Appendix A
Sampling Plan

Table 5-1
Recommendations for Spring 2023 Sampling - Cell 1 and Offsite Wells

Draft By:	E. Ehret	Update By:	K.Leslie
Date:	1/18/23	Date:	3/27/2023
Check By:	K. Leslie	Backcheck By:	
Date:	1/30/23	Date:	

Well ID	Water Levels	Field parameters[1]	Appendix I			Appendix II										Geochemical/Microbial						Screen Start (ft bgs)	Screen End (ft bgs)	Pump Depth (ft btoc)	Allowable Drawdown (ft)	Volume of Water in Tubing[4] (gallons)	Minimum Purge Volume[5] (gallons)	Expected Flow Rate (mL/min)
			VOCs		Dissolved Metals	SVOCs		O/C Pest[2]	O/P Pest	Chlor Herb	PCBs[2]	Dioxin/ Furan	Mercury	Cyanide	Total Sulfide	Anions[3]	Dissolved Gases	TOC	Ferrous Iron	CSIA	Dhc & genes							
			8260D	8011	6020B/6010C	8270E	8270E SIM	8081B	8141B	8321B	8082A	8290	7470A	SM4500-CN-E	SM 4500S-2	9056A	RSK-175	9060A	HACH 8146	U of O	M.I.							
Cell 1 (Low-flow Sampling)																												
MW-1	1																					77	97	Dedicated	--	--	--	--
MW-101S†	1	1	1																			55	75	65	0.1	0.2	0.6	200-250
MW-102S†	1	1	1																			125	145	136	--	--	--	--
MW-104D	1																					79	89	79	--	--	--	--
MW-104S†	1																					47	67	58.5	--	--	--	--
MW-105D	1	1	1		1											1		1	1			72	82	Dedicated	2	0.2	0.9	50-100
MW-105S†	1	1	1		1											1		1	1			45	65	Dedicated	0.1	0.1	0.4	150-200
MW-109D	1	1	1																			75	95	85	2	0.2	1.0	50-100
MW-109S†	1	1	1																			42	62	54	0.1	0.1	0.4	150-200
MW-110D	1																					154	159	155.5	2	0.4	1.5	50-100
MW-110S†	1	1	1																			107.5	127.5	125	0.1	0.3	1.0	200-250
MW-111D	1	1	1																			104	124	Dedicated	2	0.3	1.2	50-100
MW-111S†	1																					54	74	67	0.1	0.2	0.5	50-100
MW-112D	1	1	1																			93	103	95	2	0.2	1.0	50-100
MW-112M	1	1	1																			66	76	71	1	0.2	0.7	100-150
MW-112S	1																					41	61	--	--	--	--	--
MW-113D	1	1	1																			115	135	125	1	0.3	1.1	50-100
MW-113S	1	1	1																			74	94	Dedicated	3.0	0.2	1.1	150-200
MW-117R	1	1	1																			113	123	Dedicated	--	--	--	--
MW-118D†	1	1	1		1											1		1	1			82	102	Dedicated	0.1	0.2	0.7	300-400
MW-119D	1	1	1		1											1		1	1			90	100	Dedicated	1.0	0.2	0.9	150-200
MW-119S	1	1	1		1											1		1	1			70	80	Dedicated	0.3	0.2	0.6	300-400
MW-120D	1	1	1		1											1		1	1			90	100	Dedicated	0.3	0.2	0.8	200-250
MW-120S†	1	1	1		1											1		1	1			70	80	Dedicated	0.1	0.2	0.6	100-150
MW-121	1																					67	87	--	--	--	--	--
MW-122	1	1	1																			38	48	43	0.1	0.1	0.4	--
MW-123	1	1	1																			67.3	71.3	69	0.1	0.2	0.6	--
MW-124	1	1	1		1											1	1	1	1	1	1	TBD	TBD	TBD	TBD	TBD	TBD	TBD
MW-125	1	1	1		1											1	1	1	1	1	1	TBD	TBD	TBD	TBD	TBD	TBD	TBD
MP-1	1																					60	100	80	0.3	0.2	0.8	250-300
MP-2†	1	1	1		1											1		1	1			50	90	80	0.1	0.2	0.7	150-200
MP-3	1	1	1																			60	100	80	0.3	0.2	0.8	250-300
MP-4	1	1	1																			60	100	80	0.3	0.2	0.8	250-300
MP-9	1																					--	--	--	--	--	--	--
Remediation System (Low-flow sampling)																												
RW-1	1	1	1		1											1		1	1			60	100	--	--	--	--	--
RW-2	1	1	1		1											1		1	1			70	90	--	--	--	--	--
RW-3	1	1	1		1											1		1	1			50	90	--	--	--	--	--
RW-16†		1																				43	103	70	0.1	0.2	0.6	150-200
Remediation System (Grab Sampling)																												
INJ-1R*			1	1	1	1	1	1	1	1	1	1	1	1	1							--	--	--	--	--	--	--
RW-4		1	1																			50	100	--	--	--	--	--
RW-5		1	1																			60	100	--	--	--	--	--
RW-9R		1	1																			51	76	--	--	--	--	--
RW-10		1	1																			50	85	--	--	--	--	--
RW-15		1	1		1											1		1	1			45	105	--	--	--	--	--
RW-17		1	1																			43.5	103.5	--	--	--	--	--
Offsite (Low-flow Sampling)																												
MW-103D	1																					173.5	183.5	175	--	--	--	--
MW-103S†	1	1	1																			90	110	Dedicated	0.1	0.3	1.7	50-100
MW-106D	1																					89	99	91.5	--	--	--	--
MW-106S†	1																					55	75	70	--	--	--	--
MW-115D	1																					100	120	110	--	--	--	--
MW-115S†	1	1	1																			80	90	87	0.1	0.2	0.7	100-150
MW-116D																						122	142	130	--	--	--	--
MW-116S†		1	1																			78	93	85	0.1	0.2	0.7	50-100
Offsite Domestic (Tap Sampling)																												
RW-2140H		1	1																					--	--	--	400	--

Notes:
†No allowable drawdown as water level is within screened interval
* INJ-1R will also be sampled for VOCs (8260B) in the winter and summer
[1] Field parameters include pH, oxidation reduction potential, turbidity, dissolved oxygen, specific conductivity, and temperature
[2] PCBs and O/C Pest are collected in the same bottle
[3] Anions include sulfate, chloride, and bromide
[4] Volume of water in the tubing is the minimum volume that must be purged prior to the collection of purge parameters
[5] Minimum purge volume for low-flow sampling is volume in sampling tubing and volume of allowable drawdown

Acronyms/Abbreviations:
ft = feet
ft bgs = feet below ground surface
ft btoc = feet below top of casing
mL/min = milliliter per minute
VOCs = volatile organic compounds
SVOCs = semivolatile organic compounds
Chlor Herb = chlorinated herbicides
O/C Pest = organochlorine pesticides
O/P Pest = organophosphorus pesticides
PCBs = polychlorinated biphenyls
VOCs = volatile organic compounds
SVOCs = semivolatile organic compounds
O/C Pest = organochlorine pesticides
O/P Pest = organophosphorus pesticides

Table 5-3
Recommendations for Spring 2023 Sampling - Cell 2 and 4 Wells

Draft By:	E. Ehret	Update By:	
Date:	1/18/23	Date:	
Check By:	K. Leslie	Backcheck By:	
Date:	2/9/2023	Date:	

Well ID	Water Levels	Field parameters[1]	Appendix I			Appendix II											Pump Depth (ft bgs)	Well Diameter (inches)	Allowable Drawdown (feet)	Volume of Water in Tubing[3] (gallons)	Minimum Purge Volume[4] (gallons)	Expected Flow Rate (mL/min)
			VOCs		Total metals	SVOCs[2]		O/C Pest[2]	O/P Pest	Chlorinated Herbicides		PCBs[2]	Dioxins/ Furans	Mercury	Cyanide	Total Sulfide						
			8260B	8011	6020B/ 6010C	8270C	8270C SIM	8081A	8141A	8151A	8321A	8082A	8290	7470A	SM4500-CN-E	SM 4500S-2						
Cell 2 (Low-flow sampling method)																						
MW-12	1	1	1	1	1											1	Dedicated	4	1.0	1.1	1.7	250-300
MW-13	1	1	1	1	1											1	Dedicated	4	2.5	1.0	2.6	200-250
MW-7																	--	--	--	--	--	--
MW-8†	1	1	1	1	1											1	Dedicated	4	0.1	1.2	1.3	100-150
MW-9	1	1	1	1	1											1	Dedicated	4	2.0	1.4	2.7	250-300
Cell 4 (Low-flow sampling method)																						
MW-3A	1	1	1	1	1												Dedicated	4	4.0	2.2	4.8	100-150
MW-4A	1	1	1	1	1												Dedicated	4	0.3	1.1	1.3	250-300
MW-4	1	1	1	1	1												Dedicated	4	1.0	0.9	1.6	150-200
MW-5AR	1	1	1	1	1												Dedicated	4	0.5	1.7	2.0	100-150
MW-6A	1	1	1	1	1												Dedicated	4	2.5	0.9	2.5	100-150

Notes:

†No allowable drawdown as water level is within screened interval

[1] Field parameters include pH, oxidation reduction potential, turbidity, dissolved oxygen, specific conductivity, and temperature

[2] PCBs and O/C Pest are collected in the same bottle

[3] Volume of water in the tubing is the minimum volume that must be purged prior to the collection of purge parameters

[4] Minimum purge volume for low-flow sampling is volume in sampling tubing and volume of allowable drawdown

ft bgs = feet below ground surface
mL/min = milliliter per minute
VOCs = volatile organic compounds
SVOCs = semivolatile organic compounds
O/C Pest = organochlorine pesticides
O/P Pest = organophosphorus pesticides
PCBs = polychlorinated biphenyls

Appendix B

Field Documentation

Remediation System Sampling
Fort Hall Mine Landfill, Bannock County, Pocatello, ID

Date: 4/11/23 Samplers: JM, IGL

Well	Operating? (Y/N)	Sample Time	Temp. (°C)	pH	DO (mg/L)	Conductivity (µS/cm)	Turbidity (NTU)	ORP (mV)	Comments
RW-4	~~Y~~ N	~~1615~~							Not operating, no sample collected
RW-5	Y	1610	12.17	6.67	6.02	1426	0.22	160.6	
RW-9R	Y	1620	13.18	~~6.70~~ 6.50	~~4.50~~ 7.50	2150	2.13	~~144.0~~ 154.0	
RM-10	Y	1605	13.88	6.70	7.75	1517	2.32	~~154.5~~ 157.5	
RW-15	Y	1630	12.50	6.50	~~3.79~~ 3.40	1913	11.6	139.6	
RW-17	Y	1640	12.39	6.58		1642	5.74	155.6	
INJ-1R	N/A	1630	N/A	N/A	N/A	N/A	N/A	N/A	

Note: all wells (except INJ-1R) are sampled only for VOCs (8260)
INJ-1R sampled for VOCs (8260 and 8011), Total metals (6020/6010), Mercury (7470), SVOCs (8270/8270SIM), O/C Pesticides and PCBs (8081B and 8082A), O/P Pesticides (8141B), Herbicides (8321B), 2,3,7,8-TCD (8290), Sulfide (SM4500S-2), Cyanide (SM4500-CN)

CDM Smith

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GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/11/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0 (Vented to) 0

Well ID: MP-2 Purging/Sampling Device: Portable pump Pump depth (ft bgs): 80

Initial Static Water Level (feet btoc): 66.99 Analytical Parameters: VOCs (8260D), Dissolved Metals (use filters), Anions, TOC

Final Water Level (feet btoc): 67.40 QC Samples Collected: None

Purge Start Time: 13:00 Ferrous Iron (mg/L): 0 Allowable Drawdown (ft): 0.1 - No allowable drawdown

Sample Time: 14:40 Controller Settings: Recharge: 13 secs Discharge: 7 secs Pressure: 50 psi

Samplers' Signatures: Kole Cesi · Jesse Yoick Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
13:40	67.1	19.35	6.41	1877	4.45	146.7	0.62	60	
13:54	67.17	16.91	6.61	1873	2.07	142.0	1.25	75	
13:59	67.2	15.49	6.61	1872	1.71	142.8	0.73	75	
14:04	67.26	15.44	6.62	1869	1.49	142.8	0.71	75	
14:09	67.3	15.27	6.62	1867	1.46	142.9	0.88	75	
14:14	67.33	15.39	6.62	1867	1.35	142.8	0.61	80	Purged 1.3 gallons
14:19	67.35	15.80	6.61	1862	1.30	151.6	0.44	130	
14:25	67.40	15.67	6.69	1861	1.39	126.9	0.50	110	
14:30	67.40	16.20	6.70	1859	1.37	131.0	0.67	100	
14:35	67.40	16.51	6.84	1855	1.37	126.6	0.78	100	

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 16 secs Discharge: 4 secs

Pressure: 40 psi Cycles Per Minute: 3 Flow Rate: 150-200 mL/min

Screened Interval: 50-90 Minimum purge volume: 1.3

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/13/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MP-3 Purging/Sampling Device: Portable pump Pump depth (ft bgs): 80

Initial Static Water Level (feet btoc): 59.1 Analytical Parameters: VOCs (8260D)

Final Water Level (feet btoc): 59.2 QC Samples Collected: None

Purge Start Time: 1430 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.3

Sample Time: 1626 Controller Settings: Recharge: 11 secs Discharge: 9 secs Pressure: 50 psi

Samplers' Signatures: Dana Shewmaker, Jessica Yaich Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1500	59.1	8.2	9.79	727	13.63	57.9	49.5	75	
1510	59.2	8.3	6.67	1529	4.72	83.4	79.8	50	
1520	59.19	8.5	6.74	1528	4.446	80.0	44.5	50	
1540	59.15	8.3	6.71	1528	4.14	79.3	28.8	60	
1600	59.2	8.4	6.72	1531	3.75	78.7	20.4	60	
1610	59.15	8.3	6.74	1528	3.83	78.9	20.5	60	
1615	59.2	9.7	6.71	1521	3.85	78.6	21.6	90	
1620	59.2	9.8	6.72	1522	3.91	78.7	22.4	120	
1625	59.2	9.7	6.7	1523	4.06	78.9	20.3	120	
1626	SAMPLE								

Final Volume: 2.5

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 12 secs Discharge: 8 secs

Pressure: 40 psi Cycles Per Minute: 3 Flow Rate: 250-300 mL/min

Screened Interval: 60-100 Minimum purge volume: 1.6

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/14/2023 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MP-4 Purging/Sampling Device: Portable pump Pump depth (ft bgs): 80

Initial Static Water Level (feet btoc): 58.56 Analytical Parameters: VOCs (8260D)

Final Water Level (feet btoc): ~~58.64~~ 58.64 QC Samples Collected: None

Purge Start Time: 0840 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.3

Sample Time: 0945 Controller Settings: Recharge: 10 secs Discharge: 10 secs Pressure: 60 psi

Samplers' Signatures: [signature] Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
0910	58.65	11.0	6.52	5958	4.10	143.6	14.3	350	
0915	58.65	11.1	6.53	5895	5.25	141.7	16.0	325	
0920	58.65	11.0	6.58	5888	5.04	114.8	20.3	325	
0925	58.64	11.1	6.52	5865	4.87	128.6	21.0	325	
0930	58.65	11.0	6.53	5859	5.40	133.2	24.6	325	
0935	58.65	11.2	6.54	5838	5.74	135.6	27.7	325	
0940	58.65	11.1	6.54	5831	5.45	137.2	25.6	325	
0945	58.64	11.2	6.56	5807	5.55	137.8	32.6	325	
0945	SAMPLE								TOTAL PURGE 5 Gal

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 11 secs Discharge: 9 secs

Pressure: 40 psi Cycles Per Minute: 3 Flow Rate: 250-300 mL/min

Screened Interval: 60-100 Minimum purge volume: 1.6

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/13/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: RW-1 Purging/Sampling Device: Portable pump Pump depth (ft btoc): 80' depending on water level

Initial Static Water Level (feet btoc): 57.98 Analytical Parameters: VOCs 8260D, Dissolved metals (Use filter), TOC ferrous iron, ~~total sulfide~~, anions +N

Final Water Level (feet btoc): 58.03 QC Samples Collected: None

Purge Start Time: 1435 Ferrous Iron (mg/L): NA HR 0.04 Allowable Drawdown (ft):

Sample Time: 1520 Controller Settings: Recharge: 13 secs Discharge: 7 secs Pressure: 48 psi

Samplers' Signatures: Joe Miller Hunter Robb Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1445	57.98	9.14	6.47	1876	6.84	127.3	5.20	110	
1450	57.99	9.90	6.41	2023	1.87	124.1	3.72	160	
1455	58.00	10.55	6.39	2075	1.04	126.8	3.30	200	
1500	58.01	10.69	6.37	2096	0.60	119.7	2.88	200	
1505	58.02	10.80	6.37	2090	0.48	121.6	2.36	200	
1510	58.02	10.75	6.37	2096	0.49	115.4	1.93	≈00	1.5 Gal Purged
1515	58.02	10.73	6.37	2094	0.39	115.6	1.47	200	2.5 Gal total purge
									*Pump has metal (rusty) chunks upon Retrieval Adrin took Photo

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6' diameter well: 1.47

Screen: 60 to 100 ft bgs

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/12/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.1 (Vented to) 0.1

Well ID: RW-2 Purging/Sampling Device: Portable pump Pump depth (ft btoc): 80' depending on water level

Initial Static Water Level (feet btoc): 63.60 Analytical Parameters: VOCs 8260D, Dissolved metals (Use filter), TOC ferrous iron, ~~total sulfide~~, anions

Final Water Level (feet btoc): 63.84 QC Samples Collected: None

Purge Start Time: Purge on 1342 Purge 1343 Ferrous Iron (mg/L): 0.01 ✓ Allowable Drawdown (ft): _____

Sample Time: 1435 Controller Settings: Recharge: 20 secs Discharge: 10 secs Pressure: 42 psi

Samplers' Signatures: Joe Miller H Rea ~~SEND SAME DAY~~ HR Cycles Per Minute: 2

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1350	63.71	13.68	6.78	1695	12.10	138.5	125	90	initial purge had grey floc
1356	63.73	13.09	6.59	2052	7.89	142	4.40	100	
1400	63.75	12.78	6.58	2158	3.84	145.8	1.29	95	
1405	63.78	12.67	6.64	2178	2.70	146.8	0.58	100	
1410	63.80	12.78	6.57	2181	2.13	148.0	0.41	100	
1415	63.80	12.85	6.56	2179	1.94	149.4	0.34	80	
1420	63.81	12.86	6.57	2179	1.81	154.1	0.26	80	
1425	63.81	12.70	6.56	2181	1.76	153.3	0.30	80	
1430	63.82	12.78	6.56	2175	1.69	155.5	0.31	90	
1435	Sample								

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Screen: 70 to 90 ft bgs

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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MO

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/13/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) _____

Well ID: RW-3 Purging/Sampling Device: Portable pump Pump depth (ft btoc): 70' depending on water level

Initial Static Water Level (feet btoc): 58.25 Analytical Parameters: VOCs 8260D, Dissolved metals (Use filter), TOC ferrous iron, ~~total sulfide~~, anions

Final Water Level (feet btoc): 59.14 QC Samples Collected: None

Purge Start Time: 1205 Ferrous Iron (mg/L): ~~NA~~ HR 0.04 Allowable Drawdown (ft): ~~58.25~~ JM

Sample Time: 1245 Controller Settings: Recharge: 16 secs Discharge: 4 secs Pressure: 45 psi

Samplers' Signatures: [signature] Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1210	58.39	10.96	6.67	2228	2.83	106.3	27.9	220	
1215	58.50	11.27	6.68	2259	2.53	110.1	27.3	225	
1220	58.60	11.35	6.69	2269	2.05	70.1	21.4	175	
1225	58.67	11.13	6.69	2268	1.98	82.4	19.1	175	
1230	58.73	10.92	6.69	2270	1.99	84.2	22.5	125	
1235	58.78	10.76	6.69	2267	1.97	86.8	20.7	125	
1240	58.83	10.76	6.69	2266	1.99	93.0	20.8	125	
									total purge vol. ~ 2 gal

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

· 50 to 90 ft bgs

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/15/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.5 (Vented to) 0.0

Well ID: MW-101S Purging/Sampling Device: Portable pump Pump depth (ft bgs): 65

Initial Static Water Level (feet btoc): 56.55 Analytical Parameters: VOCs (8260D)

Final Water Level (feet btoc): 56.55 QC Samples Collected: None

Purge Start Time: 0900 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.1

Sample Time: 0940 Controller Settings: Recharge: 12.0 secs Discharge: 4.0 secs Pressure: 50 psi

Samplers' Signatures: HeL RL Cycles Per Minute: 4

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
0925	56.56	9.3	6.95	1083	5.46	101.5	1.14	225	min. purge vol met
0930	56.54	9.4	6.97	1093	5.33	102.3	1.27	230	
0935	56.54	9.0	6.97	1100	5.26	103.7	1.37	225	total purge vol ~ 2.5 gal
0940	SAMPLE								

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 12 secs Discharge: 3 secs
Pressure: 40 psi Cycles Per Minute: 4 Flow Rate: 200-250 mL/min

Screened Interval: 55-75 ft bgs Minimum purge volume: 1.2 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/14/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-102S Purging/Sampling Device: ~~Portable pump~~ Dedicated Pump depth (ft btoc): 136 depending on water level

Initial Static Water Level (feet btoc): 131.90 Analytical Parameters: VOCs

Final Water Level (feet btoc): ~~1344~~ 132.10 QC Samples Collected: None

Purge Start Time: 1349 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): _____

Sample Time: 1450 Controller Settings: Recharge: 18 secs Discharge: 12 secs Pressure: 110 psi

Samplers' Signatures: [signature] Cycles Per Minute: 2

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1355	131.91	9.63	6.58	613	8.04	84.6	1.86	100	
1405	132.02	10.68	6.98	631	6.88	75.6	0.45	100	
1410	132.06	10.47	7.17	634	6.44	72.0	0.30	100	
1415	132.06	10.12	7.30	634	5.62	68.7	0.23	100	
1425	132.07	9.85	7.40	633	5.50	66.2	0.20	100	
1435	132.09	9.73	7.43	632	5.41	64.1	0.19	100	
1440	132.10	9.82	7.43	632	5.36	63.5	0.17	100	
1445	132.10	9.82	7.43	632	5.32	63.3	0.17	100	2 gal Purge

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Controller settings: Recharge: _____ secs Discharge: _____ secs
Pressure: _____ psi Cycles Per Minute: _____ Flow Rate: _____ mL/min

Screened Interval: 125-145 ft bgs **Minimum purge volume:** _____ gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/15/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-103S Purging/Sampling Device: Dedicated pump Pump depth (ft bgs): 105 ?

Initial Static Water Level (feet btoc): 107.26 Analytical Parameters: VOCs (8260D)

Final Water Level (feet btoc): 107.26 QC Samples Collected: None

Purge Start Time: 1100 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.1

Sample Time: 1225 Controller Settings: Recharge: 15 secs Discharge: 5 secs Pressure: 70 psi

Samplers' Signatures: Joe Mik Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1105	107.26	9.13	7.11	603	8.76	75.7	1.37	100	
1115	107.26	10.11	6.88	1195	8.02	74.1	0.51	80	
1125	107.26	10.40	6.79	1412	7.15	74.7	0.42	90	
1135	107.26	10.56	6.77	1472	7.04	74.8	0.44	90	
1145	107.26	10.55	6.77	1483	7.05	74.6	0.32	90	
1155	107.26	10.94	6.81	1484	6.96	74.5	0.36	90	
1205	107.26	11.00	7.04	1484	7.08	72.7	0.49	90	Min Purge Met
1210	107.26	11.02	7.04	1485	6.89	72.3	0.35	90	
1215	107.26	11.07	7.04	1486	7.00	72.3	0.32	90	
1220	107.26	11.20	7.06	1486	6.90	72.2	0.29	90	

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 12 secs Discharge: 8 secs
Pressure: 75 psi Cycles Per Minute: 3 Flow Rate: 50-100 mL/min

Screened Interval: 90-110 ft bgs **Minimum purge volume:** 1.7 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: April 11, 2008 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0 (Vented to) 0

Well ID: MW-105S Purging/Sampling Device: Dedicated pump Pump depth (ft bgs): 65

Initial Static Water Level (feet btoc): 55.75 Analytical Parameters: VOCs 8260D (Preserved and unpreserved VOAs), Dissolved Metals (use filter), Anions, TOC, ferrous iron

Final Water Level (feet btoc): 55.83 QC Samples Collected: None

Purge Start Time: 12:05 Ferrous Iron (mg/L): 0.0 Allowable Drawdown (ft): 0.1

Sample Time: 1330 Controller Settings: Recharge: 4.5 ~~4.5~~ 15.5 secs Discharge: 4.5 secs Pressure: 40 psi

Samplers' Signatures: Dan Shanks Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
12:15	55.80	12.90	6.96	3.212	6.30	42.2	2.87	75	
1233	55.84	12.83	6.91	3.384	2.71	38.1	2.61	100	
1250	55.83	13.22	6.89	3.418	1.70	36.5	0.65	90	Converted to µS/cm 3422
1310	55.83	12.93	6.87	3438	1.34	33.0	0.50	100	minimum purge meth ~1gal
1315	55.84	13.15	6.86	3439	1.22	31.3	0.49	100	
1322	55.83	13.06	6.87	3446	1.17	30.7	0.43	100	
1328	55.83	12.98	6.85	3451	1.10	29.9	0.52	100	
1330	SAMPLE								total purge 2.5 liters
									Collect VOCs in both preserved and unpreserved VOAs

Casing Volume Calculations:

Water Col. X Casing Factor = Gallons per Casing Volume

Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: **Recharge:** 17.5 secs **Discharge:** 2.5 secs

Pressure: 45 psi **Cycles Per Minute:** 3 **Flow Rate:** 150-200 mL/min

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/11/2023 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-105D Purging/Sampling Device: Dedicated Pump depth (ft bgs): 78.5

Initial Static Water Level (feet btoc): 59.60 Analytical Parameters: VOCs 8260D (Preserved and unpreserved VOAs), Dissolved Metals (use filter), Anions, TOC, ferrous iron

Final Water Level (feet btoc): 61.0 QC Samples Collected: None

Purge Start Time: 1424 Ferrous Iron (mg/L): 0.00 Allowable Drawdown (ft): 2.0

Sample Time: 1600 Controller Settings: Recharge: 17.5 secs Discharge: 2.5 secs Pressure: 45 psi

Samplers' Signatures: [signature] Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1438	60.8	13.88	6.88	1775	5.63	-93.7	0.61	~80	
1445	60.9	14.16	6.78	1837	2.27	-61.1	3.26		
1450	60.92	14.19	6.78	1847	1.27	-54	0.51	~80	
1455	60.95	14.17	6.77	1850	0.83	-51.9	0.31	100 mL/m	
1505	61.0	14.10	6.77	1849	0.54	-47.9	0.23	100	
1515	61.0	14.15	6.76	1862	0.50	-49.4	0.14	100	
1525	61.0	14.14	6.76	1878	0.47	-50.4	0.14		
1535	61.0	13.16	6.76	1898	0.43	-54.5	0.16		
1545	61.1	12.71	6.76	1903	0.42	-55.5	0.11	100	
1555	61.0	12.73	6.75	1909	0.39	-57.0		100	
1600	SAMPLE								total purge 2.0 gal
									Collect VOCs in both preserved and unpreserved VOAs

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 17.5 secs Discharge: 2.5 secs
Pressure: 45 psi Cycles Per Minute: 3 Flow Rate: 50-100 mL/min

Screened Interval: 72-82 ft bgs Minimum purge volume: 1.7 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/15/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-109S Purging/Sampling Device: Portable pump Pump depth (ft bgs): 54

Initial Static Water Level (feet btoc): 48.98 Analytical Parameters: VOCs 8260D

Final Water Level (feet btoc): 48.97 QC Samples Collected: Duplicate & MS/MSD

Purge Start Time: 1517 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.1

Sample Time: 1545 Controller Settings: Recharge: 10.5 secs Discharge: 3.5 secs Pressure: 50 psi

Samplers' Signatures: Dan Shay, Hannah Rolston, Jessica Yaich Cycles Per Minute: 4

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1525	48.97	10.7	7.07	1318	7.01	108.0	1.92	300	Min. purge met
1530	48.97	10.6	7.11	1317	6.77	106.4	2.02	300	
1535	48.97	10.6	7.10	1315	6.71	106.7	1.00	300	
1540	48.97	10.7	7.07	1315	6.83	106.2	0.81	300	
SAMPLE									TOTAL PURGE ~ 3 gallons

Casing Volume Calculations: Total Purge Vol: 2.5 gal.
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 10.5 secs Discharge: 4.5 secs
Pressure: 35 psi Cycles Per Minute: 4 Flow Rate: 150-200 mL/min

Screened Interval: 42-62 ft bgs Minimum purge volume: 0.9 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/15/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-109D Purging/Sampling Device: Portable pump Pump depth (ft bgs): 85

Initial Static Water Level (feet btoc): 59.61 Analytical Parameters: VOCs 8260D

Final Water Level (feet btoc): 63.92 QC Samples Collected: None

Purge Start Time: 1618 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 2.0

Sample Time: 1800 Controller Settings: Recharge: 4 secs Discharge: 9 secs Pressure: 50 psi

Samplers' Signatures: [signature] Cycles Per Minute: 2

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1630	60.58	13.0	7.21	1069	4.76	95.9	3.2	35	Increased discharge from 3 to 4 sec.
1640	60.90	10.8	7.20	1080	3.91	96.8	4.25	65	Increase discharge from 4 to 5 sec
1650	61.54	10.9	7.20	1087	3.38	92.6	2.49	100	Changed to 2 cycles, 6 sec. discharge
1720	62.35	10.8	7.17	1085	3.18	90.3	0.78	100	
1740	63.18	10.6	7.20	1088	4.10	72.8	0.56	120	Min. purge met at 1750 (2.5 gal)
1750	63.60	10.5	7.2	1085	3.18	83.8	0.79	120	
1755	63.70	10.5	7.22	1085	3.10	84.1	0.57	120	
1800	63.73	10.4	7.2	1085	3.15	85.4	0.61	120	
SAMPLE									total purge vol ~ 3.5 gal.

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 17 secs **Discharge:** 3 secs
Pressure: 45 psi **Cycles Per Minute:** 3 **Flow Rate:** 50-100 mL/min

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

4

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/14/2023 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-110S Purging/Sampling Device: Portable pump Pump depth (ft bgs): 125

Initial Static Water Level (feet btoc): ~~120.78~~ 120.66 Analytical Parameters: VOCs 8260D

Final Water Level (feet btoc): 120.69 QC Samples Collected: None

Purge Start Time: ~~1000~~ 1105 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.1

Sample Time: 1205 Controller Settings: Recharge: 18 secs Discharge: 12 secs Pressure: 100 psi

Samplers' Signatures: [signature] Cycles Per Minute: 2

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1145	120.69	12.1	6.72	2574	1.78	98.2	0.77	175	
1155	120.69	12.3	6.71	2585	1.81	99.9	0.35	175	Minimum Purge met
1200	120.69	12.4	6.70	2584	1.83	100.3	0.34	175	
1205	120.69	12.3	6.64	2596	1.85	102.2	0.39	175	
1205	SAMPLE								TOTAL PURGE 3.5 gal

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 18 secs Discharge: 12 secs

Pressure: 90 psi Cycles Per Minute: 2 Flow Rate: 200-250 mL/min

Screened Interval: 107.5-127.5 ft bgs Minimum purge volume: 2.2 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

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GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/14 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-111D Purging/Sampling Device: Dedicated pump Pump depth (ft bgs): 110

Initial Static Water Level (feet btoc): ~~71.40~~ 77.40 Analytical Parameters: VOCs 8260D (Preserved and unpreserved VOAs)

Final Water Level (feet btoc): 77.80 QC Samples Collected: None

Purge Start Time: 1335 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 2.0

Sample Time: 1530 Controller Settings: Recharge: 24 secs Discharge: 6 secs Pressure: 60 psi

Samplers' Signatures: Cycles Per Minute: 2

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1430	77.70	10.6	6.90	4442	1.20	-151.0	0.55	150	
1435	77.8	10.7	6.81	4460	1.07	-151.9	0.45	150	
1445	77.8	10.7	6.82	4470	0.82	-151.7	0.78	150	Minimum Purge met
1450	77.8	10.7	6.85	4468	0.72	-153.5	0.80	150	
1500	77.85	10.8	6.90	4455	0.63	-153.7	0.49	150	
1505	77.90	11.0	6.83	4442	0.54	-153.7	0.59	150	
1510	77.80	11.2	6.85	4418	0.46	-154.4	0.84	150	
1515	77.80	11.2	6.87	4414	0.44	-154.6	0.55	150	
1520	77.80	11.3	6.88	4388	0.35	-154.9	0.64	150	
1525	77.80	11.0	6.78	4377	0.32	-154.7	0.96	150	
1530	77.80	10.8	6.87	4367	0.37	-154.8		150	TOTAL PURGE 5gal
1530	SAMPLE								
									Collect VOCs in both preserved and unpreserved VOAs

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: **Recharge:** 24 secs **Discharge:** 6 secs

Pressure: 60 psi **Cycles Per Minute:** 2 **Flow Rate:** 50-100 mL/min

Screened Interval: 104-124 ft bgs **Minimum purge volume:** 2.3 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

MR

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4.15.23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-112M Purging/Sampling Device: Portable pump Pump depth (ft bgs): 71

Initial Static Water Level (feet btoc): 63.25 Analytical Parameters: VOCs 8260D

Final Water Level (feet btoc): 63.38 taken after pump off - fast recharge - HR QC Samples Collected: None

Purge Start Time: 1200 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 1.0

Sample Time: 1245 Controller Settings: Recharge: ~~4~~ 10.5 secs Discharge: 4.5 secs Pressure: 40 psi

Samplers' Signatures: [signatures] Cycles Per Minute: 4

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1230	63.55	11.4	7.19	1016	6.48	83.7	44.0	150	Minimum PURGE VOL MET
1235	63.52	11.3	7.11	~~85.4~~ 1015	6.40	86.1	25.8	150	
1240	63.60	11.3	7.08	~~86.8~~ 1015	6.46	86.8	15.5	160	
1245		SAMPLE	COLLECTED						TOTAL PURGE 1.5 GAL

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 11 secs Discharge: 4 secs

Pressure: 30 psi Cycles Per Minute: 4 Flow Rate: 100-150 mL/min

Screened Interval: 66-76 ft bgs Minimum purge volume: 1.4 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4.15.23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-112D Purging/Sampling Device: Dedicated pump Pump depth (ft bgs): 94.5

Initial Static Water Level (feet btoc): 62.65 Analytical Parameters: VOCs 8260D

Final Water Level (feet btoc): 64.50 QC Samples Collected: None

Purge Start Time: 1257 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 2.0

Sample Time: 1405 Controller Settings: Recharge: 12 secs Discharge: 3 secs Pressure: 45 psi

Samplers' Signatures: Damon Shewmaker, Hannah Rolston Cycles Per Minute: 4

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1345	65.0	11.0	7.50	876	4.65	87.5	9.39	120	MINIMUM PURGE MET
1350	65.05	11.0	7.57	~~84.6~~ 844	4.54	84.5	5.90	120	Sp. Cond is 844, reduce Flow Rate
1355	64.70	11.2	7.56	~~83.8~~ 882	4.62	83.8	4.32	60	Sp Cond is 882
1400	64.70	10.9	~~7.75~~	875	4.52	85.0	4.46	80	pH 7.57,
1405	SAMPLE	COLLECTED							

Casing Volume Calculations:

Water Col. X Casing Factor = Gallons per Casing Volume

Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: **Recharge:** 12 secs **Discharge:** 3 secs

Pressure: 45 psi **Cycles Per Minute:** 4 **Flow Rate:** 50-100 mL/min

Screened Interval: 93-103 ft bgs **Minimum purge volume:** 2.0 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/14/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-113S Purging/Sampling Device: Dedicated pump Pump depth (ft bgs): 81.5

Initial Static Water Level (feet btoc): 31.65 Analytical Parameters: VOCs 8260D

Final Water Level (feet btoc): 32.96 QC Samples Collected: None

Purge Start Time: 0829 Ferrous Iron (mg/L): — Allowable Drawdown (ft): 3

Sample Time: 0925 Controller Settings: Recharge: 12.5 secs Discharge: 2.5 secs Pressure: 62 psi

Samplers' Signatures: Joe Mills Cycles Per Minute: 4

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
0835	32.86	9.03	6.60	2616	2.76	32.2	2.05	175	Initial Purge Sulfur Odor
0840	32.75	9.74	6.52	2814	1.58	45.8	1.77	200	
~~0850~~ 0845	32.84	9.95	6.50	2924	0.90	53.7	0.14	200	
0850	32.94	10.03	6.50	2949	0.67	57.0	1.08	200	
0855	33.00	10.11	6.49	2957	0.58	59.0	0.92	200	
0900	33.09	10.19	6.49	2965	0.49	54.8	2.27	200	
0905	33.15	10.24	6.48	2975	0.43	60.2	2.11	200	*Min Purge Met ~2gal
0910	33.21	10.22	6.48	2983	0.39	59.8	2.10	200	
0915	33.24	10.17	6.48	2983	0.38	59.1	2.16	200	
0920	33.29	10.21	6.48	2984	0.39	58.5	2.21	200	

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: **Recharge:** 12.5 secs **Discharge:** 2.5 secs

Pressure: 60 psi **Cycles Per Minute:** 4 **Flow Rate:** 150-200 mL/min

Screened Interval: 74-94 ft bgs **Minimum purge volume:** 1.9 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/14/23

Well ID: MW-113D

Initial Static Water Level (feet btoc): 29.01

Final Water Level (feet btoc): 40.97

Purge Start Time: 0950

Sample Time: 1255

Samplers' Signatures:

OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Purging/Sampling Device: Portable pump Pump depth (ft bgs): 125

Analytical Parameters: VOCs 8260D

QC Samples Collected: None

Ferrous Iron (mg/L): — Allowable Drawdown (ft): 1.0

Controller Settings: Recharge: 6.5 secs Discharge: 6.5 secs Pressure: 85 psi

~~SEND Microbial Analysis SAME DAY~~ KL Cycles Per Minute: 4

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
0957	30.72	8.44	7.31	689	5.74	59.5	2.50	75	
1030	34.47	9.91	7.37	657	11.50	56.6	18.0	75	* Had to adjust air line Reset Flow Rate
1100	34.27	11.09	7.33	656	10.43	55.8	12.6	50	
1115	35.00	11.04	7.34	654	11.40	55.7	15.5	150	Reduced flow Rate ~2gal
1135	35.74	10.50	7.35	653	12.06	55.8	9.46	100	2.5gal purged Need 1gal for drawdown
1200	38.18	11.64	7.38	651	~~11.58~~ 10.70	55.4	5.20	100	~3.3gal
1230	39.86	10.66	7.37	652	10.93	54.1	2.60	125	~4.4gal Min purgevolume (4gal)
1240	40.25	10.61	7.39	651	11.69	55.7	3.40	125	
1245	40.49	10.68	7.39	651	11.92	56.0	2.40	125	
1250	40.71	10.56	7.36	656	11.23	56.3	5.83	125	

Casing Volume Calculations:

Water Col. X Casing Factor = Gallons per Casing Volume

Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 11 secs ***Discharge:*** 4 secs

Pressure: 75 psi ***Cycles Per Minute:*** 4 ***Flow Rate:*** 50-100 mL/min

Screened Interval: 115-135 ft bgs ***Minimum purge volume:*** 2.3 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/15/23

Well ID: MW-115S

Initial Static Water Level (feet btoc): 87.86

Final Water Level (feet btoc): _____

Purge Start Time: 926

Sample Time: 1030

Samplers' Signatures: _____

OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Purging/Sampling Device: Portable pump Pump depth (ft bgs): 87

Analytical Parameters: VOCs 8260D

QC Samples Collected: None

Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.1

Controller Settings: Recharge: 16.5 secs Discharge: 3.5 secs Pressure: 60 psi

Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
930	87.88	7.59	7.16	799	11.94	83.1	3.58	140	
935	87.88	8.59	7.13	810	9.88	72.4	3.60	140	
950	87.88	9.26	7.13	817	9.43	80.7	1.60	140	
1000	87.88	9.53	7.13	826	9.23	78.8	0.85	140	
1010	87.88	9.80	7.12	834	8.93	77.7	0.89	140	Minimum purge met
1015	87.88	9.99	7.12	840	8.96	77.1	1.20	140	
1020	87.88	10.10	7.12	841	8.97	76.8	0.78	140	
1025	87.88	10.06	7.12	845	8.98	76.3	0.75	140	

Casing Volume Calculations:

Water Col. X Casing Factor = Gallons per Casing Volume

Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: **Recharge:** 16 secs **Discharge:** 4 secs

Pressure: 50 psi **Cycles Per Minute:** 3 **Flow Rate:** 100-150 mL/min

90.00 ft bgs **Minimum purge volume:** 1.5 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL LOW-FLOW SAMPLING DATA SHEET

VOCs

Site Name: FHML Date: 0

OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.1 (Vented to) 0.3

Well ID: MW-118D

Purging/Sampling Device: Dedicated pump Pump depth (ft bgs): 88

Initial Static Water Level (feet btoc): 85.75

Analytical Parameters: VOCs (8260D), Dissolved Metals (use filter), Anions, TOC, ferrous iron

Final Water Level (feet btoc): 85.80

QC Samples Collected: None

Purge Start Time: 1548

Ferrous Iron (mg/L): 0.00 Allowable Drawdown (ft): 0.1

Sample Time: 1705

Controller Settings: Recharge: 14.0 secs Discharge: 6.0 secs Pressure: 45 psi

Samplers' Signatures:

Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1552	85.76	12.58	7.02	2603	20.25	162.6	3.51	250	
1600	85.79	12.34	6.78	2472	5.8	164.2	2.01	300	
1610	85.80	12.80	6.74	2727	4.58	160.0	0.98	300	
1615	85.81	12.31	6.74	2796	3.98	158.1	0.78	300	min purge vol. met
1620	85.81	12.23	6.73	2828	3.55	156.6		300	
1625	85.79	12.22	6.73	2854	3.23	155.6	0.57	300	
1630	85.81	12.23	6.73	2903	2.97	154.6	0.54	300	
1635	85.79	12.23	6.73	2922	2.74	158.6	0.41	300	
1640	85.79	12.23	6.73	2934	2.49	157.3	0.53	300	
1645	85.81	12.19	6.73	2943	2.40	157.4	0.61	300	
1650	85.79	12.25	6.73	2949	2.22	161.1	0.59	300	
1655	85.80	12.32	6.73	2962	2.10	159.6	0.49	300	
1700	85.81	12.21	6.73	2971	1.99	155.6		300	

Casing Volume Calculations:

Water Col. X Casing Factor = Gallons per Casing Volume

Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 15 secs Discharge: 5 secs

Pressure: 50 psi Cycles Per Minute: 3 Flow Rate: 300-400 mL/min

Screened Interval: 82-102 ft bgs Minimum purge volume: 1.6 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/13/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-119S Purging/Sampling Device: Dedicated pump Pump depth (ft bgs): 71.5

Initial Static Water Level (feet btoc): 65.50 Analytical Parameters: VOCs (8260D), Dissolved Metals (use filter), Anions, TOC, ferrous iron

Final Water Level (feet btoc): 65.61 QC Samples Collected: None

Purge Start Time: 0833 Ferrous Iron (mg/L): 0.00 Allowable Drawdown (ft): 0.3

Sample Time: 0915 Controller Settings: Recharge: 3 HF 16.5 secs Discharge: 3.5 secs Pressure: 70 psi

Samplers' Signatures: [signature] [signature] Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
0835	65.60	9.72	6.70	1467	9.45	29.3	0.98	375	
0840	65.63	10.54	6.49	1630	5.89	41.3	0.51	350	
0845	65.58	10.70	6.46	1652	5.22	44.8	0.58	375	min purge vol. met
0850	65.58	10.78	6.45	1651	4.70	81.2	0.21	375	
0855	65.58	10.71	6.49	1650	~~4~~ HF 4.74	73.5	0.45	375	
0900	65.57	10.63	6.45	1650	4.60	83.5	0.27	375	
0905	65.60	10.57	6.46	1648	4.78	87.1	0.30	375	
0910	65.59	10.75	6.44	1649	4.39	91.5	0.39	375	

Casing Volume Calculations:

Water Col. X Casing Factor = Gallons per Casing Volume

Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

controller settings: **Recharge:** 15-17.5 secs **Discharge:** 2.5-5 secs

Pressure: 80-90 psi **Cycles Per Minute:** 3 **Flow Rate:** 300-400 mL/min

d Interval: 70-80 ft bgs **Minimum purge volume:** 1.3 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/13/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-119D Purging/Sampling Device: Dedicated pump Pump depth (ft bgs): 91.5

Initial Static Water Level (feet btoc): 69.19 Analytical Parameters: VOCs (8260D), Dissolved Metals (use filter), Anions, TOC, ferrous iron

Final Water Level (feet btoc): 70.31 QC Samples Collected: None

Purge Start Time: 0935 Ferrous Iron (mg/L): 0.01 Allowable Drawdown (ft): 1.0

Sample Time: 1055 Controller Settings: Recharge: 27 secs Discharge: 3 secs Pressure: 60 psi

Samplers' Signatures: Joe Miller H— Cycles Per Minute: 2

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
0945	69.72	7.30	6.88	1241	7.93	105.8	0.88	100	
0950	69.80	8.43	6.63	1340	5.55	103.8	2.07	100	
0955	69.90	8.70	6.57	1404	4.36	96.9	1.18	100	adjusting flowrate for drawdown
1005	69.95	8.92	6.53	1440	3.25	94.6	0.71	100	
1015	70.06	8.49	6.53	1437	3.04	95.0	0.46	100	
1025	70.11	8.96	6.50	1444	3.01	99.9	0.42	100	
1035	70.12	9.13	6.51	1450	2.69	99.9	0.30	100	min purge vol. met
1040	70.12	9.07	6.52	1452	2.70	102.1	0.39	100	
1045	70.14	9.94	6.50	1451	2.80	99.0	0.40	100	
1050	70.15	9.00	6.51	1450	2.72	98.3	0.21	100	Total Purge 2.5gal

Casing Volume Calculations:

Casing Factor = Gallons per Casing Volume
s: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

roller settings: Recharge: 17.5 secs Discharge: 2.5 secs

ure: 65 psi Cycles Per Minute: 3 Flow Rate: 150-200 mL/min

Screen val: 90-100 ft bgs Minimum purge volume: 1.8 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4.13.23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-120S Purging/Sampling Device: Dedicated Pump Pump depth (ft bgs): 78.8

Initial Static Water Level (feet btoc): ~~67.05~~ 76.05 Analytical Parameters: VOCs (8260D), Dissolved Metals (use filter), Anions, TOC, ferrous iron

Final Water Level (feet btoc): 76.1 QC Samples Collected: None

Purge Start Time: 840 Ferrous Iron (mg/L): 0 Allowable Drawdown (ft): 0.1

Sample Time: 1020 Controller Settings: Recharge: 14 secs Discharge: 6 secs Pressure: 45 psi

Samplers' Signatures: [signature] Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
955	76.13	9.8	6.74	1909	1.15	-24.4	1.7	90	Changed discharge from 8 to 7.5
1005	76.15	9.6	6.666	1907	0.47	-33.2	0.97	50	Discharge from 7.5 to 6
1010	76.1	9.1	6.68	1909	0.49	-37.9	0.81	50	
1015	76.1	9.0	6.67	1912	0.52	-39.1	2.12	50	
1020	SAMPLE								

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 16 Discharge: 4

Pressure: 45 Cycles Per Minute: 3 Flow Rate: 100-150 mL/min

Screened Interval: 70-80 ft bgs Minimum purge volume: 1.3

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/13/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) ~~0~~ (Vented to) ~~0~~

Well ID: MW-120D Purging/Sampling Device: Dedicated pump Pump depth (ft bgs): 91.5

Initial Static Water Level (feet btoc): 71.8 Analytical Parameters: VOCs (8260D), Dissolved Metals (use filter), Anions, TOC, ferrous iron

Final Water Level (feet btoc): 82.60 QC Samples Collected: None

Purge Start Time: 1100 Ferrous Iron (mg/L): 0 Allowable Drawdown (ft): 0.3

Sample Time: 13:35 Controller Settings: Recharge: 24 secs Discharge: 6 secs Pressure: 90 psi

Samplers' Signatures: Dawn Shemeka, Jessica Yurich Cycles Per Minute: 2

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1313	82.35	9.7	6.94	1284	0.73	32.5	2.02	75	NEW CALCULATED MIN
1320	82.40	9.7	6.94	1279	0.65	35.0	1.98	75	PURGE 2.4 MET
1325	82.40	9.6	6.96	1278	0.64	36.0	1.98	75	
1330	82.50	9.7	6.91	1285	0.62	36.5	2.26	75	
1335	Sample								

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 11 secs Discharge: 4 secs

Pressure: 90 psi Cycles Per Minute: 4 Flow Rate: 200-250 mL/min

Screened Interval: 90-100 ft bgs Minimum purge volume: 1.7 gallons New purge 2.7

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/15/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-123 Purging/Sampling Device: Portable pump Pump depth (ft bgs): 69

Initial Static Water Level (feet btoc): 38.03 Analytical Parameters: VOCs (8260D)

Final Water Level (feet btoc): 41.65 QC Samples Collected: None

Purge Start Time: 1324 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.1' dependant on WL

Sample Time: ~~1445~~ 1455 Controller Settings: Recharge: 17 secs Discharge: 3 secs Pressure: 45 psi

Samplers' Signatures: Cycles Per Minute: 3

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1330	38.50	11.41	7.36	1006	50.5	76.5	7.41	150	Reduce flow rate to 100
1340	39.01	11.48	7.19	1008	5.05	70.5	26	100	Reduce flow rate to 50
1350	39.21	12.33	7.17	1005	4.66	70.0	32.6	50	increase flow rate to 150
1400	39.59	11.59	7.17	1007	4.77	69.6	24.4	140	Reduce flow rate to 100
1410	40.08	11.92	7.16	1004	4.31	69.1	11.0	100	
1425	40.66	12.02	7.17	1003	4.23	68.5	5.72	100	
1435	41.04	12.14	7.17	1003	4.15	68.0	4.55	100	Min. purge met (2 gallons)
1440	41.20	12.15	7.17	1002	4.11	68.0	4.46	100	
1445	41.35	12.19	7.17	1002	4.05	67.9	4.01	100	
1450	41.51	12.21	7.17	1001	3.98	67.9	3.45	100	

Total Purge: 2.5 gal.

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 16 secs Discharge: 4 secs

Pressure: 40 psi Cycles Per Minute: 3 Flow Rate: 50-100 mL/min

Screened Interval: 67.3-71.3 ft bgs Minimum purge volume: 1.3

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

TOC 5.7 ± 4 7/8" BGS

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 4/12/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.6 (Vented to) 0.5

Well ID: MW-124 Purging/Sampling Device: Portable pump Pump depth (ft bgs): 75

Initial Static Water Level (feet btoc): 63.19 Analytical Parameters: VOCs (8260D), Dissolved Metals (use filter), Anions, dissolved gases, TOC, ferrous iron, CSIA, Quantarray

Final Water Level (feet btoc): 63.59 QC Samples Collected: Duplicate

Purge Start Time: 855 Ferrous Iron (mg/L): 0.04 Allowable Drawdown (ft): TBD

Sample Time: 950 / 1000 Controller Settings: Recharge: 25 secs Discharge: 5 secs Pressure: 44 psi

Samplers' Signatures: Joe Miller SEND SAME DAY Cycles Per Minute: 2

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
910	63.41	11.93	6.54	2065	5.09	37.6	29	150	
915	63.46	11.75	6.6	2060	3.03	28.9	26.4	150	
920	63.49	11.81	6.6	2063	2.98	31	21.1	125	Changed flow settings (2 cycles)
925	63.52	11.83	6.61	2074	2.66	36.6	17.9	150	Disch. rate changed from 7 to 6
930	63.56	11.84	6.62	2062	2.69	37.9	18.3	140	Disch. rate from ~~7 to 6~~ 6 to 5
935	63.56	11.75	6.62	2067	2.7	40.5	16.6	100	
940	63.58	11.59	6.63	2070	2.57	42.6	19.6	100	
945	63.58	11.58	6.62	2063	2.67	45.2	19.6	100	

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: ____ secs Discharge: ____ secs
Pressure: ____ psi Cycles Per Minute: ____ Flow Rate: ____ mL/min

Screened Interval: 60 - 90 Minimum purge volume: ____

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML **Date:** 4/12/2023 **OVM:** FID ☐ PID ■ **In Casing (ppm): (Initial)** 0 **(Vented to)** 0

Well ID: MW-125 **Purging/Sampling Device:** Portable pump **Pump depth (ft bgs):** 75

Initial Static Water Level (feet btoc): 69.55 **Analytical Parameters:** VOCs (8260D), Dissolved Metals (use filter), Anions, dissolved gases, TOC, ferrous iron, CSIA, Quantarray

Final Water Level (feet btoc): 70.50 **QC Samples Collected:** MS/MSD

Purge Start Time: 0913 **Ferrous Iron (mg/L):** 0.03 **Allowable Drawdown (ft):** TBD

Sample Time: 1042 **Controller Settings: Recharge:** 8 secs **Discharge:** 12 secs **Pressure:** 52.5 psi

Samplers' Signatures: [signature] **SEND SAME DAY** **Cycles Per Minute:** 2

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
0934	69.7	12.04	6.64	2605	3.28	24.9	3.39	60	Toc for 4 1/4 inches bgs
0939	69.7	12.67	6.64	2694	2.34	25.7	3.6	50	
0944	69.7	12.73	6.64	2718	2.15	25.2	3.54	50	
0950	69.7	12.76	6.64	2731	1.89	24.5	3.18	50	
0955	69.7	12.69	6.63	2737	1.69	25.1	3.42	50	
1000	69.9	12.81	6.63	2760	1.43	25.2	3.10	175	
1006	69.9	12.88	6.62	2760	1.32	25.2	1.79	175	
1011	69.9	12.70	6.62	2765	1.23	24.6	1.69	175	
1016	69.95	12.91	6.62	2758	1.17	24.6	1.59	175	
1024	70.0	12.98	6.62	2765	1.10	24.6	1.22	175	
1033	70.0	12.96	6.62	2759	1.07	22.6	1.14	175	
1041	70.03	12.96	6.64	2760	1.08	22.0	0.83	175	
1042		SAMPLE							Total Purge 3.5 gallons

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: ____ secs **Discharge:** ____ secs

Pressure: ____ psi **Cycles Per Minute:** ____ **Flow Rate:** ____ mL/min

Screened Interval: 60-90 ft bgs **Minimum purge volume:** ____

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

CamScanner

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 5/17/23

Well ID: MW-13

Initial Static Water Level (feet btoc): 76.5

Final Water Level (feet btoc): 77.65

Purge Start Time: 1230

Sample Time: 1400

Samplers' Signatures:

OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Purging/Sampling Device: Dedicated pump Pump depth (ft btoc): 167

Analytical Parameters: VOCs (8260D, 8011), Total Metals, Total Sulfide

QC Samples Collected: Duplicate

Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 2.5

Controller Settings: Recharge: _____ secs Discharge: _____ secs Pressure: _____ psi

Cycles Per Minute: _____

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1350	77.6	15.6	7.41	688	8.35	88.7	8.60	100	
1353	77.6	15.9	7.40	686	8.35	89.1	9.16	100	
1359	77.6	16.0	7.40	685	8.21	90.1	16.1	100	
1400	SAMPLE	COLLECTED	→						TOTAL PURGE 2 GALLONS

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 16.5 secs Discharge: 3.5 secs

Pressure: 130 psi Cycles Per Minute: 3 Flow Rate: 200-250 mL/min

Screened Interval: 157-177 ft bgs Minimum purge volume: 2.6 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML

Well ID: MW-4

Date: 5/17/2023

OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Initial Static Water Level (feet btoc): 133.03

Final Water Level (feet btoc): 133.75

Purge Start Time: 1000

Sample Time: 1105

Samplers' Signatures:

Purging/Sampling Device: Dedicated pump

Pump depth (ft btoc):

Analytical Parameters: VOCs (8260D, 8011), Total Metals

QC Samples Collected: None

Ferrous Iron (mg/L): NA

Allowable Drawdown (ft): 1.0

Controller Settings: Recharge: _____ secs Discharge: _____ secs Pressure: _____ psi

Cycles Per Minute: _____

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1055	133.56	12.3	6.14	~~13,284~~	0.24	12.7	6.09	210	SB. 1328
1100	133.70	12.3	6.14	1327	0.24	12.4	5.54	210	
1105	133.70	12.3	6.14	1327	0.27	11.3	5.05	210	
1105	SAMPLE	COLLECTED							2.5 GALLONS

Casing Volume Calculations:

Water Col. X Casing Factor = Gallons per Casing Volume

Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: **Recharge:** 15.5 secs **Discharge:** 4.5 secs

Pressure: 120 psi **Cycles Per Minute:** 3 **Flow Rate:** 150-200 mL/min

Screened Interval: 141-181 ft bgs **Minimum purge volume:** 1.6 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 5/17/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-4A Purging/Sampling Device: Dedicated pump Pump depth (ft btoc): _____

Initial Static Water Level (feet btoc): 142.03 Analytical Parameters: VOCs (8260D, 8011), Total Metals

Final Water Level (feet btoc): 142.05 QC Samples Collected: None

Purge Start Time: 1500 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.3

Sample Time: 1600 Controller Settings: Recharge: _____ secs Discharge: _____ secs Pressure: _____ psi

Samplers' Signatures: [signature] Cycles Per Minute: _____

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1542	142.15	15.6	7.28	828	8.65	99.7	10.0	100	
1548	142.0	14.5	7.28	835	8.82	100.6	8.55	100	
1553	142.0	14.4	7.28	830	8.71	101.5	8.55	100	
1558	142.0	14.4	7.28	830	8.68	102.2	16.9	100	
1600	SAMPLE		COLLECTED						TOTAL PURGE 2 GALLONS

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 13 secs Discharge: 7 secs

Pressure: 130 psi Cycles Per Minute: 3 Flow Rate: 250-300 mL/min

Screened Interval: 179-199 ft bgs Minimum purge volume: 1.3 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 5/18/2023 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-3A Purging/Sampling Device: Dedicated pump Pump depth (ft btoc): _____

Initial Static Water Level (feet btoc): 283.25 Analytical Parameters: VOCs (8260D, 8011), Total Metals

Final Water Level (feet btoc): _____ QC Samples Collected: None

Purge Start Time: 1030 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 4.0

Sample Time: 1455 Controller Settings: Recharge: _____ secs Discharge: _____ secs Pressure: _____ psi

Samplers' Signatures: _____ Cycles Per Minute: _____

Time 1430	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
~~285~~	286.5	14.9	7.28	644	6.20	94.5	8.15	60	
1445	286.52	15.1	7.30	642	6.28	94.1	4.21	60	
1450	286.50	15.1	7.28	646	6.24	95.6	5.86	60	
1455	286.50	15.0	7.28	646	6.26	96.5	4.81	60	
—	—	SAMPLE COLLECTED				—			

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 21 secs Discharge: 9 secs

Pressure: 240 psi Cycles Per Minute: 2 Flow Rate: 100-150 mL/min

Screened Interval: 379-399 ft bgs Minimum purge volume: 4.8 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 5/18/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-12 Purging/Sampling Device: Dedicated pump Pump depth (ft btoc): _____

Initial Static Water Level (feet btoc): 161.5 Analytical Parameters: VOCs (8260D, 8011), Total Metals, Total Sulfide

Final Water Level (feet btoc): 162.3 QC Samples Collected: MS/MSD

Purge Start Time: 0855 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 1.0

Sample Time: 0940 Controller Settings: Recharge: _____ secs Discharge: _____ secs Pressure: _____ psi

Samplers' Signatures: _____ Cycles Per Minute: _____

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
0923	162.0	11.3	7.19	557	9.12	153.3	2.89	150	Min PURGE MET
0930	162.08	11.3	7.19	557	9.09	152.6	7.14	150	
0935	162.1	11.4	7.19	557	9.02	151.9	3.30	150	
0940	162.1	11.4	7.19	557	9.00	151.5	4.04	150	
0940	SAMPLE	COLLECTED							Total Purge 2.5 Gal

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 14.5 secs Discharge: 5.5 secs

Pressure: 145 psi Cycles Per Minute: 3 Flow Rate: 250-300 mL/min

Screened Interval: 168.5-208.5 ft bgs Minimum purge volume: 1.7 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 5/19/2023 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-6A Purging/Sampling Device: Dedicated pump Pump depth (ft btoc): _____

Initial Static Water Level (feet btoc): 91.50 Analytical Parameters: VOCs (8260D, 8011), Total Metals

Final Water Level (feet btoc): _____ QC Samples Collected: None

Purge Start Time: 1315 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 2.5

Sample Time: 1505 Controller Settings: Recharge: _____ secs Discharge: _____ secs Pressure: _____ psi

Samplers' Signatures: [signature] Cycles Per Minute: _____

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1450	94.5	17.1	7.13	922	8.14	85.0	8.03	100	
1455	94.3	17.1	7.14	923	8.08	85.5	16.4	100	
1500	94.3	17.0	7.14	923	8.13	86.5	8.64	100	
1505	94.3	16.9	7.14	924	8.06	87.1	6.38	100	TOTAL PURGE 4.5 GALLONS
1505		SAMPLE COLLECTED							

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 16.5 secs Discharge: 3.5 secs

Pressure: 105 psi Cycles Per Minute: 3 Flow Rate: 100-150 mL/min

Screened Interval: 145.4-165.4 ft bgs Minimum purge volume: 2.5 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 5/19/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-8 Purging/Sampling Device: Dedicated pump Pump depth (ft btoc): _____

Initial Static Water Level (feet btoc): 195.3 Analytical Parameters: VOCs (8260D, 8011), Total Metals, Total Sulfide

Final Water Level (feet btoc): 196.35 QC Samples Collected: None

Purge Start Time: 1000 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 0.1

Sample Time: 1140 Controller Settings: Recharge: _____ secs Discharge: _____ secs Pressure: _____ psi

Samplers' Signatures: [signature] Cycles Per Minute: _____

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1125	196.23	14.6	7.23	611	9.11	53.7	6.88	150	
1130	196.26	14.7	7.23	609	9.17	56.2	7.55	150	
1135	196.28	14.6	7.22	609	9.09	59.0	9.79	150	
1140	196.3	14.5	7.22	609	9.13	59.9	6.96	150	
1140	SAMPLE	COLLECTED							Total PURGE 3Gral

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 24 secs Discharge: 6 secs

Pressure: 150 psi Cycles Per Minute: 3 Flow Rate: 100-150 mL/min

Screened Interval: 189.5-229.5 ft bgs Minimum purge volume: 1.3 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 5/19/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-9 Purging/Sampling Device: Dedicated pump Pump depth (ft btoc): _____

Initial Static Water Level (feet btoc): ~191* Analytical Parameters: VOCs (8260D, 8011), Total Metals, Total Sulfide

Final Water Level (feet btoc): ~192* QC Samples Collected: None

Purge Start Time: 0815 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 2.0

Sample Time: 0940 Controller Settings: Recharge: _____ secs Discharge: _____ secs Pressure: _____ psi

Samplers' Signatures: [signature] Cycles Per Minute: _____

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
0928	192 *	12.7	6.25	8838	0.07	-123.5	13.1	270	Brown Sludge is blocking
0933	192	12.7	6.25	8824	0.07	-134.9	13.4	270	the water level meter
0938	192	12.7	6.25	8807	0.06	-139.0	12.0	270	can't take accurate values
0940	SAMPLE	COLLECTED							total purge 3.5 Gal

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: 14 secs Discharge: 6 secs
Pressure: 180 psi Cycles Per Minute: 3 Flow Rate: 250-300 mL/min

Screened Interval: 229.5-269.5 ft bgs Minimum purge volume: 2.7 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

GROUNDWATER MONITORING WELL
LOW-FLOW SAMPLING DATA SHEET

Site Name: FHML Date: 5/19/23 OVM: FID ☐ PID ■ In Casing (ppm): (Initial) 0.0 (Vented to) 0.0

Well ID: MW-5AR Purging/Sampling Device: Dedicated pump Pump depth (ft btoc): 205

Initial Static Water Level (feet btoc): 153.5 Analytical Parameters: VOCs (8260D, 8011), Total Metals

Final Water Level (feet btoc): _____ QC Samples Collected: None

Purge Start Time: 1600 Ferrous Iron (mg/L): NA Allowable Drawdown (ft): 4.0

Sample Time: 1835 Controller Settings: Recharge: _____ secs Discharge: _____ secs Pressure: _____ psi

Samplers' Signatures: Damon Shuck Cycles Per Minute: _____

Time	Water Level (ft btoc)	Temperature (Degrees C)	pH	Specific Cond. (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Comments
1800	156.6	16.8	7.22	1684	3.45	5.8	9.01	100	
1815	156.7	13.4	7.24	1707	3.95	17.8	3.65	100	Min Purge met
1825	156.7	13.3	7.21	1683	3.83	14.1	13.4	100	
1830	156.7	13.2	7.21	1680	3.82	13.5	8.72	100	
1835	156.7	13.0	7.21	1689	3.79	14.0	3.57	100	
1835		SAMPLE COLLECTED							

Casing Volume Calculations:
Water Col. X Casing Factor = Gallons per Casing Volume
Casing Factors: 2" diameter well: 0.16 / 4" diameter well: 0.65 / 6" diameter well: 1.47

Previous controller settings: Recharge: _____ Discharge: _____

Pressure: _____ Cycles Per Minute: _____ Flow Rate: 100-150 mL/min

Screened Interval: 195-215 ft bgs Minimum purge volume: 3.8 gallons

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature	± 1° C	DO	± 10 %
pH	± 0.1 pH unit	ORP	± 10mV
Conductivity	± 10 %	Water Level	± 0.1 foot
		Turbidity	< 50 NTU

GW Sampling FHMLF 4/10/23

1300 Onsite. Unpack bottles + equipment

1400 Health + Safety meeting

1430 Calibrate RKI units

Unit 1 · 50% LEL → 52.5%

100 ppm VOC → 98.5

Unit 2 · 50% LEL → 51%

100 ppm → 105.6 ppm

1522 Collected water level and transducer at MW-1125

1528 Collected water level at MW1120

1550 Collected water level at MW-1 and MW-1015 and transducer at MW-1015

1600 Collected water level at MW-122

1735 Collected water level and transducer at MP-2

1745 Packed up equipment and demobilized offsite.

4/10/23

4/11/23 GW SAMPLING

0700 Team onsite health and safety meeting.

0730 Calibrate equipment

0800 Water level measurements in cells 1, recon on cells 2 and 4.

0930 water level measure in residential area

1205 Setup at MW105S team training.

1235 Setup at MP-1

~~1420~~ PS 1330 Sample at MW105S

1424 Setup at MW105D

1600 SAMple collected at MW105D

1730 Clean up and team offsite

4/11/23

Scale: 1 squa

4/12/2023 GW SAMPLING

0700 TEAM ONSITE AND CALIBRATE EQUIPMENT.

0800 HEALTH AND SAFETY AND DAILY ASSIGNMENTS

0830 TEAMS MOBILIZE TO MW124 AND MW125

1042 COLLECT SAMPLE AND CONDUCT DECON EVENT

1215 COLLECT RINSATE SAMPLE EB ~~02 2023~~ 02 20230412 AT MW-125, PRIOR PUMP USAGE AT MP-2

1330 JESSIE AND ADRIA TO SURFACE WATER / SEEPAGE SURVEY

1400 SAMPLE SHIPPING PREP

1500 DEPARTURE TO FEDEX

1610 SHIP SAMPLES

1700 BACK TO SITE

1720 CHECKING DATA LOGGER IN STORMWATER POND

1800 CLEAN UP AND TEAM OFFSITE

4/12/2023

4/13/23 GW SAMPLING

0700 TEAM ONSITE, HEALTH AND SAFETY. SITE CONDITIONS ARE SNOWY AND COLD

0730 CALIBRATE EQUIPMENT

0830 SETUP AT MW-120S

0915 K. Leslie OFFSITE FOR SUPPLY RUN.

1020 COLLECT SAMPLE MW-120S-20230413

1100 SETUP AT MW-120D

1105 K. Leslie RETURN TO SITE.

1335 SAMPLE COLLECTED MW-120D-20230413

1409 SETUP AT MP-3

1430 PURGE START TIME

1626 COLLECT SAMPLE AT MP-3 MP-3-20230413

1515 TEAM OFFSITE.

4.13.2023

Scale: 1 square =

4/14/2023 GW SAMPLING

0700 TEAM ONSITE, HEALTH AND SAFETY MEETING.

0730 CALIBRATE EQUIPMENT

0800 SETUP AT MP-4.

0840 START PURGE AT MP-4

0945 COLLECTED SAMPLE AT MP-4 [MP-4-20230414] AND DECON

1010 COLLECTED EQUIPMENT BLANK [EB-04-20230414]

1025 MOVED TO MW-110S

1205 COLLECTED SAMPLE AT MW-110S [MW-110S-20230414] AND DECONED PUMP.

1240 MOVED TO MW-111D

1335 PURGE START.

1530 SAMPLE COLLECTED AT MW-111D. [MW-111D-20230414]

1630 Unloaded EQUIPMENT

1645 TEAM OFFSITE

Damon Shumaker 4-14-2023

4/15/23 GW SAMPLING

0700 TEAM ONSITE CALIBRATE EQUIPMENT AND LOADING

0730 HEALTH AND SAFETY

0800 MOBILIZE TO MW-101S

0900 PURGE START TIME

0940 SAMPLE COLLECTED AT [MW-101S-20230415].

0953 PULLED PUMP AND DECON.

1010 COLLECTED EQUIPMENT BLANK [EB-05 20230415]

1200 TEAM MOVED TO MW-112M AND STARTED PURGE.

1245 COLLECTED SAMPLE [MW-112M-20230415]

1257 TEAM SETUP AT MW-112D AND START PURGE. DECON PUMP USED AT MW-112M.

1405 SAMPLE COLLECTED AT [MW-112D-20230415]

1517 TEAM SETUP AT MW-109S AND START PURGE.

1530 D. Shewmaker AND J. Miller TO CELL 214 →

4/15/2023 GW SAMPLING

TO ASSESS SITE ACCESS CONDITIONS. MW-3A AND MW-4A ROADS ARE NOT CURRENTLY ACCESSIBLE. DISCUSSED ACCESS WITH A. MEAD AND K. LESLIE AND ALL AGREED TO FINISH CELL 1 AND DEMOB TEAM.

1540 SAMPLE COLLECTED AT MW-109S-20230415.

1618 TEAM MOVED TO MW-109D AND STARTED PURGE.

1625 D. SHEUMAKER, A. MEAD, J. MILLER CLEAN AND ORGANIZE THE SUPPLY SHED.

1800 SAMPLE COLLECTED AT MW-109D-20230415.

1830 TEAM FINISHED SHED AND UNLOADED EQUIPMENT. TEAM OFFSITE.

4-15-2023

Date: April 11, 2023	Author: Kara Leslie			
Project/Client: FHML / Barnes County				
Weather:	AM - Windy. 50°F.			
	PM - Sunny 70°F			
Field Team:	Kara Leslie, Jessie Yaich, Damon Shewmaker,			
	Hannah Folstad, Adna Read			
Activity:	Groundwater sampling			
Work Plan:				
Equipment:	Bladder pumps, compressor, other safety			
	equipment.			
H&S Issues:	Slip trip, falls, traffic			
PPE:	Modified Level D			
0700	Onsite, Health and safety			
0730	Calibrate equipment			
800	J. Yaich, A. Read downloading transducers			
	and manually note levels in pairing 7&8			
	K. Leslie, Jamie measuring note levels in			
	Cell 2/4 and offsite wells.			
	D. Shewmaker, H. Folstad measuring Cell 7 water levels			
11:00	All teams organizing equipment			
12:00	Setting up on MW-1055D (contractor to be set			
12:30	Set up on MP-2 (J. Yaich, A. Read, K. Leslie)			
1300	Started purging MP-2			

Date: April 11, 2023 Author: Kovalesic

Project/Client: FHML / Barnett Ventures

14:30	A. Mead left with Jansen Malbeck to survey surface water in FH creek. Todd notes spacing
14:40	Collected | MP-2-20230411 |
15:00	Decon portable pump
15:45	Collected | EB-01-20230411 |
16:05	| RW-10-20230411 |
16:10	| RW-5-20230411 |
16:20	| RW-9R-20230411 |
16:30	| RW-15-20230411 |
16:30	| INJ-1R-20230411 |
16:40	| RW-17-20230411 |
	Remediation wells sampled by J Miller and Injection well sampled by A Mead & J Kovalesic
17:05	All leave offsite

CamScanner

Date: 4/12/23	Author: Joe Miller				
Project/Client: FHML					
Weather:	AM -	Overcast	45		
	PM -				
Field Team:	Jessica Yaich / Joe Miller				
Activity:	Groundwater Sampling				
Work Plan:					
Equipment:	Bladder pump w/ Compressor				
H&S Issues:					
PPE:	Level D				
0700	Onsite Calibrate Meters				
	H+S tailgate JM				
0820	Set up ~~MW-125~~ MW-124				
0850	~~JM~~ Set up Pump Begin pumping				
0855	~~Gen~~ GoF water Begin Reading				
0920	4,776" TOC below Ground				
0950	Collect Sample MW-124-20230412				
1000	Collect duplicate				
	MW-124 Includes CSIA + Quarterly				
1205	Finish Quarterly purge				
1220	Decon / prep to Mob to Rhoa				

Date: 4/12/23 Author: Joe Miller

Project/Client: FHML

1230	Break for lunch w/ team
1315	Setup RW 2
1435	Sample RW-02-20230412
1515	Decon/Move
1540	Arrive MW-118
~~17~~ 1705	Sample MW-118-20230412
1730	Decon'ed Ready to Mob truck by Hwy
	Dead Call Daman planning to come
	Jump US
1750	Jumped Unload Equipment
1800	Offsite

Joe 4/12/23

Date: 4/13/23		Author: Joe Miller			
Project/Client: FHML & GWS					
Weather:	AM -	25°F Snow wind			
	PM -				
Field Team:	Joe Miller / Hannah Ralston				
Activity:	Groundwater Samplings				
Work Plan:					
Equipment:	YSI	MP50	PID		
H&S Issues:	Cold / Fatigue				
PPE:	Level D				
0700	Onsite Calibrate Meters				
0800	H+S tailgate w/ Full team				
0825	Setup MW-119S				
0915	Sample MW-119S-20230413				
0930	Decon Setup MW-119D				
1055	Sample MW-119D-20230413				
1115	Decon / Mob to next well				
1145	Setup RW-03 deploy pump to 70' DTW 58.25				
1245	Sample RW-03-20230413				
1320	Decon / Mob				

Date: 4/13/23 Author: Joe Miller

Project/Client: FHML

1340	Mob to dump purge water in Roof
1415	Collect EB off pump prior to deploying @ RW01 off decon from RW03 EB-03-20230413
1425	Setup RW01
1520	Sample RW-01-20230413
1545	Pull pump to decon, pump Has metal chunks from well Rusting On it. Adria took photo
~~1730~~ 1600	Offload Equipment
1635	Joe/Hannah Offsite

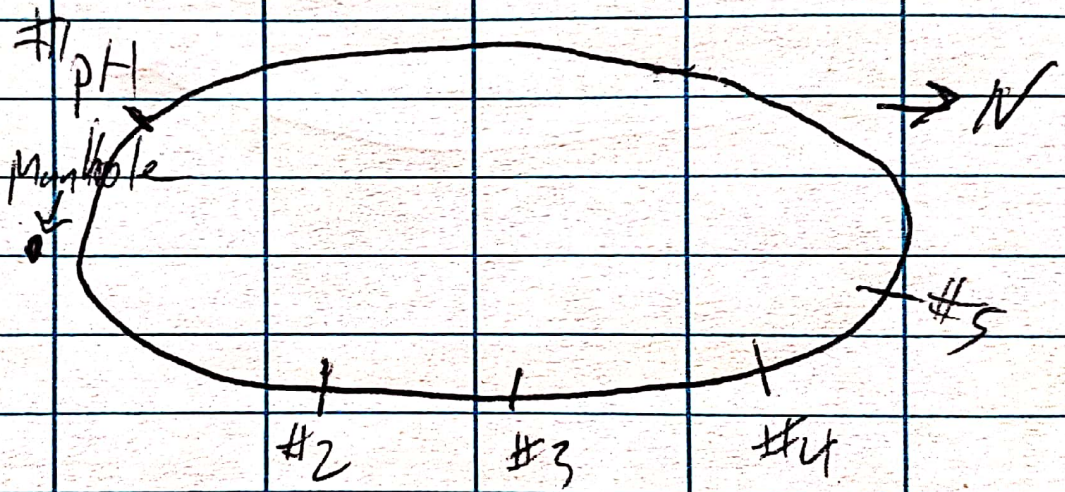
4/13/23

Date: 4/14/23		Author: Jae Miller			
Project/Client: FHNL					
Weather:	AM -	26-40°F Clear/overcast			
	PM -				
Field Team:	Jae Miller				
	Jessica Yaich				
Activity:	Groundwater Sampling				
Work Plan:	YSI PID				
Equipment:	↓				
H&S Issues:	Cold, Fatigue, working Near water				
PPE:	level D				
0700	Onsite Calibrate Meters				
0745	H&S tailgate/Load Equipment				
0815	Setup MW-113S				
	Sample MW-113S-20230414				
	Setup MW-113D				
1200	Call Karla discuss drawdown + air Bubbles. Could be geochemical, could Be tubing				
12-55	Sample MW-113D-20230414				
	Noticed hole in tubing when pulling pump Needs New tubing				

Date: 4/14/23 Author: Joe Miller

Project/Client: FHML

1330	Set up MW-102
1450	Sample MW-102-20230414
1530	~~1530~~ Arrive Leachate Manhole
	& water Backed up into vault influent
	No flow, do not collect sample
1545	collect pH at pond (upper



1553	#1 7.36
1555	#2 7.35
1557	#3 7.29
1559	#4 7.28
1601	#5 7.26
1608	Mob to Lower Pond
	Continued on Next Page

JM

Date: 4/14/23 Cont. Author: Joe Miller

Project/Client: ~~FMH~~ FHML

Weather: AM -

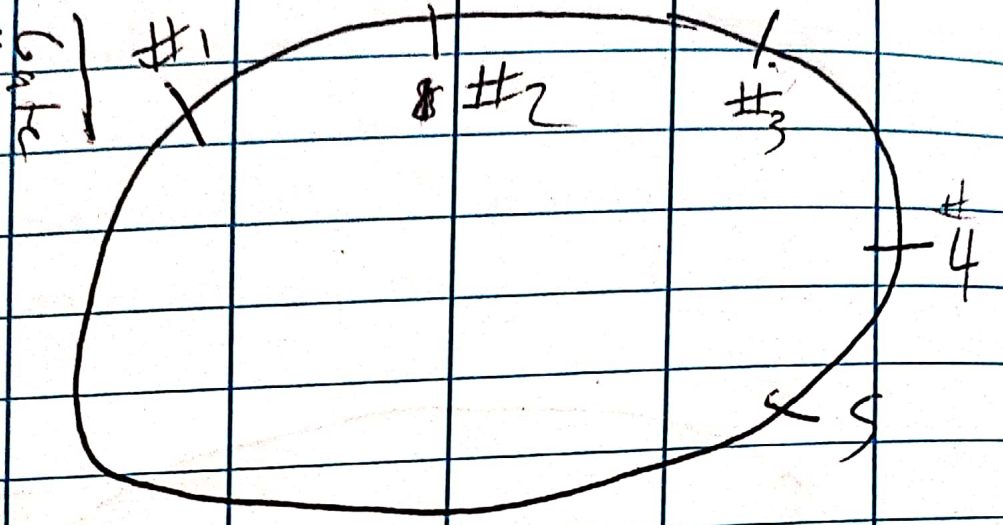
PM -

Field Team:

Activity:

Work Plan:

Equipment:



1610 #1 8.33

H&S Issues: #2 8.33

PPE: #3 8.34

#4 8.34

#5 8.33

1630 Return to Lot

4/14/23

Date: 4/15/23 Author: Joe Miller

Project/Client: FHML

0700	Onsite Task 6 w Sampling
	~~Task~~ Temp 27-55°F
	Team: Joe Milk Jessie Yaich
0820	Setup Mw-~~11~~ 11Ss, Need String/keys
	Jessie to meet Damon
0900	Install Pump
1000	Conversation w/ Brad Smalley
	208-221-7783 about Getting
	Nitrate info for FSH
1030	Sample MW-11Ss-20230415
1050	Decon/Mob
1100	Setup MW-103s
1225	Sample MW-103s-20230415
1245	Get Gas in truck
1300	Setup MW-123
1455	Sample MW-123-20230415
1510	Mob to MW-109, Trade Jessie for
	Damon
1600	Help w/ shed
1700	Offsite

5/15/2023 GW SAMPLING

1130 TEAM ONSITE, UNPACK EQUIPMENT

1300 HEALTH AND SAFETY

1330 CALIBRATE EQUIPMENT

1345 SETUP AT MW-124

1400 START PURGE AT MW-124

1500 COLLECT SAMPLE AT MW-124 [MW-124-20230515]

~~1530 COPS~~

1530 COLLECT EQUIPMENT [EB-01-20230515]

1600 SETUP AT MW-125

1630 START PURGE

1730 COLLECT SAMPLE AT [MW-125-~~0515~~-20230515]

VERY LONG SAMPLE COLLECTION TIME.

1930 PACKUP MW-125.

1945 ASSIST WITH TRACER GROUP.

2030 TEAMS OFFSITE.

5/15/2023

Rite in the Rain

5/16/2023 GW SAMPLING

0800 TEAM ONSITE
ORGANIZE EQUIPMENT
0845 HEALTH AND SAFETY
0900 SETUP AT MP-2
0915 PURGE START TIME
1050 SAMPLE COLLECTED
AT MP-2-20230516
1100 SETUP AT RW-2
1120 PURGE START TIME
1200 SAMPLE COLLECTED
AT RW-2-20230516
~~1205~~ 1230 EQUIPMENT BLANK
COLLECTED FROM PUMP
USED YESTERDAY AT
MW-124 AND TODAY
AT MP-2.
~~1205~~ EB-02-20230516
1253 SAMPLE COLLECTED
AT RW-15-20230516
1330 PREP TO SHIP
TA AND M1 SAMPLES
AND RETURN FE1
RENTAL EQUIP.
1430 DRIVE TO SHIP
1700 BACK ONSITE AND PACK
1730 TEAM OFFSITE.

Scale: 1 square =

5/17/2023 GW SAMPLING

0800 TEAM ONSITE.

0830 HEALTH AND SAFETY EQUIPMENT CALIBRATION

0900 LOADING EQUIPMENT AND TRAINING ON NITROGEN TANK MANAGEMENT.

0930 SETUP AT MW-4

1000 START PURGE AT MW-4.

1105 SAMPLE COLLECTED MW-4-20230517

1215 SETUP AT MW-13.

1230 START PURGE AT MW-13.

1400 SAMPLES COLLECTED MW-13-20230517 AND DUPLICATE MW-13-Q-20230517

1445 SETUP AT MW-4A

1500 START PURGE.

1600 SAMPLE COLLECTED MW-4A-20230517

1700 UNPACK EQUIPMENT AND DUMP PURGE WATER.

1715 TEAM OFFSITE.

5/17/23

Rite in the Rain

5/18/2023 GW SAMPLING

0800 TEAM ONSITE.
0830 HEALTH & SAFETY
CALIBRATE EQUIPMENT.
0845 SETUP AT MW-12
0855 START PURGE
0940 SAMPLE COLLECTED
AT [MW-12-05182023] AND
COLLECTION OF MS/MSD
SAMPLES.
1015 SETUP AT MW-3A
1030 START PURGE.
1455 SAMPLE COLLECTED
AT [MW-3A-05182023]
1530 DUMP PURGE WATER
1600 PACK EQUIPMENT
& TEAM OFFSITE.

5/18/2023

5/19/2023 GW SAMPLING

0700 TEAM ONSITE.

0730 HEALTH & SAFETY

0800 CALIBRATE EQUIPMENT

0815 SETUP AT MW-9

0815 PURGE START TIME

0940 SAMPLE COLLECTED AT [MW-9-05192023]

0950 SETUP AT MW-8

1000 PURGE START TIME

1140 SAMPLE COLLECTED AT [MW-8-05192023]

1300 SETUP AT MW-6A

1315 PURGE START TIME

1505 SAMPLE COLLECTED AT [MW-6A-05192023]

1530 SETUP AT MW-5AR, LOCK WAS NOT WORKING SO HAD TO BE CUT.

1600 PURGE START.

1835 SAMPLE COLLECTED AT MW-5AR-05192023

1900 TEAM UNPACK AND OFFSITE.

5/19/2023

Rite in the Rain

TREATMENT SYSTEM ON

WATER LEVEL MEASUREMENTS

Project: Bannock Fort Hall Mine Landfill (FHML) | Project No.: 237792
Weather Conditions: 45 degree F, cold and snowy | Date: 04/10/2023
Site Conditions: Snowy | Measured By: DS, JY, KL, JM, AM
Measurement Device: Geotech - Water Level Meter | Calculations By: NA
Elevation Datum: Elevation Datum available in Table 3-1

Well	Time	Depth to Water	Reference	Reference Elevation	Water Elevation	Comments
MW-1	1555	61.4				
MW-101S	1550	57.35				Transducer
MW-102S	0935	131.95				
MW-104S	0827	53.61				Transducer
MW-104D	0819	57.62				Transducer
MW-105S	0907	55.80				
MW-105D	0905	59.70				
MW-109S	1120	49.0				
MW-109D	1124	60.50				
MW-110S	1035	120.70				
MW-110D	1040	124.5				
MW-111S	1010	74.10				
MW-111D	1002	75.45				
MW-112S	1522	62.10				
MW-112M	1105	63.50				Transducer
MW-112D	1528	63.85				
MW-113S	1020	31.75				
MW-113D	1017	30.75				
MW-117R	0948	125.50				
MW-118D	NA	85.78				
MW-119S	NA	65.79				
MW-119D	NA	69.51				
MW-120S	NA	76.2				
MW-120D	NA	75.9				

Additional Comments: Reference, reference elevation, and water elevation data is available in Table 3-1

TREATMENT SYSTEM ON

WATER LEVEL MEASUREMENTS

Project: Bannock Fort Hall Mine Landfill (FHML) | Project No.: 237792
Weather Conditions: 45 degree F, cold and snowy | Date: 04/10/2023
Site Conditions: Snowy | Measured By: DS, JY, KL, JM, AM
Measurement Device: Geotech - Water Level Meter | Calculations By: NA
Elevation Datum: Elevation Datum available in Table 3-1

Well	Time	Depth to Water	Reference	Reference Elevation	Water Elevation	Comments
MW-122	1600	51.15				
MW-123	1140	38.7				
MP-1	0840	58.6				Transducer
MP-2	1735	67.01				Transducer
MP-3	1019	59.81				
MP-4	1016	58.73				
MP-9	--	--				Not accessible due to snow
MW-103S	1010	107.97				
MW-103D	0935	105.22				
MW-106S	0945	66.65				
MW-106D	0953	65.89				
MW-115S	0955	88.36				
MW-115D	0957	88.67				
MW-12	--	--				Not accessible due to snow
MW-13	--	--				Not accessible due to snow
MW-8	--	--				Not accessible due to snow
MW-9	--	--				Not accessible due to snow
MW-3A	--	--				Not accessible due to snow
MW-4A	--	--				Not accessible due to snow
MW-4	--	--				Not accessible due to snow
MW-5A	--	--				Not accessible due to snow
MW-6A	0832	91.46				
RW-1	0941	58.20				
RW-2	1028	63.75				

Additional Comments: Reference, reference elevation, and water elevation data is available in Table 3-1

TREATMENT SYSTEM ON

WATER LEVEL MEASUREMENTS

Project: Bannock Fort Hall Mine Landfill (FHML) | Project No.: 237792
Weather Conditions: 45 degree F, cold and snowy | Date: 04/10/2023
Site Conditions: Snowy | Measured By: DS, JY, KL, JM, AM
Measurement Device: Geotech - Water Level Meter | Calculations By: NA
Elevation Datum: Elevation Datum available in Table 3-1

Well	Time	Depth to Water	Reference	Reference Elevation	Water Elevation	Comments
RW-3	--	--				Not accessible due to snow
MW-124	1100	63.69				
MW-125	1110	69.53				

Additional Comments: Reference, reference elevation, and water elevation data is available in Table 3-1

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock

Instrument (Name/Model No./ Serial No.): YSI 556 4660998

Manufacturer: YSI

~~28.84~~ 29.84 in

757.9 mm

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/14/23	1425	1409 µmho/cm	M195 7/2024	no	1409	pass	[signature]
4/14/23	117%	—	—	no	99.4	pass	[signature]
4/15/23	7.02	PH 7	M171-04	NO	6.96	Pass	[signature]
4/15/23	4.06	PH 4	#202194	~~NO~~ Yes	~~4.05~~ 10.34	Pass	[signature]
4/15/23	9.95	PH 10	M145-20	NO	10.00	Pass	[signature]
4/15/23	1.409	1409 µmho/cm	M195-07	NO	1409	Pass	[signature]
4/15/23	~~ORP~~ 220	ORP	14677	NO	220	Pass	[signature]
4/15/23	~~757.94~~ 101.1	DO	—	NO	99.1	Pass	[signature]

CamScanner

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock

Instrument (Name/Model No./ Serial No.): V113953X

Manufacturer: YSI

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/13/23	1410	Cond.	9/a/24	No	1409	Pass	
	7.1	pH 7	1/24/25	No	7	Pass	
	4.3	pH 4	6/21/24	No	4	Pass	
	10	pH 10	5/9/24	No	10	Pass	
	220	ORP	8/10/23	No	220	Pass	
	760	DO	—	No	760.5	Pass	
4/14/23	6.88	pH7	8202442 3/7/24	No	7.00	Pass	
	4.11	pH 4	8202194 2/23/24	No	4.00	Pass	
	10.03	pH10	8202569 3/10/24	No	10.06	Pass	
	1631	Cond 1409	8102225 2/28/23	No	1409	Pass	
	311	ORP 220	14677 8/10/23	Yes	220	Pass	
	90.4	DO	—	No	99.8	Pass	75294

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock County Landfill

Instrument (Name/Model No./ Serial No.): YSI 556 4660994

Manufacturer: YSI

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/11/23	7.00	pH 7	M171-04 6/28/24	No	7.00	Pass	
	10.11	pH 10	M145-20 6/10/24	No	10.00	Pass	
	4.05	pH 4	8202194 2/23/24	No	4.01	Pass	
	1339	1409 µS/cm	M195-07 7/20/24	No	1409	Pass	
	241.9	ORP 220	14677 8/10/23	No	220	Pass	
	94.3	DO 100%	DI	No	100.5	Pass	
4/12/23	1.409	Cond.	7/20/24	No	1.409	Pass	
	10	pH 10	6/10/24	No	10	Pass	
	7	pH 7	6/28/24	No	7	Pass	
	4	pH 4	2/23/24	No	4	Pass	
	220	ORP 220	8/10/23	No	220	Pass	
	763.78	DO	—	No	763	Pass	
4/14/23	170	220 mv	14677 8/10/23	No	220	pass	
4/14/23	7.1	pH 7	M171-04 6/28/24	No	7.0	pass	
4/14/23	9.92	pH 10	M145 6/10/24	No	10.0	pass	
4/14/23	4.09	pH 4	8202194 2/23/24	NO	4.01	pass	

4/11/23
763.78

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock

Instrument (Name/Model No./ Serial No.): ~~DR DR4500~~ 19110C0822163

Manufacturer: Hach

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/11/23	—	10 NTU	NOV-23	No	10.6	Pass	
4/11/23	—	100 NTU	NOV-23	No	102	Pass	
4/12/23	—	10 NTU	" "	No	11.2	PASS	
4/12/23	—	20 NTU	" "	No	20.9	PASS	
4/12/23	—	100 NTU	" "	No	98.2	PASS	
4/12/23	—	800 NTU	" "	No	772	PASS	
4/13/23	—	10	" "	NO	10.6	~~FAIL~~ PASS	
4/13/23	—	20	" "	NO	20.9	~~FAIL~~ PASS	
4/14/23	—	10.0	" "	NO	10.6	PASS	
4/14/23	—	20	" "	NO	20.6	PASS	
4/14/23	—	100	" "	NO	97.4	PASS	

CamScanner

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock

Instrument (Name/Model No./ Serial No.): 317 040 190 RN

Manufacturer: RKI

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/10/23	—	LEL 50%	50118 2/25	—	51%	PASS	
4/10/23	—	CH4 100ppm	50118 2/25	—	105.6	PASS	
4/12/23		LEL 50%	~~500-118~~ 50118 2/25	—	49%	pass	
4/12/23		VOCs 100ppm	50118 2/25	—	105	pass	
4/13/23		CH4 ~~100ppm~~ 50% LEL	50118 2/25	—	50	pass	
4/13/23		VOCs 100ppm	50118 2/25	—	105	pass	
4/14/23		LEL 50%	" "	—	51	PASS	
4/14/23		VOCs 100ppm	" "	—	103.5	PASS	
~~4/14/23~~ 4/15/23		LEL 50%	" "	—	50%	PASS	
~~4/14/23~~ 4/15/23		VOC 100ppm	" "	—	104.5	PASS	

CamScanner

EQUIPMENT CALIBRATION LOG

SITE NAME: EHMC

Instrument (Name/Model No./ Serial No.): 3170401544 RN

Manufacturer: RKI

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/10/23	—	LEL 50%	50118 2/25	—	52.5%	PASS	
4/10/23	—	100 CH4	50118 2/25	—	98.5	PASS	
4/11/23	—	LEL 50%	50118 2/25	—	50%	PASS	
4/11/23	—	CH4 100ppm	50118 2/25	—	105.5	PASS	
4/12/23	—	LEL 50%	50118 2/25	—	50%	pass	
4/12/23	—	CH4 100ppm	50118 2/25	—	106.6	pass	
4/13/23	—	CH4 100ppm	50118 2/25	—	52%	Pass	
4/13/23	—	LEL 50%	50118 2/25	—	106.6	Pass	
4/14/23	—	CH4 100ppm	" "	—	102.2	PASS	
4/14/23	—	LEL 50%	" "	—	50%	PASS	
4/15/23	—	LEL 50%	" "	—	50%	PASS	
4/15/23	—	VOC 100 ppm	" "	—	106.4 ppm	PASS	

CamScanner

EQUIPMENT CALIBRATION LOG

SITE NAME: FHMC

Instrument (Name/Model No./Serial No.): 21070 DO 002444

Manufacturer: HACH

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/11/23	—	10 NTU U10504SK	U10504SK	—	9.95	PASS	
4/11/23	—	20 NTU	" "	—	22.3	PASS	
4/11/23	—	100	" "	—	102	PASS	
4/11/23	—	800	" "	—	806	PASS	
4/12/23	—	10	" "	—	10.7	PASS	
4/12/23	—	20	" "	—	21.1	PASS	
4/12/23	—	100	" "	—	111	PASS	
4/12/23	—	800	" "	—	811	PASS	
4/13/23	—	10 NTU	" "	—	10.1	Pass	
4/13/23	—	20 NTU	" "	—	19.8	Pass	
4/13/23	—	100 NTU	" "	—	101	Pass	
4/13/23	—	800 NTU	" "	—	797	Pass	
4/14/23	—	10 NTU	" "	—	9.71	PASS	
4/14/23	—	20 NTU	" "	—	19.7	PASS	
4/14/23	—	100 NTU		—	101	PASS	

CamScanner

EQUIPMENT CALIBRATION LOG

SITE NAME: FHML

Instrument (Name/Model No./ Serial No.): Hach no serial

Manufacturer:

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/13/23	–	10 NTU	U113197X	–	11.2	Pass	
↓	–	20 NTU	–	–	22.1	Pass	
	–	100 NTU	–	–	101	Pass	
↓	–	800 NTU	–	–	812	Pass	

CamScanner

EQUIPMENT CALIBRATION LOG

SITE NAME: FHMC

Instrument (Name/Model No./ Serial No.): HACH no serial

Manufacturer:

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/11/23	—	10 NTU	U113197X	—	10.2	PASS	D
4/11/23	—	20 NTU	" "	—	20.7	PASS	D
4/11/23	—	100 NTU	" "	—	99.9	PASS	D
4/11/23	—	800 NTU	" "	—	816	PASS	D
4/12/23	—	10	" "	—	9.99	" "	D
4/12/23	—	20	" "	—	20.4	" "	D
4/12/23	—	100	" "	—	101	" "	D
4/12/23	—	800	" "	—	794	" "	D
4/13/23	—	10	" "	—	10.4	" "	D
4/13/23	—	20	" "	—	20.6	" "	D
4/13/23	—	100	" "	—	102	" "	D
4/13/23	—	800	" "	—	813	" "	D
4/14/23	—	10	" "	—	10.7	" "	D
4/14/23	—	20	" "	—	22.3	" "	D
4/14/23	—	100	" "	—	103	" "	D

CamScanner

for DO
763.78

EQUIPMENT CALIBRATION LOG

SITE NAME: Barnock

Instrument (Name/Model No./ Serial No.): U113953X

Manufacturer: YSI

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/11/23	6.98	pH 7	8111363	N	7.01	pass	HR
4/11/23	10.14	pH 10	8111170	N	10.13	pass	HR
4/11/23	4.02	pH 4	M311-03				
4/11/23	7.02	pH 7	8111363	No	7.01	pass	HRe
4/11/23	10.11	pH 10	8111170	No	10.00	pass	HR
4/11/23	4.14	pH 4	M311-03	No	4.03	pass	HR
4/11/23	1572	1409 umho/cm	8207533	no	1409	pass	HRe
4/11/23	171.2	220 mVolts	14677	no	220.0	pass	HRe
4/11/23	93.4 %	763.78	—	no	100.4 %	pass	HRe
4/12/23	7.08	pH 7	8301162	N	7.02	Pass	Idrid Head
4/12/23	9.91	pH 10	8204414	N	9.95	Pass	Idrid Head
4/12/23	4.12	pH 4	8206164	N	4.12 (3.99)	Pass	Idrid Head
4/12/23	1274	1409 umho/cm	8208544	N	1409	Pass	Idrid Head
4/12/23	218.4	220 mVolts	14677	N	220.3	Pass	Idrid Head
4/12/23	93.9%	763.78	—	N	100.6 %.	Pass	Idrid Head

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock

Instrument (Name/Model No./ Serial No.): YSI 01099788X

Manufacturer: ProQuatro

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
4/11/23	1471	Cond. Stand	8/4/24	Yes	1409	Pass	
4/11/23	10.21	pH 10	11/23/23	No	10	Pass	
4/11/23	7.08	pH 7	11/25/23	No	7	Pass	
	4	pH 4	6/20/24	No	4	Pass	
	245	ORP	8/10/23	No	220	Pass	
	666.6	Bar. Press.	—	—	666.7	Pass	
4/12/23	pH 706	pH 7	811363 11/25/23	No	7.06	Pass	
	10.17	pH 10	8111170 11/23/23	No	10.17	Pass	
	4.00	pH 4	14311-03 11/6/24	No	4.00	Pass	
	1323	Cond 1409	8207553 8/11/24	Yes	1328	Pass	
	245	ORP	14677 8-10-23	Yes	245	Pass	
	87.1	DO	—	No	87%	Pass	661.7 mm Hg
4/13/23	7	pH 7	8301162 1/24/25	no	7.0	pass	
4/13/23	10.21	pH 10	8204444 6/9/24	no	10.16	pass	
4/13/23	4.0	pH 4	8206164 6/21/24	no	4.0	pass	
4/13/23	1341	1409 mm no cm	8208549 9/9/24	no	1409	pass	

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock

Instrument (Name/Model No./ Serial No.): Pro DSS

Manufacturer: U91886X

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
5/15/23	10.06	10.00	8301447 2-2-23	No	10.00	Pass	
	7.04	7.00	8301487 2-9-25	NO	7.0	PASS	
	4.05	4.00	8302216 3-2-23	NO	4.00	Pass	
	1409	1409		NO	1409	PASS	
	~~220~~ 239	220	14677 08-10-2023	NO	220	PASS	
5/16/23	10.10	10	8111170 11/23/23	No	10	P	
	7.04	7	8111363 11/25/23	No	7	P	
	4 ~~2724~~	4	M311-C3 11/6/24	No	4	P	
	~~1409 µmho~~	1409 µmho	8207533 8/11/24	~~No~~ Yes	1409	P	
	240.3	220	14839 3/23/24	No	220	P	
	673	—	—	No	678	P	
5/17/23	10.09	10	8111170 11/23/23	No	10	P	
	7.04	7	8111363 11/25/23	No	7	P	
	4	4	M311-C3 11/6/24	No	4	P	
	1681	1409	8207533 8/11/24	~~No~~ Yes	1409	P	
	210	220	14839 3/23/24	No	220	P	

10-7-24

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock

Instrument (Name/Model No./ Serial No.): GX-6000 / 317040154RN

Manufacturer: RKI PID

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
5/15/23		100ppm	81-0143RK-04 02/25	NO	87.5ppm	Pass	AM
5/15/23		50%	81-0143RK-04 02/25	NO	51%	Pass	AM
5/16/23		100ppm	" "	NO	97 ppm	PASS	D
5/16/23		50%	" "	NO	48%	Pass	D
5/19/23		100 ppm	" "	NO	97.5	PASS	D
5/19/23		50%	" "	NO	49%	PASS	D

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock

Instrument (Name/Model No./ Serial No.): YSI Pro DSS

Manufacturer:

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
5/15/23	10.06	pH 10	2/2/23 8301442	N	10	P	
	7.02	pH 7	2/9/25 8301467	N	7	P	
	4.00	pH	3/2/25 8302216	N	4	P	
	1457	1409 µmhos	8208 SHH 9/9/24	N	1409	P	
	210.6	220 mV	14671 8/10/23	N	220	P	
	670	—	—	Y	762	P	
~~5/16/23~~							

EQUIPMENT CALIBRATION LOG

SITE NAME: Bannock

Instrument (Name/Model No./ Serial No.): Pro DSS

Manufacturer: 091886X

Calibration Date	Initial Setting	Standard/ Gas Used	Lot Control No. Expiration date	Adjustments Made?	Final Reading	Comments Pass/Fail	Signature
5/18/23	10.10	10	same as day before	No	10	P	
	7.06	7	*	No	7	P	
	4.08	4	*	No	4	P	
	210.2	220	*	No	220	P	
	1689	1409	*	No	1409	P	

Appendix C

Spring 2023 Groundwater Analytical Data

Appendix C Notes

Highlight indicates values greater than the MCL
Underline indicates values greater than IDGW Standard (or outside range for pH)
Bold indicates detected values
Italics indicates nondetected values

µg/L = micrograms per liter
µS/cm = microsiemens per centimeter
EPA = U.S. Environmental Protection Agency
ID GW = Idaho Groundwater Standards
J = Result is estimated
MCL = maximum contaminant level
mg/L = milligrams per liter
NTU = Nephelometric Turbidity Unit
PCB = Polychlorinated Biphenyl
pg/L = picograms per liter
Q = qualifier
R = Result is Rejected
su = standard unit
SVOCs = semivolatile organic compounds
U = Analyte was not detected at the associated value
UJ = The non-detection at the associated value is an estimate
VOCs = volatile organic compounds

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells											
				Well ID	MP-2		MP-3		MP-4		MW-101S		MW-102S		MW-105D		MW-105S	
				Sample Name	MP-2-20230411		MP-3-20230413		MP-4-20230414		MW-101S-20230415		MW-102S-20230414		MW-105D-20230411		MW-105S-20230411	
				Sample Date	4/11/2023		4/13/2023		4/14/2023		4/15/2023		4/14/2023		4/11/2023		4/11/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Volatile Organic Compounds																		
1,1,1,2-Tetrachloroethane	--	--	--	µg/L	*2.3*	U	*1.2*	U	*1.2*	U	*0.58*	U	*0.58*	U	*2.3*	U	*0.58*	U
1,1,1-Trichloroethane	200	200	--	µg/L	*1.6*	U	*0.78*	U	*0.78*	U	*0.39*	U	*0.39*	U	*1.6*	U	*0.39*	U
1,1,2,2-Tetrachloroethane	--	--	--	µg/L	*0.84*	U	*0.42*	U	*0.42*	U	*0.21*	U	*0.21*	U	*0.84*	U	*0.21*	U
1,1,2-Trichloroethane	5	5	--	µg/L	*1.1*	U	*0.54*	U	*0.54*	U	*0.27*	U	*0.27*	U	*1.1*	U	*0.27*	U
1,1-Dichloroethane	--	--	--	µg/L	**1.7**	J	*0.44*	U	**0.79**	J	*0.22*	U	*0.22*	U	**3.3**	J	**0.44**	J
1,1-Dichloroethene	7	7	--	µg/L	*0.92*	U	*0.46*	U	*0.46*	U	*0.23*	U	*0.23*	U	*0.92*	U	*0.23*	U
1,1-Dichloropropene	--	--	--	µg/L	*1.7*	U	*0.83*	U	*0.83*	U	*0.42*	U	*0.42*	U	*1.7*	U	*0.42*	U
1,2,3-Trichloropropane	--	--	--	µg/L	*3.4*	U	*1.7*	U	*1.7*	U	*0.86*	U	*0.86*	U	*3.4*	U	*0.86*	U
1,2,4-Trichlorobenzene	70	70	--	µg/L	*2.3*	U	*1.2*	U	*1.2*	U	*0.58*	U	*0.58*	U	*2.3*	U	*0.58*	U
1,2-Dibromo-3-Chloropropane	0.2	0.2	--	µg/L	*7*	U	*3.5*	U	*3.5*	U	*1.8*	U	*1.8*	U	*7*	U	*1.8*	U
1,2-Dibromoethane	0.05	0.05	--	µg/L	*1.6*	U	*0.81*	U	*0.81*	U	*0.4*	U	*0.4*	U	*1.6*	U	*0.4*	U
1,2-Dichlorobenzene	600	600	--	µg/L	*1.5*	U	*0.74*	U	*0.74*	U	*0.37*	U	*0.37*	U	*1.5*	U	*0.37*	U
1,2-Dichloroethane	5	5	--	µg/L	*2.2*	U	*1.1*	U	*1.1*	U	*0.54*	U	*0.54*	U	*2.2*	U	*0.54*	U
1,2-Dichloropropane	5	5	--	µg/L	*2.1*	U	*1*	U	*1*	U	*0.52*	U	*0.52*	U	*2.1*	U	*0.52*	U
1,3-Dichlorobenzene	--	600	--	µg/L	*1.3*	U	*0.67*	U	*0.67*	U	*0.33*	U	*0.33*	U	*1.3*	U	*0.33*	U
1,3-Dichloropropane	--	--	--	µg/L	*1.5*	U	*0.76*	U	*0.76*	U	*0.38*	U	*0.38*	U	*1.5*	U	*0.38*	U
1,4-Dichlorobenzene	75	75	--	µg/L	*1.6*	U	*0.78*	U	*0.78*	U	*0.39*	U	*0.39*	U	*1.6*	U	*0.39*	U
2,2-Dichloropropane	--	--	--	µg/L	*1.5*	U	*0.76*	U	*0.76*	U	*0.38*	U	*0.38*	U	*1.5*	U	*0.38*	U
2-Butanone (MEK)	--	--	--	µg/L	*24*	U	*12*	U	*12*	U	*6*	U	*6*	U	*24*	U	*6*	U
2-Hexanone	--	--	--	µg/L	*6.8*	U	*3.4*	U	*3.4*	U	*1.7*	U	*1.7*	U	*6.8*	U	*1.7*	U
4-Methyl-2-pentanone (MIBK)	--	--	--	µg/L	*3.9*	U	*2*	U	*2*	U	*0.98*	U	*0.98*	U	*3.9*	U	*0.98*	U
Acetone	--	--	--	µg/L	*26*	U	*13*	U	*13*	U	*6.6*	U	*6.6*	U	*26*	U	*6.6*	U
Acetonitrile; methyl cyanide	--	--	--	µg/L	*38*	U	*19*	U	*19*	U	*9.6*	U	*9.6*	U	*38*	U	*9.6*	U
Acrolein	--	--	--	µg/L	*19*	U	*9.7*	U	*9.7*	U	*4.9*	U	*4.9*	U	*19*	U	*4.9*	U
Acrylonitrile	--	--	--	µg/L	*18*	U	*8.9*	U	*8.9*	U	*4.5*	U	*4.5*	U	*18*	U	*4.5*	U
Allyl chloride	--	--	--	µg/L	*0.68*	U	*0.34*	U	*0.34*	U	*0.17*	U	*0.17*	U	*0.68*	U	*0.17*	U
Benzene	5	5	--	µg/L	*1.2*	U	*0.62*	U	*0.62*	U	*0.31*	U	*0.31*	U	*1.2*	U	*0.31*	U
Bromochloromethane	--	--	--	µg/L	*1.6*	U	*0.81*	U	*0.81*	U	*0.4*	U	*0.4*	U	*1.6*	U	*0.4*	U
Bromodichloromethane	80	100	--	µg/L	*1.5*	U	*0.77*	U	*0.77*	U	*0.39*	U	*0.39*	U	*1.5*	U	*0.39*	U
Bromoform	80	100	--	µg/L	*4.8*	U	*2.4*	U	*2.4*	U	*1.2*	U	*1.2*	U	*4.8*	U	*1.2*	U
Bromomethane	--	--	--	µg/L	*9.4*	U	*4.7*	U	*4.7*	U	*2.4*	U	*2.4*	U	*9.4*	U	*2.4*	U
Carbon disulfide	--	--	--	µg/L	*2.5*	U	*1.3*	U	*1.3*	U	*0.63*	U	*0.63*	U	*2.5*	U	*0.63*	U
Carbon tetrachloride	5	5	--	µg/L	*2.3*	U	*1.1*	U	*1.1*	U	*0.57*	U	*0.57*	U	*2.3*	U	*0.57*	U
Chlorobenzene	100	100	--	µg/L	*1.7*	U	*0.84*	U	*0.84*	U	*0.42*	U	*0.42*	U	*1.7*	U	*0.42*	U
Chlorodibromomethane	80	100	--	µg/L	*2.5*	U	*1.2*	U	*1.2*	U	*0.62*	U	*0.62*	U	*2.5*	U	*0.62*	U
Chloroethane	--	--	--	µg/L	*5.5*	U	*2.7*	U	*2.7*	U	*1.4*	U	*1.4*	U	*5.5*	U	*1.4*	U
Chloroform	80	2	--	µg/L	**1.6**	J	**2.1**		*0.72*	U	**0.97**	J	*0.36*	U	*1.4*	U	**1.5**	
Chloromethane	--	--	--	µg/L	*3*	U	*1.5*	U	*1.5*	U	*0.75*	U	*0.75*	U	*3*	U	*0.75*	U
Chloroprene	--	--	--	µg/L	*4.7*	U	*2.3*	U	*2.3*	U	*1.2*	U	*1.2*	U	*4.7*	U	*1.2*	U
cis-1,2-Dichloroethene	70	70	--	µg/L	**20**		**4.3**		**8.9**		**2.2**		*0.32*	U	*1.3*	U	*0.32*	U
cis-1,3-Dichloropropene	--	--	--	µg/L	*2.5*	U	*1.3*	U	*1.3*	U	*0.63*	U	*0.63*	U	*2.5*	U	*0.63*	U
Dibromomethane	--	--	--	µg/L	*1.4*	U	*0.69*	U	*0.69*	U	*0.34*	U	*0.34*	U	*1.4*	U	*0.34*	U
Dichlorodifluoromethane	--	--	--	µg/L	*3.8*	U	*1.9*	U	*1.9*	U	*0.96*	U	*0.96*	U	*3.8*	U	*0.96*	U
Ethyl methacrylate	--	--	--	µg/L	*3.4*	U	*1.7*	U	*1.7*	U	*0.86*	U	*0.86*	U	*3.4*	U	*0.86*	U
Ethylbenzene	700	700	--	µg/L	*1.2*	U	*0.61*	U	*0.61*	U	*0.3*	U	*0.3*	U	*1.2*	U	*0.3*	U
Iodomethane	--	--	--	µg/L	*10*	U	*5.2*	U	*5.2*	U	*2.6*	U	*2.6*	U	*10*	U	*2.6*	U
Isobutanol; Isobutyl alcohol	--	--	--	µg/L	*150*	U	*73*	U	*73*	U	*37*	U	*37*	U	*150*	U	*37*	U
m,p-Xylene	10000	--	--	µg/L	*1.4*	U	*0.71*	U	*0.71*	U	*0.36*	U	*0.36*	U	*1.4*	U	*0.36*	U
Methacrylonitrile	--	--	--	µg/L	*21*	U	*11*	U	*11*	U	*5.3*	U	*5.3*	U	*21*	U	*5.3*	U
Methyl methacrylate	--	--	--	µg/L	*4.4*	U	*2.2*	U	*2.2*	U	*1.1*	U	*1.1*	U	*4.4*	U	*1.1*	U

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells											
				Well ID	MP-2		MP-3		MP-4		MW-101S		MW-102S		MW-105D		MW-105S	
				Sample Name	MP-2-20230411		MP-3-20230413		MP-4-20230414		MW-101S-20230415		MW-102S-20230414		MW-105D-20230411		MW-105S-20230411	
				Sample Date	4/11/2023		4/13/2023		4/14/2023		4/15/2023		4/14/2023		4/11/2023		4/11/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Methylene Chloride	5	5	--	µg/L	*3.8*	*U*	*1.9*	*U*	*1.9*	*U*	*0.94*	*U*	*0.94*	*U*	*3.8*	*U*	*0.94*	*U*
o-xylene (1,2-dimethylbenzene)	10000	--	--	µg/L	*1.3*	*U*	*0.66*	*U*	*0.66*	*U*	*0.33*	*U*	*0.33*	*U*	*1.3*	*U*	*0.33*	*U*
Propionitrile; ethyl cyanide	--	--	--	µg/L	*15*	*U*	*7.4*	*U*	*7.4*	*U*	*3.7*	*U*	*3.7*	*U*	*15*	*U*	*3.7*	*U*
Styrene	100	100	--	µg/L	*1.4*	*U*	*0.71*	*U*	*0.71*	*U*	*0.36*	*U*	*0.36*	*U*	*1.4*	*U*	*0.36*	*U*
Tetrachloroethene	5	5	--	µg/L	**19**		**19**		**25**		**17**		**0.91**	**J**	**37**		**11**	
Toluene	1000	1000	--	µg/L	*1.3*	*U*	*0.64*	*U*	*0.64*	*U*	*0.32*	*U*	*0.32*	*U*	*1.3*	*U*	*0.32*	*U*
trans-1,2-Dichloroethene	100	100	--	µg/L	*1.5*	*U*	*0.74*	*U*	*0.74*	*U*	*0.37*	*U*	*0.37*	*U*	*1.5*	*U*	*0.37*	*U*
trans-1,3-Dichloropropene	--	--	--	µg/L	*2.6*	*U*	*1.3*	*U*	*1.3*	*U*	*0.65*	*U*	*0.65*	*U*	*2.6*	*U*	*0.65*	*U*
trans-1,4-Dichloro-2-butene	--	--	--	µg/L	*5.5*	*U*	*2.8*	*U*	*2.8*	*U*	*1.4*	*U*	*1.4*	*U*	*5.5*	*U*	*1.4*	*U*
Trichloroethene	5	5	--	µg/L	**180**		**110**		**180**		**64**		**2**		**200**		**37**	
Trichlorofluoromethane	--	--	--	µg/L	*2.3*	*U*	*1.1*	*U*	*1.1*	*U*	*0.57*	*U*	*0.57*	*U*	*2.3*	*U*	*0.57*	*U*
Vinyl acetate	--	--	--	µg/L	*3.8*	*U*	*1.9*	*U*	*1.9*	*U*	*0.94*	*U*	*0.94*	*U*	*3.8*	*U*	*0.94*	*U*
Vinyl chloride	2	2	--	µg/L	**3.7**	**J**	*1*	*U*	*1*	*U*	*0.51*	*U*	*0.51*	*U*	*2*	*U*	*0.51*	*U*
Xylene (Total)	10000	10000	--	µg/L	*1.3*	*U*	*0.66*	*U*	*0.66*	*U*	*0.33*	*U*	*0.33*	*U*	*1.3*	*U*	*0.33*	*U*

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells													
				Well ID	MW-109D		MW-109S		MW-109S		MW-110S		MW-111D		MW-112D		MW-112M	
				Sample Name	MW-109D-20230415		MW-109S-20230415		MW-109S-Q-20230415		MW-110S-20230414		MW-111D-20230414		MW-112D-20230415		MW-112M-20230415	
				Sample Date	4/15/2023		4/15/2023		4/15/2023		4/14/2023		4/14/2023		4/15/2023		4/15/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Volatile Organic Compounds																		
1,1,1,2-Tetrachloroethane	--	--	--	µg/L	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*1.2*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*
1,1,1-Trichloroethane	200	200	--	µg/L	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.78*	*U*	*0.39*	*U*	**0.58**	**J**	*0.39*	*U*
1,1,2,2-Tetrachloroethane	--	--	--	µg/L	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.42*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*
1,1,2-Trichloroethane	5	5	--	µg/L	*0.27*	*U*	*0.27*	*U*	*0.27*	*U*	*0.54*	*U*	*0.27*	*U*	*0.27*	*U*	*0.27*	*U*
1,1-Dichloroethane	--	--	--	µg/L	*0.22*	*U*	*0.22*	*U*	*0.22*	*U*	**1**	**J**	**24**		**0.48**	**J**	**0.79**	**J**
1,1-Dichloroethene	7	7	--	µg/L	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*	*0.46*	*U*	**0.43**	**J**	**1.1**		*0.23*	*U*
1,1-Dichloropropene	--	--	--	µg/L	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.83*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*
1,2,3-Trichloropropane	--	--	--	µg/L	*0.86*	*U*	*0.86*	*UJ*	*0.86*	*U*	*1.7*	*U*	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*
1,2,4-Trichlorobenzene	70	70	--	µg/L	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*1.2*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*
1,2-Dibromo-3-Chloropropane	0.2	0.2	--	µg/L	*1.8*	*U*	*1.8*	*U*	*1.8*	*U*	*3.5*	*U*	*1.8*	*U*	*1.8*	*U*	*1.8*	*U*
1,2-Dibromoethane	0.05	0.05	--	µg/L	*0.4*	*U*	*0.4*	*UJ*	*0.4*	*U*	*0.81*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
1,2-Dichlorobenzene	600	600	--	µg/L	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*	**2.7**		**8.9**		*0.37*	*U*	*0.37*	*U*
1,2-Dichloroethane	5	5	--	µg/L	*0.54*	*U*	*0.54*	*U*	*0.54*	*U*	*1.1*	*U*	*0.54*	*U*	*0.54*	*U*	*0.54*	*U*
1,2-Dichloropropane	5	5	--	µg/L	*0.52*	*U*	*0.52*	*U*	*0.52*	*U*	**1**	**J**	**2.4**		*0.52*	*U*	*0.52*	*U*
1,3-Dichlorobenzene	--	600	--	µg/L	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.67*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
1,3-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.76*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*
1,4-Dichlorobenzene	75	75	--	µg/L	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	**0.79**	**J**	**3.6**		*0.39*	*U*	*0.39*	*U*
2,2-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.76*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*
2-Butanone (MEK)	--	--	--	µg/L	*6*	*U*	*6*	*U*	*6*	*U*	*12*	*U*	*6*	*U*	*6*	*U*	*6*	*U*
2-Hexanone	--	--	--	µg/L	*1.7*	*U*	*1.7*	*U*	*1.7*	*U*	*3.4*	*U*	*1.7*	*U*	*1.7*	*U*	*1.7*	*U*
4-Methyl-2-pentanone (MIBK)	--	--	--	µg/L	*0.98*	*U*	*0.98*	*U*	*0.98*	*U*	*2*	*U*	*0.98*	*U*	*0.98*	*U*	*0.98*	*U*
Acetone	--	--	--	µg/L	*6.6*	*U*	*6.6*	*U*	*6.6*	*U*	*13*	*U*	*6.6*	*U*	*6.6*	*U*	*6.6*	*U*
Acetonitrile; methyl cyanide	--	--	--	µg/L	*9.6*	*U*	*9.6*	*U*	*9.6*	*U*	*19*	*U*	*9.6*	*U*	*9.6*	*U*	*9.6*	*U*
Acrolein	--	--	--	µg/L	*4.9*	*U*	*4.9*	*U*	*4.9*	*U*	*9.7*	*U*	*4.9*	*U*	*4.9*	*U*	*4.9*	*U*
Acrylonitrile	--	--	--	µg/L	*4.5*	*U*	*4.5*	*U*	*4.5*	*U*	*8.9*	*U*	*4.5*	*U*	*4.5*	*U*	*4.5*	*U*
Allyl chloride	--	--	--	µg/L	*0.17*	*U*	*0.17*	*U*	*0.17*	*U*	*0.34*	*U*	*0.17*	*U*	*0.17*	*U*	*0.17*	*U*
Benzene	5	5	--	µg/L	*0.31*	*U*	*0.31*	*U*	*0.31*	*U*	**0.63**	**J**	**7.3**		*0.31*	*U*	*0.31*	*U*
Bromochloromethane	--	--	--	µg/L	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.81*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
Bromodichloromethane	80	100	--	µg/L	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.77*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
Bromoform	80	100	--	µg/L	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*2.4*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*
Bromomethane	--	--	--	µg/L	*2.4*	*U*	*2.4*	*U*	*2.4*	*U*	*4.7*	*U*	*2.4*	*U*	*2.4*	*U*	*2.4*	*U*
Carbon disulfide	--	--	--	µg/L	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*1.3*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*
Carbon tetrachloride	5	5	--	µg/L	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*	*1.1*	*U*	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*
Chlorobenzene	100	100	--	µg/L	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.84*	*U*	**6.7**		*0.42*	*U*	*0.42*	*U*
Chlorodibromomethane	80	100	--	µg/L	*0.62*	*U*	*0.62*	*U*	*0.62*	*U*	*1.2*	*U*	*0.62*	*U*	*0.62*	*U*	*0.62*	*U*
Chloroethane	--	--	--	µg/L	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*2.7*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*
Chloroform	80	2	--	µg/L	**0.55**	**J**	**0.65**	**J**	**0.62**	**J**	*0.72*	*U*	**0.48**	**J**	*0.36*	*U*	**1.2**	
Chloromethane	--	--	--	µg/L	*0.75*	*U*	*0.75*	*U*	*0.75*	*U*	*1.5*	*U*	*0.75*	*U*	*0.75*	*U*	*0.75*	*U*
Chloroprene	--	--	--	µg/L	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*2.3*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*
cis-1,2-Dichloroethene	70	70	--	µg/L	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*	**15**		**9.2**		*0.32*	*U*	**0.4**	**J**
cis-1,3-Dichloropropene	--	--	--	µg/L	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*1.3*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*
Dibromomethane	--	--	--	µg/L	*0.34*	*U*	*0.34*	*U*	*0.34*	*U*	*0.69*	*U*	*0.34*	*U*	*0.34*	*U*	*0.34*	*U*
Dichlorodifluoromethane	--	--	--	µg/L	*0.96*	*U*	*0.96*	*U*	*0.96*	*U*	*1.9*	*U*	**6.5**		**2.8**	**J**	*0.96*	*U*
Ethyl methacrylate	--	--	--	µg/L	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*	*1.7*	*U*	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*
Ethylbenzene	700	700	--	µg/L	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.61*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*
Iodomethane	--	--	--	µg/L	*2.6*	*U*	*2.6*	*U*	*2.6*	*U*	*5.2*	*U*	*2.6*	*U*	*2.6*	*U*	*2.6*	*U*
Isobutanol; Isobutyl alcohol	--	--	--	µg/L	*37*	*U*	*37*	*U*	*37*	*U*	*73*	*U*	*37*	*U*	*37*	*U*	*37*	*U*
m,p-Xylene	10000	--	--	µg/L	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.71*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Methacrylonitrile	--	--	--	µg/L	*5.3*	*U*	*5.3*	*U*	*5.3*	*U*	*11*	*U*	*5.3*	*U*	*5.3*	*U*	*5.3*	*U*
Methyl methacrylate	--	--	--	µg/L	*1.1*	*U*	*1.1*	*U*	*1.1*	*U*	*2.2*	*U*	*1.1*	*U*	*1.1*	*U*	*1.1*	*U*

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells													
				Well ID	MW-109D		MW-109S		MW-109S		MW-110S		MW-111D		MW-112D		MW-112M	
				Sample Name	MW-109D-20230415		MW-109S-20230415		MW-109S-Q-20230415		MW-110S-20230414		MW-111D-20230414		MW-112D-20230415		MW-112M-20230415	
				Sample Date	4/15/2023		4/15/2023		4/15/2023		4/14/2023		4/14/2023		4/15/2023		4/15/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Methylene Chloride	5	5	--	µg/L	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*1.9*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*
o-xylene (1,2-dimethylbenzene)	10000	--	--	µg/L	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.66*	*U*	**0.74**	**J**	*0.33*	*U*	*0.33*	*U*
Propionitrile; ethyl cyanide	--	--	--	µg/L	*3.7*	*U*	*3.7*	*U*	*3.7*	*U*	*7.4*	*U*	*3.7*	*U*	*3.7*	*U*	*3.7*	*U*
Styrene	100	100	--	µg/L	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.71*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Tetrachloroethene	5	5	--	µg/L	**20**		**15**	**J**	**15**		**18**		**1.6**		**12**		**14**	
Toluene	1000	1000	--	µg/L	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*	*0.64*	*U*	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*
trans-1,2-Dichloroethene	100	100	--	µg/L	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*	*0.74*	*U*	**1.3**		*0.37*	*U*	*0.37*	*U*
trans-1,3-Dichloropropene	--	--	--	µg/L	*0.65*	*U*	*0.65*	*U*	*0.65*	*U*	*1.3*	*U*	*0.65*	*U*	*0.65*	*U*	*0.65*	*U*
trans-1,4-Dichloro-2-butene	--	--	--	µg/L	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*2.8*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*
Trichloroethene	5	5	--	µg/L	**66**		**48**		**47**		**130**		**110**		**190**		**190**	
Trichlorofluoromethane	--	--	--	µg/L	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*	*1.1*	*U*	*0.57*	*U*	**2**		*0.57*	*U*
Vinyl acetate	--	--	--	µg/L	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*1.9*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*
Vinyl chloride	2	2	--	µg/L	*0.51*	*U*	*0.51*	*U*	*0.51*	*U*	**4.6**		**6.1**		*0.51*	*U*	*0.51*	*U*
Xylene (Total)	10000	10000	--	µg/L	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.66*	*U*	**0.74**	**J**	*0.33*	*U*	*0.33*	*U*

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells											
				Well ID	MW-113D		MW-113S		MW-118D		MW-119D		MW-119S		MW-120D		MW-120S	
				Sample Name	MW-113D-20230414		MW-113S-20230414		MW-118D-20230412		MW-119D-20230413		MW-119S-20230413		MW-120D-20230413		MW-120S-20230413	
				Sample Date	4/14/2023		4/14/2023		4/12/2023		4/13/2023		4/13/2023		4/13/2023		4/13/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Volatile Organic Compounds																		
1,1,1,2-Tetrachloroethane	--	--	--	µg/L	*0.58*	U	*0.58*	U	*0.58*	U	*0.58*	U	*1.2*	U	*0.58*	U	*0.58*	U
1,1,1-Trichloroethane	200	200	--	µg/L	*0.39*	U	*0.39*	U	*0.39*	U	*0.39*	U	*0.78*	U	*0.39*	U	*0.39*	U
1,1,2,2-Tetrachloroethane	--	--	--	µg/L	*0.21*	U	*0.21*	U	*0.21*	U	*0.21*	U	*0.42*	U	*0.21*	U	*0.21*	U
1,1,2-Trichloroethane	5	5	--	µg/L	*0.27*	U	*0.27*	U	*0.27*	U	*0.27*	U	*0.54*	U	*0.27*	U	*0.27*	U
1,1-Dichloroethane	--	--	--	µg/L	**0.41**	J	**26**		**7.8**		*0.22*	U	*0.44*	U	**1.1**		**1.2**	
1,1-Dichloroethene	7	7	--	µg/L	*0.23*	U	**0.82**	J	**0.48**	J	*0.23*	U	*0.46*	U	**1.1**		*0.23*	U
1,1-Dichloropropene	--	--	--	µg/L	*0.42*	U	*0.42*	U	*0.42*	U	*0.42*	U	*0.83*	U	*0.42*	U	*0.42*	U
1,2,3-Trichloropropane	--	--	--	µg/L	*0.86*	U	*0.86*	U	*0.86*	U	*0.86*	U	*1.7*	U	*0.86*	U	*0.86*	U
1,2,4-Trichlorobenzene	70	70	--	µg/L	*0.58*	U	*0.58*	U	*0.58*	U	*0.58*	U	*1.2*	U	*0.58*	U	*0.58*	U
1,2-Dibromo-3-Chloropropane	0.2	0.2	--	µg/L	*1.8*	U	*1.8*	U	*1.8*	U	*1.8*	U	*3.5*	U	*1.8*	U	*1.8*	U
1,2-Dibromoethane	0.05	0.05	--	µg/L	*0.4*	U	*0.4*	U	*0.4*	U	*0.4*	U	*0.81*	U	*0.4*	U	*0.4*	U
1,2-Dichlorobenzene	600	600	--	µg/L	*0.37*	U	**11**		**1.1**		*0.37*	U	*0.74*	U	**0.72**	J	**2.9**	
1,2-Dichloroethane	5	5	--	µg/L	*0.54*	U	**3.9**		*0.54*	U	*0.54*	U	*1.1*	U	*0.54*	U	*0.54*	U
1,2-Dichloropropane	5	5	--	µg/L	*0.52*	U	**5**		**0.9**	J	*0.52*	U	*1*	U	*0.52*	U	**0.65**	J
1,3-Dichlorobenzene	--	600	--	µg/L	*0.33*	U	*0.33*	U	*0.33*	U	*0.33*	U	*0.67*	U	*0.33*	U	*0.33*	U
1,3-Dichloropropane	--	--	--	µg/L	*0.38*	U	*0.38*	U	*0.38*	U	*0.38*	U	*0.76*	U	*0.38*	U	*0.38*	U
1,4-Dichlorobenzene	75	75	--	µg/L	*0.39*	U	**5.8**		**0.52**	J	*0.39*	U	*0.78*	U	*0.39*	U	**0.42**	J
2,2-Dichloropropane	--	--	--	µg/L	*0.38*	U	*0.38*	U	*0.38*	U	*0.38*	U	*0.76*	U	*0.38*	U	*0.38*	U
2-Butanone (MEK)	--	--	--	µg/L	*6*	U	*6*	U	*6*	U	*6*	U	*12*	U	*6*	U	*6*	U
2-Hexanone	--	--	--	µg/L	*1.7*	U	*1.7*	U	*1.7*	U	*1.7*	U	*3.4*	U	*1.7*	U	*1.7*	U
4-Methyl-2-pentanone (MIBK)	--	--	--	µg/L	*0.98*	U	*0.98*	U	*0.98*	U	*0.98*	U	*2*	U	*0.98*	U	*0.98*	U
Acetone	--	--	--	µg/L	*6.6*	U	*6.6*	U	*6.6*	U	*6.6*	U	*13*	U	*6.6*	U	*6.6*	U
Acetonitrile; methyl cyanide	--	--	--	µg/L	*9.6*	U	*9.6*	U	*9.6*	U	*9.6*	U	*19*	U	*9.6*	U	*9.6*	U
Acrolein	--	--	--	µg/L	*4.9*	U	*4.9*	U	*4.9*	U	*4.9*	U	*9.7*	U	*4.9*	U	*4.9*	U
Acrylonitrile	--	--	--	µg/L	*4.5*	U	*4.5*	U	*4.5*	U	*4.5*	U	*8.9*	U	*4.5*	U	*4.5*	U
Allyl chloride	--	--	--	µg/L	*0.17*	U	*0.17*	U	*0.17*	U	*0.17*	U	*0.34*	U	*0.17*	U	*0.17*	U
Benzene	5	5	--	µg/L	*0.31*	U	**7.3**		**0.47**	J	*0.31*	U	*0.62*	U	*0.31*	U	*0.31*	U
Bromochloromethane	--	--	--	µg/L	*0.4*	U	*0.4*	U	*0.4*	U	*0.4*	U	*0.81*	U	*0.4*	U	*0.4*	U
Bromodichloromethane	80	100	--	µg/L	*0.39*	U	*0.39*	U	*0.39*	U	*0.39*	U	*0.77*	U	*0.39*	U	*0.39*	U
Bromoform	80	100	--	µg/L	*1.2*	U	*1.2*	U	*1.2*	U	*1.2*	U	*2.4*	U	*1.2*	U	*1.2*	U
Bromomethane	--	--	--	µg/L	*2.4*	U	*2.4*	U	*2.4*	U	*2.4*	U	*4.7*	U	*2.4*	U	*2.4*	U
Carbon disulfide	--	--	--	µg/L	*0.63*	U	*0.63*	U	*0.63*	U	*0.63*	U	*1.3*	U	*0.63*	U	*0.63*	U
Carbon tetrachloride	5	5	--	µg/L	*0.57*	U	*0.57*	U	*0.57*	U	*0.57*	U	*1.1*	U	*0.57*	U	*0.57*	U
Chlorobenzene	100	100	--	µg/L	*0.42*	U	**0.46**	J	*0.42*	U	*0.42*	U	*0.84*	U	*0.42*	U	*0.42*	U
Chlorodibromomethane	80	100	--	µg/L	*0.62*	U	*0.62*	U	*0.62*	U	*0.62*	U	*1.2*	U	*0.62*	U	*0.62*	U
Chloroethane	--	--	--	µg/L	*1.4*	U	*1.4*	U	*1.4*	U	*1.4*	U	*2.7*	U	*1.4*	U	*1.4*	U
Chloroform	80	2	--	µg/L	*0.36*	U	**1.4**		**0.37**	J	**1.3**		**1.8**	J	**0.4**	J	**0.69**	J
Chloromethane	--	--	--	µg/L	*0.75*	U	*0.75*	U	*0.75*	U	*0.75*	U	*1.5*	U	*0.75*	U	*0.75*	U
Chloroprene	--	--	--	µg/L	*1.2*	U	*1.2*	U	*1.2*	U	*1.2*	U	*2.3*	U	*1.2*	U	*1.2*	U
cis-1,2-Dichloroethene	70	70	--	µg/L	**0.46**	J	**29**		**4.6**		**3.6**		**4.5**		**12**		**22**	
cis-1,3-Dichloropropene	--	--	--	µg/L	*0.63*	U	*0.63*	U	*0.63*	U	*0.63*	U	*1.3*	U	*0.63*	U	*0.63*	U
Dibromomethane	--	--	--	µg/L	*0.34*	U	*0.34*	U	*0.34*	U	*0.34*	U	*0.69*	U	*0.34*	U	*0.34*	U
Dichlorodifluoromethane	--	--	--	µg/L	**1.1**	J	**24**		**3.2**		*0.96*	U	*1.9*	U	**3.3**		*0.96*	U
Ethyl methacrylate	--	--	--	µg/L	*0.86*	U	*0.86*	U	*0.86*	U	*0.86*	U	*1.7*	U	*0.86*	U	*0.86*	U
Ethylbenzene	700	700	--	µg/L	*0.3*	U	*0.3*	U	*0.3*	U	*0.3*	U	*0.61*	U	*0.3*	U	*0.3*	U
Iodomethane	--	--	--	µg/L	*2.6*	U	*2.6*	U	*2.6*	U	*2.6*	U	*5.2*	U	*2.6*	U	*2.6*	U
Isobutanol; Isobutyl alcohol	--	--	--	µg/L	*37*	U	*37*	U	*37*	U	*37*	U	*73*	U	*37*	U	*37*	U
m,p-Xylene	10000	--	--	µg/L	*0.36*	U	*0.36*	U	*0.36*	U	*0.36*	U	*0.71*	U	*0.36*	U	*0.36*	U
Methacrylonitrile	--	--	--	µg/L	*5.3*	U	*5.3*	U	*5.3*	U	*5.3*	U	*11*	U	*5.3*	U	*5.3*	U
Methyl methacrylate	--	--	--	µg/L	*1.1*	U	*1.1*	U	*1.1*	U	*1.1*	U	*2.2*	U	*1.1*	U	*1.1*	U

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells											
				Well ID	MW-113D		MW-113S		MW-118D		MW-119D		MW-119S		MW-120D		MW-120S	
				Sample Name	MW-113D-20230414		MW-113S-20230414		MW-118D-20230412		MW-119D-20230413		MW-119S-20230413		MW-120D-20230413		MW-120S-20230413	
				Sample Date	4/14/2023		4/14/2023		4/12/2023		4/13/2023		4/13/2023		4/13/2023		4/13/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Methylene Chloride	5	5	--	µg/L	*0.94*	U	**1.1**	J	*0.94*	U	*0.94*	U	*1.9*	U	*0.94*	U	*0.94*	U
o-xylene (1,2-dimethylbenzene)	10000	--	--	µg/L	*0.33*	U	**1**		*0.33*	U	*0.33*	U	*0.66*	U	*0.33*	U	*0.33*	U
Propionitrile; ethyl cyanide	--	--	--	µg/L	*3.7*	U	*3.7*	U	*3.7*	U	*3.7*	U	*7.4*	U	*3.7*	U	*3.7*	U
Styrene	100	100	--	µg/L	*0.36*	U	*0.36*	U	*0.36*	U	*0.36*	U	*0.71*	U	*0.36*	U	*0.36*	U
Tetrachloroethene	5	5	--	µg/L	**1.1**		**22**		**9.9**		**22**		**29**		**14**		**15**	
Toluene	1000	1000	--	µg/L	*0.32*	U	*0.32*	U	*0.32*	U	*0.32*	U	*0.64*	U	*0.32*	U	*0.32*	U
trans-1,2-Dichloroethene	100	100	--	µg/L	*0.37*	U	**1.5**		*0.37*	U	*0.37*	U	*0.74*	U	*0.37*	U	*0.37*	U
trans-1,3-Dichloropropene	--	--	--	µg/L	*0.65*	U	*0.65*	U	*0.65*	U	*0.65*	U	*1.3*	U	*0.65*	U	*0.65*	U
trans-1,4-Dichloro-2-butene	--	--	--	µg/L	*1.4*	U	*1.4*	U	*1.4*	U	*1.4*	U	*2.8*	U	*1.4*	U	*1.4*	U
Trichloroethene	5	5	--	µg/L	**0.31**	J	**16**		**58**		**120**		**130**		**160**		**130**	
Trichlorofluoromethane	--	--	--	µg/L	*0.57*	U	**2.6**		*0.57*	U	*0.57*	U	*1.1*	U	**1.8**	J	*0.57*	U
Vinyl acetate	--	--	--	µg/L	*0.94*	U	*0.94*	U	*0.94*	U	*0.94*	U	*1.9*	U	*0.94*	U	*0.94*	U
Vinyl chloride	2	2	--	µg/L	*0.51*	U	**92**		*0.51*	U	*0.51*	U	*1*	U	**1.4**	J	*0.51*	U
Xylene (Total)	10000	10000	--	µg/L	*0.33*	U	**1**		*0.33*	U	*0.33*	U	*0.66*	U	*0.33*	U	*0.33*	U

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells								Offsite Monitoring Wells			
				Well ID	MW-123		MW-124		MW-124		MW-125		MW-103S		MW-115S	
				Sample Name	MW-123-20230415		MW-124-20230412		MW-124-Q-20230412		MW-125-20230412		MW-103S-20230415		MW-115S-20230415	
				Sample Date	4/15/2023		4/12/2023		4/12/2023		4/12/2023		4/15/2023		4/15/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	--	--	--	µg/L	*0.58*	*U*	*1.2*	*U*	*1.2*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*
1,1,1-Trichloroethane	200	200	--	µg/L	*0.39*	*U*	*0.78*	*U*	*0.78*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
1,1,2,2-Tetrachloroethane	--	--	--	µg/L	*0.21*	*U*	*0.42*	*U*	*0.42*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*
1,1,2-Trichloroethane	5	5	--	µg/L	*0.27*	*U*	*0.54*	*U*	*0.54*	*U*	*0.27*	*U*	*0.27*	*U*	*0.27*	*U*
1,1-Dichloroethane	--	--	--	µg/L	*0.22*	*U*	**1.7**	**J**	**1.5**	**J**	**1.1**		*0.22*	*U*	*0.22*	*U*
1,1-Dichloroethene	7	7	--	µg/L	*0.23*	*U*	*0.46*	*UJ*	**0.47**	**J**	**0.25**	**J**	*0.23*	*U*	*0.23*	*U*
1,1-Dichloropropene	--	--	--	µg/L	*0.42*	*U*	*0.83*	*U*	*0.83*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*
1,2,3-Trichloropropane	--	--	--	µg/L	*0.86*	*U*	*1.7*	*U*	*1.7*	*U*	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*
1,2,4-Trichlorobenzene	70	70	--	µg/L	*0.58*	*U*	*1.2*	*U*	*1.2*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*
1,2-Dibromo-3-Chloropropane	0.2	0.2	--	µg/L	*1.8*	*U*	*3.5*	*U*	*3.5*	*U*	*1.8*	*U*	*1.8*	*U*	*1.8*	*U*
1,2-Dibromoethane	0.05	0.05	--	µg/L	*0.4*	*U*	*0.81*	*U*	*0.81*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
1,2-Dichlorobenzene	600	600	--	µg/L	*0.37*	*U*	**2.2**		**2**		*0.37*	*U*	*0.37*	*U*	*0.37*	*U*
1,2-Dichloroethane	5	5	--	µg/L	*0.54*	*U*	*1.1*	*U*	*1.1*	*U*	*0.54*	*U*	*0.54*	*U*	*0.54*	*U*
1,2-Dichloropropane	5	5	--	µg/L	*0.52*	*U*	*1*	*U*	*1*	*U*	*0.52*	*U*	*0.52*	*U*	*0.52*	*U*
1,3-Dichlorobenzene	--	600	--	µg/L	*0.33*	*U*	*0.67*	*U*	*0.67*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
1,3-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.76*	*U*	*0.76*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*
1,4-Dichlorobenzene	75	75	--	µg/L	*0.39*	*U*	*0.78*	*UJ*	**0.78**	**J**	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
2,2-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.76*	*U*	*0.76*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*
2-Butanone (MEK)	--	--	--	µg/L	*6*	*U*	*12*	*U*	*12*	*U*	*6*	*U*	*6*	*U*	*6*	*U*
2-Hexanone	--	--	--	µg/L	*1.7*	*U*	*3.4*	*U*	*3.4*	*U*	*1.7*	*U*	*1.7*	*U*	*1.7*	*U*
4-Methyl-2-pentanone (MIBK)	--	--	--	µg/L	*0.98*	*U*	*2*	*U*	*2*	*U*	*0.98*	*U*	*0.98*	*U*	*0.98*	*U*
Acetone	--	--	--	µg/L	*6.6*	*U*	*13*	*U*	*13*	*U*	*6.6*	*U*	*6.6*	*U*	*6.6*	*U*
Acetonitrile; methyl cyanide	--	--	--	µg/L	*9.6*	*U*	*19*	*U*	*19*	*U*	*9.6*	*U*	*9.6*	*U*	*9.6*	*U*
Acrolein	--	--	--	µg/L	*4.9*	*U*	*9.7*	*U*	*9.7*	*U*	*4.9*	*U*	*4.9*	*U*	*4.9*	*U*
Acrylonitrile	--	--	--	µg/L	*4.5*	*U*	*8.9*	*U*	*8.9*	*U*	*4.5*	*U*	*4.5*	*U*	*4.5*	*U*
Allyl chloride	--	--	--	µg/L	*0.17*	*U*	*0.34*	*U*	*0.34*	*U*	*0.17*	*U*	*0.17*	*U*	*0.17*	*U*
Benzene	5	5	--	µg/L	*0.31*	*U*	*0.62*	*U*	*0.62*	*U*	*0.31*	*U*	*0.31*	*U*	*0.31*	*U*
Bromochloromethane	--	--	--	µg/L	*0.4*	*U*	*0.81*	*U*	*0.81*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
Bromodichloromethane	80	100	--	µg/L	*0.39*	*U*	*0.77*	*U*	*0.77*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
Bromoform	80	100	--	µg/L	*1.2*	*U*	*2.4*	*U*	*2.4*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*
Bromomethane	--	--	--	µg/L	*2.4*	*U*	*4.7*	*U*	*4.7*	*U*	*2.4*	*U*	*2.4*	*U*	*2.4*	*U*
Carbon disulfide	--	--	--	µg/L	*0.63*	*U*	*1.3*	*U*	*1.3*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*
Carbon tetrachloride	5	5	--	µg/L	*0.57*	*U*	*1.1*	*U*	*1.1*	*U*	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*
Chlorobenzene	100	100	--	µg/L	*0.42*	*U*	*0.84*	*U*	*0.84*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*
Chlorodibromomethane	80	100	--	µg/L	*0.62*	*U*	*1.2*	*U*	*1.2*	*U*	*0.62*	*U*	*0.62*	*U*	*0.62*	*U*
Chloroethane	--	--	--	µg/L	*1.4*	*U*	*2.7*	*U*	*2.7*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*
Chloroform	80	2	--	µg/L	*0.36*	*U*	**0.89**	**J**	**0.99**	**J**	**1.7**		*0.36*	*U*	*0.36*	*U*
Chloromethane	--	--	--	µg/L	*0.75*	*U*	*1.5*	*U*	*1.5*	*U*	*0.75*	*U*	*0.75*	*U*	*0.75*	*U*
Chloroprene	--	--	--	µg/L	*1.2*	*U*	*2.3*	*U*	*2.3*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*
cis-1,2-Dichloroethene	70	70	--	µg/L	*0.32*	*U*	**28**		**28**		**7.4**		**2.5**		*0.32*	*U*
cis-1,3-Dichloropropene	--	--	--	µg/L	*0.63*	*U*	*1.3*	*U*	*1.3*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*
Dibromomethane	--	--	--	µg/L	*0.34*	*U*	*0.69*	*U*	*0.69*	*U*	*0.34*	*U*	*0.34*	*U*	*0.34*	*U*
Dichlorodifluoromethane	--	--	--	µg/L	*0.96*	*U*	*1.9*	*U*	*1.9*	*U*	**1.9**	**J**	*0.96*	*U*	*0.96*	*U*
Ethyl methacrylate	--	--	--	µg/L	*0.86*	*U*	*1.7*	*U*	*1.7*	*U*	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*
Ethylbenzene	700	700	--	µg/L	*0.3*	*U*	*0.61*	*U*	*0.61*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*
Iodomethane	--	--	--	µg/L	*2.6*	*U*	*5.2*	*U*	*5.2*	*U*	*2.6*	*U*	*2.6*	*U*	*2.6*	*U*
Isobutanol; Isobutyl alcohol	--	--	--	µg/L	*37*	*U*	*73*	*U*	*73*	*U*	*37*	*U*	*37*	*U*	*37*	*U*
m,p-Xylene	10000	--	--	µg/L	*0.36*	*U*	*0.71*	*U*	*0.71*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Methacrylonitrile	--	--	--	µg/L	*5.3*	*U*	*11*	*U*	*11*	*U*	*5.3*	*U*	*5.3*	*U*	*5.3*	*U*
Methyl methacrylate	--	--	--	µg/L	*1.1*	*U*	*2.2*	*U*	*2.2*	*U*	*1.1*	*U*	*1.1*	*U*	*1.1*	*U*

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells								Offsite Monitoring Wells			
				Well ID	MW-123		MW-124		MW-124		MW-125		MW-103S		MW-115S	
				Sample Name	MW-123-20230415		MW-124-20230412		MW-124-Q-20230412		MW-125-20230412		MW-103S-20230415		MW-115S-20230415	
				Sample Date	4/15/2023		4/12/2023		4/12/2023		4/12/2023		4/15/2023		4/15/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Methylene Chloride	5	5	--	µg/L	*0.94*	*U*	*1.9*	*U*	*1.9*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*
o-xylene (1,2-dimethylbenzene)	10000	--	--	µg/L	*0.33*	*U*	*0.66*	*U*	*0.66*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
Propionitrile; ethyl cyanide	--	--	--	µg/L	*3.7*	*U*	*7.4*	*U*	*7.4*	*U*	*3.7*	*U*	*3.7*	*U*	*3.7*	*U*
Styrene	100	100	--	µg/L	*0.36*	*U*	*0.71*	*U*	*0.71*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Tetrachloroethene	5	5	--	µg/L	**4.2**		**11**		**12**		**19**		**5.2**		*0.4*	*U*
Toluene	1000	1000	--	µg/L	*0.32*	*U*	*0.64*	*U*	*0.64*	*U*	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*
trans-1,2-Dichloroethene	100	100	--	µg/L	*0.37*	*U*	*0.74*	*U*	*0.74*	*U*	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*
trans-1,3-Dichloropropene	--	--	--	µg/L	*0.65*	*U*	*1.3*	*U*	*1.3*	*U*	*0.65*	*U*	*0.65*	*U*	*0.65*	*U*
trans-1,4-Dichloro-2-butene	--	--	--	µg/L	*1.4*	*U*	*2.8*	*U*	*2.8*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*
Trichloroethene	5	5	--	µg/L	**56**		**160**		**160**		**90**	**J**	**30**		**0.45**	**J**
Trichlorofluoromethane	--	--	--	µg/L	*0.57*	*U*	*1.1*	*U*	*1.1*	*U*	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*
Vinyl acetate	--	--	--	µg/L	*0.94*	*U*	*1.9*	*U*	*1.9*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*
Vinyl chloride	2	2	--	µg/L	*0.51*	*U*	**6.3**		**6.5**		*0.51*	*U*	*0.51*	*U*	*0.51*	*U*
Xylene (Total)	10000	10000	--	µg/L	*0.33*	*U*	*0.66*	*U*	*0.66*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Remediation System Wells													
				Well ID	RW-1		RW-10		RW-15		RW-17		RW-2		RW-3		RW-5		RW-9R	
				Sample Name	RW-1-20230413		RW-10-20230411		RW-15-20230411		RW-17-20230411		RW-2-20230412		RW-3-20230413		RW-5-20230411		RW-9R-20230411	
				Sample Date	4/13/2023		4/11/2023		4/11/2023		4/11/2023		4/12/2023		4/13/2023		4/11/2023		4/11/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Volatile Organic Compounds																				
1,1,1,2-Tetrachloroethane	--	--	--	µg/L	*2.3*	U	*0.58*	U	*2.3*	U	*1.2*	U	*0.58*	U	*1.2*	U	*0.58*	U	*2.3*	U
1,1,1-Trichloroethane	200	200	--	µg/L	*1.6*	U	*0.39*	U	*1.6*	U	*0.78*	U	*0.39*	U	*0.78*	U	*0.39*	U	*1.6*	U
1,1,2,2-Tetrachloroethane	--	--	--	µg/L	*0.84*	U	*0.21*	U	*0.84*	U	*0.42*	U	*0.21*	U	*0.42*	U	*0.21*	U	*0.84*	U
1,1,2-Trichloroethane	5	5	--	µg/L	*1.1*	U	*0.27*	U	*1.1*	U	*0.54*	U	*0.27*	U	*0.54*	U	*0.27*	U	*1.1*	U
1,1-Dichloroethane	--	--	--	µg/L	**1.8**	J	**0.33**	J	**0.92**	J	*0.44*	U	**1.2**		*0.44*	U	**0.35**	J	**1.5**	J
1,1-Dichloroethene	7	7	--	µg/L	*0.92*	U	*0.23*	U	*0.92*	U	*0.46*	U	*0.23*	U	*0.46*	U	*0.23*	U	*0.92*	U
1,1-Dichloropropene	--	--	--	µg/L	*1.7*	U	*0.42*	U	*1.7*	U	*0.83*	U	*0.42*	U	*0.83*	U	*0.42*	U	*1.7*	U
1,2,3-Trichloropropane	--	--	--	µg/L	*3.4*	U	*0.86*	U	*3.4*	U	*1.7*	U	*0.86*	U	*1.7*	U	*0.86*	U	*3.4*	U
1,2,4-Trichlorobenzene	70	70	--	µg/L	*2.3*	U	*0.58*	U	*2.3*	U	*1.2*	U	*0.58*	U	*1.2*	U	*0.58*	U	*2.3*	U
1,2-Dibromo-3-Chloropropane	0.2	0.2	--	µg/L	*7*	U	*1.8*	U	*7*	U	*3.5*	U	*1.8*	U	*3.5*	U	*1.8*	U	*7*	U
1,2-Dibromoethane	0.05	0.05	--	µg/L	*1.6*	U	*0.4*	U	*1.6*	U	*0.81*	U	*0.4*	U	*0.81*	U	*0.4*	U	*1.6*	U
1,2-Dichlorobenzene	600	600	--	µg/L	**2.2**	J	*0.37*	U	**2.4**	J	*0.74*	U	**1.6**		*0.74*	U	*0.37*	U	**7**	
1,2-Dichloroethane	5	5	--	µg/L	*2.2*	U	*0.54*	U	*2.2*	U	*1.1*	U	*0.54*	U	*1.1*	U	*0.54*	U	*2.2*	U
1,2-Dichloropropane	5	5	--	µg/L	*2.1*	U	*0.52*	U	*2.1*	U	*1*	U	*0.52*	U	*1*	U	*0.52*	U	*2.1*	U
1,3-Dichlorobenzene	--	600	--	µg/L	*1.3*	U	*0.33*	U	*1.3*	U	*0.67*	U	*0.33*	U	*0.67*	U	*0.33*	U	*1.3*	U
1,3-Dichloropropane	--	--	--	µg/L	*1.5*	U	*0.38*	U	*1.5*	U	*0.76*	U	*0.38*	U	*0.76*	U	*0.38*	U	*1.5*	U
1,4-Dichlorobenzene	75	75	--	µg/L	*1.6*	U	*0.39*	U	*1.6*	U	*0.78*	U	*0.39*	U	*0.78*	U	*0.39*	U	**2**	J
2,2-Dichloropropane	--	--	--	µg/L	*1.5*	U	*0.38*	U	*1.5*	U	*0.76*	U	*0.38*	U	*0.76*	U	*0.38*	U	*1.5*	U
2-Butanone (MEK)	--	--	--	µg/L	*24*	U	*6*	U	*24*	U	*12*	U	*6*	U	*12*	U	*6*	U	*24*	U
2-Hexanone	--	--	--	µg/L	*6.8*	U	*1.7*	U	*6.8*	U	*3.4*	U	*1.7*	U	*3.4*	U	*1.7*	U	*6.8*	U
4-Methyl-2-pentanone (MIBK)	--	--	--	µg/L	*3.9*	U	*0.98*	U	*3.9*	U	*2*	U	*0.98*	U	*2*	U	*0.98*	U	*3.9*	U
Acetone	--	--	--	µg/L	*26*	U	*6.6*	U	*26*	U	*13*	U	*6.6*	U	*13*	U	*6.6*	U	*26*	U
Acetonitrile; methyl cyanide	--	--	--	µg/L	*38*	U	*9.6*	U	*38*	U	*19*	U	*9.6*	U	*19*	U	*9.6*	U	*38*	U
Acrolein	--	--	--	µg/L	*19*	U	*4.9*	U	*19*	U	*9.7*	U	*4.9*	U	*9.7*	U	*4.9*	U	*19*	U
Acrylonitrile	--	--	--	µg/L	*18*	U	*4.5*	U	*18*	U	*8.9*	U	*4.5*	U	*8.9*	U	*4.5*	U	*18*	U
Allyl chloride	--	--	--	µg/L	*0.68*	U	*0.17*	U	*0.68*	U	*0.34*	U	*0.17*	U	*0.34*	U	*0.17*	U	*0.68*	U
Benzene	5	5	--	µg/L	*1.2*	U	*0.31*	U	*1.2*	U	*0.62*	U	*0.31*	U	*0.62*	U	*0.31*	U	*1.2*	U
Bromochloromethane	--	--	--	µg/L	*1.6*	U	*0.4*	U	*1.6*	U	*0.81*	U	*0.4*	U	*0.81*	U	*0.4*	U	*1.6*	U
Bromodichloromethane	80	100	--	µg/L	*1.5*	U	*0.39*	U	*1.5*	U	*0.77*	U	*0.39*	U	*0.77*	U	*0.39*	U	*1.5*	U
Bromoform	80	100	--	µg/L	*4.8*	U	*1.2*	U	*4.8*	U	*2.4*	U	*1.2*	U	*2.4*	U	*1.2*	U	*4.8*	U
Bromomethane	--	--	--	µg/L	*9.4*	U	*2.4*	U	*9.4*	U	*4.7*	U	*2.4*	U	*4.7*	U	*2.4*	U	*9.4*	U
Carbon disulfide	--	--	--	µg/L	*2.5*	U	*0.63*	U	*2.5*	U	*1.3*	U	*0.63*	U	*1.3*	U	*0.63*	U	*2.5*	U
Carbon tetrachloride	5	5	--	µg/L	*2.3*	U	*0.57*	U	*2.3*	U	*1.1*	U	*0.57*	U	*1.1*	U	*0.57*	U	*2.3*	U
Chlorobenzene	100	100	--	µg/L	*1.7*	U	*0.42*	U	*1.7*	U	*0.84*	U	*0.42*	U	*0.84*	U	*0.42*	U	*1.7*	U
Chlorodibromomethane	80	100	--	µg/L	*2.5*	U	*0.62*	U	*2.5*	U	*1.2*	U	*0.62*	U	*1.2*	U	*0.62*	U	*2.5*	U
Chloroethane	--	--	--	µg/L	*5.5*	U	*1.4*	U	*5.5*	U	*2.7*	U	*1.4*	U	*2.7*	U	*1.4*	U	*5.5*	U
Chloroform	80	2	--	µg/L	**2.6**	J	**1.7**		**1.9**	J	**2**		**1.3**		*0.72*	U	**1.6**		**1.5**	J
Chloromethane	--	--	--	µg/L	*3*	U	*0.75*	U	*3*	U	*1.5*	U	*0.75*	U	*1.5*	U	*0.75*	U	*3*	U
Chloroprene	--	--	--	µg/L	*4.7*	U	*1.2*	U	*4.7*	U	*2.3*	U	*1.2*	U	*2.3*	U	*1.2*	U	*4.7*	U
cis-1,2-Dichloroethene	70	70	--	µg/L	**26**		**3.4**		**19**		**5.4**		**21**		*0.64*	U	**2.7**		**38**	
cis-1,3-Dichloropropene	--	--	--	µg/L	*2.5*	U	*0.63*	U	*2.5*	U	*1.3*	U	*0.63*	U	*1.3*	U	*0.63*	U	*2.5*	U
Dibromomethane	--	--	--	µg/L	*1.4*	U	*0.34*	U	*1.4*	U	*0.69*	U	*0.34*	U	*0.69*	U	*0.34*	U	*1.4*	U
Dichlorodifluoromethane	--	--	--	µg/L	*3.8*	U	*0.96*	U	*3.8*	U	*1.9*	U	*0.96*	U	*1.9*	U	*0.96*	U	*3.8*	U
Ethyl methacrylate	--	--	--	µg/L	*3.4*	U	*0.86*	U	*3.4*	U	*1.7*	U	*0.86*	U	*1.7*	U	*0.86*	U	*3.4*	U
Ethylbenzene	700	700	--	µg/L	*1.2*	U	*0.3*	U	*1.2*	U	*0.61*	U	*0.3*	U	*0.61*	U	*0.3*	U	*1.2*	U
Iodomethane	--	--	--	µg/L	*10*	U	*2.6*	U	*10*	U	*5.2*	U	*2.6*	U	*5.2*	U	*2.6*	U	*10*	U
Isobutanol; Isobutyl alcohol	--	--	--	µg/L	*150*	U	*37*	U	*150*	U	*73*	U	*37*	U	*73*	U	*37*	U	*150*	U
m,p-Xylene	10000	--	--	µg/L	*1.4*	U	*0.36*	U	*1.4*	U	*0.71*	U	*0.36*	U	*0.71*	U	*0.36*	U	*1.4*	U
Methacrylonitrile	--	--	--	µg/L	*21*	U	*5.3*	U	*21*	U	*11*	U	*5.3*	U	*11*	U	*5.3*	U	*21*	U
Methyl methacrylate	--	--	--	µg/L	*4.4*	U	*1.1*	U	*4.4*	U	*2.2*	U	*1.1*	U	*2.2*	U	*1.1*	U	*4.4*	U

Appendix C
Table 1
Cell 1 VOC Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Remediation System Wells													
				Well ID	RW-1		RW-10		RW-15		RW-17		RW-2		RW-3		RW-5		RW-9R	
				Sample Name	RW-1-20230413		RW-10-20230411		RW-15-20230411		RW-17-20230411		RW-2-20230412		RW-3-20230413		RW-5-20230411		RW-9R-20230411	
				Sample Date	4/13/2023		4/11/2023		4/11/2023		4/11/2023		4/12/2023		4/13/2023		4/11/2023		4/11/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Methylene Chloride	5	5	--	µg/L	*3.8*	*U*	*0.94*	*U*	*3.8*	*U*	*1.9*	*U*	*0.94*	*U*	*1.9*	*U*	*0.94*	*U*	*3.8*	*U*
o-xylene (1,2-dimethylbenzene)	10000	--	--	µg/L	*1.3*	*U*	*0.33*	*U*	*1.3*	*U*	*0.66*	*U*	*0.33*	*U*	*0.66*	*U*	*0.33*	*U*	*1.3*	*U*
Propionitrile; ethyl cyanide	--	--	--	µg/L	*15*	*U*	*3.7*	*U*	*15*	*U*	*7.4*	*U*	*3.7*	*U*	*7.4*	*U*	*3.7*	*U*	*15*	*U*
Styrene	100	100	--	µg/L	*1.4*	*U*	*0.36*	*U*	*1.4*	*U*	*0.71*	*U*	*0.36*	*U*	*0.71*	*U*	*0.36*	*U*	*1.4*	*U*
Tetrachloroethene	5	5	--	µg/L	**26**		**27**		**33**		**32**		**13**		**4.4**		**24**		**22**	
Toluene	1000	1000	--	µg/L	*1.3*	*U*	*0.32*	*U*	*1.3*	*U*	*0.64*	*U*	*0.32*	*U*	*0.64*	*U*	*0.32*	*U*	*1.3*	*U*
trans-1,2-Dichloroethene	100	100	--	µg/L	*1.5*	*U*	*0.37*	*U*	*1.5*	*U*	*0.74*	*U*	*0.37*	*U*	*0.74*	*U*	*0.37*	*U*	*1.5*	*U*
trans-1,3-Dichloropropene	--	--	--	µg/L	*2.6*	*U*	*0.65*	*U*	*2.6*	*U*	*1.3*	*U*	*0.65*	*U*	*1.3*	*U*	*0.65*	*U*	*2.6*	*U*
trans-1,4-Dichloro-2-butene	--	--	--	µg/L	*5.5*	*U*	*1.4*	*U*	*5.5*	*U*	*2.8*	*U*	*1.4*	*U*	*2.8*	*U*	*1.4*	*U*	*5.5*	*U*
Trichloroethene	5	5	--	µg/L	**250**		**110**		**180**		**130**		**140**		**7.2**		**100**		**200**	
Trichlorofluoromethane	--	--	--	µg/L	*2.3*	*U*	*0.57*	*U*	*2.3*	*U*	*1.1*	*U*	*0.57*	*U*	*1.1*	*U*	*0.57*	*U*	*2.3*	*U*
Vinyl acetate	--	--	--	µg/L	*3.8*	*U*	*0.94*	*U*	*3.8*	*U*	*1.9*	*U*	*0.94*	*U*	*1.9*	*U*	*0.94*	*U*	*3.8*	*U*
Vinyl chloride	2	2	--	µg/L	**3**	**J**	*0.51*	*U*	*2*	*U*	*1*	*U*	*0.51*	*U*	*1*	*U*	*0.51*	*U*	**4.9**	**J**
Xylene (Total)	10000	10000	--	µg/L	*1.3*	*U*	*0.33*	*U*	*1.3*	*U*	*0.66*	*U*	*0.33*	*U*	*0.66*	*U*	*0.33*	*U*	*1.3*	*U*

Appendix C
Table 2
Cell 1 Inorganic and Field and Redox Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells													
				Well ID	MP-2		MP-3		MP-4		MW-101S		MW-102S		MW-105D		MW-105S	
				Sample Name	MP-2-20230411		MP-3-20230413		MP-4-20230414		MW-101S-20230415		MW-102S-20230414		MW-105D-20230411		MW-105S-20230411	
				Sample Date	4/11/2023		4/13/2023		4/14/2023		4/15/2023		4/14/2023		4/11/2023		4/11/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Inorganics																		
Antimony	6	6	--	µg/L	*0.4*	*U*	--		--		--		--		*0.4*	*U*	*0.4*	*U*
Arsenic	10	50	--	µg/L	**0.91**	**J**	--		--		--		--		**0.72**	**J**	**0.66**	**J**
Barium	2000	2000	--	µg/L	**370**		--		--		--		--		**310**		**250**	
Beryllium	4	4	--	µg/L	*0.3*	*U*	--		--		--		--		*0.3*	*U*	*0.3*	*U*
Cadmium	5	5	--	µg/L	*0.19*	*U*	--		--		--		--		*0.19*	*U*	*0.19*	*U*
Calcium	--	--	--	µg/L	**210000**		--		--		--		--		**230000**		**230000**	
Chromium	100	100	--	µg/L	*0.5*	*U*	--		--		--		--		*0.5*	*U*	**2.3**	**J**
Cobalt	--	--	--	µg/L	*0.33*	*U*	--		--		--		--		*0.33*	*U*	**11**	
Copper	1300	1300	--	µg/L	**1.1**	**J**	--		--		--		--		**1**	**J**	**3**	
Cyanide	0.2	0.2	--	mg/L			--		--		--		--					
Iron	--	--	300	µg/L	**8.8**	**J**	--		--		--		--		*8.7*	*U*	**15**	**J**
Lead	15	15	--	µg/L	*0.23*	*U*	--		--		--		--		*0.23*	*U*	*0.23*	*U*
Magnesium	--	--	--	µg/L	**67000**		--		--		--		--		**69000**		**80000**	
Manganese	--	--	50	µg/L	**3.5**		--		--		--		--		**5**		**520**	
Mercury	2	2	--	µg/L			--		--		--		--					
Nickel	--	--	--	µg/L	**2**	**J**	--		--		--		--		*0.83*	*U*	**50**	
Potassium	--	--	--	µg/L	**4200**		--		--		--		--		**3800**		**5000**	
Selenium	50	50	--	µg/L	*1*	*U*	--		--		--		--		*1*	*U*	*1*	*U*
Silver	--	--	100	µg/L	*0.045*	*U*	--		--		--		--		*0.045*	*U*	*0.045*	*U*
Sodium	--	--	--	µg/L	**86000**		--		--		--		--		**64000**		**410000**	
Sulfide	--	--	--	mg/L			--		--		--		--					
Thallium	2	2	--	µg/L	*0.21*	*U*	--		--		--		--		*0.21*	*U*	*0.21*	*U*
Tin	--	--	--	µg/L	*0.58*	*U*	--		--		--		--		*0.58*	*U*	*0.58*	*U*
Vanadium	--	--	--	µg/L	**2.5**	**J**	--		--		--		--		**1.2**	**J**	*1.1*	*U*
Zinc	--	--	5000	µg/L	*2*	*U*	--		--		--		--		*2*	*U*	*2*	*U*
Field and Redox Parameters																		
Acetylene	--	--	--	µg/L	--		--		--		--		--		--		--	
Bromide	--	--	--	mg/L	**2.1**	**J-**	--		--		--		--		**0.76**		**1.4**	
Chloride	--	--	250	mg/L	**310**		--		--		--		--		**280**		**470**	
Dissolved Oxygen	--	--	--	mg/L	**1.37**		**4.06**		**5.55**		**5.26**		**5.32**		**0.39**		**1.1**	
Ethane	--	--	--	µg/L	--		--		--		--		--		--		--	
Ethene	--	--	--	µg/L	--		--		--		--		--		--		--	
FERROUS IRON	--	--	--	mg/L	--		--		--		--		--		--		--	
Manganese	--	--	0.05	mg/L	**0.0035**		--		--		--		--		**0.005**		**0.52**	
Methane	--	--	--	mg/L	--		--		--		--		--		--		--	
Nitrate	10	10	--	mg/L	**2.2**		--		--		--		--		**0.71**	**J-**	**13**	**J-**
Nitrite	1	1	--	mg/L	*0.049*	*U*	--		--		--		--		0.049	R	0.049	R
Oxidation-Reduction Potential	--	--	--	millivolts	**126.6**		**78.9**		**137.8**		**103.7**		**63.3**		**-57**		**29.9**	
pH	--	--	6.5 - 8.5	su	**6.84**		**6.7**		**6.56**		**6.97**		**7.43**		**6.75**		**6.85**	
Propane	--	--	--	µg/L	--		--		--		--		--		--		--	
Specific Conductance	--	--	--	µS/cm	**1855**		**1523**		**5807**		**1100**		**632**		**1909**		**3451**	
Sulfate	--	--	250	mg/L	**120**		--		--		--		--		**79**		**200**	
Sulfide	--	--	--	mg/L	--		--		--		--		--		--		--	
Temperature	--	--	--	Celsius	**16.51**		**9.7**		**11.2**		**9**		**9.82**		**12.73**		**12.98**	
Total Organic Carbon	--	--	--	mg/L	**3.9**		--		--		--		--		**1.9**		**7.2**	
Turbidity	--	--	--	ntu	**0.78**		**20.3**		**32.6**		**1.37**		**0.17**		**0.11**		**0.52**	

Appendix C
Table 2
Cell 1 Inorganic and Field and Redox Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells											
				Well ID	MW-109D		MW-109S		MW-110S		MW-111D		MW-112D		MW-112M	
				Sample Name	MW-109D-20230415		MW-109S-20230415		MW-110S-20230414		MW-111D-20230414		MW-112D-20230415		MW-112M-20230415	
				Sample Date	4/15/2023		4/15/2023		4/14/2023		4/14/2023		4/15/2023		4/15/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Inorganics																
Antimony	6	6	--	µg/L	--		--		--		--		--		--	
Arsenic	10	50	--	µg/L	--		--		--		--		--		--	
Barium	2000	2000	--	µg/L	--		--		--		--		--		--	
Beryllium	4	4	--	µg/L	--		--		--		--		--		--	
Cadmium	5	5	--	µg/L	--		--		--		--		--		--	
Calcium	--	--	--	µg/L	--		--		--		--		--		--	
Chromium	100	100	--	µg/L	--		--		--		--		--		--	
Cobalt	--	--	--	µg/L	--		--		--		--		--		--	
Copper	1300	1300	--	µg/L	--		--		--		--		--		--	
Cyanide	0.2	0.2	--	mg/L	--		--		--		--		--		--	
Iron	--	--	300	µg/L	--		--		--		--		--		--	
Lead	15	15	--	µg/L	--		--		--		--		--		--	
Magnesium	--	--	--	µg/L	--		--		--		--		--		--	
Manganese	--	--	50	µg/L	--		--		--		--		--		--	
Mercury	2	2	--	µg/L	--		--		--		--		--		--	
Nickel	--	--	--	µg/L	--		--		--		--		--		--	
Potassium	--	--	--	µg/L	--		--		--		--		--		--	
Selenium	50	50	--	µg/L	--		--		--		--		--		--	
Silver	--	--	100	µg/L	--		--		--		--		--		--	
Sodium	--	--	--	µg/L	--		--		--		--		--		--	
Sulfide	--	--	--	mg/L	--		--		--		--		--		--	
Thallium	2	2	--	µg/L	--		--		--		--		--		--	
Tin	--	--	--	µg/L	--		--		--		--		--		--	
Vanadium	--	--	--	µg/L	--		--		--		--		--		--	
Zinc	--	--	5000	µg/L	--		--		--		--		--		--	
Field and Redox Parameters																
Acetylene	--	--	--	µg/L	--		--		--		--		--		--	
Bromide	--	--	--	mg/L	--		--		--		--		--		--	
Chloride	--	--	250	mg/L	--		--		--		--		--		--	
Dissolved Oxygen	--	--	--	mg/L	**3.15**		**6.83**		**1.85**		**0.37**		**4.52**		**6.46**	
Ethane	--	--	--	µg/L	--		--		--		--		--		--	
Ethene	--	--	--	µg/L	--		--		--		--		--		--	
FERROUS IRON	--	--	--	mg/L	--		--		--		--		--		--	
Manganese	--	--	0.05	mg/L	--		--		--		--		--		--	
Methane	--	--	--	mg/L	--		--		--		--		--		--	
Nitrate	10	10	--	mg/L	--		--		--		--		--		--	
Nitrite	1	1	--	mg/L	--		--		--		--		--		--	
Oxidation-Reduction Potential	--	--	--	millivolts	**85.4**		**106.2**		**102.2**		**-154.8**		**85**		**86.8**	
pH	--	--	6.5 - 8.5	su	**7.2**		**7.07**		**6.64**		**6.87**		**7.57**		**7.08**	
Propane	--	--	--	µg/L	--		--		--		--		--		--	
Specific Conductance	--	--	--	µS/cm	**1085**		**1315**		**2586**		**4367**		**875**		**1015**	
Sulfate	--	--	250	mg/L	--		--		--		--		--		--	
Sulfide	--	--	--	mg/L	--		--		--		--		--		--	
Temperature	--	--	--	Celsius	**10.4**		**10.7**		**12.3**		**10.8**		**10.9**		**11.3**	
Total Organic Carbon	--	--	--	mg/L	--		--		--		--		--		--	
Turbidity	--	--	--	ntu	**0.61**		**0.81**		**0.39**		**0.96**		**4.46**		**15.5**	

Appendix C
Table 2
Cell 1 Inorganic and Field and Redox Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells																	
				Well ID	MW-113D		MW-113S		MW-118D		MW-119D		MW-119S		MW-120D		MW-120S		MW-123			
				Sample Name	MW-113D-20230414		MW-113S-20230414		MW-118D-20230412		MW-119D-20230413		MW-119S-20230413		MW-120D-20230413		MW-120S-20230413		MW-123-20230415			
				Sample Date	4/14/2023		4/14/2023		4/12/2023		4/13/2023		4/13/2023		4/13/2023		4/13/2023		4/15/2023			
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q		
Inorganics																						
Antimony	6	6	--	µg/L	--		--		*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	--			
Arsenic	10	50	--	µg/L	--		--		**1.2**	**J**	*0.5*	*U*	**0.58**	**J**	**0.84**	**J**	**0.84**	**J**	--			
Barium	2000	2000	--	µg/L	--		--		**520**		**220**		**250**		**280**		**340**		--			
Beryllium	4	4	--	µg/L	--		--		*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	--			
Cadmium	5	5	--	µg/L	--		--		*0.19*	*U*	*0.19*	*U*	*0.19*	*U*	*0.19*	*U*	*0.19*	*U*	--			
Calcium	--	--	--	µg/L	--		--		**270000**		**120000**		**140000**		**140000**		**210000**		--			
Chromium	100	100	--	µg/L	--		--		**0.62**	**J**	*0.5*	*U*	*0.5*	*U*	**1.2**	**J**	*0.5*	*U*	--			
Cobalt	--	--	--	µg/L	--		--		**4**		*0.33*	*U*	*0.33*	*U*	**0.68**	**J**	**3.1**		--			
Copper	1300	1300	--	µg/L	--		--		**4**		*0.71*	*U*	**0.96**	**J**	**1**	**J**	**1.1**	**J**	--			
Cyanide	0.2	0.2	--	mg/L	--		--												--			
Iron	--	--	300	µg/L	--		--		**23**	**J**	**9.9**	**J**	*8.7*	*U*	*8.7*	*U*	**510**		--			
Lead	15	15	--	µg/L	--		--		**2.8**		*0.23*	*U*	*0.23*	*U*	*0.23*	*U*	**0.29**	**J**	--			
Magnesium	--	--	--	µg/L	--		--		**96000**		**54000**		**63000**		**43000**		**72000**		--			
Manganese	--	--	50	µg/L	--		--		**23**		**0.52**	**J**	*0.51*	*U*	**220**		**180**		--			
Mercury	2	2	--	µg/L	--		--												--			
Nickel	--	--	--	µg/L	--		--		**70**		*0.83*	*U*	*0.83*	*U*	**2.5**	**J**	**5**		--			
Potassium	--	--	--	µg/L	--		--		**5700**		**3500**		**4400**		**6000**		**5800**		--			
Selenium	50	50	--	µg/L	--		--		*1*	*U*	*1*	*U*	*1*	*U*	*1*	*U*	*1*	*U*	--			
Silver	--	--	100	µg/L	--		--		*0.045*	*U*	*0.045*	*U*	*0.045*	*U*	*0.045*	*U*	*0.045*	*U*	--			
Sodium	--	--	--	µg/L	--		--		**170000**		**68000**		**78000**		**54000**		**99000**		--			
Sulfide	--	--	--	mg/L	--		--												--			
Thallium	2	2	--	µg/L	--		--		*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	--			
Tin	--	--	--	µg/L	--		--		*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	**2.4**	**J**	--			
Vanadium	--	--	--	µg/L	--		--		**2.6**	**J**	*1.1*	*U*	*1.1*	*U*	**1.4**	**J**	**1.5**	**J**	--			
Zinc	--	--	5000	µg/L	--		--		*2*	*U*	*2*	*U*	*2*	*U*	*10*	*U*	*10*	*U*	--			
Field and Redox Parameters																						
Acetylene	--	--	--	µg/L	--		--		--		--		--		--		--		--			
Bromide	--	--	--	mg/L	--		--		**3.8**	**J-**	**1.2**		**1.3**		**1.6**		**0.96**		--			
Chloride	--	--	250	mg/L	--		--		**640**		**210**		**270**		**190**		**330**		--			
Dissolved Oxygen	--	--	--	mg/L	**11.23**		**0.39**		**1.99**		**2.72**		**4.38**		**0.62**		**0.52**		**3.98**			
Ethane	--	--	--	µg/L	--		--		--		--		--		--		--		--			
Ethene	--	--	--	µg/L	--		--		--		--		--		--		--		--			
FERROUS IRON	--	--	--	mg/L	--		--		--		**0.01**		--		--		--		--			
Manganese	--	--	0.05	mg/L	--		--		**0.023**		**0.00052**	**J**	*0.00051*	*U*	**0.22**		**0.18**		--			
Methane	--	--	--	mg/L	--		--		--		--		--		--		--		--			
Nitrate	10	10	--	mg/L	--		--		**2.2**		**2.5**	**J-**	**4.1**	**J-**	**0.38**	**J**	**1.5**	**J**	--			
Nitrite	1	1	--	mg/L	--		--		*0.049*	*U*	0.049	R	0.049	R	*0.049*	*UJ*	*0.049*	*UJ*	--			
Oxidation-Reduction Potential	--	--	--	millivolts	**58.3**		**58.5**		**155.6**		**98.3**		**91.5**		**36.5**		**-39.1**		**67.9**			
pH	--	--	6.5 - 8.5	su	**7.36**		**6.48**		**6.73**		**6.51**		**6.44**		**6.91**		**6.67**		**7.17**			
Propane	--	--	--	µg/L	--		--		--		--		--		--		--		--			
Specific Conductance	--	--	--	µS/cm	**656**		**2984**		**2971**		**1450**		**1649**		**1285**		**1912**		**1001**			
Sulfate	--	--	250	mg/L	--		--		**80**		**100**		**110**		**71**		**100**		--			
Sulfide	--	--	--	mg/L	--		--		--		--		--		--		--		--			
Temperature	--	--	--	Celsius	**10.56**		**10.21**		**12.21**		**9**		**10.75**		**9.7**		**9**		**12.21**			
Total Organic Carbon	--	--	--	mg/L	--		--		**11**		**1.7**		**2.2**		**2.5**		**5.2**		--			
Turbidity	--	--	--	ntu	**5.83**		**2.21**		**0.49**		**0.21**		**0.39**		**2.26**		**2.12**		**3.45**			

Appendix C
Table 2
Cell 1 Inorganic and Field and Redox Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 1 Monitoring Wells						Offsite Monitoring Wells			
				Well ID	MW-124		MW-124		MW-125		MW-103S		MW-115S	
				Sample Name	MW-124-20230412		MW-124-Q-20230412		MW-125-20230412		MW-103S-20230415		MW-115S-20230415	
				Sample Date	4/12/2023		4/12/2023		4/12/2023		4/15/2023		4/15/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Inorganics														
Antimony	6	6	--	µg/L	0.4	UJ	**0.42**	**J**	0.4	U	--		--	
Arsenic	10	50	--	µg/L	0.5	U	0.5	U	**1.2**	**J**	--		--	
Barium	2000	2000	--	µg/L	**420**		**400**		**490**		--		--	
Beryllium	4	4	--	µg/L	0.3	U	0.3	U	0.3	U	--		--	
Cadmium	5	5	--	µg/L	**0.29**	**J**	**0.3**	**J**	0.19	U	--		--	
Calcium	--	--	--	µg/L	**220000**		**210000**		**300000**		--		--	
Chromium	100	100	--	µg/L	0.5	U	0.5	U	**0.85**	**J**	--		--	
Cobalt	--	--	--	µg/L	**2.8**		**2.6**		**0.43**	**J-**	--		--	
Copper	1300	1300	--	µg/L	**3.1**		**3**		**2.4**		--		--	
Cyanide	0.2	0.2	--	mg/L							--		--	
Iron	--	--	300	µg/L	**24**	**J**	**21**	**J**	**8.9**	**J**	--		--	
Lead	15	15	--	µg/L	0.23	U	0.23	U	0.23	UJ	--		--	
Magnesium	--	--	--	µg/L	**73000**		**69000**		**92000**		--		--	
Manganese	--	--	50	µg/L	**2000**		**1800**		**52**		--		--	
Mercury	2	2	--	µg/L							--		--	
Nickel	--	--	--	µg/L	**15**		**15**		**1.9**	**J-**	--		--	
Potassium	--	--	--	µg/L	**4800**		**4600**		**5100**		--		--	
Selenium	50	50	--	µg/L	1	U	1	U	1	U	--		--	
Silver	--	--	100	µg/L	0.045	U	0.045	U	0.045	U	--		--	
Sodium	--	--	--	µg/L	**100000**		**95000**		**120000**		--		--	
Sulfide	--	--	--	mg/L							--		--	
Thallium	2	2	--	µg/L	0.21	U	0.21	U	0.21	U	--		--	
Tin	--	--	--	µg/L	0.58	U	0.58	U	0.58	U	--		--	
Vanadium	--	--	--	µg/L	1.1	U	1.1	U	**1.7**	**J**	--		--	
Zinc	--	--	5000	µg/L	**9.3**	**J**	**9.9**	**J**	2	U	--		--	
Field and Redox Parameters														
Acetylene	--	--	--	µg/L	*0.73*	*U*	*0.73*	*U*	*0.73*	*U*	--		--	
Bromide	--	--	--	mg/L	**1.4**		**1.4**		**1.2**		--		--	
Chloride	--	--	250	mg/L	**310**		**330**		**570**		--		--	
Dissolved Oxygen	--	--	--	mg/L	**2.67**		--		**1.08**		**6.9**		**8.98**	
Ethane	--	--	--	µg/L	**1**	**J**	**0.94**	**J**	*0.57*	*U*	--		--	
Ethene	--	--	--	µg/L	**0.42**	**J**	*0.4*	*U*	*0.4*	*U*	--		--	
FERROUS IRON	--	--	--	mg/L	**0.04**		--		**0.03**		--		--	
Manganese	--	--	0.05	mg/L	**2**		**1.8**		**0.052**		--		--	
Methane	--	--	--	mg/L	**0.013**		**0.014**		*0.00063*	*U*	--		--	
Nitrate	10	10	--	mg/L	**5.6**		**5.6**		**18**		--		--	
Nitrite	1	1	--	mg/L	*0.049*	*UJ*	*0.049*	*UJ*	*0.049*	*U*	--		--	
Oxidation-Reduction Potential	--	--	--	millivolts	**45.2**		--		**22**		**72.2**		**76.3**	
pH	--	--	6.5 - 8.5	su	**6.62**		--		**6.64**		**7.06**		**7.12**	
Propane	--	--	--	µg/L	**0.68**	**J**	**0.64**	**J**	*0.56*	*U*	--		--	
Specific Conductance	--	--	--	µS/cm	**2063**		--		**2760**		**1486**		**845**	
Sulfate	--	--	250	mg/L	**120**		**120**		**150**		--		--	
Sulfide	--	--	--	mg/L	--		--		--		--		--	
Temperature	--	--	--	Celsius	**11.58**		--		**12.96**		**11.2**		**10**	
Total Organic Carbon	--	--	--	mg/L	**5.1**		**4.9**		**4.6**		--		--	
Turbidity	--	--	--	ntu	**19.6**		--		**0.83**		**0.29**		**0.75**	

Appendix C
Table 2
Cell 1 Inorganic and Field and Redox Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Remediation System Wells													
				Well ID	RW-1		RW-10		RW-15		RW-17		RW-2		RW-3		RW-5		RW-9R	
				Sample Name	RW-1-20230413		RW-10-20230411		RW-15-20230411		RW-17-20230411		RW-2-20230412		RW-3-20230413		RW-5-20230411		RW-9R-20230411	
				Sample Date	4/13/2023		4/11/2023		4/11/2023		4/11/2023		4/12/2023		4/13/2023		4/11/2023		4/11/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Inorganics																				
Antimony	6	6	--	µg/L	*0.4*	U	--		*0.4*	U	--		*0.4*	U	*0.4*	U	--		--	
Arsenic	10	50	--	µg/L	**0.62**	J	--		*0.5*	U	--		**1.7**	J	**1.4**	J	--		--	
Barium	2000	2000	--	µg/L	**340**		--		**300**		--		**350**		**410**		--		--	
Beryllium	4	4	--	µg/L	*0.3*	U	--		*0.3*	U	--		*0.3*	U	*0.3*	U	--		--	
Cadmium	5	5	--	µg/L	*0.19*	U	--		*0.19*	U	--		*0.19*	U	*0.19*	U	--		--	
Calcium	--	--	--	µg/L	**210000**		--		**200000**		--		**220000**		**210000**		--		--	
Chromium	100	100	--	µg/L	*0.5*	U	--		*0.5*	U	--		**0.98**	J	**0.8**	J	--		--	
Cobalt	--	--	--	µg/L	*0.33*	U	--		*0.33*	U	--		*0.33*	U	**1.6**		--		--	
Copper	1300	1300	--	µg/L	**1.3**	J	--		**7.6**		--		**1.7**	J	**1.2**	J	--		--	
Cyanide	0.2	0.2	--	mg/L			--				--						--		--	
Iron	--	--	300	µg/L	**44**	J	--		*8.7*	U	--		**34**	J	**52**	J	--		--	
Lead	15	15	--	µg/L	*0.23*	U	--		**0.25**	J	--		*0.23*	U	*0.23*	U	--		--	
Magnesium	--	--	--	µg/L	**74000**		--		**78000**		--		**73000**		**60000**		--		--	
Manganese	--	--	50	µg/L	**390**		--		**1.2**	J	--		**3.6**		**280**		--		--	
Mercury	2	2	--	µg/L			--				--						--		--	
Nickel	--	--	--	µg/L	**8.7**		--		**2.6**	J	--		**3.5**		**39**		--		--	
Potassium	--	--	--	µg/L	**4800**		--		**4200**		--		**4700**		**4800**		--		--	
Selenium	50	50	--	µg/L	*1*	U	--		*1*	U	--		*1*	U	*1*	U	--		--	
Silver	--	--	100	µg/L	*0.045*	U	--		*0.045*	U	--		*0.045*	U	*0.045*	U	--		--	
Sodium	--	--	--	µg/L	**100000**		--		**96000**		--		**100000**		**160000**		--		--	
Sulfide	--	--	--	mg/L			--				--						--		--	
Thallium	2	2	--	µg/L	*0.21*	U	--		*0.21*	U	--		*0.21*	U	*0.21*	U	--		--	
Tin	--	--	--	µg/L	*0.58*	U	--		*0.58*	U	--		*0.58*	U	*0.58*	U	--		--	
Vanadium	--	--	--	µg/L	**1.2**	J	--		*1.1*	U	--		**2.7**	J	**2.9**	J	--		--	
Zinc	--	--	5000	µg/L	*2*	U	--		**47**		--		*10*	U	*10*	U	--		--	
Field and Redox Parameters																				
Acetylene	--	--	--	µg/L	--		--		--		--		--		--		--		--	
Bromide	--	--	--	mg/L	**2.8**	J-	--		**1.5**		--		**2.4**		*0.23*	U	--		--	
Chloride	--	--	250	mg/L	**350**		--		**310**		--		**330**		**340**		--		--	
Dissolved Oxygen	--	--	--	mg/L	**0.39**		**7.75**		**3.79**		**3.4**		**1.69**		**1.99**		**6.02**		**14.5**	
Ethane	--	--	--	µg/L	--		--		--		--		--		--		--		--	
Ethene	--	--	--	µg/L	--		--		--		--		--		--		--		--	
FERROUS IRON	--	--	--	mg/L	**0.04**		--		--		--		**0.01**		**0.04**		--		--	
Manganese	--	--	0.05	mg/L	**0.39**		--		**0.0012**	J	--		**0.0036**		**0.28**		--		--	
Methane	--	--	--	mg/L	--		--		--		--		--		--		--		--	
Nitrate	10	10	--	mg/L	**2.3**		--		**2.2**	J-	--		**5.8**	J	**5.6**	J-	--		--	
Nitrite	1	1	--	mg/L	*0.049*	U	--		0.049	R	--		*0.049*	UJ	0.049	R	--		--	
Oxidation-Reduction Potential	--	--	--	millivolts	**115.6**		**139.5**		**139.6**		**155.6**		**155.5**		**93**		**160.6**		**144**	
pH	--	--	6.5 - 8.5	su	**6.37**		**6.7**		**6.5**		**6.58**		**6.56**		**6.69**		**6.67**		**6.7**	
Propane	--	--	--	µg/L	--		--		--		--		--		--		--		--	
Specific Conductance	--	--	--	µS/cm	**2094**		**1512**		**1913**		**1642**		**2175**		**2260**		**1426**		**2150**	
Sulfate	--	--	250	mg/L	**110**		--		**98**		--		**120**		**49**		--		--	
Sulfide	--	--	--	mg/L	--		--		--		--		--		--		--		--	
Temperature	--	--	--	Celsius	**10.73**		**13.88**		**12.5**		**12.39**		**12.78**		**10.7**		**12.17**		**13.18**	
Total Organic Carbon	--	--	--	mg/L	**5.1**		--		**4.4**		--		**4.6**		**3.8**		--		--	
Turbidity	--	--	--	ntu	**1.47**		**2.32**		**11.6**		**5.74**		**0.31**		**20.8**		**0.22**		**2.13**	

Appendix C
Table 3
Injection-1R Analytical Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Remediation System			
				Well ID	INJ-1R		INJ-1R	
				Sample Name	INJ-1R-20230125		INJ-1R-20230411	
				Sample Date	1/25/2023		4/11/2023	
				Unit	Result	Q	Result	Q
Volatile Organic Compounds (VOCs)								
1,1,1,2-Tetrachloroethane	--	--	--	µg/L	*0.58*	*U*	*0.58*	*U*
1,1,1-Trichloroethane	200	200	--	µg/L	*0.39*	*U*	*0.39*	*U*
1,1,2,2-Tetrachloroethane	--	--	--	µg/L	*0.21*	*U*	*0.21*	*U*
1,1,2-Trichloroethane	5	5	--	µg/L	*0.27*	*U*	*0.27*	*U*
1,1-Dichloroethane	--	--	--	µg/L	*0.22*	*U*	*0.22*	*U*
1,1-Dichloroethene	7	7	--	µg/L	*0.23*	*U*	*0.23*	*U*
1,1-Dichloropropene	--	--	--	µg/L	*0.42*	*U*	*0.42*	*U*
1,2,3-Trichloropropane	--	--	--	µg/L	*0.86*	*U*	*0.005*	*U*
1,2,4-Trichlorobenzene	70	70	--	µg/L	*0.58*	*U*	*0.58*	*U*
1,2-Dibromo-3-Chloropropane	0.2	0.2	--	µg/L	*1.8*	*U*	*0.0067*	*U*
1,2-Dibromoethane	0.05	0.05	--	µg/L	*0.4*	*U*	*0.0037*	*U*
1,2-Dichlorobenzene	600	600	--	µg/L	*0.37*	*U*	*0.37*	*U*
1,2-Dichloroethane	5	5	--	µg/L	*0.54*	*U*	*0.54*	*U*
1,2-Dichloropropane	5	5	--	µg/L	*0.52*	*U*	*0.52*	*U*
1,3-Dichlorobenzene	--	600	--	µg/L	*0.33*	*U*	*0.33*	*U*
1,3-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.38*	*U*
1,4-Dichlorobenzene	75	75	--	µg/L	*0.39*	*U*	*0.39*	*U*
2,2-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.38*	*U*
2-Butanone (MEK)	--	--	--	µg/L	*5.9*	*U*	*6*	*U*
2-Hexanone	--	--	--	µg/L	*1.7*	*U*	*1.7*	*U*
4-Methyl-2-pentanone (MIBK)	--	--	--	µg/L	*0.98*	*U*	*0.98*	*U*
Acetone	--	--	--	µg/L	*6.6*	*U*	*6.6*	*U*
Acetonitrile; methyl cyanide	--	--	--	µg/L	*9.6*	*U*	*9.6*	*U*
Acrolein	--	--	--	µg/L	*4.9*	*U*	*4.9*	*U*
Acrylonitrile	--	--	--	µg/L	*4.5*	*U*	*4.5*	*U*
Allyl chloride	--	--	--	µg/L	*0.17*	*U*	*0.17*	*U*
Benzene	5	5	--	µg/L	*0.31*	*U*	*0.31*	*U*
Bromochloromethane	--	--	--	µg/L	*0.4*	*U*	*0.4*	*U*
Bromodichloromethane	80	100	--	µg/L	*0.39*	*U*	*0.39*	*U*
Bromoform	80	100	--	µg/L	*1.2*	*U*	*1.2*	*U*
Bromomethane	--	--	--	µg/L	*2.4*	*U*	*2.4*	*U*
Carbon disulfide	--	--	--	µg/L	*0.63*	*U*	*0.63*	*U*
Carbon tetrachloride	5	5	--	µg/L	*0.57*	*U*	*0.57*	*U*
Chlorobenzene	100	100	--	µg/L	*0.42*	*U*	*0.42*	*U*
Chlorodibromomethane	80	100	--	µg/L	*0.62*	*U*	*0.62*	*U*
Chloroethane	--	--	--	µg/L	*1.4*	*U*	*1.4*	*U*
Chloroform	80	2	--	µg/L	*0.36*	*U*	*0.36*	*U*
Chloromethane	--	--	--	µg/L	*0.75*	*U*	*0.75*	*U*
Chloroprene	--	--	--	µg/L	*1.2*	*U*	*1.2*	*U*
cis-1,2-Dichloroethene	70	70	--	µg/L	*0.32*	*U*	*0.32*	*U*
cis-1,3-Dichloropropene	--	--	--	µg/L	*0.63*	*U*	*0.63*	*U*
Dibromomethane	--	--	--	µg/L	*0.34*	*U*	*0.34*	*U*
Dichlorodifluoromethane	--	--	--	µg/L	*0.96*	*U*	*0.96*	*U*
Ethyl methacrylate	--	--	--	µg/L	*0.86*	*U*	*0.86*	*U*
Ethylbenzene	700	700	--	µg/L	*0.3*	*U*	*0.3*	*U*
Iodomethane	--	--	--	µg/L	*2.6*	*U*	*2.6*	*U*
Isobutanol; Isobutyl alcohol	--	--	--	µg/L	*37*	*U*	*37*	*U*
m,p-Xylene	10000	--	--	µg/L	*0.36*	*U*	*0.36*	*U*
Methacrylonitrile	--	--	--	µg/L	*5.3*	*U*	*5.3*	*U*
Methyl methacrylate	--	--	--	µg/L	*1.1*	*U*	*1.1*	*U*
Methylene Chloride	5	5	--	µg/L	*0.94*	*U*	*0.94*	*U*
o-xylene (1,2-dimethylbenzene)	10000	--	--	µg/L	*0.33*	*U*	*0.33*	*U*
Propionitrile; ethyl cyanide	--	--	--	µg/L	*3.7*	*U*	*3.7*	*U*
Styrene	100	100	--	µg/L	*0.36*	*U*	*0.36*	*U*
Tetrachloroethene	5	5	--	µg/L	*0.4*	*U*	*0.4*	*U*
Toluene	1000	1000	--	µg/L	*0.32*	*U*	*0.32*	*U*
trans-1,2-Dichloroethene	100	100	--	µg/L	*0.37*	*U*	*0.37*	*U*
trans-1,3-Dichloropropene	--	--	--	µg/L	*0.65*	*U*	*0.65*	*U*
trans-1,4-Dichloro-2-butene	--	--	--	µg/L	*1.4*	*U*	*1.4*	*U*
Trichloroethene	5	5	--	µg/L	*0.3*	*U*	**0.44**	**J**
Trichlorofluoromethane	--	--	--	µg/L	*0.57*	*U*	*0.57*	*U*
Vinyl acetate	--	--	--	µg/L	*0.94*	*U*	*0.94*	*U*
Vinyl chloride	2	2	--	µg/L	*0.51*	*U*	*0.51*	*U*
Xylene (Total)	10000	10000	--	µg/L	*0.33*	*U*	*0.33*	*U*

Appendix C
Table 3
Injection-1R Analytical Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Remediation System			
				Well ID	INJ-1R		INJ-1R	
				Sample Name	INJ-1R-20230125		INJ-1R-20230411	
				Sample Date	1/25/2023		4/11/2023	
				Unit	Result	Q	Result	Q
Inorganics								
Antimony	6	6	--	µg/L	--		*0.4*	*U*
Arsenic	10	50	--	µg/L	--		**0.84**	**J**
Barium	2000	2000	--	µg/L	--		**280**	
Beryllium	4	4	--	µg/L	--		*0.3*	*U*
Cadmium	5	5	--	µg/L	--		*0.19*	*U*
Calcium	--	--	--	µg/L	--		**160000**	
Chromium	100	100	--	µg/L	--		*0.5*	*U*
Cobalt	--	--	--	µg/L	--		*0.33*	*U*
Copper	1300	1300	--	µg/L	--		**9.6**	
Cyanide	0.2	0.2	--	mg/L	--		*0.005*	*U*
Iron	--	--	300	µg/L	--		**11**	**J**
Lead	15	15	--	µg/L	--		**1.1**	
Magnesium	--	--	--	µg/L	--		**69000**	
Manganese	--	--	50	µg/L	--		**180**	
Mercury	2	2	--	µg/L	--		**0.071**	**J**
Nickel	--	--	--	µg/L	--		**2.3**	**J**
Potassium	--	--	--	µg/L	--		**4600**	
Selenium	50	50	--	µg/L	--		*1*	*U*
Silver	--	--	100	µg/L	--		**0.2**	**J**
Sodium	--	--	--	µg/L	--		**85000**	
Sulfide	--	--	--	mg/L	--		*0.022*	*U*
Thallium	2	2	--	µg/L	--		*0.21*	*U*
Tin	--	--	--	µg/L	--		**1.7**	**J**
Vanadium	--	--	--	µg/L	--		**1.5**	**J**
Zinc	--	--	5000	µg/L	--		**20**	
Semivolatile Organic Compounds (SVOCs)								
1,2,4,5-Tetrachlorobenzene	--	--	--	µg/L	--		*1.8*	*U*
1,3,5-Trinitrobenzene	--	--	--	µg/L	--		*5.4*	*U*
1,3-Dinitrobenzene	--	--	--	µg/L	--		*5.4*	*U*
1,4-Naphthoquinone	--	--	--	µg/L	--		*5.6*	*U*
1-Naphthylamine	--	--	--	µg/L	--		*3.8*	*U*
2,3,4,6-Tetrachlorophenol	--	--	--	µg/L	--		*7.3*	*U*
2,4,5-Trichlorophenol	--	--	--	µg/L	--		*0.93*	*U*
2,4,6-Trichlorophenol	--	--	--	µg/L	--		*0.74*	*U*
2,4-Dichlorophenol	--	--	--	µg/L	--		*0.66*	*U*
2,4-Dimethylphenol; m-Xylenol	--	--	--	µg/L	--		*1.4*	*U*
2,4-Dinitrophenol	--	--	--	µg/L	--		*13*	*U*
2,4-Dinitrotoluene	--	--	--	µg/L	--		*1.5*	*U*
2,6-Dichlorophenol	--	--	--	µg/L	--		*0.77*	*U*
2,6-Dinitrotoluene	--	--	--	µg/L	--		*1.5*	*U*
2-Acetylaminofluorene	--	--	--	µg/L	--		*8.4*	*U*
2-Chloronaphthalene	--	--	--	µg/L	--		*1.3*	*U*
2-Chlorophenol	--	--	--	µg/L	--		*0.71*	*U*
2-Methylnaphthalene	--	--	--	µg/L	--		*1.3*	*U*
2-Methylphenol (o-cresol)	--	--	--	µg/L	--		*0.8*	*U*
2-Naphthylamine	--	--	--	µg/L	--		*1.4*	*U*
2-Nitroaniline; o-Nitroaniline	--	--	--	µg/L	--		*2.7*	*U*
2-Nitrophenol; o-Nitrophenol	--	--	--	µg/L	--		*3.6*	*U*
3,3'-Dichlorobenzidine	--	--	--	µg/L	--		*3.5*	*UJ*
3,3'-Dimethylbenzidine	--	--	--	µg/L	--		*15*	*U*
3-Methylcholanthrene	--	--	--	µg/L	--		*4*	*U*
3-METHYLPHENOL & 4-METHYLPHENOL (M&P-CRESOL)	--	--	--	µg/L	--		*0.83*	*U*
3-Nitroaniline; m-Nitroaniline	--	--	--	µg/L	--		*3.5*	*U*
4,6-Dinitro-2-methylphenol	--	--	--	µg/L	--		*4.2*	*U*
4-Aminobiphenyl	--	--	--	µg/L	--		*8.1*	*U*
4-Bromophenyl phenyl ether	--	--	--	µg/L	--		*1*	*U*
4-Chloro-3-methylphenol	--	--	--	µg/L	--		*0.72*	*U*
4-Chloroaniline; p-Chloroaniline	--	--	--	µg/L	--		*6.5*	*U*
4-Chlorophenyl phenyl ether	--	--	--	µg/L	--		*1.3*	*U*
4-Nitroaniline; p-Nitroaniline	--	--	--	µg/L	--		*2.7*	*U*
4-Nitrophenol; p-Nitrophenol	--	--	--	µg/L	--		*9.4*	*U*
5-Nitro-o-toluidine	--	--	--	µg/L	--		*4.4*	*U*
7,12-Dimethylbenz[a]anthracene	--	--	--	µg/L	--		*7.9*	*U*
Acenaphthene	--	--	--	µg/L	--		*1*	*U*
Acenaphthylene	--	--	--	µg/L	--		*0.77*	*U*
Acetophenone	--	--	--	µg/L	--		*0.71*	*U*
Anthracene	--	--	--	µg/L	--		*0.6*	*U*
Benzo[a]anthracene	--	--	--	µg/L	--		*0.4*	*U*
Benzo[a]pyrene	0.2	0.2	--	µg/L	--		*0.027*	*U*
Benzo[b]fluoranthene	--	--	--	µg/L	--		*1.2*	*U*
Benzo[ghi]perylene	--	--	--	µg/L	--		*0.53*	*U*
Benzo[k]fluoranthene	--	--	--	µg/L	--		*0.41*	*U*
Benzyl alcohol	--	--	--	µg/L	--		*2.6*	*U*
Bis(2-chloroethoxy)methane	--	--	--	µg/L	--		*0.84*	*U*
Bis(2-chloroethyl)ether	--	--	--	µg/L	--		*2.1*	*U*
Bis(2-chloroisopropyl)ether	--	--	--	µg/L	--		*1.4*	*U*

Appendix C
Table 3
Injection-1R Analytical Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Remediation System			
				Well ID	INJ-1R		INJ-1R	
				Sample Name	INJ-1R-20230125		INJ-1R-20230411	
				Sample Date	1/25/2023		4/11/2023	
				Unit	Result	Q	Result	Q
Bis(2-ethylhexyl) phthalate	6	6	--	µg/L	--		*10*	*U*
Butyl benzyl phthalate	--	--	--	µg/L	--		*1.6*	*U*
Chlorobenzilate	--	--	--	µg/L	--		*1.9*	*U*
Chrysene	--	--	--	µg/L	--		*2.1*	*U*
Diallate	--	--	--	µg/L	--		*4.1*	*U*
Dibenz[a,h]anthracene	--	--	--	µg/L	--		*0.6*	*U*
Dibenzofuran	--	--	--	µg/L	--		*0.99*	*U*
Diethyl phthalate	--	--	--	µg/L	--		*0.61*	*U*
Dimethyl phthalate	--	--	--	µg/L	--		*0.78*	*U*
Di-n-butyl phthalate	--	--	--	µg/L	--		*4.1*	*U*
Di-n-octyl phthalate	--	--	--	µg/L	--		*3.7*	*U*
Diphenylamine	--	--	--	µg/L	--		*0.72*	*U*
Ethyl methanesulfonate	--	--	--	µg/L	--		*0.57*	*U*
Famphur	--	--	--	µg/L	--		*0.17*	*UJ*
Fluoranthene	--	--	--	µg/L	--		*0.52*	*U*
Fluorene	--	--	--	µg/L	--		*0.81*	*U*
Hexachloro-1,3-butadiene	--	--	--	µg/L	--		*3*	*U*
Hexachlorobenzene	1	1	--	µg/L	--		*0.89*	*U*
Hexachlorocyclopentadiene	50	50	--	µg/L	--		*17*	*U*
Hexachloroethane	--	--	--	µg/L	--		*4.6*	*U*
Hexachloropropene	--	--	--	µg/L	--		*1.7*	*UJ*
Indeno(1,2,3-cd)pyrene	--	--	--	µg/L	--		*1.4*	*U*
Isodrin	--	--	--	µg/L	--		*0.013*	*U*
Isophorone	--	--	--	µg/L	--		*2.1*	*U*
Isosafrole	--	--	--	µg/L	--		*3.6*	*U*
Kepone	--	--	--	µg/L	--		*0.91*	*U*
Methapyrilene	--	--	--	µg/L	--		*9.9*	*U*
Methyl methanesulfonate	--	--	--	µg/L	--		*0.45*	*U*
Naphthalene	--	--	--	µg/L	--		*1.6*	*U*
Nitrobenzene	--	--	--	µg/L	--		*1.3*	*U*
N-Nitrosodiethylamine	--	--	--	µg/L	--		*0.35*	*U*
N-Nitrosodimethylamine	--	--	--	µg/L	--		*0.59*	*U*
N-Nitrosodi-n-butylamine	--	--	--	µg/L	--		*1.3*	*U*
N-Nitrosodi-n-propylamine	--	--	--	µg/L	--		*2*	*U*
N-Nitrosodiphenylamine	--	--	--	µg/L	--		*0.8*	*U*
N-Nitrosomethylethylamine	--	--	--	µg/L	--		*1.9*	*U*
N-Nitrosopiperidine	--	--	--	µg/L	--		*5.5*	*U*
N-Nitrosopyrrolidine	--	--	--	µg/L	--		*5.1*	*U*
O,O,O-Triethyl phosphorothioate	--	--	--	µg/L	--		*5*	*U*
o-Toluidine	--	--	--	µg/L	--		*2.1*	*U*
p-(Dimethylamino)azobenzene	--	--	--	µg/L	--		*0.91*	*U*
Pentachlorobenzene	--	--	--	µg/L	--		*1.2*	*U*
Pentachloronitrobenzene	--	--	--	µg/L	--		*8.6*	*U*
Pentachlorophenol	1	1	--	µg/L	--		*0.075*	*U*
Phenacetin	--	--	--	µg/L	--		*4.7*	*U*
Phenanthrene	--	--	--	µg/L	--		*1.6*	*U*
Phenol	--	--	--	µg/L	--		*0.95*	*U*
Phorate	--	--	--	µg/L	--		*0.15*	*UJ*
Pronamide	--	--	--	µg/L	--		*1.3*	*U*
Pyrene	--	--	--	µg/L	--		*0.55*	*U*
Safrole, Total	--	--	--	µg/L	--		*4.2*	*U*
Thionazin	--	--	--	µg/L	--		*4.3*	*U*
Organochlorine Pesticides								
4,4'-DDD	--	--	--	µg/L	--		*0.0043*	*U*
4,4'-DDE	--	--	--	µg/L	--		*0.0043*	*U*
4,4'-DDT	--	--	--	µg/L	--		*0.024*	*U*
Aldrin	--	--	--	µg/L	--		*0.0063*	*U*
alpha-BHC	--	--	--	µg/L	--		*0.0098*	*U*
beta-BHC	--	--	--	µg/L	--		*0.0093*	*U*
Chlordane - constituents	2	2	--	µg/L	--		*0.12*	*U*
delta-BHC	--	--	--	µg/L	--		*0.0079*	*U*
Dieldrin	--	--	--	µg/L	--		*0.0047*	*U*
Endosulfan I	--	--	--	µg/L	--		*0.0059*	*U*
Endosulfan II	--	--	--	µg/L	--		*0.0067*	*U*
Endosulfan sulfate	--	--	--	µg/L	--		*0.005*	*U*
Endrin	2	2	--	µg/L	--		*0.0087*	*U*
Endrin aldehyde	--	--	--	µg/L	--		*0.0088*	*U*
gamma-BHC (lindane)	0.2	0.2	--	µg/L	--		*0.01*	*U*
Heptachlor	0.4	0.4	--	µg/L	--		*0.01*	*U*
Heptachlor epoxide	0.2	0.2	--	µg/L	--		*0.0033*	*U*
Methoxychlor	40	40	--	µg/L	--		*0.014*	*U*
Toxaphene	3	3	--	µg/L	--		*1.5*	*U*
Organophosphorous Pesticides								
Dimethoate	--	--	--	µg/L	--		*0.43*	*UJ*
Disulfoton	--	--	--	µg/L	--		*0.31*	*UJ*
Methyl parathion	--	--	--	µg/L	--		*0.14*	*UJ*
Parathion	--	--	--	µg/L	--		*0.14*	*UJ*

Appendix C
Table 3
Injection-1R Analytical Data
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Remediation System			
				Well ID	INJ-1R		INJ-1R	
				Sample Name	INJ-1R-20230125		INJ-1R-20230411	
				Sample Date	1/25/2023		4/11/2023	
				Unit	Result	Q	Result	Q
Polychlorinated Biphenyls (PCBs)								
PCB 1016	0.5	--	--	µg/L	--		*0.17*	*U*
PCB 1221	0.5	--	--	µg/L	--		*0.18*	*U*
PCB 1232	0.5	--	--	µg/L	--		*0.13*	*U*
PCB 1242	0.5	--	--	µg/L	--		*0.11*	*U*
PCB 1248	0.5	--	--	µg/L	--		*0.17*	*U*
PCB 1254	0.5	--	--	µg/L	--		*0.14*	*U*
PCB 1260	0.5	--	--	µg/L	--		*0.09*	*U*
Polychlorinated Biphenyl (PCBs)	0.5	0.5	--	µg/L	--		*0.074*	*U*
Chlorinated Herbicides								
2,4,5-TP (Silvex)	50	50	--	µg/L	--		*0.33*	*U*
2,4,5-Trichlorophenoxyacetic acid	--	--	--	µg/L	--		*0.33*	*U*
2,4-Dichlorophenoxyacetic acid	70	70	--	µg/L	--		*0.21*	*U*
Dinoseb; 2-sec-Butyl-4,6-dinitrophenol	7	7	--	µg/L	--		*0.23*	*U*
Dioxins/Furans								
2,3,7,8-TCDD	30	30	--	pg/L	--		*0.47*	*U*
Field and Redox Parameters								
Manganese	--	--	0.05	mg/L	--		**0.18**	
Sulfide	--	--	--	mg/L	--		*0.022*	*U*

Appendix C
Table 4
Cell 2 and 4 Analytical Results
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 2 Monitoring Wells									
				Well ID	MW-8		MW-9		MW-12		MW-13		MW-13	
				Sample Name	MW-8-20230519		MW-9-20230519		MW-12-20230518		MW-13-20230517		MW-13-Q-20230517	
				Sample Date	5/19/2023		5/19/2023		5/18/2023		5/17/2023		5/17/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Volatile Organic Compounds (VOCs)														
1,1,1,2-Tetrachloroethane	--	--	--	ug/l	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*
1,1,1-Trichloroethane	200	200	--	ug/l	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
1,1,2,2-Tetrachloroethane	--	--	--	ug/l	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*
1,1,2-Trichloroethane	5	5	--	ug/l	*0.27*	*U*	*0.27*	*U*	*0.27*	*U*	*0.27*	*U*	*0.27*	*U*
1,1-Dichloroethane	--	--	--	µg/L	*0.22*	*U*	*0.22*	*U*	*0.22*	*U*	**0.27**	**J**	**0.29**	**J**
1,1-Dichloroethene	7	7	--	µg/L	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*
1,1-Dichloropropene	--	--	--	µg/L	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*
1,2,3-Trichloropropane	--	--	--	µg/L	*0.005*	*U*	*0.005*	*U*	*0.005*	*U*	*0.005*	*U*	*0.005*	*U*
1,2,4-Trichlorobenzene	70	70	--	µg/L	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*
1,2-Dibromo-3-Chloropropane	0.2	0.2	--	µg/L	*0.0068*	*U*	*0.0067*	*U*	*0.0069*	*U*	*0.0068*	*U*	*0.0068*	*U*
1,2-Dibromoethane	0.05	0.05	--	µg/L	*0.0037*	*U*	*0.0037*	*U*	*0.0037*	*U*	*0.0037*	*U*	*0.0037*	*U*
1,2-Dichlorobenzene	600	600	--	µg/L	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*
1,2-Dichloroethane	5	5	--	µg/L	*0.54*	*U*	*0.54*	*U*	*0.54*	*U*	*0.54*	*U*	*0.54*	*U*
1,2-Dichloropropane	5	5	--	µg/L	*0.52*	*U*	*0.52*	*U*	*0.52*	*U*	*0.52*	*U*	*0.52*	*U*
1,3-Dichlorobenzene	--	600	--	µg/L	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
1,3-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*
1,4-Dichlorobenzene	75	75	--	µg/L	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
2,2-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*
2-Butanone (MEK)	--	--	--	µg/L	*6*	*U*	*6*	*U*	*6*	*U*	*6*	*U*	*6*	*U*
2-Hexanone	--	--	--	µg/L	*1.7*	*U*	*1.7*	*U*	*1.7*	*U*	*1.7*	*U*	*1.7*	*U*
4-Methyl-2-pentanone (MIBK)	--	--	--	µg/L	*0.98*	*U*	*0.98*	*U*	*0.98*	*U*	*0.98*	*U*	*0.98*	*U*
Acetone	--	--	--	µg/L	*6.6*	*U*	**88**		*6.6*	*U*	*6.6*	*U*	*6.6*	*U*
Acetonitrile; methyl cyanide	--	--	--	µg/L	*9.6*	*U*	*9.6*	*U*	*9.6*	*U*	*9.6*	*U*	*9.6*	*U*
Acrolein	--	--	--	µg/L	*4.9*	*U*	*4.9*	*U*	*4.9*	*U*	*4.9*	*U*	*4.9*	*U*
Acrylonitrile	--	--	--	µg/L	*4.5*	*U*	*4.5*	*U*	*4.5*	*U*	*4.5*	*U*	*4.5*	*U*
Allyl chloride	--	--	--	µg/L	*0.17*	*U*	*0.17*	*U*	*0.17*	*U*	*0.17*	*U*	*0.17*	*U*
Benzene	5	5	--	µg/L	*0.31*	*U*	**1.1**		*0.31*	*U*	*0.31*	*U*	*0.31*	*U*
Bromochloromethane	--	--	--	µg/L	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
Bromodichloromethane	80	100	--	µg/L	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
Bromoform	80	100	--	µg/L	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*
Bromomethane	--	--	--	µg/L	*2.4*	*U*	*2.4*	*U*	*2.4*	*U*	*2.4*	*U*	*2.4*	*U*
Carbon disulfide	--	--	--	µg/L	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*
Carbon tetrachloride	5	5	--	µg/L	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*
Chlorobenzene	100	100	--	µg/L	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*
Chlorodibromomethane	80	100	--	µg/L	*0.62*	*U*	*0.62*	*U*	*0.62*	*U*	*0.62*	*U*	*0.62*	*U*
Chloroethane	--	--	--	µg/L	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*
Chloroform	80	2	--	µg/L	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Chloromethane	--	--	--	µg/L	*0.75*	*U*	*0.75*	*U*	*0.75*	*U*	*0.75*	*U*	*0.75*	*U*
Chloroprene	--	--	--	µg/L	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*
cis-1,2-Dichloroethene	70	70	--	µg/L	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*	**1.1**		**1.1**	
cis-1,3-Dichloropropene	--	--	--	µg/L	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*
Dibromomethane	--	--	--	µg/L	*0.34*	*U*	*0.34*	*U*	*0.34*	*U*	*0.34*	*U*	*0.34*	*U*
Dichlorodifluoromethane	--	--	--	µg/L	*0.96*	*U*	*0.96*	*U*	*0.96*	*U*	**1.6**	**J**	**1.6**	**J**
Ethyl methacrylate	--	--	--	µg/L	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*
Ethylbenzene	700	700	--	µg/L	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*
Iodomethane	--	--	--	µg/L	*2.6*	*U*	*2.6*	*U*	*2.6*	*U*	*2.6*	*U*	*2.6*	*U*
Isobutanol; Isobutyl alcohol	--	--	--	µg/L	*37*	*U*	*37*	*U*	*37*	*U*	*37*	*U*	*37*	*U*

Appendix C
Table 4
Cell 2 and 4 Analytical Results
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 2 Monitoring Wells									
				Well ID	MW-8		MW-9		MW-12		MW-13		MW-13	
				Sample Name	MW-8-20230519		MW-9-20230519		MW-12-20230518		MW-13-20230517		MW-13-Q-20230517	
				Sample Date	5/19/2023		5/19/2023		5/18/2023		5/17/2023		5/17/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
m,p-Xylene	10000	--	--	µg/L	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Methacrylonitrile	--	--	--	µg/L	*5.3*	*U*	*5.3*	*U*	*5.3*	*U*	*5.3*	*U*	*5.3*	*U*
Methyl methacrylate	--	--	--	µg/L	*1.1*	*U*	*1.1*	*U*	*1.1*	*U*	*1.1*	*U*	*1.1*	*U*
Methylene Chloride	5	5	--	µg/L	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*
o-xylene (1,2-dimethylbenzene)	10000	--	--	µg/L	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
Propionitrile; ethyl cyanide	--	--	--	µg/L	*3.7*	*U*	*3.7*	*U*	*3.7*	*U*	*3.7*	*U*	*3.7*	*U*
Styrene	100	100	--	µg/L	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Tetrachloroethene	5	5	--	µg/L	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
Toluene	1000	1000	--	µg/L	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*
trans-1,2-Dichloroethene	100	100	--	µg/L	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*
trans-1,3-Dichloropropene	--	--	--	µg/L	*0.65*	*U*	*0.65*	*U*	*0.65*	*U*	*0.65*	*U*	*0.65*	*U*
trans-1,4-Dichloro-2-butene	--	--	--	µg/L	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*
Trichloroethene	5	5	--	µg/L	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*
Trichlorofluoromethane	--	--	--	µg/L	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*	**0.65**	**J**	*0.57*	*U*
Vinyl acetate	--	--	--	µg/L	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*
Vinyl chloride	2	2	--	µg/L	*0.51*	*U*	**1**	**J**	*0.51*	*U*	*0.51*	*U*	*0.51*	*U*
Xylene (Total)	10000	10000	--	ug/l	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
Inorganics														
Antimony	6	6	--	ug/l	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
Arsenic	10	50	--	µg/L	**3.2**	**J**	**1.8**	**J**	**0.82**	**J**	**3.9**	**J**	**4.1**	**J**
Barium	2000	2000	--	µg/L	**33**		**80**		**54**		**110**		**110**	
Beryllium	4	4	--	µg/L	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*
Cadmium	5	5	--	µg/L	*0.19*	*U*	*0.19*	*U*	*0.19*	*U*	*0.19*	*U*	*0.19*	*U*
Calcium	--	--	--	µg/L	**59000**		**490000**		**64000**		**45000**		**46000**	
Chromium	100	100	--	µg/L	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	**0.83**	**J**	**0.71**	**J**
Cobalt	--	--	--	µg/L	*0.33*	*U*	**1.2**		**2.6**		**0.36**	**J**	**0.35**	**J**
Copper	1300	1300	--	µg/L	*0.71*	*U*	**2.2**		*0.71*	*U*	*0.71*	*U*	*0.71*	*U*
Iron	--	--	300	µg/L	*200*	*U*	**5400**		*8.7*	*U*	*200*	*U*	*200*	*U*
Lead	15	15	--	µg/L	*0.23*	*U*	**0.4**	**J**	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*
Magnesium	--	--	--	µg/L	**22000**		**370000**		**17000**		**40000**		**40000**	
Manganese	--	--	50	µg/L	**0.61**	**J**	**4400**		*0.51*	*U*	**1.5**	**J**	**2.2**	**J**
Nickel	--	--	--	µg/L	**1.3**	**J**	**4**		*0.83*	*U*	*0.83*	*U*	*0.83*	*U*
Potassium	--	--	--	µg/L	**580**	**J**	**8200**		**1000**		**2700**		**2600**	
Selenium	50	50	--	µg/L	*1*	*U*	*1*	*U*	*1*	*U*	*1*	*U*	*1*	*U*
Silver	--	--	100	µg/L	*0.045*	*U*	*0.045*	*U*	*0.045*	*U*	*0.045*	*U*	*0.045*	*U*
Sodium	--	--	--	µg/L	**45000**		**1300000**		**34000**		**37000**		**36000**	
Sulfide	--	--	--	µg/L	*0.022*	*UJ*	*0.022*	*UJ*	*0.022*	*UJ*	*0.022*	*U*	*0.022*	*U*
Thallium	2	2	--	µg/L	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*
Tin	--	--	--	µg/L	**1.1**	**J**	*0.58*	*U*	**1.3**	**J**	*0.58*	*U*	*0.58*	*U*
Vanadium	--	--	--	µg/L	**1.2**	**J**	**1.4**	**J**	*1.1*	*U*	**1.6**	**J**	**1.5**	**J**
Zinc	--	--	5000	µg/L	**2.2**	**J**	**48**		*2*	*U*	*2*	*U*	*2*	*U*

Appendix C
Table 4
Cell 2 and 4 Analytical Results
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 2 Monitoring Wells									
				Well ID	MW-8		MW-9		MW-12		MW-13		MW-13	
				Sample Name	MW-8-20230519		MW-9-20230519		MW-12-20230518		MW-13-20230517		MW-13-Q-20230517	
				Sample Date	5/19/2023		5/19/2023		5/18/2023		5/17/2023		5/17/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Field and Redox Parameters														
Dissolved Oxygen	--	--	--	mg/L	**9.13**		**0.06**		**9**		**8.21**		--	
Manganese	--	--	0.05	mg/L	**0.00061**	J	**4.4**		*0.00051*	U	**0.0015**	J	**0.0022**	J
Oxidation-Reduction Potential	--	--	--	millivolts	**59.9**		**-139**		**151.5**		**90.1**		--	
pH	--	--	6.5 - 8.5	su	**7.22**		**6.25**		**7.19**		**7.4**		--	
Specific Conductance	--	--	--	µS/cm	**609**		**8807**		**557**		**685**		--	
Sulfide	--	--	--	mg/L	*0.022*	UJ	*0.022*	UJ	*0.022*	UJ	*0.022*	U	*0.022*	U
Temperature	--	--	--	Celsius	**14.5**		**12.7**		**11.4**		**16**		--	
Turbidity	--	--	--	ntu	**6.96**		**12**		**4.04**		**16.1**		--	

Appendix C
Table 4
Cell 2 and 4 Analytical Results
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 4 Monitoring Wells									
				Well ID	MW-3A		MW-4		MW-4A		MW-5AR		MW-6A	
				Sample Name	MW-3A-20230518		MW-4-20230517		MW-4A-20230517		MW-5AR-20230519		MW-6A-20230519	
				Sample Date	5/18/2023		5/17/2023		5/17/2023		5/19/2023		5/19/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Volatile Organic Compounds (VOCs)														
1,1,1,2-Tetrachloroethane	--	--	--	ug/l	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*
1,1,1-Trichloroethane	200	200	--	ug/l	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
1,1,2,2-Tetrachloroethane	--	--	--	ug/l	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*
1,1,2-Trichloroethane	5	5	--	ug/l	*0.27*	*U*	*0.27*	*U*	*0.27*	*U*	*0.27*	*U*	*0.27*	*U*
1,1-Dichloroethane	--	--	--	µg/L	*0.22*	*U*	**1.1**		*0.22*	*U*	*0.22*	*U*	*0.22*	*U*
1,1-Dichloroethene	7	7	--	µg/L	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*
1,1-Dichloropropene	--	--	--	µg/L	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*
1,2,3-Trichloropropane	--	--	--	µg/L	*0.0049*	*U*	*0.0049*	*U*	*0.005*	*U*	*0.005*	*U*	*0.005*	*U*
1,2,4-Trichlorobenzene	70	70	--	µg/L	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*
1,2-Dibromo-3-Chloropropane	0.2	0.2	--	µg/L	*0.0066*	*U*	*0.0067*	*U*	*0.0067*	*U*	*0.0068*	*U*	*0.0067*	*U*
1,2-Dibromoethane	0.05	0.05	--	µg/L	*0.0036*	*U*	*0.0036*	*U*	*0.0037*	*U*	*0.0037*	*U*	*0.0037*	*U*
1,2-Dichlorobenzene	600	600	--	µg/L	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*
1,2-Dichloroethane	5	5	--	µg/L	*0.54*	*U*	**0.87**	**J**	*0.54*	*U*	*0.54*	*U*	*0.54*	*U*
1,2-Dichloropropane	5	5	--	µg/L	*0.52*	*U*	*0.52*	*U*	*0.52*	*U*	*0.52*	*U*	*0.52*	*U*
1,3-Dichlorobenzene	--	600	--	µg/L	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
1,3-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*
1,4-Dichlorobenzene	75	75	--	µg/L	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
2,2-Dichloropropane	--	--	--	µg/L	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*	*0.38*	*U*
2-Butanone (MEK)	--	--	--	µg/L	*6*	*U*	*6*	*U*	*6*	*U*	*6*	*U*	*6*	*U*
2-Hexanone	--	--	--	µg/L	*1.7*	*U*	*1.7*	*U*	*1.7*	*U*	*1.7*	*U*	*1.7*	*U*
4-Methyl-2-pentanone (MIBK)	--	--	--	µg/L	*0.98*	*U*	*0.98*	*U*	*0.98*	*U*	*0.98*	*U*	*0.98*	*U*
Acetone	--	--	--	µg/L	*6.6*	*U*	*6.6*	*U*	*6.6*	*U*	*6.6*	*U*	*6.6*	*U*
Acetonitrile; methyl cyanide	--	--	--	µg/L	*9.6*	*U*	*9.6*	*U*	*9.6*	*U*	*9.6*	*U*	*9.6*	*U*
Acrolein	--	--	--	µg/L	*4.9*	*U*	*4.9*	*U*	*4.9*	*U*	*4.9*	*U*	*4.9*	*U*
Acrylonitrile	--	--	--	µg/L	*4.5*	*U*	*4.5*	*U*	*4.5*	*U*	*4.5*	*U*	*4.5*	*U*
Allyl chloride	--	--	--	µg/L	*0.17*	*U*	*0.17*	*U*	*0.17*	*U*	*0.17*	*U*	*0.17*	*U*
Benzene	5	5	--	µg/L	*0.31*	*U*	**0.89**	**J**	*0.31*	*U*	*0.31*	*U*	*0.31*	*U*
Bromochloromethane	--	--	--	µg/L	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
Bromodichloromethane	80	100	--	µg/L	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*	*0.39*	*U*
Bromoform	80	100	--	µg/L	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*
Bromomethane	--	--	--	µg/L	*2.4*	*U*	*2.4*	*U*	*2.4*	*U*	*2.4*	*U*	*2.4*	*U*
Carbon disulfide	--	--	--	µg/L	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*
Carbon tetrachloride	5	5	--	µg/L	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*
Chlorobenzene	100	100	--	µg/L	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*	*0.42*	*U*
Chlorodibromomethane	80	100	--	µg/L	*0.62*	*U*	*0.62*	*U*	*0.62*	*U*	*0.62*	*U*	*0.62*	*U*
Chloroethane	--	--	--	µg/L	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*
Chloroform	80	2	--	µg/L	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Chloromethane	--	--	--	µg/L	*0.75*	*U*	*0.75*	*U*	*0.75*	*U*	*0.75*	*U*	*0.75*	*U*
Chloroprene	--	--	--	µg/L	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*	*1.2*	*U*
cis-1,2-Dichloroethene	70	70	--	µg/L	*0.32*	*U*	**2.5**		*0.32*	*U*	*0.32*	*U*	*0.32*	*U*
cis-1,3-Dichloropropene	--	--	--	µg/L	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*	*0.63*	*U*
Dibromomethane	--	--	--	µg/L	*0.34*	*U*	*0.34*	*U*	*0.34*	*U*	*0.34*	*U*	*0.34*	*U*
Dichlorodifluoromethane	--	--	--	µg/L	*0.96*	*U*	**1**	**J**	*0.96*	*U*	*0.96*	*U*	*0.96*	*U*
Ethyl methacrylate	--	--	--	µg/L	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*	*0.86*	*U*
Ethylbenzene	700	700	--	µg/L	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*
Iodomethane	--	--	--	µg/L	*2.6*	*U*	*2.6*	*U*	*2.6*	*U*	*2.6*	*U*	*2.6*	*U*
Isobutanol; Isobutyl alcohol	--	--	--	µg/L	*37*	*U*	*37*	*U*	*37*	*U*	*37*	*U*	*37*	*U*

Appendix C
Table 4
Cell 2 and 4 Analytical Results
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 4 Monitoring Wells									
				Well ID	MW-3A		MW-4		MW-4A		MW-5AR		MW-6A	
				Sample Name	MW-3A-20230518		MW-4-20230517		MW-4A-20230517		MW-5AR-20230519		MW-6A-20230519	
				Sample Date	5/18/2023		5/17/2023		5/17/2023		5/19/2023		5/19/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
m,p-Xylene	10000	--	--	µg/L	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Methacrylonitrile	--	--	--	µg/L	*5.3*	*U*	*5.3*	*U*	*5.3*	*U*	*5.3*	*U*	*5.3*	*U*
Methyl methacrylate	--	--	--	µg/L	*1.1*	*U*	*1.1*	*U*	*1.1*	*U*	*1.1*	*U*	*1.1*	*U*
Methylene Chloride	5	5	--	µg/L	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*
o-xylene (1,2-dimethylbenzene)	10000	--	--	µg/L	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
Propionitrile; ethyl cyanide	--	--	--	µg/L	*3.7*	*U*	*3.7*	*U*	*3.7*	*U*	*3.7*	*U*	*3.7*	*U*
Styrene	100	100	--	µg/L	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*	*0.36*	*U*
Tetrachloroethene	5	5	--	µg/L	*0.4*	*U*	**2.7**		*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
Toluene	1000	1000	--	µg/L	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*	*0.32*	*U*
trans-1,2-Dichloroethene	100	100	--	µg/L	*0.37*	*U*	**0.43**	**J**	*0.37*	*U*	*0.37*	*U*	*0.37*	*U*
trans-1,3-Dichloropropene	--	--	--	µg/L	*0.65*	*U*	*0.65*	*U*	*0.65*	*U*	*0.65*	*U*	*0.65*	*U*
trans-1,4-Dichloro-2-butene	--	--	--	µg/L	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*	*1.4*	*U*
Trichloroethene	5	5	--	µg/L	*0.3*	*U*	**0.49**	**J**	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*
Trichlorofluoromethane	--	--	--	µg/L	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*	*0.57*	*U*
Vinyl acetate	--	--	--	µg/L	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*	*0.94*	*U*
Vinyl chloride	2	2	--	µg/L	*0.51*	*U*	**2.5**		*0.51*	*U*	*0.51*	*U*	*0.51*	*U*
Xylene (Total)	10000	10000	--	ug/l	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
Inorganics														
Antimony	6	6	--	ug/l	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*	*0.4*	*U*
Arsenic	10	50	--	µg/L	*0.5*	*U*	**2.2**	**J**	**1.6**	**J**	*0.5*	*U*	**0.63**	**J**
Barium	2000	2000	--	µg/L	**150**		**210**		**170**		**100**		**200**	
Beryllium	4	4	--	µg/L	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*	*0.3*	*U*
Cadmium	5	5	--	µg/L	*0.19*	*U*	*0.19*	*U*	*0.19*	*U*	*0.19*	*U*	*0.19*	*U*
Calcium	--	--	--	µg/L	**53000**		**170000**		**85000**		**77000**		**73000**	
Chromium	100	100	--	µg/L	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*
Cobalt	--	--	--	µg/L	*0.33*	*U*	**0.49**	**J**	*0.33*	*U*	*0.33*	*U*	*0.33*	*U*
Copper	1300	1300	--	µg/L	*0.71*	*U*	*0.71*	*U*	*0.71*	*U*	*0.71*	*U*	*0.71*	*U*
Iron	--	--	300	µg/L	*200*	*U*	**360**		*200*	*U*	*200*	*U*	*200*	*U*
Lead	15	15	--	µg/L	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*	*0.23*	*U*
Magnesium	--	--	--	µg/L	**28000**		**66000**		**18000**		**25000**		**42000**	
Manganese	--	--	50	µg/L	**1.1**	**J**	**66**		*0.51*	*U*	**9.3**		*0.51*	*U*
Nickel	--	--	--	µg/L	*0.83*	*U*	*0.83*	*U*	*0.83*	*U*	*0.83*	*U*	*0.83*	*U*
Potassium	--	--	--	µg/L	**2300**		**3300**		**3400**		**3100**		**1900**	
Selenium	50	50	--	µg/L	*1*	*U*	*1*	*U*	*1*	*U*	*1*	*U*	*1*	*U*
Silver	--	--	100	µg/L	*0.045*	*U*	*0.045*	*U*	*0.045*	*U*	*0.045*	*U*	*0.045*	*U*
Sodium	--	--	--	µg/L	**44000**		**56000**		**60000**		**250000**		**49000**	
Sulfide	--	--	--	µg/L										
Thallium	2	2	--	µg/L	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*	*0.21*	*U*
Tin	--	--	--	µg/L	**1**	**J**	**0.77**	**J**	*0.58*	*U*	*0.58*	*U*	*0.58*	*U*
Vanadium	--	--	--	µg/L	*1.1*	*U*	**3.8**	**J**	**1.8**	**J**	*1.1*	*U*	*1.1*	*U*
Zinc	--	--	5000	µg/L	**6.4**	**J**	*2*	*U*	**2.2**	**J**	*2*	*U*	*2*	*U*

Appendix C
Table 4
Cell 2 and 4 Analytical Results
Spring 2023

Analyte	EPA MCL	ID GW - PRIMARY	ID GW - SECONDARY	Area	Cell 4 Monitoring Wells									
				Well ID	MW-3A		MW-4		MW-4A		MW-5AR		MW-6A	
				Sample Name	MW-3A-20230518		MW-4-20230517		MW-4A-20230517		MW-5AR-20230519		MW-6A-20230519	
				Sample Date	5/18/2023		5/17/2023		5/17/2023		5/19/2023		5/19/2023	
				Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Field and Redox Parameters														
Dissolved Oxygen	--	--	--	mg/L	**6.26**		**0.27**		**8.68**		**3.79**		**8.06**	
Manganese	--	--	0.05	mg/L	**0.0011**	J	**0.066**		*0.00051*	U	**0.0093**		*0.00051*	U
Oxidation-Reduction Potential	--	--	--	millivolts	**96.5**		**11.3**		**102.2**		**14**		**87.1**	
pH	--	--	6.5 - 8.5	su	**7.28**		**6.14**		**7.28**		**7.21**		**7.14**	
Specific Conductance	--	--	--	µS/cm	**646**		**1327**		**830**		**1689**		**924**	
Sulfide	--	--	--	mg/L	--		--		--		--		--	
Temperature	--	--	--	Celsius	**15**		**12.3**		**14.4**		**13**		**16.9**	
Turbidity	--	--	--	ntu	**4.81**		**5.05**		**16.9**		**3.57**		**6.38**	

Appendix D

Data Usability Assessment Report

Appendix D Data Validation Narrative

This appendix presents the data validation results for the Effluent Sampling Event in January 2023, the Effluent Sampling Event in April 2023, and the 2023 Spring Semi-Annual Groundwater Sampling Event in April 2023.

The analytical data for the samples listed in **Tables D-1, D-2, and D-3** were validated according to requirements in the analytical methods; National Functional Guidelines (NFGs) for Organic Superfund Methods Data Review (United States Environmental Protection Agency [EPA] 2020), NFGs for Inorganic Superfund Methods Data Review (EPA 2020a), and NFGs for High Resolution Superfund Methods Data Review (EPA 2020b), as applicable.

Eurofins TestAmerica Denver (TA-Denver) performed the volatile organic compounds (VOCs) by SW-846 method 8260B; selected volatiles by SW-846 method 8011; semivolatile organic compounds (SVOCs); benzo(a)pyrene with selected ion monitoring (SIM); organochlorine pesticides (OC-Pests); polychlorinated biphenyls (PCBs); organophosphorus pesticides (OP-Pests); herbicides; dissolved methane, ethene, ethene (MEE); total metals; anions, total cyanide, total sulfide; and total organic carbon (TOC) analyses and Eurofins TestAmerica-Sacramento (TA-Sacramento) performed the dioxin/furan analyses.

The samples were analyzed according to the following methods:

- *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods (SW-846). Third Edition, Final Update III*
    - 8260D - VOCs by Gas Chromatography/Mass Spectrometry (GC/MS)
    - 8011 – selected VOCs by microextraction and GC
    - 8270E – SVOCs by Gas Chromatography/Mass Spectrometry (GC/MS)
    - 8270E/SIM – SVOCs by GC/MS and SIM
    - 8081B – Organochlorine Pesticides by Gas Chromatography
    - 8082A – Polychlorinated Biphenyls (PCBs) by Gas Chromatography
    - 8141B – Organophosphorus Compounds by Gas Chromatography
    - 8151A – Chlorinated Herbicides by Gas Chromatography: Capillary Column Technique
    - 8290A - Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High Resolution Gas Chromatography/High Resolution Mass Spectroscopy for 2,3,7,8-TCDD only
    - 6010C – Inductively-Coupled Plasma – Optical Emission Spectrometry
    - 6020B – Inductively-Coupled Plasma – Mass Spectrometry
    - 7470A - Mercury in Liquid Waste (Manual Cold-Vapor Technique)
    - 9056A – Determination of Inorganic Anions by Ion Chromatography
    - 9060 – Total Organic Carbon

- *Standard Operating Procedure Robert S. Kerr (RSK) 175*
    - Dissolved gases; MEE

- *Standard Methods for the Examination of Water and Wastewater*
    - SM4500 CN E – Total Cyanide
    - SM 4500 S2 D – Total Sulfide

Level 2 and 4 data packages were provided as well as electronic data deliverables (EDDs). All data generated by TestAmerica laboratories for the January and April effluent samplings and the Spring 2023 On-Site sampling were validated manually to the Stage 2A level and sampling were validated with the EQuIS Data

Quality Module (DQM) to the Stage 2A level, except for the dioxin/furan data, additionally for which calibration data was manually validated to the Stage 2B level for the April 2023 Effluent Sampling 8290 data.

Cross references of laboratory sample delivery groups (SDGs), data validation reports, and sample identifications (IDs) are provided in **Tables D-1and D-3**. The complete laboratory data packages for each SDG are provided in **Appendix E.** All samples submitted were analyzed as requested. Six nitrite results were rejected in six samples. All other data generated is acceptable, with some qualification as noted in the discussion below.

Sampling Deviations

1.1 January Effluent 2023

Effluent from the treatment system was sampled in January and the following sample was collected:

- On January 25 ,2023: one primary sample and one field duplicate sample were collected

Samples were submitted to the laboratory for analysis of VOCs. The field duplicate sample was submitted on hold and was not analyzed.

Results reported above the method detection limit (MDL) but below the reporting limit (RL) were qualified as estimated (J) by the laboratory.

1.1.1 Holding Times

The holding time for the VOC analysis was met.

1.1.2 Blank Results

Trip and laboratory method blanks were analyzed.

When an analyte was detected in a blank below the RL and that analyte was detected in a sample at a concentration less than the RL the result was qualified as not detected at the RL (U). When the sample concentration was above the RL, but less than five times the blank concentration, the analyte result was qualified(U) at the level of detection. When associated sample detections were greater than five times the blank concentration, the data were not qualified.

Acetone was detected in the method blank associated with the sample analysis above the reporting limit. Acetone was not detected in sample INJ-1R 20230125 and no data were qualified for the acetone method blank detection.

1.1.3 Laboratory Reporting Limits

The reporting levels (method detection limits [MDLs]) achieved by the laboratories met the project goals.

1.1.4 Field Duplicate Results

A field duplicate was collected and placed on hold as backup for the parent sample. The parent sample was successfully analyzed and analysis of the field duplicate was not necessary.

1.1.5 Laboratory Control Sample Results

All laboratory control samples/laboratory control sample duplicates (LCS/LCSD) % recoveries met the quality control (QC) limits with the following exceptions:

- RPDs for 2-butanone, 2-hexanone, 4-methyl-2-pentanone, acetone, and methylene chloride were above the control limits in LCS/LCSD associated with the sample. These compounds were not detected in the associated sample and no data were qualified for the high RPDs.

1.1.6 Matrix Spike Results

Matrix spike/matrix spike duplicates (MS/MSDs) were not submitted for the effluent sampling.

1.1.7 Surrogate Recovery Results

All surrogate recoveries for the VOC analysis met the control limits.

1.1.8 Completeness

Completeness was evaluated by comparing the number of completed analyses yielding usable, valid data to requested analyses with a criterion of 90%. The VOC analysis requested was successfully performed and is usable, yielding a completeness value of 100% for the January 2023 event, meeting the 90% criterion.

1.1.12 Assessment of Data Usability

All the January effluent data are suitable for their intended use.

2.1 April Effluent 2023

Effluent from the treatment system was sampled in April and the following samples were collected:

- On April 11, 2023: one primary sample was collected

Samples were submitted to the laboratory for analysis of VOCs, SVOCs, SIM for benzo(a)pyrene, organochlorine pesticides, PCB Aroclors, herbicides, 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD), metals and mercury, sulfide, and cyanide.

Results reported above the method detection limit (MDL) but below the reporting limit (RL) were qualified as estimated (J) by the laboratory.

2.1.1 Holding Times

Holding times for all analyses were met.

2.1.2 Blank Results

Trip and laboratory method blanks were analyzed.

When an analyte was detected in a blank below the RL and that analyte was detected in a sample at a concentration less than the RL the result was qualified as not detected at the RL (U). When the sample concentration was above the RL, but less than five times the blank concentration, the analyte result was qualified(U) at the level of detection. When associated sample detections were greater than five times the blank concentration, the data were not qualified.

Bis-2-ethyl-hexyl-phthalate (BEHP) was detected in the method blank associated with the SVOC analysis below the reporting limit. BEHP was detected below the reporting limit in the samples and was qualified not detected (U) at the reporting limit for the BEHP method blank detection.

Aldrin, endosulfan sulfate, and kepone were detected in the organochlorine pesticides method blank. These compounds were not detected in the sample and no data were qualified.

Calcium and magnesium were detected in the metals method blank at levels below the reporting limit. Associated sample results were greater than the reporting levels and greater than ten times the levels detected in the method blank and no data were qualified.

2.1.3 Laboratory Reporting Limits

The reporting levels (method detection limits [MDLs]) achieved by the laboratories met the project goals.

2.1.4 Field Duplicate Results

No field duplicate was analyzed.

2.1.5 Laboratory Control Sample Results

All laboratory control samples/laboratory control sample duplicates (LCS/LCSD) % recoveries met the quality control (QC) limits with the following exceptions:

- For the SVOC analysis, 3,3'-Dimethylbenzene and hexachloroproprene were recovered below the control limits in the LCS and 3,3'-dimethylbenzene and hexachloroprene were also recovered low in the LCSD. 4-Nitrophenol, benzo(b)fluoranthene, benzyl alcohol, indeno(1,2,3-c,d)pyrene and phenol were recovered above the control limits and 4-niroaniline, 4-nitrophenol, benzo(b)fluoranthene, BEHP, di-n-butylphthalate, fluoranthene, indeno(c,d)pyrene, and n-nitroso-di-methylamine were recovered above the control limits in the LCSD. 3,3'-Dimethylbenzene and hexachloroproprene were qualified UJ in the sample for the low recoveries. The di-n-butylphthalate detected result qualified was qualified J+ for the high LCS recovery

2.1.6 Matrix Spike Results

Matrix spike/matrix spike duplicates (MS/MSDs) were not submitted for the effluent sampling.

2.1.7 Surrogate Recovery Results

All surrogate recoveries for the VOC analyses met the control limits with the following exception:

- Recovery of the triphenylphosphate surrogate in the organophosphorus pesticides analysis was below the control limits. the organophosphorus results for the sample were qualified estimated (UJ.

2.1.8 Completeness

Completeness was evaluated by comparing the number of completed analyses yielding usable, valid data to requested analyses with a criterion of 90%. All analyses requested was successfully performed and are usable, yielding a completeness value of 100% for the April 2023 effluent sampling, meeting the 90% criterion.

2.1.12 Assessment of Data Usability

All the April effluent data are suitable for their intended use.

3.2 Semi-Annual Sampling Spring 2023

From April 11 to May 20, 2023, 42 primary samples, three field duplicates, five rinsate blanks, and eleven trip blanks were collected for analysis of VOCs, SVOCs, SVOC/SIM, OC-Pests, PCBs, OP-Pests, herbicides, dioxins/furans, MEE, total metals, anions, total cyanide, and total sulfide. Data were qualified as estimated (J, J-, UJ) or not detected (U) based on results for one or more of the following criteria: holding time, preservation criteria, LCS/LCSD % recoveries, matrix spike/matrix spike duplicate (MS/MSD) % recoveries, serial dilutions, or method, equipment, and/or trip blank contamination.

Results reported above the MDL but below the reporting limit (RL) were qualified as estimated (J) by the laboratory.

3.2.1 Holding Times

The nitrite and nitrate analyses for samples MW-105D-20230411, RW-15-20230411, MW-119S-20230413, MW-105S-20230411, MW-119S-20230413, RW-3-20230413, and RW-15-20230411 were past the holding time. The detected nitrate results were qualified J- and the undetected nitrite results were rejected (qualified R). Holding times for all other analyses were met.

3.2.2 Blank Results

Trip, equipment, and laboratory method blanks were analyzed. Trip blanks were included with the VOC sample shipments and equipment blanks were submitted for equipment that was used at multiple locations and decontaminated between locations.

When an analyte was detected in a blank below the RL and that analyte was detected in a sample at a concentration less than the RL the result was qualified as not detected at the RL (U). When the sample concentration was above the RL, but less than five times the blank concentration, the analyte result was qualified (U) at the level of detection. When associated sample detections were greater than five times the blank concentration, the data were not qualified.

All analytes were not detected in the equipment and trip blanks.

Iron and zinc were detected in methods blanks associated with samples in SDGs 280-176878, 280-174084, 280-175121, 280-175123, and 280-176877. These analytes were qualified as not detected (U) at the RL in the following samples:

- MW-120D-20230413 (zinc qualified U)
- MW-120S-20230413 (zinc qualified U)
- RW-2-20230412 (zinc qualified U)
- RW-3-20230413 (zinc qualified U)
- MW-13-20230517(iron qualified U)
- MW-13-Q-20230517 (iron qualified U)
- MW-3A-20230518 (iron qualified U)
- MW-4A-20230517 (iron qualified U)
- MW-6A-20230519 (iron qualified U)
- MW-8-20230519 (iron qualified U)
- MW-5AR-20230519 (iron qualified U)

3.2.3 Laboratory Reporting Limits

The reporting levels MDLs achieved by the laboratories either met the project goals or were appropriate for the concentrations and/or matrices of the samples.

3.2.4 Field Duplicate Results

Three field duplicates were collected for the Spring 2023 Semi-Annual Groundwater Sampling which meets the planned frequency. RPDs were calculated when analytes were detected in both the primary sample and its duplicate. The project specific and groundwater RPD control limits for field duplicates is 30% when an analyte is reported in both the primary sample and its field duplicate at concentrations equal to or greater than five times the RL. When either the sample or duplicate concentration is less than five times the RL, the absolute difference between the two concentrations should be less than the RL. The results of the field duplicate RPDs are included in **Table D-3** of this Appendix. All RPDs or absolute differences for the three field duplicates met the control limits.

3.2.5 Laboratory Control Sample Results

All LCS/LCSD % recoveries and RPDs for the groundwater samples met the quality control (QC) limits with the following exceptions:

- RPDs for acetonitrile, chloropropene, methacrylonitrile, methyl methacrylate, and propionitrile were above the control limits for an LCS/LCSD associated with samples in SDG 280-174957. These compounds were not detected in the associated samples and no data were qualified for this LCS/LCSD.
- RPDs for 2-butanone, acetone, and acrylonitrile were above the control limits in an LCS/LCSD associated with samples in SDG 280-175121. These compounds were not detected in the associated samples and no data were qualified for these LCS/LCSD RPDs.
- RPDs for 1,2-dichlorobenzene, 1,3-dichlorobenzene, ethylbenzene, tetrachloroethene, and trichloroethene were above the control limits in an LCS/LCSD associated with samples in SDG 280-176877. These compounds were not detected in the associated samples and no data were qualified for theses LCS/LCSD RPDs.

3.2.6 Matrix Spike Results

All MS/MSD % recoveries and RPDs met the QC limits except for the following samples/analytes:

- Sample MW-125-20230412: percent recoveries of trichloroethene were below the control limit. The trichloroethene result for sample MW-125-20230412 was qualified estimated (J).
- Sample MW-125-20230512: percent recoveries of cobalt, nickel, and lead were below the control limits. The cobalt, nickel, and lead results for sample MW-125-20230512 were qualified estimated (J-/UJ).
- Sample MP-2-20230411: percent recovery of bromide were below the control limits. The bromide result for samples in SDG 175122 were qualified estimated (J-/UJ).
- Sample MW-105D-20230411: percent recoveries of nitrite were below the control limits. These compounds were not detected in the sample and no data were qualified for this MS/MSD.

- Sample MW-12-202306518: percent recovery for iron was below the control limits in the MS. The sulfide results for samples MW-103S-20210423, MW-113S-20210423, and MW-120S-20210422 were qualified estimated with a potential low bias (J-) or estimated (UJ).
- Sample MW-103S-20210423: percent recoveries of nickel were below the control limits. The nickel result for samples MW-103S-20210423, MW-113S-20210423, MW-120S-20210422were qualified estimated with potential low bias (J-).
- Sample MW-12-20230518: percent recoveries of iodomethane was above the control limits. Iodomethane was not detected in the parent sample and no data were qualified for this high recovery.
- Sample MW-12-20230518: percent recovery of iron in the MS was above the control limits and the RPD for the MS/MSD was above the control limits. Iron was not detected in the sample and no data were qualified for this MS/MSD.
- Sample MW-8-20230519; percent recoveries of sulfide were below the control limits in the MS and MSD. Sulfide was not detected in the samples and the results were qualified estimated (UJ).

3.2.7 Surrogate Recovery Results

All surrogate recoveries for the VOC, SVOC, OC-pesticides, PCBs, organophosphorus pesticides, herbicides, and dioxins/furans analyses met the control limits for all groundwater analyses.

3.2.8 Serial Dilution

All serial dilution results for the 6010C and 6020B metals analyses met the control limits.

3.2.9 Column RPDs

All column RPDs met the control limit.

3.2.10 Calibration Results

All calibration results for the dioxins/furans analyses met the control limits.

3.2.11 Completeness

Completeness was evaluated by comparing the number of completed analyses yielding valid data to requested analyses with a criterion of 90%. All analyses requested were successfully performed except the nitrite analyses for six samples, which were analyzed past the holding time and were not detected. A total of 66 results were obtained for the wet chemistry analyses (anions, and sulfide), which yields a completeness value of 90.9%, meeting the 90% criterion.

3.2.12 Assessment of Data Usability

All the groundwater data except for nitrite results for , which were rejected, are suitable for their intended use. Some results should be used with caution as noted by the “J/J-/ UJ” qualifiers applied during the data validation process.

4.1 References

United States Environmental Protection Agency, Office of Solid Waste and Emergency Response. 2009. Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use. January 13.

United States Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. 2020. *National Functional Guidelines for High Resolution Superfund Methods Data Review*. April.

United States Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. 2020. *National Functional Guidelines for Superfund Inorganics Methods Data Review*. January.

United States Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. 2020. *National Functional Guidelines for Superfund Organics Methods Data Review*. January.

TABLE D-1

Table D-1
Sample ID, Laboratory SDG References

Analytical Method	A4500_CN_E	SM4500-S2-D	SW6020B	SW7470A	SW8011	SW8081B	SW8082	SW8141	SW8290	SW8321B	SW846_8260D	SW846_8270E	SW846_8270ESIM
Sample ID	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG
January													
INJ-1R-20230125	--	--	--	--	--	--	--	--	--	--	280-171793-1	--	--
April													
INJ-1R-20230411	280-175031-1	280-175031-1	280-175031-1	280-175031-1	280-175031-1	280-175031-1	280-175031-1	280-175031-1	280-175031-1	280-175031-1	280-175031-1	280-175031-1	280-175031-1

Notes:
-- = analysis not performed
ID = identifier
SDG = sample delivery group

TABLE D-2

Table D-2
Sample ID, Laboratory SDG References

Analytical Method	FIELD MEASURE	RSK175	SM4500-S2-D	SW6020B	SW8011	SW846_8260D	SW9056	SW9060
Sample ID	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG	LAB SDG
EB-01-20230411	--	--	--	--	--	280-174957-1	--	--
EB-02-20230412	--	--	--	--	--	280-174962-1	--	--
EB-03-20230413	--	--	--	--	--	280-175123-1	--	--
EB-04-20230414	--	--	--	--	--	280-175123-1	--	--
EB-05-20230415	--	--	--	--	--	280-175121-1	--	--
MP-2-20230411	--	--	--	280-175122-1	--	280-175122-1	280-175122-1	280-175122-1
MP-3-20230413	--	--	--	--	--	280-175122-1	--	--
MP-4-20230414	--	--	--	--	--	280-175121-1	--	--
MW-101S-20230415	--	--	--	--	--	280-175121-1	--	--
MW-102S-20230414	--	--	--	--	--	280-175122-1	--	--
MW-103S-20230415	--	--	--	--	--	280-175121-1	--	--
MW-105D-20230411	--	--	--	280-174957-1	--	280-174957-1	280-174957-1	280-174957-1
MW-105S-20230411	--	--	--	280-174957-1	--	280-174957-1	280-174957-1	280-174957-1
MW-109D-20230415	--	--	--	--	--	280-175123-1	--	--
MW-109S-20230415	--	--	--	--	--	280-175121-1	--	--
MW-109S-Q-20230415	--	--	--	--	--	280-175121-1	--	--
MW-110S-20230414	--	--	--	--	--	280-175121-1	--	--
MW-111D-20230414	--	--	--	--	--	280-175122-1	--	--
MW-112D-20230415	--	--	--	--	--	280-175123-1	--	--
MW-112M-20230415	--	--	--	--	--	280-175123-1	--	--
MW-113D-20230414	--	--	--	--	--	280-175123-1	--	--
MW-113S-20230414	--	--	--	--	--	280-175123-1	--	--
MW-115S-20230415	--	--	--	--	--	280-175122-1	--	--
MW-118D-20230412	--	--	--	280-175122-1	--	280-175122-1	280-175122-1	280-175122-1
MW-119D-20230413	--	--	--	280-175123-1	--	280-175123-1	280-175123-1	280-175123-1
MW-119S-20230413	--	--	--	280-175123-1	--	280-175123-1	280-175123-1	280-175123-1
MW-120D-20230413	--	--	--	280-175121-1	--	280-175121-1	280-175121-1	280-175121-1
MW-120S-20230413	--	--	--	280-175121-1	--	280-175121-1	280-175121-1	280-175121-1
MW-12-20230518	--	--	280-176877-1	280-176877-1	280-176877-1	280-176877-1	--	--
MW-123-20230415	--	--	--	--	--	280-175122-1	--	--
MW-124-20230412	--	280-174957-1	--	280-174957-1	--	280-174957-1	280-174957-1	280-174957-1
MW-124-Q-20230412	--	280-174957-1	--	280-174957-1	--	280-174957-1	280-174957-1	280-174957-1
MW-125-20230412	--	280-174962-1	--	280-174962-1	--	280-174962-1	280-174962-1	280-174962-1
MW-13-20230517	--	--	280-176877-1	280-176877-1	280-176877-1	280-176877-1	--	--
MW-13-Q-20230517	--	--	280-176877-1	280-176877-1	280-176877-1	280-176877-1	--	--
MW-3A-20230518	--	--	--	280-176878-1	280-176878-1	280-176878-1	--	--
MW-4-20230517	--	--	--	280-176877-1	280-176877-1	280-176877-1	--	--
MW-4A-20230517	--	--	--	280-176878-1	280-176878-1	280-176878-1	--	--
MW-5AR-20230519	--	--	--	280-176878-1	280-176878-1	280-176878-1	--	--
MW-6A-20230519	--	--	--	280-176878-1	280-176878-1	280-176878-1	--	--
MW-8-20230519	--	--	280-176878-1	280-176878-1	280-176878-1	280-176878-1	--	--
MW-9-20230519	--	--	280-176878-1	280-176878-1	280-176878-1	280-176878-1	--	--
RW-10-20230411	--	--	--	--	--	280-174962-1	--	--
RW-1-20230413	--	--	--	280-175122-1	--	280-175122-1	280-175122-1	280-175122-1
RW-15-20230411	--	--	--	280-174957-1	--	280-174962-1	280-174957-1	280-174957-1
RW-17-20230411	--	--	--	--	--	280-174962-1	--	--
RW-2-20230412	--	--	--	280-175121-1	--	280-175121-1	280-175121-1	280-175121-1
RW-3-20230413	--	--	--	280-175123-1	--	280-175123-1	280-175123-1	280-175123-1
RW-5-20230411	--	--	--	--	--	280-174962-1	--	--
RW-9R-20230411	--	--	--	--	--	280-174962-1	--	--
TB-01-20230412	--	--	--	--	--	280-175031-1	--	--
TB-02-20230412	--	--	--	--	280-175031-1	--	--	--
TB-02-20230520	--	--	--	--	--	280-176878-1	--	--
TB-03-20230412	--	--	--	--	--	280-174962-1	--	--
TB-03-20230520	--	--	--	--	280-176878-1	--	--	--
TB-04-20230412	--	--	--	--	--	280-174957-1	--	--
TB-04-20230520	--	--	--	--	--	280-176877-1	--	--
TB-05-20230416	--	--	--	--	--	280-175123-1	--	--
TB-05-20230520	--	--	--	--	280-176877-1	--	--	--
TB-06-20230416	--	--	--	--	--	280-175121-1	--	--
TB-07-20230416	--	--	--	--	--	280-175122-1	--	--
TB-VOC-20230125	--	--	--	--	--	280-171793-1	--	--

Noes:
-- = analysis not performed
ID = identifier
SDG = sample delivery group

TABLE D-3

Table D-3
Groundwater Field Duplicate Comparisons

				Location ID	MW-109S		MW-109S					MW-124		MW-124					MW-13		MW-13				
				Sample Type	N		FD					N		FD					N		FD				
				Sample Date	4/15/2023		4/15/2023					4/12/2023		4/12/2023					5/17/2023		5/17/2023				
Method	Chemical Name	CAS No.	Unit	Result	Q	Result	Q	RDL	5x RL	RPD or Absolute Difference	Result	Q	Result	Q	RDL	5x RL	RPD or Absolute Difference	Result	Q	Result	Q	RDL	5x RL	RPD or Absolute Difference
SW846_8260D	1,1,1,2-Tetrachloroethane	630-20-6	ug/l	0.58	U	0.58	U	1	5	NC	1.2	U	1.2	U	2	10	NC	0.58	U	0.58	U	1	5	NC
	1,1,1-Trichloroethane	71-55-6	ug/l	0.39	U	0.39	U	1	5	NC	0.78	U	0.78	U	2	10	NC	0.39	U	0.39	U	1	5	NC
	1,1,2,2-Tetrachloroethane	79-34-5	ug/l	0.21	U	0.21	U	1	5	NC	0.42	U	0.42	U	2	10	NC	0.21	U	0.21	U	1	5	NC
	1,1,2-Trichloroethane	79-00-5	ug/l	0.27	U	0.27	U	1	5	NC	0.54	U	0.54	U	2	10	NC	0.27	U	0.27	U	1	5	NC
	1,1-Dichloroethane	75-34-3	ug/l	0.22	U	0.22	U	1	5	NC	**1.7**	**J**	**1.5**	**J**	**2**	10	**0.2**	**0.27**	**J**	**0.29**	**J**	**1**	5	**0.02**
	1,1-Dichloroethene	75-35-4	ug/l	0.23	U	0.23	U	1	5	NC	0.46	UJ	**0.47**	**J**	2	10	**0.01**	0.23	U	0.23	U	1	5	NC
	1,1-Dichloropropene	563-58-6	ug/l	0.42	U	0.42	U	1	5	NC	0.83	U	0.83	U	2	10	NC	0.42	U	0.42	U	1	5	NC
	1,2,3-Trichloropropane	96-18-4	ug/l	0.86	UJ	0.86	U	2.5	12.5	NC	1.7	U	1.7	U	5	25	NC	--		--				
	1,2,4-Trichlorobenzene	120-82-1	ug/l	0.58	U	0.58	U	1	5	NC	1.2	U	1.2	U	2	10	NC	0.58	U	0.58	U	1	5	NC
	1,2-Dibromo-3-Chloropropane	96-12-8	ug/l	1.8	U	1.8	U	5	25	NC	3.5	U	3.5	U	10	50	NC	--		--				
	1,2-Dibromoethane	106-93-4	ug/l	0.4	UJ	0.4	U	1	5	NC	0.81	U	0.81	U	2	10	NC	--		--				
	1,2-Dichlorobenzene	95-50-1	ug/l	0.37	U	0.37	U	1	5	NC	**2.2**		**2**		**2**	10	**0.2**	0.37	U	0.37	U	1	5	NC
	1,2-Dichloroethane	107-06-2	ug/l	0.54	U	0.54	U	1	5	NC	1.1	U	1.1	U	2	10	NC	0.54	U	0.54	U	1	5	NC
	1,2-Dichloropropane	78-87-5	ug/l	0.52	U	0.52	U	1	5	NC	1	U	1	U	2	10	NC	0.52	U	0.52	U	1	5	NC
	1,3-Dichlorobenzene	541-73-1	ug/l	0.33	U	0.33	U	1	5	NC	0.67	U	0.67	U	2	10	NC	0.33	U	0.33	U	1	5	NC
	1,3-Dichloropropane	142-28-9	ug/l	0.38	U	0.38	U	1	5	NC	0.76	U	0.76	U	2	10	NC	0.38	U	0.38	U	1	5	NC
	1,4-Dichlorobenzene	106-46-7	ug/l	0.39	U	0.39	U	1	5	NC	0.78	UJ	**0.78**	**J**	2	10	NC	0.39	U	0.39	U	1	5	NC
	2,2-Dichloropropane	594-20-7	ug/l	0.38	U	0.38	U	1	5	NC	0.76	U	0.76	U	2	10	NC	0.38	U	0.38	U	1	5	NC
	2-Butanone (MEK)	78-93-3	ug/l	6	U	6	U	15	75	NC	12	U	12	U	30	150	NC	6	U	6	U	15	75	NC
	2-Hexanone	591-78-6	ug/l	1.7	U	1.7	U	5	25	NC	3.4	U	3.4	U	10	50	NC	1.7	U	1.7	U	5	25	NC
	4-Methyl-2-pentanone (MIBK)	108-10-1	ug/l	0.98	U	0.98	U	5	25	NC	2	U	2	U	10	50	NC	0.98	U	0.98	U	5	25	NC
	Acetone	67-64-1	ug/l	6.6	U	6.6	U	15	75	NC	13	U	13	U	30	150	NC	6.6	U	6.6	U	15	75	NC
	Acetonitrile; methyl cyanide	75-05-8	ug/l	9.6	U	9.6	U	30	150	NC	19	U	19	U	60	300	NC	9.6	U	9.6	U	30	150	NC
	Acrolein	107-02-8	ug/l	4.9	U	4.9	U	20	100	NC	9.7	U	9.7	U	40	200	NC	4.9	U	4.9	U	20	100	NC
	Acrylonitrile	107-13-1	ug/l	4.5	U	4.5	U	20	100	NC	8.9	U	8.9	U	40	200	NC	4.5	U	4.5	U	20	100	NC
	Allyl chloride	107-05-1	ug/l	0.17	U	0.17	U	2	10	NC	0.34	U	0.34	U	4	20	NC	0.17	U	0.17	U	2	10	NC
	Benzene	71-43-2	ug/l	0.31	U	0.31	U	1	5	NC	0.62	U	0.62	U	2	10	NC	0.31	U	0.31	U	1	5	NC
	Bromochloromethane	74-97-5	ug/l	0.4	U	0.4	U	1	5	NC	0.81	U	0.81	U	2	10	NC	0.4	U	0.4	U	1	5	NC
	Bromodichloromethane	75-27-4	ug/l	0.39	U	0.39	U	1	5	NC	0.77	U	0.77	U	2	10	NC	0.39	U	0.39	U	1	5	NC
	Bromoform	75-25-2	ug/l	1.2	U	1.2	U	2	10	NC	2.4	U	2.4	U	4	20	NC	1.2	U	1.2	U	2	10	NC
	Bromomethane	74-83-9	ug/l	2.4	U	2.4	U	5	25	NC	4.7	U	4.7	U	10	50	NC	2.4	U	2.4	U	5	25	NC
	Carbon disulfide	75-15-0	ug/l	0.63	U	0.63	U	2	10	NC	1.3	U	1.3	U	4	20	NC	0.63	U	0.63	U	2	10	NC
	Carbon tetrachloride	56-23-5	ug/l	0.57	U	0.57	U	1	5	NC	1.1	U	1.1	U	2	10	NC	0.57	U	0.57	U	1	5	NC
	Chlorobenzene	108-90-7	ug/l	0.42	U	0.42	U	1	5	NC	0.84	U	0.84	U	2	10	NC	0.42	U	0.42	U	1	5	NC
	Chlorodibromomethane	124-48-1	ug/l	0.62	U	0.62	U	2	10	NC	1.2	U	1.2	U	4	20	NC	0.62	U	0.62	U	2	10	NC
	Chloroethane	75-00-3	ug/l	1.4	U	1.4	U	4	20	NC	2.7	U	2.7	U	8	40	NC	1.4	U	1.4	U	4	20	NC
	Chloroform	67-66-3	ug/l	**0.65**	**J**	**0.62**	**J**	**1**	5	**0.03**	**0.89**	**J**	**0.99**	**J**	**2**	10	**0.1**	0.36	U	0.36	U	1	5	NC
	Chloromethane	74-87-3	ug/l	0.75	U	0.75	U	2	10	NC	1.5	U	1.5	U	4	20	NC	0.75	U	0.75	U	2	10	NC
	Chloroprene	126-99-8	ug/l	1.2	U	1.2	U	3	15	NC	2.3	U	2.3	U	6	30	NC	1.2	U	1.2	U	3	15	NC
	cis-1,2-Dichloroethene	156-59-2	ug/l	0.32	U	0.32	U	1	5	NC	0.64	U	0.64	U	2	10	NC	**1.1**		**1.1**		**1**	5	**0**
	cis-1,3-Dichloropropene	10061-01-5	ug/l	0.63	U	0.63	U	2	10	NC	1.3	U	1.3	U	4	20	NC	0.63	U	0.63	U	2	10	NC
	Dibromomethane	74-95-3	ug/l	0.34	U	0.34	U	1	5	NC	0.69	U	0.69	U	2	10	NC	0.34	U	0.34	U	1	5	NC
	Dichlorodifluoromethane	75-71-8	ug/l	0.96	U	0.96	U	3	15	NC	1.9	U	1.9	U	6	30	NC	**1.6**	**J**	**1.6**	**J**	**3**	15	**0**
	Ethyl methacrylate	97-63-2	ug/l	0.86	U	0.86	U	3	15	NC	1.7	U	1.7	U	6	30	NC	0.86	U	0.86	U	3	15	NC
	Ethylbenzene	100-41-4	ug/l	0.3	U	0.3	U	1	5	NC	0.61	U	0.61	U	2	10	NC	0.3	U	0.3	U	1	5	NC
	Iodomethane	74-88-4	ug/l	2.6	U	2.6	U	5	25	NC	5.2	U	5.2	U	10	50	NC	2.6	U	2.6	U	5	25	NC
	Isobutanol; Isobutyl alcohol	78-83-1	ug/l	37	U	37	U	110	550	NC	73	U	73	U	220	1100	NC	37	U	37	U	110	550	NC
	m,p-Xylene	179601-23-1	ug/l	0.36	U	0.36	U	2	10	NC	0.71	U	0.71	U	4	20	NC	0.36	U	0.36	U	2	10	NC
	Methacrylonitrile	126-98-7	ug/l	5.3	U	5.3	U	15	75	NC	11	U	11	U	30	150	NC	5.3	U	5.3	U	15	75	NC
	Methyl methacrylate	80-62-6	ug/l	1.1	U	1.1	U	4	20	NC	2.2	U	2.2	U	8	40	NC	1.1	U	1.1	U	4	20	NC
	Methylene Chloride	75-09-2	ug/l	0.94	U	0.94	U	2	10	NC	1.9	U	1.9	U	4	20	NC	0.94	U	0.94	U	2	10	NC
	o-xylene (1,2-dimethylbenzene)	95-47-6	ug/l	0.33	U	0.33	U	1	5	NC	0.66	U	0.66	U	2	10	NC	0.33	U	0.33	U	1	5	NC
	Propionitrile; ethyl cyanide	107-12-0	ug/l	3.7	U	3.7	U	20	100	NC	7.4	U	7.4	U	40	200	NC	3.7	U	3.7	U	20	100	NC
	Styrene	100-42-5	ug/l	0.36	U	0.36	U	1	5	NC	0.71	U	0.71	U	2	10	NC	0.36	U	0.36	U	1	5	NC
	Tetrachloroethene	127-18-4	ug/l	**15**	**J**	**15**		**1**	5	**0.00**	**11**		**12**		**2**	10	**8.70**	0.4	U	0.4	U	1	5	NC
	Toluene	108-88-3	ug/l	0.32	U	0.32	U	1	5	NC	0.64	U	0.64	U	2	10	NC	0.32	U	0.32	U	1	5	NC
	trans-1,2-Dichloroethene	156-60-5	ug/l	0.37	U	0.37	U	1	5	NC	0.74	U	0.74	U	2	10	NC	0.37	U	0.37	U	1	5	NC
	trans-1,3-Dichloropropene	10061-02-6	ug/l	0.65	U	0.65	U	2	10	NC	1.3	U	1.3	U	4	20	NC	0.65	U	0.65	U	2	10	NC
	trans-1,4-Dichloro-2-butene	110-57-6	ug/l	1.4	U	1.4	U	3	15	NC	2.8	U	2.8	U	6	30	NC	1.4	U	1.4	U	3	15	NC
	Trichloroethene	79-01-6	ug/l	**48**		**47**		**1**	5	**2.11**	**160**		**160**		**2**	10	**0.00**	0.3	U	0.3	U	1	5	NC
	Trichlorofluoromethane	75-69-4	ug/l	0.57	U	0.57	U	2	10	NC	1.1	U	1.1	U	4	20	NC	**0.65**	**J**	0.57	UJ	**2**	10	**0.08**
	Vinyl acetate	108-05-4	ug/l	0.94	U	0.94	U	3	15	NC	1.9	U	1.9	U	6	30	NC	0.94	U	0.94	U	3	15	NC
	Vinyl chloride	75-01-4	ug/l	0.51	U	0.51	U	2	10	NC	**6.3**		**6.5**		**4**	20	**0.2**	0.51	U	0.51	U	2	10	NC
	Xylene (Total)	1330-20-7	ug/l	0.33	U	0.33	U	1	5	NC	0.66	U	0.66	U	2	10	NC	0.33	U	0.33	U	1	5	NC
SW6020B	Antimony	7440-36-0	ug/l	--		--		--	--	--	0.4	UJ	**0.42**	**J**	2	10	**0.02**	0.4	U	0.4	U	2	10	NC
	Arsenic	7440-38-2	ug/l	--		--		--	--	--	0.5	U	0.5	U	5	25	NC	**3.9**	**J**	**4.1**	**J**	**5**	25	**0.2**
	Barium	7440-39-3	ug/l	--		--		--	--	--	**420**		**400**		**3**	15	**4.88**	**110**	**J**	**110**		**3**	15	**0**
	Beryllium	7440-41-7	ug/l	--		--		--	--	--	0.3	U	0.3	U	1	5	NC	0.3	U	0.3	U	1	5	NC
	Cadmium	7440-43-9	ug/l	--		--		--	--	--	**0.29**	**J**	**0.3**	**J**	**1**	5	**0.01**	0.19	U	0.19	U	1	5	NC

Table D-3
Groundwater Field Duplicate Comparisons

				Location ID	MW-109S		MW-109S					MW-124		MW-124					MW-13		MW-13				
				Sample Type	N		FD					N		FD					N		FD				
				Sample Date	4/15/2023		4/15/2023					4/12/2023		4/12/2023					5/17/2023		5/17/2023				
Method	Chemical Name	CAS No.	Unit	Result	Q	Result	Q	RDL	5x RL	RPD or Absolute Difference	Result	Q	Result	Q	RDL	5x RL	RPD or Absolute Difference	Result	Q	Result	Q	RDL	5x RL	RPD or Absolute Difference
	Calcium	7440-70-2	ug/l	--		--		--	--	--	**220000**		**210000**		**200**	1000	**4.65**	**45000**		**46000**		**200**	1000	**2.20**
	Chromium	7440-47-3	ug/l	--		--		--	--	--	0.5	U	0.5	U	3	15	NC	**0.83**	**J**	**0.71**	**J**	**3**	15	**0.12**
	Cobalt	7440-48-4	ug/l	--		--		--	--	--	**2.8**		**2.6**		**1**	5	**0.2**	**0.36**	**J**	**0.35**	**J**	**1**	5	**0.01**
	Copper	7440-50-8	ug/l	--		--		--	--	--	**3.1**		**3**		**2**	10	**0.1**	0.71	U	0.71	U	2	10	NC
	Iron	7439-89-6	ug/l	--		--		--	--	--	**24**	**J**	**21**	**J**	**200**	1000	**3**	200	U	8.7	U	200	1000	NC
	Lead	7439-92-1	ug/l	--		--		--	--	--	0.23	U	0.23	U	1	5	NC	0.23	U	0.23	U	1	5	NC
	Magnesium	7439-95-4	ug/l	--		--		--	--	--	**73000**		**69000**		**200**	1000	**5.63**	**40000**	**J**	**40000**		**200**	1000	**0.00**
	Manganese	7439-96-5	mg/l	--		--		--	--	--	**2**	**J**	**1.8**	**J**	**3**	15	**0.2**	**0.0015**	**J**	**0.0022**	**J**	**3**	15	**0.0007**
	Manganese	7439-96-5	ug/l	--		--		--	--	--	**2000**		**1800**		**3**	15	**10.53**	**1.5**	**J**	**2.2**	**J**	**3**	15	**0.7**
	Nickel	7440-02-0	ug/l	--		--		--	--	--	**15**		**15**		**3**	15	**0.00**	0.83	U	0.83	U	3	15	NC
	Potassium	7440-09-7	ug/l	--		--		--	--	--	**4800**		**4600**		**1000**	5000	**4.26**	**2700**		**2600**		**1000**	5000	**3.77**
	Selenium	7782-49-2	ug/l	--		--		--	--	--	1	U	1	U	5	25	NC	1	U	1	U	5	25	NC
	Silver	7440-22-4	ug/l	--		--		--	--	--	0.045	U	0.045	U	1	5	NC	0.045	U	0.045	U	1	5	NC
	Sodium	7440-23-5	ug/l	--		--		--	--	--	**100000**		**95000**		**1000**	5000	**5.13**	**37000**	**J**	**36000**		**1000**	5000	**2.74**
	Thallium	7440-28-0	ug/l	--		--		--	--	--	0.21	U	0.21	U	1	5	NC	0.21	U	0.21	U	1	5	NC
	Tin	7440-31-5	ug/l	--		--		--	--	--	0.58	U	0.58	U	10	50	NC	0.58	U	0.58	U	10	50	NC
	Vanadium	7440-62-2	ug/l	--		--		--	--	--	1.1	U	1.1	U	5	25	NC	**1.6**	**J**	**1.5**	**J**	**5**	25	**0.1**
	Zinc	7440-66-6	ug/l	--		--		--	--	--	**9.3**	**J**	**9.9**	**J**	**10**	50	**0.6**	2	U	2	U	10	50	NC
SW8011	1,2,3-Trichloropropane	96-18-4	ug/l	--		--		--	--	--	--		--		--	--	--	0.005	U	0.005	U	0.02	0.1	NC
	1,2-Dibromo-3-Chloropropane	96-12-8	ug/l	--		--		--	--	--	--		--		--	--	--	0.0068	U	0.0068	U	0.02	0.1	NC
	1,2-Dibromoethane	106-93-4	ug/l	--		--		--	--	--	--		--		--	--	--	0.0037	U	0.0037	U	0.02	0.1	NC
SW9056	Bromide	24959-67-9	mg/l	--		--		--	--	--	**1.4**		**1.4**		**0.5**	2.5	**0**	--		--		--	--	--
	Chloride	16887-00-6	mg/l	--		--		--	--	--	**310**		**330**		**30**	150	**6.25**	--		--		--	--	--
	Nitrate	14797-55-8	mg/l	--		--		--	--	--	**5.6**		**5.6**		**1**	5	**0.00**	--		--		--	--	--
	Nitrite	14797-65-0	mg/l	--		--		--	--	--	0.049	UJ	0.049	UJ	0.5	2.5	NC	--		--		--	--	--
	Sulfate	14808-79-8	mg/l	--		--		--	--	--	**120**		**120**		**10**	50	**0.00**	--		--		--	--	--
SW9060	Total Organic Carbon	TOC	mg/l	--		--		--	--	--	**5.1**		**4.9**		**1**	5	**4.00**	--		--		--	--	--
RSK175	Acetylene	74-86-2	ug/l	--		--		--	--	--	0.73	U	0.73	U	5	25	NC	--		--		--	--	--
	Ethane	74-84-0	ug/l	--		--		--	--	--	**1**	**J**	**0.94**	**J**	**5**	25	**0.06**	--		--		--	--	--
	Ethene	74-85-1	ug/l	--		--		--	--	--	**0.42**	**J**	0.4	U	**5**	25	**0.02**	--		--		--	--	--
	Methane	74-82-8	mg/l	--		--		--	--	--	**0.013**	**J**	**0.014**	**J**	**5**	25	**0.001**	--		--		--	--	--
	Propane	74-98-6	ug/l	--		--		--	--	--	**0.68**	**J**	**0.64**	**J**	**5**	25	**0.04**	--		--		--	--	--
SM4500-S2-D	Sulfide	18496-25-8	mg/l	--		--		--	--	--	--		--		--	--	--	0.022	UJ	0.022	UJ	0.05	0.25	**0**

Notes:
Relative percent differences or absolute differences that are outside the control limits are highlighted yellow
FD = field duplicate
N = normal field sample
NC = not calculated

Appendix E

Laboratory Reports (Data Packages)

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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CDM Smith Inc
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Suite 100
Bellevue WA 98007-6493

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JOB DESCRIPTION

Bannock Ft. Hall Mine LF, Idaho

JOB NUMBER

280-174957-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

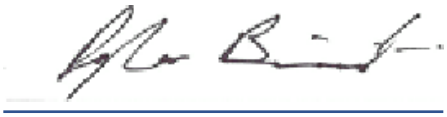
Eurofins Denver

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: CDM Smith Inc

Project: Bannock Ft. Hall Mine LF, Idaho

Report Number: 280-174957-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

REVISION - 1

Following an internal data quality review it was determined that due to analyst error cis-1,2-dichloroethene detections were improperly reported as non-detect due to improperly defining peaks related to co-elution of cis-1,2-dichloroethene and ethyl acetate for samples MW-124-20230412 (280-174957-2), MW-124-Q-20230412 (280-174957-3), MW-105D-20230411 (280-174957-5), and MW-105S-20230411 (280-174957-6). The issue has been corrected and revised results are reported for cis-1,2-dichloroethene for the impacted samples.

RECEIPT

The samples were received on 04/13/2023; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.7 C.

VOLATILE ORGANIC COMPOUNDS BY GC/MS

Samples TB-04-20230412 (280-174957-1), MW-124-20230412 (280-174957-2), MW-124-Q-20230412 (280-174957-3), MW-105D-20230411 (280-174957-5), MW-105S-20230411 (280-174957-6) and EB-01-20230411 (280-174957-7) were analyzed for Volatile Organic Compounds by GC/MS in accordance with SW-846 8260D. The samples were analyzed on 04/18/2023, 04/24/2023 and 04/25/2023.

Acetonitrile, Chloroprene, Methacrylonitrile, Methyl methacrylate and Propionitrile exceeded the RPD limit for LCSD 280-609068/5. LCS and LCSD percent recoveries were within control limits. Refer to the QC report for details.

A continuing calibration verification (CCV) associated with batch 280-609068 recovered outside of the control limits (20%D) for Bromomethane and Isobutyl alcohol. These analytes are considered poor performers. The samples associated with this CCV were non-detects for the affected analytes. The LCS/LCSD recovered within control limits therefore the data have been reported.

A continuing calibration verification (CCV) associated with batch 280-609932 recovered outside the control limit of 20%D for 1,2-Dibromo-3-Chloropropane (-21.5%D). This analyte is a poor performer. The samples associated with this CCV were non-detect for the affected analyte. The LCS/LCSD recovered within control limits therefore the data have been reported.

A continuing calibration verification (CCV) associated with batch 280-609932 recovered outside the control limit (20%D) Allyl Chloride (25.6%D), Chloroethane (22.7%D), Trichlorofluoromethane (36.2%D) and Vinyl chloride (36.2%D). These analytes are considered poor performers. The samples associated with this CCV were non-detects for the affected analytes. The LCS/LCSD recovered within control limits therefore the data have been reported.

A continuing calibration verification (CCV) associated with batch 280-609932 recovered outside the control limit of 20%D for Methyl methacrylate (-22.3%D). This analyte is a poor performer. The LCS/LCSD recovered within control limits therefore the data were reported.

The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 280-609946: 1,2-Dibromo-3-Chloropropane, Allyl chloride and Iodomethane. These compounds are not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. The associated samples were non-detect for the affected analytes and the LCS/LCSD recovered within control limits; therefore, the data have been reported.

After a re-review of raw data due to an error in spectral data interpretation by a lab analyst, the following sample results for the analyte cis-1,2-Dichloroethene have been determined to have changed from a ND result to a detected concentration: MW-124-20230412 (280-174957-2), MW-124-Q-20230412 (280-174957-3), MW-105D-20230411 (280-174957-5), and MW-105S-20230411 (280-174957-6).

Samples MW-124-20230412 (280-174957-2)[2X], MW-124-Q-20230412 (280-174957-3)[2X] and MW-105D-20230411 (280-174957-5) [4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED GASES

Samples MW-124-20230412 (280-174957-2) and MW-124-Q-20230412 (280-174957-3) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 04/19/2023.

Analytes Acetylene/Ethane co-elute on one of the columns used for this analysis. As a result, there are no results reported for the %Difference in the concentration on the Form X.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP/MS)

Samples MW-124-20230412 (280-174957-2), MW-124-Q-20230412 (280-174957-3), RW-15-20230411 (280-174957-4), MW-105D-20230411 (280-174957-5) and MW-105S-20230411 (280-174957-6) were analyzed for Dissolved Metals (ICP/MS) in accordance with SW846 6020B. The samples were prepared on 04/14/2023 and analyzed on 04/17/2023.

Magnesium was detected in method blank MB 280-608688/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (28 DAYS)

Samples MW-124-20230412 (280-174957-2), MW-124-Q-20230412 (280-174957-3), RW-15-20230411 (280-174957-4), MW-105D-20230411 (280-174957-5) and MW-105S-20230411 (280-174957-6) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A (28 Days). The samples were analyzed on 04/13/2023, 04/14/2023, 04/27/2023 and 04/28/2023.

The concentration of the matrix spike reagent caused the results for the matrix spike and matrix spike duplicate (MS/MSD) to be above the highest point of the calibration range for bromide and sulfate. The results for the MS/MSD are still within the standard control limits of 80-120% so the results are being qualified and reported: MW-105D-20230411 (280-174957-5), (280-174957-C-5 MS) and (280-174957-C-5 MSD)

Samples MW-124-20230412 (280-174957-2)[10X], MW-124-20230412 (280-174957-2)[2X], MW-124-Q-20230412 (280-174957-3)[2X], MW-124-Q-20230412 (280-174957-3)[5X], RW-15-20230411 (280-174957-4)[5X], MW-105D-20230411 (280-174957-5)[5X], MW-105S-20230411 (280-174957-6)[2X] and MW-105S-20230411 (280-174957-6)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (48 HOURS)

Samples MW-124-20230412 (280-174957-2), MW-124-Q-20230412 (280-174957-3), RW-15-20230411 (280-174957-4), MW-105D-20230411 (280-174957-5) and MW-105S-20230411 (280-174957-6) were analyzed for anions (48 hours) in accordance with EPA SW-846 Method 9056A (48 Hours). The samples were analyzed on 04/13/2023 and 04/14/2023.

Nitrite as N failed the recovery criteria low for the MS and MSD of sample MW-105D-20230411 (280-174957-5) in batch 280-608624. Nitrite as N exceeded the RPD limit. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. Refer to the QC report for details.

The concentration of the matrix spike reagent caused the results for the matrix spike and matrix spike duplicate (MS/MSD) to be above the highest point of the calibration range for nitrate. The results for the MS/MSD are still within the standard control limits of 80-120% so the results are being qualified and reported. (280-174957-C-5 DU), (280-174957-C-5 MS) and (280-174957-C-5 MSD)

The following samples were received with less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: RW-15-20230411 (280-174957-4), MW-105D-20230411 (280-174957-5) and MW-105S-20230411 (280-174957-6).

Reanalysis of the following sample was also performed outside of the analytical holding time due to the sample requiring a

higher dilution for nitrate: MW-105S-20230411 (280-174957-6).

Samples MW-124-20230412 (280-174957-2)[2X], MW-124-Q-20230412 (280-174957-3)[2X] and MW-105S-20230411 (280-174957-6) [5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL ORGANIC CARBON

Samples MW-124-20230412 (280-174957-2), MW-124-Q-20230412 (280-174957-3), RW-15-20230411 (280-174957-4), MW-105D-20230411 (280-174957-5) and MW-105S-20230411 (280-174957-6) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 04/20/2023.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: CDM Smith Inc
Job ID: 280-174957-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID: TB-04-20230412 — Lab Sample ID: 280-174957-1

No Detections.

Client Sample ID: MW-124-20230412 — Lab Sample ID: 280-174957-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.7	J	2.0	0.44	ug/L	2		8260D	Total/NA
1,2-Dichlorobenzene	2.2		2.0	0.74	ug/L	2		8260D	Total/NA
Chloroform	0.89	J	2.0	0.72	ug/L	2		8260D	Total/NA
cis-1,2-Dichloroethene	28		2.0	0.64	ug/L	2		8260D	Total/NA
Tetrachloroethene	11		2.0	0.81	ug/L	2		8260D	Total/NA
Trichloroethene	160		2.0	0.60	ug/L	2		8260D	Total/NA
Vinyl chloride	6.3		4.0	1.0	ug/L	2		8260D	Total/NA
Methane	13		5.0	0.63	ug/L	1		RSK-175	Total/NA
Ethene	0.42	J	5.0	0.40	ug/L	1		RSK-175	Total/NA
Ethane	1.0	J	5.0	0.57	ug/L	1		RSK-175	Total/NA
Propane	0.68	J	5.0	0.56	ug/L	1		RSK-175	Total/NA
Barium	420		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	220000		200	32	ug/L	1		6020B	Dissolved
Cadmium	0.29	J	1.0	0.19	ug/L	1		6020B	Dissolved
Co	2.8		1.0	0.33	ug/L	1		6020B	Dissolved
Copper	3.1		2.0	0.71	ug/L	1		6020B	Dissolved
Iron	24	J	200	8.7	ug/L	1		6020B	Dissolved
Potassium	4800		1000	52	ug/L	1		6020B	Dissolved
Magnesium	73000	B	200	4.2	ug/L	1		6020B	Dissolved
Manganese	2000		3.0	0.51	ug/L	1		6020B	Dissolved
Sodium	100000		1000	73	ug/L	1		6020B	Dissolved
Nickel	15		3.0	0.83	ug/L	1		6020B	Dissolved
Zinc	9.3	J	10	2.0	ug/L	1		6020B	Dissolved
Bromide	1.4		0.50	0.23	mg/L	1		9056A	Total/NA
Nitrate as N	5.6		1.0	0.18	mg/L	2		9056A	Total/NA
Chloride	310		30	10	mg/L	10		9056A	Total/NA
Sulfate	120		10	2.1	mg/L	2		9056A	Total/NA
Total Organic Carbon - Duplicates	5.1		1.0	0.35	mg/L	1	☼	9060A	Total/NA

Client Sample ID: MW-124-Q-20230412 — Lab Sample ID: 280-174957-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.5	J	2.0	0.44	ug/L	2		8260D	Total/NA
1,1-Dichloroethene	0.47	J	2.0	0.46	ug/L	2		8260D	Total/NA
1,2-Dichlorobenzene	2.0		2.0	0.74	ug/L	2		8260D	Total/NA
1,4-Dichlorobenzene	0.78	J	2.0	0.78	ug/L	2		8260D	Total/NA
Chloroform	0.99	J	2.0	0.72	ug/L	2		8260D	Total/NA
cis-1,2-Dichloroethene	28		2.0	0.64	ug/L	2		8260D	Total/NA
Tetrachloroethene	12		2.0	0.81	ug/L	2		8260D	Total/NA
Trichloroethene	160		2.0	0.60	ug/L	2		8260D	Total/NA
Vinyl chloride	6.5		4.0	1.0	ug/L	2		8260D	Total/NA
Methane	14		5.0	0.63	ug/L	1		RSK-175	Total/NA
Ethane	0.94	J	5.0	0.57	ug/L	1		RSK-175	Total/NA
Propane	0.64	J	5.0	0.56	ug/L	1		RSK-175	Total/NA
Barium	400		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	210000		200	32	ug/L	1		6020B	Dissolved
Cadmium	0.30	J	1.0	0.19	ug/L	1		6020B	Dissolved
Co	2.6		1.0	0.33	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-124-Q-20230412 (Continued) — Lab Sample ID: 280-174957-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	3.0		2.0	0.71	ug/L	1		6020B	Dissolved
Iron	21	J	200	8.7	ug/L	1		6020B	Dissolved
Potassium	4600		1000	52	ug/L	1		6020B	Dissolved
Magnesium	69000	B	200	4.2	ug/L	1		6020B	Dissolved
Manganese	1800		3.0	0.51	ug/L	1		6020B	Dissolved
Sodium	95000		1000	73	ug/L	1		6020B	Dissolved
Nickel	15		3.0	0.83	ug/L	1		6020B	Dissolved
Antimony	0.42	J	2.0	0.40	ug/L	1		6020B	Dissolved
Zinc	9.9	J	10	2.0	ug/L	1		6020B	Dissolved
Bromide	1.4		0.50	0.23	mg/L	1		9056A	Total/NA
Nitrate as N	5.6		1.0	0.18	mg/L	2		9056A	Total/NA
Chloride	330		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	120		10	2.1	mg/L	2		9056A	Total/NA
Total Organic Carbon - Duplicates	4.9		1.0	0.35	mg/L	1	☼	9060A	Total/NA

Client Sample ID: RW-15-20230411 — Lab Sample ID: 280-174957-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	300		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	200000		200	32	ug/L	1		6020B	Dissolved
Copper	7.6		2.0	0.71	ug/L	1		6020B	Dissolved
Potassium	4200		1000	52	ug/L	1		6020B	Dissolved
Magnesium	78000	B	200	4.2	ug/L	1		6020B	Dissolved
Manganese	1.2	J	3.0	0.51	ug/L	1		6020B	Dissolved
Sodium	96000		1000	73	ug/L	1		6020B	Dissolved
Nickel	2.6	J	3.0	0.83	ug/L	1		6020B	Dissolved
Lead	0.25	J	1.0	0.23	ug/L	1		6020B	Dissolved
Zinc	47		10	2.0	ug/L	1		6020B	Dissolved
Bromide	1.5		0.50	0.23	mg/L	1		9056A	Total/NA
Nitrate as N	2.2	H	0.50	0.090	mg/L	1		9056A	Total/NA
Chloride	310		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	98		25	5.2	mg/L	5		9056A	Total/NA
Total Organic Carbon - Duplicates	4.4		1.0	0.35	mg/L	1	☼	9060A	Total/NA

Client Sample ID: MW-105D-20230411 — Lab Sample ID: 280-174957-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	3.3	J	4.0	0.88	ug/L	4		8260D	Total/NA
Chloroform	2.2	J	4.0	1.4	ug/L	4		8260D	Total/NA
cis-1,2-Dichloroethene	13		4.0	1.3	ug/L	4		8260D	Total/NA
Tetrachloroethene	37		4.0	1.6	ug/L	4		8260D	Total/NA
Trichloroethene	200		4.0	1.2	ug/L	4		8260D	Total/NA
Arsenic	0.72	J	5.0	0.50	ug/L	1		6020B	Dissolved
Barium	310		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	230000		200	32	ug/L	1		6020B	Dissolved
Copper	1.0	J	2.0	0.71	ug/L	1		6020B	Dissolved
Potassium	3800		1000	52	ug/L	1		6020B	Dissolved
Magnesium	69000	B	200	4.2	ug/L	1		6020B	Dissolved
Manganese	5.0		3.0	0.51	ug/L	1		6020B	Dissolved
Sodium	64000		1000	73	ug/L	1		6020B	Dissolved
Vanadium	1.2	J	5.0	1.1	ug/L	1		6020B	Dissolved
Bromide	0.76		0.50	0.23	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-105D-20230411 (Continued) — Lab Sample ID: 280-174957-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.71	H	0.50	0.090	mg/L	1		9056A	Total/NA
Chloride	280		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	79		5.0	1.0	mg/L	1		9056A	Total/NA
Total Organic Carbon - Duplicates	1.9		1.0	0.35	mg/L	1	☼	9060A	Total/NA

Client Sample ID: MW-105S-20230411 — Lab Sample ID: 280-174957-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.44	J	1.0	0.22	ug/L	1		8260D	Total/NA
Chloroform	1.5		1.0	0.36	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	2.8		1.0	0.32	ug/L	1		8260D	Total/NA
Tetrachloroethene	11		1.0	0.40	ug/L	1		8260D	Total/NA
Trichloroethene	37		1.0	0.30	ug/L	1		8260D	Total/NA
Arsenic	0.66	J	5.0	0.50	ug/L	1		6020B	Dissolved
Barium	250		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	230000		200	32	ug/L	1		6020B	Dissolved
Co	11		1.0	0.33	ug/L	1		6020B	Dissolved
Chromium	2.3	J	3.0	0.50	ug/L	1		6020B	Dissolved
Copper	3.0		2.0	0.71	ug/L	1		6020B	Dissolved
Iron	15	J	200	8.7	ug/L	1		6020B	Dissolved
Potassium	5000		1000	52	ug/L	1		6020B	Dissolved
Magnesium	80000	B	200	4.2	ug/L	1		6020B	Dissolved
Manganese	520		3.0	0.51	ug/L	1		6020B	Dissolved
Sodium	410000		1000	73	ug/L	1		6020B	Dissolved
Nickel	50		3.0	0.83	ug/L	1		6020B	Dissolved
Bromide	1.4		0.50	0.23	mg/L	1		9056A	Total/NA
Nitrate as N	14	H E	0.50	0.090	mg/L	1		9056A	Total/NA
Nitrate as N	13	H	2.5	0.45	mg/L	5		9056A	Total/NA
Chloride	470		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	200		10	2.1	mg/L	2		9056A	Total/NA
Total Organic Carbon - Duplicates	7.2		1.0	0.35	mg/L	1	☼	9060A	Total/NA

Client Sample ID: EB-01-20230411 — Lab Sample ID: 280-174957-7

No Detections.

Client Sample ID: TB-04-20230412
Lab Sample ID: 280-174957-1

Date Collected: 04/12/23 14:10
Matrix: Water

Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/25/23 09:46	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/25/23 09:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/25/23 09:46	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/25/23 09:46	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/25/23 09:46	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/25/23 09:46	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/25/23 09:46	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/25/23 09:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/25/23 09:46	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/25/23 09:46	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/25/23 09:46	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/25/23 09:46	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/25/23 09:46	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/25/23 09:46	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/25/23 09:46	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/25/23 09:46	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/25/23 09:46	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/25/23 09:46	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/25/23 09:46	1
2-Hexanone	ND		5.0	1.7	ug/L			04/25/23 09:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/25/23 09:46	1
Acetone	ND		15	6.6	ug/L			04/25/23 09:46	1
Acetonitrile	ND		30	9.6	ug/L			04/25/23 09:46	1
Acrolein	ND		20	4.9	ug/L			04/25/23 09:46	1
Acrylonitrile	ND		20	4.5	ug/L			04/25/23 09:46	1
Allyl chloride	ND		2.0	0.17	ug/L			04/25/23 09:46	1
Benzene	ND		1.0	0.31	ug/L			04/25/23 09:46	1
Bromoform	ND		2.0	1.2	ug/L			04/25/23 09:46	1
Bromomethane	ND		5.0	2.4	ug/L			04/25/23 09:46	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/25/23 09:46	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/25/23 09:46	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/25/23 09:46	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/25/23 09:46	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/25/23 09:46	1
Chloroethane	ND		4.0	1.4	ug/L			04/25/23 09:46	1
Chloroform	ND		1.0	0.36	ug/L			04/25/23 09:46	1
Chloromethane	ND		2.0	0.75	ug/L			04/25/23 09:46	1
Chloroprene	ND		3.0	1.2	ug/L			04/25/23 09:46	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/25/23 09:46	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/25/23 09:46	1
Dibromomethane	ND		1.0	0.34	ug/L			04/25/23 09:46	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/25/23 09:46	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/25/23 09:46	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/25/23 09:46	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/25/23 09:46	1
Iodomethane	ND		5.0	2.6	ug/L			04/25/23 09:46	1
Isobutyl alcohol	ND		110	37	ug/L			04/25/23 09:46	1
Methacrylonitrile	ND		15	5.3	ug/L			04/25/23 09:46	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/25/23 09:46	1

Client Sample ID: TB-04-20230412
Lab Sample ID: 280-174957-1

Date Collected: 04/12/23 14:10
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.94	ug/L			04/25/23 09:46	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/25/23 09:46	1
o-Xylene	ND		1.0	0.33	ug/L			04/25/23 09:46	1
Propionitrile	ND		20	3.7	ug/L			04/25/23 09:46	1
Styrene	ND		1.0	0.36	ug/L			04/25/23 09:46	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/25/23 09:46	1
Toluene	ND		1.0	0.32	ug/L			04/25/23 09:46	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/25/23 09:46	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/25/23 09:46	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/25/23 09:46	1
Trichloroethene	ND		1.0	0.30	ug/L			04/25/23 09:46	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/25/23 09:46	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/25/23 09:46	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/25/23 09:46	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/25/23 09:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 127*		*04/25/23 09:46*	*1*
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*		*04/25/23 09:46*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*04/25/23 09:46*	*1*
Toluene-d8 (Surr)	*101*		*80 - 125*		*04/25/23 09:46*	*1*

Client Sample ID: MW-124-20230412
Lab Sample ID: 280-174957-2

Date Collected: 04/12/23 09:50
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0	1.2	ug/L			04/25/23 14:21	2
1,1,1-Trichloroethane	ND		2.0	0.78	ug/L			04/25/23 14:21	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			04/25/23 14:21	2
1,1,2-Trichloroethane	ND		2.0	0.54	ug/L			04/25/23 14:21	2
1,1-Dichloroethane	**1.7**	**J**	2.0	0.44	ug/L			04/25/23 14:21	2
1,1-Dichloroethene	ND		2.0	0.46	ug/L			04/25/23 14:21	2
1,1-Dichloropropene	ND		2.0	0.83	ug/L			04/25/23 14:21	2
1,2,3-Trichloropropane	ND		5.0	1.7	ug/L			04/25/23 14:21	2
1,2,4-Trichlorobenzene	ND		2.0	1.2	ug/L			04/25/23 14:21	2
1,2-Dibromo-3-Chloropropane	ND		10	3.5	ug/L			04/25/23 14:21	2
1,2-Dibromoethane	ND		2.0	0.81	ug/L			04/25/23 14:21	2
1,2-Dichlorobenzene	**2.2**		2.0	0.74	ug/L			04/25/23 14:21	2
1,2-Dichloroethane	ND		2.0	1.1	ug/L			04/25/23 14:21	2
1,2-Dichloropropane	ND		2.0	1.0	ug/L			04/25/23 14:21	2
1,3-Dichlorobenzene	ND		2.0	0.67	ug/L			04/25/23 14:21	2
1,3-Dichloropropane	ND		2.0	0.76	ug/L			04/25/23 14:21	2
1,4-Dichlorobenzene	ND		2.0	0.78	ug/L			04/25/23 14:21	2
2,2-Dichloropropane	ND		2.0	0.76	ug/L			04/25/23 14:21	2
2-Butanone (MEK)	ND		30	12	ug/L			04/25/23 14:21	2
2-Hexanone	ND		10	3.4	ug/L			04/25/23 14:21	2
4-Methyl-2-pentanone (MIBK)	ND		10	2.0	ug/L			04/25/23 14:21	2
Acetone	ND		30	13	ug/L			04/25/23 14:21	2

Client Sample ID: MW-124-20230412
Date Collected: 04/12/23 09:50
Date Received: 04/13/23 09:30

Lab Sample ID: 280-174957-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	ND		60	19	ug/L			04/25/23 14:21	2
Acrolein	ND		40	9.7	ug/L			04/25/23 14:21	2
Acrylonitrile	ND		40	8.9	ug/L			04/25/23 14:21	2
Allyl chloride	ND		4.0	0.34	ug/L			04/25/23 14:21	2
Benzene	ND		2.0	0.62	ug/L			04/25/23 14:21	2
Bromoform	ND		4.0	2.4	ug/L			04/25/23 14:21	2
Bromomethane	ND		10	4.7	ug/L			04/25/23 14:21	2
Carbon disulfide	ND		4.0	1.3	ug/L			04/25/23 14:21	2
Carbon tetrachloride	ND		2.0	1.1	ug/L			04/25/23 14:21	2
Chlorobenzene	ND		2.0	0.84	ug/L			04/25/23 14:21	2
Chlorobromomethane	ND		2.0	0.81	ug/L			04/25/23 14:21	2
Chlorodibromomethane	ND		4.0	1.2	ug/L			04/25/23 14:21	2
Chloroethane	ND		8.0	2.7	ug/L			04/25/23 14:21	2
Chloroform	**0.89**	**J**	2.0	0.72	ug/L			04/25/23 14:21	2
Chloromethane	ND		4.0	1.5	ug/L			04/25/23 14:21	2
Chloroprene	ND		6.0	2.3	ug/L			04/25/23 14:21	2
cis-1,2-Dichloroethene	**28**		2.0	0.64	ug/L			04/25/23 14:21	2
cis-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/25/23 14:21	2
Dibromomethane	ND		2.0	0.69	ug/L			04/25/23 14:21	2
Dichlorobromomethane	ND		2.0	0.77	ug/L			04/25/23 14:21	2
Dichlorodifluoromethane	ND		6.0	1.9	ug/L			04/25/23 14:21	2
Ethyl methacrylate	ND		6.0	1.7	ug/L			04/25/23 14:21	2
Ethylbenzene	ND		2.0	0.61	ug/L			04/25/23 14:21	2
Iodomethane	ND		10	5.2	ug/L			04/25/23 14:21	2
Isobutyl alcohol	ND		220	73	ug/L			04/25/23 14:21	2
Methacrylonitrile	ND		30	11	ug/L			04/25/23 14:21	2
Methyl methacrylate	ND		8.0	2.2	ug/L			04/25/23 14:21	2
Methylene Chloride	ND		4.0	1.9	ug/L			04/25/23 14:21	2
m-Xylene & p-Xylene	ND		4.0	0.71	ug/L			04/25/23 14:21	2
o-Xylene	ND		2.0	0.66	ug/L			04/25/23 14:21	2
Propionitrile	ND		40	7.4	ug/L			04/25/23 14:21	2
Styrene	ND		2.0	0.71	ug/L			04/25/23 14:21	2
Tetrachloroethene	**11**		2.0	0.81	ug/L			04/25/23 14:21	2
Toluene	ND		2.0	0.64	ug/L			04/25/23 14:21	2
trans-1,2-Dichloroethene	ND		2.0	0.74	ug/L			04/25/23 14:21	2
trans-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/25/23 14:21	2
trans-1,4-Dichloro-2-butene	ND		6.0	2.8	ug/L			04/25/23 14:21	2
Trichloroethene	**160**		2.0	0.60	ug/L			04/25/23 14:21	2
Trichlorofluoromethane	ND		4.0	1.1	ug/L			04/25/23 14:21	2
Vinyl acetate	ND		6.0	1.9	ug/L			04/25/23 14:21	2
Vinyl chloride	**6.3**		4.0	1.0	ug/L			04/25/23 14:21	2
Xylenes, Total	ND		2.0	0.66	ug/L			04/25/23 14:21	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 127*		*04/25/23 14:21*	*2*
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*		*04/25/23 14:21*	*2*
Dibromofluoromethane (Surr)	*103*		*77 - 120*		*04/25/23 14:21*	*2*
Toluene-d8 (Surr)	*99*		*80 - 125*		*04/25/23 14:21*	*2*

Client Sample ID: MW-124-20230412
Lab Sample ID: 280-174957-2

Date Collected: 04/12/23 09:50
Matrix: Water
Date Received: 04/13/23 09:30

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**13**		5.0	0.63	ug/L			04/19/23 03:12	1
Ethene	**0.42**	**J**	5.0	0.40	ug/L			04/19/23 03:12	1
Ethane	**1.0**	**J**	5.0	0.57	ug/L			04/19/23 03:12	1
Acetylene	ND		5.0	0.73	ug/L			04/19/23 03:12	1
Propane	**0.68**	**J**	5.0	0.56	ug/L			04/19/23 03:12	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/14/23 14:30	04/17/23 16:18	1
Arsenic	ND		5.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:18	1
Barium	**420**		3.0	0.38	ug/L		04/14/23 14:30	04/17/23 16:18	1
Beryllium	ND		1.0	0.30	ug/L		04/14/23 14:30	04/17/23 16:18	1
Calcium	**220000**		200	32	ug/L		04/14/23 14:30	04/17/23 16:18	1
Cadmium	**0.29**	**J**	1.0	0.19	ug/L		04/14/23 14:30	04/17/23 16:18	1
Co	**2.8**		1.0	0.33	ug/L		04/14/23 14:30	04/17/23 16:18	1
Chromium	ND		3.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:18	1
Copper	**3.1**		2.0	0.71	ug/L		04/14/23 14:30	04/17/23 16:18	1
Iron	**24**	**J**	200	8.7	ug/L		04/14/23 14:30	04/17/23 16:18	1
Potassium	**4800**		1000	52	ug/L		04/14/23 14:30	04/17/23 16:18	1
Magnesium	**73000**	**B**	200	4.2	ug/L		04/14/23 14:30	04/17/23 16:18	1
Manganese	**2000**		3.0	0.51	ug/L		04/14/23 14:30	04/17/23 16:18	1
Sodium	**100000**		1000	73	ug/L		04/14/23 14:30	04/17/23 16:18	1
Nickel	**15**		3.0	0.83	ug/L		04/14/23 14:30	04/17/23 16:18	1
Lead	ND		1.0	0.23	ug/L		04/14/23 14:30	04/17/23 16:18	1
Antimony	ND		2.0	0.40	ug/L		04/14/23 14:30	04/17/23 16:18	1
Selenium	ND		5.0	1.0	ug/L		04/14/23 14:30	04/17/23 16:18	1
Tin	ND		10	0.58	ug/L		04/14/23 14:30	04/17/23 16:18	1
Thallium	ND		1.0	0.21	ug/L		04/14/23 14:30	04/17/23 16:18	1
Vanadium	ND		5.0	1.1	ug/L		04/14/23 14:30	04/17/23 16:18	1
Zinc	**9.3**	**J**	10	2.0	ug/L		04/14/23 14:30	04/17/23 16:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**1.4**		0.50	0.23	mg/L			04/13/23 18:06	1
Nitrate as N (SW846 9056A)	**5.6**		1.0	0.18	mg/L			04/13/23 18:22	2
Chloride (SW846 9056A)	**310**		30	10	mg/L			04/28/23 23:03	10
Nitrite as N (SW846 9056A)	ND		0.50	0.049	mg/L			04/13/23 18:06	1
Sulfate (SW846 9056A)	**120**		10	2.1	mg/L			04/13/23 18:22	2
Total Organic Carbon - Duplicates (SW846 9060A)	**5.1**		1.0	0.35	mg/L	☼		04/20/23 19:56	1

Client Sample ID: MW-124-Q-20230412
Lab Sample ID: 280-174957-3

Date Collected: 04/12/23 10:00
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0	1.2	ug/L			04/25/23 14:42	2
1,1,1-Trichloroethane	ND		2.0	0.78	ug/L			04/25/23 14:42	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			04/25/23 14:42	2
1,1,2-Trichloroethane	ND		2.0	0.54	ug/L			04/25/23 14:42	2

Client Sample ID: MW-124-Q-20230412
Lab Sample ID: 280-174957-3

Date Collected: 04/12/23 10:00
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	**1.5**	**J**	2.0	0.44	ug/L			04/25/23 14:42	2
1,1-Dichloroethene	**0.47**	**J**	2.0	0.46	ug/L			04/25/23 14:42	2
1,1-Dichloropropene	ND		2.0	0.83	ug/L			04/25/23 14:42	2
1,2,3-Trichloropropane	ND		5.0	1.7	ug/L			04/25/23 14:42	2
1,2,4-Trichlorobenzene	ND		2.0	1.2	ug/L			04/25/23 14:42	2
1,2-Dibromo-3-Chloropropane	ND		10	3.5	ug/L			04/25/23 14:42	2
1,2-Dibromoethane	ND		2.0	0.81	ug/L			04/25/23 14:42	2
1,2-Dichlorobenzene	**2.0**		2.0	0.74	ug/L			04/25/23 14:42	2
1,2-Dichloroethane	ND		2.0	1.1	ug/L			04/25/23 14:42	2
1,2-Dichloropropane	ND		2.0	1.0	ug/L			04/25/23 14:42	2
1,3-Dichlorobenzene	ND		2.0	0.67	ug/L			04/25/23 14:42	2
1,3-Dichloropropane	ND		2.0	0.76	ug/L			04/25/23 14:42	2
1,4-Dichlorobenzene	**0.78**	**J**	2.0	0.78	ug/L			04/25/23 14:42	2
2,2-Dichloropropane	ND		2.0	0.76	ug/L			04/25/23 14:42	2
2-Butanone (MEK)	ND		30	12	ug/L			04/25/23 14:42	2
2-Hexanone	ND		10	3.4	ug/L			04/25/23 14:42	2
4-Methyl-2-pentanone (MIBK)	ND		10	2.0	ug/L			04/25/23 14:42	2
Acetone	ND		30	13	ug/L			04/25/23 14:42	2
Acetonitrile	ND		60	19	ug/L			04/25/23 14:42	2
Acrolein	ND		40	9.7	ug/L			04/25/23 14:42	2
Acrylonitrile	ND		40	8.9	ug/L			04/25/23 14:42	2
Allyl chloride	ND		4.0	0.34	ug/L			04/25/23 14:42	2
Benzene	ND		2.0	0.62	ug/L			04/25/23 14:42	2
Bromoform	ND		4.0	2.4	ug/L			04/25/23 14:42	2
Bromomethane	ND		10	4.7	ug/L			04/25/23 14:42	2
Carbon disulfide	ND		4.0	1.3	ug/L			04/25/23 14:42	2
Carbon tetrachloride	ND		2.0	1.1	ug/L			04/25/23 14:42	2
Chlorobenzene	ND		2.0	0.84	ug/L			04/25/23 14:42	2
Chlorobromomethane	ND		2.0	0.81	ug/L			04/25/23 14:42	2
Chlorodibromomethane	ND		4.0	1.2	ug/L			04/25/23 14:42	2
Chloroethane	ND		8.0	2.7	ug/L			04/25/23 14:42	2
Chloroform	**0.99**	**J**	2.0	0.72	ug/L			04/25/23 14:42	2
Chloromethane	ND		4.0	1.5	ug/L			04/25/23 14:42	2
Chloroprene	ND		6.0	2.3	ug/L			04/25/23 14:42	2
cis-1,2-Dichloroethene	**28**		2.0	0.64	ug/L			04/25/23 14:42	2
cis-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/25/23 14:42	2
Dibromomethane	ND		2.0	0.69	ug/L			04/25/23 14:42	2
Dichlorobromomethane	ND		2.0	0.77	ug/L			04/25/23 14:42	2
Dichlorodifluoromethane	ND		6.0	1.9	ug/L			04/25/23 14:42	2
Ethyl methacrylate	ND		6.0	1.7	ug/L			04/25/23 14:42	2
Ethylbenzene	ND		2.0	0.61	ug/L			04/25/23 14:42	2
Iodomethane	ND		10	5.2	ug/L			04/25/23 14:42	2
Isobutyl alcohol	ND		220	73	ug/L			04/25/23 14:42	2
Methacrylonitrile	ND		30	11	ug/L			04/25/23 14:42	2
Methyl methacrylate	ND		8.0	2.2	ug/L			04/25/23 14:42	2
Methylene Chloride	ND		4.0	1.9	ug/L			04/25/23 14:42	2
m-Xylene & p-Xylene	ND		4.0	0.71	ug/L			04/25/23 14:42	2
o-Xylene	ND		2.0	0.66	ug/L			04/25/23 14:42	2
Propionitrile	ND		40	7.4	ug/L			04/25/23 14:42	2

Client Sample ID: MW-124-Q-20230412
Lab Sample ID: 280-174957-3

Date Collected: 04/12/23 10:00
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		2.0	0.71	ug/L			04/25/23 14:42	2
Tetrachloroethene	**12**		2.0	0.81	ug/L			04/25/23 14:42	2
Toluene	ND		2.0	0.64	ug/L			04/25/23 14:42	2
trans-1,2-Dichloroethene	ND		2.0	0.74	ug/L			04/25/23 14:42	2
trans-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/25/23 14:42	2
trans-1,4-Dichloro-2-butene	ND		6.0	2.8	ug/L			04/25/23 14:42	2
Trichloroethene	**160**		2.0	0.60	ug/L			04/25/23 14:42	2
Trichlorofluoromethane	ND		4.0	1.1	ug/L			04/25/23 14:42	2
Vinyl acetate	ND		6.0	1.9	ug/L			04/25/23 14:42	2
Vinyl chloride	**6.5**		4.0	1.0	ug/L			04/25/23 14:42	2
Xylenes, Total	ND		2.0	0.66	ug/L			04/25/23 14:42	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 127*		*04/25/23 14:42*	*2*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*		*04/25/23 14:42*	*2*
Dibromofluoromethane (Surr)	*104*		*77 - 120*		*04/25/23 14:42*	*2*
Toluene-d8 (Surr)	*101*		*80 - 125*		*04/25/23 14:42*	*2*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**14**		5.0	0.63	ug/L			04/19/23 02:59	1
Ethene	ND		5.0	0.40	ug/L			04/19/23 02:59	1
Ethane	**0.94**	**J**	5.0	0.57	ug/L			04/19/23 02:59	1
Acetylene	ND		5.0	0.73	ug/L			04/19/23 02:59	1
Propane	**0.64**	**J**	5.0	0.56	ug/L			04/19/23 02:59	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/14/23 14:30	04/17/23 16:39	1
Arsenic	ND		5.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:39	1
Barium	**400**		3.0	0.38	ug/L		04/14/23 14:30	04/17/23 16:39	1
Beryllium	ND		1.0	0.30	ug/L		04/14/23 14:30	04/17/23 16:39	1
Calcium	**210000**		200	32	ug/L		04/14/23 14:30	04/17/23 16:39	1
Cadmium	**0.30**	**J**	1.0	0.19	ug/L		04/14/23 14:30	04/17/23 16:39	1
Co	**2.6**		1.0	0.33	ug/L		04/14/23 14:30	04/17/23 16:39	1
Chromium	ND		3.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:39	1
Copper	**3.0**		2.0	0.71	ug/L		04/14/23 14:30	04/17/23 16:39	1
Iron	**21**	**J**	200	8.7	ug/L		04/14/23 14:30	04/17/23 16:39	1
Potassium	**4600**		1000	52	ug/L		04/14/23 14:30	04/17/23 16:39	1
Magnesium	**69000**	**B**	200	4.2	ug/L		04/14/23 14:30	04/17/23 16:39	1
Manganese	**1800**		3.0	0.51	ug/L		04/14/23 14:30	04/17/23 16:39	1
Sodium	**95000**		1000	73	ug/L		04/14/23 14:30	04/17/23 16:39	1
Nickel	**15**		3.0	0.83	ug/L		04/14/23 14:30	04/17/23 16:39	1
Lead	ND		1.0	0.23	ug/L		04/14/23 14:30	04/17/23 16:39	1
Antimony	**0.42**	**J**	2.0	0.40	ug/L		04/14/23 14:30	04/17/23 16:39	1
Selenium	ND		5.0	1.0	ug/L		04/14/23 14:30	04/17/23 16:39	1
Tin	ND		10	0.58	ug/L		04/14/23 14:30	04/17/23 16:39	1
Thallium	ND		1.0	0.21	ug/L		04/14/23 14:30	04/17/23 16:39	1
Vanadium	ND		5.0	1.1	ug/L		04/14/23 14:30	04/17/23 16:39	1
Zinc	**9.9**	**J**	10	2.0	ug/L		04/14/23 14:30	04/17/23 16:39	1

Client Sample ID: MW-124-Q-20230412
Lab Sample ID: 280-174957-3

Date Collected: 04/12/23 10:00
Matrix: Water
Date Received: 04/13/23 09:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**1.4**		0.50	0.23	mg/L			04/13/23 20:13	1
Nitrate as N (SW846 9056A)	**5.6**		1.0	0.18	mg/L			04/13/23 21:02	2
Chloride (SW846 9056A)	**330**		15	5.1	mg/L			04/27/23 16:55	5
Nitrite as N (SW846 9056A)	ND		0.50	0.049	mg/L			04/13/23 20:13	1
Sulfate (SW846 9056A)	**120**		10	2.1	mg/L			04/13/23 21:02	2
Total Organic Carbon - Duplicates (SW846 9060A)	**4.9**		1.0	0.35	mg/L	☼		04/20/23 20:12	1

Client Sample ID: RW-15-20230411
Lab Sample ID: 280-174957-4

Date Collected: 04/11/23 16:30
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/14/23 14:30	04/17/23 16:43	1
Arsenic	ND		5.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:43	1
Barium	**300**		3.0	0.38	ug/L		04/14/23 14:30	04/17/23 16:43	1
Beryllium	ND		1.0	0.30	ug/L		04/14/23 14:30	04/17/23 16:43	1
Calcium	**200000**		200	32	ug/L		04/14/23 14:30	04/17/23 16:43	1
Cadmium	ND		1.0	0.19	ug/L		04/14/23 14:30	04/17/23 16:43	1
Co	ND		1.0	0.33	ug/L		04/14/23 14:30	04/17/23 16:43	1
Chromium	ND		3.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:43	1
Copper	**7.6**		2.0	0.71	ug/L		04/14/23 14:30	04/17/23 16:43	1
Iron	ND		200	8.7	ug/L		04/14/23 14:30	04/17/23 16:43	1
Potassium	**4200**		1000	52	ug/L		04/14/23 14:30	04/17/23 16:43	1
Magnesium	**78000**	**B**	200	4.2	ug/L		04/14/23 14:30	04/17/23 16:43	1
Manganese	**1.2**	**J**	3.0	0.51	ug/L		04/14/23 14:30	04/17/23 16:43	1
Sodium	**96000**		1000	73	ug/L		04/14/23 14:30	04/17/23 16:43	1
Nickel	**2.6**	**J**	3.0	0.83	ug/L		04/14/23 14:30	04/17/23 16:43	1
Lead	**0.25**	**J**	1.0	0.23	ug/L		04/14/23 14:30	04/17/23 16:43	1
Antimony	ND		2.0	0.40	ug/L		04/14/23 14:30	04/17/23 16:43	1
Selenium	ND		5.0	1.0	ug/L		04/14/23 14:30	04/17/23 16:43	1
Tin	ND		10	0.58	ug/L		04/14/23 14:30	04/17/23 16:43	1
Thallium	ND		1.0	0.21	ug/L		04/14/23 14:30	04/17/23 16:43	1
Vanadium	ND		5.0	1.1	ug/L		04/14/23 14:30	04/17/23 16:43	1
Zinc	**47**		10	2.0	ug/L		04/14/23 14:30	04/17/23 16:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**1.5**		0.50	0.23	mg/L			04/14/23 03:42	1
Nitrate as N (SW846 9056A)	**2.2**	**H**	0.50	0.090	mg/L			04/14/23 03:42	1
Chloride (SW846 9056A)	**310**		15	5.1	mg/L			04/27/23 17:07	5
Nitrite as N (SW846 9056A)	ND	H	0.50	0.049	mg/L			04/14/23 03:42	1
Sulfate (SW846 9056A)	**98**		25	5.2	mg/L			04/27/23 17:07	5
Total Organic Carbon - Duplicates (SW846 9060A)	**4.4**		1.0	0.35	mg/L	☼		04/20/23 20:59	1

Client Sample ID: MW-105D-20230411
Lab Sample ID: 280-174957-5

Date Collected: 04/11/23 16:00
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		4.0	2.3	ug/L			04/18/23 18:01	4
1,1,1-Trichloroethane	ND		4.0	1.6	ug/L			04/18/23 18:01	4
1,1,2,2-Tetrachloroethane	ND		4.0	0.84	ug/L			04/18/23 18:01	4
1,1,2-Trichloroethane	ND		4.0	1.1	ug/L			04/18/23 18:01	4
1,1-Dichloroethane	**3.3**	**J**	4.0	0.88	ug/L			04/18/23 18:01	4
1,1-Dichloroethene	ND		4.0	0.92	ug/L			04/18/23 18:01	4
1,1-Dichloropropene	ND		4.0	1.7	ug/L			04/18/23 18:01	4
1,2,3-Trichloropropane	ND		10	3.4	ug/L			04/18/23 18:01	4
1,2,4-Trichlorobenzene	ND		4.0	2.3	ug/L			04/18/23 18:01	4
1,2-Dibromo-3-Chloropropane	ND		20	7.0	ug/L			04/18/23 18:01	4
1,2-Dibromoethane	ND		4.0	1.6	ug/L			04/18/23 18:01	4
1,2-Dichlorobenzene	ND		4.0	1.5	ug/L			04/18/23 18:01	4
1,2-Dichloroethane	ND		4.0	2.2	ug/L			04/18/23 18:01	4
1,2-Dichloropropane	ND		4.0	2.1	ug/L			04/18/23 18:01	4
1,3-Dichlorobenzene	ND		4.0	1.3	ug/L			04/18/23 18:01	4
1,3-Dichloropropane	ND		4.0	1.5	ug/L			04/18/23 18:01	4
1,4-Dichlorobenzene	ND		4.0	1.6	ug/L			04/18/23 18:01	4
2,2-Dichloropropane	ND		4.0	1.5	ug/L			04/18/23 18:01	4
2-Butanone (MEK)	ND		60	24	ug/L			04/18/23 18:01	4
2-Hexanone	ND		20	6.8	ug/L			04/18/23 18:01	4
4-Methyl-2-pentanone (MIBK)	ND		20	3.9	ug/L			04/18/23 18:01	4
Acetone	ND		60	26	ug/L			04/18/23 18:01	4
Acetonitrile	ND	*1	120	38	ug/L			04/18/23 18:01	4
Acrolein	ND		80	19	ug/L			04/18/23 18:01	4
Acrylonitrile	ND		80	18	ug/L			04/18/23 18:01	4
Allyl chloride	ND		8.0	0.68	ug/L			04/18/23 18:01	4
Benzene	ND		4.0	1.2	ug/L			04/18/23 18:01	4
Bromoform	ND		8.0	4.8	ug/L			04/18/23 18:01	4
Bromomethane	ND		20	9.4	ug/L			04/18/23 18:01	4
Carbon disulfide	ND		8.0	2.5	ug/L			04/18/23 18:01	4
Carbon tetrachloride	ND		4.0	2.3	ug/L			04/18/23 18:01	4
Chlorobenzene	ND		4.0	1.7	ug/L			04/18/23 18:01	4
Chlorobromomethane	ND		4.0	1.6	ug/L			04/18/23 18:01	4
Chlorodibromomethane	ND		8.0	2.5	ug/L			04/18/23 18:01	4
Chloroethane	ND		16	5.5	ug/L			04/18/23 18:01	4
Chloroform	**2.2**	**J**	4.0	1.4	ug/L			04/18/23 18:01	4
Chloromethane	ND		8.0	3.0	ug/L			04/18/23 18:01	4
Chloroprene	ND	*1	12	4.7	ug/L			04/18/23 18:01	4
cis-1,2-Dichloroethene	**13**		4.0	1.3	ug/L			04/18/23 18:01	4
cis-1,3-Dichloropropene	ND		8.0	2.5	ug/L			04/18/23 18:01	4
Dibromomethane	ND		4.0	1.4	ug/L			04/18/23 18:01	4
Dichlorobromomethane	ND		4.0	1.5	ug/L			04/18/23 18:01	4
Dichlorodifluoromethane	ND		12	3.8	ug/L			04/18/23 18:01	4
Ethyl methacrylate	ND		12	3.4	ug/L			04/18/23 18:01	4
Ethylbenzene	ND		4.0	1.2	ug/L			04/18/23 18:01	4
Iodomethane	ND		20	10	ug/L			04/18/23 18:01	4
Isobutyl alcohol	ND		440	150	ug/L			04/18/23 18:01	4
Methacrylonitrile	ND	*1	60	21	ug/L			04/18/23 18:01	4
Methyl methacrylate	ND	*1	16	4.4	ug/L			04/18/23 18:01	4

Client Sample ID: MW-105D-20230411
Lab Sample ID: 280-174957-5

Date Collected: 04/11/23 16:00
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		8.0	3.8	ug/L			04/18/23 18:01	4
m-Xylene & p-Xylene	ND		8.0	1.4	ug/L			04/18/23 18:01	4
o-Xylene	ND		4.0	1.3	ug/L			04/18/23 18:01	4
Propionitrile	ND	*1	80	15	ug/L			04/18/23 18:01	4
Styrene	ND		4.0	1.4	ug/L			04/18/23 18:01	4
Tetrachloroethene	**37**		4.0	1.6	ug/L			04/18/23 18:01	4
Toluene	ND		4.0	1.3	ug/L			04/18/23 18:01	4
trans-1,2-Dichloroethene	ND		4.0	1.5	ug/L			04/18/23 18:01	4
trans-1,3-Dichloropropene	ND		8.0	2.6	ug/L			04/18/23 18:01	4
trans-1,4-Dichloro-2-butene	ND		12	5.5	ug/L			04/18/23 18:01	4
Trichloroethene	**200**		4.0	1.2	ug/L			04/18/23 18:01	4
Trichlorofluoromethane	ND		8.0	2.3	ug/L			04/18/23 18:01	4
Vinyl acetate	ND		12	3.8	ug/L			04/18/23 18:01	4
Vinyl chloride	ND		8.0	2.0	ug/L			04/18/23 18:01	4
Xylenes, Total	ND		4.0	1.3	ug/L			04/18/23 18:01	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 127*		*04/18/23 18:01*	*4*
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*		*04/18/23 18:01*	*4*
Dibromofluoromethane (Surr)	*100*		*77 - 120*		*04/18/23 18:01*	*4*
Toluene-d8 (Surr)	*100*		*80 - 125*		*04/18/23 18:01*	*4*

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/14/23 14:30	04/17/23 16:46	1
Arsenic	**0.72**	**J**	5.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:46	1
Barium	**310**		3.0	0.38	ug/L		04/14/23 14:30	04/17/23 16:46	1
Beryllium	ND		1.0	0.30	ug/L		04/14/23 14:30	04/17/23 16:46	1
Calcium	**230000**		200	32	ug/L		04/14/23 14:30	04/17/23 16:46	1
Cadmium	ND		1.0	0.19	ug/L		04/14/23 14:30	04/17/23 16:46	1
Co	ND		1.0	0.33	ug/L		04/14/23 14:30	04/17/23 16:46	1
Chromium	ND		3.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:46	1
Copper	**1.0**	**J**	2.0	0.71	ug/L		04/14/23 14:30	04/17/23 16:46	1
Iron	ND		200	8.7	ug/L		04/14/23 14:30	04/17/23 16:46	1
Potassium	**3800**		1000	52	ug/L		04/14/23 14:30	04/17/23 16:46	1
Magnesium	**69000**	**B**	200	4.2	ug/L		04/14/23 14:30	04/17/23 16:46	1
Manganese	**5.0**		3.0	0.51	ug/L		04/14/23 14:30	04/17/23 16:46	1
Sodium	**64000**		1000	73	ug/L		04/14/23 14:30	04/17/23 16:46	1
Nickel	ND		3.0	0.83	ug/L		04/14/23 14:30	04/17/23 16:46	1
Lead	ND		1.0	0.23	ug/L		04/14/23 14:30	04/17/23 16:46	1
Antimony	ND		2.0	0.40	ug/L		04/14/23 14:30	04/17/23 16:46	1
Selenium	ND		5.0	1.0	ug/L		04/14/23 14:30	04/17/23 16:46	1
Tin	ND		10	0.58	ug/L		04/14/23 14:30	04/17/23 16:46	1
Thallium	ND		1.0	0.21	ug/L		04/14/23 14:30	04/17/23 16:46	1
Vanadium	**1.2**	**J**	5.0	1.1	ug/L		04/14/23 14:30	04/17/23 16:46	1
Zinc	ND		10	2.0	ug/L		04/14/23 14:30	04/17/23 16:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**0.76**		0.50	0.23	mg/L			04/14/23 05:17	1

Client Sample ID: MW-105D-20230411
Lab Sample ID: 280-174957-5

Date Collected: 04/11/23 16:00
Matrix: Water
Date Received: 04/13/23 09:30

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (SW846 9056A)	**0.71**	**H**	0.50	0.090	mg/L			04/14/23 05:17	1
Chloride (SW846 9056A)	**280**		15	5.1	mg/L			04/27/23 17:19	5
Nitrite as N (SW846 9056A)	ND	H F2 F1	0.50	0.049	mg/L			04/14/23 05:17	1
Sulfate (SW846 9056A)	**79**		5.0	1.0	mg/L			04/14/23 05:17	1
Total Organic Carbon - Duplicates (SW846 9060A)	**1.9**		1.0	0.35	mg/L	☼		04/20/23 21:16	1

Client Sample ID: MW-105S-20230411
Lab Sample ID: 280-174957-6

Date Collected: 04/11/23 13:30
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/18/23 13:44	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/18/23 13:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/18/23 13:44	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/18/23 13:44	1
1,1-Dichloroethane	**0.44**	**J**	1.0	0.22	ug/L			04/18/23 13:44	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/18/23 13:44	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/18/23 13:44	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/18/23 13:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/18/23 13:44	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/18/23 13:44	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/18/23 13:44	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/18/23 13:44	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/18/23 13:44	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/18/23 13:44	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/18/23 13:44	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/18/23 13:44	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/18/23 13:44	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/18/23 13:44	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/18/23 13:44	1
2-Hexanone	ND		5.0	1.7	ug/L			04/18/23 13:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/18/23 13:44	1
Acetone	ND		15	6.6	ug/L			04/18/23 13:44	1
Acetonitrile	ND	*1	30	9.6	ug/L			04/18/23 13:44	1
Acrolein	ND		20	4.9	ug/L			04/18/23 13:44	1
Acrylonitrile	ND		20	4.5	ug/L			04/18/23 13:44	1
Allyl chloride	ND		2.0	0.17	ug/L			04/18/23 13:44	1
Benzene	ND		1.0	0.31	ug/L			04/18/23 13:44	1
Bromoform	ND		2.0	1.2	ug/L			04/18/23 13:44	1
Bromomethane	ND		5.0	2.4	ug/L			04/18/23 13:44	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/18/23 13:44	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/18/23 13:44	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/18/23 13:44	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/18/23 13:44	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/18/23 13:44	1
Chloroethane	ND		4.0	1.4	ug/L			04/18/23 13:44	1
Chloroform	**1.5**		1.0	0.36	ug/L			04/18/23 13:44	1
Chloromethane	ND		2.0	0.75	ug/L			04/18/23 13:44	1

Client Sample ID: MW-105S-20230411
Lab Sample ID: 280-174957-6

Date Collected: 04/11/23 13:30
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroprene	ND	*1	3.0	1.2	ug/L			04/18/23 13:44	1
cis-1,2-Dichloroethene	**2.8**		1.0	0.32	ug/L			04/18/23 13:44	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/18/23 13:44	1
Dibromomethane	ND		1.0	0.34	ug/L			04/18/23 13:44	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/18/23 13:44	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/18/23 13:44	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/18/23 13:44	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/18/23 13:44	1
Iodomethane	ND		5.0	2.6	ug/L			04/18/23 13:44	1
Isobutyl alcohol	ND		110	37	ug/L			04/18/23 13:44	1
Methacrylonitrile	ND	*1	15	5.3	ug/L			04/18/23 13:44	1
Methyl methacrylate	ND	*1	4.0	1.1	ug/L			04/18/23 13:44	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/18/23 13:44	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/18/23 13:44	1
o-Xylene	ND		1.0	0.33	ug/L			04/18/23 13:44	1
Propionitrile	ND	*1	20	3.7	ug/L			04/18/23 13:44	1
Styrene	ND		1.0	0.36	ug/L			04/18/23 13:44	1
Tetrachloroethene	**11**		1.0	0.40	ug/L			04/18/23 13:44	1
Toluene	ND		1.0	0.32	ug/L			04/18/23 13:44	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/18/23 13:44	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/18/23 13:44	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/18/23 13:44	1
Trichloroethene	**37**		1.0	0.30	ug/L			04/18/23 13:44	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/18/23 13:44	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/18/23 13:44	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/18/23 13:44	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/18/23 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 127*		*04/18/23 13:44*	*1*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/18/23 13:44*	*1*
Dibromofluoromethane (Surr)	*100*		*77 - 120*		*04/18/23 13:44*	*1*
Toluene-d8 (Surr)	*100*		*80 - 125*		*04/18/23 13:44*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/14/23 14:30	04/17/23 16:50	1
Arsenic	**0.66**	**J**	5.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:50	1
Barium	**250**		3.0	0.38	ug/L		04/14/23 14:30	04/17/23 16:50	1
Beryllium	ND		1.0	0.30	ug/L		04/14/23 14:30	04/17/23 16:50	1
Calcium	**230000**		200	32	ug/L		04/14/23 14:30	04/17/23 16:50	1
Cadmium	ND		1.0	0.19	ug/L		04/14/23 14:30	04/17/23 16:50	1
Co	**11**		1.0	0.33	ug/L		04/14/23 14:30	04/17/23 16:50	1
Chromium	**2.3**	**J**	3.0	0.50	ug/L		04/14/23 14:30	04/17/23 16:50	1
Copper	**3.0**		2.0	0.71	ug/L		04/14/23 14:30	04/17/23 16:50	1
Iron	**15**	**J**	200	8.7	ug/L		04/14/23 14:30	04/17/23 16:50	1
Potassium	**5000**		1000	52	ug/L		04/14/23 14:30	04/17/23 16:50	1
Magnesium	**80000**	**B**	200	4.2	ug/L		04/14/23 14:30	04/17/23 16:50	1
Manganese	**520**		3.0	0.51	ug/L		04/14/23 14:30	04/17/23 16:50	1
Sodium	**410000**		1000	73	ug/L		04/14/23 14:30	04/17/23 16:50	1

Client Sample ID: MW-105S-20230411
Lab Sample ID: 280-174957-6
Date Collected: 04/11/23 13:30
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**50**		3.0	0.83	ug/L		04/14/23 14:30	04/17/23 16:50	1
Lead	ND		1.0	0.23	ug/L		04/14/23 14:30	04/17/23 16:50	1
Antimony	ND		2.0	0.40	ug/L		04/14/23 14:30	04/17/23 16:50	1
Selenium	ND		5.0	1.0	ug/L		04/14/23 14:30	04/17/23 16:50	1
Tin	ND		10	0.58	ug/L		04/14/23 14:30	04/17/23 16:50	1
Thallium	ND		1.0	0.21	ug/L		04/14/23 14:30	04/17/23 16:50	1
Vanadium	ND		5.0	1.1	ug/L		04/14/23 14:30	04/17/23 16:50	1
Zinc	ND		10	2.0	ug/L		04/14/23 14:30	04/17/23 16:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**1.4**		0.50	0.23	mg/L			04/14/23 04:46	1
Nitrate as N (SW846 9056A)	**14**	**H E**	0.50	0.090	mg/L			04/14/23 04:46	1
Nitrate as N (SW846 9056A)	**13**	**H**	2.5	0.45	mg/L			04/14/23 19:20	5
Chloride (SW846 9056A)	**470**		15	5.1	mg/L			04/14/23 19:20	5
Nitrite as N (SW846 9056A)	ND	H	0.50	0.049	mg/L			04/14/23 04:46	1
Sulfate (SW846 9056A)	**200**		10	2.1	mg/L			04/14/23 05:02	2
Total Organic Carbon - Duplicates (SW846 9060A)	**7.2**		1.0	0.35	mg/L	☼		04/20/23 21:32	1

Client Sample ID: EB-01-20230411
Lab Sample ID: 280-174957-7
Date Collected: 04/11/23 15:45
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/24/23 22:37	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/24/23 22:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/24/23 22:37	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/24/23 22:37	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/24/23 22:37	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/24/23 22:37	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/24/23 22:37	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/24/23 22:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/24/23 22:37	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/24/23 22:37	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/24/23 22:37	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/24/23 22:37	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/24/23 22:37	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/24/23 22:37	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/24/23 22:37	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/24/23 22:37	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/24/23 22:37	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/24/23 22:37	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/24/23 22:37	1
2-Hexanone	ND		5.0	1.7	ug/L			04/24/23 22:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/24/23 22:37	1
Acetone	ND		15	6.6	ug/L			04/24/23 22:37	1
Acetonitrile	ND		30	9.6	ug/L			04/24/23 22:37	1
Acrolein	ND		20	4.9	ug/L			04/24/23 22:37	1

Client Sample ID: EB-01-20230411
Lab Sample ID: 280-174957-7

Date Collected: 04/11/23 15:45
Matrix: Water
Date Received: 04/13/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	ND		20	4.5	ug/L			04/24/23 22:37	1
Allyl chloride	ND		2.0	0.17	ug/L			04/24/23 22:37	1
Benzene	ND		1.0	0.31	ug/L			04/24/23 22:37	1
Bromoform	ND		2.0	1.2	ug/L			04/24/23 22:37	1
Bromomethane	ND		5.0	2.4	ug/L			04/24/23 22:37	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/24/23 22:37	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/24/23 22:37	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/24/23 22:37	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/24/23 22:37	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/24/23 22:37	1
Chloroethane	ND		4.0	1.4	ug/L			04/24/23 22:37	1
Chloroform	ND		1.0	0.36	ug/L			04/24/23 22:37	1
Chloromethane	ND		2.0	0.75	ug/L			04/24/23 22:37	1
Chloroprene	ND		3.0	1.2	ug/L			04/24/23 22:37	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/24/23 22:37	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/24/23 22:37	1
Dibromomethane	ND		1.0	0.34	ug/L			04/24/23 22:37	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/24/23 22:37	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/24/23 22:37	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/24/23 22:37	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/24/23 22:37	1
Iodomethane	ND		5.0	2.6	ug/L			04/24/23 22:37	1
Isobutyl alcohol	ND		110	37	ug/L			04/24/23 22:37	1
Methacrylonitrile	ND		15	5.3	ug/L			04/24/23 22:37	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/24/23 22:37	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/24/23 22:37	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/24/23 22:37	1
o-Xylene	ND		1.0	0.33	ug/L			04/24/23 22:37	1
Propionitrile	ND		20	3.7	ug/L			04/24/23 22:37	1
Styrene	ND		1.0	0.36	ug/L			04/24/23 22:37	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/24/23 22:37	1
Toluene	ND		1.0	0.32	ug/L			04/24/23 22:37	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/24/23 22:37	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/24/23 22:37	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/24/23 22:37	1
Trichloroethene	ND		1.0	0.30	ug/L			04/24/23 22:37	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/24/23 22:37	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/24/23 22:37	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/24/23 22:37	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/24/23 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 127*		*04/24/23 22:37*	*1*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/24/23 22:37*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/24/23 22:37*	*1*
Toluene-d8 (Surr)	*104*		*80 - 125*		*04/24/23 22:37*	*1*

Default Detection Limits

Client: CDM Smith Inc
Job ID: 280-174957-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units
1,1,1,2-Tetrachloroethane	1.0	0.58	ug/L
1,1,1-Trichloroethane	1.0	0.39	ug/L
1,1,2,2-Tetrachloroethane	1.0	0.21	ug/L
1,1,2-Trichloroethane	1.0	0.27	ug/L
1,1-Dichloroethane	1.0	0.22	ug/L
1,1-Dichloroethene	1.0	0.23	ug/L
1,1-Dichloropropene	1.0	0.42	ug/L
1,2,3-Trichloropropane	2.5	0.86	ug/L
1,2,4-Trichlorobenzene	1.0	0.58	ug/L
1,2-Dibromo-3-Chloropropane	5.0	1.8	ug/L
1,2-Dibromoethane	1.0	0.40	ug/L
1,2-Dichlorobenzene	1.0	0.37	ug/L
1,2-Dichloroethane	1.0	0.54	ug/L
1,2-Dichloropropane	1.0	0.52	ug/L
1,3-Dichlorobenzene	1.0	0.33	ug/L
1,3-Dichloropropane	1.0	0.38	ug/L
1,4-Dichlorobenzene	1.0	0.39	ug/L
2,2-Dichloropropane	1.0	0.38	ug/L
2-Butanone (MEK)	15	6.0	ug/L
2-Hexanone	5.0	1.7	ug/L
4-Methyl-2-pentanone (MIBK)	5.0	0.98	ug/L
Acetone	15	6.6	ug/L
Acetonitrile	30	9.6	ug/L
Acrolein	20	4.9	ug/L
Acrylonitrile	20	4.5	ug/L
Allyl chloride	2.0	0.17	ug/L
Benzene	1.0	0.31	ug/L
Bromoform	2.0	1.2	ug/L
Bromomethane	5.0	2.4	ug/L
Carbon disulfide	2.0	0.63	ug/L
Carbon tetrachloride	1.0	0.57	ug/L
Chlorobenzene	1.0	0.42	ug/L
Chlorobromomethane	1.0	0.40	ug/L
Chlorodibromomethane	2.0	0.62	ug/L
Chloroethane	4.0	1.4	ug/L
Chloroform	1.0	0.36	ug/L
Chloromethane	2.0	0.75	ug/L
Chloroprene	3.0	1.2	ug/L
cis-1,2-Dichloroethene	1.0	0.32	ug/L
cis-1,3-Dichloropropene	2.0	0.63	ug/L
Dibromomethane	1.0	0.34	ug/L
Dichlorobromomethane	1.0	0.39	ug/L
Dichlorodifluoromethane	3.0	0.96	ug/L
Ethyl methacrylate	3.0	0.86	ug/L
Ethylbenzene	1.0	0.30	ug/L
Iodomethane	5.0	2.6	ug/L
Isobutyl alcohol	110	37	ug/L
Methacrylonitrile	15	5.3	ug/L
Methyl methacrylate	4.0	1.1	ug/L
Methylene Chloride	2.0	0.94	ug/L
m-Xylene & p-Xylene	2.0	0.36	ug/L
o-Xylene	1.0	0.33	ug/L
Propionitrile	20	3.7	ug/L

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	RL	MDL	Units
Styrene	1.0	0.36	ug/L
Tetrachloroethene	1.0	0.40	ug/L
Toluene	1.0	0.32	ug/L
trans-1,2-Dichloroethene	1.0	0.37	ug/L
trans-1,3-Dichloropropene	2.0	0.65	ug/L
trans-1,4-Dichloro-2-butene	3.0	1.4	ug/L
Trichloroethene	1.0	0.30	ug/L
Trichlorofluoromethane	2.0	0.57	ug/L
Vinyl acetate	3.0	0.94	ug/L
Vinyl chloride	2.0	0.51	ug/L
Xylenes, Total	1.0	0.33	ug/L

Method: RSK-175 - Dissolved Gases (GC)

Analyte	RL	MDL	Units
Acetylene	5.0	0.73	ug/L
Ethane	5.0	0.57	ug/L
Ethene	5.0	0.40	ug/L
Methane	5.0	0.63	ug/L
Propane	5.0	0.56	ug/L

Method: 6020B - Metals (ICP/MS) - Dissolved

Prep: 3005A

Analyte	RL	MDL	Units
Antimony	2.0	0.40	ug/L
Arsenic	5.0	0.50	ug/L
Barium	3.0	0.38	ug/L
Beryllium	1.0	0.30	ug/L
Cadmium	1.0	0.19	ug/L
Calcium	200	32	ug/L
Chromium	3.0	0.50	ug/L
Co	1.0	0.33	ug/L
Copper	2.0	0.71	ug/L
Iron	200	8.7	ug/L
Lead	1.0	0.23	ug/L
Magnesium	200	4.2	ug/L
Manganese	3.0	0.51	ug/L
Nickel	3.0	0.83	ug/L
Potassium	1000	52	ug/L
Selenium	5.0	1.0	ug/L
Silver	1.0	0.045	ug/L
Sodium	1000	73	ug/L
Thallium	1.0	0.21	ug/L
Tin	10	0.58	ug/L
Vanadium	5.0	1.1	ug/L
Zinc	10	2.0	ug/L

General Chemistry

Analyte	RL	MDL	Units
Bromide	0.50	0.23	mg/L
Chloride	3.0	1.0	mg/L
Nitrate as N	0.50	0.090	mg/L
Nitrite as N	0.50	0.049	mg/L

Default Detection Limits

Client: CDM Smith Inc
Job ID: 280-174957-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

General Chemistry (Continued)

Analyte	RL	MDL	Units
Sulfate	5.0	1.0	mg/L
Total Organic Carbon - Duplicates	1.0	0.35	mg/L

Surrogate Summary

Client: CDM Smith Inc
Job ID: 280-174957-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-127)	(78-120)	(77-120)	(80-125)
280-174957-1	TB-04-20230412	101	101	101	101
280-174957-2	MW-124-20230412	99	101	103	99
280-174957-3	MW-124-Q-20230412	100	100	104	101
280-174957-5	MW-105D-20230411	101	101	100	100
280-174957-6	MW-105S-20230411	102	102	100	100
280-174957-7	EB-01-20230411	100	102	102	104
LCS 280-609068/1002	Lab Control Sample	105	102	104	99
LCS 280-609068/1003	Lab Control Sample	101	100	101	99
LCS 280-609932/1002	Lab Control Sample	100	99	103	100
LCS 280-609932/1003	Lab Control Sample	102	102	103	102
LCS 280-609946/1002	Lab Control Sample	101	103	105	102
LCS 280-609946/1003	Lab Control Sample	102	103	104	103
LCSD 280-609068/4	Lab Control Sample Dup	100	102	99	100
LCSD 280-609068/5	Lab Control Sample Dup	103	101	102	100
LCSD 280-609932/4	Lab Control Sample Dup	102	102	104	101
LCSD 280-609932/5	Lab Control Sample Dup	103	100	103	103
LCSD 280-609946/4	Lab Control Sample Dup	101	101	104	103
LCSD 280-609946/5	Lab Control Sample Dup	103	102	105	102
MB 280-609068/7	Method Blank	103	102	101	100
MB 280-609932/7	Method Blank	99	102	104	102
MB 280-609946/7	Method Blank	99	101	102	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 280-609068/7
Matrix: Water
Analysis Batch: 609068

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/18/23 11:53	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/18/23 11:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/18/23 11:53	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/18/23 11:53	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/18/23 11:53	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/18/23 11:53	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/18/23 11:53	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/18/23 11:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/18/23 11:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/18/23 11:53	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/18/23 11:53	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/18/23 11:53	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/18/23 11:53	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/18/23 11:53	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/18/23 11:53	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/18/23 11:53	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/18/23 11:53	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/18/23 11:53	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/18/23 11:53	1
2-Hexanone	ND		5.0	1.7	ug/L			04/18/23 11:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/18/23 11:53	1
Acetone	ND		15	6.6	ug/L			04/18/23 11:53	1
Acetonitrile	ND		30	9.6	ug/L			04/18/23 11:53	1
Acrolein	ND		20	4.9	ug/L			04/18/23 11:53	1
Acrylonitrile	ND		20	4.5	ug/L			04/18/23 11:53	1
Allyl chloride	ND		2.0	0.17	ug/L			04/18/23 11:53	1
Benzene	ND		1.0	0.31	ug/L			04/18/23 11:53	1
Bromoform	ND		2.0	1.2	ug/L			04/18/23 11:53	1
Bromomethane	ND		5.0	2.4	ug/L			04/18/23 11:53	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/18/23 11:53	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/18/23 11:53	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/18/23 11:53	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/18/23 11:53	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/18/23 11:53	1
Chloroethane	ND		4.0	1.4	ug/L			04/18/23 11:53	1
Chloroform	ND		1.0	0.36	ug/L			04/18/23 11:53	1
Chloromethane	ND		2.0	0.75	ug/L			04/18/23 11:53	1
Chloroprene	ND		3.0	1.2	ug/L			04/18/23 11:53	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/18/23 11:53	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/18/23 11:53	1
Dibromomethane	ND		1.0	0.34	ug/L			04/18/23 11:53	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/18/23 11:53	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/18/23 11:53	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/18/23 11:53	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/18/23 11:53	1
Iodomethane	ND		5.0	2.6	ug/L			04/18/23 11:53	1
Isobutyl alcohol	ND		110	37	ug/L			04/18/23 11:53	1
Methacrylonitrile	ND		15	5.3	ug/L			04/18/23 11:53	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-609068/7
Matrix: Water
Analysis Batch: 609068

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl methacrylate	ND		4.0	1.1	ug/L			04/18/23 11:53	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/18/23 11:53	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/18/23 11:53	1
o-Xylene	ND		1.0	0.33	ug/L			04/18/23 11:53	1
Propionitrile	ND		20	3.7	ug/L			04/18/23 11:53	1
Styrene	ND		1.0	0.36	ug/L			04/18/23 11:53	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/18/23 11:53	1
Toluene	ND		1.0	0.32	ug/L			04/18/23 11:53	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/18/23 11:53	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/18/23 11:53	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/18/23 11:53	1
Trichloroethene	ND		1.0	0.30	ug/L			04/18/23 11:53	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/18/23 11:53	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/18/23 11:53	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/18/23 11:53	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/18/23 11:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*		*04/18/23 11:53*	*1*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/18/23 11:53*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*04/18/23 11:53*	*1*
Toluene-d8 (Surr)	*100*		*80 - 125*		*04/18/23 11:53*	*1*

Lab Sample ID: LCS 280-609068/1002
Matrix: Water
Analysis Batch: 609068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	25.0	22.7		ug/L		91	74 - 121
1,1,1-Trichloroethane	25.0	24.0		ug/L		96	62 - 132
1,1,2,2-Tetrachloroethane	25.0	22.2		ug/L		89	72 - 122
1,1,2-Trichloroethane	25.0	23.4		ug/L		93	72 - 128
1,1-Dichloroethane	25.0	24.4		ug/L		98	66 - 130
1,1-Dichloroethene	25.0	23.7		ug/L		95	62 - 130
1,1-Dichloropropene	25.0	23.7		ug/L		95	64 - 133
1,2,3-Trichloropropane	25.0	22.6		ug/L		91	74 - 123
1,2,4-Trichlorobenzene	25.0	22.7		ug/L		91	73 - 124
1,2-Dibromo-3-Chloropropane	25.0	20.9		ug/L		84	58 - 122
1,2-Dibromoethane	25.0	23.7		ug/L		95	81 - 118
1,2-Dichlorobenzene	25.0	23.6		ug/L		94	77 - 121
1,2-Dichloroethane	25.0	21.8		ug/L		87	61 - 130
1,2-Dichloropropane	25.0	22.8		ug/L		91	68 - 127
1,3-Dichlorobenzene	25.0	23.7		ug/L		95	76 - 121
1,3-Dichloropropane	25.0	23.7		ug/L		95	80 - 118
1,4-Dichlorobenzene	25.0	23.5		ug/L		94	76 - 119
2,2-Dichloropropane	25.0	23.4		ug/L		94	57 - 140
2-Butanone (MEK)	100	85.4		ug/L		85	53 - 135
2-Hexanone	100	87.5		ug/L		87	58 - 134

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609068/1002
Matrix: Water
Analysis Batch: 609068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Methyl-2-pentanone (MIBK)	100	89.8		ug/L		90	56 - 135
Acetone	100	86.4		ug/L		86	50 - 137
Acrolein	247	249		ug/L		101	10 - 207
Acrylonitrile	250	238		ug/L		95	65 - 133
Allyl chloride	25.0	25.4		ug/L		102	57 - 136
Benzene	25.0	23.8		ug/L		95	69 - 126
Bromoform	25.0	22.0		ug/L		88	57 - 125
Bromomethane	25.0	30.0		ug/L		120	25 - 163
Carbon disulfide	25.0	24.2		ug/L		97	56 - 128
Carbon tetrachloride	25.0	22.1		ug/L		89	60 - 133
Chlorobenzene	25.0	23.3		ug/L		93	78 - 118
Chlorobromomethane	25.0	23.5		ug/L		94	71 - 130
Chlorodibromomethane	25.0	23.0		ug/L		92	71 - 122
Chloroethane	25.0	26.6		ug/L		106	52 - 144
Chloroform	25.0	24.4		ug/L		98	68 - 128
Chloromethane	25.0	24.1		ug/L		96	43 - 142
cis-1,2-Dichloroethene	25.0	23.6		ug/L		94	69 - 126
cis-1,3-Dichloropropene	25.0	22.9		ug/L		92	75 - 120
Dibromomethane	25.0	23.6		ug/L		94	68 - 129
Dichlorobromomethane	25.0	23.6		ug/L		94	67 - 126
Dichlorodifluoromethane	25.0	22.0		ug/L		88	26 - 152
Ethyl methacrylate	25.0	23.2		ug/L		93	69 - 126
Ethylbenzene	25.0	23.7		ug/L		95	76 - 121
Iodomethane	25.0	20.0		ug/L		80	37 - 145
Isobutyl alcohol	625	497		ug/L		79	46 - 132
Methylene Chloride	25.0	24.7		ug/L		99	64 - 128
m-Xylene & p-Xylene	25.0	23.9		ug/L		96	76 - 122
o-Xylene	25.0	23.6		ug/L		94	77 - 120
Styrene	25.0	23.7		ug/L		95	79 - 120
Tetrachloroethene	25.0	23.7		ug/L		95	72 - 127
Toluene	25.0	23.9		ug/L		96	68 - 127
trans-1,2-Dichloroethene	25.0	22.9		ug/L		92	66 - 129
trans-1,3-Dichloropropene	25.0	22.2		ug/L		89	66 - 127
trans-1,4-Dichloro-2-butene	25.0	21.2		ug/L		85	44 - 131
Trichloroethene	25.0	24.1		ug/L		96	70 - 125
Trichlorofluoromethane	25.0	24.8		ug/L		99	57 - 144
Vinyl acetate	50.0	49.4		ug/L		99	61 - 139
Vinyl chloride	25.0	23.1		ug/L		93	53 - 141
Xylenes, Total	50.0	47.5		ug/L		95	77 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*99*		*80 - 125*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609068/1003
Matrix: Water
Analysis Batch: 609068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			250	259		ug/L		104	45 - 142		
Chloroprene			25.0	27.9		ug/L		112	53 - 147		
Methacrylonitrile			250	291		ug/L		116	47 - 142		
Methyl methacrylate			50.0	57.8		ug/L		116	60 - 131		
Propionitrile			250	267		ug/L		107	52 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 127*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*
Dibromofluoromethane (Surr)	*101*		*77 - 120*
Toluene-d8 (Surr)	*99*		*80 - 125*

Lab Sample ID: LCSD 280-609068/4
Matrix: Water
Analysis Batch: 609068

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			25.0	21.8		ug/L		87	74 - 121	4	20
1,1,1-Trichloroethane			25.0	21.7		ug/L		87	62 - 132	10	20
1,1,2,2-Tetrachloroethane			25.0	22.2		ug/L		89	72 - 122	0	20
1,1,2-Trichloroethane			25.0	21.8		ug/L		87	72 - 128	7	20
1,1-Dichloroethane			25.0	22.3		ug/L		89	66 - 130	9	20
1,1-Dichloroethene			25.0	21.5		ug/L		86	62 - 130	10	21
1,1-Dichloropropene			25.0	22.1		ug/L		88	64 - 133	7	20
1,2,3-Trichloropropane			25.0	21.9		ug/L		88	74 - 123	3	20
1,2,4-Trichlorobenzene			25.0	21.6		ug/L		86	73 - 124	5	20
1,2-Dibromo-3-Chloropropane			25.0	21.2		ug/L		85	58 - 122	1	21
1,2-Dibromoethane			25.0	22.6		ug/L		90	81 - 118	5	20
1,2-Dichlorobenzene			25.0	22.1		ug/L		89	77 - 121	6	20
1,2-Dichloroethane			25.0	21.2		ug/L		85	61 - 130	3	20
1,2-Dichloropropane			25.0	21.2		ug/L		85	68 - 127	7	20
1,3-Dichlorobenzene			25.0	22.3		ug/L		89	76 - 121	6	20
1,3-Dichloropropane			25.0	23.0		ug/L		92	80 - 118	3	20
1,4-Dichlorobenzene			25.0	22.1		ug/L		88	76 - 119	6	20
2,2-Dichloropropane			25.0	20.9		ug/L		83	57 - 140	12	22
2-Butanone (MEK)			100	82.8		ug/L		83	53 - 135	3	20
2-Hexanone			100	85.8		ug/L		86	58 - 134	2	21
4-Methyl-2-pentanone (MIBK)			100	87.0		ug/L		87	56 - 135	3	20
Acetone			100	83.5		ug/L		84	50 - 137	3	21
Acrolein			247	239		ug/L		97	10 - 207	4	23
Acrylonitrile			250	227		ug/L		91	65 - 133	5	20
Allyl chloride			25.0	22.7		ug/L		91	57 - 136	11	20
Benzene			25.0	22.1		ug/L		88	69 - 126	8	20
Bromoform			25.0	21.2		ug/L		85	57 - 125	4	20
Bromomethane			25.0	27.6		ug/L		110	25 - 163	8	40
Carbon disulfide			25.0	22.0		ug/L		88	56 - 128	10	20
Carbon tetrachloride			25.0	20.6		ug/L		82	60 - 133	7	20
Chlorobenzene			25.0	22.0		ug/L		88	78 - 118	6	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609068/4
Matrix: Water
Analysis Batch: 609068

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorobromomethane			25.0	22.0		ug/L		88	71 - 130	7	20
Chlorodibromomethane			25.0	22.0		ug/L		88	71 - 122	5	20
Chloroethane			25.0	24.4		ug/L		97	52 - 144	9	30
Chloroform			25.0	22.5		ug/L		90	68 - 128	8	20
Chloromethane			25.0	22.1		ug/L		88	43 - 142	8	20
cis-1,2-Dichloroethene			25.0	21.3		ug/L		85	69 - 126	10	20
cis-1,3-Dichloropropene			25.0	21.9		ug/L		88	75 - 120	4	20
Dibromomethane			25.0	21.6		ug/L		86	68 - 129	9	20
Dichlorobromomethane			25.0	21.4		ug/L		86	67 - 126	10	20
Dichlorodifluoromethane			25.0	20.6		ug/L		82	26 - 152	7	21
Ethyl methacrylate			25.0	21.7		ug/L		87	69 - 126	7	20
Ethylbenzene			25.0	22.3		ug/L		89	76 - 121	6	20
Iodomethane			25.0	19.5		ug/L		78	37 - 145	3	38
Isobutyl alcohol			625	502		ug/L		80	46 - 132	1	30
Methylene Chloride			25.0	23.0		ug/L		92	64 - 128	7	20
m-Xylene & p-Xylene			25.0	22.1		ug/L		88	76 - 122	8	20
o-Xylene			25.0	22.4		ug/L		90	77 - 120	5	20
Styrene			25.0	22.1		ug/L		88	79 - 120	7	20
Tetrachloroethene			25.0	22.1		ug/L		88	72 - 127	7	20
Toluene			25.0	22.2		ug/L		89	68 - 127	7	20
trans-1,2-Dichloroethene			25.0	21.6		ug/L		87	66 - 129	6	20
trans-1,3-Dichloropropene			25.0	20.2		ug/L		81	66 - 127	10	20
trans-1,4-Dichloro-2-butene			25.0	20.8		ug/L		83	44 - 131	2	24
Trichloroethene			25.0	22.1		ug/L		88	70 - 125	9	20
Trichlorofluoromethane			25.0	22.9		ug/L		92	57 - 144	8	28
Vinyl acetate			50.0	46.5		ug/L		93	61 - 139	6	23
Vinyl chloride			25.0	21.2		ug/L		85	53 - 141	9	25
Xylenes, Total			50.0	44.5		ug/L		89	77 - 120	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*99*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Lab Sample ID: LCSD 280-609068/5
Matrix: Water
Analysis Batch: 609068

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	186	*1	ug/L		74	45 - 142	33	20
Chloroprene			25.0	20.1	*1	ug/L		80	53 - 147	33	20
Methacrylonitrile			250	206	*1	ug/L		82	47 - 142	34	20
Methyl methacrylate			50.0	40.5	*1	ug/L		81	60 - 131	35	20
Propionitrile			250	190	*1	ug/L		76	52 - 138	34	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609068/5
Matrix: Water
Analysis Batch: 609068

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*
Dibromofluoromethane (Surr)	*102*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Lab Sample ID: MB 280-609932/7
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/24/23 20:30	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/24/23 20:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/24/23 20:30	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/24/23 20:30	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/24/23 20:30	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/24/23 20:30	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/24/23 20:30	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/24/23 20:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/24/23 20:30	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/24/23 20:30	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/24/23 20:30	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/24/23 20:30	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/24/23 20:30	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/24/23 20:30	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/24/23 20:30	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/24/23 20:30	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/24/23 20:30	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/24/23 20:30	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/24/23 20:30	1
2-Hexanone	ND		5.0	1.7	ug/L			04/24/23 20:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/24/23 20:30	1
Acetone	ND		15	6.6	ug/L			04/24/23 20:30	1
Acetonitrile	ND		30	9.6	ug/L			04/24/23 20:30	1
Acrolein	ND		20	4.9	ug/L			04/24/23 20:30	1
Acrylonitrile	ND		20	4.5	ug/L			04/24/23 20:30	1
Allyl chloride	ND		2.0	0.17	ug/L			04/24/23 20:30	1
Benzene	ND		1.0	0.31	ug/L			04/24/23 20:30	1
Bromoform	ND		2.0	1.2	ug/L			04/24/23 20:30	1
Bromomethane	ND		5.0	2.4	ug/L			04/24/23 20:30	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/24/23 20:30	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/24/23 20:30	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/24/23 20:30	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/24/23 20:30	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/24/23 20:30	1
Chloroethane	ND		4.0	1.4	ug/L			04/24/23 20:30	1
Chloroform	ND		1.0	0.36	ug/L			04/24/23 20:30	1
Chloromethane	ND		2.0	0.75	ug/L			04/24/23 20:30	1
Chloroprene	ND		3.0	1.2	ug/L			04/24/23 20:30	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/24/23 20:30	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-609932/7
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/24/23 20:30	1
Dibromomethane	ND		1.0	0.34	ug/L			04/24/23 20:30	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/24/23 20:30	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/24/23 20:30	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/24/23 20:30	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/24/23 20:30	1
Iodomethane	ND		5.0	2.6	ug/L			04/24/23 20:30	1
Isobutyl alcohol	ND		110	37	ug/L			04/24/23 20:30	1
Methacrylonitrile	ND		15	5.3	ug/L			04/24/23 20:30	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/24/23 20:30	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/24/23 20:30	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/24/23 20:30	1
o-Xylene	ND		1.0	0.33	ug/L			04/24/23 20:30	1
Propionitrile	ND		20	3.7	ug/L			04/24/23 20:30	1
Styrene	ND		1.0	0.36	ug/L			04/24/23 20:30	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/24/23 20:30	1
Toluene	ND		1.0	0.32	ug/L			04/24/23 20:30	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/24/23 20:30	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/24/23 20:30	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/24/23 20:30	1
Trichloroethene	ND		1.0	0.30	ug/L			04/24/23 20:30	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/24/23 20:30	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/24/23 20:30	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/24/23 20:30	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/24/23 20:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 127*		*04/24/23 20:30*	*1*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/24/23 20:30*	*1*
Dibromofluoromethane (Surr)	*104*		*77 - 120*		*04/24/23 20:30*	*1*
Toluene-d8 (Surr)	*102*		*80 - 125*		*04/24/23 20:30*	*1*

Lab Sample ID: LCS 280-609932/1002
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	49.0		ug/L		98	74 - 121
1,1,1-Trichloroethane	50.0	51.4		ug/L		103	62 - 132
1,1,2,2-Tetrachloroethane	50.0	45.1		ug/L		90	72 - 122
1,1,2-Trichloroethane	50.0	50.1		ug/L		100	72 - 128
1,1-Dichloroethane	50.0	54.5		ug/L		109	66 - 130
1,1-Dichloroethene	50.0	51.7		ug/L		103	62 - 130
1,1-Dichloropropene	50.0	52.5		ug/L		105	64 - 133
1,2,3-Trichloropropane	50.0	43.3		ug/L		87	74 - 123
1,2,4-Trichlorobenzene	50.0	49.7		ug/L		99	73 - 124
1,2-Dibromo-3-Chloropropane	50.0	39.3		ug/L		79	58 - 122
1,2-Dibromoethane	50.0	47.7		ug/L		95	81 - 118

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609932/1002
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	50.0	46.8		ug/L		94	77 - 121
1,2-Dichloroethane	50.0	48.8		ug/L		98	61 - 130
1,2-Dichloropropane	50.0	54.1		ug/L		108	68 - 127
1,3-Dichlorobenzene	50.0	47.9		ug/L		96	76 - 121
1,3-Dichloropropane	50.0	49.5		ug/L		99	80 - 118
1,4-Dichlorobenzene	50.0	45.8		ug/L		92	76 - 119
2,2-Dichloropropane	50.0	54.6		ug/L		109	57 - 140
2-Butanone (MEK)	200	213		ug/L		106	53 - 135
2-Hexanone	200	210		ug/L		105	58 - 134
4-Methyl-2-pentanone (MIBK)	200	225		ug/L		112	56 - 135
Acetone	200	191		ug/L		95	50 - 137
Acrolein	494	452		ug/L		92	10 - 207
Acrylonitrile	500	544		ug/L		109	65 - 133
Allyl chloride	50.0	62.8		ug/L		126	57 - 136
Benzene	50.0	53.1		ug/L		106	69 - 126
Bromoform	50.0	47.7		ug/L		95	57 - 125
Bromomethane	50.0	40.8		ug/L		82	25 - 163
Carbon disulfide	50.0	53.5		ug/L		107	56 - 128
Carbon tetrachloride	50.0	53.6		ug/L		107	60 - 133
Chlorobenzene	50.0	48.9		ug/L		98	78 - 118
Chlorobromomethane	50.0	50.3		ug/L		101	71 - 130
Chlorodibromomethane	50.0	47.4		ug/L		95	71 - 122
Chloroethane	50.0	64.0		ug/L		128	52 - 144
Chloroform	50.0	50.1		ug/L		100	68 - 128
Chloromethane	50.0	53.7		ug/L		107	43 - 142
cis-1,2-Dichloroethene	50.0	51.0		ug/L		102	69 - 126
cis-1,3-Dichloropropene	50.0	52.4		ug/L		105	75 - 120
Dibromomethane	50.0	48.0		ug/L		96	68 - 129
Dichlorobromomethane	50.0	50.0		ug/L		100	67 - 126
Dichlorodifluoromethane	50.0	59.2		ug/L		118	26 - 152
Ethyl methacrylate	50.0	51.6		ug/L		103	69 - 126
Ethylbenzene	50.0	48.4		ug/L		97	76 - 121
Iodomethane	50.0	44.6		ug/L		89	37 - 145
Isobutyl alcohol	1250	1130		ug/L		91	46 - 132
Methylene Chloride	50.0	48.0		ug/L		96	64 - 128
m-Xylene & p-Xylene	50.0	50.8		ug/L		102	76 - 122
o-Xylene	50.0	49.3		ug/L		99	77 - 120
Styrene	50.0	51.0		ug/L		102	79 - 120
Tetrachloroethene	50.0	54.0		ug/L		108	72 - 127
Toluene	50.0	52.1		ug/L		104	68 - 127
trans-1,2-Dichloroethene	50.0	54.1		ug/L		108	66 - 129
trans-1,3-Dichloropropene	50.0	54.0		ug/L		108	66 - 127
trans-1,4-Dichloro-2-butene	50.0	42.6		ug/L		85	44 - 131
Trichloroethene	50.0	51.5		ug/L		103	70 - 125
Trichlorofluoromethane	50.0	61.1		ug/L		122	57 - 144
Vinyl acetate	100	120		ug/L		120	61 - 139
Vinyl chloride	50.0	68.1		ug/L		136	53 - 141
Xylenes, Total	100	100		ug/L		100	77 - 120

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609932/1002
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 127*
4-Bromofluorobenzene (Surr)	*99*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Lab Sample ID: LCS 280-609932/1003
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			250	234		ug/L		94	45 - 142		
Chloroprene			25.0	25.4		ug/L		101	53 - 147		
Methacrylonitrile			250	233		ug/L		93	47 - 142		
Methyl methacrylate			50.0	38.9		ug/L		78	60 - 131		
Propionitrile			250	246		ug/L		98	52 - 138		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*102*		*80 - 125*

Lab Sample ID: LCSD 280-609932/4
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			50.0	48.5		ug/L		97	74 - 121	1	20
1,1,1-Trichloroethane			50.0	51.0		ug/L		102	62 - 132	1	20
1,1,2,2-Tetrachloroethane			50.0	47.7		ug/L		95	72 - 122	6	20
1,1,2-Trichloroethane			50.0	50.2		ug/L		100	72 - 128	0	20
1,1-Dichloroethane			50.0	54.8		ug/L		110	66 - 130	1	20
1,1-Dichloroethene			50.0	51.5		ug/L		103	62 - 130	0	21
1,1-Dichloropropene			50.0	53.1		ug/L		106	64 - 133	1	20
1,2,3-Trichloropropane			50.0	46.5		ug/L		93	74 - 123	7	20
1,2,4-Trichlorobenzene			50.0	50.4		ug/L		101	73 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	43.9		ug/L		88	58 - 122	11	21
1,2-Dibromoethane			50.0	47.2		ug/L		94	81 - 118	1	20
1,2-Dichlorobenzene			50.0	47.4		ug/L		95	77 - 121	1	20
1,2-Dichloroethane			50.0	49.3		ug/L		99	61 - 130	1	20
1,2-Dichloropropane			50.0	54.5		ug/L		109	68 - 127	1	20
1,3-Dichlorobenzene			50.0	49.1		ug/L		98	76 - 121	2	20
1,3-Dichloropropane			50.0	49.7		ug/L		99	80 - 118	0	20
1,4-Dichlorobenzene			50.0	46.1		ug/L		92	76 - 119	1	20
2,2-Dichloropropane			50.0	53.4		ug/L		107	57 - 140	2	22
2-Butanone (MEK)			200	222		ug/L		111	53 - 135	4	20
2-Hexanone			200	213		ug/L		106	58 - 134	1	21
4-Methyl-2-pentanone (MIBK)			200	232		ug/L		116	56 - 135	3	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609932/4
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone			200	203		ug/L		101	50 - 137	6	21
Acrolein			494	466		ug/L		94	10 - 207	3	23
Acrylonitrile			500	555		ug/L		111	65 - 133	2	20
Allyl chloride			50.0	61.6		ug/L		123	57 - 136	2	20
Benzene			50.0	52.6		ug/L		105	69 - 126	1	20
Bromoform			50.0	48.9		ug/L		98	57 - 125	3	20
Bromomethane			50.0	49.0		ug/L		98	25 - 163	18	40
Carbon disulfide			50.0	52.3		ug/L		105	56 - 128	2	20
Carbon tetrachloride			50.0	52.9		ug/L		106	60 - 133	1	20
Chlorobenzene			50.0	48.2		ug/L		96	78 - 118	1	20
Chlorobromomethane			50.0	51.2		ug/L		102	71 - 130	2	20
Chlorodibromomethane			50.0	47.3		ug/L		95	71 - 122	0	20
Chloroethane			50.0	62.6		ug/L		125	52 - 144	2	30
Chloroform			50.0	50.4		ug/L		101	68 - 128	1	20
Chloromethane			50.0	53.9		ug/L		108	43 - 142	0	20
cis-1,2-Dichloroethene			50.0	50.7		ug/L		101	69 - 126	1	20
cis-1,3-Dichloropropene			50.0	52.2		ug/L		104	75 - 120	0	20
Dibromomethane			50.0	48.5		ug/L		97	68 - 129	1	20
Dichlorobromomethane			50.0	50.2		ug/L		100	67 - 126	0	20
Dichlorodifluoromethane			50.0	56.9		ug/L		114	26 - 152	4	21
Ethyl methacrylate			50.0	52.0		ug/L		104	69 - 126	1	20
Ethylbenzene			50.0	47.8		ug/L		96	76 - 121	1	20
Iodomethane			50.0	43.9		ug/L		88	37 - 145	2	38
Isobutyl alcohol			1250	1190		ug/L		95	46 - 132	5	30
Methylene Chloride			50.0	48.1		ug/L		96	64 - 128	0	20
m-Xylene & p-Xylene			50.0	49.1		ug/L		98	76 - 122	4	20
o-Xylene			50.0	47.8		ug/L		96	77 - 120	3	20
Styrene			50.0	50.7		ug/L		101	79 - 120	1	20
Tetrachloroethene			50.0	52.4		ug/L		105	72 - 127	3	20
Toluene			50.0	52.1		ug/L		104	68 - 127	0	20
trans-1,2-Dichloroethene			50.0	54.1		ug/L		108	66 - 129	0	20
trans-1,3-Dichloropropene			50.0	54.9		ug/L		110	66 - 127	2	20
trans-1,4-Dichloro-2-butene			50.0	45.7		ug/L		91	44 - 131	7	24
Trichloroethene			50.0	50.9		ug/L		102	70 - 125	1	20
Trichlorofluoromethane			50.0	59.1		ug/L		118	57 - 144	3	28
Vinyl acetate			100	123		ug/L		123	61 - 139	3	23
Vinyl chloride			50.0	67.0		ug/L		134	53 - 141	2	25
Xylenes, Total			100	96.9		ug/L		97	77 - 120	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609932/5
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	252		ug/L		101	45 - 142	7	20
Chloroprene			25.0	25.9		ug/L		104	53 - 147	2	20
Methacrylonitrile			250	241		ug/L		96	47 - 142	3	20
Methyl methacrylate			50.0	42.2		ug/L		84	60 - 131	8	20
Propionitrile			250	254		ug/L		102	52 - 138	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*103*		*80 - 125*

Lab Sample ID: MB 280-609946/7
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/25/23 08:08	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/25/23 08:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/25/23 08:08	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/25/23 08:08	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/25/23 08:08	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/25/23 08:08	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/25/23 08:08	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/25/23 08:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/25/23 08:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/25/23 08:08	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/25/23 08:08	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/25/23 08:08	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/25/23 08:08	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/25/23 08:08	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/25/23 08:08	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/25/23 08:08	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/25/23 08:08	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/25/23 08:08	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/25/23 08:08	1
2-Hexanone	ND		5.0	1.7	ug/L			04/25/23 08:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/25/23 08:08	1
Acetone	ND		15	6.6	ug/L			04/25/23 08:08	1
Acetonitrile	ND		30	9.6	ug/L			04/25/23 08:08	1
Acrolein	ND		20	4.9	ug/L			04/25/23 08:08	1
Acrylonitrile	ND		20	4.5	ug/L			04/25/23 08:08	1
Allyl chloride	ND		2.0	0.17	ug/L			04/25/23 08:08	1
Benzene	ND		1.0	0.31	ug/L			04/25/23 08:08	1
Bromoform	ND		2.0	1.2	ug/L			04/25/23 08:08	1
Bromomethane	ND		5.0	2.4	ug/L			04/25/23 08:08	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/25/23 08:08	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/25/23 08:08	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-609946/7
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	0.42	ug/L			04/25/23 08:08	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/25/23 08:08	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/25/23 08:08	1
Chloroethane	ND		4.0	1.4	ug/L			04/25/23 08:08	1
Chloroform	ND		1.0	0.36	ug/L			04/25/23 08:08	1
Chloromethane	ND		2.0	0.75	ug/L			04/25/23 08:08	1
Chloroprene	ND		3.0	1.2	ug/L			04/25/23 08:08	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/25/23 08:08	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/25/23 08:08	1
Dibromomethane	ND		1.0	0.34	ug/L			04/25/23 08:08	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/25/23 08:08	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/25/23 08:08	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/25/23 08:08	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/25/23 08:08	1
Iodomethane	ND		5.0	2.6	ug/L			04/25/23 08:08	1
Isobutyl alcohol	ND		110	37	ug/L			04/25/23 08:08	1
Methacrylonitrile	ND		15	5.3	ug/L			04/25/23 08:08	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/25/23 08:08	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/25/23 08:08	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/25/23 08:08	1
o-Xylene	ND		1.0	0.33	ug/L			04/25/23 08:08	1
Propionitrile	ND		20	3.7	ug/L			04/25/23 08:08	1
Styrene	ND		1.0	0.36	ug/L			04/25/23 08:08	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/25/23 08:08	1
Toluene	ND		1.0	0.32	ug/L			04/25/23 08:08	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/25/23 08:08	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/25/23 08:08	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/25/23 08:08	1
Trichloroethene	ND		1.0	0.30	ug/L			04/25/23 08:08	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/25/23 08:08	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/25/23 08:08	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/25/23 08:08	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/25/23 08:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 127*		*04/25/23 08:08*	*1*
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*		*04/25/23 08:08*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/25/23 08:08*	*1*
Toluene-d8 (Surr)	*101*		*80 - 125*		*04/25/23 08:08*	*1*

Lab Sample ID: LCS 280-609946/1002
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	25.0	21.8		ug/L		87	74 - 121
1,1,1-Trichloroethane	25.0	23.2		ug/L		93	62 - 132
1,1,2,2-Tetrachloroethane	25.0	22.2		ug/L		89	72 - 122

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609946/1002
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,2-Trichloroethane	25.0	22.9		ug/L		91	72 - 128
1,1-Dichloroethane	25.0	25.1		ug/L		100	66 - 130
1,1-Dichloroethene	25.0	23.4		ug/L		94	62 - 130
1,1-Dichloropropene	25.0	23.3		ug/L		93	64 - 133
1,2,3-Trichloropropane	25.0	20.8		ug/L		83	74 - 123
1,2,4-Trichlorobenzene	25.0	23.4		ug/L		94	73 - 124
1,2-Dibromo-3-Chloropropane	25.0	19.9		ug/L		79	58 - 122
1,2-Dibromoethane	25.0	22.1		ug/L		89	81 - 118
1,2-Dichlorobenzene	25.0	21.6		ug/L		86	77 - 121
1,2-Dichloroethane	25.0	22.7		ug/L		91	61 - 130
1,2-Dichloropropane	25.0	24.9		ug/L		99	68 - 127
1,3-Dichlorobenzene	25.0	22.2		ug/L		89	76 - 121
1,3-Dichloropropane	25.0	22.5		ug/L		90	80 - 118
1,4-Dichlorobenzene	25.0	21.4		ug/L		85	76 - 119
2,2-Dichloropropane	25.0	24.8		ug/L		99	57 - 140
2-Butanone (MEK)	100	106		ug/L		106	53 - 135
2-Hexanone	100	101		ug/L		101	58 - 134
4-Methyl-2-pentanone (MIBK)	100	108		ug/L		108	56 - 135
Acetone	100	93.5		ug/L		93	50 - 137
Acrolein	247	218		ug/L		88	10 - 207
Acrylonitrile	250	266		ug/L		106	65 - 133
Allyl chloride	25.0	30.1		ug/L		120	57 - 136
Benzene	25.0	24.2		ug/L		97	69 - 126
Bromoform	25.0	22.1		ug/L		88	57 - 125
Bromomethane	25.0	20.1		ug/L		80	25 - 163
Carbon disulfide	25.0	24.8		ug/L		99	56 - 128
Carbon tetrachloride	25.0	23.6		ug/L		94	60 - 133
Chlorobenzene	25.0	22.2		ug/L		89	78 - 118
Chlorobromomethane	25.0	23.6		ug/L		94	71 - 130
Chlorodibromomethane	25.0	21.3		ug/L		85	71 - 122
Chloroethane	25.0	24.0		ug/L		96	52 - 144
Chloroform	25.0	22.9		ug/L		92	68 - 128
Chloromethane	25.0	22.1		ug/L		88	43 - 142
cis-1,2-Dichloroethene	25.0	23.3		ug/L		93	69 - 126
cis-1,3-Dichloropropene	25.0	23.3		ug/L		93	75 - 120
Dibromomethane	25.0	22.6		ug/L		90	68 - 129
Dichlorobromomethane	25.0	23.1		ug/L		92	67 - 126
Dichlorodifluoromethane	25.0	20.6		ug/L		83	26 - 152
Ethyl methacrylate	25.0	24.2		ug/L		97	69 - 126
Ethylbenzene	25.0	22.3		ug/L		89	76 - 121
Iodomethane	25.0	17.2		ug/L		69	37 - 145
Isobutyl alcohol	625	519		ug/L		83	46 - 132
Methylene Chloride	25.0	22.4		ug/L		89	64 - 128
m-Xylene & p-Xylene	25.0	23.3		ug/L		93	76 - 122
o-Xylene	25.0	22.0		ug/L		88	77 - 120
Styrene	25.0	23.2		ug/L		93	79 - 120
Tetrachloroethene	25.0	23.2		ug/L		93	72 - 127
Toluene	25.0	24.0		ug/L		96	68 - 127
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	66 - 129

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609946/1002
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,3-Dichloropropene	25.0	24.9		ug/L		100	66 - 127
trans-1,4-Dichloro-2-butene	25.0	20.2		ug/L		81	44 - 131
Trichloroethene	25.0	22.9		ug/L		92	70 - 125
Trichlorofluoromethane	25.0	22.0		ug/L		88	57 - 144
Vinyl acetate	50.0	56.8		ug/L		114	61 - 139
Vinyl chloride	25.0	26.3		ug/L		105	53 - 141
Xylenes, Total	50.0	45.3		ug/L		91	77 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 127*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*
Dibromofluoromethane (Surr)	*105*		*77 - 120*
Toluene-d8 (Surr)	*102*		*80 - 125*

Lab Sample ID: LCS 280-609946/1003
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetonitrile	250	271		ug/L		108	45 - 142
Chloroprene	25.0	28.9		ug/L		116	53 - 147
Methacrylonitrile	250	275		ug/L		110	47 - 142
Methyl methacrylate	50.0	46.1		ug/L		92	60 - 131
Propionitrile	250	273		ug/L		109	52 - 138

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 127*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*
Dibromofluoromethane (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*103*		*80 - 125*

Lab Sample ID: LCSD 280-609946/4
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	24.3		ug/L		97	74 - 121	11	20
1,1,1-Trichloroethane	25.0	24.0		ug/L		96	62 - 132	3	20
1,1,2,2-Tetrachloroethane	25.0	24.5		ug/L		98	72 - 122	10	20
1,1,2-Trichloroethane	25.0	25.5		ug/L		102	72 - 128	11	20
1,1-Dichloroethane	25.0	27.7		ug/L		111	66 - 130	10	20
1,1-Dichloroethene	25.0	24.7		ug/L		99	62 - 130	5	21
1,1-Dichloropropene	25.0	25.4		ug/L		102	64 - 133	9	20
1,2,3-Trichloropropane	25.0	23.6		ug/L		94	74 - 123	12	20
1,2,4-Trichlorobenzene	25.0	24.9		ug/L		100	73 - 124	6	20
1,2-Dibromo-3-Chloropropane	25.0	21.2		ug/L		85	58 - 122	7	21
1,2-Dibromoethane	25.0	25.1		ug/L		100	81 - 118	12	20
1,2-Dichlorobenzene	25.0	23.8		ug/L		95	77 - 121	10	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609946/4
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane	25.0	24.7		ug/L		99	61 - 130	8	20
1,2-Dichloropropane	25.0	26.9		ug/L		107	68 - 127	8	20
1,3-Dichlorobenzene	25.0	24.1		ug/L		97	76 - 121	8	20
1,3-Dichloropropane	25.0	25.9		ug/L		103	80 - 118	14	20
1,4-Dichlorobenzene	25.0	23.0		ug/L		92	76 - 119	7	20
2,2-Dichloropropane	25.0	26.7		ug/L		107	57 - 140	8	22
2-Butanone (MEK)	100	123		ug/L		123	53 - 135	15	20
2-Hexanone	100	114		ug/L		114	58 - 134	13	21
4-Methyl-2-pentanone (MIBK)	100	119		ug/L		119	56 - 135	10	20
Acetone	100	103		ug/L		103	50 - 137	9	21
Acrolein	247	242		ug/L		98	10 - 207	10	23
Acrylonitrile	250	296		ug/L		118	65 - 133	11	20
Allyl chloride	25.0	32.3		ug/L		129	57 - 136	7	20
Benzene	25.0	26.6		ug/L		106	69 - 126	9	20
Bromoform	25.0	25.0		ug/L		100	57 - 125	13	20
Bromomethane	25.0	17.5		ug/L		70	25 - 163	14	40
Carbon disulfide	25.0	25.8		ug/L		103	56 - 128	4	20
Carbon tetrachloride	25.0	24.8		ug/L		99	60 - 133	5	20
Chlorobenzene	25.0	24.5		ug/L		98	78 - 118	10	20
Chlorobromomethane	25.0	26.0		ug/L		104	71 - 130	10	20
Chlorodibromomethane	25.0	24.3		ug/L		97	71 - 122	13	20
Chloroethane	25.0	27.0		ug/L		108	52 - 144	12	30
Chloroform	25.0	25.0		ug/L		100	68 - 128	9	20
Chloromethane	25.0	23.3		ug/L		93	43 - 142	5	20
cis-1,2-Dichloroethene	25.0	25.6		ug/L		103	69 - 126	9	20
cis-1,3-Dichloropropene	25.0	26.0		ug/L		104	75 - 120	11	20
Dibromomethane	25.0	25.2		ug/L		101	68 - 129	11	20
Dichlorobromomethane	25.0	24.6		ug/L		99	67 - 126	7	20
Dichlorodifluoromethane	25.0	22.8		ug/L		91	26 - 152	10	21
Ethyl methacrylate	25.0	27.0		ug/L		108	69 - 126	11	20
Ethylbenzene	25.0	24.2		ug/L		97	76 - 121	8	20
Iodomethane	25.0	17.5		ug/L		70	37 - 145	1	38
Isobutyl alcohol	625	618		ug/L		99	46 - 132	17	30
Methylene Chloride	25.0	24.5		ug/L		98	64 - 128	9	20
m-Xylene & p-Xylene	25.0	24.9		ug/L		100	76 - 122	7	20
o-Xylene	25.0	24.6		ug/L		98	77 - 120	11	20
Styrene	25.0	26.1		ug/L		104	79 - 120	12	20
Tetrachloroethene	25.0	25.6		ug/L		102	72 - 127	10	20
Toluene	25.0	25.8		ug/L		103	68 - 127	7	20
trans-1,2-Dichloroethene	25.0	27.1		ug/L		108	66 - 129	8	20
trans-1,3-Dichloropropene	25.0	27.1		ug/L		108	66 - 127	8	20
trans-1,4-Dichloro-2-butene	25.0	22.2		ug/L		89	44 - 131	10	24
Trichloroethene	25.0	25.5		ug/L		102	70 - 125	10	20
Trichlorofluoromethane	25.0	24.7		ug/L		99	57 - 144	11	28
Vinyl acetate	50.0	62.8		ug/L		126	61 - 139	10	23
Vinyl chloride	25.0	29.0		ug/L		116	53 - 141	10	25
Xylenes, Total	50.0	49.5		ug/L		99	77 - 120	9	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609946/4
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 127*
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*
Dibromofluoromethane (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*103*		*80 - 125*

Lab Sample ID: LCSD 280-609946/5
Matrix: Water
Analysis Batch: 609946

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	267		ug/L		107	45 - 142	1	20
Chloroprene			25.0	27.1		ug/L		109	53 - 147	6	20
Methacrylonitrile			250	264		ug/L		106	47 - 142	4	20
Methyl methacrylate			50.0	43.2		ug/L		86	60 - 131	7	20
Propionitrile			250	266		ug/L		106	52 - 138	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*105*		*77 - 120*
Toluene-d8 (Surr)	*102*		*80 - 125*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 280-609196/5
Matrix: Water
Analysis Batch: 609196

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			04/18/23 18:31	1
Ethene	ND		5.0	0.40	ug/L			04/18/23 18:31	1
Ethane	ND		5.0	0.57	ug/L			04/18/23 18:31	1
Acetylene	ND		5.0	0.73	ug/L			04/18/23 18:31	1
Propane	ND		5.0	0.56	ug/L			04/18/23 18:31	1

Lab Sample ID: LCS 280-609196/3
Matrix: Water
Analysis Batch: 609196

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methane			65.7	62.8		ug/L		96	75 - 125		
Ethene			115	113		ug/L		98	75 - 125		
Ethane			123	120		ug/L		98	75 - 125		
Acetylene			107	105		ug/L		99	75 - 125		
Propane			181	172		ug/L		95	75 - 125		

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 280-609196/4
Matrix: Water
Analysis Batch: 609196

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane			65.7	62.4		ug/L		95	75 - 125	1	20
Ethene			115	112		ug/L		98	75 - 125	0	20
Ethane			123	120		ug/L		97	75 - 125	1	20
Acetylene			107	105		ug/L		99	75 - 125	0	20
Propane			181	174		ug/L		96	75 - 125	1	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-608688/1-A
Matrix: Water
Analysis Batch: 609048

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 608688

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/14/23 14:30	04/17/23 15:04	1
Arsenic	ND		5.0	0.50	ug/L		04/14/23 14:30	04/17/23 15:04	1
Barium	ND		3.0	0.38	ug/L		04/14/23 14:30	04/17/23 15:04	1
Beryllium	ND		1.0	0.30	ug/L		04/14/23 14:30	04/17/23 15:04	1
Calcium	ND		200	32	ug/L		04/14/23 14:30	04/17/23 15:04	1
Cadmium	ND		1.0	0.19	ug/L		04/14/23 14:30	04/17/23 15:04	1
Co	ND		1.0	0.33	ug/L		04/14/23 14:30	04/17/23 15:04	1
Chromium	ND		3.0	0.50	ug/L		04/14/23 14:30	04/17/23 15:04	1
Copper	ND		2.0	0.71	ug/L		04/14/23 14:30	04/17/23 15:04	1
Iron	ND		200	8.7	ug/L		04/14/23 14:30	04/17/23 15:04	1
Potassium	ND		1000	52	ug/L		04/14/23 14:30	04/17/23 15:04	1
Magnesium	4.40	J	200	4.2	ug/L		04/14/23 14:30	04/17/23 15:04	1
Manganese	ND		3.0	0.51	ug/L		04/14/23 14:30	04/17/23 15:04	1
Sodium	ND		1000	73	ug/L		04/14/23 14:30	04/17/23 15:04	1
Nickel	ND		3.0	0.83	ug/L		04/14/23 14:30	04/17/23 15:04	1
Lead	ND		1.0	0.23	ug/L		04/14/23 14:30	04/17/23 15:04	1
Antimony	ND		2.0	0.40	ug/L		04/14/23 14:30	04/17/23 15:04	1
Selenium	ND		5.0	1.0	ug/L		04/14/23 14:30	04/17/23 15:04	1
Tin	ND		10	0.58	ug/L		04/14/23 14:30	04/17/23 15:04	1
Thallium	ND		1.0	0.21	ug/L		04/14/23 14:30	04/17/23 15:04	1
Vanadium	ND		5.0	1.1	ug/L		04/14/23 14:30	04/17/23 15:04	1
Zinc	ND		10	2.0	ug/L		04/14/23 14:30	04/17/23 15:04	1

Lab Sample ID: LCS 280-608688/2-A
Matrix: Water
Analysis Batch: 609048

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 608688

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Silver			40.0	40.3		ug/L		101	85 - 115		
Arsenic			40.0	37.6		ug/L		94	85 - 117		
Barium			40.0	39.7		ug/L		99	85 - 118		
Beryllium			40.0	35.6		ug/L		89	80 - 125		
Calcium			800	856		ug/L		107	80 - 120		
Cadmium			40.0	40.4		ug/L		101	85 - 115		
Co			40.0	38.8		ug/L		97	85 - 120		
Chromium			40.0	39.1		ug/L		98	84 - 121		

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-608688/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 609048
Prep Batch: 608688

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	40.0	38.9		ug/L		97	85 - 119
Iron	800	800		ug/L		100	80 - 120
Potassium	800	764	J	ug/L		96	80 - 120
Magnesium	800	743		ug/L		93	80 - 120
Manganese	40.0	37.9		ug/L		95	85 - 117
Sodium	800	818	J	ug/L		102	80 - 120
Nickel	40.0	37.7		ug/L		94	85 - 119
Lead	40.0	38.4		ug/L		96	85 - 118
Antimony	40.0	38.7		ug/L		97	85 - 115
Selenium	40.0	39.5		ug/L		99	77 - 122
Tin	40.0	37.1		ug/L		93	77 - 115
Thallium	40.0	39.0		ug/L		98	85 - 118
Vanadium	40.0	38.1		ug/L		95	85 - 120
Zinc	40.0	39.9		ug/L		100	83 - 122

Lab Sample ID: LCSD 280-608688/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 609048
Prep Batch: 608688

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	40.0	40.1		ug/L		100	85 - 115	0	6
Arsenic	40.0	37.0		ug/L		92	85 - 117	2	10
Barium	40.0	39.1		ug/L		98	85 - 118	1	11
Beryllium	40.0	35.3		ug/L		88	80 - 125	1	22
Calcium	800	874		ug/L		109	80 - 120	2	20
Cadmium	40.0	39.7		ug/L		99	85 - 115	2	7
Co	40.0	40.0		ug/L		100	85 - 120	3	7
Chromium	40.0	40.0		ug/L		100	84 - 121	2	8
Copper	40.0	39.3		ug/L		98	85 - 119	1	9
Iron	800	808		ug/L		101	80 - 120	1	14
Potassium	800	761	J	ug/L		95	80 - 120	0	20
Magnesium	800	753		ug/L		94	80 - 120	1	20
Manganese	40.0	38.1		ug/L		95	85 - 117	0	13
Sodium	800	858	J	ug/L		107	80 - 120	5	20
Nickel	40.0	38.0		ug/L		95	85 - 119	1	8
Lead	40.0	38.9		ug/L		97	85 - 118	1	7
Antimony	40.0	39.2		ug/L		98	85 - 115	1	9
Selenium	40.0	39.6		ug/L		99	77 - 122	0	9
Tin	40.0	37.8		ug/L		94	77 - 115	2	6
Thallium	40.0	39.6		ug/L		99	85 - 118	1	5
Vanadium	40.0	37.3		ug/L		93	85 - 120	2	8
Zinc	40.0	40.9		ug/L		102	83 - 122	3	12

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-608624/47
Matrix: Water
Analysis Batch: 608624

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.090	mg/L			04/14/23 04:30	1
Nitrite as N	ND		0.50	0.049	mg/L			04/14/23 04:30	1

Lab Sample ID: MB 280-608624/6
Matrix: Water
Analysis Batch: 608624

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.090	mg/L			04/13/23 17:34	1
Nitrite as N	ND		0.50	0.049	mg/L			04/13/23 17:34	1

Lab Sample ID: LCS 280-608624/4
Matrix: Water
Analysis Batch: 608624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.35		mg/L		94	90 - 110
Nitrite as N	2.50	2.28		mg/L		91	90 - 110

Lab Sample ID: LCS 280-608624/45
Matrix: Water
Analysis Batch: 608624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.38		mg/L		95	90 - 110
Nitrite as N	2.50	2.29		mg/L		91	90 - 110

Lab Sample ID: LCSD 280-608624/46
Matrix: Water
Analysis Batch: 608624

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	2.50	2.46		mg/L		98	90 - 110	3	10
Nitrite as N	2.50	2.29		mg/L		92	90 - 110	0	10

Lab Sample ID: LCSD 280-608624/5
Matrix: Water
Analysis Batch: 608624

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	2.50	2.36		mg/L		94	90 - 110	0	10
Nitrite as N	2.50	2.27		mg/L		91	90 - 110	0	10

Lab Sample ID: MRL 280-608624/3
Matrix: Water
Analysis Batch: 608624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.250	0.246	J	mg/L		98	50 - 150
Nitrite as N	0.250	0.248	J	mg/L		99	50 - 150

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 280-174957-5 MS
Client Sample ID: MW-105D-20230411
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 608624

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate as N	0.71	H	5.00	6.24	E	mg/L		111	80 - 120		
Nitrite as N	ND	H F2 F1	5.00	0.832	F1	mg/L		17	80 - 120		

Lab Sample ID: 280-174957-5 MSD
Client Sample ID: MW-105D-20230411
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 608624

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	0.71	H	5.00	6.19	E	mg/L		110	80 - 120	1	20
Nitrite as N	ND	H F2 F1	5.00	1.84	F2 F1	mg/L		37	80 - 120	75	20

Lab Sample ID: 280-174957-5 DU
Client Sample ID: MW-105D-20230411
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 608624

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrate as N	0.71	H		0.698		mg/L				1	15
Nitrite as N	ND	H F2 F1		ND		mg/L				NC	15

Lab Sample ID: MB 280-608625/47
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 608625

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.23	mg/L			04/14/23 04:30	1
Sulfate	ND		5.0	1.0	mg/L			04/14/23 04:30	1

Lab Sample ID: MB 280-608625/6
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 608625

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.23	mg/L			04/13/23 17:34	1
Sulfate	ND		5.0	1.0	mg/L			04/13/23 17:34	1

Lab Sample ID: LCS 280-608625/4
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 608625

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide			2.50	2.29		mg/L		92	90 - 110		
Sulfate			50.0	49.1		mg/L		98	90 - 110		

Lab Sample ID: LCS 280-608625/45
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 608625

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide			2.50	2.32		mg/L		93	90 - 110		
Sulfate			50.0	49.8		mg/L		100	90 - 110		

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LCSD 280-608625/46
Matrix: Water
Analysis Batch: 608625

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide			2.50	2.35		mg/L		94	90 - 110	1	10
Sulfate			50.0	50.3		mg/L		101	90 - 110	1	10

Lab Sample ID: LCSD 280-608625/5
Matrix: Water
Analysis Batch: 608625

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide			2.50	2.28		mg/L		91	90 - 110	0	10
Sulfate			50.0	49.2		mg/L		98	90 - 110	0	10

Lab Sample ID: MRL 280-608625/3
Matrix: Water
Analysis Batch: 608625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide			0.250	0.255	J	mg/L		102	50 - 150		
Sulfate			2.50	2.05	J	mg/L		82	50 - 150		

Lab Sample ID: 280-174957-5 MS
Matrix: Water
Analysis Batch: 608625

Client Sample ID: MW-105D-20230411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide	0.76		5.00	6.14	E	mg/L		108	80 - 120		
Sulfate	79		50.0	134	E	mg/L		109	80 - 120		

Lab Sample ID: 280-174957-5 MSD
Matrix: Water
Analysis Batch: 608625

Client Sample ID: MW-105D-20230411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	0.76		5.00	6.01	E	mg/L		105	80 - 120	2	20
Sulfate	79		50.0	133	E	mg/L		108	80 - 120	0	20

Lab Sample ID: 280-174957-5 DU
Matrix: Water
Analysis Batch: 608625

Client Sample ID: MW-105D-20230411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Bromide	0.76			0.725		mg/L				5	15
Sulfate	79			78.9		mg/L				0.2	15

Lab Sample ID: MB 280-608788/6
Matrix: Water
Analysis Batch: 608788

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.090	mg/L			04/14/23 15:28	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-608788/4
Matrix: Water
Analysis Batch: 608788

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate as N			2.50	2.38		mg/L		95	90 - 110		

Lab Sample ID: LCSD 280-608788/5
Matrix: Water
Analysis Batch: 608788

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N			2.50	2.36		mg/L		94	90 - 110	1	10

Lab Sample ID: MRL 280-608788/3
Matrix: Water
Analysis Batch: 608788

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate as N			0.250	0.235	J	mg/L		94	50 - 150		

Lab Sample ID: MB 280-608789/6
Matrix: Water
Analysis Batch: 608789

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			04/14/23 15:28	1

Lab Sample ID: LCS 280-608789/4
Matrix: Water
Analysis Batch: 608789

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	47.4		mg/L		95	90 - 110		

Lab Sample ID: LCSD 280-608789/5
Matrix: Water
Analysis Batch: 608789

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			50.0	47.7		mg/L		95	90 - 110	1	10

Lab Sample ID: MRL 280-608789/3
Matrix: Water
Analysis Batch: 608789

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			2.50	2.05	J	mg/L		82	50 - 150		

Lab Sample ID: MB 280-610429/6
Matrix: Water
Analysis Batch: 610429

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			04/27/23 15:19	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 280-610429/6
Matrix: Water
Analysis Batch: 610429

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0	1.0	mg/L			04/27/23 15:19	1

Lab Sample ID: LCS 280-610429/4
Matrix: Water
Analysis Batch: 610429

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	46.8		mg/L		94	90 - 110		
Sulfate			50.0	49.1		mg/L		98	90 - 110		

Lab Sample ID: LCSD 280-610429/5
Matrix: Water
Analysis Batch: 610429

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			50.0	47.1		mg/L		94	90 - 110	1	10
Sulfate			50.0	49.2		mg/L		98	90 - 110	0	10

Lab Sample ID: MRL 280-610429/3
Matrix: Water
Analysis Batch: 610429

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			2.50	2.16	J	mg/L		86	50 - 150		
Sulfate			2.50	2.48	J	mg/L		99	50 - 150		

Lab Sample ID: MB 280-610539/6
Matrix: Water
Analysis Batch: 610539

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			04/28/23 16:28	1

Lab Sample ID: LCS 280-610539/4
Matrix: Water
Analysis Batch: 610539

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	47.5		mg/L		95	90 - 110		

Lab Sample ID: LCSD 280-610539/5
Matrix: Water
Analysis Batch: 610539

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			50.0	47.3		mg/L		95	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-610539/3
Matrix: Water
Analysis Batch: 610539

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			2.50	2.20	J	mg/L		88	50 - 150		

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-609693/4
Matrix: Water
Analysis Batch: 609693

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1.0	0.35	mg/L	☼		04/20/23 17:33	1

Lab Sample ID: LCS 280-609693/3
Matrix: Water
Analysis Batch: 609693

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates			25.0	24.4		mg/L	☼	98	88 - 112		
TOC Result 2			25.0	23.9		mg/L	☼	96	88 - 112		
TOC Result 1			25.0	24.9		mg/L	☼	99	88 - 112		

QC Association Summary

Client: CDM Smith Inc
Job ID: 280-174957-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

GC/MS VOA

Analysis Batch: 609068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-5	MW-105D-20230411	Total/NA	Water	8260D	
280-174957-6	MW-105S-20230411	Total/NA	Water	8260D	
MB 280-609068/7	Method Blank	Total/NA	Water	8260D	
LCS 280-609068/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-609068/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-609068/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-609068/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 609932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-7	EB-01-20230411	Total/NA	Water	8260D	
MB 280-609932/7	Method Blank	Total/NA	Water	8260D	
LCS 280-609932/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-609932/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-609932/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-609932/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 609946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-1	TB-04-20230412	Total/NA	Water	8260D	
280-174957-2	MW-124-20230412	Total/NA	Water	8260D	
280-174957-3	MW-124-Q-20230412	Total/NA	Water	8260D	
MB 280-609946/7	Method Blank	Total/NA	Water	8260D	
LCS 280-609946/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-609946/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-609946/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-609946/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 609196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-2	MW-124-20230412	Total/NA	Water	RSK-175	
280-174957-3	MW-124-Q-20230412	Total/NA	Water	RSK-175	
MB 280-609196/5	Method Blank	Total/NA	Water	RSK-175	
LCS 280-609196/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 280-609196/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Metals

Prep Batch: 608688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-2	MW-124-20230412	Dissolved	Water	3005A	
280-174957-3	MW-124-Q-20230412	Dissolved	Water	3005A	
280-174957-4	RW-15-20230411	Dissolved	Water	3005A	
280-174957-5	MW-105D-20230411	Dissolved	Water	3005A	
280-174957-6	MW-105S-20230411	Dissolved	Water	3005A	
MB 280-608688/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-608688/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 280-608688/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Metals

Analysis Batch: 609048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-2	MW-124-20230412	Dissolved	Water	6020B	608688
280-174957-3	MW-124-Q-20230412	Dissolved	Water	6020B	608688
280-174957-4	RW-15-20230411	Dissolved	Water	6020B	608688
280-174957-5	MW-105D-20230411	Dissolved	Water	6020B	608688
280-174957-6	MW-105S-20230411	Dissolved	Water	6020B	608688
MB 280-608688/1-A	Method Blank	Total Recoverable	Water	6020B	608688
LCS 280-608688/2-A	Lab Control Sample	Total Recoverable	Water	6020B	608688
LCSD 280-608688/3-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	608688

General Chemistry

Analysis Batch: 608624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-2	MW-124-20230412	Total/NA	Water	9056A	
280-174957-2	MW-124-20230412	Total/NA	Water	9056A	
280-174957-3	MW-124-Q-20230412	Total/NA	Water	9056A	
280-174957-3	MW-124-Q-20230412	Total/NA	Water	9056A	
280-174957-4	RW-15-20230411	Total/NA	Water	9056A	
280-174957-5	MW-105D-20230411	Total/NA	Water	9056A	
280-174957-6	MW-105S-20230411	Total/NA	Water	9056A	
MB 280-608624/47	Method Blank	Total/NA	Water	9056A	
MB 280-608624/6	Method Blank	Total/NA	Water	9056A	
LCS 280-608624/4	Lab Control Sample	Total/NA	Water	9056A	
LCS 280-608624/45	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-608624/46	Lab Control Sample Dup	Total/NA	Water	9056A	
LCSD 280-608624/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-608624/3	Lab Control Sample	Total/NA	Water	9056A	
280-174957-5 MS	MW-105D-20230411	Total/NA	Water	9056A	
280-174957-5 MSD	MW-105D-20230411	Total/NA	Water	9056A	
280-174957-5 DU	MW-105D-20230411	Total/NA	Water	9056A	

Analysis Batch: 608625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-2	MW-124-20230412	Total/NA	Water	9056A	
280-174957-2	MW-124-20230412	Total/NA	Water	9056A	
280-174957-3	MW-124-Q-20230412	Total/NA	Water	9056A	
280-174957-3	MW-124-Q-20230412	Total/NA	Water	9056A	
280-174957-4	RW-15-20230411	Total/NA	Water	9056A	
280-174957-5	MW-105D-20230411	Total/NA	Water	9056A	
280-174957-6	MW-105S-20230411	Total/NA	Water	9056A	
280-174957-6	MW-105S-20230411	Total/NA	Water	9056A	
MB 280-608625/47	Method Blank	Total/NA	Water	9056A	
MB 280-608625/6	Method Blank	Total/NA	Water	9056A	
LCS 280-608625/4	Lab Control Sample	Total/NA	Water	9056A	
LCS 280-608625/45	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-608625/46	Lab Control Sample Dup	Total/NA	Water	9056A	
LCSD 280-608625/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-608625/3	Lab Control Sample	Total/NA	Water	9056A	
280-174957-5 MS	MW-105D-20230411	Total/NA	Water	9056A	
280-174957-5 MSD	MW-105D-20230411	Total/NA	Water	9056A	
280-174957-5 DU	MW-105D-20230411	Total/NA	Water	9056A	

General Chemistry

Analysis Batch: 608788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-6	MW-105S-20230411	Total/NA	Water	9056A	
MB 280-608788/6	Method Blank	Total/NA	Water	9056A	
LCS 280-608788/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-608788/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-608788/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 608789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-6	MW-105S-20230411	Total/NA	Water	9056A	
MB 280-608789/6	Method Blank	Total/NA	Water	9056A	
LCS 280-608789/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-608789/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-608789/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 609693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-2	MW-124-20230412	Total/NA	Water	9060A	
280-174957-3	MW-124-Q-20230412	Total/NA	Water	9060A	
280-174957-4	RW-15-20230411	Total/NA	Water	9060A	
280-174957-5	MW-105D-20230411	Total/NA	Water	9060A	
280-174957-6	MW-105S-20230411	Total/NA	Water	9060A	
MB 280-609693/4	Method Blank	Total/NA	Water	9060A	
LCS 280-609693/3	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 610429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-3	MW-124-Q-20230412	Total/NA	Water	9056A	
280-174957-4	RW-15-20230411	Total/NA	Water	9056A	
280-174957-5	MW-105D-20230411	Total/NA	Water	9056A	
MB 280-610429/6	Method Blank	Total/NA	Water	9056A	
LCS 280-610429/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-610429/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-610429/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 610539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-174957-2	MW-124-20230412	Total/NA	Water	9056A	
MB 280-610539/6	Method Blank	Total/NA	Water	9056A	
LCS 280-610539/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-610539/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-610539/3	Lab Control Sample	Total/NA	Water	9056A	

Client Sample ID: TB-04-20230412
Lab Sample ID: 280-174957-1
Date Collected: 04/12/23 14:10
Matrix: Water
Date Received: 04/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	609946	04/25/23 09:46	MD	EET DEN

Client Sample ID: MW-124-20230412
Lab Sample ID: 280-174957-2
Date Collected: 04/12/23 09:50
Matrix: Water
Date Received: 04/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		2	5 mL	5 mL	609946	04/25/23 14:21	MD	EET DEN
Total/NA	Analysis	RSK-175		1	18 mL	18 mL	609196	04/19/23 03:12	JPH	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608688	04/14/23 14:30	LJS	EET DEN
Dissolved	Analysis	6020B		1			609048	04/17/23 16:18	LMT	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608624	04/13/23 18:06	EJS	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608625	04/13/23 18:06	EJS	EET DEN
Total/NA	Analysis	9056A		2	5 mL	5 mL	608624	04/13/23 18:22	EJS	EET DEN
Total/NA	Analysis	9056A		2	5 mL	5 mL	608625	04/13/23 18:22	EJS	EET DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	610539	04/28/23 23:03	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	609693	04/20/23 19:56	ABW	EET DEN

Client Sample ID: MW-124-Q-20230412
Lab Sample ID: 280-174957-3
Date Collected: 04/12/23 10:00
Matrix: Water
Date Received: 04/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		2	5 mL	5 mL	609946	04/25/23 14:42	MD	EET DEN
Total/NA	Analysis	RSK-175		1	18 mL	18 mL	609196	04/19/23 02:59	JPH	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608688	04/14/23 14:30	LJS	EET DEN
Dissolved	Analysis	6020B		1			609048	04/17/23 16:39	LMT	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608624	04/13/23 20:13	EJS	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608625	04/13/23 20:13	EJS	EET DEN
Total/NA	Analysis	9056A		2	5 mL	5 mL	608624	04/13/23 21:02	EJS	EET DEN
Total/NA	Analysis	9056A		2	5 mL	5 mL	608625	04/13/23 21:02	EJS	EET DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	610429	04/27/23 16:55	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	609693	04/20/23 20:12	ABW	EET DEN

Client Sample ID: RW-15-20230411
Lab Sample ID: 280-174957-4
Date Collected: 04/11/23 16:30
Matrix: Water
Date Received: 04/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	608688	04/14/23 14:30	LJS	EET DEN
Dissolved	Analysis	6020B		1			609048	04/17/23 16:43	LMT	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608624	04/14/23 03:42	EJS	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608625	04/14/23 03:42	EJS	EET DEN

Lab Chronicle

Client: CDM Smith Inc
Job ID: 280-174957-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID: RW-15-20230411
Lab Sample ID: 280-174957-4
Date Collected: 04/11/23 16:30
Matrix: Water
Date Received: 04/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	5 mL	5 mL	610429	04/27/23 17:07	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	609693	04/20/23 20:59	ABW	EET DEN

Client Sample ID: MW-105D-20230411
Lab Sample ID: 280-174957-5
Date Collected: 04/11/23 16:00
Matrix: Water
Date Received: 04/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		4	5 mL	5 mL	609068	04/18/23 18:01	MD	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608688	04/14/23 14:30	LJS	EET DEN
Dissolved	Analysis	6020B		1			609048	04/17/23 16:46	LMT	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608624	04/14/23 05:17	EJS	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608625	04/14/23 05:17	EJS	EET DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	610429	04/27/23 17:19	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	609693	04/20/23 21:16	ABW	EET DEN

Client Sample ID: MW-105S-20230411
Lab Sample ID: 280-174957-6
Date Collected: 04/11/23 13:30
Matrix: Water
Date Received: 04/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	609068	04/18/23 13:44	MD	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608688	04/14/23 14:30	LJS	EET DEN
Dissolved	Analysis	6020B		1			609048	04/17/23 16:50	LMT	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608624	04/14/23 04:46	EJS	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	608625	04/14/23 04:46	EJS	EET DEN
Total/NA	Analysis	9056A		2	5 mL	5 mL	608625	04/14/23 05:02	EJS	EET DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	608788	04/14/23 19:20	EJS	EET DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	608789	04/14/23 19:20	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	609693	04/20/23 21:32	ABW	EET DEN

Client Sample ID: EB-01-20230411
Lab Sample ID: 280-174957-7
Date Collected: 04/11/23 15:45
Matrix: Water
Date Received: 04/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	609932	04/24/23 22:37	BMJ	EET DEN

Laboratory References:
EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: CDM Smith Inc
Job ID: 280-174957-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Laboratory: Eurofins Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4025-019	06-26-23

Method Summary

Client: CDM Smith Inc
Job ID: 280-174957-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET DEN
RSK-175	Dissolved Gases (GC)	RSK	EET DEN
6020B	Metals (ICP/MS)	SW846	EET DEN
9056A	Anions, Ion Chromatography	SW846	EET DEN
9060A	Organic Carbon, Total (TOC)	SW846	EET DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET DEN
5030C	Purge and Trap	SW846	EET DEN

Protocol References:

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: CDM Smith Inc
Job ID: 280-174957-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-174957-1	TB-04-20230412	Water	04/12/23 14:10	04/13/23 09:30
280-174957-2	MW-124-20230412	Water	04/12/23 09:50	04/13/23 09:30
280-174957-3	MW-124-Q-20230412	Water	04/12/23 10:00	04/13/23 09:30
280-174957-4	RW-15-20230411	Water	04/11/23 16:30	04/13/23 09:30
280-174957-5	MW-105D-20230411	Water	04/11/23 16:00	04/13/23 09:30
280-174957-6	MW-105S-20230411	Water	04/11/23 13:30	04/13/23 09:30
280-174957-7	EB-01-20230411	Water	04/11/23 15:45	04/13/23 09:30

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_MS11 Analysis Batch Number: 608560

Lab Sample ID: STD 280-608560/11 IC Client Sample ID:

Date Analyzed: 04/13/23 14:21 Lab File ID: ms11_5233.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluorobenzene	5.08	Assign Peak	RWB2	04/13/23 18:13

Lab Sample ID: STD 280-608560/12 IC Client Sample ID:

Date Analyzed: 04/13/23 14:43 Lab File ID: ms11_5234.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluorobenzene	5.08	Assign Peak	RWB2	04/13/23 18:13

Lab Sample ID: STD 280-608560/13 IC Client Sample ID:

Date Analyzed: 04/13/23 15:04 Lab File ID: ms11_5235.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluorobenzene	5.08	Assign Peak	RWB2	04/13/23 18:13

Lab Sample ID: STD 280-608560/15 IC Client Sample ID:

Date Analyzed: 04/13/23 15:47 Lab File ID: ms11_5237.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichloropropane	8.82	Assign Peak	RWB2	04/13/23 18:10

Lab Sample ID: STD 280-608560/16 IC Client Sample ID:

Date Analyzed: 04/13/23 16:08 Lab File ID: ms11_5238.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichloropropane	8.82	Assign Peak	RWB2	04/13/23 18:09

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_MS11 Analysis Batch Number: 608560

Lab Sample ID: STD 280-608560/17 IC Client Sample ID:

Date Analyzed: 04/13/23 16:30 Lab File ID: ms11_5239.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichloropropane	8.82	Assign Peak	RWB2	04/13/23 18:09

Lab Sample ID: STD 280-608560/18 IC Client Sample ID:

Date Analyzed: 04/13/23 16:51 Lab File ID: ms11_5240.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	5.60	Assign Peak	BX8N	04/13/23 21:56
1,3-Dichloropropane	6.86	Wrong peak	BX8N	04/13/23 21:56
1,2,3-Trichloropropane	8.83	Assign Peak	BX8N	04/13/23 21:56
Hexachlorobutadiene	11.87	Assign Peak	BX8N	04/13/23 21:56

Lab Sample ID: STD 280-608560/19 IC Client Sample ID:

Date Analyzed: 04/13/23 17:13 Lab File ID: ms11_5241.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	4.31	Peak Tail	BX8N	04/13/23 21:51
1,1-Dichloropropene	4.72	Wrong peak	BX8N	04/13/23 21:52
Tetrachloroethene	6.81	Assign Peak	BX8N	04/13/23 21:54
1,3-Dichloropropane	6.86	Wrong peak	BX8N	04/13/23 21:54
Hexachlorobutadiene	11.87	Assign Peak	BX8N	04/13/23 21:55

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_MS11 Analysis Batch Number: 609068

Lab Sample ID: 280-174957-6 Client Sample ID: MW-105S-20230411

Date Analyzed: 04/18/23 13:44 Lab File ID: ms11_5436.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	4.23	Invalid Compound ID	AK2J	04/18/23 22:33
1,2-Dichloroethane		Invalid Compound ID	AK2J	04/18/23 22:33
1,4-Dichlorobenzene		Invalid Compound ID	AK2J	04/18/23 22:33
Vinyl acetate		Invalid Compound ID	AK2J	04/18/23 22:32

Lab Sample ID: 280-174957-5 Client Sample ID: MW-105D-20230411

Date Analyzed: 04/18/23 18:01 Lab File ID: ms11_5448.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	4.23	Invalid Compound ID	AK2J	04/18/23 22:46
Chloroform	4.47	Invalid Compound ID	Q2ZS	11/21/23 11:59
Isobutyl alcohol		Invalid Compound ID	AK2J	04/18/23 22:46
Trichlorofluoromethane		Invalid Compound ID	AK2J	04/18/23 22:46
Vinyl chloride		Invalid Compound ID	AK2J	04/18/23 22:45

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 590907

Lab Sample ID: STD010 280-590907/23 IC Client Sample ID:

Date Analyzed: 10/22/22 15:19 Lab File ID: X43673.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD020 280-590907/24 IC Client Sample ID:

Date Analyzed: 10/22/22 15:40 Lab File ID: X43674.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD050 280-590907/25 IC Client Sample ID:

Date Analyzed: 10/22/22 16:01 Lab File ID: X43675.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD10 280-590907/26 IC Client Sample ID:

Date Analyzed: 10/22/22 16:21 Lab File ID: X43676.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD50 280-590907/27 IC Client Sample ID:

Date Analyzed: 10/22/22 16:42 Lab File ID: X43677.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.54	Peak assignment corrected	V1QB	10/23/22 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 590907

Lab Sample ID: STD100 280-590907/28 IC Client Sample ID:

Date Analyzed: 10/22/22 17:02 Lab File ID: X43678.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.54	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD200 280-590907/29 IC Client Sample ID:

Date Analyzed: 10/22/22 17:23 Lab File ID: X43679.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.54	Peak assignment corrected	V1QB	10/23/22 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 607881

Lab Sample ID: STD 280-607881/19 IC Client Sample ID:

Date Analyzed: 04/07/23 03:14 Lab File ID: X502127.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Iodomethane	3.06	Assign Peak	BX8N	04/10/23 10:13
Toluene	6.37	Assign Peak	BX8N	04/10/23 10:14
trans-1,3-Dichloropropene	6.54	Assign Peak	BX8N	04/10/23 10:14

Lab Sample ID: STD 280-607881/18 IC Client Sample ID:

Date Analyzed: 04/07/23 03:34 Lab File ID: X502128.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	5.59	Assign Peak	BX8N	04/10/23 10:15

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 609932

Lab Sample ID: MB 280-609932/7 Client Sample ID:

Date Analyzed: 04/24/23 20:30 Lab File ID: X502755.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dibromo-3-Chloropropane		Invalid Compound ID	V8PV	04/24/23 21:21
Acetonitrile		Invalid Compound ID	V8PV	04/24/23 21:21
Bromomethane		Invalid Compound ID	V8PV	04/24/23 21:21
Isobutyl alcohol		Invalid Compound ID	V8PV	04/24/23 21:21

Lab Sample ID: 280-174957-7 Client Sample ID: EB-01-20230411

Date Analyzed: 04/24/23 22:37 Lab File ID: X502759.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dibromo-3-Chloropropane		Invalid Compound ID	BX8N	04/25/23 06:55
Acetonitrile		Invalid Compound ID	BX8N	04/25/23 06:55
Isobutyl alcohol		Invalid Compound ID	BX8N	04/25/23 06:55

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 609946

Lab Sample ID: MB 280-609946/7 Client Sample ID:

Date Analyzed: 04/25/23 08:08 Lab File ID: X502783.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dibromo-3-Chloropropane		Invalid Compound ID	BX8N	04/25/23 13:53
Bromomethane		Invalid Compound ID	BX8N	04/25/23 13:53
Isobutyl alcohol		Invalid Compound ID	BX8N	04/25/23 13:53

Lab Sample ID: 280-174957-1 Client Sample ID: TB-04-20230412

Date Analyzed: 04/25/23 09:46 Lab File ID: X502787.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane		Invalid Compound ID	AK2J	04/25/23 22:26
Isobutyl alcohol		Invalid Compound ID	AK2J	04/25/23 22:26

Lab Sample ID: 280-174957-2 Client Sample ID: MW-124-20230412

Date Analyzed: 04/25/23 14:21 Lab File ID: X502799.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	4.21	Invalid Compound ID	AK2J	04/25/23 22:48
1,2-Dichloroethane		Invalid Compound ID	AK2J	04/25/23 22:49
Bromomethane		Invalid Compound ID	AK2J	04/25/23 22:48
Chlorobenzene		Invalid Compound ID	AK2J	04/25/23 22:49
Isobutyl alcohol		Invalid Compound ID	AK2J	04/25/23 22:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 609946

Lab Sample ID: 280-174957-3 Client Sample ID: MW-124-Q-20230412

Date Analyzed: 04/25/23 14:42 Lab File ID: X502800.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	4.21	Invalid Compound ID	AK2J	04/25/23 22:50
Chlorobenzene		Invalid Compound ID	AK2J	04/25/23 22:50
Isobutyl alcohol		Invalid Compound ID	AK2J	04/25/23 22:50

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 594440

Lab Sample ID: IC 280-594440/4 Client Sample ID:

Date Analyzed: 11/22/22 16:02 Lab File ID: J1044.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.21	Baseline Smoothing	DJQ7	11/22/22 16:54
Ethane	1.46	Baseline Smoothing	DJQ7	11/22/22 16:53
Ethene	1.75	Baseline Smoothing	DJQ7	11/22/22 16:54
Propane	2.51	Assign Peak	DJQ7	11/22/22 16:58
Acetylene	4.13	Assign Peak	DJQ7	11/22/22 17:04
Butane	4.41	Assign Peak	DJQ7	11/22/22 17:05
isobutylene	5.33	Assign Peak	DJQ7	11/22/22 17:06

Lab Sample ID: IC 280-594440/4 Client Sample ID:

Date Analyzed: 11/22/22 16:02 Lab File ID: J1044.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.64	Baseline Smoothing	DJQ7	11/22/22 17:03
Ethene	2.57	Assign Peak	DJQ7	11/22/22 17:01
Acetylene	2.73	Assign Peak	DJQ7	11/22/22 17:01
Ethane	2.99	Baseline Smoothing	DJQ7	11/22/22 17:02
Propane	4.91	Assign Peak	DJQ7	11/22/22 17:00
isobutylene	6.26	Assign Peak	DJQ7	11/22/22 17:08
Butane	6.42	Assign Peak	DJQ7	11/22/22 17:09

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 594440

Lab Sample ID: IC 280-594440/5 Client Sample ID:

Date Analyzed: 11/22/22 16:16 Lab File ID: J1045.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.21	Baseline Smoothing	DJQ7	11/22/22 17:30
Ethane	1.46	Baseline Smoothing	DJQ7	11/22/22 17:30
Ethene	1.75	Baseline Smoothing	DJQ7	11/22/22 17:31
Propane	2.51	Assign Peak	DJQ7	11/22/22 17:33
Acetylene	4.13	Assign Peak	DJQ7	11/22/22 17:39
Butane	4.41	Assign Peak	DJQ7	11/22/22 17:44
isobutylene	5.33	Assign Peak	DJQ7	11/22/22 17:42

Lab Sample ID: IC 280-594440/5 Client Sample ID:

Date Analyzed: 11/22/22 16:16 Lab File ID: J1045.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethene	2.58	Baseline Smoothing	DJQ7	11/22/22 17:31
Acetylene	2.73	Assign Peak	DJQ7	11/22/22 17:39
Ethane	3.00	Baseline Smoothing	DJQ7	11/22/22 17:32
Propane	4.92	Assign Peak	DJQ7	11/22/22 17:34
isobutylene	6.26	Assign Peak	DJQ7	11/22/22 17:43
Butane	6.42	Assign Peak	DJQ7	11/22/22 17:43

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 594440

Lab Sample ID: IC 280-594440/6 Client Sample ID:

Date Analyzed: 11/22/22 16:30 Lab File ID: J1046.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.21	Baseline Smoothing	DJQ7	11/22/22 17:48
Ethane	1.46	Baseline Smoothing	DJQ7	11/22/22 17:48
Ethene	1.75	Baseline Smoothing	DJQ7	11/22/22 17:48
Propane	2.51	Assign Peak	DJQ7	11/22/22 17:49
Acetylene	4.13	Assign Peak	DJQ7	11/22/22 17:52
Butane	4.41	Assign Peak	DJQ7	11/22/22 18:01
isobutylene	5.33	Assign Peak	DJQ7	11/22/22 17:58

Lab Sample ID: IC 280-594440/6 Client Sample ID:

Date Analyzed: 11/22/22 16:30 Lab File ID: J1046.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.65	Baseline Smoothing	DJQ7	11/22/22 17:47
Acetylene	2.73	Assign Peak	DJQ7	11/22/22 17:52
Propane	4.92	Assign Peak	DJQ7	11/22/22 17:51
isobutylene	6.26	Assign Peak	DJQ7	11/22/22 17:59
Butane	6.42	Assign Peak	DJQ7	11/22/22 18:02

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 594440

Lab Sample ID: IC 280-594440/7 Client Sample ID:

Date Analyzed: 11/22/22 16:44 Lab File ID: J1047.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.21	Baseline Smoothing	DJQ7	11/22/22 18:11
Ethane	1.46	Baseline Smoothing	DJQ7	11/22/22 18:13
Ethene	1.75	Baseline Smoothing	DJQ7	11/22/22 18:14
Propane	2.51	Assign Peak	DJQ7	11/22/22 18:15
Acetylene	4.13	Assign Peak	DJQ7	11/22/22 18:16
Butane	4.41	Assign Peak	DJQ7	11/22/22 18:17
isobutylene	5.33	Assign Peak	DJQ7	11/22/22 18:18

Lab Sample ID: IC 280-594440/7 Client Sample ID:

Date Analyzed: 11/22/22 16:44 Lab File ID: J1047.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.64	Baseline Smoothing	DJQ7	11/22/22 18:12
Acetylene	2.73	Assign Peak	DJQ7	11/22/22 18:16
Ethane	2.99	Baseline Smoothing	DJQ7	11/22/22 18:13
Propane	4.91	Assign Peak	DJQ7	11/22/22 18:16
isobutylene	6.26	Assign Peak	DJQ7	11/22/22 18:19
Butane	6.42	Assign Peak	DJQ7	11/22/22 18:18

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 594440

Lab Sample ID: IC 280-594440/8 Client Sample ID:

Date Analyzed: 11/22/22 16:57 Lab File ID: J1048.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.21	Baseline Smoothing	DJQ7	11/22/22 19:04
Ethane	1.46	Baseline Smoothing	DJQ7	11/22/22 19:05
Ethene	1.75	Baseline Smoothing	DJQ7	11/22/22 19:06
Propane	2.51	Assign Peak	DJQ7	11/22/22 19:07
Acetylene	4.12	Assign Peak	DJQ7	11/22/22 19:10
Butane	4.41	Assign Peak	DJQ7	11/22/22 19:11
isobutylene	5.32	Assign Peak	DJQ7	11/22/22 19:11

Lab Sample ID: IC 280-594440/8 Client Sample ID:

Date Analyzed: 11/22/22 16:57 Lab File ID: J1048.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.64	Baseline Smoothing	DJQ7	11/22/22 19:05
Acetylene	2.72	Assign Peak	DJQ7	11/22/22 19:10
Ethane	2.99	Baseline Smoothing	DJQ7	11/22/22 19:06
Propane	4.91	Assign Peak	DJQ7	11/22/22 19:08
isobutylene	6.26	Assign Peak	DJQ7	11/22/22 19:13
Butane	6.42	Assign Peak	DJQ7	11/22/22 19:14

Lab Sample ID: IC 280-594440/9 Client Sample ID:

Date Analyzed: 11/22/22 17:11 Lab File ID: J1049.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.21	Baseline Smoothing	DJQ7	11/22/22 19:15
Ethane	1.46	Baseline Smoothing	DJQ7	11/22/22 19:16
Ethene	1.75	Baseline Smoothing	DJQ7	11/22/22 19:17
isobutylene	5.32	Assign Peak	DJQ7	11/22/22 19:18

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 594440

Lab Sample ID: IC 280-594440/9 Client Sample ID:

Date Analyzed: 11/22/22 17:11 Lab File ID: J1049.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propane	4.91	Split Peak	DJQ7	11/22/22 19:17
isobutylene	6.26	Split Peak	DJQ7	11/22/22 19:18

Lab Sample ID: IC 280-594440/10 Client Sample ID:

Date Analyzed: 11/22/22 17:25 Lab File ID: J1050.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.64	Baseline Smoothing	DJQ7	11/22/22 18:04

Lab Sample ID: IC 280-594440/12 Client Sample ID:

Date Analyzed: 11/22/22 17:53 Lab File ID: J1052.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.64	Column bleed	DJQ7	11/22/22 19:20

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 609196

Lab Sample ID: CCVRT 280-609196/2 Client Sample ID:

Date Analyzed: 04/18/23 17:50 Lab File ID: J004116.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.22	Baseline Smoothing	DJQ7	04/18/23 18:29
Ethane	1.47	Baseline Smoothing	DJQ7	04/18/23 18:36
Ethene	1.74	Baseline Smoothing	DJQ7	04/18/23 18:36
Propane	2.48	Sample matrix interference	DJQ7	04/18/23 18:36
Acetylene	4.04	Sample matrix interference	DJQ7	04/18/23 18:37
Butane	4.35	Sample matrix interference	DJQ7	04/18/23 18:37
isobutylene	5.27	Sample matrix interference	DJQ7	04/18/23 18:38

Lab Sample ID: CCVRT 280-609196/2 Client Sample ID:

Date Analyzed: 04/18/23 17:50 Lab File ID: J004116.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propane	4.93	Sample matrix interference	DJQ7	04/18/23 18:36
isobutylene	6.27	Sample matrix interference	DJQ7	04/18/23 18:38
Butane	6.43	Sample matrix interference	DJQ7	04/18/23 18:38

Lab Sample ID: LCS 280-609196/3 Client Sample ID:

Date Analyzed: 04/18/23 18:04 Lab File ID: J004117.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.22	Baseline Smoothing	DJQ7	04/18/23 18:20
Ethane	1.47	Baseline Smoothing	DJQ7	04/18/23 18:20
Ethene	1.75	Baseline Smoothing	DJQ7	04/18/23 18:20
Propane	2.48	Sample matrix interference	DJQ7	04/18/23 18:23
Acetylene	4.08	Sample matrix interference	DJQ7	04/18/23 18:24

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 609196

Lab Sample ID: LCSD 280-609196/4 Client Sample ID:

Date Analyzed: 04/18/23 18:17 Lab File ID: J004118.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.22	Baseline Smoothing	DJQ7	04/18/23 18:46
Ethane	1.47	Baseline Smoothing	DJQ7	04/18/23 18:46
Ethene	1.75	Baseline Smoothing	DJQ7	04/18/23 18:46
Propane	2.50	Baseline Smoothing	DJQ7	04/18/23 18:47
Acetylene	4.10	Baseline Smoothing	DJQ7	04/18/23 18:47

Lab Sample ID: LCSD 280-609196/4 Client Sample ID:

Date Analyzed: 04/18/23 18:17 Lab File ID: J004118.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propane	4.93	Baseline Smoothing	DJQ7	04/18/23 18:47

Lab Sample ID: CCV 280-609196/19 Client Sample ID:

Date Analyzed: 04/19/23 01:12 Lab File ID: J004137.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.23	Baseline Smoothing	DJQ7	04/20/23 01:46
Ethane	1.48	Baseline Smoothing	DJQ7	04/20/23 01:46
Ethene	1.78	Baseline Smoothing	DJQ7	04/20/23 01:46
Propane	2.54	Peak not integrated	DJQ7	04/20/23 01:47
Acetylene	4.15	Peak not integrated	DJQ7	04/20/23 01:48
Butane	4.43	Peak not integrated	DJQ7	04/20/23 01:48
isobutylene	5.34	Sample matrix interference	DJQ7	04/20/23 01:50

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 609196

Lab Sample ID: CCV 280-609196/19 Client Sample ID:

Date Analyzed: 04/19/23 01:12 Lab File ID: J004137.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetylene	2.76	Peak not integrated	DJQ7	04/20/23 01:48
Propane	4.93	Peak not integrated	DJQ7	04/20/23 01:47
Butane	6.43	Peak not integrated	DJQ7	04/20/23 01:49

Lab Sample ID: 280-174957-3 Client Sample ID: MW-124-Q-20230412

Date Analyzed: 04/19/23 02:59 Lab File ID: J004145.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.23	Baseline Smoothing	DJQ7	04/20/23 02:02
Ethane	1.48	Peak not integrated	DJQ7	04/20/23 02:02
Ethene	1.76	Sample matrix interference	DJQ7	04/20/23 02:01
Propane	2.51	Sample matrix interference	DJQ7	04/20/23 02:01

Lab Sample ID: 280-174957-3 Client Sample ID: MW-124-Q-20230412

Date Analyzed: 04/19/23 02:59 Lab File ID: J004145.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.67	Baseline Smoothing	DJQ7	04/20/23 02:02
Ethene	2.60	Sample matrix interference	DJQ7	04/20/23 02:01
Ethane	3.02	Peak not integrated	DJQ7	04/20/23 02:03
Propane	4.93	Sample matrix interference	DJQ7	04/20/23 02:01

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 609196

Lab Sample ID: 280-174957-2 Client Sample ID: MW-124-20230412

Date Analyzed: 04/19/23 03:12 Lab File ID: J004146.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.23	Sample matrix interference	DJQ7	04/20/23 02:04
Ethane	1.48	Peak not integrated	DJQ7	04/20/23 02:06
Propane	2.51	Sample matrix interference	DJQ7	04/20/23 02:06

Lab Sample ID: 280-174957-2 Client Sample ID: MW-124-20230412

Date Analyzed: 04/19/23 03:12 Lab File ID: J004146.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.67	Sample matrix interference	DJQ7	04/20/23 02:04
Ethane	3.02	Peak not integrated	DJQ7	04/20/23 02:05
Propane	4.93	Sample matrix interference	DJQ7	04/20/23 02:06

Lab Sample ID: CCV 280-609196/33 Client Sample ID:

Date Analyzed: 04/19/23 04:20 Lab File ID: J004151.D GC Column: Rt-Alumina K ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.23	Baseline Smoothing	DJQ7	04/20/23 02:20
Ethane	1.48	Baseline Smoothing	DJQ7	04/20/23 02:21
Ethene	1.78	Baseline Smoothing	DJQ7	04/20/23 02:21
Propane	2.54	Peak not integrated	DJQ7	04/20/23 02:21
Acetylene	4.15	Peak not integrated	DJQ7	04/20/23 02:21
Butane	4.43	Peak not integrated	DJQ7	04/20/23 02:22

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 609196

Lab Sample ID: CCV 280-609196/33 Client Sample ID:

Date Analyzed: 04/19/23 04:20 Lab File ID: J004151.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetylene	2.76	Peak not integrated	DJQ7	04/20/23 02:21
Propane	4.93	Peak not integrated	DJQ7	04/20/23 02:21
isobutylene	6.27	Baseline Smoothing	DJQ7	04/20/23 02:22
Butane	6.43	Peak not integrated	DJQ7	04/20/23 02:22

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom13 Analysis Batch Number: 603591

Lab Sample ID: STD 280-603591/2 IC Client Sample ID:

Date Analyzed: 02/28/23 17:21 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrate as N	7.13	Baseline Smoothing	XAY4	03/01/23 10:08

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom13 Analysis Batch Number: 603592

Lab Sample ID: STD 280-603592/1 IC Client Sample ID:

Date Analyzed: 02/28/23 17:05 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.34	Baseline Smoothing	XAY4	03/01/23 10:08
Sulfate	10.83	Baseline Smoothing	XAY4	03/01/23 10:08

Lab Sample ID: STD 280-603592/2 IC Client Sample ID:

Date Analyzed: 02/28/23 17:21 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	6.35	Baseline Smoothing	XAY4	03/01/23 10:08
Sulfate	10.82	Baseline Smoothing	XAY4	03/01/23 10:08

Lab Sample ID: STD 280-603592/3 IC Client Sample ID:

Date Analyzed: 02/28/23 17:36 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	6.34	Baseline Smoothing	XAY4	03/01/23 10:09
Sulfate	10.81	Baseline Smoothing	XAY4	03/01/23 10:09

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom13 Analysis Batch Number: 608625

Lab Sample ID: CCB 280-608625/2 Client Sample ID:

Date Analyzed: 04/13/23 15:55 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.27	Baseline Smoothing	XAY4	04/14/23 10:46

Lab Sample ID: MRL 280-608625/3 Client Sample ID:

Date Analyzed: 04/13/23 16:11 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.16	Baseline Smoothing	XAY4	04/14/23 10:46

Lab Sample ID: MB 280-608625/6 Client Sample ID:

Date Analyzed: 04/13/23 17:34 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.31	Baseline Smoothing	XAY4	04/14/23 10:45

Lab Sample ID: CCB 280-608625/18 Client Sample ID:

Date Analyzed: 04/13/23 20:46 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.29	Baseline Smoothing	XAY4	04/14/23 10:47

Lab Sample ID: CCB 280-608625/30 Client Sample ID:

Date Analyzed: 04/13/23 23:58 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.29	Baseline Smoothing	XAY4	04/14/23 10:48

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom13 Analysis Batch Number: 608625

Lab Sample ID: CCB 280-608625/42 Client Sample ID:

Date Analyzed: 04/14/23 03:10 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.28	Baseline Smoothing	XAY4	04/14/23 10:48

Lab Sample ID: MB 280-608625/47 Client Sample ID:

Date Analyzed: 04/14/23 04:30 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.29	Baseline Smoothing	XAY4	04/14/23 10:49

Lab Sample ID: CCB 280-608625/54 Client Sample ID:

Date Analyzed: 04/14/23 06:21 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.26	Baseline Smoothing	XAY4	04/14/23 10:49

Lab Sample ID: CCB 280-608625/59 Client Sample ID:

Date Analyzed: 04/14/23 07:41 Lab File ID: Info 2_DENPC584_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.29	Baseline Smoothing	XAY4	04/14/23 10:49

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 607365

Lab Sample ID: STD 280-607365/2 IC Client Sample ID:

Date Analyzed: 04/03/23 16:54 Lab File ID: 280-0120083-002_04_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	3.23	Baseline Smoothing	XAY4	04/04/23 10:09

Lab Sample ID: STD 280-607365/3 IC Client Sample ID:

Date Analyzed: 04/03/23 17:06 Lab File ID: 280-0120083-003_05_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	3.23	Baseline Smoothing	XAY4	04/04/23 10:09

Lab Sample ID: STD 280-607365/4 IC Client Sample ID:

Date Analyzed: 04/03/23 17:18 Lab File ID: 280-0120083-004_06_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	3.23	Baseline Smoothing	XAY4	04/04/23 10:10

Lab Sample ID: STD 280-607365/5 IC Client Sample ID:

Date Analyzed: 04/03/23 17:30 Lab File ID: 280-0120083-005_07_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	3.23	Baseline Smoothing	XAY4	04/04/23 10:10

Lab Sample ID: STD 280-607365/6 IC Client Sample ID:

Date Analyzed: 04/03/23 17:42 Lab File ID: 280-0120083-006_08_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	3.23	Baseline Smoothing	XAY4	04/04/23 10:10

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 607366

Lab Sample ID: STD 280-607366/1 IC Client Sample ID:

Date Analyzed: 04/03/23 16:42 Lab File ID: 280-0120028-002280-01200 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:06
Sulfate	6.54	Baseline Smoothing	XAY4	04/04/23 10:07

Lab Sample ID: STD 280-607366/2 IC Client Sample ID:

Date Analyzed: 04/03/23 16:54 Lab File ID: 280-0120083-002_04_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.93	Baseline Smoothing	XAY4	04/04/23 10:07
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:09

Lab Sample ID: STD 280-607366/3 IC Client Sample ID:

Date Analyzed: 04/03/23 17:06 Lab File ID: 280-0120083-003_05_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:07
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:09

Lab Sample ID: STD 280-607366/4 IC Client Sample ID:

Date Analyzed: 04/03/23 17:18 Lab File ID: 280-0120083-004_06_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:07
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:10

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 607366

Lab Sample ID: STD 280-607366/5 IC Client Sample ID:

Date Analyzed: 04/03/23 17:30 Lab File ID: 280-0120083-005_07_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:08
Chloride	2.71	Baseline Smoothing	XAY4	04/04/23 10:10

Lab Sample ID: STD 280-607366/6 IC Client Sample ID:

Date Analyzed: 04/03/23 17:42 Lab File ID: 280-0120083-006_08_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:08
Chloride	2.72	Baseline Smoothing	XAY4	04/04/23 10:10

Lab Sample ID: ICV 280-607366/7 Client Sample ID:

Date Analyzed: 04/03/23 17:54 Lab File ID: 280-0120083-007_09_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:08
Chloride	2.72	Baseline Smoothing	XAY4	04/04/23 10:13

Lab Sample ID: ICB 280-607366/8 Client Sample ID:

Date Analyzed: 04/03/23 18:06 Lab File ID: 280-0120083-008_10_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.71	Baseline Smoothing	XAY4	04/04/23 11:51

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 608789

Lab Sample ID: CCV 280-608789/1 Client Sample ID:

Date Analyzed: 04/14/23 14:28 Lab File ID: 280-0120436-001_02_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	04/14/23 16:14
Chloride	2.70	Baseline Smoothing	XAY4	04/14/23 16:14
Bromide	3.81	Baseline Smoothing	XAY4	04/14/23 16:15

Lab Sample ID: CCB 280-608789/2 Client Sample ID:

Date Analyzed: 04/14/23 14:40 Lab File ID: 280-0120436-002_03_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

Lab Sample ID: MRL 280-608789/3 Client Sample ID:

Date Analyzed: 04/14/23 14:52 Lab File ID: 280-0120436-003_04_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.69	Baseline Smoothing	XAY4	04/17/23 10:04

Lab Sample ID: LCS 280-608789/4 Client Sample ID:

Date Analyzed: 04/14/23 15:04 Lab File ID: 280-0120436-004_05_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.70	Baseline Smoothing	XAY4	04/17/23 10:03

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 608789

Lab Sample ID: LCSD 280-608789/5 Client Sample ID:

Date Analyzed: 04/14/23 15:16 Lab File ID: 280-0120436-005_06_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.70	Baseline Smoothing	XAY4	04/17/23 10:03

Lab Sample ID: CCV 280-608789/17 Client Sample ID:

Date Analyzed: 04/14/23 17:44 Lab File ID: 280-0120436-017_18_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	04/17/23 10:05
Chloride	2.70	Baseline Smoothing	XAY4	04/17/23 10:01
Bromide	3.81	Baseline Smoothing	XAY4	04/17/23 10:05

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 610429

Lab Sample ID: CCV 280-610429/1 Client Sample ID:

Date Analyzed: 04/27/23 14:19 Lab File ID: 280-0120849-001_02_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	04/28/23 09:51
Chloride	2.68	Baseline Smoothing	XAY4	04/28/23 09:51

Lab Sample ID: CCB 280-610429/2 Client Sample ID:

Date Analyzed: 04/27/23 14:31 Lab File ID: 280-0120849-002_03_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

Lab Sample ID: MRL 280-610429/3 Client Sample ID:

Date Analyzed: 04/27/23 14:43 Lab File ID: 280-0120849-003_04_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.67	Baseline Smoothing	XAY4	04/28/23 10:03

Lab Sample ID: LCS 280-610429/4 Client Sample ID:

Date Analyzed: 04/27/23 14:55 Lab File ID: 280-0120849-004_05_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.68	Baseline Smoothing	XAY4	04/28/23 10:03

Lab Sample ID: LCSD 280-610429/5 Client Sample ID:

Date Analyzed: 04/27/23 15:07 Lab File ID: 280-0120849-005_06_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.68	Baseline Smoothing	XAY4	04/28/23 10:03

9056A

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 610429

Lab Sample ID: 280-174957-4 Client Sample ID: RW-15-20230411

Date Analyzed: 04/27/23 17:07 Lab File ID: 280-0120849-015_16_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.69	Baseline Smoothing	XAY4	04/28/23 09:50

Lab Sample ID: CCV 280-610429/17 Client Sample ID:

Date Analyzed: 04/27/23 17:31 Lab File ID: 280-0120849-017_18_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	04/28/23 09:49
Chloride	2.69	Baseline Smoothing	XAY4	04/28/23 09:48
Bromide	3.77	Baseline Smoothing	XAY4	04/28/23 09:49

Lab Sample ID: CCB 280-610429/18 Client Sample ID:

Date Analyzed: 04/27/23 17:43 Lab File ID: 280-0120849-018_19_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

Lab Sample ID: CCV 280-610429/29 Client Sample ID:

Date Analyzed: 04/28/23 10:16 Lab File ID: 280-0120849-029_30_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	04/28/23 13:58
Chloride	2.68	Baseline Smoothing	XAY4	04/28/23 13:58
Bromide	3.77	Baseline Smoothing	XAY4	04/28/23 14:03

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 610539

Lab Sample ID: CCV 280-610539/1 Client Sample ID:

Date Analyzed: 04/28/23 15:28 Lab File ID: 280-0120879-001_02_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 09:59
Chloride	2.69	Baseline Smoothing	XAY4	05/01/23 10:00

Lab Sample ID: MRL 280-610539/3 Client Sample ID:

Date Analyzed: 04/28/23 15:52 Lab File ID: 280-0120879-003_04_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 10:00

Lab Sample ID: LCS 280-610539/4 Client Sample ID:

Date Analyzed: 04/28/23 16:04 Lab File ID: 280-0120879-004_05_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.69	Baseline Smoothing	XAY4	05/01/23 10:00

Lab Sample ID: LCSD 280-610539/5 Client Sample ID:

Date Analyzed: 04/28/23 16:16 Lab File ID: 280-0120879-005_06_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.69	Baseline Smoothing	XAY4	05/01/23 10:01

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 610539

Lab Sample ID: CCV 280-610539/17 Client Sample ID:

Date Analyzed: 04/28/23 18:40 Lab File ID: 280-0120879-017_18_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	05/01/23 09:59
Chloride	2.69	Baseline Smoothing	XAY4	05/01/23 09:59

Lab Sample ID: CCB 280-610539/18 Client Sample ID:

Date Analyzed: 04/28/23 18:52 Lab File ID: 280-0120879-018_19_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

Lab Sample ID: CCV 280-610539/29 Client Sample ID:

Date Analyzed: 04/28/23 21:03 Lab File ID: 280-0120879-029_30_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	05/01/23 10:01
Chloride	2.69	Baseline Smoothing	XAY4	05/01/23 10:01

Lab Sample ID: CCB 280-610539/30 Client Sample ID:

Date Analyzed: 04/28/23 21:15 Lab File ID: 280-0120879-030_31_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 610539

Lab Sample ID: 280-174957-2 Client Sample ID: MW-124-20230412

Date Analyzed: 04/28/23 23:03 Lab File ID: 280-0120879-039_40_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 12:25

Lab Sample ID: CCV 280-610539/41 Client Sample ID:

Date Analyzed: 04/28/23 23:27 Lab File ID: 280-0120879-041_42_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 10:02
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 10:02

Lab Sample ID: CCV 280-610539/53 Client Sample ID:

Date Analyzed: 04/29/23 01:50 Lab File ID: 280-0120879-053_54_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 10:02
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 10:02

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
Cal Dil Std_00162	04/17/23	04/07/23	P&T Methanol, Lot ED137-US	100 uL	MV-Gas A_00149	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL
							2-Chloroethyl vinyl ether	5 ug/mL
					MV-MegaMainA_00086	5 uL	Acrolein	49.375 ug/mL
							2-Butanone (MEK)	20 ug/mL
							2-Hexanone	20 ug/mL
							4-Methyl-2-pentanone (MIBK)	20 ug/mL
							Acetone	20 ug/mL
							Vinyl acetate	10 ug/mL
							Cyclohexanone	150 ug/mL
							1,1,1,2-Tetrachloroethane	5 ug/mL
							1,1,1-Trichloroethane	5 ug/mL
							1,1,2,2-Tetrachloroethane	5 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	5 ug/mL
							1,1,2-Trichloroethane	5 ug/mL
							1,1-Dichloroethane	5 ug/mL
							1,1-Dichloroethene	5 ug/mL
							1,1-Dichloropropene	5 ug/mL
							1,2,3-Trichlorobenzene	5 ug/mL
							1,2,3-Trichloropropane	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2,4-Trimethylbenzene	5 ug/mL
							1,2-Dibromo-3-Chloropropane	5 ug/mL
							1,2-Dibromoethane	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Dichloroethane	5 ug/mL
							1,2-Dichloropropane	5 ug/mL
							1,3,5-Trimethylbenzene	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dichloropropane	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	100 ug/mL
							2,2-Dichloropropane	5 ug/mL
							2-Chlorotoluene	5 ug/mL
							2-Methyl-2-propanol	50 ug/mL
							4-Chlorotoluene	5 ug/mL
							4-Isopropyltoluene	5 ug/mL
							Acrylonitrile	50 ug/mL
							Allyl chloride	5 ug/mL
							Benzene	5 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromobenzene	5 ug/mL
							Bromoform	5 ug/mL
							Carbon disulfide	5 ug/mL
							Carbon tetrachloride	5 ug/mL
							Chlorobenzene	5 ug/mL
							Chlorobromomethane	5 ug/mL
							Chlorodibromomethane	5 ug/mL
							Chloroform	5 ug/mL
							cis-1,2-Dichloroethene	5 ug/mL
							cis-1,3-Dichloropropene	5 ug/mL
							Cyclohexane	5 ug/mL
							Dibromomethane	5 ug/mL
							Dichlorobromomethane	5 ug/mL
							Ethyl ether	5 ug/mL
							Ethyl methacrylate	5 ug/mL
							Ethylbenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexane	5 ug/mL
							Iodomethane	5 ug/mL
							Isobutyl alcohol	125 ug/mL
							Isopropylbenzene	5 ug/mL
							m-Xylene & p-Xylene	5 ug/mL
							Methyl acetate	10 ug/mL
							Methyl tert-butyl ether	5 ug/mL
							Methylcyclohexane	5 ug/mL
							Methylene Chloride	5 ug/mL
							n-Butylbenzene	5 ug/mL
							n-Heptane	5 ug/mL
							N-Propylbenzene	5 ug/mL
							Naphthalene	5 ug/mL
							o-Xylene	5 ug/mL
							sec-Butylbenzene	5 ug/mL
							Styrene	5 ug/mL
							tert-Butylbenzene	5 ug/mL
							Tetrachloroethene	5 ug/mL
							Tetrahydrofuran	10 ug/mL
							Toluene	5 ug/mL
							trans-1,2-Dichloroethene	5 ug/mL
							trans-1,3-Dichloropropene	5 ug/mL
							trans-1,4-Dichloro-2-butene	5 ug/mL
							Trichloroethene	5 ug/mL
							1-Chlorohexane	4 ug/mL
							2-Pentanone	16 ug/mL
							sec-Butyl Alcohol	120 ug/mL
.MV-Gas A_00149	04/25/23	03/25/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722_00021	05/31/25		RESTEK, Lot A0184726		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
..MV-569723_00017	06/30/25		RESTEK, Lot A0186788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-MegaMainA_00086	04/24/23	03/23/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butyl Alcohol	2400 ug/mL
..MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
..MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
Cal Dil Std_00167	04/17/23	04/13/23	P&T Methanol, Lot ED137-US	100 uL	MV-Gas B_00133	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL
							2-Chloroethyl vinyl ether	5 ug/mL
					MV-MegaMain B_00083	5 uL	Acrolein	49.375 ug/mL
							2-Butanone (MEK)	20 ug/mL
							2-Hexanone	20 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Methyl-2-pentanone (MIBK)	20 ug/mL
							Acetone	20 ug/mL
							Vinyl acetate	10 ug/mL
							Cyclohexanone	150 ug/mL
							1,1,1,2-Tetrachloroethane	5 ug/mL
							1,1,1-Trichloroethane	5 ug/mL
							1,1,2,2-Tetrachloroethane	5 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	5 ug/mL
							1,1,2-Trichloroethane	5 ug/mL
							1,1-Dichloroethane	5 ug/mL
							1,1-Dichloroethene	5 ug/mL
							1,1-Dichloropropene	5 ug/mL
							1,2,3-Trichlorobenzene	5 ug/mL
							1,2,3-Trichloropropane	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2,4-Trimethylbenzene	5 ug/mL
							1,2-Dibromo-3-Chloropropane	5 ug/mL
							1,2-Dibromoethane	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Dichloroethane	5 ug/mL
							1,2-Dichloropropane	5 ug/mL
							1,3,5-Trimethylbenzene	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dichloropropane	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	100 ug/mL
							2,2-Dichloropropane	5 ug/mL
							2-Chlorotoluene	5 ug/mL
							2-Methyl-2-propanol	50 ug/mL
							4-Chlorotoluene	5 ug/mL
							4-Isopropyltoluene	5 ug/mL
							Acrylonitrile	50 ug/mL
							Allyl chloride	5 ug/mL
							Benzene	5 ug/mL
							Bromobenzene	5 ug/mL
							Bromoform	5 ug/mL
							Carbon disulfide	5 ug/mL
							Carbon tetrachloride	5 ug/mL
							Chlorobenzene	5 ug/mL
							Chlorobromomethane	5 ug/mL
							Chlorodibromomethane	5 ug/mL
							Chloroform	5 ug/mL
							cis-1,2-Dichloroethene	5 ug/mL
							cis-1,3-Dichloropropene	5 ug/mL
							Cyclohexane	5 ug/mL
							Dibromomethane	5 ug/mL
							Dichlorobromomethane	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethyl ether	5 ug/mL
							Ethyl methacrylate	5 ug/mL
							Ethylbenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexane	5 ug/mL
							Iodomethane	5 ug/mL
							Isobutyl alcohol	125 ug/mL
							Isopropylbenzene	5 ug/mL
							m-Xylene & p-Xylene	5 ug/mL
							Methyl acetate	10 ug/mL
							Methyl tert-butyl ether	5 ug/mL
							Methylcyclohexane	5 ug/mL
							Methylene Chloride	5 ug/mL
							n-Butylbenzene	5 ug/mL
							n-Heptane	5 ug/mL
							N-Propylbenzene	5 ug/mL
							Naphthalene	5 ug/mL
							o-Xylene	5 ug/mL
							sec-Butylbenzene	5 ug/mL
							Styrene	5 ug/mL
							tert-Butylbenzene	5 ug/mL
							Tetrachloroethene	5 ug/mL
							Tetrahydrofuran	10 ug/mL
							Toluene	5 ug/mL
							trans-1,2-Dichloroethene	5 ug/mL
							trans-1,3-Dichloropropene	5 ug/mL
							trans-1,4-Dichloro-2-butene	5 ug/mL
							Trichloroethene	5 ug/mL
							1-Chlorohexane	4 ug/mL
							2-Pentanone	16 ug/mL
							sec-Butyl Alcohol	120 ug/mL
.MV-Gas B_00133	05/11/23	04/12/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723.sec_00014	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722.sec_00016	06/30/25	RESTEK, Lot A0186584			(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
..MV-569723.sec_00014	04/30/25	RESTEK, Lot A0184002			(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MV-MegaMain B_00083	05/17/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-568720.sec_00038	1250 uL	Acrolein	987.5 ug/mL
					MV-569721.sec_00009	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724.sec_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727.sec_00012	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992.sec_00007	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739_00015	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
..MV-568720.sec_00038	08/31/23		RESTEK, Lot A0181935		(Purchased Reagent)		Acrolein	19750 ug/mL
..MV-569721.sec_00009	11/30/24		RESTEK, Lot A0178490		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..MV-569724.sec_00035	01/31/24		RESTEK, Lot A0187085		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..MV-569727.sec_00012	03/21/25		RESTEK, Lot A0182847		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..MV-571992.sec_00007	06/30/23		RESTEK, Lot A0167172		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..MV-CUS17739_00015	12/31/24		Agilent, Lot 6712667		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
Cal Dil Std_00168	04/21/23	04/14/23	P&T Methanol, Lot ED137-US	100 uL	MV-Gas B_00133	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL
							2-Chloroethyl vinyl ether	5 ug/mL
.MV-Gas B_00133	05/11/23	04/12/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723.sec_00014	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MV-569723.sec_00014	04/30/25	RESTEK, Lot A0184002			(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
Cl ICV Std_00006	10/29/23	ERA, Lot 601021m			(Purchased Reagent)		Chloride	1000 mg/L
IC CAL cl/so4_00467	03/01/23	02/22/23	Di Water, Lot na	100 mL	IC CL cal_00074	12.5 mL	Chloride	125 mg/L
					IC SO4 Cal_00005	12.5 mL	Sulfate	125 mg/L
.IC CL cal_00074	05/30/23	SPEX CertiPrep, Lot AS-CL9-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00005	05/30/23	SPEX CertiPrep, Lot 5-160SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00473	04/05/23	03/29/23	Di Water, Lot na	100 mL	IC CL cal_00076	12.5 mL	Chloride	125 mg/L
					IC SO4 Cal_00008	12.5 mL	Sulfate	125 mg/L
.IC CL cal_00076	11/30/23	SPEX CertiPrep, Lot 5-146CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23	SPEX CertiPrep, Lot 5-160SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00475	04/19/23	04/12/23	Di Water, Lot na	100 mL	IC CL cal_00076	12.5 mL	Chloride	125 mg/L
					IC SO4 Cal_00008	12.5 mL	Sulfate	125 mg/L
.IC CL cal_00076	11/30/23	SPEX CertiPrep, Lot 5-146CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23	SPEX CertiPrep, Lot 5-160SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00477	05/03/23	04/26/23	Di Water, Lot na	100 mL	IC CL cal_00076	12.5 mL	Chloride	125 mg/L
					IC SO4 Cal_00008	12.5 mL	Sulfate	125 mg/L
.IC CL cal_00076	11/30/23	SPEX CertiPrep, Lot 5-146CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23	SPEX CertiPrep, Lot 5-160SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC Cal low_00694	03/01/23	02/22/23	Di Water, Lot NA	100 mL	IC BR ICV_00024	2.5 mL	Bromide	25 mg/L
					IC FL cal_00020	2.5 mL	Fluoride	25 mg/L
					IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
					IC NO2 Cal_00007	2.5 mL	Nitrite as N	25 mg/L
					IC P04 cal_00030	2.5 mL	Orthophosphate as P	25 mg/L
.IC BR ICV_00024	10/31/23	ricca, Lot 1204B86			(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00020	07/31/23	Ricca, Lot 2201B05			(Purchased Reagent)		Fluoride	1000 mg/L
.IC N03 cal_00028	11/30/23	Ricca, Lot 2205B73			(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC NO2 Cal_00007	06/30/23	Ricca, Lot 2212826			(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC P04 cal_00030	07/31/24	RICCA, Lot 4208152			(Purchased Reagent)		Orthophosphate as P	1000 mg/L
IC Cal low_00701	04/05/23	03/29/23	Di Water, Lot NA	100 mL	IC BR ICV_00026	2.5 mL	Bromide	25 mg/L
					IC FL cal_00023	2.5 mL	Fluoride	25 mg/L
					IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
					IC NO2 Cal_00007	2.5 mL	Nitrite as N	25 mg/L
					IC P04 cal_00030	2.5 mL	Orthophosphate as P	25 mg/L
.IC BR ICV_00026	04/30/23	RICCA, Lot 4110L50			(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00023	01/31/24	Ricca, Lot 2207H13			(Purchased Reagent)		Fluoride	1000 mg/L
.IC N03 cal_00028	11/30/23	Ricca, Lot 2205B73			(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC NO2 Cal_00007	06/30/23	Ricca, Lot 2212826			(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC P04 cal_00030	07/31/24	RICCA, Lot 4208152			(Purchased Reagent)		Orthophosphate as P	1000 mg/L
IC Cal low_00703	04/19/23	04/12/23	Di Water, Lot NA	100 mL	IC BR ICV_00026	2.5 mL	Bromide	25 mg/L
					IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
					IC NO2 Cal_00007	2.5 mL	Nitrite as N	25 mg/L
.IC BR ICV_00026	04/30/23	RICCA, Lot 4110L50			(Purchased Reagent)		Bromide	1000 mg/L
.IC N03 cal_00028	11/30/23	Ricca, Lot 2205B73			(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC NO2 Cal_00007	06/30/23	Ricca, Lot 2212826			(Purchased Reagent)		Nitrite as N	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC ICV 5_00396	03/01/23	02/22/23	Di Water, Lot na	100 mL	IC BR ICV_00028	2.5 mL	Bromide	25 mg/L
.IC BR ICV_00028	04/07/24		ERA, Lot 110422m		(Purchased Reagent)		Bromide	1000 mg/L
IC ICV 5_00402	04/05/23	03/29/23	Di Water, Lot na	100 mL	IC BR ICV_00028	2.5 mL	Bromide	25 mg/L
.IC BR ICV_00028	04/07/24		ERA, Lot 110422m		(Purchased Reagent)		Bromide	1000 mg/L
IC LCS_01947	04/19/23	04/12/23	Di Water, Lot 27	200 mL	IC Cal low_00703	20 mL	Bromide	2.5 mg/L
							Nitrate as N	2.5 mg/L
							Nitrite as N	2.5 mg/L
					IC CL cal_00076	10 mL	Chloride	50 mg/L
					IC SO4 Cal_00008	10 mL	Sulfate	50 mg/L
.IC Cal low_00703	04/19/23	04/12/23	Di Water, Lot NA	100 mL	IC BR ICV_00026	2.5 mL	Bromide	25 mg/L
					IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
					IC NO2 Cal_00007	2.5 mL	Nitrite as N	25 mg/L
..IC BR ICV_00026	04/30/23		RICCA, Lot 4110L50		(Purchased Reagent)		Bromide	1000 mg/L
..IC N03 cal_00028	11/30/23		Ricca, Lot 2205B73		(Purchased Reagent)		Nitrate as N	1000 mg/L
..IC NO2 Cal_00007	06/30/23		Ricca, Lot 2212826		(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC CL cal_00076	11/30/23		SPEX CertiPrep, Lot 5-146CL-2X		(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23		SPEX CertiPrep, Lot 5-160SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC LCS_01950	05/03/23	04/26/23	Di Water, Lot 27	200 mL	IC CL cal_00076	10 mL	Chloride	50 mg/L
					IC SO4 Cal_00008	10 mL	Sulfate	50 mg/L
.IC CL cal_00076	11/30/23		SPEX CertiPrep, Lot 5-146CL-2X		(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23		SPEX CertiPrep, Lot 5-160SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC SO4 ICV_00024	12/01/23		ERA, Lot 021221m		(Purchased Reagent)		Sulfate	1000 mg/L
ICMS/MSD WEEK_00814	04/19/23	04/12/23	Di Water, Lot NA	5 mL	IC SPK 6 ANIO_00028	2.5 mL	Bromide	499.924 mg/L
							Nitrate as N	500.003 mg/L
							Sulfate	5000.51 mg/L
					IC SPK N02SOL_00021	2.5 mL	Nitrite as N	499.973 mg/L
.IC SPK 6 ANIO_00028	10/12/23	10/12/22	Di Water, Lot NA	1000 mL	IC MS/MSD Br_00004	1.2876 g	Bromide	999.847 mg/L
					IC MS/MSD N03_00006	6.068 g	Nitrate as N	1000.01 mg/L
					IC MS/MSD S04_00006	18.1408 g	Sulfate	10001 mg/L
..IC MS/MSD Br_00004	11/13/25		FISHER, Lot A0424372		(Purchased Reagent)		Bromide	0.77652 g/g
..IC MS/MSD N03_00006	12/31/26		Spectrum, Lot 1LD0800		(Purchased Reagent)		Nitrate as N	0.1648 g/g
..IC MS/MSD S04_00006	09/29/23		FISHER, Lot 147276		(Purchased Reagent)		Sulfate	0.5513 g/g
.IC SPK N02SOL_00021	10/12/23	10/12/22	Di Water, Lot na	500 mL	IC MS/MSD N02_00005	2.4628 g	Nitrite as N	999.946 mg/L
..IC MS/MSD N02_00005	01/31/23		fisher, Lot 210979		(Purchased Reagent)		Nitrite as N	0.20301 g/g
ms 77 cal std_02954	04/18/23	04/17/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
.CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
.MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
ms 77 ccv_02962	04/18/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	200 mL	ms 77 cal std_02954	100 mL	Antimony	50 ug/L
							Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Co	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Manganese	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Thallium	50 ug/L
							Tin	50 ug/L
							Vanadium	50 ug/L
							Calcium	11000 ug/L
							Iron	1000 ug/L
							Magnesium	11000 ug/L
							Potassium	11000 ug/L
							Sodium	51000 ug/L
							Silver	50 ug/L
							Zinc	50 ug/L
					MS Cal 4_00417	100 mL	Calcium	11000 ug/L
							Potassium	11000 ug/L
							Magnesium	11000 ug/L
							Sodium	51000 ug/L
.ms 77 cal std_02954	04/18/23	04/17/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
..CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
..MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
..MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
.MS Cal 4_00417	09/15/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L
							Sodium	100 mg/L
..MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
...10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L
...10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
...10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
...10000 Na_00090	08/28/24		CPI, Lot 1263195-2		(Purchased Reagent)		Sodium	10000 mg/L
ms 77 icsa_00677	04/24/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS ICSA STOCK_00051	5 mL	Al	100 mg/L
							Calcium	100 mg/L
							Iron	100 mg/L
							Magnesium	100 mg/L
							Mo	2 mg/L
							Potassium	100 mg/L
							Sodium	100 mg/L
					MS ICSA STOCK_00052	5 mL	Al	100 mg/L
							Calcium	100 mg/L
							Iron	100 mg/L
							Magnesium	100 mg/L
							Mo	2 mg/L
							Potassium	100 mg/L
							Sodium	100 mg/L
.MS ICSA STOCK_00051	04/20/24		CPI, Lot 1267033-1		(Purchased Reagent)		Al	1000 mg/L
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Magnesium	1000 mg/L
							Mo	20 mg/L
							Potassium	1000 mg/L
							Sodium	1000 mg/L
.MS ICSA STOCK_00052	03/27/24		IV, Lot s2-meb706044		(Purchased Reagent)		Al	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Magnesium	1000 mg/L
							Mo	20 mg/L
							Potassium	1000 mg/L
							Sodium	1000 mg/L
ms 77 icsab_00672	04/24/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	CALSTD-3_00001	0.1 mL	U	0.1 mg/L
					ICV MIX-1a_00001	0.1 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Co	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Sr	0.2 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
					ICV MIX-1B_00001	0.1 mL	Antimony	0.1 mg/L
							Mo	2.1 mg/L
							Tin	0.1 mg/L
					MS ICSA STOCK_00049	10 mL	Al	102 mg/L
							Calcium	107 mg/L
							Iron	102 mg/L
							Magnesium	107 mg/L
							Mo	2.1 mg/L
							Potassium	107 mg/L
							Sodium	107 mg/L
					MS ICVMIX--5_00002	0.1 mL	Calcium	107 mg/L
							Magnesium	107 mg/L
							Potassium	107 mg/L
							Silver	0.1 mg/L
							Sodium	107 mg/L
							Sr	0.2 mg/L
							Th	0.1 mg/L
							Zinc	0.1 mg/L
					MS ICVMIX-2_00005	0.1 mL	Al	102 mg/L
							Calcium	107 mg/L
							Iron	102 mg/L
							Magnesium	107 mg/L
							Potassium	107 mg/L
							Sodium	107 mg/L
.CALSTD-3_00001	05/30/24	CPI, Lot 1285834-1			(Purchased Reagent)		U	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.ICV MIX-1a_00001	08/09/23		IV, Lot t2-meb722098		(Purchased Reagent)		Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Sr	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.ICV MIX-1B_00001	08/05/23		IV, Lot t2-meb722099		(Purchased Reagent)		Antimony	100 mg/L
							Mo	100 mg/L
							Tin	100 mg/L
.MS ICSA STOCK_00049	12/13/23		CPI, Lot 1208135-1		(Purchased Reagent)		Al	1000 mg/L
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Magnesium	1000 mg/L
							Mo	20 mg/L
							Potassium	1000 mg/L
							Sodium	1000 mg/L
.MS ICVMIX--5_00002	08/01/23		IV, Lot t2-meb721663		(Purchased Reagent)		Calcium	5000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Silver	100 mg/L
							Sodium	5000 mg/L
							Sr	100 mg/L
							Th	100 mg/L
							Zinc	100 mg/L
.MS ICVMIX-2_00005	05/16/23		CPI, Lot 1146029-1		(Purchased Reagent)		Al	2000 mg/L
							Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
ms 77 icv_02964	04/18/23	04/17/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	10000 Na SS_00006	0.2 mL	Sodium	12800 ug/L
					ICV MIX-1a_00001	0.1 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Co	40 ug/L
							Copper	40 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
					ICV MIX-1B_00001	0.1 mL	Antimony	40 ug/L
							Tin	40 ug/L
					MS ICVMIX--5_00002	0.2 mL	Calcium	4800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Silver	80 ug/L
							Sodium	12800 ug/L
							Zinc	80 ug/L
					MS ICVMIX-2_00005	0.1 mL	Calcium	4800 ug/L
							Iron	800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Sodium	12800 ug/L
.10000 Na SS_00006	04/30/24	Elemental Scientific, Lot 2209019-100ESI			(Purchased Reagent)		Sodium	10000 mg/L
.ICV MIX-1a_00001	08/09/23	IV, Lot t2-meb722098			(Purchased Reagent)		Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.ICV MIX-1B_00001	08/05/23	IV, Lot t2-meb722099			(Purchased Reagent)		Antimony	100 mg/L
							Tin	100 mg/L
.MS ICVMIX--5_00002	08/01/23	IV, Lot t2-meb721663			(Purchased Reagent)		Calcium	5000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Silver	100 mg/L
							Sodium	5000 mg/L
							Zinc	100 mg/L
.MS ICVMIX-2_00005	05/16/23	CPI, Lot 1146029-1			(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MS 77 LLCCV_02783	04/18/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS LLCCV_00009	1 mL	Antimony	0.002 mg/L
							Arsenic	0.005 mg/L
							Barium	0.001 mg/L
							Beryllium	0.001 mg/L
							Cadmium	0.001 mg/L
							Calcium	0.2 mg/L
							Chromium	0.002 mg/L
							Co	0.001 mg/L
							Copper	0.002 mg/L
							Iron	0.05 mg/L
							Lead	0.001 mg/L
							Magnesium	0.05 mg/L
							Manganese	0.001 mg/L
							Nickel	0.002 mg/L
							Potassium	0.12 mg/L
							Selenium	0.005 mg/L
							Silver	0.001 mg/L
							Sodium	0.3 mg/L
							Thallium	0.001 mg/L
							Tin	0.01 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L
.MS LLCCV_00009	03/22/24		IV, Lot t2-meb722097		(Purchased Reagent)		Antimony	0.2 mg/L
							Arsenic	0.5 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Calcium	20 mg/L
							Chromium	0.2 mg/L
							Co	0.1 mg/L
							Copper	0.2 mg/L
							Iron	5 mg/L
							Lead	0.1 mg/L
							Magnesium	5 mg/L
							Manganese	0.1 mg/L
							Nickel	0.2 mg/L
							Potassium	12 mg/L
							Selenium	0.5 mg/L
							Silver	0.1 mg/L
							Sodium	30 mg/L
							Thallium	0.1 mg/L
							Tin	1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS Cal 4_00417	09/15/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Potassium	20 mg/L
							Magnesium	20 mg/L
							Sodium	100 mg/L
.MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
..10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L
..10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
..10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
..10000 Na_00090	08/28/24		CPI, Lot 1263195-2		(Purchased Reagent)		Sodium	10000 mg/L
ms spike 1_00017	07/10/23	01/10/23	1% HNO3, Lot 215109	500 mL	CALSTD-1_00002	100 mL	Antimony	20000 ug/L
							Arsenic	20000 ug/L
							Barium	20000 ug/L
							Beryllium	20000 ug/L
							Cadmium	20000 ug/L
							Chromium	20000 ug/L
							Co	20000 ug/L
							Copper	20000 ug/L
							Lead	20000 ug/L
							Li	20000 ug/L
							Manganese	20000 ug/L
							Mo	20000 ug/L
							Nickel	20000 ug/L
							Selenium	20000 ug/L
							Si	200000 ug/L
							SiO2	428000 ug/L
							Sr	20000 ug/L
							Thallium	20000 ug/L
							Tin	20000 ug/L
							Vanadium	20000 ug/L
					MS CALSTD-2_00103	100 mL	Al	400000 ug/L
							Calcium	400000 ug/L
							Iron	400000 ug/L
							Magnesium	400000 ug/L
							Potassium	400000 ug/L
							Sodium	400000 ug/L
.CALSTD-1_00002	08/08/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Li	100 mg/L

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Manganese	100 mg/L
							Mo	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Si	1000 mg/L
							SiO2	2140 mg/L
							Sr	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Al	2000 mg/L
							Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
MS spike 2_00106	09/07/23	03/07/23	1% HNO3, Lot 275002	500 mL	1000 Ag_00018	10 mL	Silver	20 mg/L
					1000 Sr_00016	10 mL	Sr	20 mg/L
					1000 U_00045	10 mL	U	20 mg/L
					1000 Zn_00028	10 mL	Zinc	20 mg/L
					10000 Th_00027	1 mL	Th	20 mg/L
.1000 Ag_00018	03/27/24		CPI, Lot 1211976-35		(Purchased Reagent)		Silver	1000 mg/L
.1000 Sr_00016	11/26/23		CPI, Lot 1194650-4		(Purchased Reagent)		Sr	1000 mg/L
.1000 U_00045	07/03/24		CPI, Lot 1249254-2		(Purchased Reagent)		U	1000 mg/L
.1000 Zn_00028	09/24/23		CPI, Lot 1095528-109		(Purchased Reagent)		Zinc	1000 mg/L
.10000 Th_00027	09/24/23		CPI, Lot 1161822-1		(Purchased Reagent)		Th	10000 mg/L
mv-Cent BFB_00004							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
					mv-IS/SS Tune_00001	10 mL	BFB	50 ug/mL
.mv-IS/SS Tune_00001	11/30/23		Restek, Lot A0143593		(Purchased Reagent)		BFB	250 ug/mL
mv-Cent BFB_00005							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
					mv-IS/SS Tune_00001	10 mL	BFB	50 ug/mL
.mv-IS/SS Tune_00001	11/30/23		Restek, Lot A0143593		(Purchased Reagent)		BFB	250 ug/mL
mv-Cent IS_00007	07/31/23	05/20/22	P&T Methanol, Lot 1996628	5 mL	mv-30241_00010	0.1 mL	1,4-Dichlorobenzene-d4	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
.mv-30241_00010	01/31/27		Restek, Lot A0180349		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
MV-Gas A_00150	05/08/23	04/05/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
.MV-569722_00021	05/31/25		RESTEK, Lot A0184726		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00017	06/30/25		RESTEK, Lot A0186788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
MV-Gas B_00131	04/17/23	03/16/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
.MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
MV-Gas B_00132	04/25/23	03/25/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
.MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vinyl chloride	2500 ug/mL
MV-Gas B_00133	05/11/23	04/12/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723.sec_00014	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
.MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723.sec_00014	04/30/25		RESTEK, Lot A0184002		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
mv-IS_SS_00057	04/27/23	03/15/23	P&T Methanol, Lot 198123	50 mL	mv-30241_00012	1000 uL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
					MV-567650_00030	1000 uL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.mv-30241_00012	05/31/27		Restek, Lot A0185733		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
.MV-567650_00030	05/31/26		Restek, Lot A0172587		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
mv-IS_SS_00058	05/01/23	03/29/23	P&T Methanol, Lot 198123	50 mL	mv-30241_00012	1000 uL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
					MV-567650_00030	1000 uL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.mv-30241_00012	05/31/27		Restek, Lot A0185733		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
.MV-567650_00030	05/31/26		Restek, Lot A0172587		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toluene-d8 (Surr)	2500 ug/mL
MV-MegaMain B_00082	04/17/23	03/17/23	P&T Methanol, Lot 181124	25 mL	MV-568720.sec_00038	1250 uL	Acrolein	987.5 ug/mL
					MV-569721.sec_00009	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724.sec_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-571992.sec_00007	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							2,2-Dichloropropane	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	100 ug/mL
							o-Xylene	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Styrene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
							Xylenes, Total	200 ug/mL
.MV-568720.sec_00038	08/31/23		RESTEK, Lot A0181935		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721.sec_00009	11/30/24		RESTEK, Lot A0178490		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724.sec_00035	01/31/24		RESTEK, Lot A0187085		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992.sec_00007	06/30/23		RESTEK, Lot A0167172		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethylbenzene	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							o-Xylene	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMain B_00083	05/17/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-568720.sec_00038	1250 uL	Acrolein	987.5 ug/mL
					MV-569721.sec_00009	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724.sec_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727.sec_00012	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992.sec_00007	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MV-CUS17739_00015	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
.MV-568720.sec_00038	08/31/23		RESTEK, Lot A0181935		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721.sec_00009	11/30/24		RESTEK, Lot A0178490		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724.sec_00035	01/31/24		RESTEK, Lot A0187085		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727.sec_00012	03/21/25		RESTEK, Lot A0182847		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992.sec_00007	06/30/23		RESTEK, Lot A0167172		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00015	12/31/24	Agilent, Lot 6712667			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMain B_00083	05/17/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-571992.sec_00007	1000 uL	Xylenes, Total	200 ug/mL
.MV-571992.sec_00007	06/30/23	RESTEK, Lot A0167172			(Purchased Reagent)		Xylenes, Total	5000 ug/mL
MV-MegaMainA_00086	04/24/23	03/23/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
.MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00086	04/24/23	03/23/23	P&T Methanol, Lot 181124	25 mL	MV-571992_00015	1000 uL	Xylenes, Total	200 ug/mL
.MV-571992_00015	09/30/24	RESTEK, Lot A0183568			(Purchased Reagent)		Xylenes, Total	5000 ug/mL
MV-MegaMainA_00087	05/11/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							2,2-Dichloropropane	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromoform	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	100 ug/mL
							o-Xylene	100 ug/mL
							Styrene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
							Xylenes, Total	200 ug/mL
.MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							o-Xylene	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-Supp A_00073	10/31/22	09/27/22	P&T Methanol, Lot 199628	20 mL	mv-570808_00013	400 uL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Chloroprene	50 ug/mL
							Isopropyl alcohol	500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					mv-570809_00011	400 uL	Ethyl acetate	100 ug/mL
							Methyl methacrylate	100 ug/mL
					mv-571993_00007	400 uL	Acetonitrile	500 ug/mL
							Isopropyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
					mv-571994_00005	600 uL	Ethanol	3000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.mv-570808_00013	04/30/23		Restek, Lot A0177095		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Chloroprene	2500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809_00011	12/31/22		Restek, Lot A0173205		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00007	06/30/23		RESTEK, Lot A0172903		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00005	03/31/24		RESTEK, Lot A0169978		(Purchased Reagent)		Ethanol	100000 ug/mL
MV-Supp B_00057	01/03/23	12/02/22	P&T Methanol, Lot 127999	20 mL	mv-570808.sec_00008	400 uL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Chloroprene	50 ug/mL
							Isopropyl alcohol	500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					mv-570809.sec_00009	400 uL	Ethyl acetate	100 ug/mL
							Methyl methacrylate	100 ug/mL
					mv-571993.sec_00007	400 uL	Acetonitrile	500 ug/mL
							Isopropyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
					mv-571994.sec_00006	600 uL	Ethanol	3000 ug/mL
					Z-020209-01.b_00001	2000 uL	cis-1,4-Dichloro-2-butene	100 ug/mL
.mv-570808.sec_00008	10/31/23		Restek, Lot A0183834		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Chloroprene	2500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809.sec_00009	12/31/22		Restek, Lot A0171207		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993.sec_00007	03/31/23		RESTEK, Lot A0170862		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994.sec_00006	01/31/24		RESTEK, Lot A0168005		(Purchased Reagent)		Ethanol	100000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.Z-020209-01.b_00001	08/30/24		CPI, Lot 488067		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
MV-Supp B_00061	06/17/23	03/18/23	P&T Methanol, Lot 127999	20 mL	mv-570808.sec_00008	400 uL	Chloroprene	50 ug/mL
							Methacrylonitrile	500 ug/mL
					mv-570809.sec_00010	400 uL	Methyl methacrylate	100 ug/mL
					mv-571993.sec_00008	400 uL	Acetonitrile	500 ug/mL
							Propionitrile	500 ug/mL
.mv-570808.sec_00008	10/31/23		Restek, Lot A0183834		(Purchased Reagent)		Chloroprene	2500 ug/mL
							Methacrylonitrile	25000 ug/mL
.mv-570809.sec_00010	10/31/23		Restek, Lot A0183813		(Purchased Reagent)		Methyl methacrylate	5000 ug/mL
.mv-571993.sec_00008	09/30/24		RESTEK, Lot A0189867		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Propionitrile	25000 ug/mL
MV-Supp B_00062	10/31/23	03/23/23	P&T Methanol, Lot 127999	20 mL	mv-570808.sec_00008	400 uL	Chloroprene	50 ug/mL
							Methacrylonitrile	500 ug/mL
					mv-570809.sec_00010	400 uL	Methyl methacrylate	100 ug/mL
					mv-571993.sec_00008	400 uL	Acetonitrile	500 ug/mL
							Propionitrile	500 ug/mL
.mv-570808.sec_00008	10/31/23		Restek, Lot A0183834		(Purchased Reagent)		Chloroprene	2500 ug/mL
							Methacrylonitrile	25000 ug/mL
.mv-570809.sec_00010	10/31/23		Restek, Lot A0183813		(Purchased Reagent)		Methyl methacrylate	5000 ug/mL
.mv-571993.sec_00008	09/30/24		RESTEK, Lot A0189867		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Propionitrile	25000 ug/mL
MV-TAOH_CUST_00004	02/08/23	09/27/22	P&T Methanol, Lot 199628	20 mL	mv-VO-TAOH-5_00015	2000 uL	cis-1,4-Dichloro-2-butene	100 ug/mL
.mv-VO-TAOH-5_00015	02/08/23		SPEX, Lot CP220812003		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
RSK175methane_00011	08/08/25		Supelco Analytical, Lot 160-402514174-1		(Purchased Reagent)		Methane	650500 ug/L
RSK7gasMathes_00034	03/22/23		Matheson, Lot 9301615705		(Purchased Reagent)		Acetylene	10667 ug/L
							Ethane	12317 ug/L
							Ethene	11490 ug/L
							Methane	6570.3 ug/L
							Propane	18064 ug/L
RSK7gasMathes_00035	05/27/23		Matheson, Lot 9301816642		(Purchased Reagent)		Acetylene	10667 ug/L
							Butane	23807 ug/L
							Ethane	12317 ug/L
							Ethene	11490 ug/L
							isobutylene	22984 ug/L
							Methane	6570.3 ug/L
							Propane	18064 ug/L
RSK7gasMathes_00036	05/27/23		Matheson, Lot 9301616642		(Purchased Reagent)		Acetylene	10667 ug/L
							Ethane	12317 ug/L
							Ethene	11490 ug/L
							Methane	6570.3 ug/L
							Propane	18064 ug/L
TOC ICV Std_00051	07/01/23		Ricca, Lot 2208C86		(Purchased Reagent)		TOC Result 1	1000 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							TOC Result 2	1000 ppm
							Total Organic Carbon - Duplicates	1000 ppm
TOC LCS Std_00057	01/31/25	Agilent Technologies, Lot 0006719669			(Purchased Reagent)		TOC Result 1	1001 ppm
							TOC Result 2	1001 ppm
							Total Organic Carbon - Duplicates	1001 ppm

Reagent

1000 Ag_00018

CPI INTERNATIONAL

7396303
ID: 1000 Ag_00018
Exp:03/27/24 Prpd:LRD Opn:10/06/22
1000 Ag CPI

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000511

SE Std Silver (Ag) – 1000 µg/mL

Product Lot #: 1211976-35

Matrix: 5% HNO_3

Source Material Lot #: X24E070

Element	Certified Concentration & Uncertainty
Ag	1006 ± 2 µg/mL (w/v)
	999.0 ± 2.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.999% pure silver (Ag) dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3151, lot #160729**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	MAJOR	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	0.6	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	0.6	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

September 27, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

1000 Sr_00016

7288163
ID: 1000 Sr_00016
Exp:11/26/23 Prpd:LMT Opn:07/18/22
1000 Sr CPI

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000531

SE Std Strontium (Sr) – 1000 µg/mL

Lot #: 1194650-4

Matrix: 5% HNO_3

Source Material Lot #: SRZ082018A1/SRE082017A2

Element	Certified Concentration & Uncertainty
Sr	997.0 ± 6.0 µg/mL (w/v)
	992.0 ± 6.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.9965% pure strontium nitrate [$Sr(NO_3)_2$] dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3153a, lot #990906**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	64	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	MAJOR	Y	1
Ca	277	Fe	<10	La	<0.5	Ni	<2	Rh	0.8	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	4
Ce	0.4	Gd	<0.2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

May 26, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

1000 u_00045

CPI INTERNATIONAL

7546096
ID: 1000 U_00045
Exp:07/03/24 Prj d:LRD Opn:01/11/23
1000 U CPI

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000641

SE Std Uranium (U) – 1000 µg/mL

Product Lot #: 1249254-2

Matrix: 5% HNO_3

Source Material Lot #: 12030222-100

Element	Certified Concentration & Uncertainty
U	995.0 ± 5.0 µg/mL (w/v)
	990.0 ± 5.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.99% pure uranyl nitrate hexahydrate [$UO_2(NO_3)_2{\cdot}6H_2O$] dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3164, lot #080521**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	4	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	3	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

January 3, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

1000 Zn_00028

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

SE Std Zinc (Zn) – 1000 µg/mL

Matrix: 5% HNO_3

7084653
ID: 1000 Zn_00028
Exp:09/24/23 Prpd:LRD Opn:03/07/22
1000 Zn CPI

Product #: TA-1000681

Lot #: 1095528-109

Source Material Lot #: L17Y005/Y28D045

Element	Certified Concentration & Uncertainty
Zn	998 ± 2 µg/mL (w/v)
	989 ± 2 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.9999% pure zinc (Zn) metal dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3168a, lot #120629**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1		
Al	3	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2		
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5		
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2		
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1		
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	3	W	<0.5		
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5		
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2		
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	MAJOR		
Ce	<0.2	Gd	<0.2												

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 24, 2022
Certification Date

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The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 7, July 24, 2019

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br-	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl-	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

10000 Ca_00027

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M91-500

Calcium (Ca) – 10,000 µg/mL

Lot #: 1268108-19

Matrix: 4% HNO_3

Element	Certified Concentration & Uncertainty
Ca	9998 ± 23 µg/mL (w/v)
	9633 ± 22 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure calcium carbonate ($CaCO_3$). The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3109a, lot #130213**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	175	Pb	<10	Sc	<50	Tl	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	234	Y	<5
Ca	MAJOR	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 K_00018

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M411-500

Potassium (K) – 10,000 µg/mL

Lot #: 1137797-60

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty
K	10,092 ± 47 µg/mL (w/v)
	9893 ± 46 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.997% pure potassium nitrate (KNO_3). The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3141a, lot #140813**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	MAJOR	Nd	<2	Re	<2	Sr	<10	Y	<5
Ca	<250	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	394	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 7, July 24, 2019

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 Mg_00025

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M311-500

Magnesium (Mg) – 10,000 µg/mL

Lot #: 1303817-6

Matrix: 4% HNO_3

Element	Certified Concentration & Uncertainty
Mg	10,060 ± 21 µg/mL (w/v)
	9544 ± 20 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure magnesium nitrate [$Mg(NO_3)_2$]. The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3131a, lot #140110**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	9	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	MAJOR	Pb	11	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	11	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	7	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	232	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	7	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	<10	Y	<5
Ca	568	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	9	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

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The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 Na SS_00006

Certificate of Analysis

Product Description: Sodium

Product Number: **S1-Na-10000x100**

Lot Number: **2209019-100ESI**

Matrix: 1% HNO3

Density: 1.028 g/mL ± 0.002 g/mL @ 21.5°C ± 0.3°C

Certified Value:

Element	µg/mL	SRM ID
Na	10000 ± 30	3152a

The Certified Value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.
* Refer to Traceability Information, Section 4

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot via ICP-OES/ICP-MS analysis. The values are reported in µg/L.

Ag	<0.1	Cu	<2	Li	<2	Rb	<0.1	Th	<0.1
Al	<10	Dy	<0.1	Lu	<0.1	Re	<0.1	Ti	<0.1
As	<0.3	Er	<0.1	Mg	<0.5	Rh	<0.1	Tl	<0.1
Au	<0.1	Eu	<0.1	Mn	<0.3	Ru	<0.1	Tm	<0.1
B	75	Fe	<5	Mo	<2	Sb	<0.1	U	<0.3
Ba	<0.1	Ga	<0.1	Na	M	Sc	<0.1	V	<0.3
Be	<0.1	Gd	<0.1	Nb	<0.1	Se	<0.5	W	<0.1
Bi	<0.1	Ge	<0.1	Nd	<0.1	Si	<350	Y	<0.1
Ca	<5	Hf	<0.1	Ni	<0.1	Sm	<0.1	Yb	<0.1
Cd	<0.1	Ho	<0.1	Os	<0.1	Sn	<3	Zn	<0.1
Ce	<0.1	In	<0.1	Pb	<3	Sr	<0.1	Zr	<0.1
Co	<0.3	Ir	<0.1	Pd	<0.1	Ta	<0.1		
Cr	<0.3	K	<5	Pr	<0.1	Tb	<0.1		
Cs	<2	La	<0.1	Pt	<0.1	Te	<0.1		

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: October 2022

Expiration Date: April 30, 2024

Certificate Issue Date: April 25, 2022

Chris Ramsgard, Product Manager Standard Solutions

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Email: esi@icpms.com | Web: www.icpms.com

11/27/2023
6:53 PM

Preparation Information:

This standard is prepared using **99.999%** pure **Sodium Carbonate** which was purchased from a qualified vendor per ISO 9001 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. Stability of this product is based upon rigorous short-term and long-term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If, during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO 17034 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

1. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in 'NIST Weights and Measures Measurement Assurance Program' with a certificate of measurement traceability to NIST primary standards. The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.
2. **Volumetric Device**
   The calibrations of volumetric vessels are verified using the ASTM method E542.
3. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.
4. **Calibration Standards**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not available, a second source standard or independent lot is used.

Accreditation:

This product has been manufactured by an ISO 9001 registered and ISO/IEC 17025 and ISO 17034 accredited laboratory

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: ESI products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from ESI.

Reagent

10000 Na_00090

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M521-500

Sodium (Na) – 10,000 µg/mL

Lot #: 1263195-2

Matrix: 3% HNO_3

Element	Certified Concentration & Uncertainty
Na	10,055 ± 29 µg/mL (w/v)
	9763 ± 28 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.997% pure sodium carbonate (Na_2CO_3). The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3152a, lot #200413**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	57	Dy	<2	In	nd	Na	MAJOR	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	8	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	<10	Y	80
Ca	<250	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	36	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

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The Netherlands

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 Th_00027

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous RM

Thorium (Th) – 10,000 µg/mL

Matrix: 3% HNO_3

7084654
ID: 10000 Th_00027
Exp:09/24/23 Prpd:LRD Opn:03/07/22
10,000 Th CPI

Product #: S4400-10M591

Lot #: 1161822-1

Element	Certified Concentration & Uncertainty
Th	9971 ± 49 µg/mL (w/v)
	9064 ± 44 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (RM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to, **ISO 17034**, **ISO/IEC 17025** and **ISO 9001**. This RM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using pure thorium nitrate [$Th(NO_3)_4$]. The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable method against an alternate lot as NIST SRM is not available. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	7	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	5	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	<250	Nd	15	Re	<2	Sr	<10	Y	<5
Ca	<250	Fe	<100	La	17	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	31	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 24, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034:2016 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025:2017 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001:2015 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

CAL STD 1_00002

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

ICP ICPMS CAL Mix # 1

7043158
ID: ICP CAL STD 1_00013
Exp: 06/27/23 Prpd: LRD
ICP CAL STD 1 PRIMARY

Product #: TA-CAL1

Lot #: 1148545-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	99.98 ± 0.50 mg/L	Li	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.1 ± 0.5 mg/L	Sn	100.1 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	99.98 ± 0.50 mg/L
Cd	100.1 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.1 ± 0.5 mg/L
Co	99.96 ± 0.50 mg/L	Pb	99.96 ± 0.50 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	99.91 ± 0.50 mg/L	Sb	100.1 ± 0.5 mg/L	V	99.98 ± 0.50 mg/L
Cu	99.96 ± 0.50 mg/L	Se	99.97 ± 0.50 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
As	992330R	Li	170238	Si	1004988
Ba	994427	Mn	985946	Sn	1031164
Be	992601	Mo	1086465	Sr	1051374
Cd	173172	Ni	1070210R	Ti	984754
Co	983064	Pb	983061	Tl	1059794
Cr	1099019	Sb	660984R	V	154977
Cu	1140336R	Se	993619		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

December 27, 2021
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Safety Data Sheet (SDS).

:o be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35.
e analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of
neity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing
:ainties.

rnational for further information about this material.

)ared under a quality management system that is registered/accredited to the following:
Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of

ıdditional requirements specified in ISO Guide 31 and ISO Guide 35
al Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and

ment Systems, Certificate Registration No. 56 100 19560101 – Requirements

T SRMs:

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163

Reagent

CALSTD-1_00002

CPI INTERNATIONAL

7150070
ID: CALSTD-1_00002
Exp:08/08/23 Prpd:LMT Opn:04/18/22
ICP-MS Cal Std 1 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1

ICP ICPMS CAL Mix # 1

Lot #: 1148545-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	99.98 ± 0.50 mg/L	Li	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.1 ± 0.5 mg/L	Sn	100.1 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	99.98 ± 0.50 mg/L
Cd	100.1 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.1 ± 0.5 mg/L
Co	99.96 ± 0.50 mg/L	Pb	99.96 ± 0.50 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	99.91 ± 0.50 mg/L	Sb	100.1 ± 0.5 mg/L	V	99.98 ± 0.50 mg/L
Cu	99.96 ± 0.50 mg/L	Se	99.97 ± 0.50 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
As	992330R	Li	170238	Si	1004988
Ba	994427	Mn	985946	Sn	1031164
Be	992601	Mo	1086465	Sr	1051374
Cd	173172	Ni	1070210R	Ti	984754
Co	983064	Pb	983061	Tl	1059794
Cr	1099019	Sb	660984R	V	154977
Cu	1140336R	Se	993619		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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The Netherlands

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 8, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br-	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl-	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

11/27/2023
6:53 PM

Reagent

CALSTD-3_00001

7544723
ID: CALSTD-3_00001
Exp:05/30/24 Prpd:LMT Opn:01/10/23
ICP-MS Cal Std 3 CPI rev

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL3

ICP ICPMS CAL Mix # 3

Lot #: 1285834-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
P	1000 ± 5 mg/L	U	100.0 ± 0.5 mg/L
S	1000 ± 5 mg/L	W	100.0 ± 0.5 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #
P	1225600	U	AR19-22UX
S	1207779	W	1130700

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 30, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

Cl ICV Std_00006

ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Chloride
Catalog Number:	047-125mL, 988-500mL
Lot No.	601021m
Starting Material:	Sodium Chloride (NaCl)
Matrix:	18 megohm deionized water
Density:	1.0005 ± 0.0003 g/mL 19.9 °C and 750 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	November 20, 2021
Expiration Date:	October 29, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Chloride	1000	1.20	3182	95.3

16341 Table Mountain Pkwy ▪ Golden, CO 80403 ▪ 800.372.0122 ▪ 303.431.8454 ▪ fax 303.421.0159 ▪ www.eraqc.com

1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.02

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Reagent

IC BR ICV_00024

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Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 1204B86 **Product Number:** 1180

Manufacture Date: APR 26, 2022

Expiration Date: OCT 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Bromide	7647-15-6	High Purity

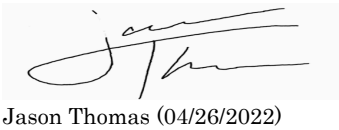
Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br^-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br^-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1180-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Jason Thomas (04/26/2022)

Operations Manager

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Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 4110L50 **Product Number:** 1180

Manufacture Date: OCT 22, 2021
Expiration Date: APR 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Bromide	7647-15-6	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1180-16	500 mL natural poly	18 months
1180-4	120 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Brandy Bates

Brandy Bates (10/22/2021)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Reagent

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ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Bromide
Catalog Number:	046-125mL, 987-500mL
Lot No.	110422m
Starting Material:	Potassium Bromide (KBr)
Matrix:	18 megohm deionized water
Density:	0.9997 ± 0.0005 g/mL 21.9 °C and 753 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	April 26, 2022
Expiration Date:	April 7, 2024
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Bromide	1000	0.927	3184	98.2

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1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size:** ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.02

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Reagent

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Certificate of Reference Material

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Chemical Testing
Cert #2495.02

Catalog Number: AS-CL9-2X **Lot No.** 5-156CL-2X

Description: 1000 µg/mL Chloride

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 999 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3182*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Sodium Chloride, Lot# 09141H. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 998 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 999 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.01	NO_3^-	<0.06
F^-	<0.05	$PO4^{-3}$	<0.03
NO_2^-	<0.05	$SO4^{-2}$	<0.08

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: MAY - - 2022 Certifying Officer: Katherine Cullinan, QC Manager

Page 1 of 2
Rev. 0

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO/IEC 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
- ISO Guide 35: Reference Materials – Guidance for characterization and assessment of homogeneity and stability
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:
All analytes and matrix materials are obtained and verified by Spex CertiPrep from pre-qualified vendors as per ISO 9001, ISO/IEC 17025 and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of Spex CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report, Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Legal Notice:
Spex CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against Spex CertiPrep, LLC. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall Spex CertiPrep, LLC. be liable for any loss of profits or any incidental, special, or consequential damages.

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Certificate of Reference Material

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Chemical Testing
Cert #2495.02

Catalog Number: AS-CL9-2X **Lot No.** 5-146CL-2X

Description: 1000 µg/mL Chloride

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3182*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Sodium Chloride, Lot# 09141H. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 999 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 1000 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.01	NO_3^-	<0.06
F^-	<0.05	$PO4^{-3}$	<0.03
NO_2^-	<0.05	$SO4^{-2}$	<0.08

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: Nov--2022 Certifying Officer: Katherine Cullinan, QC Manager

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- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
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- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

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Instructions for Use:
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Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report, Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

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Certificate of Analysis

Fluoride Standard, 1000 ppm F^-

Lot Number: 2201B05 **Product Number:** 3173

Manufacture Date: JAN 11, 2022

Expiration Date: JUL 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.
The concentration is confirmed by Fluoride ISE and is certified traceable to NIST SRM 2203.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Fluoride	7681-49-4	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Fluoride (F)	995-1005 ppm	1000 ppm

Specification	Reference
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5542)
Fluoride Stock Solution (1.00 mL = 1.00 mg F-)	EPA (SW-846) (9056)
Fluoride Calibration Stock Solution (1,000 mg/L F-)	EPA (SW-846) (9214)
Stock Solution, 1.0 mL = 1.0 mg F	EPA (340.3)
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5996)
Fluoride Stock Solution (1.00 mL = 1.00 mg F?)	ASTM (D 4327)
Fluoride Stock Standard Solution (1 mg of F in 1 mL)	ACS (N/A)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
3173-16	500 mL natural poly	18 months
3173-32	1 L natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (01/11/2022)

Quality Control

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Certificate of Analysis

Fluoride Standard, 1000 ppm F⁻

Lot Number: 2207H13 **Product Number:** 3173

Manufacture Date: JUL 29, 2022
Expiration Date: JAN 2024

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.
The concentration is confirmed by Fluoride ISE and is certified traceable to NIST SRM 2203.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Fluoride	7681-49-4	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Fluoride (F)	995-1005 ppm	1005 ppm

Specification	Reference
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5542)
Fluoride Stock Solution (1.00 mL = 1.00 mg F-)	EPA (SW-846) (9056)
Fluoride Calibration Stock Solution (1,000 mg/L F-)	EPA (SW-846) (9214)
Stock Solution, 1.0 mL = 1.0 mg F	EPA (340.3)
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5996)
Fluoride Stock Solution (1.00 mL = 1.00 mg F?)	ASTM (D 4327)
Fluoride Stock Standard Solution (1 mg of F in 1 mL)	ACS (N/A)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
3173-16	500 mL natural poly	18 months
3173-32	1 L natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (07/29/2022)
Quality Control
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Quantity:

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Cross Reference

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ACROS ORGANICS

Version	0
Molecular weight	102.89
Molecular formula	Br Na
CAS No	7647-15-6
Linear formula	NaBr
Flash point (°C)	

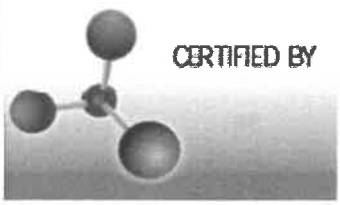
Certificate of Analysis

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Catalog Number	24690	**Quality Test / Release Date**	13 November 2020
Lot Number	A0424372	**Suggested Retest Date**	November 2025
Description	Sodium bromide,99.5%,for analysis		
Country of Origin	NETHERLANDS		
Declaration of Origin	synthetic		

Origin Comment	

Result Name	Specifications	Test Value
Appearance (Color)	White	White
Appearance (Form)	Crystalline powder	Crystalline powder
Titration Argentometric	>=99.5 %	99.7 %
pH	5 to 8.8 (5 % at 20°C)	6.9 (5 % at 20°C)
Insoluble matter	=<0.005 % (in water)	=<0.005 % (in water)
Nitrogen compounds (as N)	=<0.005 %	=<0.005 %
Chloride (Cl)	=<2000 ppm	=<100 ppm
Sulfate (SO4)	=<50 ppm	=<10 ppm
Bromate (BrO3)	=<10 ppm	=<10 ppm
Iodide (I)	=<50 ppm	=<10 ppm
Iron (Fe)	=<10 ppm	=<2 ppm
Arsenic (As)	=<2 ppm	=<1 ppm
Barium (Ba)	=<50 ppm	=<1 ppm
Calcium (Ca)	=<50 ppm	1 ppm
Magnesium (Mg)	=<50 ppm	=<1 ppm
Copper (Cu)	=<10 ppm	=<1 ppm
Nickel (Ni)	=<10 ppm	=<1 ppm
Lead (Pb)	=<10 ppm	1 ppm
Potassium (K)	=<2000 ppm	400 ppm



CERTIFIED BY

C. Wygaerts, QA Manager Issued: 12 October 2021

Acros Organics
ENA23, zone 1, nr 1350, Janssen Pharmaceuticalaan 3a, B-2440 Geel, Belgium
Tel +32 14/57.52.11 - Fax +32 14/59.34.34 Internet: https://www.acros.com
1 Reagent Lane, Fair Lawn, NJ 07410,USA Fax 201-796-1329

Reagent

IC MS/MSD N02_00005

ThermoFisher SCIENTIFIC

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	S347	Quality Test / Release Date	03/26/2021
Lot Number	210979		
Description	SODIUM NITRITE, A.C.S.		
Country of Origin	India	Suggested Retest Date	Jan/2023
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Yellow-white crystals
ASSAY	%	>= 97	100.9
CALCIUM	%	<= 0.01	<0.01
CHLORIDE	%	<= 0.005	<0.005
HEAVY METALS (as Pb)	%	<= 0.001	<0.001
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.01	<0.01
IRON (Fe)	%	<= 0.001	<0.001
POTASSIUM (K)	%	<= 0.005	<0.005
SULFATE (SO4)	%	<= 0.01	<0.01

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

IC MS/MSD S04_00006

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Certificate of Analysis

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This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	**P304**	**Quality Test / Release Date 3/2/2015**	
Lot Number	**147276**		
Description	**POTASSIUM SULFATE, CRYSTAL, CERTIFIED, A.C.S.**		
Country of Origin	**India**	*** Suggested Retest Date**	**Feb-2020**
Chemical Origin	**Inorganic-non animal**		
BSE/TSE Comment	This product is not manufactured from, or with, any type of animal product, nor any derivative of an animal product. As such, this product should not be considered a vector for BSE or TSE.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	FINE WHITE CRYSTALS
ASSAY	%	>= 99	99.4
CALCIUM	%	<= 0.01	<0.010
CHLORIDE	%	<= 0.001	<0.0010
HEAVY METALS (as Pb)	ppm	<= 5	<5.0
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	ppm	<= 5	<5.0
MAGNESIUM	%	<= 0.005	<0.0050
NITROGEN COMPOUNDS	ppm	<= 5	<5
PH 5% SOLUTION @ 25 DEG C		Inclusive Between 5.5 - 8.5	5.5
SODIUM (Na)	%	<= 0.02	<0.020

Lab Manager Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a extension of this catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

Reagent

IC N03 cal_00028

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Pocomoke City, MD 21851
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Certificate of Analysis

Nitrate Nitrogen Standard, 1000 ppm N (4427 ppm NO_3^-)

Lot Number: 2205B73 **Product Number:** 5459

Manufacture Date: MAY 11, 2022
Expiration Date: NOV 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrate	7757-79-1	High Purity
Chloroform	67-66-3	

Test	Specification	Result
Appearance	Colorless liquid	Passed
Nitrogen (N)	995-1005 ppm	1000 ppm

Specification	Reference
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 A)
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 B)
Stock Nitrate Solution: 1 mL = 1.0 mg NO3-N	EPA (353.2)
Stock Nitrate Solution: 1.0 mL = 1.00 mg NO3-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5459-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (05/11/2022)
Quality Control

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

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IC NO2 Cal_00007

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Certificate of Analysis

Nitrite Nitrogen Standard, 1000 ppm N (3285 ppm NO_2^-)

Lot Number: 2212826 **Product Number:** 5461

Manufacture Date: DEC 08, 2022
Expiration Date: JUN 2023

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrite	7758-09-0	ACS
Chloroform	67-66-3	

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Permanganate)	995-1005 ppm N	1005 ppm N	8040

Specification	Reference
Nitrite Solution, Stock (1.0 mL = 1.0 mg NO2-N)	ASTM (D 3867 A)
Nitrite Solution, Stock (1.0 mL = 1.0 mg NO2-N)	ASTM (D 3867 B)
Stock Nitrite Solution: 1 mL = 1.0 mg NO2-N	EPA (353.2)
Stock Nitrite Solution: 1.0 mL = 1.00 mg NO2-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5461-16	500 mL natural poly	6 months
5461-4	120 mL natural poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Myrlande Gilles (12/08/2022)
Quality Control
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Certificate of Analysis

Phosphorus AA Standard, 1000 ppm P in H_2O

Lot Number: 4208152 **Product Number:** AP1KW

Manufacture Date: AUG 02, 2022
Expiration Date: JUL 2024

This is a single element solution that was prepared volumetrically to contain the certified value reported. The uncertainty associated with the certified value is the sum of the estimated errors due to the purity of the raw material, the volumetric preparation of the solution, and transpiration of the solution through the container wall.
The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3139.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Ammonium Dihydrogen Phosphate	7722-76-1	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Phosphorus (P)	995-1005 ppm	1000 ppm	3139

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
AP1KW-500	500 mL natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Paul Brandon (08/02/2022)
Production Manager
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Reagent

IC SO4 Cal_00005

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Cert #2495.01

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Certificate of Reference Material

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Chemical Testing
Cert #2495.02

Catalog Number: AS-SO49-2X **Lot No.** 5-160SO4-2X

Description: 1000 µg/mL Sulfate

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3181*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Potassium Sulfate, Lot# AN07201A. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 999 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as BaSO4.

Instrumental Analysis by Ion Chromatography: 1000 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.01	NO_2^-	<0.01
Cl^-	<0.03	NO_3^-	<0.02
F^-	<0.003	$PO4^{-3}$	<0.08

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: MAY -- 2022 Certifying Officer: Katherine Cullinan, QC Manager

Page 1 of 2
Rev. 0

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO/IEC 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
- ISO Guide 35: Reference Materials – Guidance for characterization and assessment of homogeneity and stability
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:
All analytes and matrix materials are obtained and verified by Spex CertiPrep from pre-qualified vendors as per ISO 9001, ISO/IEC 17025 and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of Spex CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:
- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report, Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Legal Notice:
Spex CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against Spex CertiPrep, LLC. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall Spex CertiPrep, LLC. be liable for any loss of profits or any incidental, special, or consequential damages.

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Reagent

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Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: AS-SO49-2X **Lot No.** 5-160SO4-2X

Description: 1000 µg/mL Sulfate

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3181*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Potassium Sulfate, Lot# AN07201A. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 999 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as BaSO4.

Instrumental Analysis by Ion Chromatography: 1000 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.01	NO_2^-	<0.01
Cl^-	<0.03	NO_3^-	<0.02
F^-	<0.003	$PO4^{-3}$	<0.08

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: JUL -- 2022 Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Report of Certification

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- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
- ISO Guide 35: Reference Materials – Guidance for characterization and assessment of homogeneity and stability
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:
All analytes and matrix materials are obtained and verified by Spex CertiPrep from pre-qualified vendors as per ISO 9001, ISO/IEC 17025 and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of Spex CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report, Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

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Reagent

IC SO4 ICV_00024

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Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Sulfate
Catalog Number:	062-125mL, 995-500mL
Lot No.	021221m
Starting Material:	Potassium Sulfate (K_2SO_4)
Matrix:	18 megohm deionized water
Density:	1.0002 ± 0.0005 g/mL 20.4 °C and 748 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	December 22, 2021
Expiration Date:	December 1, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Sulfate	1000	0.994	3181	97.5

16341 Table Mountain Pkwy ▪ Golden, CO 80403 ▪ 800.372.0122 ▪ 303.431.8454 ▪ fax 303.421.0159 ▪ www.eraqc.com

1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability.** This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #539.02

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Reagent

ICV MIX-1a_00001

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-67795-A
Lot Number:	T2-MEB722098
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea:

Arsenic, Barium,
Beryllium, Cadmium,
Cobalt, Chromium,
Copper, Lithium,
Manganese, Nickel,
Lead, Selenium,
Strontium, Thallium,
Vanadium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**100.0 ± 0.6 µg/mL**	**Barium, Ba**	**100.0 ± 0.4 µg/mL**
Beryllium, Be	**100.1 ± 0.5 µg/mL**	**Cadmium, Cd**	**100.0 ± 0.4 µg/mL**
Chromium, Cr	**100.0 ± 0.5 µg/mL**	**Cobalt, Co**	**100.0 ± 0.4 µg/mL**
Copper, Cu	**100.0 ± 0.4 µg/mL**	**Lead, Pb**	**100.0 ± 0.6 µg/mL**
Lithium, Li	**100.0 ± 0.4 µg/mL**	**Manganese, Mn**	**100.0 ± 0.5 µg/mL**
Nickel, Ni	**100.0 ± 0.6 µg/mL**	**Selenium, Se**	**100.0 ± 0.7 µg/mL**
Strontium, Sr	**100.0 ± 0.4 µg/mL**	**Thallium, Tl**	**100.0 ± 0.6 µg/mL**
Vanadium, V	**100.0 ± 0.4 µg/mL**		

Density: 1.031 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	traceable to 3103a	R2-AS691113
Ba	ICP Assay	3104a	140909
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
V	IC Assay	3165	160906
V	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 28, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 28, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

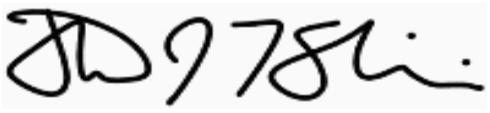
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

ICV MIX-1B_00001

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-5065
Lot Number:	T2-MEB722099
Matrix:	5% (v/v) HNO3 0.4% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon, 100 µg/mL ea: Tin, Titanium, Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**100.0 ± 0.8 µg/mL**	**Molybdenum, Mo**	**100.0 ± 0.7 µg/mL**
Silicon, Si	**1 000 ± 6 µg/mL**	**Tin, Sn**	**100.0 ± 0.7 µg/mL**
Titanium, Ti	**100.0 ± 0.7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 28, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 28, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

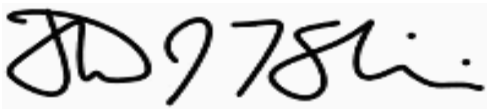
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MS CALSTD-2_00103

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

ICP ICPMS CAL Mix # 2

Matrix: 5% HNO_3

7361018
ID: MS CALSTD-2_00103
Exp:01/26/24 Prpd: Opn:09/12/22
MS CAL STD 2

Product #: TA-CAL2

Lot #: 1208136-1

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	2000 ± 10 mg/L	Fe	2000 ± 10 mg/L	Mg	2000 ± 10 mg/L
Ca	2000 ± 10 mg/L	K	2000 ± 10 mg/L	Na	2000 ± 10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1077624	Fe	1114543	Mg	1075231
Ca	1121798	K	1156013	Na	1122654

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

July 26, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br^-	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl^-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F^-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

MS CALSTD-5a_00001

CPI INTERNATIONAL

Certificate of Analysis

Custom Standard

Catalog Number: TA-CM-NOV21-DEN2 (Soln A)
Lot Number: 220527
Manufacture Date: 06/10/22

Expiration: 12/31/2023
Matrix: 2% HNO3
Hazards: Irritant, Corrosive

Analyte	Certified Concentration (ppm)
Boron (B)	1000 ± 5.75
Lithium (Li)	100 ± 0.575
Phosphorus (P)	4000 ± 23.0
Silver (Ag)	100 ± 0.575
Strontium (Sr)	100 ± 0.575
Zinc (Zn)	100 ± 0.575

Catalog Number: TA-CM-NOV21-DEN2 (Soln B)
Lot Number: 220527
Manufacture Date: 06/10/22

Expiration: 12/31/2023
Matrix: 2% HNO3
Hazards: Irritant, Corrosive

Analyte	Certified Concentration (ppm)
Thorium (Th)	100 ± 0.575

Packaging, Storage, Instructions For Use

Store at room temperature (15-30°C).

This certified reference material (CRM) is packaged in HDPE as a whole volume ready to use sample. No secondary preparative steps are necessary. Allow to equilibrate to room temperature before use. Small aliquots should be poured out of the bottle rather than directly pipetted out of bottle in order to prevent contamination or premature degradation. This CRM was manufactured by NSI Lab Solutions following quality procedures meeting the requirements of ISO 9001, ISO 17025, and ISO 17034.

Traceability Information

Analyte Source Materials: The highest purity analyte source materials are used in the manufacture of this CRM.

Method: This CRM was verified by ICP.

CAC 4 11/27/2023 6:53 PM

CPI INTERNATIONAL

Catalog Number: 4400-100113DF06
Lot Number: 220527

Balance: All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.
All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

Thermometer: All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

Glassware: All glassware used in the manufacture of our CRMs is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

Intended Uses

- Calibration of analytical instruments
- Validation of analytical methods
- Preparation of working level reference materials, i.e. "check standards"
- Detection limit studies

Uncertainty

The ± uncertainty associated with the concentration is the expanded manufacturing uncertainty at 95% confidence interval (CI) with K=2.

Homogeneity

This CRM was thoroughly mixed in production and is guaranteed homogeneous.

Ewart Morris

Ewart Morris, Inorganics Technical Manager

Mark Hammersla

Mark Hammersla, President

Reagent

MS ICSA STOCK_00049

CPI INTERNATIONAL

7284249
ID: MS ICSA STOCK_00049
Exp:12/13/23 Prpd:LMT Opn:07/14/22
ICP-MS ICS-0A STOCK SOLU

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICPMS-ICSA

ICPMS ICSA Mix

Lot #: 1208135-1

Matrix: 2% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Na	1000 ± 5 mg/L
C	1997 ± 10 mg/L	K	1000 ± 5 mg/L	P	1000 ± 5 mg/L
Ca	999.6 ± 5.0 mg/L	Mg	1000 ± 5 mg/L	S	1000 ± 5 mg/L
Cl	9999 ± 50 mg/L	Mo	20.01 ± 0.10 mg/L	Ti	19.98 ± 0.10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1077624	Fe	1114543	Na	1122654
C	P12G045	K	1156013	P	1107349
Ca	1121798	Mg	1075231	S	1154886
Cl	213900	Mo	1053794	Ti	1095555

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Trace Concentrations (µg/L)

Ag	<0.5	Co	2	Ge	<0.5	Lu	<0.2	P	MAJOR	Sb	21	Te	<1
Al	MAJOR	Cs	<0.5	Hf	<0.2	Mg	MAJOR	Pb	71	Sc	<5	Ti	MAJOR
As	<2	Cr	3	Hg	<0.5	Mn	<1	Pd	2	Se	38	Tl	<0.5
Au	44	Cu	<1	Ho	<0.2	Mo	MAJOR	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	MAJOR	Pt	<0.5	Sm	<0.2	V	<1
Ba	27	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	10	Sn	4	W	2
Bi	2	Eu	<0.2	K	MAJOR	Nd	<0.2	Re	8	Sr	21	Y	7
Ca	MAJOR	Fe	MAJOR	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	10	Ga	33	Li	18	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

June 13, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br^-	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl^-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F^-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

MS ICSA STOCK_00051

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

ICPMS ICSA Mix

7510937

ID: MS ICSA STOCK_00051
Exp:04/20/24 Prpd:LRD Opn:12/13/22
ICP-MS ICS-0A STOCK SOLUT

Product #: TA-ICPMS-ICSA

Lot #: 1267033-1

Matrix: 2% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Na	1000 ± 5 mg/L
C	2000 ± 10 mg/L	K	1000 ± 5 mg/L	P	1000 ± 5 mg/L
Ca	1000 ± 5 mg/L	Mg	1000 ± 5 mg/L	S	1000 ± 5 mg/L
Cl	10,000 ± 50 mg/L	Mo	19.99 ± 0.10 mg/L	Ti	20.00 ± 0.10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1249289	Fe	1249266	Na	1245609
C	R11H037	K	1156013	P	1225600
Ca	1232112	Mg	1075231	S	1207779
Cl	220348	Mo	1207790	Ti	1094307

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	MAJOR	Sb	<0.5	Te	<1
Al	MAJOR	Cs	<0.5	Hf	<0.2	Mg	MAJOR	Pb	<1	Sc	<5	Ti	MAJOR
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	3	Cu	<1	Ho	<0.2	Mo	MAJOR	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	MAJOR	Pt	<0.5	Sm	<0.2	V	<1
Ba	22	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	3	W	<0.5
Bi	<0.2	Eu	<0.2	K	MAJOR	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	MAJOR	Fe	MAJOR	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	18	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

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Chuck Goudreau

Chuck Goudreau, Certifying Officer

October 20, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

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- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

MS ICSA STOCK_00052

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Certificate of Analysis

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	S2-MEB706044
Matrix:	1% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chloride,
	2 000 µg/mL ea: Carbon,
	1 000 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	20 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 3 µg/mL**	**Calcium, Ca**	**1 000 ± 4 µg/mL**
Carbon, C	**2 001 ± 4 µg/mL**	**Chloride, Cl**	**10 000.0 ± 50.0 µg/mL**
Iron, Fe	**1 000 ± 4 µg/mL**	**Magnesium, Mg**	**1 000 ± 4 µg/mL**
Molybdenum, Mo	**20.01 ± 0.12 µg/mL**	**Phosphorus, P**	**1 000 ± 6 µg/mL**
Potassium, K	**1 000 ± 4 µg/mL**	**Sodium, Na**	**1 000 ± 4 µg/mL**
Sulfur, S	**1 000 ± 4 µg/mL**	**Titanium, Ti**	**20.01 ± 0.14 µg/mL**

Density: 1.031 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000260	O	Cu	<	0.007300	M	La	<	0.000120	M	Pr	<	0.000010	M	Ta		0.000230
s	Al	<		M	Dy	<	0.000360	O	Li		0.002200	M	Pt	<	0.000120	M	Tb	<	0.000040
O	As	<	0.029000	M	Er	<	0.000040	M	Lu	<	0.000010	M	Rb		0.052000	M	Te	<	0.000860
M	Au	<	0.000240	M	Eu	<	0.000010	s	Mg	<		M	Re	<	0.000040	M	Th	<	0.000060
M	B	<	0.007400	s	Fe	<		M	Mn		0.002400	M	Rh	<	0.000080	s	Ti	<	
M	Ba		0.004600	M	Ga		0.026000	s	Mo	<		M	Ru	<	0.000290	M	Tl	<	0.000050
M	Be	<	0.000070	M	Gd	<	0.000100	s	Na	<		s	S	<		M	Tm	<	0.000010
M	Bi	<	0.000220	M	Ge	<	0.003100	M	Nb	<	0.000100	M	Sb		0.000540	M	U		0.000180
s	Ca	<		M	Hf	<	0.000100	M	Nd	<	0.000040	O	Sc	<	0.000520	O	V	<	0.002900
O	Cd	<	0.001100	M	Hg	<	0.000260	O	Ni		0.002500	M	Se	<	0.002400	M	W		0.001600
M	Ce	<	0.000220	M	Ho	<	0.000100	M	Os	<	0.000020	M	Si	<	0.024000	M	Y	<	0.000120
M	Co		0.002200	M	In	<	0.000260	s	P	<		M	Sm	<	0.000080	M	Yb	<	0.000020
M	Cr		0.020000	M	Ir	<	0.000010	M	Pb		0.000480	M	Sn		0.000430	M	Zn		0.005600
M	Cs		0.000700	s	K	<		M	Pd	<	0.000060	O	Sr		0.005800	M	Zr		0.000960

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 06, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 06, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

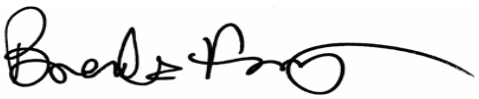
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician



Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MS ICVMIX--5_00002

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-67385
Lot Number:	T2-MEB721663
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 000 µg/mL ea: Phosphorus, Boron, 100 µg/mL ea: Silver, Lithium, Strontium, Thorium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 6 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Lithium, Li	**100.0 ± 0.4 µg/mL**	**Magnesium, Mg**	**5 000 ± 21 µg/mL**
Phosphorus, P	**1 000 ± 5 µg/mL**	**Potassium, K**	**5 000 ± 22 µg/mL**
Silver, Ag	**100.0 ± 0.4 µg/mL**	**Sodium, Na**	**5 000 ± 22 µg/mL**
Strontium, Sr	**100.0 ± 0.4 µg/mL**	**Thorium, Th**	**100.0 ± 0.5 µg/mL**
Zinc, Zn	**100.0 ± 0.4 µg/mL**		

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
B	ICP Assay	3107	190605
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 19, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 19, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

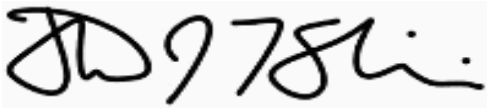
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MS ICVMIX-2_00005

CPI INTERNATIONAL

7129049
ID: MS ICVMIX-2_00005
Exp:05/16/23 Prpd:LMT Opn:04/06/22
ICP-MS ICV Std 2 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL2-SS

ICP ICPMS CAL Mix # 2

Lot #: 1146029-1

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	2000 ± 10 mg/L	Fe	2000 ± 10 mg/L	Mg	2000 ± 10 mg/L
Ca	2000 ± 10 mg/L	K	2000 ± 10 mg/L	Na	2000 ± 10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	AP18-72ALX	Fe	AR18-89FEX	Mg	AQ18-136MGX
Ca	AZ18-49CAX	K	AY18-96KX	Na	AT18-84NAX

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 16, 2021
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Europe
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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br-	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

MS LLCCV_00009

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-67794
Lot Number:	T2-MEB722097
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	30 µg/mL ea: Sodium,
	20 µg/mL ea: Calcium,
	12 µg/mL ea: Potassium,
	10 µg/mL ea: Boron, Phosphorus,
	5 µg/mL ea: Aluminum, Iron, Magnesium,
	1 µg/mL ea: Lithium, Tin, Zinc,
	0.5 µg/mL ea: Selenium, Vanadium, Strontium, Titanium, Arsenic,
	0.2 µg/mL ea: Chromium, Copper, Nickel, Molybdenum, Antimony,
	0.1 µg/mL ea: Lead, Thallium, Uranium, Thorium, Manganese, Silver, Cadmium, Cobalt, Barium, Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	4.997 ± 0.025 µg/mL	Antimony, Sb	0.2001 ± 0.0017 µg/mL
Arsenic, As	0.5003 ± 0.0030 µg/mL	Barium, Ba	0.1000 ± 0.0006 µg/mL
Beryllium, Be	0.1000 ± 0.0008 µg/mL	Boron, B	10.00 ± 0.06 µg/mL
Cadmium, Cd	0.1000 ± 0.0007 µg/mL	Calcium, Ca	20.00 ± 0.09 µg/mL
Chromium, Cr	0.2000 ± 0.0013 µg/mL	Cobalt, Co	0.1000 ± 0.0008 µg/mL
Copper, Cu	0.1998 ± 0.0009 µg/mL	Iron, Fe	4.995 ± 0.026 µg/mL
Lead, Pb	0.1000 ± 0.0007 µg/mL	Lithium, Li	1.000 ± 0.006 µg/mL
Magnesium, Mg	4.998 ± 0.026 µg/mL	Manganese, Mn	0.1000 ± 0.0008 µg/mL
Molybdenum, Mo	0.1998 ± 0.0013 µg/mL	Nickel, Ni	0.2002 ± 0.0010 µg/mL
Phosphorus, P	10.00 ± 0.05 µg/mL	Potassium, K	12.00 ± 0.06 µg/mL
Selenium, Se	0.5001 ± 0.0041 µg/mL	Silver, Ag	0.1000 ± 0.0009 µg/mL
Sodium, Na	29.98 ± 0.13 µg/mL	Strontium, Sr	0.4999 ± 0.0030 µg/mL
Thallium, Tl	0.1000 ± 0.0008 µg/mL	Thorium, Th	0.1000 ± 0.0006 µg/mL
Tin, Sn	1.000 ± 0.007 µg/mL	Titanium, Ti	0.4998 ± 0.0042 µg/mL
Uranium, U	0.1000 ± 0.0008 µg/mL	Vanadium, V	0.4996 ± 0.0029 µg/mL
Zinc, Zn	1.000 ± 0.006 µg/mL		

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Al	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Ba	Calculated		See Sec. 4.2
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Ca	Calculated		See Sec. 4.2
Cd	Calculated		See Sec. 4.2
Co	Calculated		See Sec. 4.2
Cr	Calculated		See Sec. 4.2
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
K	ICP Assay	3141a	140813
K	Calculated		See Sec. 4.2
K	Gravimetric		See Sec. 4.2
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mg	Calculated		See Sec. 4.2
Mn	Calculated		See Sec. 4.2
Mo	Calculated		See Sec. 4.2
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Calculated		See Sec. 4.2
Na	Gravimetric		See Sec. 4.2
Ni	Calculated		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
P	Calculated		See Sec. 4.2
Pb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Se	Calculated		See Sec. 4.2
Sn	Calculated		See Sec. 4.2
Sr	Calculated		See Sec. 4.2
Th	Calculated		See Sec. 4.2
Ti	Calculated		See Sec. 4.2
Tl	Calculated		See Sec. 4.2
U	Calculated		See Sec. 4.2
V	Calculated		See Sec. 4.2
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.24 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 29, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 29, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

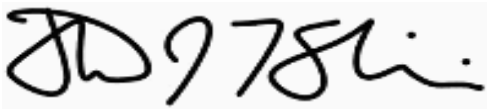
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

mv-30241_00010

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 **Lot No.:** A0180349

Description : 8260A Internal Standard Mix

8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Fluorobenzene **CAS #** 462-06-6 (Lot BCBZ5549) **Purity** 99%	2,500.6 µg/mL	+/- 14.5387 µg/mL +/- 140.2062 µg/mL +/- 143.4868 µg/mL	Gravimetric Unstressed Stressed
2	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-29571) **Purity** 99%	2,500.8 µg/mL	+/- 14.5399 µg/mL +/- 140.2174 µg/mL +/- 143.4983 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-30447) **Purity** 99%	2,500.2 µg/mL	+/- 14.5364 µg/mL +/- 140.1837 µg/mL +/- 143.4639 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Revd 4/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

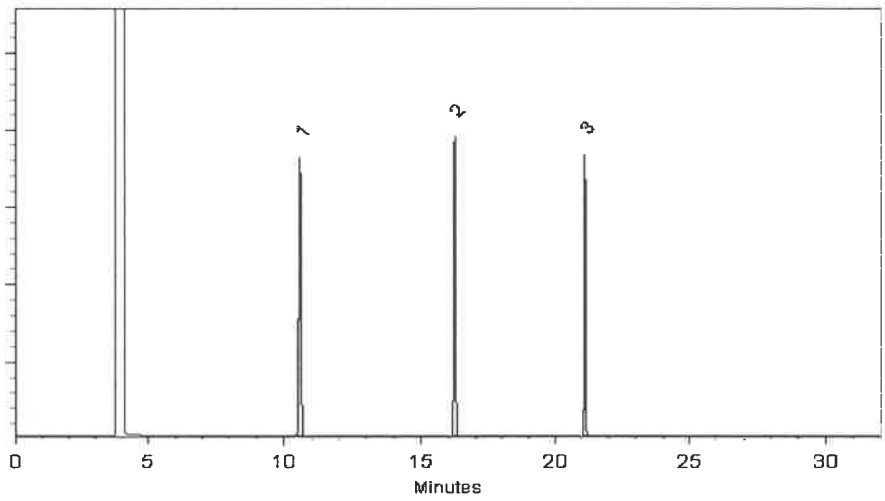
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Riglin - Operations Tech I

Date Mixed: 06-Jan-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 10-Jan-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-30241_00012

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 **Lot No.:** A0185733

Description : 8260A Internal Standard Mix

8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Fluorobenzene **CAS #** 462-06-6 (Lot BCBZ5549) **Purity** 99%	2,504.0 µg/mL	+/- 14.5585 µg/mL +/- 140.3968 µg/mL +/- 143.6819 µg/mL	Gravimetric Unstressed Stressed
2	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-29571) **Purity** 99%	2,508.0 µg/mL	+/- 14.5817 µg/mL +/- 140.6211 µg/mL +/- 143.9114 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-30447) **Purity** 99%	2,500.6 µg/mL	+/- 14.5387 µg/mL +/- 140.2062 µg/mL +/- 143.4868 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Rcvd 8/11/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

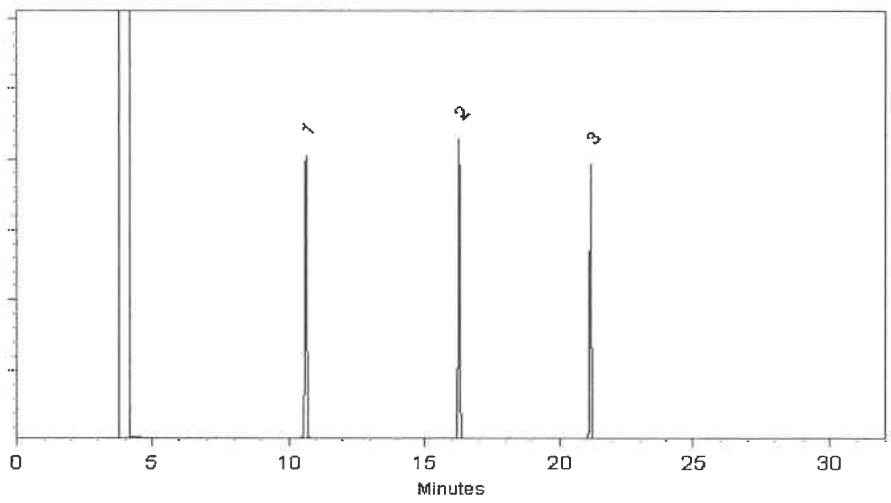
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Josh McCloskey - Operations Technician I

Date Mixed: 26-May-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 31-May-2022

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Reagent

MV-567650_00030

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0172587

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500µg/mL, P&T Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2026 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 012021) **Purity** 99%	2,510.9 µg/mL	+/- 14.5983 µg/mL +/- 140.7809 µg/mL +/- 144.0750 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-29377) **Purity** 99%	2,518.0 µg/mL	+/- 14.6399 µg/mL +/- 141.1818 µg/mL +/- 144.4852 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-31750) **Purity** 99%	2,500.4 µg/mL	+/- 14.5375 µg/mL +/- 140.1949 µg/mL +/- 143.4753 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KO) **Purity** 99%	2,520.9 µg/mL	+/- 14.6567 µg/mL +/- 141.3444 µg/mL +/- 144.6516 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Rcvd 4/5/23

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

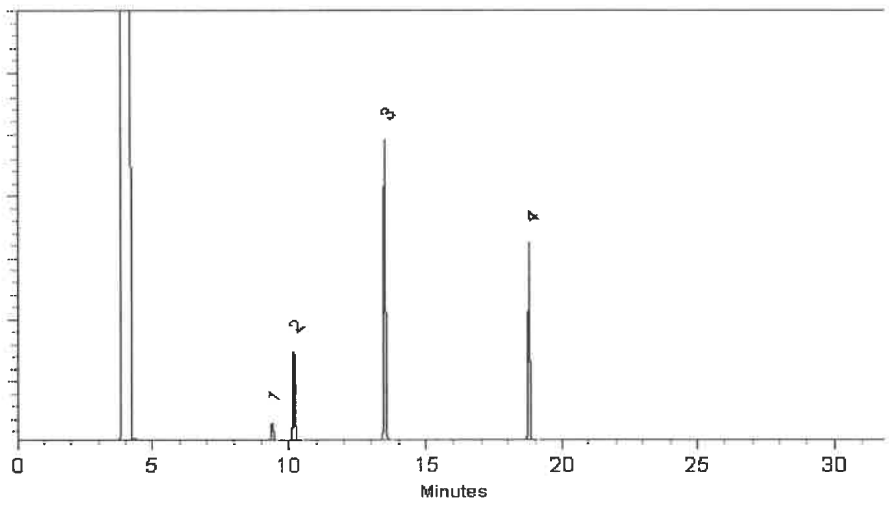
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Sam Moodler - Operations Tech I

Date Mixed: 19-May-2021 **Balance:** B707717271

Alexis Shelow - Operations Tech I

Date Passed: 21-May-2021

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720.SEC **Lot No.:** A0181935

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2023 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acrolein		19,756.8 µg/mL	+/- 115.6804	µg/mL	Gravimetric
	CAS # 107-02-8.SEC	(Lot D8402600-1024)		+/- 394.6881	µg/mL	Unstressed
	Purity 98%			+/- 885.4724	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Rcvd 6/13/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

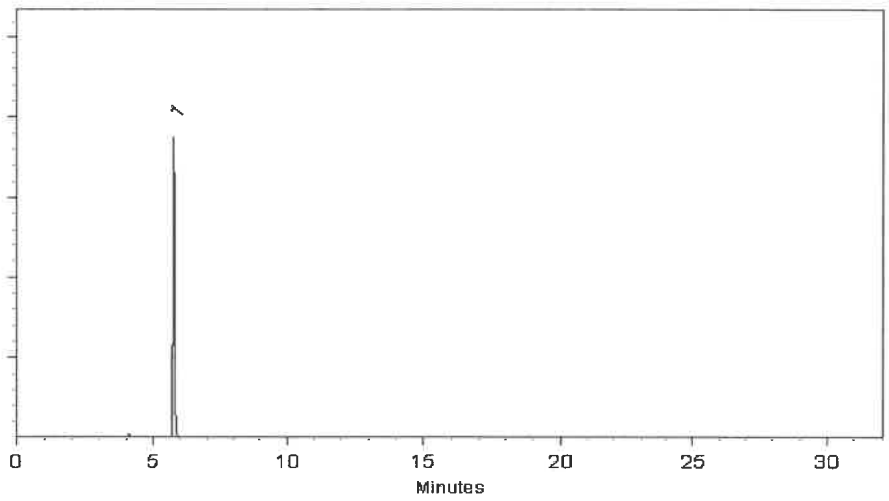
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 16-Feb-2022 **Balance:** 1128342314

Feng-Yun Lo - QC Analyst

Date Passed: 24-Feb-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-568720_00045

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0187378

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acrolein	19,750.7 µg/mL	+/- 115.6445 µg/mL	Gravimetric
	CAS # 107-02-8 (Lot RD220420)		+/- 394.5655 µg/mL	Unstressed
	Purity 99%		+/- 885.1975 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

11/1/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

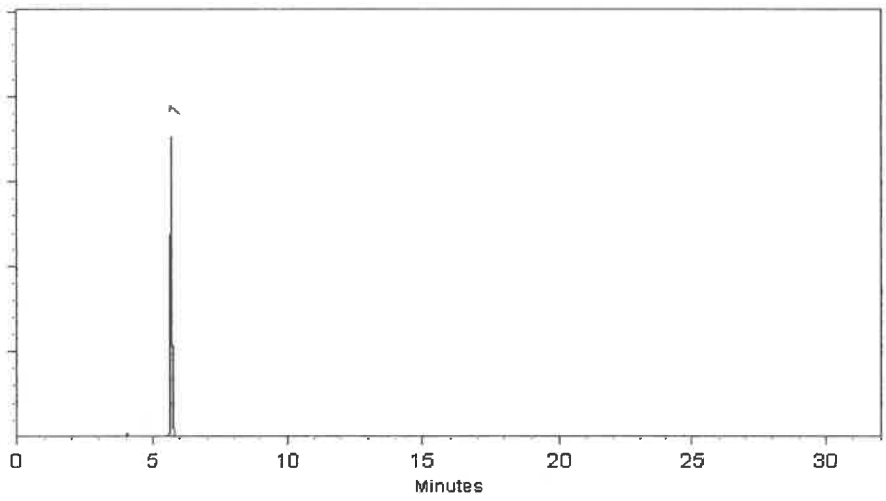
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brittany Federinko - Operations Tech I

Date Mixed: 15-Jul-2022 **Balance:** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 26-Jul-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.SEC **Lot No.:** A0178490

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot S25F025)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%		+/- 756.2625 µg/mL	Stressed
2	2-Butanone (MEK)	12,502.0 µg/mL	+/- 73.2020 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RGZ2A)		+/- 754.3508 µg/mL	Unstressed
	Purity 99%		+/- 756.1415 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,508.7 µg/mL	+/- 73.2410 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 754.7530 µg/mL	Unstressed
	Purity 99%		+/- 756.5447 µg/mL	Stressed
4	2-Hexanone	12,507.3 µg/mL	+/- 73.2332 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot Y3TUO)		+/- 754.6726 µg/mL	Unstressed
	Purity 99%		+/- 756.4641 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

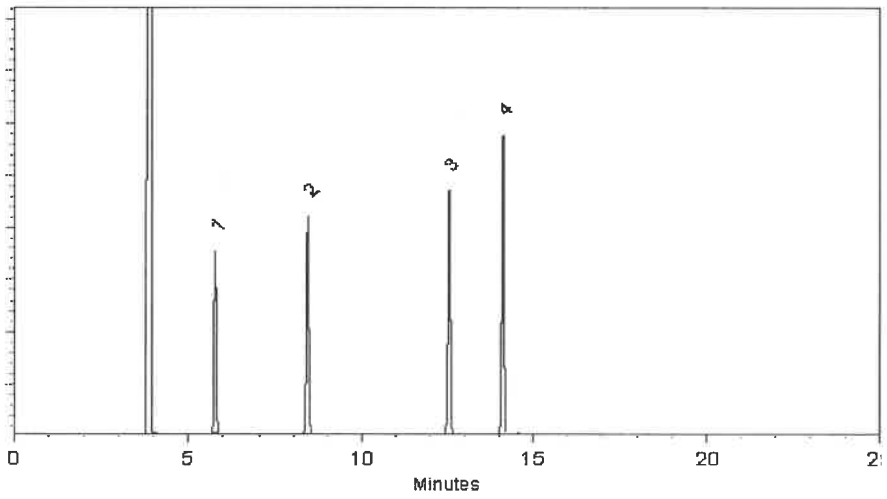
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jeff Rhoades - Mix Technician

Date Mixed: 15-Nov-2021 **Balance:** 1127510105

Clara Windle - Operations Technician I

Date Passed: 16-Nov-2021

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Catalog No. : 569721 **Lot No.:** A0186508

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot MKCQ7914) **Purity** 99%	12,514.5 µg/mL	+/- 73.2751 µg/mL +/- 755.1050 µg/mL +/- 756.8975 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot SHBN2844) **Purity** 99%	12,543.5 µg/mL	+/- 73.4450 µg/mL +/- 756.8548 µg/mL +/- 758.6515 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBN3601) **Purity** 99%	12,528.5 µg/mL	+/- 73.3571 µg/mL +/- 755.9498 µg/mL +/- 757.7443 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKCQ6663) **Purity** 99%	12,528.0 µg/mL	+/- 73.3542 µg/mL +/- 755.9196 µg/mL +/- 757.7140 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

12/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

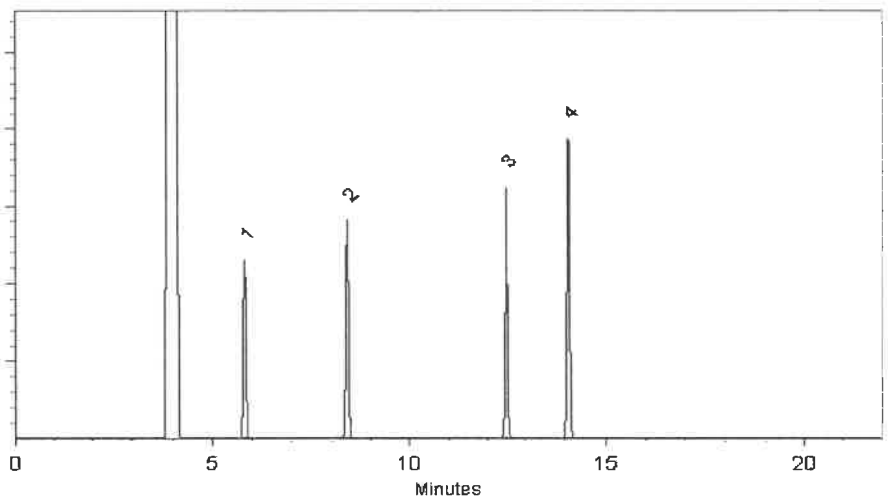
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 21-Jun-2022 **Balance:** B707717271

Marlina Cowan – Operations Tech II ARM QC

Date Passed: 23-Jun-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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Catalog No. : 569722.SEC **Lot No.:** A0186584

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,496.8 µg/mL	+/- 18.9786 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 27545)		+/- 140.5231 µg/mL	Unstressed
	Purity 99%		+/- 143.7866 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.1 µg/mL	+/- 22.2077 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.3425 µg/mL	Unstressed
	Purity 99%		+/- 144.6037 µg/mL	Stressed
3	Vinyl chloride	2,500.0 µg/mL	+/- 23.4271 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.3687 µg/mL	Unstressed
	Purity 99%		+/- 144.6213 µg/mL	Stressed
4	1,3-Butadiene	2,496.8 µg/mL	+/- 21.9304 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 26996)		+/- 140.9532 µg/mL	Unstressed
	Purity 99%		+/- 144.2070 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,506.4 µg/mL	+/- 22.1918 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot 00017022)		+/- 141.5223 µg/mL	Unstressed
	Purity 99%		+/- 144.7879 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,503.4 µg/mL	+/- 22.5874 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 141.4203 µg/mL	Unstressed
	Purity 98%		+/- 144.6805 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.0 µg/mL	+/- 14.6714 µg/mL	Gravimetric
	CAS # 75-43-4 * (Lot 12841600)		+/- 140.1867 µg/mL	Unstressed
	Purity 99%		+/- 143.4662 µg/mL	Stressed

11/1/22

8	Trichlorofluoromethane (CFC-11)		2,497.2	µg/mL	+/-	20.5278	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 00010739)			+/-	140.7628	µg/mL	Unstressed
	Purity 99%				+/-	144.0218	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

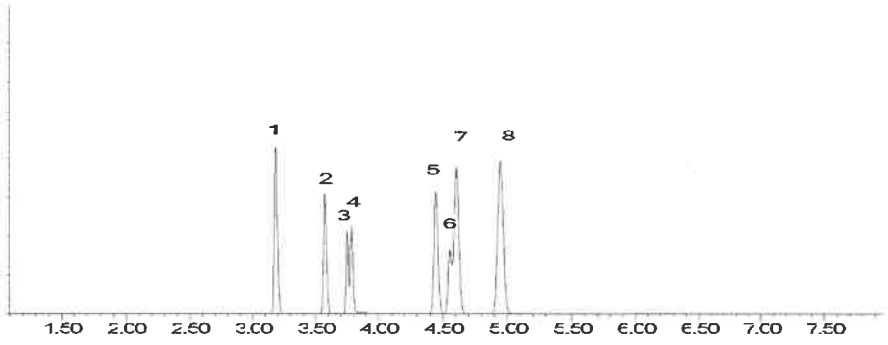
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician **Date Mixed:** 23-Jun-2022 **Balance:** 1127510105

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 27-Jun-2022

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0184726

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot 00012554) **Purity** 99%	2,500.0 µg/mL	+/- 20.3317 µg/mL +/- 140.8938 µg/mL +/- 144.1574 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBK6571) **Purity** 99%	2,500.5 µg/mL	+/- 22.8144 µg/mL +/- 141.3009 µg/mL +/- 144.5566 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 00015559) **Purity** 99%	2,500.7 µg/mL	+/- 23.2251 µg/mL +/- 141.3788 µg/mL +/- 144.6333 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot 00019375) **Purity** 99%	2,500.4 µg/mL	+/- 17.6053 µg/mL +/- 140.5467 µg/mL +/- 143.8191 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,500.2 µg/mL	+/- 24.0992 µg/mL +/- 141.4970 µg/mL +/- 144.7475 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot 107-401039114-1) **Purity** 99%	2,500.1 µg/mL	+/- 23.0388 µg/mL +/- 141.3109 µg/mL +/- 144.5651 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot 12841600) **Purity** 99%	2,500.0 µg/mL	+/- 14.5352 µg/mL +/- 140.1725 µg/mL +/- 143.4524 µg/mL	Gravimetric Unstressed Stressed

Rev'd 8/22/00

8	Trichlorofluoromethane (CFC-11)		2,500.7	µg/mL	+/-	25.4684	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot MKCL8411)			+/-	141.7630	µg/mL	Unstressed
	Purity 99%				+/-	145.0087	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

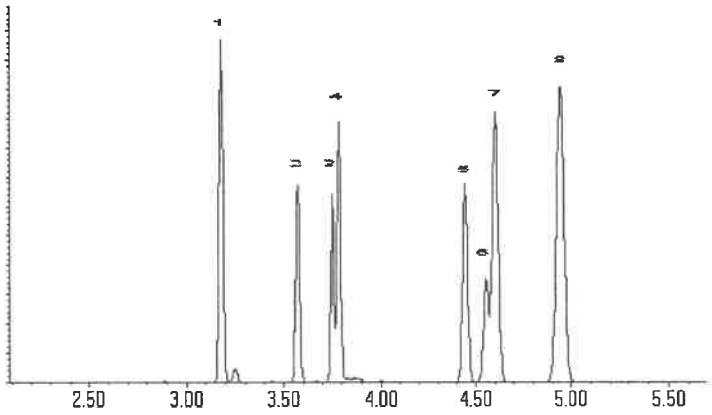
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 01-May-2022 **Balance:** B251644995

Christie Mills - Operations Technician II

Date Passed: 12-May-2022

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Catalog No. : 569723.SEC **Lot No.:** A0184002

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Chloroethyl vinyl ether	2,494.0 µg/mL	+/- 14.6362 µg/mL	Gravimetric
	CAS # 110-75-8.SEC (Lot AMBTF)		+/- 53.4339 µg/mL	Unstressed
	Purity 99%		+/- 54.9852 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Rcvd 8/22/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

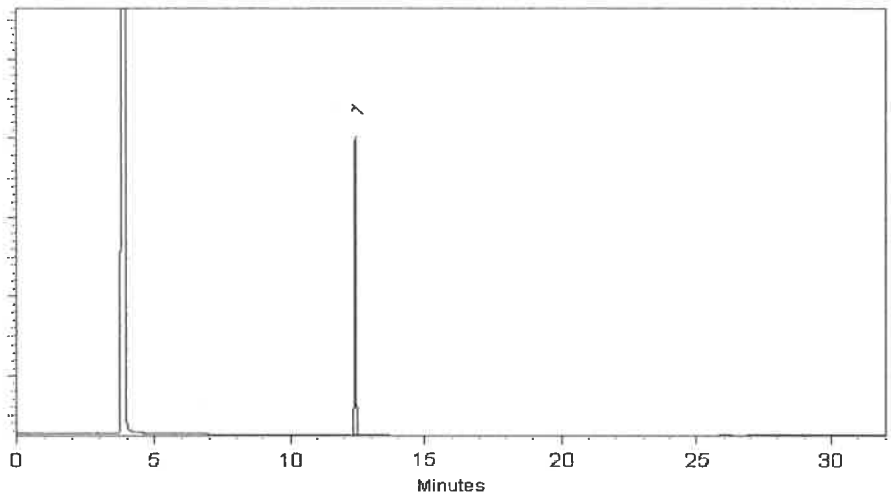
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Whitney Bennett - Operation Tech I

Date Mixed: 12-Apr-2022 **Balance:** 1127510105

Christie Mills - Operations Technician II

Date Passed: 14-Apr-2022

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Catalog No. : 569723 **Lot No.:** A0186788

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether	2,502.7 µg/mL	+/- 14.6871	µg/mL	Gravimetric
	CAS # 110-75-8 (Lot MKCK6742)		+/- 53.6196	µg/mL	Unstressed
	Purity 99%		+/- 55.1763	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

11/1/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

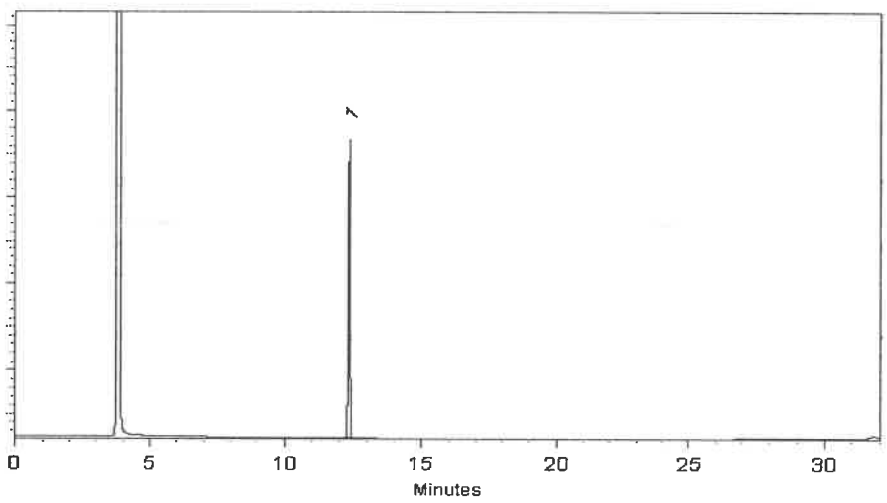
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Josh McCloskey - Operations Technician I

Date Mixed: 28-Jun-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 05-Jul-2022

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Catalog No. : 569724.SEC **Lot No.:** A0187085

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,012.0 µg/mL	+/- 29.4132	µg/mL	Gravimetric
	CAS # 108-05-4.SEC (Lot 190320CGKJ)		+/- 302.4226	µg/mL	Unstressed
	Purity 99%		+/- 303.1405	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Rcvd 12/30/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

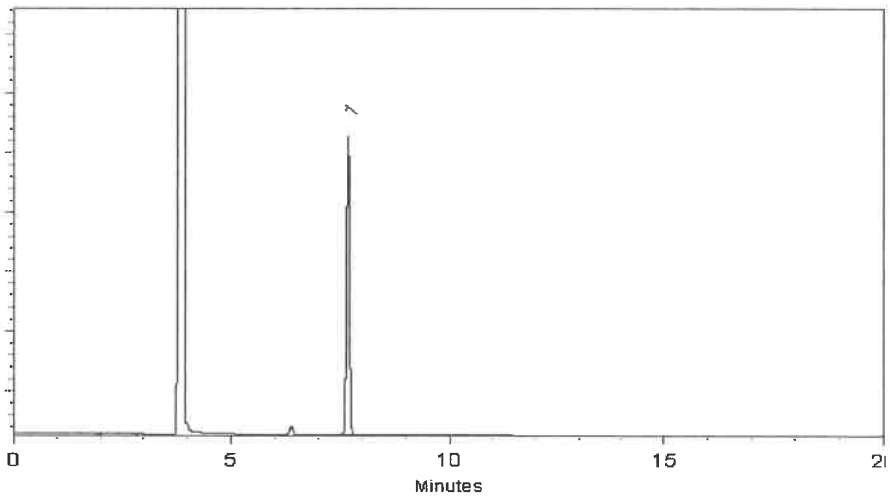
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Katelyn McGinni - Operations Tech I

Date Mixed: 08-Jul-2022 **Balance:** 1128342314

Christie Mills - Operations Tech II - ARM QC

Date Passed: 12-Jul-2022

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Catalog No. : 569724 **Lot No.:** A0187365

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl acetate	5,022.0 µg/mL	+/- 29.4049 µg/mL	Gravimetric
	CAS # 108-05-4 (Lot RD220630)		+/- 303.0195 µg/mL	Unstressed
	Purity 99%		+/- 303.7388 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Rcvd 12/30/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

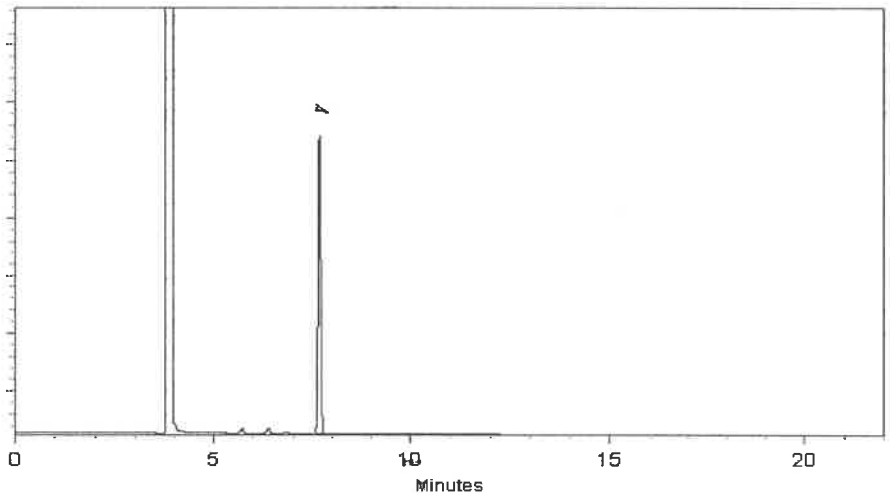
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 15-Jul-2022 **Balance:** B707717271

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 21-Jul-2022

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Catalog No. : 569727.SEC **Lot No.:** A0182847

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,032.7 µg/mL	+/- 146.5718 µg/mL	Gravimetric
	CAS # 108-94-1.SEC (Lot GA3TF)		+/- 1,510.4313 µg/mL	Unstressed
	Purity 99%		+/- 1,514.0168 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Rec'd
7-12-22
CDS

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

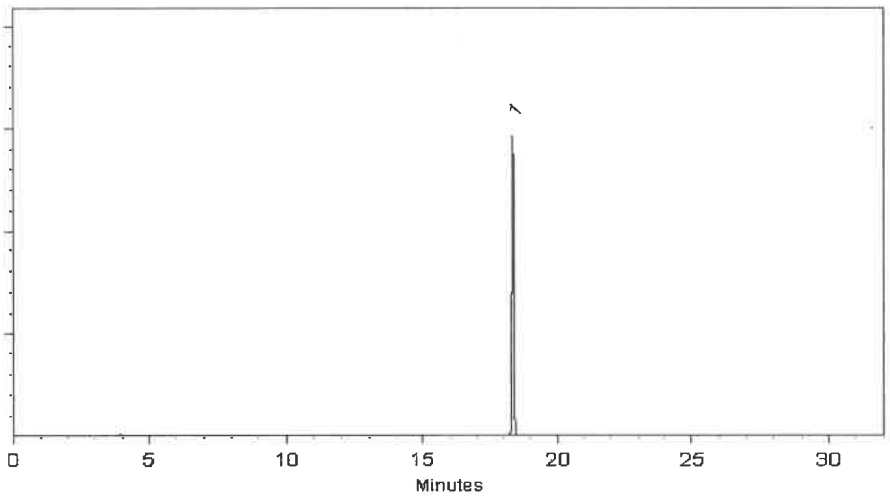
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jess Hoy - Operations Tech I

Date Mixed: 14-Mar-2022 **Balance:** 1128342314

Clara Windle - Operations Technician I

Date Passed: 18-Mar-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

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MV-569727_00020

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 **Lot No.:** A0182677

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,249.5 µg/mL	+/- 147.8414 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot 10211916)		+/- 1,523.5147 µg/mL	Unstressed
	Purity 99%		+/- 1,527.1313 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Revd 4/26/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

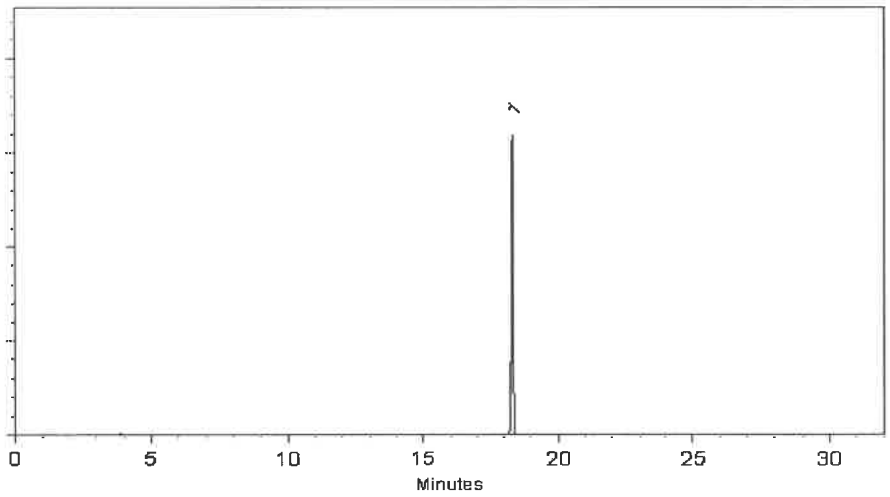
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brittany Federinko - Operations Tech I

Date Mixed: 08-Mar-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 10-Mar-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-570808.sec_00008

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808.SEC **Lot No.:** A0183834

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0.SEC (Lot G6HNF) **Purity** 99%	25,061.5 µg/mL	+/- 146.7406 µg/mL +/- 1,239.8601 µg/mL +/- 1,270.6843 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 * (Lot 220304JEAN) **Purity** 99%	2,518.0 µg/mL	+/- 14.7770 µg/mL +/- 124.5762 µg/mL +/- 127.6731 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 * (Lot 1012020) **Purity** 99%	25,079.5 µg/mL	+/- 146.8460 µg/mL +/- 1,240.7506 µg/mL +/- 1,271.5969 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (Isooctane) **CAS #** 540-84-1.SEC (Lot 11566800) **Purity** 99%	2,509.5 µg/mL	+/- 14.7272 µg/mL +/- 124.1557 µg/mL +/- 127.2422 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3.SEC (Lot RSHAH) **Purity** 99%	62,722.5 µg/mL	+/- 367.2351 µg/mL +/- 3,103.0492 µg/mL +/- 3,180.1943 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9.SEC (Lot F43IA) **Purity** 99%	5,021.5 µg/mL	+/- 29.4020 µg/mL +/- 248.4272 µg/mL +/- 254.6033 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5.SEC (Lot 13075400) **Purity** 99%	2,515.5 µg/mL	+/- 14.7624 µg/mL +/- 124.4526 µg/mL +/- 127.5464 µg/mL	Gravimetric Unstressed Stressed

10/31/22

8	1,2,3-Trimethylbenzene		2,514.0	µg/mL	+/-	14.7536	µg/mL	Gravimetric
	CAS # 526-73-8.SEC	(Lot 12203300)			+/-	124.3783	µg/mL	Unstressed
	Purity 99%				+/-	127.4703	µg/mL	Stressed
9	Benzyl chloride		2,513.5	µg/mL	+/-	14.7506	µg/mL	Gravimetric
	CAS # 100-44-7.SEC	(Lot H29N03)			+/-	124.3536	µg/mL	Unstressed
	Purity 99%				+/-	127.4450	µg/mL	Stressed
10	1,3,5-Trichlorobenzene		2,516.5	µg/mL	+/-	14.7682	µg/mL	Gravimetric
	CAS # 108-70-3.SEC	(Lot I28U021)			+/-	124.5020	µg/mL	Unstressed
	Purity 99%				+/-	127.5971	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

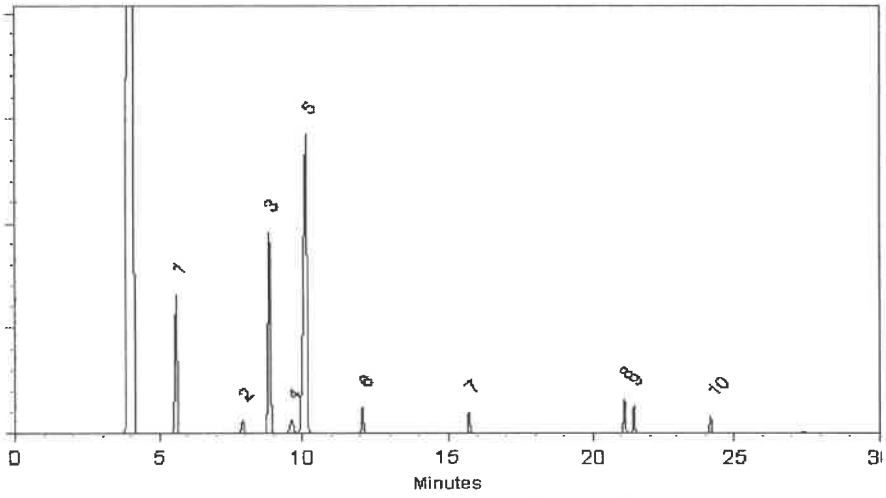
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Katelyn McGinni - Operations Tech I

Date Mixed: 07-Apr-2022 **Balance:** 1127510105

Clara Windle - Operations Technician I

Date Passed: 12-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-570808_00013

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110 Benner Circle
Bellefonte, PA 16823-8812
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CERTIFIED REFERENCE MATERIAL

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808 **Lot No.:** A0177095

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0 (Lot SHBH7211) **Purity** 99%	25,197.0 µg/mL	+/- 147.5340 µg/mL +/- 1,246.5636 µg/mL +/- 1,277.5545 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 (Lot 210413JLM) **Purity** 99%	2,522.5 µg/mL	+/- 14.8034 µg/mL +/- 124.7989 µg/mL +/- 127.9013 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 (Lot 1012020) **Purity** 99%	25,122.5 µg/mL	+/- 147.0978 µg/mL +/- 1,242.8779 µg/mL +/- 1,273.7771 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (isooctane) **CAS #** 540-84-1 (Lot MKCF8045) **Purity** 99%	2,522.5 µg/mL	+/- 14.8034 µg/mL +/- 124.7989 µg/mL +/- 127.9013 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3 (Lot SHBM5061) **Purity** 99%	62,707.0 µg/mL	+/- 367.1443 µg/mL +/- 3,102.2823 µg/mL +/- 3,179.4084 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9 (Lot BCCB9352) **Purity** 97%	5,025.1 µg/mL	+/- 29.4230 µg/mL +/- 248.6045 µg/mL +/- 254.7851 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5 (Lot BCBS3368V) **Purity** 98%	2,523.0 µg/mL	+/- 14.8064 µg/mL +/- 124.8241 µg/mL +/- 127.9272 µg/mL	Gravimetric Unstressed Stressed

2/13/24

8	1,2,3-Trimethylbenzene **CAS #** 526-73-8 **Purity** 99%	(Lot 8776.10-14)	2,508.0	µg/mL	+/- 14.7183 +/- 124.0815 +/- 127.1661	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Benzyl chloride **CAS #** 100-44-7 **Purity** 99%	(Lot SHBH2102V)	2,519.0	µg/mL	+/- 14.7829 +/- 124.6257 +/- 127.7238	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3,5-Trichlorobenzene **CAS #** 108-70-3 **Purity** 99%	(Lot 11319AS)	2,512.0	µg/mL	+/- 14.7418 +/- 124.2794 +/- 127.3689	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

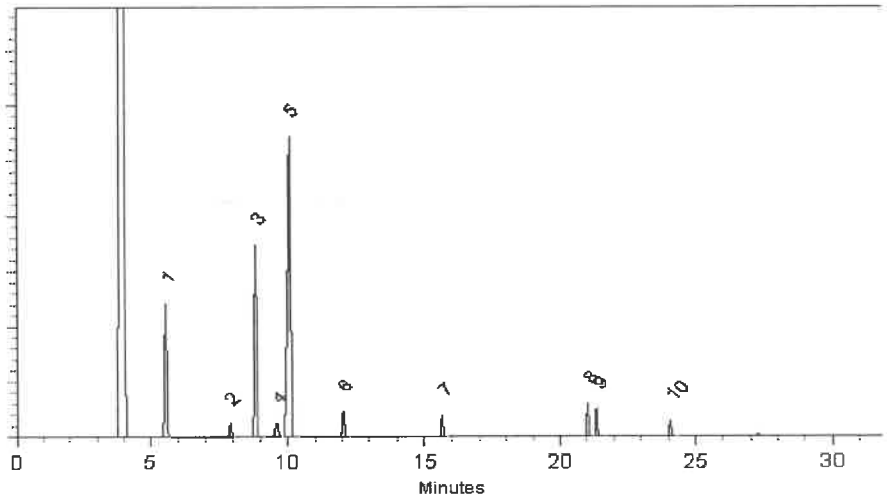
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 04-Oct-2021 **Balance:** B707717271

Alexis Shelow - Operations Tech I

Date Passed: 06-Oct-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-570809.sec_00009

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ISO/IEC 17025 Accredited
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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809.SEC **Lot No.:** A0171207

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2022 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate	5,030.0 µg/mL	+/- 29.4518 µg/mL	Gravimetric
	CAS # 141-78-6.SEC (Lot C386A-GG)		+/- 303.5022 µg/mL	Unstressed
	Purity 99%		+/- 304.2227 µg/mL	Stressed
2	Ethyl acrylate	2,515.0 µg/mL	+/- 14.7594 µg/mL	Gravimetric
	CAS # 140-88-5.SEC (Lot YIFAM-TG)		+/- 151.7544 µg/mL	Unstressed
	Purity 99%		+/- 152.1146 µg/mL	Stressed
3	Methyl methacrylate	5,029.0 µg/mL	+/- 29.4459 µg/mL	Gravimetric
	CAS # 80-62-6.SEC (Lot G01X021)		+/- 303.4419 µg/mL	Unstressed
	Purity 99%		+/- 304.1622 µg/mL	Stressed
4	Butyl acetate	2,510.0 µg/mL	+/- 14.7301 µg/mL	Gravimetric
	CAS # 123-86-4.SEC (Lot V2L2G-GT)		+/- 151.4527 µg/mL	Unstressed
	Purity 99%		+/- 151.8122 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

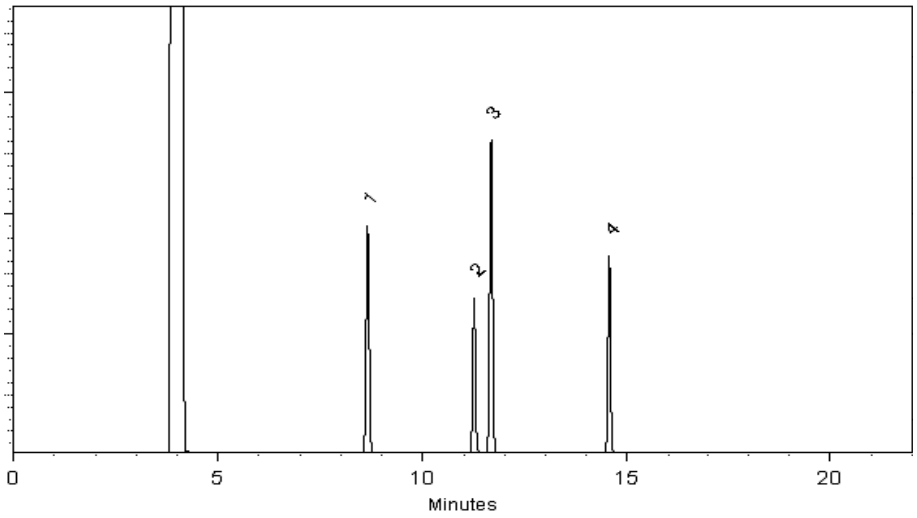
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cory Meyer - Operations Tech I

Date Mixed: 12-Apr-2021 **Balance:** 1127510105

Alexis Shelow - Operations Tech I

Date Passed: 15-Apr-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Standard Verification Form

Standard Information			
Vendor Standard Name	8260 List#2/ std#7		
Vendor	RESTEK		
Lot number	A0171207		
Initial Verification	☐	Re-Verification	x

TALS "Reagent" Information	
TALS Standard ID	MV-SUPP B_00056
COA Reviewed against what is in TALS	☒

Verification Information and Data			
Verified by	Seifert J	Instrument ID	VMS_G2
Verification Date	11/02/2022	Method Reference	EPA8260
ID of Standard Used for Verification	**lcs**	Batch # / Chrom Work List #	WL 115716
Attach to this form: formulary report , COA and data used for verification **Attach to standard in TALS: this form and all supporting documentation including the original CoA**			
See Acceptance Criteria Below:			
Approved for Use	☒	Not Approved for Use	☐
New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.			
New Expiration Date:	12/01/2022		

1st Level Review Judy Seifert Date: 11/02/2022

2nd Level Review Date: _____

QA Review (Re-verification only)		Date:

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\VMS_G2\20221102-115716.b\G2_8617.D

Lims ID: lcs Inj. Date: 02-Nov-2022 13:36:30

Worklist ID: 280-0115716-035 Instrument: VMS_G2

Method: SO_VMSG2_8260

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 5030B
$ 8 Dibromofluoromethane (S	50.0	49.5	98.9	75-121
$ 9 1,2-Dichloroethane-d4 (	50.0	51.2	102.5	58-140
$ 10 Toluene-d8 (Surr)	50.0	49.4	98.8	80-126
$ 11 4-Bromofluorobenzene (S	50.0	49.8	99.5	76-127
42 Ethanol	3000.0	4085.0	136.2	50-150
51 Isopropyl alcohol	500.0	475.4	95.1	50-150
54 Acetonitrile	500.0	689.8	138.0	50-150
66 Isopropyl ether	50.0	61.8	123.6	50-150
68 2-Chloro-1,3-butadiene	50.0	64.5	129.0	64-135
69 Tert-butyl ethyl ether	50.0	69.9	139.8	50-150
70 Ethyl acetate	100.0	108.7	108.7	52-167
73 Propionitrile	500.0	476.0	95.2	50-150
76 Methacrylonitrile	500.0	589.2	117.8	50-150
86 Tert-amyl methyl ether	50.0	62.0	123.9	50-150
88 n-Butanol	1250.0	1053.0	84.2	70-130
91 Methyl methacrylate	100.0	90.7	90.7	50-150
97 2-Nitropropane	100.0	59.1	59.1	
120 cis-1,4-Dichloro-2-bute	100.0	103.2	103.2	
135 1,2,3-Trimethylbenzene	50.0	52.1	104.2	50-150
140 1,3,5-Trichlorobenzene	50.0	59.2	118.4	50-150

Samples for Limit Group: 1, Lims Prep Method: 5030B

280-168226-A-13-A 280-168226-A-14-A 280-168226-A-15-A
280-168226-A-16-A 280-168226-A-17-A 280-168226-A-18-A
280-168021-D-1-A 280-168021-B-3-A 280-168021-C-4-A

Reagent

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Certificate #3222.02

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809.SEC **Lot No.:** A0183813

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6.SEC (Lot C386A-GG) **Purity** 99%	5,040.0 µg/mL	+/- 29.5103 µg/mL +/- 304.1056 µg/mL +/- 304.8275 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5.SEC (Lot YIFAM-TG) **Purity** 99%	2,510.0 µg/mL	+/- 14.7301 µg/mL +/- 151.4527 µg/mL +/- 151.8122 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6.SEC (Lot G01X021) **Purity** 99%	5,035.0 µg/mL	+/- 29.4810 µg/mL +/- 303.8039 µg/mL +/- 304.5251 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4.SEC (Lot V2L2G-GT) **Purity** 99%	2,500.0 µg/mL	+/- 14.6714 µg/mL +/- 150.8493 µg/mL +/- 151.2073 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

12/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

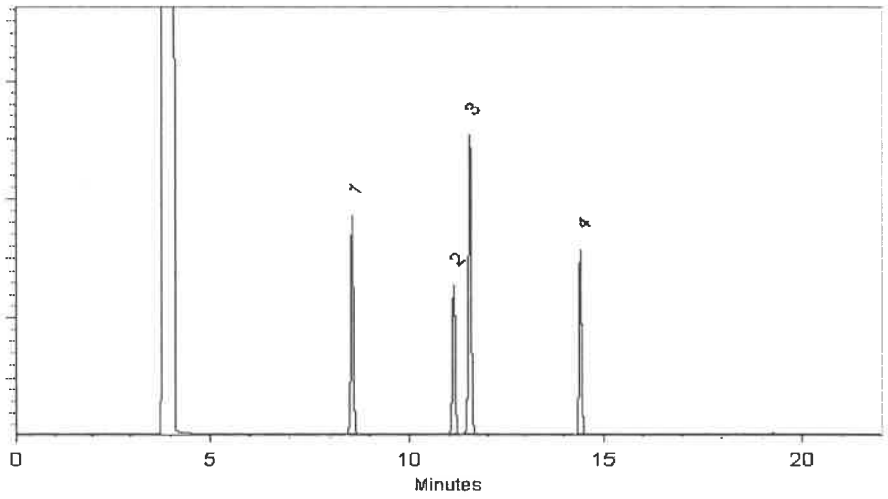
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jess Hoy - Operations Tech I

Date Mixed: 07-Apr-2022 **Balance:** 1127510105

Marlina Cowan - Operations Tech I

Date Passed: 13-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-570809_00011

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ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809 **Lot No.:** A0173205

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Rec'd 12/13/21 GM

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2022 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6 (Lot SHBM3421) **Purity** 99%	5,011.0 µg/mL	+/- 29.3405 µg/mL +/- 302.3558 µg/mL +/- 303.0735 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5 (Lot 10129902) **Purity** 99%	2,505.5 µg/mL	+/- 14.7037 µg/mL +/- 151.1811 µg/mL +/- 151.5400 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6 (Lot MKCN3027) **Purity** 99%	5,010.5 µg/mL	+/- 29.3376 µg/mL +/- 302.3256 µg/mL +/- 303.0433 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4 (Lot SHBM7214) **Purity** 99%	2,507.5 µg/mL	+/- 14.7154 µg/mL +/- 151.3018 µg/mL +/- 151.6610 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

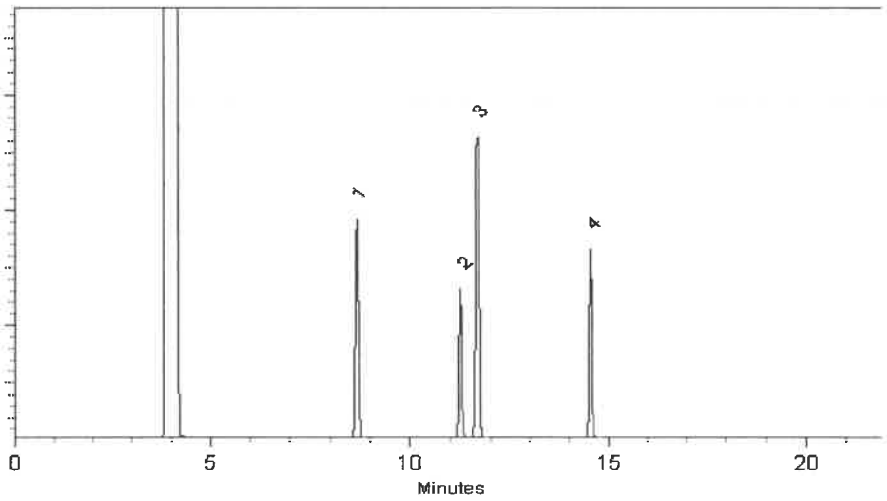
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 09-Jun-2021 **Balance:** B251644995

Alexis Shelow - Operations Tech I

Date Passed: 11-Jun-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-571992.sec_00007

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992.SEC **Lot No.:** A0167172

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC (Lot F23X068) **Purity** 99%	2,501.7 µg/mL	+/- 14.5449 µg/mL +/- 150.9366 µg/mL +/- 151.2950 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,500.8 µg/mL	+/- 14.5401 µg/mL +/- 150.8864 µg/mL +/- 151.2446 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 7692300) **Purity** 99%	2,501.2 µg/mL	+/- 14.5420 µg/mL +/- 150.9065 µg/mL +/- 151.2647 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot HGCHN) **Purity** 99%	25,001.2 µg/mL	+/- 145.3513 µg/mL +/- 1,508.4304 µg/mL +/- 1,512.0117 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9.SEC (Lot UCNEL) **Purity** 99%	5,000.2 µg/mL	+/- 29.0714 µg/mL +/- 301.6822 µg/mL +/- 302.3985 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot Y25A027) **Purity** 99%	2,501.0 µg/mL	+/- 14.5410 µg/mL +/- 150.8964 µg/mL +/- 151.2547 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot H3HGC) **Purity** 99%	2,501.7 µg/mL	+/- 14.5449 µg/mL +/- 150.9366 µg/mL +/- 151.2950 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 75-09-2.SEC	(Lot FGM02)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
9	Carbon disulfide		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 75-15-0.SEC	(Lot MKBL1376V)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
10	Acrylonitrile		25,000.7	µg/mL	+/-	145.3484	µg/mL	Gravimetric
	CAS # 107-13-1.SEC	(Lot V54AD)			+/-	1,508.4003	µg/mL	Unstressed
	Purity 99%				+/-	1,511.9815	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC	(Lot ZHKYA)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
12	cis-1,2-Dichloroethene		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 156-59-2.SEC	(Lot YZO5O)			+/-	150.8461	µg/mL	Unstressed
	Purity 99%				+/-	151.2043	µg/mL	Stressed
13	n-Hexane (C6)		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot 10188491)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
14	1,1-Dichloroethane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 75-34-3.SEC	(Lot 1026.30-2)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
15	2,2-Dichloropropane		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 594-20-7.SEC	(Lot I7E8E)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
16	trans-1,2-Dichloroethene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 156-60-5.SEC	(Lot L5QOH)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,500.7	µg/mL	+/-	363.3653	µg/mL	Gravimetric
	CAS # 78-83-1.SEC	(Lot YNG3K)			+/-	3,770.9403	µg/mL	Unstressed
	Purity 99%				+/-	3,779.8932	µg/mL	Stressed
18	Chloroform		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
19	Bromochloromethane		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 8529200)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
20	Tetrahydrofuran		5,001.5	µg/mL	+/-	29.0792	µg/mL	Gravimetric
	CAS # 109-99-9.SEC	(Lot 8DAOJ)			+/-	301.7627	µg/mL	Unstressed
	Purity 99%				+/-	302.4791	µg/mL	Stressed
21	1,1,1-Trichloroethane		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 71-55-6.SEC	(Lot 7998000)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
22	Cyclohexane		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed
23	1,1-Dichloropropene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 556500)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed

24	Carbon tetrachloride		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
25	n-Heptane (C7)		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 142-82-5.SEC	(Lot TFHUC)			+/-	150.8461	µg/mL	Unstressed
	Purity 99%				+/-	151.2043	µg/mL	Stressed
26	1,2-Dichloroethane		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 107-06-2.SEC	(Lot 00016165)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
27	Benzene		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 71-43-2.SEC	(Lot B28Y008)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
28	Trichloroethene		2,501.3	µg/mL	+/-	14.5430	µg/mL	Gravimetric
	CAS # 79-01-6.SEC	(Lot H04X050)			+/-	150.9165	µg/mL	Unstressed
	Purity 99%				+/-	151.2748	µg/mL	Stressed
29	Methylcyclohexane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 108-87-2.SEC	(Lot 24MSD-CD)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
30	1,2-Dichloropropane		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 78-87-5.SEC	(Lot ERRBI-RH)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed
31	1,4-Dioxane		50,000.7	µg/mL	+/-	290.6930	µg/mL	Gravimetric
	CAS # 123-91-1.SEC	(Lot 8CALO)			+/-	3,016.7603	µg/mL	Unstressed
	Purity 99%				+/-	3,023.9226	µg/mL	Stressed
32	Dibromomethane		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 74-95-3.SEC	(Lot MOKKJ)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 10061-01-5.SEC	(Lot 7ZLXJ-TJ)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed
34	Toluene		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 108-88-3.SEC	(Lot YND2B-BD)			+/-	150.8461	µg/mL	Unstressed
	Purity 99%				+/-	151.2043	µg/mL	Stressed
35	Ethyl methacrylate		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 97-63-2.SEC	(Lot AQSPO)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 10061-02-6.SEC	(Lot ZDMSL)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 79-00-5.SEC	(Lot 9245400)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed
38	1,3-Dichloropropane		2,501.8	µg/mL	+/-	14.5459	µg/mL	Gravimetric
	CAS # 142-28-9.SEC	(Lot IQCON)			+/-	150.9467	µg/mL	Unstressed
	Purity 99%				+/-	151.3051	µg/mL	Stressed
39	Tetrachloroethene		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 127-18-4.SEC	(Lot F09W014)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed

40	Dibromochloromethane		2,502.8	µg/mL	+/-	14.5513	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10206360)			+/-	151.0027	µg/mL	Unstressed
	Purity 97%				+/-	151.3612	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,500.3	µg/mL	+/-	14.5372	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 8529900)			+/-	150.8562	µg/mL	Unstressed
	Purity 99%				+/-	151.2143	µg/mL	Stressed
42	Chlorobenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
43	m-Xylene		1,251.3	µg/mL	+/-	7.2922	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	75.5001	µg/mL	Unstressed
	Purity 99%				+/-	75.6793	µg/mL	Stressed
44	p-Xylene		1,250.3	µg/mL	+/-	7.2863	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot D6UOA)			+/-	75.4398	µg/mL	Unstressed
	Purity 99%				+/-	75.6189	µg/mL	Stressed
45	Ethylbenzene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
46	1,1,1,2-Tetrachloroethane		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot 9366000)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
47	o-Xylene		2,501.8	µg/mL	+/-	14.5459	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01)			+/-	150.9467	µg/mL	Unstressed
	Purity 99%				+/-	151.3051	µg/mL	Stressed
48	Styrene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot QGQ7F)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot WVREC)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed
50	Bromoform		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 9170700)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
51	Bromodichloromethane		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 13780)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane		2,500.5	µg/mL	+/-	14.5379	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot BCCB0724)			+/-	150.8644	µg/mL	Unstressed
	Purity 98%				+/-	151.2226	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot GUHZN)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-3)			+/-	150.8661	µg/mL	Unstressed
	Purity 97%				+/-	151.2243	µg/mL	Stressed
55	n-Propylbenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed

56	Bromobenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 8DKWJ)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot TOOOF)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
58	2-Chlorotoluene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
59	4-Chlorotoluene		2,501.3	µg/mL	+/-	14.5430	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot S5SKD)			+/-	150.9165	µg/mL	Unstressed
	Purity 99%				+/-	151.2748	µg/mL	Stressed
60	tert-Butylbenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot D6OHC)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot JMIYD)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
62	sec-Butylbenzene		2,501.3	µg/mL	+/-	14.5430	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot O4HRF)			+/-	150.9165	µg/mL	Unstressed
	Purity 99%				+/-	151.2748	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 5221800)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,500.3	µg/mL	+/-	14.5372	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	150.8562	µg/mL	Unstressed
	Purity 99%				+/-	151.2143	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
66	n-Butylbenzene		2,500.3	µg/mL	+/-	14.5372	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot MMPGA)			+/-	150.8562	µg/mL	Unstressed
	Purity 99%				+/-	151.2143	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot R6QDM)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot Q135-105)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot IGLFA)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
70	Hexachlorobutadiene		2,501.5	µg/mL	+/-	14.5438	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 10550800)			+/-	150.9247	µg/mL	Unstressed
	Purity 97%				+/-	151.2830	µg/mL	Stressed
71	Naphthalene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot AM5NG)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,501.7 µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)		+/-	150.9366	µg/mL	Unstressed
	Purity 99%			+/-	151.2950	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

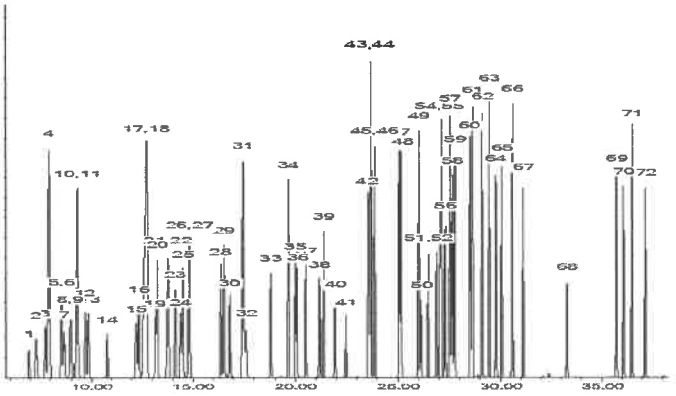
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 13-Dec-2020 **Balance:** 1127510105

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Dec-2020

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-571992_00015

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992 **Lot No.:** A0183568

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7 (Lot SHBN4280) **Purity** 99%	2,506.6 µg/mL	+/- 14.5737 µg/mL +/- 151.2358 µg/mL +/- 151.5949 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00016133) **Purity** 99%	2,514.5 µg/mL	+/- 14.6195 µg/mL +/- 151.7109 µg/mL +/- 152.0711 µg/mL	Gravimetric Unstressed Stressed
3	1,1-dichloroethene **CAS #** 75-35-4 (Lot SHBG8609V) **Purity** 99%	2,515.1 µg/mL	+/- 14.6232 µg/mL +/- 151.7486 µg/mL +/- 152.1089 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot 101619K21F-1) **Purity** 99%	25,080.8 µg/mL	+/- 145.8140 µg/mL +/- 1,513.2321 µg/mL +/- 1,516.8247 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9 (Lot SHBM1320) **Purity** 99%	5,026.6 µg/mL	+/- 29.2252 µg/mL +/- 303.2786 µg/mL +/- 303.9986 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot RD220125) **Purity** 99%	2,505.3 µg/mL	+/- 14.5657 µg/mL +/- 151.1528 µg/mL +/- 151.5117 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot RD211021) **Purity** 99%	2,509.1 µg/mL	+/- 14.5883 µg/mL +/- 151.3866 µg/mL +/- 151.7460 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,513.3	µg/mL	+/-	14.6123	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBP1417)			+/-	151.6355	µg/mL	Unstressed
	Purity 99%				+/-	151.9955	µg/mL	Stressed
9	Carbon disulfide		2,510.1	µg/mL	+/-	14.5941	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot N28F701)			+/-	151.4470	µg/mL	Unstressed
	Purity 99%				+/-	151.8065	µg/mL	Stressed
10	Acrylonitrile		25,102.9	µg/mL	+/-	145.9426	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot SHBK4954)			+/-	1,514.5670	µg/mL	Unstressed
	Purity 99%				+/-	1,518.1628	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)		2,513.8	µg/mL	+/-	14.6152	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBN6497)			+/-	151.6657	µg/mL	Unstressed
	Purity 99%				+/-	152.0258	µg/mL	Stressed
12	cis-1,2-Dichloroethene		2,515.1	µg/mL	+/-	14.6232	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKCP7830)			+/-	151.7486	µg/mL	Unstressed
	Purity 99%				+/-	152.1089	µg/mL	Stressed
13	n-Hexane (C6)		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBL9879)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
14	1,1-Dichloroethane		2,517.9	µg/mL	+/-	14.6391	µg/mL	Gravimetric
	CAS # 75-34-3	(Lot 760200)			+/-	151.9146	µg/mL	Unstressed
	Purity 99%				+/-	152.2752	µg/mL	Stressed
15	2,2-Dichloropropane		2,517.9	µg/mL	+/-	14.6391	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot RD211103)			+/-	151.9146	µg/mL	Unstressed
	Purity 99%				+/-	152.2752	µg/mL	Stressed
16	trans-1,2-Dichloroethene		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot MKBH9850V)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,633.1	µg/mL	+/-	364.1354	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot 098794J01H)			+/-	3,778.9321	µg/mL	Unstressed
	Purity 99%				+/-	3,787.9040	µg/mL	Stressed
18	chloroform		2,510.9	µg/mL	+/-	14.5984	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBN8469)			+/-	151.4922	µg/mL	Unstressed
	Purity 99%				+/-	151.8519	µg/mL	Stressed
19	Bromochloromethane		2,517.0	µg/mL	+/-	14.6341	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00008541)			+/-	151.8618	µg/mL	Unstressed
	Purity 99%				+/-	152.2223	µg/mL	Stressed
20	Tetrahydrofuran		5,036.1	µg/mL	+/-	29.2805	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBN3757)			+/-	303.8517	µg/mL	Unstressed
	Purity 99%				+/-	304.5731	µg/mL	Stressed
21	1,1,1-trichloroethane		2,509.6	µg/mL	+/-	14.5912	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot RD220215)			+/-	151.4168	µg/mL	Unstressed
	Purity 99%				+/-	151.7763	µg/mL	Stressed
22	Cyclohexane		2,510.0	µg/mL	+/-	14.5934	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot EA003-US)			+/-	151.4394	µg/mL	Unstressed
	Purity 99%				+/-	151.7990	µg/mL	Stressed
23	1,1-Dichloropropene		2,513.8	µg/mL	+/-	14.6152	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot 220217JLM)			+/-	151.6657	µg/mL	Unstressed
	Purity 99%				+/-	152.0258	µg/mL	Stressed

24	carbon tetrachloride		2,513.5	µg/mL	+/-	14.6137	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBL8097)			+/-	151.6506	µg/mL	Unstressed
	Purity 99%				+/-	152.0106	µg/mL	Stressed
25	n-Heptane (C7)		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 142-82-5	(Lot SGBL9221)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
26	1,2-Dichloroethane		2,514.4	µg/mL	+/-	14.6188	µg/mL	Gravimetric
	CAS # 107-06-2	(Lot MKCN9758)			+/-	151.7034	µg/mL	Unstressed
	Purity 99%				+/-	152.0636	µg/mL	Stressed
27	Benzene		2,509.3	µg/mL	+/-	14.5890	µg/mL	Gravimetric
	CAS # 71-43-2	(Lot MKCM9242)			+/-	151.3942	µg/mL	Unstressed
	Purity 99%				+/-	151.7536	µg/mL	Stressed
28	Trichloroethene		2,507.5	µg/mL	+/-	14.5788	µg/mL	Gravimetric
	CAS # 79-01-6	(Lot SHBL5816)			+/-	151.2886	µg/mL	Unstressed
	Purity 99%				+/-	151.6478	µg/mL	Stressed
29	Methylcyclohexane		2,510.3	µg/mL	+/-	14.5948	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBL0078)			+/-	151.4545	µg/mL	Unstressed
	Purity 99%				+/-	151.8141	µg/mL	Stressed
30	1,2-Dichloropropane		2,510.9	µg/mL	+/-	14.5984	µg/mL	Gravimetric
	CAS # 78-87-5	(Lot BCBR0882V)			+/-	151.4922	µg/mL	Unstressed
	Purity 99%				+/-	151.8519	µg/mL	Stressed
31	1,4-Dioxane		50,187.5	µg/mL	+/-	291.7792	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBM9675)			+/-	3,028.0328	µg/mL	Unstressed
	Purity 99%				+/-	3,035.2219	µg/mL	Stressed
32	Dibromomethane		2,511.0	µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 74-95-3	(Lot 10201030)			+/-	151.4998	µg/mL	Unstressed
	Purity 99%				+/-	151.8594	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,513.8	µg/mL	+/-	14.6152	µg/mL	Gravimetric
	CAS # 10061-01-5	(Lot RD220311)			+/-	151.6657	µg/mL	Unstressed
	Purity 99%				+/-	152.0258	µg/mL	Stressed
34	Toluene		2,518.4	µg/mL	+/-	14.6420	µg/mL	Gravimetric
	CAS # 108-88-3	(Lot MKCQ2779)			+/-	151.9447	µg/mL	Unstressed
	Purity 99%				+/-	152.3055	µg/mL	Stressed
35	Ethyl methacrylate		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 97-63-2	(Lot MKCL0907)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,504.5	µg/mL	+/-	14.5615	µg/mL	Gravimetric
	CAS # 10061-02-6	(Lot RD211104)			+/-	151.1083	µg/mL	Unstressed
	Purity 98%				+/-	151.4671	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,513.6	µg/mL	+/-	14.6144	µg/mL	Gravimetric
	CAS # 79-00-5	(Lot FGB01)			+/-	151.6581	µg/mL	Unstressed
	Purity 99%				+/-	152.0182	µg/mL	Stressed
38	1,3-Dichloropropane		2,513.6	µg/mL	+/-	14.6144	µg/mL	Gravimetric
	CAS # 142-28-9	(Lot BCBC6265)			+/-	151.6581	µg/mL	Unstressed
	Purity 99%				+/-	152.0182	µg/mL	Stressed
39	Tetrachloroethene		2,507.5	µg/mL	+/-	14.5788	µg/mL	Gravimetric
	CAS # 127-18-4	(Lot SHBJ7422)			+/-	151.2886	µg/mL	Unstressed
	Purity 99%				+/-	151.6478	µg/mL	Stressed

40	dibromochloromethane		2,514.8	µg/mL	+/-	14.6210	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKCM8659)			+/-	151.7260	µg/mL	Unstressed
	Purity 99%				+/-	152.0862	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,513.9	µg/mL	+/-	14.6159	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCCF5058)			+/-	151.6732	µg/mL	Unstressed
	Purity 99%				+/-	152.0333	µg/mL	Stressed
42	Chlorobenzene		2,507.9	µg/mL	+/-	14.5810	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBL8110)			+/-	151.3112	µg/mL	Unstressed
	Purity 99%				+/-	151.6704	µg/mL	Stressed
43	m-Xylene		1,260.0	µg/mL	+/-	7.3257	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot Q13G020)			+/-	76.0214	µg/mL	Unstressed
	Purity 99%				+/-	76.2019	µg/mL	Stressed
44	p-Xylene		1,258.6	µg/mL	+/-	7.3178	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot 10234437)			+/-	75.9384	µg/mL	Unstressed
	Purity 99%				+/-	76.1187	µg/mL	Stressed
45	Ethylbenzene		2,516.0	µg/mL	+/-	14.6282	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBM4308)			+/-	151.8014	µg/mL	Unstressed
	Purity 99%				+/-	152.1618	µg/mL	Stressed
46	1,1,1,2-Tetrachloroethane		2,519.1	µg/mL	+/-	14.6464	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot TMWGK)			+/-	151.9900	µg/mL	Unstressed
	Purity 99%				+/-	152.3508	µg/mL	Stressed
47	o-Xylene		2,513.5	µg/mL	+/-	14.6134	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBN5105)			+/-	151.6479	µg/mL	Unstressed
	Purity 98%				+/-	152.0079	µg/mL	Stressed
48	Styrene		2,509.1	µg/mL	+/-	14.5883	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot MKCP3941)			+/-	151.3866	µg/mL	Unstressed
	Purity 99%				+/-	151.7460	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,518.5	µg/mL	+/-	14.6428	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot Z20D022)			+/-	151.9523	µg/mL	Unstressed
	Purity 99%				+/-	152.3130	µg/mL	Stressed
50	bromoform		2,511.0	µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBK4455)			+/-	151.5001	µg/mL	Unstressed
	Purity 98%				+/-	151.8597	µg/mL	Stressed
51	bromodichloromethane		2,518.1	µg/mL	+/-	14.6406	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKCM7156)			+/-	151.9296	µg/mL	Unstressed
	Purity 99%				+/-	152.2903	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,512.5	µg/mL	+/-	14.6079	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot 332900)			+/-	151.5903	µg/mL	Unstressed
	Purity 99%				+/-	151.9502	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,511.8	µg/mL	+/-	14.6038	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot RD220405A)			+/-	151.5480	µg/mL	Unstressed
	Purity 95%				+/-	151.9078	µg/mL	Stressed
55	n-Propylbenzene		2,515.6	µg/mL	+/-	14.6261	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKCN1126)			+/-	151.7788	µg/mL	Unstressed
	Purity 99%				+/-	152.1392	µg/mL	Stressed

56	Bromobenzene		2,516.9	µg/mL	+/-	14.6333	µg/mL	Gravimetric
	CAS # 108-86-1	(Lot MKBD4032V)			+/-	151.8542	µg/mL	Unstressed
	Purity 99%				+/-	152.2147	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,512.3	µg/mL	+/-	14.6064	µg/mL	Gravimetric
	CAS # 108-67-8	(Lot BCCD0427)			+/-	151.5752	µg/mL	Unstressed
	Purity 99%				+/-	151.9350	µg/mL	Stressed
58	2-Chlorotoluene		2,510.9	µg/mL	+/-	14.5984	µg/mL	Gravimetric
	CAS # 95-49-8	(Lot MKCF5243)			+/-	151.4922	µg/mL	Unstressed
	Purity 99%				+/-	151.8519	µg/mL	Stressed
59	4-Chlorotoluene		2,513.1	µg/mL	+/-	14.6115	µg/mL	Gravimetric
	CAS # 106-43-4	(Lot MKCC8496)			+/-	151.6280	µg/mL	Unstressed
	Purity 99%				+/-	151.9880	µg/mL	Stressed
60	tert-Butylbenzene		2,514.6	µg/mL	+/-	14.6202	µg/mL	Gravimetric
	CAS # 98-06-6	(Lot STBD6954V)			+/-	151.7185	µg/mL	Unstressed
	Purity 99%				+/-	152.0787	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,517.1	µg/mL	+/-	14.6348	µg/mL	Gravimetric
	CAS # 95-63-6	(Lot WXBC9428V)			+/-	151.8696	µg/mL	Unstressed
	Purity 98%				+/-	152.2302	µg/mL	Stressed
62	sec-Butylbenzene		2,519.3	µg/mL	+/-	14.6471	µg/mL	Gravimetric
	CAS # 135-98-8	(Lot MKCN2920)			+/-	151.9975	µg/mL	Unstressed
	Purity 99%				+/-	152.3584	µg/mL	Stressed
63	p-Isopropyltoluene (p-Cymene)		2,512.0	µg/mL	+/-	14.6050	µg/mL	Gravimetric
	CAS # 99-87-6	(Lot MKCP6638)			+/-	151.5601	µg/mL	Unstressed
	Purity 99%				+/-	151.9199	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBZ7498)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,513.4	µg/mL	+/-	14.6130	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	151.6431	µg/mL	Unstressed
	Purity 99%				+/-	152.0031	µg/mL	Stressed
66	n-Butylbenzene		2,511.0	µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 104-51-8	(Lot 09418JJ)			+/-	151.4998	µg/mL	Unstressed
	Purity 99%				+/-	151.8594	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBN3835)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,512.4	µg/mL	+/-	14.6074	µg/mL	Gravimetric
	CAS # 96-12-8	(Lot HBMVB)			+/-	151.5855	µg/mL	Unstressed
	Purity 97%				+/-	151.9454	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,510.4	µg/mL	+/-	14.5955	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBM0526)			+/-	151.4620	µg/mL	Unstressed
	Purity 99%				+/-	151.8216	µg/mL	Stressed
70	Hexachlorobutadiene		2,509.3	µg/mL	+/-	14.5890	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot X05J)			+/-	151.3942	µg/mL	Unstressed
	Purity 99%				+/-	151.7536	µg/mL	Stressed
71	Naphthalene		2,520.6	µg/mL	+/-	14.6551	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKCH0219)			+/-	152.0805	µg/mL	Unstressed
	Purity 99%				+/-	152.4415	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,513.0	µg/mL	+/-	14.6108	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot MKBX7627V)			+/-	151.6204	µg/mL	Unstressed
	Purity 99%				+/-	151.9804	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

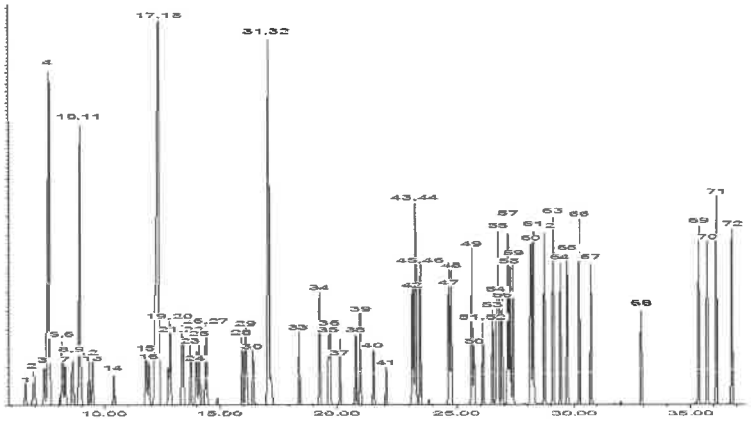
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 31-Mar-2022 **Balance:** B707717271

Feng-Yun Lo - QC Analyst

Date Passed: 21-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-571993.sec_00007

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993.SEC **Lot No.:** A0170862

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Rec'd 12/13/21

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile	25,020.7 µg/mL	+/- 146.5015 µg/mL	Gravimetric
	CAS # 75-05-8.SEC (Lot JZJ3E)		+/- 1,237.8399 µg/mL	Unstressed
	Purity 99%		+/- 1,268.6139 µg/mL	Stressed
2	Diisopropyl ether (DIPE)	2,517.0 µg/mL	+/- 14.7712 µg/mL	Gravimetric
	CAS # 108-20-3.SEC (Lot LL7TN-SH)		+/- 124.5268 µg/mL	Unstressed
	Purity 99%		+/- 127.6224 µg/mL	Stressed
3	Ethyl-tert-butyl ether (ETBE)	2,513.0 µg/mL	+/- 14.7480 µg/mL	Gravimetric
	CAS # 637-92-3.SEC (Lot UCI5B)		+/- 124.3312 µg/mL	Unstressed
	Purity 98%		+/- 127.4220 µg/mL	Stressed
4	Propionitrile	25,200.0 µg/mL	+/- 147.5515 µg/mL	Gravimetric
	CAS # 107-12-0.SEC (Lot N44LF)		+/- 1,246.7120 µg/mL	Unstressed
	Purity 99%		+/- 1,277.7066 µg/mL	Stressed
5	tert-Amyl alcohol	25,147.7 µg/mL	+/- 147.2451 µg/mL	Gravimetric
	CAS # 75-85-4.SEC (Lot D87JO)		+/- 1,244.1230 µg/mL	Unstressed
	Purity 99%		+/- 1,275.0532 µg/mL	Stressed
6	tert-Amyl methyl ether (TAME)	2,516.7 µg/mL	+/- 14.7692 µg/mL	Gravimetric
	CAS # 994-05-8.SEC (Lot 11010100)		+/- 124.5103 µg/mL	Unstressed
	Purity 99%		+/- 127.6055 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

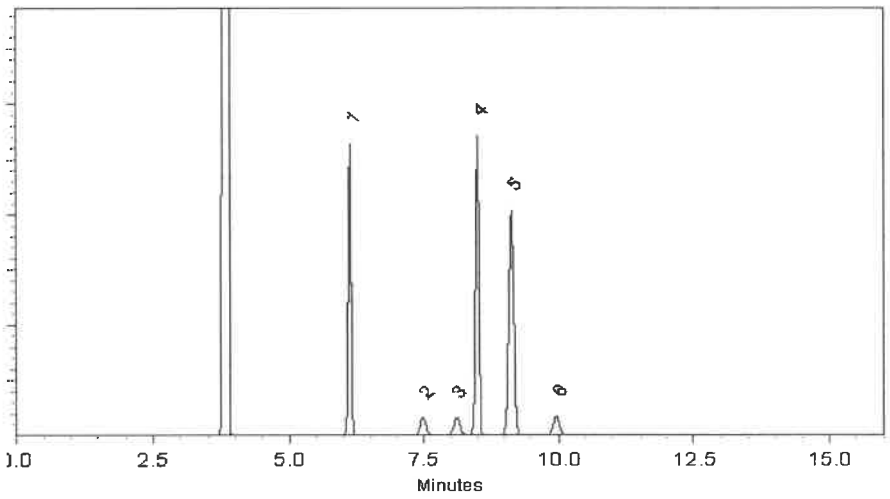
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dalton Stover - Operations Technician I

Date Mixed: 31-Mar-2021 **Balance:** 1128353505

Alexis Shelow - Operations Tech I

Date Passed: 02-Apr-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-571993.sec_00008

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993.SEC **Lot No.:** A0189867

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8.SEC (Lot 3ZDOE) **Purity** 99%	25,064.5 µg/mL	+/- 146.7582 µg/mL +/- 1,240.0085 µg/mL +/- 1,270.8364 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3.SEC (Lot LL7TN-SH) **Purity** 99%	2,511.0 µg/mL	+/- 14.7360 µg/mL +/- 124.2299 µg/mL +/- 127.3182 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3.SEC (Lot UCI5B) **Purity** 98%	2,499.2 µg/mL	+/- 14.6667 µg/mL +/- 123.6459 µg/mL +/- 126.7197 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0.SEC (Lot N44LF) **Purity** 99%	25,000.9 µg/mL	+/- 146.3858 µg/mL +/- 1,236.8620 µg/mL +/- 1,267.6117 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4.SEC (Lot REJPI) **Purity** 99%	25,023.6 µg/mL	+/- 146.5187 µg/mL +/- 1,237.9850 µg/mL +/- 1,268.7627 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8.SEC (Lot 12075100) **Purity** 98%	2,504.0 µg/mL	+/- 14.6949 µg/mL +/- 123.8835 µg/mL +/- 126.9632 µg/mL	Gravimetric Unstressed Stressed

12/5/22

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

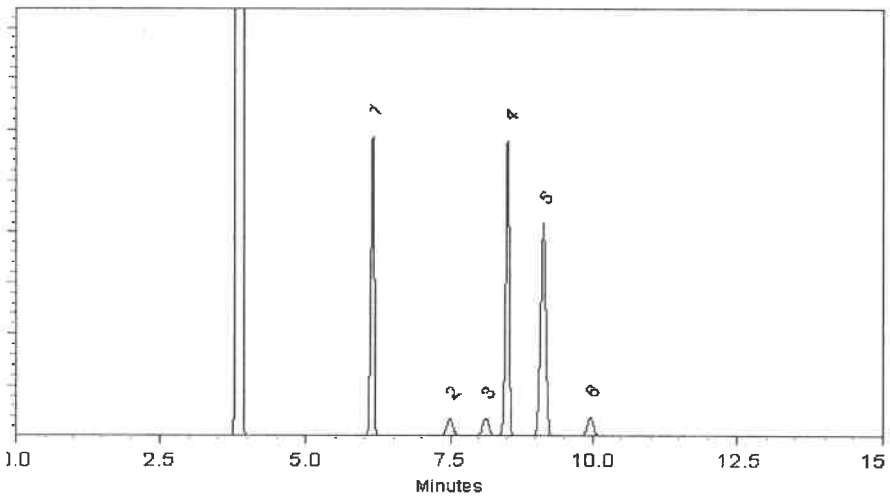
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Daniel Wasson - Operations Tech I **Date Mixed:** 22-Sep-2022 **Balance:** 1128342314

Marlina Cowan – Operations Tech II ARM QC **Date Passed:** 26-Sep-2022

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Reagent

mv-571993_00007

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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993 **Lot No.:** A0172903

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

Rec'd 12/13/21 GM

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	Acetonitrile		25,165.0	µg/mL	+/-	147.3466	µg/mL	Gravimetric
	CAS # 75-05-8	(Lot SHBH6233)			+/-	1,244.9805	µg/mL	Unstressed
	Purity 99%				+/-	1,275.9320	µg/mL	Stressed
2	Diisopropyl ether (DIPE)		2,519.5	µg/mL	+/-	14.7858	µg/mL	Gravimetric
	CAS # 108-20-3	(Lot SHBH1927V)			+/-	124.6504	µg/mL	Unstressed
	Purity 99%				+/-	127.7492	µg/mL	Stressed
3	Ethyl-tert-butyl ether (ETBE)		2,510.5	µg/mL	+/-	14.7330	µg/mL	Gravimetric
	CAS # 637-92-3	(Lot MKCM3774)			+/-	124.2052	µg/mL	Unstressed
	Purity 99%				+/-	127.2929	µg/mL	Stressed
4	Propionitrile		25,132.5	µg/mL	+/-	147.1563	µg/mL	Gravimetric
	CAS # 107-12-0	(Lot BCCB0845)			+/-	1,243.3726	µg/mL	Unstressed
	Purity 99%				+/-	1,274.2842	µg/mL	Stressed
5	tert-Amyl alcohol		25,074.0	µg/mL	+/-	146.8138	µg/mL	Gravimetric
	CAS # 75-85-4	(Lot STBB1898V)			+/-	1,240.4785	µg/mL	Unstressed
	Purity 99%				+/-	1,271.3181	µg/mL	Stressed
6	tert-Amyl methyl ether (TAME)		2,509.0	µg/mL	+/-	14.7242	µg/mL	Gravimetric
	CAS # 994-05-8	(Lot HMBG7745V)			+/-	124.1310	µg/mL	Unstressed
	Purity 99%				+/-	127.2168	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

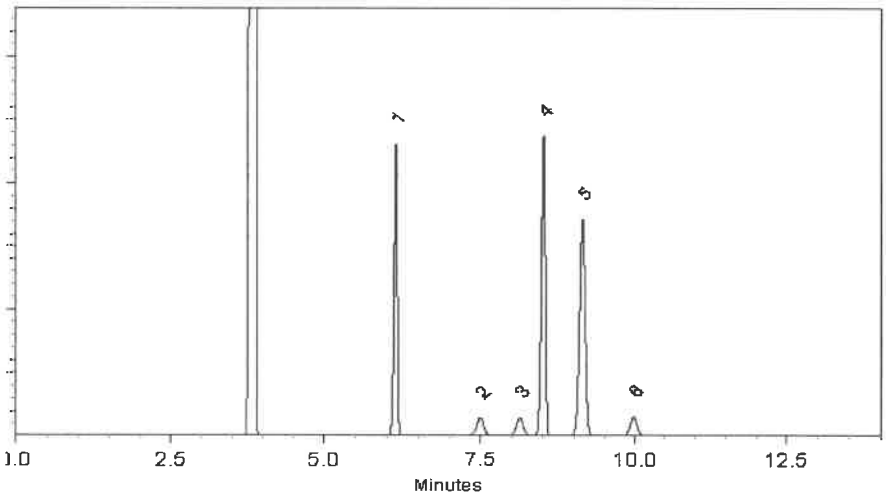
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 01-Jun-2021 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 03-Jun-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-571994.sec_00006

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571994.SEC **Lot No.:** A0168005

Description : 8260 Ethanol Standard

8260 Ethanol Standard 100,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 0°C or colder

Ship: Ambient

REC'D 12/13/21 GM

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethanol	100,731.0 µg/mL	+/- 589.7717 µg/mL	Gravimetric
	CAS # 64-17-5.SEC (Lot PG0219SEC)		+/- 2,157.7833 µg/mL	Unstressed
	Purity 99%		+/- 2,220.4496 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.# 10910)

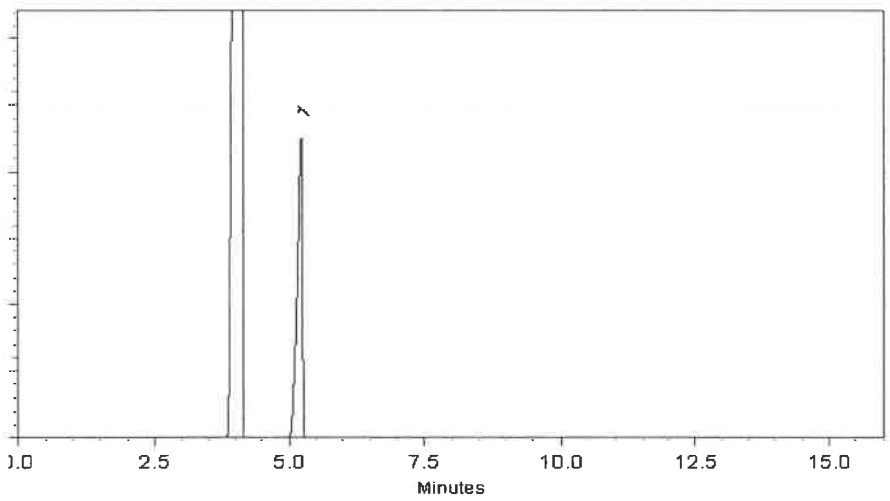
Carrier Gas:
hydrogen-constant pressure 11 psi.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cory Meyer - Operations Tech I

Date Mixed: 11-Jan-2021 **Balance:** 1127510105

Merlina Cowan - Operations Tech I

Date Passed: 14-Jan-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-571994_00005

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571994 **Lot No.:** A0169978

Description : 8260 Ethanol Standard

8260 Ethanol Standard 100,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 0°C or colder

Ship: Ambient

REC'D 12/2/21 GM

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethanol	100,586.0 µg/mL	+/- 588.9228 µg/mL	Gravimetric
	CAS # 64-17-5 (Lot SHBM3719)		+/- 2,154.6772 µg/mL	Unstressed
	Purity 99%		+/- 2,217.2533 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.# 10910)

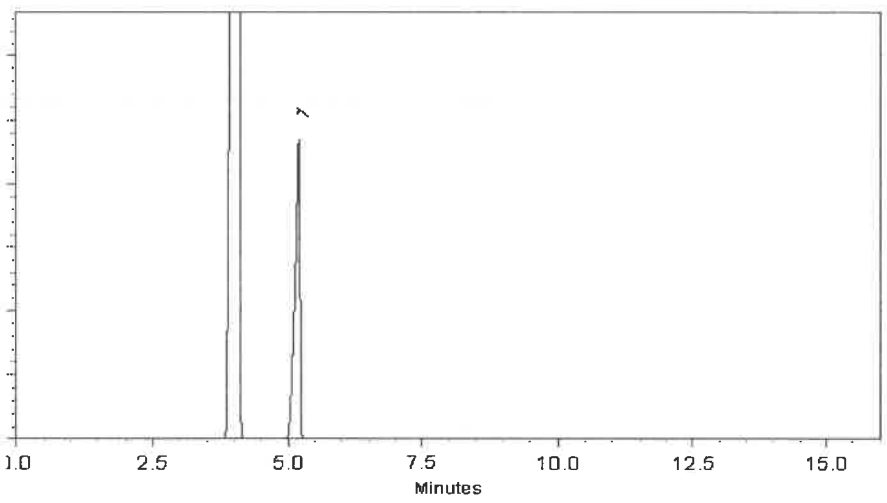
Carrier Gas:
hydrogen-constant pressure 11 psi.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Sam Moodler - Operations Tech I

Date Mixed: 10-Mar-2021 **Balance:** B707717271

Alexis Sheiow - Operations Tech I

Date Passed: 16-Mar-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-CUS17739.s_00011

ISO 17034

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Reference Material Certificate

Product Name: Custom Standard
Product Number: CUS-17739
Storage Conditions: Store Frozen (-25° to -10°C).

Lot Number: 0006676357
Lot Issue Date: 15-Apr-2022
Expiration Date: 31-May-2024

Component Name	CERTIFIED VALUES Concentration		Expanded Uncertainty	CAS#	Analyte Lot
1-chlorohexane	1004	±	5 µg/mL	000544-10-5	RM15291
2-pentanone	4019	±	20 µg/mL	000107-87-9	RM13478
sec-butanol	30105	±	151 µg/mL	000078-92-2	RM01299

Matrix: methanol (purge & trap grade)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:

Rcvd 7/4/22

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

Reagent

MV-CUS17739_00015

Agilent

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ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Custom Standard

Product Number: CUS-17739

Storage Conditions: Store Frozen (-25° to -10°C).

Lot Number: 0006712667

Lot Issue Date: 08-Nov-2022

Expiration Date: 31-Dec-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
1-chlorohexane	1004	± 5 µg/mL	000544-10-5	RM04913
2-pentanone	4015	± 20 µg/mL	000107-87-9	RM13478
sec-butanol	30099	± 150 µg/mL	000078-92-2	RM13506

Matrix: methanol (purge & trap grade)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:

Rec'd 3/17/23 qc

Agilent

Trusted Answers

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ANAB
ANSI National Accreditation Board
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ISO 17034
REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

www.agilent.com/quality/
CSD-QA-015.1

ISO 17025

Reagent

mv-IS/SS Tune_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570812 **Lot No.:** A0143593

Description : 8260 IS/Surrogate Mix (2016)

8260 IS/Surrogate Mix (2016) 250-5,000µg/mL, P&T Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2023 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol		5,000.1 µg/mL	+/- 29.0694 µg/mL	Gravimetric
	CAS # 25725-11-5	(Lot CD-107)		+/- 107.0521 µg/mL	Unstressed
	Purity 98%			+/- 110.1643 µg/mL	Stressed
2	Dibromofluoromethane		250.2 µg/mL	+/- 1.4580 µg/mL	Gravimetric
	CAS # 1868-53-7	(Lot 0012017)		+/- 5.3577 µg/mL	Unstressed
	Purity 99%			+/- 5.5134 µg/mL	Stressed
3	1,2-Dichloroethane-d4		250.3 µg/mL	+/- 1.4584 µg/mL	Gravimetric
	CAS # 17060-07-0	(Lot PR-29377)		+/- 5.3592 µg/mL	Unstressed
	Purity 99%			+/- 5.5149 µg/mL	Stressed
4	1,4-Dioxane-d8		5,000.5 µg/mL	+/- 29.0716 µg/mL	Gravimetric
	CAS # 17647-74-4	(Lot I-19942)		+/- 107.0602 µg/mL	Unstressed
	Purity 99%			+/- 110.1726 µg/mL	Stressed
5	Fluorobenzene		250.1 µg/mL	+/- 1.4573 µg/mL	Gravimetric
	CAS # 462-06-6	(Lot BCBK8171V)		+/- 5.3549 µg/mL	Unstressed
	Purity 99%			+/- 5.5105 µg/mL	Stressed
6	Toluene-d8		250.1 µg/mL	+/- 1.4575 µg/mL	Gravimetric
	CAS # 2037-26-5	(Lot PR-27311)		+/- 5.3556 µg/mL	Unstressed
	Purity 99%			+/- 5.5112 µg/mL	Stressed
7	Chlorobenzene-d5		250.5 µg/mL	+/- 1.4600 µg/mL	Gravimetric
	CAS # 3114-55-4	(Lot PR-23926)		+/- 5.3649 µg/mL	Unstressed
	Purity 99%			+/- 5.5208 µg/mL	Stressed

8	1-Bromo-4-fluorobenzene (BFB)		250.1	µg/mL	+/-	1.4575	µg/mL	Gravimetric
	CAS # 460-00-4	(Lot 20401KO)			+/-	5.3556	µg/mL	Unstressed
	Purity 99%				+/-	5.5112	µg/mL	Stressed
9	1,4-Dichlorobenzene-d4		250.2	µg/mL	+/-	1.4580	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)			+/-	5.3577	µg/mL	Unstressed
	Purity 99%				+/-	5.5134	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

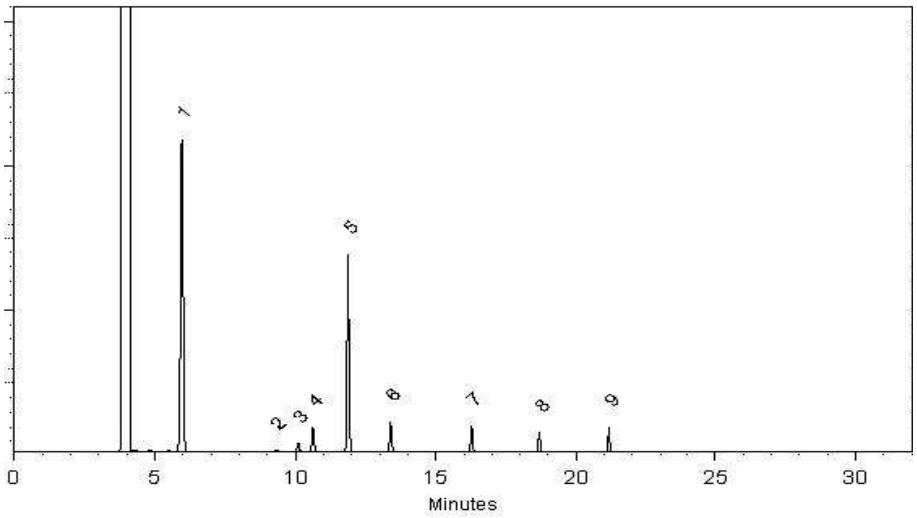
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 29-Nov-2018 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 18-Dec-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

mv-VO-TAOH-5_00015

spex certiprep

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEXertificate®
Certificate of Reference Material

ILAC-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: VO-TAOH-5

Description: Custom Organic Standard

Matrix: Methanol (Purge & Trap Grade)

Lot No. CP220812003

Manufactured Date: August 12, 2022

Expiration Date: February 8, 2023

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
Ethylene oxide	75-21-8	50000 µg/mL	99.8%	49980 µg/mL	± 1799 µg/mL
cis-1,4-Dichloro-2-butene	1476-11-5	1000 µg/mL	95%	980 µg/mL	± 35 µg/mL
Propylene oxide	75-56-9	50000 µg/mL	99%	49944 µg/mL	± 1798 µg/mL
Tetrahydrothiophene	110-01-0	1000 µg/mL	99%	998 µg/mL	± 36 µg/mL

* - Isomer ratios (when applicable) are an uncertified parameter.

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: August 12, 2022

Certifying Officer: Shannon Mara

Shannon Macieira, Operations Manager

Rev 8/25/22

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6:53 PM

Report of Certification

Catalog Number: VO-TAOH-5 **Lot No.** CP220812003

Description: Custom Organic Standard

Matrix: Methanol (Purge & Trap Grade)

Manufactured Date: August 12, 2022

Expiration Date: February 8, 2023

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS) and ISO 17025 (accredited by A2LA), and ISO 17034 (accredited by A2LA) quality system consistent with the following standards:

- ISO 9001: Quality management systems - Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials - Selected terms and definitions
- ISO Guide 31: Reference Materials - Contents of certificates and lables
- ISO Guide 35: Refernece Materials - General and Statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement - Third Edition
- NIST Technical Note 1297

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a freezer (-35°C to -10°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and applicable only if the product is stored under the laboratory specified conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bo ttle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

SPEX CertiPrep.
Your Science is Our Passion.®

203 Norcross Ave. Metuchen, NJ 08840
www.spexcertiprep.com • E-mail: crmsales@spexcsp.com
Phone: 1-732-549-7144 • Fax 1-732-603-9647

Reagent

RSK175methane_00011

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CP

Customer:	MILLIPORE SIGMA	Customer PO Number:	P50520
Part Number:	ME CPP14C514	Reference Number:	160-402514174-1
Cylinder Number:	ST0000218342	Cylinder Volume:	14.0 LG
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	240 PSIG
Analysis Date:	Aug 08, 2022	Valve Outlet:	160
Lot Number:	160-402514174-1		

Expiration Date: Aug 08, 2025

ANALYTICAL RESULTS

Component	Requested Purity	Certified Concentration
METHANE	99.0 %	< 99.0 %

Notes:MANUFACTURE DATE: 8/08/2022

P/N 22562
CYLINDER# ST0000218342, ST0000218343

Impurities verified against analytical standards traceable to NIST by weight and/or analysis.

Rec'd
9-16-22

Lynn Matonis
Approved for Release

Reagent

RSK7gasMathes_00034

MATHESON
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Analysis Report

To: MATHESON LINWELD
4705 NOME ST
P O BOX 39126
DENVER, CO 80239

MTG Customer No: 504445

Manufacturing Location
1700 SCEPTER ROAD
WAVERLY, TN 37185

Product: Multi-Component Mixture

Grade: CERTIFIED
MTG Part No: G2682238

Cylinder Size: 4
Valve: CGA 350 SS

Contents:
Net: 7.57 ft³; 0.21 m³

Pressure: 1400 psia @ 70°F; 9653 kPa @ 21°C

CYLINDER NUMBER(S)

*DM019038

	Requested Concentration	Certified Concentration	Units	Blend Tolerance	Certified Accuracy
Butane	1.00	1.00	%	±10%	±2%
Acetylene	1.00	1.00	%	±10%	±2%
Isobutylene	1.00	1.00	%	±10%	±2%
Propane	1.00	1.00	%	±10%	±2%
Ethane	1.00	1.00	%	±10%	±2%
Ethylene	1.00	1.00	%	±10%	±2%
Methane	1.00	1.01	%	±10%	±2%
Nitrogen	Balance	Balance			

TRACEABILITY

COMMENTS

*** Indicates the actual cylinder(s) analyzed.**

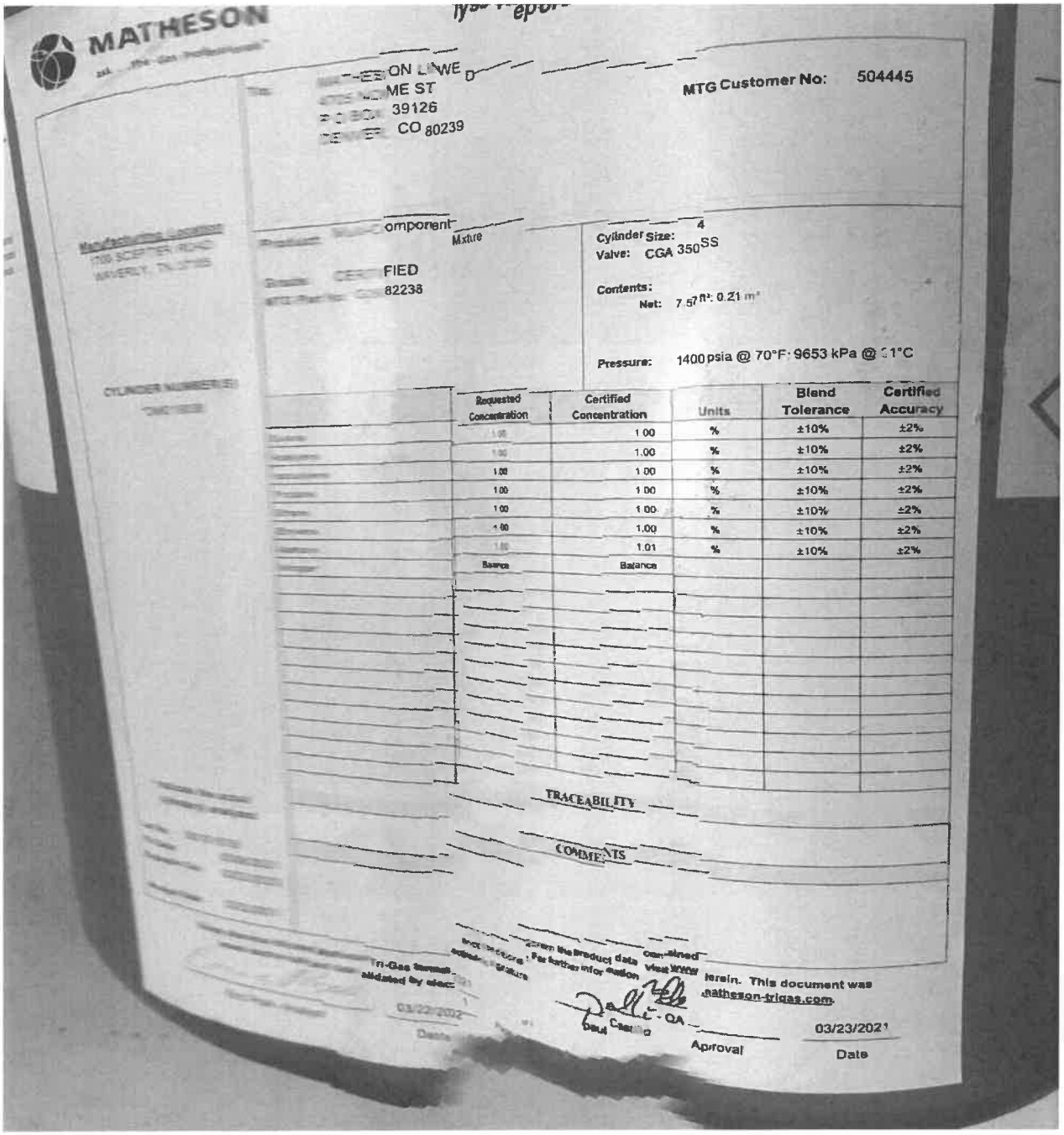
Lot No: 9301615705
Fill Date: 03/08/2021
Expiration Date: 03/22/2023

Analysis Date: 03/22/2021

Unless otherwise indicated, Matheson Tri-Gas terms and conditions govern the product data contained herein. This document was issued electronically and data validated by electronic signature. For further information visit www.matheson-trigas.com.

Eric Popa - Analyst — Date: 03/22/2021

Andrew Davila - QA Approval — Date: 11/10/2022


MATHESON
MTG Customer No: 504445
CO 80239
Cylinder Size: 4
Valve: CGA 350 SS
Contents:
Net: 7.57 ft³: 0.21 m³
Pressure: 1400 psia @ 70°F: 9653 kPa @ 21°C
Requested Concentration
Certified Concentration
Units
Blend Tolerance
Certified Accuracy
1.00 % ±10% ±2%
1.00 % ±10% ±2%
1.00 % ±10% ±2%
1.00 % ±10% ±2%
1.00 % ±10% ±2%
1.00 % ±10% ±2%
1.01 % ±10% ±2%
Balance Balance
TRACEABILITY
COMMENTS
03/22/2021
03/23/2021
Date
Approval
Date

MTG Part No: [illegible]

Net: [illegible]

Pressure: 1400 psia @ 70°F; 9653 kPa @ 21°C

CYLINDER NUMBER(S)

*DM019038

	Requested Concentration	Certified Concentration	Units	Blend Tolerance	Certified Accuracy
Butane	1.00	1.00	%	±10%	±2%
Acetylene	1.00	1.00	%	±10%	±2%
Isobutylene	1.00	1.00	%	±10%	±2%
Propane	1.00	1.00	%	±10%	±2%
Ethane	1.00	1.00	%	±10%	±2%
Ethylene	1.00	1.00	%	±10%	±2%
Methane	1.00	1.01	%	±10%	±2%
Nitrogen	Balance	Balance			

TRACEABILITY

COMMENTS

*** indicates the actual cylinder(s) analyzed.**

Lot No: 9301615705
Fill Date: 03/08/2021
Expiration Date: 03/22/2023

Analysis Date: 03/22/2021

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Eric Popa - Analyst — 03/22/2021 (Date)

Paul Castillo - QA Approval — 03/23/2021 (Date)

Page 1 of 1

[redacted]

Reagent

RSK7gasMathes_00035

MATHESON
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Certificate of Mixture Analysis

Customer Service Center
8200 WASHINGTON NE
ALBUQUERQUE, NM 87113
P 505-823-2600
F 505-247-8674
mtgNewark@matheson-trigas.com

Manufacturing Location
1700 SCEPTER ROAD
WAVERLY, TN 37185

Shipping Location
1700 SCEPTER ROAD
WAVERLY, TN 37185

CYLINDER NUMBER(S)
*DL099765

To: MATHESON LINWELD
4705 NOME ST
DENVER, CO 80239

Certificate No: 613237
MTG Customer No: 504445
Sales Order No: 783566
Purchase Order No: 24079105-0 0

Product: Multi-Component Mixture

Grade: CERTIFIED
MTG Part No: G2682238

Cylinder Size: 4
Valve: CGA 350 SS

Contents:
Net: 7.57 ft³; 0.21 m³

Pressure: 1400 psia @ 70°F; 9653 kPa @ 21°C

	Requested Concentration	Certified Concentration	Units	Blend Tolerance	Certified Accuracy
Butane	1.00	1.00	%	±10%	±2%
Acetylene	1.00	0.999	%	±10%	±2%
Isobutylene	1.00	0.999	%	±10%	±2%
Propane	1.00	1.00	%	±10%	±2%
Ethane	1.00	0.999	%	±10%	±2%
Ethylene	1.00	1.00	%	±10%	±2%
Methane	1.00	0.976	%	±10%	±2%
Nitrogen	Balance	Balance			

TRACEABILITY

COMMENTS

*** Indicates the actual cylinder(s) analyzed.**

Lot No: 9301616642
Fill Date: 04/23/2021
Expiration Date: 05/27/2023

Analysis Date: 05/27/2021

Unless otherwise indicated, Matheson Tri-Gas terms and conditions govern the product data contained herein. This document was issued electronically and data validated by electronic signature. For further information visit www.matheson-trigas.com.

Luke Wilson - Analyst — Date: 05/27/2021

Jennifer Williams - QA Approval — Date: 06/02/2021

Reagent

RSK7gasMathes_00036

MATHESON
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Certificate of Mixture Analysis

Customer Service Center
8200 WASHINGTON NE
ALBUQUERQUE, NM 87113
P 505-823-2600
F 505-247-8674
mtgNewark@matheson-trigas.com

Manufacturing Location
1700 SCEPTER ROAD
WAVERLY, TN 37185

Shipping Location
1700 SCEPTER ROAD
WAVERLY, TN 37185

CYLINDER NUMBER(S)
*DL089775

To: MATHESON LINWELD
4705 NOME ST
DENVER, CO 80239

Certificate No: 613236
MTG Customer No: 504445
Sales Order No: 783566
Purchase Order No: 24079105-0 0

Product: Multi-Component Mixture

Grade: CERTIFIED
MTG Part No: G2682238

Cylinder Size: 4
Valve: CGA 350 SS

Contents:
Net: 7.57 ft³; 0.21 m³

Pressure: 1400 psia @ 70°F; 9653 kPa @ 21°C

	Requested Concentration	Certified Concentration	Units	Blend Tolerance	Certified Accuracy
Butane	1.00	1.00	%	±10%	±2%
Acetylene	1.00	0.999	%	±10%	±2%
Isobutylene	1.00	0.999	%	±10%	±2%
Propane	1.00	1.00	%	±10%	±2%
Ethane	1.00	0.999	%	±10%	±2%
Ethylene	1.00	1.00	%	±10%	±2%
Methane	1.00	0.976	%	±10%	±2%
Nitrogen	Balance	Balance			

TRACEABILITY

COMMENTS

*** Indicates the actual cylinder(s) analyzed.**

Lot No: 9301616642
Fill Date: 04/23/2021
Expiration Date: 05/27/2023

Analysis Date: 05/27/2021

Unless otherwise indicated, Matheson Tri-Gas terms and conditions govern the product data contained herein. This document was issued electronically and data validated by electronic signature. For further information visit www.matheson-trigas.com.

Luke Wilson - Analyst — 05/27/2021 (Date)

Jennifer Williams - QA Approval — 06/02/2021 (Date)

Reagent

TOC ICV Std_00051

RICCA CHEMICAL COMPANY®

1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Organic Carbon Standard, 1000 ppm C

Lot Number: 2208C86 **Product Number:** 1847

Manufacture Date: AUG 08, 2022
Expiration Date: JUL 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Phosphoric Acid	7664-38-2	ACS
Potassium Acid Phthalate	877-24-7	ACS Acidimetric

Test	Specification	Result
Appearance	Colorless liquid	Passed
Carbon (C)	995-1005 ppm	1000 ppm

Specification	Reference
Organic Carbon Stock Solution	APHA (5310 B)
Potassium Hydrogen Phthalate, Stock Solution	EPA (SW-846) (9060)
Potassium Hydrogen Phthalate, Stock Solution, 1000 mg Carbon/liter	EPA (415.1)
Organic Carbon Solution, Standard (1 mL = 1 mg C)	ASTM (D 2579)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1847-16	500 mL amber glass	12 months
1847-32	1 L amber glass	12 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (08/08/2022)
Quality Control
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

RICCA CHEMICAL COMPANY®

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Organic Carbon Standard, 1000 ppm C

Product Number: 1847

Other Identifying Product Numbers: 1847-1, 1847-16, 1847-2.5, 1847-32, 1847-4, 1847-5, 1847-8

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company
Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)	800-424-9300
CHEMTREC (International)	1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Hazardous to the Aquatic Environment (Acute)	Category 3	H402	P273, P501

2.2. GHS Label Elements

Pictograms:

Signal Word:

Hazard Statements:

Hazard Number	Hazard Statement
H402	Harmful to aquatic life.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P273	Avoid release to the environment.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H_2O	18.01 g/mol	7732-18-5	99.39
Phosphoric Acid	H_3PO_4	97.99 g/mol	7664-38-2	0.40
Potassium Acid Phthalate	$HOCOC_6H_4COOK$	204.22 g/mol	877-24-7	0.21

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: May cause irritation, redness, pain, and tearing.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: May cause slight irritation.

Ingestion: Dilute with water or milk. Call a physician if necessary.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Does not present any significant health hazards. Wash areas of contact with water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause slight irritation.

4.3. Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

6.2. Cleanup and Containment Methods and Materials

Collect liquid and dilute with water. Neutralize with dilute base solutions. Resulting solution may be flushed to the sewer with excess water. For larger spills, absorb with suitable material and dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Keep tightly capped. Store in the refrigerator.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Phosphoric Acid (7664-38-2)	TWA	USA	1 mg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Phosphoric Acid (7664-38-2)	TLV-STEL	USA	3 mg/m³ STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Phosphoric Acid (7664-38-2)	TLV-TWA	USA	1 mg/m³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

8.3. Personal Protective Equipment

Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: < 2

Melting/Freezing Point: 0.0°C

Initial Boiling Point/Range: 100°C - 100°C

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.00

Solubility: Miscible

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Nitric Acid.

10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral, Rat: >3200 mg/kg (Potassium Acid Phthalate), details of toxic effects not reported other than lethal dose value. LD50, Oral, Rat: (Phosphoric Acid) 1530 mg/kg, behavioral, kidney, bladder, hair effects noted. LD50, Dermal, Rat: 2740 mg/kg (Phosphoric Acid), behavioral effects noted.

Skin Corrosion and Irritation:

Not applicable.

Serious Eye Damage and Irritation:

Not applicable.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

Safety Data Sheet

SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.

14.2. Transportation by Air - International Air Transport Association (IATA)

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG Regulations.

Safety Data Sheet

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Phosphoric Acid (CAS # 7664-38-2): 5000 lb final RQ; 2270 kg final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Not listed.

15.5. Massachusetts Right-to-Know Substance List

Phosphoric Acid (CAS # 7664-38-2): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

Phosphoric Acid (CAS # 7664-38-2): Environmental hazard
Phosphoric Acid (CAS # 7664-38-2): Present
Water (CAS # 7732-18-5): Present

15.7. New Jersey Worker and Community Right-to-Know Components

Phosphoric Acid (CAS # 7664-38-2): corrosive
Phosphoric Acid (CAS # 7664-38-2): sn 1516

15.8. California Proposition 65

Not listed.

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Phosphoric Acid (CAS # 7664-38-2): Present (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Potassium Acid Phthalate (CAS # 877-24-7): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Phosphoric Acid (CAS # 7664-38-2): Present
Water (CAS # 7732-18-5): Present
Potassium Acid Phthalate (CAS # 877-24-7): Present

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Phosphoric Acid (CAS # 7664-38-2): 231-633-2
Water (CAS # 7732-18-5): 231-791-2
Water (CAS # 7732-18-5): 232-148-9
Potassium Acid Phthalate (CAS # 877-24-7): 212-889-4

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Harmful to aquatic life.

Avoid release to the environment.

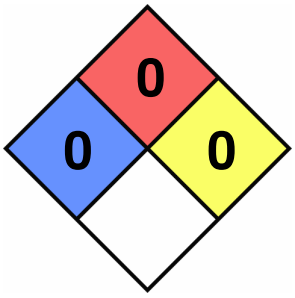
Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.
Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.
Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 0
Flammability: 0
Reactivity: 0
Special Hazard:



16.4. Document Revision

Last Revision Date: 2023-02-14

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.

Reagent

TOC LCS Std_00057

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Total Organic Carbon (TOC) Standard

Product Number: IOC-106

Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006719669

Lot Issue Date: 28-Dec-2022

Expiration Date: 31-Jan-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
potassium hydrogen phthalate (KHP) (as TOC)	1001	±	5 mg/L	000877-24-7	RM19275

Matrix: water (low TOC, < 50 ppb)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system. The analyte concentration(s) were prepared and verified by an ISO 17034 / ISO 17025 accredited laboratory and compared to calibration standards independently prepared using NIST SRM(s) when available. The certified value and uncertainty value at the 95% confidence level for each analyte is determined gravimetrically.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Agilent

Trusted Answers

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois

QMS Representative

ANAB

ANSI National Accreditation Board

ACCREDITED

ISO 17034

REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

www.agilent.com/quality/

CSD-QA-040.1

ISO 17025

Reagent

Z-020209-01.b_00001

CPI INTERNATIONAL

5580 Skylane Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received:_____

Certificate of Analysis

Rev 0

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
Z-020209-01-SS	488067	-18°C +/- 4°C	P/T Methanol	8/30/2024	cis-1,4-Dichloro-2-butene Solution, 1000 mg/L, 1 ml Second Source

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
cis-1,4-dichloro-2-butene	1476-11-5	98	209.1.5.1S	999.8 ± 14.67

*Not a certified value

9/2022

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

Certified By: _____

Sanquetta Coakley
Chemist

8260D

Volatile Organic Compounds by GC/MS

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-624SilM ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-04-20230412	280-174957-1	101	101	101	101
MW-124-20230412	280-174957-2	103	99	99	101
MW-124-Q-20230412	280-174957-3	104	100	101	100
MW-105D-20230411	280-174957-5	100	101	100	101
MW-105S-20230411	280-174957-6	100	102	100	102
EB-01-20230411	280-174957-7	102	100	104	102
	MB 280-609068/7	101	103	100	102
	MB 280-609932/7	104	99	102	102
	MB 280-609946/7	102	99	101	101
	LCS 280-609068/1002	104	105	99	102
	LCS 280-609068/1003	101	101	99	100
	LCS 280-609932/1002	103	100	100	99
	LCS 280-609932/1003	103	102	102	102
	LCS 280-609946/1002	105	101	102	103
	LCS 280-609946/1003	104	102	103	103
	LCSD 280-609068/4	99	100	100	102
	LCSD 280-609068/5	102	103	100	101
	LCSD 280-609932/4	104	102	101	102
	LCSD 280-609932/5	103	103	103	100
	LCSD 280-609946/4	104	101	103	101
	LCSD 280-609946/5	105	103	102	102

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	77-120
DCA = 1,2-Dichloroethane-d4 (Surr)	70-127
TOL = Toluene-d8 (Surr)	80-125
BFB = 4-Bromofluorobenzene (Surr)	78-120

Column to be used to flag recovery values

FORM II 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -ms11_5427-LCS.d

Lab ID: LCS 280-609068/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	22.7	91	74-121	
1,1,1-Trichloroethane	25.0	24.0	96	62-132	
1,1,2,2-Tetrachloroethane	25.0	22.2	89	72-122	
1,1,2-Trichloroethane	25.0	23.4	93	72-128	
1,1-Dichloroethane	25.0	24.4	98	66-130	
1,1-Dichloroethene	25.0	23.7	95	62-130	
1,1-Dichloropropene	25.0	23.7	95	64-133	
1,2,3-Trichloropropane	25.0	22.6	91	74-123	
1,2,4-Trichlorobenzene	25.0	22.7	91	73-124	
1,2-Dibromo-3-Chloropropane	25.0	20.9	84	58-122	
1,2-Dibromoethane	25.0	23.7	95	81-118	
1,2-Dichlorobenzene	25.0	23.6	94	77-121	
1,2-Dichloroethane	25.0	21.8	87	61-130	
1,2-Dichloropropane	25.0	22.8	91	68-127	
1,3-Dichlorobenzene	25.0	23.7	95	76-121	
1,3-Dichloropropane	25.0	23.7	95	80-118	
1,4-Dichlorobenzene	25.0	23.5	94	76-119	
2,2-Dichloropropane	25.0	23.4	94	57-140	
2-Butanone (MEK)	100	85.4	85	53-135	
2-Hexanone	100	87.5	87	58-134	
4-Methyl-2-pentanone (MIBK)	100	89.8	90	56-135	
Acetone	100	86.4	86	50-137	
Acrolein	247	249	101	10-207	
Acrylonitrile	250	238	95	65-133	
Allyl chloride	25.0	25.4	102	57-136	
Benzene	25.0	23.8	95	69-126	
Bromoform	25.0	22.0	88	57-125	
Bromomethane	25.0	30.0	120	25-163	
Carbon disulfide	25.0	24.2	97	56-128	
Carbon tetrachloride	25.0	22.1	89	60-133	
Chlorobenzene	25.0	23.3	93	78-118	
Chlorobromomethane	25.0	23.5	94	71-130	
Chlorodibromomethane	25.0	23.0	92	71-122	
Chloroethane	25.0	26.6	106	52-144	
Chloroform	25.0	24.4	98	68-128	
Chloromethane	25.0	24.1	96	43-142	
cis-1,2-Dichloroethene	25.0	23.6	94	69-126	
cis-1,3-Dichloropropene	25.0	22.9	92	75-120	
Dibromomethane	25.0	23.6	94	68-129	
Dichlorobromomethane	25.0	23.6	94	67-126	
Dichlorodifluoromethane	25.0	22.0	88	26-152	
Ethyl methacrylate	25.0	23.2	93	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -ms11_5427-LCS.d

Lab ID: LCS 280-609068/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	25.0	23.7	95	76-121	
Iodomethane	25.0	20.0	80	37-145	
Isobutyl alcohol	625	497	79	46-132	
Methylene Chloride	25.0	24.7	99	64-128	
m-Xylene & p-Xylene	25.0	23.9	96	76-122	
o-Xylene	25.0	23.6	94	77-120	
Styrene	25.0	23.7	95	79-120	
Tetrachloroethene	25.0	23.7	95	72-127	
Toluene	25.0	23.9	96	68-127	
trans-1,2-Dichloroethene	25.0	22.9	92	66-129	
trans-1,3-Dichloropropene	25.0	22.2	89	66-127	
trans-1,4-Dichloro-2-butene	25.0	21.2	85	44-131	
Trichloroethene	25.0	24.1	96	70-125	
Trichlorofluoromethane	25.0	24.8	99	57-144	
Vinyl acetate	50.0	49.4	99	61-139	
Vinyl chloride	25.0	23.1	93	53-141	
Xylenes, Total	50.0	47.5	95	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -ms11_5429-LCS.d

Lab ID: LCS 280-609068/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	259	104	45-142	
Chloroprene	25.0	27.9	112	53-147	
Methacrylonitrile	250	291	116	47-142	
Methyl methacrylate	50.0	57.8	116	60-131	
Propionitrile	250	267	107	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502750-LCS.d

Lab ID: LCS 280-609932/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	49.0	98	74-121	
1,1,1-Trichloroethane	50.0	51.4	103	62-132	
1,1,2,2-Tetrachloroethane	50.0	45.1	90	72-122	
1,1,2-Trichloroethane	50.0	50.1	100	72-128	
1,1-Dichloroethane	50.0	54.5	109	66-130	
1,1-Dichloroethene	50.0	51.7	103	62-130	
1,1-Dichloropropene	50.0	52.5	105	64-133	
1,2,3-Trichloropropane	50.0	43.3	87	74-123	
1,2,4-Trichlorobenzene	50.0	49.7	99	73-124	
1,2-Dibromo-3-Chloropropane	50.0	39.3	79	58-122	
1,2-Dibromoethane	50.0	47.7	95	81-118	
1,2-Dichlorobenzene	50.0	46.8	94	77-121	
1,2-Dichloroethane	50.0	48.8	98	61-130	
1,2-Dichloropropane	50.0	54.1	108	68-127	
1,3-Dichlorobenzene	50.0	47.9	96	76-121	
1,3-Dichloropropane	50.0	49.5	99	80-118	
1,4-Dichlorobenzene	50.0	45.8	92	76-119	
2,2-Dichloropropane	50.0	54.6	109	57-140	
2-Butanone (MEK)	200	213	106	53-135	
2-Hexanone	200	210	105	58-134	
4-Methyl-2-pentanone (MIBK)	200	225	112	56-135	
Acetone	200	191	95	50-137	
Acrolein	494	452	92	10-207	
Acrylonitrile	500	544	109	65-133	
Allyl chloride	50.0	62.8	126	57-136	
Benzene	50.0	53.1	106	69-126	
Bromoform	50.0	47.7	95	57-125	
Bromomethane	50.0	40.8	82	25-163	
Carbon disulfide	50.0	53.5	107	56-128	
Carbon tetrachloride	50.0	53.6	107	60-133	
Chlorobenzene	50.0	48.9	98	78-118	
Chlorobromomethane	50.0	50.3	101	71-130	
Chlorodibromomethane	50.0	47.4	95	71-122	
Chloroethane	50.0	64.0	128	52-144	
Chloroform	50.0	50.1	100	68-128	
Chloromethane	50.0	53.7	107	43-142	
cis-1,2-Dichloroethene	50.0	51.0	102	69-126	
cis-1,3-Dichloropropene	50.0	52.4	105	75-120	
Dibromomethane	50.0	48.0	96	68-129	
Dichlorobromomethane	50.0	50.0	100	67-126	
Dichlorodifluoromethane	50.0	59.2	118	26-152	
Ethyl methacrylate	50.0	51.6	103	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502750-LCS.d

Lab ID: LCS 280-609932/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	50.0	48.4	97	76-121	
Iodomethane	50.0	44.6	89	37-145	
Isobutyl alcohol	1250	1130	91	46-132	
Methylene Chloride	50.0	48.0	96	64-128	
m-Xylene & p-Xylene	50.0	50.8	102	76-122	
o-Xylene	50.0	49.3	99	77-120	
Styrene	50.0	51.0	102	79-120	
Tetrachloroethene	50.0	54.0	108	72-127	
Toluene	50.0	52.1	104	68-127	
trans-1,2-Dichloroethene	50.0	54.1	108	66-129	
trans-1,3-Dichloropropene	50.0	54.0	108	66-127	
trans-1,4-Dichloro-2-butene	50.0	42.6	85	44-131	
Trichloroethene	50.0	51.5	103	70-125	
Trichlorofluoromethane	50.0	61.1	122	57-144	
Vinyl acetate	100	120	120	61-139	
Vinyl chloride	50.0	68.1	136	53-141	
Xylenes, Total	100	100	100	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502751-LCS.d

Lab ID: LCS 280-609932/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	234	94	45-142	
Chloroprene	25.0	25.4	101	53-147	
Methacrylonitrile	250	233	93	47-142	
Methyl methacrylate	50.0	38.9	78	60-131	
Propionitrile	250	246	98	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502779-LCS.d

Lab ID: LCS 280-609946/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	21.8	87	74-121	
1,1,1-Trichloroethane	25.0	23.2	93	62-132	
1,1,2,2-Tetrachloroethane	25.0	22.2	89	72-122	
1,1,2-Trichloroethane	25.0	22.9	91	72-128	
1,1-Dichloroethane	25.0	25.1	100	66-130	
1,1-Dichloroethene	25.0	23.4	94	62-130	
1,1-Dichloropropene	25.0	23.3	93	64-133	
1,2,3-Trichloropropane	25.0	20.8	83	74-123	
1,2,4-Trichlorobenzene	25.0	23.4	94	73-124	
1,2-Dibromo-3-Chloropropane	25.0	19.9	79	58-122	
1,2-Dibromoethane	25.0	22.1	89	81-118	
1,2-Dichlorobenzene	25.0	21.6	86	77-121	
1,2-Dichloroethane	25.0	22.7	91	61-130	
1,2-Dichloropropane	25.0	24.9	99	68-127	
1,3-Dichlorobenzene	25.0	22.2	89	76-121	
1,3-Dichloropropane	25.0	22.5	90	80-118	
1,4-Dichlorobenzene	25.0	21.4	85	76-119	
2,2-Dichloropropane	25.0	24.8	99	57-140	
2-Butanone (MEK)	100	106	106	53-135	
2-Hexanone	100	101	101	58-134	
4-Methyl-2-pentanone (MIBK)	100	108	108	56-135	
Acetone	100	93.5	93	50-137	
Acrolein	247	218	88	10-207	
Acrylonitrile	250	266	106	65-133	
Allyl chloride	25.0	30.1	120	57-136	
Benzene	25.0	24.2	97	69-126	
Bromoform	25.0	22.1	88	57-125	
Bromomethane	25.0	20.1	80	25-163	
Carbon disulfide	25.0	24.8	99	56-128	
Carbon tetrachloride	25.0	23.6	94	60-133	
Chlorobenzene	25.0	22.2	89	78-118	
Chlorobromomethane	25.0	23.6	94	71-130	
Chlorodibromomethane	25.0	21.3	85	71-122	
Chloroethane	25.0	24.0	96	52-144	
Chloroform	25.0	22.9	92	68-128	
Chloromethane	25.0	22.1	88	43-142	
cis-1,2-Dichloroethene	25.0	23.3	93	69-126	
cis-1,3-Dichloropropene	25.0	23.3	93	75-120	
Dibromomethane	25.0	22.6	90	68-129	
Dichlorobromomethane	25.0	23.1	92	67-126	
Dichlorodifluoromethane	25.0	20.6	83	26-152	
Ethyl methacrylate	25.0	24.2	97	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502779-LCS.d

Lab ID: LCS 280-609946/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	25.0	22.3	89	76-121	
Iodomethane	25.0	17.2	69	37-145	
Isobutyl alcohol	625	519	83	46-132	
Methylene Chloride	25.0	22.4	89	64-128	
m-Xylene & p-Xylene	25.0	23.3	93	76-122	
o-Xylene	25.0	22.0	88	77-120	
Styrene	25.0	23.2	93	79-120	
Tetrachloroethene	25.0	23.2	93	72-127	
Toluene	25.0	24.0	96	68-127	
trans-1,2-Dichloroethene	25.0	25.0	100	66-129	
trans-1,3-Dichloropropene	25.0	24.9	100	66-127	
trans-1,4-Dichloro-2-butene	25.0	20.2	81	44-131	
Trichloroethene	25.0	22.9	92	70-125	
Trichlorofluoromethane	25.0	22.0	88	57-144	
Vinyl acetate	50.0	56.8	114	61-139	
Vinyl chloride	25.0	26.3	105	53-141	
Xylenes, Total	50.0	45.3	91	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502778A-LCS.d

Lab ID: LCS 280-609946/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	271	108	45-142	
Chloroprene	25.0	28.9	116	53-147	
Methacrylonitrile	250	275	110	47-142	
Methyl methacrylate	50.0	46.1	92	60-131	
Propionitrile	250	273	109	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ms11_5428.D

Lab ID: LCSD 280-609068/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	21.8	87	4	20	74-121	
1,1,1-Trichloroethane	25.0	21.7	87	10	20	62-132	
1,1,2,2-Tetrachloroethane	25.0	22.2	89	0	20	72-122	
1,1,2-Trichloroethane	25.0	21.8	87	7	20	72-128	
1,1-Dichloroethane	25.0	22.3	89	9	20	66-130	
1,1-Dichloroethene	25.0	21.5	86	10	21	62-130	
1,1-Dichloropropene	25.0	22.1	88	7	20	64-133	
1,2,3-Trichloropropane	25.0	21.9	88	3	20	74-123	
1,2,4-Trichlorobenzene	25.0	21.6	86	5	20	73-124	
1,2-Dibromo-3-Chloropropane	25.0	21.2	85	1	21	58-122	
1,2-Dibromoethane	25.0	22.6	90	5	20	81-118	
1,2-Dichlorobenzene	25.0	22.1	89	6	20	77-121	
1,2-Dichloroethane	25.0	21.2	85	3	20	61-130	
1,2-Dichloropropane	25.0	21.2	85	7	20	68-127	
1,3-Dichlorobenzene	25.0	22.3	89	6	20	76-121	
1,3-Dichloropropane	25.0	23.0	92	3	20	80-118	
1,4-Dichlorobenzene	25.0	22.1	88	6	20	76-119	
2,2-Dichloropropane	25.0	20.9	83	12	22	57-140	
2-Butanone (MEK)	100	82.8	83	3	20	53-135	
2-Hexanone	100	85.8	86	2	21	58-134	
4-Methyl-2-pentanone (MIBK)	100	87.0	87	3	20	56-135	
Acetone	100	83.5	84	3	21	50-137	
Acrolein	247	239	97	4	23	10-207	
Acrylonitrile	250	227	91	5	20	65-133	
Allyl chloride	25.0	22.7	91	11	20	57-136	
Benzene	25.0	22.1	88	8	20	69-126	
Bromoform	25.0	21.2	85	4	20	57-125	
Bromomethane	25.0	27.6	110	8	40	25-163	
Carbon disulfide	25.0	22.0	88	10	20	56-128	
Carbon tetrachloride	25.0	20.6	82	7	20	60-133	
Chlorobenzene	25.0	22.0	88	6	20	78-118	
Chlorobromomethane	25.0	22.0	88	7	20	71-130	
Chlorodibromomethane	25.0	22.0	88	5	20	71-122	
Chloroethane	25.0	24.4	97	9	30	52-144	
Chloroform	25.0	22.5	90	8	20	68-128	
Chloromethane	25.0	22.1	88	8	20	43-142	
cis-1,2-Dichloroethene	25.0	21.3	85	10	20	69-126	
cis-1,3-Dichloropropene	25.0	21.9	88	4	20	75-120	
Dibromomethane	25.0	21.6	86	9	20	68-129	
Dichlorobromomethane	25.0	21.4	86	10	20	67-126	
Dichlorodifluoromethane	25.0	20.6	82	7	21	26-152	
Ethyl methacrylate	25.0	21.7	87	7	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ms11_5428.D

Lab ID: LCSD 280-609068/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	25.0	22.3	89	6	20	76-121	
Iodomethane	25.0	19.5	78	3	38	37-145	
Isobutyl alcohol	625	502	80	1	30	46-132	
Methylene Chloride	25.0	23.0	92	7	20	64-128	
m-Xylene & p-Xylene	25.0	22.1	88	8	20	76-122	
o-Xylene	25.0	22.4	90	5	20	77-120	
Styrene	25.0	22.1	88	7	20	79-120	
Tetrachloroethene	25.0	22.1	88	7	20	72-127	
Toluene	25.0	22.2	89	7	20	68-127	
trans-1,2-Dichloroethene	25.0	21.6	87	6	20	66-129	
trans-1,3-Dichloropropene	25.0	20.2	81	10	20	66-127	
trans-1,4-Dichloro-2-butene	25.0	20.8	83	2	24	44-131	
Trichloroethene	25.0	22.1	88	9	20	70-125	
Trichlorofluoromethane	25.0	22.9	92	8	28	57-144	
Vinyl acetate	50.0	46.5	93	6	23	61-139	
Vinyl chloride	25.0	21.2	85	9	25	53-141	
Xylenes, Total	50.0	44.5	89	7	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ms11_5430.D

Lab ID: LCSD 280-609068/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	186	74	33	20	45-142	*1
Chloroprene	25.0	20.1	80	33	20	53-147	*1
Methacrylonitrile	250	206	82	34	20	47-142	*1
Methyl methacrylate	50.0	40.5	81	35	20	60-131	*1
Propionitrile	250	190	76	34	20	52-138	*1

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502752.D

Lab ID: LCSD 280-609932/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	48.5	97	1	20	74-121	
1,1,1-Trichloroethane	50.0	51.0	102	1	20	62-132	
1,1,2,2-Tetrachloroethane	50.0	47.7	95	6	20	72-122	
1,1,2-Trichloroethane	50.0	50.2	100	0	20	72-128	
1,1-Dichloroethane	50.0	54.8	110	1	20	66-130	
1,1-Dichloroethene	50.0	51.5	103	0	21	62-130	
1,1-Dichloropropene	50.0	53.1	106	1	20	64-133	
1,2,3-Trichloropropane	50.0	46.5	93	7	20	74-123	
1,2,4-Trichlorobenzene	50.0	50.4	101	1	20	73-124	
1,2-Dibromo-3-Chloropropane	50.0	43.9	88	11	21	58-122	
1,2-Dibromoethane	50.0	47.2	94	1	20	81-118	
1,2-Dichlorobenzene	50.0	47.4	95	1	20	77-121	
1,2-Dichloroethane	50.0	49.3	99	1	20	61-130	
1,2-Dichloropropane	50.0	54.5	109	1	20	68-127	
1,3-Dichlorobenzene	50.0	49.1	98	2	20	76-121	
1,3-Dichloropropane	50.0	49.7	99	0	20	80-118	
1,4-Dichlorobenzene	50.0	46.1	92	1	20	76-119	
2,2-Dichloropropane	50.0	53.4	107	2	22	57-140	
2-Butanone (MEK)	200	222	111	4	20	53-135	
2-Hexanone	200	213	106	1	21	58-134	
4-Methyl-2-pentanone (MIBK)	200	232	116	3	20	56-135	
Acetone	200	203	101	6	21	50-137	
Acrolein	494	466	94	3	23	10-207	
Acrylonitrile	500	555	111	2	20	65-133	
Allyl chloride	50.0	61.6	123	2	20	57-136	
Benzene	50.0	52.6	105	1	20	69-126	
Bromoform	50.0	48.9	98	3	20	57-125	
Bromomethane	50.0	49.0	98	18	40	25-163	
Carbon disulfide	50.0	52.3	105	2	20	56-128	
Carbon tetrachloride	50.0	52.9	106	1	20	60-133	
Chlorobenzene	50.0	48.2	96	1	20	78-118	
Chlorobromomethane	50.0	51.2	102	2	20	71-130	
Chlorodibromomethane	50.0	47.3	95	0	20	71-122	
Chloroethane	50.0	62.6	125	2	30	52-144	
Chloroform	50.0	50.4	101	1	20	68-128	
Chloromethane	50.0	53.9	108	0	20	43-142	
cis-1,2-Dichloroethene	50.0	50.7	101	1	20	69-126	
cis-1,3-Dichloropropene	50.0	52.2	104	0	20	75-120	
Dibromomethane	50.0	48.5	97	1	20	68-129	
Dichlorobromomethane	50.0	50.2	100	0	20	67-126	
Dichlorodifluoromethane	50.0	56.9	114	4	21	26-152	
Ethyl methacrylate	50.0	52.0	104	1	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502752.D

Lab ID: LCSD 280-609932/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	50.0	47.8	96	1	20	76-121	
Iodomethane	50.0	43.9	88	2	38	37-145	
Isobutyl alcohol	1250	1190	95	5	30	46-132	
Methylene Chloride	50.0	48.1	96	0	20	64-128	
m-Xylene & p-Xylene	50.0	49.1	98	4	20	76-122	
o-Xylene	50.0	47.8	96	3	20	77-120	
Styrene	50.0	50.7	101	1	20	79-120	
Tetrachloroethene	50.0	52.4	105	3	20	72-127	
Toluene	50.0	52.1	104	0	20	68-127	
trans-1,2-Dichloroethene	50.0	54.1	108	0	20	66-129	
trans-1,3-Dichloropropene	50.0	54.9	110	2	20	66-127	
trans-1,4-Dichloro-2-butene	50.0	45.7	91	7	24	44-131	
Trichloroethene	50.0	50.9	102	1	20	70-125	
Trichlorofluoromethane	50.0	59.1	118	3	28	57-144	
Vinyl acetate	100	123	123	3	23	61-139	
Vinyl chloride	50.0	67.0	134	2	25	53-141	
Xylenes, Total	100	96.9	97	3	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502753.D

Lab ID: LCSD 280-609932/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	252	101	7	20	45-142	
Chloroprene	25.0	25.9	104	2	20	53-147	
Methacrylonitrile	250	241	96	3	20	47-142	
Methyl methacrylate	50.0	42.2	84	8	20	60-131	
Propionitrile	250	254	102	3	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502784.D

Lab ID: LCSD 280-609946/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	24.3	97	11	20	74-121	
1,1,1-Trichloroethane	25.0	24.0	96	3	20	62-132	
1,1,2,2-Tetrachloroethane	25.0	24.5	98	10	20	72-122	
1,1,2-Trichloroethane	25.0	25.5	102	11	20	72-128	
1,1-Dichloroethane	25.0	27.7	111	10	20	66-130	
1,1-Dichloroethene	25.0	24.7	99	5	21	62-130	
1,1-Dichloropropene	25.0	25.4	102	9	20	64-133	
1,2,3-Trichloropropane	25.0	23.6	94	12	20	74-123	
1,2,4-Trichlorobenzene	25.0	24.9	100	6	20	73-124	
1,2-Dibromo-3-Chloropropane	25.0	21.2	85	7	21	58-122	
1,2-Dibromoethane	25.0	25.1	100	12	20	81-118	
1,2-Dichlorobenzene	25.0	23.8	95	10	20	77-121	
1,2-Dichloroethane	25.0	24.7	99	8	20	61-130	
1,2-Dichloropropane	25.0	26.9	107	8	20	68-127	
1,3-Dichlorobenzene	25.0	24.1	97	8	20	76-121	
1,3-Dichloropropane	25.0	25.9	103	14	20	80-118	
1,4-Dichlorobenzene	25.0	23.0	92	7	20	76-119	
2,2-Dichloropropane	25.0	26.7	107	8	22	57-140	
2-Butanone (MEK)	100	123	123	15	20	53-135	
2-Hexanone	100	114	114	13	21	58-134	
4-Methyl-2-pentanone (MIBK)	100	119	119	10	20	56-135	
Acetone	100	103	103	9	21	50-137	
Acrolein	247	242	98	10	23	10-207	
Acrylonitrile	250	296	118	11	20	65-133	
Allyl chloride	25.0	32.3	129	7	20	57-136	
Benzene	25.0	26.6	106	9	20	69-126	
Bromoform	25.0	25.0	100	13	20	57-125	
Bromomethane	25.0	17.5	70	14	40	25-163	
Carbon disulfide	25.0	25.8	103	4	20	56-128	
Carbon tetrachloride	25.0	24.8	99	5	20	60-133	
Chlorobenzene	25.0	24.5	98	10	20	78-118	
Chlorobromomethane	25.0	26.0	104	10	20	71-130	
Chlorodibromomethane	25.0	24.3	97	13	20	71-122	
Chloroethane	25.0	27.0	108	12	30	52-144	
Chloroform	25.0	25.0	100	9	20	68-128	
Chloromethane	25.0	23.3	93	5	20	43-142	
cis-1,2-Dichloroethene	25.0	25.6	103	9	20	69-126	
cis-1,3-Dichloropropene	25.0	26.0	104	11	20	75-120	
Dibromomethane	25.0	25.2	101	11	20	68-129	
Dichlorobromomethane	25.0	24.6	99	7	20	67-126	
Dichlorodifluoromethane	25.0	22.8	91	10	21	26-152	
Ethyl methacrylate	25.0	27.0	108	11	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502784.D

Lab ID: LCSD 280-609946/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	25.0	24.2	97	8	20	76-121	
Iodomethane	25.0	17.5	70	1	38	37-145	
Isobutyl alcohol	625	618	99	17	30	46-132	
Methylene Chloride	25.0	24.5	98	9	20	64-128	
m-Xylene & p-Xylene	25.0	24.9	100	7	20	76-122	
o-Xylene	25.0	24.6	98	11	20	77-120	
Styrene	25.0	26.1	104	12	20	79-120	
Tetrachloroethene	25.0	25.6	102	10	20	72-127	
Toluene	25.0	25.8	103	7	20	68-127	
trans-1,2-Dichloroethene	25.0	27.1	108	8	20	66-129	
trans-1,3-Dichloropropene	25.0	27.1	108	8	20	66-127	
trans-1,4-Dichloro-2-butene	25.0	22.2	89	10	24	44-131	
Trichloroethene	25.0	25.5	102	10	20	70-125	
Trichlorofluoromethane	25.0	24.7	99	11	28	57-144	
Vinyl acetate	50.0	62.8	126	10	23	61-139	
Vinyl chloride	25.0	29.0	116	10	25	53-141	
Xylenes, Total	50.0	49.5	99	9	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502781.D

Lab ID: LCSD 280-609946/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	267	107	1	20	45-142	
Chloroprene	25.0	27.1	109	6	20	53-147	
Methacrylonitrile	250	264	106	4	20	47-142	
Methyl methacrylate	50.0	43.2	86	7	20	60-131	
Propionitrile	250	266	106	3	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: ms11_5432.D Lab Sample ID: MB 280-609068/7

Matrix: Water Heated Purge:(Y/N) Y

Instrument ID: VMS_MS11 Date Analyzed: 04/18/2023 11:53

GC Column: RXI-624SilMS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-609068/1002	-ms11_5427-LCS.d	04/18/2023 10:06
	LCSD 280-609068/4	ms11_5428.D	04/18/2023 10:28
	LCS 280-609068/1003	-ms11_5429-LCS.d	04/18/2023 10:49
	LCSD 280-609068/5	ms11_5430.D	04/18/2023 11:10
MW-105S-20230411	280-174957-6	ms11_5436.D	04/18/2023 13:44
MW-105D-20230411	280-174957-5	ms11_5448.D	04/18/2023 18:01

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: X502755.D Lab Sample ID: MB 280-609932/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_X4 Date Analyzed: 04/24/2023 20:30

GC Column: RXI-624SilMS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-609932/1002	-X502750-LCS.d	04/24/2023 18:48
	LCS 280-609932/1003	-X502751-LCS.d	04/24/2023 19:08
	LCSD 280-609932/4	X502752.D	04/24/2023 19:29
	LCSD 280-609932/5	X502753.D	04/24/2023 19:49
EB-01-20230411	280-174957-7	X502759.D	04/24/2023 22:37

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: X502783.D Lab Sample ID: MB 280-609946/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_X4 Date Analyzed: 04/25/2023 08:08

GC Column: RXI-624SilMS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-609946/1003	-X502778A-LCS.d	04/25/2023 06:09
	LCS 280-609946/1002	-X502779-LCS.d	04/25/2023 06:36
	LCSD 280-609946/5	X502781.D	04/25/2023 07:27
	LCSD 280-609946/4	X502784.D	04/25/2023 08:29
TB-04-20230412	280-174957-1	X502787.D	04/25/2023 09:46
MW-124-20230412	280-174957-2	X502799.D	04/25/2023 14:21
MW-124-Q-20230412	280-174957-3	X502800.D	04/25/2023 14:42

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: ms11_0726.D BFB Injection Date: 12/04/2022

Instrument ID: VMS_MS11 BFB Injection Time: 14:15

Analysis Batch No.: 595485

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	53.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	74.2	
175	5.0 - 9.0 % of mass 174	5.6	(7.6) 1
176	95.0 - 101.0 % of mass 174	72.3	(97.4) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD200 280-595485/22	ms11_0738.D	12/04/2022	19:26
	STD100 280-595485/23	ms11_0739.D	12/04/2022	19:50
	STD75 280-595485/24	ms11_0740.D	12/04/2022	20:14
	STD50 280-595485/25	ms11_0741.D	12/04/2022	20:38
	STD10 280-595485/26	ms11_0742.D	12/04/2022	21:01
	STD5 280-595485/27	ms11_0743.D	12/04/2022	21:25
	STD2 280-595485/28	ms11_0744.D	12/04/2022	21:49
	STD1 280-595485/29	ms11_0745.D	12/04/2022	22:13

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: ms11_5231.D BFB Injection Date: 04/13/2023

Instrument ID: VMS_MS11 BFB Injection Time: 13:39

Analysis Batch No.: 608560

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	53.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	73.5	
175	5.0 - 9.0 % of mass 174	5.7	(7.8) 1
176	95.0 - 101.0 % of mass 174	71.6	(97.3) 1
177	5.0 - 9.0 % of mass 176	4.8	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD 280-608560/11	ms11_5233.D	04/13/2023	14:21
	STD 280-608560/12	ms11_5234.D	04/13/2023	14:43
	STD 280-608560/13	ms11_5235.D	04/13/2023	15:04
	ICIS 280-608560/14	ms11_5236.D	04/13/2023	15:26
	STD 280-608560/15	ms11_5237.D	04/13/2023	15:47
	STD 280-608560/16	ms11_5238.D	04/13/2023	16:08
	STD 280-608560/17	ms11_5239.D	04/13/2023	16:30
	STD 280-608560/18	ms11_5240.D	04/13/2023	16:51
	STD 280-608560/19	ms11_5241.D	04/13/2023	17:13
	ICV 280-608560/20	ms11_5242.D	04/13/2023	17:34

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: ms11_5272.D BFB Injection Date: 04/14/2023

Instrument ID: VMS_MS11 BFB Injection Time: 10:24

Analysis Batch No.: 608697

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.6	
75	30.0 - 60.0 % of mass 95	53.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	75.3	
175	5.0 - 9.0 % of mass 174	6.0	(8.0) 1
176	95.0 - 101.0 % of mass 174	73.7	(97.9) 1
177	5.0 - 9.0 % of mass 176	4.8	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD 280-608697/11	ms11_5273.D	04/14/2023	10:45
	STD 280-608697/12	ms11_5274.D	04/14/2023	11:06
	STD 280-608697/13	ms11_5275.D	04/14/2023	11:28
	ICIS 280-608697/14	ms11_5276.D	04/14/2023	11:49
	STD 280-608697/15	ms11_5277.D	04/14/2023	12:10
	STD 280-608697/16	ms11_5278.D	04/14/2023	12:32
	STD 280-608697/17	ms11_5279.D	04/14/2023	12:53
	STD 280-608697/18	ms11_5280.D	04/14/2023	13:15
	STD 280-608697/19	ms11_5281.D	04/14/2023	13:36
	ICV 280-608697/20	ms11_5282.D	04/14/2023	13:57

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: ms11_5426.D BFB Injection Date: 04/18/2023

Instrument ID: VMS_MS11 BFB Injection Time: 09:36

Analysis Batch No.: 609068

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.1	
75	30.0 - 60.0 % of mass 95	53.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	78.6	
175	5.0 - 9.0 % of mass 174	6.1	(7.8) 1
176	95.0 - 101.0 % of mass 174	75.9	(96.5) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-609068/2	ms11_5427.D	04/18/2023	10:06
	LCS 280-609068/1002	-ms11_5427-LC	04/18/2023	10:06
	LCSD 280-609068/4	ms11_5428.D	04/18/2023	10:28
	CCV 280-609068/3	ms11_5429.D	04/18/2023	10:49
	LCS 280-609068/1003	-ms11_5429-LC	04/18/2023	10:49
	LCSD 280-609068/5	ms11_5430.D	04/18/2023	11:10
	MB 280-609068/7	ms11_5432.D	04/18/2023	11:53
MW-105S-20230411	280-174957-6	ms11_5436.D	04/18/2023	13:44
MW-105D-20230411	280-174957-5	ms11_5448.D	04/18/2023	18:01

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: X43661.D BFB Injection Date: 10/22/2022

Instrument ID: VMS_X4 BFB Injection Time: 11:07

Analysis Batch No.: 590907

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.0	
75	30.0 - 60.0 % of mass 95	50.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	73.1	
175	5.0 - 9.0 % of mass 174	6.1	(8.4) 1
176	95.0 - 101.0 % of mass 174	70.6	(96.6) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD010 280-590907/23	X43673.D	10/22/2022	15:19
	STD020 280-590907/24	X43674.D	10/22/2022	15:40
	STD050 280-590907/25	X43675.D	10/22/2022	16:01
	STD10 280-590907/26	X43676.D	10/22/2022	16:21
	STD50 280-590907/27	X43677.D	10/22/2022	16:42
	STD100 280-590907/28	X43678.D	10/22/2022	17:02
	STD200 280-590907/29	X43679.D	10/22/2022	17:23

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: X502125.D BFB Injection Date: 04/07/2023

Instrument ID: VMS_X4 BFB Injection Time: 02:33

Analysis Batch No.: 607881

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.3	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.4	(0.4) 1
174	Greater than 50% of mass 95	82.2	
175	5.0 - 9.0 % of mass 174	6.4	(7.8) 1
176	95.0 - 101.0 % of mass 174	78.2	(95.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD 280-607881/19	X502127.D	04/07/2023	3:14
	STD 280-607881/18	X502128.D	04/07/2023	3:34
	STD 280-607881/16	X502129.D	04/07/2023	3:55
	STD 280-607881/17	X502130.D	04/07/2023	4:15
	STD 280-607881/15	X502131.D	04/07/2023	4:36
	ICIS 280-607881/14	X502132.D	04/07/2023	4:56
	STD 280-607881/13	X502133.D	04/07/2023	5:17
	STD 280-607881/12	X502134.D	04/07/2023	5:38
	STD 280-607881/11	X502135.D	04/07/2023	5:58

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: X502169.D BFB Injection Date: 04/10/2023

Instrument ID: VMS_X4 BFB Injection Time: 21:51

Analysis Batch No.: 608203

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.6	
75	30.0 - 60.0 % of mass 95	50.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	81.7	
175	5.0 - 9.0 % of mass 174	6.5	(7.9) 1
176	95.0 - 101.0 % of mass 174	79.9	(97.7) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 280-608203/8	X502177.D	04/11/2023	0:52

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: X502749.D BFB Injection Date: 04/24/2023

Instrument ID: VMS_X4 BFB Injection Time: 18:27

Analysis Batch No.: 609932

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.4	
75	30.0 - 60.0 % of mass 95	47.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	6.1	(7.8) 1
176	95.0 - 101.0 % of mass 174	75.9	(97.3) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-609932/2	X502750.D	04/24/2023	18:48
	LCS 280-609932/1002	-X502750-LCS.	04/24/2023	18:48
	CCV 280-609932/3	X502751.D	04/24/2023	19:08
	LCS 280-609932/1003	-X502751-LCS.	04/24/2023	19:08
	LCSD 280-609932/4	X502752.D	04/24/2023	19:29
	LCSD 280-609932/5	X502753.D	04/24/2023	19:49
	MB 280-609932/7	X502755.D	04/24/2023	20:30
EB-01-20230411	280-174957-7	X502759.D	04/24/2023	22:37

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab File ID: X502777A.D BFB Injection Date: 04/25/2023

Instrument ID: VMS_X4 BFB Injection Time: 05:49

Analysis Batch No.: 609946

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.5	
75	30.0 - 60.0 % of mass 95	48.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	80.1	
175	5.0 - 9.0 % of mass 174	6.0	(7.5) 1
176	95.0 - 101.0 % of mass 174	76.7	(95.8) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-609946/3	X502778A.D	04/25/2023	6:09
	LCS 280-609946/1003	-X502778A-LCS	04/25/2023	6:09
	CCV 280-609946/2	X502779.D	04/25/2023	6:36
	LCS 280-609946/1002	-X502779-LCS.	04/25/2023	6:36
	LCSD 280-609946/5	X502781.D	04/25/2023	7:27
	MB 280-609946/7	X502783.D	04/25/2023	8:08
	LCSD 280-609946/4	X502784.D	04/25/2023	8:29
TB-04-20230412	280-174957-1	X502787.D	04/25/2023	9:46
MW-124-20230412	280-174957-2	X502799.D	04/25/2023	14:21
MW-124-Q-20230412	280-174957-3	X502800.D	04/25/2023	14:42
	CCVC 280-609946/34	X502808.D	04/25/2023	17:28
	CCVC 280-609946/35	X502809.D	04/25/2023	17:49

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Sample No.: ICIS 280-608560/14 Date Analyzed: 04/13/2023 15:26

Instrument ID: VMS_MS11 GC Column: RXI-624SilMS ID: 0.25(mm)

Lab File ID (Standard): ms11_5236.D Heated Purge: (Y/N) Y

Calibration ID: 79243

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1425572	5.08	344779	7.57	566707	9.76
UPPER LIMIT		2851144	5.58	689558	8.07	1133414	10.26
LOWER LIMIT		712786	4.58	172390	7.07	283354	9.26
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-608560/20		1403636	5.08	344395	7.57	557332	9.76

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Sample No.: ICIS 280-608697/14 Date Analyzed: 04/14/2023 11:49

Instrument ID: VMS_MS11 GC Column: RXI-624SilMS ID: 0.25(mm)

Lab File ID (Standard): ms11_5276.D Heated Purge: (Y/N) Y

Calibration ID: 79250

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1271634	5.08	302881	7.57	496215	9.76
UPPER LIMIT		2543268	5.58	605762	8.07	992430	10.26
LOWER LIMIT		635817	4.58	151441	7.07	248108	9.26
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-608697/20		1255340	5.08	304218	7.57	489550	9.76
CCV 280-609068/2		1001556	5.07	245844	7.57	408616	9.76
LCS 280-609068/1002		1001556	5.07	245844	7.57	408616	9.76
LCSD 280-609068/4		1046403	5.08	251080	7.57	414044	9.76
CCV 280-609068/3		1035045	5.08	252313	7.57	409898	9.76
LCS 280-609068/1003		1035045	5.08	252313	7.57	409898	9.76
LCSD 280-609068/5		1045040	5.08	254651	7.57	417445	9.76
MB 280-609068/7		1039515	5.08	251512	7.57	414236	9.76

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Sample No.: ICIS 280-607881/14 Date Analyzed: 04/07/2023 04:56

Instrument ID: VMS_X4 GC Column: RXI-624SilMS ID: 0.25(mm)

Lab File ID (Standard): X502132.D Heated Purge: (Y/N) N

Calibration ID: 79019

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1433467	5.06	327912	7.57	509618	9.79
UPPER LIMIT		2866934	5.56	655824	8.07	1019236	10.29
LOWER LIMIT		716734	4.56	163956	7.07	254809	9.29
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-608203/8		1472574	5.06	356963	7.57	549141	9.79
CCV 280-609932/2		1463413	5.06	353452	7.57	560008	9.79
LCS 280-609932/1002		1463413	5.06	353452	7.57	560008	9.79
LCS 280-609932/1003		1417408	5.06	339994	7.57	535901	9.79
CCV 280-609932/3		1417408	5.06	339994	7.57	535901	9.79
LCSD 280-609932/4		1432401	5.06	352466	7.57	542963	9.79
LCSD 280-609932/5		1388739	5.06	333064	7.57	540029	9.79
MB 280-609932/7		1401368	5.06	334291	7.57	536387	9.79
280-174957-7	EB-01-20230411	1417108	5.06	333516	7.57	527760	9.79
CCV 280-609946/3		1444758	5.06	342438	7.57	541434	9.79
LCS 280-609946/1003		1444758	5.06	342438	7.57	541434	9.79
LCS 280-609946/1002		1411236	5.06	344876	7.57	539343	9.79
CCV 280-609946/2		1411236	5.06	344876	7.57	539343	9.79
LCSD 280-609946/5		1425941	5.06	344764	7.57	542608	9.79
MB 280-609946/7		1370762	5.06	332565	7.57	522855	9.79
LCSD 280-609946/4		1443982	5.06	345530	7.57	551975	9.79
280-174957-1	TB-04-20230412	1391757	5.06	336328	7.57	522141	9.79
CCVC 280-609946/34		1411029	5.06	341846	7.57	544544	9.79
CCVC 280-609946/35		1367029	5.06	329288	7.57	527094	9.79

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: TB-04-20230412 | Lab Sample ID: 280-174957-1

Matrix: Water | Lab File ID: X502787.D

Analysis Method: 8260D | Date Collected: 04/12/2023 14:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 09:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: TB-04-20230412 | Lab Sample ID: 280-174957-1

Matrix: Water | Lab File ID: X502787.D

Analysis Method: 8260D | Date Collected: 04/12/2023 14:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 09:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: TB-04-20230412 | Lab Sample ID: 280-174957-1

Matrix: Water | Lab File ID: X502787.D

Analysis Method: 8260D | Date Collected: 04/12/2023 14:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 09:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502787.D
Lims ID: 280-174957-C-1
Client ID: TB-04-20230412
Sample Type: Client
Inject. Date: 25-Apr-2023 09:46:30 ALS Bottle#: 10 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-174957-C-1
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 22:59:32 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: AK2J Date: 25-Apr-2023 22:27:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1391757	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	336328	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	522141	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	94	338577	50.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	353893	50.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1452175	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	90	470833	50.5	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	90	470833	NR	
10 Dichlorodifluoromethane	85		1.696				ND	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.967				ND	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94		2.246				ND	U
15 Chloroethane	64		2.339				ND	
16 Dichlorofluoromethane	67		2.504				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59		2.747				ND	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96		2.940				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.040				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.119				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.204				ND	
31 Methylene Chloride	84		3.297				ND	
32 2-Methyl-2-propanol	59		3.333				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.784				ND	
41 Isopropyl ether	87		3.805				ND	
40 1,1-Dichloroethane	63		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96		4.213				ND	
48 2,2-Dichloropropane	77		4.227				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42	4.406	4.398	0.008	87	3284	2.12	
54 Chloroform	83		4.441				ND	
55 1,1,1-Trichloroethane	97		4.592				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	
63 1,2-Dichloroethane	62		4.878				ND	7
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.035				ND	7
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95		5.335				ND	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164		6.808				ND	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	
89 1-Chlorohexane	91		7.552				ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
90 Chlorobenzene	112		7.602				ND	
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.588				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.590				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.733				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146		10.169				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.941				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.257				ND	U
166 Ethyl acrylate	55		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1		0.000				ND	7
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND	7
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

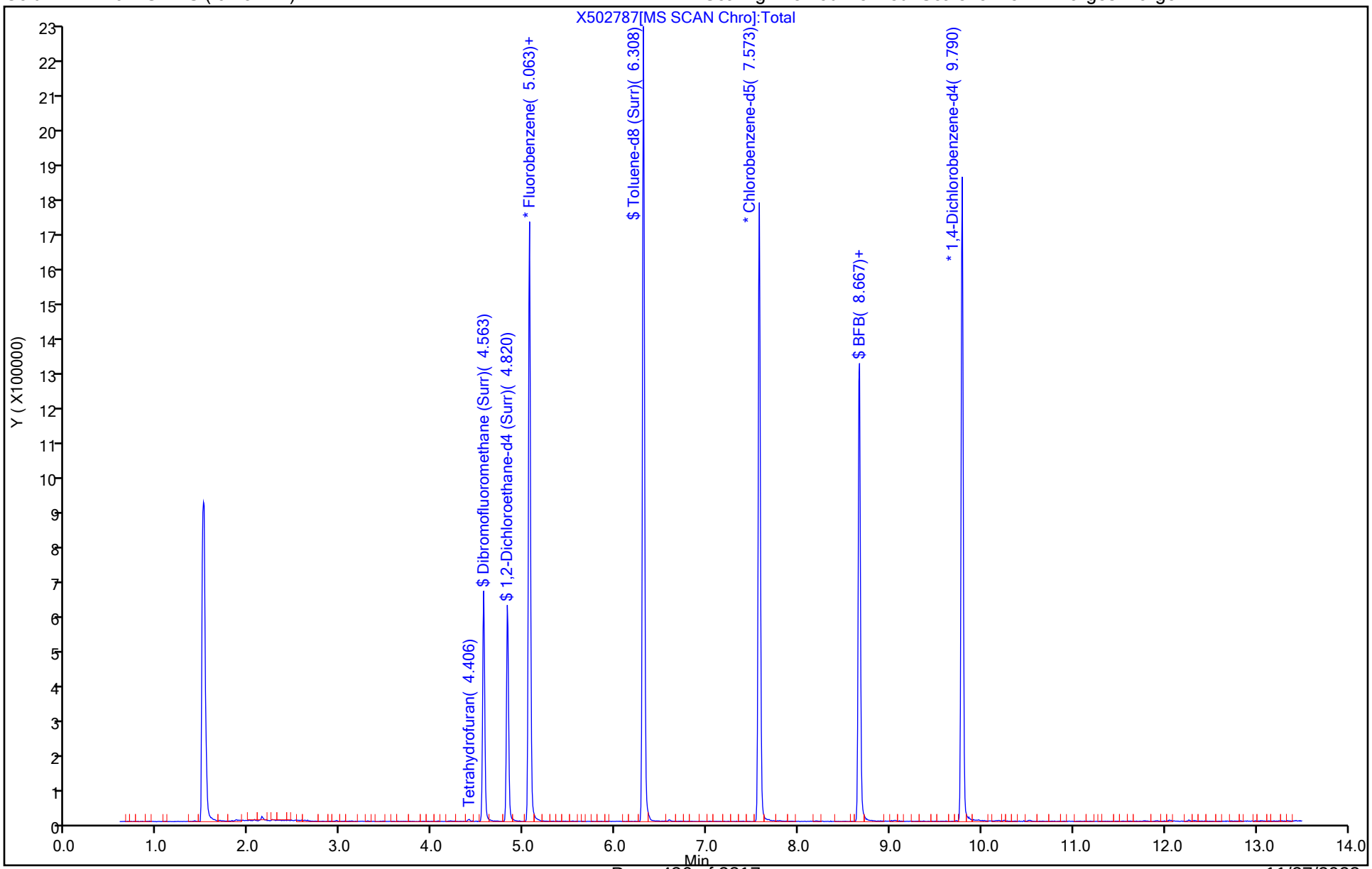
Report Date: 25-Apr-2023 22:59:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502787.D

Injection Date:	25-Apr-2023 09:46:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-174957-C-1	Lab Sample ID:	280-174957-1	Worklist Smp#:	12
Client ID:	TB-04-20230412				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502787.D				
Lims ID:	280-174957-C-1				
Client ID:	TB-04-20230412				
Sample Type:	Client				
Inject. Date:	25-Apr-2023 09:46:30	ALS Bottle#:	10	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-174957-C-1				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	25-Apr-2023 22:59:32	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1679				

First Level Reviewer: AK2J Date: 25-Apr-2023 22:27:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	50.6	101.15
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.3	100.66
$ 6 Toluene-d8 (Surr)	50.0	50.7	101.37
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.5	100.92

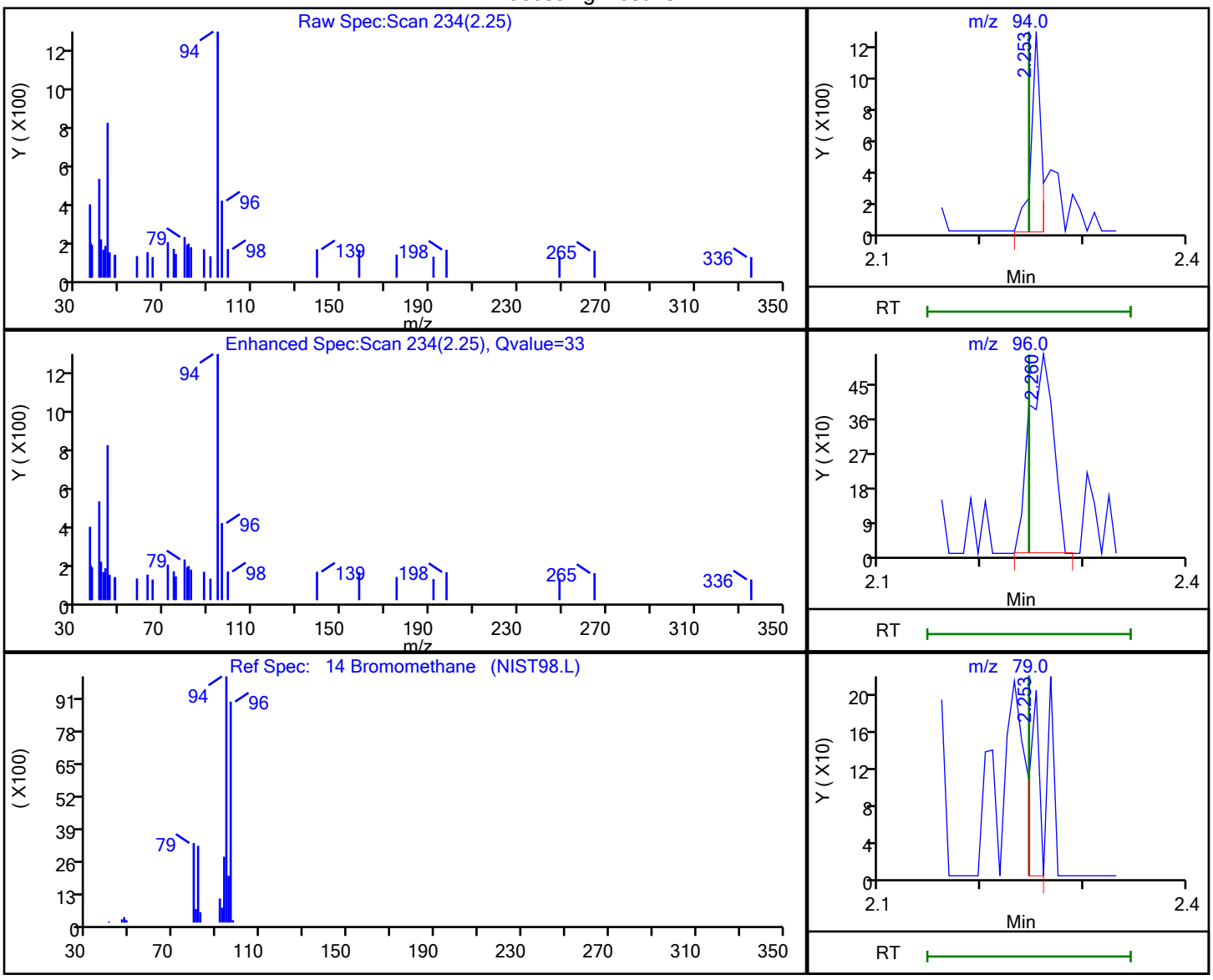
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502787.D				
Injection Date:	25-Apr-2023 09:46:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-C-1	Lab Sample ID:	280-174957-1		
Client ID:	TB-04-20230412				
Operator ID:	MED	ALS Bottle#:	10	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.25	94.00	785	0.232800
2.26	96.00	848	
2.25	79.00	130	

Reviewer: AK2J, 25-Apr-2023 22:26:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

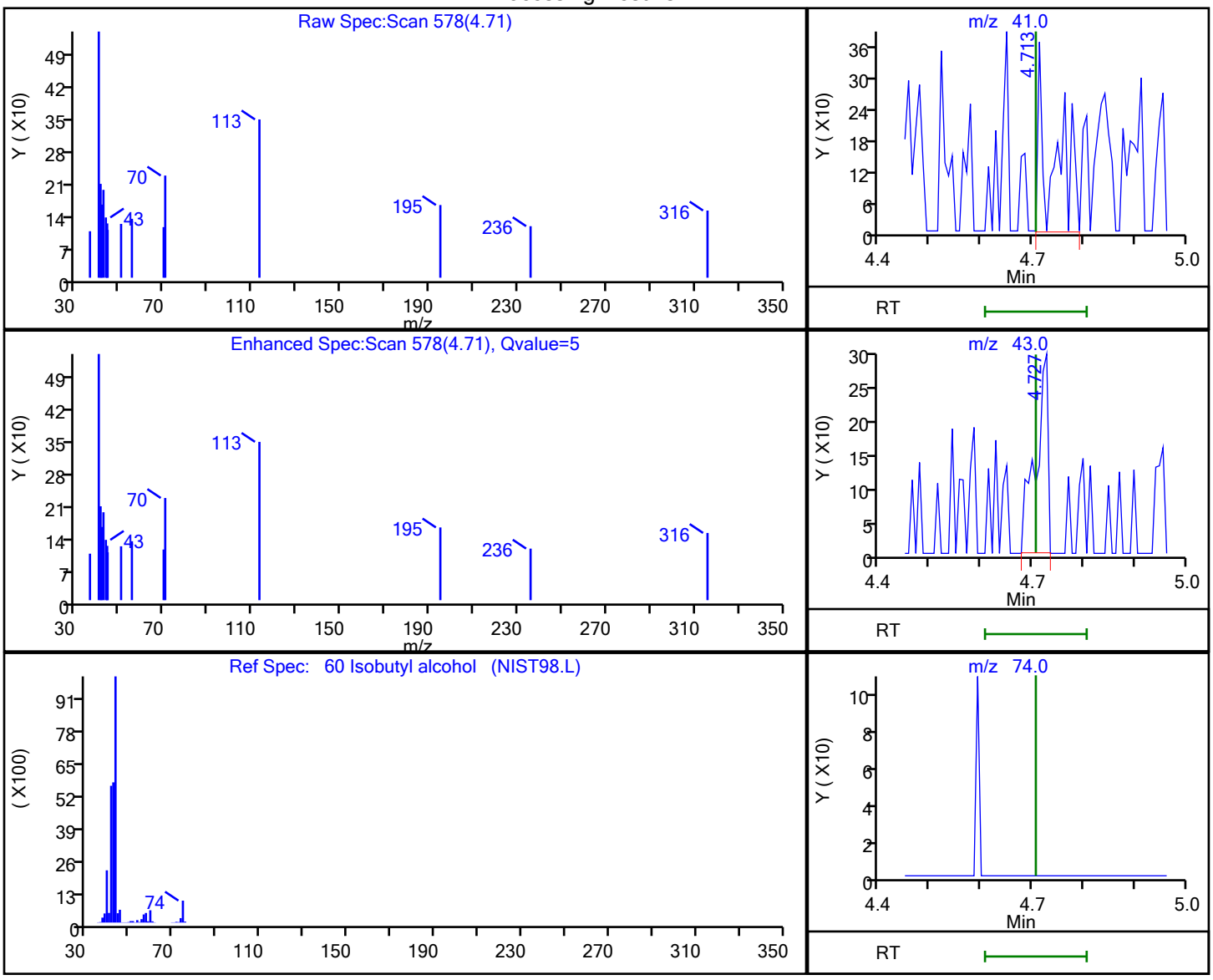
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502787.D				
Injection Date:	25-Apr-2023 09:46:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-C-1	Lab Sample ID:	280-174957-1		
Client ID:	TB-04-20230412				
Operator ID:	MED	ALS Bottle#:	10	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.71	41.00	689	15.258468
4.73	43.00	495	
4.71	74.00	0	

Reviewer: AK2J, 25-Apr-2023 22:26:43

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-20230412 | Lab Sample ID: 280-174957-2

Matrix: Water | Lab File ID: X502799.D

Analysis Method: 8260D | Date Collected: 04/12/2023 09:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 14:21

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		2.0	1.2
71-55-6	1,1,1-Trichloroethane	ND		2.0	0.78
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.54
75-34-3	1,1-Dichloroethane	1.7	J	2.0	0.44
75-35-4	1,1-Dichloroethene	ND		2.0	0.46
563-58-6	1,1-Dichloropropene	ND		2.0	0.83
96-18-4	1,2,3-Trichloropropane	ND		5.0	1.7
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	ND		10	3.5
106-93-4	1,2-Dibromoethane	ND		2.0	0.81
95-50-1	1,2-Dichlorobenzene	2.2		2.0	0.74
107-06-2	1,2-Dichloroethane	ND		2.0	1.1
78-87-5	1,2-Dichloropropane	ND		2.0	1.0
541-73-1	1,3-Dichlorobenzene	ND		2.0	0.67
142-28-9	1,3-Dichloropropane	ND		2.0	0.76
106-46-7	1,4-Dichlorobenzene	ND		2.0	0.78
594-20-7	2,2-Dichloropropane	ND		2.0	0.76
78-93-3	2-Butanone (MEK)	ND		30	12
591-78-6	2-Hexanone	ND		10	3.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	2.0
67-64-1	Acetone	ND		30	13
75-05-8	Acetonitrile	ND		60	19
107-02-8	Acrolein	ND		40	9.7
107-13-1	Acrylonitrile	ND		40	8.9
107-05-1	Allyl chloride	ND		4.0	0.34
71-43-2	Benzene	ND		2.0	0.62
75-25-2	Bromoform	ND		4.0	2.4
74-83-9	Bromomethane	ND		10	4.7
75-15-0	Carbon disulfide	ND		4.0	1.3
56-23-5	Carbon tetrachloride	ND		2.0	1.1
108-90-7	Chlorobenzene	ND		2.0	0.84
74-97-5	Chlorobromomethane	ND		2.0	0.81
124-48-1	Chlorodibromomethane	ND		4.0	1.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-20230412 | Lab Sample ID: 280-174957-2

Matrix: Water | Lab File ID: X502799.D

Analysis Method: 8260D | Date Collected: 04/12/2023 09:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 14:21

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		8.0	2.7
67-66-3	Chloroform	0.89	J	2.0	0.72
74-87-3	Chloromethane	ND		4.0	1.5
126-99-8	Chloroprene	ND		6.0	2.3
156-59-2	cis-1,2-Dichloroethene	28		2.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		4.0	1.3
74-95-3	Dibromomethane	ND		2.0	0.69
75-27-4	Dichlorobromomethane	ND		2.0	0.77
75-71-8	Dichlorodifluoromethane	ND		6.0	1.9
97-63-2	Ethyl methacrylate	ND		6.0	1.7
100-41-4	Ethylbenzene	ND		2.0	0.61
74-88-4	Iodomethane	ND		10	5.2
78-83-1	Isobutyl alcohol	ND		220	73
126-98-7	Methacrylonitrile	ND		30	11
80-62-6	Methyl methacrylate	ND		8.0	2.2
75-09-2	Methylene Chloride	ND		4.0	1.9
179601-23-1	m-Xylene & p-Xylene	ND		4.0	0.71
95-47-6	o-Xylene	ND		2.0	0.66
107-12-0	Propionitrile	ND		40	7.4
100-42-5	Styrene	ND		2.0	0.71
127-18-4	Tetrachloroethene	11		2.0	0.81
108-88-3	Toluene	ND		2.0	0.64
156-60-5	trans-1,2-Dichloroethene	ND		2.0	0.74
10061-02-6	trans-1,3-Dichloropropene	ND		4.0	1.3
110-57-6	trans-1,4-Dichloro-2-butene	ND		6.0	2.8
79-01-6	Trichloroethene	160		2.0	0.60
75-69-4	Trichlorofluoromethane	ND		4.0	1.1
108-05-4	Vinyl acetate	ND		6.0	1.9
75-01-4	Vinyl chloride	6.3		4.0	1.0
1330-20-7	Xylenes, Total	ND		2.0	0.66

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-20230412 | Lab Sample ID: 280-174957-2

Matrix: Water | Lab File ID: X502799.D

Analysis Method: 8260D | Date Collected: 04/12/2023 09:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 14:21

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	99		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D
Lims ID: 280-174957-F-2
Client ID: MW-124-20230412
Sample Type: Client
Inject. Date: 25-Apr-2023 14:21:30 ALS Bottle#: 21 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Sample Info: 280-174957-F-2 2x
Misc. Info.: 280-0120726-024
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 12:08:37 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1670

First Level Reviewer: Q2ZS Date: 21-Nov-2023 12:08:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1355253	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	335334	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	519004	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	336159	51.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	337773	49.3	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1420216	49.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	467069	50.4	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.660	8.660	0.000	86	467069	NR	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	31	1237	0.2080	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62	1.960	1.967	-0.007	98	18591	3.15	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94		2.246				ND	U
15 Chloroethane	64		2.339				ND	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	95	6315	0.6145	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59	2.747	2.747	0.000	89	35996	7.87	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96		2.940				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.040				ND	U
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.119				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.204				ND	
31 Methylene Chloride	84		3.297				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85	3.805	3.733	0.072	1	520	NC	
39 Vinyl acetate	43		3.784				ND	
41 Isopropyl ether	87		3.805				ND	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	9178	0.8704	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	
47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	78	95727	13.8	
48 2,2-Dichloropropane	77		4.227				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42	4.398	4.398	0.000	85	3743	2.48	
54 Chloroform	83	4.441	4.441	0.000	93	4789	0.4464	
55 1,1,1-Trichloroethane	97		4.592				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78	4.849	4.849	0.000	89	5292	0.2102	
63 1,2-Dichloroethane	62		4.878				ND	U
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	99	499394	77.9	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164	6.808	6.808	0.000	96	27176	5.58	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.552				ND	U
90 Chlorobenzene	112		7.602				ND	U
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.588				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.590				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.733				ND	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	89	4316	0.2965	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	98	14639	1.11	
118 1,2-Dibromo-3-Chloropropane	157		10.941				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.257				ND	
166 Ethyl acrylate	55		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1				0		0.2102	
S 140 Trihalomethanes, Total	1				0		0.4464	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		13.8	
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

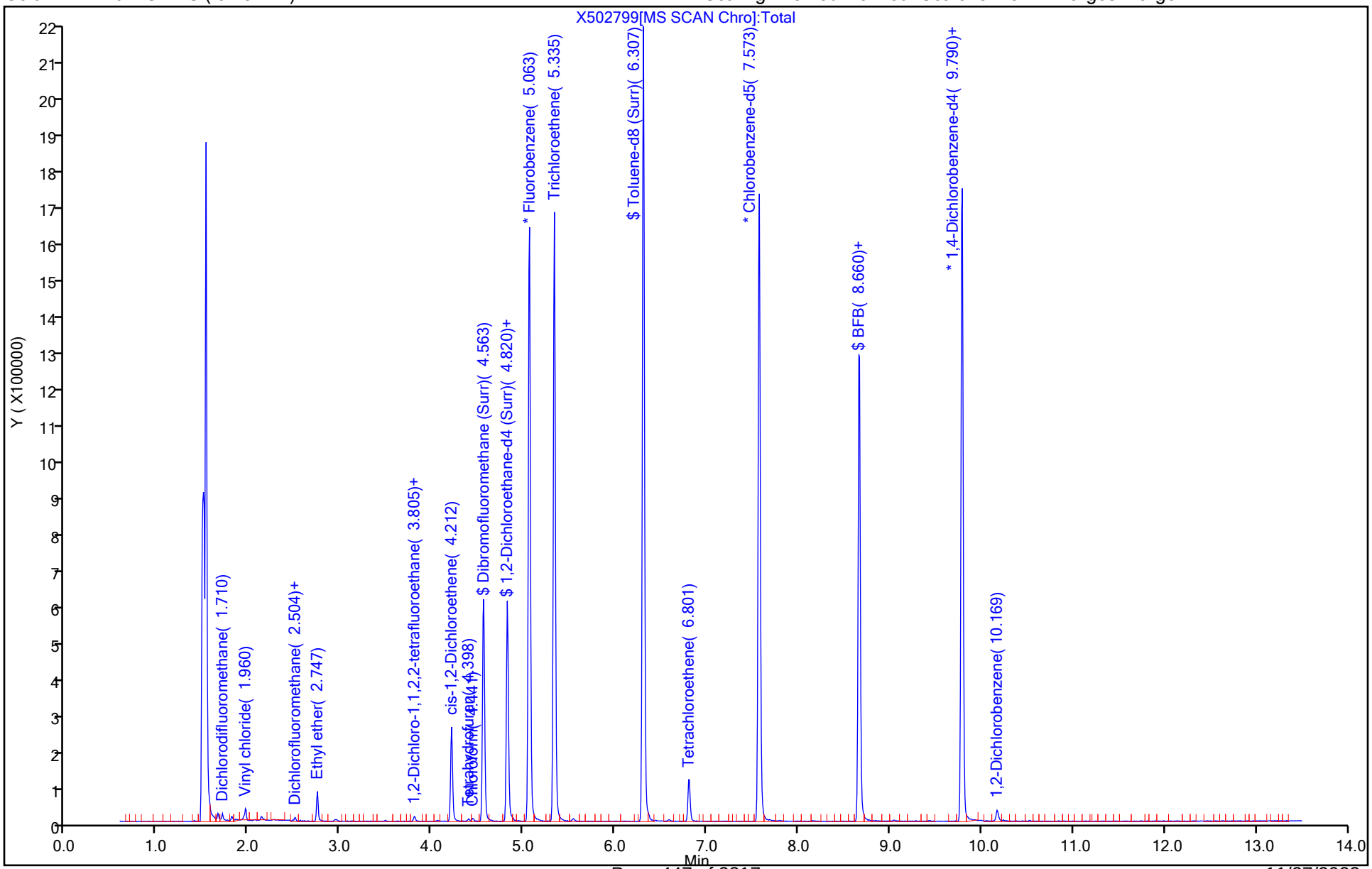
Report Date: 21-Nov-2023 12:08:46 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D

Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2	Worklist Smp#:	24
Client ID:	MW-124-20230412				
Purge Vol:	5.000 mL	Dil. Factor:	2.0000	ALS Bottle#:	21
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D				
Lims ID:	280-174957-F-2				
Client ID:	MW-124-20230412				
Sample Type:	Client				
Inject. Date:	25-Apr-2023 14:21:30	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Sample Info:	280-174957-F-2 2x				
Misc. Info.:	280-0120726-024				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	21-Nov-2023 12:08:37	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1670				

First Level Reviewer: Q2ZS Date: 21-Nov-2023 12:08:23

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.6	103.13
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	49.3	98.67
$ 6 Toluene-d8 (Surr)	50.0	49.7	99.43
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.4	100.72

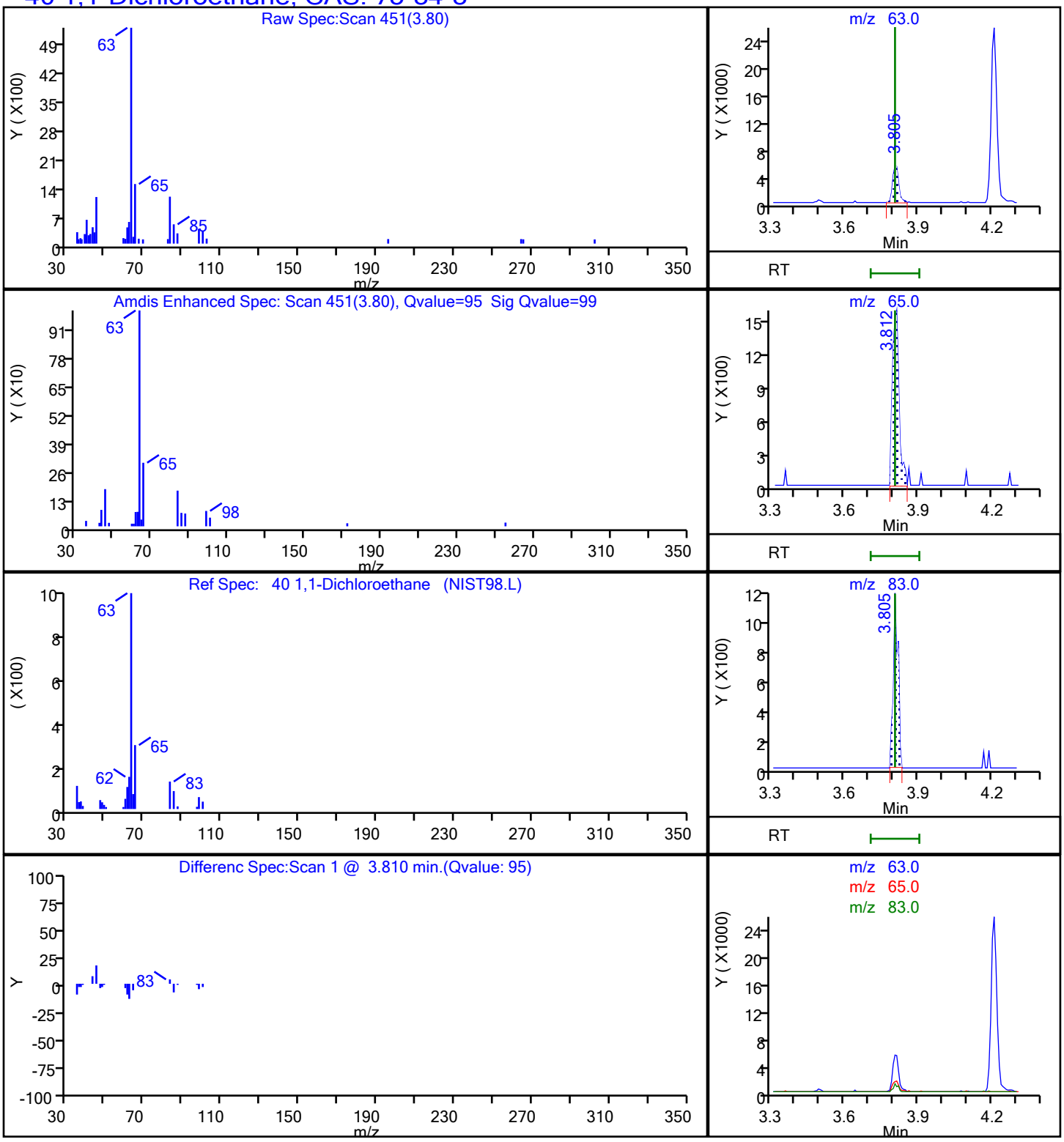
Report Date: 21-Nov-2023 12:08:46 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D

Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2
Client ID:	MW-124-20230412		
Operator ID:	MED	ALS Bottle#:	21 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

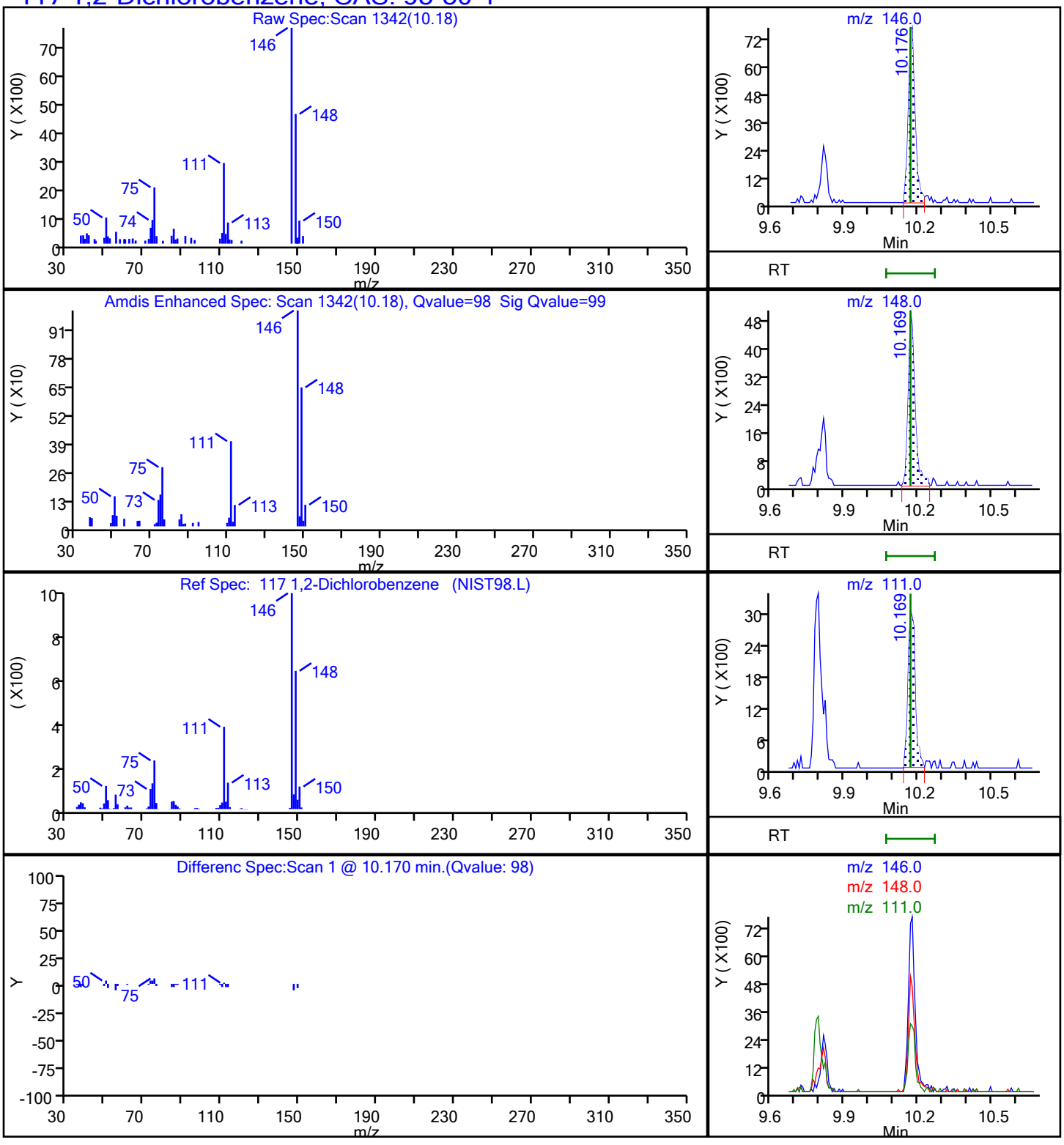
40 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D		
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2
Client ID:	MW-124-20230412		
Operator ID:	MED	ALS Bottle#:	21 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

117 1,2-Dichlorobenzene, CAS: 95-50-1

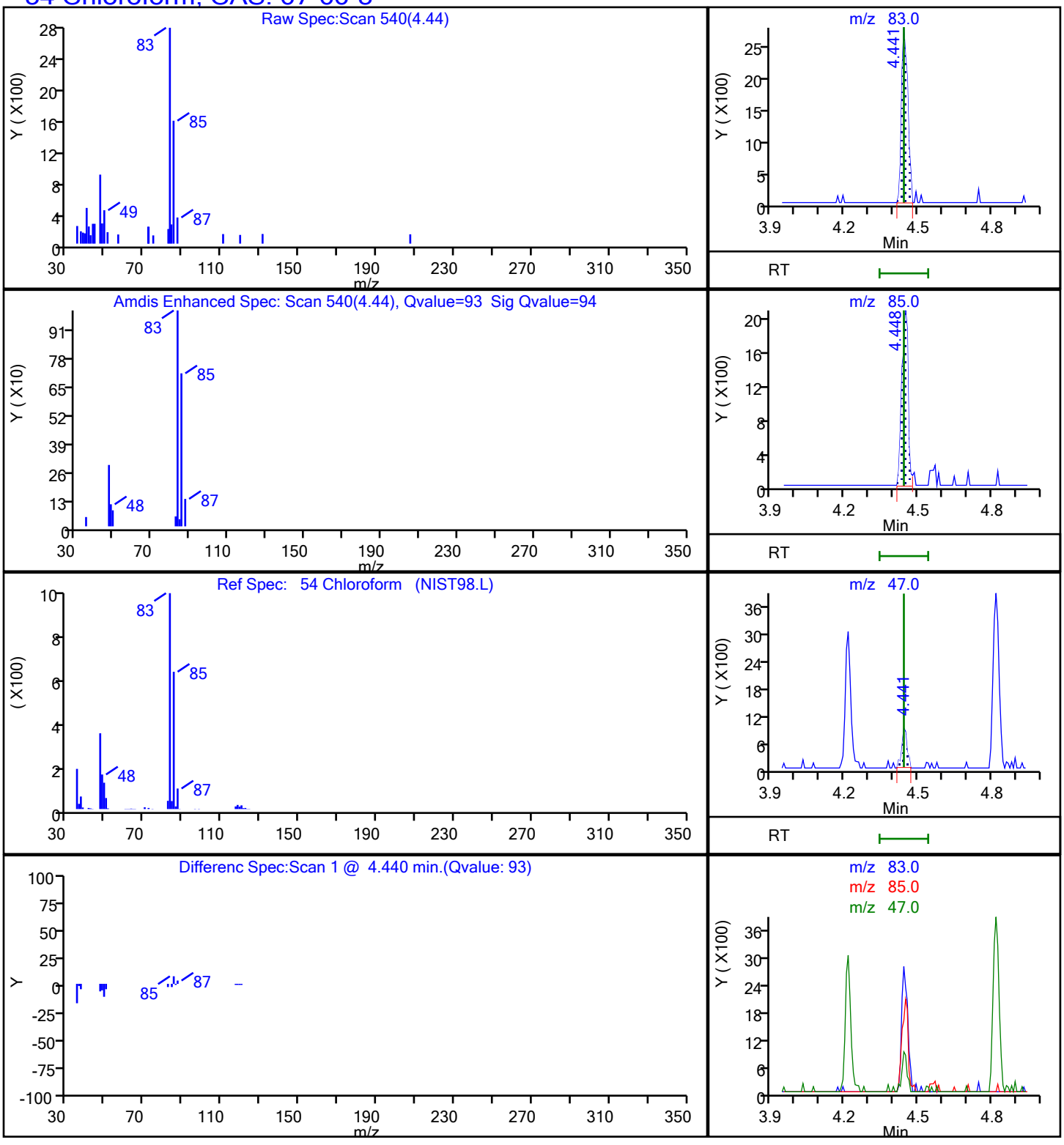


Report Date: 21-Nov-2023 12:08:46 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D		
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2
Client ID:	MW-124-20230412		
Operator ID:	MED	ALS Bottle#:	21 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

54 Chloroform, CAS: 67-66-3

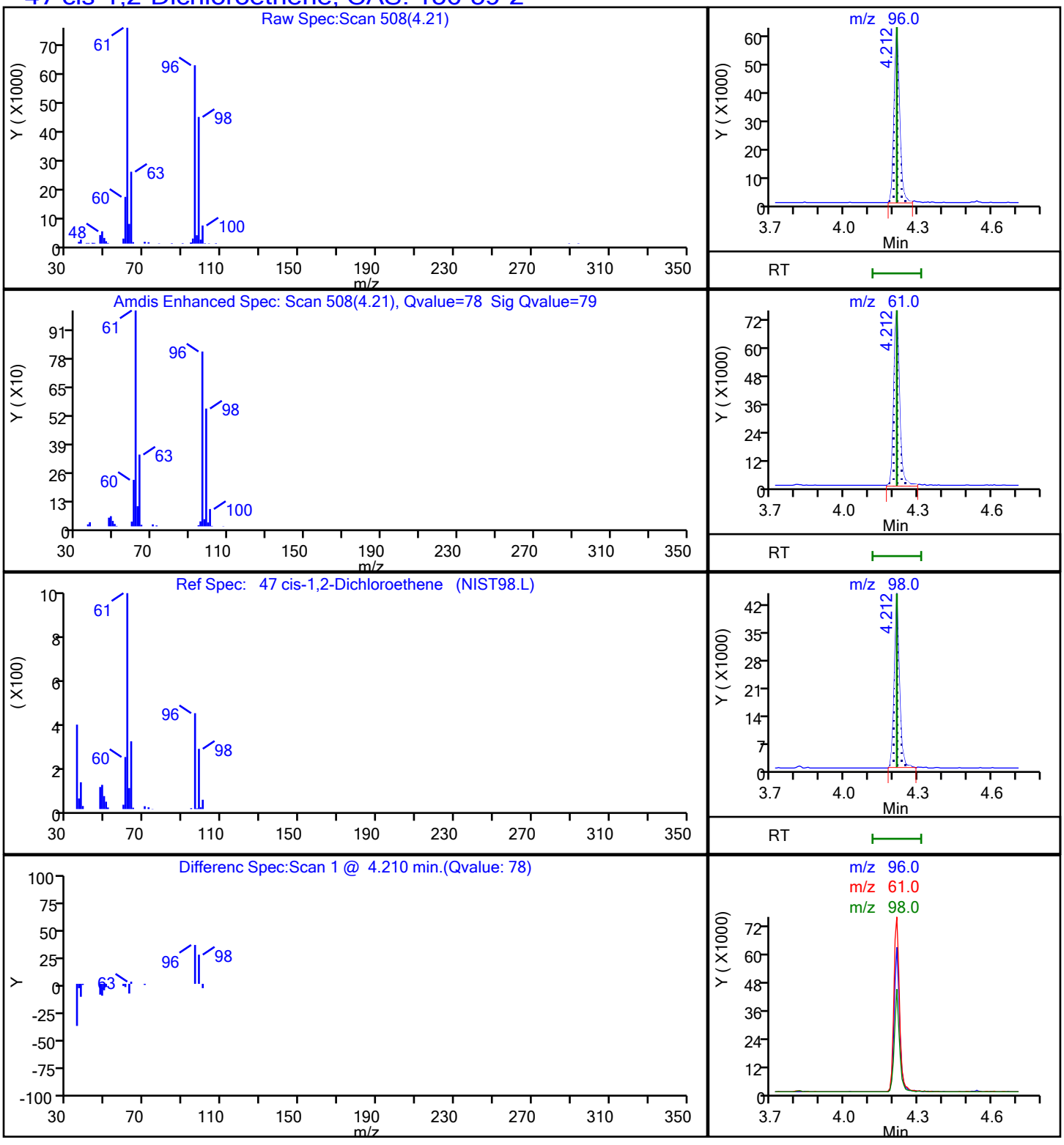


11/27/2023
6:53 PM

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D		
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2
Client ID:	MW-124-20230412		
Operator ID:	MED	ALS Bottle#:	21 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

47 cis-1,2-Dichloroethene, CAS: 156-59-2



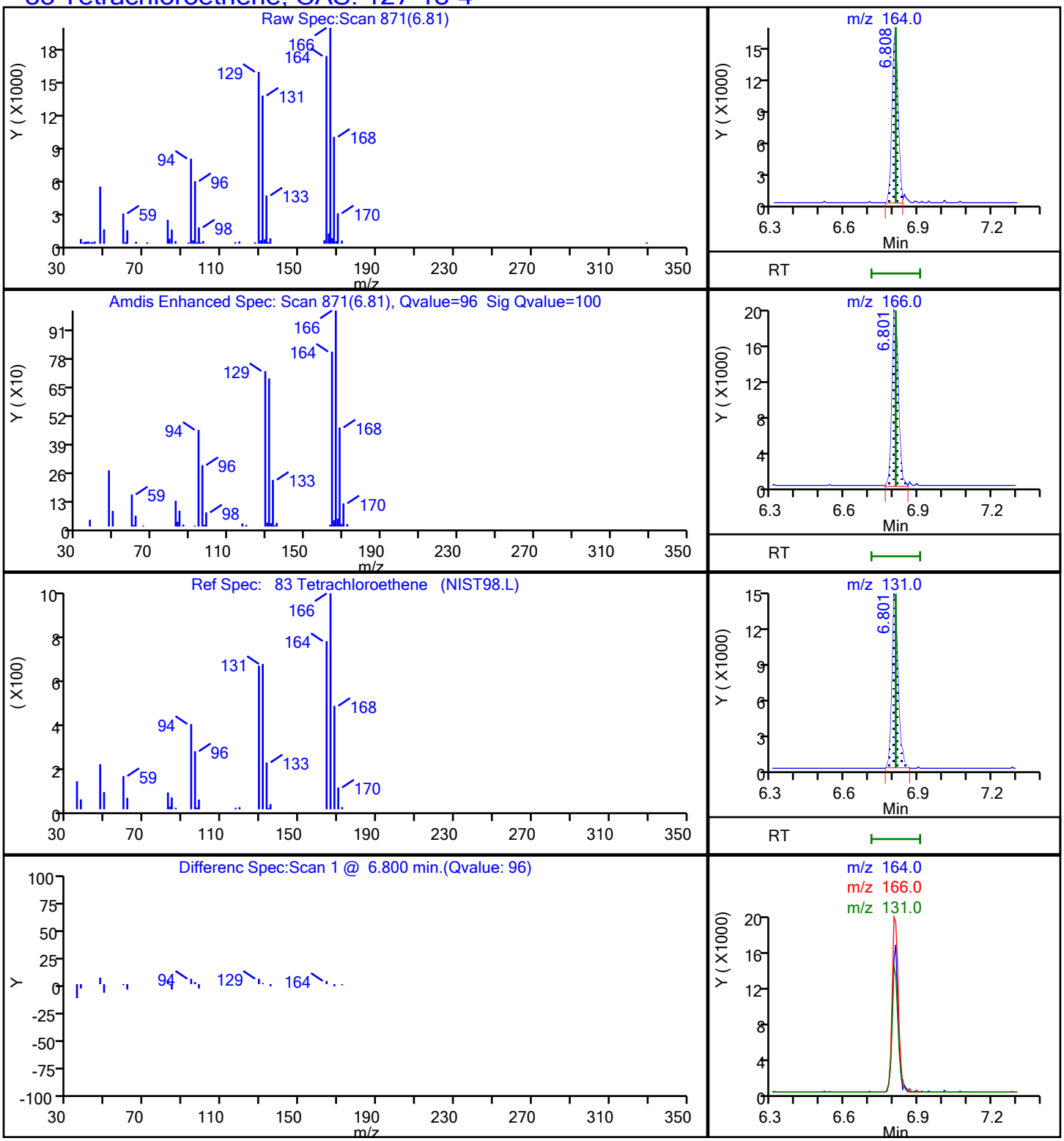
Report Date: 21-Nov-2023 12:08:47 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D

Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

83 Tetrachloroethene, CAS: 127-18-4

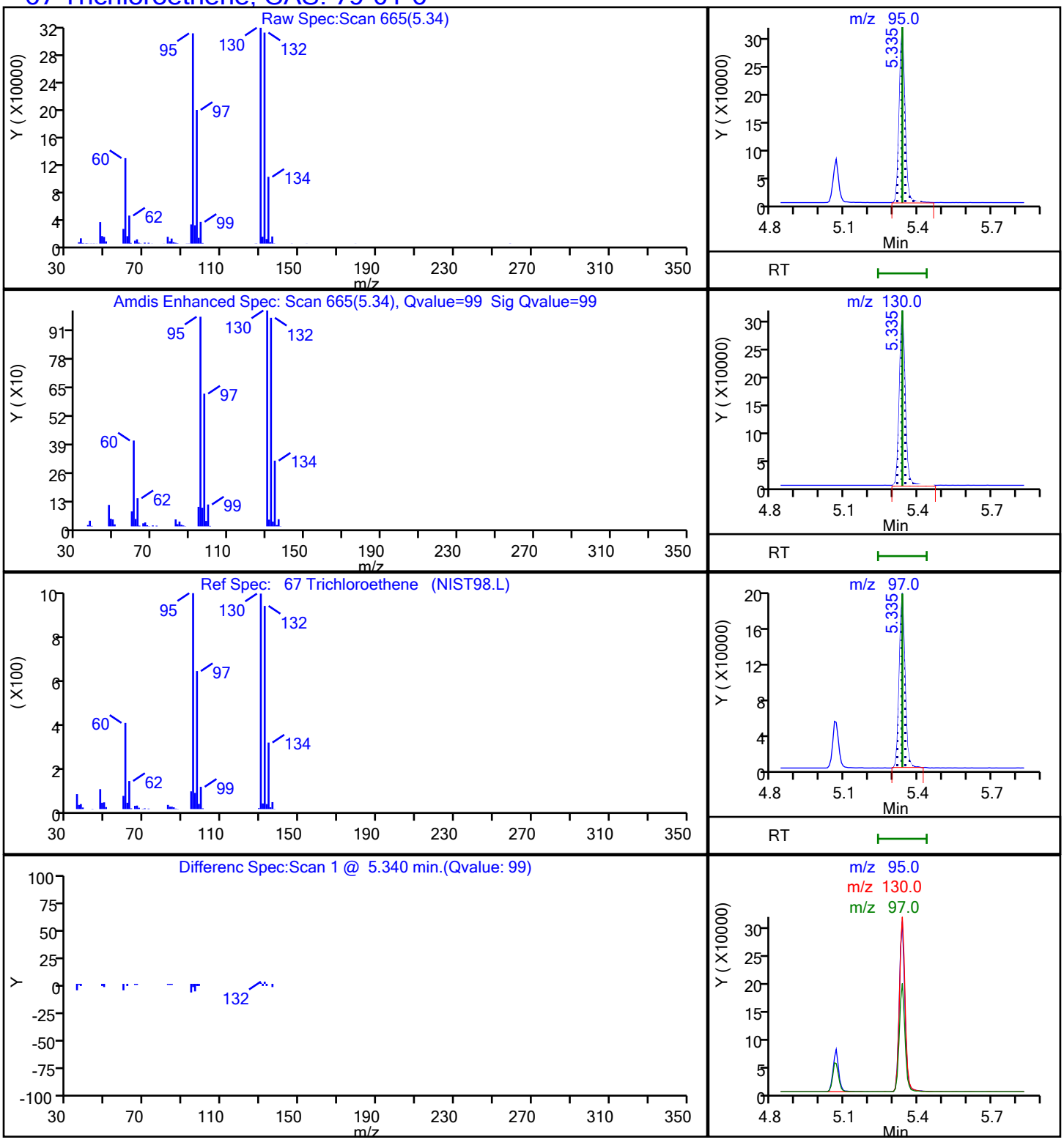


11/27/2023
6:53 PM

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D		
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2
Client ID:	MW-124-20230412		
Operator ID:	MED	ALS Bottle#:	21 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

67 Trichloroethene, CAS: 79-01-6



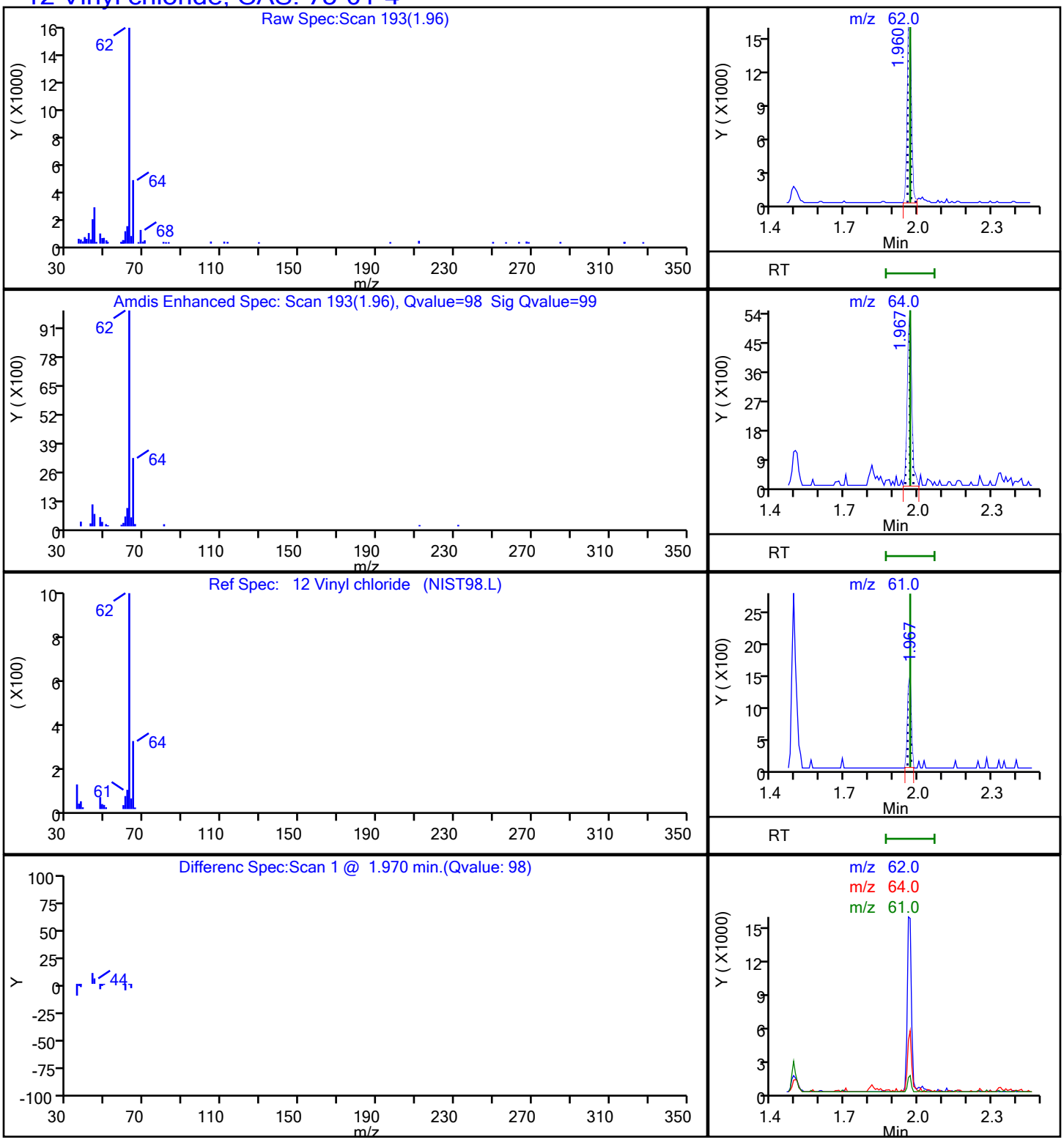
Report Date: 21-Nov-2023 12:08:46 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D

Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

12 Vinyl chloride, CAS: 75-01-4



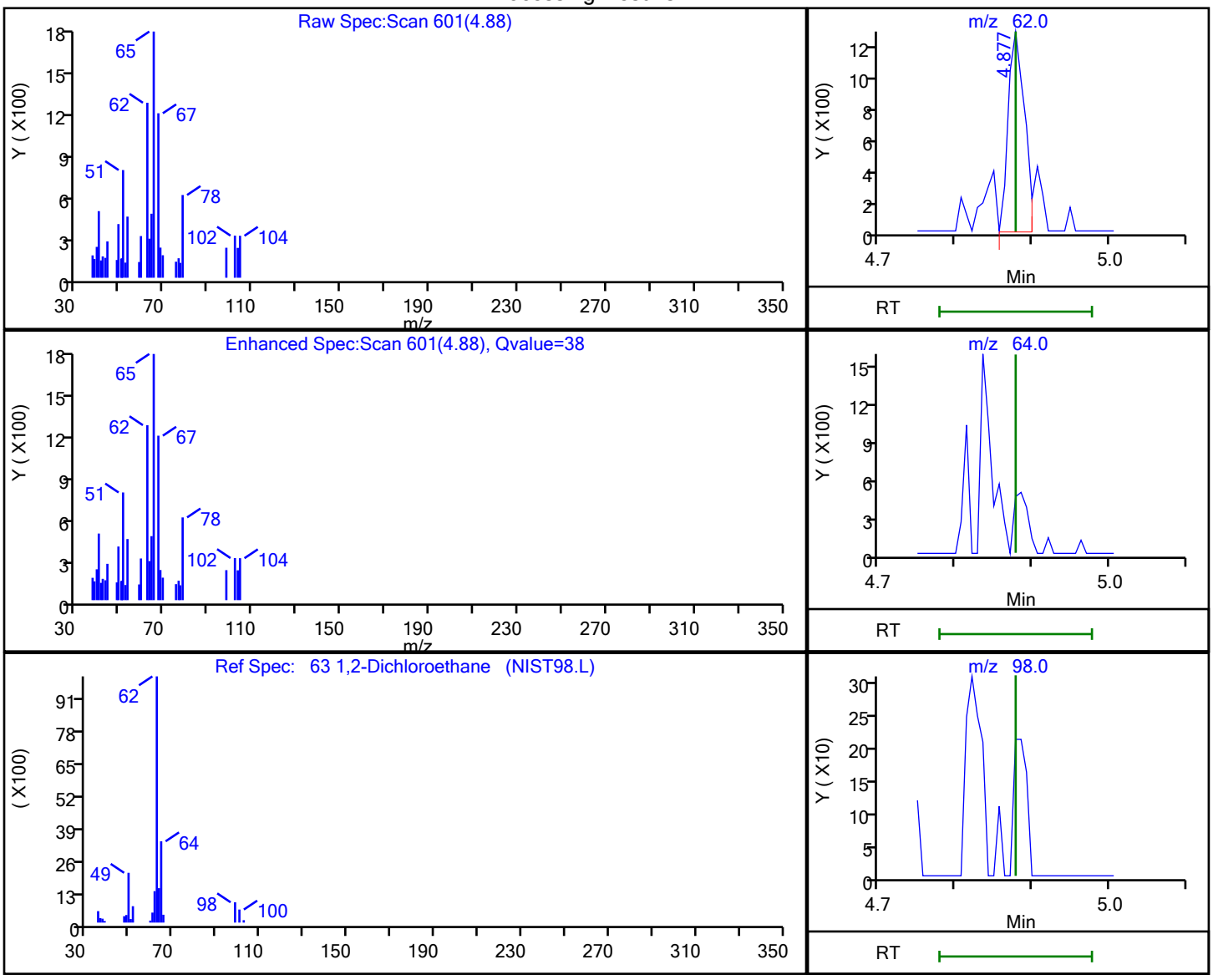
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D				
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

63 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
4.88	62.00	1808	0.226544
4.88	64.00	0	
4.88	98.00	0	

Reviewer: AK2J, 25-Apr-2023 22:49:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

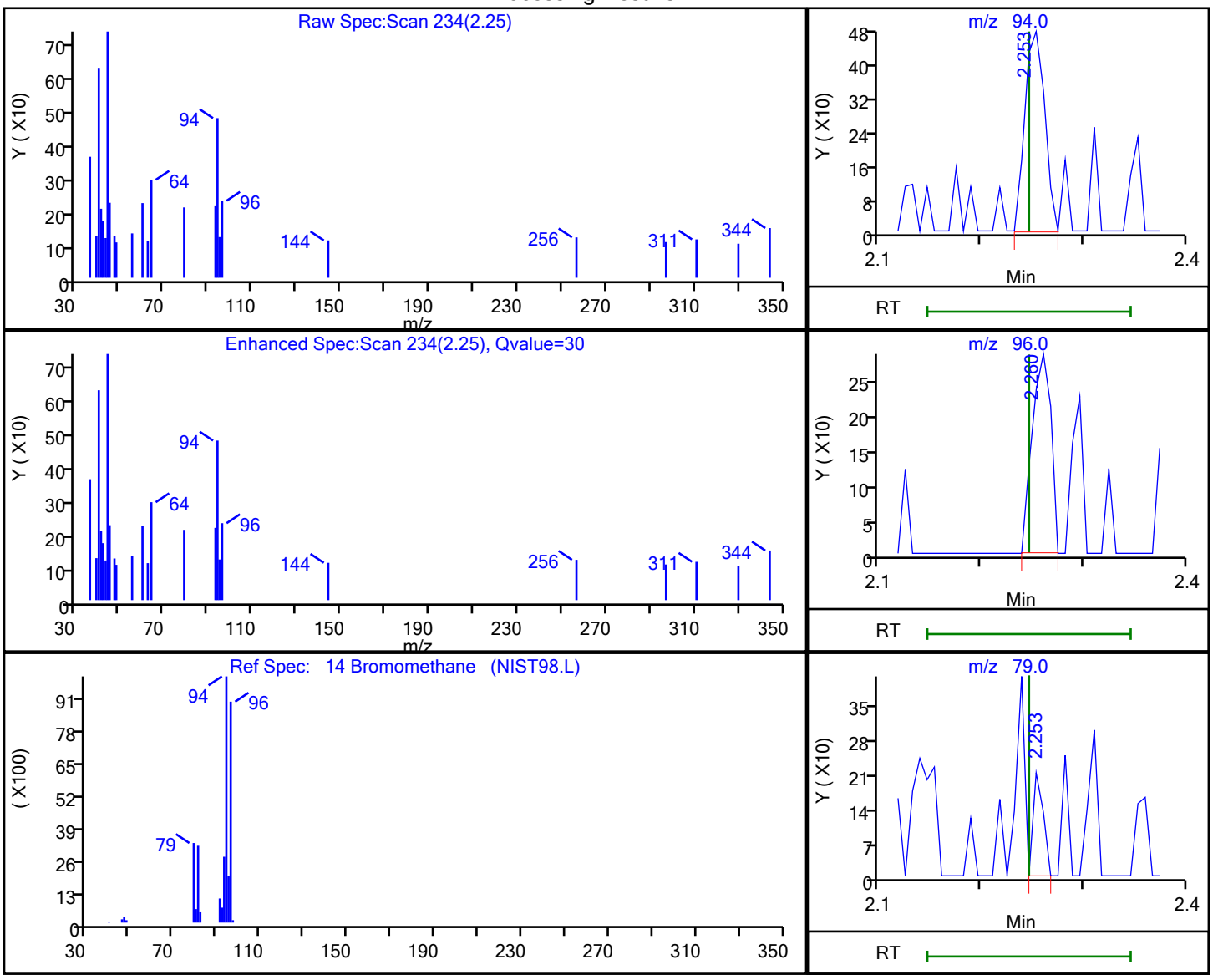
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D				
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.25	94.00	651	0.198261
2.26	96.00	363	
2.25	79.00	146	

Reviewer: AK2J, 25-Apr-2023 22:48:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

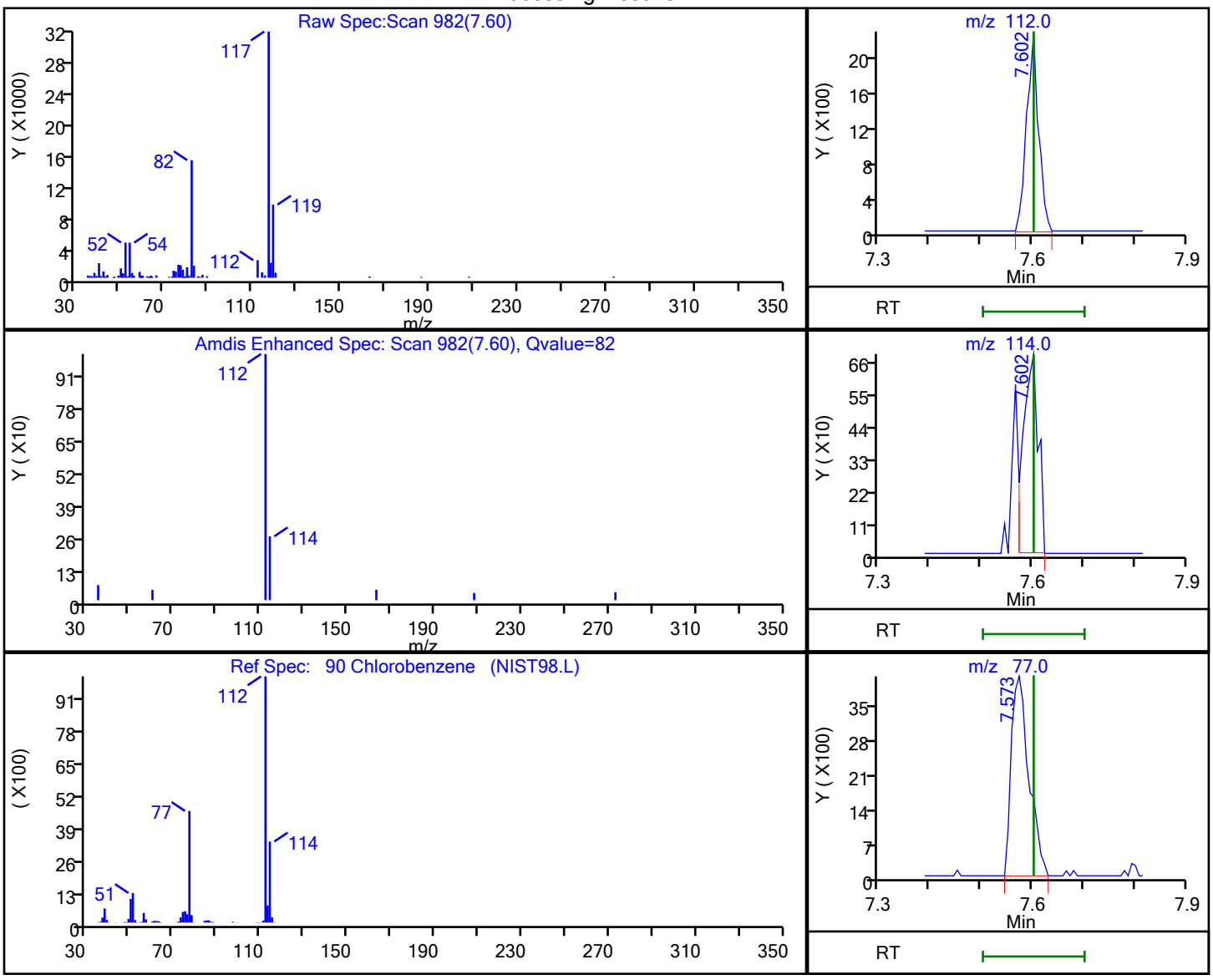
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D				
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

90 Chlorobenzene, CAS: 108-90-7

Processing Results



RT	Mass	Response	Amount
7.60	112.00	3652	0.195490
7.60	114.00	1387	
7.57	77.00	9830	

Reviewer: AK2J, 25-Apr-2023 22:49:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

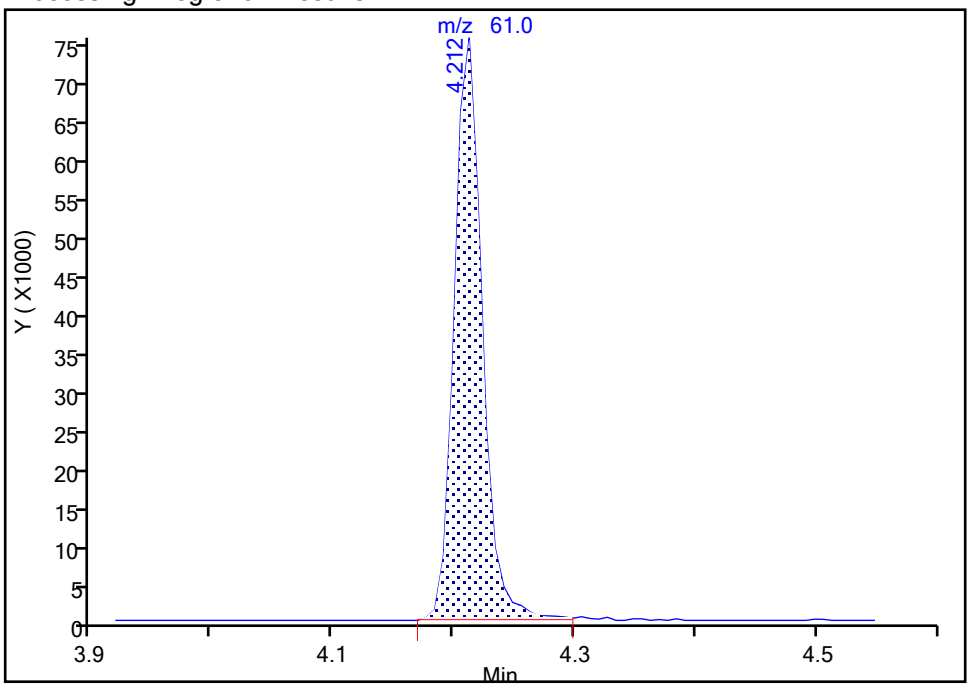
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D				
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 2

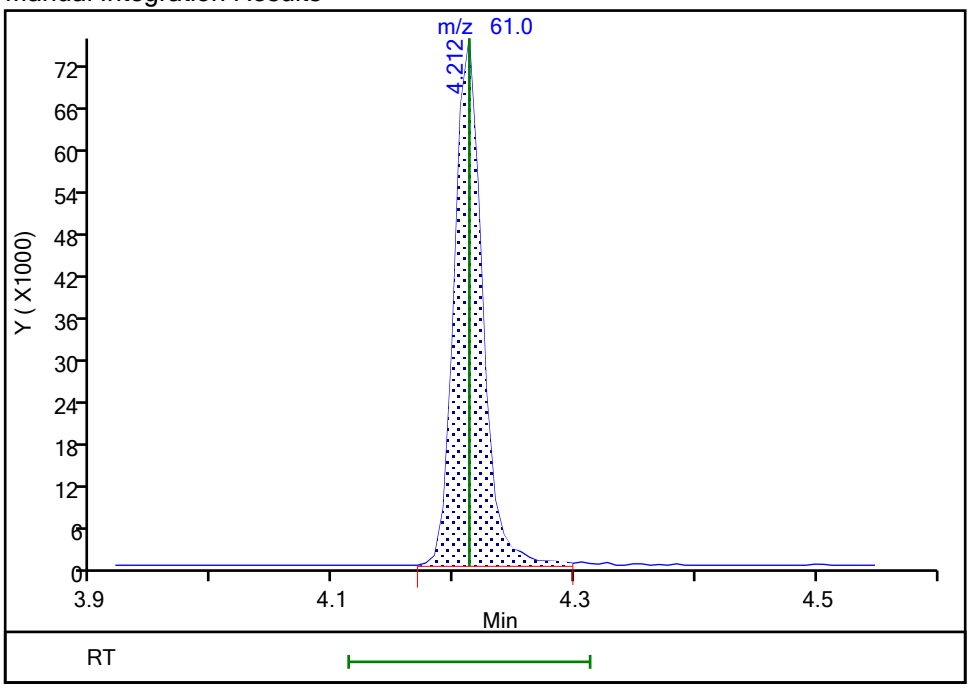
Processing Integration Results

RT: 4.21
Area: 121292
Amount: 13.825718
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 121292
Amount: 13.825718
Amount Units: ug/l



Reviewer: AK2J, 25-Apr-2023 22:48:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

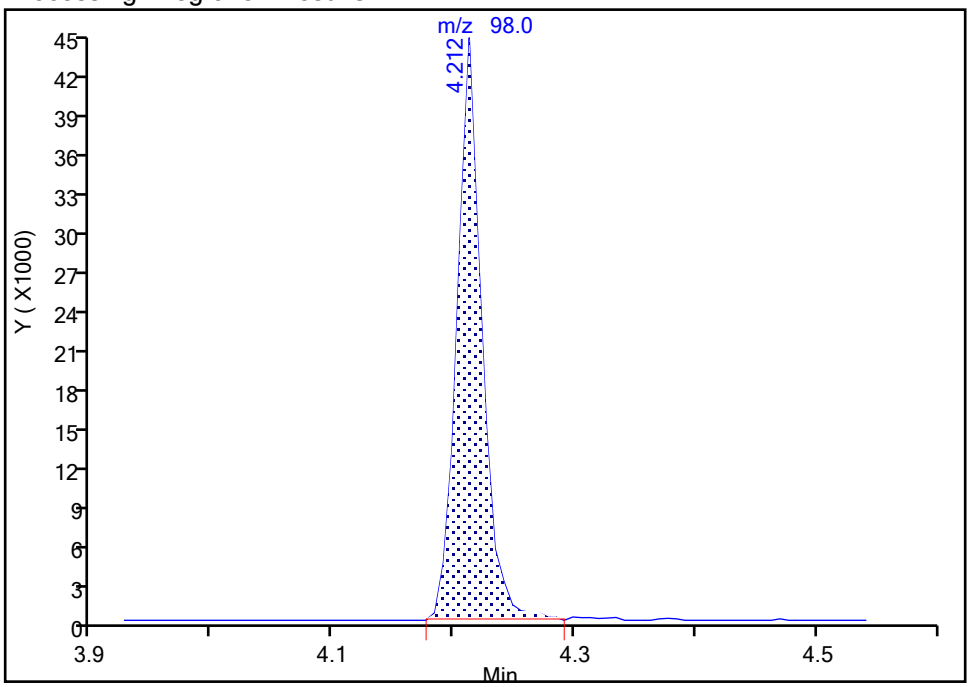
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D				
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 3

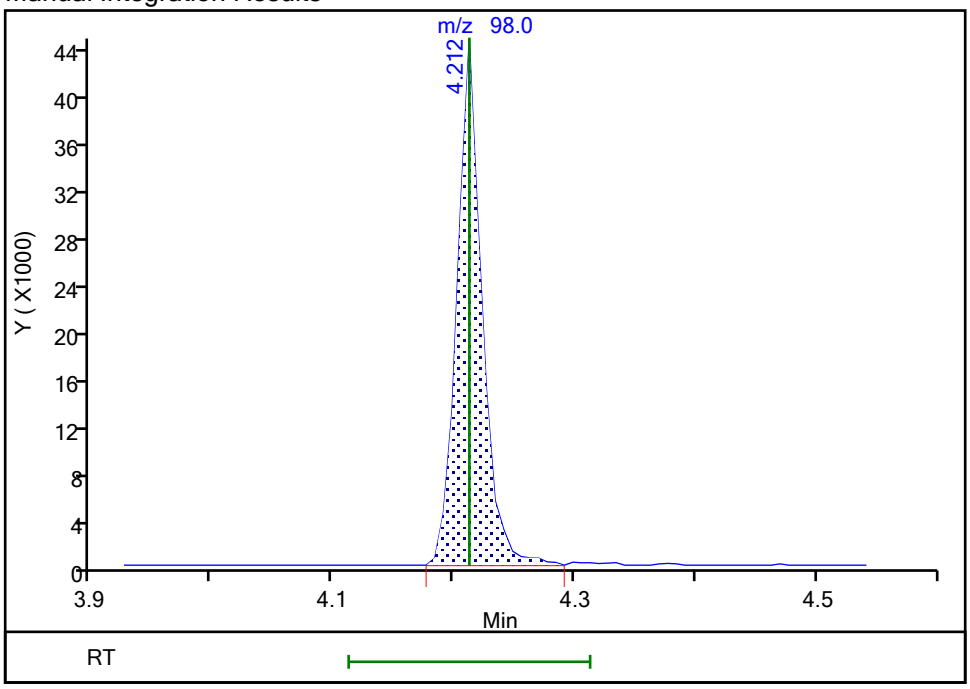
Processing Integration Results

RT: 4.21
Area: 63438
Amount: 13.825718
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 63438
Amount: 13.825718
Amount Units: ug/l



Reviewer: AK2J, 25-Apr-2023 22:48:49
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

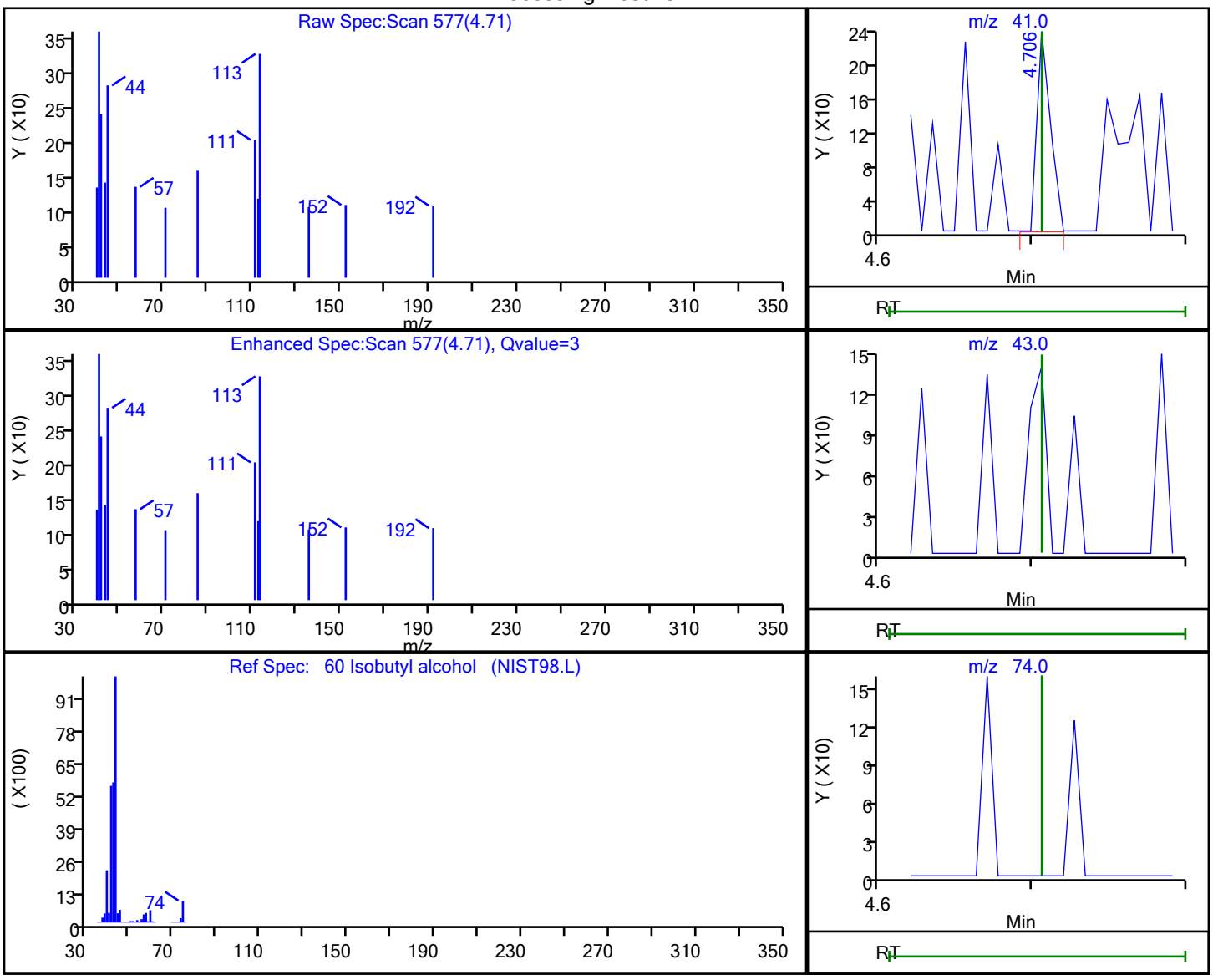
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502799.D				
Injection Date:	25-Apr-2023 14:21:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-F-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.71	41.00	144	12.168756
4.71	43.00	0	
4.71	74.00	0	

Reviewer: AK2J, 25-Apr-2023 22:48:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-Q-20230412 | Lab Sample ID: 280-174957-3

Matrix: Water | Lab File ID: X502800.D

Analysis Method: 8260D | Date Collected: 04/12/2023 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 14:42

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		2.0	1.2
71-55-6	1,1,1-Trichloroethane	ND		2.0	0.78
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.54
75-34-3	1,1-Dichloroethane	1.5	J	2.0	0.44
75-35-4	1,1-Dichloroethene	0.47	J	2.0	0.46
563-58-6	1,1-Dichloropropene	ND		2.0	0.83
96-18-4	1,2,3-Trichloropropane	ND		5.0	1.7
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	ND		10	3.5
106-93-4	1,2-Dibromoethane	ND		2.0	0.81
95-50-1	1,2-Dichlorobenzene	2.0		2.0	0.74
107-06-2	1,2-Dichloroethane	ND		2.0	1.1
78-87-5	1,2-Dichloropropane	ND		2.0	1.0
541-73-1	1,3-Dichlorobenzene	ND		2.0	0.67
142-28-9	1,3-Dichloropropane	ND		2.0	0.76
106-46-7	1,4-Dichlorobenzene	0.78	J	2.0	0.78
594-20-7	2,2-Dichloropropane	ND		2.0	0.76
78-93-3	2-Butanone (MEK)	ND		30	12
591-78-6	2-Hexanone	ND		10	3.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	2.0
67-64-1	Acetone	ND		30	13
75-05-8	Acetonitrile	ND		60	19
107-02-8	Acrolein	ND		40	9.7
107-13-1	Acrylonitrile	ND		40	8.9
107-05-1	Allyl chloride	ND		4.0	0.34
71-43-2	Benzene	ND		2.0	0.62
75-25-2	Bromoform	ND		4.0	2.4
74-83-9	Bromomethane	ND		10	4.7
75-15-0	Carbon disulfide	ND		4.0	1.3
56-23-5	Carbon tetrachloride	ND		2.0	1.1
108-90-7	Chlorobenzene	ND		2.0	0.84
74-97-5	Chlorobromomethane	ND		2.0	0.81
124-48-1	Chlorodibromomethane	ND		4.0	1.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-Q-20230412 | Lab Sample ID: 280-174957-3

Matrix: Water | Lab File ID: X502800.D

Analysis Method: 8260D | Date Collected: 04/12/2023 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 14:42

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		8.0	2.7
67-66-3	Chloroform	0.99	J	2.0	0.72
74-87-3	Chloromethane	ND		4.0	1.5
126-99-8	Chloroprene	ND		6.0	2.3
156-59-2	cis-1,2-Dichloroethene	28		2.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		4.0	1.3
74-95-3	Dibromomethane	ND		2.0	0.69
75-27-4	Dichlorobromomethane	ND		2.0	0.77
75-71-8	Dichlorodifluoromethane	ND		6.0	1.9
97-63-2	Ethyl methacrylate	ND		6.0	1.7
100-41-4	Ethylbenzene	ND		2.0	0.61
74-88-4	Iodomethane	ND		10	5.2
78-83-1	Isobutyl alcohol	ND		220	73
126-98-7	Methacrylonitrile	ND		30	11
80-62-6	Methyl methacrylate	ND		8.0	2.2
75-09-2	Methylene Chloride	ND		4.0	1.9
179601-23-1	m-Xylene & p-Xylene	ND		4.0	0.71
95-47-6	o-Xylene	ND		2.0	0.66
107-12-0	Propionitrile	ND		40	7.4
100-42-5	Styrene	ND		2.0	0.71
127-18-4	Tetrachloroethene	12		2.0	0.81
108-88-3	Toluene	ND		2.0	0.64
156-60-5	trans-1,2-Dichloroethene	ND		2.0	0.74
10061-02-6	trans-1,3-Dichloropropene	ND		4.0	1.3
110-57-6	trans-1,4-Dichloro-2-butene	ND		6.0	2.8
79-01-6	Trichloroethene	160		2.0	0.60
75-69-4	Trichlorofluoromethane	ND		4.0	1.1
108-05-4	Vinyl acetate	ND		6.0	1.9
75-01-4	Vinyl chloride	6.5		4.0	1.0
1330-20-7	Xylenes, Total	ND		2.0	0.66

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-Q-20230412 | Lab Sample ID: 280-174957-3

Matrix: Water | Lab File ID: X502800.D

Analysis Method: 8260D | Date Collected: 04/12/2023 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 14:42

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D
Lims ID: 280-174957-E-3
Client ID: MW-124-Q-20230412
Sample Type: Client
Inject. Date: 25-Apr-2023 14:42:30 ALS Bottle#: 22 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Sample Info: 280-174957-E-3 2x
Misc. Info.: 280-0120726-025
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 12:08:37 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1670

First Level Reviewer: AK2J Date: 25-Apr-2023 22:50:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1335897	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	329771	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	514706	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	335666	52.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	337845	50.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1418000	50.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	91	461900	50.2	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	91	461904	NR	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	32	976	0.1665	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62	1.967	1.967	0.000	98	18869	3.24	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94		2.246				ND	7
15 Chloroethane	64		2.339				ND	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	94	6305	0.6224	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59	2.747	2.747	0.000	93	32653	7.24	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	87	1211	0.2360	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.040				ND	U
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.119				ND	
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.204				ND	
31 Methylene Chloride	84		3.297				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85	3.805	3.733	0.072	39	665	NC	
39 Vinyl acetate	43		3.784				ND	
41 Isopropyl ether	87		3.805				ND	
40 1,1-Dichloroethane	63	3.812	3.805	0.007	95	8051	0.7746	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	79	95550	14.0	
48 2,2-Dichloropropane	77		4.227				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42	4.406	4.398	0.008	73	3735	2.51	
54 Chloroform	83	4.448	4.441	0.007	92	5242	0.4957	
55 1,1,1-Trichloroethane	97		4.592				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78	4.856	4.849	0.007	92	5173	0.2084	
63 1,2-Dichloroethane	62	4.877	4.878	-0.001	93	2318	0.2947	
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	98	494245	78.4	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	29075	6.07	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.552				ND	U
90 Chlorobenzene	112		7.602				ND	U
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.588				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.590				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.733				ND	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	92	5649	0.3914	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	98	13102	1.00	
118 1,2-Dibromo-3-Chloropropane	157		10.941				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.257				ND	
166 Ethyl acrylate	55		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1				0		0.2084	
S 140 Trihalomethanes, Total	1				0		0.4957	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		14.0	
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

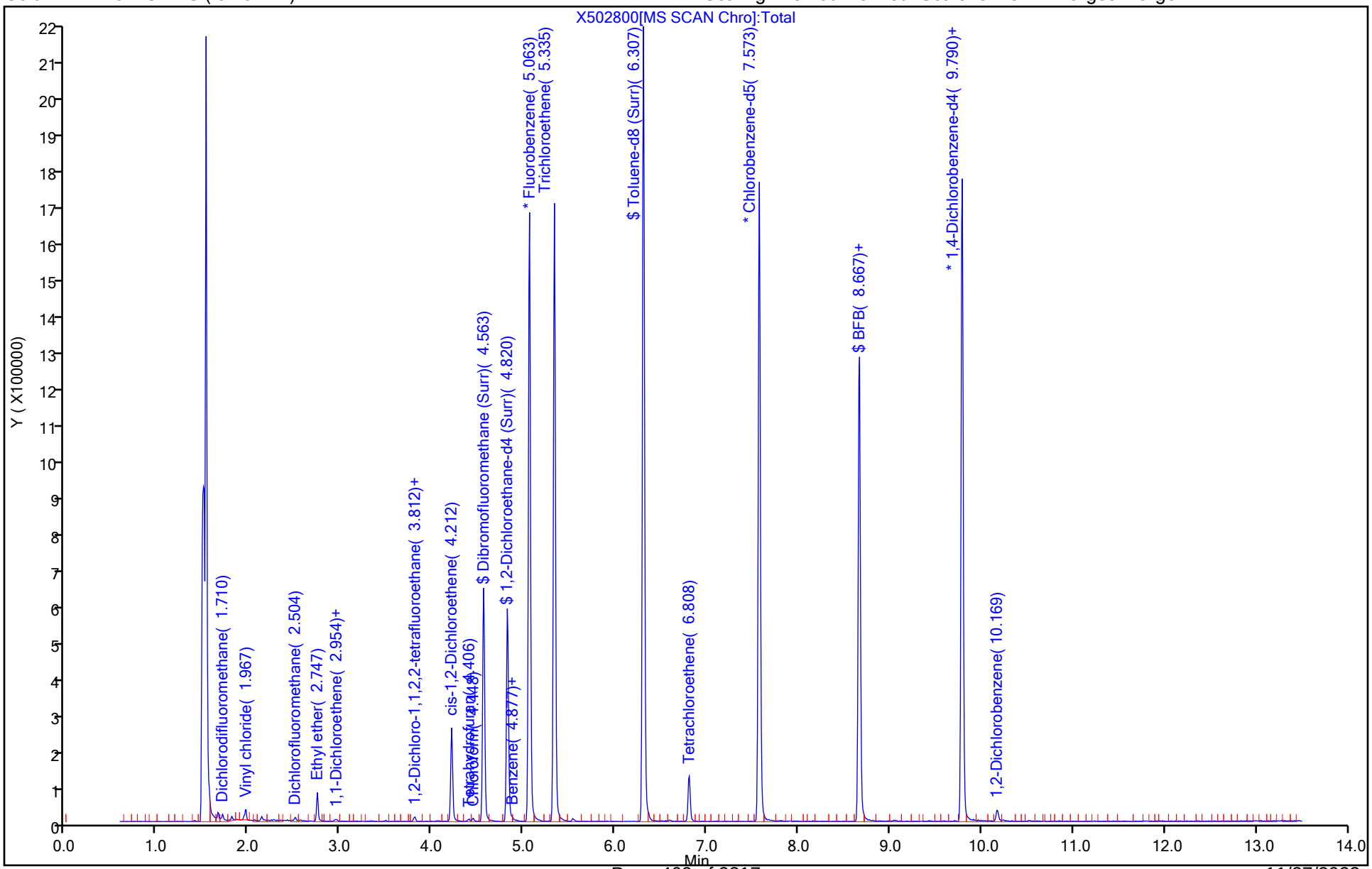
Report Date: 21-Nov-2023 12:08:50 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D

Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3	Worklist Smp#:	25
Client ID:	MW-124-Q-20230412				
Purge Vol:	5.000 mL	Dil. Factor:	2.0000	ALS Bottle#:	22
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

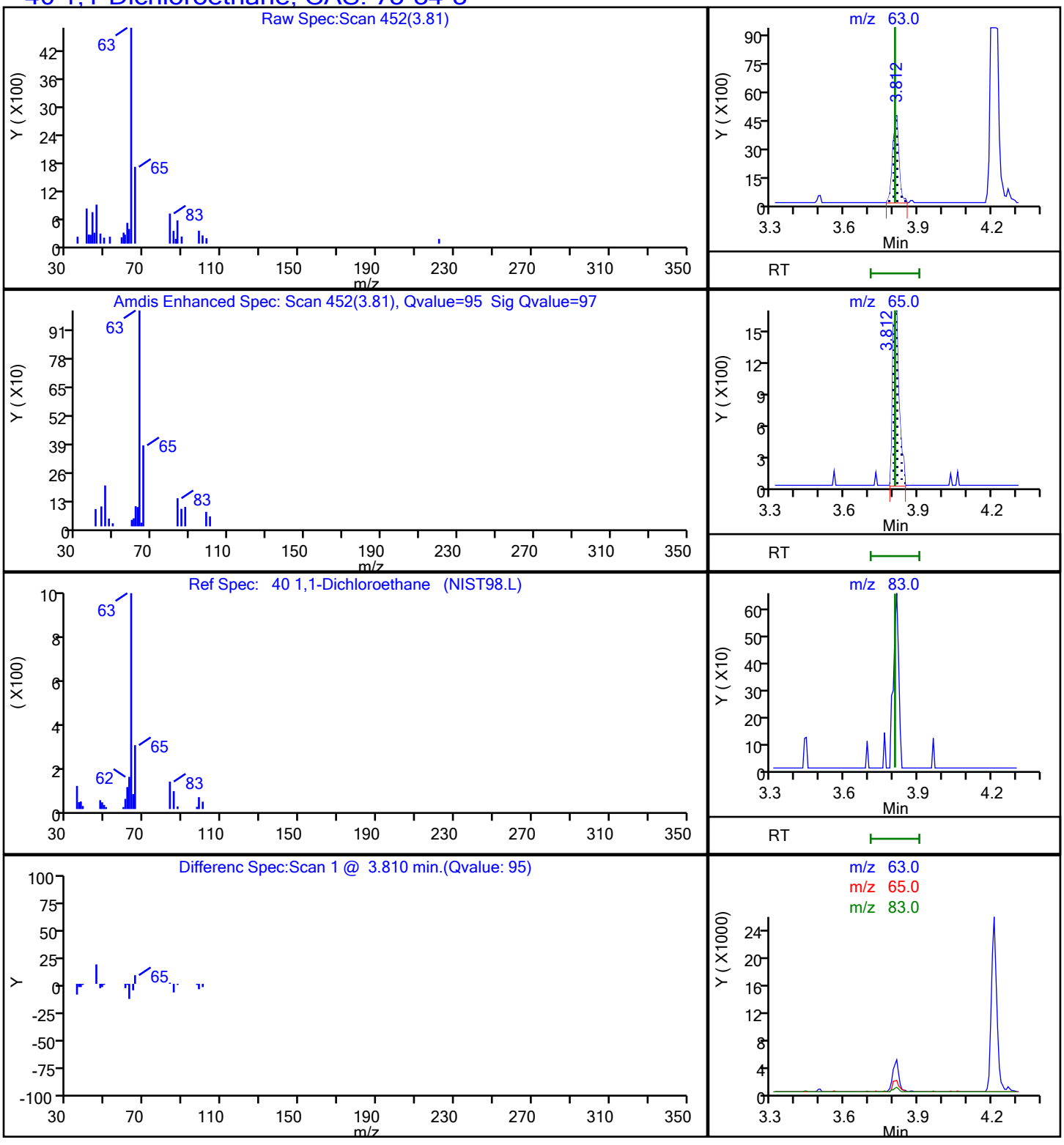
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D				
Lims ID:	280-174957-E-3				
Client ID:	MW-124-Q-20230412				
Sample Type:	Client				
Inject. Date:	25-Apr-2023 14:42:30	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Sample Info:	280-174957-E-3 2x				
Misc. Info.:	280-0120726-025				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	21-Nov-2023 12:08:37	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1670				
First Level Reviewer: AK2J		Date:	25-Apr-2023 22:50:42		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.2	104.47
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.1	100.12
$ 6 Toluene-d8 (Surr)	50.0	50.5	100.95
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.2	100.43

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D				
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	MED	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

40 1,1-Dichloroethane, CAS: 75-34-3



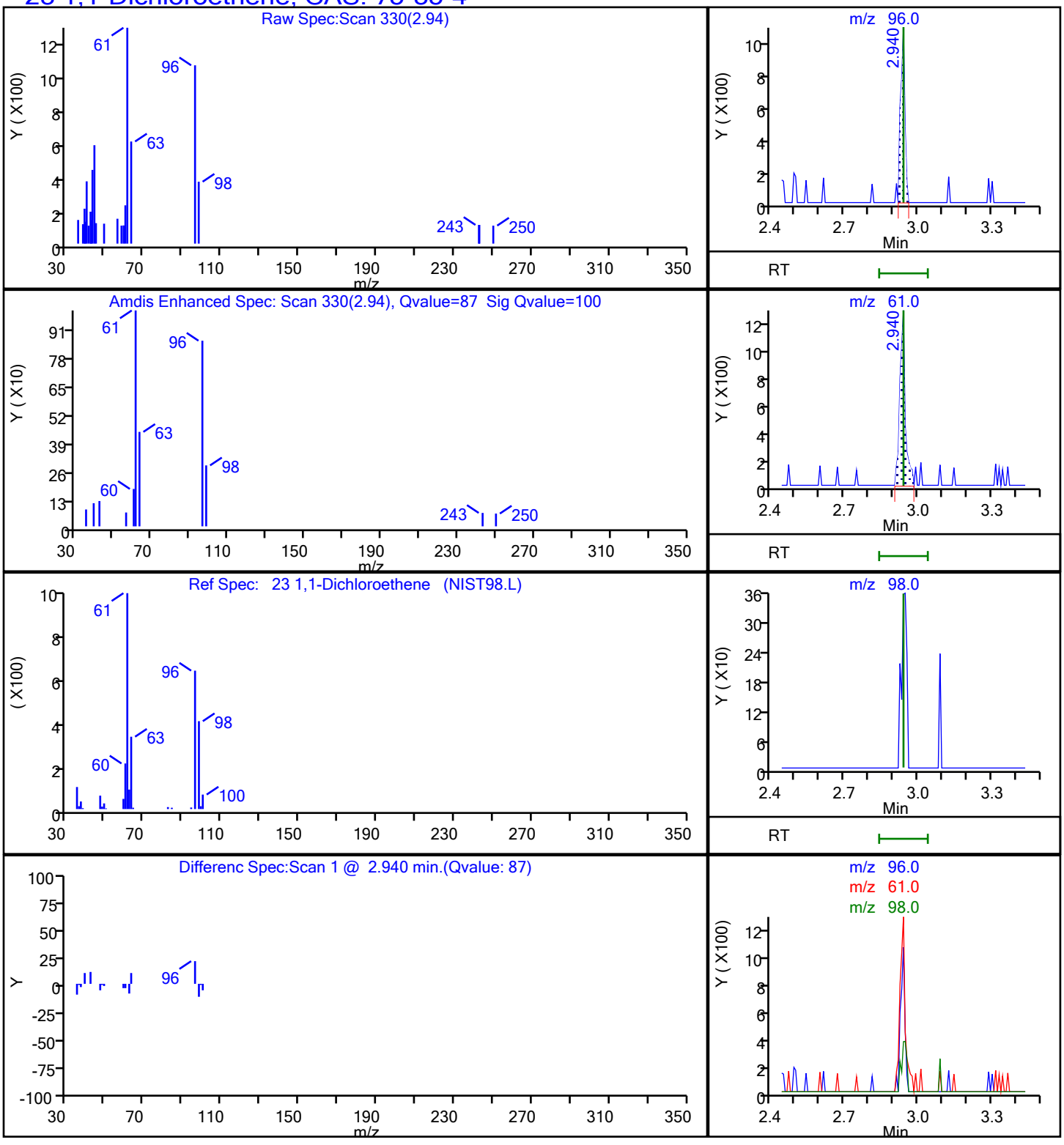
Report Date: 21-Nov-2023 12:08:50 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D

Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	MED	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

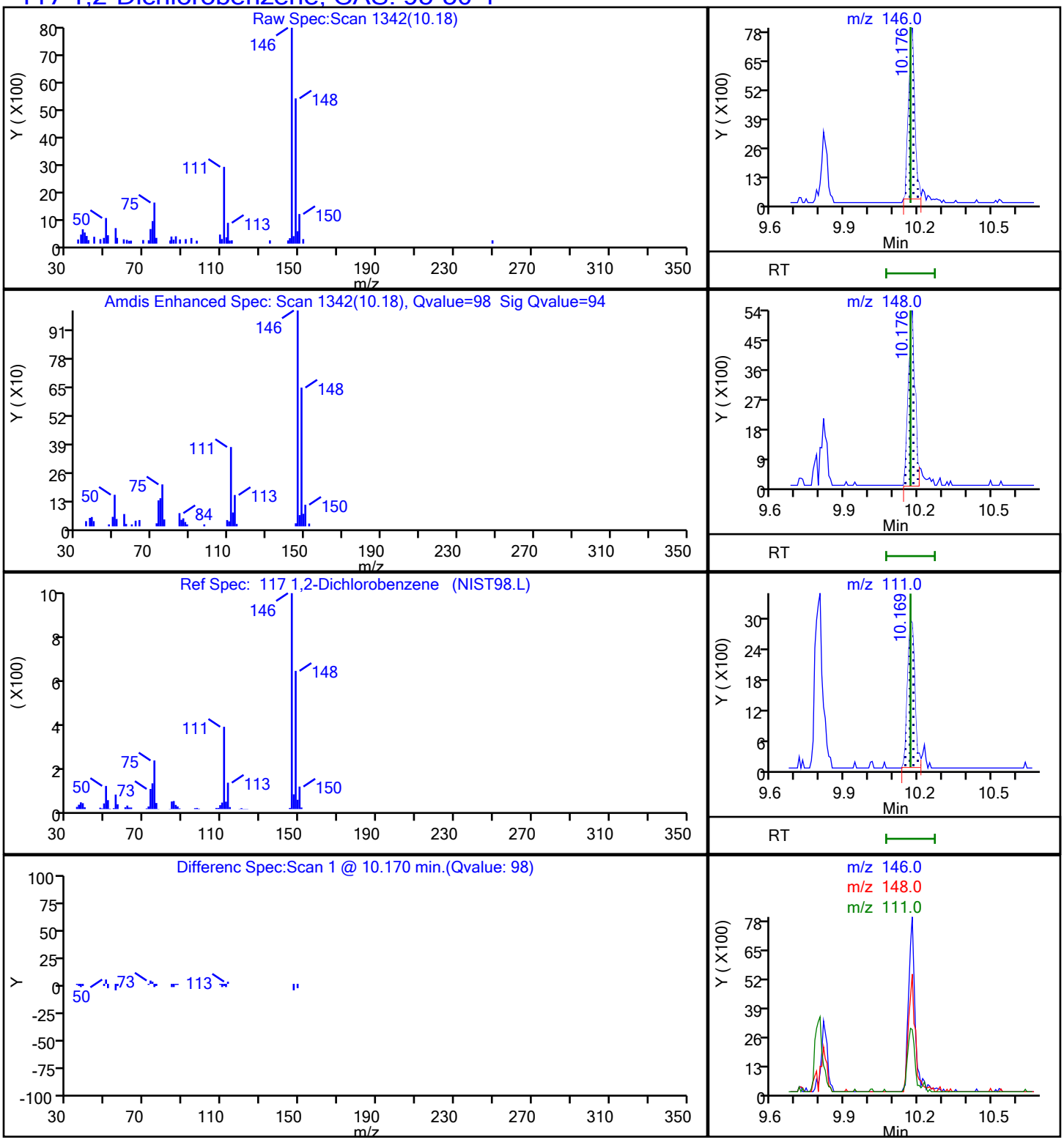
23 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D		
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3
Client ID:	MW-124-Q-20230412		
Operator ID:	MED	ALS Bottle#:	22 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

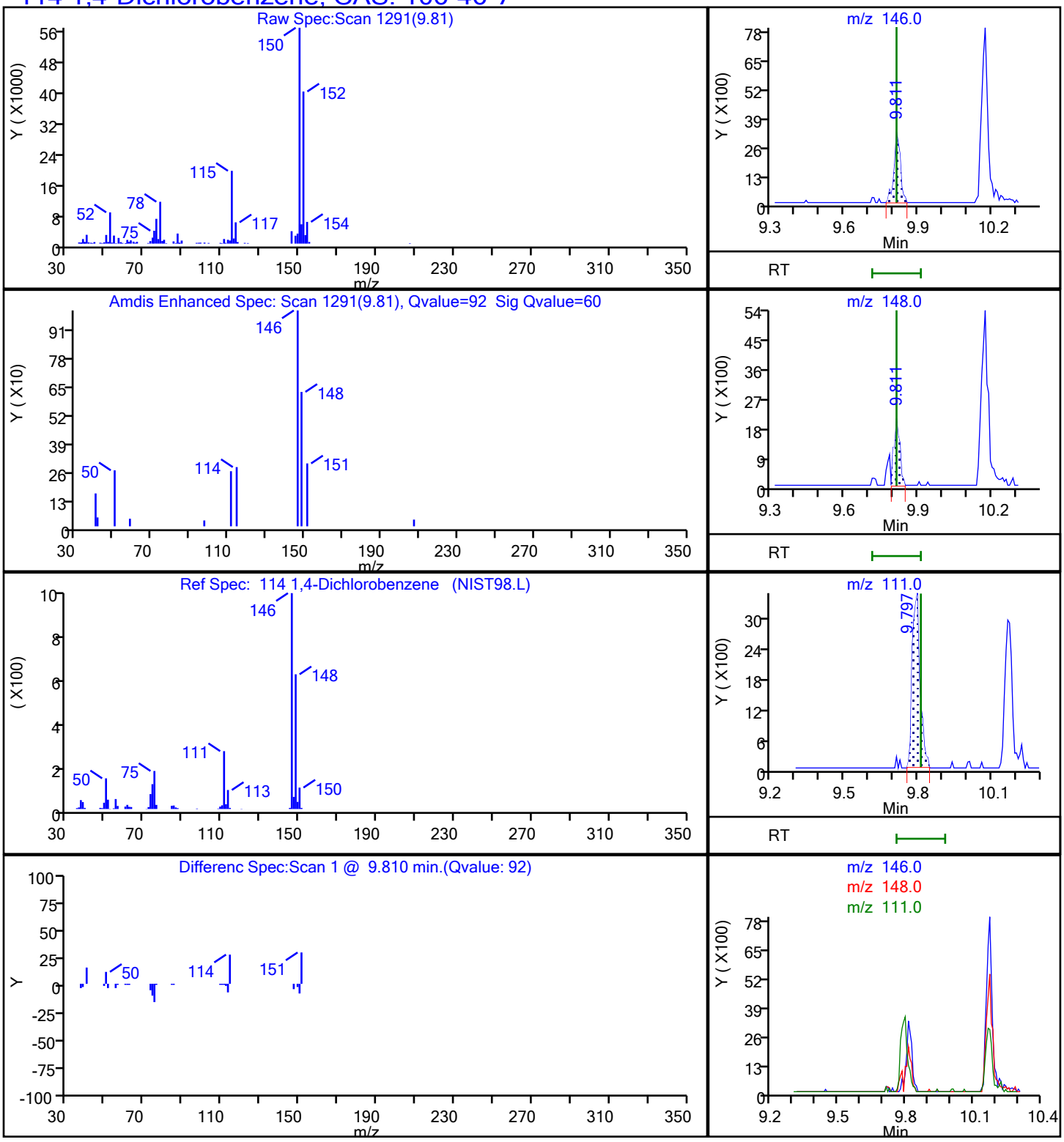
117 1,2-Dichlorobenzene, CAS: 95-50-1



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D		
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3
Client ID:	MW-124-Q-20230412		
Operator ID:	MED	ALS Bottle#:	22 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

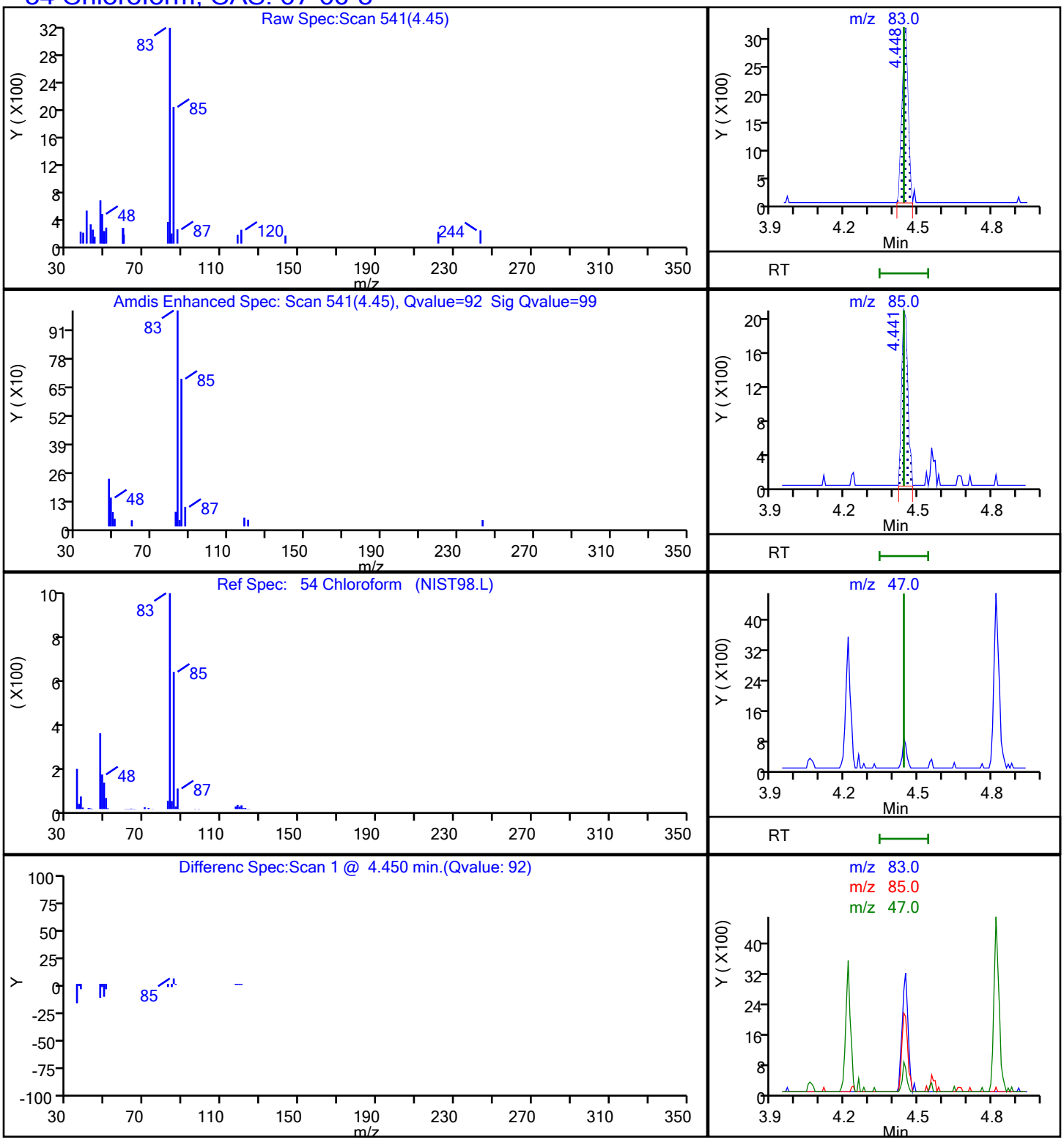
114 1,4-Dichlorobenzene, CAS: 106-46-7



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D		
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3
Client ID:	MW-124-Q-20230412		
Operator ID:	MED	ALS Bottle#:	22 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

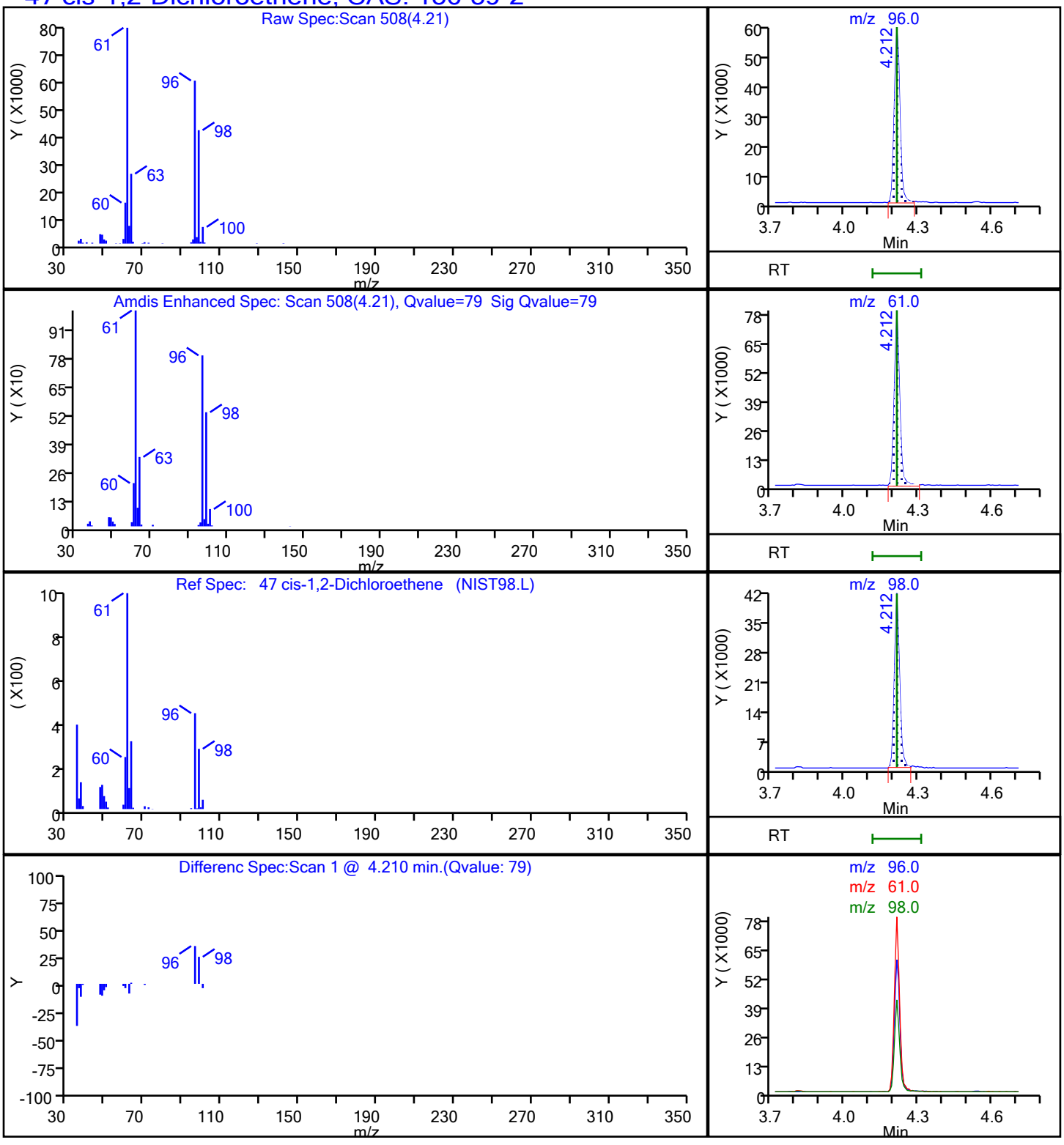
54 Chloroform, CAS: 67-66-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D		
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3
Client ID:	MW-124-Q-20230412		
Operator ID:	MED	ALS Bottle#:	22 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

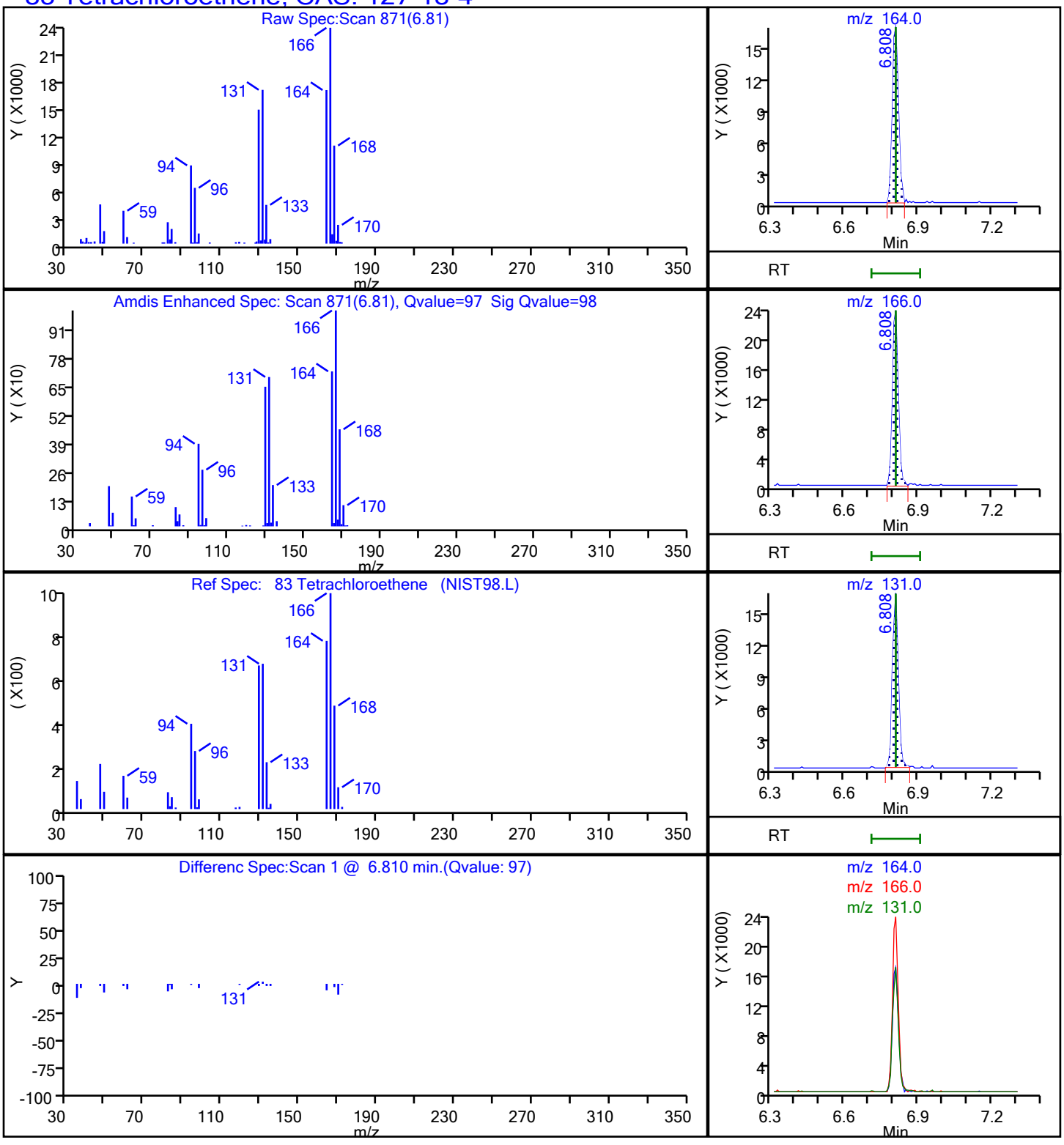
47 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D		
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3
Client ID:	MW-124-Q-20230412		
Operator ID:	MED	ALS Bottle#:	22 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

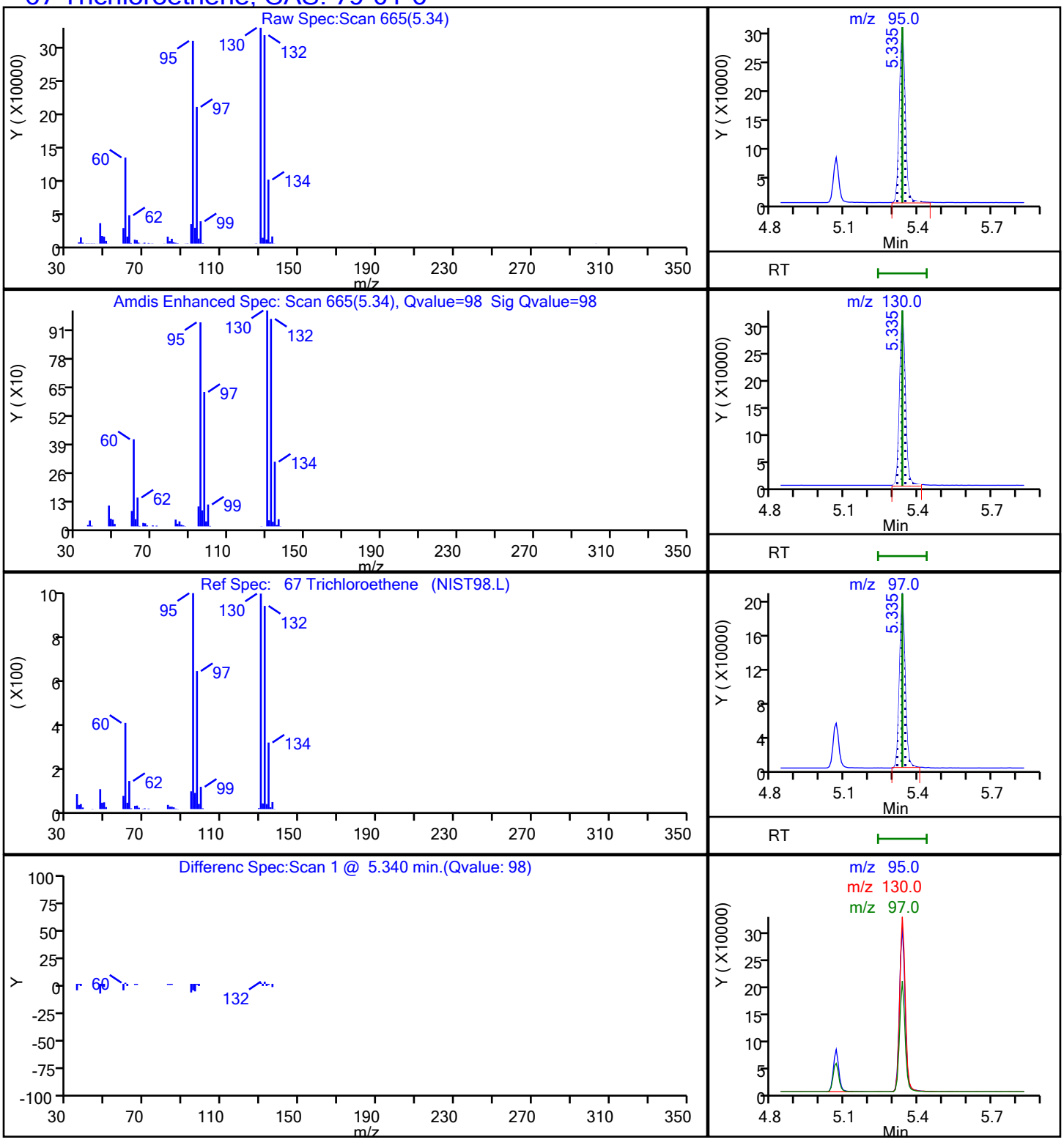
83 Tetrachloroethene, CAS: 127-18-4



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D		
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3
Client ID:	MW-124-Q-20230412		
Operator ID:	MED	ALS Bottle#:	22 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

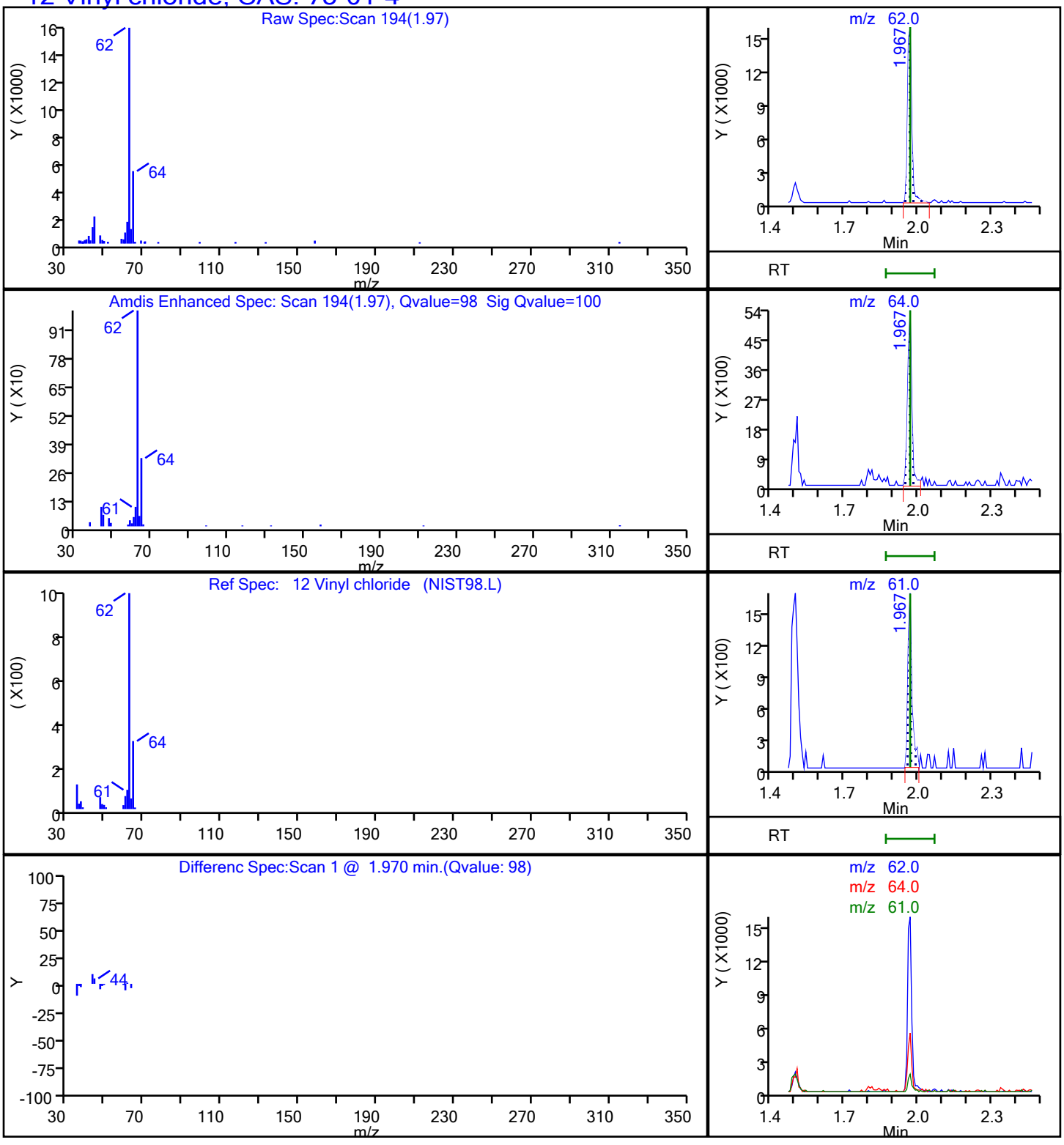
67 Trichloroethene, CAS: 79-01-6



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D		
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3
Client ID:	MW-124-Q-20230412		
Operator ID:	MED	ALS Bottle#:	22 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

12 Vinyl chloride, CAS: 75-01-4



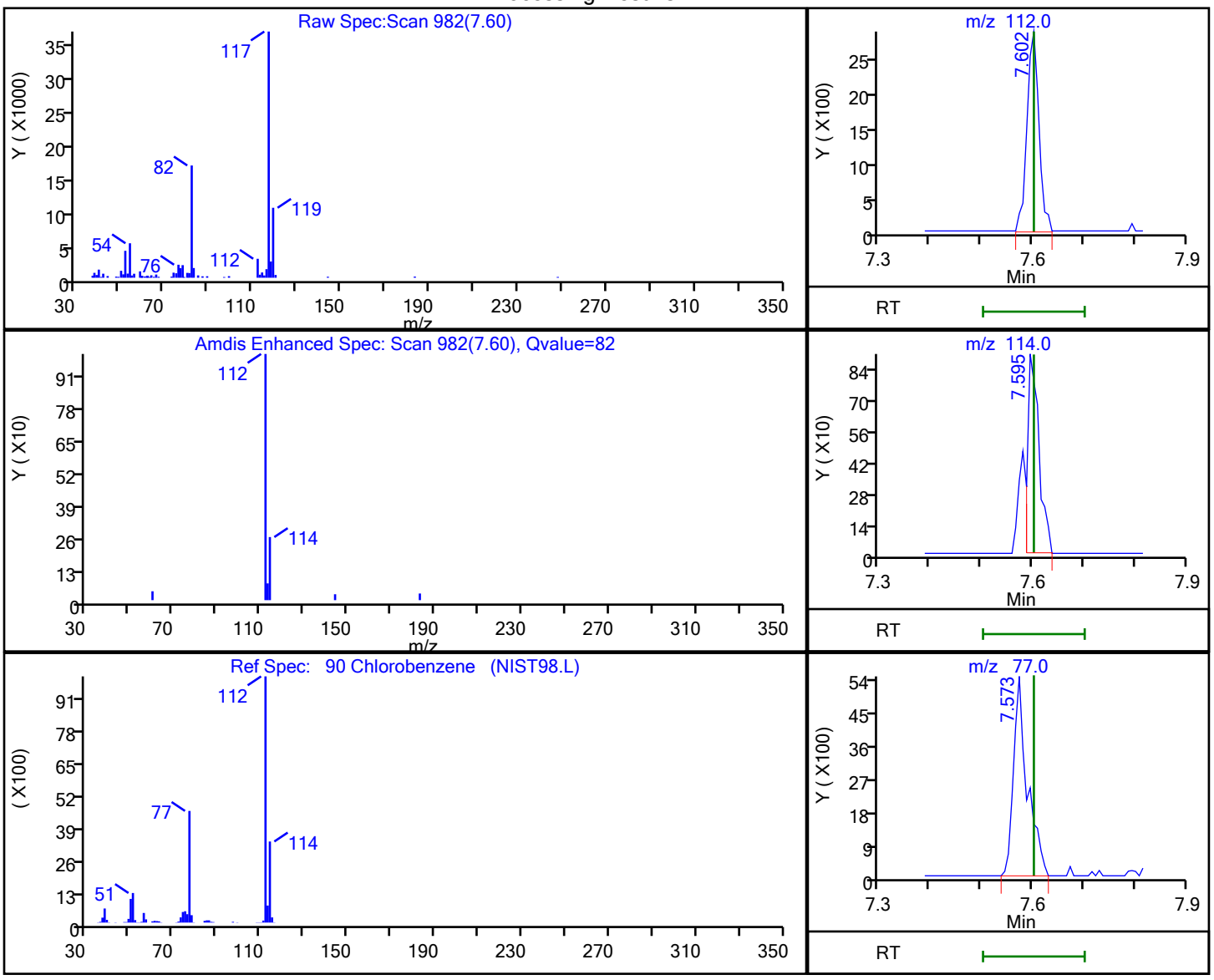
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D				
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	MED	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

90 Chlorobenzene, CAS: 108-90-7

Processing Results



RT	Mass	Response	Amount
7.60	112.00	4569	0.248703
7.59	114.00	1385	
7.57	77.00	10352	

Reviewer: AK2J, 25-Apr-2023 22:50:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins Denver

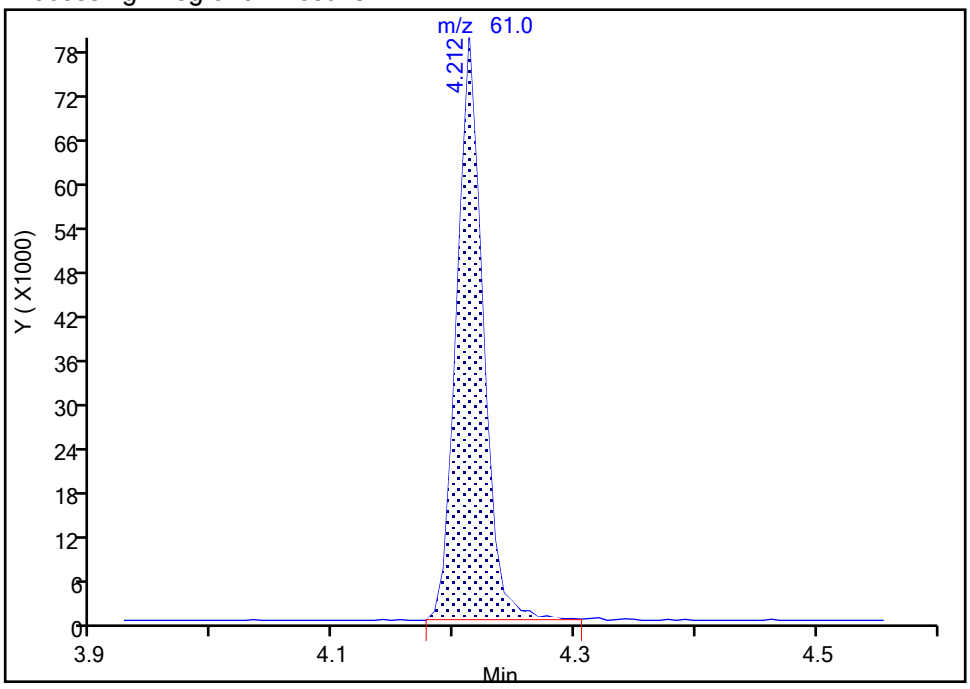
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D				
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	MED	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 2

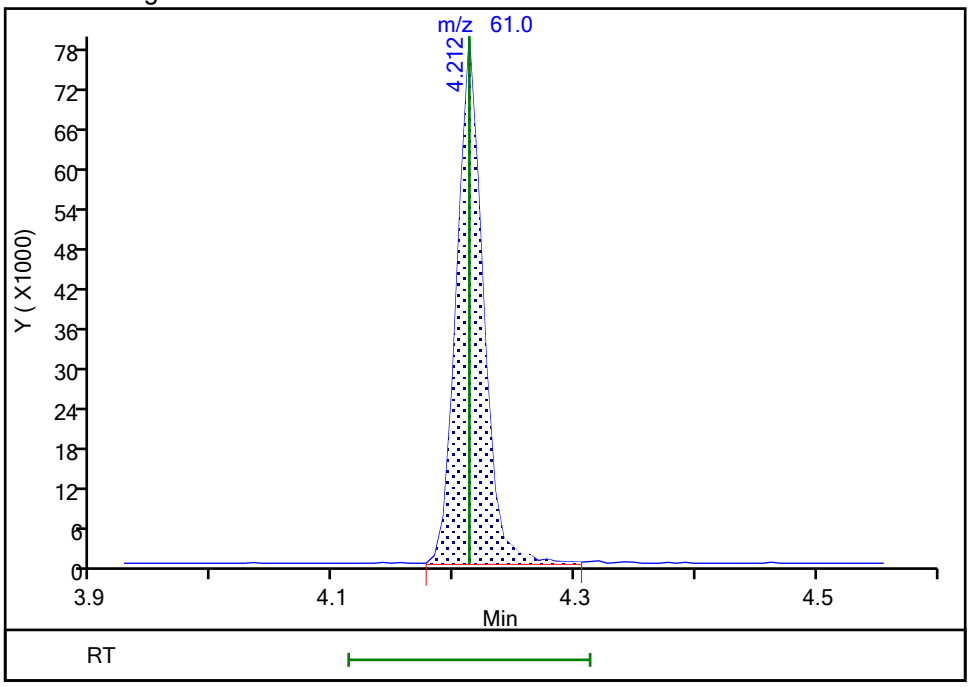
Processing Integration Results

RT: 4.21
Area: 119905
Amount: 14.000106
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 119905
Amount: 14.000106
Amount Units: ug/l



Reviewer: AK2J, 25-Apr-2023 22:50:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

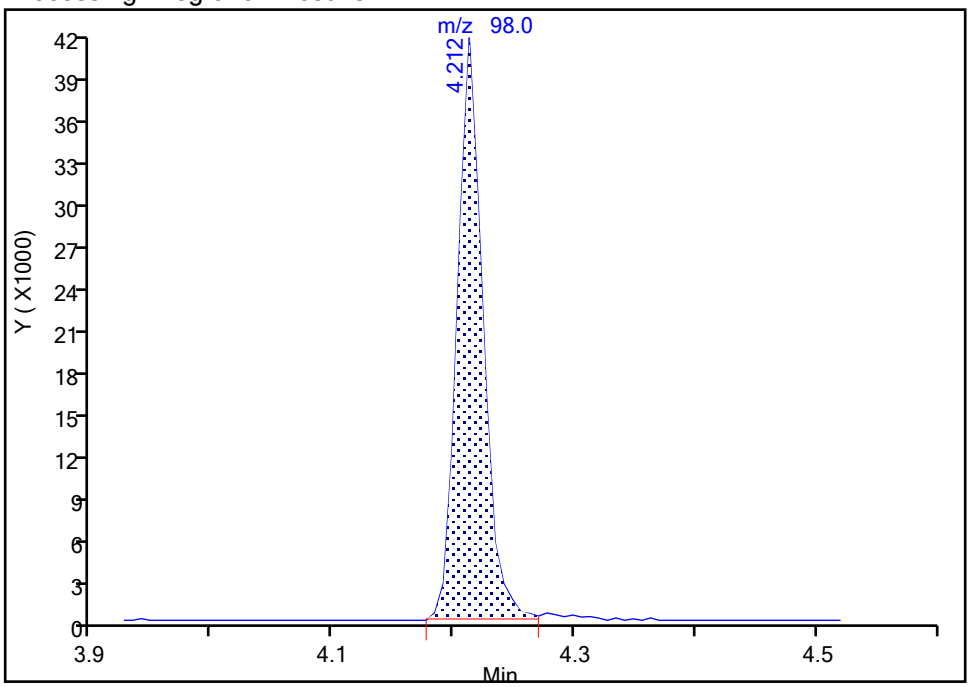
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D				
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	MED	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 3

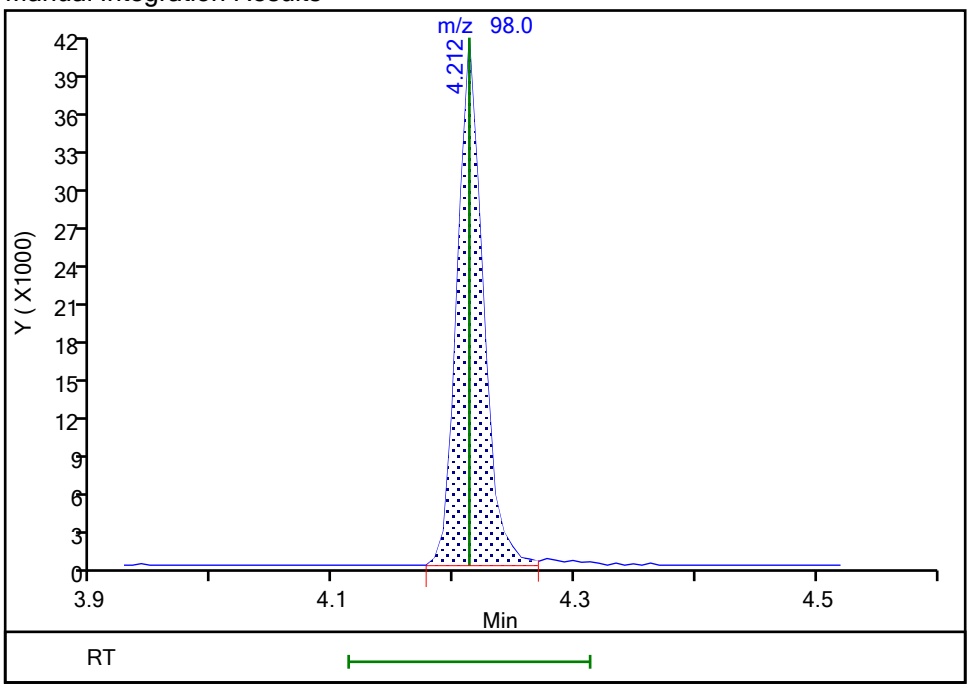
Processing Integration Results

RT: 4.21
Area: 61622
Amount: 14.000106
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 61622
Amount: 14.000106
Amount Units: ug/l



Reviewer: AK2J, 25-Apr-2023 22:50:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

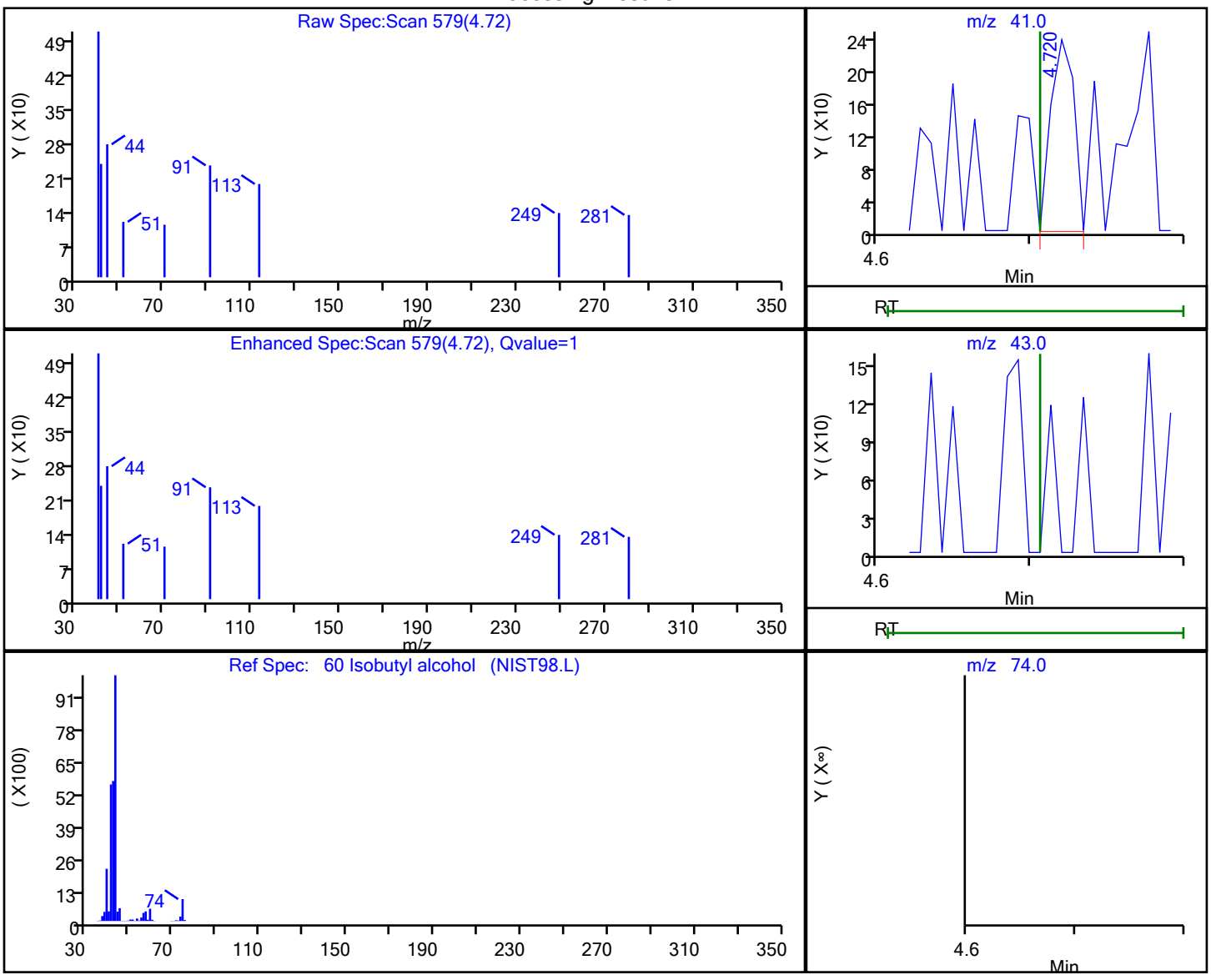
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502800.D				
Injection Date:	25-Apr-2023 14:42:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-E-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	MED	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.72	41.00	244	12.775849
4.71	43.00	0	
4.71	74.00	0	

Reviewer: AK2J, 25-Apr-2023 22:50:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-105D-20230411 | Lab Sample ID: 280-174957-5

Matrix: Water | Lab File ID: ms11_5448.D

Analysis Method: 8260D | Date Collected: 04/11/2023 16:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 18:01

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		4.0	2.3
71-55-6	1,1,1-Trichloroethane	ND		4.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.0	0.84
79-00-5	1,1,2-Trichloroethane	ND		4.0	1.1
75-34-3	1,1-Dichloroethane	3.3	J	4.0	0.88
75-35-4	1,1-Dichloroethene	ND		4.0	0.92
563-58-6	1,1-Dichloropropene	ND		4.0	1.7
96-18-4	1,2,3-Trichloropropane	ND		10	3.4
120-82-1	1,2,4-Trichlorobenzene	ND		4.0	2.3
96-12-8	1,2-Dibromo-3-Chloropropane	ND		20	7.0
106-93-4	1,2-Dibromoethane	ND		4.0	1.6
95-50-1	1,2-Dichlorobenzene	ND		4.0	1.5
107-06-2	1,2-Dichloroethane	ND		4.0	2.2
78-87-5	1,2-Dichloropropane	ND		4.0	2.1
541-73-1	1,3-Dichlorobenzene	ND		4.0	1.3
142-28-9	1,3-Dichloropropane	ND		4.0	1.5
106-46-7	1,4-Dichlorobenzene	ND		4.0	1.6
594-20-7	2,2-Dichloropropane	ND		4.0	1.5
78-93-3	2-Butanone (MEK)	ND		60	24
591-78-6	2-Hexanone	ND		20	6.8
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		20	3.9
67-64-1	Acetone	ND		60	26
75-05-8	Acetonitrile	ND	*1	120	38
107-02-8	Acrolein	ND		80	19
107-13-1	Acrylonitrile	ND		80	18
107-05-1	Allyl chloride	ND		8.0	0.68
71-43-2	Benzene	ND		4.0	1.2
75-25-2	Bromoform	ND		8.0	4.8
74-83-9	Bromomethane	ND		20	9.4
75-15-0	Carbon disulfide	ND		8.0	2.5
56-23-5	Carbon tetrachloride	ND		4.0	2.3
108-90-7	Chlorobenzene	ND		4.0	1.7
74-97-5	Chlorobromomethane	ND		4.0	1.6
124-48-1	Chlorodibromomethane	ND		8.0	2.5

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-105D-20230411 | Lab Sample ID: 280-174957-5

Matrix: Water | Lab File ID: ms11_5448.D

Analysis Method: 8260D | Date Collected: 04/11/2023 16:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 18:01

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		16	5.5
67-66-3	Chloroform	2.2	J	4.0	1.4
74-87-3	Chloromethane	ND		8.0	3.0
126-99-8	Chloroprene	ND	*1	12	4.7
156-59-2	cis-1,2-Dichloroethene	13		4.0	1.3
10061-01-5	cis-1,3-Dichloropropene	ND		8.0	2.5
74-95-3	Dibromomethane	ND		4.0	1.4
75-27-4	Dichlorobromomethane	ND		4.0	1.5
75-71-8	Dichlorodifluoromethane	ND		12	3.8
97-63-2	Ethyl methacrylate	ND		12	3.4
100-41-4	Ethylbenzene	ND		4.0	1.2
74-88-4	Iodomethane	ND		20	10
78-83-1	Isobutyl alcohol	ND		440	150
126-98-7	Methacrylonitrile	ND	*1	60	21
80-62-6	Methyl methacrylate	ND	*1	16	4.4
75-09-2	Methylene Chloride	ND		8.0	3.8
179601-23-1	m-Xylene & p-Xylene	ND		8.0	1.4
95-47-6	o-Xylene	ND		4.0	1.3
107-12-0	Propionitrile	ND	*1	80	15
100-42-5	Styrene	ND		4.0	1.4
127-18-4	Tetrachloroethene	37		4.0	1.6
108-88-3	Toluene	ND		4.0	1.3
156-60-5	trans-1,2-Dichloroethene	ND		4.0	1.5
10061-02-6	trans-1,3-Dichloropropene	ND		8.0	2.6
110-57-6	trans-1,4-Dichloro-2-butene	ND		12	5.5
79-01-6	Trichloroethene	200		4.0	1.2
75-69-4	Trichlorofluoromethane	ND		8.0	2.3
108-05-4	Vinyl acetate	ND		12	3.8
75-01-4	Vinyl chloride	ND		8.0	2.0
1330-20-7	Xylenes, Total	ND		4.0	1.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-105D-20230411 | Lab Sample ID: 280-174957-5

Matrix: Water | Lab File ID: ms11_5448.D

Analysis Method: 8260D | Date Collected: 04/11/2023 16:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 18:01

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	100		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D
Lims ID: 280-174957-F-5
Client ID: MW-105D-20230411
Sample Type: Client
Inject. Date: 18-Apr-2023 18:01:30 ALS Bottle#: 23 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 4.0000
Sample Info: 280-174957-F-5 4x
Misc. Info.: 280-0120504-026
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 12:06:01 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1670

First Level Reviewer: Q2ZS Date: 21-Nov-2023 12:06:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 2 TBA-d9 (IS)	65		3.992				ND	
* 167 Fluorobenzene (IS)	96	5.082	5.081	0.001	98	1024000	0	
* 1 Fluorobenzene	96	5.082	5.081	0.001	98	1029631	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.567	0.001	88	251791	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	411003	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	262674	49.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.844	4.830	0.014	0	350756	50.7	
$ 7 Toluene-d8 (Surr)	98	6.311	6.310	0.001	95	1038146	50.2	
$ 8 4-Bromofluorobenzene (Surr)	95	8.657	8.643	0.014	92	396079	50.5	
$ 9 Trifluorotoluene (Surr)	1		0.000				ND	
$ 10 BFB	95	8.657	8.643	0.014	92	396079	NR	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	98	4363	0.8712	
12 Chloromethane	50		1.883				ND	
13 Vinyl chloride	62		1.981				ND	U
14 Ethylene oxide	43	2.163	2.233	-0.070	98	4892	29.3	
15 Bromomethane	94		2.260				ND	7
16 Chloroethane	64		2.344				ND	
17 Dichlorofluoromethane	67		2.512				ND	U
18 Trichlorofluoromethane	101		2.554				ND	U
19 Ethanol	45		2.665				ND	
20 Ethyl ether	59	2.763	2.763	0.000	94	3882	0.8078	
21 Propene oxide	58		2.819				ND	
22 Acrolein	56		2.875				ND	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.945				ND	
25 1,1-Dichloroethene	96		2.959				ND	
24 Acetone	43		2.973				ND	7
72 Isopropyl alcohol	45		3.056				ND	
26 Iodomethane	142		3.070				ND	
28 Carbon disulfide	76		3.140				ND	
27 Acetonitrile	41		3.182				ND	
29 Methyl acetate	43		3.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
30 3-Chloro-1-propene	41		3.210				ND	
31 Methylene Chloride	84		3.308				ND	
32 2-Methyl-2-propanol	59		3.350				ND	
33 Acrylonitrile	53		3.461				ND	
34 Methyl tert-butyl ether	73		3.489				ND	
35 trans-1,2-Dichloroethene	96		3.503				ND	
36 Hexane	57		3.699				ND	
37 Vinyl acetate	43		3.797				ND	
38 Isopropyl ether	87		3.824				ND	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	96	7822	0.8226	
78 Chlorotrifluoroethene	116		3.859				ND	
40 2-Chloro-1,3-butadiene	53		3.880				ND	
41 Tert-butyl ethyl ether	59		4.076				ND	
42 2-Butanone (MEK)	43		4.202				ND	7
43 Ethyl acetate	43		4.216				ND	U
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	83	18883	3.35	
45 2,2-Dichloropropane	77		4.230				ND	
46 Propionitrile	54		4.257				ND	
47 sec-Butyl Alcohol	45		4.299				ND	
48 Methacrylonitrile	41		4.369				ND	
49 Chlorobromomethane	128		4.397				ND	
50 Tetrahydrofuran	42		4.411				ND	
51 Chloroform	83	4.467	4.453	0.014	94	5103	0.5503	
87 2-Chloro-1,1,1-Trifluoroethane	118		4.509				ND	
53 1,1,1-Trichloroethane	97		4.593				ND	
54 Cyclohexane	56		4.663				ND	
55 1,1-Dichloropropene	75		4.704				ND	
56 Carbon tetrachloride	117		4.718				ND	
52 Isobutyl alcohol	43		4.718				ND	U
57 Benzene	78		4.858				ND	
58 1,2-Dichloroethane	62		4.886				ND	
59 Tert-amyl methyl ether	73		4.928				ND	
95 1,2-Dichloro-1,1,2-trifluoroetha	117		5.006				ND	
60 n-Heptane	43		5.040				ND	
97 1,1,1-Trifluoro-2,2-dichloroetha	83		5.097				ND	
61 n-Butanol	56		5.207				ND	
62 Trichloroethene	130	5.347	5.347	0.000	97	252915	49.9	
63 2-Pentanone	43		5.445				ND	
64 Methylcyclohexane	55		5.528				ND	
65 1,2-Dichloropropane	63		5.542				ND	
66 Methyl methacrylate	100		5.556				ND	
67 1,4-Dioxane	88		5.584				ND	
68 Dibromomethane	93		5.612				ND	
69 Dichlorobromomethane	83		5.738				ND	
70 2-Nitropropane	41		5.905				ND	
71 2-Chloroethyl vinyl ether	63		5.934				ND	
76 cis-1,3-Dichloropropene	75		6.073				ND	
74 4-Methyl-2-pentanone (MIBK)	43		6.171				ND	
75 Toluene	91		6.366				ND	
73 trans-1,3-Dichloropropene	75		6.534				ND	
77 Ethyl methacrylate	69		6.548				ND	
79 1,1,2-Trichloroethane	97		6.702				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
80 Tetrachloroethene	164	6.813	6.799	0.014	94	34945	9.13	
81 1,3-Dichloropropane	76		6.855				ND	
82 2-Hexanone	43		6.869				ND	
85 Chlorodibromomethane	129		7.051				ND	
84 Tetrahydrothiophene	60		7.051				ND	
86 Ethylene Dibromide	107		7.163				ND	
88 1-Chlorohexane	91		7.540				ND	7
89 Chlorobenzene	112		7.595				ND	
90 1,1,1,2-Tetrachloroethane	131		7.665				ND	
91 Ethylbenzene	106		7.665				ND	
92 m-Xylene & p-Xylene	91		7.777				ND	
93 o-Xylene	106		8.140				ND	
94 Styrene	104		8.154				ND	
96 Bromoform	173		8.336				ND	
98 Isopropylbenzene	105		8.475				ND	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	546	0.2188	
99 Cyclohexanone	55		8.573				ND	
100 1,1,2,2-Tetrachloroethane	83		8.755				ND	
102 trans-1,4-Dichloro-2-butene	53		8.797				ND	
101 Bromobenzene	156		8.797				ND	
103 1,2,3-Trichloropropane	110		8.825				ND	
104 N-Propylbenzene	120		8.866				ND	
105 2-Chlorotoluene	126		8.964				ND	
106 1,3,5-Trimethylbenzene	105		9.034				ND	
107 4-Chlorotoluene	126		9.076				ND	
108 tert-Butylbenzene	119		9.341				ND	
109 1,2,4-Trimethylbenzene	105		9.397				ND	
111 sec-Butylbenzene	134		9.565				ND	
112 1,3-Dichlorobenzene	146		9.690				ND	
113 4-Isopropyltoluene	119		9.704				ND	
114 1,4-Dichlorobenzene	146		9.788				ND	
110 1,2,3-Trimethylbenzene	105		9.802				ND	
115 n-Butylbenzene	91		10.109				ND	
116 1,2-Dichlorobenzene	146		10.137				ND	
117 1,2-Dibromo-3-Chloropropane	157		10.905				ND	
118 1,3,5-Trichlorobenzene	180		11.101				ND	
119 1,2,4-Trichlorobenzene	180		11.729				ND	
120 Hexachlorobutadiene	225		11.869				ND	
121 Naphthalene	128		11.981				ND	
122 1,2,3-Trichlorobenzene	180		12.204				ND	
139 2,3-Dimethylpentane	1		0.000				ND	
131 Dimethyl disulfide	1		0.000				ND	
136 Methyl cyclohexane TIC	1		0.000				ND	
169 Ethylene oxide TIC	1		0.000				ND	
170 Pentachloroethane TIC	1		0.000				ND	
135 2,2-Dimethylpentane	1		0.000				ND	
124 3,3-Dimethylpentane	1		0.000				ND	
132 n-Nonyl Aldehyde	1		0.000				ND	
134 2-Methylhexane	1		0.000				ND	
133 1-Chlorohexane TIC	1		0.000				ND	
137 3-Methylhexane	1		0.000				ND	
168 cis-1,4-Dichloro-2-butene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
128 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
129 3-Ethylpentane	1		0.000				ND	
126 Pentachloroethane	167		0.000				ND	
138 n-Nonane TIC	1		0.000				ND	
125 Cyclohexane TIC	1		0.000				ND	
130 2,4-Dimethylpentane	1		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
127 2,2,3-Trimethylbutane	1		4.004				ND	
S 142 Xylenes, Total	106		0.000				ND	7
S 143 1,2-Dichloroethene, Total	1				0		3.35	
S 145 1,3-Dichloropropene, Total	1		0.000				ND	7
S 147 Trihalomethanes, Total	1				0		0.5503	
S 144 TAH	1				0		0	7
S 141 Total BTEX	1		0.000				ND	7
T 152 Propene oxide TIC	1		1.369				ND	
T 153 Propene TIC	1		1.369				ND	
T 148 1,3-Butadiene TIC	1		1.985				ND	
T 149 2,3-dichloro-1-propene TIC	1		6.150				ND	
T 150 4-Ethyltoluene TIC	1		9.345				ND	
T 151 Dicyclopentadiene TIC	1		9.670				ND	
T 155 2-Butoxyethanol TIC	1		0.000				ND	
T 154 Dichloroacetonitrile TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

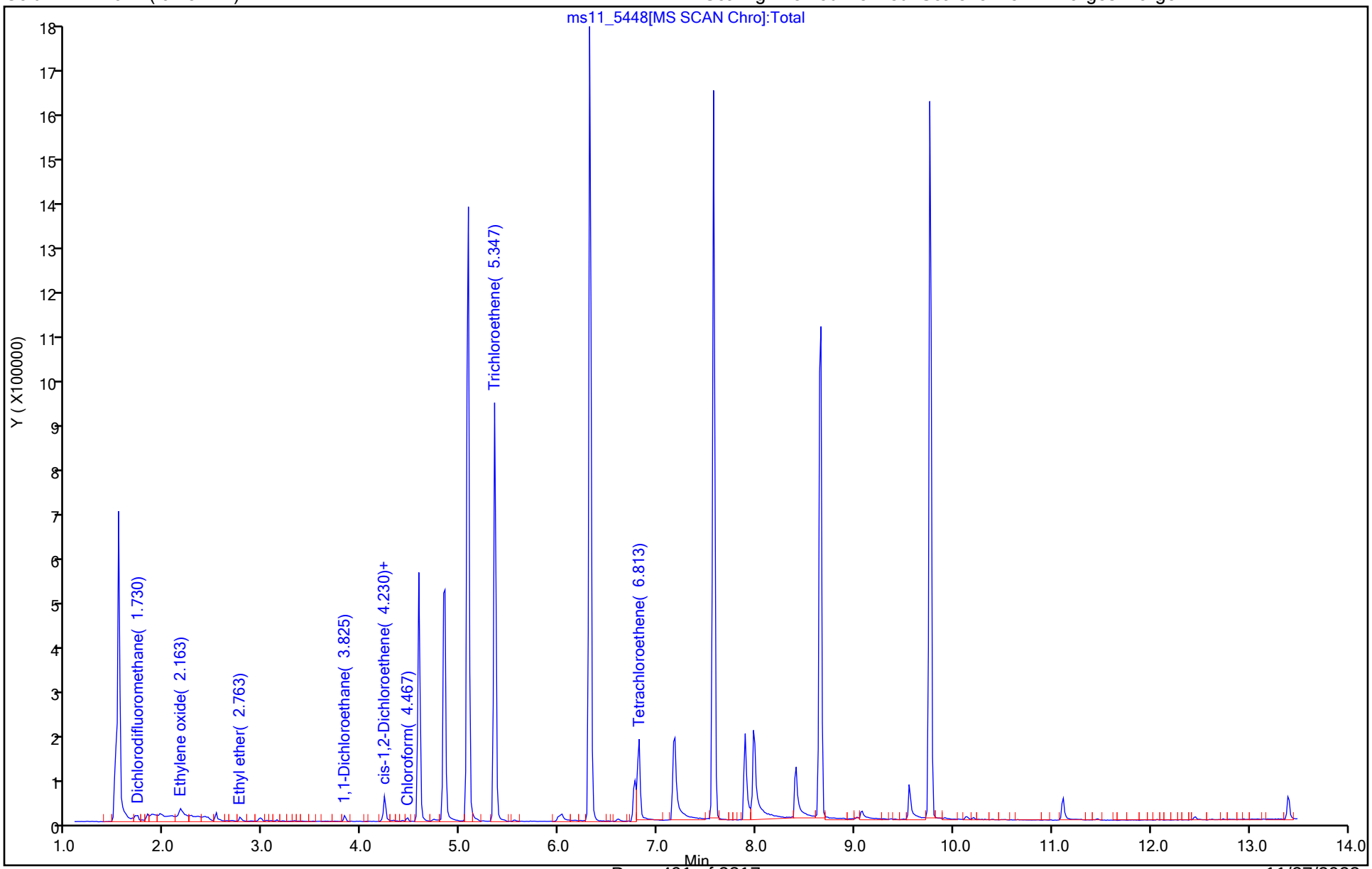
Report Date: 21-Nov-2023 12:20:47 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D

Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5	Worklist Smp#:	26
Client ID:	MW-105D-20230411				
Purge Vol:	5.000 mL	Dil. Factor:	4.0000	ALS Bottle#:	23
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D
Lims ID: 280-174957-F-5
Client ID: MW-105D-20230411
Sample Type: Client
Inject. Date: 18-Apr-2023 18:01:30 ALS Bottle#: 23 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 4.0000
Sample Info: 280-174957-F-5 4x
Misc. Info.: 280-0120504-026
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 12:06:01 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1670

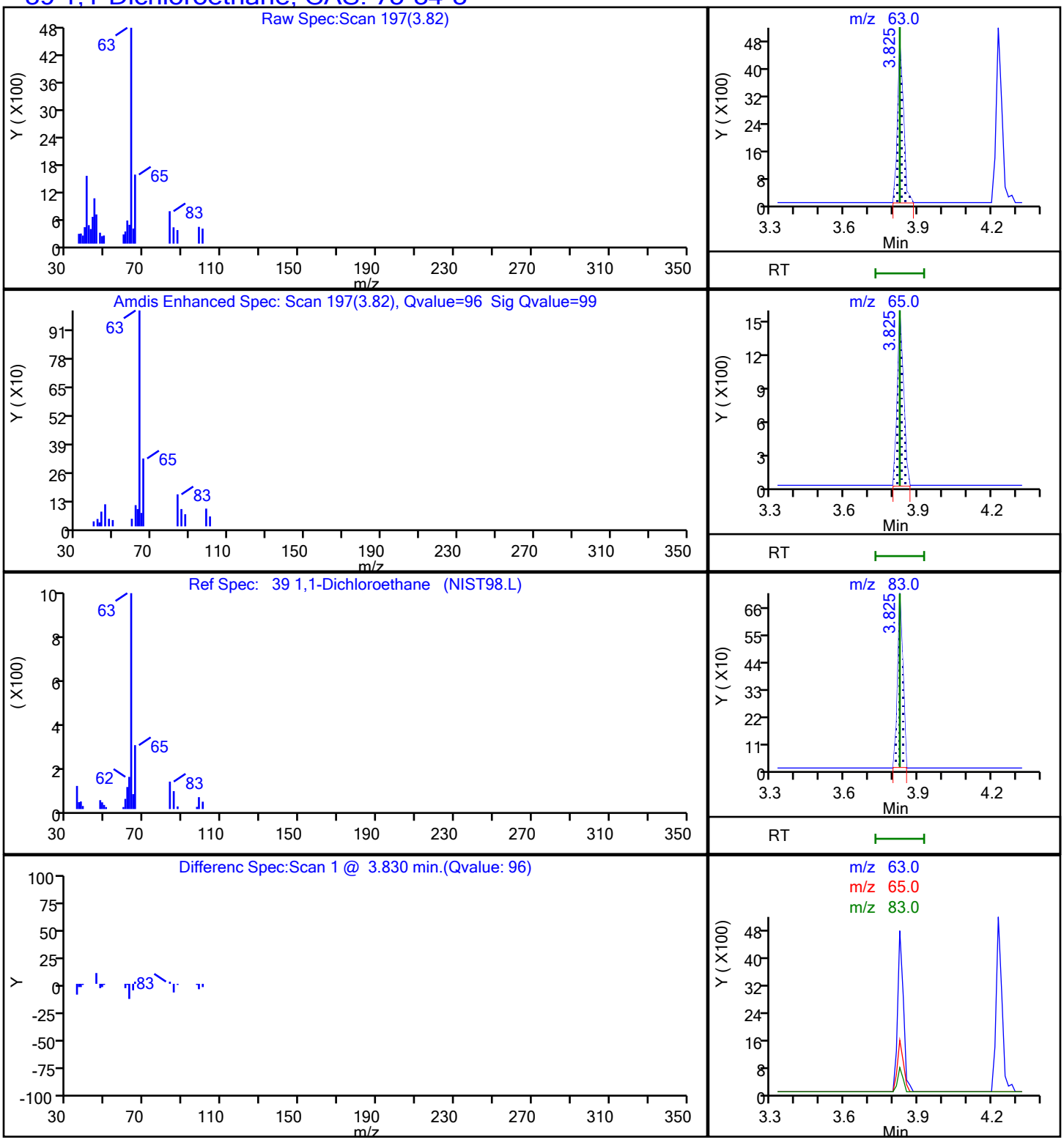
First Level Reviewer: Q2ZS Date: 21-Nov-2023 12:06:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	49.9	99.79
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	50.7	101.41
$ 7 Toluene-d8 (Surr)	50.0	50.2	100.36
$ 8 4-Bromofluorobenzene (Surr)	50.0	50.5	101.03

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D
Injection Date: 18-Apr-2023 18:01:30 Instrument ID: VMS_MS11
Lims ID: 280-174957-F-5 Lab Sample ID: 280-174957-5
Client ID: MW-105D-20230411
Operator ID: MED ALS Bottle#: 23 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 4.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

39 1,1-Dichloroethane, CAS: 75-34-3



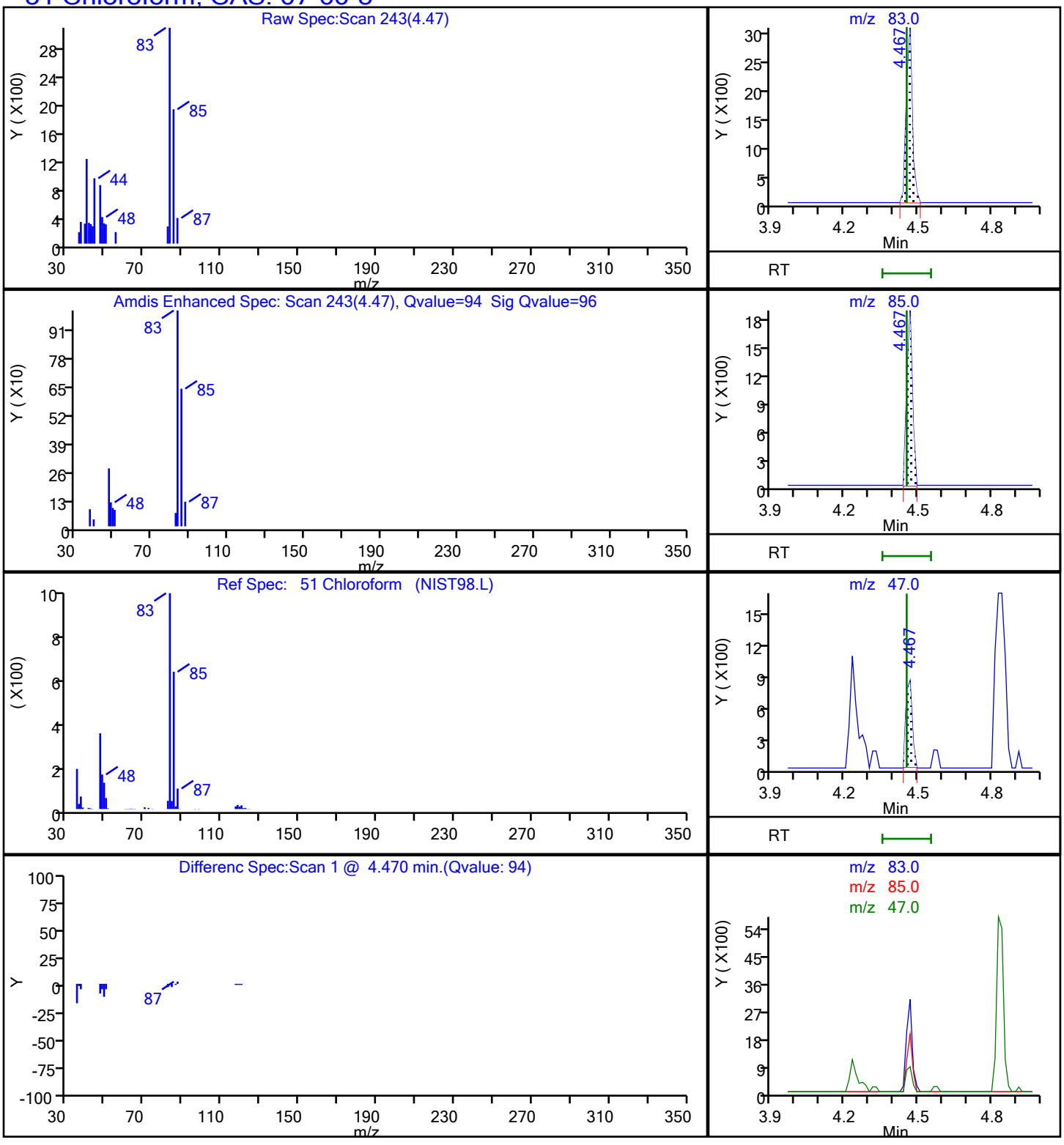
Report Date: 21-Nov-2023 12:20:48 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D

Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

51 Chloroform, CAS: 67-66-3



11/27/2023
6:53 PM

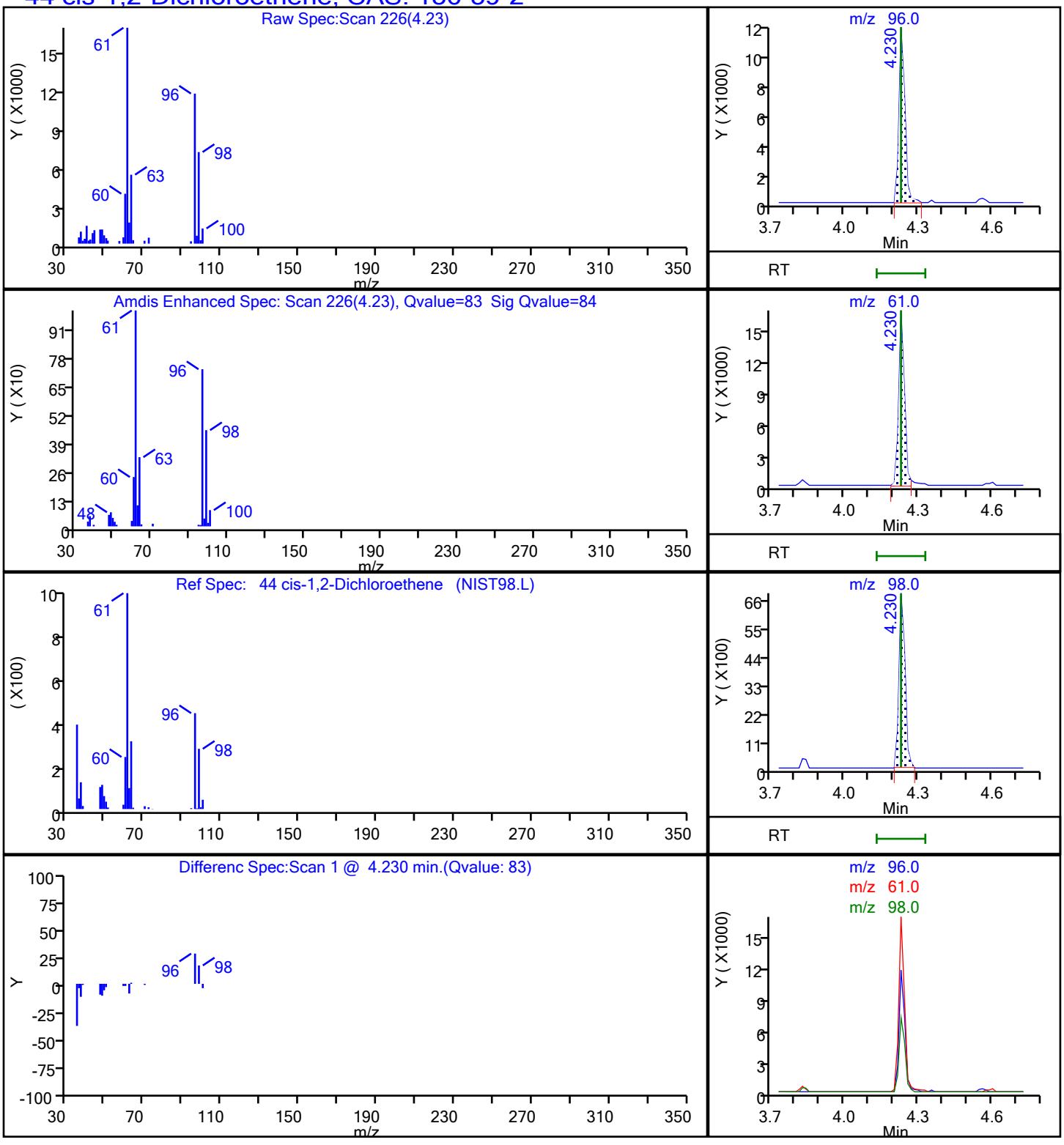
Report Date: 21-Nov-2023 12:20:48 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D

Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

44 cis-1,2-Dichloroethene, CAS: 156-59-2

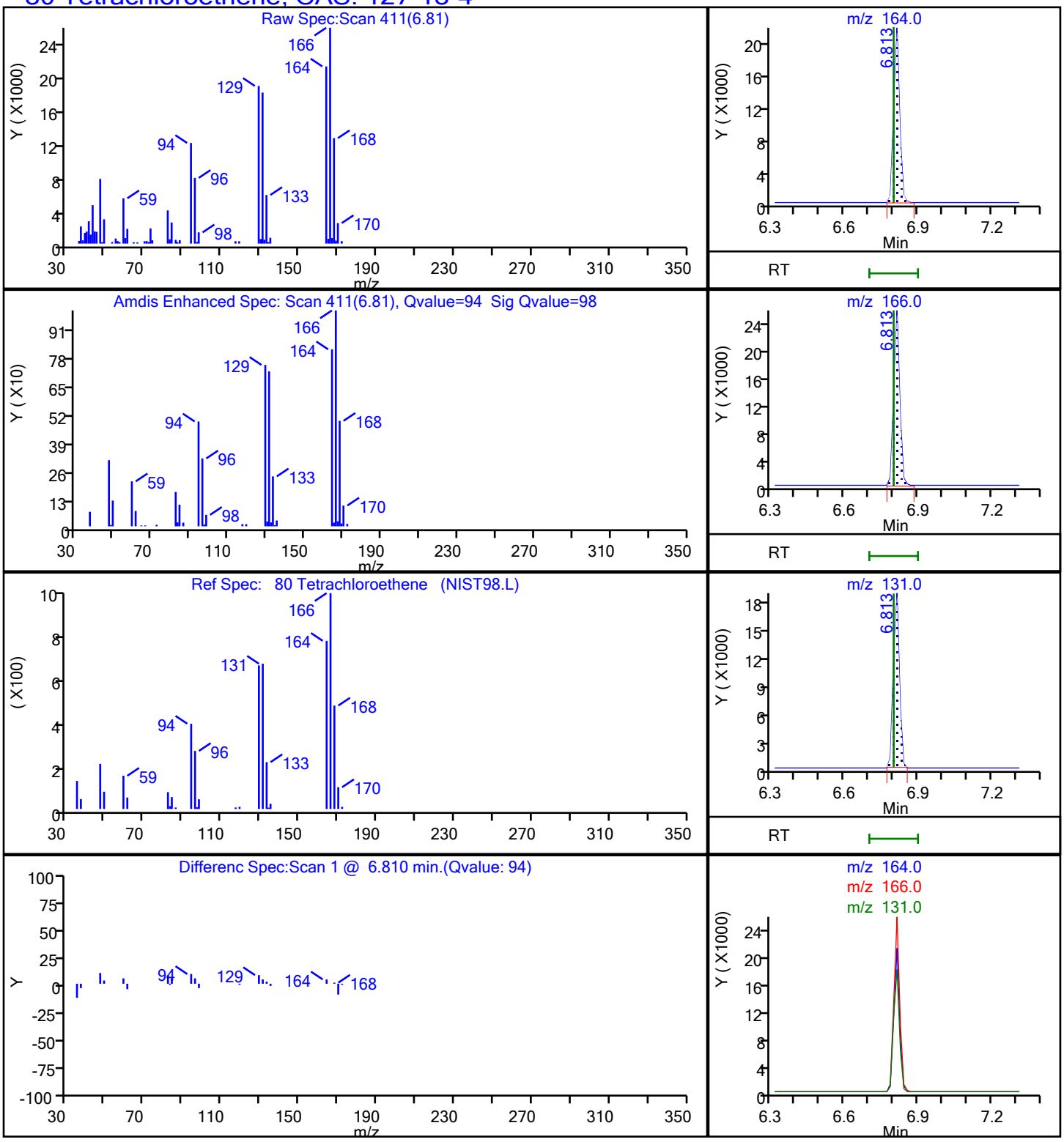


11/27/2023
6:53 PM

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D
Injection Date: 18-Apr-2023 18:01:30 Instrument ID: VMS_MS11
Lims ID: 280-174957-F-5 Lab Sample ID: 280-174957-5
Client ID: MW-105D-20230411
Operator ID: MED ALS Bottle#: 23 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 4.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

80 Tetrachloroethene, CAS: 127-18-4



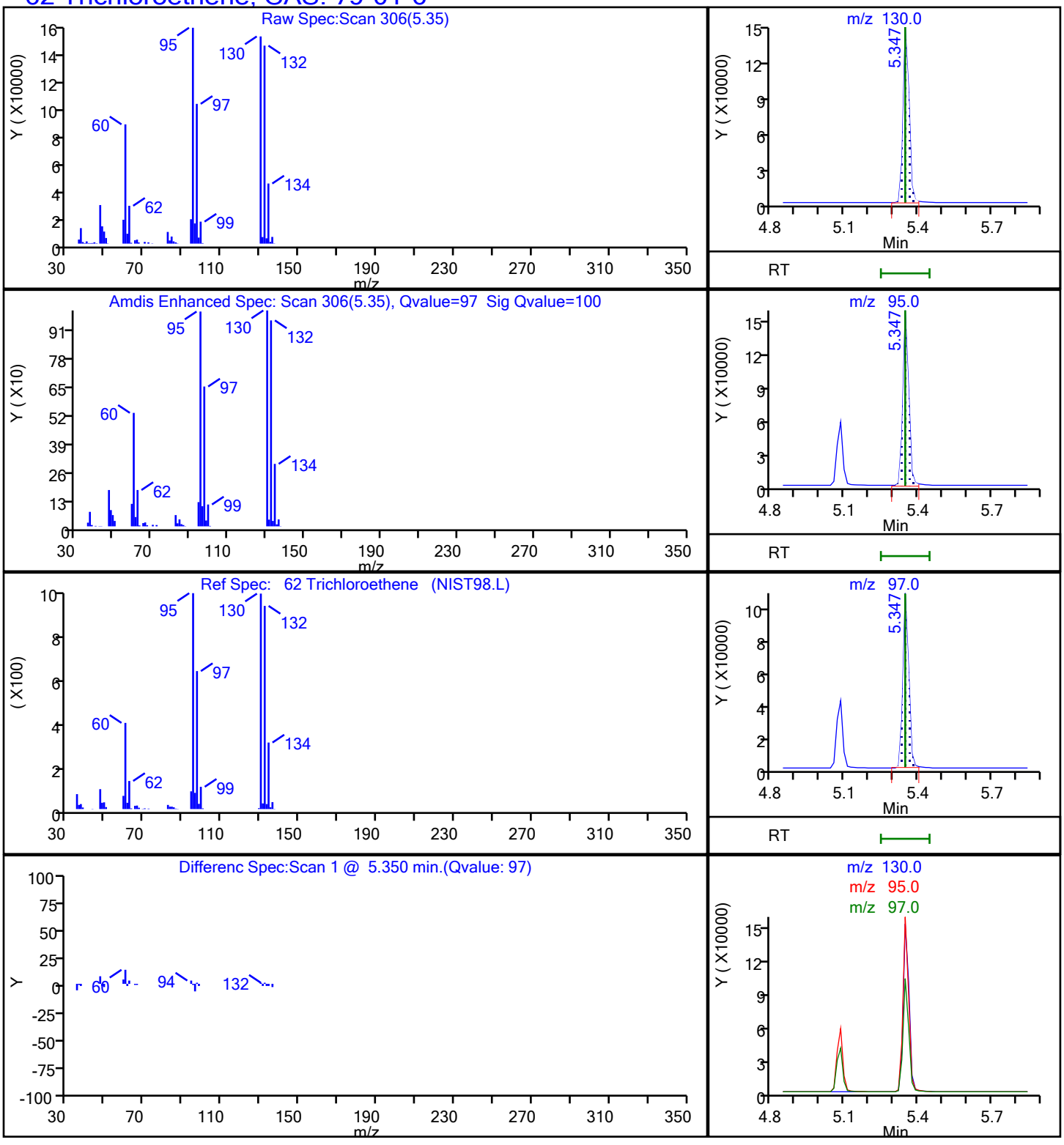
Report Date: 21-Nov-2023 12:20:48 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D

Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

62 Trichloroethene, CAS: 79-01-6



11/27/2023
6:53 PM

Eurofins Denver

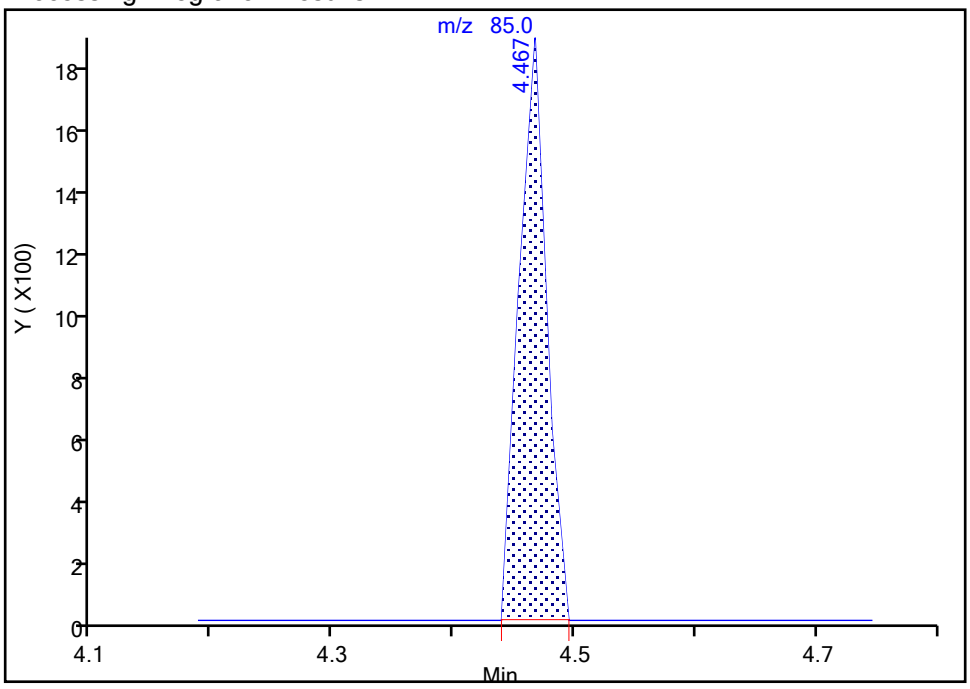
Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D				
Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

51 Chloroform, CAS: 67-66-3

Signal: 2

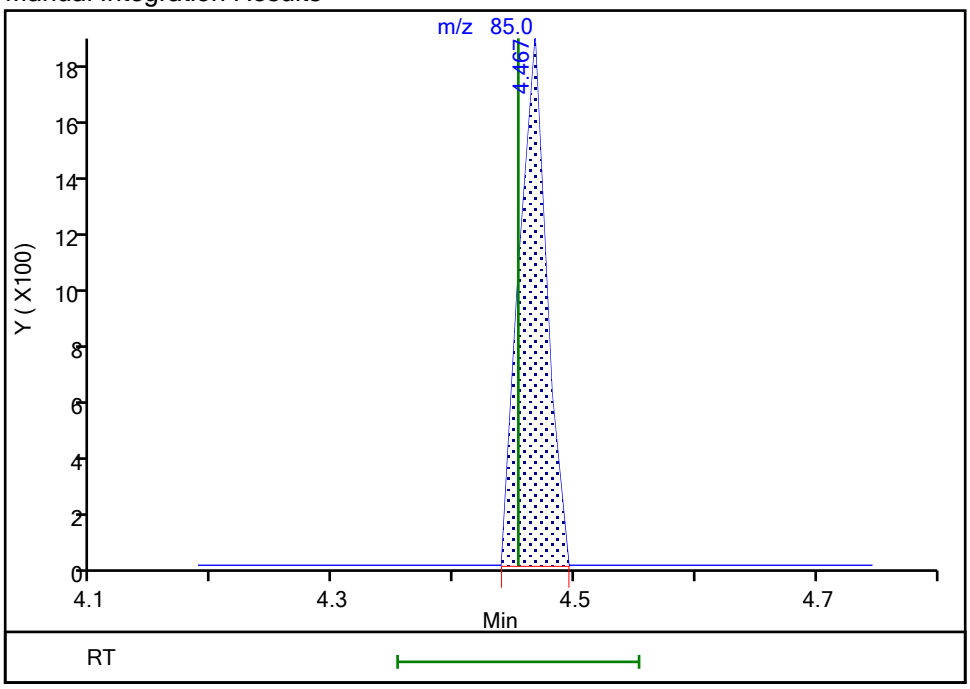
Processing Integration Results

RT: 4.47
Area: 2978
Amount: 0.550251
Amount Units: ug/l



Manual Integration Results

RT: 4.47
Area: 2978
Amount: 0.550251
Amount Units: ug/l



Reviewer: Q2ZS, 21-Nov-2023 11:59:30 -07:00:00 (UTC)
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

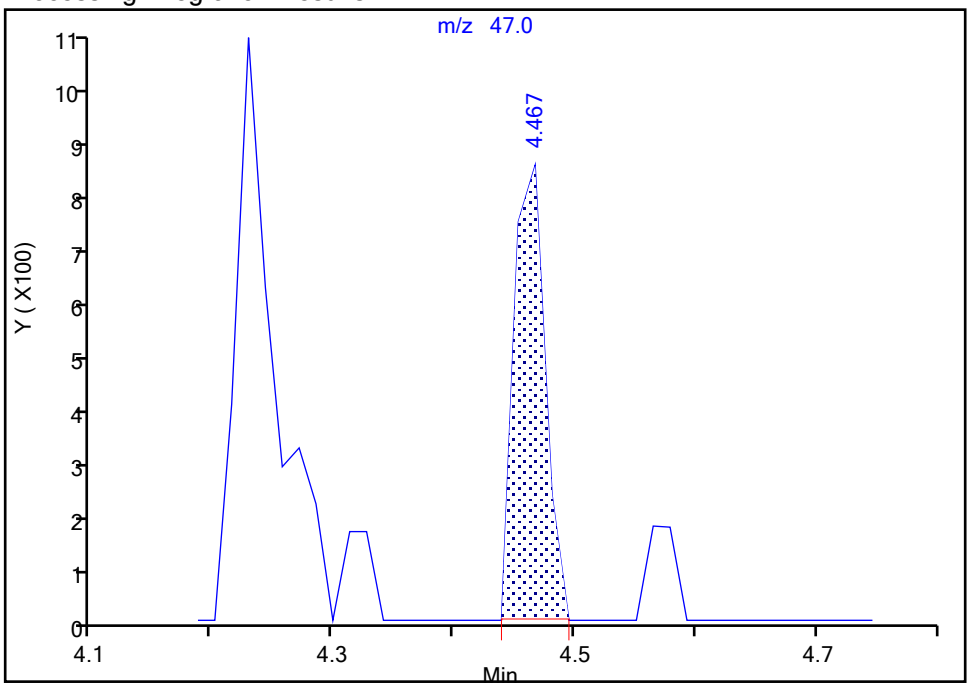
Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D				
Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

51 Chloroform, CAS: 67-66-3

Signal: 3

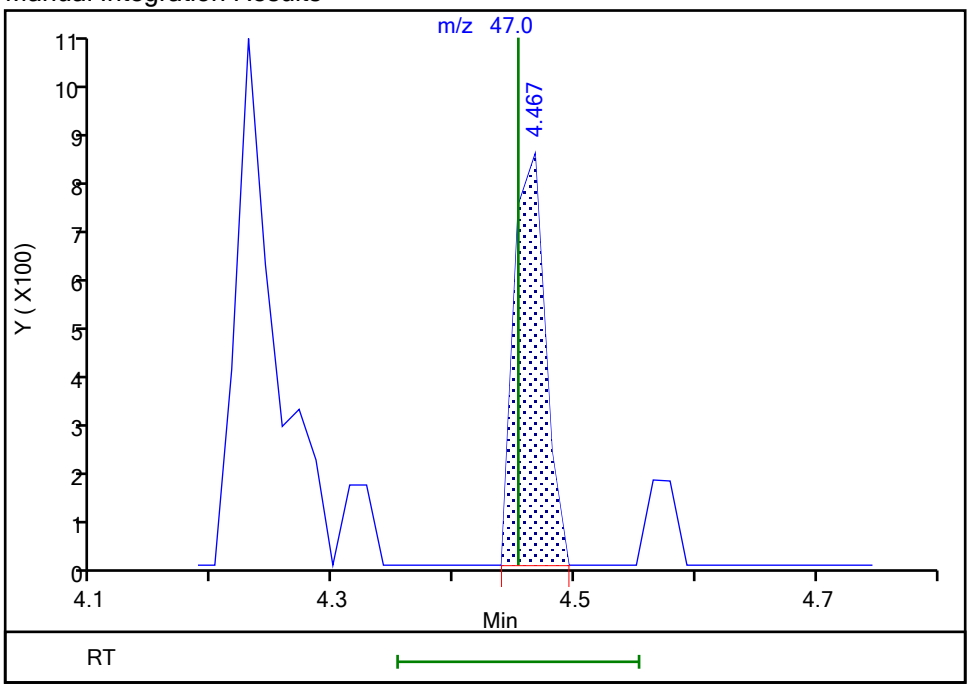
Processing Integration Results

RT: 4.47
Area: 1481
Amount: 0.550251
Amount Units: ug/l



Manual Integration Results

RT: 4.47
Area: 1481
Amount: 0.550251
Amount Units: ug/l



Reviewer: Q2ZS, 21-Nov-2023 11:59:30 -07:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

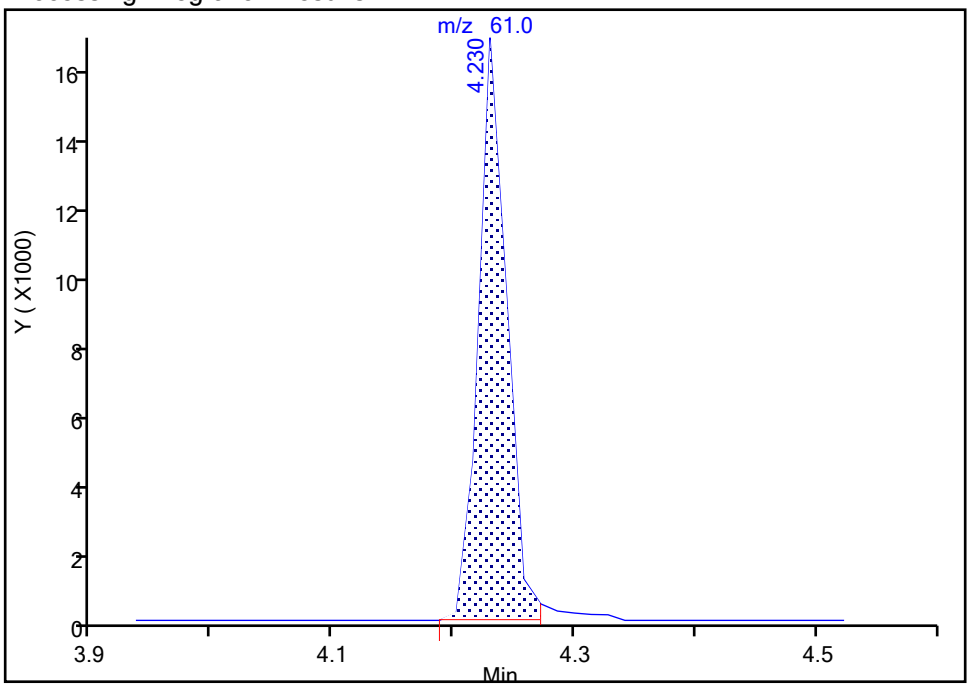
Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D				
Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

44 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 2

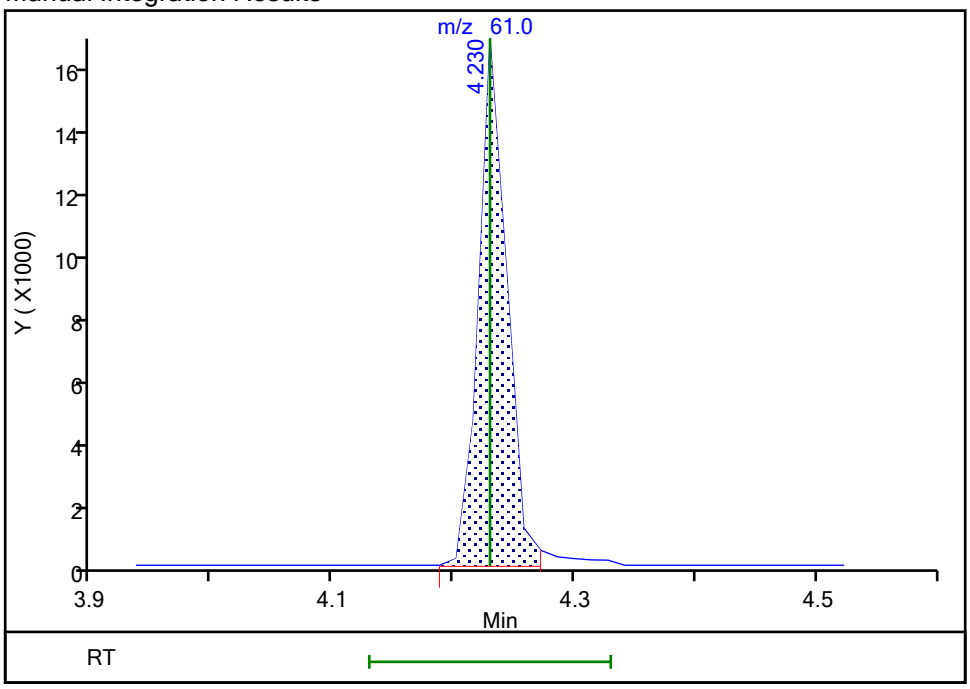
Processing Integration Results

RT: 4.23
Area: 26173
Amount: 3.352080
Amount Units: ug/l



Manual Integration Results

RT: 4.23
Area: 26173
Amount: 3.352080
Amount Units: ug/l



Reviewer: AK2J, 18-Apr-2023 22:46:40

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

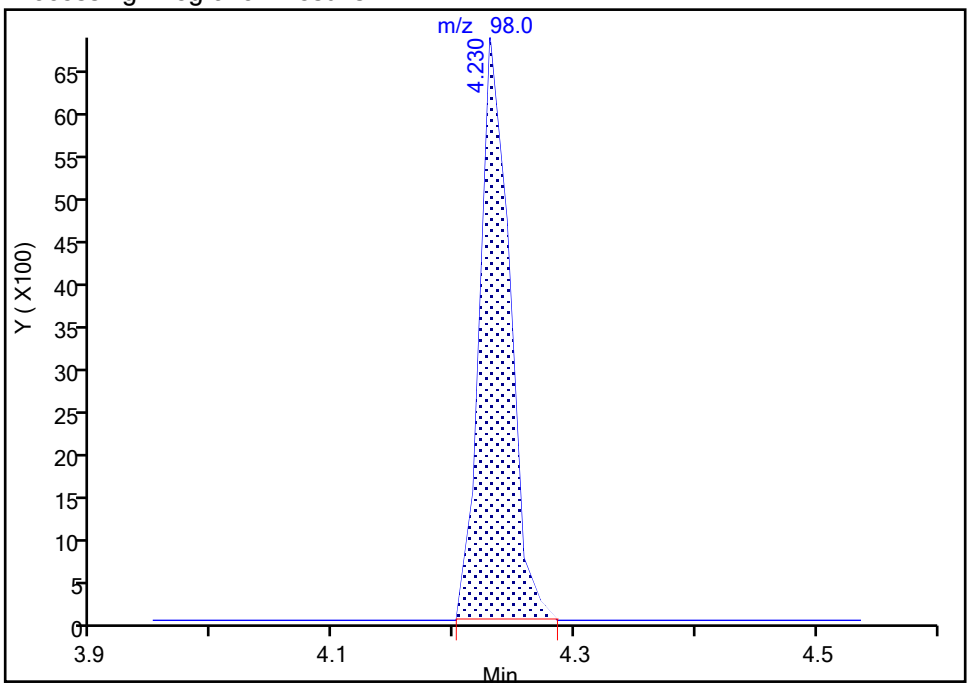
Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D				
Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

44 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 3

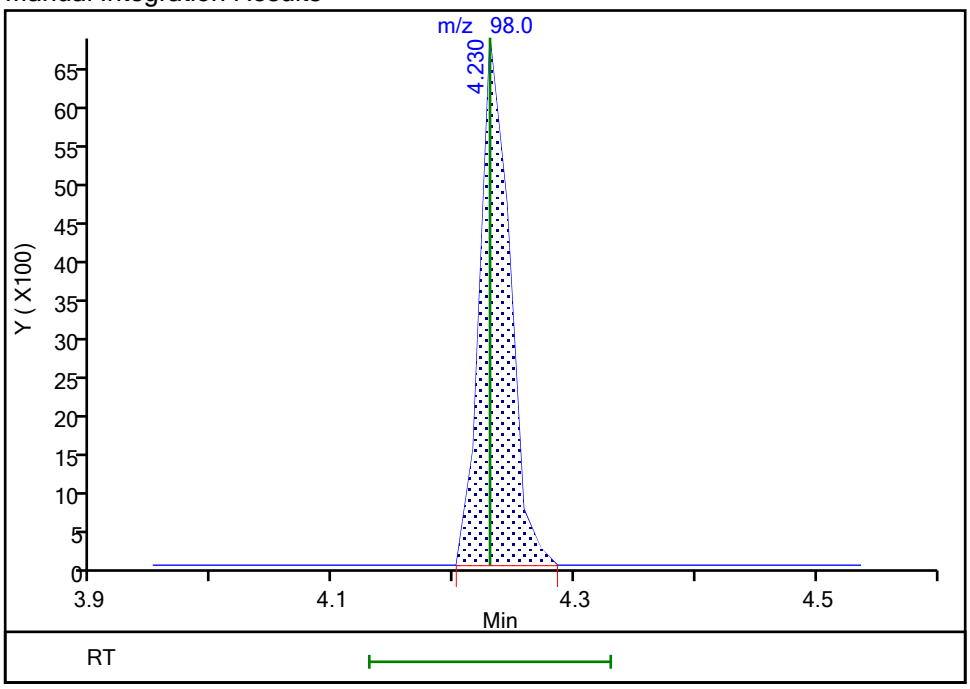
Processing Integration Results

RT: 4.23
Area: 11742
Amount: 3.352080
Amount Units: ug/l



Manual Integration Results

RT: 4.23
Area: 11742
Amount: 3.352080
Amount Units: ug/l



Reviewer: AK2J, 18-Apr-2023 22:46:40

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

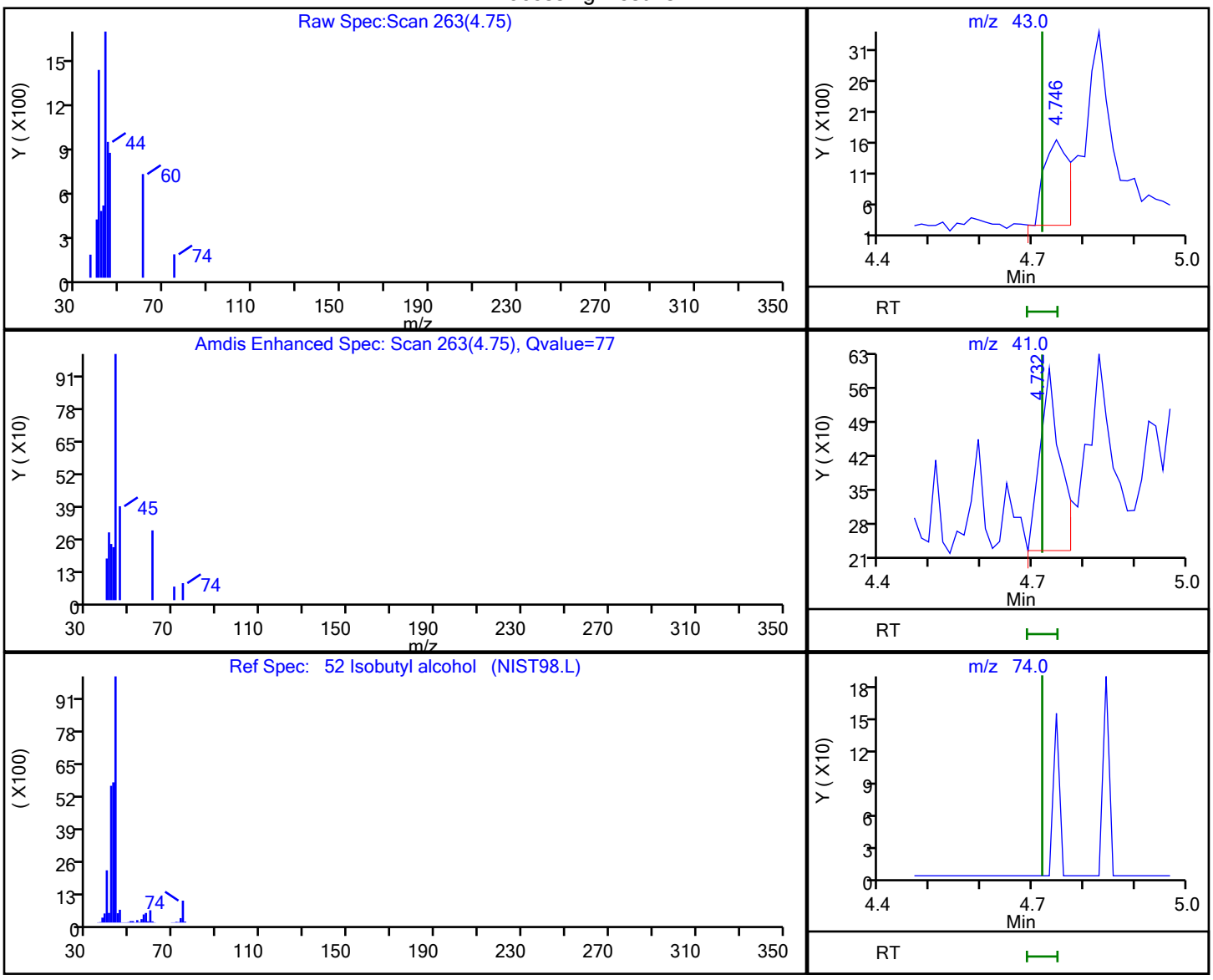
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D				
Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

52 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.75	43.00	4631	11.922844
4.73	41.00	1022	
4.72	74.00	0	

Reviewer: AK2J, 18-Apr-2023 22:46:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

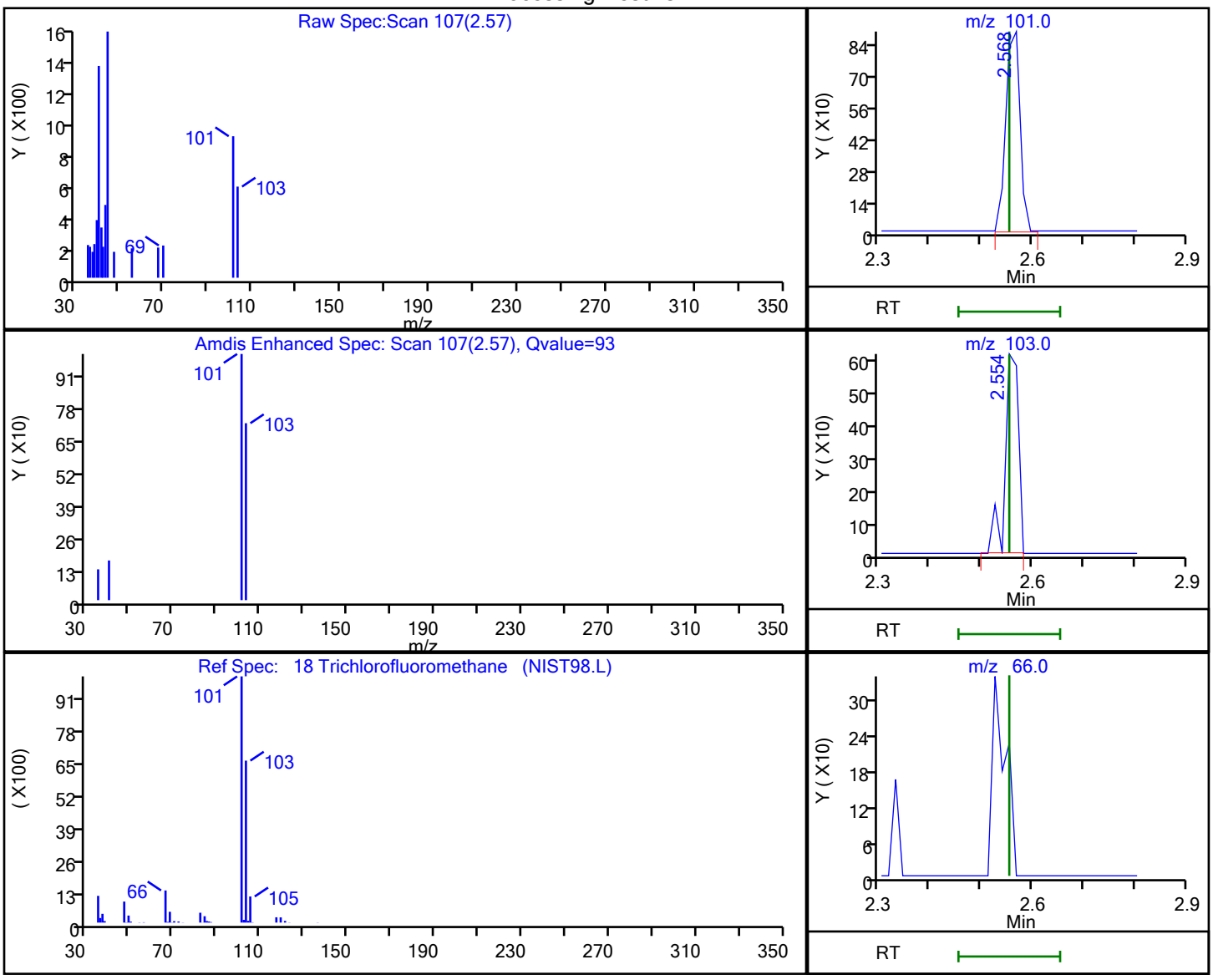
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D				
Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

18 Trichlorofluoromethane, CAS: 75-69-4

Processing Results



RT	Mass	Response	Amount
2.57	101.00	1745	0.241040
2.55	103.00	1123	
2.55	66.00	0	

Reviewer: AK2J, 18-Apr-2023 22:46:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

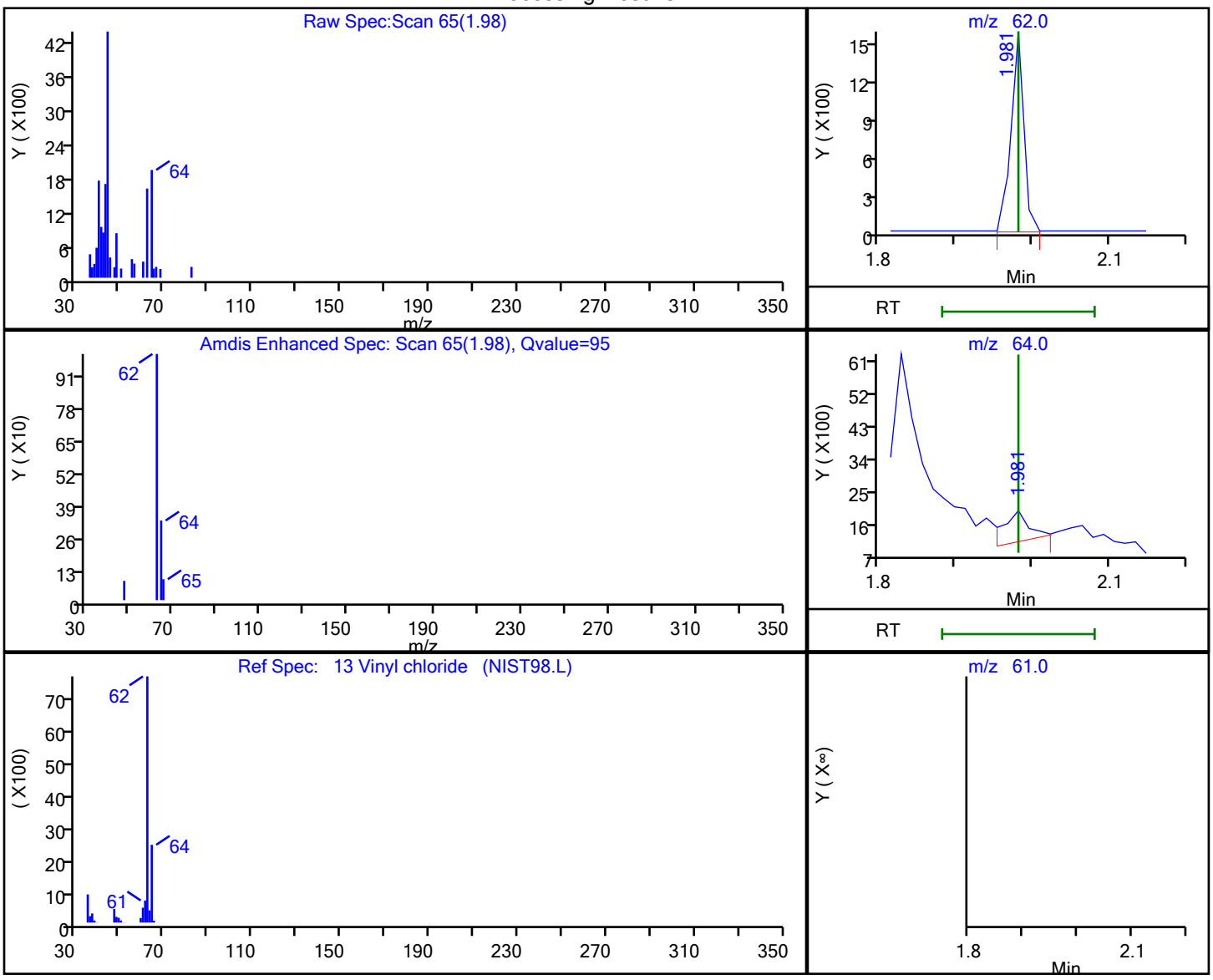
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5448.D				
Injection Date:	18-Apr-2023 18:01:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-F-5	Lab Sample ID:	280-174957-5		
Client ID:	MW-105D-20230411				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

13 Vinyl chloride, CAS: 75-01-4

Processing Results



RT	Mass	Response	Amount
1.98	62.00	1826	0.276372
1.98	64.00	2074	
1.98	61.00	0	

Reviewer: AK2J, 18-Apr-2023 22:45:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-105S-20230411 | Lab Sample ID: 280-174957-6

Matrix: Water | Lab File ID: ms11_5436.D

Analysis Method: 8260D | Date Collected: 04/11/2023 13:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	0.44	J	1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND	*1	30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-105S-20230411 | Lab Sample ID: 280-174957-6

Matrix: Water | Lab File ID: ms11_5436.D

Analysis Method: 8260D | Date Collected: 04/11/2023 13:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	1.5		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND	*1	3.0	1.2
156-59-2	cis-1,2-Dichloroethene	2.8		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND	*1	15	5.3
80-62-6	Methyl methacrylate	ND	*1	4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND	*1	20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	11		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	37		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-105S-20230411 | Lab Sample ID: 280-174957-6

Matrix: Water | Lab File ID: ms11_5436.D

Analysis Method: 8260D | Date Collected: 04/11/2023 13:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	100		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D
Lims ID: 280-174957-G-6
Client ID: MW-105S-20230411
Sample Type: Client
Inject. Date: 18-Apr-2023 13:44:30 ALS Bottle#: 11 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-174957-G-6
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 12:06:01 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1670

First Level Reviewer: AK2J Date: 18-Apr-2023 22:34:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 2 TBA-d9 (IS)	65		3.992				ND	
* 167 Fluorobenzene (IS)	96	5.081	5.081	0.000	98	1034745	0	
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1039807	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	88	249592	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	401859	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	266478	50.1	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.844	4.830	0.014	0	357797	51.2	
$ 7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1029992	50.2	
$ 8 4-Bromofluorobenzene (Surr)	95	8.657	8.643	0.014	93	390815	51.0	
$ 9 Trifluorotoluene (Surr)	1		0.000				ND	
$ 10 BFB	95	8.657	8.643	0.014	93	390815	NR	
11 Dichlorodifluoromethane	85		1.702				ND	
12 Chloromethane	50		1.883				ND	
13 Vinyl chloride	62	1.981	1.981	0.000	96	1980	0.2967	
14 Ethylene oxide	43	2.162	2.233	-0.071	98	3915	23.2	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.344				ND	
17 Dichlorofluoromethane	67		2.512				ND	7
18 Trichlorofluoromethane	101		2.554				ND	
19 Ethanol	45		2.665				ND	
20 Ethyl ether	59	2.763	2.763	0.000	94	7515	1.55	
21 Propene oxide	58		2.819				ND	
22 Acrolein	56		2.875				ND	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.945				ND	
25 1,1-Dichloroethene	96		2.959				ND	
24 Acetone	43		2.973				ND	7
72 Isopropyl alcohol	45		3.056				ND	U
26 Iodomethane	142		3.070				ND	
28 Carbon disulfide	76	3.140	3.140	0.000	97	3135	0.2115	
27 Acetonitrile	41		3.182				ND	
29 Methyl acetate	43		3.196				ND	
30 3-Chloro-1-propene	41		3.210				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
31 Methylene Chloride	84		3.308				ND	
32 2-Methyl-2-propanol	59		3.350				ND	
33 Acrylonitrile	53		3.461				ND	
34 Methyl tert-butyl ether	73		3.489				ND	
35 trans-1,2-Dichloroethene	96		3.503				ND	
36 Hexane	57		3.699				ND	
37 Vinyl acetate	43		3.797				ND	U
38 Isopropyl ether	87		3.824				ND	
39 1,1-Dichloroethane	63	3.824	3.825	-0.001	96	4237	0.4412	
78 Chlorotrifluoroethene	116		3.859				ND	
40 2-Chloro-1,3-butadiene	53		3.880				ND	
41 Tert-butyl ethyl ether	59		4.076				ND	
42 2-Butanone (MEK)	43		4.202				ND	7
43 Ethyl acetate	43		4.216				ND	U
44 cis-1,2-Dichloroethene	96	4.229	4.230	-0.001	82	16132	2.84	
45 2,2-Dichloropropane	77		4.230				ND	
46 Propionitrile	54		4.257				ND	
47 sec-Butyl Alcohol	45		4.299				ND	
48 Methacrylonitrile	41		4.369				ND	
49 Chlorobromomethane	128		4.397				ND	
50 Tetrahydrofuran	42		4.411				ND	
51 Chloroform	83	4.467	4.453	0.014	94	14367	1.53	
87 2-Chloro-1,1,1-Trifluoroethane	118		4.509				ND	
53 1,1,1-Trichloroethane	97		4.593				ND	
54 Cyclohexane	56		4.663				ND	
55 1,1-Dichloropropene	75		4.704				ND	
56 Carbon tetrachloride	117		4.718				ND	
52 Isobutyl alcohol	43		4.718				ND	
57 Benzene	78		4.858				ND	
58 1,2-Dichloroethane	62		4.886				ND	U
59 Tert-amyl methyl ether	73		4.928				ND	
95 1,2-Dichloro-1,1,2-trifluoroetha	117		5.006				ND	
60 n-Heptane	43		5.040				ND	
97 1,1,1-Trifluoro-2,2-dichloroetha	83		5.097				ND	
61 n-Butanol	56		5.207				ND	
62 Trichloroethene	130	5.347	5.347	0.000	97	190249	37.1	
63 2-Pentanone	43		5.445				ND	
64 Methylcyclohexane	55		5.528				ND	
65 1,2-Dichloropropane	63		5.542				ND	
66 Methyl methacrylate	100		5.556				ND	
67 1,4-Dioxane	88		5.584				ND	
68 Dibromomethane	93		5.612				ND	
69 Dichlorobromomethane	83		5.738				ND	
70 2-Nitropropane	41		5.905				ND	
71 2-Chloroethyl vinyl ether	63		5.934				ND	
76 cis-1,3-Dichloropropene	75		6.073				ND	
74 4-Methyl-2-pentanone (MIBK)	43		6.171				ND	
75 Toluene	91		6.366				ND	
73 trans-1,3-Dichloropropene	75		6.534				ND	
77 Ethyl methacrylate	69		6.548				ND	
79 1,1,2-Trichloroethane	97		6.702				ND	
80 Tetrachloroethene	164	6.813	6.799	0.014	94	41135	10.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
81 1,3-Dichloropropane	76		6.855				ND	
82 2-Hexanone	43		6.869				ND	
85 Chlorodibromomethane	129		7.051				ND	
84 Tetrahydrothiophene	60		7.051				ND	
86 Ethylene Dibromide	107		7.163				ND	
88 1-Chlorohexane	91		7.540				ND	7
89 Chlorobenzene	112		7.595				ND	
90 1,1,1,2-Tetrachloroethane	131		7.665				ND	
91 Ethylbenzene	106		7.665				ND	
92 m-Xylene & p-Xylene	91		7.777				ND	
93 o-Xylene	106		8.140				ND	
94 Styrene	104		8.154				ND	
96 Bromoform	173		8.336				ND	
98 Isopropylbenzene	105		8.475				ND	
123 cis-1,4-Dichloro-2-butene	53		8.531				ND	
99 Cyclohexanone	55		8.573				ND	
100 1,1,2,2-Tetrachloroethane	83		8.755				ND	
102 trans-1,4-Dichloro-2-butene	53		8.797				ND	
101 Bromobenzene	156		8.797				ND	
103 1,2,3-Trichloropropane	110		8.825				ND	
104 N-Propylbenzene	120		8.866				ND	
105 2-Chlorotoluene	126		8.964				ND	
106 1,3,5-Trimethylbenzene	105		9.034				ND	
107 4-Chlorotoluene	126		9.076				ND	
108 tert-Butylbenzene	119		9.341				ND	
109 1,2,4-Trimethylbenzene	105		9.397				ND	
111 sec-Butylbenzene	134		9.565				ND	
112 1,3-Dichlorobenzene	146		9.690				ND	
113 4-Isopropyltoluene	119		9.704				ND	
114 1,4-Dichlorobenzene	146		9.788				ND	U
110 1,2,3-Trimethylbenzene	105		9.802				ND	
115 n-Butylbenzene	91		10.109				ND	
116 1,2-Dichlorobenzene	146	10.151	10.137	0.014	90	2744	0.2726	
117 1,2-Dibromo-3-Chloropropane	157		10.905				ND	
118 1,3,5-Trichlorobenzene	180		11.101				ND	
119 1,2,4-Trichlorobenzene	180		11.729				ND	
120 Hexachlorobutadiene	225		11.869				ND	
121 Naphthalene	128		11.981				ND	
122 1,2,3-Trichlorobenzene	180		12.204				ND	
139 2,3-Dimethylpentane	1		0.000				ND	
131 Dimethyl disulfide	1		0.000				ND	
136 Methyl cyclohexane TIC	1		0.000				ND	
169 Ethylene oxide TIC	1		0.000				ND	
170 Pentachloroethane TIC	1		0.000				ND	
135 2,2-Dimethylpentane	1		0.000				ND	
124 3,3-Dimethylpentane	1		0.000				ND	
132 n-Nonyl Aldehyde	1		0.000				ND	
134 2-Methylhexane	1		0.000				ND	
133 1-Chlorohexane TIC	1		0.000				ND	
137 3-Methylhexane	1		0.000				ND	
168 cis-1,4-Dichloro-2-butene TIC	1		0.000				ND	
128 1-Chloro-1-fluoroethane TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
129 3-Ethylpentane	1		0.000				ND	
126 Pentachloroethane	167		0.000				ND	
138 n-Nonane TIC	1		0.000				ND	
125 Cyclohexane TIC	1		0.000				ND	
130 2,4-Dimethylpentane	1		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
127 2,2,3-Trimethylbutane	1		4.004				ND	
S 142 Xylenes, Total	106		0.000				ND	7
S 143 1,2-Dichloroethene, Total	1				0		2.84	
S 145 1,3-Dichloropropene, Total	1		0.000				ND	7
S 147 Trihalomethanes, Total	1				0		1.53	
S 144 TAH	1				0		0	7
S 141 Total BTEX	1		0.000				ND	7
T 152 Propene oxide TIC	1		1.369				ND	
T 153 Propene TIC	1		1.369				ND	
T 148 1,3-Butadiene TIC	1		1.985				ND	
T 149 2,3-dichloro-1-propene TIC	1		6.150				ND	
T 150 4-Ethyltoluene TIC	1		9.345				ND	
T 151 Dicyclopentadiene TIC	1		9.670				ND	
T 155 2-Butoxyethanol TIC	1		0.000				ND	
T 154 Dichloroacetonitrile TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

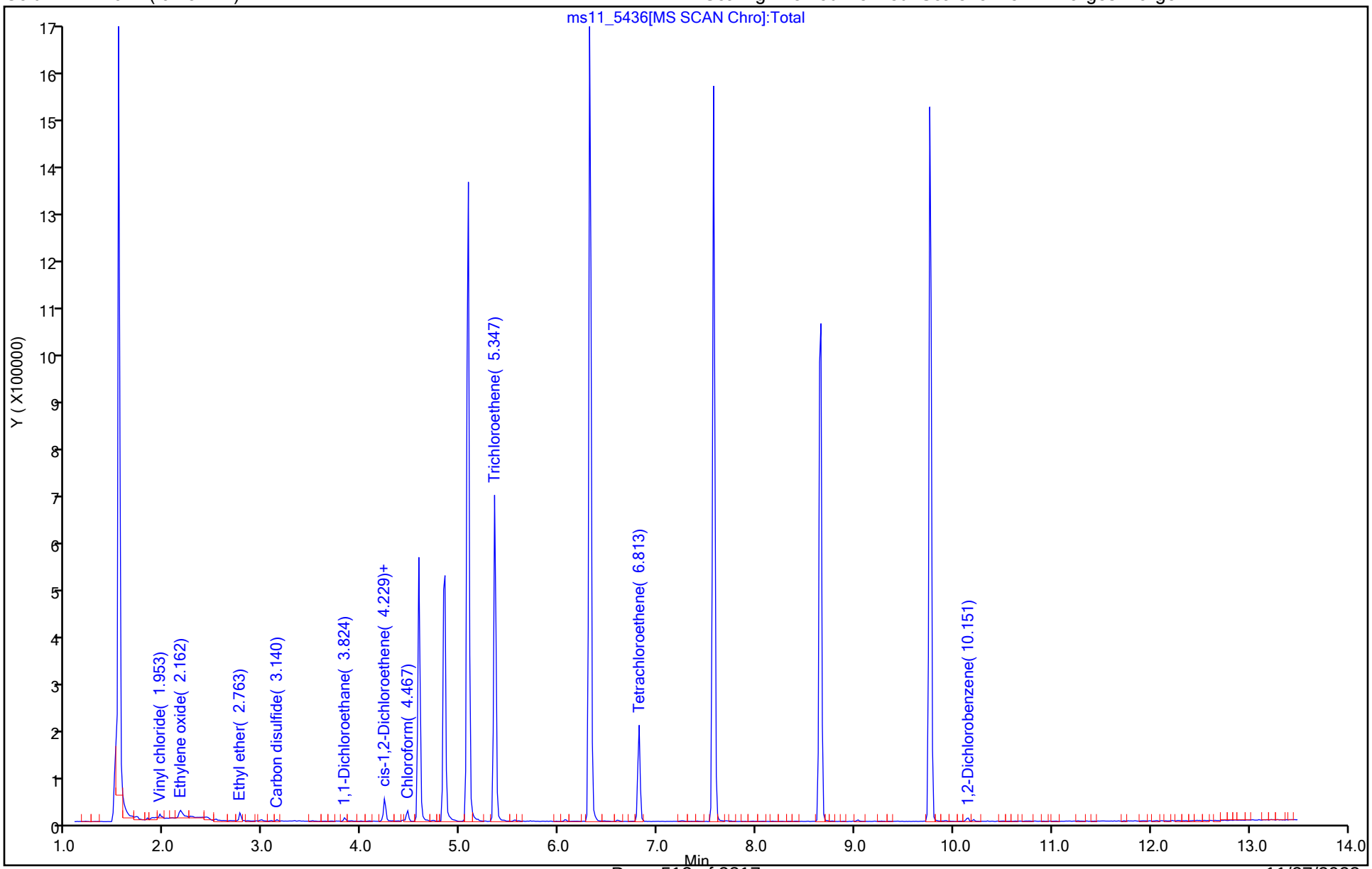
Report Date: 21-Nov-2023 12:20:51 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D

Injection Date:	18-Apr-2023 13:44:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	280-174957-G-6	Lab Sample ID:	280-174957-6	Worklist Smp#:	14
Client ID:	MW-105S-20230411				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D				
Lims ID:	280-174957-G-6				
Client ID:	MW-105S-20230411				
Sample Type:	Client				
Inject. Date:	18-Apr-2023 13:44:30	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-174957-G-6				
Operator ID:	MED	Instrument ID:	VMS_MS11		
Method:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	21-Nov-2023 12:06:01	Calib Date:	14-Apr-2023 13:36:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1670				

First Level Reviewer: AK2J Date: 18-Apr-2023 22:34:01

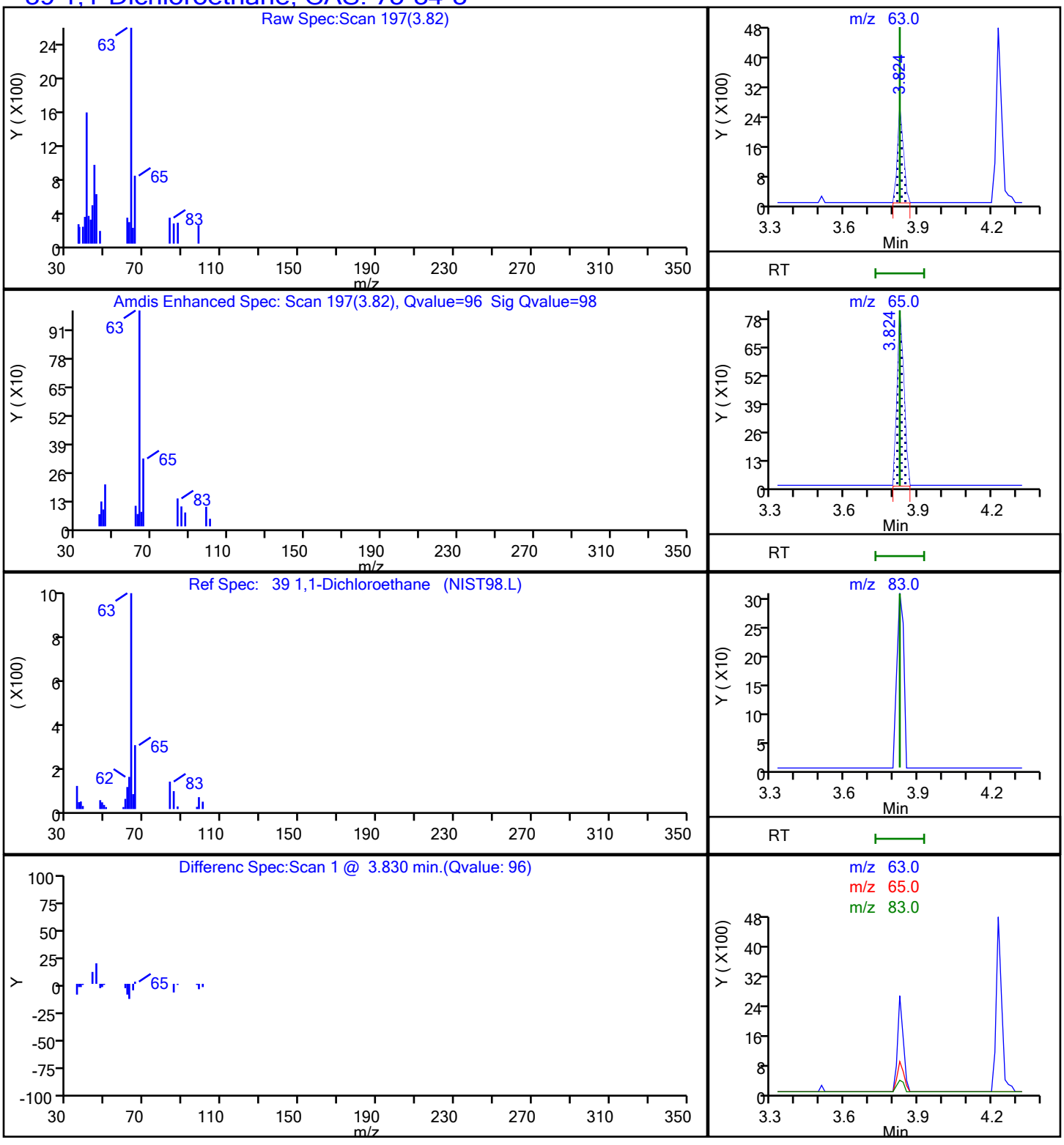
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	50.1	100.25
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.2	102.43
$ 7 Toluene-d8 (Surr)	50.0	50.2	100.45
$ 8 4-Bromofluorobenzene (Surr)	50.0	51.0	101.95

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D

Injection Date:	18-Apr-2023 13:44:30	Instrument ID:	VMS_MS11
Lims ID:	280-174957-G-6	Lab Sample ID:	280-174957-6
Client ID:	MW-105S-20230411		
Operator ID:	MED	ALS Bottle#:	11 Worklist Smp#: 14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (0.25 mm)	Detector	MS SCAN

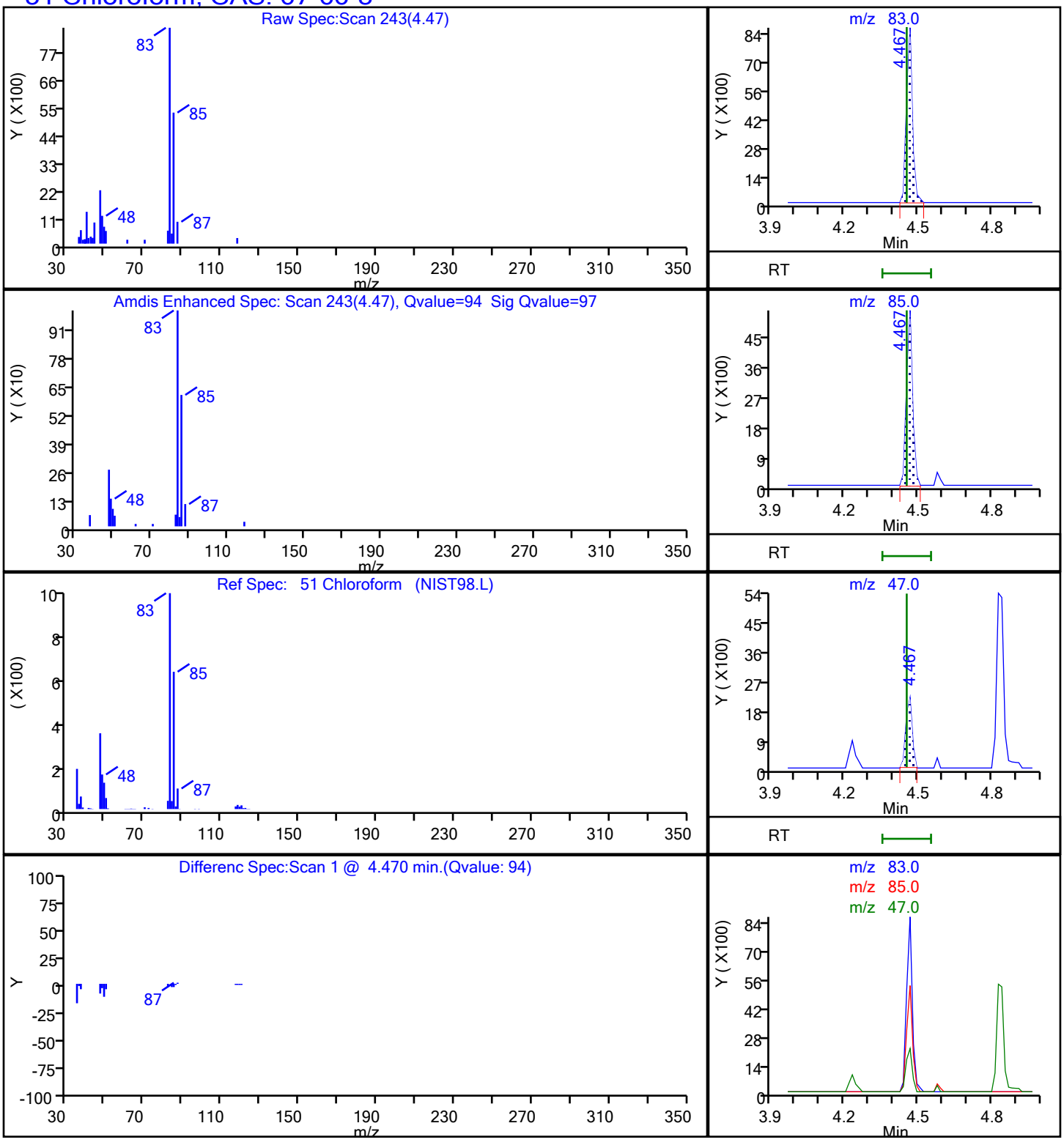
39 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D
Injection Date: 18-Apr-2023 13:44:30 Instrument ID: VMS_MS11
Lims ID: 280-174957-G-6 Lab Sample ID: 280-174957-6
Client ID: MW-105S-20230411
Operator ID: MED ALS Bottle#: 11 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

51 Chloroform, CAS: 67-66-3



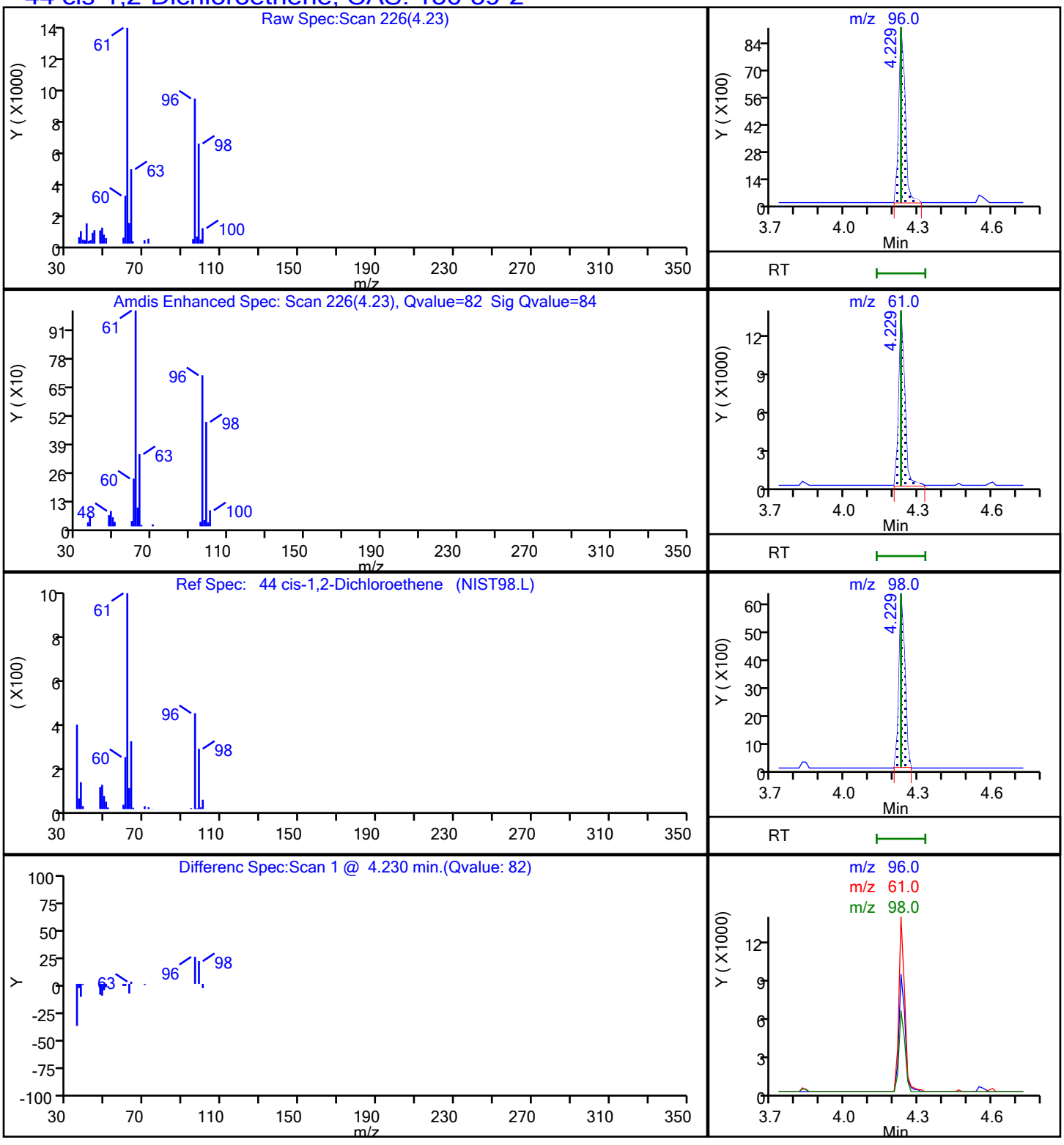
Report Date: 21-Nov-2023 12:20:51 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D

Injection Date:	18-Apr-2023 13:44:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-G-6	Lab Sample ID:	280-174957-6		
Client ID:	MW-105S-20230411				
Operator ID:	MED	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

44 cis-1,2-Dichloroethene, CAS: 156-59-2



11/27/2023
6:53 PM

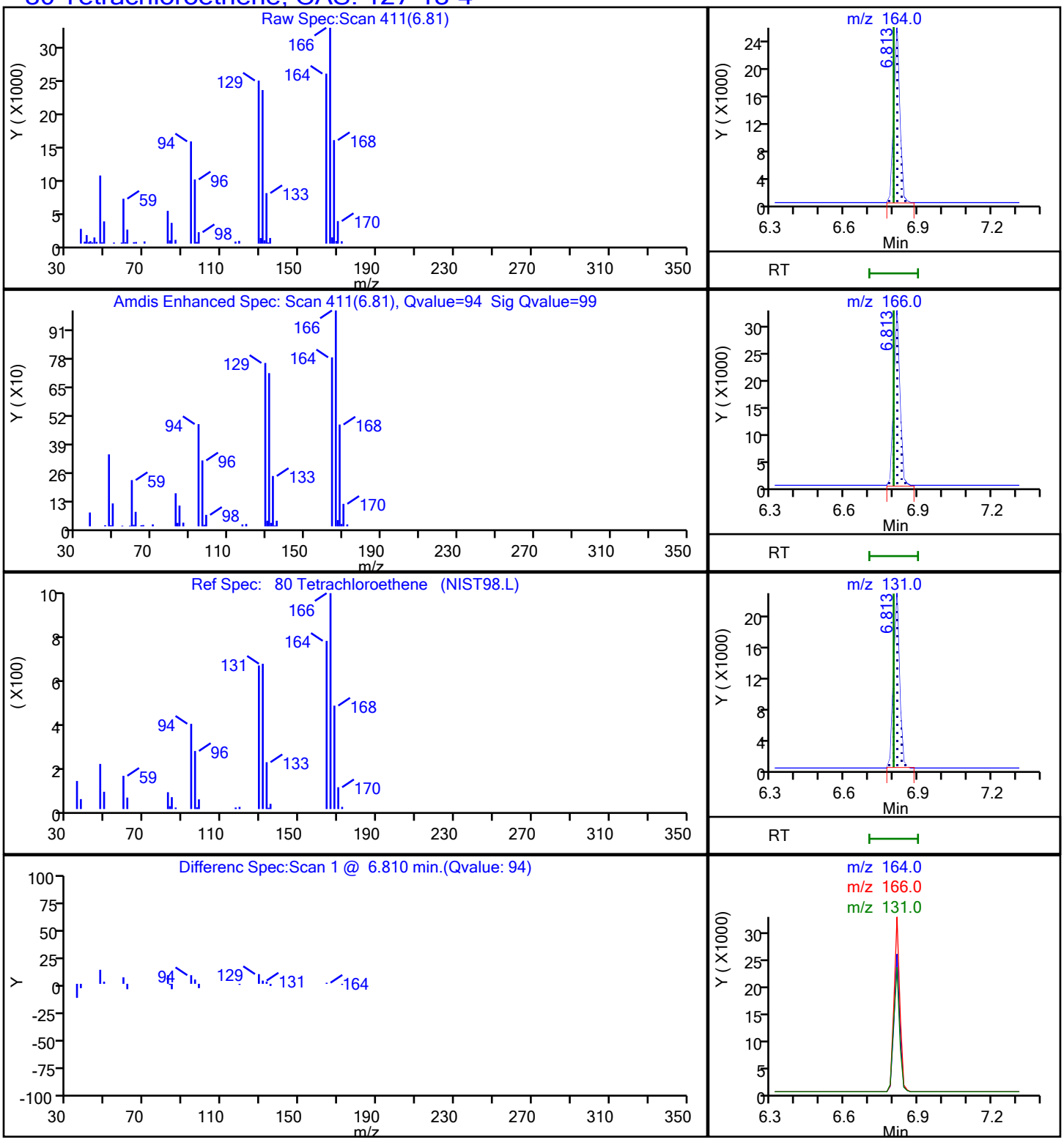
Report Date: 21-Nov-2023 12:20:51 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D

Injection Date:	18-Apr-2023 13:44:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-G-6	Lab Sample ID:	280-174957-6		
Client ID:	MW-105S-20230411				
Operator ID:	MED	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

80 Tetrachloroethene, CAS: 127-18-4

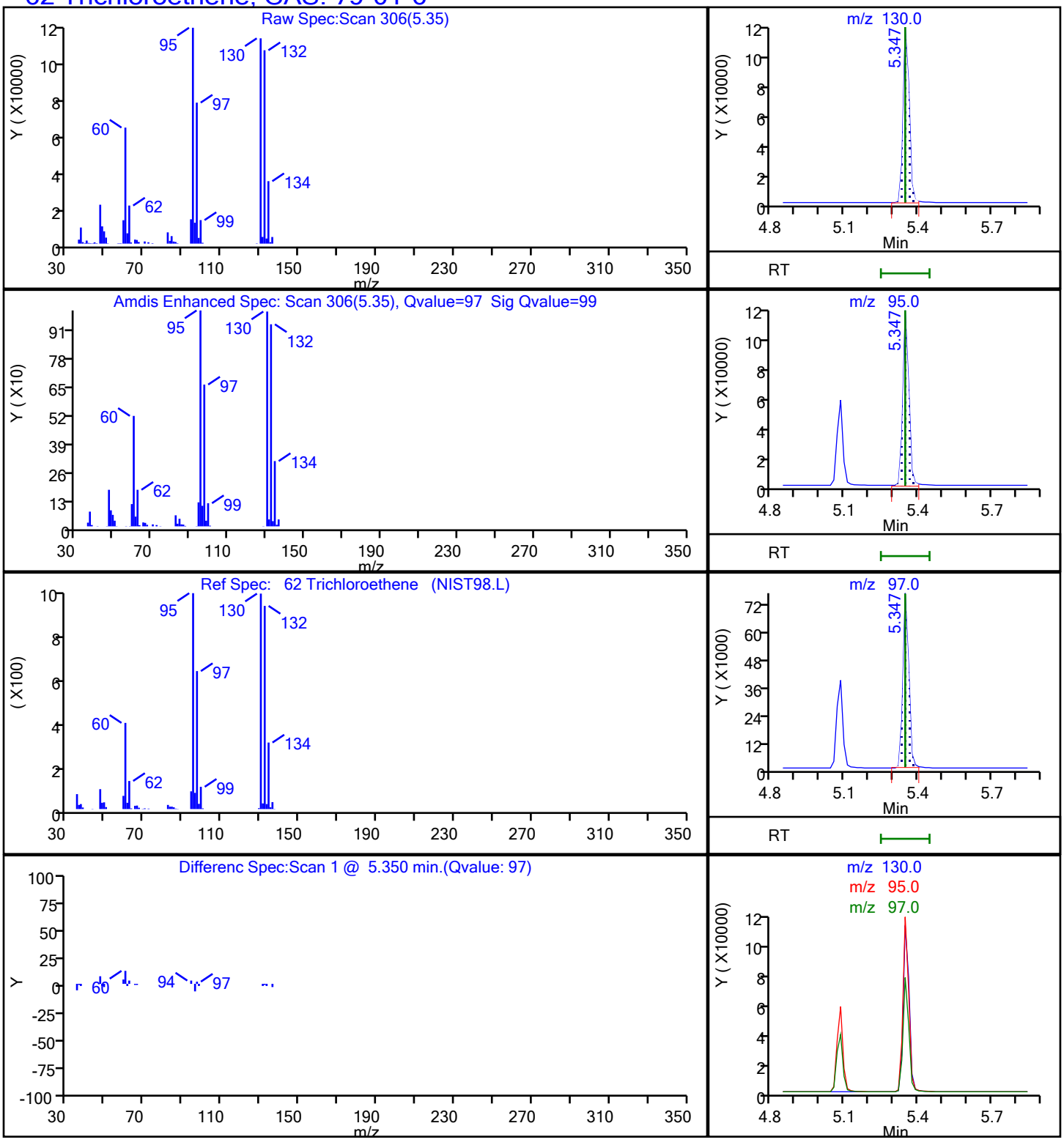


11/27/2023
6:53 PM

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D
Injection Date: 18-Apr-2023 13:44:30 Instrument ID: VMS_MS11
Lims ID: 280-174957-G-6 Lab Sample ID: 280-174957-6
Client ID: MW-105S-20230411
Operator ID: MED ALS Bottle#: 11 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

62 Trichloroethene, CAS: 79-01-6



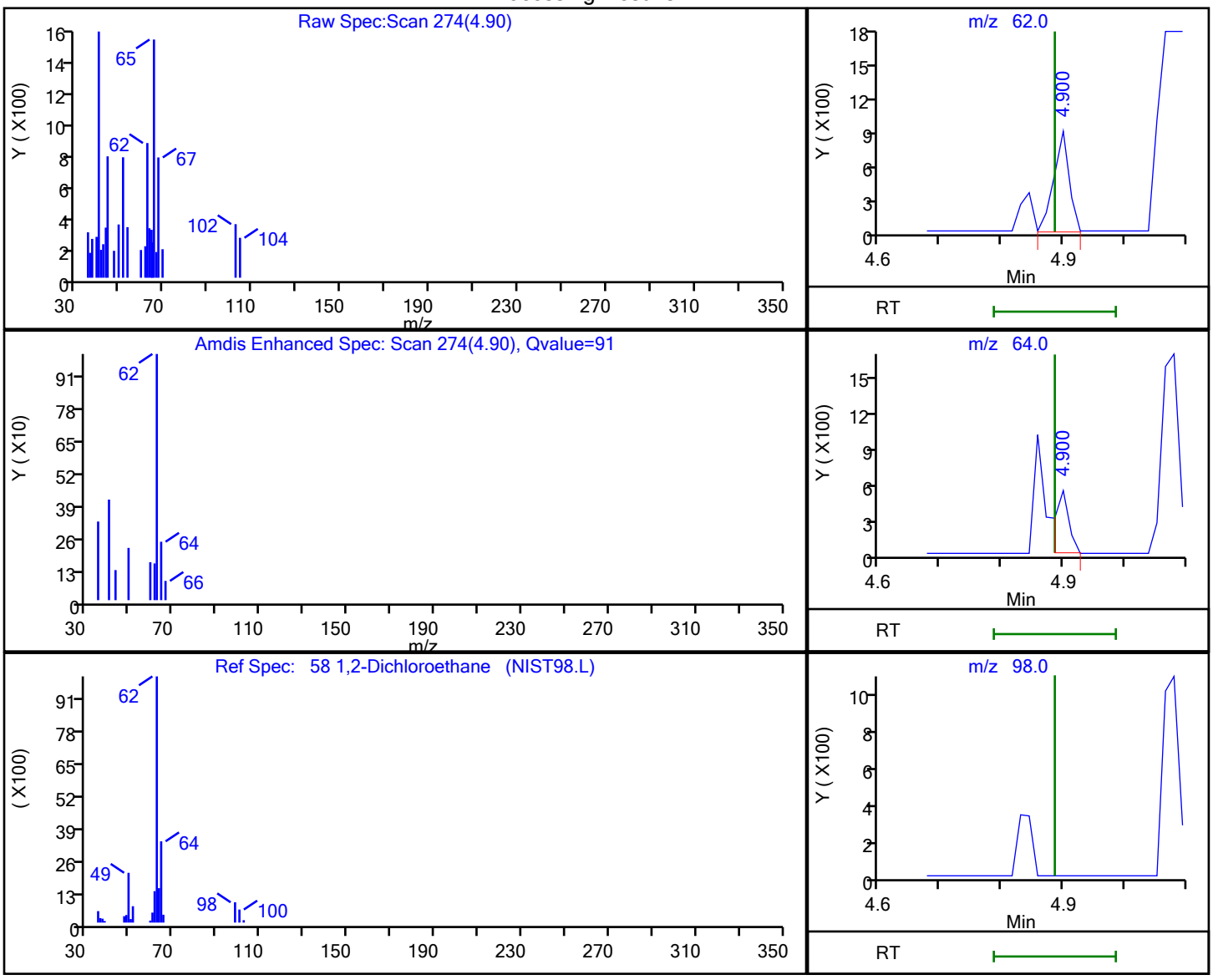
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D				
Injection Date:	18-Apr-2023 13:44:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-G-6	Lab Sample ID:	280-174957-6		
Client ID:	MW-105S-20230411				
Operator ID:	MED	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

58 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
4.90	62.00	1501	0.170310
4.90	64.00	825	
4.89	98.00	0	

Reviewer: AK2J, 18-Apr-2023 22:33:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

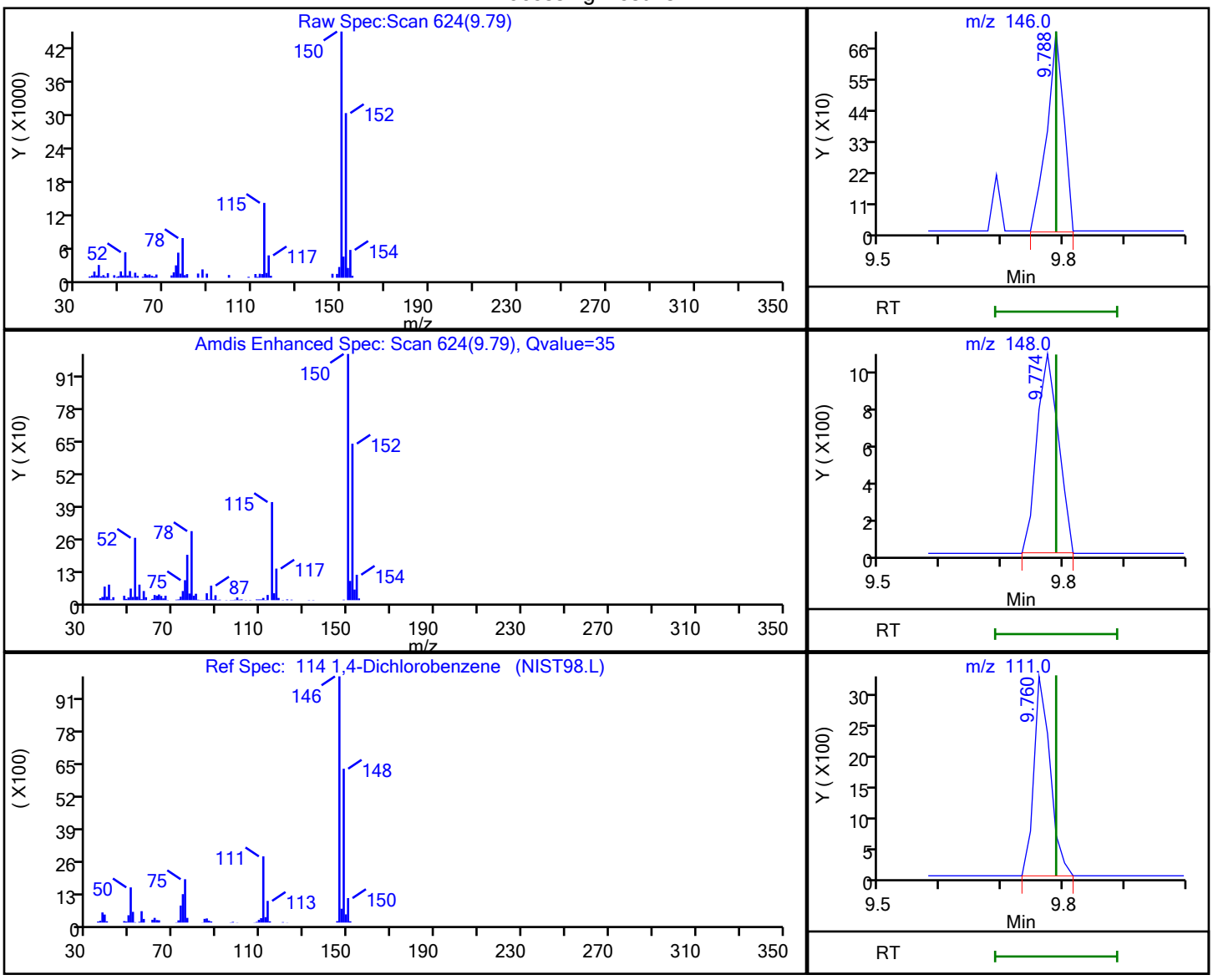
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D				
Injection Date:	18-Apr-2023 13:44:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-G-6	Lab Sample ID:	280-174957-6		
Client ID:	MW-105S-20230411				
Operator ID:	MED	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

114 1,4-Dichlorobenzene, CAS: 106-46-7

Processing Results



RT	Mass	Response	Amount
9.79	146.00	1367	0.128059
9.77	148.00	2470	
9.76	111.00	6065	

Reviewer: AK2J, 18-Apr-2023 22:33:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

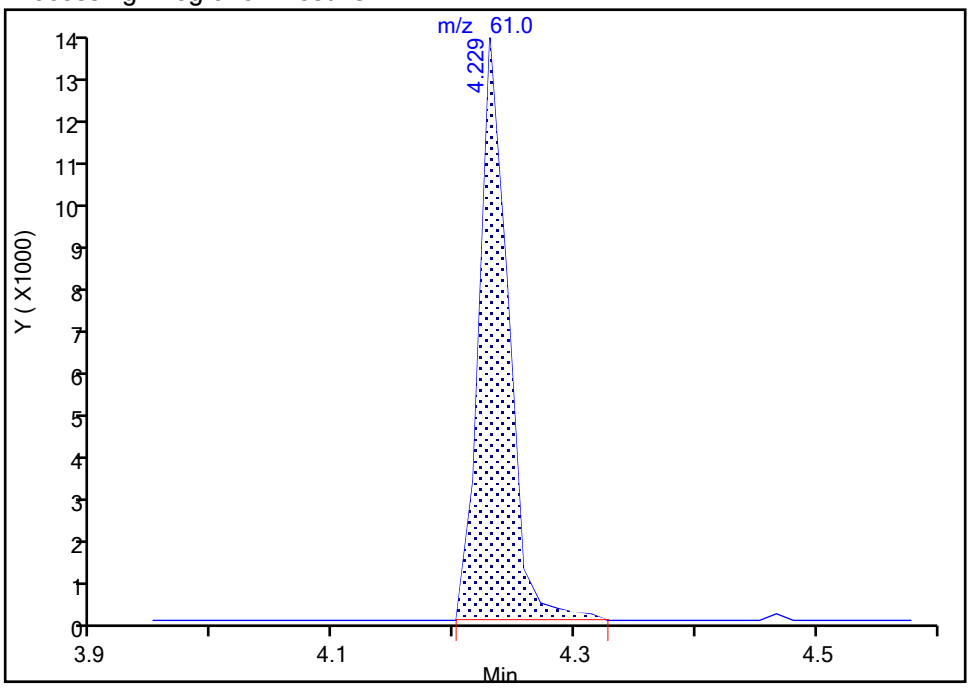
Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D				
Injection Date:	18-Apr-2023 13:44:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-G-6	Lab Sample ID:	280-174957-6		
Client ID:	MW-105S-20230411				
Operator ID:	MED	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

44 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 2

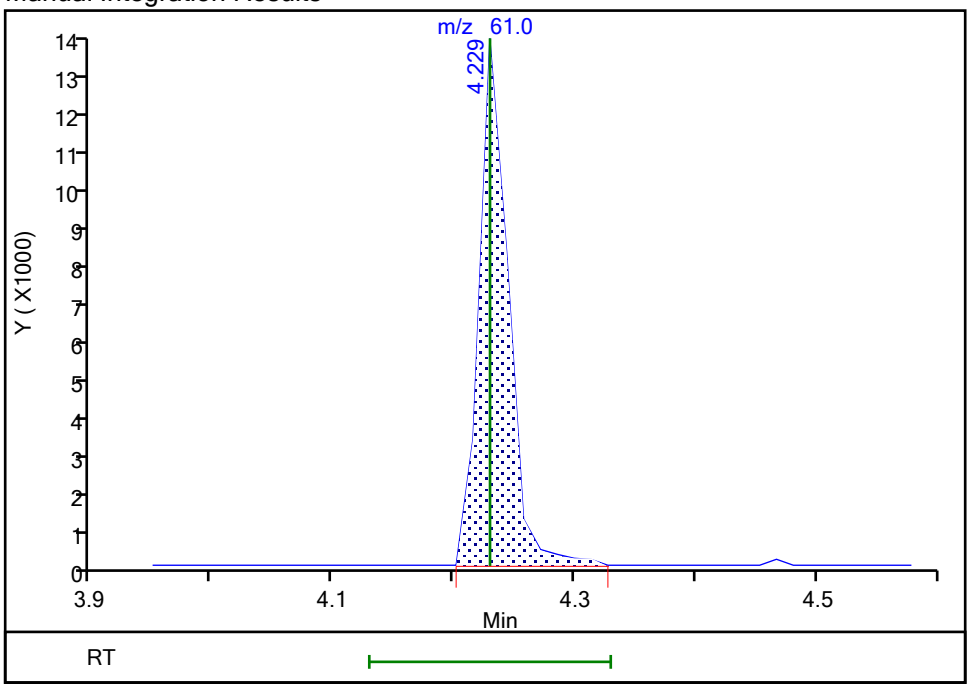
Processing Integration Results

RT: 4.23
Area: 22872
Amount: 2.835701
Amount Units: ug/l



Manual Integration Results

RT: 4.23
Area: 22872
Amount: 2.835701
Amount Units: ug/l



Reviewer: AK2J, 18-Apr-2023 22:33:29

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

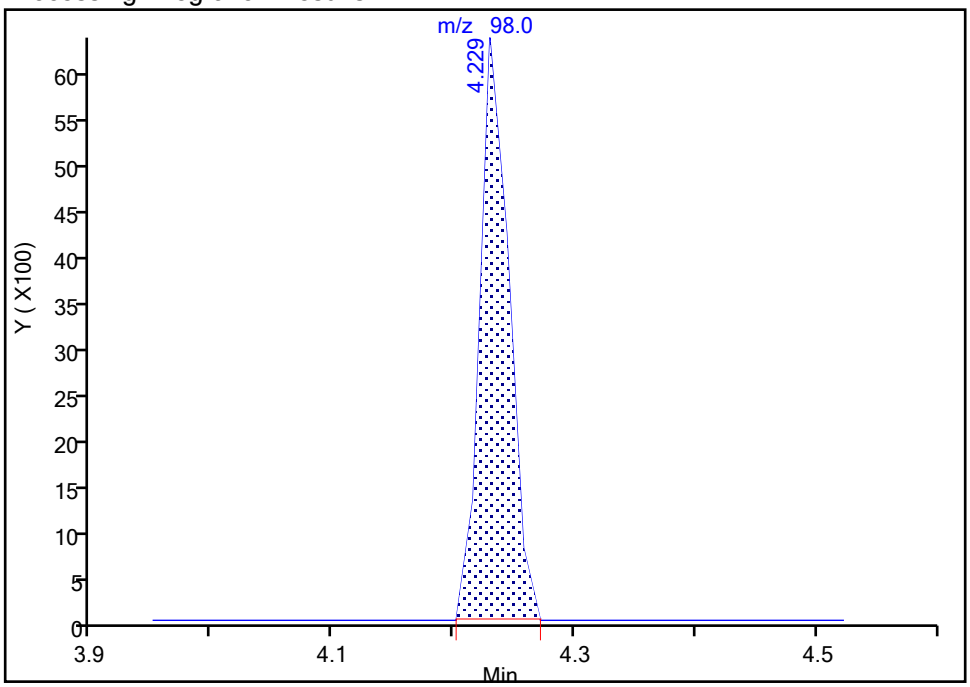
Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D				
Injection Date:	18-Apr-2023 13:44:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-G-6	Lab Sample ID:	280-174957-6		
Client ID:	MW-105S-20230411				
Operator ID:	MED	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

44 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 3

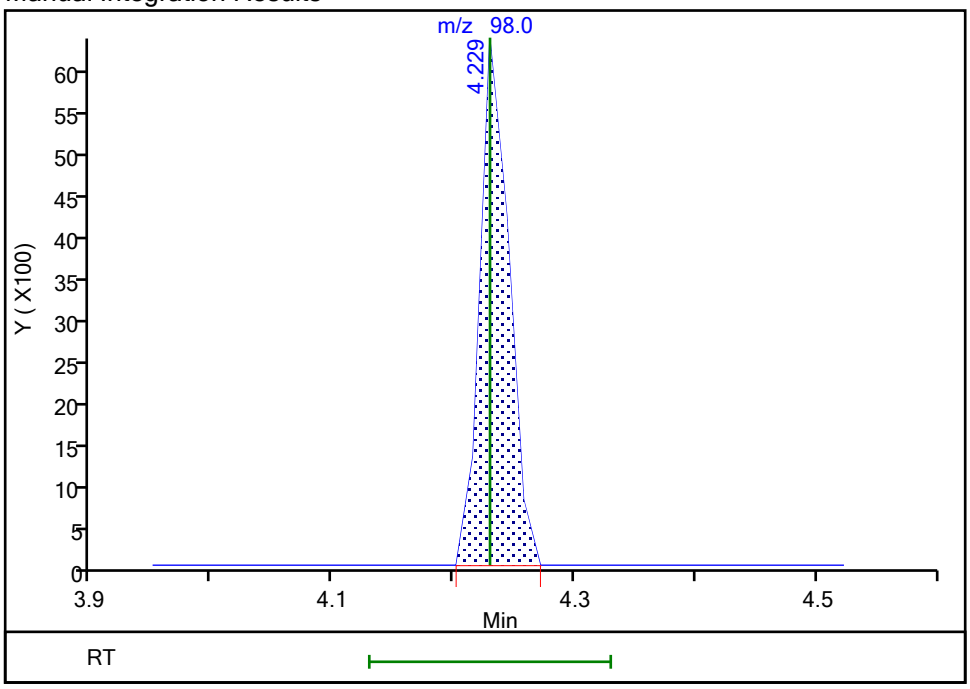
Processing Integration Results

RT: 4.23
Area: 10600
Amount: 2.835701
Amount Units: ug/l



Manual Integration Results

RT: 4.23
Area: 10600
Amount: 2.835701
Amount Units: ug/l



Reviewer: AK2J, 18-Apr-2023 22:33:29
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

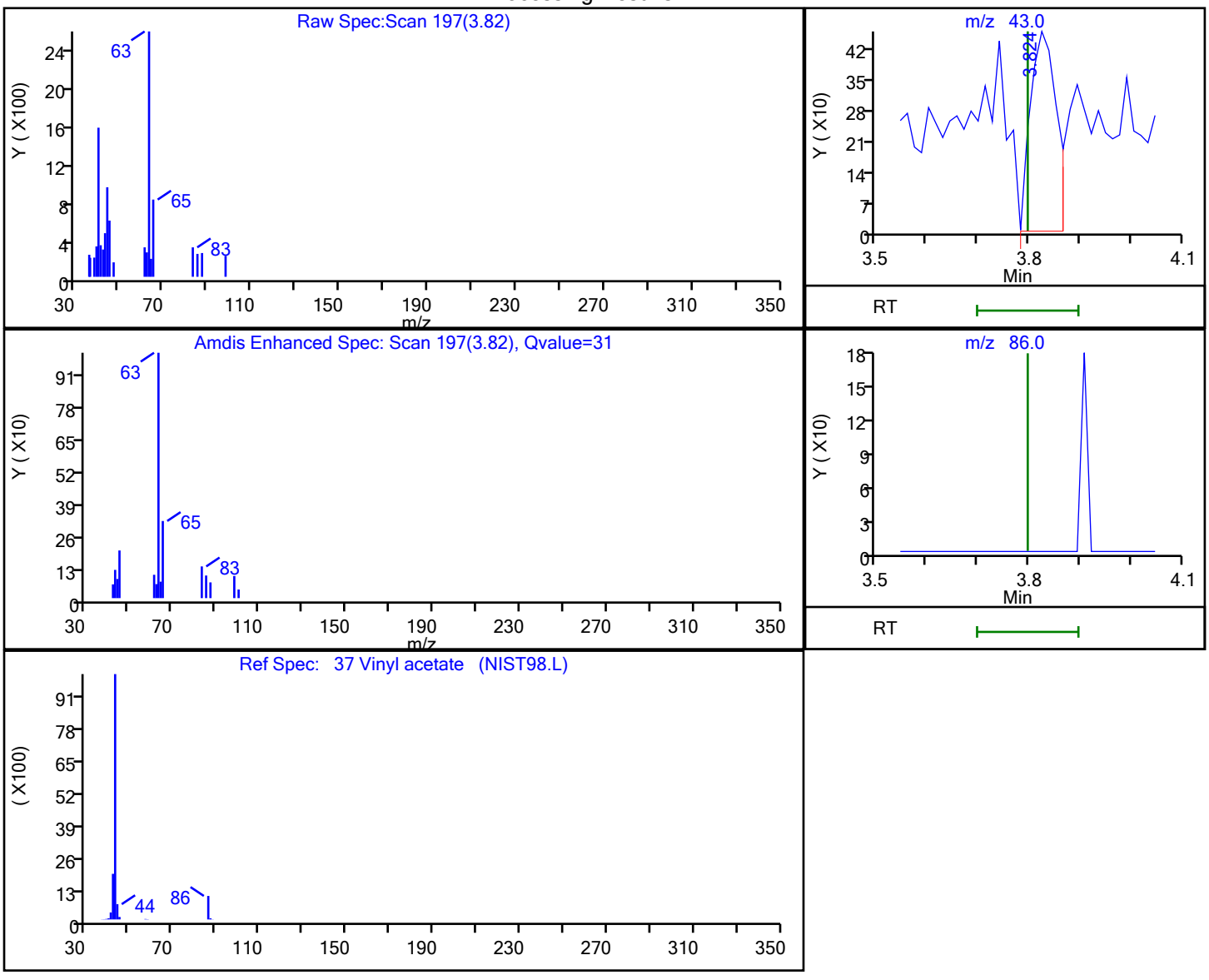
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5436.D				
Injection Date:	18-Apr-2023 13:44:30	Instrument ID:	VMS_MS11		
Lims ID:	280-174957-G-6	Lab Sample ID:	280-174957-6		
Client ID:	MW-105S-20230411				
Operator ID:	MED	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

37 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
3.82	43.00	1649	0.132795
3.80	86.00	0	

Reviewer: AK2J, 18-Apr-2023 22:32:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: EB-01-20230411 | Lab Sample ID: 280-174957-7

Matrix: Water | Lab File ID: X502759.D

Analysis Method: 8260D | Date Collected: 04/11/2023 15:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 22:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: EB-01-20230411 | Lab Sample ID: 280-174957-7

Matrix: Water | Lab File ID: X502759.D

Analysis Method: 8260D | Date Collected: 04/11/2023 15:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 22:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: EB-01-20230411 | Lab Sample ID: 280-174957-7

Matrix: Water | Lab File ID: X502759.D

Analysis Method: 8260D | Date Collected: 04/11/2023 15:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 22:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	104		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502759.D
Lims ID: 280-174957-B-7
Client ID: EB-01-20230411
Sample Type: Client
Inject. Date: 24-Apr-2023 22:37:30 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-174957-B-7
Misc. Info.: 280-0120722-014
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 11:59:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1683

First Level Reviewer: BX8N Date: 25-Apr-2023 06:56:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1417108	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	333516	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	527760	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	348506	51.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	358104	50.0	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1480929	52.1	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	92	479235	50.8	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	92	479235	NR	
10 Dichlorodifluoromethane	85		1.696				ND	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.967				ND	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94	2.253	2.246	0.007	56	740	0.2155	
15 Chloroethane	64		2.339				ND	
16 Dichlorofluoromethane	67		2.504				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.646				ND	
19 Ethyl ether	59		2.747				ND	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96		2.940				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.033				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	7
28 Acetonitrile	41		3.161				ND	U
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.204				ND	7
31 Methylene Chloride	84		3.297				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	U
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.783				ND	
41 Isopropyl ether	87		3.805				ND	
40 1,1-Dichloroethane	63		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96		4.212				ND	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.391				ND	
54 Chloroform	83		4.441				ND	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	
63 1,2-Dichloroethane	62		4.877				ND	
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.028				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95		5.335				ND	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.893				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164		6.801				ND	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.166				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.552			ND		U
90 Chlorobenzene	112		7.595			ND		
91 1,1,1,2-Tetrachloroethane	131		7.666			ND		
92 Ethylbenzene	106		7.673			ND		
93 m-Xylene & p-Xylene	106		7.788			ND		
94 o-Xylene	106		8.152			ND		
95 Styrene	104		8.167			ND		
96 Bromoform	173		8.345			ND		
97 Isopropylbenzene	105		8.488			ND		
98 cis-1,4-Dichloro-2-butene	53		8.538			ND		
99 Cyclohexanone	55		8.588			ND		U
100 1,1,2,2-Tetrachloroethane	83		8.774			ND		
101 Bromobenzene	156		8.810			ND		
102 trans-1,4-Dichloro-2-butene	53		8.810			ND		
103 1,2,3-Trichloropropane	110		8.839			ND		
104 N-Propylbenzene	120		8.889			ND		
105 2-Chlorotoluene	126		8.982			ND		
106 1,3,5-Trimethylbenzene	105		9.060			ND		
107 4-Chlorotoluene	126		9.103			ND		
108 tert-Butylbenzene	119		9.368			ND		
109 Pentachloroethane	167		9.403			ND		
110 1,2,4-Trimethylbenzene	105		9.425			ND		
111 sec-Butylbenzene	134		9.589			ND		
112 1,3-Dichlorobenzene	146		9.711			ND		
113 4-Isopropyltoluene	119		9.732			ND		
114 1,4-Dichlorobenzene	146		9.811			ND		
115 1,2,3-Trimethylbenzene	105		9.832			ND		
116 n-Butylbenzene	91		10.133			ND		
117 1,2-Dichlorobenzene	146		10.169			ND		
118 1,2-Dibromo-3-Chloropropane	157		10.948			ND		U
119 1,3,5-Trichlorobenzene	180		11.134			ND		
120 1,2,4-Trichlorobenzene	180		11.763			ND		
121 Hexachlorobutadiene	225		11.906			ND		
122 Naphthalene	128		12.035			ND		
123 1,2,3-Trichlorobenzene	180		12.256			ND		
166 Ethyl acrylate	55		0.000			ND		
167 1-Chloro-1-fluoroethane TIC	1		0.000			ND		
127 n-Nonyl Aldehyde	1		0.000			ND		
171 4-Bromofluorobenzene	95		0.000			ND		
165 t-Amyl alcohol	1		0.000			ND		
134 Propene oxide TIC	58		5.334			ND		
S 136 1,3-Dichloropropene, Total	1		0.000			ND		7
S 138 Xylenes, Total	106		0.000			ND		7
S 137 Total BTEX	1		0.000			ND		7
S 140 Trihalomethanes, Total	1		0.000			ND		7
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1		0.000			ND		7
T 152 Methyl cyclohexane TIC	1		0.000			ND		
T 148 Dicyclopentadiene TIC	1		0.000			ND		
T 150 4-Ethyltoluene TIC	1		0.000			ND		
T 153 Cyclohexane TIC	1		0.000			ND		
T 144 1,3-Butadiene TIC	1		0.000			ND		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

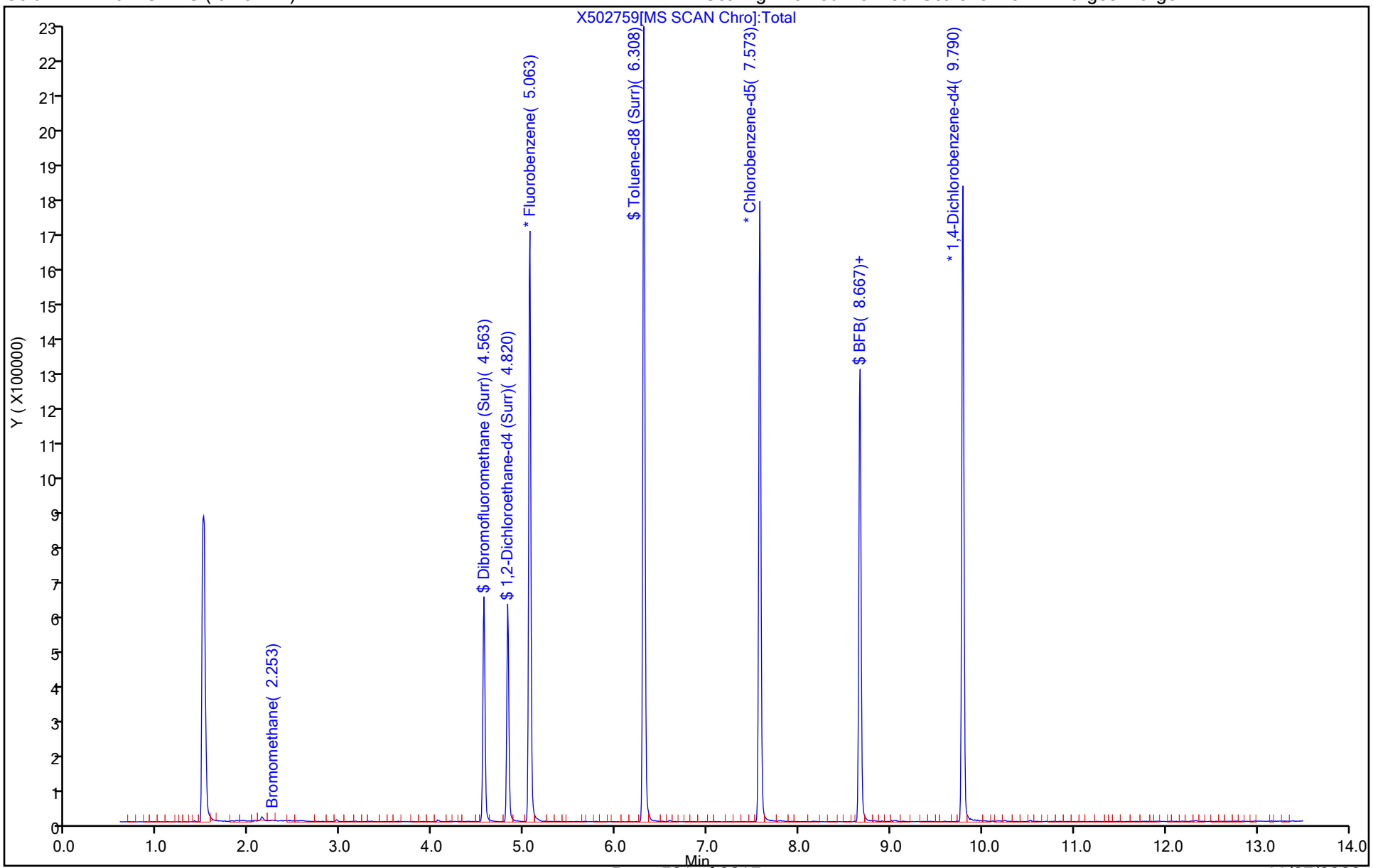
Report Date: 25-Apr-2023 11:59:56 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502759.D

Injection Date:	24-Apr-2023 22:37:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	280-174957-B-7	Lab Sample ID:	280-174957-7	Worklist Smp#:	14
Client ID:	EB-01-20230411				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502759.D
Lims ID: 280-174957-B-7
Client ID: EB-01-20230411
Sample Type: Client
Inject. Date: 24-Apr-2023 22:37:30 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-174957-B-7
Misc. Info.: 280-0120722-014
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 11:59:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1683

First Level Reviewer: BX8N Date: 25-Apr-2023 06:56:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.1	102.25
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.0	100.04
$ 6 Toluene-d8 (Surr)	50.0	52.1	104.25
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.8	101.62

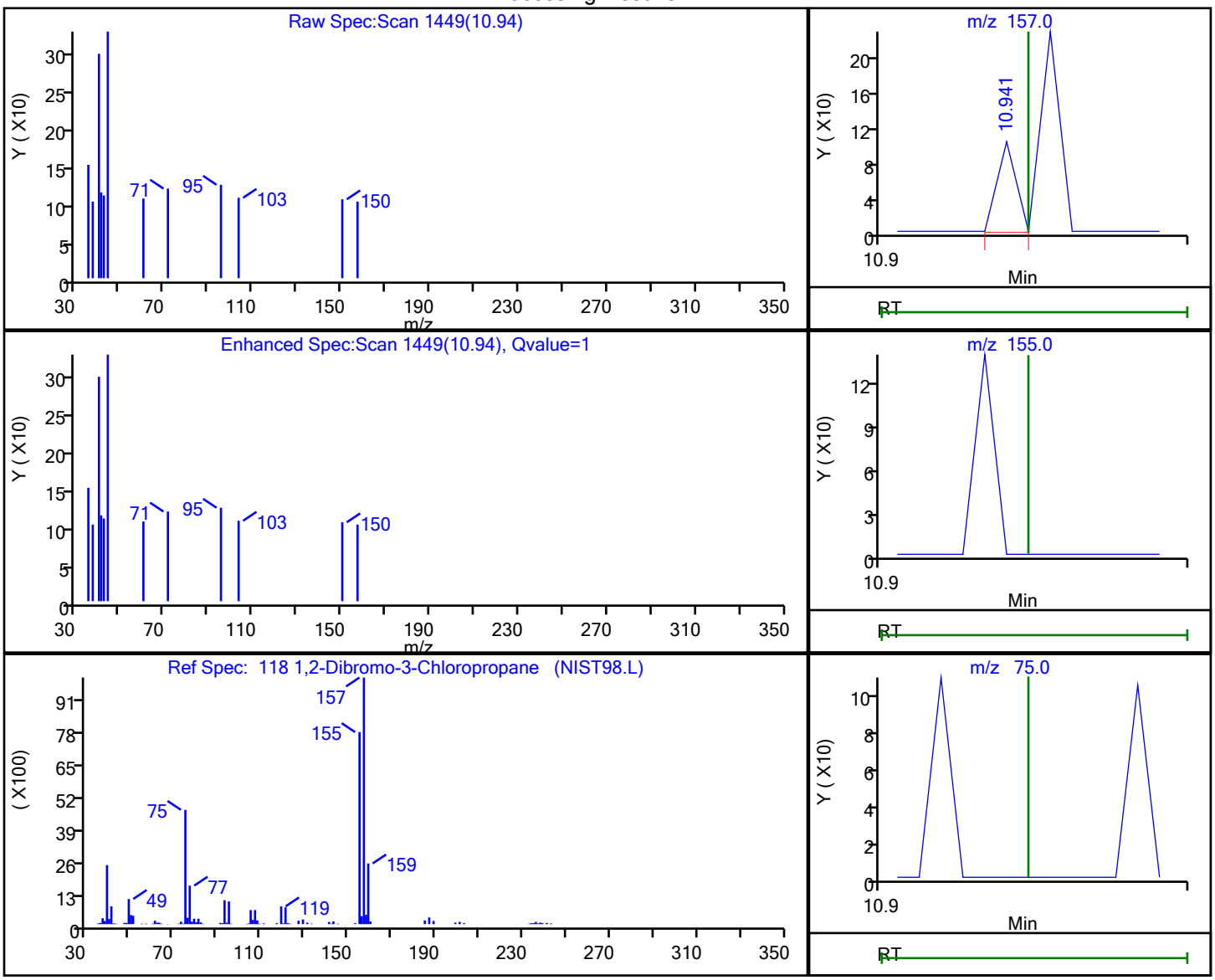
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502759.D				
Injection Date:	24-Apr-2023 22:37:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-B-7	Lab Sample ID:	280-174957-7		
Client ID:	EB-01-20230411				
Operator ID:	bj	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

118 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Processing Results



RT	Mass	Response	Amount
10.94	157.00	43	0.426620
10.95	155.00	0	
10.95	75.00	0	

Reviewer: BX8N, 25-Apr-2023 06:55:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

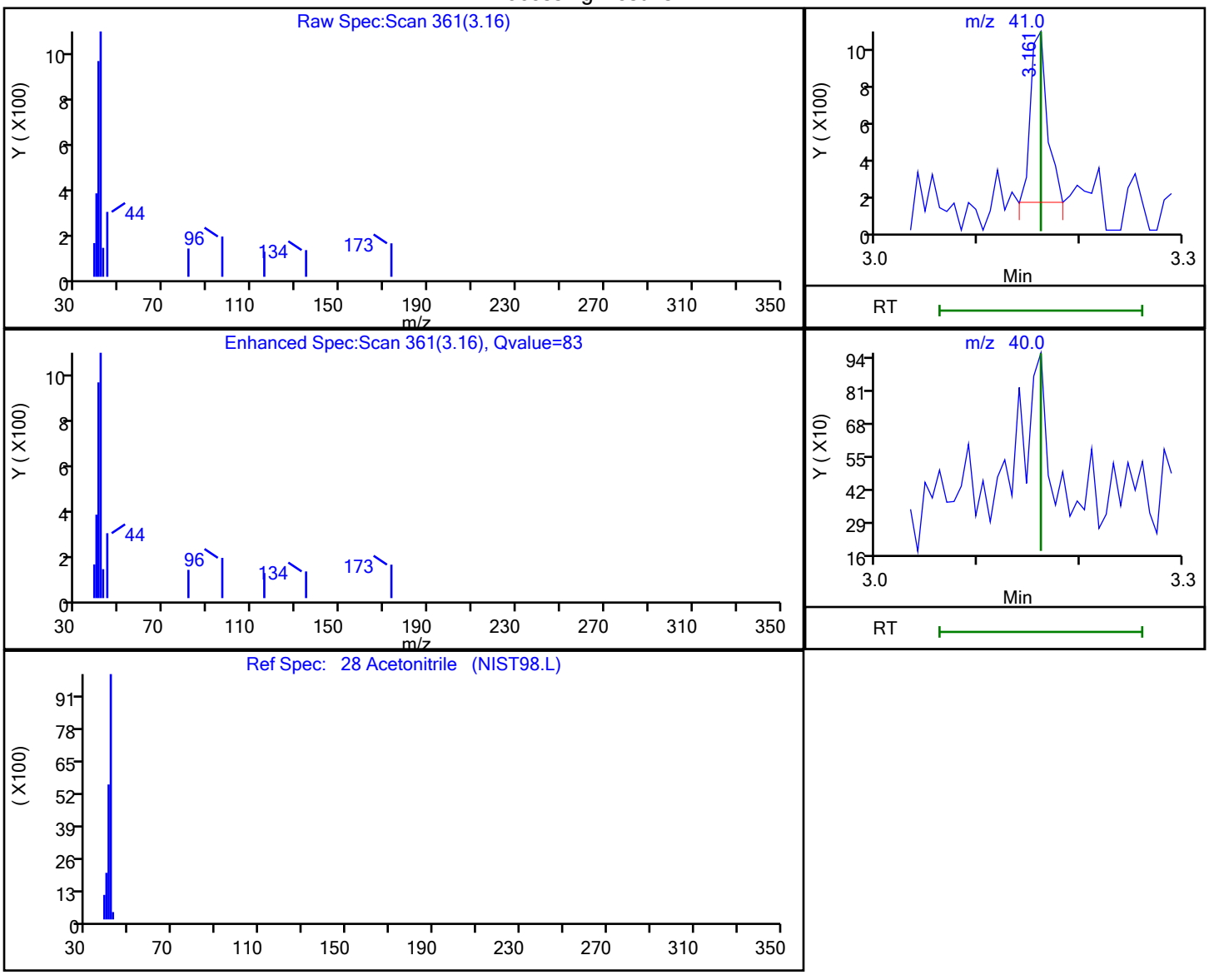
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502759.D				
Injection Date:	24-Apr-2023 22:37:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-B-7	Lab Sample ID:	280-174957-7		
Client ID:	EB-01-20230411				
Operator ID:	bj	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

28 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
3.16	41.00	1069	1.350618
3.16	40.00	0	

Reviewer: BX8N, 25-Apr-2023 06:55:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

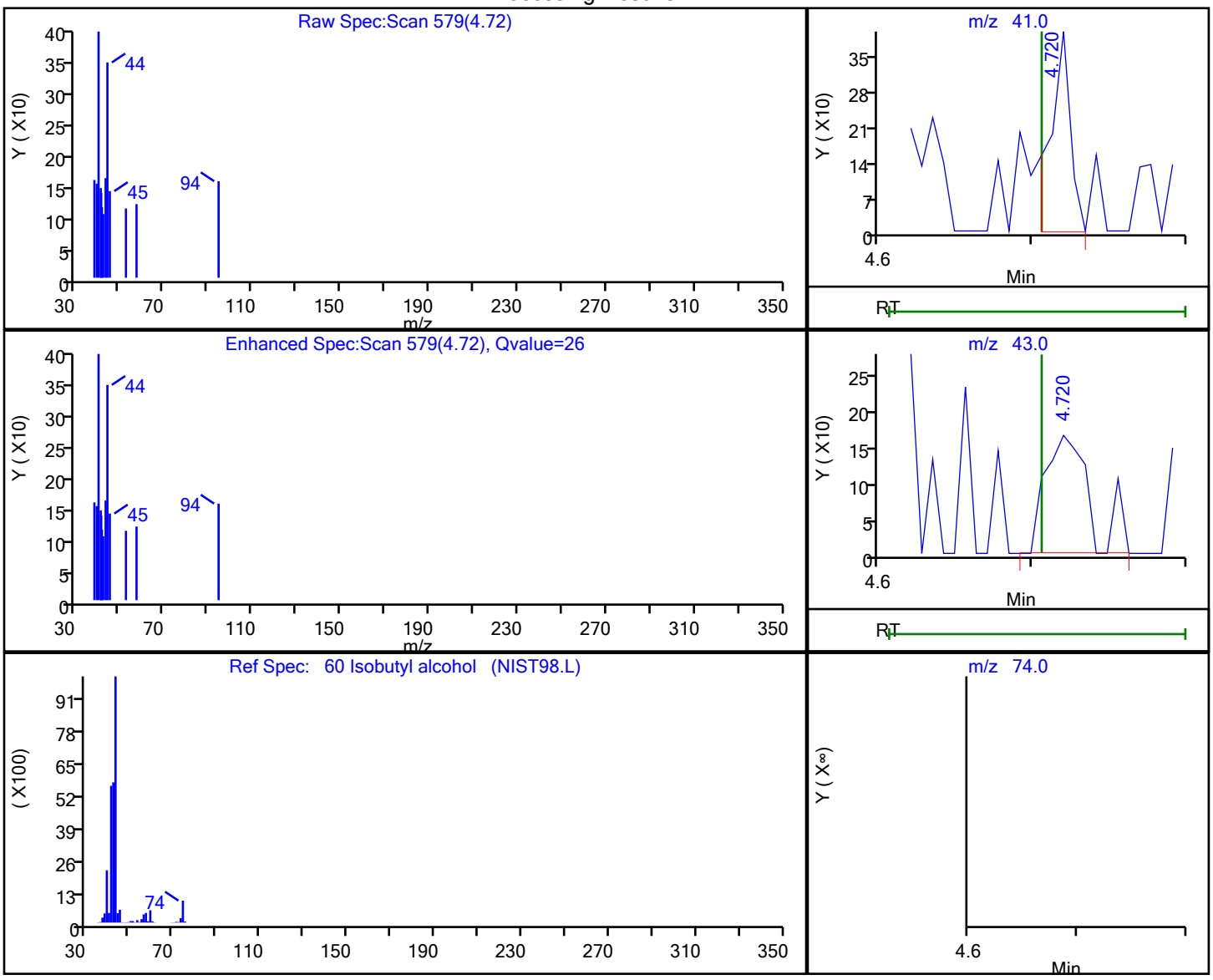
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502759.D				
Injection Date:	24-Apr-2023 22:37:30	Instrument ID:	VMS_X4		
Lims ID:	280-174957-B-7	Lab Sample ID:	280-174957-7		
Client ID:	EB-01-20230411				
Operator ID:	bj	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.72	41.00	362	13.354377
4.72	43.00	325	
4.71	74.00	0	

Reviewer: BX8N, 25-Apr-2023 06:55:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 595485

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 12/04/2022 19:26 Calibration End Date: 12/04/2022 22:13 Calibration ID: 74080

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-595485/29	ms11_0745.D
Level 2	STD2 280-595485/28	ms11_0744.D
Level 3	STD5 280-595485/27	ms11_0743.D
Level 4	STD10 280-595485/26	ms11_0742.D
Level 5	STD50 280-595485/25	ms11_0741.D
Level 6	STD75 280-595485/24	ms11_0740.D
Level 7	STD100 280-595485/23	ms11_0739.D
Level 8	STD200 280-595485/22	ms11_0738.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Ethanol	0.0064 0.0061	0.0068 0.0063	0.0059 0.0067	0.0061	0.0060	Ave		0.0063				5.2		15.0			
Isopropyl alcohol	0.0353 0.0293	0.0319 0.0312	0.0294 0.0328	0.0311	0.0297	Ave		0.0313				6.5		15.0			
Acetonitrile	0.0674 0.0548	0.0681 0.0565	0.0599 0.0558	0.0592	0.0558	Ave		0.0597				8.8		15.0			
Isopropyl ether	0.2218 0.2102	0.2060 0.2167	0.2088 0.2125	0.2133	0.2146	Ave		0.2130				2.3		15.0			
Chloroprene	0.4328 0.4121	0.4244 0.4107	0.3969 0.4124	0.4226	0.4160	Ave		0.4160				2.6		15.0			
Tert-butyl ethyl ether	0.9020 0.8438	0.8915 0.8588	0.8416 0.8435	0.8610	0.8477	Ave		0.8612				2.7		15.0			
Ethyl acetate	+++++ 0.3551	0.4102 0.3663	0.3769 0.3649	0.3717	0.3539	Ave		0.3713				5.1		15.0			
Propionitrile	0.0563 0.0571	0.0600 0.0594	0.0588 0.0598	0.0610	0.0580	Ave		0.0588				2.7		15.0			
Methacrylonitrile	0.2045 0.2129	0.2199 0.2185	0.2097 0.2031	0.2205	0.2134	Ave		0.2128				3.2		15.0			
Tert-amyl methyl ether	0.8287 0.7779	0.8192 0.7927	0.7599 0.7939	0.7936	0.7841	Ave		0.7938				2.8		15.0			
n-Butanol	0.0121 0.0133	0.0140 0.0142	0.0134 0.0153	0.0141	0.0134	Ave		0.0137				6.8		15.0			
Methyl methacrylate	0.0892 0.0820	0.0865 0.0853	0.0827 0.0860	0.0854	0.0831	Ave		0.0850				2.8		15.0			
2-Nitropropane	0.0868 0.1076	0.1156 0.1135	0.0981 0.1164	0.1083	0.1077	Ave		0.1067				9.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 595485

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 12/04/2022 19:26 Calibration End Date: 12/04/2022 22:13 Calibration ID: 74080

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
cis-1,4-Dichloro-2-butene	0.2649 0.3157	0.3044 0.3190	0.2796 0.3305	0.3070	0.3078	Ave		0.3036				7.1		15.0			
1,2,3-Trimethylbenzene	2.6386 2.4906	2.7414 2.5105	2.5209 2.4711	2.6103	2.5220	Ave		2.5632				3.6		15.0			
1,3,5-Trichlorobenzene	0.9535 0.8124	0.8848 0.8086	0.8355 0.8176	0.8495	0.8167	Ave		0.8473				5.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 595485

SDG No.:

Instrument ID: VMS_MS11 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) Y

Calibration Start Date: 12/04/2022 19:26 | Calibration End Date: 12/04/2022 22:13 | Calibration ID: 74080

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-595485/29	ms11_0745.D
Level 2	STD2 280-595485/28	ms11_0744.D
Level 3	STD5 280-595485/27	ms11_0743.D
Level 4	STD10 280-595485/26	ms11_0742.D
Level 5	STD50 280-595485/25	ms11_0741.D
Level 6	STD75 280-595485/24	ms11_0740.D
Level 7	STD100 280-595485/23	ms11_0739.D
Level 8	STD200 280-595485/22	ms11_0738.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Ethanol	FB	Ave	12788 949270	27606 1320934	59022 2756604	126923	626689	60.0 4500	120 6000	300 12000	600	3000
Isopropyl alcohol	FB	Ave	11836 765489	21606 1082024	49192 2257571	106922	516050	10.0 750	20.0 1000	50.0 2000	100	500
Acetonitrile	FB	Ave	22613 1430220	46091 1961065	100373 3838695	203718	971307	10.0 750	20.0 1000	50.0 2000	100	500
Isopropyl ether	FB	Ave	7443 548823	13937 752447	34979 1461387	73413	373421	1.00 75.0	2.00 100	5.00 200	10.0	50.0
Chloroprene	FB	Ave	14525 1075852	28707 1426242	66500 2836061	145430	723777	1.00 75.0	2.00 100	5.00 200	10.0	50.0
Tert-butyl ethyl ether	FB	Ave	30270 2203094	60311 2982315	140988 5800637	296307	1475077	1.00 75.0	2.00 100	5.00 200	10.0	50.0
Ethyl acetate	FB	Ave	+++++ 1854036	55500 2544087	126283 5018201	255827	1231651	+++++ 150	4.00 200	10.0 400	20.0	100
Propionitrile	FB	Ave	18889 1490092	40605 2061958	98461 4109431	210012	1009787	10.0 750	20.0 1000	50.0 2000	100	500
Methacrylonitrile	FB	Ave	68643 5557703	148761 7589102	351326 13968559	758926	3712692	10.0 750	20.0 1000	50.0 2000	100	500
Tert-amyl methyl ether	FB	Ave	27810 2031096	55417 2752610	127314 5459573	273093	1364392	1.00 75.0	2.00 100	5.00 200	10.0	50.0
n-Butanol	FB	Ave	10122 869216	23608 1230218	56279 2632981	121476	582636	25.0 1875	50.0 2500	125 5000	250	1250
Methyl methacrylate	FB	Ave	5990 428238	11709 592584	27702 1182255	58801	289025	2.00 150	4.00 200	10.0 400	20.0	100
2-Nitropropane	FB	Ave	5825 561733	15638 788161	32855 1600223	74529	374839	2.00 150	4.00 200	10.0 400	20.0	100
cis-1,4-Dichloro-2-butene	DCBd4	Ave	7051 627140	16346 861968	37386 1779112	82591	413956	2.00 150	4.00 200	10.0 400	20.0	100
1,2,3-Trimethylbenzene	DCBd4	Ave	35121 2473587	73609 3391377	168515 6650299	351100	1696020	1.00 75.0	2.00 100	5.00 200	10.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 595485

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624Sil ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 12/04/2022 19:26 Calibration End Date: 12/04/2022 22:13 Calibration ID: 74080

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,3,5-Trichlorobenzene	DCBd4	Ave	12692 806826	23758 1092310	55849 2200383	114256	549196	1.00 75.0	2.00 100	5.00 200	10.0	50.0

Curve Type Legend:
Ave = Average ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0738.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 04-Dec-2022 19:26:30 ALS Bottle#: 12 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC S
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub30

Method: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Dec-2022 01:00:01 Calib Date: 04-Dec-2022 22:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1601

First Level Reviewer: BX8N Date: 04-Dec-2022 21:01:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1719165	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	92	397183	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.774	9.774	0.000	97	672800	50.0	50.0	
19 Ethanol	45	2.679	2.679	0.000	100	2756604	12000	12763	
72 Isopropyl alcohol	45	3.071	3.071	0.000	99	2257571	2000.0	2096.0	
27 Acetonitrile	41	3.182	3.182	0.000	100	3838695	2000.0	1870.4	
38 Isopropyl ether	87	3.825	3.825	0.000	93	1461387	200.0	199.6	
40 2-Chloro-1,3-butadiene	53	3.881	3.881	0.000	95	2836061	200.0	198.3	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	98	5800637	200.0	195.9	
43 Ethyl acetate	43	4.216	4.216	0.000	100	5018201	400.0	393.1	
46 Propionitrile	54	4.258	4.258	0.000	98	4109431	2000.0	2032.8	
48 Methacrylonitrile	41	4.369	4.369	0.000	86	13968559	2000.0	1908.9	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	89	5459573	200.0	200.0	
61 n-Butanol	56	5.221	5.221	0.000	90	2632981	5000.0	5580.6	
66 Methyl methacrylate	100	5.557	5.557	0.000	91	1182255	400.0	404.4	
70 2-Nitropropane	41	5.906	5.906	0.000	100	1600223	400.0	436.1	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	1779112	400.0	435.5	
110 1,2,3-Trimethylbenzene	105	9.816	9.816	0.000	99	6650299	200.0	192.8	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	2200383	200.0	193.0	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00057 Amount Added: 200.00 Units: uL

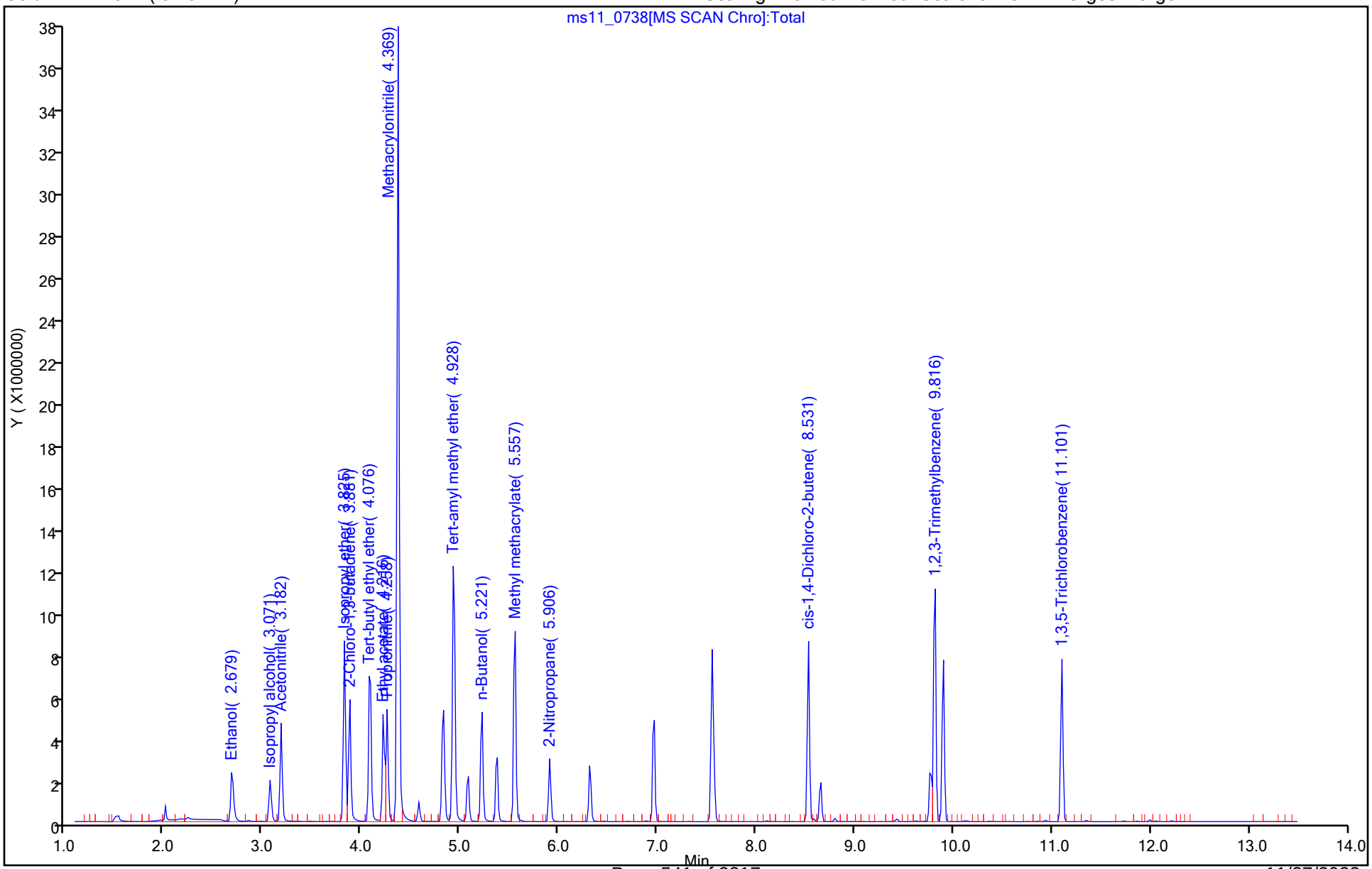
Report Date: 05-Dec-2022 01:00:01 Chrom Revision: 2.3 01-Dec-2022 08:01:02

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0738.D

Injection Date:	04-Dec-2022 19:26:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD200			Worklist Smp#:	22
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0739.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 04-Dec-2022 19:50:30 ALS Bottle#: 13 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub30

Method: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Dec-2022 01:00:02 Calib Date: 04-Dec-2022 22:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1601

First Level Reviewer: BX8N Date: 04-Dec-2022 21:01:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1736280	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	91	402861	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.774	9.774	0.000	97	675447	50.0	50.0	
19 Ethanol	45	2.679	2.679	0.000	100	1320934	6000.0	6055.5	
72 Isopropyl alcohol	45	3.070	3.070	0.000	99	1082024	1000.0	994.7	
27 Acetonitrile	41	3.182	3.182	0.000	99	1961065	1000.0	946.1	
38 Isopropyl ether	87	3.825	3.825	0.000	93	752447	100.0	101.7	
40 2-Chloro-1,3-butadiene	53	3.881	3.881	0.000	94	1426242	100.0	98.7	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	99	2982315	100.0	99.7	
43 Ethyl acetate	43	4.216	4.216	0.000	100	2544087	200.0	197.3	
46 Propionitrile	54	4.258	4.258	0.000	98	2061958	1000.0	1009.9	
48 Methacrylonitrile	41	4.369	4.369	0.000	92	7589102	1000.0	1026.9	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	90	2752610	100.0	99.9	
61 n-Butanol	56	5.207	5.207	0.000	92	1230218	2500.0	2581.7	
66 Methyl methacrylate	100	5.556	5.556	0.000	91	592584	200.0	200.7	
70 2-Nitropropane	41	5.906	5.906	0.000	100	788161	200.0	212.7	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	861968	200.0	210.2	
110 1,2,3-Trimethylbenzene	105	9.816	9.816	0.000	99	3391377	100.0	97.9	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	1092310	100.0	95.4	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00057 Amount Added: 100.00 Units: uL

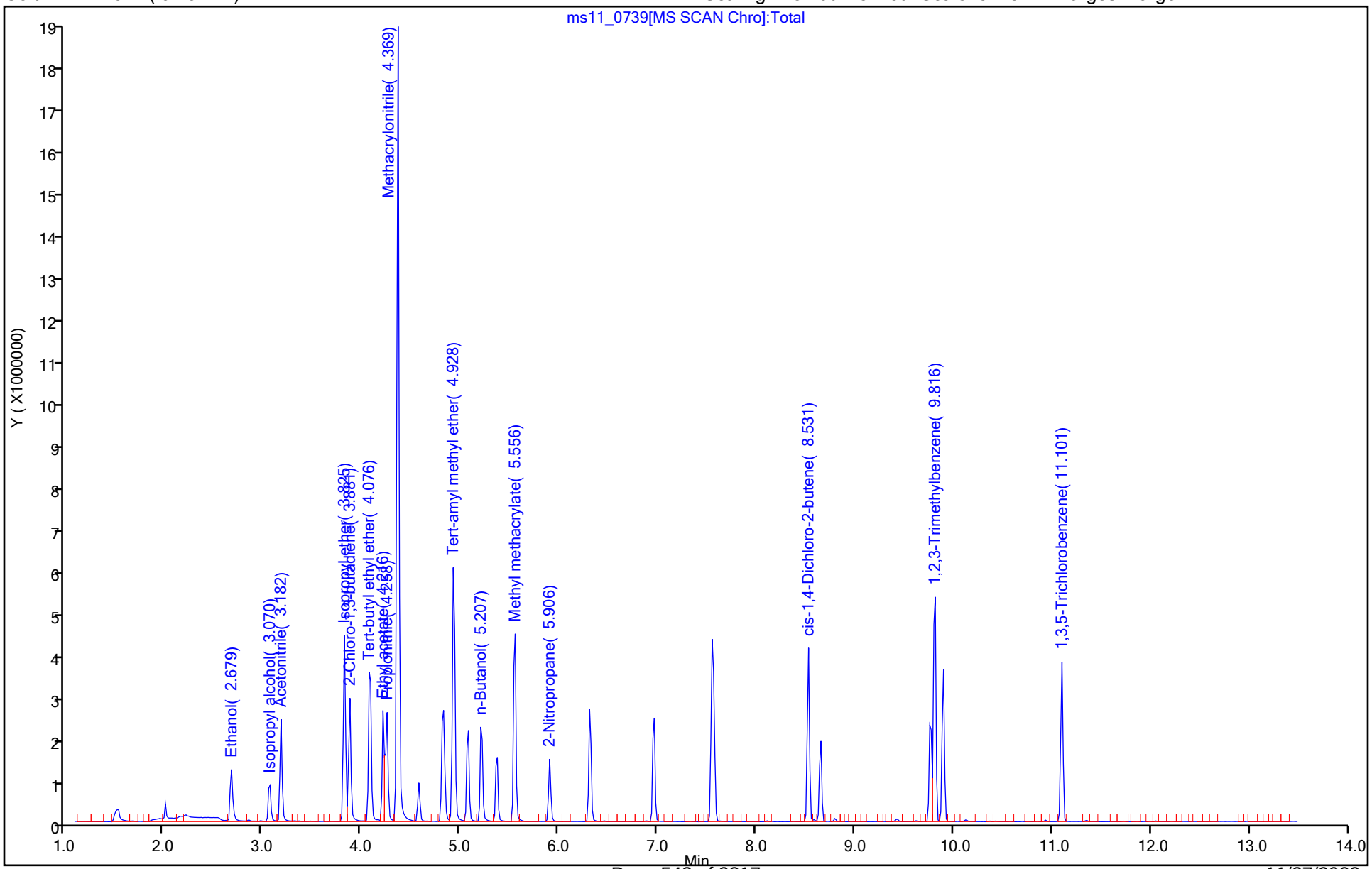
Report Date: 05-Dec-2022 01:00:02 Chrom Revision: 2.3 01-Dec-2022 08:01:02

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0739.D

Injection Date:	04-Dec-2022 19:50:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD100			Worklist Smp#:	23
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0740.D
Lims ID: STD75
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 04-Dec-2022 20:14:30 ALS Bottle#: 14 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub30

Method: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Dec-2022 01:00:03 Calib Date: 04-Dec-2022 22:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1601

First Level Reviewer: BX8N Date: 04-Dec-2022 21:01:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1740598	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	91	406433	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.774	9.774	0.000	96	662105	50.0	50.0	
19 Ethanol	45	2.679	2.679	0.000	100	949270	4500.0	4340.9	
72 Isopropyl alcohol	45	3.070	3.070	0.000	99	765489	750.0	702.0	
27 Acetonitrile	41	3.182	3.182	0.000	99	1430220	750.0	688.3	
38 Isopropyl ether	87	3.825	3.825	0.000	94	548823	75.0	74.0	
40 2-Chloro-1,3-butadiene	53	3.880	3.880	0.000	94	1075852	75.0	74.3	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	99	2203094	75.0	73.5	
43 Ethyl acetate	43	4.216	4.216	0.000	100	1854036	150.0	143.4	
46 Propionitrile	54	4.257	4.257	0.000	99	1490092	750.0	728.0	
48 Methacrylonitrile	41	4.369	4.369	0.000	93	5557703	750.0	750.1	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	90	2031096	75.0	73.5	
61 n-Butanol	56	5.207	5.207	0.000	92	869216	1875.0	1819.6	
66 Methyl methacrylate	100	5.556	5.556	0.000	91	428238	150.0	144.7	
70 2-Nitropropane	41	5.905	5.905	0.000	100	561733	150.0	151.2	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	627140	150.0	156.0	
110 1,2,3-Trimethylbenzene	105	9.816	9.816	0.000	99	2473587	75.0	72.9	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	97	806826	75.0	71.9	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00057 Amount Added: 75.00 Units: uL

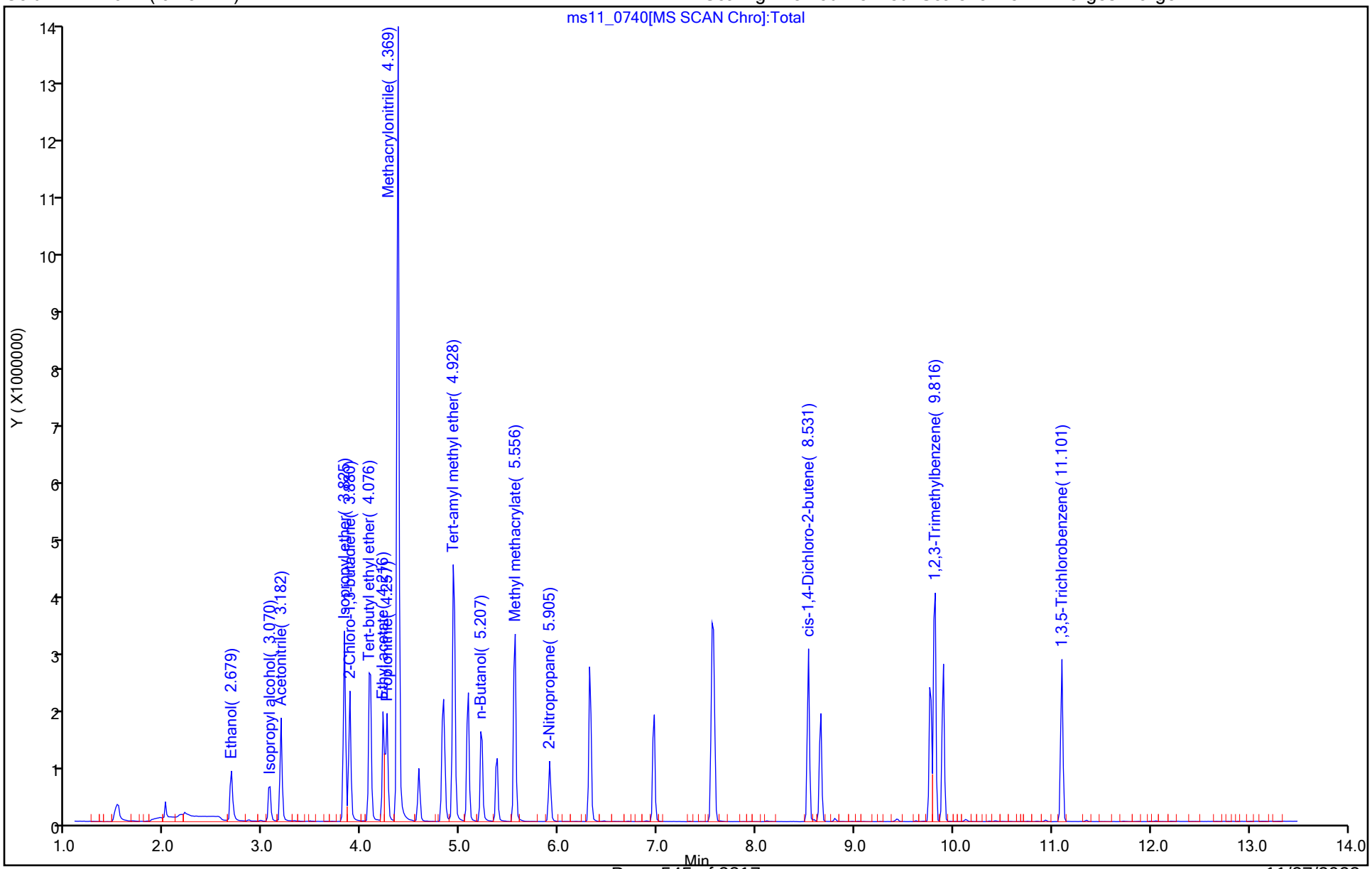
Report Date: 05-Dec-2022 01:00:03 Chrom Revision: 2.3 01-Dec-2022 08:01:02

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0740.D

Injection Date:	04-Dec-2022 20:14:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD75			Worklist Smp#:	24
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0741.D
Lims ID: STD50
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 04-Dec-2022 20:38:30 ALS Bottle#: 15 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub30

Method: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Dec-2022 01:00:04 Calib Date: 04-Dec-2022 22:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1601

First Level Reviewer: BX8N Date: 04-Dec-2022 21:02:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1740049	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	91	402869	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.774	9.774	0.000	97	672494	50.0	50.0	
19 Ethanol	45	2.679	2.679	0.000	100	626689	3000.0	2866.7	
72 Isopropyl alcohol	45	3.057	3.057	0.000	99	516050	500.0	473.4	
27 Acetonitrile	41	3.182	3.182	0.000	99	971307	500.0	467.6	
38 Isopropyl ether	87	3.825	3.825	0.000	94	373421	50.0	50.4	
40 2-Chloro-1,3-butadiene	53	3.881	3.881	0.000	94	723777	50.0	50.0	
41 Tert-butyl ethyl ether	59	4.090	4.090	0.000	98	1475077	50.0	49.2	
43 Ethyl acetate	43	4.216	4.216	0.000	100	1231651	100.0	95.3	
46 Propionitrile	54	4.258	4.258	0.000	99	1009787	500.0	493.5	
48 Methacrylonitrile	41	4.369	4.369	0.000	93	3712692	500.0	501.3	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	89	1364392	50.0	49.4	
61 n-Butanol	56	5.207	5.207	0.000	92	582636	1250.0	1220.1	
66 Methyl methacrylate	100	5.557	5.557	0.000	91	289025	100.0	97.7	
70 2-Nitropropane	41	5.906	5.906	0.000	99	374839	100.0	100.9	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	413956	100.0	101.4	
110 1,2,3-Trimethylbenzene	105	9.816	9.816	0.000	99	1696020	50.0	49.2	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	549196	50.0	48.2	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00057 Amount Added: 50.00 Units: uL

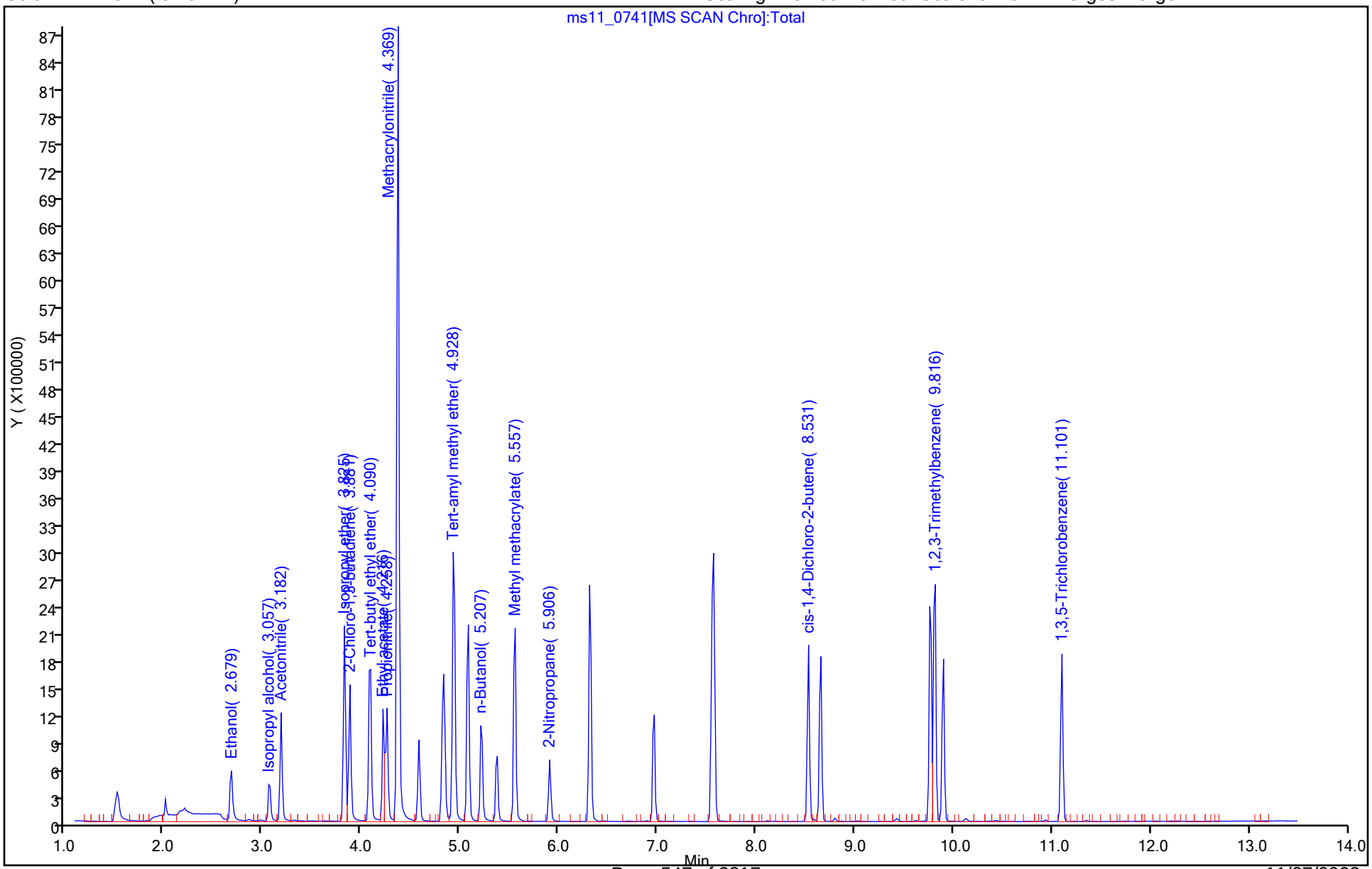
Report Date: 05-Dec-2022 01:00:05 Chrom Revision: 2.3 01-Dec-2022 08:01:02

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0741.D

Injection Date:	04-Dec-2022 20:38:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD50			Worklist Smp#:	25
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0742.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 04-Dec-2022 21:01:30 ALS Bottle#: 16 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub30

Method: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Dec-2022 01:00:06 Calib Date: 04-Dec-2022 22:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1601

First Level Reviewer: BX8N Date: 04-Dec-2022 22:00:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1720674	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	91	400193	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.774	9.774	0.000	97	672521	50.0	50.0	
19 Ethanol	45	2.665	2.665	0.000	100	126923	600.0	587.1	
72 Isopropyl alcohol	45	3.056	3.056	0.000	99	106922	100.0	99.2	
27 Acetonitrile	41	3.182	3.182	0.000	100	203718	100.0	99.2	
38 Isopropyl ether	87	3.824	3.824	0.000	94	73413	10.0	10.0	
40 2-Chloro-1,3-butadiene	53	3.880	3.880	0.000	95	145430	10.0	10.2	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	99	296307	10.0	10.0	
43 Ethyl acetate	43	4.216	4.216	0.000	100	255827	20.0	20.0	
46 Propionitrile	54	4.257	4.257	0.000	99	210012	100.0	103.8	
48 Methacrylonitrile	41	4.369	4.369	0.000	94	758926	100.0	103.6	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	90	273093	10.0	10.0	
61 n-Butanol	56	5.207	5.207	0.000	94	121476	250.0	257.2	
66 Methyl methacrylate	100	5.556	5.556	0.000	91	58801	20.0	20.1	
70 2-Nitropropane	41	5.905	5.905	0.000	100	74529	20.0	20.3	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	82591	20.0	20.2	
110 1,2,3-Trimethylbenzene	105	9.816	9.816	0.000	99	351100	10.0	10.2	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	114256	10.0	10.0	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00057 Amount Added: 10.00 Units: uL

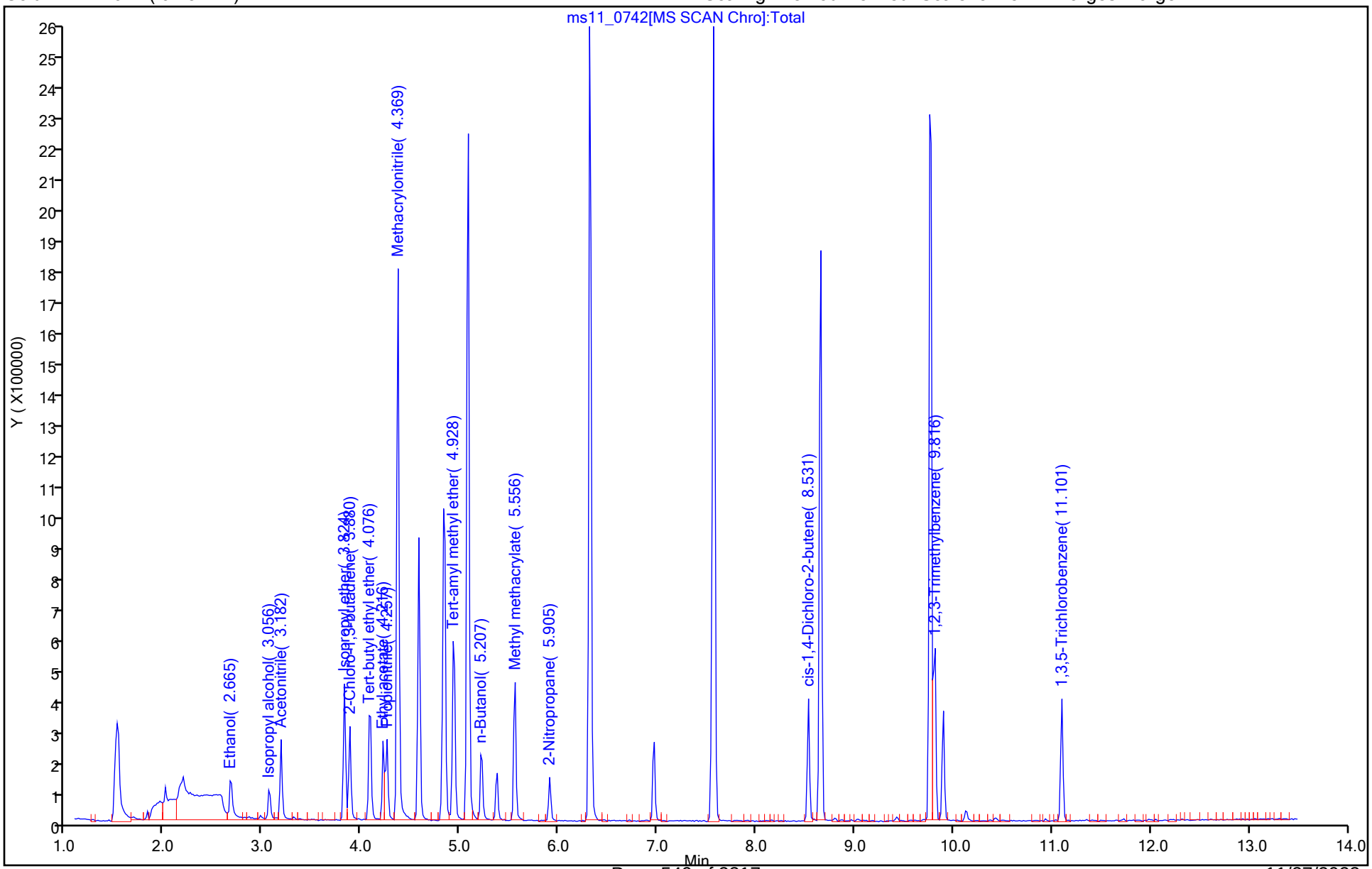
Report Date: 05-Dec-2022 01:00:06 Chrom Revision: 2.3 01-Dec-2022 08:01:02

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0742.D

Injection Date:	04-Dec-2022 21:01:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD10			Worklist Smp#:	26
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0743.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 04-Dec-2022 21:25:30 ALS Bottle#: 17 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub30

Method: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Dec-2022 01:00:08 Calib Date: 04-Dec-2022 22:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1601

First Level Reviewer: BX8N Date: 04-Dec-2022 22:01:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1675322	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	91	389998	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.774	9.774	0.000	97	668467	50.0	50.0	
19 Ethanol	45	2.679	2.679	0.000	100	59022	300.0	280.4	
72 Isopropyl alcohol	45	3.057	3.057	0.000	98	49192	50.0	46.9	
27 Acetonitrile	41	3.182	3.182	0.000	99	100373	50.0	50.2	
38 Isopropyl ether	87	3.825	3.825	0.000	94	34979	5.00	4.90	
40 2-Chloro-1,3-butadiene	53	3.881	3.881	0.000	95	66500	5.00	4.77	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	98	140988	5.00	4.89	
43 Ethyl acetate	43	4.216	4.216	0.000	100	126283	10.0	10.2	
46 Propionitrile	54	4.258	4.258	0.000	98	98461	50.0	50.0	
48 Methacrylonitrile	41	4.369	4.369	0.000	93	351326	50.0	49.3	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	90	127314	5.00	4.79	
61 n-Butanol	56	5.221	5.221	0.000	91	56279	125.0	122.4	
66 Methyl methacrylate	100	5.557	5.557	0.000	91	27702	10.0	9.72	
70 2-Nitropropane	41	5.906	5.906	0.000	100	32855	10.0	9.19	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	37386	10.0	9.21	
110 1,2,3-Trimethylbenzene	105	9.816	9.816	0.000	99	168515	5.00	4.92	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	55849	5.00	4.93	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00057 Amount Added: 5.00 Units: uL

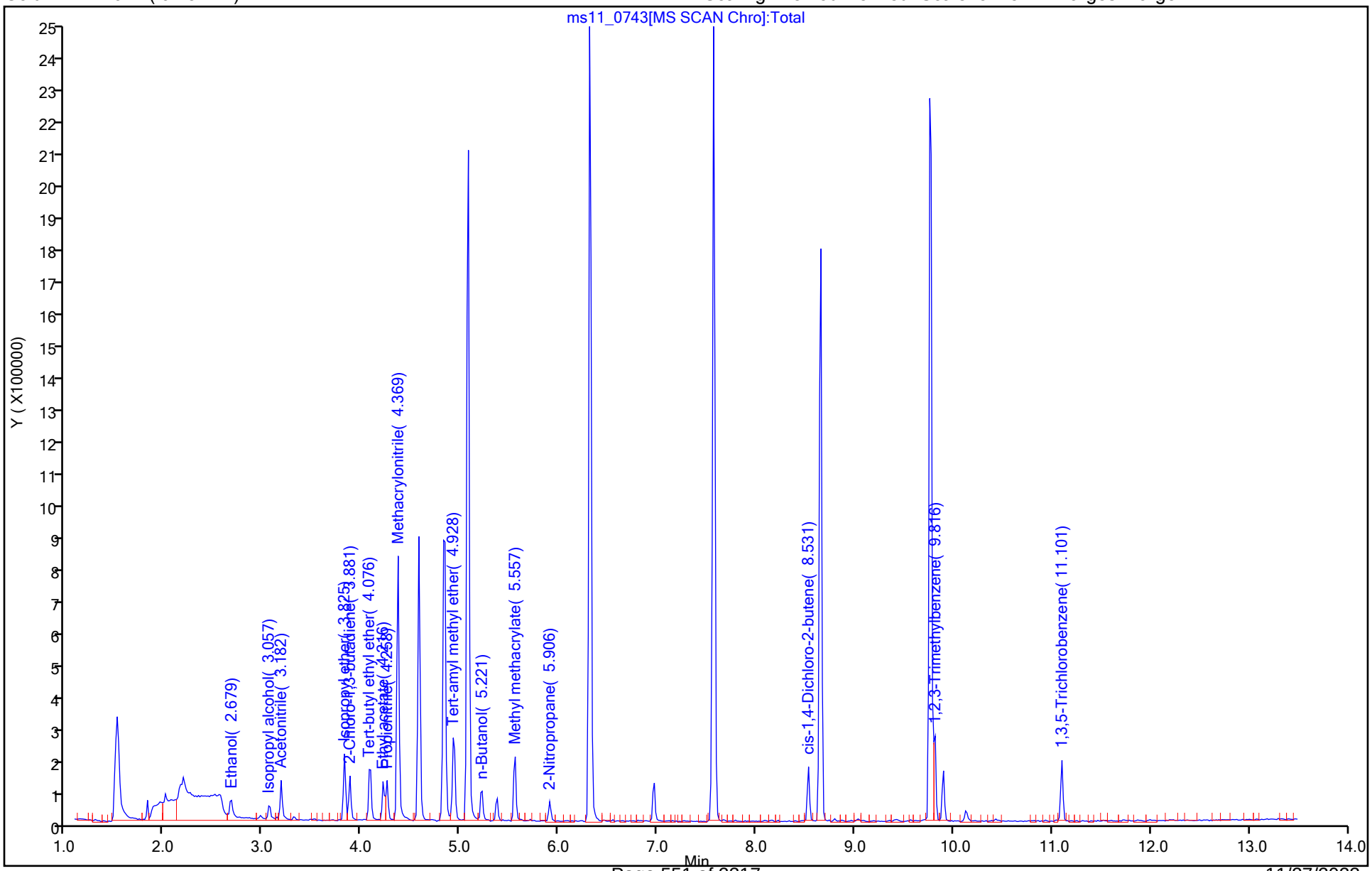
Report Date: 05-Dec-2022 01:00:08 Chrom Revision: 2.3 01-Dec-2022 08:01:02

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0743.D

Injection Date:	04-Dec-2022 21:25:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD5			Worklist Smp#:	27
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0744.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 04-Dec-2022 21:49:30 ALS Bottle#: 18 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub30

Method: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Dec-2022 01:00:09 Calib Date: 04-Dec-2022 22:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1601

First Level Reviewer: BX8N Date: 04-Dec-2022 22:49:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1691219	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	91	389786	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.774	9.774	0.000	97	671262	50.0	50.0	
19 Ethanol	45	2.665	2.665	0.000	99	27606	120.0	129.9	
72 Isopropyl alcohol	45	3.056	3.056	0.000	97	21606	20.0	20.4	
27 Acetonitrile	41	3.182	3.182	0.000	100	46091	20.0	22.8	
38 Isopropyl ether	87	3.825	3.825	0.000	94	13937	2.00	1.93	
40 2-Chloro-1,3-butadiene	53	3.880	3.880	0.000	94	28707	2.00	2.04	
41 Tert-butyl ethyl ether	59	4.090	4.090	0.000	98	60311	2.00	2.07	
43 Ethyl acetate	43	4.216	4.216	0.000	100	55500	4.00	4.42	
46 Propionitrile	54	4.257	4.257	0.000	98	40605	20.0	20.4	
48 Methacrylonitrile	41	4.369	4.369	0.000	93	148761	20.0	20.7	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	91	55417	2.00	2.06	
61 n-Butanol	56	5.221	5.221	0.000	95	23608	50.0	50.9	
66 Methyl methacrylate	100	5.556	5.556	0.000	91	11709	4.00	4.07	
70 2-Nitropropane	41	5.905	5.905	0.000	97	15638	4.00	4.33	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	16346	4.00	4.01	
110 1,2,3-Trimethylbenzene	105	9.816	9.816	0.000	99	73609	2.00	2.14	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	95	23758	2.00	2.09	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00057 Amount Added: 2.00 Units: uL

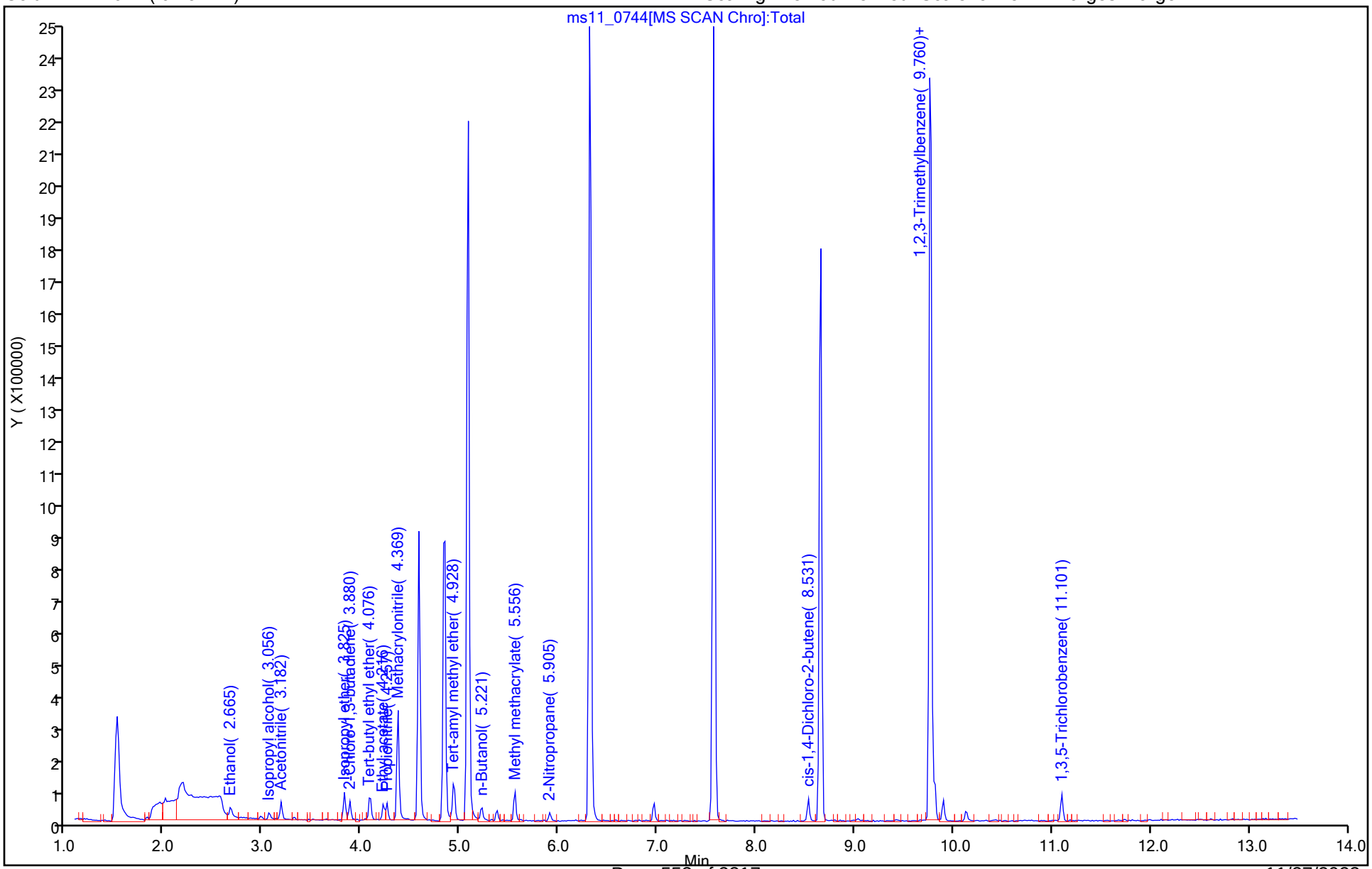
Report Date: 05-Dec-2022 01:00:10 Chrom Revision: 2.3 01-Dec-2022 08:01:02

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0744.D

Injection Date:	04-Dec-2022 21:49:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD2			Worklist Smp#:	28
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 04-Dec-2022 22:13:30 ALS Bottle#: 19 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub30

Method: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Dec-2022 01:00:11 Calib Date: 04-Dec-2022 22:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1601

First Level Reviewer: BX8N Date: 04-Dec-2022 22:50:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1677932	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	91	393887	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.774	9.774	0.000	97	665535	50.0	50.0	
19 Ethanol	45	2.680	2.680	0.000	99	12788	60.0	60.7	
72 Isopropyl alcohol	45	3.057	3.057	0.000	98	11836	10.0	11.3	
27 Acetonitrile	41	3.182	3.182	0.000	98	22613	10.0	11.3	
38 Isopropyl ether	87	3.825	3.825	0.000	95	7443	1.00	1.04	
40 2-Chloro-1,3-butadiene	53	3.881	3.881	0.000	94	14525	1.00	1.04	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	98	30270	1.00	1.05	
43 Ethyl acetate	43	4.216	4.216	0.000	98	36840	2.00	2.96	
46 Propionitrile	54	4.258	4.258	0.000	97	18889	10.0	9.57	
48 Methacrylonitrile	41	4.369	4.369	0.000	91	68643	10.0	9.61	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	89	27810	1.00	1.04	
61 n-Butanol	56	5.221	5.221	0.000	91	10122	25.0	22.0	
66 Methyl methacrylate	100	5.557	5.557	0.000	89	5990	2.00	2.10	
70 2-Nitropropane	41	5.906	5.906	0.000	96	5825	2.00	1.63	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	7051	2.00	1.74	
110 1,2,3-Trimethylbenzene	105	9.816	9.816	0.000	97	35121	1.00	1.03	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	12692	1.00	1.13	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00057 Amount Added: 1.00 Units: uL

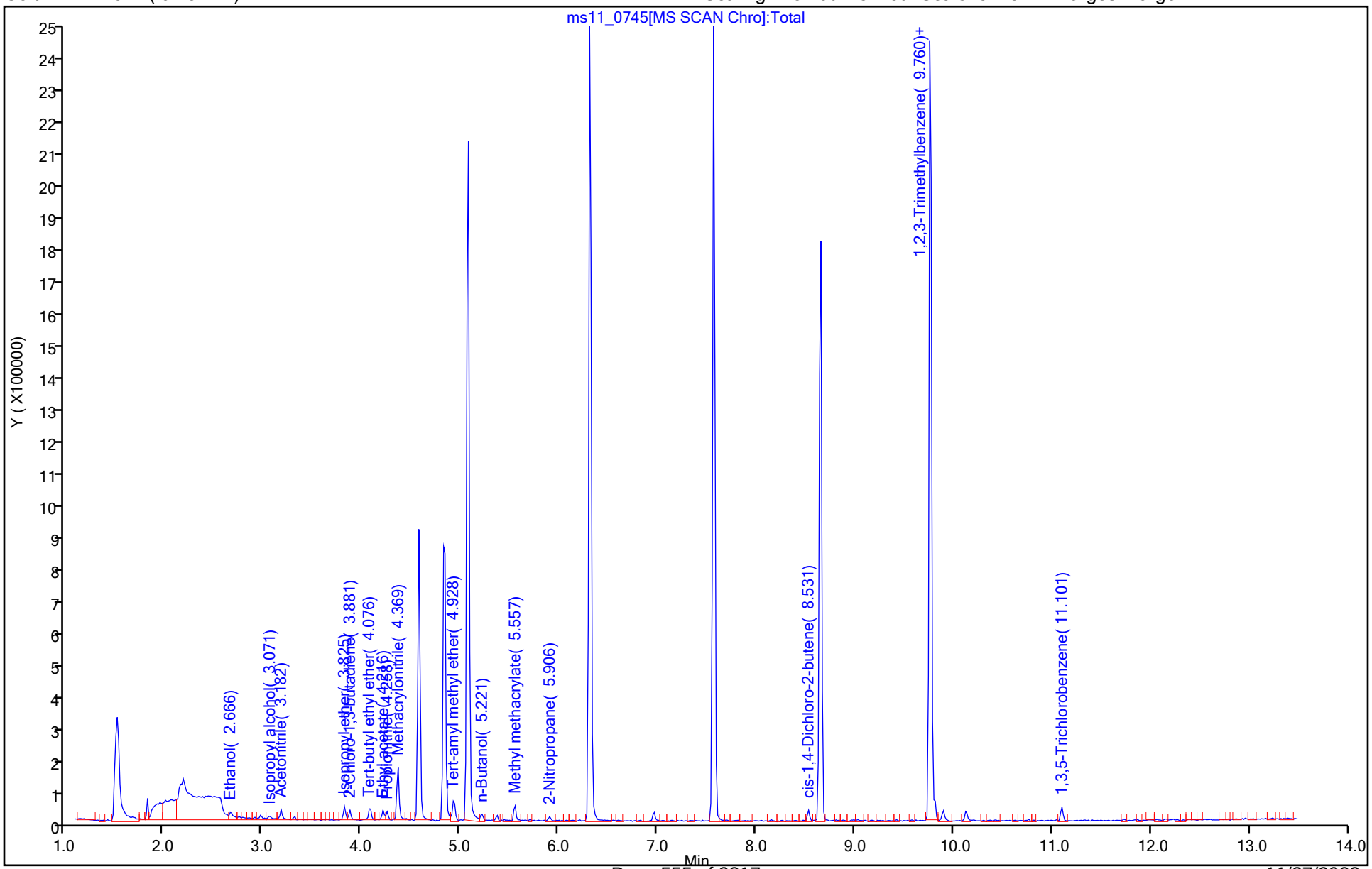
Report Date: 05-Dec-2022 01:00:11 Chrom Revision: 2.3 01-Dec-2022 08:01:02

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Injection Date:	04-Dec-2022 22:13:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD1			Worklist Smp#:	29
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Calibration / Ethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

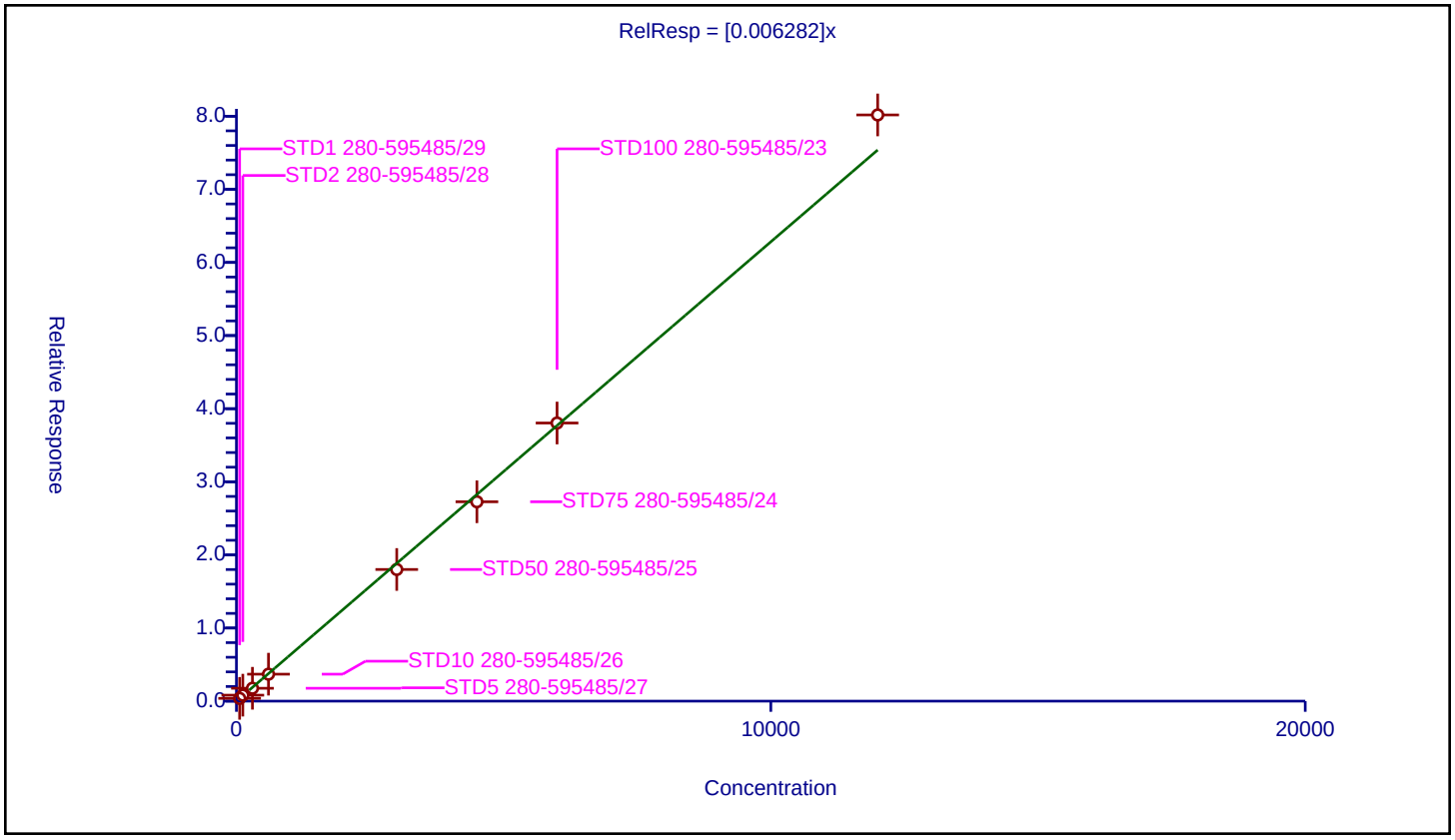
Curve Coefficients

Intercept:	0
Slope:	0.006282

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	60.0	0.381064	50.0	1677932.0	0.006351	Y
2	STD2 280-595485/28	120.0	0.816157	50.0	1691219.0	0.006801	Y
3	STD5 280-595485/27	300.0	1.761512	50.0	1675322.0	0.005872	Y
4	STD10 280-595485/26	600.0	3.688177	50.0	1720674.0	0.006147	Y
5	STD50 280-595485/25	3000.0	18.007797	50.0	1740049.0	0.006003	Y
6	STD75 280-595485/24	4500.0	27.268502	50.0	1740598.0	0.00606	Y
7	STD100 280-595485/23	6000.0	38.039199	50.0	1736280.0	0.00634	Y
8	STD200 280-595485/22	12000.0	80.172758	50.0	1719165.0	0.006681	Y



Calibration / Isopropyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

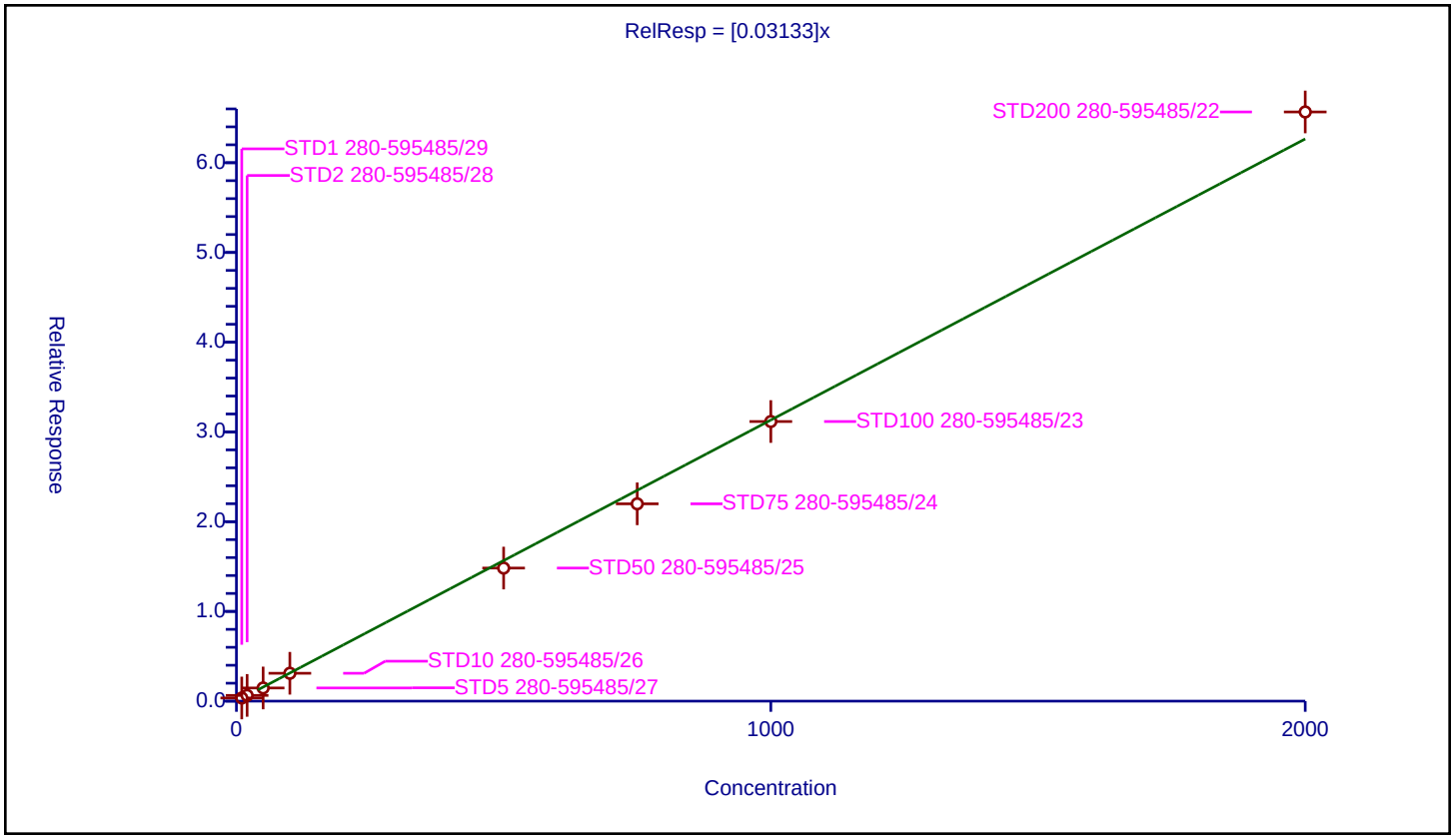
Curve Coefficients

Intercept:	0
Slope:	0.03133

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	6.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	10.0	0.352696	50.0	1677932.0	0.03527	Y
2	STD2 280-595485/28	20.0	0.63877	50.0	1691219.0	0.031939	Y
3	STD5 280-595485/27	50.0	1.468136	50.0	1675322.0	0.029363	Y
4	STD10 280-595485/26	100.0	3.10698	50.0	1720674.0	0.03107	Y
5	STD50 280-595485/25	500.0	14.828605	50.0	1740049.0	0.029657	Y
6	STD75 280-595485/24	750.0	21.989253	50.0	1740598.0	0.029319	Y
7	STD100 280-595485/23	1000.0	31.15926	50.0	1736280.0	0.031159	Y
8	STD200 280-595485/22	2000.0	65.658939	50.0	1719165.0	0.032829	Y



Calibration / Acetonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

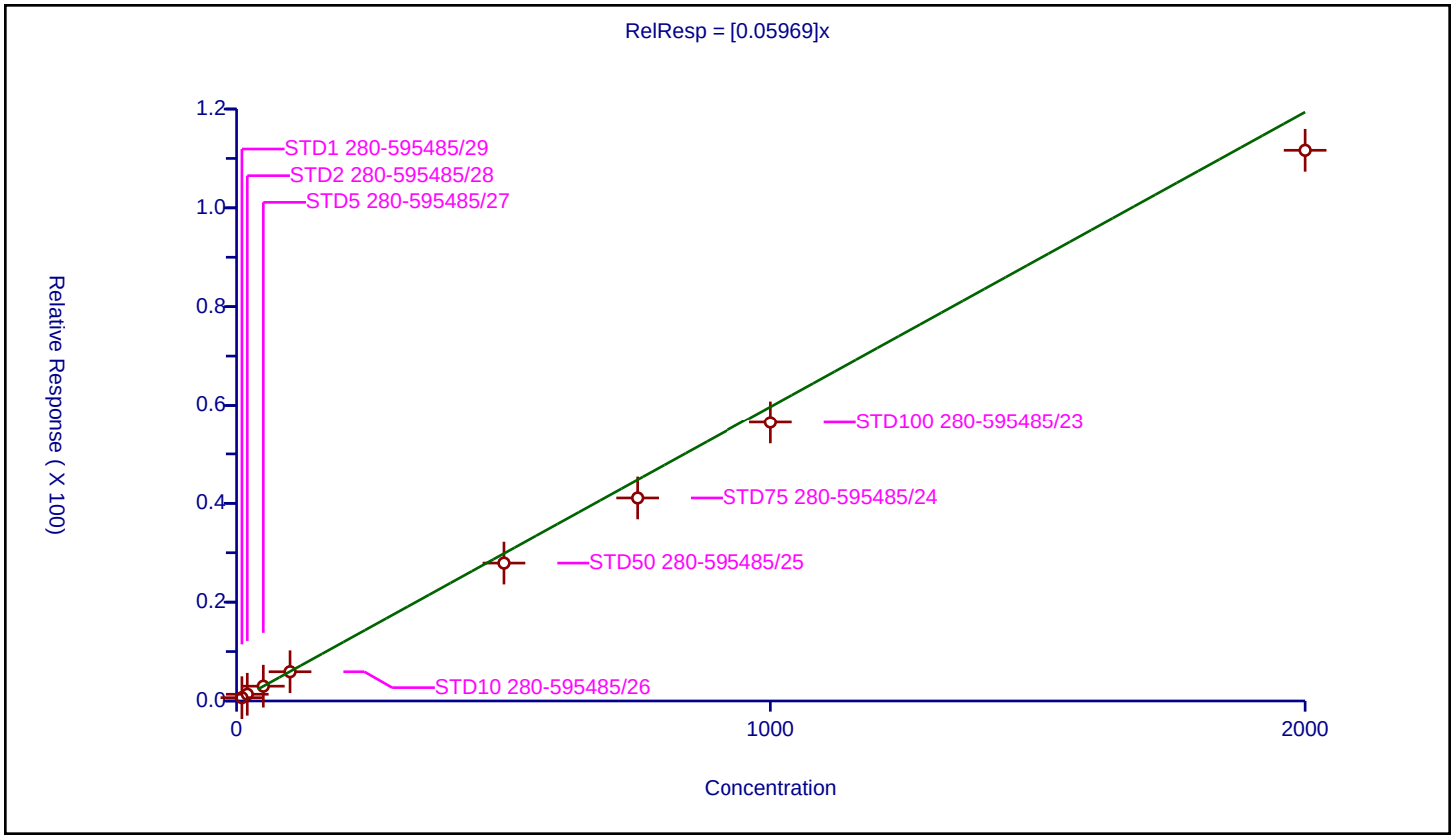
Curve Coefficients

Intercept:	0
Slope:	0.05969

Error Coefficients

Standard Error:	1760000
Relative Standard Error:	8.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	10.0	0.673835	50.0	1677932.0	0.067384	Y
2	STD2 280-595485/28	20.0	1.362656	50.0	1691219.0	0.068133	Y
3	STD5 280-595485/27	50.0	2.995633	50.0	1675322.0	0.059913	Y
4	STD10 280-595485/26	100.0	5.919715	50.0	1720674.0	0.059197	Y
5	STD50 280-595485/25	500.0	27.910335	50.0	1740049.0	0.055821	Y
6	STD75 280-595485/24	750.0	41.084156	50.0	1740598.0	0.054779	Y
7	STD100 280-595485/23	1000.0	56.473178	50.0	1736280.0	0.056473	Y
8	STD200 280-595485/22	2000.0	111.64417	50.0	1719165.0	0.055822	Y



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Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

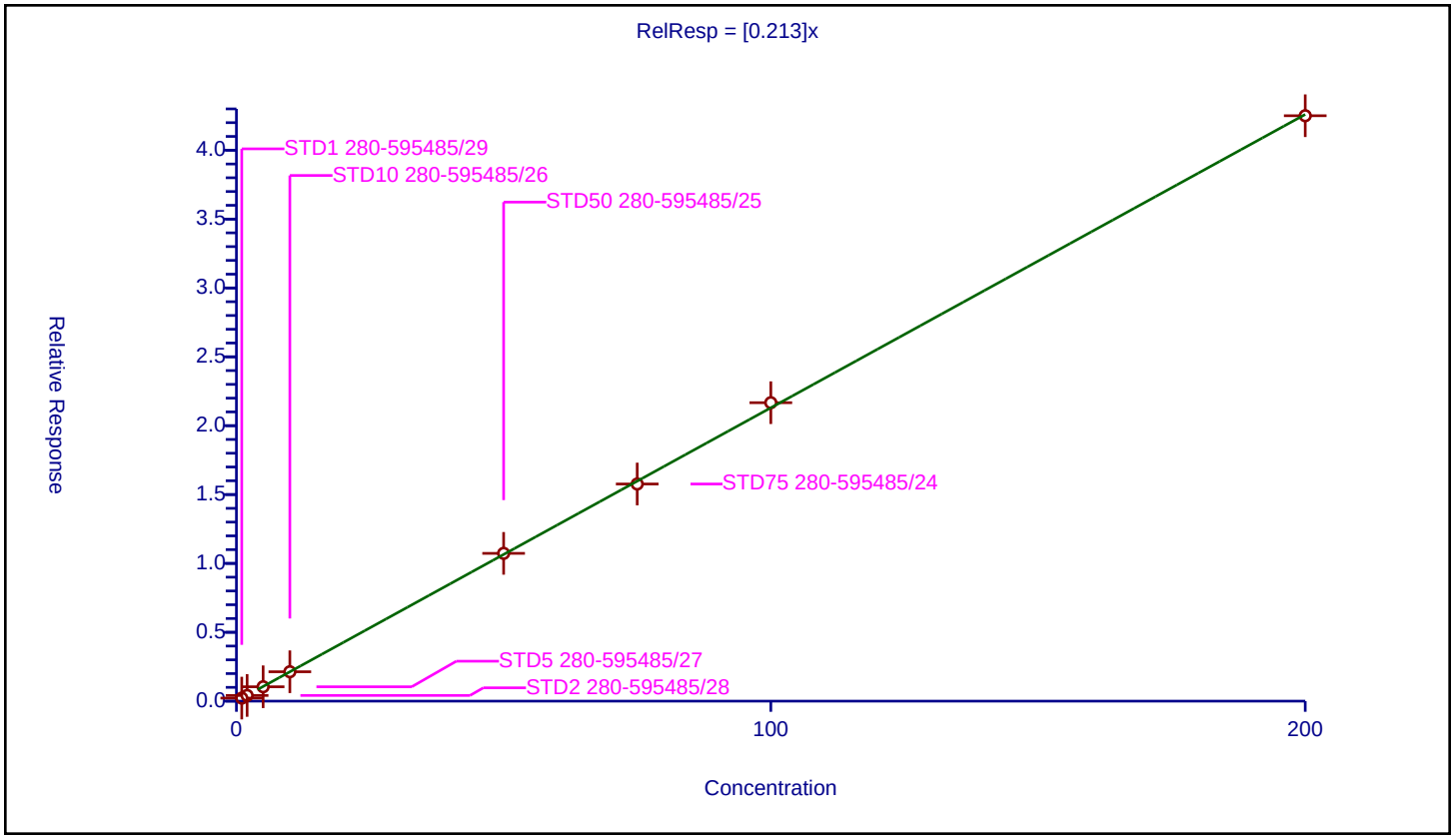
Curve Coefficients

Intercept:	0
Slope:	0.213

Error Coefficients

Standard Error:	671000
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	1.0	0.221791	50.0	1677932.0	0.221791	Y
2	STD2 280-595485/28	2.0	0.41204	50.0	1691219.0	0.20602	Y
3	STD5 280-595485/27	5.0	1.043949	50.0	1675322.0	0.20879	Y
4	STD10 280-595485/26	10.0	2.133263	50.0	1720674.0	0.213326	Y
5	STD50 280-595485/25	50.0	10.730186	50.0	1740049.0	0.214604	Y
6	STD75 280-595485/24	75.0	15.765358	50.0	1740598.0	0.210205	Y
7	STD100 280-595485/23	100.0	21.668366	50.0	1736280.0	0.216684	Y
8	STD200 280-595485/22	200.0	42.502814	50.0	1719165.0	0.212514	Y



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Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

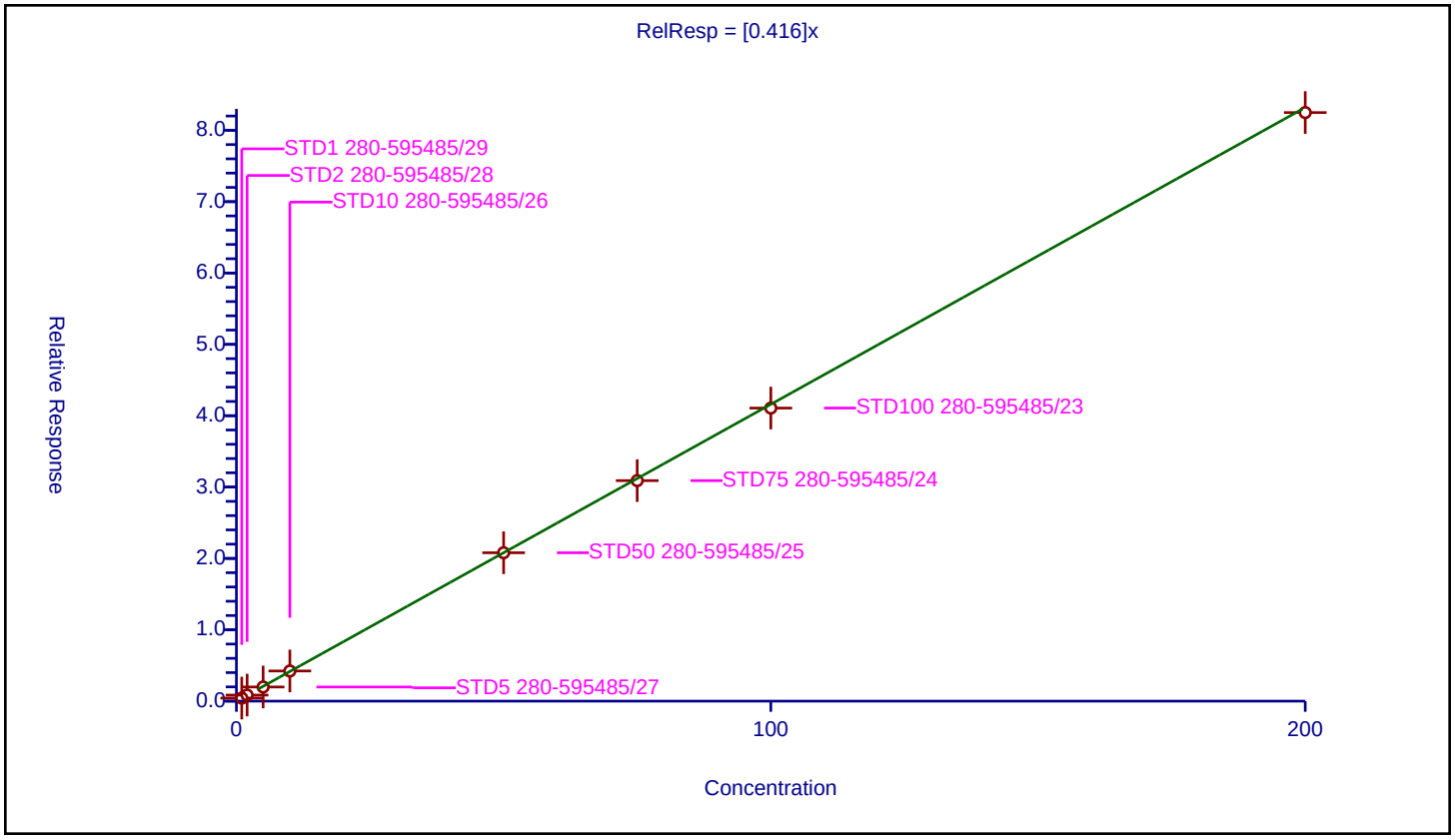
Curve Coefficients

Intercept:	0
Slope:	0.416

Error Coefficients

Standard Error:	1300000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	1.0	0.432824	50.0	1677932.0	0.432824	Y
2	STD2 280-595485/28	2.0	0.848707	50.0	1691219.0	0.424354	Y
3	STD5 280-595485/27	5.0	1.984693	50.0	1675322.0	0.396939	Y
4	STD10 280-595485/26	10.0	4.22596	50.0	1720674.0	0.422596	Y
5	STD50 280-595485/25	50.0	20.797604	50.0	1740049.0	0.415952	Y
6	STD75 280-595485/24	75.0	30.904666	50.0	1740598.0	0.412062	Y
7	STD100 280-595485/23	100.0	41.071774	50.0	1736280.0	0.410718	Y
8	STD200 280-595485/22	200.0	82.483677	50.0	1719165.0	0.412418	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

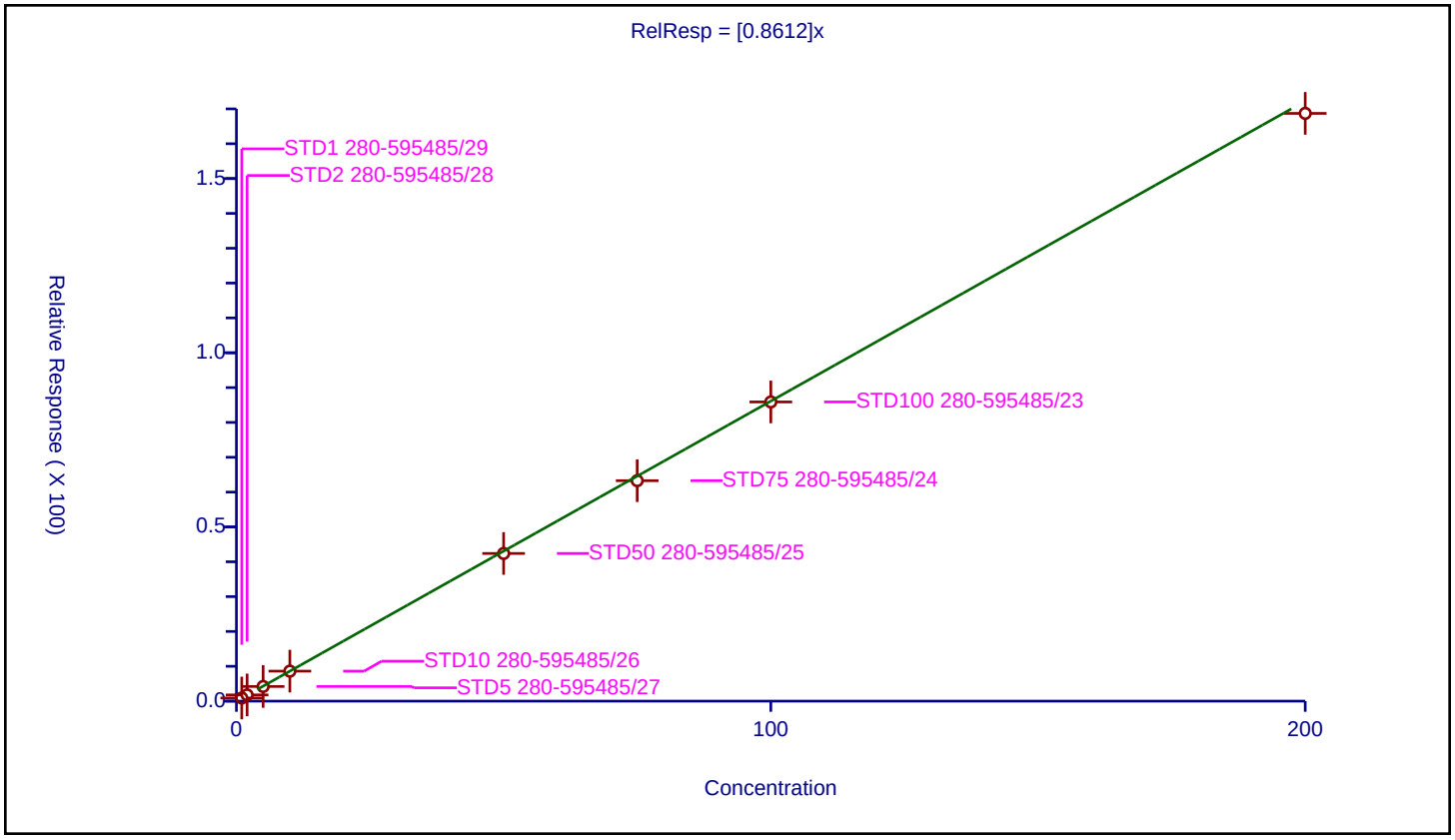
Curve Coefficients

Intercept:	0
Slope:	0.8612

Error Coefficients

Standard Error:	2660000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	1.0	0.902003	50.0	1677932.0	0.902003	Y
2	STD2 280-595485/28	2.0	1.783063	50.0	1691219.0	0.891531	Y
3	STD5 280-595485/27	5.0	4.207788	50.0	1675322.0	0.841558	Y
4	STD10 280-595485/26	10.0	8.610202	50.0	1720674.0	0.86102	Y
5	STD50 280-595485/25	50.0	42.386076	50.0	1740049.0	0.847722	Y
6	STD75 280-595485/24	75.0	63.285549	50.0	1740598.0	0.843807	Y
7	STD100 280-595485/23	100.0	85.882317	50.0	1736280.0	0.858823	Y
8	STD200 280-595485/22	200.0	168.705069	50.0	1719165.0	0.843525	Y



Calibration / Ethyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

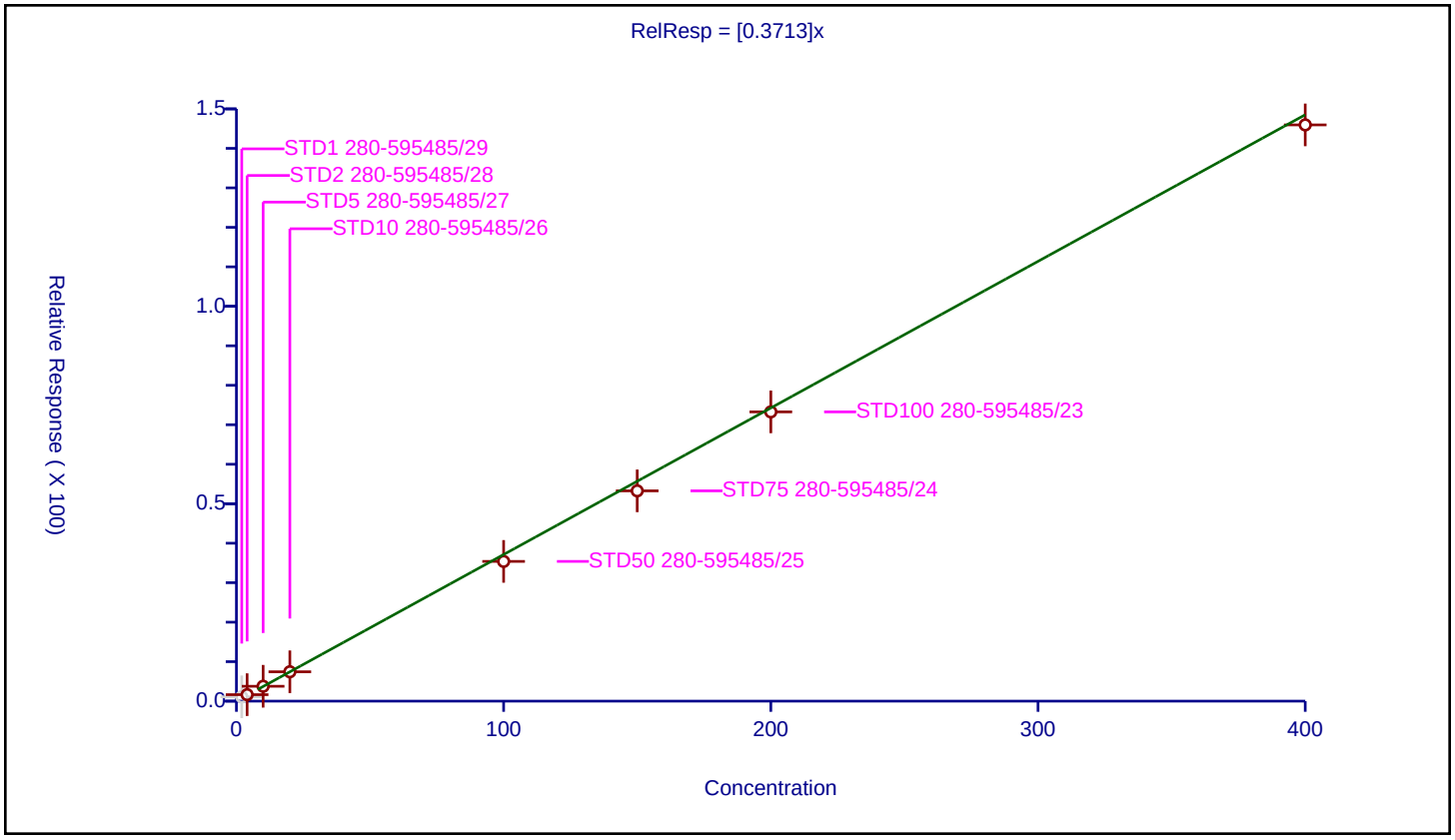
Curve Coefficients

Intercept:	0
Slope:	0.3713

Error Coefficients

Standard Error:	2470000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	2.0	1.09778	50.0	1677932.0	0.54889	N
2	STD2 280-595485/28	4.0	1.640828	50.0	1691219.0	0.410207	Y
3	STD5 280-595485/27	10.0	3.768917	50.0	1675322.0	0.376892	Y
4	STD10 280-595485/26	20.0	7.433918	50.0	1720674.0	0.371696	Y
5	STD50 280-595485/25	100.0	35.391273	50.0	1740049.0	0.353913	Y
6	STD75 280-595485/24	150.0	53.258593	50.0	1740598.0	0.355057	Y
7	STD100 280-595485/23	200.0	73.262579	50.0	1736280.0	0.366313	Y
8	STD200 280-595485/22	400.0	145.948789	50.0	1719165.0	0.364872	Y



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Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

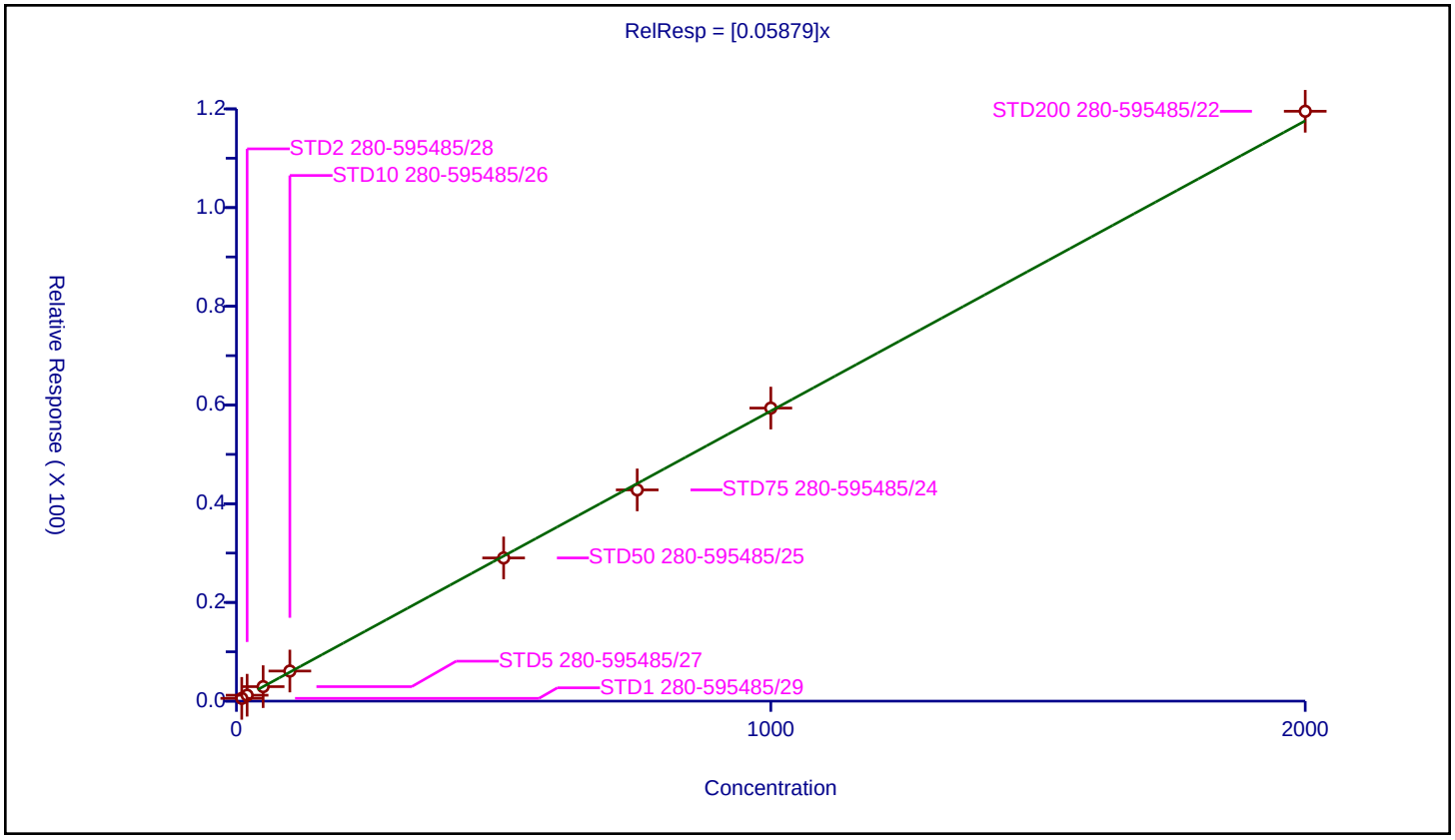
Curve Coefficients

Intercept:	0
Slope:	0.05879

Error Coefficients

Standard Error:	1870000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	10.0	0.562865	50.0	1677932.0	0.056287	Y
2	STD2 280-595485/28	20.0	1.200465	50.0	1691219.0	0.060023	Y
3	STD5 280-595485/27	50.0	2.938569	50.0	1675322.0	0.058771	Y
4	STD10 280-595485/26	100.0	6.102609	50.0	1720674.0	0.061026	Y
5	STD50 280-595485/25	500.0	29.016051	50.0	1740049.0	0.058032	Y
6	STD75 280-595485/24	750.0	42.804025	50.0	1740598.0	0.057072	Y
7	STD100 280-595485/23	1000.0	59.378614	50.0	1736280.0	0.059379	Y
8	STD200 280-595485/22	2000.0	119.518225	50.0	1719165.0	0.059759	Y



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Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

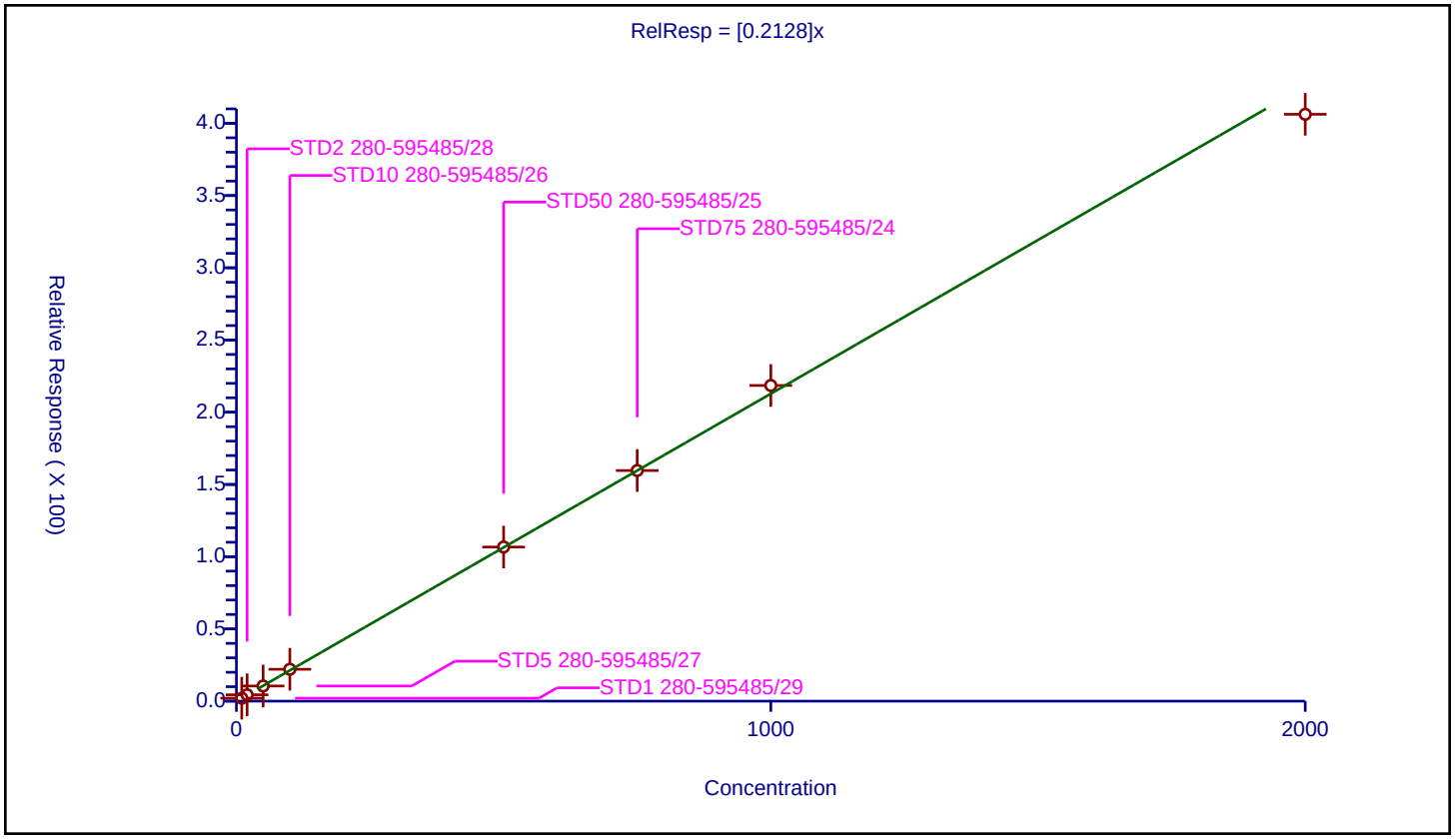
Curve Coefficients

Intercept:	0
Slope:	0.2128

Error Coefficients

Standard Error:	6530000
Relative Standard Error:	3.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	10.0	2.045464	50.0	1677932.0	0.204546	Y
2	STD2 280-595485/28	20.0	4.398041	50.0	1691219.0	0.219902	Y
3	STD5 280-595485/27	50.0	10.485328	50.0	1675322.0	0.209707	Y
4	STD10 280-595485/26	100.0	22.053161	50.0	1720674.0	0.220532	Y
5	STD50 280-595485/25	500.0	106.683547	50.0	1740049.0	0.213367	Y
6	STD75 280-595485/24	750.0	159.649241	50.0	1740598.0	0.212866	Y
7	STD100 280-595485/23	1000.0	218.544878	50.0	1736280.0	0.218545	Y
8	STD200 280-595485/22	2000.0	406.259987	50.0	1719165.0	0.20313	Y



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Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

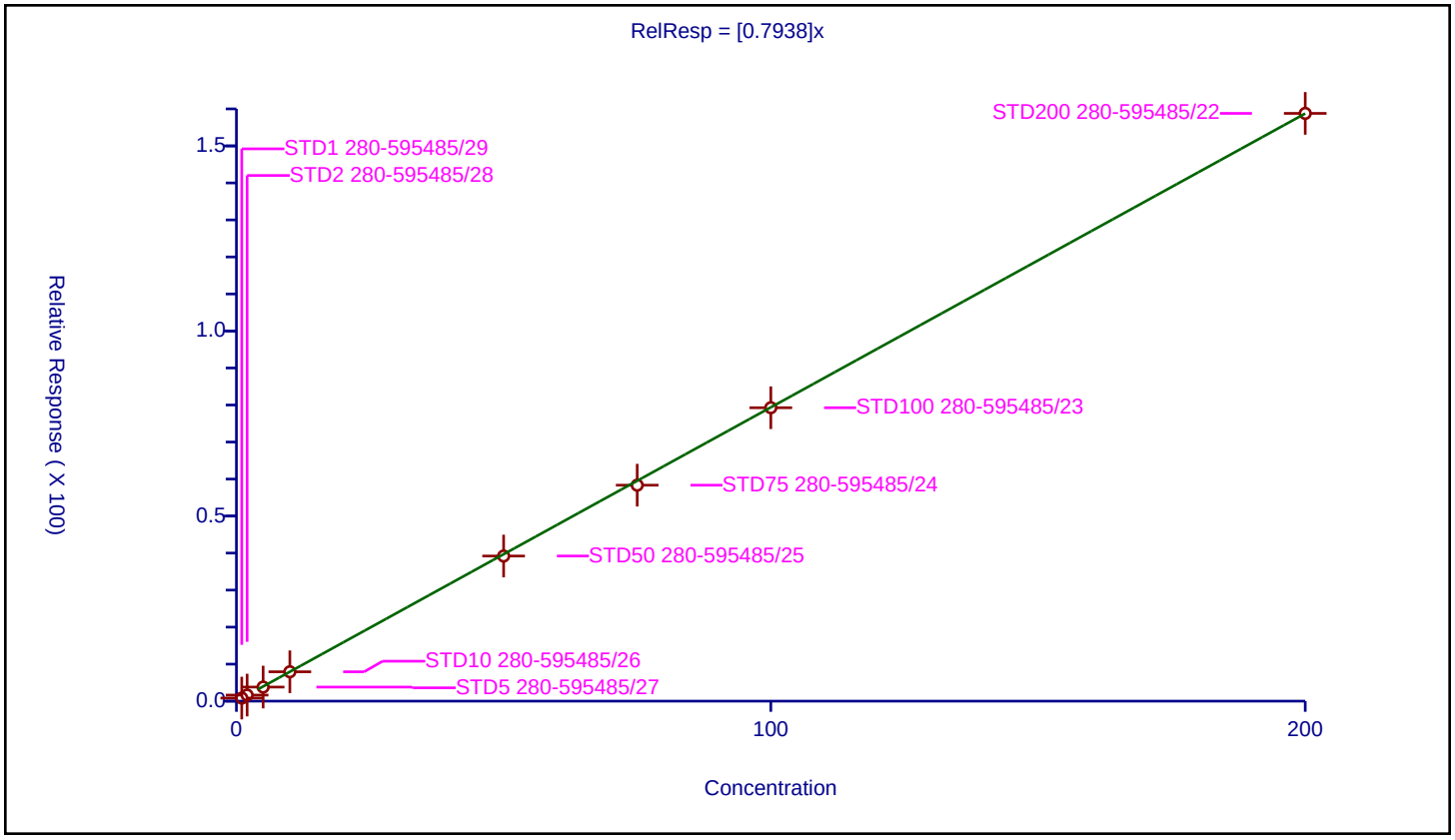
Curve Coefficients

Intercept:	0
Slope:	0.7938

Error Coefficients

Standard Error:	2490000
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	1.0	0.828699	50.0	1677932.0	0.828699	Y
2	STD2 280-595485/28	2.0	1.638374	50.0	1691219.0	0.819187	Y
3	STD5 280-595485/27	5.0	3.799687	50.0	1675322.0	0.759937	Y
4	STD10 280-595485/26	10.0	7.93564	50.0	1720674.0	0.793564	Y
5	STD50 280-595485/25	50.0	39.205563	50.0	1740049.0	0.784111	Y
6	STD75 280-595485/24	75.0	58.344776	50.0	1740598.0	0.77793	Y
7	STD100 280-595485/23	100.0	79.267457	50.0	1736280.0	0.792675	Y
8	STD200 280-595485/22	200.0	158.785602	50.0	1719165.0	0.793928	Y



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Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

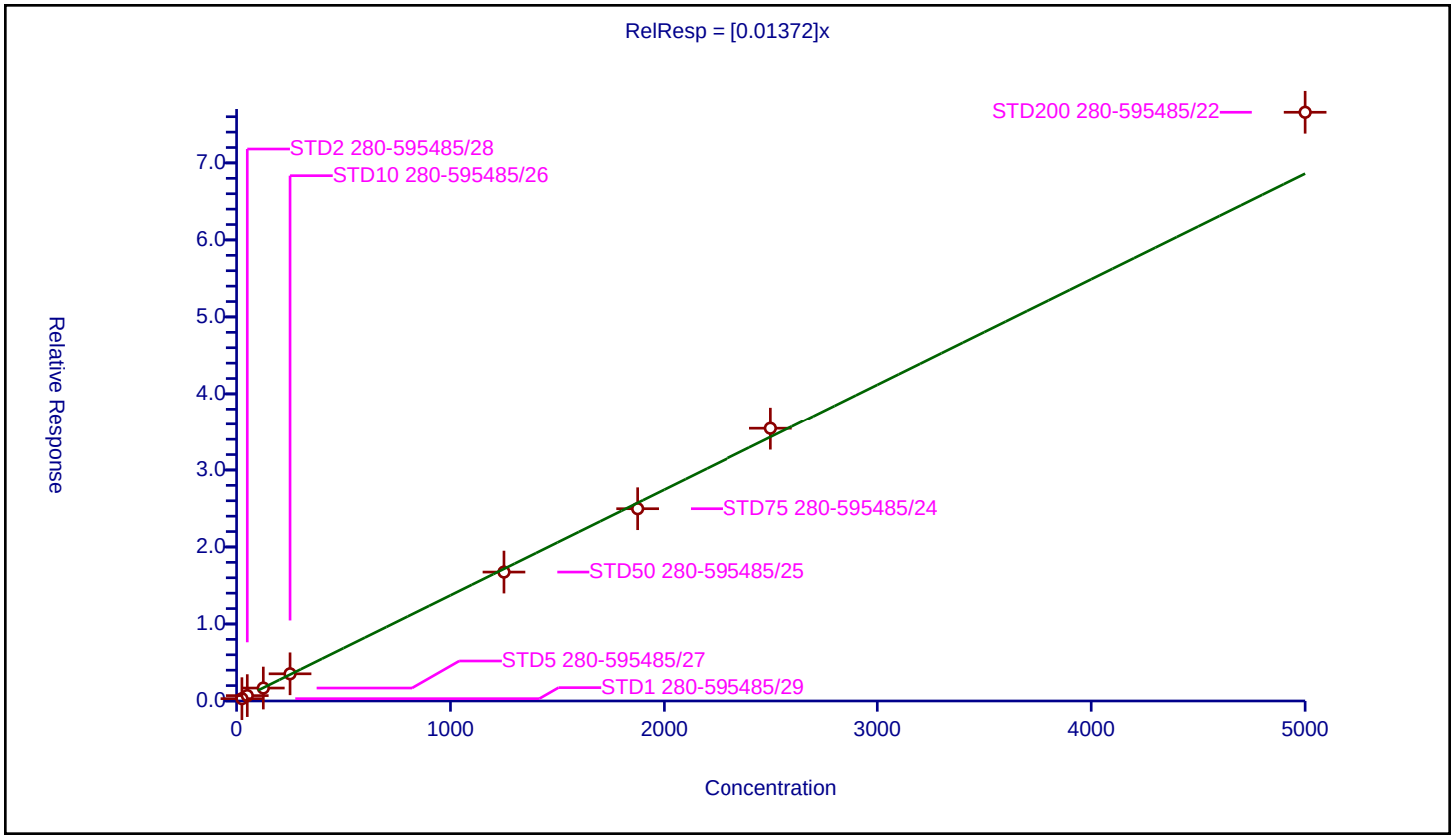
Curve Coefficients

Intercept:	0
Slope:	0.01372

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	6.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	25.0	0.301621	50.0	1677932.0	0.012065	Y
2	STD2 280-595485/28	50.0	0.697958	50.0	1691219.0	0.013959	Y
3	STD5 280-595485/27	125.0	1.679647	50.0	1675322.0	0.013437	Y
4	STD10 280-595485/26	250.0	3.529896	50.0	1720674.0	0.01412	Y
5	STD50 280-595485/25	1250.0	16.741942	50.0	1740049.0	0.013394	Y
6	STD75 280-595485/24	1875.0	24.96889	50.0	1740598.0	0.013317	Y
7	STD100 280-595485/23	2500.0	35.426832	50.0	1736280.0	0.014171	Y
8	STD200 280-595485/22	5000.0	76.577321	50.0	1719165.0	0.015315	Y



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Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

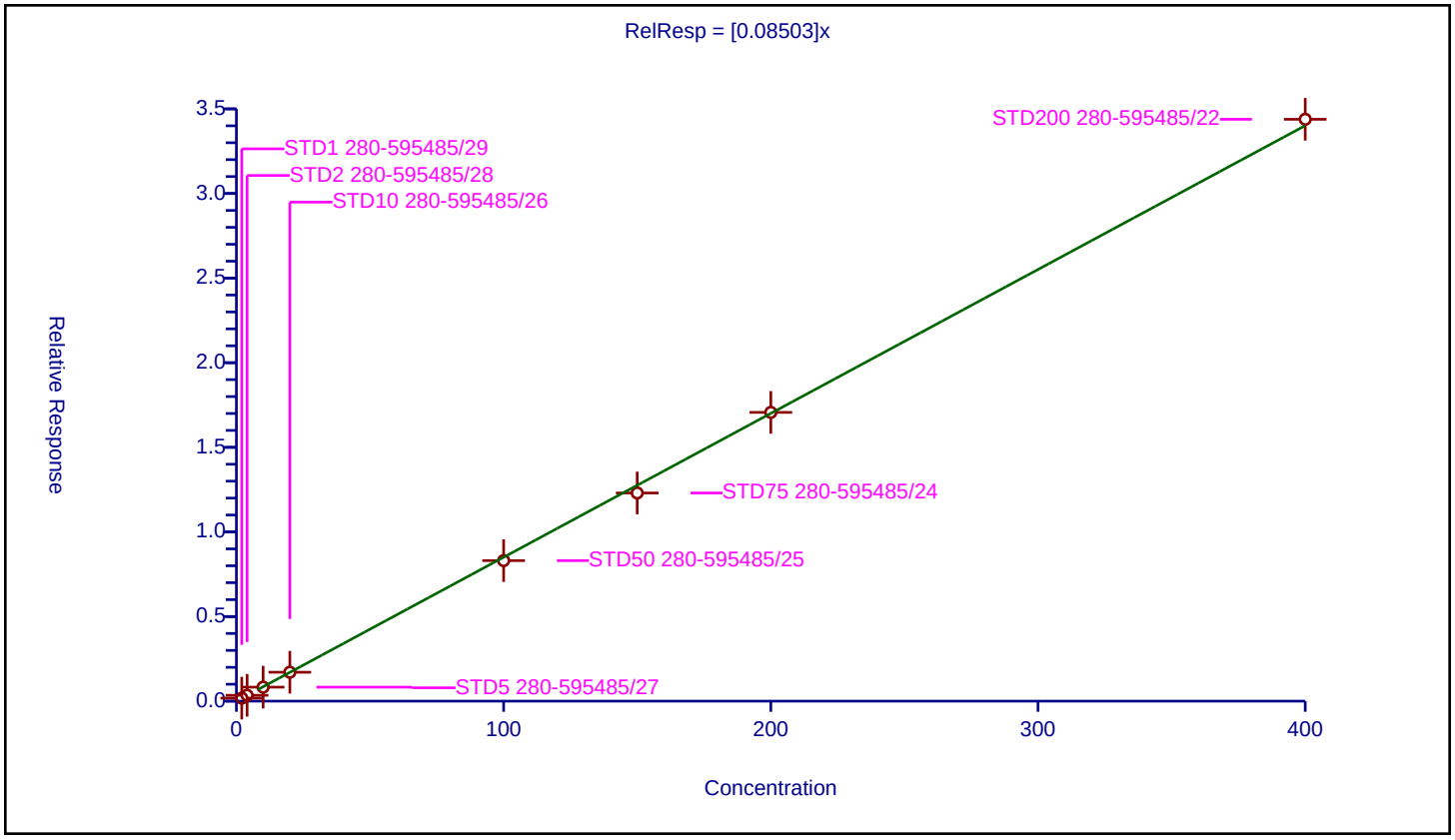
Curve Coefficients

Intercept:	0
Slope:	0.08503

Error Coefficients

Standard Error:	537000
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	2.0	0.178494	50.0	1677932.0	0.089247	Y
2	STD2 280-595485/28	4.0	0.34617	50.0	1691219.0	0.086543	Y
3	STD5 280-595485/27	10.0	0.826766	50.0	1675322.0	0.082677	Y
4	STD10 280-595485/26	20.0	1.708662	50.0	1720674.0	0.085433	Y
5	STD50 280-595485/25	100.0	8.305082	50.0	1740049.0	0.083051	Y
6	STD75 280-595485/24	150.0	12.301462	50.0	1740598.0	0.08201	Y
7	STD100 280-595485/23	200.0	17.064759	50.0	1736280.0	0.085324	Y
8	STD200 280-595485/22	400.0	34.38457	50.0	1719165.0	0.085961	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

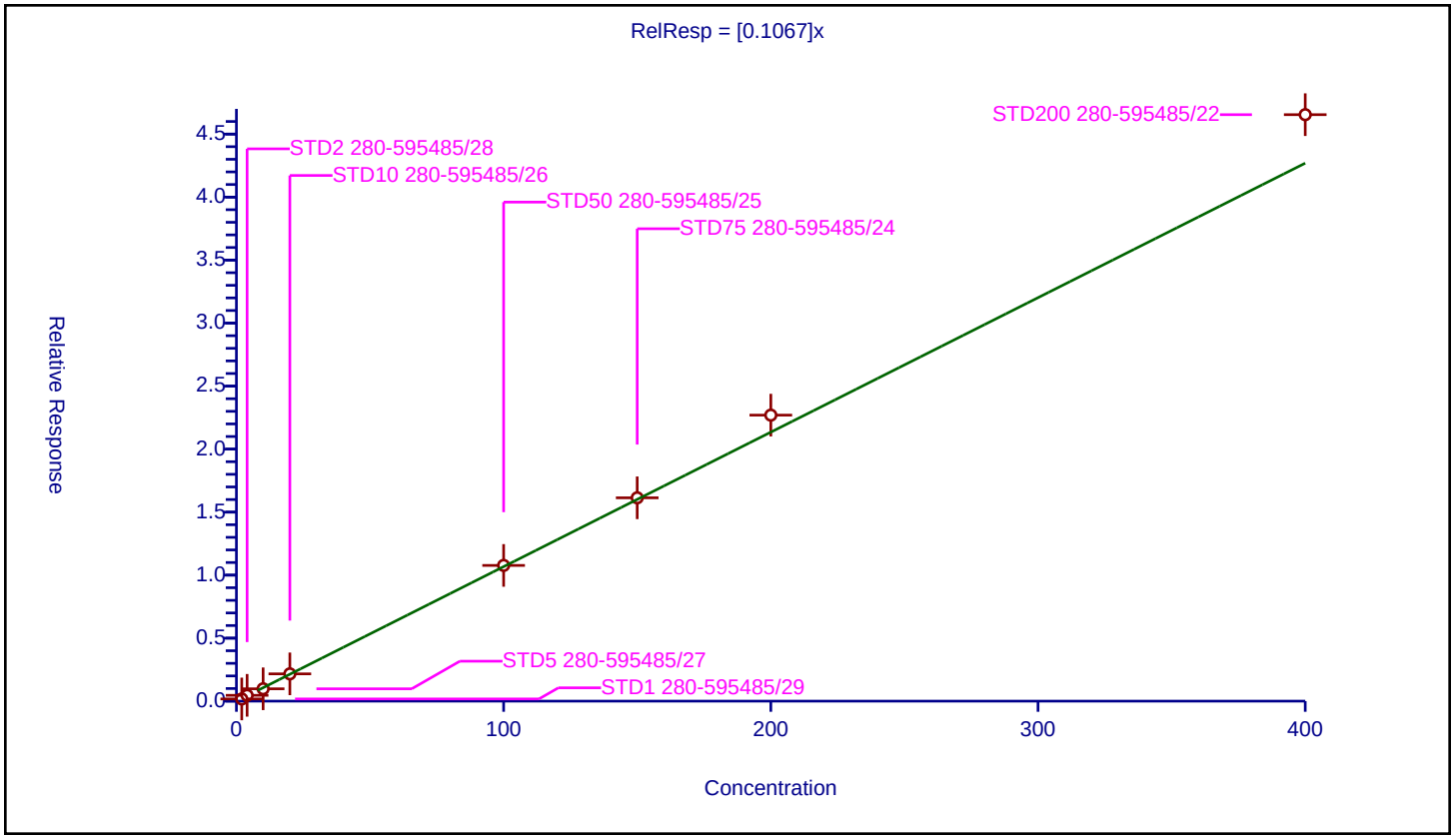
Curve Coefficients

Intercept:	0
Slope:	0.1067

Error Coefficients

Standard Error:	722000
Relative Standard Error:	9.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	2.0	0.173577	50.0	1677932.0	0.086788	Y
2	STD2 280-595485/28	4.0	0.462329	50.0	1691219.0	0.115582	Y
3	STD5 280-595485/27	10.0	0.980558	50.0	1675322.0	0.098056	Y
4	STD10 280-595485/26	20.0	2.165692	50.0	1720674.0	0.108285	Y
5	STD50 280-595485/25	100.0	10.770932	50.0	1740049.0	0.107709	Y
6	STD75 280-595485/24	150.0	16.136207	50.0	1740598.0	0.107575	Y
7	STD100 280-595485/23	200.0	22.696829	50.0	1736280.0	0.113484	Y
8	STD200 280-595485/22	400.0	46.540704	50.0	1719165.0	0.116352	Y



Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

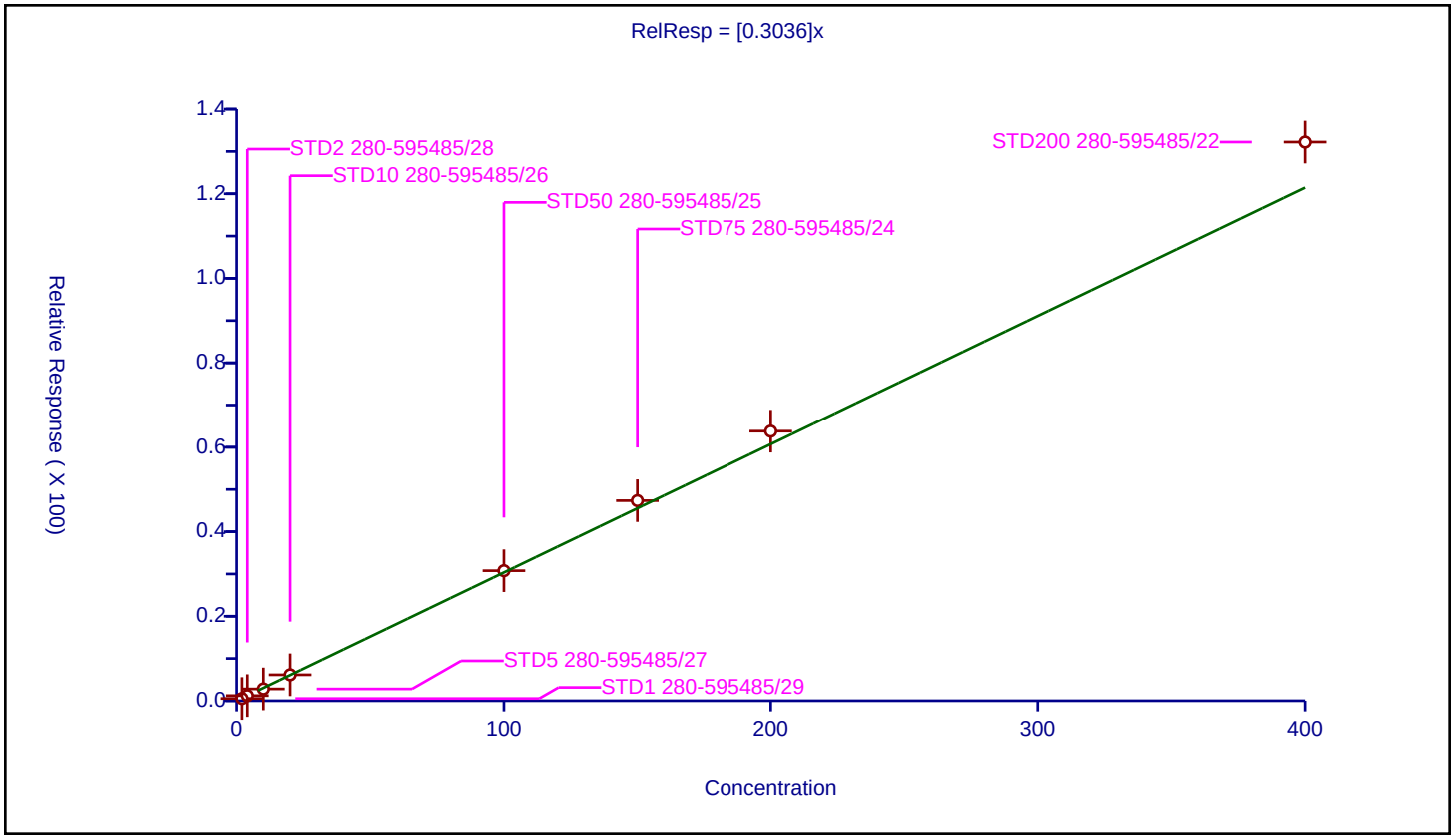
Curve Coefficients

Intercept:	0
Slope:	0.3036

Error Coefficients

Standard Error:	800000
Relative Standard Error:	7.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	2.0	0.529724	50.0	665535.0	0.264862	Y
2	STD2 280-595485/28	4.0	1.217557	50.0	671262.0	0.304389	Y
3	STD5 280-595485/27	10.0	2.796398	50.0	668467.0	0.27964	Y
4	STD10 280-595485/26	20.0	6.140403	50.0	672521.0	0.30702	Y
5	STD50 280-595485/25	100.0	30.777672	50.0	672494.0	0.307777	Y
6	STD75 280-595485/24	150.0	47.359558	50.0	662105.0	0.31573	Y
7	STD100 280-595485/23	200.0	63.807227	50.0	675447.0	0.319036	Y
8	STD200 280-595485/22	400.0	132.217004	50.0	672800.0	0.330543	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

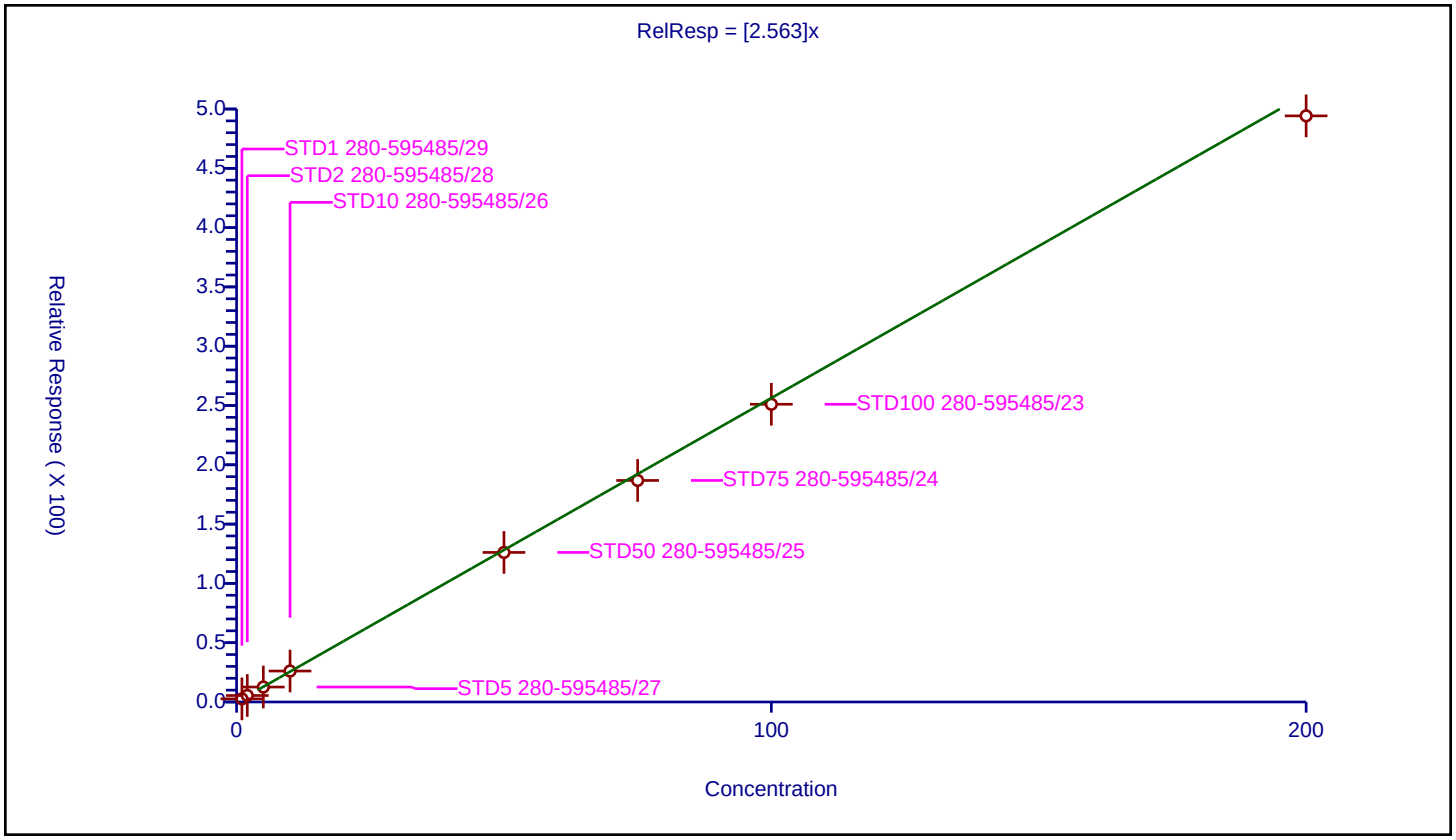
Curve Coefficients

Intercept:	0
Slope:	2.563

Error Coefficients

Standard Error:	3040000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	1.0	2.638554	50.0	665535.0	2.638554	Y
2	STD2 280-595485/28	2.0	5.482881	50.0	671262.0	2.741441	Y
3	STD5 280-595485/27	5.0	12.604586	50.0	668467.0	2.520917	Y
4	STD10 280-595485/26	10.0	26.103274	50.0	672521.0	2.610327	Y
5	STD50 280-595485/25	50.0	126.099266	50.0	672494.0	2.521985	Y
6	STD75 280-595485/24	75.0	186.797185	50.0	662105.0	2.490629	Y
7	STD100 280-595485/23	100.0	251.046862	50.0	675447.0	2.510469	Y
8	STD200 280-595485/22	200.0	494.22555	50.0	672800.0	2.471128	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

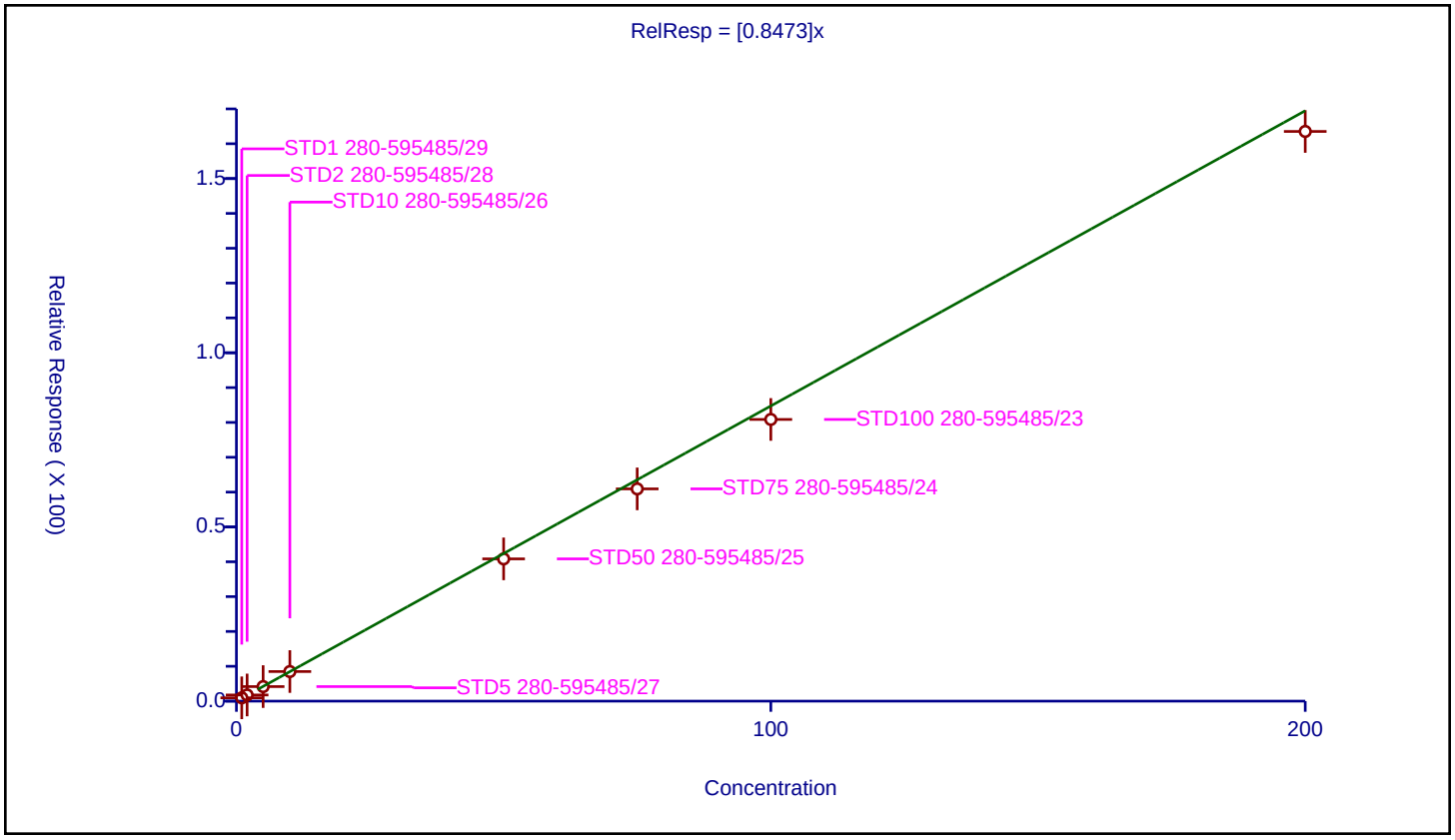
Curve Coefficients

Intercept:	0
Slope:	0.8473

Error Coefficients

Standard Error:	1000000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-595485/29	1.0	0.953519	50.0	665535.0	0.953519	Y
2	STD2 280-595485/28	2.0	1.769652	50.0	671262.0	0.884826	Y
3	STD5 280-595485/27	5.0	4.177394	50.0	668467.0	0.835479	Y
4	STD10 280-595485/26	10.0	8.494605	50.0	672521.0	0.84946	Y
5	STD50 280-595485/25	50.0	40.832781	50.0	672494.0	0.816656	Y
6	STD75 280-595485/24	75.0	60.928856	50.0	662105.0	0.812385	Y
7	STD100 280-595485/23	100.0	80.858306	50.0	675447.0	0.808583	Y
8	STD200 280-595485/22	200.0	163.524301	50.0	672800.0	0.817622	Y



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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 Calibration End Date: 04/13/2023 17:13 Calibration ID: 79243

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-608560/19	ms11_5241.D
Level 2	STD 280-608560/18	ms11_5240.D
Level 3	STD 280-608560/17	ms11_5239.D
Level 4	STD 280-608560/16	ms11_5238.D
Level 5	STD 280-608560/15	ms11_5237.D
Level 6	ICIS 280-608560/14	ms11_5236.D
Level 7	STD 280-608560/13	ms11_5235.D
Level 8	STD 280-608560/12	ms11_5234.D
Level 9	STD 280-608560/11	ms11_5233.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2580 0.2756	0.2810 0.2701	0.2500 0.2727	0.2709 0.2538	0.2492	Ave		0.2646				4.5		15.0			
Chloromethane	+++++ 0.3339	+++++ 0.3250	0.3836 0.3184	0.3570 0.2849	0.3555	Ave		0.3369			0.1000	9.5		15.0			
Vinyl chloride	+++++ 0.2953	+++++ 0.2853	0.3006 0.2796	0.3104 0.2590	0.3061	Ave		0.2909				6.1		30.0			
Bromomethane	0.3134 0.1458	0.2868 +++++	0.1772 +++++	0.1680 +++++	0.1757	Lin1	0.1005	0.1472							0.9950		0.9900
Chloroethane	+++++ 0.1882	0.3073 0.1810	0.2208 0.1745	0.2028 +++++	0.2046	Lin2	0.1192	0.1799							0.9950		0.9900
Dichlorofluoromethane	0.4736 0.4304	0.5770 0.4163	0.4341 0.4102	0.4400 0.3842	0.4487	Ave		0.4461				12.4		15.0			
Trichlorofluoromethane	+++++ 0.3048	+++++ 0.2817	0.3638 0.2715	0.3697 +++++	0.3484	Ave		0.3233				13.3		15.0			
Ethyl ether	+++++ 0.2185	0.3014 0.2179	0.2505 0.2171	0.2246 0.2080	0.2291	Ave		0.2334				12.9		15.0			
Acrolein	0.0447 0.0378	0.0370 0.0364	0.0376 0.0374	0.0381 0.0349	0.0374	Ave		0.0379				7.2		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1461 0.1410	0.1490 0.1448	0.1497 0.1455	0.1537 0.1388	0.1452	Ave		0.1460				3.1		15.0			
1,1-Dichloroethene	0.2604 0.1892	0.2392 0.1940	0.2069 0.1932	0.2036 0.1841	0.1981	Ave		0.2076				12.3		30.0			
Acetone	+++++ 0.1076	0.3019 0.1036	0.2143 0.1111	0.1479 +++++	0.1199	Lin2	0.8045	0.1051							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 Calibration End Date: 04/13/2023 17:13 Calibration ID: 79243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	+++++ 0.2916	+++++ 0.2974	0.3142 0.2924	0.2914 0.2748	0.2753	Ave		0.2910				4.6		15.0			
Carbon disulfide	+++++ 0.6832	+++++ 0.7021	0.7843 0.6985	0.7618 0.6538	0.7067	Ave		0.7129				6.3		15.0			
Methyl acetate	+++++ 0.2814	0.8387 0.2736	0.5545 0.2768	0.4101 0.2608	0.3131	Lin2	1.1475	0.2686							0.9970		0.9900
Allyl chloride	+++++ 0.3965	0.7176 0.3772	0.5734 0.3489	0.4645 0.3063	0.4344	Lin2	0.3692	0.3671							0.9900		0.9900
Methylene Chloride	+++++ 0.2405	+++++ 0.2384	0.2871 0.2374	0.2662 0.2241	0.2478	Ave		0.2488				8.5		15.0			
2-Methyl-2-propanol	0.0491 0.0409	0.0423 0.0408	0.0408 0.0424	0.0391 0.0397	0.0411	Ave		0.0418				7.0		15.0			
Acrylonitrile	0.1456 0.1303	0.1335 0.1248	0.1299 0.1285	0.1329 0.1227	0.1357	Ave		0.1315				5.1		15.0			
Methyl tert-butyl ether	0.9529 0.8093	0.8754 0.7948	0.8326 0.7961	0.8342 0.7671	0.8096	Ave		0.8302				6.7		15.0			
trans-1,2-Dichloroethene	0.3075 0.2206	0.2694 0.2242	0.2603 0.2214	0.2371 0.2099	0.2231	Ave		0.2415				13.1		15.0			
Hexane	1.2065 1.1619	1.0788 1.1885	1.1499 1.2208	1.2527 1.1760	1.1680	Ave		1.1781				4.2		15.0			
Vinyl acetate	0.7060 0.5862	0.6172 0.5483	0.6210 0.5723	0.6294 0.4872	0.6064	Ave		0.5971				10.1		15.0			
1,1-Dichloroethane	0.5196 0.4359	0.5461 0.4328	0.4732 0.4279	0.4578 0.4043	0.4584	Ave		0.4618			0.1000	9.9		15.0			
2-Butanone (MEK)	+++++ 0.1774	0.5152 0.1716	0.3630 0.1759	0.2406 0.1681	0.1991	Lin2	1.4128	0.1698							0.9970		0.9900
cis-1,2-Dichloroethene	0.3365 0.2531	0.3188 0.2507	0.2730 0.2502	0.2744 0.2333	0.2720	Ave		0.2736				12.3		15.0			
2,2-Dichloropropane	0.5182 0.3889	0.4385 0.3958	0.4571 0.3956	0.4117 0.3790	0.3838	Ave		0.4187				10.9		15.0			
sec-Butyl Alcohol	0.0342 0.0339	0.0384 0.0346	0.0337 0.0352	0.0338 0.0349	0.0340	Ave		0.0347				4.2		15.0			
Chlorobromomethane	+++++ 0.1125	0.1537 0.1124	0.1327 0.1120	0.1233 0.1074	0.1227	Ave		0.1221				12.4		15.0			
Tetrahydrofuran	+++++ 0.1128	0.1265 0.1079	0.1216 0.1121	0.1181 0.1111	0.1163	Ave		0.1158				5.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 Calibration End Date: 04/13/2023 17:13 Calibration ID: 79243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chloroform	0.5609 0.4225	0.5183 0.4254	0.4405 0.4175	0.4347 0.4055	0.4279	Ave		0.4504				11.7		30.0			
1,1,1-Trichloroethane	0.4392 0.3611	0.4114 0.3682	0.3637 0.3623	0.3851 0.3433	0.3772	Ave		0.3791				7.8		15.0			
Cyclohexane	0.4610 0.3987	0.4083 0.4107	0.4065 0.4133	0.4224 0.3920	0.4101	Ave		0.4137				4.8		15.0			
1,1-Dichloropropene	0.3910 0.3365	0.3809 0.3418	0.3668 0.3371	0.3550 0.3206	0.3461	Ave		0.3529				6.5		15.0			
Carbon tetrachloride	0.3563 0.3097	0.3585 0.3154	0.3234 0.3119	0.3237 0.2977	0.3163	Ave		0.3237				6.4		15.0			
Isobutyl alcohol	0.0179 0.0193	0.0195 0.0194	0.0175 0.0200	0.0183 0.0200	0.0179	Ave		0.0189				5.1		15.0			
Benzene	1.1802 0.9713	1.2061 0.9501	1.0141 0.9477	1.0268 0.8995	0.9912	Ave		1.0208				10.3		15.0			
1,2-Dichloroethane	0.5494 0.3868	0.4869 0.3849	0.4304 0.3843	0.4156 0.3713	0.4046	Ave		0.4238				13.8		15.0			
n-Heptane	0.9219 0.2574	0.5267 0.2612	0.3850 0.2682	0.3204 0.2673	0.2647	Lin1	0.2900	0.2619							0.9990		0.9900
Trichloroethene	0.2847 0.2334	0.2681 0.2354	0.2525 0.2322	0.2450 0.2204	0.2452	Ave		0.2463				8.0		15.0			
2-Pentanone	+++++ 0.2784	0.3622 0.2725	0.3258 0.2796	0.2957 0.2665	0.2892	Ave		0.2962				10.9		15.0			
Methylcyclohexane	0.2941 0.2737	0.3174 0.2850	0.2723 0.2877	0.2932 0.2801	0.2832	Ave		0.2874				4.7		15.0			
1,2-Dichloropropane	0.3405 0.2652	0.3411 0.2662	0.3040 0.2653	0.2802 0.2543	0.2769	Ave		0.2882				11.4		30.0			
1,4-Dioxane	+++++ 0.0051	0.0060 0.0051	0.0052 0.0052	0.0054 0.0049	0.0055	Ave		0.0053				6.1		15.0			
Dibromomethane	0.2276 0.1666	0.1905 0.1636	0.1846 0.1657	0.1642 0.1603	0.1722	Ave		0.1772				12.1		15.0			
Dichlorobromomethane	0.3597 0.3406	0.3716 0.3404	0.3657 0.3403	0.3489 0.3286	0.3532	Ave		0.3499				4.0		15.0			
2-Chloroethyl vinyl ether	0.2141 0.2126	0.2190 0.2040	0.2052 0.2018	0.2134 0.1991	0.2273	Ave		0.2107				4.3		15.0			
cis-1,3-Dichloropropene	1.9568 1.7855	1.8494 1.7808	1.8441 1.7906	1.7545 1.7292	1.7899	Ave		1.8090				3.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 Calibration End Date: 04/13/2023 17:13 Calibration ID: 79243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Methyl-2-pentanone (MIBK)	0.3555 0.3503	0.3414 0.3409	0.3502 0.3475	0.3520 0.3329	0.3596	Ave		0.3478				2.4		15.0			
Toluene	1.1338 1.0005	1.1401 1.0041	1.0425 0.9908	1.0634 0.9299	1.0333	Ave		1.0376				6.5		30.0			
trans-1,3-Dichloropropene	0.4988 0.4271	0.4625 0.4338	0.4459 0.4329	0.4429 0.4231	0.4371	Ave		0.4449				5.2		15.0			
Ethyl methacrylate	1.6820 1.6026	1.6626 1.5646	1.6282 1.6055	1.6334 1.5483	1.6534	Ave		1.6201				2.7		15.0			
1,1,2-Trichloroethane	0.2628 0.2313	0.2552 0.2266	0.2531 0.2293	0.2365 0.2237	0.2422	Ave		0.2401				5.8		15.0			
Tetrachloroethene	0.8476 0.7185	0.8405 0.7332	0.7717 0.7303	0.7695 0.6844	0.7421	Ave		0.7598				7.2		15.0			
1,3-Dichloropropane	1.9430 1.7707	1.9049 1.7308	1.8387 1.7635	1.7833 1.6982	1.8387	Ave		1.8080				4.4		15.0			
2-Hexanone	1.0828 1.0415	1.0246 1.0186	1.0129 1.0424	1.0440 0.9759	1.0862	Ave		1.0365				3.3		15.0			
Chlorodibromomethane	1.0146 1.0230	0.9583 1.0379	1.0090 1.0467	0.9924 1.0094	1.0627	Ave		1.0171				3.0		15.0			
1,2-Dibromoethane	1.1155 1.0080	1.1128 0.9961	1.0235 1.0002	1.0348 0.9603	1.0473	Ave		1.0332				5.1		15.0			
1-Chlorohexane	2.7122 1.2649	2.0183 1.2831	1.6333 1.2854	1.4449 1.2123	1.3390	Lin2	0.5854	1.2642							0.9990		0.9900
Chlorobenzene	3.2162 2.6880	2.9943 2.6707	2.8753 2.6524	2.7947 2.4947	2.7668	Ave		2.7948			0.3000	7.6		15.0			
1,1,1,2-Tetrachloroethane	1.0969 0.9713	1.0004 0.9824	0.9644 0.9754	0.9846 0.9334	0.9630	Ave		0.9858				4.6		15.0			
Ethylbenzene	1.5483 1.4312	1.4919 1.4257	1.5258 1.4133	1.5291 1.3335	1.4524	Ave		1.4612				4.7		30.0			
m-Xylene & p-Xylene	4.6726 3.6526	3.6690 3.6308	3.7183 3.6211	3.7529 3.3543	3.6975	Ave		3.7521				9.7		15.0			
o-Xylene	1.9292 1.7314	1.8260 1.7351	1.8537 1.7301	1.8368 1.5923	1.8292	Ave		1.7849				5.5		15.0			
Styrene	3.5484 2.9877	3.1810 2.9752	2.9656 2.9868	3.0079 2.7434	3.0602	Ave		3.0507				7.2		15.0			
Bromoform	0.7362 0.7346	0.6661 0.7411	0.6569 0.7454	0.7020 0.7152	0.6906	Ave		0.7098			0.1000	4.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 Calibration End Date: 04/13/2023 17:13 Calibration ID: 79243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Isopropylbenzene	2.9796 2.6148	2.7980 2.6192	2.8436 2.6517	2.7258 2.5580	2.6979	Ave		2.7210				4.9		15.0			
Cyclohexanone	0.0741 0.0697	0.0682 0.0686	0.0674 0.0702	0.0711 0.0641	0.0706	Ave		0.0693				4.0		15.0			
1,1,2,2-Tetrachloroethane	1.0765 0.8853	0.9631 0.8908	0.9586 0.9049	0.9172 0.8806	0.9368	Ave		0.9349			0.3000	6.5		15.0			
Bromobenzene	0.8305 0.6785	0.6864 0.6750	0.7379 0.6891	0.7192 0.6675	0.7149	Ave		0.7110				7.1		15.0			
trans-1,4-Dichloro-2-butene	0.3129 0.2609	0.3358 0.2663	0.2163 0.2806	0.2521 0.2732	0.2411	Ave		0.2710				13.3		15.0			
1,2,3-Trichloropropane	+++++ 0.2750	0.2971 0.2742	0.3537 0.2826	0.3000 0.2778	0.2641	Ave		0.2906				9.7		15.0			
N-Propylbenzene	0.7764 0.6995	0.7394 0.7200	0.7582 0.7016	0.7409 0.6865	0.7303	Ave		0.7281				4.0		15.0			
2-Chlorotoluene	0.7576 0.6284	0.6349 0.6349	0.6559 0.6343	0.6720 0.6130	0.6658	Ave		0.6552				6.5		15.0			
1,3,5-Trimethylbenzene	2.5938 2.1890	2.3801 2.2064	2.3358 2.2369	2.3512 2.1012	2.2727	Ave		2.2963				6.2		15.0			
4-Chlorotoluene	0.7954 0.6683	0.7577 0.6793	0.7308 0.6764	0.6868 0.6458	0.6858	Ave		0.7029				6.9		15.0			
tert-Butylbenzene	2.1707 1.7564	1.8672 2.0912	2.2786 2.0475	2.1975 1.6845	2.1472	Ave		2.0268				10.3		15.0			
1,2,4-Trimethylbenzene	2.7880 2.3089	2.6077 2.3457	2.5287 2.3296	2.4625 2.1718	2.4239	Ave		2.4408				7.5		15.0			
sec-Butylbenzene	+++++ 0.5043	0.5482 0.5177	0.5693 0.5116	0.5259 0.4880	0.5190	Ave		0.5230				4.9		15.0			
1,3-Dichlorobenzene	1.5100 1.2089	1.3708 1.2173	1.3299 1.2084	1.2444 1.1404	1.2607	Ave		1.2768				8.7		15.0			
4-Isopropyltoluene	2.6074 2.1796	2.3993 2.2341	2.3413 2.1918	2.2904 2.0598	2.3103	Ave		2.2904				6.8		15.0			
1,4-Dichlorobenzene	1.6015 1.2376	1.4122 1.2448	1.4089 1.2436	1.3329 1.1743	1.2979	Ave		1.3282				9.8		15.0			
n-Butylbenzene	2.3258 1.9105	2.0004 1.9476	2.0435 1.9136	1.9827 1.8102	2.0020	Ave		1.9929				7.1		15.0			
1,2-Dichlorobenzene	1.5447 1.1573	1.3239 1.1792	1.3046 1.1674	1.2317 1.1212	1.2406	Ave		1.2523				10.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 Calibration End Date: 04/13/2023 17:13 Calibration ID: 79243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dibromo-3-Chloropropane	0.2127 0.2023	0.1938 0.2121	0.2020 0.2166	0.2049 0.2098	0.2013	Ave		0.2062				3.5		15.0			
1,2,4-Trichlorobenzene	1.0636 0.7411	0.8586 0.7431	0.9050 0.7376	0.8544 0.7010	0.8082	Ave		0.8236				13.7		15.0			
Hexachlorobutadiene	0.3979 0.3090	0.3851 0.3098	0.3669 0.3127	0.3581 0.2945	0.3505	Ave		0.3427				10.9		15.0			
Naphthalene	3.3806 2.4080	2.8705 2.3746	2.8278 2.3714	2.6654 2.1096	2.7312	Ave		2.6377				14.2		15.0			
1,2,3-Trichlorobenzene	0.8978 0.6312	0.7739 0.6133	0.7235 0.6128	0.7296 0.5581	0.7126	Ave		0.6948				14.9		15.0			
Dibromofluoromethane (Surr)	0.2590 0.2578	0.2578 0.2578	0.2537 0.2575	0.2568 0.2538	0.2609	Ave		0.2572				0.9		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3430 0.3628	0.3469 0.3676	0.3436 0.3787	0.3449 0.3329	0.3524	Ave		0.3525				4.1		15.0			
Toluene-d8 (Surr)	4.0939 4.1690	4.0823 4.1043	4.1111 4.1181	4.1154 4.0916	4.1648	Ave		4.1167				0.7		15.0			
4-Bromofluorobenzene (Surr)	1.0108 1.0027	1.0090 1.0221	1.0276 1.0389	1.0004 1.0500	1.0189	Ave		1.0200				1.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 | Calibration End Date: 04/13/2023 17:13 | Calibration ID: 79243

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-608560/19	ms11_5241.D
Level 2	STD 280-608560/18	ms11_5240.D
Level 3	STD 280-608560/17	ms11_5239.D
Level 4	STD 280-608560/16	ms11_5238.D
Level 5	STD 280-608560/15	ms11_5237.D
Level 6	ICIS 280-608560/14	ms11_5236.D
Level 7	STD 280-608560/13	ms11_5235.D
Level 8	STD 280-608560/12	ms11_5234.D
Level 9	STD 280-608560/11	ms11_5233.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	3480 392946	7955 571856	14487 776495	38247 1463722	71800	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloromethane	FB	Ave	+++++ 476039	+++++ 687944	22226 906620	50404 1643380	102435	+++++ 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Ave	+++++ 421000	+++++ 603981	17420 795947	43834 1493479	88188	+++++ 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Lin1	4227 207798	8118 +++++	10270 +++++	23720 +++++	50629	0.500 50.0	1.00 +++++	2.00 +++++	5.00 +++++	10.0
Chloroethane	FB	Lin2	+++++ 268295	8701 383116	12796 496831	28634 +++++	58957	+++++ 50.0	1.00 75.0	2.00 100	5.00 +++++	10.0
Dichlorofluoromethane	FB	Ave	6387 613608	16336 881404	25151 1167898	62120 2215674	129290	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Ave	+++++ 434566	+++++ 596307	21080 772920	52200 +++++	100380	+++++ 50.0	+++++ 75.0	2.00 100	5.00 +++++	10.0
Ethyl ether	FB	Ave	+++++ 311430	8533 461235	14512 618027	31717 1199456	65998	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acrolein	FB	Ave	5951 532678	10336 760068	21498 1050232	53133 1987320	106418	4.94 494	9.88 741	19.8 988	49.4 1975	98.8
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	1970 200996	4217 306592	8674 414255	21697 800433	41844	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloroethene	FB	Ave	3512 269753	6773 410772	11986 550139	28752 1061559	57075	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acetone	FB	Lin2	+++++ 613428	34187 877143	49674 1265050	83509 +++++	138140	+++++ 200	4.00 300	8.00 400	20.0 +++++	40.0
Iodomethane	FB	Ave	+++++ 415640	+++++ 629635	18206 832611	41138 1585077	79311	+++++ 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Carbon disulfide	FB	Ave	+++++ 973955	+++++ 1486279	45444 1988873	107561 3770711	203610	+++++ 50.0	+++++ 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 | Calibration End Date: 04/13/2023 17:13 | Calibration ID: 79243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methyl acetate	FB	Lin2	+++++ 802367	47490 1158520	64263 1576437	115815 3007753	180411	+++++ 100	2.00 150	4.00 200	10.0 400	20.0
Allyl chloride	FB	Lin2	+++++ 565177	20315 798605	33226 993511	65585 1766416	125162	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Methylene Chloride	FB	Ave	+++++ 342894	+++++ 504634	16638 676030	37581 1292453	71394	+++++ 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
2-Methyl-2-propanol	FB	Ave	6616 583311	11972 863952	23644 1207478	55217 2289311	118481	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Acrylonitrile	FB	Ave	19634 1857188	37793 2642390	75273 3658090	187689 7076383	390986	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Methyl tert-butyl ether	FB	Ave	12852 1153728	24784 1682508	48244 2266646	117785 4424157	233279	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,2-Dichloroethene	FB	Ave	4147 314514	7628 474694	15084 630449	33483 1210798	64282	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexane	CBNZd5	Ave	4017 400615	7507 616520	16177 845329	42707 1666340	80872	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl acetate	FB	Ave	19044 1671405	34946 2321424	71969 3258755	177735 5619879	349425	1.00 100	2.00 150	4.00 200	10.0 400	20.0
1,1-Dichloroethane	FB	Ave	7007 621407	15460 916188	27419 1218304	64634 2331772	132081	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Butanone (MEK)	FB	Lin2	+++++ 1011360	58345 1452846	84128 2003721	135882 3878820	229429	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
cis-1,2-Dichloroethene	FB	Ave	4538 360878	9025 530820	15821 712228	38739 1345651	78359	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2,2-Dichloropropane	FB	Ave	6989 554357	12414 837898	26483 1126228	58137 2185647	110587	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butyl Alcohol	FB	Ave	11058 1161154	26095 1756779	46931 2402747	114407 4825472	235317	12.0 1200	24.0 1800	48.0 2400	120 4800	240
Chlorobromomethane	FB	Ave	+++++ 160412	4351 238026	7687 318814	17416 619180	35342	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Tetrahydrofuran	FB	Ave	+++++ 321622	7164 456769	14096 638324	33344 1281404	66997	+++++ 100	2.00 150	4.00 200	10.0 400	20.0
Chloroform	FB	Ave	7565 602282	14672 900662	25523 1188623	61376 2338744	123293	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1-Trichloroethane	FB	Ave	5923 514833	11648 779522	21071 1031424	54376 1979990	108687	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexane	FB	Ave	6217 568375	11559 869554	23552 1176759	59634 2260857	118173	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloropropene	FB	Ave	5273 479676	10783 723613	21251 959669	50130 1849261	99726	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 | Calibration End Date: 04/13/2023 17:13 | Calibration ID: 79243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon tetrachloride	FB	Ave	4805 441498	10149 667710	18739 888086	45710 1717180	91138	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isobutyl alcohol	FB	Ave	6039 686305	13792 1027458	25332 1421919	64662 2884469	128938	12.5 1250	25.0 1875	50.0 2500	125 5000	250
Benzene	FB	Ave	15917 1384712	34146 2011422	58759 2698399	144984 5187622	285600	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloroethane	FB	Ave	7410 551431	13783 814884	24936 1094209	58680 2141287	116578	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Heptane	FB	Lin1	12434 367012	14911 552971	22310 763475	45236 1541634	76276	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichloroethene	FB	Ave	3839 332684	7591 498432	14631 661043	34589 1271389	70635	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Pentanone	FB	Ave	+++++ 1269804	32809 1846139	60410 2547690	133615 4918746	266646	+++++ 160	3.20 240	6.40 320	16.0 640	32.0
Methylcyclohexane	FB	Ave	3966 390134	8986 603346	15777 819037	41394 1615519	81599	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloropropane	FB	Ave	4592 378092	9657 563548	17616 755386	39564 1466689	79778	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dioxane	FB	Ave	+++++ 146475	3385 216279	6069 296874	15334 565374	31598	+++++ 1000	20.0 1500	40.0 2000	100 4000	200
Dibromomethane	FB	Ave	3069 237500	5392 346291	10695 471806	23178 924653	49625	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorobromomethane	FB	Ave	4851 485530	10519 720646	21192 968922	49259 1894952	101760	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Ave	2888 303070	6201 431934	11889 574526	30138 1148111	65493	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,3-Dichloropropene	CBNZd5	Ave	6515 615600	12870 923780	25943 1239917	59816 2450076	123927	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	19180 1997439	38661 2887114	81163 3957843	198807 7679756	414477	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Toluene	FB	Ave	15291 1426315	32276 2125800	60406 2821099	150140 5363307	297712	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,3-Dichloropropene	FB	Ave	6727 608804	13093 918375	25838 1232438	62535 2439956	125934	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl methacrylate	CBNZd5	Ave	5600 552527	11570 811649	22906 1111762	55686 2193806	114480	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloroethane	FB	Ave	3544 329697	7226 479751	14667 652775	33394 1290342	69783	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Tetrachloroethene	CBNZd5	Ave	2822	5849	10857	26233	51379	0.500	1.00	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 | Calibration End Date: 04/13/2023 17:13 | Calibration ID: 79243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			247727	380336	505729	969811		50.0	75.0	100	200	
1,3-Dichloropropane	CBNZd5	Ave	6469 610498	13256 897843	25867 1221155	60798 2406253	127306	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Hexanone	CBNZd5	Ave	14420 1436348	28520 2113646	57002 2887234	142372 5531111	300827	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Chlorodibromomethane	CBNZd5	Ave	3378 352708	6669 538402	14195 724774	33834 1430261	73576	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromoethane	CBNZd5	Ave	3714 347542	7744 516746	14399 692570	35280 1360662	72514	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1-Chlorohexane	CBNZd5	Lin2	7224 348885	11236 532506	18382 712049	39407 1374237	74170	0.400 40.0	0.800 60.0	1.60 80.0	4.00 160	8.00
Chlorobenzene	CBNZd5	Ave	10708 926782	20837 1385462	40451 1836667	95280 3534772	191568	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1,2-Tetrachloroethane	CBNZd5	Ave	3652 334887	6962 509626	13568 675427	33567 1322569	66675	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethylbenzene	CBNZd5	Ave	5155 493450	10382 739616	21465 978625	52131 1889453	100564	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
m-Xylene & p-Xylene	CBNZd5	Ave	15557 1259356	25532 1883489	52311 2507466	127947 4752825	256006	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
o-Xylene	CBNZd5	Ave	6423 596948	12707 900079	26078 1198009	62622 2256228	126653	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Styrene	CBNZd5	Ave	11814 1030089	22136 1543398	41721 2068255	102548 3887174	211883	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromoform	CBNZd5	Ave	2451 253270	4635 384468	9241 516161	23933 1013360	47819	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isopropylbenzene	DCBd4	Ave	15987 1481848	31322 2203272	63537 2928942	151232 5451334	300457	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexanone	CBNZd5	Ave	7406 721261	14230 1067035	28428 1458816	72689 2724964	146569	15.0 1500	30.0 2250	60.0 3000	150 6000	300
1,1,2,2-Tetrachloroethane	DCBd4	Ave	5776	10782	21418	50887	104323	0.500	1.00	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 | Calibration End Date: 04/13/2023 17:13 | Calibration ID: 79243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			501712	749373	999492	1876707		50.0	75.0	100	200	
Bromobenzene	DCBd4	Ave	4456 384510	7684 567860	16488 761165	39900 1422574	79620	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,4-Dichloro-2-butene	DCBd4	Ave	1679 147853	3759 224001	4832 309932	13989 582259	26849	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichloropropane	DCBd4	Ave	+++++ 155850	3326 230627	7903 312145	16644 592112	29417	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
N-Propylbenzene	DCBd4	Ave	4166 396430	8277 605690	16941 774962	41105 1463087	81326	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chlorotoluene	DCBd4	Ave	4065 356104	7108 534053	14656 700600	37285 1306433	74150	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3,5-Trimethylbenzene	DCBd4	Ave	13917 1240525	26644 1856054	52192 2470770	130444 4477856	253099	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Chlorotoluene	DCBd4	Ave	4268 378730	8482 571449	16329 747162	38104 1376231	76370	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
tert-Butylbenzene	DCBd4	Ave	11647 995358	20903 1759161	50914 2261625	121918 3589901	239126	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trimethylbenzene	DCBd4	Ave	14959 1308488	29192 1973244	56502 2573168	136619 4628305	269939	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butylbenzene	DCBd4	Ave	+++++ 285787	6137 435520	12721 565043	29176 1040064	57800	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichlorobenzene	DCBd4	Ave	8102 685103	15346 1023990	29716 1334721	69038 2430386	140401	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Isopropyltoluene	DCBd4	Ave	13990 1235195	26859 1879347	52315 2420923	127074 4389671	257291	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dichlorobenzene	DCBd4	Ave	8593 701332	15809 1047111	31480 1373624	73952 2502520	144536	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Butylbenzene	DCBd4	Ave	12479 1082680	22394 1638332	45661 2113705	110000 3857648	222956	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichlorobenzene	DCBd4	Ave	8288 655822	14820 991942	29151 1289435	68337 2389443	138155	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromo-3-Chloropropane	DCBd4	Ave	1141 114666	2169 178440	4513 239264	11369 447189	22419	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trichlorobenzene	DCBd4	Ave	5707 419992	9612 625078	20222 814753	47401 1493884	90010	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexachlorobutadiene	DCBd4	Ave	2135 175119	4311 260602	8199 345344	19870 627639	39029	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Naphthalene	DCBd4	Ave	18139 1364605	32134 1997504	63185 2619404	147877 4495757	304160	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichlorobenzene	DCBd4	Ave	4817 357700	8663 515955	16167 676910	40480 1189402	79357	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 608560

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624Sil ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 04/13/2023 14:21 Calibration End Date: 04/13/2023 17:13 Calibration ID: 79243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dibromofluoromethane (Surr)	FB	Ave	349355 367471	364860 363849	367554 366546	362569 365885	375824	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	462563 517182	491040 518805	497775 539137	486976 480030	507716	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	1363020 1437385	1420400 1419424	1445916 1425831	1403027 1449389	1441802	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	542338 568213	564776 573186	574049 573749	555048 559419	567329	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5233.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 13-Apr-2023 14:21:30 ALS Bottle#: 3 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 200
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 12:44:21 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: BX8N Date: 13-Apr-2023 15:35:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1441855	50.0	50.0	a
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	90	354231	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	532771	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	96	365885	50.0	49.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	480030	50.0	47.2	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	93	1449389	50.0	49.7	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	84	559419	50.0	51.5	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	1463722	200.0	191.8	
12 Chloromethane	50	1.869	1.869	0.000	99	1643380	200.0	169.2	
13 Vinyl chloride	62	1.981	1.981	0.000	98	1493479	200.0	178.0	
15 Bromomethane	94	2.233	2.233	0.000	93	302128	200.0	70.5	
16 Chloroethane	64	2.330	2.330	0.000	100	912037	200.0	175.1	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	98	2215674	200.0	172.3	
18 Trichlorofluoromethane	101	2.540	2.540	0.000	98	1436148	200.0	154.0	
20 Ethyl ether	59	2.763	2.763	0.000	93	1199456	200.0	178.2	
22 Acrolein	56	2.875	2.875	0.000	99	1987320	1975.0	1817.9	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.945	2.945	0.000	96	800433	200.0	190.2	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	99	1061559	200.0	177.3	
24 Acetone	43	2.973	2.973	0.000	99	2429261	800.0	794.1	
26 Iodomethane	142	3.071	3.071	0.000	99	1585077	200.0	188.9	
28 Carbon disulfide	76	3.140	3.140	0.000	100	3770711	200.0	183.4	
29 Methyl acetate	43	3.196	3.196	0.000	98	3007753	400.0	384.1	
30 3-Chloro-1-propene	41	3.210	3.210	0.000	89	1766416	200.0	165.9	
31 Methylene Chloride	84	3.308	3.308	0.000	97	1292453	200.0	180.1	
32 2-Methyl-2-propanol	59	3.364	3.364	0.000	99	2289311	2000.0	1899.2	
33 Acrylonitrile	53	3.476	3.476	0.000	97	7076383	2000.0	1865.5	
34 Methyl tert-butyl ether	73	3.503	3.503	0.000	97	4424157	200.0	184.8	
35 trans-1,2-Dichloroethene	96	3.503	3.503	0.000	95	1210798	200.0	173.8	
36 Hexane	57	3.699	3.699	0.000	95	1666340	200.0	199.6	
37 Vinyl acetate	43	3.797	3.797	0.000	98	5619879	400.0	326.4	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	96	2331772	200.0	175.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	3878820	800.0	784.0	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	86	1345651	200.0	170.6	
45 2,2-Dichloropropane	77	4.244	4.244	0.000	91	2185647	200.0	181.0	
47 sec-Butyl Alcohol	45	4.314	4.314	0.000	99	4825472	4800.0	4817.0	
49 Chlorobromomethane	128	4.411	4.411	0.000	97	619180	200.0	175.9	
50 Tetrahydrofuran	42	4.411	4.411	0.000	88	1281404	400.0	383.7	
51 Chloroform	83	4.467	4.467	0.000	94	2338744	200.0	180.1	
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	98	1979990	200.0	181.1	
54 Cyclohexane	56	4.663	4.663	0.000	93	2260857	200.0	189.5	
56 Carbon tetrachloride	117	4.719	4.719	0.000	95	1717180	200.0	184.0	
55 1,1-Dichloropropene	75	4.719	4.719	0.000	92	1849261	200.0	181.7	
52 Isobutyl alcohol	43	4.733	4.733	0.000	94	2884469	5000.0	5303.1	
57 Benzene	78	4.872	4.872	0.000	98	5187622	200.0	176.2	
58 1,2-Dichloroethane	62	4.886	4.886	0.000	97	2141287	200.0	175.2	
60 n-Heptane	43	5.040	5.040	0.000	95	1541634	200.0	203.0	
62 Trichloroethene	130	5.347	5.347	0.000	97	1271389	200.0	179.0	
63 2-Pentanone	43	5.445	5.445	0.000	99	4918746	640.0	575.8	
64 Methylcyclohexane	55	5.543	5.543	0.000	93	1615519	200.0	194.9	
65 1,2-Dichloropropane	63	5.543	5.543	0.000	92	1466689	200.0	176.5	
67 1,4-Dioxane	88	5.598	5.598	0.000	97	565374	4000.0	3691.4	
68 Dibromomethane	93	5.626	5.626	0.000	95	924653	200.0	180.9	
69 Dichlorobromomethane	83	5.738	5.738	0.000	98	1894952	200.0	187.8	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	93	1148111	200.0	188.9	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	93	2450076	200.0	191.2	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	97	7679756	800.0	765.7	
75 Toluene	91	6.367	6.367	0.000	98	5363307	200.0	179.2	
73 trans-1,3-Dichloropropene	75	6.534	6.534	0.000	99	2439956	200.0	190.2	
77 Ethyl methacrylate	69	6.562	6.562	0.000	90	2193806	200.0	191.1	
79 1,1,2-Trichloroethane	97	6.716	6.716	0.000	93	1290342	200.0	186.4	
80 Tetrachloroethene	164	6.813	6.813	0.000	94	969811	200.0	180.2	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	2406253	200.0	187.9	
82 2-Hexanone	43	6.883	6.883	0.000	97	5531111	800.0	753.2	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	1430261	200.0	198.5	
86 Ethylene Dibromide	107	7.163	7.163	0.000	98	1360662	200.0	185.9	
88 1-Chlorohexane	91	7.554	7.554	0.000	98	1374237	160.0	153.0	
89 Chlorobenzene	112	7.596	7.596	0.000	92	3534772	200.0	178.5	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	93	1322569	200.0	189.4	
91 Ethylbenzene	106	7.665	7.665	0.000	99	1889453	200.0	182.5	
92 m-Xylene & p-Xylene	91	7.777	7.777	0.000	0	4752825	200.0	178.8	
93 o-Xylene	106	8.140	8.140	0.000	97	2256228	200.0	178.4	
94 Styrene	104	8.154	8.154	0.000	93	3887174	200.0	179.9	
96 Bromoform	173	8.336	8.336	0.000	94	1013360	200.0	201.5	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	5451334	200.0	188.0	
99 Cyclohexanone	55	8.573	8.573	0.000	95	2724964	6000.0	5548.2	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	1876707	200.0	188.4	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	63	582259	200.0	201.6	
101 Bromobenzene	156	8.797	8.797	0.000	98	1422574	200.0	187.8	
103 1,2,3-Trichloropropane	110	8.825	8.825	0.000	87	592112	200.0	191.2	
104 N-Propylbenzene	120	8.867	8.867	0.000	99	1463087	200.0	188.6	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	1306433	200.0	187.1	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	93	4477856	200.0	183.0	
107 4-Chlorotoluene	126	9.090	9.090	0.000	98	1376231	200.0	183.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	3589901	200.0	166.2	
109 1,2,4-Trimethylbenzene	105	9.397	9.397	0.000	99	4628305	200.0	178.0	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	1040064	200.0	186.6	
112 1,3-Dichlorobenzene	146	9.691	9.691	0.000	96	2430386	200.0	178.6	
113 4-Isopropyltoluene	119	9.705	9.705	0.000	97	4389671	200.0	179.9	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	93	2502520	200.0	176.8	
115 n-Butylbenzene	91	10.110	10.110	0.000	98	3857648	200.0	181.7	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	96	2389443	200.0	179.1	
117 1,2-Dibromo-3-Chloropropane	157	10.906	10.906	0.000	79	447189	200.0	203.6	
119 1,2,4-Trichlorobenzene	180	11.730	11.730	0.000	94	1493884	200.0	170.2	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	98	627639	200.0	171.9	
121 Naphthalene	128	11.995	11.995	0.000	98	4495757	200.0	160.0	
122 1,2,3-Trichlorobenzene	180	12.204	12.204	0.000	94	1189402	200.0	160.7	
S 142 Xylenes, Total	106				0		400.0	357.2	
S 143 1,2-Dichloroethene, Total	1				0		400.0	344.4	
S 145 1,3-Dichloropropene, Total	1				0		400.0	381.4	
S 147 Trihalomethanes, Total	1				0		800.0	767.9	
S 141 Total BTEX	1				0			895.2	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

MV-MegaMain B_00083	Amount Added: 100.00	Units: uL	
MV-Gas B_00133	Amount Added: 40.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

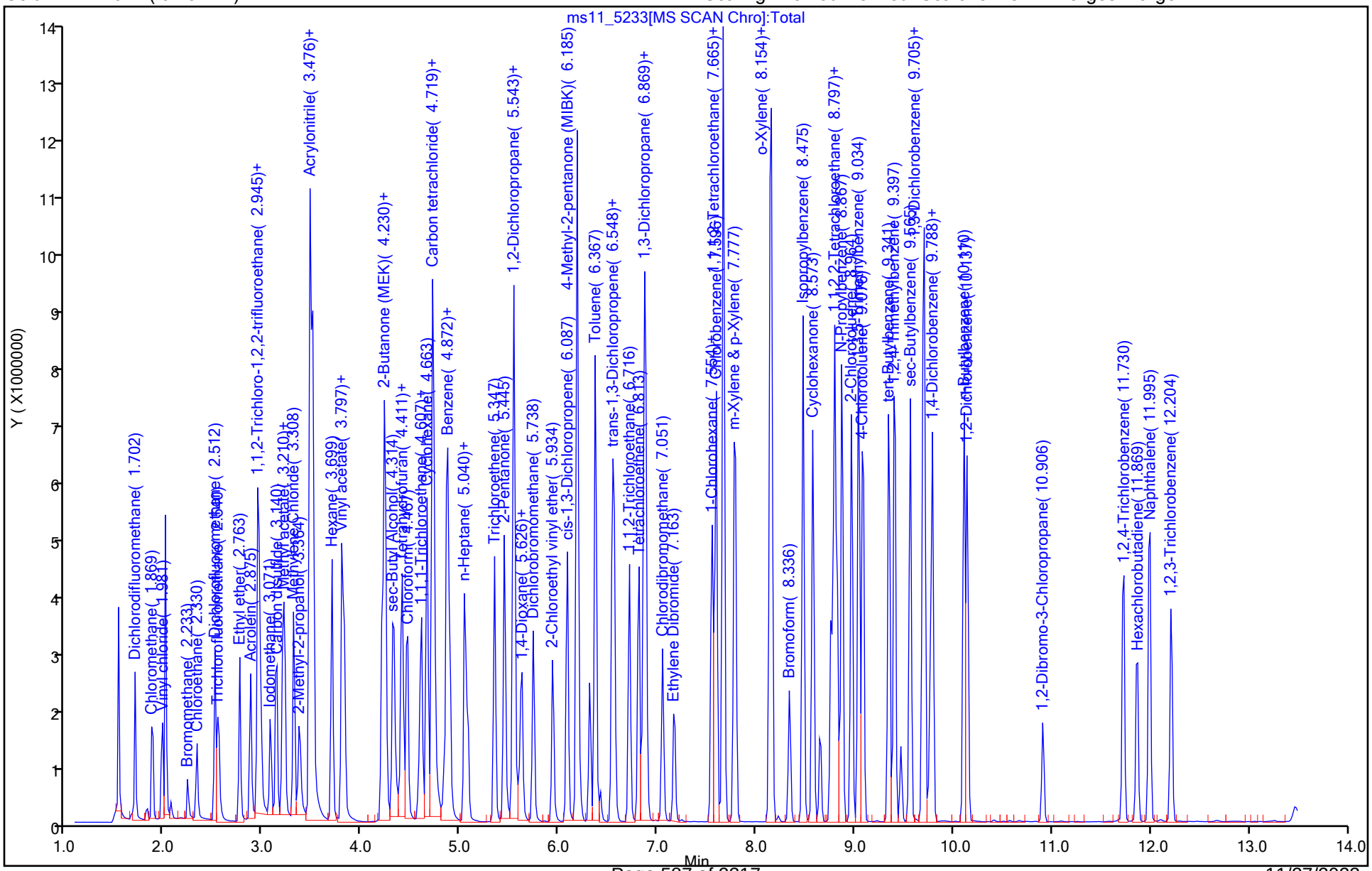
Report Date: 14-Apr-2023 12:44:22 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5233.D

Injection Date:	13-Apr-2023 14:21:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

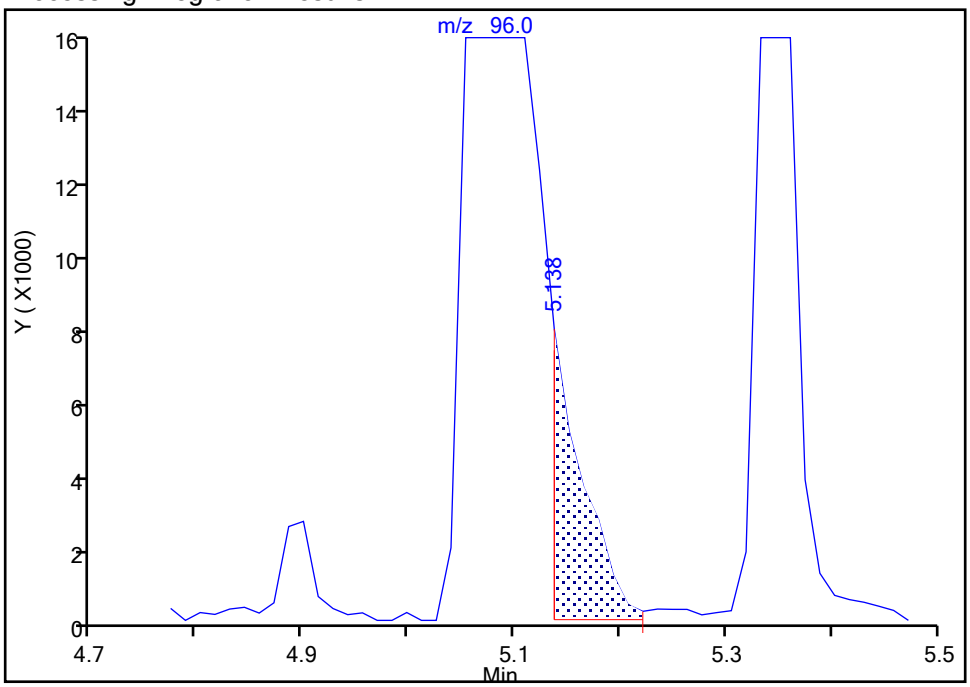
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5233.D
Injection Date: 13-Apr-2023 14:21:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 3 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

* 1 Fluorobenzene, CAS: 462-06-6

Signal: 1

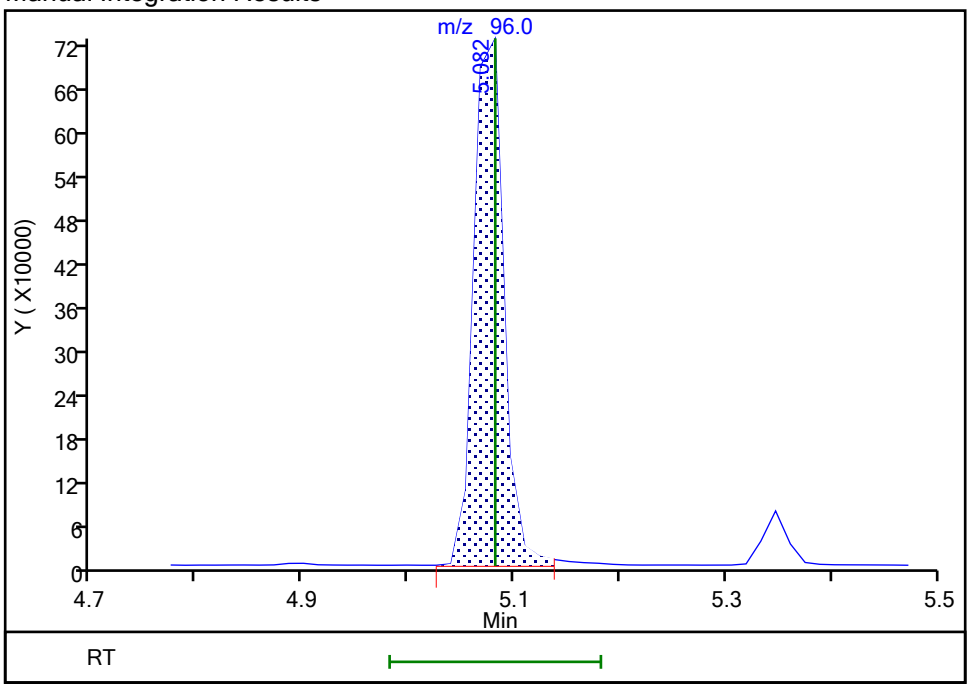
Processing Integration Results

RT: 5.14
Area: 17842
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 5.08
Area: 1441855
Amount: 50.000000
Amount Units: ug/l



Reviewer: RWB2, 13-Apr-2023 18:13:08
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5234.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 13-Apr-2023 14:43:30 ALS Bottle#: 4 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 100
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 12:44:24 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: RWB2 Date: 13-Apr-2023 18:13:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1423592	50.0	50.0	a
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	89	346231	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	552279	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	96	366546	50.0	50.0	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	539137	50.0	53.7	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1425831	50.0	50.0	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	84	573749	50.0	50.9	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	776495	100.0	103.1	
12 Chloromethane	50	1.883	1.883	0.000	99	906620	100.0	94.5	
13 Vinyl chloride	62	1.981	1.981	0.000	98	795947	100.0	96.1	
15 Bromomethane	94	2.232	2.232	0.000	93	277733	100.0	65.6	
16 Chloroethane	64	2.330	2.330	0.000	99	496831	100.0	96.3	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	98	1167898	100.0	92.0	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	99	772920	100.0	84.0	
20 Ethyl ether	59	2.763	2.763	0.000	93	618027	100.0	93.0	
22 Acrolein	56	2.875	2.875	0.000	99	1050232	987.5	973.0	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.959	0.000	96	414255	100.0	99.7	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	96	550139	100.0	93.1	
24 Acetone	43	2.973	2.973	0.000	99	1265050	400.0	415.2	
26 Iodomethane	142	3.070	3.070	0.000	99	832611	100.0	100.5	
28 Carbon disulfide	76	3.140	3.140	0.000	100	1988873	100.0	98.0	
29 Methyl acetate	43	3.196	3.196	0.000	98	1576437	200.0	201.9	
30 3-Chloro-1-propene	41	3.224	3.224	0.000	90	993511	100.0	94.1	
31 Methylene Chloride	84	3.308	3.308	0.000	97	676030	100.0	95.4	
32 2-Methyl-2-propanol	59	3.364	3.364	0.000	99	1207478	1000.0	1014.6	
33 Acrylonitrile	53	3.475	3.475	0.000	98	3658090	1000.0	976.7	
34 Methyl tert-butyl ether	73	3.503	3.503	0.000	96	2266646	100.0	95.9	
35 trans-1,2-Dichloroethene	96	3.517	3.517	0.000	95	630449	100.0	91.7	
36 Hexane	57	3.699	3.699	0.000	95	845329	100.0	103.6	
37 Vinyl acetate	43	3.797	3.797	0.000	98	3258755	200.0	191.7	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	97	1218304	100.0	92.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	2003721	400.0	406.3	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	86	712228	100.0	91.4	
45 2,2-Dichloropropane	77	4.244	4.244	0.000	91	1126228	100.0	94.5	
47 sec-Butyl Alcohol	45	4.313	4.313	0.000	99	2402747	2400.0	2429.3	
49 Chlorobromomethane	128	4.411	4.411	0.000	97	318814	100.0	91.7	
50 Tetrahydrofuran	42	4.411	4.411	0.000	88	638324	200.0	193.6	
51 Chloroform	83	4.467	4.467	0.000	95	1188623	100.0	92.7	
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	98	1031424	100.0	95.6	
54 Cyclohexane	56	4.663	4.663	0.000	94	1176759	100.0	99.9	
56 Carbon tetrachloride	117	4.718	4.718	0.000	95	888086	100.0	96.4	
55 1,1-Dichloropropene	75	4.718	4.718	0.000	92	959669	100.0	95.5	
52 Isobutyl alcohol	43	4.732	4.732	0.000	94	1421919	2500.0	2647.7	
57 Benzene	78	4.872	4.872	0.000	98	2698399	100.0	92.8	
58 1,2-Dichloroethane	62	4.886	4.886	0.000	97	1094209	100.0	90.7	
60 n-Heptane	43	5.040	5.040	0.000	95	763475	100.0	101.3	
62 Trichloroethene	130	5.347	5.347	0.000	97	661043	100.0	94.3	
63 2-Pentanone	43	5.445	5.445	0.000	99	2547690	320.0	302.1	
64 Methylcyclohexane	55	5.542	5.542	0.000	93	819037	100.0	100.1	
65 1,2-Dichloropropane	63	5.542	5.542	0.000	91	755386	100.0	92.1	
67 1,4-Dioxane	88	5.598	5.598	0.000	97	296874	2000.0	1963.2	
68 Dibromomethane	93	5.626	5.626	0.000	95	471806	100.0	93.5	
69 Dichlorobromomethane	83	5.738	5.738	0.000	98	968922	100.0	97.3	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	93	574526	100.0	95.8	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	93	1239917	100.0	99.0	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	98	3957843	400.0	399.7	
75 Toluene	91	6.366	6.366	0.000	98	2821099	100.0	95.5	
73 trans-1,3-Dichloropropene	75	6.548	6.548	0.000	99	1232438	100.0	97.3	
77 Ethyl methacrylate	69	6.562	6.562	0.000	90	1111762	100.0	99.1	
79 1,1,2-Trichloroethane	97	6.716	6.716	0.000	94	652775	100.0	95.5	
80 Tetrachloroethene	164	6.813	6.813	0.000	95	505729	100.0	96.1	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	1221155	100.0	97.5	
82 2-Hexanone	43	6.883	6.883	0.000	96	2887234	400.0	402.3	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	724774	100.0	102.9	
86 Ethylene Dibromide	107	7.163	7.163	0.000	98	692570	100.0	96.8	
88 1-Chlorohexane	91	7.554	7.554	0.000	98	712049	80.0	80.9	
89 Chlorobenzene	112	7.595	7.595	0.000	92	1836667	100.0	94.9	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	87	675427	100.0	98.9	
91 Ethylbenzene	106	7.665	7.665	0.000	99	978625	100.0	96.7	
92 m-Xylene & p-Xylene	91	7.791	7.791	0.000	0	2507466	100.0	96.5	
93 o-Xylene	106	8.140	8.140	0.000	96	1198009	100.0	96.9	
94 Styrene	104	8.154	8.154	0.000	92	2068255	100.0	97.9	
96 Bromoform	173	8.336	8.336	0.000	94	516161	100.0	105.0	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	2928942	100.0	97.5	
99 Cyclohexanone	55	8.573	8.573	0.000	95	1458816	3000.0	3038.9	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	999492	100.0	96.8	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	62	309932	100.0	103.5	
101 Bromobenzene	156	8.797	8.797	0.000	97	761165	100.0	96.9	
103 1,2,3-Trichloropropane	110	8.824	8.824	0.000	87	312145	100.0	97.3	
104 N-Propylbenzene	120	8.866	8.866	0.000	99	774962	100.0	96.4	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	700600	100.0	96.8	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	94	2470770	100.0	97.4	
107 4-Chlorotoluene	126	9.090	9.090	0.000	98	747162	100.0	96.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	2261625	100.0	101.0	
109 1,2,4-Trimethylbenzene	105	9.411	9.411	0.000	98	2573168	100.0	95.4	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	565043	100.0	97.8	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	96	1334721	100.0	94.6	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	2420923	100.0	95.7	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	91	1373624	100.0	93.6	
115 n-Butylbenzene	91	10.109	10.109	0.000	98	2113705	100.0	96.0	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	97	1289435	100.0	93.2	
117 1,2-Dibromo-3-Chloropropane	157	10.905	10.905	0.000	79	239264	100.0	105.1	
119 1,2,4-Trichlorobenzene	180	11.729	11.729	0.000	94	814753	100.0	89.6	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	98	345344	100.0	91.2	
121 Naphthalene	128	11.995	11.995	0.000	98	2619404	100.0	89.9	
122 1,2,3-Trichlorobenzene	180	12.204	12.204	0.000	94	676910	100.0	88.2	
S 142 Xylenes, Total	106				0		200.0	193.4	
S 143 1,2-Dichloroethene, Total	1				0		200.0	183.1	
S 145 1,3-Dichloropropene, Total	1				0		200.0	196.3	
S 147 Trihalomethanes, Total	1				0		400.0	397.9	
S 141 Total BTEX	1				0			478.5	

QC Flag Legend

Processing Flags
Review Flags
a - User Assigned ID

Reagents:

MV-MegaMain B_00083	Amount Added: 50.00	Units: uL	
MV-Gas B_00133	Amount Added: 20.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

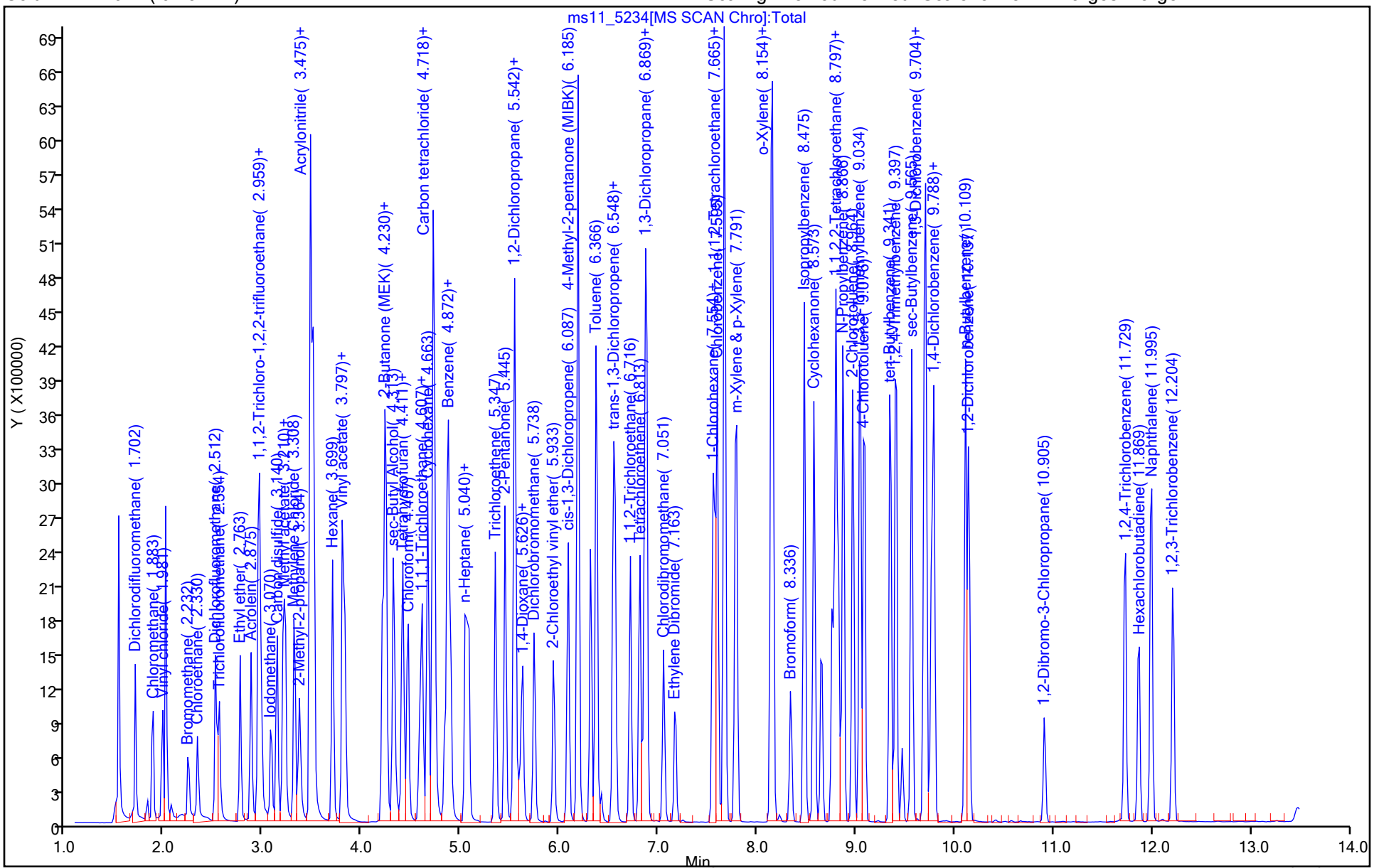
Report Date: 14-Apr-2023 12:44:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5234.D

Injection Date:	13-Apr-2023 14:43:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

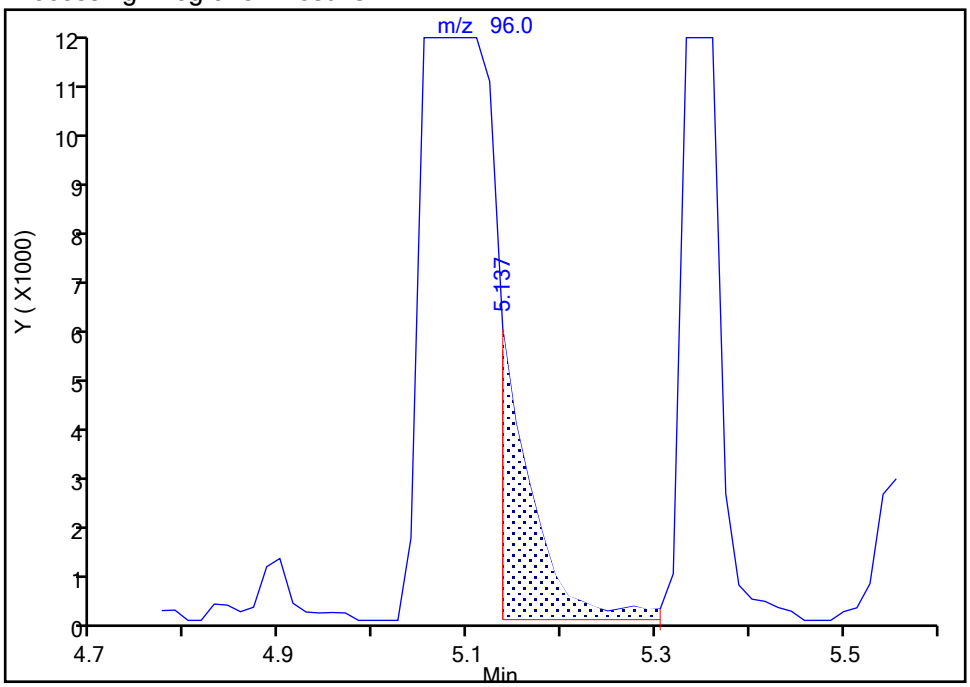
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5234.D
Injection Date: 13-Apr-2023 14:43:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 4 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

* 1 Fluorobenzene, CAS: 462-06-6

Signal: 1

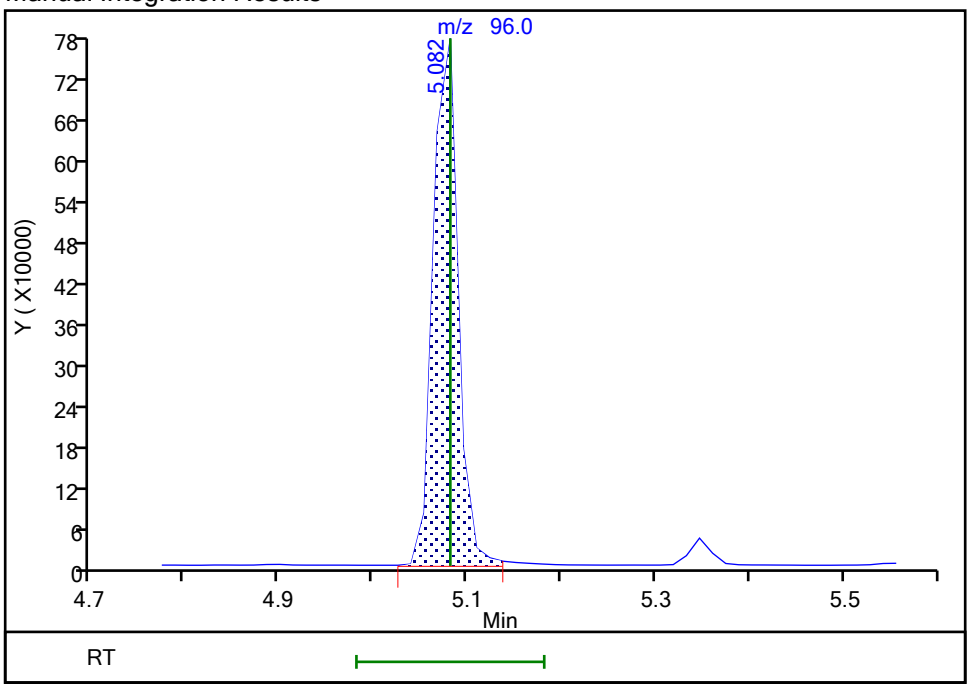
Processing Integration Results

RT: 5.14
Area: 14934
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 5.08
Area: 1423592
Amount: 50.000000
Amount Units: ug/l



Reviewer: RWB2, 13-Apr-2023 18:13:30
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5235.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 13-Apr-2023 15:04:30 ALS Bottle#: 5 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 75
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 12:44:27 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: RWB2 Date: 13-Apr-2023 18:13:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1411347	50.0	50.0	a
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	92	345838	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	560809	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	95	363849	50.0	50.1	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	518805	50.0	52.1	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1419424	50.0	49.8	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	87	573186	50.0	50.1	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	571856	75.0	76.6	
12 Chloromethane	50	1.883	1.883	0.000	99	687944	75.0	72.3	
13 Vinyl chloride	62	1.981	1.981	0.000	98	603981	75.0	73.6	
15 Bromomethane	94	2.246	2.246	0.000	92	256094	75.0	61.0	
16 Chloroethane	64	2.344	2.344	0.000	99	383116	75.0	74.8	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	98	881404	75.0	70.0	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	596307	75.0	65.3	
20 Ethyl ether	59	2.763	2.763	0.000	93	461235	75.0	70.0	
22 Acrolein	56	2.875	2.875	0.000	99	760068	740.6	710.3	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.959	0.000	96	306592	75.0	74.4	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	96	410772	75.0	70.1	
24 Acetone	43	2.973	2.973	0.000	99	877143	300.0	288.1	
26 Iodomethane	142	3.070	3.070	0.000	99	629635	75.0	76.7	
28 Carbon disulfide	76	3.140	3.140	0.000	100	1486279	75.0	73.9	
29 Methyl acetate	43	3.196	3.196	0.000	98	1158520	150.0	148.5	
30 3-Chloro-1-propene	41	3.224	3.224	0.000	90	798605	75.0	76.1	
31 Methylene Chloride	84	3.308	3.308	0.000	97	504634	75.0	71.9	
32 2-Methyl-2-propanol	59	3.364	3.364	0.000	99	863952	750.0	732.2	
33 Acrylonitrile	53	3.475	3.475	0.000	98	2642390	750.0	711.6	
34 Methyl tert-butyl ether	73	3.503	3.503	0.000	96	1682508	75.0	71.8	
35 trans-1,2-Dichloroethene	96	3.517	3.517	0.000	96	474694	75.0	69.6	
36 Hexane	57	3.699	3.699	0.000	95	616520	75.0	75.7	
37 Vinyl acetate	43	3.797	3.797	0.000	98	2321424	150.0	137.7	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	97	916188	75.0	70.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	1452846	300.0	294.9	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	85	530820	75.0	68.7	
45 2,2-Dichloropropane	77	4.244	4.244	0.000	89	837898	75.0	70.9	
47 sec-Butyl Alcohol	45	4.313	4.313	0.000	99	1756779	1800.0	1791.6	
49 Chlorobromomethane	128	4.411	4.411	0.000	97	238026	75.0	69.1	
50 Tetrahydrofuran	42	4.411	4.411	0.000	87	456769	150.0	139.7	
51 Chloroform	83	4.467	4.467	0.000	95	900662	75.0	70.9	
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	98	779522	75.0	72.9	
54 Cyclohexane	56	4.663	4.663	0.000	94	869554	75.0	74.5	
56 Carbon tetrachloride	117	4.718	4.718	0.000	95	667710	75.0	73.1	
55 1,1-Dichloropropene	75	4.718	4.718	0.000	94	723613	75.0	72.7	
52 Isobutyl alcohol	43	4.732	4.732	0.000	93	1027458	1875.0	1929.8	
57 Benzene	78	4.872	4.872	0.000	98	2011422	75.0	69.8	
58 1,2-Dichloroethane	62	4.900	4.900	0.000	97	814884	75.0	68.1	
60 n-Heptane	43	5.040	5.040	0.000	95	552971	75.0	73.7	
62 Trichloroethene	130	5.347	5.347	0.000	98	498432	75.0	71.7	
63 2-Pentanone	43	5.445	5.445	0.000	98	1846139	240.0	220.8	
64 Methylcyclohexane	55	5.542	5.542	0.000	93	603346	75.0	74.4	
65 1,2-Dichloropropane	63	5.542	5.542	0.000	92	563548	75.0	69.3	
67 1,4-Dioxane	88	5.598	5.598	0.000	97	216279	1500.0	1442.6	
68 Dibromomethane	93	5.626	5.626	0.000	96	346291	75.0	69.2	
69 Dichlorobromomethane	83	5.738	5.738	0.000	98	720646	75.0	73.0	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	93	431934	75.0	72.6	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	93	923780	75.0	73.8	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	98	2887114	300.0	294.1	
75 Toluene	91	6.366	6.366	0.000	98	2125800	75.0	72.6	
73 trans-1,3-Dichloropropene	75	6.548	6.548	0.000	99	918375	75.0	73.1	
77 Ethyl methacrylate	69	6.562	6.562	0.000	90	811649	75.0	72.4	
79 1,1,2-Trichloroethane	97	6.716	6.716	0.000	94	479751	75.0	70.8	
80 Tetrachloroethene	164	6.813	6.813	0.000	95	380336	75.0	72.4	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	897843	75.0	71.8	
82 2-Hexanone	43	6.869	6.869	0.000	96	2113646	300.0	294.8	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	538402	75.0	76.5	
86 Ethylene Dibromide	107	7.162	7.162	0.000	98	516746	75.0	72.3	
88 1-Chlorohexane	91	7.554	7.554	0.000	97	532506	60.0	60.4	
89 Chlorobenzene	112	7.595	7.595	0.000	92	1385462	75.0	71.7	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	87	509626	75.0	74.7	
91 Ethylbenzene	106	7.665	7.665	0.000	99	739616	75.0	73.2	
92 m-Xylene & p-Xylene	91	7.791	7.791	0.000	0	1883489	75.0	72.6	
93 o-Xylene	106	8.140	8.140	0.000	97	900079	75.0	72.9	
94 Styrene	104	8.154	8.154	0.000	93	1543398	75.0	73.1	
96 Bromoform	173	8.336	8.336	0.000	94	384468	75.0	78.3	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	2203272	75.0	72.2	
99 Cyclohexanone	55	8.573	8.573	0.000	95	1067035	2250.0	2225.3	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	749373	75.0	71.5	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	63	224001	75.0	73.7	
101 Bromobenzene	156	8.797	8.797	0.000	98	567860	75.0	71.2	
103 1,2,3-Trichloropropane	110	8.824	8.824	0.000	87	230627	75.0	70.8	
104 N-Propylbenzene	120	8.866	8.866	0.000	99	605690	75.0	74.2	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	534053	75.0	72.7	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	94	1856054	75.0	72.1	
107 4-Chlorotoluene	126	9.090	9.090	0.000	98	571449	75.0	72.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	1759161	75.0	77.4	
109 1,2,4-Trimethylbenzene	105	9.411	9.411	0.000	98	1973244	75.0	72.1	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	435520	75.0	74.2	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	96	1023990	75.0	71.5	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	1879347	75.0	73.2	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	91	1047111	75.0	70.3	
115 n-Butylbenzene	91	10.109	10.109	0.000	98	1638332	75.0	73.3	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	94	991942	75.0	70.6	
117 1,2-Dibromo-3-Chloropropane	157	10.905	10.905	0.000	80	178440	75.0	77.2	
119 1,2,4-Trichlorobenzene	180	11.729	11.729	0.000	94	625078	75.0	67.7	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	97	260602	75.0	67.8	
121 Naphthalene	128	11.995	11.995	0.000	98	1997504	75.0	67.5	
122 1,2,3-Trichlorobenzene	180	12.204	12.204	0.000	94	515955	75.0	66.2	
S 142 Xylenes, Total	106				0		150.0	145.5	
S 143 1,2-Dichloroethene, Total	1				0		150.0	138.4	
S 145 1,3-Dichloropropene, Total	1				0		150.0	147.0	
S 147 Trihalomethanes, Total	1				0		300.0	298.7	
S 141 Total BTEX	1				0			361.0	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

MV-MegaMain B_00083	Amount Added: 37.50	Units: uL	
MV-Gas B_00133	Amount Added: 15.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

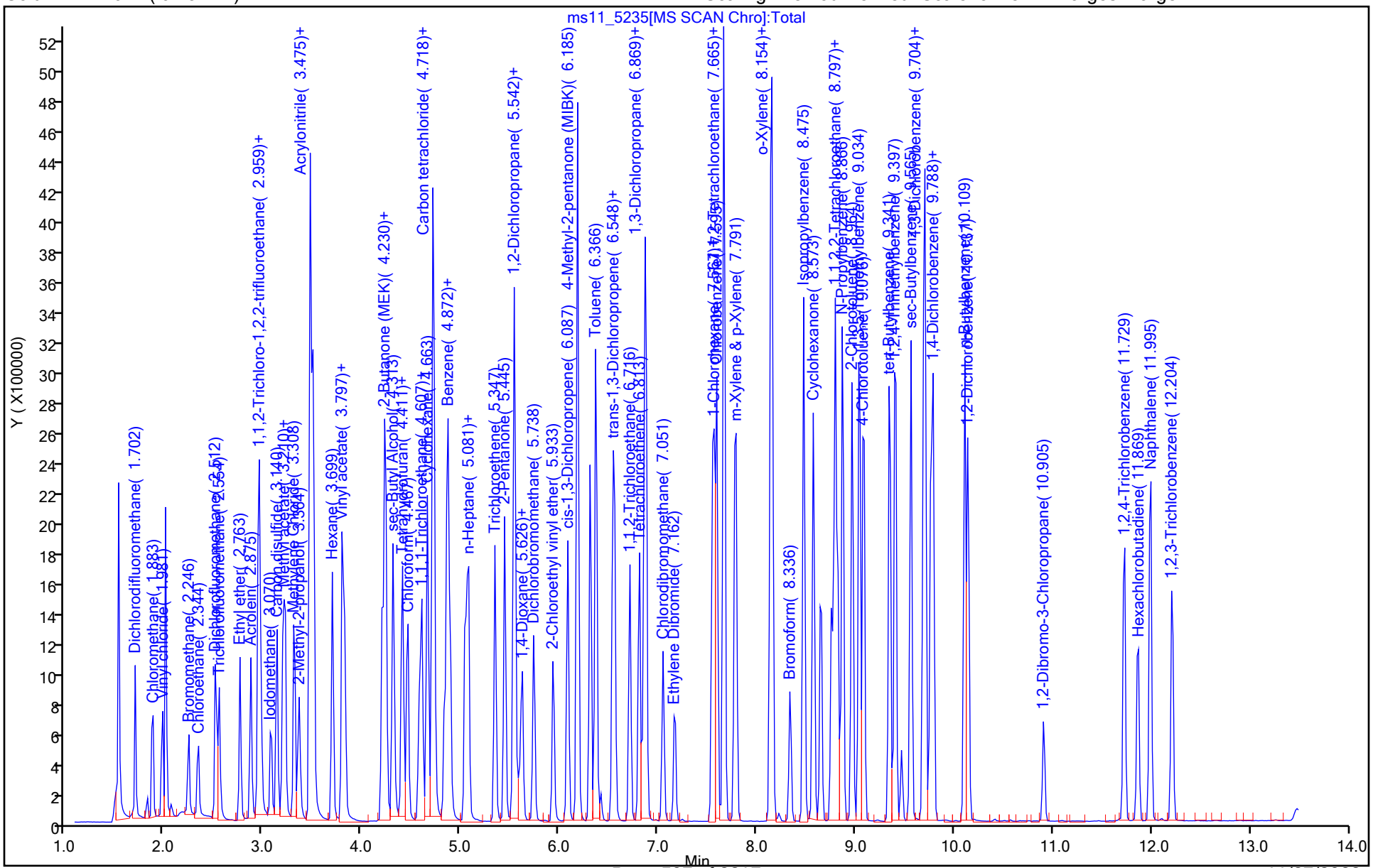
Report Date: 14-Apr-2023 12:44:28 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5235.D

Injection Date:	13-Apr-2023 15:04:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

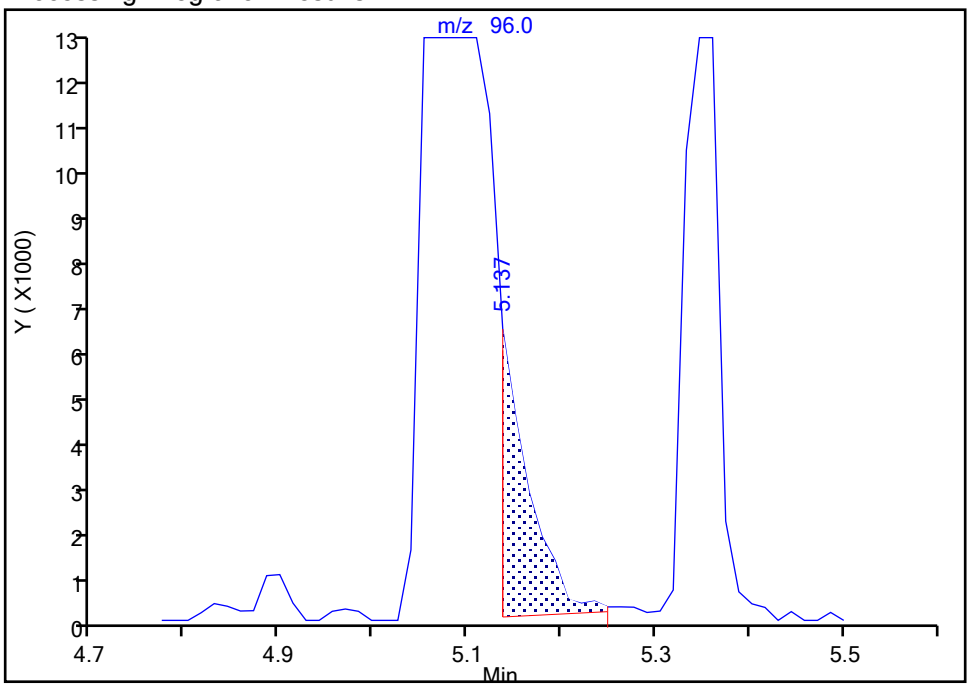
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5235.D
Injection Date: 13-Apr-2023 15:04:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 5 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

* 1 Fluorobenzene, CAS: 462-06-6

Signal: 1

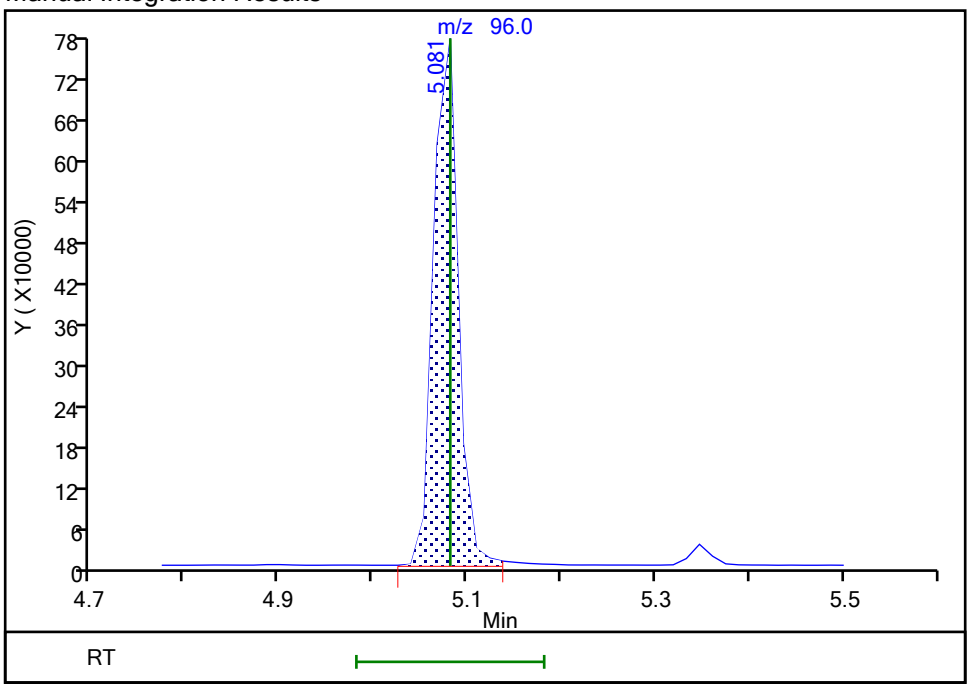
Processing Integration Results

RT: 5.14
Area: 13757
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 5.08
Area: 1411347
Amount: 50.000000
Amount Units: ug/l



Reviewer: RWB2, 13-Apr-2023 18:13:42
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5236.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 13-Apr-2023 15:26:30 ALS Bottle#: 6 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 12:44:30 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: RWB2 Date: 13-Apr-2023 18:11:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	99	1425572	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	89	344779	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	566707	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	95	367471	50.0	50.1	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	517182	50.0	51.5	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1437385	50.0	50.6	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	86	568213	50.0	49.1	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	392946	50.0	52.1	
12 Chloromethane	50	1.883	1.883	0.000	99	476039	50.0	49.6	
13 Vinyl chloride	62	1.981	1.981	0.000	98	421000	50.0	50.8	
15 Bromomethane	94	2.246	2.246	0.000	93	207798	50.0	48.8	
16 Chloroethane	64	2.344	2.344	0.000	100	268295	50.0	51.6	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	613608	50.0	48.2	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	434566	50.0	47.1	
20 Ethyl ether	59	2.763	2.763	0.000	94	311430	50.0	46.8	
22 Acrolein	56	2.875	2.875	0.000	99	532678	493.8	492.8	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.959	0.000	67	200996	50.0	48.3	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	95	269753	50.0	45.6	
24 Acetone	43	2.973	2.973	0.000	99	613428	200.0	197.1	
26 Iodomethane	142	3.084	3.084	0.000	99	415640	50.0	50.1	
28 Carbon disulfide	76	3.140	3.140	0.000	100	973955	50.0	47.9	
29 Methyl acetate	43	3.196	3.196	0.000	98	802367	100.0	100.5	
30 3-Chloro-1-propene	41	3.224	3.224	0.000	89	565177	50.0	53.0	
31 Methylene Chloride	84	3.322	3.322	0.000	96	342894	50.0	48.3	
32 2-Methyl-2-propanol	59	3.364	3.364	0.000	99	583311	500.0	489.4	
33 Acrylonitrile	53	3.476	3.476	0.000	98	1857188	500.0	495.2	
34 Methyl tert-butyl ether	73	3.503	3.503	0.000	96	1153728	50.0	48.7	
35 trans-1,2-Dichloroethene	96	3.517	3.517	0.000	96	314514	50.0	45.7	
36 Hexane	57	3.699	3.699	0.000	95	400615	50.0	49.3	
37 Vinyl acetate	43	3.797	3.797	0.000	98	1671405	100.0	98.2	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	96	621407	50.0	47.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	1011360	200.0	200.6	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	86	360878	50.0	46.3	
45 2,2-Dichloropropane	77	4.244	4.244	0.000	91	554357	50.0	46.4	
47 sec-Butyl Alcohol	45	4.313	4.313	0.000	99	1161154	1200.0	1172.4	
49 Chlorobromomethane	128	4.411	4.411	0.000	98	160412	50.0	46.1	
50 Tetrahydrofuran	42	4.411	4.411	0.000	88	321622	100.0	97.4	
51 Chloroform	83	4.467	4.467	0.000	95	602282	50.0	46.9	
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	98	514833	50.0	47.6	
54 Cyclohexane	56	4.663	4.663	0.000	94	568375	50.0	48.2	
56 Carbon tetrachloride	117	4.718	4.718	0.000	80	441498	50.0	47.8	
55 1,1-Dichloropropene	75	4.718	4.718	0.000	91	479676	50.0	47.7	
52 Isobutyl alcohol	43	4.732	4.732	0.000	89	686305	1250.0	1276.2	
57 Benzene	78	4.872	4.872	0.000	98	1384712	50.0	47.6	
58 1,2-Dichloroethane	62	4.900	4.900	0.000	97	551431	50.0	45.6	
60 n-Heptane	43	5.040	5.040	0.000	96	367012	50.0	48.1	
62 Trichloroethene	130	5.347	5.347	0.000	97	332684	50.0	47.4	
63 2-Pentanone	43	5.445	5.445	0.000	99	1269804	160.0	150.3	
64 Methylcyclohexane	55	5.543	5.543	0.000	94	390134	50.0	47.6	
65 1,2-Dichloropropane	63	5.556	5.556	0.000	92	378092	50.0	46.0	
67 1,4-Dioxane	88	5.598	5.598	0.000	97	146475	1000.0	967.3	
68 Dibromomethane	93	5.626	5.626	0.000	95	237500	50.0	47.0	
69 Dichlorobromomethane	83	5.738	5.738	0.000	98	485530	50.0	48.7	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	93	303070	50.0	50.4	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	93	615600	50.0	49.4	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	98	1997439	200.0	201.4	
75 Toluene	91	6.367	6.367	0.000	98	1426315	50.0	48.2	
73 trans-1,3-Dichloropropene	75	6.548	6.548	0.000	99	608804	50.0	48.0	
77 Ethyl methacrylate	69	6.562	6.562	0.000	90	552527	50.0	49.5	
79 1,1,2-Trichloroethane	97	6.716	6.716	0.000	93	329697	50.0	48.2	
80 Tetrachloroethene	164	6.813	6.813	0.000	94	247727	50.0	47.3	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	610498	50.0	49.0	
82 2-Hexanone	43	6.869	6.869	0.000	96	1436348	200.0	201.0	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	352708	50.0	50.3	
86 Ethylene Dibromide	107	7.163	7.163	0.000	98	347542	50.0	48.8	
88 1-Chlorohexane	91	7.554	7.554	0.000	97	348885	40.0	39.6	
89 Chlorobenzene	112	7.596	7.596	0.000	92	926782	50.0	48.1	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	91	334887	50.0	49.3	
91 Ethylbenzene	106	7.665	7.665	0.000	99	493450	50.0	49.0	
92 m-Xylene & p-Xylene	91	7.791	7.791	0.000	0	1259356	50.0	48.7	
93 o-Xylene	106	8.140	8.140	0.000	96	596948	50.0	48.5	
94 Styrene	104	8.154	8.154	0.000	93	1030089	50.0	49.0	
96 Bromoform	173	8.336	8.336	0.000	95	253270	50.0	51.7	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	1481848	50.0	48.1	
99 Cyclohexanone	55	8.573	8.573	0.000	95	721261	1500.0	1508.8	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	501712	50.0	47.3	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	63	147853	50.0	48.1	
101 Bromobenzene	156	8.797	8.797	0.000	98	384510	50.0	47.7	
103 1,2,3-Trichloropropane	110	8.825	8.825	0.000	87	155850	50.0	47.3	
104 N-Propylbenzene	120	8.866	8.866	0.000	99	396430	50.0	48.0	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	356104	50.0	48.0	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	94	1240525	50.0	47.7	
107 4-Chlorotoluene	126	9.090	9.090	0.000	98	378730	50.0	47.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	995358	50.0	43.3	
109 1,2,4-Trimethylbenzene	105	9.397	9.397	0.000	99	1308488	50.0	47.3	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	285787	50.0	48.2	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	96	685103	50.0	47.3	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	1235195	50.0	47.6	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	92	701332	50.0	46.6	
115 n-Butylbenzene	91	10.109	10.109	0.000	98	1082680	50.0	47.9	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	95	655822	50.0	46.2	
117 1,2-Dibromo-3-Chloropropane	157	10.906	10.906	0.000	78	114666	50.0	49.1	
119 1,2,4-Trichlorobenzene	180	11.730	11.730	0.000	94	419992	50.0	45.0	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	97	175119	50.0	45.1	
121 Naphthalene	128	11.995	11.995	0.000	98	1364605	50.0	45.6	
122 1,2,3-Trichlorobenzene	180	12.204	12.204	0.000	95	357700	50.0	45.4	
S 142 Xylenes, Total	106				0		100.0	97.2	
S 143 1,2-Dichloroethene, Total	1				0		100.0	91.9	
S 145 1,3-Dichloropropene, Total	1				0		100.0	97.3	
S 147 Trihalomethanes, Total	1				0		200.0	197.6	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00133	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

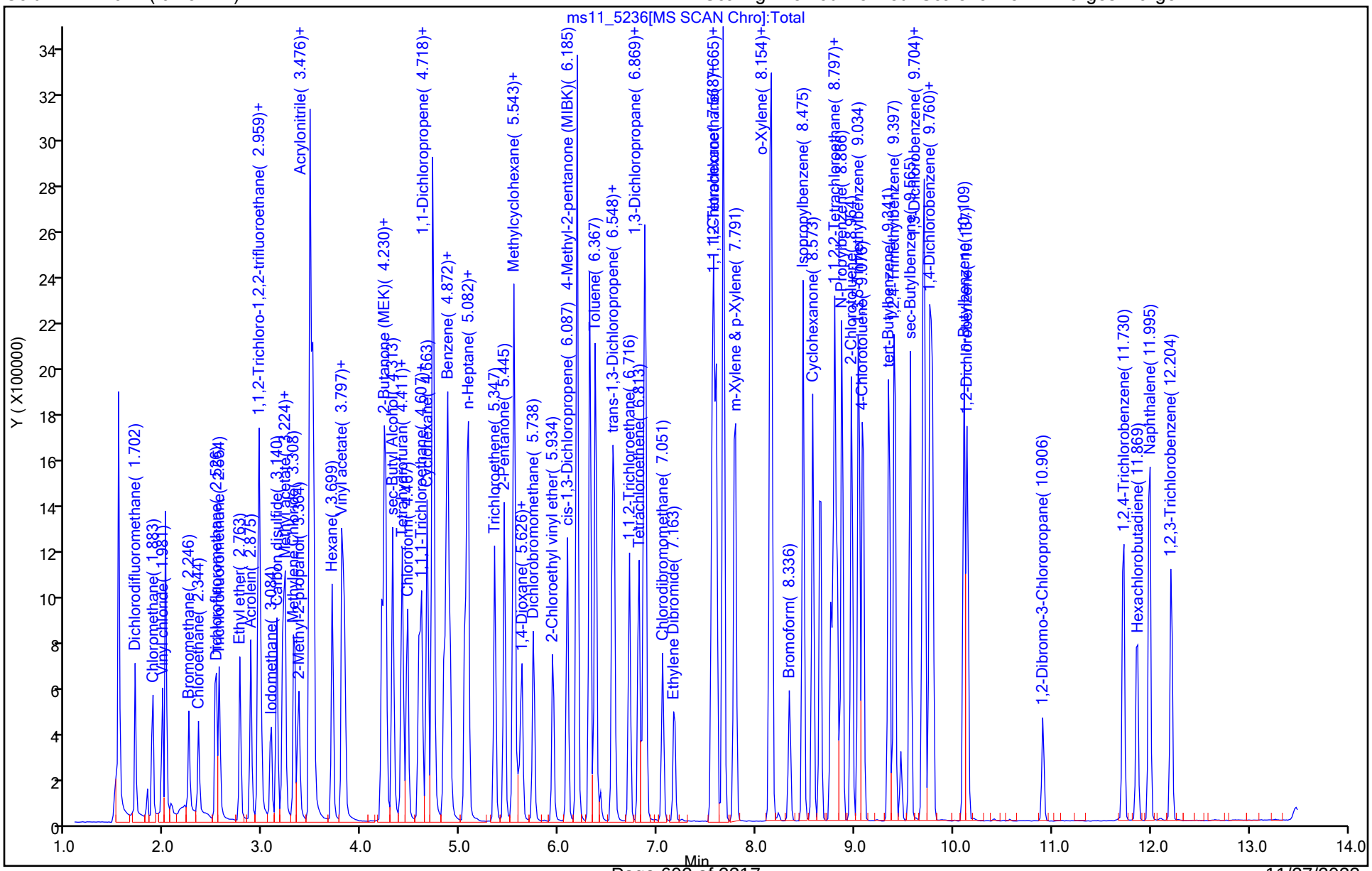
Report Date: 14-Apr-2023 12:44:31 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5236.D

Injection Date:	13-Apr-2023 15:26:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	ICIS			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5237.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Apr-2023 15:47:30 ALS Bottle#: 7 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 10
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 12:44:33 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: RWB2 Date: 13-Apr-2023 18:10:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1440625	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	89	346191	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	556825	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	94	375824	50.0	50.7	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	507716	50.0	50.0	
$ 7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1441802	50.0	50.6	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	86	567329	50.0	49.9	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	71800	10.0	9.42	
12 Chloromethane	50	1.883	1.883	0.000	99	102435	10.0	10.6	
13 Vinyl chloride	62	1.981	1.981	0.000	98	88188	10.0	10.5	
15 Bromomethane	94	2.260	2.260	0.000	93	50629	10.0	11.3	
16 Chloroethane	64	2.344	2.344	0.000	100	58957	10.0	10.7	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	129290	10.0	10.1	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	100380	10.0	10.8	
20 Ethyl ether	59	2.763	2.763	0.000	94	65998	10.0	9.82	
22 Acrolein	56	2.875	2.875	0.000	99	106418	98.8	97.4	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.959	0.000	67	41844	10.0	9.95	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	95	57075	10.0	9.54	
24 Acetone	43	2.972	2.972	0.000	99	138140	40.0	38.0	
26 Iodomethane	142	3.084	3.084	0.000	100	79311	10.0	9.46	
28 Carbon disulfide	76	3.140	3.140	0.000	100	203610	10.0	9.91	
29 Methyl acetate	43	3.196	3.196	0.000	99	180411	20.0	19.0	
30 3-Chloro-1-propene	41	3.224	3.224	0.000	89	125162	10.0	10.8	
31 Methylene Chloride	84	3.322	3.322	0.000	96	71394	10.0	9.96	
32 2-Methyl-2-propanol	59	3.364	3.364	0.000	99	118481	100.0	98.4	
33 Acrylonitrile	53	3.475	3.475	0.000	98	390986	100.0	103.2	
34 Methyl tert-butyl ether	73	3.503	3.503	0.000	96	233279	10.0	9.75	
35 trans-1,2-Dichloroethene	96	3.517	3.517	0.000	97	64282	10.0	9.24	
36 Hexane	57	3.699	3.699	0.000	95	80872	10.0	9.91	
37 Vinyl acetate	43	3.796	3.796	0.000	98	349425	20.0	20.3	
39 1,1-Dichloroethane	63	3.824	3.824	0.000	96	132081	10.0	9.93	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	229429	40.0	38.6	
44 cis-1,2-Dichloroethene	96	4.229	4.229	0.000	85	78359	10.0	9.94	
45 2,2-Dichloropropane	77	4.243	4.243	0.000	91	110587	10.0	9.17	
47 sec-Butyl Alcohol	45	4.313	4.313	0.000	99	235317	240.0	235.1	
49 Chlorobromomethane	128	4.411	4.411	0.000	98	35342	10.0	10.0	
50 Tetrahydrofuran	42	4.411	4.411	0.000	88	66997	20.0	20.1	
51 Chloroform	83	4.467	4.467	0.000	95	123293	10.0	9.50	
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	98	108687	10.0	9.95	
54 Cyclohexane	56	4.662	4.662	0.000	95	118173	10.0	9.91	
56 Carbon tetrachloride	117	4.718	4.718	0.000	95	91138	10.0	9.77	
55 1,1-Dichloropropene	75	4.718	4.718	0.000	95	99726	10.0	9.81	
52 Isobutyl alcohol	43	4.732	4.732	0.000	94	128938	250.0	237.3	
57 Benzene	78	4.872	4.872	0.000	97	285600	10.0	9.71	
58 1,2-Dichloroethane	62	4.900	4.900	0.000	96	116578	10.0	9.55	
60 n-Heptane	43	5.039	5.039	0.000	95	76276	10.0	9.00	
62 Trichloroethene	130	5.347	5.347	0.000	96	70635	10.0	9.95	
63 2-Pentanone	43	5.445	5.445	0.000	98	266646	32.0	31.2	
64 Methylcyclohexane	55	5.542	5.542	0.000	95	81599	10.0	9.85	
65 1,2-Dichloropropane	63	5.556	5.556	0.000	91	79778	10.0	9.61	
67 1,4-Dioxane	88	5.598	5.598	0.000	93	31598	200.0	206.5	
68 Dibromomethane	93	5.626	5.626	0.000	95	49625	10.0	9.72	
69 Dichlorobromomethane	83	5.738	5.738	0.000	98	101760	10.0	10.1	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	92	65493	10.0	10.8	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	93	123927	10.0	9.89	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	98	414477	40.0	41.4	
75 Toluene	91	6.366	6.366	0.000	98	297712	10.0	9.96	
73 trans-1,3-Dichloropropene	75	6.548	6.548	0.000	99	125934	10.0	9.82	
77 Ethyl methacrylate	69	6.562	6.562	0.000	90	114480	10.0	10.2	
79 1,1,2-Trichloroethane	97	6.715	6.715	0.000	93	69783	10.0	10.1	
80 Tetrachloroethene	164	6.813	6.813	0.000	95	51379	10.0	9.77	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	127306	10.0	10.2	
82 2-Hexanone	43	6.869	6.869	0.000	96	300827	40.0	41.9	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	73576	10.0	10.4	
86 Ethylene Dibromide	107	7.162	7.162	0.000	98	72514	10.0	10.1	
88 1-Chlorohexane	91	7.553	7.553	0.000	97	74170	8.00	8.01	
89 Chlorobenzene	112	7.595	7.595	0.000	93	191568	10.0	9.90	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	47	66675	10.0	9.77	
91 Ethylbenzene	106	7.665	7.665	0.000	99	100564	10.0	9.94	
92 m-Xylene & p-Xylene	91	7.791	7.791	0.000	0	256006	10.0	9.85	
93 o-Xylene	106	8.140	8.140	0.000	96	126653	10.0	10.2	
94 Styrene	104	8.154	8.154	0.000	93	211883	10.0	10.0	
96 Bromoform	173	8.336	8.336	0.000	93	47819	10.0	9.73	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	300457	10.0	9.92	
99 Cyclohexanone	55	8.573	8.573	0.000	95	146569	300.0	305.4	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	104323	10.0	10.0	
102 trans-1,4-Dichloro-2-butene	53	8.796	8.796	0.000	62	26849	10.0	8.90	
101 Bromobenzene	156	8.796	8.796	0.000	97	79620	10.0	10.1	
103 1,2,3-Trichloropropane	110	8.824	8.824	0.000	86	29417	10.0	9.09	Ma
104 N-Propylbenzene	120	8.866	8.866	0.000	99	81326	10.0	10.0	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	74150	10.0	10.2	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	94	253099	10.0	9.90	
107 4-Chlorotoluene	126	9.090	9.090	0.000	98	76370	10.0	9.76	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	239126	10.0	10.6	
109 1,2,4-Trimethylbenzene	105	9.411	9.411	0.000	98	269939	10.0	9.93	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	57800	10.0	9.92	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	97	140401	10.0	9.87	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	257291	10.0	10.1	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	94	144536	10.0	9.77	
115 n-Butylbenzene	91	10.109	10.109	0.000	98	222956	10.0	10.0	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	94	138155	10.0	9.91	
117 1,2-Dibromo-3-Chloropropane	157	10.905	10.905	0.000	78	22419	10.0	9.76	
119 1,2,4-Trichlorobenzene	180	11.729	11.729	0.000	94	90010	10.0	9.81	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	97	39029	10.0	10.2	
121 Naphthalene	128	11.995	11.995	0.000	98	304160	10.0	10.4	
122 1,2,3-Trichlorobenzene	180	12.204	12.204	0.000	92	79357	10.0	10.3	
S 142 Xylenes, Total	106				0		20.0	20.1	
S 143 1,2-Dichloroethene, Total	1				0		20.0	19.2	
S 145 1,3-Dichloropropene, Total	1				0		20.0	19.7	
S 147 Trihalomethanes, Total	1				0		40.0	39.8	
S 141 Total BTEX	1				0			49.7	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MV-MegaMain B_00083	Amount Added:	5.00	Units: uL	
MV-Gas B_00133	Amount Added:	2.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

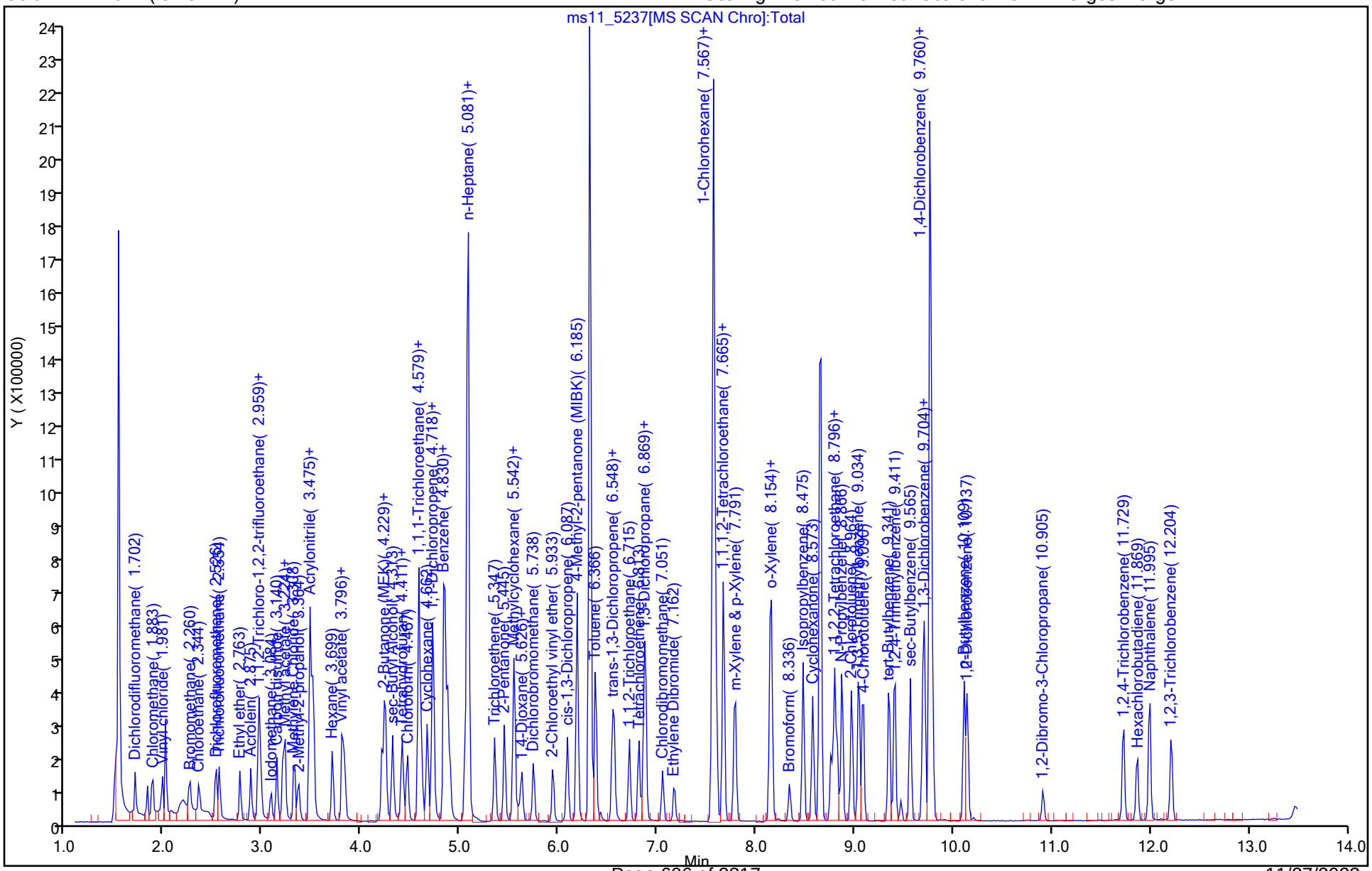
Report Date: 14-Apr-2023 12:44:33 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5237.D

Injection Date:	13-Apr-2023 15:47:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

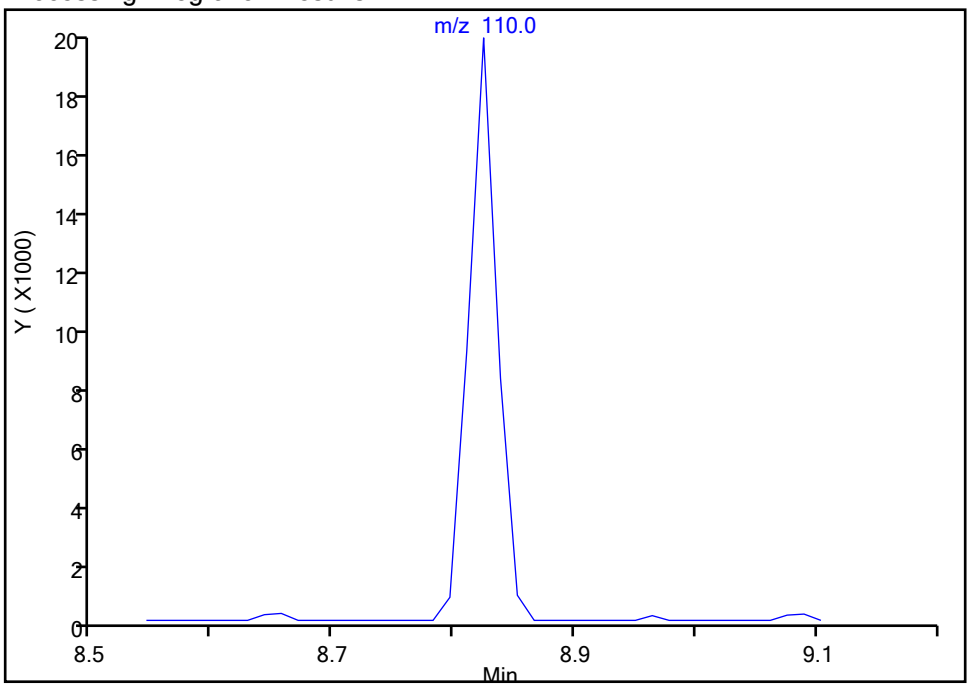
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5237.D
Injection Date: 13-Apr-2023 15:47:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 7 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

103 1,2,3-Trichloropropane, CAS: 96-18-4

Signal: 1

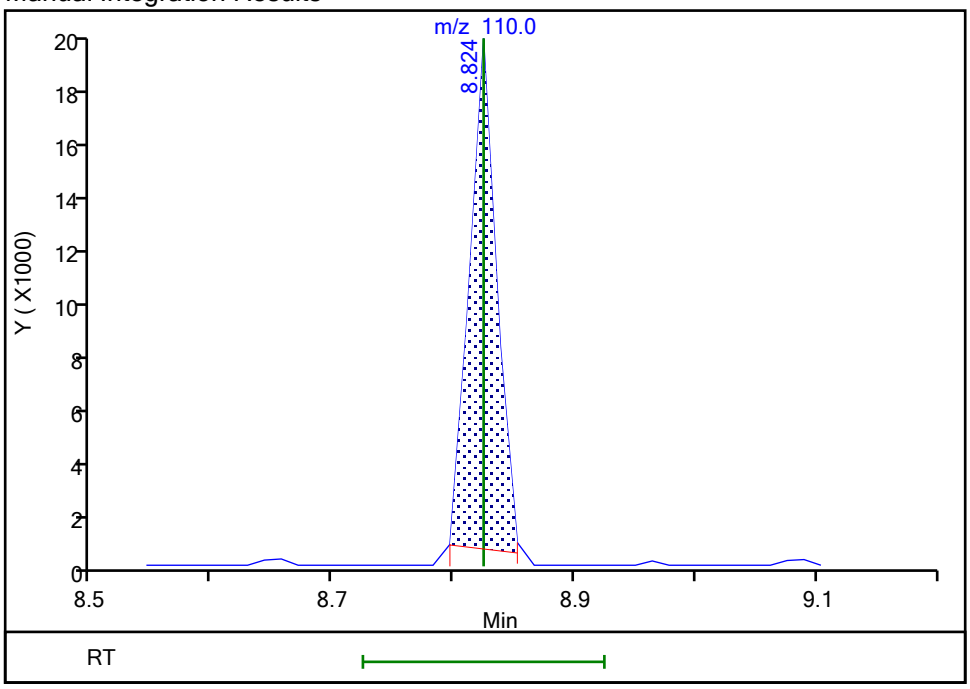
Not Detected
Expected RT: 8.82

Processing Integration Results



Manual Integration Results

RT: 8.82
Area: 29417
Amount: 9.090734
Amount Units: ug/l



Reviewer: RWB2, 13-Apr-2023 18:10:15
Audit Action: Manually Integrated Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5238.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Apr-2023 16:08:30 ALS Bottle#: 8 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 5
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 12:44:36 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: RWB2 Date: 13-Apr-2023 18:10:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1411951	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	89	340925	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	554807	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	94	362569	50.0	49.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	486976	50.0	48.9	
$ 7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1403027	50.0	50.0	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	86	555048	50.0	49.0	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	38247	5.00	5.12	
12 Chloromethane	50	1.883	1.883	0.000	99	50404	5.00	5.30	
13 Vinyl chloride	62	1.981	1.981	0.000	98	43834	5.00	5.34	
15 Bromomethane	94	2.246	2.246	0.000	95	23720	5.00	5.02	
16 Chloroethane	64	2.344	2.344	0.000	100	28634	5.00	4.97	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	97	62120	5.00	4.93	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	97	52200	5.00	5.72	
20 Ethyl ether	59	2.763	2.763	0.000	94	31717	5.00	4.81	
22 Acrolein	56	2.875	2.875	0.000	99	53133	49.4	49.6	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.959	0.000	69	21697	5.00	5.26	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	96	28752	5.00	4.90	
24 Acetone	43	2.973	2.973	0.000	99	83509	20.0	20.5	
26 Iodomethane	142	3.084	3.084	0.000	100	41138	5.00	5.01	
28 Carbon disulfide	76	3.140	3.140	0.000	100	107561	5.00	5.34	
29 Methyl acetate	43	3.196	3.196	0.000	98	115815	10.0	11.0	
30 3-Chloro-1-propene	41	3.224	3.224	0.000	88	65585	5.00	5.32	
31 Methylene Chloride	84	3.308	3.308	0.000	97	37581	5.00	5.35	
32 2-Methyl-2-propanol	59	3.364	3.364	0.000	99	55217	50.0	46.8	
33 Acrylonitrile	53	3.475	3.475	0.000	98	187689	50.0	50.5	
34 Methyl tert-butyl ether	73	3.503	3.503	0.000	96	117785	5.00	5.02	
35 trans-1,2-Dichloroethene	96	3.517	3.517	0.000	95	33483	5.00	4.91	
36 Hexane	57	3.699	3.699	0.000	94	42707	5.00	5.32	
37 Vinyl acetate	43	3.797	3.797	0.000	98	177735	10.0	10.5	
39 1,1-Dichloroethane	63	3.824	3.824	0.000	97	64634	5.00	4.96	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	99	135882	20.0	20.0	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	86	38739	5.00	5.01	
45 2,2-Dichloropropane	77	4.243	4.243	0.000	91	58137	5.00	4.92	
47 sec-Butyl Alcohol	45	4.313	4.313	0.000	99	114407	120.0	116.6	
49 Chlorobromomethane	128	4.411	4.411	0.000	97	17416	5.00	5.05	
50 Tetrahydrofuran	42	4.411	4.411	0.000	88	33344	10.0	10.2	
51 Chloroform	83	4.467	4.467	0.000	95	61376	5.00	4.83	
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	98	54376	5.00	5.08	
54 Cyclohexane	56	4.662	4.662	0.000	94	59634	5.00	5.10	
56 Carbon tetrachloride	117	4.718	4.718	0.000	94	45710	5.00	5.00	
55 1,1-Dichloropropene	75	4.718	4.718	0.000	93	50130	5.00	5.03	
52 Isobutyl alcohol	43	4.732	4.732	0.000	96	64662	125.0	121.4	
57 Benzene	78	4.872	4.872	0.000	98	144984	5.00	5.03	
58 1,2-Dichloroethane	62	4.900	4.900	0.000	98	58680	5.00	4.90	
60 n-Heptane	43	5.040	5.040	0.000	96	45236	5.00	5.01	
62 Trichloroethene	130	5.347	5.347	0.000	97	34589	5.00	4.97	
63 2-Pentanone	43	5.445	5.445	0.000	99	133615	16.0	16.0	
64 Methylcyclohexane	55	5.542	5.542	0.000	93	41394	5.00	5.10	
65 1,2-Dichloropropane	63	5.556	5.556	0.000	91	39564	5.00	4.86	
67 1,4-Dioxane	88	5.598	5.598	0.000	91	15334	100.0	102.2	
68 Dibromomethane	93	5.626	5.626	0.000	95	23178	5.00	4.63	
69 Dichlorobromomethane	83	5.738	5.738	0.000	98	49259	5.00	4.99	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	91	30138	5.00	5.06	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	93	59816	5.00	4.85	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	98	198807	20.0	20.2	
75 Toluene	91	6.366	6.366	0.000	98	150140	5.00	5.12	
73 trans-1,3-Dichloropropene	75	6.548	6.548	0.000	99	62535	5.00	4.98	
77 Ethyl methacrylate	69	6.562	6.562	0.000	90	55686	5.00	5.04	
79 1,1,2-Trichloroethane	97	6.715	6.715	0.000	94	33394	5.00	4.93	
80 Tetrachloroethene	164	6.813	6.813	0.000	95	26233	5.00	5.06	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	60798	5.00	4.93	
82 2-Hexanone	43	6.883	6.883	0.000	97	142372	20.0	20.1	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	33834	5.00	4.88	
86 Ethylene Dibromide	107	7.162	7.162	0.000	99	35280	5.00	5.01	
88 1-Chlorohexane	91	7.553	7.553	0.000	97	39407	4.00	4.11	
89 Chlorobenzene	112	7.595	7.595	0.000	93	95280	5.00	5.00	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	93	33567	5.00	4.99	
91 Ethylbenzene	106	7.665	7.665	0.000	99	52131	5.00	5.23	
92 m-Xylene & p-Xylene	91	7.791	7.791	0.000	0	127947	5.00	5.00	
93 o-Xylene	106	8.140	8.140	0.000	96	62622	5.00	5.15	
94 Styrene	104	8.154	8.154	0.000	90	102548	5.00	4.93	
96 Bromoform	173	8.336	8.336	0.000	94	23933	5.00	4.95	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	151232	5.00	5.01	
99 Cyclohexanone	55	8.573	8.573	0.000	95	72689	150.0	153.8	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	50887	5.00	4.91	
102 trans-1,4-Dichloro-2-butene	53	8.796	8.796	0.000	59	13989	5.00	4.65	
101 Bromobenzene	156	8.796	8.796	0.000	97	39900	5.00	5.06	
103 1,2,3-Trichloropropane	110	8.824	8.824	0.000	85	16644	5.00	5.16	Ma
104 N-Propylbenzene	120	8.866	8.866	0.000	99	41105	5.00	5.09	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	37285	5.00	5.13	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	95	130444	5.00	5.12	
107 4-Chlorotoluene	126	9.090	9.090	0.000	98	38104	5.00	4.89	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	94	121918	5.00	5.42	
109 1,2,4-Trimethylbenzene	105	9.411	9.411	0.000	98	136619	5.00	5.04	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	29176	5.00	5.03	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	95	69038	5.00	4.87	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	127074	5.00	5.00	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	92	73952	5.00	5.02	
115 n-Butylbenzene	91	10.109	10.109	0.000	97	110000	5.00	4.97	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	94	68337	5.00	4.92	
117 1,2-Dibromo-3-Chloropropane	157	10.905	10.905	0.000	86	11369	5.00	4.97	
119 1,2,4-Trichlorobenzene	180	11.729	11.729	0.000	93	47401	5.00	5.19	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	96	19870	5.00	5.22	
121 Naphthalene	128	11.995	11.995	0.000	97	147877	5.00	5.05	
122 1,2,3-Trichlorobenzene	180	12.218	12.218	0.000	95	40480	5.00	5.25	
S 142 Xylenes, Total	106				0		10.0	10.1	
S 143 1,2-Dichloroethene, Total	1				0		10.0	9.92	
S 145 1,3-Dichloropropene, Total	1				0		10.0	9.83	
S 147 Trihalomethanes, Total	1				0		20.0	19.6	
S 141 Total BTEX	1				0			25.5	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

Cal Dil Std_00167	Amount Added: 50.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

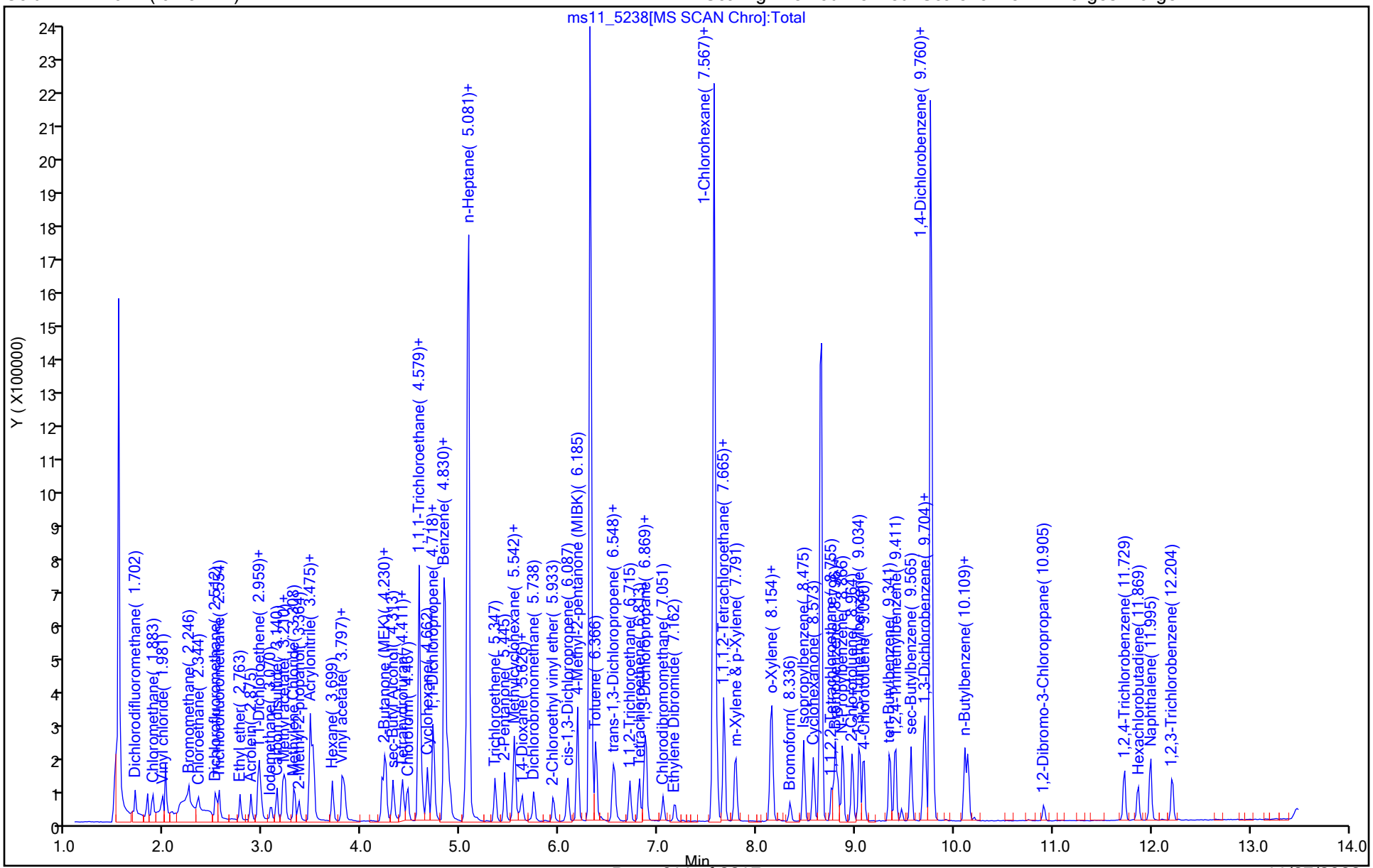
Report Date: 14-Apr-2023 12:44:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5238.D

Injection Date:	13-Apr-2023 16:08:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

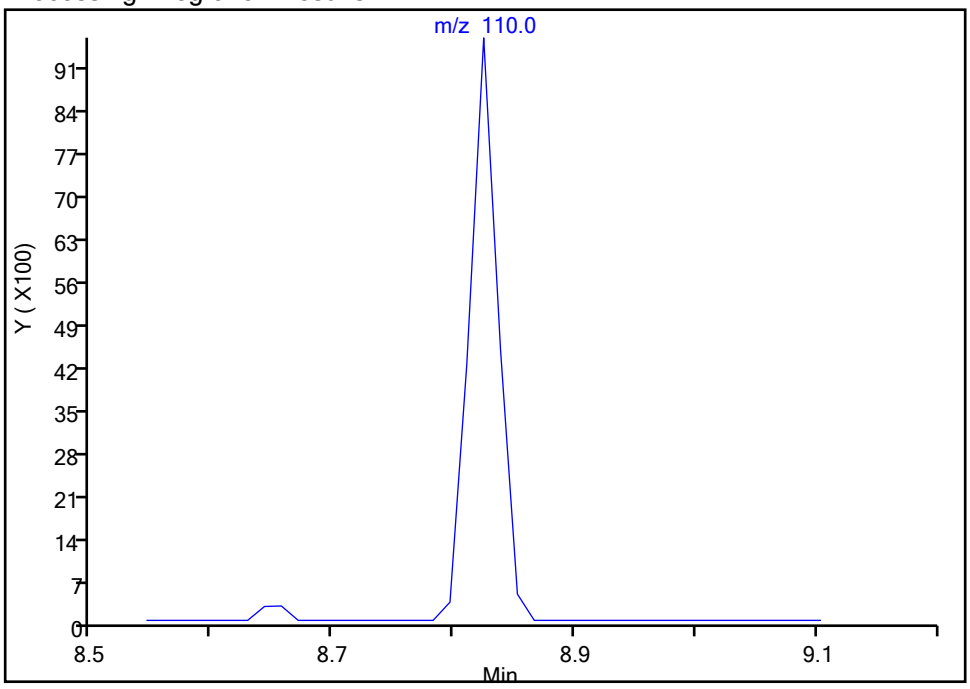
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5238.D
Injection Date: 13-Apr-2023 16:08:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 8 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

103 1,2,3-Trichloropropane, CAS: 96-18-4

Signal: 1

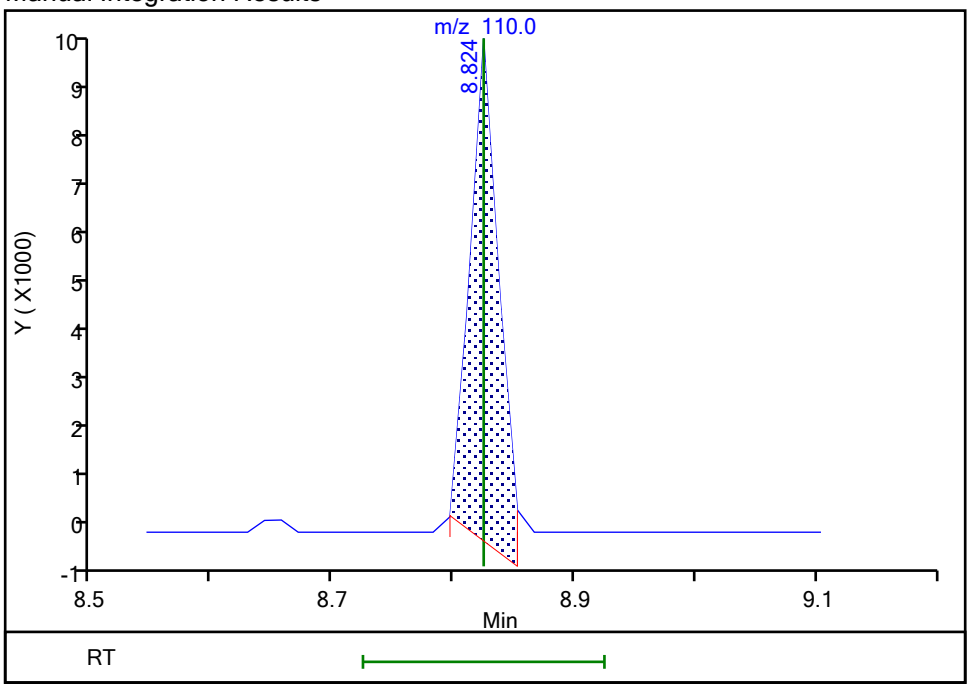
Not Detected
Expected RT: 8.82

Processing Integration Results



Manual Integration Results

RT: 8.82
Area: 16644
Amount: 5.162203
Amount Units: ug/l



Reviewer: RWB2, 13-Apr-2023 18:09:57
Audit Action: Manually Integrated Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5239.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Apr-2023 16:30:30 ALS Bottle#: 9 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 2
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 12:44:39 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: RWB2 Date: 13-Apr-2023 18:09:44

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.081	5.081	0.000	98	1448575	50.0	50.0	
*	3 Chlorobenzene-d5	119	7.567	7.567	0.000	89	351709	50.0	50.0	
*	4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	558604	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	94	367554	50.0	49.3	
$	6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	497775	50.0	48.7	
$	7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1445916	50.0	49.9	
$	8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	84	574049	50.0	50.4	
	11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	14487	2.00	1.89	
	12 Chloromethane	50	1.883	1.883	0.000	99	22226	2.00	2.28	
	13 Vinyl chloride	62	1.981	1.981	0.000	97	17420	2.00	2.07	
	15 Bromomethane	94	2.246	2.246	0.000	95	10270	2.00	1.73	
	16 Chloroethane	64	2.344	2.344	0.000	98	12796	2.00	1.79	
	17 Dichlorofluoromethane	67	2.512	2.512	0.000	97	25151	2.00	1.95	
	18 Trichlorofluoromethane	101	2.554	2.554	0.000	97	21080	2.00	2.25	
	20 Ethyl ether	59	2.763	2.763	0.000	93	14512	2.00	2.15	
	22 Acrolein	56	2.875	2.875	0.000	98	21498	19.8	19.6	
	23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.959	0.000	69	8674	2.00	2.05	
	25 1,1-Dichloroethene	96	2.959	2.959	0.000	95	11986	2.00	1.99	
	24 Acetone	43	2.973	2.973	0.000	99	49674	8.00	8.66	
	26 Iodomethane	142	3.084	3.084	0.000	99	18206	2.00	2.16	
	28 Carbon disulfide	76	3.140	3.140	0.000	100	45444	2.00	2.20	
	29 Methyl acetate	43	3.196	3.196	0.000	98	64263	4.00	3.99	
	30 3-Chloro-1-propene	41	3.224	3.224	0.000	89	33226	2.00	2.12	
	31 Methylene Chloride	84	3.308	3.308	0.000	97	16638	2.00	2.31	
	32 2-Methyl-2-propanol	59	3.364	3.364	0.000	99	23644	20.0	19.5	
	33 Acrylonitrile	53	3.475	3.475	0.000	98	75273	20.0	19.8	
	34 Methyl tert-butyl ether	73	3.503	3.503	0.000	96	48244	2.00	2.01	
	35 trans-1,2-Dichloroethene	96	3.517	3.517	0.000	96	15084	2.00	2.16	
	36 Hexane	57	3.699	3.699	0.000	94	16177	2.00	1.95	
	37 Vinyl acetate	43	3.797	3.797	0.000	98	71969	4.00	4.16	
	39 1,1-Dichloroethane	63	3.824	3.824	0.000	96	27419	2.00	2.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	84128	8.00	8.78	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	86	15821	2.00	2.00	
45 2,2-Dichloropropane	77	4.243	4.243	0.000	92	26483	2.00	2.18	
47 sec-Butyl Alcohol	45	4.313	4.313	0.000	99	46931	48.0	46.6	
49 Chlorobromomethane	128	4.411	4.411	0.000	98	7687	2.00	2.17	
50 Tetrahydrofuran	42	4.411	4.411	0.000	91	14096	4.00	4.20	
51 Chloroform	83	4.467	4.467	0.000	95	25523	2.00	1.96	
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	97	21071	2.00	1.92	
54 Cyclohexane	56	4.662	4.662	0.000	94	23552	2.00	1.97	
56 Carbon tetrachloride	117	4.718	4.718	0.000	84	18739	2.00	2.00	
55 1,1-Dichloropropene	75	4.718	4.718	0.000	92	21251	2.00	2.08	
52 Isobutyl alcohol	43	4.732	4.732	0.000	91	25332	50.0	46.4	
57 Benzene	78	4.872	4.872	0.000	97	58759	2.00	1.99	
58 1,2-Dichloroethane	62	4.900	4.900	0.000	96	24936	2.00	2.03	
60 n-Heptane	43	5.054	5.054	0.000	93	22310	2.00	1.83	
62 Trichloroethene	130	5.347	5.347	0.000	96	14631	2.00	2.05	
63 2-Pentanone	43	5.445	5.445	0.000	98	60410	6.40	7.04	
64 Methylcyclohexane	55	5.542	5.542	0.000	94	15777	2.00	1.89	
65 1,2-Dichloropropane	63	5.542	5.542	0.000	92	17616	2.00	2.11	
67 1,4-Dioxane	88	5.598	5.598	0.000	92	6069	40.0	39.4	
68 Dibromomethane	93	5.626	5.626	0.000	93	10695	2.00	2.08	
69 Dichlorobromomethane	83	5.738	5.738	0.000	97	21192	2.00	2.09	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	92	11889	2.00	1.95	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	92	25943	2.00	2.04	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	98	81163	8.00	8.05	
75 Toluene	91	6.366	6.366	0.000	98	60406	2.00	2.01	
73 trans-1,3-Dichloropropene	75	6.548	6.548	0.000	98	25838	2.00	2.00	
77 Ethyl methacrylate	69	6.562	6.562	0.000	92	22906	2.00	2.01	
79 1,1,2-Trichloroethane	97	6.715	6.715	0.000	94	14667	2.00	2.11	
80 Tetrachloroethene	164	6.813	6.813	0.000	96	10857	2.00	2.03	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	97	25867	2.00	2.03	
82 2-Hexanone	43	6.883	6.883	0.000	95	57002	8.00	7.82	
85 Chlorodibromomethane	129	7.051	7.051	0.000	91	14195	2.00	1.98	
86 Ethylene Dibromide	107	7.162	7.162	0.000	97	14399	2.00	1.98	
88 1-Chlorohexane	91	7.553	7.553	0.000	91	18382	1.60	1.60	
89 Chlorobenzene	112	7.595	7.595	0.000	96	40451	2.00	2.06	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	91	13568	2.00	1.96	
91 Ethylbenzene	106	7.665	7.665	0.000	99	21465	2.00	2.09	
92 m-Xylene & p-Xylene	91	7.791	7.791	0.000	0	52311	2.00	1.98	
93 o-Xylene	106	8.140	8.140	0.000	97	26078	2.00	2.08	
94 Styrene	104	8.154	8.154	0.000	92	41721	2.00	1.94	
96 Bromoform	173	8.336	8.336	0.000	92	9241	2.00	1.85	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	63537	2.00	2.09	
99 Cyclohexanone	55	8.573	8.573	0.000	94	28428	60.0	58.3	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	21418	2.00	2.05	
102 trans-1,4-Dichloro-2-butene	53	8.796	8.796	0.000	59	4832	2.00	1.60	
101 Bromobenzene	156	8.796	8.796	0.000	97	16488	2.00	2.08	
103 1,2,3-Trichloropropane	110	8.824	8.824	0.000	84	7903	2.00	2.43	Ma
104 N-Propylbenzene	120	8.866	8.866	0.000	99	16941	2.00	2.08	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	14656	2.00	2.00	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	94	52192	2.00	2.03	
107 4-Chlorotoluene	126	9.090	9.090	0.000	98	16329	2.00	2.08	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	94	50914	2.00	2.25	
109 1,2,4-Trimethylbenzene	105	9.411	9.411	0.000	98	56502	2.00	2.07	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	12721	2.00	2.18	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	97	29716	2.00	2.08	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	52315	2.00	2.04	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	94	31480	2.00	2.12	
115 n-Butylbenzene	91	10.109	10.109	0.000	99	45661	2.00	2.05	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	96	29151	2.00	2.08	
117 1,2-Dibromo-3-Chloropropane	157	10.919	10.919	0.000	79	4513	2.00	1.96	
119 1,2,4-Trichlorobenzene	180	11.729	11.729	0.000	93	20222	2.00	2.20	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	95	8199	2.00	2.14	
121 Naphthalene	128	11.995	11.995	0.000	98	63185	2.00	2.14	
122 1,2,3-Trichlorobenzene	180	12.218	12.218	0.000	93	16167	2.00	2.08	
S 142 Xylenes, Total	106				0		4.00	4.06	
S 143 1,2-Dichloroethene, Total	1				0		4.00	4.15	
S 145 1,3-Dichloropropene, Total	1				0		4.00	4.04	
S 147 Trihalomethanes, Total	1				0		8.00	7.88	
S 141 Total BTEX	1				0			10.1	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

Cal Dil Std_00167	Amount Added: 20.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

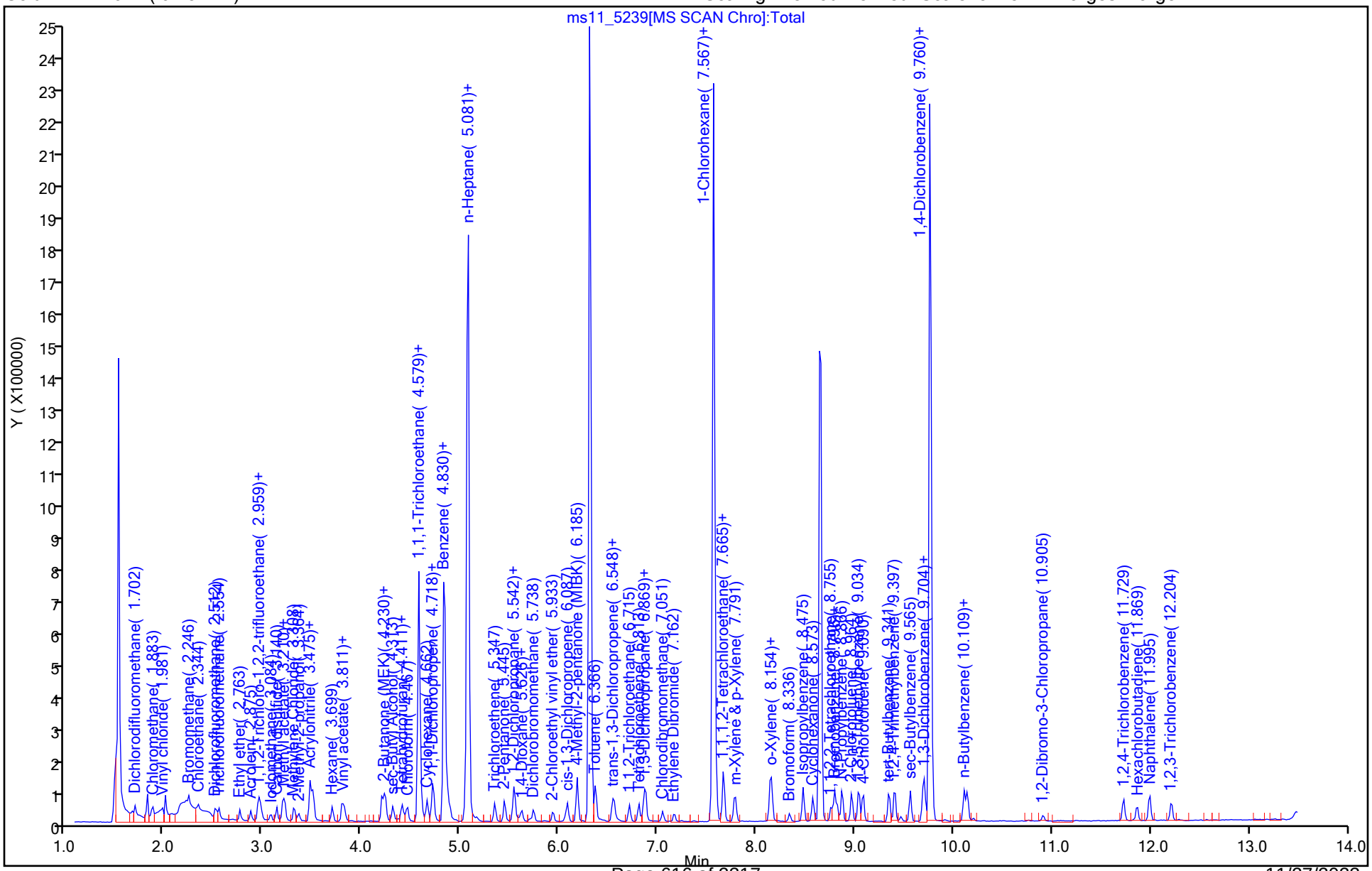
Report Date: 14-Apr-2023 12:44:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5239.D

Injection Date:	13-Apr-2023 16:30:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

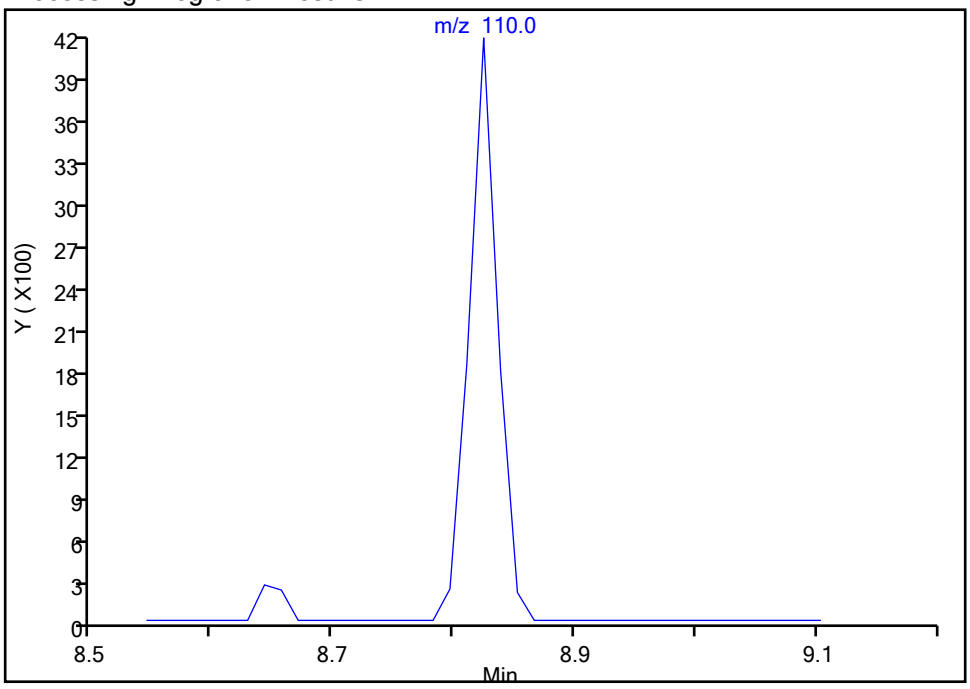
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5239.D
Injection Date: 13-Apr-2023 16:30:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 9 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

103 1,2,3-Trichloropropane, CAS: 96-18-4

Signal: 1

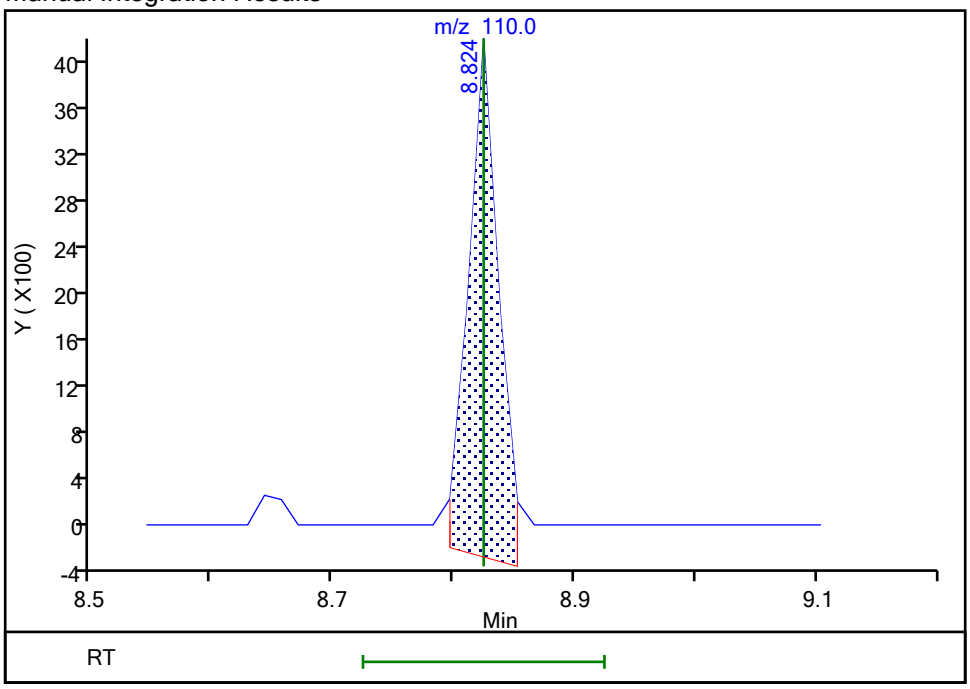
Not Detected
Expected RT: 8.82

Processing Integration Results



Manual Integration Results

RT: 8.82
Area: 7903
Amount: 2.434486
Amount Units: ug/l



Reviewer: RWB2, 13-Apr-2023 18:09:39
Audit Action: Manually Integrated Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5240.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Apr-2023 16:51:30 ALS Bottle#: 10 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 1
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 12:44:41 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: BX8N Date: 13-Apr-2023 21:56:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1415514	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	89	347944	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	559730	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	364860	50.0	50.1	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	491040	50.0	49.2	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1420400	50.0	49.6	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	84	564776	50.0	49.5	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	98	7955	1.00	1.06	
12 Chloromethane	50	1.883	1.883	0.000	99	17968	1.00	1.88	
13 Vinyl chloride	62	1.981	1.981	0.000	97	11533	1.00	1.40	
15 Bromomethane	94	2.246	2.246	0.000	96	8118	1.00	1.27	
16 Chloroethane	64	2.344	2.344	0.000	98	8701	1.00	1.05	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	97	16336	1.00	1.29	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	97	11734	1.00	1.28	
20 Ethyl ether	59	2.763	2.763	0.000	92	8533	1.00	1.29	
22 Acrolein	56	2.875	2.875	0.000	98	10336	9.88	9.63	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.959	0.000	62	4217	1.00	1.02	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	95	6773	1.00	1.15	
24 Acetone	43	2.973	2.973	0.000	99	34187	4.00	3.84	
26 Iodomethane	142	3.084	3.084	0.000	100	13382	1.00	1.62	
28 Carbon disulfide	76	3.140	3.140	0.000	100	30483	1.00	1.51	
29 Methyl acetate	43	3.196	3.196	0.000	98	47490	2.00	1.97	
30 3-Chloro-1-propene	41	3.224	3.224	0.000	88	20315	1.00	0.9492	
31 Methylene Chloride	84	3.322	3.322	0.000	97	9785	1.00	1.39	
32 2-Methyl-2-propanol	59	3.364	3.364	0.000	100	11972	10.0	10.1	
33 Acrylonitrile	53	3.476	3.476	0.000	98	37793	10.0	10.1	
34 Methyl tert-butyl ether	73	3.503	3.503	0.000	98	24784	1.00	1.05	
35 trans-1,2-Dichloroethene	96	3.517	3.517	0.000	96	7628	1.00	1.12	
36 Hexane	57	3.699	3.699	0.000	90	7507	1.00	0.9157	
37 Vinyl acetate	43	3.797	3.797	0.000	97	34946	2.00	2.07	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	96	15460	1.00	1.18	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	58345	4.00	3.82	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	85	9025	1.00	1.17	
45 2,2-Dichloropropane	77	4.244	4.244	0.000	87	12414	1.00	1.05	
47 sec-Butyl Alcohol	45	4.313	4.313	0.000	99	26095	24.0	26.5	
49 Chlorobromomethane	128	4.411	4.411	0.000	97	4351	1.00	1.26	
50 Tetrahydrofuran	42	4.411	4.411	0.000	87	7164	2.00	2.19	
51 Chloroform	83	4.467	4.467	0.000	96	14672	1.00	1.15	
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	97	11648	1.00	1.09	
54 Cyclohexane	56	4.663	4.663	0.000	95	11559	1.00	0.9870	
56 Carbon tetrachloride	117	4.719	4.719	0.000	91	10149	1.00	1.11	
55 1,1-Dichloropropene	75	4.719	4.719	0.000	94	10783	1.00	1.08	
52 Isobutyl alcohol	43	4.732	4.732	0.000	95	13792	25.0	25.8	
57 Benzene	78	4.872	4.872	0.000	96	34146	1.00	1.18	
58 1,2-Dichloroethane	62	4.900	4.900	0.000	95	13783	1.00	1.15	
60 n-Heptane	43	5.054	5.054	0.000	93	14911	1.00	0.9038	
62 Trichloroethene	130	5.347	5.347	0.000	97	7591	1.00	1.09	
63 2-Pentanone	43	5.445	5.445	0.000	99	32809	3.20	3.91	
64 Methylcyclohexane	55	5.543	5.543	0.000	93	8986	1.00	1.10	
65 1,2-Dichloropropane	63	5.556	5.556	0.000	92	9657	1.00	1.18	
67 1,4-Dioxane	88	5.598	5.598	0.000	91	3385	20.0	22.5	a
68 Dibromomethane	93	5.626	5.626	0.000	94	5392	1.00	1.07	
69 Dichlorobromomethane	83	5.738	5.738	0.000	97	10519	1.00	1.06	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	94	6201	1.00	1.04	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	92	12870	1.00	1.02	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	98	38661	4.00	3.93	
75 Toluene	91	6.367	6.367	0.000	98	32276	1.00	1.10	
73 trans-1,3-Dichloropropene	75	6.548	6.548	0.000	97	13093	1.00	1.04	
77 Ethyl methacrylate	69	6.562	6.562	0.000	91	11570	1.00	1.03	
79 1,1,2-Trichloroethane	97	6.716	6.716	0.000	93	7226	1.00	1.06	
80 Tetrachloroethene	164	6.813	6.813	0.000	94	5849	1.00	1.11	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	93	13256	1.00	1.05	a
82 2-Hexanone	43	6.883	6.883	0.000	97	28520	4.00	3.95	
85 Chlorodibromomethane	129	7.051	7.051	0.000	92	6669	1.00	0.9422	
86 Ethylene Dibromide	107	7.177	7.177	0.000	96	7744	1.00	1.08	
88 1-Chlorohexane	91	7.554	7.554	0.000	73	11236	0.8000	0.8142	
89 Chlorobenzene	112	7.596	7.596	0.000	94	20837	1.00	1.07	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	92	6962	1.00	1.01	
91 Ethylbenzene	106	7.665	7.665	0.000	99	10382	1.00	1.02	
92 m-Xylene & p-Xylene	91	7.791	7.791	0.000	0	25532	1.00	0.9778	
93 o-Xylene	106	8.140	8.140	0.000	97	12707	1.00	1.02	
94 Styrene	104	8.154	8.154	0.000	93	22136	1.00	1.04	
96 Bromoform	173	8.336	8.336	0.000	92	4635	1.00	0.9384	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	31322	1.00	1.03	
99 Cyclohexanone	55	8.573	8.573	0.000	94	14230	30.0	29.5	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	96	10782	1.00	1.03	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	63	3759	1.00	1.24	
101 Bromobenzene	156	8.797	8.797	0.000	97	7684	1.00	0.9654	
103 1,2,3-Trichloropropane	110	8.825	8.825	0.000	87	3326	1.00	1.02	a
104 N-Propylbenzene	120	8.866	8.866	0.000	99	8277	1.00	1.02	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	7108	1.00	0.9691	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	95	26644	1.00	1.04	
107 4-Chlorotoluene	126	9.090	9.090	0.000	97	8482	1.00	1.08	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	91	20903	1.00	0.9213	
109 1,2,4-Trimethylbenzene	105	9.411	9.411	0.000	97	29192	1.00	1.07	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	6137	1.00	1.05	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	97	15346	1.00	1.07	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	96	26859	1.00	1.05	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	92	15809	1.00	1.06	
115 n-Butylbenzene	91	10.109	10.109	0.000	97	22394	1.00	1.00	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	96	14820	1.00	1.06	
117 1,2-Dibromo-3-Chloropropane	157	10.906	10.906	0.000	76	2169	1.00	0.9398	
119 1,2,4-Trichlorobenzene	180	11.730	11.730	0.000	92	9612	1.00	1.04	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	95	4311	1.00	1.12	a
121 Naphthalene	128	11.995	11.995	0.000	98	32134	1.00	1.09	
122 1,2,3-Trichlorobenzene	180	12.218	12.218	0.000	93	8663	1.00	1.11	
S 142 Xylenes, Total	106				0		2.00	2.00	
S 143 1,2-Dichloroethene, Total	1				0		2.00	2.28	
S 145 1,3-Dichloropropene, Total	1				0		2.00	2.06	
S 147 Trihalomethanes, Total	1				0		4.00	4.09	
S 141 Total BTEX	1				0			5.30	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

Cal Dil Std_00167	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

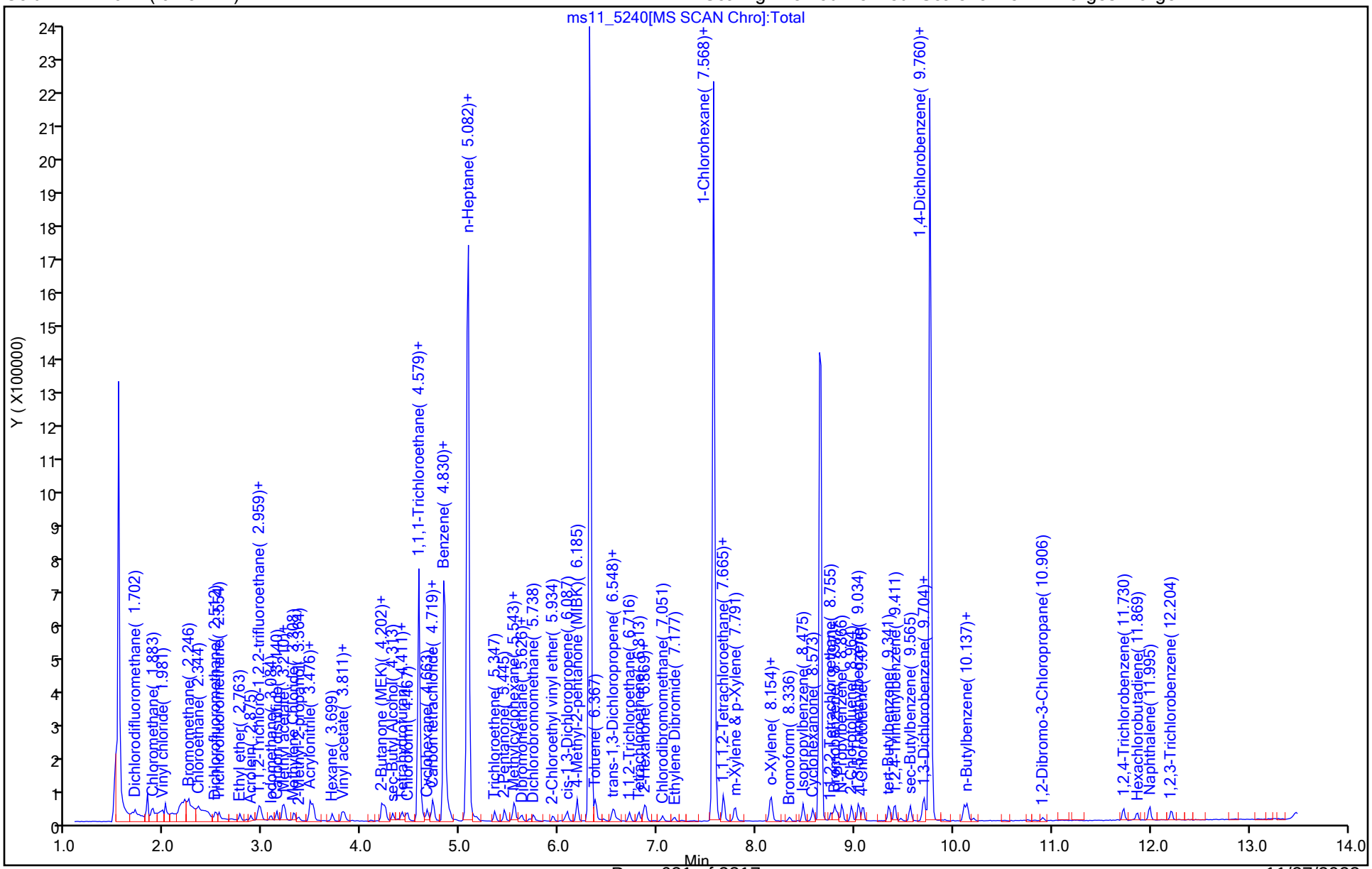
Report Date: 14-Apr-2023 12:44:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5240.D

Injection Date:	13-Apr-2023 16:51:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

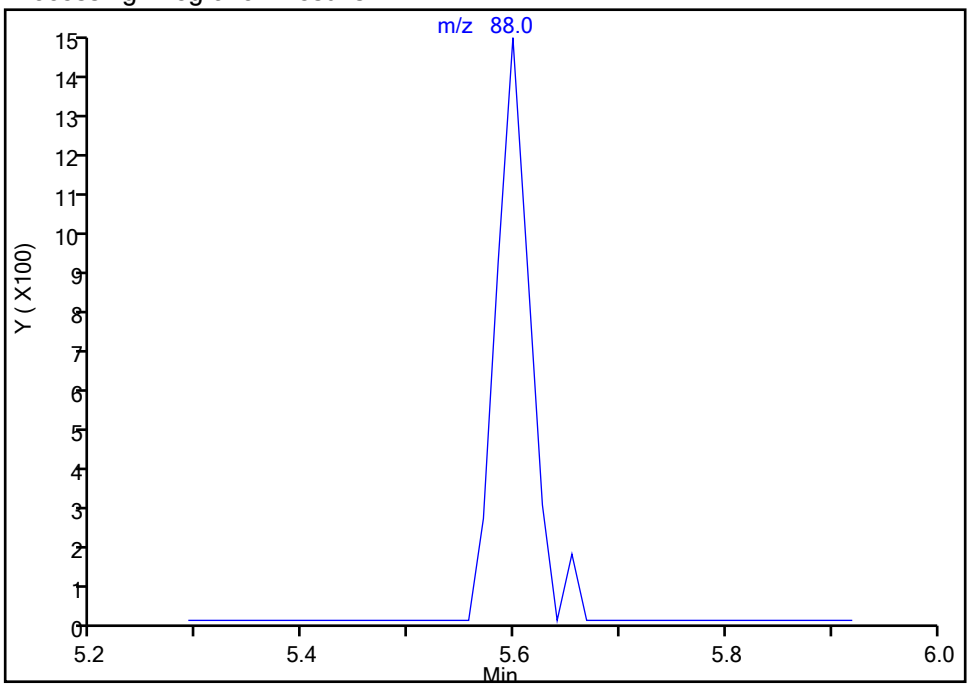
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5240.D
Injection Date: 13-Apr-2023 16:51:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 10 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

67 1,4-Dioxane, CAS: 123-91-1

Signal: 1

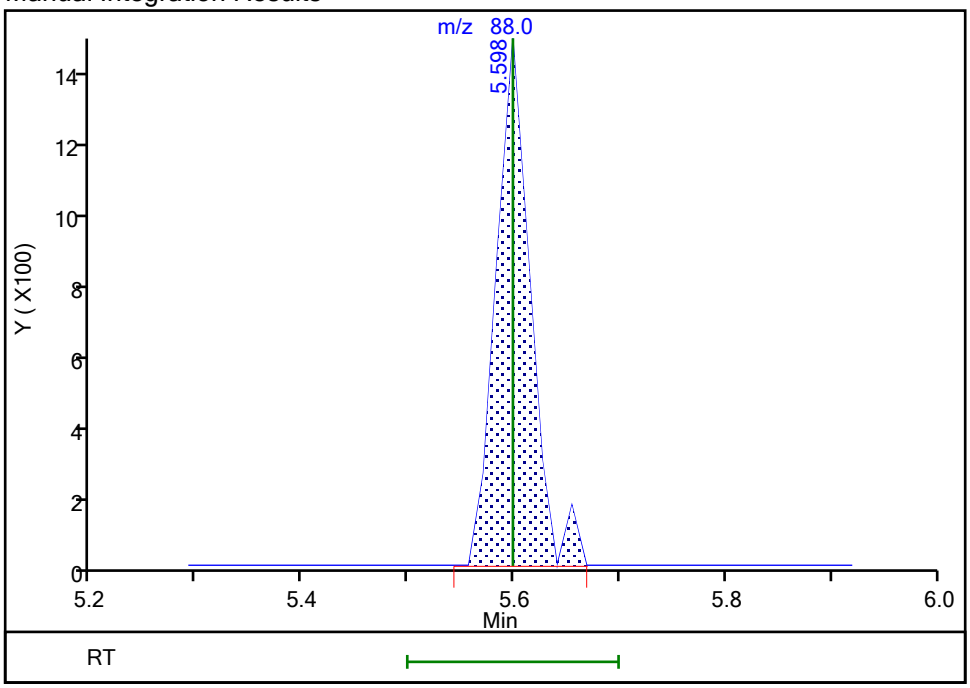
Not Detected
Expected RT: 5.60

Processing Integration Results



Manual Integration Results

RT: 5.60
Area: 3385
Amount: 22.512551
Amount Units: ug/l



Reviewer: BX8N, 13-Apr-2023 21:56:50
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

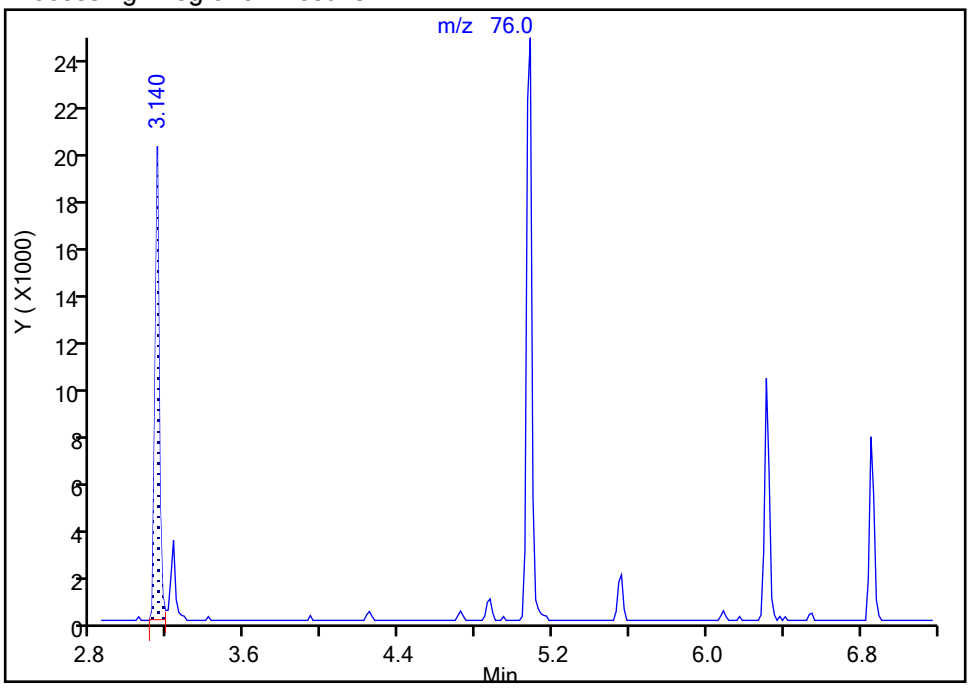
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5240.D
Injection Date: 13-Apr-2023 16:51:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 10 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

81 1,3-Dichloropropane, CAS: 142-28-9

Signal: 1

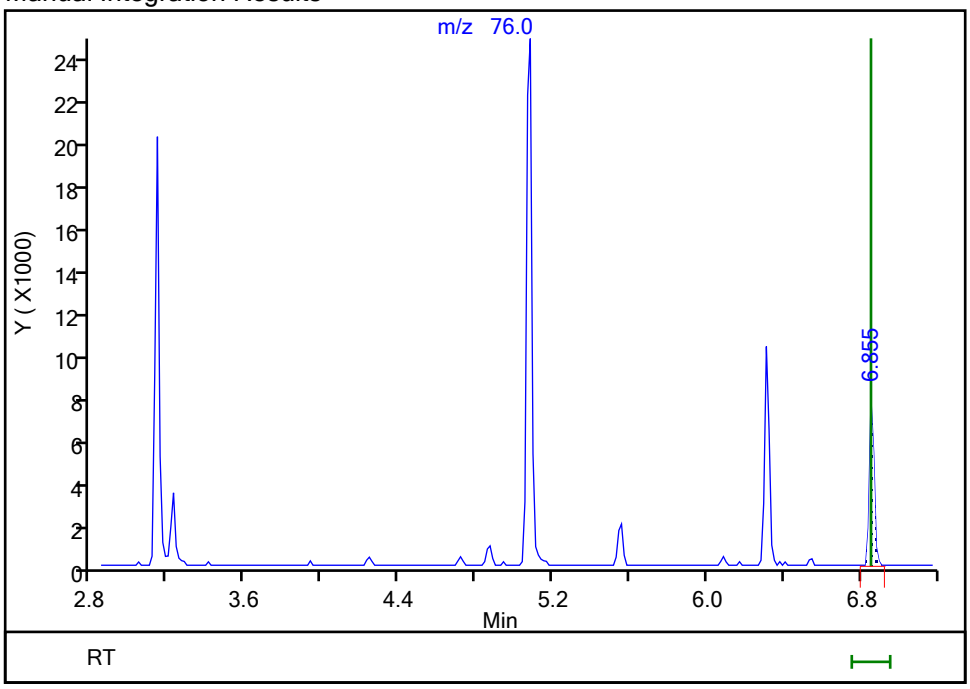
Processing Integration Results

RT: 3.14
Area: 30123
Amount: 2.083836
Amount Units: ug/l



Manual Integration Results

RT: 6.86
Area: 13256
Amount: 1.053616
Amount Units: ug/l



Reviewer: BX8N, 13-Apr-2023 21:56:09
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins Denver

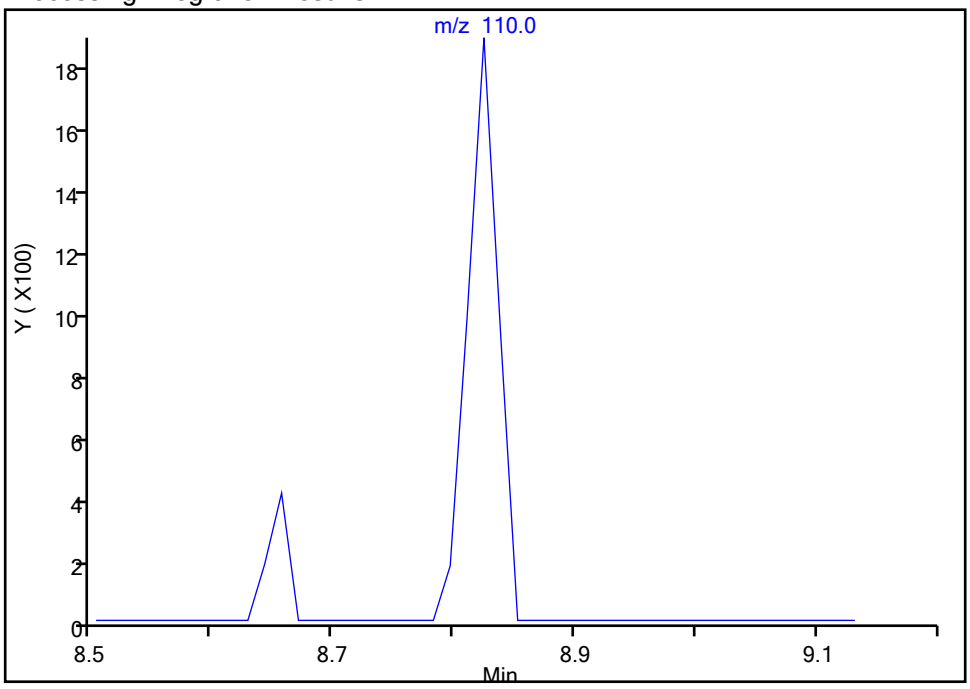
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5240.D
Injection Date: 13-Apr-2023 16:51:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 10 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

103 1,2,3-Trichloropropane, CAS: 96-18-4

Signal: 1

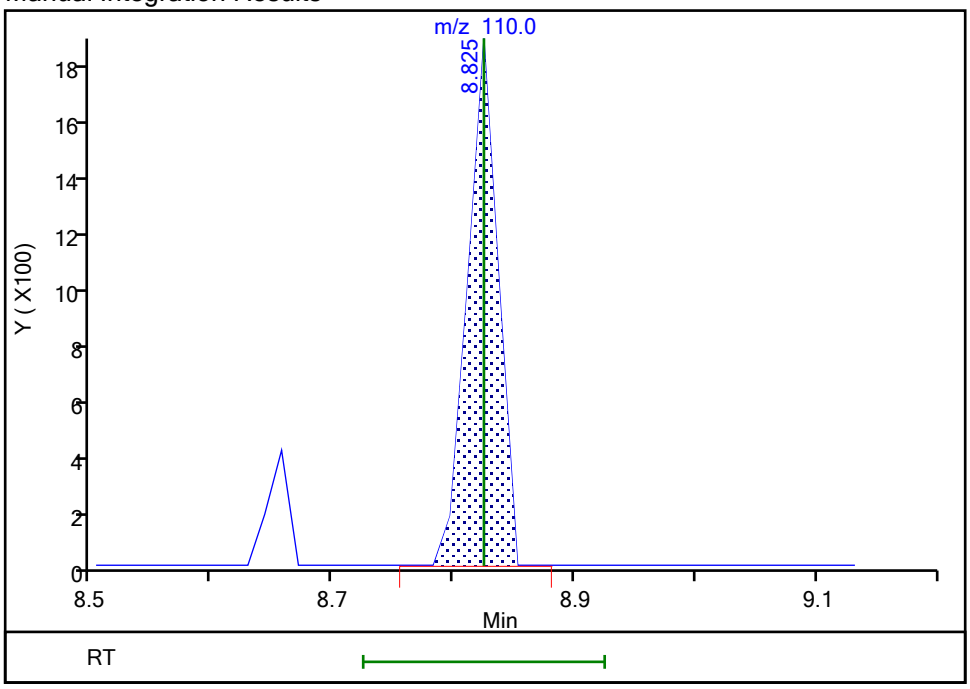
Not Detected
Expected RT: 8.82

Processing Integration Results



Manual Integration Results

RT: 8.82
Area: 3326
Amount: 1.022499
Amount Units: ug/l



Reviewer: BX8N, 13-Apr-2023 21:56:24
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

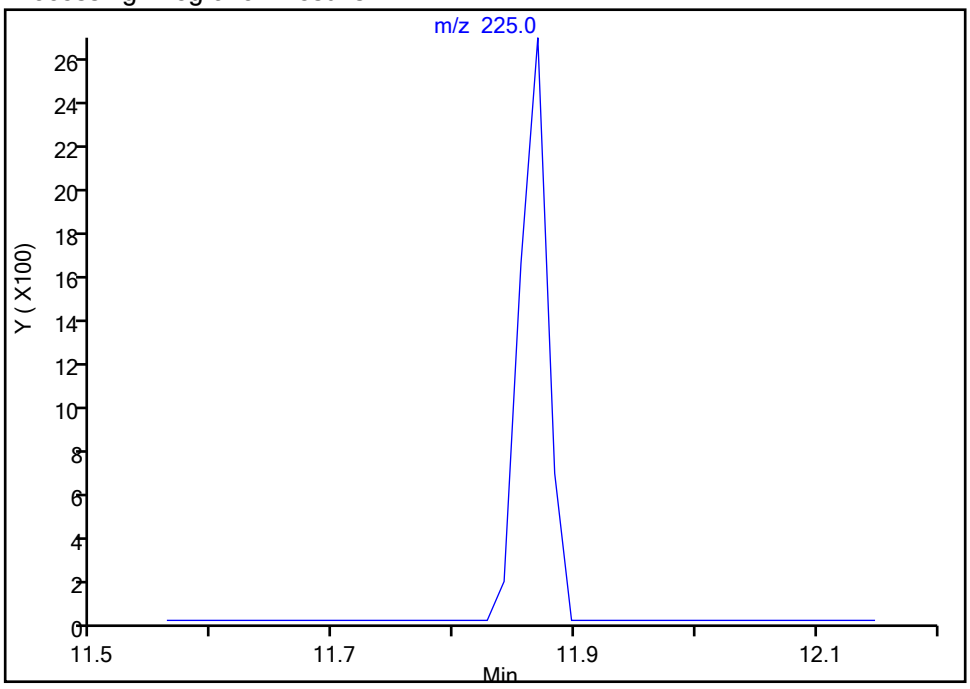
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5240.D
Injection Date: 13-Apr-2023 16:51:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 10 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

120 Hexachlorobutadiene, CAS: 87-68-3

Signal: 1

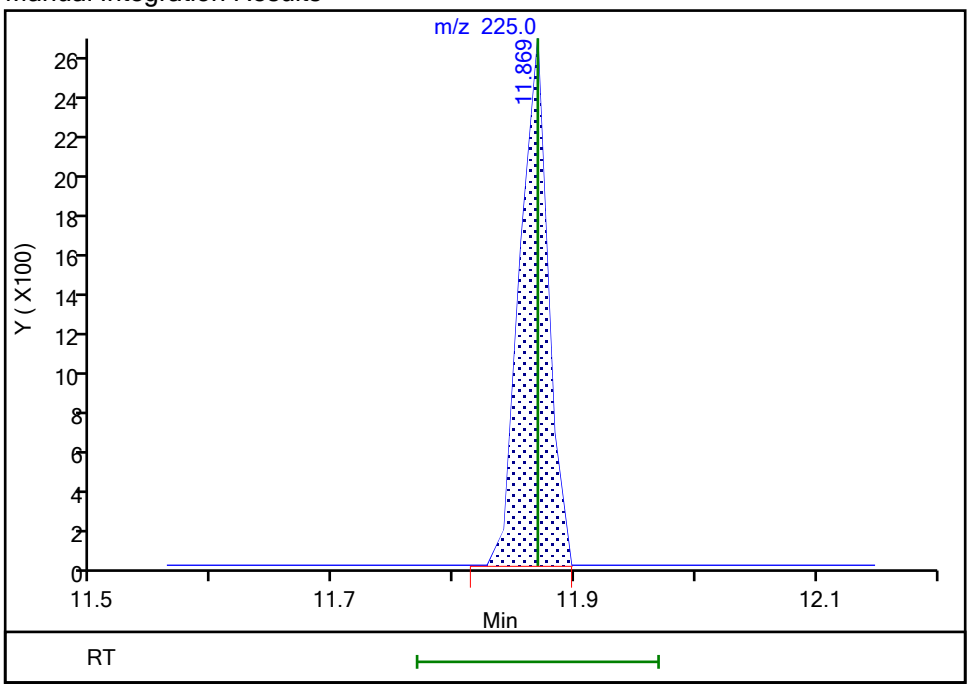
Not Detected
Expected RT: 11.87

Processing Integration Results



Manual Integration Results

RT: 11.87
Area: 4311
Amount: 1.123631
Amount Units: ug/l



Reviewer: BX8N, 13-Apr-2023 21:56:40
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Apr-2023 17:13:30 ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 05
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 12:44:44 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1679

First Level Reviewer: RWB2 Date: 13-Apr-2023 18:09:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1348665	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	88	332941	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	536555	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	349355	50.0	50.4	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	462563	50.0	48.6	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1363020	50.0	49.7	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	86	542338	50.0	49.5	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	97	3480	0.5000	0.4876	
12 Chloromethane	50	1.883	1.883	0.000	97	8655	0.5000	0.9524	
13 Vinyl chloride	62	1.981	1.981	0.000	96	4967	0.5000	0.6330	
15 Bromomethane	94	2.233	2.233	0.000	70	4227	0.5000	0.3819	
16 Chloroethane	64	2.330	2.330	0.000	95	4180	0.5000	0.1989	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	96	6387	0.5000	0.5309	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	95	5158	0.5000	0.5915	
20 Ethyl ether	59	2.763	2.763	0.000	92	4358	0.5000	0.6923	
22 Acrolein	56	2.875	2.875	0.000	98	5951	4.94	5.82	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.959	0.000	65	1970	0.5000	0.5003	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	96	3512	0.5000	0.6271	
24 Acetone	43	2.973	2.973	0.000	99	33703	2.00	4.24	
26 Iodomethane	142	3.084	3.084	0.000	99	8600	0.5000	1.10	
28 Carbon disulfide	76	3.140	3.140	0.000	99	16503	0.5000	0.8582	
29 Methyl acetate	43	3.196	3.196	0.000	98	57407	1.00	3.65	
30 3-Chloro-1-propene	41	3.224	3.224	0.000	90	13461	0.5000	0.3539	
31 Methylene Chloride	84	3.308	3.308	0.000	95	5424	0.5000	0.8083	
32 2-Methyl-2-propanol	59	3.364	3.364	0.000	98	6616	5.00	5.87	
33 Acrylonitrile	53	3.475	3.475	0.000	99	19634	5.00	5.53	
34 Methyl tert-butyl ether	73	3.503	3.503	0.000	96	12852	0.5000	0.5739	
35 trans-1,2-Dichloroethene	96	3.517	3.517	0.000	95	4147	0.5000	0.6366	
36 Hexane	57	3.699	3.699	0.000	93	4017	0.5000	0.5121	
37 Vinyl acetate	43	3.797	3.797	0.000	97	19044	1.00	1.18	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	96	7007	0.5000	0.5626	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	69392	2.00	6.83	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	82	4538	0.5000	0.6150	
45 2,2-Dichloropropane	77	4.244	4.244	0.000	87	6989	0.5000	0.6188	
47 sec-Butyl Alcohol	45	4.313	4.313	0.000	86	11058	12.0	11.8	M
49 Chlorobromomethane	128	4.411	4.411	0.000	95	2290	0.5000	0.6954	
50 Tetrahydrofuran	42	4.425	4.425	0.000	88	5008	1.00	1.60	
51 Chloroform	83	4.467	4.467	0.000	95	7565	0.5000	0.6228	
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	98	5923	0.5000	0.5793	
54 Cyclohexane	56	4.663	4.663	0.000	94	6217	0.5000	0.5572	
56 Carbon tetrachloride	117	4.718	4.718	0.000	87	4805	0.5000	0.5504	
55 1,1-Dichloropropene	75	4.718	4.718	0.000	89	5273	0.5000	0.5540	a
52 Isobutyl alcohol	43	4.732	4.732	0.000	97	6039	12.5	11.9	
57 Benzene	78	4.872	4.872	0.000	96	15917	0.5000	0.5781	
58 1,2-Dichloroethane	62	4.900	4.900	0.000	98	7410	0.5000	0.6482	
60 n-Heptane	43	5.054	5.054	0.000	84	12434	0.5000	0.6528	
62 Trichloroethene	130	5.347	5.347	0.000	93	3839	0.5000	0.5778	
63 2-Pentanone	43	5.445	5.445	0.000	99	28382	1.60	3.55	
64 Methylcyclohexane	55	5.543	5.543	0.000	90	3966	0.5000	0.5116	
65 1,2-Dichloropropane	63	5.543	5.543	0.000	77	4592	0.5000	0.5907	
67 1,4-Dioxane	88		5.598				ND	ND	
68 Dibromomethane	93	5.626	5.626	0.000	92	3069	0.5000	0.6419	
69 Dichlorobromomethane	83	5.738	5.738	0.000	92	4851	0.5000	0.5140	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	91	2888	0.5000	0.5081	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	92	6515	0.5000	0.5409	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	97	19180	2.00	2.04	
75 Toluene	91	6.367	6.367	0.000	98	15291	0.5000	0.5463	
73 trans-1,3-Dichloropropene	75	6.548	6.548	0.000	96	6727	0.5000	0.5606	
77 Ethyl methacrylate	69	6.562	6.562	0.000	93	5600	0.5000	0.5191	
79 1,1,2-Trichloroethane	97	6.716	6.716	0.000	95	3544	0.5000	0.5473	
80 Tetrachloroethene	164	6.813	6.813	0.000	95	2822	0.5000	0.5578	a
81 1,3-Dichloropropane	76	6.855	6.855	0.000	94	6469	0.5000	0.5373	a
82 2-Hexanone	43	6.883	6.883	0.000	97	14420	2.00	2.09	
85 Chlorodibromomethane	129	7.051	7.051	0.000	88	3378	0.5000	0.4988	
86 Ethylene Dibromide	107	7.163	7.163	0.000	98	3714	0.5000	0.5398	
88 1-Chlorohexane	91	7.554	7.554	0.000	34	7224	0.4000	0.3951	
89 Chlorobenzene	112	7.596	7.596	0.000	91	10708	0.5000	0.5754	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	92	3652	0.5000	0.5564	
91 Ethylbenzene	106	7.665	7.665	0.000	99	5155	0.5000	0.5298	
92 m-Xylene & p-Xylene	91	7.791	7.791	0.000	0	15557	0.5000	0.6227	
93 o-Xylene	106	8.140	8.140	0.000	98	6423	0.5000	0.5404	
94 Styrene	104	8.154	8.154	0.000	94	11814	0.5000	0.5816	
96 Bromoform	173	8.336	8.336	0.000	92	2451	0.5000	0.5186	
98 Isopropylbenzene	105	8.475	8.475	0.000	96	15987	0.5000	0.5475	
99 Cyclohexanone	55	8.573	8.573	0.000	92	7406	15.0	16.0	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	5776	0.5000	0.5757	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	52	1679	0.5000	0.5773	
101 Bromobenzene	156	8.797	8.797	0.000	96	4456	0.5000	0.5840	
103 1,2,3-Trichloropropane	110		8.825				ND	ND	
104 N-Propylbenzene	120	8.866	8.866	0.000	99	4166	0.5000	0.5332	
105 2-Chlorotoluene	126	8.964	8.964	0.000	96	4065	0.5000	0.5781	
106 1,3,5-Trimethylbenzene	105	9.048	9.048	0.000	93	13917	0.5000	0.5648	
107 4-Chlorotoluene	126	9.090	9.090	0.000	97	4268	0.5000	0.5658	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	92	11647	0.5000	0.5355	
109 1,2,4-Trimethylbenzene	105	9.411	9.411	0.000	97	14959	0.5000	0.5711	
111 sec-Butylbenzene	134		9.565				ND	ND	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	94	8102	0.5000	0.5913	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	96	13990	0.5000	0.5692	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	86	8593	0.5000	0.6029	
115 n-Butylbenzene	91	10.109	10.109	0.000	97	12479	0.5000	0.5835	
116 1,2-Dichlorobenzene	146	10.151	10.151	0.000	95	8288	0.5000	0.6167	
117 1,2-Dibromo-3-Chloropropane	157	10.920	10.920	0.000	87	1141	0.5000	0.5157	
119 1,2,4-Trichlorobenzene	180	11.730	11.730	0.000	92	5707	0.5000	0.6457	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	94	2135	0.5000	0.5805	a
121 Naphthalene	128	11.995	11.995	0.000	98	18139	0.5000	0.6408	
122 1,2,3-Trichlorobenzene	180	12.218	12.218	0.000	90	4817	0.5000	0.6461	
S 142 Xylenes, Total	106				0		1.00	1.16	
S 143 1,2-Dichloroethene, Total	1				0		1.00	1.25	
S 145 1,3-Dichloropropene, Total	1				0		1.00	1.10	
S 147 Trihalomethanes, Total	1				0		2.00	2.15	
S 141 Total BTEX	1				0			2.82	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

Cal Dil Std_00167	Amount Added:	5.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

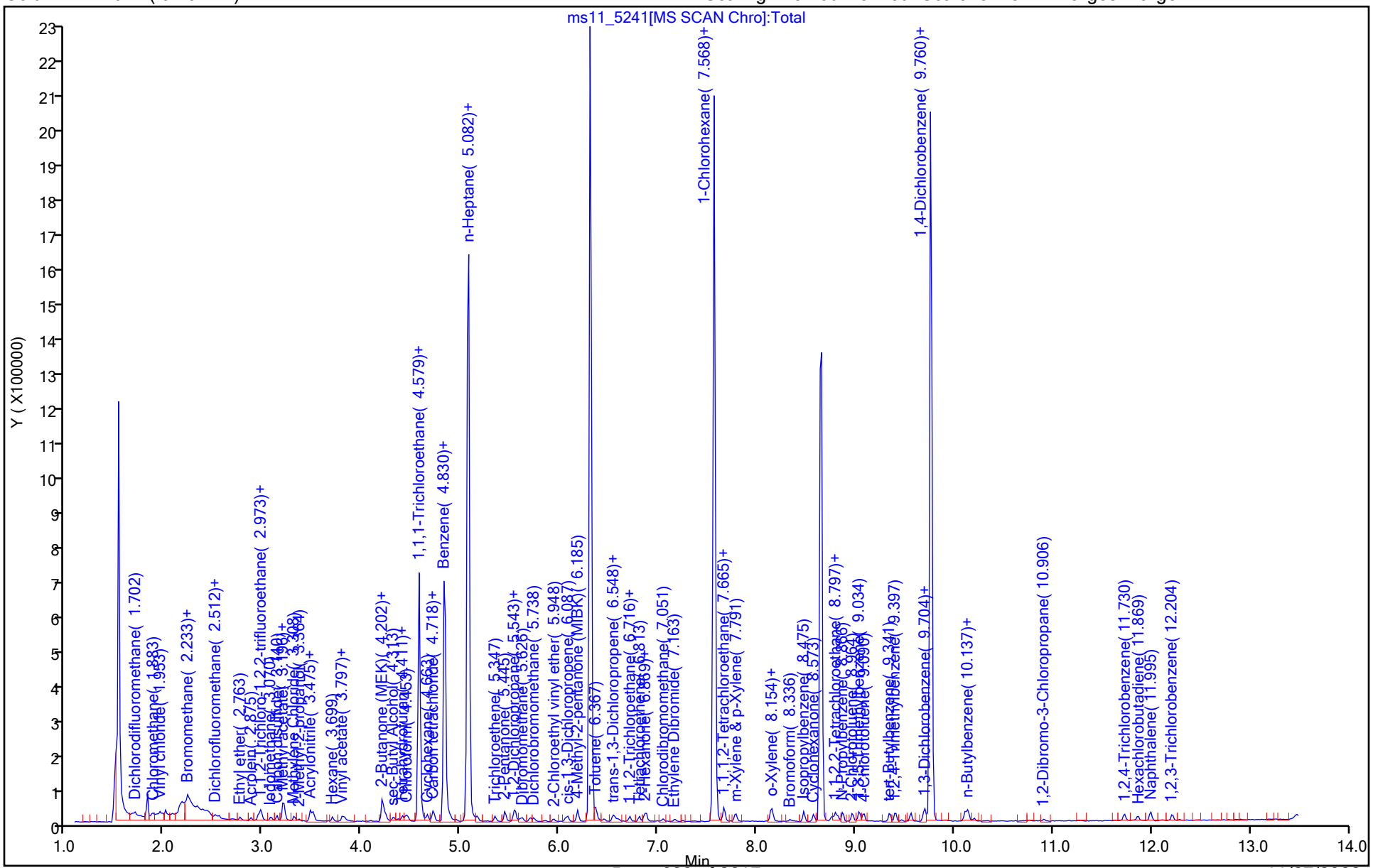
Report Date: 14-Apr-2023 12:44:45 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Injection Date:	13-Apr-2023 17:13:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

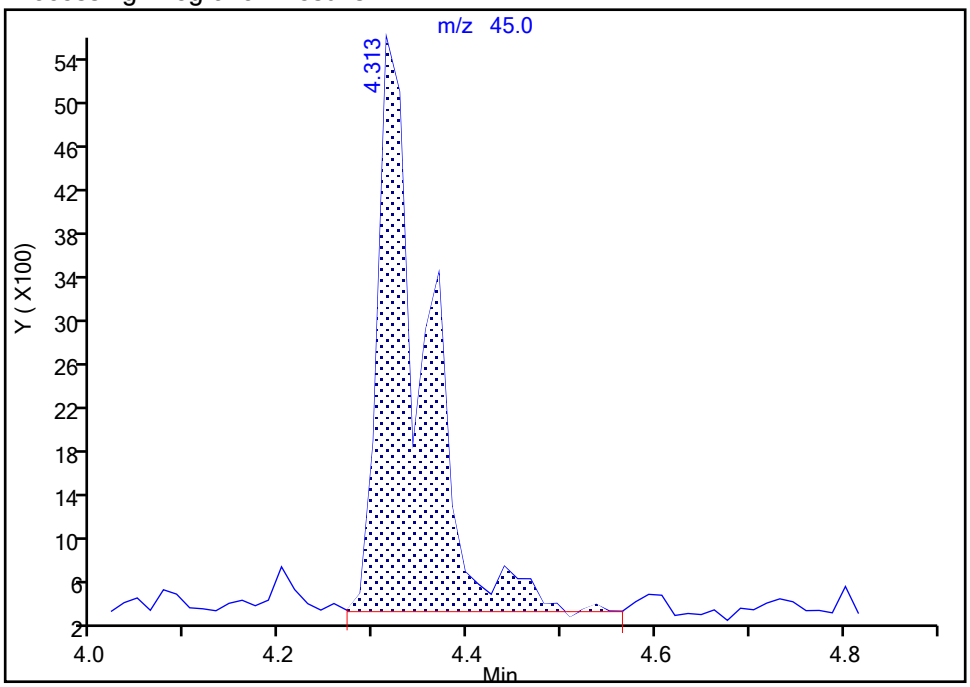
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D
Injection Date: 13-Apr-2023 17:13:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

47 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

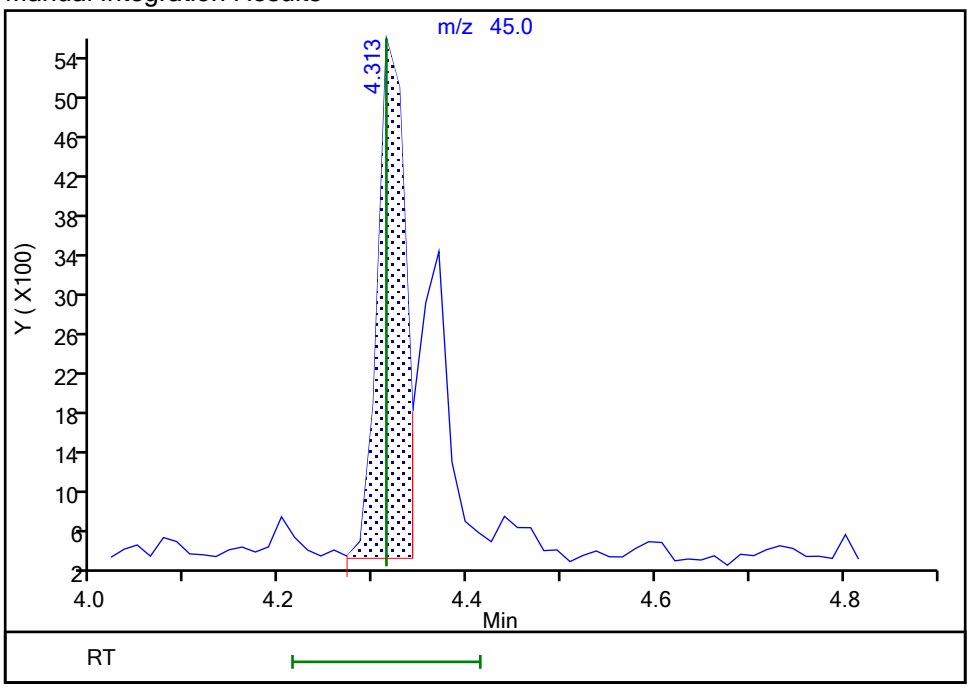
Processing Integration Results

RT: 4.31
Area: 18233
Amount: 13.233871
Amount Units: ug/l



Manual Integration Results

RT: 4.31
Area: 11058
Amount: 11.801287
Amount Units: ug/l



Reviewer: BX8N, 13-Apr-2023 21:51:24
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins Denver

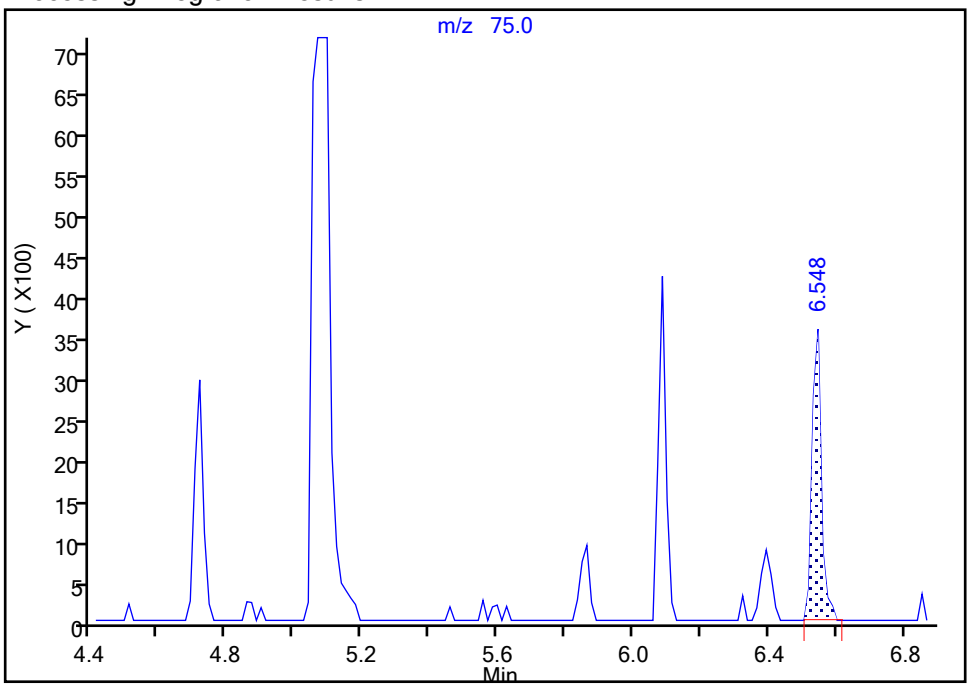
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D
Injection Date: 13-Apr-2023 17:13:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

55 1,1-Dichloropropene, CAS: 563-58-6

Signal: 1

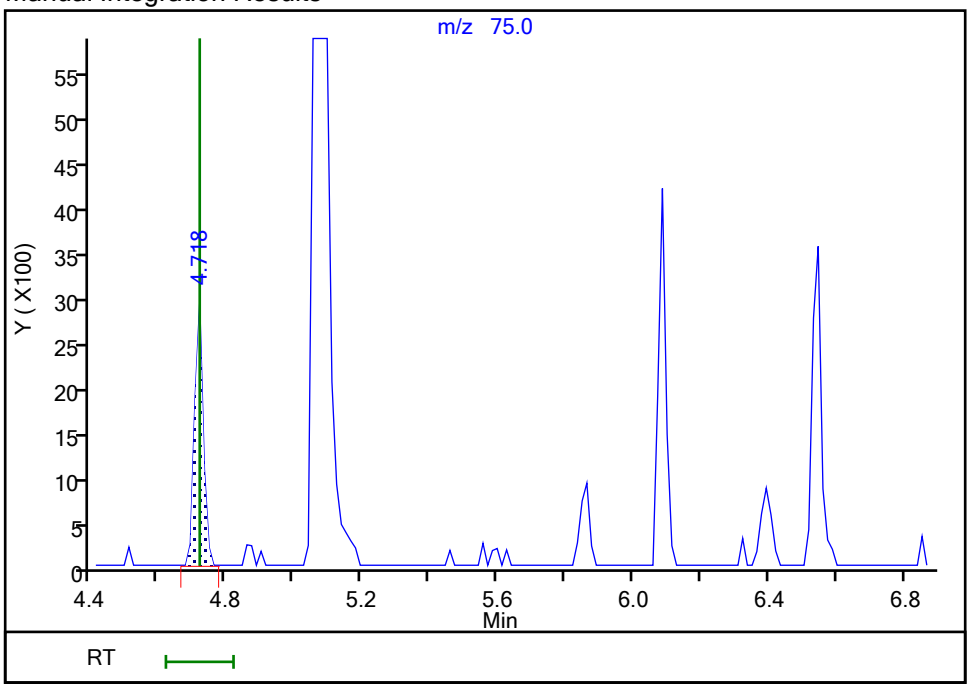
Processing Integration Results

RT: 6.55
Area: 6727
Amount: 0.683569
Amount Units: ug/l



Manual Integration Results

RT: 4.72
Area: 5273
Amount: 0.554010
Amount Units: ug/l



Reviewer: BX8N, 13-Apr-2023 21:52:01
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins Denver

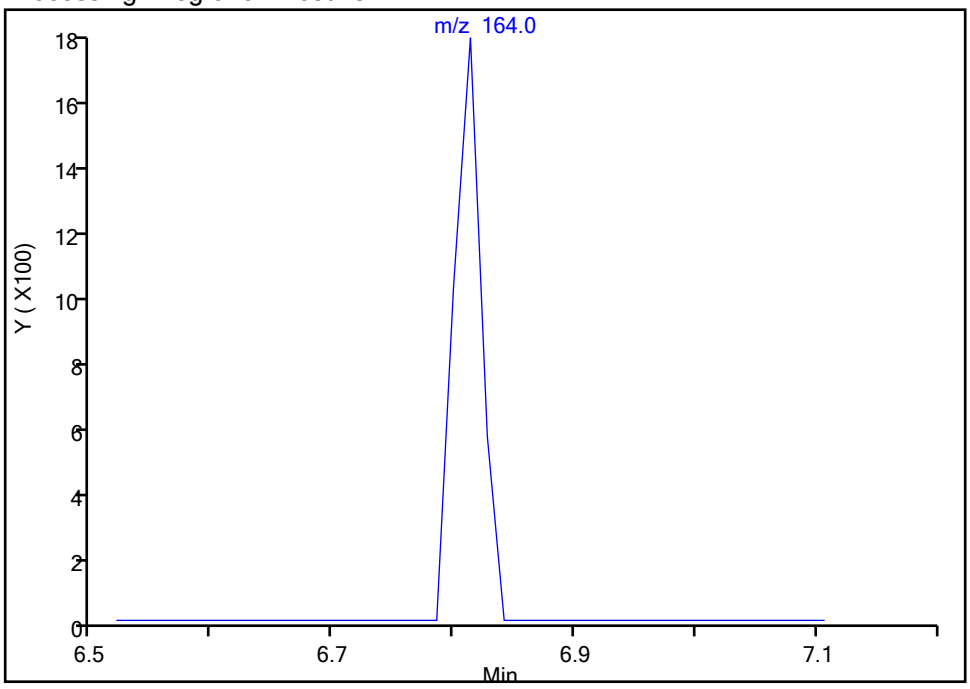
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D
Injection Date: 13-Apr-2023 17:13:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

Signal: 1

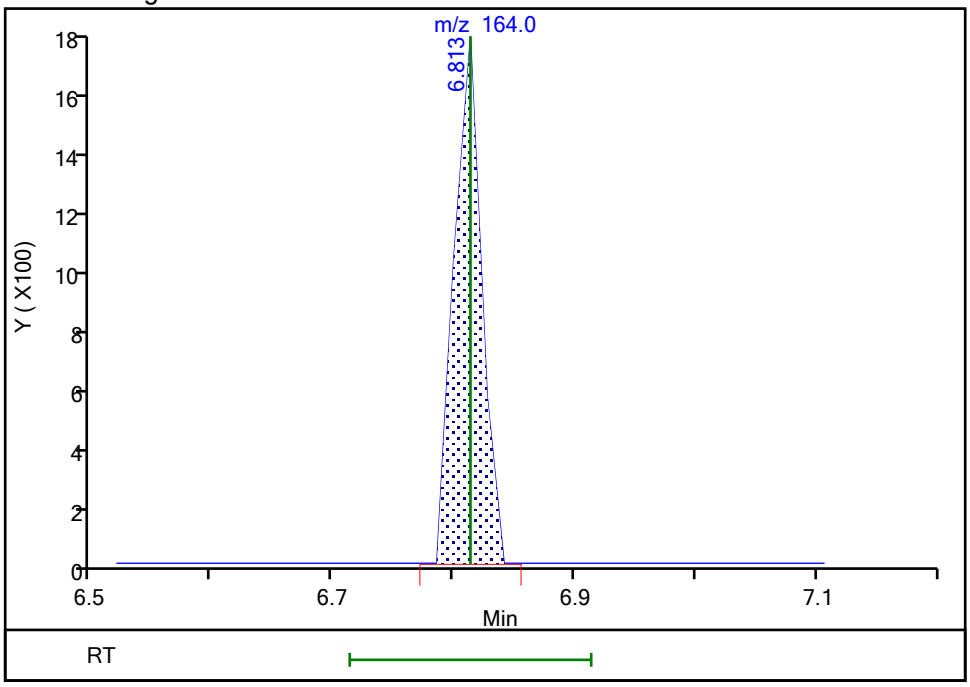
Not Detected
Expected RT: 6.81

Processing Integration Results



Manual Integration Results

RT: 6.81
Area: 2822
Amount: 0.557807
Amount Units: ug/l



Reviewer: BX8N, 13-Apr-2023 21:54:51
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

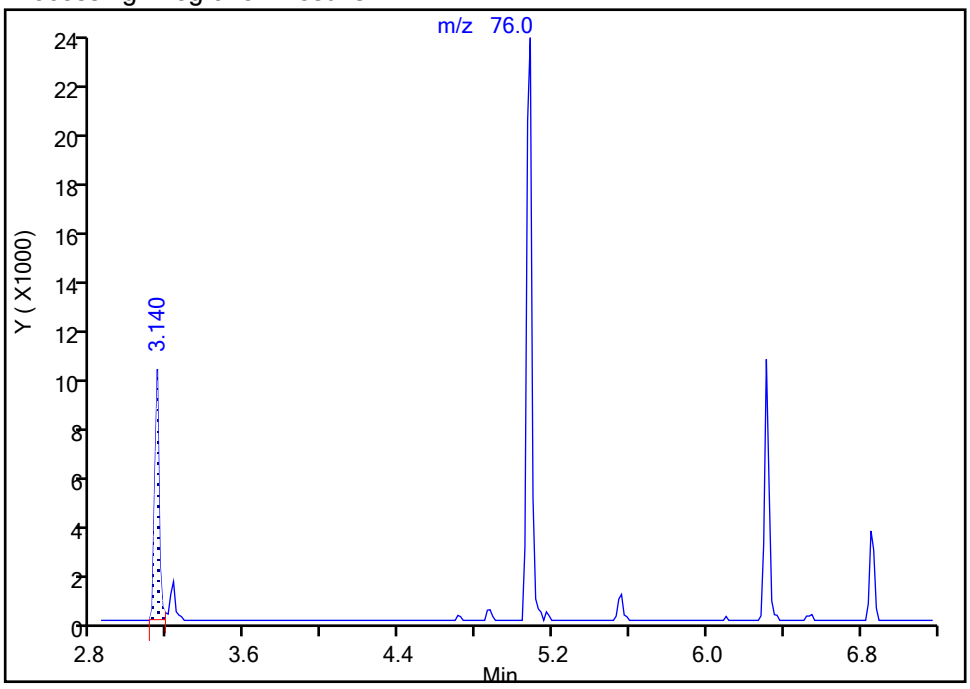
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D
Injection Date: 13-Apr-2023 17:13:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

81 1,3-Dichloropropane, CAS: 142-28-9

Signal: 1

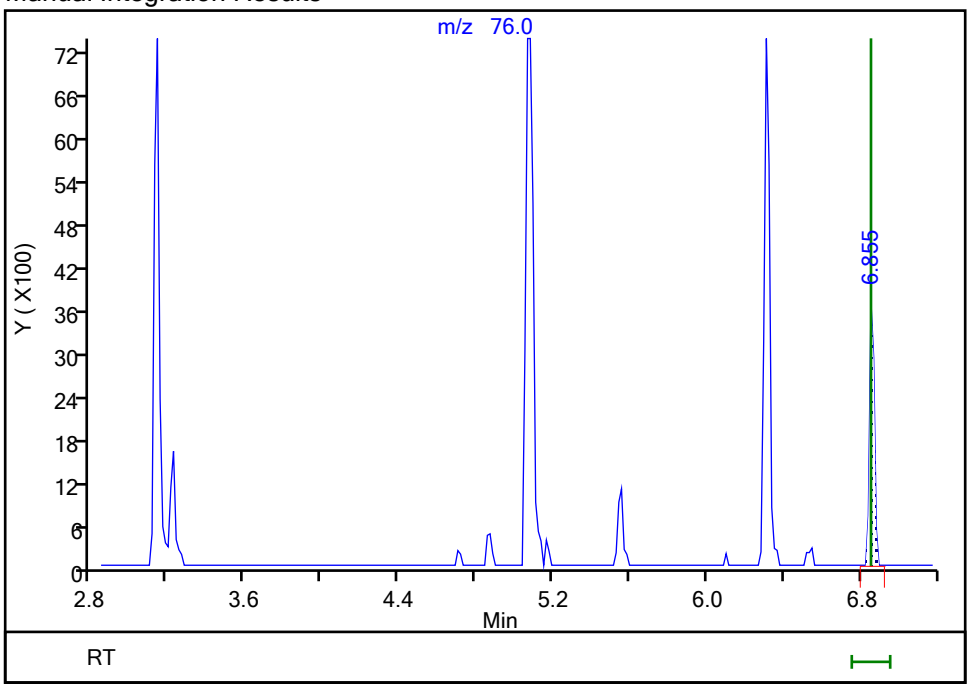
Processing Integration Results

RT: 3.14
Area: 16287
Amount: 0.686508
Amount Units: ug/l



Manual Integration Results

RT: 6.86
Area: 6469
Amount: 0.537340
Amount Units: ug/l



Reviewer: BX8N, 13-Apr-2023 21:54:40
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins Denver

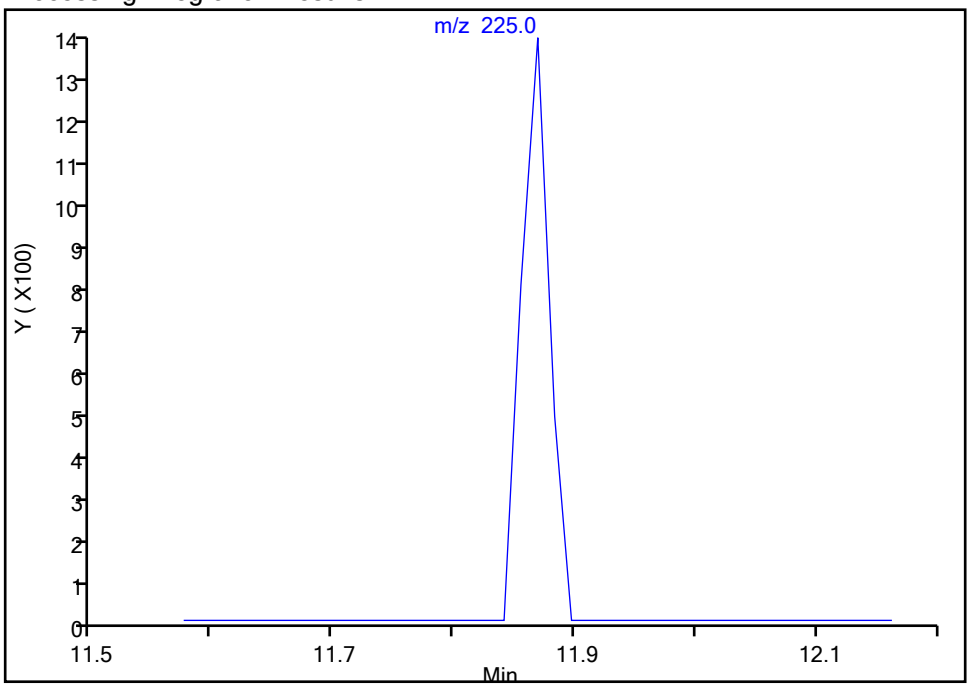
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D
Injection Date: 13-Apr-2023 17:13:30 Instrument ID: VMS_MS11
Lims ID: STD
Client ID:
Operator ID: MED ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

120 Hexachlorobutadiene, CAS: 87-68-3

Signal: 1

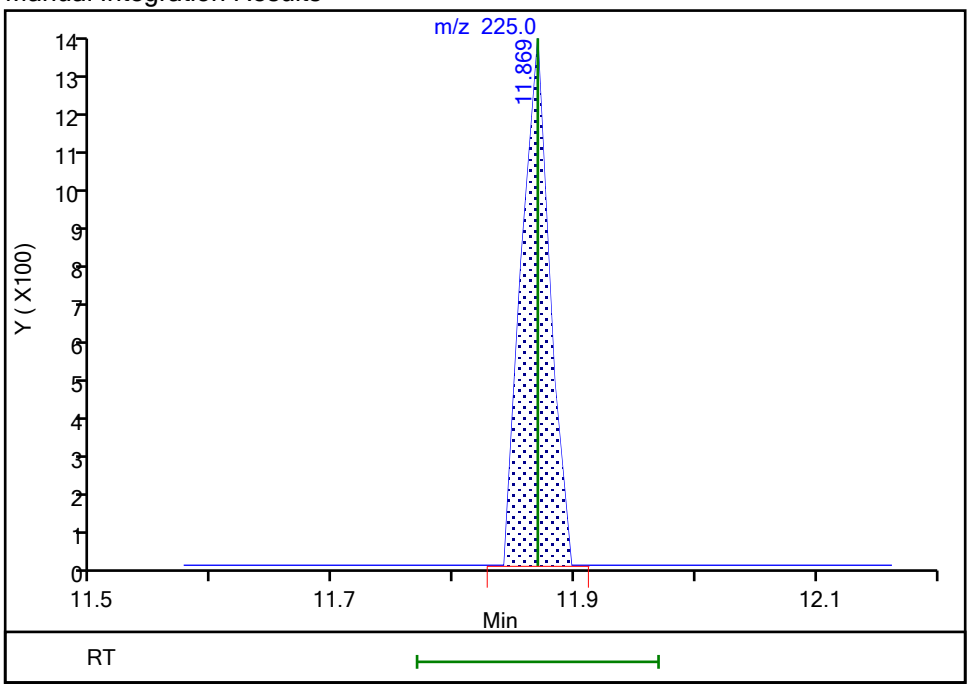
Not Detected
Expected RT: 11.87

Processing Integration Results



Manual Integration Results

RT: 11.87
Area: 2135
Amount: 0.580508
Amount Units: ug/l



Reviewer: BX8N, 13-Apr-2023 21:55:30
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

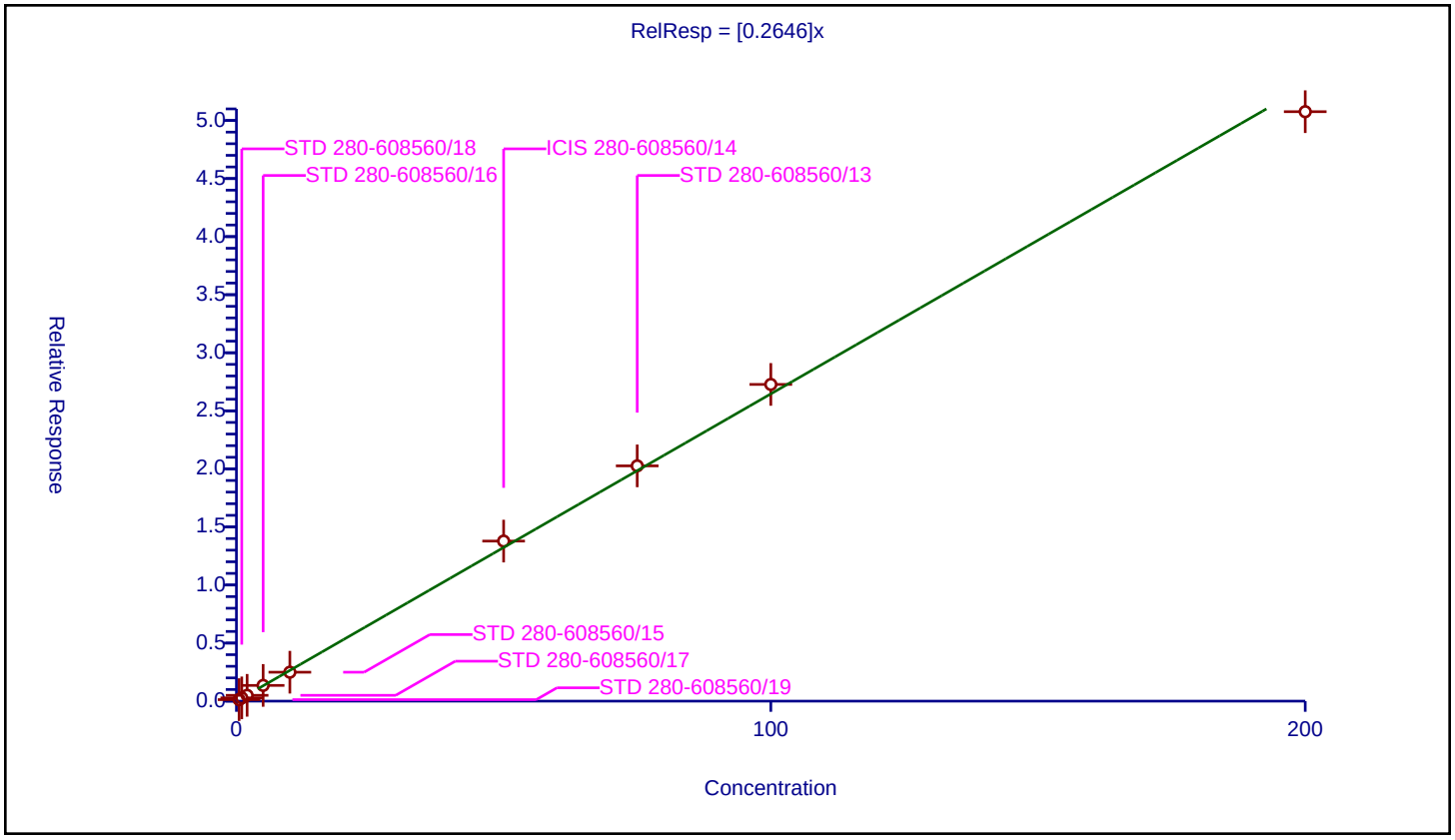
Curve Coefficients

Intercept:	0
Slope:	0.2646

Error Coefficients

Standard Error:	636000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.129016	50.0	1348665.0	0.258033	Y
2	STD 280-608560/18	1.0	0.280993	50.0	1415514.0	0.280993	Y
3	STD 280-608560/17	2.0	0.500043	50.0	1448575.0	0.250022	Y
4	STD 280-608560/16	5.0	1.354403	50.0	1411951.0	0.270881	Y
5	STD 280-608560/15	10.0	2.491974	50.0	1440625.0	0.249197	Y
6	ICIS 280-608560/14	50.0	13.782047	50.0	1425572.0	0.275641	Y
7	STD 280-608560/13	75.0	20.259228	50.0	1411347.0	0.270123	Y
8	STD 280-608560/12	100.0	27.272386	50.0	1423592.0	0.272724	Y
9	STD 280-608560/11	200.0	50.758294	50.0	1441855.0	0.253791	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

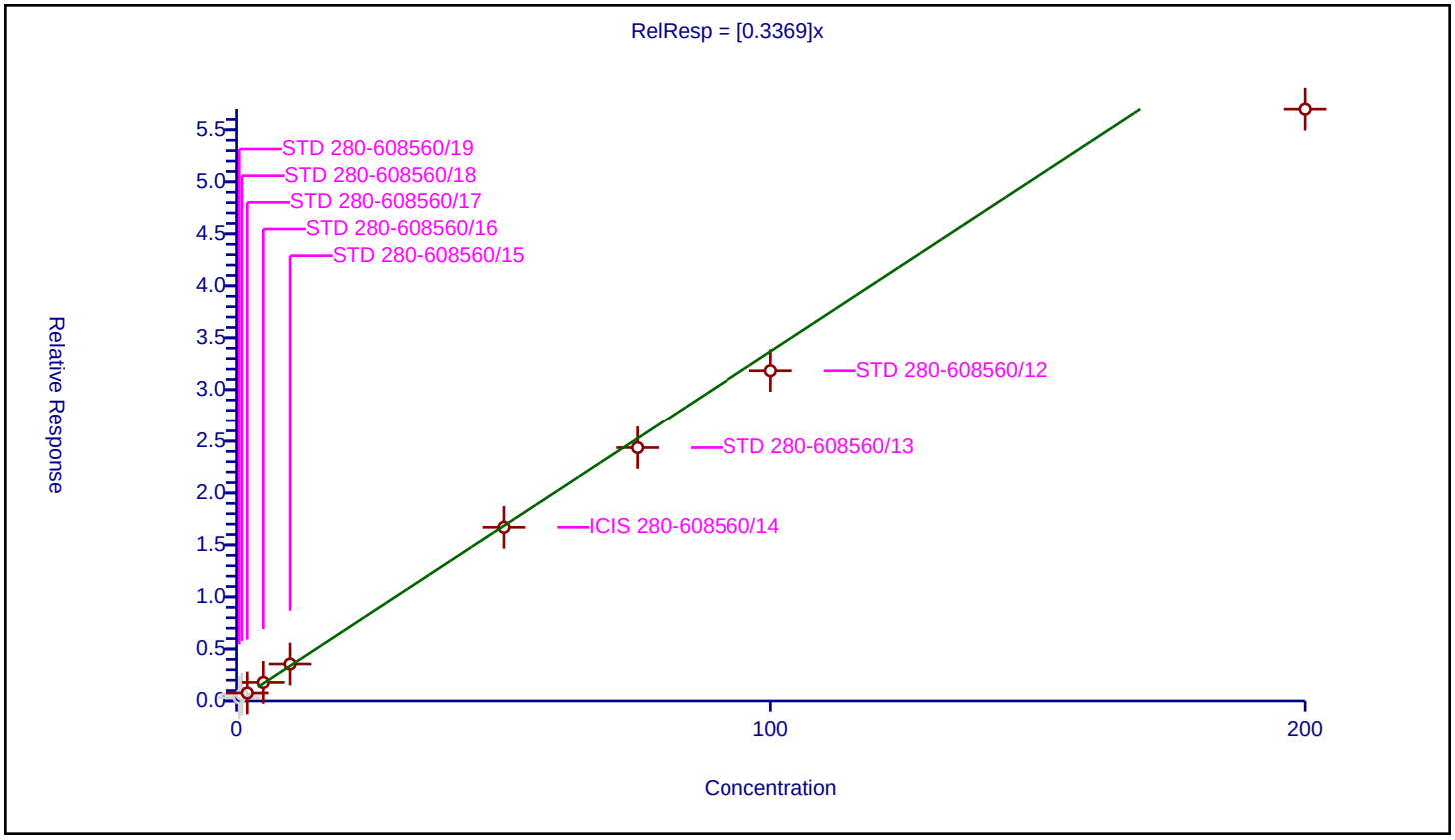
Curve Coefficients

Intercept:	0
Slope:	0.3369

Error Coefficients

Standard Error:	840000
Relative Standard Error:	9.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.320873	50.0	1348665.0	0.641746	N
2	STD 280-608560/18	1.0	0.634681	50.0	1415514.0	0.634681	N
3	STD 280-608560/17	2.0	0.767168	50.0	1448575.0	0.383584	Y
4	STD 280-608560/16	5.0	1.784906	50.0	1411951.0	0.356981	Y
5	STD 280-608560/15	10.0	3.555228	50.0	1440625.0	0.355523	Y
6	ICIS 280-608560/14	50.0	16.696421	50.0	1425572.0	0.333928	Y
7	STD 280-608560/13	75.0	24.371894	50.0	1411347.0	0.324959	Y
8	STD 280-608560/12	100.0	31.842691	50.0	1423592.0	0.318427	Y
9	STD 280-608560/11	200.0	56.988393	50.0	1441855.0	0.284942	Y



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Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

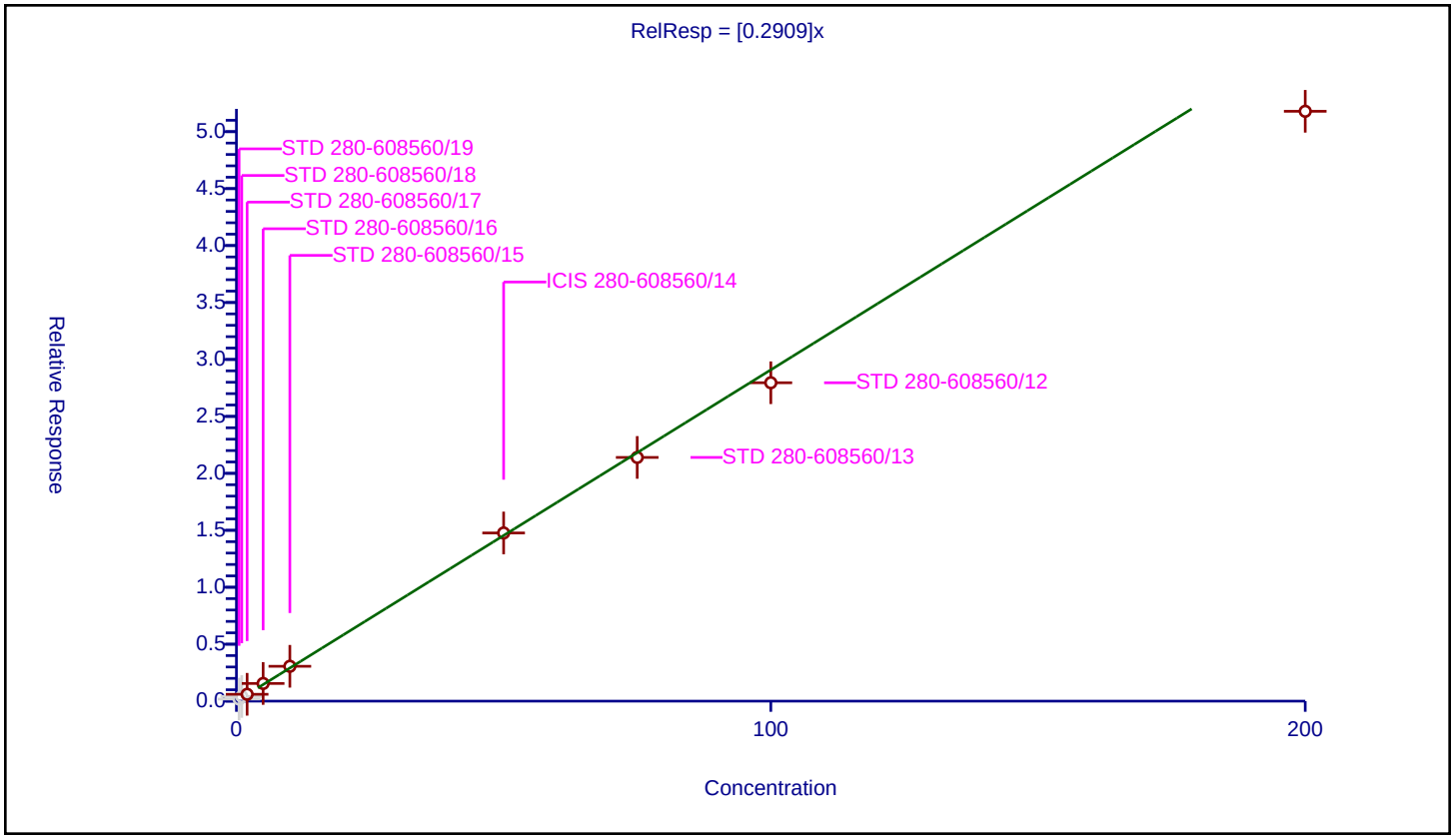
Curve Coefficients

Intercept:	0
Slope:	0.2909

Error Coefficients

Standard Error:	755000
Relative Standard Error:	6.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.184145	50.0	1348665.0	0.36829	N
2	STD 280-608560/18	1.0	0.407379	50.0	1415514.0	0.407379	N
3	STD 280-608560/17	2.0	0.601281	50.0	1448575.0	0.30064	Y
4	STD 280-608560/16	5.0	1.552249	50.0	1411951.0	0.31045	Y
5	STD 280-608560/15	10.0	3.060755	50.0	1440625.0	0.306075	Y
6	ICIS 280-608560/14	50.0	14.766003	50.0	1425572.0	0.29532	Y
7	STD 280-608560/13	75.0	21.397325	50.0	1411347.0	0.285298	Y
8	STD 280-608560/12	100.0	27.955587	50.0	1423592.0	0.279556	Y
9	STD 280-608560/11	200.0	51.790194	50.0	1441855.0	0.258951	Y



Calibration / Bromomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

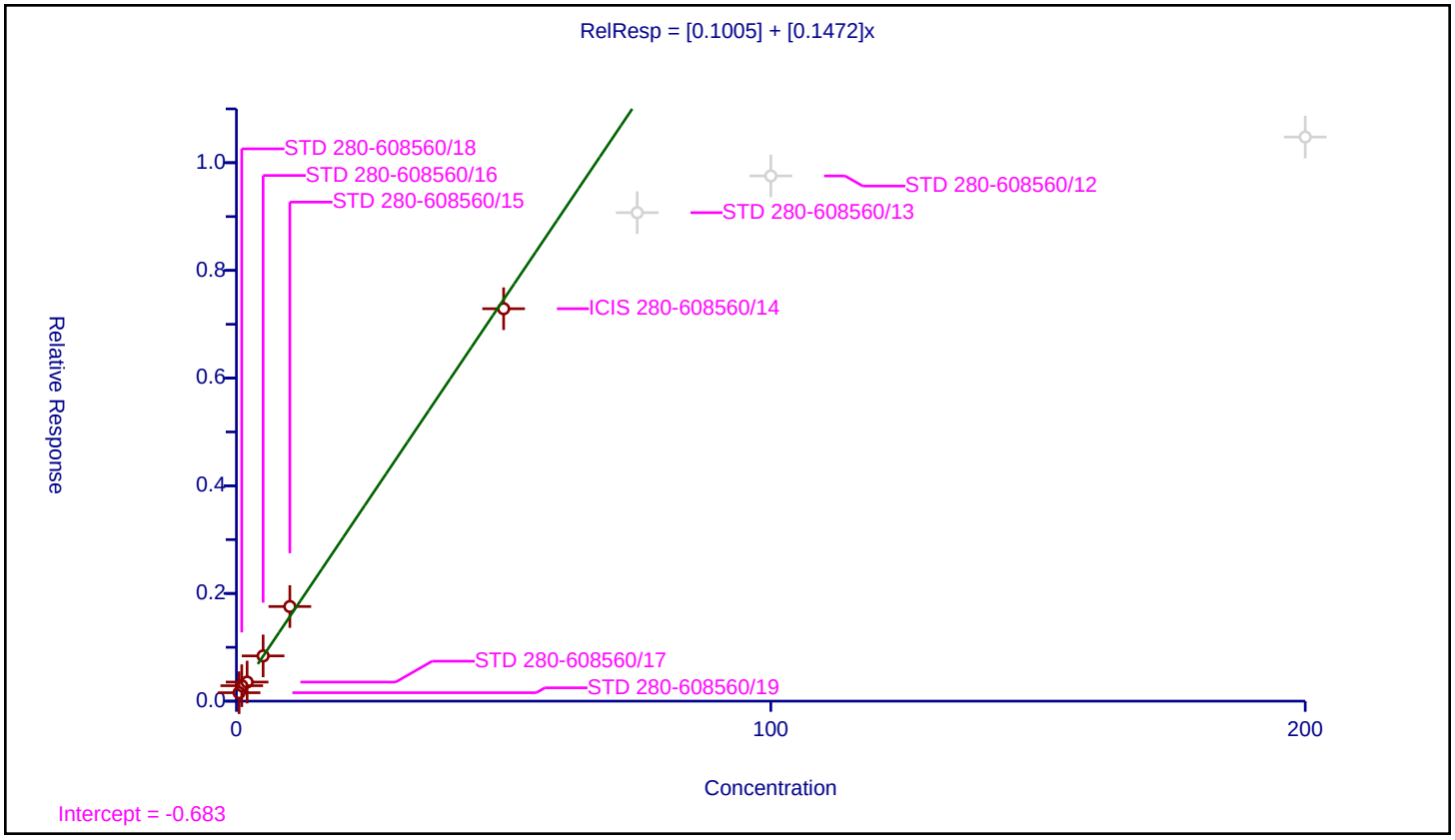
Curve Coefficients

Intercept:	0.1005
Slope:	0.1472

Error Coefficients

Standard Error:	108000
Relative Standard Error:	20.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.156711	50.0	1348665.0	0.313421	Y
2	STD 280-608560/18	1.0	0.286751	50.0	1415514.0	0.286751	Y
3	STD 280-608560/17	2.0	0.354486	50.0	1448575.0	0.177243	Y
4	STD 280-608560/16	5.0	0.839972	50.0	1411951.0	0.167994	Y
5	STD 280-608560/15	10.0	1.757189	50.0	1440625.0	0.175719	Y
6	ICIS 280-608560/14	50.0	7.288232	50.0	1425572.0	0.145765	Y
7	STD 280-608560/13	75.0	9.07268	50.0	1411347.0	0.120969	N
8	STD 280-608560/12	100.0	9.754656	50.0	1423592.0	0.097547	N
9	STD 280-608560/11	200.0	10.477059	50.0	1441855.0	0.052385	N



Calibration / Chloroethane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

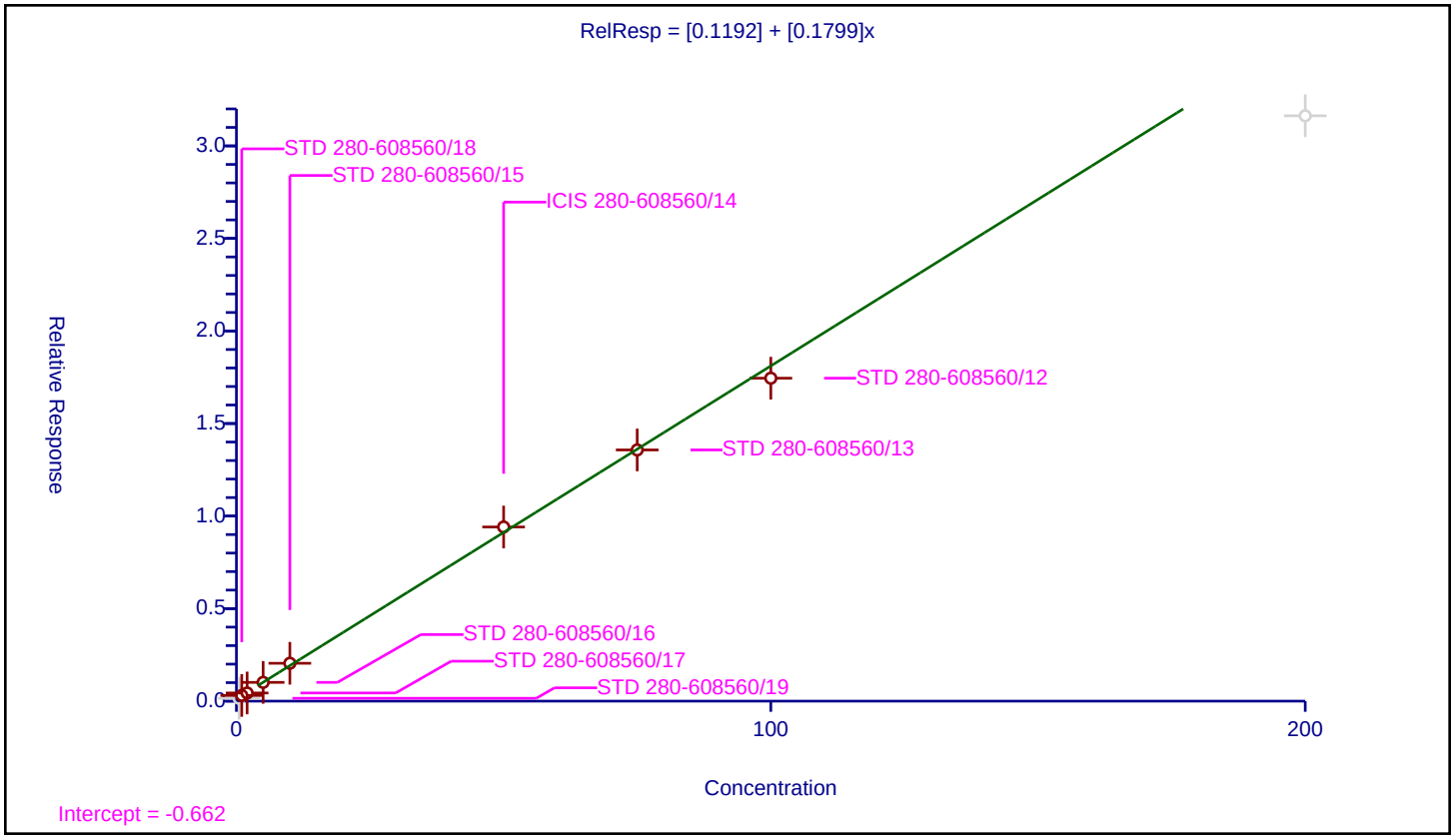
Curve Coefficients

Intercept:	0.1192
Slope:	0.1799

Error Coefficients

Standard Error:	307000
Relative Standard Error:	6.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.154968	50.0	1348665.0	0.309936	N
2	STD 280-608560/18	1.0	0.307344	50.0	1415514.0	0.307344	Y
3	STD 280-608560/17	2.0	0.441675	50.0	1448575.0	0.220838	Y
4	STD 280-608560/16	5.0	1.013987	50.0	1411951.0	0.202797	Y
5	STD 280-608560/15	10.0	2.04623	50.0	1440625.0	0.204623	Y
6	ICIS 280-608560/14	50.0	9.410082	50.0	1425572.0	0.188202	Y
7	STD 280-608560/13	75.0	13.572707	50.0	1411347.0	0.180969	Y
8	STD 280-608560/12	100.0	17.449908	50.0	1423592.0	0.174499	Y
9	STD 280-608560/11	200.0	31.627209	50.0	1441855.0	0.158136	N



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Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

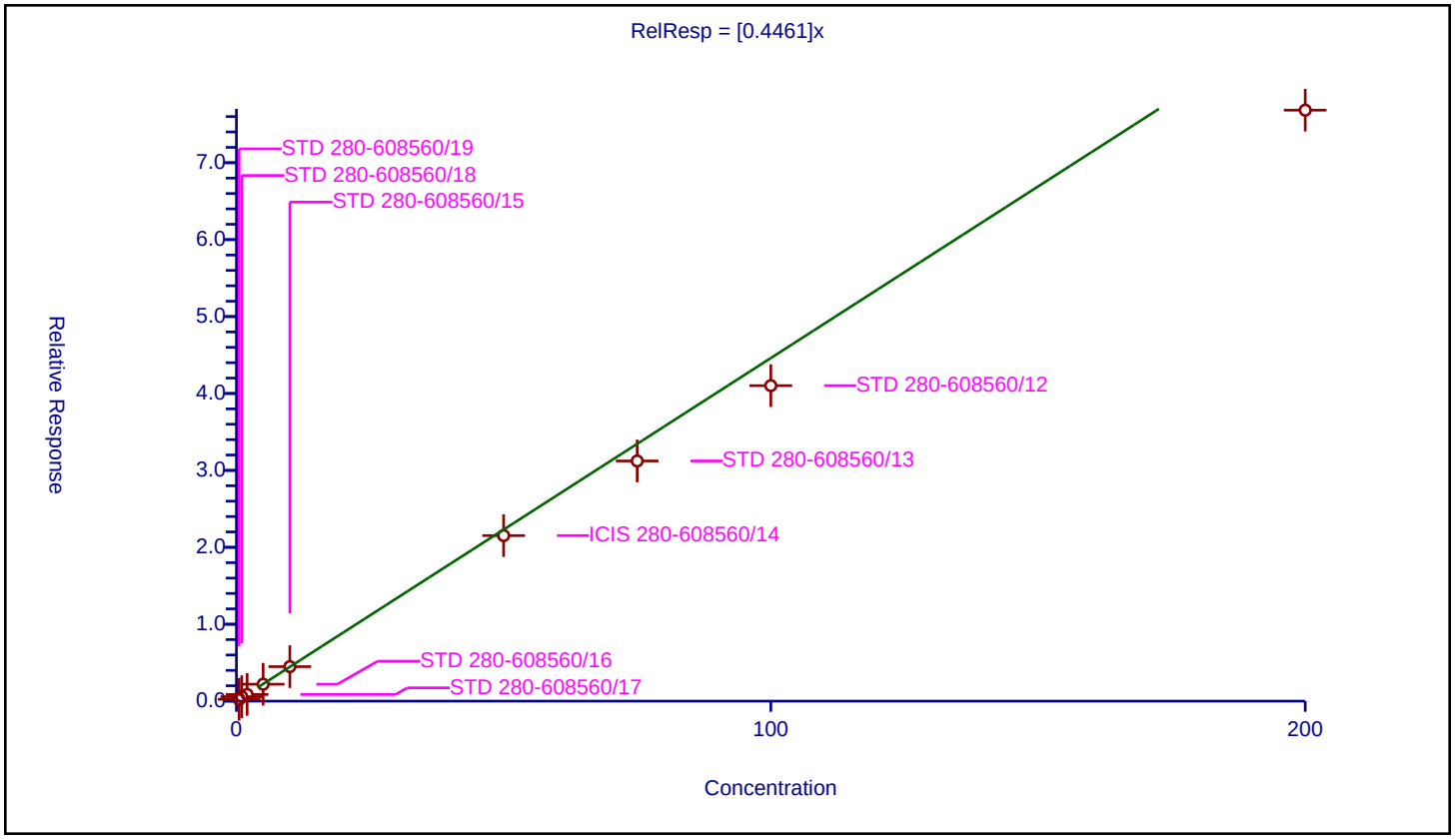
Curve Coefficients

Intercept:	0
Slope:	0.4461

Error Coefficients

Standard Error:	965000
Relative Standard Error:	12.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.23679	50.0	1348665.0	0.473579	Y
2	STD 280-608560/18	1.0	0.577034	50.0	1415514.0	0.577034	Y
3	STD 280-608560/17	2.0	0.868129	50.0	1448575.0	0.434065	Y
4	STD 280-608560/16	5.0	2.199793	50.0	1411951.0	0.439959	Y
5	STD 280-608560/15	10.0	4.487289	50.0	1440625.0	0.448729	Y
6	ICIS 280-608560/14	50.0	21.521466	50.0	1425572.0	0.430429	Y
7	STD 280-608560/13	75.0	31.225631	50.0	1411347.0	0.416342	Y
8	STD 280-608560/12	100.0	41.019407	50.0	1423592.0	0.410194	Y
9	STD 280-608560/11	200.0	76.834148	50.0	1441855.0	0.384171	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

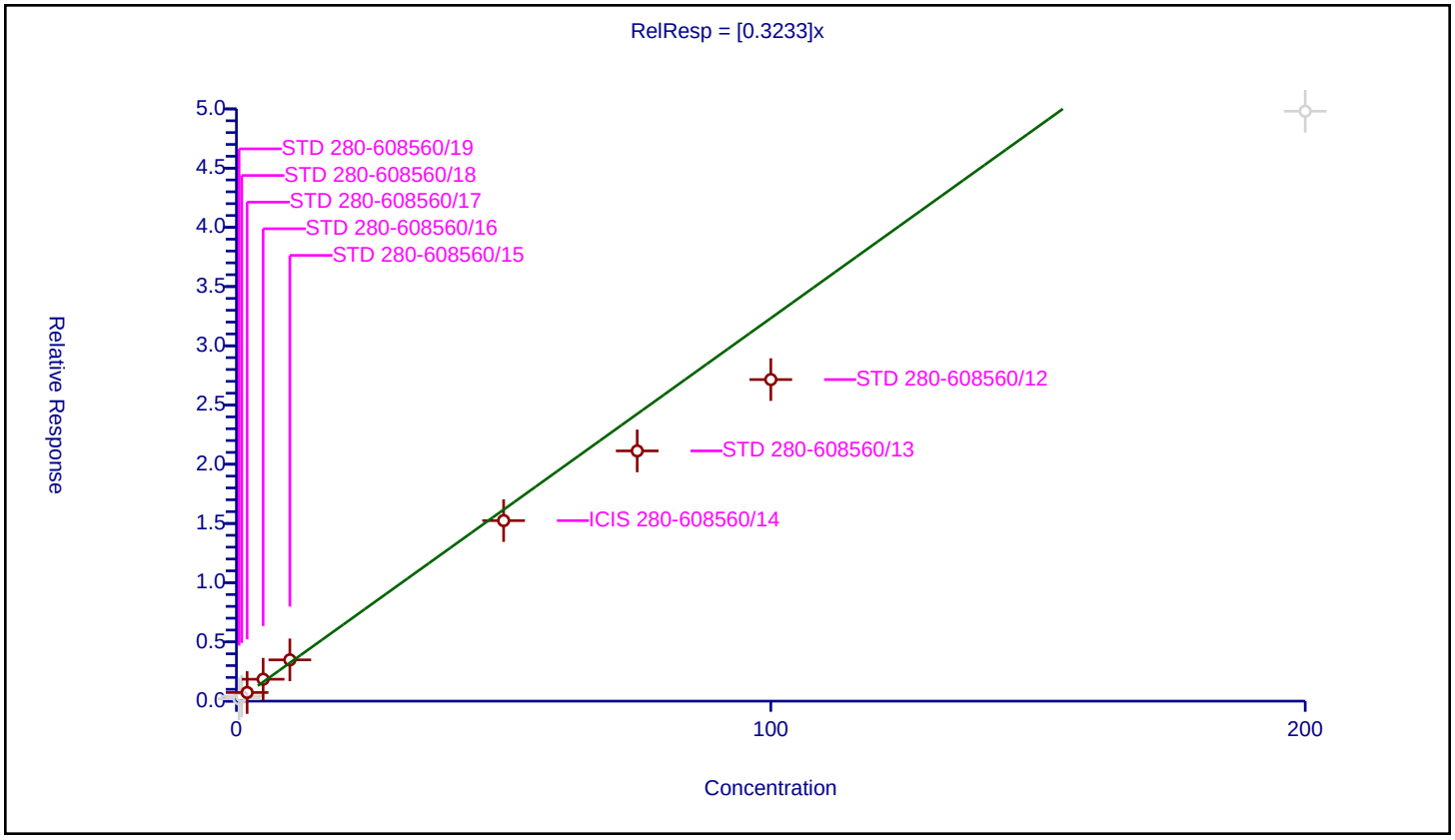
Curve Coefficients

Intercept:	0
Slope:	0.3233

Error Coefficients

Standard Error:	481000
Relative Standard Error:	13.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.972

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.191226	50.0	1348665.0	0.382452	N
2	STD 280-608560/18	1.0	0.414478	50.0	1415514.0	0.414478	N
3	STD 280-608560/17	2.0	0.727612	50.0	1448575.0	0.363806	Y
4	STD 280-608560/16	5.0	1.848506	50.0	1411951.0	0.369701	Y
5	STD 280-608560/15	10.0	3.483905	50.0	1440625.0	0.34839	Y
6	ICIS 280-608560/14	50.0	15.241812	50.0	1425572.0	0.304836	Y
7	STD 280-608560/13	75.0	21.125457	50.0	1411347.0	0.281673	Y
8	STD 280-608560/12	100.0	27.146823	50.0	1423592.0	0.271468	Y
9	STD 280-608560/11	200.0	49.802095	50.0	1441855.0	0.24901	N



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

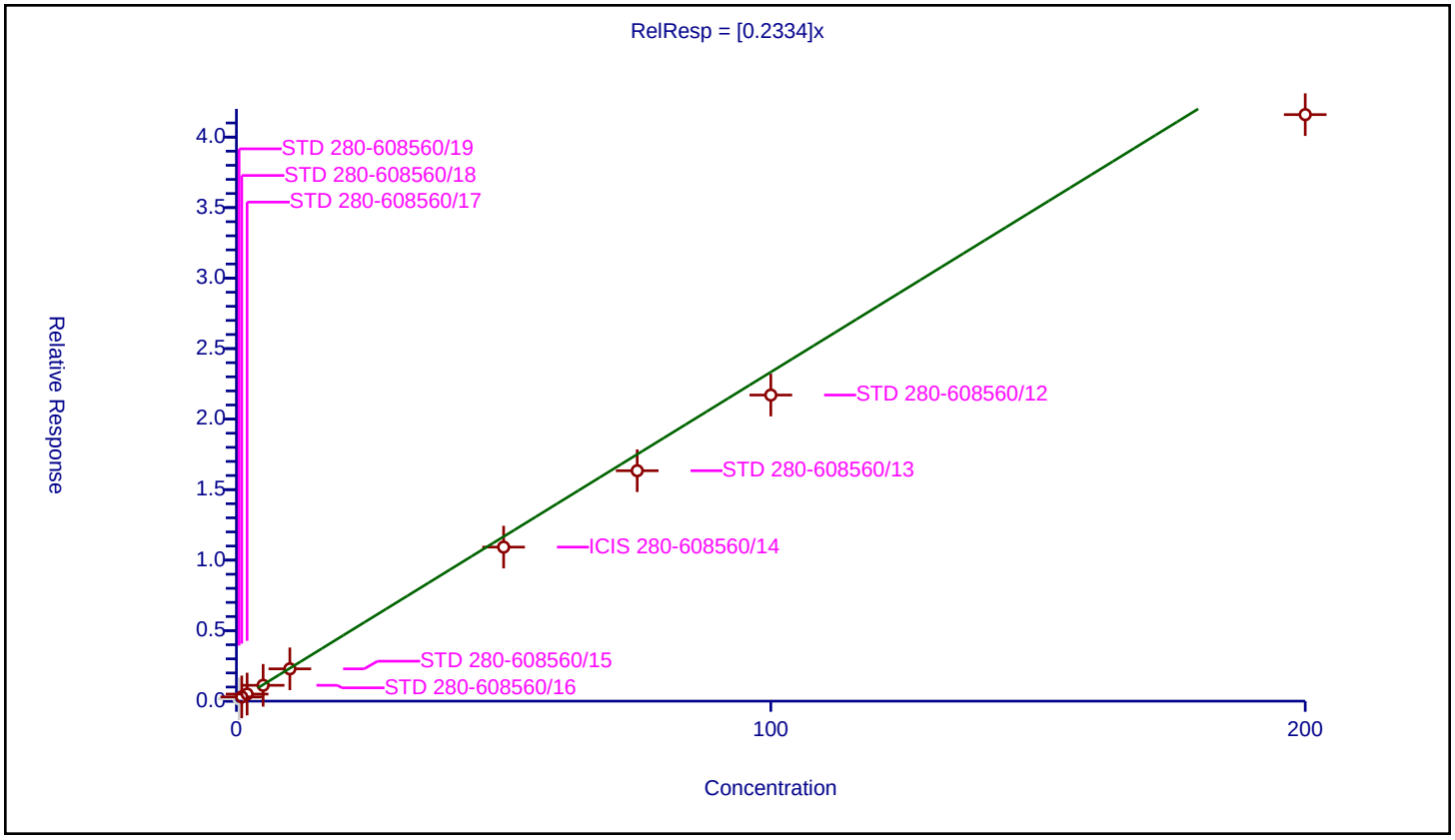
Curve Coefficients

Intercept:	0
Slope:	0.2334

Error Coefficients

Standard Error:	552000
Relative Standard Error:	12.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.161567	50.0	1348665.0	0.323134	N
2	STD 280-608560/18	1.0	0.30141	50.0	1415514.0	0.30141	Y
3	STD 280-608560/17	2.0	0.500906	50.0	1448575.0	0.250453	Y
4	STD 280-608560/16	5.0	1.123162	50.0	1411951.0	0.224632	Y
5	STD 280-608560/15	10.0	2.290603	50.0	1440625.0	0.22906	Y
6	ICIS 280-608560/14	50.0	10.922984	50.0	1425572.0	0.21846	Y
7	STD 280-608560/13	75.0	16.340241	50.0	1411347.0	0.21787	Y
8	STD 280-608560/12	100.0	21.706606	50.0	1423592.0	0.217066	Y
9	STD 280-608560/11	200.0	41.594196	50.0	1441855.0	0.207971	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

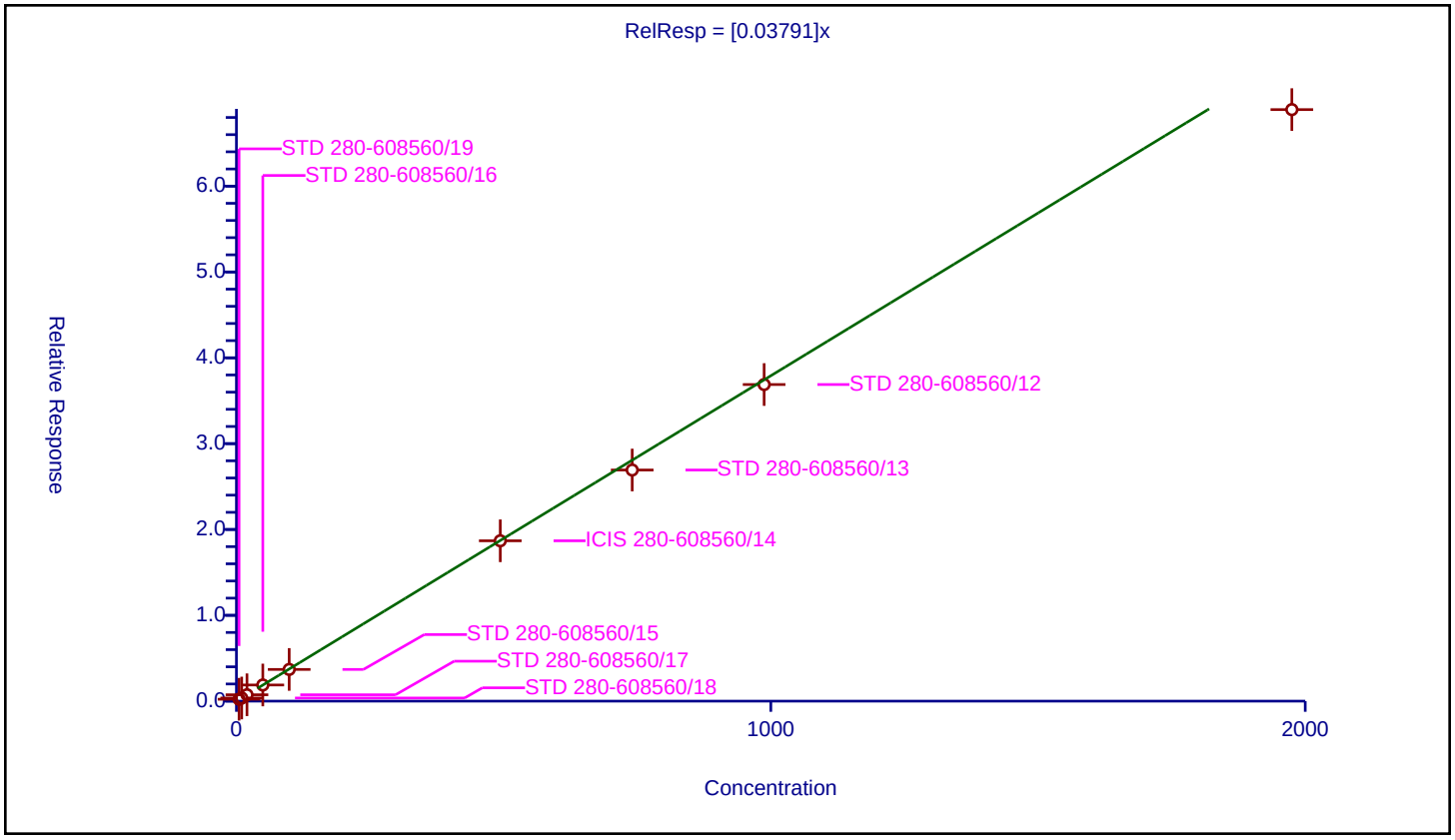
Curve Coefficients

Intercept:	0
Slope:	0.03791

Error Coefficients

Standard Error:	861000
Relative Standard Error:	7.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	4.9375	0.220626	50.0	1348665.0	0.044684	Y
2	STD 280-608560/18	9.875	0.365097	50.0	1415514.0	0.036972	Y
3	STD 280-608560/17	19.75	0.74204	50.0	1448575.0	0.037572	Y
4	STD 280-608560/16	49.375	1.881545	50.0	1411951.0	0.038107	Y
5	STD 280-608560/15	98.75	3.693466	50.0	1440625.0	0.037402	Y
6	ICIS 280-608560/14	493.75	18.682957	50.0	1425572.0	0.037839	Y
7	STD 280-608560/13	740.625	26.927042	50.0	1411347.0	0.036357	Y
8	STD 280-608560/12	987.5	36.886692	50.0	1423592.0	0.037354	Y
9	STD 280-608560/11	1975.0	68.91539	50.0	1441855.0	0.034894	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

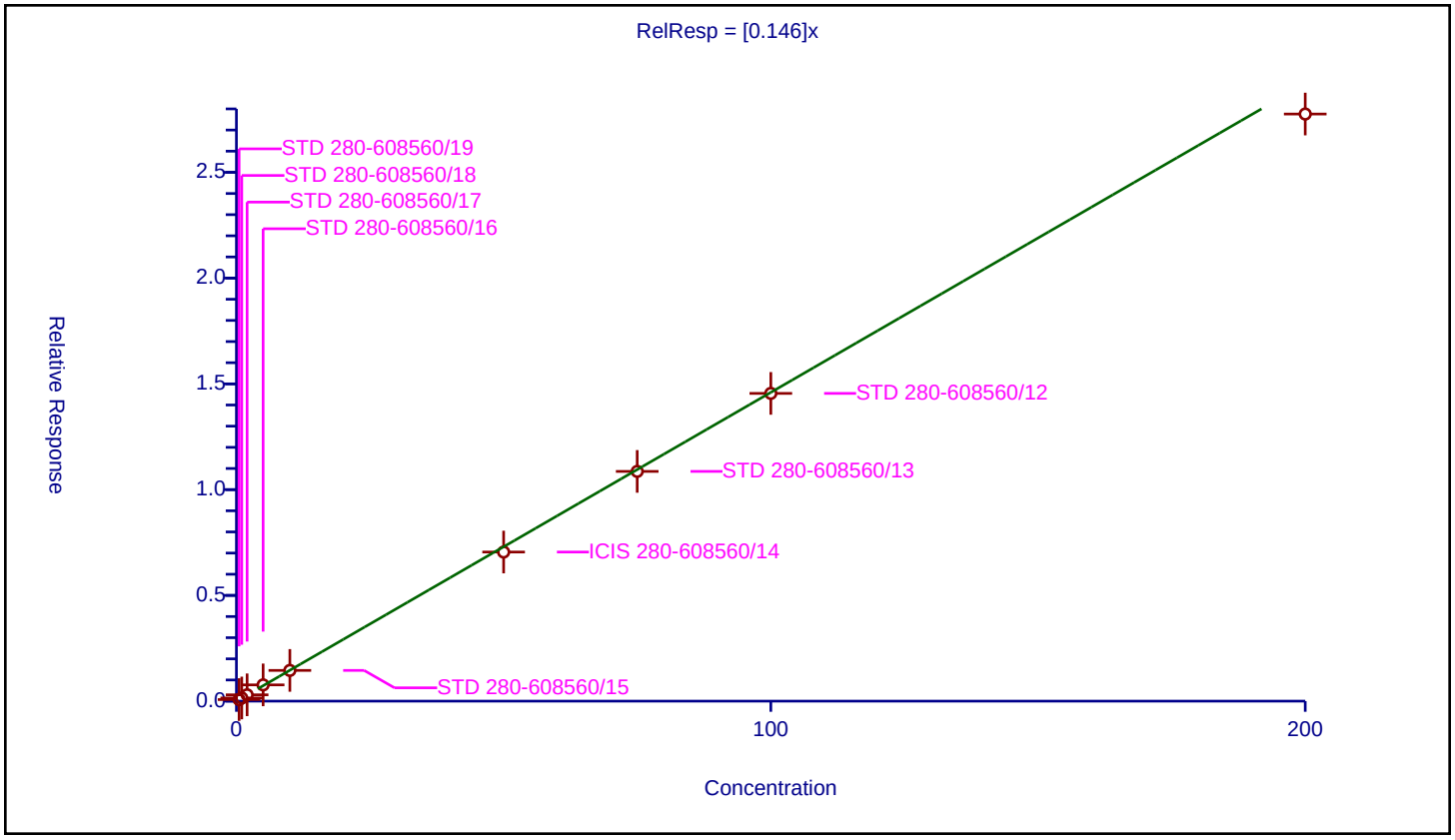
Curve Coefficients

Intercept:	0
Slope:	0.146

Error Coefficients

Standard Error:	344000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.073035	50.0	1348665.0	0.14607	Y
2	STD 280-608560/18	1.0	0.148956	50.0	1415514.0	0.148956	Y
3	STD 280-608560/17	2.0	0.299398	50.0	1448575.0	0.149699	Y
4	STD 280-608560/16	5.0	0.768334	50.0	1411951.0	0.153667	Y
5	STD 280-608560/15	10.0	1.452286	50.0	1440625.0	0.145229	Y
6	ICIS 280-608560/14	50.0	7.049661	50.0	1425572.0	0.140993	Y
7	STD 280-608560/13	75.0	10.86168	50.0	1411347.0	0.144822	Y
8	STD 280-608560/12	100.0	14.549639	50.0	1423592.0	0.145496	Y
9	STD 280-608560/11	200.0	27.757056	50.0	1441855.0	0.138785	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

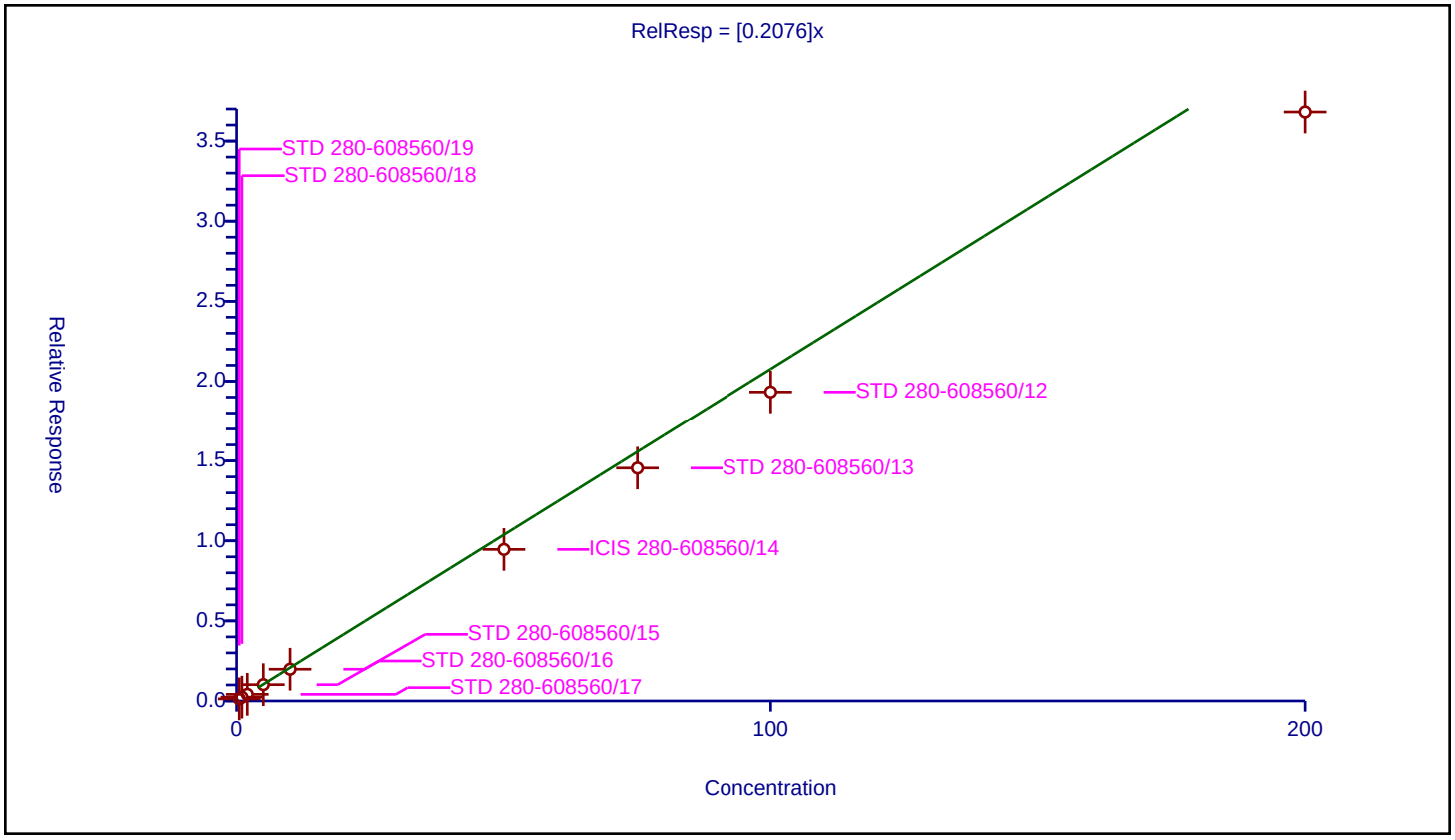
Curve Coefficients

Intercept:	0
Slope:	0.2076

Error Coefficients

Standard Error:	458000
Relative Standard Error:	12.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.130203	50.0	1348665.0	0.260406	Y
2	STD 280-608560/18	1.0	0.239242	50.0	1415514.0	0.239242	Y
3	STD 280-608560/17	2.0	0.413717	50.0	1448575.0	0.206858	Y
4	STD 280-608560/16	5.0	1.018166	50.0	1411951.0	0.203633	Y
5	STD 280-608560/15	10.0	1.980911	50.0	1440625.0	0.198091	Y
6	ICIS 280-608560/14	50.0	9.46122	50.0	1425572.0	0.189224	Y
7	STD 280-608560/13	75.0	14.552481	50.0	1411347.0	0.194033	Y
8	STD 280-608560/12	100.0	19.322215	50.0	1423592.0	0.193222	Y
9	STD 280-608560/11	200.0	36.812266	50.0	1441855.0	0.184061	Y



Calibration / Acetone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

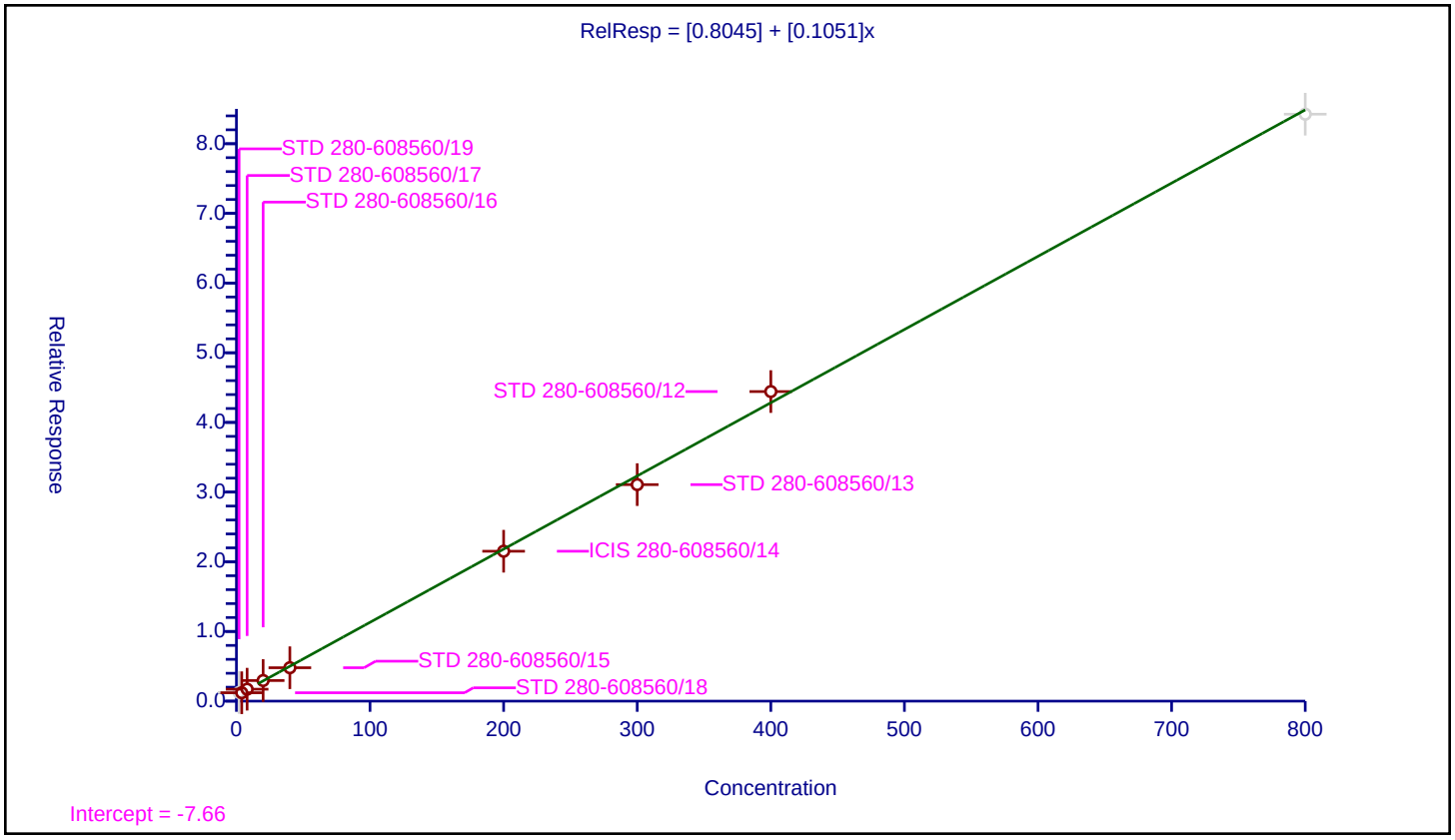
Curve Coefficients

Intercept:	0.8045
Slope:	0.1051

Error Coefficients

Standard Error:	745000
Relative Standard Error:	5.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	2.0	1.249495	50.0	1348665.0	0.624747	N
2	STD 280-608560/18	4.0	1.207583	50.0	1415514.0	0.301896	Y
3	STD 280-608560/17	8.0	1.714582	50.0	1448575.0	0.214323	Y
4	STD 280-608560/16	20.0	2.95722	50.0	1411951.0	0.147861	Y
5	STD 280-608560/15	40.0	4.794447	50.0	1440625.0	0.119861	Y
6	ICIS 280-608560/14	200.0	21.515153	50.0	1425572.0	0.107576	Y
7	STD 280-608560/13	300.0	31.074675	50.0	1411347.0	0.103582	Y
8	STD 280-608560/12	400.0	44.431621	50.0	1423592.0	0.111079	Y
9	STD 280-608560/11	800.0	84.240822	50.0	1441855.0	0.105301	N



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

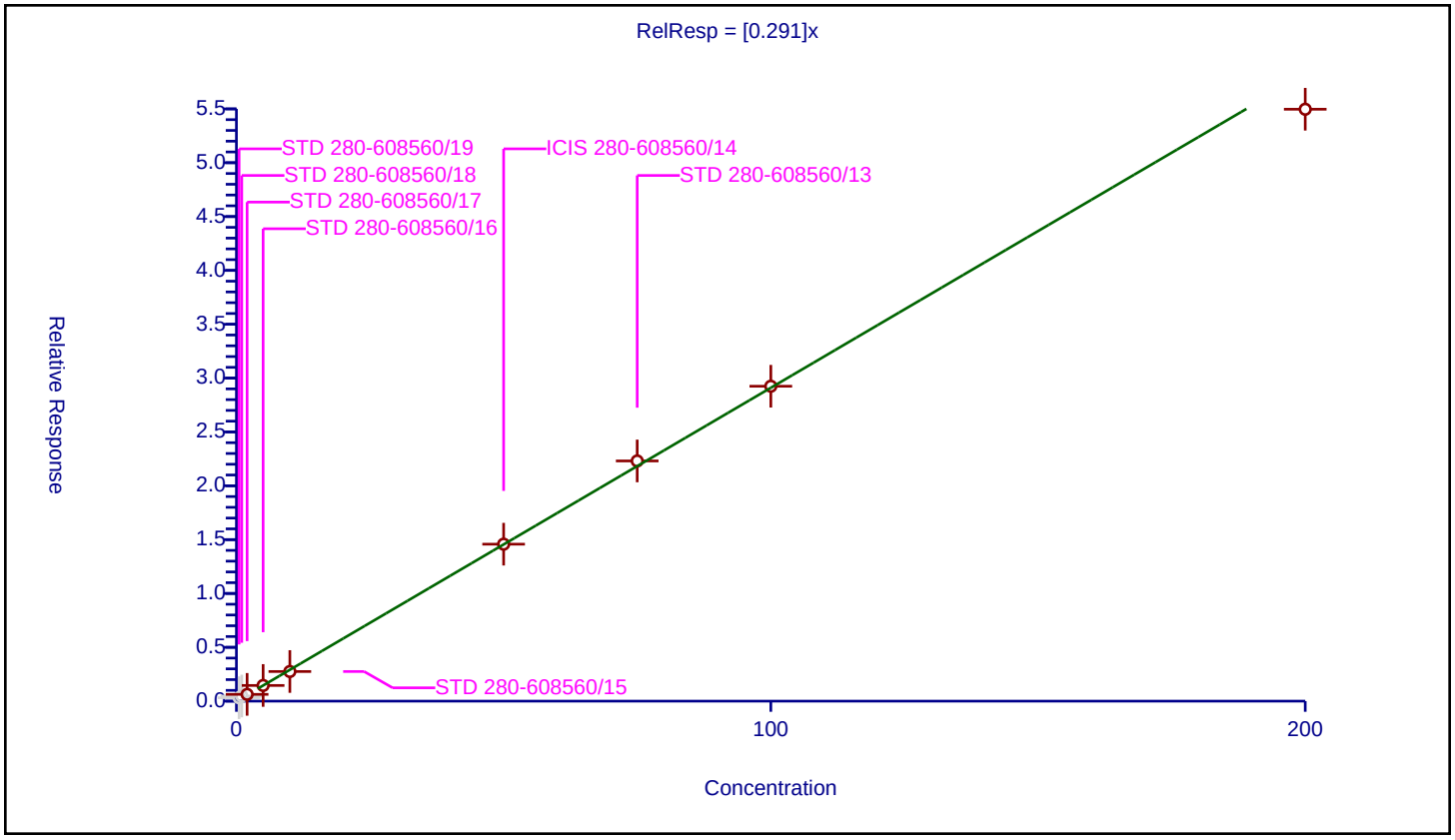
Curve Coefficients

Intercept:	0
Slope:	0.291

Error Coefficients

Standard Error:	794000
Relative Standard Error:	4.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.318834	50.0	1348665.0	0.637668	N
2	STD 280-608560/18	1.0	0.47269	50.0	1415514.0	0.47269	N
3	STD 280-608560/17	2.0	0.628411	50.0	1448575.0	0.314205	Y
4	STD 280-608560/16	5.0	1.456779	50.0	1411951.0	0.291356	Y
5	STD 280-608560/15	10.0	2.752659	50.0	1440625.0	0.275266	Y
6	ICIS 280-608560/14	50.0	14.578008	50.0	1425572.0	0.29156	Y
7	STD 280-608560/13	75.0	22.306173	50.0	1411347.0	0.297416	Y
8	STD 280-608560/12	100.0	29.243316	50.0	1423592.0	0.292433	Y
9	STD 280-608560/11	200.0	54.966588	50.0	1441855.0	0.274833	Y



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Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

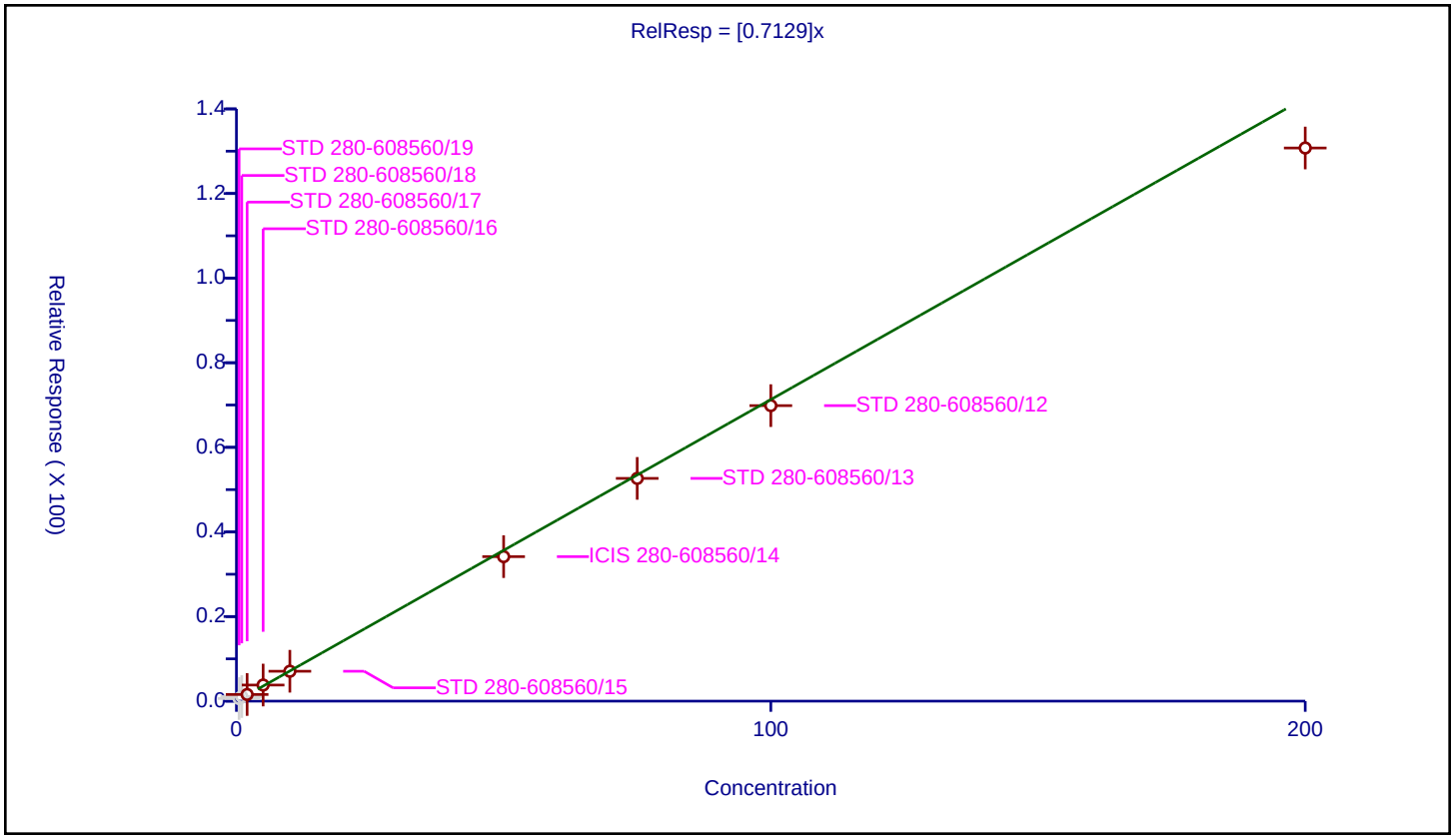
Curve Coefficients

Intercept:	0
Slope:	0.7129

Error Coefficients

Standard Error:	1890000
Relative Standard Error:	6.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.611827	50.0	1348665.0	1.223655	N
2	STD 280-608560/18	1.0	1.076747	50.0	1415514.0	1.076747	N
3	STD 280-608560/17	2.0	1.568576	50.0	1448575.0	0.784288	Y
4	STD 280-608560/16	5.0	3.808949	50.0	1411951.0	0.76179	Y
5	STD 280-608560/15	10.0	7.066725	50.0	1440625.0	0.706672	Y
6	ICIS 280-608560/14	50.0	34.160148	50.0	1425572.0	0.683203	Y
7	STD 280-608560/13	75.0	52.654627	50.0	1411347.0	0.702062	Y
8	STD 280-608560/12	100.0	69.854038	50.0	1423592.0	0.69854	Y
9	STD 280-608560/11	200.0	130.759022	50.0	1441855.0	0.653795	Y



Calibration / Methyl acetate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

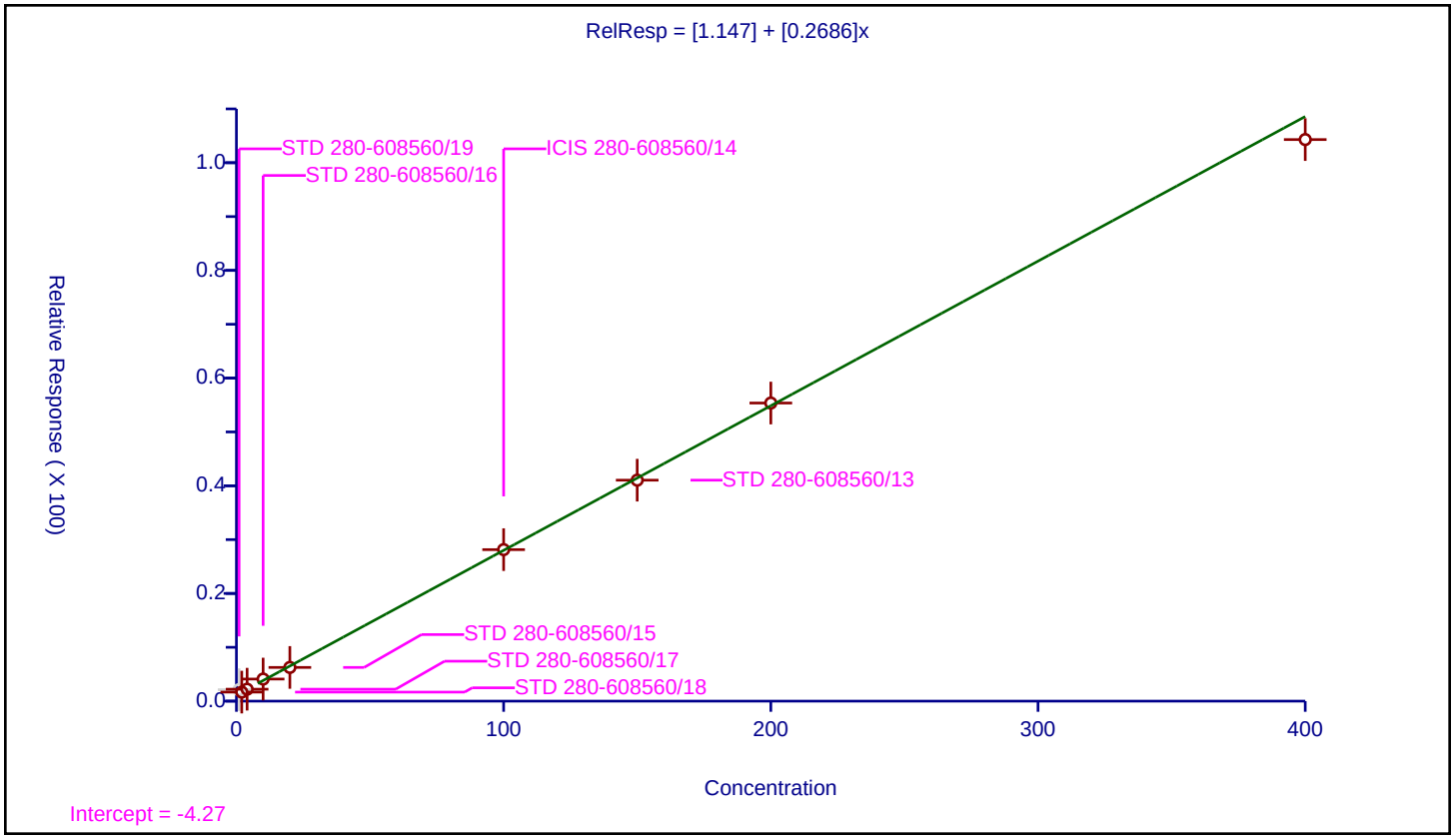
Curve Coefficients

Intercept:	1.147
Slope:	0.2686

Error Coefficients

Standard Error:	1500000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	1.0	2.12829	50.0	1348665.0	2.12829	N
2	STD 280-608560/18	2.0	1.677483	50.0	1415514.0	0.838741	Y
3	STD 280-608560/17	4.0	2.218145	50.0	1448575.0	0.554536	Y
4	STD 280-608560/16	10.0	4.10124	50.0	1411951.0	0.410124	Y
5	STD 280-608560/15	20.0	6.261553	50.0	1440625.0	0.313078	Y
6	ICIS 280-608560/14	100.0	28.141932	50.0	1425572.0	0.281419	Y
7	STD 280-608560/13	150.0	41.04306	50.0	1411347.0	0.27362	Y
8	STD 280-608560/12	200.0	55.368287	50.0	1423592.0	0.276841	Y
9	STD 280-608560/11	400.0	104.301507	50.0	1441855.0	0.260754	Y



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Calibration / 3-Chloro-1-propene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

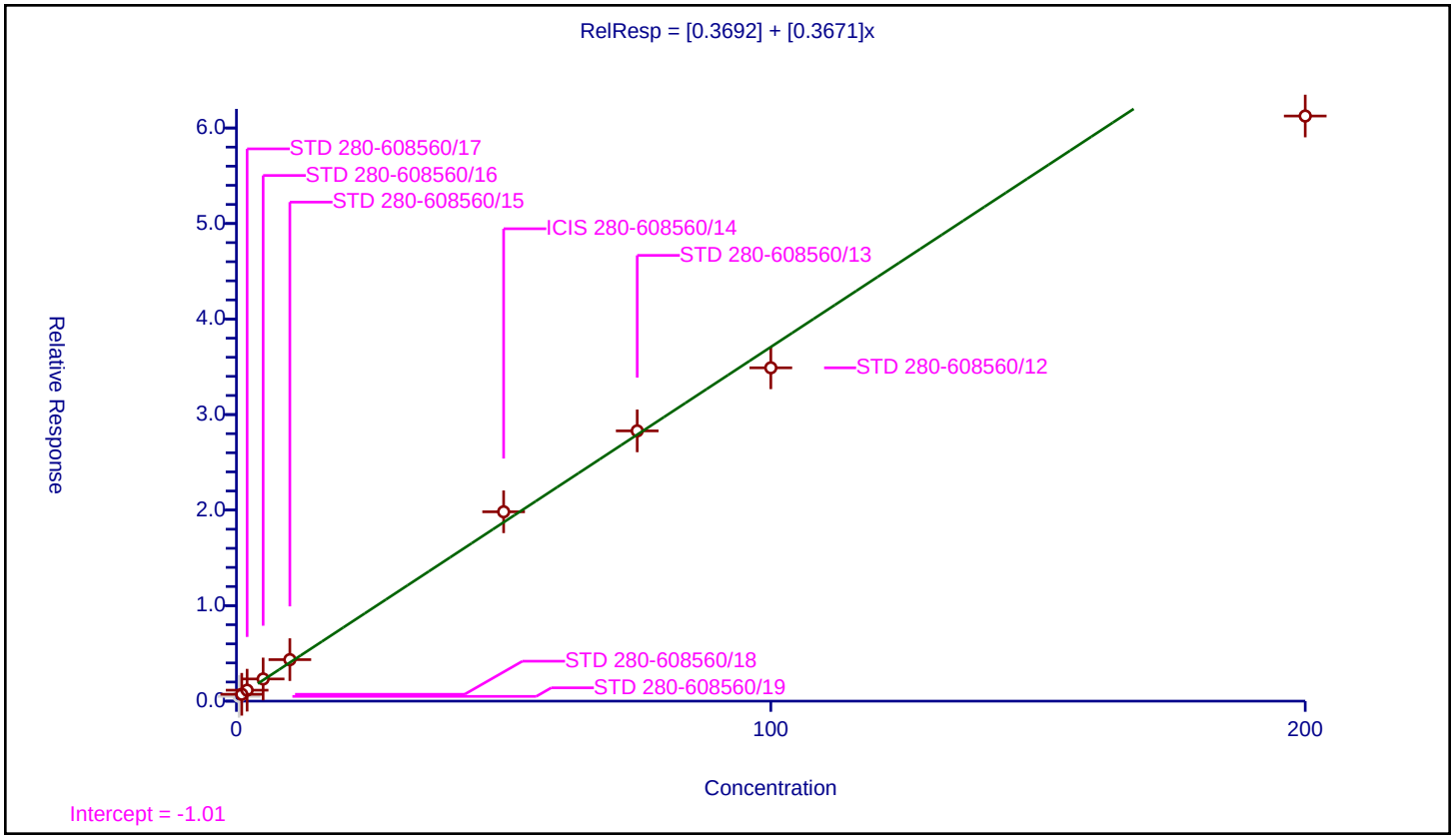
Curve Coefficients

Intercept:	0.3692
Slope:	0.3671

Error Coefficients

Standard Error:	921000
Relative Standard Error:	9.4
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.499049	50.0	1348665.0	0.998098	N
2	STD 280-608560/18	1.0	0.717584	50.0	1415514.0	0.717584	Y
3	STD 280-608560/17	2.0	1.146851	50.0	1448575.0	0.573426	Y
4	STD 280-608560/16	5.0	2.322496	50.0	1411951.0	0.464499	Y
5	STD 280-608560/15	10.0	4.344017	50.0	1440625.0	0.434402	Y
6	ICIS 280-608560/14	50.0	19.822815	50.0	1425572.0	0.396456	Y
7	STD 280-608560/13	75.0	28.292298	50.0	1411347.0	0.377231	Y
8	STD 280-608560/12	100.0	34.894513	50.0	1423592.0	0.348945	Y
9	STD 280-608560/11	200.0	61.254981	50.0	1441855.0	0.306275	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

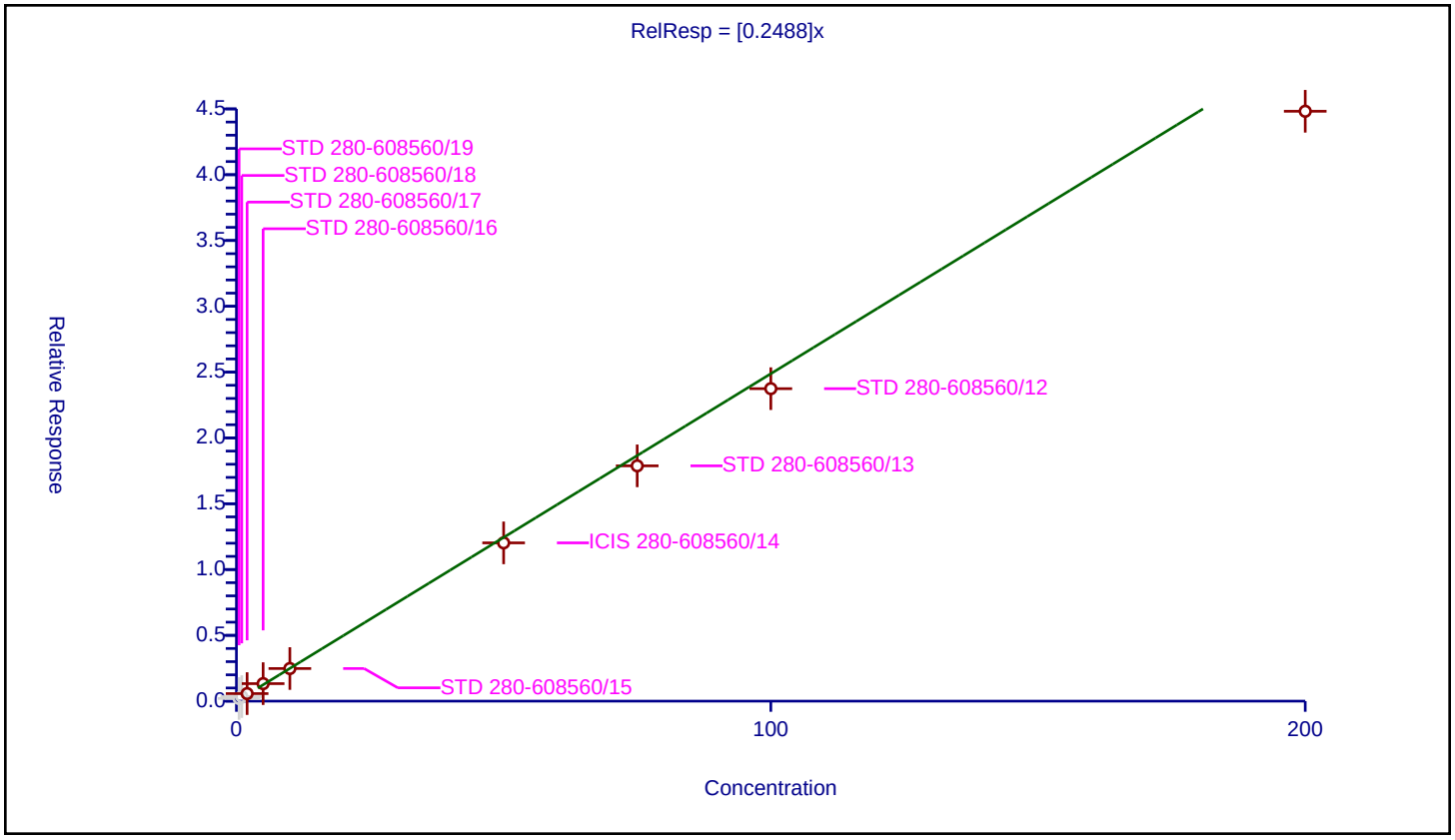
Curve Coefficients

Intercept:	0
Slope:	0.2488

Error Coefficients

Standard Error:	646000
Relative Standard Error:	8.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.201088	50.0	1348665.0	0.402175	N
2	STD 280-608560/18	1.0	0.345634	50.0	1415514.0	0.345634	N
3	STD 280-608560/17	2.0	0.574289	50.0	1448575.0	0.287144	Y
4	STD 280-608560/16	5.0	1.330818	50.0	1411951.0	0.266164	Y
5	STD 280-608560/15	10.0	2.477883	50.0	1440625.0	0.247788	Y
6	ICIS 280-608560/14	50.0	12.026541	50.0	1425572.0	0.240531	Y
7	STD 280-608560/13	75.0	17.877744	50.0	1411347.0	0.23837	Y
8	STD 280-608560/12	100.0	23.743811	50.0	1423592.0	0.237438	Y
9	STD 280-608560/11	200.0	44.819105	50.0	1441855.0	0.224096	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

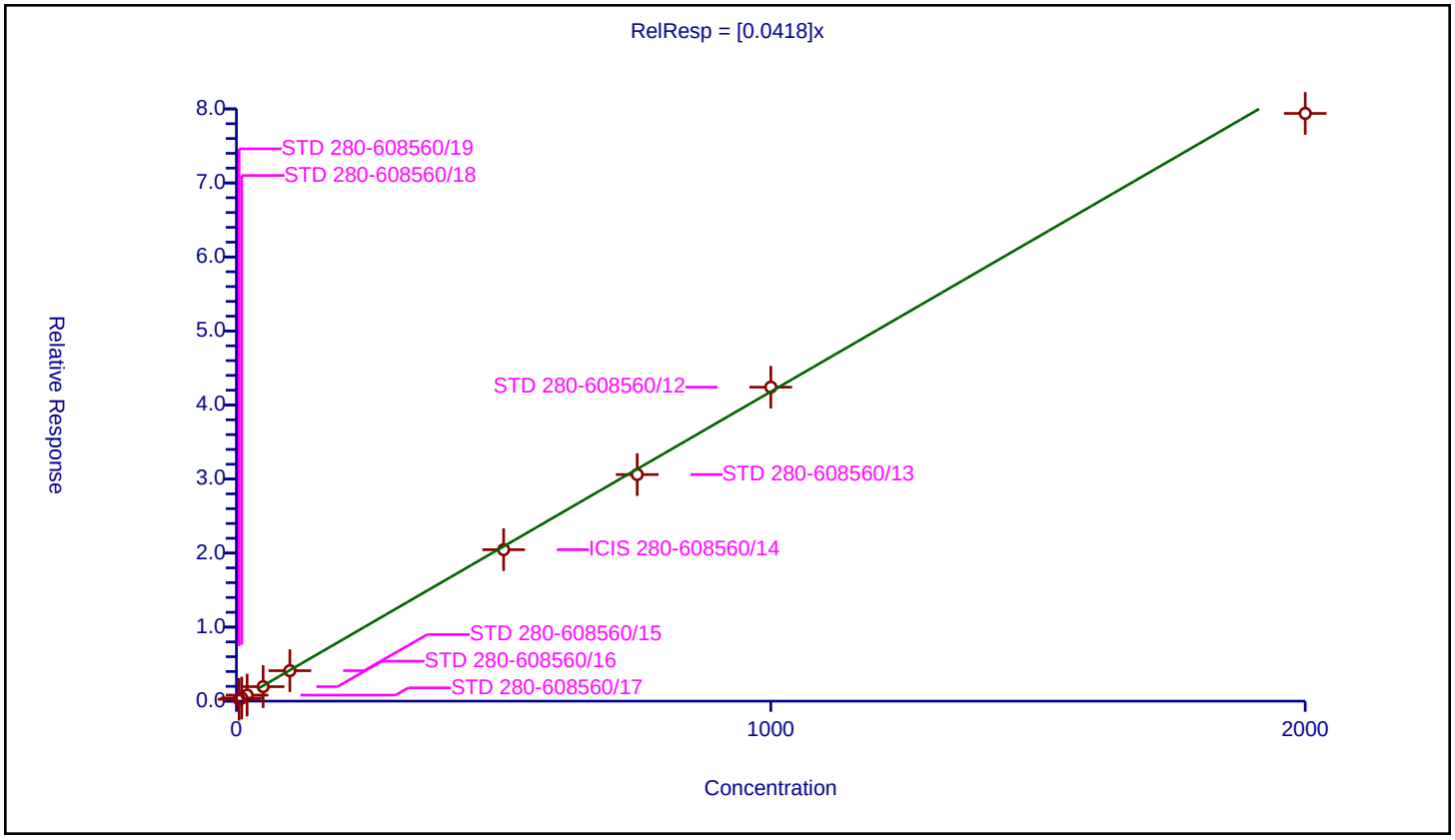
Curve Coefficients

Intercept:	0
Slope:	0.0418

Error Coefficients

Standard Error:	988000
Relative Standard Error:	7.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	5.0	0.24528	50.0	1348665.0	0.049056	Y
2	STD 280-608560/18	10.0	0.422885	50.0	1415514.0	0.042289	Y
3	STD 280-608560/17	20.0	0.816112	50.0	1448575.0	0.040806	Y
4	STD 280-608560/16	50.0	1.955344	50.0	1411951.0	0.039107	Y
5	STD 280-608560/15	100.0	4.112139	50.0	1440625.0	0.041121	Y
6	ICIS 280-608560/14	500.0	20.45884	50.0	1425572.0	0.040918	Y
7	STD 280-608560/13	750.0	30.607356	50.0	1411347.0	0.04081	Y
8	STD 280-608560/12	1000.0	42.409553	50.0	1423592.0	0.04241	Y
9	STD 280-608560/11	2000.0	79.387698	50.0	1441855.0	0.039694	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

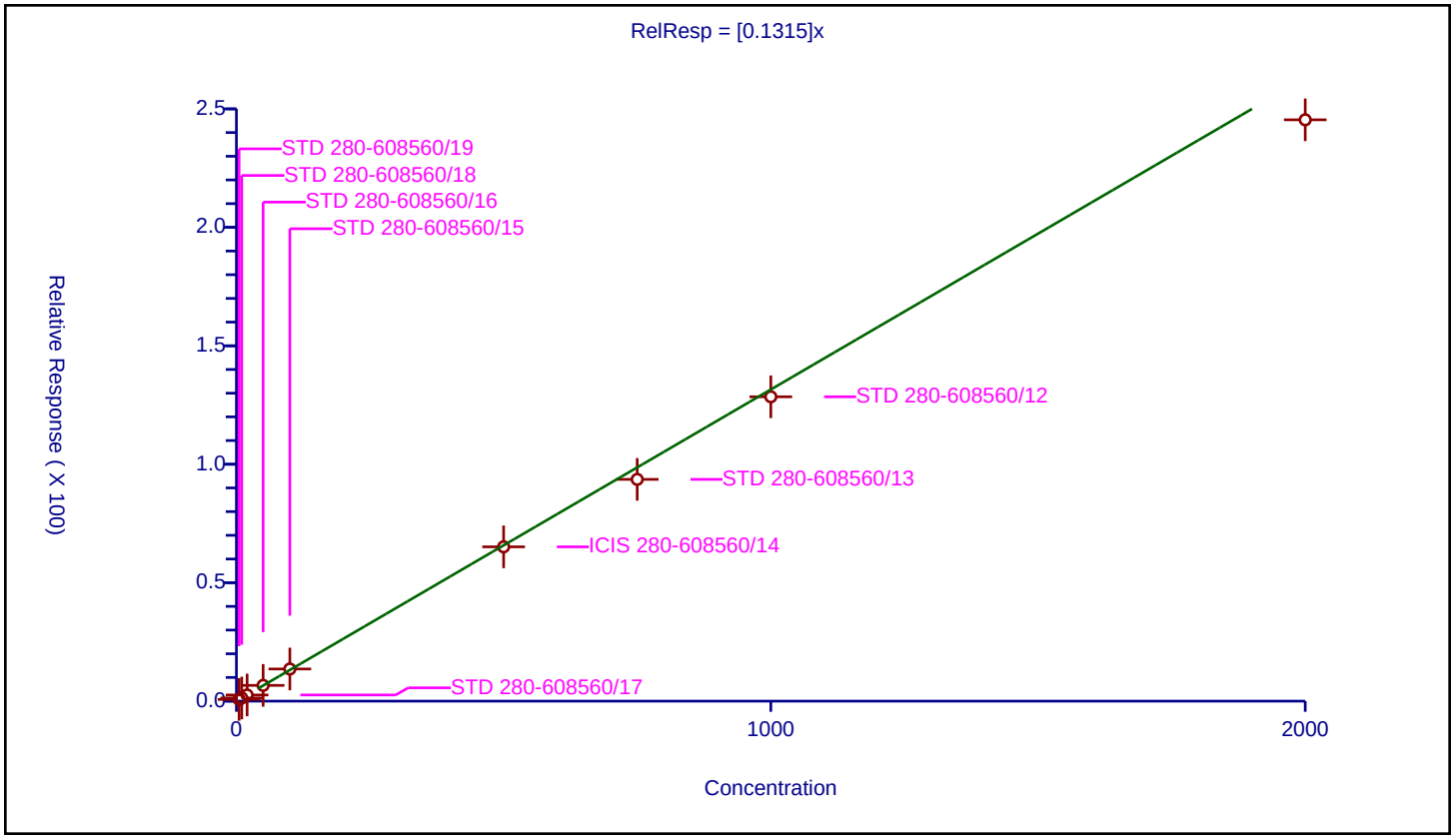
Curve Coefficients

Intercept:	0
Slope:	0.1315

Error Coefficients

Standard Error:	3040000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	5.0	0.727905	50.0	1348665.0	0.145581	Y
2	STD 280-608560/18	10.0	1.334957	50.0	1415514.0	0.133496	Y
3	STD 280-608560/17	20.0	2.598174	50.0	1448575.0	0.129909	Y
4	STD 280-608560/16	50.0	6.646442	50.0	1411951.0	0.132929	Y
5	STD 280-608560/15	100.0	13.570013	50.0	1440625.0	0.1357	Y
6	ICIS 280-608560/14	500.0	65.138344	50.0	1425572.0	0.130277	Y
7	STD 280-608560/13	750.0	93.612343	50.0	1411347.0	0.124816	Y
8	STD 280-608560/12	1000.0	128.480983	50.0	1423592.0	0.128481	Y
9	STD 280-608560/11	2000.0	245.391631	50.0	1441855.0	0.122696	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

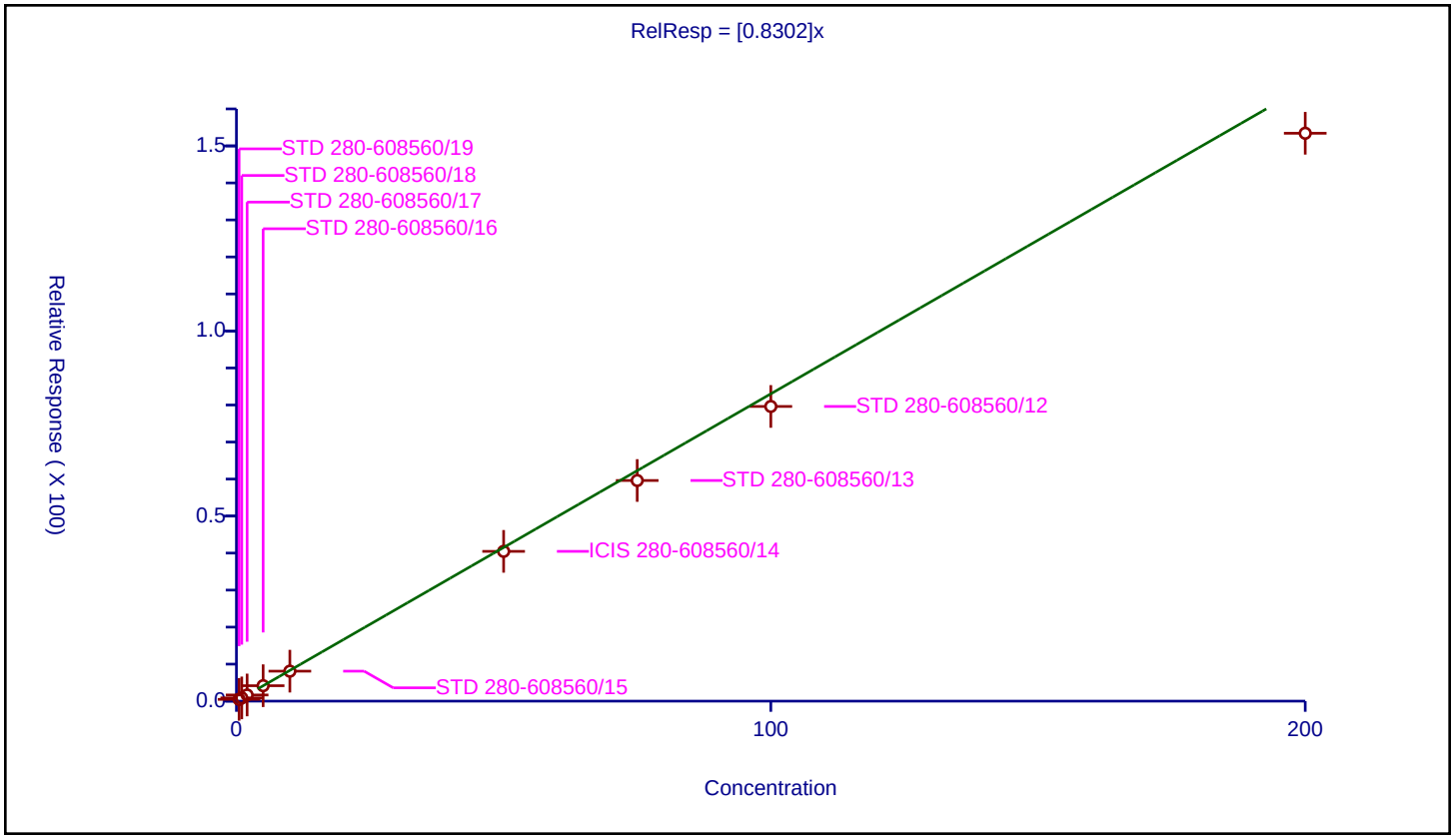
Curve Coefficients

Intercept:	0
Slope:	0.8302

Error Coefficients

Standard Error:	1900000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.476471	50.0	1348665.0	0.952942	Y
2	STD 280-608560/18	1.0	0.875442	50.0	1415514.0	0.875442	Y
3	STD 280-608560/17	2.0	1.665223	50.0	1448575.0	0.832611	Y
4	STD 280-608560/16	5.0	4.171002	50.0	1411951.0	0.8342	Y
5	STD 280-608560/15	10.0	8.096451	50.0	1440625.0	0.809645	Y
6	ICIS 280-608560/14	50.0	40.465441	50.0	1425572.0	0.809309	Y
7	STD 280-608560/13	75.0	59.606461	50.0	1411347.0	0.794753	Y
8	STD 280-608560/12	100.0	79.610099	50.0	1423592.0	0.796101	Y
9	STD 280-608560/11	200.0	153.418929	50.0	1441855.0	0.767095	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

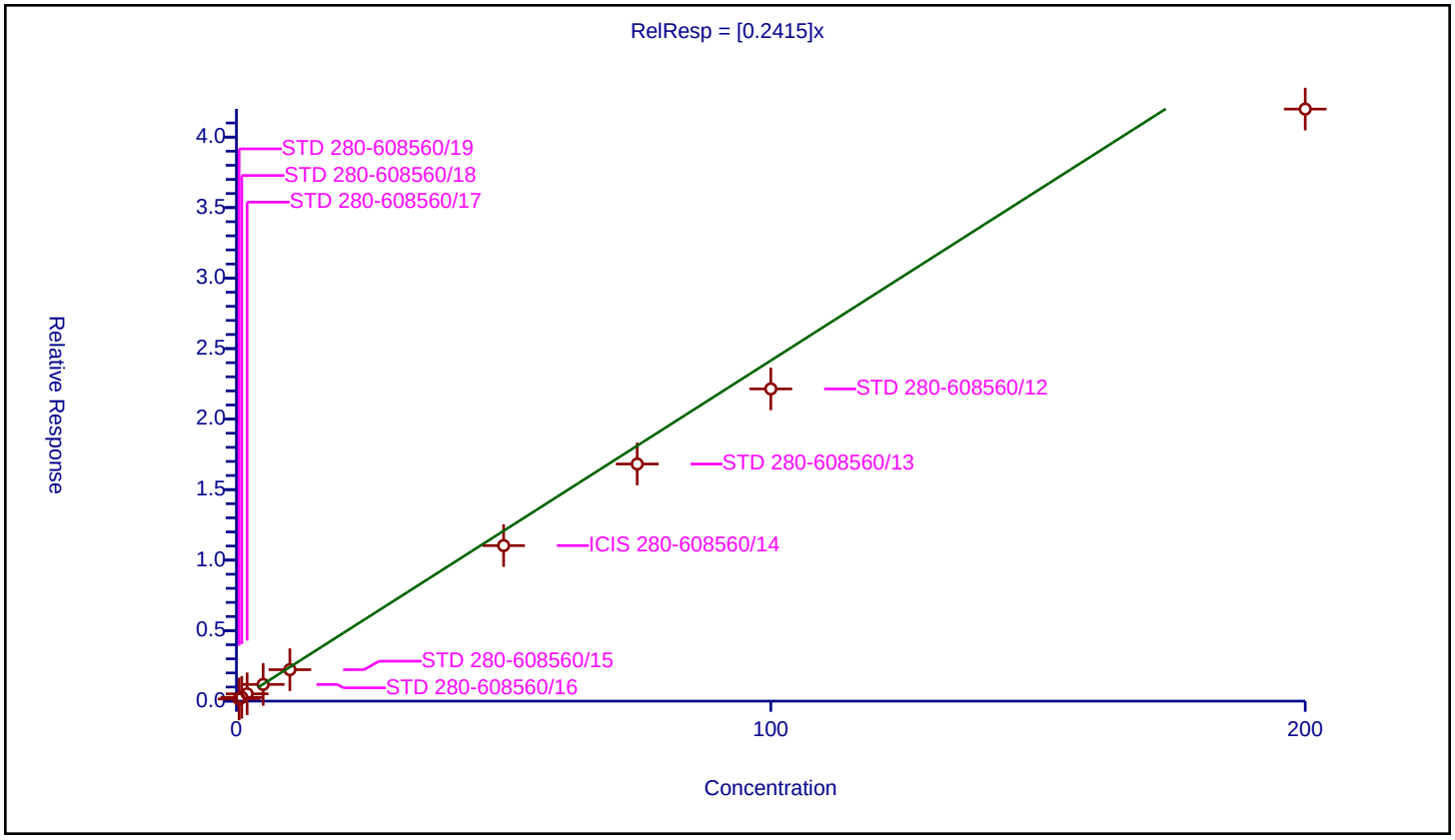
Curve Coefficients

Intercept:	0
Slope:	0.2415

Error Coefficients

Standard Error:	524000
Relative Standard Error:	13.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.153745	50.0	1348665.0	0.307489	Y
2	STD 280-608560/18	1.0	0.269443	50.0	1415514.0	0.269443	Y
3	STD 280-608560/17	2.0	0.52065	50.0	1448575.0	0.260325	Y
4	STD 280-608560/16	5.0	1.1857	50.0	1411951.0	0.23714	Y
5	STD 280-608560/15	10.0	2.231046	50.0	1440625.0	0.223105	Y
6	ICIS 280-608560/14	50.0	11.031151	50.0	1425572.0	0.220623	Y
7	STD 280-608560/13	75.0	16.817055	50.0	1411347.0	0.224227	Y
8	STD 280-608560/12	100.0	22.142896	50.0	1423592.0	0.221429	Y
9	STD 280-608560/11	200.0	41.987509	50.0	1441855.0	0.209938	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

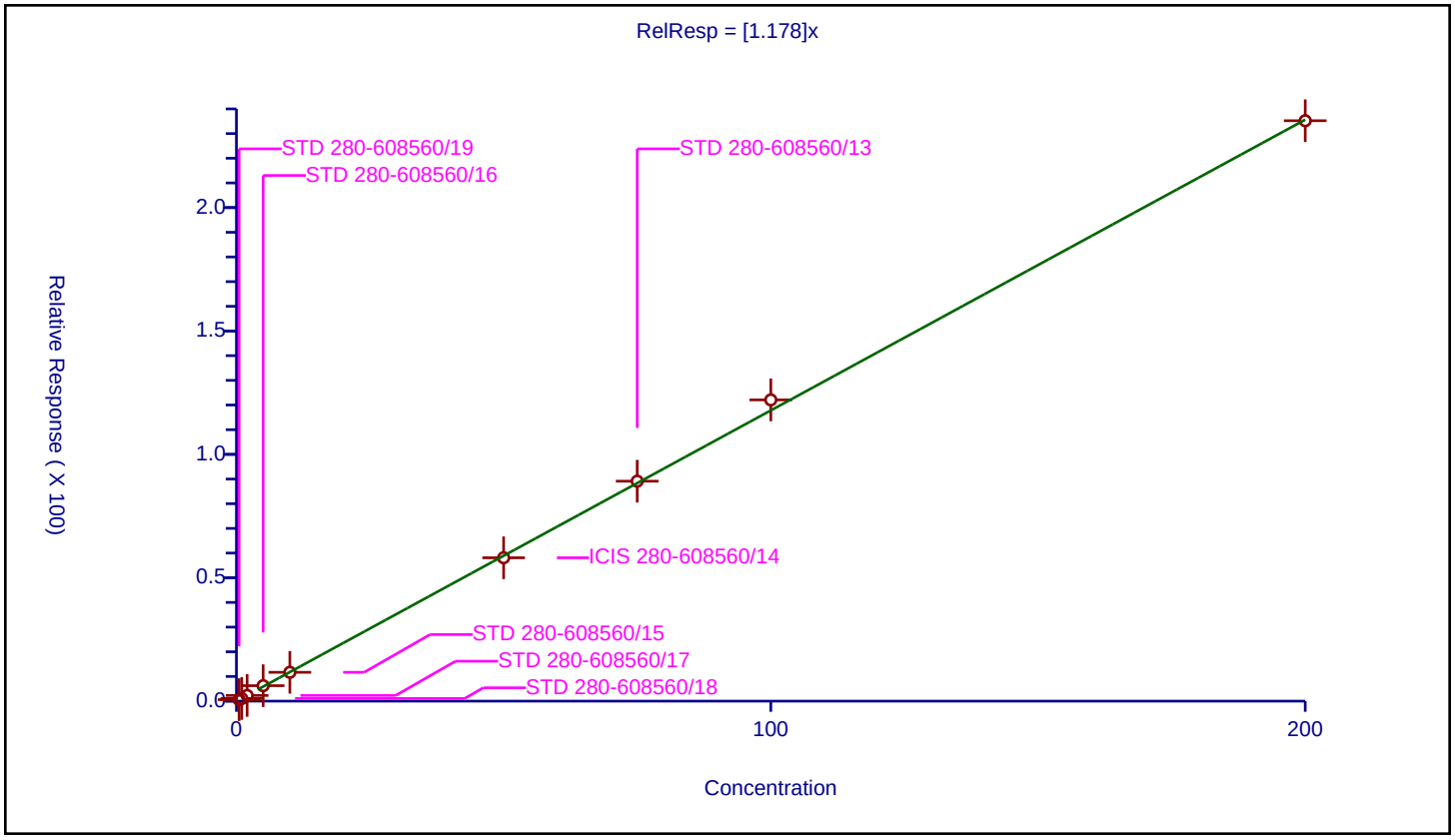
Curve Coefficients

Intercept:	0
Slope:	1.178

Error Coefficients

Standard Error:	711000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.60326	50.0	332941.0	1.20652	Y
2	STD 280-608560/18	1.0	1.078766	50.0	347944.0	1.078766	Y
3	STD 280-608560/17	2.0	2.299771	50.0	351709.0	1.149885	Y
4	STD 280-608560/16	5.0	6.263401	50.0	340925.0	1.25268	Y
5	STD 280-608560/15	10.0	11.680257	50.0	346191.0	1.168026	Y
6	ICIS 280-608560/14	50.0	58.097361	50.0	344779.0	1.161947	Y
7	STD 280-608560/13	75.0	89.134219	50.0	345838.0	1.188456	Y
8	STD 280-608560/12	100.0	122.075868	50.0	346231.0	1.220759	Y
9	STD 280-608560/11	200.0	235.205276	50.0	354231.0	1.176026	Y



Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

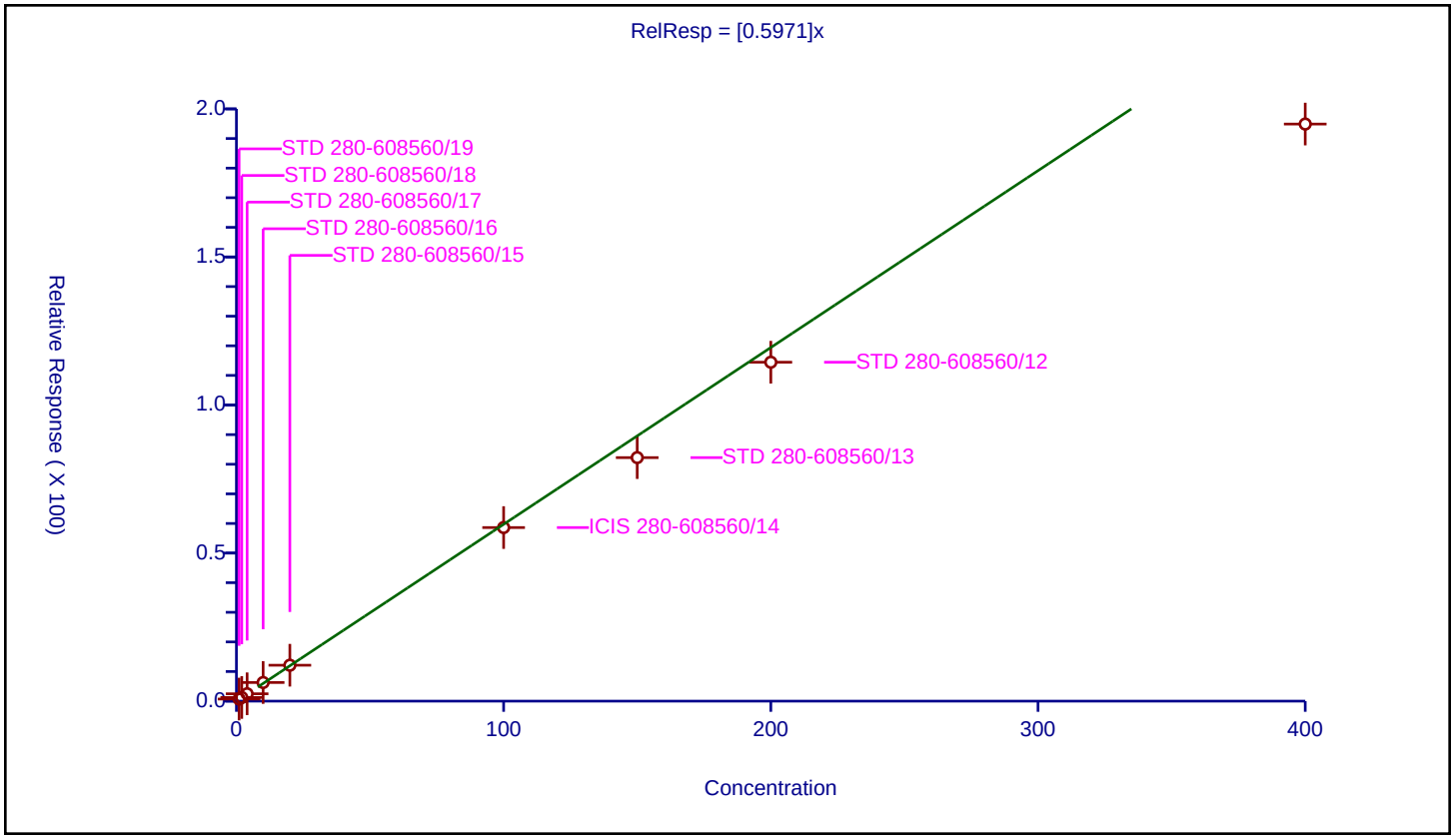
Curve Coefficients

Intercept:	0
Slope:	0.5971

Error Coefficients

Standard Error:	2510000
Relative Standard Error:	10.1
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	1.0	0.706032	50.0	1348665.0	0.706032	Y
2	STD 280-608560/18	2.0	1.234393	50.0	1415514.0	0.617196	Y
3	STD 280-608560/17	4.0	2.484131	50.0	1448575.0	0.621033	Y
4	STD 280-608560/16	10.0	6.293951	50.0	1411951.0	0.629395	Y
5	STD 280-608560/15	20.0	12.127549	50.0	1440625.0	0.606377	Y
6	ICIS 280-608560/14	100.0	58.622258	50.0	1425572.0	0.586223	Y
7	STD 280-608560/13	150.0	82.241433	50.0	1411347.0	0.548276	Y
8	STD 280-608560/12	200.0	114.455371	50.0	1423592.0	0.572277	Y
9	STD 280-608560/11	400.0	194.883639	50.0	1441855.0	0.487209	Y



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Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

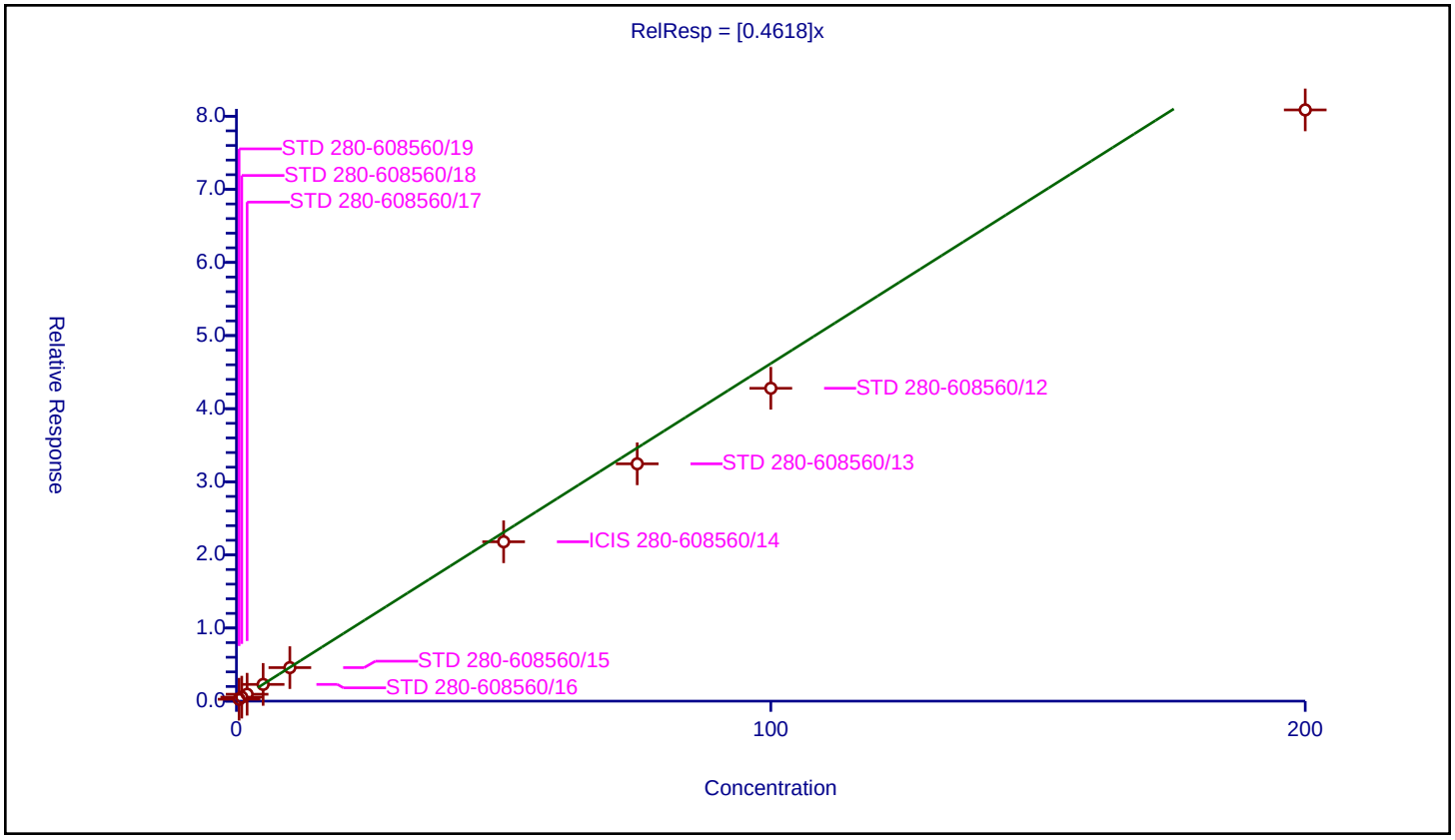
Curve Coefficients

Intercept:	0
Slope:	0.4618

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	9.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.259775	50.0	1348665.0	0.519551	Y
2	STD 280-608560/18	1.0	0.546091	50.0	1415514.0	0.546091	Y
3	STD 280-608560/17	2.0	0.946413	50.0	1448575.0	0.473206	Y
4	STD 280-608560/16	5.0	2.288819	50.0	1411951.0	0.457764	Y
5	STD 280-608560/15	10.0	4.584156	50.0	1440625.0	0.458416	Y
6	ICIS 280-608560/14	50.0	21.795006	50.0	1425572.0	0.4359	Y
7	STD 280-608560/13	75.0	32.457928	50.0	1411347.0	0.432772	Y
8	STD 280-608560/12	100.0	42.789788	50.0	1423592.0	0.427898	Y
9	STD 280-608560/11	200.0	80.860142	50.0	1441855.0	0.404301	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

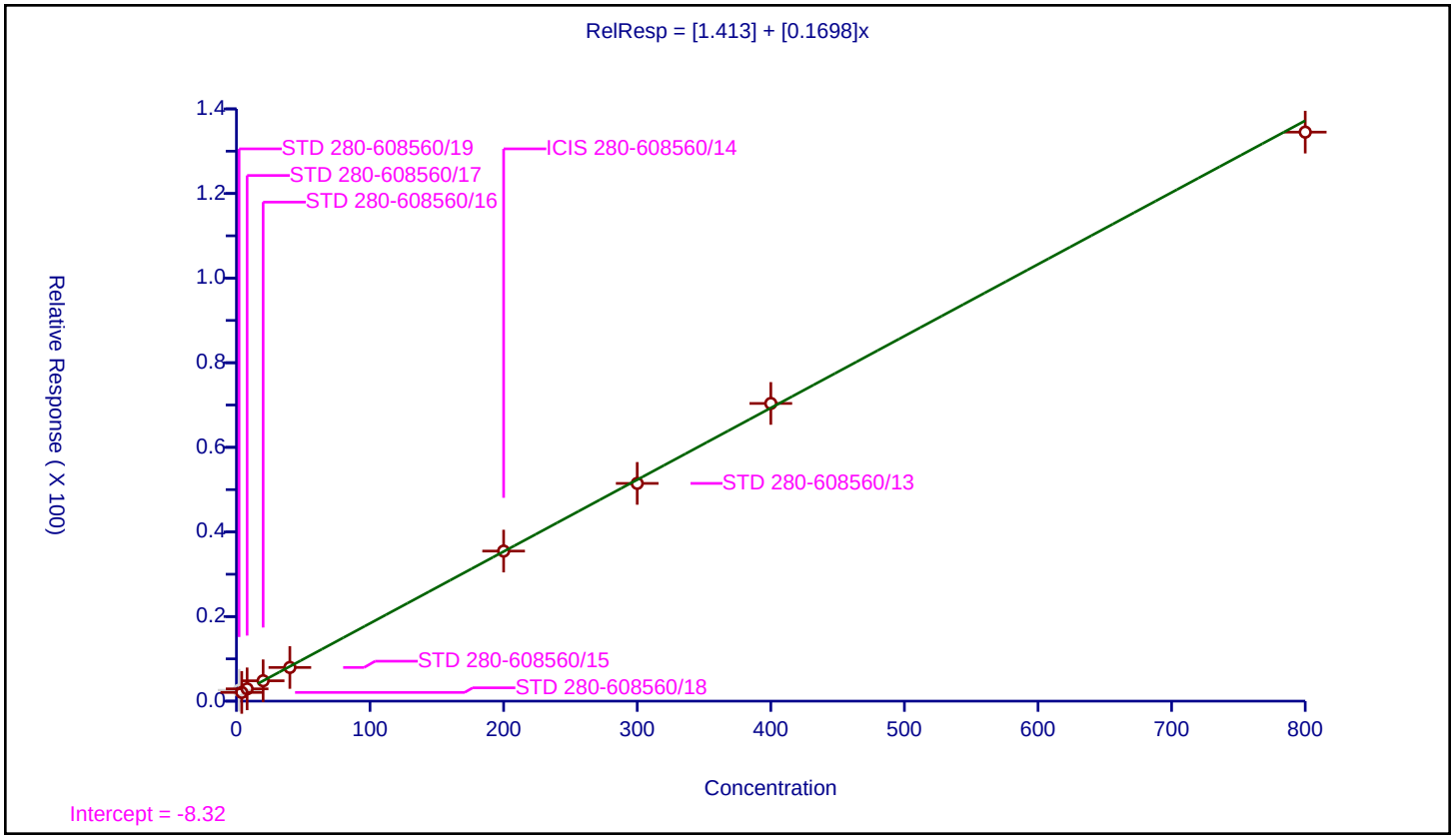
Curve Coefficients

Intercept:	1.413
Slope:	0.1698

Error Coefficients

Standard Error:	1930000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	2.0	2.572618	50.0	1348665.0	1.286309	N
2	STD 280-608560/18	4.0	2.060912	50.0	1415514.0	0.515228	Y
3	STD 280-608560/17	8.0	2.903819	50.0	1448575.0	0.362977	Y
4	STD 280-608560/16	20.0	4.811853	50.0	1411951.0	0.240593	Y
5	STD 280-608560/15	40.0	7.962829	50.0	1440625.0	0.199071	Y
6	ICIS 280-608560/14	200.0	35.472077	50.0	1425572.0	0.17736	Y
7	STD 280-608560/13	300.0	51.470191	50.0	1411347.0	0.171567	Y
8	STD 280-608560/12	400.0	70.375536	50.0	1423592.0	0.175939	Y
9	STD 280-608560/11	800.0	134.507978	50.0	1441855.0	0.168135	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

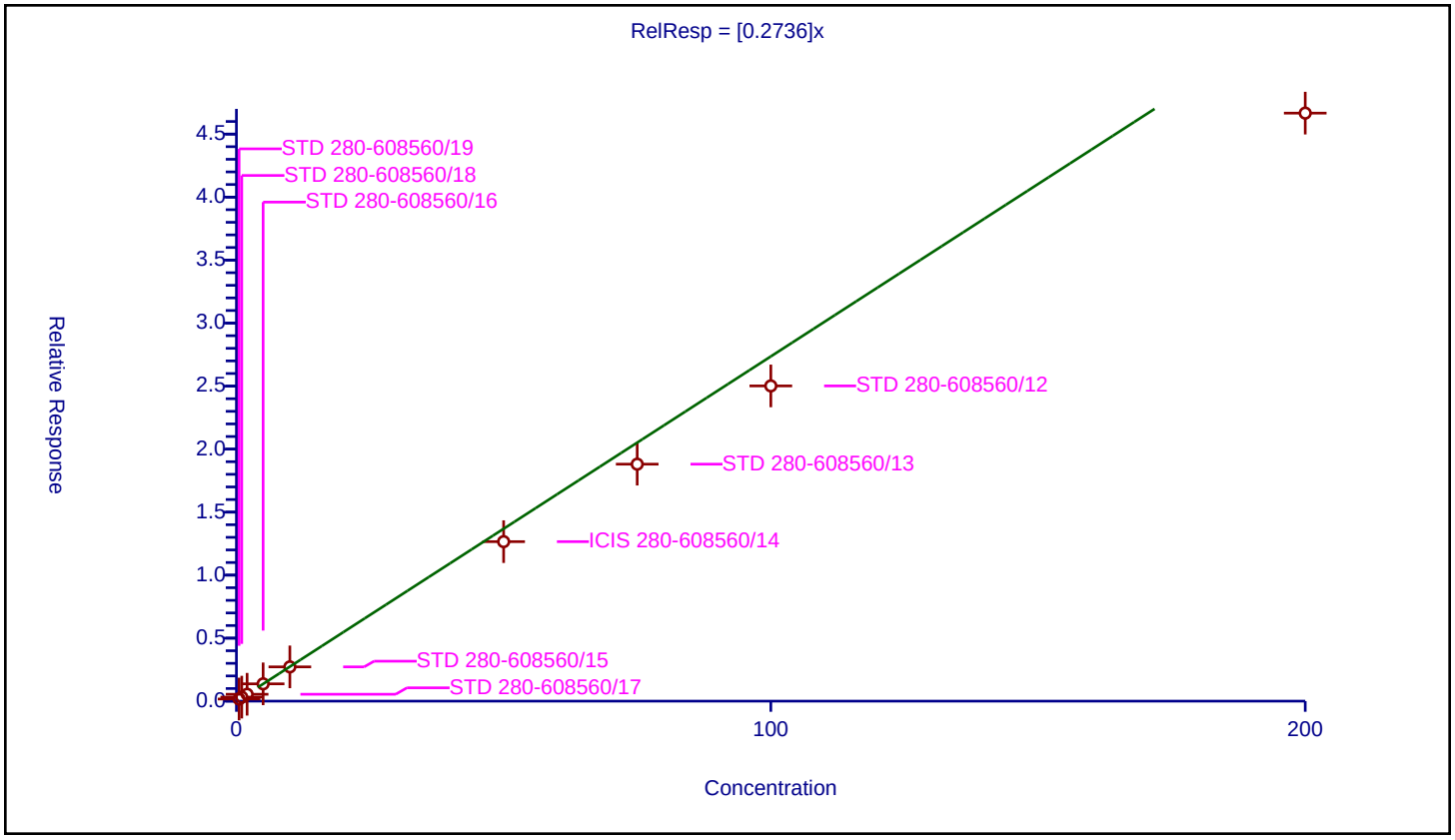
Curve Coefficients

Intercept:	0
Slope:	0.2736

Error Coefficients

Standard Error:	585000
Relative Standard Error:	12.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.16824	50.0	1348665.0	0.336481	Y
2	STD 280-608560/18	1.0	0.318789	50.0	1415514.0	0.318789	Y
3	STD 280-608560/17	2.0	0.546088	50.0	1448575.0	0.273044	Y
4	STD 280-608560/16	5.0	1.371825	50.0	1411951.0	0.274365	Y
5	STD 280-608560/15	10.0	2.719618	50.0	1440625.0	0.271962	Y
6	ICIS 280-608560/14	50.0	12.657305	50.0	1425572.0	0.253146	Y
7	STD 280-608560/13	75.0	18.805439	50.0	1411347.0	0.250739	Y
8	STD 280-608560/12	100.0	25.015173	50.0	1423592.0	0.250152	Y
9	STD 280-608560/11	200.0	46.663881	50.0	1441855.0	0.233319	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

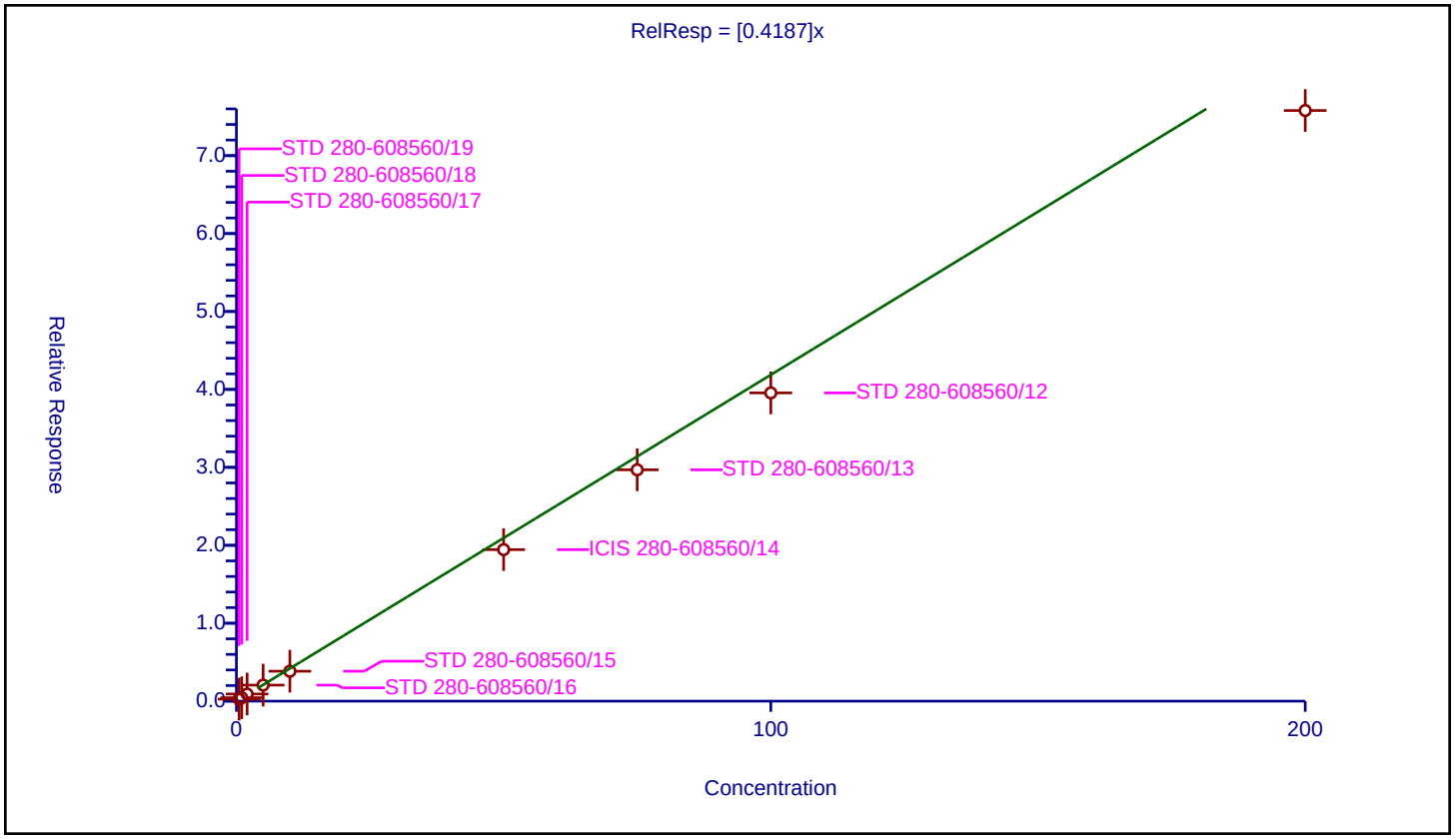
Curve Coefficients

Intercept:	0
Slope:	0.4187

Error Coefficients

Standard Error:	940000
Relative Standard Error:	10.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.259108	50.0	1348665.0	0.518216	Y
2	STD 280-608560/18	1.0	0.438498	50.0	1415514.0	0.438498	Y
3	STD 280-608560/17	2.0	0.914105	50.0	1448575.0	0.457053	Y
4	STD 280-608560/16	5.0	2.058747	50.0	1411951.0	0.411749	Y
5	STD 280-608560/15	10.0	3.838161	50.0	1440625.0	0.383816	Y
6	ICIS 280-608560/14	50.0	19.443318	50.0	1425572.0	0.388866	Y
7	STD 280-608560/13	75.0	29.684337	50.0	1411347.0	0.395791	Y
8	STD 280-608560/12	100.0	39.555856	50.0	1423592.0	0.395559	Y
9	STD 280-608560/11	200.0	75.792885	50.0	1441855.0	0.378964	Y



Calibration / sec-Butyl Alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

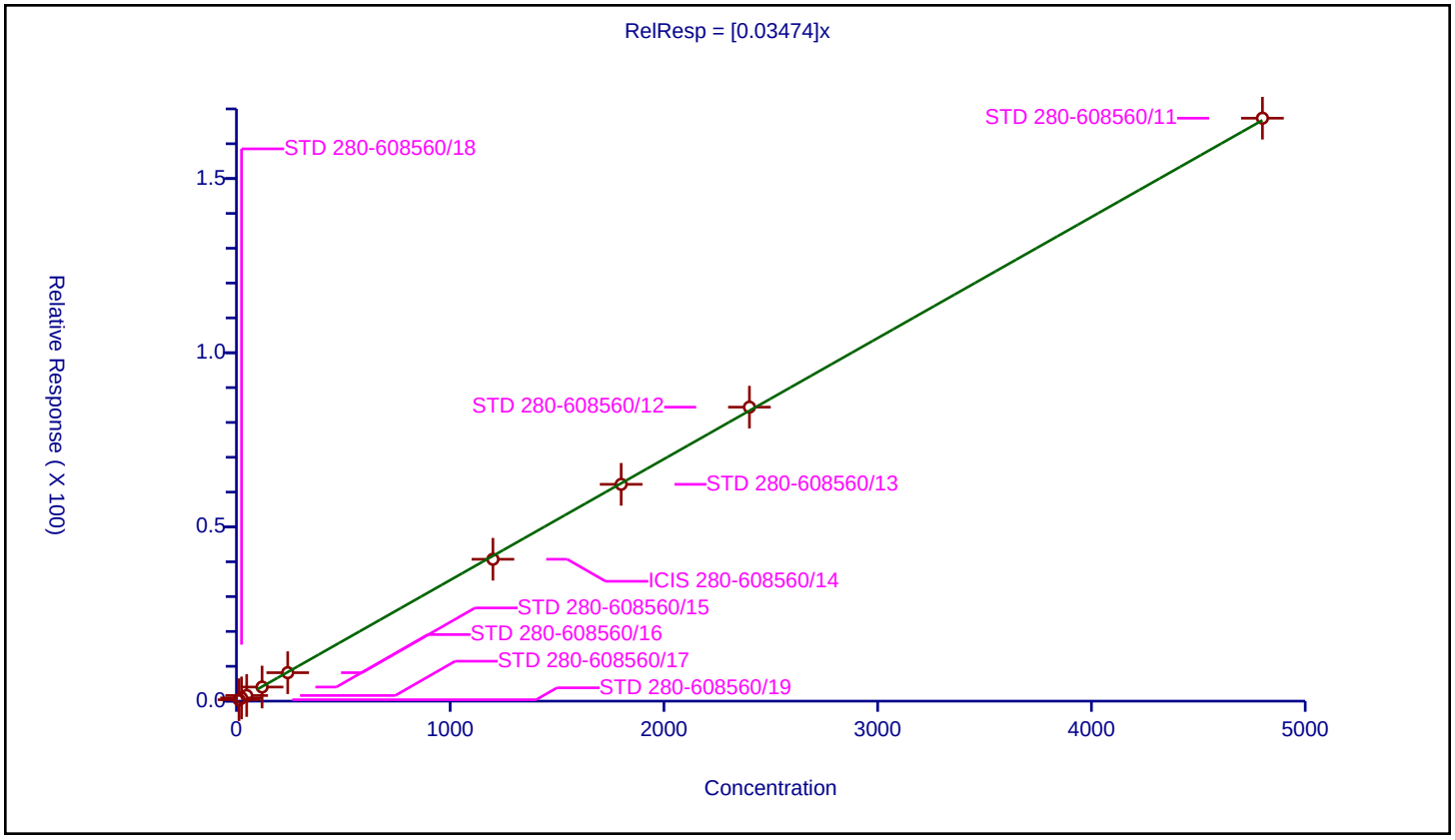
Curve Coefficients

Intercept:	0
Slope:	0.03474

Error Coefficients

Standard Error:	2050000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	12.0	0.409961	50.0	1348665.0	0.034163	Y
2	STD 280-608560/18	24.0	0.92175	50.0	1415514.0	0.038406	Y
3	STD 280-608560/17	48.0	1.619902	50.0	1448575.0	0.033748	Y
4	STD 280-608560/16	120.0	4.05138	50.0	1411951.0	0.033761	Y
5	STD 280-608560/15	240.0	8.167184	50.0	1440625.0	0.03403	Y
6	ICIS 280-608560/14	1200.0	40.725898	50.0	1425572.0	0.033938	Y
7	STD 280-608560/13	1800.0	62.237671	50.0	1411347.0	0.034576	Y
8	STD 280-608560/12	2400.0	84.390296	50.0	1423592.0	0.035163	Y
9	STD 280-608560/11	4800.0	167.33555	50.0	1441855.0	0.034862	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

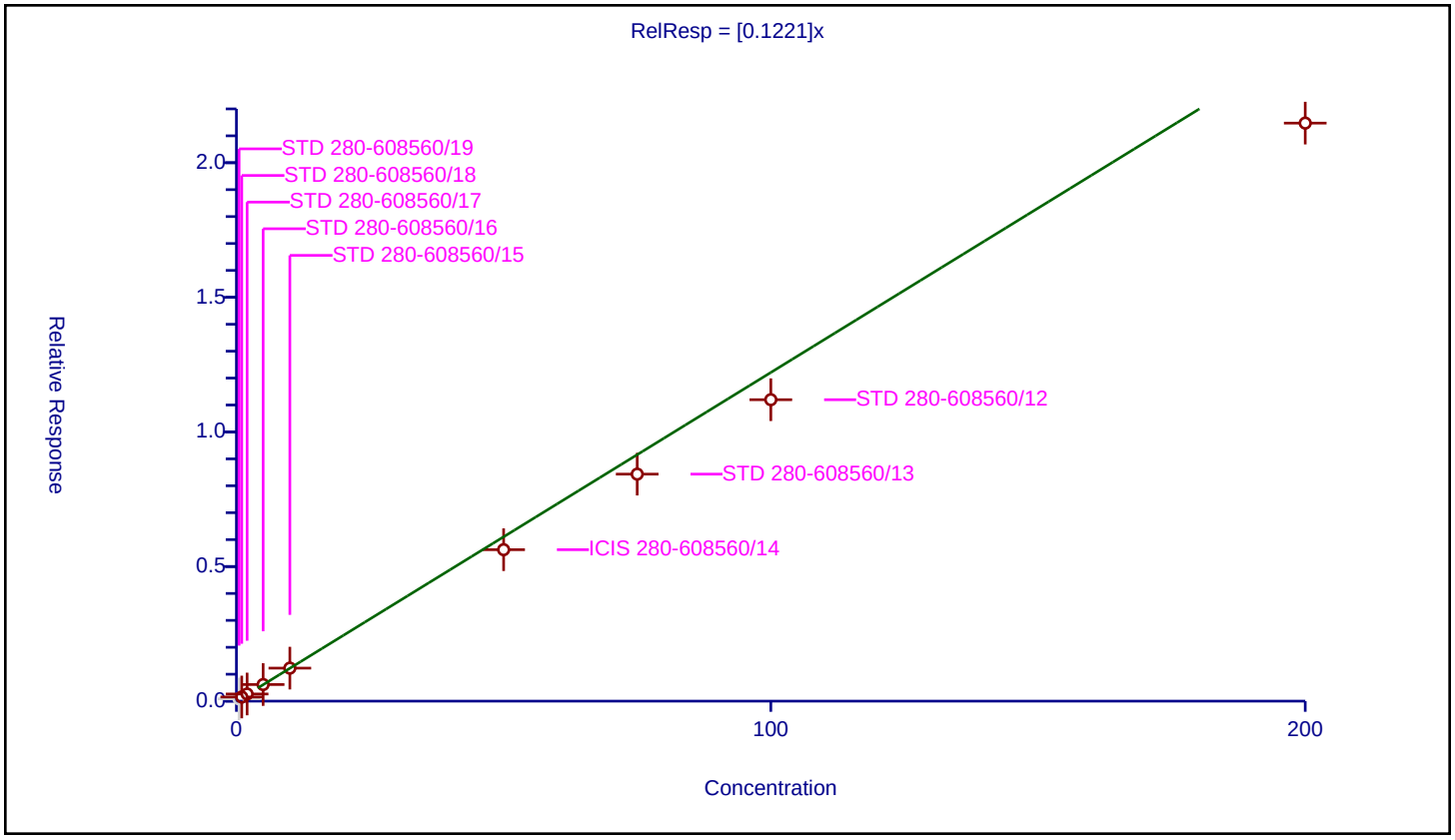
Curve Coefficients

Intercept:	0
Slope:	0.1221

Error Coefficients

Standard Error:	285000
Relative Standard Error:	12.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.084899	50.0	1348665.0	0.169798	N
2	STD 280-608560/18	1.0	0.15369	50.0	1415514.0	0.15369	Y
3	STD 280-608560/17	2.0	0.26533	50.0	1448575.0	0.132665	Y
4	STD 280-608560/16	5.0	0.616735	50.0	1411951.0	0.123347	Y
5	STD 280-608560/15	10.0	1.22662	50.0	1440625.0	0.122662	Y
6	ICIS 280-608560/14	50.0	5.626233	50.0	1425572.0	0.112525	Y
7	STD 280-608560/13	75.0	8.432582	50.0	1411347.0	0.112434	Y
8	STD 280-608560/12	100.0	11.19752	50.0	1423592.0	0.111975	Y
9	STD 280-608560/11	200.0	21.471646	50.0	1441855.0	0.107358	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

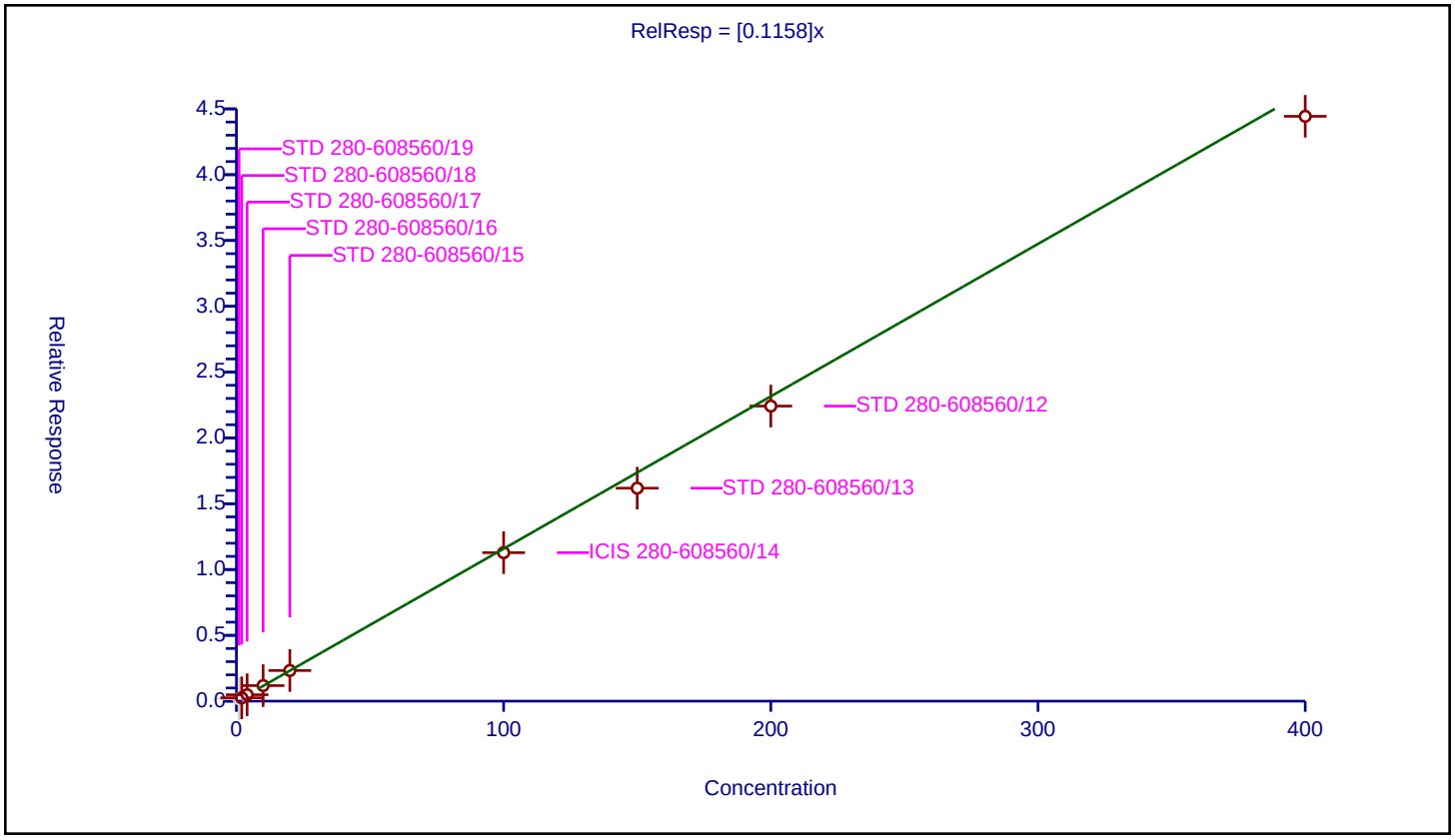
Curve Coefficients

Intercept:	0
Slope:	0.1158

Error Coefficients

Standard Error:	582000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	1.0	0.185665	50.0	1348665.0	0.185665	N
2	STD 280-608560/18	2.0	0.253053	50.0	1415514.0	0.126526	Y
3	STD 280-608560/17	4.0	0.486547	50.0	1448575.0	0.121637	Y
4	STD 280-608560/16	10.0	1.180778	50.0	1411951.0	0.118078	Y
5	STD 280-608560/15	20.0	2.325275	50.0	1440625.0	0.116264	Y
6	ICIS 280-608560/14	100.0	11.280454	50.0	1425572.0	0.112805	Y
7	STD 280-608560/13	150.0	16.182023	50.0	1411347.0	0.10788	Y
8	STD 280-608560/12	200.0	22.419485	50.0	1423592.0	0.112097	Y
9	STD 280-608560/11	400.0	44.435952	50.0	1441855.0	0.11109	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

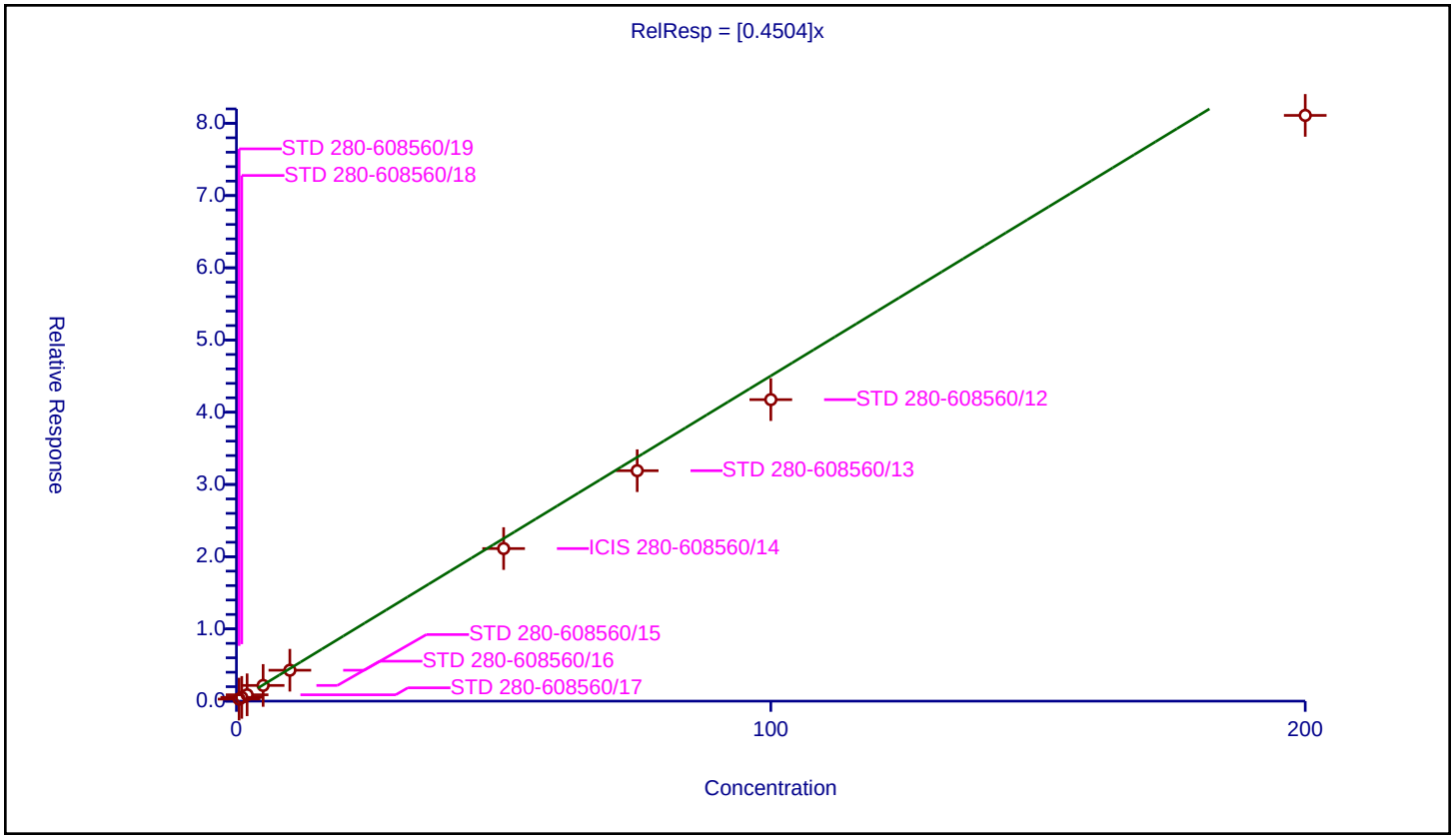
Curve Coefficients

Intercept:	0
Slope:	0.4504

Error Coefficients

Standard Error:	1000000
Relative Standard Error:	11.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.280463	50.0	1348665.0	0.560925	Y
2	STD 280-608560/18	1.0	0.518257	50.0	1415514.0	0.518257	Y
3	STD 280-608560/17	2.0	0.880969	50.0	1448575.0	0.440485	Y
4	STD 280-608560/16	5.0	2.173447	50.0	1411951.0	0.434689	Y
5	STD 280-608560/15	10.0	4.27915	50.0	1440625.0	0.427915	Y
6	ICIS 280-608560/14	50.0	21.124222	50.0	1425572.0	0.422484	Y
7	STD 280-608560/13	75.0	31.907887	50.0	1411347.0	0.425438	Y
8	STD 280-608560/12	100.0	41.747319	50.0	1423592.0	0.417473	Y
9	STD 280-608560/11	200.0	81.101914	50.0	1441855.0	0.40551	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

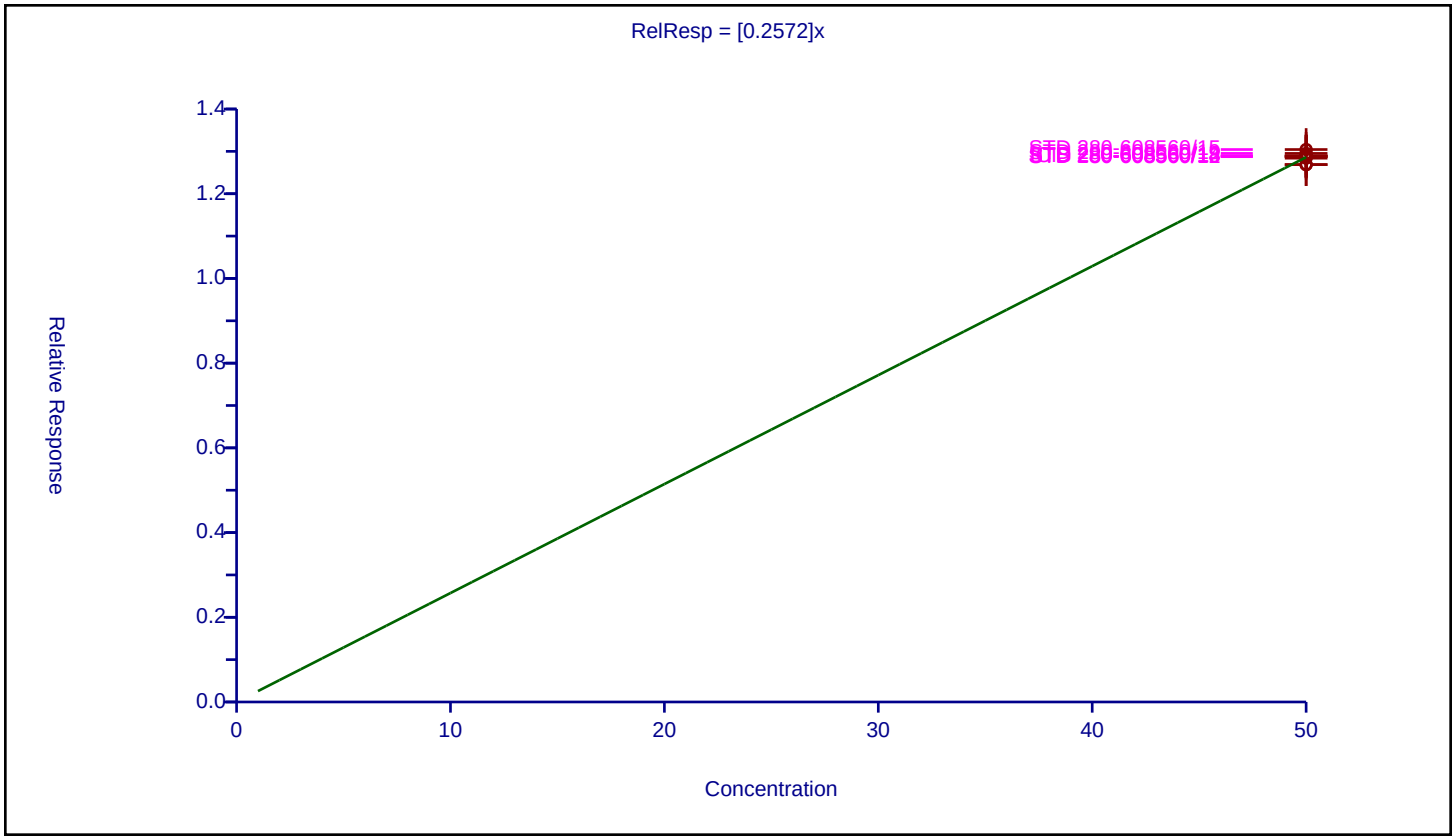
Curve Coefficients

Intercept:	0
Slope:	0.2572

Error Coefficients

Standard Error:	387000
Relative Standard Error:	0.9
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/11	50.0	12.687996	50.0	1441855.0	0.25376	Y
2	STD 280-608560/12	50.0	12.873984	50.0	1423592.0	0.25748	Y
3	STD 280-608560/13	50.0	12.890133	50.0	1411347.0	0.257803	Y
4	ICIS 280-608560/14	50.0	12.888546	50.0	1425572.0	0.257771	Y
5	STD 280-608560/15	50.0	13.043783	50.0	1440625.0	0.260876	Y
6	STD 280-608560/16	50.0	12.839291	50.0	1411951.0	0.256786	Y
7	STD 280-608560/17	50.0	12.686744	50.0	1448575.0	0.253735	Y
8	STD 280-608560/18	50.0	12.887898	50.0	1415514.0	0.257758	Y
9	STD 280-608560/19	50.0	12.951882	50.0	1348665.0	0.259038	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

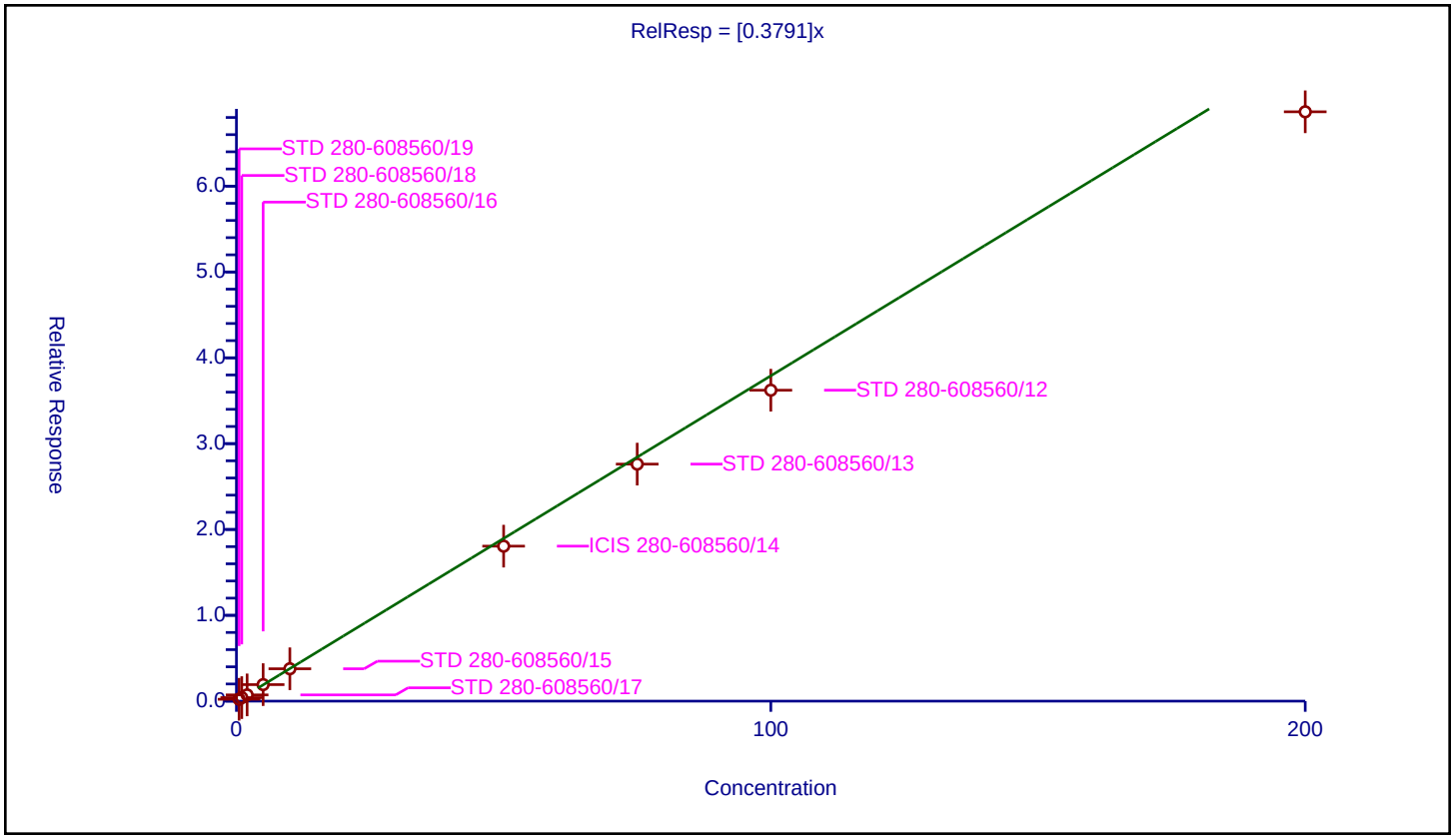
Curve Coefficients

Intercept:	0
Slope:	0.3791

Error Coefficients

Standard Error:	857000
Relative Standard Error:	7.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.219588	50.0	1348665.0	0.439175	Y
2	STD 280-608560/18	1.0	0.411441	50.0	1415514.0	0.411441	Y
3	STD 280-608560/17	2.0	0.727301	50.0	1448575.0	0.36365	Y
4	STD 280-608560/16	5.0	1.925563	50.0	1411951.0	0.385113	Y
5	STD 280-608560/15	10.0	3.772217	50.0	1440625.0	0.377222	Y
6	ICIS 280-608560/14	50.0	18.057068	50.0	1425572.0	0.361141	Y
7	STD 280-608560/13	75.0	27.616242	50.0	1411347.0	0.368217	Y
8	STD 280-608560/12	100.0	36.22611	50.0	1423592.0	0.362261	Y
9	STD 280-608560/11	200.0	68.661204	50.0	1441855.0	0.343306	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

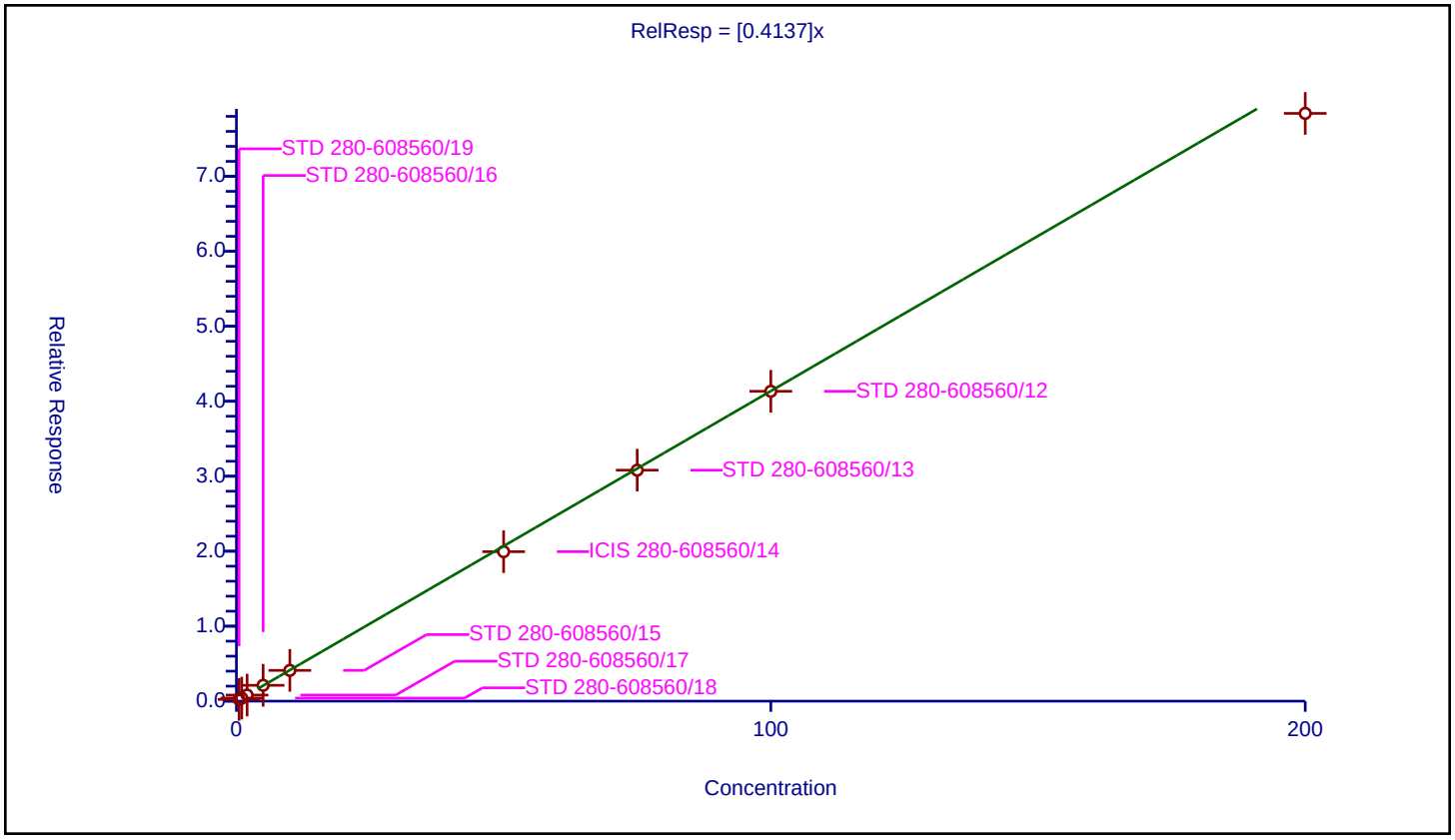
Curve Coefficients

Intercept:	0
Slope:	0.4137

Error Coefficients

Standard Error:	974000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.230487	50.0	1348665.0	0.460974	Y
2	STD 280-608560/18	1.0	0.408297	50.0	1415514.0	0.408297	Y
3	STD 280-608560/17	2.0	0.812937	50.0	1448575.0	0.406468	Y
4	STD 280-608560/16	5.0	2.111759	50.0	1411951.0	0.422352	Y
5	STD 280-608560/15	10.0	4.101449	50.0	1440625.0	0.410145	Y
6	ICIS 280-608560/14	50.0	19.93498	50.0	1425572.0	0.3987	Y
7	STD 280-608560/13	75.0	30.805819	50.0	1411347.0	0.410744	Y
8	STD 280-608560/12	100.0	41.330627	50.0	1423592.0	0.413306	Y
9	STD 280-608560/11	200.0	78.400983	50.0	1441855.0	0.392005	Y



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6:53 PM

Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

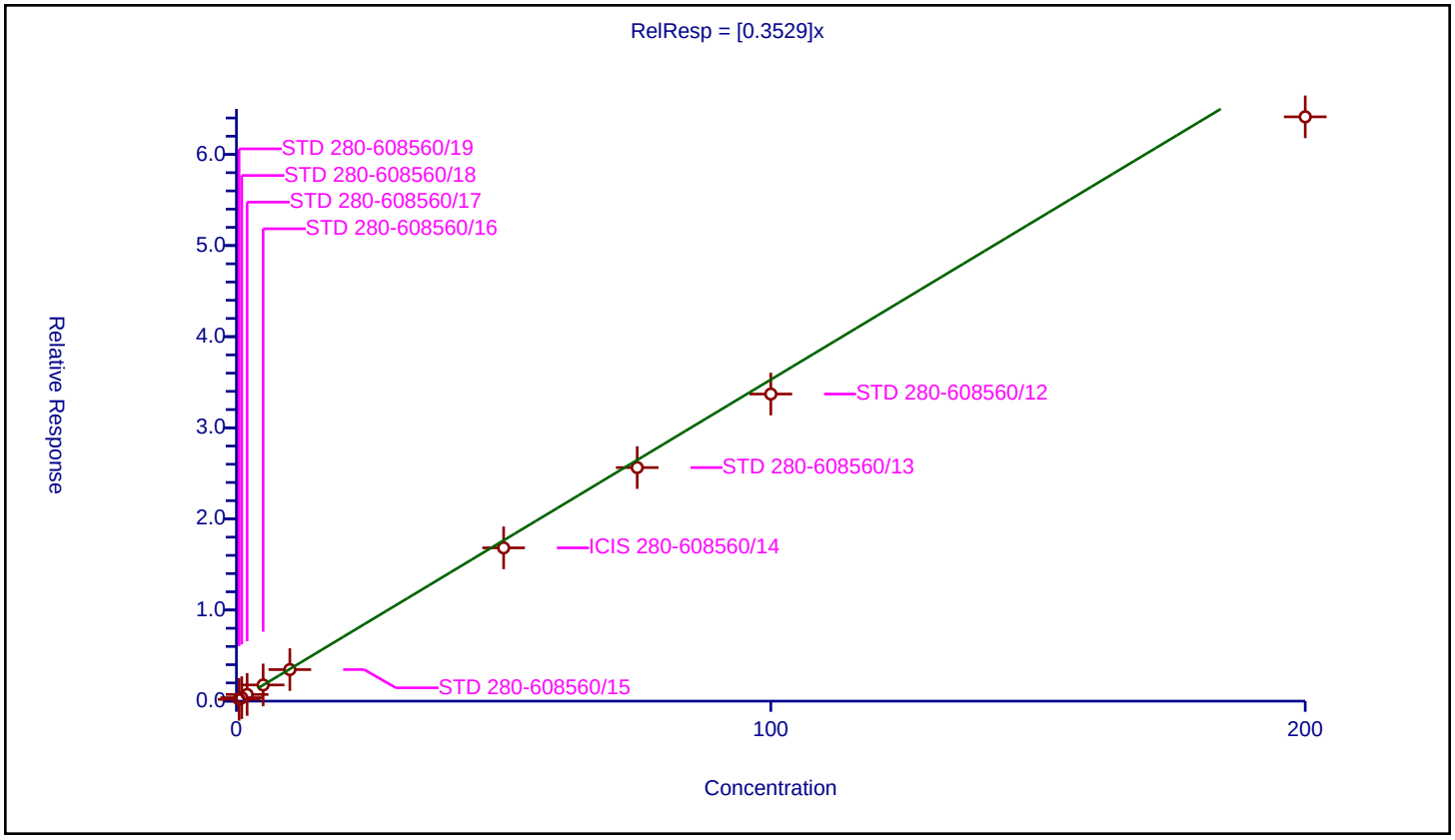
Curve Coefficients

Intercept:	0
Slope:	0.3529

Error Coefficients

Standard Error:	799000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.19549	50.0	1348665.0	0.390979	Y
2	STD 280-608560/18	1.0	0.380886	50.0	1415514.0	0.380886	Y
3	STD 280-608560/17	2.0	0.733514	50.0	1448575.0	0.366757	Y
4	STD 280-608560/16	5.0	1.775203	50.0	1411951.0	0.355041	Y
5	STD 280-608560/15	10.0	3.461206	50.0	1440625.0	0.346121	Y
6	ICIS 280-608560/14	50.0	16.823984	50.0	1425572.0	0.33648	Y
7	STD 280-608560/13	75.0	25.635545	50.0	1411347.0	0.341807	Y
8	STD 280-608560/12	100.0	33.7059	50.0	1423592.0	0.337059	Y
9	STD 280-608560/11	200.0	64.127842	50.0	1441855.0	0.320639	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

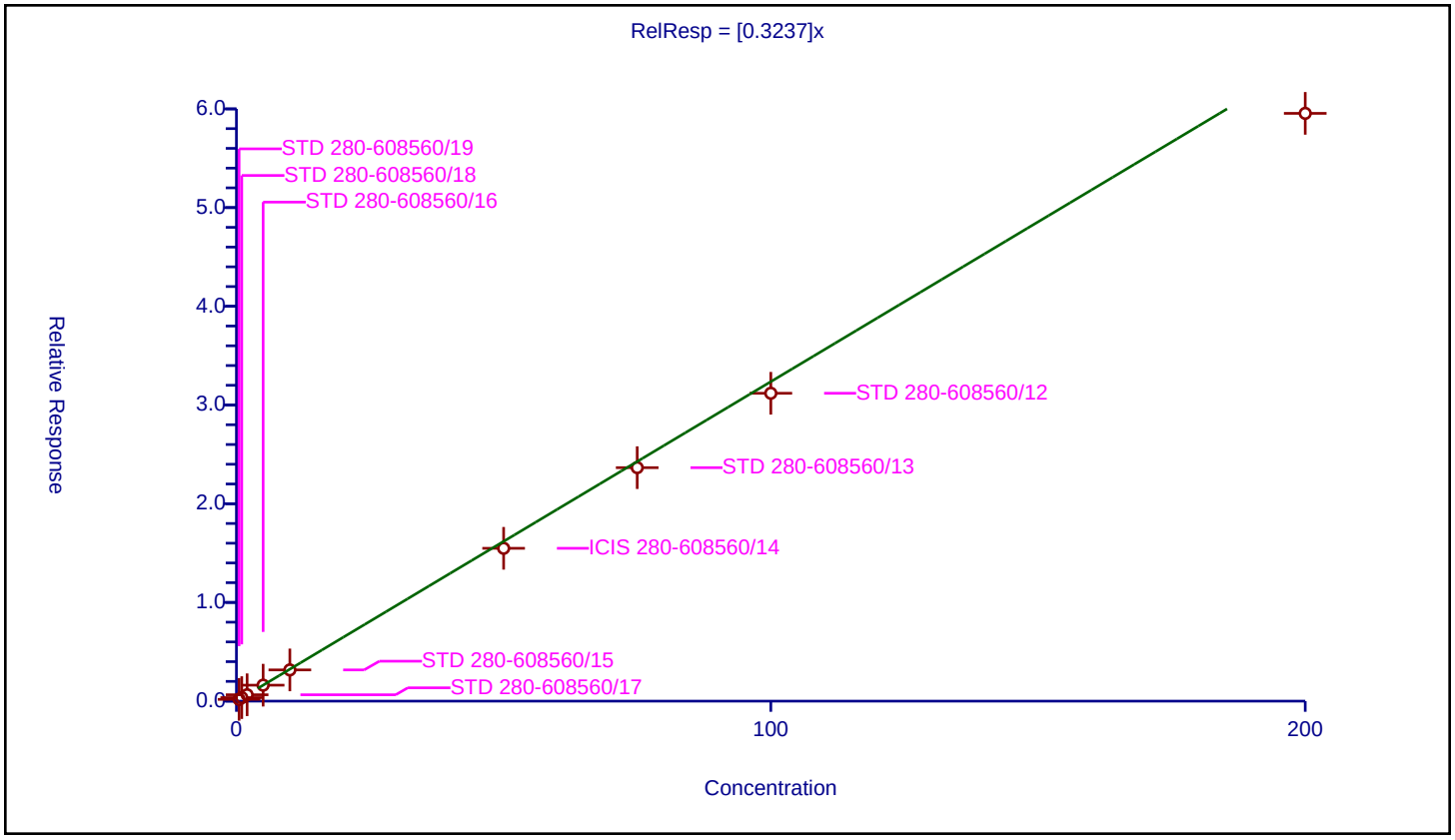
Curve Coefficients

Intercept:	0
Slope:	0.3237

Error Coefficients

Standard Error:	741000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.178139	50.0	1348665.0	0.356278	Y
2	STD 280-608560/18	1.0	0.358492	50.0	1415514.0	0.358492	Y
3	STD 280-608560/17	2.0	0.646808	50.0	1448575.0	0.323404	Y
4	STD 280-608560/16	5.0	1.618682	50.0	1411951.0	0.323736	Y
5	STD 280-608560/15	10.0	3.163141	50.0	1440625.0	0.316314	Y
6	ICIS 280-608560/14	50.0	15.484942	50.0	1425572.0	0.309699	Y
7	STD 280-608560/13	75.0	23.655061	50.0	1411347.0	0.315401	Y
8	STD 280-608560/12	100.0	31.191732	50.0	1423592.0	0.311917	Y
9	STD 280-608560/11	200.0	59.547597	50.0	1441855.0	0.297738	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

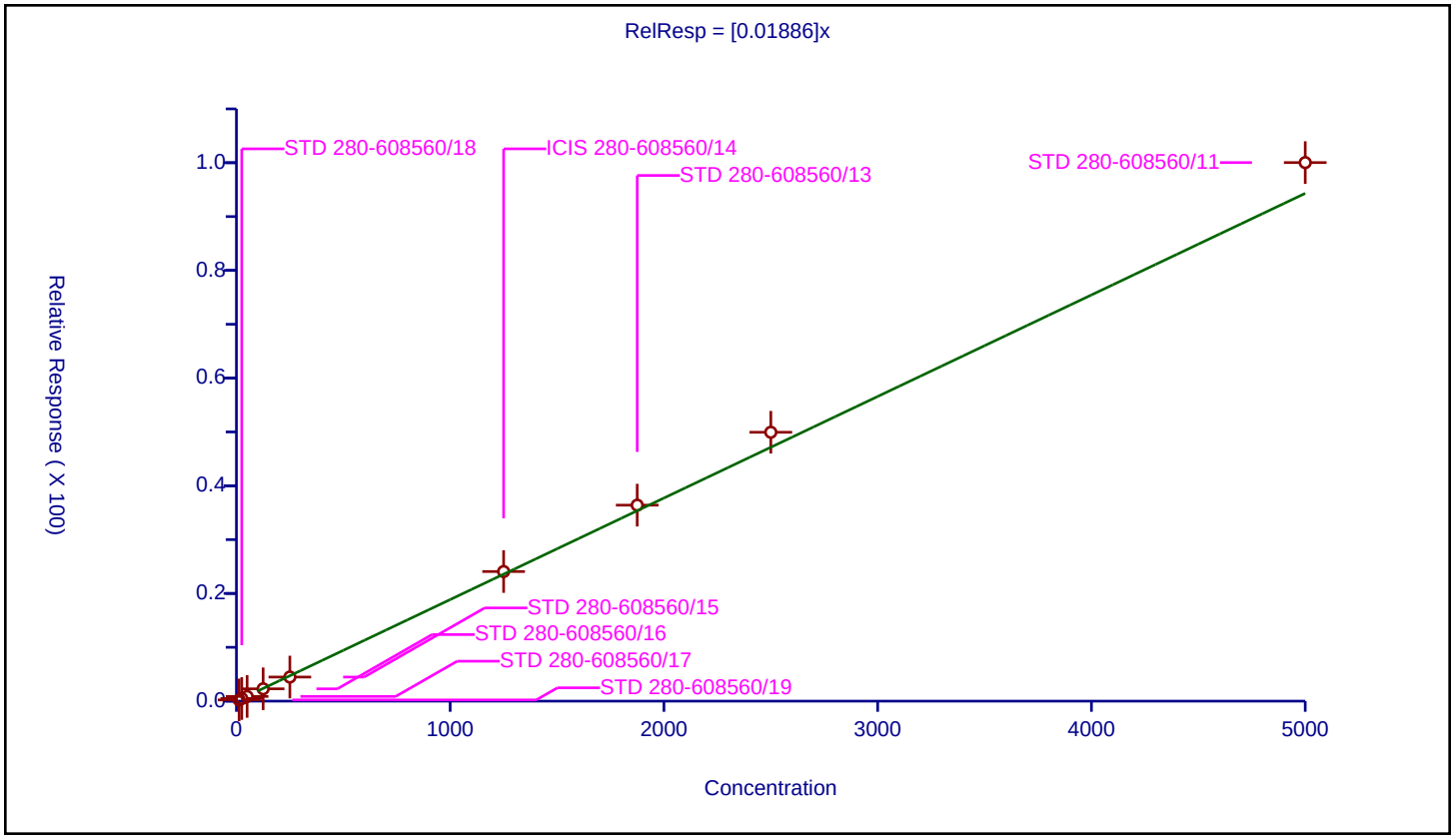
Curve Coefficients

Intercept:	0
Slope:	0.01886

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	12.5	0.223888	50.0	1348665.0	0.017911	Y
2	STD 280-608560/18	25.0	0.487173	50.0	1415514.0	0.019487	Y
3	STD 280-608560/17	50.0	0.874377	50.0	1448575.0	0.017488	Y
4	STD 280-608560/16	125.0	2.28981	50.0	1411951.0	0.018318	Y
5	STD 280-608560/15	250.0	4.475072	50.0	1440625.0	0.0179	Y
6	ICIS 280-608560/14	1250.0	24.071215	50.0	1425572.0	0.019257	Y
7	STD 280-608560/13	1875.0	36.399907	50.0	1411347.0	0.019413	Y
8	STD 280-608560/12	2500.0	49.94124	50.0	1423592.0	0.019976	Y
9	STD 280-608560/11	5000.0	100.02632	50.0	1441855.0	0.020005	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

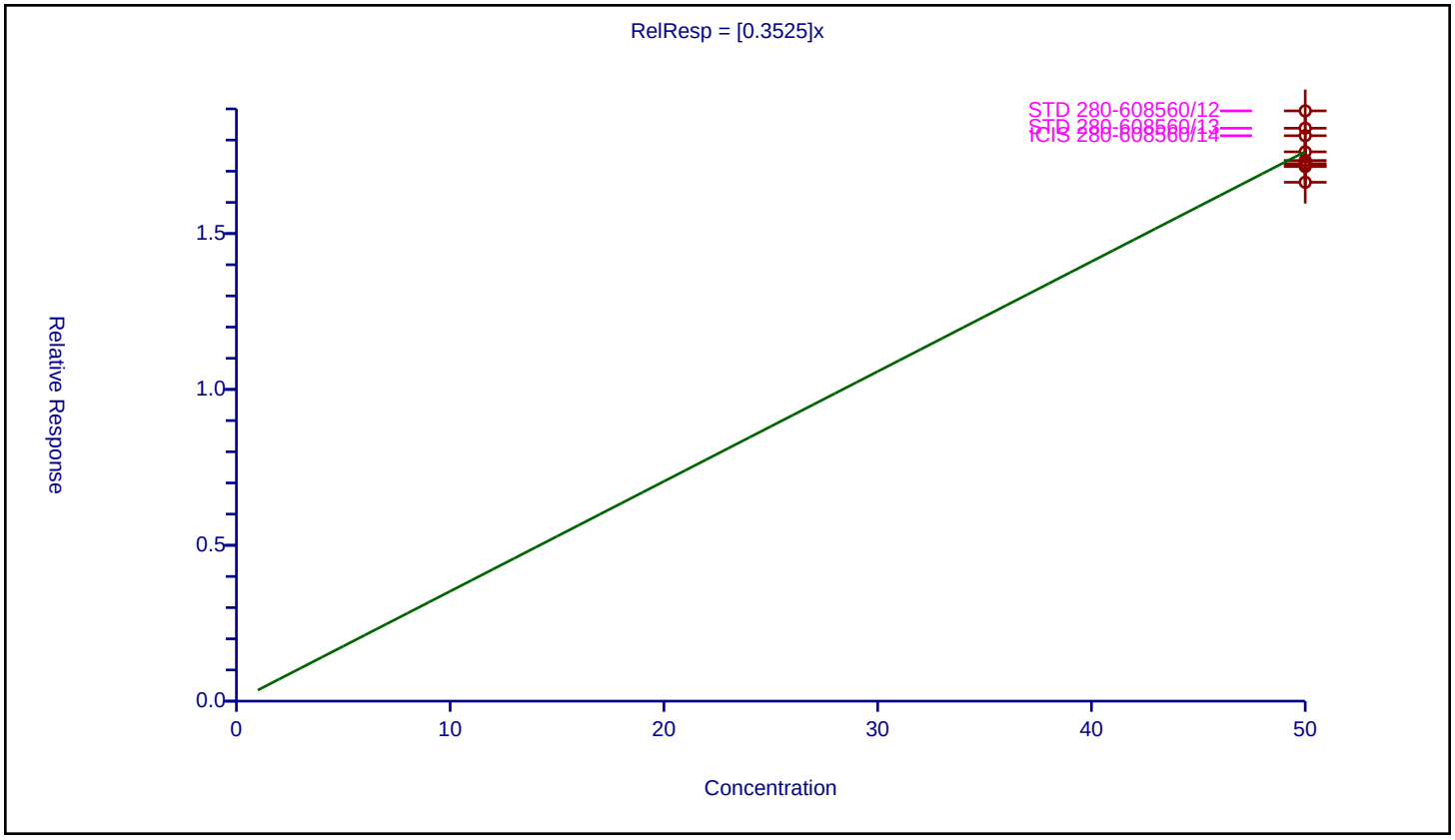
Curve Coefficients

Intercept:	0
Slope:	0.3525

Error Coefficients

Standard Error:	531000
Relative Standard Error:	4.1
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/11	50.0	16.646265	50.0	1441855.0	0.332925	Y
2	STD 280-608560/12	50.0	18.935798	50.0	1423592.0	0.378716	Y
3	STD 280-608560/13	50.0	18.379782	50.0	1411347.0	0.367596	Y
4	ICIS 280-608560/14	50.0	18.139456	50.0	1425572.0	0.362789	Y
5	STD 280-608560/15	50.0	17.62138	50.0	1440625.0	0.352428	Y
6	STD 280-608560/16	50.0	17.244791	50.0	1411951.0	0.344896	Y
7	STD 280-608560/17	50.0	17.18154	50.0	1448575.0	0.343631	Y
8	STD 280-608560/18	50.0	17.344936	50.0	1415514.0	0.346899	Y
9	STD 280-608560/19	50.0	17.148921	50.0	1348665.0	0.342978	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

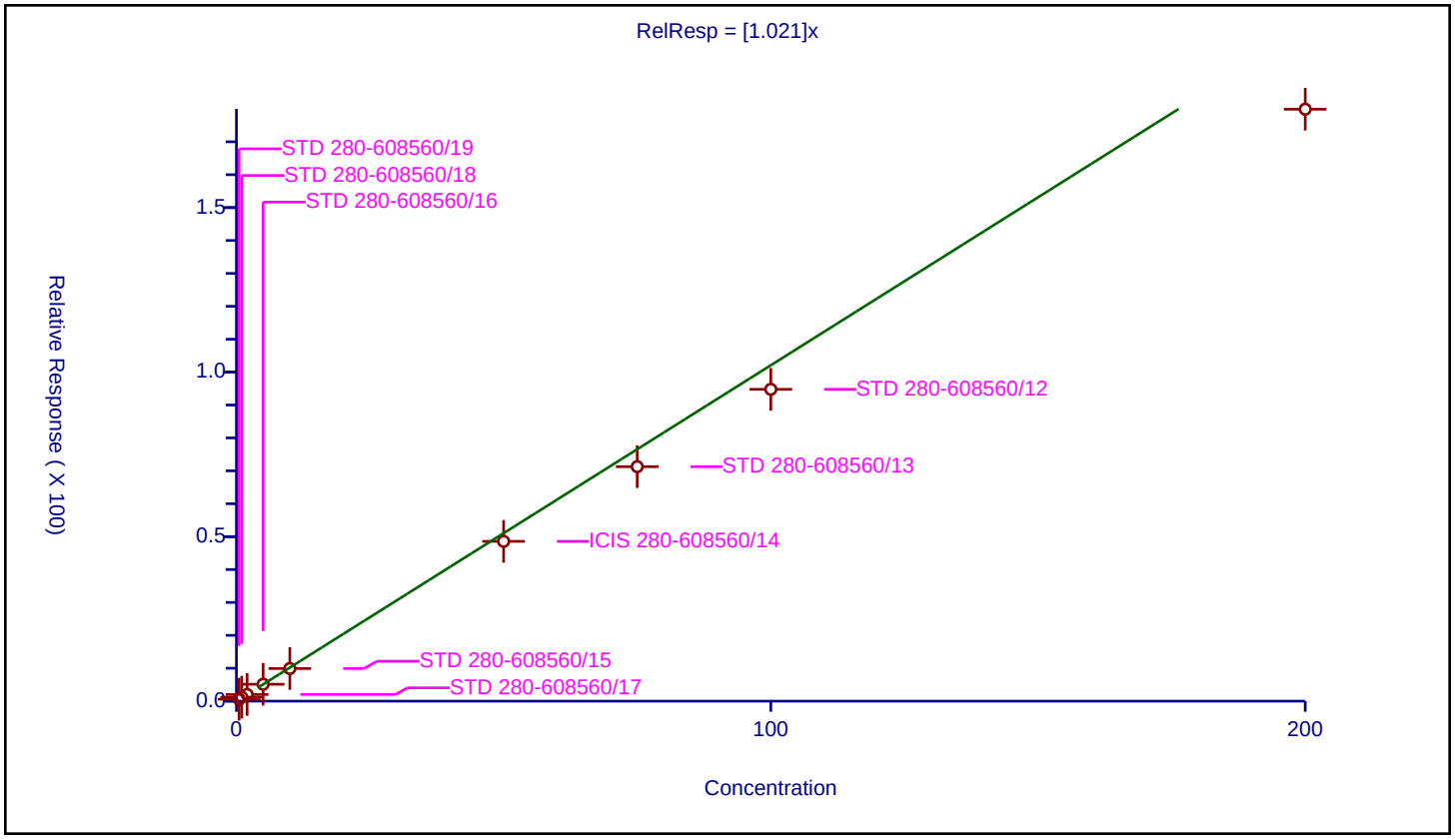
Curve Coefficients

Intercept:	0
Slope:	1.021

Error Coefficients

Standard Error:	2240000
Relative Standard Error:	10.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.590102	50.0	1348665.0	1.180204	Y
2	STD 280-608560/18	1.0	1.206134	50.0	1415514.0	1.206134	Y
3	STD 280-608560/17	2.0	2.028166	50.0	1448575.0	1.014083	Y
4	STD 280-608560/16	5.0	5.134173	50.0	1411951.0	1.026835	Y
5	STD 280-608560/15	10.0	9.912364	50.0	1440625.0	0.991236	Y
6	ICIS 280-608560/14	50.0	48.566891	50.0	1425572.0	0.971338	Y
7	STD 280-608560/13	75.0	71.258946	50.0	1411347.0	0.950119	Y
8	STD 280-608560/12	100.0	94.77431	50.0	1423592.0	0.947743	Y
9	STD 280-608560/11	200.0	179.894025	50.0	1441855.0	0.89947	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

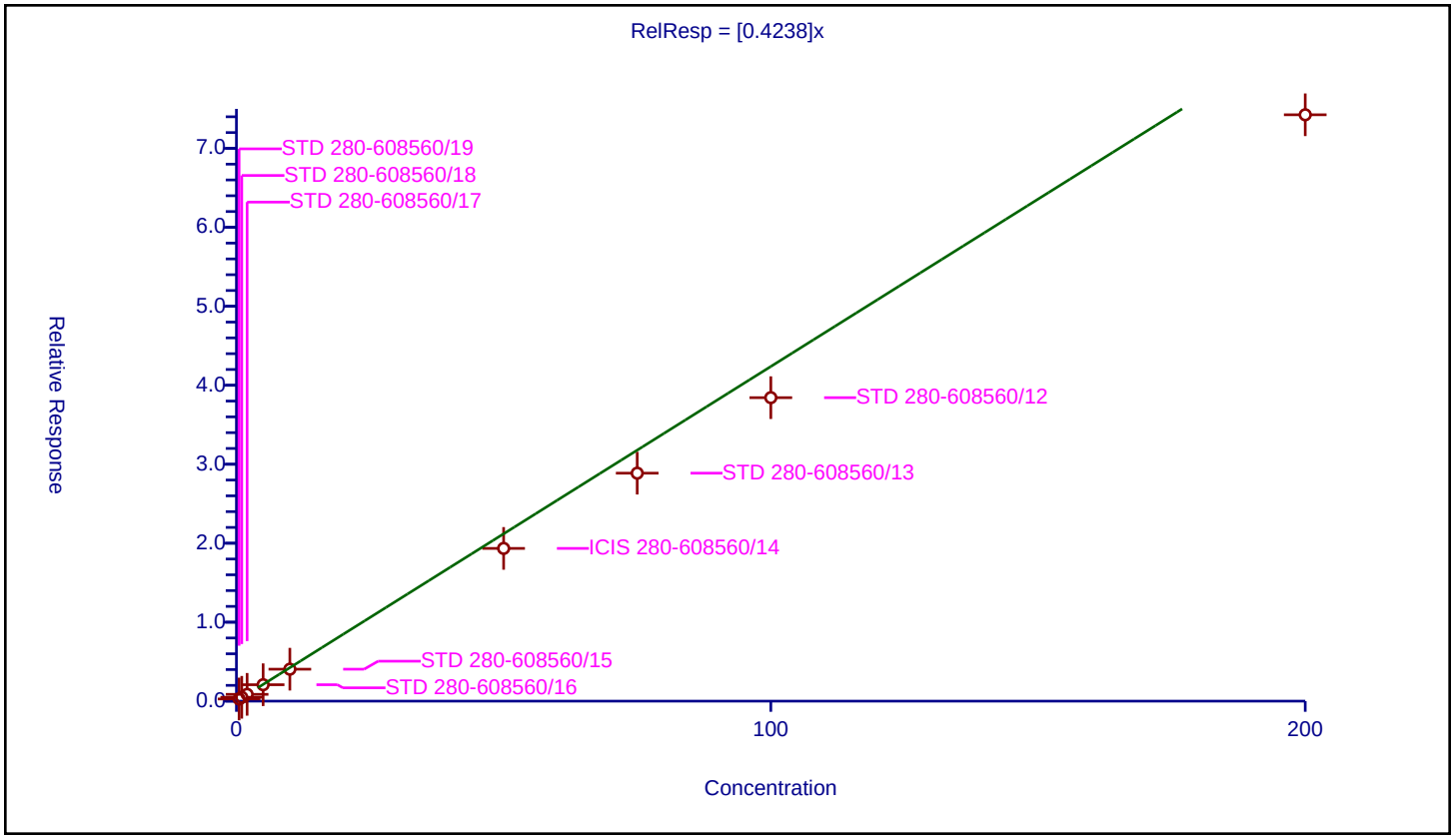
Curve Coefficients

Intercept:	0
Slope:	0.4238

Error Coefficients

Standard Error:	920000
Relative Standard Error:	13.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.274716	50.0	1348665.0	0.549432	Y
2	STD 280-608560/18	1.0	0.486855	50.0	1415514.0	0.486855	Y
3	STD 280-608560/17	2.0	0.860708	50.0	1448575.0	0.430354	Y
4	STD 280-608560/16	5.0	2.077976	50.0	1411951.0	0.415595	Y
5	STD 280-608560/15	10.0	4.046091	50.0	1440625.0	0.404609	Y
6	ICIS 280-608560/14	50.0	19.340693	50.0	1425572.0	0.386814	Y
7	STD 280-608560/13	75.0	28.869017	50.0	1411347.0	0.38492	Y
8	STD 280-608560/12	100.0	38.431271	50.0	1423592.0	0.384313	Y
9	STD 280-608560/11	200.0	74.254589	50.0	1441855.0	0.371273	Y



Calibration / n-Heptane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

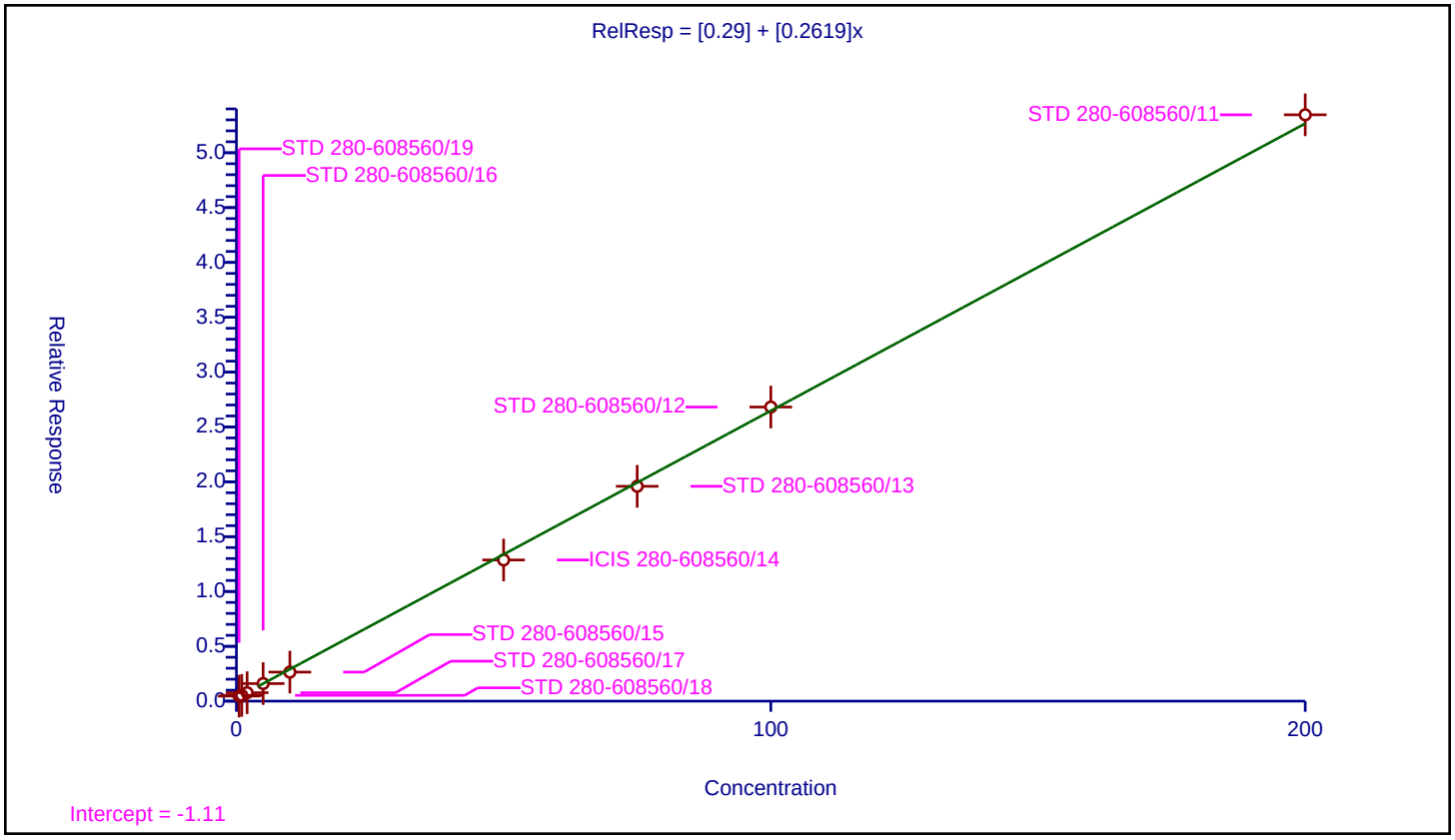
Curve Coefficients

Intercept:	0.29
Slope:	0.2619

Error Coefficients

Standard Error:	698000
Relative Standard Error:	13.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.460974	50.0	1348665.0	0.921949	Y
2	STD 280-608560/18	1.0	0.526699	50.0	1415514.0	0.526699	Y
3	STD 280-608560/17	2.0	0.770067	50.0	1448575.0	0.385034	Y
4	STD 280-608560/16	5.0	1.601897	50.0	1411951.0	0.320379	Y
5	STD 280-608560/15	10.0	2.647323	50.0	1440625.0	0.264732	Y
6	ICIS 280-608560/14	50.0	12.872447	50.0	1425572.0	0.257449	Y
7	STD 280-608560/13	75.0	19.590186	50.0	1411347.0	0.261202	Y
8	STD 280-608560/12	100.0	26.815092	50.0	1423592.0	0.268151	Y
9	STD 280-608560/11	200.0	53.460091	50.0	1441855.0	0.2673	Y



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Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

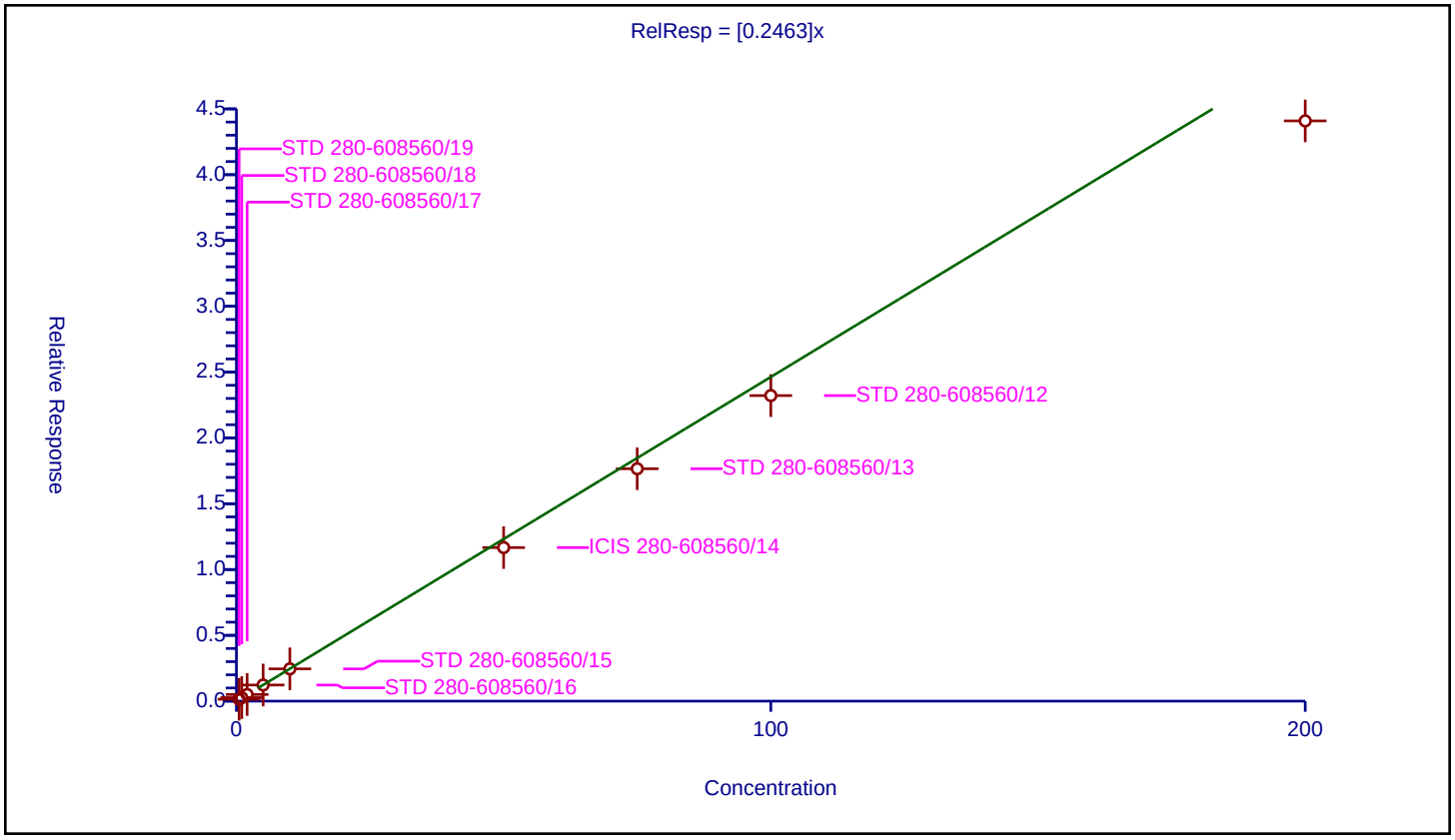
Curve Coefficients

Intercept:	0
Slope:	0.2463

Error Coefficients

Standard Error:	550000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.142326	50.0	1348665.0	0.284652	Y
2	STD 280-608560/18	1.0	0.268136	50.0	1415514.0	0.268136	Y
3	STD 280-608560/17	2.0	0.505014	50.0	1448575.0	0.252507	Y
4	STD 280-608560/16	5.0	1.224865	50.0	1411951.0	0.244973	Y
5	STD 280-608560/15	10.0	2.45154	50.0	1440625.0	0.245154	Y
6	ICIS 280-608560/14	50.0	11.668439	50.0	1425572.0	0.233369	Y
7	STD 280-608560/13	75.0	17.658025	50.0	1411347.0	0.23544	Y
8	STD 280-608560/12	100.0	23.217432	50.0	1423592.0	0.232174	Y
9	STD 280-608560/11	200.0	44.088657	50.0	1441855.0	0.220443	Y



Calibration / 2-Pentanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

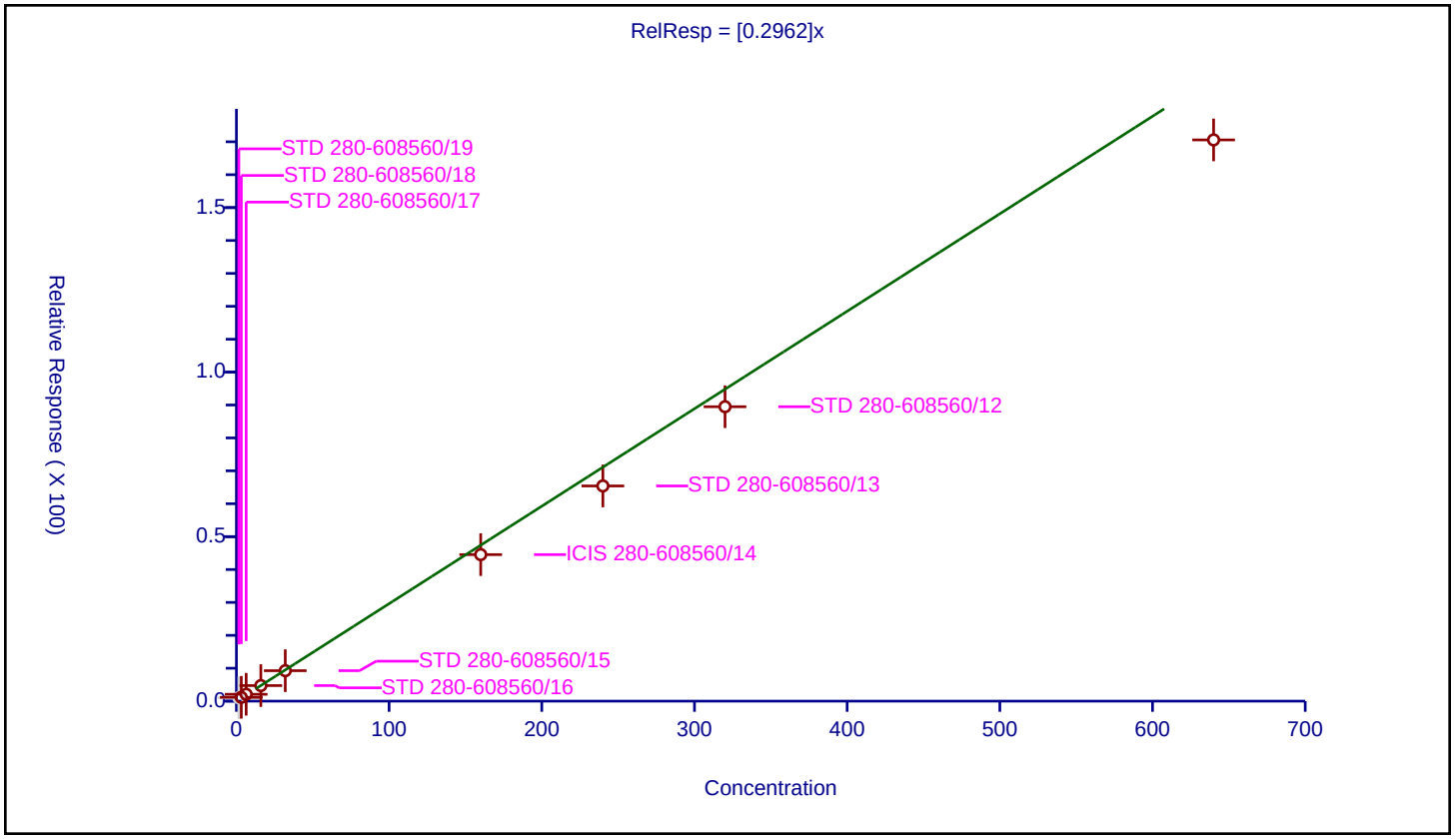
Curve Coefficients

Intercept:	0
Slope:	0.2962

Error Coefficients

Standard Error:	2260000
Relative Standard Error:	10.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	1.6	1.052226	50.0	1348665.0	0.657641	N
2	STD 280-608560/18	3.2	1.158908	50.0	1415514.0	0.362159	Y
3	STD 280-608560/17	6.4	2.085153	50.0	1448575.0	0.325805	Y
4	STD 280-608560/16	16.0	4.731574	50.0	1411951.0	0.295723	Y
5	STD 280-608560/15	32.0	9.254525	50.0	1440625.0	0.289204	Y
6	ICIS 280-608560/14	160.0	44.536649	50.0	1425572.0	0.278354	Y
7	STD 280-608560/13	240.0	65.403441	50.0	1411347.0	0.272514	Y
8	STD 280-608560/12	320.0	89.481045	50.0	1423592.0	0.279628	Y
9	STD 280-608560/11	640.0	170.570064	50.0	1441855.0	0.266516	Y



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Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

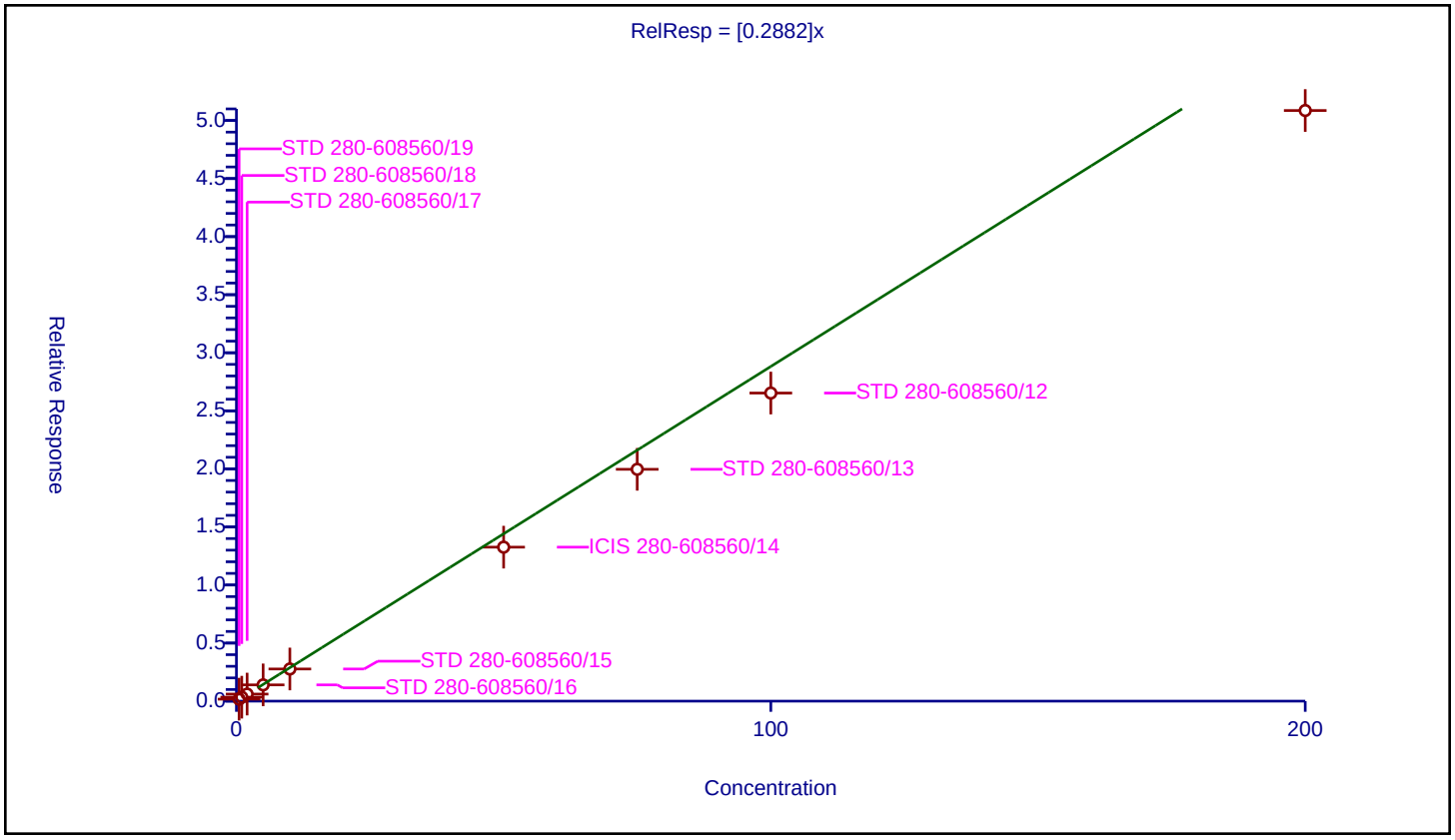
Curve Coefficients

Intercept:	0
Slope:	0.2882

Error Coefficients

Standard Error:	632000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.170242	50.0	1348665.0	0.340485	Y
2	STD 280-608560/18	1.0	0.341113	50.0	1415514.0	0.341113	Y
3	STD 280-608560/17	2.0	0.608046	50.0	1448575.0	0.304023	Y
4	STD 280-608560/16	5.0	1.40104	50.0	1411951.0	0.280208	Y
5	STD 280-608560/15	10.0	2.768868	50.0	1440625.0	0.276887	Y
6	ICIS 280-608560/14	50.0	13.261063	50.0	1425572.0	0.265221	Y
7	STD 280-608560/13	75.0	19.964899	50.0	1411347.0	0.266199	Y
8	STD 280-608560/12	100.0	26.530986	50.0	1423592.0	0.26531	Y
9	STD 280-608560/11	200.0	50.861182	50.0	1441855.0	0.254306	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

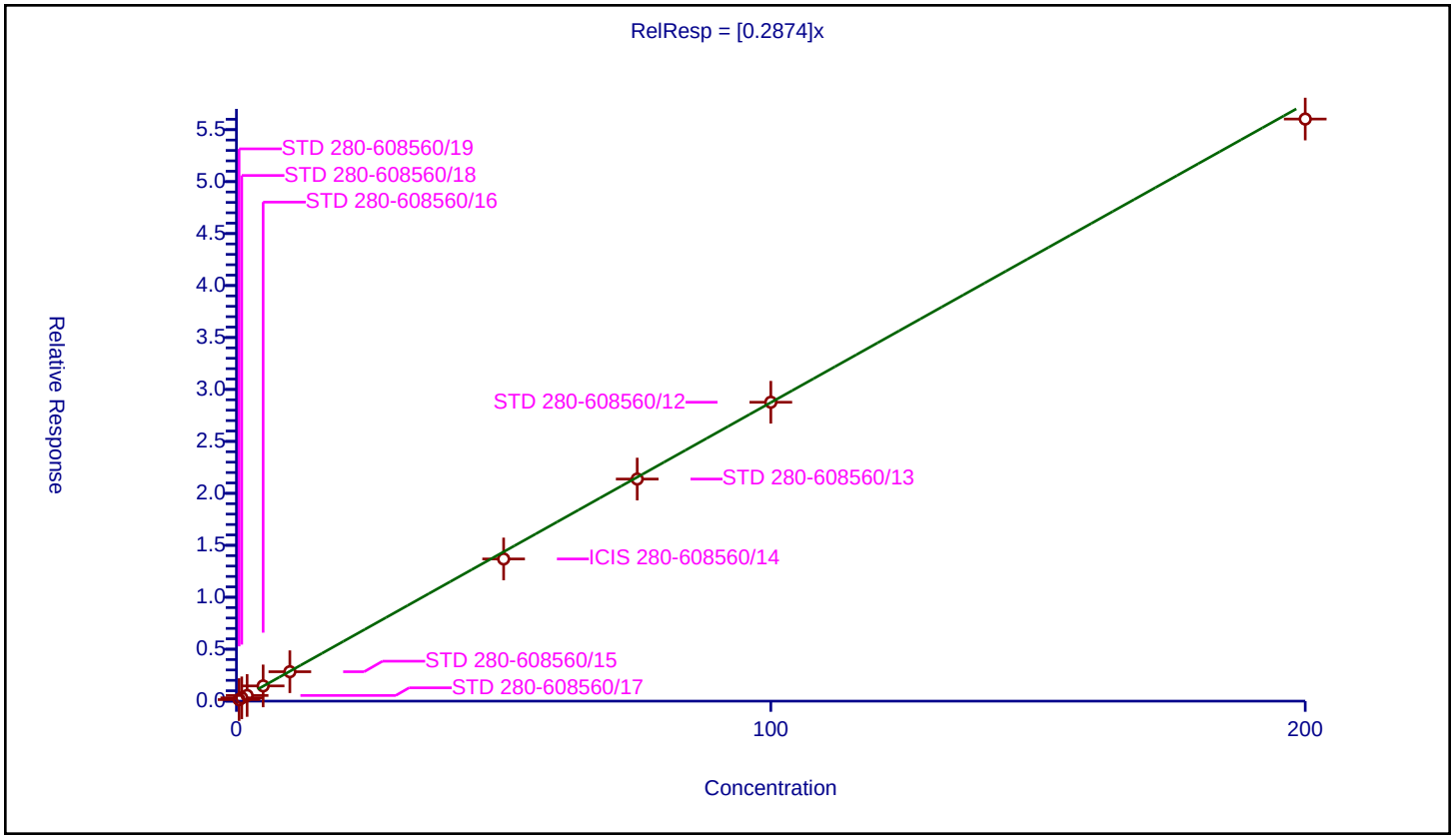
Curve Coefficients

Intercept:	0
Slope:	0.2874

Error Coefficients

Standard Error:	690000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.147034	50.0	1348665.0	0.294069	Y
2	STD 280-608560/18	1.0	0.317411	50.0	1415514.0	0.317411	Y
3	STD 280-608560/17	2.0	0.54457	50.0	1448575.0	0.272285	Y
4	STD 280-608560/16	5.0	1.465844	50.0	1411951.0	0.293169	Y
5	STD 280-608560/15	10.0	2.832069	50.0	1440625.0	0.283207	Y
6	ICIS 280-608560/14	50.0	13.68342	50.0	1425572.0	0.273668	Y
7	STD 280-608560/13	75.0	21.374828	50.0	1411347.0	0.284998	Y
8	STD 280-608560/12	100.0	28.766564	50.0	1423592.0	0.287666	Y
9	STD 280-608560/11	200.0	56.022242	50.0	1441855.0	0.280111	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

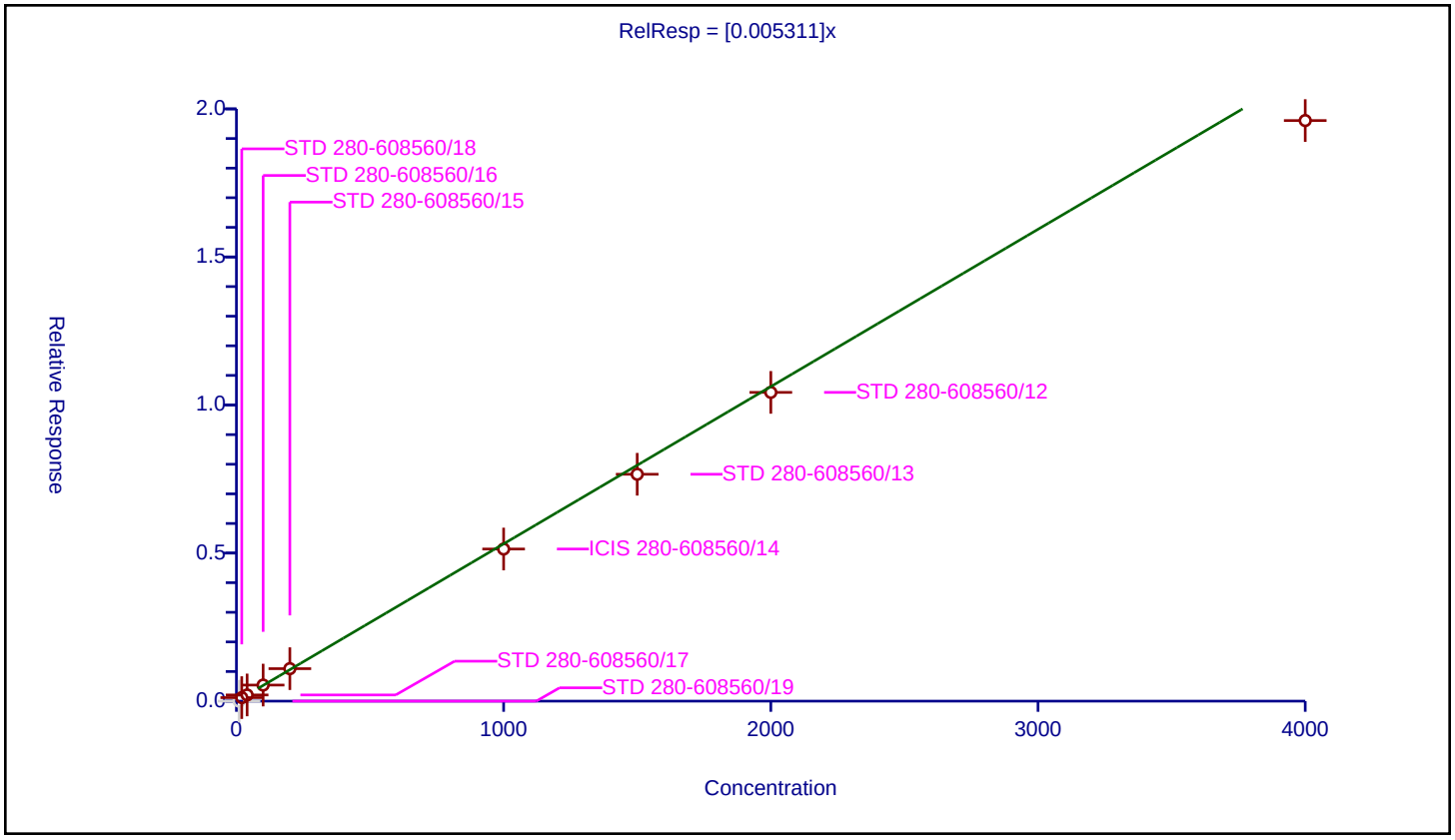
Curve Coefficients

Intercept:	0
Slope:	0.005311

Error Coefficients

Standard Error:	261000
Relative Standard Error:	6.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	10.0	0.0	50.0	1348665.0	0.0	N
2	STD 280-608560/18	20.0	0.119568	50.0	1415514.0	0.005978	Y
3	STD 280-608560/17	40.0	0.209482	50.0	1448575.0	0.005237	Y
4	STD 280-608560/16	100.0	0.543008	50.0	1411951.0	0.00543	Y
5	STD 280-608560/15	200.0	1.096677	50.0	1440625.0	0.005483	Y
6	ICIS 280-608560/14	1000.0	5.137412	50.0	1425572.0	0.005137	Y
7	STD 280-608560/13	1500.0	7.662148	50.0	1411347.0	0.005108	Y
8	STD 280-608560/12	2000.0	10.426934	50.0	1423592.0	0.005213	Y
9	STD 280-608560/11	4000.0	19.605786	50.0	1441855.0	0.004901	Y



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Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

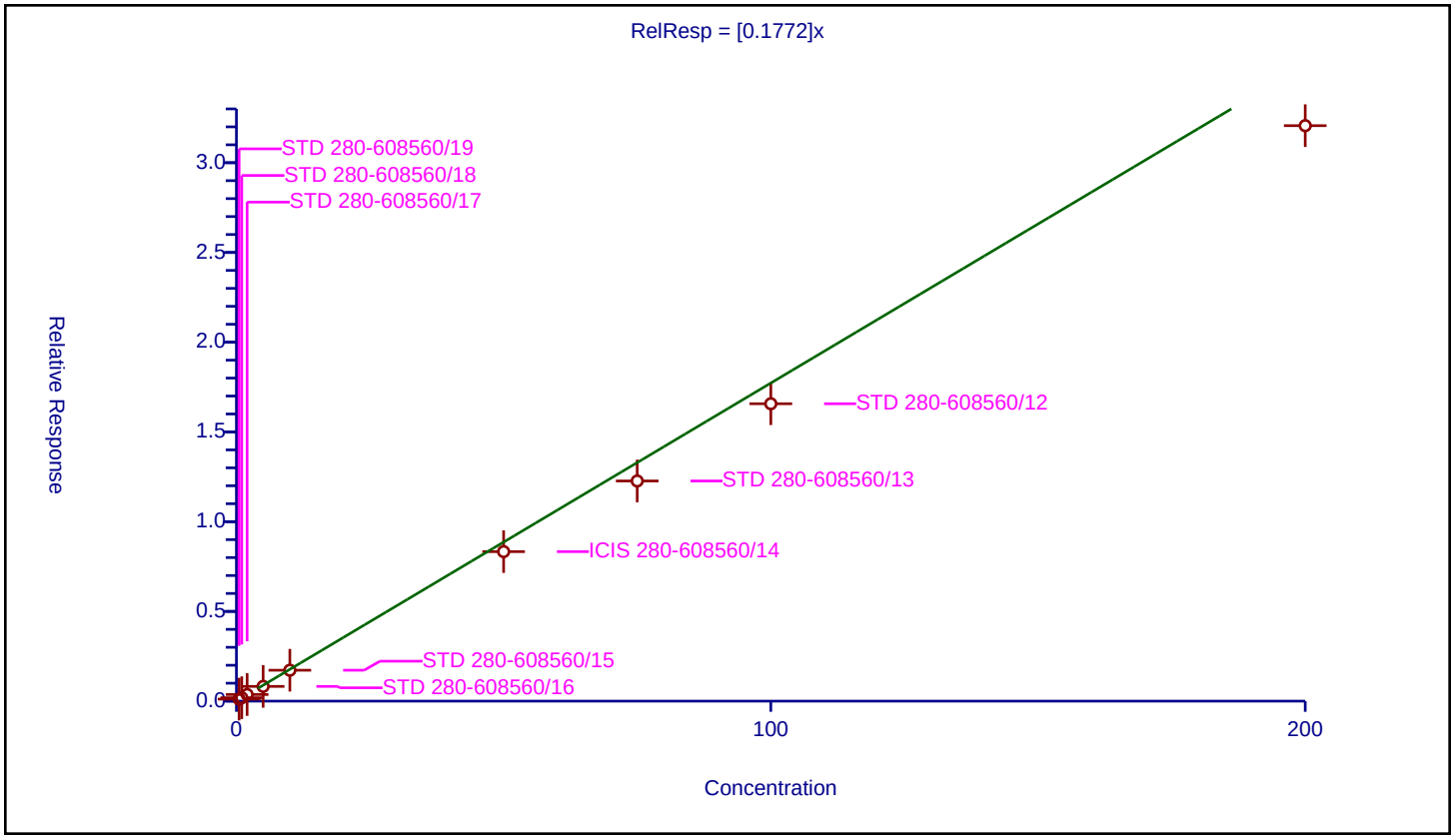
Curve Coefficients

Intercept:	0
Slope:	0.1772

Error Coefficients

Standard Error:	396000
Relative Standard Error:	12.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.113779	50.0	1348665.0	0.227558	Y
2	STD 280-608560/18	1.0	0.190461	50.0	1415514.0	0.190461	Y
3	STD 280-608560/17	2.0	0.369156	50.0	1448575.0	0.184578	Y
4	STD 280-608560/16	5.0	0.820779	50.0	1411951.0	0.164156	Y
5	STD 280-608560/15	10.0	1.722343	50.0	1440625.0	0.172234	Y
6	ICIS 280-608560/14	50.0	8.32999	50.0	1425572.0	0.1666	Y
7	STD 280-608560/13	75.0	12.268103	50.0	1411347.0	0.163575	Y
8	STD 280-608560/12	100.0	16.57097	50.0	1423592.0	0.16571	Y
9	STD 280-608560/11	200.0	32.064701	50.0	1441855.0	0.160324	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

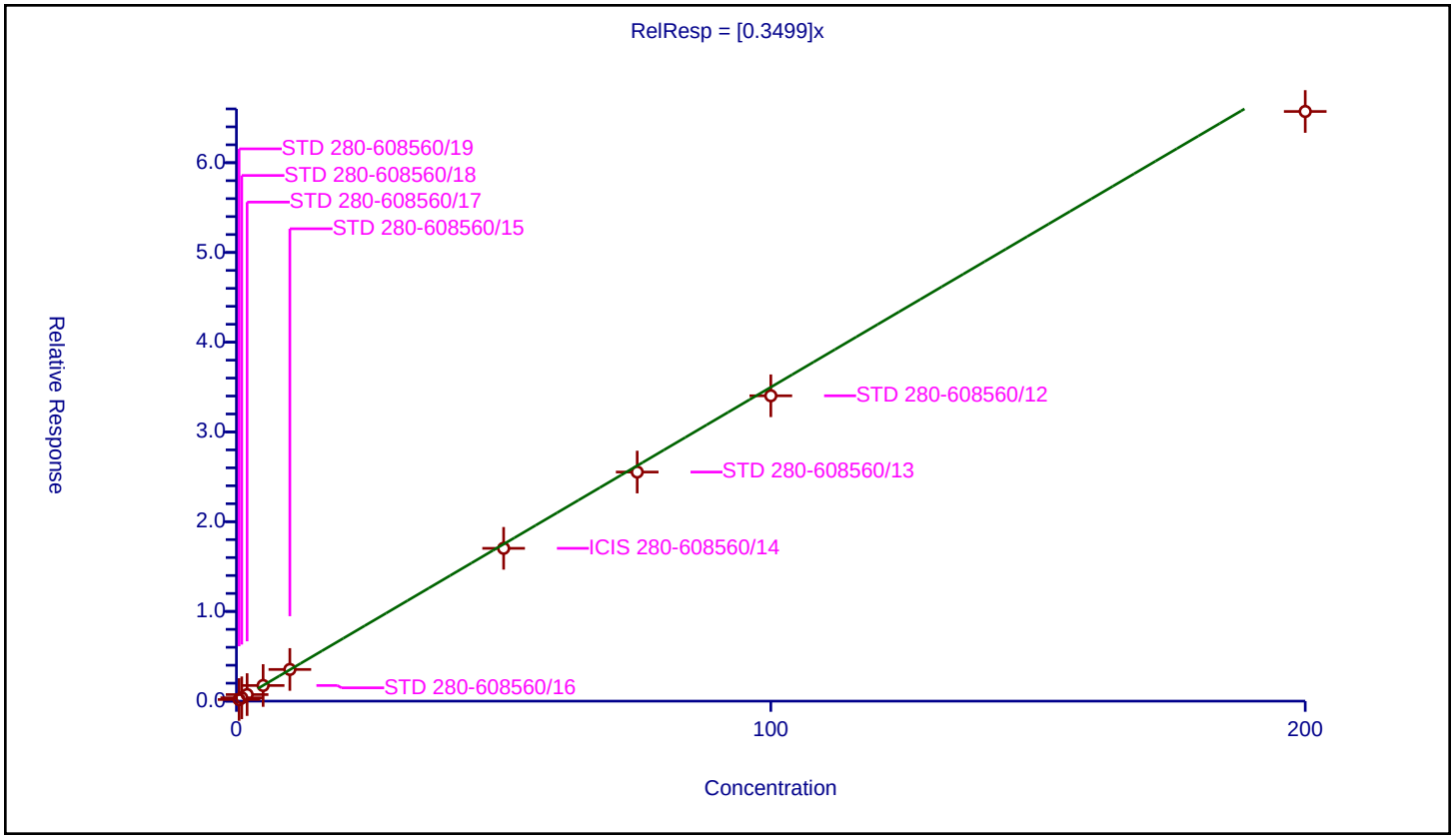
Curve Coefficients

Intercept:	0
Slope:	0.3499

Error Coefficients

Standard Error:	814000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.179845	50.0	1348665.0	0.359689	Y
2	STD 280-608560/18	1.0	0.371561	50.0	1415514.0	0.371561	Y
3	STD 280-608560/17	2.0	0.731477	50.0	1448575.0	0.365739	Y
4	STD 280-608560/16	5.0	1.744359	50.0	1411951.0	0.348872	Y
5	STD 280-608560/15	10.0	3.5318	50.0	1440625.0	0.35318	Y
6	ICIS 280-608560/14	50.0	17.029305	50.0	1425572.0	0.340586	Y
7	STD 280-608560/13	75.0	25.530433	50.0	1411347.0	0.340406	Y
8	STD 280-608560/12	100.0	34.030888	50.0	1423592.0	0.340309	Y
9	STD 280-608560/11	200.0	65.712294	50.0	1441855.0	0.328561	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

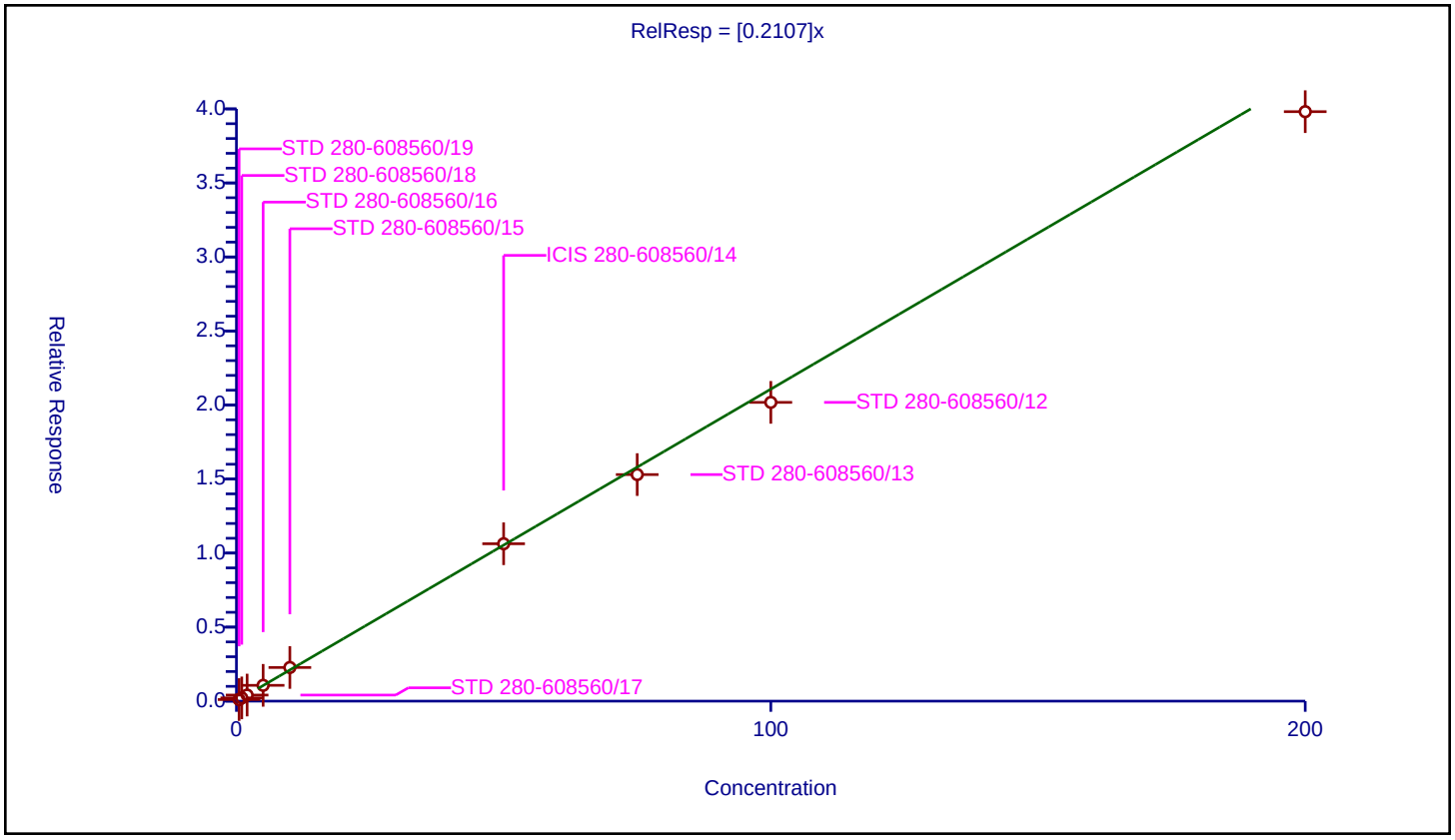
Curve Coefficients

Intercept:	0
Slope:	0.2107

Error Coefficients

Standard Error:	491000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.107069	50.0	1348665.0	0.214138	Y
2	STD 280-608560/18	1.0	0.219037	50.0	1415514.0	0.219037	Y
3	STD 280-608560/17	2.0	0.410369	50.0	1448575.0	0.205184	Y
4	STD 280-608560/16	5.0	1.067247	50.0	1411951.0	0.213449	Y
5	STD 280-608560/15	10.0	2.273076	50.0	1440625.0	0.227308	Y
6	ICIS 280-608560/14	50.0	10.629768	50.0	1425572.0	0.212595	Y
7	STD 280-608560/13	75.0	15.30219	50.0	1411347.0	0.204029	Y
8	STD 280-608560/12	100.0	20.178745	50.0	1423592.0	0.201787	Y
9	STD 280-608560/11	200.0	39.813678	50.0	1441855.0	0.199068	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

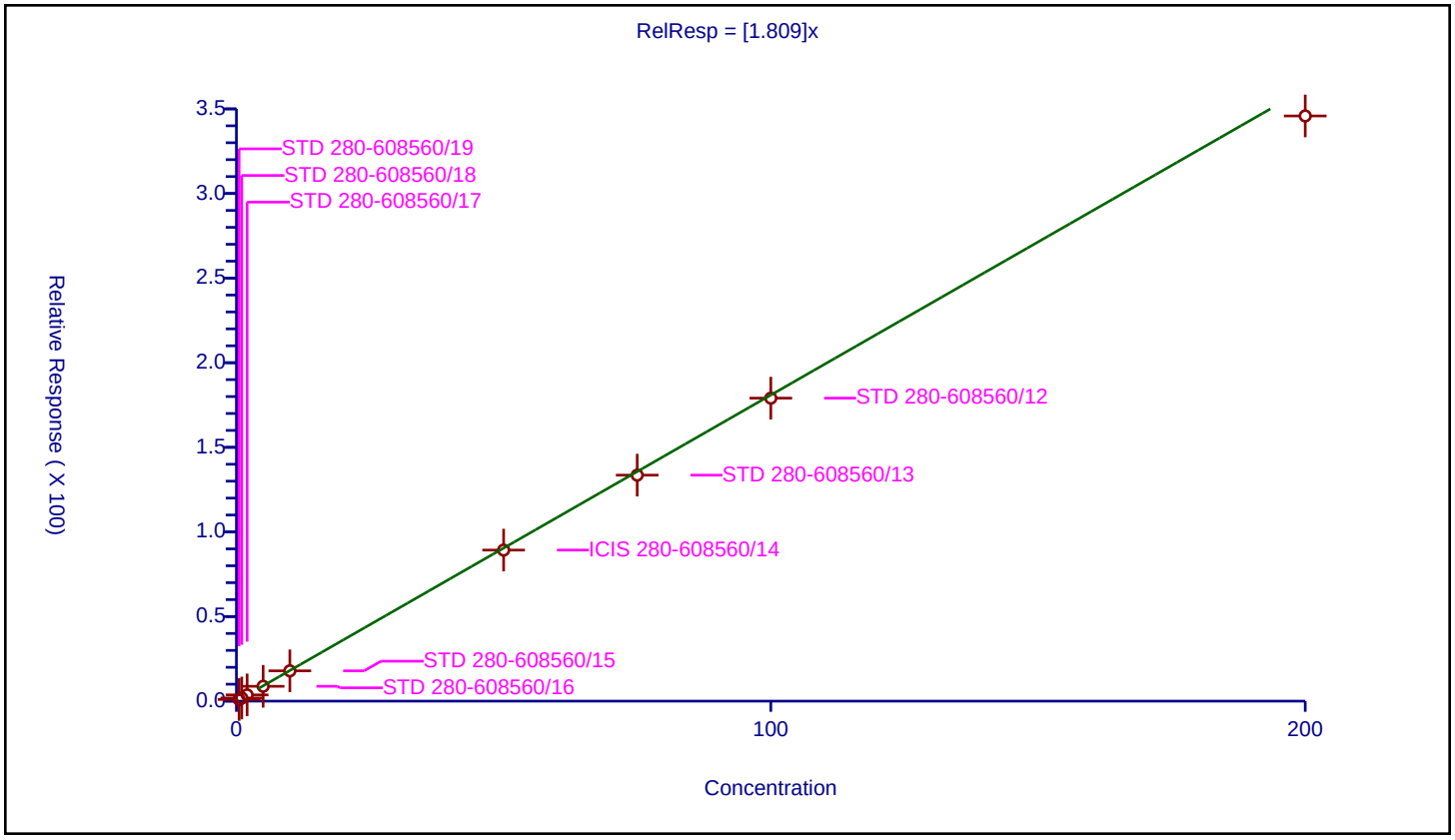
Curve Coefficients

Intercept:	0
Slope:	1.809

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.978402	50.0	332941.0	1.956803	Y
2	STD 280-608560/18	1.0	1.849436	50.0	347944.0	1.849436	Y
3	STD 280-608560/17	2.0	3.688134	50.0	351709.0	1.844067	Y
4	STD 280-608560/16	5.0	8.772604	50.0	340925.0	1.754521	Y
5	STD 280-608560/15	10.0	17.898646	50.0	346191.0	1.789865	Y
6	ICIS 280-608560/14	50.0	89.274579	50.0	344779.0	1.785492	Y
7	STD 280-608560/13	75.0	133.556752	50.0	345838.0	1.780757	Y
8	STD 280-608560/12	100.0	179.059212	50.0	346231.0	1.790592	Y
9	STD 280-608560/11	200.0	345.830263	50.0	354231.0	1.729151	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

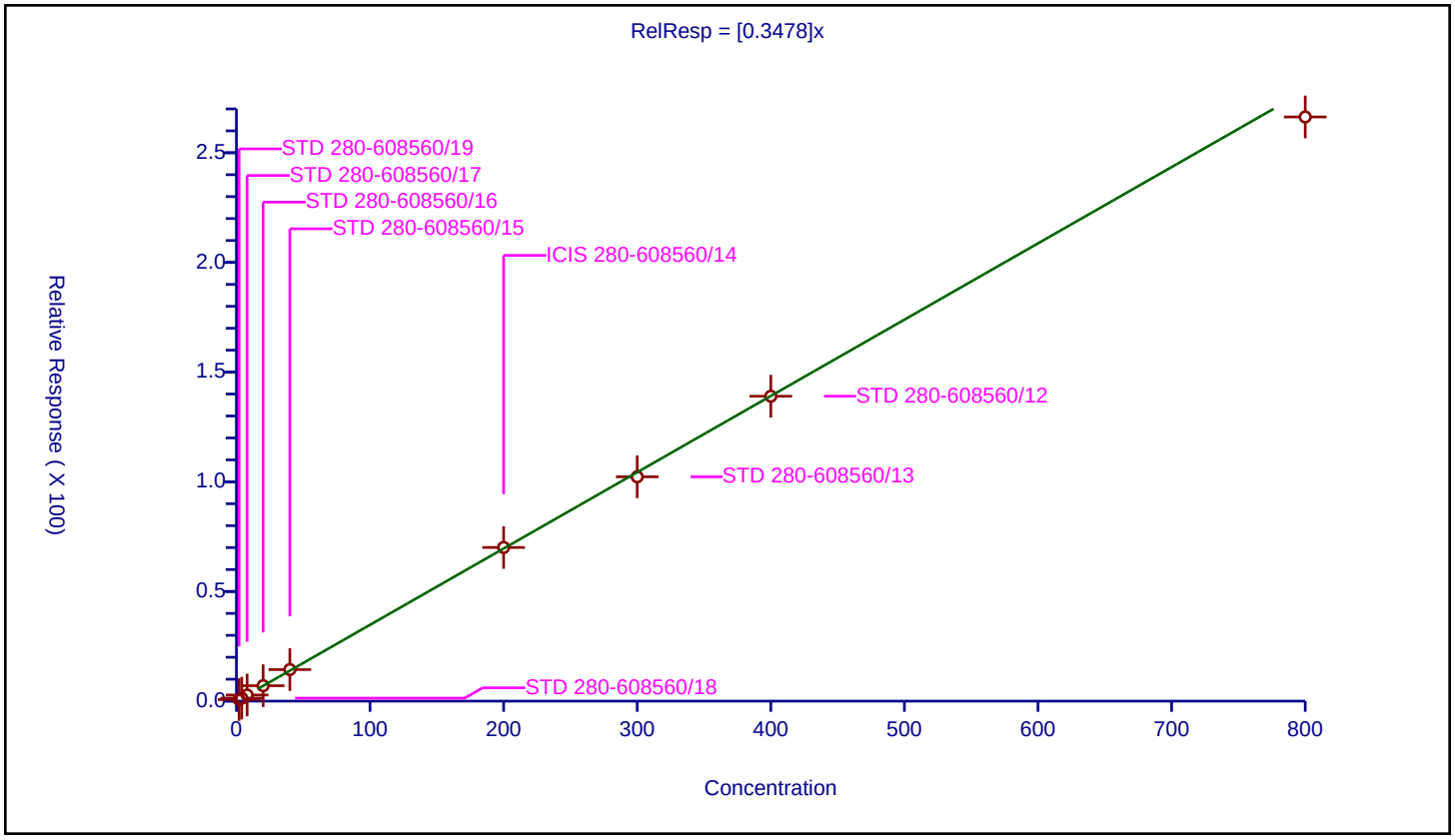
Curve Coefficients

Intercept:	0
Slope:	0.3478

Error Coefficients

Standard Error:	3300000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	2.0	0.711074	50.0	1348665.0	0.355537	Y
2	STD 280-608560/18	4.0	1.365617	50.0	1415514.0	0.341404	Y
3	STD 280-608560/17	8.0	2.801477	50.0	1448575.0	0.350185	Y
4	STD 280-608560/16	20.0	7.040152	50.0	1411951.0	0.352008	Y
5	STD 280-608560/15	40.0	14.385319	50.0	1440625.0	0.359633	Y
6	ICIS 280-608560/14	200.0	70.057458	50.0	1425572.0	0.350287	Y
7	STD 280-608560/13	300.0	102.282217	50.0	1411347.0	0.340941	Y
8	STD 280-608560/12	400.0	139.009035	50.0	1423592.0	0.347523	Y
9	STD 280-608560/11	800.0	266.315129	50.0	1441855.0	0.332894	Y



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Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

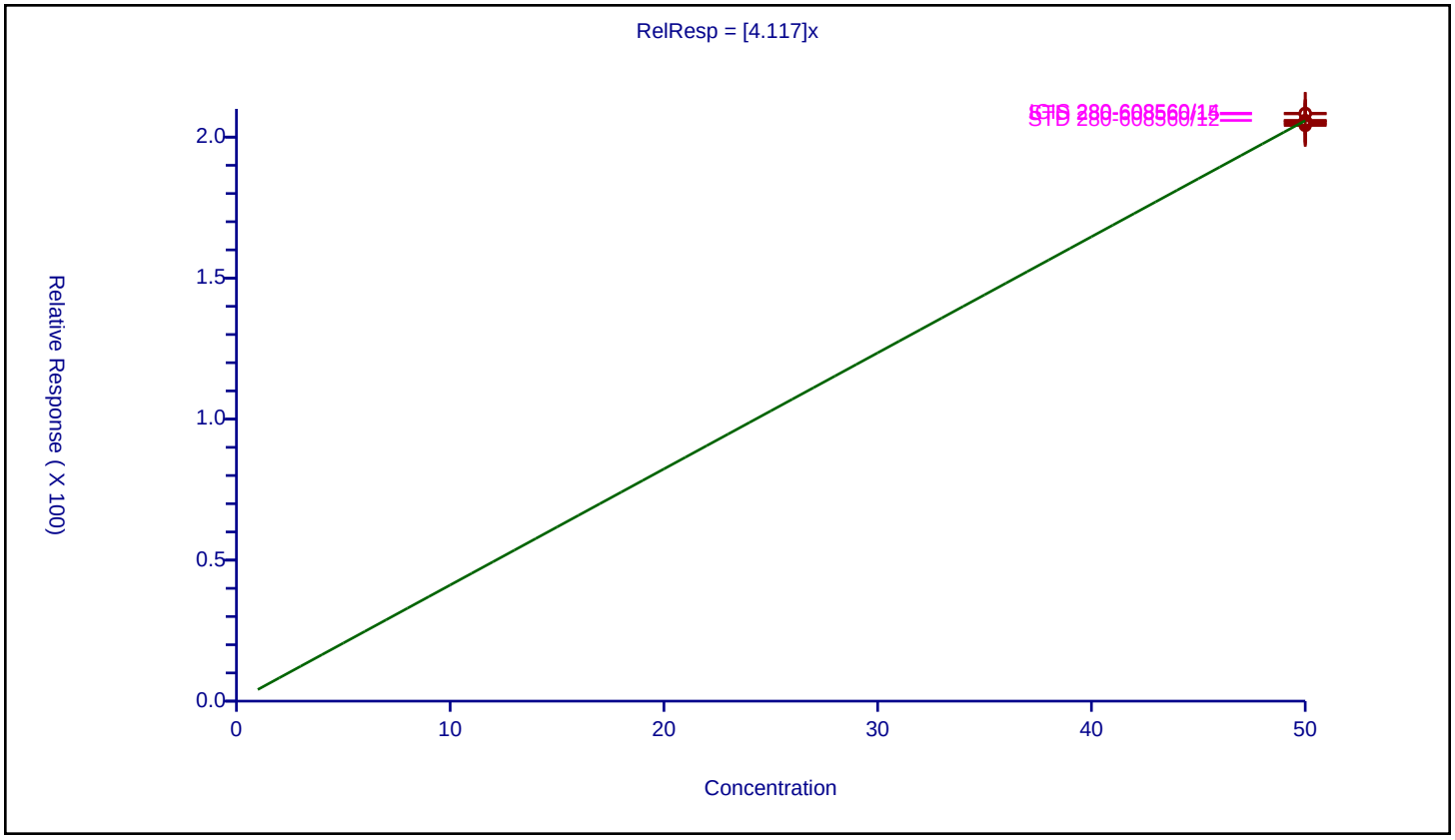
Curve Coefficients

Intercept:	0
Slope:	4.117

Error Coefficients

Standard Error:	1510000
Relative Standard Error:	0.7
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/11	50.0	204.582462	50.0	354231.0	4.091649	Y
2	STD 280-608560/12	50.0	205.907472	50.0	346231.0	4.118149	Y
3	STD 280-608560/13	50.0	205.215159	50.0	345838.0	4.104303	Y
4	ICIS 280-608560/14	50.0	208.450196	50.0	344779.0	4.169004	Y
5	STD 280-608560/15	50.0	208.237938	50.0	346191.0	4.164759	Y
6	STD 280-608560/16	50.0	205.767691	50.0	340925.0	4.115354	Y
7	STD 280-608560/17	50.0	205.555729	50.0	351709.0	4.111115	Y
8	STD 280-608560/18	50.0	204.113306	50.0	347944.0	4.082266	Y
9	STD 280-608560/19	50.0	204.693925	50.0	332941.0	4.093878	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

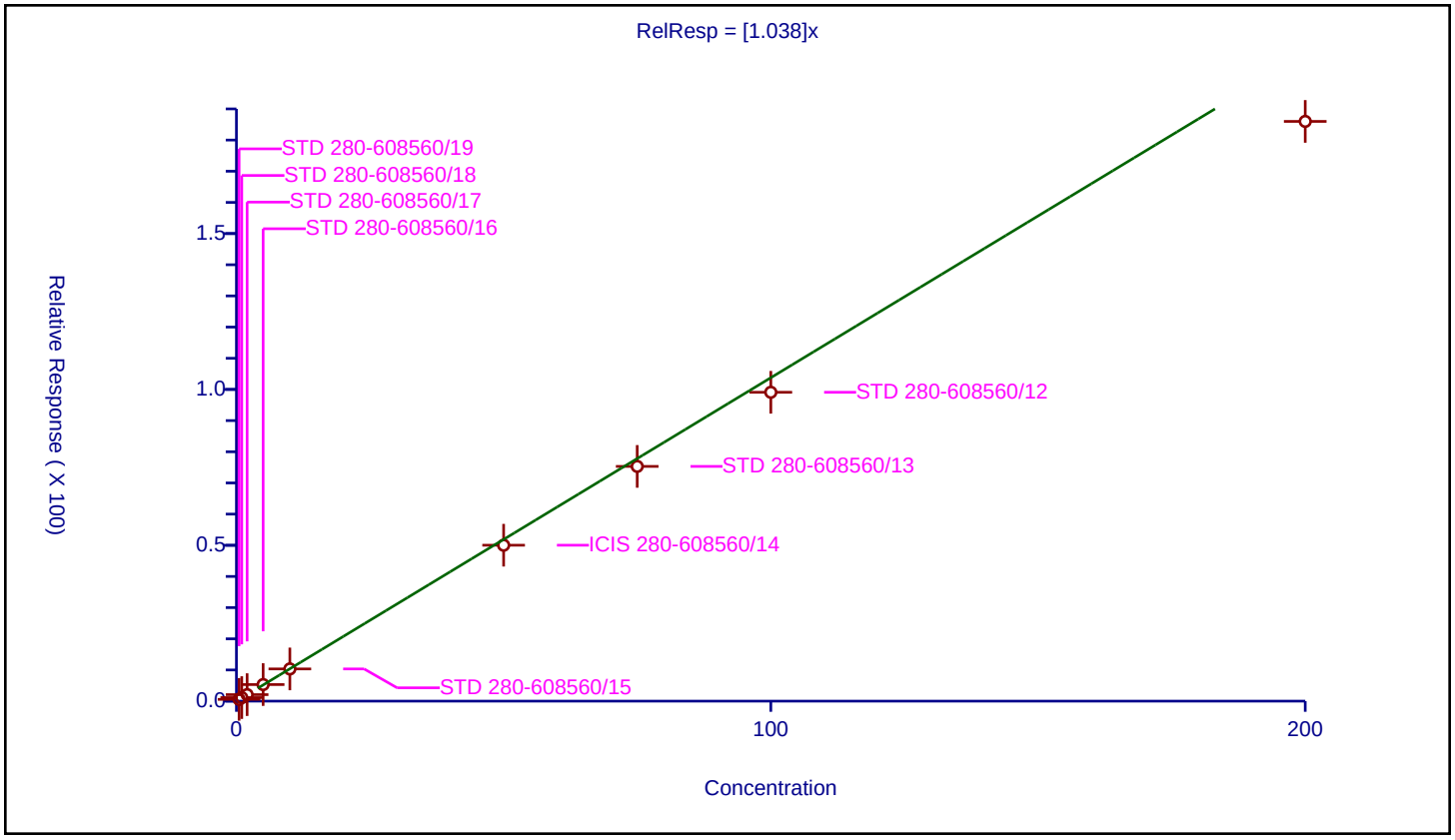
Curve Coefficients

Intercept:	0
Slope:	1.038

Error Coefficients

Standard Error:	2330000
Relative Standard Error:	6.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.566894	50.0	1348665.0	1.133788	Y
2	STD 280-608560/18	1.0	1.140081	50.0	1415514.0	1.140081	Y
3	STD 280-608560/17	2.0	2.085015	50.0	1448575.0	1.042507	Y
4	STD 280-608560/16	5.0	5.316757	50.0	1411951.0	1.063351	Y
5	STD 280-608560/15	10.0	10.332738	50.0	1440625.0	1.033274	Y
6	ICIS 280-608560/14	50.0	50.02606	50.0	1425572.0	1.000521	Y
7	STD 280-608560/13	75.0	75.311033	50.0	1411347.0	1.004147	Y
8	STD 280-608560/12	100.0	99.083832	50.0	1423592.0	0.990838	Y
9	STD 280-608560/11	200.0	185.986351	50.0	1441855.0	0.929932	Y



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Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

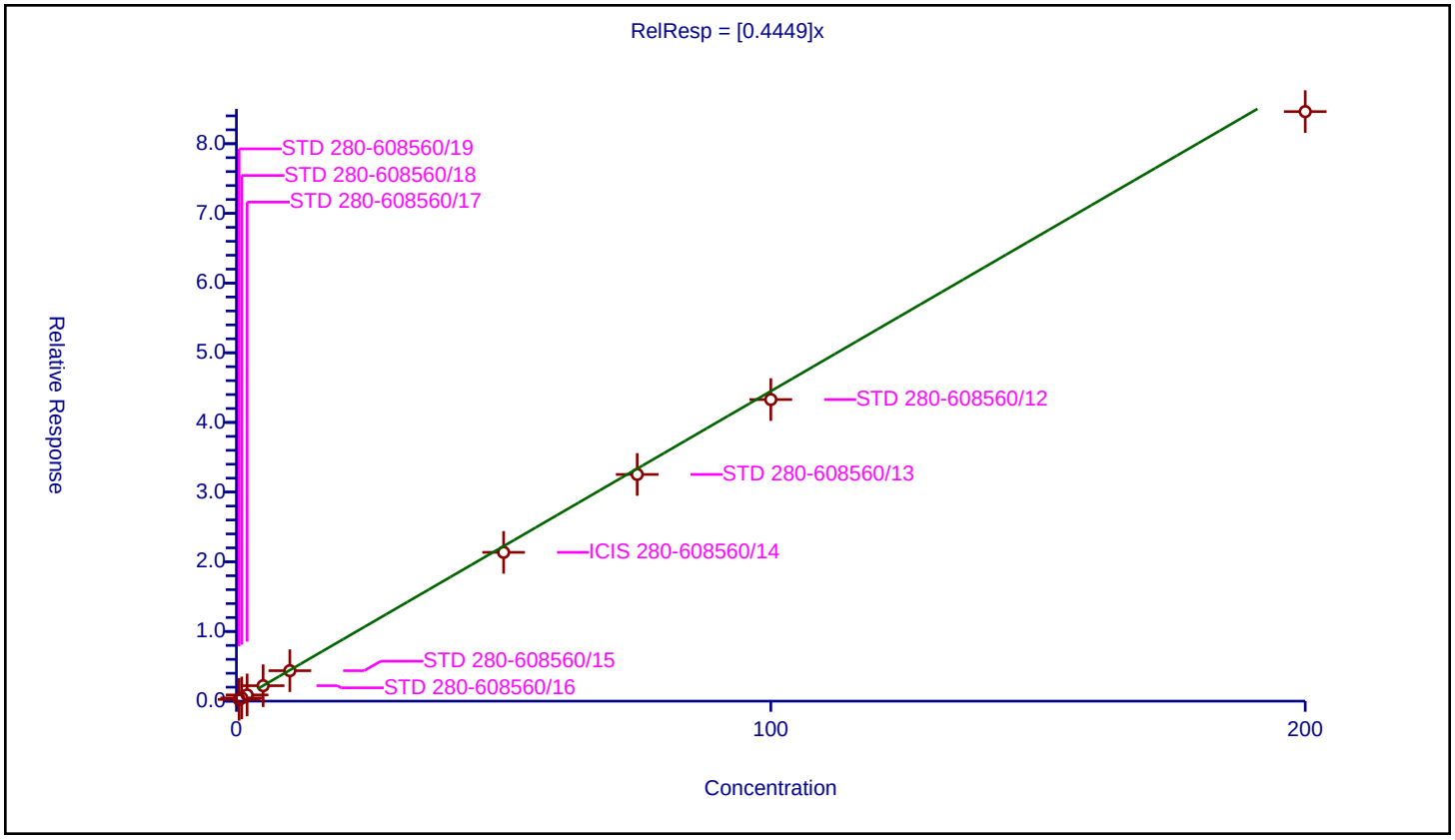
Curve Coefficients

Intercept:	0
Slope:	0.4449

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.249395	50.0	1348665.0	0.49879	Y
2	STD 280-608560/18	1.0	0.462482	50.0	1415514.0	0.462482	Y
3	STD 280-608560/17	2.0	0.891842	50.0	1448575.0	0.445921	Y
4	STD 280-608560/16	5.0	2.214489	50.0	1411951.0	0.442898	Y
5	STD 280-608560/15	10.0	4.370811	50.0	1440625.0	0.437081	Y
6	ICIS 280-608560/14	50.0	21.352973	50.0	1425572.0	0.427059	Y
7	STD 280-608560/13	75.0	32.535408	50.0	1411347.0	0.433805	Y
8	STD 280-608560/12	100.0	43.286208	50.0	1423592.0	0.432862	Y
9	STD 280-608560/11	200.0	84.611698	50.0	1441855.0	0.423058	Y



Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

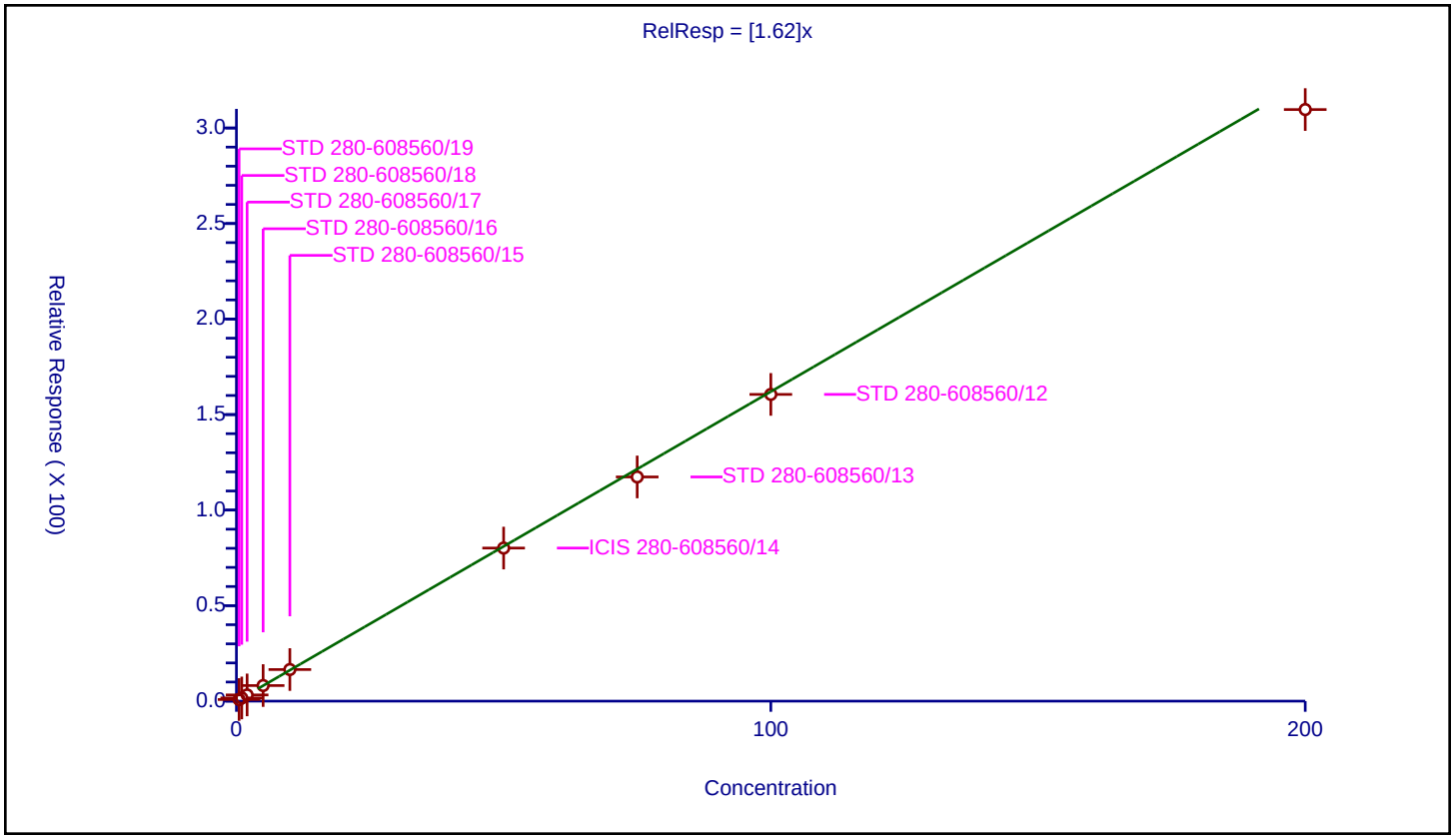
Curve Coefficients

Intercept:	0
Slope:	1.62

Error Coefficients

Standard Error:	937000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.84099	50.0	332941.0	1.68198	Y
2	STD 280-608560/18	1.0	1.662624	50.0	347944.0	1.662624	Y
3	STD 280-608560/17	2.0	3.256385	50.0	351709.0	1.628193	Y
4	STD 280-608560/16	5.0	8.166899	50.0	340925.0	1.63338	Y
5	STD 280-608560/15	10.0	16.534225	50.0	346191.0	1.653423	Y
6	ICIS 280-608560/14	50.0	80.127705	50.0	344779.0	1.602554	Y
7	STD 280-608560/13	75.0	117.34526	50.0	345838.0	1.564603	Y
8	STD 280-608560/12	100.0	160.552059	50.0	346231.0	1.605521	Y
9	STD 280-608560/11	200.0	309.65754	50.0	354231.0	1.548288	Y



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Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

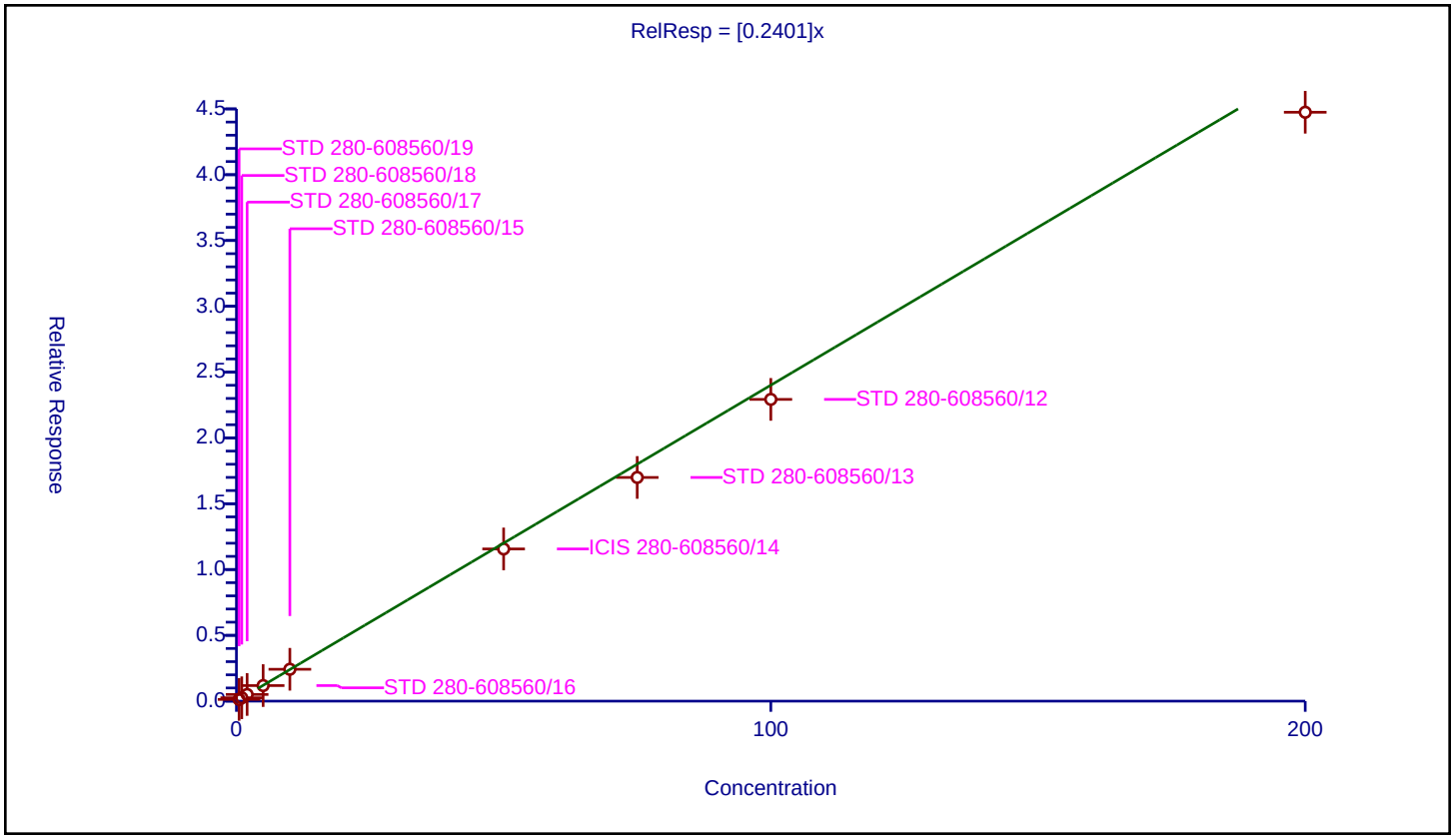
Curve Coefficients

Intercept:	0
Slope:	0.2401

Error Coefficients

Standard Error:	552000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.131389	50.0	1348665.0	0.262778	Y
2	STD 280-608560/18	1.0	0.255243	50.0	1415514.0	0.255243	Y
3	STD 280-608560/17	2.0	0.506256	50.0	1448575.0	0.253128	Y
4	STD 280-608560/16	5.0	1.182548	50.0	1411951.0	0.23651	Y
5	STD 280-608560/15	10.0	2.42197	50.0	1440625.0	0.242197	Y
6	ICIS 280-608560/14	50.0	11.563674	50.0	1425572.0	0.231273	Y
7	STD 280-608560/13	75.0	16.99621	50.0	1411347.0	0.226616	Y
8	STD 280-608560/12	100.0	22.927039	50.0	1423592.0	0.22927	Y
9	STD 280-608560/11	200.0	44.7459	50.0	1441855.0	0.22373	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

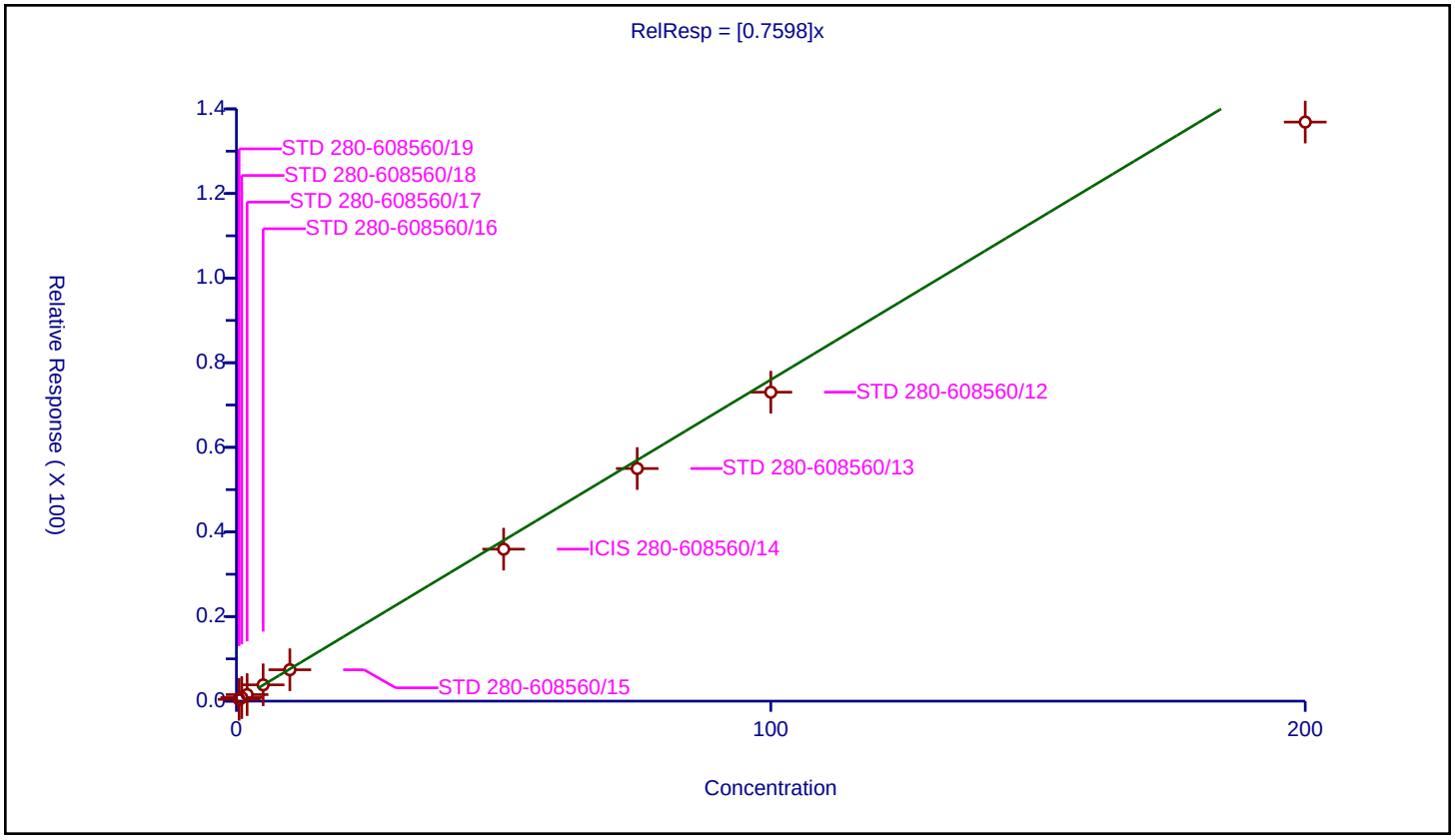
Curve Coefficients

Intercept:	0
Slope:	0.7598

Error Coefficients

Standard Error:	419000
Relative Standard Error:	7.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.423799	50.0	332941.0	0.847598	Y
2	STD 280-608560/18	1.0	0.840509	50.0	347944.0	0.840509	Y
3	STD 280-608560/17	2.0	1.543463	50.0	351709.0	0.771732	Y
4	STD 280-608560/16	5.0	3.847327	50.0	340925.0	0.769465	Y
5	STD 280-608560/15	10.0	7.420615	50.0	346191.0	0.742061	Y
6	ICIS 280-608560/14	50.0	35.925477	50.0	344779.0	0.71851	Y
7	STD 280-608560/13	75.0	54.987595	50.0	345838.0	0.733168	Y
8	STD 280-608560/12	100.0	73.033466	50.0	346231.0	0.730335	Y
9	STD 280-608560/11	200.0	136.889629	50.0	354231.0	0.684448	Y



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Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

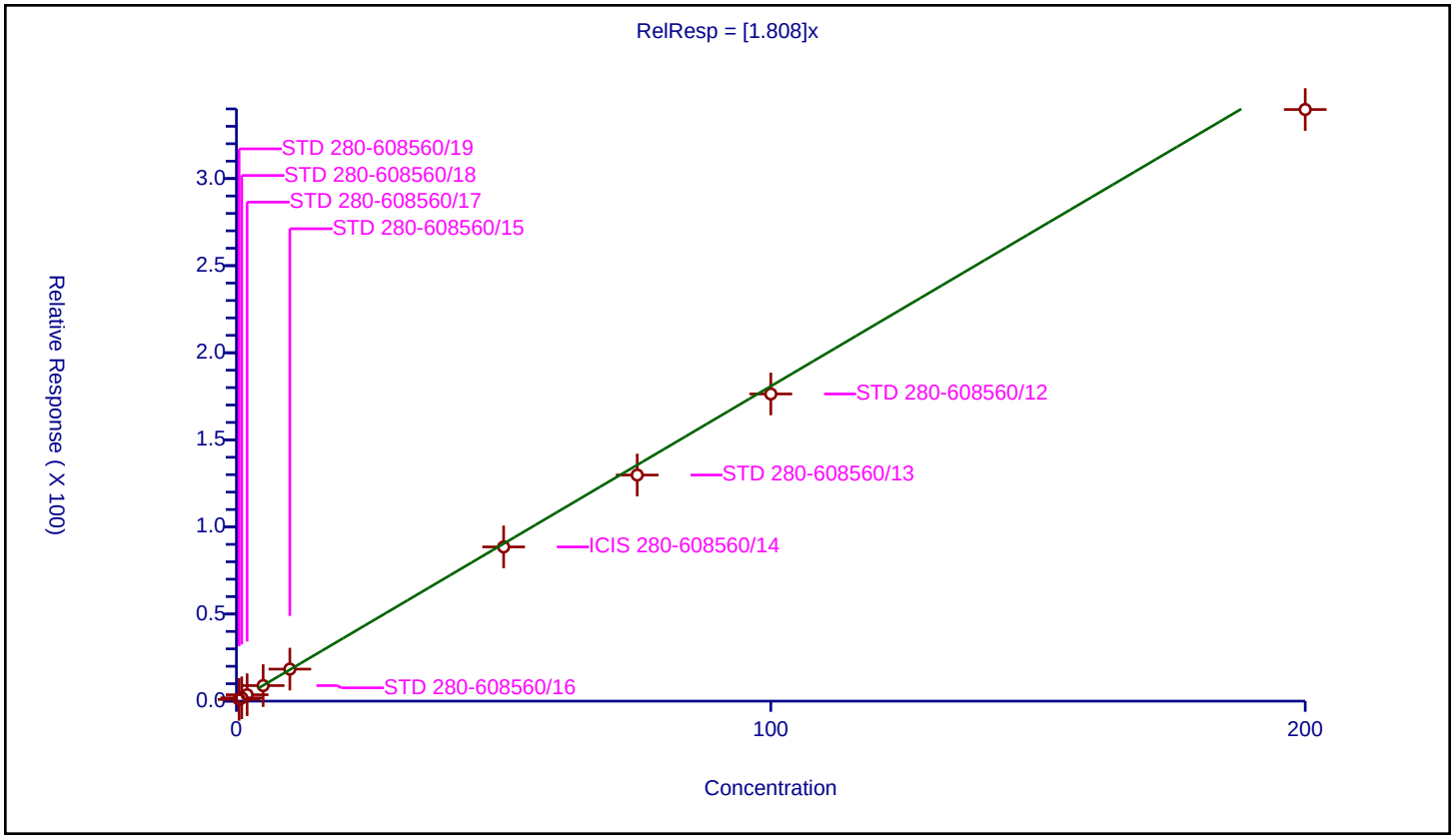
Curve Coefficients

Intercept:	0
Slope:	1.808

Error Coefficients

Standard Error:	1030000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.971493	50.0	332941.0	1.942987	Y
2	STD 280-608560/18	1.0	1.904904	50.0	347944.0	1.904904	Y
3	STD 280-608560/17	2.0	3.67733	50.0	351709.0	1.838665	Y
4	STD 280-608560/16	5.0	8.916624	50.0	340925.0	1.783325	Y
5	STD 280-608560/15	10.0	18.386671	50.0	346191.0	1.838667	Y
6	ICIS 280-608560/14	50.0	88.534685	50.0	344779.0	1.770694	Y
7	STD 280-608560/13	75.0	129.806875	50.0	345838.0	1.730758	Y
8	STD 280-608560/12	100.0	176.349749	50.0	346231.0	1.763497	Y
9	STD 280-608560/11	200.0	339.64461	50.0	354231.0	1.698223	Y



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Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

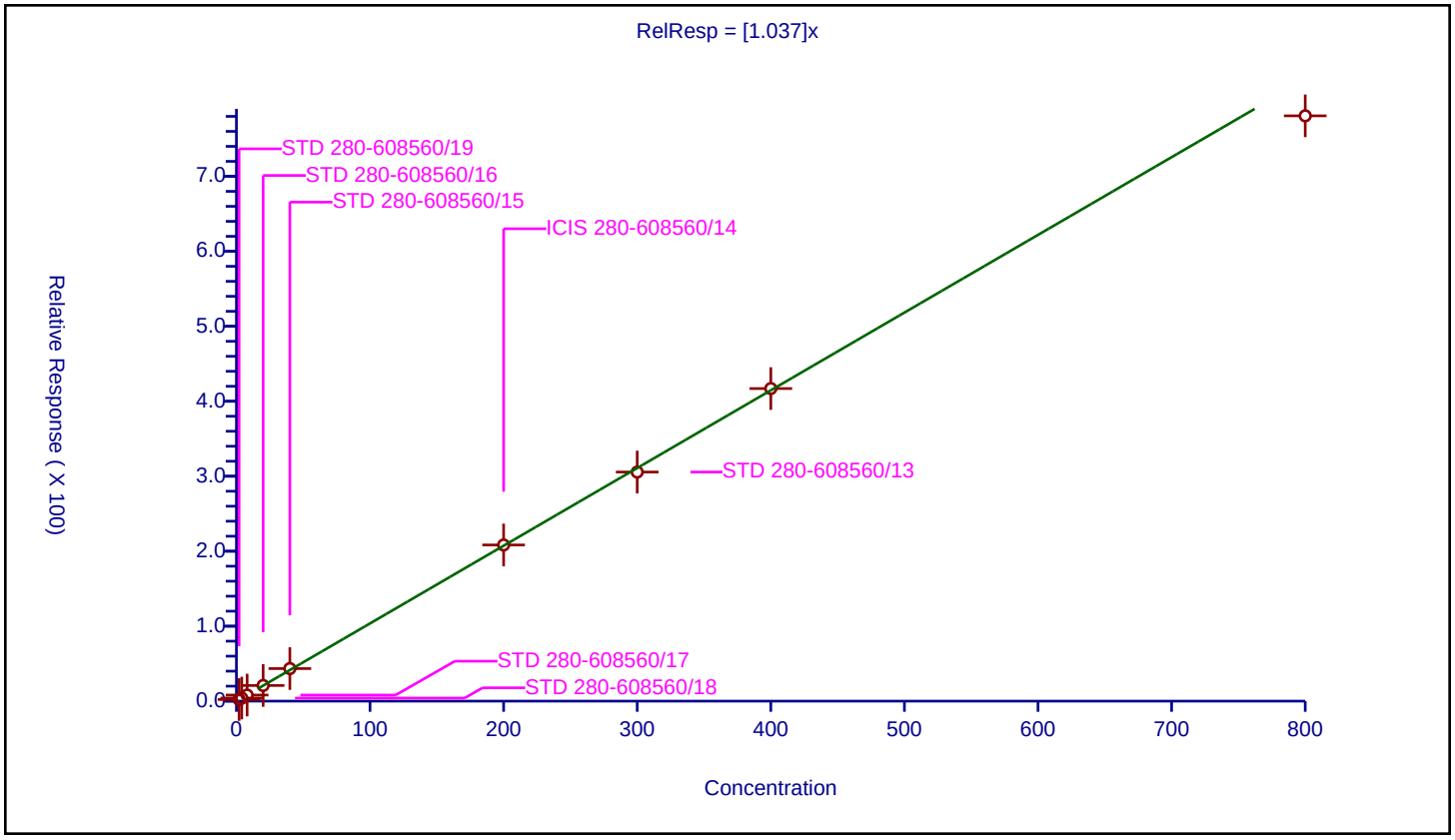
Curve Coefficients

Intercept:	0
Slope:	1.037

Error Coefficients

Standard Error:	2390000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	2.0	2.165549	50.0	332941.0	1.082774	Y
2	STD 280-608560/18	4.0	4.098361	50.0	347944.0	1.02459	Y
3	STD 280-608560/17	8.0	8.103574	50.0	351709.0	1.012947	Y
4	STD 280-608560/16	20.0	20.880252	50.0	340925.0	1.044013	Y
5	STD 280-608560/15	40.0	43.448125	50.0	346191.0	1.086203	Y
6	ICIS 280-608560/14	200.0	208.299809	50.0	344779.0	1.041499	Y
7	STD 280-608560/13	300.0	305.58325	50.0	345838.0	1.018611	Y
8	STD 280-608560/12	400.0	416.951977	50.0	346231.0	1.04238	Y
9	STD 280-608560/11	800.0	780.720914	50.0	354231.0	0.975901	Y



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Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

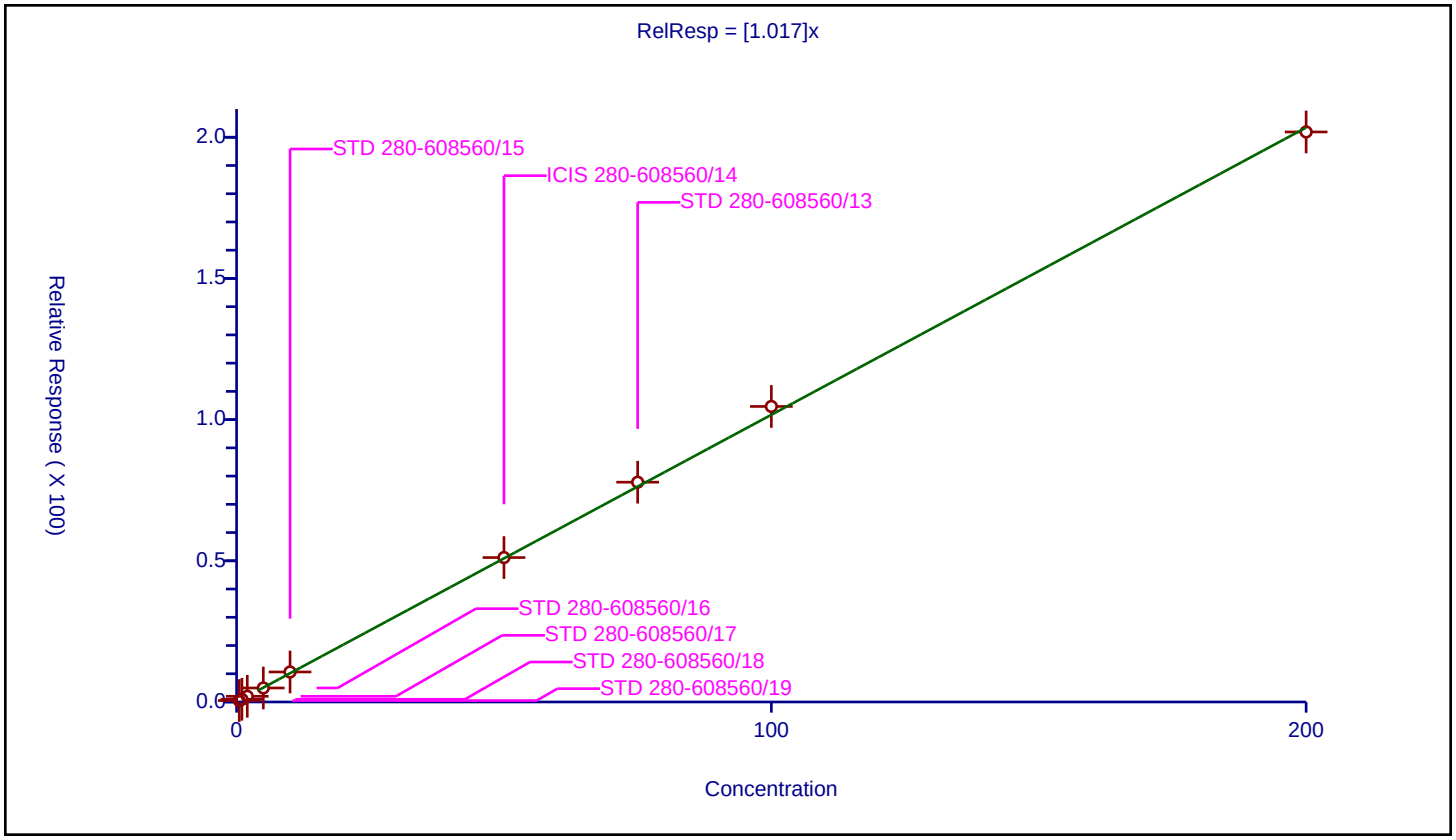
Curve Coefficients

Intercept:	0
Slope:	1.017

Error Coefficients

Standard Error:	611000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.507297	50.0	332941.0	1.014594	Y
2	STD 280-608560/18	1.0	0.958344	50.0	347944.0	0.958344	Y
3	STD 280-608560/17	2.0	2.018004	50.0	351709.0	1.009002	Y
4	STD 280-608560/16	5.0	4.962088	50.0	340925.0	0.992418	Y
5	STD 280-608560/15	10.0	10.626504	50.0	346191.0	1.06265	Y
6	ICIS 280-608560/14	50.0	51.149867	50.0	344779.0	1.022997	Y
7	STD 280-608560/13	75.0	77.840203	50.0	345838.0	1.037869	Y
8	STD 280-608560/12	100.0	104.666249	50.0	346231.0	1.046662	Y
9	STD 280-608560/11	200.0	201.882529	50.0	354231.0	1.009413	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

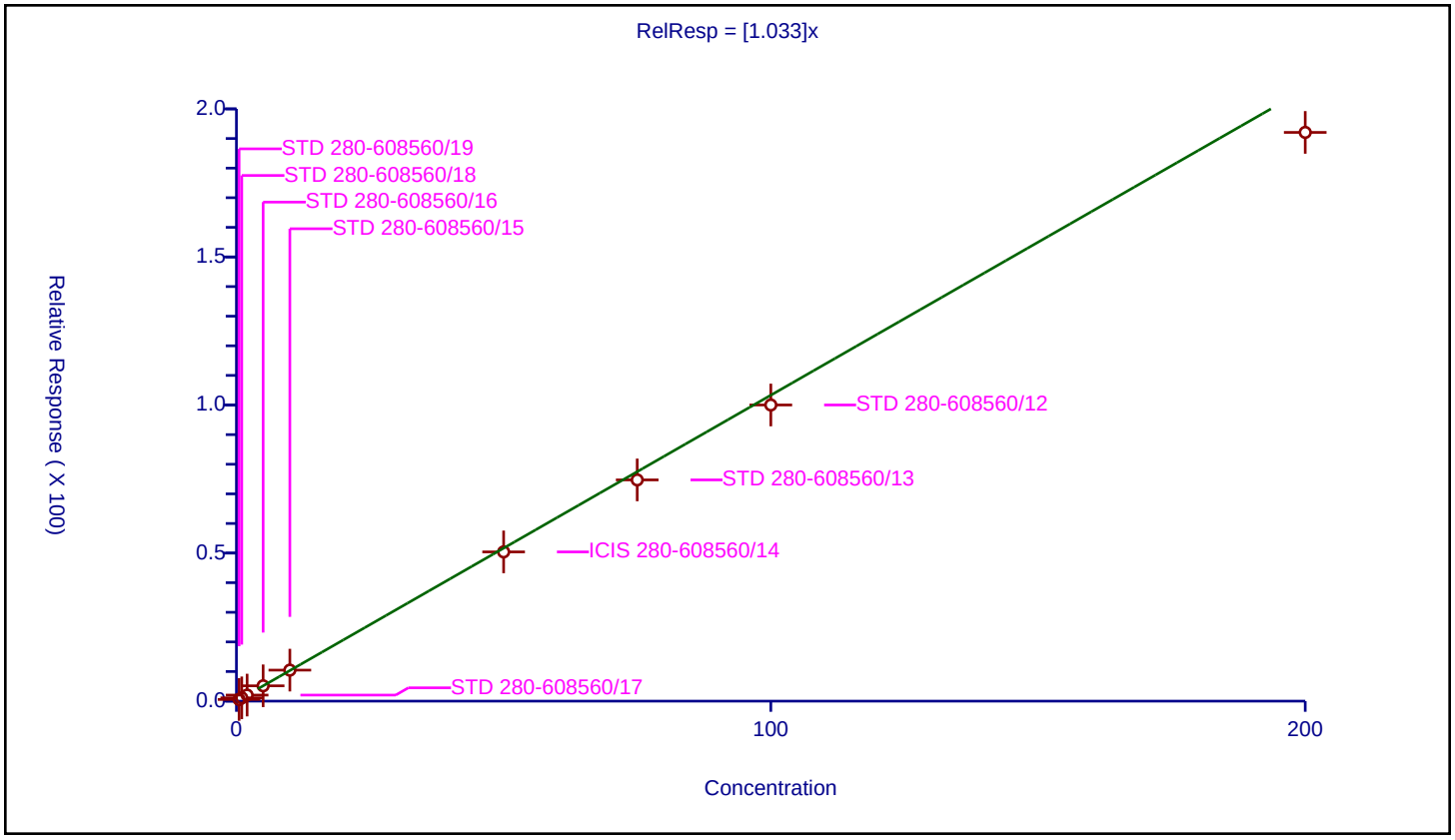
Curve Coefficients

Intercept:	0
Slope:	1.033

Error Coefficients

Standard Error:	584000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.557756	50.0	332941.0	1.115513	Y
2	STD 280-608560/18	1.0	1.112823	50.0	347944.0	1.112823	Y
3	STD 280-608560/17	2.0	2.047005	50.0	351709.0	1.023502	Y
4	STD 280-608560/16	5.0	5.174159	50.0	340925.0	1.034832	Y
5	STD 280-608560/15	10.0	10.47312	50.0	346191.0	1.047312	Y
6	ICIS 280-608560/14	50.0	50.400691	50.0	344779.0	1.008014	Y
7	STD 280-608560/13	75.0	74.709257	50.0	345838.0	0.996123	Y
8	STD 280-608560/12	100.0	100.015597	50.0	346231.0	1.000156	Y
9	STD 280-608560/11	200.0	192.058572	50.0	354231.0	0.960293	Y



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Calibration / 1-Chlorohexane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

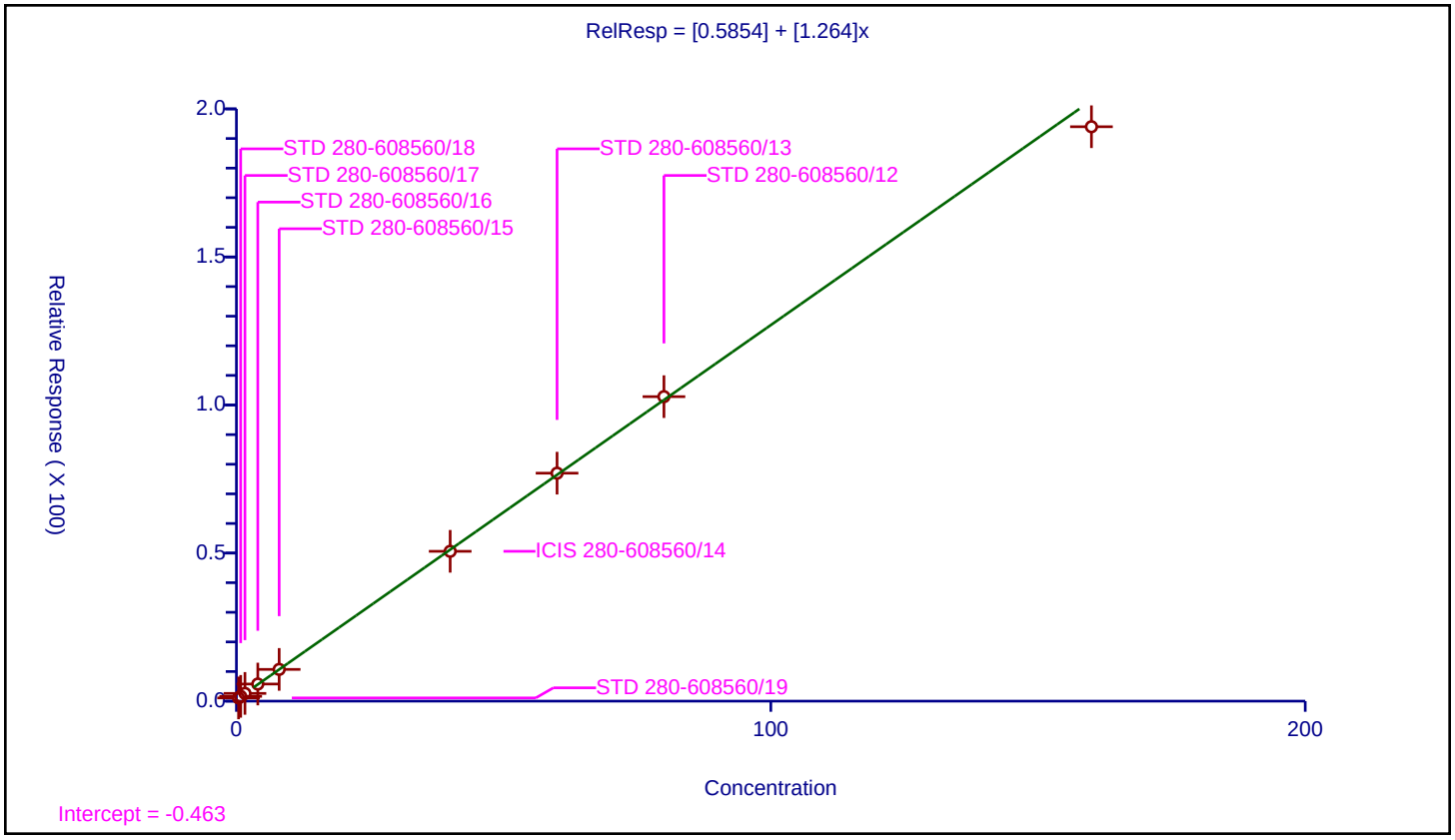
Curve Coefficients

Intercept:	0.5854
Slope:	1.264

Error Coefficients

Standard Error:	633000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.4	1.084877	50.0	332941.0	2.712192	Y
2	STD 280-608560/18	0.8	1.614628	50.0	347944.0	2.018285	Y
3	STD 280-608560/17	1.6	2.61324	50.0	351709.0	1.633275	Y
4	STD 280-608560/16	4.0	5.779424	50.0	340925.0	1.444856	Y
5	STD 280-608560/15	8.0	10.712295	50.0	346191.0	1.339037	Y
6	ICIS 280-608560/14	40.0	50.595454	50.0	344779.0	1.264886	Y
7	STD 280-608560/13	60.0	76.98778	50.0	345838.0	1.28313	Y
8	STD 280-608560/12	80.0	102.828603	50.0	346231.0	1.285358	Y
9	STD 280-608560/11	160.0	193.974694	50.0	354231.0	1.212342	Y



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Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

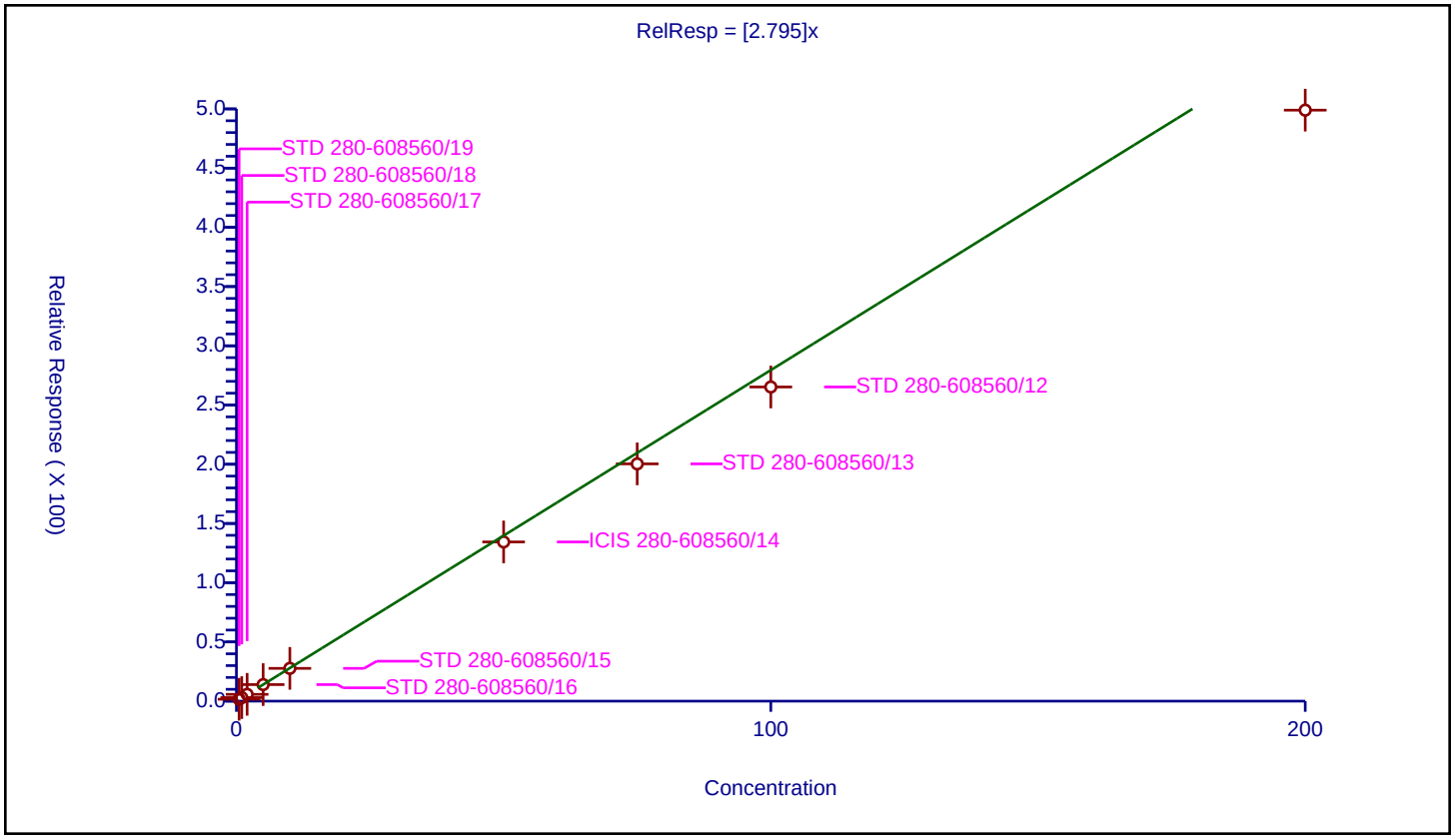
Curve Coefficients

Intercept:	0
Slope:	2.795

Error Coefficients

Standard Error:	1530000
Relative Standard Error:	7.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	1.608093	50.0	332941.0	3.216185	Y
2	STD 280-608560/18	1.0	2.994304	50.0	347944.0	2.994304	Y
3	STD 280-608560/17	2.0	5.750635	50.0	351709.0	2.875317	Y
4	STD 280-608560/16	5.0	13.973748	50.0	340925.0	2.79475	Y
5	STD 280-608560/15	10.0	27.667964	50.0	346191.0	2.766796	Y
6	ICIS 280-608560/14	50.0	134.402327	50.0	344779.0	2.688047	Y
7	STD 280-608560/13	75.0	200.305056	50.0	345838.0	2.670734	Y
8	STD 280-608560/12	100.0	265.237226	50.0	346231.0	2.652372	Y
9	STD 280-608560/11	200.0	498.936005	50.0	354231.0	2.49468	Y



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Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

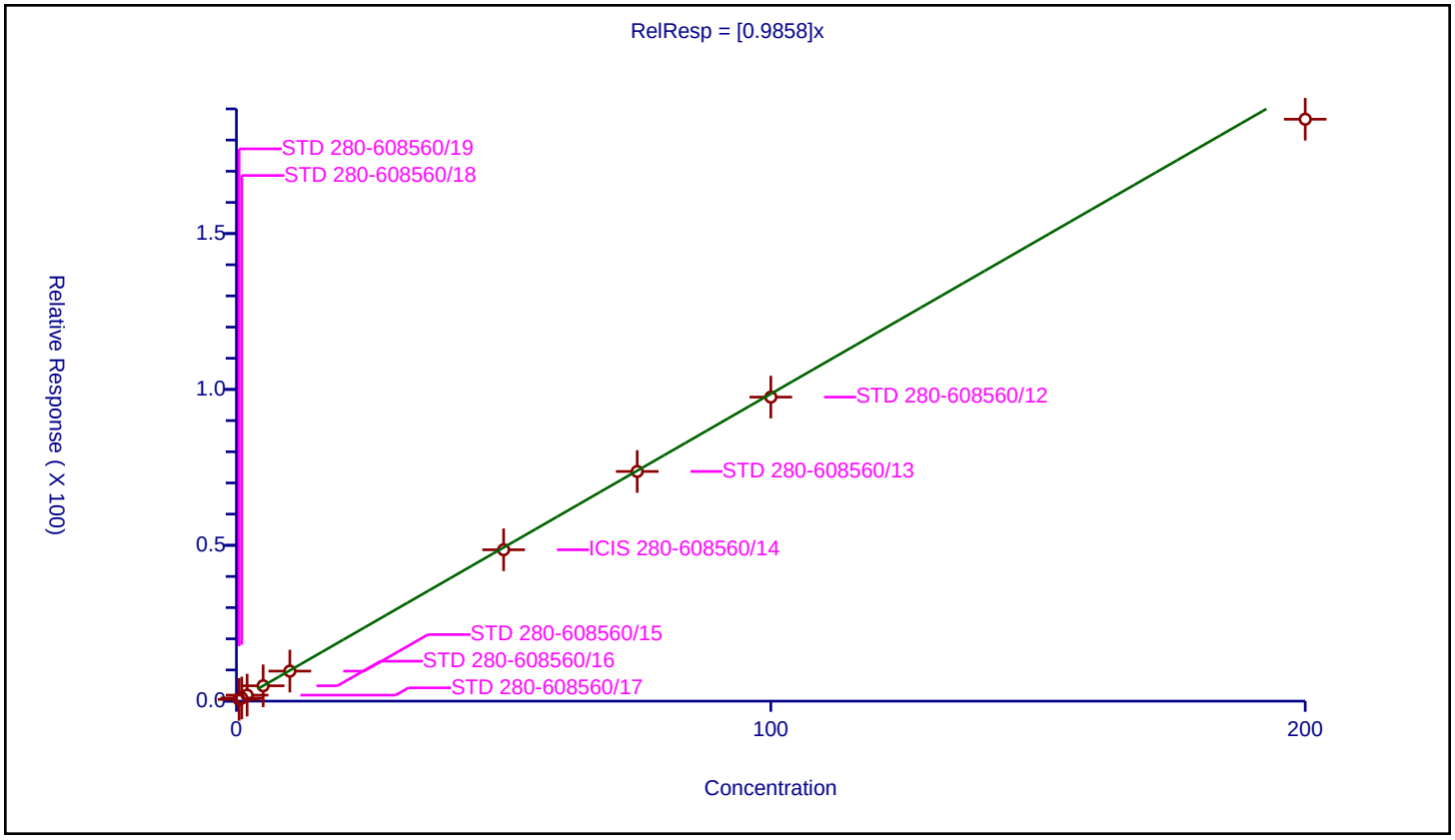
Curve Coefficients

Intercept:	0
Slope:	0.9858

Error Coefficients

Standard Error:	568000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.548446	50.0	332941.0	1.096891	Y
2	STD 280-608560/18	1.0	1.000448	50.0	347944.0	1.000448	Y
3	STD 280-608560/17	2.0	1.928867	50.0	351709.0	0.964434	Y
4	STD 280-608560/16	5.0	4.92293	50.0	340925.0	0.984586	Y
5	STD 280-608560/15	10.0	9.6298	50.0	346191.0	0.96298	Y
6	ICIS 280-608560/14	50.0	48.565458	50.0	344779.0	0.971309	Y
7	STD 280-608560/13	75.0	73.679873	50.0	345838.0	0.982398	Y
8	STD 280-608560/12	100.0	97.539937	50.0	346231.0	0.975399	Y
9	STD 280-608560/11	200.0	186.681713	50.0	354231.0	0.933409	Y



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Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

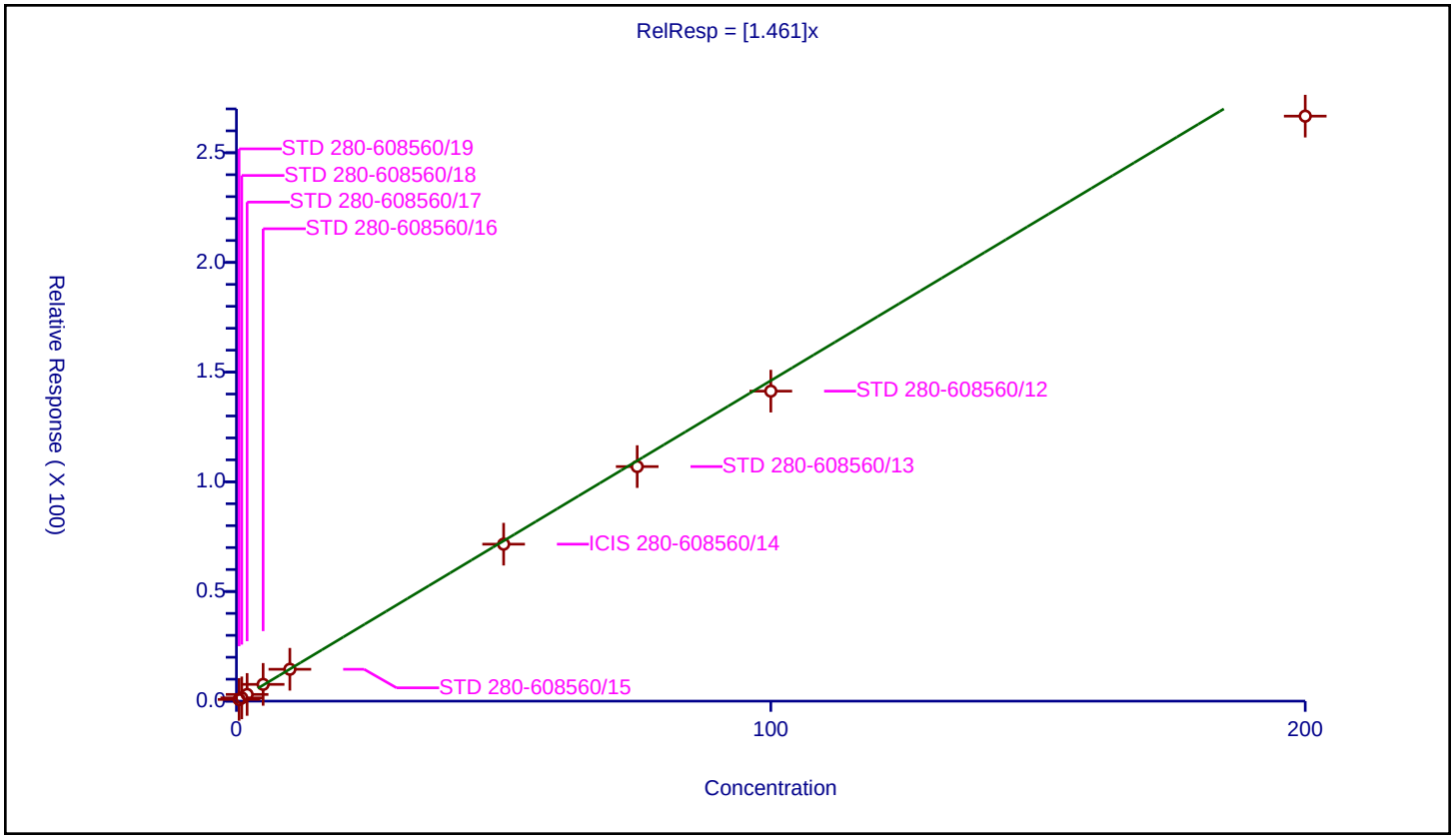
Curve Coefficients

Intercept:	0
Slope:	1.461

Error Coefficients

Standard Error:	816000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.774161	50.0	332941.0	1.548322	Y
2	STD 280-608560/18	1.0	1.491907	50.0	347944.0	1.491907	Y
3	STD 280-608560/17	2.0	3.051528	50.0	351709.0	1.525764	Y
4	STD 280-608560/16	5.0	7.645523	50.0	340925.0	1.529105	Y
5	STD 280-608560/15	10.0	14.524352	50.0	346191.0	1.452435	Y
6	ICIS 280-608560/14	50.0	71.560333	50.0	344779.0	1.431207	Y
7	STD 280-608560/13	75.0	106.930991	50.0	345838.0	1.425747	Y
8	STD 280-608560/12	100.0	141.325445	50.0	346231.0	1.413254	Y
9	STD 280-608560/11	200.0	266.697861	50.0	354231.0	1.333489	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

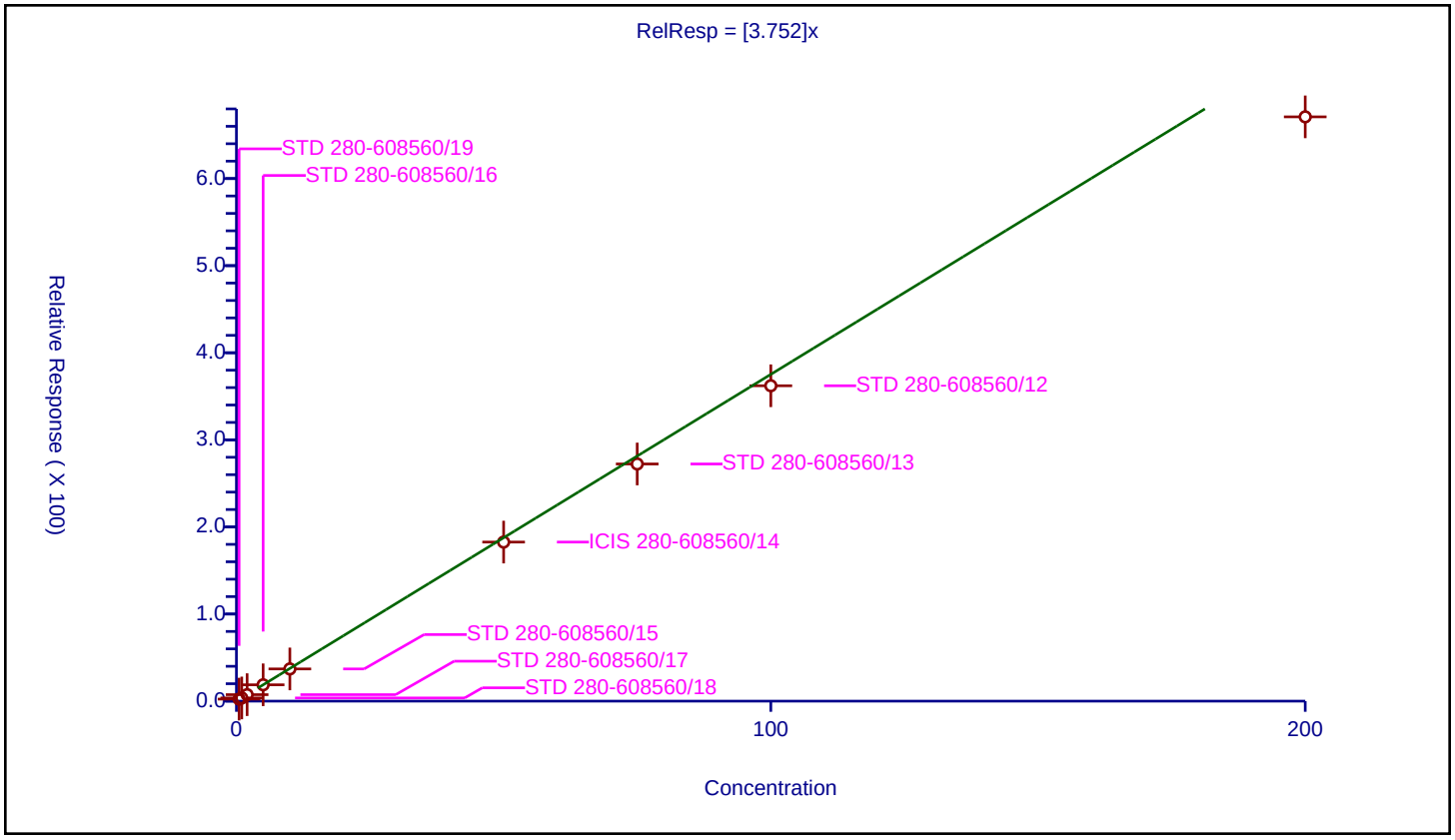
Curve Coefficients

Intercept:	0
Slope:	3.752

Error Coefficients

Standard Error:	2060000
Relative Standard Error:	9.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	2.3363	50.0	332941.0	4.6726	Y
2	STD 280-608560/18	1.0	3.668981	50.0	347944.0	3.668981	Y
3	STD 280-608560/17	2.0	7.436688	50.0	351709.0	3.718344	Y
4	STD 280-608560/16	5.0	18.764684	50.0	340925.0	3.752937	Y
5	STD 280-608560/15	10.0	36.974676	50.0	346191.0	3.697468	Y
6	ICIS 280-608560/14	50.0	182.632353	50.0	344779.0	3.652647	Y
7	STD 280-608560/13	75.0	272.307988	50.0	345838.0	3.630773	Y
8	STD 280-608560/12	100.0	362.108823	50.0	346231.0	3.621088	Y
9	STD 280-608560/11	200.0	670.865198	50.0	354231.0	3.354326	Y



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Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

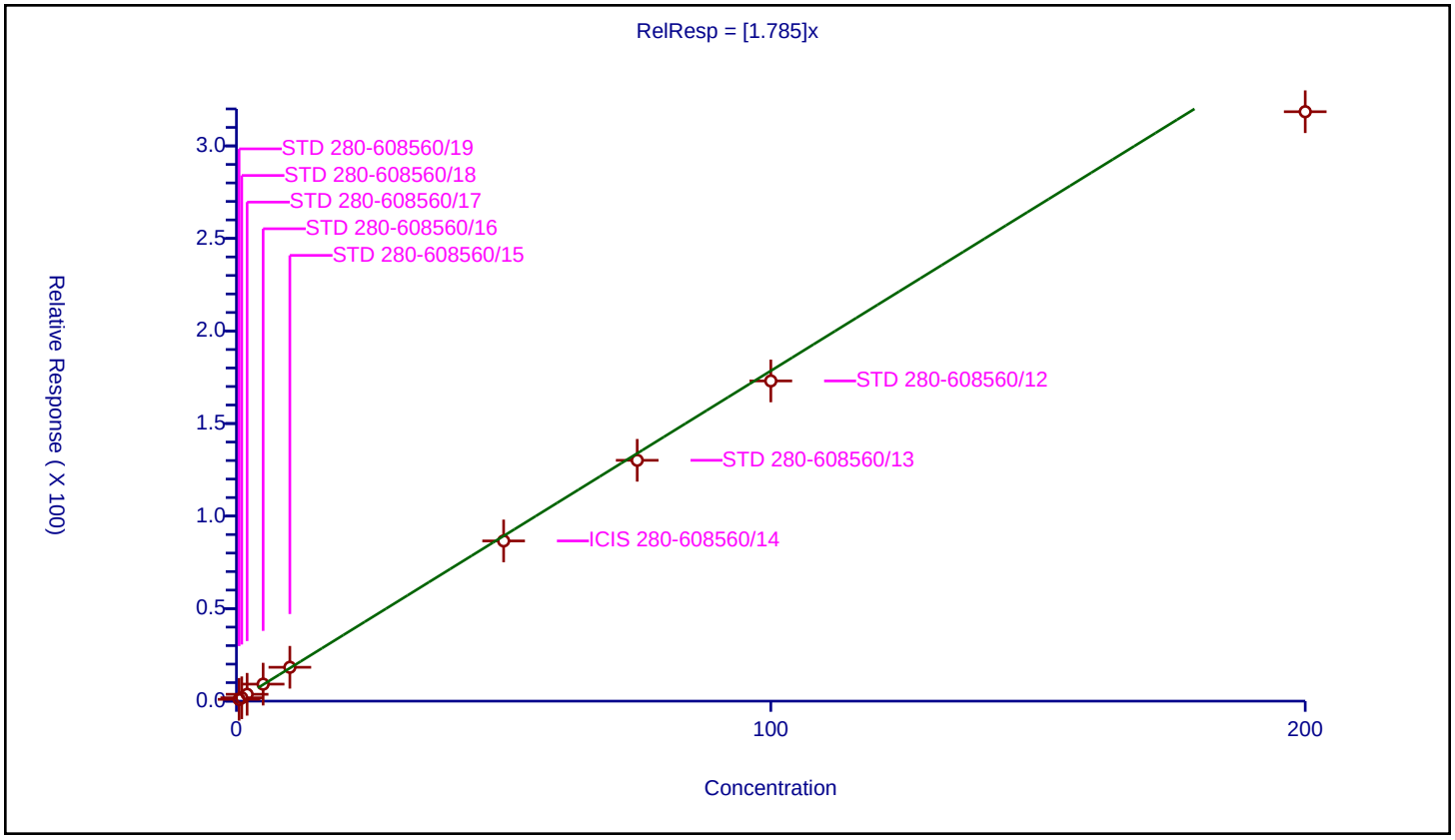
Curve Coefficients

Intercept:	0
Slope:	1.785

Error Coefficients

Standard Error:	982000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.964585	50.0	332941.0	1.929171	Y
2	STD 280-608560/18	1.0	1.826012	50.0	347944.0	1.826012	Y
3	STD 280-608560/17	2.0	3.707326	50.0	351709.0	1.853663	Y
4	STD 280-608560/16	5.0	9.184131	50.0	340925.0	1.836826	Y
5	STD 280-608560/15	10.0	18.292359	50.0	346191.0	1.829236	Y
6	ICIS 280-608560/14	50.0	86.569658	50.0	344779.0	1.731393	Y
7	STD 280-608560/13	75.0	130.130148	50.0	345838.0	1.735069	Y
8	STD 280-608560/12	100.0	173.007183	50.0	346231.0	1.730072	Y
9	STD 280-608560/11	200.0	318.468457	50.0	354231.0	1.592342	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

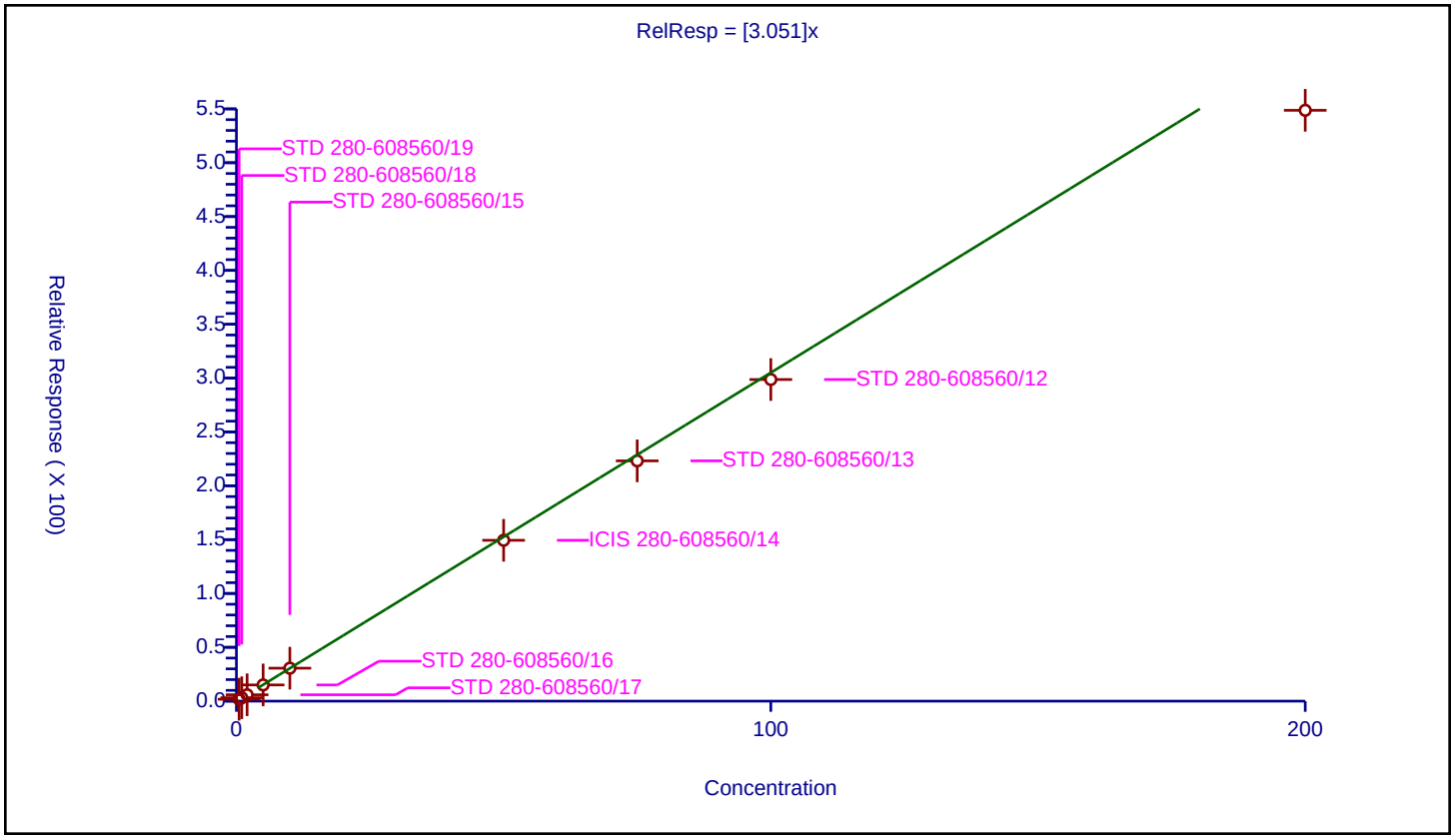
Curve Coefficients

Intercept:	0
Slope:	3.051

Error Coefficients

Standard Error:	1690000
Relative Standard Error:	7.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	1.774188	50.0	332941.0	3.548376	Y
2	STD 280-608560/18	1.0	3.180972	50.0	347944.0	3.180972	Y
3	STD 280-608560/17	2.0	5.931182	50.0	351709.0	2.965591	Y
4	STD 280-608560/16	5.0	15.039671	50.0	340925.0	3.007934	Y
5	STD 280-608560/15	10.0	30.602038	50.0	346191.0	3.060204	Y
6	ICIS 280-608560/14	50.0	149.383953	50.0	344779.0	2.987679	Y
7	STD 280-608560/13	75.0	223.138868	50.0	345838.0	2.975185	Y
8	STD 280-608560/12	100.0	298.681372	50.0	346231.0	2.986814	Y
9	STD 280-608560/11	200.0	548.67784	50.0	354231.0	2.743389	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

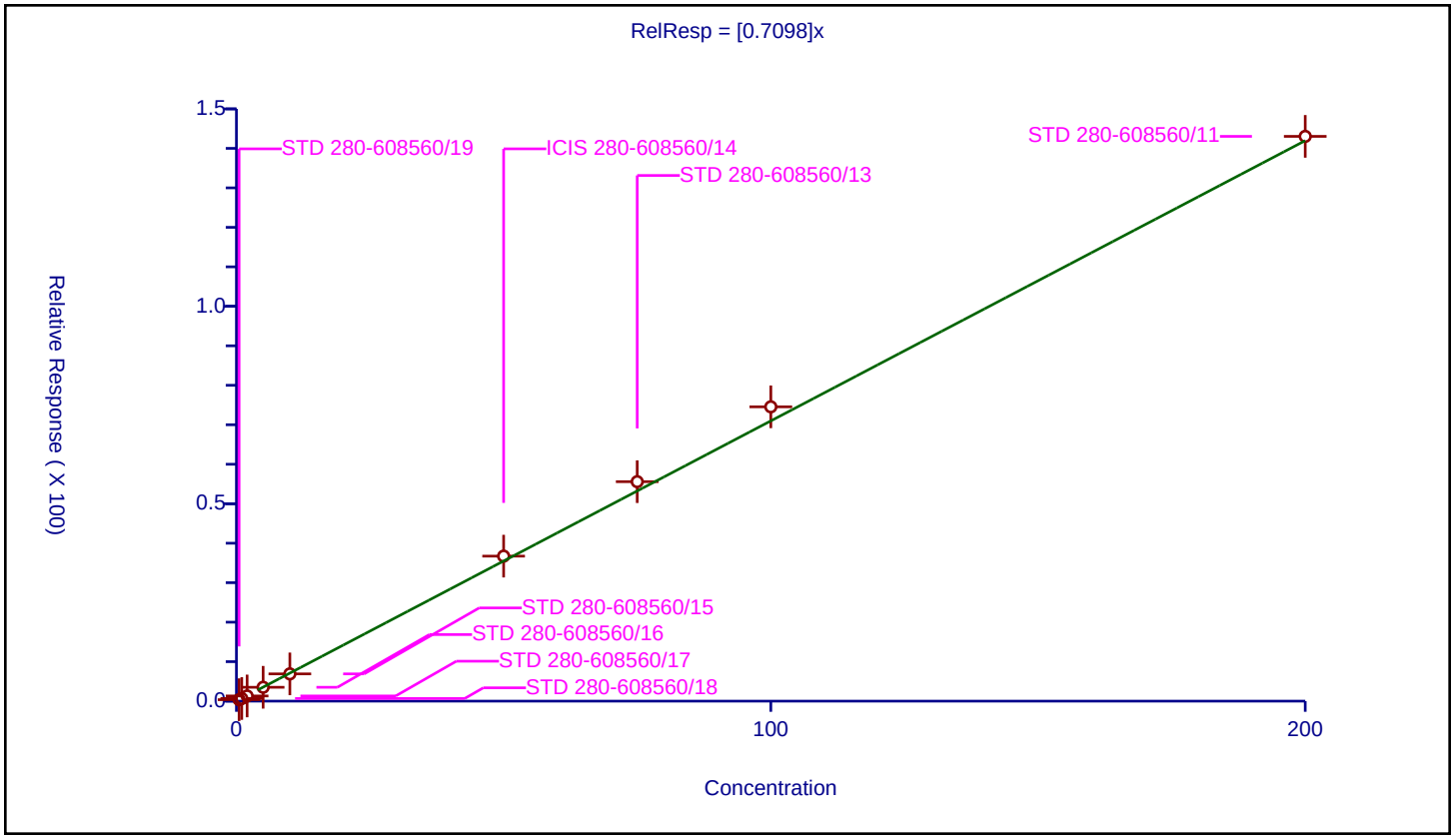
Curve Coefficients

Intercept:	0
Slope:	0.7098

Error Coefficients

Standard Error:	434000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.368083	50.0	332941.0	0.736166	Y
2	STD 280-608560/18	1.0	0.666055	50.0	347944.0	0.666055	Y
3	STD 280-608560/17	2.0	1.313728	50.0	351709.0	0.656864	Y
4	STD 280-608560/16	5.0	3.51001	50.0	340925.0	0.702002	Y
5	STD 280-608560/15	10.0	6.906448	50.0	346191.0	0.690645	Y
6	ICIS 280-608560/14	50.0	36.729325	50.0	344779.0	0.734587	Y
7	STD 280-608560/13	75.0	55.584985	50.0	345838.0	0.741133	Y
8	STD 280-608560/12	100.0	74.539975	50.0	346231.0	0.7454	Y
9	STD 280-608560/11	200.0	143.036606	50.0	354231.0	0.715183	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

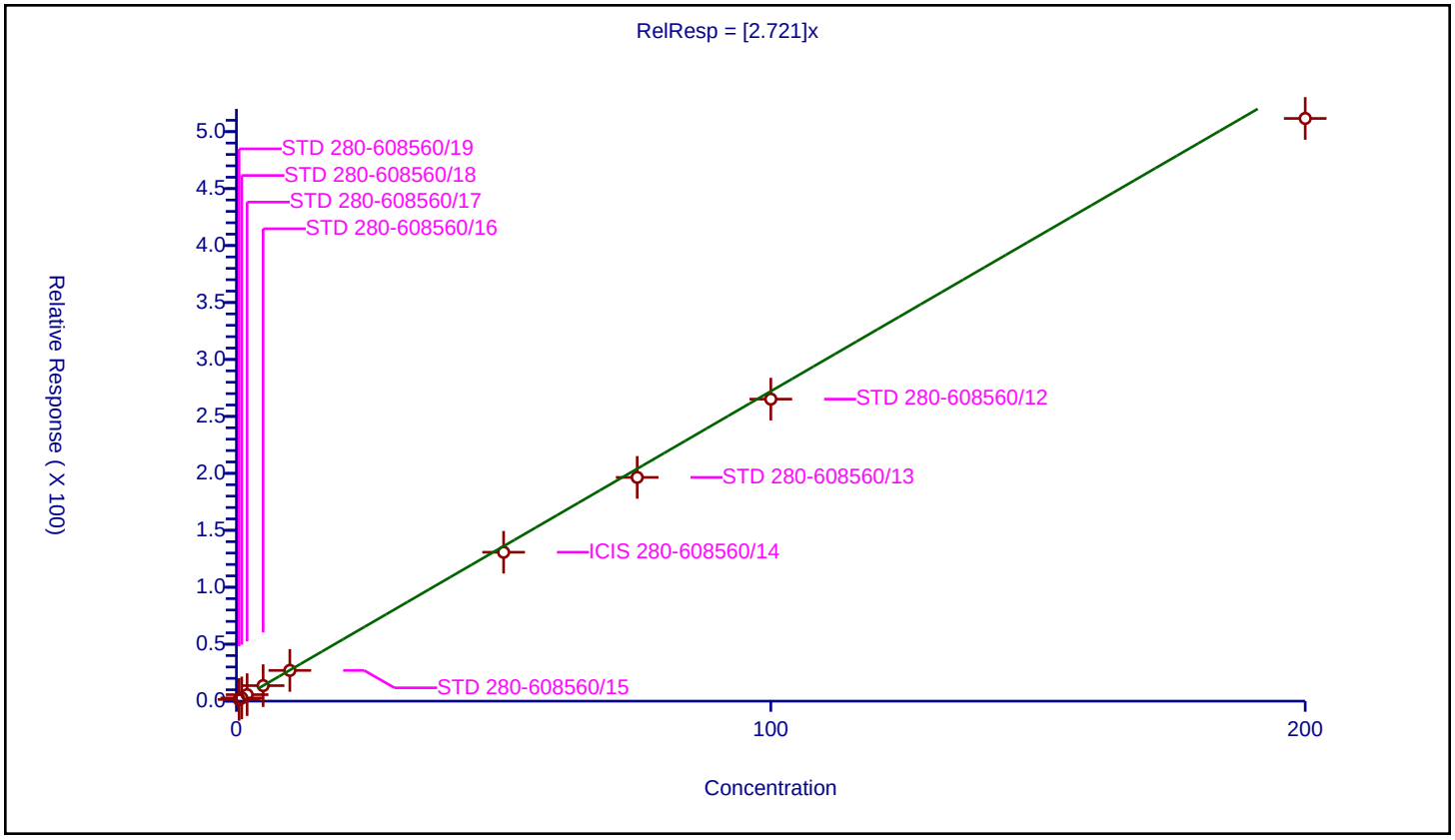
Curve Coefficients

Intercept:	0
Slope:	2.721

Error Coefficients

Standard Error:	2380000
Relative Standard Error:	4.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	1.489782	50.0	536555.0	2.979564	Y
2	STD 280-608560/18	1.0	2.797956	50.0	559730.0	2.797956	Y
3	STD 280-608560/17	2.0	5.687124	50.0	558604.0	2.843562	Y
4	STD 280-608560/16	5.0	13.629244	50.0	554807.0	2.725849	Y
5	STD 280-608560/15	10.0	26.979482	50.0	556825.0	2.697948	Y
6	ICIS 280-608560/14	50.0	130.741988	50.0	566707.0	2.61484	Y
7	STD 280-608560/13	75.0	196.436933	50.0	560809.0	2.619159	Y
8	STD 280-608560/12	100.0	265.168692	50.0	552279.0	2.651687	Y
9	STD 280-608560/11	200.0	511.601983	50.0	532771.0	2.55801	Y



Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

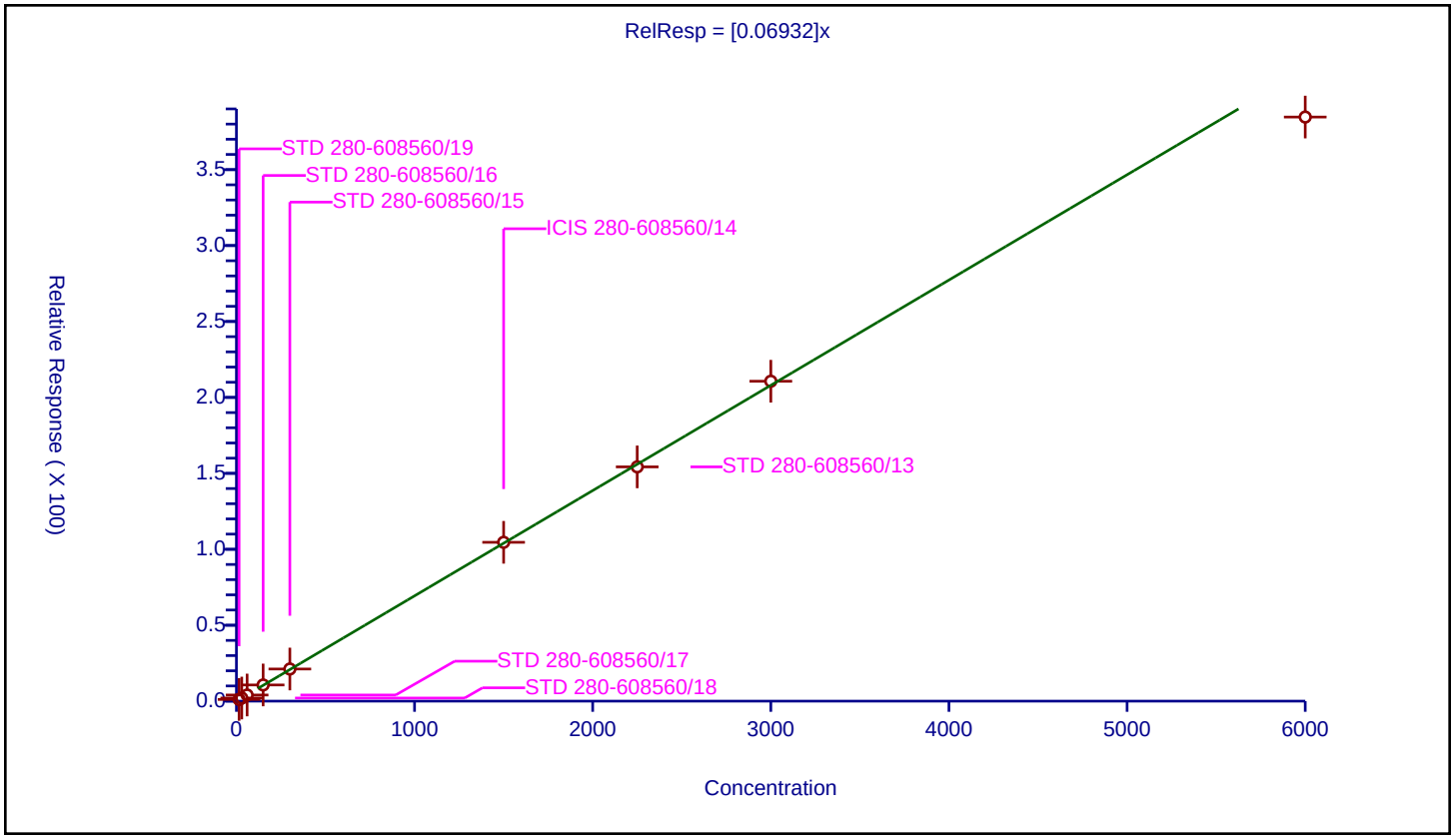
Curve Coefficients

Intercept:	0
Slope:	0.06932

Error Coefficients

Standard Error:	1190000
Relative Standard Error:	4.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	15.0	1.112209	50.0	332941.0	0.074147	Y
2	STD 280-608560/18	30.0	2.044869	50.0	347944.0	0.068162	Y
3	STD 280-608560/17	60.0	4.041409	50.0	351709.0	0.067357	Y
4	STD 280-608560/16	150.0	10.660556	50.0	340925.0	0.07107	Y
5	STD 280-608560/15	300.0	21.168806	50.0	346191.0	0.070563	Y
6	ICIS 280-608560/14	1500.0	104.597583	50.0	344779.0	0.069732	Y
7	STD 280-608560/13	2250.0	154.268039	50.0	345838.0	0.068564	Y
8	STD 280-608560/12	3000.0	210.67091	50.0	346231.0	0.070224	Y
9	STD 280-608560/11	6000.0	384.630933	50.0	354231.0	0.064105	Y



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Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

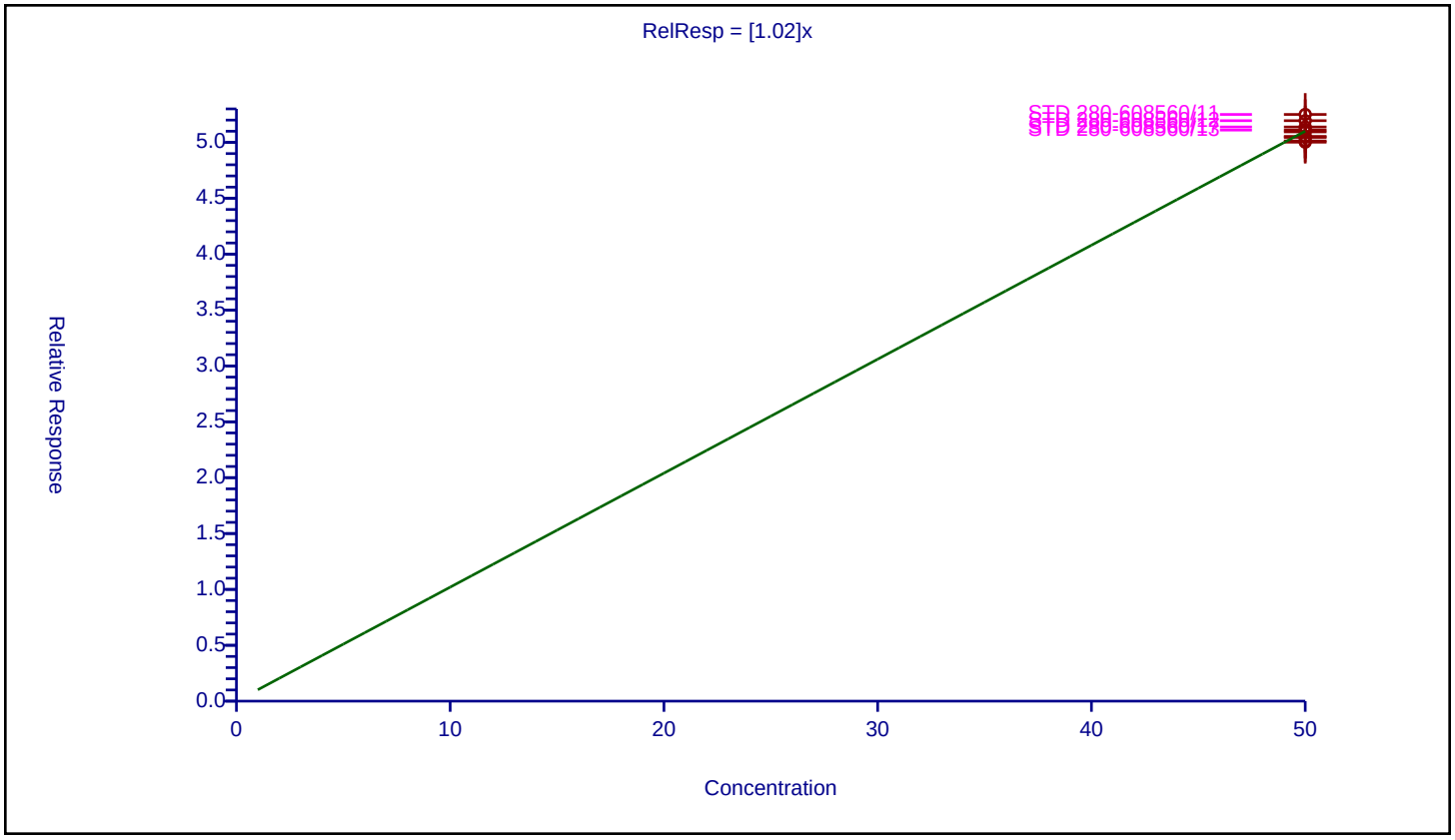
Curve Coefficients

Intercept:	0
Slope:	1.02

Error Coefficients

Standard Error:	598000
Relative Standard Error:	1.6
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/11	50.0	52.500887	50.0	532771.0	1.050018	Y
2	STD 280-608560/12	50.0	51.943764	50.0	552279.0	1.038875	Y
3	STD 280-608560/13	50.0	51.103495	50.0	560809.0	1.02207	Y
4	ICIS 280-608560/14	50.0	50.132873	50.0	566707.0	1.002657	Y
5	STD 280-608560/15	50.0	50.943205	50.0	556825.0	1.018864	Y
6	STD 280-608560/16	50.0	50.021719	50.0	554807.0	1.000434	Y
7	STD 280-608560/17	50.0	51.382464	50.0	558604.0	1.027649	Y
8	STD 280-608560/18	50.0	50.450753	50.0	559730.0	1.009015	Y
9	STD 280-608560/19	50.0	50.538901	50.0	536555.0	1.010778	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

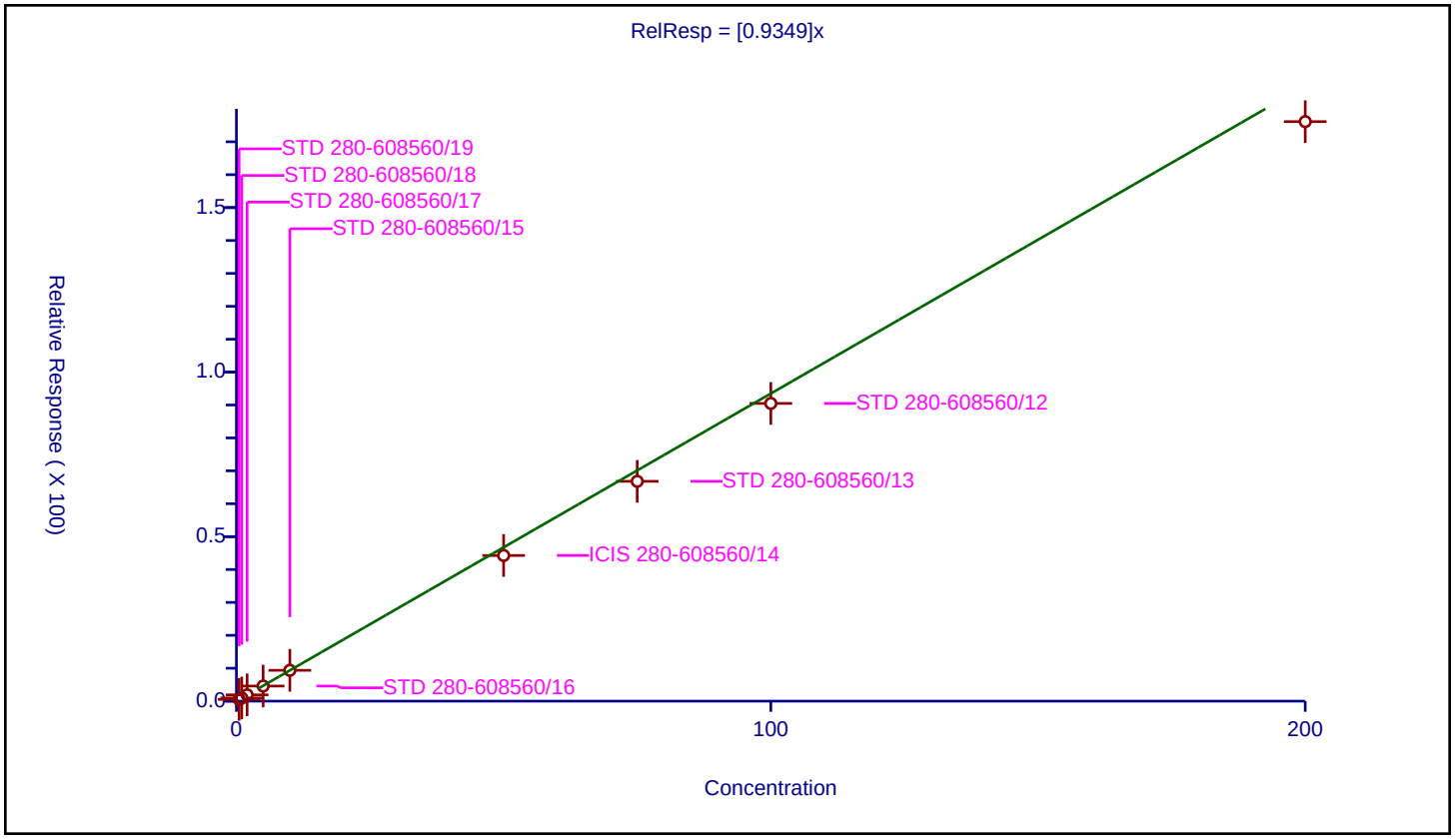
Curve Coefficients

Intercept:	0
Slope:	0.9349

Error Coefficients

Standard Error:	818000
Relative Standard Error:	6.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.538249	50.0	536555.0	1.076497	Y
2	STD 280-608560/18	1.0	0.963143	50.0	559730.0	0.963143	Y
3	STD 280-608560/17	2.0	1.9171	50.0	558604.0	0.95855	Y
4	STD 280-608560/16	5.0	4.586009	50.0	554807.0	0.917202	Y
5	STD 280-608560/15	10.0	9.367665	50.0	556825.0	0.936766	Y
6	ICIS 280-608560/14	50.0	44.265555	50.0	566707.0	0.885311	Y
7	STD 280-608560/13	75.0	66.811784	50.0	560809.0	0.890824	Y
8	STD 280-608560/12	100.0	90.48796	50.0	552279.0	0.90488	Y
9	STD 280-608560/11	200.0	176.126985	50.0	532771.0	0.880635	Y



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Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

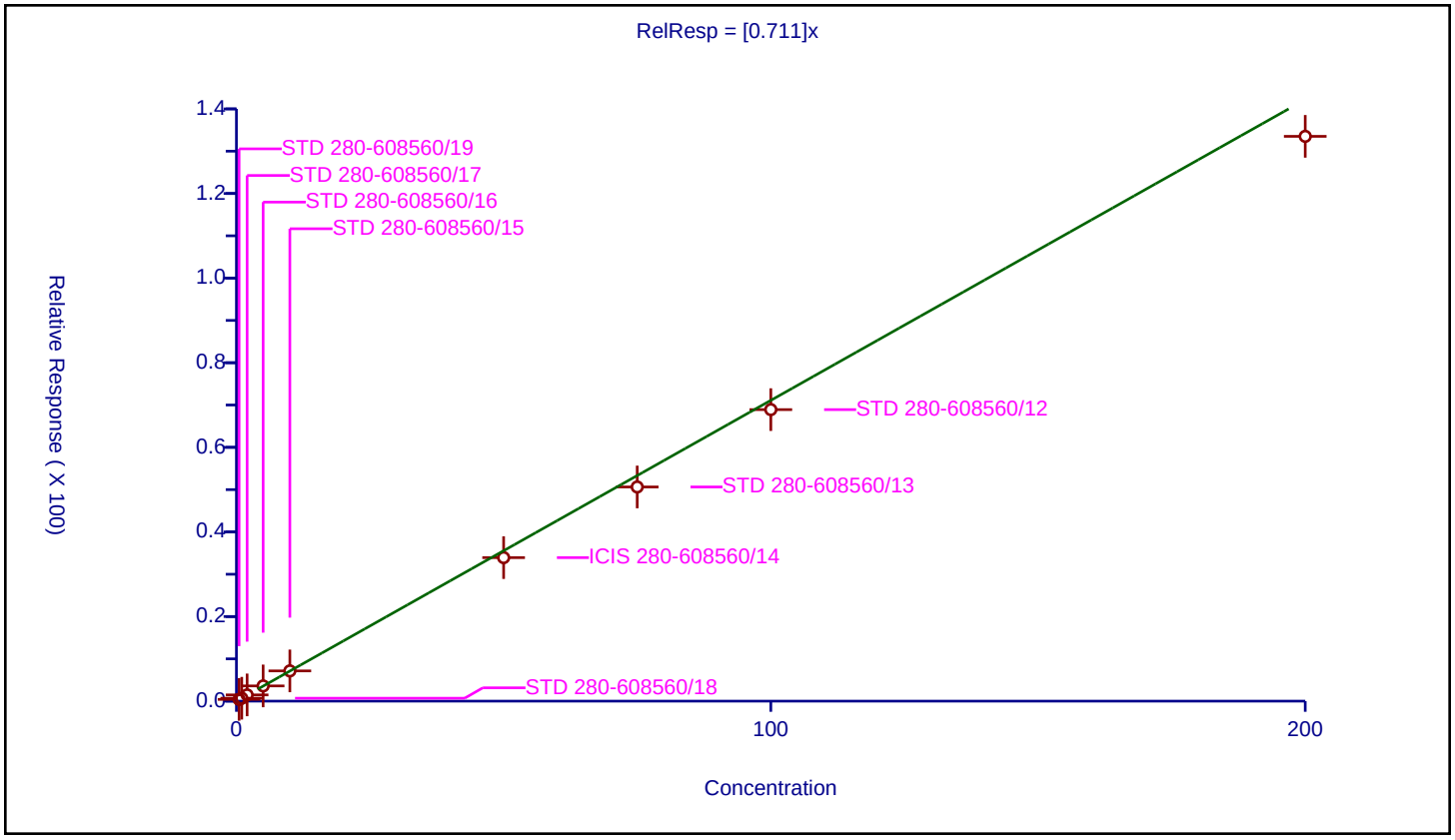
Curve Coefficients

Intercept:	0
Slope:	0.711

Error Coefficients

Standard Error:	621000
Relative Standard Error:	7.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.415242	50.0	536555.0	0.830483	Y
2	STD 280-608560/18	1.0	0.686402	50.0	559730.0	0.686402	Y
3	STD 280-608560/17	2.0	1.475822	50.0	558604.0	0.737911	Y
4	STD 280-608560/16	5.0	3.595845	50.0	554807.0	0.719169	Y
5	STD 280-608560/15	10.0	7.149463	50.0	556825.0	0.714946	Y
6	ICIS 280-608560/14	50.0	33.924938	50.0	566707.0	0.678499	Y
7	STD 280-608560/13	75.0	50.628645	50.0	560809.0	0.675049	Y
8	STD 280-608560/12	100.0	68.911275	50.0	552279.0	0.689113	Y
9	STD 280-608560/11	200.0	133.507079	50.0	532771.0	0.667535	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

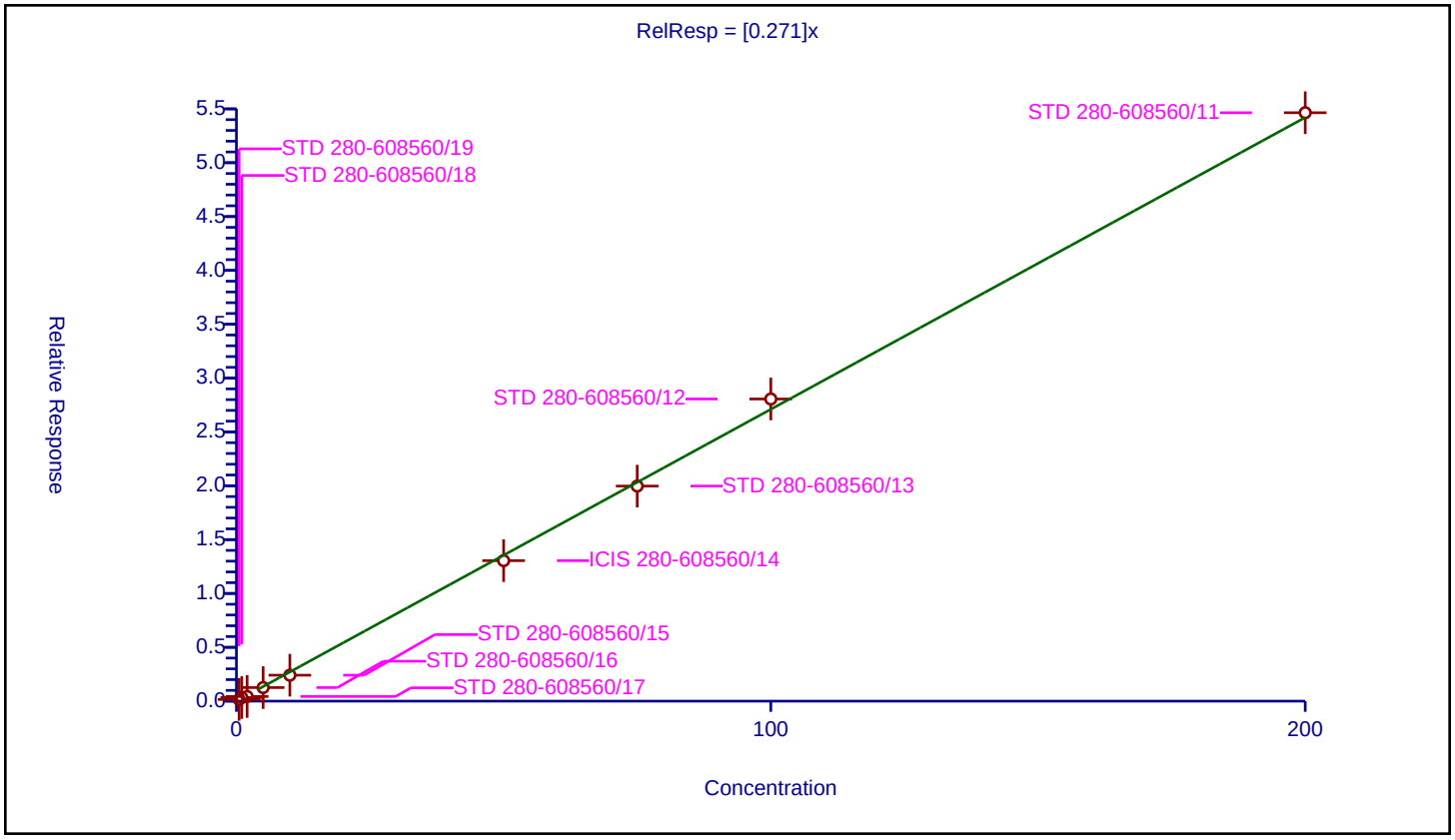
Curve Coefficients

Intercept:	0
Slope:	0.271

Error Coefficients

Standard Error:	252000
Relative Standard Error:	13.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.156461	50.0	536555.0	0.312922	Y
2	STD 280-608560/18	1.0	0.335787	50.0	559730.0	0.335787	Y
3	STD 280-608560/17	2.0	0.432507	50.0	558604.0	0.216253	Y
4	STD 280-608560/16	5.0	1.260709	50.0	554807.0	0.252142	Y
5	STD 280-608560/15	10.0	2.410901	50.0	556825.0	0.24109	Y
6	ICIS 280-608560/14	50.0	13.044924	50.0	566707.0	0.260898	Y
7	STD 280-608560/13	75.0	19.971238	50.0	560809.0	0.266283	Y
8	STD 280-608560/12	100.0	28.059369	50.0	552279.0	0.280594	Y
9	STD 280-608560/11	200.0	54.644397	50.0	532771.0	0.273222	Y



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Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

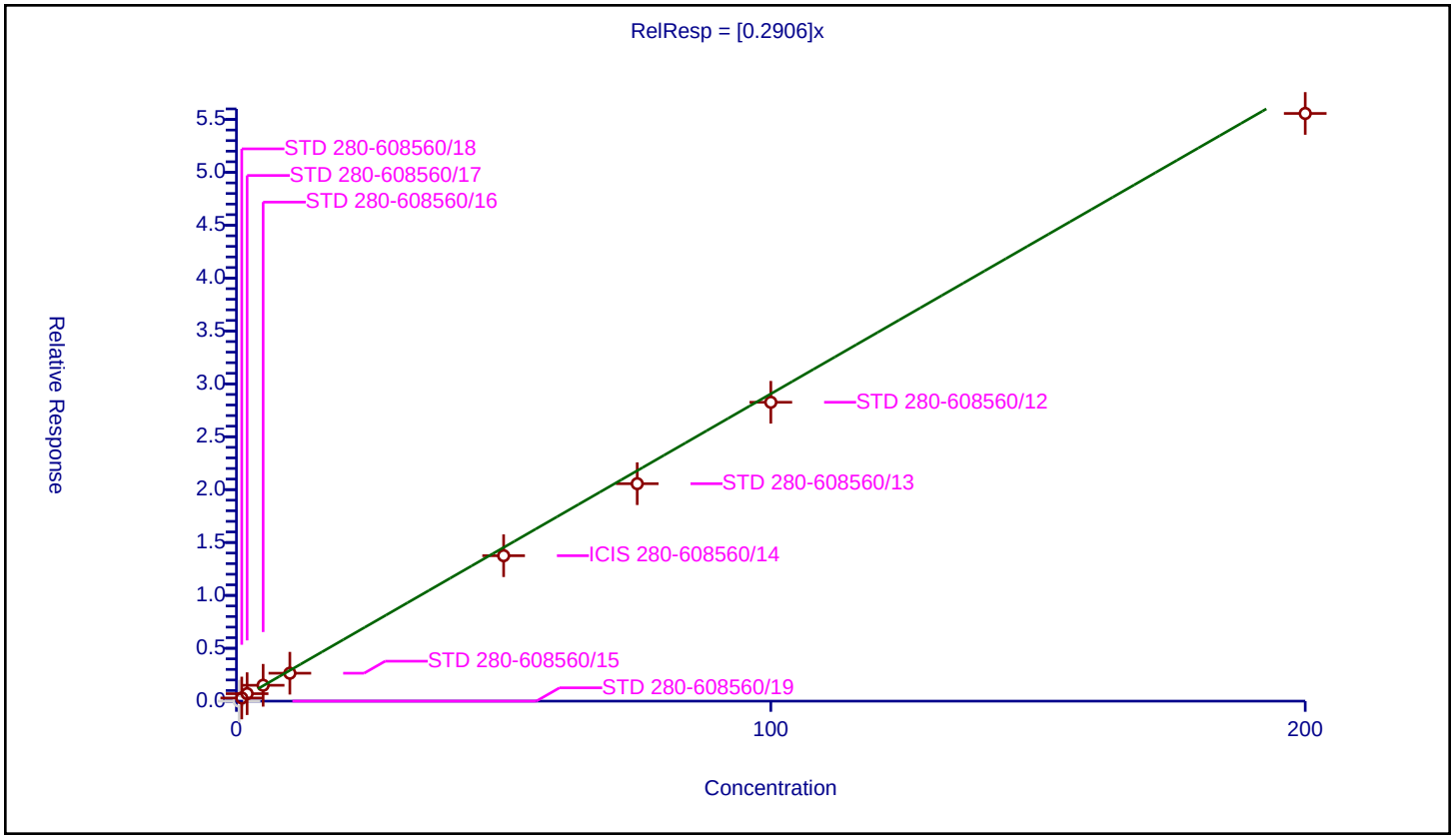
Curve Coefficients

Intercept:	0
Slope:	0.2906

Error Coefficients

Standard Error:	274000
Relative Standard Error:	9.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.0	50.0	536555.0	0.0	N
2	STD 280-608560/18	1.0	0.297108	50.0	559730.0	0.297108	Y
3	STD 280-608560/17	2.0	0.707388	50.0	558604.0	0.353694	Y
4	STD 280-608560/16	5.0	1.499981	50.0	554807.0	0.299996	Y
5	STD 280-608560/15	10.0	2.641494	50.0	556825.0	0.264149	Y
6	ICIS 280-608560/14	50.0	13.750492	50.0	566707.0	0.27501	Y
7	STD 280-608560/13	75.0	20.561992	50.0	560809.0	0.27416	Y
8	STD 280-608560/12	100.0	28.25972	50.0	552279.0	0.282597	Y
9	STD 280-608560/11	200.0	55.569091	50.0	532771.0	0.277845	Y



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Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

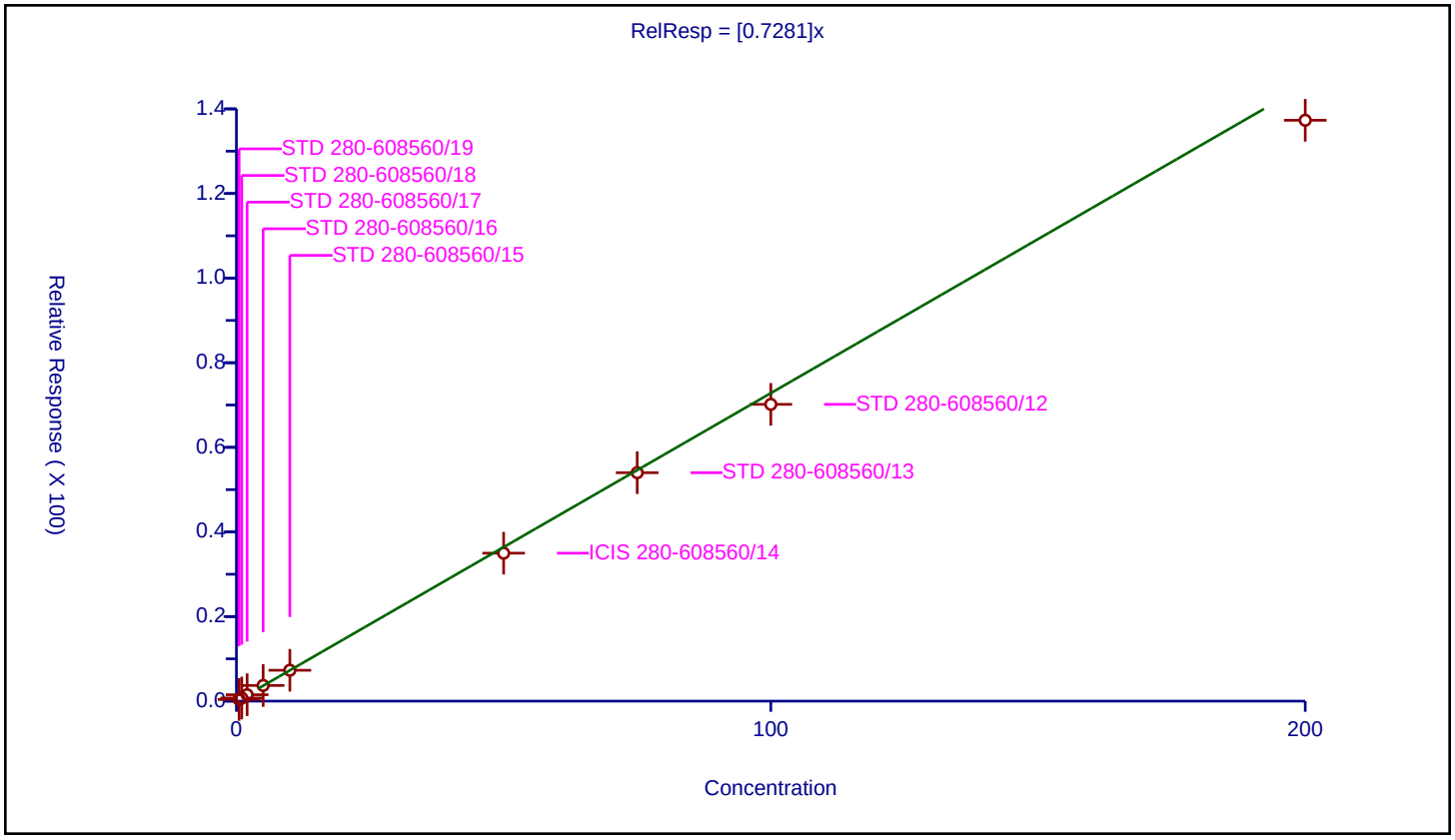
Curve Coefficients

Intercept:	0
Slope:	0.7281

Error Coefficients

Standard Error:	640000
Relative Standard Error:	4.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.388217	50.0	536555.0	0.776435	Y
2	STD 280-608560/18	1.0	0.739374	50.0	559730.0	0.739374	Y
3	STD 280-608560/17	2.0	1.516369	50.0	558604.0	0.758185	Y
4	STD 280-608560/16	5.0	3.704441	50.0	554807.0	0.740888	Y
5	STD 280-608560/15	10.0	7.302653	50.0	556825.0	0.730265	Y
6	ICIS 280-608560/14	50.0	34.976628	50.0	566707.0	0.699533	Y
7	STD 280-608560/13	75.0	54.001451	50.0	560809.0	0.720019	Y
8	STD 280-608560/12	100.0	70.160372	50.0	552279.0	0.701604	Y
9	STD 280-608560/11	200.0	137.309182	50.0	532771.0	0.686546	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

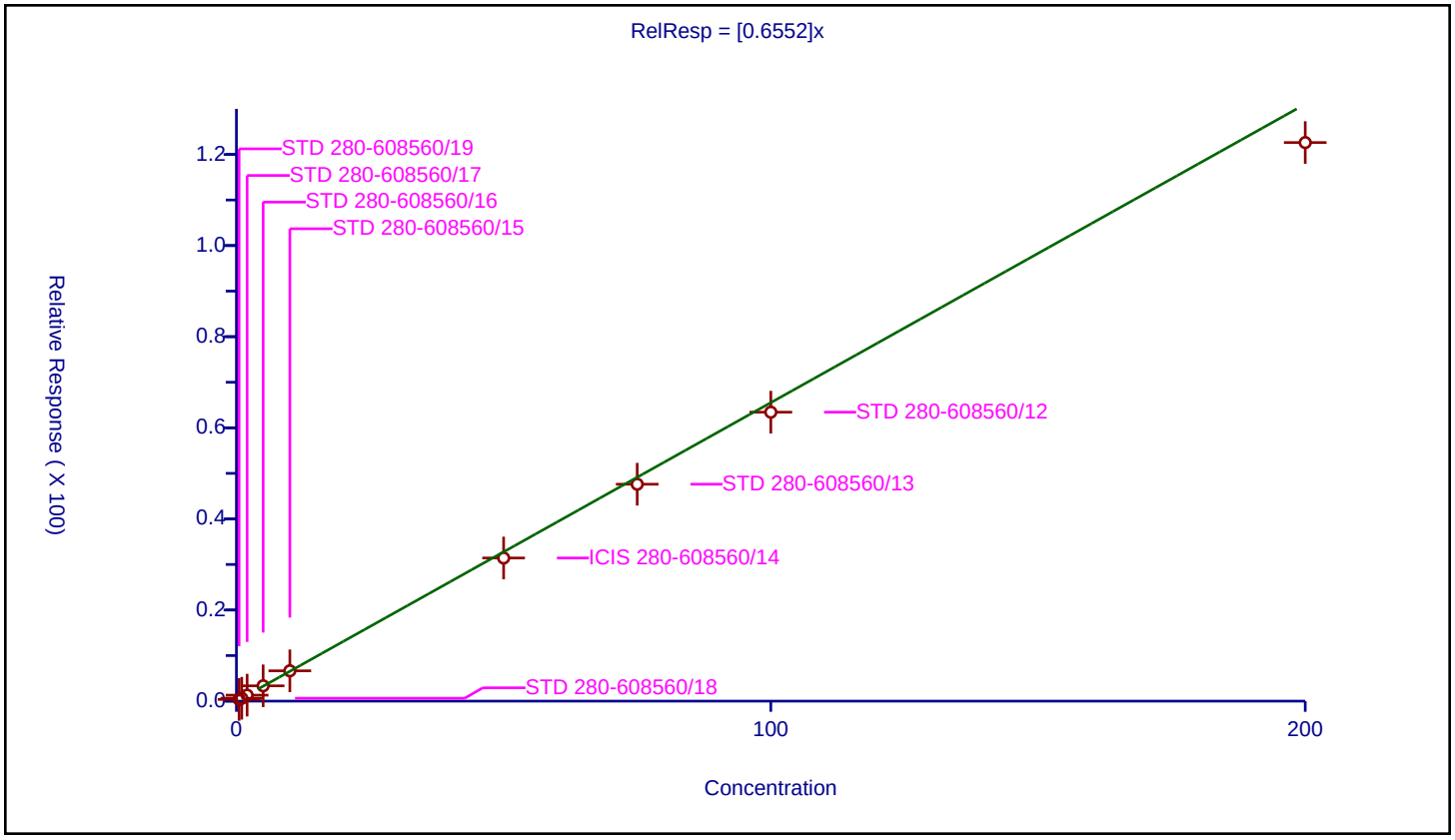
Curve Coefficients

Intercept:	0
Slope:	0.6552

Error Coefficients

Standard Error:	572000
Relative Standard Error:	6.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.378806	50.0	536555.0	0.757611	Y
2	STD 280-608560/18	1.0	0.634949	50.0	559730.0	0.634949	Y
3	STD 280-608560/17	2.0	1.311842	50.0	558604.0	0.655921	Y
4	STD 280-608560/16	5.0	3.360178	50.0	554807.0	0.672036	Y
5	STD 280-608560/15	10.0	6.658286	50.0	556825.0	0.665829	Y
6	ICIS 280-608560/14	50.0	31.418705	50.0	566707.0	0.628374	Y
7	STD 280-608560/13	75.0	47.614518	50.0	560809.0	0.63486	Y
8	STD 280-608560/12	100.0	63.428086	50.0	552279.0	0.634281	Y
9	STD 280-608560/11	200.0	122.607368	50.0	532771.0	0.613037	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

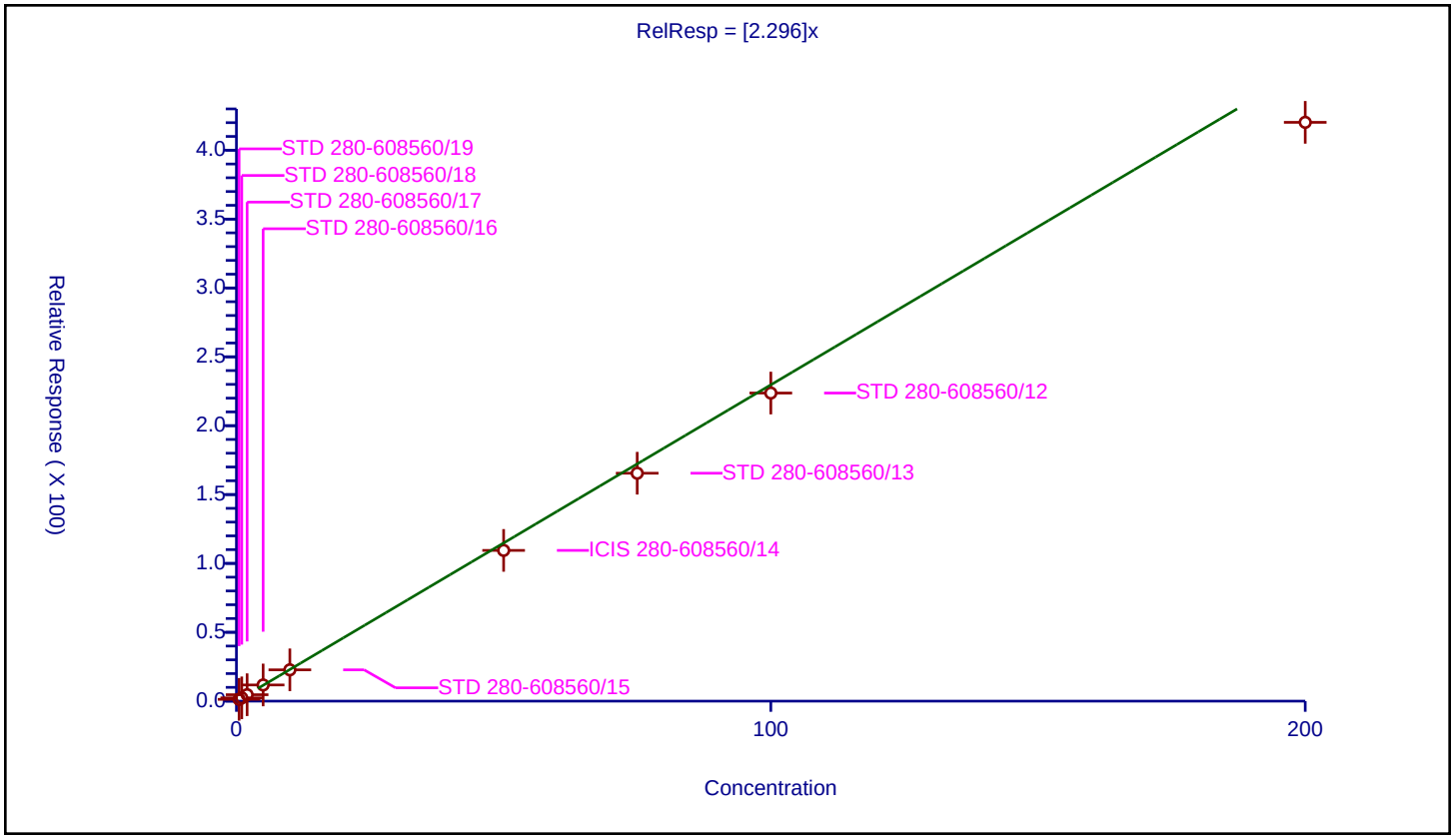
Curve Coefficients

Intercept:	0
Slope:	2.296

Error Coefficients

Standard Error:	1980000
Relative Standard Error:	6.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	1.296885	50.0	536555.0	2.59377	Y
2	STD 280-608560/18	1.0	2.380076	50.0	559730.0	2.380076	Y
3	STD 280-608560/17	2.0	4.671646	50.0	558604.0	2.335823	Y
4	STD 280-608560/16	5.0	11.7558	50.0	554807.0	2.35116	Y
5	STD 280-608560/15	10.0	22.726979	50.0	556825.0	2.272698	Y
6	ICIS 280-608560/14	50.0	109.450298	50.0	566707.0	2.189006	Y
7	STD 280-608560/13	75.0	165.480048	50.0	560809.0	2.206401	Y
8	STD 280-608560/12	100.0	223.68857	50.0	552279.0	2.236886	Y
9	STD 280-608560/11	200.0	420.242093	50.0	532771.0	2.10121	Y



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Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

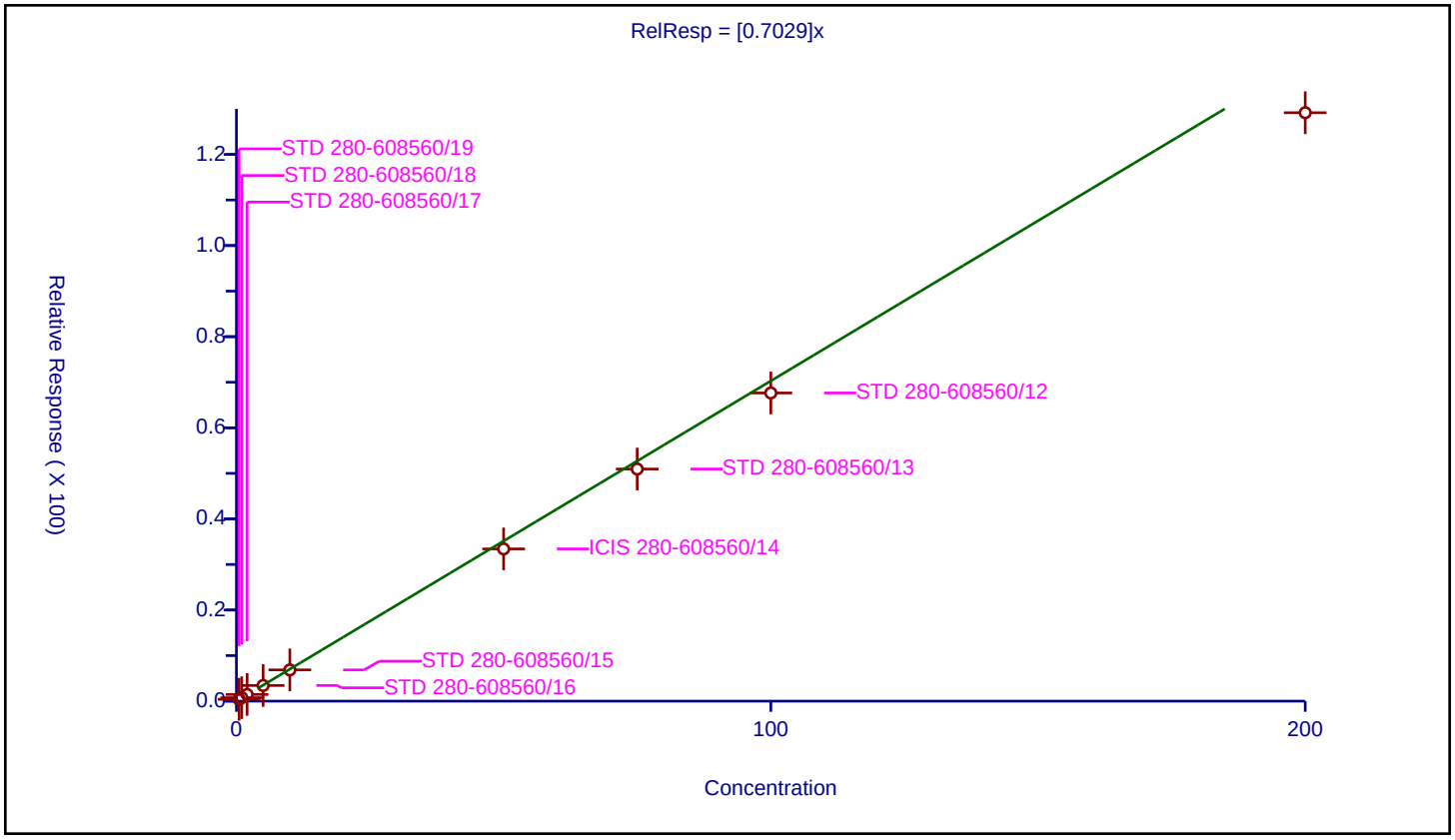
Curve Coefficients

Intercept:	0
Slope:	0.7029

Error Coefficients

Standard Error:	605000
Relative Standard Error:	6.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.397723	50.0	536555.0	0.795445	Y
2	STD 280-608560/18	1.0	0.757687	50.0	559730.0	0.757687	Y
3	STD 280-608560/17	2.0	1.46159	50.0	558604.0	0.730795	Y
4	STD 280-608560/16	5.0	3.433987	50.0	554807.0	0.686797	Y
5	STD 280-608560/15	10.0	6.85763	50.0	556825.0	0.685763	Y
6	ICIS 280-608560/14	50.0	33.414975	50.0	566707.0	0.668299	Y
7	STD 280-608560/13	75.0	50.94863	50.0	560809.0	0.679315	Y
8	STD 280-608560/12	100.0	67.643528	50.0	552279.0	0.676435	Y
9	STD 280-608560/11	200.0	129.157837	50.0	532771.0	0.645789	Y



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Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

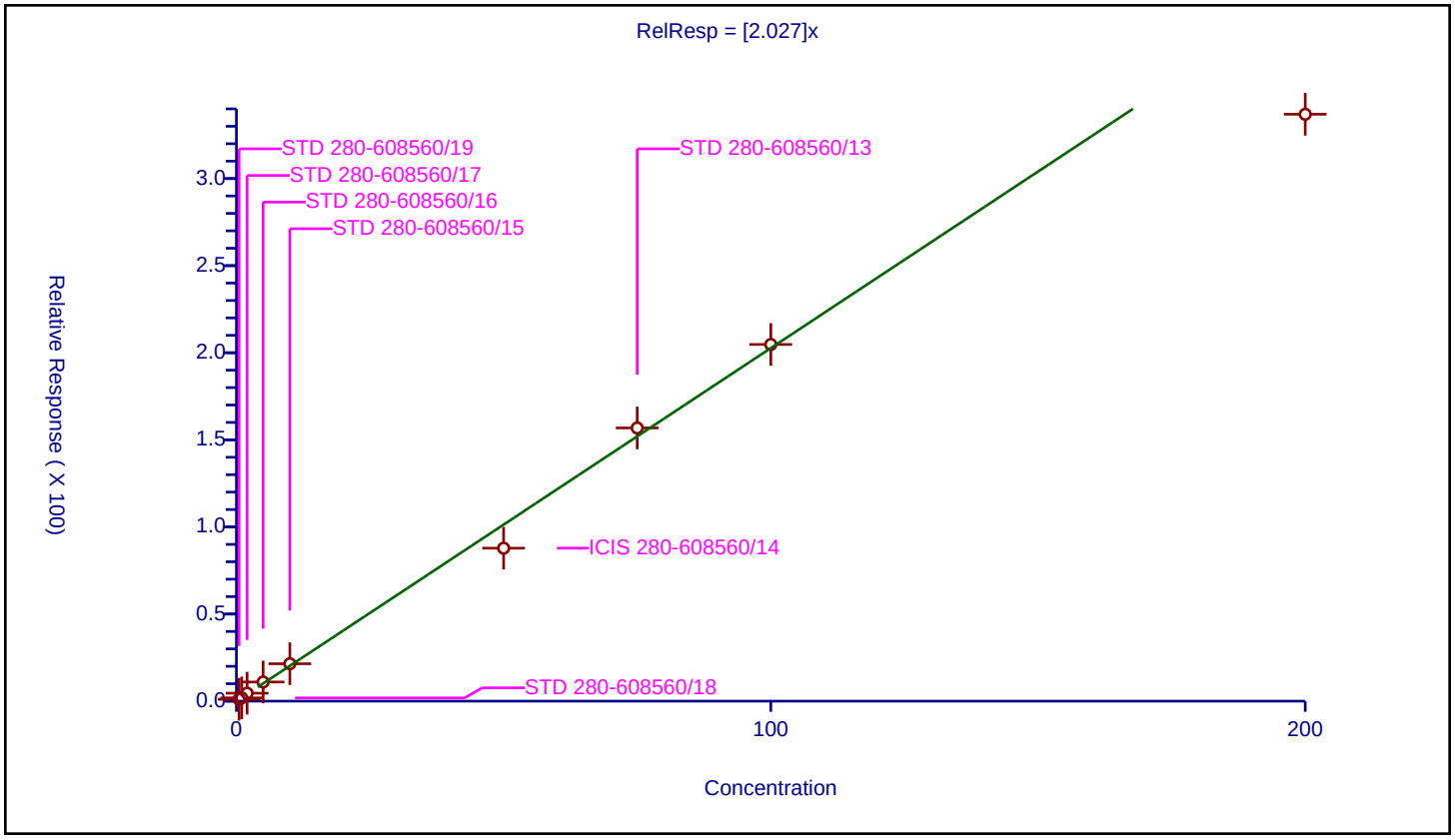
Curve Coefficients

Intercept:	0
Slope:	2.027

Error Coefficients

Standard Error:	1660000
Relative Standard Error:	10.3
Correlation Coefficient:	0.981
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	1.08535	50.0	536555.0	2.1707	Y
2	STD 280-608560/18	1.0	1.86724	50.0	559730.0	1.86724	Y
3	STD 280-608560/17	2.0	4.557253	50.0	558604.0	2.278627	Y
4	STD 280-608560/16	5.0	10.987424	50.0	554807.0	2.197485	Y
5	STD 280-608560/15	10.0	21.472276	50.0	556825.0	2.147228	Y
6	ICIS 280-608560/14	50.0	87.819455	50.0	566707.0	1.756389	Y
7	STD 280-608560/13	75.0	156.841367	50.0	560809.0	2.091218	Y
8	STD 280-608560/12	100.0	204.753847	50.0	552279.0	2.047538	Y
9	STD 280-608560/11	200.0	336.908447	50.0	532771.0	1.684542	Y



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Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

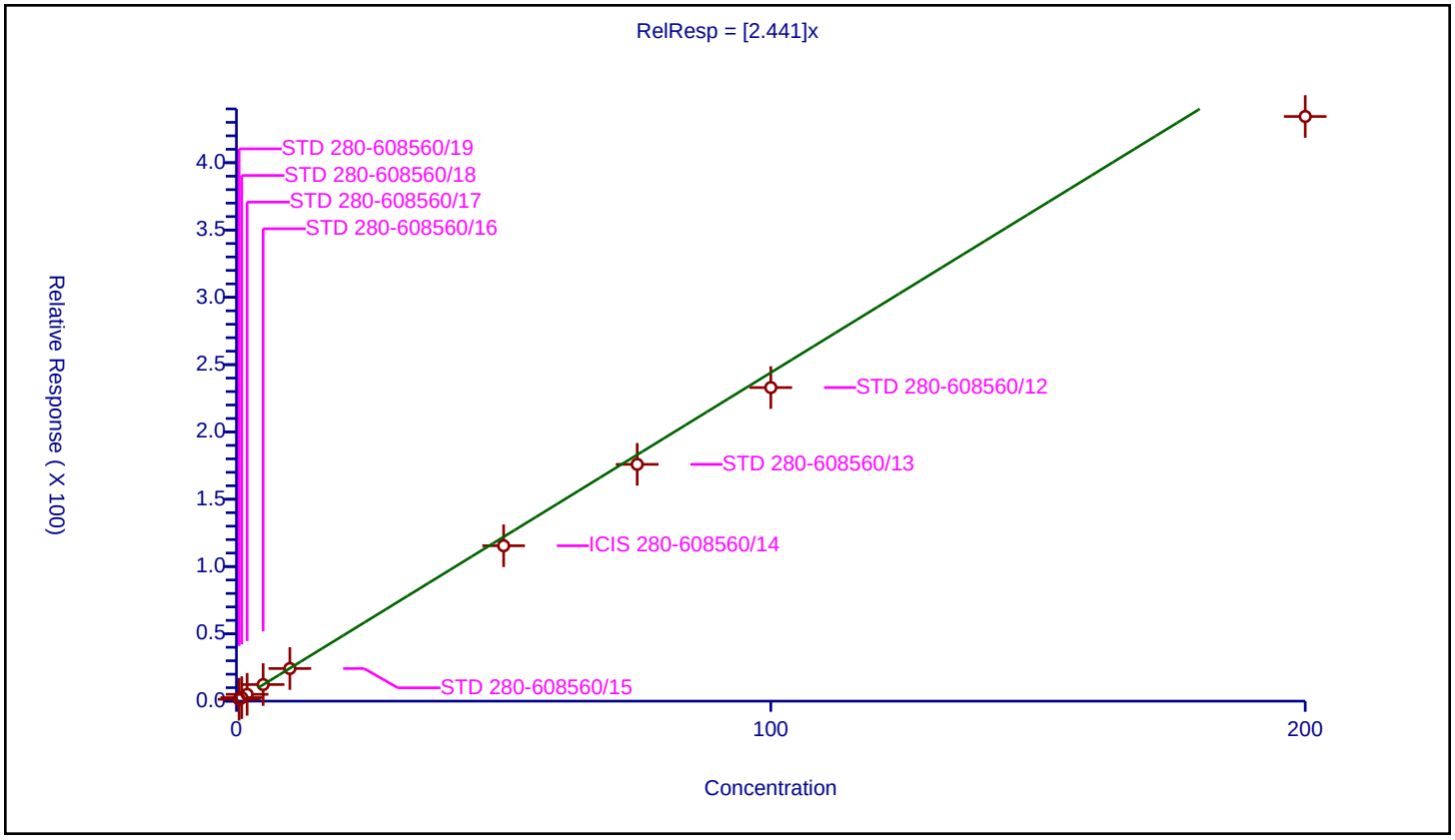
Curve Coefficients

Intercept:	0
Slope:	2.441

Error Coefficients

Standard Error:	2050000
Relative Standard Error:	7.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	1.393986	50.0	536555.0	2.787971	Y
2	STD 280-608560/18	1.0	2.607686	50.0	559730.0	2.607686	Y
3	STD 280-608560/17	2.0	5.057429	50.0	558604.0	2.528714	Y
4	STD 280-608560/16	5.0	12.3123	50.0	554807.0	2.46246	Y
5	STD 280-608560/15	10.0	24.239124	50.0	556825.0	2.423912	Y
6	ICIS 280-608560/14	50.0	115.446606	50.0	566707.0	2.308932	Y
7	STD 280-608560/13	75.0	175.928346	50.0	560809.0	2.345711	Y
8	STD 280-608560/12	100.0	232.959066	50.0	552279.0	2.329591	Y
9	STD 280-608560/11	200.0	434.361574	50.0	532771.0	2.171808	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

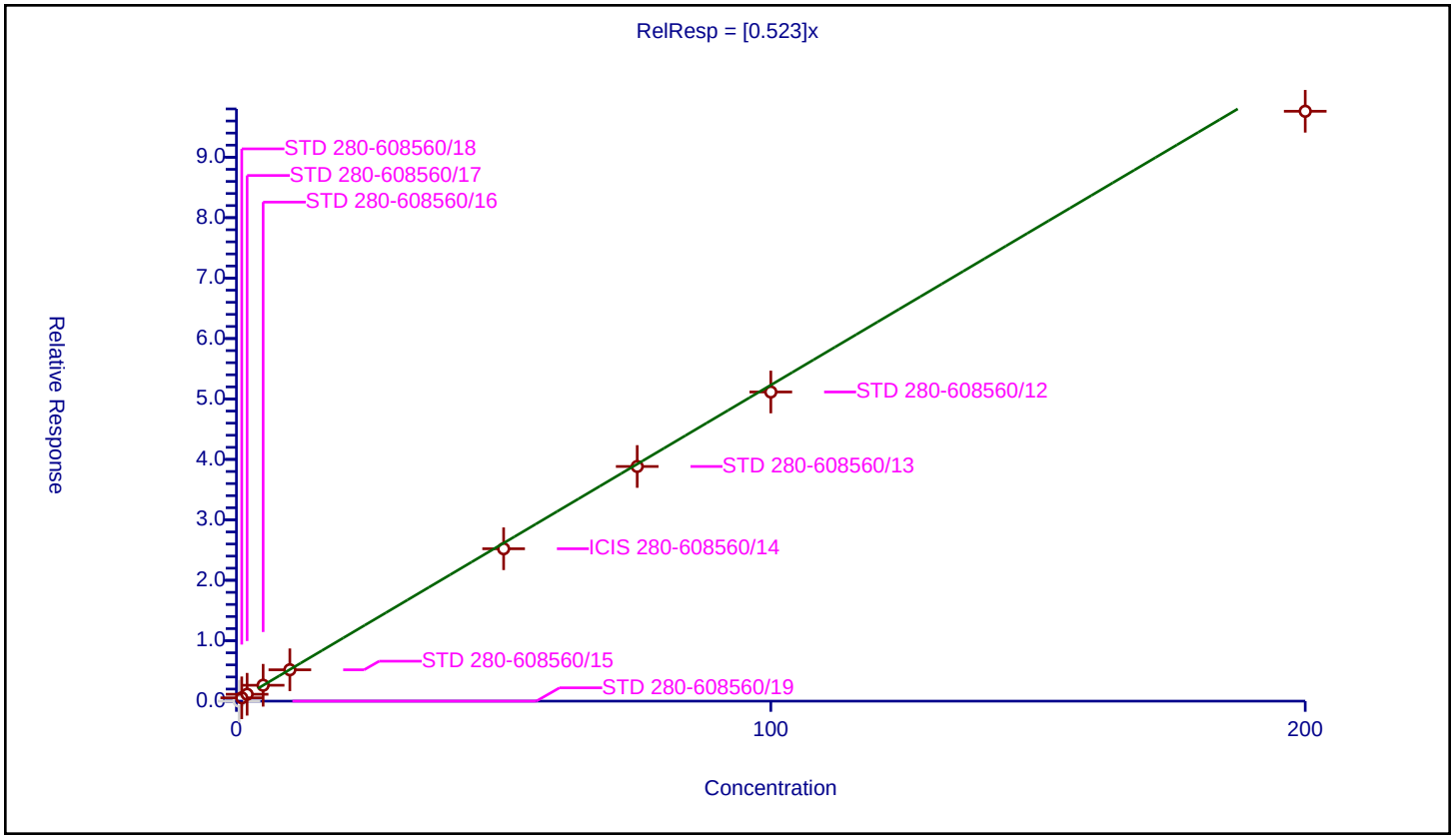
Curve Coefficients

Intercept:	0
Slope:	0.523

Error Coefficients

Standard Error:	489000
Relative Standard Error:	4.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.0	50.0	536555.0	0.0	N
2	STD 280-608560/18	1.0	0.548211	50.0	559730.0	0.548211	Y
3	STD 280-608560/17	2.0	1.138642	50.0	558604.0	0.569321	Y
4	STD 280-608560/16	5.0	2.629383	50.0	554807.0	0.525877	Y
5	STD 280-608560/15	10.0	5.190141	50.0	556825.0	0.519014	Y
6	ICIS 280-608560/14	50.0	25.214705	50.0	566707.0	0.504294	Y
7	STD 280-608560/13	75.0	38.829619	50.0	560809.0	0.517728	Y
8	STD 280-608560/12	100.0	51.155575	50.0	552279.0	0.511556	Y
9	STD 280-608560/11	200.0	97.608916	50.0	532771.0	0.488045	Y



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Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

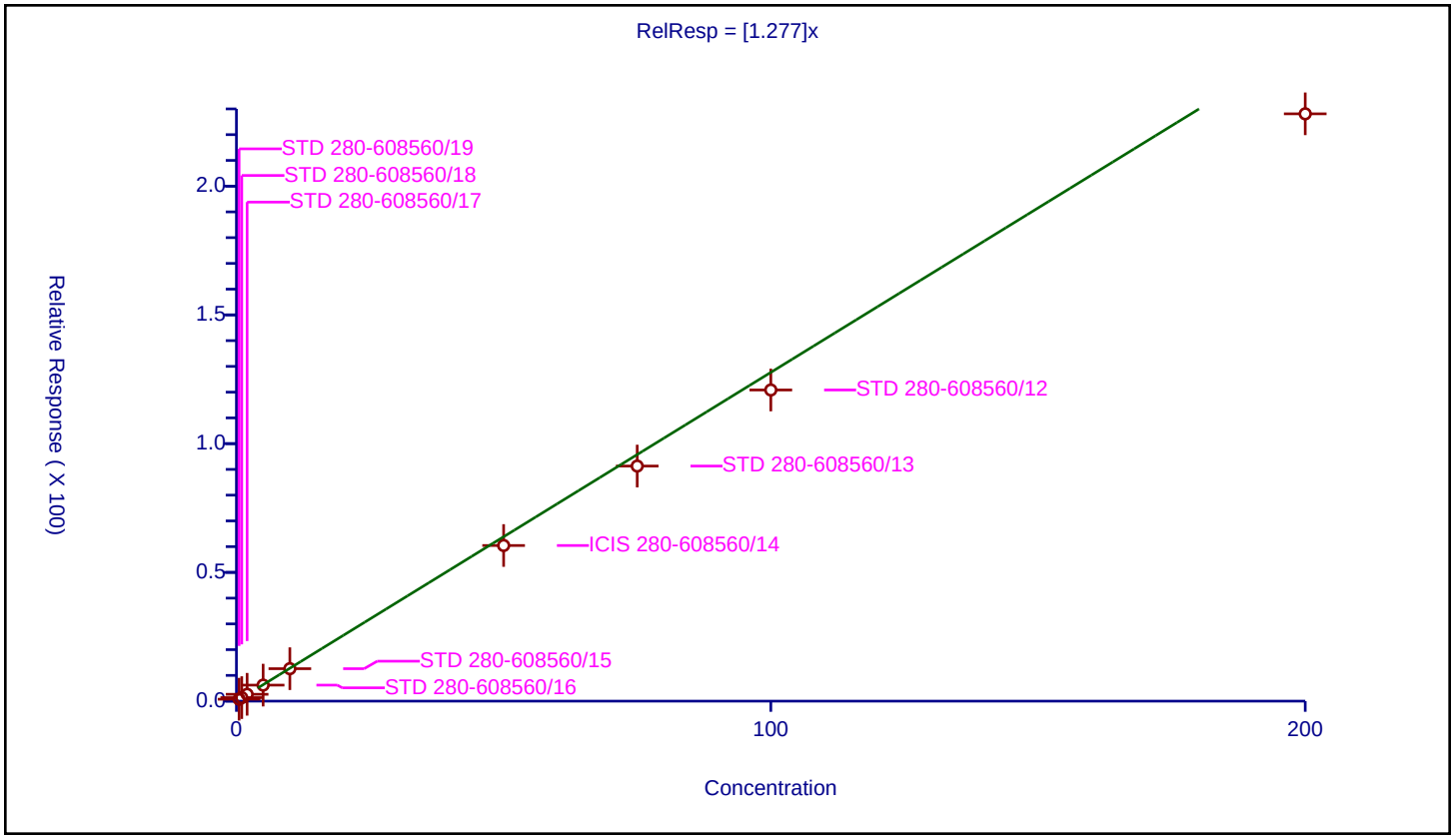
Curve Coefficients

Intercept:	0
Slope:	1.277

Error Coefficients

Standard Error:	1070000
Relative Standard Error:	8.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.755002	50.0	536555.0	1.510004	Y
2	STD 280-608560/18	1.0	1.37084	50.0	559730.0	1.37084	Y
3	STD 280-608560/17	2.0	2.659845	50.0	558604.0	1.329922	Y
4	STD 280-608560/16	5.0	6.221803	50.0	554807.0	1.244361	Y
5	STD 280-608560/15	10.0	12.607282	50.0	556825.0	1.260728	Y
6	ICIS 280-608560/14	50.0	60.445962	50.0	566707.0	1.208919	Y
7	STD 280-608560/13	75.0	91.295789	50.0	560809.0	1.217277	Y
8	STD 280-608560/12	100.0	120.837566	50.0	552279.0	1.208376	Y
9	STD 280-608560/11	200.0	228.089179	50.0	532771.0	1.140446	Y



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Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

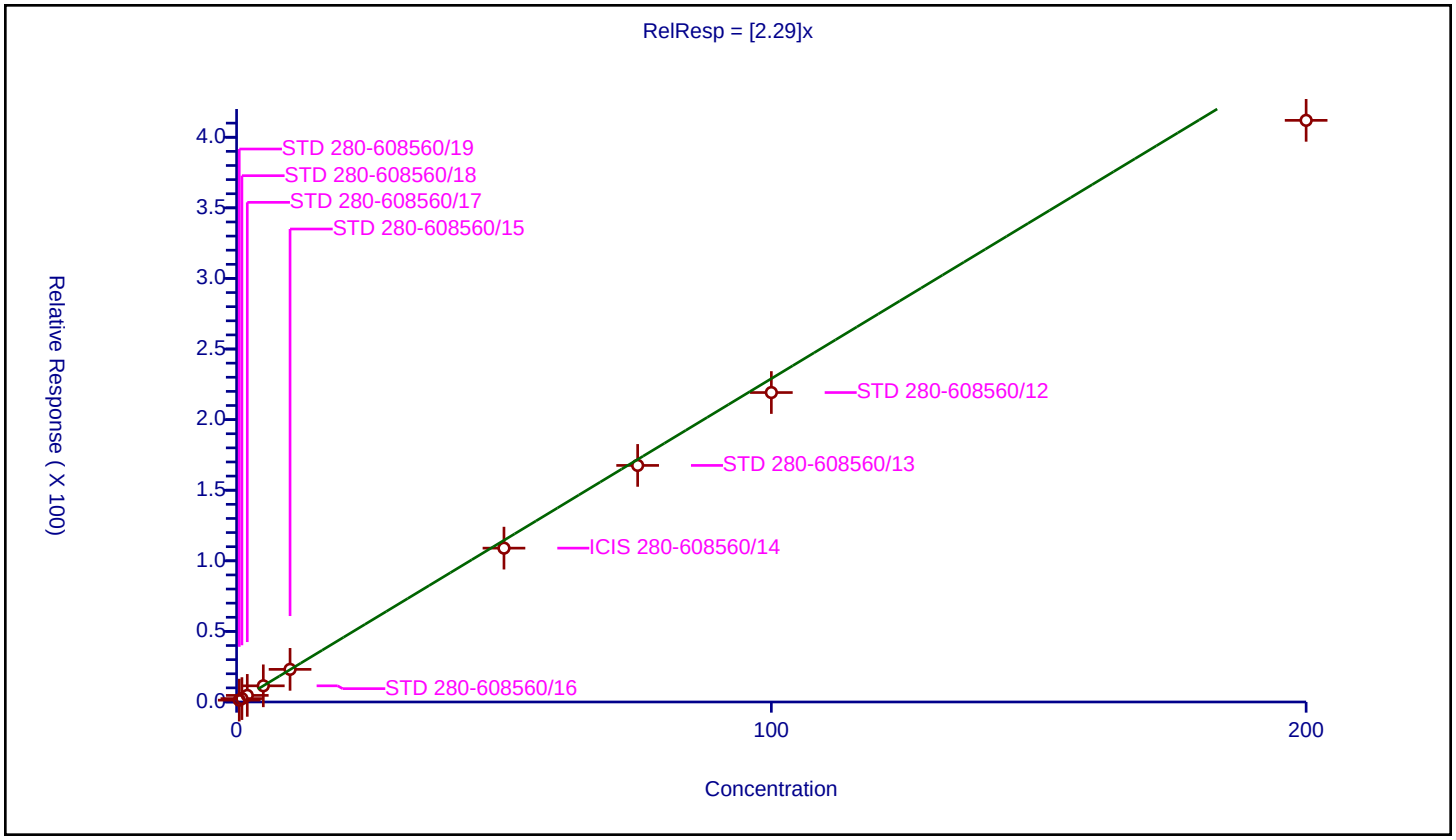
Curve Coefficients

Intercept:	0
Slope:	2.29

Error Coefficients

Standard Error:	1950000
Relative Standard Error:	6.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	1.303687	50.0	536555.0	2.607375	Y
2	STD 280-608560/18	1.0	2.399282	50.0	559730.0	2.399282	Y
3	STD 280-608560/17	2.0	4.682655	50.0	558604.0	2.341328	Y
4	STD 280-608560/16	5.0	11.452091	50.0	554807.0	2.290418	Y
5	STD 280-608560/15	10.0	23.103399	50.0	556825.0	2.31034	Y
6	ICIS 280-608560/14	50.0	108.980037	50.0	566707.0	2.179601	Y
7	STD 280-608560/13	75.0	167.55678	50.0	560809.0	2.23409	Y
8	STD 280-608560/12	100.0	219.175725	50.0	552279.0	2.191757	Y
9	STD 280-608560/11	200.0	411.966023	50.0	532771.0	2.05983	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

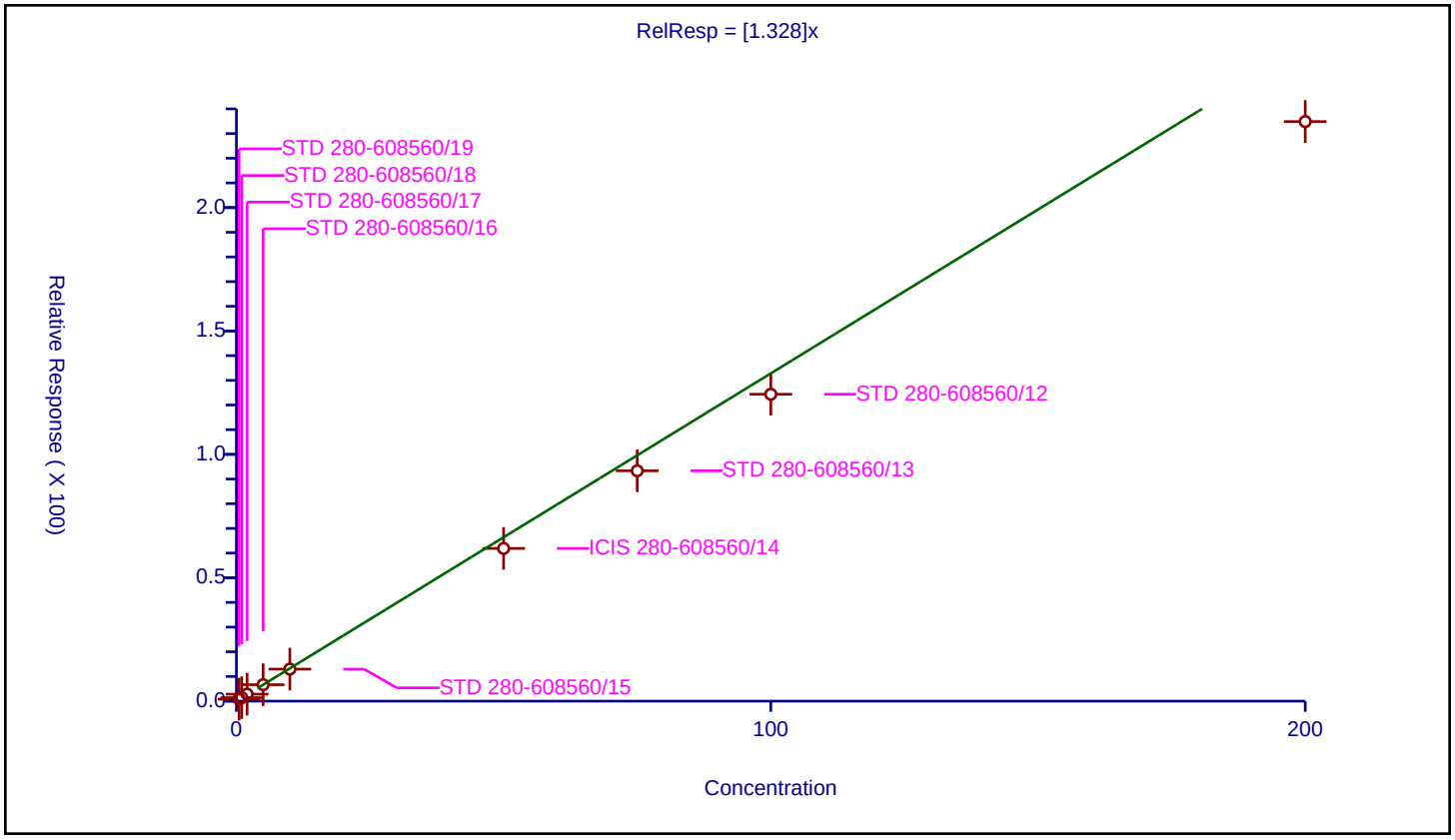
Curve Coefficients

Intercept:	0
Slope:	1.328

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	9.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.800757	50.0	536555.0	1.601513	Y
2	STD 280-608560/18	1.0	1.412199	50.0	559730.0	1.412199	Y
3	STD 280-608560/17	2.0	2.817739	50.0	558604.0	1.408869	Y
4	STD 280-608560/16	5.0	6.66466	50.0	554807.0	1.332932	Y
5	STD 280-608560/15	10.0	12.978584	50.0	556825.0	1.297858	Y
6	ICIS 280-608560/14	50.0	61.877831	50.0	566707.0	1.237557	Y
7	STD 280-608560/13	75.0	93.357186	50.0	560809.0	1.244762	Y
8	STD 280-608560/12	100.0	124.359608	50.0	552279.0	1.243596	Y
9	STD 280-608560/11	200.0	234.858879	50.0	532771.0	1.174294	Y



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Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

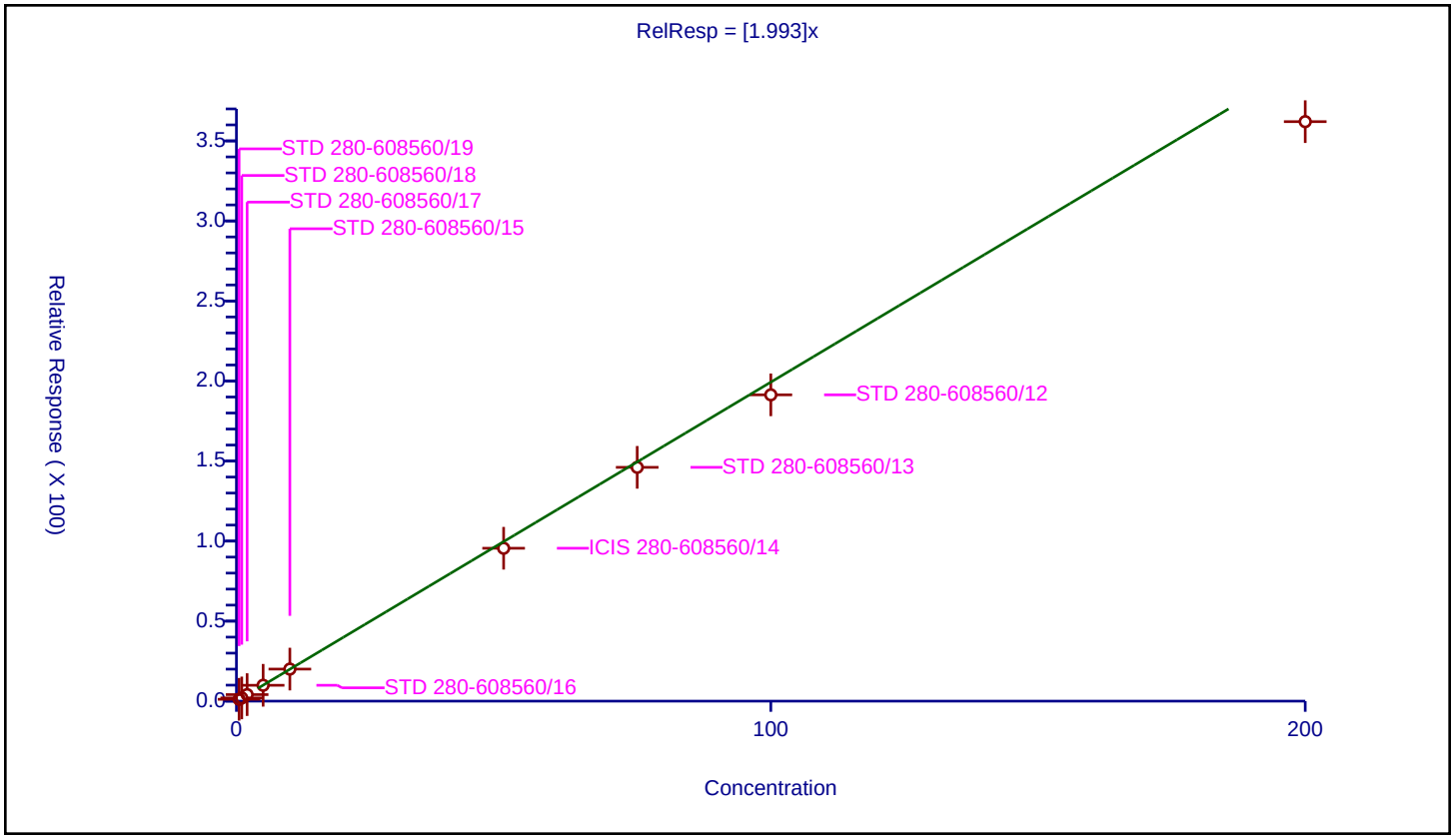
Curve Coefficients

Intercept:	0
Slope:	1.993

Error Coefficients

Standard Error:	1710000
Relative Standard Error:	7.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	1.162882	50.0	536555.0	2.325763	Y
2	STD 280-608560/18	1.0	2.000429	50.0	559730.0	2.000429	Y
3	STD 280-608560/17	2.0	4.087063	50.0	558604.0	2.043532	Y
4	STD 280-608560/16	5.0	9.913357	50.0	554807.0	1.982671	Y
5	STD 280-608560/15	10.0	20.020294	50.0	556825.0	2.002029	Y
6	ICIS 280-608560/14	50.0	95.523789	50.0	566707.0	1.910476	Y
7	STD 280-608560/13	75.0	146.068626	50.0	560809.0	1.947582	Y
8	STD 280-608560/12	100.0	191.362065	50.0	552279.0	1.913621	Y
9	STD 280-608560/11	200.0	362.036222	50.0	532771.0	1.810181	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

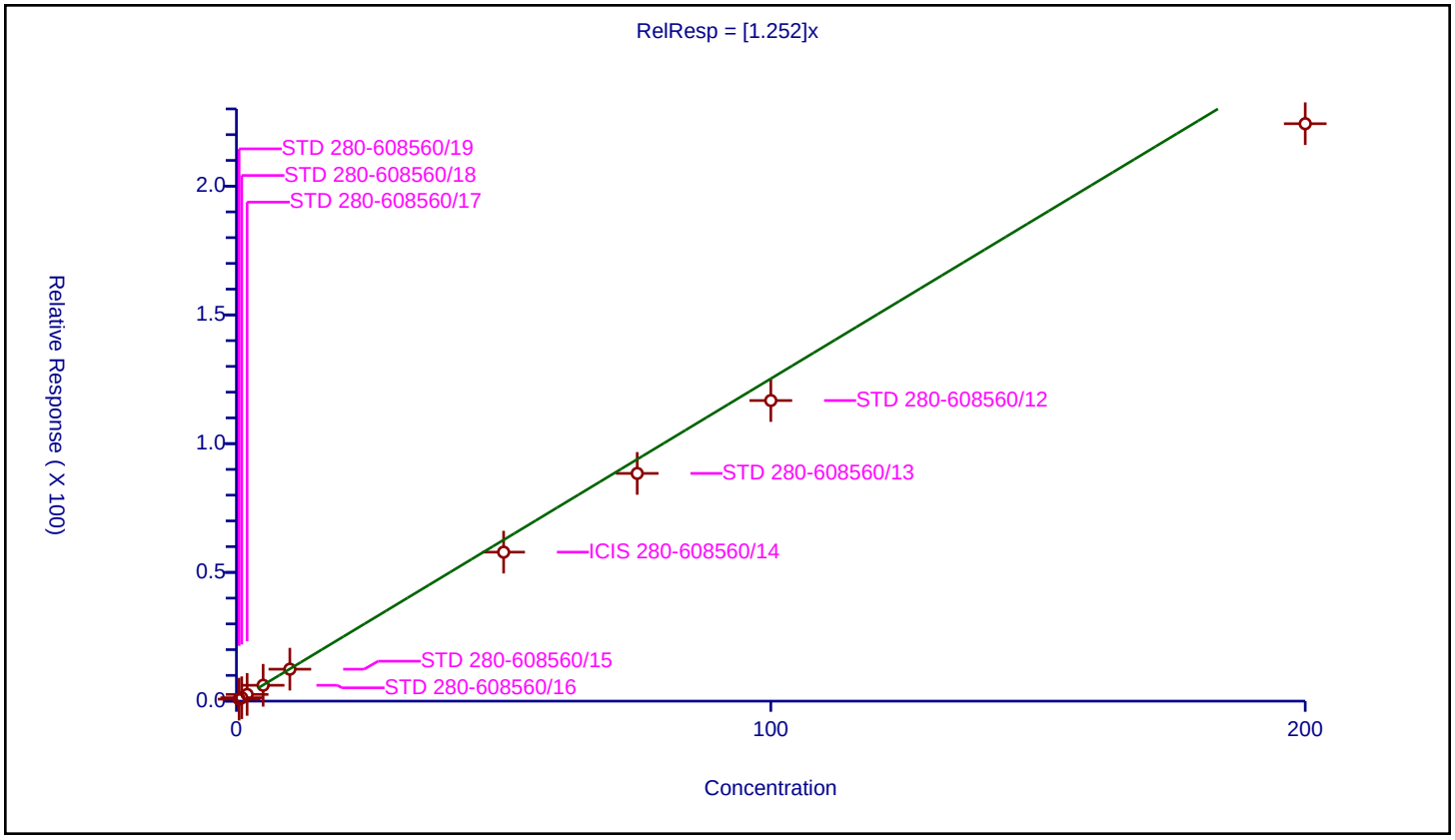
Curve Coefficients

Intercept:	0
Slope:	1.252

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	10.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.772335	50.0	536555.0	1.544669	Y
2	STD 280-608560/18	1.0	1.323853	50.0	559730.0	1.323853	Y
3	STD 280-608560/17	2.0	2.609272	50.0	558604.0	1.304636	Y
4	STD 280-608560/16	5.0	6.158628	50.0	554807.0	1.231726	Y
5	STD 280-608560/15	10.0	12.405603	50.0	556825.0	1.24056	Y
6	ICIS 280-608560/14	50.0	57.862529	50.0	566707.0	1.157251	Y
7	STD 280-608560/13	75.0	88.438488	50.0	560809.0	1.17918	Y
8	STD 280-608560/12	100.0	116.737645	50.0	552279.0	1.167376	Y
9	STD 280-608560/11	200.0	224.246721	50.0	532771.0	1.121234	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

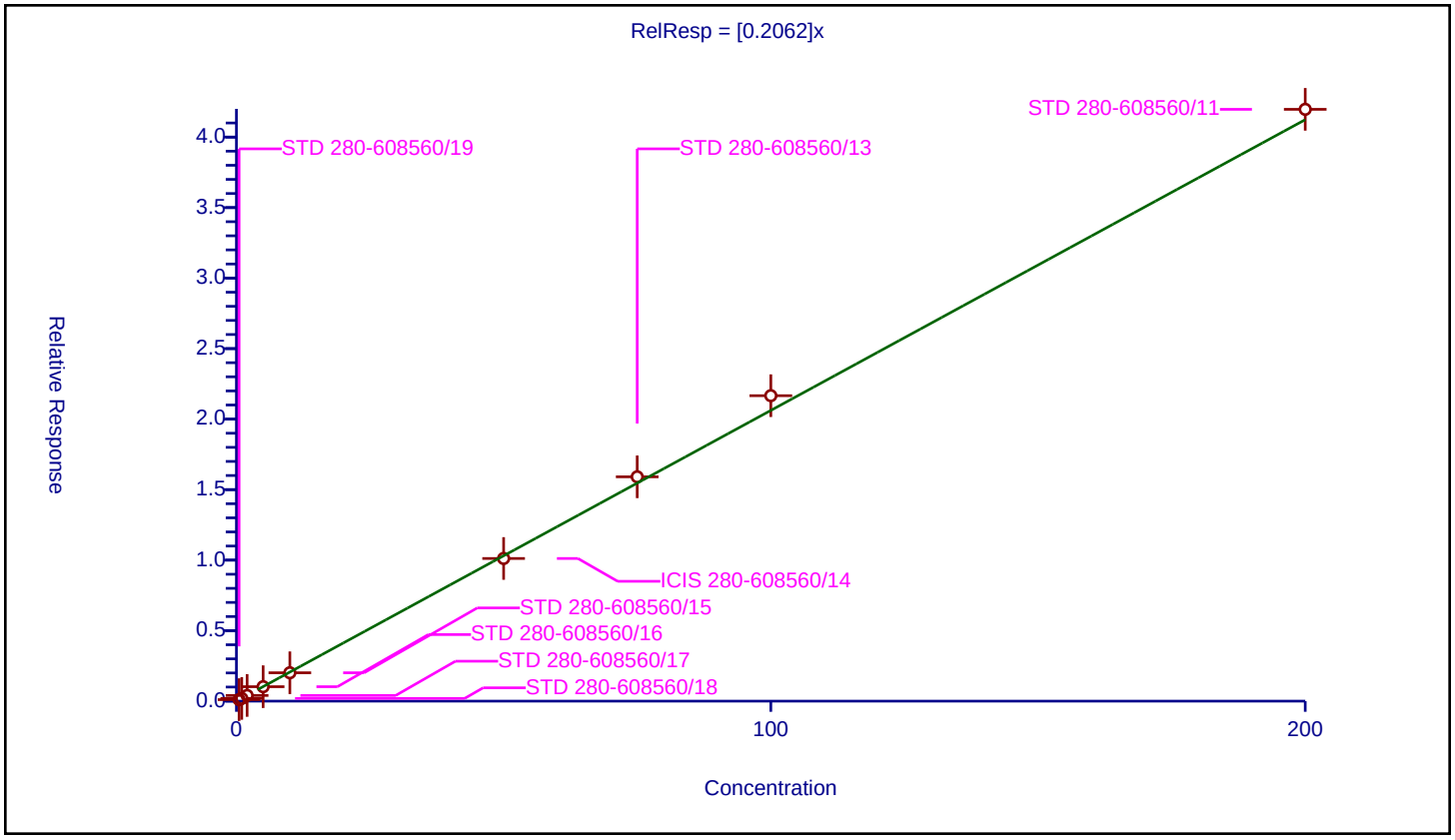
Curve Coefficients

Intercept:	0
Slope:	0.2062

Error Coefficients

Standard Error:	195000
Relative Standard Error:	3.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.106326	50.0	536555.0	0.212653	Y
2	STD 280-608560/18	1.0	0.193754	50.0	559730.0	0.193754	Y
3	STD 280-608560/17	2.0	0.403953	50.0	558604.0	0.201977	Y
4	STD 280-608560/16	5.0	1.024591	50.0	554807.0	0.204918	Y
5	STD 280-608560/15	10.0	2.01311	50.0	556825.0	0.201311	Y
6	ICIS 280-608560/14	50.0	10.116868	50.0	566707.0	0.202337	Y
7	STD 280-608560/13	75.0	15.90916	50.0	560809.0	0.212122	Y
8	STD 280-608560/12	100.0	21.661515	50.0	552279.0	0.216615	Y
9	STD 280-608560/11	200.0	41.968219	50.0	532771.0	0.209841	Y



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Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

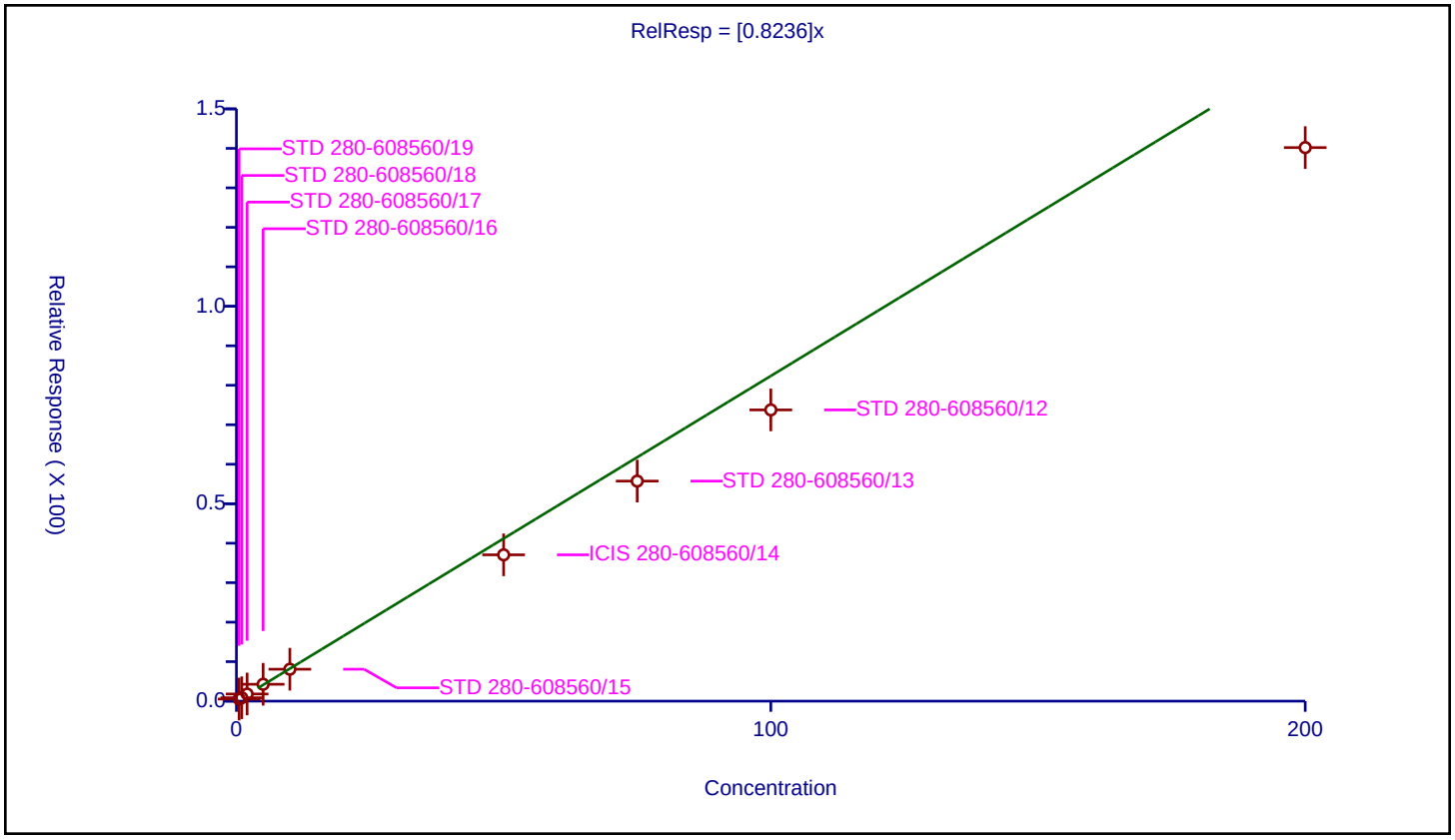
Curve Coefficients

Intercept:	0
Slope:	0.8236

Error Coefficients

Standard Error:	659000
Relative Standard Error:	13.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.531819	50.0	536555.0	1.063637	Y
2	STD 280-608560/18	1.0	0.858628	50.0	559730.0	0.858628	Y
3	STD 280-608560/17	2.0	1.810048	50.0	558604.0	0.905024	Y
4	STD 280-608560/16	5.0	4.271846	50.0	554807.0	0.854369	Y
5	STD 280-608560/15	10.0	8.082432	50.0	556825.0	0.808243	Y
6	ICIS 280-608560/14	50.0	37.05548	50.0	566707.0	0.74111	Y
7	STD 280-608560/13	75.0	55.730026	50.0	560809.0	0.743067	Y
8	STD 280-608560/12	100.0	73.762808	50.0	552279.0	0.737628	Y
9	STD 280-608560/11	200.0	140.199448	50.0	532771.0	0.700997	Y



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Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

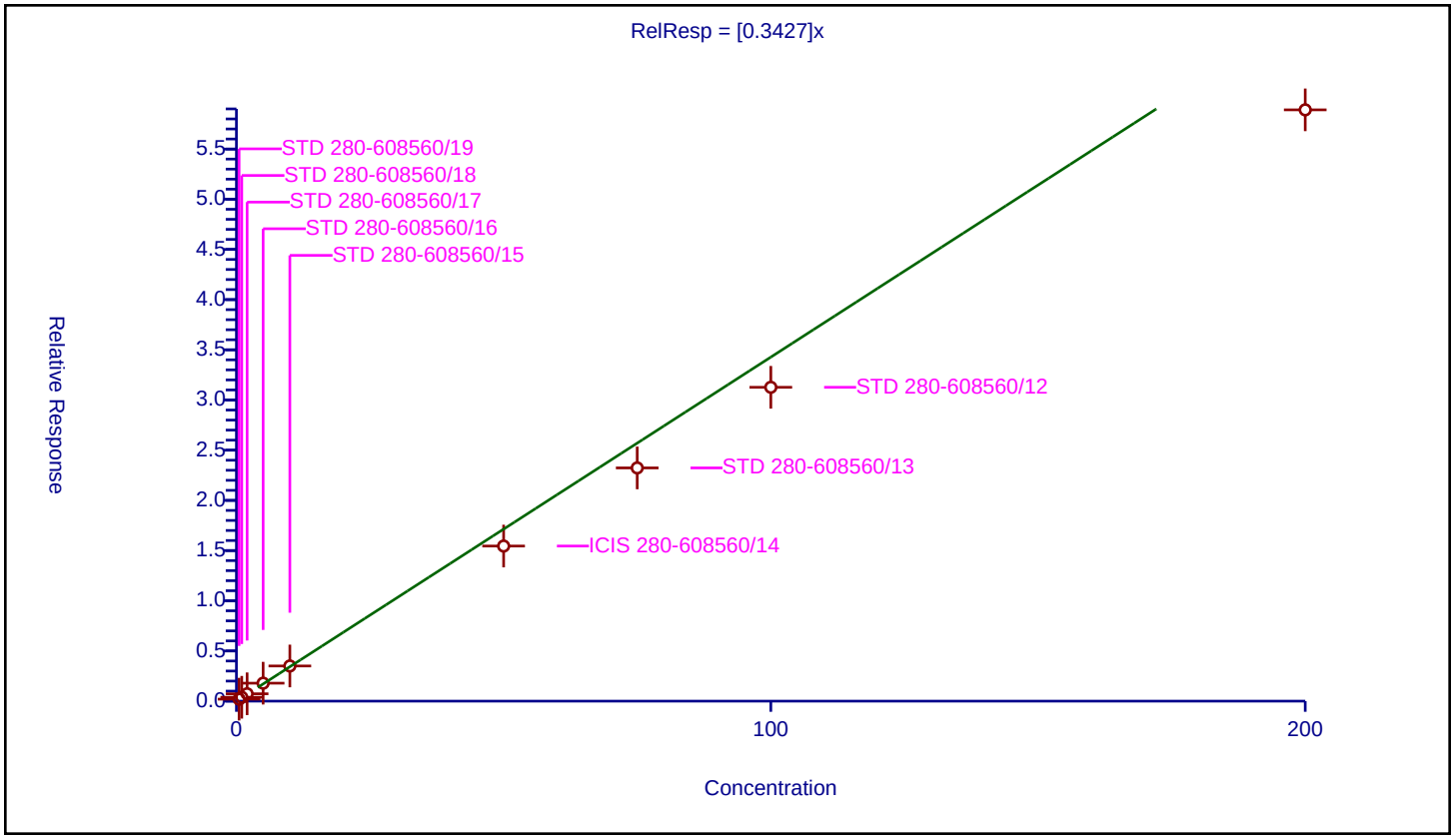
Curve Coefficients

Intercept:	0
Slope:	0.3427

Error Coefficients

Standard Error:	277000
Relative Standard Error:	10.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.198954	50.0	536555.0	0.397909	Y
2	STD 280-608560/18	1.0	0.385096	50.0	559730.0	0.385096	Y
3	STD 280-608560/17	2.0	0.733883	50.0	558604.0	0.366942	Y
4	STD 280-608560/16	5.0	1.790713	50.0	554807.0	0.358143	Y
5	STD 280-608560/15	10.0	3.504602	50.0	556825.0	0.35046	Y
6	ICIS 280-608560/14	50.0	15.450577	50.0	566707.0	0.309012	Y
7	STD 280-608560/13	75.0	23.23447	50.0	560809.0	0.309793	Y
8	STD 280-608560/12	100.0	31.265357	50.0	552279.0	0.312654	Y
9	STD 280-608560/11	200.0	58.903262	50.0	532771.0	0.294516	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

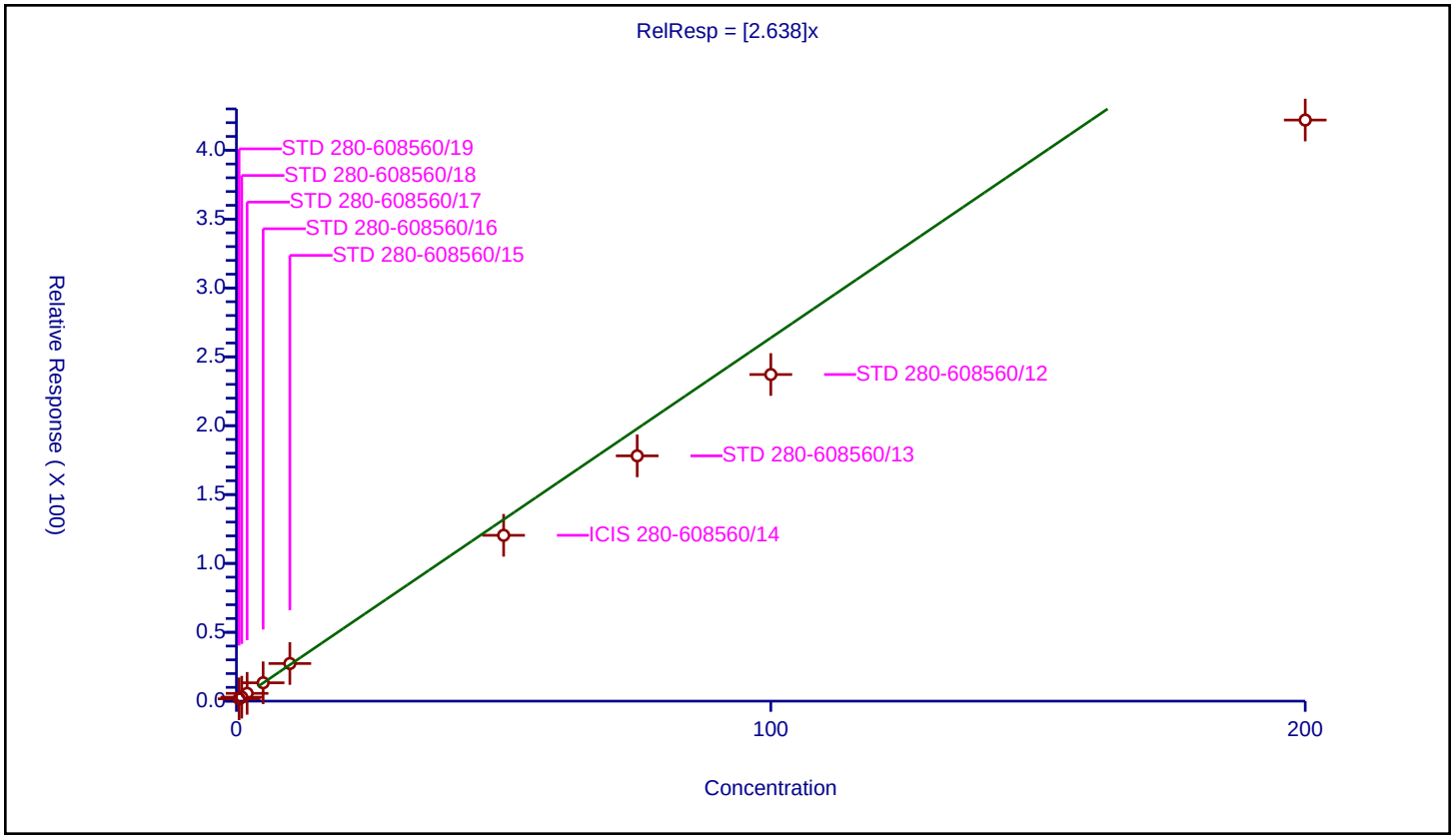
Curve Coefficients

Intercept:	0
Slope:	2.638

Error Coefficients

Standard Error:	2030000
Relative Standard Error:	14.2
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.969

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	1.690321	50.0	536555.0	3.380641	Y
2	STD 280-608560/18	1.0	2.870491	50.0	559730.0	2.870491	Y
3	STD 280-608560/17	2.0	5.655617	50.0	558604.0	2.827808	Y
4	STD 280-608560/16	5.0	13.326887	50.0	554807.0	2.665377	Y
5	STD 280-608560/15	10.0	27.311992	50.0	556825.0	2.731199	Y
6	ICIS 280-608560/14	50.0	120.397754	50.0	566707.0	2.407955	Y
7	STD 280-608560/13	75.0	178.091293	50.0	560809.0	2.374551	Y
8	STD 280-608560/12	100.0	237.144994	50.0	552279.0	2.37145	Y
9	STD 280-608560/11	200.0	421.922083	50.0	532771.0	2.10961	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

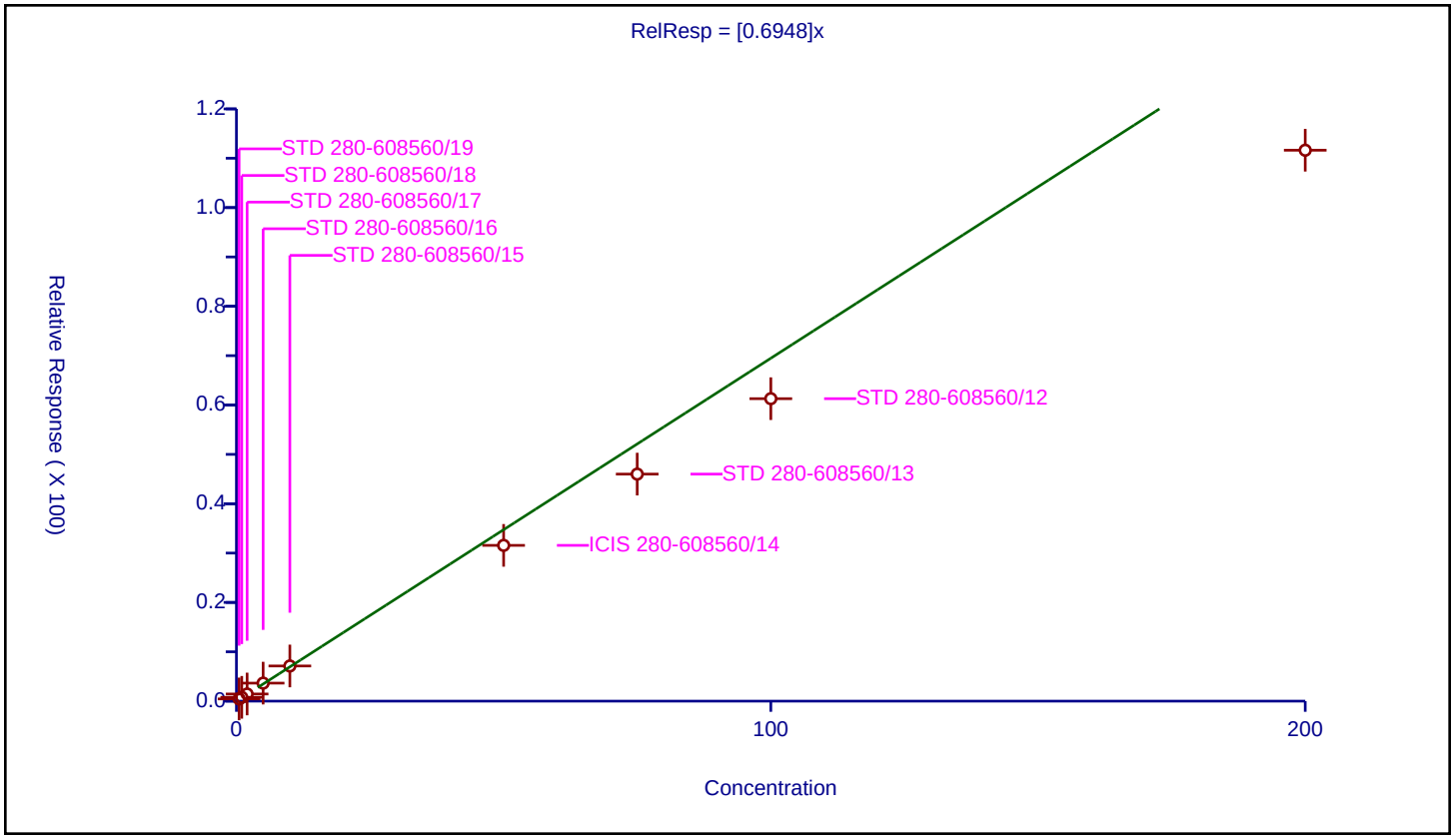
Curve Coefficients

Intercept:	0
Slope:	0.6948

Error Coefficients

Standard Error:	533000
Relative Standard Error:	14.9
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.966

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608560/19	0.5	0.448882	50.0	536555.0	0.897764	Y
2	STD 280-608560/18	1.0	0.773855	50.0	559730.0	0.773855	Y
3	STD 280-608560/17	2.0	1.44709	50.0	558604.0	0.723545	Y
4	STD 280-608560/16	5.0	3.648115	50.0	554807.0	0.729623	Y
5	STD 280-608560/15	10.0	7.125847	50.0	556825.0	0.712585	Y
6	ICIS 280-608560/14	50.0	31.559518	50.0	566707.0	0.63119	Y
7	STD 280-608560/13	75.0	46.000956	50.0	560809.0	0.613346	Y
8	STD 280-608560/12	100.0	61.283337	50.0	552279.0	0.612833	Y
9	STD 280-608560/11	200.0	111.624131	50.0	532771.0	0.558121	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 608697

SDG No.:

Instrument ID: VMS_MS11 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 04/14/2023 10:45 Calibration End Date: 04/14/2023 13:36 Calibration ID: 79250

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-608697/19	ms11_5281.D
Level 2	STD 280-608697/18	ms11_5280.D
Level 3	STD 280-608697/17	ms11_5279.D
Level 4	STD 280-608697/16	ms11_5278.D
Level 5	STD 280-608697/15	ms11_5277.D
Level 6	ICIS 280-608697/14	ms11_5276.D
Level 7	STD 280-608697/13	ms11_5275.D
Level 8	STD 280-608697/12	ms11_5274.D
Level 9	STD 280-608697/11	ms11_5273.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	+++++ 0.2422	0.2379 0.2309	0.2000 0.2390	0.2541 0.2415	0.3000	Ave		0.2432				11.4		15.0			
Chloromethane	+++++ 0.3257	0.4387 0.3127	0.5176 0.3181	0.3949 0.3038	0.3783	Lin1	0.2758	0.3100			0.1000				0.9980		0.9900
Vinyl chloride	+++++ 0.3044	0.3336 0.2910	0.3867 0.2941	0.3291 0.2816	0.3462	Ave		0.3208				10.9		30.0			
Bromomethane	+++++ 0.1646	0.2674 0.1603	0.3110 0.1649	0.2175 0.1439	0.1921	Lin1	0.2160	0.1528							0.9940		0.9900
Chloroethane	+++++ 0.1949	0.2461 0.1872	0.2965 0.1897	0.2204 0.1846	0.2297	Lin1	0.1373	0.1869							0.9980		0.9900
Dichlorofluoromethane	+++++ 0.4096	0.4496 0.3975	0.6148 0.4039	0.4623 0.3940	0.4695	Lin1	0.2253	0.3981							0.9990		0.9900
Trichlorofluoromethane	+++++ 0.3375	0.3460 0.3244	0.3807 0.3284	0.3560 0.3264	0.4130	Ave		0.3516				8.8		15.0			
2-Chloroethyl vinyl ether	+++++ 0.1889	0.1997 0.1890	0.2145 0.1862	0.1986 0.1850	0.2074	Ave		0.1962				5.5		15.0			
Dibromofluoromethane (Surr)	0.2540 0.2509	0.2588 0.2573	0.2538 0.2550	0.2584 0.2562	0.2565	Ave		0.2556				1.0		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3351 0.3337	0.3344 0.3377	0.3388 0.3361	0.3375 0.3367	0.3335	Ave		0.3359				0.6		15.0			
Toluene-d8 (Surr)	4.0592 4.1311	4.1163 4.1290	4.0309 4.1245	4.1825 4.0646	4.1352	Ave		4.1081				1.1		15.0			
4-Bromofluorobenzene (Surr)	0.9600 0.9493	0.9488 0.9743	0.9591 0.9541	0.9454 0.9533	0.9407	Ave		0.9539				1.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 608697

SDG No.:

Instrument ID: VMS_MS11 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) Y

Calibration Start Date: 04/14/2023 10:45 | Calibration End Date: 04/14/2023 13:36 | Calibration ID: 79250

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-608697/19	ms11_5281.D
Level 2	STD 280-608697/18	ms11_5280.D
Level 3	STD 280-608697/17	ms11_5279.D
Level 4	STD 280-608697/16	ms11_5278.D
Level 5	STD 280-608697/15	ms11_5277.D
Level 6	ICIS 280-608697/14	ms11_5276.D
Level 7	STD 280-608697/13	ms11_5275.D
Level 8	STD 280-608697/12	ms11_5274.D
Level 9	STD 280-608697/11	ms11_5273.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	+++++ 308037	6096 442079	10343 611064	31848 1219848	75793	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloromethane	FB	Lin1	+++++ 414179	11240 598554	26764 813282	49494 1534621	95594	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Ave	+++++ 387066	8549 557128	19994 751875	41249 1422742	87470	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Lin1	+++++ 209329	6851 306837	16080 421601	27256 726719	48529	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloroethane	FB	Lin1	+++++ 247859	6307 358336	15331 484968	27626 932368	58045	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Lin1	+++++ 520916	11520 760926	31792 1032584	57940 1990154	118642	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Ave	+++++ 429131	8866 621002	19687 839561	44624 1649026	104346	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Ave	+++++ 240189	5117 361704	11089 476056	24895 934607	52407	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	313428 318991	331509 328395	328090 325902	323865 323583	324019	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	413480 424389	428412 431017	437931 429643	422955 425188	421308	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	1218361 1251217	1277120 1270739	1286424 1258252	1261616 1251271	1264981	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	460624 471060	484640 487579	494248 478309	475387 483012	477942	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5273.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 14-Apr-2023 10:45:30 ALS Bottle#: 3 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 200
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub4

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:13:52 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 11:24:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	99	1262885	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	88	307847	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	506654	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	323583	50.0	50.1	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	425188	50.0	50.1	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1251271	50.0	49.5	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	88	483012	50.0	50.0	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	1219848	200.0	198.6	
12 Chloromethane	50	1.883	1.883	0.000	99	1534621	200.0	195.1	
13 Vinyl chloride	62	1.981	1.981	0.000	98	1422742	200.0	175.6	
15 Bromomethane	94	2.247	2.247	0.000	93	726719	200.0	186.9	
16 Chloroethane	64	2.344	2.344	0.000	100	932368	200.0	196.7	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	97	1990154	200.0	197.4	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	1649026	200.0	185.7	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	93	934607	200.0	188.6	

QC Flag Legend
Processing Flags

Reagents:
MV-Gas B_00133 Amount Added: 40.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

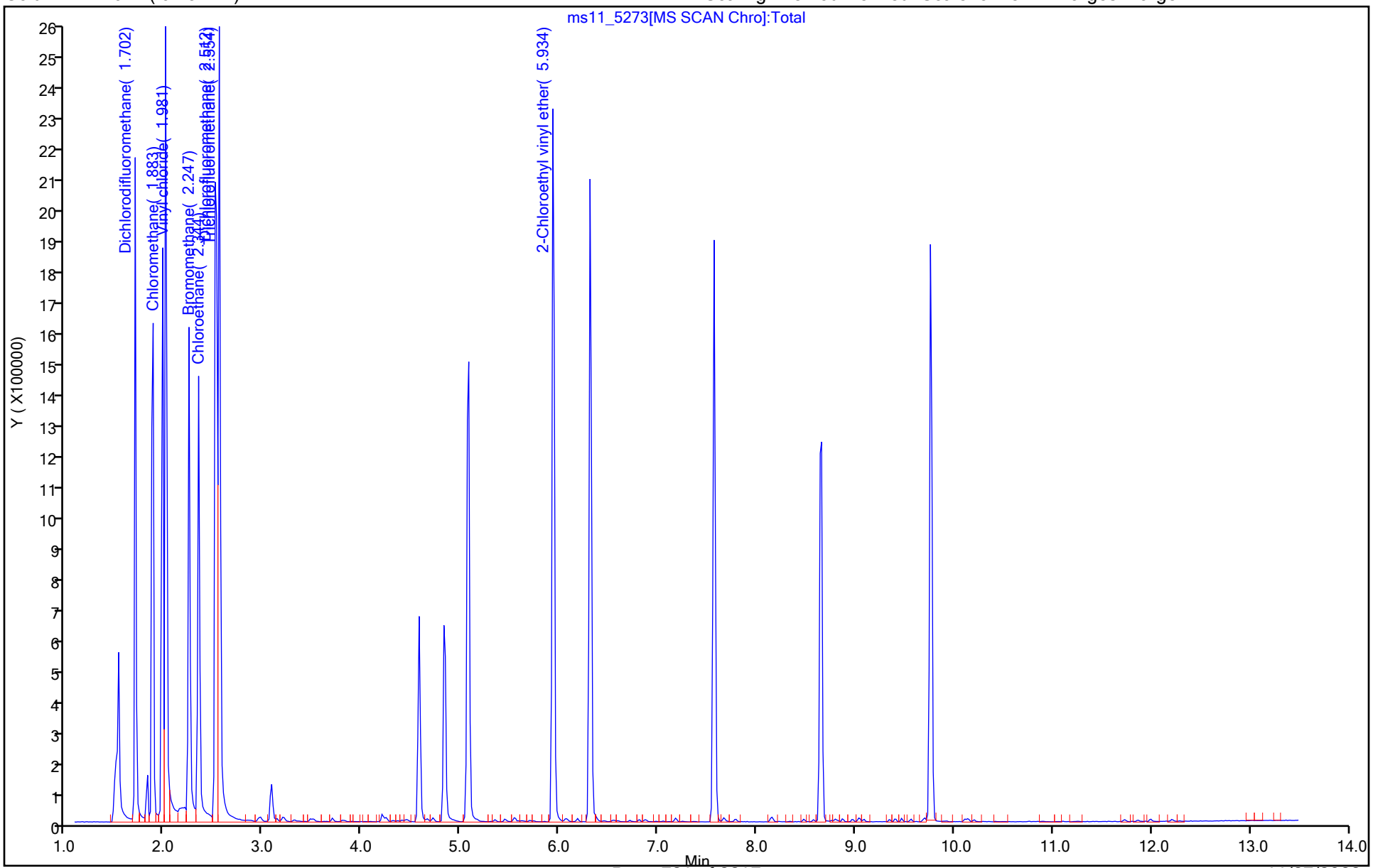
Report Date: 14-Apr-2023 17:13:53 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5273.D

Injection Date:	14-Apr-2023 10:45:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5274.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 14-Apr-2023 11:06:30 ALS Bottle#: 4 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 100
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub4

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:13:54 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 11:25:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1278242	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	88	305066	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	501332	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	325902	50.0	49.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	429643	50.0	50.0	
$ 7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1258252	50.0	50.2	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	88	478309	50.0	50.0	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	611064	100.0	98.3	
12 Chloromethane	50	1.883	1.883	0.000	99	813282	100.0	101.7	
13 Vinyl chloride	62	1.981	1.981	0.000	98	751875	100.0	91.7	
15 Bromomethane	94	2.260	2.260	0.000	92	421601	100.0	106.5	
16 Chloroethane	64	2.344	2.344	0.000	99	484968	100.0	100.7	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	1032584	100.0	100.9	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	839561	100.0	93.4	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	93	476056	100.0	94.9	

QC Flag Legend
Processing Flags

Reagents:
MV-Gas B_00133 Amount Added: 20.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

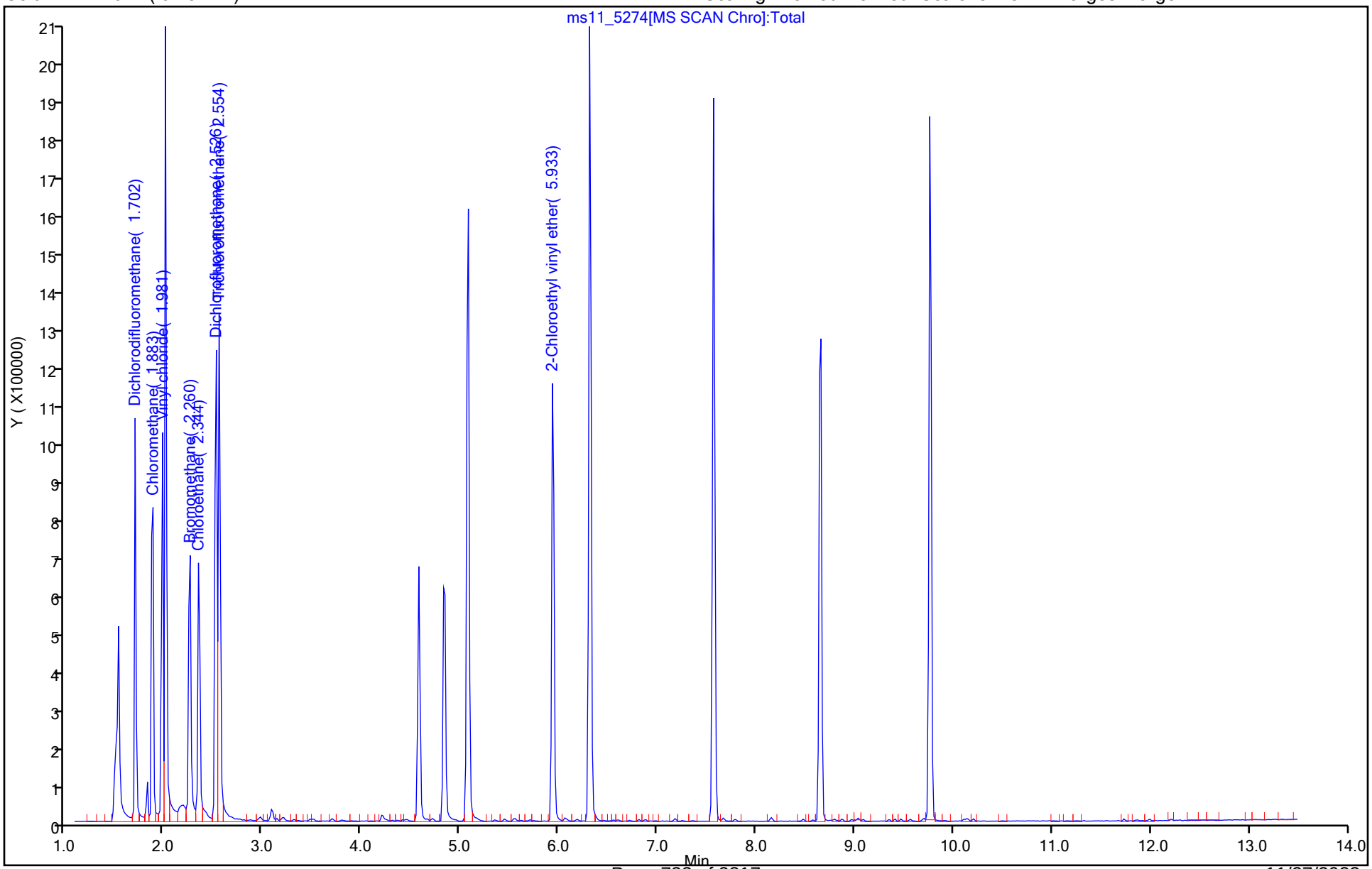
Report Date: 14-Apr-2023 17:13:54 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5274.D

Injection Date:	14-Apr-2023 11:06:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5275.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 14-Apr-2023 11:28:30 ALS Bottle#: 5 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 75
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub4

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:13:55 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 12:36:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1276145	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	88	307758	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	500460	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	328395	50.0	50.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	431017	50.0	50.3	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1270739	50.0	50.3	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	87	487579	50.0	51.1	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	442079	75.0	71.2	
12 Chloromethane	50	1.883	1.883	0.000	99	598554	75.0	74.8	
13 Vinyl chloride	62	1.981	1.981	0.000	98	557128	75.0	68.0	
15 Bromomethane	94	2.260	2.260	0.000	92	306837	75.0	77.3	
16 Chloroethane	64	2.344	2.344	0.000	99	358336	75.0	74.4	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	760926	75.0	74.3	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	621002	75.0	69.2	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	93	361704	75.0	72.2	

QC Flag Legend
Processing Flags

Reagents:
MV-Gas B_00133 Amount Added: 15.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

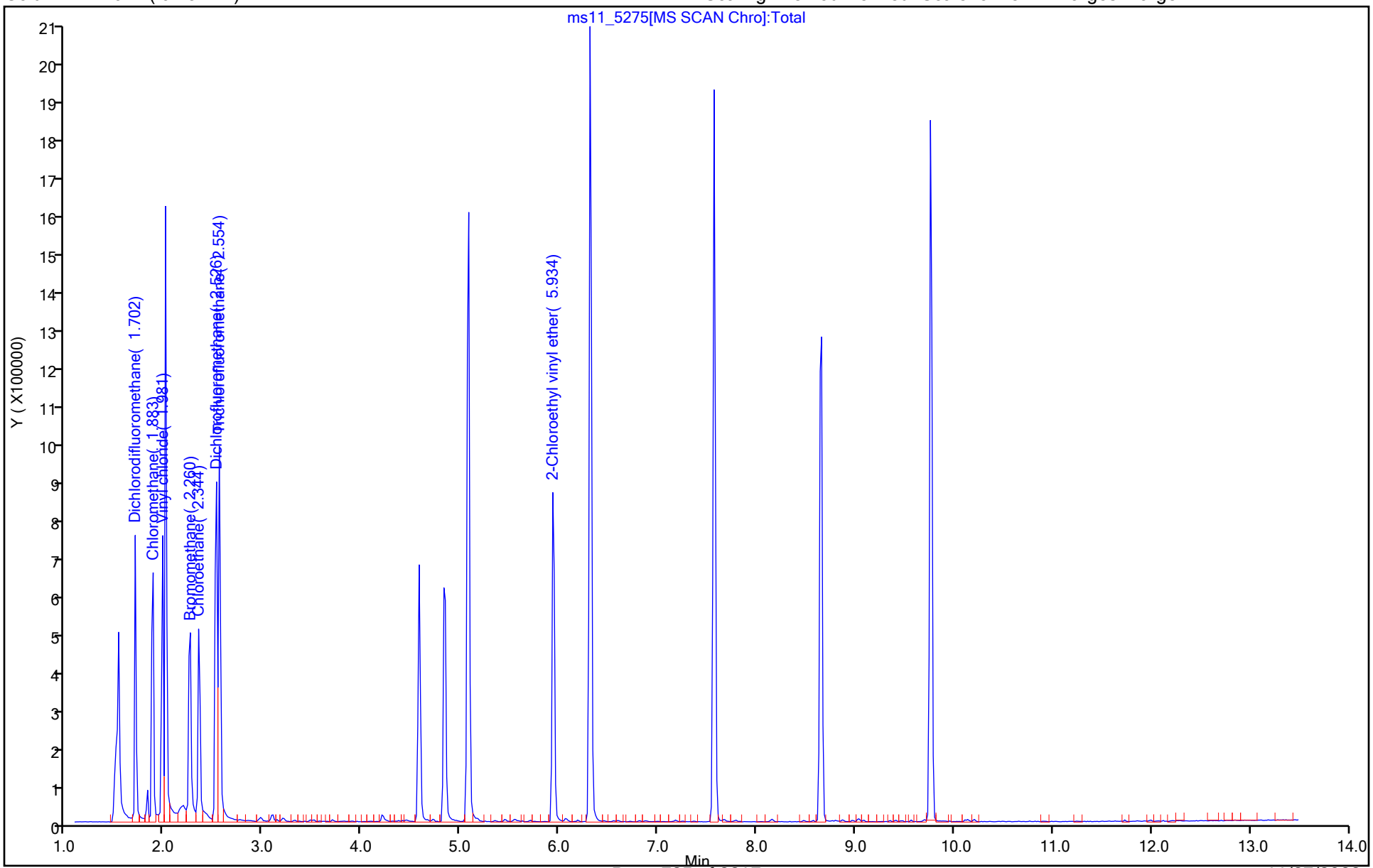
Report Date: 14-Apr-2023 17:13:55 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5275.D

Injection Date:	14-Apr-2023 11:28:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5276.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 14-Apr-2023 11:49:30 ALS Bottle#: 6 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub4

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:13:56 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 14:14:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1271634	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	88	302881	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	496215	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	318991	50.0	49.1	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	424389	50.0	49.7	
$ 7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1251217	50.0	50.3	
$ 8 4-Bromofluorobenzene (Surr)	95	8.657	8.657	0.000	93	471060	50.0	49.8	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	308037	50.0	49.8	
12 Chloromethane	50	1.883	1.883	0.000	99	414179	50.0	51.6	
13 Vinyl chloride	62	1.981	1.981	0.000	98	387066	50.0	47.4	
15 Bromomethane	94	2.246	2.246	0.000	93	209329	50.0	52.5	
16 Chloroethane	64	2.344	2.344	0.000	100	247859	50.0	51.4	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	520916	50.0	50.9	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	429131	50.0	48.0	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	93	240189	50.0	48.1	

QC Flag Legend
Processing Flags

Reagents:
MV-Gas B_00133 Amount Added: 10.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

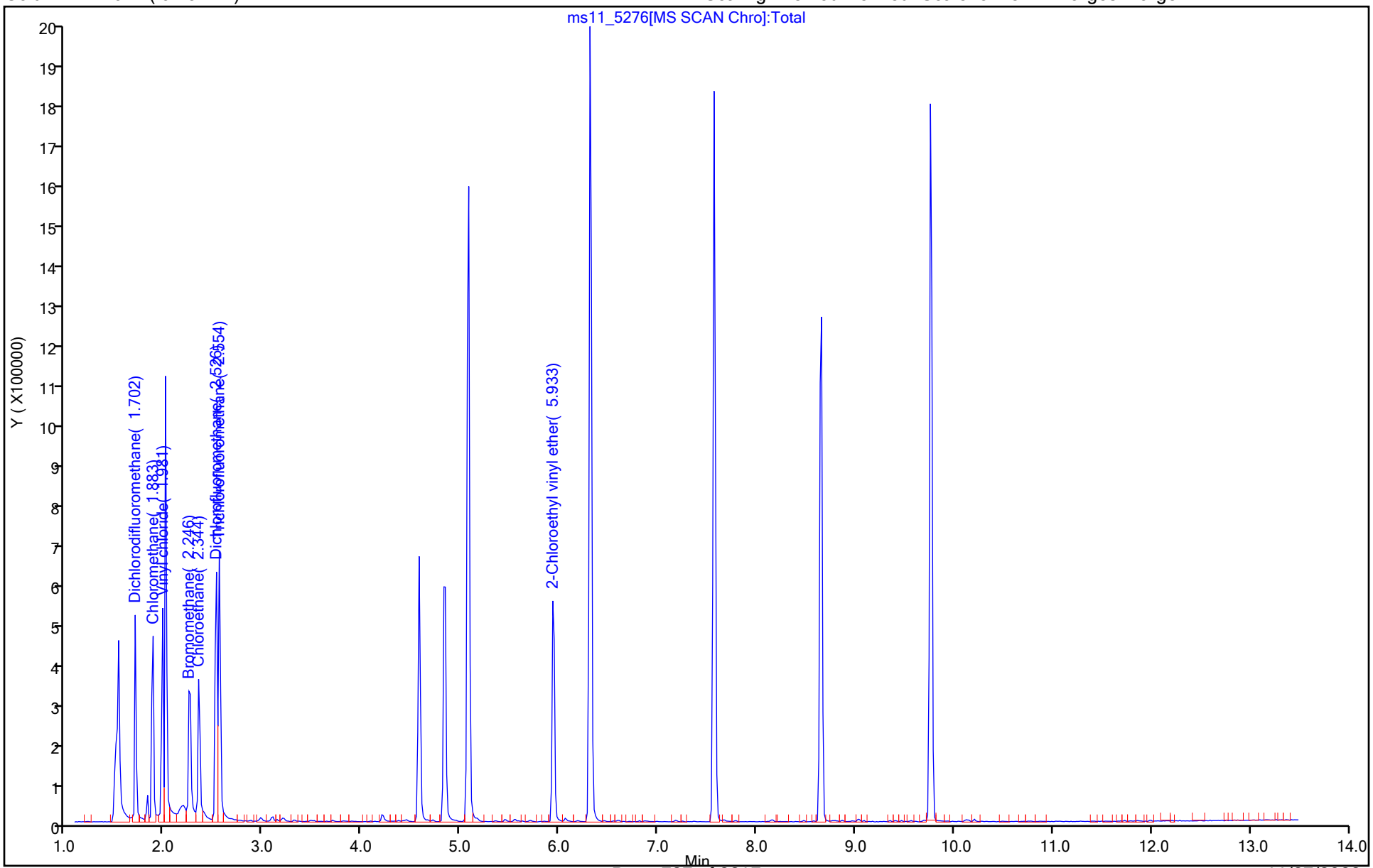
Report Date: 14-Apr-2023 17:13:56 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5276.D

Injection Date:	14-Apr-2023 11:49:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	ICIS			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5277.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Apr-2023 12:10:30 ALS Bottle#: 7 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 10
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub4

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:13:57 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 14:14:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1263410	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	88	305909	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	508044	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	324019	50.0	50.2	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	421308	50.0	49.6	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1264981	50.0	50.3	
$ 8 4-Bromofluorobenzene (Surr)	95	8.657	8.657	0.000	93	477942	50.0	49.3	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	75793	10.0	12.3	
12 Chloromethane	50	1.883	1.883	0.000	99	95594	10.0	11.3	
13 Vinyl chloride	62	1.981	1.981	0.000	98	87470	10.0	10.8	
15 Bromomethane	94	2.246	2.246	0.000	92	48529	10.0	11.2	
16 Chloroethane	64	2.344	2.344	0.000	100	58045	10.0	11.6	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	98	118642	10.0	11.2	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	104346	10.0	11.7	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	94	52407	10.0	10.6	

QC Flag Legend
Processing Flags

Reagents:
MV-Gas B_00133 Amount Added: 2.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

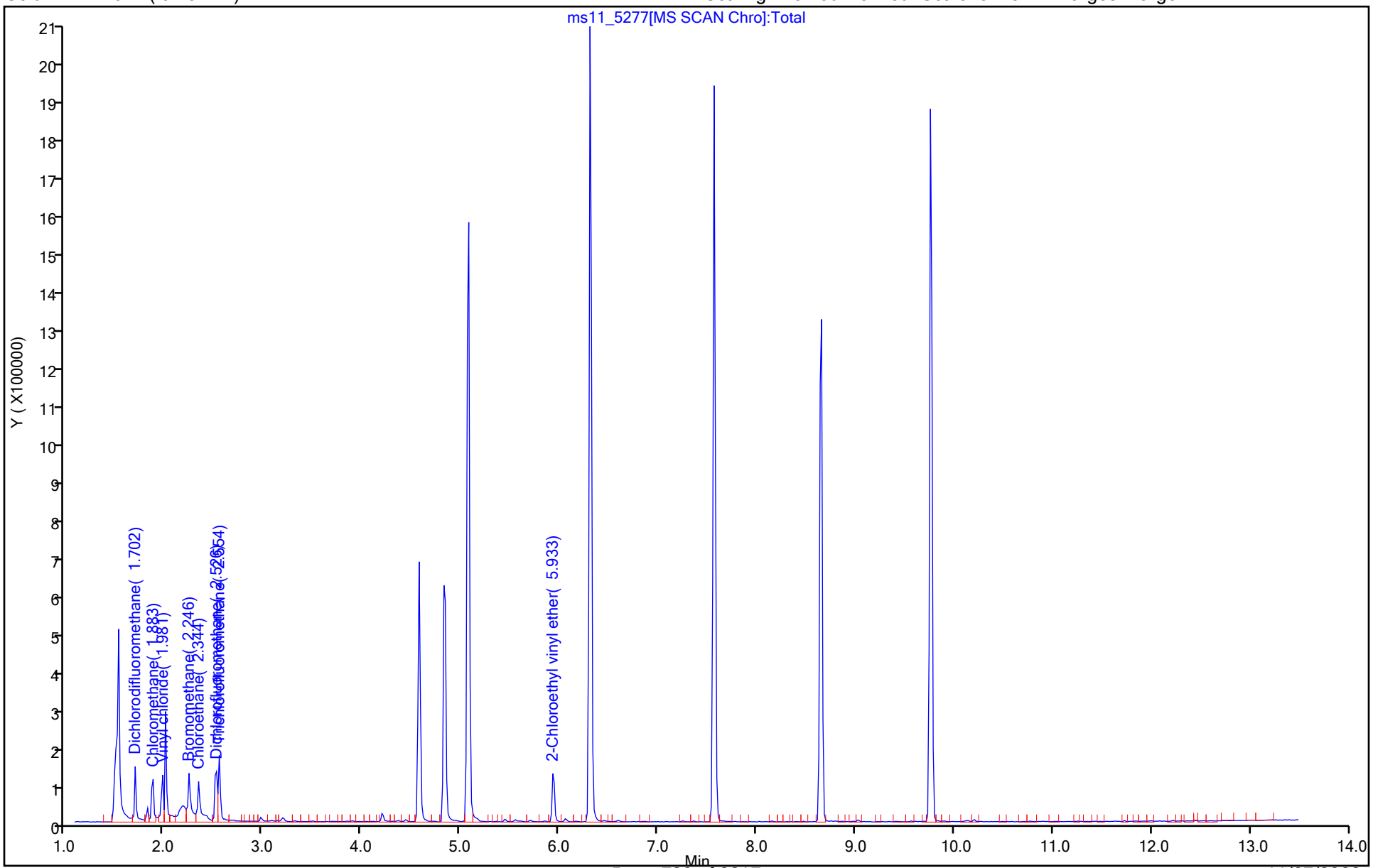
Report Date: 14-Apr-2023 17:13:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5277.D

Injection Date:	14-Apr-2023 12:10:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5278.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Apr-2023 12:32:30 ALS Bottle#: 8 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 5
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub4

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:13:59 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 14:14:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1253370	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	88	301641	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	502835	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	323865	50.0	50.5	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	422955	50.0	50.2	
$ 7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1261616	50.0	50.9	
$ 8 4-Bromofluorobenzene (Surr)	95	8.657	8.657	0.000	93	475387	50.0	49.6	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	31848	5.00	5.22	
12 Chloromethane	50	1.883	1.883	0.000	98	49494	5.00	5.48	
13 Vinyl chloride	62	1.981	1.981	0.000	98	41249	5.00	5.13	
15 Bromomethane	94	2.260	2.260	0.000	92	27256	5.00	5.70	
16 Chloroethane	64	2.344	2.344	0.000	99	27626	5.00	5.16	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	57940	5.00	5.24	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	44624	5.00	5.06	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	93	24895	5.00	5.06	

QC Flag Legend
Processing Flags

Reagents:
Cal Dil Std_00168 Amount Added: 50.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

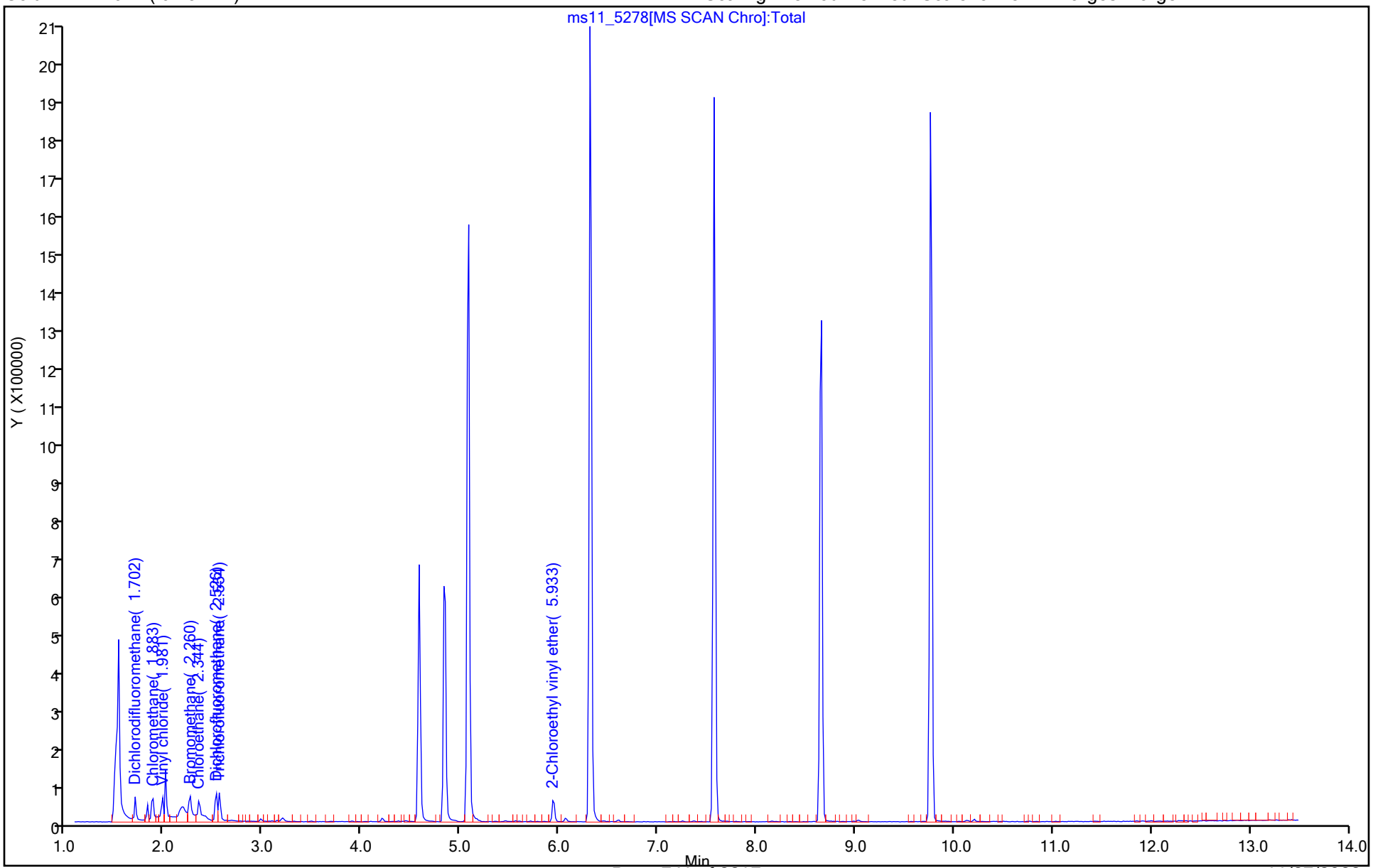
Report Date: 14-Apr-2023 17:13:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5278.D

Injection Date:	14-Apr-2023 12:32:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5279.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Apr-2023 12:53:30 ALS Bottle#: 9 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 2
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub4

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:14:00 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 14:14:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1292706	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	88	319139	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	515324	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	328090	50.0	49.6	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	437931	50.0	50.4	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1286424	50.0	49.1	
$ 8 4-Bromofluorobenzene (Surr)	95	8.657	8.657	0.000	93	494248	50.0	50.3	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	98	10343	2.00	1.64	
12 Chloromethane	50	1.883	1.883	0.000	99	26764	2.00	2.45	
13 Vinyl chloride	62	1.981	1.981	0.000	98	19994	2.00	2.41	
15 Bromomethane	94	2.260	2.260	0.000	92	16080	2.00	2.66	
16 Chloroethane	64	2.344	2.344	0.000	99	15331	2.00	2.44	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	31792	2.00	2.52	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	19687	2.00	2.17	
71 2-Chloroethyl vinyl ether	63	5.933	5.933	0.000	93	11089	2.00	2.19	

QC Flag Legend
Processing Flags

Reagents:
Cal Dil Std_00168 Amount Added: 20.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

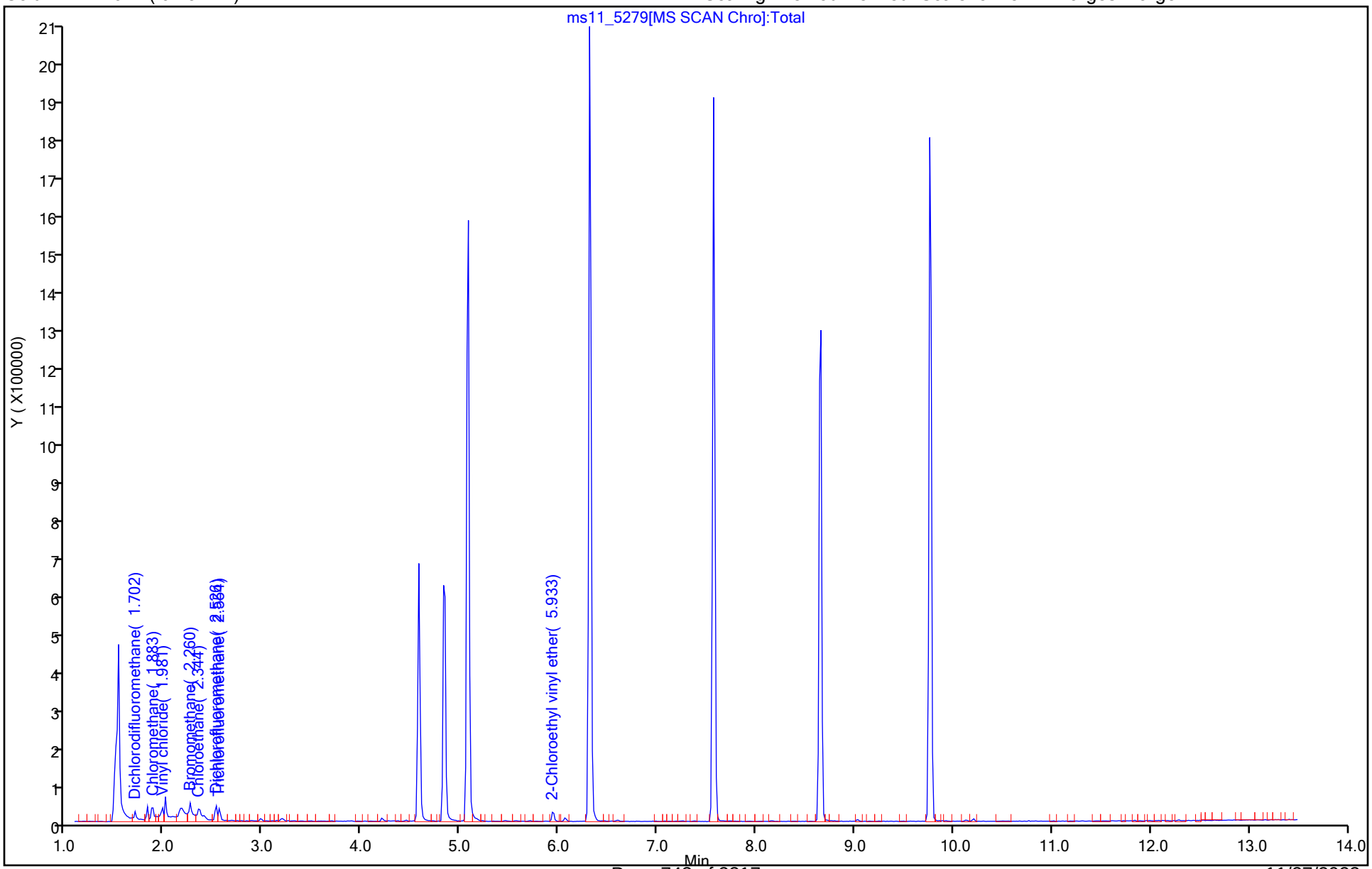
Report Date: 14-Apr-2023 17:14:00 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5279.D

Injection Date:	14-Apr-2023 12:53:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5280.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Apr-2023 13:15:30 ALS Bottle#: 10 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 1
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub4

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:14:01 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 14:13:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1281182	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	88	310262	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	510772	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	331509	50.0	50.6	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	428412	50.0	49.8	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1277120	50.0	50.1	
$ 8 4-Bromofluorobenzene (Surr)	95	8.657	8.657	0.000	93	484640	50.0	49.7	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	97	6096	1.00	0.9782	
12 Chloromethane	50	1.883	1.883	0.000	98	11240	1.00	0.5254	
13 Vinyl chloride	62	1.981	1.981	0.000	97	8549	1.00	1.04	
15 Bromomethane	94	2.260	2.260	0.000	92	6851	1.00	0.3362	
16 Chloroethane	64	2.358	2.358	0.000	99	6307	1.00	0.5825	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	11520	1.00	0.5635	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	97	8866	1.00	0.9842	
71 2-Chloroethyl vinyl ether	63	5.948	5.948	0.000	93	5117	1.00	1.02	

QC Flag Legend
Processing Flags

Reagents:
Cal Dil Std_00168 Amount Added: 10.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

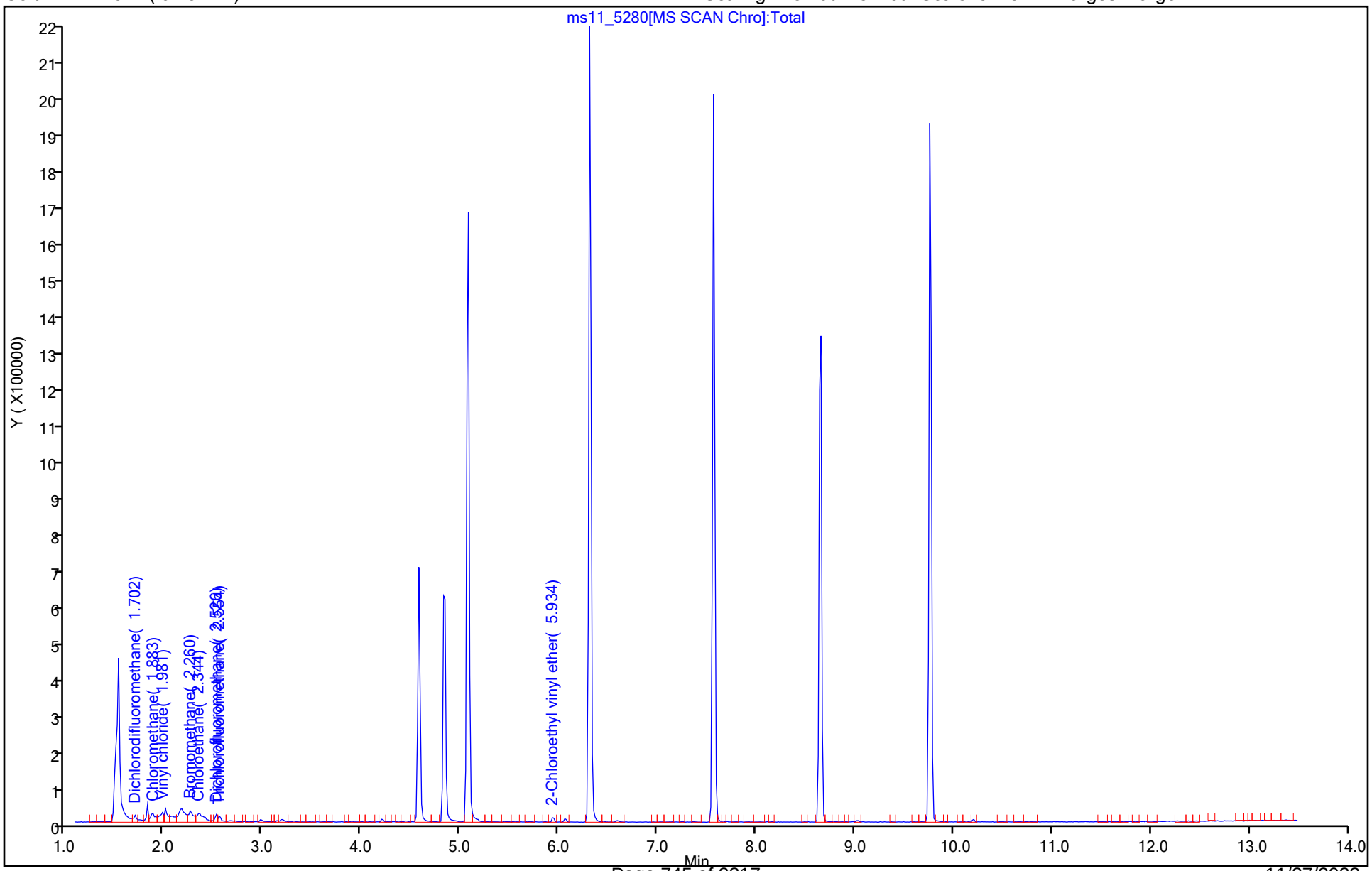
Report Date: 14-Apr-2023 17:14:02 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5280.D

Injection Date:	14-Apr-2023 13:15:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 14-Apr-2023 13:36:30 ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC 05
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub4

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:14:03 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 14:13:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1233957	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	88	300148	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	479804	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	313428	50.0	49.7	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.844	4.844	0.000	0	413480	50.0	49.9	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1218361	50.0	49.4	
$ 8 4-Bromofluorobenzene (Surr)	95	8.657	8.657	0.000	93	460624	50.0	50.3	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	98	4091	0.5000	0.6816	
12 Chloromethane	50	1.883	1.883	0.000	98	17107	0.5000	1.35	
13 Vinyl chloride	62	1.981	1.981	0.000	98	11313	0.5000	1.43	
15 Bromomethane	94	2.260	2.260	0.000	92	9400	0.5000	1.08	
16 Chloroethane	64	2.358	2.358	0.000	99	8995	0.5000	1.22	
17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	17171	0.5000	1.18	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	97	8426	0.5000	0.9712	
71 2-Chloroethyl vinyl ether	63	5.947	5.947	0.000	95	4681	0.5000	0.9670	

QC Flag Legend
Processing Flags

Reagents:

Cal Dil Std_00168	Amount Added:	5.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

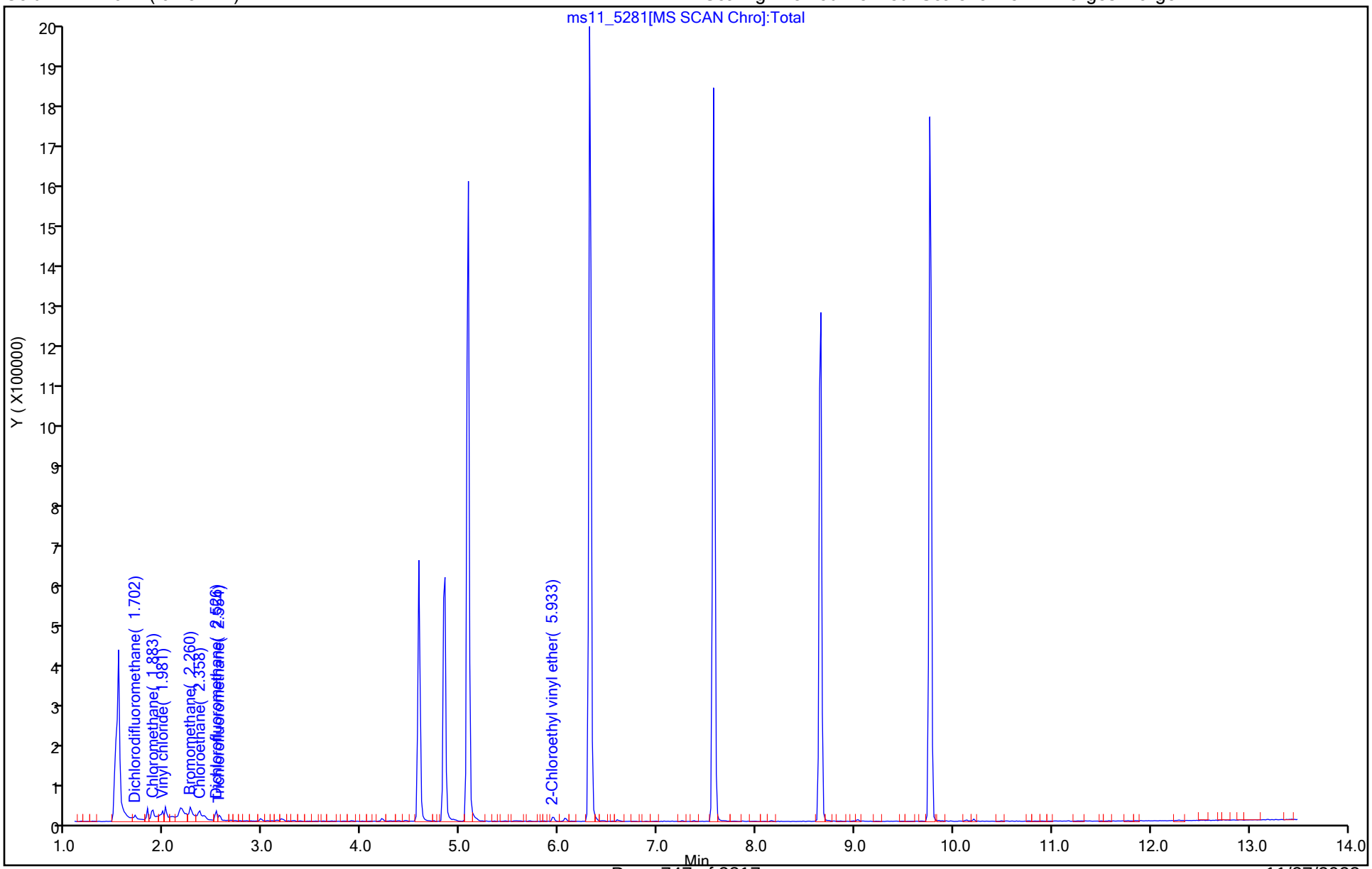
Report Date: 14-Apr-2023 17:14:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Injection Date:	14-Apr-2023 13:36:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	STD			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

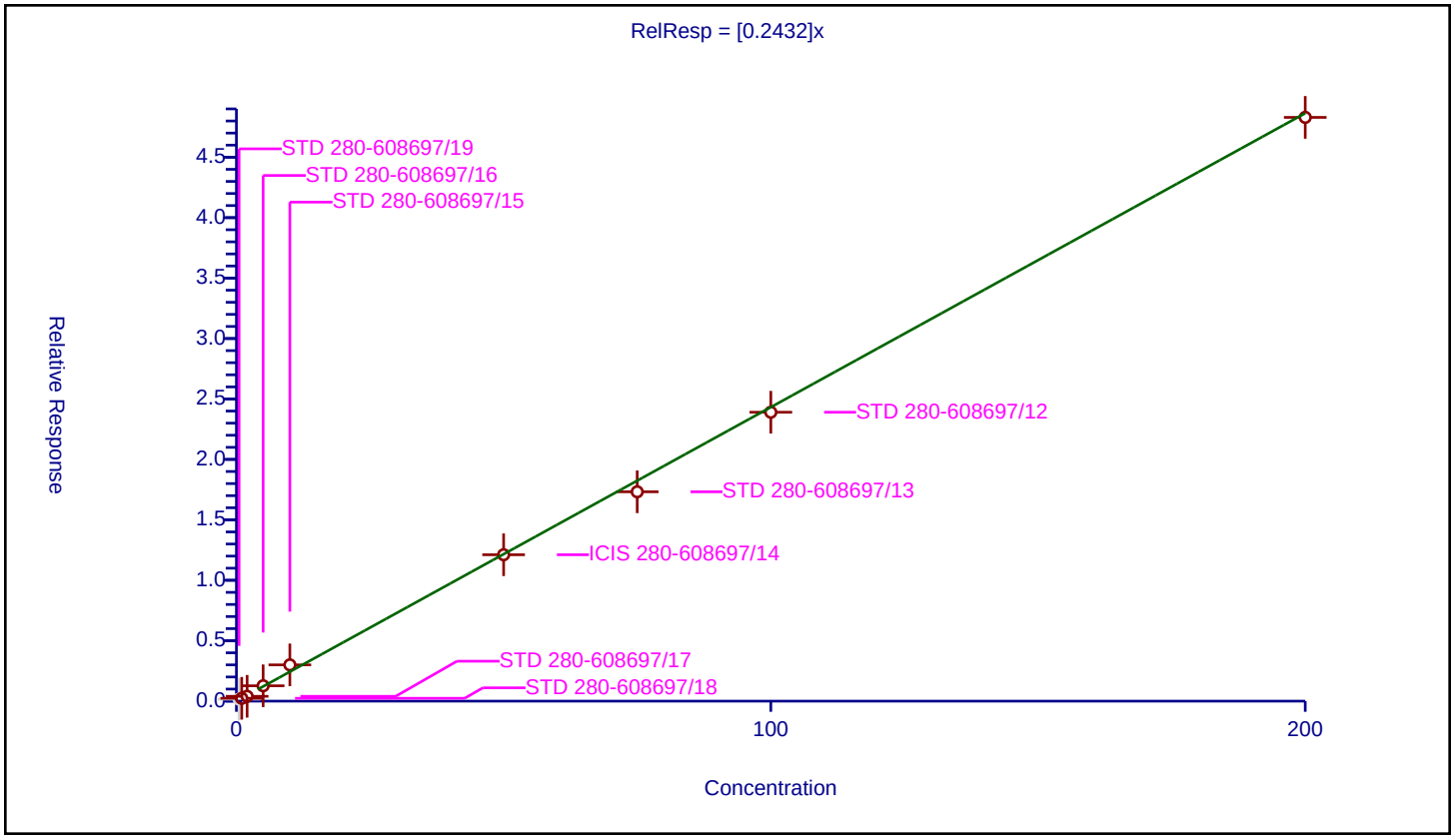
Curve Coefficients

Intercept:	0
Slope:	0.2432

Error Coefficients

Standard Error:	555000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/19	0.5	0.165768	50.0	1233957.0	0.331535	N
2	STD 280-608697/18	1.0	0.237905	50.0	1281182.0	0.237905	Y
3	STD 280-608697/17	2.0	0.400052	50.0	1292706.0	0.200026	Y
4	STD 280-608697/16	5.0	1.270495	50.0	1253370.0	0.254099	Y
5	STD 280-608697/15	10.0	2.999541	50.0	1263410.0	0.299954	Y
6	ICIS 280-608697/14	50.0	12.111858	50.0	1271634.0	0.242237	Y
7	STD 280-608697/13	75.0	17.320877	50.0	1276145.0	0.230945	Y
8	STD 280-608697/12	100.0	23.902516	50.0	1278242.0	0.239025	Y
9	STD 280-608697/11	200.0	48.296084	50.0	1262885.0	0.24148	Y



Calibration / Chloromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

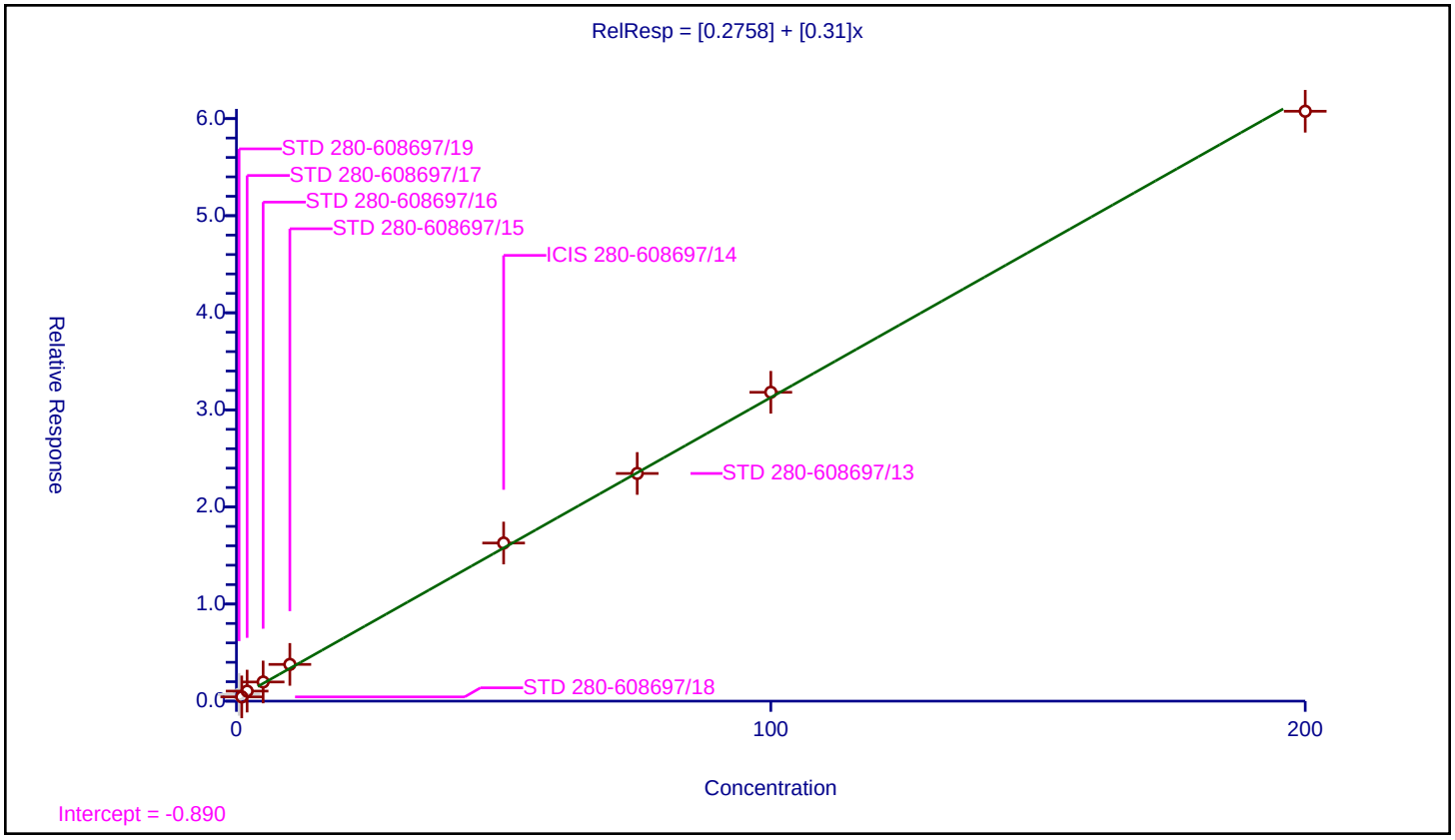
Curve Coefficients

Intercept:	0.2758
Slope:	0.31

Error Coefficients

Standard Error:	770000
Relative Standard Error:	22.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/19	0.5	0.693177	50.0	1233957.0	1.386353	N
2	STD 280-608697/18	1.0	0.438657	50.0	1281182.0	0.438657	Y
3	STD 280-608697/17	2.0	1.035193	50.0	1292706.0	0.517596	Y
4	STD 280-608697/16	5.0	1.974437	50.0	1253370.0	0.394887	Y
5	STD 280-608697/15	10.0	3.783174	50.0	1263410.0	0.378317	Y
6	ICIS 280-608697/14	50.0	16.285307	50.0	1271634.0	0.325706	Y
7	STD 280-608697/13	75.0	23.451645	50.0	1276145.0	0.312689	Y
8	STD 280-608697/12	100.0	31.812521	50.0	1278242.0	0.318125	Y
9	STD 280-608697/11	200.0	60.758541	50.0	1262885.0	0.303793	Y



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Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

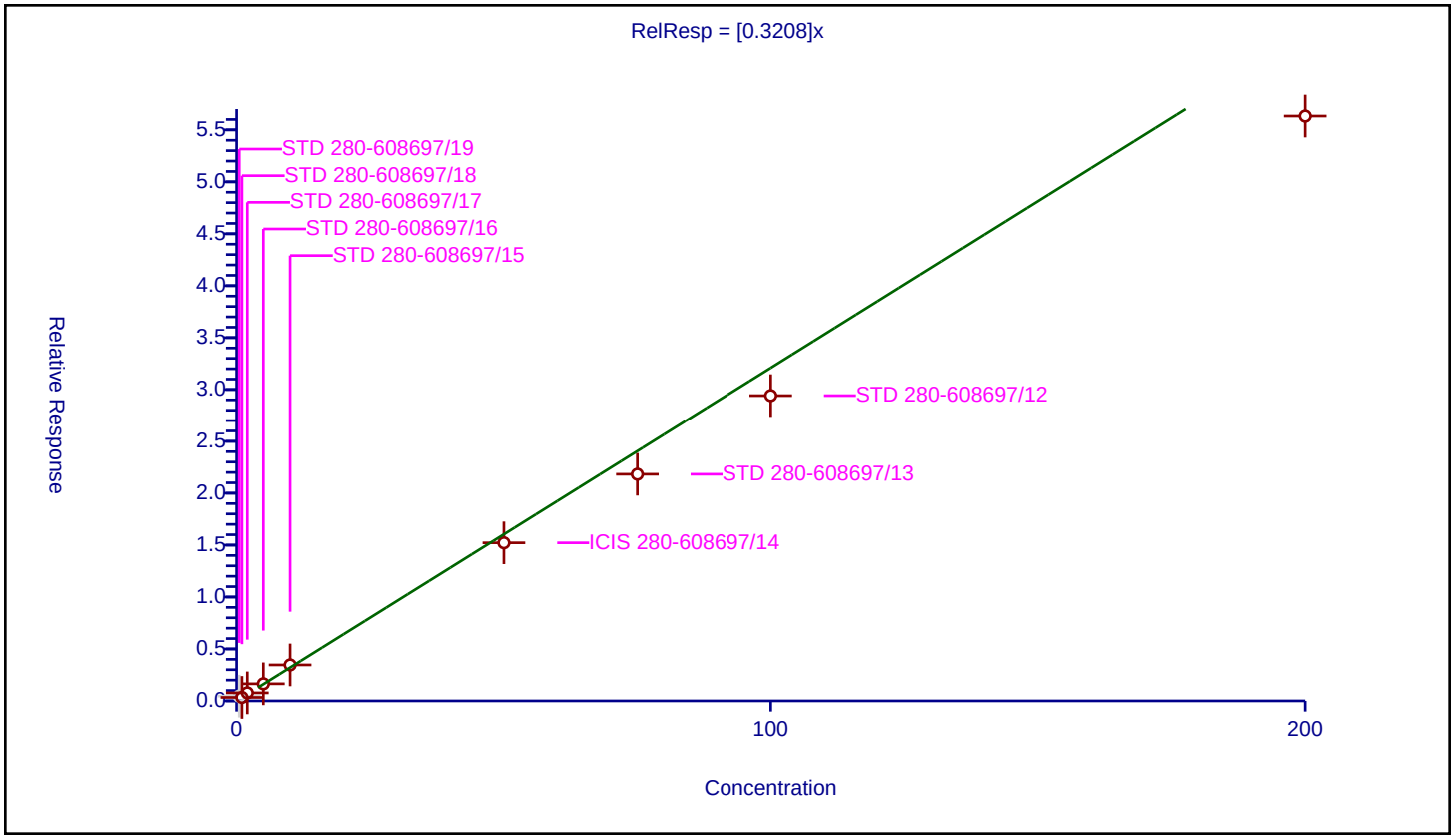
Curve Coefficients

Intercept:	0
Slope:	0.3208

Error Coefficients

Standard Error:	661000
Relative Standard Error:	10.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/19	0.5	0.458403	50.0	1233957.0	0.916807	N
2	STD 280-608697/18	1.0	0.333637	50.0	1281182.0	0.333637	Y
3	STD 280-608697/17	2.0	0.773339	50.0	1292706.0	0.38667	Y
4	STD 280-608697/16	5.0	1.645524	50.0	1253370.0	0.329105	Y
5	STD 280-608697/15	10.0	3.461663	50.0	1263410.0	0.346166	Y
6	ICIS 280-608697/14	50.0	15.219238	50.0	1271634.0	0.304385	Y
7	STD 280-608697/13	75.0	21.828554	50.0	1276145.0	0.291047	Y
8	STD 280-608697/12	100.0	29.410511	50.0	1278242.0	0.294105	Y
9	STD 280-608697/11	200.0	56.32904	50.0	1262885.0	0.281645	Y



Calibration / Bromomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

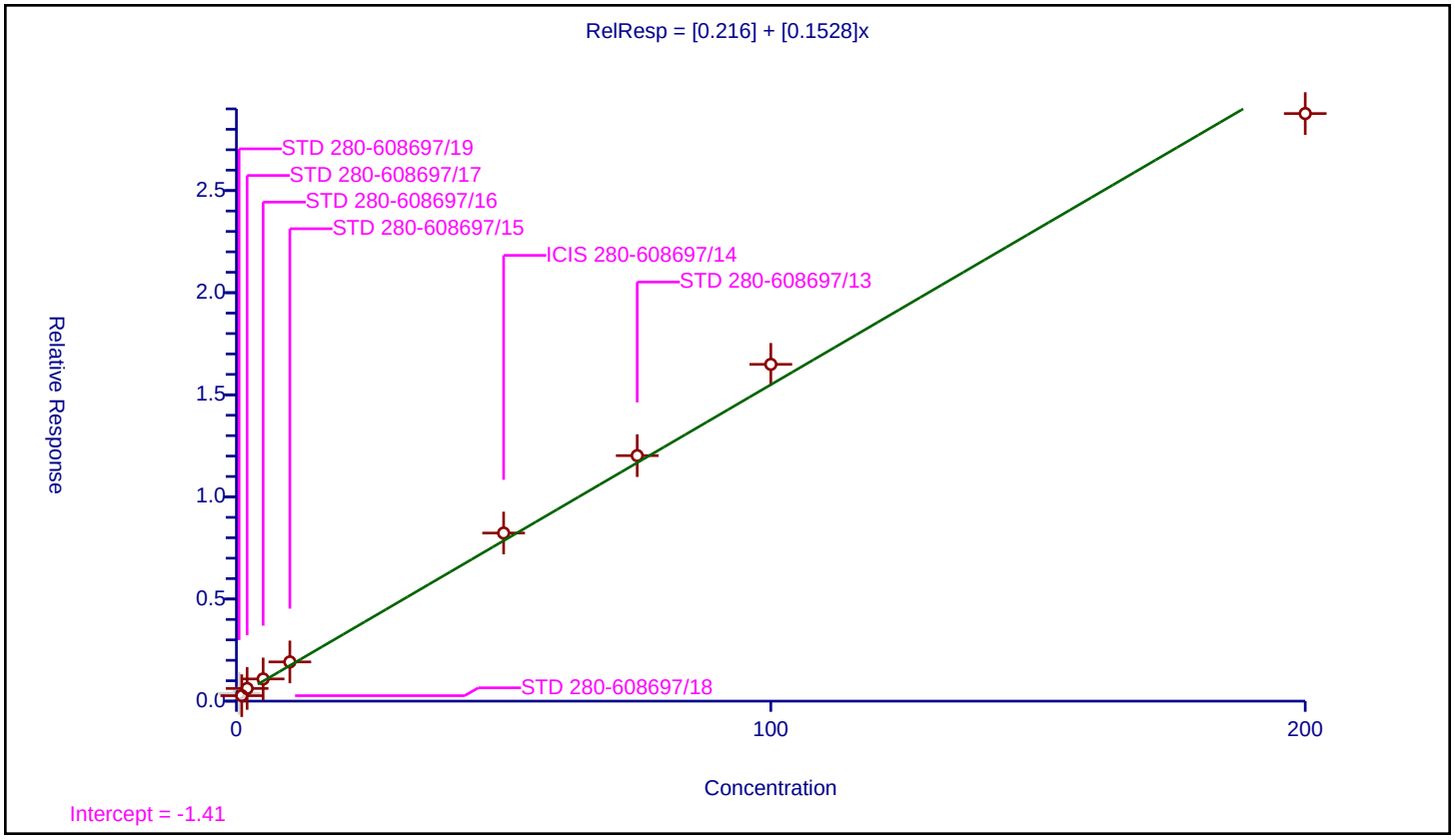
Curve Coefficients

Intercept:	0.216
Slope:	0.1528

Error Coefficients

Standard Error:	376000
Relative Standard Error:	31.5
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/19	0.5	0.380888	50.0	1233957.0	0.761777	N
2	STD 280-608697/18	1.0	0.26737	50.0	1281182.0	0.26737	Y
3	STD 280-608697/17	2.0	0.621951	50.0	1292706.0	0.310976	Y
4	STD 280-608697/16	5.0	1.087309	50.0	1253370.0	0.217462	Y
5	STD 280-608697/15	10.0	1.920556	50.0	1263410.0	0.192056	Y
6	ICIS 280-608697/14	50.0	8.230709	50.0	1271634.0	0.164614	Y
7	STD 280-608697/13	75.0	12.022027	50.0	1276145.0	0.160294	Y
8	STD 280-608697/12	100.0	16.491439	50.0	1278242.0	0.164914	Y
9	STD 280-608697/11	200.0	28.772176	50.0	1262885.0	0.143861	Y



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Calibration / Chloroethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

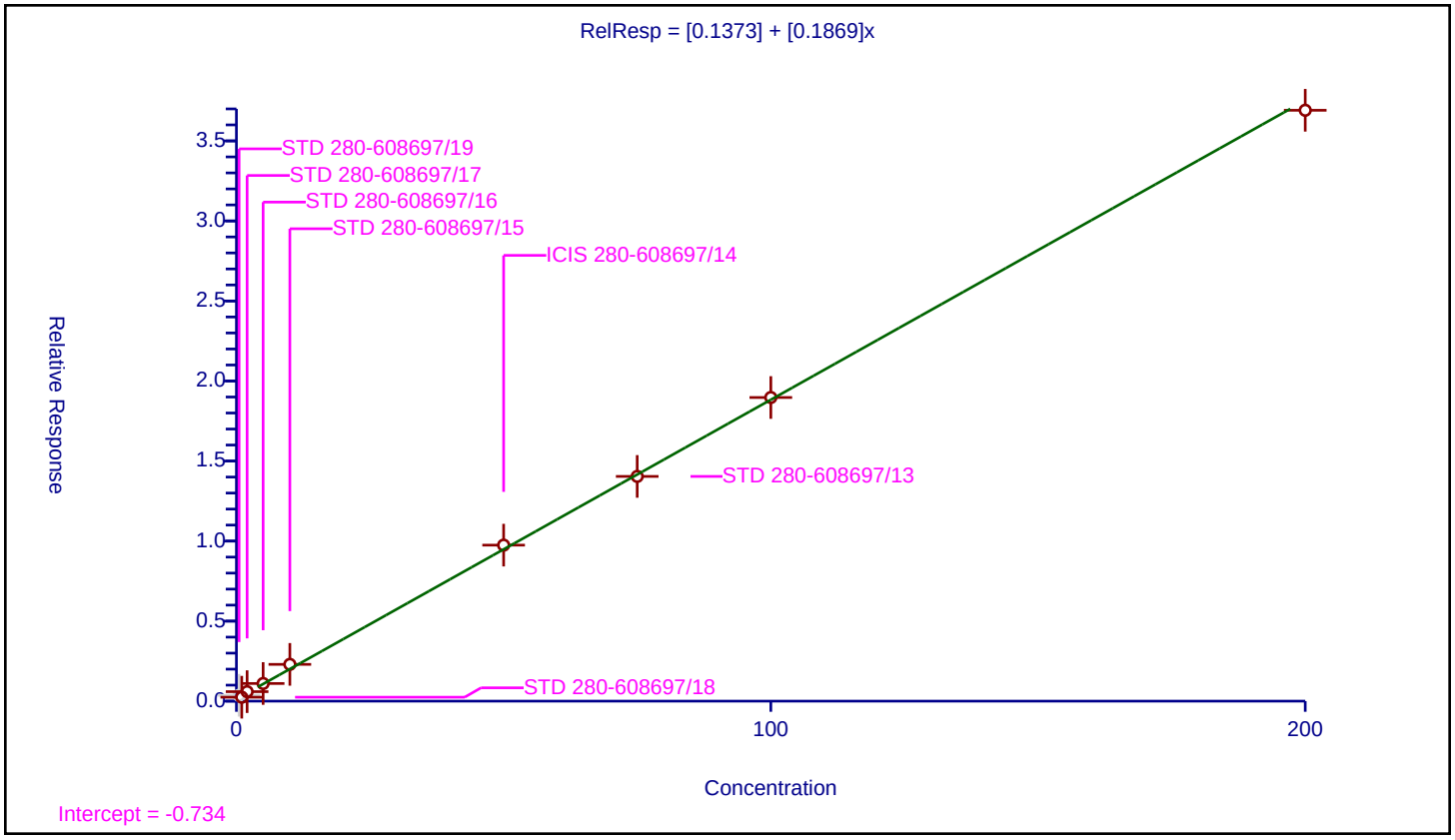
Curve Coefficients

Intercept:	0.1373
Slope:	0.1869

Error Coefficients

Standard Error:	465000
Relative Standard Error:	20.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/19	0.5	0.364478	50.0	1233957.0	0.728956	N
2	STD 280-608697/18	1.0	0.24614	50.0	1281182.0	0.24614	Y
3	STD 280-608697/17	2.0	0.592981	50.0	1292706.0	0.29649	Y
4	STD 280-608697/16	5.0	1.102069	50.0	1253370.0	0.220414	Y
5	STD 280-608697/15	10.0	2.297156	50.0	1263410.0	0.229716	Y
6	ICIS 280-608697/14	50.0	9.745689	50.0	1271634.0	0.194914	Y
7	STD 280-608697/13	75.0	14.039784	50.0	1276145.0	0.187197	Y
8	STD 280-608697/12	100.0	18.970117	50.0	1278242.0	0.189701	Y
9	STD 280-608697/11	200.0	36.914208	50.0	1262885.0	0.184571	Y



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Calibration / Dichlorofluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

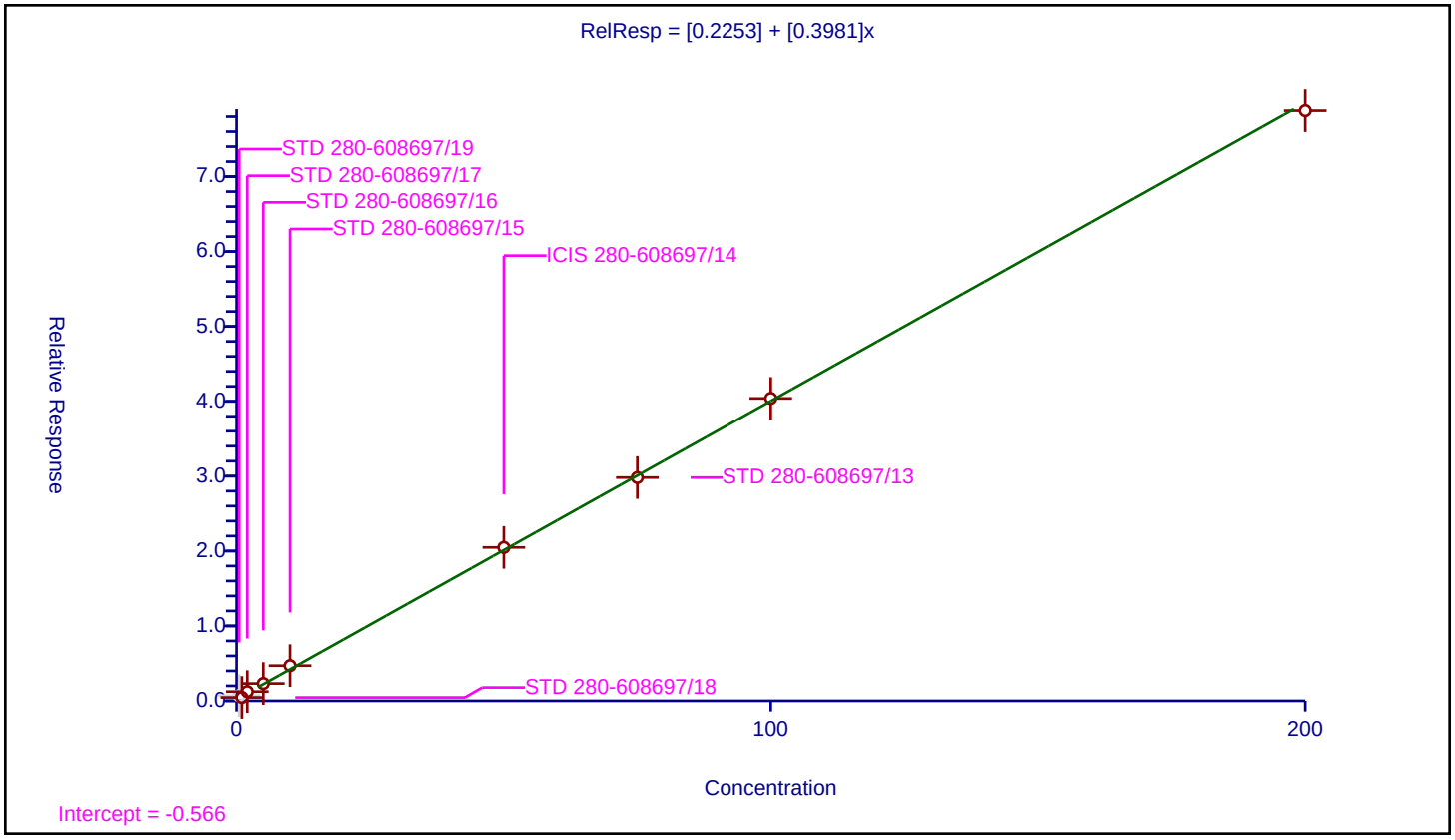
Curve Coefficients

Intercept:	0.2253
Slope:	0.3981

Error Coefficients

Standard Error:	991000
Relative Standard Error:	21.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/19	0.5	0.69577	50.0	1233957.0	1.39154	N
2	STD 280-608697/18	1.0	0.449585	50.0	1281182.0	0.449585	Y
3	STD 280-608697/17	2.0	1.229669	50.0	1292706.0	0.614834	Y
4	STD 280-608697/16	5.0	2.311369	50.0	1253370.0	0.462274	Y
5	STD 280-608697/15	10.0	4.695309	50.0	1263410.0	0.469531	Y
6	ICIS 280-608697/14	50.0	20.482151	50.0	1271634.0	0.409643	Y
7	STD 280-608697/13	75.0	29.813462	50.0	1276145.0	0.397513	Y
8	STD 280-608697/12	100.0	40.390787	50.0	1278242.0	0.403908	Y
9	STD 280-608697/11	200.0	78.793952	50.0	1262885.0	0.39397	Y



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Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

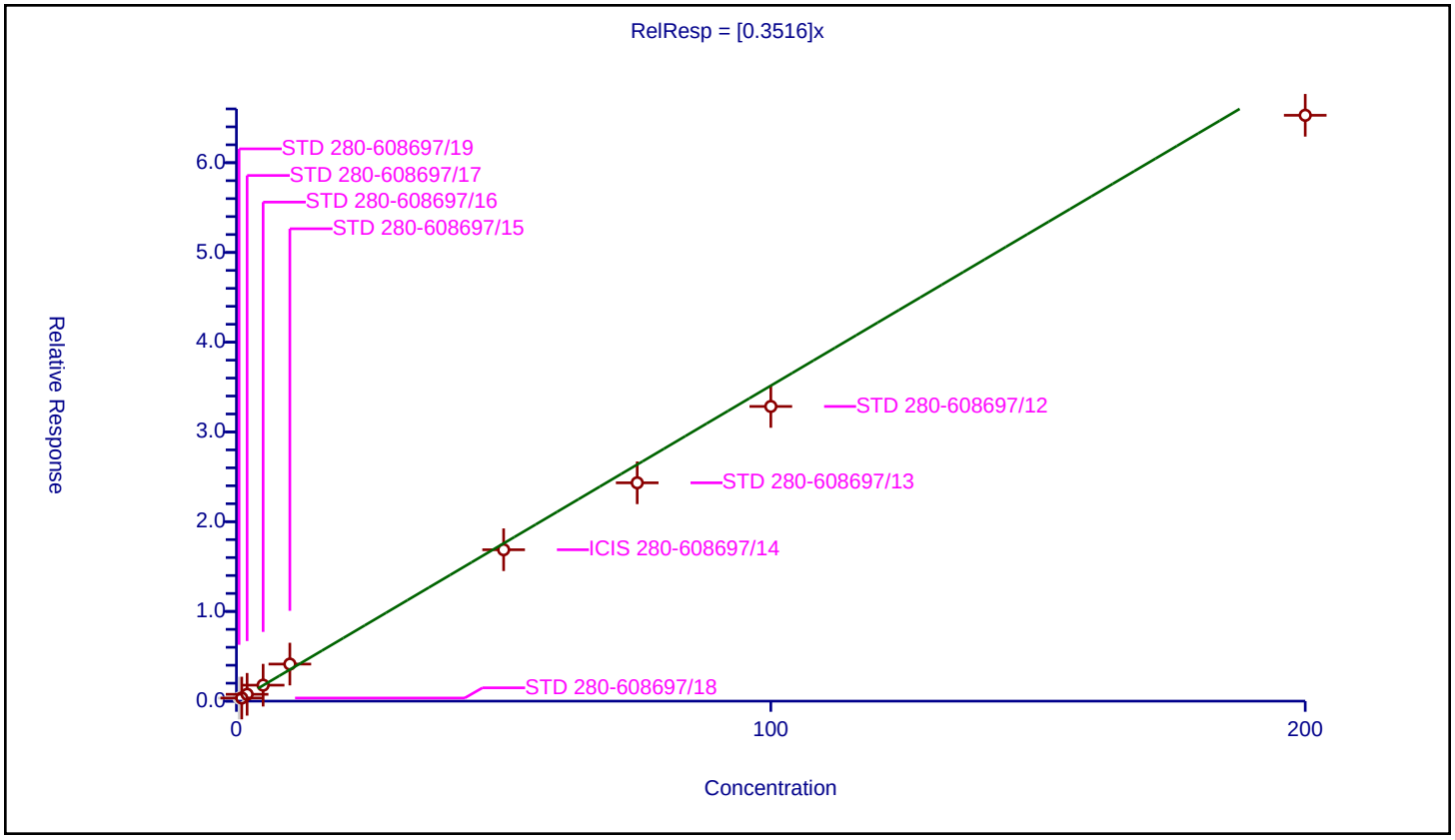
Curve Coefficients

Intercept:	0
Slope:	0.3516

Error Coefficients

Standard Error:	757000
Relative Standard Error:	8.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/19	0.5	0.341422	50.0	1233957.0	0.682844	N
2	STD 280-608697/18	1.0	0.346009	50.0	1281182.0	0.346009	Y
3	STD 280-608697/17	2.0	0.761465	50.0	1292706.0	0.380732	Y
4	STD 280-608697/16	5.0	1.780161	50.0	1253370.0	0.356032	Y
5	STD 280-608697/15	10.0	4.129538	50.0	1263410.0	0.412954	Y
6	ICIS 280-608697/14	50.0	16.873212	50.0	1271634.0	0.337464	Y
7	STD 280-608697/13	75.0	24.331169	50.0	1276145.0	0.324416	Y
8	STD 280-608697/12	100.0	32.840456	50.0	1278242.0	0.328405	Y
9	STD 280-608697/11	200.0	65.288051	50.0	1262885.0	0.32644	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

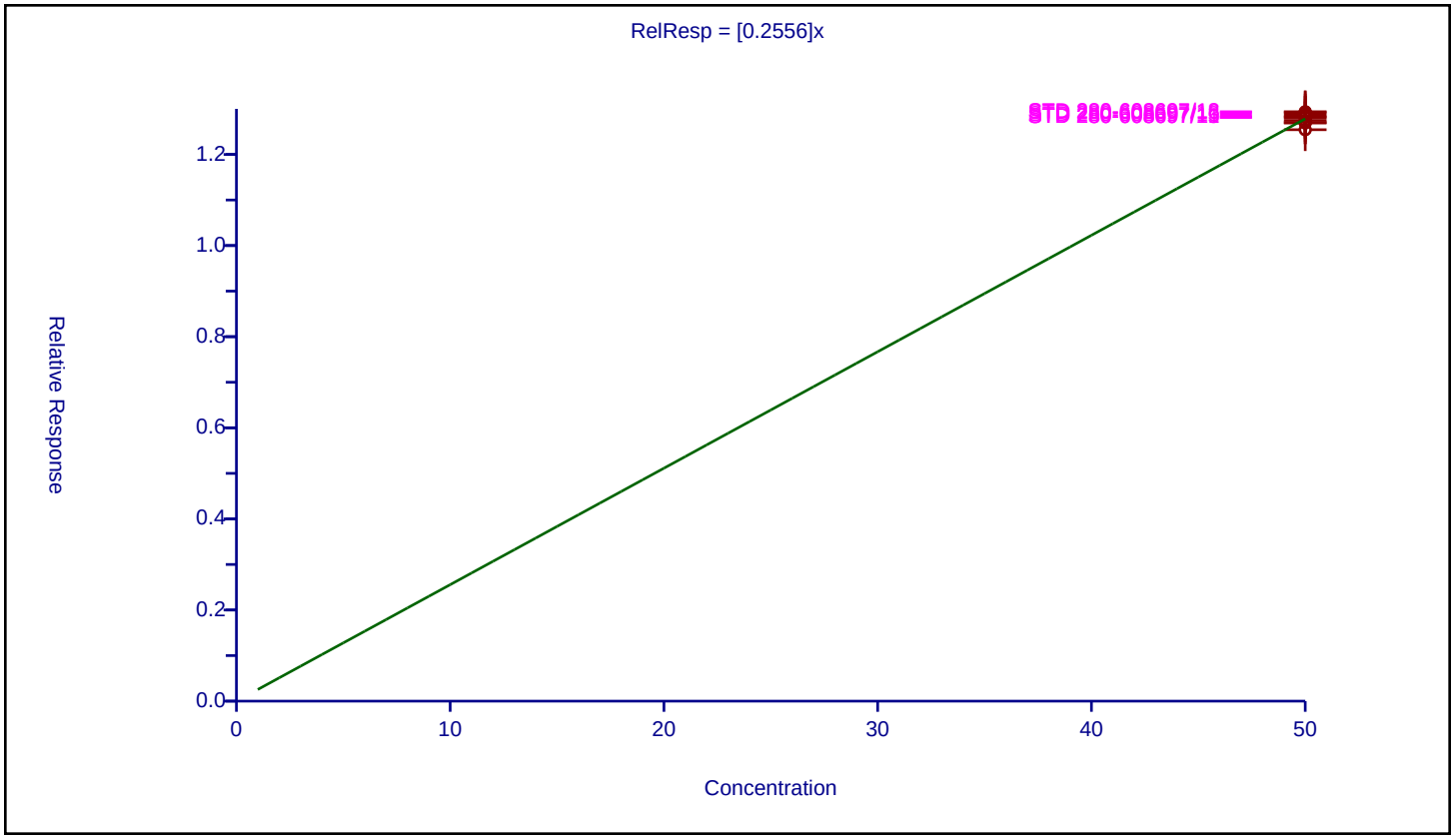
Curve Coefficients

Intercept:	0
Slope:	0.2556

Error Coefficients

Standard Error:	344000
Relative Standard Error:	1.0
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/11	50.0	12.811262	50.0	1262885.0	0.256225	Y
2	STD 280-608697/12	50.0	12.748056	50.0	1278242.0	0.254961	Y
3	STD 280-608697/13	50.0	12.866681	50.0	1276145.0	0.257334	Y
4	ICIS 280-608697/14	50.0	12.542563	50.0	1271634.0	0.250851	Y
5	STD 280-608697/15	50.0	12.823193	50.0	1263410.0	0.256464	Y
6	STD 280-608697/16	50.0	12.919768	50.0	1253370.0	0.258395	Y
7	STD 280-608697/17	50.0	12.690047	50.0	1292706.0	0.253801	Y
8	STD 280-608697/18	50.0	12.937623	50.0	1281182.0	0.258752	Y
9	STD 280-608697/19	50.0	12.700118	50.0	1233957.0	0.254002	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

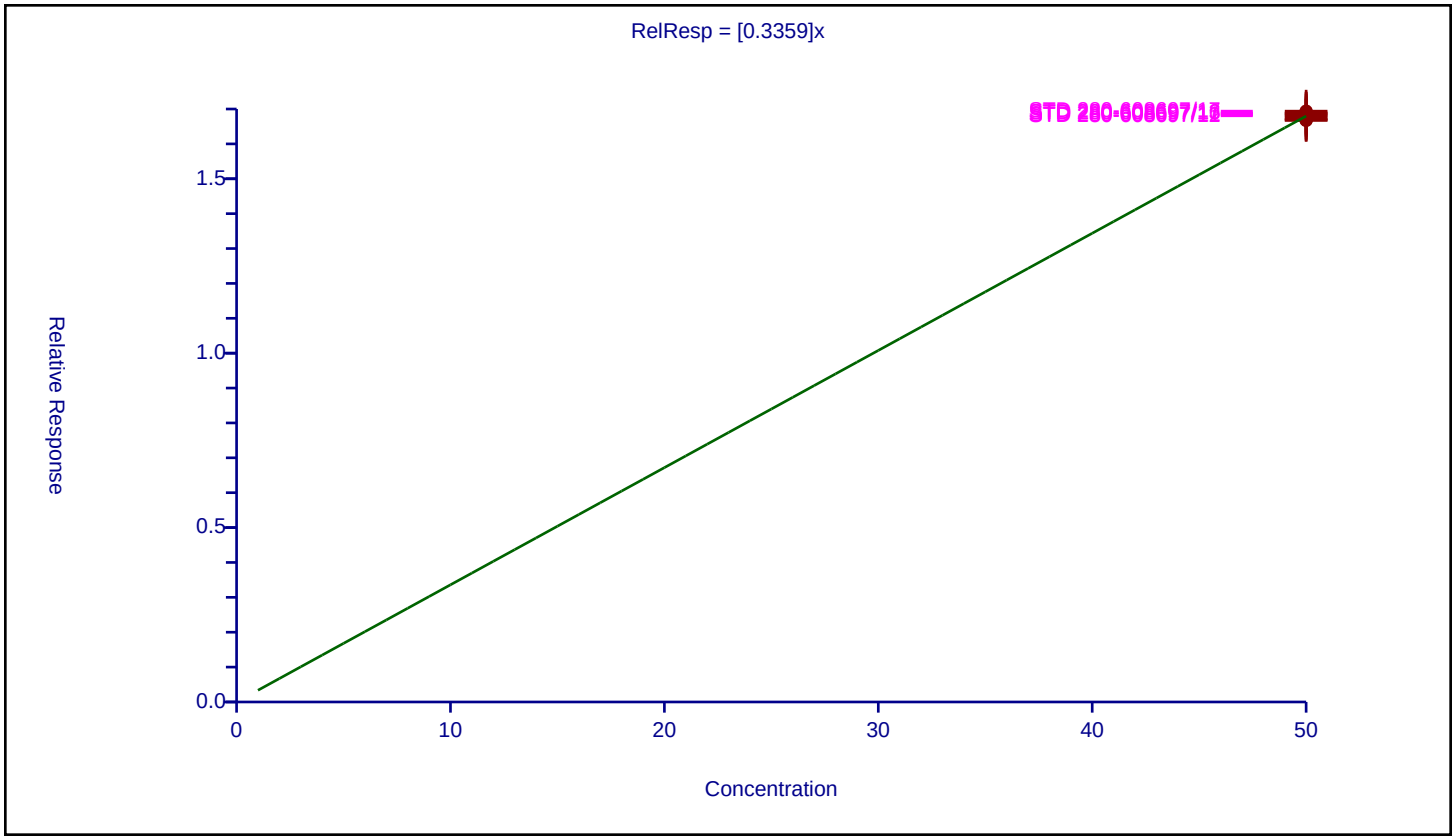
Curve Coefficients

Intercept:	0
Slope:	0.3359

Error Coefficients

Standard Error:	452000
Relative Standard Error:	0.6
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/11	50.0	16.833995	50.0	1262885.0	0.33668	Y
2	STD 280-608697/12	50.0	16.806012	50.0	1278242.0	0.33612	Y
3	STD 280-608697/13	50.0	16.887462	50.0	1276145.0	0.337749	Y
4	ICIS 280-608697/14	50.0	16.686759	50.0	1271634.0	0.333735	Y
5	STD 280-608697/15	50.0	16.673447	50.0	1263410.0	0.333469	Y
6	STD 280-608697/16	50.0	16.872711	50.0	1253370.0	0.337454	Y
7	STD 280-608697/17	50.0	16.938538	50.0	1292706.0	0.338771	Y
8	STD 280-608697/18	50.0	16.719404	50.0	1281182.0	0.334388	Y
9	STD 280-608697/19	50.0	16.75423	50.0	1233957.0	0.335085	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

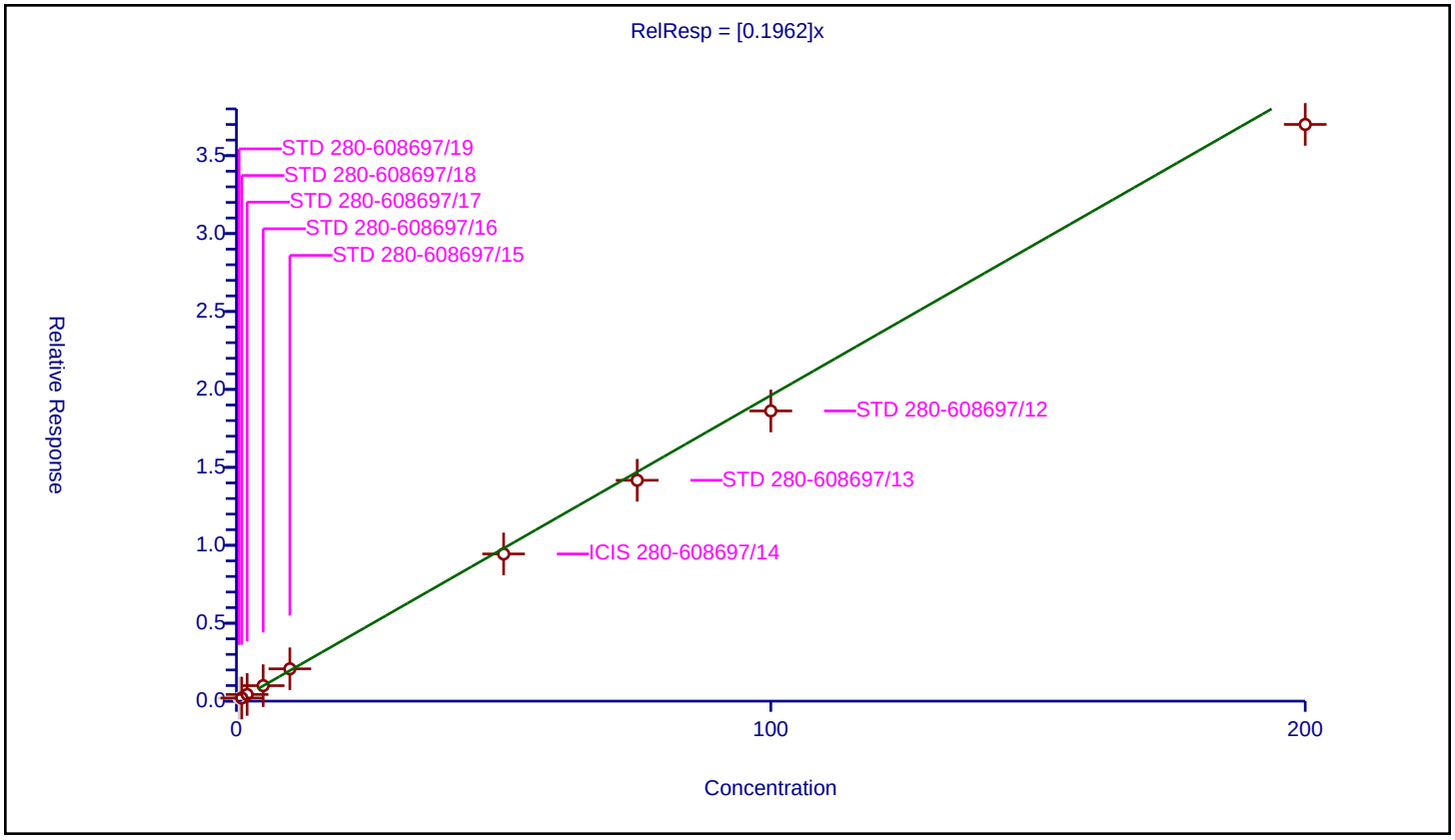
Curve Coefficients

Intercept:	0
Slope:	0.1962

Error Coefficients

Standard Error:	430000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/19	0.5	0.189674	50.0	1233957.0	0.379349	N
2	STD 280-608697/18	1.0	0.199698	50.0	1281182.0	0.199698	Y
3	STD 280-608697/17	2.0	0.428906	50.0	1292706.0	0.214453	Y
4	STD 280-608697/16	5.0	0.993123	50.0	1253370.0	0.198625	Y
5	STD 280-608697/15	10.0	2.07403	50.0	1263410.0	0.207403	Y
6	ICIS 280-608697/14	50.0	9.444109	50.0	1271634.0	0.188882	Y
7	STD 280-608697/13	75.0	14.171744	50.0	1276145.0	0.188957	Y
8	STD 280-608697/12	100.0	18.621513	50.0	1278242.0	0.186215	Y
9	STD 280-608697/11	200.0	37.002855	50.0	1262885.0	0.185014	Y



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Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

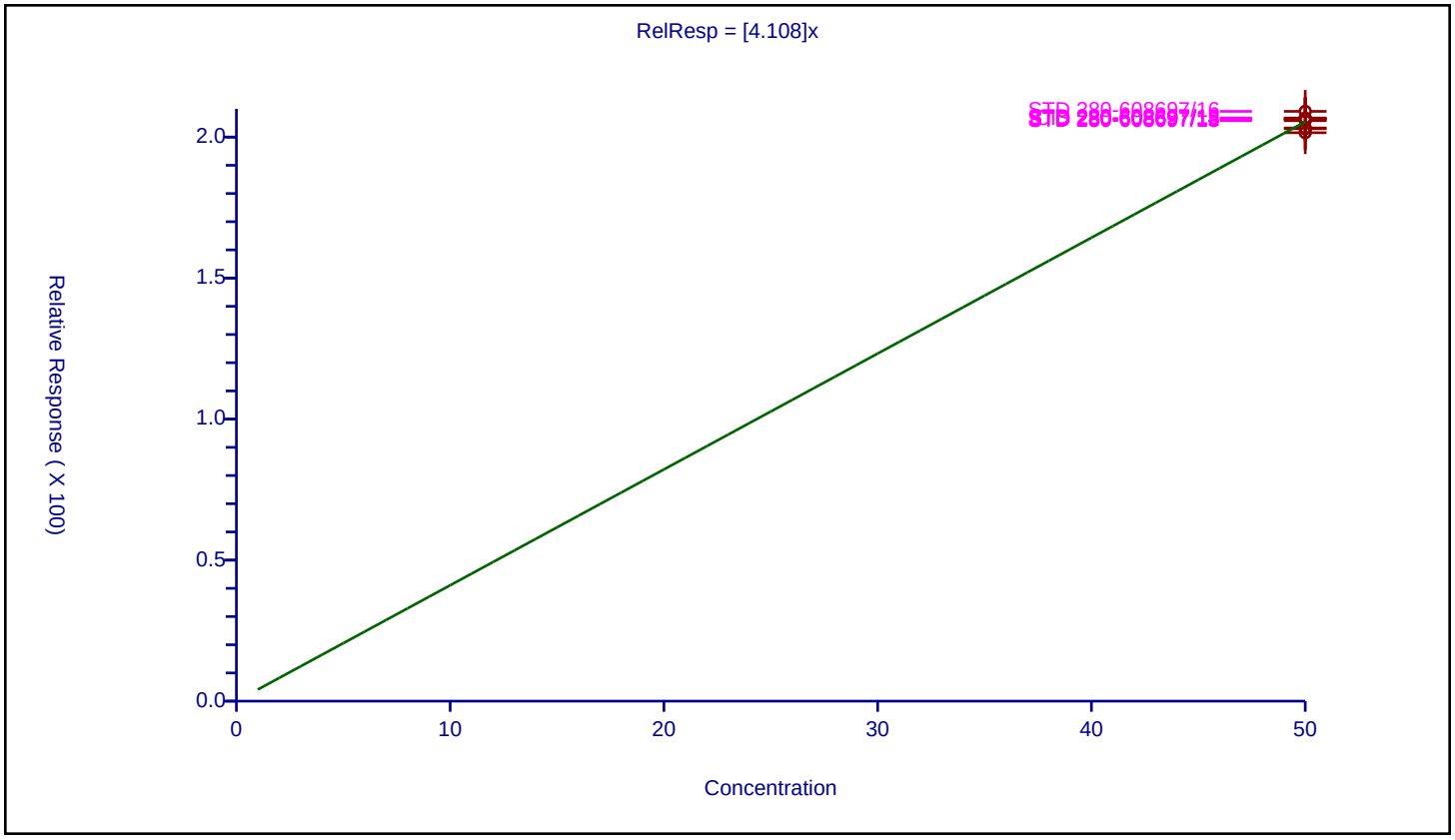
Curve Coefficients

Intercept:	0
Slope:	4.108

Error Coefficients

Standard Error:	1340000
Relative Standard Error:	1.1
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/11	50.0	203.229364	50.0	307847.0	4.064587	Y
2	STD 280-608697/12	50.0	206.226194	50.0	305066.0	4.124524	Y
3	STD 280-608697/13	50.0	206.45101	50.0	307758.0	4.12902	Y
4	ICIS 280-608697/14	50.0	206.552573	50.0	302881.0	4.131051	Y
5	STD 280-608697/15	50.0	206.757729	50.0	305909.0	4.135155	Y
6	STD 280-608697/16	50.0	209.125417	50.0	301641.0	4.182508	Y
7	STD 280-608697/17	50.0	201.546035	50.0	319139.0	4.030921	Y
8	STD 280-608697/18	50.0	205.813151	50.0	310262.0	4.116263	Y
9	STD 280-608697/19	50.0	202.96004	50.0	300148.0	4.059201	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

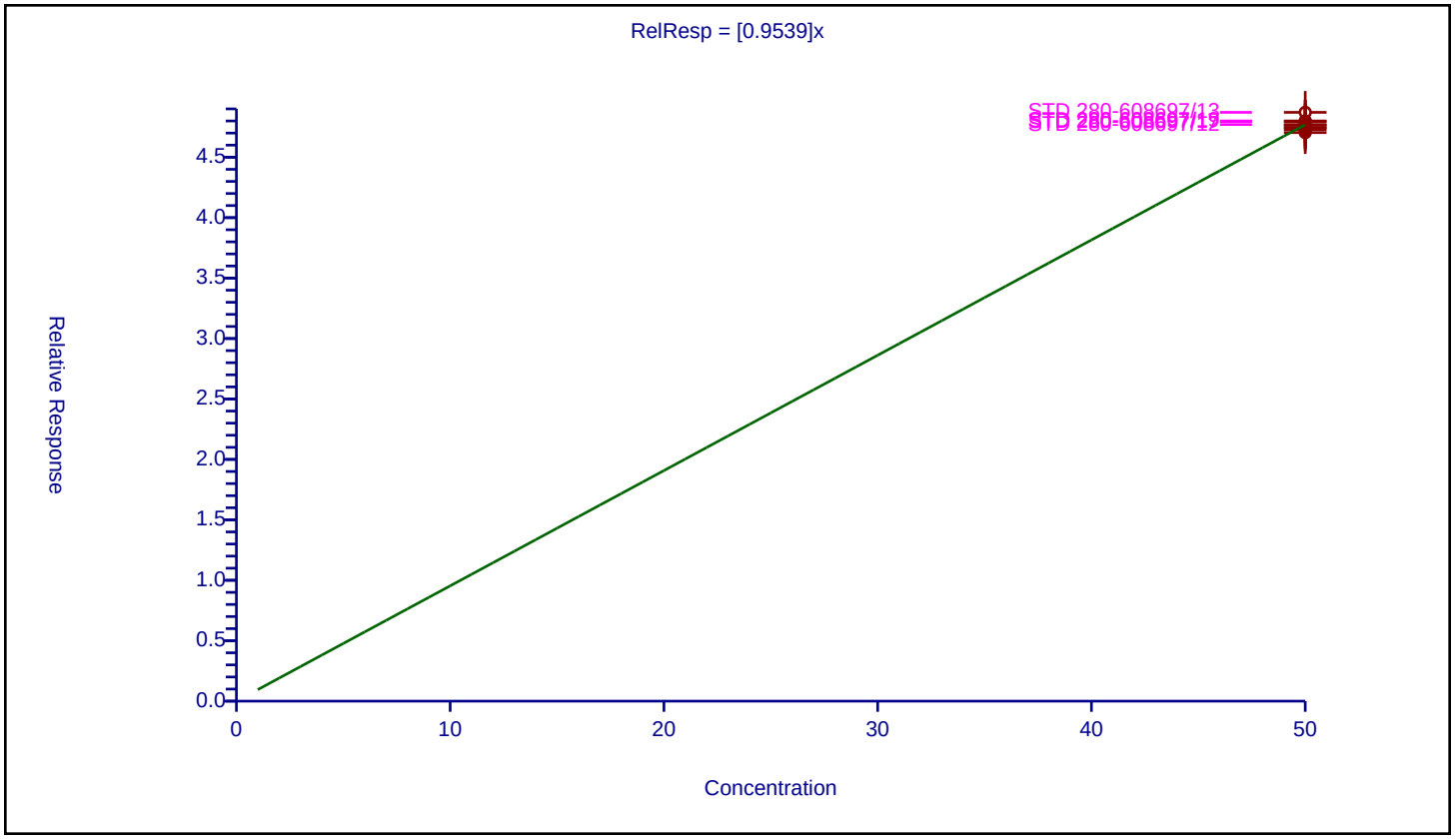
Curve Coefficients

Intercept:	0
Slope:	0.9539

Error Coefficients

Standard Error:	508000
Relative Standard Error:	1.0
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-608697/11	50.0	47.66685	50.0	506654.0	0.953337	Y
2	STD 280-608697/12	50.0	47.703817	50.0	501332.0	0.954076	Y
3	STD 280-608697/13	50.0	48.713084	50.0	500460.0	0.974262	Y
4	ICIS 280-608697/14	50.0	47.465312	50.0	496215.0	0.949306	Y
5	STD 280-608697/15	50.0	47.037461	50.0	508044.0	0.940749	Y
6	STD 280-608697/16	50.0	47.270675	50.0	502835.0	0.945414	Y
7	STD 280-608697/17	50.0	47.955073	50.0	515324.0	0.959101	Y
8	STD 280-608697/18	50.0	47.441911	50.0	510772.0	0.948838	Y
9	STD 280-608697/19	50.0	48.001267	50.0	479804.0	0.960025	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 Calibration End Date: 10/22/2022 17:23 Calibration ID: 72174

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-590907/23	X43673.D
Level 2	STD020 280-590907/24	X43674.D
Level 3	STD050 280-590907/25	X43675.D
Level 4	STD10 280-590907/26	X43676.D
Level 5	STD50 280-590907/27	X43677.D
Level 6	STD100 280-590907/28	X43678.D
Level 7	STD200 280-590907/29	X43679.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol	0.0032 0.0026	0.0026 0.0023	0.0029	0.0025	0.0025	Ave		0.0026				10.6		15.0			
Isopropyl alcohol	0.0178 0.0147	0.0171 0.0142	0.0159	0.0150	0.0139	Ave		0.0155				9.6		15.0			
Acetonitrile	0.0357 0.0260	0.0313 0.0247	0.0279	0.0254	0.0246	Ave		0.0279				14.8		15.0			
Isopropyl ether	0.1986 0.1823	0.1972 0.1737	0.1904	0.1822	0.1823	Ave		0.1867				4.9		15.0			
Chloroprene	0.3174 0.3430	0.2769 0.3217	0.3500	0.3482	0.3347	Ave		0.3274				7.8		15.0			
Tert-butyl ethyl ether	0.6896 0.6362	0.6424 0.6075	0.6570	0.6470	0.6461	Ave		0.6465				3.8		15.0			
Ethyl acetate	0.2311 0.1772	0.2104 0.1690	0.1935	0.1861	0.1868	Ave		0.1934				10.9		15.0			
Propionitrile	0.0348 0.0301	0.0312 0.0288	0.0318	0.0306	0.0301	Ave		0.0311				6.1		15.0			
Methacrylonitrile	0.1385 0.1142	0.1269 0.1079	0.1219	0.1219	0.1200	Ave		0.1216				7.9		15.0			
Tert-amyl methyl ether	0.6631 0.6037	0.6257 0.5760	0.6386	0.6432	0.6205	Ave		0.6244				4.5		15.0			
n-Butanol	0.0046 0.0071	0.0060 0.0066	0.0060	0.0060	0.0067	Ave		0.0061				13.1		15.0			
Methyl methacrylate	0.0714 0.0640	0.0656 0.0612	0.0657	0.0665	0.0678	Ave		0.0660				4.8		15.0			
2-Nitropropane	0.0833 0.0644	0.0730 0.0637	0.0698	0.0672	0.0684	Ave		0.0700				9.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 Calibration End Date: 10/22/2022 17:23 Calibration ID: 72174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-1,4-Dichloro-2-butene	0.2016 0.1913	0.1918 0.2163	0.1942	0.1866	0.1968	Ave		0.1969				5.0		15.0			
1,2,3-Trimethylbenzene	2.8314 2.6571	2.6423 2.5044	2.8365	2.7578	2.7500	Ave		2.7114				4.4		15.0			
1,3,5-Trichlorobenzene	0.8958 0.8497	0.7739 0.8025	0.8734	0.8509	0.8566	Ave		0.8433				4.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 | Calibration End Date: 10/22/2022 17:23 | Calibration ID: 72174

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-590907/23	X43673.D
Level 2	STD020 280-590907/24	X43674.D
Level 3	STD050 280-590907/25	X43675.D
Level 4	STD10 280-590907/26	X43676.D
Level 5	STD50 280-590907/27	X43677.D
Level 6	STD100 280-590907/28	X43678.D
Level 7	STD200 280-590907/29	X43679.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethanol	FB	Ave	4673 399032	7779 718910	21619	37444	193816	60.0 6000	120 12000	300	600	3000
Isopropyl alcohol	FB	Ave	4391 372304	8539 733137	19965	37978	179278	10.0 1000	20.0 2000	50.0	100	500
Acetonitrile	FB	Ave	8803 660703	15619 1273959	34977	64393	317384	10.0 1000	20.0 2000	50.0	100	500
Isopropyl ether	FB	Ave	4904 463376	9855 894974	23877	46219	235392	1.00 100	2.00 200	5.00	10.0	50.0
Chloroprene	FB	Ave	7835 871601	13838 1657553	43897	88324	432283	1.00 100	2.00 200	5.00	10.0	50.0
Tert-butyl ethyl ether	FB	Ave	17025 1616686	32102 3130196	82404	164107	834301	1.00 100	2.00 200	5.00	10.0	50.0
Ethyl acetate	FB	Ave	11412 900674	21024 1742173	48531	94394	482374	2.00 200	4.00 400	10.0	20.0	100
Propionitrile	FB	Ave	8599 764517	15584 1484489	39918	77594	389290	10.0 1000	20.0 2000	50.0	100	500
Methacrylonitrile	FB	Ave	34182 2902366	63429 5559833	152942	309281	1549638	10.0 1000	20.0 2000	50.0	100	500
Tert-amyl methyl ether	FB	Ave	16370 1534136	31268 2968159	80101	163148	801237	1.00 100	2.00 200	5.00	10.0	50.0
n-Butanol	FB	Ave	2828 450075	7446 848596	18679	38349	215752	25.0 2500	50.0 5000	125	250	1250
Methyl methacrylate	FB	Ave	3527 325472	6557 630700	16474	33734	175199	2.00 200	4.00 400	10.0	20.0	100
2-Nitropropane	FB	Ave	4115 327521	7296 656258	17515	34115	176598	2.00 200	4.00 400	10.0	20.0	100
cis-1,4-Dichloro-2-butene	DCBd4	Ave	3716 384763	7080 889057	18102	35175	186298	2.00 200	4.00 400	10.0	20.0	100
1,2,3-Trimethylbenzene	DCBd4	Ave	26094 2672462	48769 5146842	132233	259975	1301729	1.00 100	2.00 200	5.00	10.0	50.0
1,3,5-Trichlorobenzene	DCBd4	Ave	8256	14284	40714	80216	405455	1.00	2.00	5.00	10.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 Calibration End Date: 10/22/2022 17:23 Calibration ID: 72174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			854593	1649274				100	200			

Curve Type Legend:
Ave = Average ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43673.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Oct-2022 15:19:30 ALS Bottle#: 12 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:03 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1234372	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	284993	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	460800	50.0	50.0	
13 Ethylene oxide	43	2.146	2.210	-0.064	81	2305	100.0	0	
18 Ethanol	45	2.647	2.654	-0.007	94	4673	60.0	71.5	
20 Propene oxide	58	2.682	2.661	0.021	9	109	100.0	0	
25 Isopropyl alcohol	45	3.033	3.040	-0.007	97	4391	10.0	11.5	
28 Acetonitrile	41	3.161	3.161	0.000	100	8803	10.0	12.8	
41 Isopropyl ether	87	3.812	3.805	0.007	96	4904	1.00	1.06	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	7835	1.00	0.9693	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	96	17025	1.00	1.07	
46 Ethyl acetate	43	4.205	4.198	0.007	97	11412	2.00	2.39	
49 Propionitrile	54	4.234	4.234	0.000	98	8599	10.0	11.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	91	34182	10.0	11.4	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	92	16370	1.00	1.06	
66 n-Butanol	56	5.206	5.199	0.007	88	2828	25.0	18.7	
71 Methyl methacrylate	100	5.542	5.542	0.000	92	3527	2.00	2.16	
75 2-Nitropropane	41	5.900	5.900	0.000	96	4115	2.00	2.38	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	85	1528	2.00	2.56	a
98 cis-1,4-Dichloro-2-butene	53	8.545	8.538	0.007	0	3716	2.00	2.05	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	-0.001	98	26094	1.00	1.04	
119 1,3,5-Trichlorobenzene	180	11.141	11.134	0.007	94	8256	1.00	1.06	
166 Ethyl acrylate	55		0.000				ND	ND	
165 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	1.00	Units: uL
MV-Supp A_00073	Amount Added:	1.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

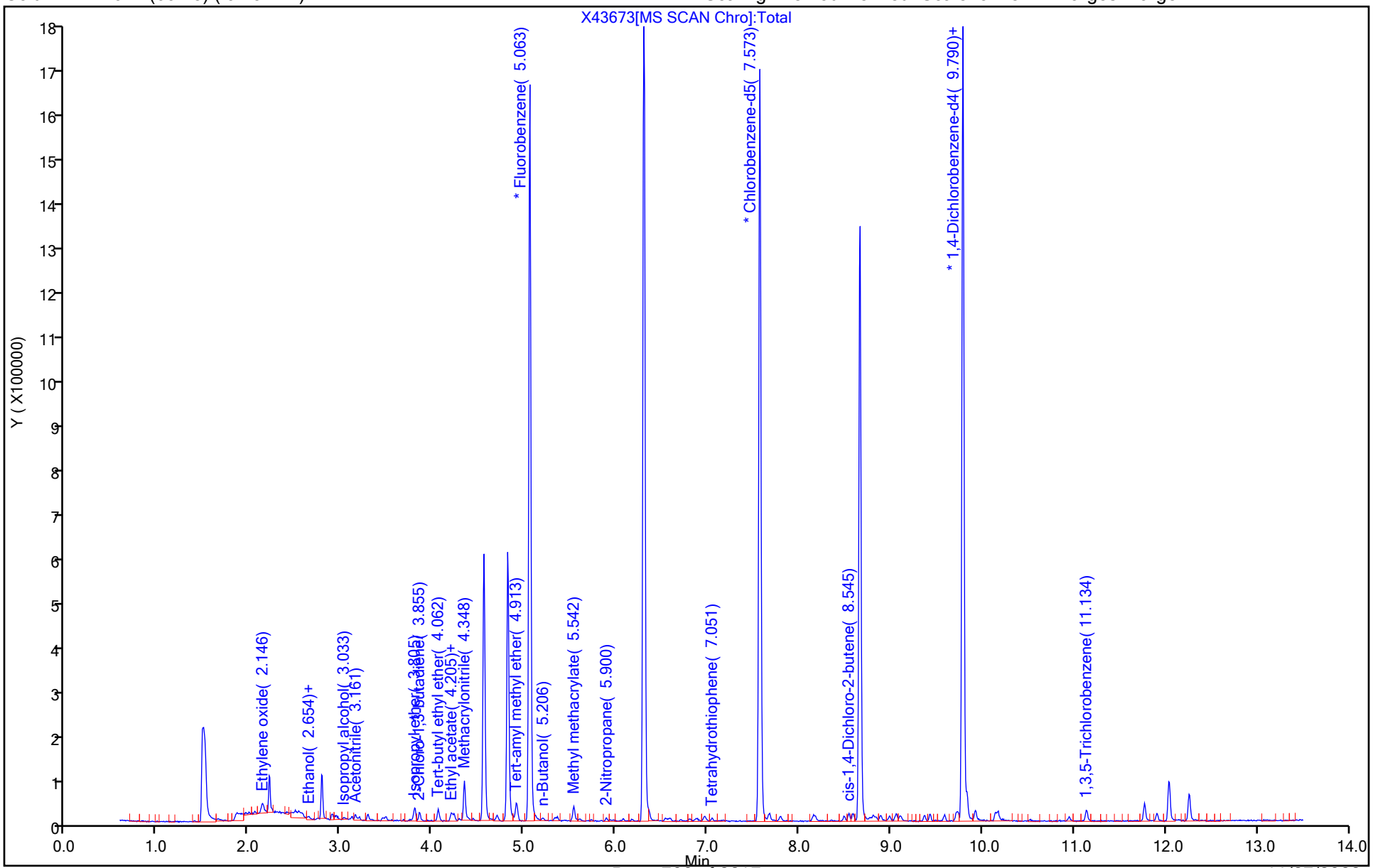
Report Date: 23-Oct-2022 12:17:03 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43673.D

Injection Date:	22-Oct-2022 15:19:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD010			Worklist Smp#:	23
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

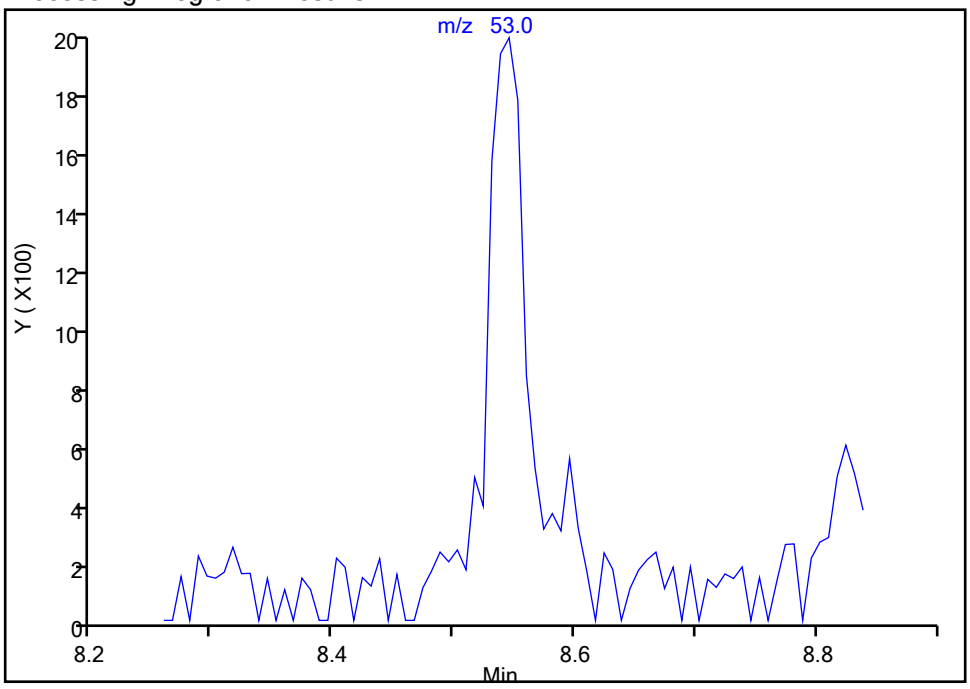
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43673.D
Injection Date: 22-Oct-2022 15:19:30 Instrument ID: VMS_X4
Lims ID: STD010
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 12 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

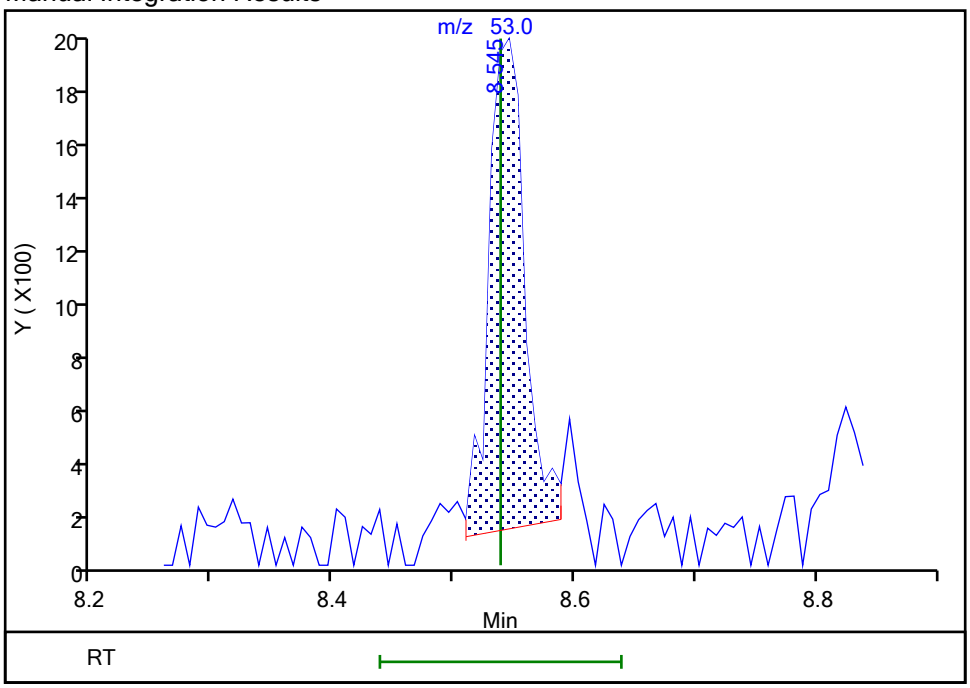
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 3716
Amount: 2.047520
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:26
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43674.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Oct-2022 15:40:30 ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:04 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1249318	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	287204	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	461417	50.0	50.0	
13 Ethylene oxide	43	2.139	2.210	-0.071	77	2101	200.0	0	
18 Ethanol	45	2.647	2.654	-0.007	99	7779	120.0	117.6	
20 Propene oxide	58	2.654	2.661	-0.007	23	163	200.0	0	
25 Isopropyl alcohol	45	3.033	3.040	-0.007	96	8539	20.0	22.0	
28 Acetonitrile	41	3.161	3.161	0.000	99	15619	20.0	22.4	
41 Isopropyl ether	87	3.805	3.805	0.000	92	9855	2.00	2.11	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	13838	2.00	1.69	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	96	32102	2.00	1.99	
46 Ethyl acetate	43	4.205	4.198	0.007	99	21024	4.00	4.35	
49 Propionitrile	54	4.234	4.234	0.000	98	15584	20.0	20.1	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	63429	20.0	20.9	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	92	31268	2.00	2.00	
66 n-Butanol	56	5.199	5.199	0.000	89	7446	50.0	48.6	
71 Methyl methacrylate	100	5.542	5.542	0.000	87	6557	4.00	3.97	
75 2-Nitropropane	41	5.900	5.900	0.000	98	7296	4.00	4.17	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	81	2459	4.00	4.09	a
98 cis-1,4-Dichloro-2-butene	53	8.546	8.538	0.008	0	7080	4.00	3.90	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	48769	2.00	1.95	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	95	14284	2.00	1.84	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	2.00	Units: uL
MV-Supp A_00073	Amount Added:	2.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

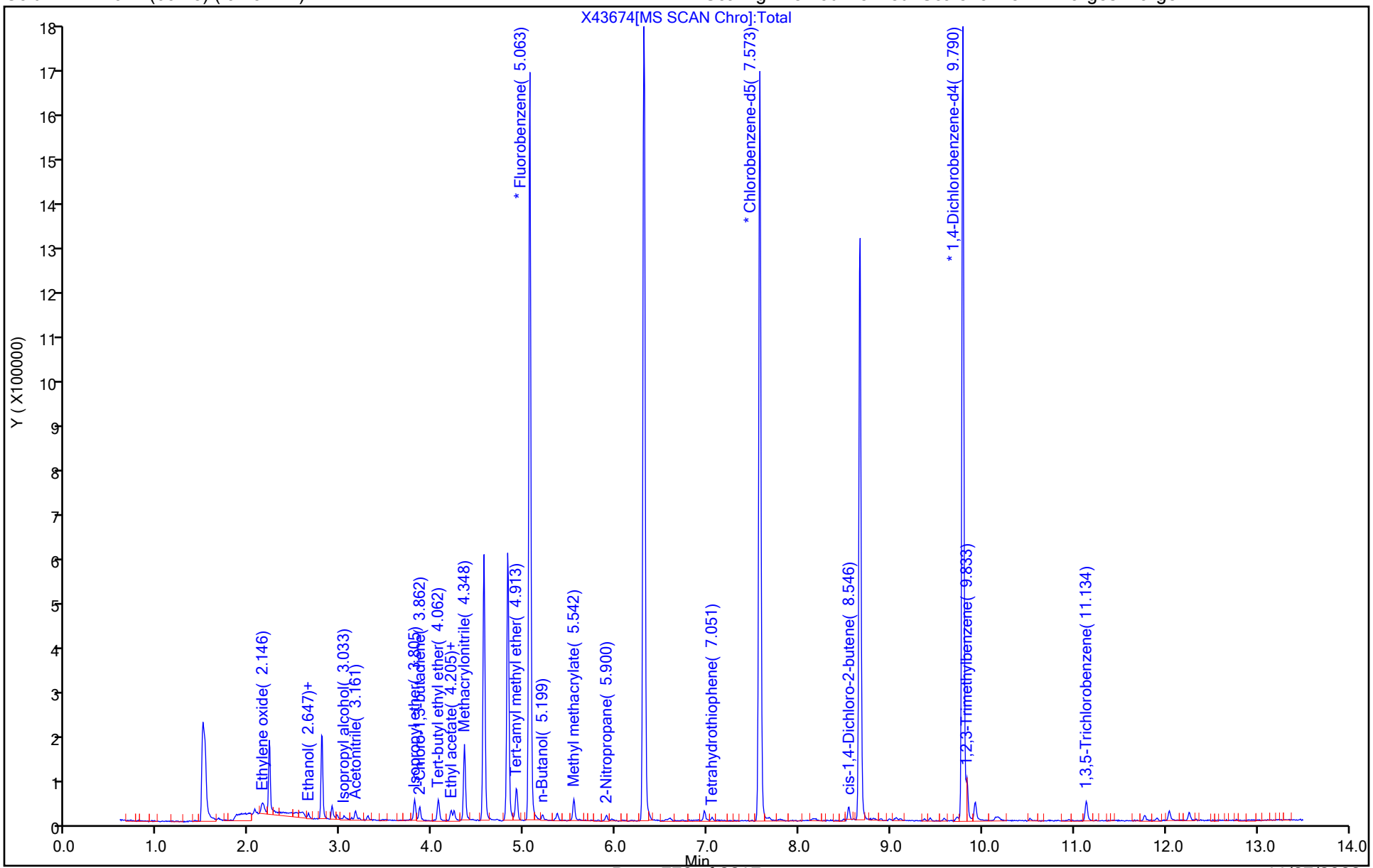
Report Date: 23-Oct-2022 12:17:04 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43674.D

Injection Date:	22-Oct-2022 15:40:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD020			Worklist Smp#:	24
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver

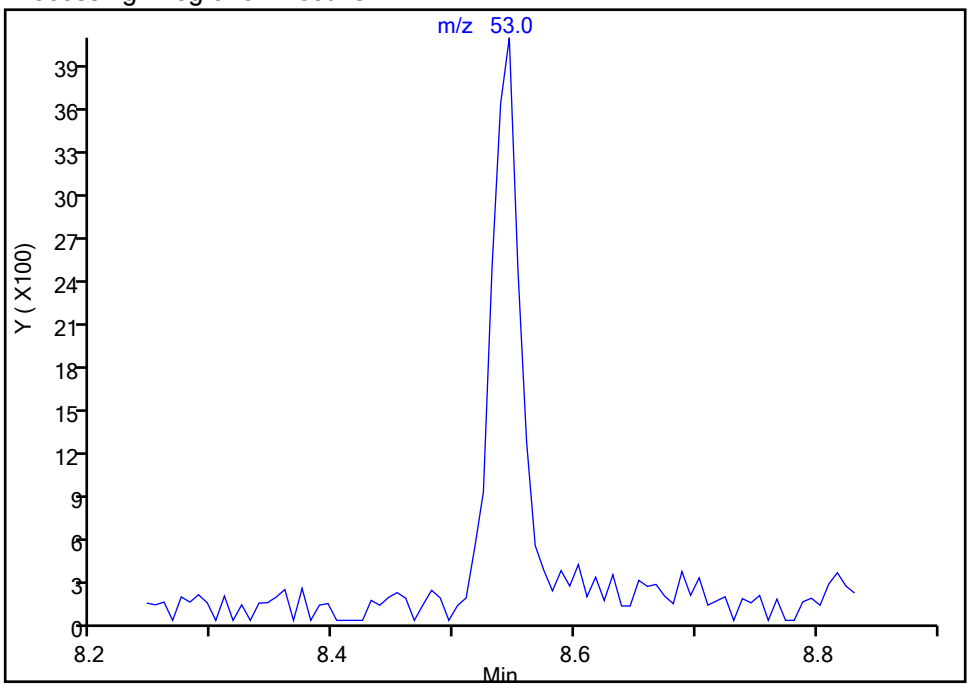
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43674.D
Injection Date: 22-Oct-2022 15:40:30 Instrument ID: VMS_X4
Lims ID: STD020
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

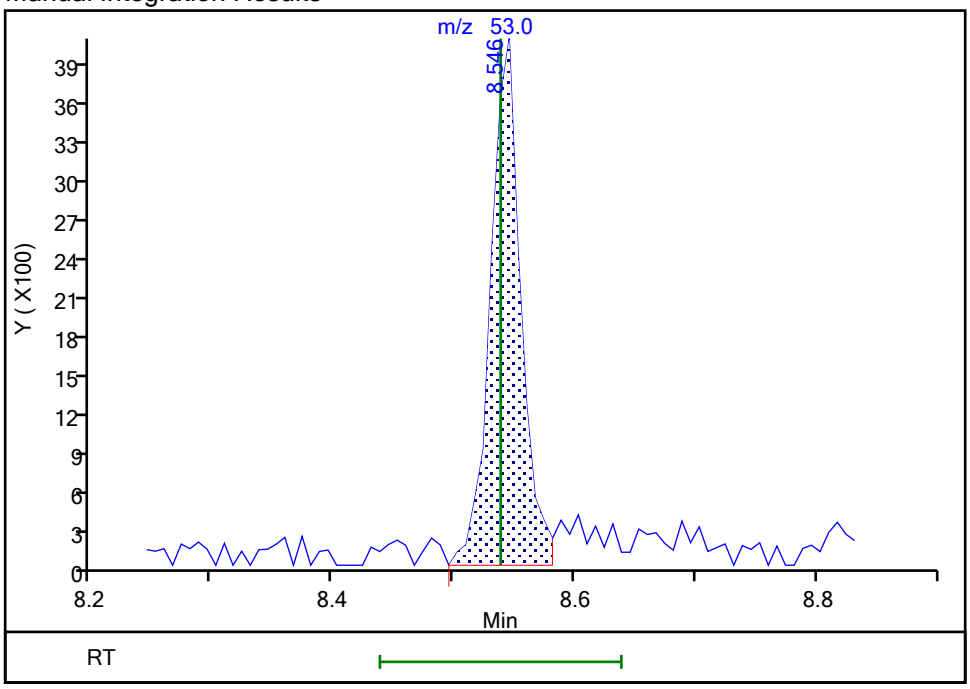
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 7080
Amount: 3.895870
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43675.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Oct-2022 16:01:30 ALS Bottle#: 14 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:05 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1254313	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	292644	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	466180	50.0	50.0	
13 Ethylene oxide	43	2.210	2.210	0.000	99	87282	500.0	0	
18 Ethanol	45	2.654	2.654	0.000	99	21619	300.0	325.6	
20 Propene oxide	58	2.654	2.661	-0.007	15	46	500.0	0	
25 Isopropyl alcohol	45	3.040	3.040	0.000	98	19965	50.0	51.3	
28 Acetonitrile	41	3.161	3.161	0.000	100	34977	50.0	49.9	
41 Isopropyl ether	87	3.805	3.805	0.000	93	23877	5.00	5.10	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	92	43897	5.00	5.34	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	82404	5.00	5.08	
46 Ethyl acetate	43	4.198	4.198	0.000	99	48531	10.0	10.0	
49 Propionitrile	54	4.234	4.234	0.000	99	39918	50.0	51.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	89	152942	50.0	50.1	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	90	80101	5.00	5.11	
66 n-Butanol	56	5.199	5.199	0.000	87	18679	125.0	121.5	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	16474	10.0	9.94	
75 2-Nitropropane	41	5.900	5.900	0.000	98	17515	10.0	9.98	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	89	6254	10.0	10.2	a
98 cis-1,4-Dichloro-2-butene	53	8.545	8.538	0.007	0	18102	10.0	9.86	a
115 1,2,3-Trimethylbenzene	105	9.832	9.833	-0.001	99	132233	5.00	5.23	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	95	40714	5.00	5.18	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	5.00	Units: uL
MV-Supp A_00073	Amount Added:	5.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

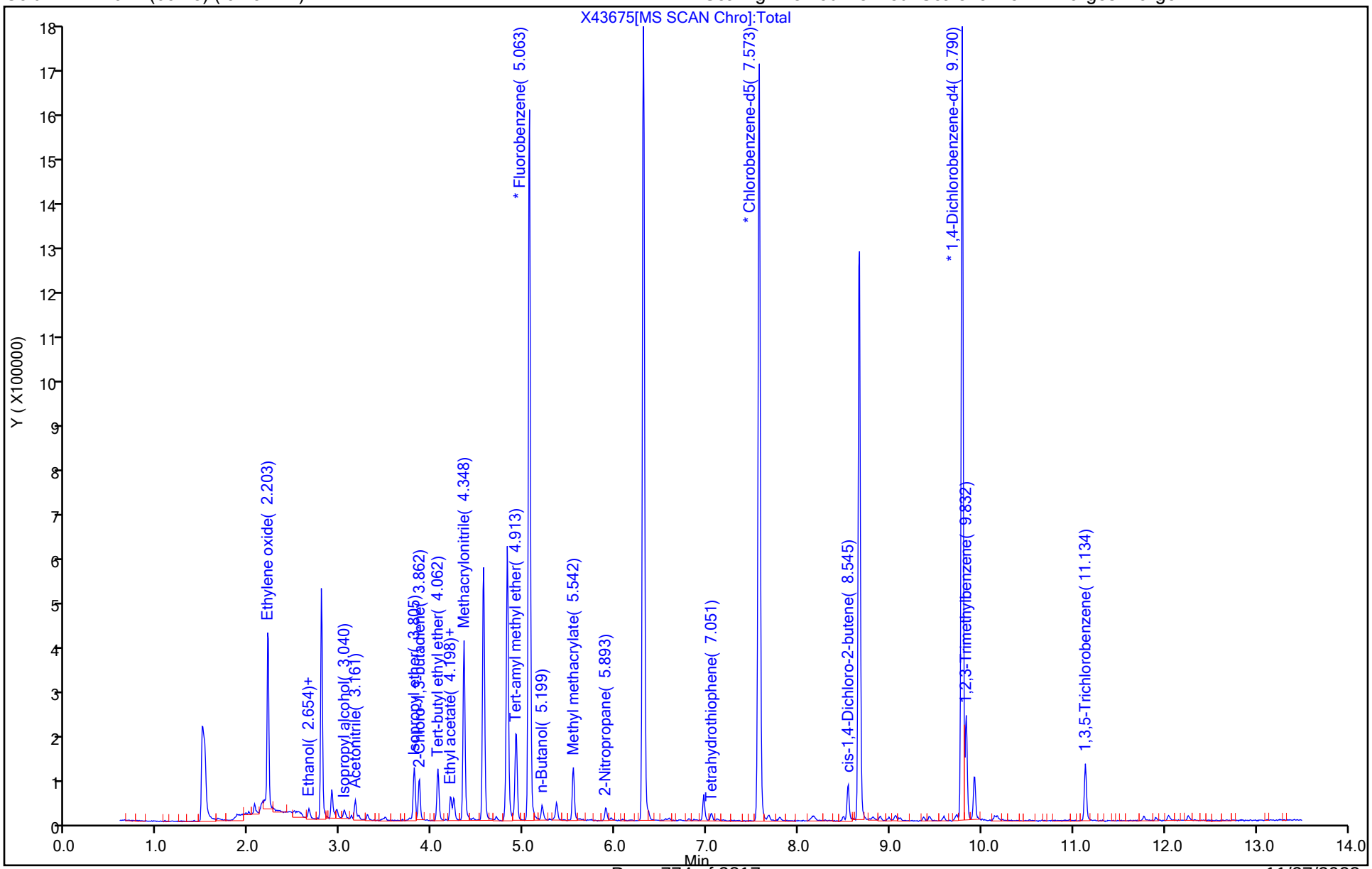
Report Date: 23-Oct-2022 12:17:05 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43675.D

Injection Date:	22-Oct-2022 16:01:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD050			Worklist Smp#:	25
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

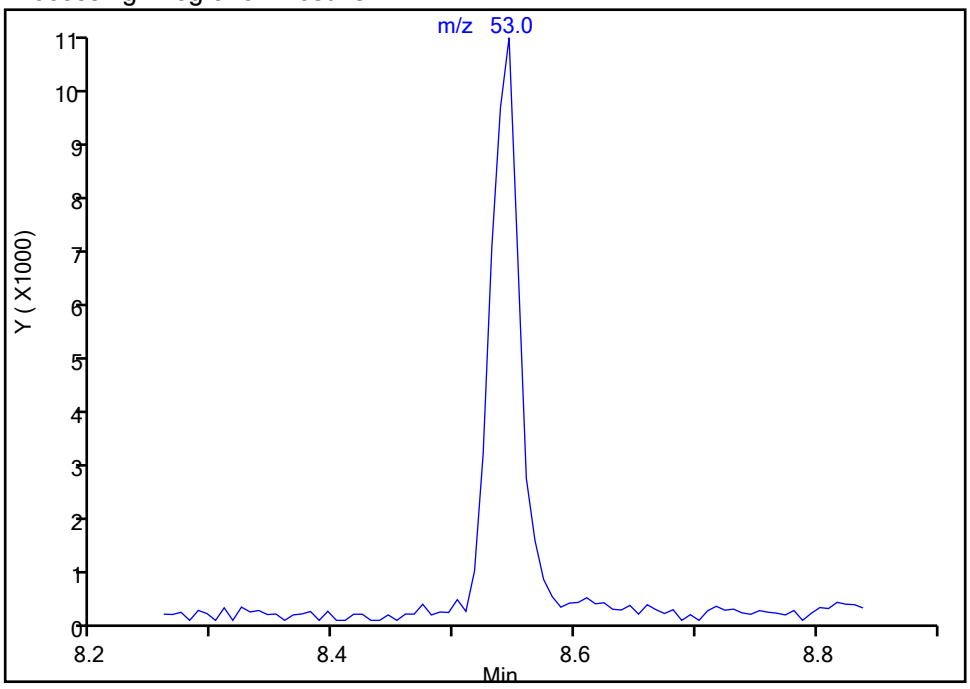
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43675.D
Injection Date: 22-Oct-2022 16:01:30 Instrument ID: VMS_X4
Lims ID: STD050
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 14 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

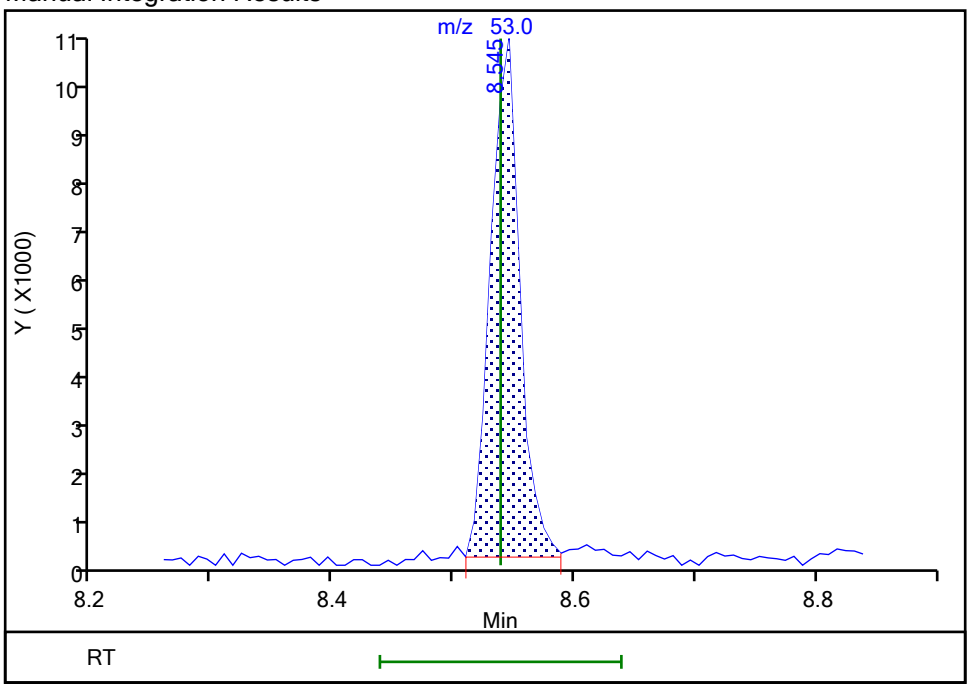
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 18102
Amount: 9.859111
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:38
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43676.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Oct-2022 16:21:30 ALS Bottle#: 15 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:07 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1268265	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	294502	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	471349	50.0	50.0	
13 Ethylene oxide	43	2.146	2.210	-0.064	76	5283	1000.0	0	
18 Ethanol	45	2.646	2.654	-0.008	100	37444	600.0	557.8	
20 Propene oxide	58	2.725	2.661	0.064	8	60	1000.0	0	
25 Isopropyl alcohol	45	3.040	3.040	0.000	98	37978	100.0	96.6	
28 Acetonitrile	41	3.161	3.161	0.000	100	64393	100.0	90.9	
41 Isopropyl ether	87	3.805	3.805	0.000	92	46219	10.0	9.76	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	88324	10.0	10.6	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	164107	10.0	10.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	94394	20.0	19.2	
49 Propionitrile	54	4.234	4.234	0.000	99	77594	100.0	98.5	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	309281	100.0	100.3	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	90	163148	10.0	10.3	
66 n-Butanol	56	5.199	5.199	0.000	88	38349	250.0	246.7	
71 Methyl methacrylate	100	5.542	5.542	0.000	88	33734	20.0	20.1	
75 2-Nitropropane	41	5.893	5.900	-0.007	98	34115	20.0	19.2	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	92	11047	20.0	17.9	a
98 cis-1,4-Dichloro-2-butene	53	8.545	8.538	0.007	0	35175	20.0	18.9	a
115 1,2,3-Trimethylbenzene	105	9.832	9.833	-0.001	99	259975	10.0	10.2	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	80216	10.0	10.1	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	10.00	Units: uL
MV-Supp A_00073	Amount Added:	10.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

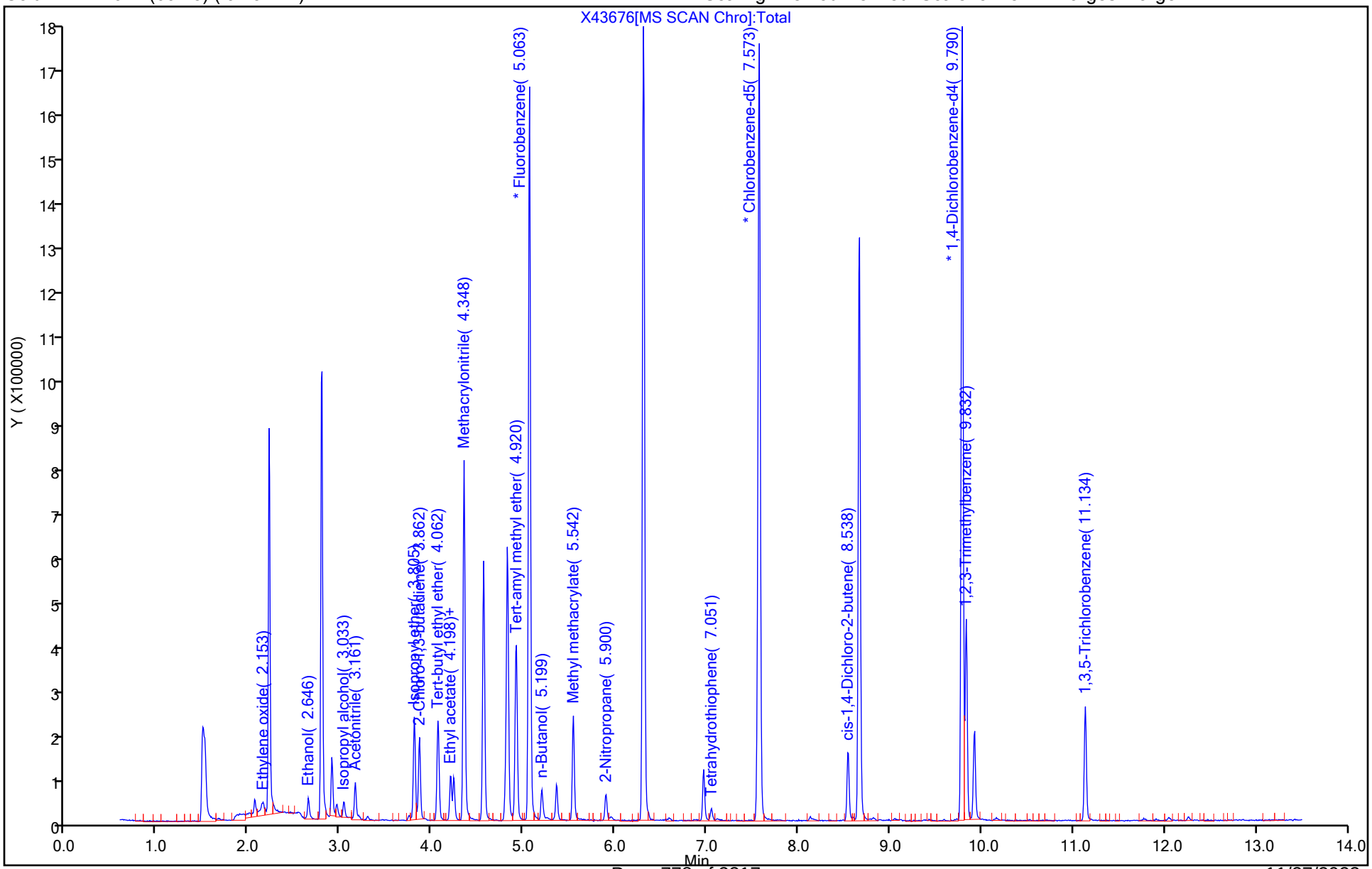
Report Date: 23-Oct-2022 12:17:07 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43676.D

Injection Date:	22-Oct-2022 16:21:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD10			Worklist Smp#:	26
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver

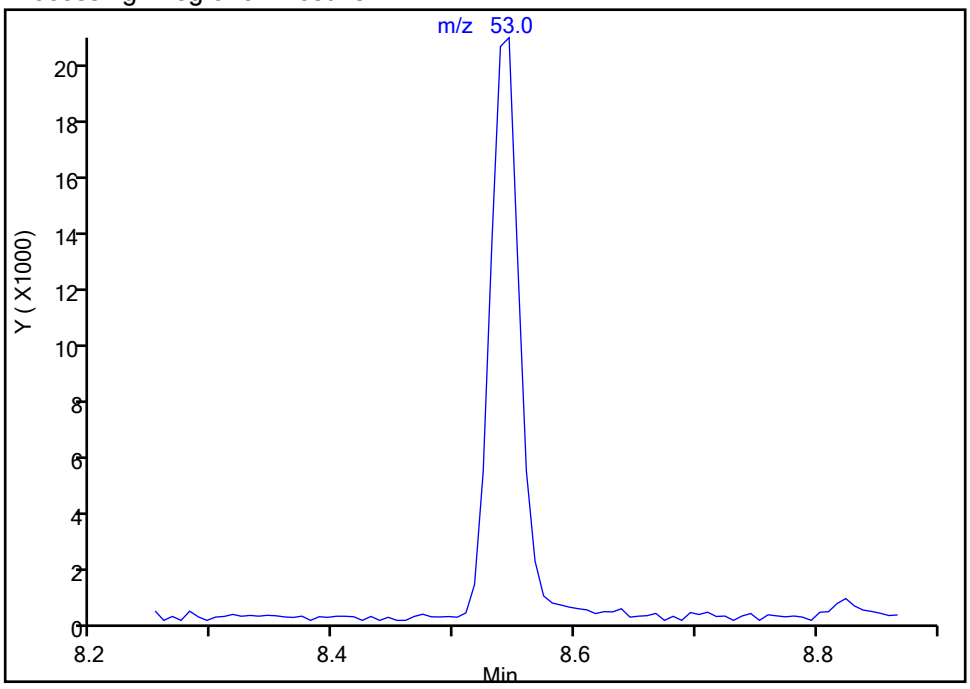
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43676.D				
Injection Date:	22-Oct-2022 16:21:30	Instrument ID:	VMS_X4		
Lims ID:	STD10				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	15	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

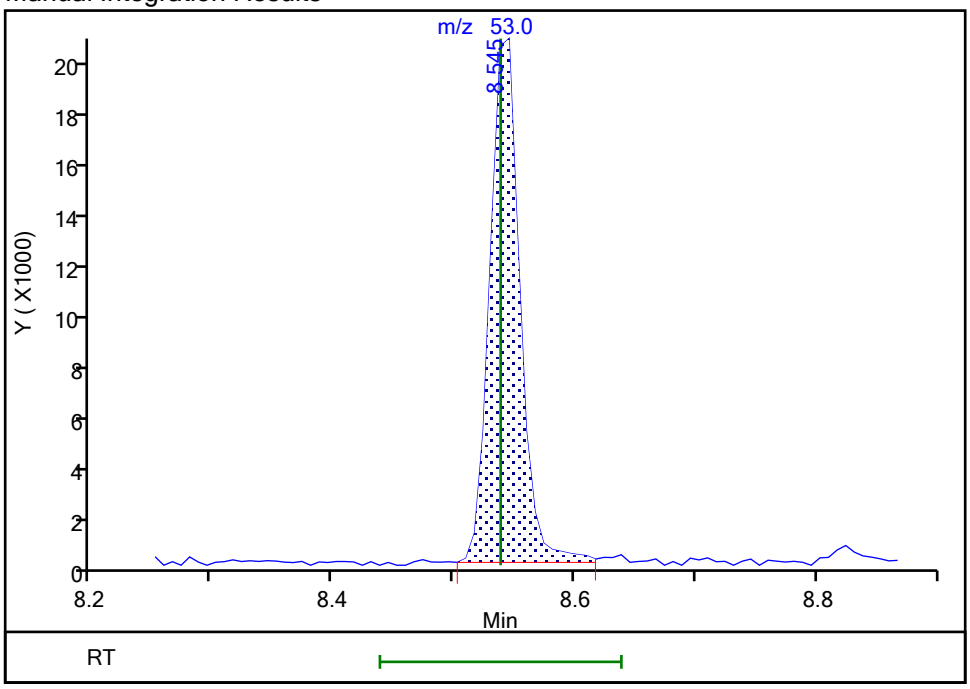
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 35175
Amount: 18.947693
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:42
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43677.D
Lims ID: STD50
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 22-Oct-2022 16:42:30 ALS Bottle#: 16 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD50
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:08 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1291361	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	293360	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	473350	50.0	50.0	
13 Ethylene oxide	43	2.210	2.210	0.000	100	1025949	5000.0	0	
18 Ethanol	45	2.654	2.654	0.000	100	193816	3000.0	2835.5	
20 Propene oxide	58	2.661	2.661	0.000	19	46	5000.0	0	
25 Isopropyl alcohol	45	3.040	3.040	0.000	98	179278	500.0	447.7	
28 Acetonitrile	41	3.161	3.161	0.000	100	317384	500.0	440.0	
41 Isopropyl ether	87	3.805	3.805	0.000	92	235392	50.0	48.8	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	432283	50.0	51.1	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	834301	50.0	50.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	482374	100.0	96.6	
49 Propionitrile	54	4.234	4.234	0.000	99	389290	500.0	485.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	1549638	500.0	493.3	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	801237	50.0	49.7	
66 n-Butanol	56	5.199	5.199	0.000	87	215752	1250.0	1363.0	
71 Methyl methacrylate	100	5.542	5.542	0.000	88	175199	100.0	102.7	
75 2-Nitropropane	41	5.900	5.900	0.000	98	176598	100.0	97.7	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	91	56224	100.0	91.6	a
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	186298	100.0	99.9	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	1301729	50.0	50.7	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	405455	50.0	50.8	
166 Ethyl acrylate	55		0.000				ND	ND	
165 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added: 50.00	Units: uL
MV-Supp A_00073	Amount Added: 50.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

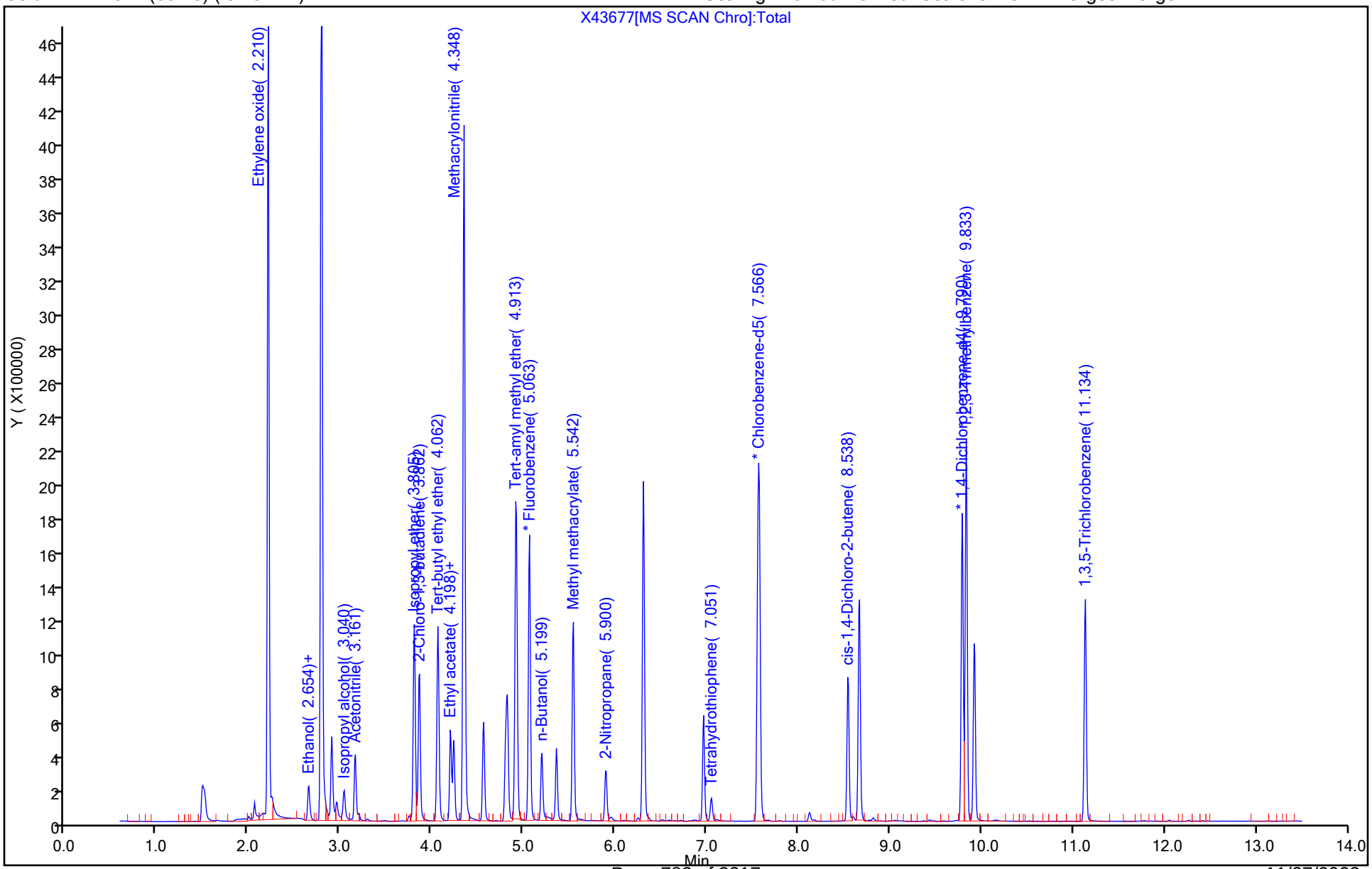
Report Date: 23-Oct-2022 12:17:08 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43677.D

Injection Date:	22-Oct-2022 16:42:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD50			Worklist Smp#:	27
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

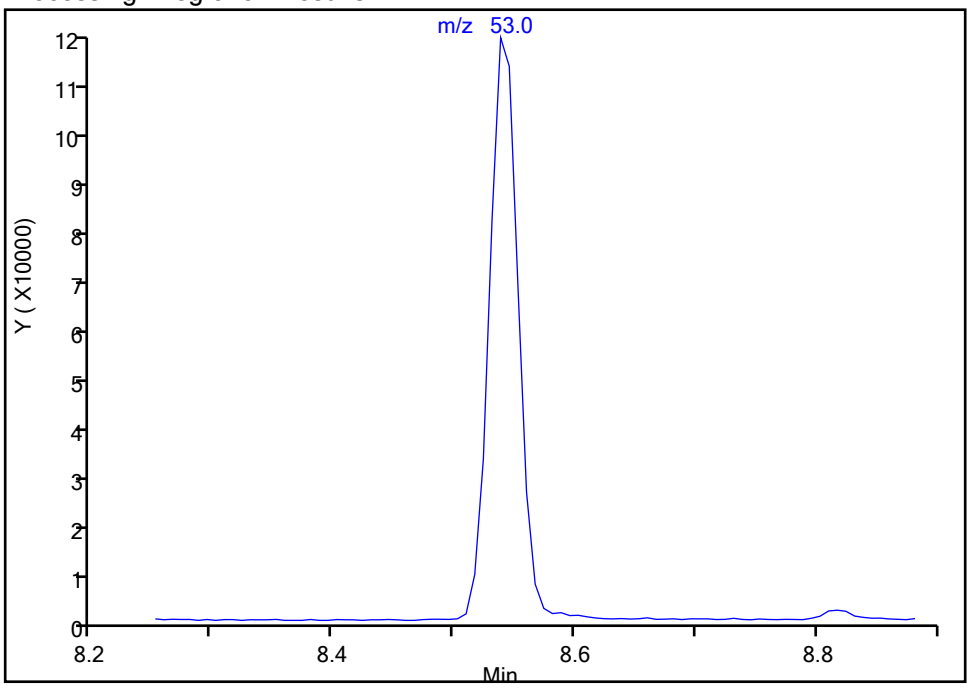
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43677.D
Injection Date: 22-Oct-2022 16:42:30 Instrument ID: VMS_X4
Lims ID: STD50
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 16 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

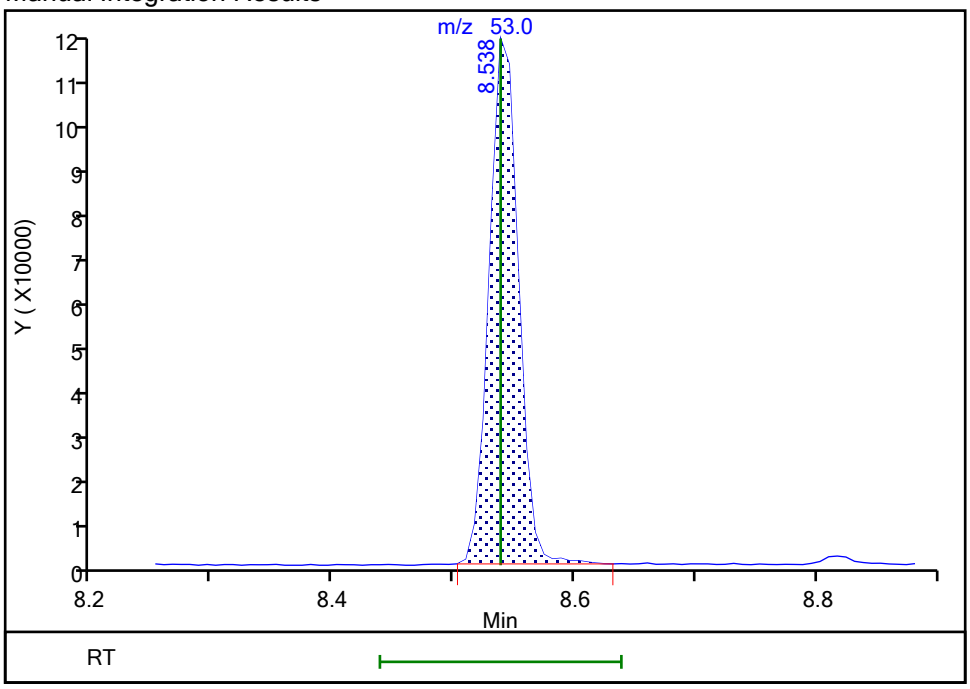
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.54
Area: 186298
Amount: 99.928790
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:46
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43678.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 22-Oct-2022 17:02:30 ALS Bottle#: 17 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:09 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.063	-0.007	98	1270651	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	295681	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	502900	50.0	50.0	
13 Ethylene oxide	43	2.225	2.210	0.015	97	22695	10000	0	
18 Ethanol	45	2.697	2.654	0.043	100	399032	6000.0	5933.0	
20 Propene oxide	58	2.625	2.661	-0.036	14	360	10000	0	
25 Isopropyl alcohol	45	3.076	3.040	0.036	99	372304	1000.0	945.0	
28 Acetonitrile	41	3.162	3.161	0.001	100	660703	1000.0	931.0	
41 Isopropyl ether	87	3.805	3.805	0.000	92	463376	100.0	97.7	
42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	93	871601	100.0	104.8	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	1616686	100.0	98.4	
46 Ethyl acetate	43	4.198	4.198	0.000	99	900674	200.0	183.2	
49 Propionitrile	54	4.241	4.234	0.007	99	764517	1000.0	968.3	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	2902366	1000.0	939.0	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	89	1534136	100.0	96.7	
66 n-Butanol	56	5.214	5.199	0.015	87	450075	2500.0	2889.8	
71 Methyl methacrylate	100	5.543	5.542	0.001	88	325472	200.0	193.9	
75 2-Nitropropane	41	5.893	5.900	-0.007	98	327521	200.0	184.1	
86 Tetrahydrothiophene	60	7.044	7.051	-0.007	91	108454	200.0	175.3	a
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	384763	200.0	194.3	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	2672462	100.0	98.0	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	854593	100.0	100.8	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added: 100.00	Units: uL
MV-Supp A_00073	Amount Added: 100.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

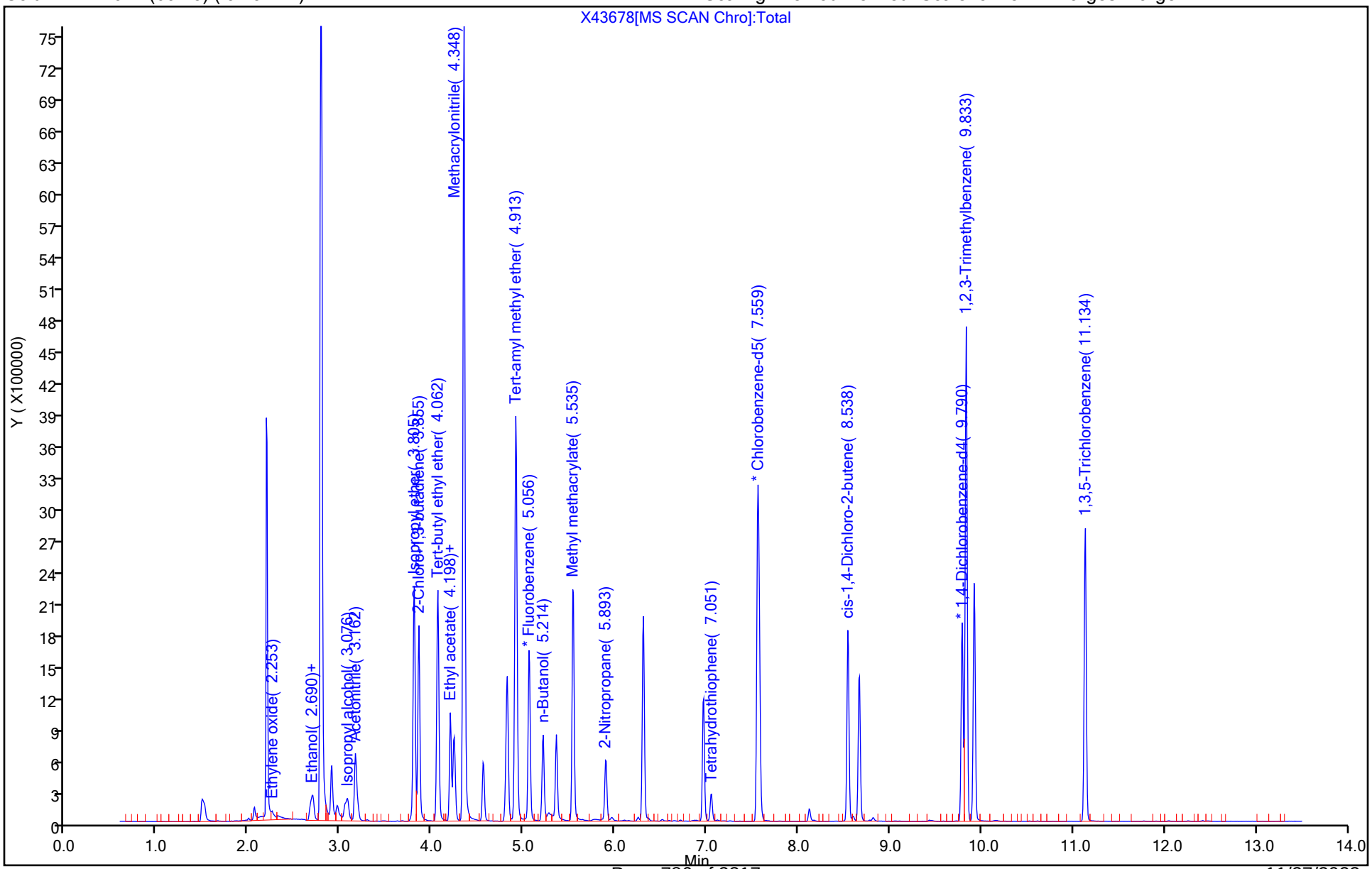
Report Date: 23-Oct-2022 12:17:09 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43678.D

Injection Date:	22-Oct-2022 17:02:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD100			Worklist Smp#:	28
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

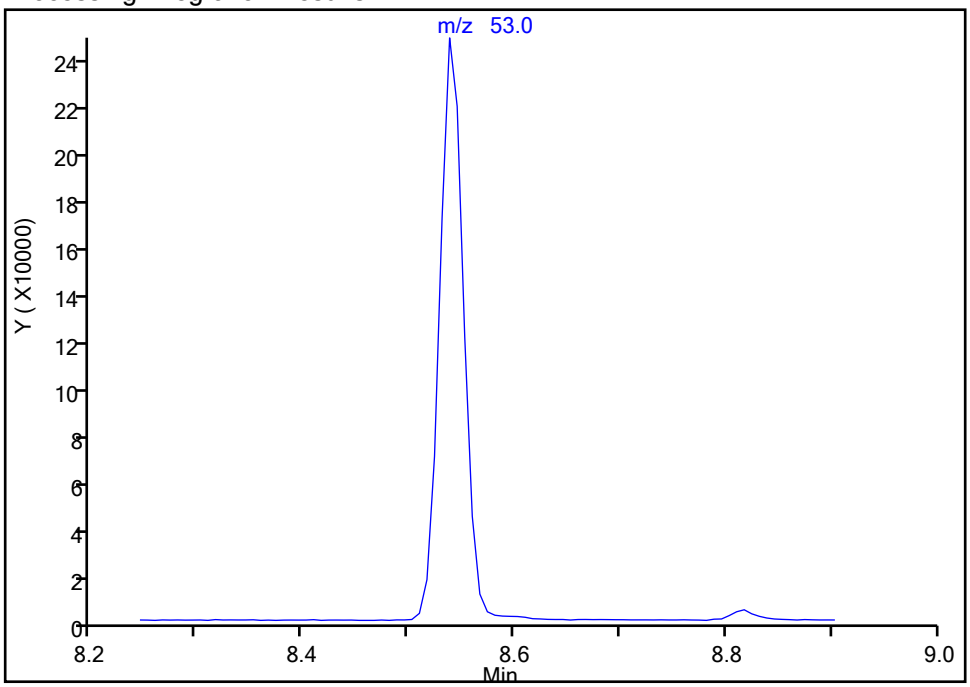
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43678.D
Injection Date: 22-Oct-2022 17:02:30 Instrument ID: VMS_X4
Lims ID: STD100
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 17 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

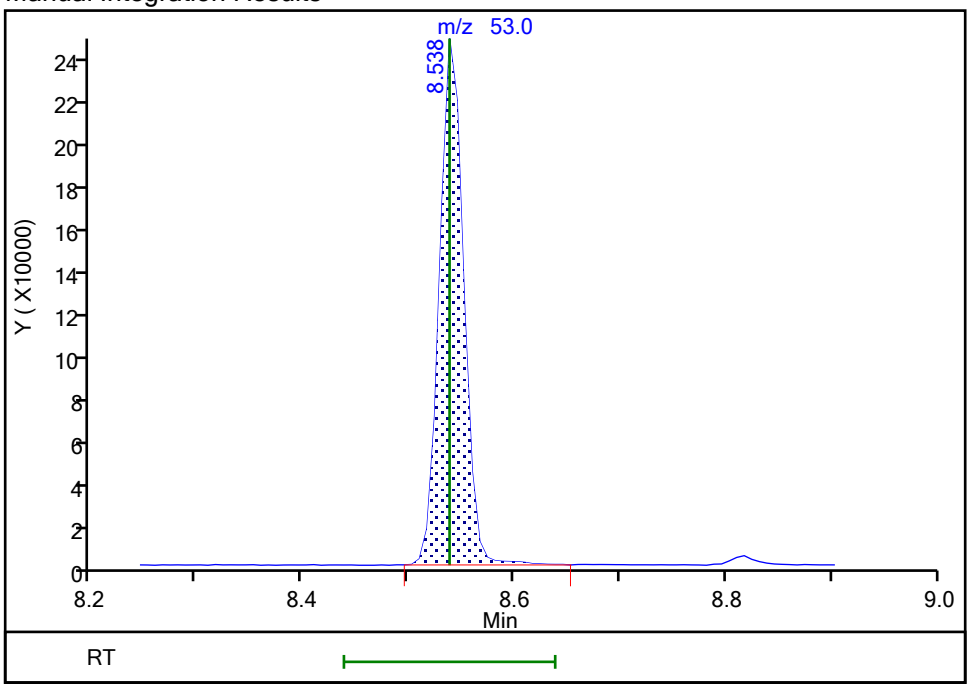
Not Detected
Expected RT: 8.54

Processing Integration Results



RT: 8.54
Area: 384763
Amount: 194.2569
Amount Units: ug/l

Manual Integration Results



Reviewer: V1QB, 23-Oct-2022 12:11:50
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 22-Oct-2022 17:23:30 ALS Bottle#: 18 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:10 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.063	-0.007	98	1288234	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	305072	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	513774	50.0	50.0	
13 Ethylene oxide	43	2.225	2.210	0.015	98	17599	20000	0	
18 Ethanol	45	2.711	2.654	0.057	100	718910	12000	10543	
20 Propene oxide	58	2.704	2.661	0.043	22	215	20000	0	
25 Isopropyl alcohol	45	3.090	3.040	0.050	99	733137	2000.0	1835.4	
28 Acetonitrile	41	3.162	3.161	0.001	99	1273959	2000.0	1770.6	
41 Isopropyl ether	87	3.805	3.805	0.000	92	894974	200.0	186.1	
42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	93	1657553	200.0	196.5	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	3130196	200.0	187.9	
46 Ethyl acetate	43	4.198	4.198	0.000	99	1742173	400.0	349.6	
49 Propionitrile	54	4.241	4.234	0.007	99	1484489	2000.0	1854.6	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	5559833	2000.0	1774.3	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	89	2968159	200.0	184.5	
66 n-Butanol	56	5.221	5.199	0.022	86	848596	5000.0	5374.1	
71 Methyl methacrylate	100	5.543	5.542	0.001	88	630700	400.0	370.7	
75 2-Nitropropane	41	5.893	5.900	-0.007	98	656258	400.0	363.9	
86 Tetrahydrothiophene	60	7.044	7.051	-0.007	91	251334	400.0	393.8	a
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	889057	400.0	439.4	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	5146842	200.0	184.7	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	1649274	200.0	190.3	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added: 200.00	Units: uL
MV-Supp A_00073	Amount Added: 200.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

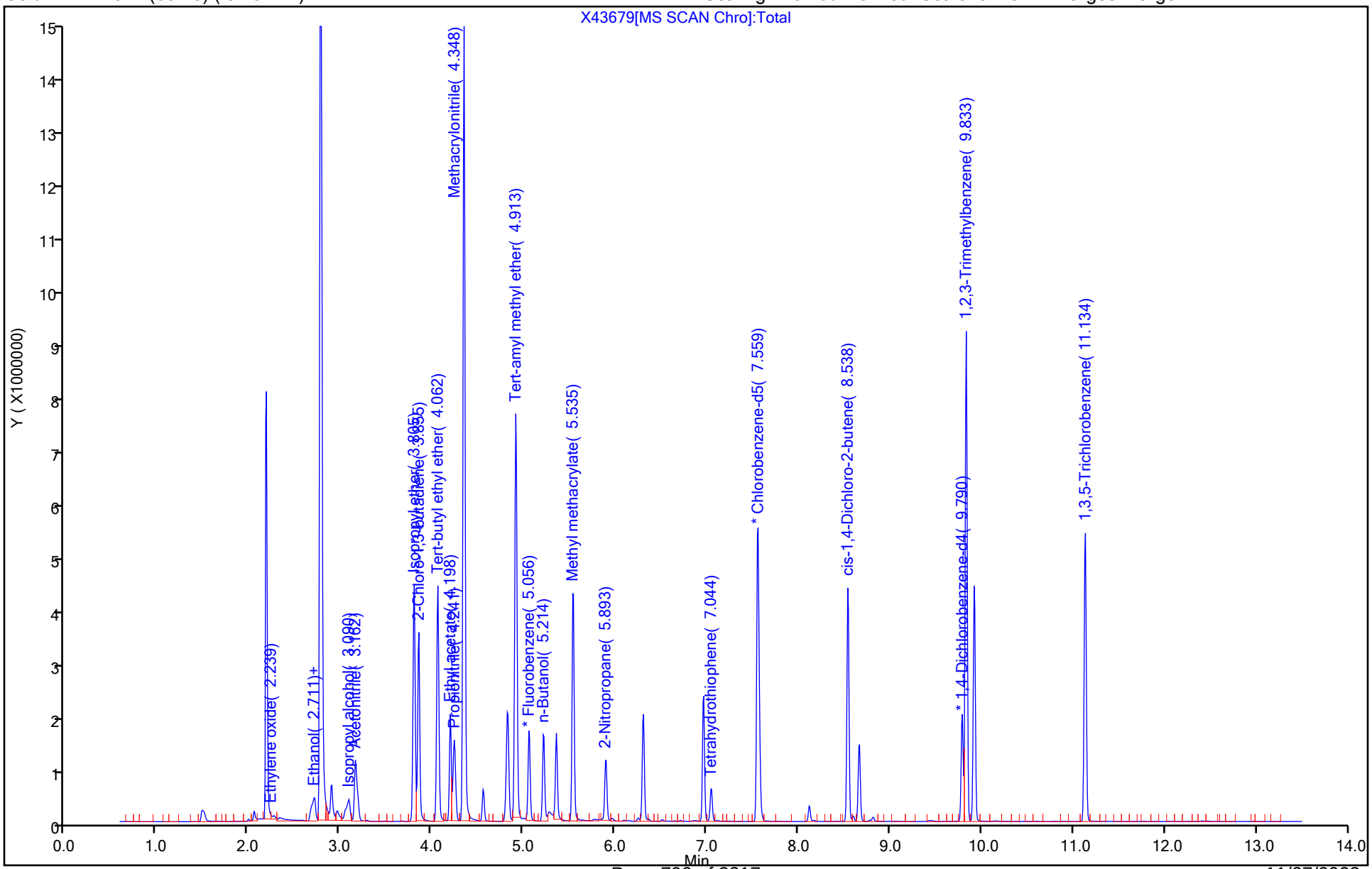
Report Date: 23-Oct-2022 12:17:11 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Injection Date:	22-Oct-2022 17:23:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD200			Worklist Smp#:	29
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

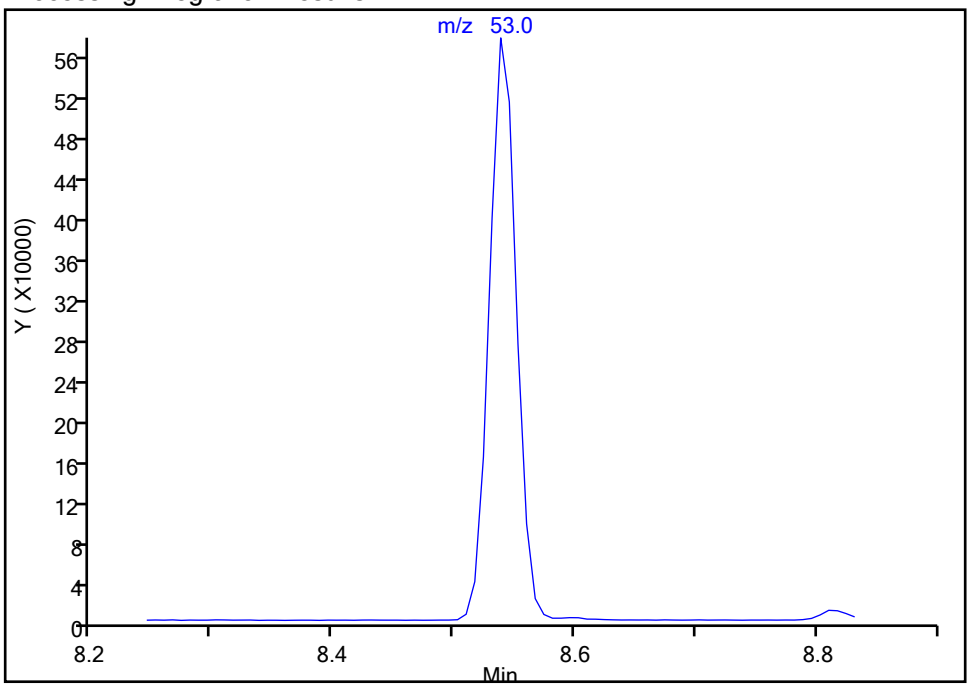
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D
Injection Date: 22-Oct-2022 17:23:30 Instrument ID: VMS_X4
Lims ID: STD200
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 18 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

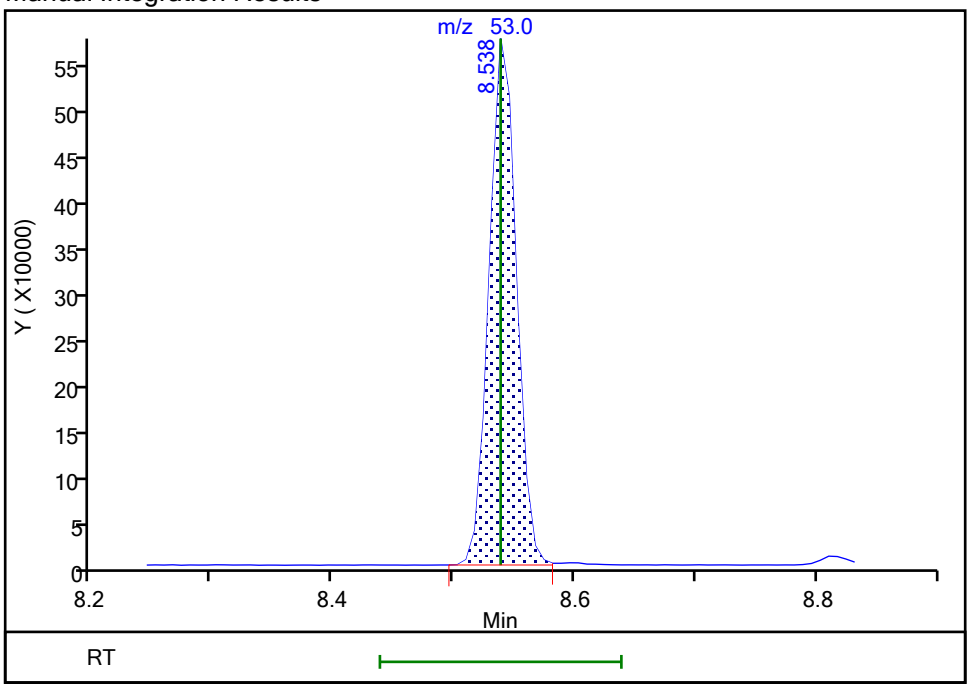
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.54
Area: 889057
Amount: 439.3618
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Calibration / Ethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

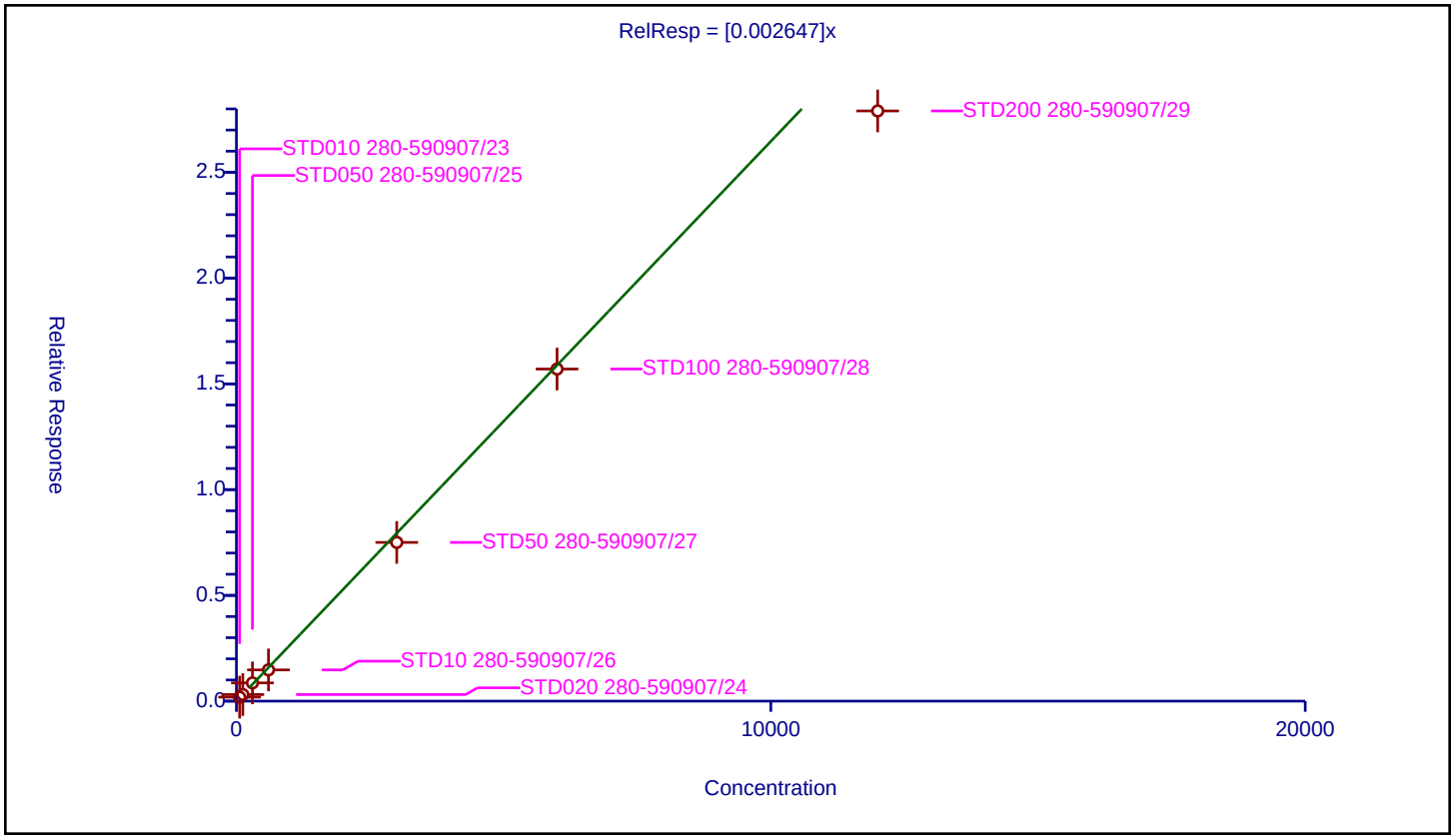
Curve Coefficients

Intercept:	0
Slope:	0.002647

Error Coefficients

Standard Error:	345000
Relative Standard Error:	10.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	60.0	0.189287	50.0	1234372.0	0.003155	Y
2	STD020 280-590907/24	120.0	0.31133	50.0	1249318.0	0.002594	Y
3	STD050 280-590907/25	300.0	0.861786	50.0	1254313.0	0.002873	Y
4	STD10 280-590907/26	600.0	1.47619	50.0	1268265.0	0.00246	Y
5	STD50 280-590907/27	3000.0	7.504331	50.0	1291361.0	0.002501	Y
6	STD100 280-590907/28	6000.0	15.701873	50.0	1270651.0	0.002617	Y
7	STD200 280-590907/29	12000.0	27.902928	50.0	1288234.0	0.002325	Y



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Calibration / Isopropyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

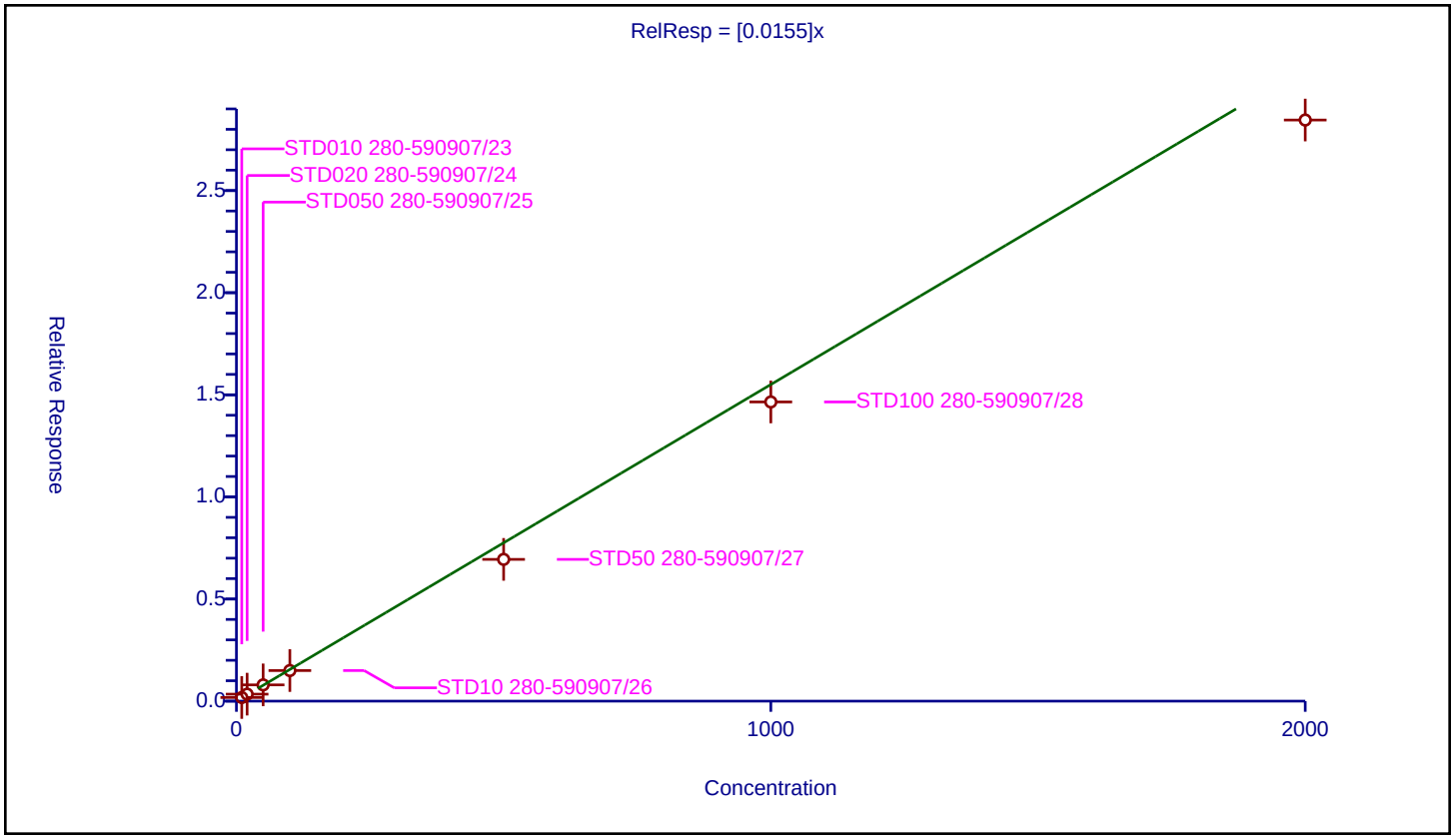
Curve Coefficients

Intercept:	0
Slope:	0.0155

Error Coefficients

Standard Error:	344000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	0.177864	50.0	1234372.0	0.017786	Y
2	STD020 280-590907/24	20.0	0.341746	50.0	1249318.0	0.017087	Y
3	STD050 280-590907/25	50.0	0.795854	50.0	1254313.0	0.015917	Y
4	STD10 280-590907/26	100.0	1.497242	50.0	1268265.0	0.014972	Y
5	STD50 280-590907/27	500.0	6.941436	50.0	1291361.0	0.013883	Y
6	STD100 280-590907/28	1000.0	14.650128	50.0	1270651.0	0.01465	Y
7	STD200 280-590907/29	2000.0	28.455118	50.0	1288234.0	0.014228	Y



Calibration / Acetonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

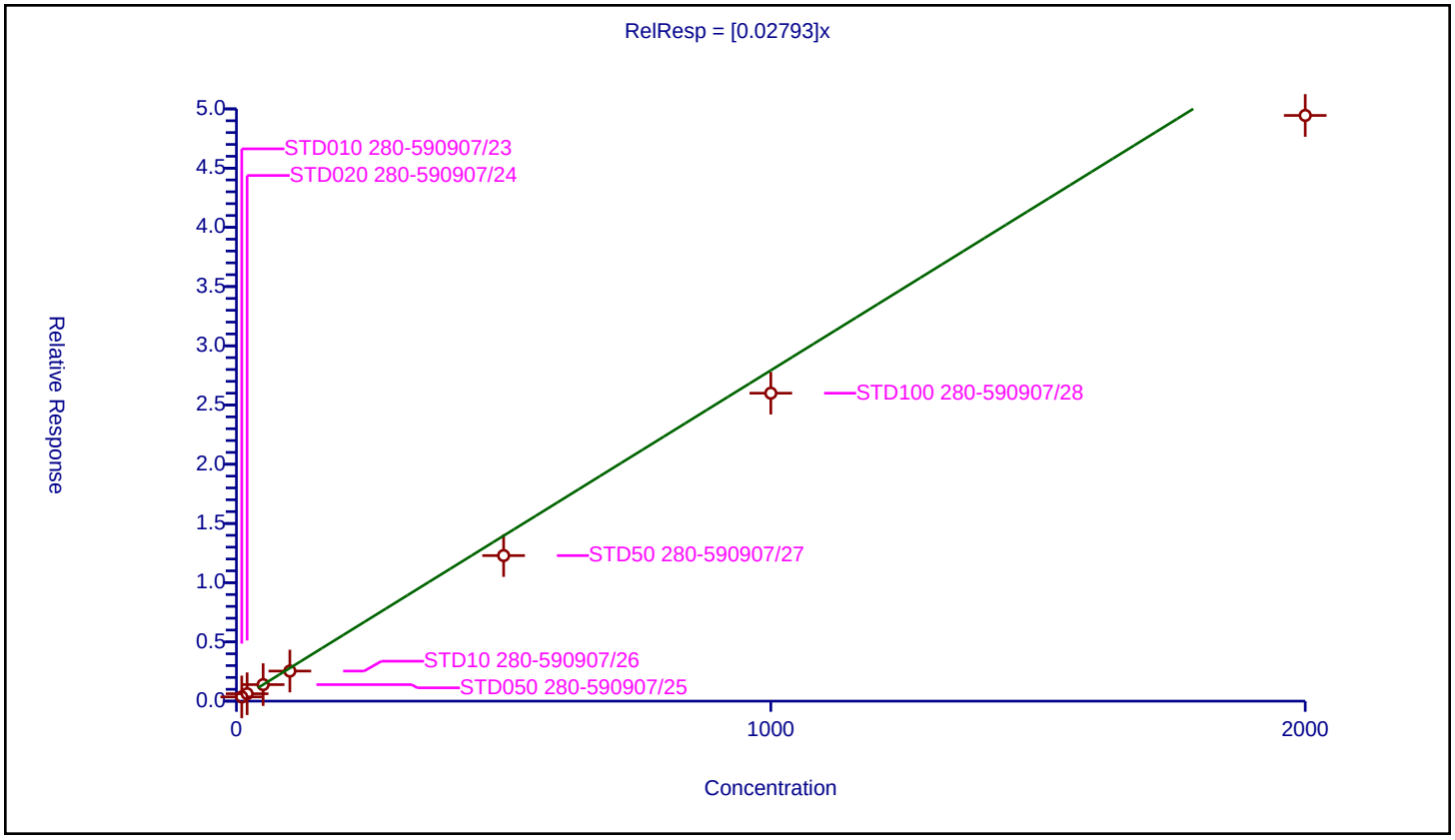
Curve Coefficients

Intercept:	0
Slope:	0.02793

Error Coefficients

Standard Error:	601000
Relative Standard Error:	14.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.963

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	0.356578	50.0	1234372.0	0.035658	Y
2	STD020 280-590907/24	20.0	0.625101	50.0	1249318.0	0.031255	Y
3	STD050 280-590907/25	50.0	1.394269	50.0	1254313.0	0.027885	Y
4	STD10 280-590907/26	100.0	2.538626	50.0	1268265.0	0.025386	Y
5	STD50 280-590907/27	500.0	12.28874	50.0	1291361.0	0.024577	Y
6	STD100 280-590907/28	1000.0	25.998602	50.0	1270651.0	0.025999	Y
7	STD200 280-590907/29	2000.0	49.445947	50.0	1288234.0	0.024723	Y



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Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

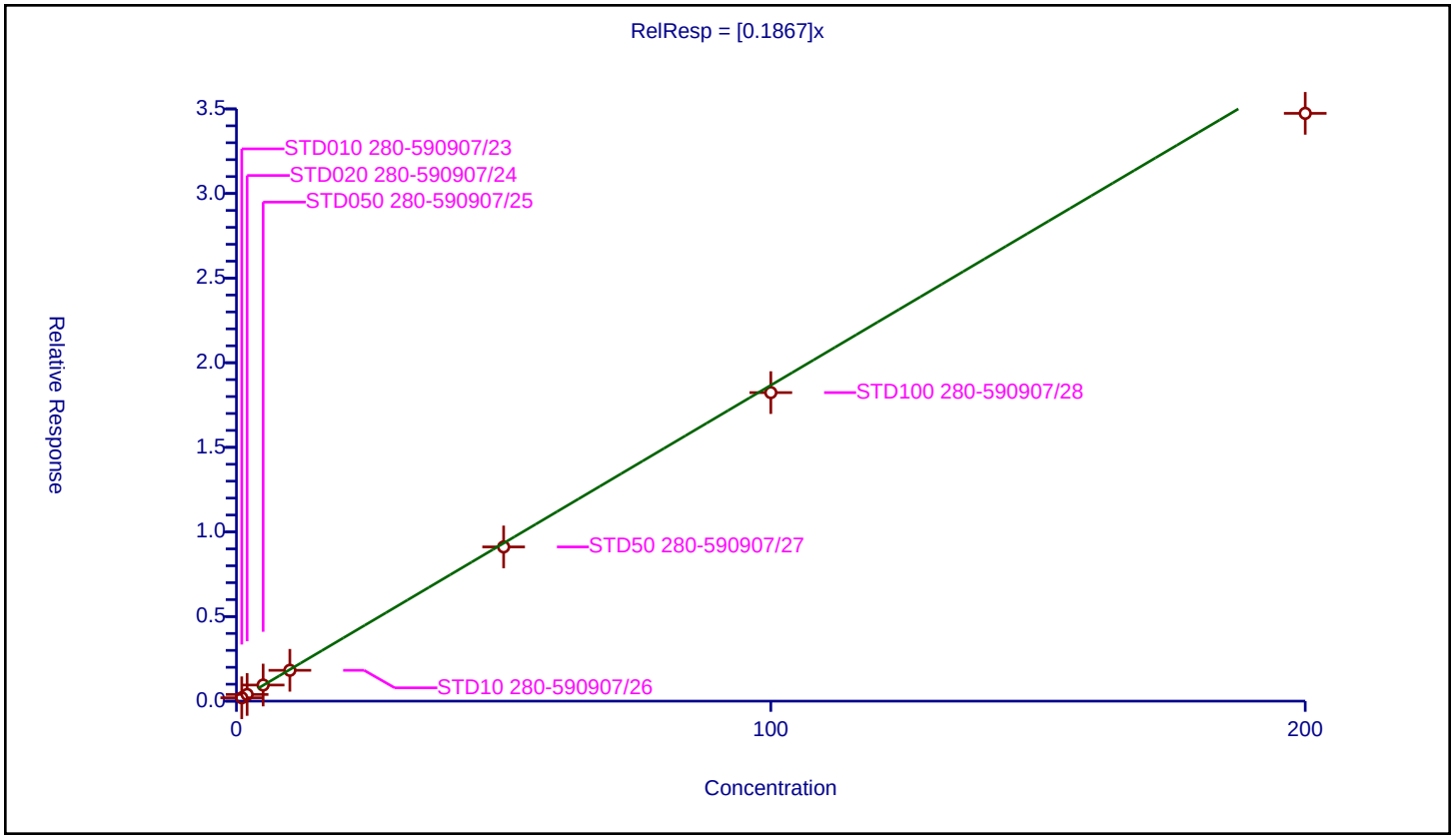
Curve Coefficients

Intercept:	0
Slope:	0.1867

Error Coefficients

Standard Error:	423000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.198644	50.0	1234372.0	0.198644	Y
2	STD020 280-590907/24	2.0	0.394415	50.0	1249318.0	0.197208	Y
3	STD050 280-590907/25	5.0	0.951796	50.0	1254313.0	0.190359	Y
4	STD10 280-590907/26	10.0	1.822135	50.0	1268265.0	0.182213	Y
5	STD50 280-590907/27	50.0	9.114105	50.0	1291361.0	0.182282	Y
6	STD100 280-590907/28	100.0	18.233803	50.0	1270651.0	0.182338	Y
7	STD200 280-590907/29	200.0	34.736469	50.0	1288234.0	0.173682	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

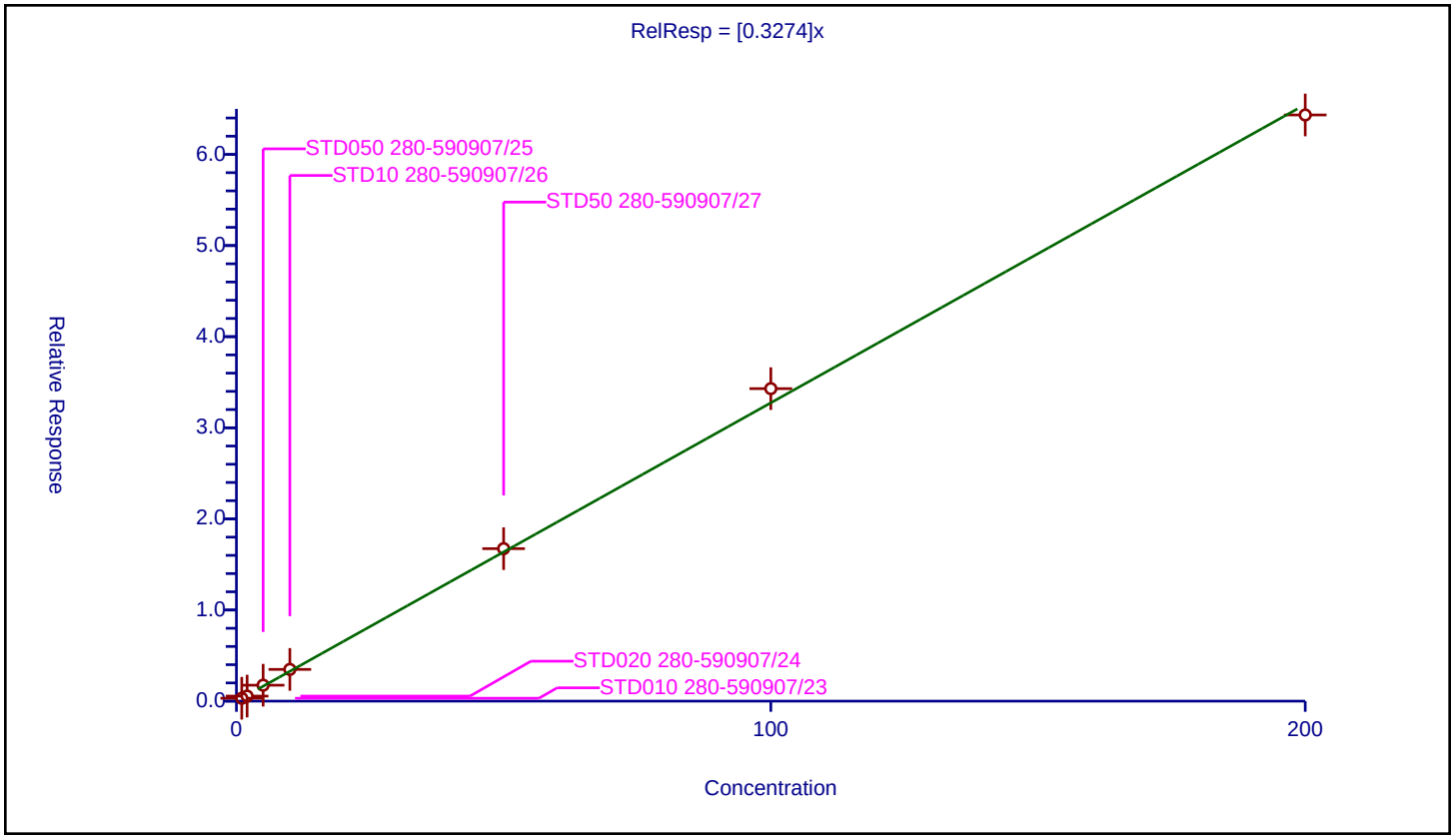
Curve Coefficients

Intercept:	0
Slope:	0.3274

Error Coefficients

Standard Error:	786000
Relative Standard Error:	7.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.317368	50.0	1234372.0	0.317368	Y
2	STD020 280-590907/24	2.0	0.553822	50.0	1249318.0	0.276911	Y
3	STD050 280-590907/25	5.0	1.749842	50.0	1254313.0	0.349968	Y
4	STD10 280-590907/26	10.0	3.48208	50.0	1268265.0	0.348208	Y
5	STD50 280-590907/27	50.0	16.737496	50.0	1291361.0	0.33475	Y
6	STD100 280-590907/28	100.0	34.297419	50.0	1270651.0	0.342974	Y
7	STD200 280-590907/29	200.0	64.334313	50.0	1288234.0	0.321672	Y



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Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

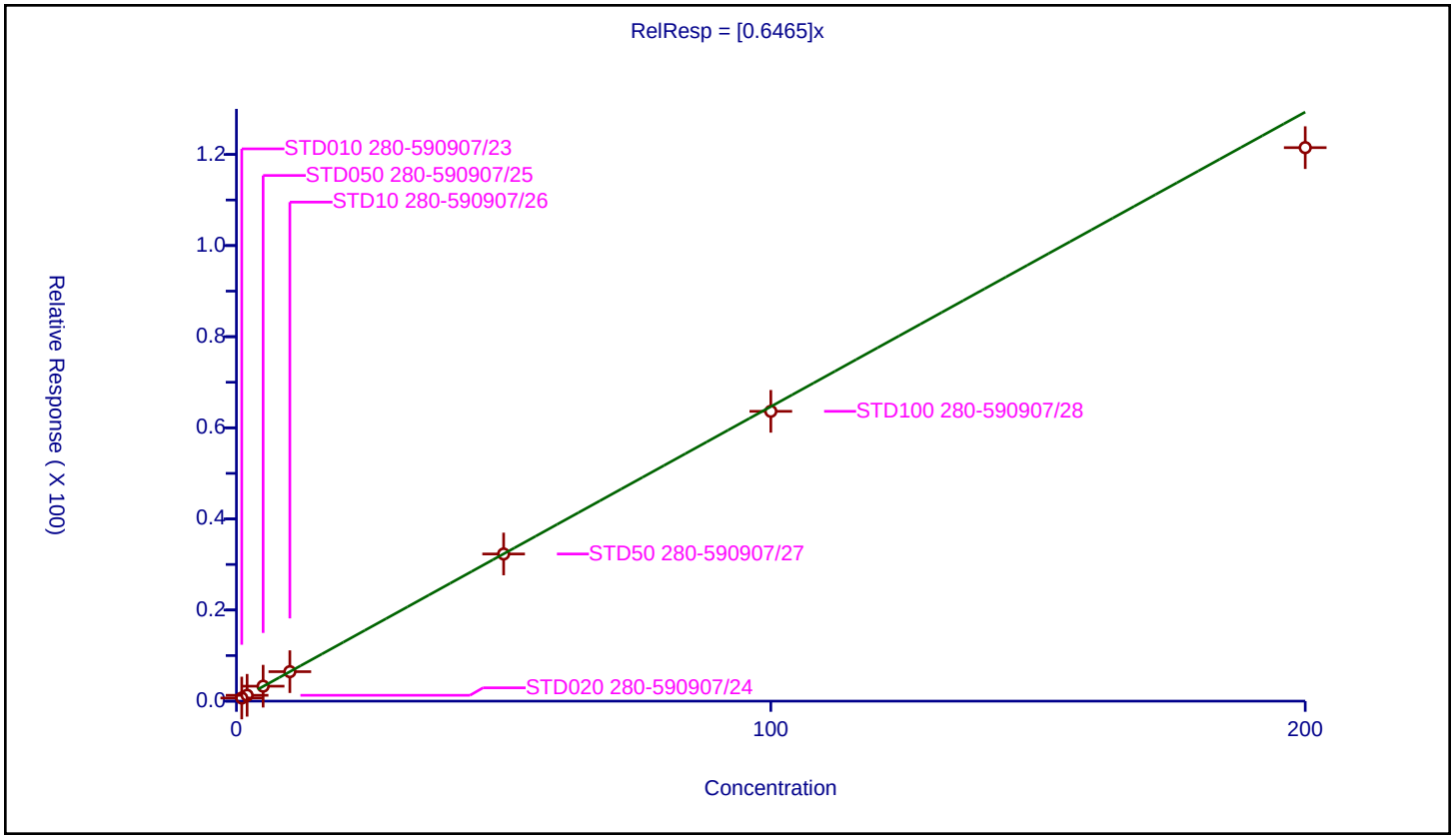
Curve Coefficients

Intercept:	0
Slope:	0.6465

Error Coefficients

Standard Error:	1480000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.689622	50.0	1234372.0	0.689622	Y
2	STD020 280-590907/24	2.0	1.284781	50.0	1249318.0	0.64239	Y
3	STD050 280-590907/25	5.0	3.284826	50.0	1254313.0	0.656965	Y
4	STD10 280-590907/26	10.0	6.469744	50.0	1268265.0	0.646974	Y
5	STD50 280-590907/27	50.0	32.303167	50.0	1291361.0	0.646063	Y
6	STD100 280-590907/28	100.0	63.616445	50.0	1270651.0	0.636164	Y
7	STD200 280-590907/29	200.0	121.491748	50.0	1288234.0	0.607459	Y



Calibration / Ethyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

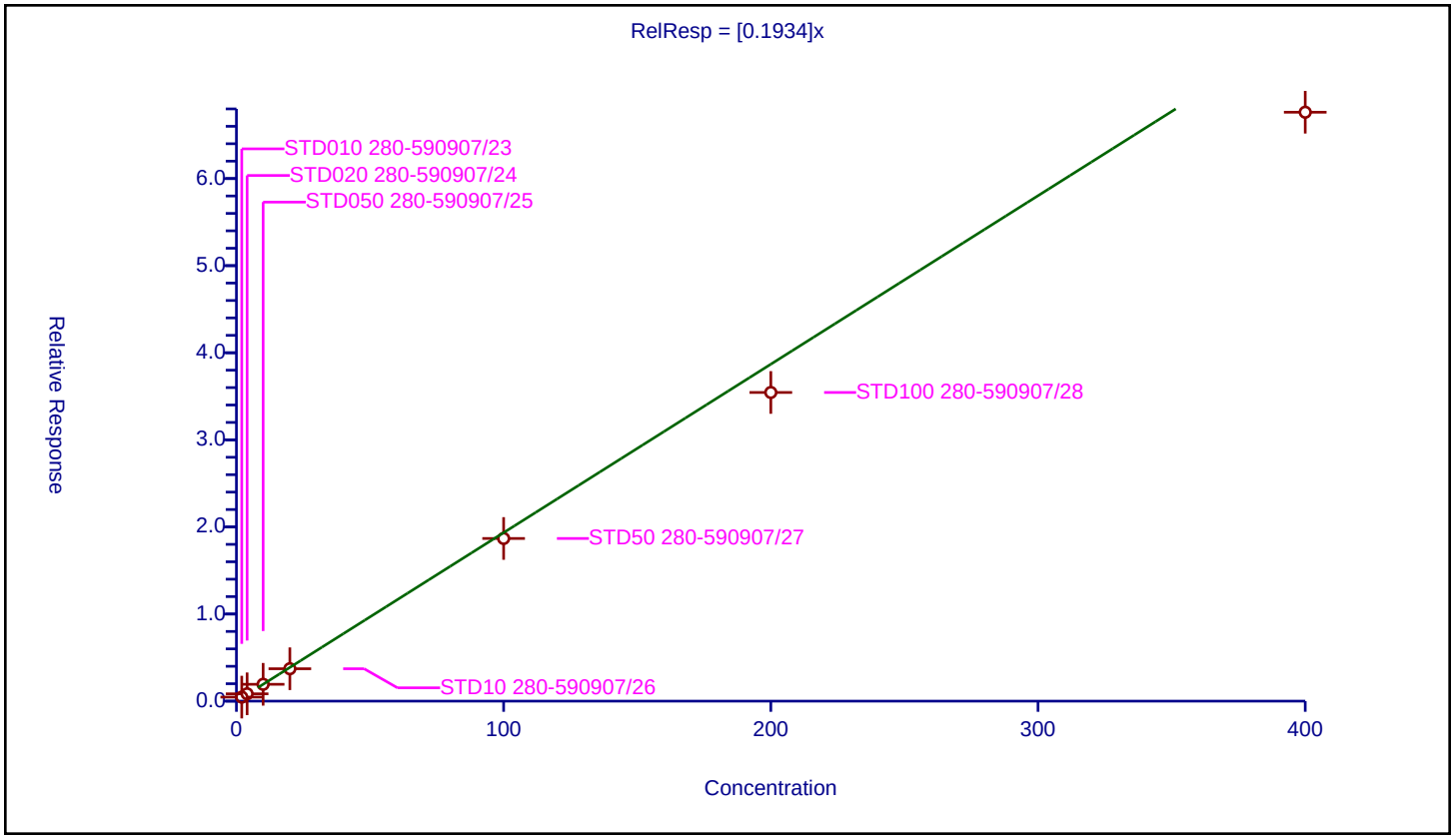
Curve Coefficients

Intercept:	0
Slope:	0.1934

Error Coefficients

Standard Error:	826000
Relative Standard Error:	10.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.462259	50.0	1234372.0	0.23113	Y
2	STD020 280-590907/24	4.0	0.841419	50.0	1249318.0	0.210355	Y
3	STD050 280-590907/25	10.0	1.934565	50.0	1254313.0	0.193456	Y
4	STD10 280-590907/26	20.0	3.721383	50.0	1268265.0	0.186069	Y
5	STD50 280-590907/27	100.0	18.676962	50.0	1291361.0	0.18677	Y
6	STD100 280-590907/28	200.0	35.441439	50.0	1270651.0	0.177207	Y
7	STD200 280-590907/29	400.0	67.618655	50.0	1288234.0	0.169047	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

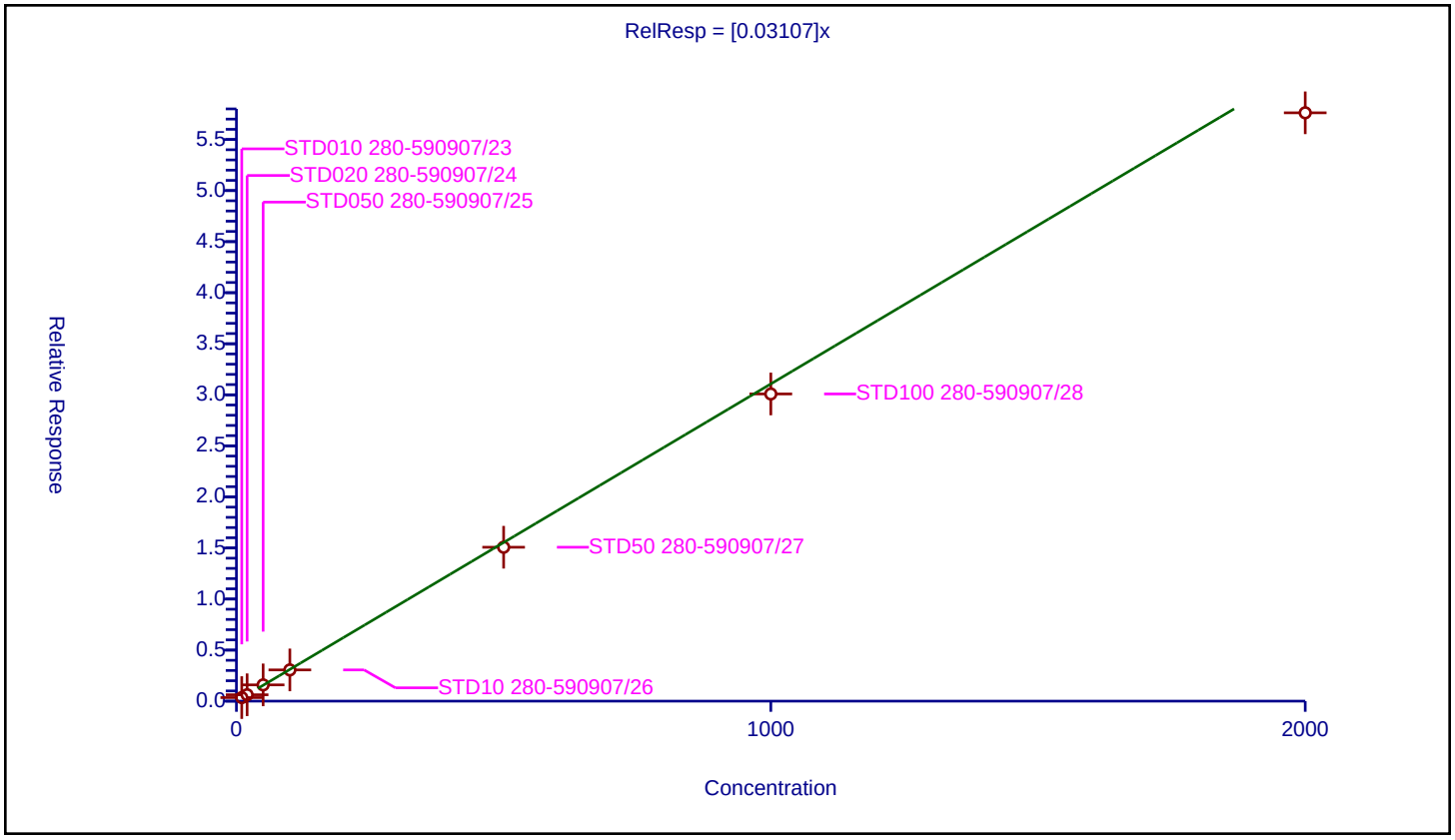
Curve Coefficients

Intercept:	0
Slope:	0.03107

Error Coefficients

Standard Error:	701000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	0.348315	50.0	1234372.0	0.034831	Y
2	STD020 280-590907/24	20.0	0.6237	50.0	1249318.0	0.031185	Y
3	STD050 280-590907/25	50.0	1.59123	50.0	1254313.0	0.031825	Y
4	STD10 280-590907/26	100.0	3.059061	50.0	1268265.0	0.030591	Y
5	STD50 280-590907/27	500.0	15.072857	50.0	1291361.0	0.030146	Y
6	STD100 280-590907/28	1000.0	30.083674	50.0	1270651.0	0.030084	Y
7	STD200 280-590907/29	2000.0	57.617211	50.0	1288234.0	0.028809	Y



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Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

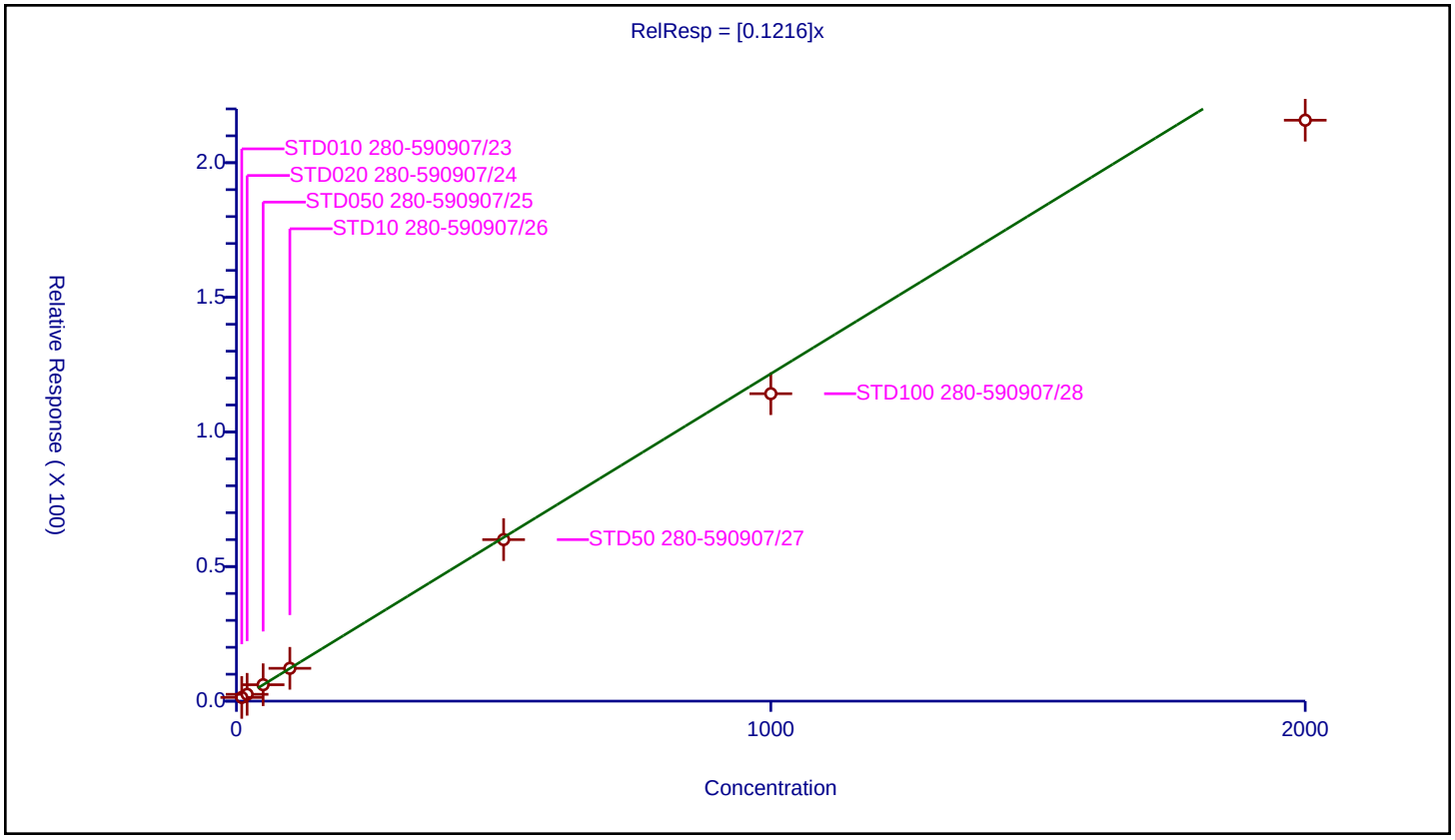
Curve Coefficients

Intercept:	0
Slope:	0.1216

Error Coefficients

Standard Error:	2640000
Relative Standard Error:	7.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	1.384591	50.0	1234372.0	0.138459	Y
2	STD020 280-590907/24	20.0	2.538545	50.0	1249318.0	0.126927	Y
3	STD050 280-590907/25	50.0	6.096644	50.0	1254313.0	0.121933	Y
4	STD10 280-590907/26	100.0	12.193075	50.0	1268265.0	0.121931	Y
5	STD50 280-590907/27	500.0	60.000186	50.0	1291361.0	0.12	Y
6	STD100 280-590907/28	1000.0	114.207835	50.0	1270651.0	0.114208	Y
7	STD200 280-590907/29	2000.0	215.792822	50.0	1288234.0	0.107896	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

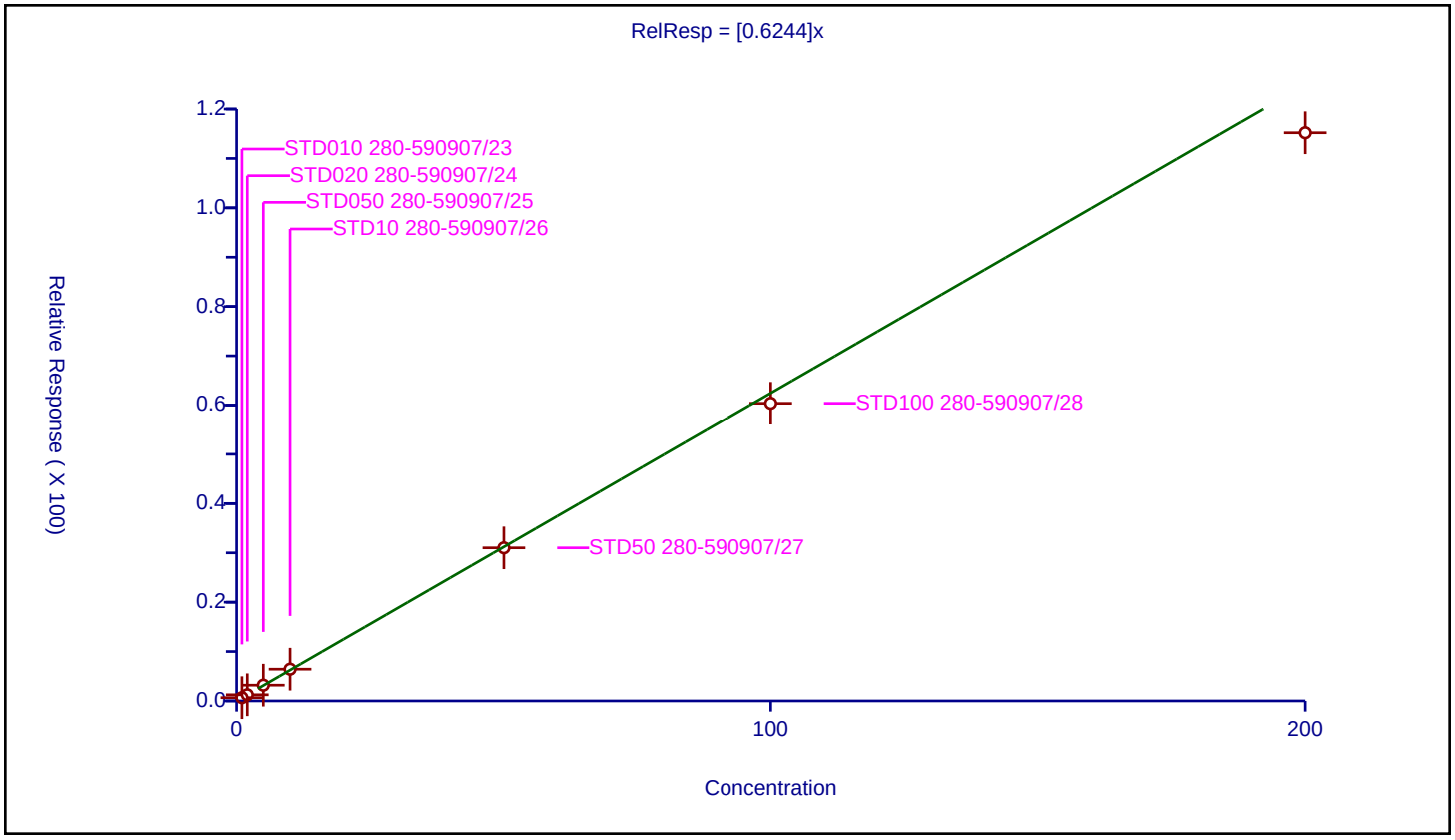
Curve Coefficients

Intercept:	0
Slope:	0.6244

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.66309	50.0	1234372.0	0.66309	Y
2	STD020 280-590907/24	2.0	1.251403	50.0	1249318.0	0.625701	Y
3	STD050 280-590907/25	5.0	3.193023	50.0	1254313.0	0.638605	Y
4	STD10 280-590907/26	10.0	6.431937	50.0	1268265.0	0.643194	Y
5	STD50 280-590907/27	50.0	31.022967	50.0	1291361.0	0.620459	Y
6	STD100 280-590907/28	100.0	60.368111	50.0	1270651.0	0.603681	Y
7	STD200 280-590907/29	200.0	115.202634	50.0	1288234.0	0.576013	Y



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Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

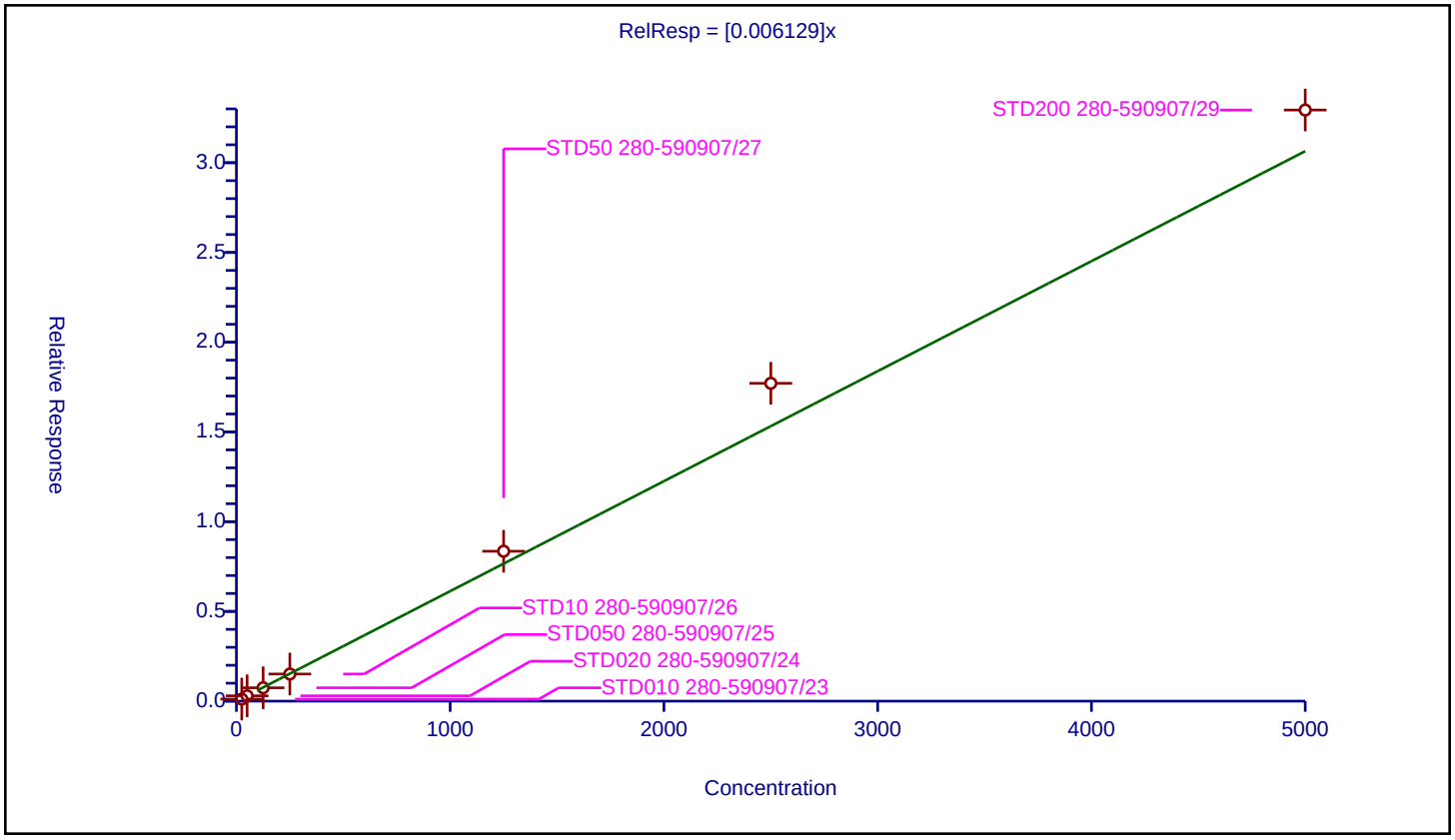
Curve Coefficients

Intercept:	0
Slope:	0.006129

Error Coefficients

Standard Error:	402000
Relative Standard Error:	13.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	25.0	0.114552	50.0	1234372.0	0.004582	Y
2	STD020 280-590907/24	50.0	0.298003	50.0	1249318.0	0.00596	Y
3	STD050 280-590907/25	125.0	0.744591	50.0	1254313.0	0.005957	Y
4	STD10 280-590907/26	250.0	1.511869	50.0	1268265.0	0.006047	Y
5	STD50 280-590907/27	1250.0	8.353667	50.0	1291361.0	0.006683	Y
6	STD100 280-590907/28	2500.0	17.71041	50.0	1270651.0	0.007084	Y
7	STD200 280-590907/29	5000.0	32.936408	50.0	1288234.0	0.006587	Y



Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

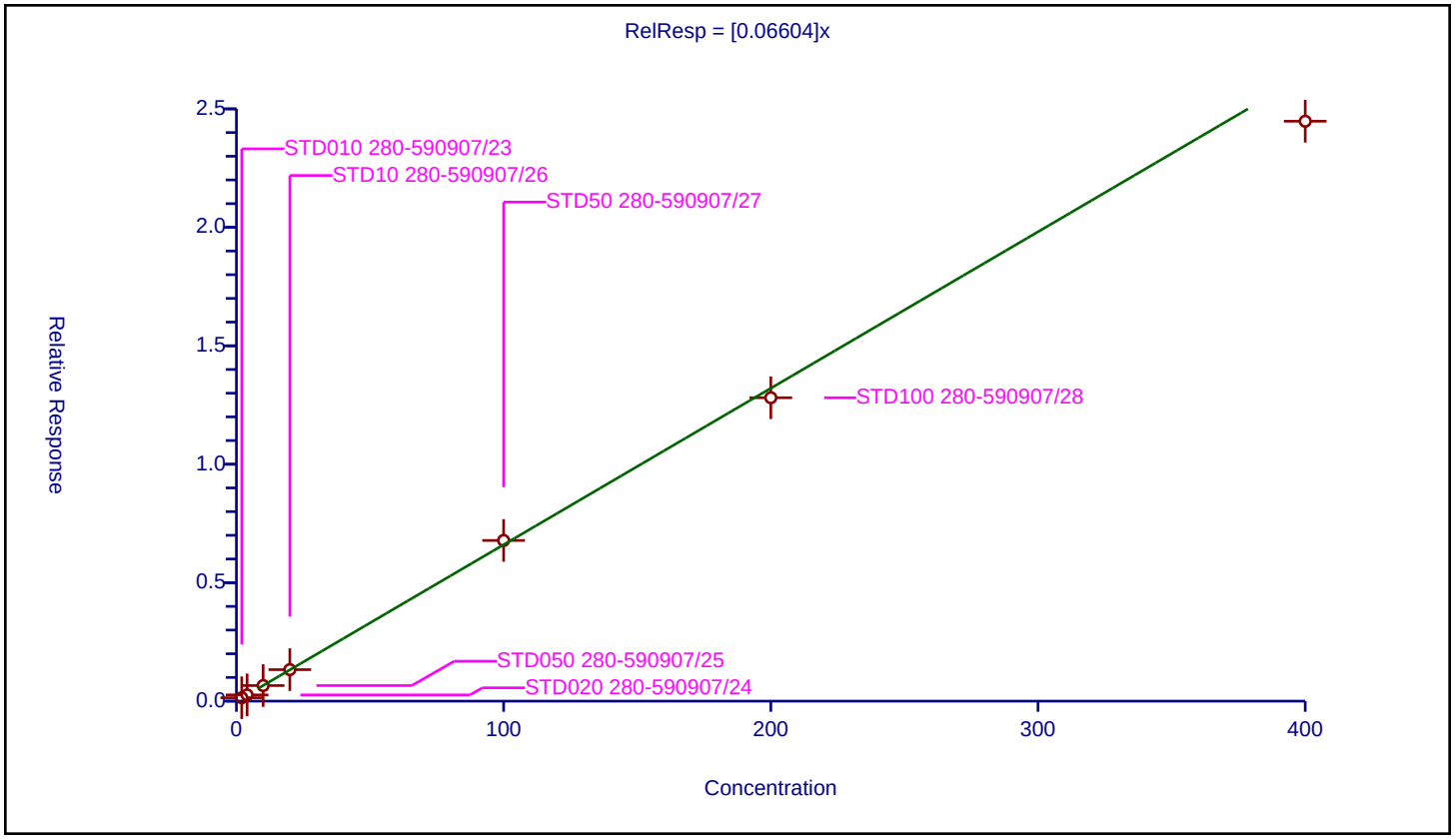
Curve Coefficients

Intercept:	0
Slope:	0.06604

Error Coefficients

Standard Error:	299000
Relative Standard Error:	4.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.142866	50.0	1234372.0	0.071433	Y
2	STD020 280-590907/24	4.0	0.262423	50.0	1249318.0	0.065606	Y
3	STD050 280-590907/25	10.0	0.656694	50.0	1254313.0	0.065669	Y
4	STD10 280-590907/26	20.0	1.329927	50.0	1268265.0	0.066496	Y
5	STD50 280-590907/27	100.0	6.783502	50.0	1291361.0	0.067835	Y
6	STD100 280-590907/28	200.0	12.807293	50.0	1270651.0	0.064036	Y
7	STD200 280-590907/29	400.0	24.479248	50.0	1288234.0	0.061198	Y



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Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

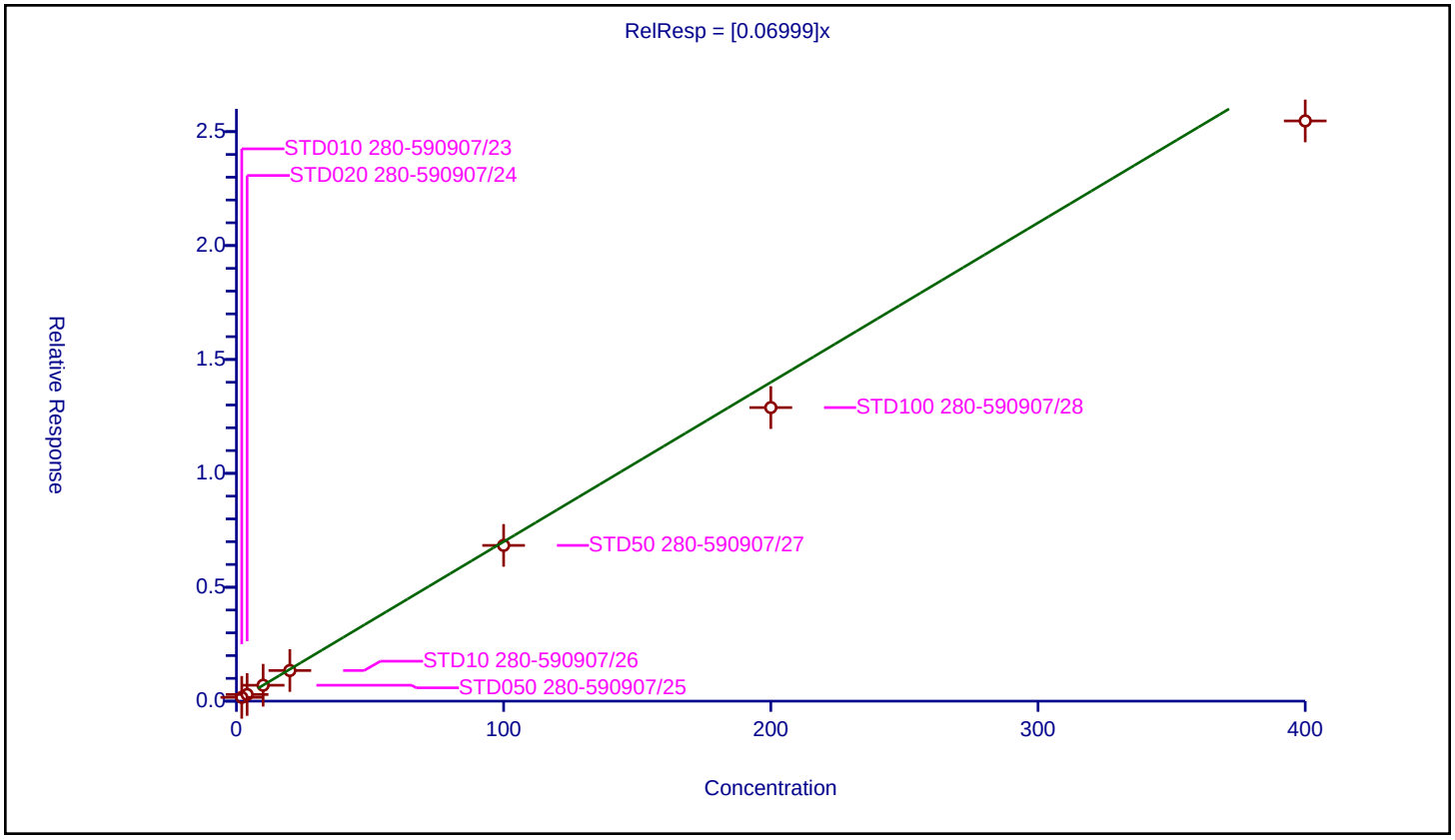
Curve Coefficients

Intercept:	0
Slope:	0.06999

Error Coefficients

Standard Error:	308000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.166684	50.0	1234372.0	0.083342	Y
2	STD020 280-590907/24	4.0	0.291999	50.0	1249318.0	0.073	Y
3	STD050 280-590907/25	10.0	0.698191	50.0	1254313.0	0.069819	Y
4	STD10 280-590907/26	20.0	1.344948	50.0	1268265.0	0.067247	Y
5	STD50 280-590907/27	100.0	6.83767	50.0	1291361.0	0.068377	Y
6	STD100 280-590907/28	200.0	12.887921	50.0	1270651.0	0.06444	Y
7	STD200 280-590907/29	400.0	25.471227	50.0	1288234.0	0.063678	Y



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Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

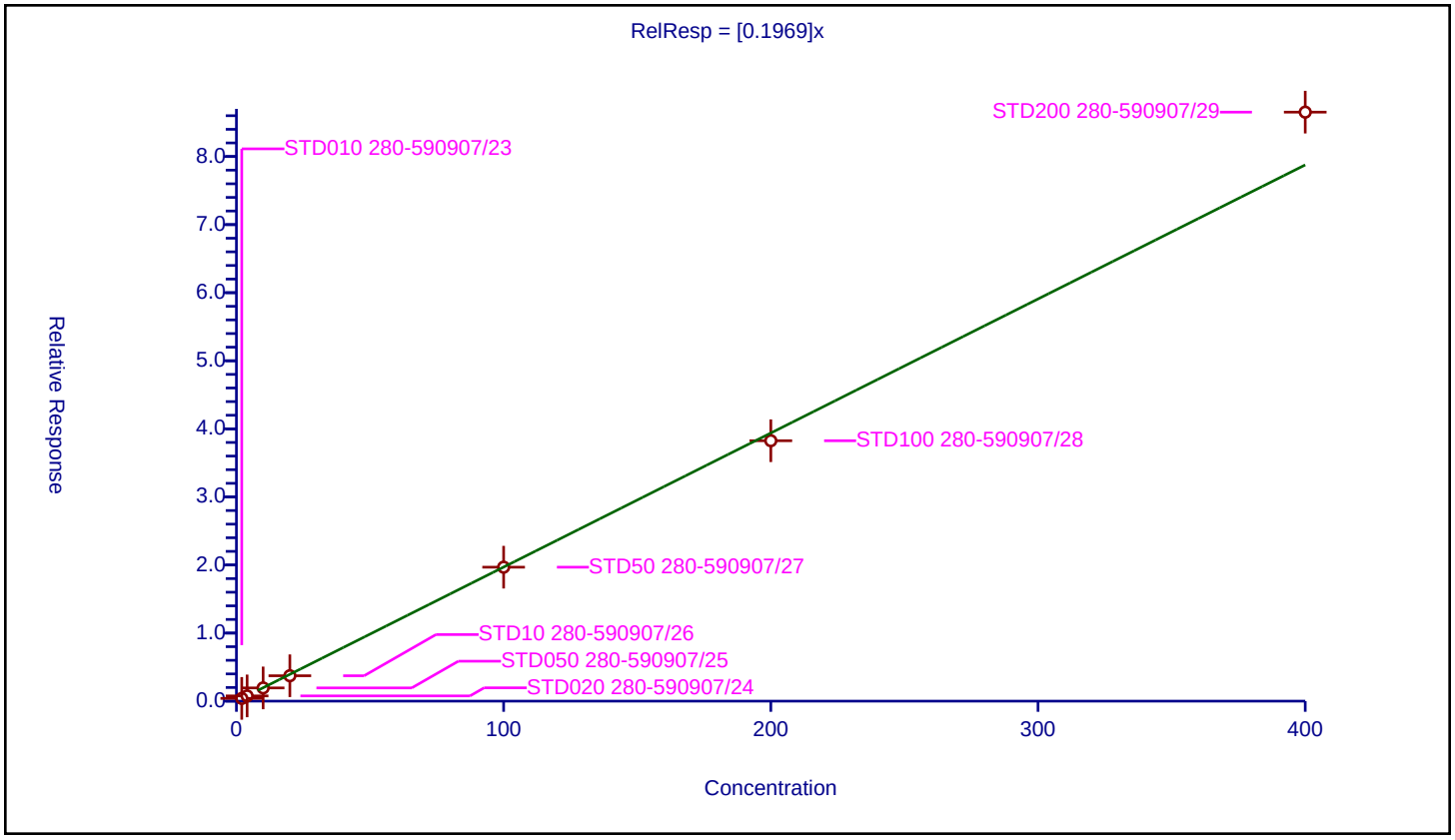
Curve Coefficients

Intercept:	0
Slope:	0.1969

Error Coefficients

Standard Error:	403000
Relative Standard Error:	5.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.403212	50.0	460800.0	0.201606	Y
2	STD020 280-590907/24	4.0	0.767202	50.0	461417.0	0.1918	Y
3	STD050 280-590907/25	10.0	1.941525	50.0	466180.0	0.194152	Y
4	STD10 280-590907/26	20.0	3.731312	50.0	471349.0	0.186566	Y
5	STD50 280-590907/27	100.0	19.678673	50.0	473350.0	0.196787	Y
6	STD100 280-590907/28	200.0	38.254424	50.0	502900.0	0.191272	Y
7	STD200 280-590907/29	400.0	86.522187	50.0	513774.0	0.216305	Y



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Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

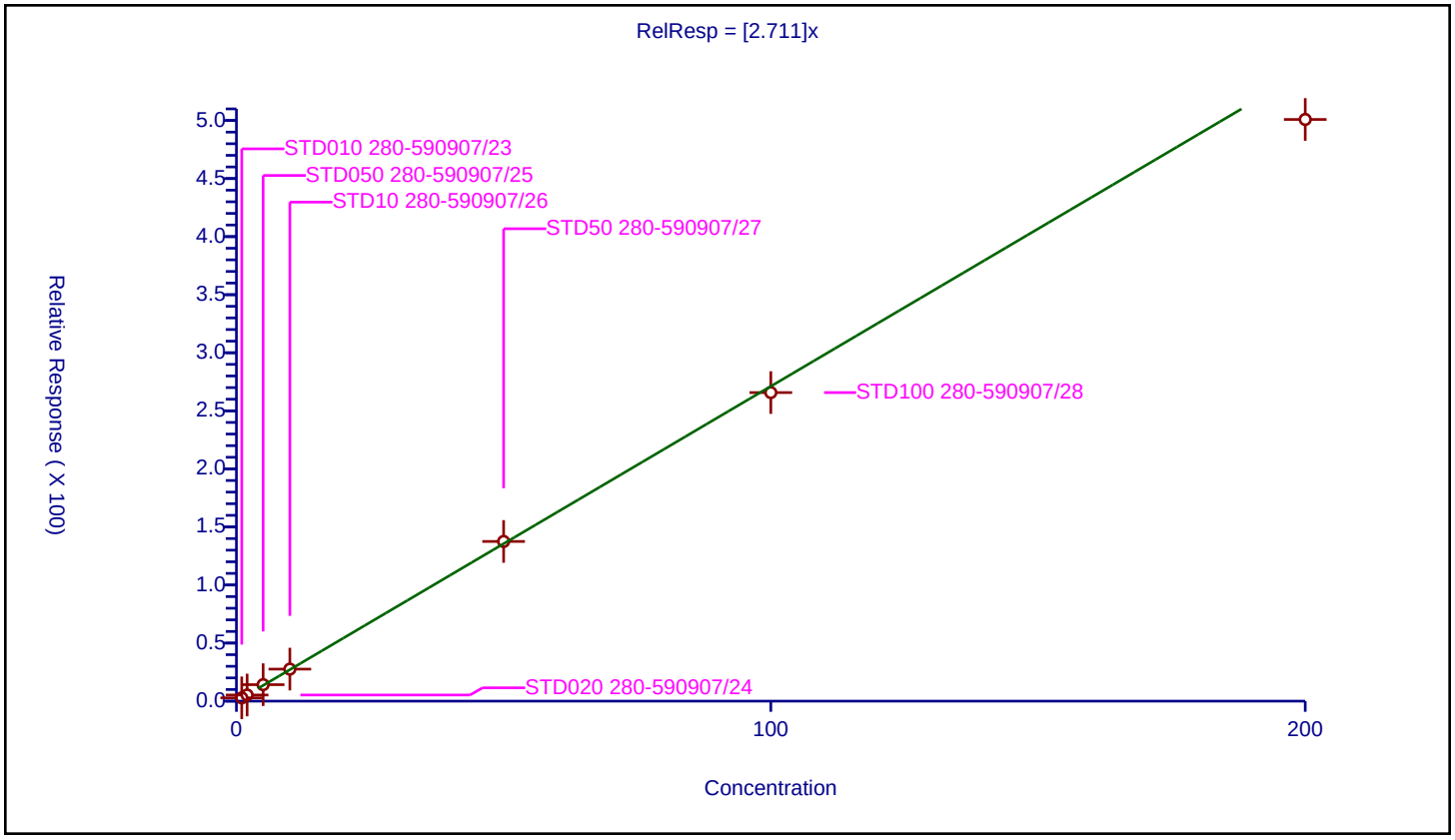
Curve Coefficients

Intercept:	0
Slope:	2.711

Error Coefficients

Standard Error:	2430000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	2.83138	50.0	460800.0	2.83138	Y
2	STD020 280-590907/24	2.0	5.284699	50.0	461417.0	2.64235	Y
3	STD050 280-590907/25	5.0	14.182612	50.0	466180.0	2.836522	Y
4	STD10 280-590907/26	10.0	27.577761	50.0	471349.0	2.757776	Y
5	STD50 280-590907/27	50.0	137.501743	50.0	473350.0	2.750035	Y
6	STD100 280-590907/28	100.0	265.70511	50.0	502900.0	2.657051	Y
7	STD200 280-590907/29	200.0	500.885798	50.0	513774.0	2.504429	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

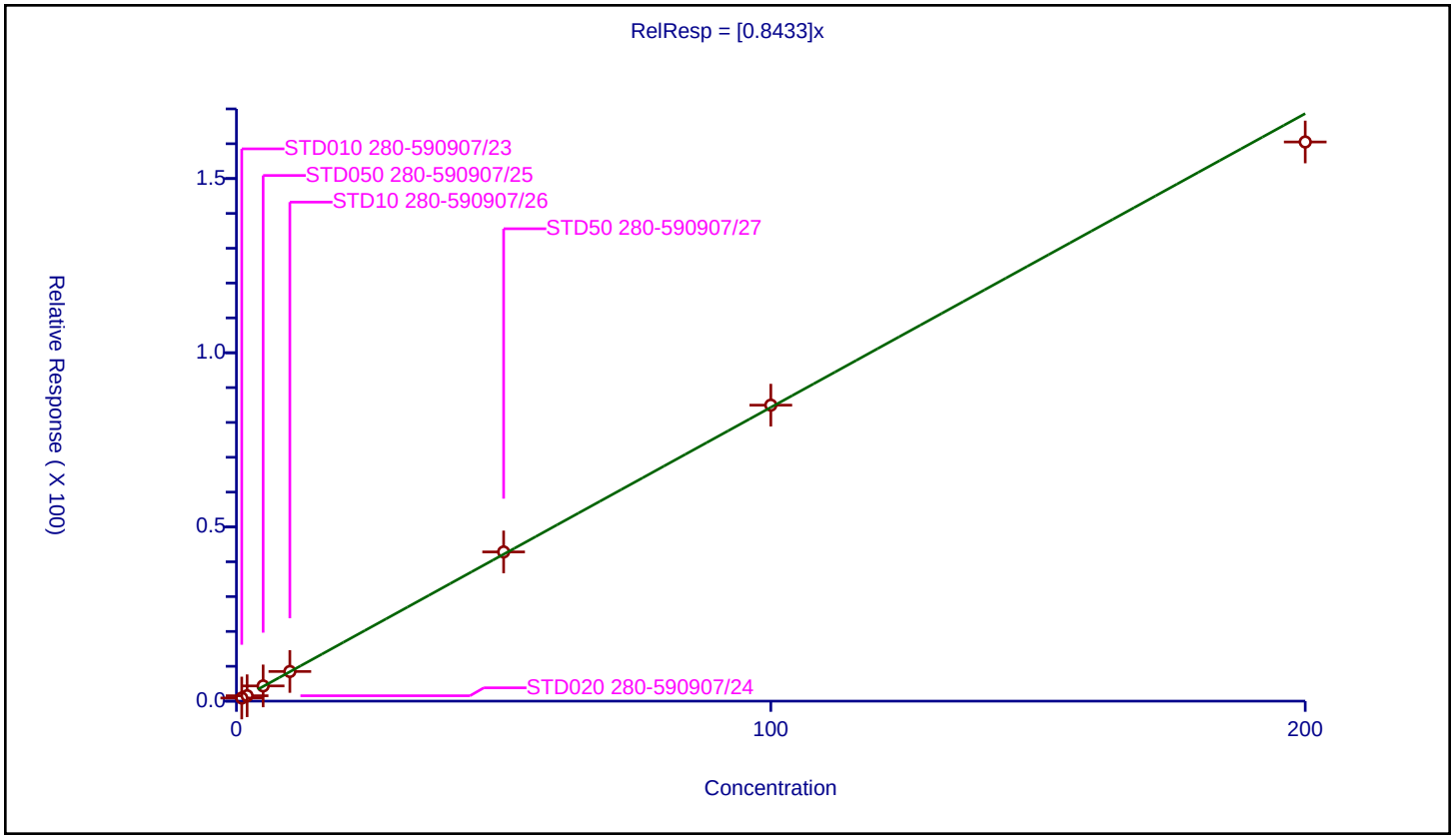
Curve Coefficients

Intercept:	0
Slope:	0.8433

Error Coefficients

Standard Error:	777000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.895833	50.0	460800.0	0.895833	Y
2	STD020 280-590907/24	2.0	1.547841	50.0	461417.0	0.77392	Y
3	STD050 280-590907/25	5.0	4.366768	50.0	466180.0	0.873354	Y
4	STD10 280-590907/26	10.0	8.509194	50.0	471349.0	0.850919	Y
5	STD50 280-590907/27	50.0	42.828245	50.0	473350.0	0.856565	Y
6	STD100 280-590907/28	100.0	84.966494	50.0	502900.0	0.849665	Y
7	STD200 280-590907/29	200.0	160.505787	50.0	513774.0	0.802529	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-607881/19	X502127.D
Level 2	STD 280-607881/18	X502128.D
Level 3	STD 280-607881/16	X502129.D
Level 4	STD 280-607881/17	X502130.D
Level 5	STD 280-607881/15	X502131.D
Level 6	ICIS 280-607881/14	X502132.D
Level 7	STD 280-607881/13	X502133.D
Level 8	STD 280-607881/12	X502134.D
Level 9	STD 280-607881/11	X502135.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2400 0.2364	0.2098 0.2058	0.1634 0.2408	0.2219 0.2369	0.2196	Ave		0.2194				11.3		15.0			
Chloromethane	0.2540 0.2229	0.2083 0.2053	0.1870 0.2246	0.2270 0.2248	0.2523	Ave		0.2229			0.1000	9.6		15.0			
Vinyl chloride	0.2171 0.2257	0.1938 0.2038	0.1790 0.2325	0.2288 0.2345	0.2095	Lin1	-0.032	0.2275							0.9970		0.9900
Bromomethane	0.1457 0.1080	0.1036 0.1142	0.1252 0.1311	0.1238 0.1276	0.1112	Ave		0.1211				10.9		15.0			
Chloroethane	0.1419 0.1566	0.1689 0.1409	0.1225 0.1560	0.1601 0.1574	0.1631	Ave		0.1519				9.4		15.0			
Dichlorofluoromethane	0.3887 0.3839	0.3567 0.3619	0.3564 0.3896	0.3844 0.3944	0.3965	Ave		0.3792				4.3		15.0			
Trichlorofluoromethane	0.3016 0.3031	0.2964 0.2751	0.2601 0.3142	0.2807 0.3141	0.2877	Ave		0.2925				6.2		15.0			
Ethyl ether	0.1994 0.1624	0.1353 0.1550	0.1727 0.1670	0.1735 0.1736	0.1795	Ave		0.1687				10.4		15.0			
Acrolein	0.0295 0.0268	0.0253 0.0264	0.0226 0.0276	0.0291 0.0287	0.0288	Ave		0.0272				8.2		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 0.1506	0.1121 0.1260	0.1192 0.1471	0.1365 0.1451	0.1684	Ave		0.1381				13.4		15.0			
1,1-Dichloroethene	0.2232 0.1942	0.2036 0.1672	0.1662 0.1889	0.1826 0.1932	0.2095	Ave		0.1921				9.7		30.0			
Acetone	+++++ 0.0531	0.1188 0.0519	0.0879 0.0531	0.0676 0.0564	0.0630	Lin2	0.2638	0.0537							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	+++++ 0.2428	0.0859 0.2403	0.0968 0.2700	0.1599 0.2878	0.1934	Lin1	-0.322	0.2716							0.9940		0.9900
Carbon disulfide	0.8237 0.6000	0.6206 0.5382	0.5271 0.5995	0.6043 0.6074	0.6809	Ave		0.6224				14.1		15.0			
Methyl acetate	0.1302 0.1269	0.1033 0.1241	0.1127 0.1304	0.1374 0.1383	0.1329	Ave		0.1262				9.1		15.0			
Allyl chloride	0.2680 0.2564	0.2417 0.2437	0.2100 0.2549	0.2795 0.2501	0.2914	Ave		0.2551				9.2		15.0			
Methylene Chloride	+++++ 0.2222	0.3098 0.2089	0.2479 0.2237	0.2676 0.2300	0.2627	Ave		0.2466				13.3		15.0			
2-Methyl-2-propanol	0.0172 0.0169	0.0125 0.0179	0.0116 0.0193	0.0186 0.0212	0.0183	Lin1	-0.061	0.0197							0.9930		0.9900
Acrylonitrile	0.0749 0.0709	0.0637 0.0698	0.0620 0.0724	0.0761 0.0768	0.0785	Ave		0.0717				8.0		15.0			
Methyl tert-butyl ether	0.6217 0.5978	0.5246 0.5854	0.5009 0.6259	0.6675 0.6471	0.6688	Ave		0.6044				9.8		15.0			
trans-1,2-Dichloroethene	0.2063 0.2224	0.2129 0.1986	0.1799 0.2189	0.2201 0.2255	0.2350	Ave		0.2133				7.7		15.0			
Hexane	1.3406 1.2250	1.1213 1.0415	0.9109 1.1799	1.0412 1.1848	1.2672	Ave		1.1458				11.5		15.0			
Vinyl acetate	0.3457 0.3436	0.3007 0.3349	0.2645 0.3731	0.3450 0.3639	0.3707	Ave		0.3380				10.4		15.0			
1,1-Dichloroethane	0.4000 0.3925	0.3422 0.3691	0.3371 0.3992	0.4167 0.4123	0.4320	Ave		0.3890			0.1000	8.5		15.0			
2-Butanone (MEK)	+++++ 0.0801	0.0714 0.0809	0.0775 0.0829	0.0849 0.0873	0.0923	Ave		0.0821				7.7		15.0			
cis-1,2-Dichloroethene	0.2877 0.2443	0.2431 0.2300	0.2255 0.2519	0.2853 0.2568	0.2743	Ave		0.2554				8.9		15.0			
2,2-Dichloropropane	0.3305 0.3077	0.2598 0.2797	0.2642 0.3150	0.2845 0.3248	0.3249	Ave		0.2990				9.2		15.0			
sec-Butyl Alcohol	0.0097 0.0127	0.0088 0.0138	0.0082 0.0143	0.0130 0.0160	0.0124	Lin1	-0.152	0.0148							0.9930		0.9900
Chlorobromomethane	0.1164 0.1130	0.1164 0.1102	0.1114 0.1157	0.1293 0.1148	0.1320	Ave		0.1177				6.5		15.0			
Tetrahydrofuran	0.0649 0.0547	0.0496 0.0526	0.0480 0.0545	0.0567 0.0588	0.0613	Ave		0.0557				9.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chloroform	0.4289 0.3881	0.3823 0.3610	0.3395 0.3947	0.4332 0.4017	0.4331	Ave		0.3958				8.3		30.0			
1,1,1-Trichloroethane	0.3593 0.3270	0.3070 0.2903	0.2797 0.3271	0.3183 0.3336	0.3437	Ave		0.3206				7.9		15.0			
Cyclohexane	0.3472 0.3437	0.3205 0.2995	0.2697 0.3438	0.3274 0.3390	0.3862	Ave		0.3308				9.9		15.0			
1,1-Dichloropropene	0.3469 0.3153	0.3309 0.2822	0.2618 0.3193	0.3068 0.3236	0.3412	Ave		0.3142				8.7		15.0			
Carbon tetrachloride	0.2503 0.2773	0.2555 0.2456	0.2042 0.2806	0.2534 0.2853	0.2834	Ave		0.2595				10.0		15.0			
Isobutyl alcohol	0.0037 0.0056	0.0035 0.0058	0.0030 0.0060	0.0060 0.0067	0.0053	Lin1	-0.071	0.0063							0.9940		0.9900
Benzene	1.0614 0.9194	0.8520 0.8467	0.8152 0.9164	1.0143 0.9263	1.0083	Ave		0.9289				9.1		15.0			
1,2-Dichloroethane	+++++ 0.2931	0.2484 0.2849	0.2810 0.2993	0.3198 0.3047	0.3245	Ave		0.2944				8.2		15.0			
n-Heptane	+++++ 0.2007	0.1848 0.1831	0.1786 0.2027	0.1808 0.1979	0.2137	Ave		0.1928				6.6		15.0			
Trichloroethene	0.9482 0.9884	0.8928 0.8886	0.8011 0.9962	1.0224 1.0287	1.0411	Ave		0.9564				8.4		15.0			
2-Pentanone	+++++ 0.1284	0.0852 0.1285	0.0989 0.1325	0.1232 0.1396	0.1350	Lin2	-0.166	0.1334							0.9980		0.9900
Methylcyclohexane	0.2797 0.2528	0.2195 0.2243	0.2030 0.2535	0.2310 0.2509	0.2650	Ave		0.2422				10.1		15.0			
1,2-Dichloropropane	0.2960 0.2289	0.1845 0.2202	0.2089 0.2377	0.2522 0.2468	0.2508	Ave		0.2362				13.3		30.0			
1,4-Dioxane	+++++ 0.0028	0.0026 0.0030	0.0028 0.0030	0.0032 0.0030	0.0035	Ave		0.0030				9.8		15.0			
Dibromomethane	0.1530 0.1358	0.1395 0.1337	0.1230 0.1413	0.1401 0.1446	0.1569	Ave		0.1409				7.2		15.0			
Dichlorobromomethane	0.3298 0.2923	0.2574 0.2836	0.2529 0.3072	0.3185 0.3106	0.3243	Ave		0.2974				9.4		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0749	0.0860 0.0710	0.1086 0.0783	0.1053 0.0728	0.1185	Lin1	0.0651	0.0744							0.9900		0.9900
cis-1,3-Dichloropropene	1.4117 1.5795	1.2425 1.5208	1.3778 1.6454	1.5331 1.7171	1.6820	Ave		1.5233				10.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Methyl-2-pentanone (MIBK)	0.1454 0.1657	0.1212 0.1686	0.1235 0.1714	0.1641 0.1790	0.1842	Ave		0.1581				14.5		15.0			
Toluene	1.0661 0.9997	0.9758 0.9219	0.8750 0.9956	1.0755 1.0007	1.0956	Ave		1.0007				7.2		30.0			
trans-1,3-Dichloropropene	0.2907 0.3187	0.2574 0.3134	0.2396 0.3408	0.3121 0.3575	0.3319	Ave		0.3069				12.5		15.0			
Ethyl methacrylate	0.9701 1.1405	0.9124 1.1208	0.8475 1.1774	1.1664 1.2527	1.2438	Ave		1.0924				13.4		15.0			
1,1,2-Trichloroethane	0.2006 0.1942	0.1784 0.1897	0.1919 0.1991	0.2178 0.2016	0.2267	Ave		0.2000				7.3		15.0			
Tetrachloroethene	0.8562 0.7557	0.6039 0.6601	0.6675 0.7365	0.7038 0.7487	0.8008	Ave		0.7259				10.6		15.0			
1,3-Dichloropropane	1.5878 1.5228	1.4523 1.4632	1.3230 1.5350	1.5940 1.5966	1.7173	Ave		1.5324				7.3		15.0			
2-Hexanone	+++++ 0.5049	0.3825 0.4958	0.3703 0.5140	0.4663 0.5443	0.5530	Ave		0.4789				14.4		15.0			
Chlorodibromomethane	0.9064 0.9385	0.8593 0.8841	0.7457 0.9640	0.9631 1.0039	1.0535	Ave		0.9243				9.7		15.0			
1,2-Dibromoethane	0.8954 0.8694	0.7676 0.8468	0.7784 0.8905	0.9326 0.9199	0.9781	Ave		0.8754				7.9		15.0			
1-Chlorohexane	+++++ 1.3402	1.7170 1.1706	1.2481 1.3002	1.2677 1.3189	1.4650	Ave		1.3535				12.5		15.0			
Chlorobenzene	3.1050 2.7824	2.4890 2.5403	2.5301 2.7684	2.9586 2.7890	3.1063	Ave		2.7855			0.3000	8.5		15.0			
1,1,1,2-Tetrachloroethane	0.8652 0.9018	0.8481 0.8604	0.6725 0.9342	0.9610 0.9731	1.0421	Ave		0.8954				11.7		15.0			
Ethylbenzene	1.8784 1.5384	1.4104 1.3577	1.3823 1.5016	1.5351 1.5580	1.6375	Ave		1.5332				10.3		30.0			
m-Xylene & p-Xylene	1.9878 1.8724	1.7192 1.6721	1.6824 1.8200	1.8799 1.8385	2.0707	Ave		1.8381				7.3		15.0			
o-Xylene	1.9940 1.8244	1.7776 1.6899	1.7061 1.8053	1.9731 1.8633	2.1494	Ave		1.8648				8.0		15.0			
Styrene	2.8118 3.0976	2.5487 2.8469	2.4820 3.0545	3.1245 3.1233	3.5752	Ave		2.9627				11.3		15.0			
Bromoform	0.5330 0.5638	0.5015 0.5688	0.4391 0.5921	0.5691 0.6311	0.6295	Ave		0.5587			0.1000	10.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Isopropylbenzene	2.8936 2.9182	2.7601 2.5824	2.4989 2.8659	2.8273 2.8974	3.3009	Ave		2.8383				8.0		15.0			
Cyclohexanone	0.0334 0.0401	0.0267 0.0404	0.0305 0.0418	0.0468 0.0443	0.0453	Lin1	-0.276	0.0427							0.9980		0.9900
1,1,2,2-Tetrachloroethane	0.6301 0.7085	0.6248 0.6871	0.6626 0.7226	0.7903 0.7516	0.8670	Ave		0.7161			0.3000	10.9		15.0			
Bromobenzene	0.7766 0.7077	0.6263 0.6577	0.6563 0.7080	0.7647 0.7221	0.8149	Ave		0.7149				8.7		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1822	0.1263 0.1835	0.1287 0.1940	0.1519 0.2125	0.1894	Lin2	-0.077	0.1888							0.9900		0.9900
1,2,3-Trichloropropane	0.2499 0.2155	0.2004 0.2066	0.1906 0.2155	0.2179 0.2217	0.2381	Ave		0.2173				8.3		15.0			
N-Propylbenzene	0.6759 0.8318	0.7555 0.7400	0.6784 0.8152	0.8276 0.8332	0.9397	Ave		0.7886				10.7		15.0			
2-Chlorotoluene	0.6489 0.7072	0.6256 0.6538	0.6306 0.7058	0.7889 0.7279	0.8105	Ave		0.6999				9.6		15.0			
1,3,5-Trimethylbenzene	2.4596 2.4282	2.4243 2.2064	2.0402 2.3845	2.4665 2.4215	2.7111	Ave		2.3936				7.7		15.0			
4-Chlorotoluene	0.7915 0.7318	0.6133 0.6916	0.6247 0.7450	0.7554 0.7566	0.8437	Ave		0.7282				10.2		15.0			
tert-Butylbenzene	2.0916 2.0393	1.9174 1.8308	1.7605 1.9996	2.0336 2.0130	2.3148	Ave		2.0001				8.0		15.0			
1,2,4-Trimethylbenzene	2.5467 2.5377	2.2047 2.3227	2.1669 2.5199	2.5783 2.5345	2.8738	Ave		2.4761				8.7		15.0			
sec-Butylbenzene	0.6749 0.6094	0.5621 0.5379	0.5279 0.5978	0.5998 0.5993	0.6832	Ave		0.5991				9.0		15.0			
1,3-Dichlorobenzene	1.4200 1.3305	1.1613 1.2337	1.0806 1.3224	1.3945 1.3544	1.5820	Ave		1.3199				11.2		15.0			
4-Isopropyltoluene	2.6229 2.5483	2.2922 2.2999	2.1048 2.4915	2.4527 2.4962	2.9289	Ave		2.4708				9.4		15.0			
1,4-Dichlorobenzene	1.4352 1.3411	1.4443 1.2583	1.3203 1.3446	1.5037 1.3687	1.6038	Ave		1.4022				7.5		15.0			
n-Butylbenzene	2.1326 2.2934	1.8212 2.0756	1.7970 2.2244	2.1769 2.2368	2.5001	Ave		2.1398				10.4		15.0			
1,2-Dichlorobenzene	1.3335 1.2382	1.2170 1.1866	1.1044 1.2523	1.3639 1.2572	1.4825	Ave		1.2706				8.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dibromo-3-Chloropropane	0.0697 0.1376	0.0878 0.1390	0.0699 0.1413	0.1473 0.1508	0.1432	Lin1	-0.058	0.1455							0.9980		0.9900
1,2,4-Trichlorobenzene	+++++ 0.6449	0.5083 0.6322	0.5417 0.6705	0.7012 0.6625	0.7563	Ave		0.6397				12.6		15.0			
Hexachlorobutadiene	+++++ 0.2390	0.1972 0.2215	0.2168 0.2412	0.2393 0.2321	0.2783	Ave		0.2332				10.1		15.0			
Naphthalene	1.4705 1.6489	1.2750 1.6963	1.3620 1.7576	1.7489 1.7291	1.9996	Ave		1.6320				13.8		15.0			
1,2,3-Trichlorobenzene	0.4869 0.4768	0.3653 0.4926	0.4280 0.5076	0.5113 0.4977	0.5791	Ave		0.4828				12.2		15.0			
Dibromofluoromethane (Surr)	0.2382 0.2381	0.2408 0.2421	0.2412 0.2419	0.2381 0.2420	0.2421	Ave		0.2405				0.8		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2484 0.2416	0.2535 0.2553	0.2564 0.2532	0.2542 0.2544	0.2564	Ave		0.2526				1.9		15.0			
Toluene-d8 (Surr)	4.2464 4.3013	4.2733 4.2275	4.2546 4.2538	4.2016 4.2763	4.2990	Ave		4.2593				0.8		15.0			
4-Bromofluorobenzene (Surr)	0.8784 0.8996	0.9003 0.8995	0.8888 0.9133	0.8857 0.9033	0.8728	Ave		0.8935				1.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-607881/19	X502127.D
Level 2	STD 280-607881/18	X502128.D
Level 3	STD 280-607881/16	X502129.D
Level 4	STD 280-607881/17	X502130.D
Level 5	STD 280-607881/15	X502131.D
Level 6	ICIS 280-607881/14	X502132.D
Level 7	STD 280-607881/13	X502133.D
Level 8	STD 280-607881/12	X502134.D
Level 9	STD 280-607881/11	X502135.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	3233 338892	5544 455235	8877 719193	29690 1487302	60240	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloromethane	FB	Ave	3421 319506	5505 454103	10159 670892	30373 1411421	69201	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Lin1	2925 323546	5121 450884	9723 694430	30616 1472583	57453	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Ave	1963 154866	2737 252611	6801 391432	16566 800852	30485	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloroethane	FB	Ave	1911 224545	4463 311792	6653 465962	21424 988102	44742	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Ave	5236 550286	9428 800461	19362 1163656	51426 2476231	108746	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Ave	4063 434484	7834 608496	14131 938320	37549 1971931	78899	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl ether	FB	Ave	2686 232745	3577 342946	9381 498848	23215 1090208	49231	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acrolein	FB	Ave	3927 379722	6604 577559	12124 814984	38447 1778974	77990	4.94 494	9.88 741	19.8 988	49.4 1975	98.8
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	+++++ 215857	2962 278730	6474 439333	18269 910907	46180	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloroethene	FB	Ave	3007 278445	5380 369837	9029 564261	24433 1212739	57452	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acetone	FB	Lin2	+++++ 304604	12556 458920	19107 634088	36169 1417706	69108	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Iodomethane	FB	Lin1	+++++ 348041	2269 531498	5258 806371	21390 1807115	53045	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Carbon disulfide	FB	Ave	11096 860085	16403 1190511	28640 1790422	80848 3813466	186751	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methyl acetate	FB	Ave	3507 363705	5462 549127	12245 778916	36777 1736405	72912	1.00 100	2.00 150	4.00 200	10.0 400	20.0
Allyl chloride	FB	Ave	3610 367558	6388 539065	11410 761288	37396 1570415	79909	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Methylene Chloride	FB	Ave	+++++ 318574	8188 462061	13471 668279	35804 1444297	72041	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Methyl-2-propanol	FB	Lin1	2320 242268	3291 395522	6328 575215	24877 1330547	50092	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Acrylonitrile	FB	Ave	10085 1016179	16828 1544048	33673 2161584	101841 4821060	215343	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Methyl tert-butyl ether	FB	Ave	8375 856915	13865 1294920	27213 1869281	89301 4062888	183431	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,2-Dichloroethene	FB	Ave	2779 318807	5628 439291	9776 653913	29443 1416053	64462	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexane	CBNZd5	Ave	4165 401685	6800 539664	11365 826083	32583 1712945	80887	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl acetate	FB	Ave	9312 985044	15894 1481686	28743 2229008	92305 4569454	203312	1.00 100	2.00 150	4.00 200	10.0 400	20.0
1,1-Dichloroethane	FB	Ave	5388 562644	9045 816491	18317 1192336	55748 2588608	118483	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Butanone (MEK)	FB	Ave	+++++ 459249	7552 715496	16837 989943	45431 2191938	101248	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
cis-1,2-Dichloroethene	FB	Ave	3876 350256	6426 508687	12253 752429	38166 1612272	75236	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2,2-Dichloropropane	FB	Ave	4452 441048	6866 618660	14356 940919	38064 2039483	89114	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butyl Alcohol	FB	Lin1	3124 438034	5594 733439	10662 1022793	41713 2406100	81863	12.0 1200	24.0 1800	48.0 2400	120 4800	240
Chlorobromomethane	FB	Ave	1568 161935	3076 243851	6050 345635	17299 720959	36209	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Tetrahydrofuran	FB	Ave	1748 156862	2622 232688	5217 325621	15172 738419	33630	1.00 100	2.00 150	4.00 200	10.0 400	20.0
Chloroform	FB	Ave	5777 556331	10105 798668	18443 1178968	57954 2521900	118770	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1-Trichloroethane	FB	Ave	4840 468729	8113 642071	15195 976837	42581 2094298	94276	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexane	FB	Ave	4677 492743	8471 662501	14652 1026924	43802 2128312	105926	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloropropene	FB	Ave	4673 451920	8745 624293	14223 953615	41052 2031898	93579	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon tetrachloride	FB	Ave	3372 397512	6754 543267	11093 838075	33909 1791238	77728	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isobutyl alcohol	FB	Lin1	1239 202099	2296 322140	4131 449774	19923 1059317	36138	12.5 1250	25.0 1875	50.0 2500	125 5000	250
Benzene	FB	Ave	14297 1317866	22519 1872929	44293 2737137	135707 5815711	276546	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloroethane	FB	Ave	+++++ 420189	6564 630156	15265 894032	42781 1912823	88985	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Heptane	FB	Ave	+++++ 287678	4883 405076	9701 605305	24184 1242834	58608	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichloroethene	CBNZd5	Ave	2946 324099	5414 460433	9994 697477	31994 1487283	66453	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Pentanone	FB	Lin2	+++++ 588946	7204 909963	17190 1266287	52743 2805362	118471	+++++ 160	3.20 240	6.40 320	16.0 640	32.0
Methylcyclohexane	FB	Ave	3768 362438	5802 496273	11028 757279	30908 1575514	72674	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloropropane	FB	Ave	3987 328128	4877 487163	11347 709804	33738 1549684	68795	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dioxane	FB	Ave	+++++ 80232	1363 131133	3045 180232	8564 378292	19458	+++++ 1000	20.0 1500	40.0 2000	100 4000	200
Dibromomethane	FB	Ave	2061 194598	3688 295852	6682 422071	18747 907837	43029	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorobromomethane	FB	Ave	4442 419022	6802 627304	13742 917466	42619 1950032	88953	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Lin1	+++++ 107303	2272 157070	5903 233733	14093 457301	32500	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,3-Dichloropropene	CBNZd5	Ave	4386 517953	7535 788014	17190 1151983	47976 2482593	107368	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	7832 949935	12812 1491522	26840 2047359	87812 4496701	202042	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Toluene	FB	Ave	14361 1433071	25789 2039321	47540 2973481	143890 6283173	300489	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,3-Dichloropropene	FB	Ave	3916 456797	6802 693272	13015 1017829	41755 2244726	91033	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl methacrylate	CBNZd5	Ave	3014 373973	5533 580727	10574 824314	36500 1811167	79396	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloroethane	FB	Ave	2702 278363	4715 419600	10425 594722	29134 1265996	62169	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Tetrachloroethene	CBNZd5	Ave	2660 247796	3662 342034	8328 515640	22024 1082502	51118	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichloropropane	CBNZd5	Ave	4933 499334	8807 758142	16506 1074648	49882 2308352	109621	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Hexanone	CBNZd5	Ave	+++++ 662278	9279 1027635	18479 1439383	58368 3147857	141186	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Chlorodibromomethane	CBNZd5	Ave	2816 307759	5211 458113	9303 674905	30139 1451433	67246	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromoethane	CBNZd5	Ave	2782 285071	4655 438788	9711 623452	29186 1329989	62436	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1-Chlorohexane	CBNZd5	Ave	+++++ 351579	8330 485226	12457 728215	31737 1525490	74809	+++++ 40.0	0.800 60.0	1.60 80.0	4.00 160	8.00
Chlorobenzene	CBNZd5	Ave	9647 912393	15094 1316251	31566 1938193	92586 4032300	198280	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1,2-Tetrachloroethane	CBNZd5	Ave	2688 295726	5143 445800	8390 654047	30072 1406924	66518	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethylbenzene	CBNZd5	Ave	5836 504466	8553 703490	17245 1051276	48039 2252454	104522	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
m-Xylene & p-Xylene	CBNZd5	Ave	6176 613970	10426 866391	20990 1274199	58830 2658033	132180	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
o-Xylene	CBNZd5	Ave	6195 598233	10780 875612	21285 1263921	61746 2693943	137199	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Styrene	CBNZd5	Ave	8736 1015747	15456 1475117	30966 2138500	97777 4515616	228213	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromoform	CBNZd5	Ave	1656 184865	3041 294736	5478 414564	17809 912378	40184	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isopropylbenzene	DCBd4	Ave	14024 1487164	26320 2070408	48399 3086487	137693 6405703	333813	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexanone	CBNZd5	Lin1	3115	4862	11401	43891	86743	15.0	30.0	60.0	150	300

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			394415	628647	877871	1922235		1500	2250	3000	6000	
1,1,2,2-Tetrachloroethane	DCBd4	Ave	3054 361050	5958 550837	12834 778211	38489 1661698	87682	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromobenzene	DCBd4	Ave	3764 360643	5972 527328	12712 762506	37243 1596570	82410	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,4-Dichloro-2-butene	DCBd4	Lin2	+++++ 92835	1204 147092	2492 208918	7396 469794	19149	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichloropropane	DCBd4	Ave	1211 109805	1911 165636	3692 232101	10613 490084	24074	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
N-Propylbenzene	DCBd4	Ave	3276 423898	7204 593298	13139 877894	40306 1842046	95031	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chlorotoluene	DCBd4	Ave	3145 360383	5966 524154	12213 760094	38420 1609270	81968	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3,5-Trimethylbenzene	DCBd4	Ave	11921 1237465	23118 1768967	39515 2568017	120120 5353526	274169	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Chlorotoluene	DCBd4	Ave	3836 372917	5848 554452	12100 802364	36788 1672759	85320	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
tert-Butylbenzene	DCBd4	Ave	10137 1039264	18284 1467821	34097 2153460	99040 4450424	234094	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trimethylbenzene	DCBd4	Ave	12343 1293267	21024 1862150	41968 2713812	125567 5603513	290623	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butylbenzene	DCBd4	Ave	3271 310567	5360 431247	10225 643793	29211 1324888	69093	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichlorobenzene	DCBd4	Ave	6882 678055	11074 989115	20930 1424143	67914 2994458	159983	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Isopropyltoluene	DCBd4	Ave	12712 1298661	21858 1843862	40766 2683227	119450 5518835	296199	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dichlorobenzene	DCBd4	Ave	6956 683454	13773 1008782	25571 1448050	73232 3025964	162189	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Butylbenzene	DCBd4	Ave	10336 1168748	17367 1664058	34804 2395612	106017 4945270	252833	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichlorobenzene	DCBd4	Ave	6463 630995	11605 951304	21390 1348625	66425 2779439	149928	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromo-3-Chloropropane	DCBd4	Lin1	338 70118	837 111417	1353 152194	7174 333356	14481	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trichlorobenzene	DCBd4	Ave	+++++ 328647	4847 506863	10492 722079	34150 1464797	76481	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexachlorobutadiene	DCBd4	Ave	+++++ 121800	1880 177563	4199 259806	11656 513207	28148	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Naphthalene	DCBd4	Ave	7127 840312	12158 1359974	26379 1892905	85174 3822819	202222	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trichlorobenzene	DCBd4	Ave	2360 243010	3483 394915	8290 546626	24900 1100436	58565	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	320846 341310	318271 357034	327624 361321	318595 379808	331984	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	334584 346313	334967 376482	348242 378106	340158 399359	351639	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	1319319 1410445	1295729 1460315	1327001 1489072	1314839 1545654	1372074	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	425745 458461	429272 480762	430376 491788	431339 499290	441338	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 07-Apr-2023 05:58:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 200
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:36 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:46:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1569677	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	361445	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	552718	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	379808	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	399359	50.0	50.4	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1545654	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	88	499290	50.0	50.5	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	1487302	200.0	215.9	
11 Chloromethane	50	1.867	1.867	0.000	99	1411421	200.0	201.7	
12 Vinyl chloride	62	1.960	1.967	-0.007	98	1472583	200.0	206.3	
14 Bromomethane	94	2.232	2.246	-0.014	91	800852	200.0	210.6	
15 Chloroethane	64	2.332	2.339	-0.007	100	988102	200.0	207.2	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	97	2476231	200.0	208.0	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	1971931	200.0	214.7	
19 Ethyl ether	59	2.747	2.747	0.000	88	1090208	200.0	205.8	
21 Acrolein	56	2.854	2.854	0.000	100	1778974	1975.0	2082.4	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.932	0.001	96	910907	200.0	210.1	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	98	1212739	200.0	201.1	
24 Acetone	43	2.954	2.954	0.000	100	1417706	800.0	835.5	
26 Iodomethane	142	3.054	3.061	-0.007	99	1807115	200.0	213.1	
27 Carbon disulfide	76	3.119	3.118	0.001	99	3813466	200.0	195.2	
29 Methyl acetate	43	3.176	3.176	0.000	97	1736405	400.0	438.1	
30 3-Chloro-1-propene	41	3.197	3.204	-0.007	87	1570415	200.0	196.1	
31 Methylene Chloride	84	3.290	3.297	-0.007	89	1444297	200.0	186.5	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	100	1330547	2000.0	2157.4	
33 Acrylonitrile	53	3.455	3.454	0.001	97	4821060	2000.0	2142.8	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	4062888	200.0	214.1	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	1416053	200.0	211.5	
37 Hexane	57	3.683	3.683	0.000	90	1712945	200.0	206.8	
39 Vinyl acetate	43	3.784	3.783	0.001	97	4569454	400.0	430.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	2588608	200.0	212.0	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	2191938	800.0	849.9	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	82	1612272	200.0	201.0	
48 2,2-Dichloropropane	77	4.220	4.227	-0.007	89	2039483	200.0	217.3	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	2406100	4800.0	5184.4	
52 Chlorobromomethane	128	4.384	4.391	-0.007	94	720959	200.0	195.1	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	738419	400.0	422.4	
54 Chloroform	83	4.441	4.448	-0.007	93	2521900	200.0	202.9	
55 1,1,1-Trichloroethane	97	4.584	4.591	-0.007	99	2094298	200.0	208.1	
56 Cyclohexane	56	4.649	4.649	0.000	88	2128312	200.0	205.0	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	2031898	200.0	206.0	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	1059317	5000.0	5374.3	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	1791238	200.0	219.9	
62 Benzene	78	4.849	4.849	0.000	96	5815711	200.0	199.4	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	1912823	200.0	206.9	
65 n-Heptane	43	5.028	5.035	-0.007	89	1242834	200.0	205.4	
67 Trichloroethene	95	5.335	5.335	0.000	98	1487283	200.0	215.1	
68 2-Pentanone	43	5.435	5.435	0.000	98	2805362	640.0	671.1	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	1575514	200.0	207.2	
70 1,2-Dichloropropane	63	5.535	5.542	-0.007	97	1549684	200.0	209.0	
72 1,4-Dioxane	88	5.578	5.578	0.000	92	378292	4000.0	4030.0	
73 Dibromomethane	93	5.607	5.607	0.000	94	907837	200.0	205.3	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	1950032	200.0	208.9	
76 2-Chloroethyl vinyl ether	63	5.929	5.936	-0.007	90	457301	200.0	194.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	2482593	200.0	225.4	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	4496701	800.0	906.0	
79 Toluene	91	6.365	6.365	0.000	98	6283173	200.0	200.0	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	2244726	200.0	233.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	1811167	200.0	229.4	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	1265996	200.0	201.6	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	1082502	200.0	206.3	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	95	2308352	200.0	208.4	
85 2-Hexanone	43	6.872	6.879	-0.007	94	3147857	800.0	909.3	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	1451433	200.0	217.2	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	1329989	200.0	210.2	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	1525490	160.0	155.9	
90 Chlorobenzene	112	7.602	7.602	0.000	95	4032300	200.0	200.3	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	96	1406924	200.0	217.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	2252454	200.0	203.2	
93 m-Xylene & p-Xylene	106	7.788	7.795	-0.007	0	2658033	200.0	200.0	
94 o-Xylene	106	8.152	8.152	0.000	96	2693943	200.0	199.8	
95 Styrene	104	8.167	8.166	0.001	94	4515616	200.0	210.8	
96 Bromoform	173	8.345	8.345	0.000	94	912378	200.0	225.9	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	6405703	200.0	204.2	
99 Cyclohexanone	55	8.588	8.588	0.000	91	1922235	6000.0	6228.1	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	1661698	200.0	209.9	
101 Bromobenzene	156	8.810	8.810	0.000	97	1596570	200.0	202.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	79	469794	200.0	225.5	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	490084	200.0	204.0	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	1842046	200.0	211.3	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	1609270	200.0	208.0	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	5353526	200.0	202.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	1672759	200.0	207.8	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	4450424	200.0	201.3	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	5603513	200.0	204.7	
111 sec-Butylbenzene	134	9.589	9.582	0.007	94	1324888	200.0	200.0	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	2994458	200.0	205.2	
113 4-Isopropyltoluene	119	9.733	9.732	0.000	97	5518835	200.0	202.1	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	3025964	200.0	195.2	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	4945270	200.0	209.1	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	2779439	200.0	197.9	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.948	-0.007	87	333356	200.0	207.6	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	1464797	200.0	207.1	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	513207	200.0	199.1	
122 Naphthalene	128	12.035	12.035	0.000	97	3822819	200.0	211.9	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	94	1100436	200.0	206.2	
S 135 1,2-Dichloroethene, Total (URS)	96				0		400.0	412.5	
S 139 Xylenes, Total (URS)	1				0		400.0	399.9	
S 136 1,3-Dichloropropene, Total	1				0		400.0	458.4	
S 138 Xylenes, Total	106				0		400.0	399.9	
S 137 Total BTEX	1				0			1002.5	
S 140 Trihalomethanes, Total	1				0		800.0	855.0	
S 141 1,2-Dichloroethene, Total	1				0		400.0	412.5	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00086	Amount Added: 100.00	Units: uL	
MV-Gas A_00150	Amount Added: 40.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

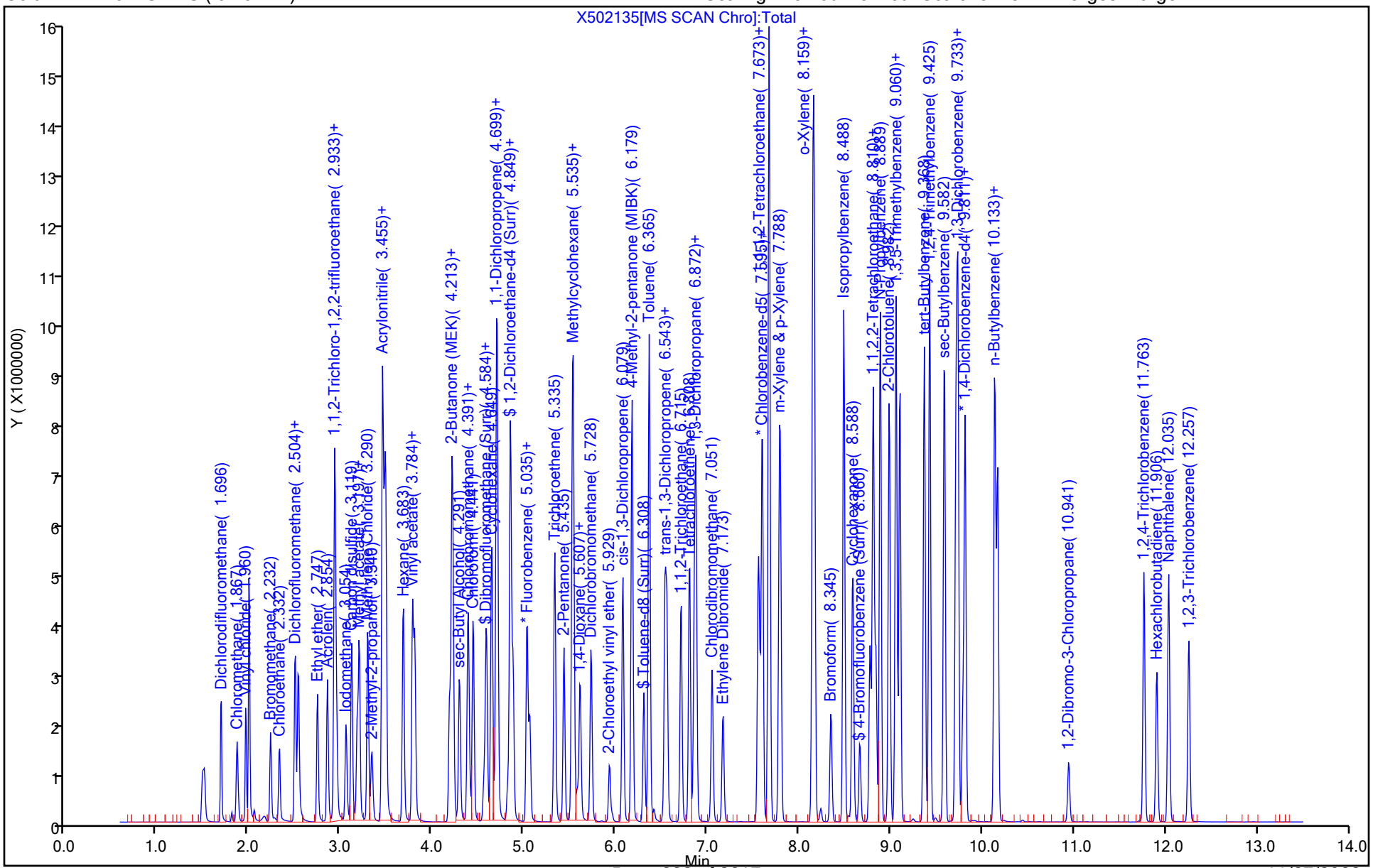
Report Date: 10-Apr-2023 11:26:37 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Injection Date:	07-Apr-2023 05:58:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502134.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 07-Apr-2023 05:38:30 ALS Bottle#: 9 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 100
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:39 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:26:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1493380	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	350056	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	538480	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	361321	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	378106	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1489072	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	88	491788	50.0	51.1	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	100	719193	100.0	109.8	
11 Chloromethane	50	1.867	1.867	0.000	98	670892	100.0	100.8	
12 Vinyl chloride	62	1.967	1.967	0.000	98	694430	100.0	102.3	
14 Bromomethane	94	2.239	2.246	-0.007	91	391432	100.0	108.2	
15 Chloroethane	64	2.332	2.339	-0.007	100	465962	100.0	102.7	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	97	1163656	100.0	102.8	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	99	938320	100.0	107.4	
19 Ethyl ether	59	2.747	2.747	0.000	89	498848	100.0	99.0	
21 Acrolein	56	2.854	2.854	0.000	99	814984	987.5	1002.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.932	0.001	96	439333	100.0	106.5	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	564261	100.0	98.4	
24 Acetone	43	2.954	2.954	0.000	100	634088	400.0	390.2	
26 Iodomethane	142	3.061	3.061	0.000	98	806371	100.0	100.6	
27 Carbon disulfide	76	3.118	3.118	0.000	99	1790422	100.0	96.3	
29 Methyl acetate	43	3.176	3.176	0.000	97	778916	200.0	206.6	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	87	761288	100.0	99.9	
31 Methylene Chloride	84	3.297	3.297	0.000	89	668279	100.0	90.7	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	575215	1000.0	982.0	
33 Acrylonitrile	53	3.455	3.454	0.001	98	2161584	1000.0	1009.8	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	1869281	100.0	103.5	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	653913	100.0	102.6	
37 Hexane	57	3.683	3.683	0.000	90	826083	100.0	103.0	
39 Vinyl acetate	43	3.783	3.783	0.000	97	2229008	200.0	220.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	1192336	100.0	102.6	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	989943	400.0	403.5	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	752429	100.0	98.6	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	89	940919	100.0	105.4	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	1022793	2400.0	2322.1	
52 Chlorobromomethane	128	4.384	4.391	-0.007	94	345635	100.0	98.3	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	325621	200.0	195.8	
54 Chloroform	83	4.441	4.448	-0.007	93	1178968	100.0	99.7	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	976837	100.0	102.0	
56 Cyclohexane	56	4.649	4.649	0.000	87	1026924	100.0	103.9	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	953615	100.0	101.6	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	449774	2500.0	2404.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	838075	100.0	108.1	
62 Benzene	78	4.849	4.849	0.000	96	2737137	100.0	98.7	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	894032	100.0	101.7	
65 n-Heptane	43	5.035	5.035	0.000	87	605305	100.0	105.1	
67 Trichloroethene	95	5.335	5.335	0.000	98	697477	100.0	104.2	
68 2-Pentanone	43	5.435	5.435	0.000	98	1266287	320.0	319.1	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	757279	100.0	104.7	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	96	709804	100.0	100.6	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	180232	2000.0	2018.1	
73 Dibromomethane	93	5.607	5.607	0.000	94	422071	100.0	100.3	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	917466	100.0	103.3	
76 2-Chloroethyl vinyl ether	63	5.929	5.936	-0.007	91	233733	100.0	104.3	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	1151983	100.0	108.0	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	2047359	400.0	433.6	
79 Toluene	91	6.365	6.365	0.000	98	2973481	100.0	99.5	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	1017829	100.0	111.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	824314	100.0	107.8	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	594722	100.0	99.6	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	515640	100.0	101.5	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	1074648	100.0	100.2	
85 2-Hexanone	43	6.872	6.879	-0.007	94	1439383	400.0	429.3	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	674905	100.0	104.3	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	623452	100.0	101.7	
89 1-Chlorohexane	91	7.552	7.559	-0.007	95	728215	80.0	76.9	
90 Chlorobenzene	112	7.602	7.602	0.000	96	1938193	100.0	99.4	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	46	654047	100.0	104.3	
92 Ethylbenzene	106	7.673	7.673	0.000	98	1051276	100.0	97.9	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	1274199	100.0	99.0	
94 o-Xylene	106	8.152	8.152	0.000	96	1263921	100.0	96.8	
95 Styrene	104	8.167	8.166	0.001	94	2138500	100.0	103.1	
96 Bromoform	173	8.345	8.345	0.000	95	414564	100.0	106.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	3086487	100.0	101.0	
99 Cyclohexanone	55	8.588	8.588	0.000	91	877871	3000.0	2940.3	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	778211	100.0	100.9	
101 Bromobenzene	156	8.810	8.810	0.000	97	762506	100.0	99.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	79	208918	100.0	103.2	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	232101	100.0	99.2	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	877894	100.0	103.4	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	760094	100.0	100.8	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	2568017	100.0	99.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	802364	100.0	102.3	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	2153460	100.0	100.0	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	2713812	100.0	101.8	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	643793	100.0	99.8	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	1424143	100.0	100.2	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	2683227	100.0	100.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	1448050	100.0	95.9	
116 n-Butylbenzene	91	10.140	10.133	0.007	98	2395612	100.0	104.0	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	1348625	100.0	98.6	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	85	152194	100.0	97.5	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	722079	100.0	104.8	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	259806	100.0	103.5	
122 Naphthalene	128	12.035	12.035	0.000	97	1892905	100.0	107.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	546626	100.0	105.1	
S 135 1,2-Dichloroethene, Total (URS)	96				0		200.0	201.3	
S 139 Xylenes, Total (URS)	1				0		200.0	195.8	
S 136 1,3-Dichloropropene, Total	1				0		200.0	219.1	
S 138 Xylenes, Total	106				0		200.0	195.8	
S 137 Total BTEX	1				0			491.9	
S 140 Trihalomethanes, Total	1				0		400.0	413.3	
S 141 1,2-Dichloroethene, Total	1				0		200.0	201.3	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00150	Amount Added: 20.00	Units: uL	
MV-MegaMainA_00086	Amount Added: 50.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

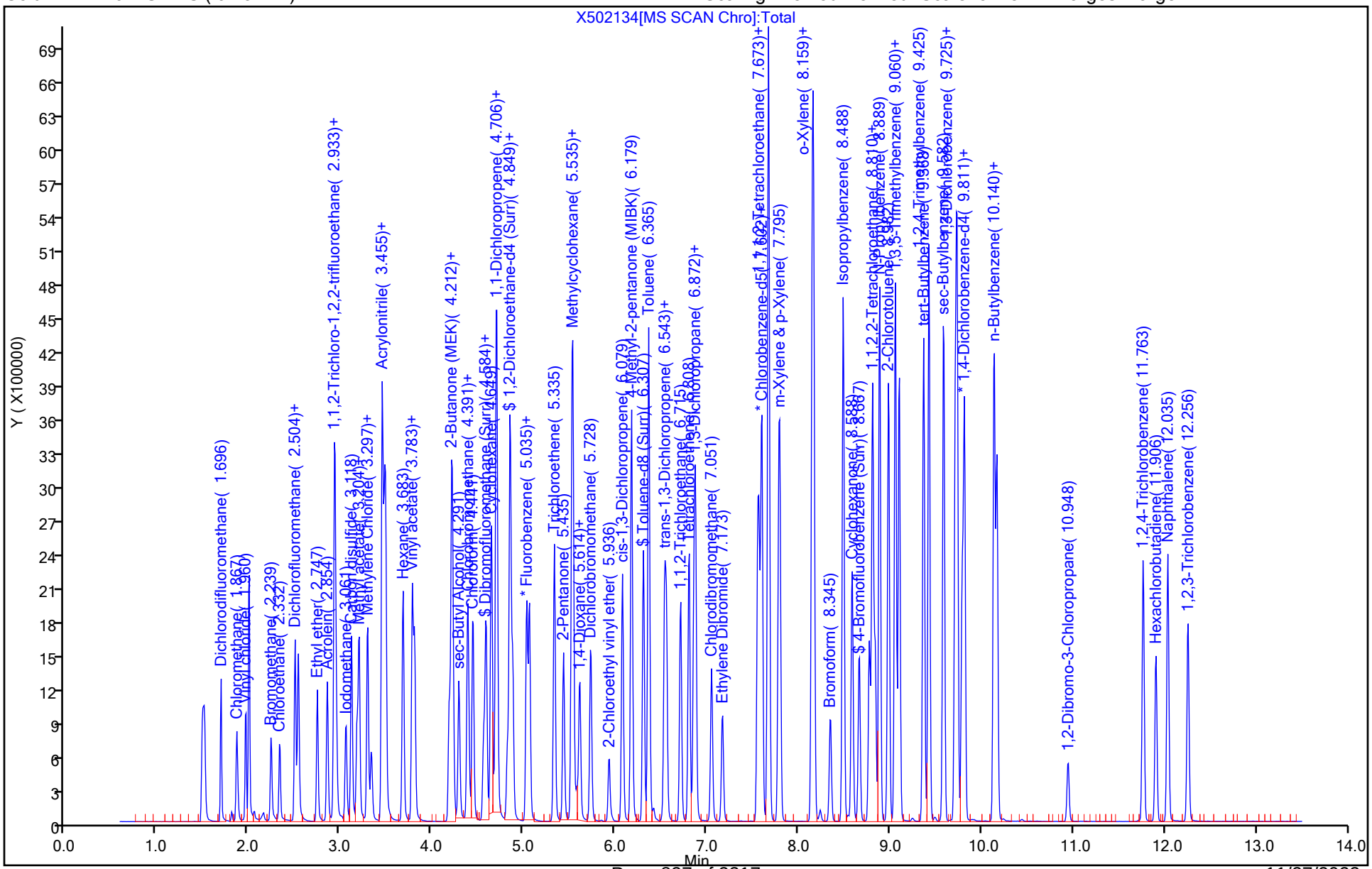
Report Date: 10-Apr-2023 11:26:40 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502134.D

Injection Date:	07-Apr-2023 05:38:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502133.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 07-Apr-2023 05:17:30 ALS Bottle#: 8 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 75
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:46 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:25:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1474746	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	345430	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	534485	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	357034	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	376482	50.0	50.5	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1460315	50.0	49.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	88	480762	50.0	50.3	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	455235	75.0	70.3	
11 Chloromethane	50	1.867	1.867	0.000	99	454103	75.0	69.1	
12 Vinyl chloride	62	1.967	1.967	0.000	98	450884	75.0	67.3	
14 Bromomethane	94	2.246	2.246	0.000	91	252611	75.0	70.7	
15 Chloroethane	64	2.339	2.339	0.000	100	311792	75.0	69.6	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	97	800461	75.0	71.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	608496	75.0	70.5	
19 Ethyl ether	59	2.747	2.747	0.000	89	342946	75.0	68.9	
21 Acrolein	56	2.854	2.854	0.000	99	577559	740.6	719.6	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.932	0.001	96	278730	75.0	68.4	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	369837	75.0	65.3	
24 Acetone	43	2.954	2.954	0.000	100	458920	300.0	284.7	
26 Iodomethane	142	3.061	3.061	0.000	98	531498	75.0	67.5	
27 Carbon disulfide	76	3.118	3.118	0.000	99	1190511	75.0	64.8	
29 Methyl acetate	43	3.183	3.176	0.007	97	549127	150.0	147.5	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	86	539065	75.0	71.7	
31 Methylene Chloride	84	3.297	3.297	0.000	90	462061	75.0	63.5	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	395522	750.0	684.7	
33 Acrylonitrile	53	3.454	3.454	0.000	98	1544048	750.0	730.5	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	1294920	75.0	72.6	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	439291	75.0	69.8	
37 Hexane	57	3.683	3.683	0.000	90	539664	75.0	68.2	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1481686	150.0	148.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	816491	75.0	71.2	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	715496	300.0	295.3	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	508687	75.0	67.5	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	618660	75.0	70.1	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	733439	1800.0	1689.0	
52 Chlorobromomethane	128	4.391	4.391	0.000	93	243851	75.0	70.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	232688	150.0	141.7	
54 Chloroform	83	4.441	4.448	-0.007	93	798668	75.0	68.4	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	98	642071	75.0	67.9	
56 Cyclohexane	56	4.649	4.649	0.000	87	662501	75.0	67.9	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	624293	75.0	67.4	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	322140	1875.0	1747.2	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	543267	75.0	71.0	
62 Benzene	78	4.849	4.849	0.000	96	1872929	75.0	68.4	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	630156	75.0	72.6	
65 n-Heptane	43	5.035	5.035	0.000	88	405076	75.0	71.2	
67 Trichloroethene	95	5.335	5.335	0.000	98	460433	75.0	69.7	
68 2-Pentanone	43	5.435	5.435	0.000	98	909963	240.0	232.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	496273	75.0	69.5	
70 1,2-Dichloropropane	63	5.535	5.542	-0.007	96	487163	75.0	69.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	131133	1500.0	1486.9	
73 Dibromomethane	93	5.614	5.607	0.007	96	295852	75.0	71.2	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	627304	75.0	71.5	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	90	157070	75.0	70.7	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	788014	75.0	74.9	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1491522	300.0	319.8	
79 Toluene	91	6.365	6.365	0.000	98	2039321	75.0	69.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	693272	75.0	76.6	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	580727	75.0	76.9	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	419600	75.0	71.1	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	342034	75.0	68.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	758142	75.0	71.6	
85 2-Hexanone	43	6.879	6.879	0.000	94	1027635	300.0	310.6	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	458113	75.0	71.7	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	438788	75.0	72.6	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	485226	60.0	51.9	
90 Chlorobenzene	112	7.602	7.602	0.000	95	1316251	75.0	68.4	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	445800	75.0	72.1	
92 Ethylbenzene	106	7.673	7.673	0.000	98	703490	75.0	66.4	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	866391	75.0	68.2	
94 o-Xylene	106	8.152	8.152	0.000	96	875612	75.0	68.0	
95 Styrene	104	8.167	8.166	0.000	94	1475117	75.0	72.1	
96 Bromoform	173	8.345	8.345	0.000	94	294736	75.0	76.4	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	2070408	75.0	68.2	
99 Cyclohexanone	55	8.588	8.588	0.000	91	628647	2250.0	2135.5	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	550837	75.0	72.0	
101 Bromobenzene	156	8.810	8.810	0.000	97	527328	75.0	69.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	80	147092	75.0	73.3	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	165636	75.0	71.3	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	593298	75.0	70.4	
105 2-Chlorotoluene	126	8.982	8.982	0.000	96	524154	75.0	70.1	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1768967	75.0	69.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	554452	75.0	71.2	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1467821	75.0	68.7	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1862150	75.0	70.4	
111 sec-Butylbenzene	134	9.589	9.582	0.007	94	431247	75.0	67.3	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	989115	75.0	70.1	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1843862	75.0	69.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	1008782	75.0	67.3	
116 n-Butylbenzene	91	10.140	10.133	0.007	98	1664058	75.0	72.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	951304	75.0	70.0	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	86	111417	75.0	72.0	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	506863	75.0	74.1	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	177563	75.0	71.2	
122 Naphthalene	128	12.035	12.035	0.000	97	1359974	75.0	78.0	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	394915	75.0	76.5	
S 135 1,2-Dichloroethene, Total (URS)	96				0		150.0	137.3	
S 139 Xylenes, Total (URS)	1				0		150.0	136.2	
S 136 1,3-Dichloropropene, Total	1				0		150.0	151.5	
S 138 Xylenes, Total	106				0		150.0	136.2	
S 137 Total BTEX	1				0			340.1	
S 140 Trihalomethanes, Total	1				0		300.0	288.0	
S 141 1,2-Dichloroethene, Total	1				0		150.0	137.3	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00086	Amount Added:	37.50	Units: uL	
MV-Gas A_00150	Amount Added:	15.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

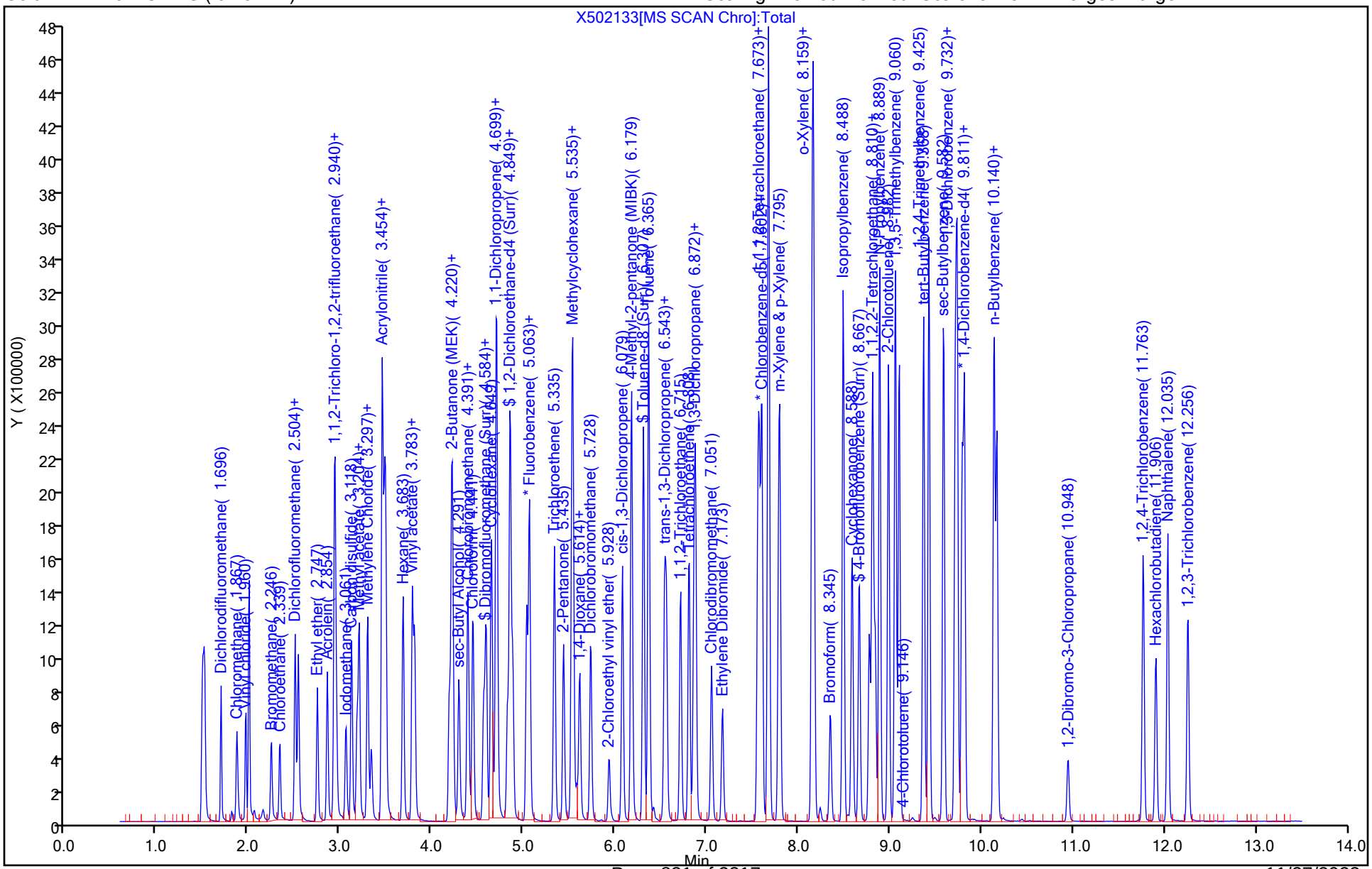
Report Date: 10-Apr-2023 11:26:47 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502133.D

Injection Date:	07-Apr-2023 05:17:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502132.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 07-Apr-2023 04:56:30 ALS Bottle#: 7 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icis
Misc. Info.: 50
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:53 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:25:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1433467	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	327912	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	509618	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	341310	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	346313	50.0	47.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1410445	50.0	50.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	87	458461	50.0	50.3	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	338892	50.0	53.9	
11 Chloromethane	50	1.867	1.867	0.000	99	319506	50.0	50.0	
12 Vinyl chloride	62	1.967	1.967	0.000	98	323546	50.0	49.7	
14 Bromomethane	94	2.246	2.246	0.000	91	154866	50.0	44.6	
15 Chloroethane	64	2.339	2.339	0.000	99	224545	50.0	51.5	
16 Dichlorofluoromethane	67	2.503	2.503	0.000	97	550286	50.0	50.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	434484	50.0	51.8	
19 Ethyl ether	59	2.747	2.747	0.000	87	232745	50.0	48.1	
21 Acrolein	56	2.854	2.854	0.000	100	379722	493.8	486.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.932	0.000	96	215857	50.0	54.5	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	278445	50.0	50.6	
24 Acetone	43	2.954	2.954	0.000	100	304604	200.0	192.8	
26 Iodomethane	142	3.061	3.061	0.000	98	348041	50.0	45.9	
27 Carbon disulfide	76	3.118	3.118	0.000	99	860085	50.0	48.2	
29 Methyl acetate	43	3.176	3.176	0.000	96	363705	100.0	100.5	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	85	367558	50.0	50.3	
31 Methylene Chloride	84	3.297	3.297	0.000	90	318574	50.0	45.1	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	242268	500.0	432.6	
33 Acrylonitrile	53	3.454	3.454	0.000	97	1016179	500.0	494.6	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	856915	50.0	49.5	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	97	318807	50.0	52.1	
37 Hexane	57	3.683	3.683	0.000	90	401685	50.0	53.5	
39 Vinyl acetate	43	3.783	3.783	0.000	97	985044	100.0	101.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	562644	50.0	50.4	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	459249	200.0	195.0	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	350256	50.0	47.8	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	88	441048	50.0	51.4	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	438034	1200.0	1041.7	
52 Chlorobromomethane	128	4.391	4.391	0.000	93	161935	50.0	48.0	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	156862	100.0	98.3	
54 Chloroform	83	4.448	4.448	0.000	93	556331	50.0	49.0	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	468729	50.0	51.0	
56 Cyclohexane	56	4.649	4.649	0.000	88	492743	50.0	52.0	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	451920	50.0	50.2	
60 Isobutyl alcohol	41	4.706	4.706	0.000	92	202099	1250.0	1131.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	397512	50.0	53.4	
62 Benzene	78	4.849	4.849	0.000	96	1317866	50.0	49.5	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	420189	50.0	49.8	
65 n-Heptane	43	5.035	5.035	0.000	88	287678	50.0	52.1	
67 Trichloroethene	95	5.335	5.335	0.000	98	324099	50.0	51.7	
68 2-Pentanone	43	5.435	5.435	0.000	98	588946	160.0	155.2	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	362438	50.0	52.2	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	95	328128	50.0	48.5	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	80232	1000.0	935.9	
73 Dibromomethane	93	5.607	5.607	0.000	94	194598	50.0	48.2	
74 Dichlorobromomethane	83	5.735	5.735	0.000	99	419022	50.0	49.1	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	91	107303	50.0	49.4	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	517953	50.0	51.8	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	949935	200.0	209.6	
79 Toluene	91	6.365	6.365	0.000	98	1433071	50.0	50.0	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	456797	50.0	51.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	373973	50.0	52.2	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	278363	50.0	48.5	
83 Tetrachloroethene	164	6.808	6.808	0.000	96	247796	50.0	52.1	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	499334	50.0	49.7	
85 2-Hexanone	43	6.879	6.879	0.000	94	662278	200.0	210.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	307759	50.0	50.8	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	285071	50.0	49.7	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	351579	40.0	39.6	
90 Chlorobenzene	112	7.602	7.602	0.000	96	912393	50.0	49.9	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	96	295726	50.0	50.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	504466	50.0	50.2	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	613970	50.0	50.9	
94 o-Xylene	106	8.152	8.152	0.000	96	598233	50.0	48.9	
95 Styrene	104	8.166	8.166	0.000	94	1015747	50.0	52.3	
96 Bromoform	173	8.345	8.345	0.000	94	184865	50.0	50.5	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1487164	50.0	51.4	
99 Cyclohexanone	55	8.588	8.588	0.000	91	394415	1500.0	1413.6	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	361050	50.0	49.5	
101 Bromobenzene	156	8.810	8.810	0.000	96	360643	50.0	49.5	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	84	92835	50.0	48.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	87	109805	50.0	49.6	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	423898	50.0	52.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	96	360383	50.0	50.5	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1237465	50.0	50.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	372917	50.0	50.2	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1039264	50.0	51.0	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	1293267	50.0	51.2	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	310567	50.0	50.9	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	678055	50.0	50.4	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1298661	50.0	51.6	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	683454	50.0	47.8	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1168748	50.0	53.6	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	630995	50.0	48.7	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	86	70118	50.0	47.7	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	328647	50.0	50.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	96	121800	50.0	51.2	
122 Naphthalene	128	12.035	12.035	0.000	97	840312	50.0	50.5	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	243010	50.0	49.4	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	100.0	
S 139 Xylenes, Total (URS)	1				0		100.0	99.8	
S 136 1,3-Dichloropropene, Total	1				0		100.0	103.8	
S 138 Xylenes, Total	106				0		100.0	99.8	
S 140 Trihalomethanes, Total	1				0		200.0	199.4	
S 141 1,2-Dichloroethene, Total	1				0		100.0	100.0	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00150	Amount Added: 10.00	Units: uL	
MV-MegaMainA_00086	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

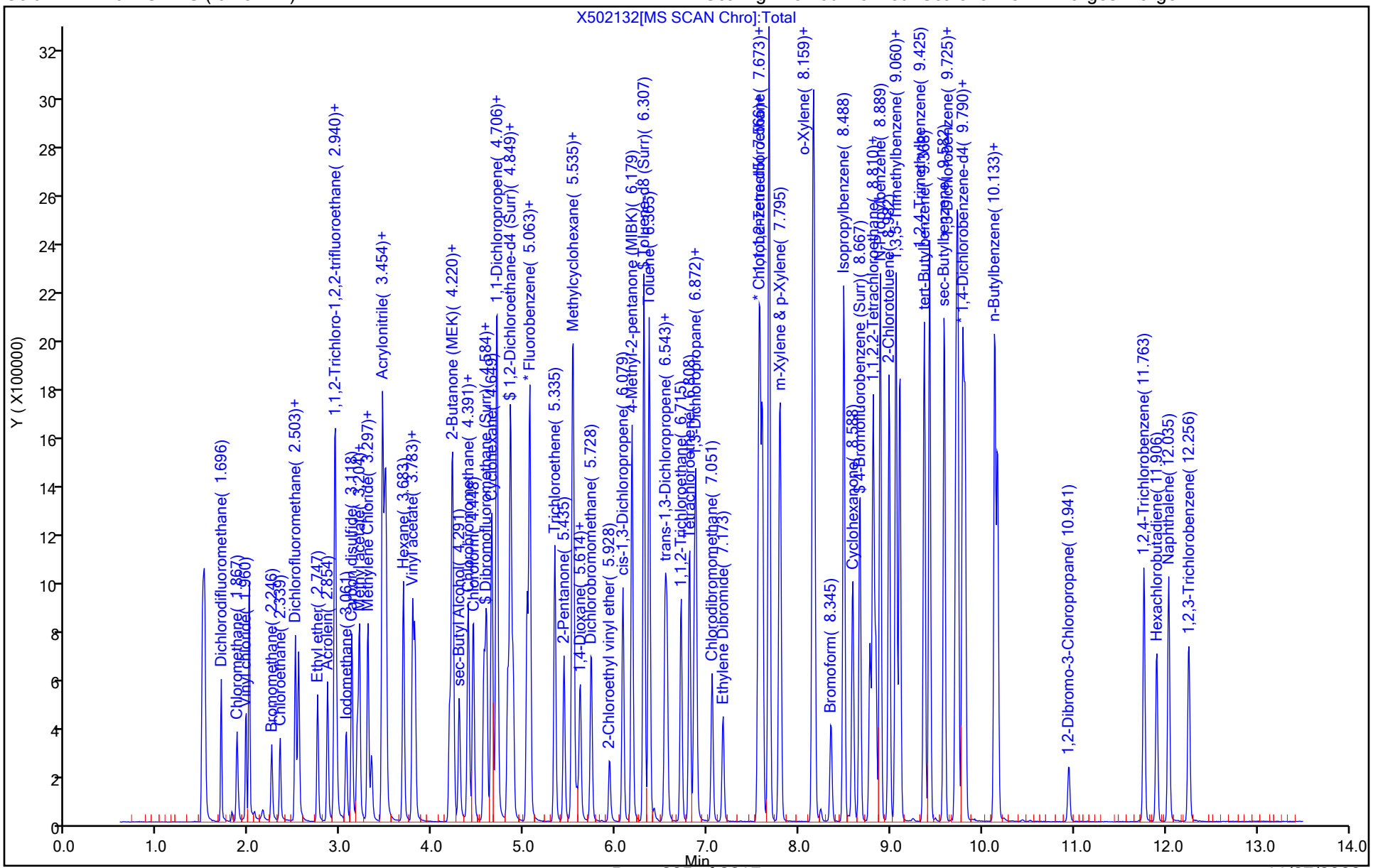
Report Date: 10-Apr-2023 11:26:54 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502132.D

Injection Date:	07-Apr-2023 04:56:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	ICIS			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502131.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 07-Apr-2023 04:36:30 ALS Bottle#: 6 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 10
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:56 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:24:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1371311	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	319160	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	505647	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	331984	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	351639	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1372074	50.0	50.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	441338	50.0	48.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	60240	10.0	10.0	
11 Chloromethane	50	1.860	1.860	0.000	99	69201	10.0	11.3	
12 Vinyl chloride	62	1.960	1.960	0.000	98	57453	10.0	9.35	
14 Bromomethane	94	2.246	2.246	0.000	91	30485	10.0	9.18	
15 Chloroethane	64	2.339	2.339	0.000	99	44742	10.0	10.7	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	108746	10.0	10.5	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	78899	10.0	9.83	
19 Ethyl ether	59	2.747	2.747	0.000	89	49231	10.0	10.6	
21 Acrolein	56	2.854	2.854	0.000	99	77990	98.8	104.5	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	46180	10.0	12.2	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	97	57452	10.0	10.9	
24 Acetone	43	2.954	2.954	0.000	100	69108	40.0	42.0	
26 Iodomethane	142	3.054	3.054	0.000	99	53045	10.0	8.31	
27 Carbon disulfide	76	3.118	3.118	0.000	99	186751	10.0	10.9	
29 Methyl acetate	43	3.176	3.176	0.000	96	72912	20.0	21.1	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	79909	10.0	11.4	
31 Methylene Chloride	84	3.297	3.297	0.000	89	72041	10.0	10.7	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	50092	100.0	96.0	
33 Acrylonitrile	53	3.455	3.455	0.000	98	215343	100.0	109.6	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	183431	10.0	11.1	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	96	64462	10.0	11.0	
37 Hexane	57	3.683	3.683	0.000	91	80887	10.0	11.1	
39 Vinyl acetate	43	3.783	3.783	0.000	97	203312	20.0	21.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	118483	10.0	11.1	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	101248	40.0	44.9	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	81	75236	10.0	10.7	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	93	89114	10.0	10.9	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	97	81863	240.0	211.8	
52 Chlorobromomethane	128	4.384	4.384	0.000	93	36209	10.0	11.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	33630	20.0	22.0	
54 Chloroform	83	4.448	4.448	0.000	93	118770	10.0	10.9	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	94276	10.0	10.7	
56 Cyclohexane	56	4.649	4.649	0.000	87	105926	10.0	11.7	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	93579	10.0	10.9	
60 Isobutyl alcohol	41	4.706	4.706	0.000	77	36138	250.0	220.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	77728	10.0	10.9	
62 Benzene	78	4.849	4.849	0.000	97	276546	10.0	10.9	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	88985	10.0	11.0	
65 n-Heptane	43	5.035	5.035	0.000	83	58608	10.0	11.1	
67 Trichloroethene	95	5.335	5.335	0.000	96	66453	10.0	10.9	
68 2-Pentanone	43	5.435	5.435	0.000	97	118471	32.0	33.6	
69 Methylcyclohexane	55	5.528	5.528	0.000	88	72674	10.0	10.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	96	68795	10.0	10.6	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	19458	200.0	237.3	
73 Dibromomethane	93	5.614	5.614	0.000	91	43029	10.0	11.1	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	88953	10.0	10.9	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	90	32500	10.0	15.1	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	107368	10.0	11.0	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	202042	40.0	46.6	
79 Toluene	91	6.365	6.365	0.000	98	300489	10.0	10.9	
80 trans-1,3-Dichloropropene	75	6.543	6.543	0.000	95	91033	10.0	10.8	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	79396	10.0	11.4	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	92	62169	10.0	11.3	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	51118	10.0	11.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	109621	10.0	11.2	
85 2-Hexanone	43	6.880	6.880	0.000	93	141186	40.0	46.2	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	67246	10.0	11.4	
88 Ethylene Dibromide	107	7.173	7.173	0.000	100	62436	10.0	11.2	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	74809	8.00	8.66	
90 Chlorobenzene	112	7.602	7.602	0.000	97	198280	10.0	11.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	93	66518	10.0	11.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	104522	10.0	10.7	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	132180	10.0	11.3	
94 o-Xylene	106	8.152	8.152	0.000	95	137199	10.0	11.5	
95 Styrene	104	8.167	8.167	0.000	94	228213	10.0	12.1	
96 Bromoform	173	8.352	8.352	0.000	91	40184	10.0	11.3	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	333813	10.0	11.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	86743	300.0	324.4	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	87682	10.0	12.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	82410	10.0	11.4	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	60	19149	10.0	10.4	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	24074	10.0	11.0	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	95031	10.0	11.9	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	81968	10.0	11.6	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	274169	10.0	11.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	85320	10.0	11.6	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	234094	10.0	11.6	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	290623	10.0	11.6	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	69093	10.0	11.4	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	159983	10.0	12.0	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	296199	10.0	11.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	162189	10.0	11.4	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	252833	10.0	11.7	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	149928	10.0	11.7	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	85	14481	10.0	10.2	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	90	76481	10.0	11.8	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	96	28148	10.0	11.9	
122 Naphthalene	128	12.035	12.035	0.000	96	202222	10.0	12.3	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	94	58565	10.0	12.0	
S 135 1,2-Dichloroethene, Total (URS)	96				0		20.0	21.8	
S 139 Xylenes, Total (URS)	1				0		20.0	22.8	
S 136 1,3-Dichloropropene, Total	1				0		20.0	21.9	
S 138 Xylenes, Total	106				0		20.0	22.8	
S 137 Total BTEX	1				0			55.3	
S 140 Trihalomethanes, Total	1				0		40.0	44.5	
S 141 1,2-Dichloroethene, Total	1				0		20.0	21.8	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00086	Amount Added:	5.00	Units: uL	
MV-Gas A_00150	Amount Added:	2.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 10-Apr-2023 11:26:57 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502131.D

Injection Date: 07-Apr-2023 04:36:30 Instrument ID: VMS_X4 Operator ID: bj

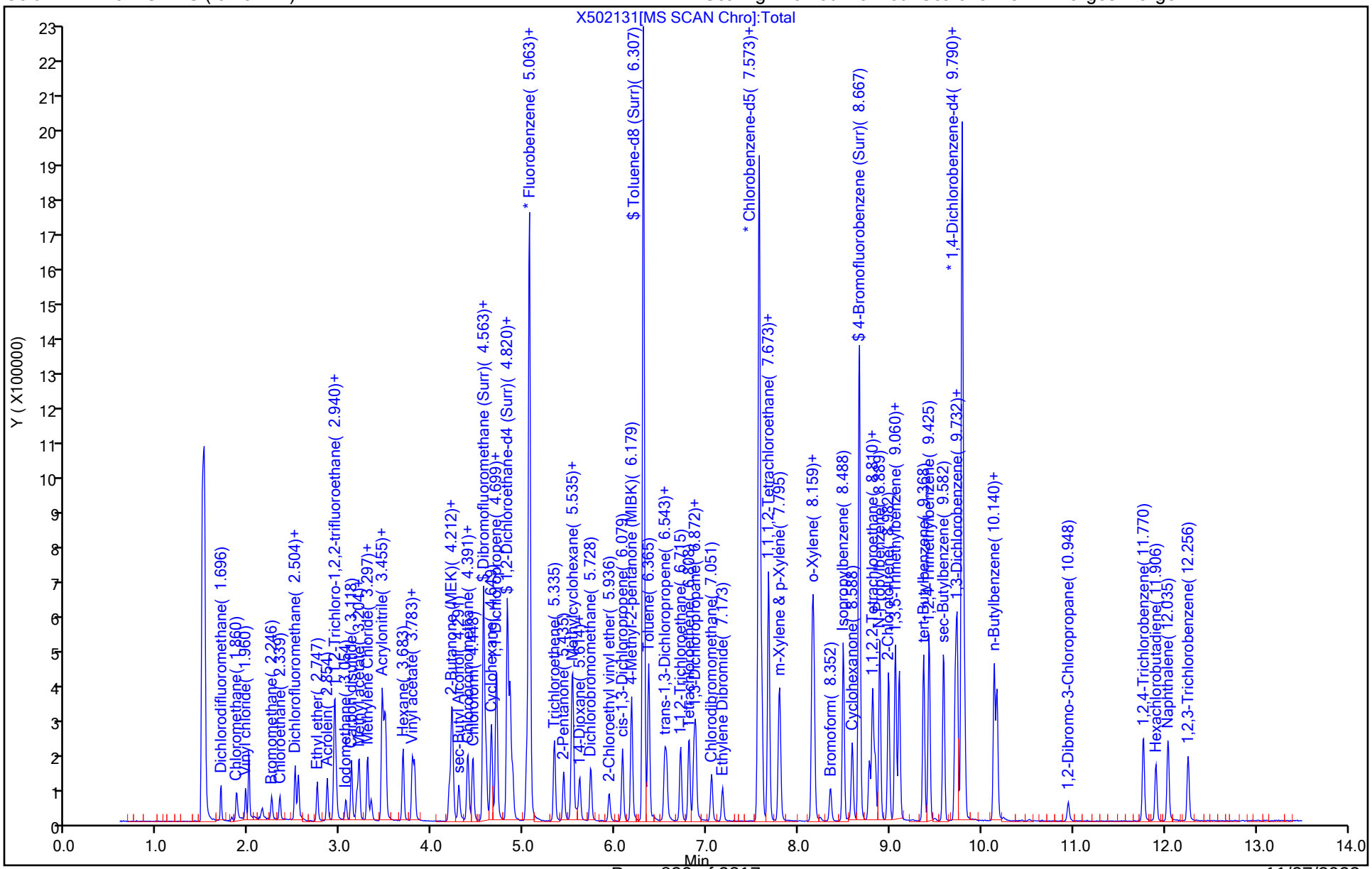
Lims ID: STD Worklist Smp#: 15

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 6

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502129.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 07-Apr-2023 03:55:30 ALS Bottle#: 4 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:00 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:17:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1358265	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	311900	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	484201	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	327624	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	348242	50.0	50.7	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1327001	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	95	430376	50.0	49.7	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	8877	2.00	1.49	
11 Chloromethane	50	1.867	1.860	0.007	99	10159	2.00	1.68	
12 Vinyl chloride	62	1.960	1.960	0.000	97	9723	2.00	1.71	
14 Bromomethane	94	2.246	2.246	0.000	88	6801	2.00	2.07	
15 Chloroethane	64	2.339	2.339	0.000	99	6653	2.00	1.61	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	19362	2.00	1.88	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	97	14131	2.00	1.78	
19 Ethyl ether	59	2.747	2.747	0.000	87	9381	2.00	2.05	
21 Acrolein	56	2.854	2.854	0.000	99	12124	19.8	16.4	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	88	6474	2.00	1.73	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	97	9029	2.00	1.73	
24 Acetone	43	2.954	2.954	0.000	98	19107	8.00	8.18	
26 Iodomethane	142	3.061	3.054	0.007	96	5258	2.00	1.90	
27 Carbon disulfide	76	3.119	3.118	0.001	99	28640	2.00	1.69	
29 Methyl acetate	43	3.176	3.176	0.000	97	12245	4.00	3.57	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	11410	2.00	1.65	
31 Methylene Chloride	84	3.297	3.297	0.000	91	13471	2.00	2.01	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	97	6328	20.0	15.0	
33 Acrylonitrile	53	3.455	3.455	0.000	96	33673	20.0	17.3	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	95	27213	2.00	1.66	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	9776	2.00	1.69	
37 Hexane	57	3.683	3.683	0.000	88	11365	2.00	1.59	
39 Vinyl acetate	43	3.784	3.783	0.001	97	28743	4.00	3.13	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	98	18317	2.00	1.73	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	98	16837	8.00	7.54	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	84	12253	2.00	1.77	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	74	14356	2.00	1.77	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	96	10662	48.0	36.8	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	6050	2.00	1.89	
53 Tetrahydrofuran	42	4.398	4.398	0.000	88	5217	4.00	3.45	
54 Chloroform	83	4.441	4.448	-0.007	93	18443	2.00	1.72	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	99	15195	2.00	1.74	
56 Cyclohexane	56	4.642	4.649	-0.007	86	14652	2.00	1.63	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	92	14223	2.00	1.67	
60 Isobutyl alcohol	41	4.713	4.706	0.007	74	4131	50.0	35.5	
59 Carbon tetrachloride	117	4.706	4.706	0.000	82	11093	2.00	1.57	
62 Benzene	78	4.849	4.849	0.000	93	44293	2.00	1.76	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	97	15265	2.00	1.91	
65 n-Heptane	43	5.028	5.035	-0.007	83	9701	2.00	1.85	
67 Trichloroethene	95	5.342	5.335	0.007	97	9994	2.00	1.68	
68 2-Pentanone	43	5.442	5.435	0.007	98	17190	6.40	5.99	
69 Methylcyclohexane	55	5.528	5.528	0.000	88	11028	2.00	1.68	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	92	11347	2.00	1.77	
72 1,4-Dioxane	88	5.593	5.578	0.015	76	3045	40.0	37.5	
73 Dibromomethane	93	5.614	5.614	0.000	93	6682	2.00	1.75	
74 Dichlorobromomethane	83	5.736	5.728	0.008	99	13742	2.00	1.70	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	82	5903	2.00	2.05	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	17190	2.00	1.81	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	26840	8.00	6.25	
79 Toluene	91	6.365	6.365	0.000	98	47540	2.00	1.75	
80 trans-1,3-Dichloropropene	75	6.544	6.543	0.001	93	13015	2.00	1.56	
81 Ethyl methacrylate	69	6.565	6.558	0.007	86	10574	2.00	1.55	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	86	10425	2.00	1.92	
83 Tetrachloroethene	164	6.808	6.808	0.000	91	8328	2.00	1.84	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	93	16506	2.00	1.73	
85 2-Hexanone	43	6.887	6.880	0.007	96	18479	8.00	6.19	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	9303	2.00	1.61	
88 Ethylene Dibromide	107	7.173	7.173	0.000	97	9711	2.00	1.78	
89 1-Chlorohexane	91	7.566	7.559	0.007	94	12457	1.60	1.48	
90 Chlorobenzene	112	7.602	7.602	0.000	97	31566	2.00	1.82	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	92	8390	2.00	1.50	
92 Ethylbenzene	106	7.680	7.673	0.007	98	17245	2.00	1.80	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	20990	2.00	1.83	
94 o-Xylene	106	8.152	8.152	0.000	96	21285	2.00	1.83	
95 Styrene	104	8.174	8.167	0.007	94	30966	2.00	1.68	
96 Bromoform	173	8.353	8.352	0.001	90	5478	2.00	1.57	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	48399	2.00	1.76	
99 Cyclohexanone	55	8.596	8.588	0.008	90	11401	60.0	49.2	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	12834	2.00	1.85	
101 Bromobenzene	156	8.810	8.810	0.000	94	12712	2.00	1.84	
102 trans-1,4-Dichloro-2-butene	53	8.824	8.817	0.007	61	2492	2.00	1.77	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	3692	2.00	1.75	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	13139	2.00	1.72	
105 2-Chlorotoluene	126	8.982	8.982	0.000	95	12213	2.00	1.80	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	39515	2.00	1.70	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	12100	2.00	1.72	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	91	34097	2.00	1.76	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	41968	2.00	1.75	
111 sec-Butylbenzene	134	9.590	9.582	0.008	93	10225	2.00	1.76	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	20930	2.00	1.64	
113 4-Isopropyltoluene	119	9.733	9.732	0.001	96	40766	2.00	1.70	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	25571	2.00	1.88	
116 n-Butylbenzene	91	10.140	10.140	0.000	96	34804	2.00	1.68	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	96	21390	2.00	1.74	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	43	1353	2.00	1.36	
120 1,2,4-Trichlorobenzene	180	11.778	11.770	0.008	93	10492	2.00	1.69	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	4199	2.00	1.86	
122 Naphthalene	128	12.042	12.035	0.007	97	26379	2.00	1.67	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	95	8290	2.00	1.77	
S 135 1,2-Dichloroethene, Total (URS)	96				0		4.00	3.45	
S 139 Xylenes, Total (URS)	1				0		4.00	3.66	
S 136 1,3-Dichloropropene, Total	1				0		4.00	3.37	
S 138 Xylenes, Total	106				0		4.00	3.66	
S 137 Total BTEX	1				0			8.97	
S 140 Trihalomethanes, Total	1				0		8.00	6.60	
S 141 1,2-Dichloroethene, Total	1				0		4.00	3.45	

QC Flag Legend

Processing Flags

Reagents:

Cal Dil Std_00162	Amount Added: 20.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

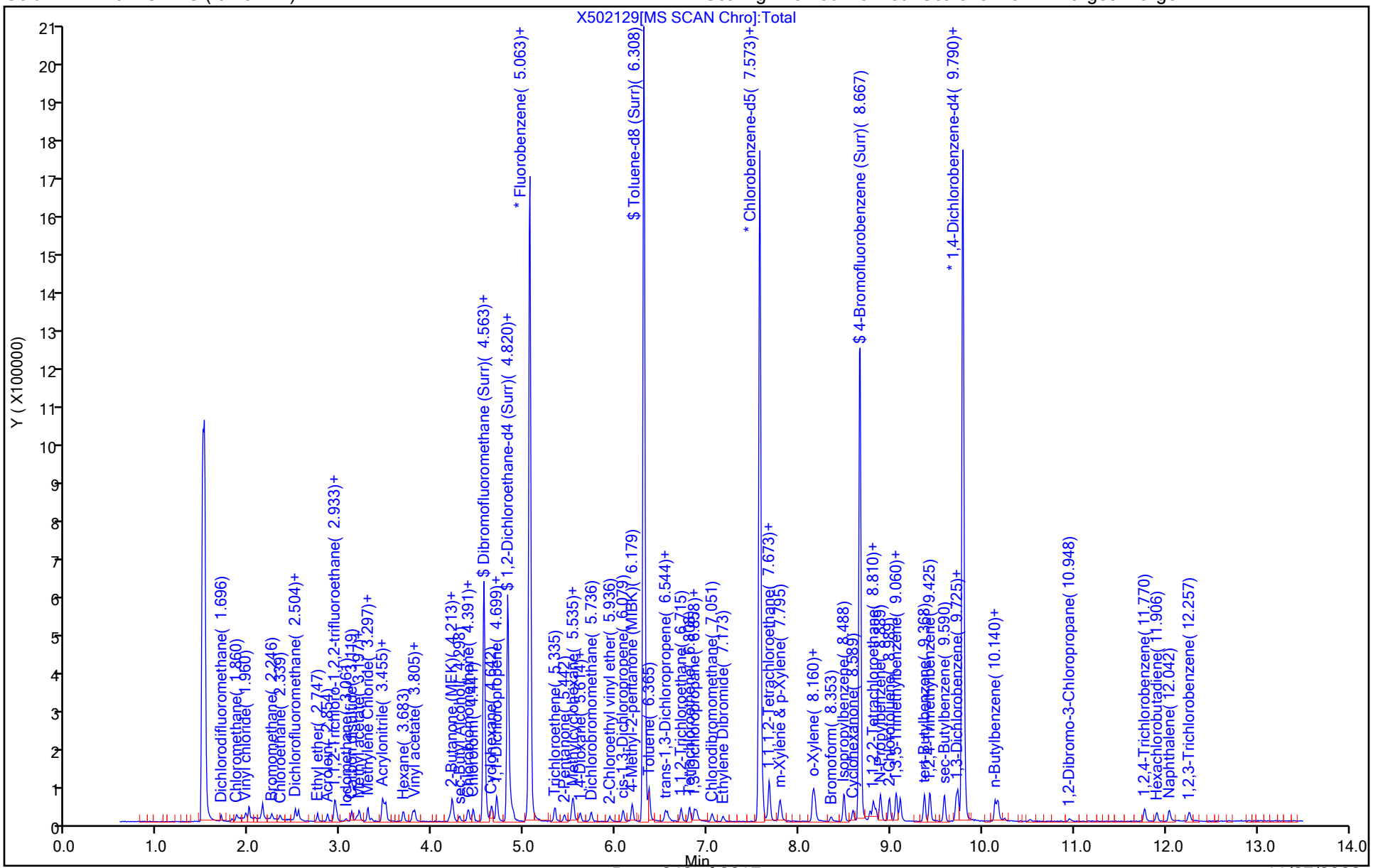
Report Date: 10-Apr-2023 11:27:01 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502129.D

Injection Date:	07-Apr-2023 03:55:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502130.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 07-Apr-2023 04:15:30 ALS Bottle#: 5 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:17:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1337910	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	312939	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	487009	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	318595	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	340158	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1314839	50.0	49.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	431339	50.0	49.6	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	29690	5.00	5.06	
11 Chloromethane	50	1.867	1.860	0.007	99	30373	5.00	5.09	
12 Vinyl chloride	62	1.960	1.960	0.000	97	30616	5.00	5.17	
14 Bromomethane	94	2.246	2.246	0.000	90	16566	5.00	5.11	
15 Chloroethane	64	2.339	2.339	0.000	98	21424	5.00	5.27	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	51426	5.00	5.07	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	97	37549	5.00	4.80	
19 Ethyl ether	59	2.747	2.747	0.000	88	23215	5.00	5.14	
21 Acrolein	56	2.854	2.854	0.000	99	38447	49.4	52.8	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	86	18269	5.00	4.94	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	98	24433	5.00	4.75	
24 Acetone	43	2.954	2.954	0.000	99	36169	20.0	20.2	
26 Iodomethane	142	3.061	3.054	0.007	99	21390	5.00	4.13	
27 Carbon disulfide	76	3.119	3.118	0.001	100	80848	5.00	4.85	
29 Methyl acetate	43	3.183	3.176	0.007	97	36777	10.0	10.9	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	90	37396	5.00	5.48	
31 Methylene Chloride	84	3.297	3.297	0.000	86	35804	5.00	5.43	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	24877	50.0	50.4	
33 Acrylonitrile	53	3.455	3.455	0.000	97	101841	50.0	53.1	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	89301	5.00	5.52	
35 trans-1,2-Dichloroethene	96	3.498	3.490	0.008	98	29443	5.00	5.16	
37 Hexane	57	3.683	3.683	0.000	91	32583	5.00	4.54	
39 Vinyl acetate	43	3.784	3.783	0.001	97	92305	10.0	10.2	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	97	55748	5.00	5.36	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	98	45431	20.0	20.7	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	80	38166	5.00	5.58	
48 2,2-Dichloropropane	77	4.227	4.220	0.007	89	38064	5.00	4.76	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	95	41713	120.0	115.5	
52 Chlorobromomethane	128	4.384	4.384	0.000	92	17299	5.00	5.49	
53 Tetrahydrofuran	42	4.398	4.398	0.000	86	15172	10.0	10.2	
54 Chloroform	83	4.441	4.448	-0.007	95	57954	5.00	5.47	
55 1,1,1-Trichloroethane	97	4.592	4.584	0.008	98	42581	5.00	4.96	
56 Cyclohexane	56	4.649	4.649	0.000	89	43802	5.00	4.95	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	95	41052	5.00	4.88	
60 Isobutyl alcohol	41	4.706	4.706	0.000	75	19923	125.0	129.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	92	33909	5.00	4.88	
62 Benzene	78	4.849	4.849	0.000	97	135707	5.00	5.46	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	98	42781	5.00	5.43	
65 n-Heptane	43	5.035	5.035	0.000	86	24184	5.00	4.69	
67 Trichloroethene	95	5.335	5.335	0.000	99	31994	5.00	5.35	
68 2-Pentanone	43	5.435	5.435	0.000	98	52743	16.0	16.0	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	30908	5.00	4.77	
70 1,2-Dichloropropane	63	5.543	5.535	0.007	95	33738	5.00	5.34	
72 1,4-Dioxane	88	5.578	5.578	0.000	92	8564	100.0	107.0	
73 Dibromomethane	93	5.614	5.614	0.000	95	18747	5.00	4.97	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	42619	5.00	5.36	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	93	14093	5.00	6.21	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	94	47976	5.00	5.03	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	87812	20.0	20.8	
79 Toluene	91	6.365	6.365	0.000	97	143890	5.00	5.37	
80 trans-1,3-Dichloropropene	75	6.544	6.543	0.001	96	41755	5.00	5.08	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	36500	5.00	5.34	
82 1,1,2-Trichloroethane	97	6.708	6.715	-0.007	92	29134	5.00	5.44	
83 Tetrachloroethene	164	6.801	6.808	-0.007	93	22024	5.00	4.85	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	49882	5.00	5.20	
85 2-Hexanone	43	6.880	6.880	0.000	94	58368	20.0	19.5	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	30139	5.00	5.21	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	29186	5.00	5.33	
89 1-Chlorohexane	91	7.559	7.559	0.000	95	31737	4.00	3.75	
90 Chlorobenzene	112	7.602	7.602	0.000	95	92586	5.00	5.31	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	91	30072	5.00	5.37	
92 Ethylbenzene	106	7.673	7.673	0.000	98	48039	5.00	5.01	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	58830	5.00	5.11	
94 o-Xylene	106	8.152	8.152	0.000	95	61746	5.00	5.29	
95 Styrene	104	8.167	8.167	0.000	94	97777	5.00	5.27	
96 Bromoform	173	8.353	8.352	0.001	94	17809	5.00	5.09	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	137693	5.00	4.98	
99 Cyclohexanone	55	8.589	8.588	0.000	90	43891	150.0	170.5	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	38489	5.00	5.52	
101 Bromobenzene	156	8.810	8.810	0.000	95	37243	5.00	5.35	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.817	-0.007	61	7396	5.00	4.43	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	10613	5.00	5.01	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	40306	5.00	5.25	
105 2-Chlorotoluene	126	8.989	8.982	0.007	97	38420	5.00	5.64	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	96	120120	5.00	5.15	
107 4-Chlorotoluene	126	9.103	9.103	0.000	98	36788	5.00	5.19	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	99040	5.00	5.08	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	125567	5.00	5.21	
111 sec-Butylbenzene	134	9.590	9.582	0.008	94	29211	5.00	5.01	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	67914	5.00	5.28	
113 4-Isopropyltoluene	119	9.733	9.732	0.001	97	119450	5.00	4.96	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	73232	5.00	5.36	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	106017	5.00	5.09	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	66425	5.00	5.37	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	84	7174	5.00	5.46	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	91	34150	5.00	5.48	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	11656	5.00	5.13	
122 Naphthalene	128	12.035	12.035	0.000	97	85174	5.00	5.36	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	95	24900	5.00	5.29	
S 135 1,2-Dichloroethene, Total (URS)	96				0		10.0	10.7	
S 139 Xylenes, Total (URS)	1				0		10.0	10.4	
S 136 1,3-Dichloropropene, Total	1				0		10.0	10.1	
S 138 Xylenes, Total	106				0		10.0	10.4	
S 137 Total BTEX	1				0			26.2	
S 140 Trihalomethanes, Total	1				0		20.0	21.1	
S 141 1,2-Dichloroethene, Total	1				0		10.0	10.7	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00150	Amount Added:	1.00	Units: uL	
MV-MegaMainA_00086	Amount Added:	2.50	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

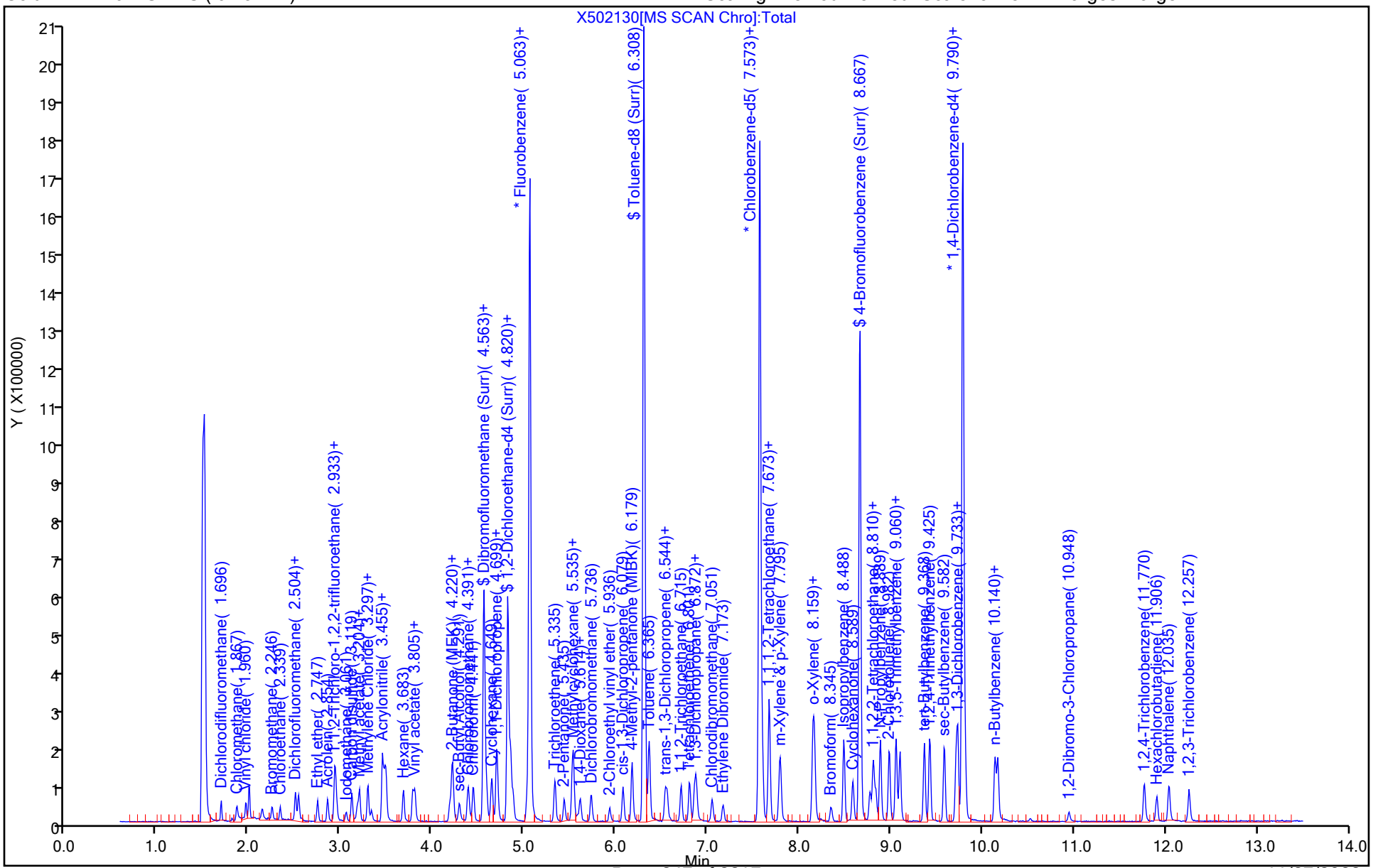
Report Date: 10-Apr-2023 11:27:04 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502130.D

Injection Date:	07-Apr-2023 04:15:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502128.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 07-Apr-2023 03:34:30 ALS Bottle#: 3 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:15:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1321475	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	303218	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	476794	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	318271	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	334967	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1295729	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	429272	50.0	50.4	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	5544	1.00	0.9561	
11 Chloromethane	50	1.867	1.860	0.007	97	5505	1.00	0.9344	
12 Vinyl chloride	62	1.967	1.960	0.007	97	5121	1.00	0.99	
14 Bromomethane	94	2.246	2.246	0.000	89	2737	1.00	0.8549	
15 Chloroethane	64	2.332	2.339	-0.007	95	4463	1.00	1.11	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	95	9428	1.00	0.9408	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	95	7834	1.00	1.01	
19 Ethyl ether	59	2.747	2.747	0.000	83	3577	1.00	0.8022	
21 Acrolein	56	2.854	2.854	0.000	95	6604	9.88	9.18	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.940	2.933	0.007	71	2962	1.00	0.8114	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	95	5380	1.00	1.06	
24 Acetone	43	2.954	2.954	0.000	99	12556	4.00	3.93	
26 Iodomethane	142	3.054	3.054	0.000	94	2269	1.00	1.50	
27 Carbon disulfide	76	3.118	3.118	0.000	99	16403	1.00	1.00	
29 Methyl acetate	43	3.183	3.176	0.007	97	5462	2.00	1.64	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	82	6388	1.00	0.9476	
31 Methylene Chloride	84	3.297	3.297	0.000	86	8188	1.00	1.26	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	99	3291	10.0	9.45	
33 Acrylonitrile	53	3.454	3.455	-0.001	98	16828	10.0	8.88	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	13865	1.00	0.8680	
35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	93	5628	1.00	1.00	
37 Hexane	57	3.676	3.683	-0.007	85	6800	1.00	0.9786	
39 Vinyl acetate	43	3.783	3.783	0.000	96	15894	2.00	1.78	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	9045	1.00	0.8797	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	100	7552	4.00	3.48	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	85	6426	1.00	0.9518	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	72	6866	1.00	0.8688	
50 sec-Butyl Alcohol	45	4.298	4.291	0.007	95	5594	24.0	24.6	
52 Chlorobromomethane	128	4.384	4.384	0.000	87	3076	1.00	0.9889	
53 Tetrahydrofuran	42	4.405	4.398	0.007	80	2622	2.00	1.78	
54 Chloroform	83	4.448	4.448	0.000	93	10105	1.00	0.9659	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	95	8113	1.00	0.9573	
56 Cyclohexane	56	4.641	4.649	-0.008	90	8471	1.00	0.9690	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	90	8745	1.00	1.05	
60 Isobutyl alcohol	41	4.713	4.706	0.007	67	2296	25.0	25.1	
59 Carbon tetrachloride	117	4.699	4.706	-0.007	89	6754	1.00	0.9847	
62 Benzene	78	4.856	4.849	0.007	92	22519	1.00	0.9173	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	96	6564	1.00	0.8435	
65 n-Heptane	43	5.035	5.035	0.000	77	4883	1.00	0.9584	
67 Trichloroethene	95	5.335	5.335	0.000	96	5414	1.00	0.9335	
68 2-Pentanone	43	5.442	5.435	0.007	97	7204	3.20	3.29	
69 Methylcyclohexane	55	5.528	5.528	0.000	87	5802	1.00	0.9064	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	79	4877	1.00	0.7812	
72 1,4-Dioxane	88	5.592	5.578	0.014	72	1363	20.0	17.2	a
73 Dibromomethane	93	5.614	5.614	0.000	89	3688	1.00	0.99	
74 Dichlorobromomethane	83	5.735	5.728	0.007	98	6802	1.00	0.8654	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	85	2272	1.00	0.2808	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	93	7535	1.00	0.8156	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	12812	4.00	3.07	
79 Toluene	91	6.365	6.365	0.000	97	25789	1.00	0.9751	
80 trans-1,3-Dichloropropene	75	6.551	6.543	0.008	94	6802	1.00	0.8386	
81 Ethyl methacrylate	69	6.565	6.558	0.007	90	5533	1.00	0.8352	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	4715	1.00	0.8920	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	3662	1.00	0.8319	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	89	8807	1.00	0.9477	
85 2-Hexanone	43	6.879	6.880	-0.001	92	9279	4.00	3.20	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	5211	1.00	0.9297	
88 Ethylene Dibromide	107	7.180	7.173	0.007	97	4655	1.00	0.8768	
89 1-Chlorohexane	91	7.566	7.559	0.007	33	8330	0.8000	1.01	
90 Chlorobenzene	112	7.602	7.602	0.000	96	15094	1.00	0.8936	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.673	-0.007	86	5143	1.00	0.9472	
92 Ethylbenzene	106	7.673	7.673	0.000	98	8553	1.00	0.9199	
93 m-Xylene & p-Xylene	106	7.809	7.795	0.014	0	10426	1.00	0.9353	
94 o-Xylene	106	8.152	8.152	0.000	97	10780	1.00	0.9532	
95 Styrene	104	8.174	8.167	0.007	93	15456	1.00	0.8602	
96 Bromoform	173	8.345	8.352	-0.007	94	3041	1.00	0.8976	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	26320	1.00	0.9725	
99 Cyclohexanone	55	8.596	8.588	0.008	88	4862	30.0	25.2	
100 1,1,2,2-Tetrachloroethane	83	8.781	8.774	0.007	93	5958	1.00	0.8725	
101 Bromobenzene	156	8.817	8.810	0.007	92	5972	1.00	0.8760	
102 trans-1,4-Dichloro-2-butene	53	8.831	8.817	0.014	43	1204	1.00	1.08	
103 1,2,3-Trichloropropane	110	8.831	8.839	-0.008	79	1911	1.00	0.9220	
104 N-Propylbenzene	120	8.896	8.889	0.007	98	7204	1.00	0.9580	
105 2-Chlorotoluene	126	8.996	8.982	0.014	95	5966	1.00	0.8939	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	23118	1.00	1.01	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	5848	1.00	0.8422	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	90	18284	1.00	0.9587	
110 1,2,4-Trimethylbenzene	105	9.432	9.425	0.007	97	21024	1.00	0.8904	
111 sec-Butylbenzene	134	9.589	9.582	0.007	93	5360	1.00	0.9382	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	96	11074	1.00	0.8798	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	96	21858	1.00	0.9277	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	13773	1.00	1.03	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	17367	1.00	0.8511	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	96	11605	1.00	0.9578	
118 1,2-Dibromo-3-Chloropropane	157	10.955	10.948	0.007	15	837	1.00	1.00	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	90	4847	1.00	0.7946	
121 Hexachlorobutadiene	225	11.913	11.906	0.007	85	1880	1.00	0.8455	
122 Naphthalene	128	12.042	12.035	0.007	97	12158	1.00	0.7812	
123 1,2,3-Trichlorobenzene	180	12.264	12.256	0.008	93	3483	1.00	0.7565	
S 135 1,2-Dichloroethene, Total (URS)	96				0		2.00	1.95	
S 139 Xylenes, Total (URS)	1				0		2.00	1.89	
S 136 1,3-Dichloropropene, Total	1				0		2.00	1.65	
S 138 Xylenes, Total	106				0		2.00	1.89	
S 137 Total BTEX	1				0			4.70	
S 140 Trihalomethanes, Total	1				0		4.00	3.66	
S 141 1,2-Dichloroethene, Total	1				0		2.00	1.95	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

Cal Dil Std_00162	Amount Added:	10.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

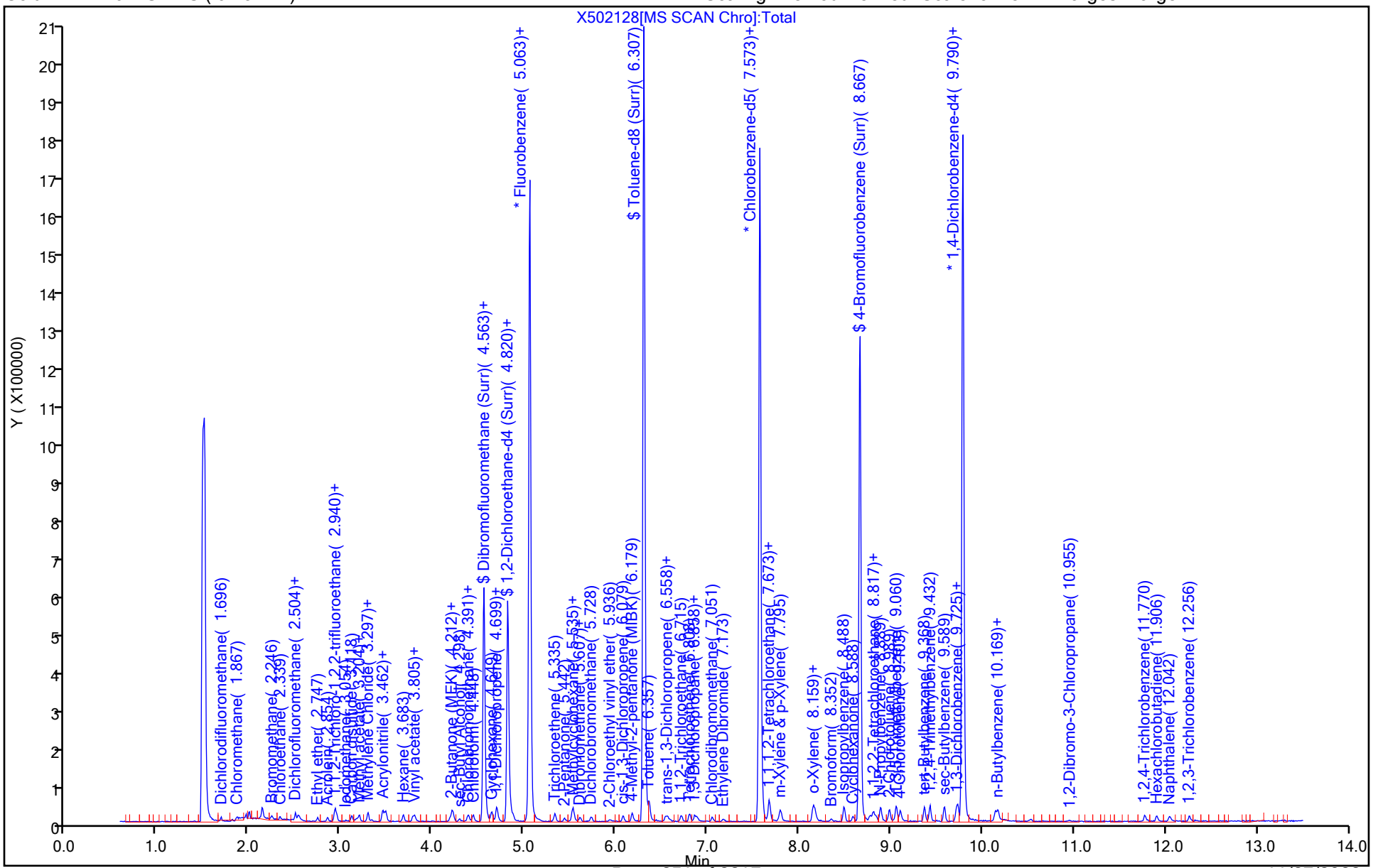
Report Date: 10-Apr-2023 11:27:07 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502128.D

Injection Date:	07-Apr-2023 03:34:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

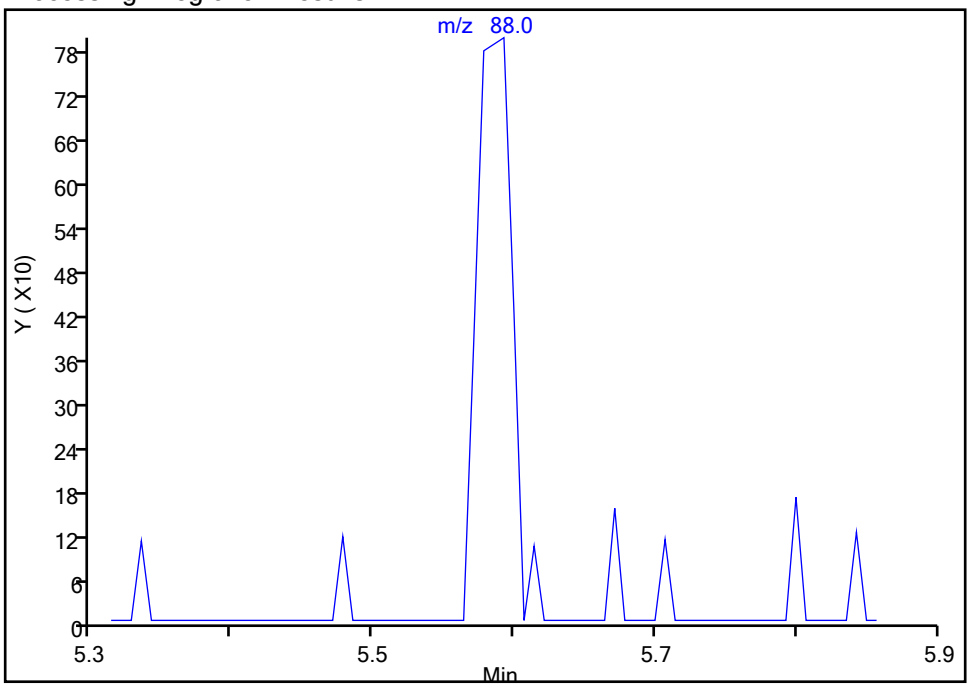
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502128.D
Injection Date: 07-Apr-2023 03:34:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 3 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

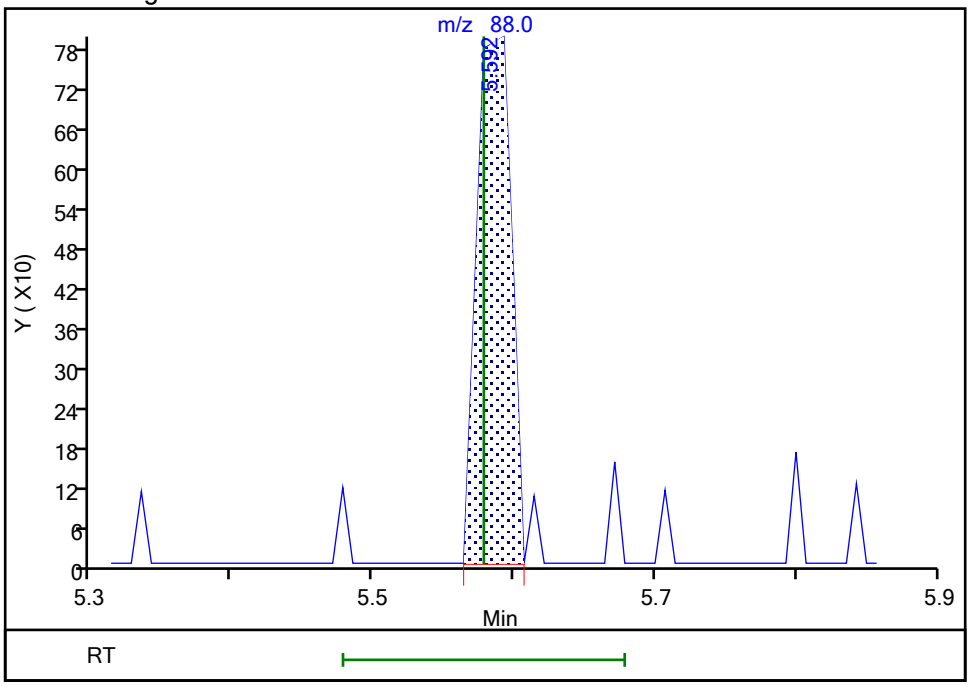
Not Detected
Expected RT: 5.58

Processing Integration Results



Manual Integration Results

RT: 5.59
Area: 1363
Amount: 17.247249
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:15:45
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 07-Apr-2023 03:14:30 ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: .5
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:10 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:13:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1347020	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	310688	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	484663	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	320846	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	334584	50.0	49.2	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1319319	50.0	49.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	87	425745	50.0	49.2	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	3233	0.5000	0.5470	
11 Chloromethane	50	1.860	1.860	0.000	97	3421	0.5000	0.5697	
12 Vinyl chloride	62	1.967	1.960	0.007	96	2925	0.5000	0.6178	
14 Bromomethane	94	2.246	2.246	0.000	90	1963	0.5000	0.6015	
15 Chloroethane	64	2.332	2.339	-0.007	77	1911	0.5000	0.4669	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	95	5236	0.5000	0.5126	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	94	4063	0.5000	0.5155	
19 Ethyl ether	59	2.747	2.747	0.000	89	2686	0.5000	0.5909	
21 Acrolein	56	2.854	2.854	0.000	95	3927	4.94	5.36	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	71	2615	0.5000	0.7028	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	97	3007	0.5000	0.5811	
24 Acetone	43	2.954	2.954	0.000	97	10634	2.00	2.44	
26 Iodomethane	142	3.061	3.054	0.007	72	1377	0.5000	1.38	a
27 Carbon disulfide	76	3.119	3.118	0.001	98	11096	0.5000	0.6617	
29 Methyl acetate	43	3.176	3.176	0.000	88	3507	1.00	1.03	
30 3-Chloro-1-propene	41	3.197	3.204	-0.007	87	3610	0.5000	0.5253	
31 Methylene Chloride	84	3.290	3.297	-0.007	86	6039	0.5000	0.9089	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	93	2320	5.00	7.50	
33 Acrylonitrile	53	3.455	3.455	0.000	96	10085	5.00	5.22	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	92	8375	0.5000	0.5143	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	94	2779	0.5000	0.4836	
37 Hexane	57	3.683	3.683	0.000	89	4165	0.5000	0.5850	
39 Vinyl acetate	43	3.784	3.783	0.001	97	9312	1.00	1.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	93	5388	0.5000	0.5141	
45 2-Butanone (MEK)	43	4.191	4.184	0.007	97	6157	2.00	2.78	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	84	3876	0.5000	0.5632	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	63	4452	0.5000	0.5527	
50 sec-Butyl Alcohol	45	4.298	4.291	0.007	95	3124	12.0	18.1	
52 Chlorobromomethane	128	4.391	4.384	0.007	90	1568	0.5000	0.4945	
53 Tetrahydrofuran	42	4.391	4.398	-0.007	67	1748	1.00	1.17	
54 Chloroform	83	4.441	4.448	-0.007	95	5777	0.5000	0.5417	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	93	4840	0.5000	0.5603	
56 Cyclohexane	56	4.656	4.649	0.007	80	4677	0.5000	0.5248	
57 1,1-Dichloropropene	75	4.706	4.699	0.007	93	4673	0.5000	0.5520	
60 Isobutyl alcohol	41	4.713	4.706	0.007	58	1239	12.5	18.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	76	3372	0.5000	0.4823	
62 Benzene	78	4.849	4.849	0.000	93	14297	0.5000	0.5713	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	92	5952	0.5000	0.7503	
65 n-Heptane	43	5.028	5.035	-0.007	78	3879	0.5000	0.7469	
67 Trichloroethene	95	5.335	5.335	0.000	95	2946	0.5000	0.4957	
68 2-Pentanone	43	5.450	5.435	0.015	97	4444	1.60	2.48	
69 Methylcyclohexane	55	5.528	5.528	0.000	87	3768	0.5000	0.5775	
70 1,2-Dichloropropane	63	5.543	5.535	0.008	93	3987	0.5000	0.6265	
72 1,4-Dioxane	88		5.578				ND	ND	
73 Dibromomethane	93	5.607	5.614	-0.007	90	2061	0.5000	0.5430	
74 Dichlorobromomethane	83	5.736	5.728	0.008	98	4442	0.5000	0.5544	
76 2-Chloroethyl vinyl ether	63	5.943	5.936	0.007	31	765	0.5000	-0.4931	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	91	4386	0.5000	0.4634	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	92	7832	2.00	1.84	
79 Toluene	91	6.365	6.365	0.000	97	14361	0.5000	0.5327	a
80 trans-1,3-Dichloropropene	75	6.544	6.543	0.001	94	3916	0.5000	0.4736	a
81 Ethyl methacrylate	69	6.565	6.558	0.007	63	3014	0.5000	0.4440	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	88	2702	0.5000	0.5015	
83 Tetrachloroethene	164	6.808	6.808	0.000	86	2660	0.5000	0.5897	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	4933	0.5000	0.5181	
85 2-Hexanone	43	6.887	6.880	0.007	87	4483	2.00	1.51	
87 Chlorodibromomethane	129	7.058	7.051	0.007	93	2816	0.5000	0.4903	
88 Ethylene Dibromide	107	7.173	7.173	0.000	94	2782	0.5000	0.5114	
89 1-Chlorohexane	91	7.559	7.559	0.000	33	5343	0.4000	0.6353	
90 Chlorobenzene	112	7.602	7.602	0.000	83	9647	0.5000	0.5574	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	41	2688	0.5000	0.4831	
92 Ethylbenzene	106	7.680	7.673	0.007	97	5836	0.5000	0.6126	
93 m-Xylene & p-Xylene	106	7.802	7.795	0.007	0	6176	0.5000	0.5407	
94 o-Xylene	106	8.152	8.152	0.000	96	6195	0.5000	0.5346	
95 Styrene	104	8.174	8.167	0.007	94	8736	0.5000	0.4745	
96 Bromoform	173	8.353	8.352	0.001	85	1656	0.5000	0.4770	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	14024	0.5000	0.5097	
99 Cyclohexanone	55	8.596	8.588	0.008	74	3115	15.0	18.2	
100 1,1,2,2-Tetrachloroethane	83	8.782	8.774	0.008	90	3054	0.5000	0.4400	
101 Bromobenzene	156	8.810	8.810	0.000	93	3764	0.5000	0.5431	
102 trans-1,4-Dichloro-2-butene	53		8.817				ND	ND	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	62	1211	0.5000	0.5748	
104 N-Propylbenzene	120	8.896	8.889	0.007	98	3276	0.5000	0.4286	
105 2-Chlorotoluene	126	8.989	8.982	0.007	93	3145	0.5000	0.4636	
106 1,3,5-Trimethylbenzene	105	9.068	9.060	0.008	91	11921	0.5000	0.5138	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.110	9.103	0.007	95	3836	0.5000	0.5435	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	10137	0.5000	0.5229	
110 1,2,4-Trimethylbenzene	105	9.432	9.425	0.007	97	12343	0.5000	0.5143	
111 sec-Butylbenzene	134	9.590	9.582	0.008	93	3271	0.5000	0.5632	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	95	6882	0.5000	0.5379	
113 4-Isopropyltoluene	119	9.740	9.732	0.008	96	12712	0.5000	0.5308	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	77	6956	0.5000	0.5118	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	10336	0.5000	0.4983	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	94	6463	0.5000	0.5247	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	1	338	0.5000	0.6382	
120 1,2,4-Trichlorobenzene	180	11.778	11.770	0.008	91	2093	0.5000	0.3375	
121 Hexachlorobutadiene	225	11.913	11.906	0.007	85	1540	0.5000	0.6813	
122 Naphthalene	128	12.049	12.035	0.014	94	7127	0.5000	0.4505	
123 1,2,3-Trichlorobenzene	180	12.271	12.256	0.015	86	2360	0.5000	0.5043	
S 135 1,2-Dichloroethene, Total (URS)	96				0		1.00	1.05	
S 139 Xylenes, Total (URS)	1				0		1.00	1.08	
S 136 1,3-Dichloropropene, Total	1				0		1.00	0.9370	
S 138 Xylenes, Total	106				0		1.00	1.08	
S 137 Total BTEX	1				0			2.79	
S 140 Trihalomethanes, Total	1				0		2.00	2.06	
S 141 1,2-Dichloroethene, Total	1				0		1.00	1.05	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

Cal Dil Std_00162	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

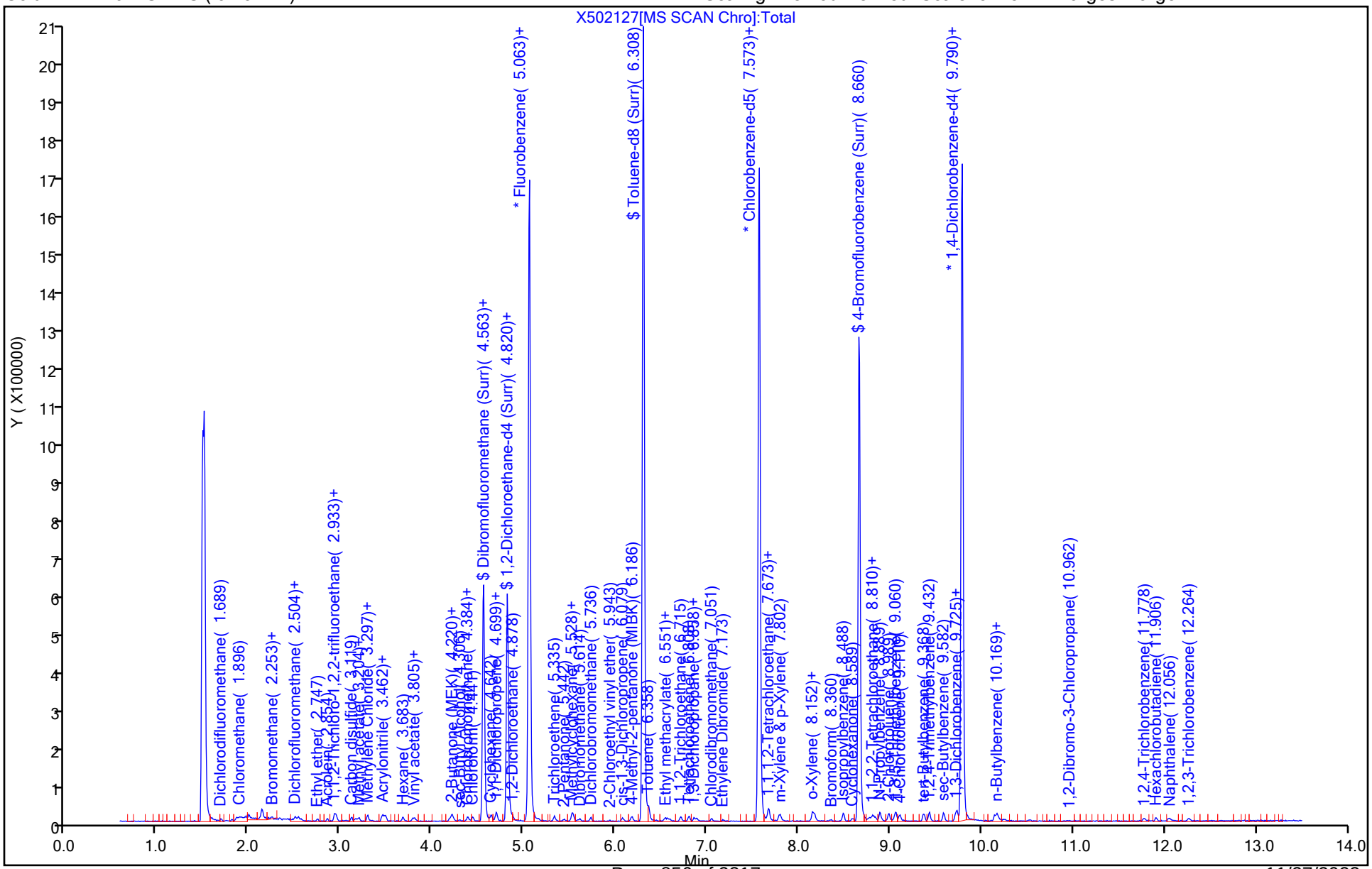
Report Date: 10-Apr-2023 11:27:11 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D

Injection Date:	07-Apr-2023 03:14:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

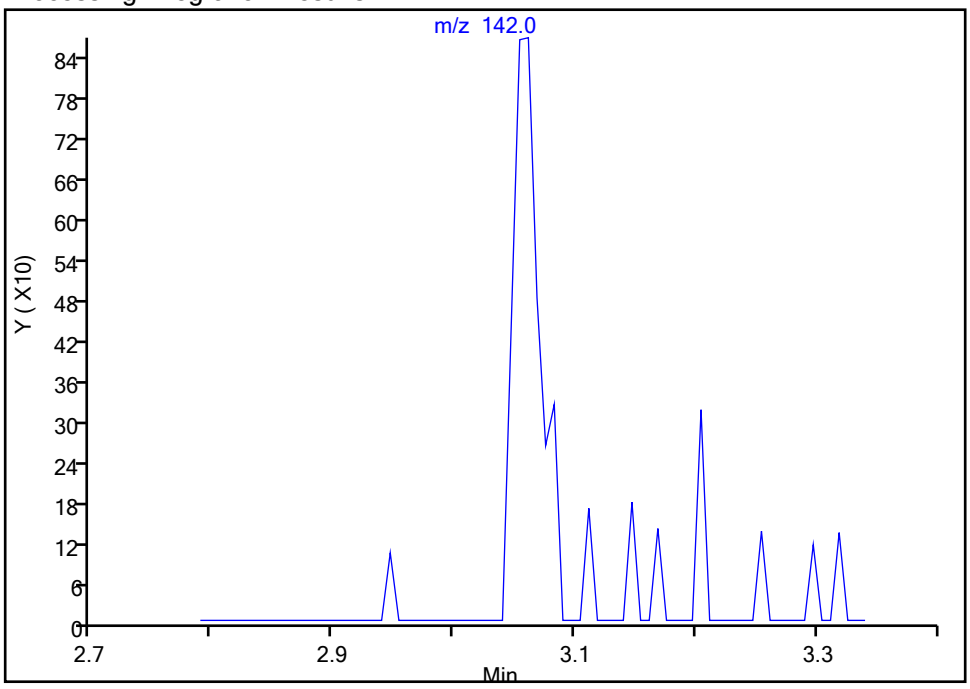
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Injection Date: 07-Apr-2023 03:14:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

26 Iodomethane, CAS: 74-88-4

Signal: 1

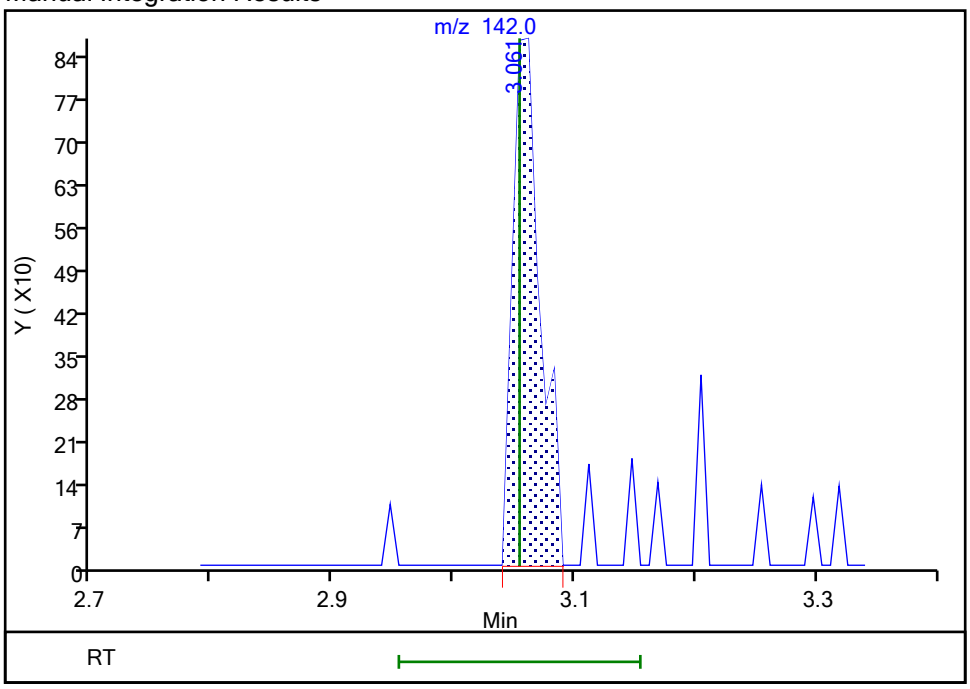
Not Detected
Expected RT: 3.05

Processing Integration Results



Manual Integration Results

RT: 3.06
Area: 1377
Amount: 1.375342
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:13:14
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

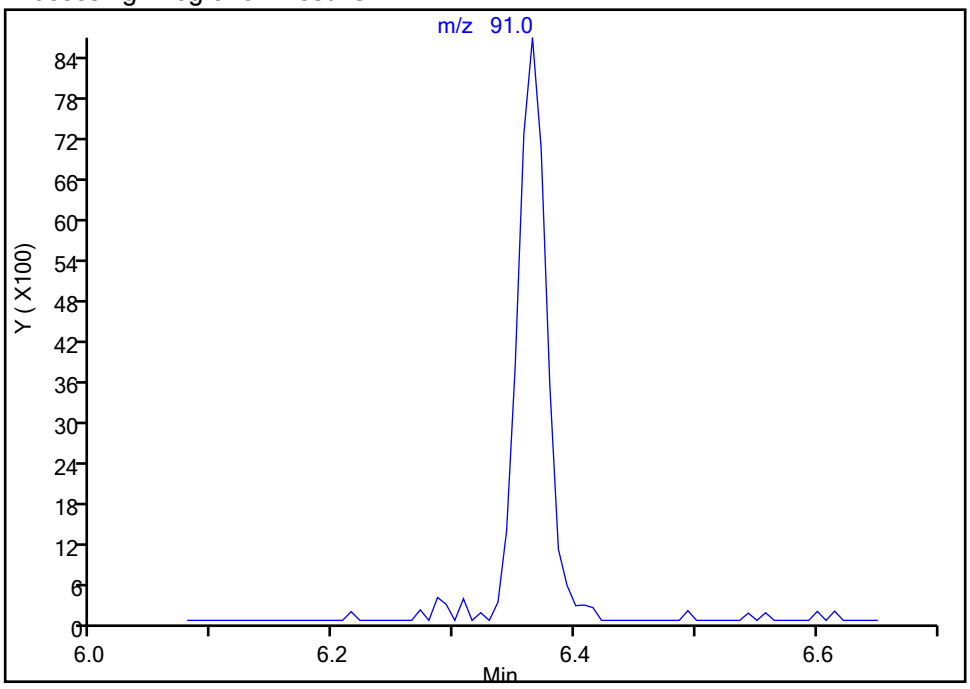
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Injection Date: 07-Apr-2023 03:14:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

79 Toluene, CAS: 108-88-3

Signal: 1

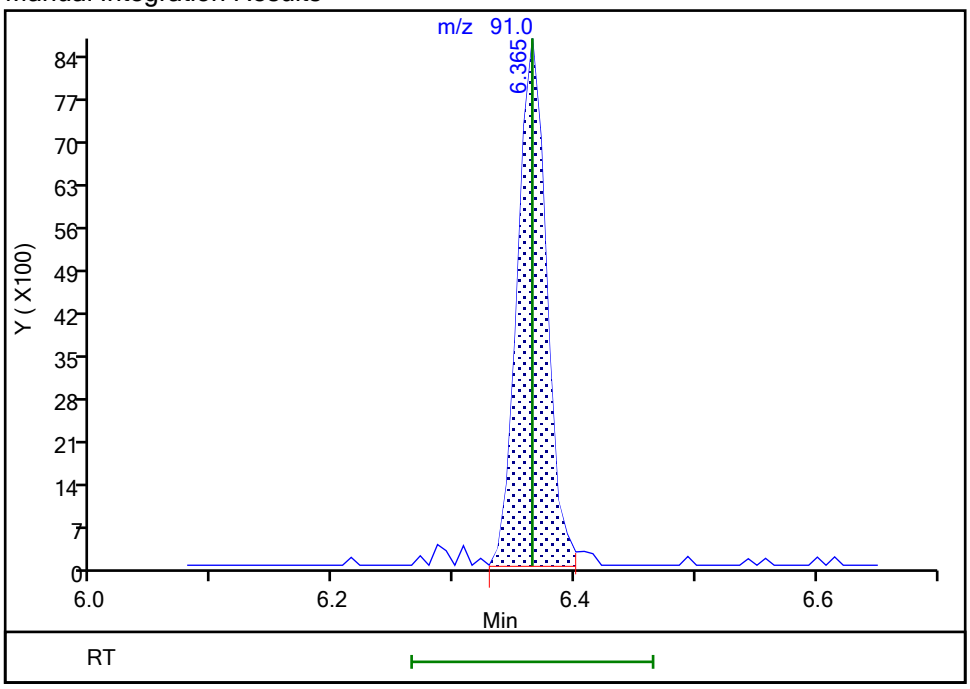
Not Detected
Expected RT: 6.36

Processing Integration Results



Manual Integration Results

RT: 6.36
Area: 14361
Amount: 0.532717
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:14:20
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

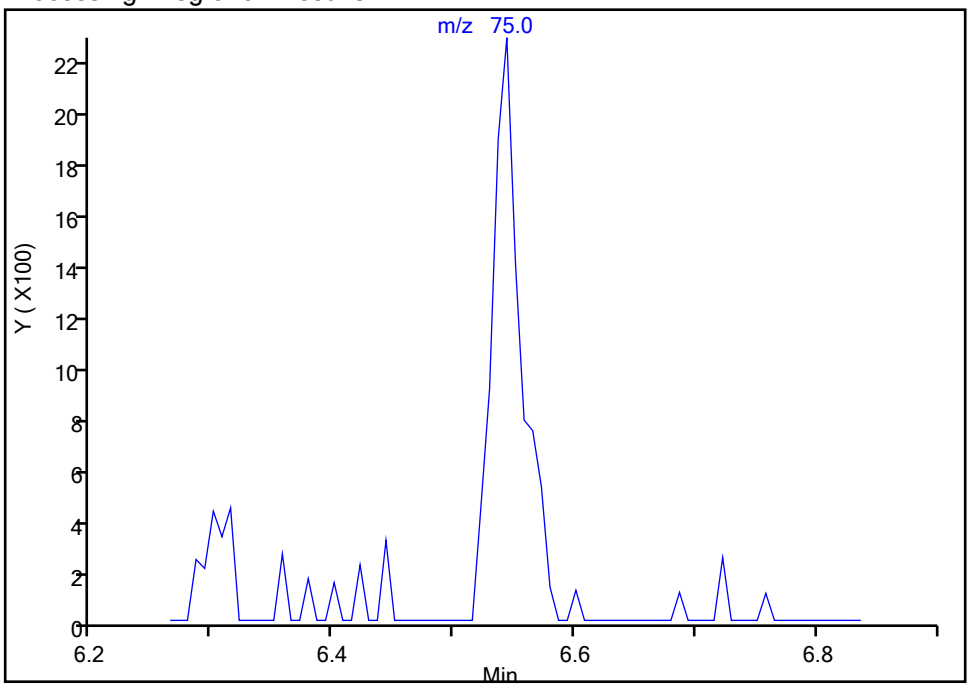
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Injection Date: 07-Apr-2023 03:14:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

80 trans-1,3-Dichloropropene, CAS: 10061-02-6

Signal: 1

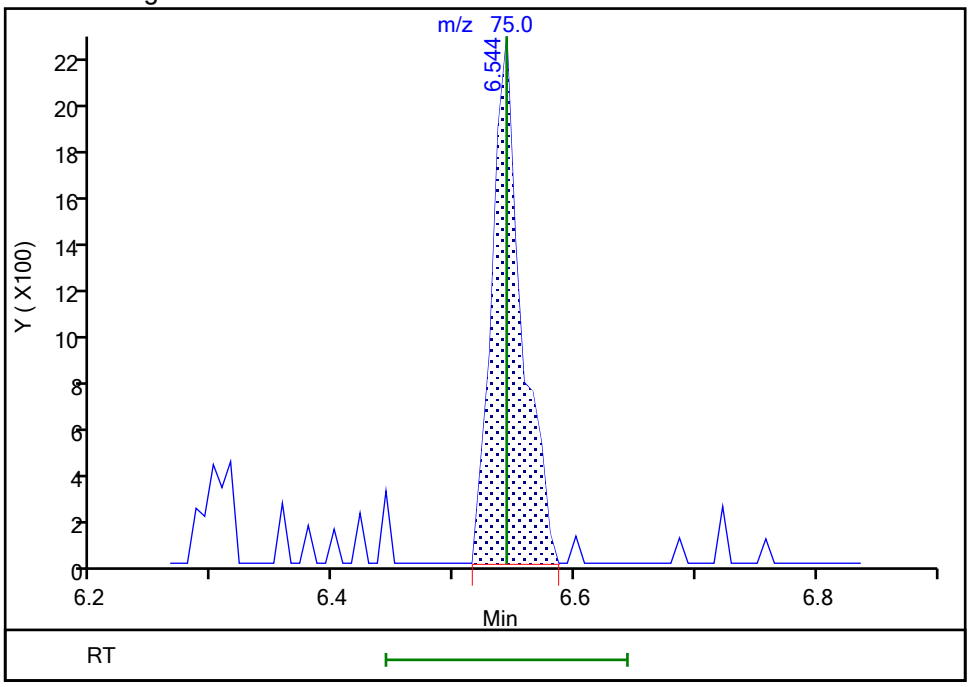
Not Detected
Expected RT: 6.54

Processing Integration Results



Manual Integration Results

RT: 6.54
Area: 3916
Amount: 0.473650
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:14:41
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

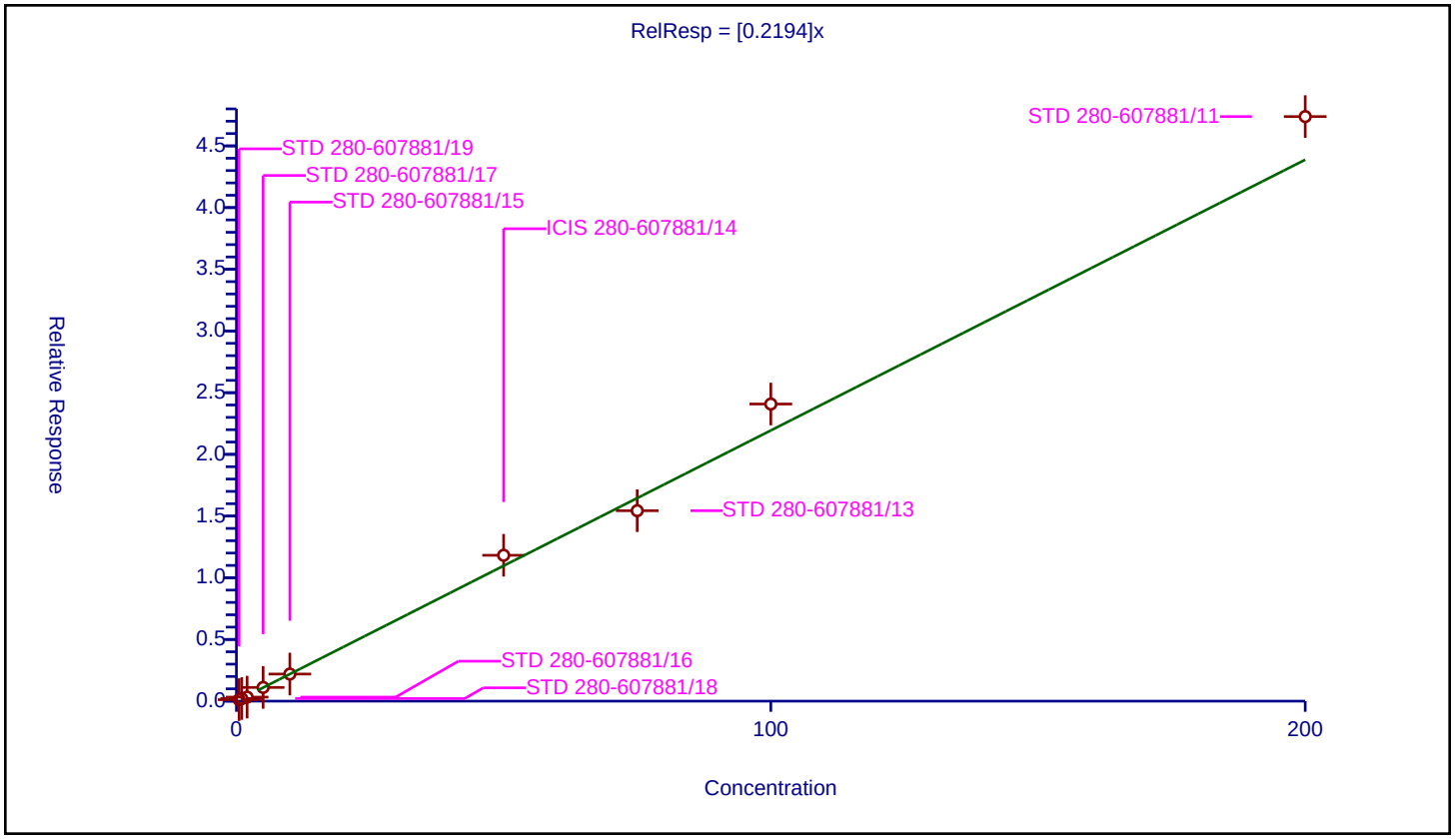
Curve Coefficients

Intercept:	0
Slope:	0.2194

Error Coefficients

Standard Error:	618000
Relative Standard Error:	11.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.120006	50.0	1347020.0	0.240011	Y
2	STD 280-607881/18	1.0	0.209766	50.0	1321475.0	0.209766	Y
3	STD 280-607881/16	2.0	0.326777	50.0	1358265.0	0.163389	Y
4	STD 280-607881/17	5.0	1.109566	50.0	1337910.0	0.221913	Y
5	STD 280-607881/15	10.0	2.196438	50.0	1371311.0	0.219644	Y
6	ICIS 280-607881/14	50.0	11.820712	50.0	1433467.0	0.236414	Y
7	STD 280-607881/13	75.0	15.434353	50.0	1474746.0	0.205791	Y
8	STD 280-607881/12	100.0	24.07937	50.0	1493380.0	0.240794	Y
9	STD 280-607881/11	200.0	47.376053	50.0	1569677.0	0.23688	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

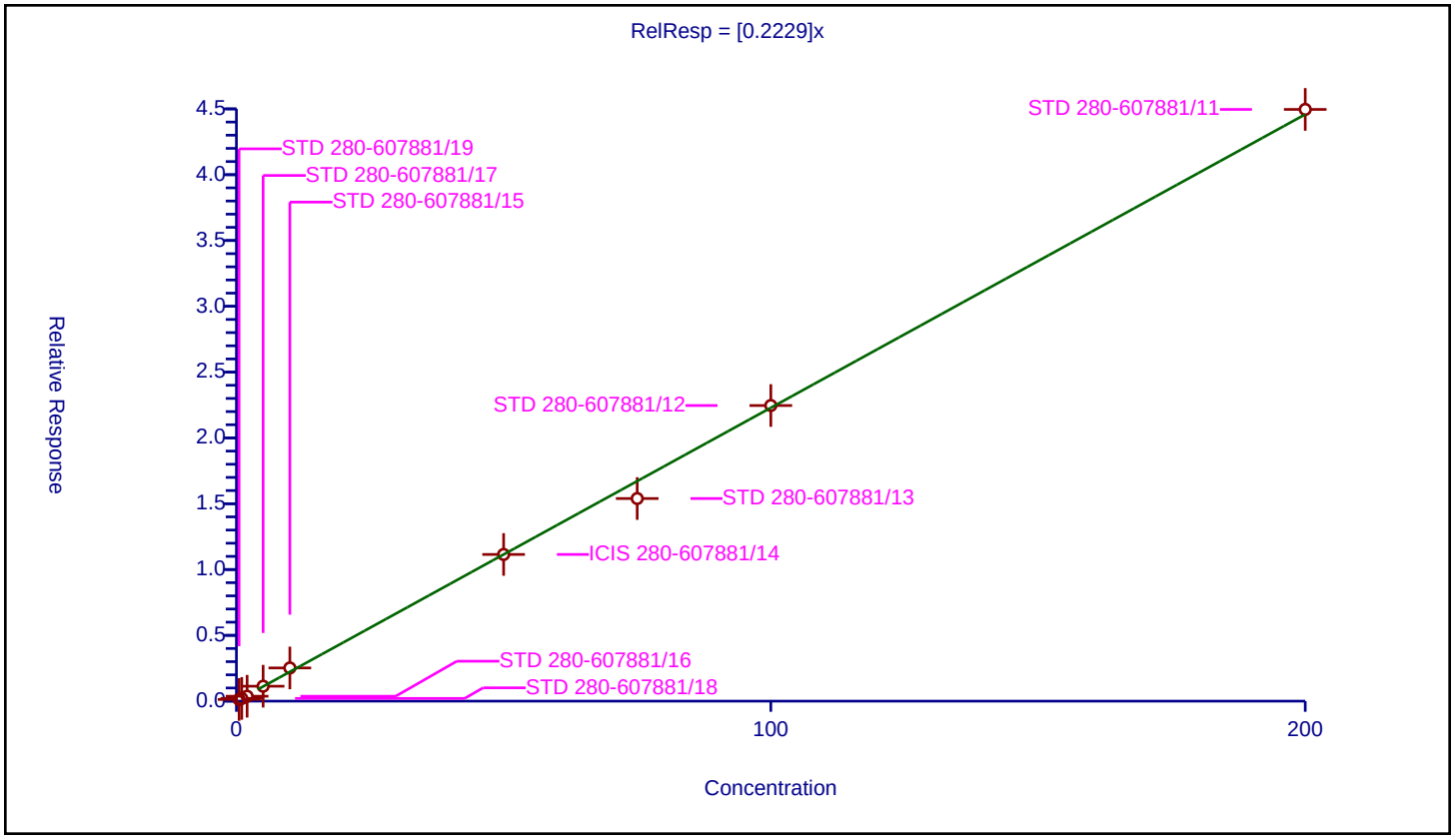
Curve Coefficients

Intercept:	0
Slope:	0.2229

Error Coefficients

Standard Error:	587000
Relative Standard Error:	9.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.126984	50.0	1347020.0	0.253968	Y
2	STD 280-607881/18	1.0	0.20829	50.0	1321475.0	0.20829	Y
3	STD 280-607881/16	2.0	0.37397	50.0	1358265.0	0.186985	Y
4	STD 280-607881/17	5.0	1.135091	50.0	1337910.0	0.227018	Y
5	STD 280-607881/15	10.0	2.523169	50.0	1371311.0	0.252317	Y
6	ICIS 280-607881/14	50.0	11.144519	50.0	1433467.0	0.22289	Y
7	STD 280-607881/13	75.0	15.395973	50.0	1474746.0	0.20528	Y
8	STD 280-607881/12	100.0	22.4622	50.0	1493380.0	0.224622	Y
9	STD 280-607881/11	200.0	44.958963	50.0	1569677.0	0.224795	Y



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Calibration / Vinyl chloride

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

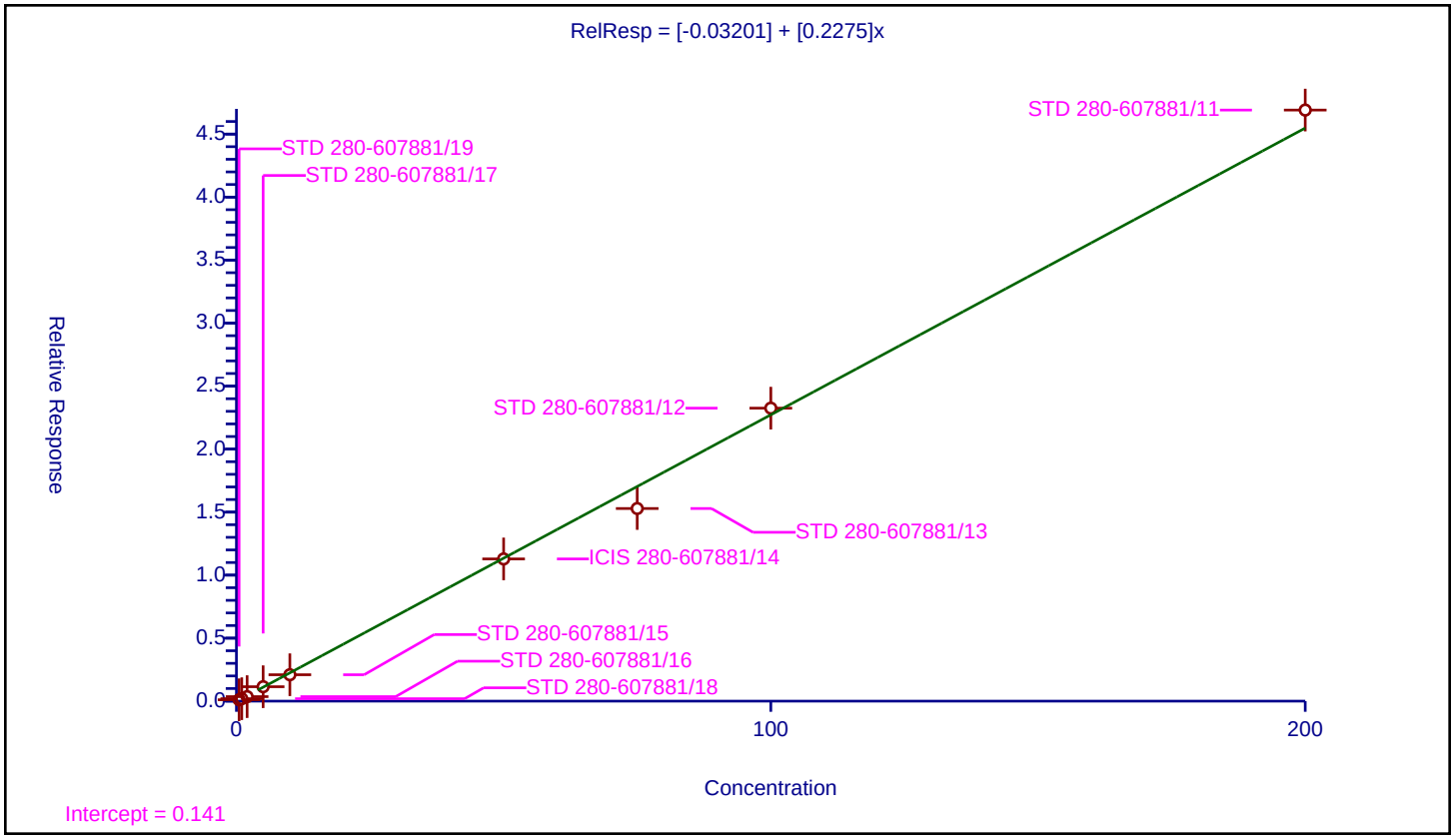
Curve Coefficients

Intercept:	-0.03201
Slope:	0.2275

Error Coefficients

Standard Error:	651000
Relative Standard Error:	11.6
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.108573	50.0	1347020.0	0.217146	Y
2	STD 280-607881/18	1.0	0.193761	50.0	1321475.0	0.193761	Y
3	STD 280-607881/16	2.0	0.35792	50.0	1358265.0	0.17896	Y
4	STD 280-607881/17	5.0	1.144173	50.0	1337910.0	0.228835	Y
5	STD 280-607881/15	10.0	2.09482	50.0	1371311.0	0.209482	Y
6	ICIS 280-607881/14	50.0	11.285436	50.0	1433467.0	0.225709	Y
7	STD 280-607881/13	75.0	15.286836	50.0	1474746.0	0.203824	Y
8	STD 280-607881/12	100.0	23.250278	50.0	1493380.0	0.232503	Y
9	STD 280-607881/11	200.0	46.907198	50.0	1569677.0	0.234536	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

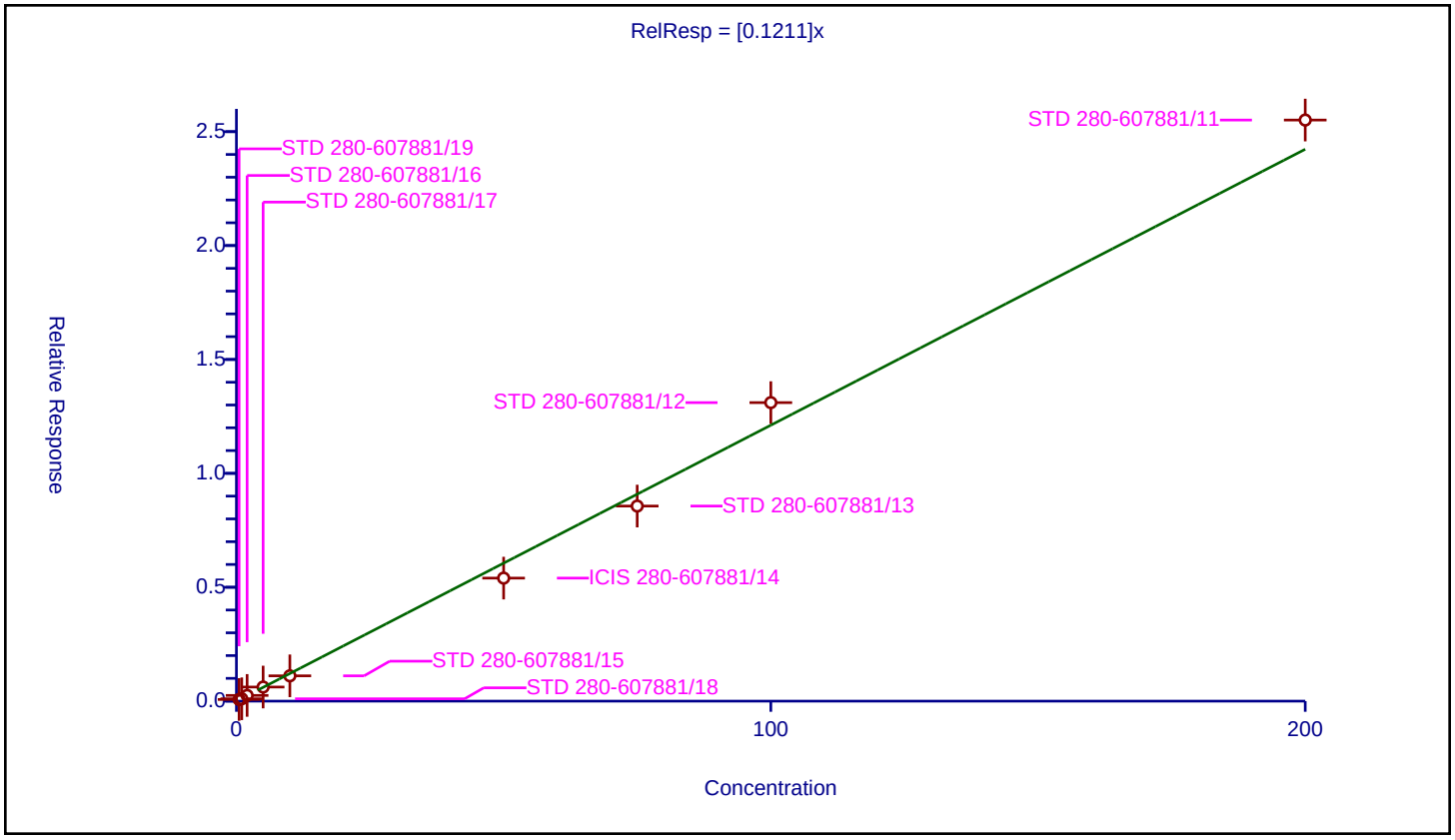
Curve Coefficients

Intercept:	0
Slope:	0.1211

Error Coefficients

Standard Error:	332000
Relative Standard Error:	10.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.072865	50.0	1347020.0	0.145729	Y
2	STD 280-607881/18	1.0	0.103559	50.0	1321475.0	0.103559	Y
3	STD 280-607881/16	2.0	0.250356	50.0	1358265.0	0.125178	Y
4	STD 280-607881/17	5.0	0.6191	50.0	1337910.0	0.12382	Y
5	STD 280-607881/15	10.0	1.111528	50.0	1371311.0	0.111153	Y
6	ICIS 280-607881/14	50.0	5.401799	50.0	1433467.0	0.108036	Y
7	STD 280-607881/13	75.0	8.56456	50.0	1474746.0	0.114194	Y
8	STD 280-607881/12	100.0	13.105573	50.0	1493380.0	0.131056	Y
9	STD 280-607881/11	200.0	25.510089	50.0	1569677.0	0.12755	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

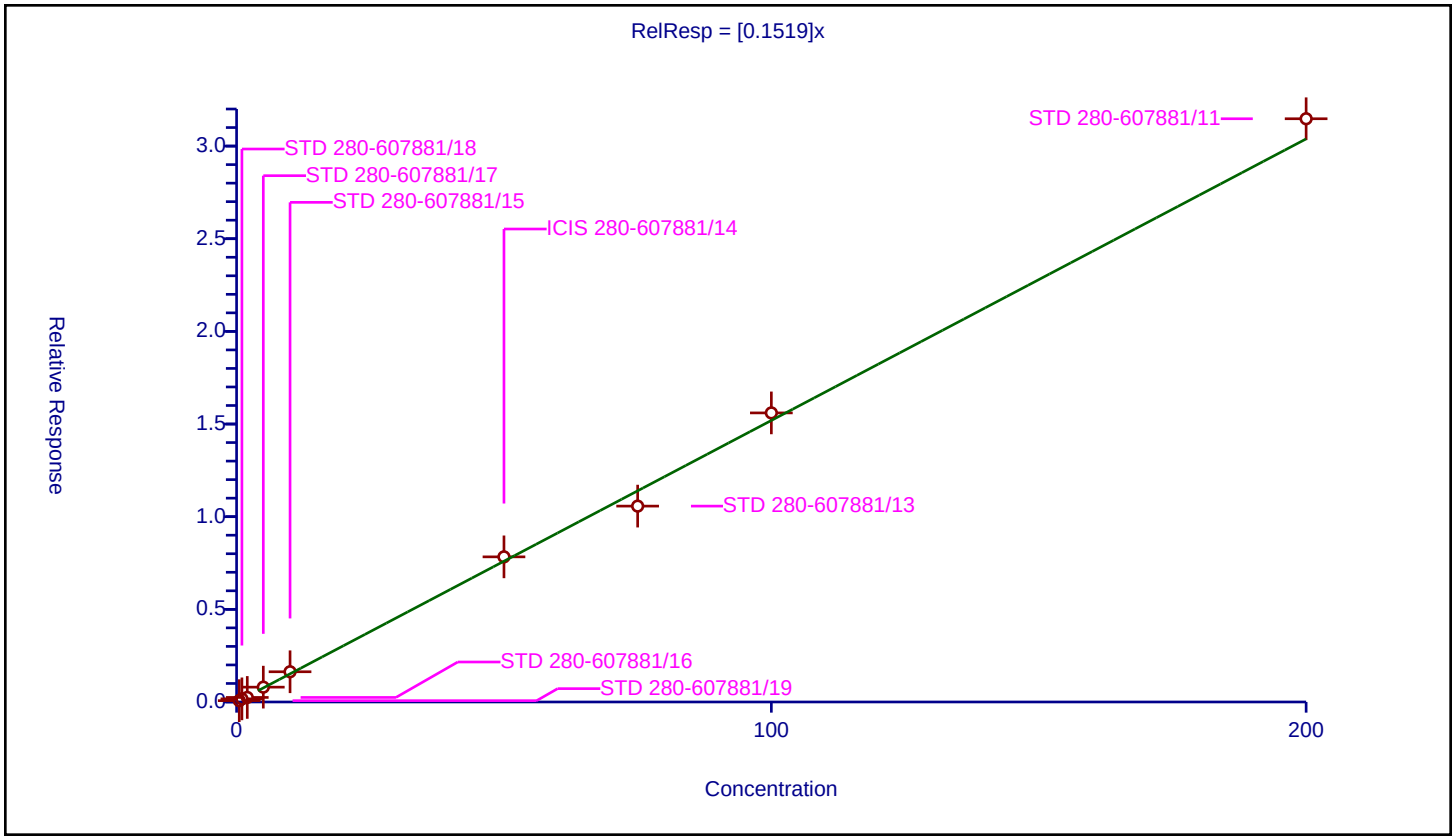
Curve Coefficients

Intercept:	0
Slope:	0.1519

Error Coefficients

Standard Error:	410000
Relative Standard Error:	9.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.070934	50.0	1347020.0	0.141869	Y
2	STD 280-607881/18	1.0	0.168864	50.0	1321475.0	0.168864	Y
3	STD 280-607881/16	2.0	0.244908	50.0	1358265.0	0.122454	Y
4	STD 280-607881/17	5.0	0.800652	50.0	1337910.0	0.16013	Y
5	STD 280-607881/15	10.0	1.631359	50.0	1371311.0	0.163136	Y
6	ICIS 280-607881/14	50.0	7.832235	50.0	1433467.0	0.156645	Y
7	STD 280-607881/13	75.0	10.571041	50.0	1474746.0	0.140947	Y
8	STD 280-607881/12	100.0	15.600919	50.0	1493380.0	0.156009	Y
9	STD 280-607881/11	200.0	31.474692	50.0	1569677.0	0.157373	Y



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Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

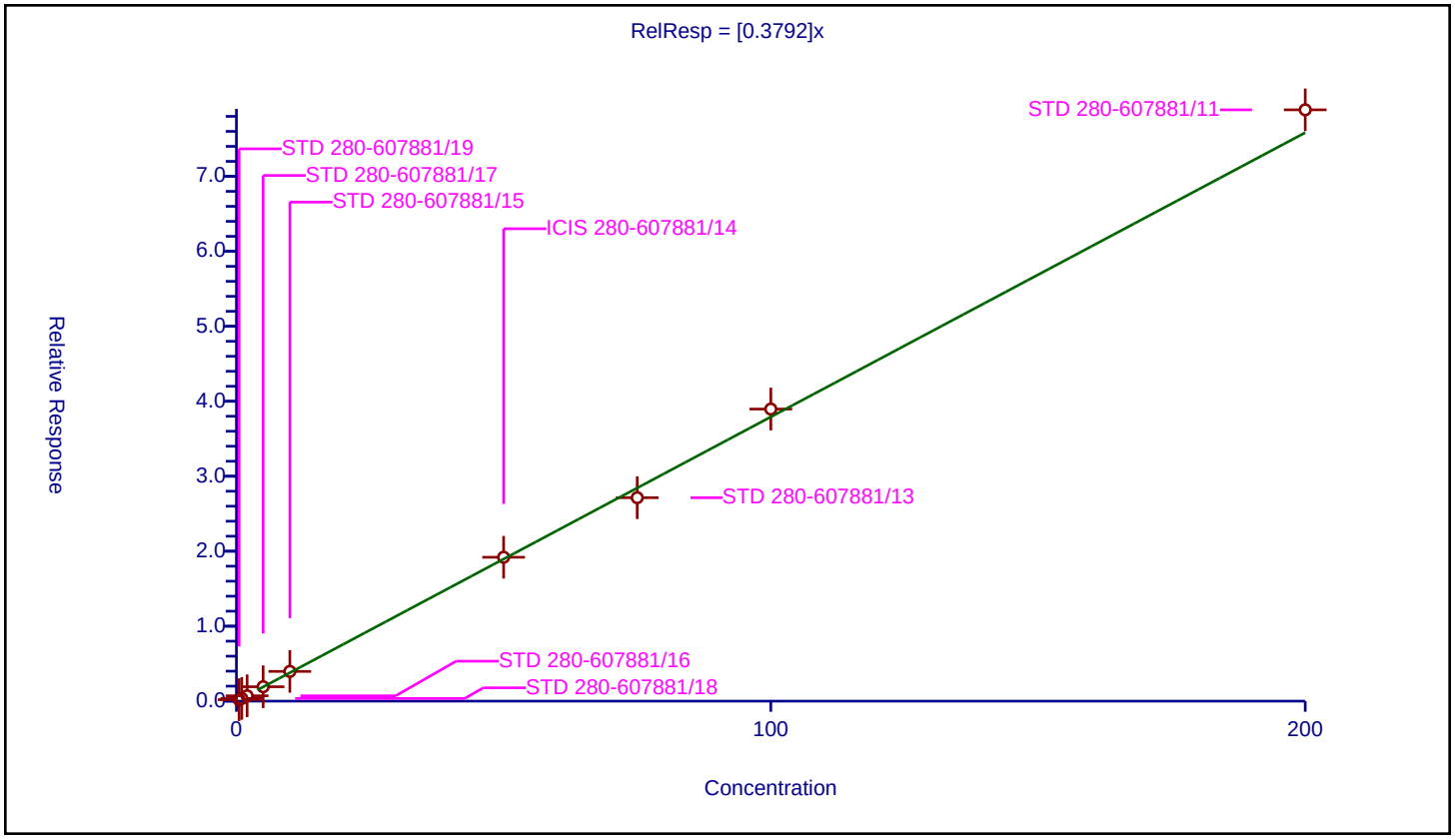
Curve Coefficients

Intercept:	0
Slope:	0.3792

Error Coefficients

Standard Error:	1030000
Relative Standard Error:	4.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.194355	50.0	1347020.0	0.38871	Y
2	STD 280-607881/18	1.0	0.356723	50.0	1321475.0	0.356723	Y
3	STD 280-607881/16	2.0	0.712748	50.0	1358265.0	0.356374	Y
4	STD 280-607881/17	5.0	1.921878	50.0	1337910.0	0.384376	Y
5	STD 280-607881/15	10.0	3.965038	50.0	1371311.0	0.396504	Y
6	ICIS 280-607881/14	50.0	19.194233	50.0	1433467.0	0.383885	Y
7	STD 280-607881/13	75.0	27.138945	50.0	1474746.0	0.361853	Y
8	STD 280-607881/12	100.0	38.960479	50.0	1493380.0	0.389605	Y
9	STD 280-607881/11	200.0	78.877087	50.0	1569677.0	0.394385	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

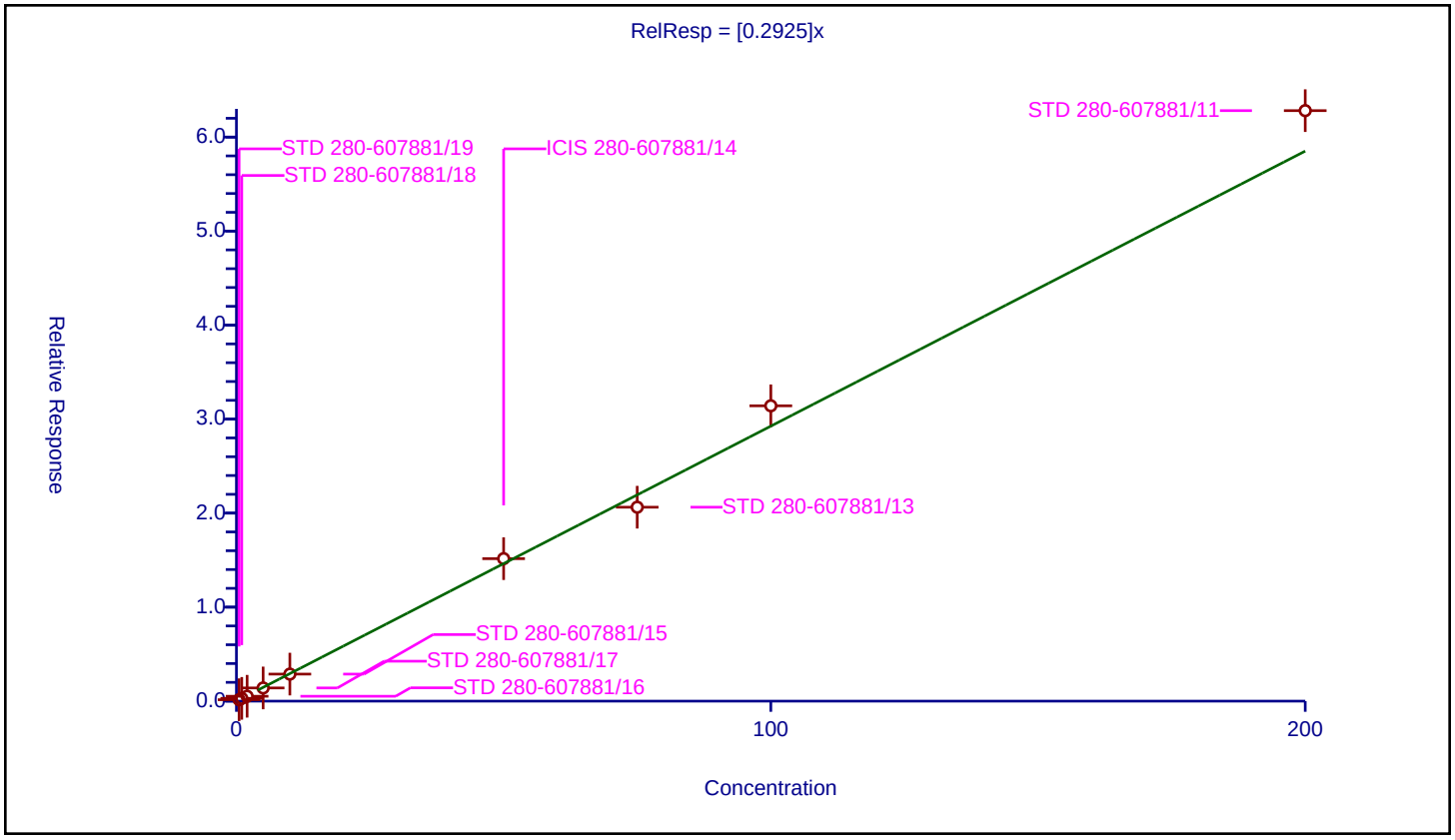
Curve Coefficients

Intercept:	0
Slope:	0.2925

Error Coefficients

Standard Error:	817000
Relative Standard Error:	6.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.150814	50.0	1347020.0	0.301629	Y
2	STD 280-607881/18	1.0	0.296411	50.0	1321475.0	0.296411	Y
3	STD 280-607881/16	2.0	0.520186	50.0	1358265.0	0.260093	Y
4	STD 280-607881/17	5.0	1.403271	50.0	1337910.0	0.280654	Y
5	STD 280-607881/15	10.0	2.876773	50.0	1371311.0	0.287677	Y
6	ICIS 280-607881/14	50.0	15.155005	50.0	1433467.0	0.3031	Y
7	STD 280-607881/13	75.0	20.630536	50.0	1474746.0	0.275074	Y
8	STD 280-607881/12	100.0	31.415983	50.0	1493380.0	0.31416	Y
9	STD 280-607881/11	200.0	62.813273	50.0	1569677.0	0.314066	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

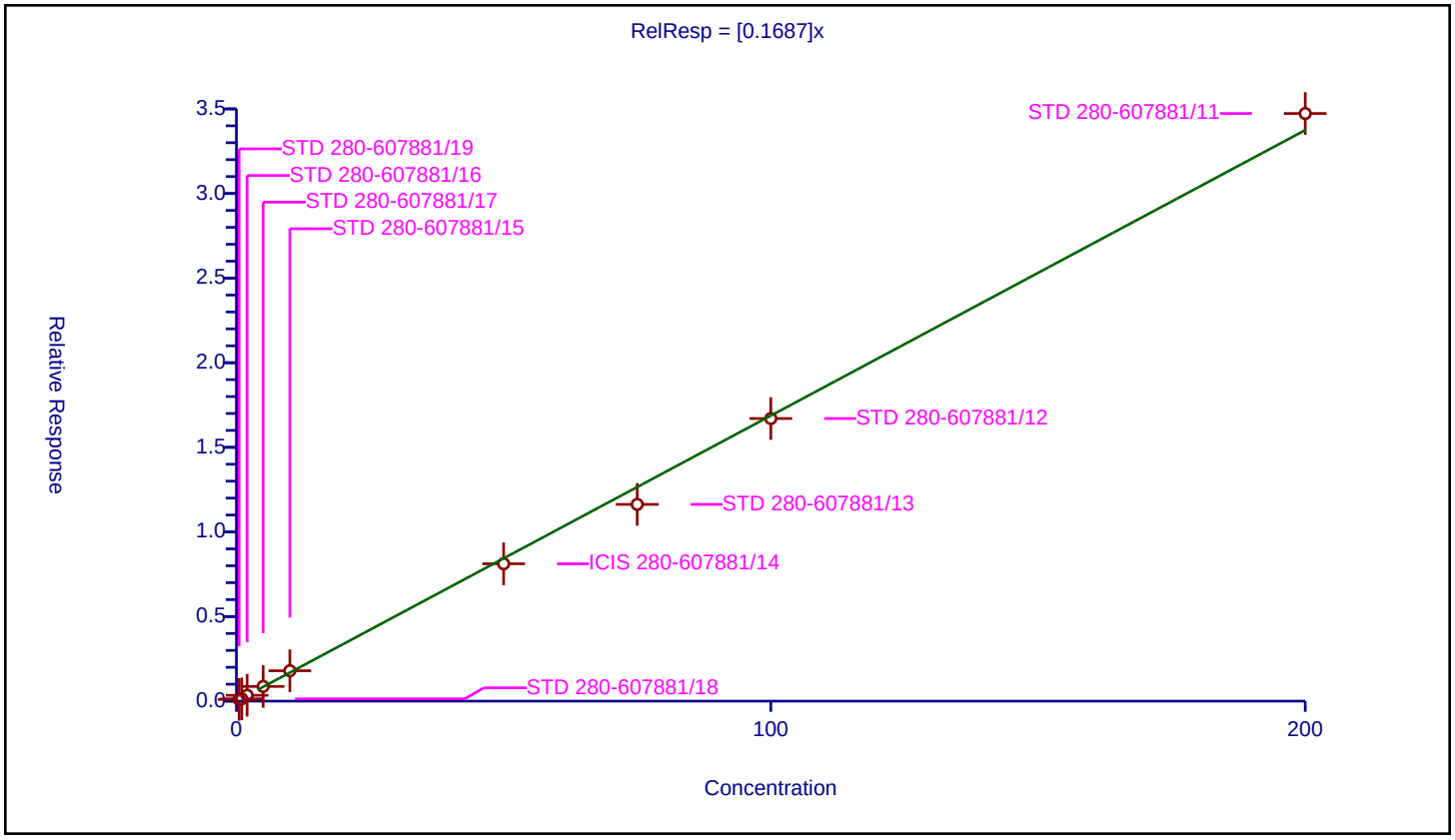
Curve Coefficients

Intercept:	0
Slope:	0.1687

Error Coefficients

Standard Error:	449000
Relative Standard Error:	10.4
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.099702	50.0	1347020.0	0.199403	Y
2	STD 280-607881/18	1.0	0.135341	50.0	1321475.0	0.135341	Y
3	STD 280-607881/16	2.0	0.34533	50.0	1358265.0	0.172665	Y
4	STD 280-607881/17	5.0	0.867585	50.0	1337910.0	0.173517	Y
5	STD 280-607881/15	10.0	1.795034	50.0	1371311.0	0.179503	Y
6	ICIS 280-607881/14	50.0	8.118255	50.0	1433467.0	0.162365	Y
7	STD 280-607881/13	75.0	11.62729	50.0	1474746.0	0.155031	Y
8	STD 280-607881/12	100.0	16.701978	50.0	1493380.0	0.16702	Y
9	STD 280-607881/11	200.0	34.727145	50.0	1569677.0	0.173636	Y



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Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

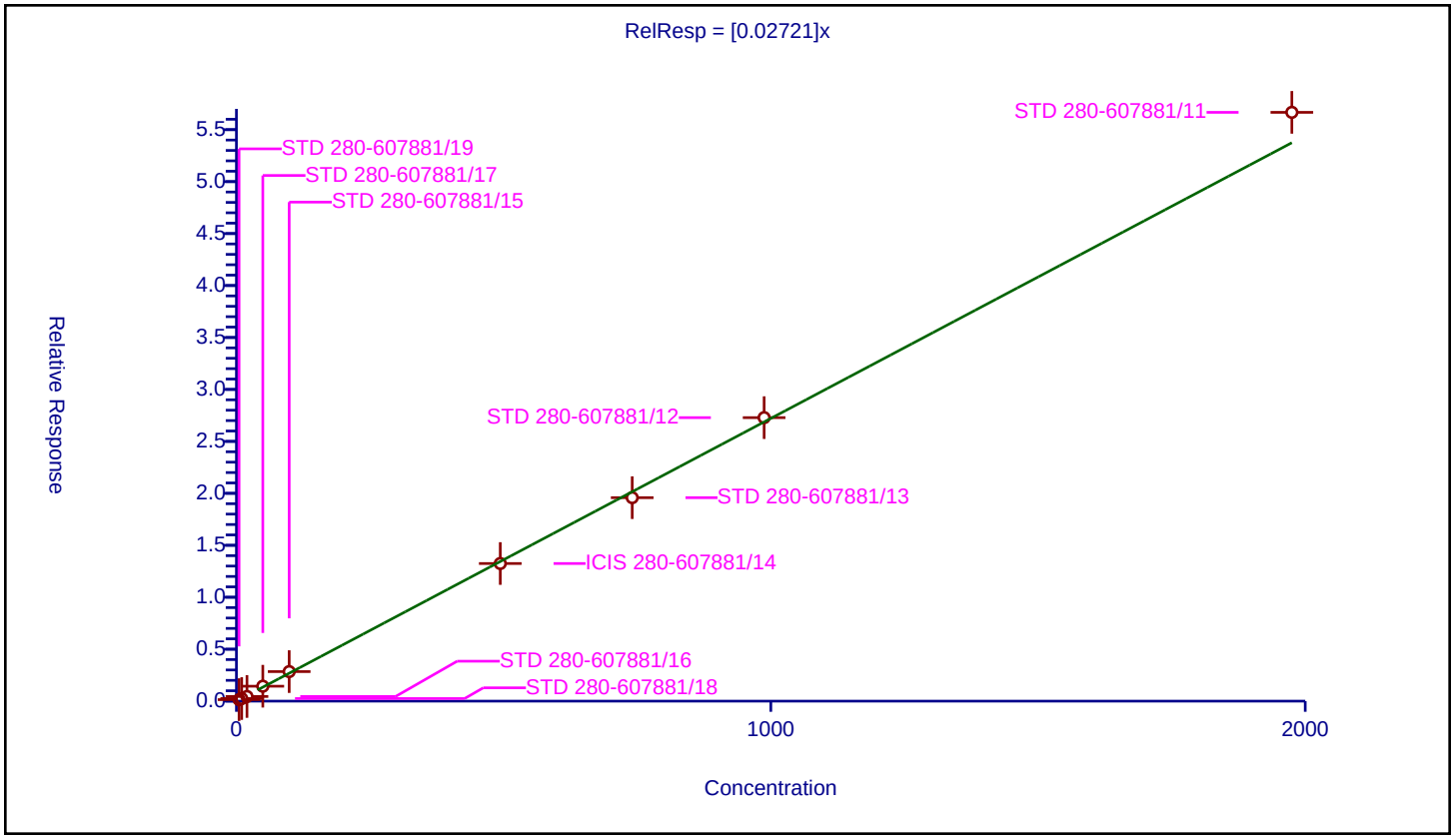
Curve Coefficients

Intercept:	0
Slope:	0.02721

Error Coefficients

Standard Error:	734000
Relative Standard Error:	8.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	4.9375	0.145766	50.0	1347020.0	0.029522	Y
2	STD 280-607881/18	9.875	0.249872	50.0	1321475.0	0.025304	Y
3	STD 280-607881/16	19.75	0.446305	50.0	1358265.0	0.022598	Y
4	STD 280-607881/17	49.375	1.436831	50.0	1337910.0	0.0291	Y
5	STD 280-607881/15	98.75	2.843629	50.0	1371311.0	0.028796	Y
6	ICIS 280-607881/14	493.75	13.244881	50.0	1433467.0	0.026825	Y
7	STD 280-607881/13	740.625	19.581643	50.0	1474746.0	0.026439	Y
8	STD 280-607881/12	987.5	27.286558	50.0	1493380.0	0.027632	Y
9	STD 280-607881/11	1975.0	56.666881	50.0	1569677.0	0.028692	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

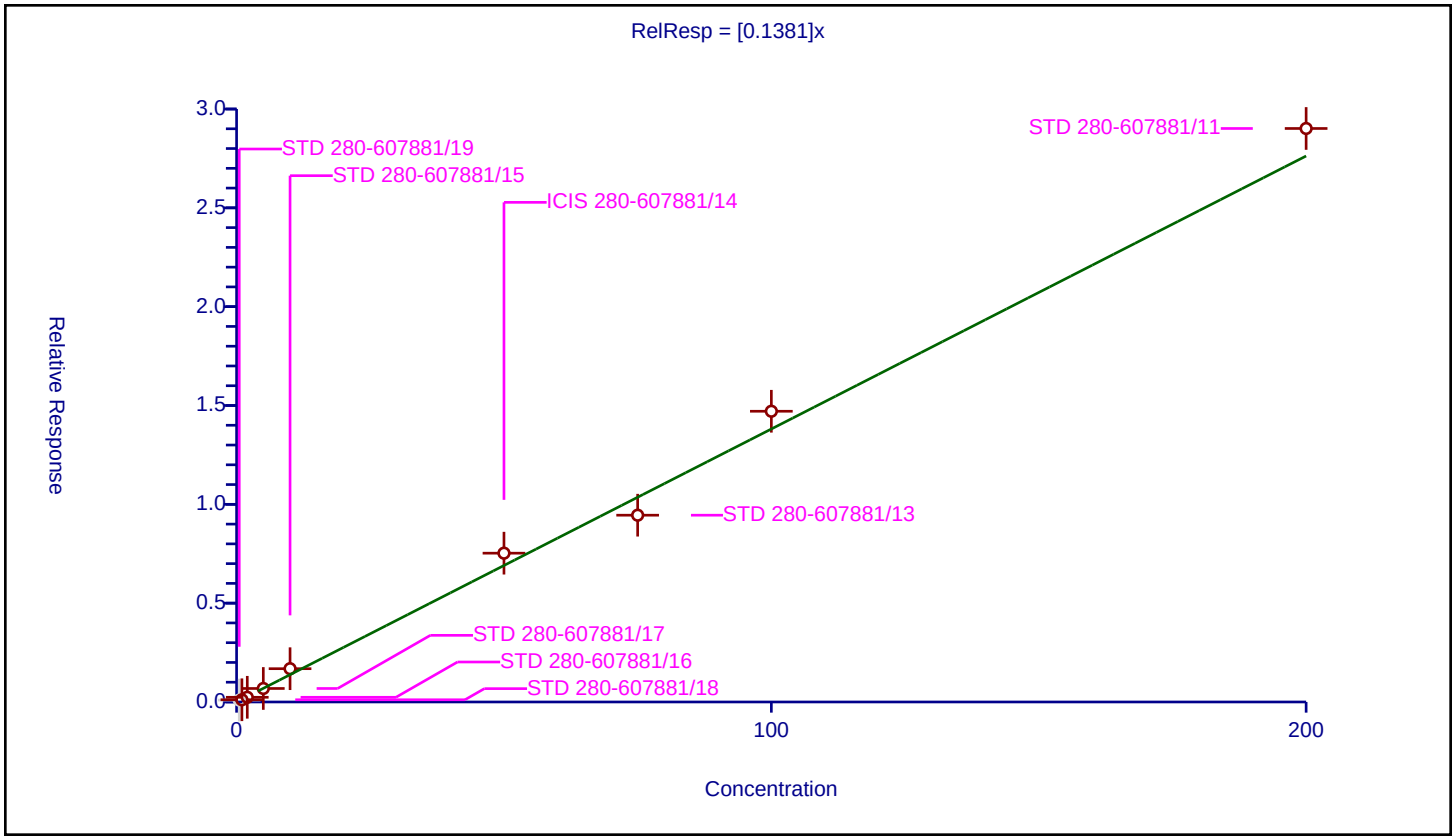
Curve Coefficients

Intercept:	0
Slope:	0.1381

Error Coefficients

Standard Error:	405000
Relative Standard Error:	13.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.097066	50.0	1347020.0	0.194132	N
2	STD 280-607881/18	1.0	0.112072	50.0	1321475.0	0.112072	Y
3	STD 280-607881/16	2.0	0.238319	50.0	1358265.0	0.119159	Y
4	STD 280-607881/17	5.0	0.682744	50.0	1337910.0	0.136549	Y
5	STD 280-607881/15	10.0	1.68379	50.0	1371311.0	0.168379	Y
6	ICIS 280-607881/14	50.0	7.529193	50.0	1433467.0	0.150584	Y
7	STD 280-607881/13	75.0	9.450102	50.0	1474746.0	0.126001	Y
8	STD 280-607881/12	100.0	14.709351	50.0	1493380.0	0.147094	Y
9	STD 280-607881/11	200.0	29.015747	50.0	1569677.0	0.145079	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

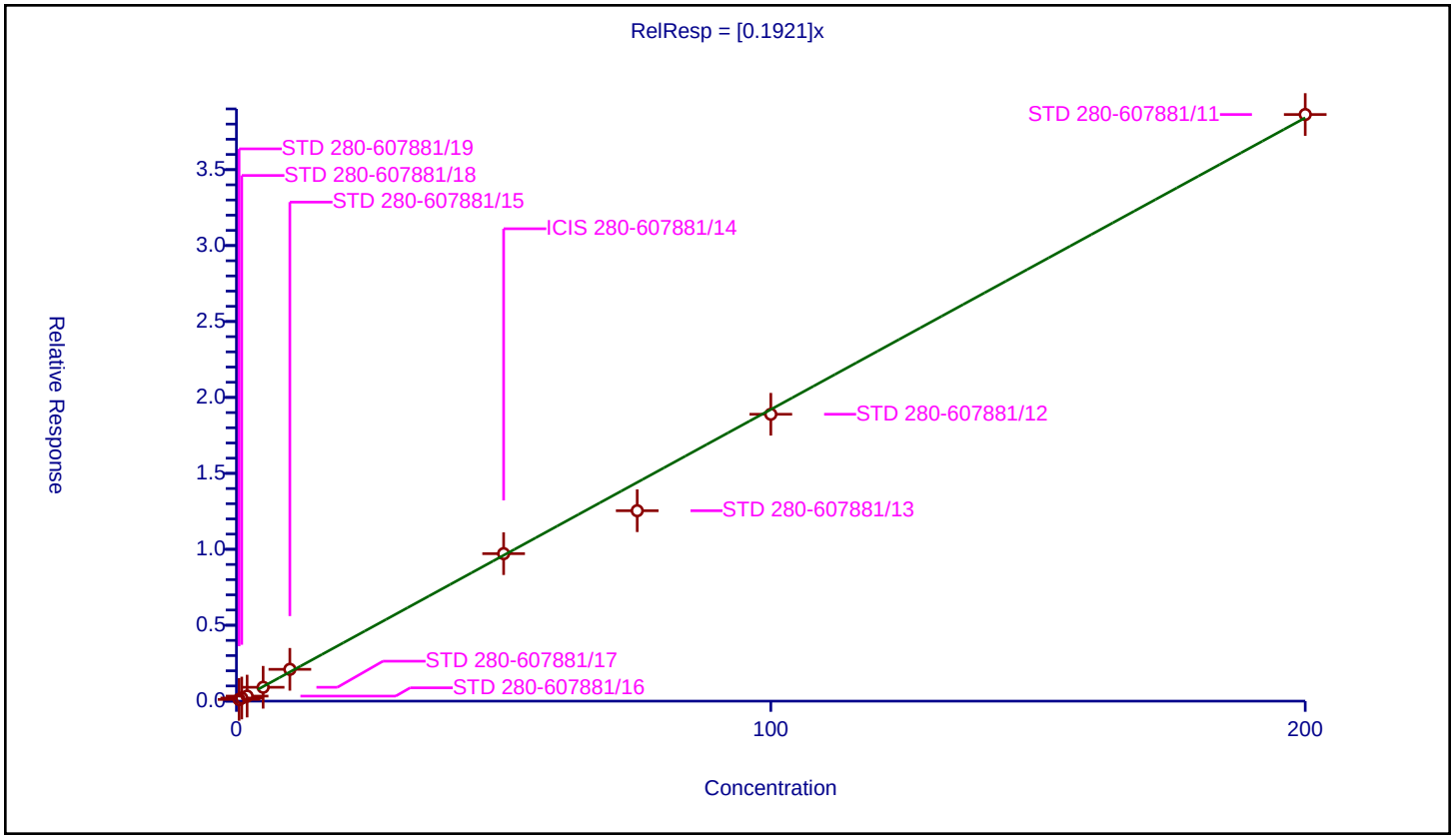
Curve Coefficients

Intercept:	0
Slope:	0.1921

Error Coefficients

Standard Error:	501000
Relative Standard Error:	9.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.111617	50.0	1347020.0	0.223234	Y
2	STD 280-607881/18	1.0	0.20356	50.0	1321475.0	0.20356	Y
3	STD 280-607881/16	2.0	0.332373	50.0	1358265.0	0.166186	Y
4	STD 280-607881/17	5.0	0.913103	50.0	1337910.0	0.182621	Y
5	STD 280-607881/15	10.0	2.094784	50.0	1371311.0	0.209478	Y
6	ICIS 280-607881/14	50.0	9.712292	50.0	1433467.0	0.194246	Y
7	STD 280-607881/13	75.0	12.539007	50.0	1474746.0	0.167187	Y
8	STD 280-607881/12	100.0	18.892077	50.0	1493380.0	0.188921	Y
9	STD 280-607881/11	200.0	38.630209	50.0	1569677.0	0.193151	Y



Calibration / Acetone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

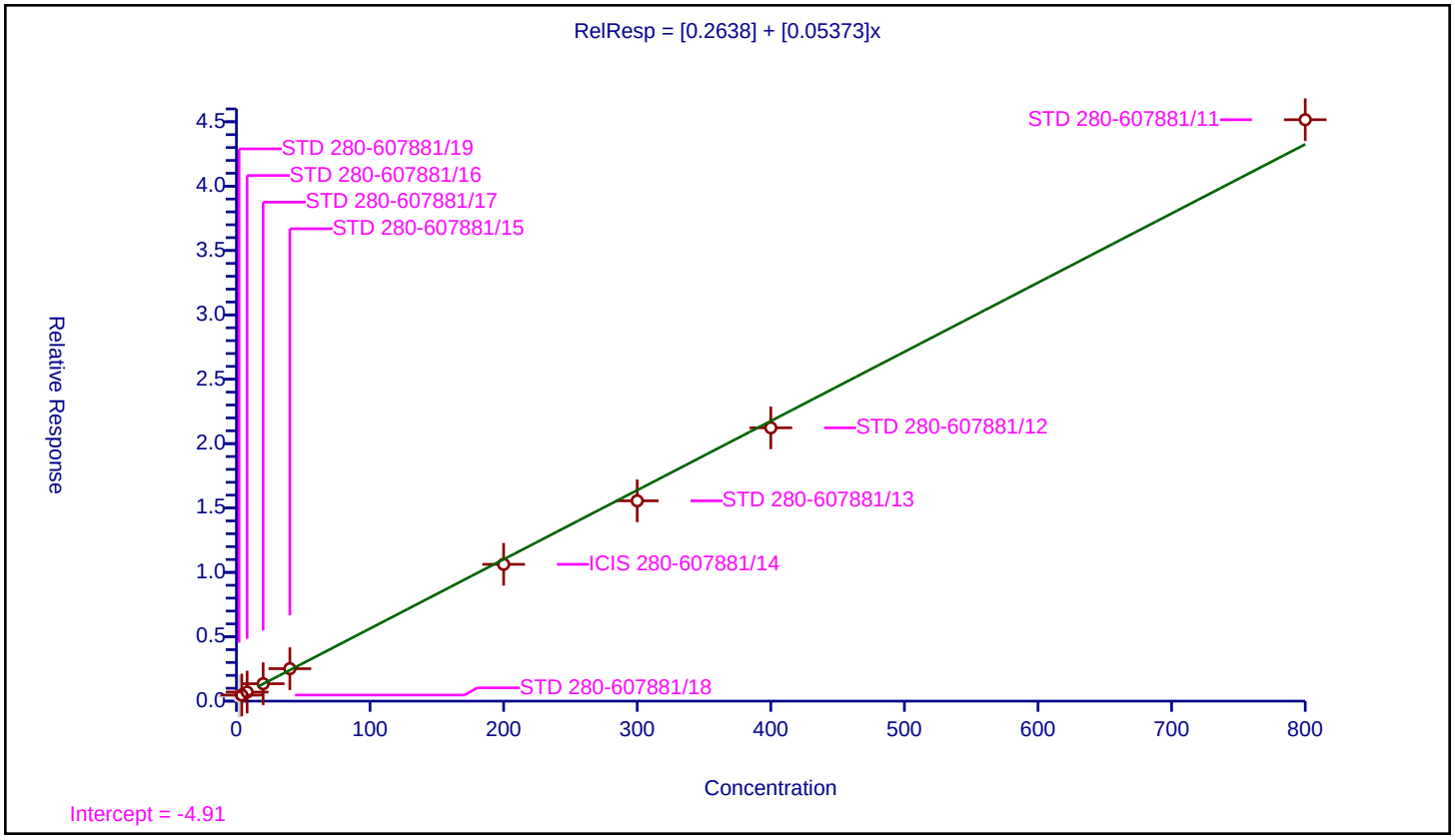
Curve Coefficients

Intercept:	0.2638
Slope:	0.05373

Error Coefficients

Standard Error:	674000
Relative Standard Error:	4.1
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.394723	50.0	1347020.0	0.197362	N
2	STD 280-607881/18	4.0	0.475075	50.0	1321475.0	0.118769	Y
3	STD 280-607881/16	8.0	0.703361	50.0	1358265.0	0.08792	Y
4	STD 280-607881/17	20.0	1.351698	50.0	1337910.0	0.067585	Y
5	STD 280-607881/15	40.0	2.519779	50.0	1371311.0	0.062994	Y
6	ICIS 280-607881/14	200.0	10.62473	50.0	1433467.0	0.053124	Y
7	STD 280-607881/13	300.0	15.55929	50.0	1474746.0	0.051864	Y
8	STD 280-607881/12	400.0	21.229962	50.0	1493380.0	0.053075	Y
9	STD 280-607881/11	800.0	45.159163	50.0	1569677.0	0.056449	Y



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Calibration / Iodomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

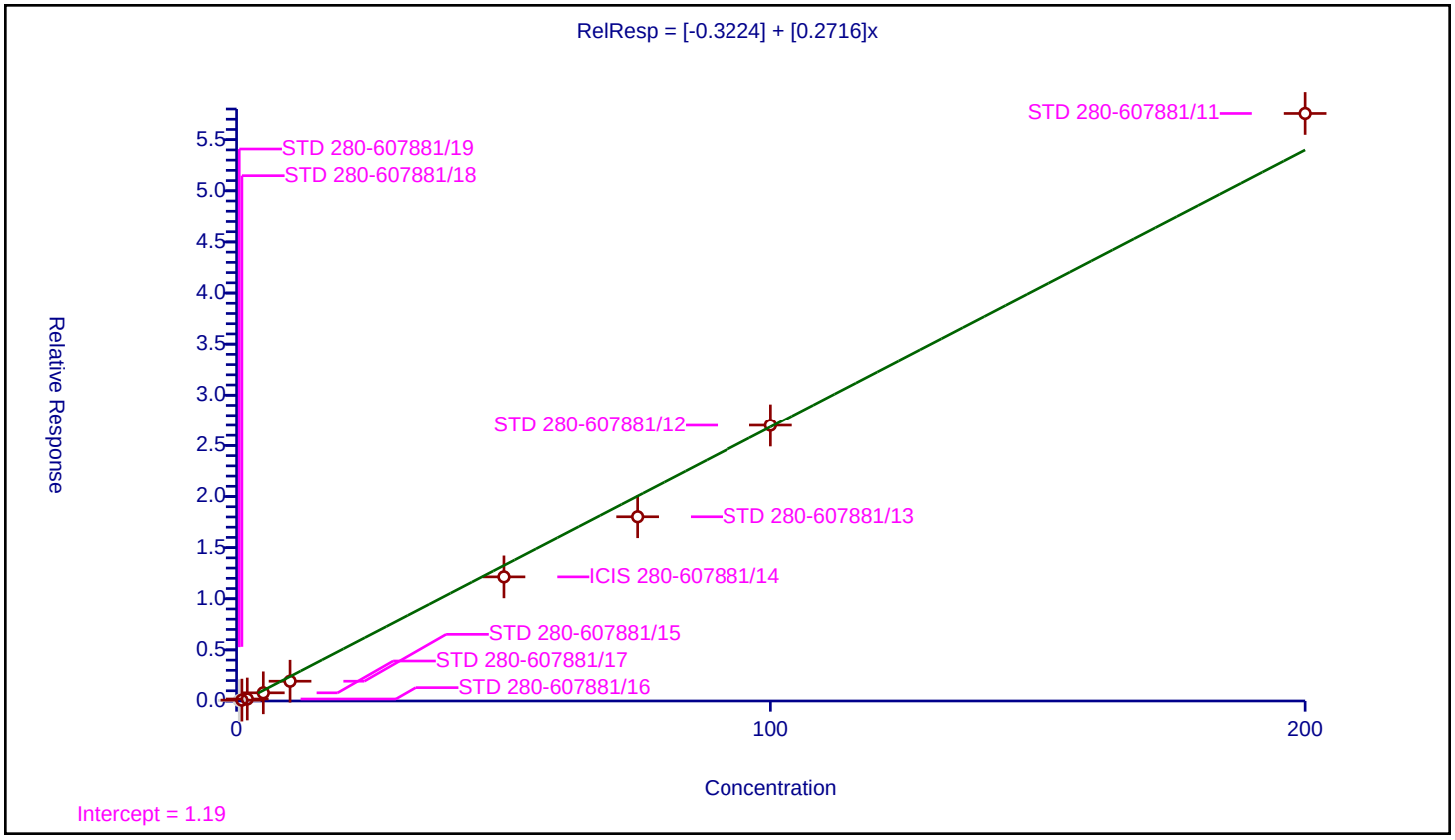
Curve Coefficients

Intercept:	-0.3224
Slope:	0.2716

Error Coefficients

Standard Error:	849000
Relative Standard Error:	23.7
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.051113	50.0	1347020.0	0.102226	N
2	STD 280-607881/18	1.0	0.085851	50.0	1321475.0	0.085851	Y
3	STD 280-607881/16	2.0	0.193556	50.0	1358265.0	0.096778	Y
4	STD 280-607881/17	5.0	0.799381	50.0	1337910.0	0.159876	Y
5	STD 280-607881/15	10.0	1.934098	50.0	1371311.0	0.19341	Y
6	ICIS 280-607881/14	50.0	12.139833	50.0	1433467.0	0.242797	Y
7	STD 280-607881/13	75.0	18.019984	50.0	1474746.0	0.240266	Y
8	STD 280-607881/12	100.0	26.998185	50.0	1493380.0	0.269982	Y
9	STD 280-607881/11	200.0	57.563276	50.0	1569677.0	0.287816	Y



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Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

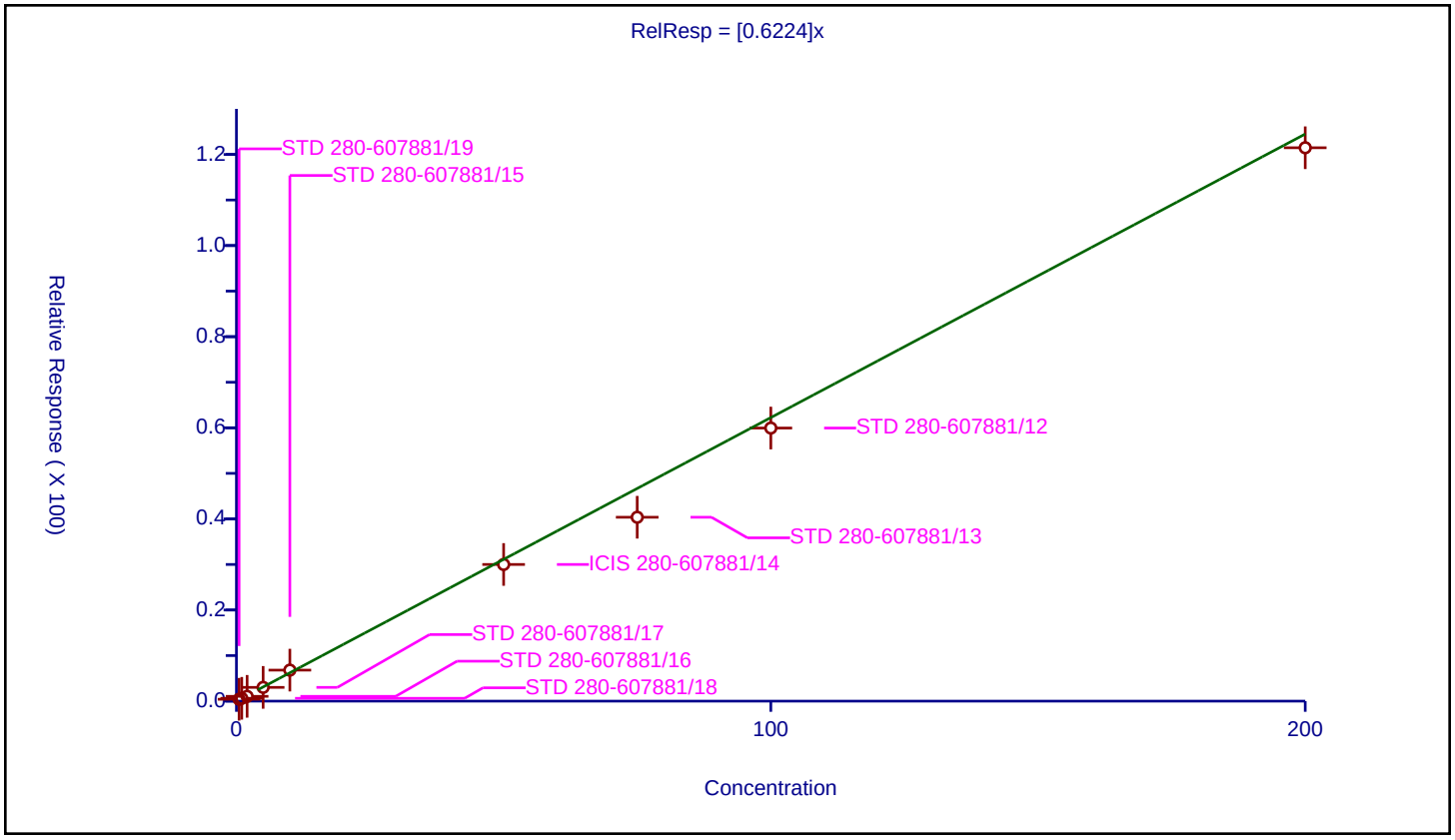
Curve Coefficients

Intercept:	0
Slope:	0.6224

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	14.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.411872	50.0	1347020.0	0.823744	Y
2	STD 280-607881/18	1.0	0.620632	50.0	1321475.0	0.620632	Y
3	STD 280-607881/16	2.0	1.054286	50.0	1358265.0	0.527143	Y
4	STD 280-607881/17	5.0	3.021429	50.0	1337910.0	0.604286	Y
5	STD 280-607881/15	10.0	6.809214	50.0	1371311.0	0.680921	Y
6	ICIS 280-607881/14	50.0	30.000167	50.0	1433467.0	0.600003	Y
7	STD 280-607881/13	75.0	40.363256	50.0	1474746.0	0.538177	Y
8	STD 280-607881/12	100.0	59.945292	50.0	1493380.0	0.599453	Y
9	STD 280-607881/11	200.0	121.472953	50.0	1569677.0	0.607365	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

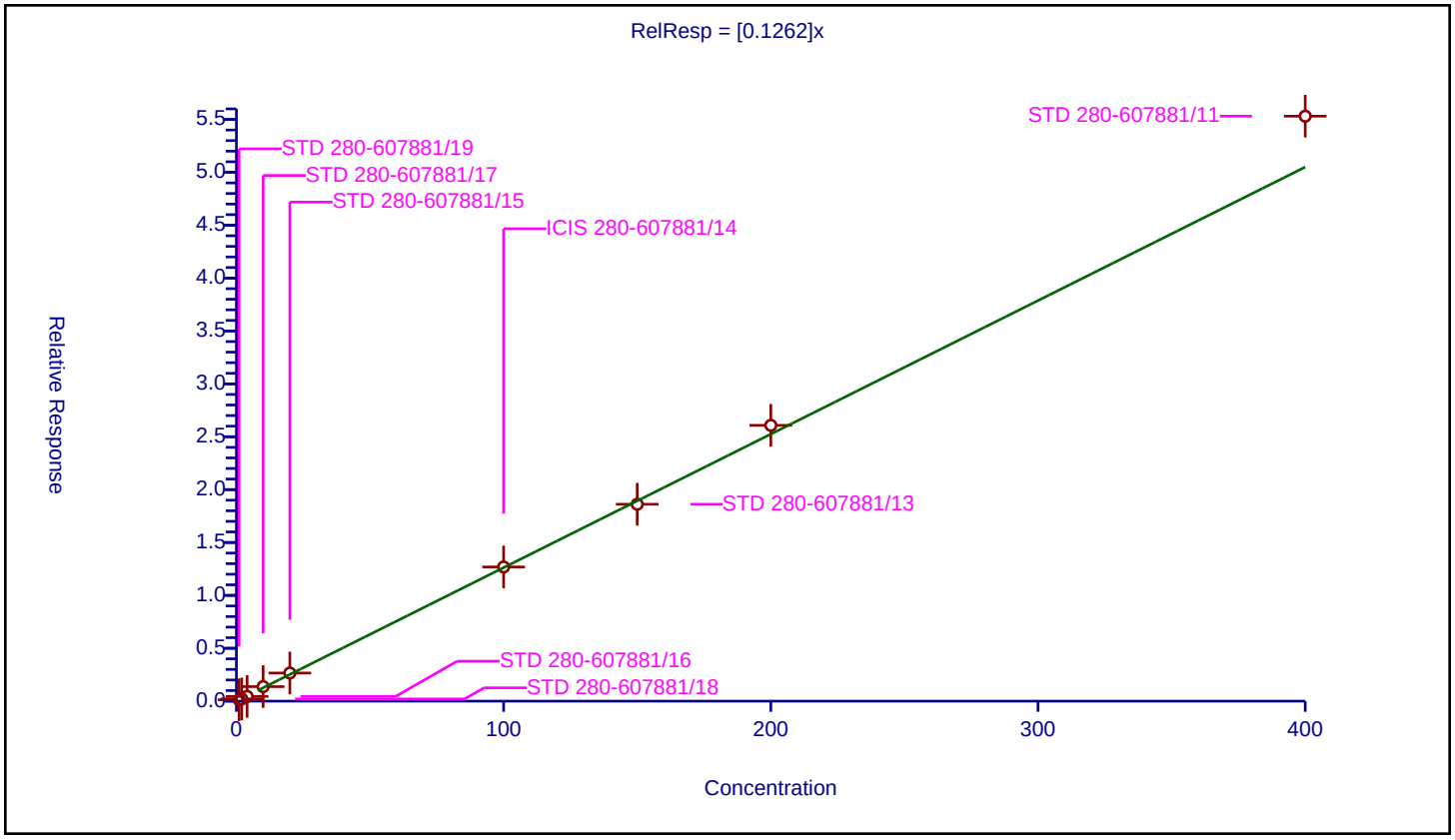
Curve Coefficients

Intercept:	0
Slope:	0.1262

Error Coefficients

Standard Error:	713000
Relative Standard Error:	9.1
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.0	0.130176	50.0	1347020.0	0.130176	Y
2	STD 280-607881/18	2.0	0.206663	50.0	1321475.0	0.103332	Y
3	STD 280-607881/16	4.0	0.450759	50.0	1358265.0	0.11269	Y
4	STD 280-607881/17	10.0	1.37442	50.0	1337910.0	0.137442	Y
5	STD 280-607881/15	20.0	2.658478	50.0	1371311.0	0.132924	Y
6	ICIS 280-607881/14	100.0	12.686201	50.0	1433467.0	0.126862	Y
7	STD 280-607881/13	150.0	18.617681	50.0	1474746.0	0.124118	Y
8	STD 280-607881/12	200.0	26.078962	50.0	1493380.0	0.130395	Y
9	STD 280-607881/11	400.0	55.310902	50.0	1569677.0	0.138277	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

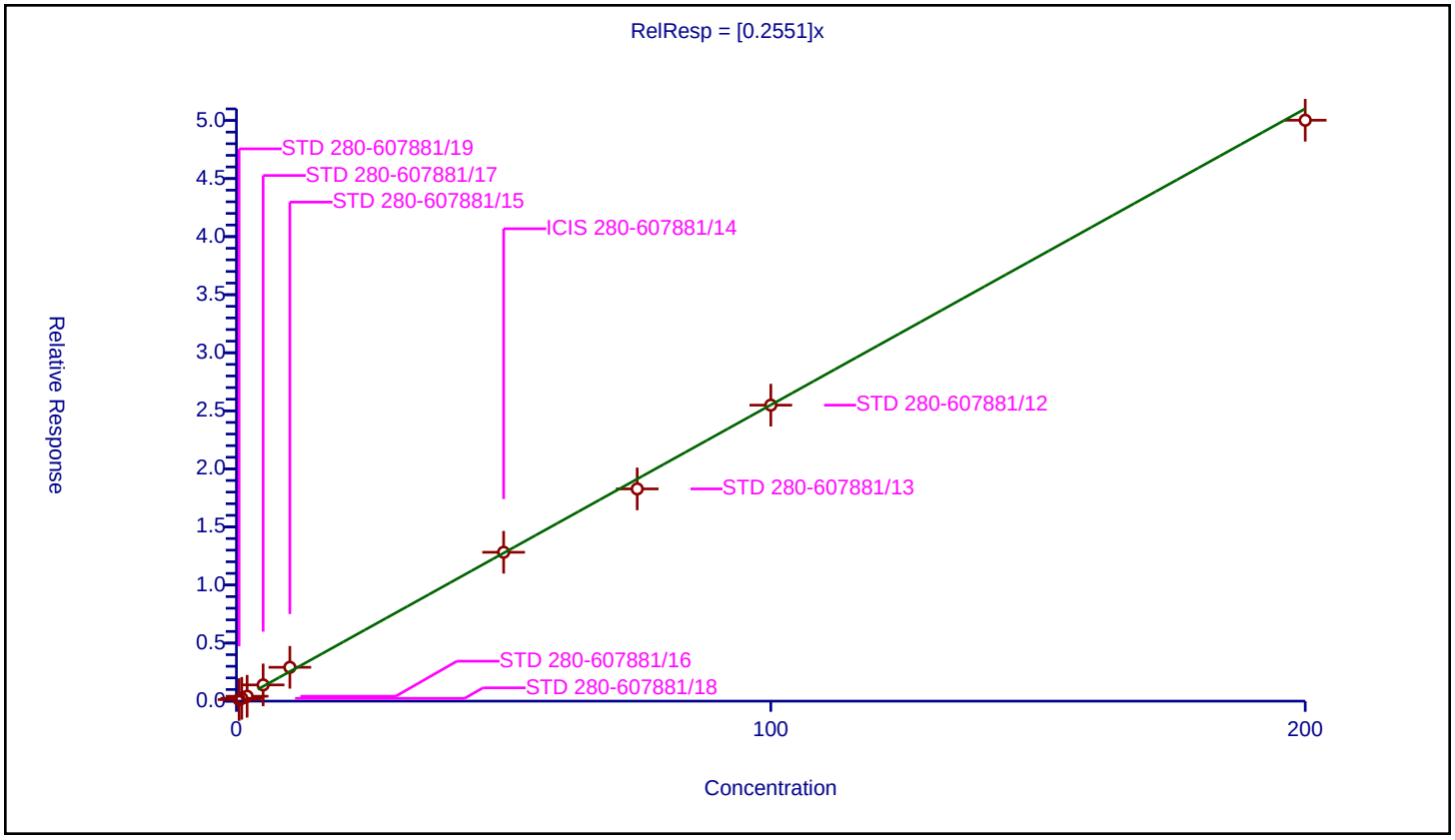
Curve Coefficients

Intercept:	0
Slope:	0.2551

Error Coefficients

Standard Error:	659000
Relative Standard Error:	9.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.133999	50.0	1347020.0	0.267999	Y
2	STD 280-607881/18	1.0	0.2417	50.0	1321475.0	0.2417	Y
3	STD 280-607881/16	2.0	0.420021	50.0	1358265.0	0.210011	Y
4	STD 280-607881/17	5.0	1.397553	50.0	1337910.0	0.279511	Y
5	STD 280-607881/15	10.0	2.913599	50.0	1371311.0	0.29136	Y
6	ICIS 280-607881/14	50.0	12.820595	50.0	1433467.0	0.256412	Y
7	STD 280-607881/13	75.0	18.276537	50.0	1474746.0	0.243687	Y
8	STD 280-607881/12	100.0	25.488757	50.0	1493380.0	0.254888	Y
9	STD 280-607881/11	200.0	50.023508	50.0	1569677.0	0.250118	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

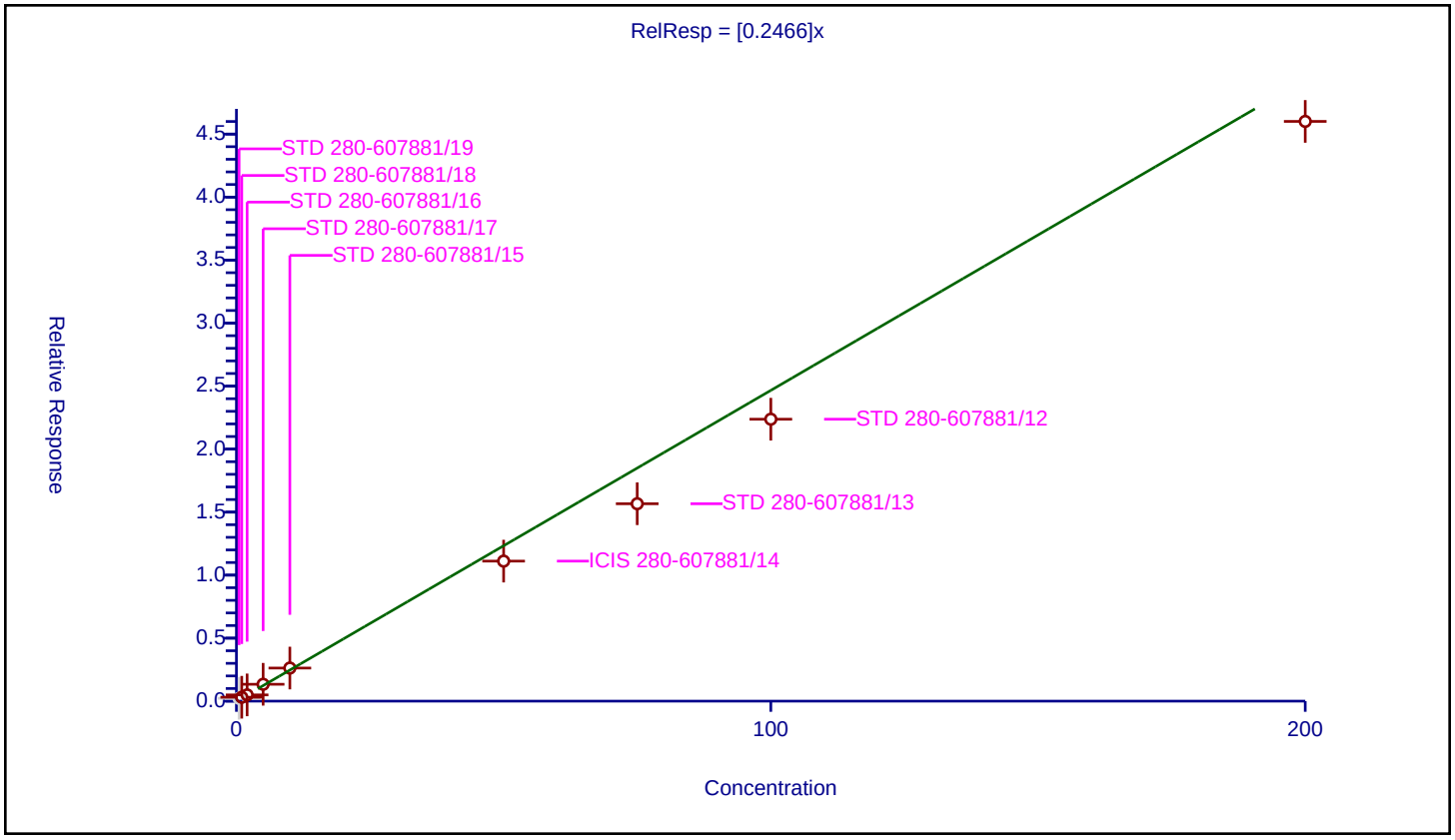
Curve Coefficients

Intercept:	0
Slope:	0.2466

Error Coefficients

Standard Error:	639000
Relative Standard Error:	13.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.224161	50.0	1347020.0	0.448323	N
2	STD 280-607881/18	1.0	0.309805	50.0	1321475.0	0.309805	Y
3	STD 280-607881/16	2.0	0.49589	50.0	1358265.0	0.247945	Y
4	STD 280-607881/17	5.0	1.338057	50.0	1337910.0	0.267611	Y
5	STD 280-607881/15	10.0	2.62672	50.0	1371311.0	0.262672	Y
6	ICIS 280-607881/14	50.0	11.11201	50.0	1433467.0	0.22224	Y
7	STD 280-607881/13	75.0	15.665782	50.0	1474746.0	0.208877	Y
8	STD 280-607881/12	100.0	22.374714	50.0	1493380.0	0.223747	Y
9	STD 280-607881/11	200.0	46.006185	50.0	1569677.0	0.230031	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

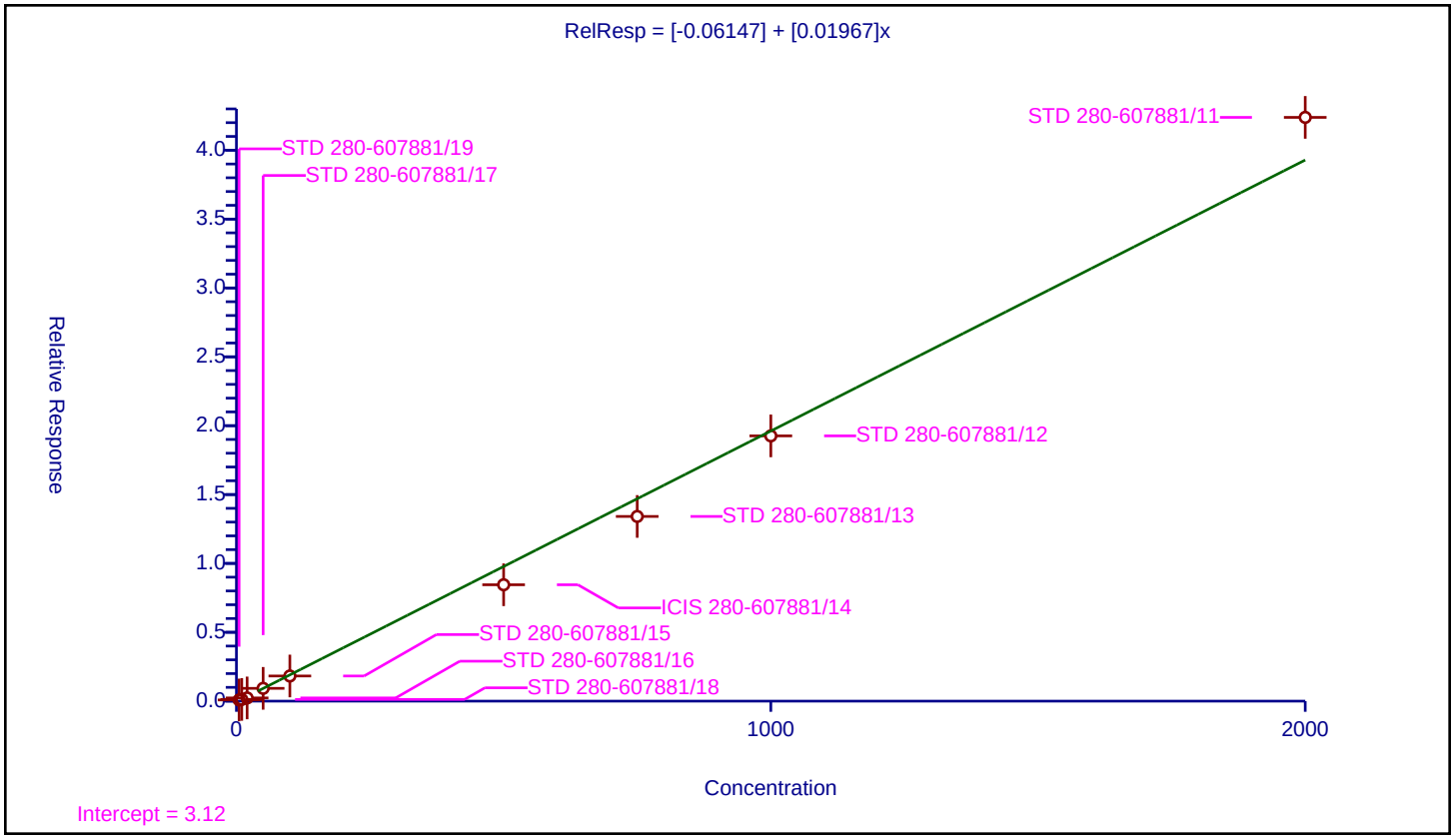
Curve Coefficients

Intercept:	-0.06147
Slope:	0.01967

Error Coefficients

Standard Error:	576000
Relative Standard Error:	22.4
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	5.0	0.086116	50.0	1347020.0	0.017223	Y
2	STD 280-607881/18	10.0	0.12452	50.0	1321475.0	0.012452	Y
3	STD 280-607881/16	20.0	0.232944	50.0	1358265.0	0.011647	Y
4	STD 280-607881/17	50.0	0.929696	50.0	1337910.0	0.018594	Y
5	STD 280-607881/15	100.0	1.826427	50.0	1371311.0	0.018264	Y
6	ICIS 280-607881/14	500.0	8.450421	50.0	1433467.0	0.016901	Y
7	STD 280-607881/13	750.0	13.409835	50.0	1474746.0	0.01788	Y
8	STD 280-607881/12	1000.0	19.258829	50.0	1493380.0	0.019259	Y
9	STD 280-607881/11	2000.0	42.382828	50.0	1569677.0	0.021191	Y



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Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

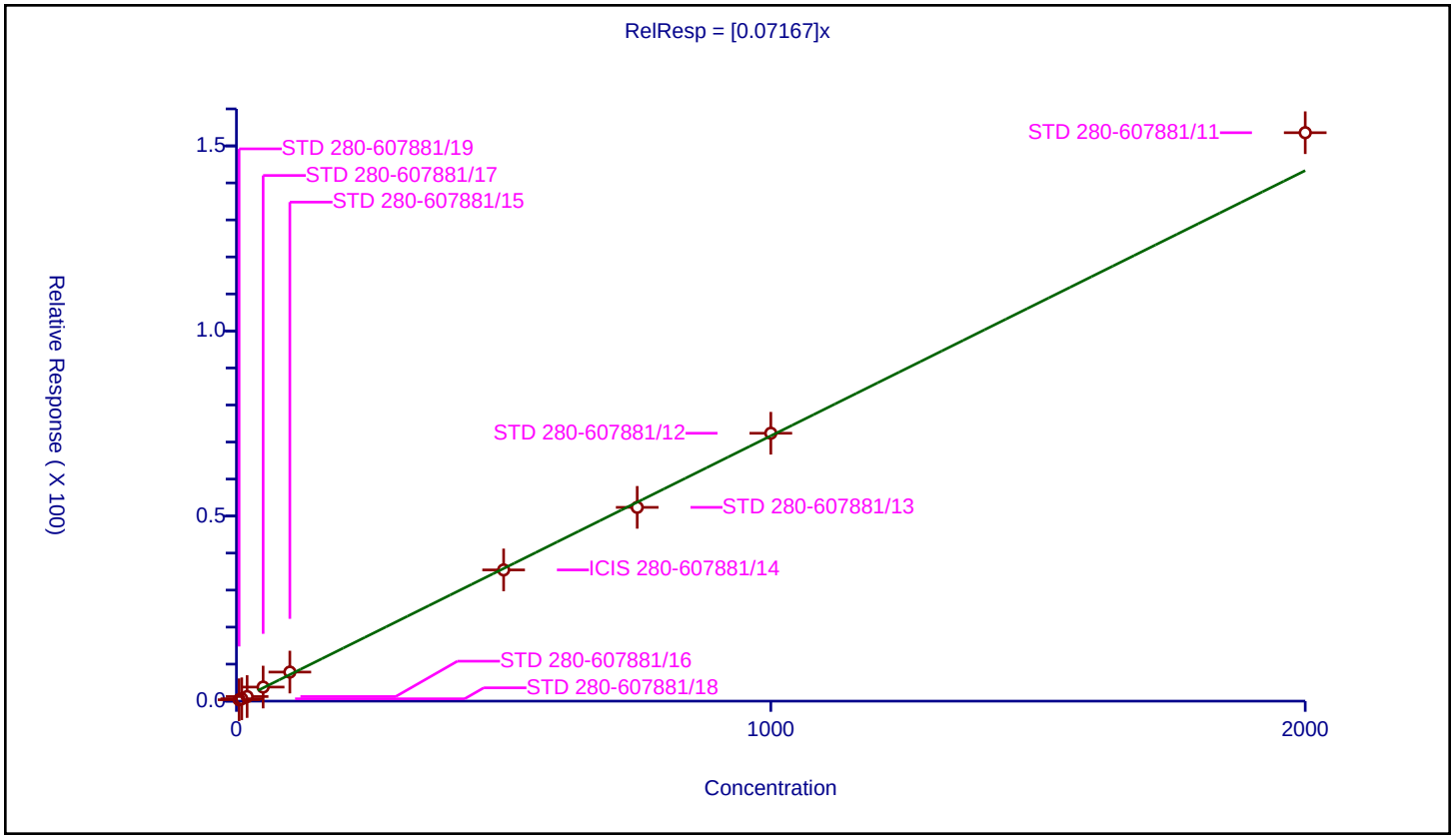
Curve Coefficients

Intercept:	0
Slope:	0.07167

Error Coefficients

Standard Error:	1980000
Relative Standard Error:	8.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	5.0	0.374345	50.0	1347020.0	0.074869	Y
2	STD 280-607881/18	10.0	0.636713	50.0	1321475.0	0.063671	Y
3	STD 280-607881/16	20.0	1.239559	50.0	1358265.0	0.061978	Y
4	STD 280-607881/17	50.0	3.805973	50.0	1337910.0	0.076119	Y
5	STD 280-607881/15	100.0	7.85172	50.0	1371311.0	0.078517	Y
6	ICIS 280-607881/14	500.0	35.444799	50.0	1433467.0	0.07089	Y
7	STD 280-607881/13	750.0	52.349625	50.0	1474746.0	0.069799	Y
8	STD 280-607881/12	1000.0	72.372203	50.0	1493380.0	0.072372	Y
9	STD 280-607881/11	2000.0	153.568537	50.0	1569677.0	0.076784	Y



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Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

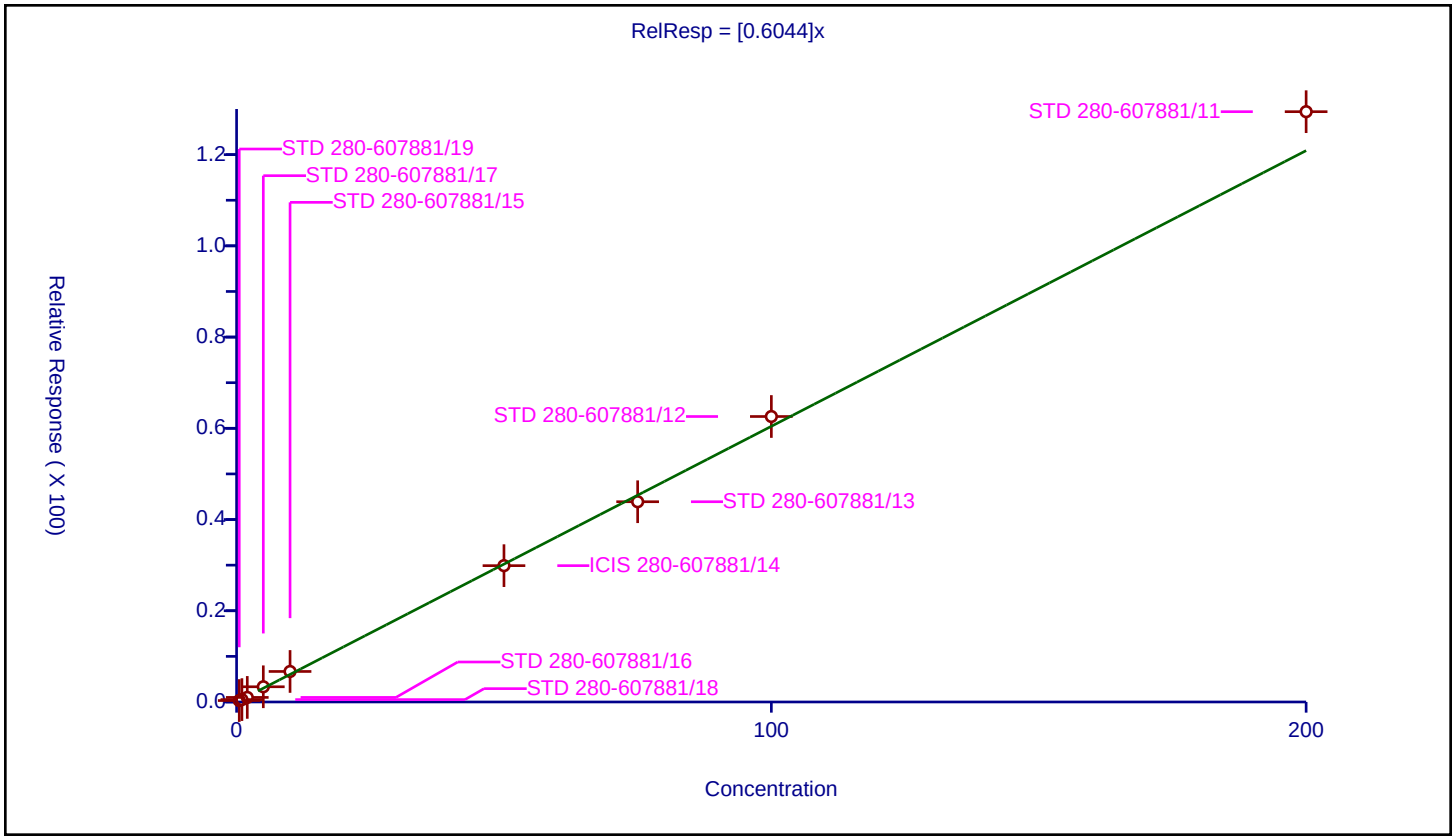
Curve Coefficients

Intercept:	0
Slope:	0.6044

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	9.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.310871	50.0	1347020.0	0.621743	Y
2	STD 280-607881/18	1.0	0.524603	50.0	1321475.0	0.524603	Y
3	STD 280-607881/16	2.0	1.001756	50.0	1358265.0	0.500878	Y
4	STD 280-607881/17	5.0	3.337332	50.0	1337910.0	0.667466	Y
5	STD 280-607881/15	10.0	6.688162	50.0	1371311.0	0.668816	Y
6	ICIS 280-607881/14	50.0	29.889596	50.0	1433467.0	0.597792	Y
7	STD 280-607881/13	75.0	43.903153	50.0	1474746.0	0.585375	Y
8	STD 280-607881/12	100.0	62.585578	50.0	1493380.0	0.625856	Y
9	STD 280-607881/11	200.0	129.417963	50.0	1569677.0	0.64709	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

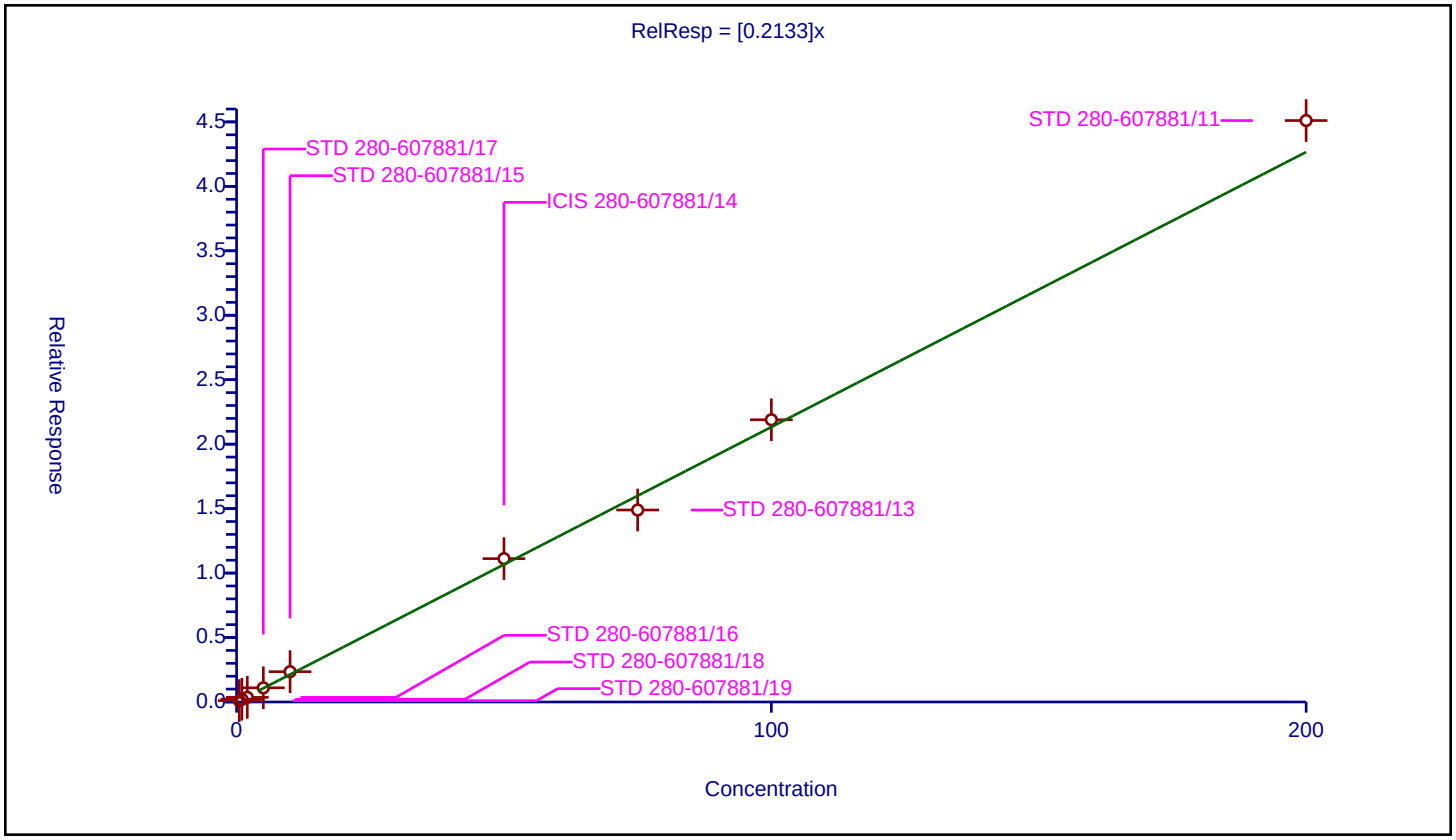
Curve Coefficients

Intercept:	0
Slope:	0.2133

Error Coefficients

Standard Error:	584000
Relative Standard Error:	7.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.103154	50.0	1347020.0	0.206307	Y
2	STD 280-607881/18	1.0	0.212944	50.0	1321475.0	0.212944	Y
3	STD 280-607881/16	2.0	0.359871	50.0	1358265.0	0.179935	Y
4	STD 280-607881/17	5.0	1.100336	50.0	1337910.0	0.220067	Y
5	STD 280-607881/15	10.0	2.350379	50.0	1371311.0	0.235038	Y
6	ICIS 280-607881/14	50.0	11.120137	50.0	1433467.0	0.222403	Y
7	STD 280-607881/13	75.0	14.893785	50.0	1474746.0	0.198584	Y
8	STD 280-607881/12	100.0	21.893724	50.0	1493380.0	0.218937	Y
9	STD 280-607881/11	200.0	45.106509	50.0	1569677.0	0.225533	Y



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Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

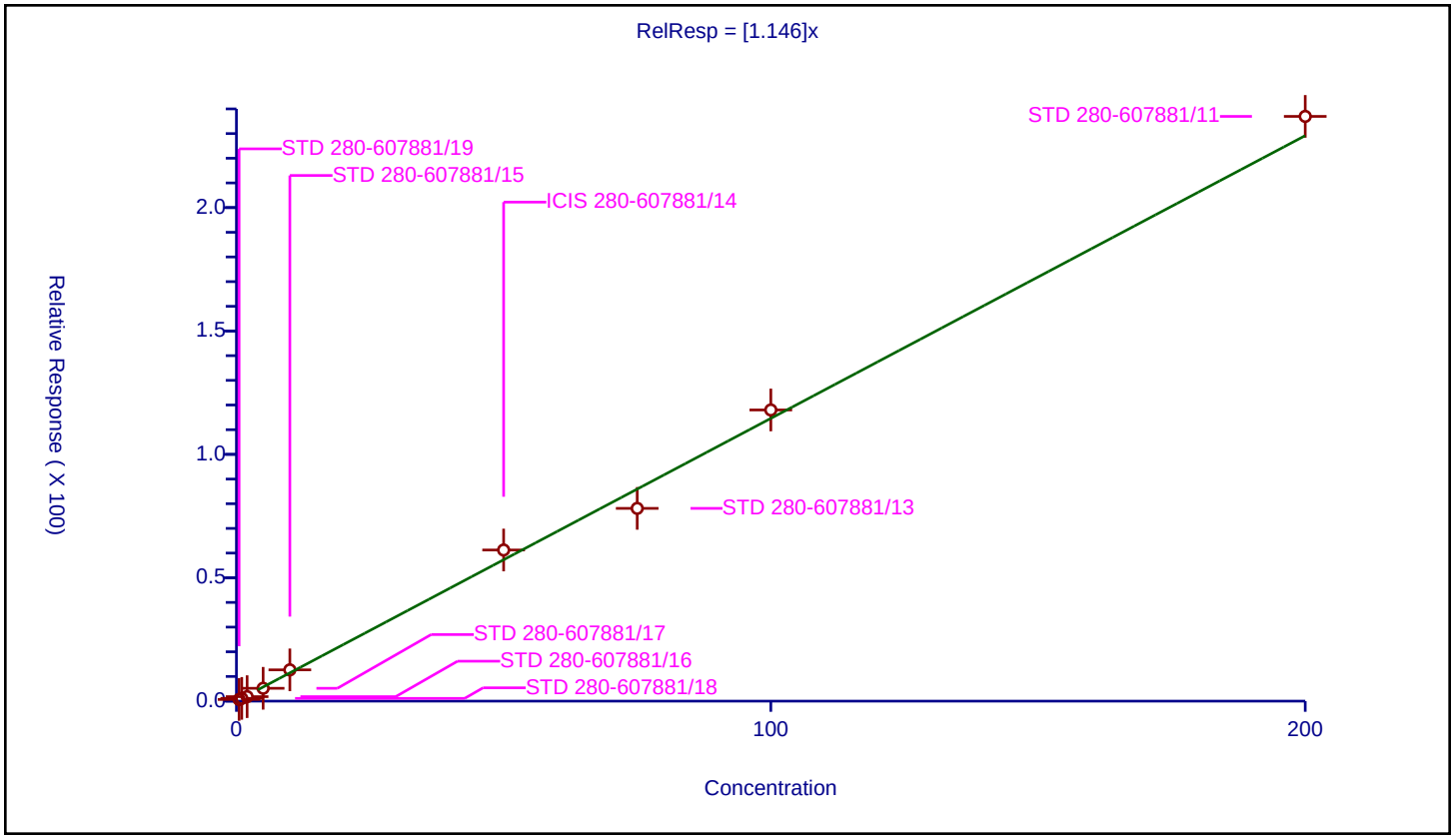
Curve Coefficients

Intercept:	0
Slope:	1.146

Error Coefficients

Standard Error:	714000
Relative Standard Error:	11.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.670287	50.0	310688.0	1.340573	Y
2	STD 280-607881/18	1.0	1.121305	50.0	303218.0	1.121305	Y
3	STD 280-607881/16	2.0	1.821898	50.0	311900.0	0.910949	Y
4	STD 280-607881/17	5.0	5.205967	50.0	312939.0	1.041193	Y
5	STD 280-607881/15	10.0	12.671857	50.0	319160.0	1.267186	Y
6	ICIS 280-607881/14	50.0	61.248902	50.0	327912.0	1.224978	Y
7	STD 280-607881/13	75.0	78.114813	50.0	345430.0	1.041531	Y
8	STD 280-607881/12	100.0	117.992978	50.0	350056.0	1.17993	Y
9	STD 280-607881/11	200.0	236.957905	50.0	361445.0	1.18479	Y



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Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

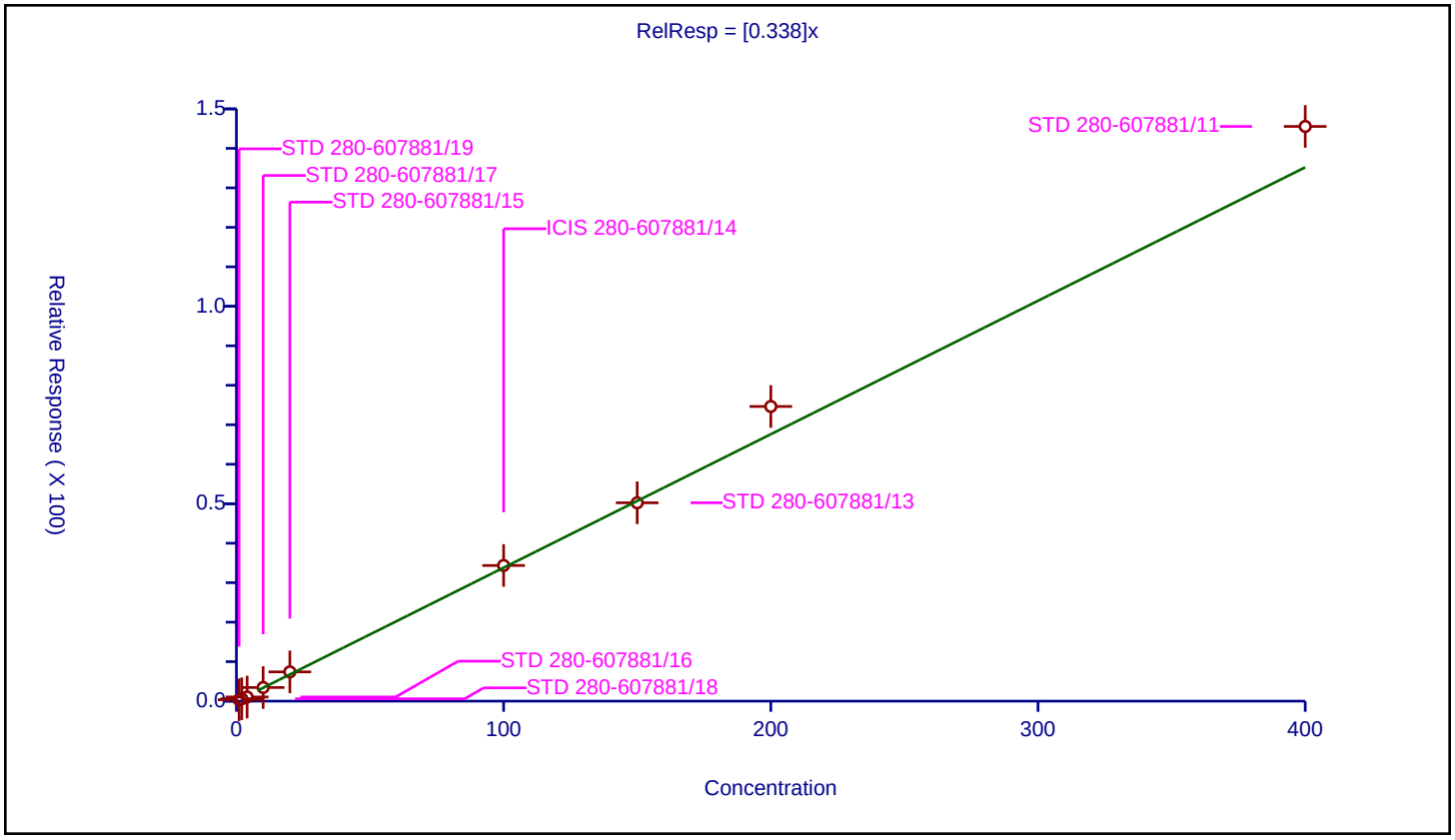
Curve Coefficients

Intercept:	0
Slope:	0.338

Error Coefficients

Standard Error:	1910000
Relative Standard Error:	10.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.0	0.345652	50.0	1347020.0	0.345652	Y
2	STD 280-607881/18	2.0	0.601373	50.0	1321475.0	0.300687	Y
3	STD 280-607881/16	4.0	1.058078	50.0	1358265.0	0.264519	Y
4	STD 280-607881/17	10.0	3.449597	50.0	1337910.0	0.34496	Y
5	STD 280-607881/15	20.0	7.413052	50.0	1371311.0	0.370653	Y
6	ICIS 280-607881/14	100.0	34.358796	50.0	1433467.0	0.343588	Y
7	STD 280-607881/13	150.0	50.235295	50.0	1474746.0	0.334902	Y
8	STD 280-607881/12	200.0	74.629632	50.0	1493380.0	0.373148	Y
9	STD 280-607881/11	400.0	145.553958	50.0	1569677.0	0.363885	Y



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Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

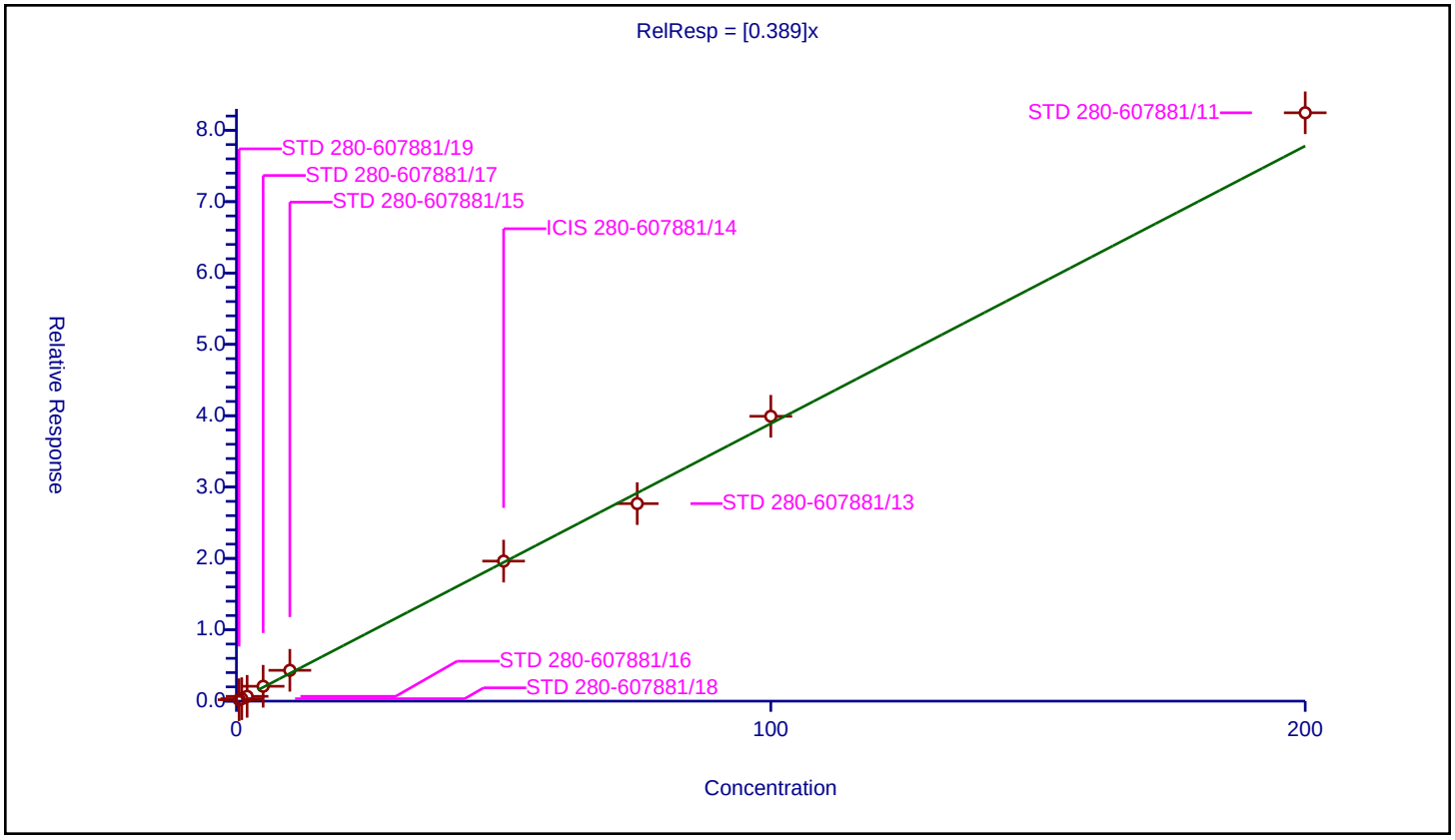
Curve Coefficients

Intercept:	0
Slope:	0.389

Error Coefficients

Standard Error:	1070000
Relative Standard Error:	8.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.199997	50.0	1347020.0	0.399994	Y
2	STD 280-607881/18	1.0	0.342231	50.0	1321475.0	0.342231	Y
3	STD 280-607881/16	2.0	0.674279	50.0	1358265.0	0.33714	Y
4	STD 280-607881/17	5.0	2.083399	50.0	1337910.0	0.41668	Y
5	STD 280-607881/15	10.0	4.320063	50.0	1371311.0	0.432006	Y
6	ICIS 280-607881/14	50.0	19.625286	50.0	1433467.0	0.392506	Y
7	STD 280-607881/13	75.0	27.682428	50.0	1474746.0	0.369099	Y
8	STD 280-607881/12	100.0	39.920717	50.0	1493380.0	0.399207	Y
9	STD 280-607881/11	200.0	82.456709	50.0	1569677.0	0.412284	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

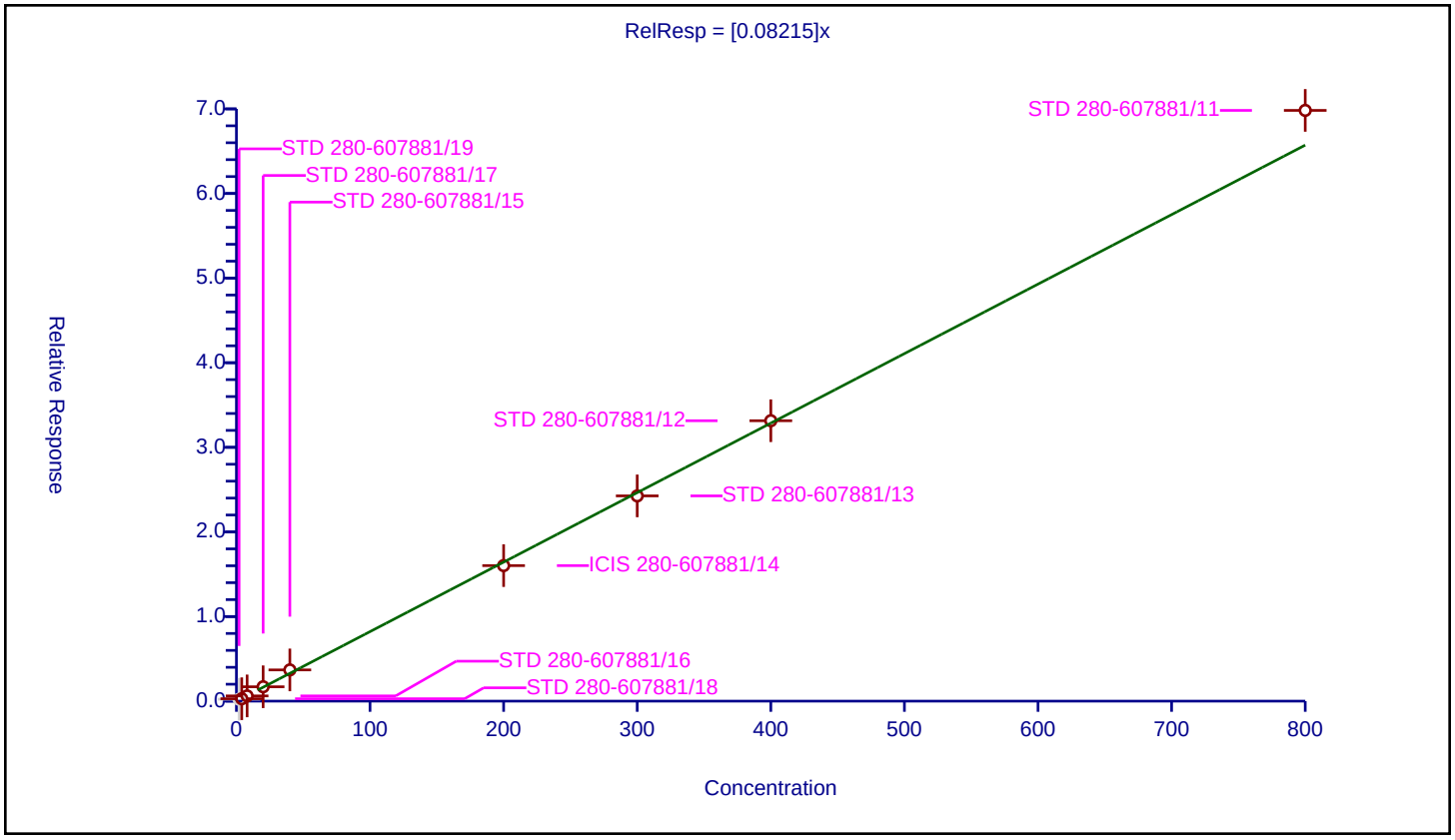
Curve Coefficients

Intercept:	0
Slope:	0.08215

Error Coefficients

Standard Error:	965000
Relative Standard Error:	7.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.228542	50.0	1347020.0	0.114271	N
2	STD 280-607881/18	4.0	0.285741	50.0	1321475.0	0.071435	Y
3	STD 280-607881/16	8.0	0.619798	50.0	1358265.0	0.077475	Y
4	STD 280-607881/17	20.0	1.697835	50.0	1337910.0	0.084892	Y
5	STD 280-607881/15	40.0	3.69165	50.0	1371311.0	0.092291	Y
6	ICIS 280-607881/14	200.0	16.01882	50.0	1433467.0	0.080094	Y
7	STD 280-607881/13	300.0	24.258279	50.0	1474746.0	0.080861	Y
8	STD 280-607881/12	400.0	33.144377	50.0	1493380.0	0.082861	Y
9	STD 280-607881/11	800.0	69.821307	50.0	1569677.0	0.087277	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

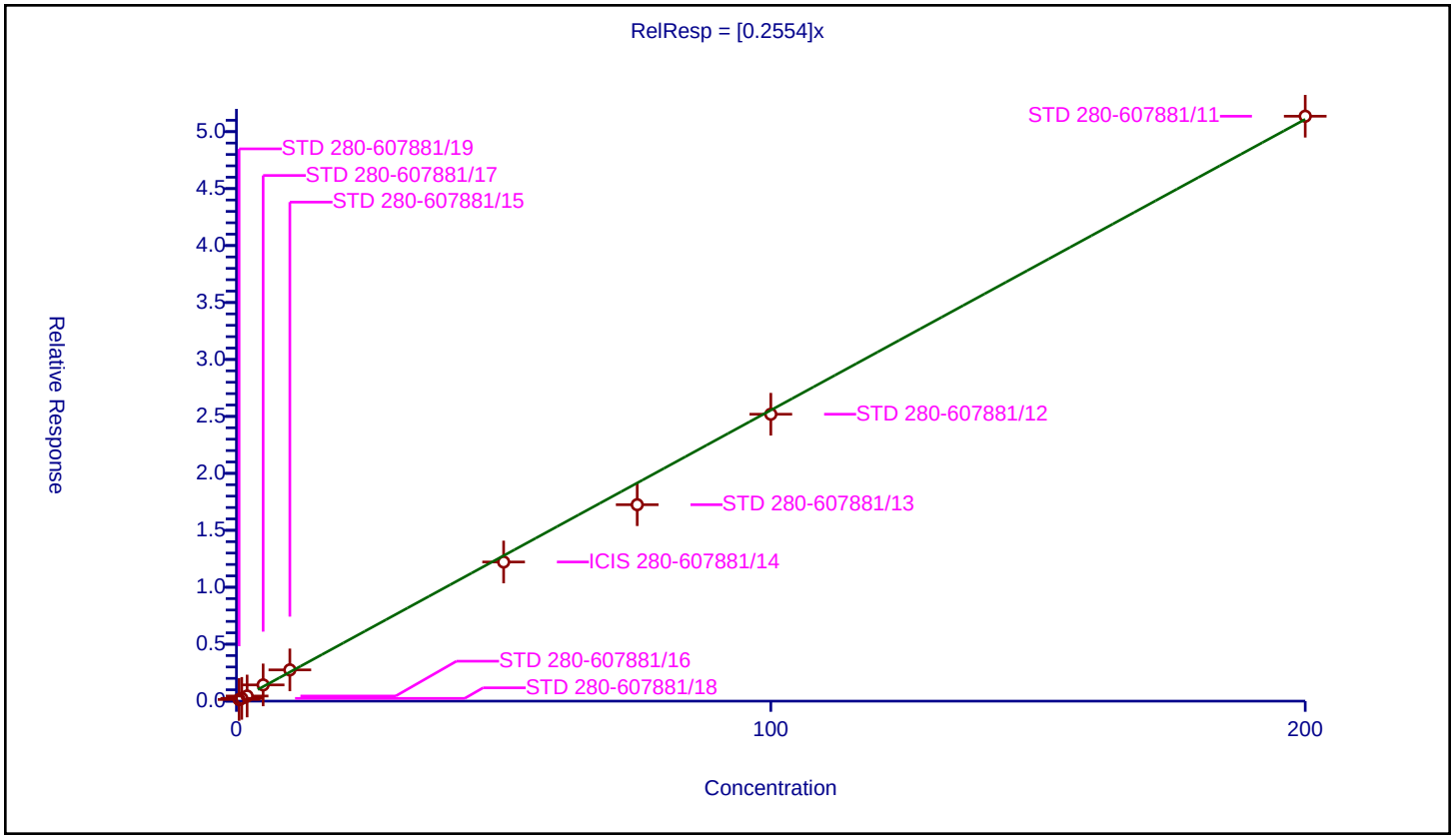
Curve Coefficients

Intercept:	0
Slope:	0.2554

Error Coefficients

Standard Error:	667000
Relative Standard Error:	8.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.143873	50.0	1347020.0	0.287746	Y
2	STD 280-607881/18	1.0	0.243137	50.0	1321475.0	0.243137	Y
3	STD 280-607881/16	2.0	0.451053	50.0	1358265.0	0.225527	Y
4	STD 280-607881/17	5.0	1.426329	50.0	1337910.0	0.285266	Y
5	STD 280-607881/15	10.0	2.743214	50.0	1371311.0	0.274321	Y
6	ICIS 280-607881/14	50.0	12.217093	50.0	1433467.0	0.244342	Y
7	STD 280-607881/13	75.0	17.246597	50.0	1474746.0	0.229955	Y
8	STD 280-607881/12	100.0	25.192148	50.0	1493380.0	0.251921	Y
9	STD 280-607881/11	200.0	51.356808	50.0	1569677.0	0.256784	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

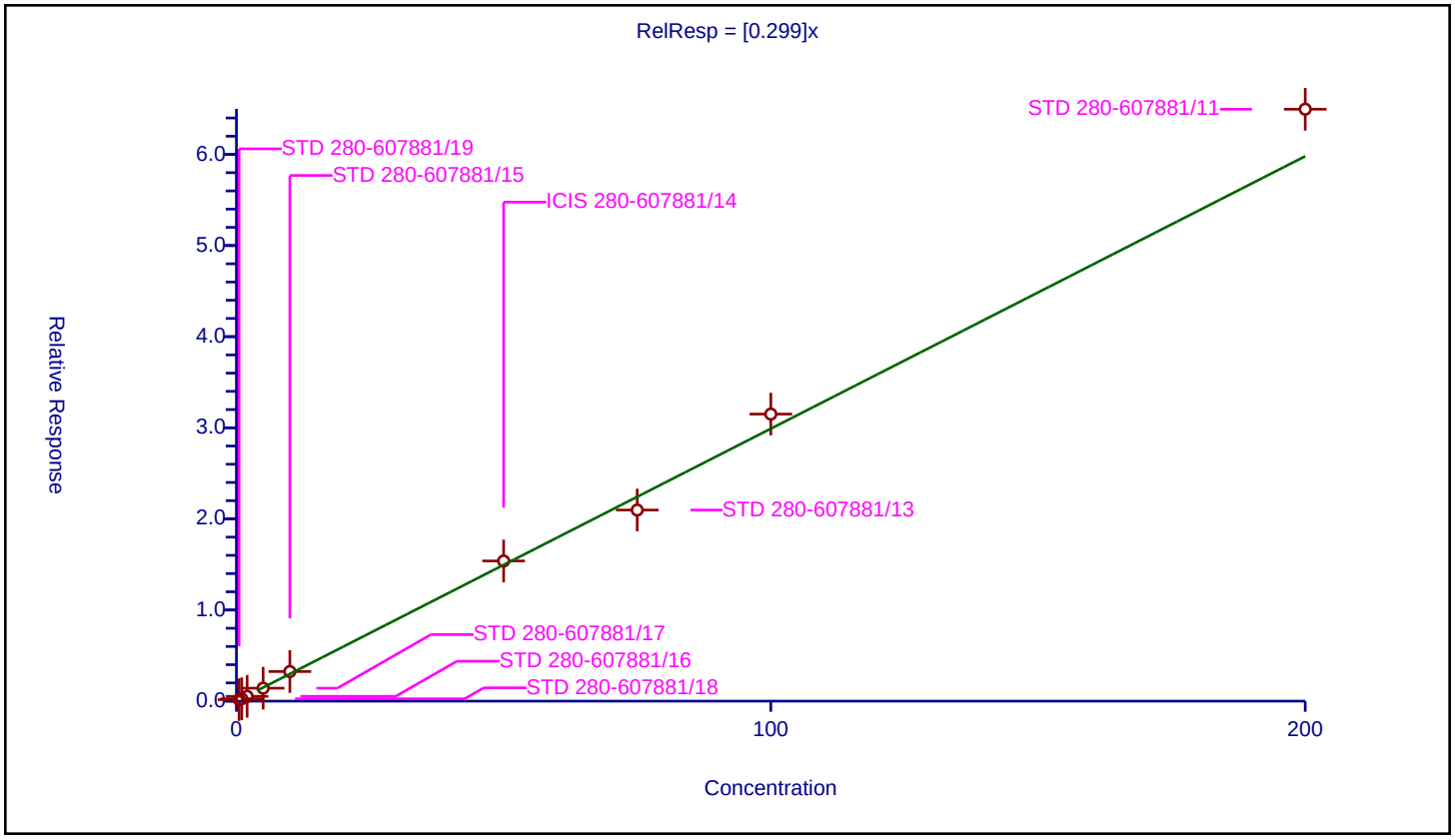
Curve Coefficients

Intercept:	0
Slope:	0.299

Error Coefficients

Standard Error:	839000
Relative Standard Error:	9.2
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.165254	50.0	1347020.0	0.330507	Y
2	STD 280-607881/18	1.0	0.259785	50.0	1321475.0	0.259785	Y
3	STD 280-607881/16	2.0	0.528468	50.0	1358265.0	0.264234	Y
4	STD 280-607881/17	5.0	1.422517	50.0	1337910.0	0.284503	Y
5	STD 280-607881/15	10.0	3.249226	50.0	1371311.0	0.324923	Y
6	ICIS 280-607881/14	50.0	15.383961	50.0	1433467.0	0.307679	Y
7	STD 280-607881/13	75.0	20.975137	50.0	1474746.0	0.279668	Y
8	STD 280-607881/12	100.0	31.503	50.0	1493380.0	0.31503	Y
9	STD 280-607881/11	200.0	64.965053	50.0	1569677.0	0.324825	Y



Calibration / sec-Butyl Alcohol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

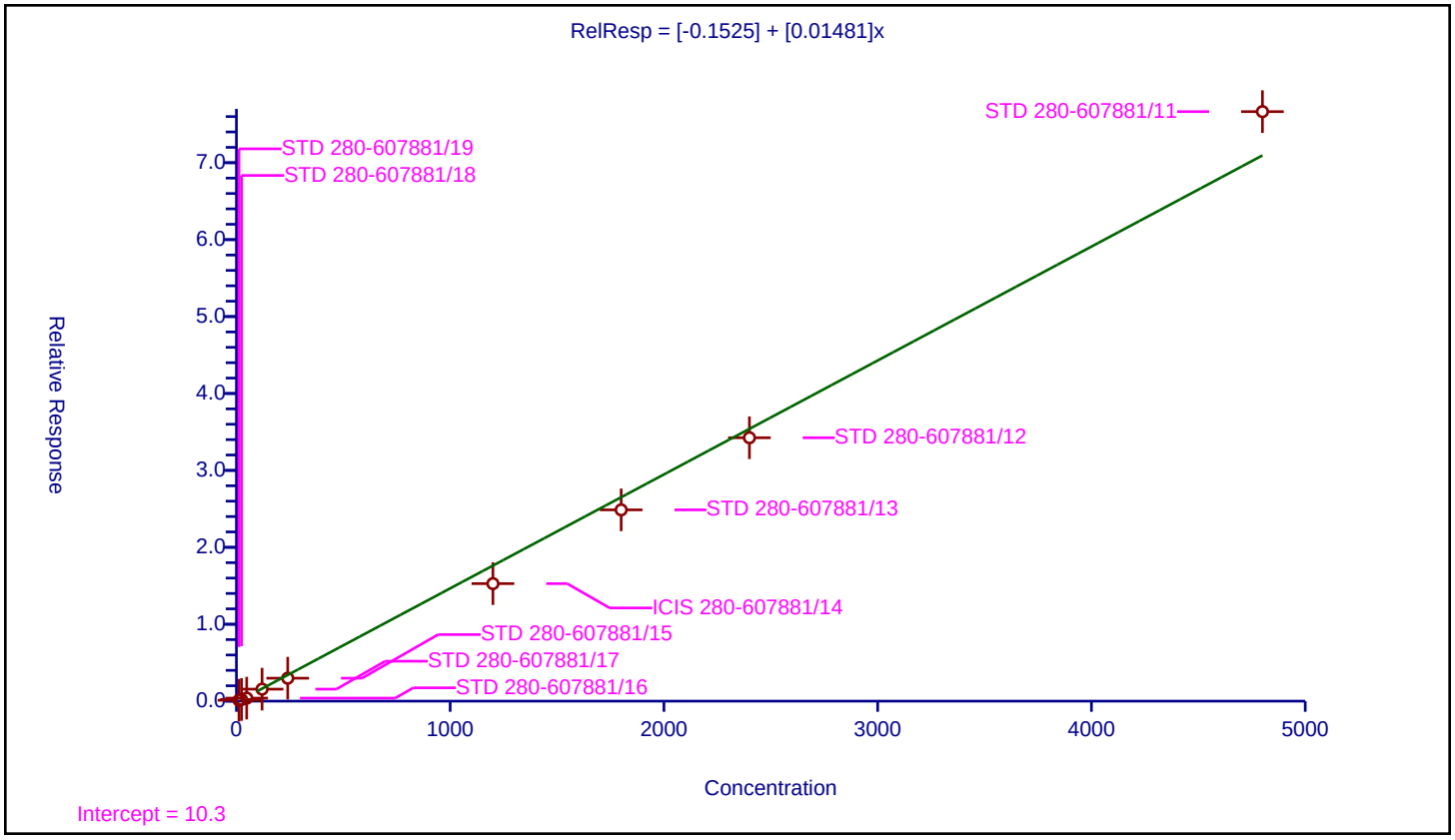
Curve Coefficients

Intercept:	-0.1525
Slope:	0.01481

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	22.7
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	12.0	0.11596	50.0	1347020.0	0.009663	Y
2	STD 280-607881/18	24.0	0.211657	50.0	1321475.0	0.008819	Y
3	STD 280-607881/16	48.0	0.392486	50.0	1358265.0	0.008177	Y
4	STD 280-607881/17	120.0	1.558887	50.0	1337910.0	0.012991	Y
5	STD 280-607881/15	240.0	2.984844	50.0	1371311.0	0.012437	Y
6	ICIS 280-607881/14	1200.0	15.278831	50.0	1433467.0	0.012732	Y
7	STD 280-607881/13	1800.0	24.866621	50.0	1474746.0	0.013815	Y
8	STD 280-607881/12	2400.0	34.244231	50.0	1493380.0	0.014268	Y
9	STD 280-607881/11	4800.0	76.643157	50.0	1569677.0	0.015967	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

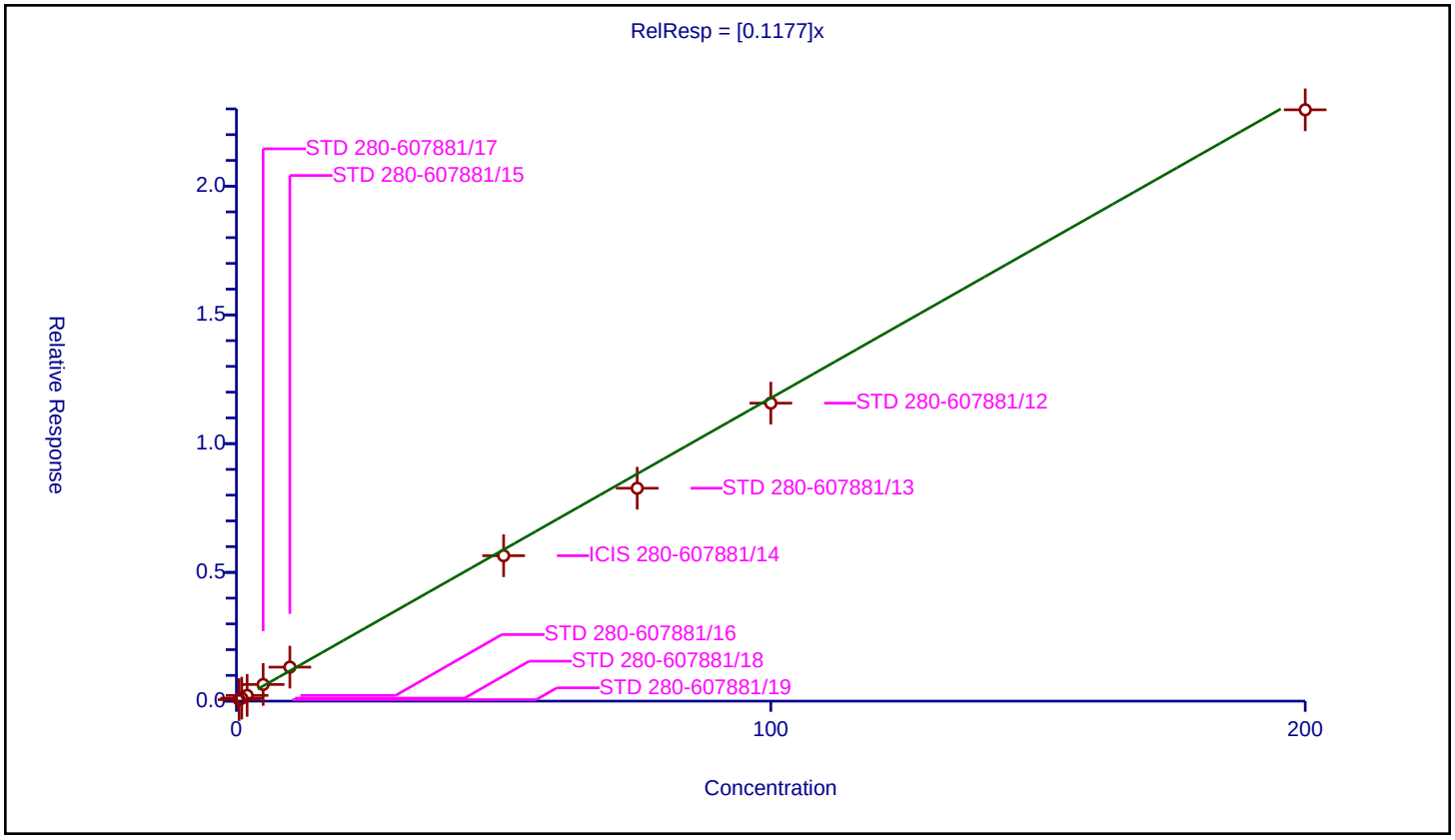
Curve Coefficients

Intercept:	0
Slope:	0.1177

Error Coefficients

Standard Error:	301000
Relative Standard Error:	6.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.058203	50.0	1347020.0	0.116405	Y
2	STD 280-607881/18	1.0	0.116385	50.0	1321475.0	0.116385	Y
3	STD 280-607881/16	2.0	0.222711	50.0	1358265.0	0.111355	Y
4	STD 280-607881/17	5.0	0.646493	50.0	1337910.0	0.129299	Y
5	STD 280-607881/15	10.0	1.320233	50.0	1371311.0	0.132023	Y
6	ICIS 280-607881/14	50.0	5.648369	50.0	1433467.0	0.112967	Y
7	STD 280-607881/13	75.0	8.267559	50.0	1474746.0	0.110234	Y
8	STD 280-607881/12	100.0	11.572239	50.0	1493380.0	0.115722	Y
9	STD 280-607881/11	200.0	22.965202	50.0	1569677.0	0.114826	Y



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Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

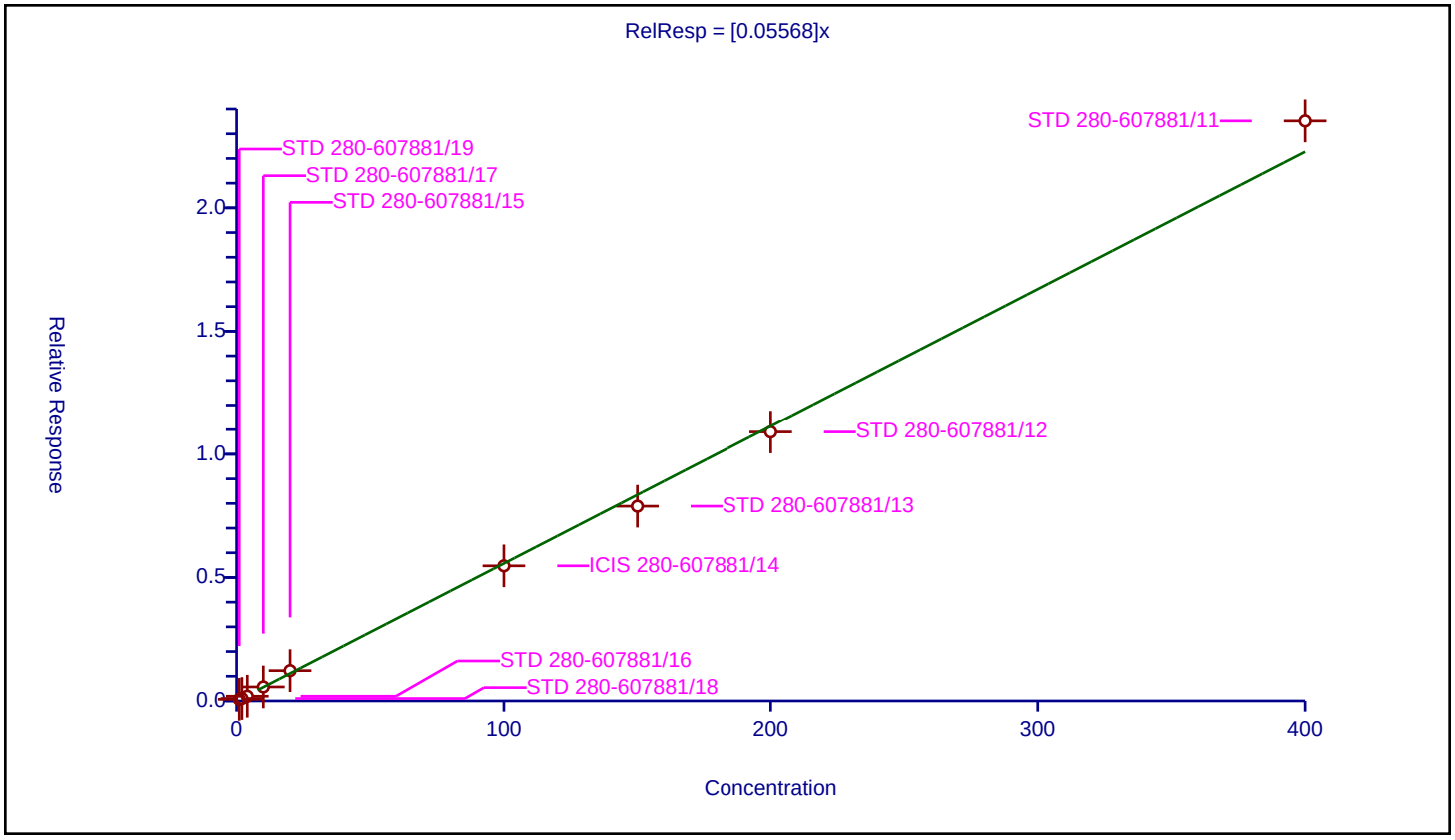
Curve Coefficients

Intercept:	0
Slope:	0.05568

Error Coefficients

Standard Error:	302000
Relative Standard Error:	9.7
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.0	0.064884	50.0	1347020.0	0.064884	Y
2	STD 280-607881/18	2.0	0.099207	50.0	1321475.0	0.049604	Y
3	STD 280-607881/16	4.0	0.192046	50.0	1358265.0	0.048012	Y
4	STD 280-607881/17	10.0	0.567004	50.0	1337910.0	0.0567	Y
5	STD 280-607881/15	20.0	1.226199	50.0	1371311.0	0.06131	Y
6	ICIS 280-607881/14	100.0	5.47142	50.0	1433467.0	0.054714	Y
7	STD 280-607881/13	150.0	7.889087	50.0	1474746.0	0.052594	Y
8	STD 280-607881/12	200.0	10.902148	50.0	1493380.0	0.054511	Y
9	STD 280-607881/11	400.0	23.521368	50.0	1569677.0	0.058803	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

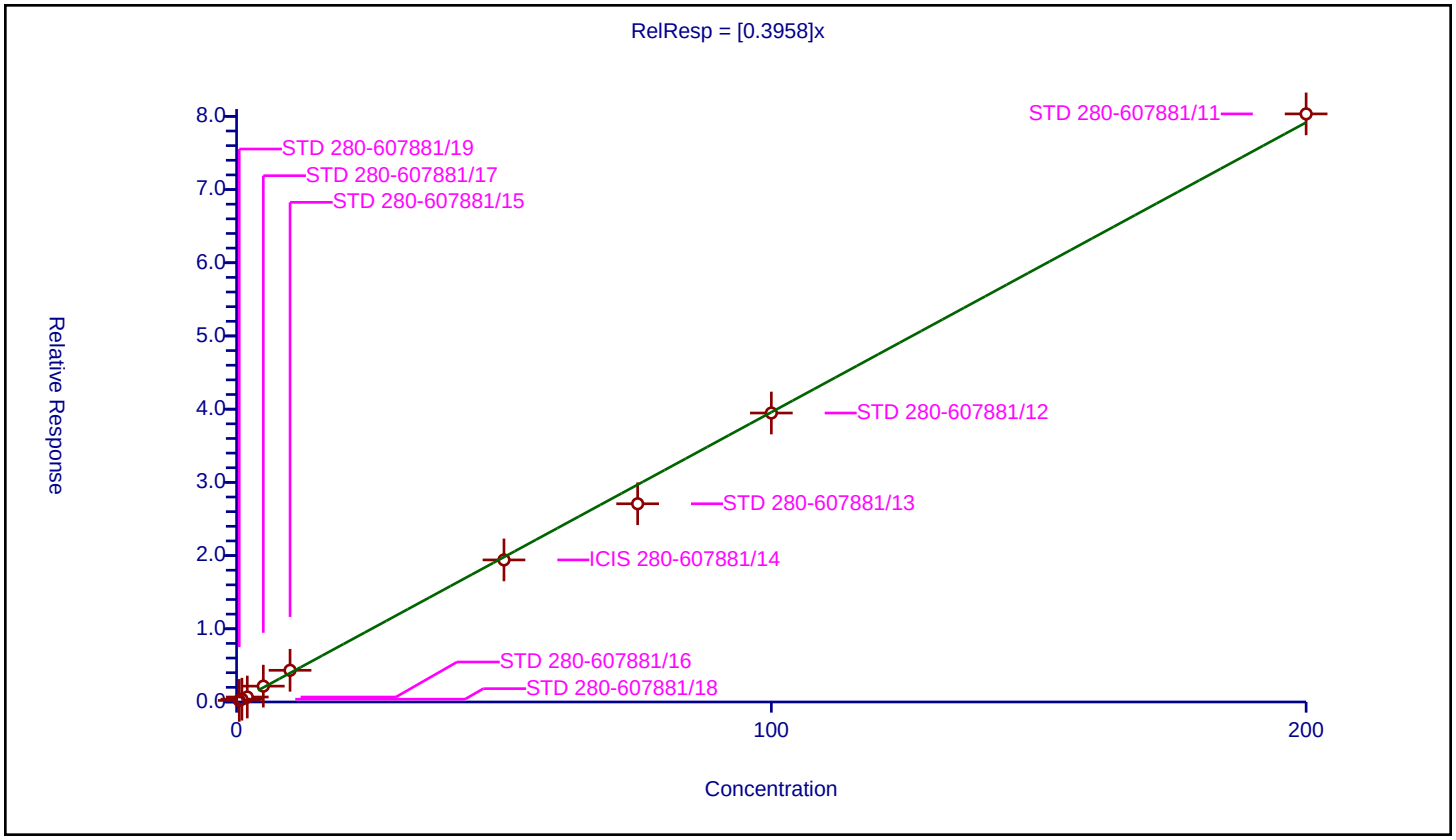
Curve Coefficients

Intercept:	0
Slope:	0.3958

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	8.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.214436	50.0	1347020.0	0.428873	Y
2	STD 280-607881/18	1.0	0.382338	50.0	1321475.0	0.382338	Y
3	STD 280-607881/16	2.0	0.678918	50.0	1358265.0	0.339459	Y
4	STD 280-607881/17	5.0	2.165841	50.0	1337910.0	0.433168	Y
5	STD 280-607881/15	10.0	4.330528	50.0	1371311.0	0.433053	Y
6	ICIS 280-607881/14	50.0	19.405086	50.0	1433467.0	0.388102	Y
7	STD 280-607881/13	75.0	27.078154	50.0	1474746.0	0.361042	Y
8	STD 280-607881/12	100.0	39.473141	50.0	1493380.0	0.394731	Y
9	STD 280-607881/11	200.0	80.331813	50.0	1569677.0	0.401659	Y



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Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

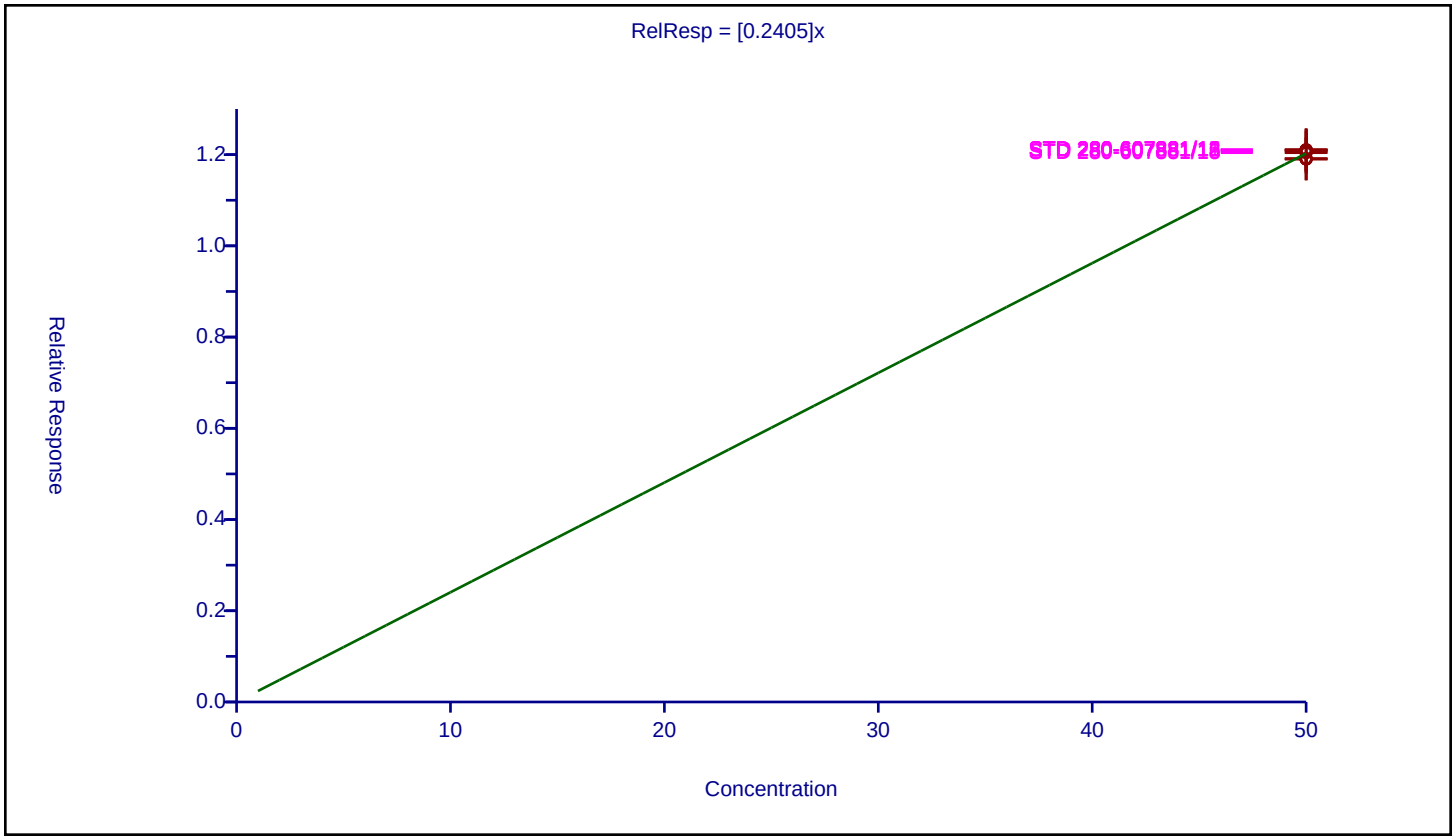
Curve Coefficients

Intercept:	0
Slope:	0.2405

Error Coefficients

Standard Error:	361000
Relative Standard Error:	0.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	12.098285	50.0	1569677.0	0.241966	Y
2	STD 280-607881/12	50.0	12.097423	50.0	1493380.0	0.241948	Y
3	STD 280-607881/13	50.0	12.104932	50.0	1474746.0	0.242099	Y
4	ICIS 280-607881/14	50.0	11.905053	50.0	1433467.0	0.238101	Y
5	STD 280-607881/15	50.0	12.104621	50.0	1371311.0	0.242092	Y
6	STD 280-607881/16	50.0	12.060386	50.0	1358265.0	0.241208	Y
7	STD 280-607881/17	50.0	11.906444	50.0	1337910.0	0.238129	Y
8	STD 280-607881/18	50.0	12.042263	50.0	1321475.0	0.240845	Y
9	STD 280-607881/19	50.0	11.909474	50.0	1347020.0	0.238189	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

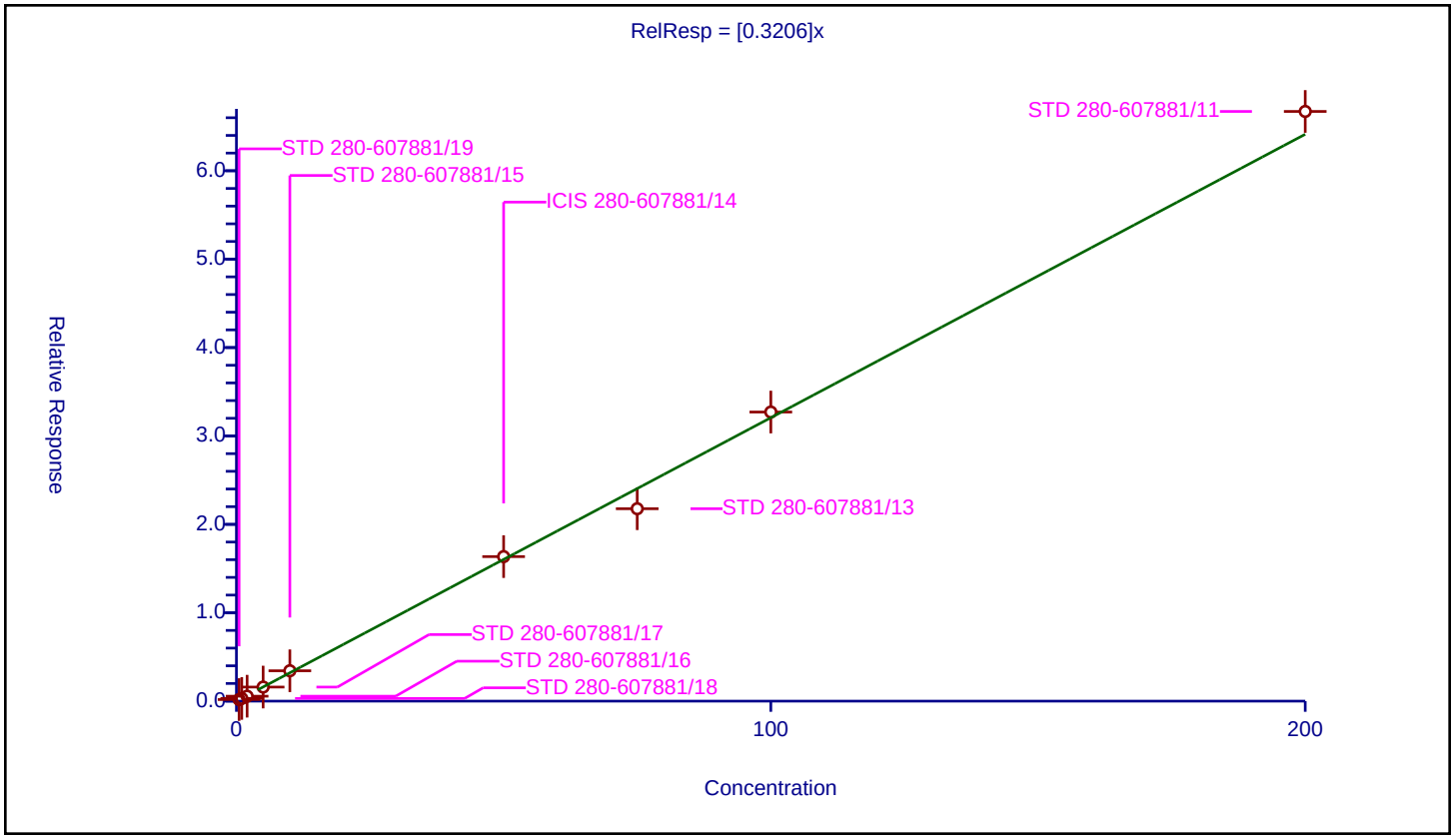
Curve Coefficients

Intercept:	0
Slope:	0.3206

Error Coefficients

Standard Error:	865000
Relative Standard Error:	7.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.179656	50.0	1347020.0	0.359312	Y
2	STD 280-607881/18	1.0	0.306968	50.0	1321475.0	0.306968	Y
3	STD 280-607881/16	2.0	0.559353	50.0	1358265.0	0.279677	Y
4	STD 280-607881/17	5.0	1.591325	50.0	1337910.0	0.318265	Y
5	STD 280-607881/15	10.0	3.437441	50.0	1371311.0	0.343744	Y
6	ICIS 280-607881/14	50.0	16.349487	50.0	1433467.0	0.32699	Y
7	STD 280-607881/13	75.0	21.768867	50.0	1474746.0	0.290252	Y
8	STD 280-607881/12	100.0	32.705574	50.0	1493380.0	0.327056	Y
9	STD 280-607881/11	200.0	66.711113	50.0	1569677.0	0.333556	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

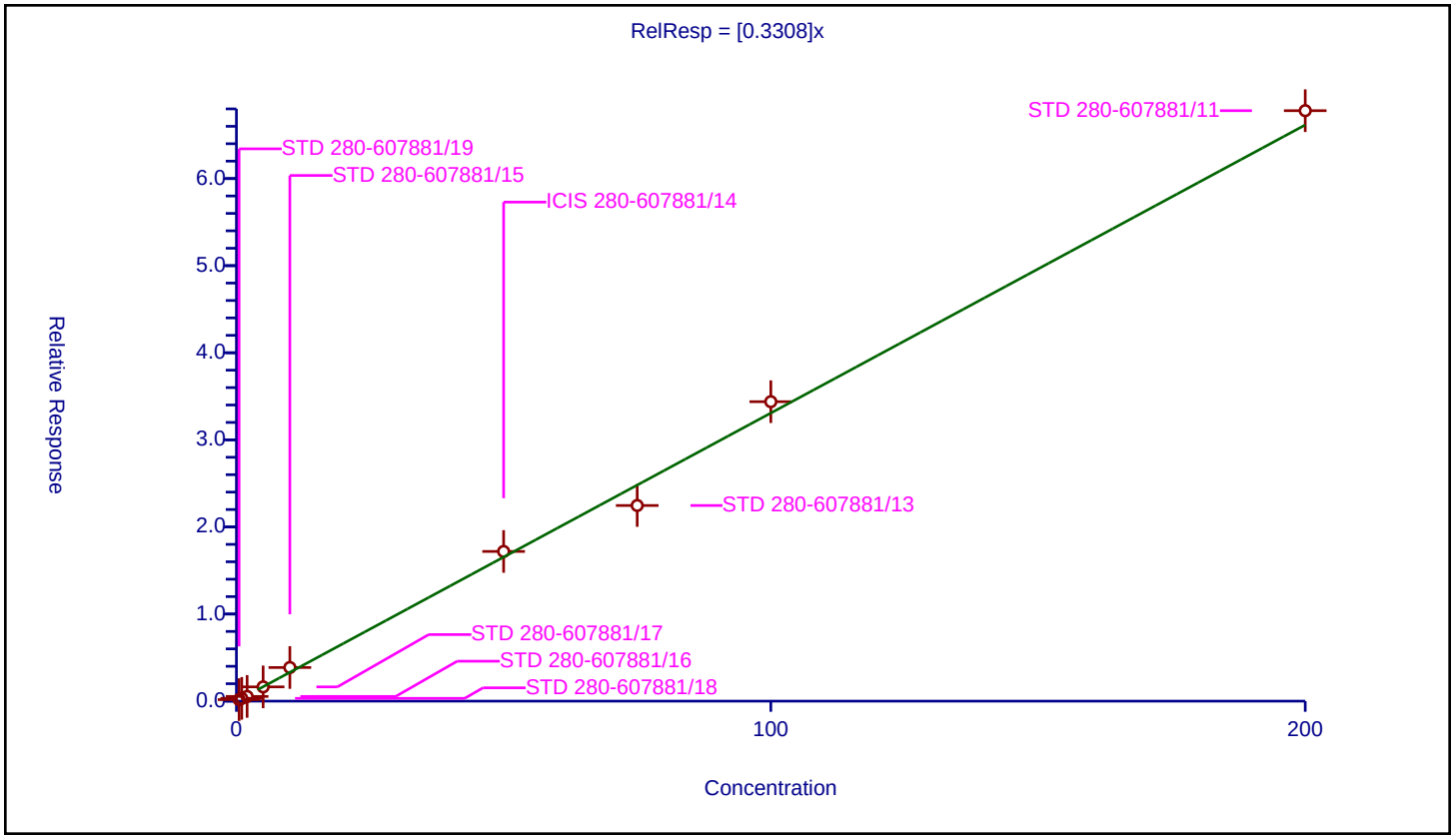
Curve Coefficients

Intercept:	0
Slope:	0.3308

Error Coefficients

Standard Error:	886000
Relative Standard Error:	9.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.173605	50.0	1347020.0	0.347211	Y
2	STD 280-607881/18	1.0	0.320513	50.0	1321475.0	0.320513	Y
3	STD 280-607881/16	2.0	0.539365	50.0	1358265.0	0.269682	Y
4	STD 280-607881/17	5.0	1.636956	50.0	1337910.0	0.327391	Y
5	STD 280-607881/15	10.0	3.862217	50.0	1371311.0	0.386222	Y
6	ICIS 280-607881/14	50.0	17.187107	50.0	1433467.0	0.343742	Y
7	STD 280-607881/13	75.0	22.461529	50.0	1474746.0	0.299487	Y
8	STD 280-607881/12	100.0	34.382542	50.0	1493380.0	0.343825	Y
9	STD 280-607881/11	200.0	67.794584	50.0	1569677.0	0.338973	Y



Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

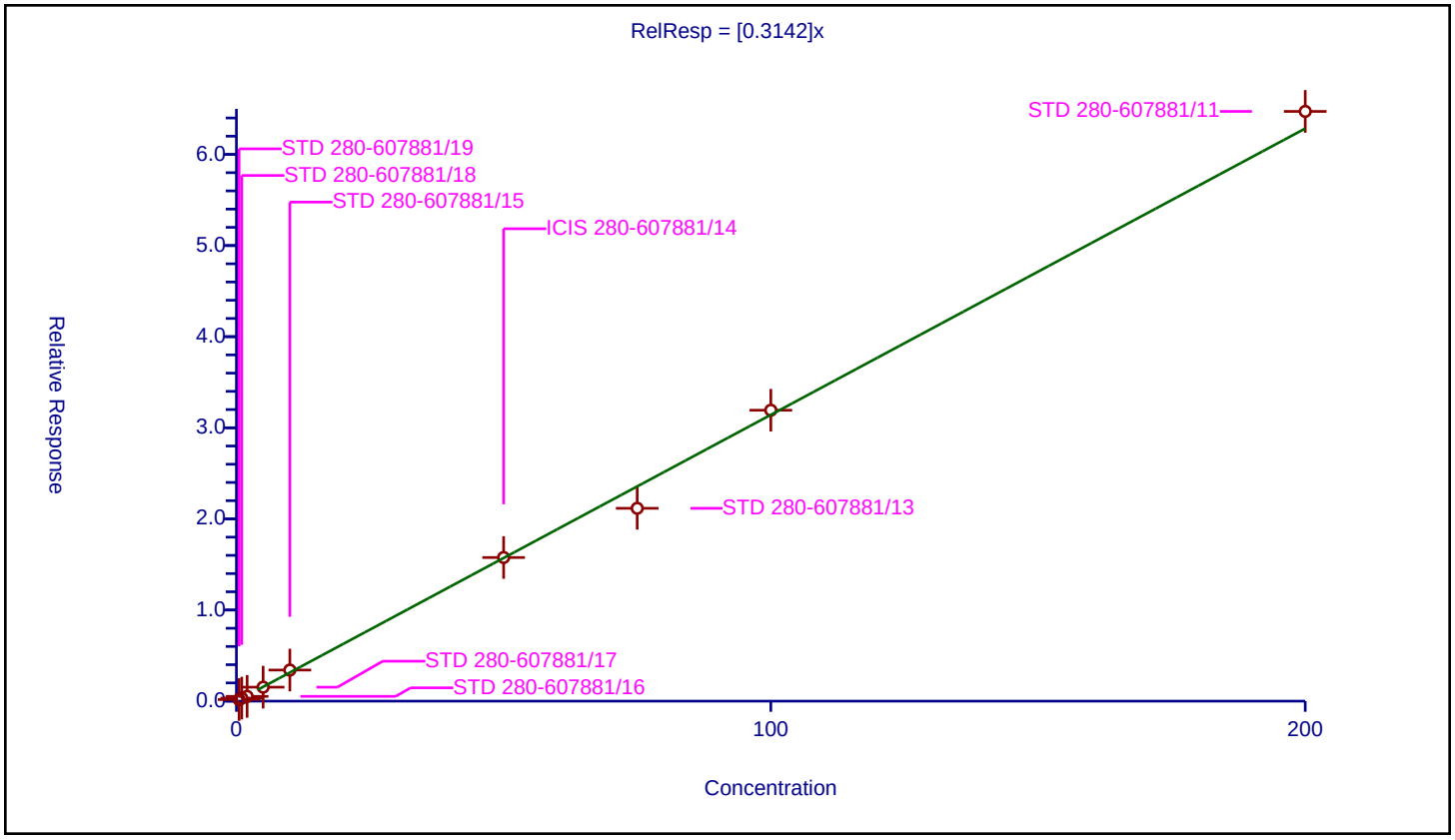
Curve Coefficients

Intercept:	0
Slope:	0.3142

Error Coefficients

Standard Error:	840000
Relative Standard Error:	8.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.173457	50.0	1347020.0	0.346914	Y
2	STD 280-607881/18	1.0	0.33088	50.0	1321475.0	0.33088	Y
3	STD 280-607881/16	2.0	0.523572	50.0	1358265.0	0.261786	Y
4	STD 280-607881/17	5.0	1.534184	50.0	1337910.0	0.306837	Y
5	STD 280-607881/15	10.0	3.412027	50.0	1371311.0	0.341203	Y
6	ICIS 280-607881/14	50.0	15.763181	50.0	1433467.0	0.315264	Y
7	STD 280-607881/13	75.0	21.166119	50.0	1474746.0	0.282215	Y
8	STD 280-607881/12	100.0	31.928076	50.0	1493380.0	0.319281	Y
9	STD 280-607881/11	200.0	64.723443	50.0	1569677.0	0.323617	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

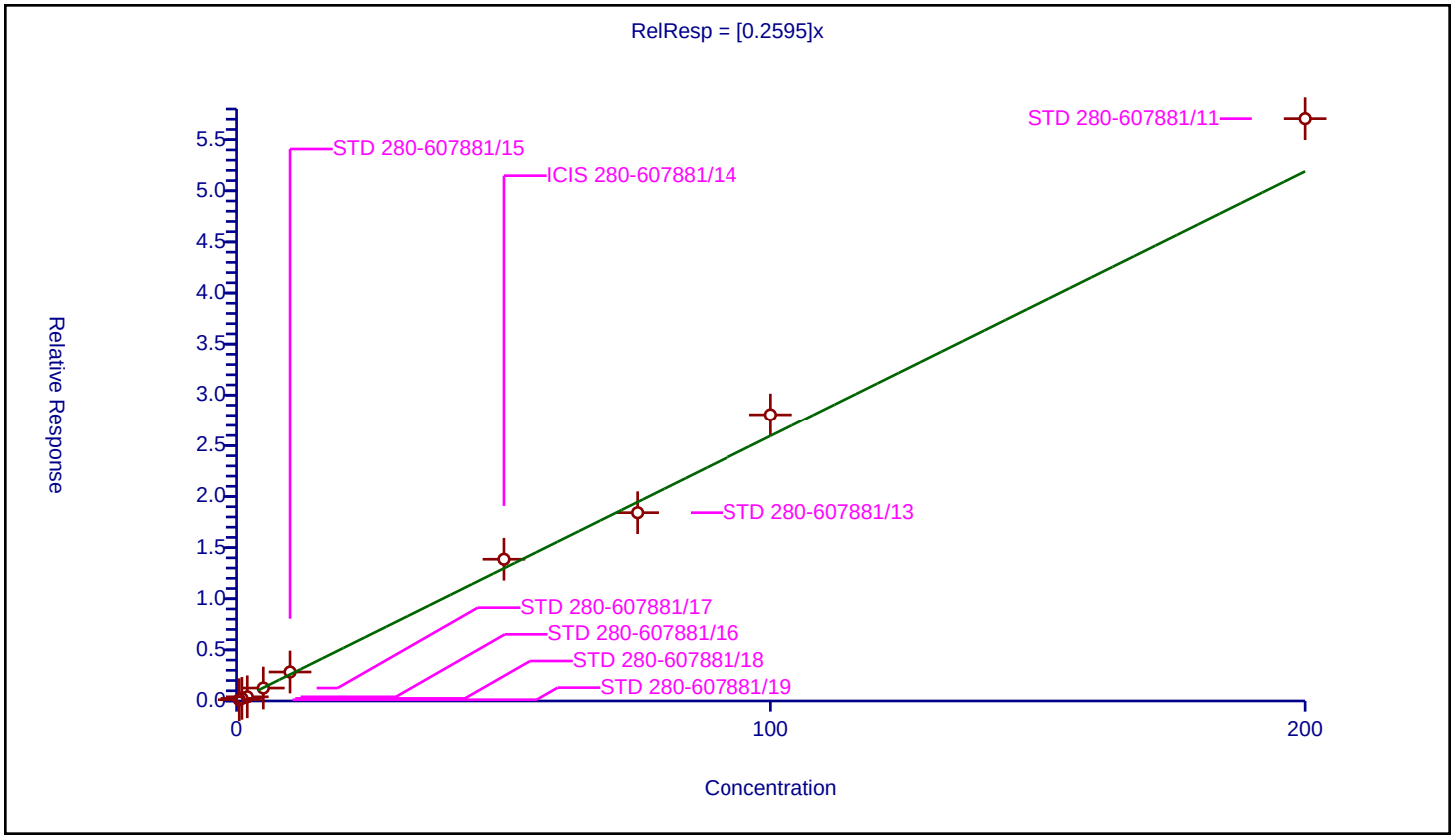
Curve Coefficients

Intercept:	0
Slope:	0.2595

Error Coefficients

Standard Error:	739000
Relative Standard Error:	10.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.125165	50.0	1347020.0	0.25033	Y
2	STD 280-607881/18	1.0	0.255548	50.0	1321475.0	0.255548	Y
3	STD 280-607881/16	2.0	0.408352	50.0	1358265.0	0.204176	Y
4	STD 280-607881/17	5.0	1.267238	50.0	1337910.0	0.253448	Y
5	STD 280-607881/15	10.0	2.834076	50.0	1371311.0	0.283408	Y
6	ICIS 280-607881/14	50.0	13.865405	50.0	1433467.0	0.277308	Y
7	STD 280-607881/13	75.0	18.419002	50.0	1474746.0	0.245587	Y
8	STD 280-607881/12	100.0	28.05967	50.0	1493380.0	0.280597	Y
9	STD 280-607881/11	200.0	57.057535	50.0	1569677.0	0.285288	Y



Calibration / Isobutyl alcohol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

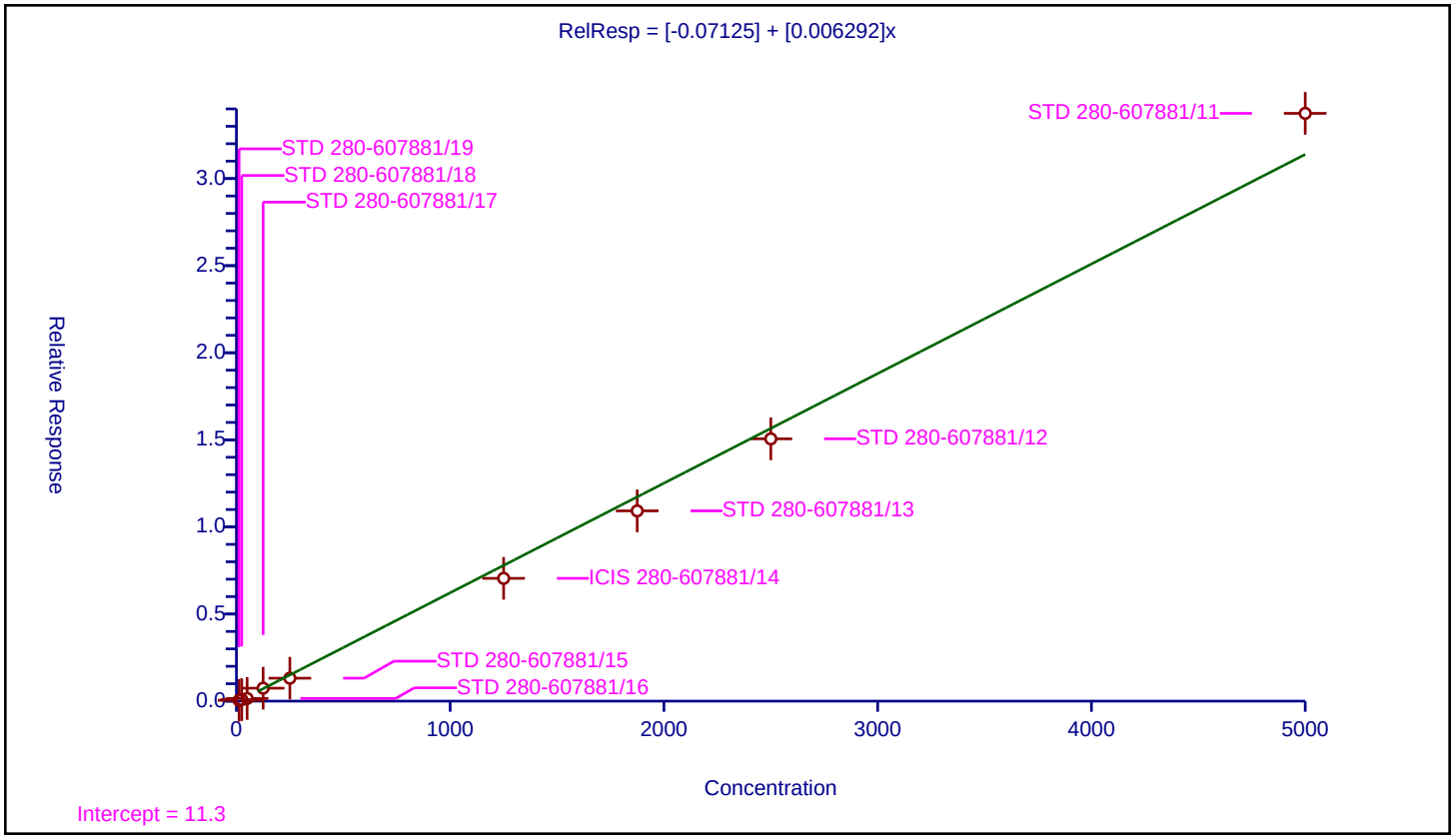
Curve Coefficients

Intercept:	-0.07125
Slope:	0.006292

Error Coefficients

Standard Error:	458000
Relative Standard Error:	22.7
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	12.5	0.04599	50.0	1347020.0	0.003679	Y
2	STD 280-607881/18	25.0	0.086873	50.0	1321475.0	0.003475	Y
3	STD 280-607881/16	50.0	0.152069	50.0	1358265.0	0.003041	Y
4	STD 280-607881/17	125.0	0.744557	50.0	1337910.0	0.005956	Y
5	STD 280-607881/15	250.0	1.317644	50.0	1371311.0	0.005271	Y
6	ICIS 280-607881/14	1250.0	7.049308	50.0	1433467.0	0.005639	Y
7	STD 280-607881/13	1875.0	10.921881	50.0	1474746.0	0.005825	Y
8	STD 280-607881/12	2500.0	15.058927	50.0	1493380.0	0.006024	Y
9	STD 280-607881/11	5000.0	33.743152	50.0	1569677.0	0.006749	Y



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Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

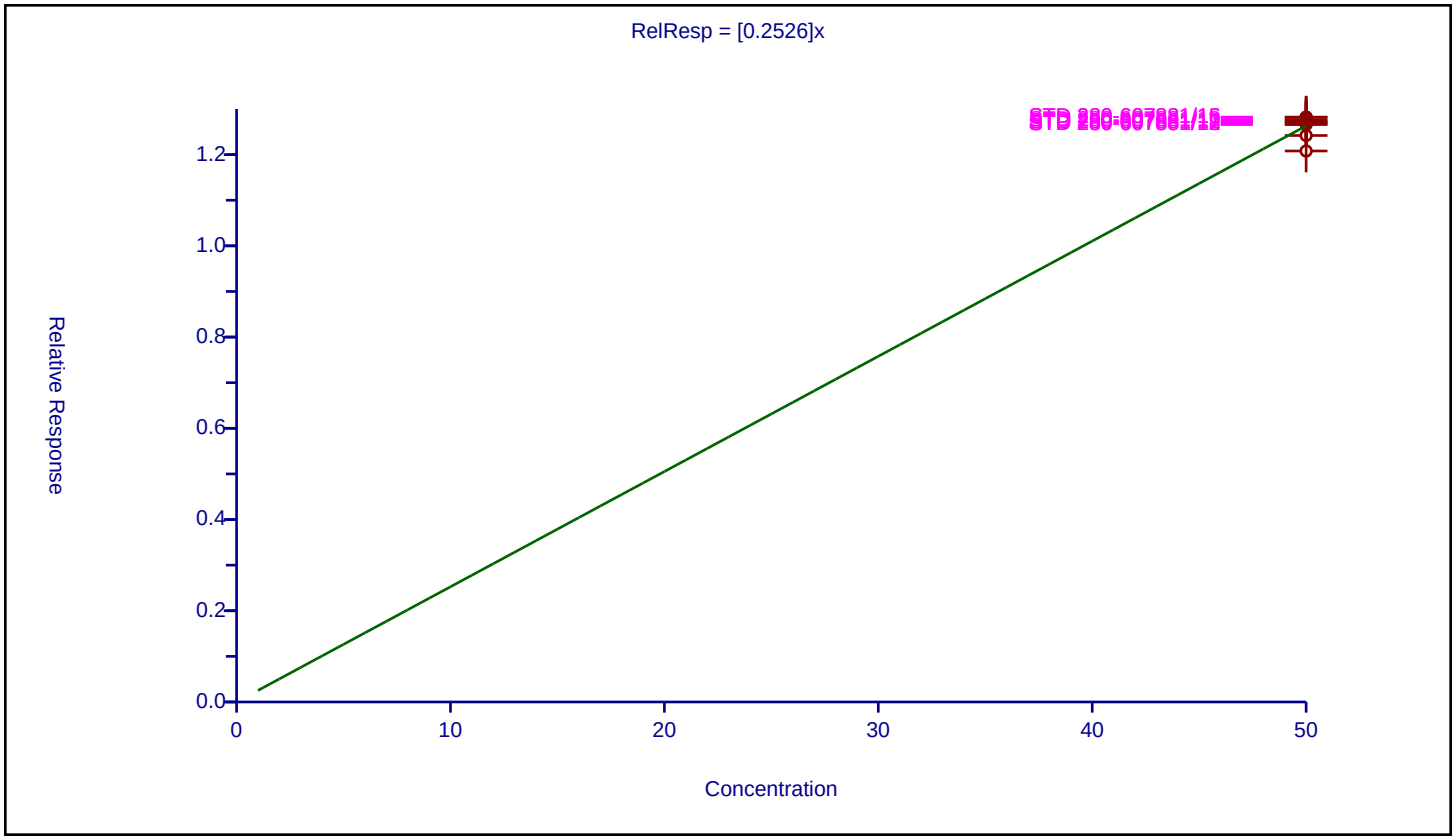
Curve Coefficients

Intercept:	0
Slope:	0.2526

Error Coefficients

Standard Error:	379000
Relative Standard Error:	1.9
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	12.721057	50.0	1569677.0	0.254421	Y
2	STD 280-607881/12	50.0	12.659404	50.0	1493380.0	0.253188	Y
3	STD 280-607881/13	50.0	12.7643	50.0	1474746.0	0.255286	Y
4	ICIS 280-607881/14	50.0	12.07956	50.0	1433467.0	0.241591	Y
5	STD 280-607881/15	50.0	12.821271	50.0	1371311.0	0.256425	Y
6	STD 280-607881/16	50.0	12.819369	50.0	1358265.0	0.256387	Y
7	STD 280-607881/17	50.0	12.71229	50.0	1337910.0	0.254246	Y
8	STD 280-607881/18	50.0	12.673982	50.0	1321475.0	0.25348	Y
9	STD 280-607881/19	50.0	12.419415	50.0	1347020.0	0.248388	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

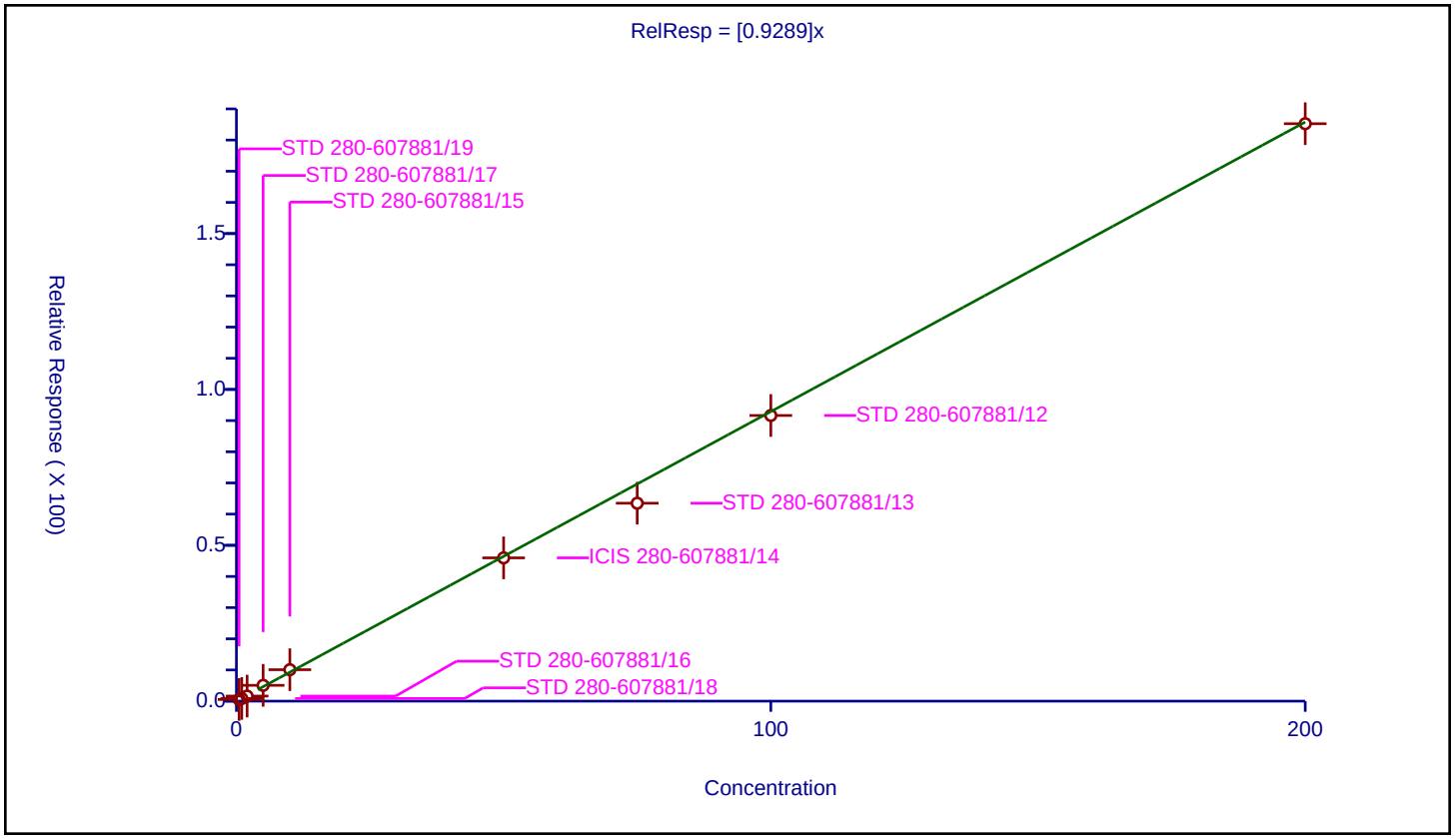
Curve Coefficients

Intercept:	0
Slope:	0.9289

Error Coefficients

Standard Error:	2410000
Relative Standard Error:	9.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.53069	50.0	1347020.0	1.06138	Y
2	STD 280-607881/18	1.0	0.85204	50.0	1321475.0	0.85204	Y
3	STD 280-607881/16	2.0	1.630499	50.0	1358265.0	0.81525	Y
4	STD 280-607881/17	5.0	5.071604	50.0	1337910.0	1.014321	Y
5	STD 280-607881/15	10.0	10.083271	50.0	1371311.0	1.008327	Y
6	ICIS 280-607881/14	50.0	45.967783	50.0	1433467.0	0.919356	Y
7	STD 280-607881/13	75.0	63.500054	50.0	1474746.0	0.846667	Y
8	STD 280-607881/12	100.0	91.642348	50.0	1493380.0	0.916423	Y
9	STD 280-607881/11	200.0	185.251838	50.0	1569677.0	0.926259	Y



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Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

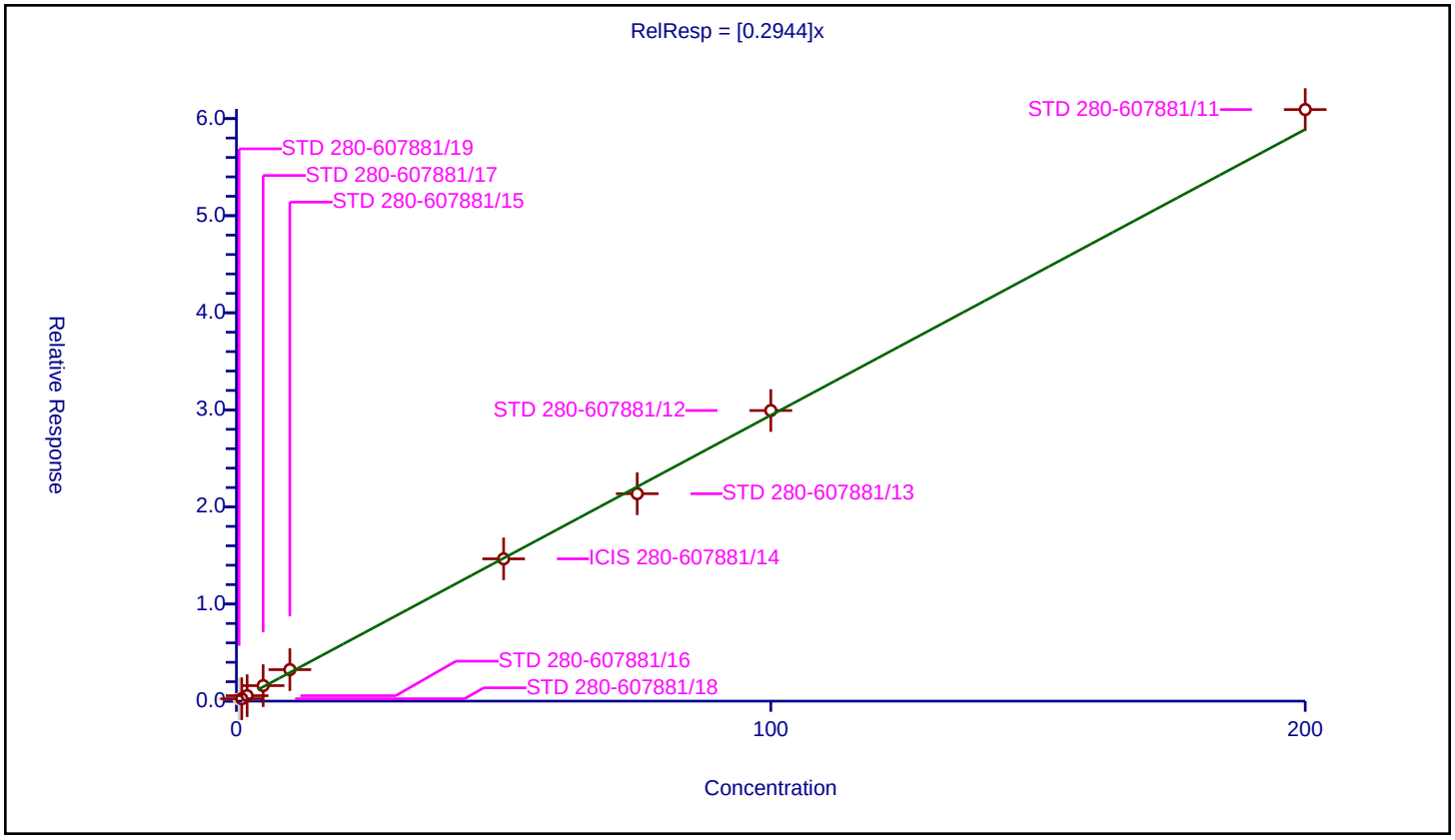
Curve Coefficients

Intercept:	0
Slope:	0.2944

Error Coefficients

Standard Error:	849000
Relative Standard Error:	8.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.220932	50.0	1347020.0	0.441864	N
2	STD 280-607881/18	1.0	0.248359	50.0	1321475.0	0.248359	Y
3	STD 280-607881/16	2.0	0.56193	50.0	1358265.0	0.280965	Y
4	STD 280-607881/17	5.0	1.5988	50.0	1337910.0	0.31976	Y
5	STD 280-607881/15	10.0	3.244523	50.0	1371311.0	0.324452	Y
6	ICIS 280-607881/14	50.0	14.656389	50.0	1433467.0	0.293128	Y
7	STD 280-607881/13	75.0	21.364899	50.0	1474746.0	0.284865	Y
8	STD 280-607881/12	100.0	29.933172	50.0	1493380.0	0.299332	Y
9	STD 280-607881/11	200.0	60.930465	50.0	1569677.0	0.304652	Y



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Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

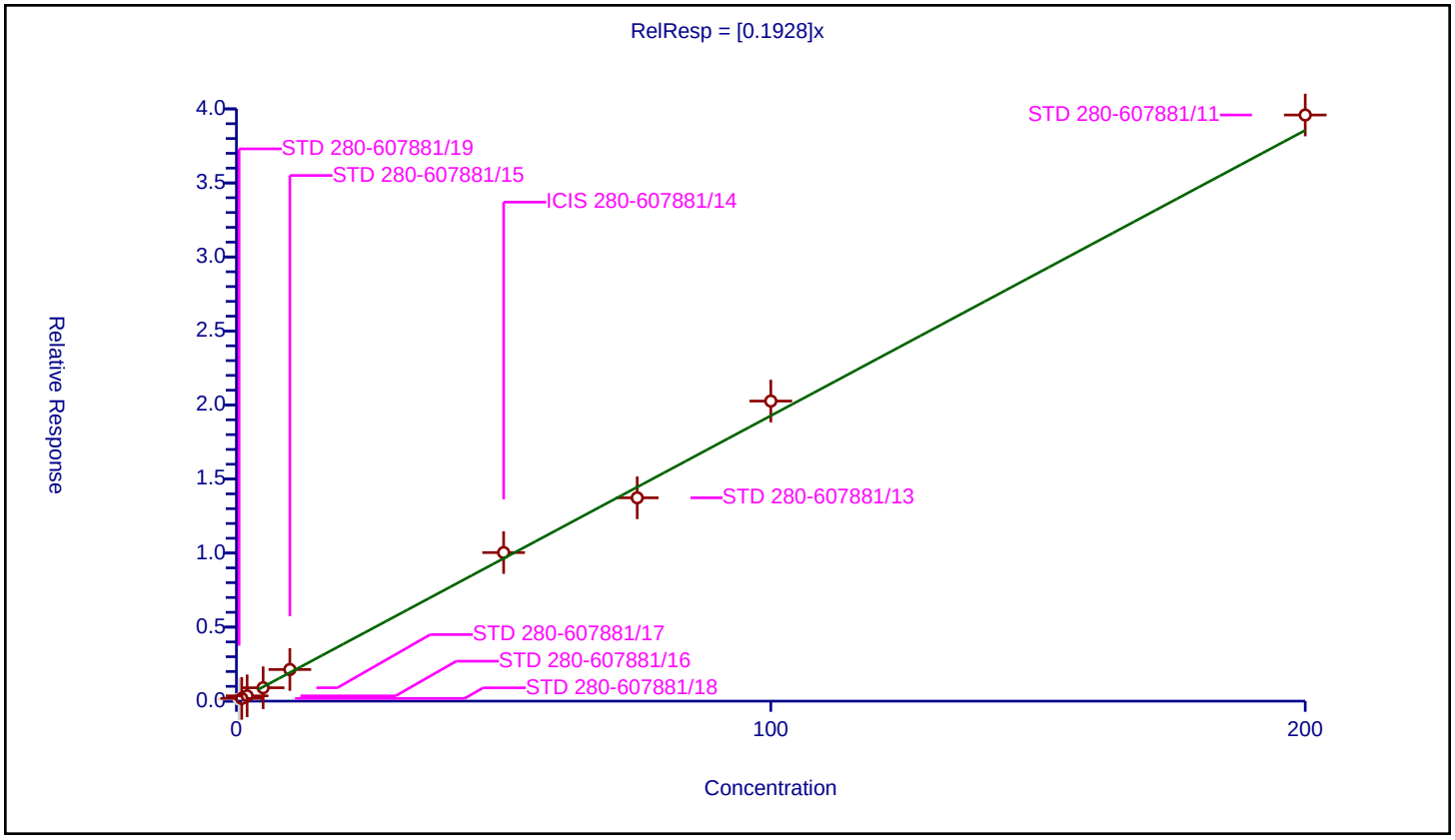
Curve Coefficients

Intercept:	0
Slope:	0.1928

Error Coefficients

Standard Error:	556000
Relative Standard Error:	6.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.143984	50.0	1347020.0	0.287969	N
2	STD 280-607881/18	1.0	0.184756	50.0	1321475.0	0.184756	Y
3	STD 280-607881/16	2.0	0.35711	50.0	1358265.0	0.178555	Y
4	STD 280-607881/17	5.0	0.903798	50.0	1337910.0	0.18076	Y
5	STD 280-607881/15	10.0	2.136933	50.0	1371311.0	0.213693	Y
6	ICIS 280-607881/14	50.0	10.034343	50.0	1433467.0	0.200687	Y
7	STD 280-607881/13	75.0	13.733755	50.0	1474746.0	0.183117	Y
8	STD 280-607881/12	100.0	20.266275	50.0	1493380.0	0.202663	Y
9	STD 280-607881/11	200.0	39.588845	50.0	1569677.0	0.197944	Y



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Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

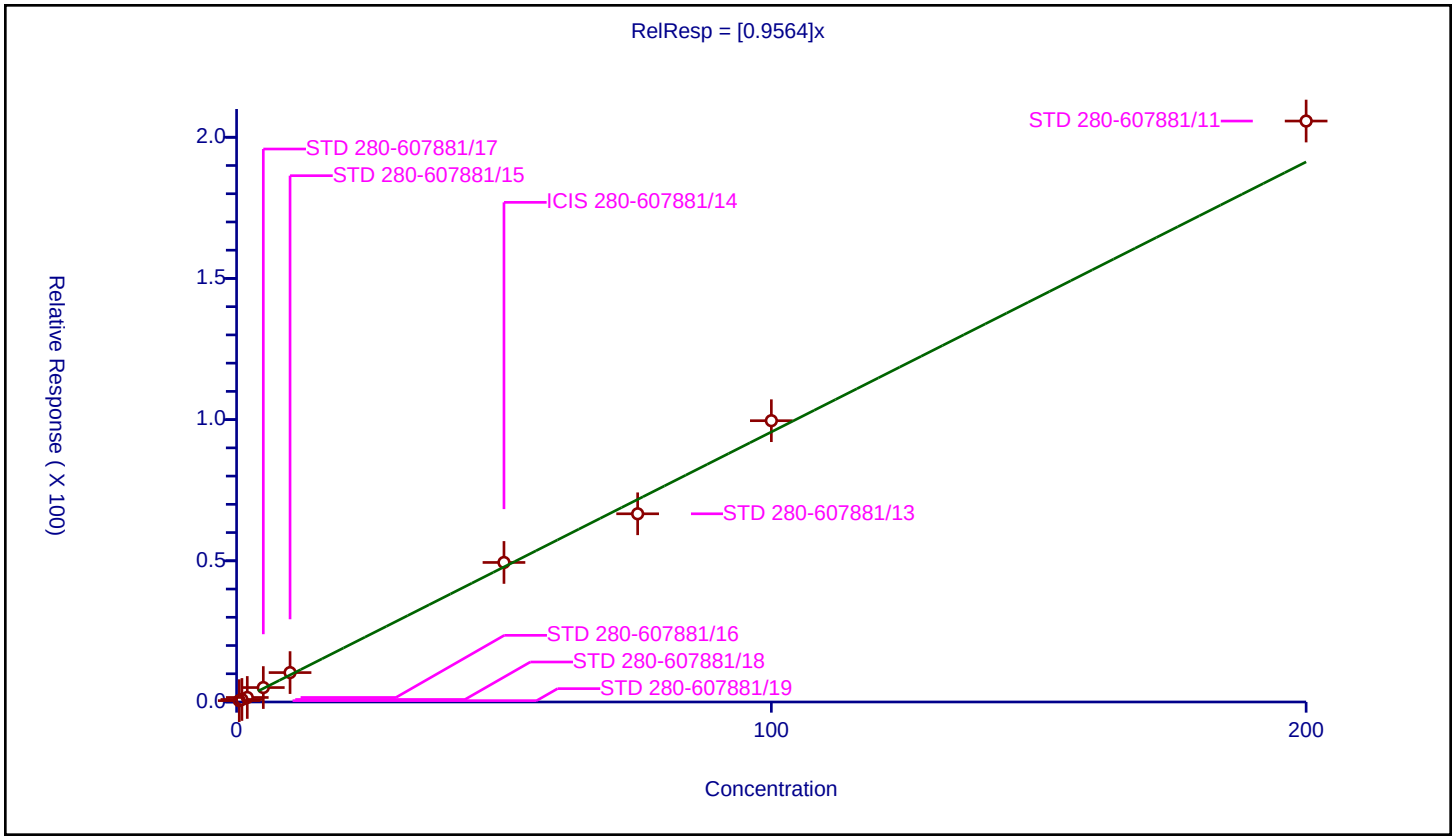
Curve Coefficients

Intercept:	0
Slope:	0.9564

Error Coefficients

Standard Error:	614000
Relative Standard Error:	8.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.474109	50.0	310688.0	0.948218	Y
2	STD 280-607881/18	1.0	0.892757	50.0	303218.0	0.892757	Y
3	STD 280-607881/16	2.0	1.602116	50.0	311900.0	0.801058	Y
4	STD 280-607881/17	5.0	5.111859	50.0	312939.0	1.022372	Y
5	STD 280-607881/15	10.0	10.410609	50.0	319160.0	1.041061	Y
6	ICIS 280-607881/14	50.0	49.418594	50.0	327912.0	0.988372	Y
7	STD 280-607881/13	75.0	66.646354	50.0	345430.0	0.888618	Y
8	STD 280-607881/12	100.0	99.623632	50.0	350056.0	0.996236	Y
9	STD 280-607881/11	200.0	205.741261	50.0	361445.0	1.028706	Y



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Calibration / 2-Pentanone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

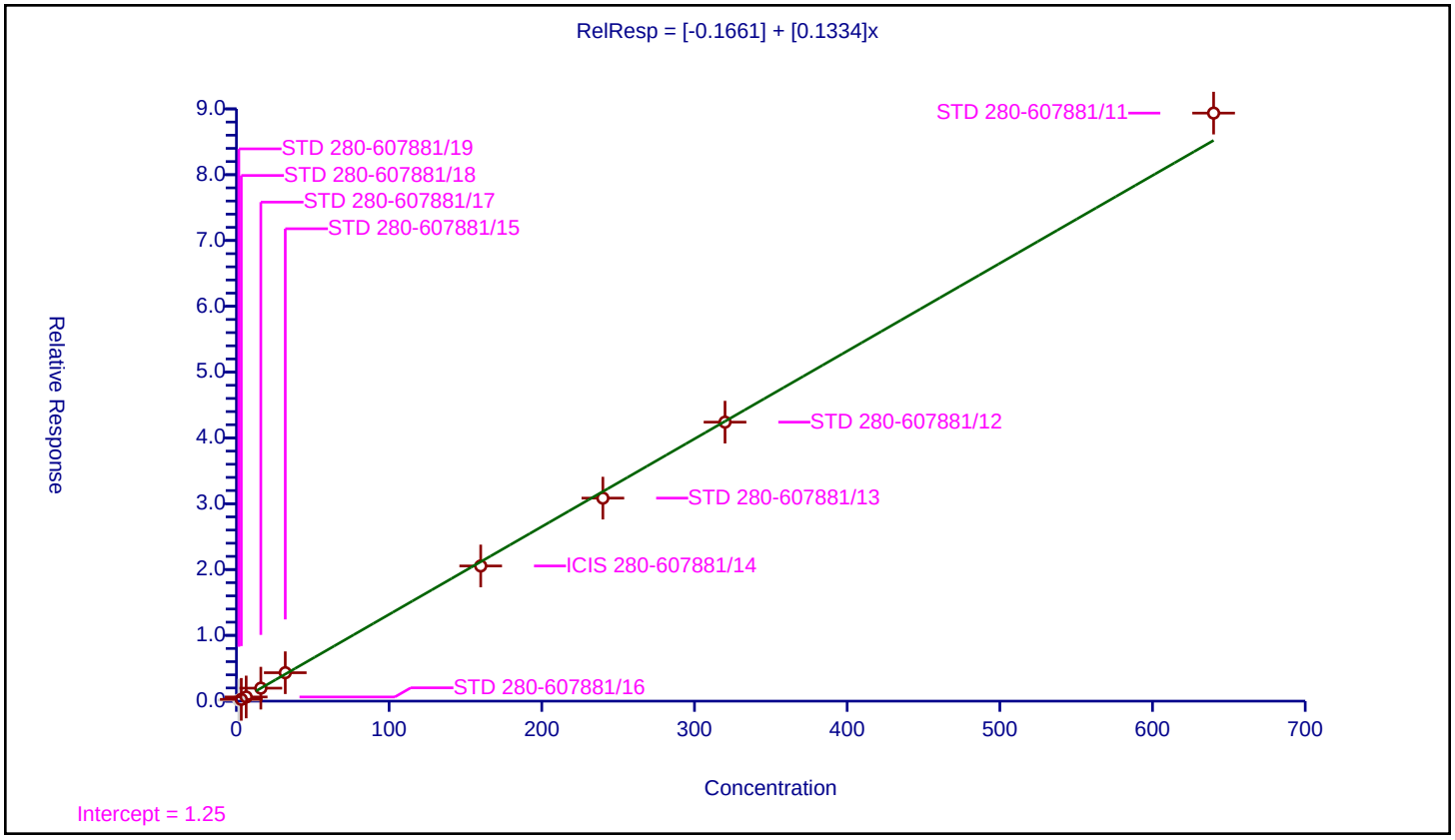
Curve Coefficients

Intercept:	-0.1661
Slope:	0.1334

Error Coefficients

Standard Error:	1330000
Relative Standard Error:	4.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.6	0.164957	50.0	1347020.0	0.103098	N
2	STD 280-607881/18	3.2	0.272574	50.0	1321475.0	0.085179	Y
3	STD 280-607881/16	6.4	0.632793	50.0	1358265.0	0.098874	Y
4	STD 280-607881/17	16.0	1.971097	50.0	1337910.0	0.123194	Y
5	STD 280-607881/15	32.0	4.319626	50.0	1371311.0	0.134988	Y
6	ICIS 280-607881/14	160.0	20.542712	50.0	1433467.0	0.128392	Y
7	STD 280-607881/13	240.0	30.851516	50.0	1474746.0	0.128548	Y
8	STD 280-607881/12	320.0	42.396677	50.0	1493380.0	0.13249	Y
9	STD 280-607881/11	640.0	89.361123	50.0	1569677.0	0.139627	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

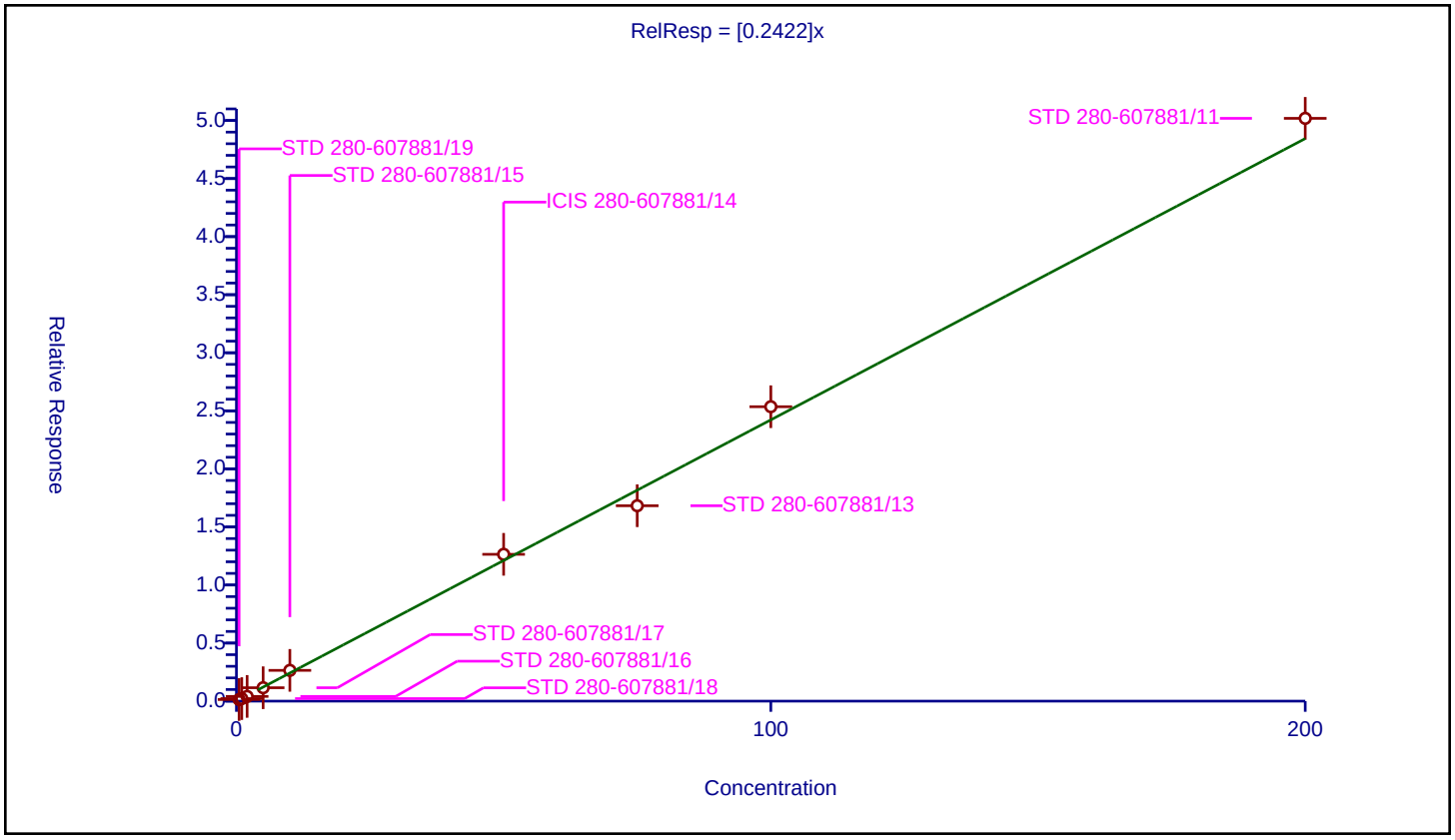
Curve Coefficients

Intercept:	0
Slope:	0.2422

Error Coefficients

Standard Error:	656000
Relative Standard Error:	10.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.139864	50.0	1347020.0	0.279729	Y
2	STD 280-607881/18	1.0	0.219527	50.0	1321475.0	0.219527	Y
3	STD 280-607881/16	2.0	0.405959	50.0	1358265.0	0.20298	Y
4	STD 280-607881/17	5.0	1.155085	50.0	1337910.0	0.231017	Y
5	STD 280-607881/15	10.0	2.6498	50.0	1371311.0	0.26498	Y
6	ICIS 280-607881/14	50.0	12.642007	50.0	1433467.0	0.25284	Y
7	STD 280-607881/13	75.0	16.825711	50.0	1474746.0	0.224343	Y
8	STD 280-607881/12	100.0	25.354531	50.0	1493380.0	0.253545	Y
9	STD 280-607881/11	200.0	50.18593	50.0	1569677.0	0.25093	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

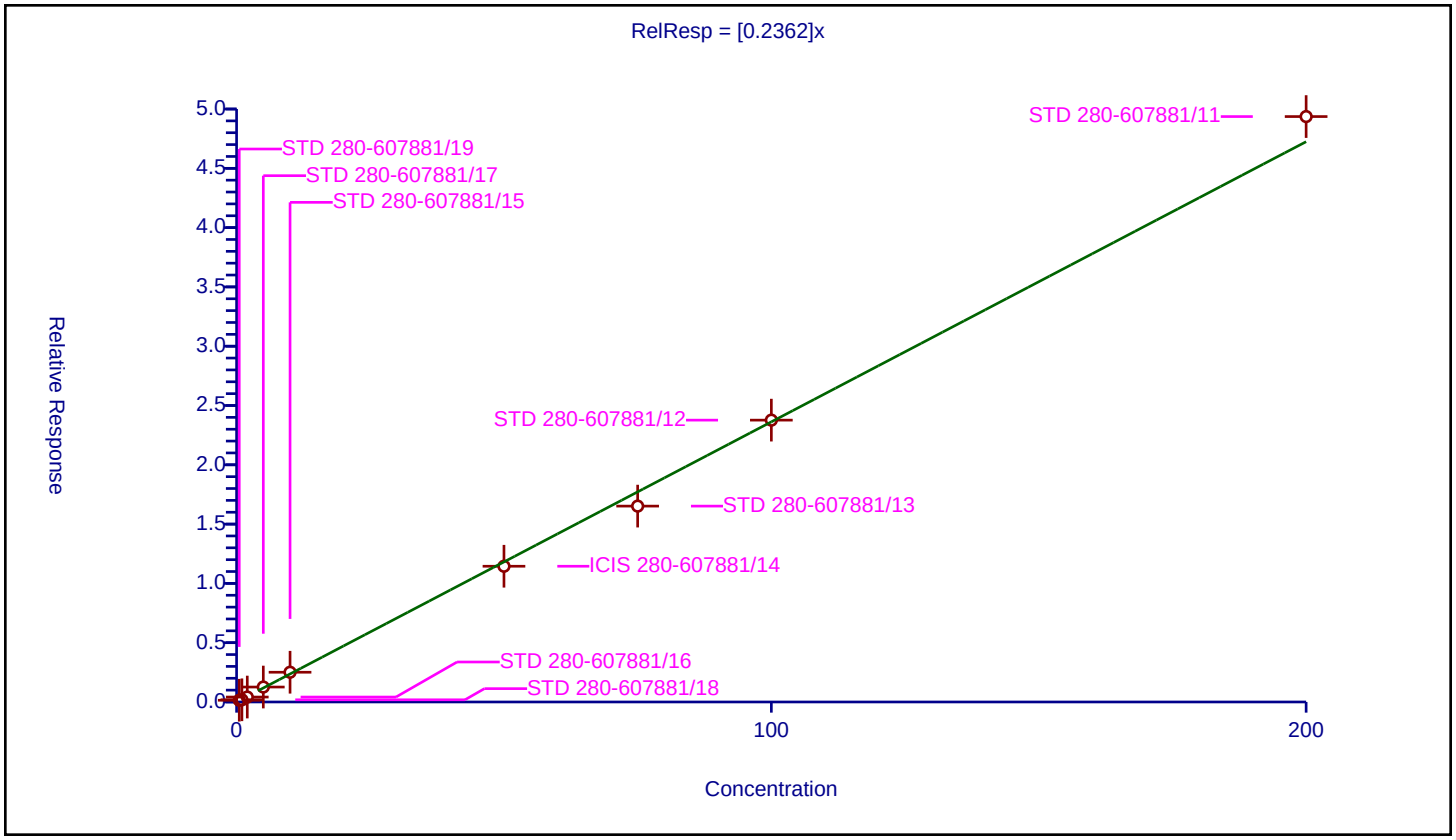
Curve Coefficients

Intercept:	0
Slope:	0.2362

Error Coefficients

Standard Error:	638000
Relative Standard Error:	13.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.147993	50.0	1347020.0	0.295987	Y
2	STD 280-607881/18	1.0	0.184529	50.0	1321475.0	0.184529	Y
3	STD 280-607881/16	2.0	0.417702	50.0	1358265.0	0.208851	Y
4	STD 280-607881/17	5.0	1.260847	50.0	1337910.0	0.252169	Y
5	STD 280-607881/15	10.0	2.508366	50.0	1371311.0	0.250837	Y
6	ICIS 280-607881/14	50.0	11.445258	50.0	1433467.0	0.228905	Y
7	STD 280-607881/13	75.0	16.516844	50.0	1474746.0	0.220225	Y
8	STD 280-607881/12	100.0	23.765016	50.0	1493380.0	0.23765	Y
9	STD 280-607881/11	200.0	49.363149	50.0	1569677.0	0.246816	Y



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Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

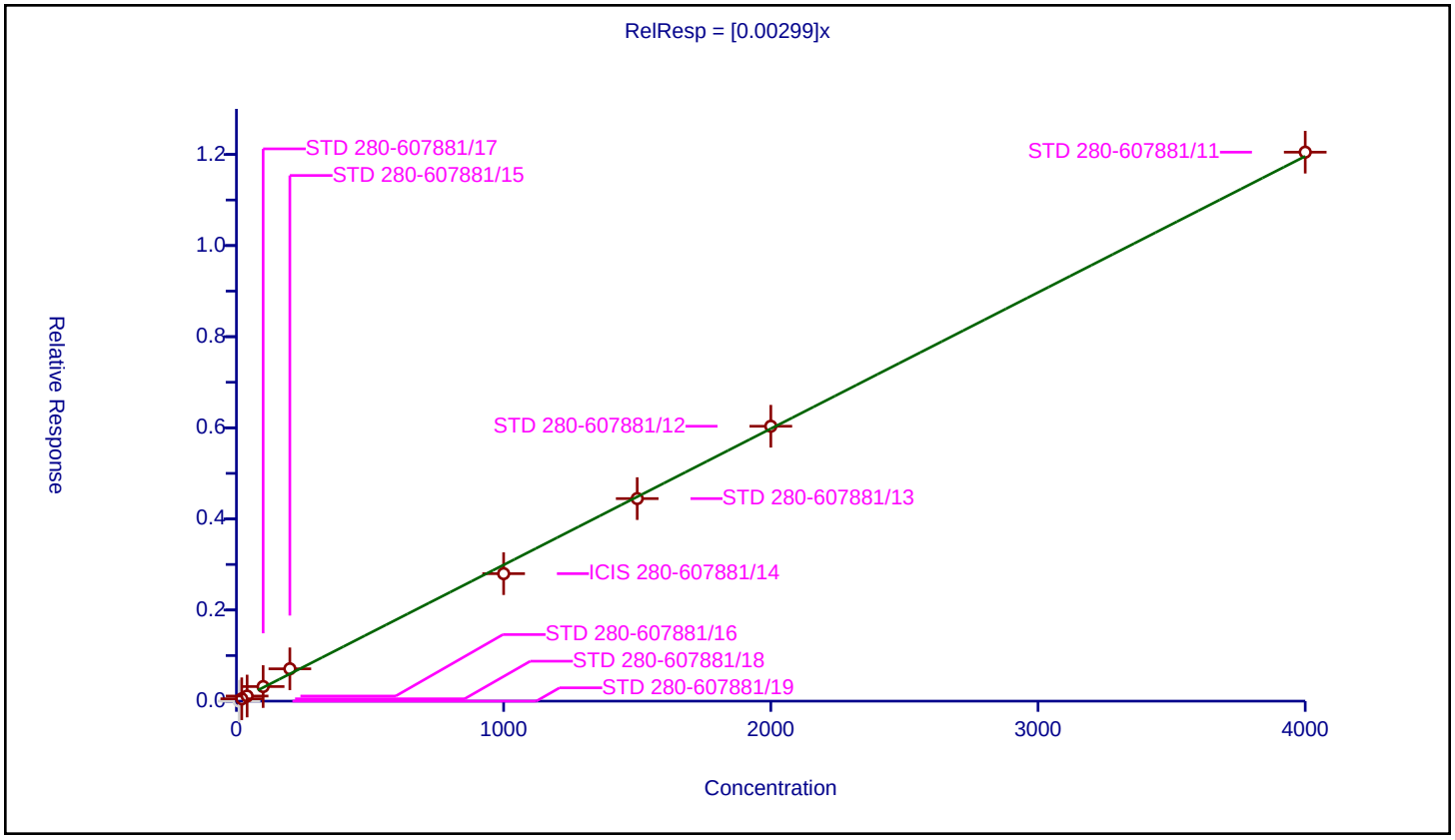
Curve Coefficients

Intercept:	0
Slope:	0.00299

Error Coefficients

Standard Error:	169000
Relative Standard Error:	9.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	10.0	0.0	50.0	1347020.0	0.0	N
2	STD 280-607881/18	20.0	0.051571	50.0	1321475.0	0.002579	Y
3	STD 280-607881/16	40.0	0.112092	50.0	1358265.0	0.002802	Y
4	STD 280-607881/17	100.0	0.320051	50.0	1337910.0	0.003201	Y
5	STD 280-607881/15	200.0	0.709467	50.0	1371311.0	0.003547	Y
6	ICIS 280-607881/14	1000.0	2.79853	50.0	1433467.0	0.002799	Y
7	STD 280-607881/13	1500.0	4.445952	50.0	1474746.0	0.002964	Y
8	STD 280-607881/12	2000.0	6.034365	50.0	1493380.0	0.003017	Y
9	STD 280-607881/11	4000.0	12.049995	50.0	1569677.0	0.003012	Y



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Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

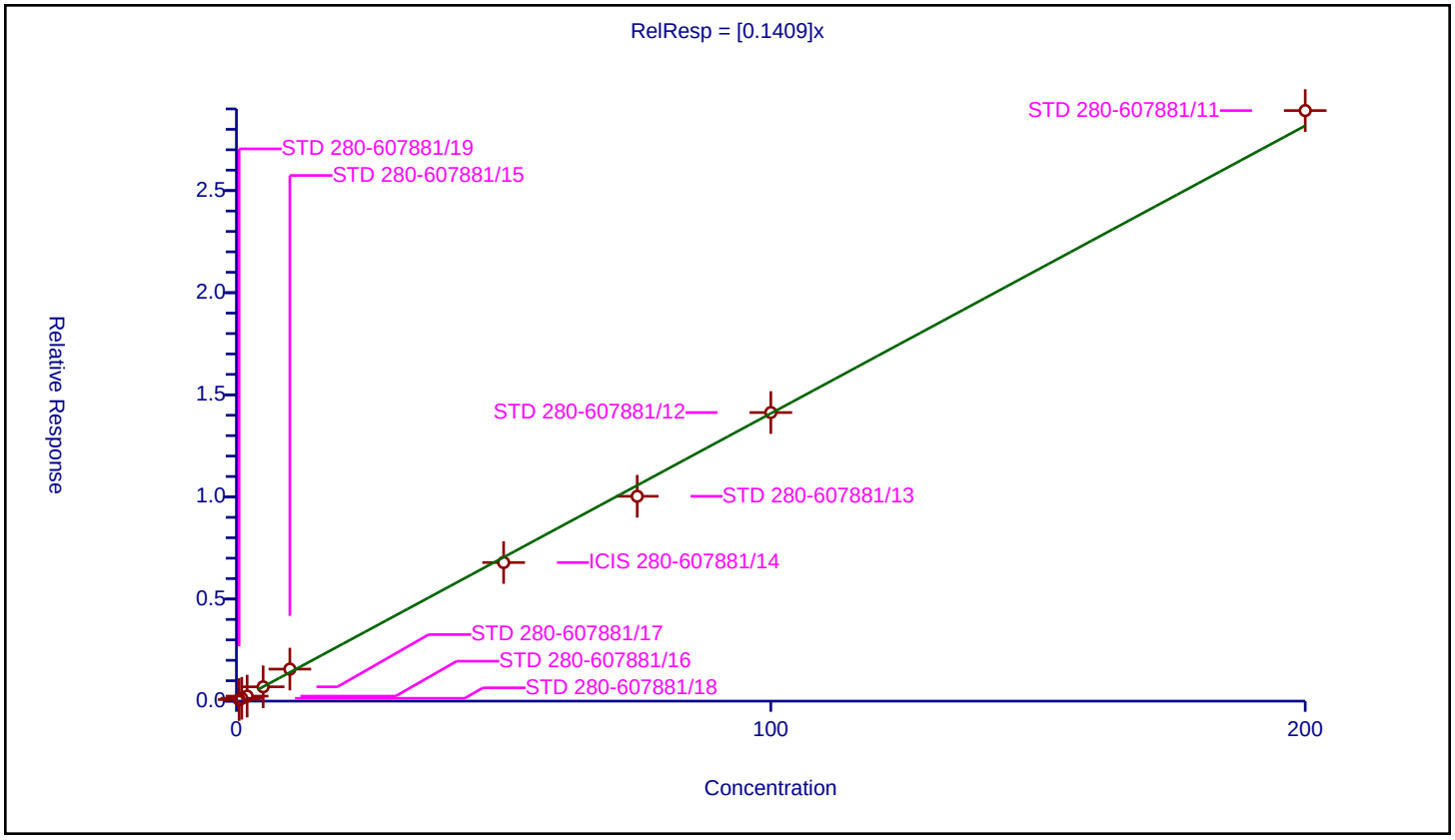
Curve Coefficients

Intercept:	0
Slope:	0.1409

Error Coefficients

Standard Error:	376000
Relative Standard Error:	7.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.076502	50.0	1347020.0	0.153004	Y
2	STD 280-607881/18	1.0	0.139541	50.0	1321475.0	0.139541	Y
3	STD 280-607881/16	2.0	0.245976	50.0	1358265.0	0.122988	Y
4	STD 280-607881/17	5.0	0.700608	50.0	1337910.0	0.140122	Y
5	STD 280-607881/15	10.0	1.5689	50.0	1371311.0	0.15689	Y
6	ICIS 280-607881/14	50.0	6.787669	50.0	1433467.0	0.135753	Y
7	STD 280-607881/13	75.0	10.030609	50.0	1474746.0	0.133741	Y
8	STD 280-607881/12	100.0	14.1314	50.0	1493380.0	0.141314	Y
9	STD 280-607881/11	200.0	28.917956	50.0	1569677.0	0.14459	Y



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Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

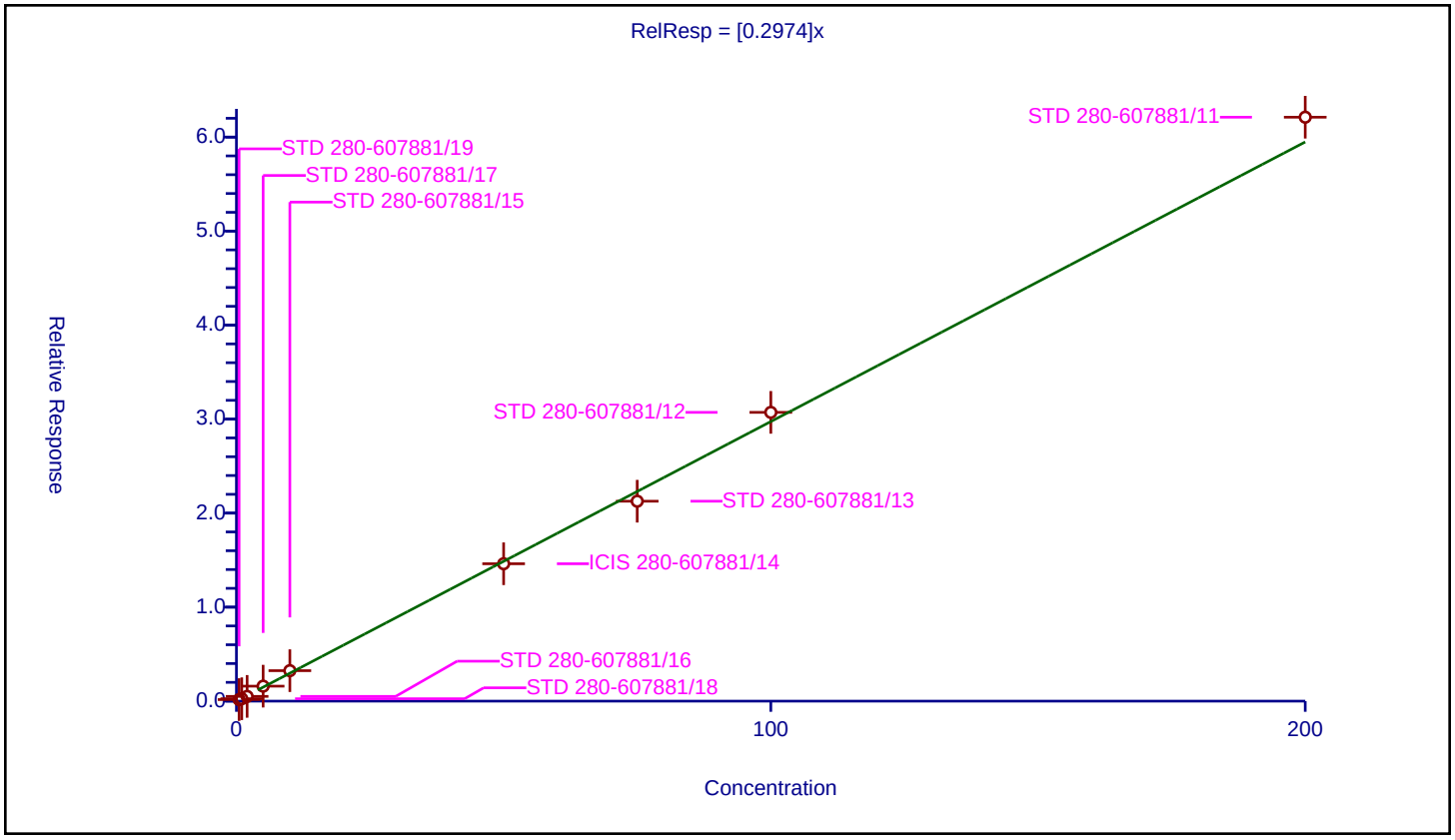
Curve Coefficients

Intercept:	0
Slope:	0.2974

Error Coefficients

Standard Error:	808000
Relative Standard Error:	9.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.164882	50.0	1347020.0	0.329765	Y
2	STD 280-607881/18	1.0	0.257364	50.0	1321475.0	0.257364	Y
3	STD 280-607881/16	2.0	0.505866	50.0	1358265.0	0.252933	Y
4	STD 280-607881/17	5.0	1.592745	50.0	1337910.0	0.318549	Y
5	STD 280-607881/15	10.0	3.243356	50.0	1371311.0	0.324336	Y
6	ICIS 280-607881/14	50.0	14.615684	50.0	1433467.0	0.292314	Y
7	STD 280-607881/13	75.0	21.268205	50.0	1474746.0	0.283576	Y
8	STD 280-607881/12	100.0	30.717768	50.0	1493380.0	0.307178	Y
9	STD 280-607881/11	200.0	62.115709	50.0	1569677.0	0.310579	Y



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Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

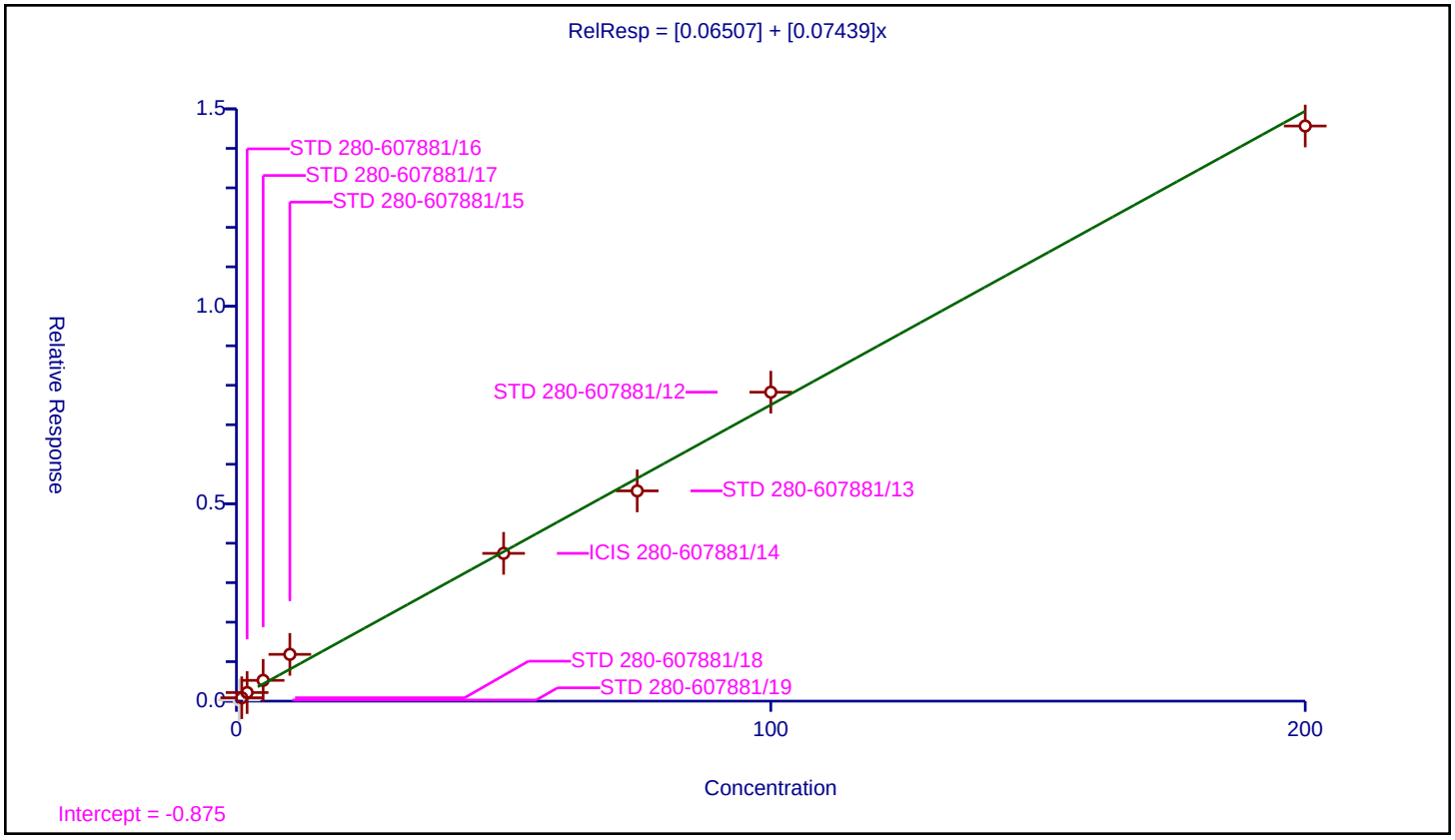
Curve Coefficients

Intercept:	0.06507
Slope:	0.07439

Error Coefficients

Standard Error:	224000
Relative Standard Error:	37.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.028396	50.0	1347020.0	0.056792	N
2	STD 280-607881/18	1.0	0.085965	50.0	1321475.0	0.085965	Y
3	STD 280-607881/16	2.0	0.217299	50.0	1358265.0	0.10865	Y
4	STD 280-607881/17	5.0	0.52668	50.0	1337910.0	0.105336	Y
5	STD 280-607881/15	10.0	1.184997	50.0	1371311.0	0.1185	Y
6	ICIS 280-607881/14	50.0	3.742779	50.0	1433467.0	0.074856	Y
7	STD 280-607881/13	75.0	5.325324	50.0	1474746.0	0.071004	Y
8	STD 280-607881/12	100.0	7.825637	50.0	1493380.0	0.078256	Y
9	STD 280-607881/11	200.0	14.566723	50.0	1569677.0	0.072834	Y



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Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

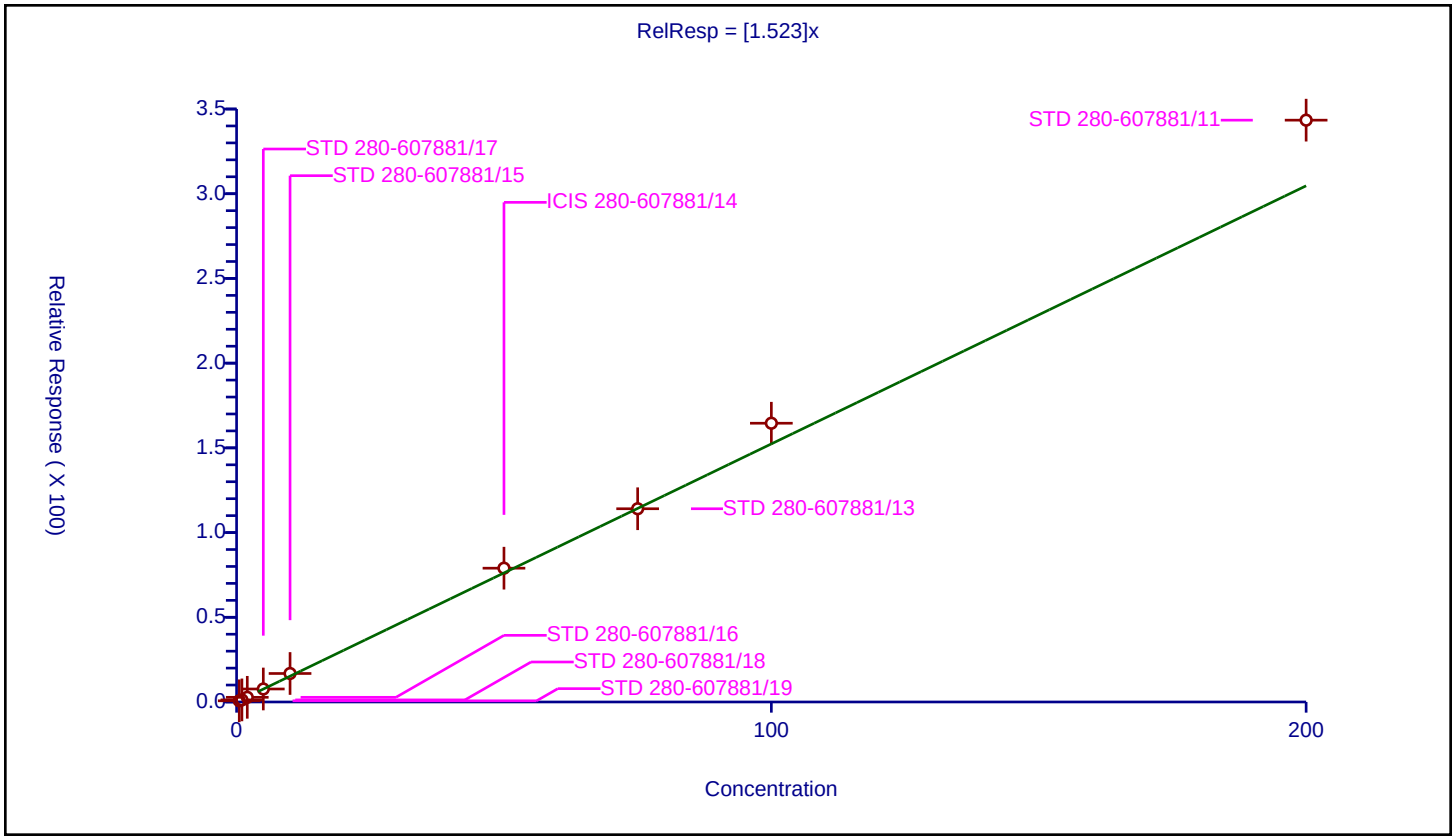
Curve Coefficients

Intercept:	0
Slope:	1.523

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	10.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.705853	50.0	310688.0	1.411706	Y
2	STD 280-607881/18	1.0	1.242505	50.0	303218.0	1.242505	Y
3	STD 280-607881/16	2.0	2.755691	50.0	311900.0	1.377845	Y
4	STD 280-607881/17	5.0	7.665392	50.0	312939.0	1.533078	Y
5	STD 280-607881/15	10.0	16.820404	50.0	319160.0	1.68204	Y
6	ICIS 280-607881/14	50.0	78.977439	50.0	327912.0	1.579549	Y
7	STD 280-607881/13	75.0	114.062762	50.0	345430.0	1.520837	Y
8	STD 280-607881/12	100.0	164.542673	50.0	350056.0	1.645427	Y
9	STD 280-607881/11	200.0	343.426109	50.0	361445.0	1.717131	Y



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Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

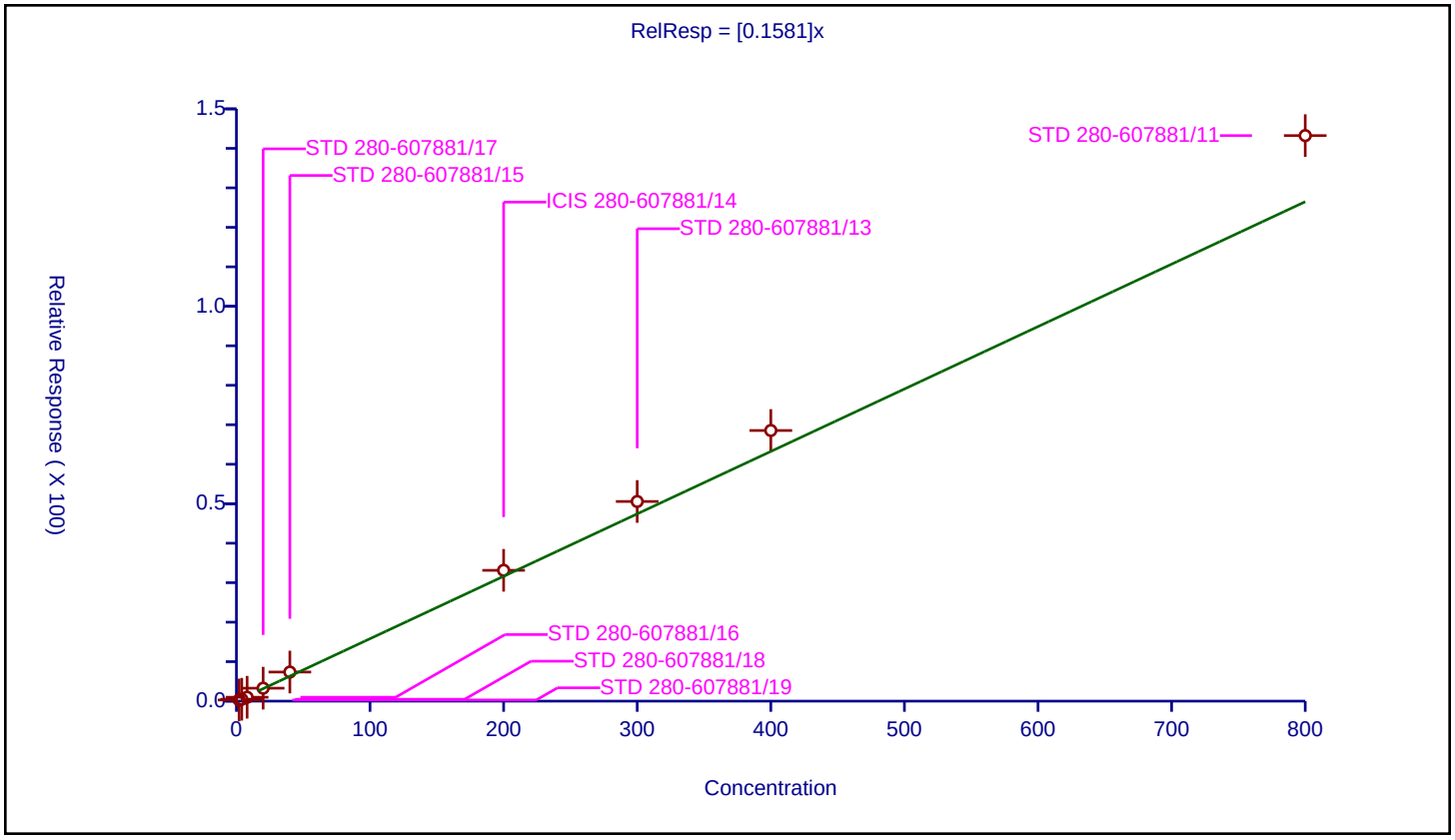
Curve Coefficients

Intercept:	0
Slope:	0.1581

Error Coefficients

Standard Error:	1860000
Relative Standard Error:	14.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.290716	50.0	1347020.0	0.145358	Y
2	STD 280-607881/18	4.0	0.484761	50.0	1321475.0	0.12119	Y
3	STD 280-607881/16	8.0	0.988025	50.0	1358265.0	0.123503	Y
4	STD 280-607881/17	20.0	3.281686	50.0	1337910.0	0.164084	Y
5	STD 280-607881/15	40.0	7.366746	50.0	1371311.0	0.184169	Y
6	ICIS 280-607881/14	200.0	33.134177	50.0	1433467.0	0.165671	Y
7	STD 280-607881/13	300.0	50.568776	50.0	1474746.0	0.168563	Y
8	STD 280-607881/12	400.0	68.547824	50.0	1493380.0	0.17137	Y
9	STD 280-607881/11	800.0	143.236507	50.0	1569677.0	0.179046	Y



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Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

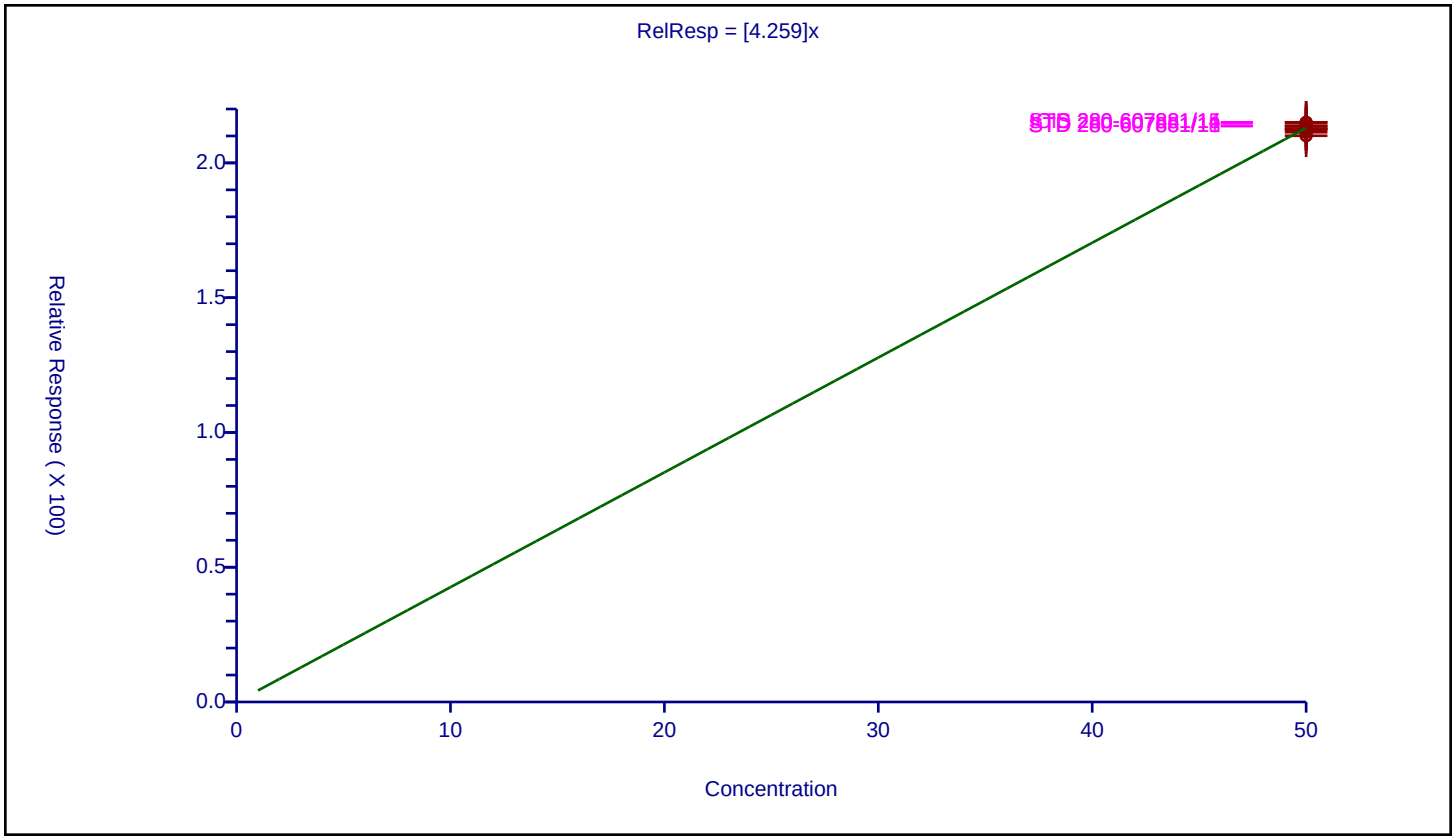
Curve Coefficients

Intercept:	0
Slope:	4.259

Error Coefficients

Standard Error:	1480000
Relative Standard Error:	0.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	213.815933	50.0	361445.0	4.276319	Y
2	STD 280-607881/12	50.0	212.690541	50.0	350056.0	4.253811	Y
3	STD 280-607881/13	50.0	211.3764	50.0	345430.0	4.227528	Y
4	ICIS 280-607881/14	50.0	215.06456	50.0	327912.0	4.301291	Y
5	STD 280-607881/15	50.0	214.950808	50.0	319160.0	4.299016	Y
6	STD 280-607881/16	50.0	212.728599	50.0	311900.0	4.254572	Y
7	STD 280-607881/17	50.0	210.079121	50.0	312939.0	4.201582	Y
8	STD 280-607881/18	50.0	213.662942	50.0	303218.0	4.273259	Y
9	STD 280-607881/19	50.0	212.322169	50.0	310688.0	4.246443	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

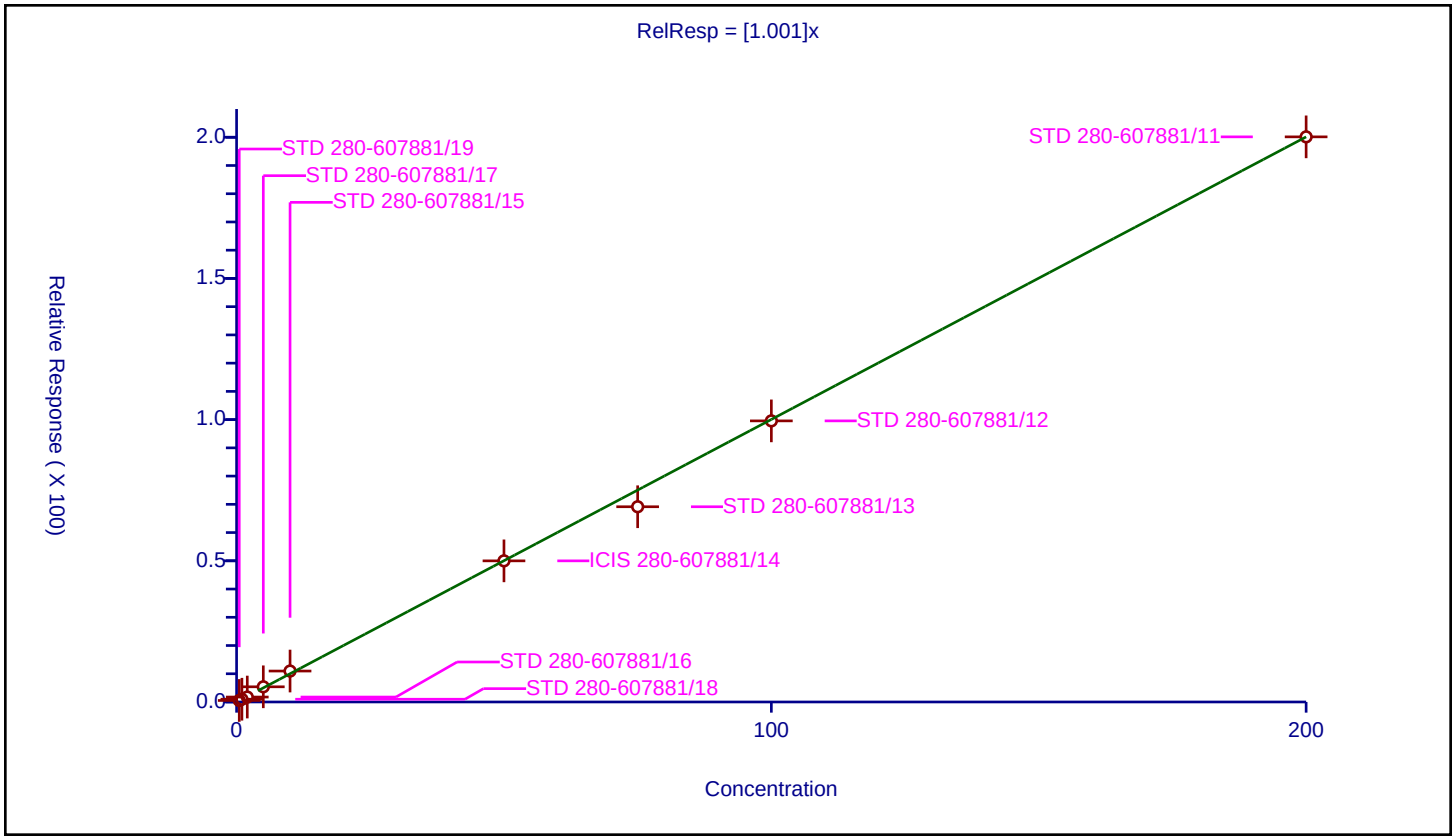
Curve Coefficients

Intercept:	0
Slope:	1.001

Error Coefficients

Standard Error:	2610000
Relative Standard Error:	7.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.533066	50.0	1347020.0	1.066131	Y
2	STD 280-607881/18	1.0	0.975766	50.0	1321475.0	0.975766	Y
3	STD 280-607881/16	2.0	1.750027	50.0	1358265.0	0.875013	Y
4	STD 280-607881/17	5.0	5.377417	50.0	1337910.0	1.075483	Y
5	STD 280-607881/15	10.0	10.956267	50.0	1371311.0	1.095627	Y
6	ICIS 280-607881/14	50.0	49.986187	50.0	1433467.0	0.999724	Y
7	STD 280-607881/13	75.0	69.141432	50.0	1474746.0	0.921886	Y
8	STD 280-607881/12	100.0	99.555405	50.0	1493380.0	0.995554	Y
9	STD 280-607881/11	200.0	200.142227	50.0	1569677.0	1.000711	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

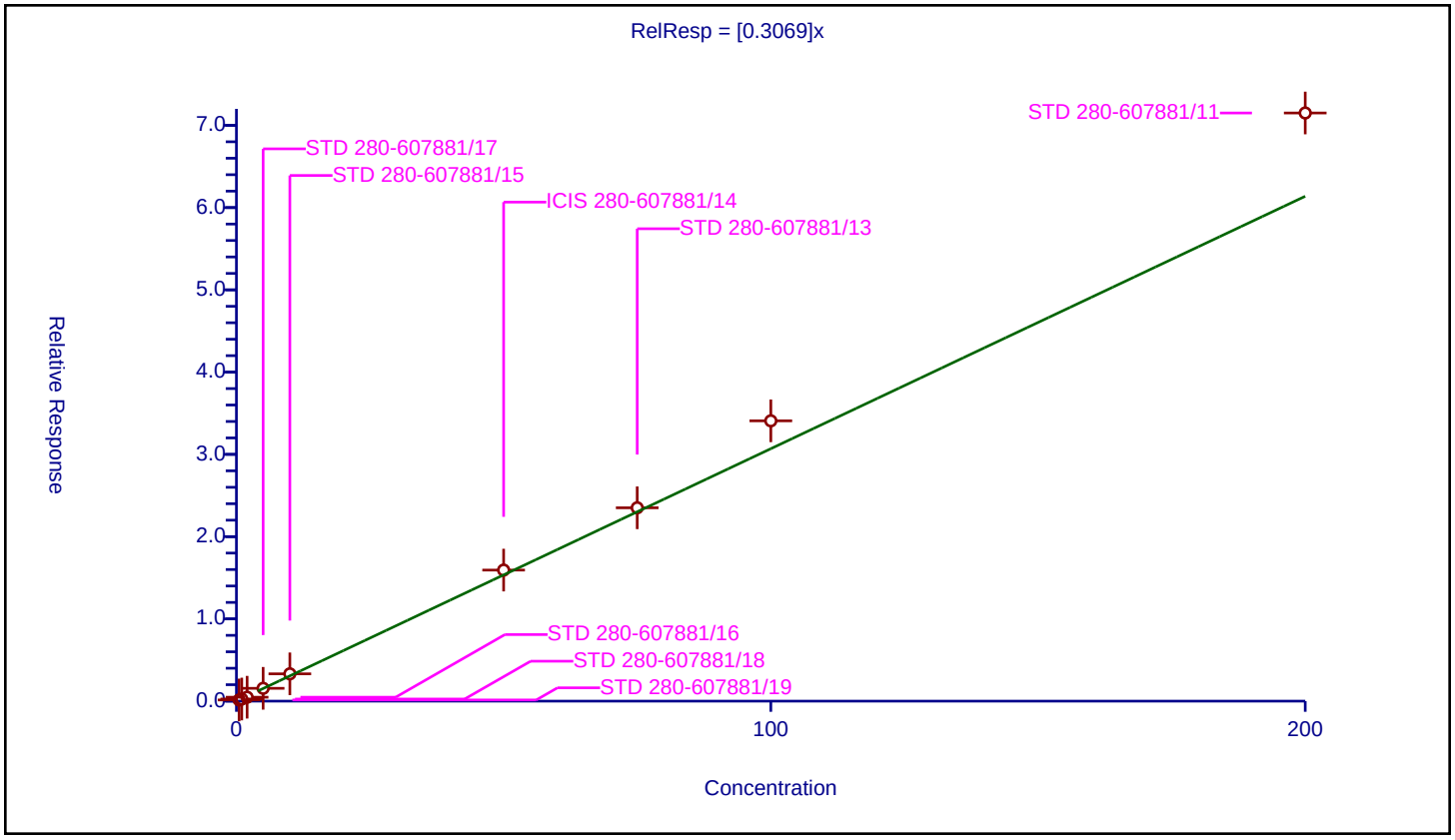
Curve Coefficients

Intercept:	0
Slope:	0.3069

Error Coefficients

Standard Error:	920000
Relative Standard Error:	12.5
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.145358	50.0	1347020.0	0.290716	Y
2	STD 280-607881/18	1.0	0.257364	50.0	1321475.0	0.257364	Y
3	STD 280-607881/16	2.0	0.479104	50.0	1358265.0	0.239552	Y
4	STD 280-607881/17	5.0	1.560456	50.0	1337910.0	0.312091	Y
5	STD 280-607881/15	10.0	3.319196	50.0	1371311.0	0.33192	Y
6	ICIS 280-607881/14	50.0	15.933293	50.0	1433467.0	0.318666	Y
7	STD 280-607881/13	75.0	23.504793	50.0	1474746.0	0.313397	Y
8	STD 280-607881/12	100.0	34.078031	50.0	1493380.0	0.34078	Y
9	STD 280-607881/11	200.0	71.5028	50.0	1569677.0	0.357514	Y



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Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

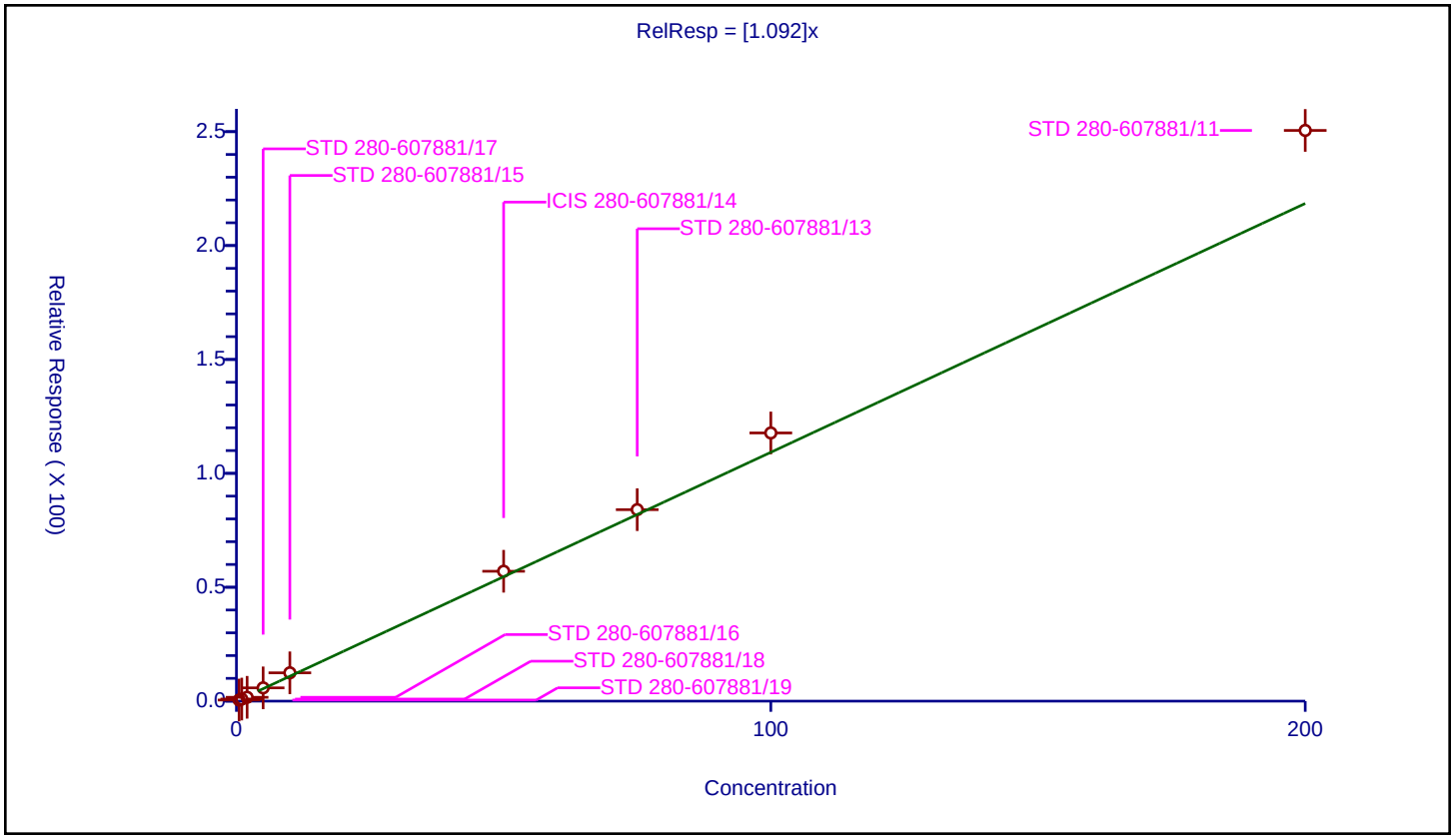
Curve Coefficients

Intercept:	0
Slope:	1.092

Error Coefficients

Standard Error:	745000
Relative Standard Error:	13.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.485053	50.0	310688.0	0.970105	Y
2	STD 280-607881/18	1.0	0.91238	50.0	303218.0	0.91238	Y
3	STD 280-607881/16	2.0	1.695095	50.0	311900.0	0.847547	Y
4	STD 280-607881/17	5.0	5.831807	50.0	312939.0	1.166361	Y
5	STD 280-607881/15	10.0	12.438275	50.0	319160.0	1.243828	Y
6	ICIS 280-607881/14	50.0	57.023378	50.0	327912.0	1.140468	Y
7	STD 280-607881/13	75.0	84.058565	50.0	345430.0	1.120781	Y
8	STD 280-607881/12	100.0	117.740304	50.0	350056.0	1.177403	Y
9	STD 280-607881/11	200.0	250.545311	50.0	361445.0	1.252727	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

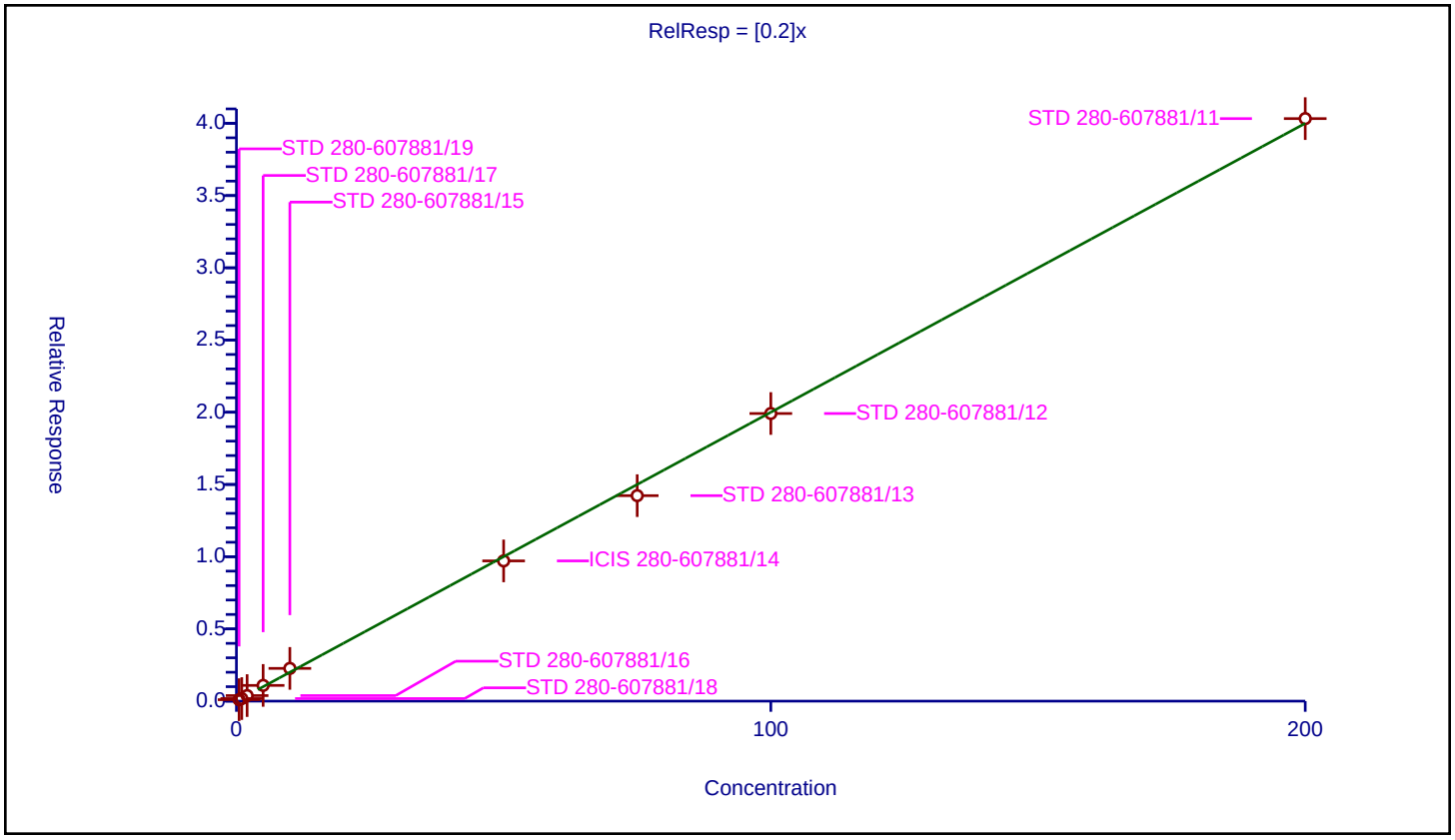
Curve Coefficients

Intercept:	0
Slope:	0.2

Error Coefficients

Standard Error:	526000
Relative Standard Error:	7.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.100295	50.0	1347020.0	0.200591	Y
2	STD 280-607881/18	1.0	0.178399	50.0	1321475.0	0.178399	Y
3	STD 280-607881/16	2.0	0.383762	50.0	1358265.0	0.191881	Y
4	STD 280-607881/17	5.0	1.088788	50.0	1337910.0	0.217758	Y
5	STD 280-607881/15	10.0	2.266772	50.0	1371311.0	0.226677	Y
6	ICIS 280-607881/14	50.0	9.709432	50.0	1433467.0	0.194189	Y
7	STD 280-607881/13	75.0	14.226179	50.0	1474746.0	0.189682	Y
8	STD 280-607881/12	100.0	19.911945	50.0	1493380.0	0.199119	Y
9	STD 280-607881/11	200.0	40.32664	50.0	1569677.0	0.201633	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

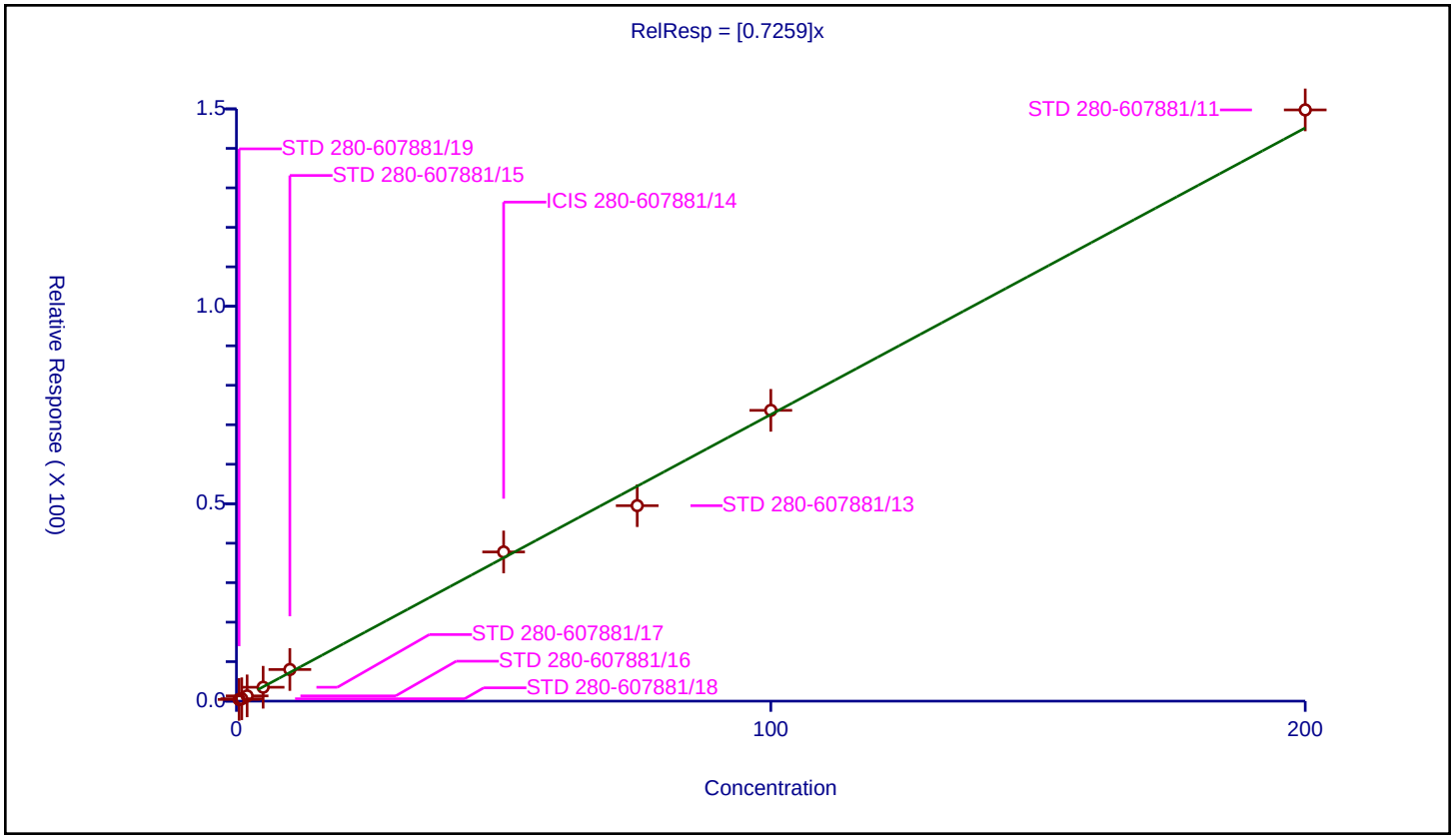
Curve Coefficients

Intercept:	0
Slope:	0.7259

Error Coefficients

Standard Error:	450000
Relative Standard Error:	10.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.428082	50.0	310688.0	0.856164	Y
2	STD 280-607881/18	1.0	0.603856	50.0	303218.0	0.603856	Y
3	STD 280-607881/16	2.0	1.335043	50.0	311900.0	0.667522	Y
4	STD 280-607881/17	5.0	3.518897	50.0	312939.0	0.703779	Y
5	STD 280-607881/15	10.0	8.008209	50.0	319160.0	0.800821	Y
6	ICIS 280-607881/14	50.0	37.783918	50.0	327912.0	0.755678	Y
7	STD 280-607881/13	75.0	49.508439	50.0	345430.0	0.660113	Y
8	STD 280-607881/12	100.0	73.651073	50.0	350056.0	0.736511	Y
9	STD 280-607881/11	200.0	149.746434	50.0	361445.0	0.748732	Y



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Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

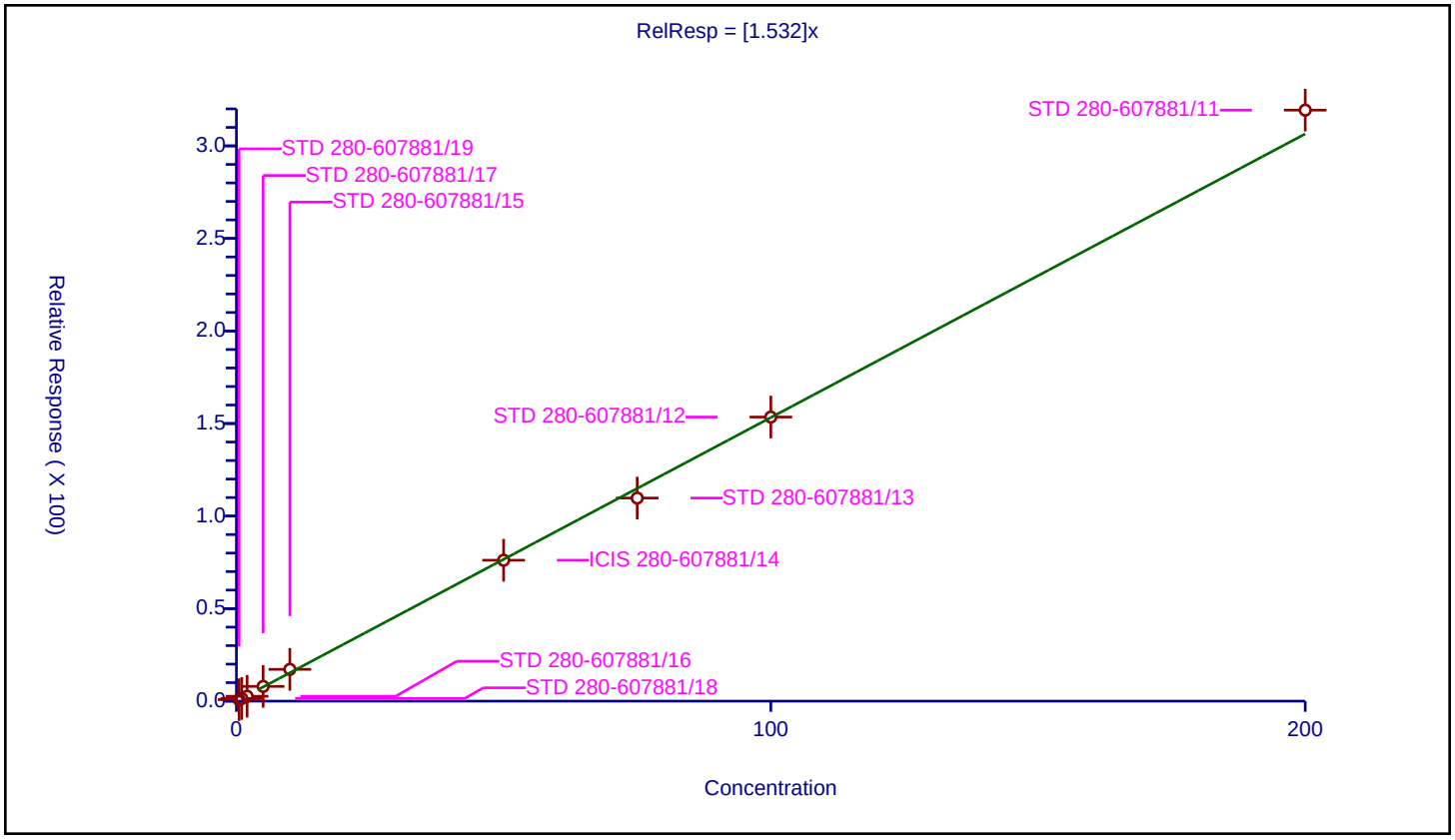
Curve Coefficients

Intercept:	0
Slope:	1.532

Error Coefficients

Standard Error:	957000
Relative Standard Error:	7.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.793883	50.0	310688.0	1.587767	Y
2	STD 280-607881/18	1.0	1.452255	50.0	303218.0	1.452255	Y
3	STD 280-607881/16	2.0	2.64604	50.0	311900.0	1.32302	Y
4	STD 280-607881/17	5.0	7.969924	50.0	312939.0	1.593985	Y
5	STD 280-607881/15	10.0	17.173361	50.0	319160.0	1.717336	Y
6	ICIS 280-607881/14	50.0	76.138415	50.0	327912.0	1.522768	Y
7	STD 280-607881/13	75.0	109.738876	50.0	345430.0	1.463185	Y
8	STD 280-607881/12	100.0	153.496583	50.0	350056.0	1.534966	Y
9	STD 280-607881/11	200.0	319.322719	50.0	361445.0	1.596614	Y



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Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

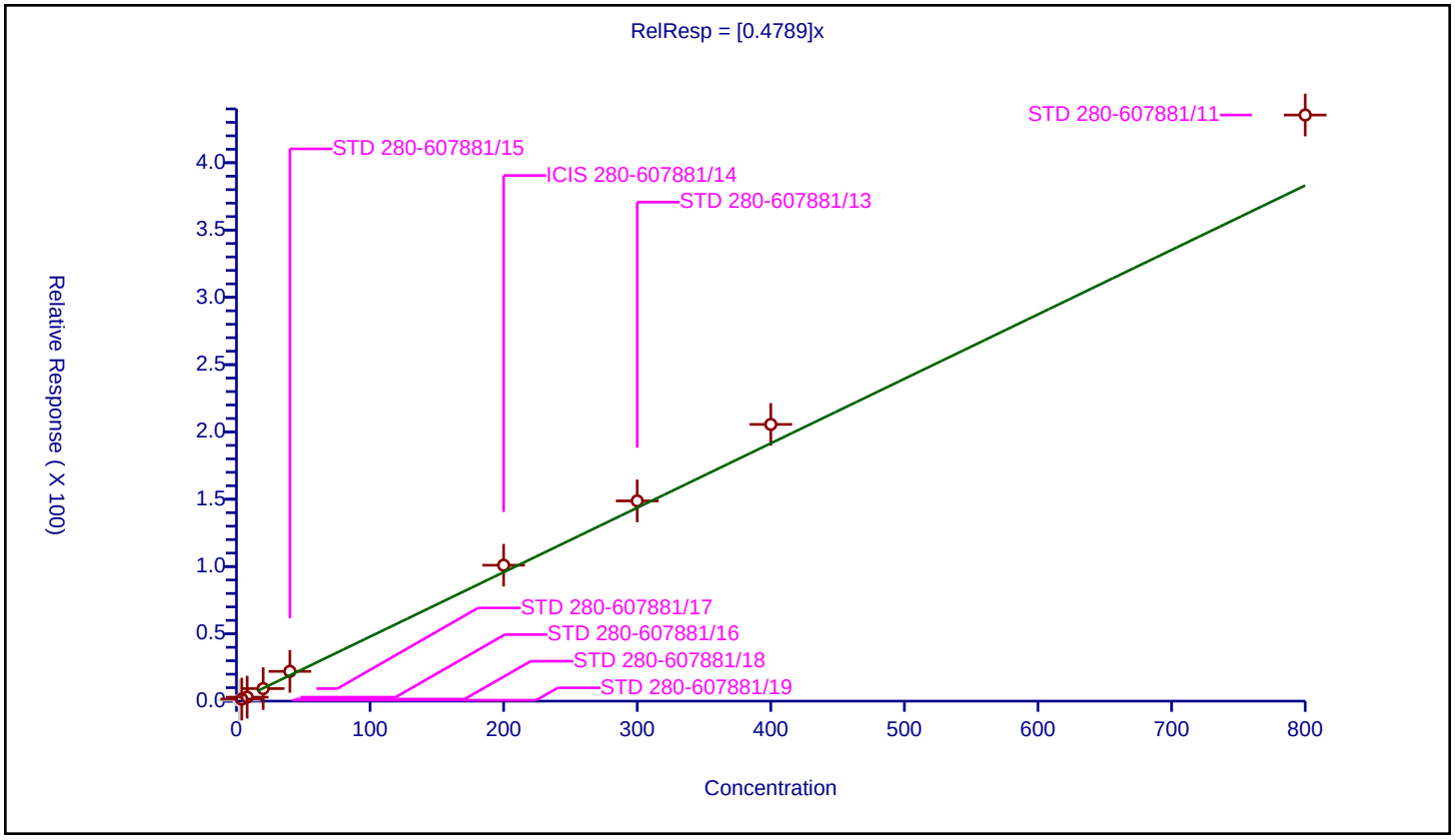
Curve Coefficients

Intercept:	0
Slope:	0.4789

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	14.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.721463	50.0	310688.0	0.360732	N
2	STD 280-607881/18	4.0	1.530087	50.0	303218.0	0.382522	Y
3	STD 280-607881/16	8.0	2.962328	50.0	311900.0	0.370291	Y
4	STD 280-607881/17	20.0	9.325779	50.0	312939.0	0.466289	Y
5	STD 280-607881/15	40.0	22.118373	50.0	319160.0	0.552959	Y
6	ICIS 280-607881/14	200.0	100.984105	50.0	327912.0	0.504921	Y
7	STD 280-607881/13	300.0	148.747214	50.0	345430.0	0.495824	Y
8	STD 280-607881/12	400.0	205.593248	50.0	350056.0	0.513983	Y
9	STD 280-607881/11	800.0	435.454495	50.0	361445.0	0.544318	Y



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Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

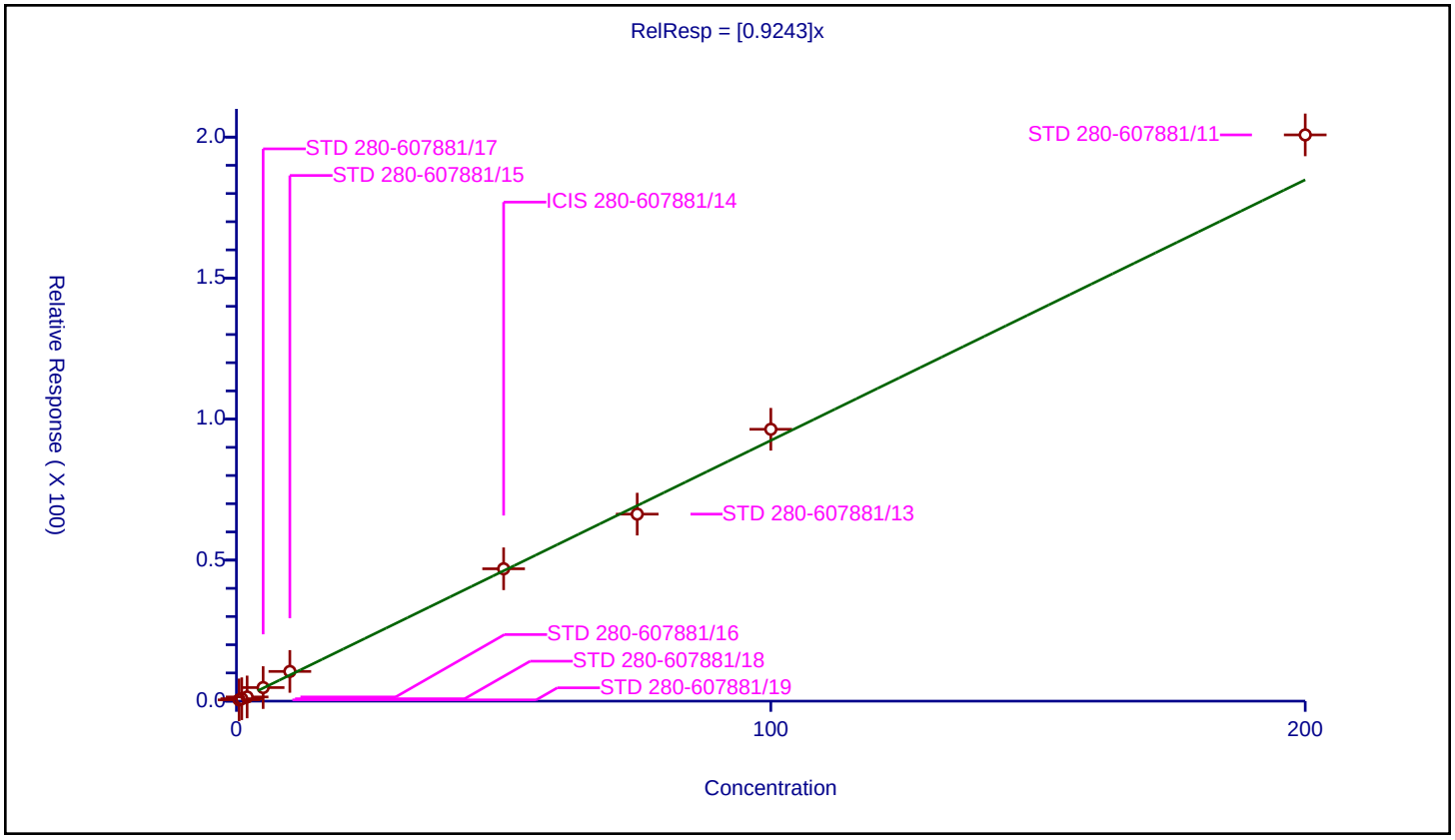
Curve Coefficients

Intercept:	0
Slope:	0.9243

Error Coefficients

Standard Error:	599000
Relative Standard Error:	9.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.453188	50.0	310688.0	0.906376	Y
2	STD 280-607881/18	1.0	0.859283	50.0	303218.0	0.859283	Y
3	STD 280-607881/16	2.0	1.491343	50.0	311900.0	0.745672	Y
4	STD 280-607881/17	5.0	4.815475	50.0	312939.0	0.963095	Y
5	STD 280-607881/15	10.0	10.534841	50.0	319160.0	1.053484	Y
6	ICIS 280-607881/14	50.0	46.927072	50.0	327912.0	0.938541	Y
7	STD 280-607881/13	75.0	66.31054	50.0	345430.0	0.884141	Y
8	STD 280-607881/12	100.0	96.399576	50.0	350056.0	0.963996	Y
9	STD 280-607881/11	200.0	200.782	50.0	361445.0	1.00391	Y



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Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

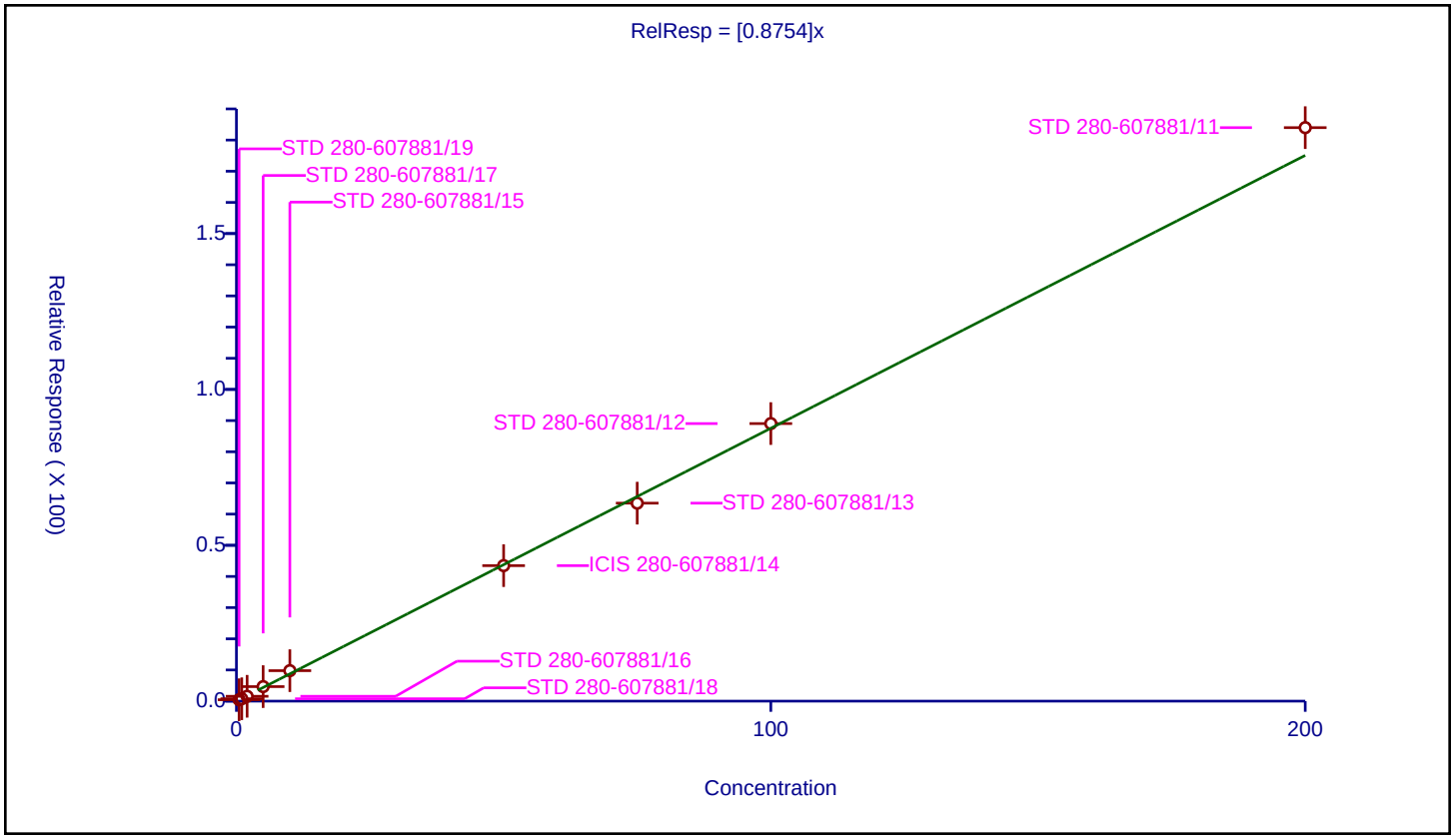
Curve Coefficients

Intercept:	0
Slope:	0.8754

Error Coefficients

Standard Error:	552000
Relative Standard Error:	7.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.447716	50.0	310688.0	0.895432	Y
2	STD 280-607881/18	1.0	0.7676	50.0	303218.0	0.7676	Y
3	STD 280-607881/16	2.0	1.556749	50.0	311900.0	0.778374	Y
4	STD 280-607881/17	5.0	4.663209	50.0	312939.0	0.932642	Y
5	STD 280-607881/15	10.0	9.781301	50.0	319160.0	0.97813	Y
6	ICIS 280-607881/14	50.0	43.467607	50.0	327912.0	0.869352	Y
7	STD 280-607881/13	75.0	63.513302	50.0	345430.0	0.846844	Y
8	STD 280-607881/12	100.0	89.050323	50.0	350056.0	0.890503	Y
9	STD 280-607881/11	200.0	183.98221	50.0	361445.0	0.919911	Y



Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

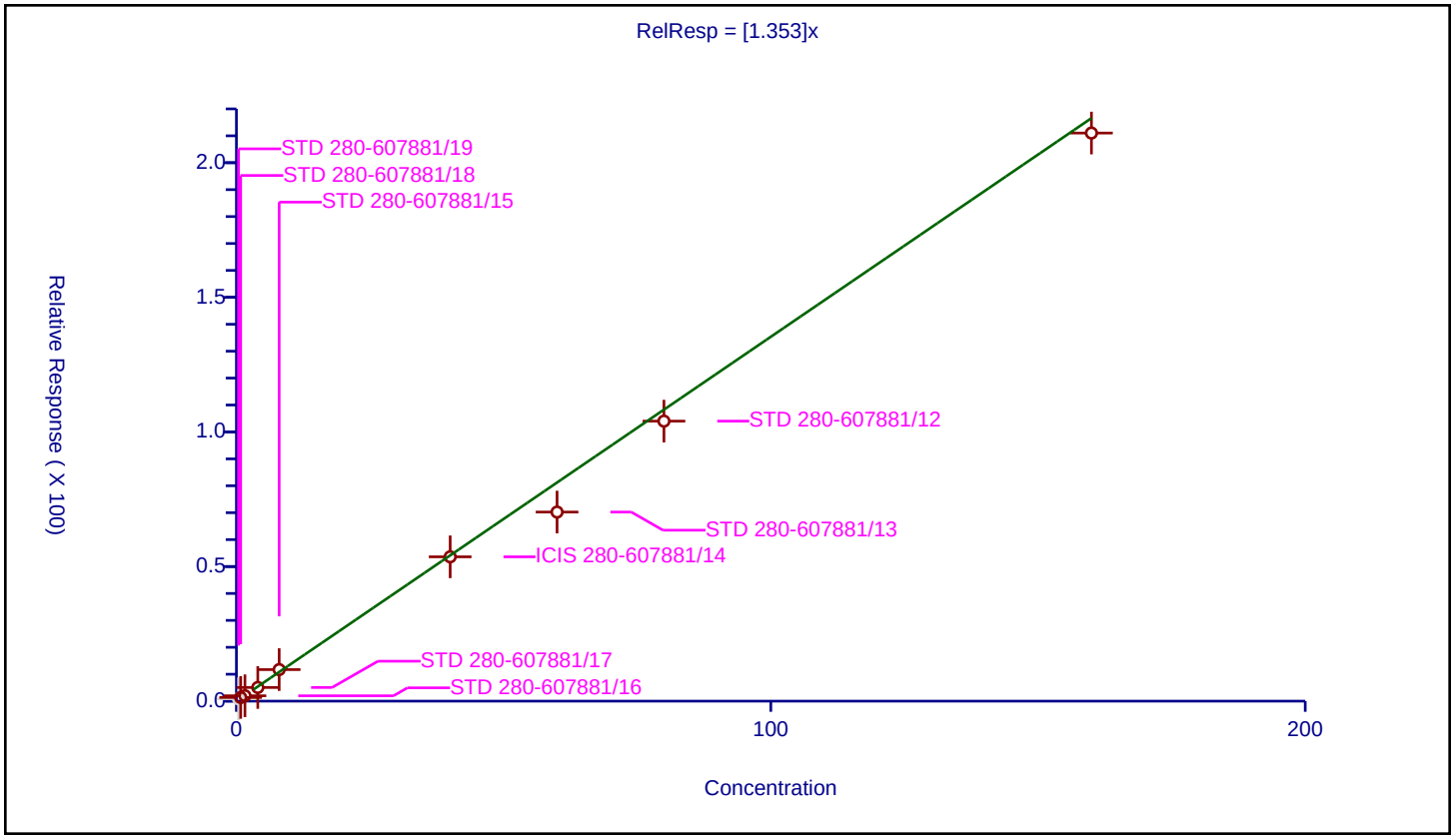
Curve Coefficients

Intercept:	0
Slope:	1.353

Error Coefficients

Standard Error:	678000
Relative Standard Error:	12.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.4	0.859866	50.0	310688.0	2.149665	N
2	STD 280-607881/18	0.8	1.373599	50.0	303218.0	1.716999	Y
3	STD 280-607881/16	1.6	1.996954	50.0	311900.0	1.248096	Y
4	STD 280-607881/17	4.0	5.070797	50.0	312939.0	1.267699	Y
5	STD 280-607881/15	8.0	11.71967	50.0	319160.0	1.464959	Y
6	ICIS 280-607881/14	40.0	53.608743	50.0	327912.0	1.340219	Y
7	STD 280-607881/13	60.0	70.235069	50.0	345430.0	1.170584	Y
8	STD 280-607881/12	80.0	104.014072	50.0	350056.0	1.300176	Y
9	STD 280-607881/11	160.0	211.026574	50.0	361445.0	1.318916	Y



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Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

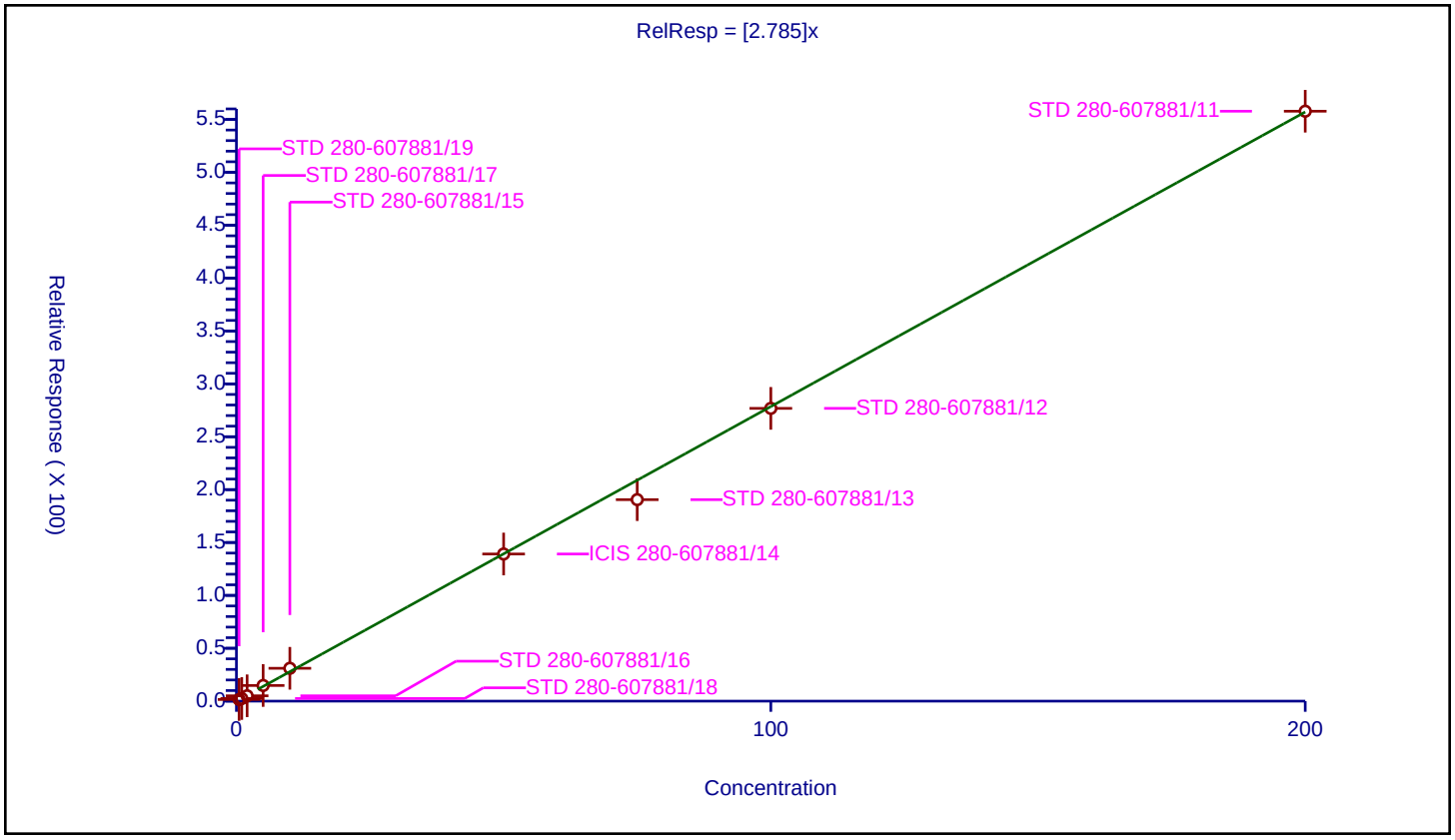
Curve Coefficients

Intercept:	0
Slope:	2.785

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	8.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.552522	50.0	310688.0	3.105044	Y
2	STD 280-607881/18	1.0	2.488968	50.0	303218.0	2.488968	Y
3	STD 280-607881/16	2.0	5.060276	50.0	311900.0	2.530138	Y
4	STD 280-607881/17	5.0	14.792979	50.0	312939.0	2.958596	Y
5	STD 280-607881/15	10.0	31.06279	50.0	319160.0	3.106279	Y
6	ICIS 280-607881/14	50.0	139.121624	50.0	327912.0	2.782432	Y
7	STD 280-607881/13	75.0	190.52355	50.0	345430.0	2.540314	Y
8	STD 280-607881/12	100.0	276.84042	50.0	350056.0	2.768404	Y
9	STD 280-607881/11	200.0	557.802709	50.0	361445.0	2.789014	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

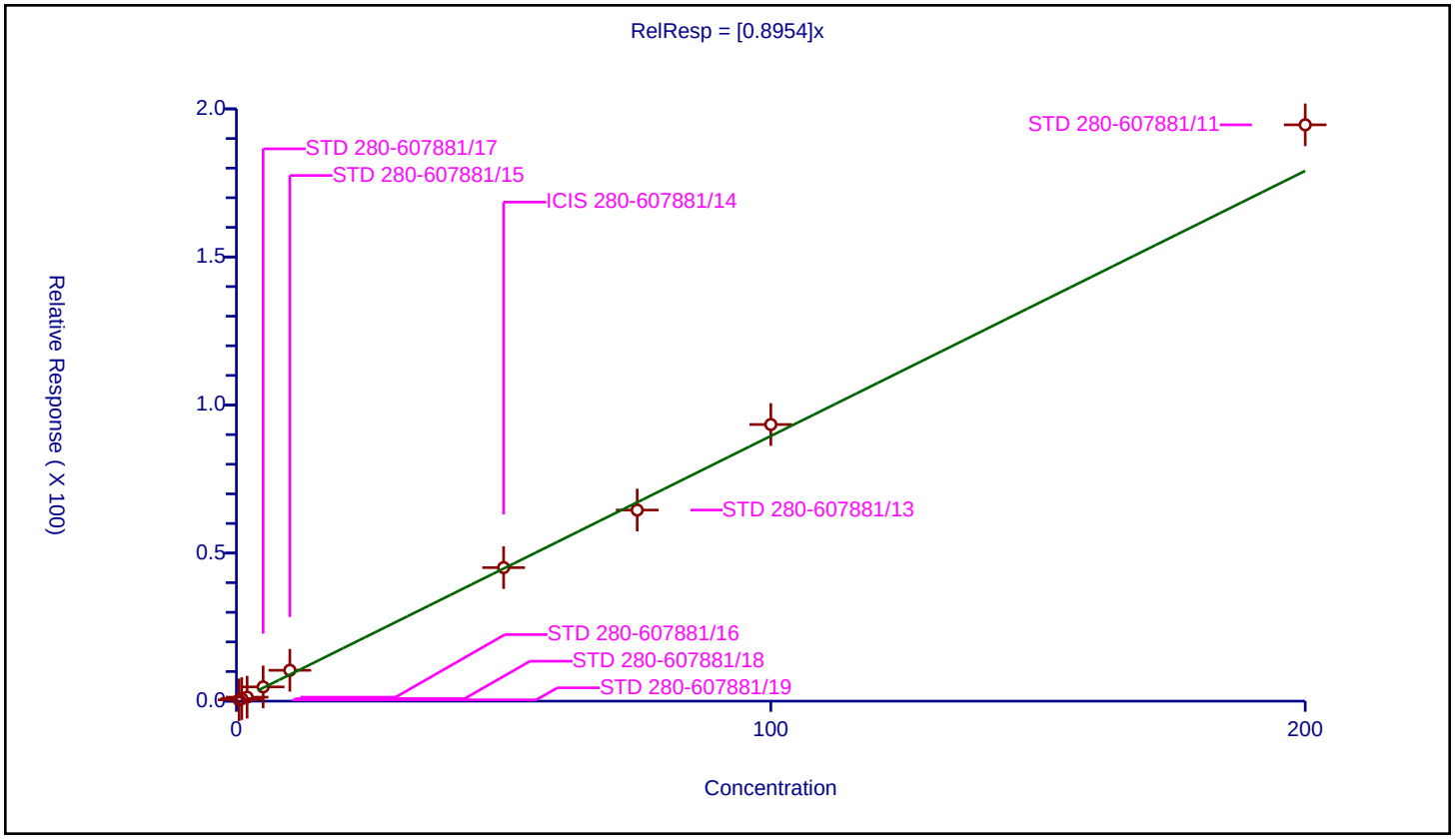
Curve Coefficients

Intercept:	0
Slope:	0.8954

Error Coefficients

Standard Error:	581000
Relative Standard Error:	11.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.432588	50.0	310688.0	0.865177	Y
2	STD 280-607881/18	1.0	0.84807	50.0	303218.0	0.84807	Y
3	STD 280-607881/16	2.0	1.344982	50.0	311900.0	0.672491	Y
4	STD 280-607881/17	5.0	4.80477	50.0	312939.0	0.960954	Y
5	STD 280-607881/15	10.0	10.420792	50.0	319160.0	1.042079	Y
6	ICIS 280-607881/14	50.0	45.092281	50.0	327912.0	0.901846	Y
7	STD 280-607881/13	75.0	64.528269	50.0	345430.0	0.860377	Y
8	STD 280-607881/12	100.0	93.420338	50.0	350056.0	0.934203	Y
9	STD 280-607881/11	200.0	194.624908	50.0	361445.0	0.973125	Y



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Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

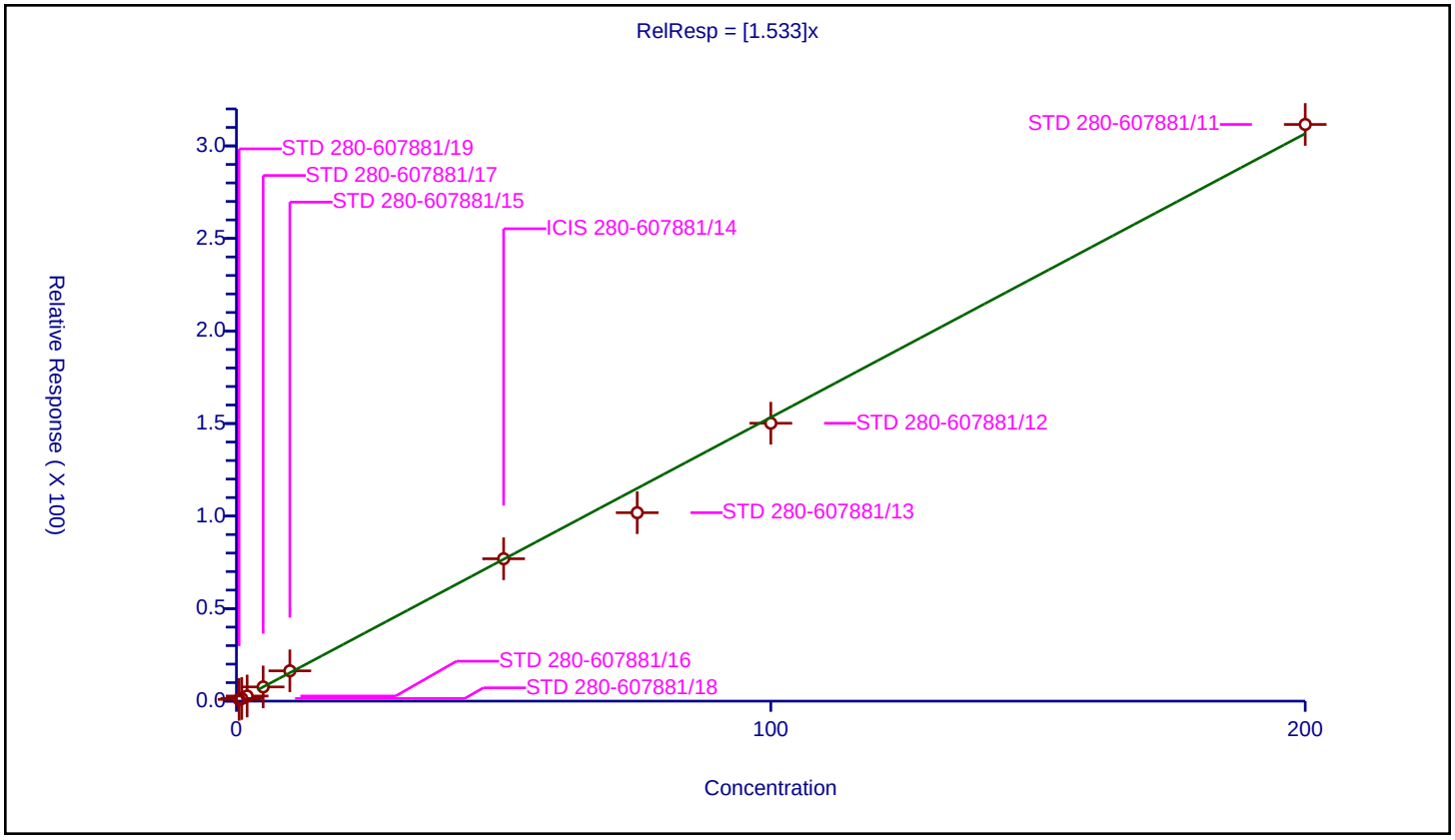
Curve Coefficients

Intercept:	0
Slope:	1.533

Error Coefficients

Standard Error:	931000
Relative Standard Error:	10.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.939206	50.0	310688.0	1.878412	Y
2	STD 280-607881/18	1.0	1.410371	50.0	303218.0	1.410371	Y
3	STD 280-607881/16	2.0	2.764508	50.0	311900.0	1.382254	Y
4	STD 280-607881/17	5.0	7.675458	50.0	312939.0	1.535092	Y
5	STD 280-607881/15	10.0	16.374546	50.0	319160.0	1.637455	Y
6	ICIS 280-607881/14	50.0	76.920942	50.0	327912.0	1.538419	Y
7	STD 280-607881/13	75.0	101.828156	50.0	345430.0	1.357709	Y
8	STD 280-607881/12	100.0	150.15826	50.0	350056.0	1.501583	Y
9	STD 280-607881/11	200.0	311.590145	50.0	361445.0	1.557951	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

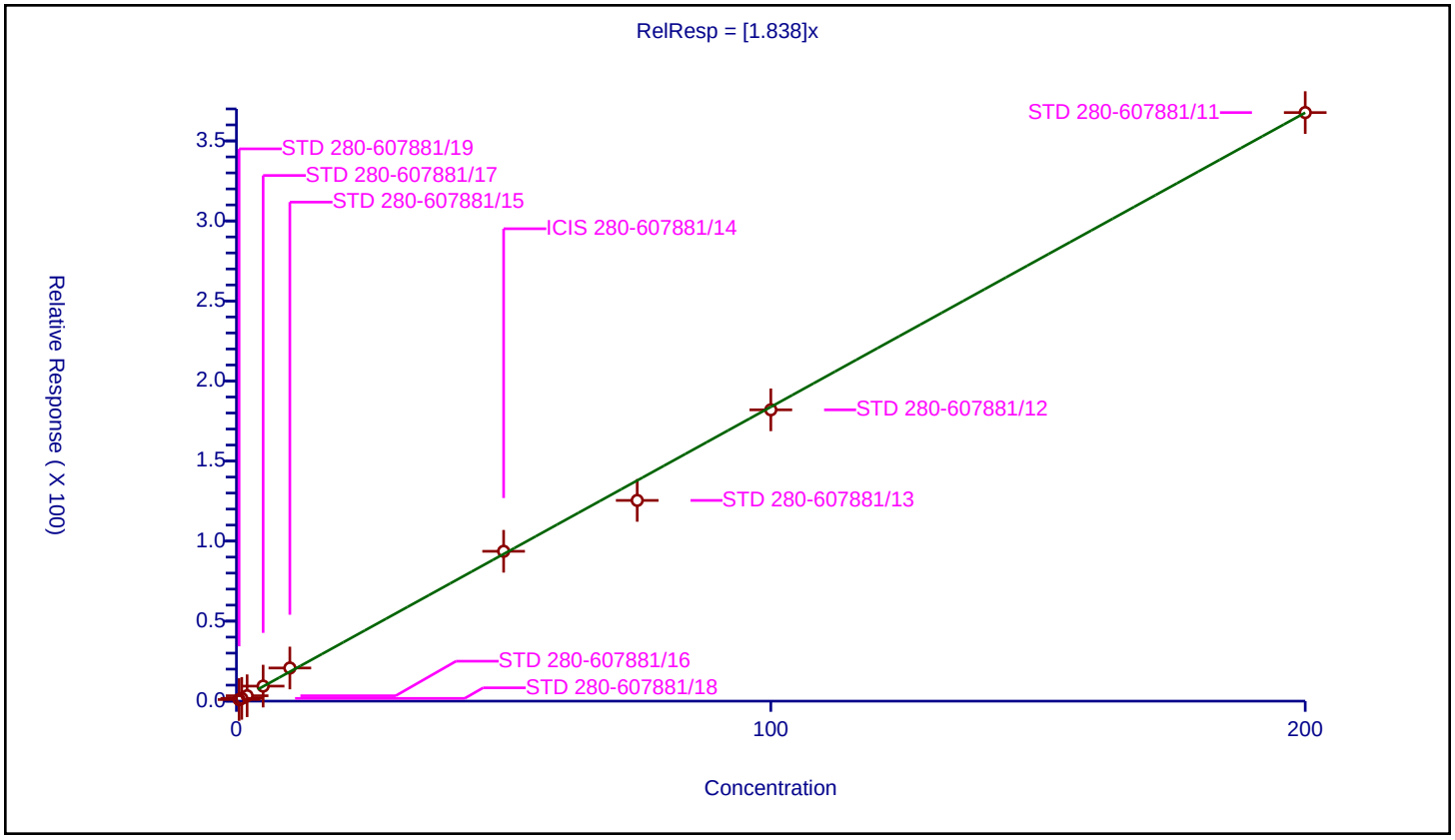
Curve Coefficients

Intercept:	0
Slope:	1.838

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	7.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.993923	50.0	310688.0	1.987846	Y
2	STD 280-607881/18	1.0	1.719225	50.0	303218.0	1.719225	Y
3	STD 280-607881/16	2.0	3.364861	50.0	311900.0	1.68243	Y
4	STD 280-607881/17	5.0	9.399595	50.0	312939.0	1.879919	Y
5	STD 280-607881/15	10.0	20.707482	50.0	319160.0	2.070748	Y
6	ICIS 280-607881/14	50.0	93.618105	50.0	327912.0	1.872362	Y
7	STD 280-607881/13	75.0	125.407608	50.0	345430.0	1.672101	Y
8	STD 280-607881/12	100.0	181.999309	50.0	350056.0	1.819993	Y
9	STD 280-607881/11	200.0	367.695362	50.0	361445.0	1.838477	Y



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Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

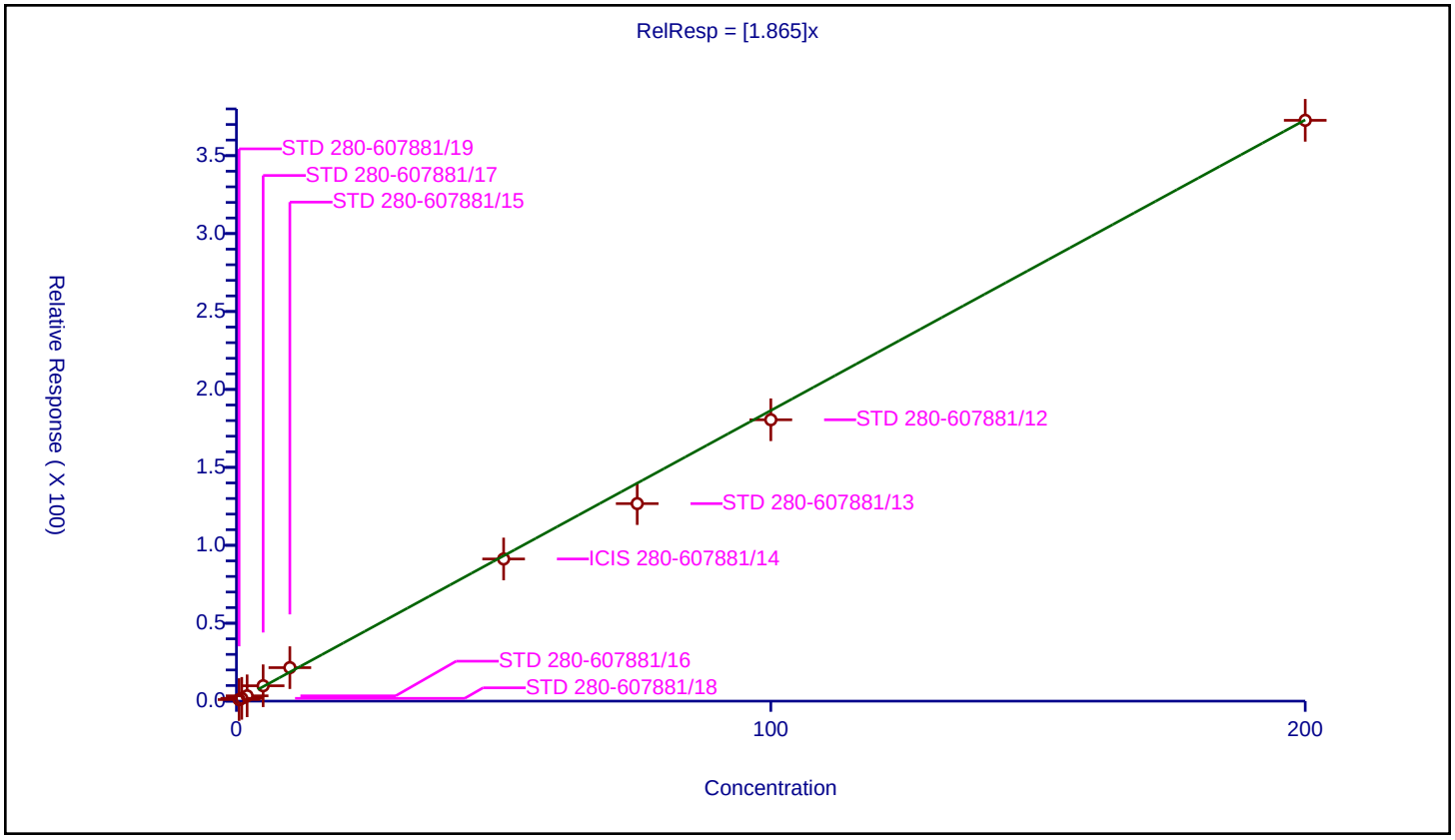
Curve Coefficients

Intercept:	0
Slope:	1.865

Error Coefficients

Standard Error:	1120000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.996981	50.0	310688.0	1.993962	Y
2	STD 280-607881/18	1.0	1.777599	50.0	303218.0	1.777599	Y
3	STD 280-607881/16	2.0	3.412151	50.0	311900.0	1.706076	Y
4	STD 280-607881/17	5.0	9.865501	50.0	312939.0	1.9731	Y
5	STD 280-607881/15	10.0	21.493765	50.0	319160.0	2.149376	Y
6	ICIS 280-607881/14	50.0	91.218528	50.0	327912.0	1.824371	Y
7	STD 280-607881/13	75.0	126.742321	50.0	345430.0	1.689898	Y
8	STD 280-607881/12	100.0	180.531258	50.0	350056.0	1.805313	Y
9	STD 280-607881/11	200.0	372.662922	50.0	361445.0	1.863315	Y



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Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

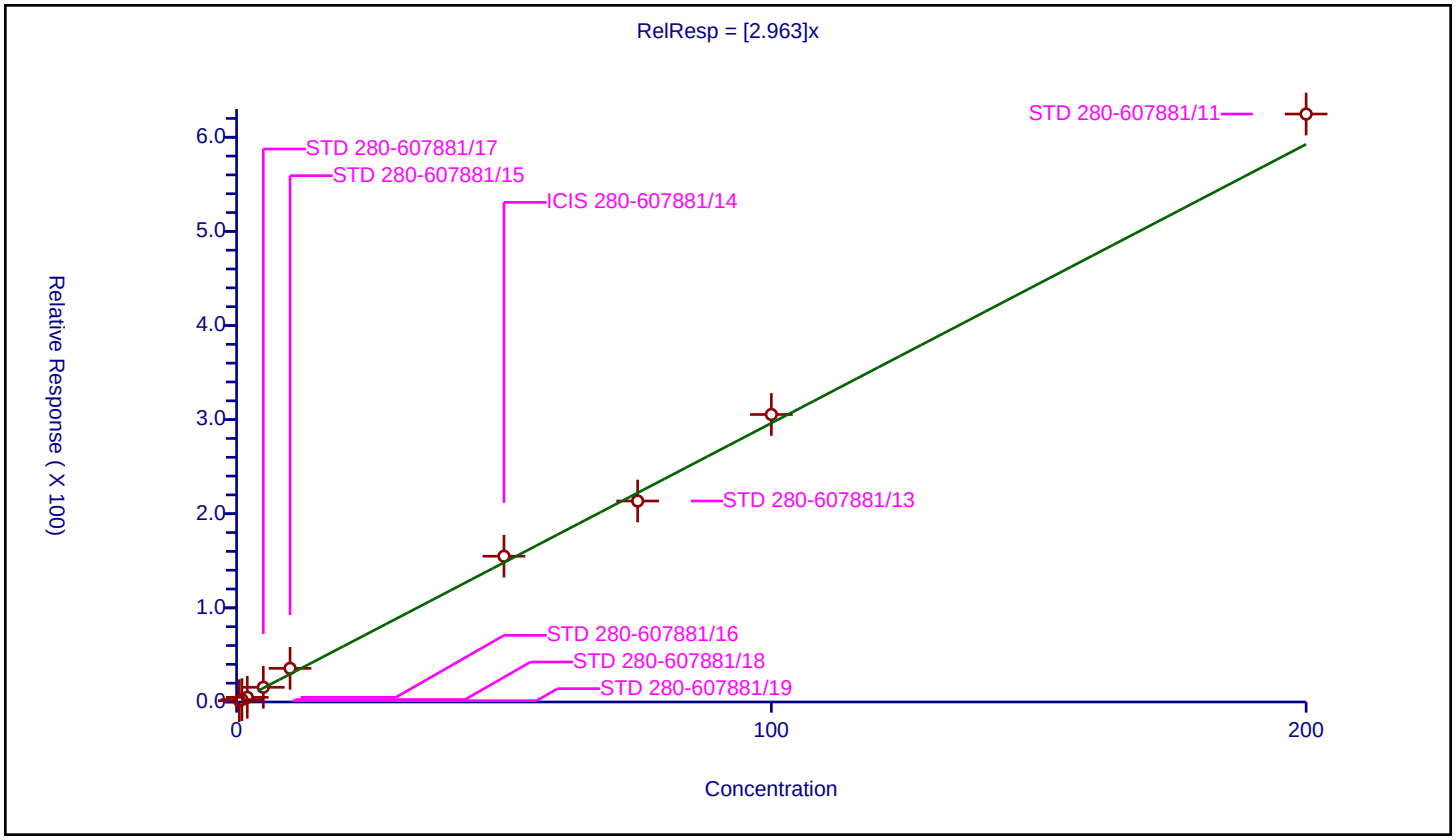
Curve Coefficients

Intercept:	0
Slope:	2.963

Error Coefficients

Standard Error:	1880000
Relative Standard Error:	11.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.405912	50.0	310688.0	2.811824	Y
2	STD 280-607881/18	1.0	2.548661	50.0	303218.0	2.548661	Y
3	STD 280-607881/16	2.0	4.964091	50.0	311900.0	2.482046	Y
4	STD 280-607881/17	5.0	15.622374	50.0	312939.0	3.124475	Y
5	STD 280-607881/15	10.0	35.752131	50.0	319160.0	3.575213	Y
6	ICIS 280-607881/14	50.0	154.881035	50.0	327912.0	3.097621	Y
7	STD 280-607881/13	75.0	213.518947	50.0	345430.0	2.846919	Y
8	STD 280-607881/12	100.0	305.451128	50.0	350056.0	3.054511	Y
9	STD 280-607881/11	200.0	624.661567	50.0	361445.0	3.123308	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

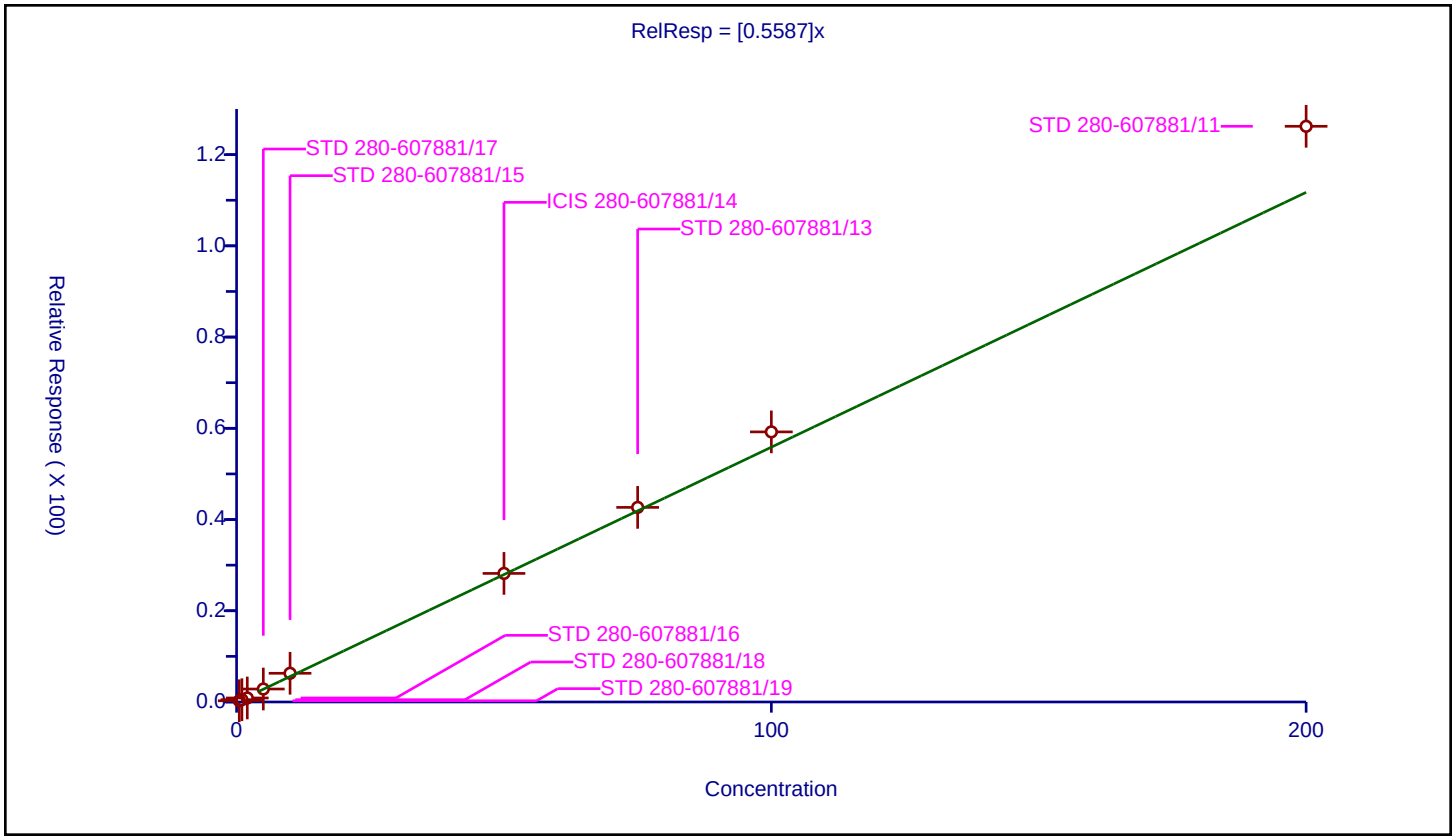
Curve Coefficients

Intercept:	0
Slope:	0.5587

Error Coefficients

Standard Error:	375000
Relative Standard Error:	10.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.266505	50.0	310688.0	0.533011	Y
2	STD 280-607881/18	1.0	0.501454	50.0	303218.0	0.501454	Y
3	STD 280-607881/16	2.0	0.878166	50.0	311900.0	0.439083	Y
4	STD 280-607881/17	5.0	2.845443	50.0	312939.0	0.569089	Y
5	STD 280-607881/15	10.0	6.295275	50.0	319160.0	0.629528	Y
6	ICIS 280-607881/14	50.0	28.188203	50.0	327912.0	0.563764	Y
7	STD 280-607881/13	75.0	42.662189	50.0	345430.0	0.568829	Y
8	STD 280-607881/12	100.0	59.213954	50.0	350056.0	0.59214	Y
9	STD 280-607881/11	200.0	126.212563	50.0	361445.0	0.631063	Y



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Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

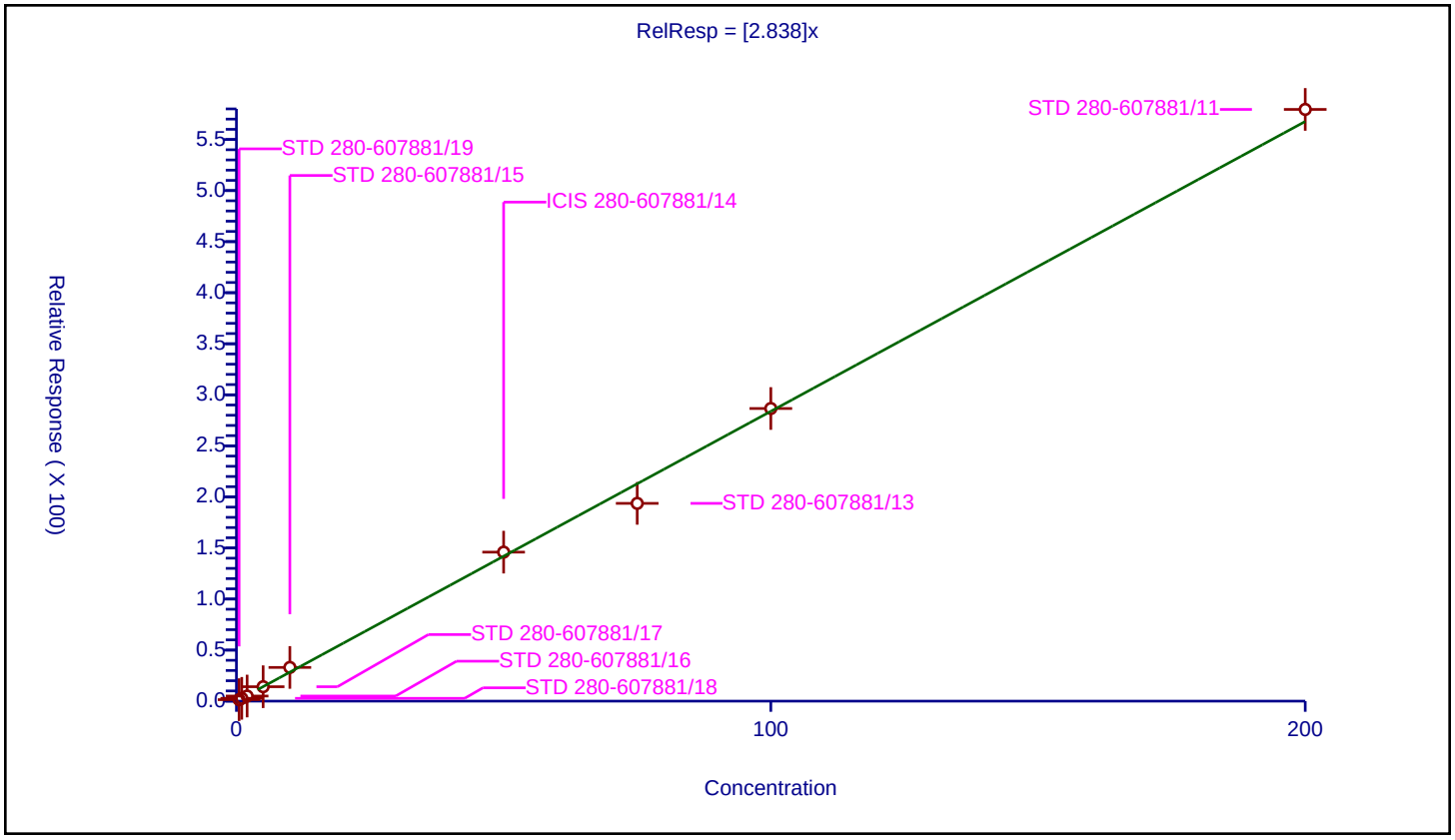
Curve Coefficients

Intercept:	0
Slope:	2.838

Error Coefficients

Standard Error:	2670000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.446778	50.0	484663.0	2.893557	Y
2	STD 280-607881/18	1.0	2.760102	50.0	476794.0	2.760102	Y
3	STD 280-607881/16	2.0	4.997821	50.0	484201.0	2.498911	Y
4	STD 280-607881/17	5.0	14.136597	50.0	487009.0	2.827319	Y
5	STD 280-607881/15	10.0	33.008502	50.0	505647.0	3.30085	Y
6	ICIS 280-607881/14	50.0	145.909681	50.0	509618.0	2.918194	Y
7	STD 280-607881/13	75.0	193.682517	50.0	534485.0	2.582434	Y
8	STD 280-607881/12	100.0	286.592538	50.0	538480.0	2.865925	Y
9	STD 280-607881/11	200.0	579.472986	50.0	552718.0	2.897365	Y



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Calibration / Cyclohexanone

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

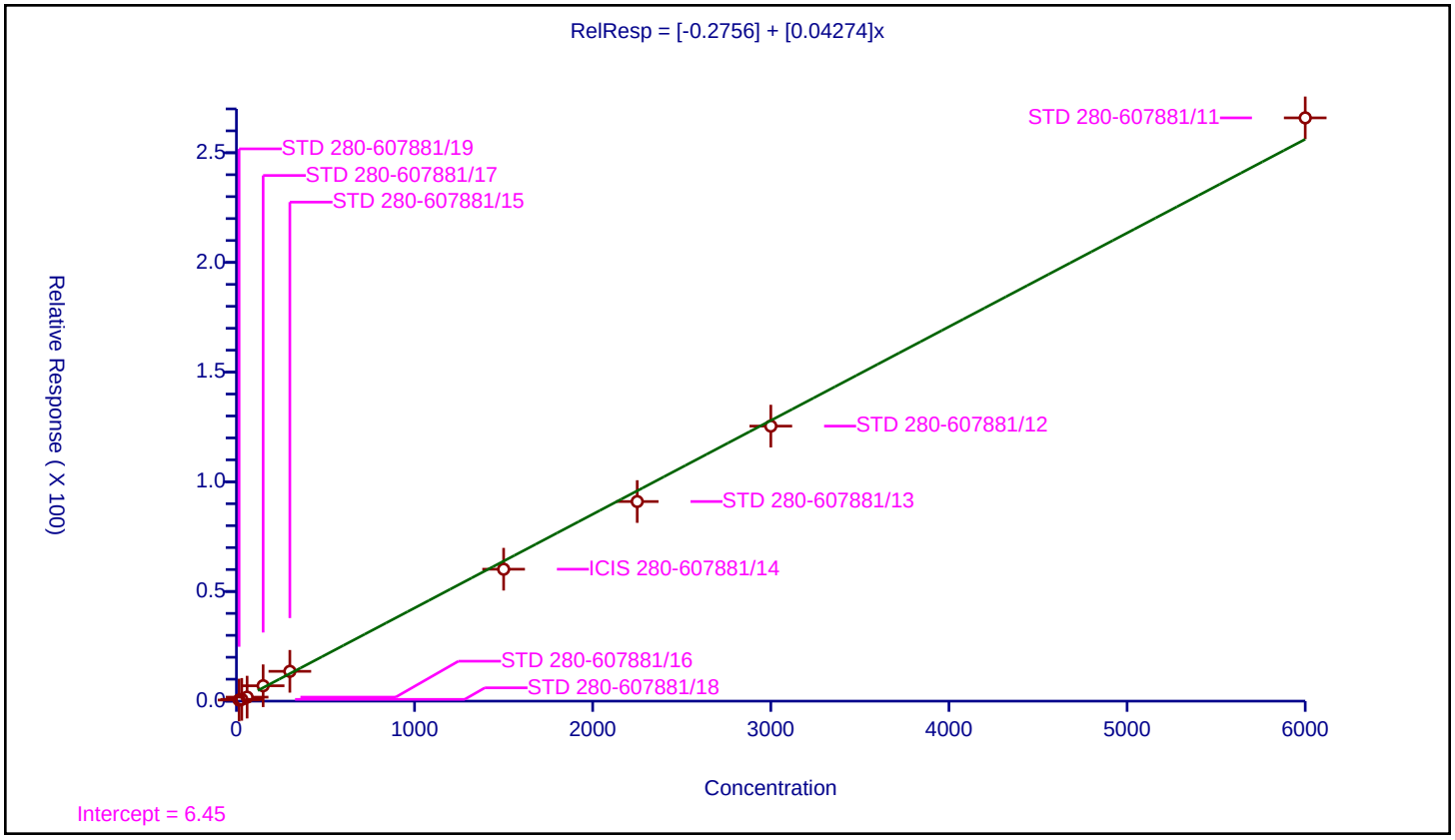
Curve Coefficients

Intercept:	-0.2756
Slope:	0.04274

Error Coefficients

Standard Error:	847000
Relative Standard Error:	13.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	15.0	0.501307	50.0	310688.0	0.03342	Y
2	STD 280-607881/18	30.0	0.801733	50.0	303218.0	0.026724	Y
3	STD 280-607881/16	60.0	1.827669	50.0	311900.0	0.030461	Y
4	STD 280-607881/17	150.0	7.012709	50.0	312939.0	0.046751	Y
5	STD 280-607881/15	300.0	13.589266	50.0	319160.0	0.045298	Y
6	ICIS 280-607881/14	1500.0	60.140373	50.0	327912.0	0.040094	Y
7	STD 280-607881/13	2250.0	90.994847	50.0	345430.0	0.040442	Y
8	STD 280-607881/12	3000.0	125.39008	50.0	350056.0	0.041797	Y
9	STD 280-607881/11	6000.0	265.909751	50.0	361445.0	0.044318	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

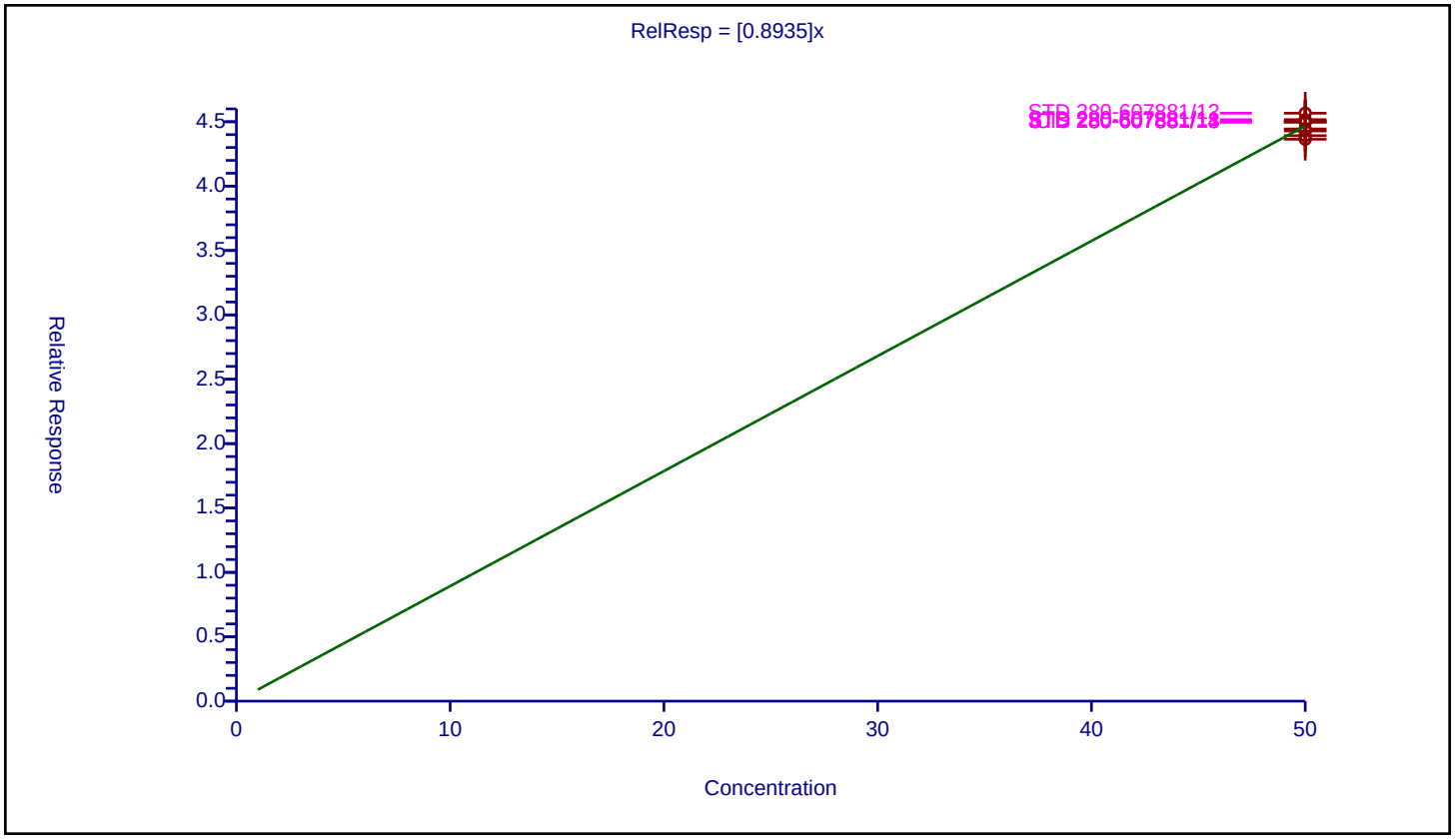
Curve Coefficients

Intercept:	0
Slope:	0.8935

Error Coefficients

Standard Error:	483000
Relative Standard Error:	1.5
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	45.166794	50.0	552718.0	0.903336	Y
2	STD 280-607881/12	50.0	45.664463	50.0	538480.0	0.913289	Y
3	STD 280-607881/13	50.0	44.974321	50.0	534485.0	0.899486	Y
4	ICIS 280-607881/14	50.0	44.980848	50.0	509618.0	0.899617	Y
5	STD 280-607881/15	50.0	43.640919	50.0	505647.0	0.872818	Y
6	STD 280-607881/16	50.0	44.441874	50.0	484201.0	0.888837	Y
7	STD 280-607881/17	50.0	44.2845	50.0	487009.0	0.88569	Y
8	STD 280-607881/18	50.0	45.016506	50.0	476794.0	0.90033	Y
9	STD 280-607881/19	50.0	43.921756	50.0	484663.0	0.878435	Y



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Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

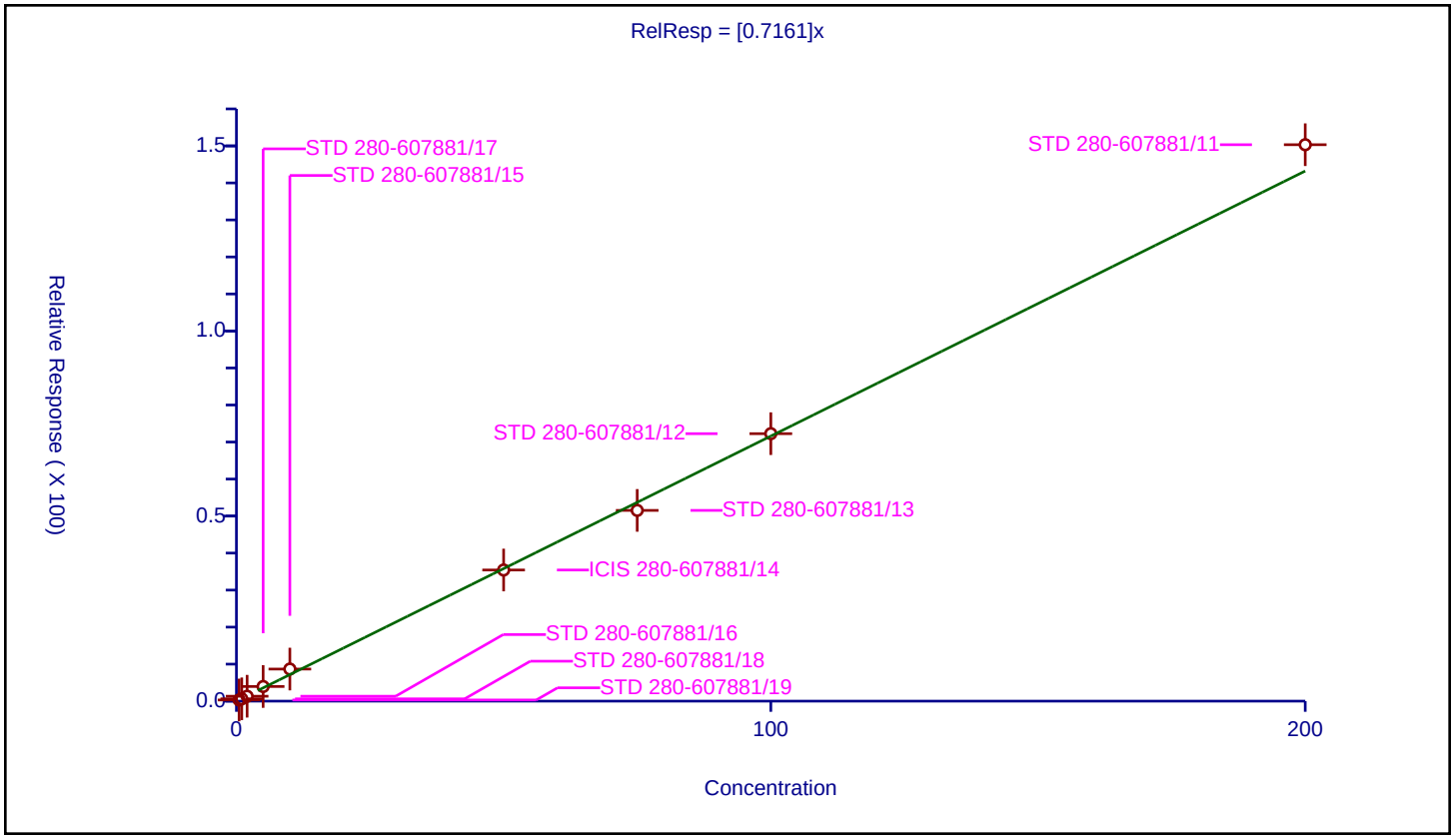
Curve Coefficients

Intercept:	0
Slope:	0.7161

Error Coefficients

Standard Error:	690000
Relative Standard Error:	10.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.315064	50.0	484663.0	0.630129	Y
2	STD 280-607881/18	1.0	0.624798	50.0	476794.0	0.624798	Y
3	STD 280-607881/16	2.0	1.325276	50.0	484201.0	0.662638	Y
4	STD 280-607881/17	5.0	3.95157	50.0	487009.0	0.790314	Y
5	STD 280-607881/15	10.0	8.670278	50.0	505647.0	0.867028	Y
6	ICIS 280-607881/14	50.0	35.423592	50.0	509618.0	0.708472	Y
7	STD 280-607881/13	75.0	51.529697	50.0	534485.0	0.687063	Y
8	STD 280-607881/12	100.0	72.259973	50.0	538480.0	0.7226	Y
9	STD 280-607881/11	200.0	150.320597	50.0	552718.0	0.751603	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

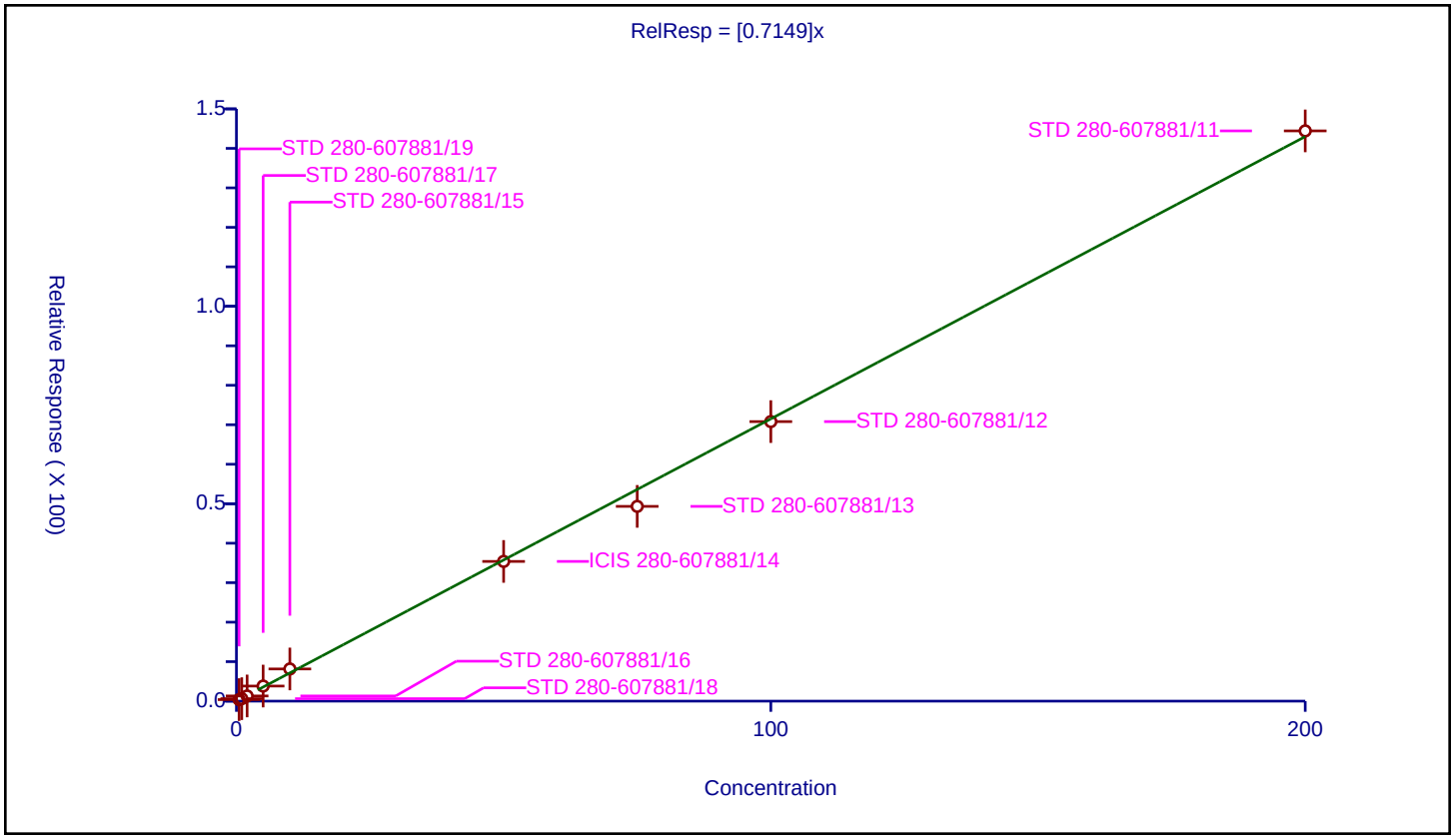
Curve Coefficients

Intercept:	0
Slope:	0.7149

Error Coefficients

Standard Error:	666000
Relative Standard Error:	8.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.388311	50.0	484663.0	0.776622	Y
2	STD 280-607881/18	1.0	0.626266	50.0	476794.0	0.626266	Y
3	STD 280-607881/16	2.0	1.312678	50.0	484201.0	0.656339	Y
4	STD 280-607881/17	5.0	3.823646	50.0	487009.0	0.764729	Y
5	STD 280-607881/15	10.0	8.148966	50.0	505647.0	0.814897	Y
6	ICIS 280-607881/14	50.0	35.38366	50.0	509618.0	0.707673	Y
7	STD 280-607881/13	75.0	49.330477	50.0	534485.0	0.65774	Y
8	STD 280-607881/12	100.0	70.801701	50.0	538480.0	0.708017	Y
9	STD 280-607881/11	200.0	144.428985	50.0	552718.0	0.722145	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

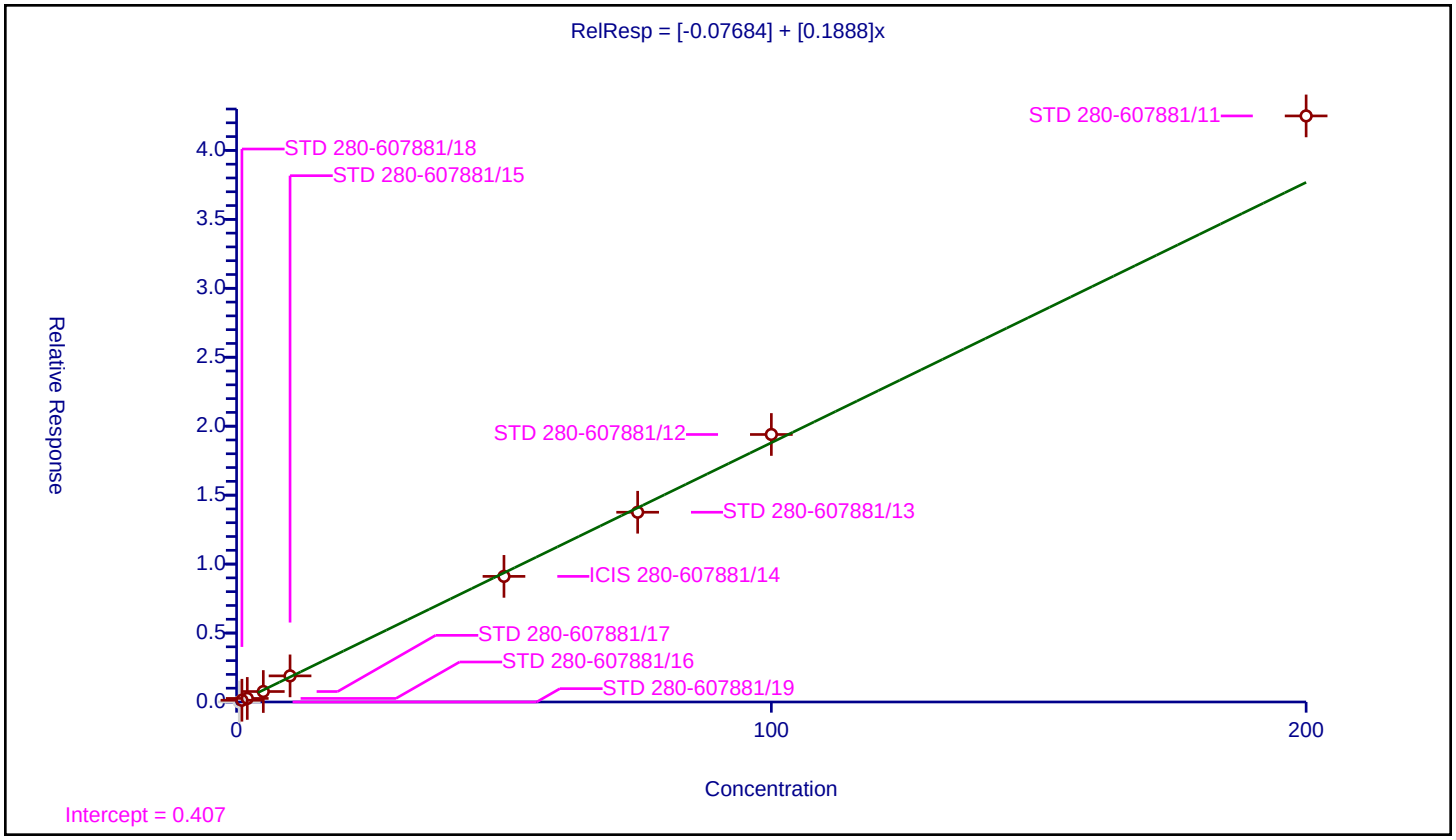
Curve Coefficients

Intercept:	-0.07684
Slope:	0.1888

Error Coefficients

Standard Error:	222000
Relative Standard Error:	9.3
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.0	50.0	484663.0	0.0	N
2	STD 280-607881/18	1.0	0.12626	50.0	476794.0	0.12626	Y
3	STD 280-607881/16	2.0	0.257331	50.0	484201.0	0.128666	Y
4	STD 280-607881/17	5.0	0.759329	50.0	487009.0	0.151866	Y
5	STD 280-607881/15	10.0	1.893515	50.0	505647.0	0.189351	Y
6	ICIS 280-607881/14	50.0	9.108293	50.0	509618.0	0.182166	Y
7	STD 280-607881/13	75.0	13.760162	50.0	534485.0	0.183469	Y
8	STD 280-607881/12	100.0	19.398863	50.0	538480.0	0.193989	Y
9	STD 280-607881/11	200.0	42.498525	50.0	552718.0	0.212493	Y



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Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

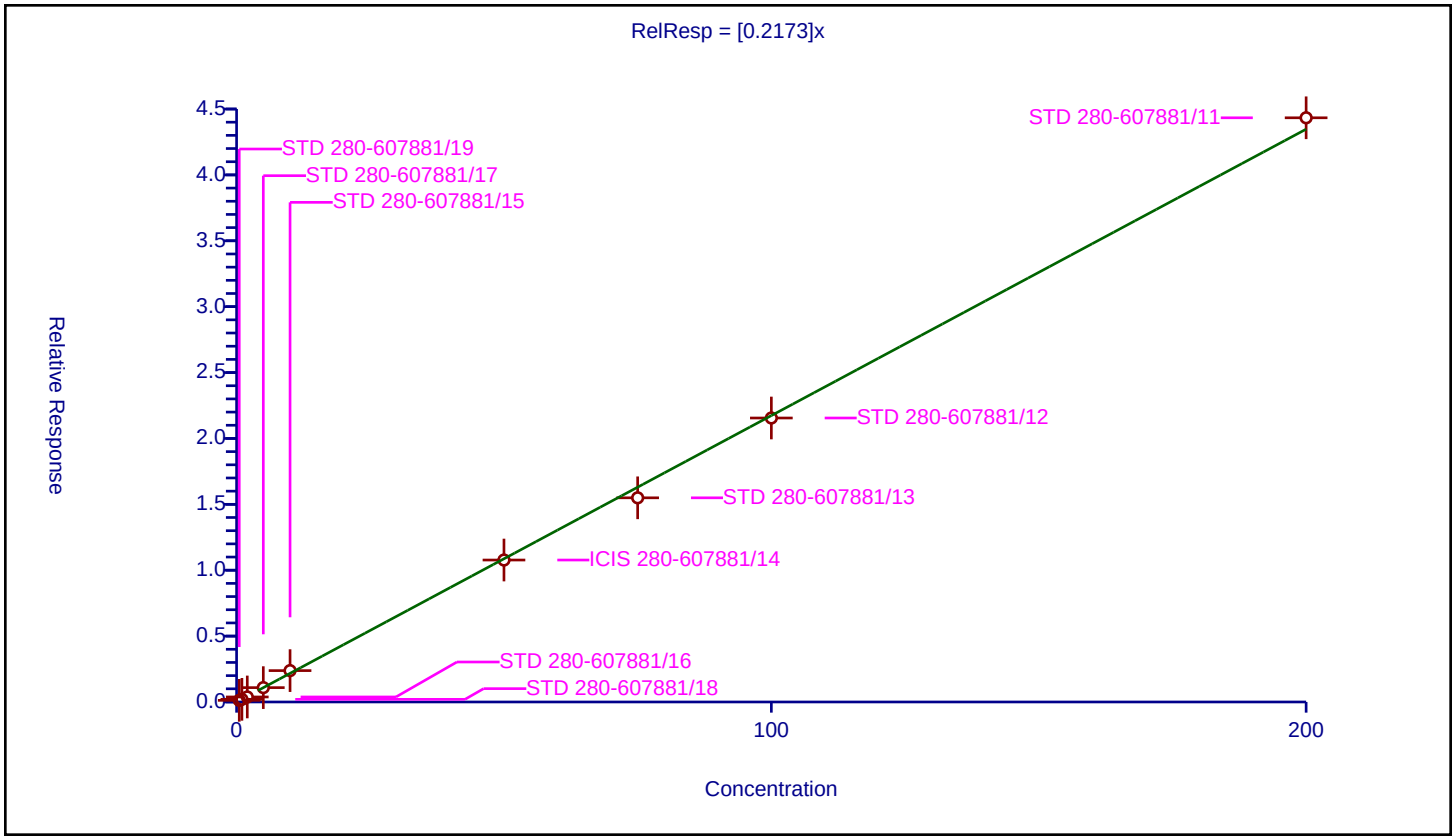
Curve Coefficients

Intercept:	0
Slope:	0.2173

Error Coefficients

Standard Error:	204000
Relative Standard Error:	8.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.124932	50.0	484663.0	0.249864	Y
2	STD 280-607881/18	1.0	0.200401	50.0	476794.0	0.200401	Y
3	STD 280-607881/16	2.0	0.381247	50.0	484201.0	0.190623	Y
4	STD 280-607881/17	5.0	1.08961	50.0	487009.0	0.217922	Y
5	STD 280-607881/15	10.0	2.380514	50.0	505647.0	0.238051	Y
6	ICIS 280-607881/14	50.0	10.773265	50.0	509618.0	0.215465	Y
7	STD 280-607881/13	75.0	15.494916	50.0	534485.0	0.206599	Y
8	STD 280-607881/12	100.0	21.551497	50.0	538480.0	0.215515	Y
9	STD 280-607881/11	200.0	44.334	50.0	552718.0	0.22167	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

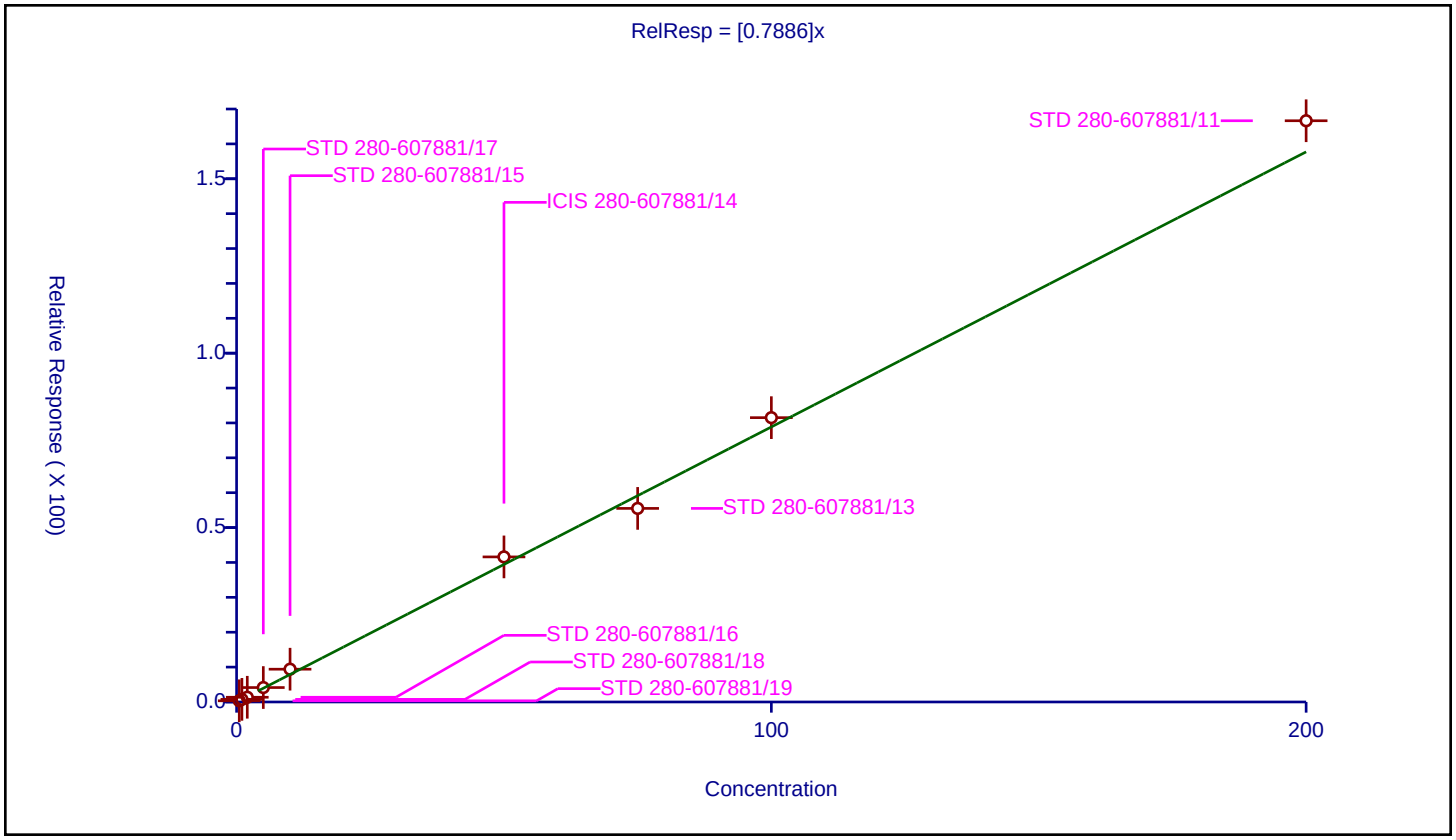
Curve Coefficients

Intercept:	0
Slope:	0.7886

Error Coefficients

Standard Error:	767000
Relative Standard Error:	10.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.337967	50.0	484663.0	0.675934	Y
2	STD 280-607881/18	1.0	0.755463	50.0	476794.0	0.755463	Y
3	STD 280-607881/16	2.0	1.356771	50.0	484201.0	0.678386	Y
4	STD 280-607881/17	5.0	4.138117	50.0	487009.0	0.827623	Y
5	STD 280-607881/15	10.0	9.396971	50.0	505647.0	0.939697	Y
6	ICIS 280-607881/14	50.0	41.589779	50.0	509618.0	0.831796	Y
7	STD 280-607881/13	75.0	55.501838	50.0	534485.0	0.740025	Y
8	STD 280-607881/12	100.0	81.515934	50.0	538480.0	0.815159	Y
9	STD 280-607881/11	200.0	166.635246	50.0	552718.0	0.833176	Y



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Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

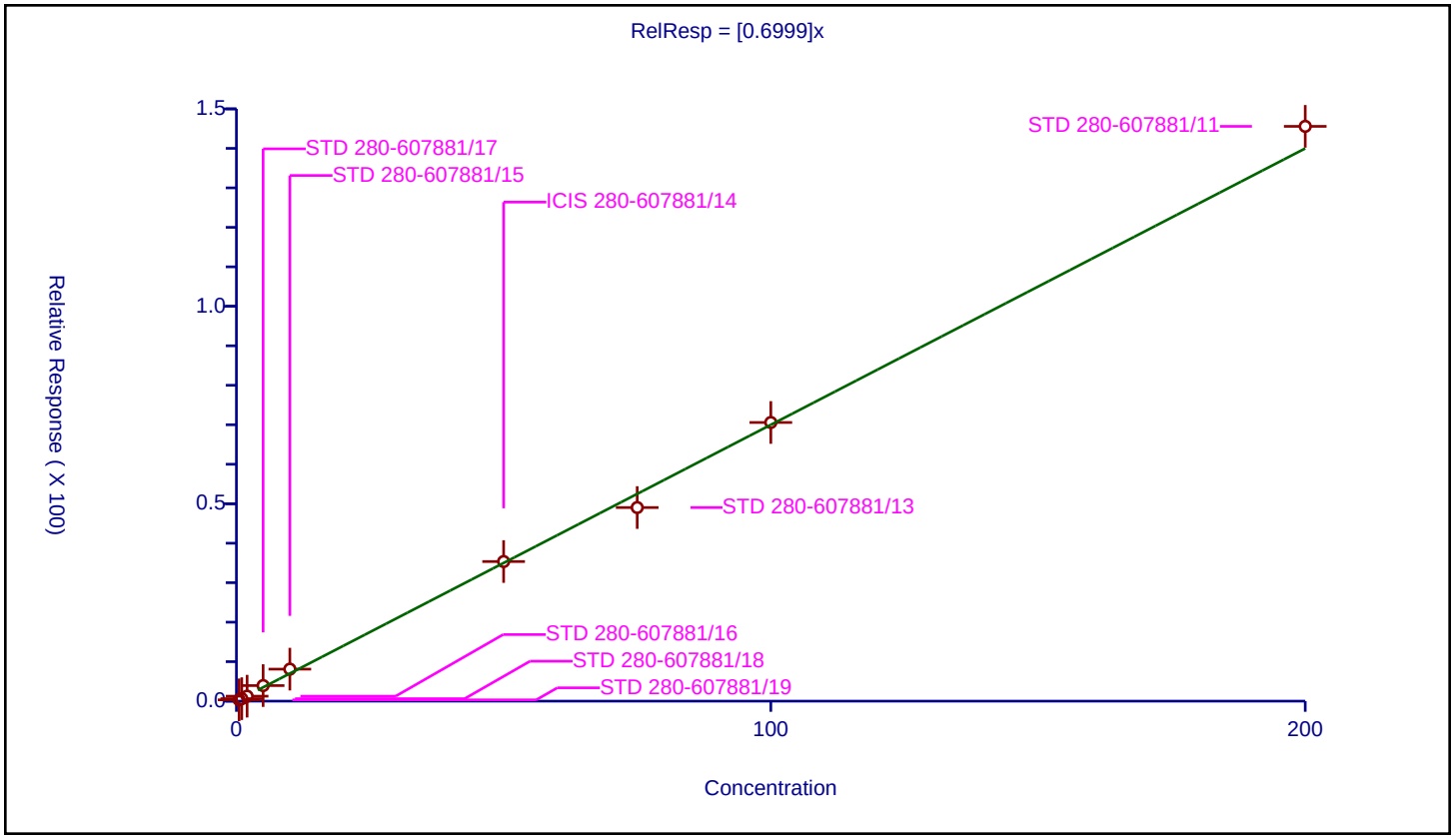
Curve Coefficients

Intercept:	0
Slope:	0.6999

Error Coefficients

Standard Error:	669000
Relative Standard Error:	9.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.324452	50.0	484663.0	0.648904	Y
2	STD 280-607881/18	1.0	0.625637	50.0	476794.0	0.625637	Y
3	STD 280-607881/16	2.0	1.26115	50.0	484201.0	0.630575	Y
4	STD 280-607881/17	5.0	3.944486	50.0	487009.0	0.788897	Y
5	STD 280-607881/15	10.0	8.105259	50.0	505647.0	0.810526	Y
6	ICIS 280-607881/14	50.0	35.358151	50.0	509618.0	0.707163	Y
7	STD 280-607881/13	75.0	49.033556	50.0	534485.0	0.653781	Y
8	STD 280-607881/12	100.0	70.577737	50.0	538480.0	0.705777	Y
9	STD 280-607881/11	200.0	145.577853	50.0	552718.0	0.727889	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

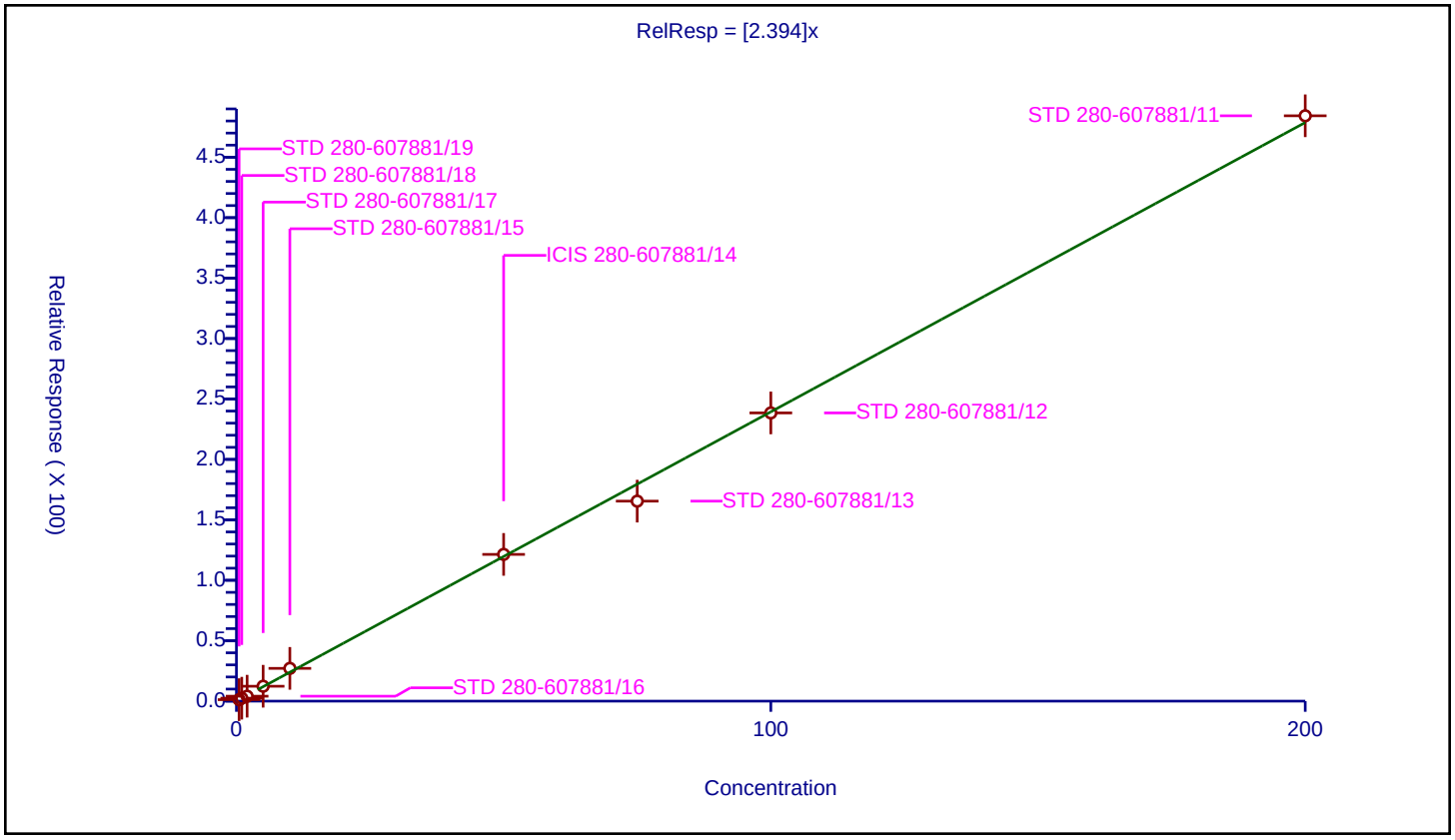
Curve Coefficients

Intercept:	0
Slope:	2.394

Error Coefficients

Standard Error:	2240000
Relative Standard Error:	7.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.229824	50.0	484663.0	2.459647	Y
2	STD 280-607881/18	1.0	2.424317	50.0	476794.0	2.424317	Y
3	STD 280-607881/16	2.0	4.080434	50.0	484201.0	2.040217	Y
4	STD 280-607881/17	5.0	12.332421	50.0	487009.0	2.466484	Y
5	STD 280-607881/15	10.0	27.110712	50.0	505647.0	2.711071	Y
6	ICIS 280-607881/14	50.0	121.411037	50.0	509618.0	2.428221	Y
7	STD 280-607881/13	75.0	165.483316	50.0	534485.0	2.206444	Y
8	STD 280-607881/12	100.0	238.450546	50.0	538480.0	2.384505	Y
9	STD 280-607881/11	200.0	484.290904	50.0	552718.0	2.421455	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

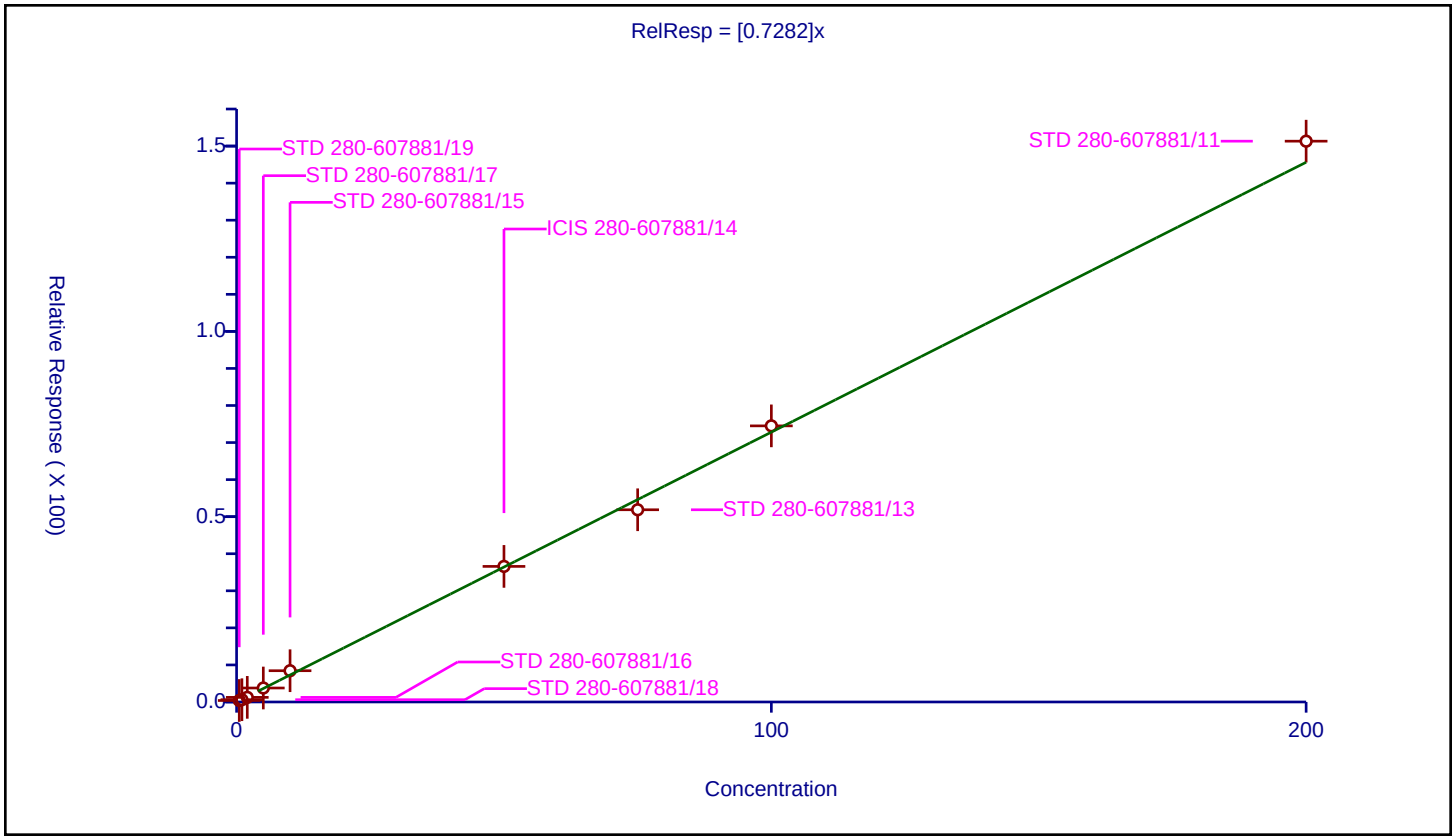
Curve Coefficients

Intercept:	0
Slope:	0.7282

Error Coefficients

Standard Error:	698000
Relative Standard Error:	10.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.395739	50.0	484663.0	0.791478	Y
2	STD 280-607881/18	1.0	0.613263	50.0	476794.0	0.613263	Y
3	STD 280-607881/16	2.0	1.249481	50.0	484201.0	0.624741	Y
4	STD 280-607881/17	5.0	3.776932	50.0	487009.0	0.755386	Y
5	STD 280-607881/15	10.0	8.436716	50.0	505647.0	0.843672	Y
6	ICIS 280-607881/14	50.0	36.587895	50.0	509618.0	0.731758	Y
7	STD 280-607881/13	75.0	51.867873	50.0	534485.0	0.691572	Y
8	STD 280-607881/12	100.0	74.502674	50.0	538480.0	0.745027	Y
9	STD 280-607881/11	200.0	151.321198	50.0	552718.0	0.756606	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

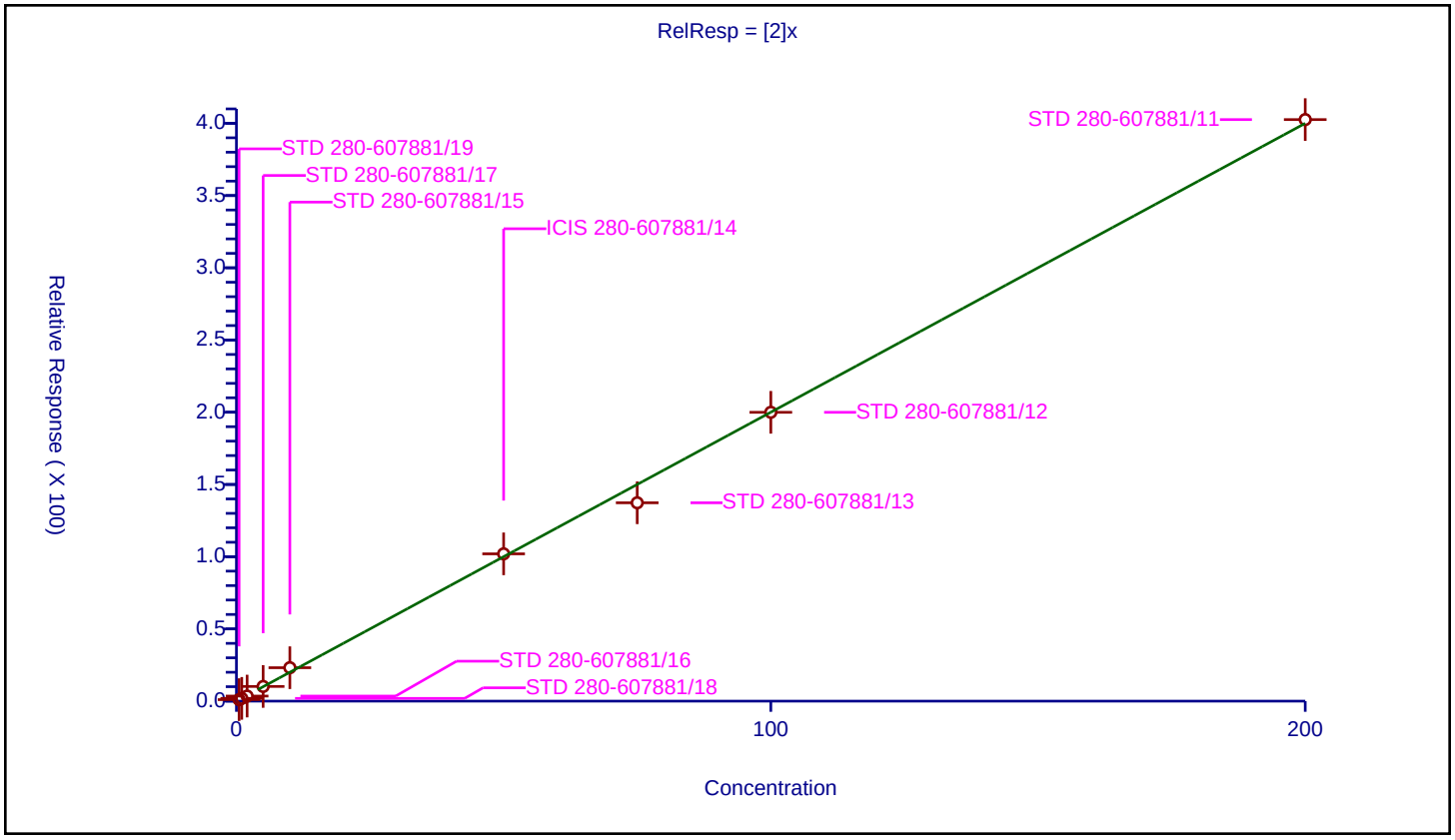
Curve Coefficients

Intercept:	0
Slope:	2

Error Coefficients

Standard Error:	1860000
Relative Standard Error:	8.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.045778	50.0	484663.0	2.091556	Y
2	STD 280-607881/18	1.0	1.91739	50.0	476794.0	1.91739	Y
3	STD 280-607881/16	2.0	3.520955	50.0	484201.0	1.760478	Y
4	STD 280-607881/17	5.0	10.16819	50.0	487009.0	2.033638	Y
5	STD 280-607881/15	10.0	23.147967	50.0	505647.0	2.314797	Y
6	ICIS 280-607881/14	50.0	101.965001	50.0	509618.0	2.0393	Y
7	STD 280-607881/13	75.0	137.311711	50.0	534485.0	1.830823	Y
8	STD 280-607881/12	100.0	199.957287	50.0	538480.0	1.999573	Y
9	STD 280-607881/11	200.0	402.594451	50.0	552718.0	2.012972	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

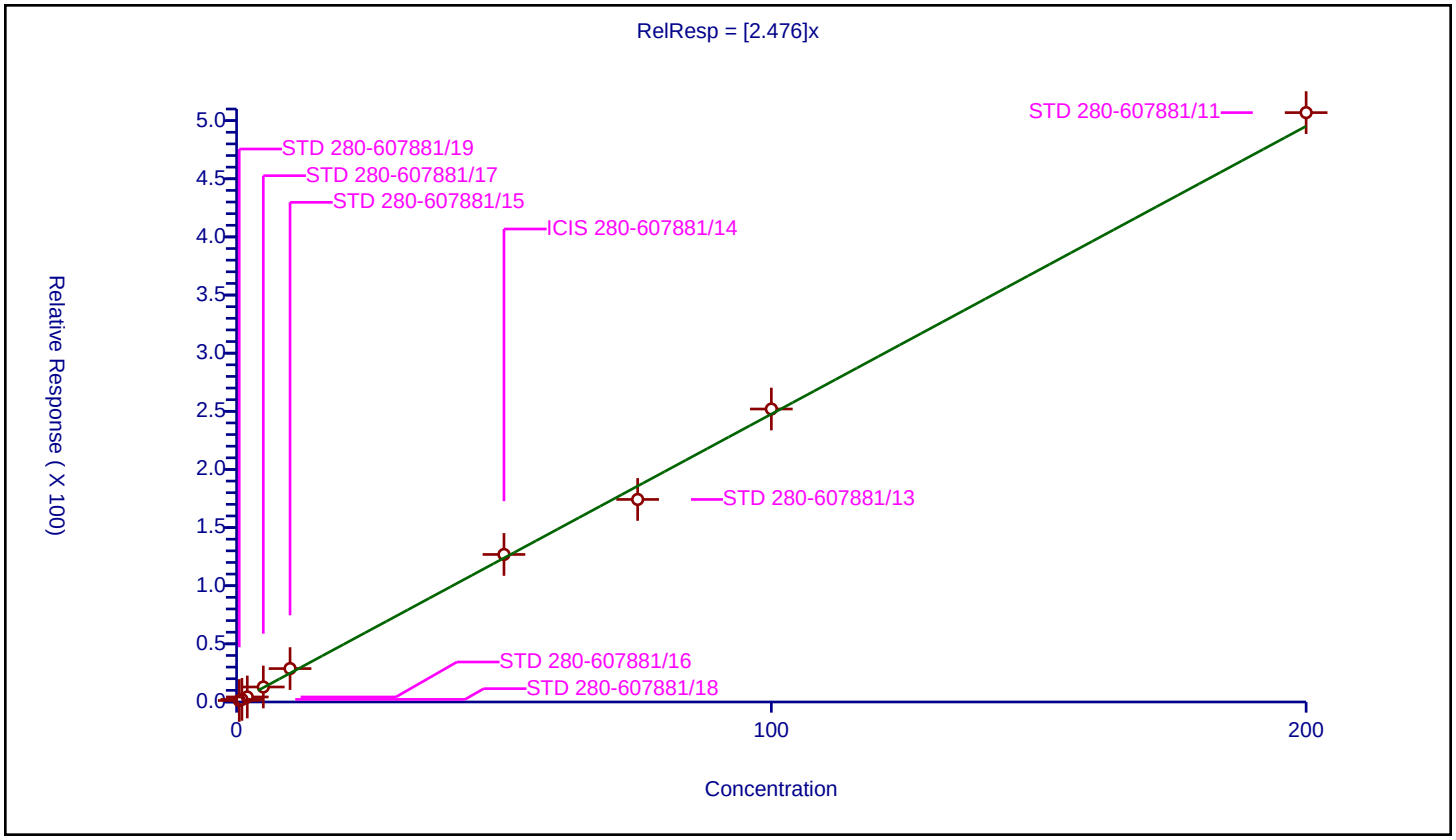
Curve Coefficients

Intercept:	0
Slope:	2.476

Error Coefficients

Standard Error:	2350000
Relative Standard Error:	8.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.273359	50.0	484663.0	2.546718	Y
2	STD 280-607881/18	1.0	2.204726	50.0	476794.0	2.204726	Y
3	STD 280-607881/16	2.0	4.333737	50.0	484201.0	2.166869	Y
4	STD 280-607881/17	5.0	12.891651	50.0	487009.0	2.57833	Y
5	STD 280-607881/15	10.0	28.737736	50.0	505647.0	2.873774	Y
6	ICIS 280-607881/14	50.0	126.885922	50.0	509618.0	2.537718	Y
7	STD 280-607881/13	75.0	174.200399	50.0	534485.0	2.322672	Y
8	STD 280-607881/12	100.0	251.988189	50.0	538480.0	2.519882	Y
9	STD 280-607881/11	200.0	506.905239	50.0	552718.0	2.534526	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

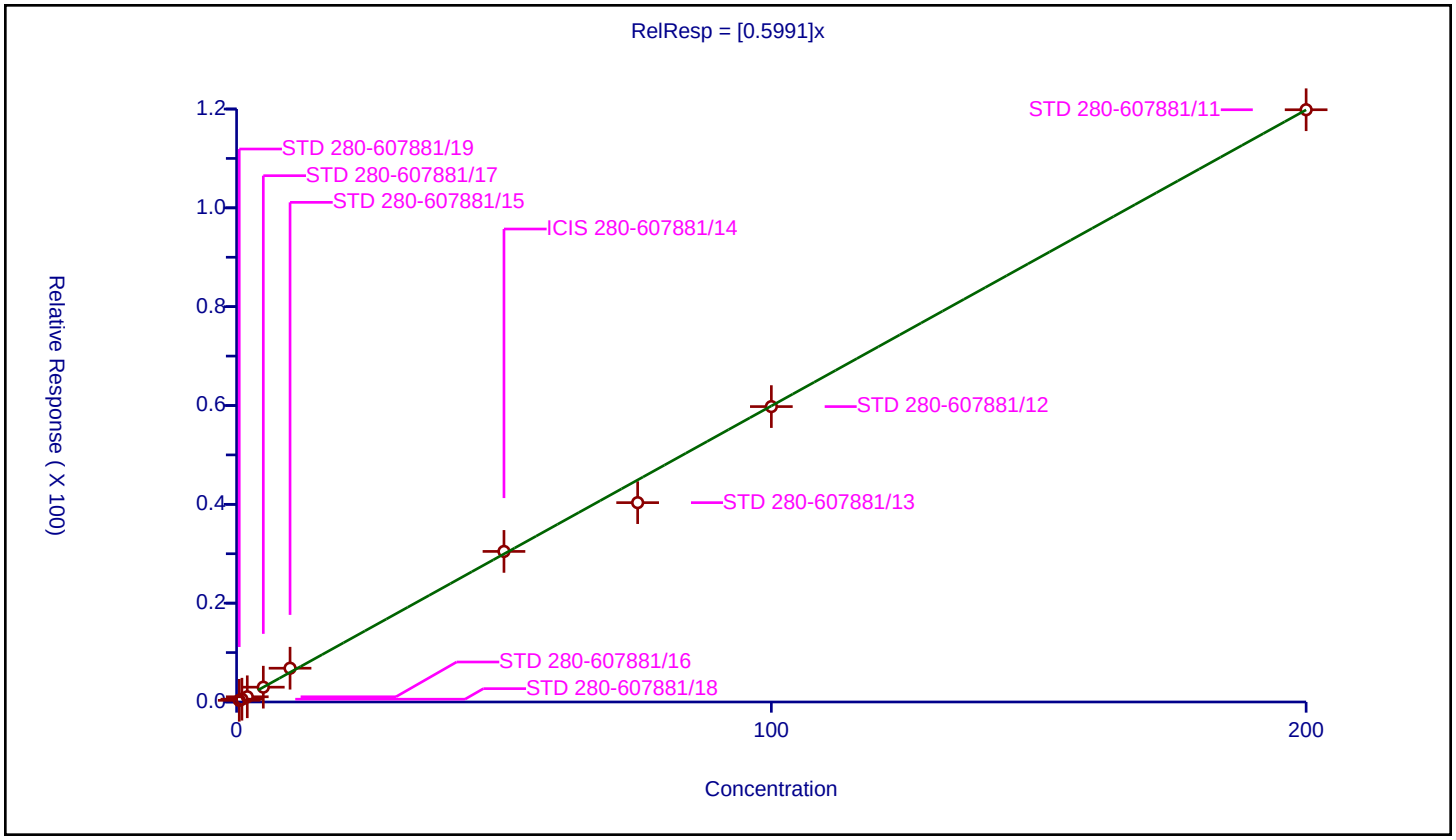
Curve Coefficients

Intercept:	0
Slope:	0.5991

Error Coefficients

Standard Error:	554000
Relative Standard Error:	9.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.337451	50.0	484663.0	0.674902	Y
2	STD 280-607881/18	1.0	0.562088	50.0	476794.0	0.562088	Y
3	STD 280-607881/16	2.0	1.055863	50.0	484201.0	0.527932	Y
4	STD 280-607881/17	5.0	2.999021	50.0	487009.0	0.599804	Y
5	STD 280-607881/15	10.0	6.832138	50.0	505647.0	0.683214	Y
6	ICIS 280-607881/14	50.0	30.470568	50.0	509618.0	0.609411	Y
7	STD 280-607881/13	75.0	40.342292	50.0	534485.0	0.537897	Y
8	STD 280-607881/12	100.0	59.778729	50.0	538480.0	0.597787	Y
9	STD 280-607881/11	200.0	119.852076	50.0	552718.0	0.59926	Y



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Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

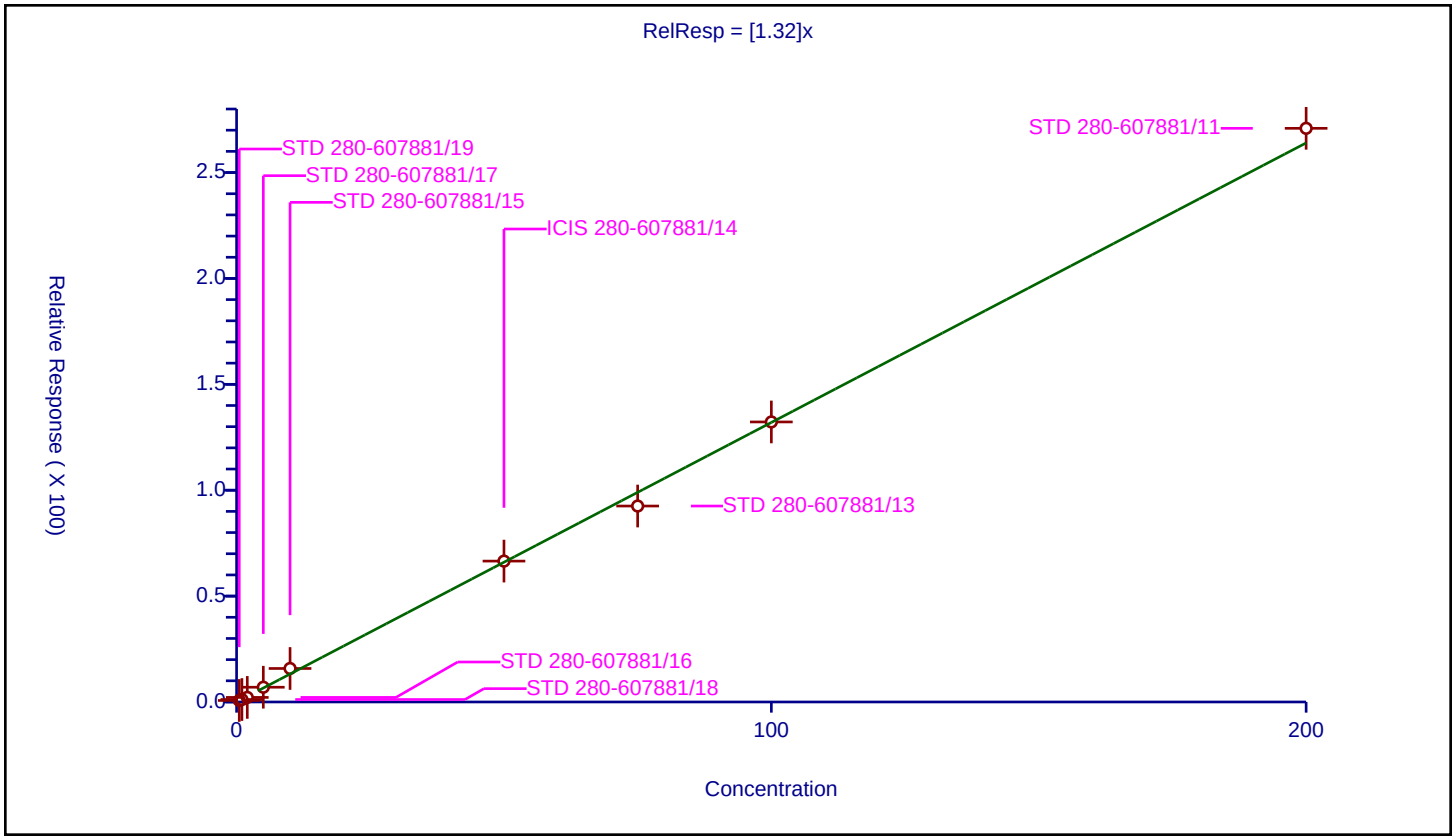
Curve Coefficients

Intercept:	0
Slope:	1.32

Error Coefficients

Standard Error:	1250000
Relative Standard Error:	11.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.709978	50.0	484663.0	1.419956	Y
2	STD 280-607881/18	1.0	1.161298	50.0	476794.0	1.161298	Y
3	STD 280-607881/16	2.0	2.161293	50.0	484201.0	1.080646	Y
4	STD 280-607881/17	5.0	6.972561	50.0	487009.0	1.394512	Y
5	STD 280-607881/15	10.0	15.819633	50.0	505647.0	1.581963	Y
6	ICIS 280-607881/14	50.0	66.52581	50.0	509618.0	1.330516	Y
7	STD 280-607881/13	75.0	92.529725	50.0	534485.0	1.23373	Y
8	STD 280-607881/12	100.0	132.237316	50.0	538480.0	1.322373	Y
9	STD 280-607881/11	200.0	270.884791	50.0	552718.0	1.354424	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

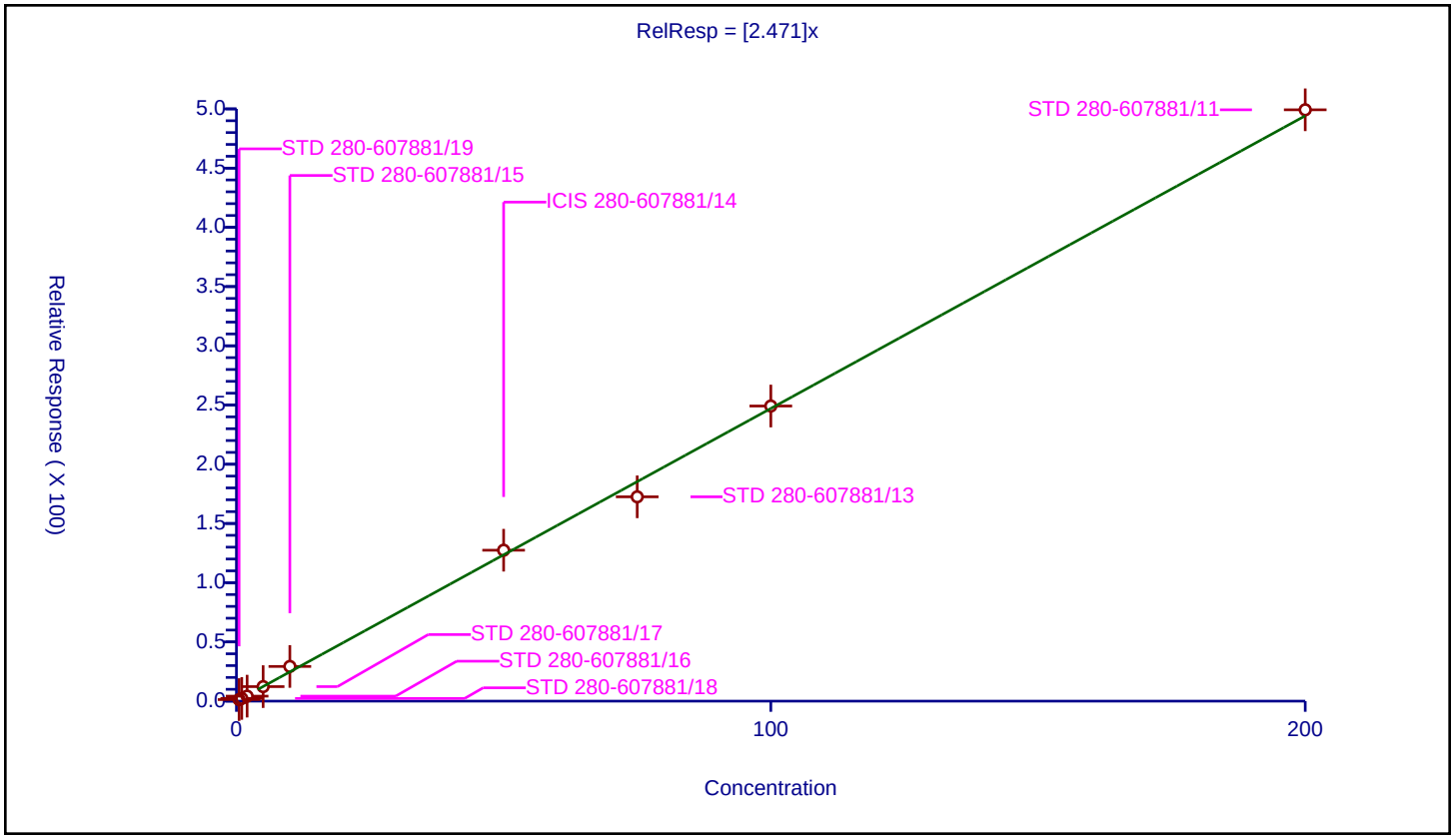
Curve Coefficients

Intercept:	0
Slope:	2.471

Error Coefficients

Standard Error:	2310000
Relative Standard Error:	9.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.311427	50.0	484663.0	2.622853	Y
2	STD 280-607881/18	1.0	2.292185	50.0	476794.0	2.292185	Y
3	STD 280-607881/16	2.0	4.209615	50.0	484201.0	2.104808	Y
4	STD 280-607881/17	5.0	12.263634	50.0	487009.0	2.452727	Y
5	STD 280-607881/15	10.0	29.289109	50.0	505647.0	2.928911	Y
6	ICIS 280-607881/14	50.0	127.415142	50.0	509618.0	2.548303	Y
7	STD 280-607881/13	75.0	172.489593	50.0	534485.0	2.299861	Y
8	STD 280-607881/12	100.0	249.148251	50.0	538480.0	2.491483	Y
9	STD 280-607881/11	200.0	499.245094	50.0	552718.0	2.496225	Y



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Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

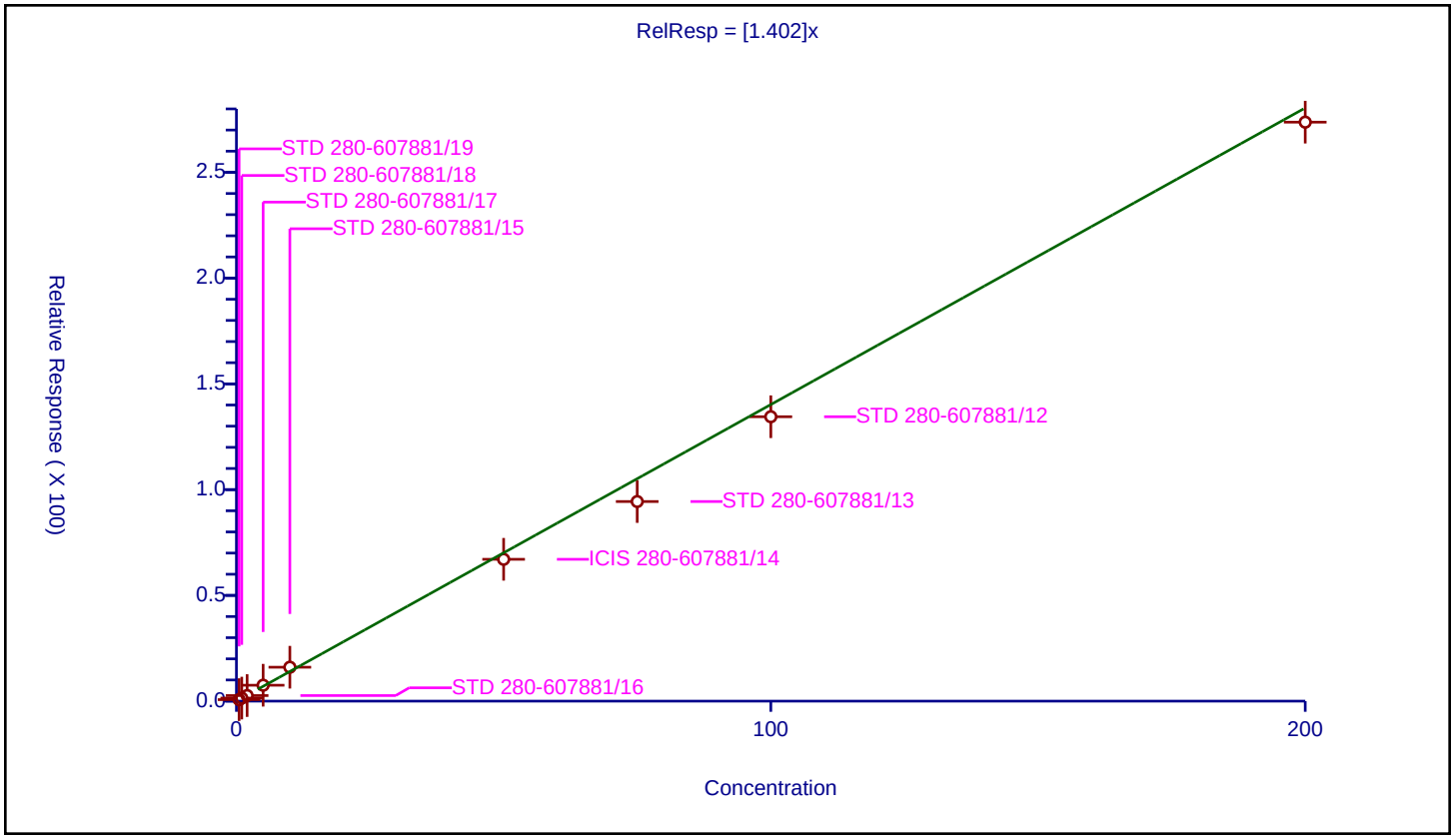
Curve Coefficients

Intercept:	0
Slope:	1.402

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	7.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.717612	50.0	484663.0	1.435224	Y
2	STD 280-607881/18	1.0	1.444334	50.0	476794.0	1.444334	Y
3	STD 280-607881/16	2.0	2.640536	50.0	484201.0	1.320268	Y
4	STD 280-607881/17	5.0	7.518547	50.0	487009.0	1.503709	Y
5	STD 280-607881/15	10.0	16.037769	50.0	505647.0	1.603777	Y
6	ICIS 280-607881/14	50.0	67.05552	50.0	509618.0	1.34111	Y
7	STD 280-607881/13	75.0	94.369533	50.0	534485.0	1.25826	Y
8	STD 280-607881/12	100.0	134.457176	50.0	538480.0	1.344572	Y
9	STD 280-607881/11	200.0	273.734888	50.0	552718.0	1.368674	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

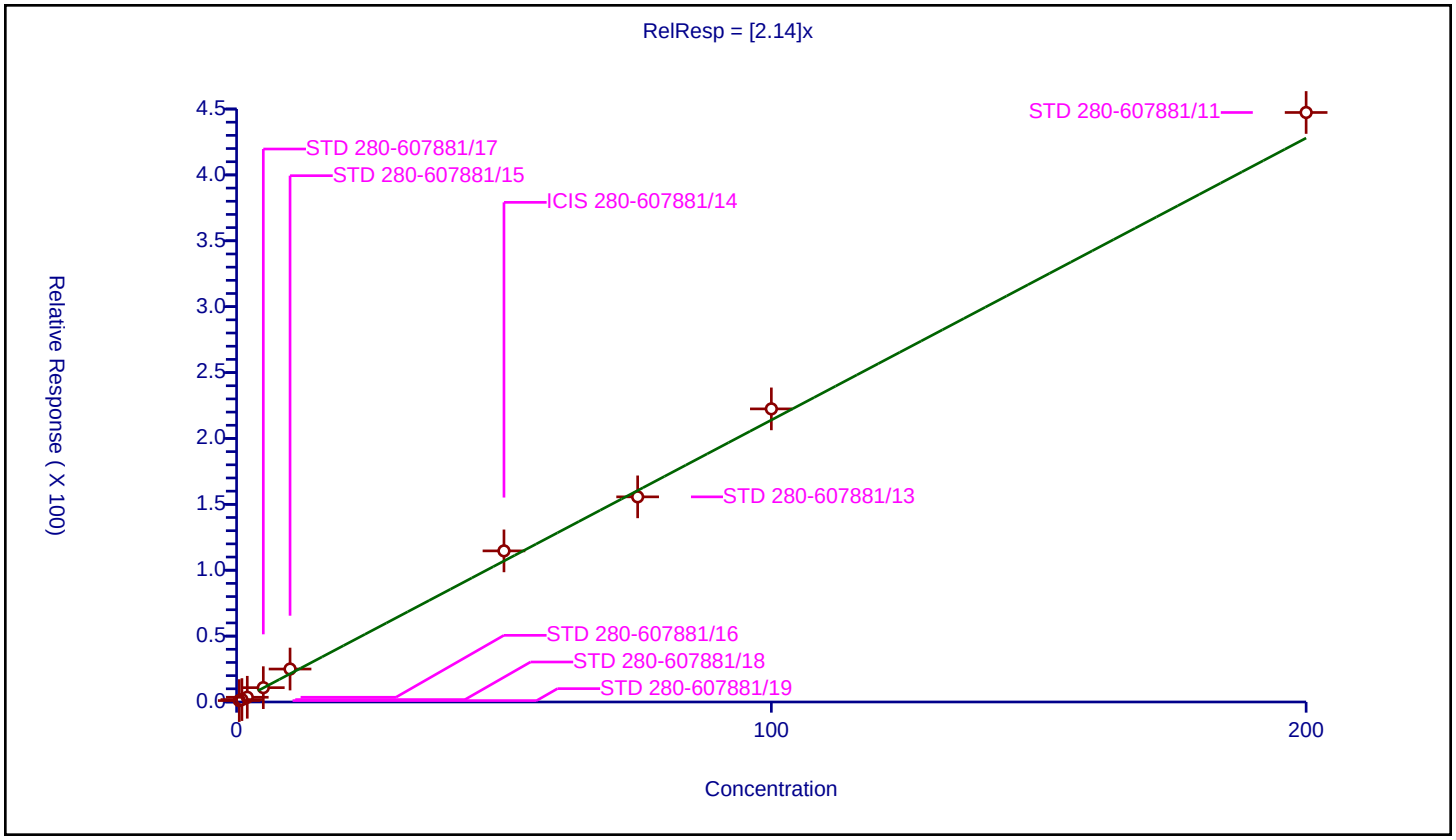
Curve Coefficients

Intercept:	0
Slope:	2.14

Error Coefficients

Standard Error:	2070000
Relative Standard Error:	10.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.066308	50.0	484663.0	2.132616	Y
2	STD 280-607881/18	1.0	1.821227	50.0	476794.0	1.821227	Y
3	STD 280-607881/16	2.0	3.593962	50.0	484201.0	1.796981	Y
4	STD 280-607881/17	5.0	10.884501	50.0	487009.0	2.1769	Y
5	STD 280-607881/15	10.0	25.000939	50.0	505647.0	2.500094	Y
6	ICIS 280-607881/14	50.0	114.669027	50.0	509618.0	2.293381	Y
7	STD 280-607881/13	75.0	155.669289	50.0	534485.0	2.075591	Y
8	STD 280-607881/12	100.0	222.442059	50.0	538480.0	2.224421	Y
9	STD 280-607881/11	200.0	447.359232	50.0	552718.0	2.236796	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

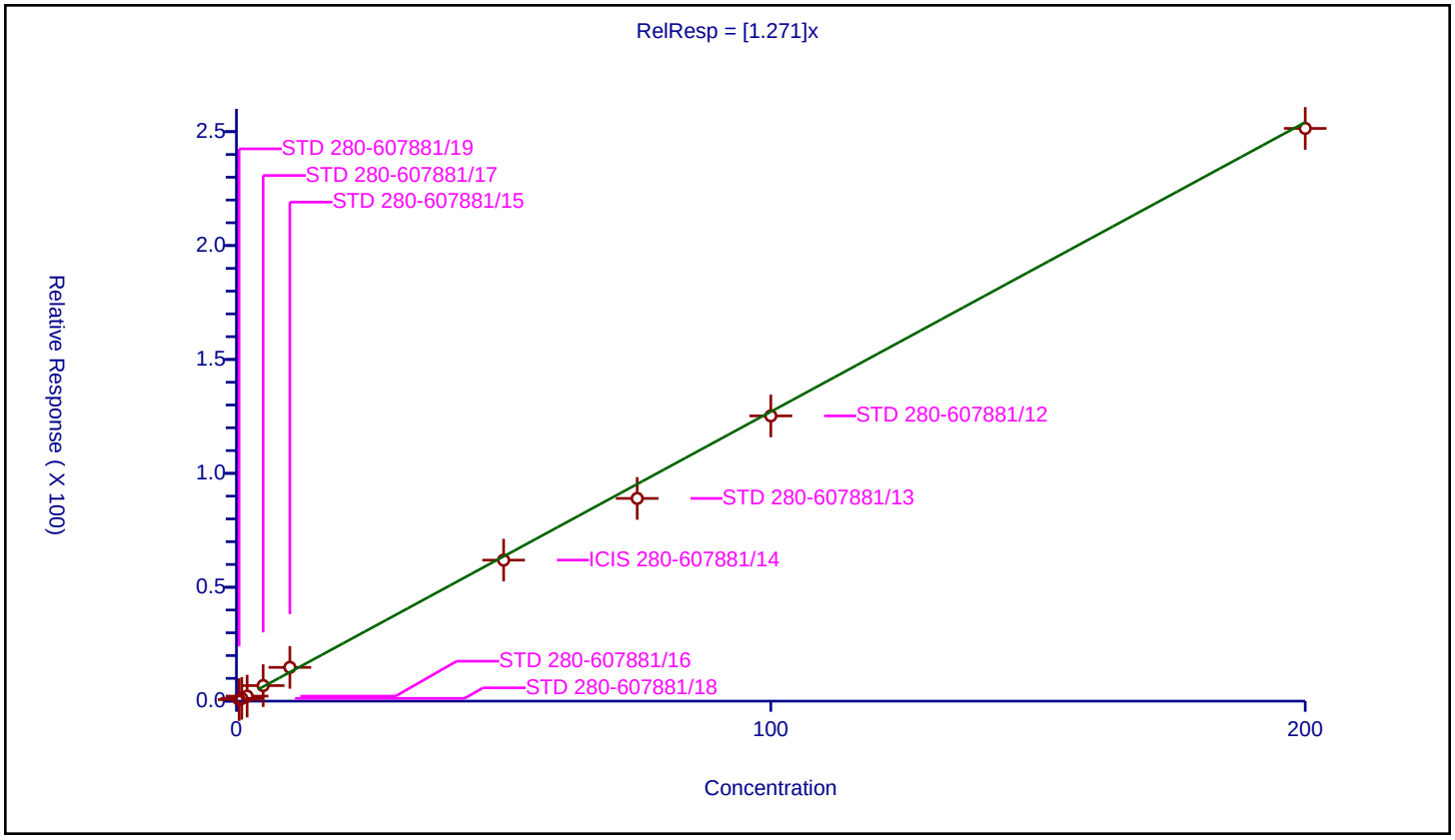
Curve Coefficients

Intercept:	0
Slope:	1.271

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	8.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.666752	50.0	484663.0	1.333504	Y
2	STD 280-607881/18	1.0	1.216983	50.0	476794.0	1.216983	Y
3	STD 280-607881/16	2.0	2.208793	50.0	484201.0	1.104397	Y
4	STD 280-607881/17	5.0	6.819689	50.0	487009.0	1.363938	Y
5	STD 280-607881/15	10.0	14.825362	50.0	505647.0	1.482536	Y
6	ICIS 280-607881/14	50.0	61.908626	50.0	509618.0	1.238173	Y
7	STD 280-607881/13	75.0	88.992582	50.0	534485.0	1.186568	Y
8	STD 280-607881/12	100.0	125.225171	50.0	538480.0	1.252252	Y
9	STD 280-607881/11	200.0	251.433733	50.0	552718.0	1.257169	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

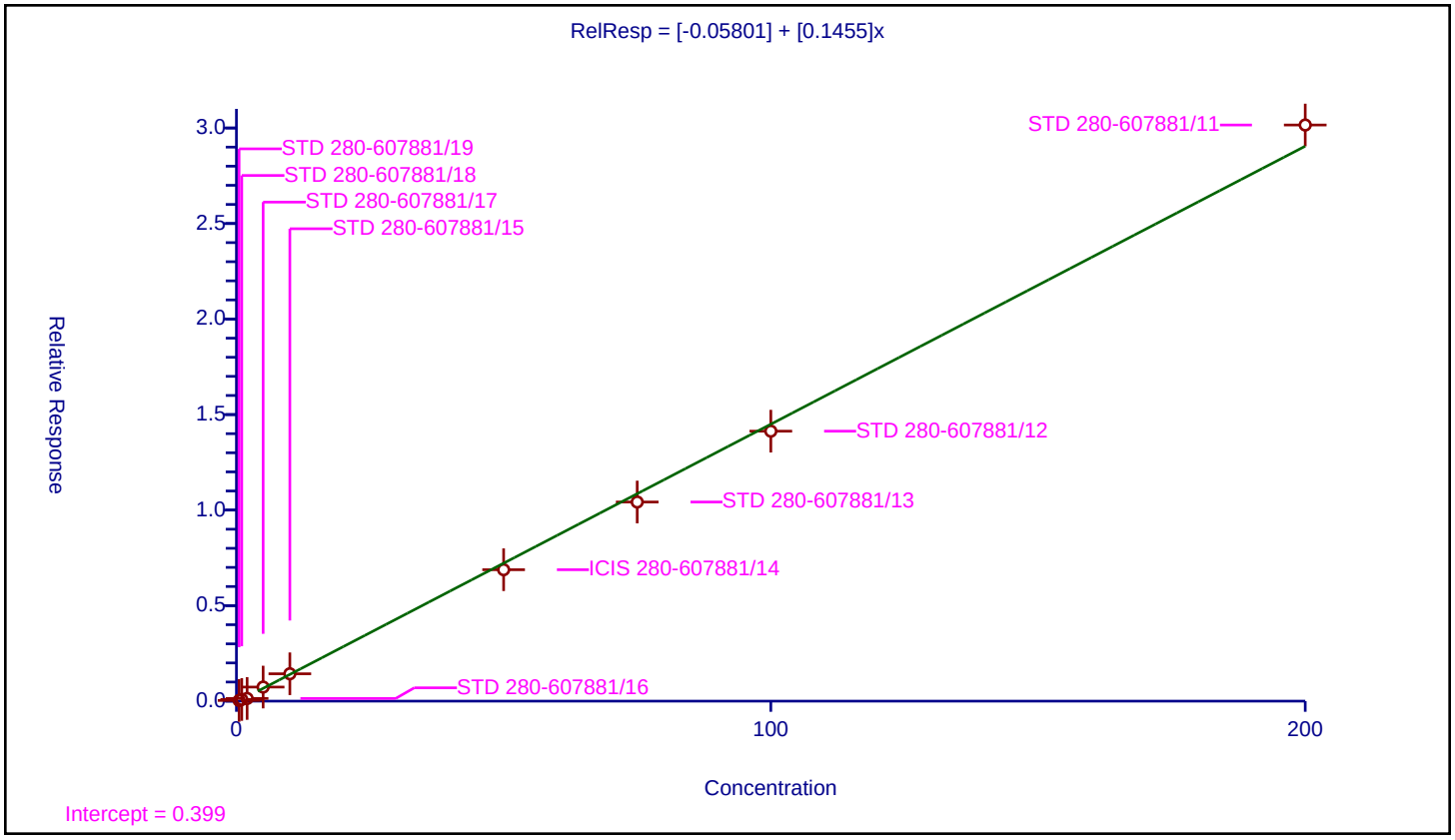
Curve Coefficients

Intercept:	-0.05801
Slope:	0.1455

Error Coefficients

Standard Error:	147000
Relative Standard Error:	16.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.03487	50.0	484663.0	0.069739	Y
2	STD 280-607881/18	1.0	0.087774	50.0	476794.0	0.087774	Y
3	STD 280-607881/16	2.0	0.139715	50.0	484201.0	0.069857	Y
4	STD 280-607881/17	5.0	0.736537	50.0	487009.0	0.147307	Y
5	STD 280-607881/15	10.0	1.431928	50.0	505647.0	0.143193	Y
6	ICIS 280-607881/14	50.0	6.879467	50.0	509618.0	0.137589	Y
7	STD 280-607881/13	75.0	10.422837	50.0	534485.0	0.138971	Y
8	STD 280-607881/12	100.0	14.131815	50.0	538480.0	0.141318	Y
9	STD 280-607881/11	200.0	30.156065	50.0	552718.0	0.15078	Y



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Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

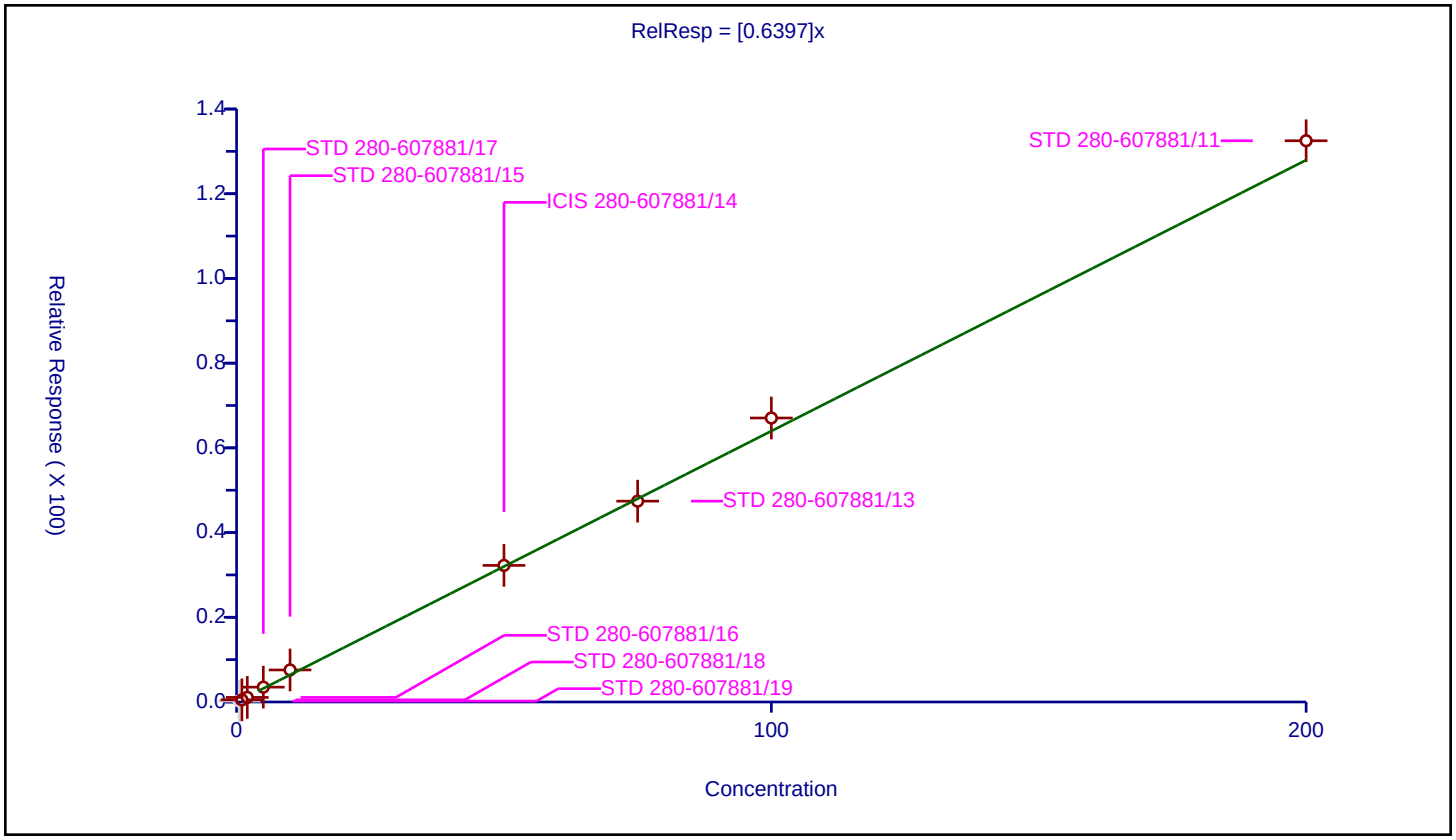
Curve Coefficients

Intercept:	0
Slope:	0.6397

Error Coefficients

Standard Error:	659000
Relative Standard Error:	12.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.215923	50.0	484663.0	0.431846	N
2	STD 280-607881/18	1.0	0.508291	50.0	476794.0	0.508291	Y
3	STD 280-607881/16	2.0	1.083434	50.0	484201.0	0.541717	Y
4	STD 280-607881/17	5.0	3.506095	50.0	487009.0	0.701219	Y
5	STD 280-607881/15	10.0	7.562687	50.0	505647.0	0.756269	Y
6	ICIS 280-607881/14	50.0	32.244446	50.0	509618.0	0.644889	Y
7	STD 280-607881/13	75.0	47.416017	50.0	534485.0	0.632214	Y
8	STD 280-607881/12	100.0	67.047894	50.0	538480.0	0.670479	Y
9	STD 280-607881/11	200.0	132.508531	50.0	552718.0	0.662543	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

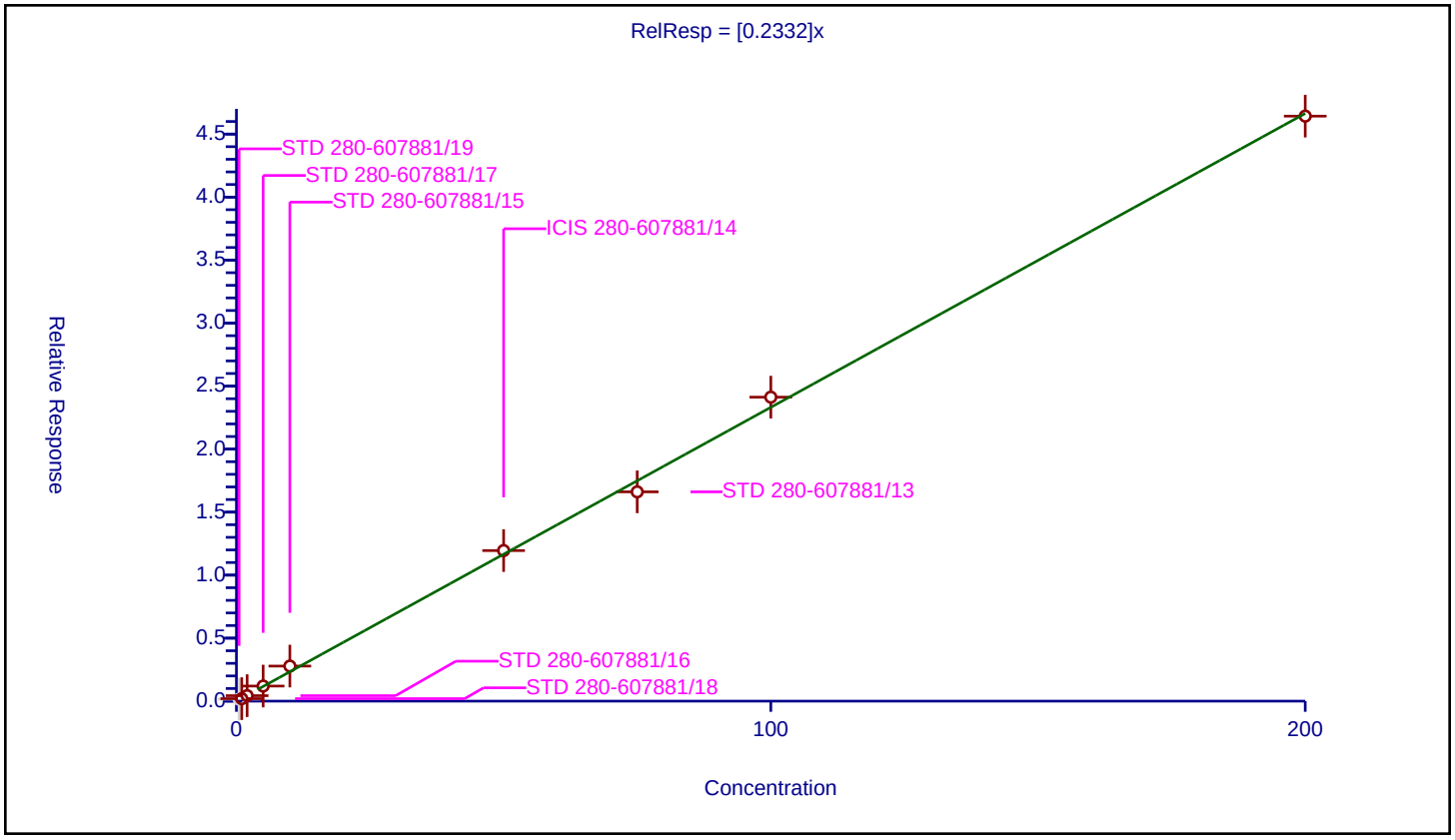
Curve Coefficients

Intercept:	0
Slope:	0.2332

Error Coefficients

Standard Error:	232000
Relative Standard Error:	10.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.158873	50.0	484663.0	0.317747	N
2	STD 280-607881/18	1.0	0.19715	50.0	476794.0	0.19715	Y
3	STD 280-607881/16	2.0	0.433601	50.0	484201.0	0.2168	Y
4	STD 280-607881/17	5.0	1.196692	50.0	487009.0	0.239338	Y
5	STD 280-607881/15	10.0	2.783365	50.0	505647.0	0.278336	Y
6	ICIS 280-607881/14	50.0	11.950127	50.0	509618.0	0.239003	Y
7	STD 280-607881/13	75.0	16.610663	50.0	534485.0	0.221476	Y
8	STD 280-607881/12	100.0	24.124016	50.0	538480.0	0.24124	Y
9	STD 280-607881/11	200.0	46.425754	50.0	552718.0	0.232129	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

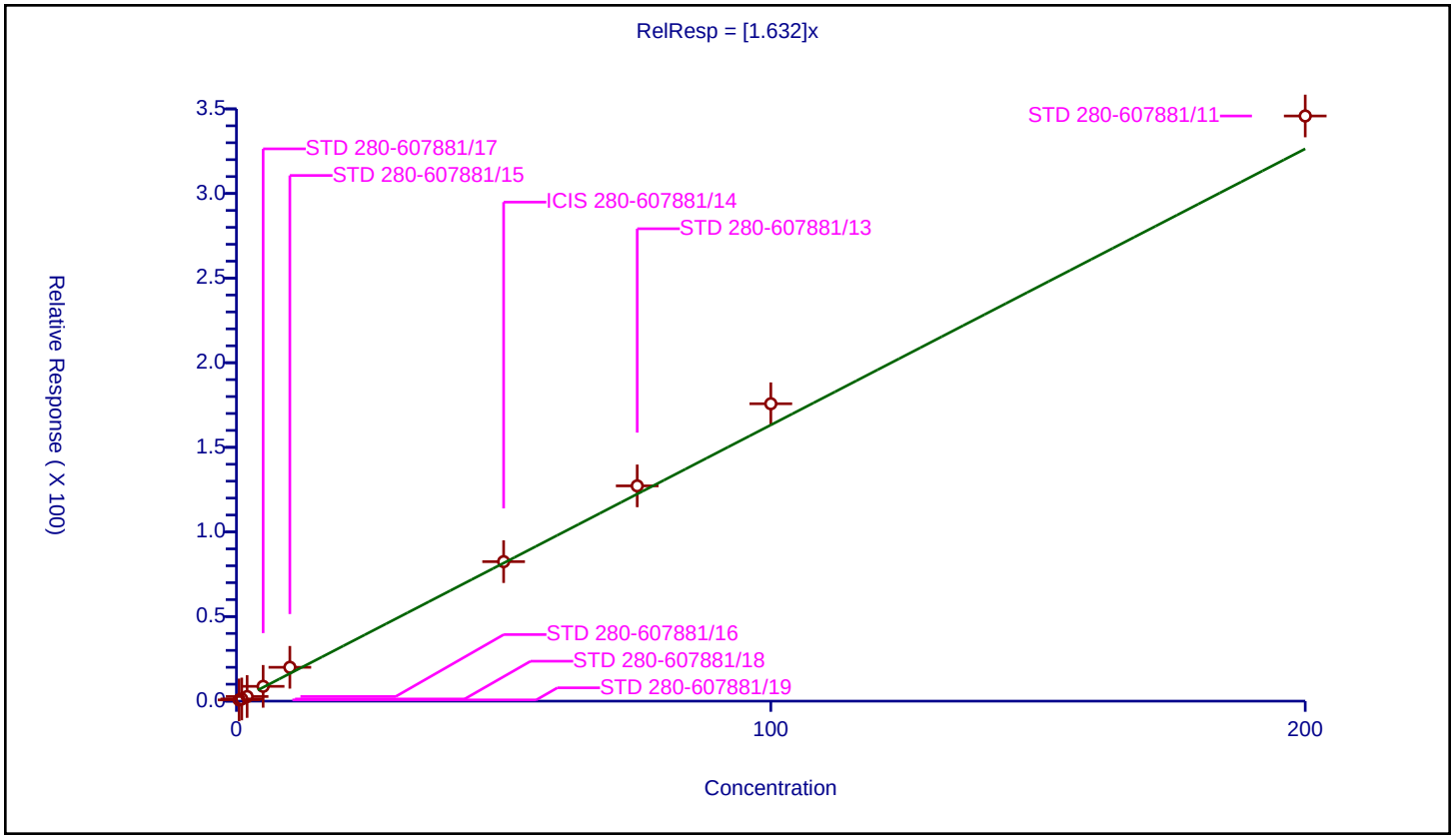
Curve Coefficients

Intercept:	0
Slope:	1.632

Error Coefficients

Standard Error:	1610000
Relative Standard Error:	13.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.735253	50.0	484663.0	1.470506	Y
2	STD 280-607881/18	1.0	1.274974	50.0	476794.0	1.274974	Y
3	STD 280-607881/16	2.0	2.723972	50.0	484201.0	1.361986	Y
4	STD 280-607881/17	5.0	8.744602	50.0	487009.0	1.74892	Y
5	STD 280-607881/15	10.0	19.996361	50.0	505647.0	1.999636	Y
6	ICIS 280-607881/14	50.0	82.445283	50.0	509618.0	1.648906	Y
7	STD 280-607881/13	75.0	127.222841	50.0	534485.0	1.696305	Y
8	STD 280-607881/12	100.0	175.763724	50.0	538480.0	1.757637	Y
9	STD 280-607881/11	200.0	345.82002	50.0	552718.0	1.7291	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

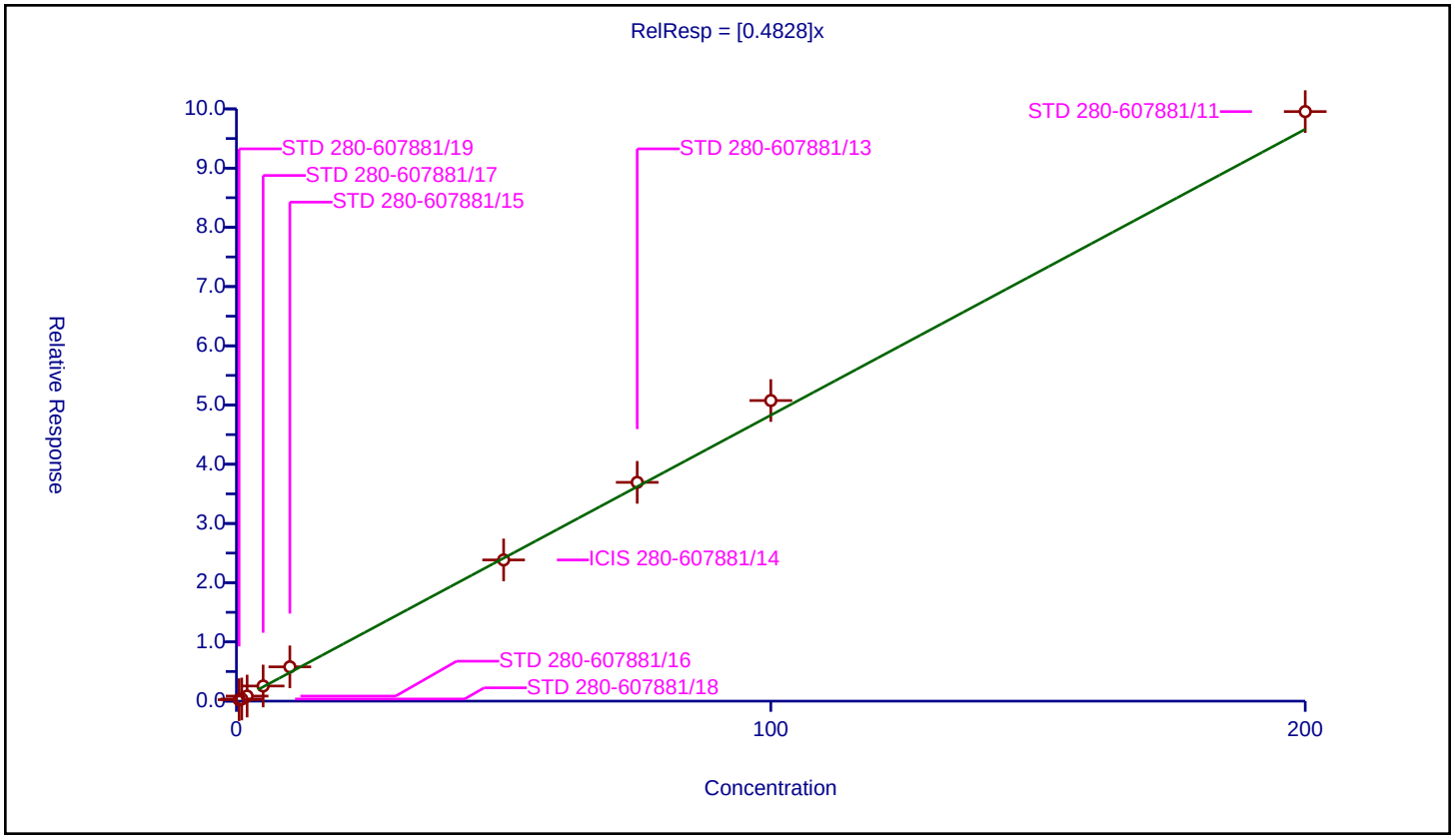
Curve Coefficients

Intercept:	0
Slope:	0.4828

Error Coefficients

Standard Error:	465000
Relative Standard Error:	12.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.243468	50.0	484663.0	0.486936	Y
2	STD 280-607881/18	1.0	0.365252	50.0	476794.0	0.365252	Y
3	STD 280-607881/16	2.0	0.856049	50.0	484201.0	0.428025	Y
4	STD 280-607881/17	5.0	2.556421	50.0	487009.0	0.511284	Y
5	STD 280-607881/15	10.0	5.791095	50.0	505647.0	0.57911	Y
6	ICIS 280-607881/14	50.0	23.842368	50.0	509618.0	0.476847	Y
7	STD 280-607881/13	75.0	36.943506	50.0	534485.0	0.49258	Y
8	STD 280-607881/12	100.0	50.756388	50.0	538480.0	0.507564	Y
9	STD 280-607881/11	200.0	99.54769	50.0	552718.0	0.497738	Y



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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-608560/20 Calibration Date: 04/13/2023 17:34

Instrument ID: VMS_MS11 Calib Start Date: 04/13/2023 14:21

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/13/2023 17:13

Lab File ID: ms11_5242.D Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2334	0.2151	0.0100	46.1	50.0	-7.8	30.0
Acrolein	Ave	0.0379	0.0373	0.0010	486	494	-1.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1460	0.1375	0.0500	47.1	50.0	-5.8	30.0
1,1-Dichloroethene	Ave	0.2076	0.1747	0.0600	42.1	50.0	-15.9	30.0
Acetone	Lin2		0.1012	0.0100	185	200	-7.6	30.0
Iodomethane	Ave	0.2910	0.2804	0.0100	48.2	50.0	-3.6	30.0
Carbon disulfide	Ave	0.7129	0.6311	0.1000	44.3	50.0	-11.5	30.0
Methyl acetate	Lin2		0.2631	0.0100	93.7	100	-6.3	30.0
Allyl chloride	Lin2		0.3646	0.0100	48.7	50.0	-2.7	30.0
Methylene Chloride	Ave	0.2488	0.2314	0.0100	46.5	50.0	-7.0	30.0
2-Methyl-2-propanol	Ave	0.0418	0.0383	0.0010	458	500	-8.5	30.0
Acrylonitrile	Ave	0.1315	0.1238	0.0100	470	500	-5.9	30.0
Methyl tert-butyl ether	Ave	0.8302	0.7919	0.1000	47.7	50.0	-4.6	30.0
trans-1,2-Dichloroethene	Ave	0.2415	0.2135	0.1000	44.2	50.0	-11.6	30.0
Hexane	Ave	1.178	1.119	0.0100	47.5	50.0	-5.0	30.0
Vinyl acetate	Ave	0.5971	0.5583	0.0100	93.5	100	-6.5	30.0
1,1-Dichloroethane	Ave	0.4618	0.4188	0.1000	45.3	50.0	-9.3	30.0
2-Butanone (MEK)	Lin2		0.1659	0.0100	187	200	-6.5	30.0
cis-1,2-Dichloroethene	Ave	0.2736	0.2465	0.1000	45.0	50.0	-9.9	30.0
2,2-Dichloropropane	Ave	0.4187	0.3741	0.0100	44.7	50.0	-10.6	30.0
sec-Butyl Alcohol	Ave	0.0347	0.0312	0.0100	1080	1200	-10.2	30.0
Chlorobromomethane	Ave	0.1221	0.1167	0.0500	47.8	50.0	-4.4	30.0
Tetrahydrofuran	Ave	0.1158	0.1072	0.0010	92.6	100	-7.4	30.0
Chloroform	Ave	0.4504	0.4042	0.2000	44.9	50.0	-10.2	30.0
1,1,1-Trichloroethane	Ave	0.3791	0.3413	0.0500	45.0	50.0	-10.0	30.0
Cyclohexane	Ave	0.4137	0.3842	0.0100	46.4	50.0	-7.1	30.0
1,1-Dichloropropene	Ave	0.3529	0.3223	0.0100	45.7	50.0	-8.6	30.0
Carbon tetrachloride	Ave	0.3237	0.2969	0.1000	45.9	50.0	-8.3	30.0
Isobutyl alcohol	Ave	0.0189	0.0177	0.0010	1180	1250	-6.0	30.0
Benzene	Ave	1.021	0.9137	0.2000	44.8	50.0	-10.5	30.0
1,2-Dichloroethane	Ave	0.4238	0.3820	0.0700	45.1	50.0	-9.9	30.0
n-Heptane	Lin1		0.2396		44.6	50.0	-10.7	
Trichloroethene	Ave	0.2463	0.2241	0.2000	45.5	50.0	-9.0	30.0
2-Pentanone	Ave	0.2962	0.2619	0.0010	141	160	-11.6	30.0
Methylcyclohexane	Ave	0.2874	0.2683	0.0500	46.7	50.0	-6.7	30.0
1,2-Dichloropropane	Ave	0.2882	0.2566	0.1000	44.5	50.0	-11.0	30.0
1,4-Dioxane	Ave	0.0053	0.0050	0.0010	936	1000	-6.4	30.0
Dibromomethane	Ave	0.1772	0.1608	0.0100	45.4	50.0	-9.3	30.0
Dichlorobromomethane	Ave	0.3499	0.3304	0.2000	47.2	50.0	-5.6	30.0
cis-1,3-Dichloropropene	Ave	1.809	1.759	0.2000	48.6	50.0	-2.7	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-608560/20 Calibration Date: 04/13/2023 17:34

Instrument ID: VMS_MS11 Calib Start Date: 04/13/2023 14:21

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/13/2023 17:13

Lab File ID: ms11_5242.D Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Methyl-2-pentanone (MIBK)	Ave	0.3478	0.3319	0.0300	191	200	-4.6	30.0
Toluene	Ave	1.038	0.9773	0.3000	47.1	50.0	-5.8	30.0
trans-1,3-Dichloropropene	Ave	0.4449	0.4115	0.2000	46.2	50.0	-7.5	30.0
Ethyl methacrylate	Ave	1.620	1.567	0.0100	48.4	50.0	-3.2	30.0
1,1,2-Trichloroethane	Ave	0.2401	0.2239	0.1000	46.6	50.0	-6.7	30.0
Tetrachloroethene	Ave	0.7598	0.6868	0.1000	45.2	50.0	-9.6	30.0
1,3-Dichloropropane	Ave	1.808	1.727	0.0100	47.7	50.0	-4.5	30.0
2-Hexanone	Ave	1.037	0.9787	0.0100	189	200	-5.6	30.0
Chlorodibromomethane	Ave	1.017	1.001	0.1000	49.2	50.0	-1.6	30.0
1,2-Dibromoethane	Ave	1.033	0.9931	0.1000	48.1	50.0	-3.9	30.0
1-Chlorohexane	Lin2		1.198	0.0100	37.5	40.0	-6.4	30.0
Chlorobenzene	Ave	2.795	2.592	0.3000	46.4	50.0	-7.3	30.0
1,1,1,2-Tetrachloroethane	Ave	0.9858	0.9362	0.0100	47.5	50.0	-5.0	30.0
Ethylbenzene	Ave	1.461	1.356	0.3000	46.4	50.0	-7.2	30.0
m-Xylene & p-Xylene	Ave	3.752	3.447	0.1000	45.9	50.0	-8.1	30.0
o-Xylene	Ave	1.785	1.692	0.2000	47.4	50.0	-5.2	30.0
Styrene	Ave	3.051	2.941	0.2000	48.2	50.0	-3.6	30.0
Bromoform	Ave	0.7098	0.6974	0.1000	49.1	50.0	-1.7	30.0
Isopropylbenzene	Ave	2.721	2.464	0.3000	45.3	50.0	-9.4	30.0
Cyclohexanone	Ave	0.0693	0.0631	0.0010	1370	1500	-8.9	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9349	0.8416	0.3000	45.0	50.0	-10.0	30.0
Bromobenzene	Ave	0.7110	0.6633	0.0100	46.6	50.0	-6.7	30.0
trans-1,4-Dichloro-2-butene	Ave	0.2710	0.2330	0.0100	43.0	50.0	-14.0	30.0
1,2,3-Trichloropropane	Ave	0.2906	0.2694	0.0100	46.3	50.0	-7.3	30.0
N-Propylbenzene	Ave	0.7281	0.6780	0.0100	46.6	50.0	-6.9	30.0
2-Chlorotoluene	Ave	0.6552	0.6091	0.0100	46.5	50.0	-7.0	30.0
1,3,5-Trimethylbenzene	Ave	2.296	2.154	0.0100	46.9	50.0	-6.2	30.0
4-Chlorotoluene	Ave	0.7029	0.6436	0.0100	45.8	50.0	-8.4	30.0
tert-Butylbenzene	Ave	2.027	1.988	0.0100	49.0	50.0	-1.9	30.0
1,2,4-Trimethylbenzene	Ave	2.441	2.288	0.3000	46.9	50.0	-6.3	30.0
sec-Butylbenzene	Ave	0.5230	0.4895	0.0100	46.8	50.0	-6.4	30.0
1,3-Dichlorobenzene	Ave	1.277	1.183	0.5000	46.3	50.0	-7.4	30.0
4-Isopropyltoluene	Ave	2.290	2.147	0.0100	46.9	50.0	-6.3	30.0
1,4-Dichlorobenzene	Ave	1.328	1.236	0.5000	46.5	50.0	-7.0	30.0
n-Butylbenzene	Ave	1.993	1.858	0.0100	46.6	50.0	-6.8	30.0
1,2-Dichlorobenzene	Ave	1.252	1.167	0.5000	46.6	50.0	-6.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2062	0.2029	0.0100	49.2	50.0	-1.6	30.0
1,2,4-Trichlorobenzene	Ave	0.8236	0.7345	0.2000	44.6	50.0	-10.8	30.0
Hexachlorobutadiene	Ave	0.3427	0.2814	0.0100	41.1	50.0	-17.9	30.0
Naphthalene	Ave	2.638	2.277	0.0100	43.2	50.0	-13.7	30.0
1,2,3-Trichlorobenzene	Ave	0.6948	0.6058	0.3000	43.6	50.0	-12.8	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-608560/20 Calibration Date: 04/13/2023 17:34

Instrument ID: VMS_MS11 Calib Start Date: 04/13/2023 14:21

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/13/2023 17:13

Lab File ID: ms11_5242.D Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2572	0.2570	0.0100	49.9	50.0	-0.1	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3525	0.3624	0.0100	51.4	50.0	2.8	30.0
Toluene-d8 (Surr)	Ave	4.117	4.100	0.0100	49.8	50.0	-0.4	30.0
4-Bromofluorobenzene (Surr)	Ave	1.020	1.007	0.0100	49.3	50.0	-1.3	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5242.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 13-Apr-2023 17:34:30 ALS Bottle#: 12 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: MED Instrument ID: VMS_MS11
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 16:27:50 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: RWB2 Date: 13-Apr-2023 18:14:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.082	0.000	98	1403636	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	89	344395	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	557332	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	95	360680	50.0	49.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	508690	50.0	51.4	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1412033	50.0	49.8	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	86	560999	50.0	49.3	
20 Ethyl ether	59	2.763	2.763	0.000	93	301907	50.0	46.1	
22 Acrolein	56	2.875	2.875	0.000	99	517424	493.8	486.2	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.959	0.000	69	193068	50.0	47.1	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	95	245204	50.0	42.1	
24 Acetone	43	2.973	2.973	0.000	99	567919	200.0	184.9	
26 Iodomethane	142	3.085	3.084	0.000	100	393645	50.0	48.2	
28 Carbon disulfide	76	3.140	3.140	0.000	100	885831	50.0	44.3	
29 Methyl acetate	43	3.196	3.196	0.000	98	738571	100.0	93.7	
30 3-Chloro-1-propene	41	3.224	3.224	0.000	89	511803	50.0	48.7	
31 Methylene Chloride	84	3.308	3.308	0.000	96	324863	50.0	46.5	
32 2-Methyl-2-propanol	59	3.364	3.364	0.000	99	537080	500.0	457.7	
33 Acrylonitrile	53	3.476	3.475	0.001	98	1737302	500.0	470.5	
34 Methyl tert-butyl ether	73	3.503	3.503	0.000	96	1111491	50.0	47.7	
35 trans-1,2-Dichloroethene	96	3.517	3.517	0.000	96	299611	50.0	44.2	
36 Hexane	57	3.699	3.699	0.000	95	385443	50.0	47.5	
37 Vinyl acetate	43	3.797	3.797	0.000	98	1567210	100.0	93.5	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	96	587851	50.0	45.3	
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	931263	200.0	187.1	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	85	345938	50.0	45.0	
45 2,2-Dichloropropane	77	4.244	4.244	0.000	91	525163	50.0	44.7	
47 sec-Butyl Alcohol	45	4.314	4.313	0.001	99	1050746	1200.0	1077.5	
49 Chlorobromomethane	128	4.411	4.411	0.000	98	163796	50.0	47.8	
50 Tetrahydrofuran	42	4.411	4.425	-0.014	89	300890	100.0	92.6	
51 Chloroform	83	4.467	4.467	0.000	95	567351	50.0	44.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
53 1,1,1-Trichloroethane	97	4.607	4.607	0.000	98	479066	50.0	45.0	
54 Cyclohexane	56	4.663	4.663	0.000	94	539215	50.0	46.4	
56 Carbon tetrachloride	117	4.719	4.718	0.001	95	416787	50.0	45.9	
55 1,1-Dichloropropene	75	4.719	4.718	0.001	96	452456	50.0	45.7	
52 Isobutyl alcohol	43	4.733	4.732	0.001	94	622394	1250.0	1175.4	
57 Benzene	78	4.872	4.872	0.000	98	1282551	50.0	44.8	
58 1,2-Dichloroethane	62	4.900	4.900	0.000	97	536129	50.0	45.1	
60 n-Heptane	43	5.040	5.054	-0.014	95	336318	50.0	44.6	
62 Trichloroethene	130	5.347	5.347	0.000	97	314580	50.0	45.5	
63 2-Pentanone	43	5.445	5.445	0.000	98	1176361	160.0	141.5	
64 Methylcyclohexane	55	5.543	5.543	0.001	93	376570	50.0	46.7	
65 1,2-Dichloropropane	63	5.557	5.543	0.015	91	360164	50.0	44.5	
67 1,4-Dioxane	88	5.598	5.598	0.000	96	139591	1000.0	936.2	
68 Dibromomethane	93	5.626	5.626	0.000	95	225720	50.0	45.4	
69 Dichlorobromomethane	83	5.738	5.738	0.000	98	463826	50.0	47.2	
76 cis-1,3-Dichloropropene	75	6.087	6.087	0.000	93	605939	50.0	48.6	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.185	0.000	98	1863487	200.0	190.8	
75 Toluene	91	6.367	6.367	0.001	98	1371824	50.0	47.1	
73 trans-1,3-Dichloropropene	75	6.548	6.548	0.000	99	577560	50.0	46.2	
77 Ethyl methacrylate	69	6.562	6.562	0.000	90	539828	50.0	48.4	
79 1,1,2-Trichloroethane	97	6.716	6.716	0.000	93	314327	50.0	46.6	
80 Tetrachloroethene	164	6.813	6.813	0.000	95	236541	50.0	45.2	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	594615	50.0	47.7	
82 2-Hexanone	43	6.883	6.883	0.000	96	1348292	200.0	188.8	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	344804	50.0	49.2	
86 Ethylene Dibromide	107	7.163	7.163	0.000	98	342031	50.0	48.1	
88 1-Chlorohexane	91	7.554	7.554	0.000	97	330184	40.0	37.5	
89 Chlorobenzene	112	7.596	7.596	0.000	92	892622	50.0	46.4	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	92	322432	50.0	47.5	
91 Ethylbenzene	106	7.665	7.665	0.000	99	467057	50.0	46.4	
92 m-Xylene & p-Xylene	91	7.791	7.791	0.000	0	1187195	50.0	45.9	
93 o-Xylene	106	8.140	8.140	0.000	97	582692	50.0	47.4	
94 Styrene	104	8.154	8.154	0.000	94	1012737	50.0	48.2	
96 Bromoform	173	8.336	8.336	0.000	95	240174	50.0	49.1	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	1373226	50.0	45.3	
99 Cyclohexanone	55	8.573	8.573	0.000	95	652292	1500.0	1366.0	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	469062	50.0	45.0	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	60	129876	50.0	43.0	
101 Bromobenzene	156	8.797	8.797	0.000	97	369669	50.0	46.6	
103 1,2,3-Trichloropropane	110	8.825	8.825	0.000	86	150118	50.0	46.3	
104 N-Propylbenzene	120	8.867	8.866	0.001	99	377893	50.0	46.6	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	339475	50.0	46.5	
106 1,3,5-Trimethylbenzene	105	9.034	9.048	-0.014	93	1200707	50.0	46.9	
107 4-Chlorotoluene	126	9.090	9.090	0.000	98	358721	50.0	45.8	
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	1108085	50.0	49.0	
109 1,2,4-Trimethylbenzene	105	9.411	9.411	0.000	98	1275056	50.0	46.9	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	272835	50.0	46.8	
112 1,3-Dichlorobenzene	146	9.691	9.690	0.001	97	659151	50.0	46.3	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	1196507	50.0	46.9	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	92	688680	50.0	46.5	
115 n-Butylbenzene	91	10.110	10.109	0.001	98	1035677	50.0	46.6	
116 1,2-Dichlorobenzene	146	10.137	10.151	-0.014	94	650334	50.0	46.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
117 1,2-Dibromo-3-Chloropropane	157	10.906	10.920	-0.014	79	113095	50.0	49.2	
119 1,2,4-Trichlorobenzene	180	11.730	11.730	0.000	94	409376	50.0	44.6	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	98	156849	50.0	41.1	
121 Naphthalene	128	11.995	11.995	0.000	98	1268960	50.0	43.2	
122 1,2,3-Trichlorobenzene	180	12.204	12.218	-0.014	94	337654	50.0	43.6	
S 142 Xylenes, Total	106				0		100.0	93.3	
S 143 1,2-Dichloroethene, Total	1				0		100.0	89.2	
S 145 1,3-Dichloropropene, Total	1				0		100.0	94.9	
S 147 Trihalomethanes, Total	1				0		200.0	190.4	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added:	25.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

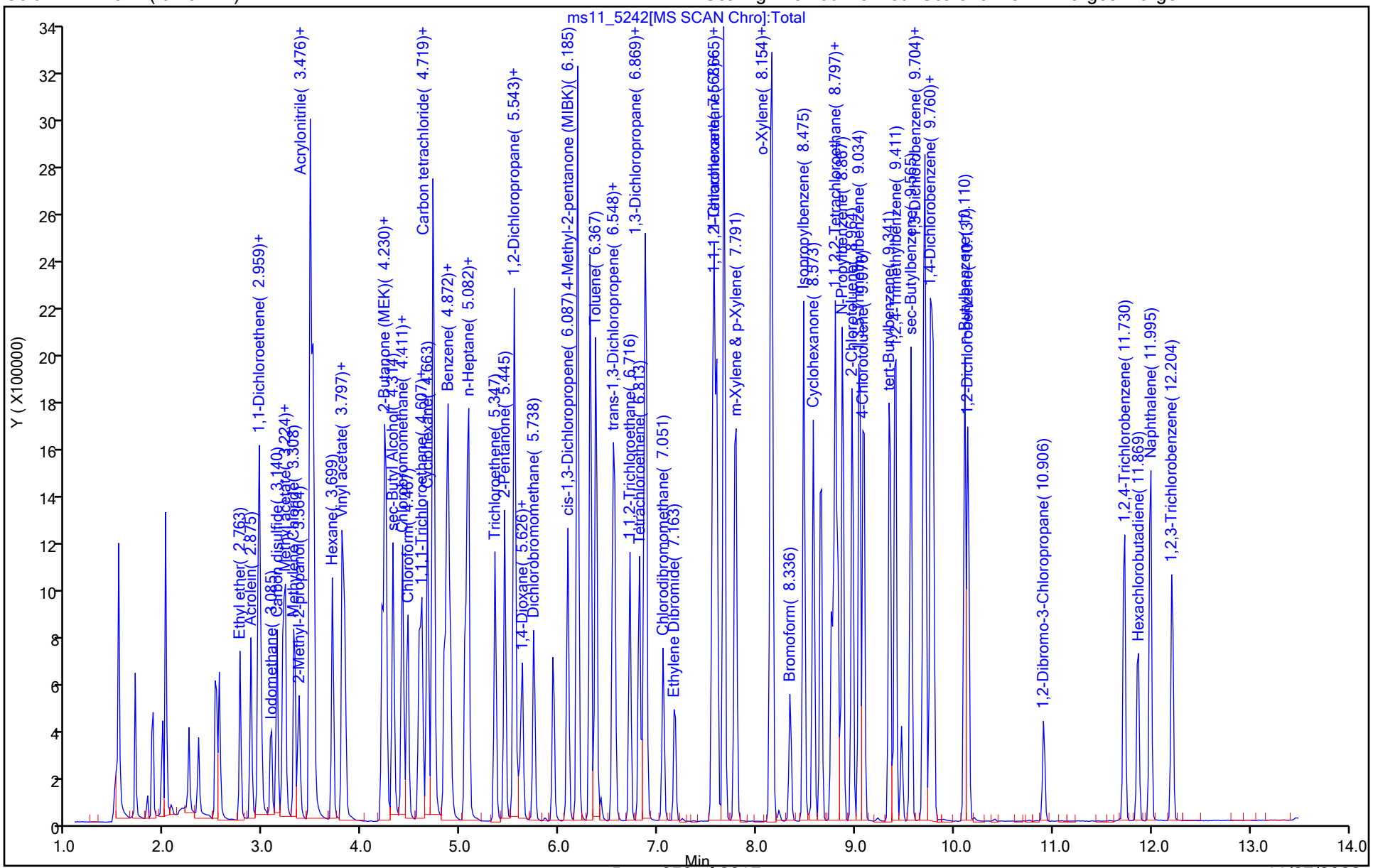
Report Date: 14-Apr-2023 16:27:54 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5242.D

Injection Date:	13-Apr-2023 17:34:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	ICV			Worklist Smp#:	20
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-608697/20 Calibration Date: 04/14/2023 13:57

Instrument ID: VMS_MS11 Calib Start Date: 04/14/2023 10:45

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/14/2023 13:36

Lab File ID: ms11_5282.D Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2432	0.2289	0.1000	47.1	50.0	-5.9	30.0
Chloromethane	Lin1		0.3668	0.1000	58.3	50.0	16.5	30.0
Vinyl chloride	Ave	0.3208	0.2799	0.0100	43.6	50.0	-12.8	30.0
Bromomethane	Lin1		0.1652	0.0100	52.6	50.0	5.3	30.0
Chloroethane	Lin1		0.1895	0.0100	50.0	50.0	-0.0	30.0
Dichlorofluoromethane	Lin1		0.4342	0.0100	54.0	50.0	7.9	30.0
Trichlorofluoromethane	Ave	0.3516	0.3022	0.0100	43.0	50.0	-14.0	30.0
2-Chloroethyl vinyl ether	Ave	0.1962	0.1930	0.0100	49.2	50.0	-1.6	30.0
Dibromofluoromethane (Surr)	Ave	0.2556	0.2581	0.0100	50.5	50.0	1.0	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3359	0.3316	0.0100	49.4	50.0	-1.3	30.0
Toluene-d8 (Surr)	Ave	4.108	4.082	0.0100	49.7	50.0	-0.6	30.0
4-Bromofluorobenzene (Surr)	Ave	0.9539	0.9645	0.0100	50.6	50.0	1.1	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5282.D
Lims ID: ICV g
Client ID:
Sample Type: ICV
Inject. Date: 14-Apr-2023 13:57:30 ALS Bottle#: 12 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: MED Instrument ID: VMS_MS11
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:21:02 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 14:25:44

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.081	5.081	0.000	98	1255340	50.0	50.0	
*	3 Chlorobenzene-d5	119	7.567	7.567	0.000	88	304218	50.0	50.0	
*	4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	489550	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	324019	50.0	50.5	
$	6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.844	-0.014	0	416321	50.0	49.4	
$	7 Toluene-d8 (Surr)	98	6.310	6.311	-0.001	94	1241862	50.0	49.7	
$	8 4-Bromofluorobenzene (Surr)	95	8.657	8.657	0.000	93	472152	50.0	50.6	
	11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	287399	50.0	47.1	
	12 Chloromethane	50	1.883	1.883	0.000	99	460440	50.0	58.3	
	13 Vinyl chloride	62	1.981	1.981	0.000	98	351373	50.0	43.6	
	15 Bromomethane	94	2.260	2.260	0.000	92	207329	50.0	52.6	
	16 Chloroethane	64	2.344	2.358	-0.014	100	237930	50.0	50.0	
	17 Dichlorofluoromethane	67	2.526	2.526	0.000	97	545019	50.0	54.0	
	18 Trichlorofluoromethane	101	2.554	2.554	0.000	99	379324	50.0	43.0	
	71 2-Chloroethyl vinyl ether	63	5.933	5.947	-0.014	93	242320	50.0	49.2	

QC Flag Legend
Processing Flags

Reagents:
MV-Gas A_00150 Amount Added: 10.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

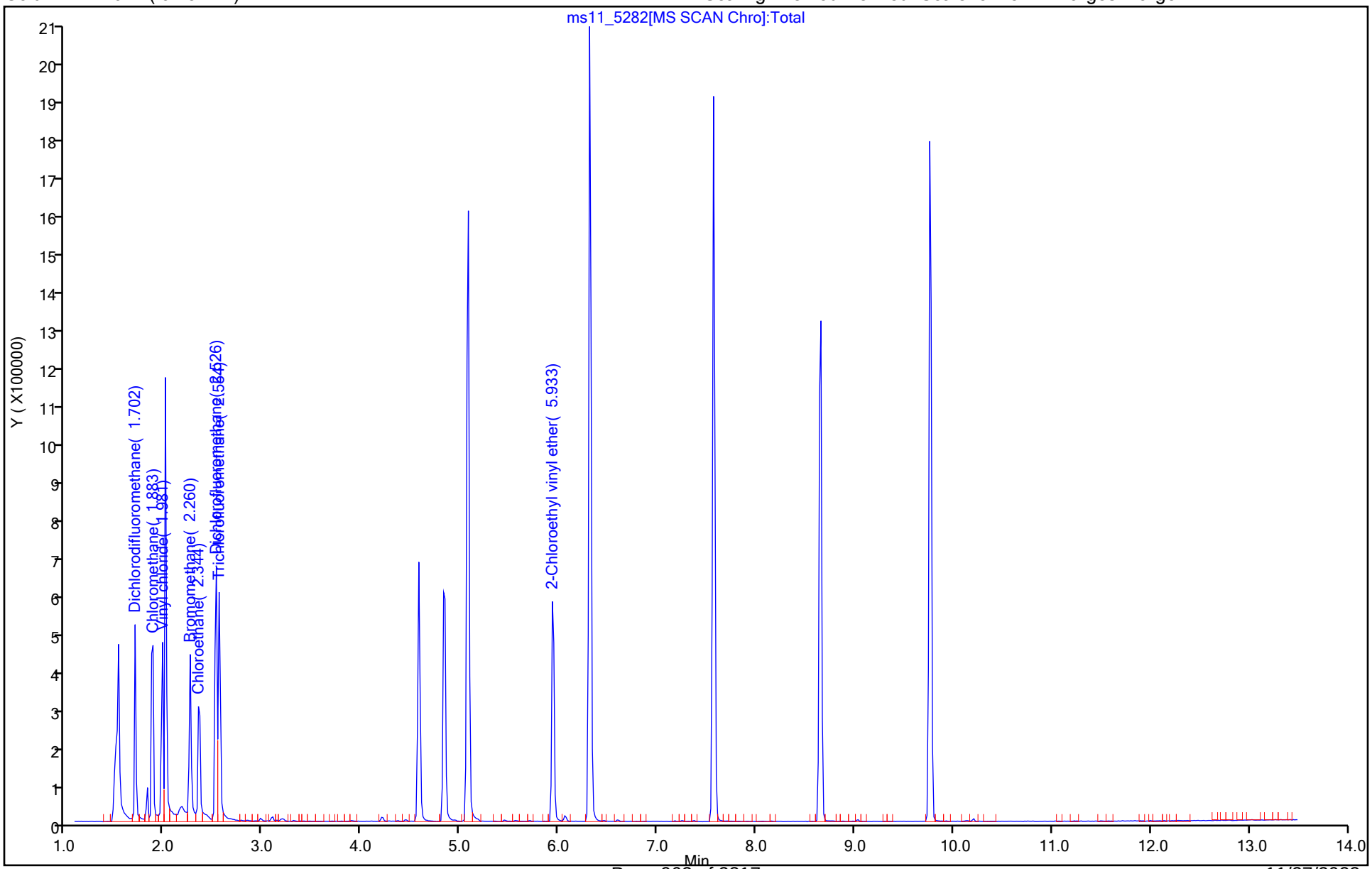
Report Date: 14-Apr-2023 17:21:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5282.D

Injection Date:	14-Apr-2023 13:57:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	ICV g			Worklist Smp#:	20
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609068/2 | Calibration Date: 04/18/2023 10:06

Instrument ID: VMS_MS11 | Calib Start Date: 04/13/2023 14:21

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/13/2023 17:13

Lab File ID: ms11_5427.D | Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2334	0.2200		23.6	25.0	-5.7	
Acrolein	Ave	0.0379	0.0382		249	247	0.8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1460	0.1412		24.2	25.0	-3.3	
1,1-Dichloroethene	Ave	0.2076	0.1965		23.7	25.0	-5.4	
Acetone	Lin2		0.0988		86.4	100	-13.6	
Iodomethane	Ave	0.2910	0.2330		20.0	25.0	-19.9	
Carbon disulfide	Ave	0.7129	0.6910		24.2	25.0	-3.1	
Methyl acetate	Lin2		0.2454		41.4	50.0	-17.2	
Allyl chloride	Lin2		0.3875		25.4	25.0	1.5	
Methylene Chloride	Ave	0.2488	0.2455		24.7	25.0	-1.3	
2-Methyl-2-propanol	Ave	0.0418	0.0328		196	250	-21.5	
Acrylonitrile	Ave	0.1315	0.1254		238	250	-4.6	
Methyl tert-butyl ether	Ave	0.8302	0.7887		23.7	25.0	-5.0	
trans-1,2-Dichloroethene	Ave	0.2415	0.2215		22.9	25.0	-8.3	
Hexane	Ave	1.178	1.060		22.5	25.0	-10.0	
Vinyl acetate	Ave	0.5971	0.5899		49.4	50.0	-1.2	
1,1-Dichloroethane	Ave	0.4618	0.4503		24.4	25.0	-2.5	
2-Butanone (MEK)	Lin2		0.1592		85.4	100	-14.6	
2,2-Dichloropropane	Ave	0.4187	0.3922		23.4	25.0	-6.3	
cis-1,2-Dichloroethene	Ave	0.2736	0.2584		23.6	25.0	-5.6	
sec-Butyl Alcohol	Ave	0.0347	0.0264		457	600	-23.9	
Chlorobromomethane	Ave	0.1221	0.1150		23.5	25.0	-5.8	
Tetrahydrofuran	Ave	0.1158	0.1010		43.6	50.0	-12.8	
Chloroform	Ave	0.4504	0.4391		24.4	25.0	-2.5	
1,1,1-Trichloroethane	Ave	0.3791	0.3644		24.0	25.0	-3.9	
Cyclohexane	Ave	0.4137	0.3727		22.5	25.0	-9.9	
1,1-Dichloropropene	Ave	0.3529	0.3348		23.7	25.0	-5.1	
Carbon tetrachloride	Ave	0.3237	0.2866		22.1	25.0	-11.5	
Isobutyl alcohol	Ave	0.0189	0.0150		497	625	-20.6	
Benzene	Ave	1.021	0.9736		23.8	25.0	-4.6	
1,2-Dichloroethane	Ave	0.4238	0.3694		21.8	25.0	-12.8	
n-Heptane	Lin1		0.2348		21.3	25.0	-14.8	
Trichloroethene	Ave	0.2463	0.2375		24.1	25.0	-3.6	
2-Pentanone	Ave	0.2962	0.2403		64.9	80.0	-18.9	
Methylcyclohexane	Ave	0.2874	0.2578		22.4	25.0	-10.3	
1,2-Dichloropropane	Ave	0.2882	0.2631		22.8	25.0	-8.7	
1,4-Dioxane	Ave	0.0053	0.0046		434	500	-13.3	
Dibromomethane	Ave	0.1772	0.1670		23.6	25.0	-5.8	
Dichlorobromomethane	Ave	0.3499	0.3303		23.6	25.0	-5.6	
cis-1,3-Dichloropropene	Ave	1.809	1.656		22.9	25.0	-8.4	

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609068/2 Calibration Date: 04/18/2023 10:06

Instrument ID: VMS_MS11 Calib Start Date: 04/13/2023 14:21

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/13/2023 17:13

Lab File ID: ms11_5427.D Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Methyl-2-pentanone (MIBK)	Ave	0.3478	0.3124		89.8	100	-10.2	
Toluene	Ave	1.038	0.9933		23.9	25.0	-4.3	
trans-1,3-Dichloropropene	Ave	0.4449	0.3957		22.2	25.0	-11.0	
Ethyl methacrylate	Ave	1.620	1.504		23.2	25.0	-7.2	
1,1,2-Trichloroethane	Ave	0.2401	0.2243		23.4	25.0	-6.6	
Tetrachloroethene	Ave	0.7598	0.7216		23.7	25.0	-5.0	
1,3-Dichloropropane	Ave	1.808	1.712		23.7	25.0	-5.3	
2-Hexanone	Ave	1.037	0.9066		87.5	100	-12.5	
Chlorodibromomethane	Ave	1.017	0.9376		23.0	25.0	-7.8	
1,2-Dibromoethane	Ave	1.033	0.9814		23.7	25.0	-5.0	
1-Chlorohexane	Lin2		1.245		19.2	20.0	-3.8	
Chlorobenzene	Ave	2.795	2.605		23.3	25.0	-6.8	
1,1,1,2-Tetrachloroethane	Ave	0.9858	0.8961		22.7	25.0	-9.1	
Ethylbenzene	Ave	1.461	1.385		23.7	25.0	-5.2	
m-Xylene & p-Xylene	Ave	3.752	3.593		23.9	25.0	-4.2	
o-Xylene	Ave	1.785	1.684		23.6	25.0	-5.7	
Styrene	Ave	3.051	2.893		23.7	25.0	-5.2	
Bromoform	Ave	0.7098	0.6234		22.0	25.0	-12.2	
Isopropylbenzene	Ave	2.721	2.554		23.5	25.0	-6.1	
Cyclohexanone	Ave	0.0693	0.0578		626	750	-16.6	
1,1,2,2-Tetrachloroethane	Ave	0.9349	0.8305		22.2	25.0	-11.2	
Bromobenzene	Ave	0.7110	0.6670		23.5	25.0	-6.2	
trans-1,4-Dichloro-2-butene	Ave	0.2710	0.2295		21.2	25.0	-15.3	
1,2,3-Trichloropropane	Ave	0.2906	0.2631		22.6	25.0	-9.4	
N-Propylbenzene	Ave	0.7281	0.6895		23.7	25.0	-5.3	
2-Chlorotoluene	Ave	0.6552	0.6062		23.1	25.0	-7.5	
1,3,5-Trimethylbenzene	Ave	2.296	2.162		23.5	25.0	-5.9	
4-Chlorotoluene	Ave	0.7029	0.6388		22.7	25.0	-9.1	
tert-Butylbenzene	Ave	2.027	1.742		21.5	25.0	-14.0	
1,2,4-Trimethylbenzene	Ave	2.441	2.249		23.0	25.0	-7.9	
sec-Butylbenzene	Ave	0.5230	0.5194		24.8	25.0	-0.7	
1,3-Dichlorobenzene	Ave	1.277	1.209		23.7	25.0	-5.3	
4-Isopropyltoluene	Ave	2.290	2.192		23.9	25.0	-4.3	
1,4-Dichlorobenzene	Ave	1.328	1.250		23.5	25.0	-5.9	
n-Butylbenzene	Ave	1.993	1.950		24.5	25.0	-2.2	
1,2-Dichlorobenzene	Ave	1.252	1.180		23.6	25.0	-5.8	
1,2-Dibromo-3-Chloropropane	Ave	0.2062	0.1724		20.9	25.0	-16.4	
1,2,4-Trichlorobenzene	Ave	0.8236	0.7471		22.7	25.0	-9.3	
Hexachlorobutadiene	Ave	0.3427	0.3154		23.0	25.0	-8.0	
Naphthalene	Ave	2.638	2.151		20.4	25.0	-18.5	
1,2,3-Trichlorobenzene	Ave	0.6948	0.6053		21.8	25.0	-12.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5427.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Apr-2023 10:06:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:13 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 10:37:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.068	5.068	0.000	98	1001556	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	88	245844	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	96	408616	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	265343	50.0	51.8	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	352073	50.0	52.3	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1001687	50.0	49.6	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	85	398542	50.0	51.1	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	107207	25.0	22.0	
12 Chloromethane	50	1.883	1.883	0.000	99	154874	25.0	24.1	
13 Vinyl chloride	62	1.981	1.981	0.000	98	148708	25.0	23.1	
15 Bromomethane	94	2.260	2.260	0.000	93	96278	25.0	30.0	
16 Chloroethane	64	2.344	2.344	0.000	99	102265	25.0	26.6	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	97	223164	25.0	27.4	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	174828	25.0	24.8	
20 Ethyl ether	59	2.763	2.763	0.000	91	110166	25.0	23.6	
22 Acrolein	56	2.875	2.875	0.000	99	188930	246.9	248.8	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.945	2.945	0.000	93	70694	25.0	24.2	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	96	98413	25.0	23.7	
24 Acetone	43	2.973	2.973	0.000	99	197973	100.0	86.4	
26 Iodomethane	142	3.070	3.070	0.000	99	116696	25.0	20.0	
28 Carbon disulfide	76	3.140	3.140	0.000	100	346043	25.0	24.2	
29 Methyl acetate	43	3.196	3.196	0.000	98	245788	50.0	41.4	
30 3-Chloro-1-propene	41	3.210	3.210	0.000	89	194053	25.0	25.4	
31 Methylene Chloride	84	3.308	3.308	0.000	96	122960	25.0	24.7	
32 2-Methyl-2-propanol	59	3.350	3.350	0.000	99	164410	250.0	196.4	
33 Acrylonitrile	53	3.461	3.461	0.000	98	628132	250.0	238.4	
34 Methyl tert-butyl ether	73	3.489	3.489	0.000	96	394968	25.0	23.7	
35 trans-1,2-Dichloroethene	96	3.503	3.503	0.000	95	110939	25.0	22.9	
36 Hexane	57	3.699	3.699	0.000	93	130332	25.0	22.5	
37 Vinyl acetate	43	3.797	3.797	0.000	98	590818	50.0	49.4	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	97	225479	25.0	24.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	318836	100.0	85.4	
45 2,2-Dichloropropane	77	4.230	4.230	0.000	89	196396	25.0	23.4	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	85	129385	25.0	23.6	
47 sec-Butyl Alcohol	45	4.299	4.299	0.000	99	317786	600.0	456.7	
49 Chlorobromomethane	128	4.397	4.397	0.000	97	57584	25.0	23.5	
50 Tetrahydrofuran	42	4.411	4.411	0.000	88	101172	50.0	43.6	
51 Chloroform	83	4.453	4.453	0.000	94	219889	25.0	24.4	
53 1,1,1-Trichloroethane	97	4.593	4.593	0.000	99	182495	25.0	24.0	
54 Cyclohexane	56	4.663	4.663	0.000	93	186649	25.0	22.5	
55 1,1-Dichloropropene	75	4.704	4.704	0.000	91	167661	25.0	23.7	
56 Carbon tetrachloride	117	4.718	4.718	0.000	81	143508	25.0	22.1	
52 Isobutyl alcohol	43	4.718	4.718	0.000	93	187599	625.0	496.5	
57 Benzene	78	4.858	4.858	0.000	98	487570	25.0	23.8	
58 1,2-Dichloroethane	62	4.886	4.886	0.000	97	185006	25.0	21.8	
60 n-Heptane	43	5.040	5.040	0.000	93	117592	25.0	21.3	
62 Trichloroethene	130	5.347	5.347	0.000	98	118952	25.0	24.1	
63 2-Pentanone	43	5.445	5.445	0.000	99	385020	80.0	64.9	
64 Methylcyclohexane	55	5.528	5.528	0.000	92	129084	25.0	22.4	
65 1,2-Dichloropropane	63	5.542	5.542	0.000	89	131742	25.0	22.8	
67 1,4-Dioxane	88	5.584	5.584	0.000	97	46134	500.0	433.6	
68 Dibromomethane	93	5.612	5.612	0.000	95	83640	25.0	23.6	
69 Dichlorobromomethane	83	5.738	5.738	0.000	99	165396	25.0	23.6	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	92	107686	25.0	27.4	
76 cis-1,3-Dichloropropene	75	6.073	6.073	0.000	93	203580	25.0	22.9	
74 4-Methyl-2-pentanone (MIBK)	43	6.171	6.171	0.000	99	625762	100.0	89.8	
75 Toluene	91	6.366	6.366	0.000	98	497407	25.0	23.9	
73 trans-1,3-Dichloropropene	75	6.534	6.534	0.000	99	198180	25.0	22.2	
77 Ethyl methacrylate	69	6.548	6.548	0.000	91	184871	25.0	23.2	
79 1,1,2-Trichloroethane	97	6.702	6.702	0.000	94	112302	25.0	23.4	
80 Tetrachloroethene	164	6.799	6.799	0.000	93	88705	25.0	23.7	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	210484	25.0	23.7	
82 2-Hexanone	43	6.869	6.869	0.000	96	445786	100.0	87.5	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	115252	25.0	23.0	
86 Ethylene Dibromide	107	7.163	7.163	0.000	98	120641	25.0	23.7	
88 1-Chlorohexane	91	7.540	7.540	0.000	97	122446	20.0	19.2	
89 Chlorobenzene	112	7.595	7.595	0.000	93	320272	25.0	23.3	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	44	110145	25.0	22.7	
91 Ethylbenzene	106	7.665	7.665	0.000	99	170226	25.0	23.7	
92 m-Xylene & p-Xylene	91	7.777	7.777	0.000	0	441684	25.0	23.9	
93 o-Xylene	106	8.140	8.140	0.000	97	206963	25.0	23.6	
94 Styrene	104	8.154	8.154	0.000	94	355658	25.0	23.7	
96 Bromoform	173	8.336	8.336	0.000	95	76631	25.0	22.0	
98 Isopropylbenzene	105	8.475	8.475	0.000	96	521798	25.0	23.5	
99 Cyclohexanone	55	8.573	8.573	0.000	94	213311	750.0	625.8	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	169680	25.0	22.2	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	63	46884	25.0	21.2	
101 Bromobenzene	156	8.797	8.797	0.000	98	136279	25.0	23.5	
103 1,2,3-Trichloropropane	110	8.825	8.825	0.000	87	53762	25.0	22.6	
104 N-Propylbenzene	120	8.866	8.866	0.000	99	140870	25.0	23.7	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	123854	25.0	23.1	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	94	441621	25.0	23.5	
107 4-Chlorotoluene	126	9.076	9.076	0.000	99	130513	25.0	22.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	355955	25.0	21.5	
109 1,2,4-Trimethylbenzene	105	9.397	9.397	0.000	99	459439	25.0	23.0	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	106113	25.0	24.8	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	98	246987	25.0	23.7	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	447847	25.0	23.9	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	93	255369	25.0	23.5	
115 n-Butylbenzene	91	10.109	10.109	0.000	98	398340	25.0	24.5	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	96	241091	25.0	23.6	
117 1,2-Dibromo-3-Chloropropane	157	10.905	10.905	0.000	82	35214	25.0	20.9	
119 1,2,4-Trichlorobenzene	180	11.729	11.729	0.000	94	152631	25.0	22.7	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	97	64441	25.0	23.0	
121 Naphthalene	128	11.981	11.981	0.000	98	439471	25.0	20.4	
122 1,2,3-Trichlorobenzene	180	12.204	12.204	0.000	95	123659	25.0	21.8	
S 142 Xylenes, Total	106				0		50.0	47.5	
S 143 1,2-Dichloroethene, Total	1				0		50.0	46.5	
S 145 1,3-Dichloropropene, Total	1				0		50.0	45.1	
S 147 Trihalomethanes, Total	1				0		100.0	93.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

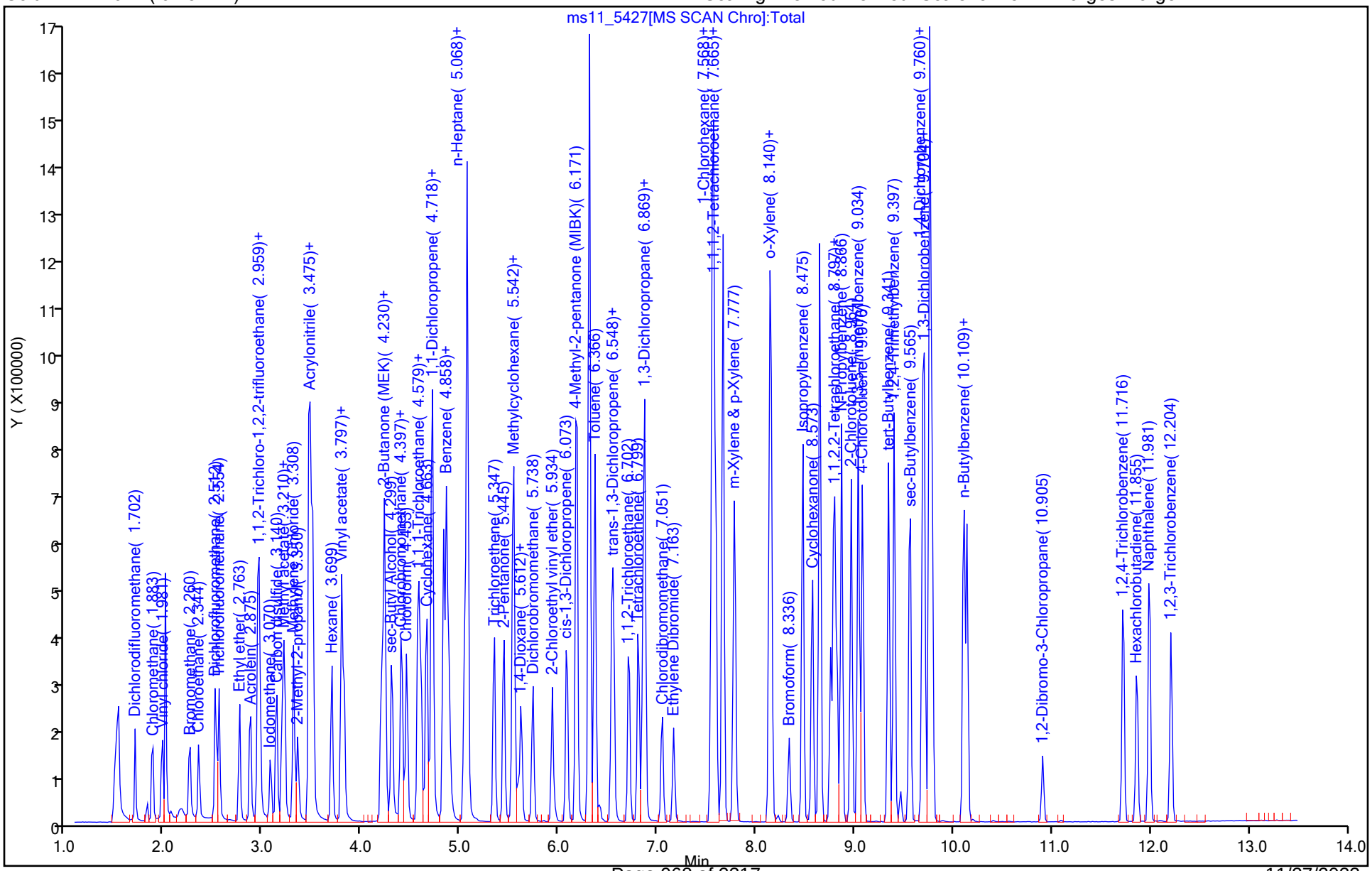
Report Date: 18-Apr-2023 15:38:14 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5427.D

Injection Date:	18-Apr-2023 10:06:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609068/2 Calibration Date: 04/18/2023 10:06

Instrument ID: VMS_MS11 Calib Start Date: 04/14/2023 10:45

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/14/2023 13:36

Lab File ID: ms11_5427.D Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2432	0.2141		22.0	25.0	-12.0	
Chloromethane	Lin1		0.3093		24.1	25.0	-3.8	
Vinyl chloride	Ave	0.3208	0.2970		23.1	25.0	-7.4	
Bromomethane	Lin1		0.1923		30.0	25.0	20.2	
Chloroethane	Lin1		0.2042		26.6	25.0	6.3	
Dichlorofluoromethane	Lin1		0.4456		27.4	25.0	9.7	
Trichlorofluoromethane	Ave	0.3516	0.3491		24.8	25.0	-0.7	
2-Chloroethyl vinyl ether	Ave	0.1962	0.2150		27.4	25.0	9.6	
Dibromofluoromethane (Surr)	Ave	0.2556	0.2649		51.8	50.0	3.6	
1,2-Dichloroethane-d4 (Surr)	Ave	0.3359	0.3515		52.3	50.0	4.6	
Toluene-d8 (Surr)	Ave	4.108	4.074		49.6	50.0	-0.8	
4-Bromofluorobenzene (Surr)	Ave	0.9539	0.9753		51.1	50.0	2.2	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5427.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Apr-2023 10:06:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:13 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 10:37:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.068	5.068	0.000	98	1001556	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	88	245844	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	96	408616	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	265343	50.0	51.8	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	352073	50.0	52.3	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1001687	50.0	49.6	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	85	398542	50.0	51.1	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	107207	25.0	22.0	
12 Chloromethane	50	1.883	1.883	0.000	99	154874	25.0	24.1	
13 Vinyl chloride	62	1.981	1.981	0.000	98	148708	25.0	23.1	
15 Bromomethane	94	2.260	2.260	0.000	93	96278	25.0	30.0	
16 Chloroethane	64	2.344	2.344	0.000	99	102265	25.0	26.6	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	97	223164	25.0	27.4	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	174828	25.0	24.8	
20 Ethyl ether	59	2.763	2.763	0.000	91	110166	25.0	23.6	
22 Acrolein	56	2.875	2.875	0.000	99	188930	246.9	248.8	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.945	2.945	0.000	93	70694	25.0	24.2	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	96	98413	25.0	23.7	
24 Acetone	43	2.973	2.973	0.000	99	197973	100.0	86.4	
26 Iodomethane	142	3.070	3.070	0.000	99	116696	25.0	20.0	
28 Carbon disulfide	76	3.140	3.140	0.000	100	346043	25.0	24.2	
29 Methyl acetate	43	3.196	3.196	0.000	98	245788	50.0	41.4	
30 3-Chloro-1-propene	41	3.210	3.210	0.000	89	194053	25.0	25.4	
31 Methylene Chloride	84	3.308	3.308	0.000	96	122960	25.0	24.7	
32 2-Methyl-2-propanol	59	3.350	3.350	0.000	99	164410	250.0	196.4	
33 Acrylonitrile	53	3.461	3.461	0.000	98	628132	250.0	238.4	
34 Methyl tert-butyl ether	73	3.489	3.489	0.000	96	394968	25.0	23.7	
35 trans-1,2-Dichloroethene	96	3.503	3.503	0.000	95	110939	25.0	22.9	
36 Hexane	57	3.699	3.699	0.000	93	130332	25.0	22.5	
37 Vinyl acetate	43	3.797	3.797	0.000	98	590818	50.0	49.4	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	97	225479	25.0	24.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	318836	100.0	85.4	
45 2,2-Dichloropropane	77	4.230	4.230	0.000	89	196396	25.0	23.4	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	85	129385	25.0	23.6	
47 sec-Butyl Alcohol	45	4.299	4.299	0.000	99	317786	600.0	456.7	
49 Chlorobromomethane	128	4.397	4.397	0.000	97	57584	25.0	23.5	
50 Tetrahydrofuran	42	4.411	4.411	0.000	88	101172	50.0	43.6	
51 Chloroform	83	4.453	4.453	0.000	94	219889	25.0	24.4	
53 1,1,1-Trichloroethane	97	4.593	4.593	0.000	99	182495	25.0	24.0	
54 Cyclohexane	56	4.663	4.663	0.000	93	186649	25.0	22.5	
55 1,1-Dichloropropene	75	4.704	4.704	0.000	91	167661	25.0	23.7	
56 Carbon tetrachloride	117	4.718	4.718	0.000	81	143508	25.0	22.1	
52 Isobutyl alcohol	43	4.718	4.718	0.000	93	187599	625.0	496.5	
57 Benzene	78	4.858	4.858	0.000	98	487570	25.0	23.8	
58 1,2-Dichloroethane	62	4.886	4.886	0.000	97	185006	25.0	21.8	
60 n-Heptane	43	5.040	5.040	0.000	93	117592	25.0	21.3	
62 Trichloroethene	130	5.347	5.347	0.000	98	118952	25.0	24.1	
63 2-Pentanone	43	5.445	5.445	0.000	99	385020	80.0	64.9	
64 Methylcyclohexane	55	5.528	5.528	0.000	92	129084	25.0	22.4	
65 1,2-Dichloropropane	63	5.542	5.542	0.000	89	131742	25.0	22.8	
67 1,4-Dioxane	88	5.584	5.584	0.000	97	46134	500.0	433.6	
68 Dibromomethane	93	5.612	5.612	0.000	95	83640	25.0	23.6	
69 Dichlorobromomethane	83	5.738	5.738	0.000	99	165396	25.0	23.6	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	92	107686	25.0	27.4	
76 cis-1,3-Dichloropropene	75	6.073	6.073	0.000	93	203580	25.0	22.9	
74 4-Methyl-2-pentanone (MIBK)	43	6.171	6.171	0.000	99	625762	100.0	89.8	
75 Toluene	91	6.366	6.366	0.000	98	497407	25.0	23.9	
73 trans-1,3-Dichloropropene	75	6.534	6.534	0.000	99	198180	25.0	22.2	
77 Ethyl methacrylate	69	6.548	6.548	0.000	91	184871	25.0	23.2	
79 1,1,2-Trichloroethane	97	6.702	6.702	0.000	94	112302	25.0	23.4	
80 Tetrachloroethene	164	6.799	6.799	0.000	93	88705	25.0	23.7	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	210484	25.0	23.7	
82 2-Hexanone	43	6.869	6.869	0.000	96	445786	100.0	87.5	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	115252	25.0	23.0	
86 Ethylene Dibromide	107	7.163	7.163	0.000	98	120641	25.0	23.7	
88 1-Chlorohexane	91	7.540	7.540	0.000	97	122446	20.0	19.2	
89 Chlorobenzene	112	7.595	7.595	0.000	93	320272	25.0	23.3	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	44	110145	25.0	22.7	
91 Ethylbenzene	106	7.665	7.665	0.000	99	170226	25.0	23.7	
92 m-Xylene & p-Xylene	91	7.777	7.777	0.000	0	441684	25.0	23.9	
93 o-Xylene	106	8.140	8.140	0.000	97	206963	25.0	23.6	
94 Styrene	104	8.154	8.154	0.000	94	355658	25.0	23.7	
96 Bromoform	173	8.336	8.336	0.000	95	76631	25.0	22.0	
98 Isopropylbenzene	105	8.475	8.475	0.000	96	521798	25.0	23.5	
99 Cyclohexanone	55	8.573	8.573	0.000	94	213311	750.0	625.8	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	169680	25.0	22.2	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	63	46884	25.0	21.2	
101 Bromobenzene	156	8.797	8.797	0.000	98	136279	25.0	23.5	
103 1,2,3-Trichloropropane	110	8.825	8.825	0.000	87	53762	25.0	22.6	
104 N-Propylbenzene	120	8.866	8.866	0.000	99	140870	25.0	23.7	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	123854	25.0	23.1	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	94	441621	25.0	23.5	
107 4-Chlorotoluene	126	9.076	9.076	0.000	99	130513	25.0	22.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	355955	25.0	21.5	
109 1,2,4-Trimethylbenzene	105	9.397	9.397	0.000	99	459439	25.0	23.0	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	106113	25.0	24.8	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	98	246987	25.0	23.7	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	447847	25.0	23.9	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	93	255369	25.0	23.5	
115 n-Butylbenzene	91	10.109	10.109	0.000	98	398340	25.0	24.5	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	96	241091	25.0	23.6	
117 1,2-Dibromo-3-Chloropropane	157	10.905	10.905	0.000	82	35214	25.0	20.9	
119 1,2,4-Trichlorobenzene	180	11.729	11.729	0.000	94	152631	25.0	22.7	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	97	64441	25.0	23.0	
121 Naphthalene	128	11.981	11.981	0.000	98	439471	25.0	20.4	
122 1,2,3-Trichlorobenzene	180	12.204	12.204	0.000	95	123659	25.0	21.8	
S 142 Xylenes, Total	106				0		50.0	47.5	
S 143 1,2-Dichloroethene, Total	1				0		50.0	46.5	
S 145 1,3-Dichloropropene, Total	1				0		50.0	45.1	
S 147 Trihalomethanes, Total	1				0		100.0	93.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

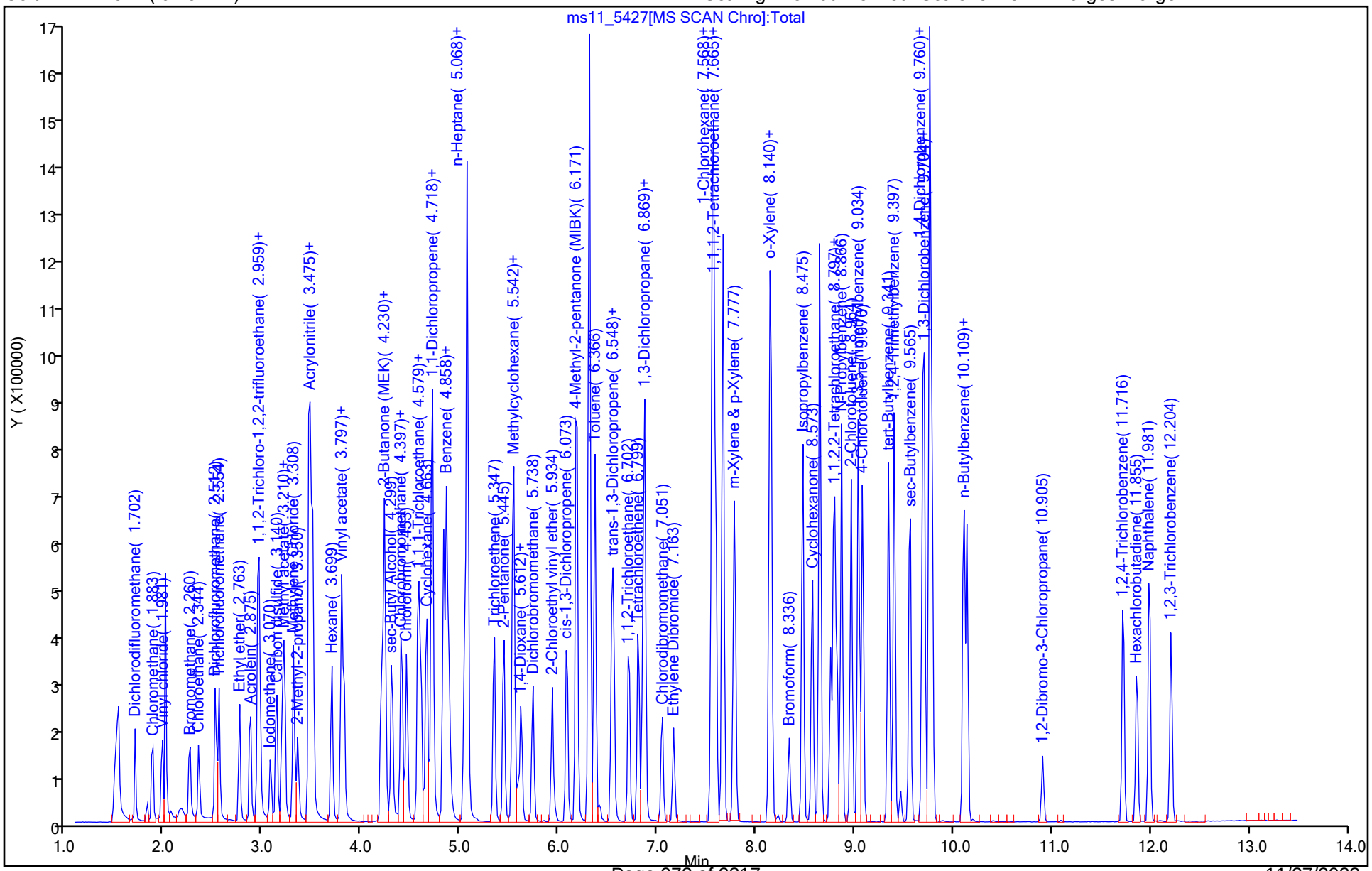
Report Date: 18-Apr-2023 15:38:14 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5427.D

Injection Date:	18-Apr-2023 10:06:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609068/3 Calibration Date: 04/18/2023 10:49

Instrument ID: VMS_MS11 Calib Start Date: 12/04/2022 19:26

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 12/04/2022 22:13

Lab File ID: ms11_5429.D Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0063	0.0061		1450	1500	-3.6	
Isopropyl alcohol	Ave	0.0313	0.0287		229	250	-8.5	
Acetonitrile	Ave	0.0597	0.0619		259	250	3.7	
Isopropyl ether	Ave	0.2130	0.2499		29.3	25.0	17.3	
Chloroprene	Ave	0.4160	0.4643		27.9	25.0	11.6	
Tert-butyl ethyl ether	Ave	0.8612	0.9822		28.5	25.0	14.0	
Ethyl acetate	Ave	0.3713	0.3928		52.9	50.0	5.8	
Propionitrile	Ave	0.0588	0.0629		267	250	7.0	
Methacrylonitrile	Ave	0.2128	0.2475		291	250	16.3	
Tert-amyl methyl ether	Ave	0.7938	0.9402		29.6	25.0	18.5	
n-Butanol	Ave	0.0137	0.0129		588	625	-5.9	
Methyl methacrylate	Ave	0.0850	0.0983		57.8	50.0	15.6	
2-Nitropropane	Ave	0.1067	0.0938		43.9	50.0	-12.1	
cis-1,4-Dichloro-2-butene	Ave	0.3036	0.2861		47.1	50.0	-5.8	
1,2,3-Trimethylbenzene	Ave	2.563	2.717		26.5	25.0	6.0	
1,3,5-Trichlorobenzene	Ave	0.8473	0.9613		28.4	25.0	13.5	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5429.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Apr-2023 10:49:30 ALS Bottle#: 4 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub31

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 11:35:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1035045	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	89	252313	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	409898	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	267209	50.0	50.5	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	352251	50.0	50.7	
$ 7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1028305	50.0	49.6	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	88	390763	50.0	50.0	
19 Ethanol	45	2.665	2.665	0.000	100	188112	1500.0	1446.6	
72 Isopropyl alcohol	45	3.056	3.056	0.000	98	148341	250.0	228.8	
27 Acetonitrile	41	3.182	3.182	0.000	99	320277	250.0	259.2	
38 Isopropyl ether	87	3.824	3.824	0.000	93	129313	25.0	29.3	
40 2-Chloro-1,3-butadiene	53	3.880	3.880	0.000	94	240264	25.0	27.9	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	98	508291	25.0	28.5	
43 Ethyl acetate	43	4.216	4.216	0.000	100	406569	50.0	52.9	
46 Propionitrile	54	4.257	4.257	0.000	98	325553	250.0	267.5	
48 Methacrylonitrile	41	4.369	4.369	0.000	93	1281065	250.0	290.8	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	90	486588	25.0	29.6	
61 n-Butanol	56	5.207	5.207	0.000	90	167019	625.0	588.0	
66 Methyl methacrylate	100	5.556	5.556	0.000	91	101728	50.0	57.8	
70 2-Nitropropane	41	5.905	5.905	0.000	99	97065	50.0	43.9	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	117263	50.0	47.1	
110 1,2,3-Trimethylbenzene	105	9.802	9.802	0.000	100	556786	25.0	26.5	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	197016	25.0	28.4	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00061	Amount Added: 25.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

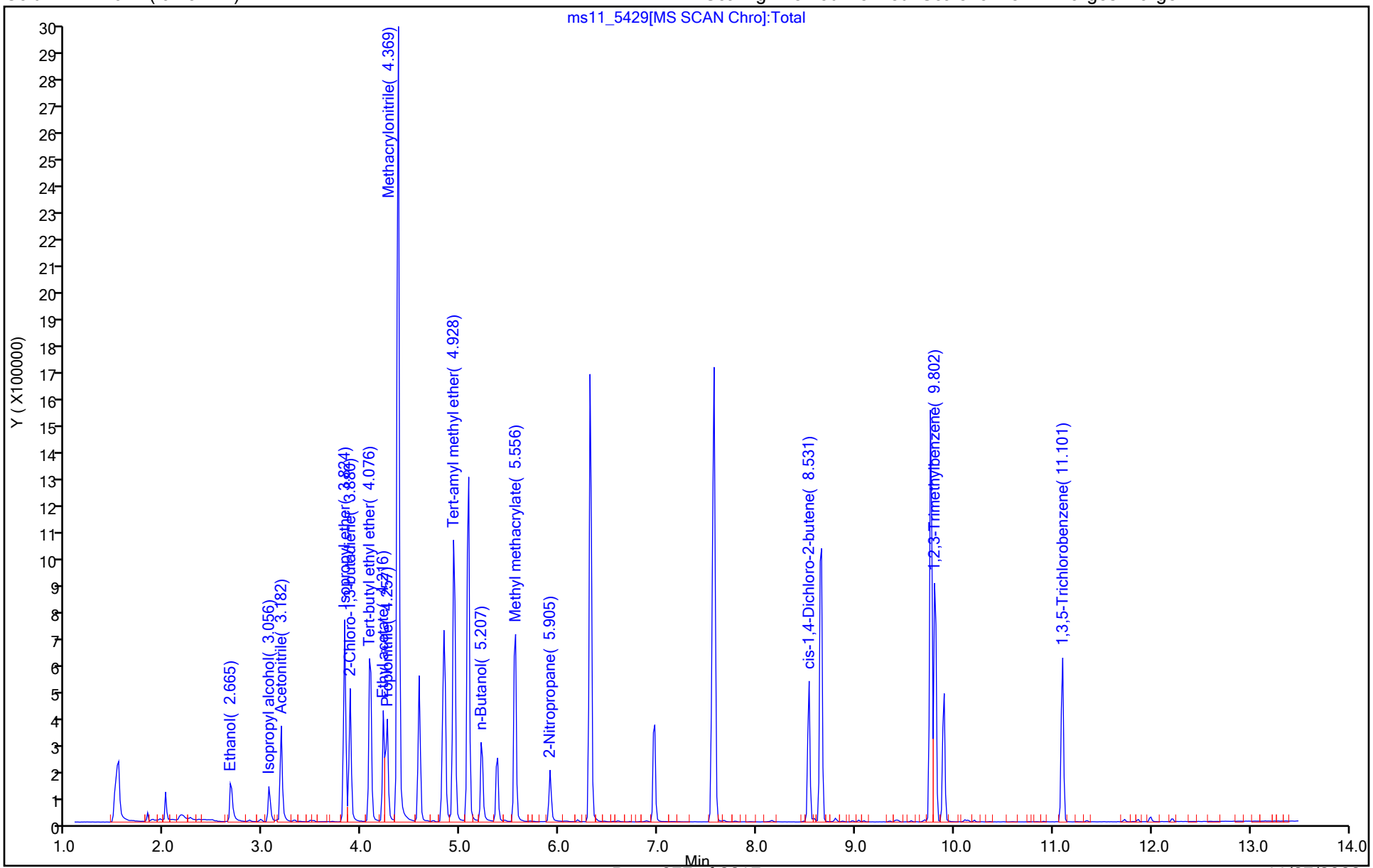
Report Date: 18-Apr-2023 15:38:18 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5429.D

Injection Date:	18-Apr-2023 10:49:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609068/3 Calibration Date: 04/18/2023 10:49

Instrument ID: VMS_MS11 Calib Start Date: 04/14/2023 10:45

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/14/2023 13:36

Lab File ID: ms11_5429.D Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2556	0.2582		50.5	50.0	1.0	
1,2-Dichloroethane-d4 (Surr)	Ave	0.3359	0.3403		50.7	50.0	1.3	
Toluene-d8 (Surr)	Ave	4.108	4.076		49.6	50.0	-0.8	
4-Bromofluorobenzene (Surr)	Ave	0.9539	0.9533		50.0	50.0	-0.0	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5429.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Apr-2023 10:49:30 ALS Bottle#: 4 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_MS11
Sublist: chrom-AQ_VMS11_8260*sub31

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 11:35:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1035045	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	89	252313	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	409898	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	267209	50.0	50.5	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	352251	50.0	50.7	
$ 7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1028305	50.0	49.6	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	88	390763	50.0	50.0	
19 Ethanol	45	2.665	2.665	0.000	100	188112	1500.0	1446.6	
72 Isopropyl alcohol	45	3.056	3.056	0.000	98	148341	250.0	228.8	
27 Acetonitrile	41	3.182	3.182	0.000	99	320277	250.0	259.2	
38 Isopropyl ether	87	3.824	3.824	0.000	93	129313	25.0	29.3	
40 2-Chloro-1,3-butadiene	53	3.880	3.880	0.000	94	240264	25.0	27.9	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	98	508291	25.0	28.5	
43 Ethyl acetate	43	4.216	4.216	0.000	100	406569	50.0	52.9	
46 Propionitrile	54	4.257	4.257	0.000	98	325553	250.0	267.5	
48 Methacrylonitrile	41	4.369	4.369	0.000	93	1281065	250.0	290.8	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	90	486588	25.0	29.6	
61 n-Butanol	56	5.207	5.207	0.000	90	167019	625.0	588.0	
66 Methyl methacrylate	100	5.556	5.556	0.000	91	101728	50.0	57.8	
70 2-Nitropropane	41	5.905	5.905	0.000	99	97065	50.0	43.9	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	117263	50.0	47.1	
110 1,2,3-Trimethylbenzene	105	9.802	9.802	0.000	100	556786	25.0	26.5	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	197016	25.0	28.4	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00061	Amount Added: 25.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

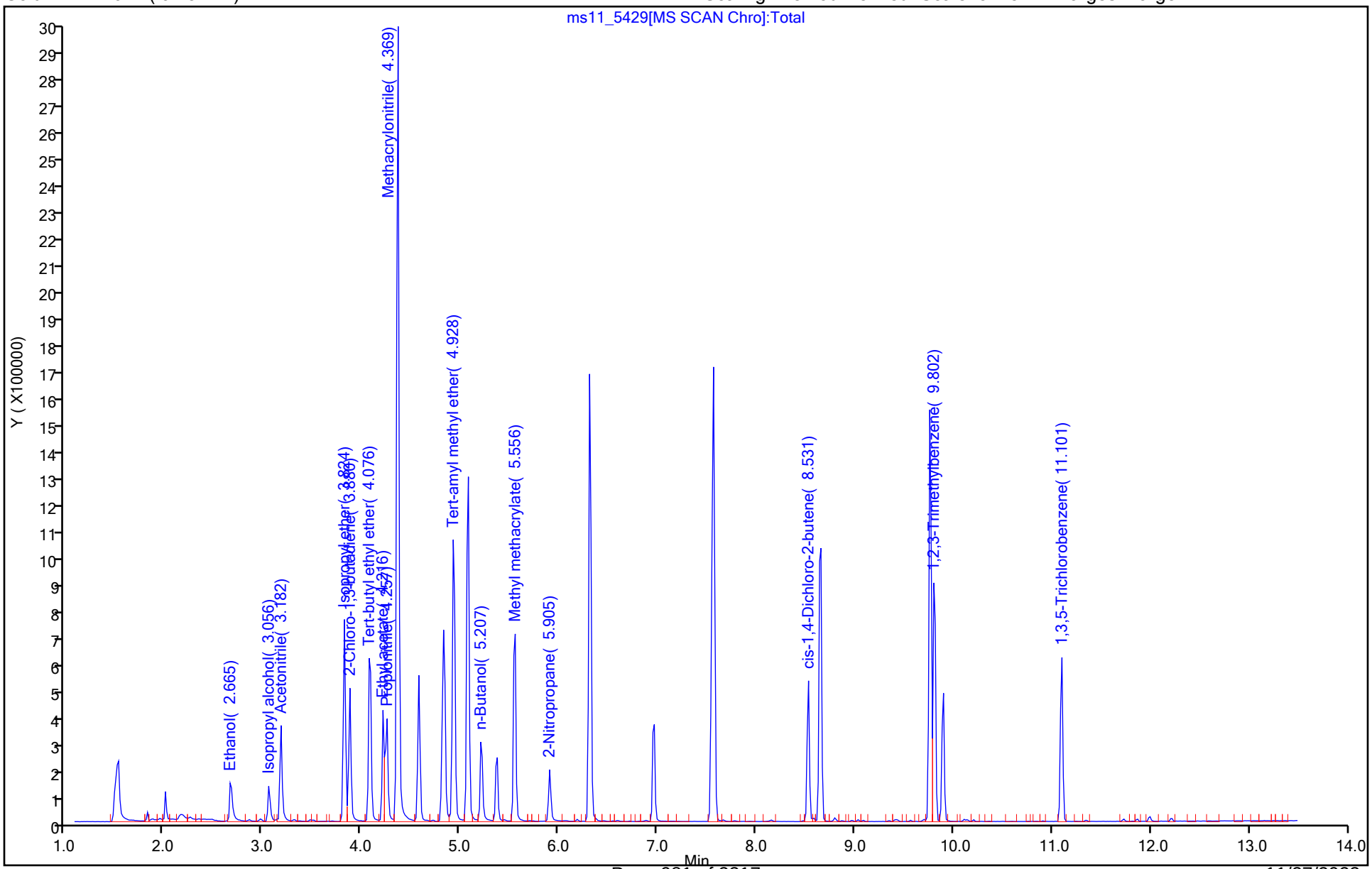
Report Date: 18-Apr-2023 15:38:18 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5429.D

Injection Date:	18-Apr-2023 10:49:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-608203/8 | Calibration Date: 04/11/2023 00:52

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502177.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.2375	0.1000	54.1	50.0	8.3	30.0
Chloromethane	Ave	0.2229	0.2221	0.1000	49.8	50.0	-0.4	30.0
Vinyl chloride	Lin1		0.2611	0.0100	57.5	50.0	15.0	30.0
Bromomethane	Ave	0.1211	0.1410	0.0100	58.2	50.0	16.4	30.0
Chloroethane	Ave	0.1519	0.1722	0.0100	56.7	50.0	13.3	30.0
Dichlorofluoromethane	Ave	0.3792	0.3949	0.0100	52.1	50.0	4.2	30.0
Trichlorofluoromethane	Ave	0.2925	0.3340	0.0100	57.1	50.0	14.2	30.0
Ethyl ether	Ave	0.1687	0.1643	0.0100	48.7	50.0	-2.6	30.0
Acrolein	Ave	0.0272	0.0254	0.0010	461	494	-6.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1554	0.0500	56.3	50.0	12.5	30.0
1,1-Dichloroethene	Ave	0.1921	0.2016	0.0600	52.5	50.0	4.9	30.0
Acetone	Lin2		0.0555	0.0100	202	200	0.8	30.0
Iodomethane	Lin1		0.2511	0.0100	47.4	50.0	-5.2	30.0
Carbon disulfide	Ave	0.6224	0.6163	0.1000	49.5	50.0	-1.0	30.0
Methyl acetate	Ave	0.1262	0.1266	0.0100	100	100	0.3	30.0
Allyl chloride	Ave	0.2551	0.2679	0.0100	52.5	50.0	5.0	30.0
Methylene Chloride	Ave	0.2466	0.2343	0.0100	47.5	50.0	-5.0	30.0
2-Methyl-2-propanol	Lin1		0.0175	0.0010	449	500	-10.2	30.0
Acrylonitrile	Ave	0.0717	0.0707	0.0100	493	500	-1.4	30.0
Methyl tert-butyl ether	Ave	0.6044	0.6254	0.1000	51.7	50.0	3.5	30.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2260	0.1000	53.0	50.0	6.0	30.0
Hexane	Ave	1.146	1.080	0.0100	47.1	50.0	-5.8	30.0
Vinyl acetate	Ave	0.3380	0.3735	0.0100	111	100	10.5	30.0
1,1-Dichloroethane	Ave	0.3890	0.4001	0.1000	51.4	50.0	2.8	30.0
2-Butanone (MEK)	Ave	0.0821	0.0835	0.0100	203	200	1.6	30.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2592	0.1000	50.7	50.0	1.5	30.0
2,2-Dichloropropane	Ave	0.2990	0.3173	0.0100	53.1	50.0	6.1	30.0
sec-Butyl Alcohol	Lin1		0.0130	0.0100	1060	1200	-11.6	30.0
Chlorobromomethane	Ave	0.1177	0.1223	0.0500	51.9	50.0	3.9	30.0
Tetrahydrofuran	Ave	0.0557	0.0530	0.0010	95.2	100	-4.8	30.0
Chloroform	Ave	0.3958	0.4101	0.2000	51.8	50.0	3.6	30.0
1,1,1-Trichloroethane	Ave	0.3206	0.3525	0.0500	55.0	50.0	9.9	30.0
Cyclohexane	Ave	0.3308	0.3483	0.0100	52.6	50.0	5.3	30.0
1,1-Dichloropropene	Ave	0.3142	0.3361	0.0100	53.5	50.0	7.0	30.0
Carbon tetrachloride	Ave	0.2595	0.2956	0.1000	56.9	50.0	13.9	30.0
Isobutyl alcohol	Lin1		0.0057	0.0010	1150	1250	-8.2	30.0
Benzene	Ave	0.9289	0.9492	0.2000	51.1	50.0	2.2	30.0
1,2-Dichloroethane	Ave	0.2944	0.3077	0.0700	52.3	50.0	4.5	30.0
n-Heptane	Ave	0.1928	0.1961		50.9	50.0	1.8	
Trichloroethene	Ave	0.9564	0.9925	0.2000	51.9	50.0	3.8	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-608203/8 Calibration Date: 04/11/2023 00:52

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502177.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1294	0.0010	156	160	-2.2	30.0
Methylcyclohexane	Ave	0.2422	0.2579	0.0500	53.2	50.0	6.5	30.0
1,2-Dichloropropane	Ave	0.2362	0.2402	0.1000	50.8	50.0	1.7	30.0
1,4-Dioxane	Ave	0.0030	0.0029	0.0010	982	1000	-1.8	30.0
Dibromomethane	Ave	0.1409	0.1469	0.0100	52.1	50.0	4.2	30.0
Dichlorobromomethane	Ave	0.2974	0.3127	0.2000	52.6	50.0	5.1	30.0
2-Chloroethyl vinyl ether	Lin1		0.1144	0.0100	76.0	50.0	52.1*	30.0
cis-1,3-Dichloropropene	Ave	1.523	1.541	0.2000	50.6	50.0	1.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1734	0.0300	219	200	9.7	30.0
Toluene	Ave	1.001	1.045	0.3000	52.2	50.0	4.5	30.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3367	0.2000	54.9	50.0	9.7	30.0
Ethyl methacrylate	Ave	1.092	1.109	0.0100	50.7	50.0	1.5	30.0
1,1,2-Trichloroethane	Ave	0.2000	0.2084	0.1000	52.1	50.0	4.2	30.0
Tetrachloroethene	Ave	0.7259	0.7668	0.1000	52.8	50.0	5.6	30.0
1,3-Dichloropropane	Ave	1.532	1.496	0.0100	48.8	50.0	-2.3	30.0
2-Hexanone	Ave	0.4789	0.4980	0.0100	208	200	4.0	30.0
Chlorodibromomethane	Ave	0.9243	0.9266	0.1000	50.1	50.0	0.2	30.0
1,2-Dibromoethane	Ave	0.8754	0.8924	0.1000	51.0	50.0	1.9	30.0
1-Chlorohexane	Ave	1.353	1.377	0.0100	40.7	40.0	1.8	30.0
Chlorobenzene	Ave	2.785	2.788	0.3000	50.0	50.0	0.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.9412	0.0100	52.6	50.0	5.1	30.0
Ethylbenzene	Ave	1.533	1.552	0.3000	50.6	50.0	1.2	30.0
m-Xylene & p-Xylene	Ave	1.838	1.885	0.1000	51.3	50.0	2.5	30.0
o-Xylene	Ave	1.865	1.840	0.2000	49.3	50.0	-1.3	30.0
Styrene	Ave	2.963	3.052	0.2000	51.5	50.0	3.0	30.0
Bromoform	Ave	0.5587	0.5565	0.1000	49.8	50.0	-0.4	30.0
Isopropylbenzene	Ave	2.838	2.984	0.3000	52.6	50.0	5.1	30.0
Cyclohexanone	Lin1		0.0419	0.0010	1480	1500	-1.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.7188	0.3000	50.2	50.0	0.4	30.0
Bromobenzene	Ave	0.7149	0.7091	0.0100	49.6	50.0	-0.8	30.0
trans-1,4-Dichloro-2-butene	Lin2		0.1898	0.0100	50.7	50.0	1.4	30.0
1,2,3-Trichloropropane	Ave	0.2173	0.2178	0.0100	50.1	50.0	0.2	30.0
N-Propylbenzene	Ave	0.7886	0.8463	0.0100	53.7	50.0	7.3	30.0
2-Chlorotoluene	Ave	0.6999	0.7331	0.0100	52.4	50.0	4.7	30.0
1,3,5-Trimethylbenzene	Ave	2.394	2.490	0.0100	52.0	50.0	4.0	30.0
4-Chlorotoluene	Ave	0.7282	0.7663	0.0100	52.6	50.0	5.2	30.0
tert-Butylbenzene	Ave	2.000	2.078	0.0100	51.9	50.0	3.9	30.0
1,2,4-Trimethylbenzene	Ave	2.476	2.571	0.3000	51.9	50.0	3.8	30.0
sec-Butylbenzene	Ave	0.5991	0.6151	0.0100	51.3	50.0	2.7	30.0
1,3-Dichlorobenzene	Ave	1.320	1.354	0.5000	51.3	50.0	2.6	30.0
4-Isopropyltoluene	Ave	2.471	2.618	0.0100	53.0	50.0	6.0	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-608203/8 Calibration Date: 04/11/2023 00:52

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502177.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.387	0.5000	49.5	50.0	-1.1	30.0
n-Butylbenzene	Ave	2.140	2.289	0.0100	53.5	50.0	7.0	30.0
1,2-Dichlorobenzene	Ave	1.271	1.286	0.5000	50.6	50.0	1.2	30.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1223	0.0100	42.4	50.0	-15.1	30.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.6514	0.2000	50.9	50.0	1.8	30.0
Hexachlorobutadiene	Ave	0.2332	0.2497	0.0100	53.5	50.0	7.1	30.0
Naphthalene	Ave	1.632	1.570	0.0100	48.1	50.0	-3.8	30.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.4865	0.3000	50.4	50.0	0.8	30.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2409	0.0100	50.1	50.0	0.2	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2532	0.0100	50.1	50.0	0.2	30.0
Toluene-d8 (Surr)	Ave	4.259	4.114	0.0100	48.3	50.0	-3.4	30.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.8864	0.0100	49.6	50.0	-0.8	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502177.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 11-Apr-2023 00:52:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: COULTERD Instrument ID: VMS_X4
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 07:35:16 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: BX8N Date: 11-Apr-2023 07:35:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1472574	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	356963	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	549141	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	354816	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	372903	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1468680	50.0	48.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	486743	50.0	49.6	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	100	349805	50.0	54.1	
11 Chloromethane	50	1.867	1.867	0.000	99	327043	50.0	49.8	
12 Vinyl chloride	62	1.967	1.967	0.000	98	384458	50.0	57.5	
14 Bromomethane	94	2.246	2.246	0.000	91	207640	50.0	58.2	
15 Chloroethane	64	2.339	2.339	0.000	99	253510	50.0	56.7	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	581591	50.0	52.1	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	491826	50.0	57.1	
19 Ethyl ether	59	2.747	2.747	0.000	87	241978	50.0	48.7	
21 Acrolein	56	2.854	2.854	0.000	99	369503	493.8	461.1	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	96	228889	50.0	56.3	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	296821	50.0	52.5	
24 Acetone	43	2.954	2.954	0.000	100	326659	200.0	201.5	
26 Iodomethane	142	3.061	3.061	0.000	99	369742	50.0	47.4	
27 Carbon disulfide	76	3.118	3.119	0.000	99	907562	50.0	49.5	
29 Methyl acetate	43	3.176	3.176	0.000	96	372821	100.0	100.3	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	84	394556	50.0	52.5	
31 Methylene Chloride	84	3.297	3.297	0.000	88	344980	50.0	47.5	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	258260	500.0	448.8	
33 Acrylonitrile	53	3.455	3.455	0.000	97	1040968	500.0	493.2	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	920911	50.0	51.7	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	332829	50.0	53.0	
37 Hexane	57	3.683	3.683	0.000	89	385479	50.0	47.1	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1100062	100.0	110.5	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	589139	50.0	51.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	491662	200.0	203.2	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	81	381622	50.0	50.7	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	467208	50.0	53.1	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	458399	1200.0	1061.0	
52 Chlorobromomethane	128	4.384	4.391	-0.007	91	180047	50.0	51.9	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	156118	100.0	95.2	
54 Chloroform	83	4.448	4.448	0.000	93	603959	50.0	51.8	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	519048	50.0	55.0	
56 Cyclohexane	56	4.649	4.649	0.000	87	512833	50.0	52.6	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	494884	50.0	53.5	
60 Isobutyl alcohol	41	4.706	4.706	0.000	87	210637	1250.0	1148.0	
59 Carbon tetrachloride	117	4.706	4.706	0.000	93	435260	50.0	56.9	
62 Benzene	78	4.849	4.849	0.000	96	1397730	50.0	51.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	453127	50.0	52.3	
65 n-Heptane	43	5.035	5.035	0.000	87	288841	50.0	50.9	
67 Trichloroethene	95	5.335	5.335	0.000	98	354303	50.0	51.9	
68 2-Pentanone	43	5.435	5.435	0.000	97	609936	160.0	156.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	379764	50.0	53.2	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	95	353755	50.0	50.8	
72 1,4-Dioxane	88	5.578	5.578	0.000	89	86501	1000.0	982.3	
73 Dibromomethane	93	5.607	5.614	-0.007	94	216268	50.0	52.1	
74 Dichlorobromomethane	83	5.735	5.735	0.000	100	460419	50.0	52.6	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	91	168486	50.0	76.0	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	550239	50.0	50.6	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	1021236	200.0	219.3	
79 Toluene	91	6.365	6.365	0.000	98	1539573	50.0	52.2	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	495828	50.0	54.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	395737	50.0	50.7	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	306947	50.0	52.1	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	273720	50.0	52.8	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	534171	50.0	48.8	
85 2-Hexanone	43	6.880	6.880	0.000	97	711085	200.0	208.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	330746	50.0	50.1	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	318564	50.0	51.0	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	393346	40.0	40.7	
90 Chlorobenzene	112	7.602	7.602	0.000	96	995087	50.0	50.0	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	94	335958	50.0	52.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	554111	50.0	50.6	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	672846	50.0	51.3	
94 o-Xylene	106	8.152	8.152	0.000	96	656959	50.0	49.3	
95 Styrene	104	8.167	8.167	0.000	94	1089528	50.0	51.5	
96 Bromoform	173	8.352	8.352	0.000	94	198643	50.0	49.8	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	1638770	50.0	52.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	448738	1500.0	1477.1	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	394709	50.0	50.2	
101 Bromobenzene	156	8.810	8.810	0.000	96	389410	50.0	49.6	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	74	104235	50.0	50.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	119578	50.0	50.1	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	464747	50.0	53.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	402556	50.0	52.4	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	1367329	50.0	52.0	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	420792	50.0	52.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1140927	50.0	51.9	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	1411577	50.0	51.9	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	337760	50.0	51.3	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	743380	50.0	51.3	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1437685	50.0	53.0	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	761683	50.0	49.5	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	1257063	50.0	53.5	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	706003	50.0	50.6	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	84	67177	50.0	42.4	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	357702	50.0	50.9	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	137140	50.0	53.5	
122 Naphthalene	128	12.035	12.035	0.000	97	862181	50.0	48.1	
123 1,2,3-Trichlorobenzene	180	12.256	12.257	0.000	95	267144	50.0	50.4	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	103.7	
S 139 Xylenes, Total (URS)	1				0		100.0	100.6	
S 136 1,3-Dichloropropene, Total	1				0		100.0	105.5	
S 138 Xylenes, Total	106				0		100.0	100.6	
S 140 Trihalomethanes, Total	1				0		200.0	204.3	
S 141 1,2-Dichloroethene, Total	1				0		100.0	103.7	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas B_00131	Amount Added: 10.00	Units: uL	
MV-MegaMain B_00082	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

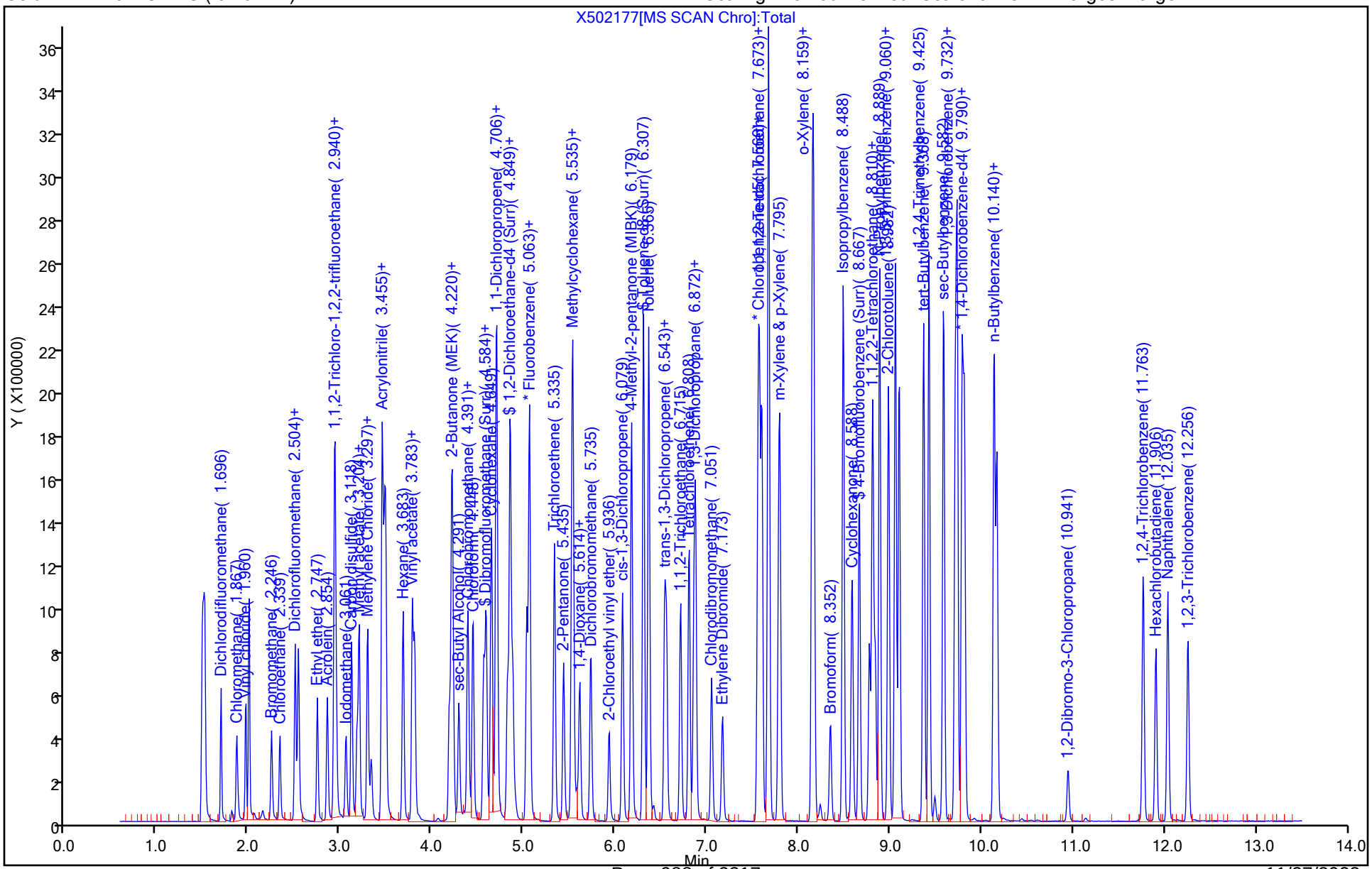
Report Date: 11-Apr-2023 07:36:07 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502177.D

Injection Date:	11-Apr-2023 00:52:30	Instrument ID:	VMS_X4	Operator ID:	COULTERD
Lims ID:	ICV			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609932/2 Calibration Date: 04/24/2023 18:48

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502750.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.2597	0.1000	59.2	50.0	18.4	20.0
Chloromethane	Ave	0.2229	0.2392	0.1000	53.7	50.0	7.3	20.0
Vinyl chloride	Lin1		0.3093	0.0100	68.1	50.0	36.2*	20.0
Bromomethane	Ave	0.1211	0.0990	0.0100	40.8	50.0	-18.3	20.0
Chloroethane	Ave	0.1519	0.1943	0.0100	64.0	50.0	27.9*	20.0
Dichlorofluoromethane	Ave	0.3792	0.4269	0.0100	56.3	50.0	12.6	20.0
Trichlorofluoromethane	Ave	0.2925	0.3577	0.0100	61.1	50.0	22.3*	20.0
Ethyl ether	Ave	0.1687	0.1807	0.0100	53.6	50.0	7.1	20.0
Acrolein	Ave	0.0272	0.0249	0.0010	452	494	-8.4	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1575	0.0500	57.0	50.0	14.0	20.0
1,1-Dichloroethene	Ave	0.1921	0.1988	0.0600	51.7	50.0	3.5	20.0
Acetone	Lin2		0.0526	0.0100	191	200	-4.7	20.0
Iodomethane	Lin1		0.2360	0.0100	44.6	50.0	-10.7	20.0
Carbon disulfide	Ave	0.6224	0.6654	0.1000	53.5	50.0	6.9	20.0
Methyl acetate	Ave	0.1262	0.1372	0.0100	109	100	8.7	20.0
Allyl chloride	Ave	0.2551	0.3203	0.0100	62.8	50.0	25.6*	20.0
Methylene Chloride	Ave	0.2466	0.2368	0.0100	48.0	50.0	-4.0	20.0
2-Methyl-2-propanol	Lin1		0.0169	0.0010	432	500	-13.6	20.0
Acrylonitrile	Ave	0.0717	0.0780	0.0100	544	500	8.8	20.0
Methyl tert-butyl ether	Ave	0.6044	0.6114	0.1000	50.6	50.0	1.2	20.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2309	0.1000	54.1	50.0	8.2	20.0
Hexane	Ave	1.146	1.318	0.0100	57.5	50.0	15.0	20.0
Vinyl acetate	Ave	0.3380	0.4051	0.0100	120	100	19.9	20.0
1,1-Dichloroethane	Ave	0.3890	0.4236	0.1000	54.5	50.0	8.9	20.0
2-Butanone (MEK)	Ave	0.0821	0.0874	0.0100	213	200	6.4	20.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2607	0.1000	51.0	50.0	2.0	20.0
2,2-Dichloropropane	Ave	0.2990	0.3264	0.0100	54.6	50.0	9.1	20.0
sec-Butyl Alcohol	Lin1		0.0138	0.0100	1130	1200	-6.0	20.0
Chlorobromomethane	Ave	0.1177	0.1184	0.0500	50.3	50.0	0.6	20.0
Tetrahydrofuran	Ave	0.0557	0.0593	0.0010	107	100	6.5	20.0
Chloroform	Ave	0.3958	0.3970	0.2000	50.1	50.0	0.3	20.0
1,1,1-Trichloroethane	Ave	0.3206	0.3296	0.0500	51.4	50.0	2.8	20.0
Cyclohexane	Ave	0.3308	0.4058	0.0100	61.3	50.0	22.7*	20.0
1,1-Dichloropropene	Ave	0.3142	0.3302	0.0100	52.5	50.0	5.1	20.0
Carbon tetrachloride	Ave	0.2595	0.2782	0.1000	53.6	50.0	7.2	20.0
Isobutyl alcohol	Lin1		0.0056	0.0010	1130	1250	-9.3	20.0
Benzene	Ave	0.9289	0.9867	0.2000	53.1	50.0	6.2	20.0
1,2-Dichloroethane	Ave	0.2944	0.2874	0.0700	48.8	50.0	-2.4	20.0
n-Heptane	Ave	0.1928	0.2426		62.9	50.0	25.8	
Trichloroethene	Ave	0.9564	0.9843	0.2000	51.5	50.0	2.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609932/2 Calibration Date: 04/24/2023 18:48

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502750.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1357	0.0010	164	160	2.5	20.0
Methylcyclohexane	Ave	0.2422	0.2900	0.0500	59.9	50.0	19.7	20.0
1,2-Dichloropropane	Ave	0.2362	0.2554	0.1000	54.1	50.0	8.1	20.0
1,4-Dioxane	Ave	0.0030	0.0029	0.0010	954	1000	-4.6	20.0
Dibromomethane	Ave	0.1409	0.1352	0.0100	48.0	50.0	-4.0	20.0
Dichlorobromomethane	Ave	0.2974	0.2971	0.2000	50.0	50.0	-0.0	20.0
2-Chloroethyl vinyl ether	Lin1		0.1478	0.0100	98.5	50.0	97.0*	20.0
cis-1,3-Dichloropropene	Ave	1.523	1.595	0.2000	52.4	50.0	4.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1775	0.0300	225	200	12.3	20.0
Toluene	Ave	1.001	1.043	0.3000	52.1	50.0	4.3	20.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3313	0.2000	54.0	50.0	8.0	20.0
Ethyl methacrylate	Ave	1.092	1.127	0.0100	51.6	50.0	3.2	20.0
1,1,2-Trichloroethane	Ave	0.2000	0.2006	0.1000	50.1	50.0	0.3	20.0
Tetrachloroethene	Ave	0.7259	0.7840	0.1000	54.0	50.0	8.0	20.0
1,3-Dichloropropane	Ave	1.532	1.517	0.0100	49.5	50.0	-1.0	20.0
2-Hexanone	Ave	0.4789	0.5026	0.0100	210	200	4.9	20.0
Chlorodibromomethane	Ave	0.9243	0.8767	0.1000	47.4	50.0	-5.1	20.0
1,2-Dibromoethane	Ave	0.8754	0.8351	0.1000	47.7	50.0	-4.6	20.0
1-Chlorohexane	Ave	1.353	1.379	0.0100	40.8	40.0	1.9	20.0
Chlorobenzene	Ave	2.785	2.724	0.3000	48.9	50.0	-2.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.8770	0.0100	49.0	50.0	-2.1	20.0
Ethylbenzene	Ave	1.533	1.483	0.3000	48.4	50.0	-3.3	20.0
m-Xylene & p-Xylene	Ave	1.838	1.869	0.1000	50.8	50.0	1.7	20.0
o-Xylene	Ave	1.865	1.839	0.2000	49.3	50.0	-1.4	20.0
Styrene	Ave	2.963	3.022	0.2000	51.0	50.0	2.0	20.0
Bromoform	Ave	0.5587	0.5326	0.1000	47.7	50.0	-4.7	20.0
Isopropylbenzene	Ave	2.838	2.817	0.3000	49.6	50.0	-0.8	20.0
Cyclohexanone	Lin1		0.0376	0.0010	1320	1500	-11.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.6462	0.3000	45.1	50.0	-9.8	20.0
Bromobenzene	Ave	0.7149	0.6834	0.0100	47.8	50.0	-4.4	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1594	0.0100	42.6	50.0	-14.7	20.0
1,2,3-Trichloropropane	Ave	0.2173	0.1880	0.0100	43.3	50.0	-13.5	20.0
N-Propylbenzene	Ave	0.7886	0.8035	0.0100	50.9	50.0	1.9	20.0
2-Chlorotoluene	Ave	0.6999	0.6836	0.0100	48.8	50.0	-2.3	20.0
1,3,5-Trimethylbenzene	Ave	2.394	2.346	0.0100	49.0	50.0	-2.0	20.0
4-Chlorotoluene	Ave	0.7282	0.7074	0.0100	48.6	50.0	-2.9	20.0
tert-Butylbenzene	Ave	2.000	1.970	0.0100	49.2	50.0	-1.5	20.0
1,2,4-Trimethylbenzene	Ave	2.476	2.471	0.3000	49.9	50.0	-0.2	20.0
sec-Butylbenzene	Ave	0.5991	0.5963	0.0100	49.8	50.0	-0.5	20.0
1,3-Dichlorobenzene	Ave	1.320	1.265	0.5000	47.9	50.0	-4.2	20.0
4-Isopropyltoluene	Ave	2.471	2.467	0.0100	49.9	50.0	-0.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609932/2 Calibration Date: 04/24/2023 18:48

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502750.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.284	0.5000	45.8	50.0	-8.4	20.0
n-Butylbenzene	Ave	2.140	2.197	0.0100	51.3	50.0	2.7	20.0
1,2-Dichlorobenzene	Ave	1.271	1.188	0.5000	46.8	50.0	-6.5	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1131	0.0100	39.3	50.0	-21.5*	20.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.6353	0.2000	49.7	50.0	-0.7	20.0
Hexachlorobutadiene	Ave	0.2332	0.2502	0.0100	53.7	50.0	7.3	20.0
Naphthalene	Ave	1.632	1.427	0.0100	43.7	50.0	-12.6	20.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.4487	0.3000	46.5	50.0	-7.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2480	0.0100	51.5	50.0	3.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2535	0.0100	50.2	50.0	0.3	20.0
Toluene-d8 (Surr)	Ave	4.259	4.274	0.0100	50.2	50.0	0.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.8843	0.0100	49.5	50.0	-1.0	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502750.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Apr-2023 18:48:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1463413	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	353452	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	560008	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	362866	50.0	51.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	370928	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1510607	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	495188	50.0	49.5	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	380047	50.0	59.2	
11 Chloromethane	50	1.867	1.867	0.000	99	350094	50.0	53.7	
12 Vinyl chloride	62	1.967	1.967	0.000	98	452648	50.0	68.1	
14 Bromomethane	94	2.246	2.246	0.000	90	144822	50.0	40.8	
15 Chloroethane	64	2.339	2.339	0.000	99	284414	50.0	64.0	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	624742	50.0	56.3	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	523413	50.0	61.1	
19 Ethyl ether	59	2.747	2.747	0.000	89	264482	50.0	53.6	
21 Acrolein	56	2.854	2.854	0.000	99	360363	493.8	452.5	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	230452	50.0	57.0	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	290890	50.0	51.7	
24 Acetone	43	2.954	2.954	0.000	100	307619	200.0	190.7	
26 Iodomethane	142	3.054	3.054	0.000	98	345371	50.0	44.6	
27 Carbon disulfide	76	3.118	3.118	0.000	98	973811	50.0	53.5	
29 Methyl acetate	43	3.176	3.176	0.000	97	401488	100.0	108.7	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	468668	50.0	62.8	
31 Methylene Chloride	84	3.297	3.297	0.000	91	346526	50.0	48.0	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	246817	500.0	431.8	
33 Acrylonitrile	53	3.455	3.455	0.000	99	1141505	500.0	544.2	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	894663	50.0	50.6	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	337851	50.0	54.1	
37 Hexane	57	3.683	3.683	0.000	89	465931	50.0	57.5	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1185731	100.0	119.9	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	619971	50.0	54.5	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	511833	200.0	212.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	381447	50.0	51.0	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	86	477624	50.0	54.6	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	484520	1200.0	1127.9	
52 Chlorobromomethane	128	4.384	4.384	0.000	97	173322	50.0	50.3	
53 Tetrahydrofuran	42	4.391	4.391	0.000	88	173592	100.0	106.5	
54 Chloroform	83	4.441	4.441	0.000	93	580982	50.0	50.1	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	99	482377	50.0	51.4	
56 Cyclohexane	56	4.649	4.649	0.000	88	593915	50.0	61.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	99	483232	50.0	52.5	
60 Isobutyl alcohol	41	4.706	4.706	0.000	92	206694	1250.0	1133.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	407141	50.0	53.6	
62 Benzene	78	4.849	4.849	0.000	95	1443961	50.0	53.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	420549	50.0	48.8	
65 n-Heptane	43	5.028	5.028	0.000	91	354968	50.0	62.9	
67 Trichloroethene	95	5.335	5.335	0.000	99	347916	50.0	51.5	
68 2-Pentanone	43	5.435	5.435	0.000	99	635523	160.0	164.0	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	424346	50.0	59.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	98	373818	50.0	54.1	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	83485	1000.0	953.9	
73 Dibromomethane	93	5.607	5.607	0.000	97	197897	50.0	48.0	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	434831	50.0	50.0	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	216347	50.0	98.5	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	97	563882	50.0	52.4	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1039137	200.0	224.6	
79 Toluene	91	6.365	6.365	0.000	98	1526884	50.0	52.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	91	484824	50.0	54.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	398472	50.0	51.6	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	293530	50.0	50.1	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	277102	50.0	54.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	536227	50.0	49.5	
85 2-Hexanone	43	6.872	6.872	0.000	95	710512	200.0	209.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	91	309879	50.0	47.4	
88 Ethylene Dibromide	107	7.166	7.166	0.000	98	295159	50.0	47.7	
89 1-Chlorohexane	91	7.552	7.552	0.000	96	390042	40.0	40.8	
90 Chlorobenzene	112	7.595	7.595	0.000	95	962841	50.0	48.9	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.666	0.000	96	309971	50.0	49.0	
92 Ethylbenzene	106	7.673	7.673	0.000	98	524068	50.0	48.4	
93 m-Xylene & p-Xylene	106	7.788	7.788	0.000	0	660648	50.0	50.8	
94 o-Xylene	106	8.152	8.152	0.000	95	649886	50.0	49.3	
95 Styrene	104	8.167	8.167	0.000	95	1067989	50.0	51.0	
96 Bromoform	173	8.345	8.345	0.000	96	188235	50.0	47.7	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1577400	50.0	49.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	398165	1500.0	1324.3	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	361902	50.0	45.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	382712	50.0	47.8	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	80	89277	50.0	42.6	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	83	105306	50.0	43.3	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	449972	50.0	50.9	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	382812	50.0	48.8	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1313988	50.0	49.0	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	396139	50.0	48.6	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1103049	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1383726	50.0	49.9	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	333933	50.0	49.8	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	708319	50.0	47.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1381584	50.0	49.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	719234	50.0	45.8	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1230613	50.0	51.3	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	665529	50.0	46.8	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	88	63330	50.0	39.3	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	355759	50.0	49.7	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	140126	50.0	53.7	
122 Naphthalene	128	12.035	12.035	0.000	97	799006	50.0	43.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	251296	50.0	46.5	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	105.1	
S 139 Xylenes, Total (URS)	1				0		100.0	100.1	
S 136 1,3-Dichloropropene, Total	1				0		100.0	106.3	
S 138 Xylenes, Total	106				0		100.0	100.1	
S 140 Trihalomethanes, Total	1				0		200.0	195.2	
S 141 1,2-Dichloroethene, Total	1				0		100.0	105.1	

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00132	Amount Added: 10.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

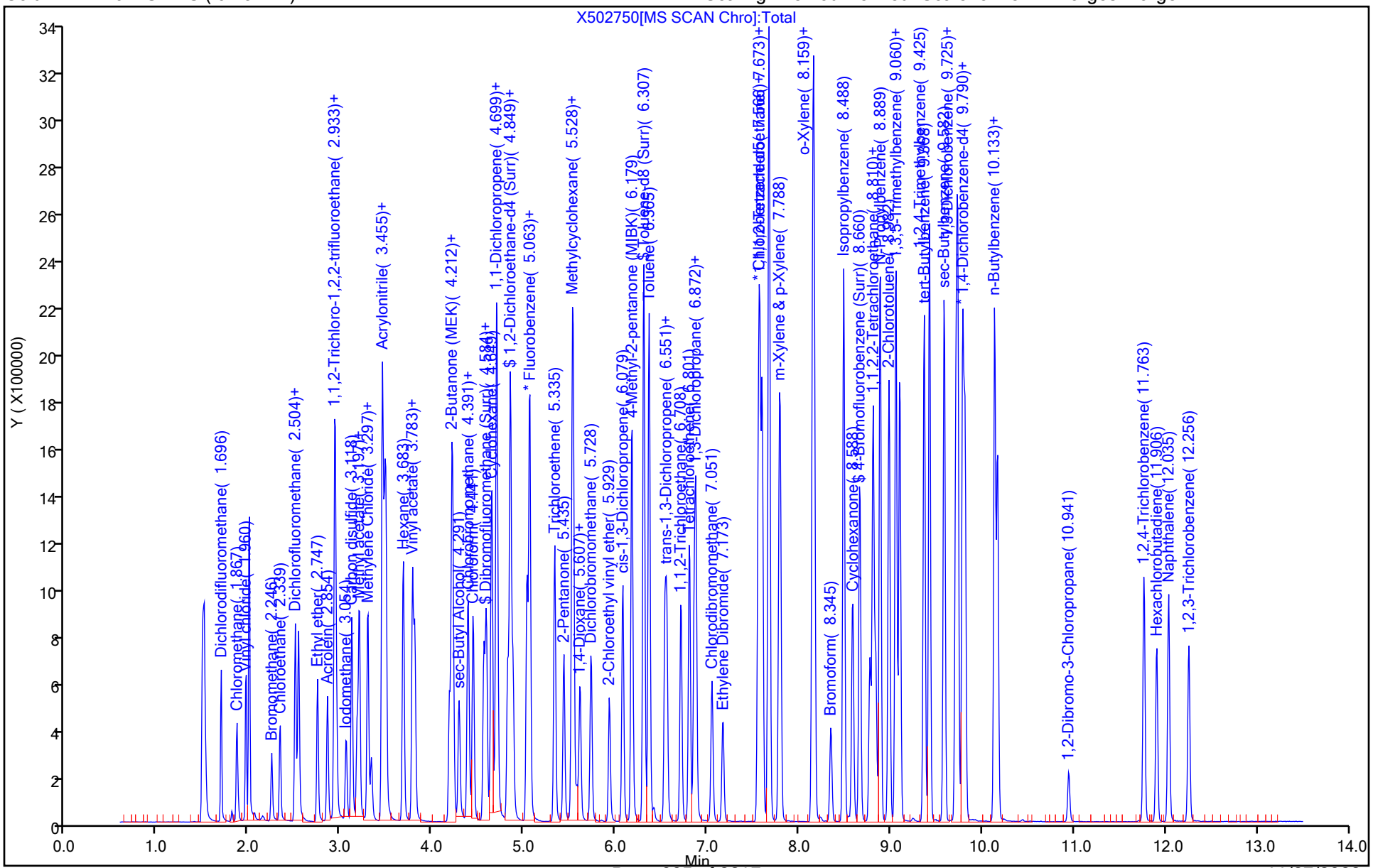
Report Date: 25-Apr-2023 04:09:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502750.D

Injection Date:	24-Apr-2023 18:48:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609932/3 Calibration Date: 04/24/2023 19:08

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 15:19

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 10/22/2022 17:23

Lab File ID: X502751.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0023*	0.0100	1300	1500	-13.6	20.0
Isopropyl alcohol	Ave	0.0155	0.0100	0.0100	162	250	-35.3*	20.0
Acetonitrile	Ave	0.0279	0.0262	0.0100	234	250	-6.2	20.0
Isopropyl ether	Ave	0.1867	0.1931	0.0100	25.9	25.0	3.4	20.0
Chloroprene	Ave	0.3274	0.3323	0.0100	25.4	25.0	1.5	20.0
Tert-butyl ethyl ether	Ave	0.6465	0.6467	0.0100	25.0	25.0	0.0	20.0
Ethyl acetate	Ave	0.1934	0.1659	0.0100	42.9	50.0	-14.2	20.0
Propionitrile	Ave	0.0311	0.0306	0.0100	246	250	-1.5	20.0
Methacrylonitrile	Ave	0.1216	0.1135	0.0100	233	250	-6.6	20.0
Tert-amyl methyl ether	Ave	0.6244	0.6017	0.0100	24.1	25.0	-3.6	20.0
n-Butanol	Ave	0.0061	0.0044*	0.0100	449	625	-28.2*	20.0
Methyl methacrylate	Ave	0.0660	0.0513	0.0100	38.9	50.0	-22.3*	20.0
2-Nitropropane	Ave	0.0700	0.0342	0.0100	24.4	50.0	-51.1*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1528	0.0100	38.8	50.0	-22.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.711	2.374	0.0100	21.9	25.0	-12.5	20.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.7538	0.0100	22.3	25.0	-10.6	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502751.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Apr-2023 19:08:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	1417408	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	339994	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	535901	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	349770	50.0	51.3	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	363967	50.0	50.8	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1476755	50.0	51.0	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	488319	50.0	51.0	
	18 Ethanol	45	2.646	2.646	0.000	100	97227	1500.0	1295.9	
	25 Isopropyl alcohol	45	3.033	3.033	0.000	98	71036	250.0	161.6	
	28 Acetonitrile	41	3.161	3.161	0.000	100	185585	250.0	234.4	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	136832	25.0	25.9	
	42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	235503	25.0	25.4	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	458314	25.0	25.0	
	46 Ethyl acetate	43	4.198	4.198	0.000	99	235175	50.0	42.9	
	49 Propionitrile	54	4.234	4.234	0.000	99	216813	250.0	246.2	
	51 Methacrylonitrile	41	4.348	4.348	0.000	90	804721	250.0	233.4	
	64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	426417	25.0	24.1	
	66 n-Butanol	56	5.199	5.199	0.000	86	77987	625.0	448.9	
	71 Methyl methacrylate	100	5.542	5.542	0.000	90	72770	50.0	38.9	
	75 2-Nitropropane	41	5.893	5.893	0.000	97	48468	50.0	24.4	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	81872	50.0	38.8	
	115 1,2,3-Trimethylbenzene	105	9.832	9.832	0.000	97	635983	25.0	21.9	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	201994	25.0	22.3	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

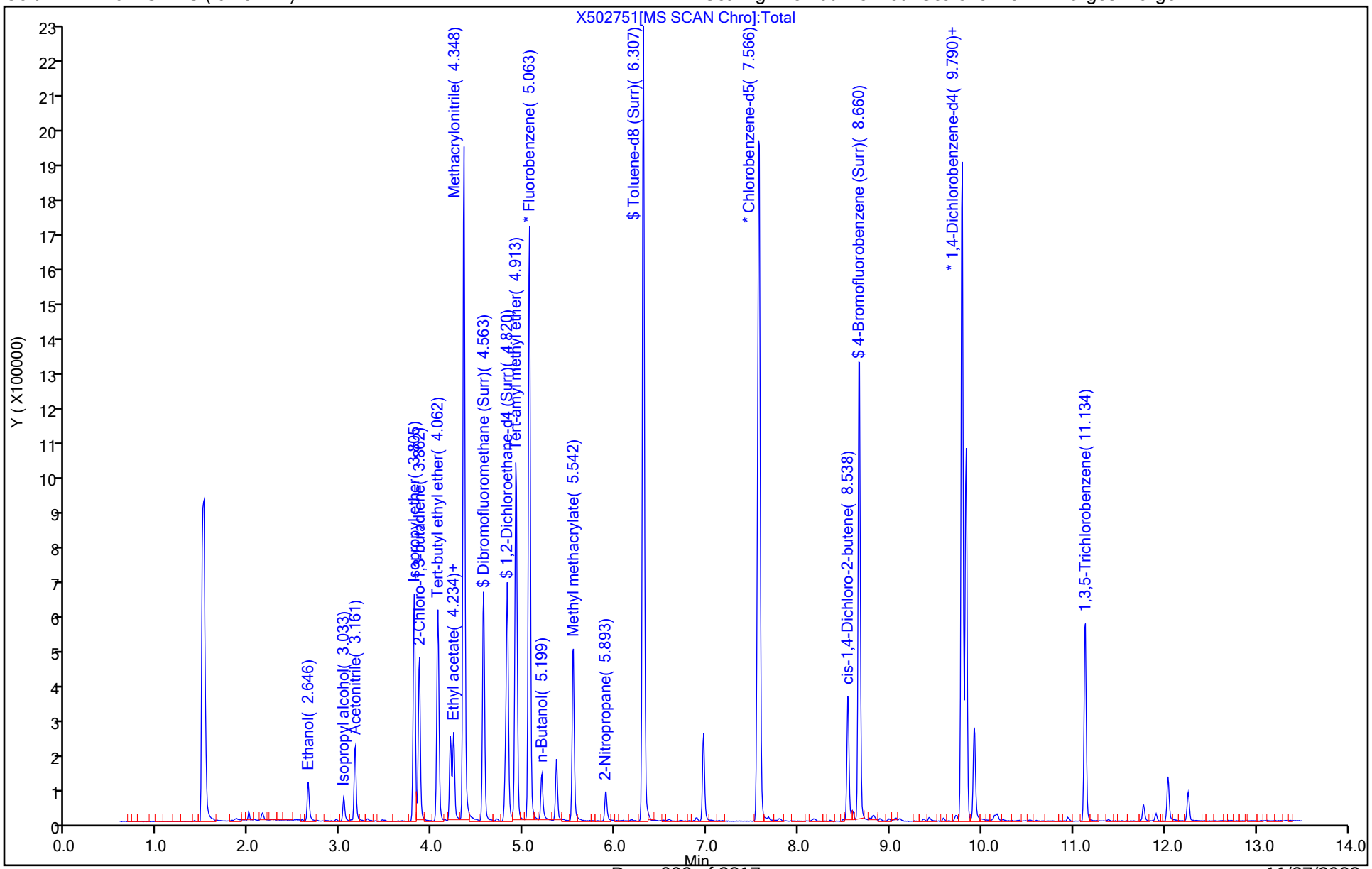
Report Date: 25-Apr-2023 04:09:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502751.D

Injection Date:	24-Apr-2023 19:08:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609932/3 Calibration Date: 04/24/2023 19:08

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502751.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2405	0.2468	0.0100	51.3	50.0	2.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2568	0.0100	50.8	50.0	1.7	20.0
Toluene-d8 (Surr)	Ave	4.259	4.343	0.0100	51.0	50.0	2.0	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9112	0.0100	51.0	50.0	2.0	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502751.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Apr-2023 19:08:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1417408	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	339994	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	535901	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	349770	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	363967	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1476755	50.0	51.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	488319	50.0	51.0	
18 Ethanol	45	2.646	2.646	0.000	100	97227	1500.0	1295.9	
25 Isopropyl alcohol	45	3.033	3.033	0.000	98	71036	250.0	161.6	
28 Acetonitrile	41	3.161	3.161	0.000	100	185585	250.0	234.4	
41 Isopropyl ether	87	3.805	3.805	0.000	95	136832	25.0	25.9	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	235503	25.0	25.4	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	458314	25.0	25.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	235175	50.0	42.9	
49 Propionitrile	54	4.234	4.234	0.000	99	216813	250.0	246.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	804721	250.0	233.4	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	426417	25.0	24.1	
66 n-Butanol	56	5.199	5.199	0.000	86	77987	625.0	448.9	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	72770	50.0	38.9	
75 2-Nitropropane	41	5.893	5.893	0.000	97	48468	50.0	24.4	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	81872	50.0	38.8	
115 1,2,3-Trimethylbenzene	105	9.832	9.832	0.000	97	635983	25.0	21.9	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	201994	25.0	22.3	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

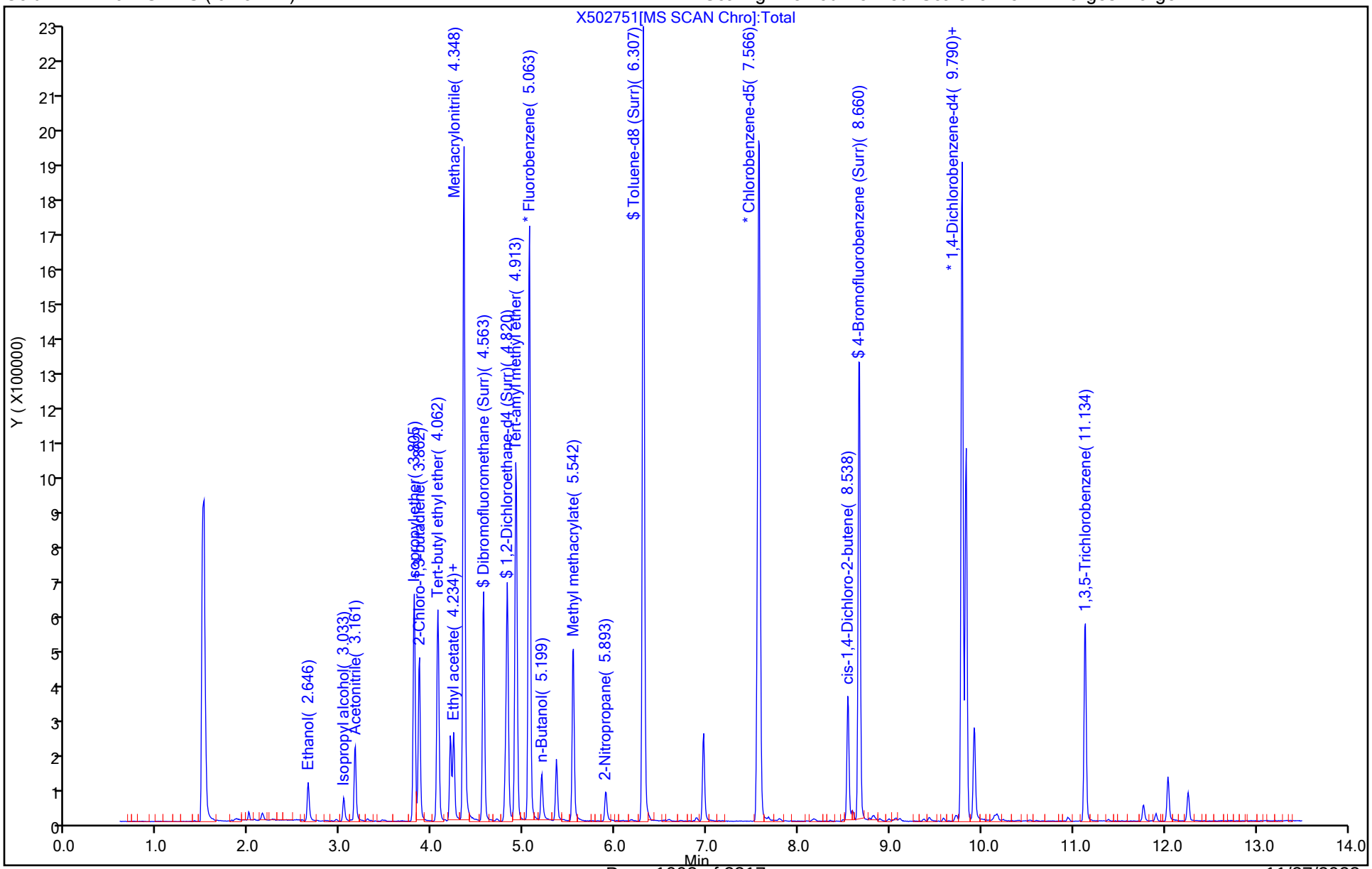
Report Date: 25-Apr-2023 04:09:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502751.D

Injection Date:	24-Apr-2023 19:08:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609946/3 | Calibration Date: 04/25/2023 06:09

Instrument ID: VMS_X4 | Calib Start Date: 10/22/2022 15:19

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 10/22/2022 17:23

Lab File ID: X502778A.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0029*	0.0100	1640	1500	9.1	20.0
Isopropyl alcohol	Ave	0.0155	0.0126	0.0100	204	250	-18.5	20.0
Acetonitrile	Ave	0.0279	0.0303	0.0100	271	250	8.4	20.0
Isopropyl ether	Ave	0.1867	0.2109	0.0100	28.2	25.0	13.0	20.0
Chloroprene	Ave	0.3274	0.3789	0.0100	28.9	25.0	15.7	20.0
Tert-butyl ethyl ether	Ave	0.6465	0.7327	0.0100	28.3	25.0	13.3	20.0
Ethyl acetate	Ave	0.1934	0.2003	0.0100	51.8	50.0	3.5	20.0
Propionitrile	Ave	0.0311	0.0339	0.0100	273	250	9.2	20.0
Methacrylonitrile	Ave	0.1216	0.1340	0.0100	275	250	10.2	20.0
Tert-amyl methyl ether	Ave	0.6244	0.6662	0.0100	26.7	25.0	6.7	20.0
n-Butanol	Ave	0.0061	0.0053*	0.0100	543	625	-13.1	20.0
Methyl methacrylate	Ave	0.0660	0.0609	0.0100	46.1	50.0	-7.8	20.0
2-Nitropropane	Ave	0.0700	0.0393	0.0100	28.1	50.0	-43.9*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1804	0.0100	45.8	50.0	-8.4	20.0
1,2,3-Trimethylbenzene	Ave	2.711	2.691	0.0100	24.8	25.0	-0.8	20.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.8632	0.0100	25.6	25.0	2.4	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502778A.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Apr-2023 06:09:30 ALS Bottle#: 29 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Misc. Info.: 280-0120722-033
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

First Level Reviewer: BX8N Date: 25-Apr-2023 06:50:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1444758	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	342438	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	541434	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	360958	50.0	51.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	370496	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1496529	50.0	51.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	496845	50.0	51.3	
18 Ethanol	45	2.647	2.647	0.000	100	125121	1500.0	1636.2	
25 Isopropyl alcohol	45	3.040	3.040	0.000	99	91320	250.0	203.9	
28 Acetonitrile	41	3.161	3.161	0.000	99	218676	250.0	271.0	
41 Isopropyl ether	87	3.805	3.805	0.000	95	152316	25.0	28.2	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	273714	25.0	28.9	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	529275	25.0	28.3	
46 Ethyl acetate	43	4.198	4.198	0.000	99	289337	50.0	51.8	
49 Propionitrile	54	4.234	4.234	0.000	100	245137	250.0	273.1	
51 Methacrylonitrile	41	4.348	4.348	0.000	89	968077	250.0	275.5	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	91	481281	25.0	26.7	
66 n-Butanol	56	5.199	5.199	0.000	85	96234	625.0	543.4	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	87965	50.0	46.1	
75 2-Nitropropane	41	5.900	5.900	0.000	98	56742	50.0	28.1	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	97648	50.0	45.8	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	728486	25.0	24.8	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	233693	25.0	25.6	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

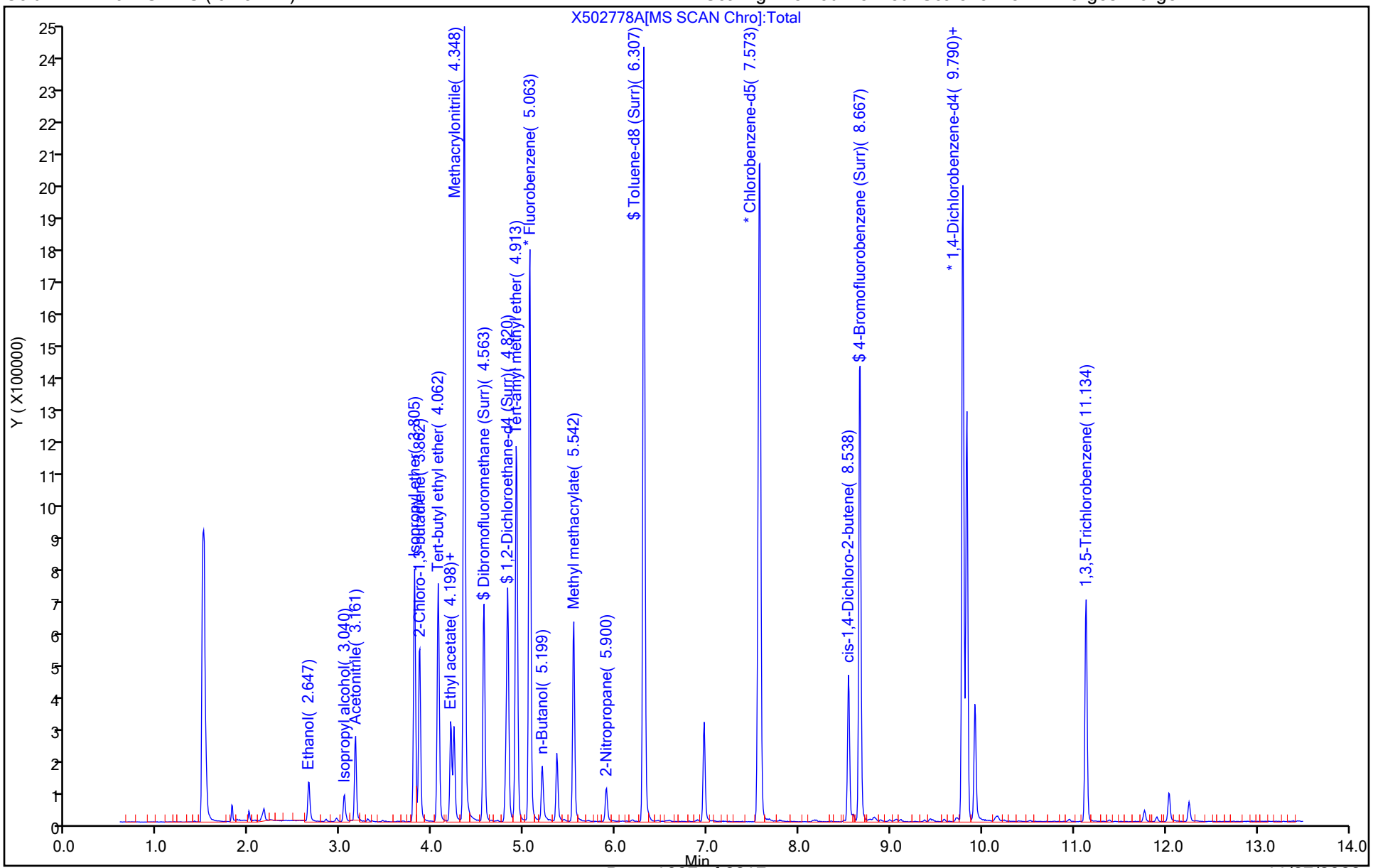
Report Date: 25-Apr-2023 13:52:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502778A.D

Injection Date:	25-Apr-2023 06:09:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609946/3 Calibration Date: 04/25/2023 06:09

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502778A.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2405	0.2498	0.0100	51.9	50.0	3.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2564	0.0100	50.8	50.0	1.5	20.0
Toluene-d8 (Surr)	Ave	4.259	4.370	0.0100	51.3	50.0	2.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9176	0.0100	51.3	50.0	2.7	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502778A.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Apr-2023 06:09:30 ALS Bottle#: 29 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Misc. Info.: 280-0120722-033
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

First Level Reviewer: BX8N Date: 25-Apr-2023 06:50:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1444758	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	342438	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	541434	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	360958	50.0	51.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	370496	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1496529	50.0	51.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	496845	50.0	51.3	
18 Ethanol	45	2.647	2.647	0.000	100	125121	1500.0	1636.2	
25 Isopropyl alcohol	45	3.040	3.040	0.000	99	91320	250.0	203.9	
28 Acetonitrile	41	3.161	3.161	0.000	99	218676	250.0	271.0	
41 Isopropyl ether	87	3.805	3.805	0.000	95	152316	25.0	28.2	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	273714	25.0	28.9	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	529275	25.0	28.3	
46 Ethyl acetate	43	4.198	4.198	0.000	99	289337	50.0	51.8	
49 Propionitrile	54	4.234	4.234	0.000	100	245137	250.0	273.1	
51 Methacrylonitrile	41	4.348	4.348	0.000	89	968077	250.0	275.5	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	91	481281	25.0	26.7	
66 n-Butanol	56	5.199	5.199	0.000	85	96234	625.0	543.4	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	87965	50.0	46.1	
75 2-Nitropropane	41	5.900	5.900	0.000	98	56742	50.0	28.1	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	97648	50.0	45.8	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	728486	25.0	24.8	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	233693	25.0	25.6	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

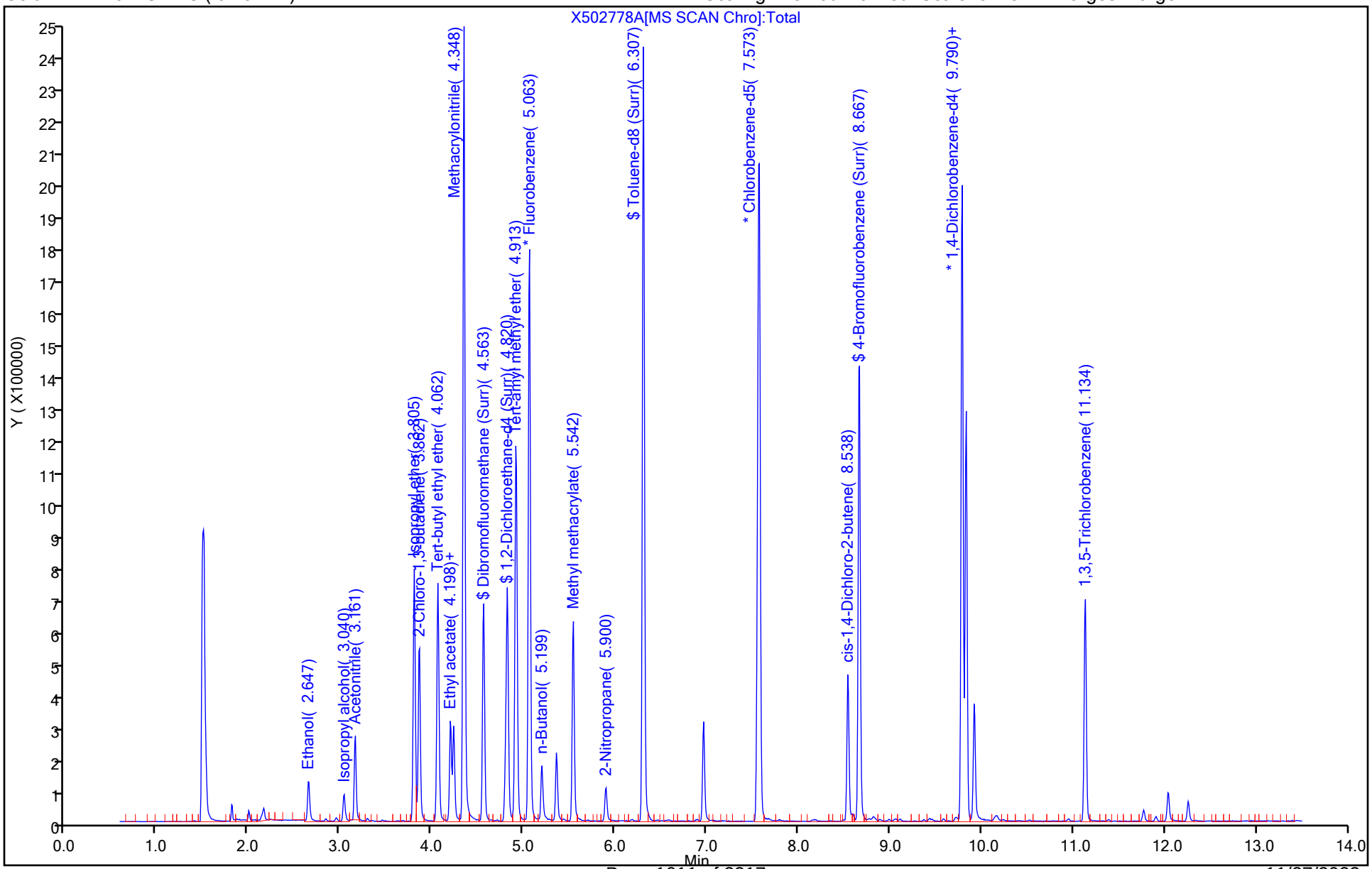
Report Date: 25-Apr-2023 13:52:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502778A.D

Injection Date:	25-Apr-2023 06:09:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609946/2 Calibration Date: 04/25/2023 06:36

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502779.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.1811	0.1000	20.6	25.0	-17.4	20.0
Chloromethane	Ave	0.2229	0.1971	0.1000	22.1	25.0	-11.6	20.0
Vinyl chloride	Lin1		0.2384	0.0100	26.3	25.0	5.3	20.0
Bromomethane	Ave	0.1211	0.0973	0.0100	20.1	25.0	-19.7	20.0
Chloroethane	Ave	0.1519	0.1461	0.0100	24.0	25.0	-3.8	20.0
Dichlorofluoromethane	Ave	0.3792	0.3286	0.0100	21.7	25.0	-13.3	20.0
Trichlorofluoromethane	Ave	0.2925	0.2579	0.0100	22.0	25.0	-11.8	20.0
Ethyl ether	Ave	0.1687	0.1660	0.0100	24.6	25.0	-1.6	20.0
Acrolein	Ave	0.0272	0.0240	0.0010	218	247	-11.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1297	0.0500	23.5	25.0	-6.1	20.0
1,1-Dichloroethene	Ave	0.1921	0.1796	0.0600	23.4	25.0	-6.5	20.0
Acetone	Lin2		0.0529	0.0100	93.5	100	-6.5	20.0
Iodomethane	Lin1		0.1744	0.0100	17.2	25.0	-31.0*	20.0
Carbon disulfide	Ave	0.6224	0.6172	0.1000	24.8	25.0	-0.8	20.0
Methyl acetate	Ave	0.1262	0.1339	0.0100	53.0	50.0	6.1	20.0
Allyl chloride	Ave	0.2551	0.3067	0.0100	30.1	25.0	20.2*	20.0
Methylene Chloride	Ave	0.2466	0.2207	0.0100	22.4	25.0	-10.5	20.0
2-Methyl-2-propanol	Lin1		0.0166	0.0010	214	250	-14.4	20.0
Acrylonitrile	Ave	0.0717	0.0763	0.0100	266	250	6.4	20.0
Methyl tert-butyl ether	Ave	0.6044	0.5636	0.1000	23.3	25.0	-6.8	20.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2136	0.1000	25.0	25.0	0.1	20.0
Hexane	Ave	1.146	1.056	0.0100	23.0	25.0	-7.9	20.0
Vinyl acetate	Ave	0.3380	0.3842	0.0100	56.8	50.0	13.7	20.0
1,1-Dichloroethane	Ave	0.3890	0.3898	0.1000	25.1	25.0	0.2	20.0
2-Butanone (MEK)	Ave	0.0821	0.0870	0.0100	106	100	5.9	20.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2385	0.1000	23.3	25.0	-6.6	20.0
2,2-Dichloropropane	Ave	0.2990	0.2960	0.0100	24.8	25.0	-1.0	20.0
sec-Butyl Alcohol	Lin1		0.0133	0.0100	549	600	-8.5	20.0
Chlorobromomethane	Ave	0.1177	0.1110	0.0500	23.6	25.0	-5.7	20.0
Tetrahydrofuran	Ave	0.0557	0.0591	0.0010	53.0	50.0	6.1	20.0
Chloroform	Ave	0.3958	0.3625	0.2000	22.9	25.0	-8.4	20.0
1,1,1-Trichloroethane	Ave	0.3206	0.2980	0.0500	23.2	25.0	-7.0	20.0
Cyclohexane	Ave	0.3308	0.3346	0.0100	25.3	25.0	1.2	20.0
1,1-Dichloropropene	Ave	0.3142	0.2929	0.0100	23.3	25.0	-6.8	20.0
Carbon tetrachloride	Ave	0.2595	0.2452	0.1000	23.6	25.0	-5.5	20.0
Isobutyl alcohol	Lin1		0.0051	0.0010	519	625	-16.9	20.0
Benzene	Ave	0.9289	0.9002	0.2000	24.2	25.0	-3.1	20.0
1,2-Dichloroethane	Ave	0.2944	0.2669	0.0700	22.7	25.0	-9.3	20.0
n-Heptane	Ave	0.1928	0.2097		27.2	25.0	8.8	
Trichloroethene	Ave	0.9564	0.8778	0.2000	22.9	25.0	-8.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609946/2 | Calibration Date: 04/25/2023 06:36

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502779.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1305	0.0010	79.5	80.0	-0.6	20.0
Methylcyclohexane	Ave	0.2422	0.2404	0.0500	24.8	25.0	-0.8	20.0
1,2-Dichloropropane	Ave	0.2362	0.2349	0.1000	24.9	25.0	-0.6	20.0
1,4-Dioxane	Ave	0.0030	0.0027	0.0010	451	500	-9.8	20.0
Dibromomethane	Ave	0.1409	0.1273	0.0100	22.6	25.0	-9.7	20.0
Dichlorobromomethane	Ave	0.2974	0.2745	0.2000	23.1	25.0	-7.7	20.0
2-Chloroethyl vinyl ether	Lin1		0.1165	0.0100	38.3	25.0	53.1*	20.0
cis-1,3-Dichloropropene	Ave	1.523	1.422	0.2000	23.3	25.0	-6.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1705	0.0300	108	100	7.8	20.0
Toluene	Ave	1.001	0.9599	0.3000	24.0	25.0	-4.1	20.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3059	0.2000	24.9	25.0	-0.3	20.0
Ethyl methacrylate	Ave	1.092	1.056	0.0100	24.2	25.0	-3.4	20.0
1,1,2-Trichloroethane	Ave	0.2000	0.1828	0.1000	22.9	25.0	-8.6	20.0
Tetrachloroethene	Ave	0.7259	0.6743	0.1000	23.2	25.0	-7.1	20.0
1,3-Dichloropropane	Ave	1.532	1.381	0.0100	22.5	25.0	-9.9	20.0
2-Hexanone	Ave	0.4789	0.4817	0.0100	101	100	0.6	20.0
Chlorodibromomethane	Ave	0.9243	0.7872	0.1000	21.3	25.0	-14.8	20.0
1,2-Dibromoethane	Ave	0.8754	0.7750	0.1000	22.1	25.0	-11.5	20.0
1-Chlorohexane	Ave	1.353	1.196	0.0100	17.7	20.0	-11.6	20.0
Chlorobenzene	Ave	2.785	2.470	0.3000	22.2	25.0	-11.3	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.7806	0.0100	21.8	25.0	-12.8	20.0
Ethylbenzene	Ave	1.533	1.365	0.3000	22.3	25.0	-11.0	20.0
m-Xylene & p-Xylene	Ave	1.838	1.714	0.1000	23.3	25.0	-6.8	20.0
o-Xylene	Ave	1.865	1.639	0.2000	22.0	25.0	-12.1	20.0
Styrene	Ave	2.963	2.749	0.2000	23.2	25.0	-7.2	20.0
Bromoform	Ave	0.5587	0.4931	0.1000	22.1	25.0	-11.7	20.0
Isopropylbenzene	Ave	2.838	2.568	0.3000	22.6	25.0	-9.5	20.0
Cyclohexanone	Lin1		0.0445	0.0010	788	750	5.0	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.6347	0.3000	22.2	25.0	-11.4	20.0
Bromobenzene	Ave	0.7149	0.6367	0.0100	22.3	25.0	-10.9	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1494	0.0100	20.2	25.0	-19.2	20.0
1,2,3-Trichloropropane	Ave	0.2173	0.1810	0.0100	20.8	25.0	-16.7	20.0
N-Propylbenzene	Ave	0.7886	0.7460	0.0100	23.7	25.0	-5.4	20.0
2-Chlorotoluene	Ave	0.6999	0.6458	0.0100	23.1	25.0	-7.7	20.0
1,3,5-Trimethylbenzene	Ave	2.394	2.151	0.0100	22.5	25.0	-10.1	20.0
4-Chlorotoluene	Ave	0.7282	0.6710	0.0100	23.0	25.0	-7.9	20.0
tert-Butylbenzene	Ave	2.000	1.815	0.0100	22.7	25.0	-9.2	20.0
1,2,4-Trimethylbenzene	Ave	2.476	2.267	0.3000	22.9	25.0	-8.4	20.0
sec-Butylbenzene	Ave	0.5991	0.5301	0.0100	22.1	25.0	-11.5	20.0
1,3-Dichlorobenzene	Ave	1.320	1.172	0.5000	22.2	25.0	-11.2	20.0
4-Isopropyltoluene	Ave	2.471	2.266	0.0100	22.9	25.0	-8.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609946/2 Calibration Date: 04/25/2023 06:36

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502779.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.198	0.5000	21.4	25.0	-14.6	20.0
n-Butylbenzene	Ave	2.140	2.033	0.0100	23.8	25.0	-5.0	20.0
1,2-Dichlorobenzene	Ave	1.271	1.098	0.5000	21.6	25.0	-13.6	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1132	0.0100	19.9	25.0	-20.6*	20.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.5982	0.2000	23.4	25.0	-6.5	20.0
Hexachlorobutadiene	Ave	0.2332	0.2340	0.0100	25.1	25.0	0.4	20.0
Naphthalene	Ave	1.632	1.442	0.0100	22.1	25.0	-11.6	20.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.4503	0.3000	23.3	25.0	-6.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2537	0.0100	52.7	50.0	5.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2539	0.0100	50.3	50.0	0.5	20.0
Toluene-d8 (Surr)	Ave	4.259	4.331	0.0100	50.8	50.0	1.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9171	0.0100	51.3	50.0	2.6	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502779.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Apr-2023 06:36:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:43 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

First Level Reviewer: BX8N Date: 25-Apr-2023 07:04:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1411236	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	344876	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	539343	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	357989	50.0	52.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	358268	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	93	1493601	50.0	50.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	494622	50.0	51.3	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	127817	25.0	20.6	
11 Chloromethane	50	1.867	1.867	0.000	99	139104	25.0	22.1	
12 Vinyl chloride	62	1.967	1.967	0.000	98	168190	25.0	26.3	
14 Bromomethane	94	2.246	2.246	0.000	89	68677	25.0	20.1	
15 Chloroethane	64	2.339	2.339	0.000	100	103118	25.0	24.0	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	231838	25.0	21.7	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	182002	25.0	22.0	
19 Ethyl ether	59	2.747	2.747	0.000	91	117146	25.0	24.6	
21 Acrolein	56	2.854	2.854	0.000	99	167308	246.9	217.8	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	91519	25.0	23.5	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	126755	25.0	23.4	
24 Acetone	43	2.954	2.954	0.000	99	149225	100.0	93.5	
26 Iodomethane	142	3.054	3.054	0.000	97	123072	25.0	17.2	
27 Carbon disulfide	76	3.119	3.119	0.000	98	435495	25.0	24.8	
29 Methyl acetate	43	3.176	3.176	0.000	97	188983	50.0	53.0	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	216406	25.0	30.1	
31 Methylene Chloride	84	3.297	3.297	0.000	92	155710	25.0	22.4	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	117038	250.0	213.9	
33 Acrylonitrile	53	3.455	3.455	0.000	99	538138	250.0	266.0	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	397671	25.0	23.3	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	100	150700	25.0	25.0	
37 Hexane	57	3.683	3.683	0.000	91	182025	25.0	23.0	
39 Vinyl acetate	43	3.784	3.784	0.000	97	542248	50.0	56.8	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	275066	25.0	25.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	245559	100.0	105.9	
47 cis-1,2-Dichloroethene	96	4.213	4.213	0.000	82	168278	25.0	23.3	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	208897	25.0	24.8	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	225175	600.0	548.9	
52 Chlorobromomethane	128	4.384	4.384	0.000	96	78310	25.0	23.6	
53 Tetrahydrofuran	42	4.398	4.398	0.000	89	83344	50.0	53.0	
54 Chloroform	83	4.441	4.441	0.000	93	255774	25.0	22.9	
55 1,1,1-Trichloroethane	97	4.592	4.592	0.000	99	210303	25.0	23.2	
56 Cyclohexane	56	4.649	4.649	0.000	88	236110	25.0	25.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	206666	25.0	23.3	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	90170	625.0	519.1	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	173006	25.0	23.6	
62 Benzene	78	4.849	4.849	0.000	96	635178	25.0	24.2	
63 1,2-Dichloroethane	62	4.878	4.878	0.000	97	188352	25.0	22.7	
65 n-Heptane	43	5.035	5.035	0.000	91	147949	25.0	27.2	
67 Trichloroethene	95	5.335	5.335	0.000	97	151361	25.0	22.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	294613	80.0	79.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	169612	25.0	24.8	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	97	165750	25.0	24.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	94	38076	500.0	451.2	
73 Dibromomethane	93	5.607	5.607	0.000	97	89795	25.0	22.6	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	193664	25.0	23.1	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	82207	25.0	38.3	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	245215	25.0	23.3	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	481118	100.0	107.8	
79 Toluene	91	6.365	6.365	0.000	98	677326	25.0	24.0	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	215875	25.0	24.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	182048	25.0	24.2	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	128990	25.0	22.9	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	116272	25.0	23.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	89	238182	25.0	22.5	
85 2-Hexanone	43	6.872	6.872	0.000	96	332231	100.0	100.6	
87 Chlorodibromomethane	129	7.051	7.051	0.000	91	135741	25.0	21.3	
88 Ethylene Dibromide	107	7.173	7.173	0.000	97	133643	25.0	22.1	
89 1-Chlorohexane	91	7.552	7.552	0.000	97	164999	20.0	17.7	
90 Chlorobenzene	112	7.602	7.602	0.000	95	425911	25.0	22.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	93	134600	25.0	21.8	
92 Ethylbenzene	106	7.673	7.673	0.000	98	235424	25.0	22.3	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	295475	25.0	23.3	
94 o-Xylene	106	8.152	8.152	0.000	96	282550	25.0	22.0	
95 Styrene	104	8.167	8.167	0.000	95	473950	25.0	23.2	
96 Bromoform	173	8.345	8.345	0.000	96	85036	25.0	22.1	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	692444	25.0	22.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	230360	750.0	787.9	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	171171	25.0	22.2	
101 Bromobenzene	156	8.810	8.810	0.000	95	171707	25.0	22.3	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	80	40285	25.0	20.2	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	48803	25.0	20.8	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	201179	25.0	23.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	174151	25.0	23.1	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	579999	25.0	22.5	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	180951	25.0	23.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	489478	25.0	22.7	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	611431	25.0	22.9	
111 sec-Butylbenzene	134	9.590	9.590	0.000	94	142956	25.0	22.1	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	315947	25.0	22.2	
113 4-Isopropyltoluene	119	9.733	9.733	0.000	97	611072	25.0	22.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	322936	25.0	21.4	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	548360	25.0	23.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	296094	25.0	21.6	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.941	0.000	85	30539	25.0	19.9	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	93	161311	25.0	23.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	63113	25.0	25.1	
122 Naphthalene	128	12.035	12.035	0.000	97	388907	25.0	22.1	
123 1,2,3-Trichlorobenzene	180	12.257	12.257	0.000	96	121442	25.0	23.3	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	48.4	
S 139 Xylenes, Total (URS)	1				0		50.0	45.3	
S 136 1,3-Dichloropropene, Total	1				0		50.0	48.3	
S 138 Xylenes, Total	106				0		50.0	45.3	
S 140 Trihalomethanes, Total	1				0		100.0	89.3	
S 141 1,2-Dichloroethene, Total	1				0		50.0	48.4	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00132	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 25-Apr-2023 13:52:45 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502779.D

Injection Date: 25-Apr-2023 06:36:30 Instrument ID: VMS_X4 Operator ID: MED

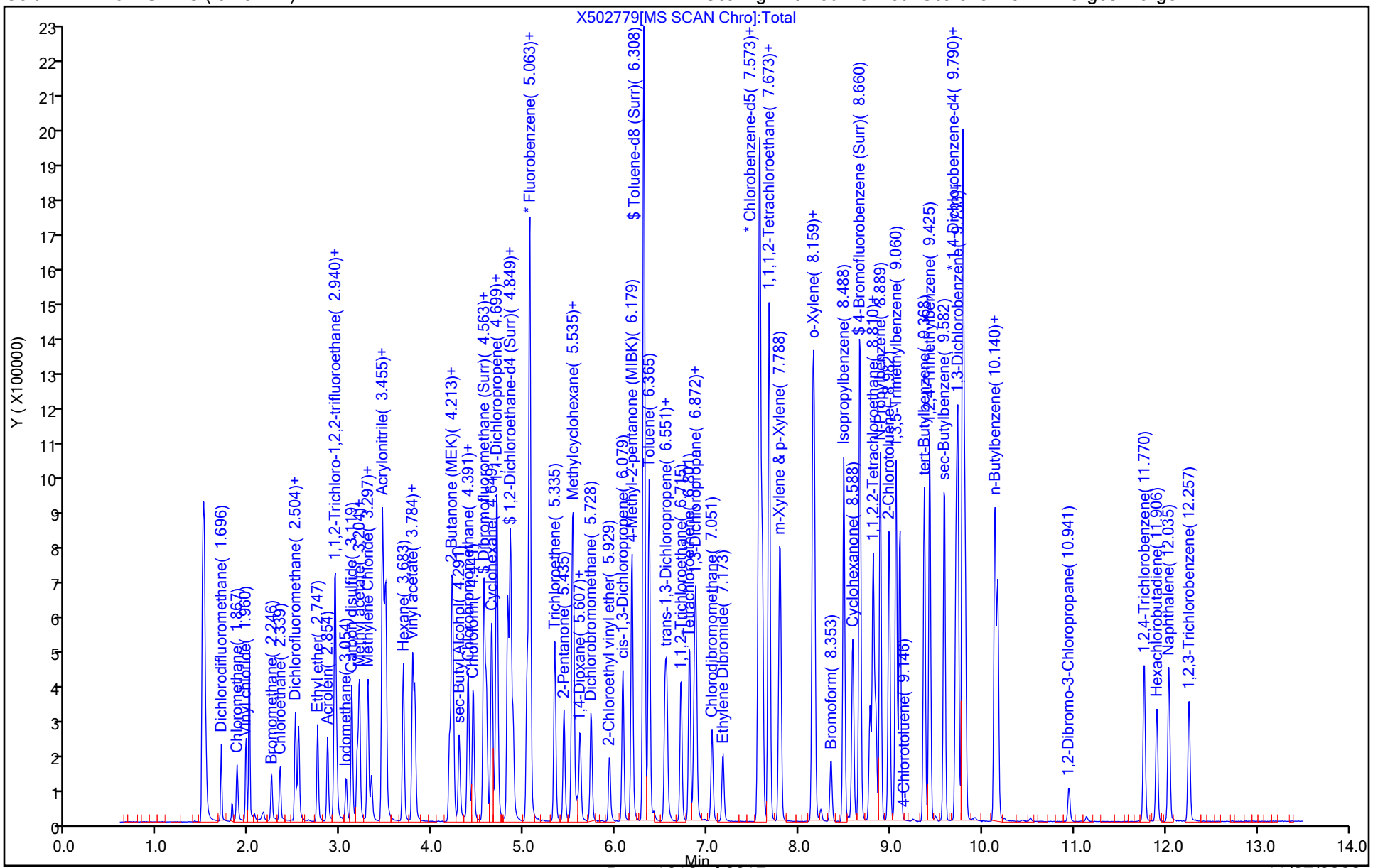
Lims ID: CCV Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCVC 280-609946/34 | Calibration Date: 04/25/2023 17:28

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502808.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.1873	0.1000	21.3	25.0	-14.6	50.0
Chloromethane	Ave	0.2229	0.2044	0.1000	22.9	25.0	-8.3	50.0
Vinyl chloride	Lin1		0.2491	0.0100	27.5	25.0	10.0	50.0
Bromomethane	Ave	0.1211	0.0910	0.0100	18.8	25.0	-24.9	50.0
Chloroethane	Ave	0.1519	0.1557	0.0100	25.6	25.0	2.5	50.0
Dichlorofluoromethane	Ave	0.3792	0.3478	0.0100	22.9	25.0	-8.3	50.0
Trichlorofluoromethane	Ave	0.2925	0.2736	0.0100	23.4	25.0	-6.5	50.0
Ethyl ether	Ave	0.1687	0.1862	0.0100	27.6	25.0	10.4	50.0
Acrolein	Ave	0.0272	0.0262	0.0010	237	247	-3.9	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1290	0.0500	23.3	25.0	-6.6	50.0
1,1-Dichloroethene	Ave	0.1921	0.1862	0.0600	24.2	25.0	-3.1	50.0
Acetone	Lin2		0.0570	0.0100	101	100	1.1	50.0
Iodomethane	Lin1		0.1931	0.0100	19.0	25.0	-24.1	50.0
Carbon disulfide	Ave	0.6224	0.6121	0.1000	24.6	25.0	-1.7	50.0
Methyl acetate	Ave	0.1262	0.1488	0.0100	58.9	50.0	17.9	50.0
Allyl chloride	Ave	0.2551	0.3037	0.0100	29.8	25.0	19.1	50.0
Methylene Chloride	Ave	0.2466	0.2412	0.0100	24.4	25.0	-2.2	50.0
2-Methyl-2-propanol	Lin1		0.0180	0.0010	231	250	-7.5	50.0
Acrylonitrile	Ave	0.0717	0.0832	0.0100	290	250	16.1	50.0
Methyl tert-butyl ether	Ave	0.6044	0.6173	0.1000	25.5	25.0	2.1	50.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2193	0.1000	25.7	25.0	2.8	50.0
Hexane	Ave	1.146	1.102	0.0100	24.0	25.0	-3.9	50.0
Vinyl acetate	Ave	0.3380	0.3970	0.0100	58.7	50.0	17.5	50.0
1,1-Dichloroethane	Ave	0.3890	0.4132	0.1000	26.6	25.0	6.2	50.0
2-Butanone (MEK)	Ave	0.0821	0.0964	0.0100	117	100	17.3	50.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2553	0.1000	25.0	25.0	-0.0	50.0
2,2-Dichloropropane	Ave	0.2990	0.2814	0.0100	23.5	25.0	-5.9	50.0
sec-Butyl Alcohol	Lin1		0.0145	0.0100	600	600	-0.0	50.0
Chlorobromomethane	Ave	0.1177	0.1199	0.0500	25.5	25.0	1.8	50.0
Tetrahydrofuran	Ave	0.0557	0.0638	0.0010	57.3	50.0	14.6	50.0
Chloroform	Ave	0.3958	0.3893	0.2000	24.6	25.0	-1.6	50.0
1,1,1-Trichloroethane	Ave	0.3206	0.3022	0.0500	23.6	25.0	-5.8	50.0
Cyclohexane	Ave	0.3308	0.3662	0.0100	27.7	25.0	10.7	50.0
1,1-Dichloropropene	Ave	0.3142	0.3075	0.0100	24.5	25.0	-2.1	50.0
Carbon tetrachloride	Ave	0.2595	0.2514	0.1000	24.2	25.0	-3.1	50.0
Isobutyl alcohol	Lin1		0.0060	0.0010	603	625	-3.5	50.0
Benzene	Ave	0.9289	0.9562	0.2000	25.7	25.0	2.9	50.0
1,2-Dichloroethane	Ave	0.2944	0.2895	0.0700	24.6	25.0	-1.7	50.0
n-Heptane	Ave	0.1928	0.2072		26.9	25.0	7.5	
Trichloroethene	Ave	0.9564	0.9513	0.2000	24.9	25.0	-0.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCVC 280-609946/34 Calibration Date: 04/25/2023 17:28

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502808.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1429	0.0010	86.9	80.0	8.7	50.0
Methylcyclohexane	Ave	0.2422	0.2463	0.0500	25.4	25.0	1.7	50.0
1,2-Dichloropropane	Ave	0.2362	0.2538	0.1000	26.9	25.0	7.4	50.0
1,4-Dioxane	Ave	0.0030	0.0032	0.0010	529	500	5.8	50.0
Dibromomethane	Ave	0.1409	0.1356	0.0100	24.1	25.0	-3.7	50.0
Dichlorobromomethane	Ave	0.2974	0.2943	0.2000	24.7	25.0	-1.0	50.0
2-Chloroethyl vinyl ether	Lin1		0.1355	0.0100	44.7	25.0	78.7*	50.0
cis-1,3-Dichloropropene	Ave	1.523	1.543	0.2000	25.3	25.0	1.3	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1876	0.0300	119	100	18.6	50.0
Toluene	Ave	1.001	1.005	0.3000	25.1	25.0	0.4	50.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3193	0.2000	26.0	25.0	4.1	50.0
Ethyl methacrylate	Ave	1.092	1.154	0.0100	26.4	25.0	5.7	50.0
1,1,2-Trichloroethane	Ave	0.2000	0.1988	0.1000	24.9	25.0	-0.6	50.0
Tetrachloroethene	Ave	0.7259	0.7255	0.1000	25.0	25.0	-0.0	50.0
1,3-Dichloropropane	Ave	1.532	1.563	0.0100	25.5	25.0	2.0	50.0
2-Hexanone	Ave	0.4789	0.5298	0.0100	111	100	10.6	50.0
Chlorodibromomethane	Ave	0.9243	0.8744	0.1000	23.7	25.0	-5.4	50.0
1,2-Dibromoethane	Ave	0.8754	0.8408	0.1000	24.0	25.0	-4.0	50.0
1-Chlorohexane	Ave	1.353	1.255	0.0100	18.5	20.0	-7.3	50.0
Chlorobenzene	Ave	2.785	2.627	0.3000	23.6	25.0	-5.7	50.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.8335	0.0100	23.3	25.0	-6.9	50.0
Ethylbenzene	Ave	1.533	1.437	0.3000	23.4	25.0	-6.3	50.0
m-Xylene & p-Xylene	Ave	1.838	1.773	0.1000	24.1	25.0	-3.5	50.0
o-Xylene	Ave	1.865	1.754	0.2000	23.5	25.0	-5.9	50.0
Styrene	Ave	2.963	2.956	0.2000	24.9	25.0	-0.2	50.0
Bromoform	Ave	0.5587	0.5324	0.1000	23.8	25.0	-4.7	50.0
Isopropylbenzene	Ave	2.838	2.666	0.3000	23.5	25.0	-6.1	50.0
Cyclohexanone	Lin1		0.0341	0.0010	605	750	-19.4	50.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.6747	0.3000	23.6	25.0	-5.8	50.0
Bromobenzene	Ave	0.7149	0.6737	0.0100	23.6	25.0	-5.8	50.0
trans-1,4-Dichloro-2-butene	Lin2		0.1608	0.0100	21.7	25.0	-13.2	50.0
1,2,3-Trichloropropane	Ave	0.2173	0.1987	0.0100	22.9	25.0	-8.6	50.0
N-Propylbenzene	Ave	0.7886	0.7616	0.0100	24.1	25.0	-3.4	50.0
2-Chlorotoluene	Ave	0.6999	0.6577	0.0100	23.5	25.0	-6.0	50.0
1,3,5-Trimethylbenzene	Ave	2.394	2.224	0.0100	23.2	25.0	-7.1	50.0
4-Chlorotoluene	Ave	0.7282	0.6951	0.0100	23.9	25.0	-4.5	50.0
tert-Butylbenzene	Ave	2.000	1.888	0.0100	23.6	25.0	-5.6	50.0
1,2,4-Trimethylbenzene	Ave	2.476	2.336	0.3000	23.6	25.0	-5.6	50.0
sec-Butylbenzene	Ave	0.5991	0.5591	0.0100	23.3	25.0	-6.7	50.0
1,3-Dichlorobenzene	Ave	1.320	1.242	0.5000	23.5	25.0	-5.9	50.0
4-Isopropyltoluene	Ave	2.471	2.286	0.0100	23.1	25.0	-7.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCVC 280-609946/34 Calibration Date: 04/25/2023 17:28

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502808.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.272	0.5000	22.7	25.0	-9.3	50.0
n-Butylbenzene	Ave	2.140	2.059	0.0100	24.1	25.0	-3.8	50.0
1,2-Dichlorobenzene	Ave	1.271	1.179	0.5000	23.2	25.0	-7.2	50.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1220	0.0100	21.4	25.0	-14.6	50.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.6508	0.2000	25.4	25.0	1.7	50.0
Hexachlorobutadiene	Ave	0.2332	0.2411	0.0100	25.8	25.0	3.4	50.0
Naphthalene	Ave	1.632	1.757	0.0100	26.9	25.0	7.7	50.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.5100	0.3000	26.4	25.0	5.6	50.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2527	0.0100	52.5	50.0	5.1	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2570	0.0100	50.9	50.0	1.7	50.0
Toluene-d8 (Surr)	Ave	4.259	4.342	0.0100	51.0	50.0	1.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9144	0.0100	51.2	50.0	2.3	50.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502808.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 25-Apr-2023 17:28:30 ALS Bottle#: 30 Worklist Smp#: 34
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Misc. Info.: 280-0120726-034
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 23:01:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1679

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1411029	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	341846	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.789	9.790	-0.001	95	544544	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	356592	50.0	52.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	362638	50.0	50.9	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1484306	50.0	51.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	92	497956	50.0	51.2	
10 Dichlorodifluoromethane	85	1.695	1.696	-0.001	99	132167	25.0	21.3	
11 Chloromethane	50	1.867	1.867	0.000	99	144187	25.0	22.9	
12 Vinyl chloride	62	1.967	1.967	0.000	98	175709	25.0	27.5	
14 Bromomethane	94	2.239	2.246	-0.007	90	64207	25.0	18.8	
15 Chloroethane	64	2.332	2.339	-0.007	100	109856	25.0	25.6	
16 Dichlorofluoromethane	67	2.503	2.504	-0.001	97	245360	25.0	22.9	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	193039	25.0	23.4	
19 Ethyl ether	59	2.747	2.747	-0.001	90	131381	25.0	27.6	
21 Acrolein	56	2.854	2.854	0.000	100	182257	246.9	237.3	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.933	-0.001	92	90994	25.0	23.3	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	131336	25.0	24.2	
24 Acetone	43	2.954	2.954	0.000	100	160807	100.0	101.1	
26 Iodomethane	142	3.061	3.054	0.007	97	136268	25.0	19.0	
27 Carbon disulfide	76	3.118	3.119	-0.001	99	431834	25.0	24.6	
29 Methyl acetate	43	3.183	3.176	0.007	97	209941	50.0	58.9	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	95	214275	25.0	29.8	
31 Methylene Chloride	84	3.297	3.297	0.000	91	170141	25.0	24.4	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	126705	250.0	231.3	
33 Acrylonitrile	53	3.454	3.455	-0.001	99	587071	250.0	290.3	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	435503	25.0	25.5	
35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	100	154703	25.0	25.7	
37 Hexane	57	3.683	3.683	0.000	91	188281	25.0	24.0	
39 Vinyl acetate	43	3.783	3.784	-0.001	97	560228	50.0	58.7	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	291539	25.0	26.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	271946	100.0	117.3	
47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	81	180112	25.0	25.0	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	198530	25.0	23.5	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	246312	600.0	599.5	
52 Chlorobromomethane	128	4.384	4.384	0.000	97	84562	25.0	25.5	
53 Tetrahydrofuran	42	4.398	4.398	0.000	90	90076	50.0	57.3	
54 Chloroform	83	4.448	4.441	0.007	93	274665	25.0	24.6	
55 1,1,1-Trichloroethane	97	4.591	4.592	-0.001	99	213182	25.0	23.6	
56 Cyclohexane	56	4.648	4.649	-0.001	88	258342	25.0	27.7	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	99	216959	25.0	24.5	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	105081	625.0	603.1	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	177333	25.0	24.2	
62 Benzene	78	4.849	4.849	0.000	96	674635	25.0	25.7	
63 1,2-Dichloroethane	62	4.884	4.878	0.006	97	204272	25.0	24.6	
65 n-Heptane	43	5.035	5.035	0.000	90	146187	25.0	26.9	
67 Trichloroethene	95	5.335	5.335	0.000	98	162594	25.0	24.9	
68 2-Pentanone	43	5.435	5.435	0.000	99	322635	80.0	86.9	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	173752	25.0	25.4	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	97	179068	25.0	26.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	95	44628	500.0	528.9	
73 Dibromomethane	93	5.614	5.607	0.007	97	95672	25.0	24.1	
74 Dichlorobromomethane	83	5.735	5.728	0.007	98	207660	25.0	24.7	
76 2-Chloroethyl vinyl ether	63	5.936	5.929	0.007	91	95606	25.0	44.7	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	263754	25.0	25.3	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	529338	100.0	118.6	
79 Toluene	91	6.365	6.365	0.000	98	709046	25.0	25.1	
80 trans-1,3-Dichloropropene	75	6.543	6.536	0.007	97	225303	25.0	26.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	197298	25.0	26.4	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	140257	25.0	24.9	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	124012	25.0	25.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	88	267149	25.0	25.5	
85 2-Hexanone	43	6.879	6.872	0.007	95	362251	100.0	110.6	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	149458	25.0	23.7	
88 Ethylene Dibromide	107	7.173	7.173	-0.001	99	143716	25.0	24.0	
89 1-Chlorohexane	91	7.559	7.552	0.007	95	171588	20.0	18.5	
90 Chlorobenzene	112	7.602	7.602	0.000	95	449085	25.0	23.6	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	142465	25.0	23.3	
92 Ethylbenzene	106	7.673	7.673	0.000	98	245626	25.0	23.4	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	303088	25.0	24.1	
94 o-Xylene	106	8.152	8.152	0.000	95	299784	25.0	23.5	
95 Styrene	104	8.166	8.167	-0.001	95	505282	25.0	24.9	
96 Bromoform	173	8.352	8.345	0.007	95	90992	25.0	23.8	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	725962	25.0	23.5	
99 Cyclohexanone	55	8.588	8.588	0.000	90	174855	750.0	604.8	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	183705	25.0	23.6	
101 Bromobenzene	156	8.810	8.810	0.000	95	183443	25.0	23.6	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.810	0.007	79	43789	25.0	21.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	54102	25.0	22.9	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	207365	25.0	24.1	
105 2-Chlorotoluene	126	8.989	8.982	0.007	97	179085	25.0	23.5	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	605397	25.0	23.2	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	189244	25.0	23.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	514050	25.0	23.6	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	636091	25.0	23.6	
111 sec-Butylbenzene	134	9.589	9.590	-0.001	94	152227	25.0	23.3	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	338052	25.0	23.5	
113 4-Isopropyltoluene	119	9.732	9.733	-0.001	97	622444	25.0	23.1	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	346353	25.0	22.7	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	560743	25.0	24.1	
117 1,2-Dichlorobenzene	146	10.168	10.169	-0.001	98	321021	25.0	23.2	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.941	0.007	86	33226	25.0	21.4	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	177192	25.0	25.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	65646	25.0	25.8	
122 Naphthalene	128	12.035	12.035	0.000	97	478495	25.0	26.9	
123 1,2,3-Trichlorobenzene	180	12.256	12.257	-0.001	96	138850	25.0	26.4	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	50.7	
S 139 Xylenes, Total (URS)	1				0		50.0	47.6	
S 136 1,3-Dichloropropene, Total	1				0		50.0	51.3	
S 138 Xylenes, Total	106				0		50.0	47.6	
S 137 Total BTEX	1				0			121.9	
S 140 Trihalomethanes, Total	1				0		100.0	96.8	
S 141 1,2-Dichloroethene, Total	1				0		50.0	50.7	

Reagents:

MV-MegaMain B_00083	Amount Added: 12.50	Units: uL	
MV-Gas B_00132	Amount Added: 5.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

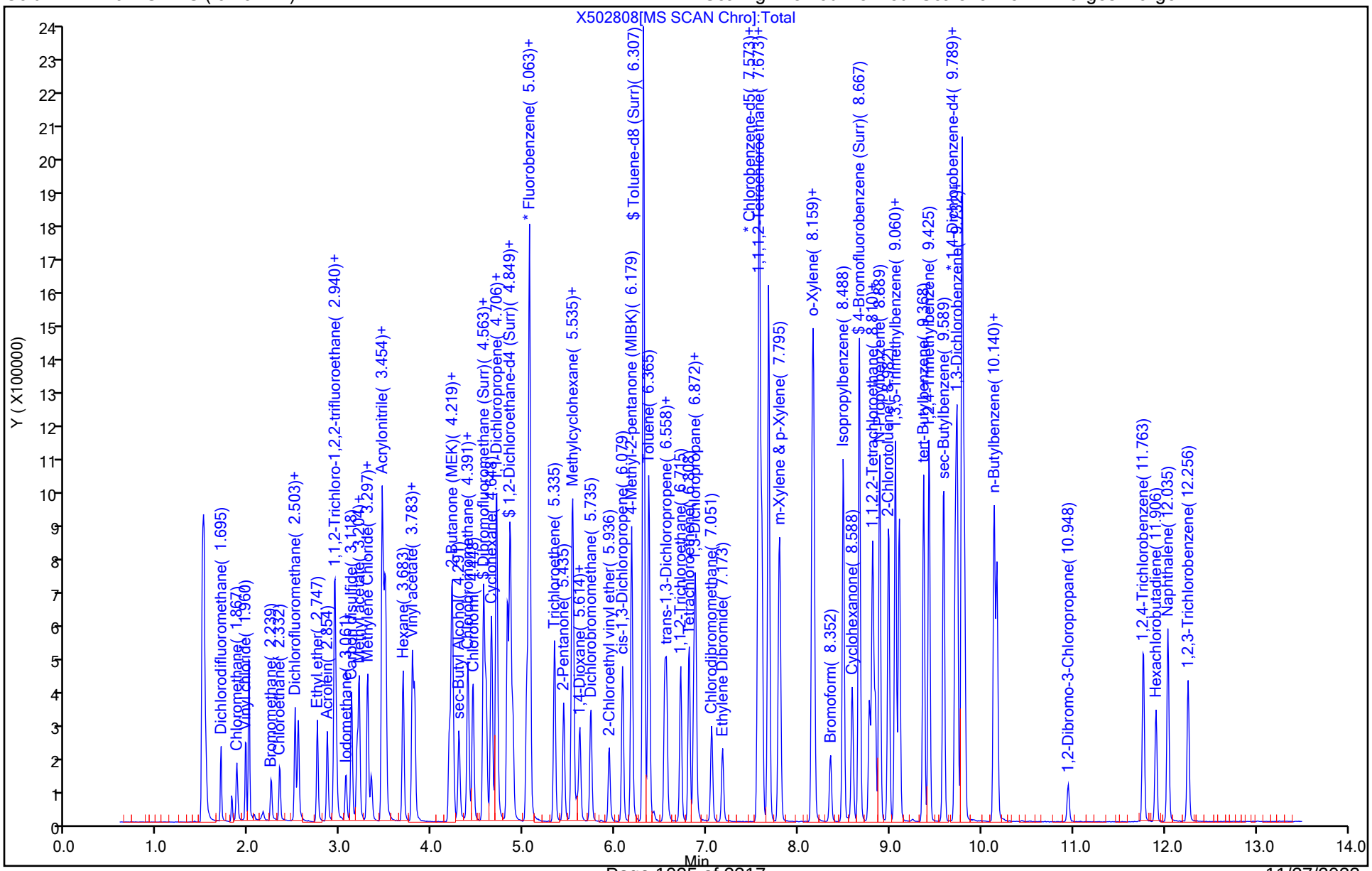
Report Date: 25-Apr-2023 23:01:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502808.D

Injection Date:	25-Apr-2023 17:28:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCVC			Worklist Smp#:	34
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCVC 280-609946/35 | Calibration Date: 04/25/2023 17:49

Instrument ID: VMS_X4 | Calib Start Date: 10/22/2022 15:19

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 10/22/2022 17:23

Lab File ID: X502809.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0029*	0.0100	1650	1500	9.8	50.0
Isopropyl alcohol	Ave	0.0155	0.0137	0.0100	221	250	-11.6	50.0
Acetonitrile	Ave	0.0279	0.0348	0.0100	312	250	24.7	50.0
Isopropyl ether	Ave	0.1867	0.2414	0.0100	32.3	25.0	29.3	50.0
Chloroprene	Ave	0.3274	0.4031	0.0100	30.8	25.0	23.1	50.0
Tert-butyl ethyl ether	Ave	0.6465	0.8043	0.0100	31.1	25.0	24.4	50.0
Ethyl acetate	Ave	0.1934	0.2166	0.0100	56.0	50.0	12.0	50.0
Propionitrile	Ave	0.0311	0.0381	0.0100	307	250	22.7	50.0
Methacrylonitrile	Ave	0.1216	0.1512	0.0100	311	250	24.3	50.0
Tert-amyl methyl ether	Ave	0.6244	0.7557	0.0100	30.3	25.0	21.0	50.0
n-Butanol	Ave	0.0061	0.0057*	0.0100	585	625	-6.3	50.0
Methyl methacrylate	Ave	0.0660	0.0685	0.0100	51.9	50.0	3.7	50.0
2-Nitropropane	Ave	0.0700	0.0426	0.0100	30.4	50.0	-39.1	50.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1854	0.0100	47.1	50.0	-5.9	50.0
1,2,3-Trimethylbenzene	Ave	2.711	2.854	0.0100	26.3	25.0	5.3	50.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.9164	0.0100	27.2	25.0	8.7	50.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502809.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 25-Apr-2023 17:49:30 ALS Bottle#: 31 Worklist Smp#: 35
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Misc. Info.: 280-0120726-035
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 23:01:27 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1679

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1367029	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	329288	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	527094	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	337686	50.0	51.4	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	346632	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	92	1436614	50.0	51.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	479005	50.0	50.9	
18 Ethanol	45	2.647	2.647	0.000	98	119137	1500.0	1646.5	
25 Isopropyl alcohol	45	3.033	3.040	-0.007	99	93661	250.0	221.0	
28 Acetonitrile	41	3.161	3.161	0.000	99	238086	250.0	311.8	
41 Isopropyl ether	87	3.805	3.805	0.000	94	164971	25.0	32.3	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	275535	25.0	30.8	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	549732	25.0	31.1	
46 Ethyl acetate	43	4.198	4.198	0.000	98	296120	50.0	56.0	
49 Propionitrile	54	4.234	4.234	0.000	99	260532	250.0	306.7	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	1033394	250.0	310.8	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	91	516505	25.0	30.3	
66 n-Butanol	56	5.192	5.199	-0.007	87	98088	625.0	585.4	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	93634	50.0	51.9	
75 2-Nitropropane	41	5.900	5.900	0.000	95	58261	50.0	30.4	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	97700	50.0	47.1	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	97	752097	25.0	26.3	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	241515	25.0	27.2	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

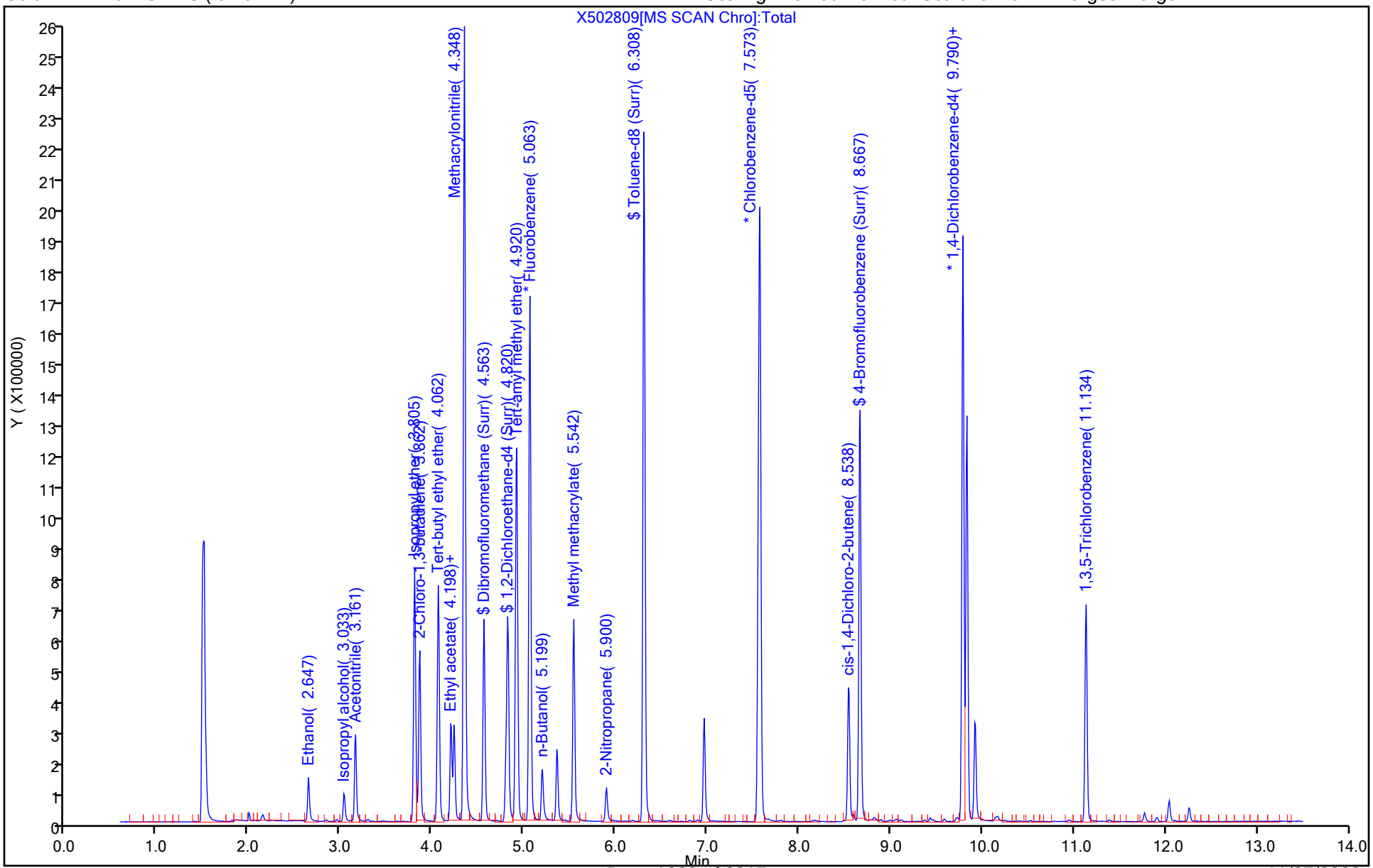
Report Date: 25-Apr-2023 23:01:28 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502809.D

Injection Date:	25-Apr-2023 17:49:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCVC			Worklist Smp#:	35
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCVC 280-609946/35 Calibration Date: 04/25/2023 17:49

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502809.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2405	0.2470	0.0100	51.4	50.0	2.7	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2536	0.0100	50.2	50.0	0.4	50.0
Toluene-d8 (Surr)	Ave	4.259	4.363	0.0100	51.2	50.0	2.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9088	0.0100	50.9	50.0	1.7	50.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502809.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 25-Apr-2023 17:49:30 ALS Bottle#: 31 Worklist Smp#: 35
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Misc. Info.: 280-0120726-035
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 23:01:27 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1679

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1367029	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	329288	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	527094	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	337686	50.0	51.4	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	346632	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	92	1436614	50.0	51.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	479005	50.0	50.9	
18 Ethanol	45	2.647	2.647	0.000	98	119137	1500.0	1646.5	
25 Isopropyl alcohol	45	3.033	3.040	-0.007	99	93661	250.0	221.0	
28 Acetonitrile	41	3.161	3.161	0.000	99	238086	250.0	311.8	
41 Isopropyl ether	87	3.805	3.805	0.000	94	164971	25.0	32.3	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	275535	25.0	30.8	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	549732	25.0	31.1	
46 Ethyl acetate	43	4.198	4.198	0.000	98	296120	50.0	56.0	
49 Propionitrile	54	4.234	4.234	0.000	99	260532	250.0	306.7	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	1033394	250.0	310.8	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	91	516505	25.0	30.3	
66 n-Butanol	56	5.192	5.199	-0.007	87	98088	625.0	585.4	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	93634	50.0	51.9	
75 2-Nitropropane	41	5.900	5.900	0.000	95	58261	50.0	30.4	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	97700	50.0	47.1	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	97	752097	25.0	26.3	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	241515	25.0	27.2	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

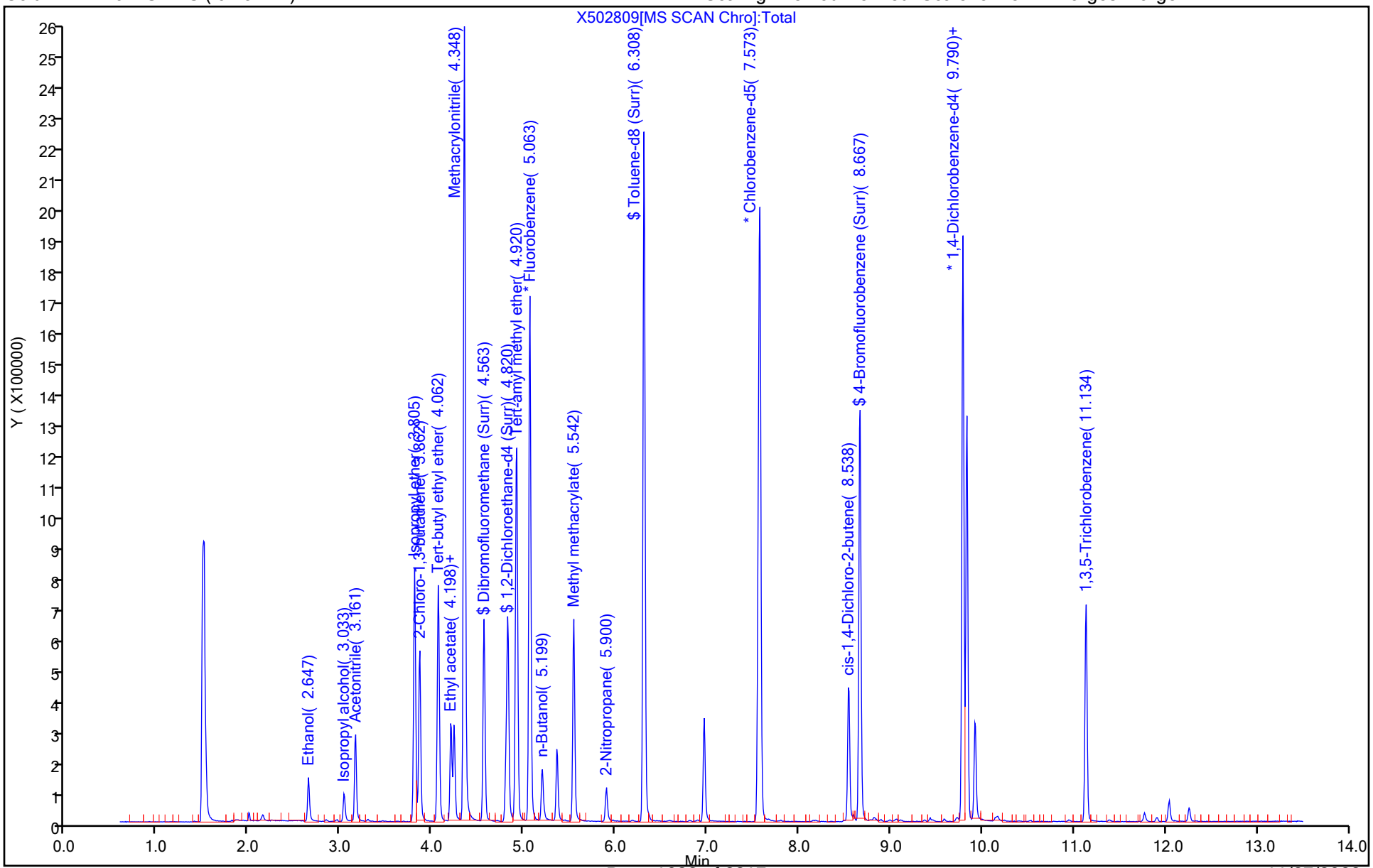
Report Date: 25-Apr-2023 23:01:28 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502809.D

Injection Date:	25-Apr-2023 17:49:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCVC			Worklist Smp#:	35
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0726.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 04-Dec-2022 14:15:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: blk
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Dec-2022 06:31:00 Calib Date: 04-Dec-2022 22:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0745.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1686

First Level Reviewer: BX8N Date: 04-Dec-2022 14:39:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	3.922	3.922	0.000	88	632258	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

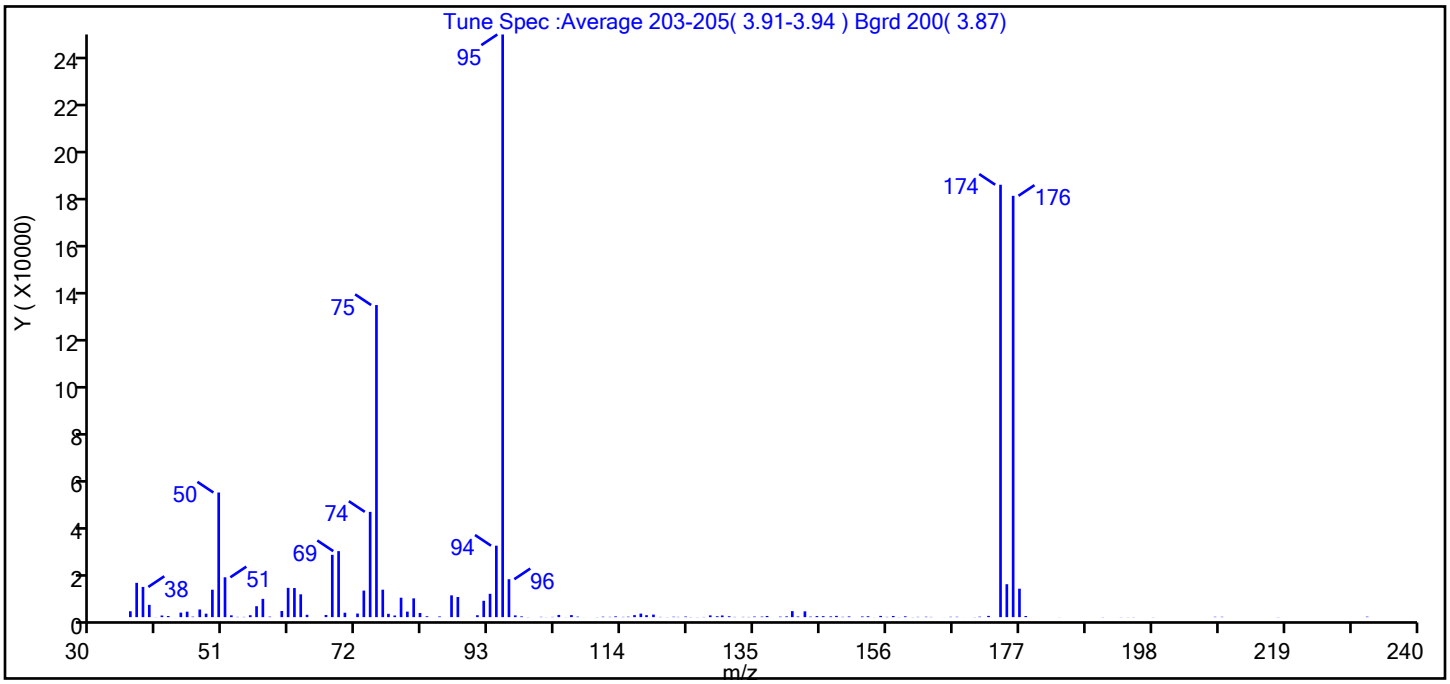
mv-Cent BFB_00004 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0726.D
Injection Date: 04-Dec-2022 14:15:30 Instrument ID: VMS_MS11
Lims ID: BFB
Client ID:
Operator ID: MED ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.4
75	30 to 60% of m/z 95	53.6
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	74.2
175	5 to 9% of m/z 174	5.6 (7.6)
176	Greater than 95% but less than 101% of m/z 174	72.3 (97.4)
177	5 to 9% of m/z 176	4.9 (6.8)

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0726.D\AQ_VMS11_8260.rslt\spect
Injection Date: 04-Dec-2022 14:15:30
Spectrum: Tune Spec :Average 203-205(3.91-3.94) Bgrd 200(3.87)
Base Peak: 95.10
Minimum % Base Peak: 0
Number of Points: 137

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2444	76.00	11403	117.00	1478	154.00	31
37.00	14238	77.00	1379	118.00	813	155.00	518
38.00	12542	78.00	682	119.00	1061	156.00	118
39.00	5102	79.00	8075	120.00	102	157.00	487
40.00	47	80.00	2296	121.00	55	158.00	53
41.00	683	81.00	7797	122.00	170	159.00	347
42.00	465	82.00	1727	123.00	109	160.00	56
44.00	1876	83.00	367	124.00	253	161.00	114
45.00	2272	85.00	291	125.00	67	162.00	174
46.00	203	87.00	9046	126.00	53	163.00	92
47.00	3177	88.00	8357	127.00	78	165.00	18
48.00	1447	91.00	796	128.00	730	166.00	145
49.00	11392	92.00	6794	129.00	379	167.00	153
50.00	51760	93.00	9692	130.00	692	168.00	8
51.00	16544	94.00	29680	131.00	366	170.00	57
52.00	743	95.00	241984	132.00	100	171.00	194
53.00	114	96.00	15752	133.00	109	172.00	526
54.00	103	97.00	731	134.00	87	174.00	179584
55.00	794	98.00	323	135.00	244	175.00	13672
56.00	4546	99.00	52	136.00	233	176.00	174976
57.00	7584	101.00	127	137.00	486	177.00	11825
58.00	200	102.00	38	139.00	203	178.00	461
60.00	2552	103.00	105	140.00	313	183.00	32
61.00	12162	104.00	916	141.00	2496	190.00	63
62.00	12088	105.00	37	142.00	261	193.00	58
63.00	9479	106.00	852	143.00	2405	194.00	51
64.00	975	107.00	202	144.00	203	195.00	58
67.00	895	108.00	15	145.00	442	198.00	53
68.00	25872	110.00	53	146.00	406	208.00	155
69.00	27416	111.00	195	147.00	318	209.00	147
70.00	1844	112.00	120	148.00	524	218.00	61
72.00	1496	113.00	320	149.00	131	232.00	199
73.00	11028	114.00	109	150.00	297		

Report Date: 05-Dec-2022 06:31:01 Chrom Revision: 2.3 01-Dec-2022 08:01:02
Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0726.D\AQ_VMS11_8260.rslt\spect
Injection Date: 04-Dec-2022 14:15:30
Spectrum: Tune Spec :Average 203-205(3.91-3.94) Bgrd 200(3.87)
Base Peak: 95.10
Minimum % Base Peak: 0
Number of Points: 137

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	43728	115.00	192	152.00	279		
75.00	129624	116.00	837	153.00	367		

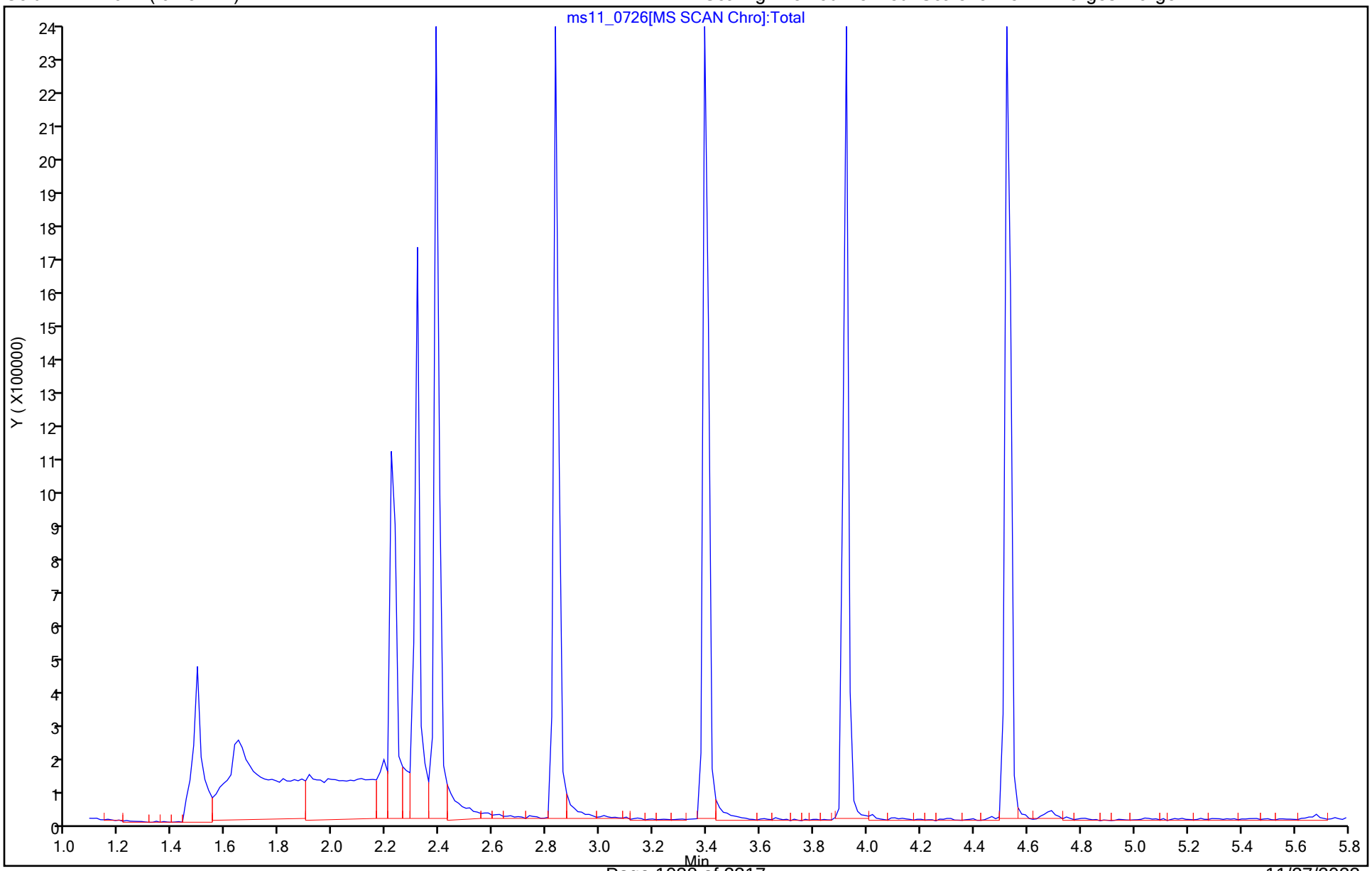
Report Date: 05-Dec-2022 06:31:01 Chrom Revision: 2.3 01-Dec-2022 08:01:02

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20221204-116685.b\ms11_0726.D

Injection Date:	04-Dec-2022 14:15:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5231.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 13-Apr-2023 13:39:30 ALS Bottle#: 4 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 16:27:50 Calib Date: 13-Apr-2023 17:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5241.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	8.643	8.643	0.000	83	544424	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

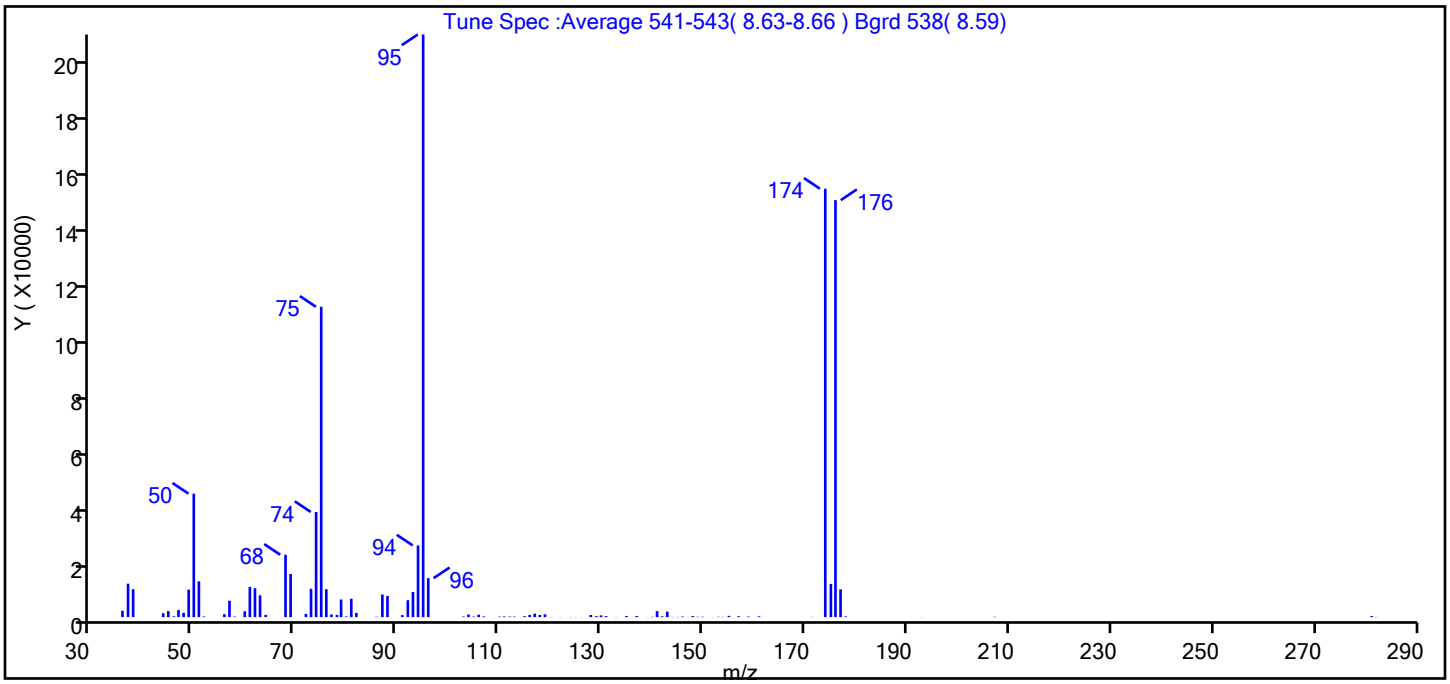
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5231.D
Injection Date: 13-Apr-2023 13:39:30 Instrument ID: VMS_MS11
Lims ID: BFB
Client ID:
Operator ID: MED ALS Bottle#: 4 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.2
75	30 to 60% of m/z 95	53.3
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	73.5
175	5 to 9% of m/z 174	5.7 (7.8)
176	Greater than 95% but less than 101% of m/z 174	71.6 (97.3)
177	5 to 9% of m/z 176	4.8 (6.7)

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5231.D\AQ_VMS11_8260.rslt\spect
Injection Date: 13-Apr-2023 13:39:30
Spectrum: Tune Spec :Average 541-543(8.63-8.66) Bgrd 538(8.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 97

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2302	75.00	111656	113.00	192	146.00	231
37.00	12038	76.00	10036	115.00	342	147.00	59
38.00	10056	77.00	975	116.00	771	148.00	395
44.00	1400	78.00	807	117.00	1266	149.00	135
45.00	2165	79.00	6340	118.00	791	150.00	165
46.00	304	80.00	247	119.00	1039	152.00	53
47.00	2585	81.00	6625	120.00	52	153.00	135
48.00	1565	82.00	1514	122.00	56	154.00	84
49.00	9898	86.00	142	124.00	68	155.00	459
50.00	44424	87.00	8139	125.00	60	157.00	331
51.00	12896	88.00	7627	126.00	51	159.00	199
52.00	247	91.00	726	128.00	774	161.00	283
56.00	1057	92.00	6104	129.00	355	171.00	73
57.00	5899	93.00	9050	130.00	641	174.00	154112
58.00	204	94.00	25792	131.00	378	175.00	11955
60.00	2104	95.00	209600	133.00	64	176.00	150016
61.00	10893	96.00	14015	135.00	412	177.00	9985
62.00	10395	103.00	214	137.00	407	178.00	271
63.00	7843	104.00	931	139.00	58	193.00	52
64.00	822	105.00	212	140.00	131	207.00	123
68.00	22448	106.00	882	141.00	2158	281.00	386
69.00	15527	107.00	273	142.00	294	282.00	86
72.00	1174	110.00	187	143.00	1997		
73.00	10199	111.00	266	144.00	75		
74.00	37832	112.00	206	145.00	89		

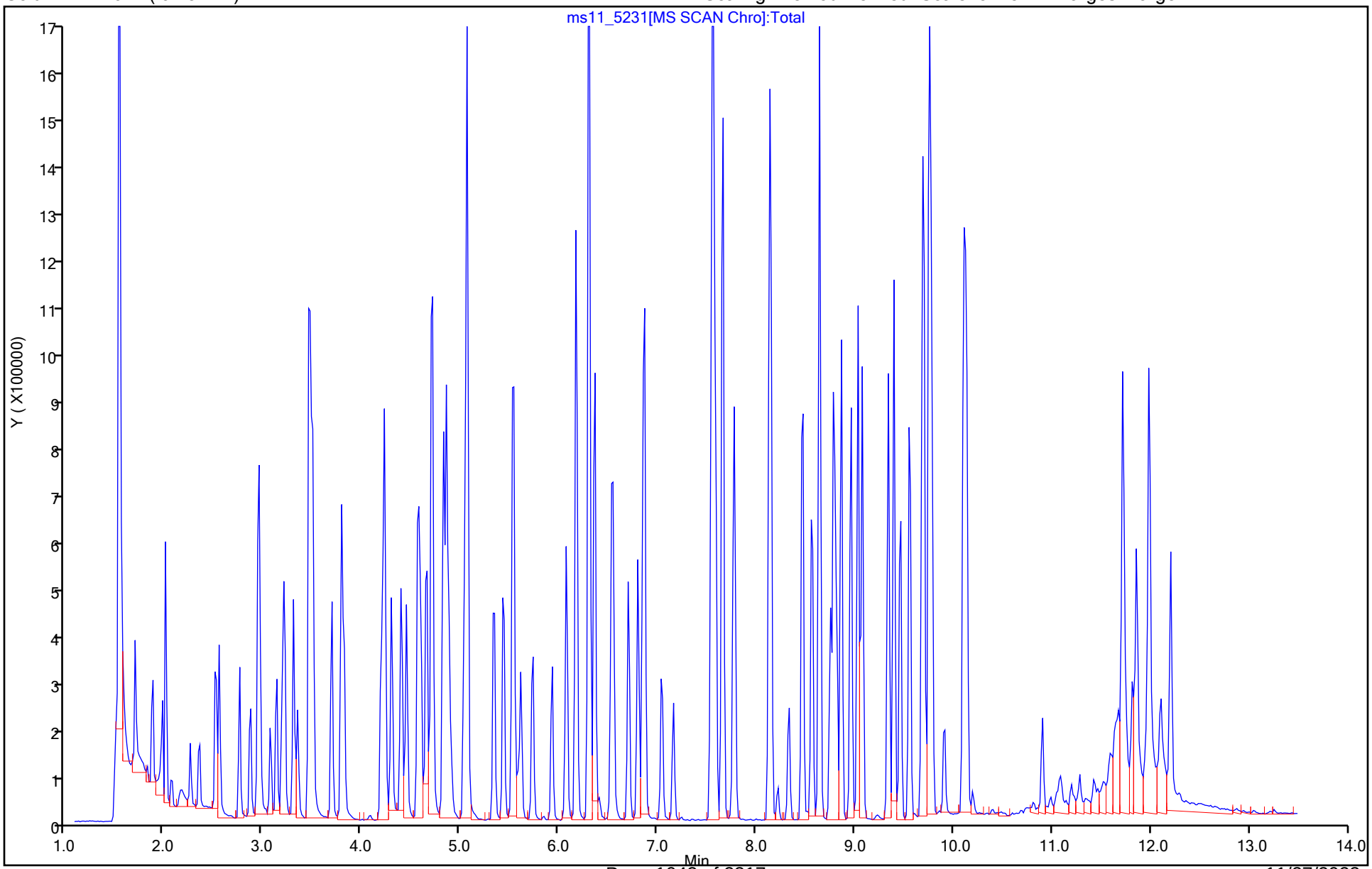
Report Date: 14-Apr-2023 16:27:51 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230413-120378.b\ms11_5231.D

Injection Date:	13-Apr-2023 13:39:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5272.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 14-Apr-2023 10:24:30 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Apr-2023 17:21:02 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1650

First Level Reviewer: BX8N Date: 14-Apr-2023 11:26:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	8.643	8.643	0.000	78	478886	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

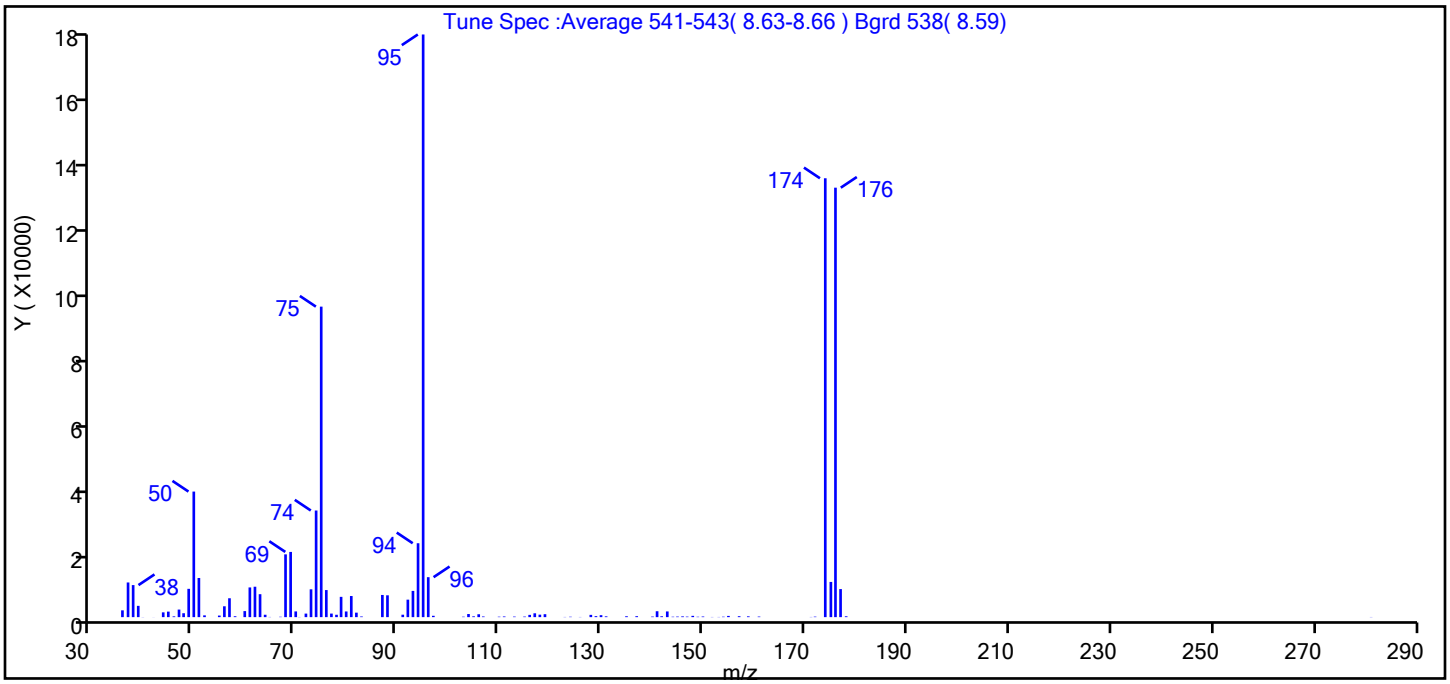
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5272.D
Injection Date: 14-Apr-2023 10:24:30 Instrument ID: VMS_MS11
Lims ID: BFB
Client ID:
Operator ID: MED ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.6
75	30 to 60% of m/z 95	53.3
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	75.3
175	5 to 9% of m/z 174	6.0 (8.0)
176	Greater than 95% but less than 101% of m/z 174	73.7 (97.9)
177	5 to 9% of m/z 176	4.8 (6.5)

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5272.D\AQ_VMS11_8260.rslt\spect
Injection Date: 14-Apr-2023 10:24:30
Spectrum: Tune Spec :Average 541-543(8.63-8.66) Bgrd 538(8.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 99

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2080	67.00	118	97.00	411	142.00	264
37.00	10603	68.00	19200	103.00	134	143.00	1742
38.00	9802	69.00	19944	104.00	952	144.00	130
39.00	3453	70.00	1751	105.00	248	145.00	175
40.00	35	71.00	50	106.00	884	146.00	230
42.00	20	72.00	1085	107.00	202	147.00	164
44.00	1466	73.00	8509	110.00	138	148.00	394
45.00	1691	74.00	32608	111.00	203	149.00	120
46.00	236	75.00	94952	113.00	167	150.00	191
47.00	2315	76.00	8281	115.00	172	152.00	55
48.00	1199	77.00	1091	116.00	695	153.00	57
49.00	8658	78.00	726	117.00	1178	154.00	135
50.00	38400	79.00	6203	118.00	758	155.00	378
51.00	11969	80.00	1740	119.00	902	157.00	282
52.00	545	81.00	6460	123.00	58	159.00	243
55.00	482	82.00	1372	124.00	123	161.00	178
56.00	3320	83.00	201	126.00	54	171.00	57
57.00	5775	87.00	6782	128.00	697	172.00	154
58.00	273	88.00	6678	129.00	301	174.00	134208
60.00	1848	91.00	745	130.00	600	175.00	10766
61.00	9085	92.00	5348	131.00	240	176.00	131328
62.00	9302	93.00	8022	135.00	271	177.00	8580
63.00	7020	94.00	22600	137.00	294	178.00	260
64.00	733	95.00	178176	140.00	175	281.00	50
65.00	59	96.00	12219	141.00	1809		

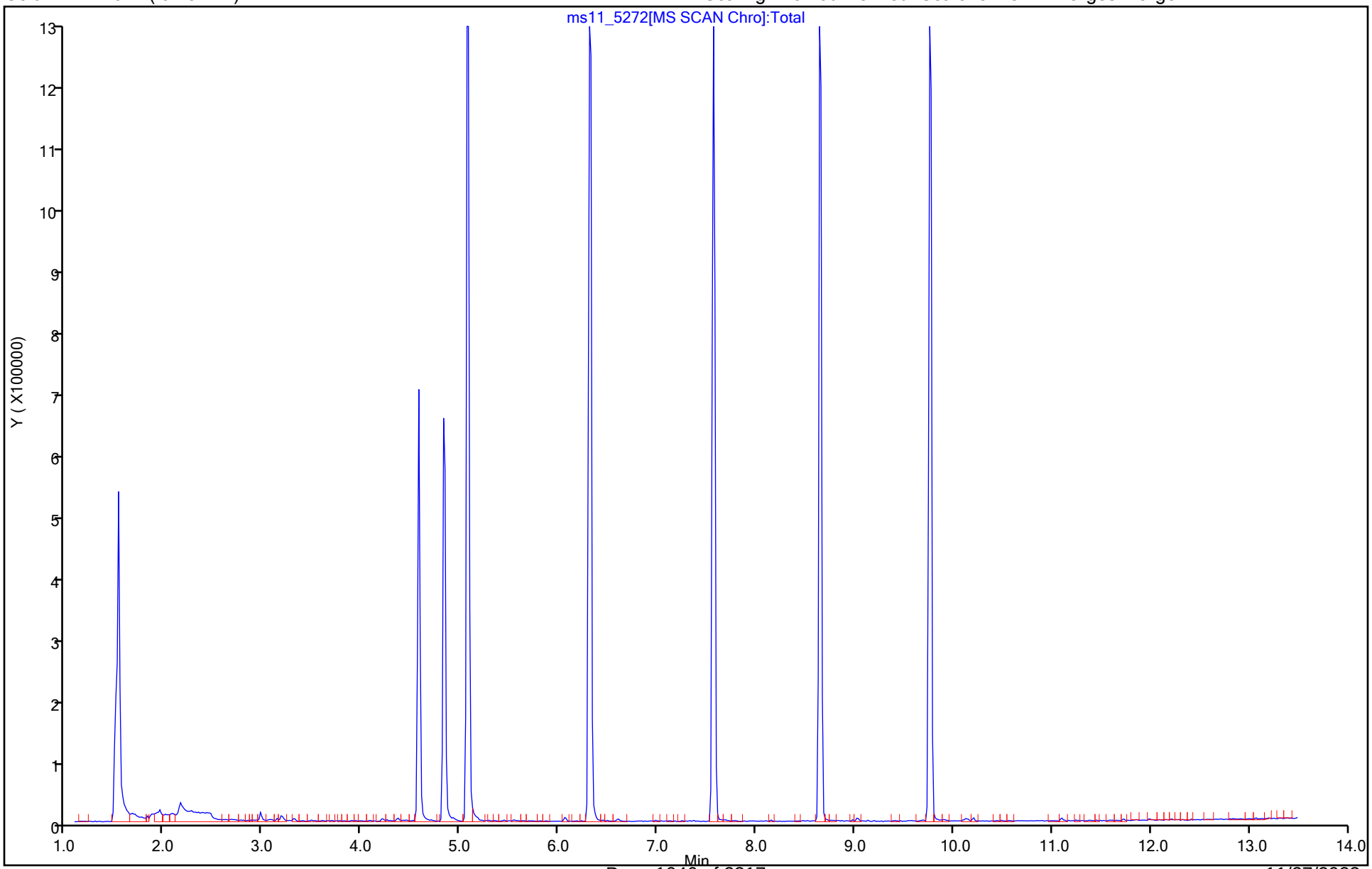
Report Date: 14-Apr-2023 17:21:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5272.D

Injection Date:	14-Apr-2023 10:24:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5426.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 18-Apr-2023 09:36:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:12 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	8.643	8.643	0.000	85	548048	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

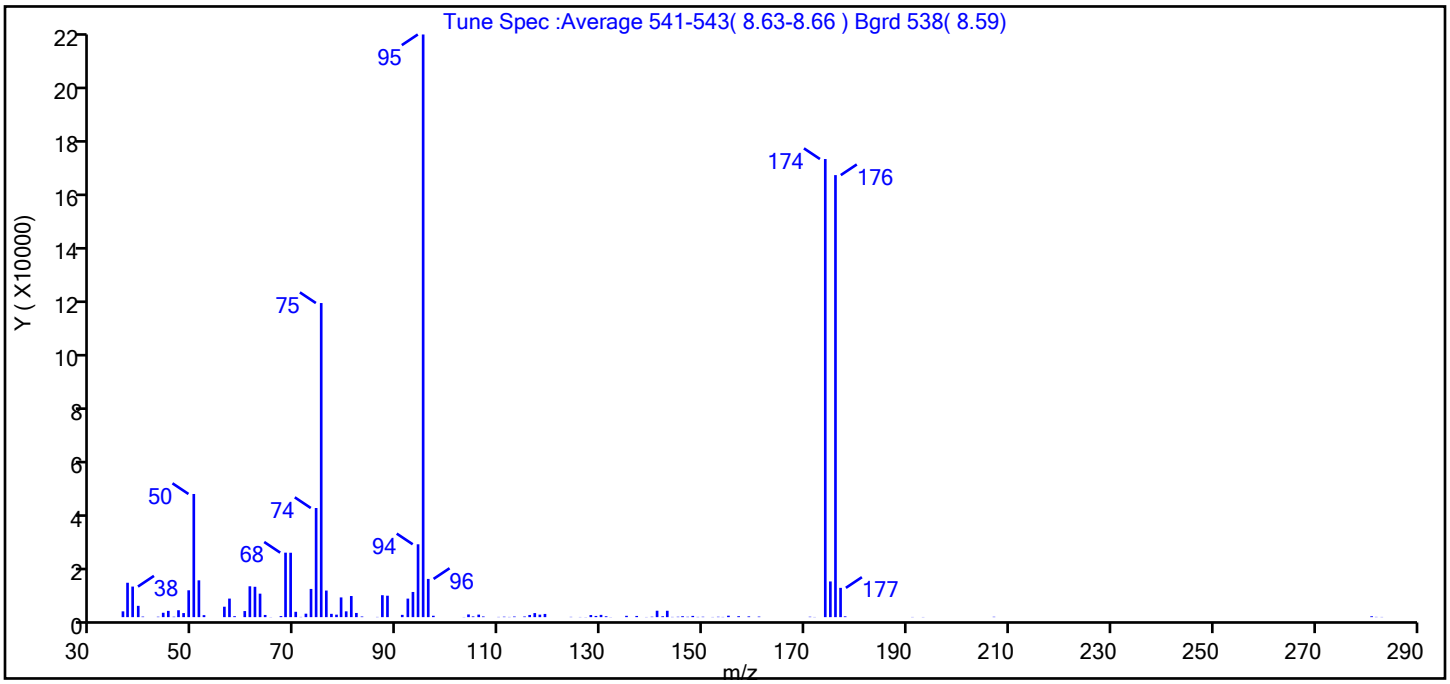
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5426.D
Injection Date: 18-Apr-2023 09:36:30 Instrument ID: VMS_MS11
Lims ID: BFB
Client ID:
Operator ID: MED ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.1
75	30 to 60% of m/z 95	53.9
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	78.6
175	5 to 9% of m/z 174	6.1 (7.8)
176	Greater than 95% but less than 101% of m/z 174	75.9 (96.5)
177	5 to 9% of m/z 176	5.0 (6.6)

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5426.D\AQ_VMS11_8260.rslt\spect
Injection Date: 18-Apr-2023 09:36:30
Spectrum: Tune Spec :Average 541-543(8.63-8.66) Bgrd 538(8.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 107

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2103	70.00	1938	106.00	917	145.00	141
37.00	12458	71.00	79	107.00	247	146.00	337
38.00	11077	72.00	1255	110.00	82	147.00	134
39.00	4094	73.00	10222	111.00	163	148.00	449
40.00	200	74.00	39536	112.00	77	149.00	87
43.00	152	75.00	113784	113.00	223	150.00	146
44.00	1586	76.00	9635	115.00	238	152.00	66
45.00	2270	77.00	1196	116.00	790	153.00	138
46.00	157	78.00	902	117.00	1473	154.00	74
47.00	2498	79.00	7145	118.00	902	155.00	519
48.00	1478	80.00	2108	119.00	1165	157.00	339
49.00	9728	81.00	7653	124.00	100	159.00	276
50.00	44616	82.00	1520	126.00	63	161.00	207
51.00	13335	83.00	231	127.00	51	171.00	148
52.00	721	86.00	80	128.00	764	172.00	62
56.00	3778	87.00	7946	129.00	436	174.00	165952
57.00	6721	88.00	7767	130.00	820	175.00	12933
58.00	345	91.00	827	131.00	314	176.00	160128
60.00	2203	92.00	6715	132.00	50	177.00	10615
61.00	11181	93.00	9121	135.00	481	178.00	284
62.00	10998	94.00	26392	137.00	435	191.00	67
63.00	8511	95.00	211072	139.00	61	193.00	59
64.00	793	96.00	13849	140.00	166	207.00	133
65.00	53	97.00	502	141.00	2324	281.00	317
67.00	381	103.00	56	142.00	316	282.00	91
68.00	23360	104.00	973	143.00	2312	283.00	72
69.00	23328	105.00	263	144.00	85		

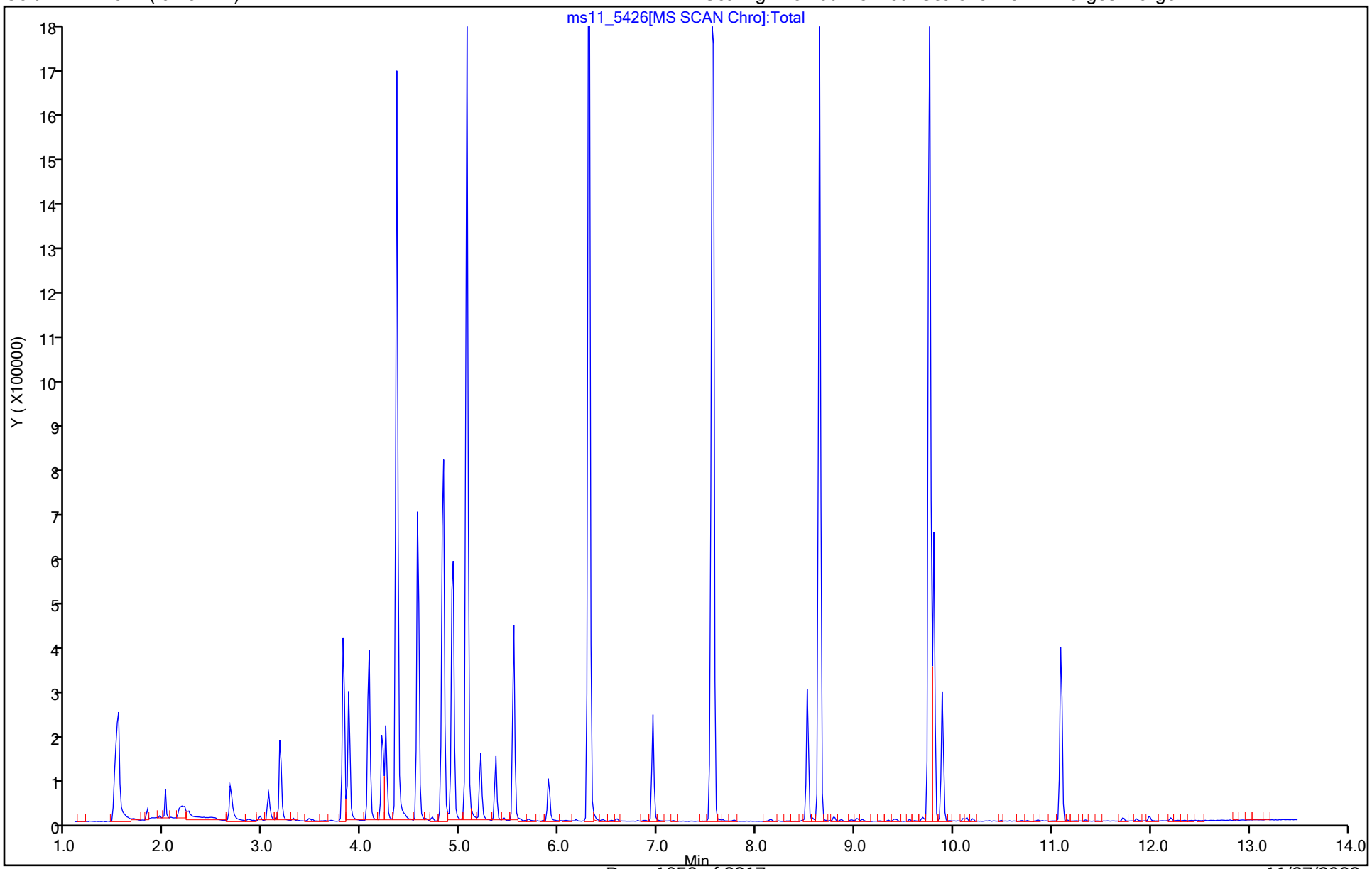
Report Date: 18-Apr-2023 15:38:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5426.D

Injection Date:	18-Apr-2023 09:36:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	22-Oct-2022 11:07:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	2.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	24-Oct-2022 11:52:40	Calib Date:	22-Oct-2022 17:23:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1674				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.547	3.547	0.000	85	446769	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

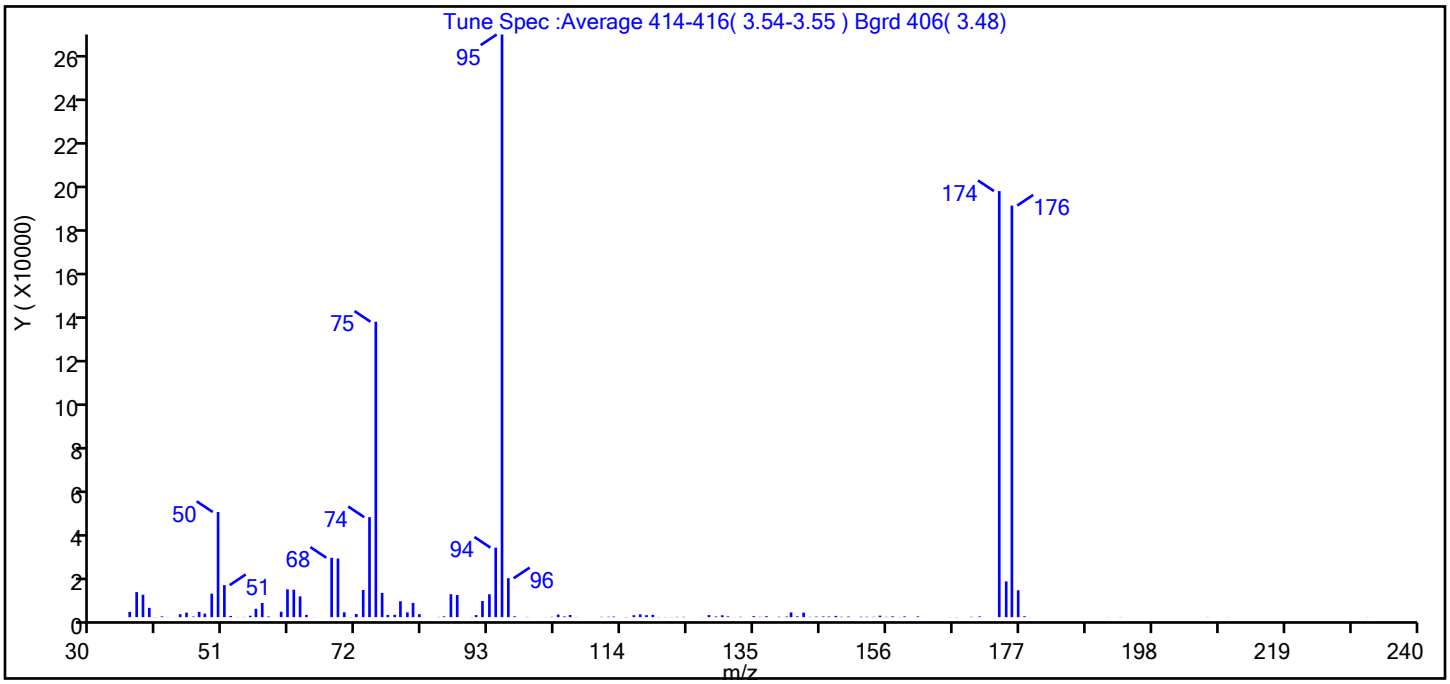
mv-Cent BFB_00004 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D
Injection Date: 22-Oct-2022 11:07:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.0
75	30 to 60% of m/z 95	50.7
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	73.1
175	5 to 9% of m/z 174	6.1 (8.4)
176	Greater than 95% but less than 101% of m/z 174	70.6 (96.6)
177	5 to 9% of m/z 176	4.6 (6.5)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 22-Oct-2022 11:07:30
Spectrum: Tune Spec :Average 414-416(3.54-3.55) Bgrd 406(3.48)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2338	71.00	85	110.00	9	145.00	253
37.00	11173	72.00	1409	111.00	137	146.00	303
38.00	10014	73.00	12114	112.00	193	147.00	279
39.00	4149	74.00	44616	113.00	265	148.00	578
40.00	63	75.00	131840	114.00	64	149.00	166
41.00	336	76.00	10814	115.00	76	150.00	283
42.00	68	77.00	986	116.00	866	152.00	184
44.00	1301	78.00	1056	117.00	1248	153.00	188
45.00	2033	79.00	7105	118.00	904	154.00	142
46.00	259	80.00	2140	119.00	1020	155.00	677
47.00	2358	81.00	6374	120.00	89	156.00	139
48.00	1581	82.00	1331	121.00	78	157.00	357
49.00	10484	84.00	9	122.00	74	158.00	89
50.00	46912	85.00	96	123.00	142	159.00	337
51.00	14286	86.00	353	124.00	142	161.00	342
52.00	543	87.00	10254	127.00	43	166.00	46
53.00	79	88.00	9886	128.00	931	167.00	65
54.00	85	90.00	65	129.00	310	169.00	136
55.00	612	91.00	908	130.00	843	170.00	34
56.00	3738	92.00	7210	131.00	347	171.00	323
57.00	6328	93.00	10187	132.00	35	174.00	190144
58.00	286	94.00	31024	133.00	162	175.00	15946
60.00	2421	95.00	260032	134.00	13	176.00	183680
61.00	12385	96.00	17360	135.00	439	177.00	11982
62.00	12211	97.00	377	136.00	148	178.00	401
63.00	9272	99.00	115	137.00	424	179.00	39
64.00	1004	102.00	39	139.00	187	191.00	40
65.00	52	103.00	154	140.00	264	193.00	80
66.00	14	104.00	1131	141.00	2128	207.00	89
68.00	26504	105.00	328	142.00	354	210.00	45
69.00	26168	106.00	963	143.00	2015	232.00	51
70.00	2145	107.00	82	144.00	127		

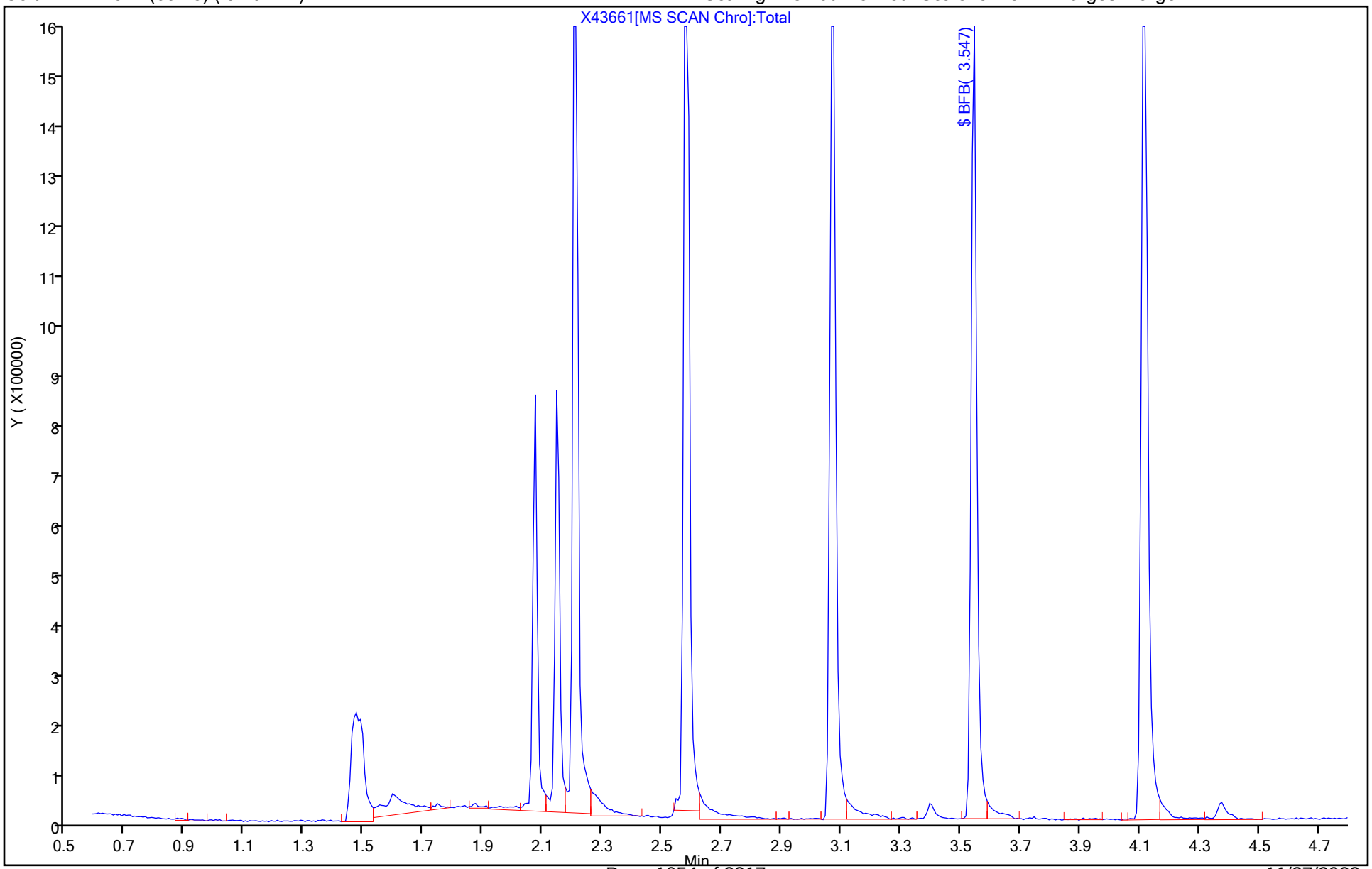
Report Date: 24-Oct-2022 11:52:40 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D

Injection Date:	22-Oct-2022 11:07:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	07-Apr-2023 02:33:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	2.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	bj	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	10-Apr-2023 11:30:21	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1637				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.549	3.549	0.000	88	436891	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

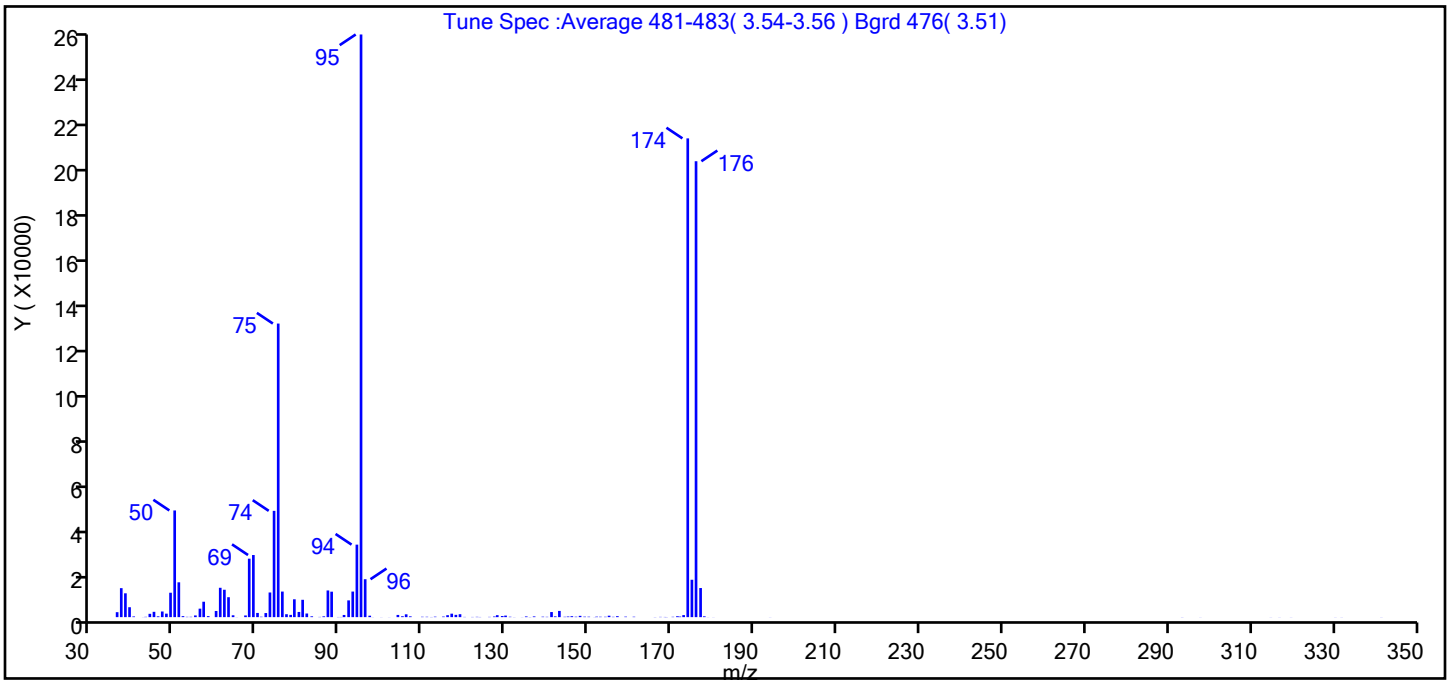
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D
Injection Date: 07-Apr-2023 02:33:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: bj ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.3
75	30 to 60% of m/z 95	50.4
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.4 (0.4)
174	50 to 120% of m/z 95	82.2
175	5 to 9% of m/z 174	6.4 (7.8)
176	Greater than 95% but less than 101% of m/z 174	78.2 (95.2)
177	5 to 9% of m/z 176	5.0 (6.4)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 07-Apr-2023 02:33:30
Spectrum: Tune Spec :Average 481-483(3.54-3.56) Bgrd 476(3.51)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 135

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2183	73.00	10844	112.00	71	151.00	42
37.00	12751	74.00	46752	113.00	209	152.00	212
38.00	10483	75.00	129120	115.00	250	153.00	179
39.00	4364	76.00	11248	116.00	864	154.00	164
40.00	303	77.00	1290	117.00	1527	155.00	634
42.00	35	78.00	990	118.00	1010	156.00	144
43.00	135	79.00	7856	119.00	1286	157.00	426
44.00	1461	80.00	2280	120.00	96	159.00	224
45.00	2340	81.00	7630	122.00	88	161.00	187
46.00	349	82.00	1600	123.00	135	166.00	60
47.00	2484	83.00	355	124.00	78	167.00	112
48.00	1534	85.00	99	126.00	114	168.00	85
49.00	10734	86.00	349	127.00	281	169.00	54
50.00	46920	87.00	11739	128.00	868	170.00	152
51.00	15321	88.00	11195	129.00	489	171.00	397
52.00	439	90.00	73	130.00	677	172.00	234
53.00	138	90.00	80	131.00	175	173.00	897
54.00	148	91.00	957	132.00	45	174.00	210560
55.00	749	92.00	7370	134.00	38	175.00	16448
56.00	3730	93.00	11252	135.00	310	176.00	200512
57.00	6780	94.00	31888	136.00	61	177.00	12803
58.00	445	95.00	256256	137.00	321	178.00	356
60.00	2713	96.00	16680	139.00	204	179.00	36
61.00	12912	97.00	632	140.00	143	180.00	34
62.00	12049	98.00	37	141.00	2240	194.00	35
63.00	8765	100.00	35	142.00	333	293.00	48
64.00	817	102.00	35	143.00	2734	298.00	34
65.00	35	103.00	4	144.00	160	315.00	36
67.00	739	104.00	972	145.00	276	317.00	38
68.00	25712	105.00	392	146.00	414	320.00	36
69.00	27320	106.00	1245	147.00	191	330.00	37
70.00	1848	107.00	349	148.00	572	332.00	38
71.00	183	110.00	166	149.00	207	341.00	39

Report Date: 10-Apr-2023 11:30:21 Chrom Revision: 2.3 16-Mar-2023 15:40:40
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 07-Apr-2023 02:33:30
Spectrum: Tune Spec :Average 481-483(3.54-3.56) Bgrd 476(3.51)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 135

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	1801	111.00	165	150.00	198		

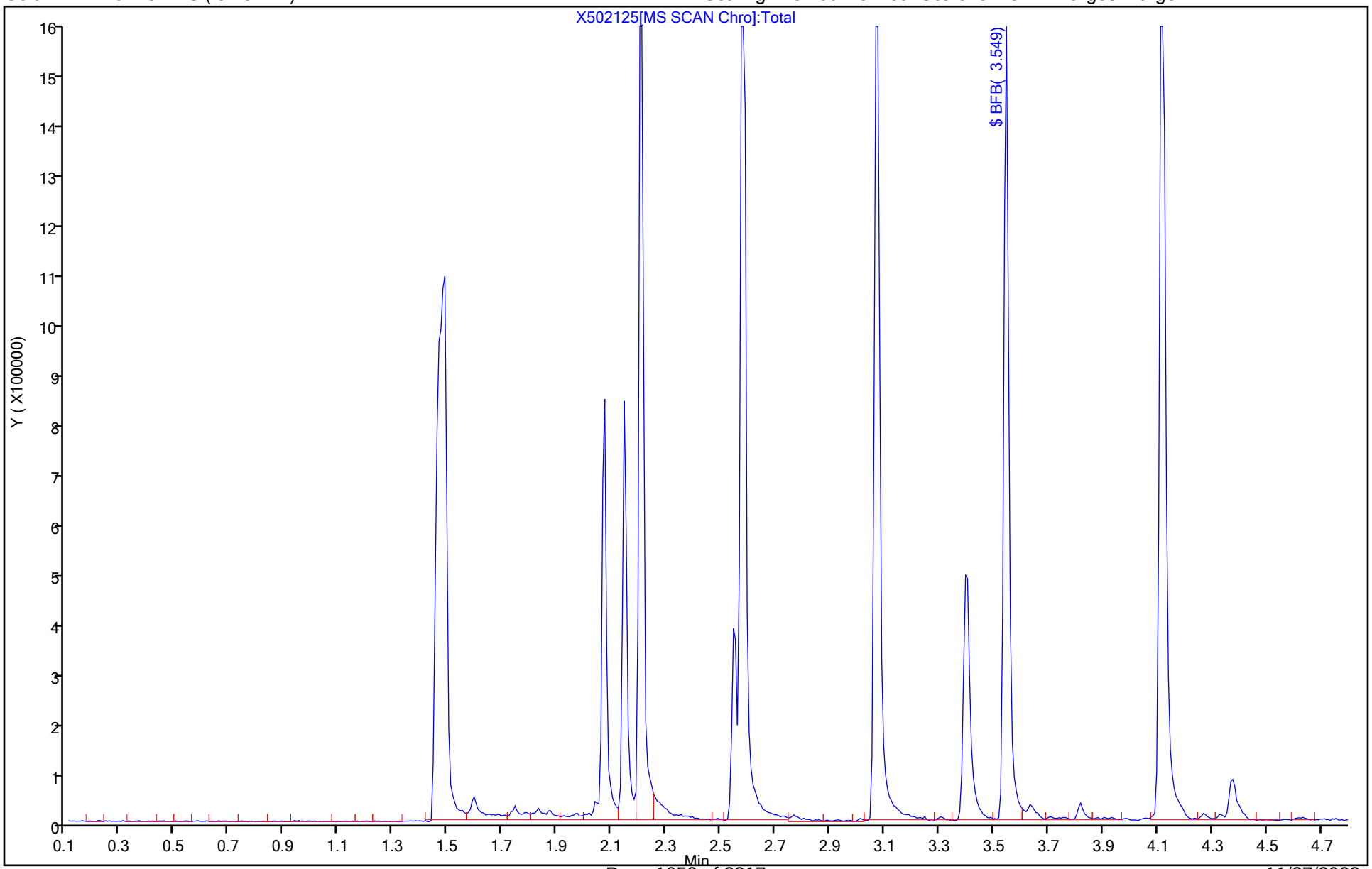
Report Date: 10-Apr-2023 11:30:21 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D

Injection Date:	07-Apr-2023 02:33:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 10-Apr-2023 21:51:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: COULTERD Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 01:28:25 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1663

First Level Reviewer: NNS5 Date: 10-Apr-2023 22:47:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.547	3.547	0.000	0	468110	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

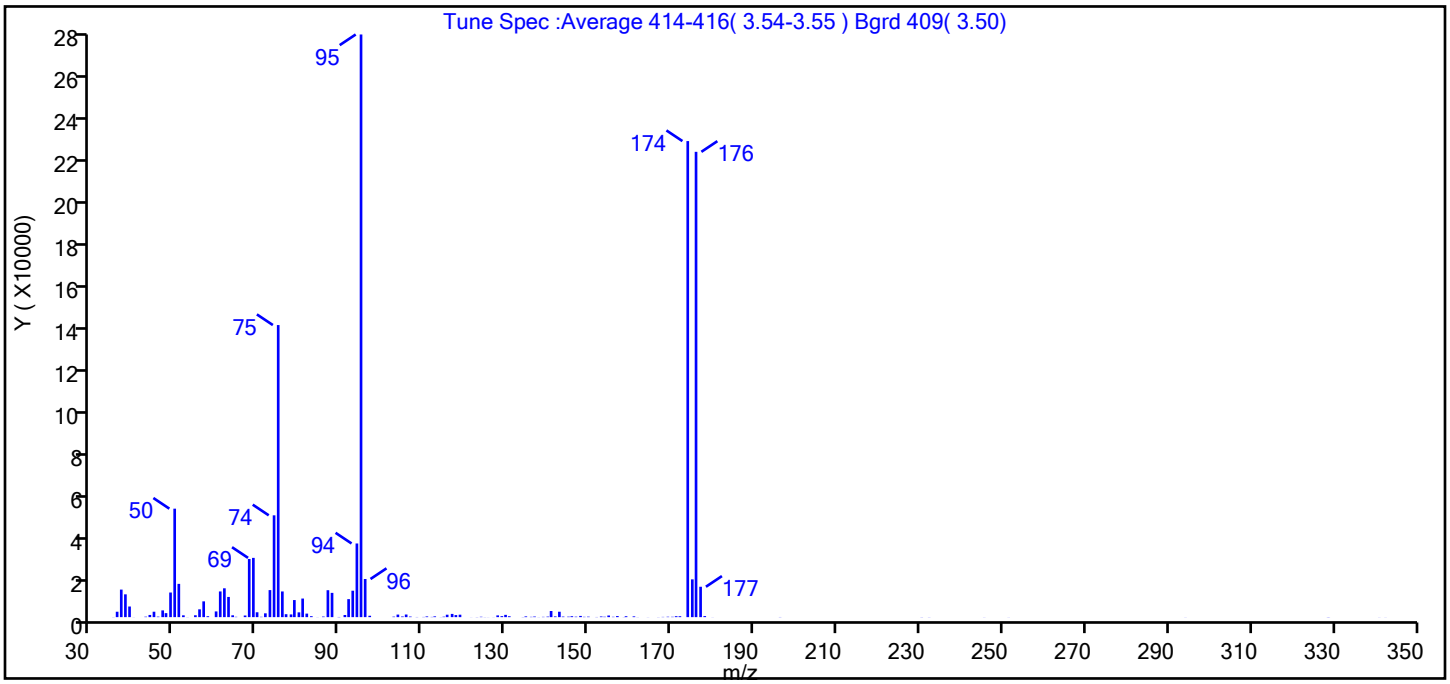
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D
Injection Date: 10-Apr-2023 21:51:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: COULTERD ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.6
75	30 to 60% of m/z 95	50.1
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	81.7
175	5 to 9% of m/z 174	6.5 (7.9)
176	Greater than 95% but less than 101% of m/z 174	79.9 (97.7)
177	5 to 9% of m/z 176	5.2 (6.5)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 10-Apr-2023 21:51:30
Spectrum: Tune Spec :Average 414-416(3.54-3.55) Bgrd 409(3.50)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	54	73.00	12727	114.00	45	153.00	311
36.00	2548	74.00	47920	115.00	215	154.00	191
37.00	12967	75.00	137472	116.00	1145	155.00	768
38.00	10736	76.00	12090	117.00	1522	156.00	163
39.00	5007	77.00	1388	118.00	972	157.00	505
40.00	37	78.00	1277	119.00	1153	158.00	50
42.00	3	79.00	8037	122.00	33	159.00	427
43.00	216	80.00	2250	123.00	61	161.00	363
44.00	1028	81.00	8754	124.00	177	162.00	45
45.00	2555	82.00	1664	125.00	49	164.00	38
46.00	242	83.00	440	126.00	37	167.00	50
47.00	3179	84.00	39	127.00	35	168.00	113
48.00	1892	86.00	272	128.00	822	169.00	192
49.00	11590	87.00	12679	129.00	462	170.00	168
50.00	51056	88.00	11424	130.00	1076	171.00	445
51.00	15660	90.00	78	131.00	416	172.00	430
52.00	853	90.00	40	134.00	65	174.00	224064
53.00	46	91.00	1008	135.00	352	175.00	17784
55.00	887	92.00	8481	136.00	141	176.00	219008
56.00	3683	93.00	12443	137.00	284	177.00	14304
57.00	7433	94.00	34672	138.00	45	178.00	490
58.00	427	95.00	274240	139.00	141	180.00	37
60.00	2694	96.00	17952	140.00	251	196.00	73
61.00	12097	97.00	652	141.00	2888	230.00	62
62.00	13575	103.00	236	142.00	342	232.00	52
63.00	9507	104.00	1207	143.00	2546	246.00	39
64.00	865	105.00	310	144.00	262	251.00	35
65.00	154	106.00	1238	145.00	228	294.00	38
67.00	768	107.00	274	146.00	431	328.00	47
68.00	27376	108.00	76	147.00	216	329.00	45
69.00	27896	110.00	95	148.00	577	341.00	38
70.00	2292	111.00	342	149.00	147	342.00	34
71.00	152	112.00	108	150.00	228		

Report Date: 11-Apr-2023 01:28:25 Chrom Revision: 2.3 16-Mar-2023 15:40:40
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 10-Apr-2023 21:51:30
Spectrum: Tune Spec :Average 414-416(3.54-3.55) Bgrd 409(3.50)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	1795	113.00	368	152.00	79		

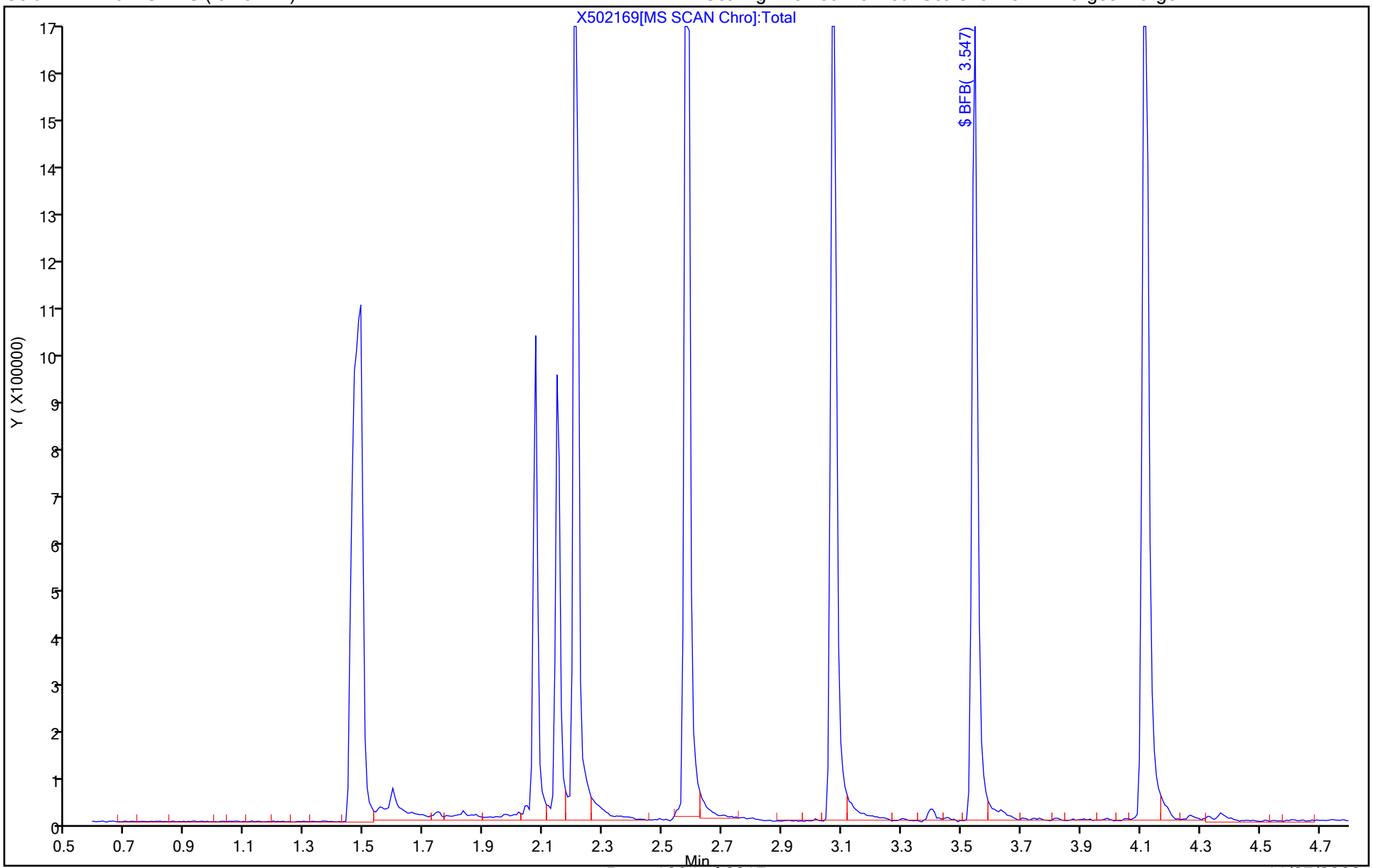
Report Date: 11-Apr-2023 01:28:25 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D

Injection Date:	10-Apr-2023 21:51:30	Instrument ID:	VMS_X4	Operator ID:	COULTERD
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	24-Apr-2023 18:27:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	2.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Operator ID:	bj	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	25-Apr-2023 04:09:04	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1648				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	8.660	8.660	0.000	86	552208	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

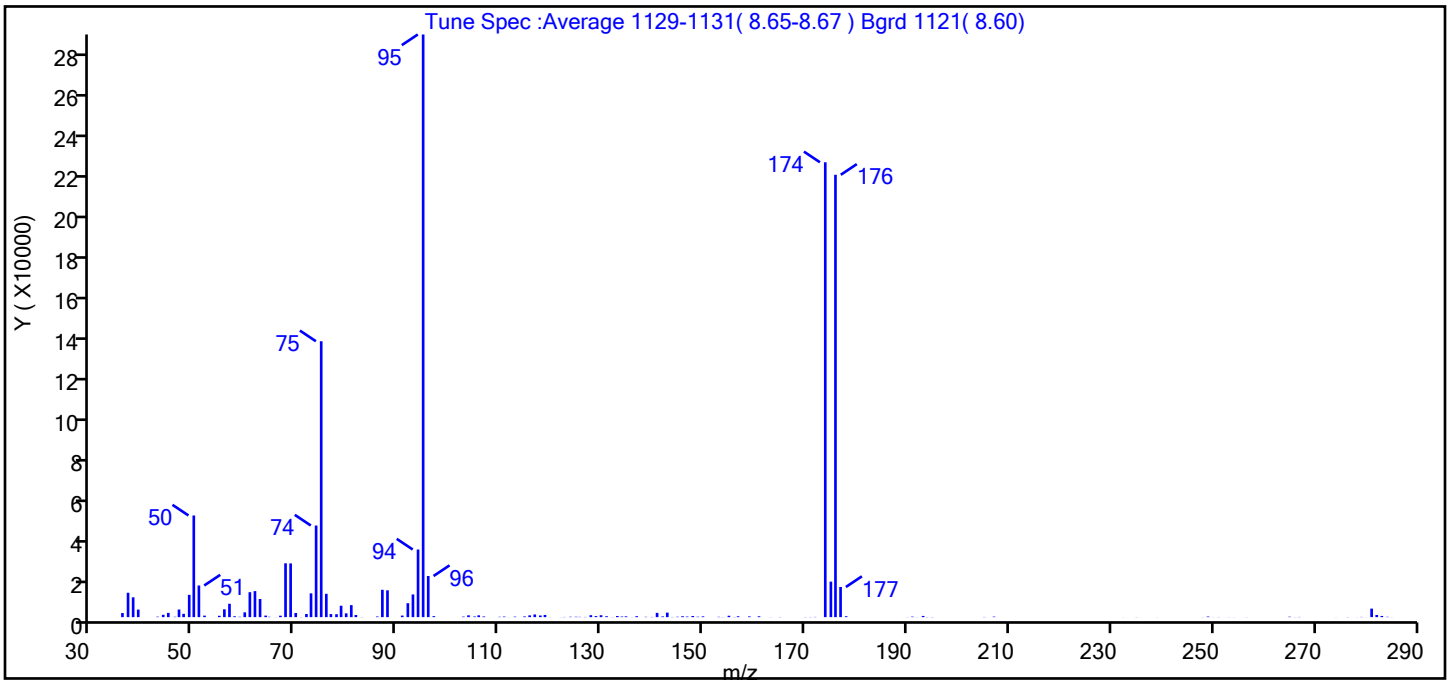
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D
Injection Date: 24-Apr-2023 18:27:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: bj ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.4
75	30 to 60% of m/z 95	47.4
96	5 to 9% of m/z 95	7.1
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	78.1
175	5 to 9% of m/z 174	6.1 (7.8)
176	Greater than 95% but less than 101% of m/z 174	75.9 (97.3)
177	5 to 9% of m/z 176	5.2 (6.8)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 24-Apr-2023 18:27:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 144

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2025	77.00	1511	126.00	136	174.00	223680
37.00	11995	78.00	1446	127.00	101	175.00	17464
38.00	9749	79.00	5613	128.00	951	176.00	217536
39.00	3711	80.00	1866	129.00	517	177.00	14826
43.00	231	81.00	5913	130.00	941	178.00	430
44.00	1151	82.00	1045	131.00	438	190.00	52
45.00	2076	83.00	76	132.00	61	191.00	240
46.00	175	86.00	317	133.00	550	192.00	38
47.00	3751	87.00	13446	134.00	289	193.00	595
48.00	1623	88.00	13190	135.00	397	194.00	70
49.00	10971	91.00	770	136.00	43	195.00	82
50.00	49992	92.00	6861	137.00	475	205.00	91
51.00	15557	93.00	11160	139.00	164	207.00	257
52.00	745	94.00	33256	140.00	105	232.00	34
55.00	670	95.00	286528	141.00	2092	235.00	55
56.00	3856	96.00	20232	142.00	343	239.00	33
57.00	6580	97.00	495	143.00	2226	248.00	44
58.00	428	103.00	260	144.00	88	249.00	294
59.00	176	104.00	901	145.00	187	250.00	36
60.00	2368	105.00	312	146.00	439	251.00	61
61.00	12268	106.00	886	147.00	290	253.00	42
62.00	12798	107.00	334	148.00	567	254.00	34
63.00	8920	110.00	166	149.00	210	257.00	45
64.00	765	111.00	274	150.00	373	265.00	213
65.00	173	112.00	33	153.00	157	266.00	50
66.00	39	113.00	242	154.00	58	267.00	101
67.00	711	115.00	343	155.00	679	274.00	36
68.00	26480	116.00	871	156.00	78	276.00	67
69.00	26424	117.00	1314	157.00	423	278.00	33
70.00	2046	118.00	810	159.00	366	279.00	100
71.00	61	119.00	1083	161.00	423	280.00	33
72.00	1541	120.00	36	163.00	49	281.00	4201
73.00	11713	122.00	42	165.00	84	282.00	1056

Report Date: 25-Apr-2023 04:09:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 24-Apr-2023 18:27:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 144

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	45064	123.00	92	170.00	76	283.00	597
75.00	135680	124.00	190	171.00	74	284.00	158
76.00	11469	125.00	197	172.00	113	285.00	38

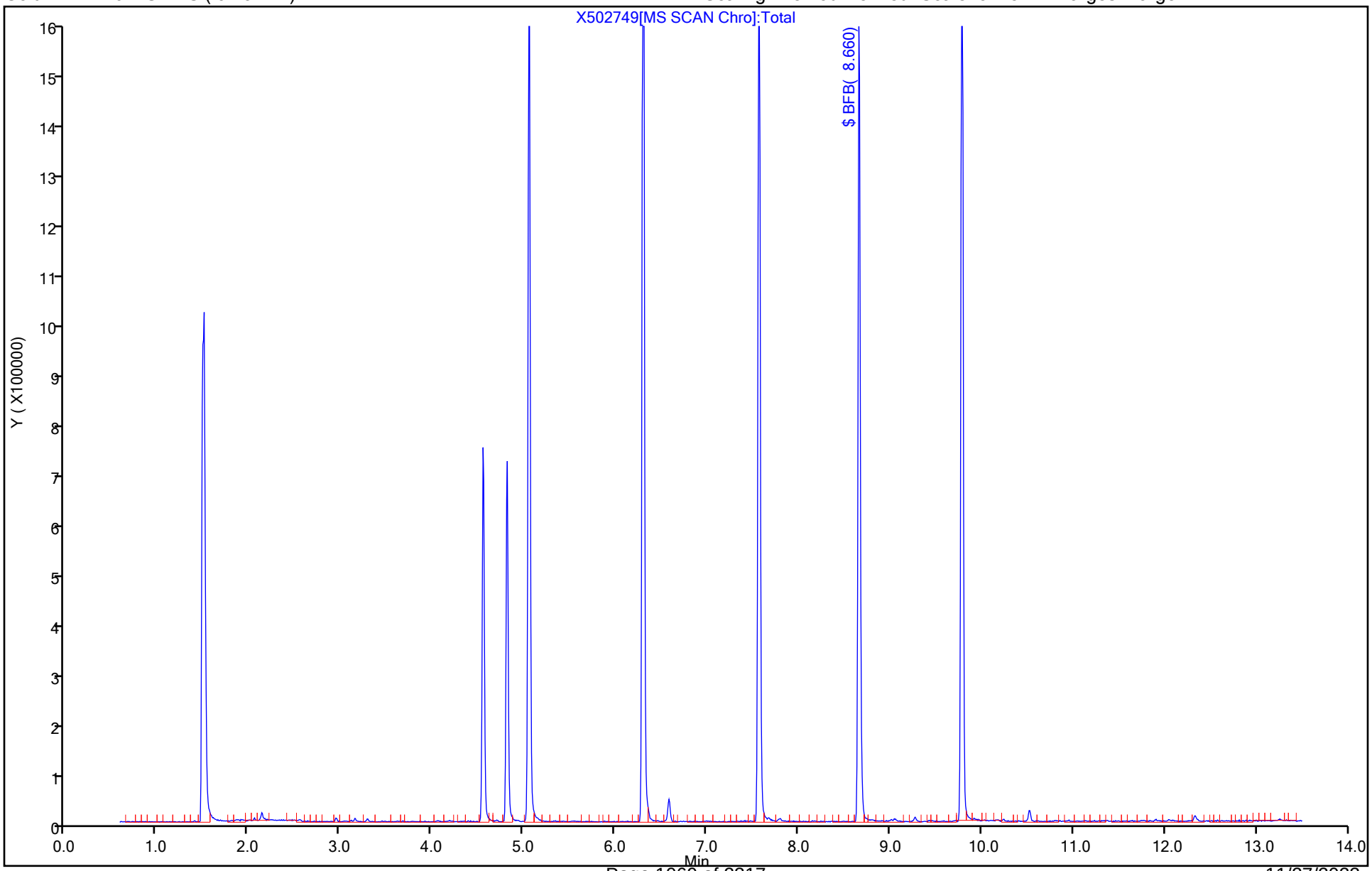
Report Date: 25-Apr-2023 04:09:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D

Injection Date:	24-Apr-2023 18:27:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502777A.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 25-Apr-2023 05:49:30 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: CCVC
Misc. Info.: 280-0120722-032
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:41 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

First Level Reviewer: BX8N Date: 25-Apr-2023 06:24:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	8.660	8.660	0.000	87	491006	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

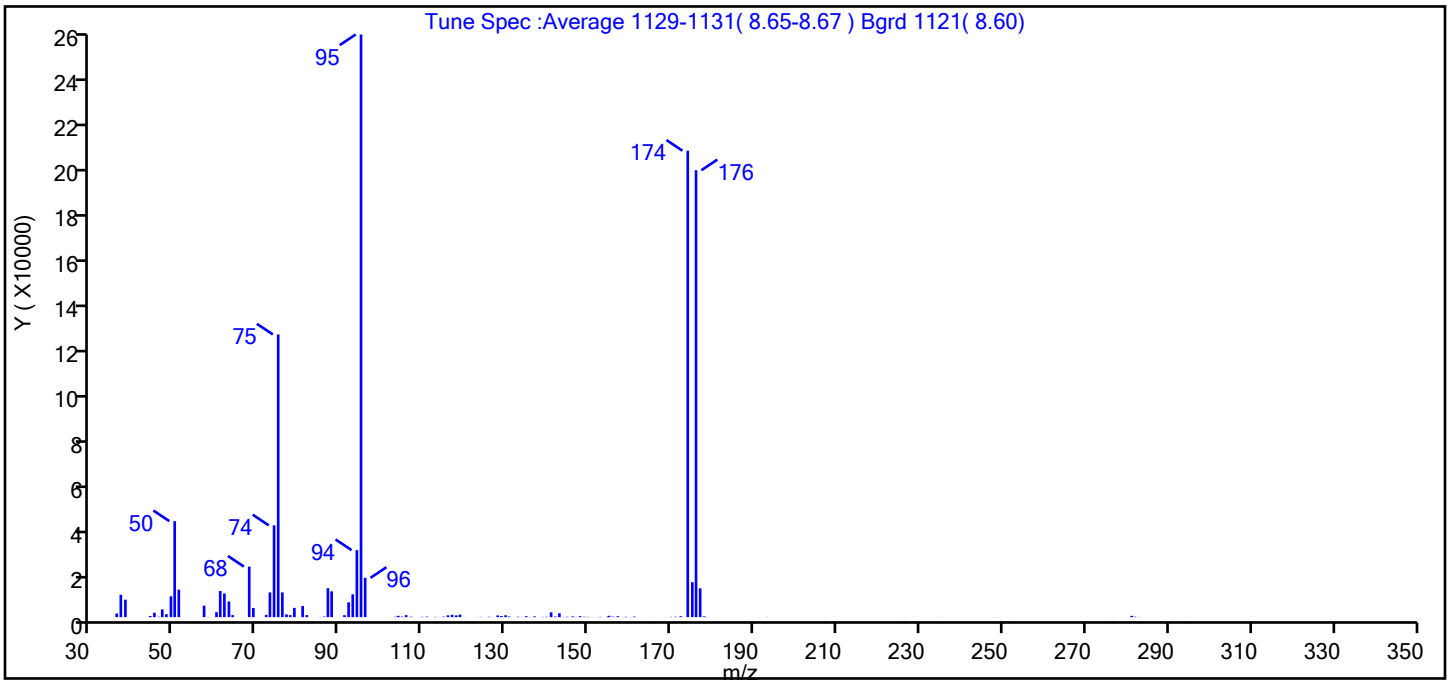
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502777A.D
Injection Date: 25-Apr-2023 05:49:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: bj ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.5
75	30 to 60% of m/z 95	48.5
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	80.1
175	5 to 9% of m/z 174	6.0 (7.5)
176	Greater than 95% but less than 101% of m/z 174	76.7 (95.8)
177	5 to 9% of m/z 176	4.9 (6.4)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502777A.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 25-Apr-2023 05:49:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 120

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1602	85.00	89	126.00	158	158.00	50
37.00	9891	86.00	238	127.00	50	159.00	165
38.00	7708	87.00	12792	128.00	749	160.00	75
44.00	521	88.00	11407	129.00	493	161.00	249
45.00	1950	90.00	34	130.00	821	165.00	33
46.00	183	91.00	866	131.00	292	169.00	34
47.00	3435	92.00	6548	133.00	182	170.00	116
48.00	1312	93.00	10101	135.00	422	171.00	183
49.00	9214	94.00	29640	136.00	49	172.00	390
50.00	42440	95.00	257664	137.00	355	174.00	206272
51.00	12172	96.00	17384	138.00	33	175.00	15452
57.00	5084	103.00	174	139.00	123	176.00	197632
58.00	72	104.00	597	140.00	158	177.00	12731
60.00	2188	105.00	229	141.00	2124	178.00	338
61.00	11556	106.00	878	142.00	274	179.00	45
62.00	10456	107.00	196	143.00	1703	191.00	36
63.00	6919	109.00	35	144.00	106	193.00	78
64.00	892	110.00	136	145.00	173	207.00	37
68.00	22352	111.00	212	146.00	325	226.00	42
69.00	4058	113.00	128	147.00	87	235.00	49
72.00	1001	114.00	43	148.00	444	248.00	50
73.00	10937	115.00	201	149.00	181	249.00	35
74.00	40592	116.00	804	150.00	122	251.00	35
75.00	125008	117.00	1016	151.00	38	276.00	37
76.00	10928	118.00	785	152.00	43	281.00	573
77.00	1213	119.00	1135	153.00	128	282.00	210
78.00	893	120.00	51	155.00	232	283.00	57
79.00	4097	123.00	42	155.00	601	295.00	33
81.00	4930	124.00	112	156.00	206	347.00	34
82.00	908	125.00	33	157.00	414	349.00	35

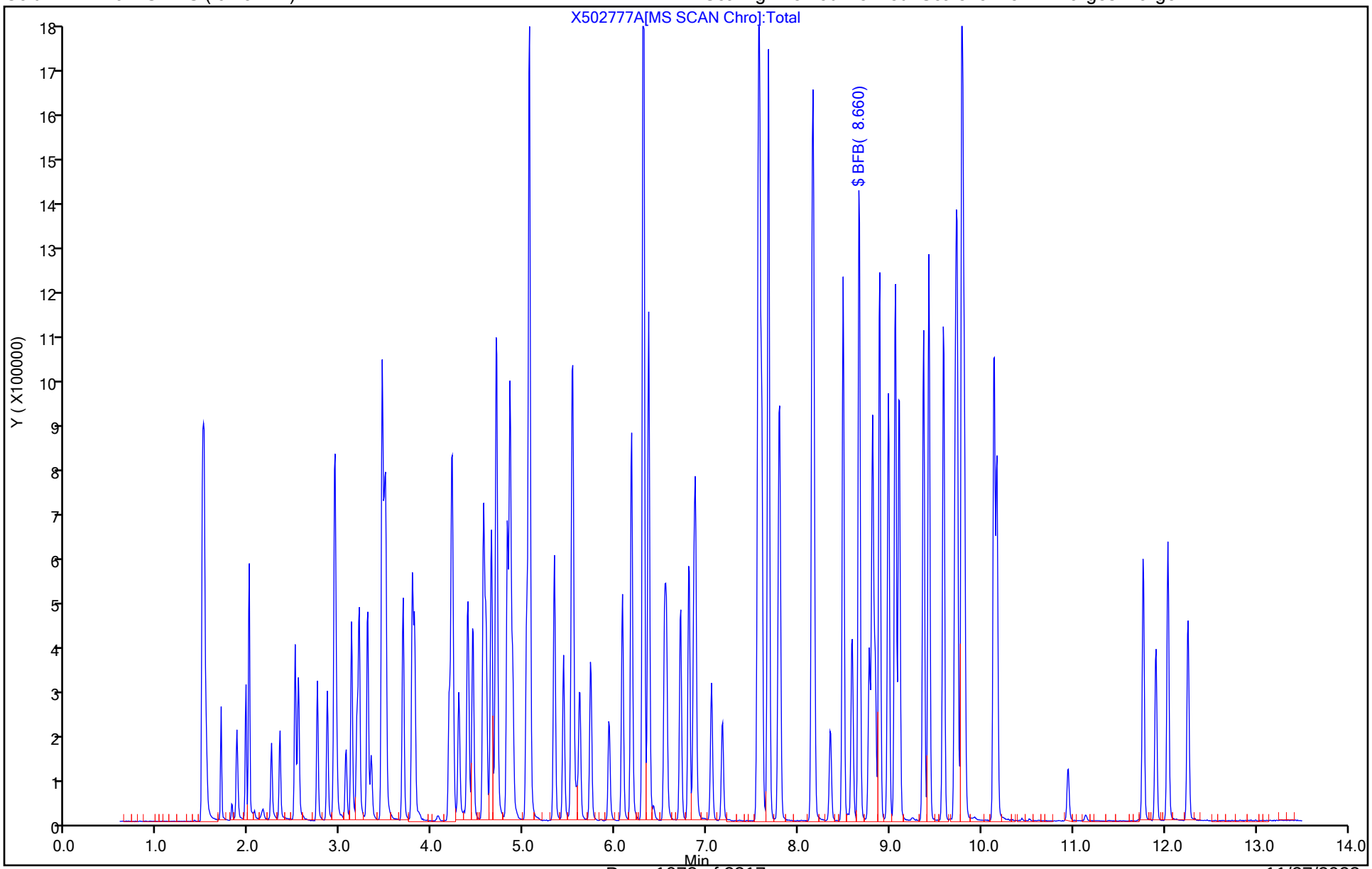
Report Date: 25-Apr-2023 13:52:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502777A.D

Injection Date:	25-Apr-2023 05:49:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609068/7

Matrix: Water | Lab File ID: ms11_5432.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 11:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609068/7

Matrix: Water | Lab File ID: ms11_5432.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 11:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609068/7

Matrix: Water | Lab File ID: ms11_5432.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 11:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5432.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 18-Apr-2023 11:53:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 15:38:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 2 TBA-d9 (IS)	65		3.992					ND	
* 167 Fluorobenzene (IS)	96	5.082	5.081	0.001	98	1033864		0	
* 1 Fluorobenzene	96	5.082	5.081	0.001	98	1039515	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.567	0.001	89	251512	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	414236	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	268365	50.0	50.5	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.844	4.830	0.014	0	358066	50.0	51.3	
$ 7 Toluene-d8 (Surr)	98	6.311	6.310	0.001	94	1036133	50.0	50.1	
$ 8 4-Bromofluorobenzene (Surr)	95	8.657	8.643	0.014	91	401160	50.0	50.8	
$ 9 Trifluorotoluene (Surr)	1		0.000					ND	
$ 10 BFB	95	8.657	8.643	0.014	91	401160		NR	
11 Dichlorodifluoromethane	85		1.702					ND	
12 Chloromethane	50		1.883					ND	
13 Vinyl chloride	62		1.981					ND	
14 Ethylene oxide	43		2.233					ND	U
15 Bromomethane	94		2.260					ND	7
16 Chloroethane	64		2.344					ND	
17 Dichlorofluoromethane	67		2.512					ND	
18 Trichlorofluoromethane	101		2.554					ND	
19 Ethanol	45	2.679	2.665	0.014	98	2145		16.4	
20 Ethyl ether	59		2.763					ND	
21 Propene oxide	58		2.819					ND	
22 Acrolein	56		2.875					ND	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.945					ND	
25 1,1-Dichloroethene	96		2.959					ND	
24 Acetone	43		2.973					ND	7
72 Isopropyl alcohol	45		3.056					ND	
26 Iodomethane	142		3.070					ND	
28 Carbon disulfide	76	3.140	3.140	0.000	95	2230		0.1505	
27 Acetonitrile	41	3.182	3.182	0.000	96	2901		2.34	
29 Methyl acetate	43		3.196					ND	
30 3-Chloro-1-propene	41		3.210					ND	7

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
31 Methylene Chloride	84	3.322	3.308	0.014	93	1347		0.2604	
32 2-Methyl-2-propanol	59		3.350					ND	
33 Acrylonitrile	53		3.461					ND	
34 Methyl tert-butyl ether	73		3.489					ND	
35 trans-1,2-Dichloroethene	96		3.503					ND	
36 Hexane	57		3.699					ND	
37 Vinyl acetate	43		3.797					ND	
38 Isopropyl ether	87		3.824					ND	
39 1,1-Dichloroethane	63		3.825					ND	
78 Chlorotrifluoroethene	116		3.859					ND	
40 2-Chloro-1,3-butadiene	53		3.880					ND	
41 Tert-butyl ethyl ether	59		4.076					ND	
42 2-Butanone (MEK)	43		4.202					ND	7
43 Ethyl acetate	43		4.216					ND	U
45 2,2-Dichloropropane	77		4.230					ND	
44 cis-1,2-Dichloroethene	96		4.230					ND	
46 Propionitrile	54		4.257					ND	
47 sec-Butyl Alcohol	45		4.299					ND	
48 Methacrylonitrile	41		4.369					ND	
49 Chlorobromomethane	128		4.397					ND	
50 Tetrahydrofuran	42		4.411					ND	
51 Chloroform	83		4.453					ND	
87 2-Chloro-1,1,1-Trifluoroethane	118		4.509					ND	
53 1,1,1-Trichloroethane	97		4.593					ND	
54 Cyclohexane	56		4.663					ND	
55 1,1-Dichloropropene	75		4.704					ND	
56 Carbon tetrachloride	117		4.718					ND	
52 Isobutyl alcohol	43		4.718					ND	
57 Benzene	78		4.858					ND	
58 1,2-Dichloroethane	62		4.886					ND	
59 Tert-amyl methyl ether	73		4.928					ND	
95 1,2-Dichloro-1,1,2-trifluoroetha	117		5.006					ND	
60 n-Heptane	43		5.040					ND	
97 1,1,1-Trifluoro-2,2-dichloroetha	83		5.097					ND	
61 n-Butanol	56		5.207					ND	
62 Trichloroethene	130		5.347					ND	
63 2-Pentanone	43		5.445					ND	
64 Methylcyclohexane	55		5.528					ND	
65 1,2-Dichloropropane	63		5.542					ND	
66 Methyl methacrylate	100		5.556					ND	
67 1,4-Dioxane	88		5.584					ND	
68 Dibromomethane	93		5.612					ND	
69 Dichlorobromomethane	83		5.738					ND	
70 2-Nitropropane	41		5.905					ND	U
71 2-Chloroethyl vinyl ether	63		5.934					ND	
76 cis-1,3-Dichloropropene	75		6.073					ND	
74 4-Methyl-2-pentanone (MIBK)	43		6.171					ND	
75 Toluene	91		6.366					ND	
73 trans-1,3-Dichloropropene	75		6.534					ND	
77 Ethyl methacrylate	69		6.548					ND	
79 1,1,2-Trichloroethane	97		6.702					ND	
80 Tetrachloroethene	164		6.799					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
81 1,3-Dichloropropane	76		6.855					ND	
82 2-Hexanone	43		6.869					ND	
85 Chlorodibromomethane	129		7.051					ND	
84 Tetrahydrothiophene	60		7.051					ND	
86 Ethylene Dibromide	107		7.163					ND	
88 1-Chlorohexane	91		7.540					ND	7
89 Chlorobenzene	112		7.595					ND	
90 1,1,1,2-Tetrachloroethane	131		7.665					ND	
91 Ethylbenzene	106		7.665					ND	
92 m-Xylene & p-Xylene	91		7.777					ND	
93 o-Xylene	106		8.140					ND	
94 Styrene	104		8.154					ND	
96 Bromoform	173		8.336					ND	
98 Isopropylbenzene	105		8.475					ND	
123 cis-1,4-Dichloro-2-butene	53		8.531					ND	
99 Cyclohexanone	55		8.573					ND	
100 1,1,2,2-Tetrachloroethane	83		8.755					ND	
102 trans-1,4-Dichloro-2-butene	53		8.797					ND	
101 Bromobenzene	156		8.797					ND	
103 1,2,3-Trichloropropane	110		8.825					ND	
104 N-Propylbenzene	120		8.866					ND	
105 2-Chlorotoluene	126		8.964					ND	
106 1,3,5-Trimethylbenzene	105		9.034					ND	
107 4-Chlorotoluene	126		9.076					ND	
108 tert-Butylbenzene	119		9.341					ND	
109 1,2,4-Trimethylbenzene	105		9.397					ND	
111 sec-Butylbenzene	134		9.565					ND	
112 1,3-Dichlorobenzene	146		9.690					ND	
113 4-Isopropyltoluene	119		9.704					ND	
114 1,4-Dichlorobenzene	146		9.788					ND	
110 1,2,3-Trimethylbenzene	105		9.802					ND	
115 n-Butylbenzene	91		10.109					ND	
116 1,2-Dichlorobenzene	146		10.137					ND	
117 1,2-Dibromo-3-Chloropropane	157		10.905					ND	
118 1,3,5-Trichlorobenzene	180		11.101					ND	
119 1,2,4-Trichlorobenzene	180		11.729					ND	
120 Hexachlorobutadiene	225		11.869					ND	
121 Naphthalene	128		11.981					ND	
122 1,2,3-Trichlorobenzene	180		12.204					ND	
135 2,2-Dimethylpentane	1		0.000					ND	
124 3,3-Dimethylpentane	1		0.000					ND	
166 Ethyl acrylate	55		0.000					ND	
165 t-Amyl alcohol	1		0.000					ND	
130 2,4-Dimethylpentane	1		0.000					ND	
125 Cyclohexane TIC	1		0.000					ND	
138 n-Nonane TIC	1		0.000					ND	
168 cis-1,4-Dichloro-2-butene TIC	1		0.000					ND	
137 3-Methylhexane	1		0.000					ND	
133 1-Chlorohexane TIC	1		0.000					ND	
134 2-Methylhexane	1		0.000					ND	
132 n-Nonyl Aldehyde	1		0.000					ND	
170 Pentachloroethane TIC	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
169 Ethylene oxide TIC	1		0.000				ND		
136 Methyl cyclohexane TIC	1		0.000				ND		
131 Dimethyl disulfide	1		0.000				ND		
139 2,3-Dimethylpentane	1		0.000				ND		
128 1-Chloro-1-fluoroethane TIC	1		0.000				ND		
129 3-Ethylpentane	1		0.000				ND		
126 Pentachloroethane	167		0.000				ND		
127 2,2,3-Trimethylbutane	1		4.004				ND		
S 142 Xylenes, Total	106		0.000				ND		7
S 143 1,2-Dichloroethene, Total	1		0.000				ND		7
S 145 1,3-Dichloropropene, Total	1		0.000				ND		7
S 147 Trihalomethanes, Total	1		0.000				ND		7
S 144 TAH	1				0			0	7
S 141 Total BTEX	1		0.000				ND		7

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection
Review Flags
U - Marked Undetected

Reagents:

mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

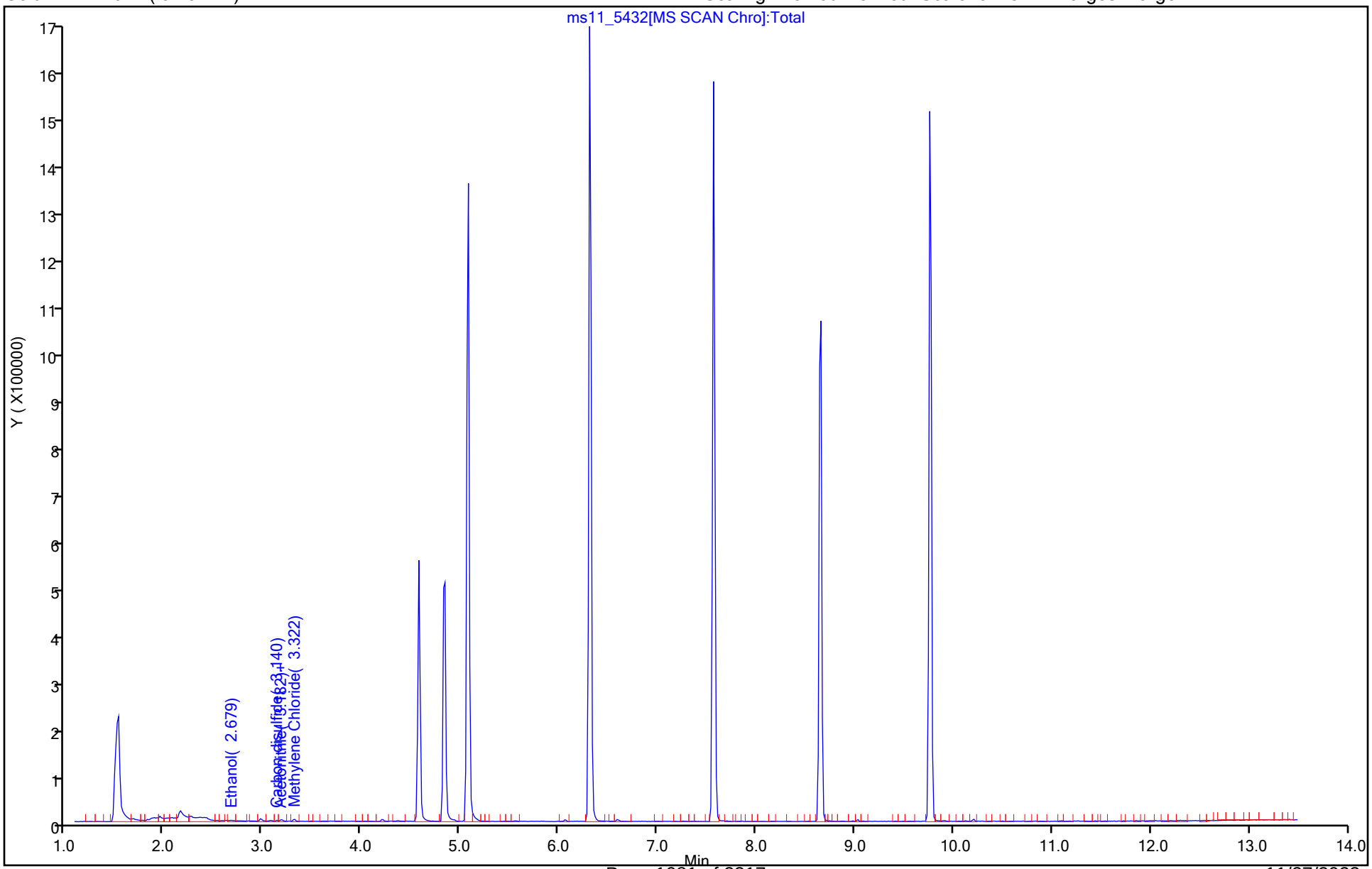
Report Date: 18-Apr-2023 15:38:24 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5432.D

Injection Date:	18-Apr-2023 11:53:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5432.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 18-Apr-2023 11:53:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 15:38:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	50.5	100.99
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.3	102.53
$ 7 Toluene-d8 (Surr)	50.0	50.1	100.28
$ 8 4-Bromofluorobenzene (Surr)	50.0	50.8	101.52

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609932/7

Matrix: Water | Lab File ID: X502755.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 20:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609932/7

Matrix: Water | Lab File ID: X502755.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 20:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609932/7

Matrix: Water | Lab File ID: X502755.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 20:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 24-Apr-2023 20:30:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

First Level Reviewer: V8PV Date: 24-Apr-2023 21:32:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942					ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1401368	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	334291	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	536387	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	349113	50.0	51.8	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	350171	50.0	49.5	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1450143	50.0	50.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	89	486766	50.0	50.8	
$ 8 Trifluorotoluene (Surr)	1		0.000					ND	
$ 9 BFB	95	8.667	8.660	0.007	89	486766		NR	
10 Dichlorodifluoromethane	85		1.696					ND	7
11 Chloromethane	50		1.867					ND	
12 Vinyl chloride	62		1.967					ND	
13 Ethylene oxide	43		2.225					ND	7
14 Bromomethane	94		2.246					ND	U
15 Chloroethane	64		2.339					ND	
16 Dichlorofluoromethane	67		2.504					ND	
20 Propene oxide	58		2.504					ND	7
17 Trichlorofluoromethane	101		2.539					ND	
18 Ethanol	45		2.646					ND	
19 Ethyl ether	59		2.747					ND	
21 Acrolein	56		2.854					ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933					ND	
23 1,1-Dichloroethene	96		2.940					ND	
24 Acetone	43		2.954					ND	7
25 Isopropyl alcohol	45		3.033					ND	
26 Iodomethane	142		3.054					ND	
27 Carbon disulfide	76		3.118					ND	7
28 Acetonitrile	41		3.161					ND	U
29 Methyl acetate	43		3.176					ND	
30 3-Chloro-1-propene	41		3.204					ND	
31 Methylene Chloride	84		3.297					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333					ND	
33 Acrylonitrile	53		3.455					ND	
34 Methyl tert-butyl ether	73		3.476					ND	
35 trans-1,2-Dichloroethene	96		3.490					ND	
36 Chlorotrifluoroethene	116		3.526					ND	
37 Hexane	57		3.683					ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733					ND	
39 Vinyl acetate	43		3.783					ND	
41 Isopropyl ether	87		3.805					ND	
40 1,1-Dichloroethane	63		3.805					ND	
42 2-Chloro-1,3-butadiene	53		3.862					ND	
43 2-Chloro-1,1,1-Trifluoroethane	118		3.948					ND	
44 Tert-butyl ethyl ether	59		4.062					ND	
45 2-Butanone (MEK)	43		4.184					ND	
46 Ethyl acetate	43		4.198					ND	U
47 cis-1,2-Dichloroethene	96		4.212					ND	
48 2,2-Dichloropropane	77		4.220					ND	
49 Propionitrile	54		4.234					ND	
50 sec-Butyl Alcohol	45		4.291					ND	
51 Methacrylonitrile	41		4.348					ND	
52 Chlorobromomethane	128		4.384					ND	
53 Tetrahydrofuran	42		4.391					ND	
54 Chloroform	83		4.441					ND	
55 1,1,1-Trichloroethane	97		4.584					ND	
56 Cyclohexane	56		4.649					ND	
58 1,2-Dichloro-1,1,2-trifluoroetha	117		4.678					ND	
57 1,1-Dichloropropene	75		4.699					ND	
60 Isobutyl alcohol	41		4.706					ND	U
59 Carbon tetrachloride	117		4.706					ND	
61 1,1,1-Trifluoro-2,2-dichloroetha	83		4.706					ND	
62 Benzene	78		4.849					ND	
63 1,2-Dichloroethane	62		4.877					ND	7
64 Tert-amyl methyl ether	73		4.913					ND	
65 n-Heptane	43		5.028					ND	
66 n-Butanol	56		5.199					ND	
67 Trichloroethene	95		5.335					ND	
68 2-Pentanone	43		5.435					ND	
69 Methylcyclohexane	55		5.528					ND	
70 1,2-Dichloropropane	63		5.535					ND	
71 Methyl methacrylate	100		5.542					ND	
72 1,4-Dioxane	88		5.578					ND	
73 Dibromomethane	93		5.607					ND	
74 Dichlorobromomethane	83		5.728					ND	
75 2-Nitropropane	41		5.893					ND	
76 2-Chloroethyl vinyl ether	63		5.929					ND	
77 cis-1,3-Dichloropropene	75		6.079					ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179					ND	
79 Toluene	91		6.365					ND	
80 trans-1,3-Dichloropropene	75		6.536					ND	
81 Ethyl methacrylate	69		6.558					ND	
82 1,1,2-Trichloroethane	97		6.715					ND	
83 Tetrachloroethene	164		6.801					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 1,3-Dichloropropane	76		6.858					ND	
85 2-Hexanone	43		6.872					ND	
86 Tetrahydrothiophene	60		7.051					ND	
87 Chlorodibromomethane	129		7.051					ND	
88 Ethylene Dibromide	107		7.166					ND	
89 1-Chlorohexane	91		7.552					ND	U
90 Chlorobenzene	112		7.595					ND	
91 1,1,1,2-Tetrachloroethane	131		7.666					ND	
92 Ethylbenzene	106		7.673					ND	
93 m-Xylene & p-Xylene	106		7.788					ND	7
94 o-Xylene	106		8.152					ND	
95 Styrene	104		8.167					ND	
96 Bromoform	173		8.345					ND	
97 Isopropylbenzene	105		8.488					ND	
98 cis-1,4-Dichloro-2-butene	53		8.538					ND	
99 Cyclohexanone	55		8.588					ND	
100 1,1,2,2-Tetrachloroethane	83		8.774					ND	
101 Bromobenzene	156		8.810					ND	
102 trans-1,4-Dichloro-2-butene	53		8.810					ND	
103 1,2,3-Trichloropropane	110		8.839					ND	
104 N-Propylbenzene	120		8.889					ND	
105 2-Chlorotoluene	126		8.982					ND	
106 1,3,5-Trimethylbenzene	105		9.060					ND	
107 4-Chlorotoluene	126		9.103					ND	
108 tert-Butylbenzene	119		9.368					ND	
109 Pentachloroethane	167		9.403					ND	
110 1,2,4-Trimethylbenzene	105		9.425					ND	
111 sec-Butylbenzene	134		9.589					ND	
112 1,3-Dichlorobenzene	146		9.711					ND	
113 4-Isopropyltoluene	119		9.732					ND	
114 1,4-Dichlorobenzene	146		9.811					ND	
115 1,2,3-Trimethylbenzene	105		9.832					ND	
116 n-Butylbenzene	91		10.133					ND	
117 1,2-Dichlorobenzene	146		10.169					ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948					ND	U
119 1,3,5-Trichlorobenzene	180		11.134					ND	7
120 1,2,4-Trichlorobenzene	180		11.763					ND	7
121 Hexachlorobutadiene	225		11.906					ND	
122 Naphthalene	128		12.035					ND	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	33	1225		0.2365	
172 4-Chlorobenzotrifluoride	1		0.000					ND	
128 2,4-Dimethylpentane	1		0.000					ND	
133 2-Methylhexane	1		0.000					ND	
168 1,2-dichloro-4-(trifluoromethyl)	1		0.000					ND	
171 4-Bromofluorobenzene	95		0.000					ND	
132 3,3-Dimethylpentane	1		0.000					ND	
169 1,4-Dibromobenzene	1		0.000					ND	
125 3-Ethylpentane	1		0.000					ND	
165 t-Amyl alcohol	1		0.000					ND	
131 2,3-Dimethylpentane	1		0.000					ND	
173 Benzene, 1-bromo-4-ethyl-	1		0.000					ND	
174 Benzene, 1-bromo-3-fluoro-	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
126 Dimethyl disulfide	1		0.000				ND		
175 1-Bromo-2-chloroethane	1		0.000				ND		
170 1,3-Dibromobenzene	1		0.000				ND		
166 Ethyl acrylate	55		0.000				ND		
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND		
130 2,2-Dimethylpentane	1		0.000				ND		
127 n-Nonyl Aldehyde	1		0.000				ND		
124 3-Methylhexane	1		0.000				ND		
177 Pentachloroethane TIC	1		0.000				ND		
129 2,2,3-Trimethylbutane	1		0.000				ND		
134 Propene oxide TIC	58		5.334				ND		
S 135 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 139 Xylenes, Total (URS)	1		0.000				ND		7
S 136 1,3-Dichloropropene, Total	1		0.000				ND		7
S 138 Xylenes, Total	106		0.000				ND		7
S 137 Total BTEX	1		0.000				ND		7
S 140 Trihalomethanes, Total	1		0.000				ND		7
S 142 TAH	1				0			0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND		7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

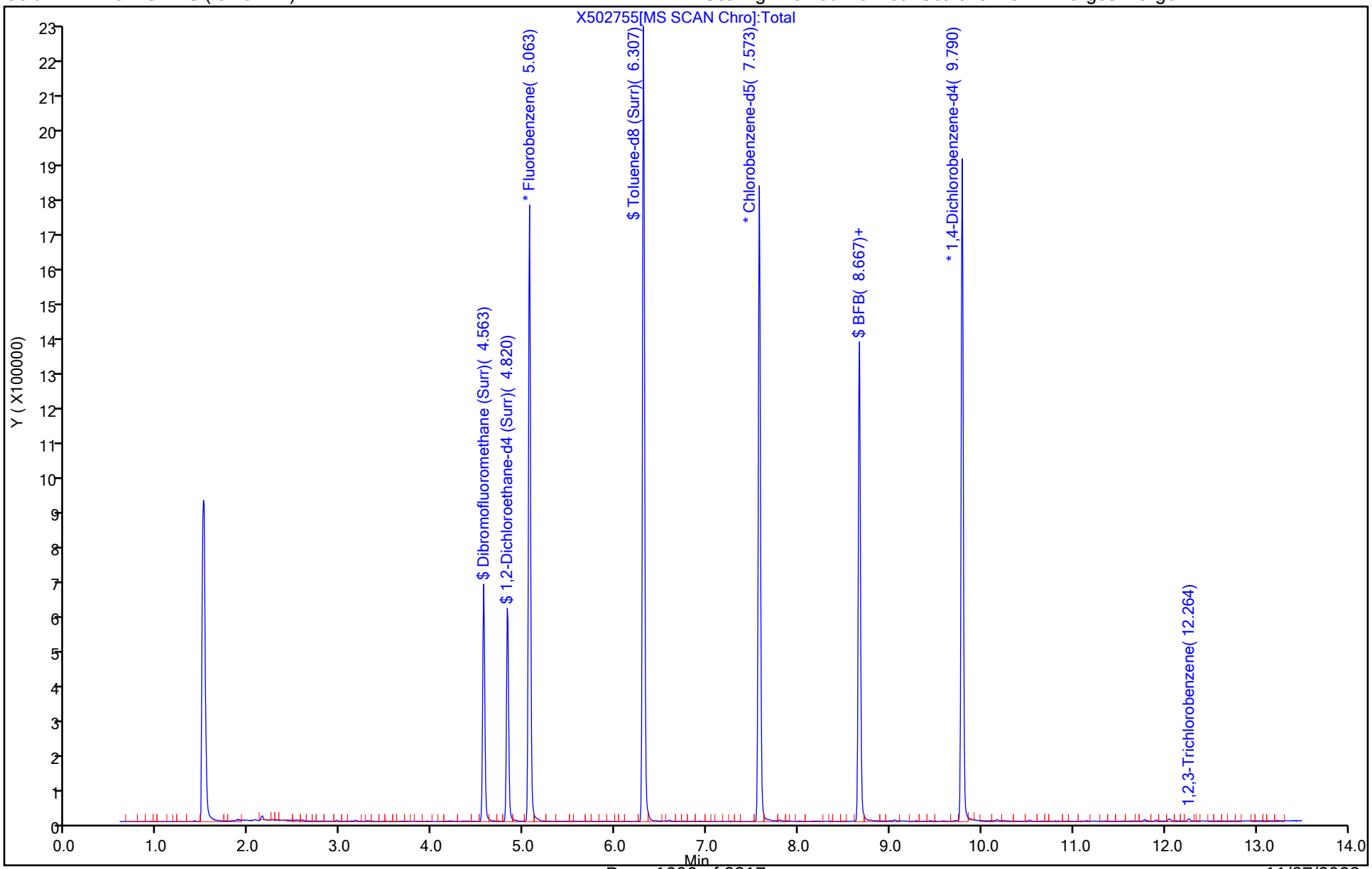
Report Date: 25-Apr-2023 04:09:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D

Injection Date:	24-Apr-2023 20:30:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 24-Apr-2023 20:30:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

First Level Reviewer: V8PV Date: 24-Apr-2023 21:32:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.8	103.58
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	49.5	98.92
$ 6 Toluene-d8 (Surr)	50.0	50.9	101.85
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.8	101.56

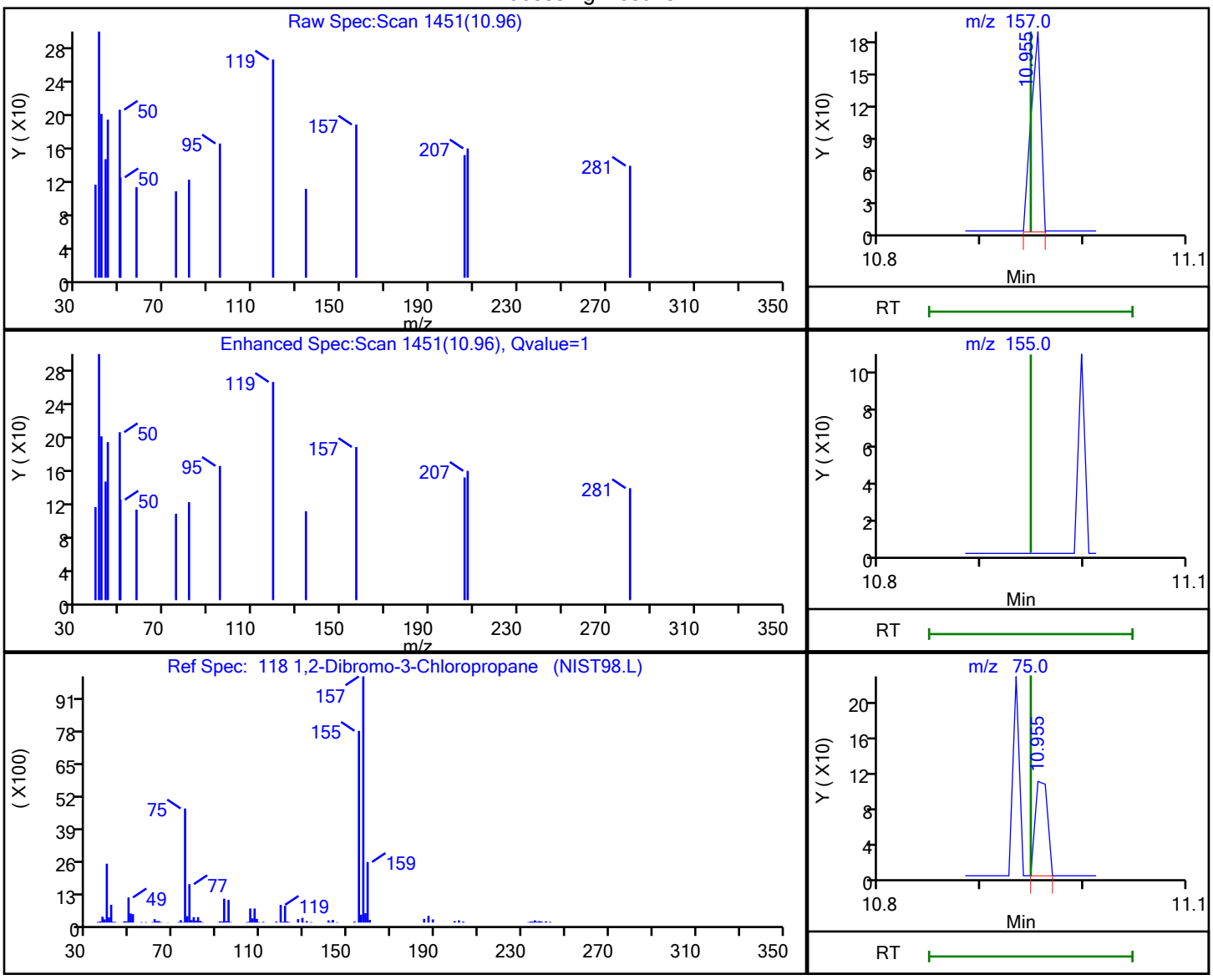
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Injection Date: 24-Apr-2023 20:30:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: bj ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

118 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Processing Results



RT	Mass	Response	Amount
10.96	157.00	124	0.478052
10.95	155.00	0	
10.96	75.00	89	

Reviewer: V8PV, 24-Apr-2023 21:21:21
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

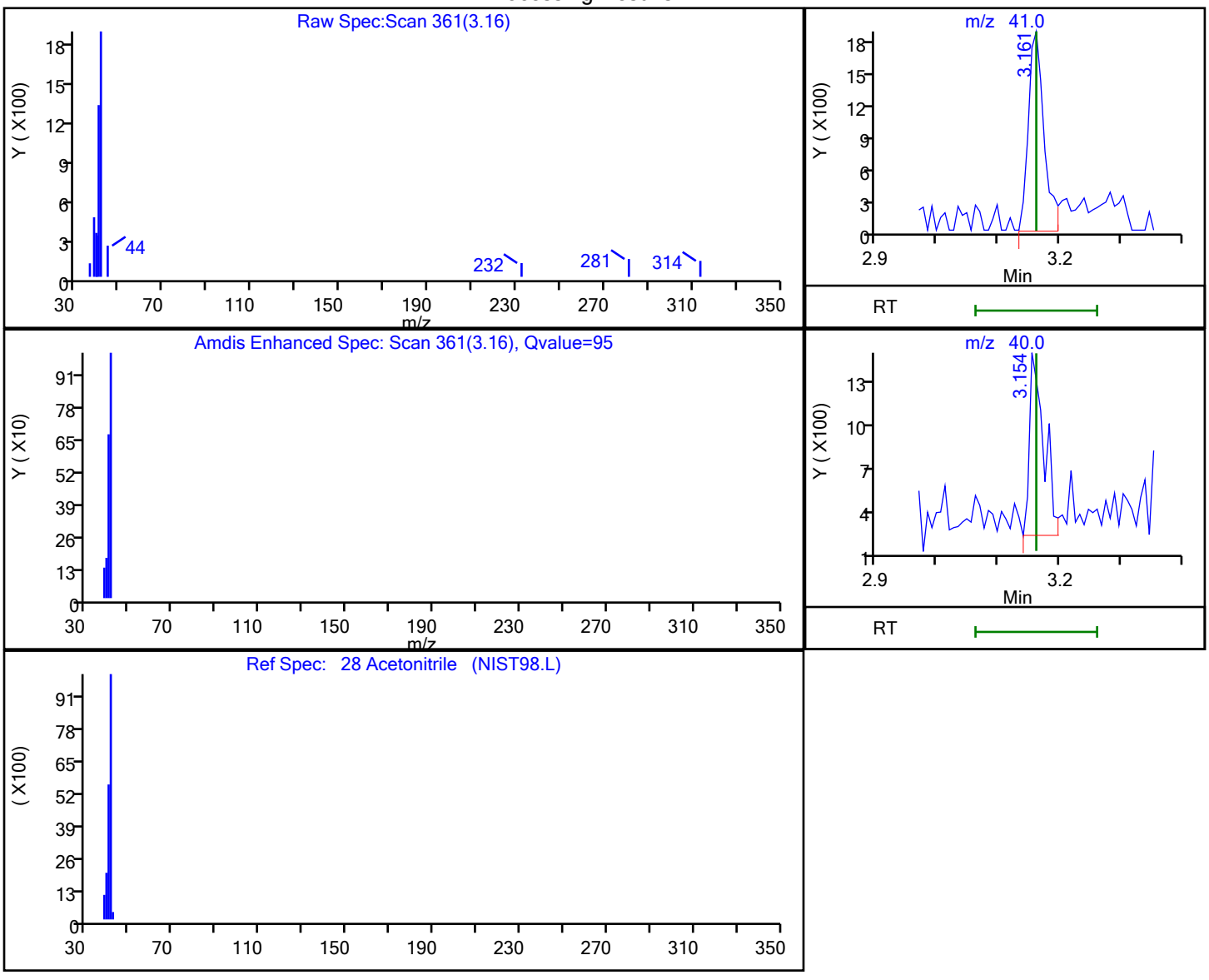
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Injection Date: 24-Apr-2023 20:30:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: bj ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

28 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
3.16	41.00	3244	4.144637
3.15	40.00	2046	

Reviewer: V8PV, 24-Apr-2023 21:21:09
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

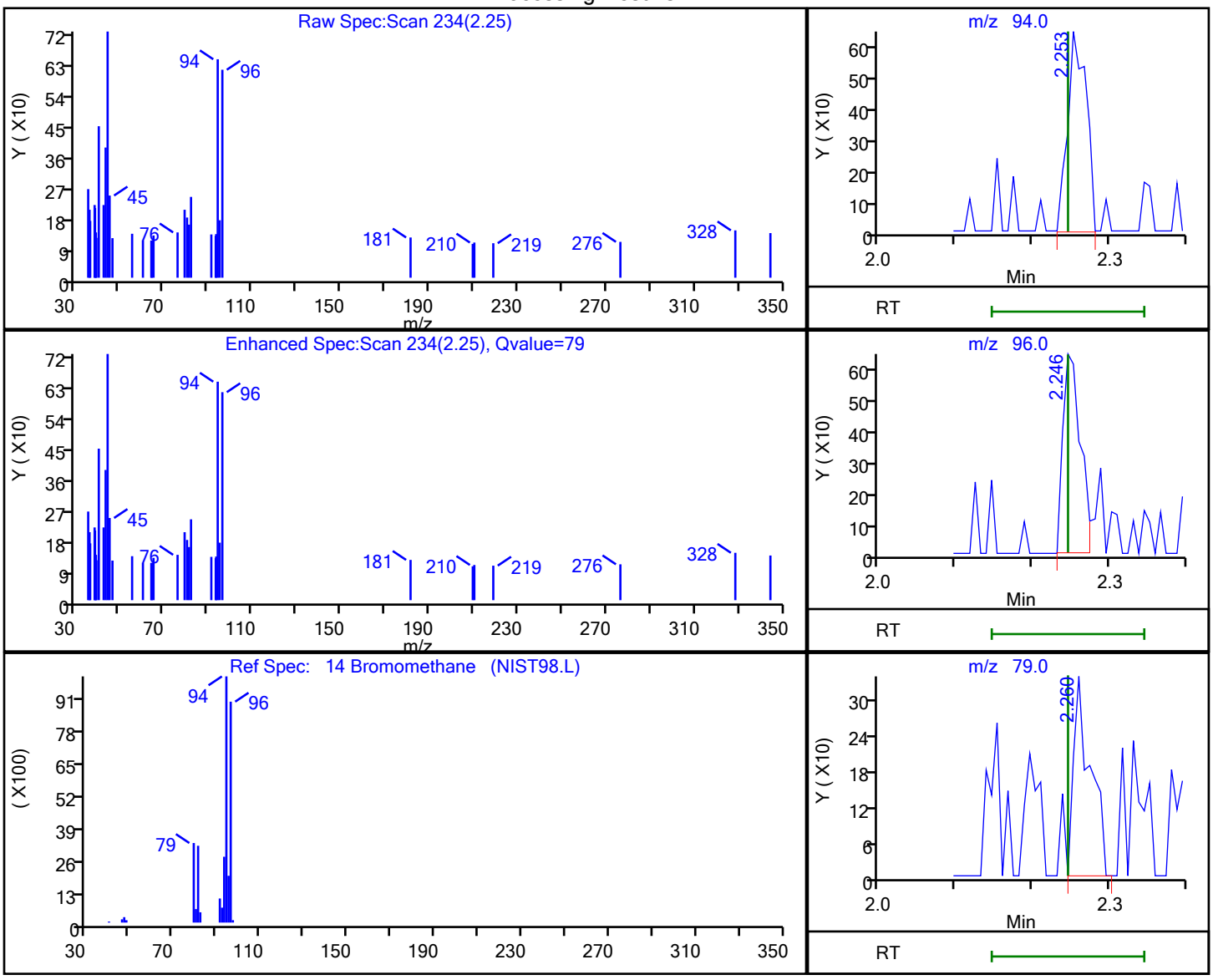
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Injection Date: 24-Apr-2023 20:30:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: bj ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.25	94.00	1096	0.322801
2.25	96.00	1047	
2.26	79.00	519	

Reviewer: V8PV, 24-Apr-2023 21:21:05
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

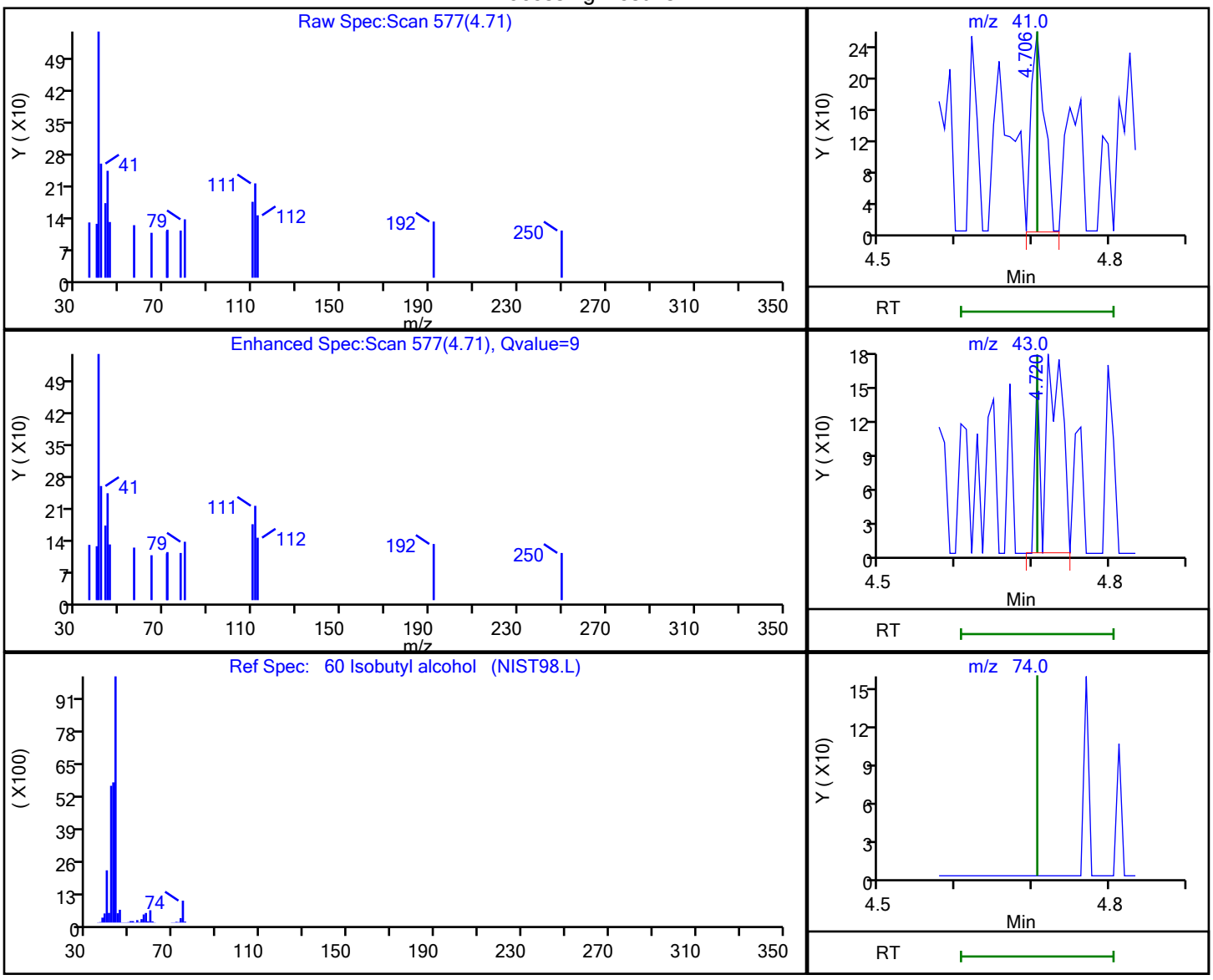
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D				
Injection Date:	24-Apr-2023 20:30:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	bj	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.71	41.00	305	13.053949
4.72	43.00	325	
4.71	74.00	0	

Reviewer: V8PV, 24-Apr-2023 21:21:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609946/7

Matrix: Water | Lab File ID: X502783.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 08:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609946/7

Matrix: Water | Lab File ID: X502783.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 08:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609946/7

Matrix: Water | Lab File ID: X502783.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 08:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502783.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 25-Apr-2023 08:08:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:54:12 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

First Level Reviewer: BX8N Date: 25-Apr-2023 13:54:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942					ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1370762	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	332565	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	522855	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	336107	50.0	51.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	341741	50.0	49.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1424178	50.0	50.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	471129	50.0	50.4	
$ 8 Trifluorotoluene (Surr)	1		0.000					ND	
$ 9 BFB	95	8.660	8.660	0.000	86	471129		NR	
10 Dichlorodifluoromethane	85		1.696					ND	
11 Chloromethane	50		1.867					ND	
12 Vinyl chloride	62		1.967					ND	
13 Ethylene oxide	43		2.225					ND	
14 Bromomethane	94		2.246					ND	U
15 Chloroethane	64		2.339					ND	
16 Dichlorofluoromethane	67		2.504					ND	
20 Propene oxide	58		2.504					ND	
17 Trichlorofluoromethane	101		2.539					ND	
18 Ethanol	45		2.647					ND	U
19 Ethyl ether	59		2.747					ND	
21 Acrolein	56		2.854					ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933					ND	
23 1,1-Dichloroethene	96		2.940					ND	
24 Acetone	43		2.954					ND	7
25 Isopropyl alcohol	45		3.040					ND	
26 Iodomethane	142		3.054					ND	
27 Carbon disulfide	76		3.119					ND	7
28 Acetonitrile	41	3.169	3.161	0.008	99	4076		5.32	
29 Methyl acetate	43		3.176					ND	
30 3-Chloro-1-propene	41		3.204					ND	
31 Methylene Chloride	84	3.297	3.297	0.000	83	2824		0.4177	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333					ND	
33 Acrylonitrile	53		3.455					ND	
34 Methyl tert-butyl ether	73		3.476					ND	
35 trans-1,2-Dichloroethene	96		3.490					ND	
36 Chlorotrifluoroethene	116		3.526					ND	
37 Hexane	57		3.683					ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733					ND	
39 Vinyl acetate	43		3.784					ND	
41 Isopropyl ether	87		3.805					ND	
40 1,1-Dichloroethane	63		3.805					ND	
42 2-Chloro-1,3-butadiene	53		3.862					ND	
43 2-Chloro-1,1,1-Trifluoroethane	118		3.948					ND	
44 Tert-butyl ethyl ether	59		4.062					ND	
45 2-Butanone (MEK)	43		4.184					ND	
46 Ethyl acetate	43		4.198					ND	U
47 cis-1,2-Dichloroethene	96		4.213					ND	
48 2,2-Dichloropropane	77		4.227					ND	
49 Propionitrile	54		4.234					ND	
50 sec-Butyl Alcohol	45		4.291					ND	
51 Methacrylonitrile	41		4.348					ND	
52 Chlorobromomethane	128		4.384					ND	
53 Tetrahydrofuran	42		4.398					ND	
54 Chloroform	83		4.441					ND	
55 1,1,1-Trichloroethane	97		4.592					ND	
56 Cyclohexane	56		4.649					ND	
58 1,2-Dichloro-1,1,2-trifluoroetha	117		4.678					ND	
57 1,1-Dichloropropene	75		4.699					ND	
60 Isobutyl alcohol	41		4.706					ND	U
59 Carbon tetrachloride	117		4.706					ND	
61 1,1,1-Trifluoro-2,2-dichloroetha	83		4.706					ND	
62 Benzene	78		4.849					ND	
63 1,2-Dichloroethane	62		4.878					ND	
64 Tert-amyl methyl ether	73		4.913					ND	
65 n-Heptane	43		5.035					ND	
66 n-Butanol	56		5.199					ND	
67 Trichloroethene	95		5.335					ND	
68 2-Pentanone	43		5.435					ND	
69 Methylcyclohexane	55		5.528					ND	
70 1,2-Dichloropropane	63		5.535					ND	
71 Methyl methacrylate	100		5.542					ND	
72 1,4-Dioxane	88		5.578					ND	
73 Dibromomethane	93		5.607					ND	
74 Dichlorobromomethane	83		5.728					ND	
75 2-Nitropropane	41		5.900					ND	
76 2-Chloroethyl vinyl ether	63		5.929					ND	
77 cis-1,3-Dichloropropene	75		6.079					ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179					ND	
79 Toluene	91		6.365					ND	
80 trans-1,3-Dichloropropene	75		6.536					ND	
81 Ethyl methacrylate	69		6.558					ND	
82 1,1,2-Trichloroethane	97		6.715					ND	
83 Tetrachloroethene	164		6.808					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 1,3-Dichloropropane	76		6.858					ND	
85 2-Hexanone	43		6.872					ND	
86 Tetrahydrothiophene	60		7.051					ND	
87 Chlorodibromomethane	129		7.051					ND	
88 Ethylene Dibromide	107		7.173					ND	
89 1-Chlorohexane	91		7.552					ND	U
90 Chlorobenzene	112		7.602					ND	
91 1,1,1,2-Tetrachloroethane	131		7.673					ND	
92 Ethylbenzene	106		7.673					ND	
93 m-Xylene & p-Xylene	106		7.795					ND	7
94 o-Xylene	106		8.152					ND	
95 Styrene	104		8.167					ND	
96 Bromoform	173		8.345					ND	
97 Isopropylbenzene	105		8.488					ND	
98 cis-1,4-Dichloro-2-butene	53		8.538					ND	
99 Cyclohexanone	55		8.588					ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774					ND	
101 Bromobenzene	156		8.810					ND	
102 trans-1,4-Dichloro-2-butene	53		8.810					ND	
103 1,2,3-Trichloropropane	110		8.839					ND	
104 N-Propylbenzene	120		8.889					ND	
105 2-Chlorotoluene	126		8.982					ND	
106 1,3,5-Trimethylbenzene	105		9.060					ND	
107 4-Chlorotoluene	126		9.103					ND	
108 tert-Butylbenzene	119		9.368					ND	
109 Pentachloroethane	167		9.403					ND	
110 1,2,4-Trimethylbenzene	105		9.425					ND	
111 sec-Butylbenzene	134		9.590					ND	
112 1,3-Dichlorobenzene	146		9.711					ND	
113 4-Isopropyltoluene	119		9.733					ND	
114 1,4-Dichlorobenzene	146		9.811					ND	
115 1,2,3-Trimethylbenzene	105		9.833					ND	
116 n-Butylbenzene	91		10.140					ND	
117 1,2-Dichlorobenzene	146		10.169					ND	
118 1,2-Dibromo-3-Chloropropane	157		10.941					ND	U
119 1,3,5-Trichlorobenzene	180		11.134					ND	7
120 1,2,4-Trichlorobenzene	180		11.770					ND	7
121 Hexachlorobutadiene	225		11.906					ND	
122 Naphthalene	128		12.035					ND	
123 1,2,3-Trichlorobenzene	180	12.271	12.257	0.014	88	1800		0.3565	
172 4-Chlorobenzotrifluoride	1		0.000					ND	
175 1-Bromo-2-chloroethane	1		0.000					ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000					ND	
124 3-Methylhexane	1		0.000					ND	
129 2,2,3-Trimethylbutane	1		0.000					ND	
132 3,3-Dimethylpentane	1		0.000					ND	
127 n-Nonyl Aldehyde	1		0.000					ND	
171 4-Bromofluorobenzene	95		0.000					ND	
133 2-Methylhexane	1		0.000					ND	
128 2,4-Dimethylpentane	1		0.000					ND	
173 Benzene, 1-bromo-4-ethyl-	1		0.000					ND	
168 1,2-dichloro-4-(trifluoromethyl)	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 2,2-Dimethylpentane	1		0.000				ND		
131 2,3-Dimethylpentane	1		0.000				ND		
169 1,4-Dibromobenzene	1		0.000				ND		
166 Ethyl acrylate	55		0.000				ND		
165 t-Amyl alcohol	1		0.000				ND		
126 Dimethyl disulfide	1		0.000				ND		
170 1,3-Dibromobenzene	1		0.000				ND		
174 Benzene, 1-bromo-3-fluoro-	1		0.000				ND		
177 Pentachloroethane TIC	1		0.000				ND		
125 3-Ethylpentane	1		0.000				ND		
134 Propene oxide TIC	58		5.334				ND		
S 135 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 139 Xylenes, Total (URS)	1		0.000				ND		7
S 136 1,3-Dichloropropene, Total	1		0.000				ND		7
S 138 Xylenes, Total	106		0.000				ND		7
S 137 Total BTEX	1		0.000				ND		7
S 140 Trihalomethanes, Total	1		0.000				ND		7
S 142 TAH	1				0			0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND		7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

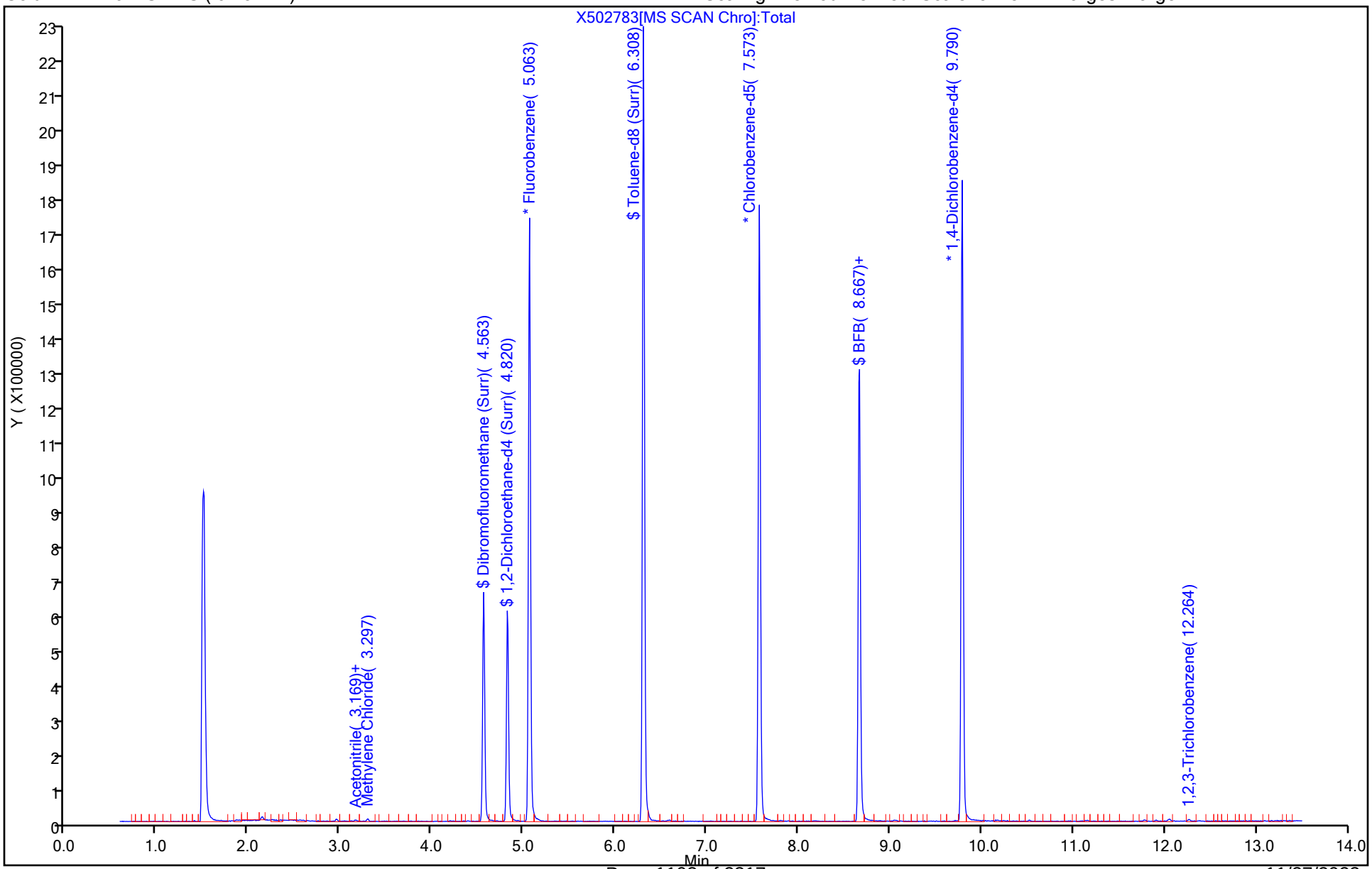
Report Date: 25-Apr-2023 13:54:13 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502783.D

Injection Date:	25-Apr-2023 08:08:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502783.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 25-Apr-2023 08:08:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:54:12 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

First Level Reviewer: BX8N Date: 25-Apr-2023 13:54:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.0	101.95
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	49.3	98.70
$ 6 Toluene-d8 (Surr)	50.0	50.3	100.54
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.4	100.84

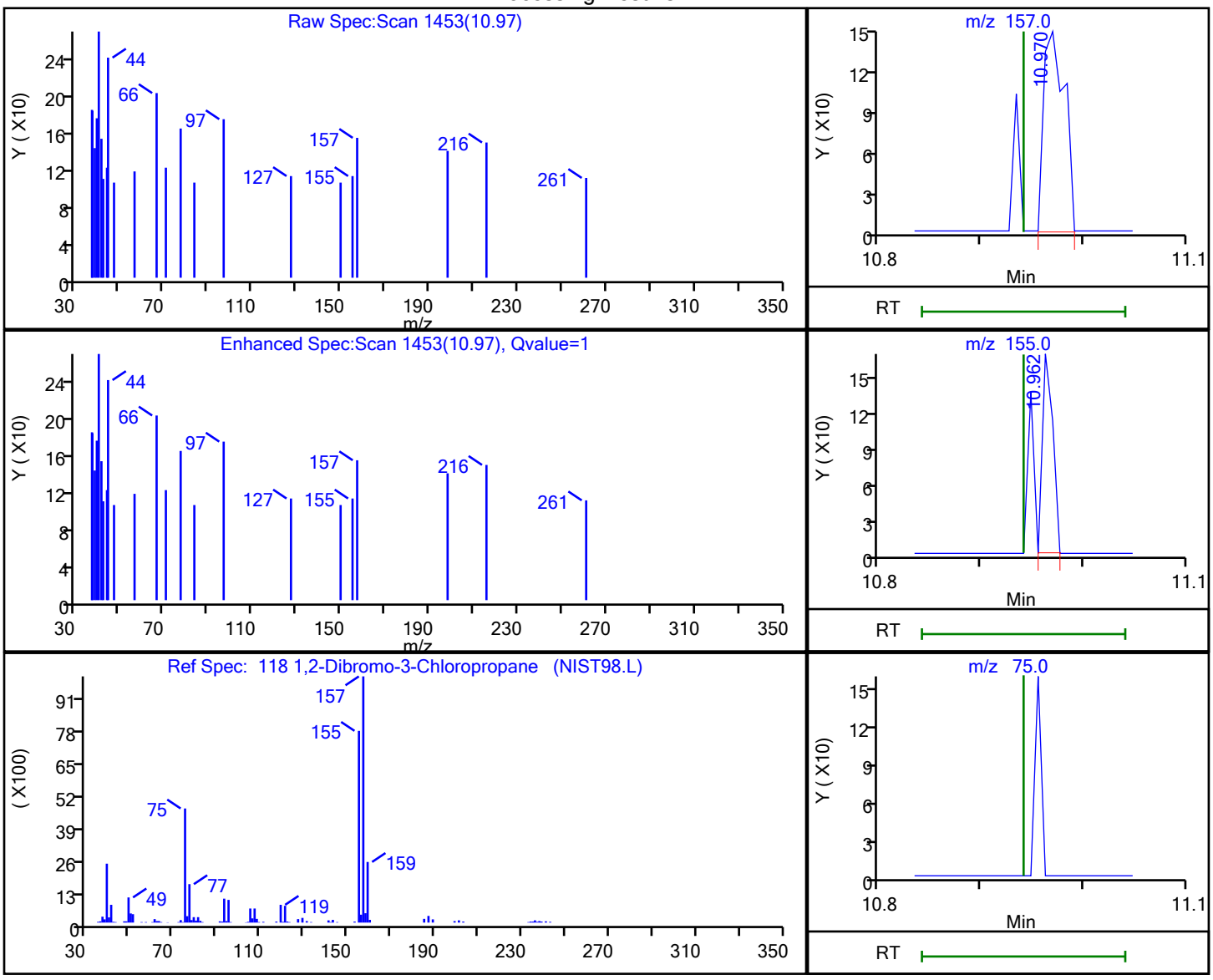
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502783.D
Injection Date: 25-Apr-2023 08:08:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: MED ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

118 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Processing Results



RT	Mass	Response	Amount
10.97	157.00	215	0.539904
10.96	155.00	117	
10.94	75.00	0	

Reviewer: BX8N, 25-Apr-2023 13:53:38
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

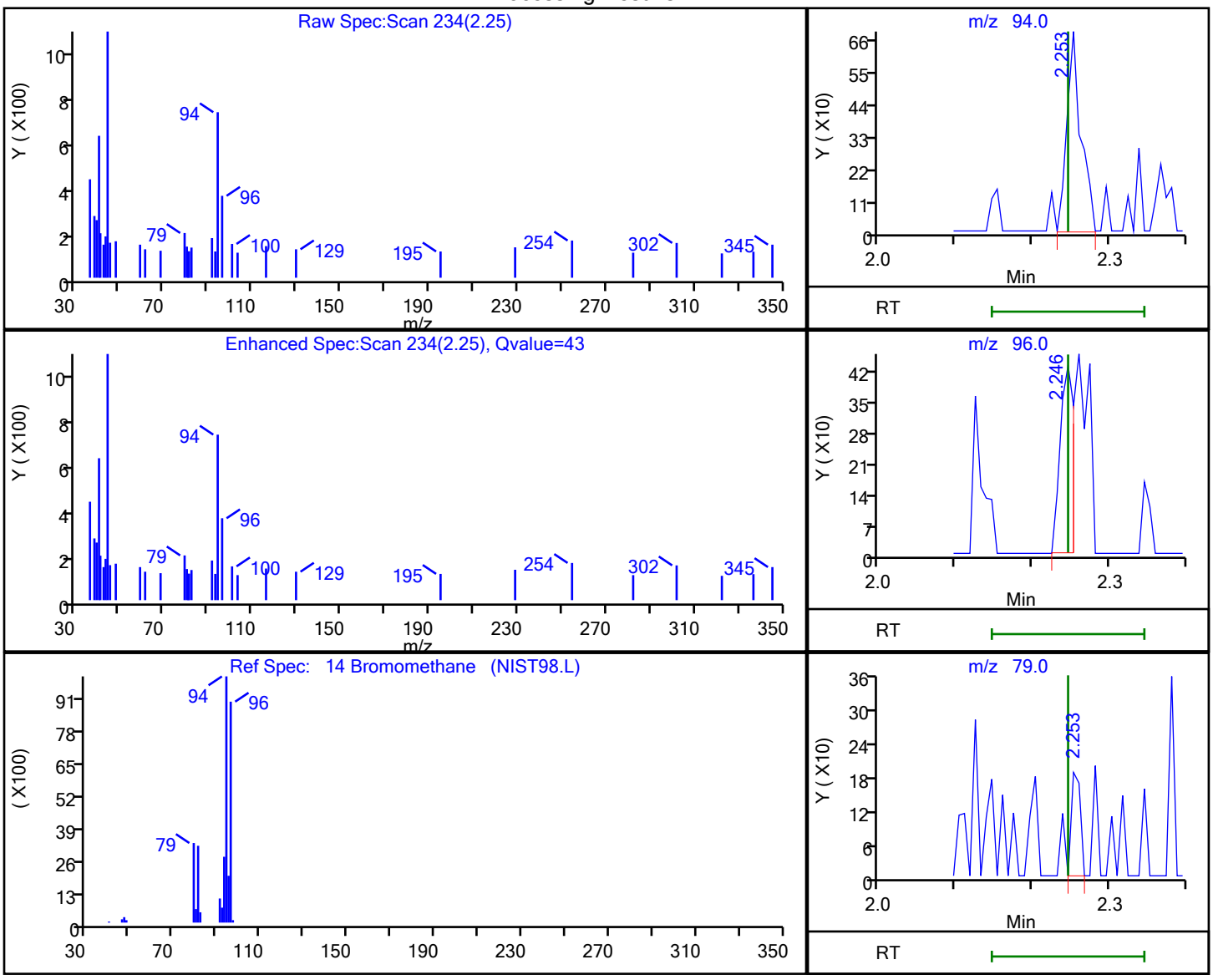
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502783.D
Injection Date: 25-Apr-2023 08:08:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: MED ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.25	94.00	873	0.262863
2.25	96.00	539	
2.25	79.00	150	

Reviewer: BX8N, 25-Apr-2023 13:53:14
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

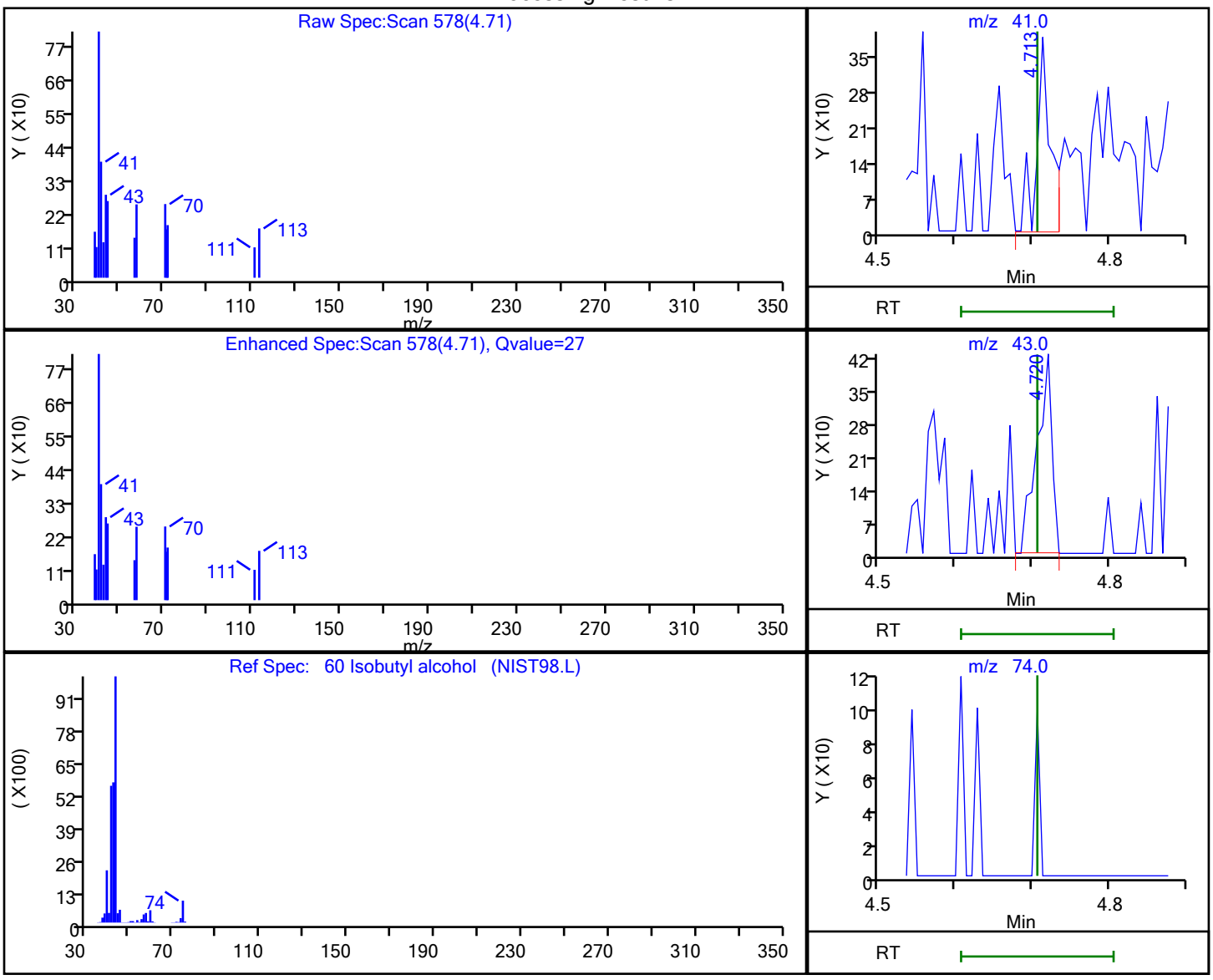
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502783.D				
Injection Date:	25-Apr-2023 08:08:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	MED	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.71	41.00	489	14.159266
4.72	43.00	589	
4.71	74.00	0	

Reviewer: BX8N, 25-Apr-2023 13:53:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609068/1002

Matrix: Water | Lab File ID: -ms11_5427-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 10:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	22.7		1.0	0.58
71-55-6	1,1,1-Trichloroethane	24.0		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	22.2		1.0	0.21
79-00-5	1,1,2-Trichloroethane	23.4		1.0	0.27
75-34-3	1,1-Dichloroethane	24.4		1.0	0.22
75-35-4	1,1-Dichloroethene	23.7		1.0	0.23
563-58-6	1,1-Dichloropropene	23.7		1.0	0.42
96-18-4	1,2,3-Trichloropropane	22.6		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	22.7		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	20.9		5.0	1.8
106-93-4	1,2-Dibromoethane	23.7		1.0	0.40
95-50-1	1,2-Dichlorobenzene	23.6		1.0	0.37
107-06-2	1,2-Dichloroethane	21.8		1.0	0.54
78-87-5	1,2-Dichloropropane	22.8		1.0	0.52
541-73-1	1,3-Dichlorobenzene	23.7		1.0	0.33
142-28-9	1,3-Dichloropropane	23.7		1.0	0.38
106-46-7	1,4-Dichlorobenzene	23.5		1.0	0.39
594-20-7	2,2-Dichloropropane	23.4		1.0	0.38
78-93-3	2-Butanone (MEK)	85.4		15	6.0
591-78-6	2-Hexanone	87.5		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	89.8		5.0	0.98
67-64-1	Acetone	86.4		15	6.6
107-02-8	Acrolein	249		20	4.9
107-13-1	Acrylonitrile	238		20	4.5
107-05-1	Allyl chloride	25.4		2.0	0.17
71-43-2	Benzene	23.8		1.0	0.31
75-25-2	Bromoform	22.0		2.0	1.2
74-83-9	Bromomethane	30.0		5.0	2.4
75-15-0	Carbon disulfide	24.2		2.0	0.63
56-23-5	Carbon tetrachloride	22.1		1.0	0.57
108-90-7	Chlorobenzene	23.3		1.0	0.42
74-97-5	Chlorobromomethane	23.5		1.0	0.40
124-48-1	Chlorodibromomethane	23.0		2.0	0.62
75-00-3	Chloroethane	26.6		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609068/1002

Matrix: Water | Lab File ID: -ms11_5427-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 10:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	24.4		1.0	0.36
74-87-3	Chloromethane	24.1		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	23.6		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	22.9		2.0	0.63
74-95-3	Dibromomethane	23.6		1.0	0.34
75-27-4	Dichlorobromomethane	23.6		1.0	0.39
75-71-8	Dichlorodifluoromethane	22.0		3.0	0.96
97-63-2	Ethyl methacrylate	23.2		3.0	0.86
100-41-4	Ethylbenzene	23.7		1.0	0.30
74-88-4	Iodomethane	20.0		5.0	2.6
78-83-1	Isobutyl alcohol	497		110	37
75-09-2	Methylene Chloride	24.7		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	23.9		2.0	0.36
95-47-6	o-Xylene	23.6		1.0	0.33
100-42-5	Styrene	23.7		1.0	0.36
127-18-4	Tetrachloroethene	23.7		1.0	0.40
108-88-3	Toluene	23.9		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	22.9		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	22.2		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	21.2		3.0	1.4
79-01-6	Trichloroethene	24.1		1.0	0.30
75-69-4	Trichlorofluoromethane	24.8		2.0	0.57
108-05-4	Vinyl acetate	49.4		3.0	0.94
75-01-4	Vinyl chloride	23.1		2.0	0.51
1330-20-7	Xylenes, Total	47.5		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	99		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\-ms11_5427-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 18-Apr-2023 10:06:30 ALS Bottle#: 2 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:13 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 10:37:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.068	5.068	0.000	98	1001556	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.568	0.000	88	245844	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	96	408616	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	265343	50.0	51.8	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	352073	50.0	52.3	
$ 7 Toluene-d8 (Surr)	98	6.311	6.311	0.000	94	1001687	50.0	49.6	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	85	398542	50.0	51.1	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	107207	25.0	22.0	
12 Chloromethane	50	1.883	1.883	0.000	99	154874	25.0	24.1	
13 Vinyl chloride	62	1.981	1.981	0.000	98	148708	25.0	23.1	
15 Bromomethane	94	2.260	2.260	0.000	93	96278	25.0	30.0	
16 Chloroethane	64	2.344	2.344	0.000	99	102265	25.0	26.6	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	97	223164	25.0	27.4	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	174828	25.0	24.8	
20 Ethyl ether	59	2.763	2.763	0.000	91	110166	25.0	23.6	
22 Acrolein	56	2.875	2.875	0.000	99	188930	246.9	248.8	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.945	2.945	0.000	93	70694	25.0	24.2	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	96	98413	25.0	23.7	
24 Acetone	43	2.973	2.973	0.000	99	197973	100.0	86.4	
26 Iodomethane	142	3.070	3.070	0.000	99	116696	25.0	20.0	
28 Carbon disulfide	76	3.140	3.140	0.000	100	346043	25.0	24.2	
29 Methyl acetate	43	3.196	3.196	0.000	98	245788	50.0	41.4	
30 3-Chloro-1-propene	41	3.210	3.210	0.000	89	194053	25.0	25.4	
31 Methylene Chloride	84	3.308	3.308	0.000	96	122960	25.0	24.7	
32 2-Methyl-2-propanol	59	3.350	3.350	0.000	99	164410	250.0	196.4	
33 Acrylonitrile	53	3.461	3.461	0.000	98	628132	250.0	238.4	
34 Methyl tert-butyl ether	73	3.489	3.489	0.000	96	394968	25.0	23.7	
35 trans-1,2-Dichloroethene	96	3.503	3.503	0.000	95	110939	25.0	22.9	
36 Hexane	57	3.699	3.699	0.000	93	130332	25.0	22.5	
37 Vinyl acetate	43	3.797	3.797	0.000	98	590818	50.0	49.4	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	97	225479	25.0	24.4	
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	318836	100.0	85.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2,2-Dichloropropane	77	4.230	4.230	0.000	89	196396	25.0	23.4	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	85	129385	25.0	23.6	
47 sec-Butyl Alcohol	45	4.299	4.299	0.000	99	317786	600.0	456.7	
49 Chlorobromomethane	128	4.397	4.397	0.000	97	57584	25.0	23.5	
50 Tetrahydrofuran	42	4.411	4.411	0.000	88	101172	50.0	43.6	
51 Chloroform	83	4.453	4.453	0.000	94	219889	25.0	24.4	
53 1,1,1-Trichloroethane	97	4.593	4.593	0.000	99	182495	25.0	24.0	
54 Cyclohexane	56	4.663	4.663	0.000	93	186649	25.0	22.5	
55 1,1-Dichloropropene	75	4.704	4.704	0.000	91	167661	25.0	23.7	
56 Carbon tetrachloride	117	4.718	4.718	0.000	81	143508	25.0	22.1	
52 Isobutyl alcohol	43	4.718	4.718	0.000	93	187599	625.0	496.5	
57 Benzene	78	4.858	4.858	0.000	98	487570	25.0	23.8	
58 1,2-Dichloroethane	62	4.886	4.886	0.000	97	185006	25.0	21.8	
60 n-Heptane	43	5.040	5.040	0.000	93	117592	25.0	21.3	
62 Trichloroethene	130	5.347	5.347	0.000	98	118952	25.0	24.1	
63 2-Pentanone	43	5.445	5.445	0.000	99	385020	80.0	64.9	
64 Methylcyclohexane	55	5.528	5.528	0.000	92	129084	25.0	22.4	
65 1,2-Dichloropropane	63	5.542	5.542	0.000	89	131742	25.0	22.8	
67 1,4-Dioxane	88	5.584	5.584	0.000	97	46134	500.0	433.6	
68 Dibromomethane	93	5.612	5.612	0.000	95	83640	25.0	23.6	
69 Dichlorobromomethane	83	5.738	5.738	0.000	99	165396	25.0	23.6	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	92	107686	25.0	27.4	
76 cis-1,3-Dichloropropene	75	6.073	6.073	0.000	93	203580	25.0	22.9	
74 4-Methyl-2-pentanone (MIBK)	43	6.171	6.171	0.000	99	625762	100.0	89.8	
75 Toluene	91	6.366	6.366	0.000	98	497407	25.0	23.9	
73 trans-1,3-Dichloropropene	75	6.534	6.534	0.000	99	198180	25.0	22.2	
77 Ethyl methacrylate	69	6.548	6.548	0.000	91	184871	25.0	23.2	
79 1,1,2-Trichloroethane	97	6.702	6.702	0.000	94	112302	25.0	23.4	
80 Tetrachloroethene	164	6.799	6.799	0.000	93	88705	25.0	23.7	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	96	210484	25.0	23.7	
82 2-Hexanone	43	6.869	6.869	0.000	96	445786	100.0	87.5	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	115252	25.0	23.0	
86 Ethylene Dibromide	107	7.163	7.163	0.000	98	120641	25.0	23.7	
88 1-Chlorohexane	91	7.540	7.540	0.000	97	122446	20.0	19.2	
89 Chlorobenzene	112	7.595	7.595	0.000	93	320272	25.0	23.3	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	44	110145	25.0	22.7	
91 Ethylbenzene	106	7.665	7.665	0.000	99	170226	25.0	23.7	
92 m-Xylene & p-Xylene	91	7.777	7.777	0.000	0	441684	25.0	23.9	
93 o-Xylene	106	8.140	8.140	0.000	97	206963	25.0	23.6	
94 Styrene	104	8.154	8.154	0.000	94	355658	25.0	23.7	
96 Bromoform	173	8.336	8.336	0.000	95	76631	25.0	22.0	
98 Isopropylbenzene	105	8.475	8.475	0.000	96	521798	25.0	23.5	
99 Cyclohexanone	55	8.573	8.573	0.000	94	213311	750.0	625.8	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	169680	25.0	22.2	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	63	46884	25.0	21.2	
101 Bromobenzene	156	8.797	8.797	0.000	98	136279	25.0	23.5	
103 1,2,3-Trichloropropane	110	8.825	8.825	0.000	87	53762	25.0	22.6	
104 N-Propylbenzene	120	8.866	8.866	0.000	99	140870	25.0	23.7	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	123854	25.0	23.1	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	94	441621	25.0	23.5	
107 4-Chlorotoluene	126	9.076	9.076	0.000	99	130513	25.0	22.7	
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	355955	25.0	21.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
109 1,2,4-Trimethylbenzene	105	9.397	9.397	0.000	99	459439	25.0	23.0	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	106113	25.0	24.8	
112 1,3-Dichlorobenzene	146	9.690	9.690	0.000	98	246987	25.0	23.7	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	447847	25.0	23.9	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	93	255369	25.0	23.5	
115 n-Butylbenzene	91	10.109	10.109	0.000	98	398340	25.0	24.5	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	96	241091	25.0	23.6	
117 1,2-Dibromo-3-Chloropropane	157	10.905	10.905	0.000	82	35214	25.0	20.9	
119 1,2,4-Trichlorobenzene	180	11.729	11.729	0.000	94	152631	25.0	22.7	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	97	64441	25.0	23.0	
121 Naphthalene	128	11.981	11.981	0.000	98	439471	25.0	20.4	
122 1,2,3-Trichlorobenzene	180	12.204	12.204	0.000	95	123659	25.0	21.8	
S 142 Xylenes, Total	106				0		50.0	47.5	
S 143 1,2-Dichloroethene, Total	1				0		50.0	46.5	
S 145 1,3-Dichloropropene, Total	1				0		50.0	45.1	
S 147 Trihalomethanes, Total	1				0		100.0	93.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added: 12.50	Units: uL	
MV-Gas B_00133	Amount Added: 5.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 18-Apr-2023 15:38:16 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\-ms11_5427-LCS.d

Injection Date: 18-Apr-2023 10:06:30 Instrument ID: VMS_MS11 Operator ID: MED

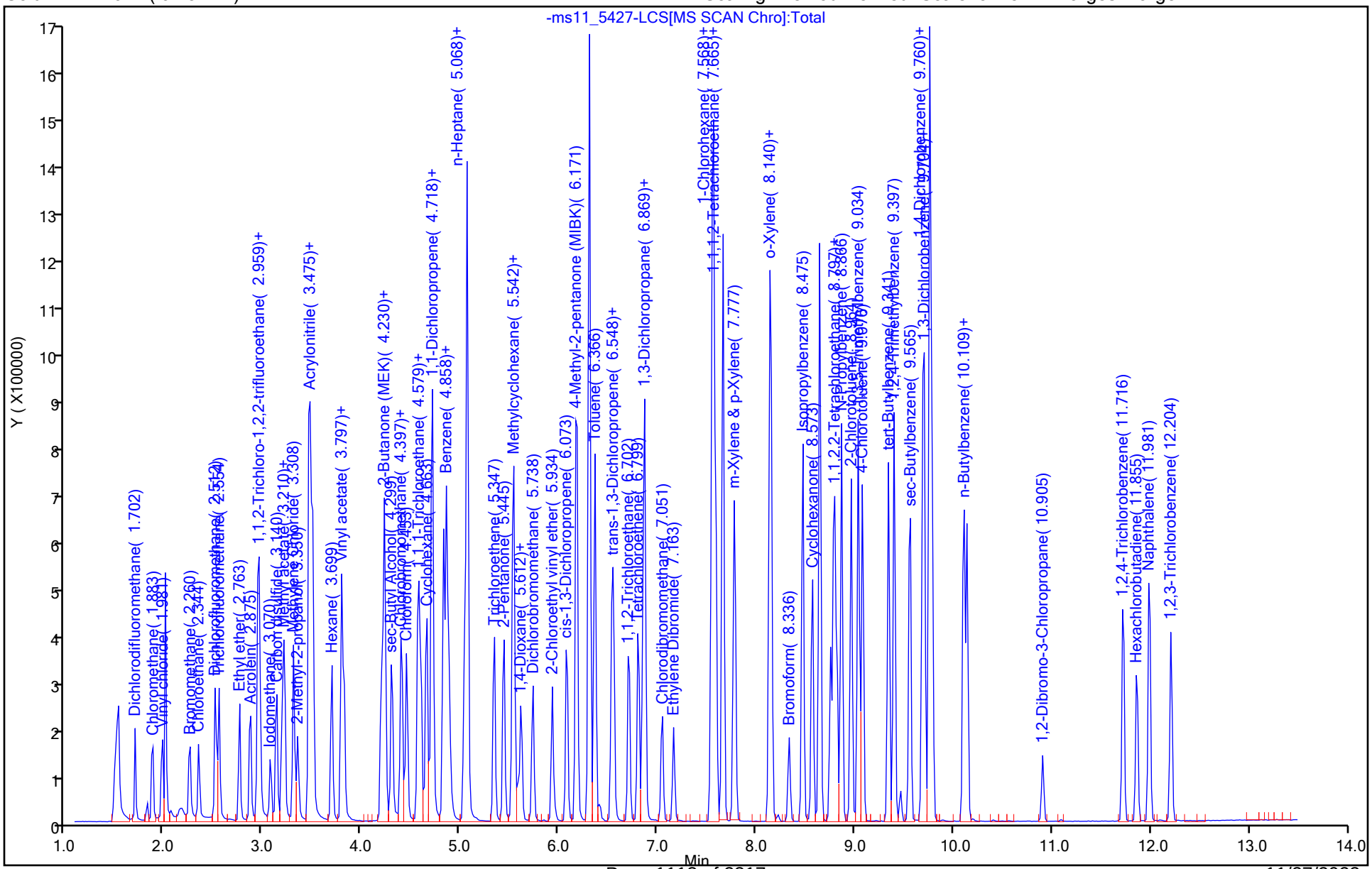
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: AQ_VMS11_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\-ms11_5427-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 18-Apr-2023 10:06:30 ALS Bottle#: 2 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:13 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 10:37:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	51.8	103.63
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	52.3	104.64
$ 7 Toluene-d8 (Surr)	50.0	49.6	99.18
$ 8 4-Bromofluorobenzene (Surr)	50.0	51.1	102.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609068/1003

Matrix: Water | Lab File ID: -ms11_5429-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 10:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	259		30	9.6
126-99-8	Chloroprene	27.9		3.0	1.2
126-98-7	Methacrylonitrile	291		15	5.3
80-62-6	Methyl methacrylate	57.8		4.0	1.1
107-12-0	Propionitrile	267		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	99		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\-ms11_5429-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 18-Apr-2023 10:49:30 ALS Bottle#: 4 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 11:35:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.081	5.081	0.000	98	1035045	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.567	7.567	0.000	89	252313	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	98	409898	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	267209	50.0	50.5	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	352251	50.0	50.7	
$ 7 Toluene-d8 (Surr)	98	6.310	6.310	0.000	94	1028305	50.0	49.6	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	88	390763	50.0	50.0	
19 Ethanol	45	2.665	2.665	0.000	100	188112	1500.0	1446.6	
72 Isopropyl alcohol	45	3.056	3.056	0.000	98	148341	250.0	228.8	
27 Acetonitrile	41	3.182	3.182	0.000	99	320277	250.0	259.2	
38 Isopropyl ether	87	3.824	3.824	0.000	93	129313	25.0	29.3	
40 2-Chloro-1,3-butadiene	53	3.880	3.880	0.000	94	240264	25.0	27.9	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	98	508291	25.0	28.5	
43 Ethyl acetate	43	4.216	4.216	0.000	100	406569	50.0	52.9	
46 Propionitrile	54	4.257	4.257	0.000	98	325553	250.0	267.5	
48 Methacrylonitrile	41	4.369	4.369	0.000	93	1281065	250.0	290.8	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	90	486588	25.0	29.6	
61 n-Butanol	56	5.207	5.207	0.000	90	167019	625.0	588.0	
66 Methyl methacrylate	100	5.556	5.556	0.000	91	101728	50.0	57.8	
70 2-Nitropropane	41	5.905	5.905	0.000	99	97065	50.0	43.9	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	117263	50.0	47.1	
110 1,2,3-Trimethylbenzene	105	9.802	9.802	0.000	100	556786	25.0	26.5	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	197016	25.0	28.4	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00061	Amount Added:	25.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

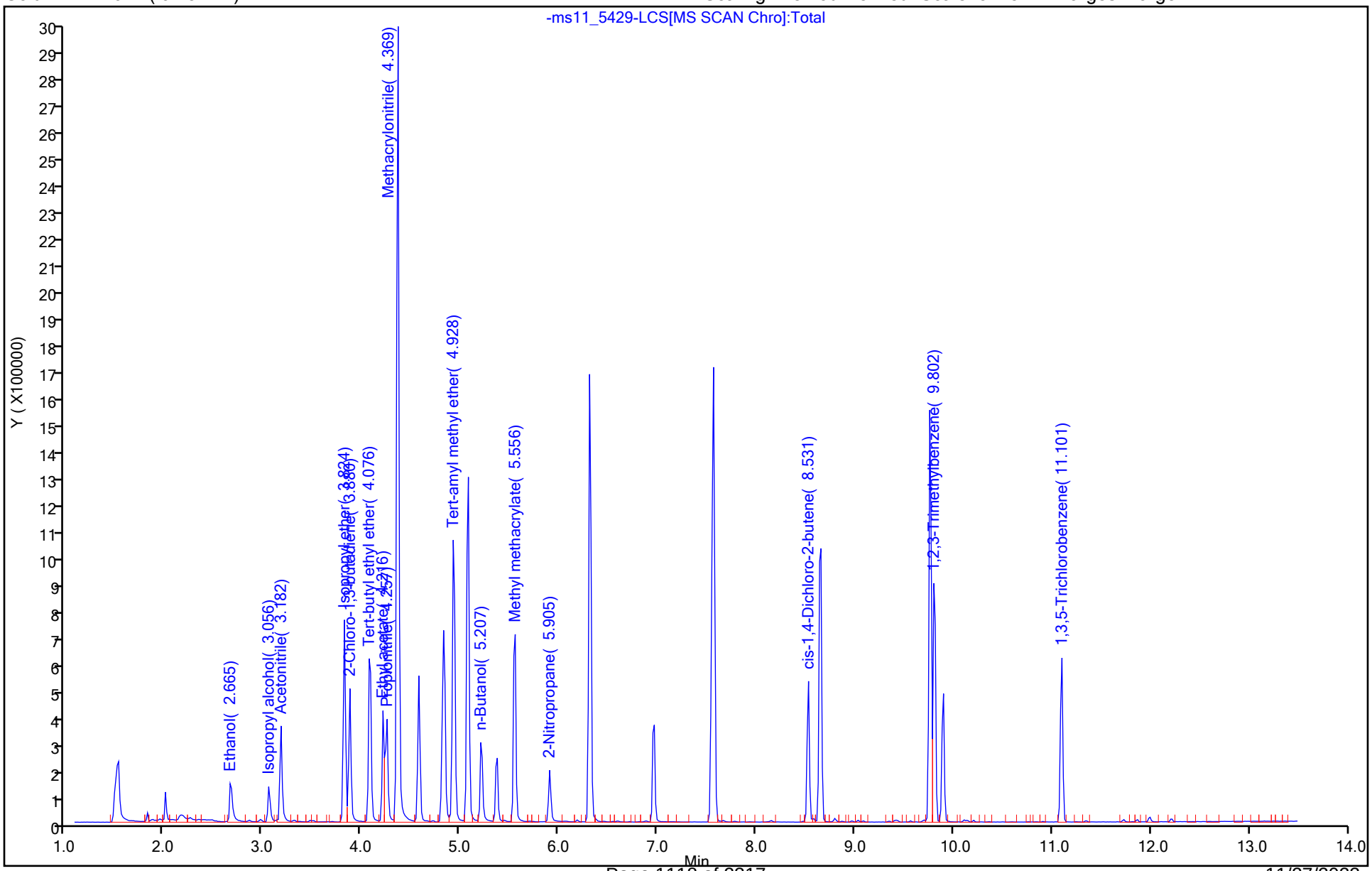
Report Date: 18-Apr-2023 15:38:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\-ms11_5429-LCS.d

Injection Date:	18-Apr-2023 10:49:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\-ms11_5429-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 18-Apr-2023 10:49:30 ALS Bottle#: 4 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 11:35:10

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	50.5	100.99
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	50.7	101.31
$ 7 Toluene-d8 (Surr)	50.0	49.6	99.21
$ 8 4-Bromofluorobenzene (Surr)	50.0	50.0	99.94

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609932/1002

Matrix: Water | Lab File ID: -X502750-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 18:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	49.0		1.0	0.58
71-55-6	1,1,1-Trichloroethane	51.4		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	45.1		1.0	0.21
79-00-5	1,1,2-Trichloroethane	50.1		1.0	0.27
75-34-3	1,1-Dichloroethane	54.5		1.0	0.22
75-35-4	1,1-Dichloroethene	51.7		1.0	0.23
563-58-6	1,1-Dichloropropene	52.5		1.0	0.42
96-18-4	1,2,3-Trichloropropane	43.3		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	49.7		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	39.3		5.0	1.8
106-93-4	1,2-Dibromoethane	47.7		1.0	0.40
95-50-1	1,2-Dichlorobenzene	46.8		1.0	0.37
107-06-2	1,2-Dichloroethane	48.8		1.0	0.54
78-87-5	1,2-Dichloropropane	54.1		1.0	0.52
541-73-1	1,3-Dichlorobenzene	47.9		1.0	0.33
142-28-9	1,3-Dichloropropane	49.5		1.0	0.38
106-46-7	1,4-Dichlorobenzene	45.8		1.0	0.39
594-20-7	2,2-Dichloropropane	54.6		1.0	0.38
78-93-3	2-Butanone (MEK)	213		15	6.0
591-78-6	2-Hexanone	210		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	225		5.0	0.98
67-64-1	Acetone	191		15	6.6
107-02-8	Acrolein	452		20	4.9
107-13-1	Acrylonitrile	544		20	4.5
107-05-1	Allyl chloride	62.8		2.0	0.17
71-43-2	Benzene	53.1		1.0	0.31
75-25-2	Bromoform	47.7		2.0	1.2
74-83-9	Bromomethane	40.8		5.0	2.4
75-15-0	Carbon disulfide	53.5		2.0	0.63
56-23-5	Carbon tetrachloride	53.6		1.0	0.57
108-90-7	Chlorobenzene	48.9		1.0	0.42
74-97-5	Chlorobromomethane	50.3		1.0	0.40
124-48-1	Chlorodibromomethane	47.4		2.0	0.62
75-00-3	Chloroethane	64.0		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609932/1002

Matrix: Water | Lab File ID: -X502750-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 18:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	50.1		1.0	0.36
74-87-3	Chloromethane	53.7		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	51.0		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	52.4		2.0	0.63
74-95-3	Dibromomethane	48.0		1.0	0.34
75-27-4	Dichlorobromomethane	50.0		1.0	0.39
75-71-8	Dichlorodifluoromethane	59.2		3.0	0.96
97-63-2	Ethyl methacrylate	51.6		3.0	0.86
100-41-4	Ethylbenzene	48.4		1.0	0.30
74-88-4	Iodomethane	44.6		5.0	2.6
78-83-1	Isobutyl alcohol	1130		110	37
75-09-2	Methylene Chloride	48.0		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	50.8		2.0	0.36
95-47-6	o-Xylene	49.3		1.0	0.33
100-42-5	Styrene	51.0		1.0	0.36
127-18-4	Tetrachloroethene	54.0		1.0	0.40
108-88-3	Toluene	52.1		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	54.1		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	54.0		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	42.6		3.0	1.4
79-01-6	Trichloroethene	51.5		1.0	0.30
75-69-4	Trichlorofluoromethane	61.1		2.0	0.57
108-05-4	Vinyl acetate	120		3.0	0.94
75-01-4	Vinyl chloride	68.1		2.0	0.51
1330-20-7	Xylenes, Total	100		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		70-127
460-00-4	4-Bromofluorobenzene (Surr)	99		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502750-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Apr-2023 18:48:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	1463413	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	353452	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	560008	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	362866	50.0	51.5	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	370928	50.0	50.2	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1510607	50.0	50.2	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	495188	50.0	49.5	
	10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	380047	50.0	59.2	
	11 Chloromethane	50	1.867	1.867	0.000	99	350094	50.0	53.7	
	12 Vinyl chloride	62	1.967	1.967	0.000	98	452648	50.0	68.1	
	14 Bromomethane	94	2.246	2.246	0.000	90	144822	50.0	40.8	
	15 Chloroethane	64	2.339	2.339	0.000	99	284414	50.0	64.0	
	16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	624742	50.0	56.3	
	17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	523413	50.0	61.1	
	19 Ethyl ether	59	2.747	2.747	0.000	89	264482	50.0	53.6	
	21 Acrolein	56	2.854	2.854	0.000	99	360363	493.8	452.5	
	22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	230452	50.0	57.0	
	23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	290890	50.0	51.7	
	24 Acetone	43	2.954	2.954	0.000	100	307619	200.0	190.7	
	26 Iodomethane	142	3.054	3.054	0.000	98	345371	50.0	44.6	
	27 Carbon disulfide	76	3.118	3.118	0.000	98	973811	50.0	53.5	
	29 Methyl acetate	43	3.176	3.176	0.000	97	401488	100.0	108.7	
	30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	468668	50.0	62.8	
	31 Methylene Chloride	84	3.297	3.297	0.000	91	346526	50.0	48.0	
	32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	246817	500.0	431.8	
	33 Acrylonitrile	53	3.455	3.455	0.000	99	1141505	500.0	544.2	
	34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	894663	50.0	50.6	
	35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	337851	50.0	54.1	
	37 Hexane	57	3.683	3.683	0.000	89	465931	50.0	57.5	
	39 Vinyl acetate	43	3.783	3.783	0.000	97	1185731	100.0	119.9	
	40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	619971	50.0	54.5	
	45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	511833	200.0	212.9	
	47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	381447	50.0	51.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 2,2-Dichloropropane	77	4.220	4.220	0.000	86	477624	50.0	54.6	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	484520	1200.0	1127.9	
52 Chlorobromomethane	128	4.384	4.384	0.000	97	173322	50.0	50.3	
53 Tetrahydrofuran	42	4.391	4.391	0.000	88	173592	100.0	106.5	
54 Chloroform	83	4.441	4.441	0.000	93	580982	50.0	50.1	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	99	482377	50.0	51.4	
56 Cyclohexane	56	4.649	4.649	0.000	88	593915	50.0	61.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	99	483232	50.0	52.5	
60 Isobutyl alcohol	41	4.706	4.706	0.000	92	206694	1250.0	1133.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	407141	50.0	53.6	
62 Benzene	78	4.849	4.849	0.000	95	1443961	50.0	53.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	420549	50.0	48.8	
65 n-Heptane	43	5.028	5.028	0.000	91	354968	50.0	62.9	
67 Trichloroethene	95	5.335	5.335	0.000	99	347916	50.0	51.5	
68 2-Pentanone	43	5.435	5.435	0.000	99	635523	160.0	164.0	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	424346	50.0	59.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	98	373818	50.0	54.1	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	83485	1000.0	953.9	
73 Dibromomethane	93	5.607	5.607	0.000	97	197897	50.0	48.0	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	434831	50.0	50.0	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	216347	50.0	98.5	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	97	563882	50.0	52.4	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1039137	200.0	224.6	
79 Toluene	91	6.365	6.365	0.000	98	1526884	50.0	52.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	91	484824	50.0	54.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	398472	50.0	51.6	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	293530	50.0	50.1	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	277102	50.0	54.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	536227	50.0	49.5	
85 2-Hexanone	43	6.872	6.872	0.000	95	710512	200.0	209.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	91	309879	50.0	47.4	
88 Ethylene Dibromide	107	7.166	7.166	0.000	98	295159	50.0	47.7	
89 1-Chlorohexane	91	7.552	7.552	0.000	96	390042	40.0	40.8	
90 Chlorobenzene	112	7.595	7.595	0.000	95	962841	50.0	48.9	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.666	0.000	96	309971	50.0	49.0	
92 Ethylbenzene	106	7.673	7.673	0.000	98	524068	50.0	48.4	
93 m-Xylene & p-Xylene	106	7.788	7.788	0.000	0	660648	50.0	50.8	
94 o-Xylene	106	8.152	8.152	0.000	95	649886	50.0	49.3	
95 Styrene	104	8.167	8.167	0.000	95	1067989	50.0	51.0	
96 Bromoform	173	8.345	8.345	0.000	96	188235	50.0	47.7	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1577400	50.0	49.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	398165	1500.0	1324.3	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	361902	50.0	45.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	382712	50.0	47.8	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	80	89277	50.0	42.6	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	83	105306	50.0	43.3	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	449972	50.0	50.9	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	382812	50.0	48.8	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1313988	50.0	49.0	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	396139	50.0	48.6	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1103049	50.0	49.2	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1383726	50.0	49.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	333933	50.0	49.8	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	708319	50.0	47.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1381584	50.0	49.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	719234	50.0	45.8	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1230613	50.0	51.3	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	665529	50.0	46.8	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	88	63330	50.0	39.3	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	355759	50.0	49.7	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	140126	50.0	53.7	
122 Naphthalene	128	12.035	12.035	0.000	97	799006	50.0	43.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	251296	50.0	46.5	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	105.1	
S 139 Xylenes, Total (URS)	1				0		100.0	100.1	
S 136 1,3-Dichloropropene, Total	1				0		100.0	106.3	
S 138 Xylenes, Total	106				0		100.0	100.1	
S 140 Trihalomethanes, Total	1				0		200.0	195.2	
S 141 1,2-Dichloroethene, Total	1				0		100.0	105.1	

Reagents:

MV-MegaMain B_00083	Amount Added:	25.00	Units: uL	
MV-Gas B_00132	Amount Added:	10.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 25-Apr-2023 04:09:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502750-LCS.d

Injection Date: 24-Apr-2023 18:48:30 Instrument ID: VMS_X4 Operator ID: bj

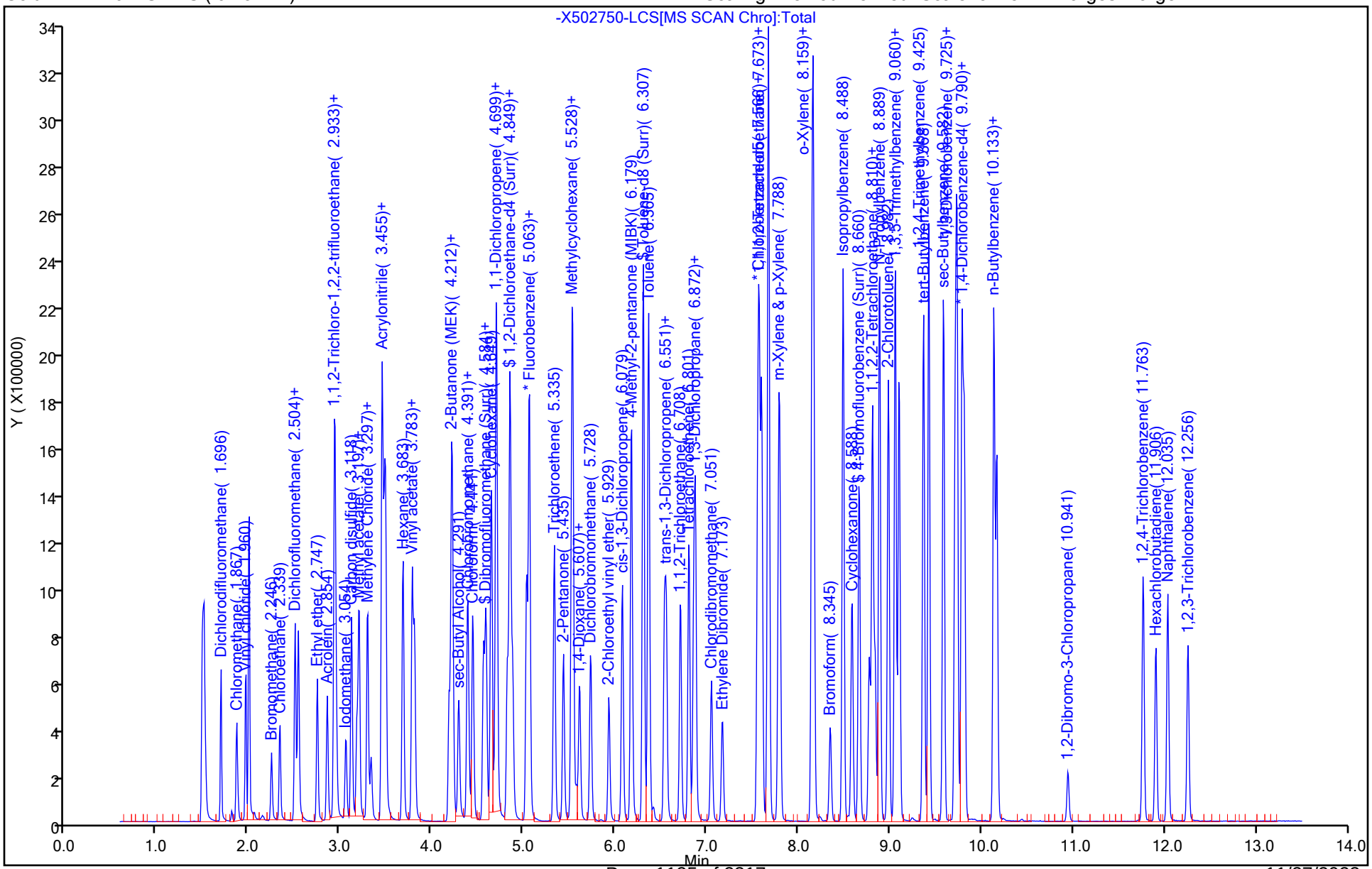
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 1

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502750-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Apr-2023 18:48:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.5	103.10
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.2	100.34
$ 6 Toluene-d8 (Surr)	50.0	50.2	100.34
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.5	98.96

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609932/1003

Matrix: Water | Lab File ID: -X502751-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 19:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	234		30	9.6
126-99-8	Chloroprene	25.4		3.0	1.2
126-98-7	Methacrylonitrile	233		15	5.3
80-62-6	Methyl methacrylate	38.9		4.0	1.1
107-12-0	Propionitrile	246		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502751-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Apr-2023 19:08:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1417408	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	339994	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	535901	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	349770	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	363967	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1476755	50.0	51.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	488319	50.0	51.0	
18 Ethanol	45	2.646	2.646	0.000	100	97227	1500.0	1295.9	
25 Isopropyl alcohol	45	3.033	3.033	0.000	98	71036	250.0	161.6	
28 Acetonitrile	41	3.161	3.161	0.000	100	185585	250.0	234.4	
41 Isopropyl ether	87	3.805	3.805	0.000	95	136832	25.0	25.9	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	235503	25.0	25.4	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	458314	25.0	25.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	235175	50.0	42.9	
49 Propionitrile	54	4.234	4.234	0.000	99	216813	250.0	246.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	804721	250.0	233.4	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	426417	25.0	24.1	
66 n-Butanol	56	5.199	5.199	0.000	86	77987	625.0	448.9	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	72770	50.0	38.9	
75 2-Nitropropane	41	5.893	5.893	0.000	97	48468	50.0	24.4	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	81872	50.0	38.8	
115 1,2,3-Trimethylbenzene	105	9.832	9.832	0.000	97	635983	25.0	21.9	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	201994	25.0	22.3	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

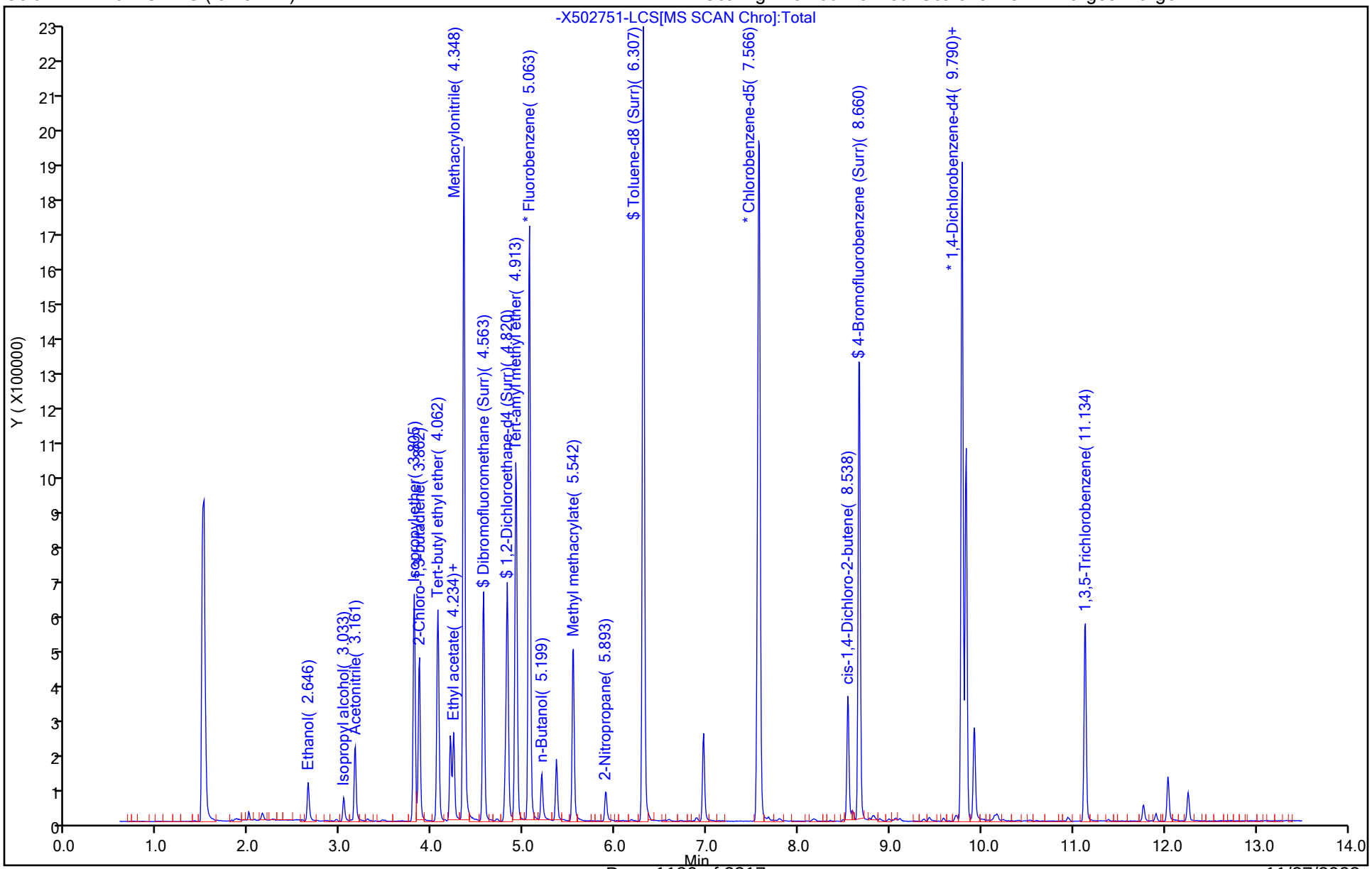
Report Date: 25-Apr-2023 04:09:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502751-LCS.d

Injection Date:	24-Apr-2023 19:08:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502751-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Apr-2023 19:08:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.60
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.8	101.66
$ 6 Toluene-d8 (Surr)	50.0	51.0	101.98
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.0	101.98

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609946/1002

Matrix: Water | Lab File ID: -X502779-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 06:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	21.8		1.0	0.58
71-55-6	1,1,1-Trichloroethane	23.2		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	22.2		1.0	0.21
79-00-5	1,1,2-Trichloroethane	22.9		1.0	0.27
75-34-3	1,1-Dichloroethane	25.1		1.0	0.22
75-35-4	1,1-Dichloroethene	23.4		1.0	0.23
563-58-6	1,1-Dichloropropene	23.3		1.0	0.42
96-18-4	1,2,3-Trichloropropane	20.8		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	23.4		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	19.9		5.0	1.8
106-93-4	1,2-Dibromoethane	22.1		1.0	0.40
95-50-1	1,2-Dichlorobenzene	21.6		1.0	0.37
107-06-2	1,2-Dichloroethane	22.7		1.0	0.54
78-87-5	1,2-Dichloropropane	24.9		1.0	0.52
541-73-1	1,3-Dichlorobenzene	22.2		1.0	0.33
142-28-9	1,3-Dichloropropane	22.5		1.0	0.38
106-46-7	1,4-Dichlorobenzene	21.4		1.0	0.39
594-20-7	2,2-Dichloropropane	24.8		1.0	0.38
78-93-3	2-Butanone (MEK)	106		15	6.0
591-78-6	2-Hexanone	101		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	108		5.0	0.98
67-64-1	Acetone	93.5		15	6.6
107-02-8	Acrolein	218		20	4.9
107-13-1	Acrylonitrile	266		20	4.5
107-05-1	Allyl chloride	30.1		2.0	0.17
71-43-2	Benzene	24.2		1.0	0.31
75-25-2	Bromoform	22.1		2.0	1.2
74-83-9	Bromomethane	20.1		5.0	2.4
75-15-0	Carbon disulfide	24.8		2.0	0.63
56-23-5	Carbon tetrachloride	23.6		1.0	0.57
108-90-7	Chlorobenzene	22.2		1.0	0.42
74-97-5	Chlorobromomethane	23.6		1.0	0.40
124-48-1	Chlorodibromomethane	21.3		2.0	0.62
75-00-3	Chloroethane	24.0		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609946/1002

Matrix: Water | Lab File ID: -X502779-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 06:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	22.9		1.0	0.36
74-87-3	Chloromethane	22.1		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	23.3		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	23.3		2.0	0.63
74-95-3	Dibromomethane	22.6		1.0	0.34
75-27-4	Dichlorobromomethane	23.1		1.0	0.39
75-71-8	Dichlorodifluoromethane	20.6		3.0	0.96
97-63-2	Ethyl methacrylate	24.2		3.0	0.86
100-41-4	Ethylbenzene	22.3		1.0	0.30
74-88-4	Iodomethane	17.2		5.0	2.6
78-83-1	Isobutyl alcohol	519		110	37
75-09-2	Methylene Chloride	22.4		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	23.3		2.0	0.36
95-47-6	o-Xylene	22.0		1.0	0.33
100-42-5	Styrene	23.2		1.0	0.36
127-18-4	Tetrachloroethene	23.2		1.0	0.40
108-88-3	Toluene	24.0		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	25.0		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	24.9		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	20.2		3.0	1.4
79-01-6	Trichloroethene	22.9		1.0	0.30
75-69-4	Trichlorofluoromethane	22.0		2.0	0.57
108-05-4	Vinyl acetate	56.8		3.0	0.94
75-01-4	Vinyl chloride	26.3		2.0	0.51
1330-20-7	Xylenes, Total	45.3		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	105		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\-X502779-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 25-Apr-2023 06:36:30 ALS Bottle#: 2 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:43 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

First Level Reviewer: BX8N Date: 25-Apr-2023 07:04:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1411236	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	344876	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	539343	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	357989	50.0	52.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	358268	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	93	1493601	50.0	50.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	494622	50.0	51.3	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	127817	25.0	20.6	
11 Chloromethane	50	1.867	1.867	0.000	99	139104	25.0	22.1	
12 Vinyl chloride	62	1.967	1.967	0.000	98	168190	25.0	26.3	
14 Bromomethane	94	2.246	2.246	0.000	89	68677	25.0	20.1	
15 Chloroethane	64	2.339	2.339	0.000	100	103118	25.0	24.0	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	231838	25.0	21.7	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	182002	25.0	22.0	
19 Ethyl ether	59	2.747	2.747	0.000	91	117146	25.0	24.6	
21 Acrolein	56	2.854	2.854	0.000	99	167308	246.9	217.8	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	91519	25.0	23.5	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	126755	25.0	23.4	
24 Acetone	43	2.954	2.954	0.000	99	149225	100.0	93.5	
26 Iodomethane	142	3.054	3.054	0.000	97	123072	25.0	17.2	
27 Carbon disulfide	76	3.119	3.119	0.000	98	435495	25.0	24.8	
29 Methyl acetate	43	3.176	3.176	0.000	97	188983	50.0	53.0	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	216406	25.0	30.1	
31 Methylene Chloride	84	3.297	3.297	0.000	92	155710	25.0	22.4	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	117038	250.0	213.9	
33 Acrylonitrile	53	3.455	3.455	0.000	99	538138	250.0	266.0	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	397671	25.0	23.3	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	100	150700	25.0	25.0	
37 Hexane	57	3.683	3.683	0.000	91	182025	25.0	23.0	
39 Vinyl acetate	43	3.784	3.784	0.000	97	542248	50.0	56.8	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	275066	25.0	25.1	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	245559	100.0	105.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.213	4.213	0.000	82	168278	25.0	23.3	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	208897	25.0	24.8	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	225175	600.0	548.9	
52 Chlorobromomethane	128	4.384	4.384	0.000	96	78310	25.0	23.6	
53 Tetrahydrofuran	42	4.398	4.398	0.000	89	83344	50.0	53.0	
54 Chloroform	83	4.441	4.441	0.000	93	255774	25.0	22.9	
55 1,1,1-Trichloroethane	97	4.592	4.592	0.000	99	210303	25.0	23.2	
56 Cyclohexane	56	4.649	4.649	0.000	88	236110	25.0	25.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	206666	25.0	23.3	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	90170	625.0	519.1	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	173006	25.0	23.6	
62 Benzene	78	4.849	4.849	0.000	96	635178	25.0	24.2	
63 1,2-Dichloroethane	62	4.878	4.878	0.000	97	188352	25.0	22.7	
65 n-Heptane	43	5.035	5.035	0.000	91	147949	25.0	27.2	
67 Trichloroethene	95	5.335	5.335	0.000	97	151361	25.0	22.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	294613	80.0	79.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	169612	25.0	24.8	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	97	165750	25.0	24.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	94	38076	500.0	451.2	
73 Dibromomethane	93	5.607	5.607	0.000	97	89795	25.0	22.6	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	193664	25.0	23.1	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	82207	25.0	38.3	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	245215	25.0	23.3	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	481118	100.0	107.8	
79 Toluene	91	6.365	6.365	0.000	98	677326	25.0	24.0	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	215875	25.0	24.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	182048	25.0	24.2	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	128990	25.0	22.9	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	116272	25.0	23.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	89	238182	25.0	22.5	
85 2-Hexanone	43	6.872	6.872	0.000	96	332231	100.0	100.6	
87 Chlorodibromomethane	129	7.051	7.051	0.000	91	135741	25.0	21.3	
88 Ethylene Dibromide	107	7.173	7.173	0.000	97	133643	25.0	22.1	
89 1-Chlorohexane	91	7.552	7.552	0.000	97	164999	20.0	17.7	
90 Chlorobenzene	112	7.602	7.602	0.000	95	425911	25.0	22.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	93	134600	25.0	21.8	
92 Ethylbenzene	106	7.673	7.673	0.000	98	235424	25.0	22.3	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	295475	25.0	23.3	
94 o-Xylene	106	8.152	8.152	0.000	96	282550	25.0	22.0	
95 Styrene	104	8.167	8.167	0.000	95	473950	25.0	23.2	
96 Bromoform	173	8.345	8.345	0.000	96	85036	25.0	22.1	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	692444	25.0	22.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	230360	750.0	787.9	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	171171	25.0	22.2	
101 Bromobenzene	156	8.810	8.810	0.000	95	171707	25.0	22.3	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	80	40285	25.0	20.2	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	48803	25.0	20.8	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	201179	25.0	23.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	174151	25.0	23.1	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	579999	25.0	22.5	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	180951	25.0	23.0	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	489478	25.0	22.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	611431	25.0	22.9	
111 sec-Butylbenzene	134	9.590	9.590	0.000	94	142956	25.0	22.1	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	315947	25.0	22.2	
113 4-Isopropyltoluene	119	9.733	9.733	0.000	97	611072	25.0	22.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	322936	25.0	21.4	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	548360	25.0	23.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	296094	25.0	21.6	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.941	0.000	85	30539	25.0	19.9	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	93	161311	25.0	23.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	63113	25.0	25.1	
122 Naphthalene	128	12.035	12.035	0.000	97	388907	25.0	22.1	
123 1,2,3-Trichlorobenzene	180	12.257	12.257	0.000	96	121442	25.0	23.3	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	48.4	
S 139 Xylenes, Total (URS)	1				0		50.0	45.3	
S 136 1,3-Dichloropropene, Total	1				0		50.0	48.3	
S 138 Xylenes, Total	106				0		50.0	45.3	
S 140 Trihalomethanes, Total	1				0		100.0	89.3	
S 141 1,2-Dichloroethene, Total	1				0		50.0	48.4	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00132	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 25-Apr-2023 13:52:47 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\-X502779-LCS.d

Injection Date: 25-Apr-2023 06:36:30 Instrument ID: VMS_X4 Operator ID: MED

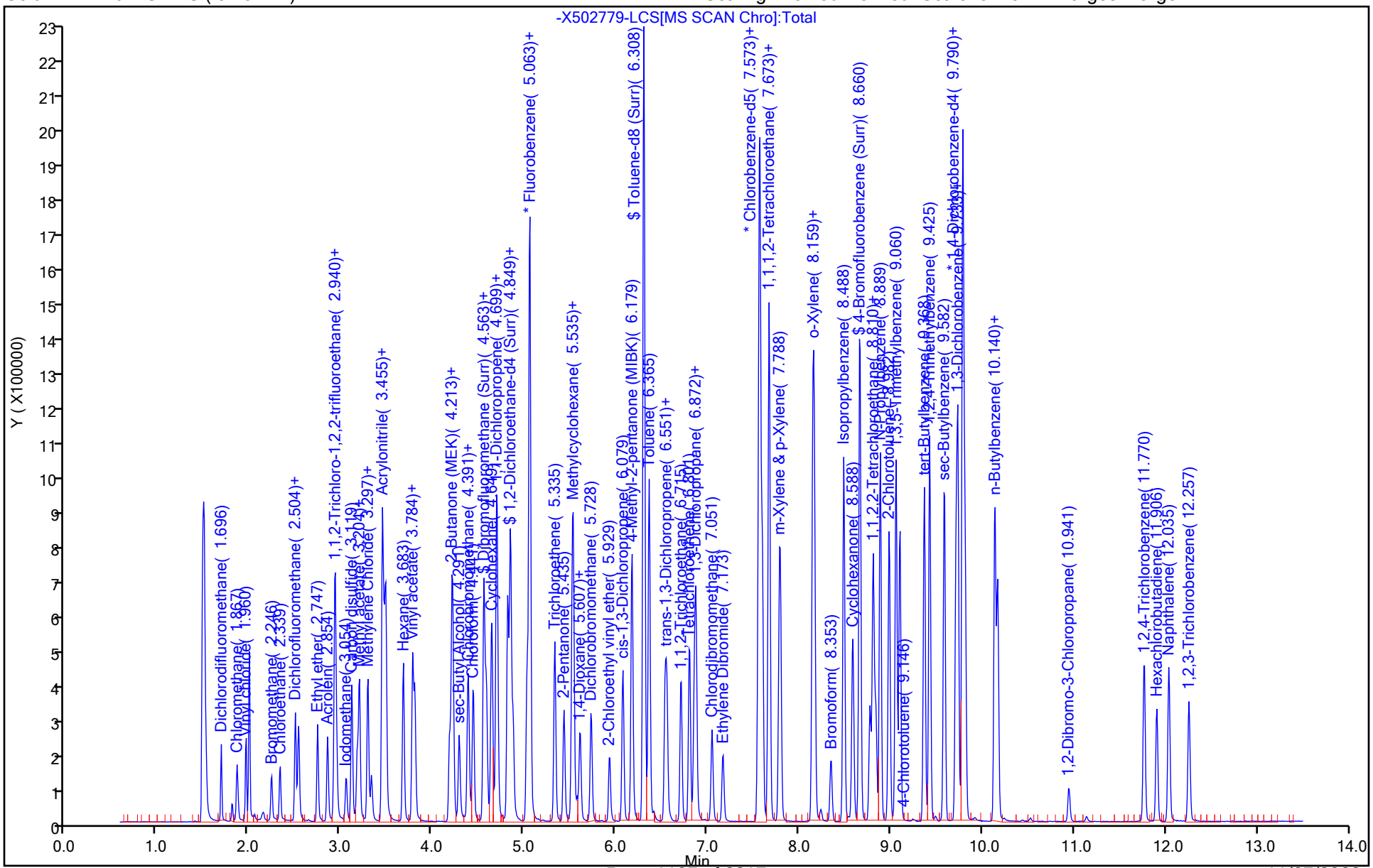
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\-X502779-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 25-Apr-2023 06:36:30 ALS Bottle#: 2 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:43 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

First Level Reviewer: BX8N Date: 25-Apr-2023 07:04:50

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.7	105.47
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.3	100.50
$ 6 Toluene-d8 (Surr)	50.0	50.8	101.68
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.3	102.64

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609946/1003

Matrix: Water | Lab File ID: -X502778A-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 06:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	271		30	9.6
126-99-8	Chloroprene	28.9		3.0	1.2
126-98-7	Methacrylonitrile	275		15	5.3
80-62-6	Methyl methacrylate	46.1		4.0	1.1
107-12-0	Propionitrile	273		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	103		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\-X502778A-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 25-Apr-2023 06:09:30 ALS Bottle#: 29 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Misc. Info.: 280-0120722-033
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

First Level Reviewer: BX8N Date: 25-Apr-2023 06:50:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1444758	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	342438	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	541434	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	360958	50.0	51.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	370496	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1496529	50.0	51.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	496845	50.0	51.3	
18 Ethanol	45	2.647	2.647	0.000	100	125121	1500.0	1636.2	
25 Isopropyl alcohol	45	3.040	3.040	0.000	99	91320	250.0	203.9	
28 Acetonitrile	41	3.161	3.161	0.000	99	218676	250.0	271.0	
41 Isopropyl ether	87	3.805	3.805	0.000	95	152316	25.0	28.2	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	273714	25.0	28.9	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	529275	25.0	28.3	
46 Ethyl acetate	43	4.198	4.198	0.000	99	289337	50.0	51.8	
49 Propionitrile	54	4.234	4.234	0.000	100	245137	250.0	273.1	
51 Methacrylonitrile	41	4.348	4.348	0.000	89	968077	250.0	275.5	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	91	481281	25.0	26.7	
66 n-Butanol	56	5.199	5.199	0.000	85	96234	625.0	543.4	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	87965	50.0	46.1	
75 2-Nitropropane	41	5.900	5.900	0.000	98	56742	50.0	28.1	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	97648	50.0	45.8	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	728486	25.0	24.8	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	233693	25.0	25.6	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

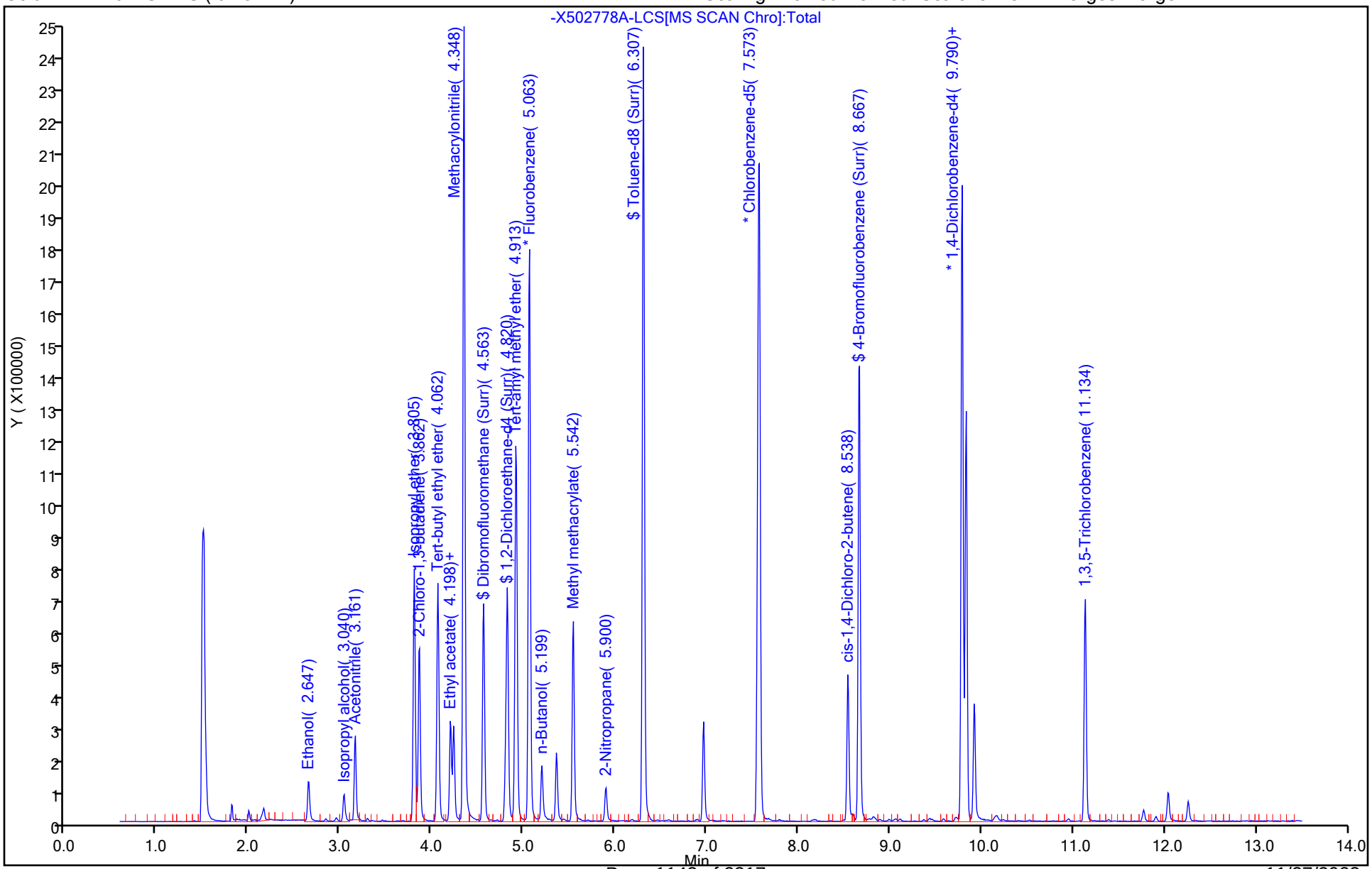
Report Date: 25-Apr-2023 13:52:50 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\-X502778A-LCS.d

Injection Date:	25-Apr-2023 06:09:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Environment Testing America
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\-X502778A-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	25-Apr-2023 06:09:30	ALS Bottle#:	29	Worklist Smp#:	1003
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	CCVC				
Misc. Info.:	280-0120722-033				
Operator ID:	bj	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	25-Apr-2023 13:52:48	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1675				

First Level Reviewer: BX8N Date: 25-Apr-2023 06:50:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.9	103.88
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.8	101.52
$ 6 Toluene-d8 (Surr)	50.0	51.3	102.60
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.3	102.70

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609068/4

Matrix: Water | Lab File ID: ms11_5428.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 10:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	21.8		1.0	0.58
71-55-6	1,1,1-Trichloroethane	21.7		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	22.2		1.0	0.21
79-00-5	1,1,2-Trichloroethane	21.8		1.0	0.27
75-34-3	1,1-Dichloroethane	22.3		1.0	0.22
75-35-4	1,1-Dichloroethene	21.5		1.0	0.23
563-58-6	1,1-Dichloropropene	22.1		1.0	0.42
96-18-4	1,2,3-Trichloropropane	21.9		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	21.6		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	21.2		5.0	1.8
106-93-4	1,2-Dibromoethane	22.6		1.0	0.40
95-50-1	1,2-Dichlorobenzene	22.1		1.0	0.37
107-06-2	1,2-Dichloroethane	21.2		1.0	0.54
78-87-5	1,2-Dichloropropane	21.2		1.0	0.52
541-73-1	1,3-Dichlorobenzene	22.3		1.0	0.33
142-28-9	1,3-Dichloropropane	23.0		1.0	0.38
106-46-7	1,4-Dichlorobenzene	22.1		1.0	0.39
594-20-7	2,2-Dichloropropane	20.9		1.0	0.38
78-93-3	2-Butanone (MEK)	82.8		15	6.0
591-78-6	2-Hexanone	85.8		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	87.0		5.0	0.98
67-64-1	Acetone	83.5		15	6.6
107-02-8	Acrolein	239		20	4.9
107-13-1	Acrylonitrile	227		20	4.5
107-05-1	Allyl chloride	22.7		2.0	0.17
71-43-2	Benzene	22.1		1.0	0.31
75-25-2	Bromoform	21.2		2.0	1.2
74-83-9	Bromomethane	27.6		5.0	2.4
75-15-0	Carbon disulfide	22.0		2.0	0.63
56-23-5	Carbon tetrachloride	20.6		1.0	0.57
108-90-7	Chlorobenzene	22.0		1.0	0.42
74-97-5	Chlorobromomethane	22.0		1.0	0.40
124-48-1	Chlorodibromomethane	22.0		2.0	0.62
75-00-3	Chloroethane	24.4		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609068/4

Matrix: Water | Lab File ID: ms11_5428.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 10:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	22.5		1.0	0.36
74-87-3	Chloromethane	22.1		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	21.3		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	21.9		2.0	0.63
74-95-3	Dibromomethane	21.6		1.0	0.34
75-27-4	Dichlorobromomethane	21.4		1.0	0.39
75-71-8	Dichlorodifluoromethane	20.6		3.0	0.96
97-63-2	Ethyl methacrylate	21.7		3.0	0.86
100-41-4	Ethylbenzene	22.3		1.0	0.30
74-88-4	Iodomethane	19.5		5.0	2.6
78-83-1	Isobutyl alcohol	502		110	37
75-09-2	Methylene Chloride	23.0		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	22.1		2.0	0.36
95-47-6	o-Xylene	22.4		1.0	0.33
100-42-5	Styrene	22.1		1.0	0.36
127-18-4	Tetrachloroethene	22.1		1.0	0.40
108-88-3	Toluene	22.2		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	21.6		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	20.2		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	20.8		3.0	1.4
79-01-6	Trichloroethene	22.1		1.0	0.30
75-69-4	Trichlorofluoromethane	22.9		2.0	0.57
108-05-4	Vinyl acetate	46.5		3.0	0.94
75-01-4	Vinyl chloride	21.2		2.0	0.51
1330-20-7	Xylenes, Total	44.5		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	99		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5428.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 18-Apr-2023 10:28:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 10:59:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.081	0.001	99	1046403	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.567	0.001	89	251080	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	414044	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	93	263774	50.0	49.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	351873	50.0	50.0	
$ 7 Toluene-d8 (Surr)	98	6.311	6.310	0.001	94	1028022	50.0	49.8	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	89	401923	50.0	50.9	
11 Dichlorodifluoromethane	85	1.702	1.702	0.000	99	104734	25.0	20.6	
12 Chloromethane	50	1.883	1.883	0.000	99	149275	25.0	22.1	
13 Vinyl chloride	62	1.981	1.981	0.000	98	142106	25.0	21.2	
15 Bromomethane	94	2.260	2.260	0.000	92	92776	25.0	27.6	
16 Chloroethane	64	2.344	2.344	0.000	99	98214	25.0	24.4	
17 Dichlorofluoromethane	67	2.512	2.512	0.000	97	207209	25.0	24.3	
18 Trichlorofluoromethane	101	2.554	2.554	0.000	98	168797	25.0	22.9	
20 Ethyl ether	59	2.763	2.763	0.000	92	106842	25.0	21.9	
22 Acrolein	56	2.875	2.875	0.000	99	189618	246.9	239.0	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.959	2.945	0.014	67	66725	25.0	21.8	
25 1,1-Dichloroethene	96	2.959	2.959	0.000	96	93304	25.0	21.5	
24 Acetone	43	2.973	2.973	0.000	99	200474	100.0	83.5	
26 Iodomethane	142	3.084	3.070	0.014	99	118884	25.0	19.5	
28 Carbon disulfide	76	3.140	3.140	0.000	100	327921	25.0	22.0	
29 Methyl acetate	43	3.196	3.196	0.000	98	244391	50.0	39.2	
30 3-Chloro-1-propene	41	3.224	3.210	0.014	89	181789	25.0	22.7	
31 Methylene Chloride	84	3.308	3.308	0.000	97	119712	25.0	23.0	
32 2-Methyl-2-propanol	59	3.350	3.350	0.000	99	171198	250.0	195.7	
33 Acrylonitrile	53	3.476	3.461	0.015	98	625523	250.0	227.2	
34 Methyl tert-butyl ether	73	3.490	3.489	0.001	96	387440	25.0	22.3	
35 trans-1,2-Dichloroethene	96	3.517	3.503	0.014	97	109385	25.0	21.6	
36 Hexane	57	3.699	3.699	0.000	95	128609	25.0	21.7	
37 Vinyl acetate	43	3.797	3.797	0.000	98	581342	50.0	46.5	
39 1,1-Dichloroethane	63	3.825	3.825	0.000	96	215240	25.0	22.3	
42 2-Butanone (MEK)	43	4.202	4.202	0.000	100	323711	100.0	82.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2,2-Dichloropropane	77	4.244	4.230	0.014	89	182804	25.0	20.9	
44 cis-1,2-Dichloroethene	96	4.230	4.230	0.000	84	121875	25.0	21.3	
47 sec-Butyl Alcohol	45	4.314	4.299	0.015	99	326112	600.0	448.6	
49 Chlorobromomethane	128	4.397	4.397	0.000	97	56271	25.0	22.0	
50 Tetrahydrofuran	42	4.411	4.411	0.000	88	102792	50.0	42.4	
51 Chloroform	83	4.467	4.453	0.014	94	212478	25.0	22.5	
53 1,1,1-Trichloroethane	97	4.607	4.593	0.014	98	172445	25.0	21.7	
54 Cyclohexane	56	4.663	4.663	0.000	93	184196	25.0	21.3	
55 1,1-Dichloropropene	75	4.719	4.704	0.015	91	163124	25.0	22.1	
56 Carbon tetrachloride	117	4.719	4.718	0.001	81	139604	25.0	20.6	
52 Isobutyl alcohol	43	4.719	4.718	0.001	93	197993	625.0	501.6	
57 Benzene	78	4.872	4.858	0.014	97	471759	25.0	22.1	
58 1,2-Dichloroethane	62	4.886	4.886	0.000	97	188405	25.0	21.2	
60 n-Heptane	43	5.040	5.040	0.000	95	115356	25.0	19.9	
62 Trichloroethene	130	5.347	5.347	0.000	97	113870	25.0	22.1	
63 2-Pentanone	43	5.445	5.445	0.000	99	396462	80.0	63.9	
64 Methylcyclohexane	55	5.543	5.528	0.015	93	126750	25.0	21.1	
65 1,2-Dichloropropane	63	5.543	5.542	0.001	93	127996	25.0	21.2	
67 1,4-Dioxane	88	5.584	5.584	0.000	98	46432	500.0	417.7	
68 Dibromomethane	93	5.626	5.612	0.014	96	80054	25.0	21.6	
69 Dichlorobromomethane	83	5.738	5.738	0.000	98	156841	25.0	21.4	
71 2-Chloroethyl vinyl ether	63	5.934	5.934	0.000	93	108521	25.0	26.4	
76 cis-1,3-Dichloropropene	75	6.087	6.073	0.014	93	199241	25.0	21.9	
74 4-Methyl-2-pentanone (MIBK)	43	6.185	6.171	0.014	97	633034	100.0	87.0	
75 Toluene	91	6.367	6.366	0.001	97	482882	25.0	22.2	
73 trans-1,3-Dichloropropene	75	6.534	6.534	0.000	98	188266	25.0	20.2	
77 Ethyl methacrylate	69	6.562	6.548	0.014	89	176201	25.0	21.7	
79 1,1,2-Trichloroethane	97	6.716	6.702	0.014	93	109525	25.0	21.8	
80 Tetrachloroethene	164	6.813	6.799	0.014	96	84344	25.0	22.1	
81 1,3-Dichloropropane	76	6.855	6.855	0.000	97	208469	25.0	23.0	
82 2-Hexanone	43	6.869	6.869	0.000	97	446466	100.0	85.8	
85 Chlorodibromomethane	129	7.051	7.051	0.000	90	112296	25.0	22.0	
86 Ethylene Dibromide	107	7.163	7.163	0.000	98	117004	25.0	22.6	
88 1-Chlorohexane	91	7.554	7.540	0.014	98	119166	20.0	18.3	
89 Chlorobenzene	112	7.596	7.595	0.001	93	309115	25.0	22.0	
90 1,1,1,2-Tetrachloroethane	131	7.665	7.665	0.000	46	107952	25.0	21.8	
91 Ethylbenzene	106	7.665	7.665	0.000	99	163365	25.0	22.3	
92 m-Xylene & p-Xylene	91	7.777	7.777	0.000	0	416074	25.0	22.1	
93 o-Xylene	106	8.140	8.140	0.000	97	201161	25.0	22.4	
94 Styrene	104	8.154	8.154	0.000	94	338767	25.0	22.1	
96 Bromoform	173	8.336	8.336	0.000	94	75415	25.0	21.2	
98 Isopropylbenzene	105	8.475	8.475	0.000	97	490406	25.0	21.8	
99 Cyclohexanone	55	8.573	8.573	0.000	94	220201	750.0	632.5	
100 1,1,2,2-Tetrachloroethane	83	8.755	8.755	0.000	95	171596	25.0	22.2	
102 trans-1,4-Dichloro-2-butene	53	8.797	8.797	0.000	55	46706	25.0	20.8	
101 Bromobenzene	156	8.797	8.797	0.000	97	131445	25.0	22.3	
103 1,2,3-Trichloropropane	110	8.825	8.825	0.001	87	52688	25.0	21.9	
104 N-Propylbenzene	120	8.867	8.866	0.000	99	133012	25.0	22.1	
105 2-Chlorotoluene	126	8.964	8.964	0.000	95	120599	25.0	22.2	
106 1,3,5-Trimethylbenzene	105	9.034	9.034	0.000	94	420072	25.0	22.1	
107 4-Chlorotoluene	126	9.090	9.076	0.014	98	125917	25.0	21.6	
108 tert-Butylbenzene	119	9.341	9.341	0.000	93	338462	25.0	20.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
109 1,2,4-Trimethylbenzene	105	9.397	9.397	0.000	99	438160	25.0	21.7	
111 sec-Butylbenzene	134	9.565	9.565	0.000	95	97117	25.0	22.4	
112 1,3-Dichlorobenzene	146	9.691	9.690	0.000	97	235447	25.0	22.3	
113 4-Isopropyltoluene	119	9.704	9.704	0.000	97	422486	25.0	22.3	
114 1,4-Dichlorobenzene	146	9.788	9.788	0.000	94	242762	25.0	22.1	
115 n-Butylbenzene	91	10.110	10.109	0.001	98	373415	25.0	22.6	
116 1,2-Dichlorobenzene	146	10.137	10.137	0.000	95	229485	25.0	22.1	
117 1,2-Dibromo-3-Chloropropane	157	10.906	10.905	0.001	81	36109	25.0	21.2	
119 1,2,4-Trichlorobenzene	180	11.730	11.729	0.001	94	147015	25.0	21.6	
120 Hexachlorobutadiene	225	11.869	11.869	0.000	97	61348	25.0	21.6	
121 Naphthalene	128	11.995	11.981	0.014	98	449388	25.0	20.6	
122 1,2,3-Trichlorobenzene	180	12.204	12.204	0.000	94	123181	25.0	21.4	
S 142 Xylenes, Total	106				0		50.0	44.5	
S 143 1,2-Dichloroethene, Total	1				0		50.0	42.9	
S 145 1,3-Dichloropropene, Total	1				0		50.0	42.2	
S 147 Trihalomethanes, Total	1				0		100.0	87.1	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added: 12.50	Units: uL	
MV-Gas B_00133	Amount Added: 5.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

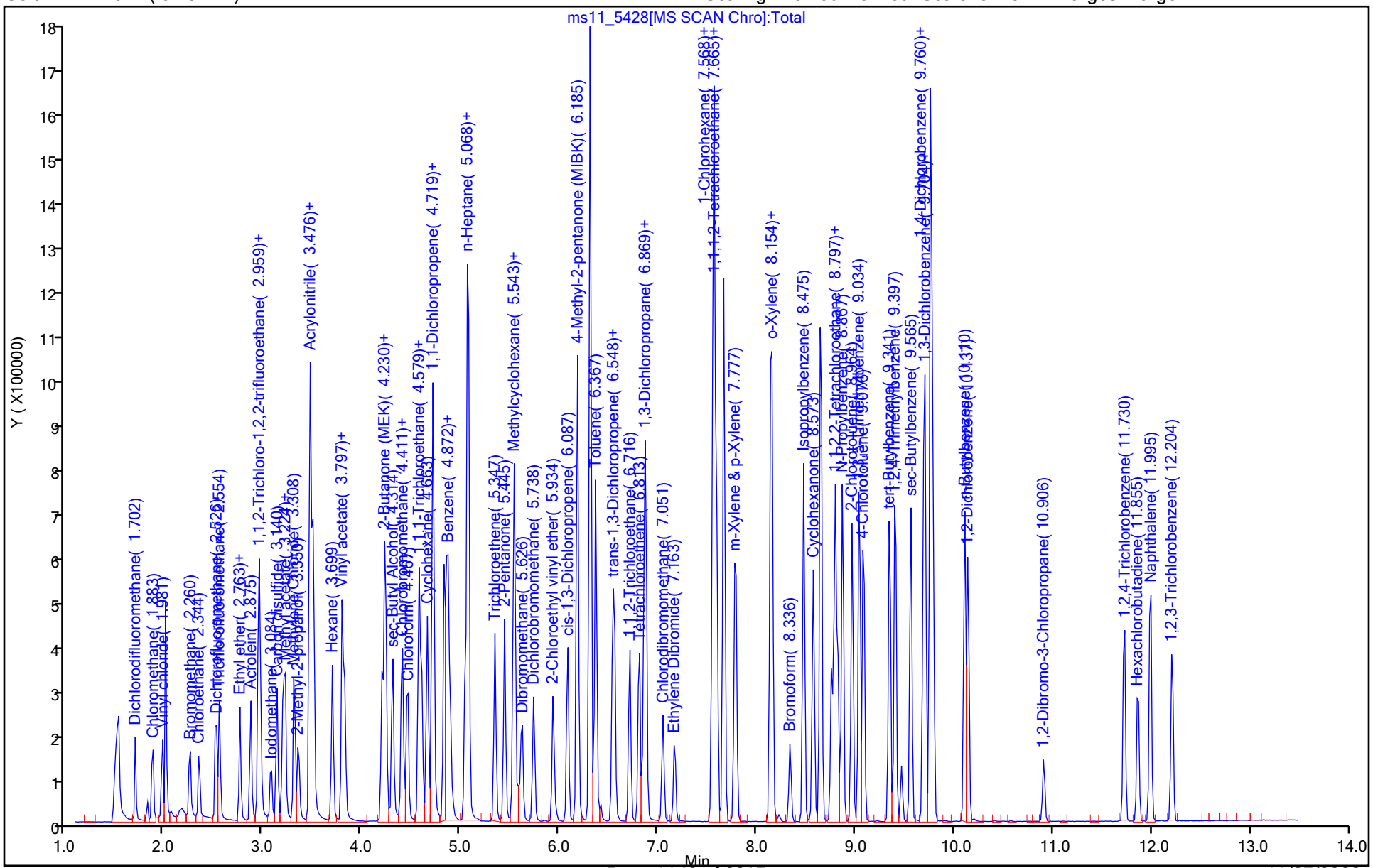
Report Date: 18-Apr-2023 15:38:20 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5428.D

Injection Date:	18-Apr-2023 10:28:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5428.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 18-Apr-2023 10:28:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 10:59:18

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	49.3	98.61
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	50.0	100.10
$ 7 Toluene-d8 (Surr)	50.0	49.8	99.67
$ 8 4-Bromofluorobenzene (Surr)	50.0	50.9	101.76

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609068/5

Matrix: Water | Lab File ID: ms11_5430.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/18/2023 11:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609068 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	186		30	9.6
126-99-8	Chloroprene	20.1		3.0	1.2
126-98-7	Methacrylonitrile	206		15	5.3
80-62-6	Methyl methacrylate	40.5		4.0	1.1
107-12-0	Propionitrile	190		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5430.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 18-Apr-2023 11:10:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 12:50:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.082	5.081	0.001	98	1045040	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.568	7.567	0.001	89	254651	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.760	9.760	0.000	97	417445	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	4.579	4.579	0.000	92	271257	50.0	50.8	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.000	0	361885	50.0	51.5	
$ 7 Toluene-d8 (Surr)	98	6.311	6.310	0.001	94	1045894	50.0	50.0	
$ 8 4-Bromofluorobenzene (Surr)	95	8.643	8.643	0.000	87	402317	50.0	50.5	
19 Ethanol	45	2.665	2.665	0.000	100	132676	1500.0	1010.5	
72 Isopropyl alcohol	45	3.057	3.056	0.000	98	103032	250.0	157.4	
27 Acetonitrile	41	3.182	3.182	0.000	99	232224	250.0	186.1	
38 Isopropyl ether	87	3.825	3.824	0.001	93	94986	25.0	21.3	
40 2-Chloro-1,3-butadiene	53	3.881	3.880	0.000	93	174580	25.0	20.1	
41 Tert-butyl ethyl ether	59	4.076	4.076	0.000	98	367842	25.0	20.4	
43 Ethyl acetate	43	4.216	4.216	0.000	100	291280	50.0	37.5	
46 Propionitrile	54	4.258	4.257	0.001	99	233774	250.0	190.2	
48 Methacrylonitrile	41	4.369	4.369	0.000	93	917421	250.0	206.2	
59 Tert-amyl methyl ether	73	4.928	4.928	0.000	90	355067	25.0	21.4	
61 n-Butanol	56	5.207	5.207	0.000	92	113339	625.0	395.2	
66 Methyl methacrylate	100	5.556	5.556	0.000	91	72052	50.0	40.5	
70 2-Nitropropane	41	5.906	5.905	0.001	98	65748	50.0	29.5	
123 cis-1,4-Dichloro-2-butene	53	8.531	8.531	0.000	0	82608	50.0	32.6	
110 1,2,3-Trimethylbenzene	105	9.802	9.802	0.000	99	408083	25.0	19.1	
118 1,3,5-Trichlorobenzene	180	11.101	11.101	0.000	96	145104	25.0	20.5	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00061	Amount Added:	25.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

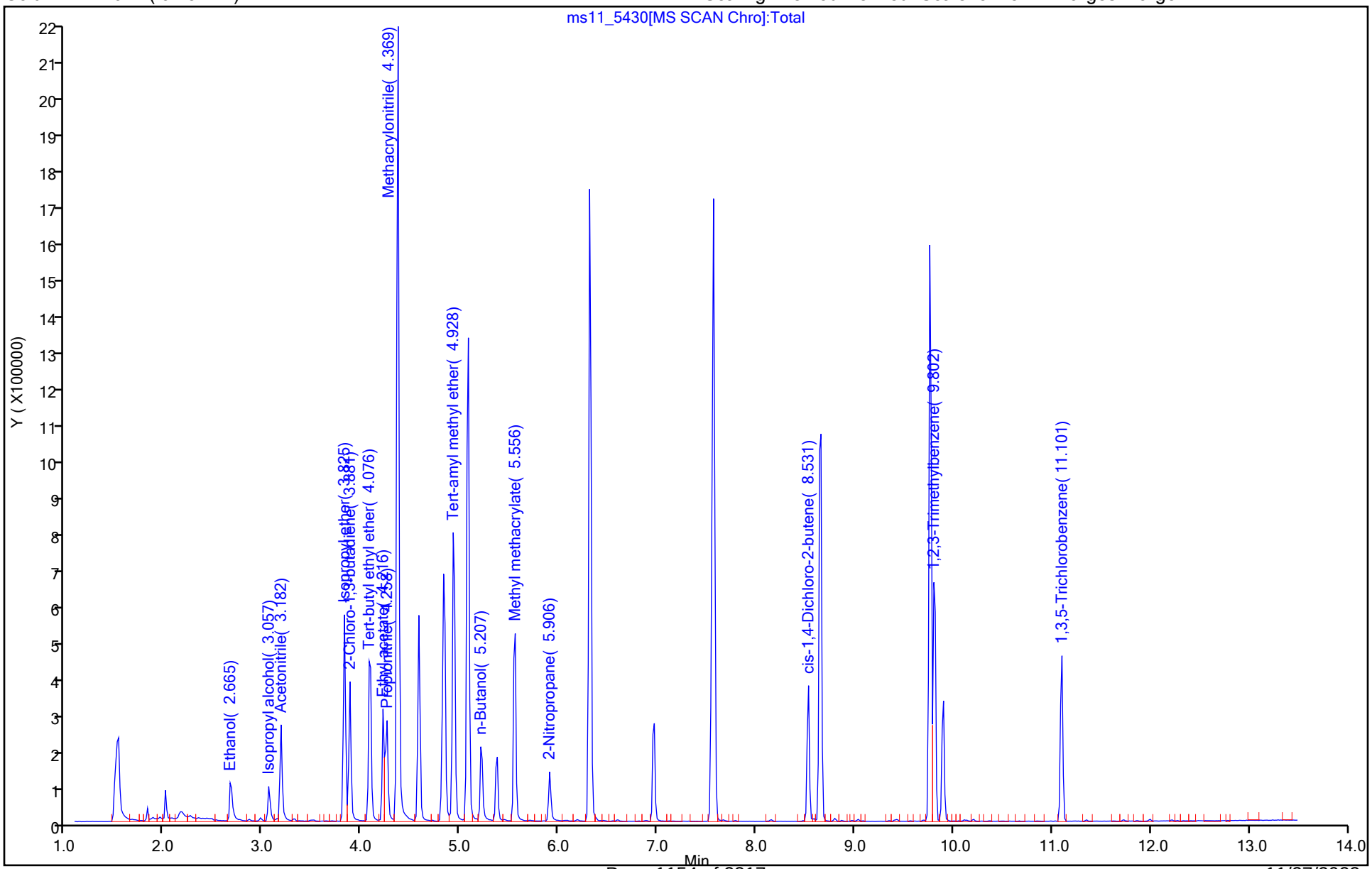
Report Date: 18-Apr-2023 15:38:22 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5430.D

Injection Date:	18-Apr-2023 11:10:30	Instrument ID:	VMS_MS11	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMS11_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\ms11_5430.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 18-Apr-2023 11:10:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_MS11

Method: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b\AQ_VMS11_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Apr-2023 15:38:17 Calib Date: 14-Apr-2023 13:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS11\20230414-120414.b\ms11_5281.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: BX8N Date: 18-Apr-2023 12:50:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	50.8	101.53
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.5	103.08
$ 7 Toluene-d8 (Surr)	50.0	50.0	99.98
$ 8 4-Bromofluorobenzene (Surr)	50.0	50.5	101.03

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609932/4

Matrix: Water | Lab File ID: X502752.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 19:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	48.5		1.0	0.58
71-55-6	1,1,1-Trichloroethane	51.0		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	47.7		1.0	0.21
79-00-5	1,1,2-Trichloroethane	50.2		1.0	0.27
75-34-3	1,1-Dichloroethane	54.8		1.0	0.22
75-35-4	1,1-Dichloroethene	51.5		1.0	0.23
563-58-6	1,1-Dichloropropene	53.1		1.0	0.42
96-18-4	1,2,3-Trichloropropane	46.5		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	50.4		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	43.9		5.0	1.8
106-93-4	1,2-Dibromoethane	47.2		1.0	0.40
95-50-1	1,2-Dichlorobenzene	47.4		1.0	0.37
107-06-2	1,2-Dichloroethane	49.3		1.0	0.54
78-87-5	1,2-Dichloropropane	54.5		1.0	0.52
541-73-1	1,3-Dichlorobenzene	49.1		1.0	0.33
142-28-9	1,3-Dichloropropane	49.7		1.0	0.38
106-46-7	1,4-Dichlorobenzene	46.1		1.0	0.39
594-20-7	2,2-Dichloropropane	53.4		1.0	0.38
78-93-3	2-Butanone (MEK)	222		15	6.0
591-78-6	2-Hexanone	213		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	232		5.0	0.98
67-64-1	Acetone	203		15	6.6
107-02-8	Acrolein	466		20	4.9
107-13-1	Acrylonitrile	555		20	4.5
107-05-1	Allyl chloride	61.6		2.0	0.17
71-43-2	Benzene	52.6		1.0	0.31
75-25-2	Bromoform	48.9		2.0	1.2
74-83-9	Bromomethane	49.0		5.0	2.4
75-15-0	Carbon disulfide	52.3		2.0	0.63
56-23-5	Carbon tetrachloride	52.9		1.0	0.57
108-90-7	Chlorobenzene	48.2		1.0	0.42
74-97-5	Chlorobromomethane	51.2		1.0	0.40
124-48-1	Chlorodibromomethane	47.3		2.0	0.62
75-00-3	Chloroethane	62.6		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609932/4

Matrix: Water | Lab File ID: X502752.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 19:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	50.4		1.0	0.36
74-87-3	Chloromethane	53.9		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	50.7		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	52.2		2.0	0.63
74-95-3	Dibromomethane	48.5		1.0	0.34
75-27-4	Dichlorobromomethane	50.2		1.0	0.39
75-71-8	Dichlorodifluoromethane	56.9		3.0	0.96
97-63-2	Ethyl methacrylate	52.0		3.0	0.86
100-41-4	Ethylbenzene	47.8		1.0	0.30
74-88-4	Iodomethane	43.9		5.0	2.6
78-83-1	Isobutyl alcohol	1190		110	37
75-09-2	Methylene Chloride	48.1		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	49.1		2.0	0.36
95-47-6	o-Xylene	47.8		1.0	0.33
100-42-5	Styrene	50.7		1.0	0.36
127-18-4	Tetrachloroethene	52.4		1.0	0.40
108-88-3	Toluene	52.1		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	54.1		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	54.9		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	45.7		3.0	1.4
79-01-6	Trichloroethene	50.9		1.0	0.30
75-69-4	Trichlorofluoromethane	59.1		2.0	0.57
108-05-4	Vinyl acetate	123		3.0	0.94
75-01-4	Vinyl chloride	67.0		2.0	0.51
1330-20-7	Xylenes, Total	96.9		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502752.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 24-Apr-2023 19:29:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	1432401	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	352466	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	542963	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	359519	50.0	52.2	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	367488	50.0	50.8	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1511248	50.0	50.3	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	495995	50.0	51.1	
	10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	357916	50.0	56.9	
	11 Chloromethane	50	1.867	1.867	0.000	99	344160	50.0	53.9	
	12 Vinyl chloride	62	1.967	1.967	0.000	98	435845	50.0	67.0	
	14 Bromomethane	94	2.246	2.246	0.000	89	170153	50.0	49.0	
	15 Chloroethane	64	2.339	2.339	0.000	99	272512	50.0	62.6	
	16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	608269	50.0	56.0	
	17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	495443	50.0	59.1	
	19 Ethyl ether	59	2.747	2.747	0.000	90	262239	50.0	54.3	
	21 Acrolein	56	2.854	2.854	0.000	100	363393	493.8	466.1	
	22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	94	221392	50.0	56.0	
	23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	283428	50.0	51.5	
	24 Acetone	43	2.954	2.954	0.000	100	319449	200.0	202.6	
	26 Iodomethane	142	3.061	3.054	0.007	97	332590	50.0	43.9	
	27 Carbon disulfide	76	3.118	3.118	0.000	99	932413	50.0	52.3	
	29 Methyl acetate	43	3.176	3.176	0.000	97	402673	100.0	111.3	
	30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	450090	50.0	61.6	
	31 Methylene Chloride	84	3.297	3.297	0.000	90	339670	50.0	48.1	
	32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	251862	500.0	450.0	
	33 Acrylonitrile	53	3.455	3.455	-0.001	99	1140141	500.0	555.3	
	34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	883660	50.0	51.0	
	35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	99	330869	50.0	54.1	
	37 Hexane	57	3.683	3.683	0.000	89	440700	50.0	54.6	
	39 Vinyl acetate	43	3.783	3.783	0.000	97	1191839	100.0	123.1	
	40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	610936	50.0	54.8	
	45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	522721	200.0	222.1	
	47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	371355	50.0	50.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 2,2-Dichloropropane	77	4.227	4.220	0.007	87	457724	50.0	53.4	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	490895	1200.0	1167.1	
52 Chlorobromomethane	128	4.384	4.384	0.000	96	172477	50.0	51.2	
53 Tetrahydrofuran	42	4.398	4.391	0.007	88	176705	100.0	110.8	
54 Chloroform	83	4.441	4.441	0.000	93	571773	50.0	50.4	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	99	468070	50.0	51.0	
56 Cyclohexane	56	4.649	4.649	0.000	88	577030	50.0	60.9	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	99	477835	50.0	53.1	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	213090	1250.0	1193.5	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	393222	50.0	52.9	
62 Benzene	78	4.849	4.849	0.000	96	1400259	50.0	52.6	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	415623	50.0	49.3	
65 n-Heptane	43	5.035	5.028	0.007	90	335182	50.0	60.7	
67 Trichloroethene	95	5.335	5.335	0.000	98	342890	50.0	50.9	
68 2-Pentanone	43	5.435	5.435	0.000	99	646302	160.0	170.4	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	403377	50.0	58.1	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	98	368702	50.0	54.5	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	85271	1000.0	995.5	
73 Dibromomethane	93	5.607	5.607	0.000	97	195942	50.0	48.5	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	427397	50.0	50.2	
76 2-Chloroethyl vinyl ether	63	5.928	5.929	-0.001	90	236188	50.0	110.0	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	97	560635	50.0	52.2	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1052804	200.0	232.4	
79 Toluene	91	6.365	6.365	0.000	98	1494845	50.0	52.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	482438	50.0	54.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	400201	50.0	52.0	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	287682	50.0	50.2	
83 Tetrachloroethene	164	6.808	6.801	0.007	98	268107	50.0	52.4	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	536486	50.0	49.7	
85 2-Hexanone	43	6.872	6.872	0.000	94	718825	200.0	212.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	308051	50.0	47.3	
88 Ethylene Dibromide	107	7.173	7.166	0.007	99	291108	50.0	47.2	
89 1-Chlorohexane	91	7.559	7.552	0.007	96	370750	40.0	38.9	
90 Chlorobenzene	112	7.602	7.595	0.007	96	946104	50.0	48.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.666	0.007	97	306224	50.0	48.5	
92 Ethylbenzene	106	7.673	7.673	0.000	98	516914	50.0	47.8	
93 m-Xylene & p-Xylene	106	7.795	7.788	0.007	0	635689	50.0	49.1	
94 o-Xylene	106	8.152	8.152	0.000	96	627709	50.0	47.8	
95 Styrene	104	8.167	8.167	-0.001	94	1059367	50.0	50.7	
96 Bromoform	173	8.352	8.345	0.007	97	192652	50.0	48.9	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1533197	50.0	49.7	
99 Cyclohexanone	55	8.588	8.588	0.000	90	469526	1500.0	1564.9	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	370945	50.0	47.7	
101 Bromobenzene	156	8.810	8.810	0.000	95	375266	50.0	48.3	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.810	0.007	82	92752	50.0	45.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	109771	50.0	46.5	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	435416	50.0	50.8	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	376712	50.0	49.6	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1285325	50.0	49.4	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	391052	50.0	49.5	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1063334	50.0	49.0	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1325896	50.0	49.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	315194	50.0	48.4	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	703192	50.0	49.1	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1327774	50.0	49.5	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	701846	50.0	46.1	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1177707	50.0	50.7	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	653680	50.0	47.4	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	88	68671	50.0	43.9	
120 1,2,4-Trichlorobenzene	180	11.770	11.763	0.007	94	349969	50.0	50.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	134947	50.0	53.3	
122 Naphthalene	128	12.035	12.035	0.000	97	827153	50.0	46.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	257280	50.0	49.1	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	104.9	
S 139 Xylenes, Total (URS)	1				0		100.0	96.8	
S 136 1,3-Dichloropropene, Total	1				0		100.0	107.1	
S 138 Xylenes, Total	106				0		100.0	96.8	
S 140 Trihalomethanes, Total	1				0		200.0	196.8	
S 141 1,2-Dichloroethene, Total	1				0		100.0	104.9	

Reagents:

MV-Gas B_00132	Amount Added:	10.00	Units: uL	
MV-MegaMain B_00083	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 25-Apr-2023 04:09:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502752.D

Injection Date: 24-Apr-2023 19:29:30 Instrument ID: VMS_X4 Operator ID: bj

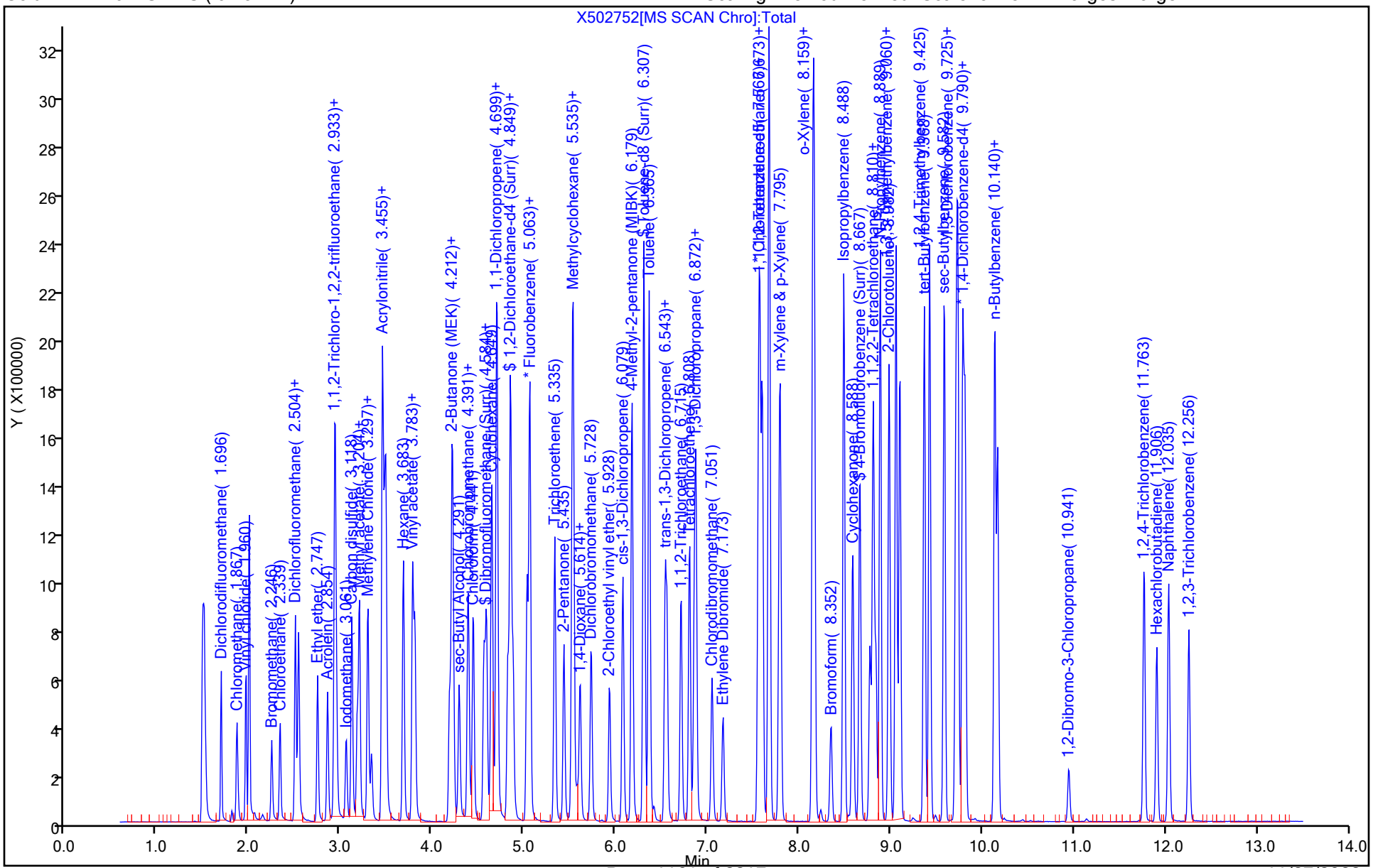
Lims ID: LCSD Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502752.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 24-Apr-2023 19:29:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.2	104.36
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.8	101.56
$ 6 Toluene-d8 (Surr)	50.0	50.3	100.67
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.1	102.23

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609932/5

Matrix: Water | Lab File ID: X502753.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 19:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	252		30	9.6
126-99-8	Chloroprene	25.9		3.0	1.2
126-98-7	Methacrylonitrile	241		15	5.3
80-62-6	Methyl methacrylate	42.2		4.0	1.1
107-12-0	Propionitrile	254		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	103		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502753.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 24-Apr-2023 19:49:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	1388739	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	333064	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	540029	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	343854	50.0	51.5	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	362080	50.0	51.6	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1462827	50.0	51.6	
$	7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	91	483535	50.0	50.1	
	18 Ethanol	45	2.646	2.646	0.000	99	101928	1500.0	1386.6	
	25 Isopropyl alcohol	45	3.033	3.033	0.000	99	78712	250.0	182.8	
	28 Acetonitrile	41	3.161	3.161	0.000	100	195423	250.0	251.9	
	41 Isopropyl ether	87	3.805	3.805	0.000	94	136475	25.0	26.3	
	42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	89	235552	25.0	25.9	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	459704	25.0	25.6	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	238035	50.0	44.3	
	49 Propionitrile	54	4.234	4.234	0.000	99	219589	250.0	254.5	
	51 Methacrylonitrile	41	4.348	4.348	0.000	90	814751	250.0	241.2	
	64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	427185	25.0	24.6	
	66 n-Butanol	56	5.199	5.199	0.000	85	79014	625.0	464.2	
	71 Methyl methacrylate	100	5.542	5.542	0.000	89	77462	50.0	42.2	
	75 2-Nitropropane	41	5.893	5.893	0.000	98	48885	50.0	25.1	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	84732	50.0	39.8	
	115 1,2,3-Trimethylbenzene	105	9.832	9.832	0.000	98	630361	25.0	21.5	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	204674	25.0	22.5	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

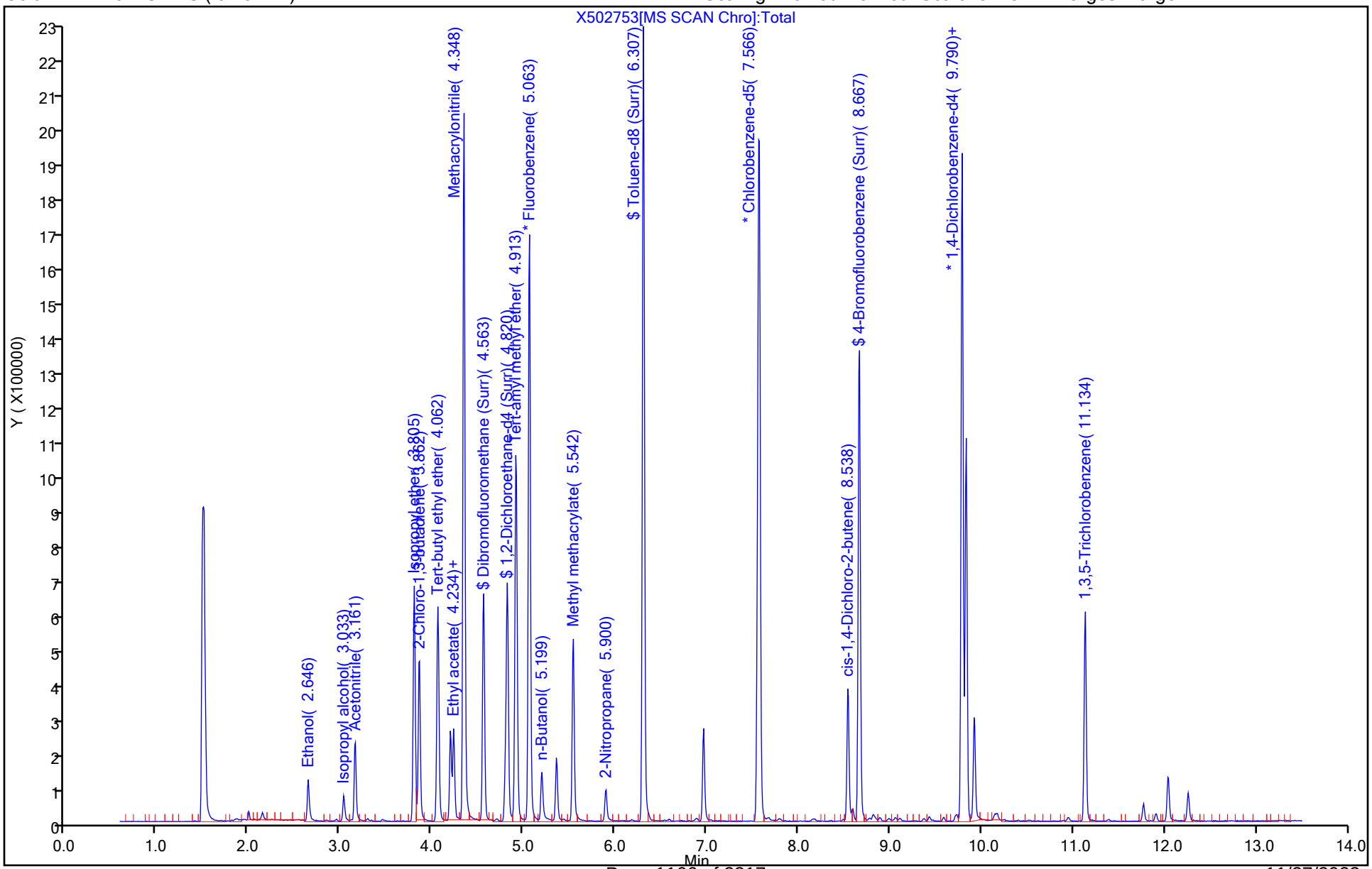
Report Date: 25-Apr-2023 04:09:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502753.D

Injection Date:	24-Apr-2023 19:49:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502753.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 24-Apr-2023 19:49:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.5	102.95
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	51.6	103.22
$ 6 Toluene-d8 (Surr)	50.0	51.6	103.12
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.1	100.21

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609946/4

Matrix: Water | Lab File ID: X502784.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 08:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	24.3		1.0	0.58
71-55-6	1,1,1-Trichloroethane	24.0		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	24.5		1.0	0.21
79-00-5	1,1,2-Trichloroethane	25.5		1.0	0.27
75-34-3	1,1-Dichloroethane	27.7		1.0	0.22
75-35-4	1,1-Dichloroethene	24.7		1.0	0.23
563-58-6	1,1-Dichloropropene	25.4		1.0	0.42
96-18-4	1,2,3-Trichloropropane	23.6		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	24.9		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	21.2		5.0	1.8
106-93-4	1,2-Dibromoethane	25.1		1.0	0.40
95-50-1	1,2-Dichlorobenzene	23.8		1.0	0.37
107-06-2	1,2-Dichloroethane	24.7		1.0	0.54
78-87-5	1,2-Dichloropropane	26.9		1.0	0.52
541-73-1	1,3-Dichlorobenzene	24.1		1.0	0.33
142-28-9	1,3-Dichloropropane	25.9		1.0	0.38
106-46-7	1,4-Dichlorobenzene	23.0		1.0	0.39
594-20-7	2,2-Dichloropropane	26.7		1.0	0.38
78-93-3	2-Butanone (MEK)	123		15	6.0
591-78-6	2-Hexanone	114		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	119		5.0	0.98
67-64-1	Acetone	103		15	6.6
107-02-8	Acrolein	242		20	4.9
107-13-1	Acrylonitrile	296		20	4.5
107-05-1	Allyl chloride	32.3		2.0	0.17
71-43-2	Benzene	26.6		1.0	0.31
75-25-2	Bromoform	25.0		2.0	1.2
74-83-9	Bromomethane	17.5		5.0	2.4
75-15-0	Carbon disulfide	25.8		2.0	0.63
56-23-5	Carbon tetrachloride	24.8		1.0	0.57
108-90-7	Chlorobenzene	24.5		1.0	0.42
74-97-5	Chlorobromomethane	26.0		1.0	0.40
124-48-1	Chlorodibromomethane	24.3		2.0	0.62
75-00-3	Chloroethane	27.0		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609946/4

Matrix: Water | Lab File ID: X502784.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 08:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	25.0		1.0	0.36
74-87-3	Chloromethane	23.3		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	25.6		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	26.0		2.0	0.63
74-95-3	Dibromomethane	25.2		1.0	0.34
75-27-4	Dichlorobromomethane	24.6		1.0	0.39
75-71-8	Dichlorodifluoromethane	22.8		3.0	0.96
97-63-2	Ethyl methacrylate	27.0		3.0	0.86
100-41-4	Ethylbenzene	24.2		1.0	0.30
74-88-4	Iodomethane	17.5		5.0	2.6
78-83-1	Isobutyl alcohol	618		110	37
75-09-2	Methylene Chloride	24.5		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	24.9		2.0	0.36
95-47-6	o-Xylene	24.6		1.0	0.33
100-42-5	Styrene	26.1		1.0	0.36
127-18-4	Tetrachloroethene	25.6		1.0	0.40
108-88-3	Toluene	25.8		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	27.1		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	27.1		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	22.2		3.0	1.4
79-01-6	Trichloroethene	25.5		1.0	0.30
75-69-4	Trichlorofluoromethane	24.7		2.0	0.57
108-05-4	Vinyl acetate	62.8		3.0	0.94
75-01-4	Vinyl chloride	29.0		2.0	0.51
1330-20-7	Xylenes, Total	49.5		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	103		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502784.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 25-Apr-2023 08:29:30 ALS Bottle#: 7 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	1443982	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	345530	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	551975	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	360851	50.0	52.0	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	368619	50.0	50.5	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1511559	50.0	51.4	
$	7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	91	498477	50.0	50.5	
	10 Dichlorodifluoromethane	85	1.695	1.696	-0.001	99	144310	25.0	22.8	
	11 Chloromethane	50	1.867	1.867	0.000	99	150007	25.0	23.3	
	12 Vinyl chloride	62	1.960	1.967	-0.007	98	189764	25.0	29.0	
	14 Bromomethane	94	2.232	2.246	-0.014	91	61171	25.0	17.5	
	15 Chloroethane	64	2.332	2.339	-0.007	100	118594	25.0	27.0	
	16 Dichlorofluoromethane	67	2.503	2.504	-0.001	97	268763	25.0	24.5	
	17 Trichlorofluoromethane	101	2.539	2.539	0.000	97	208294	25.0	24.7	
	19 Ethyl ether	59	2.747	2.747	0.000	90	138072	25.0	28.3	
	21 Acrolein	56	2.854	2.854	0.000	100	190140	246.9	241.9	
	22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.933	-0.001	96	106152	25.0	26.6	
	23 1,1-Dichloroethene	96	2.932	2.940	-0.008	98	136968	25.0	24.7	
	24 Acetone	43	2.954	2.954	0.000	99	166900	100.0	102.6	
	26 Iodomethane	142	3.054	3.054	0.000	98	127819	25.0	17.5	
	27 Carbon disulfide	76	3.118	3.119	-0.001	99	463973	25.0	25.8	
	29 Methyl acetate	43	3.176	3.176	0.000	97	215981	50.0	59.2	
	30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	238138	25.0	32.3	
	31 Methylene Chloride	84	3.297	3.297	0.000	91	174152	25.0	24.5	
	32 2-Methyl-2-propanol	59	3.340	3.333	0.007	100	133719	250.0	238.5	
	33 Acrylonitrile	53	3.454	3.455	-0.001	98	613062	250.0	296.2	
	34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	454755	25.0	26.1	
	35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	166656	25.0	27.1	
	37 Hexane	57	3.683	3.683	0.000	89	205483	25.0	26.0	
	39 Vinyl acetate	43	3.783	3.784	-0.001	97	613074	50.0	62.8	
	40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	311408	25.0	27.7	
	45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	291363	100.0	122.8	
	47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	81	189210	25.0	25.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 2,2-Dichloropropane	77	4.220	4.227	-0.007	86	230762	25.0	26.7	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	250566	600.0	596.0	
52 Chlorobromomethane	128	4.391	4.384	0.007	98	88216	25.0	26.0	
53 Tetrahydrofuran	42	4.398	4.398	0.000	86	94835	50.0	59.0	
54 Chloroform	83	4.441	4.441	0.000	93	285795	25.0	25.0	
55 1,1,1-Trichloroethane	97	4.584	4.592	-0.008	98	222328	25.0	24.0	
56 Cyclohexane	56	4.649	4.649	0.000	89	267755	25.0	28.0	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	230318	25.0	25.4	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	110322	625.0	618.5	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	185902	25.0	24.8	
62 Benzene	78	4.849	4.849	0.000	95	713487	25.0	26.6	
63 1,2-Dichloroethane	62	4.877	4.878	-0.001	97	209659	25.0	24.7	
65 n-Heptane	43	5.035	5.035	0.000	90	166359	25.0	29.9	
67 Trichloroethene	95	5.335	5.335	0.000	98	168213	25.0	25.5	
68 2-Pentanone	43	5.435	5.435	0.000	99	342177	80.0	90.1	
69 Methylcyclohexane	55	5.528	5.528	0.000	92	189190	25.0	27.0	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	98	183169	25.0	26.9	
72 1,4-Dioxane	88	5.585	5.578	0.007	91	45293	500.0	524.5	
73 Dibromomethane	93	5.607	5.607	0.000	97	102664	25.0	25.2	
74 Dichlorobromomethane	83	5.735	5.728	0.007	100	211618	25.0	24.6	
76 2-Chloroethyl vinyl ether	63	5.936	5.929	0.007	89	103872	25.0	47.5	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	97	274044	25.0	26.0	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	543084	100.0	118.9	
79 Toluene	91	6.365	6.365	0.000	98	744286	25.0	25.8	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	240182	25.0	27.1	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	203980	25.0	27.0	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	147472	25.0	25.5	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	128453	25.0	25.6	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	273765	25.0	25.9	
85 2-Hexanone	43	6.879	6.872	0.007	95	377301	100.0	114.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	155153	25.0	24.3	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	151658	25.0	25.1	
89 1-Chlorohexane	91	7.559	7.552	0.007	96	178371	20.0	19.1	
90 Chlorobenzene	112	7.602	7.602	0.000	96	472181	25.0	24.5	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	96	150224	25.0	24.3	
92 Ethylbenzene	106	7.673	7.673	0.000	98	256670	25.0	24.2	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	316208	25.0	24.9	
94 o-Xylene	106	8.152	8.152	0.000	96	316720	25.0	24.6	
95 Styrene	104	8.166	8.167	-0.001	95	534789	25.0	26.1	
96 Bromoform	173	8.352	8.345	0.007	95	96573	25.0	25.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	757033	25.0	24.2	
99 Cyclohexanone	55	8.588	8.588	0.000	90	268901	750.0	916.9	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	194022	25.0	24.5	
101 Bromobenzene	156	8.810	8.810	0.000	95	186507	25.0	23.6	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.810	0.007	65	45428	25.0	22.2	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	56578	25.0	23.6	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	217847	25.0	25.0	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	189122	25.0	24.5	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	628251	25.0	23.8	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	197731	25.0	24.6	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	515388	25.0	23.3	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	674126	25.0	24.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
111 sec-Butylbenzene	134	9.589	9.590	-0.001	94	152607	25.0	23.1	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	351824	25.0	24.1	
113 4-Isopropyltoluene	119	9.732	9.733	-0.001	97	659721	25.0	24.2	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	96	355779	25.0	23.0	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	584938	25.0	24.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	334481	25.0	23.8	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.941	0.007	86	33453	25.0	21.2	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	175703	25.0	24.9	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	96	68752	25.0	26.7	
122 Naphthalene	128	12.035	12.035	0.000	97	416940	25.0	23.1	
123 1,2,3-Trichlorobenzene	180	12.256	12.257	-0.001	95	132147	25.0	24.8	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	52.7	
S 139 Xylenes, Total (URS)	1				0		50.0	49.5	
S 136 1,3-Dichloropropene, Total	1				0		50.0	53.1	
S 138 Xylenes, Total	106				0		50.0	49.5	
S 140 Trihalomethanes, Total	1				0		100.0	98.9	
S 141 1,2-Dichloroethene, Total	1				0		50.0	52.7	

Reagents:

MV-Gas B_00132	Amount Added:	5.00	Units: uL	
MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

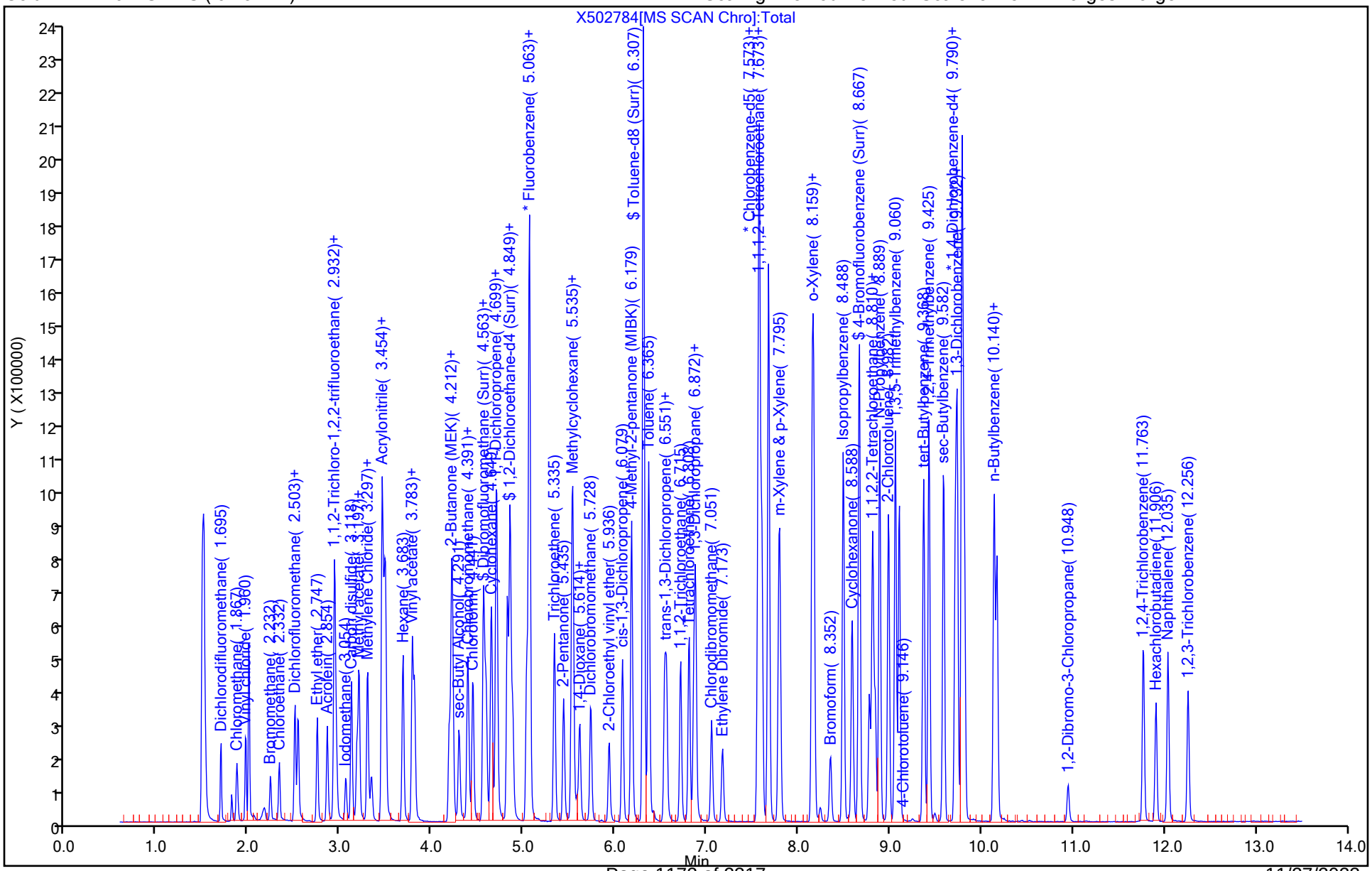
Report Date: 25-Apr-2023 13:52:52 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502784.D

Injection Date:	25-Apr-2023 08:29:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502784.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 25-Apr-2023 08:29:30 ALS Bottle#: 7 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.0	103.90
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.5	101.06
$ 6 Toluene-d8 (Surr)	50.0	51.4	102.71
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.5	101.07

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609946/5

Matrix: Water | Lab File ID: X502781.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 07:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609946 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	267		30	9.6
126-99-8	Chloroprene	27.1		3.0	1.2
126-98-7	Methacrylonitrile	264		15	5.3
80-62-6	Methyl methacrylate	43.2		4.0	1.1
107-12-0	Propionitrile	266		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	105		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502781.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 25-Apr-2023 07:27:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1425941	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	344764	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	542608	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	361649	50.0	52.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	369495	50.0	51.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1494594	50.0	50.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	94	494925	50.0	51.0	
18 Ethanol	45	2.647	2.647	0.000	99	120694	1500.0	1599.1	
25 Isopropyl alcohol	45	3.033	3.040	-0.007	99	86337	250.0	195.3	
28 Acetonitrile	41	3.161	3.161	0.000	99	212708	250.0	267.1	
41 Isopropyl ether	87	3.805	3.805	0.000	95	144718	25.0	27.2	
42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	90	253355	25.0	27.1	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	493008	25.0	26.7	
46 Ethyl acetate	43	4.198	4.198	0.000	99	273251	50.0	49.5	
49 Propionitrile	54	4.234	4.234	0.000	99	235693	250.0	266.0	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	916870	250.0	264.3	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	91	461645	25.0	25.9	
66 n-Butanol	56	5.199	5.199	0.000	87	90742	625.0	519.2	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	81267	50.0	43.2	
75 2-Nitropropane	41	5.900	5.900	0.000	96	53575	50.0	26.8	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	90151	50.0	42.2	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	677856	25.0	23.0	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	211942	25.0	23.2	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

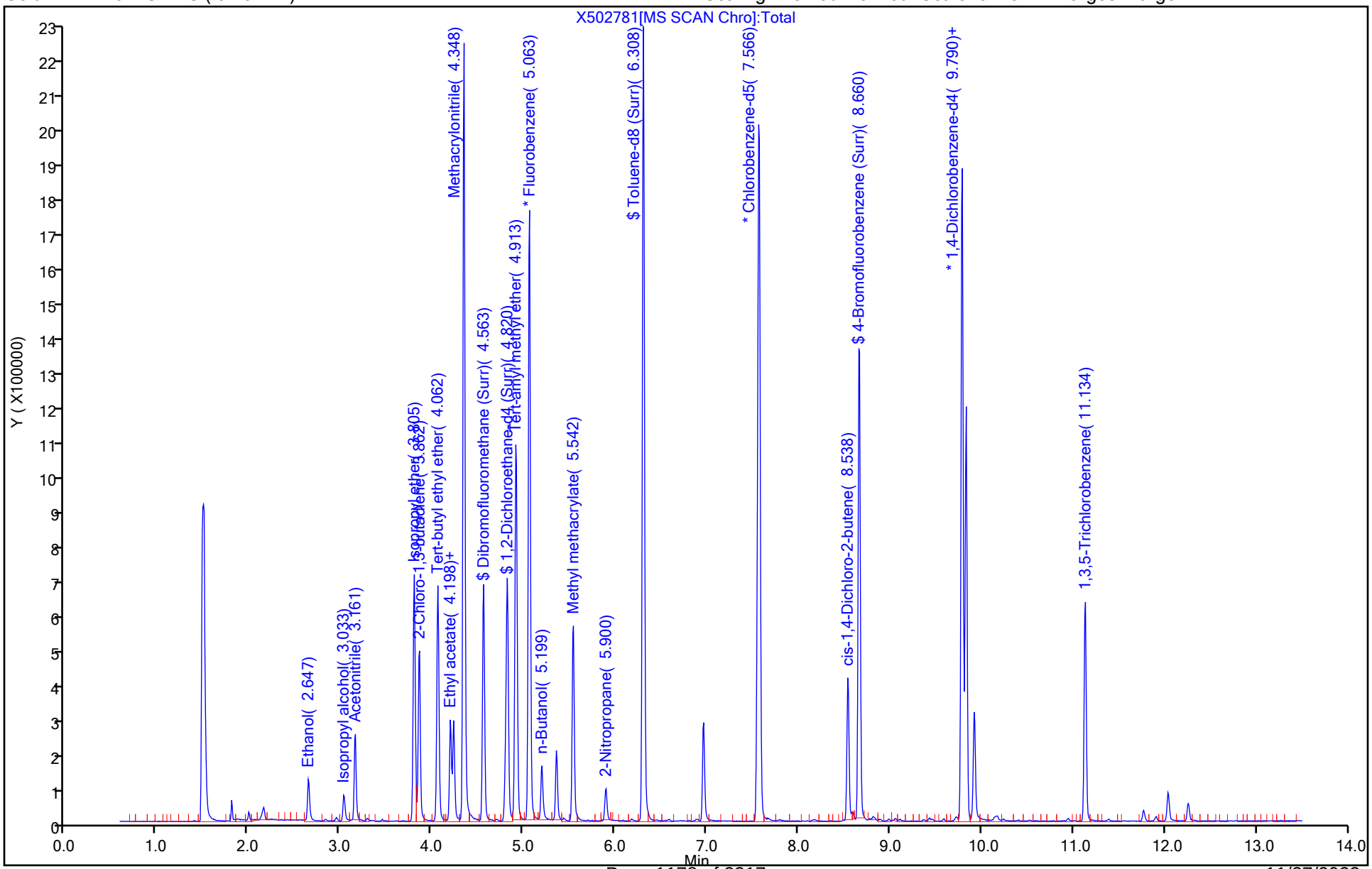
Report Date: 25-Apr-2023 13:52:55 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502781.D

Injection Date:	25-Apr-2023 07:27:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\X502781.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 25-Apr-2023 07:27:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 13:52:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1675

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.7	105.45
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	51.3	102.58
$ 6 Toluene-d8 (Surr)	50.0	50.9	101.78
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.0	102.08

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 10/22/2022 11:07

Analysis Batch Number: 590907 End Date: 10/22/2022 17:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-590907/1		10/22/2022 11:07	1	X43661.D	DB-624 (60.25) 0.25(mm)
STD005 280-590907/13 IC		10/22/2022 11:33	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 11:33	1		DB-624 (60.25) 0.25(mm)
ICIS 280-590907/18		10/22/2022 11:54	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 11:54	1		DB-624 (60.25) 0.25(mm)
STD010 280-590907/14 IC		10/22/2022 12:14	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 12:14	1		DB-624 (60.25) 0.25(mm)
STD020 280-590907/15 IC		10/22/2022 12:35	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 12:35	1		DB-624 (60.25) 0.25(mm)
STD050 280-590907/16 IC		10/22/2022 12:55	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 12:55	1		DB-624 (60.25) 0.25(mm)
STD10 280-590907/17 IC		10/22/2022 13:16	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 13:16	1		DB-624 (60.25) 0.25(mm)
STD75 280-590907/19 IC		10/22/2022 13:36	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 13:36	1		DB-624 (60.25) 0.25(mm)
STD100 280-590907/20 IC		10/22/2022 13:57	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 13:57	1		DB-624 (60.25) 0.25(mm)
STD200 280-590907/21 IC		10/22/2022 14:18	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 14:18	1		DB-624 (60.25) 0.25(mm)
ICV 280-590907/22		10/22/2022 14:59	1		DB-624 (60.25) 0.25(mm)
STD010 280-590907/23 IC		10/22/2022 15:19	1	X43673.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 15:19	1		DB-624 (60.25) 0.25(mm)
STD020 280-590907/24 IC		10/22/2022 15:40	1	X43674.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 15:40	1		DB-624 (60.25) 0.25(mm)
STD050 280-590907/25 IC		10/22/2022 16:01	1	X43675.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 16:01	1		DB-624 (60.25) 0.25(mm)
STD10 280-590907/26 IC		10/22/2022 16:21	1	X43676.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 16:21	1		DB-624 (60.25) 0.25(mm)
STD50 280-590907/27 IC		10/22/2022 16:42	1	X43677.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 16:42	1		DB-624 (60.25) 0.25(mm)
STD100 280-590907/28 IC		10/22/2022 17:02	1	X43678.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 17:02	1		DB-624 (60.25) 0.25(mm)
STD200 280-590907/29 IC		10/22/2022 17:23	1	X43679.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 17:23	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_MS11 Start Date: 12/04/2022 14:15

Analysis Batch Number: 595485 End Date: 12/05/2022 02:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-595485/1		12/04/2022 14:15	1	ms11_0726.D	RXI-624SilMS 0.25(mm)
STD200 280-595485/12 IC		12/04/2022 15:07	1		RXI-624SilMS 0.25(mm)
STD100 280-595485/13 IC		12/04/2022 15:31	1		RXI-624SilMS 0.25(mm)
STD75 280-595485/14 IC		12/04/2022 15:55	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 15:55	1		RXI-624SilMS 0.25(mm)
ICIS 280-595485/15		12/04/2022 16:19	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 16:19	1		RXI-624SilMS 0.25(mm)
STD10 280-595485/16 IC		12/04/2022 16:43	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 16:43	1		RXI-624SilMS 0.25(mm)
STD5 280-595485/17 IC		12/04/2022 17:07	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 17:07	1		RXI-624SilMS 0.25(mm)
STD2 280-595485/18 IC		12/04/2022 17:51	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 17:51	1		RXI-624SilMS 0.25(mm)
STD1 280-595485/19 IC		12/04/2022 18:15	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 18:15	1		RXI-624SilMS 0.25(mm)
STD05 280-595485/20 IC		12/04/2022 18:39	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 18:39	1		RXI-624SilMS 0.25(mm)
ICV 280-595485/21		12/04/2022 19:02	1		RXI-624SilMS 0.25(mm)
STD200 280-595485/22 IC		12/04/2022 19:26	1	ms11_0738.D	RXI-624SilMS 0.25(mm)
STD100 280-595485/23 IC		12/04/2022 19:50	1	ms11_0739.D	RXI-624SilMS 0.25(mm)
STD75 280-595485/24 IC		12/04/2022 20:14	1	ms11_0740.D	RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 20:14	1		RXI-624SilMS 0.25(mm)
STD50 280-595485/25 IC		12/04/2022 20:38	1	ms11_0741.D	RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 20:38	1		RXI-624SilMS 0.25(mm)
STD10 280-595485/26 IC		12/04/2022 21:01	1	ms11_0742.D	RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 21:01	1		RXI-624SilMS 0.25(mm)
STD5 280-595485/27 IC		12/04/2022 21:25	1	ms11_0743.D	RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 21:25	1		RXI-624SilMS 0.25(mm)
STD2 280-595485/28 IC		12/04/2022 21:49	1	ms11_0744.D	RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 21:49	1		RXI-624SilMS 0.25(mm)
STD1 280-595485/29 IC		12/04/2022 22:13	1	ms11_0745.D	RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 22:13	1		RXI-624SilMS 0.25(mm)
ICV 280-595485/30		12/04/2022 22:37	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 23:01	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 23:25	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/04/2022 23:48	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/05/2022 00:12	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/05/2022 00:36	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_MS11 Start Date: 12/04/2022 14:15

Analysis Batch Number: 595485 End Date: 12/05/2022 02:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		12/05/2022 01:00	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/05/2022 01:24	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/05/2022 01:47	1		RXI-624SilMS 0.25(mm)
ZZZZZ		12/05/2022 02:11	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/07/2023 02:33

Analysis Batch Number: 607881 End Date: 04/07/2023 06:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-607881/1		04/07/2023 02:33	1	X502125.D	RXI-624SilMS 0.25(mm)
STD 280-607881/19 IC		04/07/2023 03:14	1	X502127.D	RXI-624SilMS 0.25(mm)
STD 280-607881/18 IC		04/07/2023 03:34	1	X502128.D	RXI-624SilMS 0.25(mm)
STD 280-607881/16 IC		04/07/2023 03:55	1	X502129.D	RXI-624SilMS 0.25(mm)
STD 280-607881/17 IC		04/07/2023 04:15	1	X502130.D	RXI-624SilMS 0.25(mm)
STD 280-607881/15 IC		04/07/2023 04:36	1	X502131.D	RXI-624SilMS 0.25(mm)
ICIS 280-607881/14		04/07/2023 04:56	1	X502132.D	RXI-624SilMS 0.25(mm)
STD 280-607881/13 IC		04/07/2023 05:17	1	X502133.D	RXI-624SilMS 0.25(mm)
STD 280-607881/12 IC		04/07/2023 05:38	1	X502134.D	RXI-624SilMS 0.25(mm)
STD 280-607881/11 IC		04/07/2023 05:58	1	X502135.D	RXI-624SilMS 0.25(mm)
ICV 280-607881/20		04/07/2023 06:39	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/10/2023 21:51

Analysis Batch Number: 608203 End Date: 04/11/2023 08:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-608203/1		04/10/2023 21:51	1	X502169.D	RXI-624SilMS 0.25(mm)
CCV 280-608203/3		04/10/2023 22:47	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 22:47	1		RXI-624SilMS 0.25(mm)
CCV 280-608203/2		04/10/2023 23:09	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 23:09	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 23:30	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 23:50	1		RXI-624SilMS 0.25(mm)
RINSE 280-608203/6		04/11/2023 00:11	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 00:32	1		RXI-624SilMS 0.25(mm)
ICV 280-608203/8		04/11/2023 00:52	1	X502177.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 01:13	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 01:33	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 01:54	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 02:14	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 02:35	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 02:55	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 03:16	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 03:36	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 03:57	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 04:17	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 04:38	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 04:59	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 05:20	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 05:41	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 06:02	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 06:23	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 06:44	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 07:05	20		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 07:25	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 07:46	1		RXI-624SilMS 0.25(mm)
CCVC 280-608203/32		04/11/2023 08:07	1		RXI-624SilMS 0.25(mm)
CCVC 280-608203/33		04/11/2023 08:27	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_MS11 Start Date: 04/13/2023 13:39

Analysis Batch Number: 608560 End Date: 04/13/2023 19:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-608560/1		04/13/2023 13:39	1	ms11_5231.D	RXI-624SilMS 0.25(mm)
STD 280-608560/11 IC		04/13/2023 14:21	1	ms11_5233.D	RXI-624SilMS 0.25(mm)
STD 280-608560/12 IC		04/13/2023 14:43	1	ms11_5234.D	RXI-624SilMS 0.25(mm)
STD 280-608560/13 IC		04/13/2023 15:04	1	ms11_5235.D	RXI-624SilMS 0.25(mm)
ICIS 280-608560/14		04/13/2023 15:26	1	ms11_5236.D	RXI-624SilMS 0.25(mm)
STD 280-608560/15 IC		04/13/2023 15:47	1	ms11_5237.D	RXI-624SilMS 0.25(mm)
STD 280-608560/16 IC		04/13/2023 16:08	1	ms11_5238.D	RXI-624SilMS 0.25(mm)
STD 280-608560/17 IC		04/13/2023 16:30	1	ms11_5239.D	RXI-624SilMS 0.25(mm)
STD 280-608560/18 IC		04/13/2023 16:51	1	ms11_5240.D	RXI-624SilMS 0.25(mm)
STD 280-608560/19 IC		04/13/2023 17:13	1	ms11_5241.D	RXI-624SilMS 0.25(mm)
ICV 280-608560/20		04/13/2023 17:34	1	ms11_5242.D	RXI-624SilMS 0.25(mm)
ICV 280-608560/21		04/13/2023 19:01	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_MS11 Start Date: 04/14/2023 10:24

Analysis Batch Number: 608697 End Date: 04/14/2023 13:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-608697/1		04/14/2023 10:24	1	ms11_5272.D	RXI-624SilMS 0.25(mm)
STD 280-608697/11 IC		04/14/2023 10:45	1	ms11_5273.D	RXI-624SilMS 0.25(mm)
STD 280-608697/12 IC		04/14/2023 11:06	1	ms11_5274.D	RXI-624SilMS 0.25(mm)
STD 280-608697/13 IC		04/14/2023 11:28	1	ms11_5275.D	RXI-624SilMS 0.25(mm)
ICIS 280-608697/14		04/14/2023 11:49	1	ms11_5276.D	RXI-624SilMS 0.25(mm)
STD 280-608697/15 IC		04/14/2023 12:10	1	ms11_5277.D	RXI-624SilMS 0.25(mm)
STD 280-608697/16 IC		04/14/2023 12:32	1	ms11_5278.D	RXI-624SilMS 0.25(mm)
STD 280-608697/17 IC		04/14/2023 12:53	1	ms11_5279.D	RXI-624SilMS 0.25(mm)
STD 280-608697/18 IC		04/14/2023 13:15	1	ms11_5280.D	RXI-624SilMS 0.25(mm)
STD 280-608697/19 IC		04/14/2023 13:36	1	ms11_5281.D	RXI-624SilMS 0.25(mm)
ICV 280-608697/20		04/14/2023 13:57	1	ms11_5282.D	RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_MS11 Start Date: 04/18/2023 09:36

Analysis Batch Number: 609068 End Date: 04/18/2023 20:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-609068/1		04/18/2023 09:36	1	ms11_5426.D	RXI-624SilMS 0.25(mm)
CCV 280-609068/2		04/18/2023 10:06	1	ms11_5427.D	RXI-624SilMS 0.25(mm)
LCS 280-609068/1002		04/18/2023 10:06	1	-ms11_5427-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-609068/4		04/18/2023 10:28	1	ms11_5428.D	RXI-624SilMS 0.25(mm)
CCV 280-609068/3		04/18/2023 10:49	1	ms11_5429.D	RXI-624SilMS 0.25(mm)
LCS 280-609068/1003		04/18/2023 10:49	1	-ms11_5429-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-609068/5		04/18/2023 11:10	1	ms11_5430.D	RXI-624SilMS 0.25(mm)
MB 280-609068/7		04/18/2023 11:53	1	ms11_5432.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 12:39	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 13:00	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 13:23	1		RXI-624SilMS 0.25(mm)
280-174957-6	MW-105S-20230411	04/18/2023 13:44	1	ms11_5436.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 14:05	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 14:26	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 14:48	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 15:09	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 15:31	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 15:52	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 16:13	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 16:35	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 16:56	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 17:18	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 17:39	2		RXI-624SilMS 0.25(mm)
280-174957-5	MW-105D-20230411	04/18/2023 18:01	4	ms11_5448.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 18:22	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 18:43	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 19:05	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 19:26	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/18/2023 19:48	2		RXI-624SilMS 0.25(mm)
CCVC 280-609068/33		04/18/2023 20:09	1		RXI-624SilMS 0.25(mm)
CCVC 280-609068/35		04/18/2023 20:30	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/24/2023 18:27

Analysis Batch Number: 609932 End Date: 04/25/2023 06:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-609932/1		04/24/2023 18:27	1	X502749.D	RXI-624SilMS 0.25(mm)
CCV 280-609932/2		04/24/2023 18:48	1	X502750.D	RXI-624SilMS 0.25(mm)
LCS 280-609932/1002		04/24/2023 18:48	1	-X502750-LCS.d	RXI-624SilMS 0.25(mm)
CCV 280-609932/3		04/24/2023 19:08	1	X502751.D	RXI-624SilMS 0.25(mm)
LCS 280-609932/1003		04/24/2023 19:08	1	-X502751-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-609932/4		04/24/2023 19:29	1	X502752.D	RXI-624SilMS 0.25(mm)
LCSD 280-609932/5		04/24/2023 19:49	1	X502753.D	RXI-624SilMS 0.25(mm)
MB 280-609932/7		04/24/2023 20:30	1	X502755.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 21:35	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 21:56	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 22:16	1		RXI-624SilMS 0.25(mm)
280-174957-7	EB-01-20230411	04/24/2023 22:37	1	X502759.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 22:57	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 23:18	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 23:38	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 23:59	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 00:19	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 00:40	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 01:00	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 01:21	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 01:41	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 02:02	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 02:23	4		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 02:44	4		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 03:05	4		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 03:26	5		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 03:47	5		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 04:07	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 05:28	1		RXI-624SilMS 0.25(mm)
CCVC 280-609932/32		04/25/2023 05:49	1		RXI-624SilMS 0.25(mm)
CCVC 280-609932/33		04/25/2023 06:09	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/25/2023 05:49

Analysis Batch Number: 609946 End Date: 04/25/2023 17:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-609946/1		04/25/2023 05:49	1	X502777A.D	RXI-624SilMS 0.25(mm)
CCV 280-609946/3		04/25/2023 06:09	1	X502778A.D	RXI-624SilMS 0.25(mm)
LCS 280-609946/1003		04/25/2023 06:09	1	-X502778A-LCS.d	RXI-624SilMS 0.25(mm)
CCV 280-609946/2		04/25/2023 06:36	1	X502779.D	RXI-624SilMS 0.25(mm)
LCS 280-609946/1002		04/25/2023 06:36	1	-X502779-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-609946/5		04/25/2023 07:27	1	X502781.D	RXI-624SilMS 0.25(mm)
MB 280-609946/7		04/25/2023 08:08	1	X502783.D	RXI-624SilMS 0.25(mm)
LCSD 280-609946/4		04/25/2023 08:29	1	X502784.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 09:25	1		RXI-624SilMS 0.25(mm)
280-174957-1	TB-04-20230412	04/25/2023 09:46	1	X502787.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 10:35	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 10:55	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 11:16	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 11:36	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 11:57	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 12:18	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 12:38	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 12:59	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 13:19	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 13:40	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 14:01	1		RXI-624SilMS 0.25(mm)
280-174957-2	MW-124-20230412	04/25/2023 14:21	2	X502799.D	RXI-624SilMS 0.25(mm)
280-174957-3	MW-124-Q-20230412	04/25/2023 14:42	2	X502800.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 15:03	100		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 15:24	5		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 15:45	4		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 16:06	4		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 16:27	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 16:47	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 17:08	1		RXI-624SilMS 0.25(mm)
CCVC 280-609946/34		04/25/2023 17:28	1	X502808.D	RXI-624SilMS 0.25(mm)
CCVC 280-609946/35		04/25/2023 17:49	1	X502809.D	RXI-624SilMS 0.25(mm)

Eurofins Environment Testing America
Worklist Report

Worklist Name: 041823AM
Instrument Name: VMS_MS11
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b
Upload Directory: \\corptalsapp16\280-DN-RawData\Organics\MS\VMS_MS11

Worklist Number: 120504
Chrom Method: AQ_VMS11_8260
Units: mL

Run Reagent: mv-IS_SS_00057 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp B_00061		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp B_00061		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-175082-A-1	Client	1.000	voaWater	5.000	mL		<2	
12	#12 280-174623-A-2	Client	1.000	voaWater	5.000	mL		6	
13	#13 280-174726-D-14	Client	1.000	voaWater	5.000	mL		<2	
14	#14 280-174957-G-6	Client	1.000	voaWater	5.000	mL		7	
15	#15 280-174726-D-3	Client	1.000	voaWater	5.000	mL		<2	
16	#16 280-174726-D-13	Client	1.000	voaWater	5.000	mL		<2	
17	#17 280-174726-D-22	Client	1.000	voaWater	5.000	mL		<2	
18	#18 280-174726-H-23	Client	1.000	voaWater	5.000	mL		<2	
19	#19 280-174912-B-12	Client	1.000	voaWater	5.000	mL		<2	
20	#20 280-174912-B-13	Client	1.000	voaWater	5.000	mL		<2	
21	#21 280-174912-B-14	Client	1.000	voaWater	5.000	mL		<2	
22	#22 280-174912-B-15	Client	1.000	voaWater	5.000	mL		<2	
23	#23 280-174912-B-24	Client	1.000	voaWater	5.000	mL		<2	
24	#24 280-174912-B-25	Client	1.000	voaWater	5.000	mL		<2	
25	#25 280-175082-F-3	Client	2.000	voaWater	5.000	mL		7	
26	#26 280-174957-F-5	Client	4.000	voaWater	5.000	mL		<2	
27	#27 280-175082-G-4	Client	2.000	voaWater	5.000	mL		6	
28	#28 280-174726-D-14 MS	MS	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	<2	
29	#29 280-174726-D-14 MSD	MSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	<2	
30	#30 280-175082-A-3 MS	MS	2.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	6	
31	#31 280-175082-A-3 MSD	MSD	2.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	6	
33	#33 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
35	#35 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp B_00061		
32	#32 Samp 32	Client	1.000	voaWater	5.000	mL			

d:l J
4-18-23

pH lot = HC293085

Instrument ID: MS4
SOP: DV-MS-0010 Rev. 29
Method: (524 / 624 / 624.1 / 8260C / 8260D)
Purge Volume (20mL / 5mL)
Matrix: (Water / Soil / Waste)
Tune Time:
TAL Batch: 609068

Sample Request Form: 82019

MS II 4/18/23 AM

den_msvoa_totalbacklog Gabe 4/18/2023 12:00:43 PM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-174623-2 1x	TB-D9-LC-02 2023-04-05		8260D_DOD5	8260D_DOD5	04/19 23:59	04/24/23	PJM	NJ	VS-8	Unconfirmed
M QSM5.3_StdVarAccepted_DIL2										
280-174726-3	FBTS-RB3-040523		8260D_DOD5	8260D_DOD5	04/19 23:59	04/25/23	DTB	AZ	VS-13 & Mtls-Strge & VS-15	Unconfirmed
M Q5.3_TechSpecs 9/7/2017 Accepted										
280-174726-13	FBTS-OW16B-040523		8260D_DOD5	8260D_DOD5	04/19 23:59	04/25/23	DTB	AZ	Mtls-Strge & VS-13 & VS-15	Unconfirmed
M Q5.3_TechSpecs 9/7/2017 Accepted										
280-174726-14	FBTS-OW16C-040523		8260D_DOD5	8260D_DOD5	04/19 23:59	04/25/23	DTB	AZ	Mtls-Strge & VS-15 & VS-13	Unconfirmed
M Q5.3_TechSpecs 9/7/2017 Accepted										
280-174726-14MS	FBTS-OW16C-040523		8260D_DOD5	8260D_DOD5	04/19 23:59	04/25/23	DTB	AZ	VS-15 & VS-13 & Mtls-Strge	Unconfirmed
M Q5.3_TechSpecs 9/7/2017 Accepted										
280-174726-14MSD	FBTS-OW16C-040523		8260D_DOD5	8260D_DOD5	04/19 23:59	04/25/23	DTB	AZ	Mtls-Strge & VS-15 & VS-13	Unconfirmed
M Q5.3_TechSpecs 9/7/2017 Accepted										
280-174726-22	FBTS-PW4-040523		8260D_DOD5	8260D_DOD5	04/19 23:59	04/25/23	DTB	AZ	VS-13 & VS-15	Unconfirmed
M Q5.3_TechSpecs 9/7/2017 Accepted										
280-174726-23	YPG10-IDW-040523		8260D_DOD5	8260D_DOD5	04/19 23:59	04/25/23	DTB	AZ	Marked as Disposed & Mtls-Strge & VS-15 & 108 & VS-13	Unconfirmed
M Q5.3_TechSpecs 9/7/2017 Accepted										
280-174912-12 1x	2304-B52		8260D	8260D	04/19 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-13	2304-B35		8260D	8260D	04/19 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-14	2304-B50		8260D	8260D	04/19 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed

Sample Request Form: 82019

den_msvoa_totalbacklog Gabe 4/18/2023 12:00:43 PM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-174912-15 1x	2304-B51		8260D	8260D	04/19 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-24	2304-B12		8260D	8260D	04/19 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-25	2304-B38		8260D	8260D	04/19 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174957-5 1x	MW-105D-20230411		8260D	8260D	04/18 23:59	05/01/23	DTB	ID	Mtls-Strge & VS-12 & 149	Unconfirmed
M 8260 Supp Spk DIL2										
280-174957-6 1x	MW-105S-20230411		8260D	8260D	04/18 23:59	05/01/23	DTB	ID	149 & Mtls-Strge & VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-175082-1 1x	20230412ZSB006		8260D_DOD5	8260D_DOD5	04/19 23:59	05/11/23	MAJ	TX	VS-5	Unconfirmed
M QSM5/NCM ALL QC FAILURES AND DIL_QC on Pantex sample_See Pantex QAS in Docs.										
280-175082-3 2x	20230412ZSB008		8260D_DOD5	8260D_DOD5	04/19 23:59	05/11/23	MAJ	TX	VS-5 & 180 & Mtls-Strge & VS-15	Unconfirmed
M QSM5/NCM ALL QC FAILURES AND DIL_QC on Pantex sample_See Pantex QAS in Docs.										
280-175082-3MS	20230412ZSB008		8260D_DOD5	8260D_DOD5	04/19 23:59	05/11/23	MAJ	TX	VS-5 & VS-15	Unconfirmed
M QSM5/NCM ALL QC FAILURES AND DIL_QC on Pantex sample_See Pantex QAS in Docs.										
280-175082-3MSD	20230412ZSB008		8260D_DOD5	8260D_DOD5	04/19 23:59	05/11/23	MAJ	TX	VS-15 & VS-5	Unconfirmed
M QSM5/NCM ALL QC FAILURES AND DIL_QC on Pantex sample_See Pantex QAS in Docs.										
280-175082-4 2x	20230412ZSB009		8260D_DOD5	8260D_DOD5	04/19 23:59	05/11/23	MAJ	TX	VS-15 & VS-5 & 180 & Mtls-Strge	Unconfirmed
M QSM5/NCM ALL QC FAILURES AND DIL_QC on Pantex sample_See Pantex QAS in Docs.										

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b

Worklist Name:	041823AM	Worklist Num:	120504
Instrument:	VMS_MS11	Method:	AQ_VMS11_8260
Analysis Type:	VOA	Creator:	Dobransky, Michael E
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 609068
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-175082-A-1	# 11 280-175082-A-1
# 12 280-174623-A-2	# 12 280-174623-A-2
# 13 280-174726-D-14	# 13 280-174726-D-14
# 14 280-174957-G-6	# 14 280-174957-G-6
# 15 280-174726-D-3	# 15 280-174726-D-3
# 16 280-174726-D-13	# 16 280-174726-D-13
# 17 280-174726-D-22	# 17 280-174726-D-22
# 18 280-174726-H-23	# 18 280-174726-H-23
# 19 280-174912-B-12	# 19 280-174912-B-12
# 20 280-174912-B-13	# 20 280-174912-B-13
# 21 280-174912-B-14	# 21 280-174912-B-14
# 22 280-174912-B-15	# 22 280-174912-B-15
# 23 280-174912-B-24	# 23 280-174912-B-24
# 24 280-174912-B-25	# 24 280-174912-B-25
# 25 280-175082-F-3	# 25 280-175082-F-3
# 26 280-174957-F-5	# 26 280-174957-F-5
# 27 280-175082-G-4	# 27 280-175082-G-4
# 28 280-174726-D-14 MS	# 28 280-174726-D-14 MS
# 29 280-174726-D-14 MSD	# 29 280-174726-D-14 MSD
# 30 280-175082-A-3 MS	# 30 280-175082-A-3 MS
# 31 280-175082-A-3 MSD	# 31 280-175082-A-3 MSD
# 33 CCVC	# 33 CCVC
# 35 CCVC	# 35 CCVC
# 32 Samp 32	# 32 Samp 32

Eurofins Environment Testing America
Worklist Report

Worklist Name: 041823AM
Worklist Number: 120504
Instrument Name: VMS_MS11
Chrom Method: AQ_VMS11_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_MS11\20230418-120504.b
Upload Directory: \\corptalsapp16\280-DN-RawData\Organics\MS\VMS_MS11
Run Reagent: mv-IS_SS_00057
Amount Added: 5.000, Units: uL
Batch #s: 609068

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120504-001	# 1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120504-002	# 2 CCV	MV-MegaMain B_00083 MV-Gas B_00133	CCV	voaWater	5.000	mL	1.000
280-0120504-003	# 3 CCV	MV-Supp B_00061	CCV	voaWater	5.000	mL	1.000
280-0120504-004	# 4 LCSD	MV-MegaMain B_00083 MV-Gas B_00133	LCSD	voaWater	5.000	mL	1.000
280-0120504-005	# 5 LCSD	MV-Supp B_00061	LCSD	voaWater	5.000	mL	1.000
280-0120504-006	# 6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120504-007	# 7 MB		MB	voaWater	5.000	mL	1.000
280-0120504-008	# 8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120504-009	# 9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120504-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120504-011	#11 280-175082-A-1		Client	voaWater	5.000	mL	1.000
280-0120504-012	#12 280-174623-A-2		Client	voaWater	5.000	mL	1.000
280-0120504-013	#13 280-174726-D-14		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120504-033	#33 CCVC	MV-MegaMain B_00083 MV-Gas B_00133	CCVC	voaWater	5.000	mL	1.000
280-0120504-035	#35 CCVC	MV-Supp B_00061	CCVC	voaWater	5.000	mL	1.000
280-0120504-032	#32 Samp 32		Client	voaWater	5.000	mL	1.000

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042423pM
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120722
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00083		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-174912-A-26	Client	1.000	voaWater	5.000	mL		LL	HS
12	#12 280-174912-B-36	Client	1.000	voaWater	5.000	mL		LL	
13	#13 280-174955-A-14	Client	1.000	voaWater	5.000	mL		LL	
14	#14 280-174957-B-7	Client	1.000	voaWater	5.000	mL		LL	
15	#15 280-174912-C-3	Client	1.000	voaWater	5.000	mL		LL	
16	#16 280-174912-B-6	Client	1.000	voaWater	5.000	mL		LL	
17	#17 280-174912-C-7	Client	1.000	voaWater	5.000	mL		LL	
18	#18 280-174912-C-30	Client	1.000	voaWater	5.000	mL		LL	
19	#19 280-174912-D-31	Client	1.000	voaWater	5.000	mL		LL	
20	#20 280-174912-E-32	Client	1.000	voaWater	5.000	mL		LL	
21	#21 280-174962-B-3	Client	1.000	voaWater	5.000	mL		LL	
22	#22 280-174962-C-4	Client	1.000	voaWater	5.000	mL		LL	
23	#23 280-175031-P-1	Client	1.000	voaWater	5.000	mL		LL	
24	#24 280-174962-A-7	Client	2.000	voaWater	5.000	mL		LL	
25	#25 280-174962-A-5	Client	4.000	voaWater	5.000	mL		LL	
26	#26 280-174962-B-6	Client	4.00	voaWater	5.000	mL		LL	
27	#27 280-175122-E-2	Client	4.000	voaWater	5.000	mL		LL	
28	#28 280-175168-A-4	Client	5.000	voaWater	5.000	mL		LL	HS
29	#29 280-175168-B-14	Client	5.000	voaWater	5.000	mL		LL	
30	#30 280-174912-A-3 MS	MS	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132	LL	
31	#31 280-174912-B-3 MSD	MSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132	LL	
32	#32 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132		
33	#33 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp B_00062		

DIL ✓ LL 4/25/23 pH Lot #: HC281827

Eurofins TestAmerica Denver
Instrument ID: X4
SOP: DV-MS-0010 Rev. 29
Method: (524 / 624 / 8260B / 8260C)
Purge Volume (20mL / (5mL))
Matrix: (Water / Soil / Waste)
Tune Time:
TALs Batch: 609932

Sample Request Form: 82183

den_msvoa_totalbacklog Gabe 4/24/2023 9:08:30 PM Assigned to:Jones, Branden M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-174912-3MS	2304-B11	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-3MSD	2304-B11	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-6	2304-B9	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-7	2304-FD04	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-26	2304-TB01	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-30	2304-MW112	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	Mtls-Strge & VS-9	Unconfirmed
280-174912-31	2304-P3	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	Mtls-Strge & VS-9	Unconfirmed
280-174912-32	2304-MW103	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	Mtls-Strge & VS-9	Unconfirmed
280-174912-36	2304-TB02	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174955-14	TRIP BLANKS	1x	8260D	8260D	04/25 23:59	04/25/23	PJM	UT	VS-15 & VS-12	Unconfirmed
280-174957-7	EB-01-20230411	1x	8260D	8260D	04/25 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-3	RW-10-20230411	1x	8260D	8260D	04/25 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-4	RW-5-20230411	1x	8260D	8260D	04/25 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-5	RW-9R-20230411	4x	8260D	8260D	04/25 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b

Worklist Name:	042423pM	Worklist Num:	120722
Instrument:	VMS_X4	Method:	VMS_X4_8260
Analysis Type:	VOA	Creator:	Jones, Branden M
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 609932
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-174912-A-26	# 11 280-174912-A-26
# 12 280-174912-B-36	# 12 280-174912-B-36
# 13 280-174955-A-14	# 13 280-174955-A-14
# 14 280-174957-B-7	# 14 280-174957-B-7
# 15 280-174912-C-3	# 15 280-174912-C-3
# 16 280-174912-B-6	# 16 280-174912-B-6
# 17 280-174912-C-7	# 17 280-174912-C-7
# 18 280-174912-C-30	# 18 280-174912-C-30
# 19 280-174912-D-31	# 19 280-174912-D-31
# 20 280-174912-E-32	# 20 280-174912-E-32
# 21 280-174962-B-3	# 21 280-174962-B-3
# 22 280-174962-C-4	# 22 280-174962-C-4
# 23 280-175031-P-1	# 23 280-175031-P-1
# 24 280-174962-A-7	# 24 280-174962-A-7
# 25 280-174962-A-5	# 25 280-174962-A-5
# 26 280-174962-B-6	# 26 280-174962-B-6
# 27 280-175122-E-2	# 27 280-175122-E-2
# 28 280-175168-A-4	# 28 280-175168-A-4
# 29 280-175168-B-14	# 29 280-175168-B-14
# 30 280-174912-A-3 MS	# 30 280-174912-A-3 MS
# 31 280-174912-B-3 MSD	# 31 280-174912-B-3 MSD
# 32 CCVC	# 32 CCVC
# 33 CCVC	# 33 CCVC

Eurofins Environment Testing America
Worklist Report

Worklist Name:	042423pM	Worklist Number:	120722
Instrument Name:	VMS_X4	Chrom Method:	VMS_X4_8260
Purge Volume:	5.000	Units:	mL
Analysis Type:	VOA		
Batch Directory:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b		
Upload Directory:	\\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4		
Run Reagent:	mv-IS_SS_00058	Amount Added:	5.000, Units: uL
Batch #s:	609932		

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120722-001	# 1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120722-002	# 2 CCV	MV-MegaMain B_00083 MV-Gas B_00132	CCV	voaWater	5.000	mL	1.000
280-0120722-003	# 3 CCV	MV-Supp B_00062	CCV	voaWater	5.000	mL	1.000
280-0120722-004	# 4 LCSD	MV-Gas B_00132 MV-MegaMain B_00083	LCSD	voaWater	5.000	mL	1.000
280-0120722-005	# 5 LCSD	MV-Supp B_00062	LCSD	voaWater	5.000	mL	1.000
280-0120722-006	# 6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120722-007	# 7 MB		MB	voaWater	5.000	mL	1.000
280-0120722-008	# 8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120722-009	# 9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120722-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120722-011	#11 280-174912-A-26		Client	voaWater	5.000	mL	1.000
280-0120722-012	#12 280-174912-B-36		Client	voaWater	5.000	mL	1.000
280-0120722-013	#13 280-174955-A-14		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120722-014	#14 280-174957-B-7		Client	voaWater	5.000	mL	1.000
280-0120722-015	#15 280-174912-C-3		Client	voaWater	5.000	mL	1.000
280-0120722-016	#16 280-174912-B-6		Client	voaWater	5.000	mL	1.000
280-0120722-017	#17 280-174912-C-7		Client	voaWater	5.000	mL	1.000
280-0120722-018	#18 280-174912-C-30		Client	voaWater	5.000	mL	1.000
280-0120722-019	#19 280-174912-D-31		Client	voaWater	5.000	mL	1.000
280-0120722-020	#20 280-174912-E-32		Client	voaWater	5.000	mL	1.000
280-0120722-021	#21 280-174962-B-3		Client	voaWater	5.000	mL	1.000
280-0120722-022	#22 280-174962-C-4		Client	voaWater	5.000	mL	1.000
280-0120722-023	#23 280-175031-P-1		Client	voaWater	5.000	mL	1.000
280-0120722-024	#24 280-174962-A-7		Client	voaWater	5.000	mL	2.000
280-0120722-025	#25 280-174962-A-5		Client	voaWater	5.000	mL	4.000
280-0120722-026	#26 280-174962-B-6		Client	voaWater	5.000	mL	14.00
280-0120722-027	#27 280-175122-E-2		Client	voaWater	5.000	mL	4.000
280-0120722-028	#28 280-175168-A-4		Client	voaWater	5.000	mL	5.000
280-0120722-029	#29 280-175168-B-14		Client	voaWater	5.000	mL	5.000
280-0120722-030	#30 280-174912-A-3 MS	MV-MegaMain B_00083 MV-Gas B_00132	MS	voaWater	5.000	mL	1.000
280-0120722-031	#31 280-174912-B-3 MSD	MV-MegaMain B_00083 MV-Gas B_00132	MSD	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120722-032	#32 CCVC	MV-MegaMain B_00083 MV-Gas B_00132	CCVC	voaWater	5.000	mL	1.000
280-0120722-033	#33 CCVC	MV-Supp B_00062	CCVC	voaWater	5.000	mL	1.000

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042523AM
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120726
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00083		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-175031-A-2	Client	1.000	voaWater	5.000	mL		<2	
12	#12 280-174957-C-1	Client	1.000	voaWater	5.000	mL			
13	#13 280-174962-B-1	Client	1.000	voaWater	5.000	mL			
14	#14 280-175053-A-21	Client	1.000	voaWater	5.000	mL			
15	#15 280-174876-C-3	Client	1.000	voaWater	5.000	mL			
16	#16 280-174962-B-8	Client	1.000	voaWater	5.000	mL			
17	#17 280-174962-D-2	Client	1.000	voaWater	5.000	mL			
18	#18 280-175180-C-10	Client	1.000	voaWater	5.000	mL			
19	#19 680-233708-C-4	Client	1.000	voaWater	5.000	mL			
20	#20 680-233708-C-3	Client	1.000	voaWater	5.000	mL			
21	#21 680-233708-C-2	Client	1.000	voaWater	5.000	mL		<2	
22	#22 680-233708-C-1	Client	1.000	voaWater	5.000	mL			
23	#23 280-174991-F-12	Client	1.000	voaWater	5.000	mL			
24	#24 280-174957-F-2	Client	2.000	voaWater	5.000	mL			
25	#25 280-174957-E-3	Client	2.000	voaWater	5.000	mL			
26	#26 280-175180-B-6	Client	100.0	voaWater	5.000	mL			
27	#27 280-175180-B-25	Client	5.000	voaWater	5.000	mL			HS
28	#28 280-175180-B-26	Client	4.000	voaWater	5.000	mL			HS
29	#29 280-175180-A-1	Client	4.000	voaWater	5.000	mL			
30	#30 280-175180-B-17	Client	2.000	voaWater	5.000	mL			HS
31	#31 280-174962-D-2 MS	MS	1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00083		
32	#32 280-174962-D-2 MSD	MSD	1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00083	<2	
34	#34 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132		
35	#35 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp B_00062		
33	#33 Samp 33	Client	1.000	voaWater	5.000	mL			

4-25-23 dil ✓
CF

pH lot=HC160347

X4 29 DOD

Batch: 609946

Sample Request Form: 82220

X4 4/25/23 AM

den_msvoa_totalbacklog Gabe 4/25/2023 9:08:39 AM Assigned to:Dobransky, Michael E

1 IN

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-174876-3	QCFB		8260B	8260B	04/25 23:59	04/28/23	JSC	CA	VS-9	Unconfirmed
280-174937-5	TRIP BLANK	No Vials left	8260B	8260B	04/25 23:59	04/28/23	MOG	UT	VS-9	Unconfirmed
280-174957-1	TB-04-20230412		8260D	8260D	04/26 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174957-2	MW-124-20230412		8260D	8260D	04/26 23:59	05/01/23	DTB	ID	149 & VS-15 & Mtls-Strge & VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174957-3	MW-124-Q-20230412		8260D	8260D	04/26 23:59	05/01/23	DTB	ID	VS-15 & VS-12 & Mtls-Strge & 149	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-1	TB-03-20230412		8260D	8260D	04/26 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-2	MW-125-20230412		8260D	8260D	04/26 23:59	05/01/23	DTB	ID	151 & VS-12 & VS-15 & Mtls-Strge	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-2MS	MW-125-20230412		8260D	8260D	04/26 23:59	05/01/23	DTB	ID	151 & VS-15 & VS-12 & Mtls-Strge	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-2MSD	MW-125-20230412		8260D	8260D	04/26 23:59	05/01/23	DTB	ID	Mtls-Strge & VS-15 & 151 & VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-8	EB-02-20230412		8260D	8260D	04/26 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174991-12	ER-04112023		8260D_DOD5	8260D_DOD5	04/25 23:59	05/01/23	PJM	CA	VS-12 & 154 & Marked as Disposed & VS-15	Unconfirmed

Sample Request Form: 82220

den_msvoa_totalbacklog Gabe 4/25/2023 9:08:39 AM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
M QSM5.3										
280-175031-2	TB-01-20230412		8260D	8260D	04/26 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-175053-21	TRIP BLANK 6		8260D_DOD5	8260D_DOD5	04/25 23:59	05/02/23	PJM	LA	VS-5	Unconfirmed
M Q5.3_StdVariancesAccepted_DIL1										
280-175180-1	SSDR-3-20230412		8260D	8260D	04/26 23:59	04/28/23	PJM	IA	AA-2	Unconfirmed
280-175180-6	Dup-6-20230413		8260D	8260D	04/26 23:59	04/28/23	PJM	IA	AA-2	Unconfirmed
280-175180-10	SSDR-9-20230412		8260D	8260D	04/26 23:59	04/28/23	PJM	IA	AA-2	Unconfirmed
280-175180-17	MW-51-4-20230412		8260D	8260D	04/26 23:59	04/28/23	PJM	IA	AA-2	Unconfirmed
280-175180-25	MW-44D-20230412		8260D	8260D	04/26 23:59	04/28/23	PJM	IA	AA-2	Unconfirmed
280-175180-26	MW-51-6-2023041		8260D	8260D	04/26 23:59	04/28/23	PJM	IA	AA-2	Unconfirmed

Sample Request Form: 82224

KY 4/25/23AM

den_msvoa_totalbacklog Gabe 4/25/2023 10:54:32 AM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
680-233708-1	MW-11		8260B	8260B	05/01 23:59	04/24/23	TMB	NH	VS-15 & L Soil & Marked as Disposed	Unconfirmed
680-233708-2	MW-16R		8260B	8260B	05/01 23:59	04/24/23	TMB	NH	Marked as Disposed & L Soil & VS-15	Unconfirmed
680-233708-3	MW-23		8260B	8260B	05/01 23:59	04/24/23	TMB	NH	Marked as Disposed & VS-15 & L Soil	Unconfirmed
680-233708-4	Trip Blank		8260B	8260B	05/01 23:59	04/24/23	TMB	NH	Marked as Disposed & L Soil & VS-15	Unconfirmed

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b

Worklist Name:	042523AM	Worklist Num:	120726
Instrument:	VMS_X4	Method:	VMS_X4_8260
Analysis Type:	VOA	Creator:	Dobransky, Michael E
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 609946
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-175031-A-2	# 11 280-175031-A-2
# 12 280-174957-C-1	# 12 280-174957-C-1
# 13 280-174962-B-1	# 13 280-174962-B-1
# 14 280-175053-A-21	# 14 280-175053-A-21
# 15 280-174876-C-3	# 15 280-174876-C-3
# 16 280-174962-B-8	# 16 280-174962-B-8
# 17 280-174962-D-2	# 17 280-174962-D-2
# 18 280-175180-C-10	# 18 280-175180-C-10
# 19 680-233708-C-4	# 19 680-233708-C-4
# 20 680-233708-C-3	# 20 680-233708-C-3
# 21 680-233708-C-2	# 21 680-233708-C-2
# 22 680-233708-C-1	# 22 680-233708-C-1
# 23 280-174991-F-12	# 23 280-174991-F-12
# 24 280-174957-F-2	# 24 280-174957-F-2
# 25 280-174957-E-3	# 25 280-174957-E-3
# 26 280-175180-B-6	# 26 280-175180-B-6
# 27 280-175180-B-25	# 27 280-175180-B-25
# 28 280-175180-B-26	# 28 280-175180-B-26
# 29 280-175180-A-1	# 29 280-175180-A-1
# 30 280-175180-B-17	# 30 280-175180-B-17
# 31 280-174962-D-2 MS	# 31 280-174962-D-2 MS
# 32 280-174962-D-2 MSD	# 32 280-174962-D-2 MSD
# 34 CCVC	# 34 CCVC
# 35 CCVC	# 35 CCVC
# 33 BLK	# 33 BLK

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042523AM
Worklist Number: 120726
Instrument Name: VMS_X4
Chrom Method: VMS_X4_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230425-120726.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4
Run Reagent: mv-IS_SS_00058
Amount Added: 5.000, Units: uL
Batch #s: 609946

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120726-001	# 1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120726-002	# 2 CCV	MV-MegaMain B_00083 MV-Gas B_00132	CCV	voaWater	5.000	mL	1.000
280-0120726-003	# 3 CCV	MV-Supp B_00062	CCV	voaWater	5.000	mL	1.000
280-0120726-004	# 4 LCSD	MV-Gas B_00132 MV-MegaMain B_00083	LCSD	voaWater	5.000	mL	1.000
280-0120726-005	# 5 LCSD	MV-Supp B_00062	LCSD	voaWater	5.000	mL	1.000
280-0120726-006	# 6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120726-007	# 7 MB		MB	voaWater	5.000	mL	1.000
280-0120726-008	# 8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120726-009	# 9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120726-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120726-011	#11 280-175031-A-2		Client	voaWater	5.000	mL	1.000
280-0120726-012	#12 280-174957-C-1		Client	voaWater	5.000	mL	1.000
280-0120726-013	#13 280-174962-B-1		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120726-032	#32 280-174962-D-2 MSD	MV-Gas B_00132 MV-MegaMain B_00083	MSD	voaWater	5.000	mL	1.000
280-0120726-034	#34 CCVC	MV-MegaMain B_00083 MV-Gas B_00132	CCVC	voaWater	5.000	mL	1.000
280-0120726-035	#35 CCVC	MV-Supp B_00062	CCVC	voaWater	5.000	mL	1.000
280-0120726-033	#33 Samp 33		Client	voaWater	5.000	mL	1.000

Eurofins Environment Testing America
Worklist Report

Worklist Name: 040623ical
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120207
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Ical Lvl	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB		1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV		1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		
3	# 3 CCV	CCV		1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00082		
5	# 5 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client		1.000	voaWater	5.000	mL			
7	# 7 MB	MB		1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client		1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client		1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client		1.000	voaWater	5.000	mL			
19	#19 STD	IC	1	1.000	voaWater	5.000	mL	Cal Dil Std_00162		
18	#18 STD	IC	2	1.000	voaWater	5.000	mL	Cal Dil Std_00162		
16	#16 STD	IC	4	1.000	voaWater	5.000	mL	Cal Dil Std_00162		
17	#17 STD	IC	3	1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00086		
15	#15 STD	IC	5	1.000	voaWater	5.000	mL	MV-MegaMainA_00086 MV-Gas A_00150		
14	#14 ICIS	ICIS	6	1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00086		
13	#13 STD	IC	7	1.000	voaWater	5.000	mL	MV-MegaMainA_00086 MV-Gas A_00150		
12	#12 STD	IC	8	1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00086		
11	#11 STD	IC	9	1.000	voaWater	5.000	mL	MV-MegaMainA_00086 MV-Gas A_00150		
20	#20 ICV	ICV		1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00082		

Rerun of ICV in batch 608203 Line 8: All compounds within 20%, except:
2-CLEVE (+52.1%)

Eurofins TestAmerica Denver
Instrument ID: _____
SOP: DV-MS-00010 Rev. _____
Method: (8260B / 8260C / 8260D / 8260D SIM)
Purge Volume: (5ml / 25ml)
Matrix: (Water / Soil / Waste)
Time Times: _____
TALs Batch: _____
4/11/23

Eurofins TestAmerica Denver
Instrument ID: X4
SOP: DV-MS-00010 Rev. 28 29
Method: (8260B / 8260C / 8260D / 8260D SIM)
Purge Volume: (5ml / 25ml)
Matrix: (Water / Soil / Waste)
02:33 - 06:39
607881
4/11/23

ICV Line 20: All compounds ≤ 20% except for: Vinyl Chloride (+22.5%) & Cyclohexanone (+27.2%)

4/11/23

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 590907 Batch Start Date: 10/22/22 11:07 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00004	mv-Cent IS 00007	MV-Supp A 00073	MV-TAOH_CUST 00004
BFB 280-590907/1		8260D		2 uL	2 uL	5 uL			
STD010 280-590907/23 IC		8260D		5 mL	5 mL		5 uL	1 uL	1 uL
STD020 280-590907/24 IC		8260D		5 mL	5 mL		5 uL	2 uL	2 uL
STD050 280-590907/25 IC		8260D		5 mL	5 mL		5 uL	5 uL	5 uL
STD10 280-590907/26 IC		8260D		5 mL	5 mL		5 uL	10 uL	10 uL
STD50 280-590907/27 IC		8260D		5 mL	5 mL		5 uL	50 uL	50 uL
STD100 280-590907/28 IC		8260D		5 mL	5 mL		5 uL	100 uL	100 uL
STD200 280-590907/29 IC		8260D		5 mL	5 mL		5 uL	200 uL	200 uL

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 595485 Batch Start Date: 12/04/22 14:15 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00004	mv-Cent IS 00007	MV-Supp B 00057	
BFB 280-595485/1		8260D		2 uL	2 uL	5 uL			
STD200 280-595485/22 IC		8260D		5 mL	5 mL		5 uL	200 uL	
STD100 280-595485/23 IC		8260D		5 mL	5 mL		5 uL	100 uL	
STD75 280-595485/24 IC		8260D		5 mL	5 mL		5 uL	75 uL	
STD50 280-595485/25 IC		8260D		5 mL	5 mL		5 uL	50 uL	
STD10 280-595485/26 IC		8260D		5 mL	5 mL		5 uL	10 uL	
STD5 280-595485/27 IC		8260D		5 mL	5 mL		5 uL	5 uL	
STD2 280-595485/28 IC		8260D		5 mL	5 mL		5 uL	2 uL	
STD1 280-595485/29 IC		8260D		5 mL	5 mL		5 uL	1 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 607881 Batch Start Date: 04/07/23 02:33 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00162	mv-Cent BFB 00005	MV-Gas A 00150	mv-IS_SS 00058
BFB 280-607881/1		8260D		2 uL	2 uL		5 uL		
STD 280-607881/11 IC		8260D		5 mL	5 mL			40 uL	5 uL
STD 280-607881/12 IC		8260D		5 mL	5 mL			20 uL	5 uL
STD 280-607881/13 IC		8260D		5 mL	5 mL			15 uL	5 uL
ICIS 280-607881/14		8260D		5 mL	5 mL			10 uL	5 uL
STD 280-607881/15 IC		8260D		5 mL	5 mL			2 uL	5 uL
STD 280-607881/16 IC		8260D		5 mL	5 mL	20 uL			5 uL
STD 280-607881/17 IC		8260D		5 mL	5 mL			1 uL	5 uL
STD 280-607881/18 IC		8260D		5 mL	5 mL	10 uL			5 uL
STD 280-607881/19 IC		8260D		5 mL	5 mL	5 uL			5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00086					
BFB 280-607881/1		8260D							
STD 280-607881/11 IC		8260D		100 uL					
STD 280-607881/12 IC		8260D		50 uL					
STD 280-607881/13 IC		8260D		37.5 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 607881 Batch Start Date: 04/07/23 02:33 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00086					
ICIS 280-607881/14		8260D		25 uL					
STD 280-607881/15 IC		8260D		5 uL					
STD 280-607881/16 IC		8260D							
STD 280-607881/17 IC		8260D		2.5 uL					
STD 280-607881/18 IC		8260D							
STD 280-607881/19 IC		8260D							

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608203 Batch Start Date: 04/10/23 21:51 Batch Analyst: Coulter, Dawn (goes by Sh

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00131	mv-IS_SS 00058	MV-MegaMain B 00082
BFB 280-608203/1		8260D		2 uL	2 uL	5 uL			
ICV 280-608203/8		8260D		5 mL	5 mL		10 uL	5 uL	25 uL

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608560 Batch Start Date: 04/13/23 13:39 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00167	mv-Cent BFB 00005	MV-Gas B 00133	mv-IS_SS 00057
BFB 280-608560/1		8260D		2 uL	2 uL		5 uL		
STD 280-608560/11 IC		8260D		5 mL	5 mL			40 uL	5 uL
STD 280-608560/12 IC		8260D		5 mL	5 mL			20 uL	5 uL
STD 280-608560/13 IC		8260D		5 mL	5 mL			15 uL	5 uL
ICIS 280-608560/14		8260D		5 mL	5 mL			10 uL	5 uL
STD 280-608560/15 IC		8260D		5 mL	5 mL			2 uL	5 uL
STD 280-608560/16 IC		8260D		5 mL	5 mL	50 uL			5 uL
STD 280-608560/17 IC		8260D		5 mL	5 mL	20 uL			5 uL
STD 280-608560/18 IC		8260D		5 mL	5 mL	10 uL			5 uL
STD 280-608560/19 IC		8260D		5 mL	5 mL	5 uL			5 uL
ICV 280-608560/20		8260D		5 mL	5 mL				5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00083	MV-MegaMainA 00087				
BFB 280-608560/1		8260D							
STD 280-608560/11 IC		8260D		100 uL					
STD 280-608560/12 IC		8260D		50 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608560 Batch Start Date: 04/13/23 13:39 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00083	MV-MegaMainA 00087				
STD 280-608560/13 IC		8260D		37.5 uL					
ICIS 280-608560/14		8260D		25 uL					
STD 280-608560/15 IC		8260D		5 uL					
STD 280-608560/16 IC		8260D							
STD 280-608560/17 IC		8260D							
STD 280-608560/18 IC		8260D							
STD 280-608560/19 IC		8260D							
ICV 280-608560/20		8260D			25 uL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608697 Batch Start Date: 04/14/23 10:24 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00168	mv-Cent BFB 00005	MV-Gas A 00150	MV-Gas B 00133
BFB 280-608697/1		8260D		2 uL	2 uL		5 uL		
STD 280-608697/11 IC		8260D		5 mL	5 mL				40 uL
STD 280-608697/12 IC		8260D		5 mL	5 mL				20 uL
STD 280-608697/13 IC		8260D		5 mL	5 mL				15 uL
ICIS 280-608697/14		8260D		5 mL	5 mL				10 uL
STD 280-608697/15 IC		8260D		5 mL	5 mL				2 uL
STD 280-608697/16 IC		8260D		5 mL	5 mL	50 uL			
STD 280-608697/17 IC		8260D		5 mL	5 mL	20 uL			
STD 280-608697/18 IC		8260D		5 mL	5 mL	10 uL			
STD 280-608697/19 IC		8260D		5 mL	5 mL	5 uL			
ICV 280-608697/20		8260D		5 mL	5 mL			10 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057					
BFB 280-608697/1		8260D							
STD 280-608697/11 IC		8260D		5 uL					
STD 280-608697/12 IC		8260D		5 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608697 Batch Start Date: 04/14/23 10:24 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057					
STD 280-608697/13 IC		8260D		5 uL					
ICIS 280-608697/14		8260D		5 uL					
STD 280-608697/15 IC		8260D		5 uL					
STD 280-608697/16 IC		8260D		5 uL					
STD 280-608697/17 IC		8260D		5 uL					
STD 280-608697/18 IC		8260D		5 uL					
STD 280-608697/19 IC		8260D		5 uL					
ICV 280-608697/20		8260D		5 uL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609068 Batch Start Date: 04/18/23 09:36 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00133	mv-IS_SS 00057	MV-MegaMain B 00083
BFB 280-609068/1		8260D		2 uL	2 uL	5 uL			
CCV 280-609068/2		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
CCV 280-609068/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-609068/4		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
LCSD 280-609068/5		8260D		5 mL	5 mL			5 uL	
MB 280-609068/7		8260D		5 mL	5 mL			5 uL	
280-174957-G-6	MW-105S-20230411	8260D	T	5 mL	5 mL			5 uL	
280-174957-F-5	MW-105D-20230411	8260D	T	5 mL	5 mL			5 uL	
LCS 280-609068/1002		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
LCS 280-609068/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00061					
BFB 280-609068/1		8260D							
CCV 280-609068/2		8260D							
CCV 280-609068/3		8260D		25 uL					
LCSD 280-609068/4		8260D							
LCSD 280-609068/5		8260D		25 uL					
MB 280-609068/7		8260D							
280-174957-G-6	MW-105S-20230411	8260D	T						
280-174957-F-5	MW-105D-20230411	8260D	T						
LCS 280-609068/1002		8260D							
LCS 280-609068/1003		8260D		25 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609068 Batch Start Date: 04/18/23 09:36 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609932 Batch Start Date: 04/24/23 18:27 Batch Analyst: Jones, Branden M

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00132	mv-IS_SS 00058	MV-MegaMain B 00083
BFB 280-609932/1		8260D		2 uL	2 uL	5 uL			
CCV 280-609932/2		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
CCV 280-609932/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-609932/4		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCSD 280-609932/5		8260D		5 mL	5 mL			5 uL	
MB 280-609932/7		8260D		5 mL	5 mL			5 uL	
280-174957-B-7	EB-01-20230411	8260D	T	5 mL	5 mL			5 uL	
LCS 280-609932/1002		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCS 280-609932/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00062					
BFB 280-609932/1		8260D							
CCV 280-609932/2		8260D							
CCV 280-609932/3		8260D		25 uL					
LCSD 280-609932/4		8260D							
LCSD 280-609932/5		8260D		25 uL					
MB 280-609932/7		8260D							
280-174957-B-7	EB-01-20230411	8260D	T						
LCS 280-609932/1002		8260D							
LCS 280-609932/1003		8260D		25 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609932 Batch Start Date: 04/24/23 18:27 Batch Analyst: Jones, Branden M

Batch Method: 8260D Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609946 Batch Start Date: 04/25/23 05:49 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00132	mv-IS_SS 00058	MV-MegaMain B 00083
BFB 280-609946/1		8260D		2 uL	2 uL	5 uL			
CCV 280-609946/2		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
CCV 280-609946/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-609946/4		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
LCSD 280-609946/5		8260D		5 mL	5 mL			5 uL	
MB 280-609946/7		8260D		5 mL	5 mL			5 uL	
280-174957-C-1	TB-04-20230412	8260D	T	5 mL	5 mL			5 uL	
280-174957-F-2	MW-124-20230412	8260D	T	5 mL	5 mL			5 uL	
280-174957-E-3	MW-124-Q-20230412	8260D	T	5 mL	5 mL			5 uL	
CCVC 280-609946/34		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
CCVC 280-609946/35		8260D		5 mL	5 mL			5 uL	
LCS 280-609946/1002		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
LCS 280-609946/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00062					
BFB 280-609946/1		8260D							
CCV 280-609946/2		8260D							
CCV 280-609946/3		8260D		25 uL					
LCSD 280-609946/4		8260D							
LCSD 280-609946/5		8260D		25 uL					
MB 280-609946/7		8260D							
280-174957-C-1	TB-04-20230412	8260D	T						
280-174957-F-2	MW-124-20230412	8260D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609946 Batch Start Date: 04/25/23 05:49 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00062					
280-174957-E-3	MW-124-Q-20230412	8260D	T						
CCVC 280-609946/34		8260D							
CCVC 280-609946/35		8260D		25 uL					
LCS 280-609946/1002		8260D							
LCS 280-609946/1003		8260D		25 uL					

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method RSK-175

Dissolved Gases (GC) by Method RSK_175

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: J004117.D

Lab ID: LCS 280-609196/3 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Methane	65.7	62.8	96	75-125	
Ethene	115	113	98	75-125	
Ethane	123	120	98	75-125	
Acetylene	107	105	99	75-125	
Propane	181	172	95	75-125	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water Level: Low Lab File ID: J004118.D

Lab ID: LCSD 280-609196/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Methane	65.7	62.4	95	1	20	75-125	
Ethene	115	112	98	0	20	75-125	
Ethane	123	120	97	1	20	75-125	
Acetylene	107	105	99	0	20	75-125	
Propane	181	174	96	1	20	75-125	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: MB 280-609196/5

Matrix: Water Date Extracted:

Lab File ID:(1) J004119.D Lab File ID:(2) J004119.D

Date Analyzed:(1) 04/18/2023 18:31 Date Analyzed:(2) 04/18/2023 18:31

Instrument ID:(1) VGC_J Instrument ID:(2) VGC_J

GC Column:(1) HP-Plot Q ID: 0.53(mm) GC Column:(2) Rt-Alumina K ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-609196/3	04/18/2023 18:04	04/18/2023 18:04
	LCSD 280-609196/4	04/18/2023 18:17	04/18/2023 18:17
MW-124-Q-20230412	280-174957-3	04/19/2023 02:59	04/19/2023 02:59
MW-124-20230412	280-174957-2	04/19/2023 03:12	04/19/2023 03:12

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-20230412 Lab Sample ID: 280-174957-2

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 04/19/2023 03:12 Date Analyzed (2): 04/19/2023 03:12

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina K ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.67	1.62	1.70	13		3.7
	2		1.23	1.18	1.26	14		
Ethane	1		3.02	2.97	3.07	1.0		31.0
	2		1.48	1.42	1.52	1.4		
Propane	1		4.93	4.87	4.99	0.68		3.1
	2		2.51	2.42	2.54	0.66		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-Q-20230412 Lab Sample ID: 280-174957-3

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 04/19/2023 02:59 Date Analyzed (2): 04/19/2023 02:59

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina K ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.67	1.62	1.70	14		4.7
	2		1.23	1.18	1.26	15		
Ethane	1		3.02	2.97	3.07	0.94		52.8
	2		1.48	1.42	1.52	1.6		
Propane	1		4.93	4.87	4.99	0.64		3.5
	2		2.51	2.42	2.54	0.66		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-609196/3

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 04/18/2023 18:04 Date Analyzed (2): 04/18/2023 18:04

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina K ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.66	1.62	1.70	62.8		1.4
	2		1.22	1.18	1.26	63.7		
Ethene	1		2.60	2.55	2.65	113		0.3
	2		1.75	1.69	1.79	113		
Acetylene	1		2.76	2.67	2.83	105		2.0
	2		4.08	3.96	4.12	103		
Ethane	1		3.02	2.97	3.07	120		0.6
	2		1.47	1.42	1.52	121		
Propane	1		4.93	4.87	4.99	172		2.2
	2		2.48	2.42	2.54	176		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-609196/4

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 04/18/2023 18:17 Date Analyzed (2): 04/18/2023 18:17

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina K ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.66	1.62	1.70	62.4		1.5
	2		1.22	1.18	1.26	63.3		
Ethene	1		2.60	2.55	2.65	112		0.1
	2		1.75	1.69	1.79	112		
Acetylene	1		2.76	2.67	2.83	105		1.4
	2		4.10	3.96	4.12	104		
Ethane	1		3.02	2.97	3.07	120		0.4
	2		1.47	1.42	1.52	120		
Propane	1		4.93	4.87	4.99	174		0.9
	2		2.50	2.42	2.54	175		

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-20230412 | Lab Sample ID: 280-174957-2

Matrix: Water | Lab File ID: J004146.D

Analysis Method: RSK-175 | Date Collected: 04/12/2023 09:50

Sample wt/vol: 18(mL) | Date Analyzed: 04/19/2023 03:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: HP-Plot Q ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609196 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	13		5.0	0.63
74-85-1	Ethene	0.42	J	5.0	0.40
74-84-0	Ethane	1.0	J	5.0	0.57
74-86-2	Acetylene	ND		5.0	0.73
74-98-6	Propane	0.68	J	5.0	0.56

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004146.D
Lims ID: 280-174957-G-2
Client ID: MW-124-20230412
Sample Type: Client
Inject. Date: 19-Apr-2023 03:12:50 ALS Bottle#: 28 Worklist Smp#: 28
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-174957-G-2
Operator ID: JH Instrument ID: VGC_J

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:21 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 20-Apr-2023 02:06:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
$ 1 1,1,1-Trifluoroethane						
1		4.377			ND	
2		5.458				
2 Methane						M
1	1.229	1.224	0.005	607561	13.7	M
2	1.666	1.663	0.003	523089	13.2	M
					RPD = 3.73	
3 Ethane						Ma
1	1.479	1.469	0.010	54709	1.41	M
2	3.022	3.016	0.006	36381	1.03	M
					RPD = 31.00	
4 Ethylene						
1	1.759	1.742	0.017	14754	0.3747	
2	2.601	2.596	0.005	13041	0.4152	
					RPD = 10.25	
5 Propane						M
1	2.514	2.476	0.038	25277	0.6610	M
2	4.932	4.926	0.006	23317	0.6819	M
					RPD = 3.12	
6 Acetylene						
1		4.042			ND	
2		2.753				
7 Butane						
1		4.351			ND	
2		6.426				
8 isobutylene						
1		5.271			ND	
2		6.269				

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

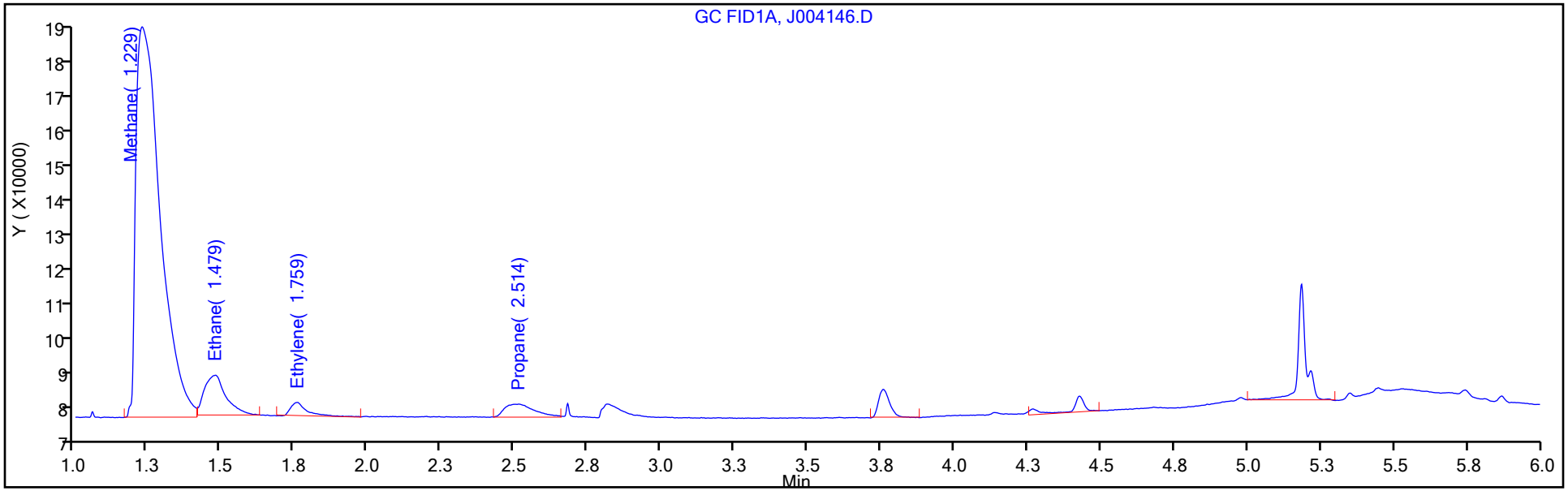
Report Date: 20-Apr-2023 02:23:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

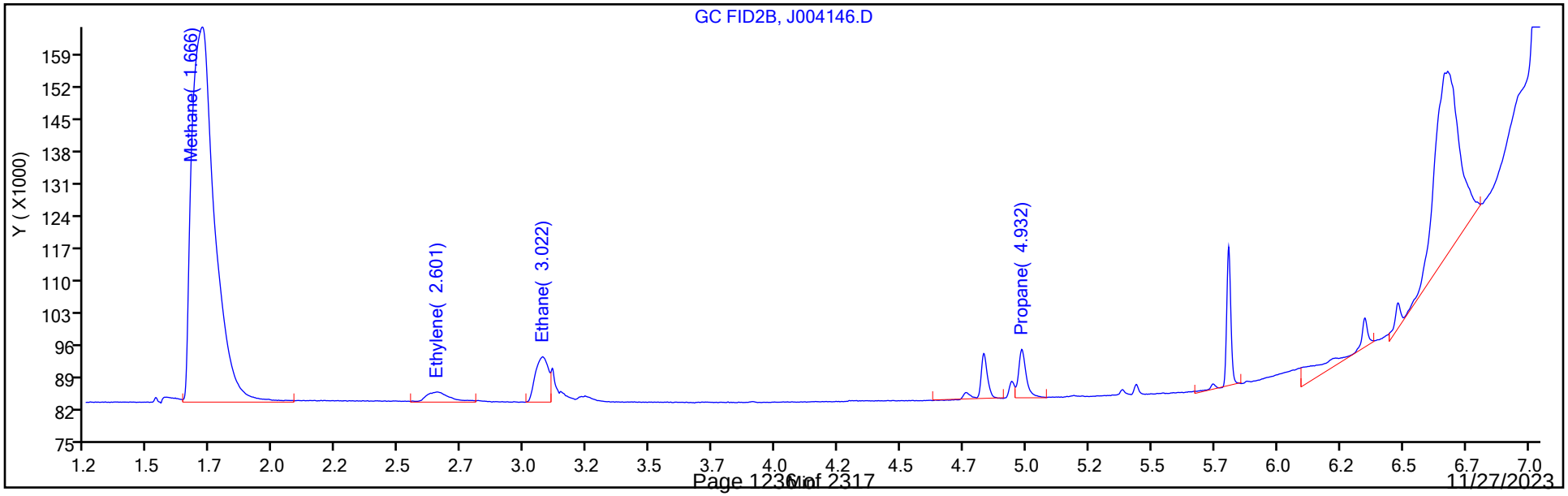
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004146.D

Injection Date:	19-Apr-2023 03:12:50	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	280-174957-G-2	Lab Sample ID:	280-174957-2	Worklist Smp#:	28
Client ID:	MW-124-20230412				
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

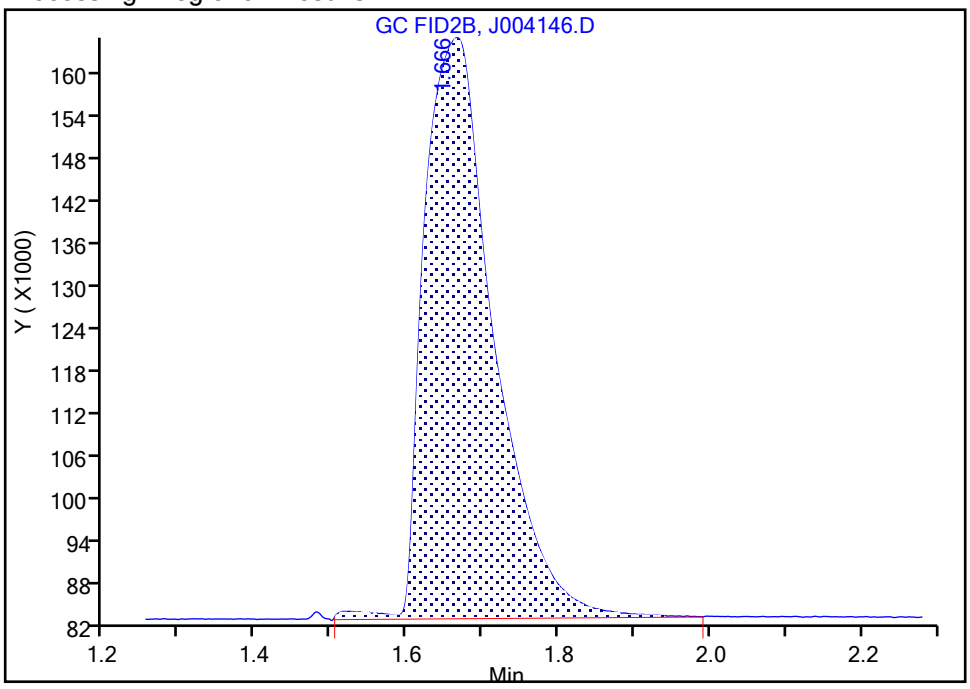
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004146.D				
Injection Date:	19-Apr-2023 03:12:50	Instrument ID:	VGC_J		
Lims ID:	280-174957-G-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	JH	ALS Bottle#:	28	Worklist Smp#:	28
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

2 Methane, CAS: 74-82-8

Signal: 2

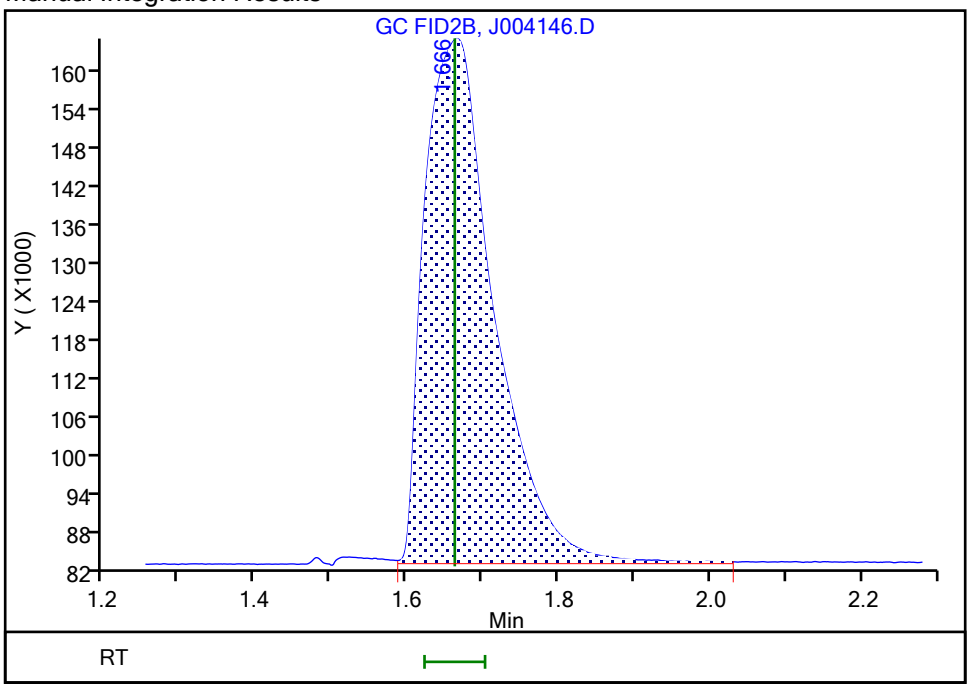
Processing Integration Results

RT: 1.67
Area: 525705
Amount: 13.258100
Amount Units: ug/l



Manual Integration Results

RT: 1.67
Area: 523089
Amount: 13.184124
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:04:17

Audit Action: Manually Integrated Audit Reason: Sample matrix interference

Manual Integration/User Assign Peak Report

Eurofins Denver

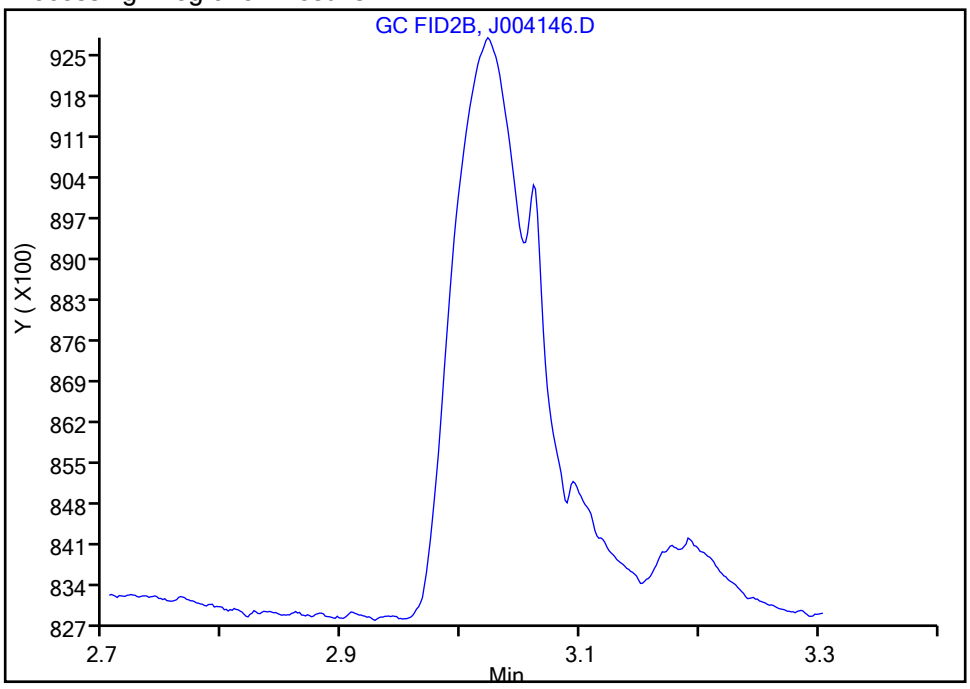
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004146.D				
Injection Date:	19-Apr-2023 03:12:50	Instrument ID:	VGC_J		
Lims ID:	280-174957-G-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	JH	ALS Bottle#:	28	Worklist Smp#:	28
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

3 Ethane, CAS: 74-84-0

Signal: 2

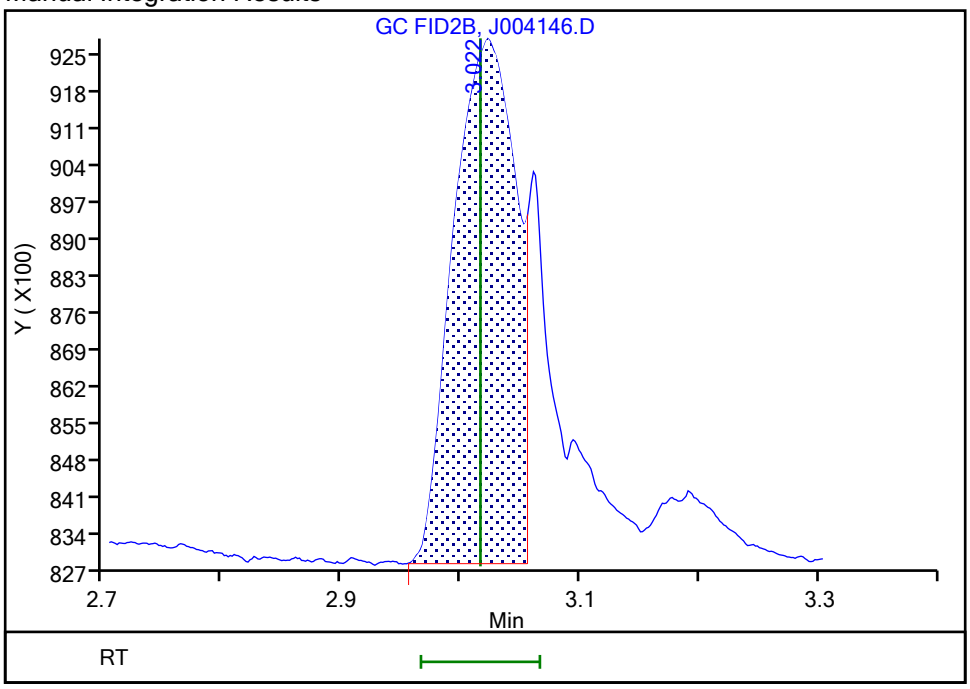
Not Detected
Expected RT: 3.02

Processing Integration Results



Manual Integration Results

RT: 3.02
Area: 36381
Amount: 1.034508
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:05:30
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

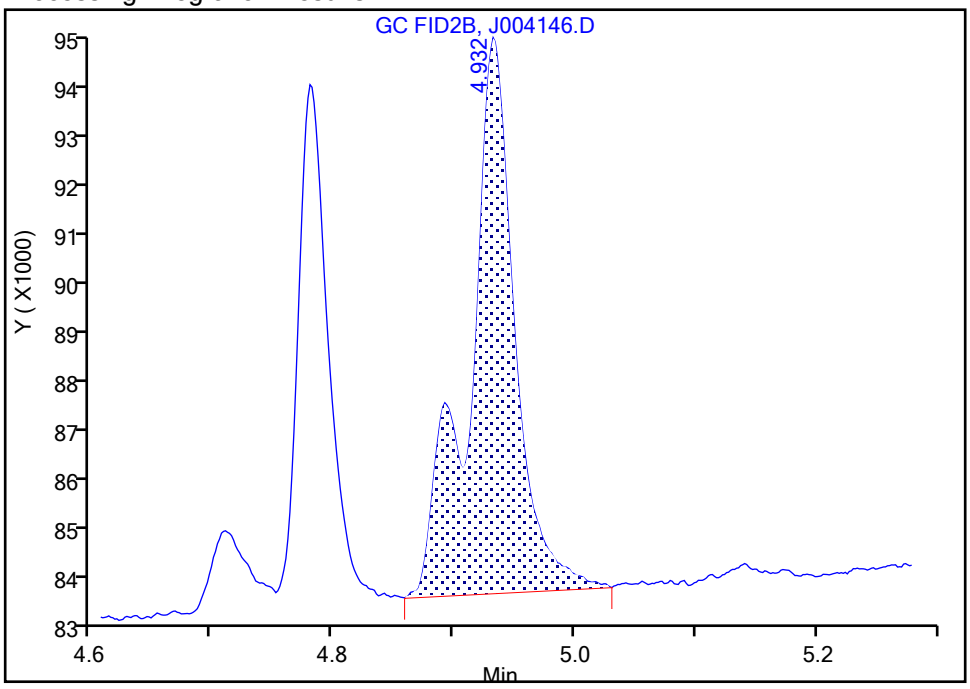
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004146.D				
Injection Date:	19-Apr-2023 03:12:50	Instrument ID:	VGC_J		
Lims ID:	280-174957-G-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:	JH	ALS Bottle#:	28	Worklist Smp#:	28
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

5 Propane, CAS: 74-98-6

Signal: 2

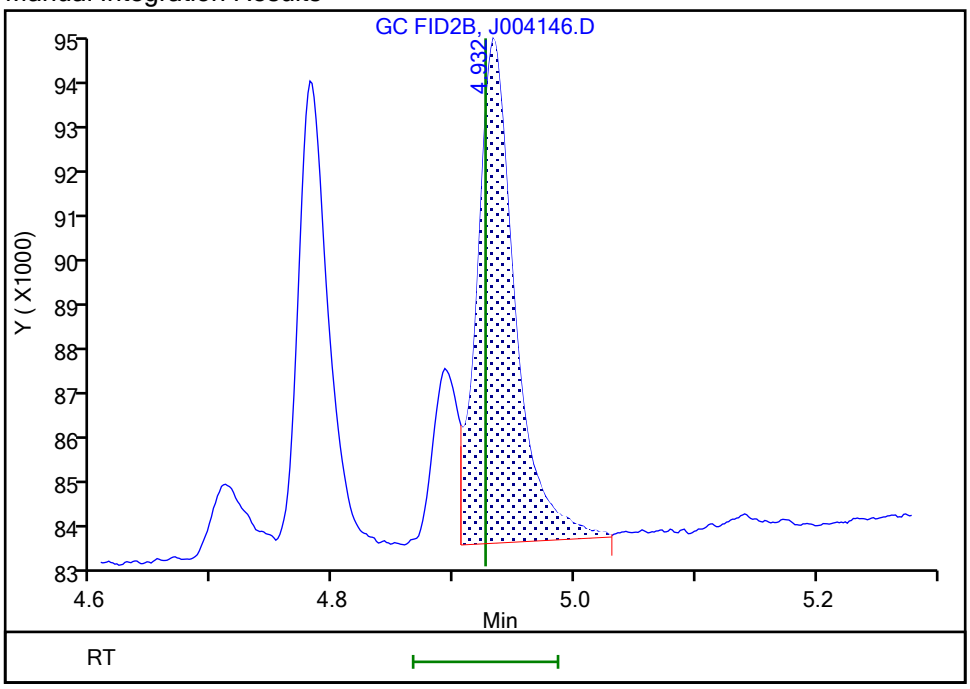
Processing Integration Results

RT: 4.93
Area: 28106
Amount: 0.822005
Amount Units: ug/l



Manual Integration Results

RT: 4.93
Area: 23317
Amount: 0.681943
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:06:32
Audit Action: Manually Integrated Audit Reason: Sample matrix interference

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: MW-124-Q-20230412 | Lab Sample ID: 280-174957-3

Matrix: Water | Lab File ID: J004145.D

Analysis Method: RSK-175 | Date Collected: 04/12/2023 10:00

Sample wt/vol: 18(mL) | Date Analyzed: 04/19/2023 02:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: HP-Plot Q ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609196 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	14		5.0	0.63
74-85-1	Ethene	ND		5.0	0.40
74-84-0	Ethane	0.94	J	5.0	0.57
74-86-2	Acetylene	ND		5.0	0.73
74-98-6	Propane	0.64	J	5.0	0.56

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004145.D
Lims ID: 280-174957-G-3
Client ID: MW-124-Q-20230412
Sample Type: Client
Inject. Date: 19-Apr-2023 02:59:26 ALS Bottle#: 27 Worklist Smp#: 27
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-174957-G-3
Operator ID: JH Instrument ID: VGC_J

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:21 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 20-Apr-2023 02:03:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
$ 1 1,1,1-Trifluoroethane						
1		4.377			ND	
2		5.458				
2 Methane						M
1	1.228	1.224	0.004	645874	14.7	M
2	1.669	1.663	0.006	552046	14.0	M
					RPD = 4.69	
3 Ethane						Ma
1	1.480	1.469	0.011	62538	1.62	M
2	3.022	3.016	0.006	33114	0.9416	M
					RPD = 52.76	
4 Ethylene						7M
1	1.757	1.742	0.015	15350	0.3898	M
2	2.604	2.596	0.008	12125	0.3860	M
					RPD = 0.99	
LOD = 0.3970						
5 Propane						M
1	2.512	2.476	0.036	25333	0.6625	M
2	4.932	4.926	0.006	21880	0.6399	M
					RPD = 3.47	
6 Acetylene						
1		4.042			ND	
2		2.753				
7 Butane						
1		4.351			ND	
2		6.426				
8 isobutylene						
1		5.271			ND	
2		6.269				

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

a - User Assigned ID

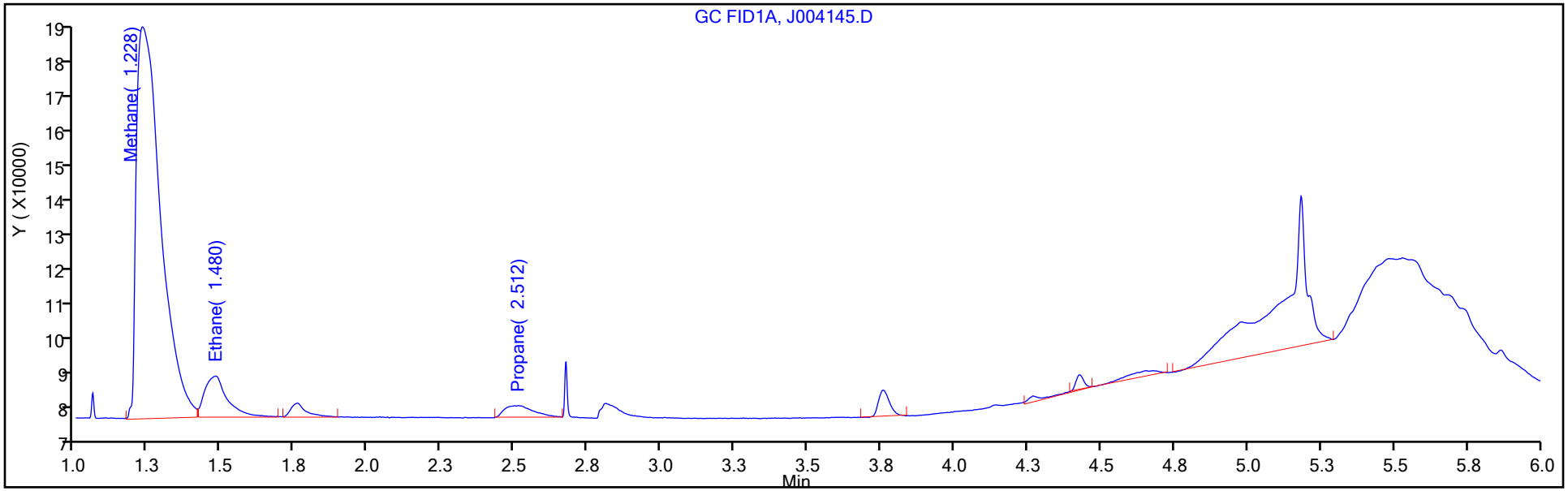
Report Date: 20-Apr-2023 02:23:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

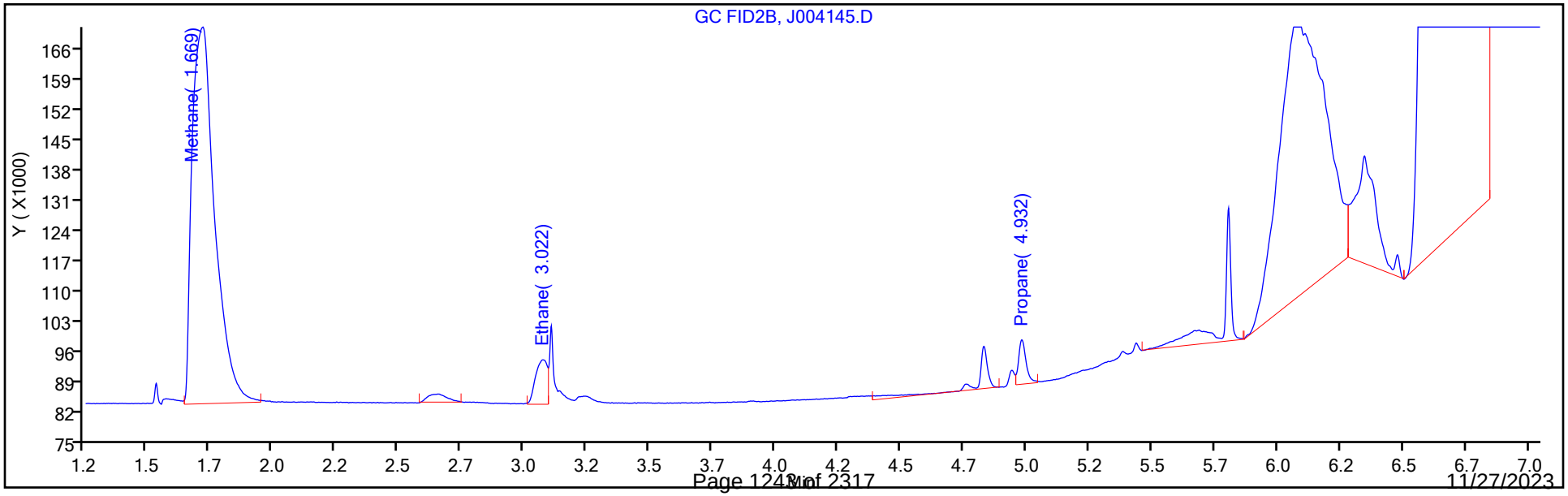
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004145.D

Injection Date:	19-Apr-2023 02:59:26	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	280-174957-G-3	Lab Sample ID:	280-174957-3	Worklist Smp#:	27
Client ID:	MW-124-Q-20230412				
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

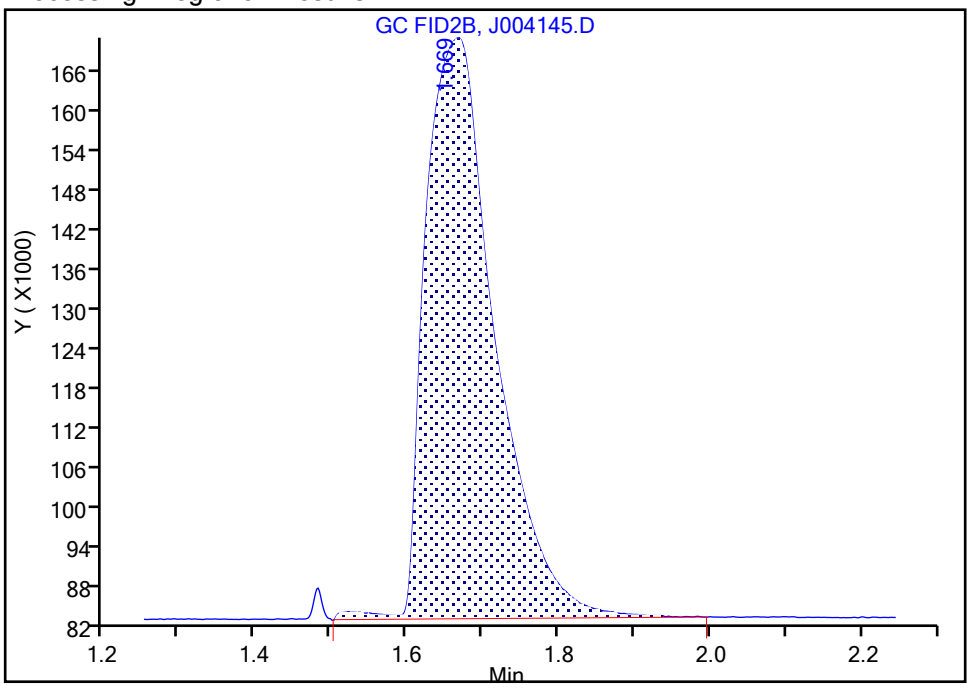
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004145.D				
Injection Date:	19-Apr-2023 02:59:26	Instrument ID:	VGC_J		
Lims ID:	280-174957-G-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	JH	ALS Bottle#:	27	Worklist Smp#:	27
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

2 Methane, CAS: 74-82-8

Signal: 2

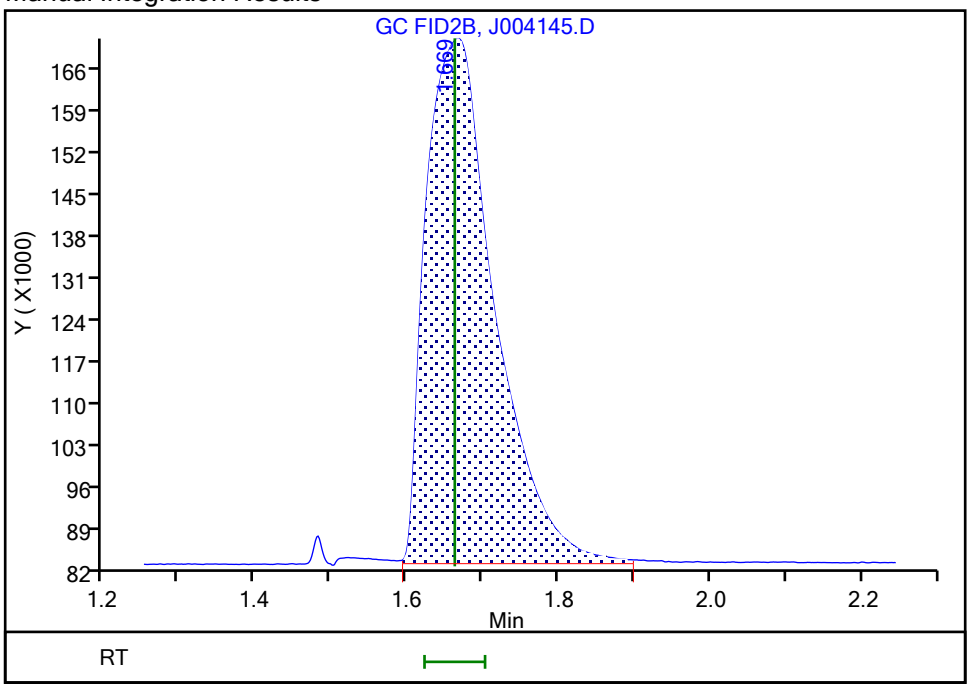
Processing Integration Results

RT: 1.67
Area: 559357
Amount: 14.209721
Amount Units: ug/l



Manual Integration Results

RT: 1.67
Area: 552046
Amount: 14.002978
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:02:37

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

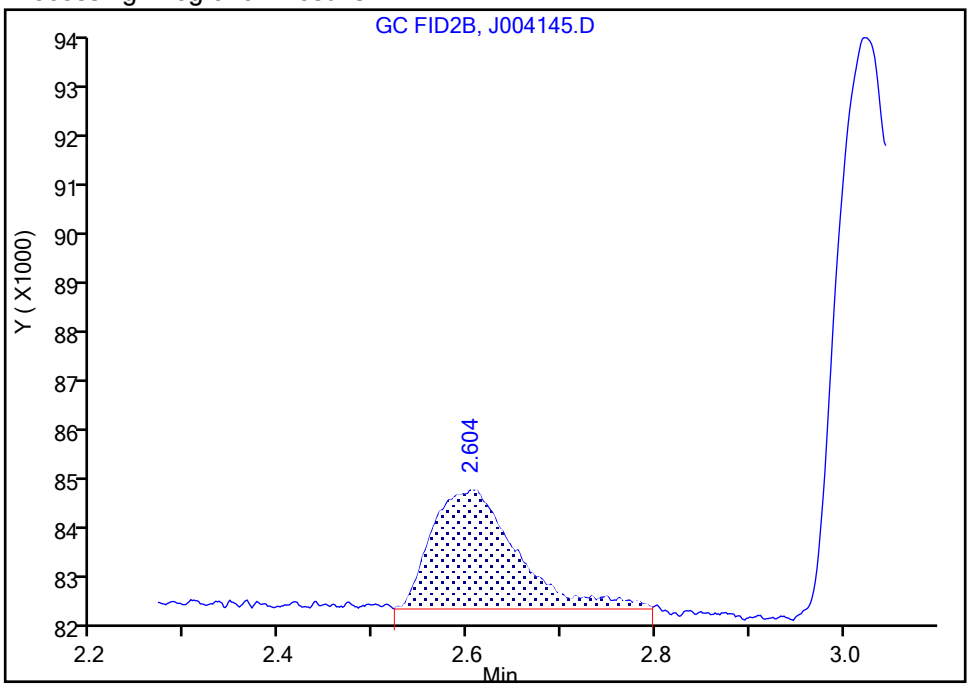
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004145.D				
Injection Date:	19-Apr-2023 02:59:26	Instrument ID:	VGC_J		
Lims ID:	280-174957-G-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	JH	ALS Bottle#:	27	Worklist Smp#:	27
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

4 Ethylene, CAS: 74-85-1

Signal: 2

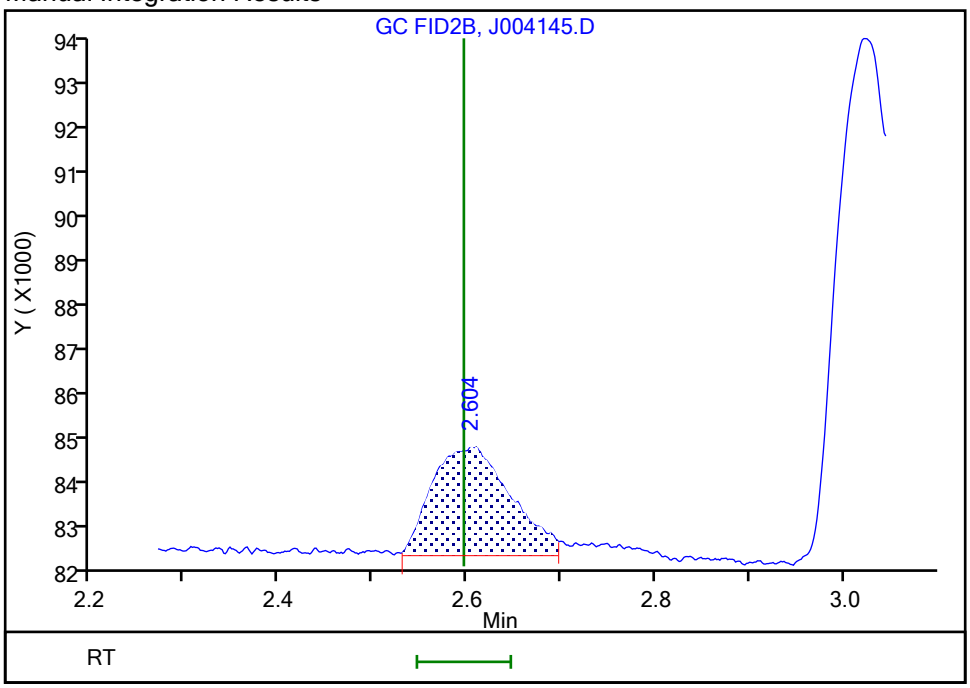
Processing Integration Results

RT: 2.60
Area: 13274
Amount: 0.422600
Amount Units: ug/l



Manual Integration Results

RT: 2.60
Area: 12125
Amount: 0.386020
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:01:36

Audit Action: Manually Integrated Audit Reason: Sample matrix interference

Manual Integration/User Assign Peak Report

Eurofins Denver

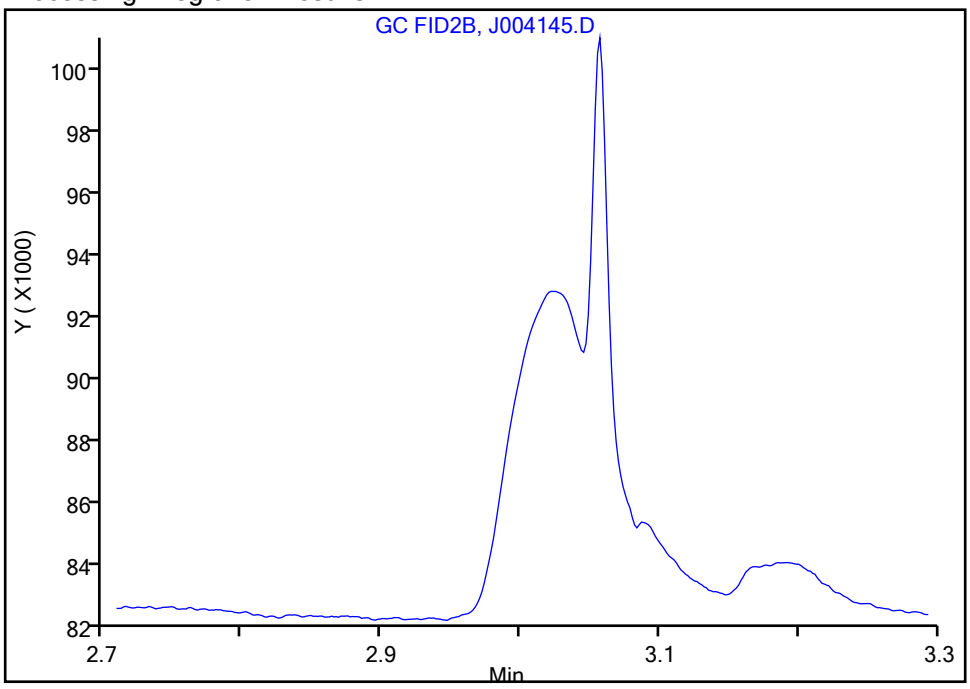
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004145.D				
Injection Date:	19-Apr-2023 02:59:26	Instrument ID:	VGC_J		
Lims ID:	280-174957-G-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	JH	ALS Bottle#:	27	Worklist Smp#:	27
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

3 Ethane, CAS: 74-84-0

Signal: 2

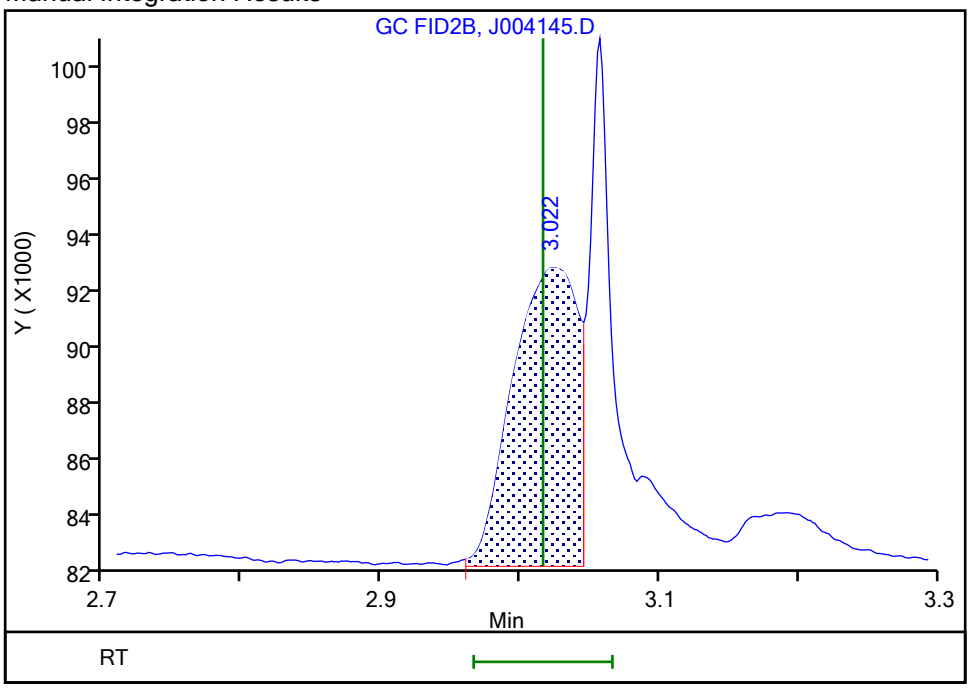
Processing Integration Results

RT: 3.02
Area: 0
Amount: 1.616399
Amount Units: ug/l



Manual Integration Results

RT: 3.02
Area: 33114
Amount: 0.941610
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:03:09

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

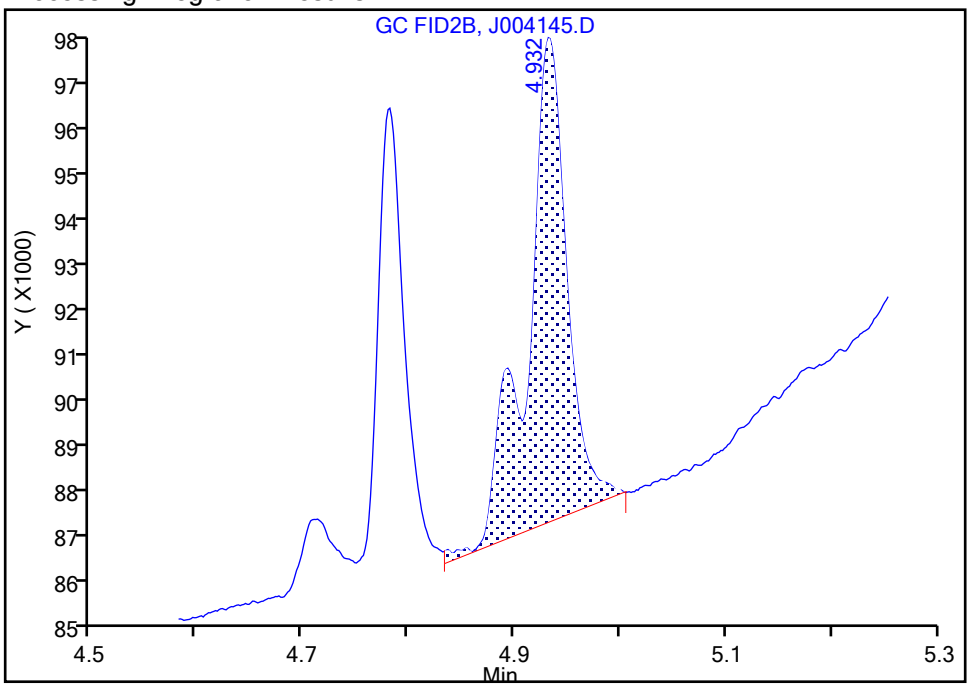
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004145.D				
Injection Date:	19-Apr-2023 02:59:26	Instrument ID:	VGC_J		
Lims ID:	280-174957-G-3	Lab Sample ID:	280-174957-3		
Client ID:	MW-124-Q-20230412				
Operator ID:	JH	ALS Bottle#:	27	Worklist Smp#:	27
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

5 Propane, CAS: 74-98-6

Signal: 2

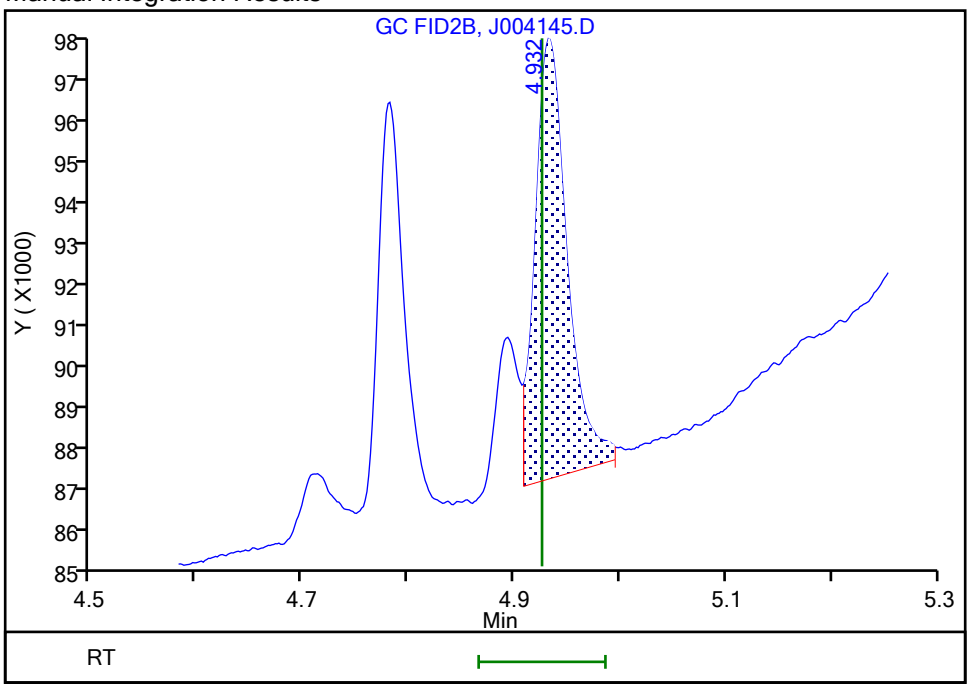
Processing Integration Results

RT: 4.93
Area: 27382
Amount: 0.800830
Amount Units: ug/l



Manual Integration Results

RT: 4.93
Area: 21880
Amount: 0.639916
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:01:15

Audit Action: Manually Integrated Audit Reason: Sample matrix interference

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 594440

SDG No.:

Instrument ID: VGC_J | GC Column: Rt-Alumina ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 11/22/2022 16:02 | Calibration End Date: 11/22/2022 17:53 | Calibration ID: 73554

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-594440/4	J1044.D
Level 2	IC 280-594440/5	J1045.D
Level 3	IC 280-594440/6	J1046.D
Level 4	IC 280-594440/7	J1047.D
Level 5	IC 280-594440/8	J1048.D
Level 6	IC 280-594440/9	J1049.D
Level 7	IC 280-594440/10	J1050.D
Level 8	IC 280-594440/11	J1051.D
Level 9	IC 280-594440/12	J1052.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	1.208	1.208	1.210	1.209	1.209	1.209	1.207	1.207	1.205		1.169 - 1.249	1.208
Ethane	1.461	1.464	1.462	1.460	1.461	1.460					1.411 - 1.511	1.461
Ethene	1.748	1.749	1.749	1.747	1.746	1.747					1.696 - 1.796	1.748
Propane	2.509	2.507	2.509	2.509	2.506	2.507					2.446 - 2.566	2.508
Acetylene	4.131	4.131	4.130	4.125	4.121	4.112					4.041 - 4.201	4.125
Butane	4.413	4.411	4.412	4.410	4.407	4.402					4.327 - 4.487	4.409
isobutylene	5.328	5.326	5.327	5.325	5.322	5.315					5.242 - 5.402	5.324

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 594440

SDG No.:

Instrument ID: VGC_J GC Column: Rt-Alumina ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/22/2022 16:02 Calibration End Date: 11/22/2022 17:53 Calibration ID: 73554

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-594440/4	J1044.D
Level 2	IC 280-594440/5	J1045.D
Level 3	IC 280-594440/6	J1046.D
Level 4	IC 280-594440/7	J1047.D
Level 5	IC 280-594440/8	J1048.D
Level 6	IC 280-594440/9	J1049.D
Level 7	IC 280-594440/10	J1050.D
Level 8	IC 280-594440/11	J1051.D
Level 9	IC 280-594440/12	J1052.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	133471 38638 37926	86816 38844	45484 40216	39485 38076	Lin2	78114.3724	38688.6784							1.0000		0.9900
Ethane	37358 38560	38187 38899	40160	38973	Ave		38689.6928				2.4		20.0			
Ethene	38406 39510	38194 39552	40846	39737	Ave		39374.1891				2.5		20.0			
Propane	36540 38181	37621 38147	39933	39014	Ave		38239.4228				3.0		20.0			
Acetylene	28374 29301	29558 28839	30532	29421	Ave		29337.5672				2.5		20.0			
Butane	38432 39013	38552 38993	41253	39742	Ave		39330.9412				2.7		20.0			
isobutylene	36454 36486	36341 36487	38432	36973	Ave		36861.9980				2.2		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 594440

SDG No.:

Instrument ID: VGC_J | GC Column: Rt-Alumina ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 11/22/2022 16:02 | Calibration End Date: 11/22/2022 17:53 | Calibration ID: 73554

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-594440/4	J1044.D
Level 2	IC 280-594440/5	J1045.D
Level 3	IC 280-594440/6	J1046.D
Level 4	IC 280-594440/7	J1047.D
Level 5	IC 280-594440/8	J1048.D
Level 6	IC 280-594440/9	J1049.D
Level 7	IC 280-594440/10	J1050.D
Level 8	IC 280-594440/11	J1051.D
Level 9	IC 280-594440/12	J1052.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Lin2	109618 10208583	142601 65400484	597693 247686566	2594265 740134626	5077236	0.821 263	1.64 1626	13.1 6505	65.7 19515	131
Ethane	Ave	57518 19164973	117587	989301	4800335	9498907	1.54 493	3.08	24.6	123	246
Ethene	Ave	55161 18178326	109711	938642	4565792	9079325	1.44 460	2.87	23.0	115	230
Propane	Ave	82508 27563548	169896	1442697	7047561	13794006	2.26 723	4.52	36.1	181	361
Acetylene	Ave	37833 12305009	78825	651380	3138327	6251021	1.33 427	2.67	21.3	107	213
Butane	Ave	114370 37132422	229454	1964235	9461289	18575547	2.98 952	5.95	47.6	238	476
isobutylene	Ave	104731 33544265	208817	1766626	8497786	16772055	2.87 919	5.75	46.0	230	460

Curve Type Legend:

Ave = Average
Lin2 = Linear 1/conc^2

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D
Lims ID: ic RSK 2.5 uL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Nov-2022 16:02:41 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 2.5 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:52 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 17:11:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							Ma
1	1.208	1.209	-0.001	109618	0.8213	0.8143	M
2	1.644	1.640	0.004	84338	0.8213	0.7770	M
						RPD = 4.69	
3 Ethane							M
1	1.461	1.461	0.000	57518	1.54	1.49	M
2	2.992	2.990	0.002	52685	1.54	1.50	M
						RPD = 0.77	
4 Ethylene							Ma
1	1.748	1.746	0.002	55161	1.44	1.40	M
2	2.574	2.570	0.004	42544	1.44	1.35	M
						RPD = 3.37	
5 Propane							Ma
1	2.509	2.506	0.003	82508	2.26	2.16	M
2	4.912	4.914	-0.002	73929	2.26	2.16	M
						RPD = 0.21	
6 Acetylene							Ma
1	4.131	4.121	0.010	37833	1.33	1.29	M
2	2.726	2.724	0.002	42181	1.33	1.26	M
						RPD = 2.59	
7 Butane							Ma
1	4.413	4.407	0.006	114370	2.98	2.91	M
2	6.421	6.415	0.006	113725	2.98	3.11	M
						RPD = 6.86	
8 isobutylene							Ma
1	5.328	5.322	0.006	104731	2.87	2.84	M
2	6.264	6.260	0.004	97000	2.87	2.97	M
						RPD = 4.31	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 2.50 Units: uL

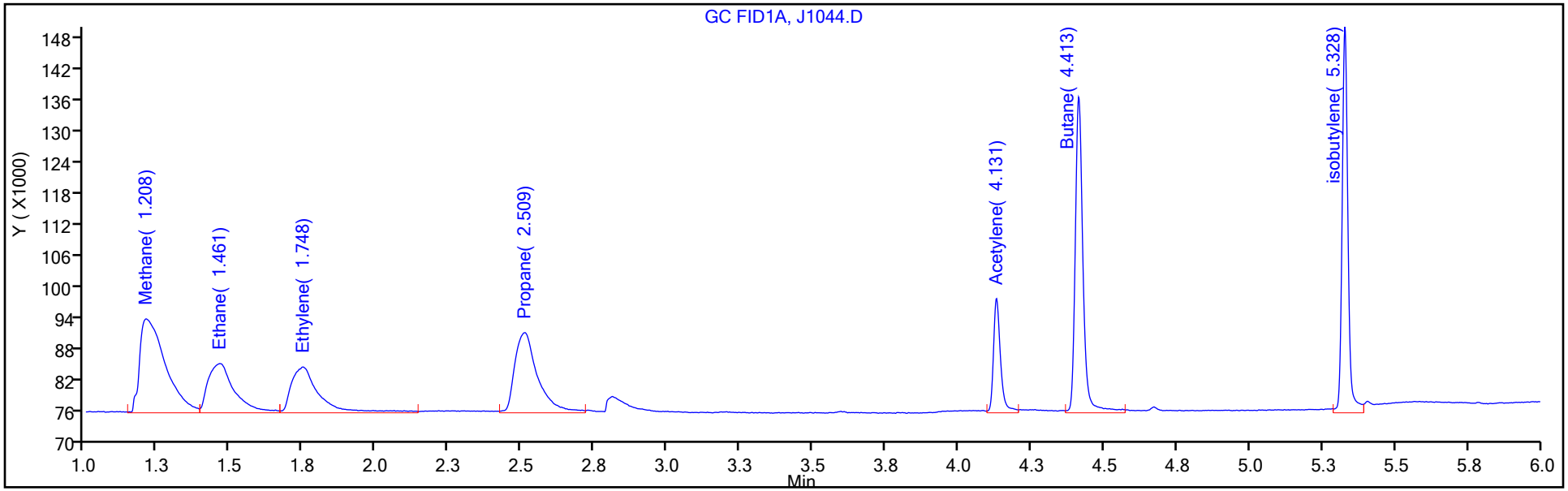
Report Date: 23-Nov-2022 11:28:52 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

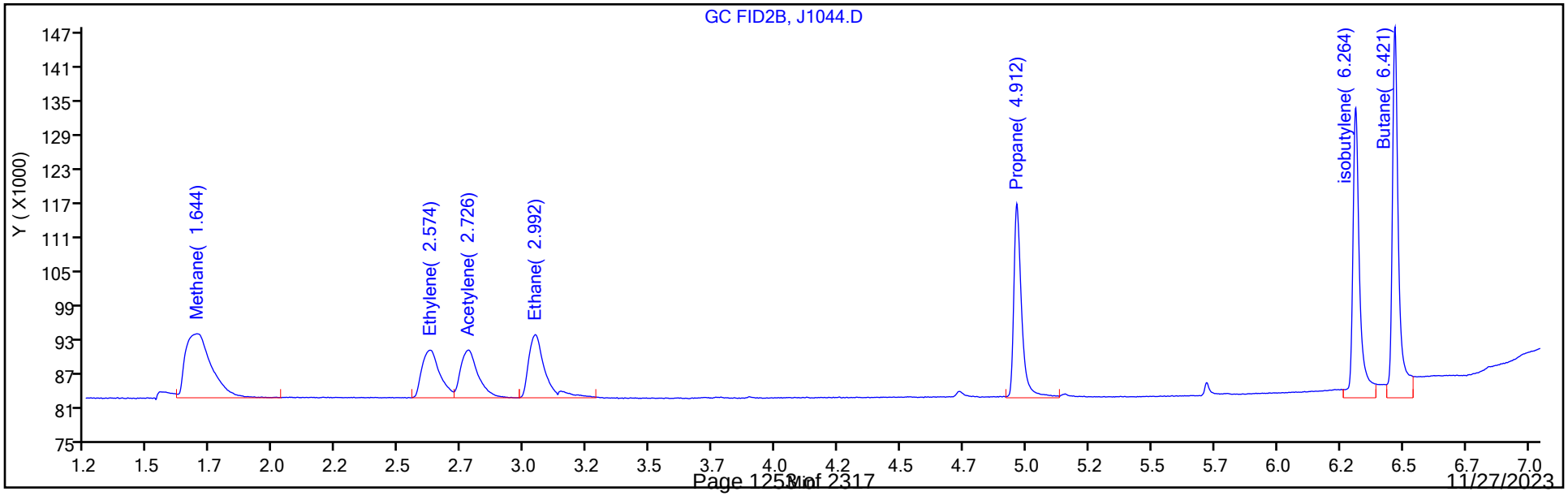
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D

Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 2.5 uL			Worklist Smp#:	4
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

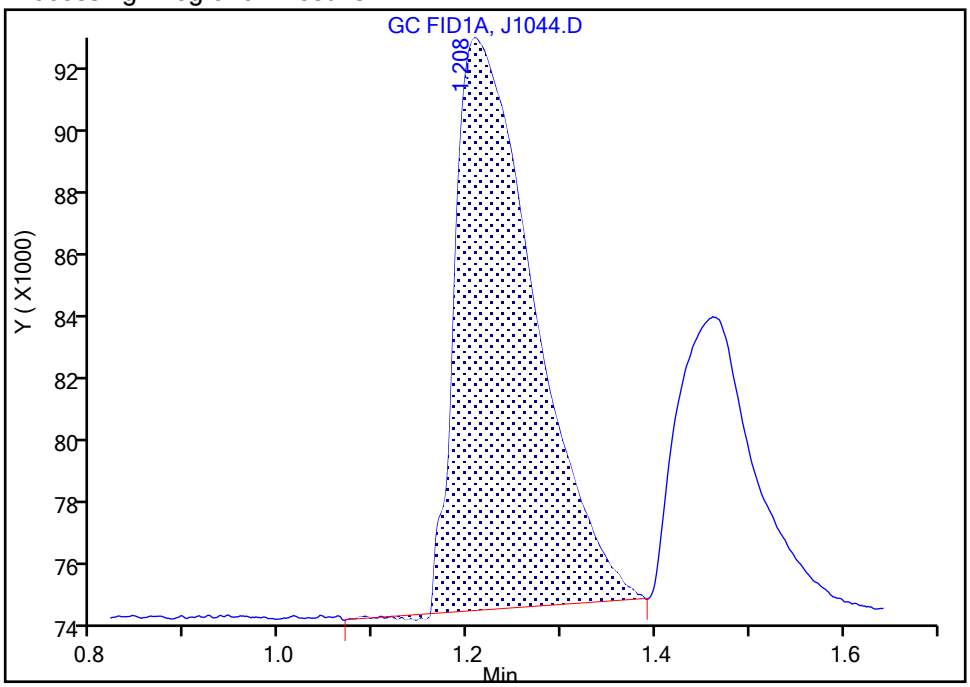
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D				
Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J		
Lims ID:	ic RSK 2.5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

2 Methane, CAS: 74-82-8

Signal: 1

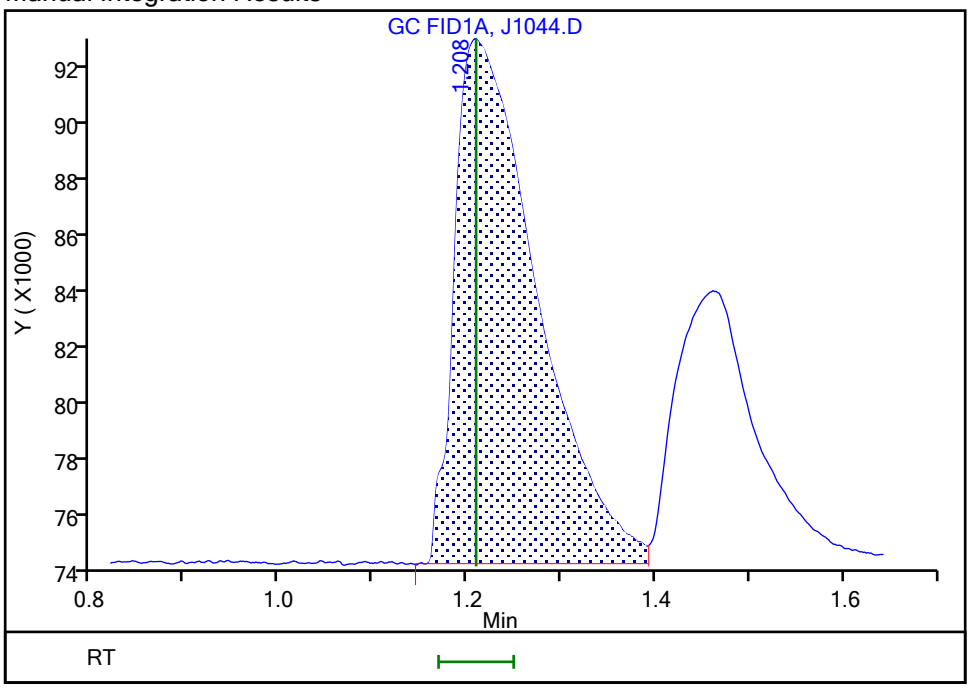
Processing Integration Results

RT: 1.21
Area: 104254
Amount: 0.818797
Amount Units: ug/l



Manual Integration Results

RT: 1.21
Area: 109618
Amount: 0.814285
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 16:54:22

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

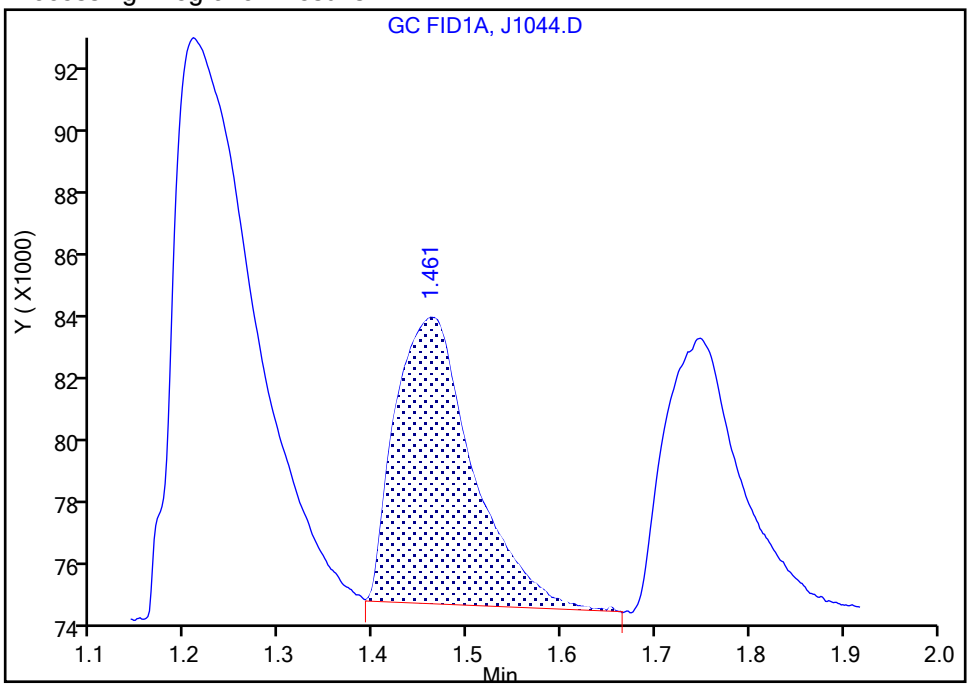
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D
Injection Date: 22-Nov-2022 16:02:41 Instrument ID: VGC_J
Lims ID: ic RSK 2.5 uL
Client ID:
Operator ID: JH ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

3 Ethane, CAS: 74-84-0

Signal: 1

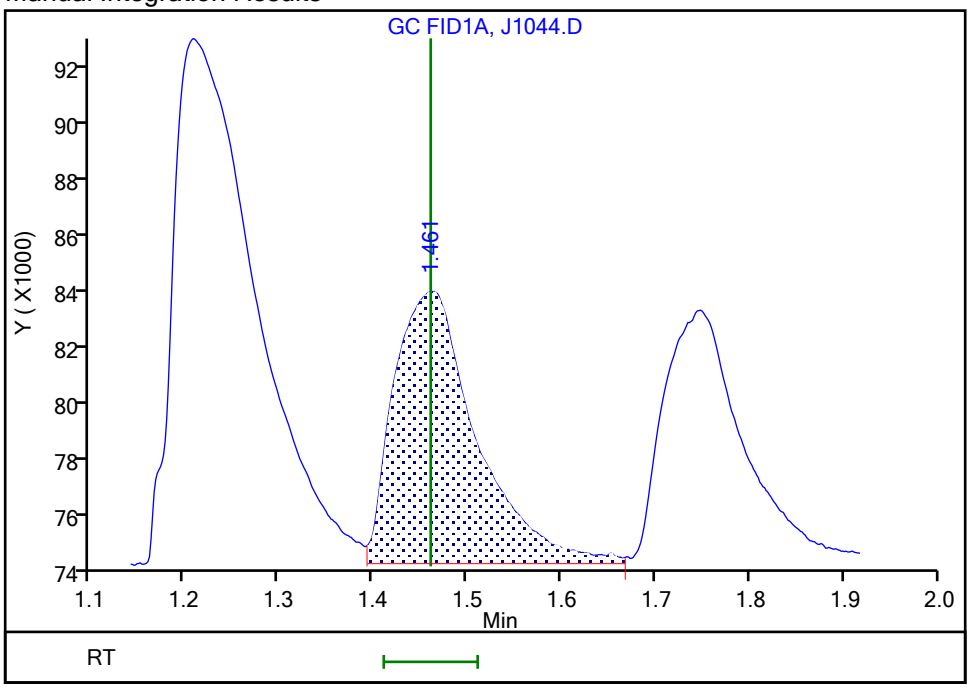
Processing Integration Results

RT: 1.46
Area: 50886
Amount: 1.439477
Amount Units: ug/l



Manual Integration Results

RT: 1.46
Area: 57518
Amount: 1.486649
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 16:53:57
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

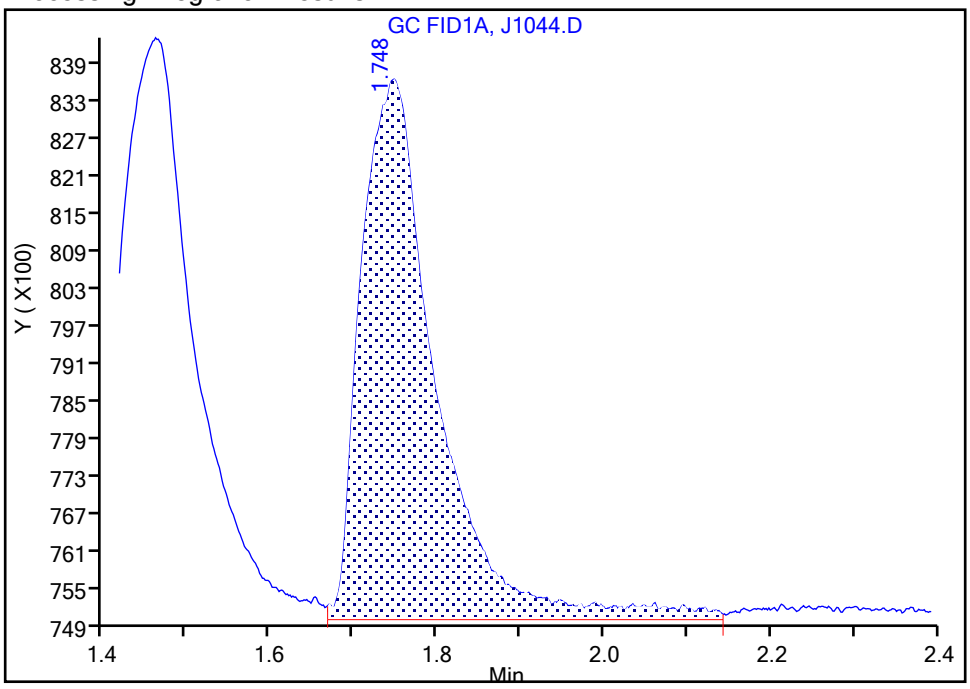
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D				
Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J		
Lims ID:	ic RSK 2.5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

4 Ethylene, CAS: 74-85-1

Signal: 1

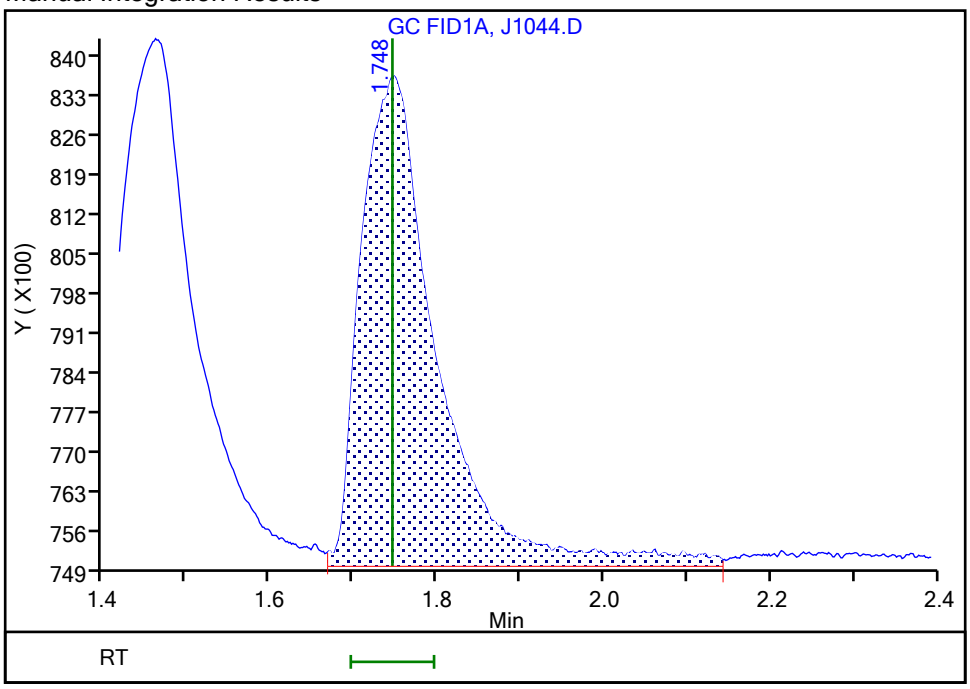
Processing Integration Results

RT: 1.75
Area: 55161
Amount: 1.458248
Amount Units: ug/l



Manual Integration Results

RT: 1.75
Area: 55161
Amount: 1.400943
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 16:54:50

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

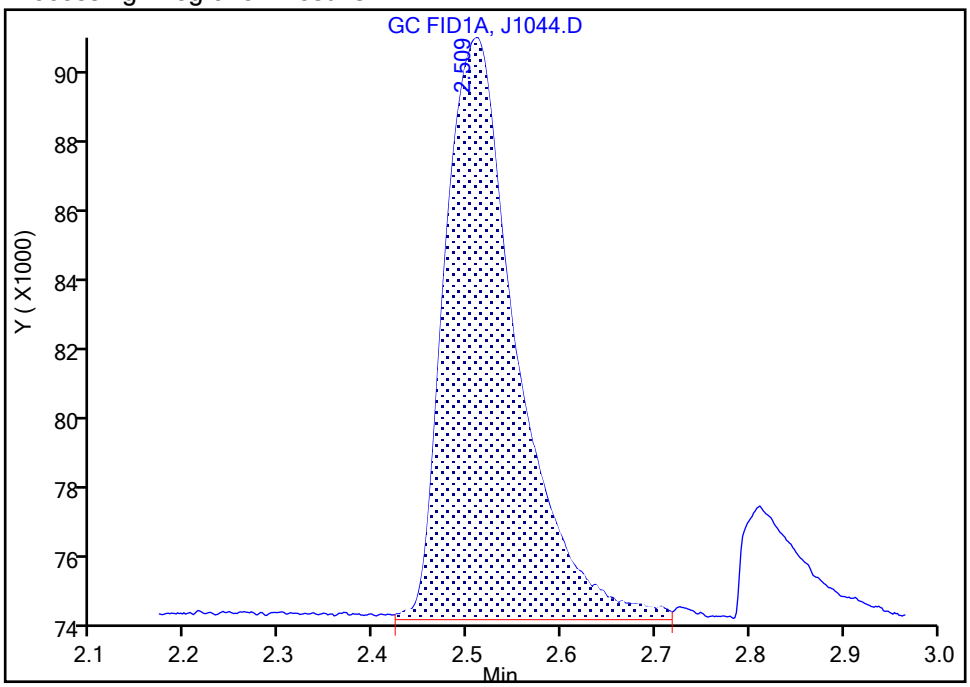
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D				
Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J		
Lims ID:	ic RSK 2.5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

5 Propane, CAS: 74-98-6

Signal: 1

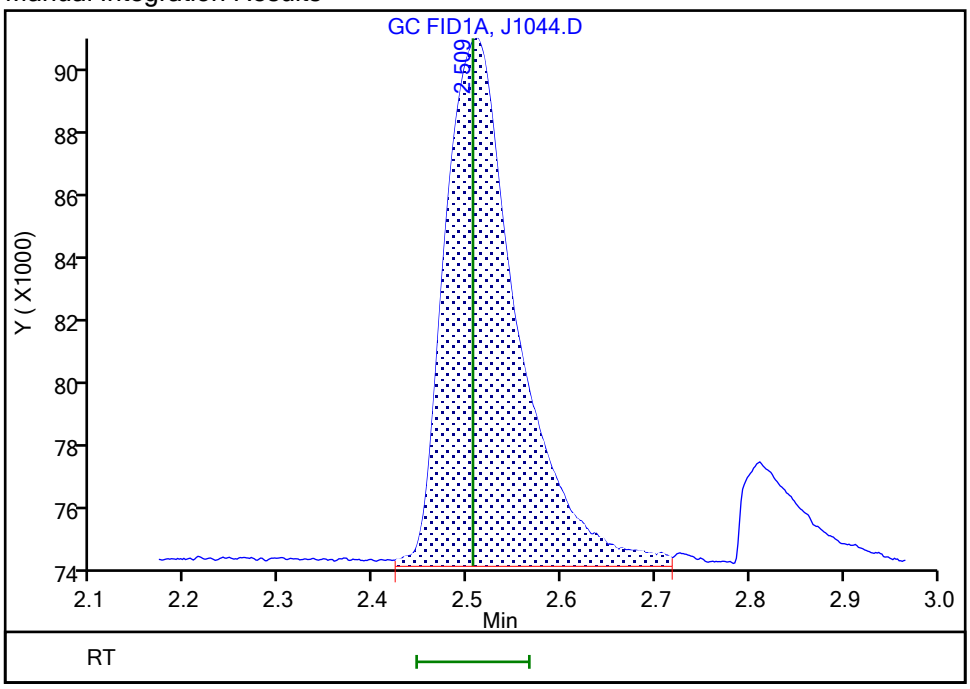
Processing Integration Results

RT: 2.51
Area: 82508
Amount: 2.258000
Amount Units: ug/l



Manual Integration Results

RT: 2.51
Area: 82508
Amount: 2.157669
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 16:58:49

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

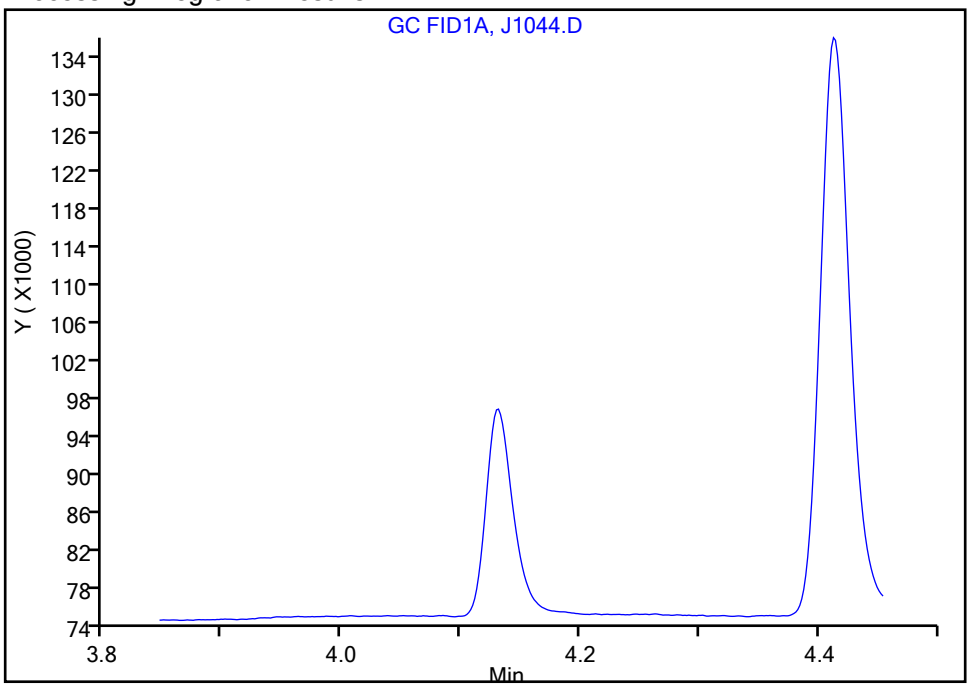
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D				
Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J		
Lims ID:	ic RSK 2.5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

6 Acetylene, CAS: 74-86-2

Signal: 1

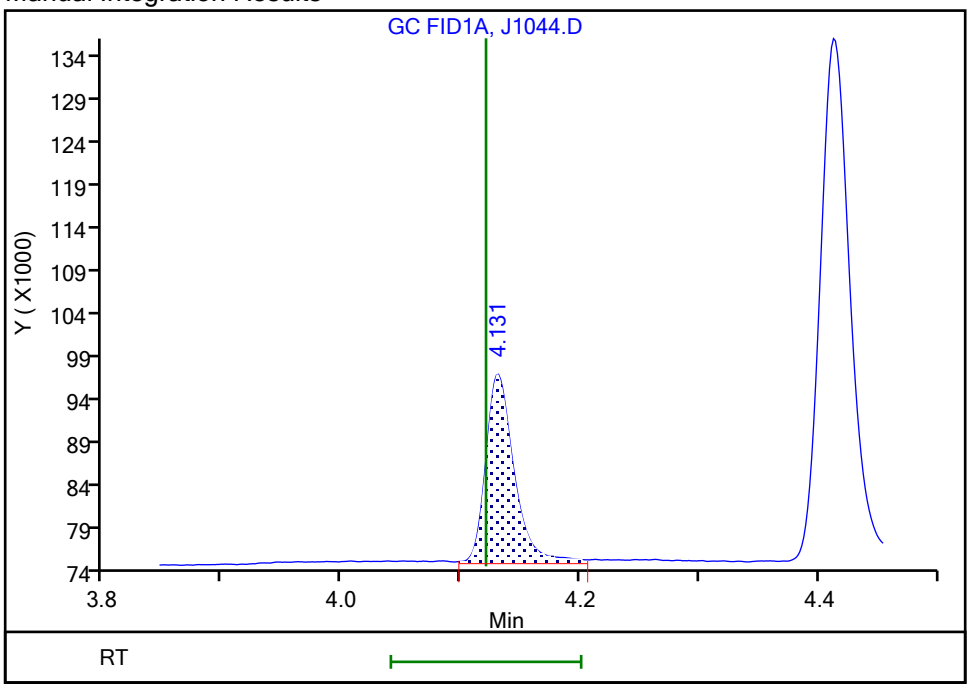
Processing Integration Results

RT: 3.96
Area: 0
Amount: 0
Amount Units: ug/l



Manual Integration Results

RT: 4.13
Area: 37833
Amount: 1.289575
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:04:31
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

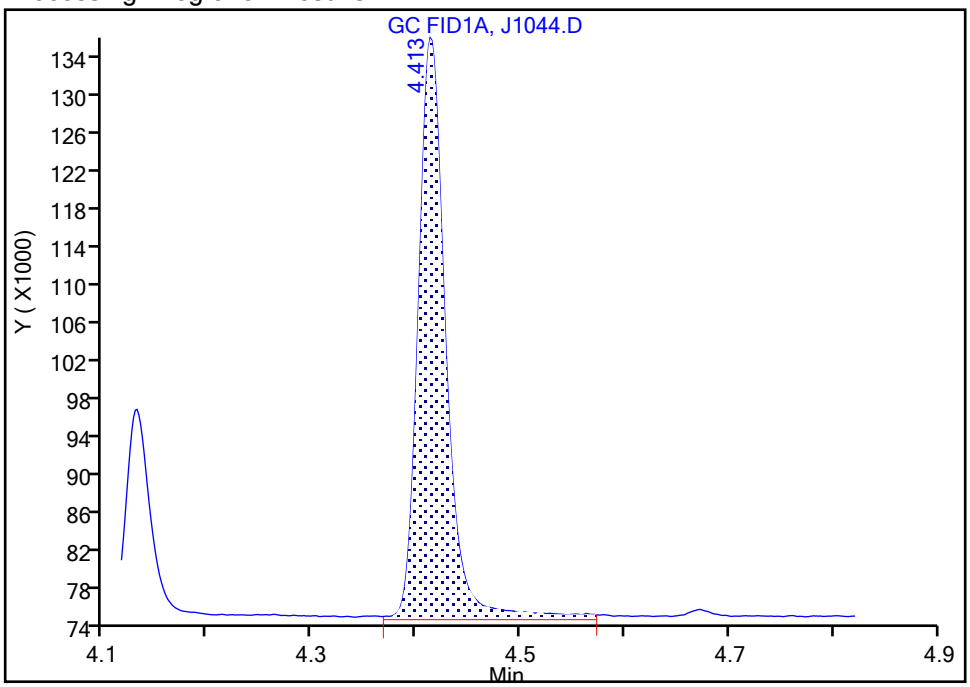
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D				
Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J		
Lims ID:	ic RSK 2.5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

7 Butane, CAS: 106-97-8

Signal: 1

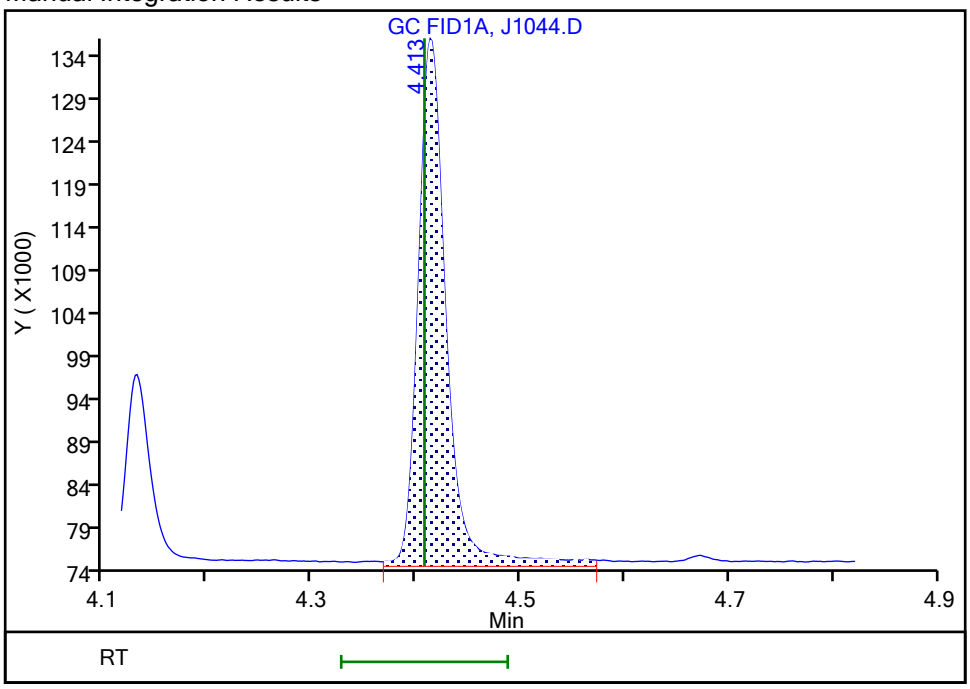
Processing Integration Results

RT: 4.41
Area: 114370
Amount: 2.975875
Amount Units: ug/l



Manual Integration Results

RT: 4.41
Area: 114370
Amount: 2.907889
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:05:29

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

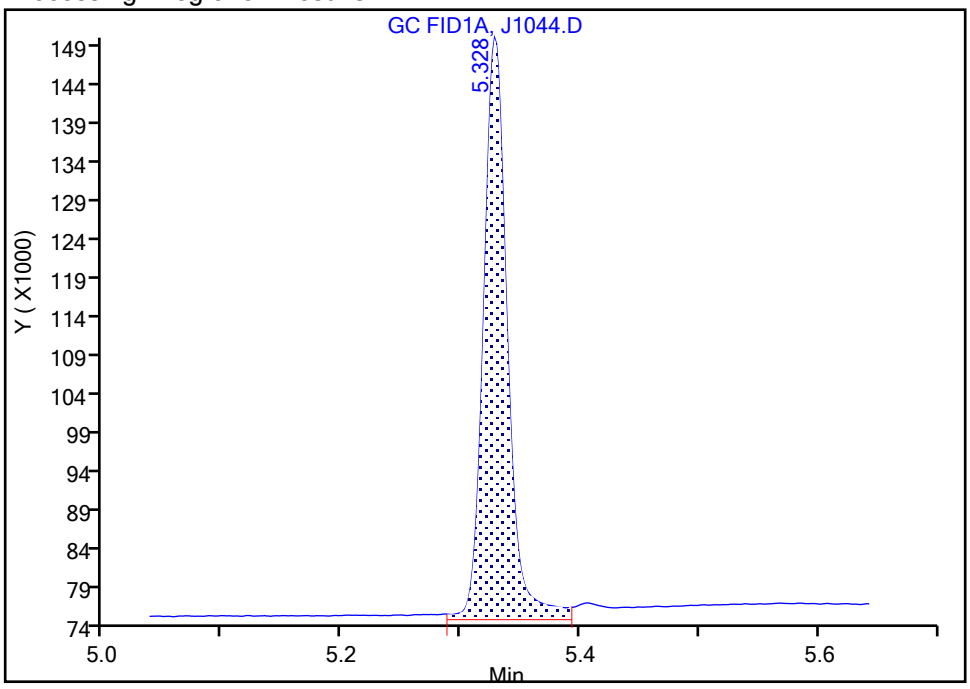
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D
Injection Date: 22-Nov-2022 16:02:41 Instrument ID: VGC_J
Lims ID: ic RSK 2.5 uL
Client ID:
Operator ID: JH ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

8 isobutylene, CAS: 115-11-7

Signal: 1

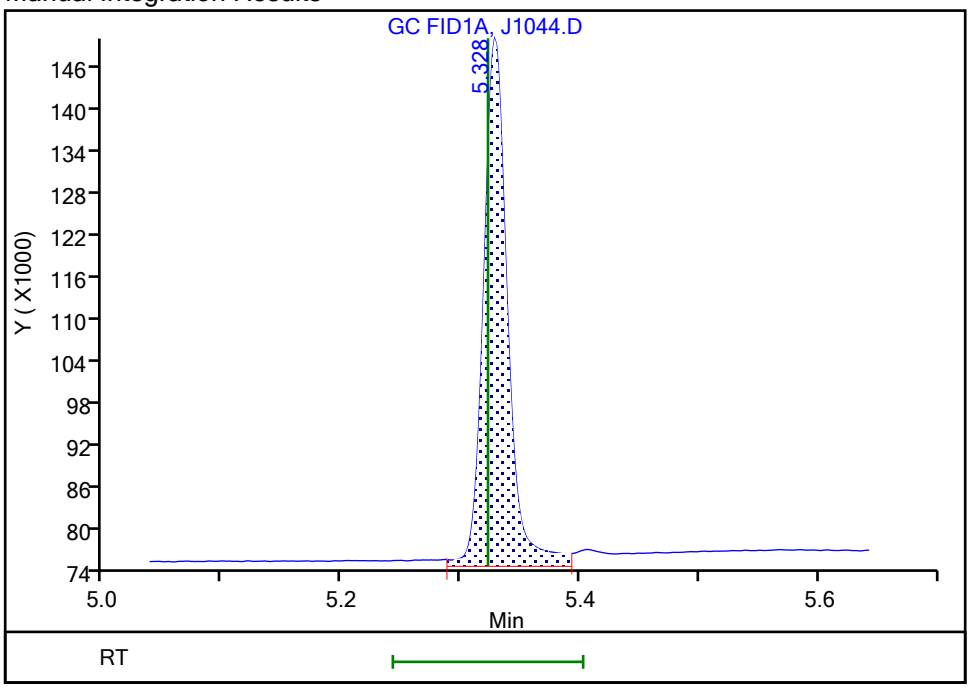
Processing Integration Results

RT: 5.33
Area: 104731
Amount: 2.873000
Amount Units: ug/l



Manual Integration Results

RT: 5.33
Area: 104731
Amount: 2.841164
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:06:58
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D
Lims ID: ic RSK 5 uL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Nov-2022 16:16:26 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 5 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:53 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 17:44:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.208	1.209	-0.001	142601	1.64	1.67	M
2	1.641	1.640	0.001	121029	1.64	1.81	
						RPD = 8.49	
3 Ethane							M
1	1.464	1.461	0.003	117587	3.08	3.04	M
2	2.997	2.990	0.007	103599	3.08	2.95	M
						RPD = 3.12	
4 Ethylene							M
1	1.749	1.746	0.003	109711	2.87	2.79	M
2	2.575	2.570	0.005	88414	2.87	2.81	M
						RPD = 1.02	
5 Propane							Ma
1	2.507	2.506	0.001	169896	4.52	4.44	M
2	4.917	4.914	0.003	153698	4.52	4.50	M
						RPD = 1.17	
6 Acetylene							Ma
1	4.131	4.121	0.010	78825	2.67	2.69	M
2	2.732	2.724	0.008	86657	2.67	2.58	M
						RPD = 4.00	
7 Butane							Ma
1	4.411	4.407	0.004	229454	5.95	5.83	M
2	6.421	6.415	0.006	219395	5.95	6.01	M
						RPD = 2.94	
8 isobutylene							Ma
1	5.326	5.322	0.004	208817	5.75	5.66	M
2	6.264	6.260	0.004	190198	5.75	5.82	M
						RPD = 2.64	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 5.00 Units: uL

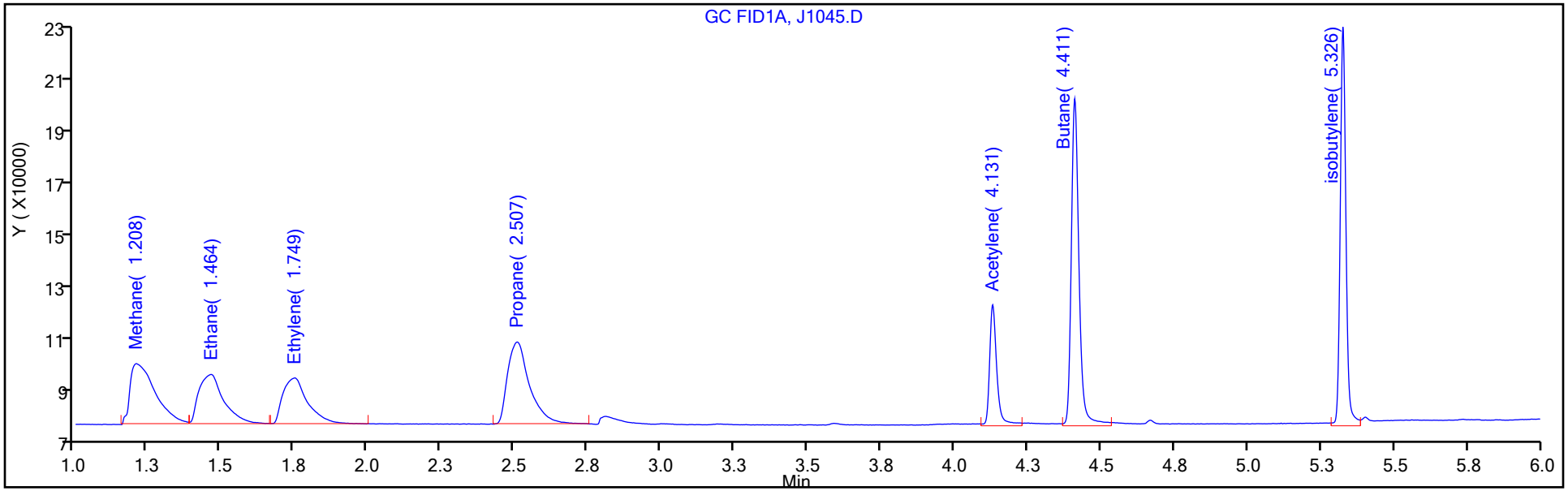
Report Date: 23-Nov-2022 11:28:53 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

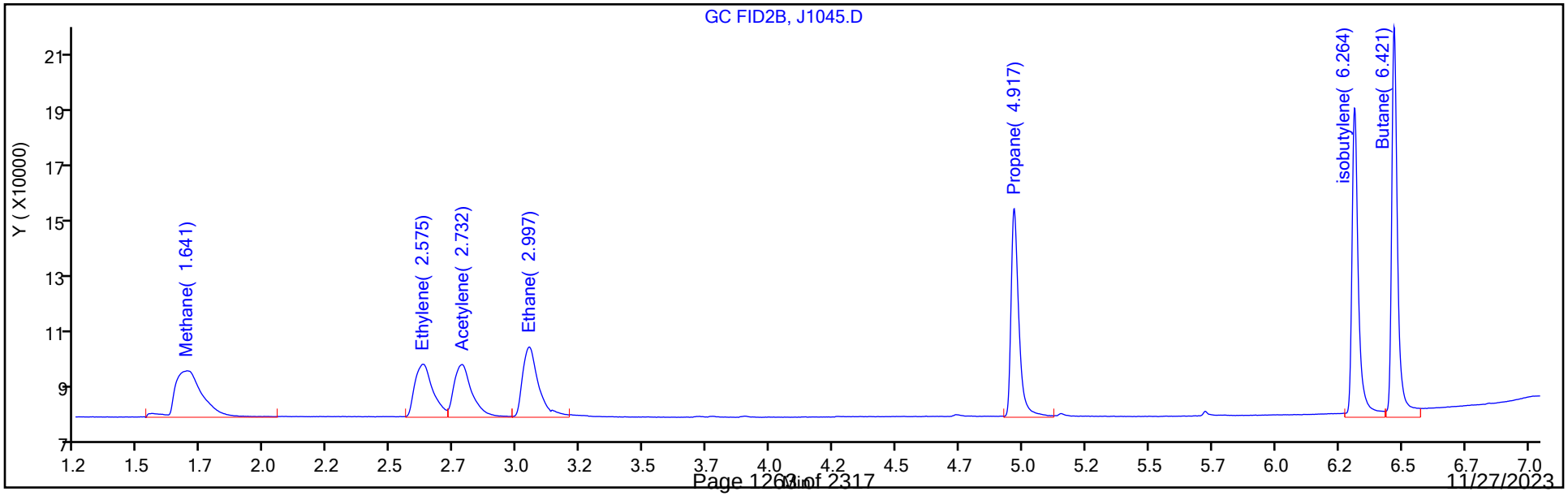
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D

Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 5 uL			Worklist Smp#:	5
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

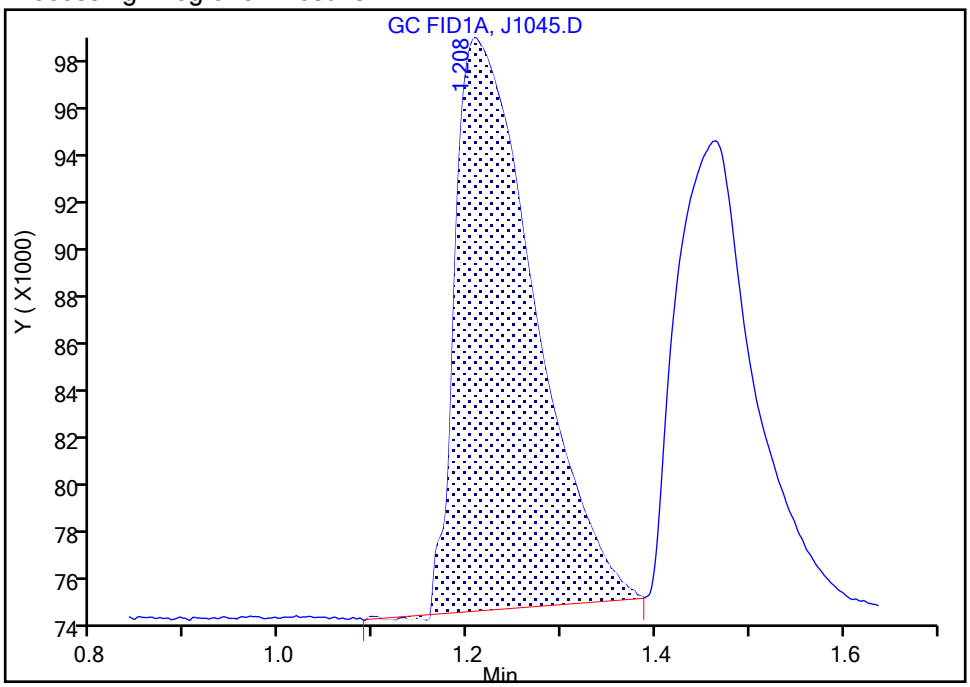
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

2 Methane, CAS: 74-82-8

Signal: 1

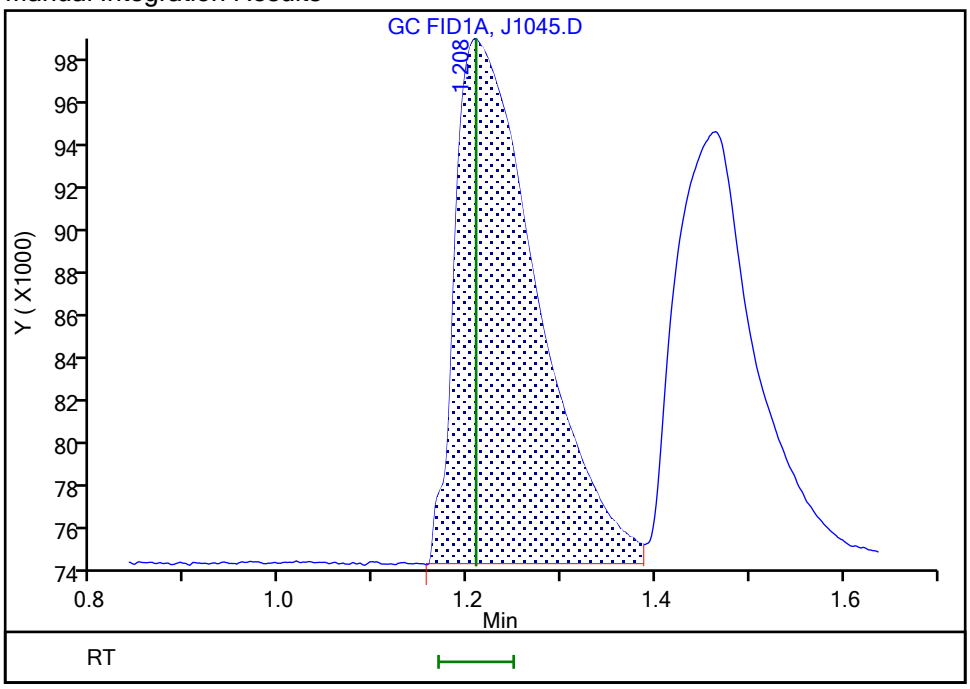
Processing Integration Results

RT: 1.21
Area: 135255
Amount: 1.560156
Amount Units: ug/l



Manual Integration Results

RT: 1.21
Area: 142601
Amount: 1.666809
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:30:20

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

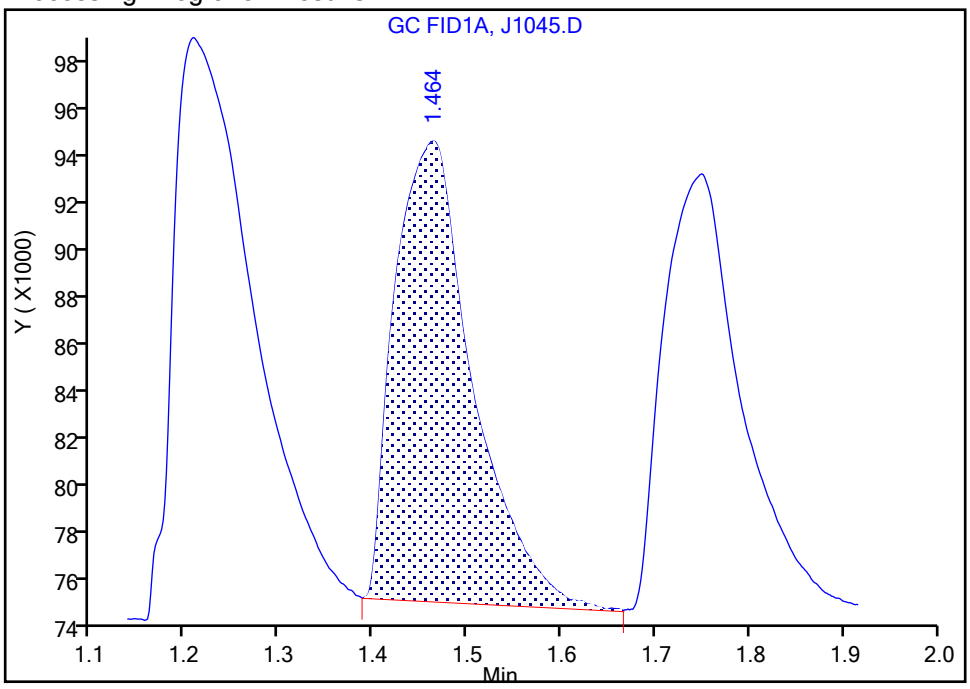
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

3 Ethane, CAS: 74-84-0

Signal: 1

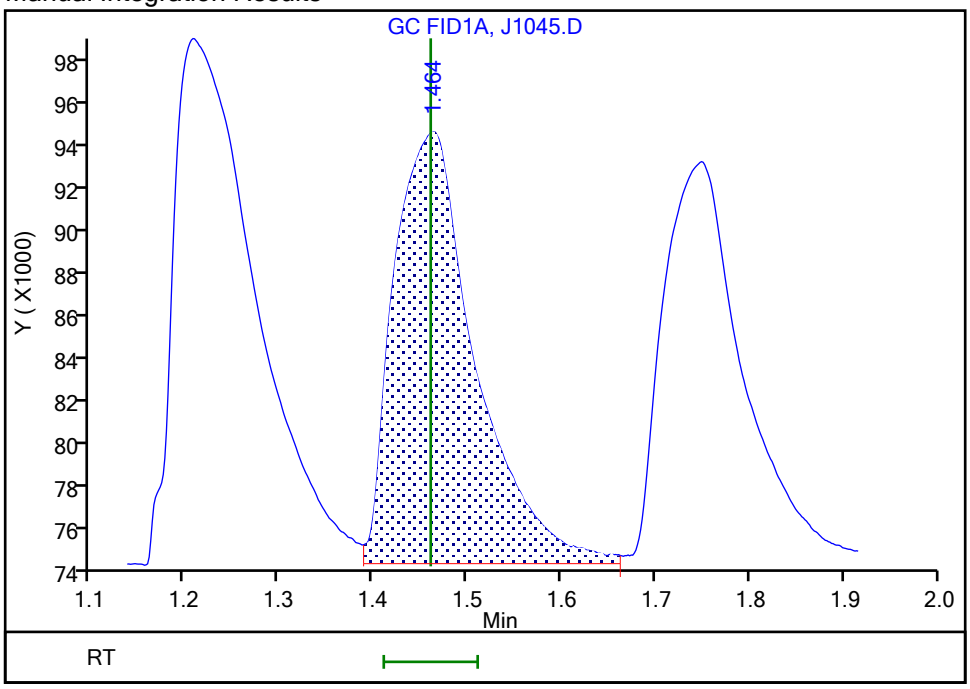
Processing Integration Results

RT: 1.46
Area: 107316
Amount: 2.917292
Amount Units: ug/l



Manual Integration Results

RT: 1.46
Area: 117587
Amount: 3.039233
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:30:34
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

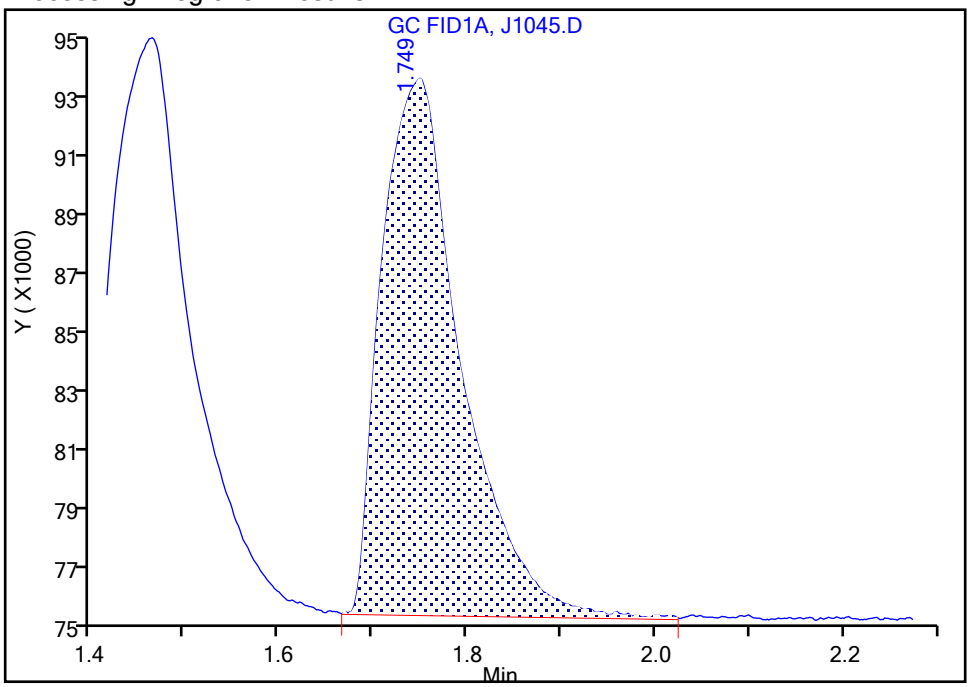
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D
Injection Date: 22-Nov-2022 16:16:26 Instrument ID: VGC_J
Lims ID: ic RSK 5 uL
Client ID:
Operator ID: JH ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

4 Ethylene, CAS: 74-85-1

Signal: 1

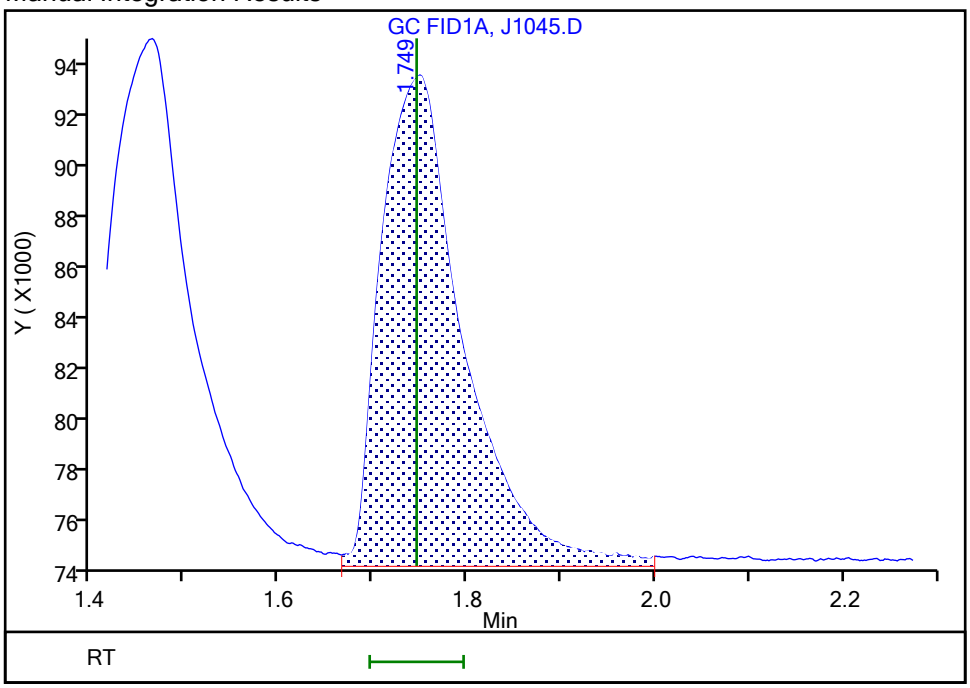
Processing Integration Results

RT: 1.75
Area: 103866
Amount: 2.745824
Amount Units: ug/l



Manual Integration Results

RT: 1.75
Area: 109711
Amount: 2.786368
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:31:22
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

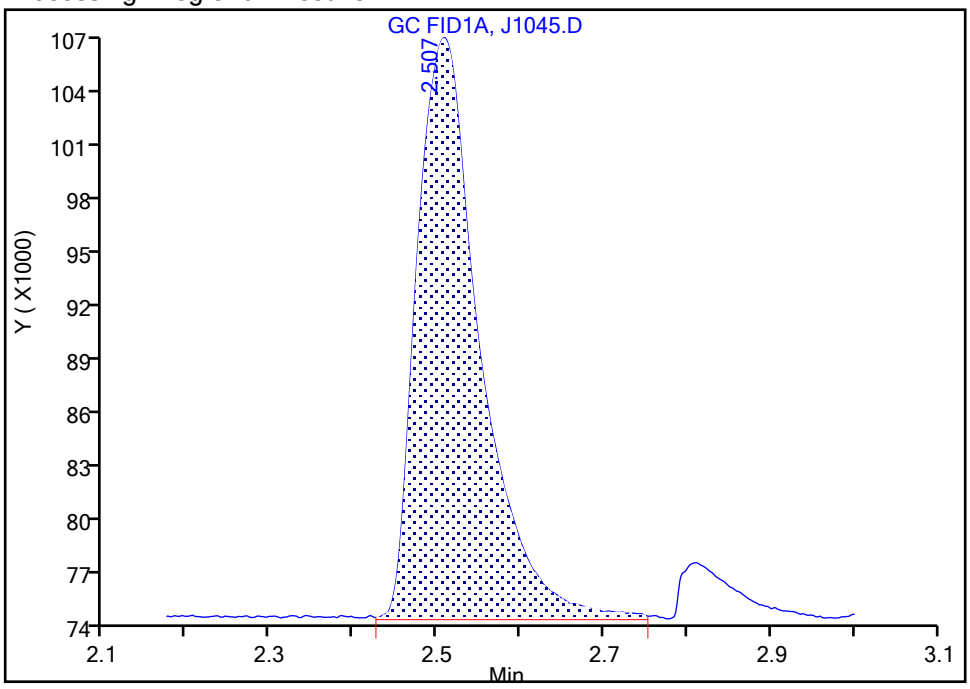
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

5 Propane, CAS: 74-98-6

Signal: 1

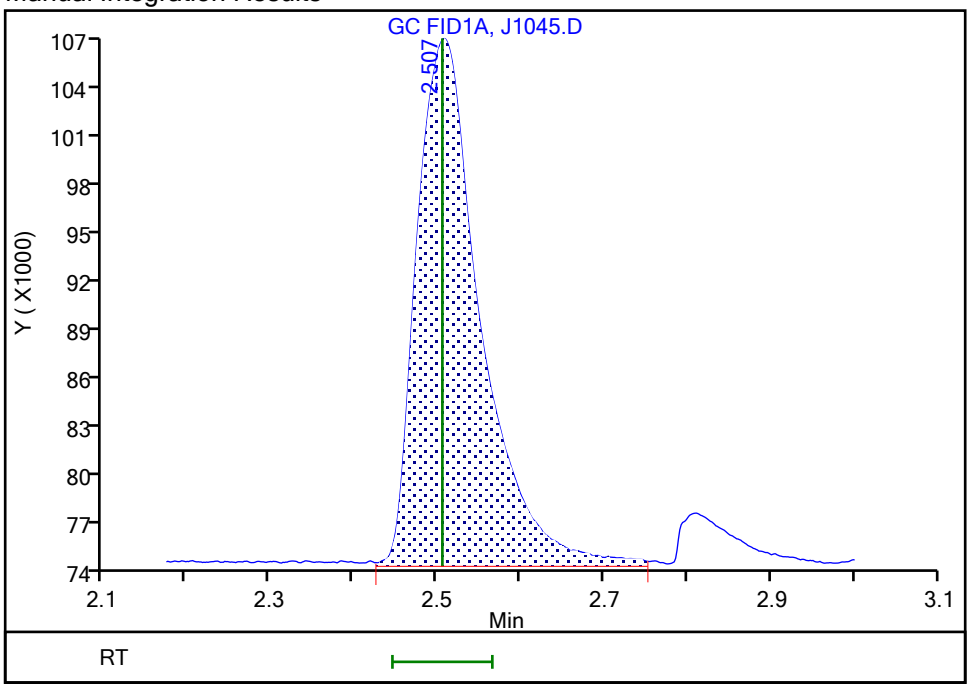
Processing Integration Results

RT: 2.51
Area: 169896
Amount: 4.581803
Amount Units: ug/l



Manual Integration Results

RT: 2.51
Area: 169896
Amount: 4.442954
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:33:47

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

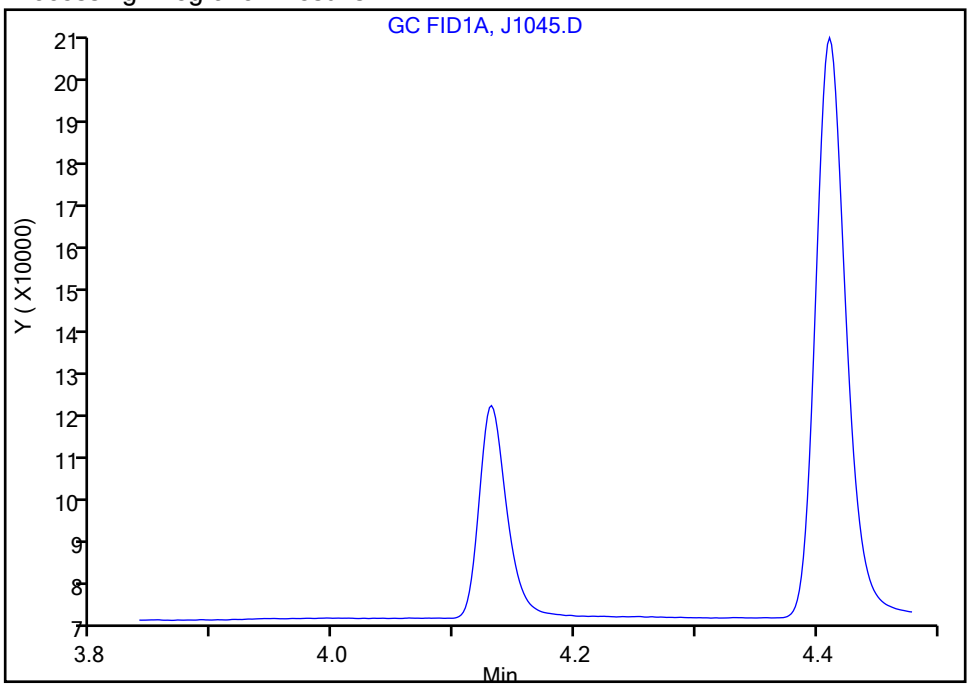
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

6 Acetylene, CAS: 74-86-2

Signal: 1

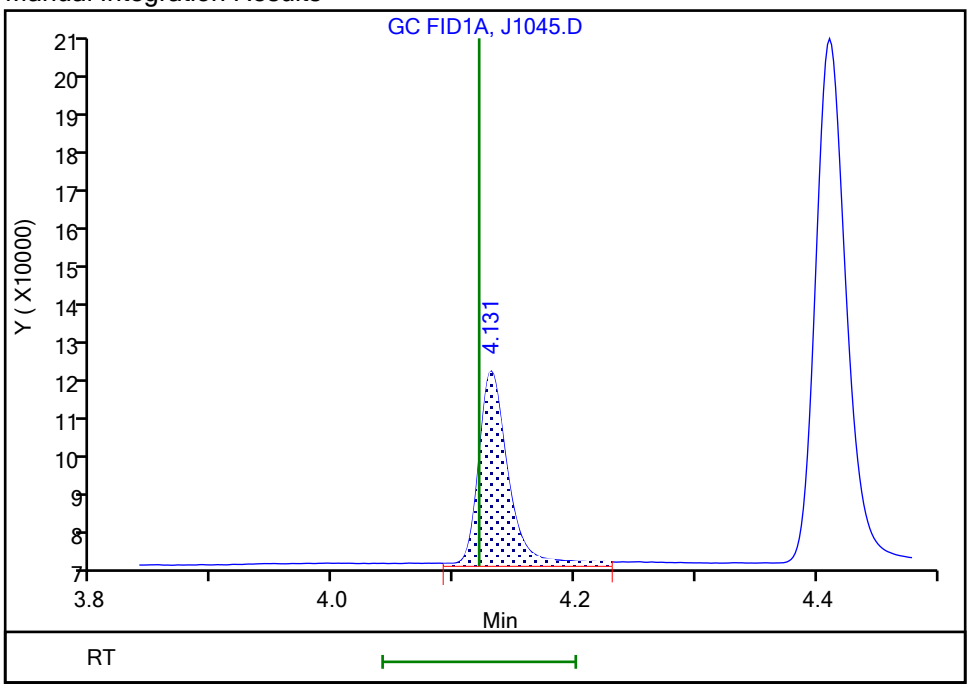
Processing Integration Results

RT: 4.11
Area: 0
Amount: 2.702537
Amount Units: ug/l



Manual Integration Results

RT: 4.13
Area: 78825
Amount: 2.686828
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:39:48

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

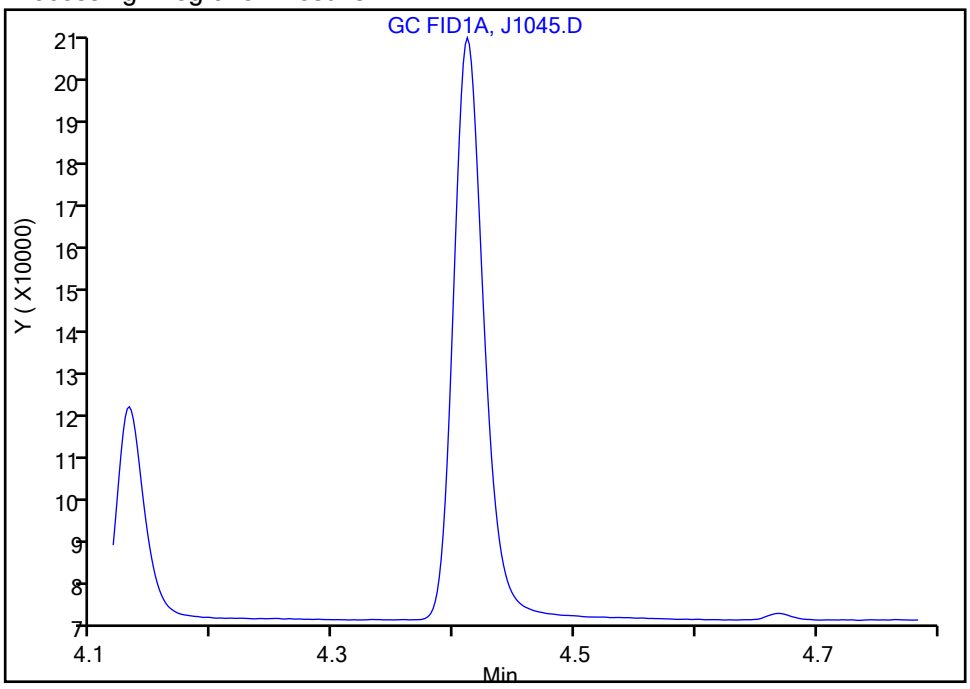
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

7 Butane, CAS: 106-97-8

Signal: 1

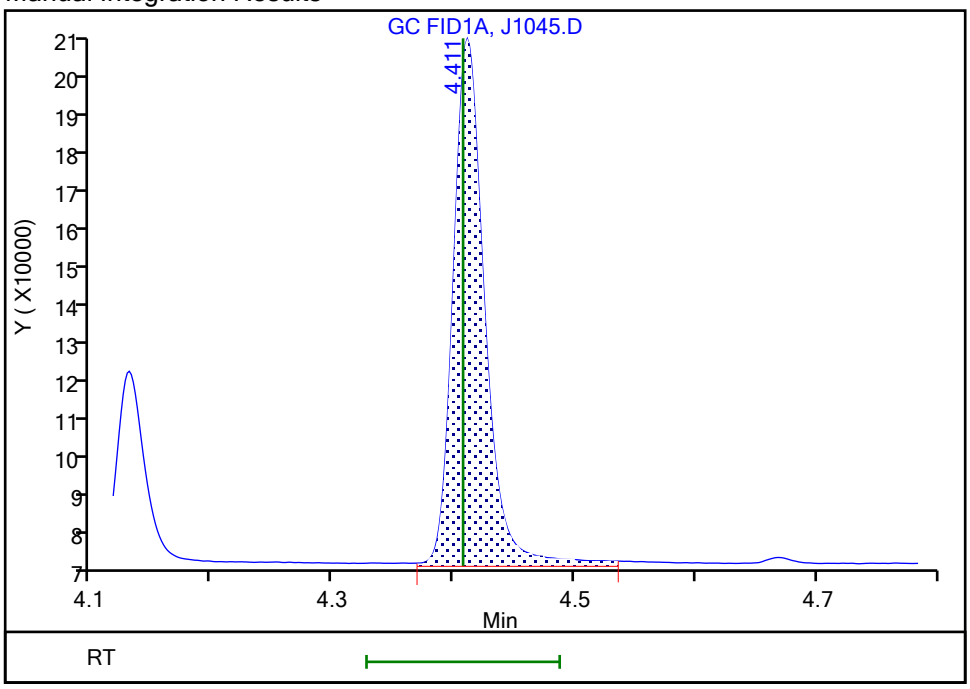
Not Detected
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.41
Area: 229454
Amount: 5.833931
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:44:05
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

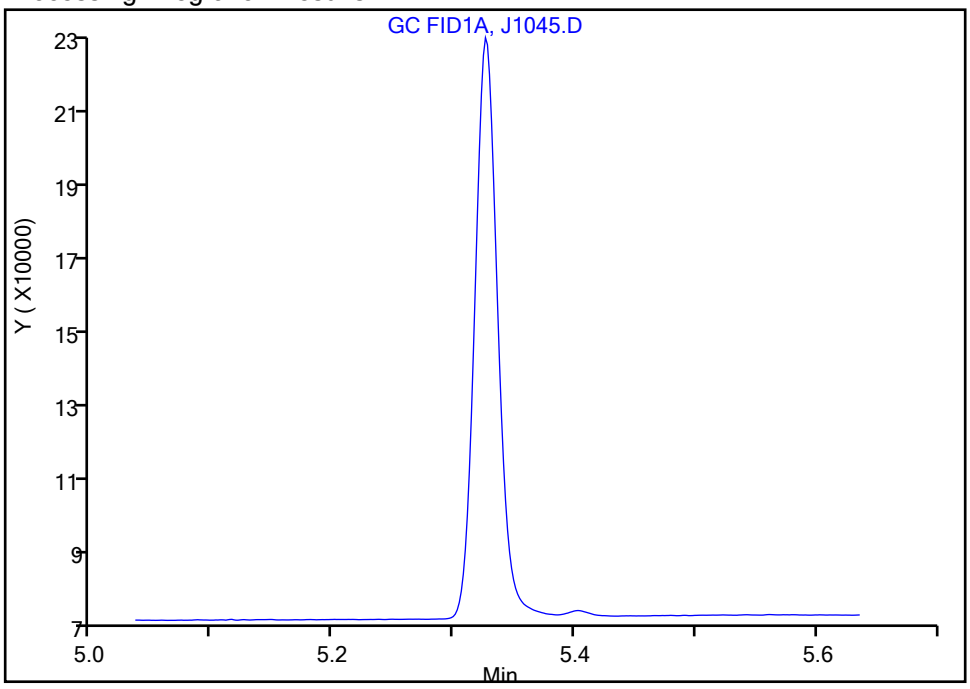
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D
Injection Date: 22-Nov-2022 16:16:26 Instrument ID: VGC_J
Lims ID: ic RSK 5 uL
Client ID:
Operator ID: JH ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

8 isobutylene, CAS: 115-11-7

Signal: 1

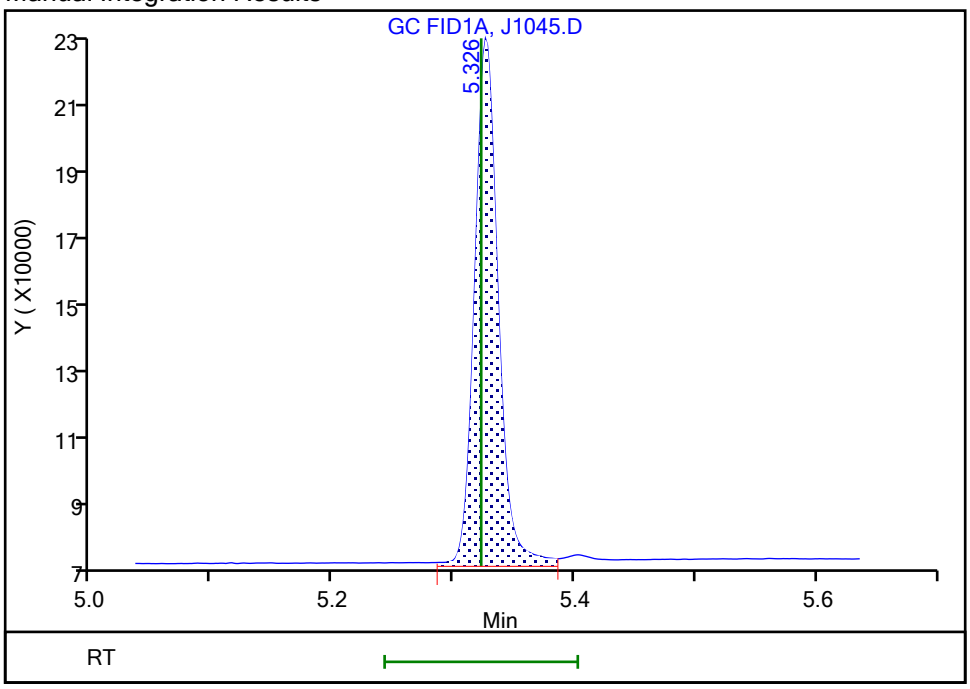
Processing Integration Results

RT: 5.32
Area: 0
Amount: 5.689138
Amount Units: ug/l



Manual Integration Results

RT: 5.33
Area: 208817
Amount: 5.664831
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:42:31
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D
Lims ID: ic RSK 40 uL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Nov-2022 16:30:12 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 40 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:54 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 18:02:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							Ma
1	1.210	1.209	0.001	597693	13.1	13.4	M
2	1.645	1.640	0.005	534550	13.1	13.5	M
						RPD = 0.58	
3 Ethane							Ma
1	1.462	1.461	0.001	989301	24.6	25.6	M
2	2.995	2.990	0.005	903672	24.6	25.7	
						RPD = 0.49	
4 Ethylene							M
1	1.749	1.746	0.003	938642	23.0	23.8	M
2	2.575	2.570	0.005	754091	23.0	24.0	
						RPD = 0.71	
5 Propane							Ma
1	2.509	2.506	0.003	1442697	36.1	37.7	M
2	4.917	4.914	0.003	1291157	36.1	37.8	M
						RPD = 0.09	
6 Acetylene							Ma
1	4.130	4.121	0.009	651380	21.3	22.2	M
2	2.730	2.724	0.006	753138	21.3	22.4	a
						RPD = 1.04	
7 Butane							Ma
1	4.412	4.407	0.005	1964235	47.6	49.9	M
2	6.420	6.415	0.005	1792980	47.6	49.1	M
						RPD = 1.70	
8 isobutylene							Ma
1	5.327	5.322	0.005	1766626	46.0	47.9	M
2	6.263	6.260	0.003	1550959	46.0	47.4	M
						RPD = 1.04	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 40.00 Units: uL

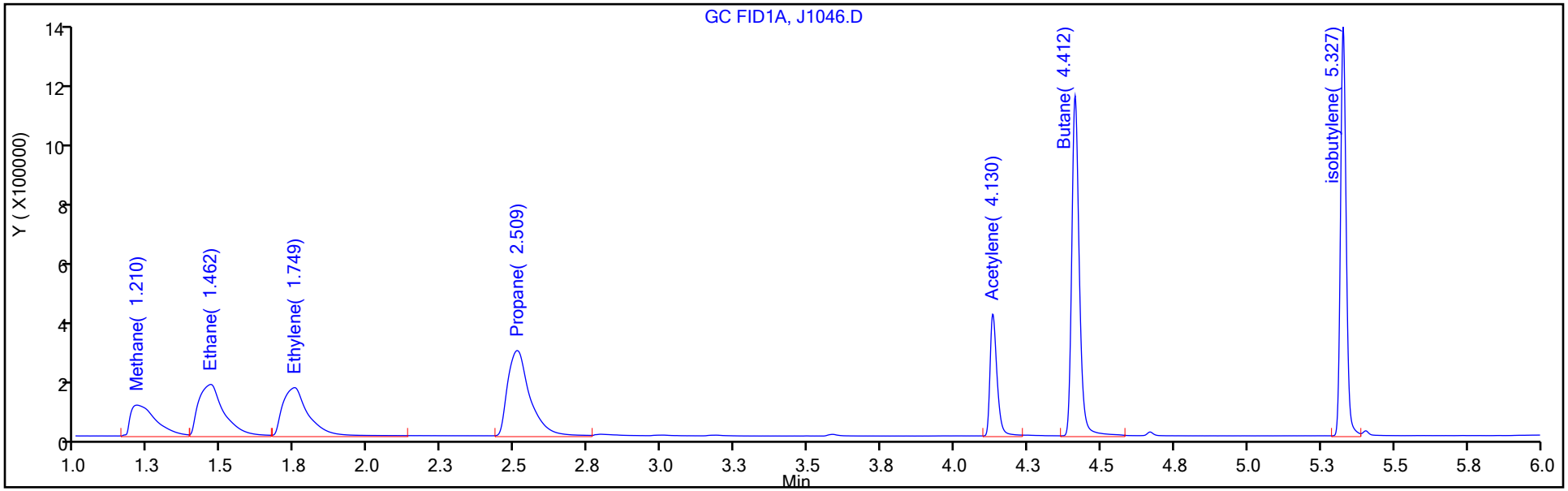
Report Date: 23-Nov-2022 11:28:54 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

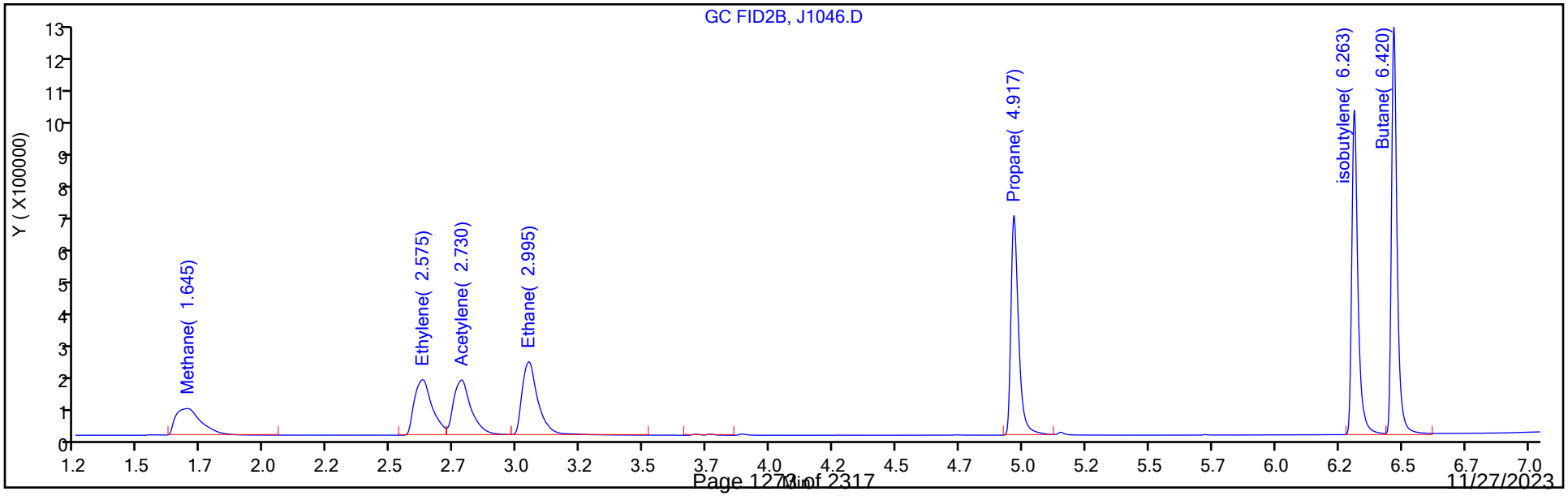
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D

Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 40 uL			Worklist Smp#:	6
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

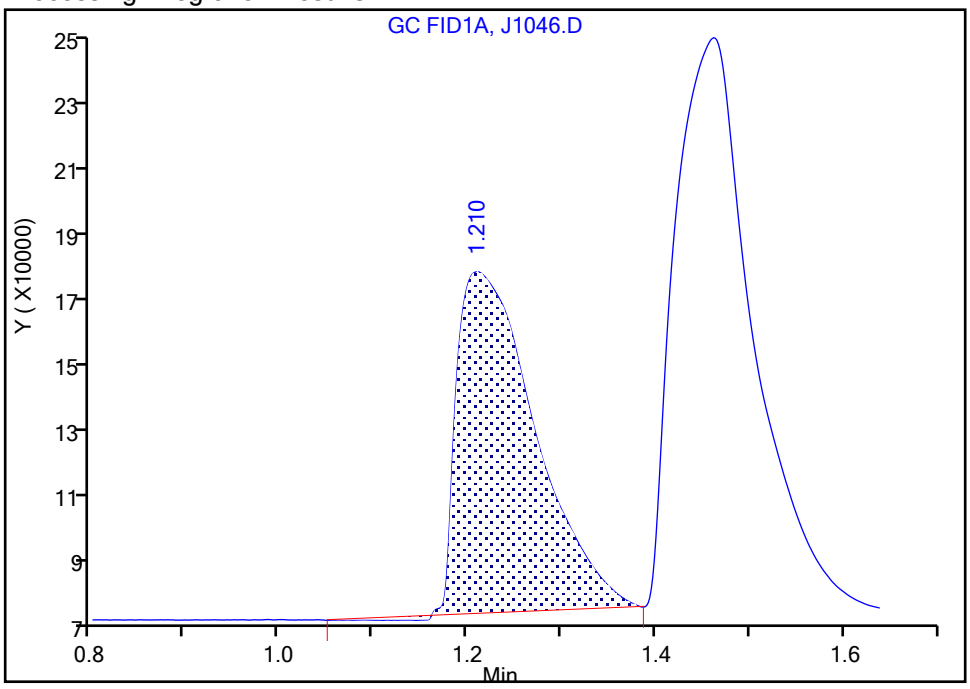
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D				
Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J		
Lims ID:	ic RSK 40 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

2 Methane, CAS: 74-82-8

Signal: 1

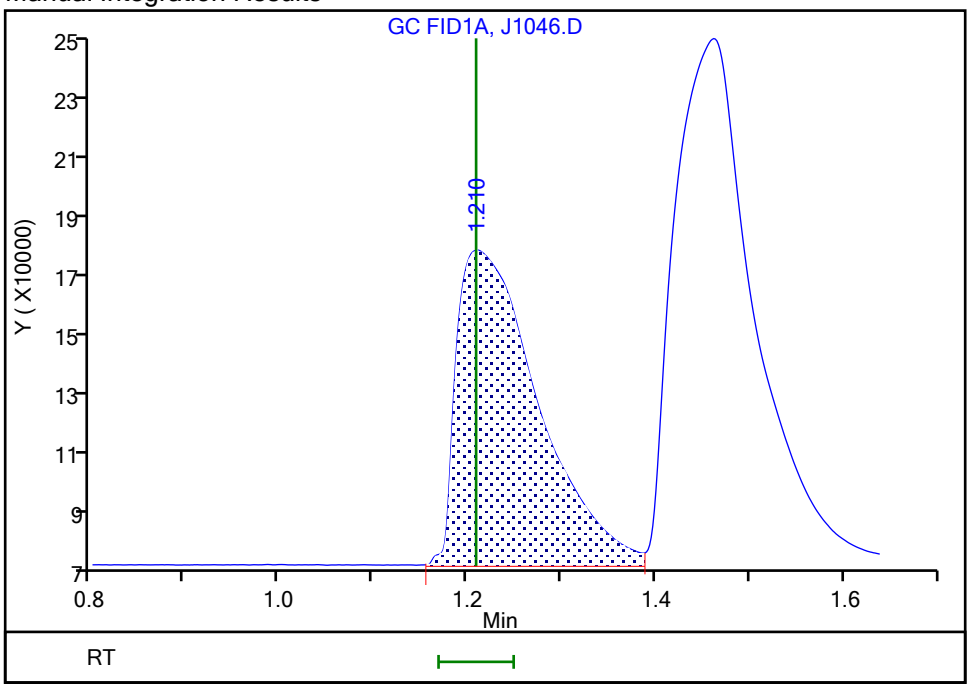
Processing Integration Results

RT: 1.21
Area: 560335
Amount: 12.916652
Amount Units: ug/l



Manual Integration Results

RT: 1.21
Area: 597693
Amount: 13.429733
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:48:14
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

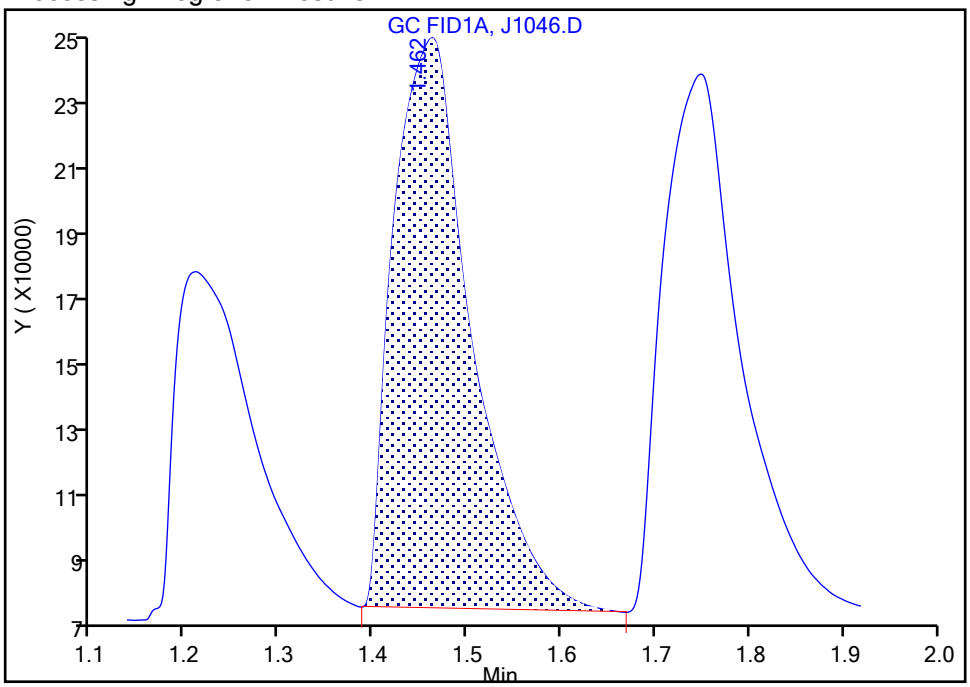
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D				
Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J		
Lims ID:	ic RSK 40 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

3 Ethane, CAS: 74-84-0

Signal: 1

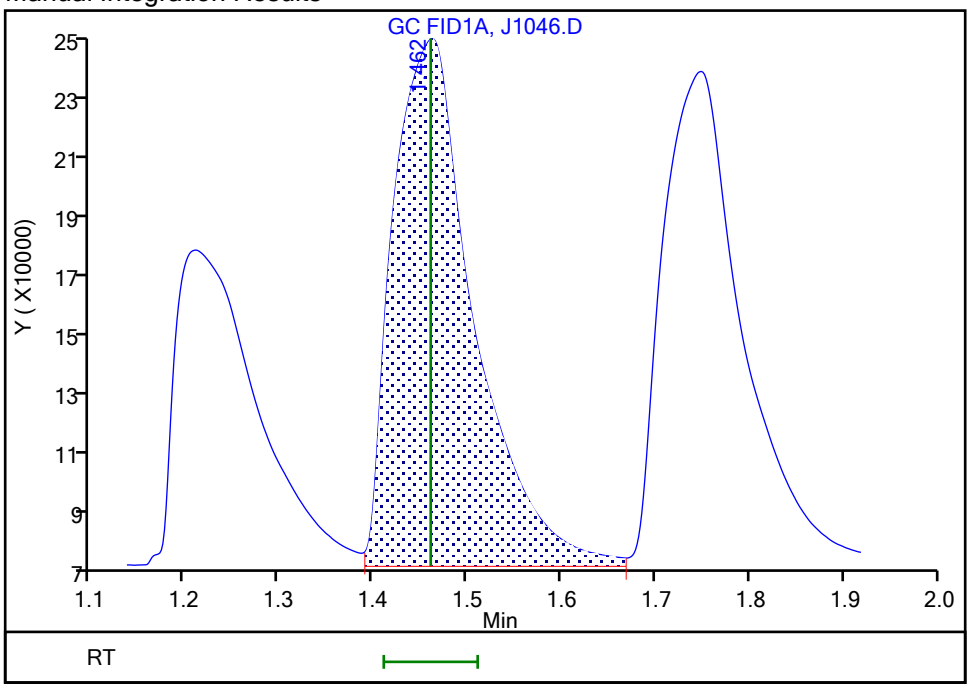
Processing Integration Results

RT: 1.46
Area: 939756
Amount: 24.796964
Amount Units: ug/l



Manual Integration Results

RT: 1.46
Area: 989301
Amount: 25.570144
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:48:08
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

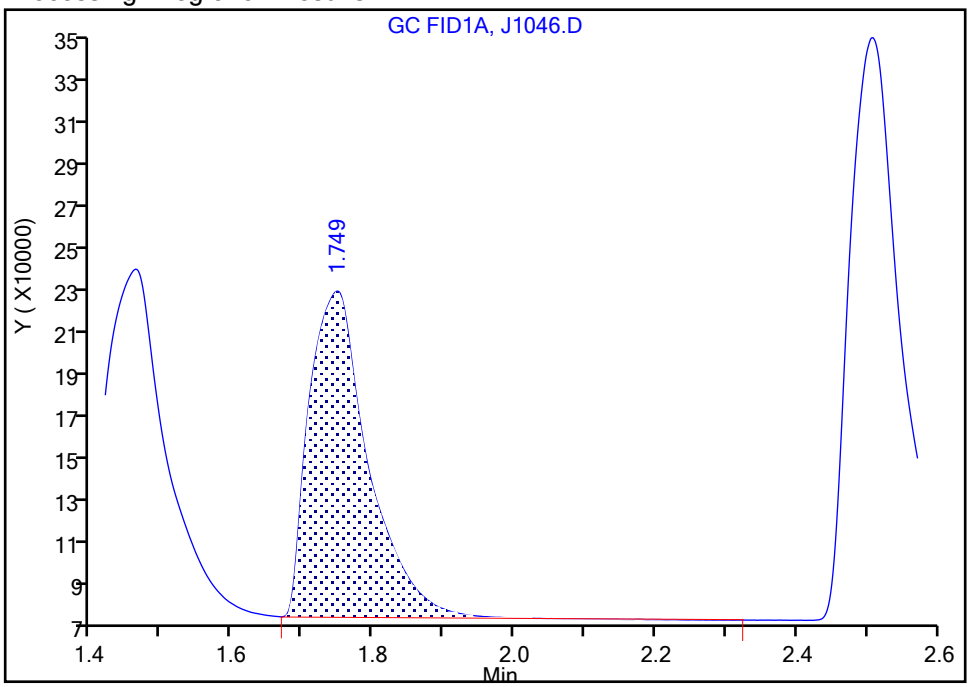
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D
Injection Date: 22-Nov-2022 16:30:12 Instrument ID: VGC_J
Lims ID: ic RSK 40 uL
Client ID:
Operator ID: JH ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

4 Ethylene, CAS: 74-85-1

Signal: 1

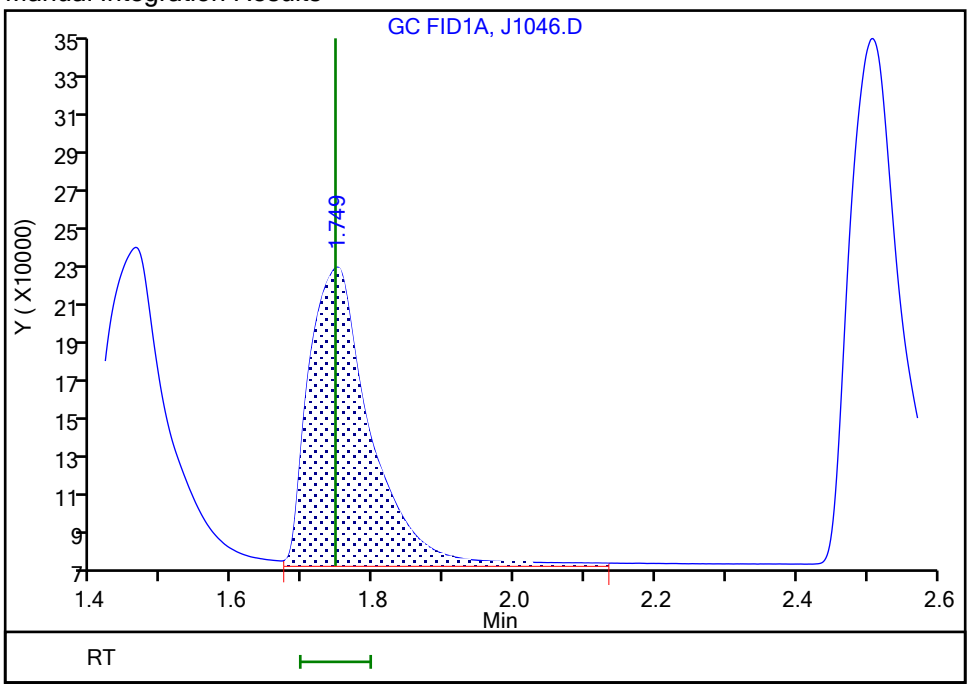
Processing Integration Results

RT: 1.75
Area: 894282
Amount: 23.224989
Amount Units: ug/l



Manual Integration Results

RT: 1.75
Area: 938642
Amount: 23.839018
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:48:44
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

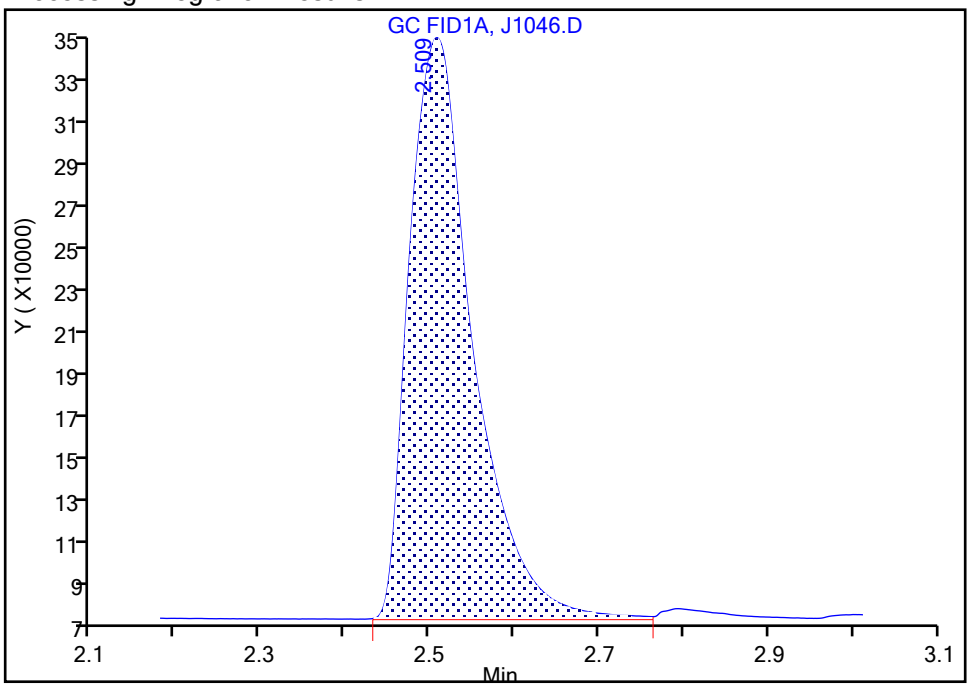
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D				
Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J		
Lims ID:	ic RSK 40 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

5 Propane, CAS: 74-98-6

Signal: 1

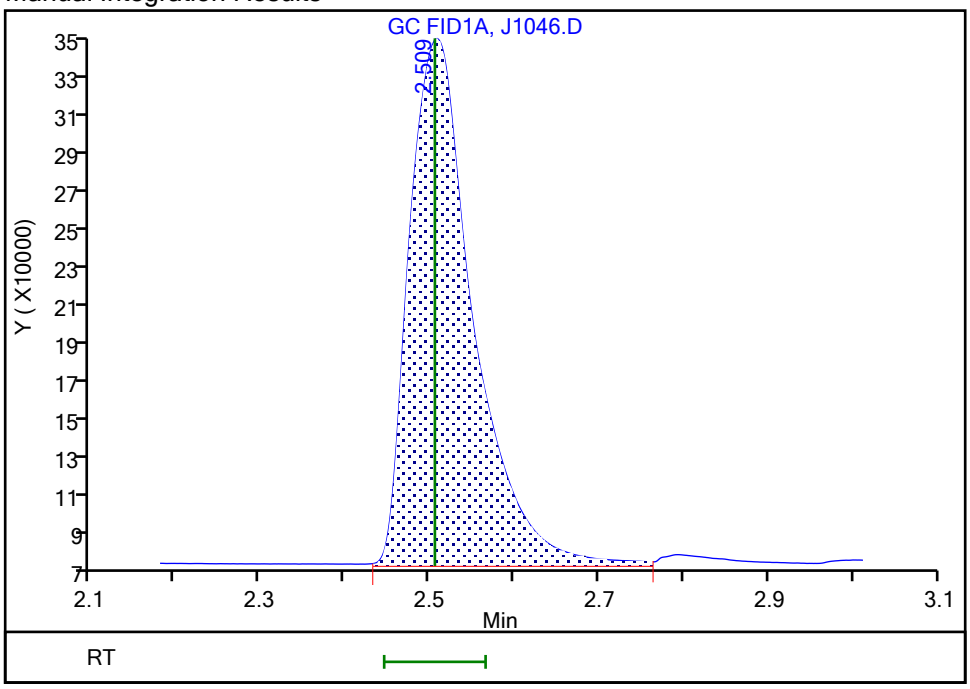
Processing Integration Results

RT: 2.51
Area: 1442697
Amount: 37.934386
Amount Units: ug/l



Manual Integration Results

RT: 2.51
Area: 1442697
Amount: 37.728001
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:49:39

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

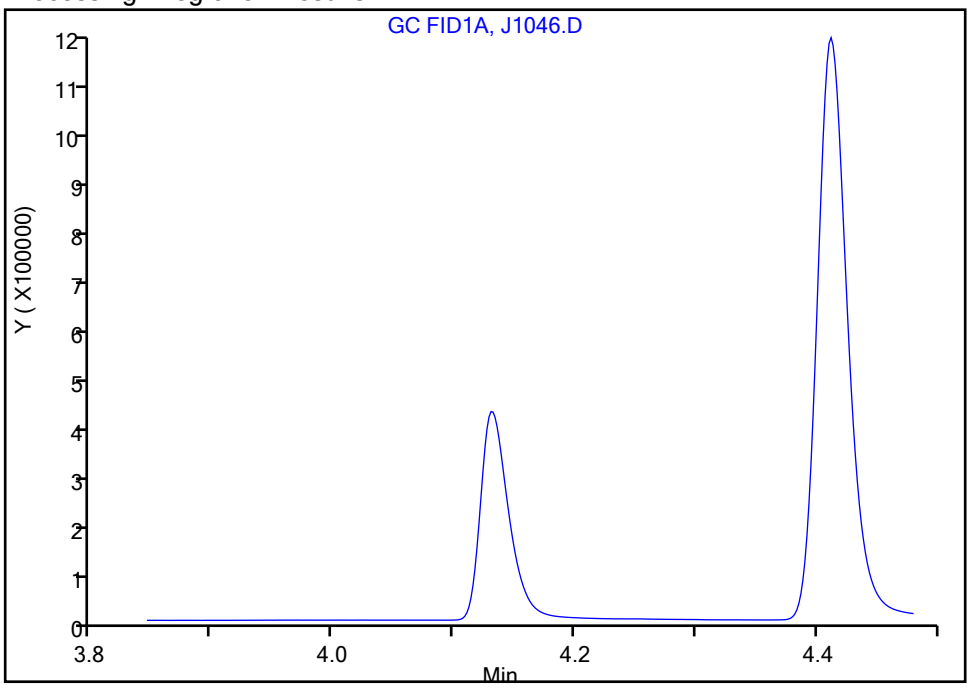
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D				
Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J		
Lims ID:	ic RSK 40 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

6 Acetylene, CAS: 74-86-2

Signal: 1

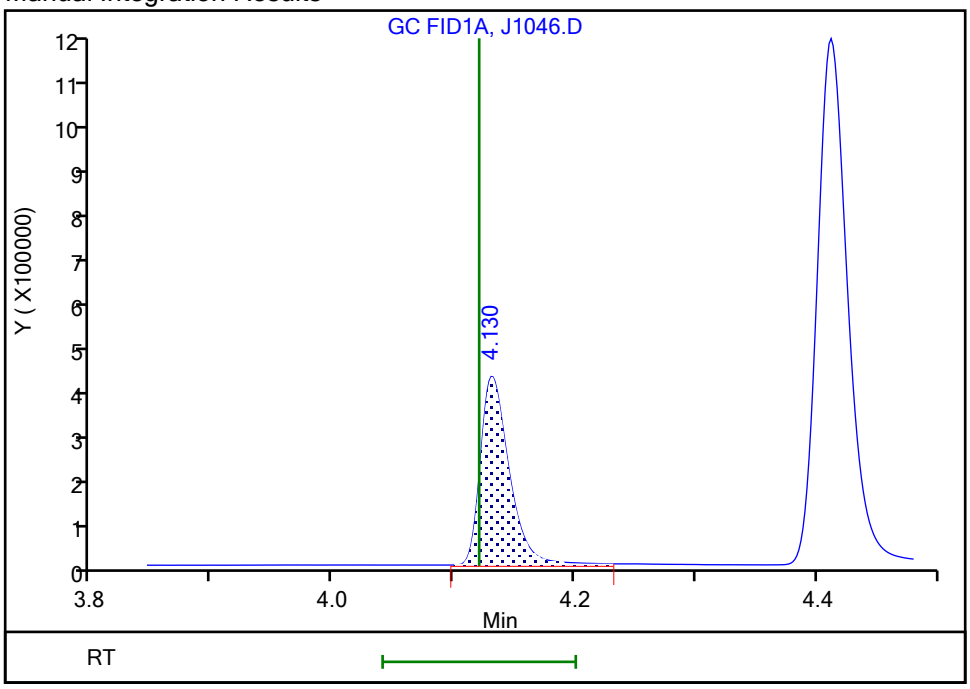
Not Detected
Expected RT: 4.12

Processing Integration Results



Manual Integration Results

RT: 4.13
Area: 651380
Amount: 22.202932
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:52:37
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

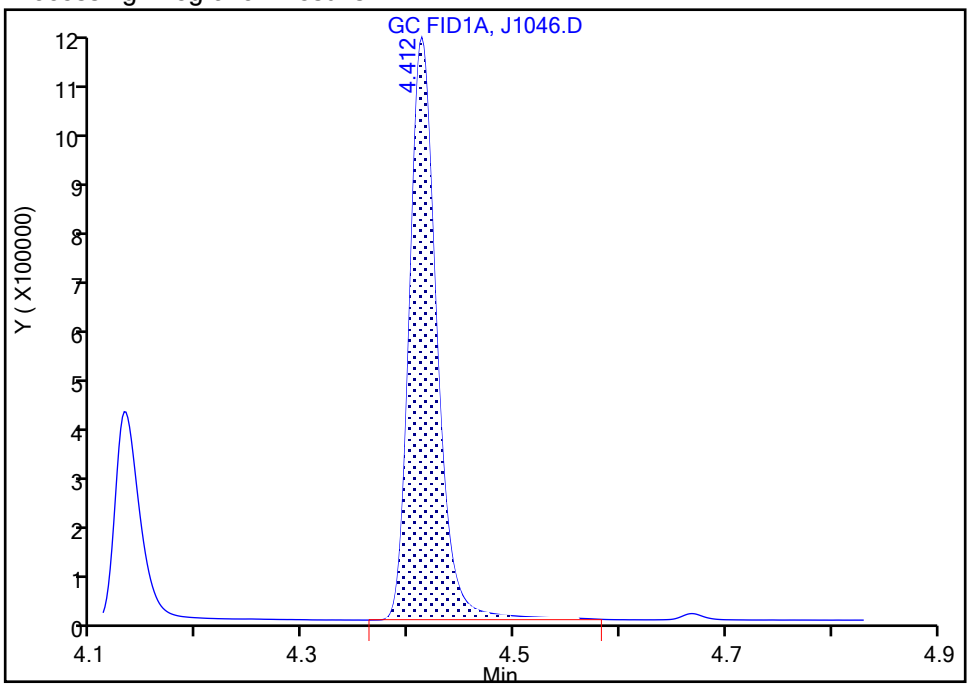
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D				
Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J		
Lims ID:	ic RSK 40 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

7 Butane, CAS: 106-97-8

Signal: 1

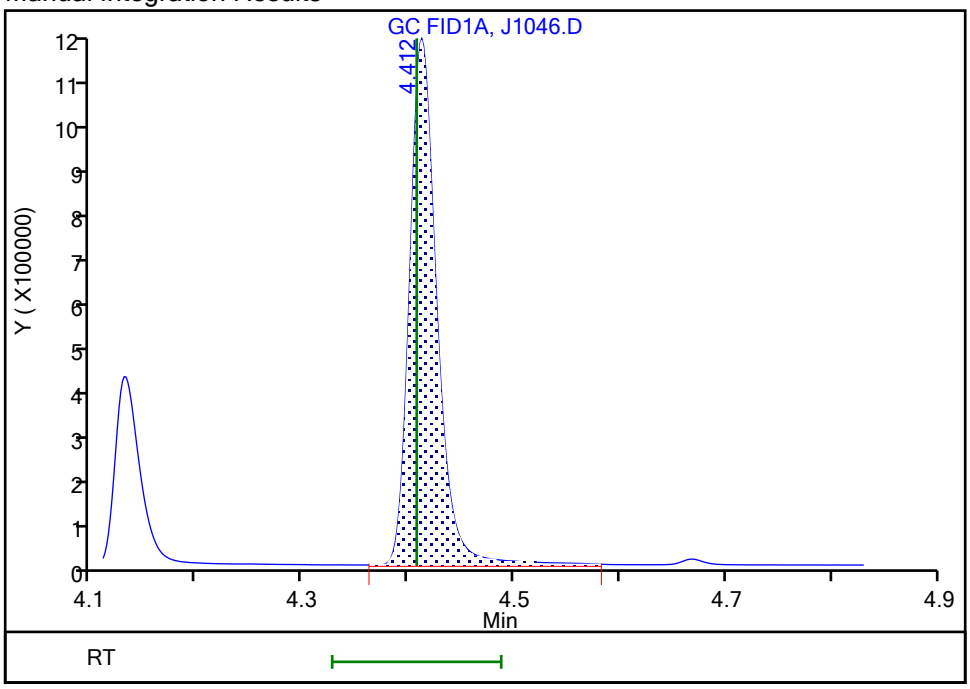
Processing Integration Results

RT: 4.41
Area: 1964235
Amount: 49.837633
Amount Units: ug/l



Manual Integration Results

RT: 4.41
Area: 1964235
Amount: 49.941215
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:01:51
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

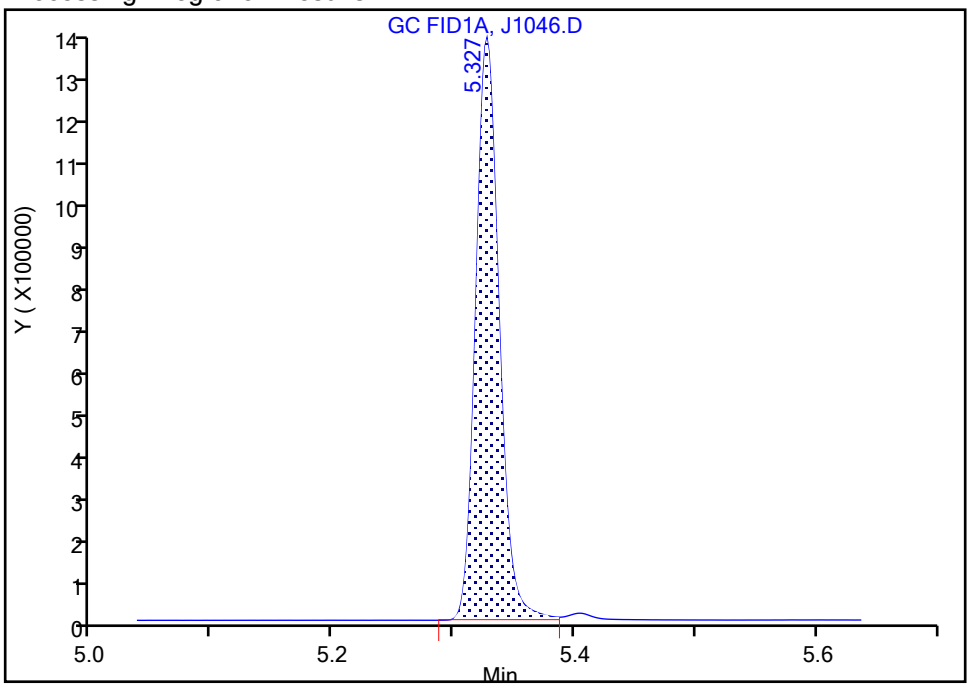
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D
Injection Date: 22-Nov-2022 16:30:12 Instrument ID: VGC_J
Lims ID: ic RSK 40 uL
Client ID:
Operator ID: JH ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

8 isobutylene, CAS: 115-11-7

Signal: 1

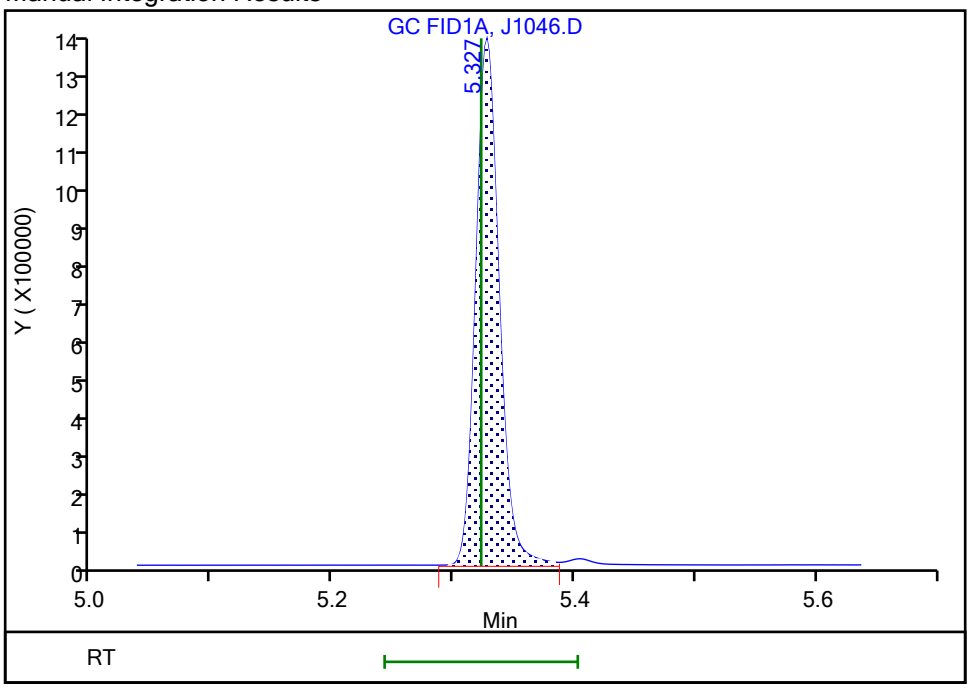
Processing Integration Results

RT: 5.33
Area: 1766626
Amount: 47.649434
Amount Units: ug/l



Manual Integration Results

RT: 5.33
Area: 1766626
Amount: 47.925400
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:58:15
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D
Lims ID: ic RSK 200 uL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Nov-2022 16:44:04 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 200 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:55 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 18:08:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.209	1.209	0.000	2594265	65.7	65.0	M
2	1.642	1.642	0.000	2374559	65.7	65.5	M
						RPD = 0.77	
3 Ethane							M
1	1.460	1.460	0.000	4800335	123.2	124.1	M
2	2.993	2.993	0.000	4386486	123.2	124.7	M
						RPD = 0.53	
4 Ethylene							M
1	1.747	1.747	0.000	4565792	114.9	116.0	M
2	2.572	2.572	0.000	3657619	114.9	116.4	
						RPD = 0.42	
5 Propane							Ma
1	2.509	2.509	0.000	7047561	180.6	184.3	M
2	4.913	4.913	0.000	6221833	180.6	182.0	M
						RPD = 1.27	
6 Acetylene							Ma
1	4.125	4.125	0.000	3138327	106.7	107.0	M
2	2.727	2.727	0.000	3637167	106.7	108.3	a
						RPD = 1.28	
7 Butane							Ma
1	4.410	4.410	0.000	9461289	238.1	240.6	M
2	6.418	6.418	0.000	8544605	238.1	234.0	M
						RPD = 2.77	
8 isobutylene							Ma
1	5.325	5.325	0.000	8497786	229.8	230.5	M
2	6.262	6.262	0.000	7390142	229.8	226.0	M
						RPD = 1.99	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 200.00 Units: uL

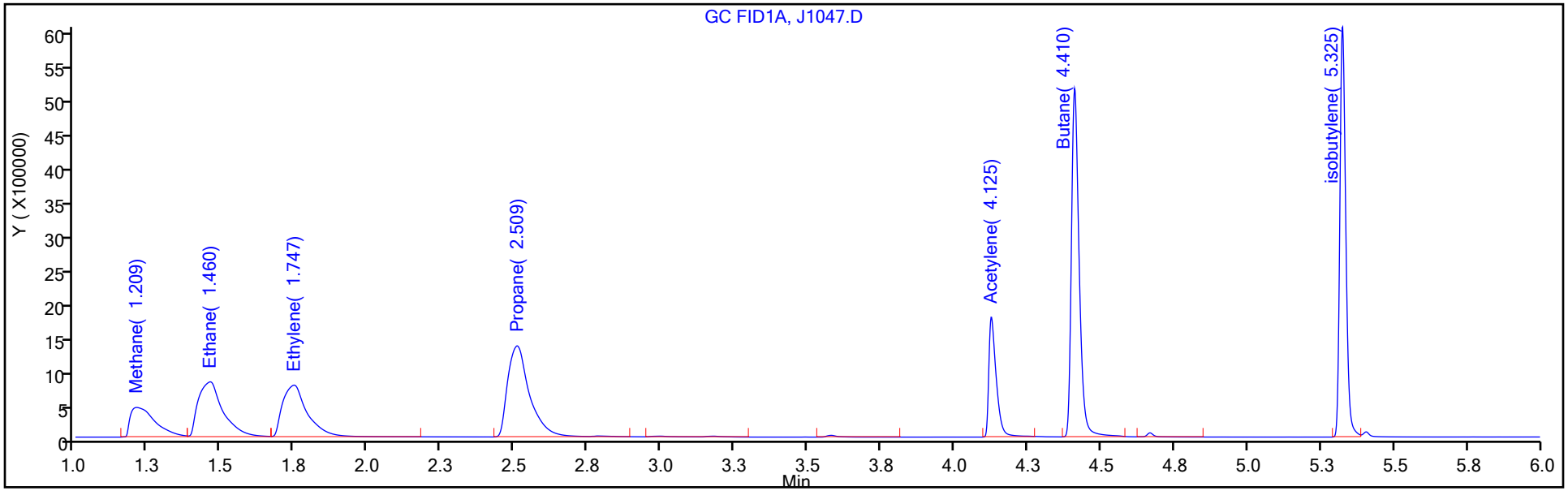
Report Date: 23-Nov-2022 11:28:55 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

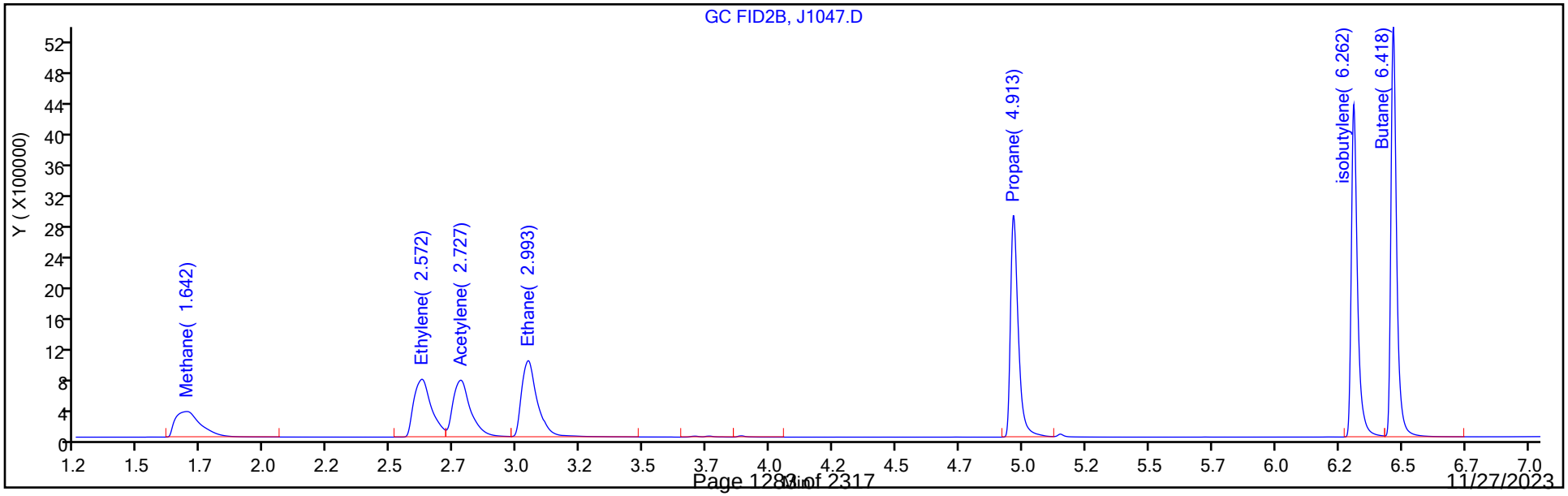
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D

Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 200 uL			Worklist Smp#:	7
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

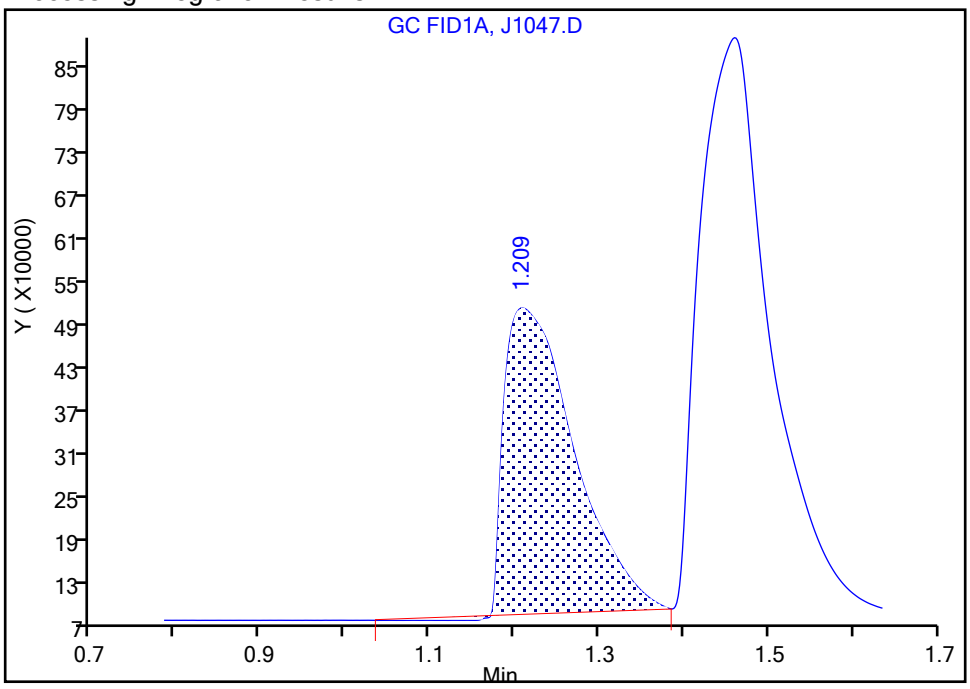
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D
Injection Date: 22-Nov-2022 16:44:04 Instrument ID: VGC_J
Lims ID: ic RSK 200 uL
Client ID:
Operator ID: JH ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

2 Methane, CAS: 74-82-8

Signal: 1

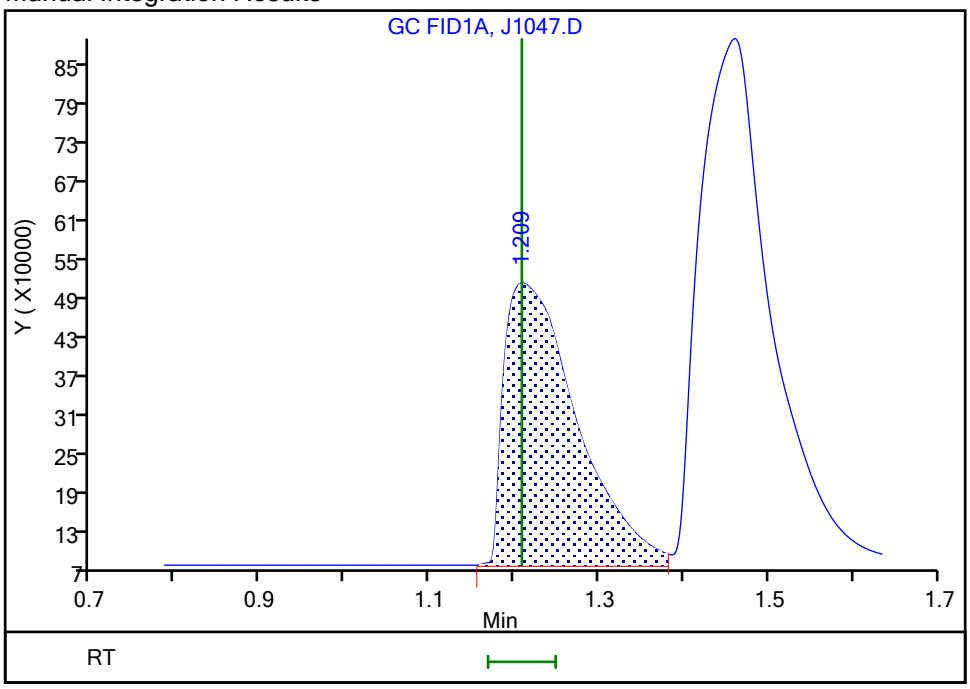
Processing Integration Results

RT: 1.21
Area: 2432392
Amount: 60.981881
Amount Units: ug/l



Manual Integration Results

RT: 1.21
Area: 2594265
Amount: 65.035838
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:11:49
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

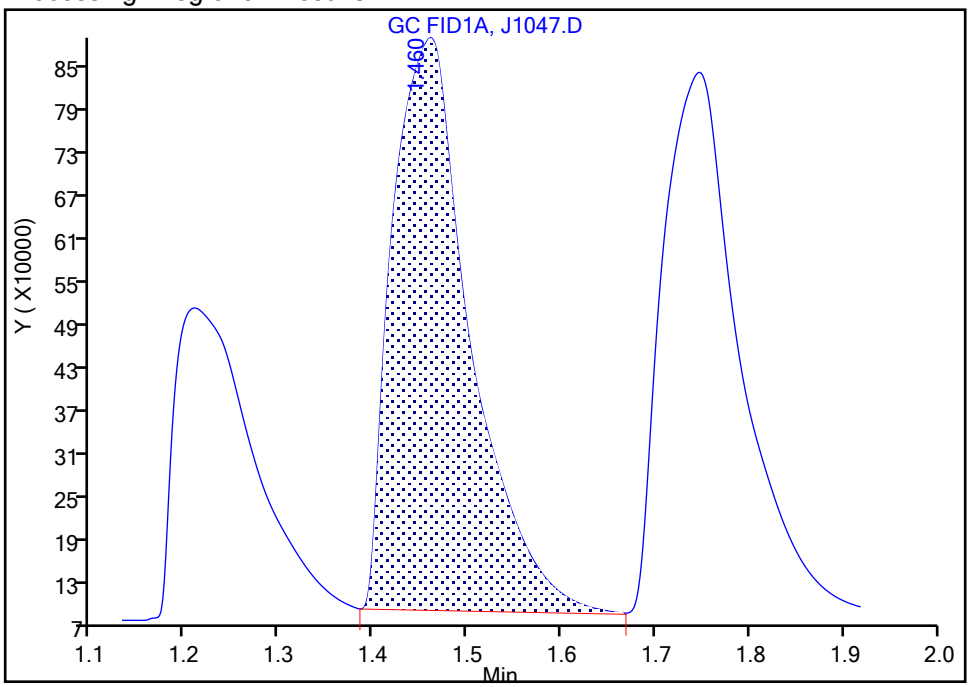
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D				
Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J		
Lims ID:	ic RSK 200 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

3 Ethane, CAS: 74-84-0

Signal: 1

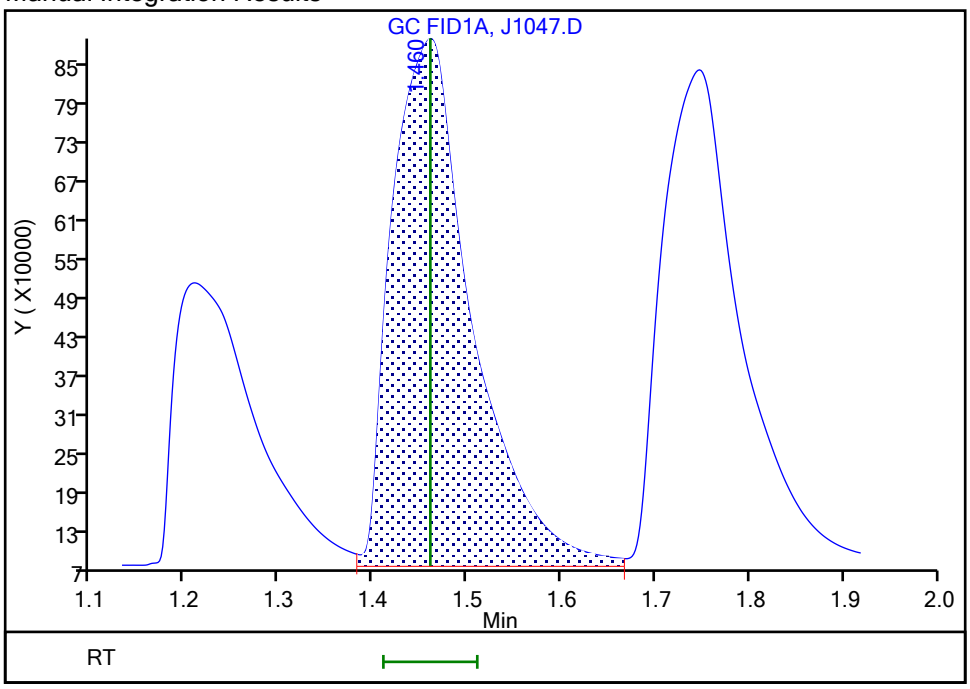
Processing Integration Results

RT: 1.46
Area: 4578573
Amount: 119.7967
Amount Units: ug/l



Manual Integration Results

RT: 1.46
Area: 4800335
Amount: 124.0727
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:13:01

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

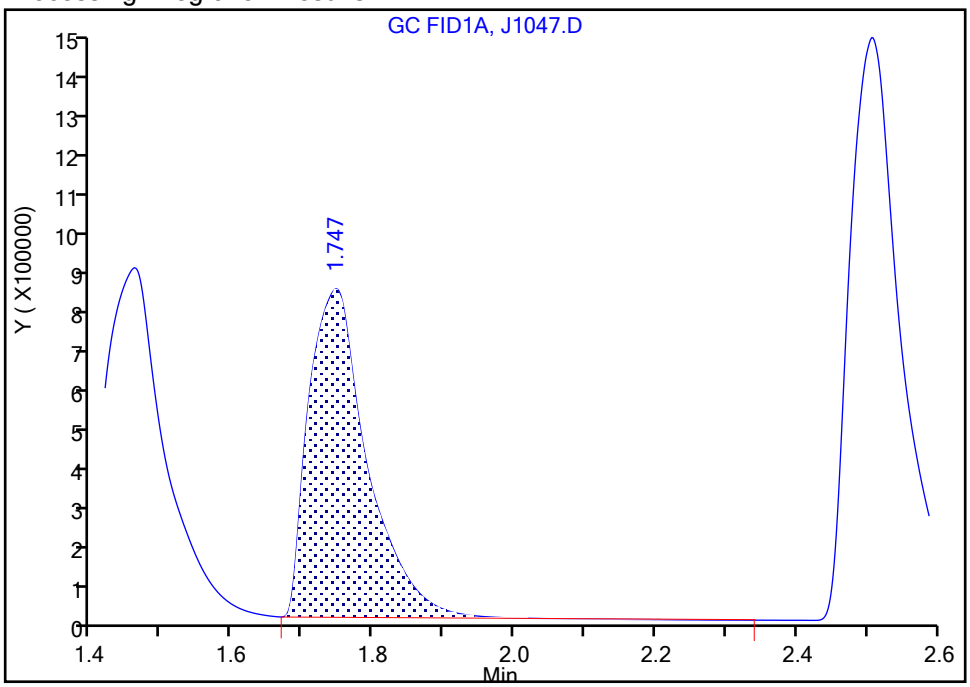
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D				
Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J		
Lims ID:	ic RSK 200 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

4 Ethylene, CAS: 74-85-1

Signal: 1

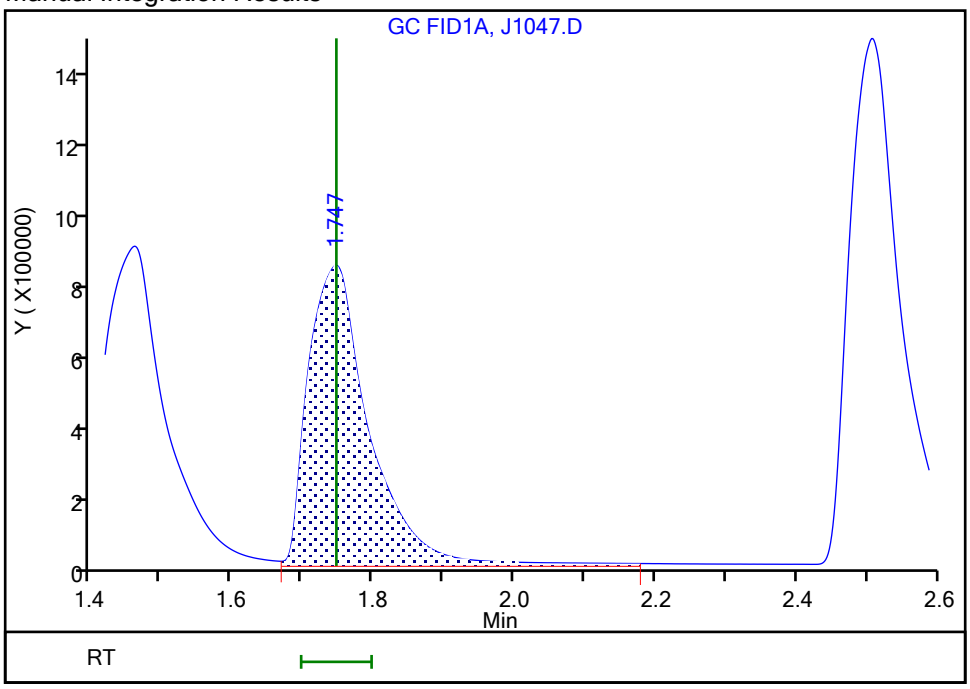
Processing Integration Results

RT: 1.75
Area: 4351043
Amount: 112.0580
Amount Units: ug/l



Manual Integration Results

RT: 1.75
Area: 4565792
Amount: 115.9590
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:14:19
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

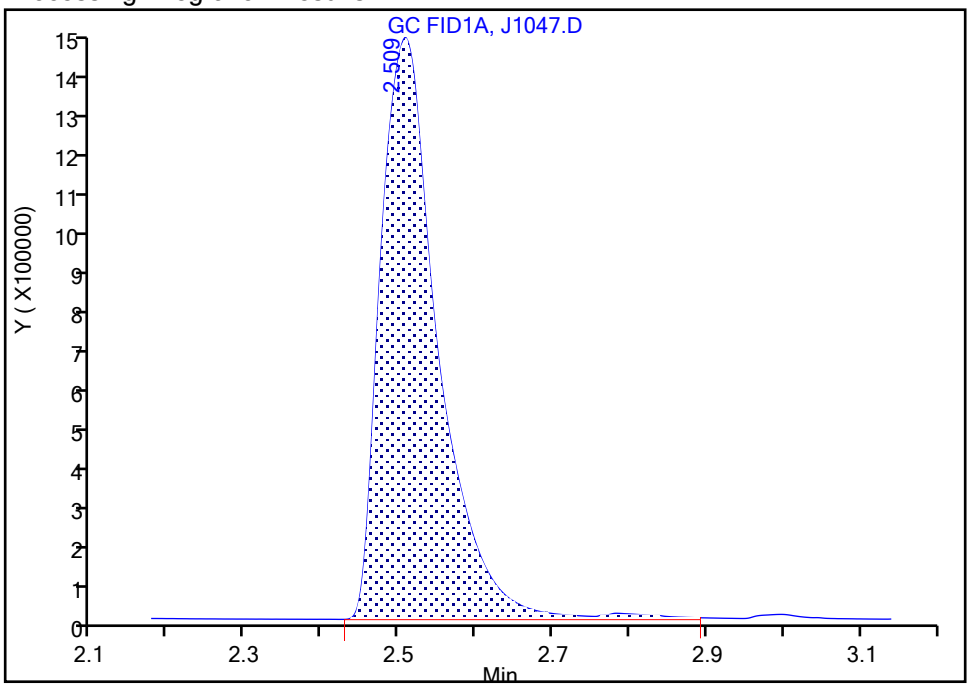
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D				
Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J		
Lims ID:	ic RSK 200 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

5 Propane, CAS: 74-98-6

Signal: 1

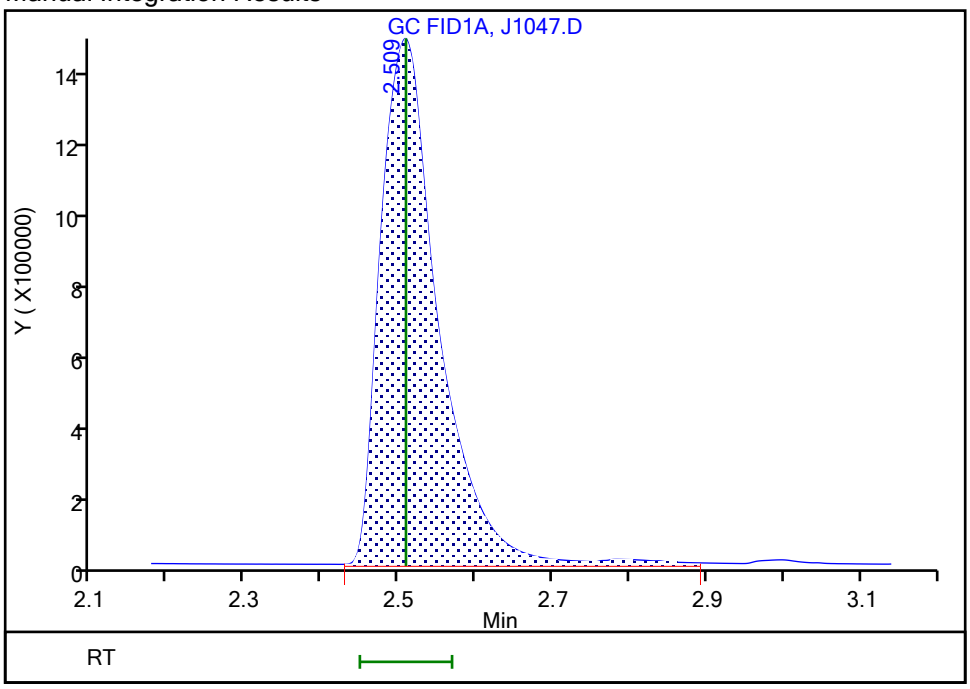
Processing Integration Results

RT: 2.51
Area: 7047561
Amount: 184.1193
Amount Units: ug/l



Manual Integration Results

RT: 2.51
Area: 7047561
Amount: 184.3009
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:15:23
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

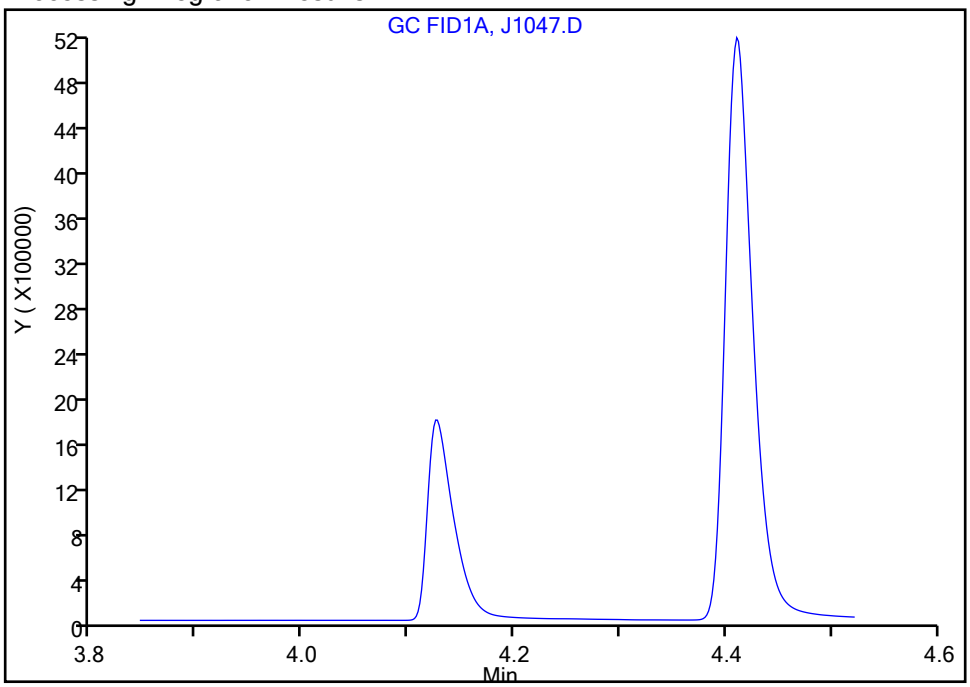
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D				
Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J		
Lims ID:	ic RSK 200 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

6 Acetylene, CAS: 74-86-2

Signal: 1

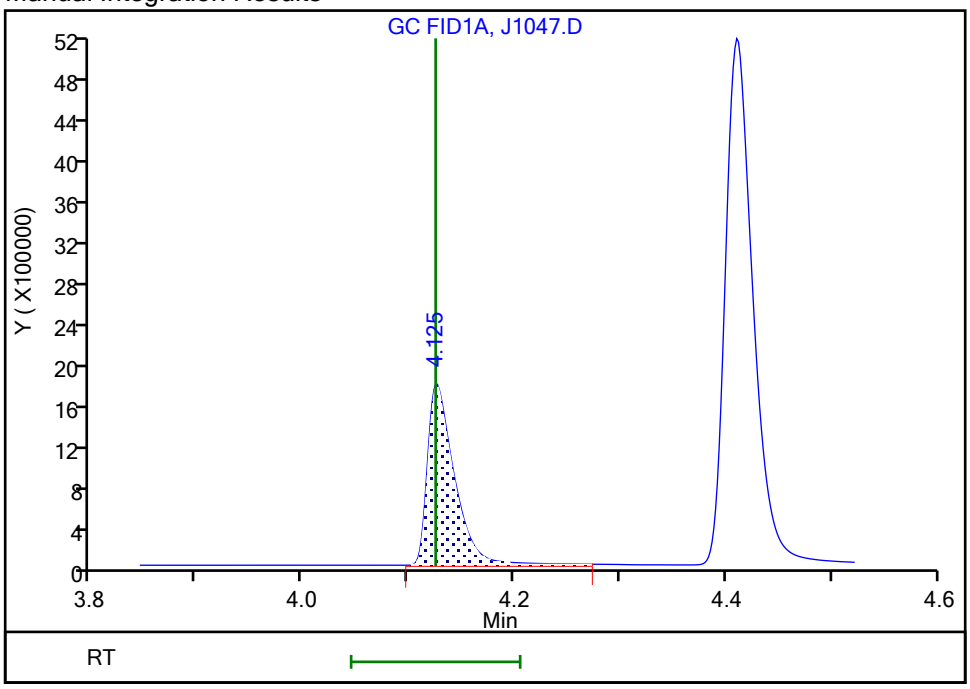
Not Detected
Expected RT: 4.13

Processing Integration Results



Manual Integration Results

RT: 4.13
Area: 3138327
Amount: 106.9730
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:16:37
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

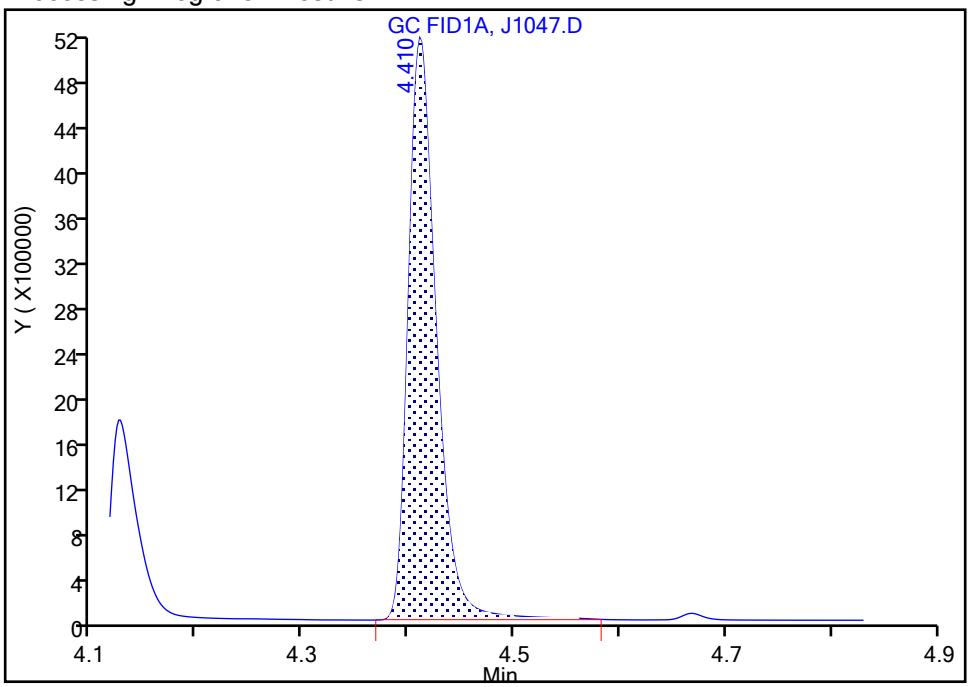
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D				
Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J		
Lims ID:	ic RSK 200 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

7 Butane, CAS: 106-97-8

Signal: 1

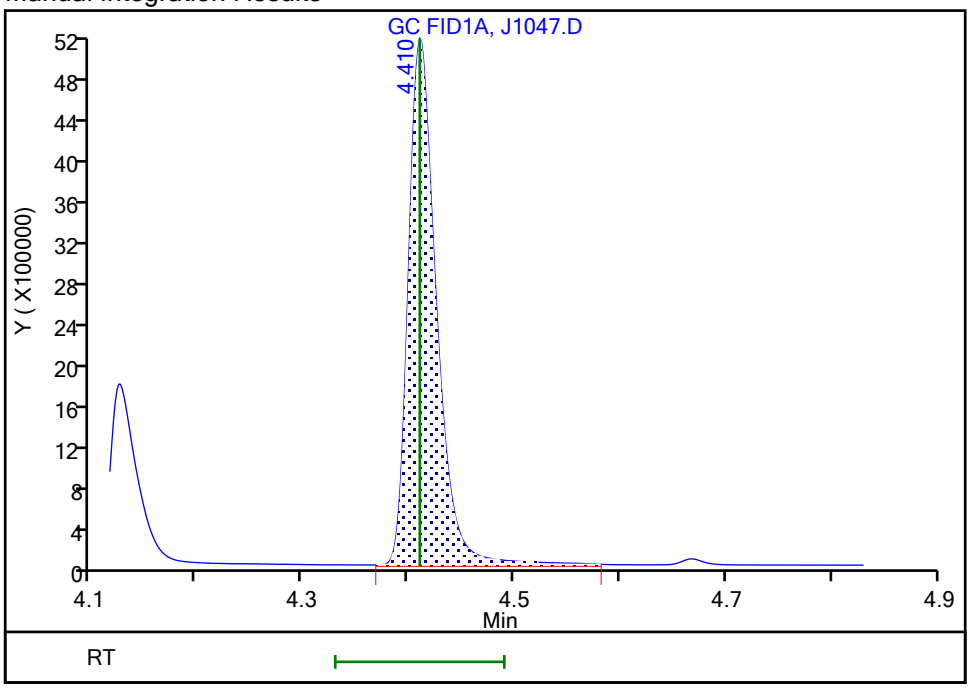
Processing Integration Results

RT: 4.41
Area: 9461289
Amount: 239.5571
Amount Units: ug/l



Manual Integration Results

RT: 4.41
Area: 9461289
Amount: 240.5559
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:17:12

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

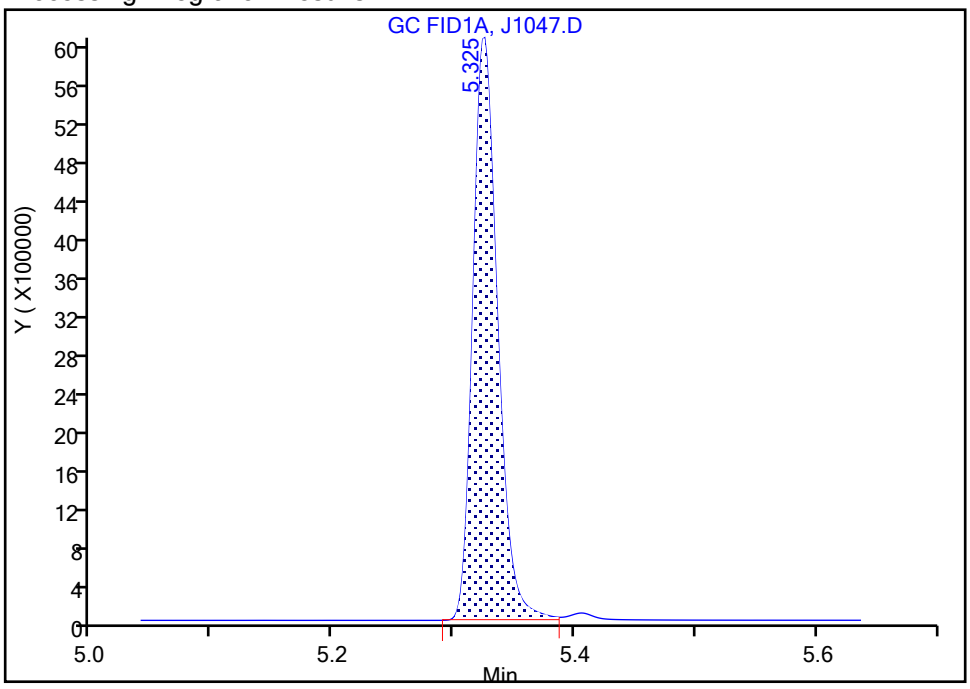
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D				
Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J		
Lims ID:	ic RSK 200 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

8 isobutylene, CAS: 115-11-7

Signal: 1

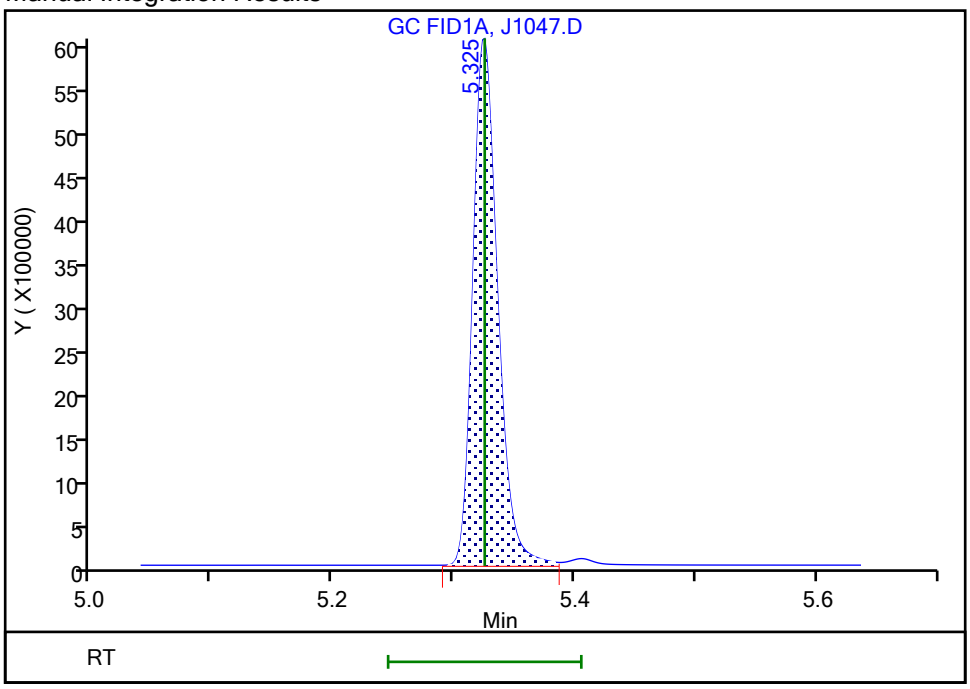
Processing Integration Results

RT: 5.33
Area: 8497786
Amount: 229.3614
Amount Units: ug/l



Manual Integration Results

RT: 5.33
Area: 8497786
Amount: 230.5297
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:18:31

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D
Lims ID: ic RSK 400 uL
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 22-Nov-2022 16:57:54 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 400 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:56 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 19:15:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.209	1.209	0.000	5077236	131.4	129.2	M
2	1.640	1.640	0.000	4645758	131.4	129.8	M
						RPD = 0.43	
3 Ethane							M
1	1.461	1.461	0.000	9498907	246.3	245.5	M
2	2.990	2.990	0.000	8694621	246.3	247.2	M
						RPD = 0.70	
4 Ethylene							M
1	1.746	1.746	0.000	9079325	229.8	230.6	M
2	2.570	2.570	0.000	7261000	229.8	231.2	
						RPD = 0.25	
5 Propane							Ma
1	2.506	2.506	0.000	13794006	361.3	360.7	M
2	4.914	4.914	0.000	12313361	361.3	360.1	M
						RPD = 0.17	
6 Acetylene							Ma
1	4.121	4.121	0.000	6251021	213.3	213.1	M
2	2.724	2.724	0.000	7277797	213.3	216.8	a
						RPD = 1.74	
7 Butane							Ma
1	4.407	4.407	0.000	18575547	476.1	472.3	M
2	6.415	6.415	0.000	16809482	476.1	460.3	M
						RPD = 2.56	
8 isobutylene							Ma
1	5.322	5.322	0.000	16772055	459.7	455.0	M
2	6.260	6.260	0.000	14593944	459.7	446.3	M
						RPD = 1.93	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 400.00 Units: uL

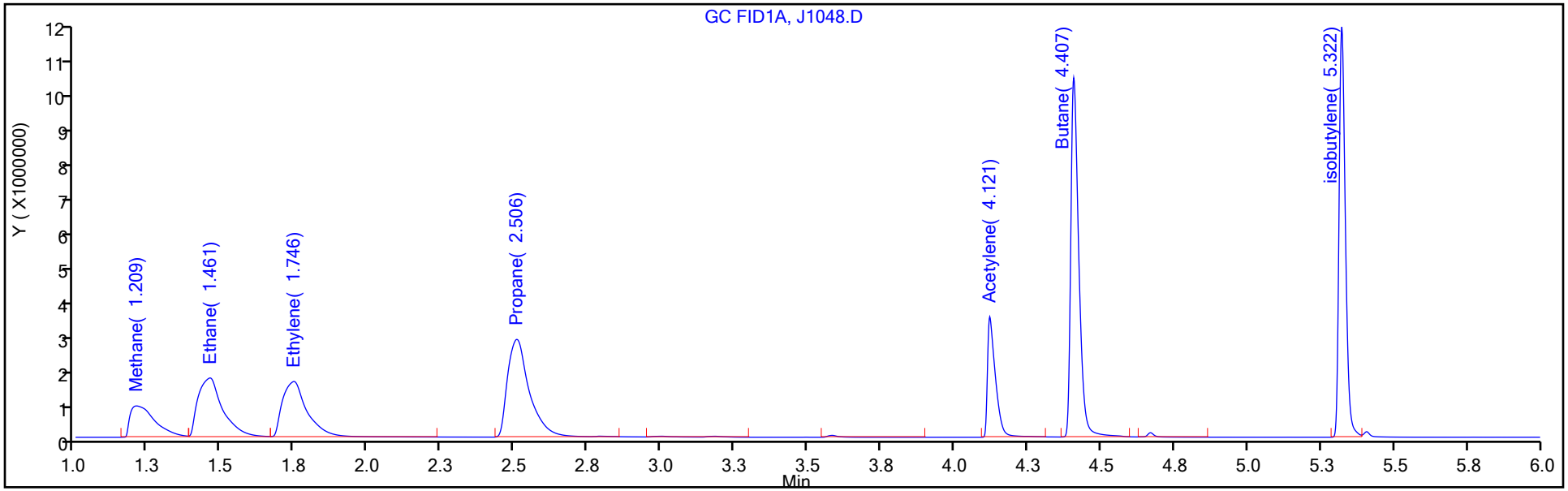
Report Date: 23-Nov-2022 11:28:56 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

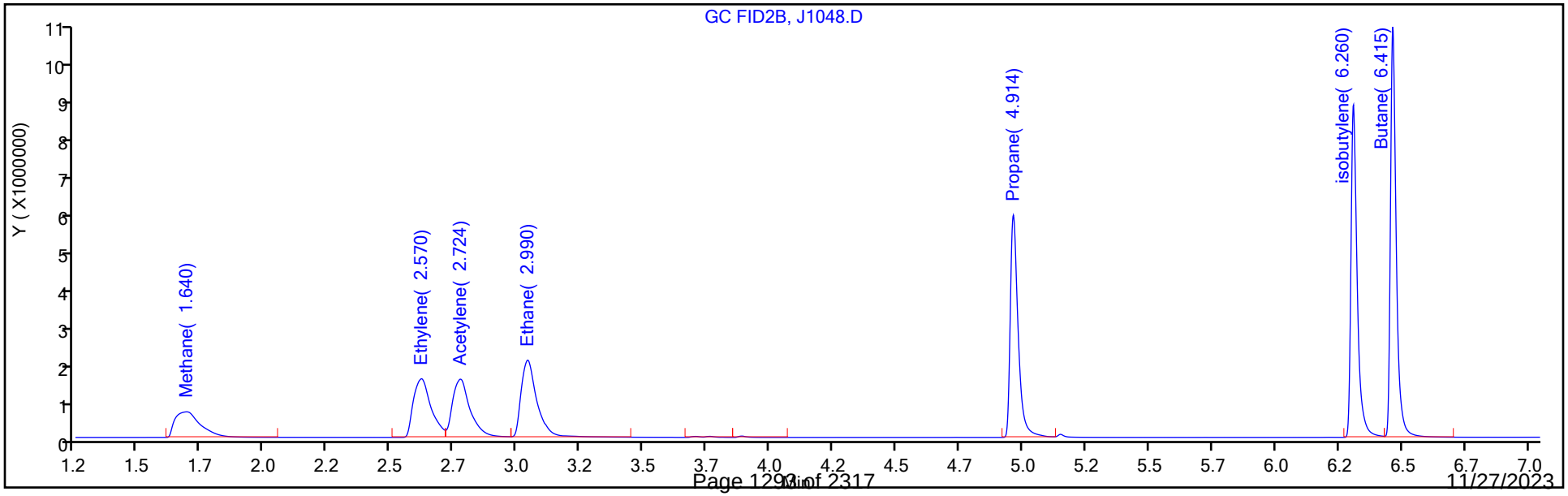
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D

Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 400 uL			Worklist Smp#:	8
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

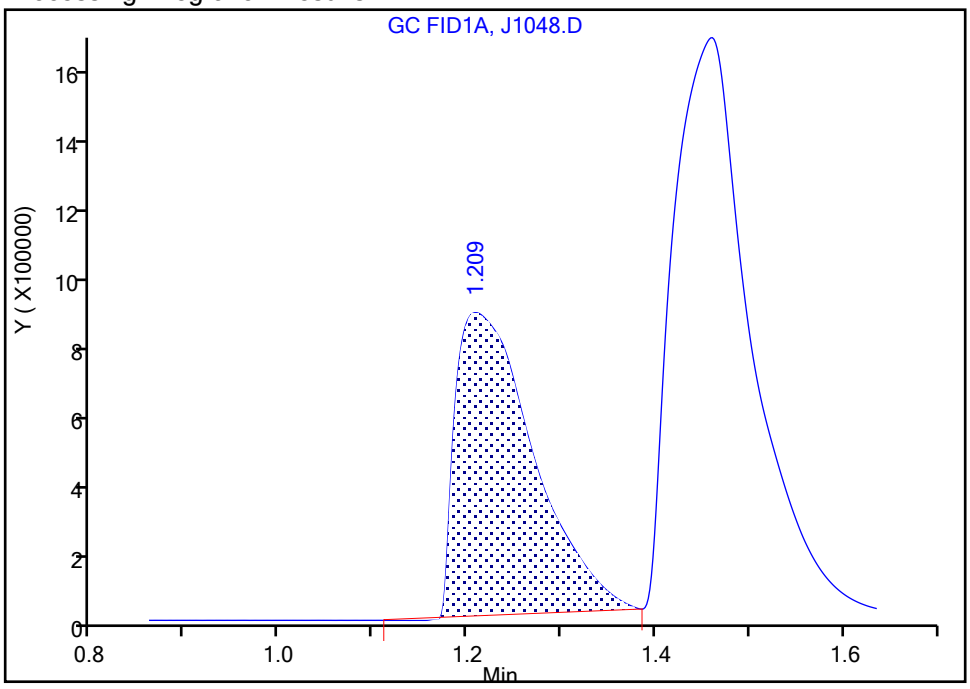
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D				
Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J		
Lims ID:	ic RSK 400 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

2 Methane, CAS: 74-82-8

Signal: 1

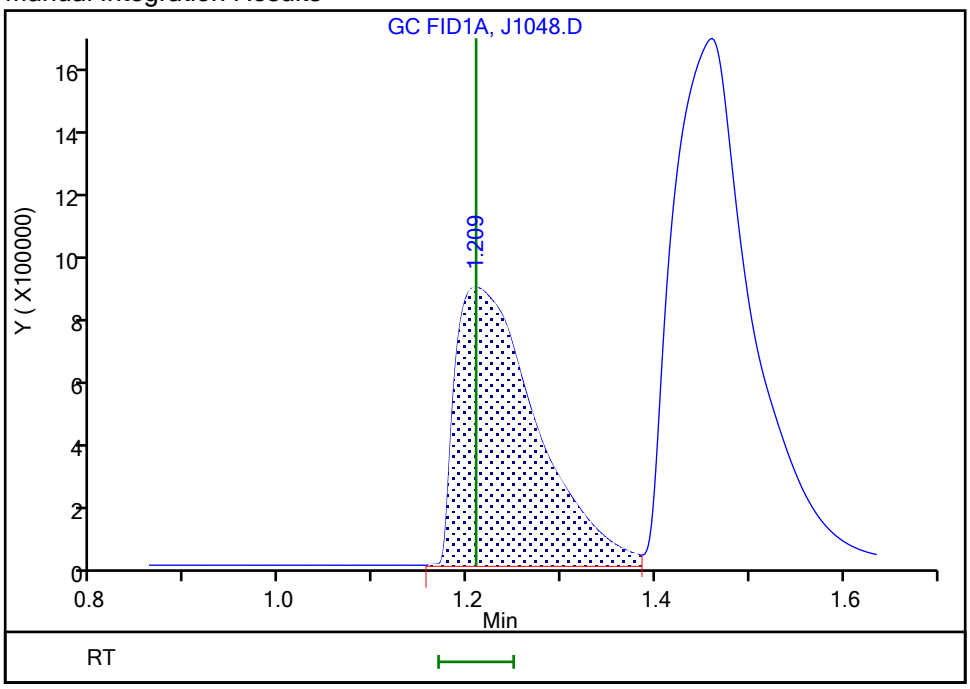
Processing Integration Results

RT: 1.21
Area: 4824290
Amount: 122.9735
Amount Units: ug/l



Manual Integration Results

RT: 1.21
Area: 5077236
Amount: 129.2141
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:04:49

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

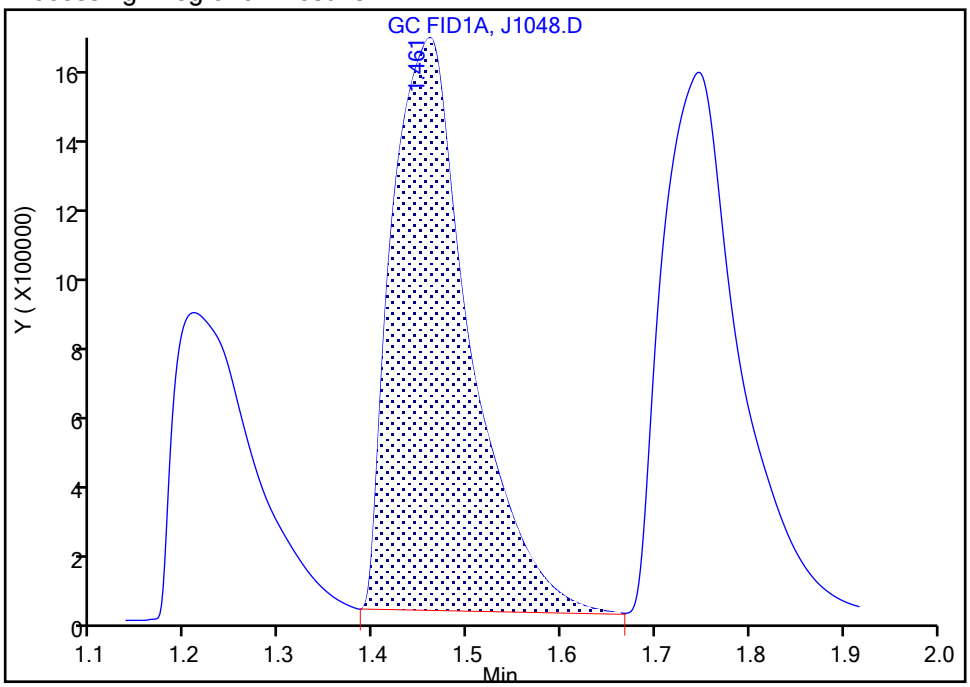
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D
Injection Date: 22-Nov-2022 16:57:54 Instrument ID: VGC_J
Lims ID: ic RSK 400 uL
Client ID:
Operator ID: JH ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

3 Ethane, CAS: 74-84-0

Signal: 1

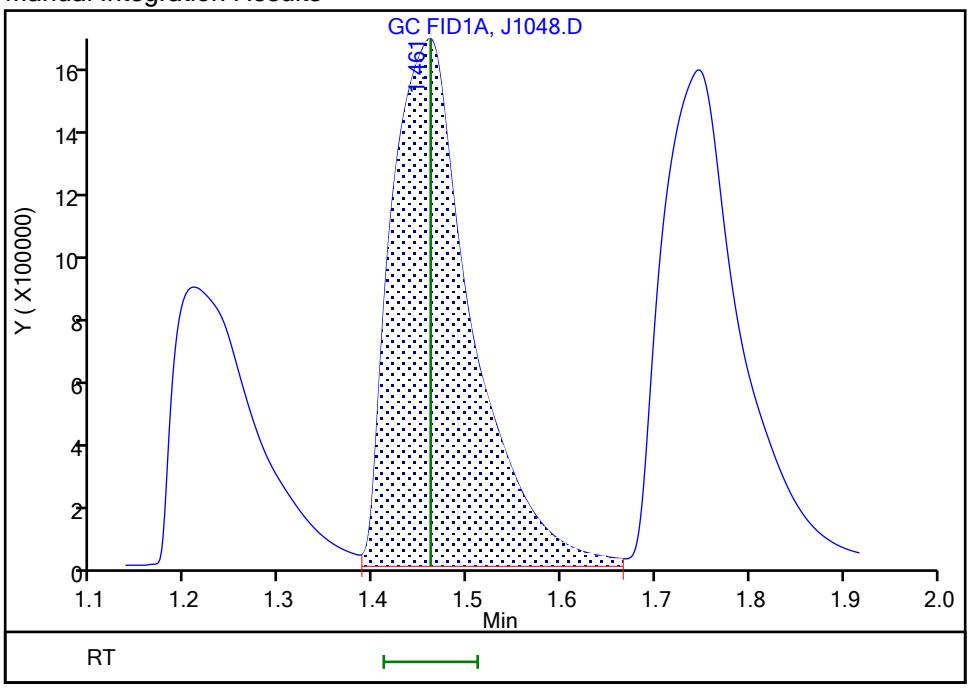
Processing Integration Results

RT: 1.46
Area: 9079596
Amount: 237.0199
Amount Units: ug/l



Manual Integration Results

RT: 1.46
Area: 9498907
Amount: 245.5152
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:05:34
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

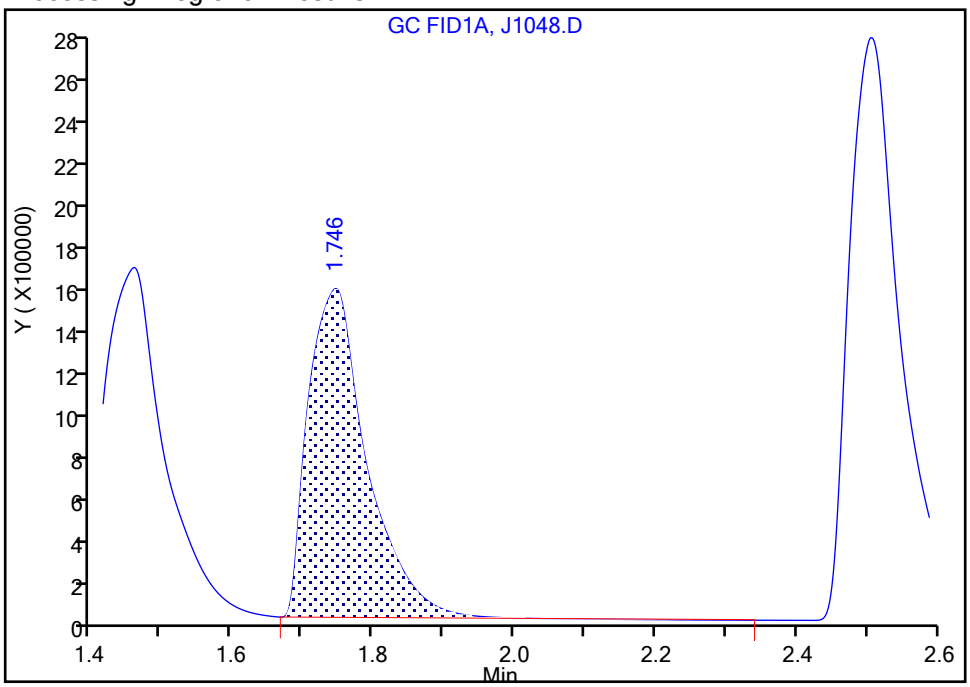
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D
Injection Date: 22-Nov-2022 16:57:54 Instrument ID: VGC_J
Lims ID: ic RSK 400 uL
Client ID:
Operator ID: JH ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

4 Ethylene, CAS: 74-85-1

Signal: 1

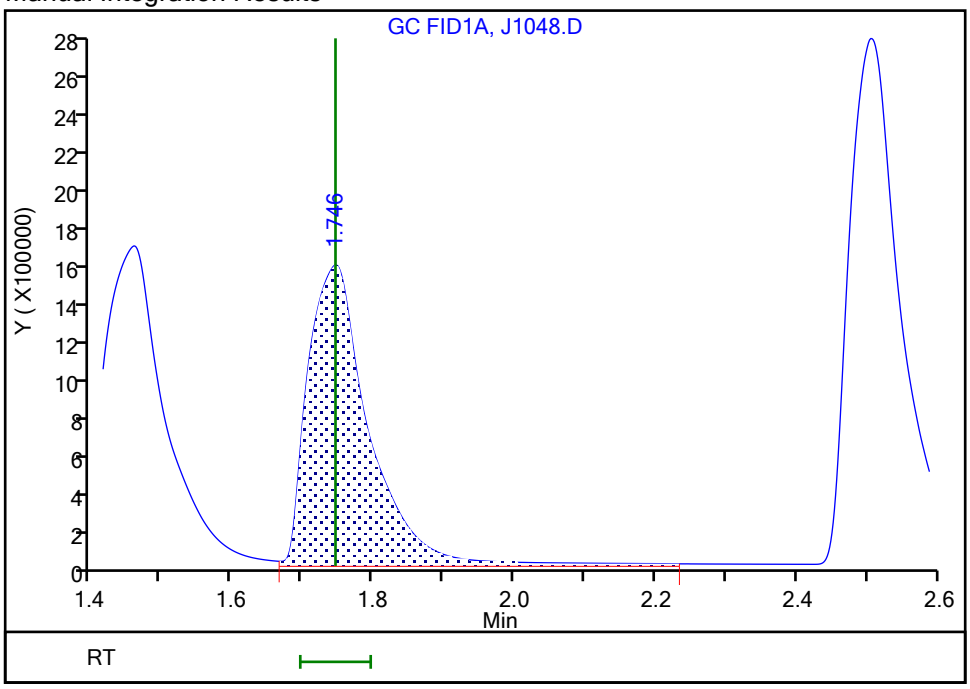
Processing Integration Results

RT: 1.75
Area: 8628676
Amount: 221.5531
Amount Units: ug/l



Manual Integration Results

RT: 1.75
Area: 9079325
Amount: 230.5908
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:06:32
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

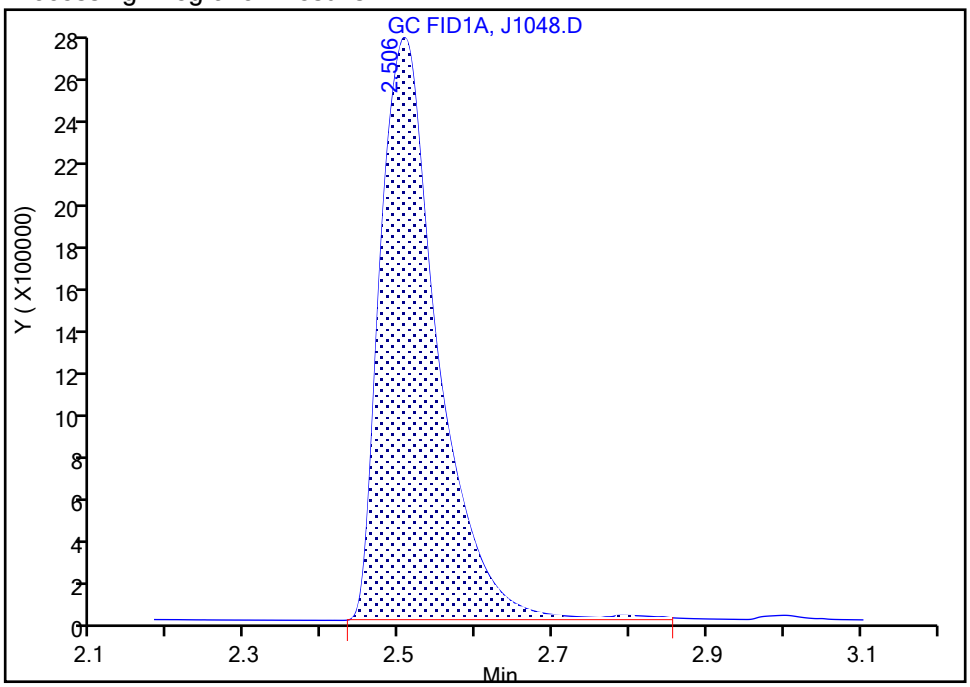
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D				
Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J		
Lims ID:	ic RSK 400 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

5 Propane, CAS: 74-98-6

Signal: 1

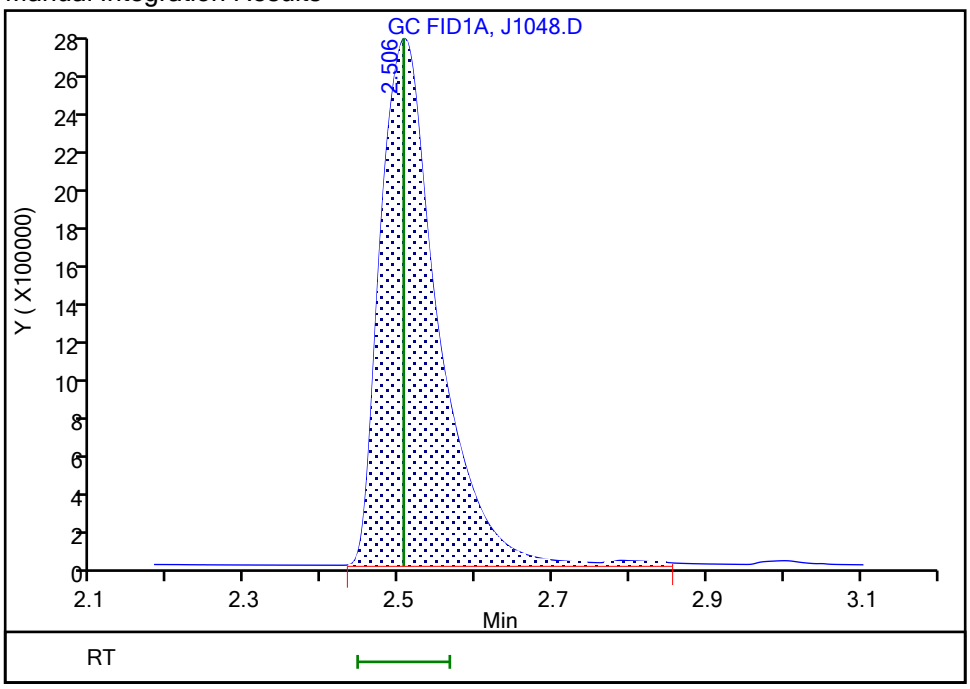
Processing Integration Results

RT: 2.51
Area: 13794006
Amount: 360.5532
Amount Units: ug/l



Manual Integration Results

RT: 2.51
Area: 13794006
Amount: 360.7274
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:07:38
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

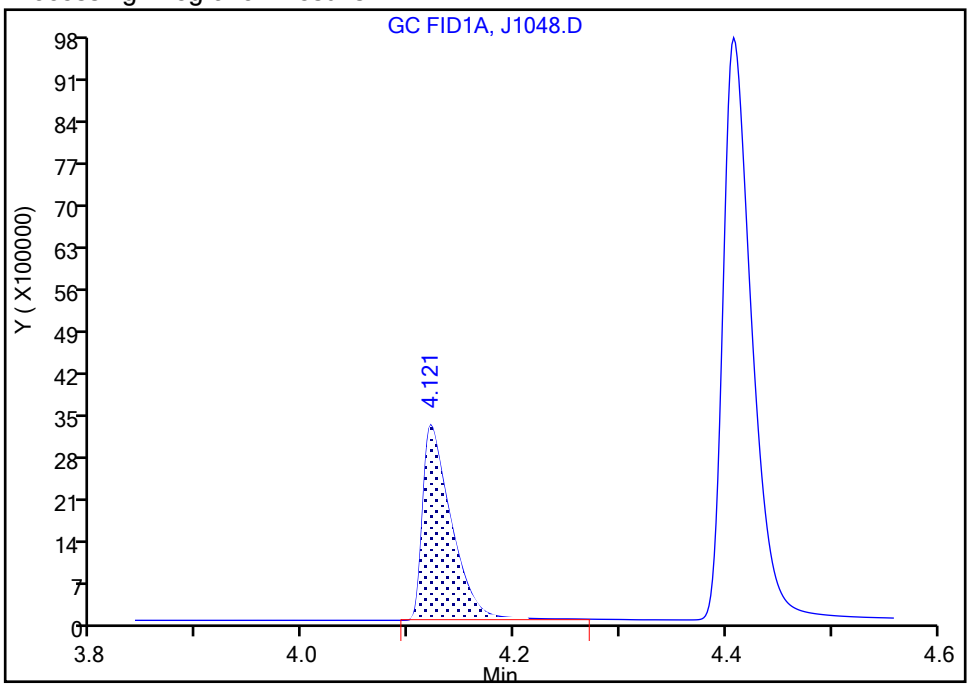
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D				
Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J		
Lims ID:	ic RSK 400 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

6 Acetylene, CAS: 74-86-2

Signal: 1

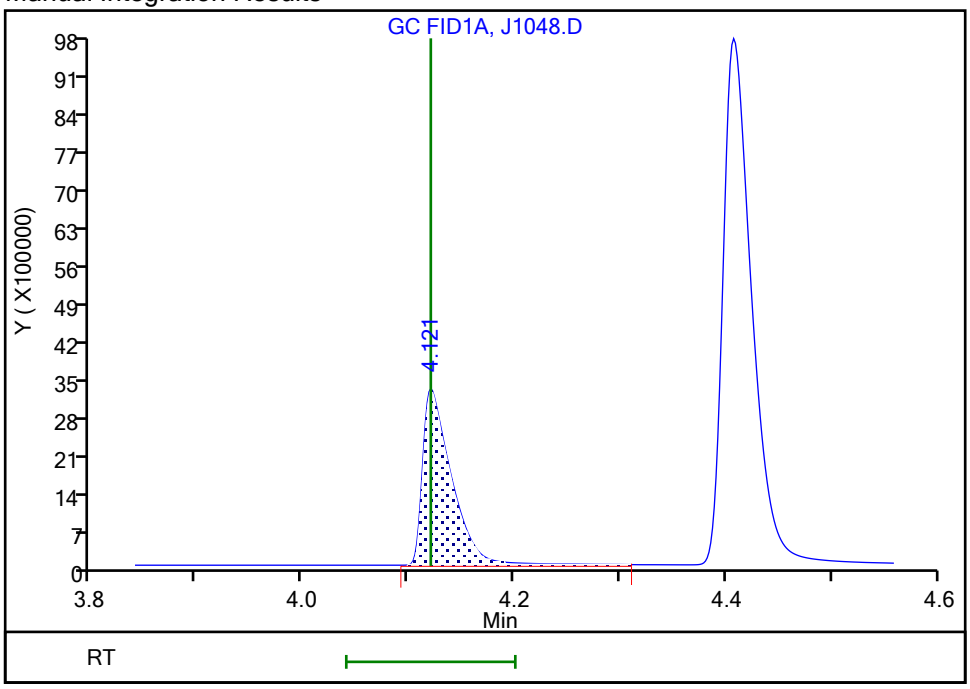
Processing Integration Results

RT: 4.12
Area: 6212163
Amount: 211.2919
Amount Units: ug/l



Manual Integration Results

RT: 4.12
Area: 6251021
Amount: 213.0722
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:10:29
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

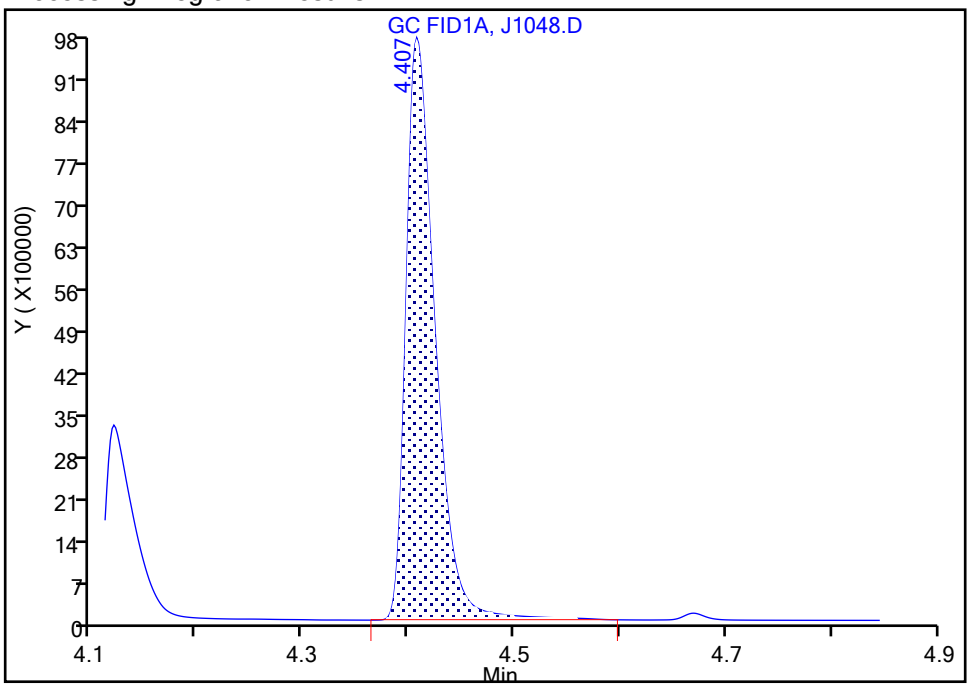
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D				
Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J		
Lims ID:	ic RSK 400 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

7 Butane, CAS: 106-97-8

Signal: 1

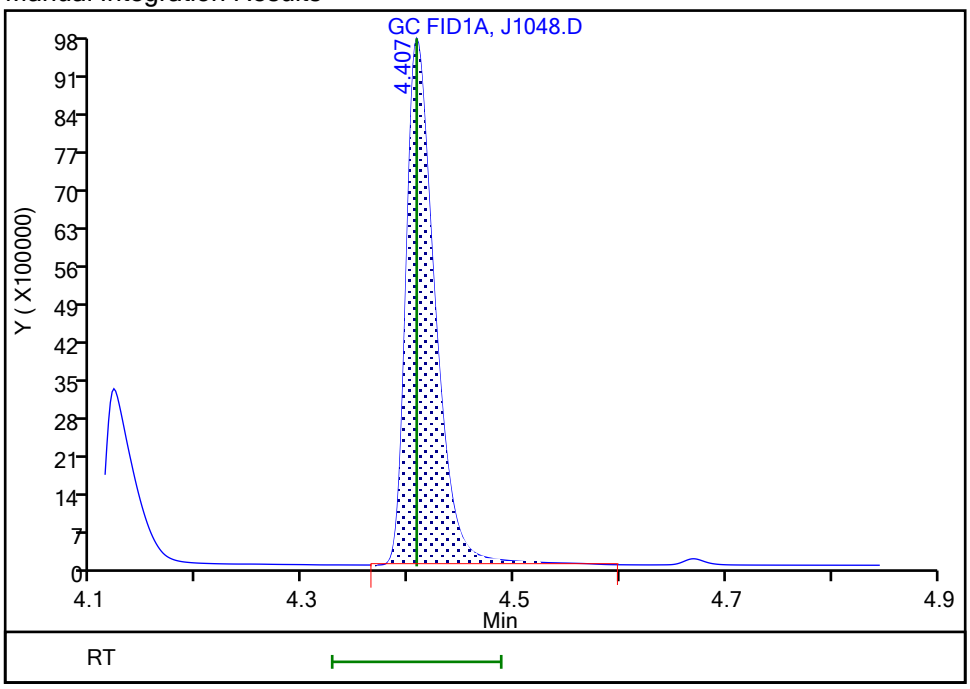
Processing Integration Results

RT: 4.41
Area: 18575547
Amount: 471.4786
Amount Units: ug/l



Manual Integration Results

RT: 4.41
Area: 18575547
Amount: 472.2884
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:11:48

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

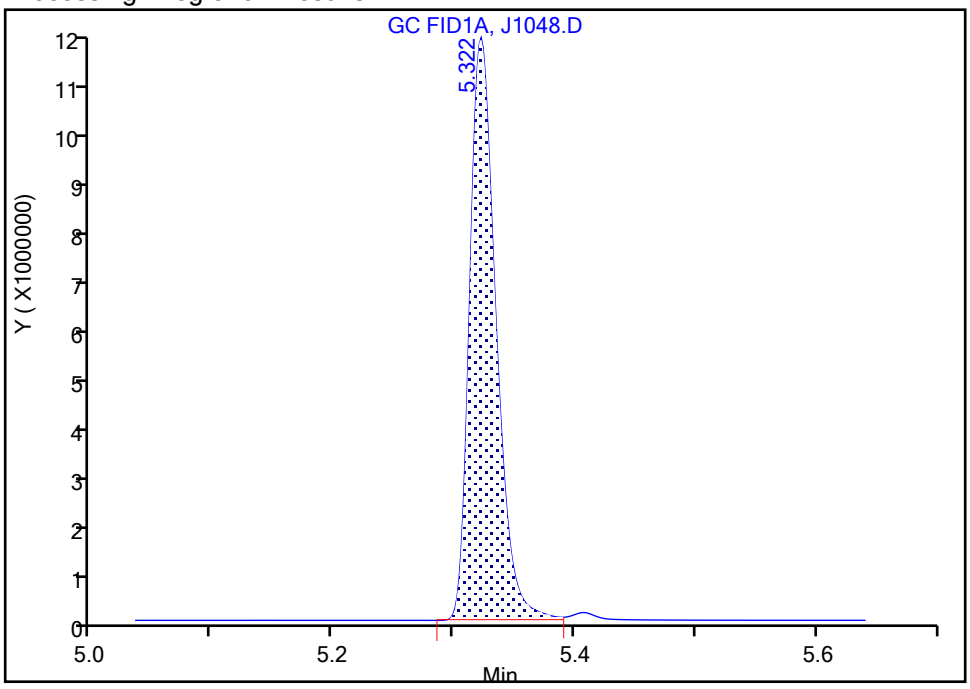
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D
Injection Date: 22-Nov-2022 16:57:54 Instrument ID: VGC_J
Lims ID: ic RSK 400 uL
Client ID:
Operator ID: JH ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

8 isobutylene, CAS: 115-11-7

Signal: 1

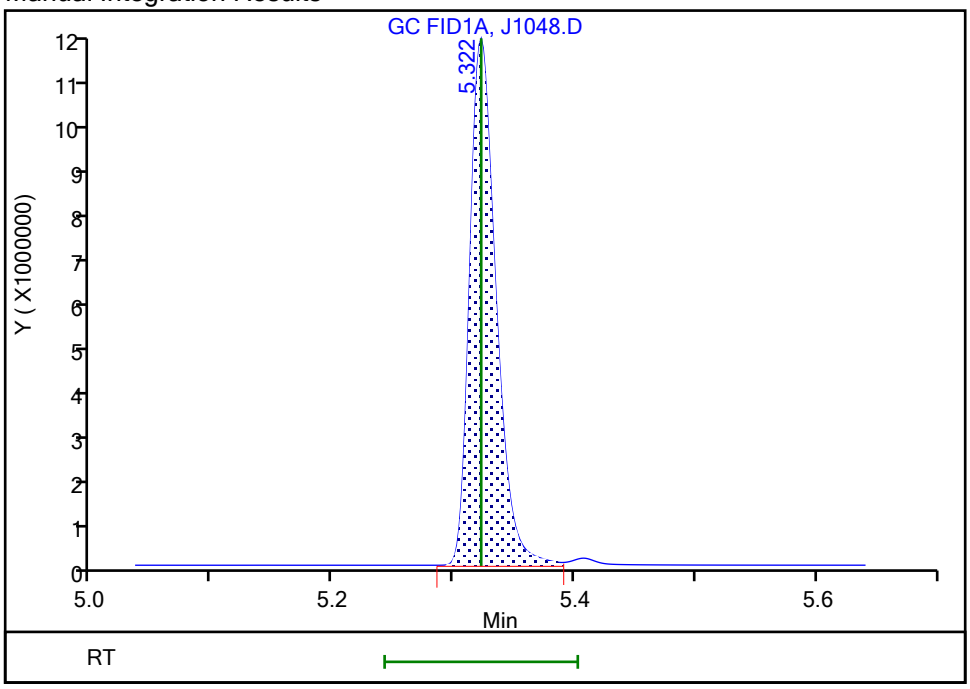
Processing Integration Results

RT: 5.32
Area: 16772055
Amount: 454.0708
Amount Units: ug/l



Manual Integration Results

RT: 5.32
Area: 16772055
Amount: 454.9958
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:11:00
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D
Lims ID: ic RSK 800 uL
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 22-Nov-2022 17:11:46 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 800 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:57 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 19:18:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.209	1.209	0.000	10208583	262.8	261.8	M
2	1.642	1.640	0.002	9189020	262.8	258.2	
						RPD = 1.39	
3 Ethane							M
1	1.460	1.461	-0.001	19164973	492.7	495.4	M
2	2.990	2.990	0.000	17514088	492.7	498.0	
						RPD = 0.54	
4 Ethylene							M
1	1.747	1.746	0.001	18178326	459.6	461.7	M
2	2.570	2.570	0.000	14622496	459.6	465.5	
						RPD = 0.83	
5 Propane							M
1	2.507	2.506	0.001	27563548	722.6	720.8	
2	4.910	4.914	-0.004	24648508	722.6	720.9	M
						RPD = 0.01	
6 Acetylene							
1	4.112	4.121	-0.009	12305009	426.7	419.4	
2	2.725	2.724	0.001	14408475	426.7	429.2	
						RPD = 2.31	
7 Butane							
1	4.402	4.407	-0.005	37132422	952.3	944.1	
2	6.412	6.415	-0.003	33490336	952.3	917.1	
						RPD = 2.90	
8 isobutylene							Ma
1	5.315	5.322	-0.007	33544265	919.4	910.0	M
2	6.257	6.260	-0.003	29144072	919.4	891.2	a
						RPD = 2.08	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 800.00 Units: uL

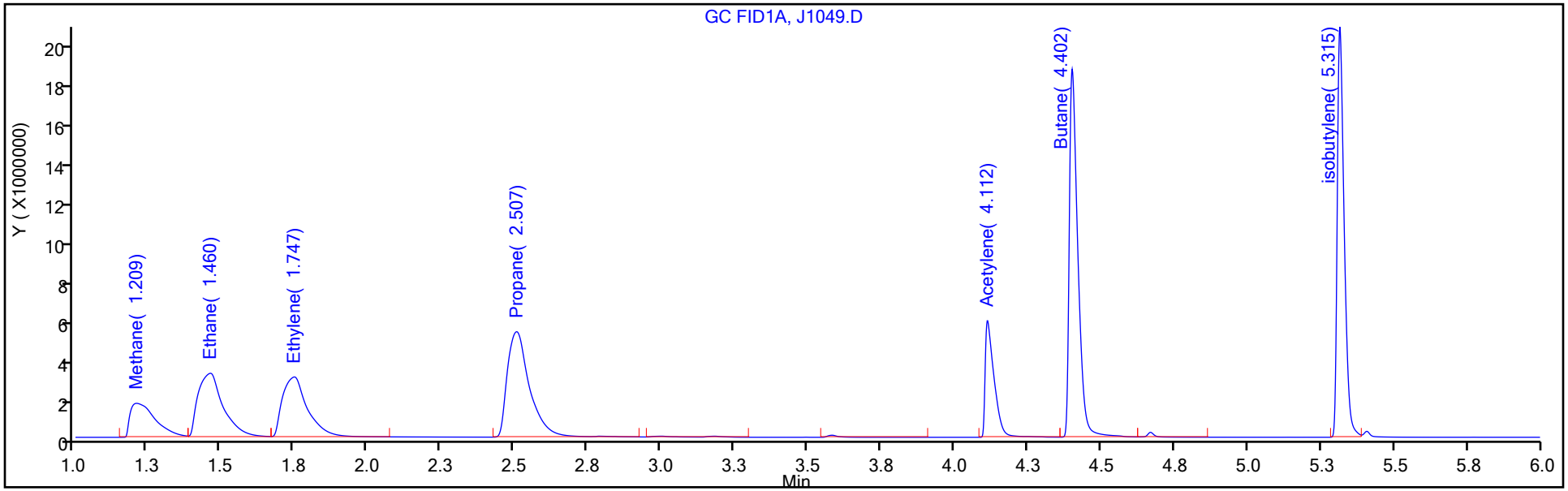
Report Date: 23-Nov-2022 11:28:57 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

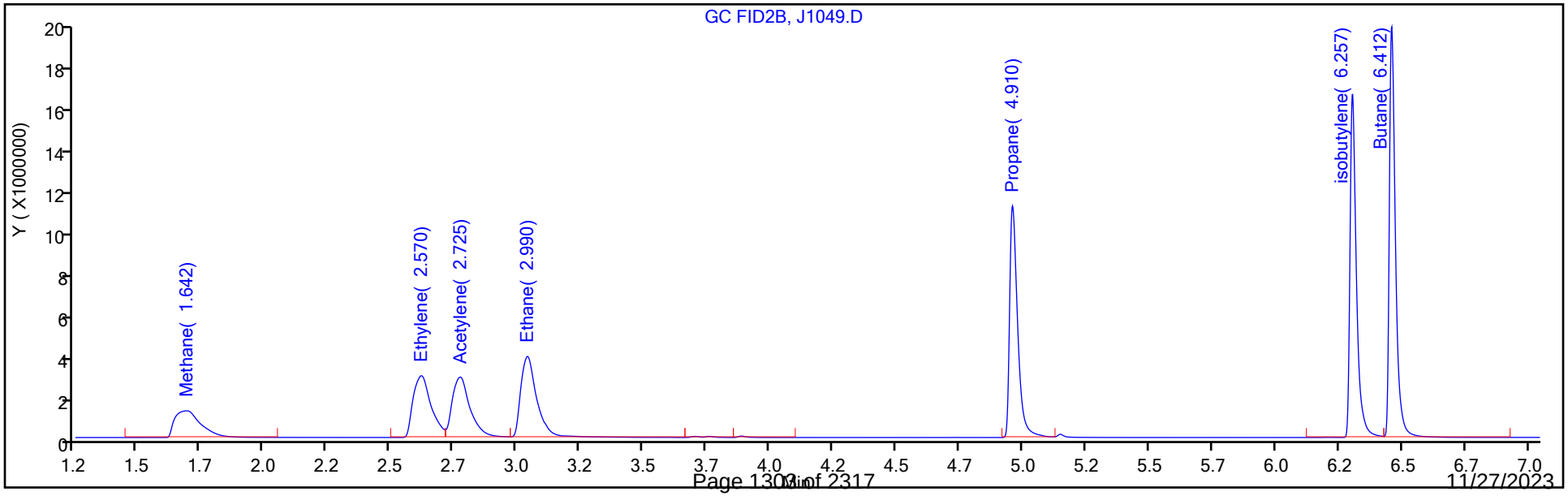
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D

Injection Date:	22-Nov-2022 17:11:46	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 800 uL			Worklist Smp#:	9
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

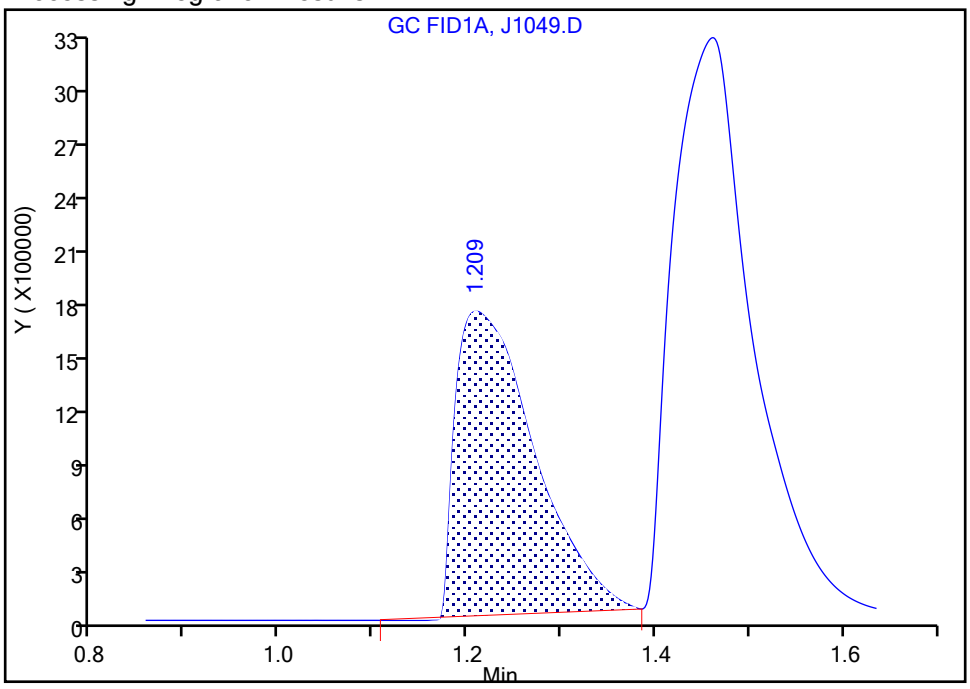
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D				
Injection Date:	22-Nov-2022 17:11:46	Instrument ID:	VGC_J		
Lims ID:	ic RSK 800 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	9	Worklist Smp#:	9
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

2 Methane, CAS: 74-82-8

Signal: 1

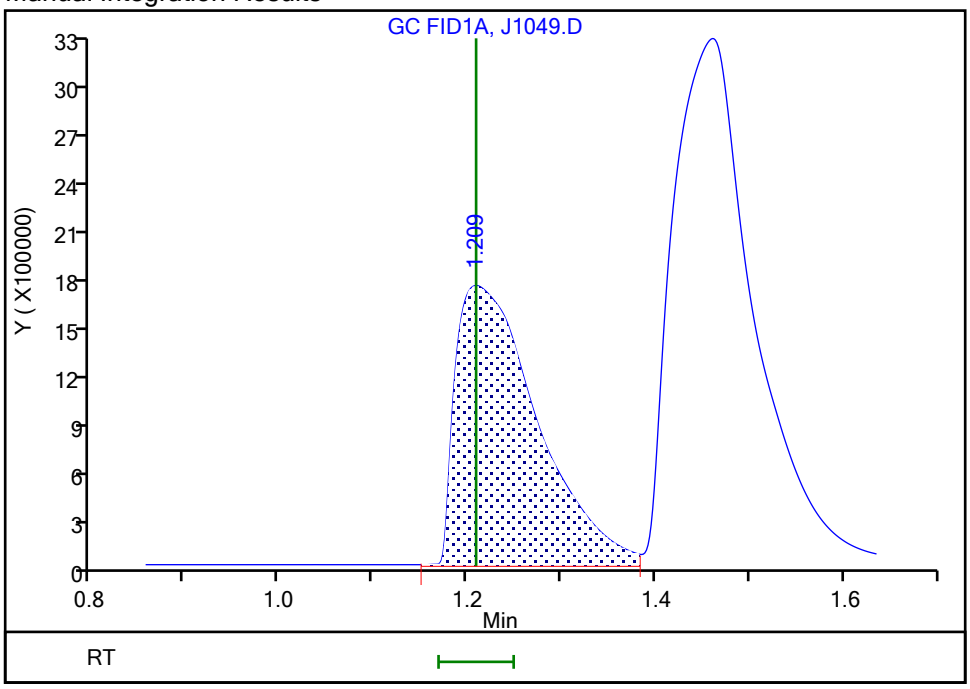
Processing Integration Results

RT: 1.21
Area: 9655972
Amount: 248.4633
Amount Units: ug/l



Manual Integration Results

RT: 1.21
Area: 10208583
Amount: 261.8458
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:15:46
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

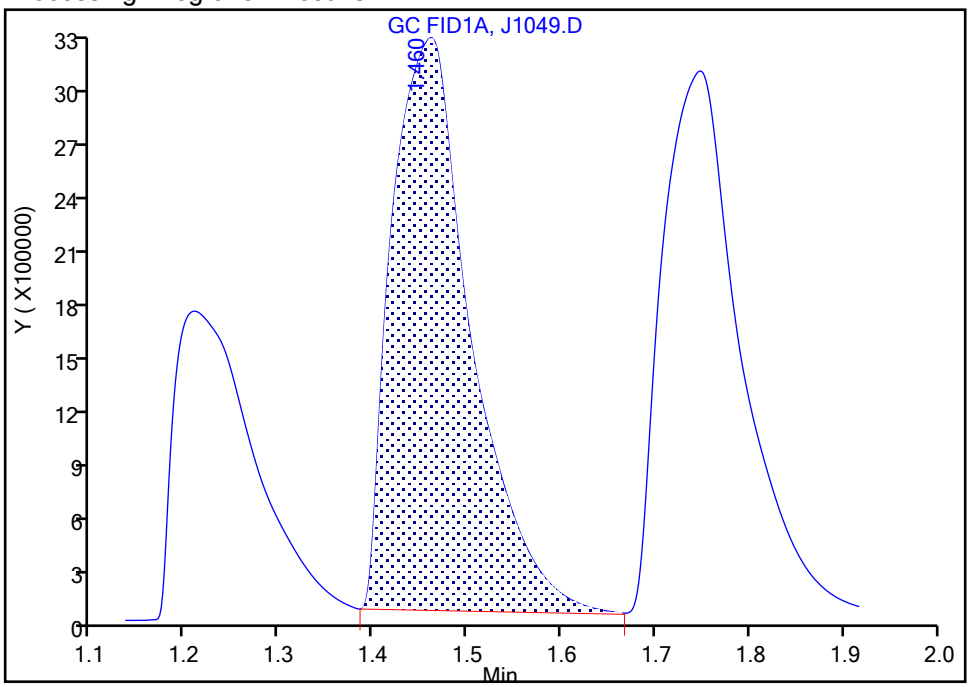
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D				
Injection Date:	22-Nov-2022 17:11:46	Instrument ID:	VGC_J		
Lims ID:	ic RSK 800 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	9	Worklist Smp#:	9
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

3 Ethane, CAS: 74-84-0

Signal: 1

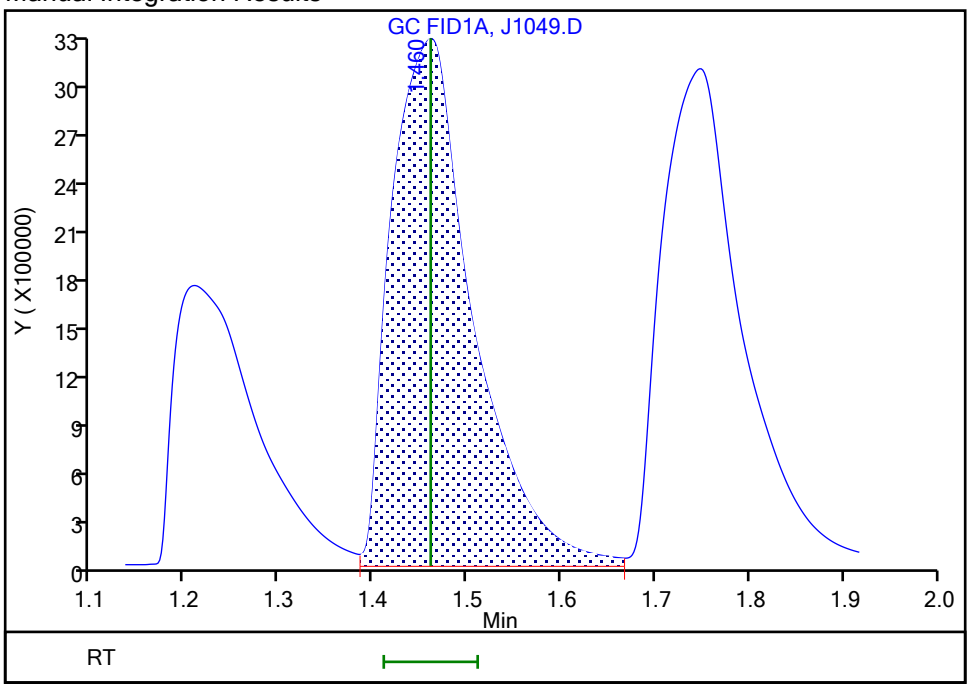
Processing Integration Results

RT: 1.46
Area: 18259032
Amount: 475.7034
Amount Units: ug/l



Manual Integration Results

RT: 1.46
Area: 19164973
Amount: 495.3509
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:16:51

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

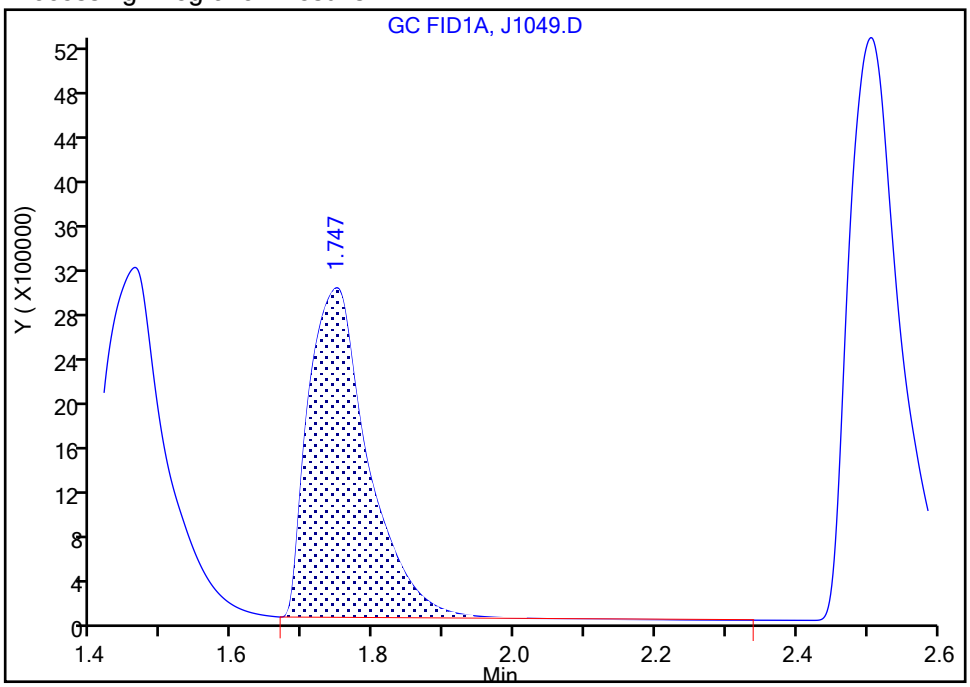
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D				
Injection Date:	22-Nov-2022 17:11:46	Instrument ID:	VGC_J		
Lims ID:	ic RSK 800 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	9	Worklist Smp#:	9
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

4 Ethylene, CAS: 74-85-1

Signal: 1

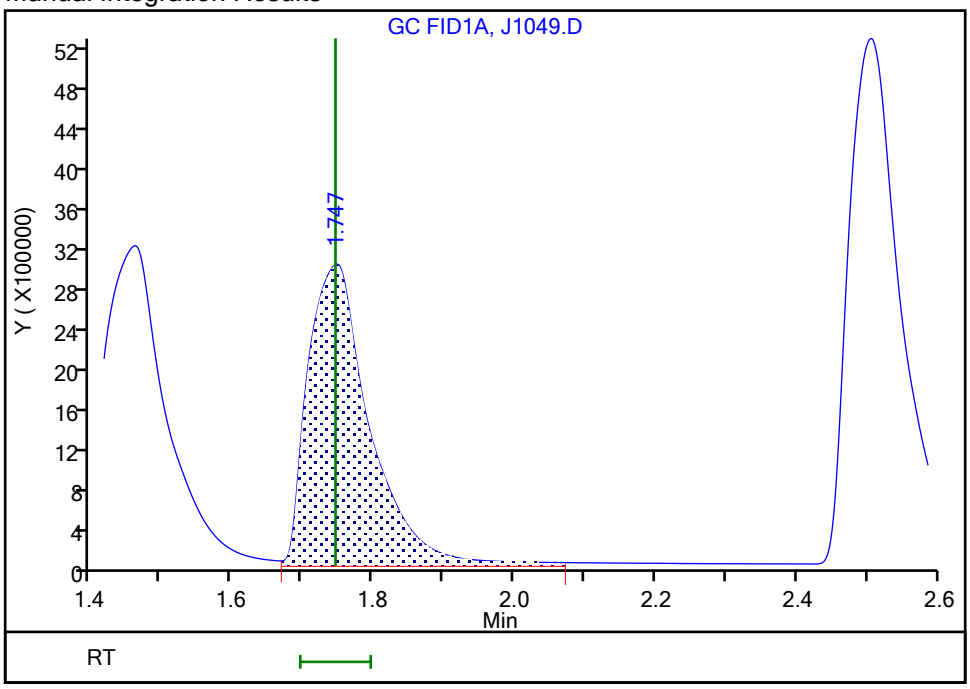
Processing Integration Results

RT: 1.75
Area: 17380731
Amount: 444.6911
Amount Units: ug/l



Manual Integration Results

RT: 1.75
Area: 18178326
Amount: 461.6813
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:17:12

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

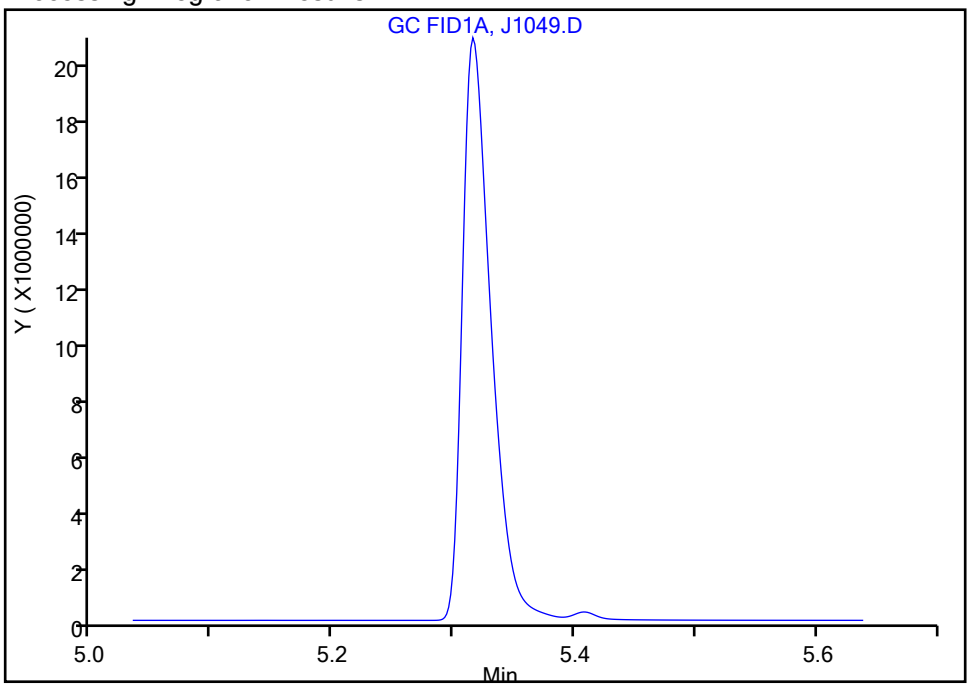
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D				
Injection Date:	22-Nov-2022 17:11:46	Instrument ID:	VGC_J		
Lims ID:	ic RSK 800 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	9	Worklist Smp#:	9
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

8 isobutylene, CAS: 115-11-7

Signal: 1

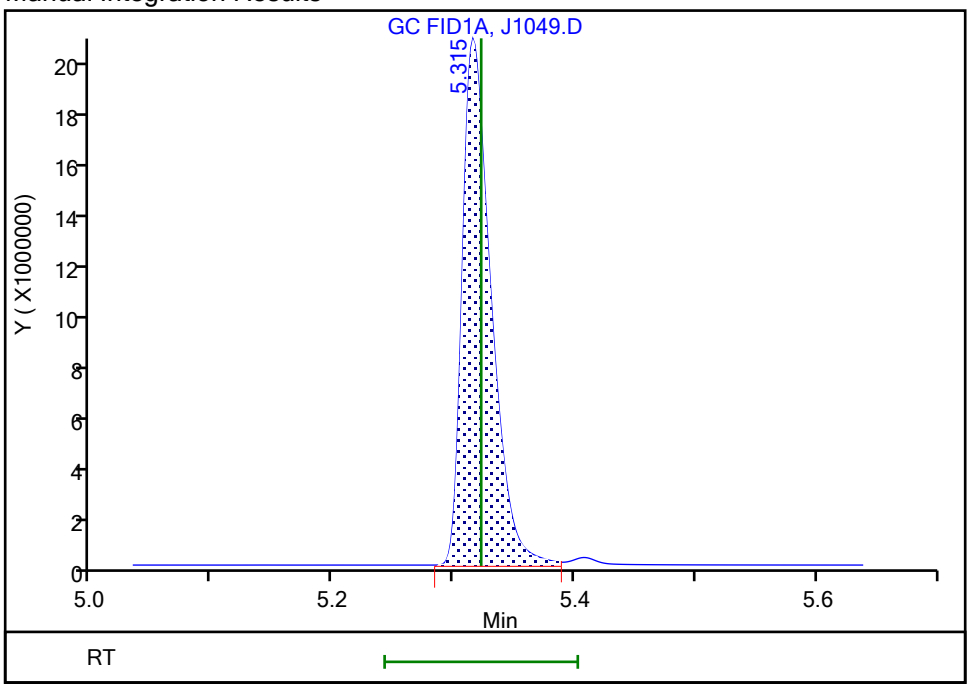
Not Detected
Expected RT: 5.32

Processing Integration Results



Manual Integration Results

RT: 5.32
Area: 33544265
Amount: 909.9958
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:18:26
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1050.D
Lims ID: ic Me 50 uL
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 22-Nov-2022 17:25:36 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic Me 50 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 13:14:39 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 18:07:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.207	1.209	-0.002	65400484	1626.3	1688.4	
2	1.640	1.640	0.000	58327040	1626.3	1647.8	M
						RPD = 2.44	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

RSK175methane_00011 Amount Added: 50.00 Units: uL

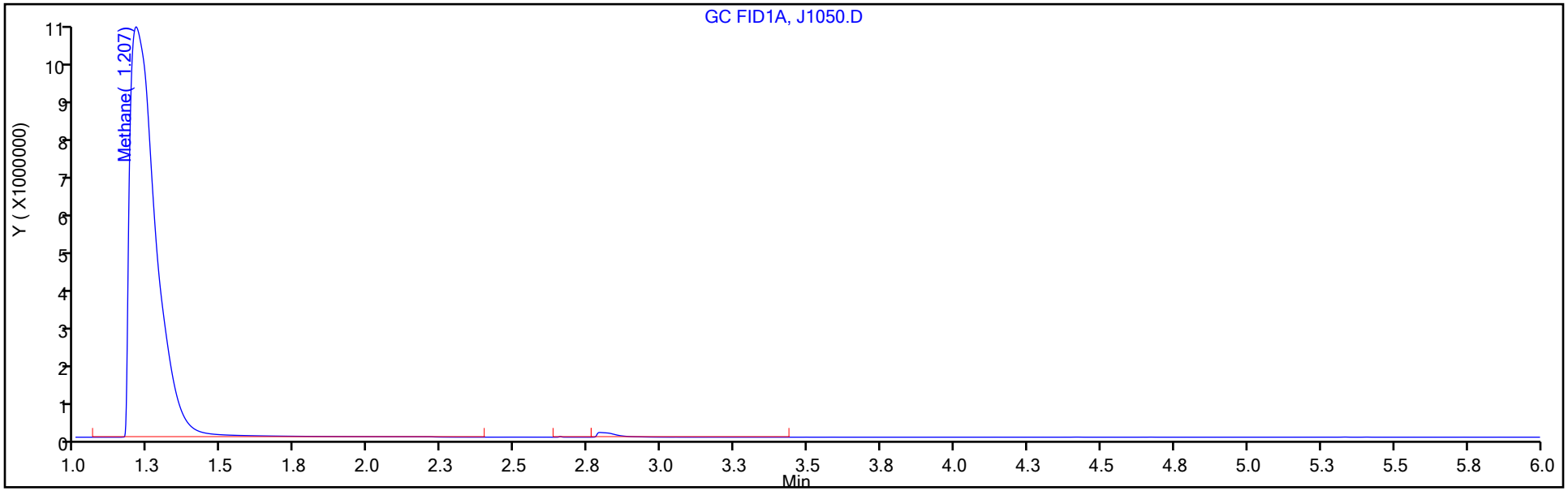
Report Date: 23-Nov-2022 13:14:40 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

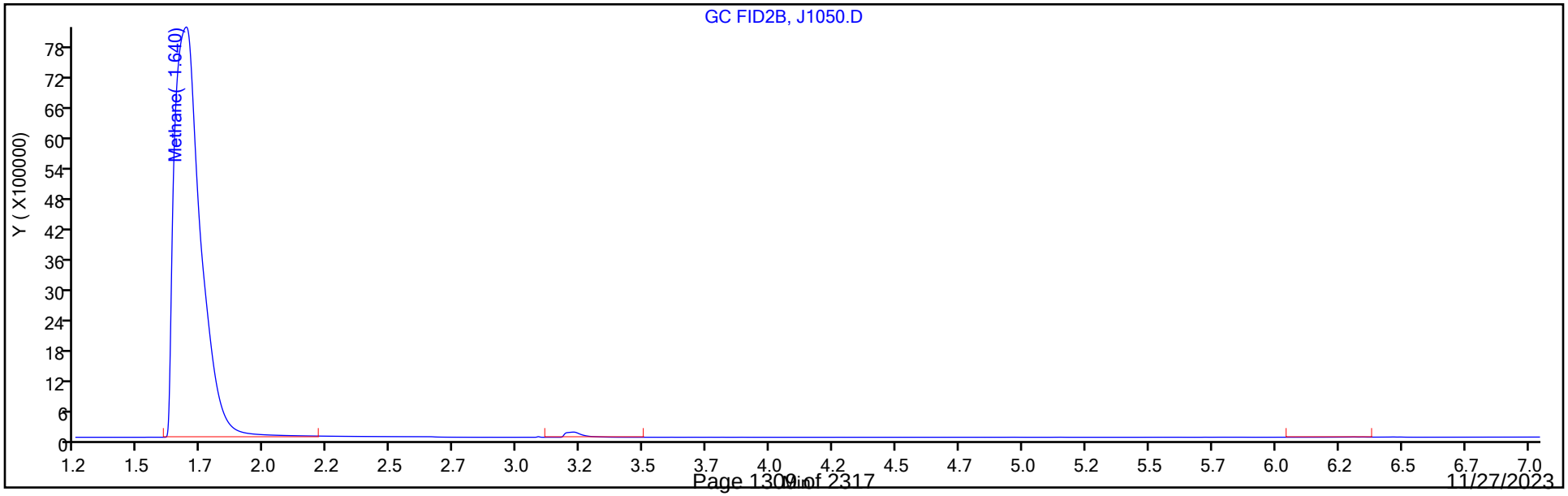
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1050.D

Injection Date:	22-Nov-2022 17:25:36	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic Me 50 uL			Worklist Smp#:	10
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1051.D				
Lims ID:	ic Me 200 uL				
Client ID:					
Sample Type:	IC	Calib Level:	9		
Inject. Date:	22-Nov-2022 17:39:26	ALS Bottle#:	11	Worklist Smp#:	11
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Sample Info:	ic Me 200 uL				
Operator ID:	JH	Instrument ID:	VGC_J		
Sublist:	chrom-RSK_J*sub5				
Method:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m				
Limit Group:	GCV - RSK 175				
Method Label:	DV-GC-0025: Dissolved Gases in Water by RSK-175				
Last Update:	23-Nov-2022 11:28:58	Calib Date:	22-Nov-2022 17:53:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D				
Column 1 :	Rt-Alumina BOND/KCl (0.53 mm)		Det: GC FID1A		
Column 2 :	HP-PLOT/Q (0.53 mm)		Det: GC FID2B		
Process Host:	CTX1625				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							
1	1.207	1.209	-0.002	247686566	6505.0	6400.0	
2	1.637	1.640	-0.003	222721558	6505.0	6296.6	
						RPD = 1.63	

Reagents:

RSK175methane_00011 Amount Added: 200.00 Units: uL

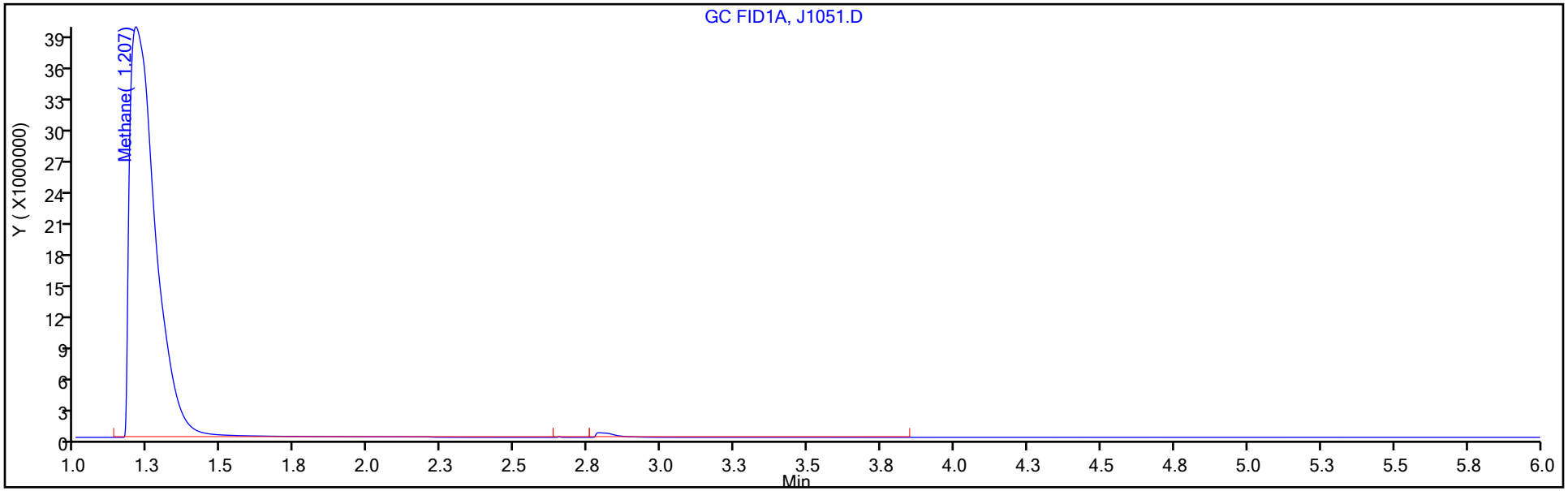
Report Date: 23-Nov-2022 11:28:58 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

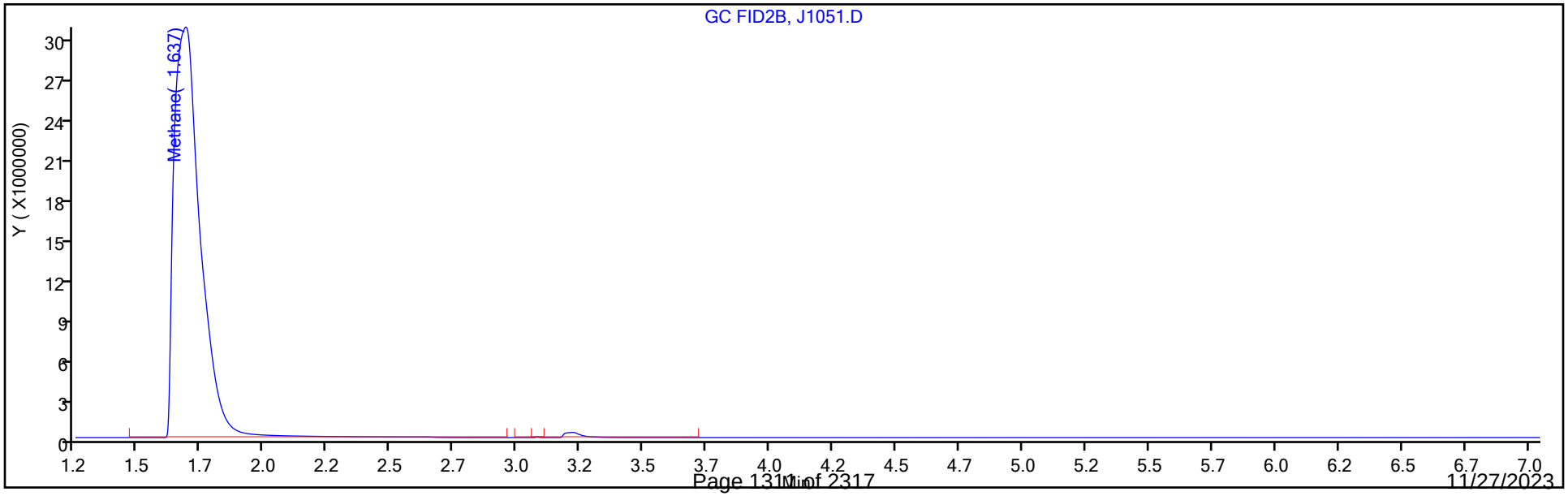
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1051.D

Injection Date:	22-Nov-2022 17:39:26	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic Me 200 uL			Worklist Smp#:	11
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D				
Lims ID:	ic Me 600 uL				
Client ID:					
Sample Type:	IC	Calib Level:	10		
Inject. Date:	22-Nov-2022 17:53:13	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Sample Info:	ic Me 600 uL				
Operator ID:	JH	Instrument ID:	VGC_J		
Sublist:	chrom-RSK_J*sub5				
Method:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m				
Limit Group:	GCV - RSK 175				
Method Label:	DV-GC-0025: Dissolved Gases in Water by RSK-175				
Last Update:	23-Nov-2022 11:28:58	Calib Date:	22-Nov-2022 17:53:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D				
Column 1 :	Rt-Alumina BOND/KCl (0.53 mm)		Det: GC FID1A		
Column 2 :	HP-PLOT/Q (0.53 mm)		Det: GC FID2B		
Process Host:	CTX1625				

First Level Reviewer: DJQ7 Date: 22-Nov-2022 19:20:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.205	1.209	-0.004	740134626	19515	19129	
2	1.635	1.640	-0.005	671116476	19515	18976	M
						RPD = 0.80	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

RSK175methane_00011 Amount Added: 600.00 Units: uL

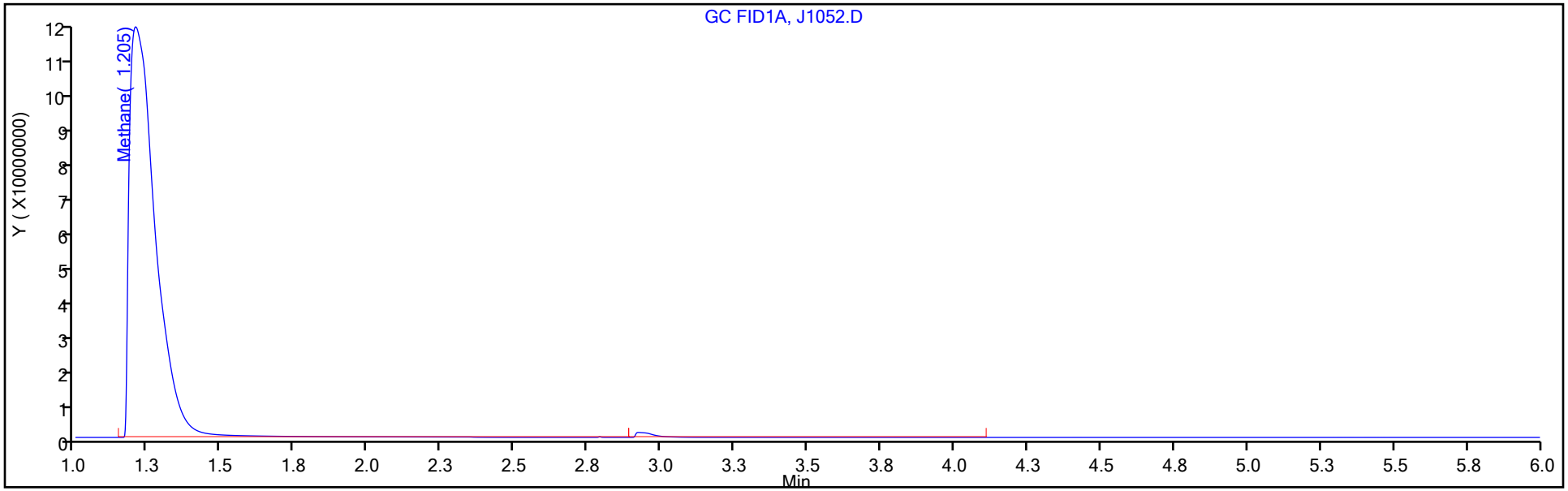
Report Date: 23-Nov-2022 11:28:59 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

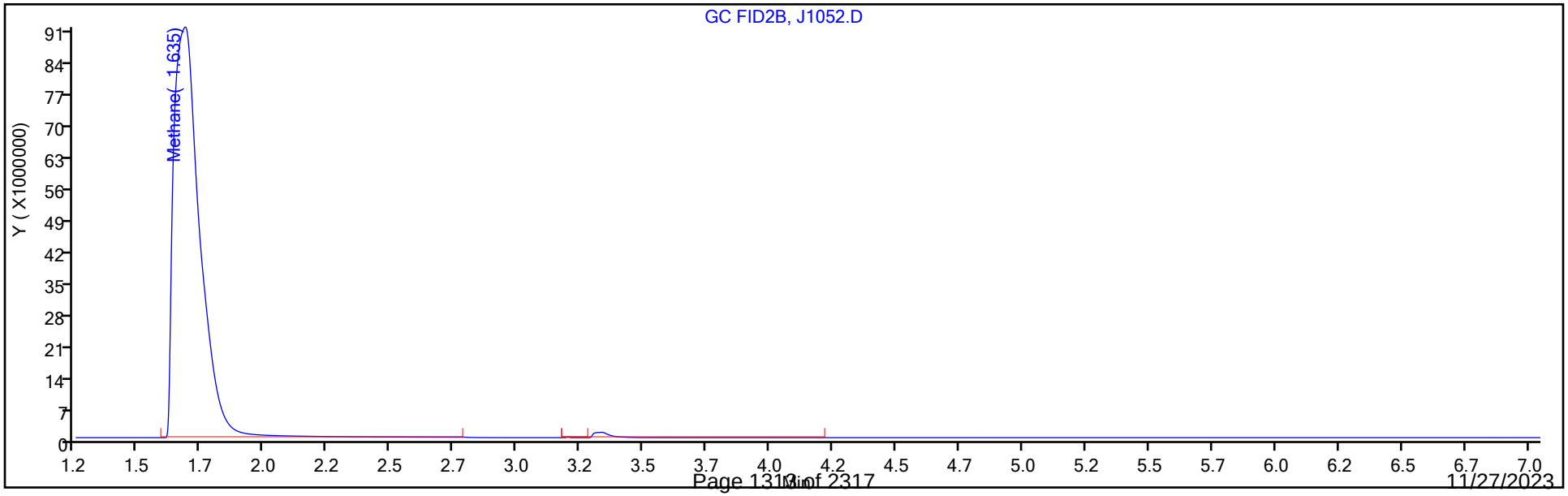
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Injection Date:	22-Nov-2022 17:53:13	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic Me 600 uL			Worklist Smp#:	12
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Methane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

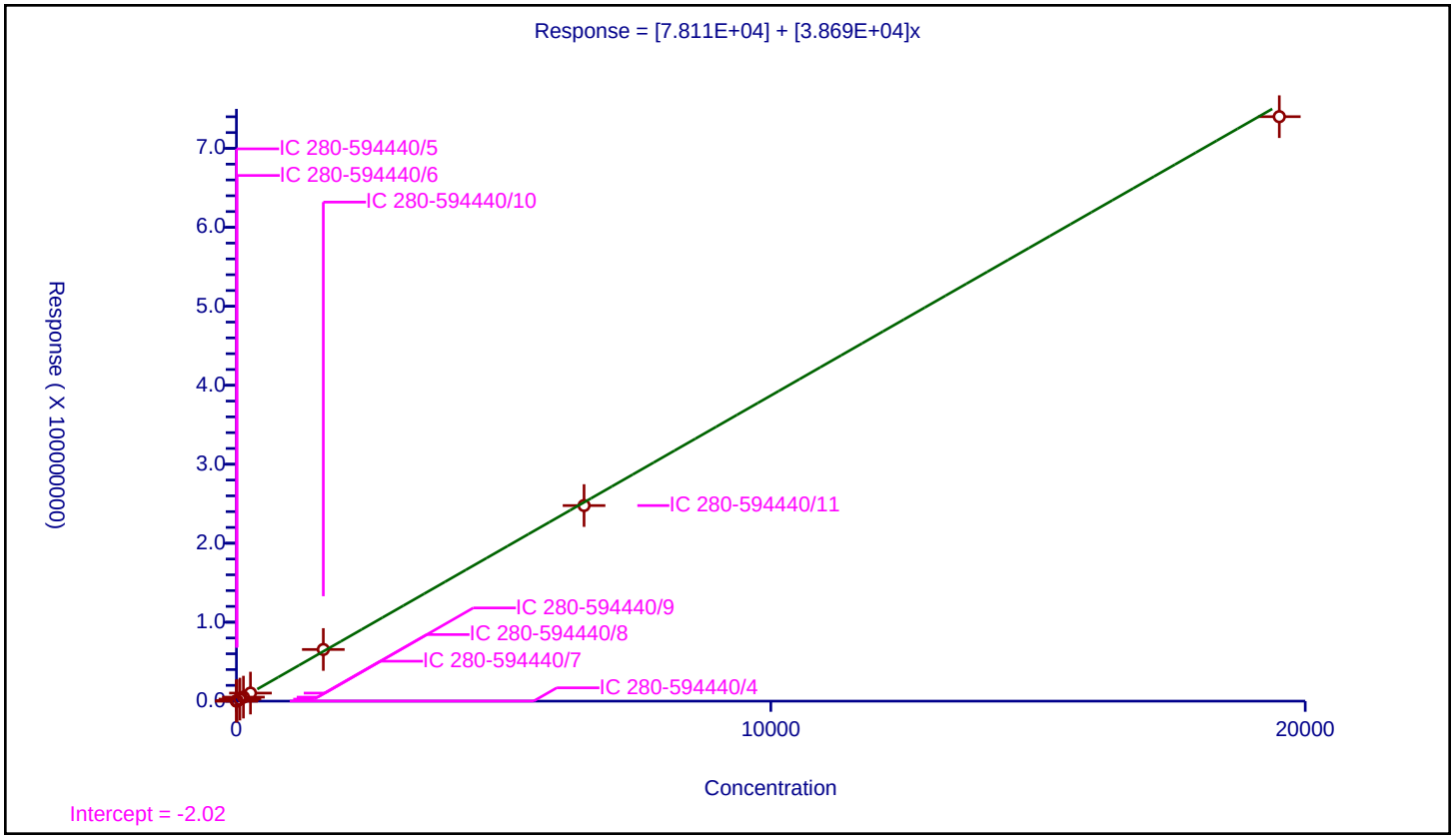
Curve Coefficients

Intercept:	7.811E+04
Slope:	3.869E+04

Error Coefficients

Standard Error:	5930000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	0.821288	109618.0			133470.92218	Y
2	IC 280-594440/5	1.642575	142601.0			86815.518317	Y
3	IC 280-594440/6	13.1406	597693.0			45484.452765	Y
4	IC 280-594440/7	65.703	2594265.0			39484.726725	Y
5	IC 280-594440/8	131.406	5077236.0			38637.779097	Y
6	IC 280-594440/9	262.812	10208583.0			38843.671522	Y
7	IC 280-594440/10	1626.25	65400484.0			40215.516679	Y
8	IC 280-594440/11	6505.0	247686566.0			38076.336049	Y
9	IC 280-594440/12	19515.0	740134626.0			37926.447656	Y



11/27/2023
6:53 PM

Calibration / Ethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

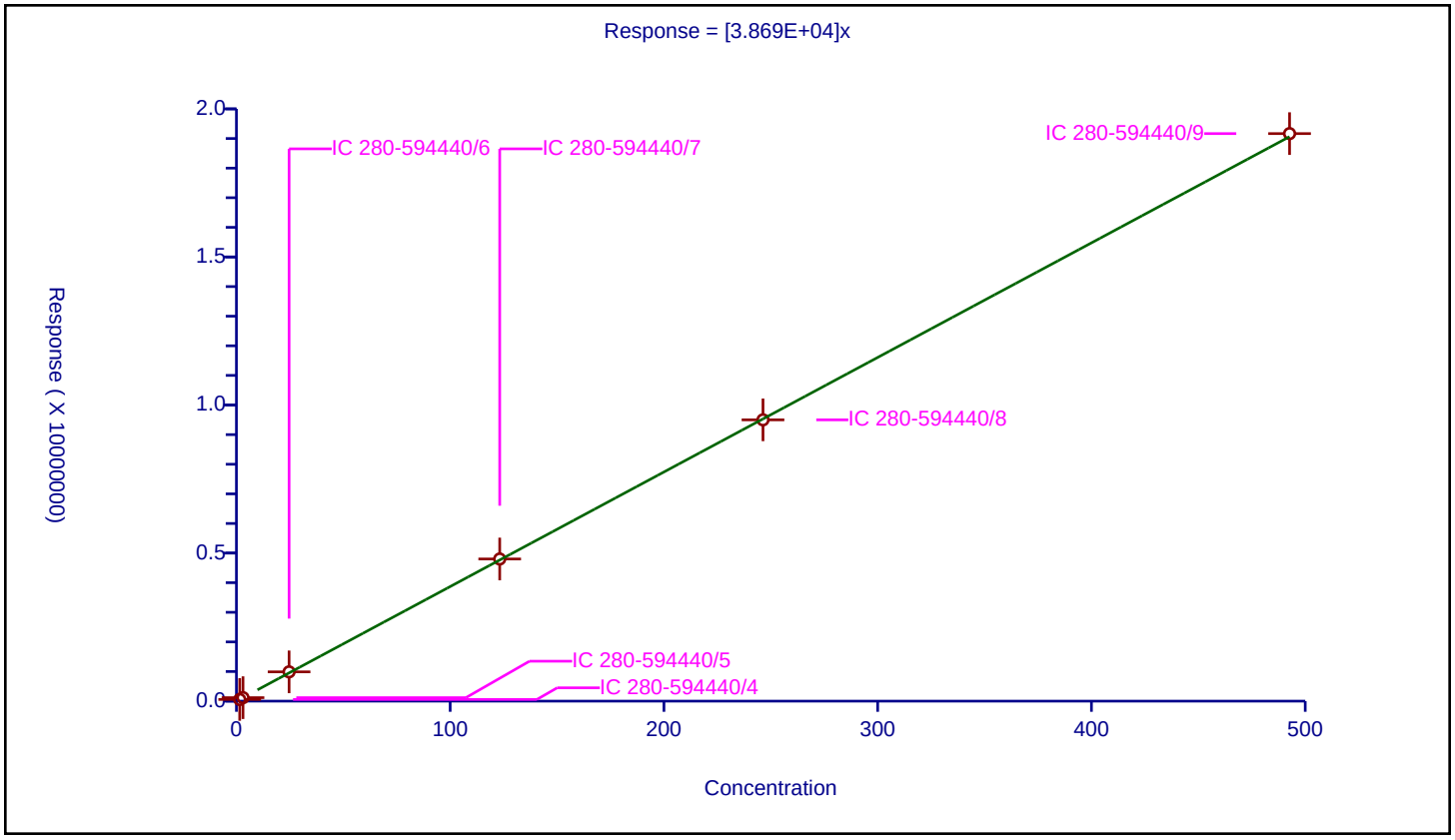
Curve Coefficients

Intercept:	0
Slope:	3.869E+04

Error Coefficients

Standard Error:	53400
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	1.539625	57518.0			37358.447674	Y
2	IC 280-594440/5	3.07925	117587.0			38186.89616	Y
3	IC 280-594440/6	24.634	989301.0			40159.982139	Y
4	IC 280-594440/7	123.17	4800335.0			38973.248356	Y
5	IC 280-594440/8	246.34	9498907.0			38560.148575	Y
6	IC 280-594440/9	492.68	19164973.0			38899.43371	Y



11/27/2023
6:53 PM

Calibration / Ethylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

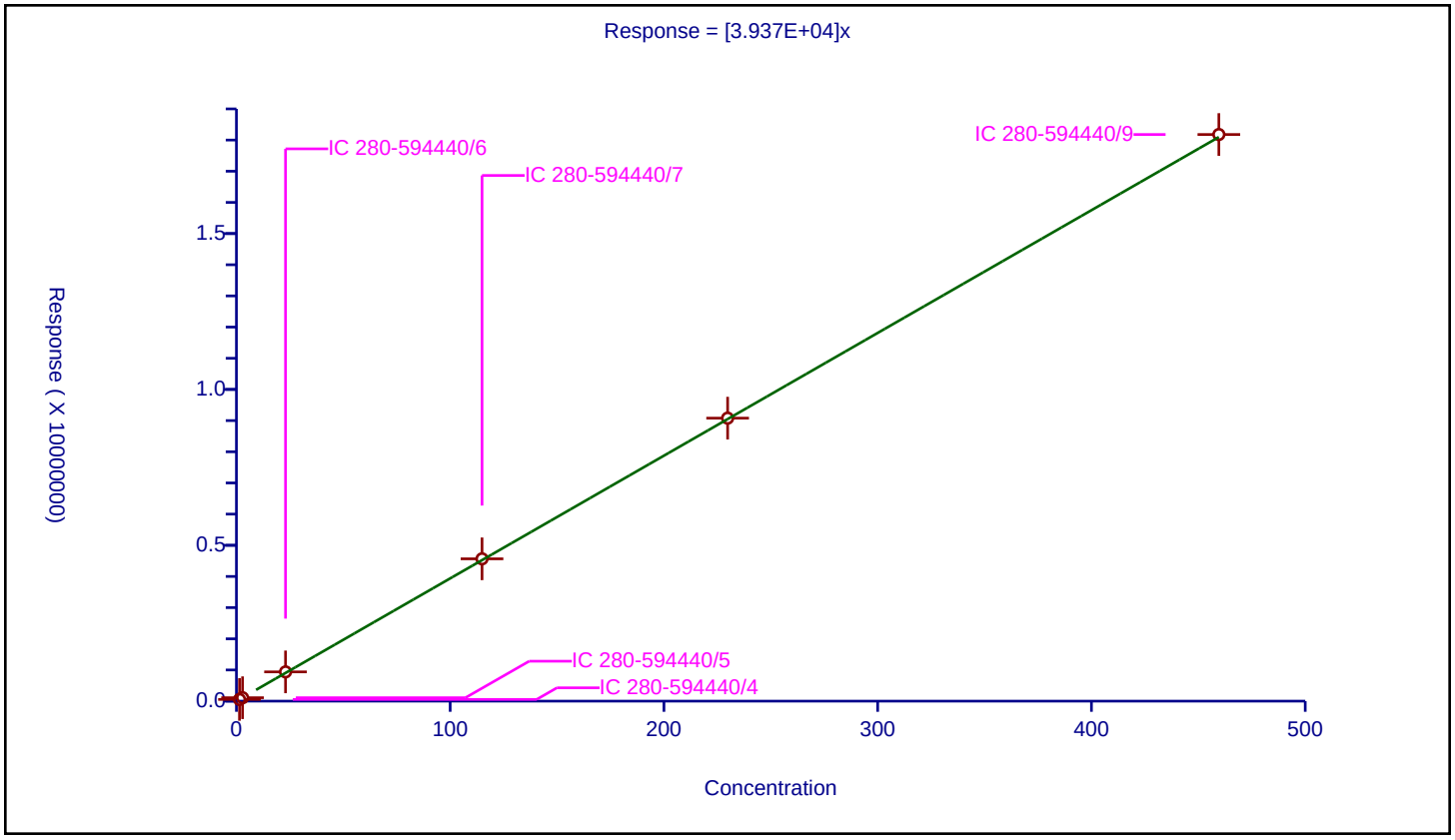
Curve Coefficients

Intercept:	0
Slope:	3.937E+04

Error Coefficients

Standard Error:	46000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	1.43625	55161.0			38406.266319	Y
2	IC 280-594440/5	2.8725	109711.0			38193.559617	Y
3	IC 280-594440/6	22.98	938642.0			40846.040035	Y
4	IC 280-594440/7	114.9	4565792.0			39737.093124	Y
5	IC 280-594440/8	229.8	9079325.0			39509.682332	Y
6	IC 280-594440/9	459.6	18178326.0			39552.493473	Y



11/27/2023
6:53 PM

Calibration / Propane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

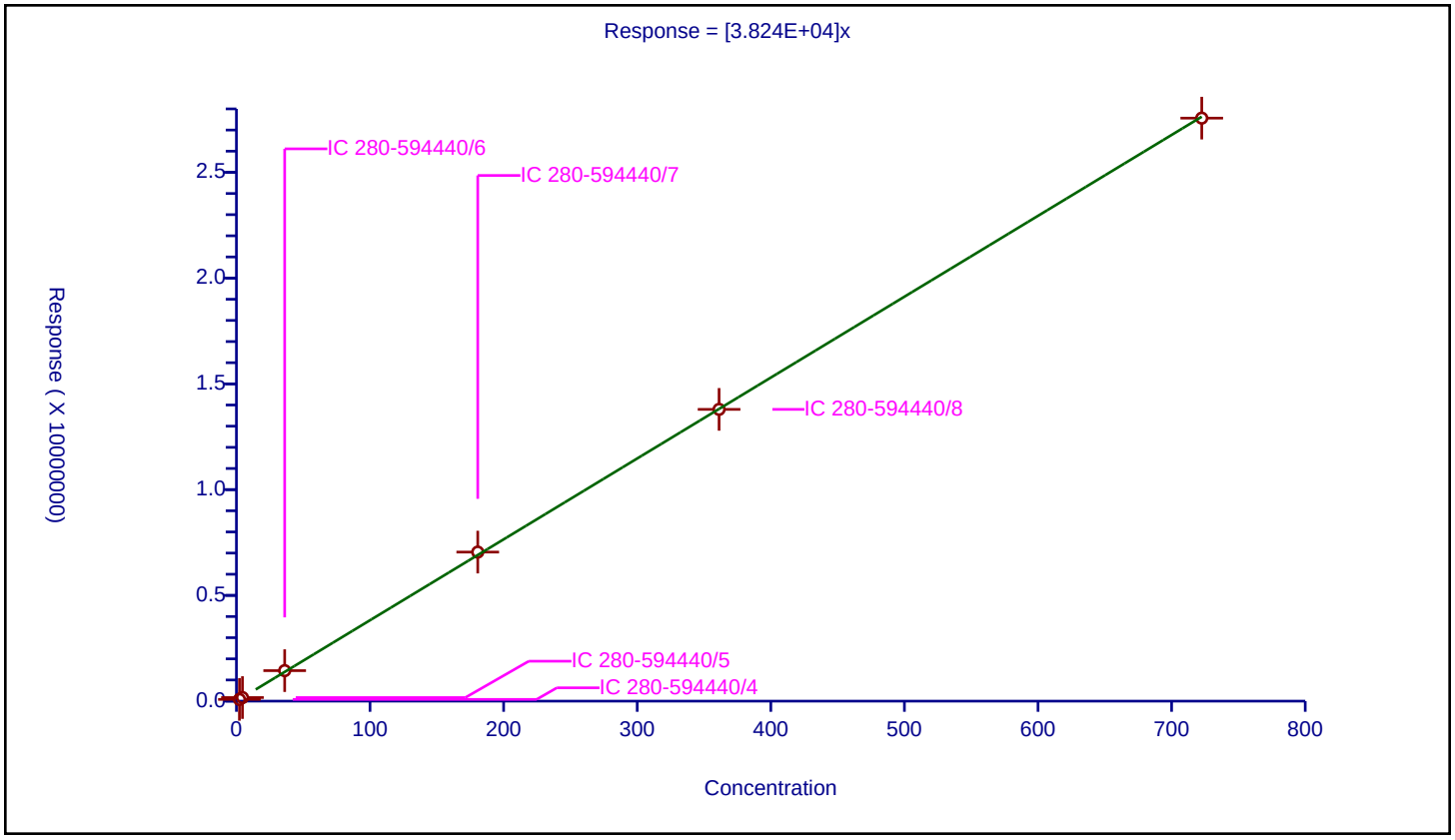
Curve Coefficients

Intercept:	0
Slope:	3.824E+04

Error Coefficients

Standard Error:	75200
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	2.258	82508.0			36540.301151	Y
2	IC 280-594440/5	4.516	169896.0			37620.903454	Y
3	IC 280-594440/6	36.128	1442697.0			39932.932905	Y
4	IC 280-594440/7	180.64	7047561.0			39014.398804	Y
5	IC 280-594440/8	361.28	13794006.0			38180.928919	Y
6	IC 280-594440/9	722.56	27563548.0			38147.071523	Y



11/27/2023
6:53 PM

Calibration / Acetylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

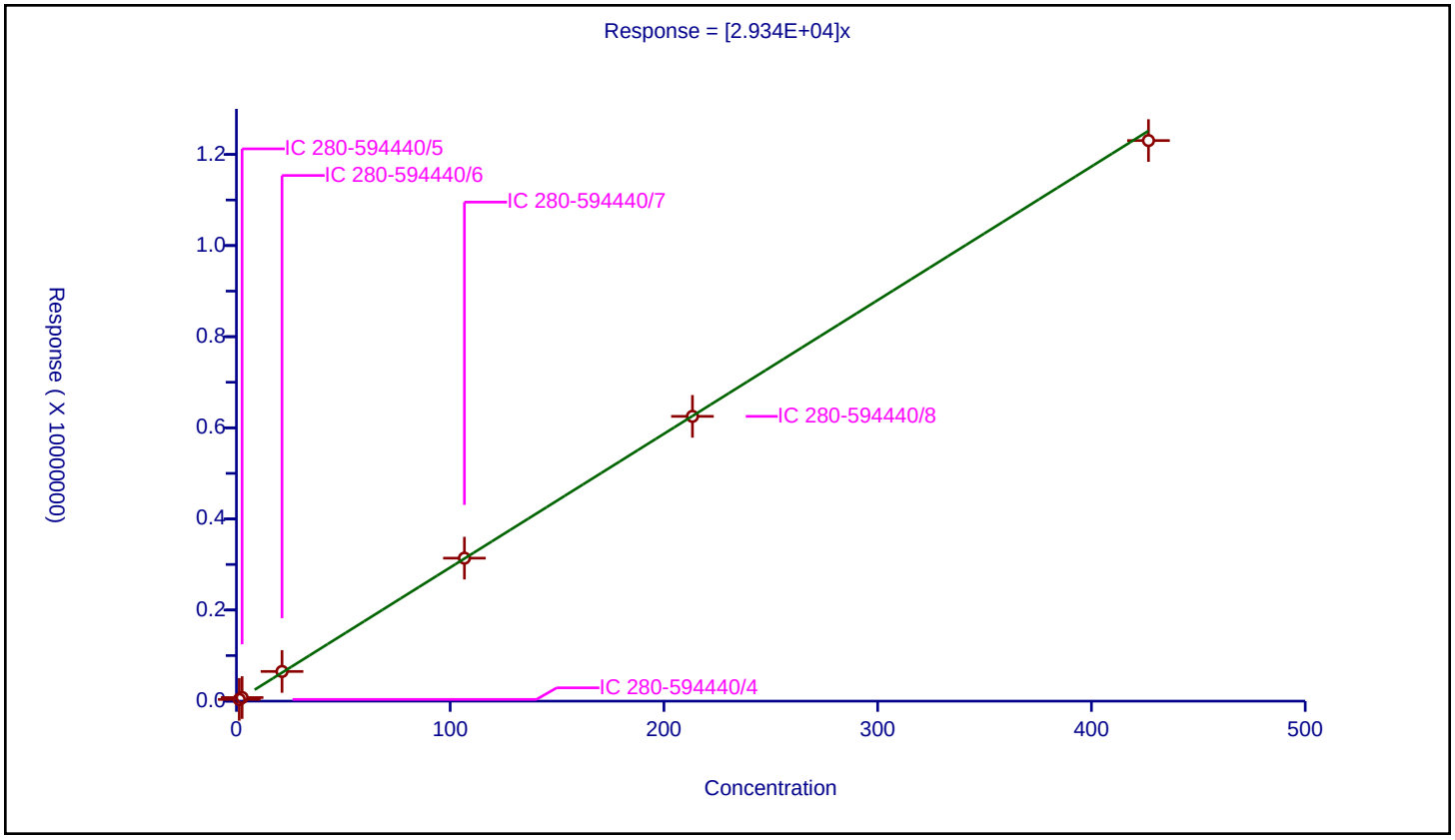
Curve Coefficients

Intercept:	0
Slope:	2.934E+04

Error Coefficients

Standard Error:	96000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	1.333375	37833.0			28373.863317	Y
2	IC 280-594440/5	2.66675	78825.0			29558.451298	Y
3	IC 280-594440/6	21.334	651380.0			30532.48336	Y
4	IC 280-594440/7	106.67	3138327.0			29420.896222	Y
5	IC 280-594440/8	213.34	6251021.0			29300.745289	Y
6	IC 280-594440/9	426.68	12305009.0			28838.963626	Y



11/27/2023
6:53 PM

Calibration / Butane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

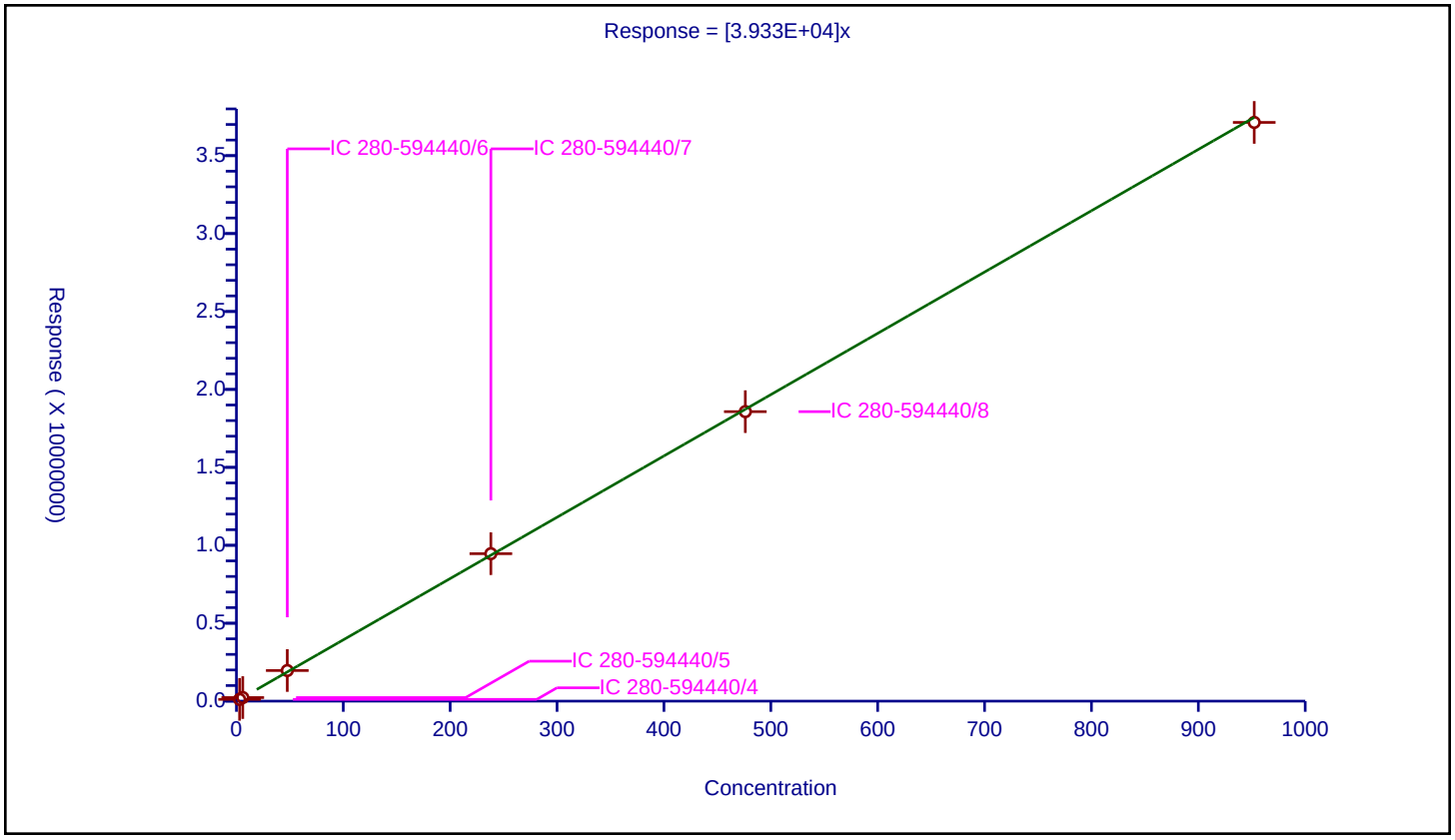
Curve Coefficients

Intercept:	0
Slope:	3.933E+04

Error Coefficients

Standard Error:	170000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	2.975875	114370.0			38432.393834	Y
2	IC 280-594440/5	5.95175	229454.0			38552.35855	Y
3	IC 280-594440/6	47.614	1964235.0			41253.307851	Y
4	IC 280-594440/7	238.07	9461289.0			39741.626412	Y
5	IC 280-594440/8	476.14	18575547.0			39012.784055	Y
6	IC 280-594440/9	952.28	37132422.0			38993.176377	Y



11/27/2023
6:53 PM

Calibration / isobutylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

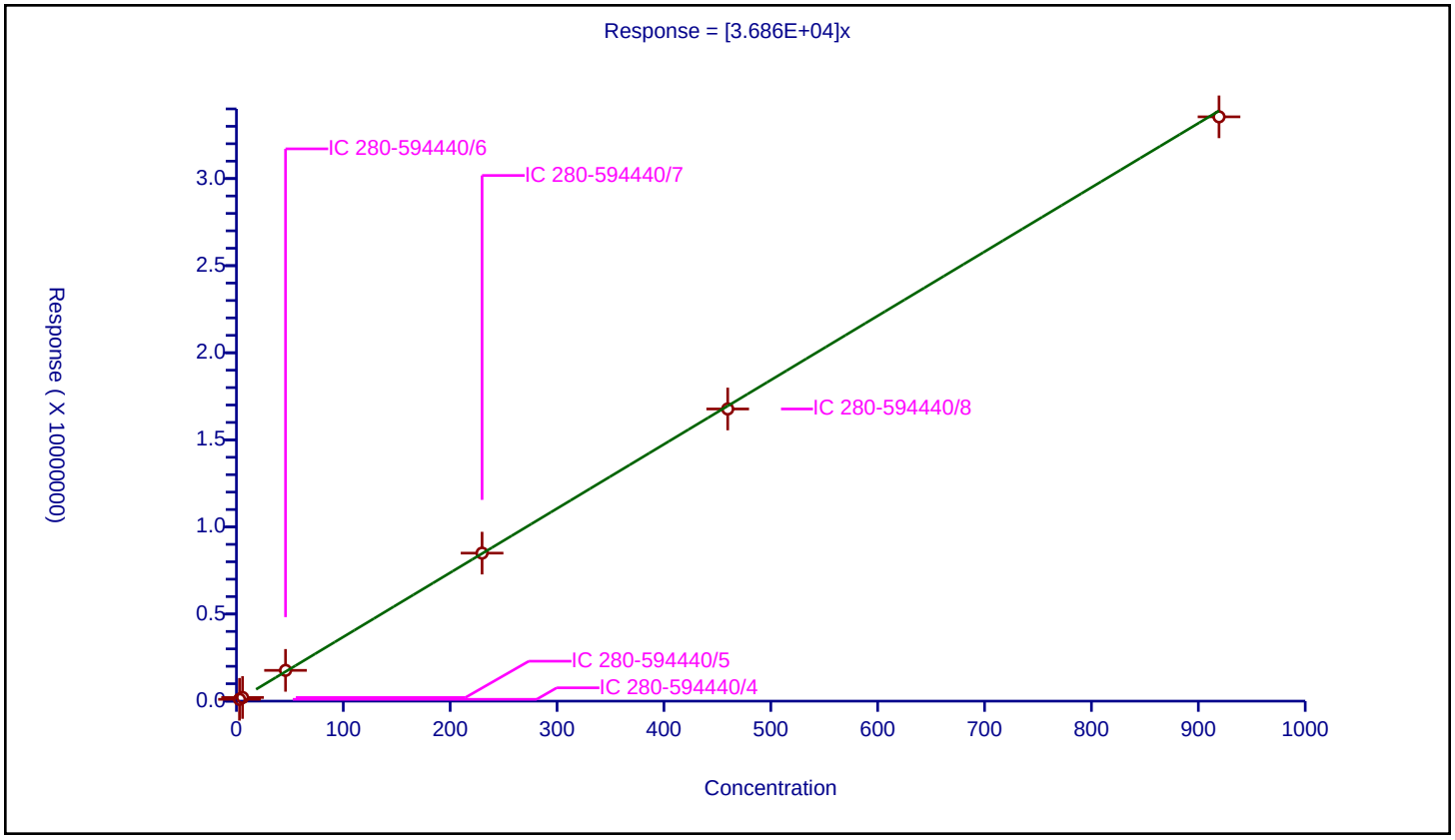
Curve Coefficients

Intercept:	0
Slope:	3.686E+04

Error Coefficients

Standard Error:	176000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	2.873	104731.0			36453.532892	Y
2	IC 280-594440/5	5.746	208817.0			36341.280891	Y
3	IC 280-594440/6	45.968	1766626.0			38431.648103	Y
4	IC 280-594440/7	229.84	8497786.0			36972.615733	Y
5	IC 280-594440/8	459.68	16772055.0			36486.370954	Y
6	IC 280-594440/9	919.36	33544265.0			36486.539549	Y



11/27/2023
6:53 PM

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 594440

SDG No.:

Instrument ID: VGC_J | GC Column: HP-Plot Q | ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 11/22/2022 16:02 | Calibration End Date: 11/22/2022 17:53 | Calibration ID: 73555

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-594440/4	J1044.D
Level 2	IC 280-594440/5	J1045.D
Level 3	IC 280-594440/6	J1046.D
Level 4	IC 280-594440/7	J1047.D
Level 5	IC 280-594440/8	J1048.D
Level 6	IC 280-594440/9	J1049.D
Level 7	IC 280-594440/10	J1050.D
Level 8	IC 280-594440/11	J1051.D
Level 9	IC 280-594440/12	J1052.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	1.644	1.641	1.645	1.642	1.640	1.642	1.640	1.637	1.635		1.600 - 1.680	1.641
Ethene	2.574	2.575	2.575	2.572	2.570	2.570					2.520 - 2.620	2.573
Acetylene	2.726	2.732	2.730	2.727	2.724	2.725					2.644 - 2.804	2.727
Ethane	2.992	2.997	2.995	2.993	2.990	2.990					2.940 - 3.040	2.993
Propane	4.912	4.917	4.917	4.913	4.914	4.910					4.854 - 4.974	4.914
isobutylene	6.264	6.264	6.263	6.262	6.260	6.257					6.180 - 6.340	6.262
Butane	6.421	6.421	6.420	6.418	6.415	6.412					6.335 - 6.495	6.418

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-174957-1 Analy Batch No.: 594440

SDG No.:

Instrument ID: VGC_J GC Column: HP-Plot Q ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/22/2022 16:02 Calibration End Date: 11/22/2022 17:53 Calibration ID: 73555

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-594440/4	J1044.D
Level 2	IC 280-594440/5	J1045.D
Level 3	IC 280-594440/6	J1046.D
Level 4	IC 280-594440/7	J1047.D
Level 5	IC 280-594440/8	J1048.D
Level 6	IC 280-594440/9	J1049.D
Level 7	IC 280-594440/10	J1050.D
Level 8	IC 280-594440/11	J1051.D
Level 9	IC 280-594440/12	J1052.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	102690 35354 34390	73682 34964	40679 35866	36141 34239	Lin2	56861.4334	35362.8028							0.9980		0.9900
Ethene	29622 31597	30779 31816	32815	31833	Ave		31410.3249				3.5		20.0			
Acetylene	31635 34114	32495 33769	35302	34097	Ave		33568.6920				3.9		20.0			
Ethane	34219 35295	33644 35549	36684	35613	Ave		35167.4359				3.1		20.0			
Propane	32741 34083	34034 34113	35738	34443	Ave		34192.0076				2.8		20.0			
isobutylene	33763 31748	33101 31700	33740	32153	Ave		32700.8985				2.9		20.0			
Butane	38216 35304	36862 35169	37657	35891	Ave		36516.3117				3.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-174957-1 | Analy Batch No.: 594440

SDG No.:

Instrument ID: VGC_J | GC Column: HP-Plot Q | ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 11/22/2022 16:02 | Calibration End Date: 11/22/2022 17:53 | Calibration ID: 73555

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-594440/4	J1044.D
Level 2	IC 280-594440/5	J1045.D
Level 3	IC 280-594440/6	J1046.D
Level 4	IC 280-594440/7	J1047.D
Level 5	IC 280-594440/8	J1048.D
Level 6	IC 280-594440/9	J1049.D
Level 7	IC 280-594440/10	J1050.D
Level 8	IC 280-594440/11	J1051.D
Level 9	IC 280-594440/12	J1052.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Lin2	84338 9189020	121029 58327040	534550 222721558	2374559 671116476	4645758	0.821 263	1.64 1626	13.1 6505	65.7 19515	131
Ethene	Ave	42544 14622496	88414	754091	3657619	7261000	1.44 460	2.87	23.0	115	230
Acetylene	Ave	42181 14408475	86657	753138	3637167	7277797	1.33 427	2.67	21.3	107	213
Ethane	Ave	52685 17514088	103599	903672	4386486	8694621	1.54 493	3.08	24.6	123	246
Propane	Ave	73929 24648508	153698	1291157	6221833	12313361	2.26 723	4.52	36.1	181	361
isobutylene	Ave	97000 29144072	190198	1550959	7390142	14593944	2.87 919	5.75	46.0	230	460
Butane	Ave	113725 33490336	219395	1792980	8544605	16809482	2.98 952	5.95	47.6	238	476

Curve Type Legend:

Ave = Average
Lin2 = Linear 1/conc^2

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D
Lims ID: ic RSK 2.5 uL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Nov-2022 16:02:41 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 2.5 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:52 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 17:11:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							Ma
1	1.208	1.209	-0.001	109618	0.8213	0.8143	M
2	1.644	1.640	0.004	84338	0.8213	0.7770	M
						RPD = 4.69	
3 Ethane							M
1	1.461	1.461	0.000	57518	1.54	1.49	M
2	2.992	2.990	0.002	52685	1.54	1.50	M
						RPD = 0.77	
4 Ethylene							Ma
1	1.748	1.746	0.002	55161	1.44	1.40	M
2	2.574	2.570	0.004	42544	1.44	1.35	M
						RPD = 3.37	
5 Propane							Ma
1	2.509	2.506	0.003	82508	2.26	2.16	M
2	4.912	4.914	-0.002	73929	2.26	2.16	M
						RPD = 0.21	
6 Acetylene							Ma
1	4.131	4.121	0.010	37833	1.33	1.29	M
2	2.726	2.724	0.002	42181	1.33	1.26	M
						RPD = 2.59	
7 Butane							Ma
1	4.413	4.407	0.006	114370	2.98	2.91	M
2	6.421	6.415	0.006	113725	2.98	3.11	M
						RPD = 6.86	
8 isobutylene							Ma
1	5.328	5.322	0.006	104731	2.87	2.84	M
2	6.264	6.260	0.004	97000	2.87	2.97	M
						RPD = 4.31	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 2.50 Units: uL

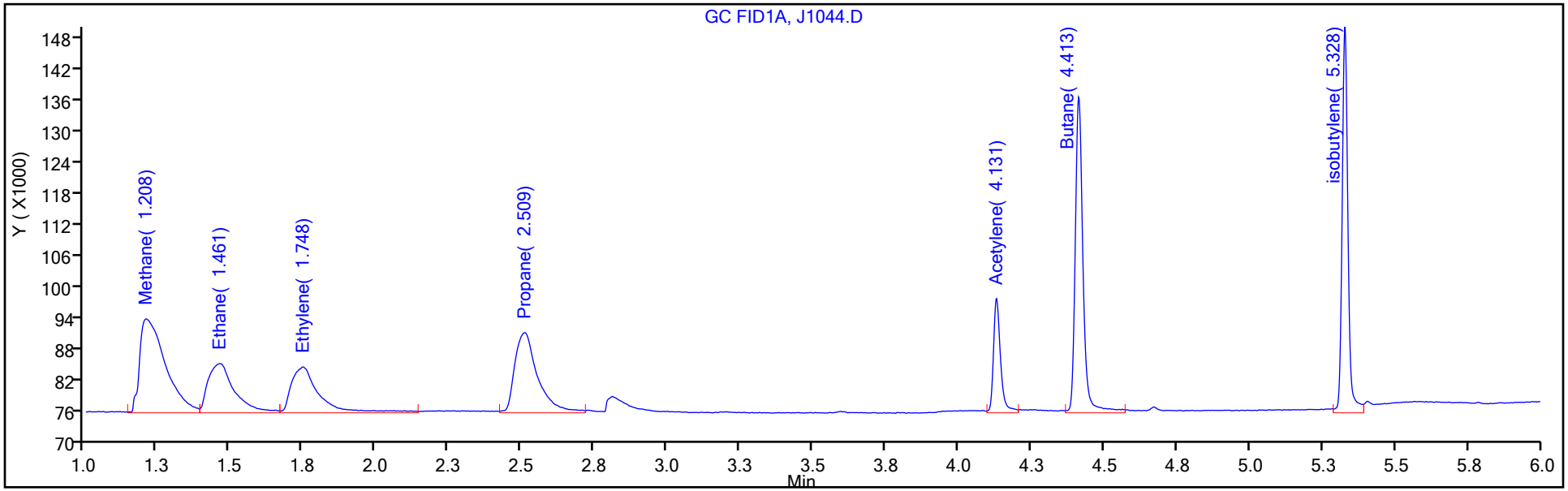
Report Date: 23-Nov-2022 11:28:52 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

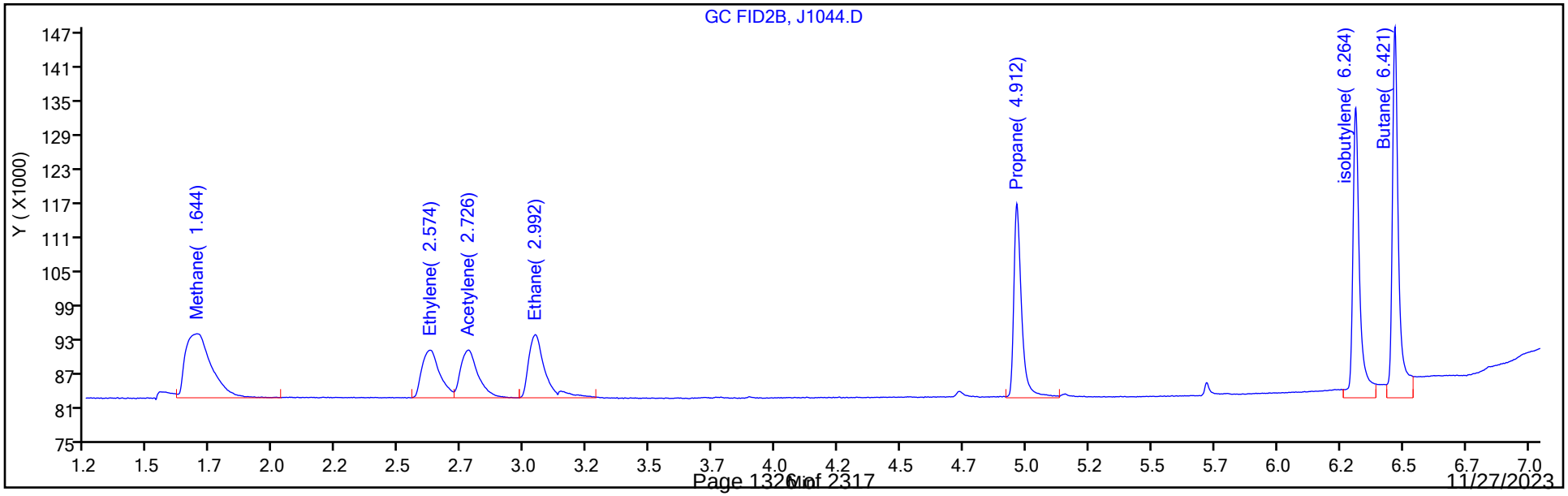
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D

Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 2.5 uL			Worklist Smp#:	4
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

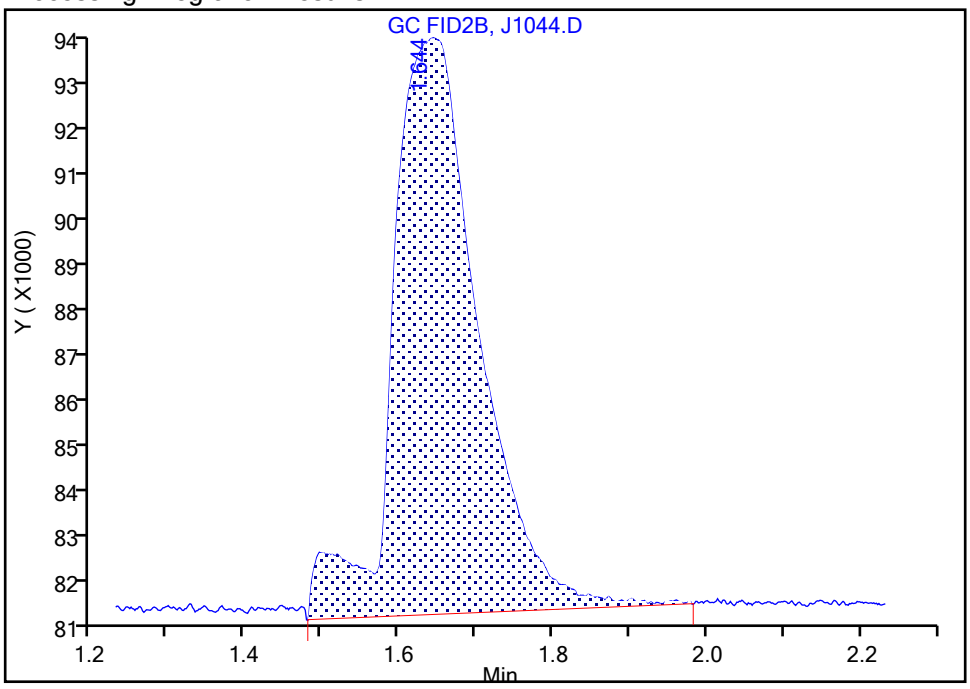
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D				
Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J		
Lims ID:	ic RSK 2.5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

2 Methane, CAS: 74-82-8

Signal: 2

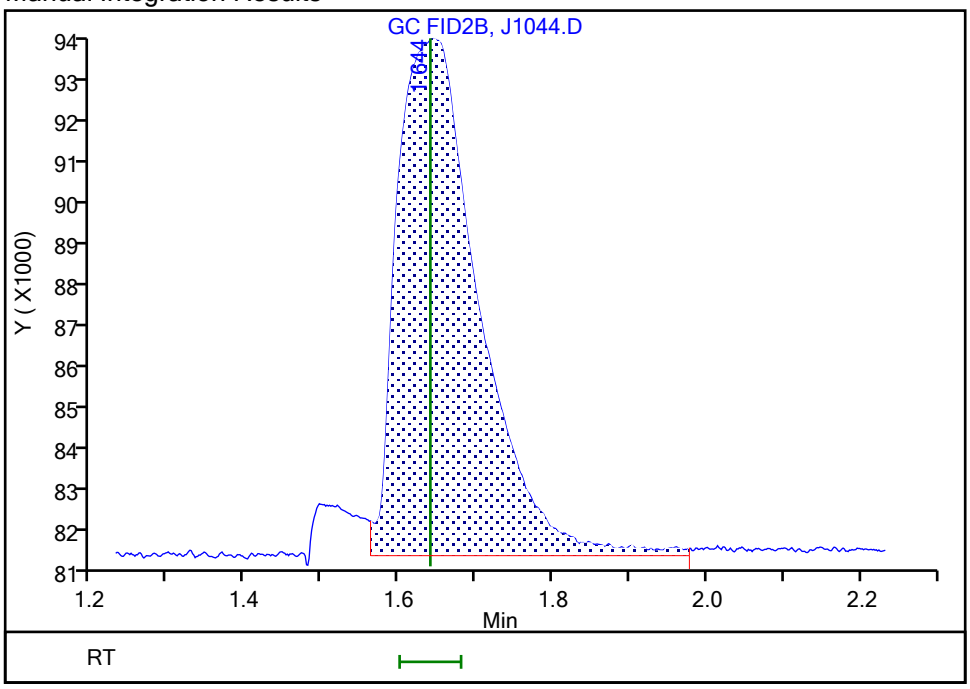
Processing Integration Results

RT: 1.64
Area: 90515
Amount: 0.816932
Amount Units: ug/l



Manual Integration Results

RT: 1.64
Area: 84338
Amount: 0.776991
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:03:37

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

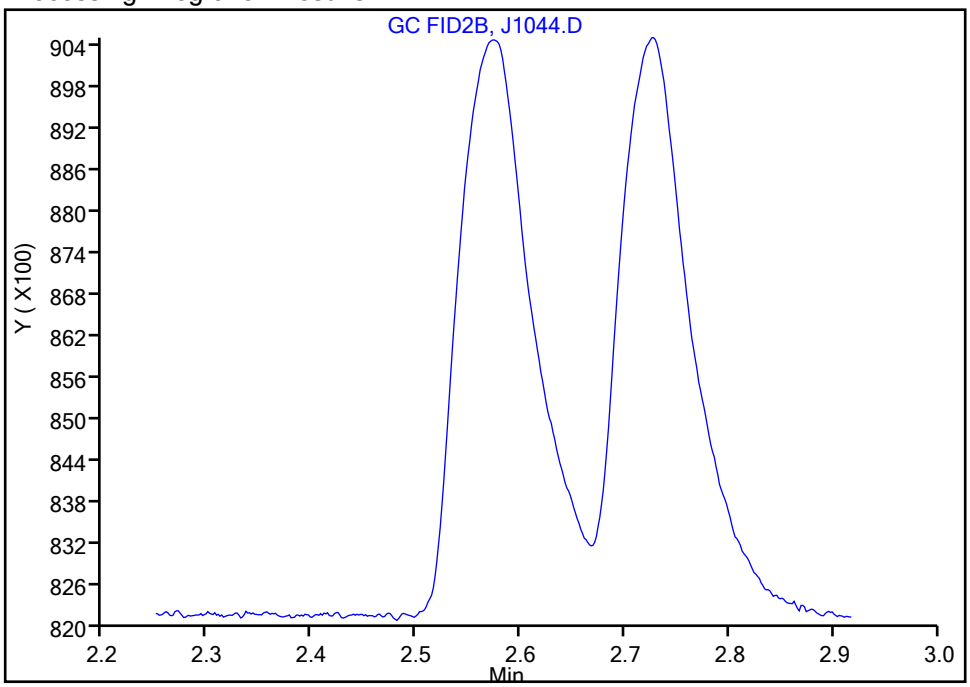
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D
Injection Date: 22-Nov-2022 16:02:41 Instrument ID: VGC_J
Lims ID: ic RSK 2.5 uL
Client ID:
Operator ID: JH ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

4 Ethylene, CAS: 74-85-1

Signal: 2

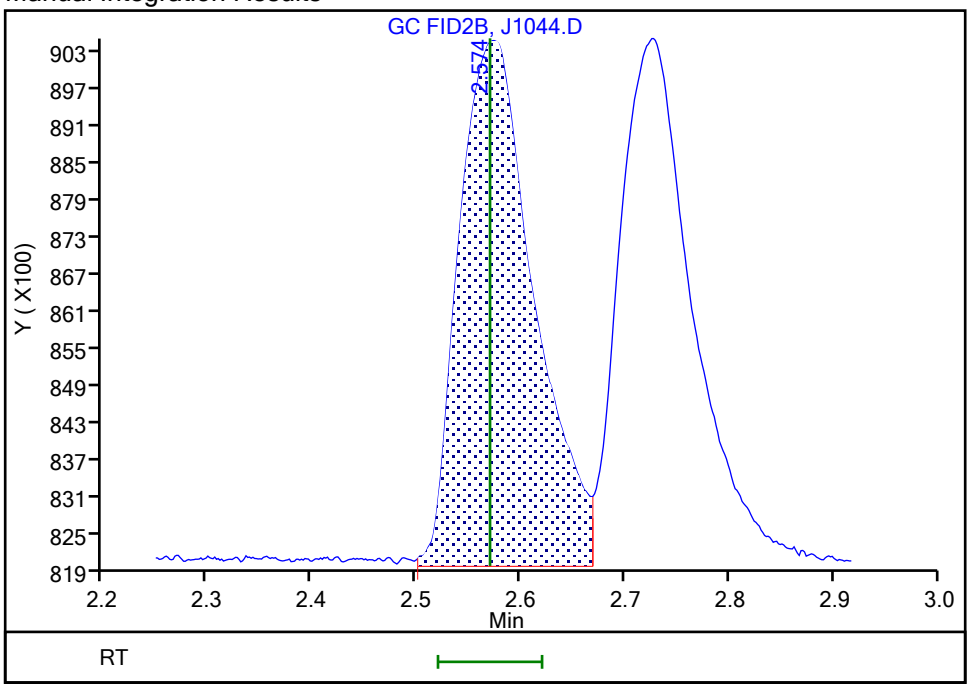
Processing Integration Results

RT: 2.59
Area: 0
Amount: 1.458248
Amount Units: ug/l



Manual Integration Results

RT: 2.57
Area: 42544
Amount: 1.354459
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:01:15
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

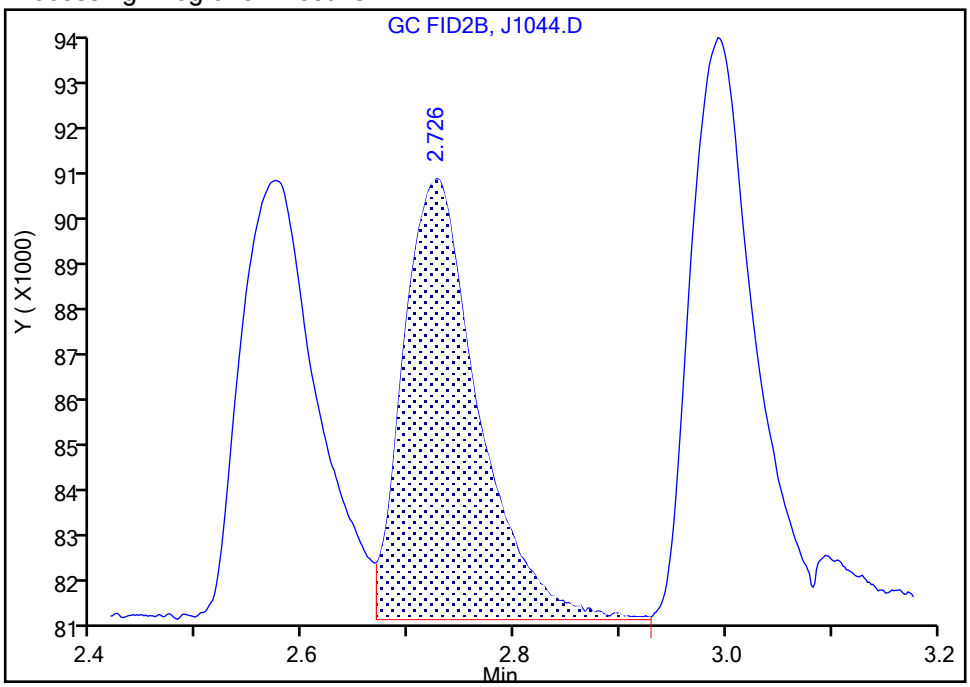
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D				
Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J		
Lims ID:	ic RSK 2.5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

6 Acetylene, CAS: 74-86-2

Signal: 2

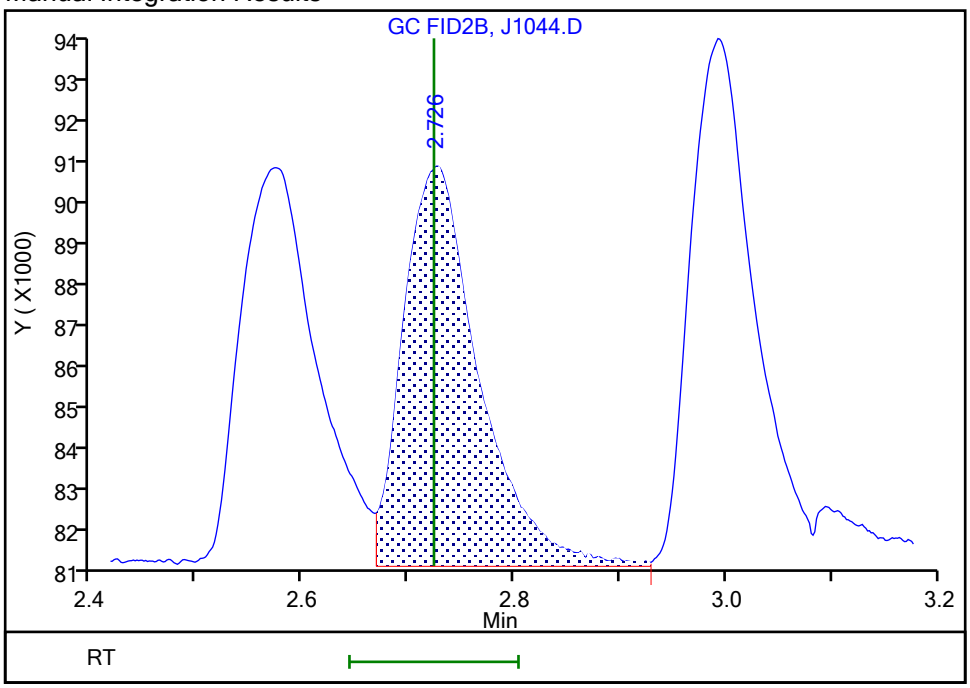
Processing Integration Results

RT: 2.73
Area: 42181
Amount: 1.333375
Amount Units: ug/l



Manual Integration Results

RT: 2.73
Area: 42181
Amount: 1.256558
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:01:57

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

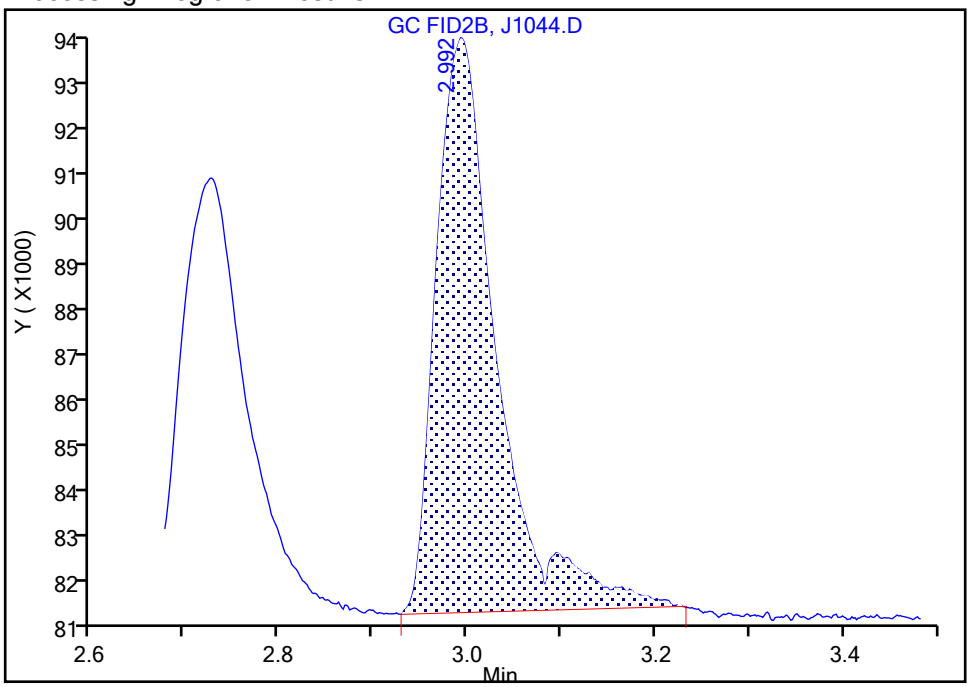
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D				
Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J		
Lims ID:	ic RSK 2.5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

3 Ethane, CAS: 74-84-0

Signal: 2

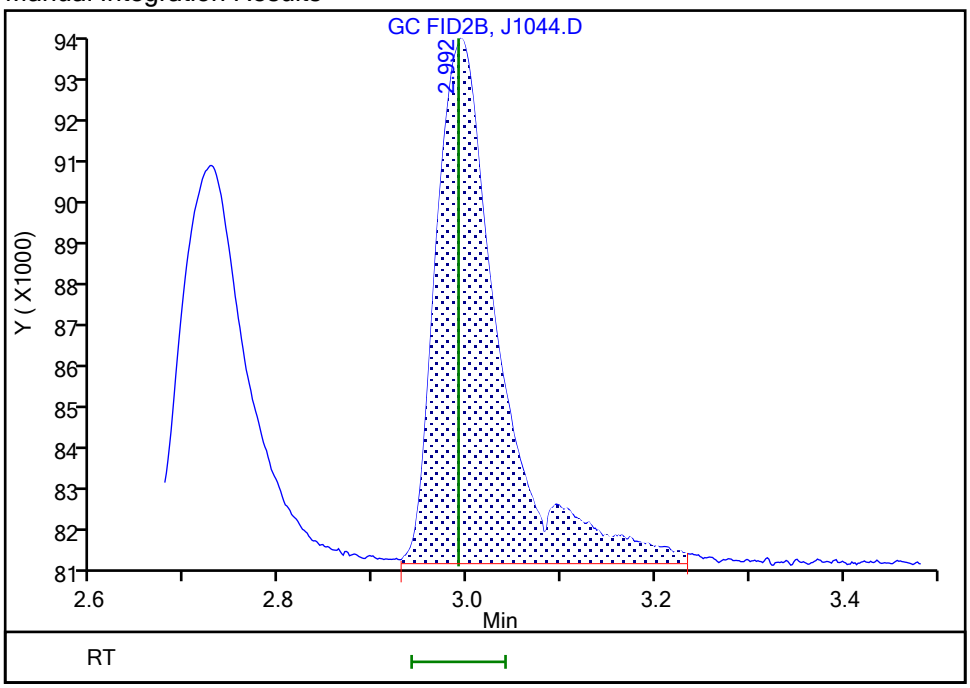
Processing Integration Results

RT: 2.99
Area: 50373
Amount: 1.468257
Amount Units: ug/l



Manual Integration Results

RT: 2.99
Area: 52685
Amount: 1.498119
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:02:46

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

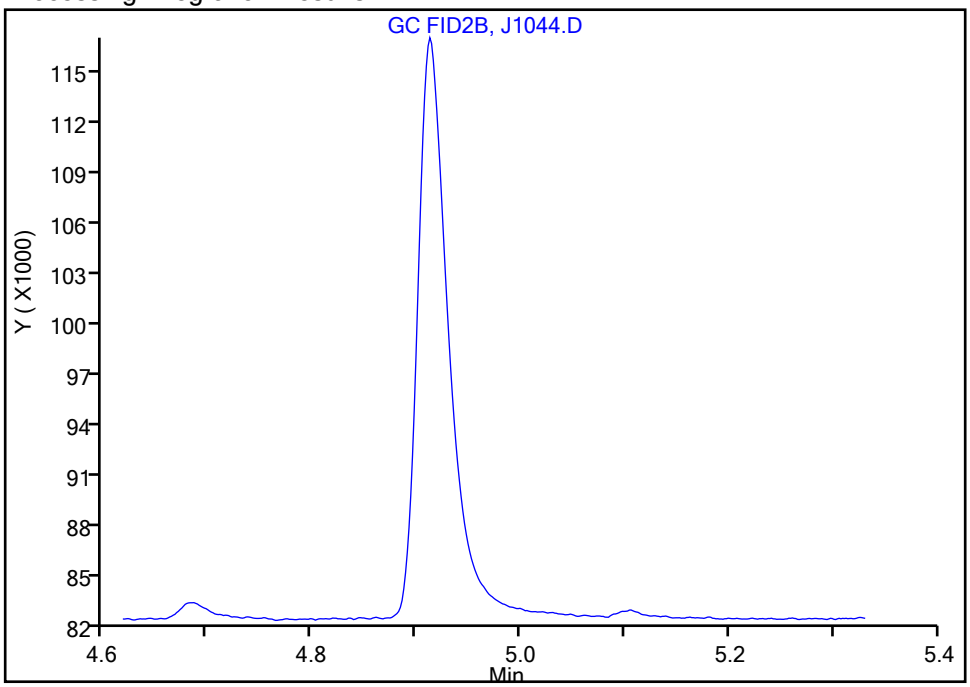
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D				
Injection Date:	22-Nov-2022 16:02:41	Instrument ID:	VGC_J		
Lims ID:	ic RSK 2.5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

5 Propane, CAS: 74-98-6

Signal: 2

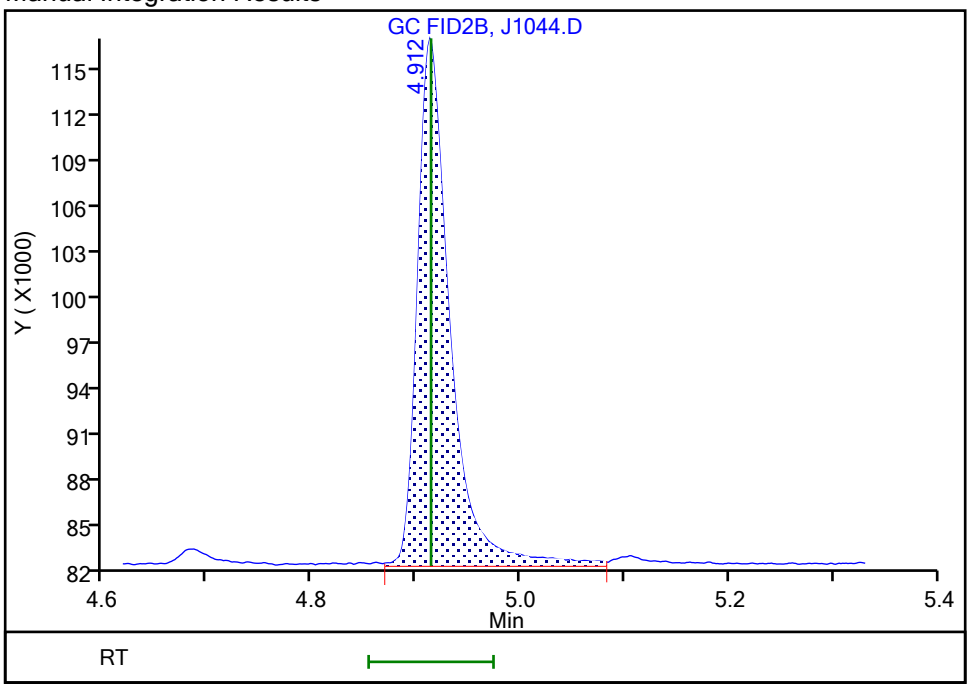
Processing Integration Results

RT: 4.92
Area: 0
Amount: 2.258000
Amount Units: ug/l



Manual Integration Results

RT: 4.91
Area: 73929
Amount: 2.162172
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:00:10
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

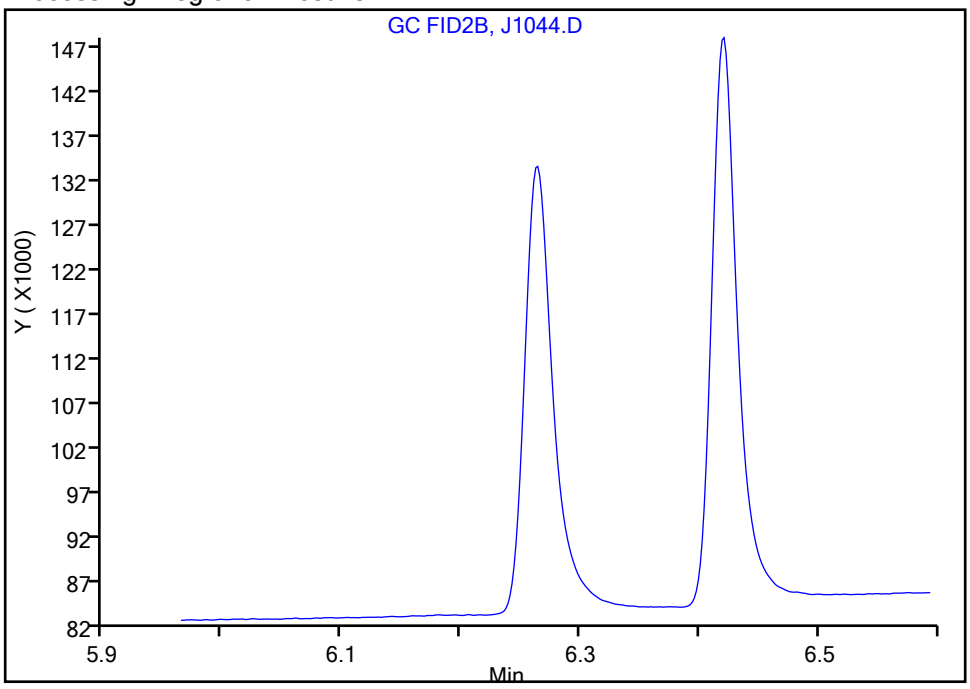
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D
Injection Date: 22-Nov-2022 16:02:41 Instrument ID: VGC_J
Lims ID: ic RSK 2.5 uL
Client ID:
Operator ID: JH ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

8 isobutylene, CAS: 115-11-7

Signal: 2

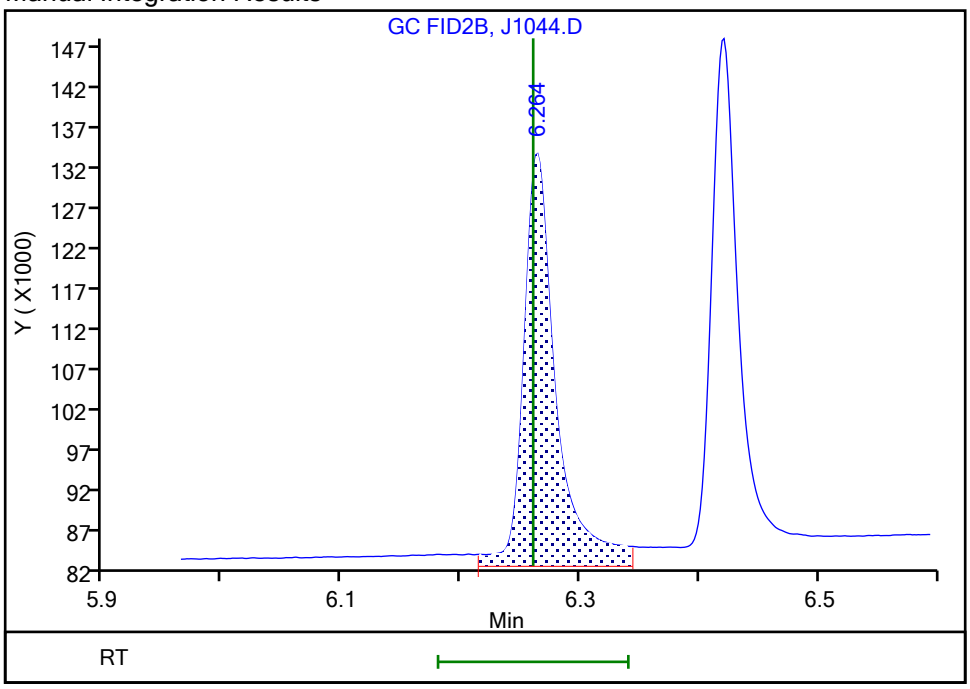
Processing Integration Results

RT: 6.27
Area: 0
Amount: 2.873000
Amount Units: ug/l



Manual Integration Results

RT: 6.26
Area: 97000
Amount: 2.966279
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:08:16
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

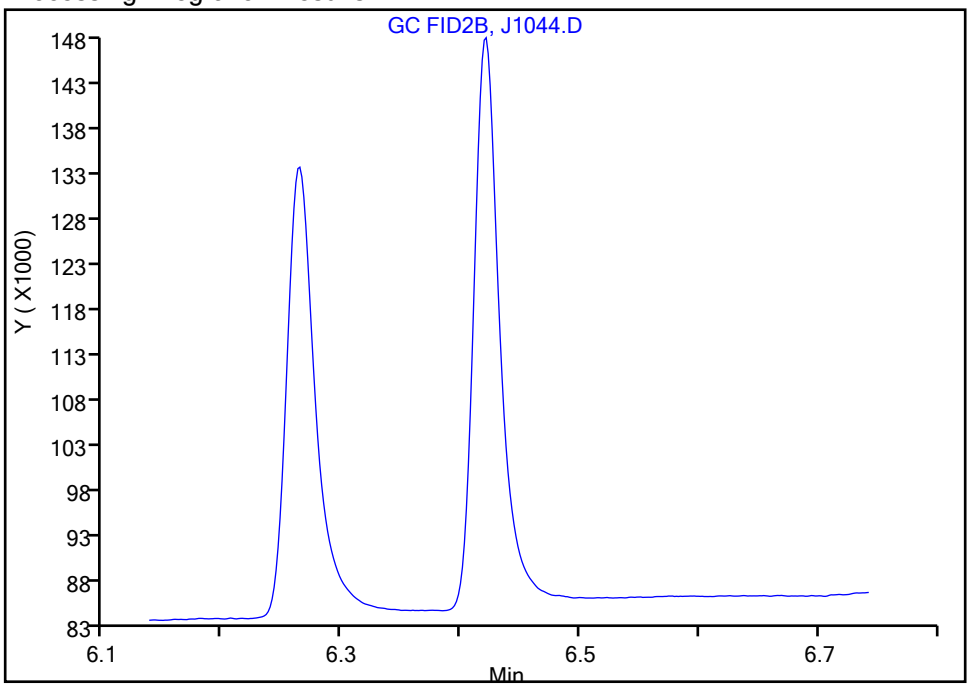
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1044.D
Injection Date: 22-Nov-2022 16:02:41 Instrument ID: VGC_J
Lims ID: ic RSK 2.5 uL
Client ID:
Operator ID: JH ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

7 Butane, CAS: 106-97-8

Signal: 2

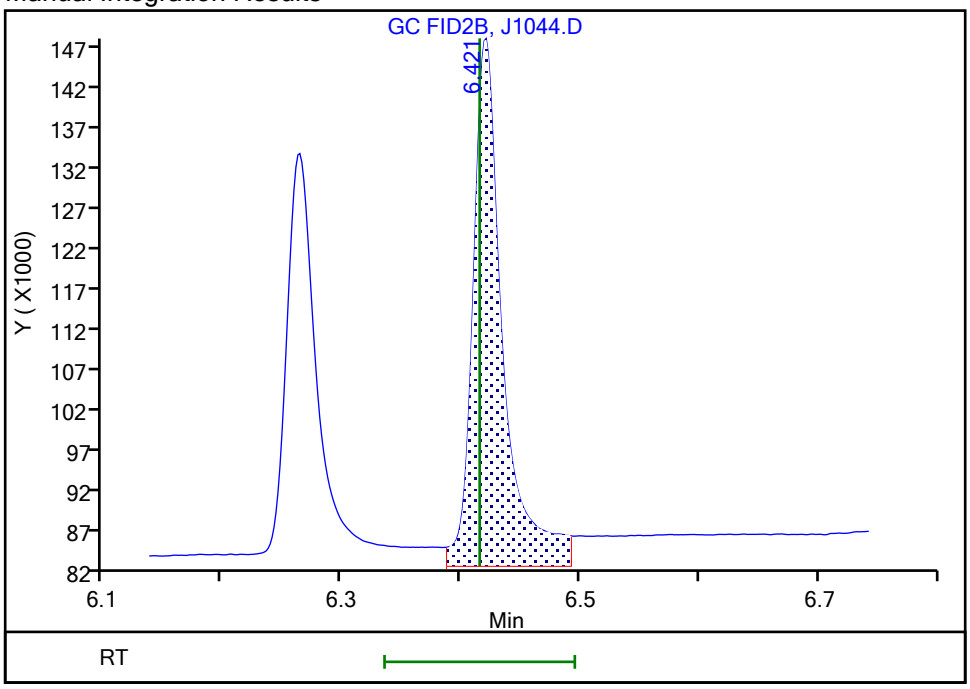
Processing Integration Results

RT: 6.42
Area: 0
Amount: 2.975875
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 113725
Amount: 3.114362
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:09:05
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D
Lims ID: ic RSK 5 uL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Nov-2022 16:16:26 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 5 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:53 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 17:44:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.208	1.209	-0.001	142601	1.64	1.67	M
2	1.641	1.640	0.001	121029	1.64	1.81	
						RPD = 8.49	
3 Ethane							M
1	1.464	1.461	0.003	117587	3.08	3.04	M
2	2.997	2.990	0.007	103599	3.08	2.95	M
						RPD = 3.12	
4 Ethylene							M
1	1.749	1.746	0.003	109711	2.87	2.79	M
2	2.575	2.570	0.005	88414	2.87	2.81	M
						RPD = 1.02	
5 Propane							Ma
1	2.507	2.506	0.001	169896	4.52	4.44	M
2	4.917	4.914	0.003	153698	4.52	4.50	M
						RPD = 1.17	
6 Acetylene							Ma
1	4.131	4.121	0.010	78825	2.67	2.69	M
2	2.732	2.724	0.008	86657	2.67	2.58	M
						RPD = 4.00	
7 Butane							Ma
1	4.411	4.407	0.004	229454	5.95	5.83	M
2	6.421	6.415	0.006	219395	5.95	6.01	M
						RPD = 2.94	
8 isobutylene							Ma
1	5.326	5.322	0.004	208817	5.75	5.66	M
2	6.264	6.260	0.004	190198	5.75	5.82	M
						RPD = 2.64	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 5.00 Units: uL

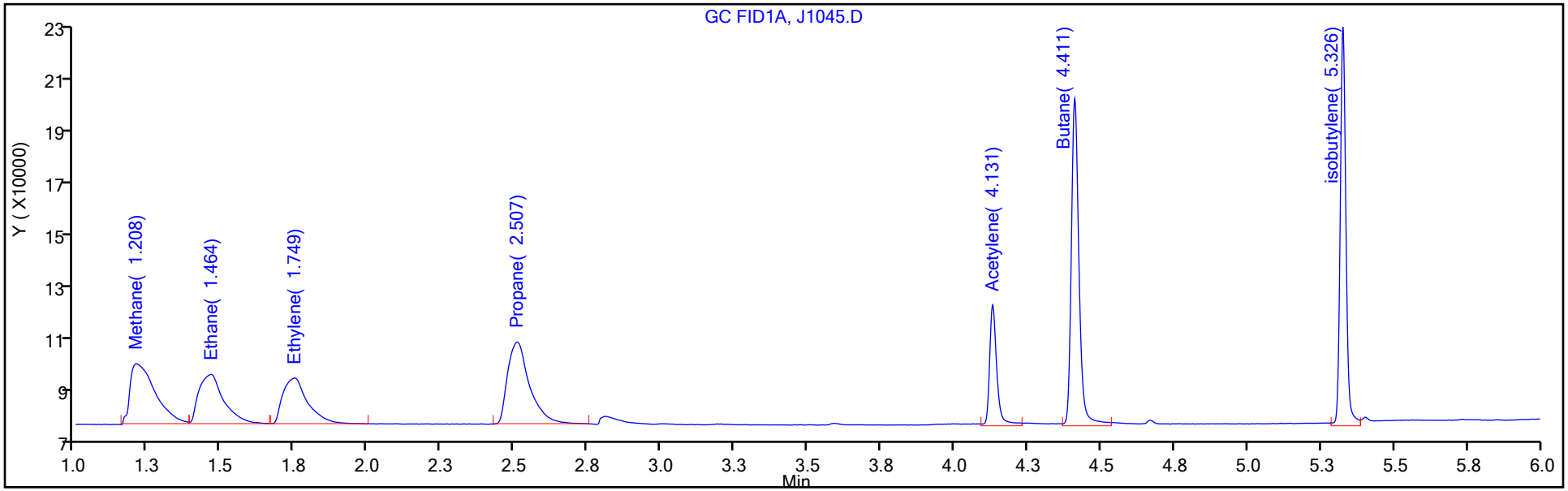
Report Date: 23-Nov-2022 11:28:53 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

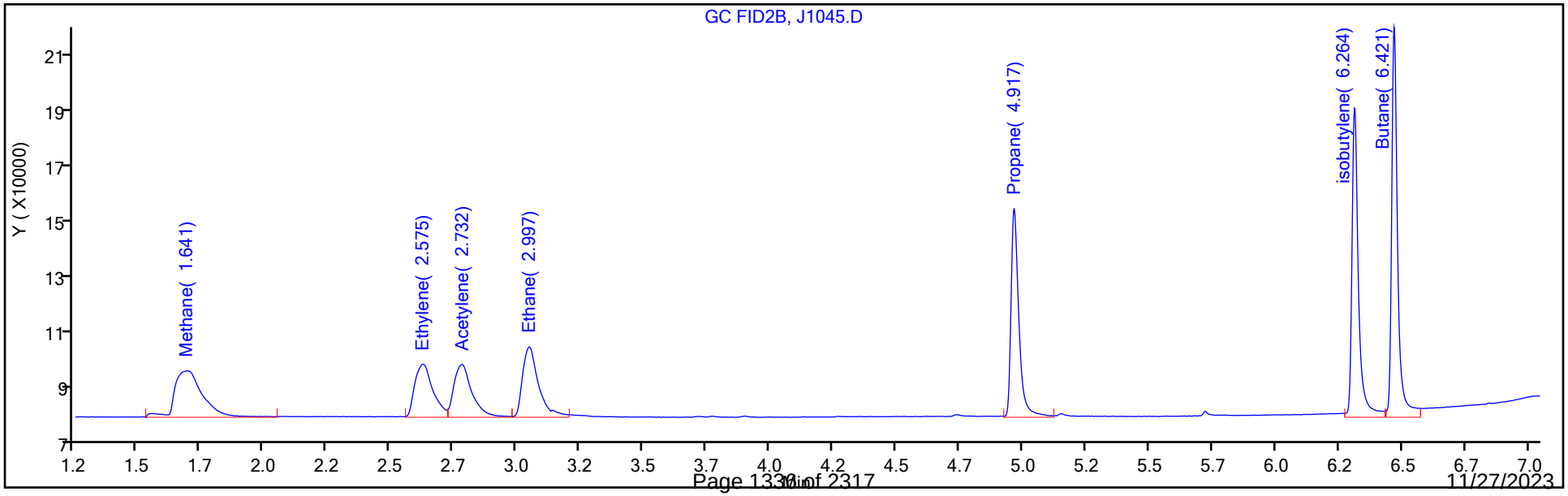
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D

Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 5 uL			Worklist Smp#:	5
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

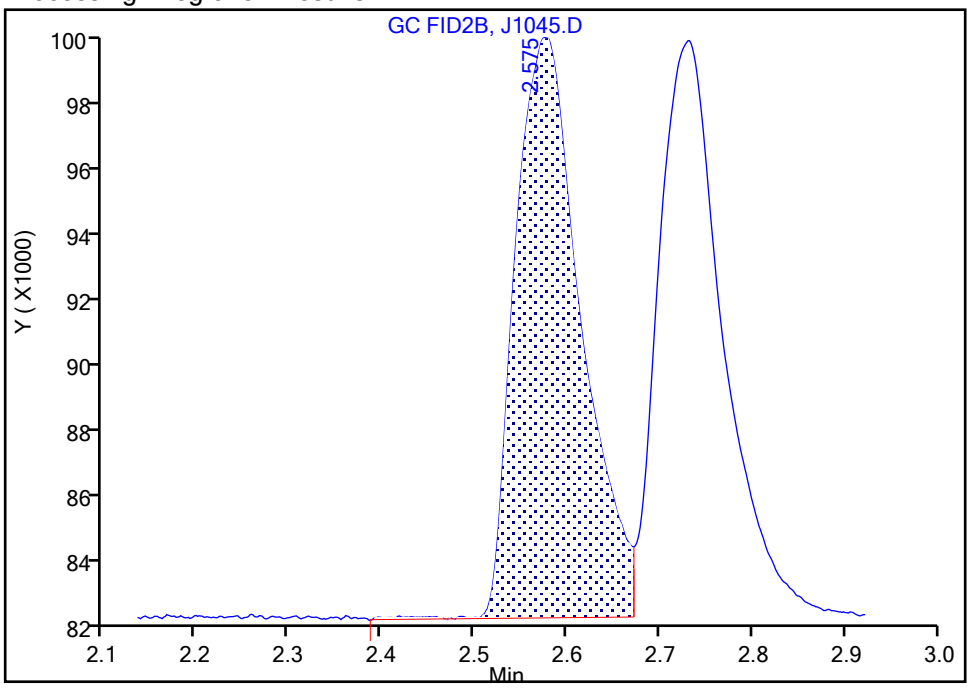
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

4 Ethylene, CAS: 74-85-1

Signal: 2

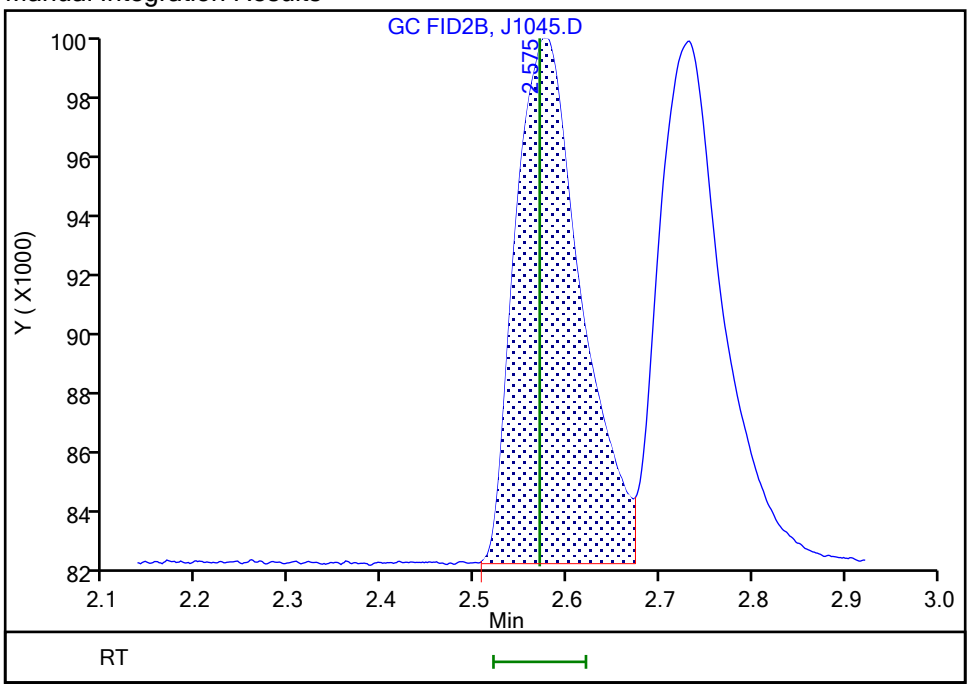
Processing Integration Results

RT: 2.58
Area: 88465
Amount: 2.846550
Amount Units: ug/l



Manual Integration Results

RT: 2.58
Area: 88414
Amount: 2.814807
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:31:52
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

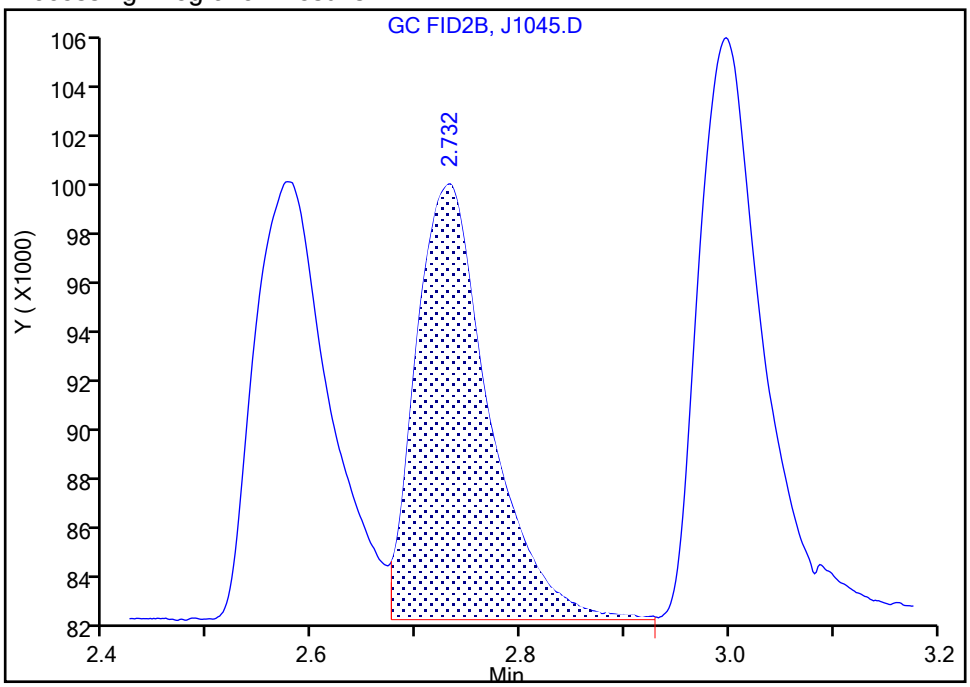
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

6 Acetylene, CAS: 74-86-2

Signal: 2

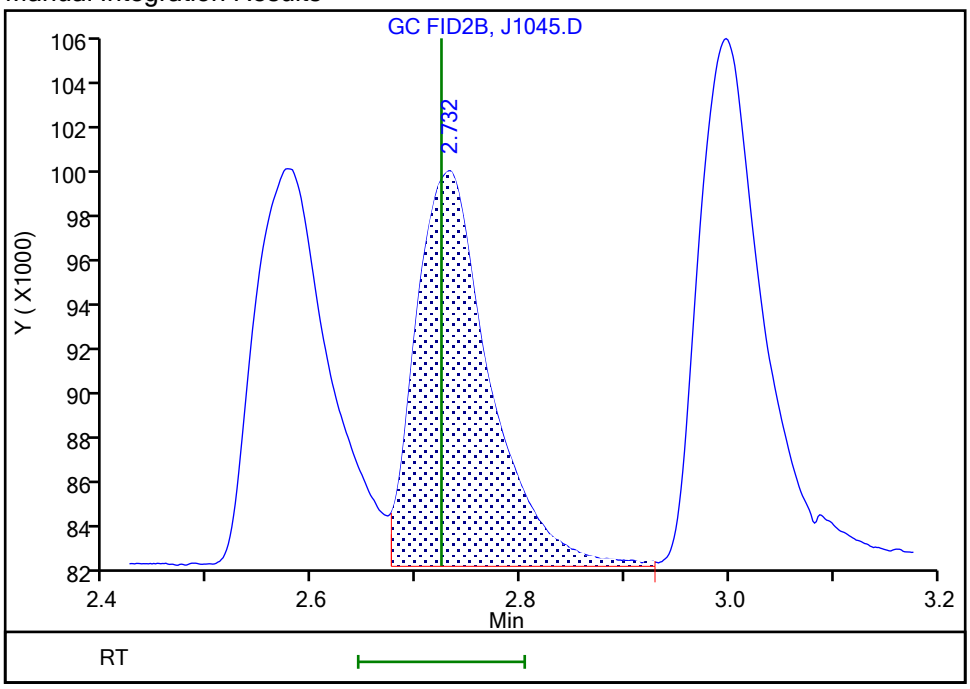
Processing Integration Results

RT: 2.73
Area: 86657
Amount: 2.702537
Amount Units: ug/l



Manual Integration Results

RT: 2.73
Area: 86657
Amount: 2.581483
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:39:08

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

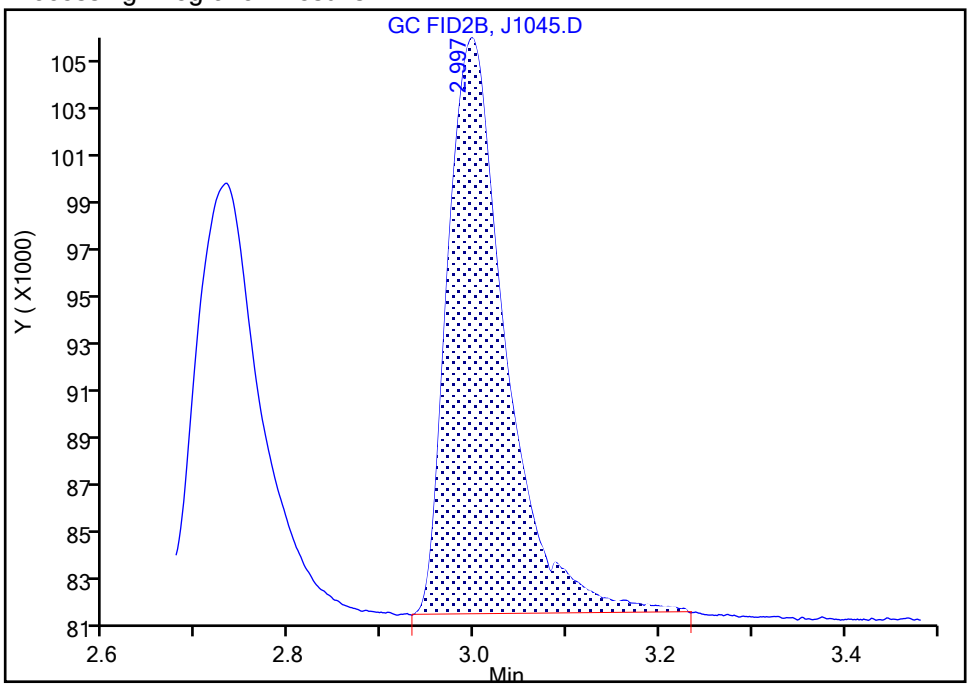
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D
Injection Date: 22-Nov-2022 16:16:26 Instrument ID: VGC_J
Lims ID: ic RSK 5 uL
Client ID:
Operator ID: JH ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

3 Ethane, CAS: 74-84-0

Signal: 2

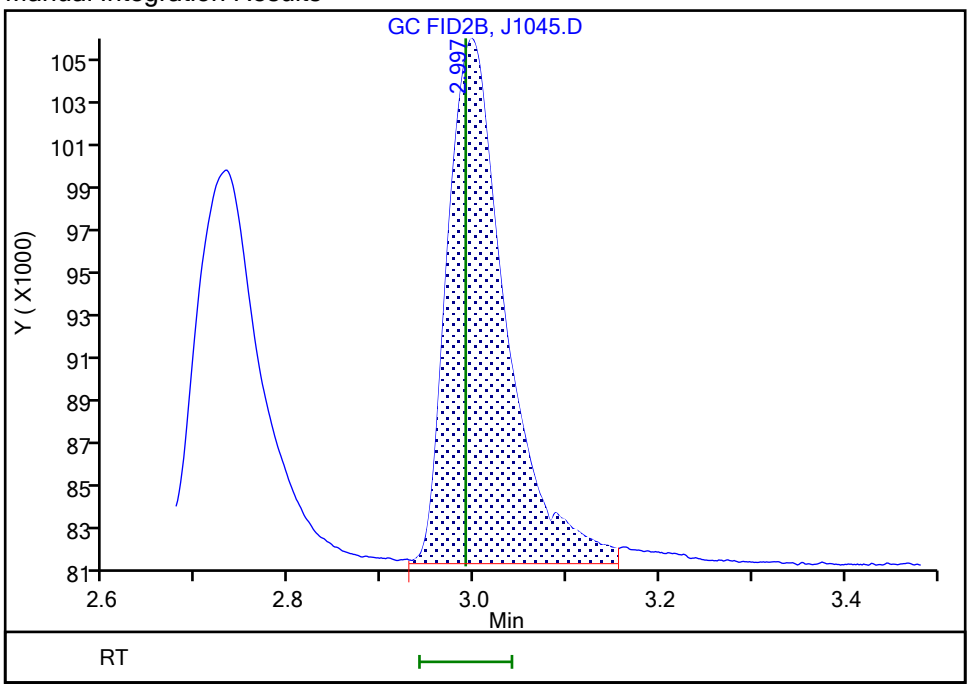
Processing Integration Results

RT: 3.00
Area: 103224
Amount: 2.965475
Amount Units: ug/l



Manual Integration Results

RT: 3.00
Area: 103599
Amount: 2.945879
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:32:36
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

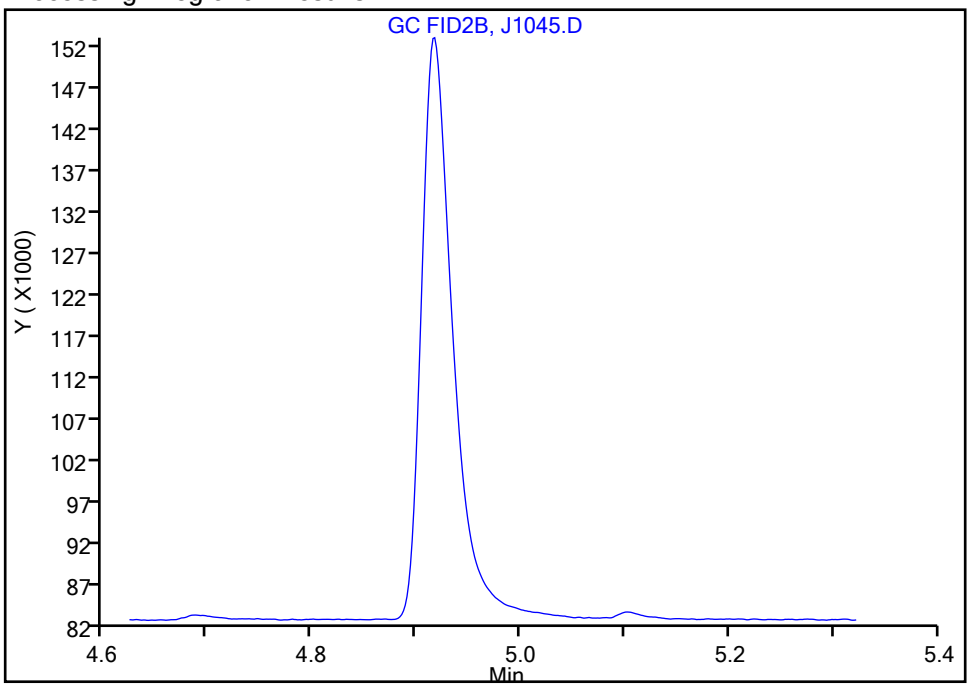
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

5 Propane, CAS: 74-98-6

Signal: 2

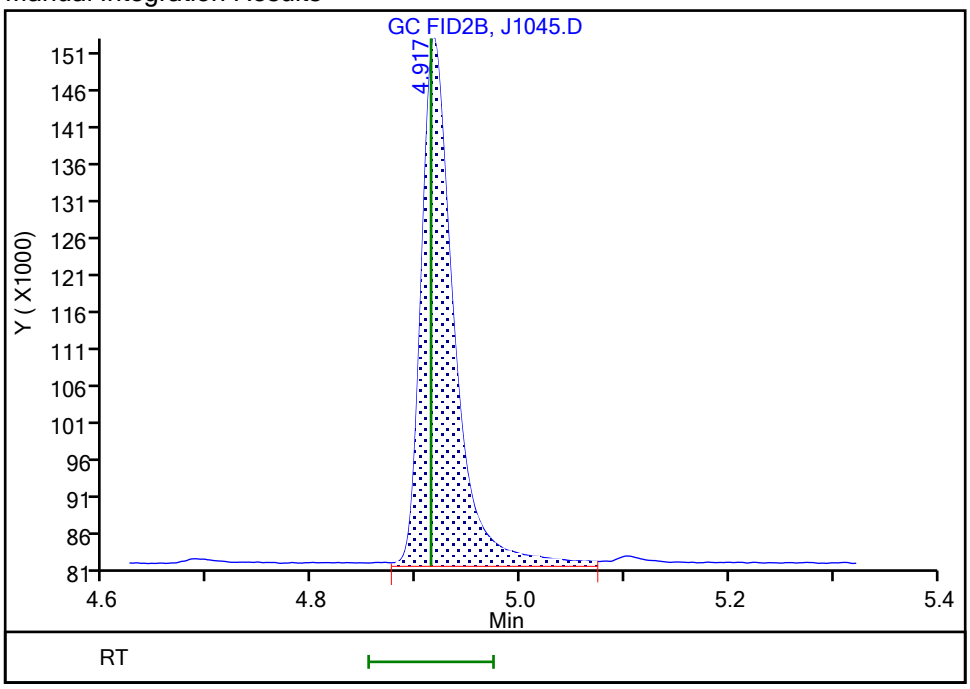
Processing Integration Results

RT: 4.92
Area: 0
Amount: 4.581803
Amount Units: ug/l



Manual Integration Results

RT: 4.92
Area: 153698
Amount: 4.495144
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:34:36

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

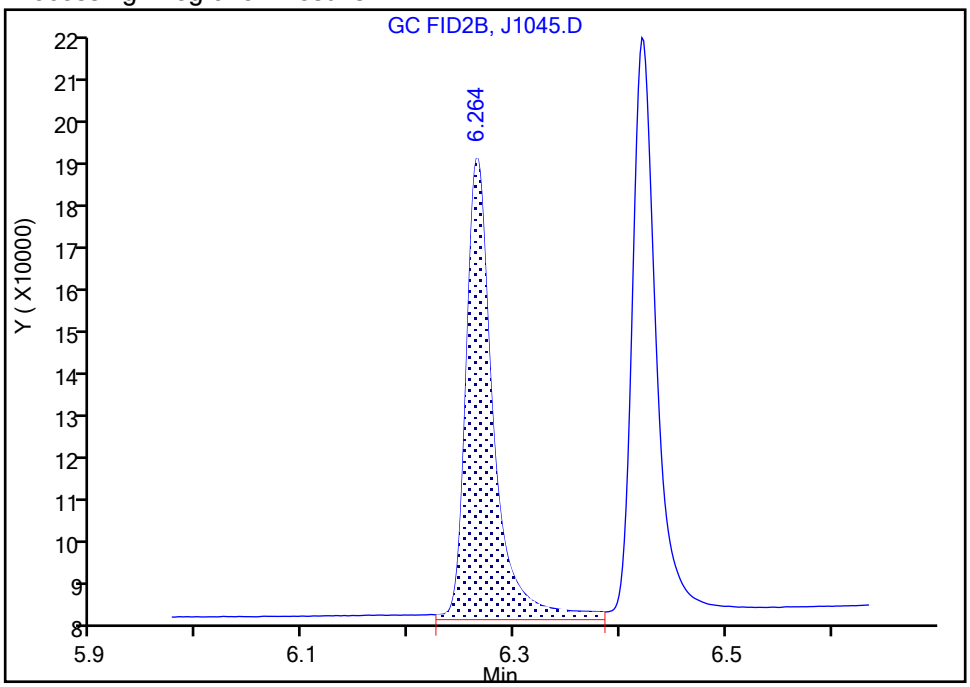
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

8 isobutylene, CAS: 115-11-7

Signal: 2

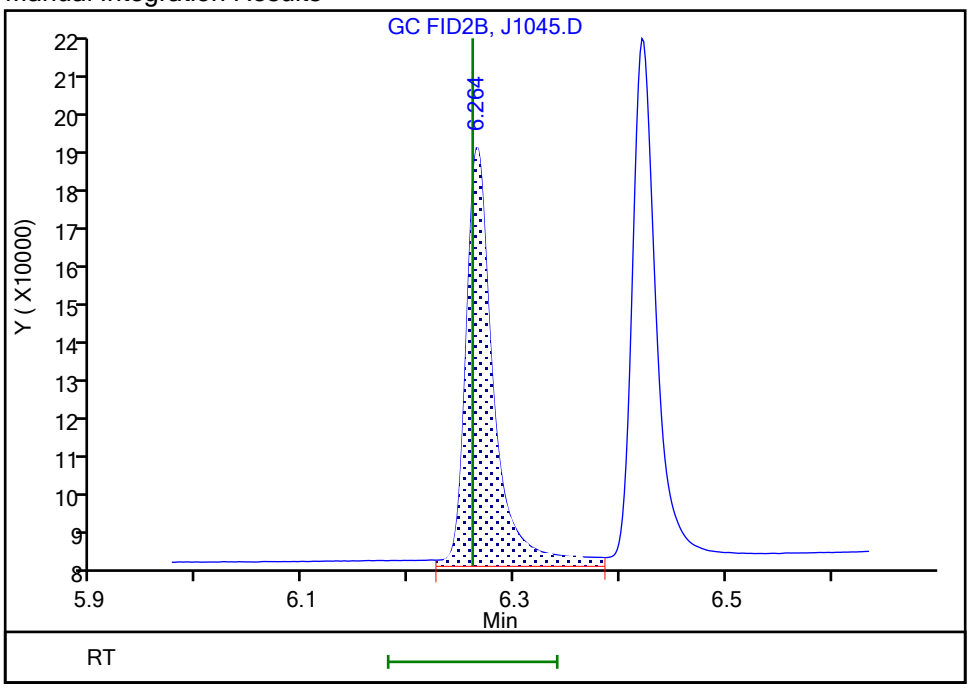
Processing Integration Results

RT: 6.26
Area: 190198
Amount: 5.689138
Amount Units: ug/l



Manual Integration Results

RT: 6.26
Area: 190198
Amount: 5.816293
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:43:08

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

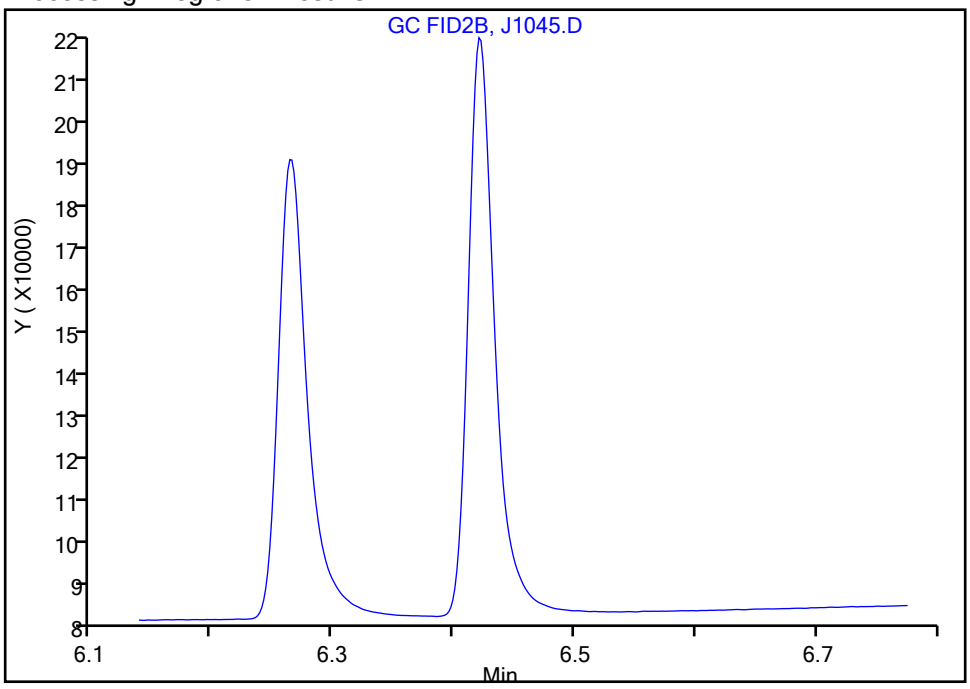
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1045.D				
Injection Date:	22-Nov-2022 16:16:26	Instrument ID:	VGC_J		
Lims ID:	ic RSK 5 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

7 Butane, CAS: 106-97-8

Signal: 2

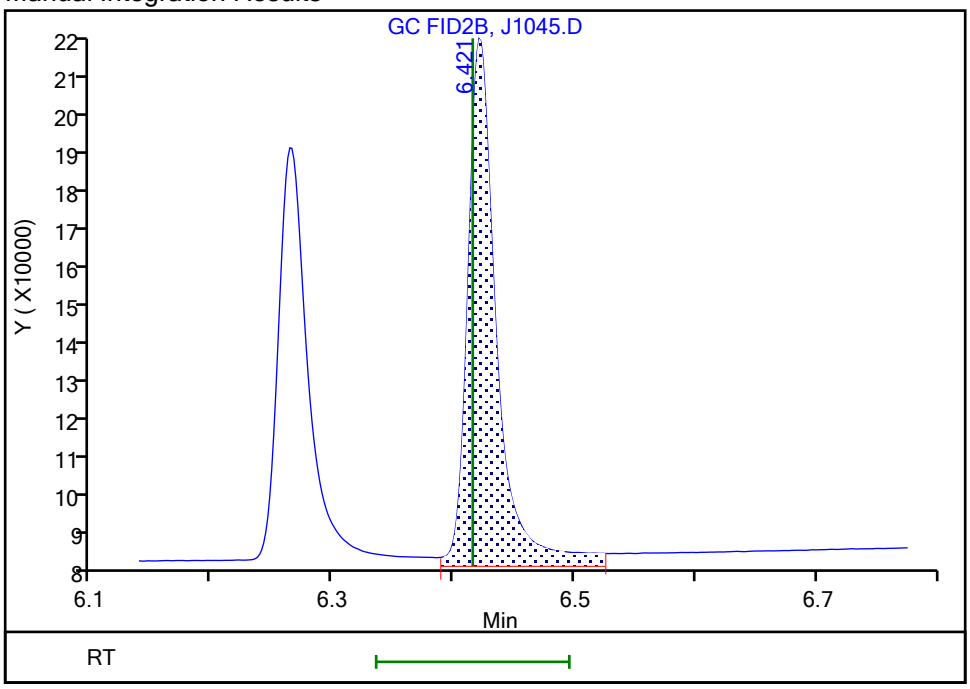
Not Detected
Expected RT: 6.42

Processing Integration Results



Manual Integration Results

RT: 6.42
Area: 219395
Amount: 6.008137
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:43:29
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D
Lims ID: ic RSK 40 uL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Nov-2022 16:30:12 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 40 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:54 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 18:02:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							Ma
1	1.210	1.209	0.001	597693	13.1	13.4	M
2	1.645	1.640	0.005	534550	13.1	13.5	M
						RPD = 0.58	
3 Ethane							Ma
1	1.462	1.461	0.001	989301	24.6	25.6	M
2	2.995	2.990	0.005	903672	24.6	25.7	
						RPD = 0.49	
4 Ethylene							M
1	1.749	1.746	0.003	938642	23.0	23.8	M
2	2.575	2.570	0.005	754091	23.0	24.0	
						RPD = 0.71	
5 Propane							Ma
1	2.509	2.506	0.003	1442697	36.1	37.7	M
2	4.917	4.914	0.003	1291157	36.1	37.8	M
						RPD = 0.09	
6 Acetylene							Ma
1	4.130	4.121	0.009	651380	21.3	22.2	M
2	2.730	2.724	0.006	753138	21.3	22.4	a
						RPD = 1.04	
7 Butane							Ma
1	4.412	4.407	0.005	1964235	47.6	49.9	M
2	6.420	6.415	0.005	1792980	47.6	49.1	M
						RPD = 1.70	
8 isobutylene							Ma
1	5.327	5.322	0.005	1766626	46.0	47.9	M
2	6.263	6.260	0.003	1550959	46.0	47.4	M
						RPD = 1.04	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 40.00 Units: uL

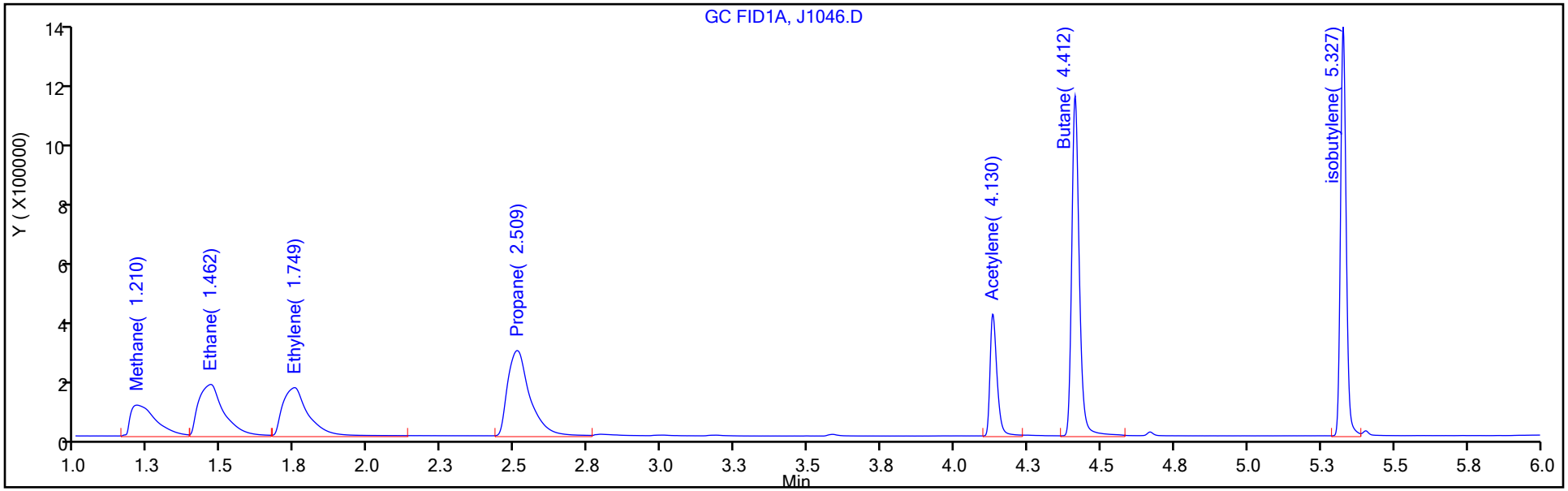
Report Date: 23-Nov-2022 11:28:54 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

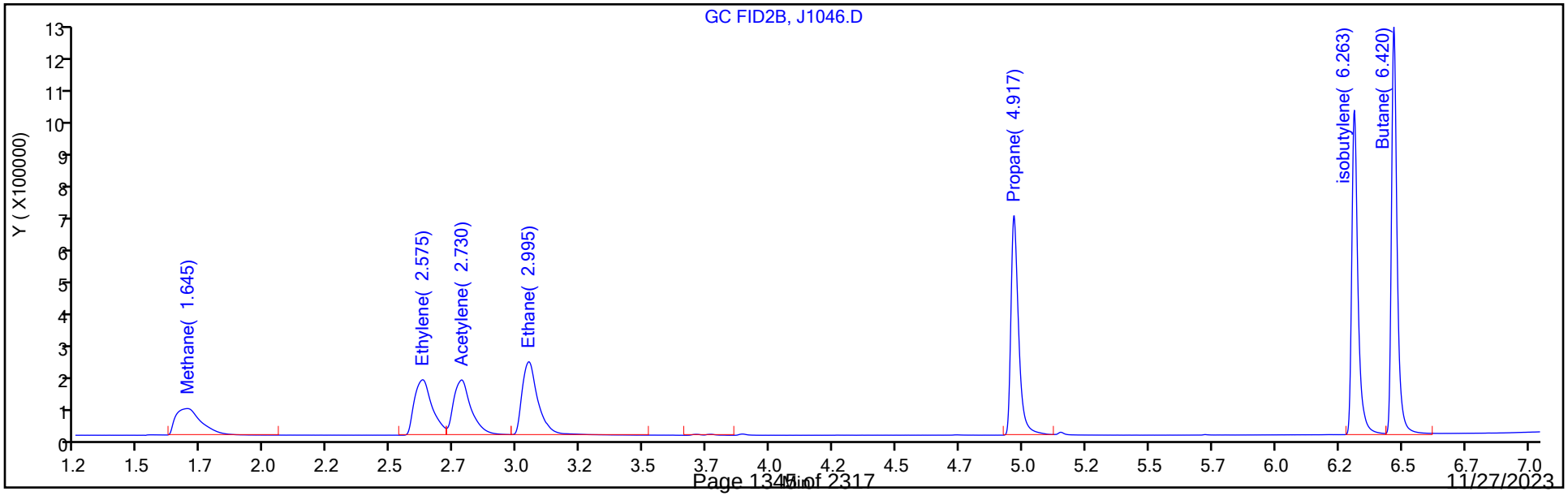
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D

Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 40 uL			Worklist Smp#:	6
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

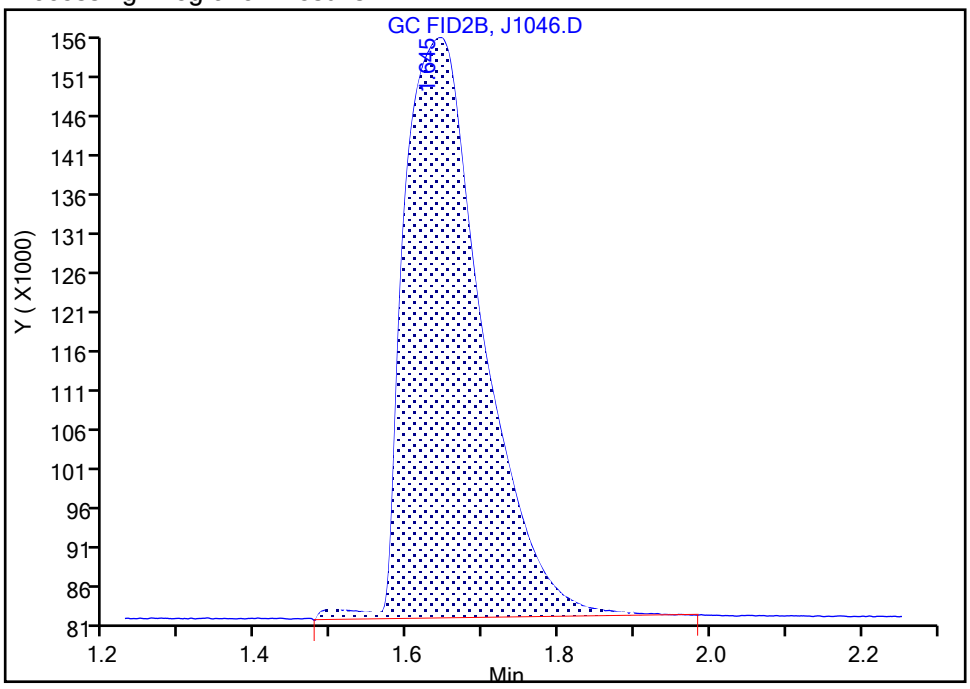
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D				
Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J		
Lims ID:	ic RSK 40 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

2 Methane, CAS: 74-82-8

Signal: 2

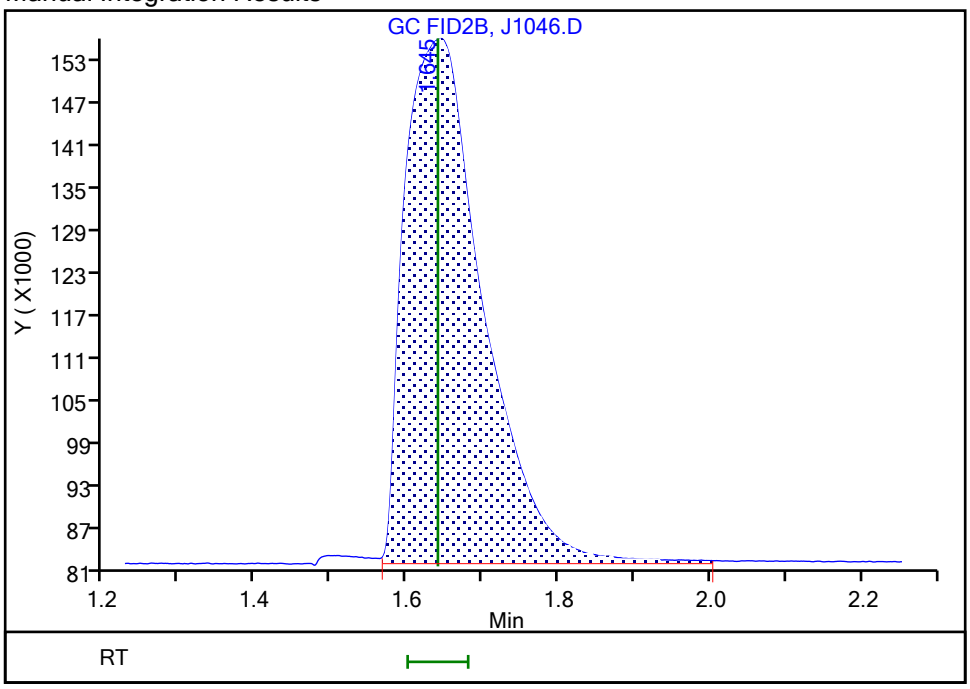
Processing Integration Results

RT: 1.65
Area: 533025
Amount: 12.632598
Amount Units: ug/l



Manual Integration Results

RT: 1.65
Area: 534550
Amount: 13.508221
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:47:39

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

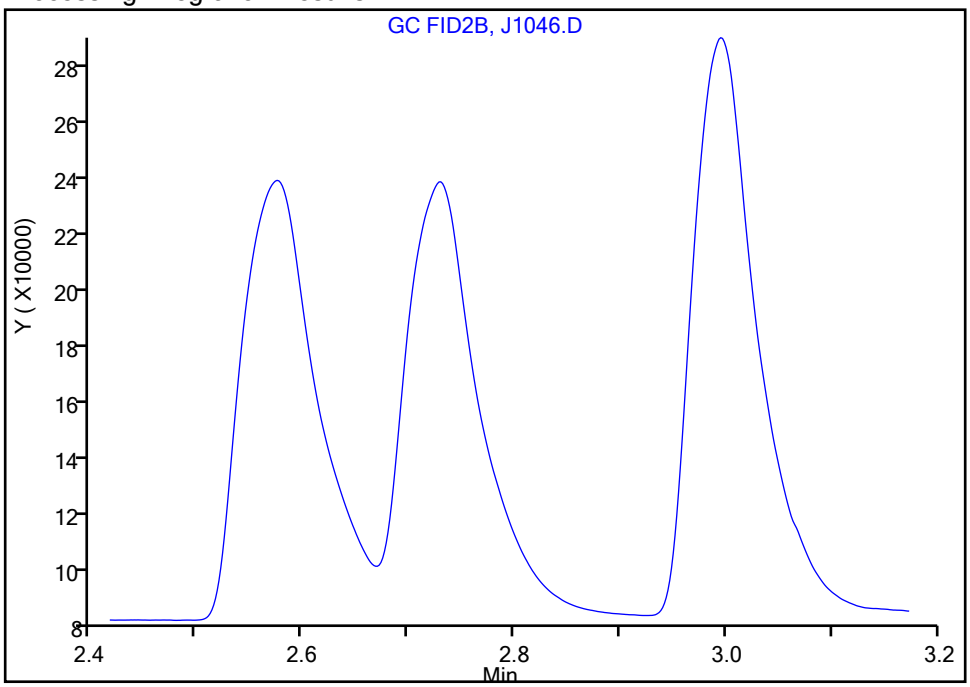
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D				
Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J		
Lims ID:	ic RSK 40 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

6 Acetylene, CAS: 74-86-2

Signal: 2

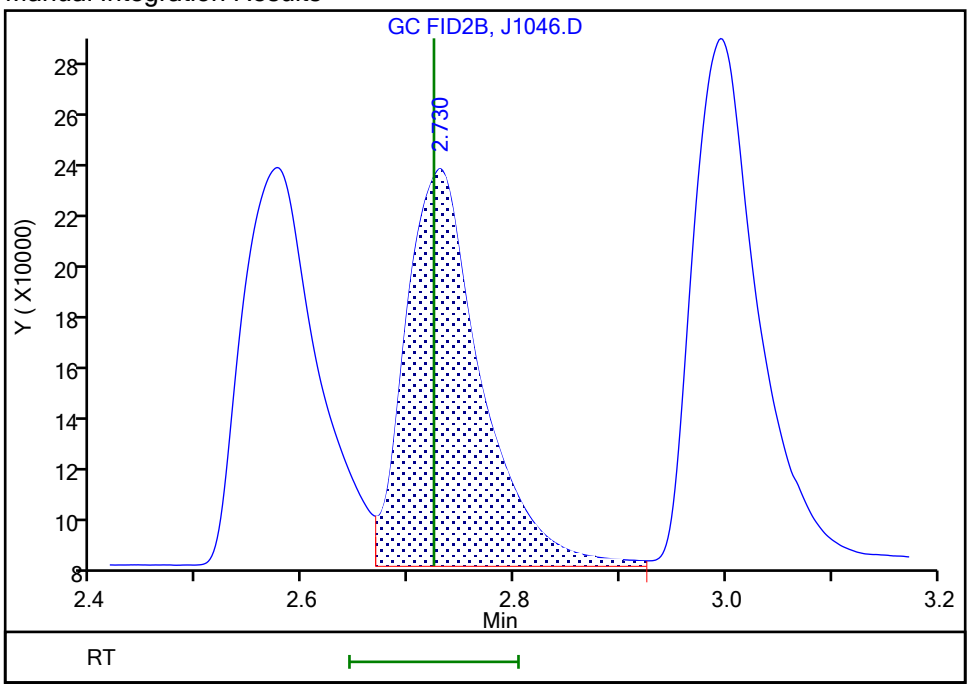
Not Detected
Expected RT: 2.72

Processing Integration Results



Manual Integration Results

RT: 2.73
Area: 753138
Amount: 22.435727
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:52:13
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

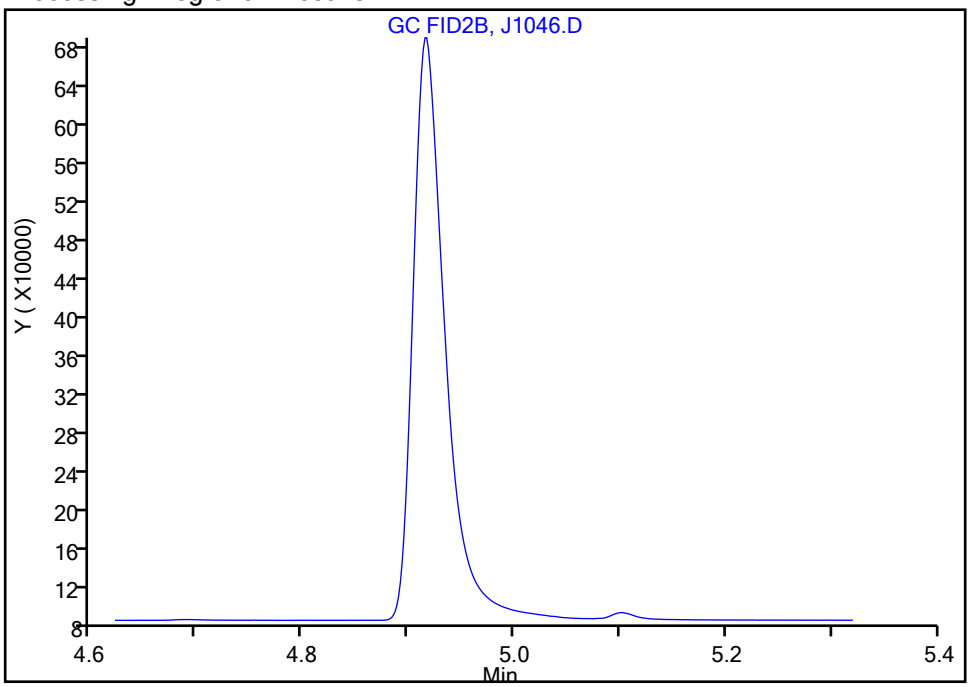
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D
Injection Date: 22-Nov-2022 16:30:12 Instrument ID: VGC_J
Lims ID: ic RSK 40 uL
Client ID:
Operator ID: JH ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

5 Propane, CAS: 74-98-6

Signal: 2

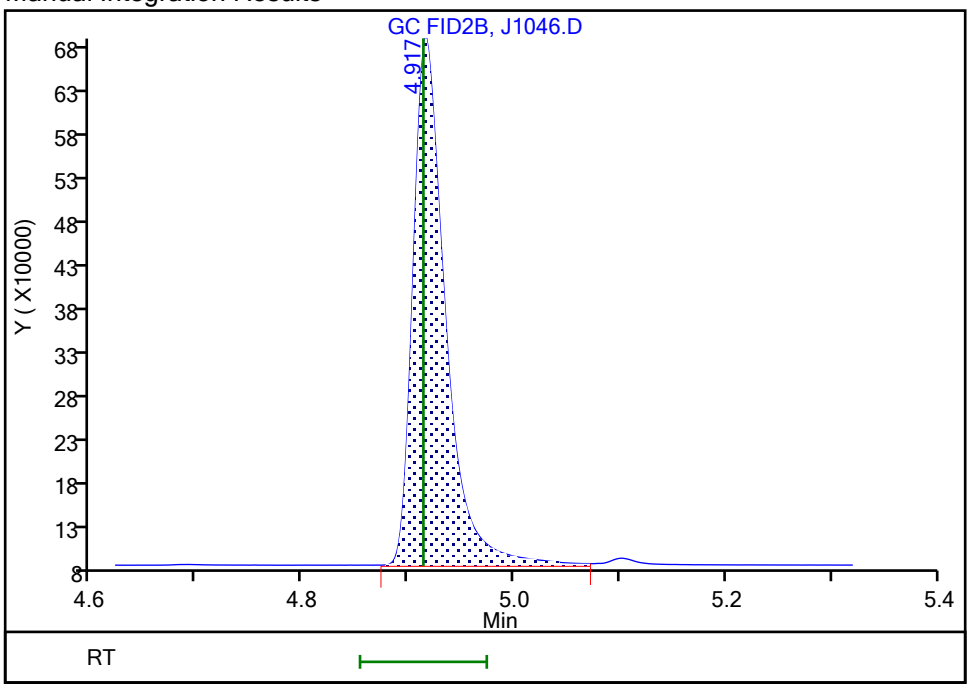
Processing Integration Results

RT: 4.92
Area: 0
Amount: 37.934386
Amount Units: ug/l



Manual Integration Results

RT: 4.92
Area: 1291157
Amount: 37.761953
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:51:35
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

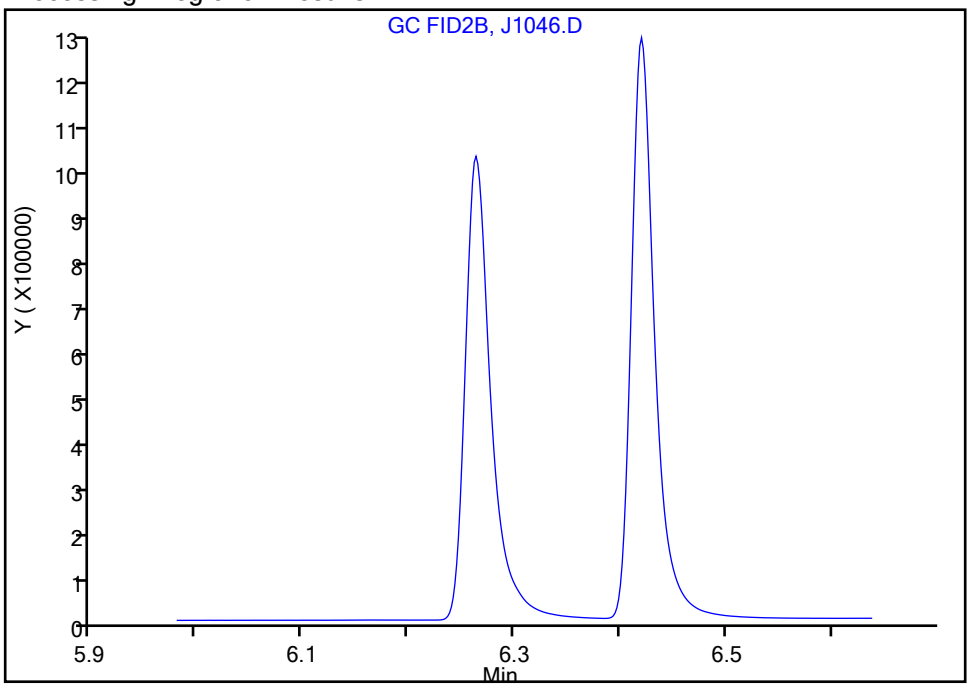
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D				
Injection Date:	22-Nov-2022 16:30:12	Instrument ID:	VGC_J		
Lims ID:	ic RSK 40 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

8 isobutylene, CAS: 115-11-7

Signal: 2

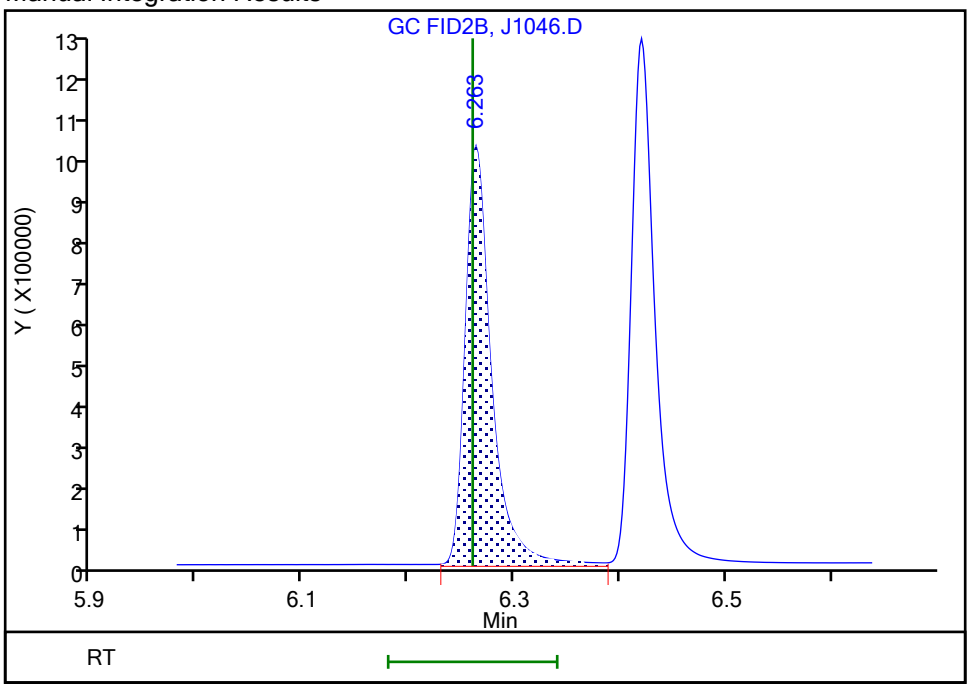
Processing Integration Results

RT: 6.26
Area: 0
Amount: 47.649434
Amount Units: ug/l



Manual Integration Results

RT: 6.26
Area: 1550959
Amount: 47.428636
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 17:59:44

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

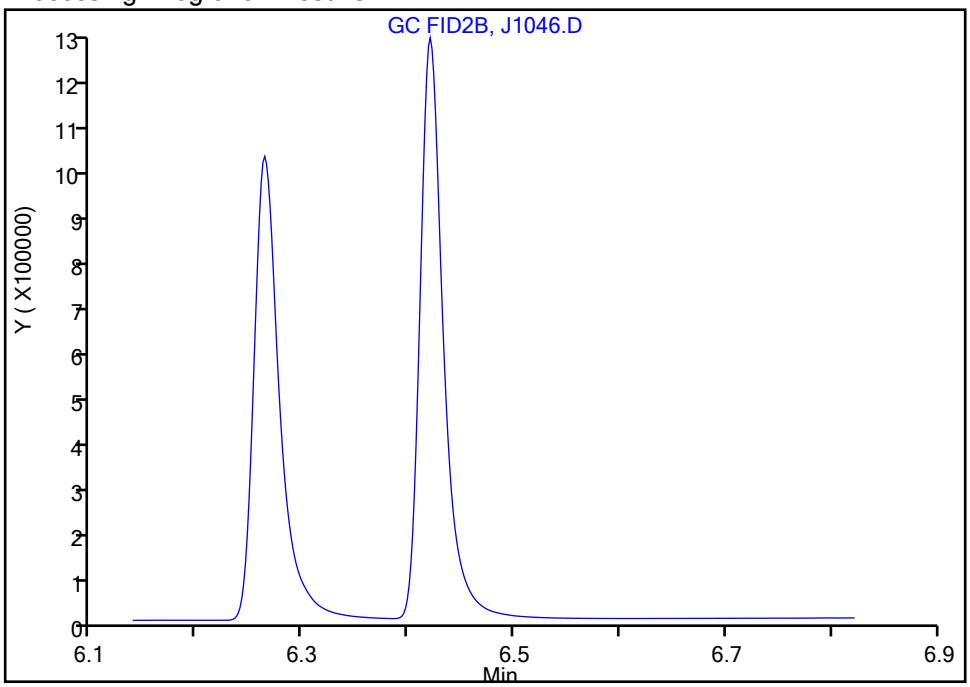
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1046.D
Injection Date: 22-Nov-2022 16:30:12 Instrument ID: VGC_J
Lims ID: ic RSK 40 uL
Client ID:
Operator ID: JH ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

7 Butane, CAS: 106-97-8

Signal: 2

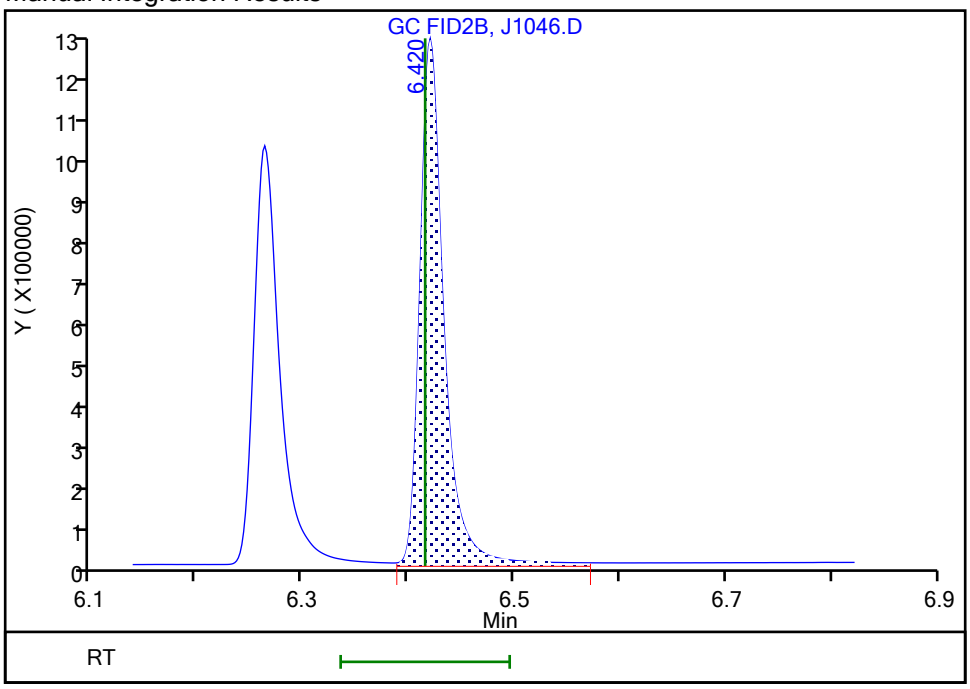
Processing Integration Results

RT: 6.42
Area: 0
Amount: 49.837633
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 1792980
Amount: 49.100797
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:02:33
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D
Lims ID: ic RSK 200 uL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Nov-2022 16:44:04 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 200 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:55 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 18:08:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.209	1.209	0.000	2594265	65.7	65.0	M
2	1.642	1.642	0.000	2374559	65.7	65.5	M
						RPD = 0.77	
3 Ethane							M
1	1.460	1.460	0.000	4800335	123.2	124.1	M
2	2.993	2.993	0.000	4386486	123.2	124.7	M
						RPD = 0.53	
4 Ethylene							M
1	1.747	1.747	0.000	4565792	114.9	116.0	M
2	2.572	2.572	0.000	3657619	114.9	116.4	
						RPD = 0.42	
5 Propane							Ma
1	2.509	2.509	0.000	7047561	180.6	184.3	M
2	4.913	4.913	0.000	6221833	180.6	182.0	M
						RPD = 1.27	
6 Acetylene							Ma
1	4.125	4.125	0.000	3138327	106.7	107.0	M
2	2.727	2.727	0.000	3637167	106.7	108.3	a
						RPD = 1.28	
7 Butane							Ma
1	4.410	4.410	0.000	9461289	238.1	240.6	M
2	6.418	6.418	0.000	8544605	238.1	234.0	M
						RPD = 2.77	
8 isobutylene							Ma
1	5.325	5.325	0.000	8497786	229.8	230.5	M
2	6.262	6.262	0.000	7390142	229.8	226.0	M
						RPD = 1.99	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 200.00 Units: uL

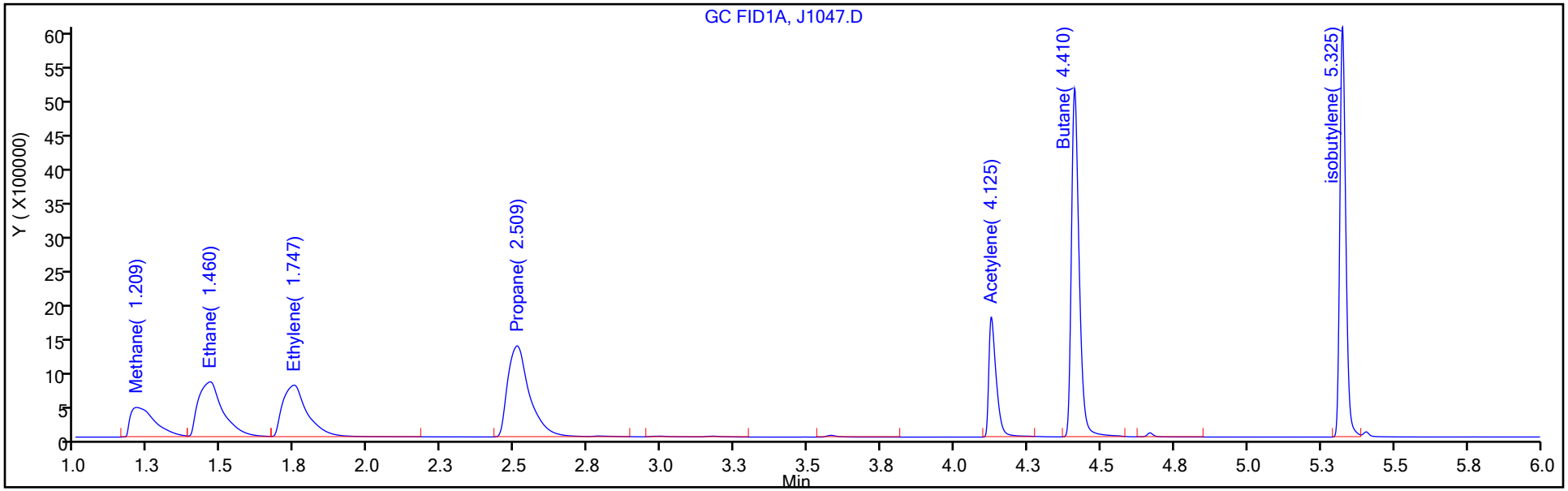
Report Date: 23-Nov-2022 11:28:55 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

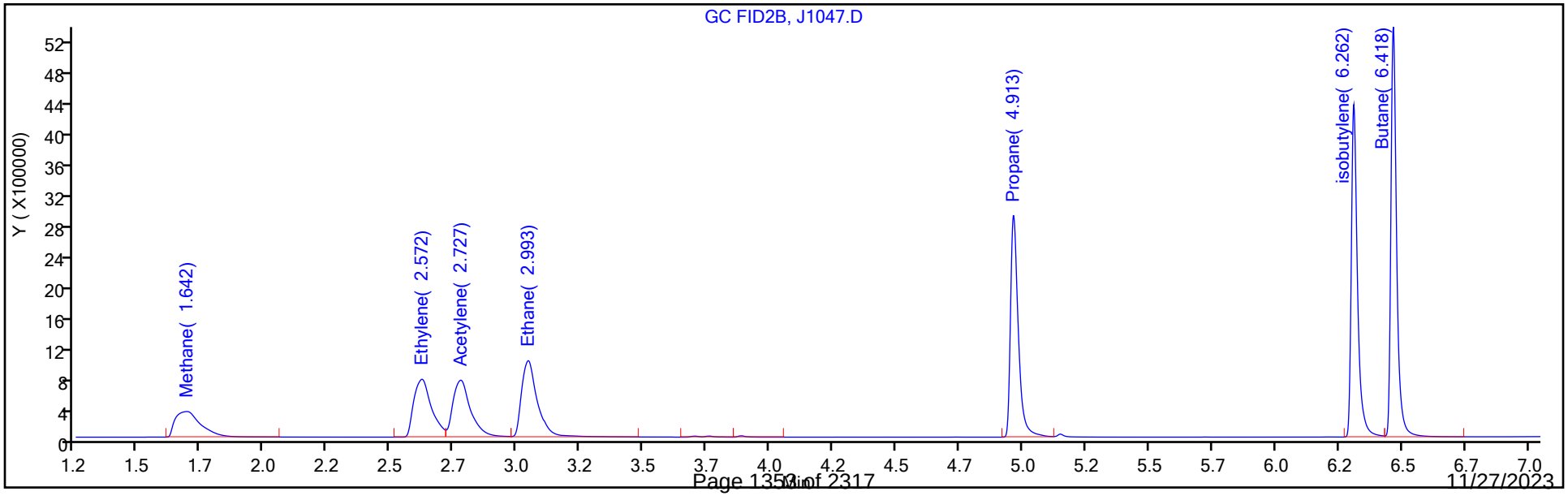
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D

Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 200 uL			Worklist Smp#:	7
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

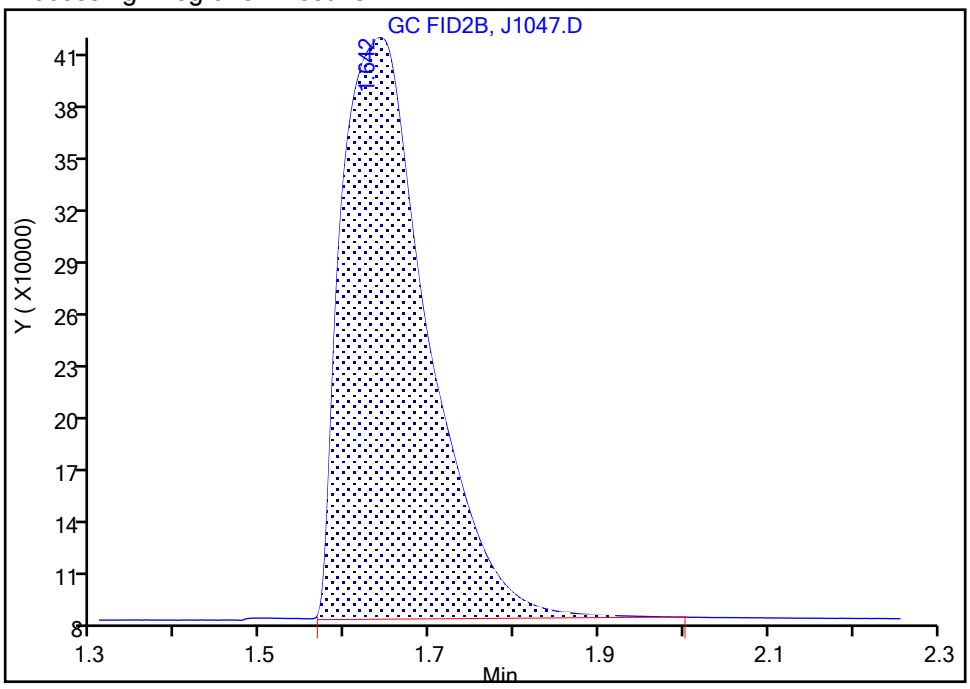
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D				
Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J		
Lims ID:	ic RSK 200 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

2 Methane, CAS: 74-82-8

Signal: 2

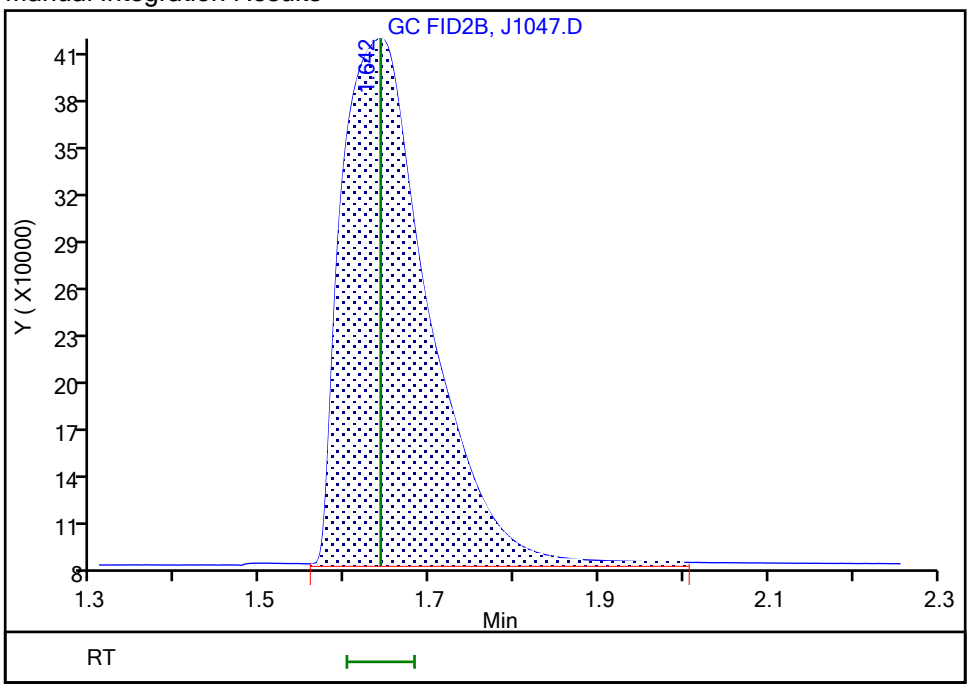
Processing Integration Results

RT: 1.64
Area: 2345638
Amount: 63.137902
Amount Units: ug/l



Manual Integration Results

RT: 1.64
Area: 2374559
Amount: 65.540551
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:12:36
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

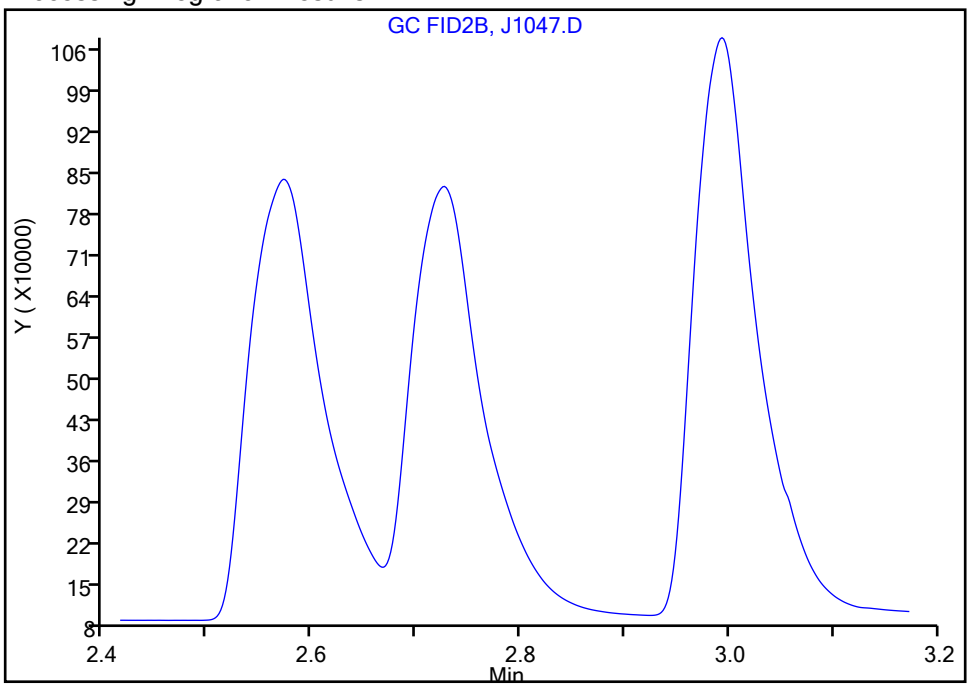
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D
Injection Date: 22-Nov-2022 16:44:04 Instrument ID: VGC_J
Lims ID: ic RSK 200 uL
Client ID:
Operator ID: JH ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

6 Acetylene, CAS: 74-86-2

Signal: 2

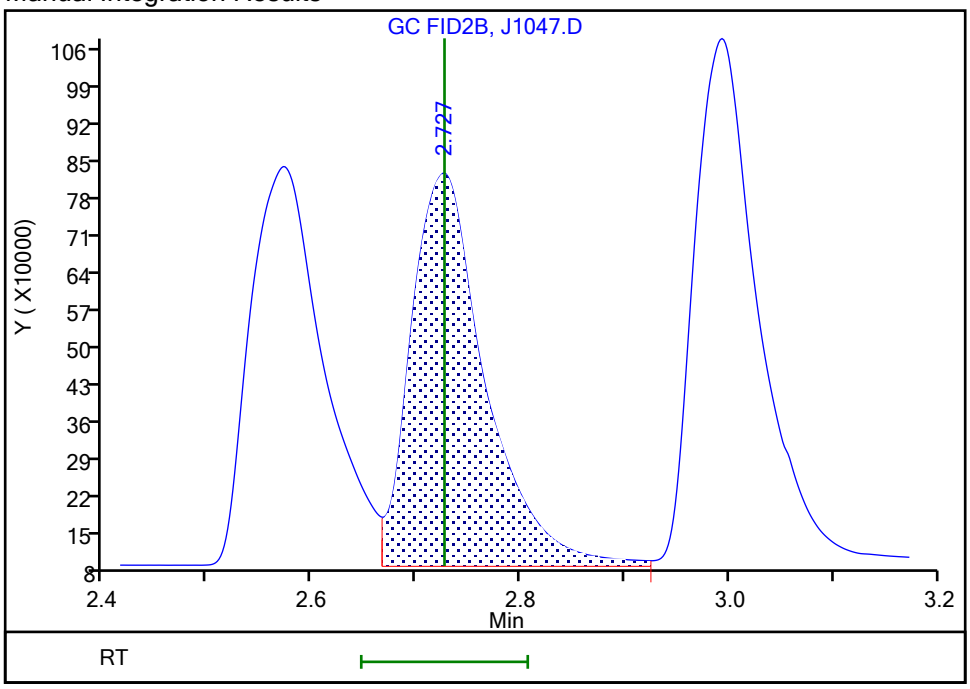
Not Detected
Expected RT: 2.73

Processing Integration Results



Manual Integration Results

RT: 2.73
Area: 3637167
Amount: 108.3500
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:16:11
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

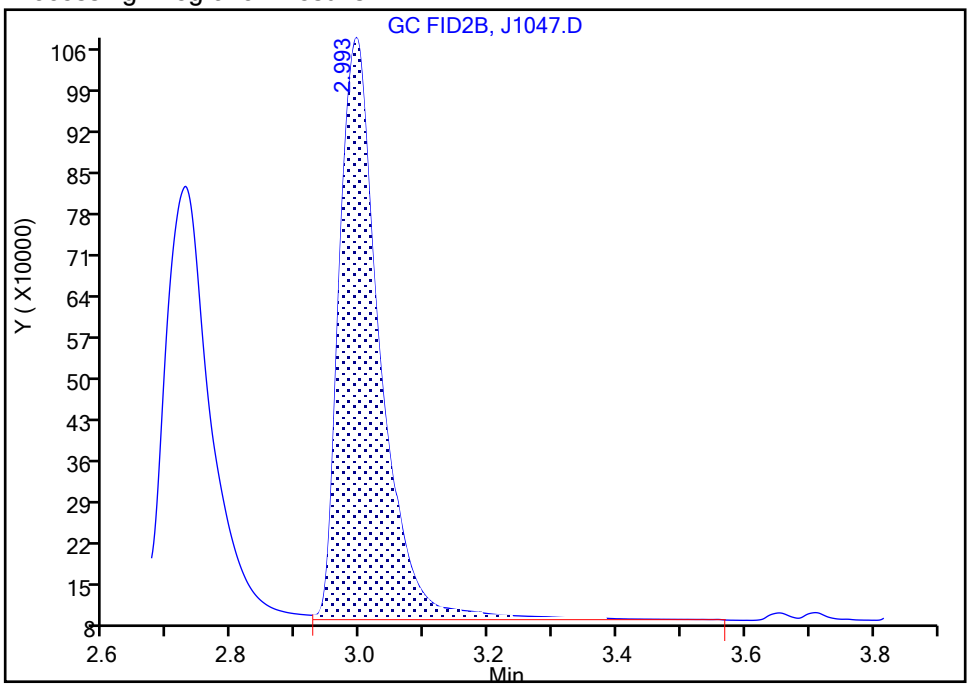
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D
Injection Date: 22-Nov-2022 16:44:04 Instrument ID: VGC_J
Lims ID: ic RSK 200 uL
Client ID:
Operator ID: JH ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

3 Ethane, CAS: 74-84-0

Signal: 2

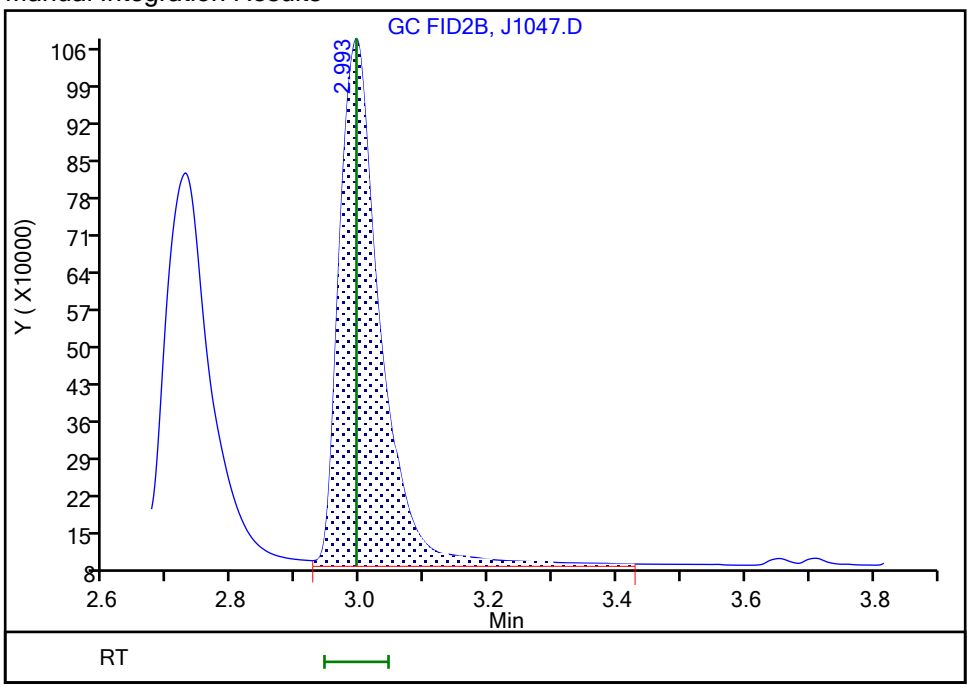
Processing Integration Results

RT: 2.99
Area: 4391503
Amount: 125.2912
Amount Units: ug/l



Manual Integration Results

RT: 2.99
Area: 4386486
Amount: 124.7315
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:13:35
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

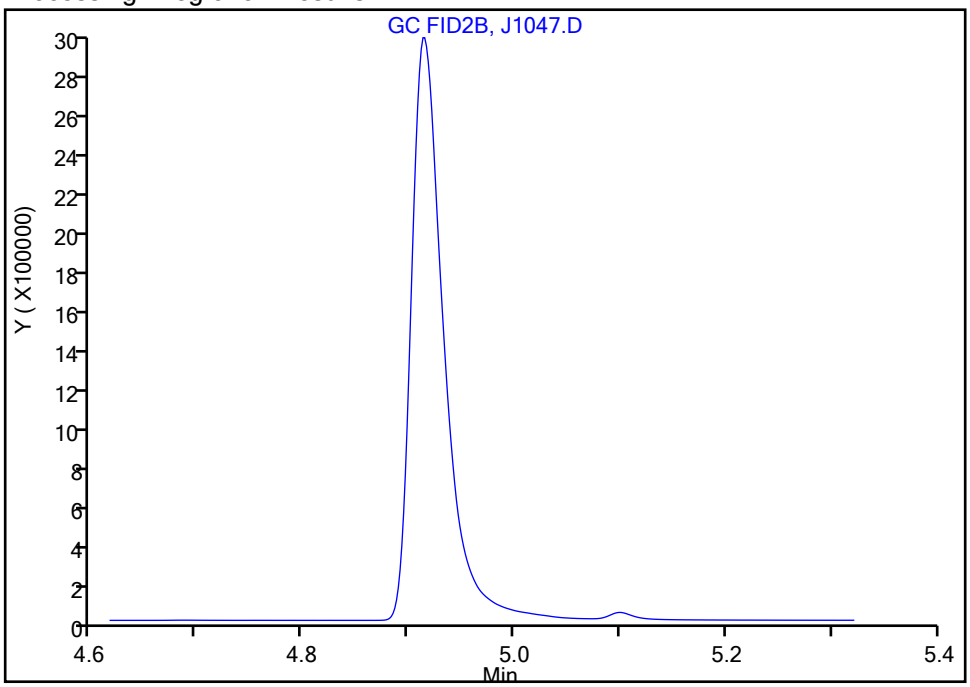
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D				
Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J		
Lims ID:	ic RSK 200 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

5 Propane, CAS: 74-98-6

Signal: 2

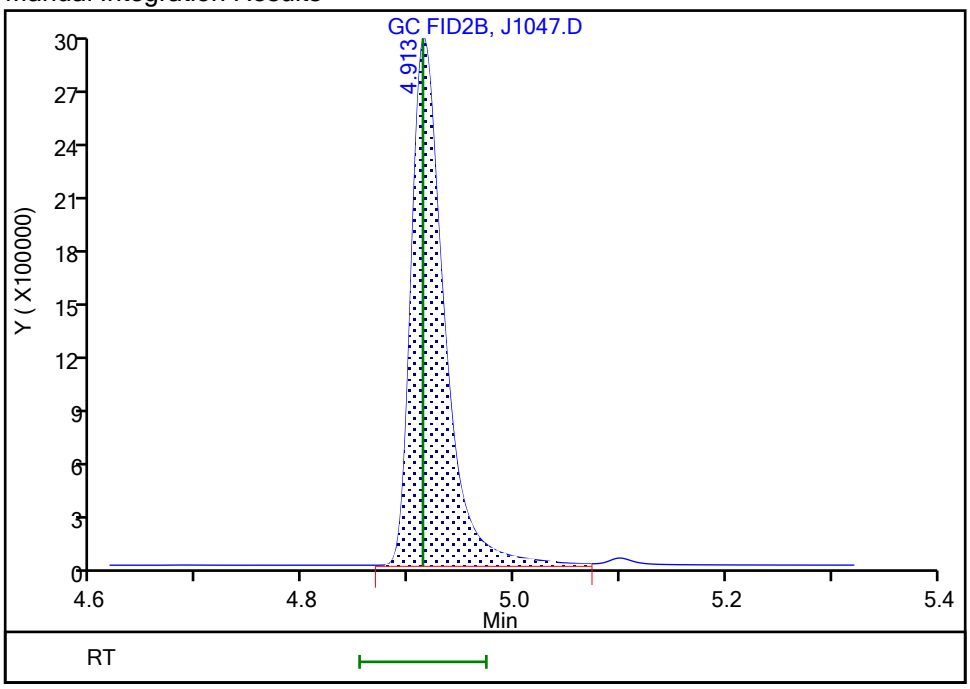
Processing Integration Results

RT: 4.92
Area: 0
Amount: 184.1193
Amount Units: ug/l



Manual Integration Results

RT: 4.91
Area: 6221833
Amount: 181.9675
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:16:01
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

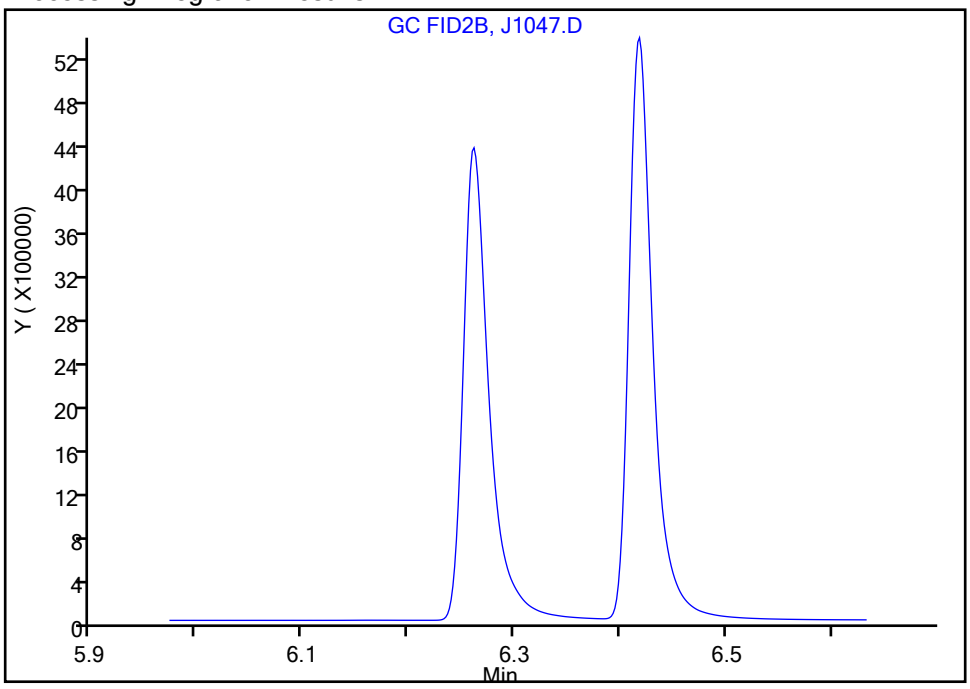
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D
Injection Date: 22-Nov-2022 16:44:04 Instrument ID: VGC_J
Lims ID: ic RSK 200 uL
Client ID:
Operator ID: JH ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

8 isobutylene, CAS: 115-11-7

Signal: 2

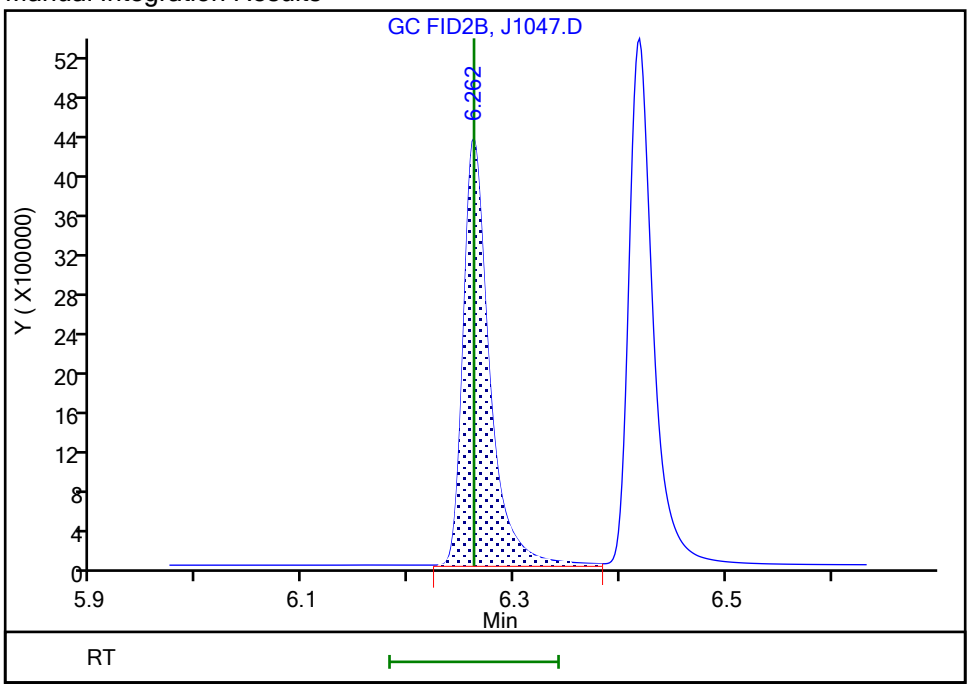
Processing Integration Results

RT: 6.26
Area: 0
Amount: 229.3614
Amount Units: ug/l



Manual Integration Results

RT: 6.26
Area: 7390142
Amount: 225.9920
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:19:06
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

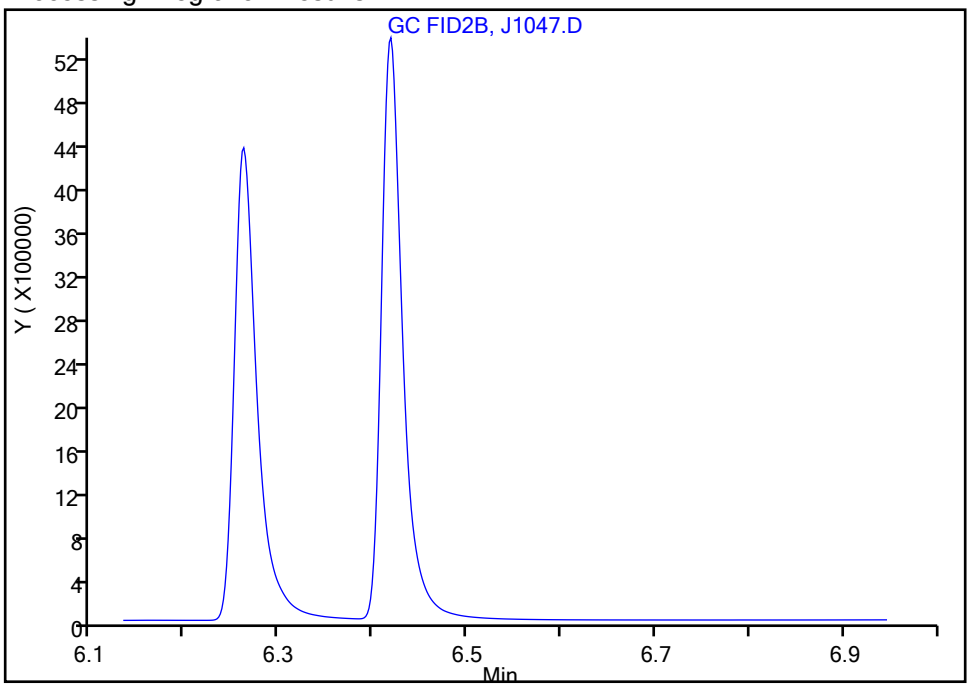
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1047.D				
Injection Date:	22-Nov-2022 16:44:04	Instrument ID:	VGC_J		
Lims ID:	ic RSK 200 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

7 Butane, CAS: 106-97-8

Signal: 2

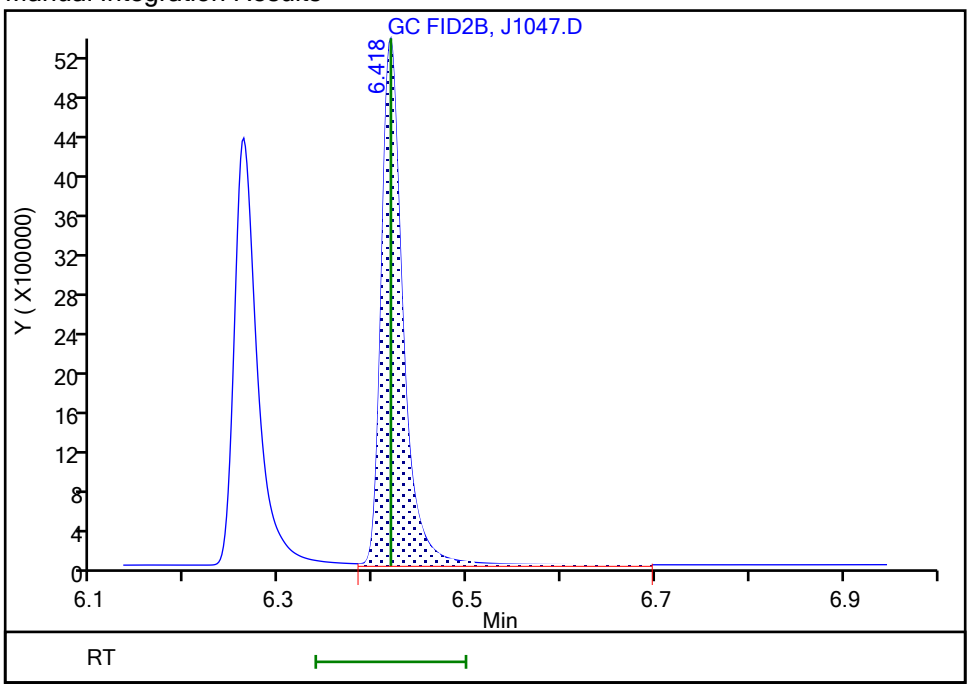
Processing Integration Results

RT: 6.42
Area: 0
Amount: 239.5571
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 8544605
Amount: 233.9942
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:18:06

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D
Lims ID: ic RSK 400 uL
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 22-Nov-2022 16:57:54 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 400 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:56 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 19:15:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.209	1.209	0.000	5077236	131.4	129.2	M
2	1.640	1.640	0.000	4645758	131.4	129.8	M
						RPD = 0.43	
3 Ethane							M
1	1.461	1.461	0.000	9498907	246.3	245.5	M
2	2.990	2.990	0.000	8694621	246.3	247.2	M
						RPD = 0.70	
4 Ethylene							M
1	1.746	1.746	0.000	9079325	229.8	230.6	M
2	2.570	2.570	0.000	7261000	229.8	231.2	
						RPD = 0.25	
5 Propane							Ma
1	2.506	2.506	0.000	13794006	361.3	360.7	M
2	4.914	4.914	0.000	12313361	361.3	360.1	M
						RPD = 0.17	
6 Acetylene							Ma
1	4.121	4.121	0.000	6251021	213.3	213.1	M
2	2.724	2.724	0.000	7277797	213.3	216.8	a
						RPD = 1.74	
7 Butane							Ma
1	4.407	4.407	0.000	18575547	476.1	472.3	M
2	6.415	6.415	0.000	16809482	476.1	460.3	M
						RPD = 2.56	
8 isobutylene							Ma
1	5.322	5.322	0.000	16772055	459.7	455.0	M
2	6.260	6.260	0.000	14593944	459.7	446.3	M
						RPD = 1.93	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 400.00 Units: uL

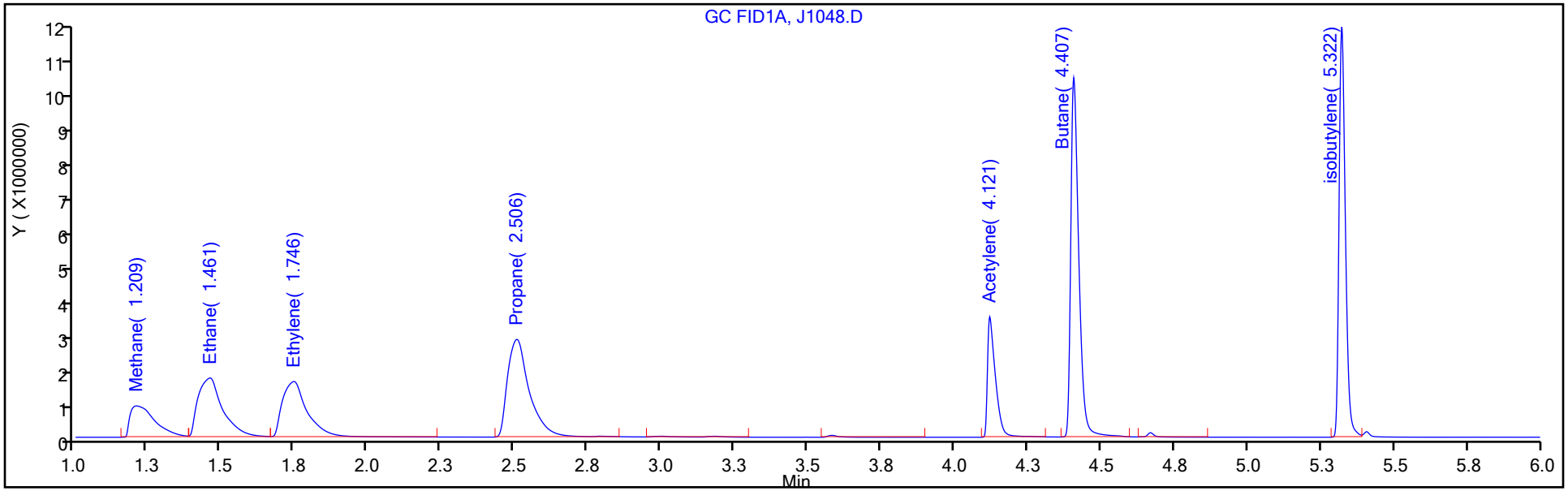
Report Date: 23-Nov-2022 11:28:56 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

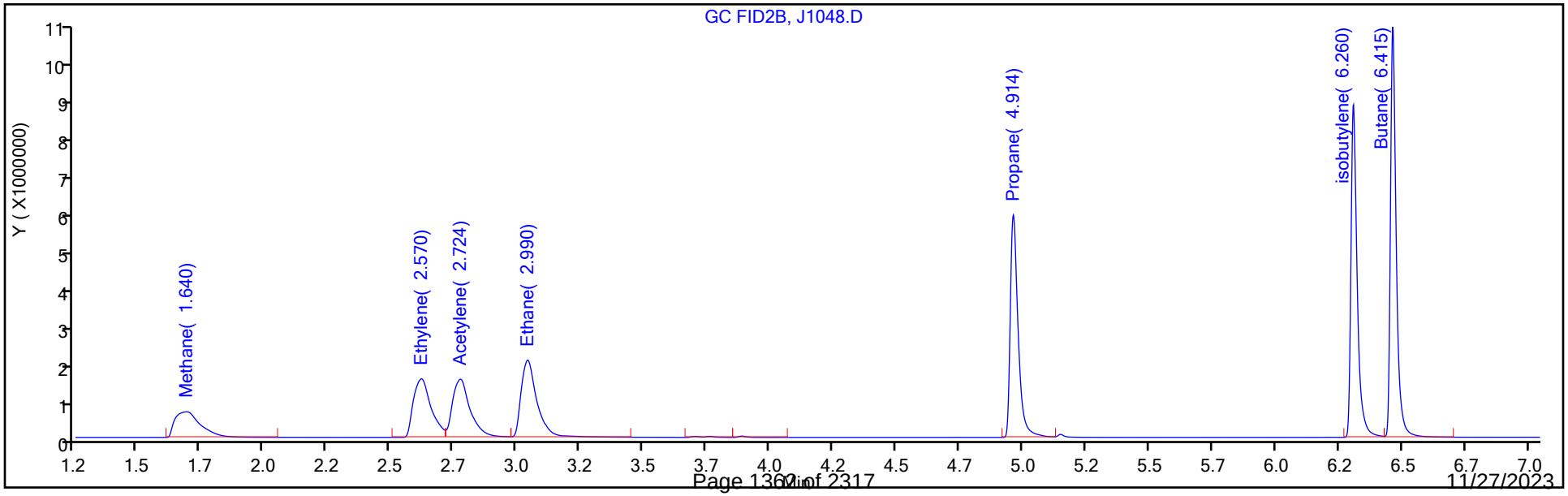
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D

Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 400 uL			Worklist Smp#:	8
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

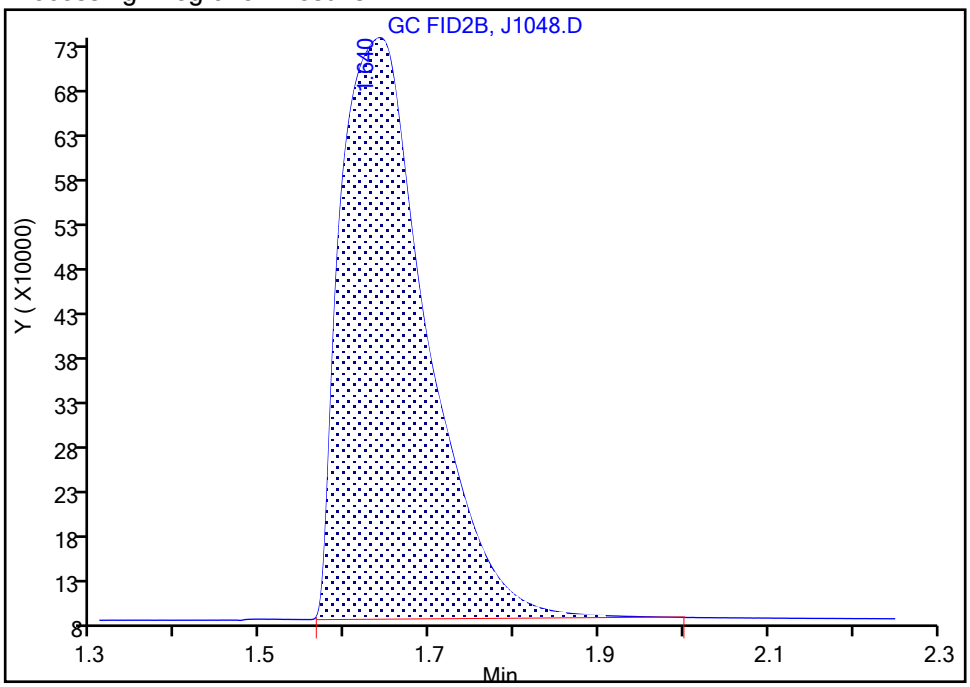
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D
Injection Date: 22-Nov-2022 16:57:54 Instrument ID: VGC_J
Lims ID: ic RSK 400 uL
Client ID:
Operator ID: JH ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

2 Methane, CAS: 74-82-8

Signal: 2

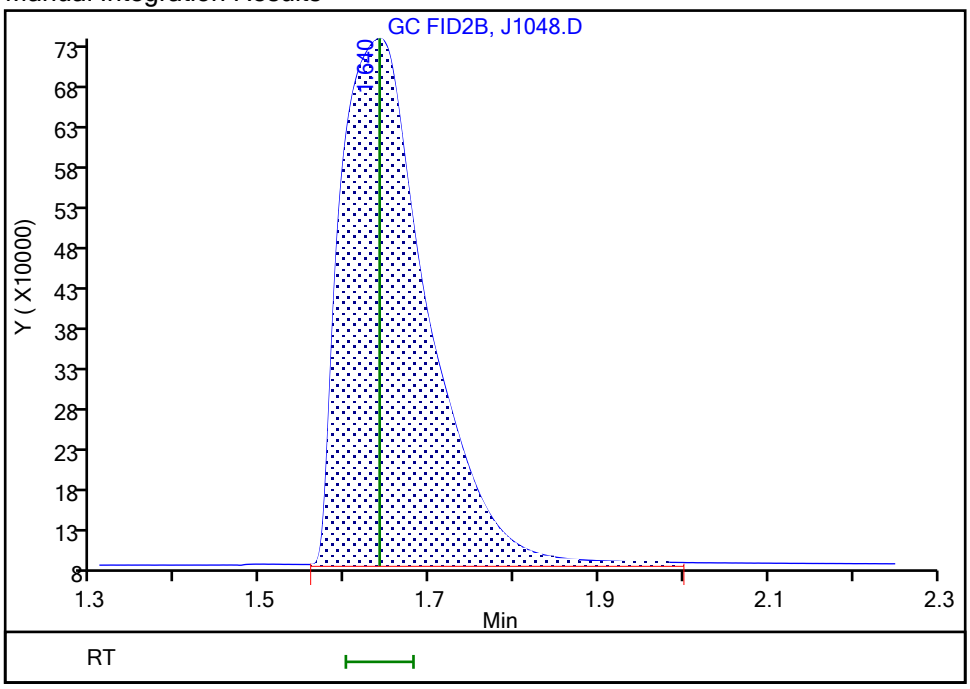
Processing Integration Results

RT: 1.64
Area: 4591535
Amount: 126.1899
Amount Units: ug/l



Manual Integration Results

RT: 1.64
Area: 4645758
Amount: 129.7662
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:05:15
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

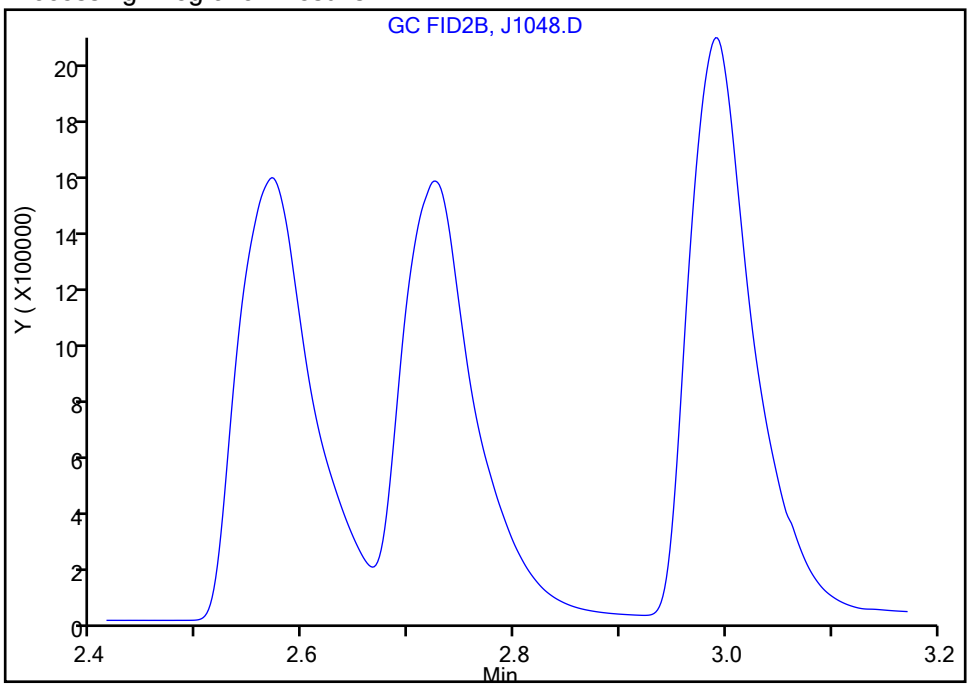
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D				
Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J		
Lims ID:	ic RSK 400 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

6 Acetylene, CAS: 74-86-2

Signal: 2

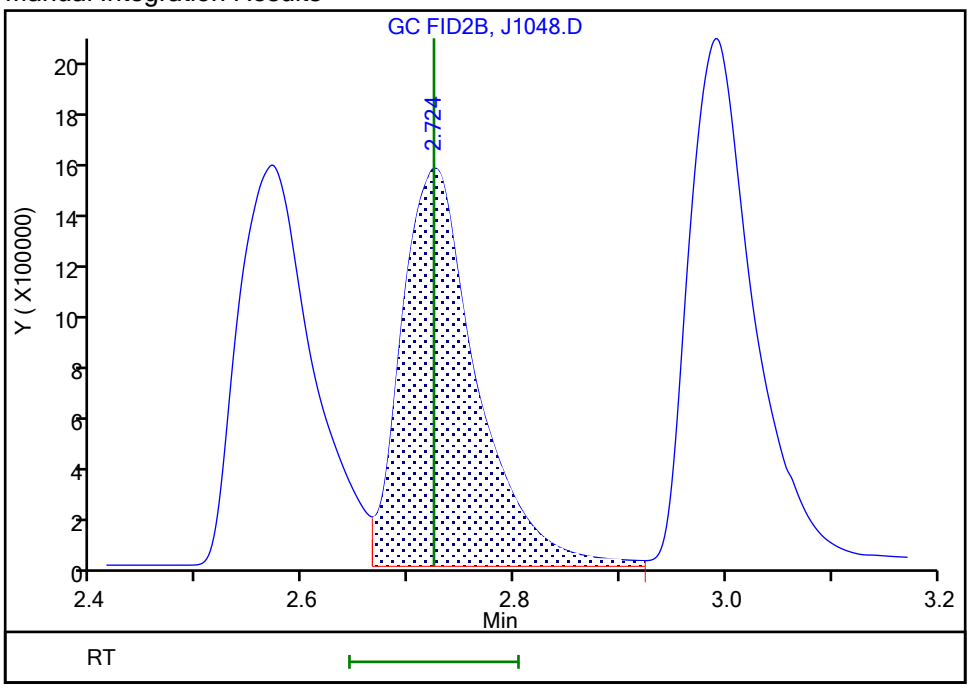
Processing Integration Results

RT: 2.73
Area: 0
Amount: 211.2919
Amount Units: ug/l



Manual Integration Results

RT: 2.72
Area: 7277797
Amount: 216.8031
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:10:36
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

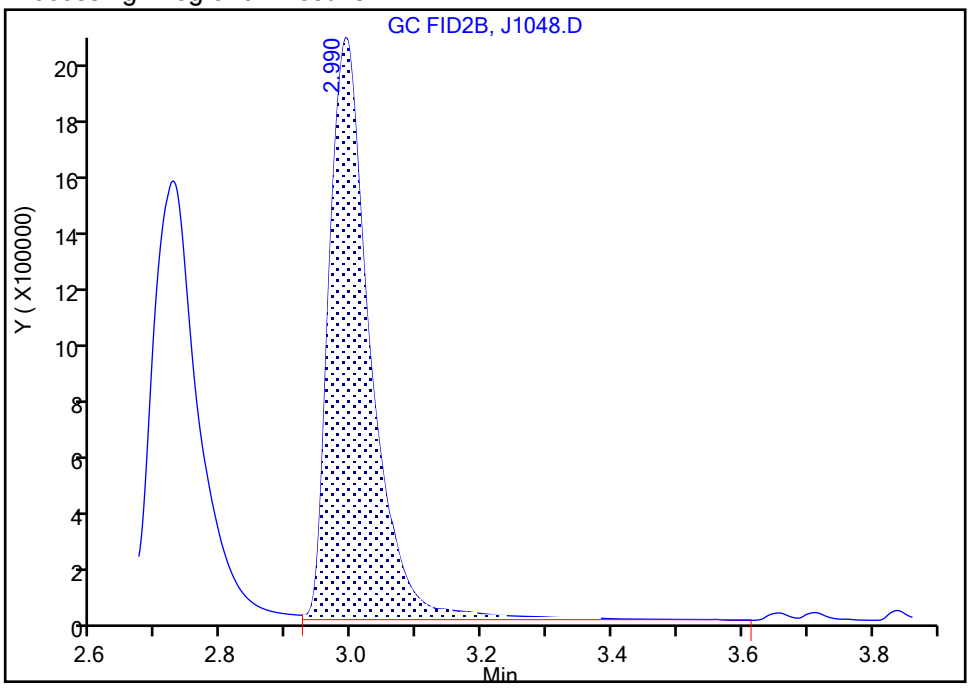
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D				
Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J		
Lims ID:	ic RSK 400 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

3 Ethane, CAS: 74-84-0

Signal: 2

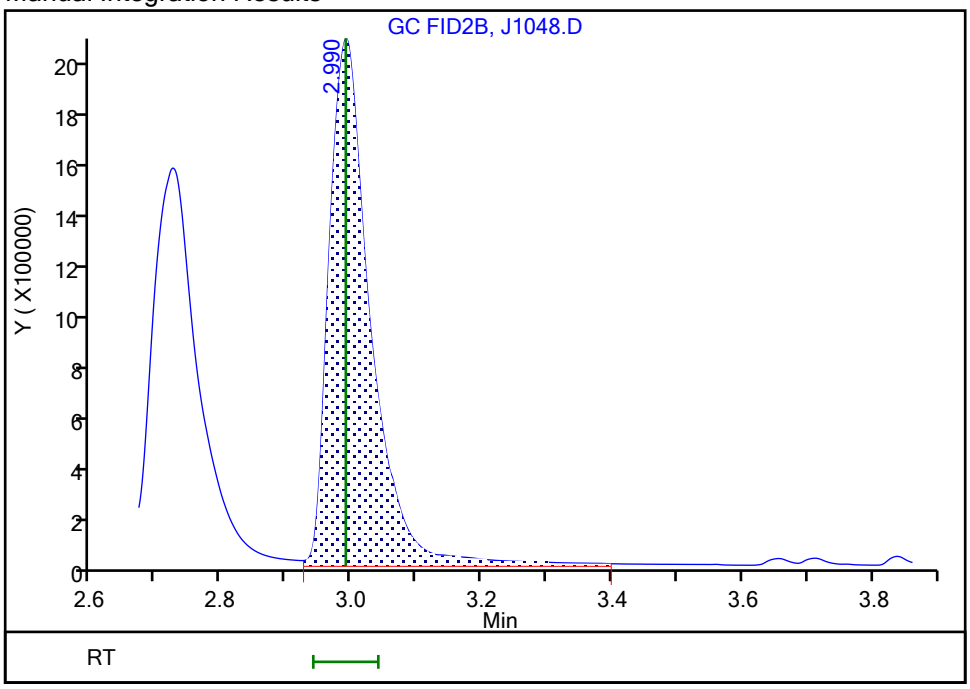
Processing Integration Results

RT: 2.99
Area: 8731508
Amount: 248.6111
Amount Units: ug/l



Manual Integration Results

RT: 2.99
Area: 8694621
Amount: 247.2350
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:06:03

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

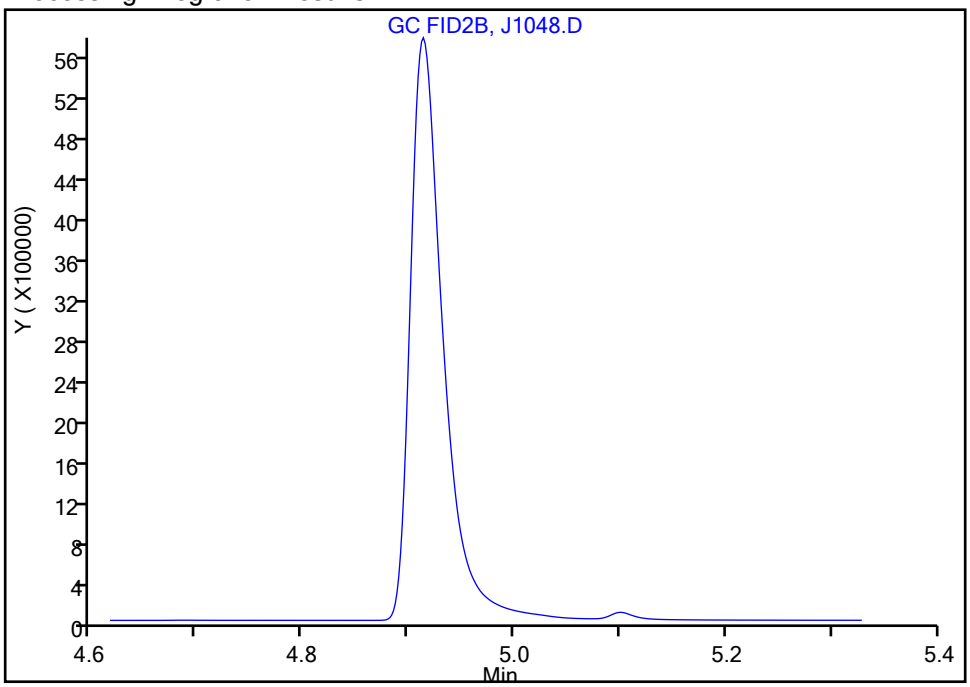
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D				
Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J		
Lims ID:	ic RSK 400 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

5 Propane, CAS: 74-98-6

Signal: 2

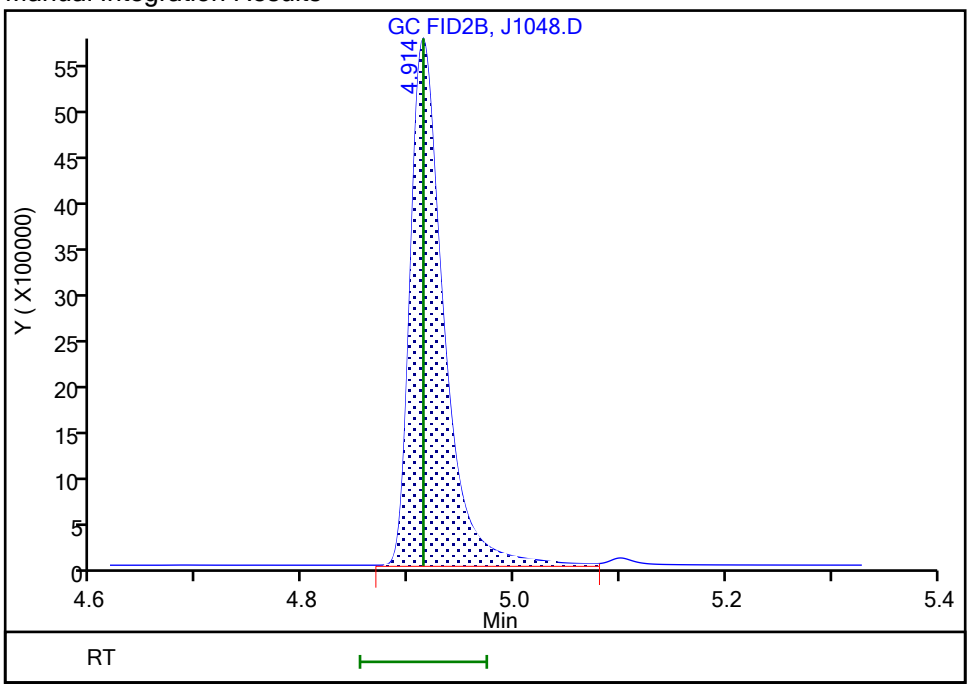
Processing Integration Results

RT: 4.91
Area: 0
Amount: 360.5532
Amount Units: ug/l



Manual Integration Results

RT: 4.91
Area: 12313361
Amount: 360.1240
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:08:13

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

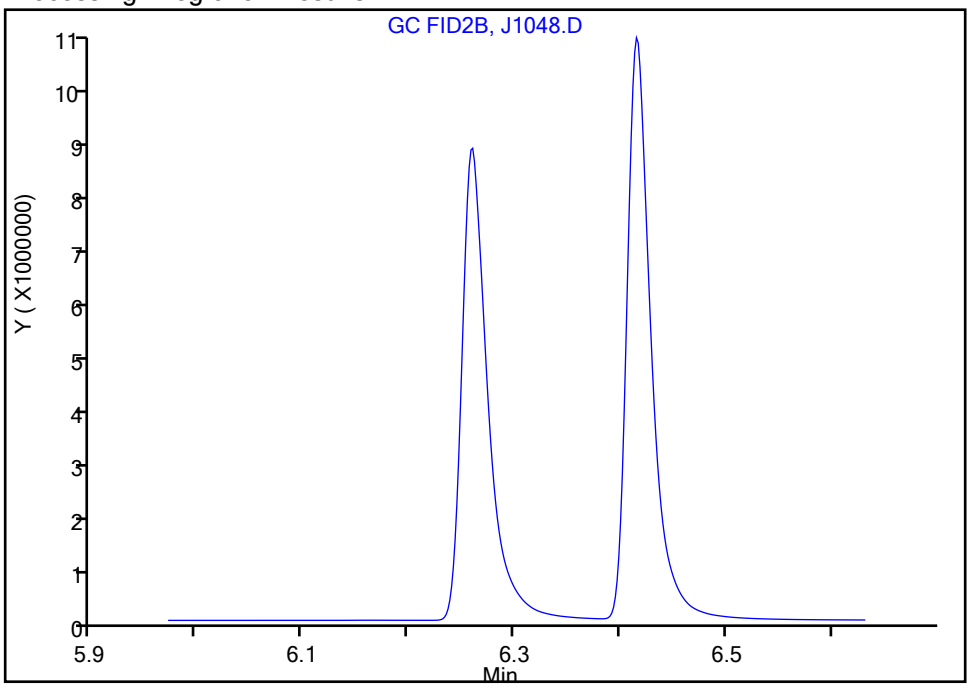
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D				
Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J		
Lims ID:	ic RSK 400 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

8 isobutylene, CAS: 115-11-7

Signal: 2

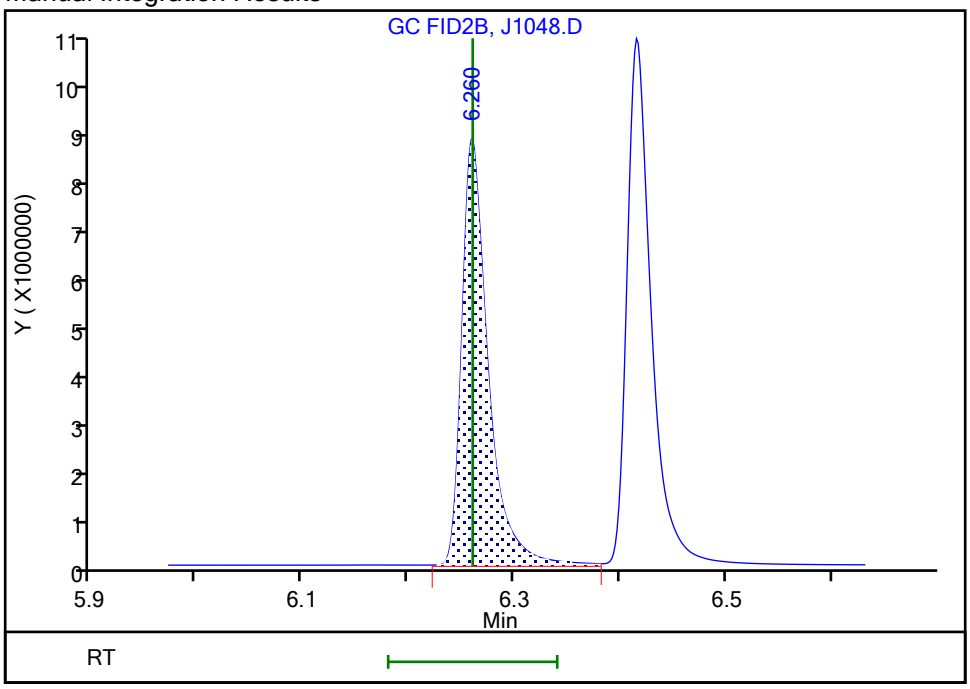
Processing Integration Results

RT: 6.26
Area: 0
Amount: 454.0708
Amount Units: ug/l



Manual Integration Results

RT: 6.26
Area: 14593944
Amount: 446.2857
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:13:50
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

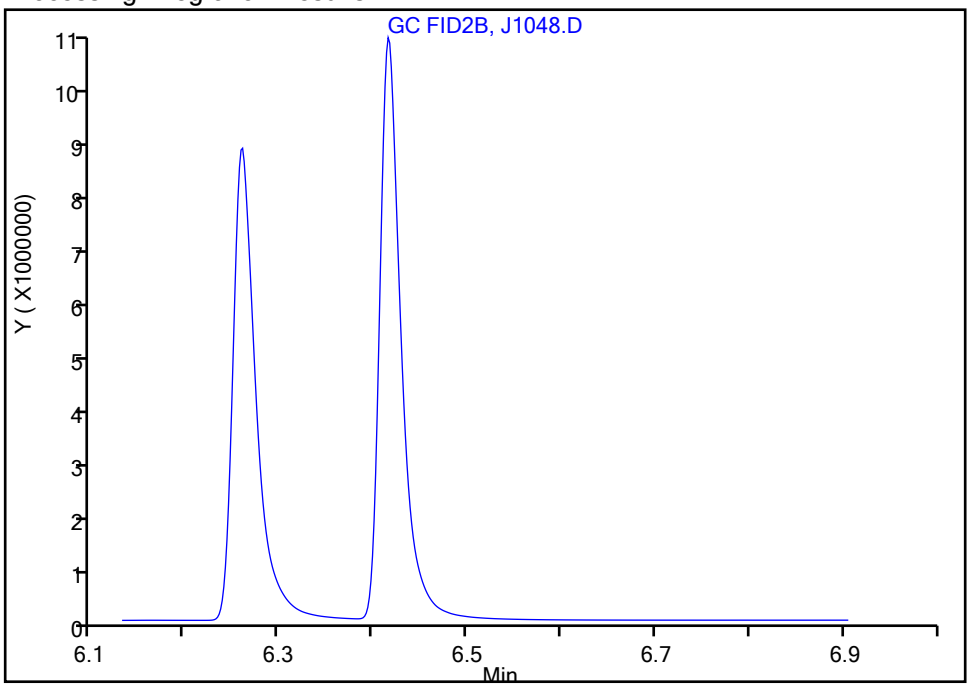
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1048.D				
Injection Date:	22-Nov-2022 16:57:54	Instrument ID:	VGC_J		
Lims ID:	ic RSK 400 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

7 Butane, CAS: 106-97-8

Signal: 2

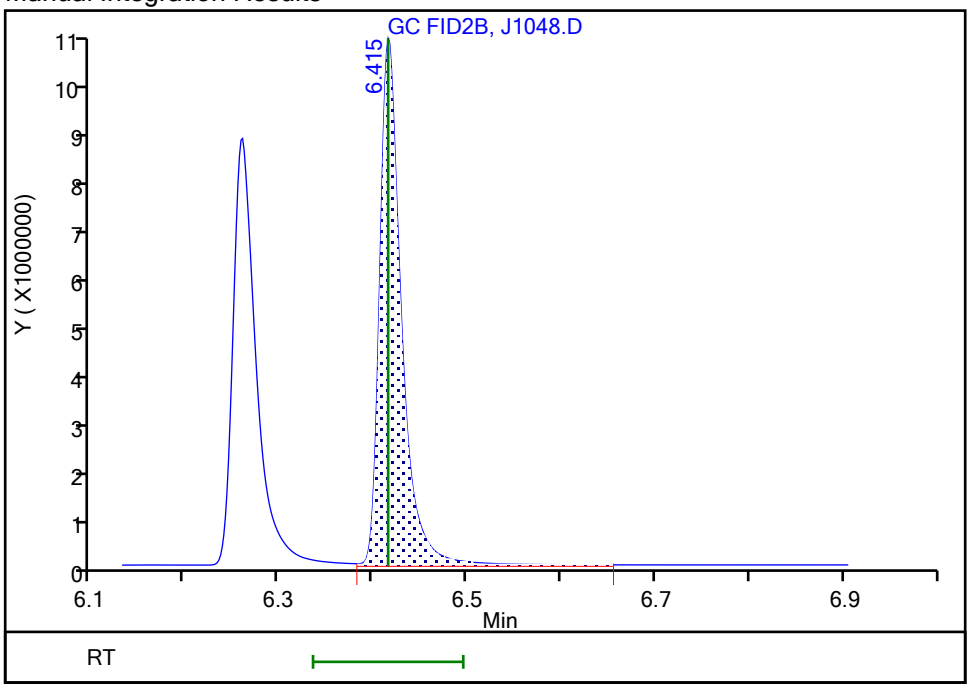
Processing Integration Results

RT: 6.42
Area: 0
Amount: 471.4786
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 16809482
Amount: 460.3280
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:14:44
Audit Action: Manually Integrated Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D
Lims ID: ic RSK 800 uL
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 22-Nov-2022 17:11:46 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic RSK 800 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:57 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 19:18:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.209	1.209	0.000	10208583	262.8	261.8	M
2	1.642	1.640	0.002	9189020	262.8	258.2	
						RPD = 1.39	
3 Ethane							M
1	1.460	1.461	-0.001	19164973	492.7	495.4	M
2	2.990	2.990	0.000	17514088	492.7	498.0	
						RPD = 0.54	
4 Ethylene							M
1	1.747	1.746	0.001	18178326	459.6	461.7	M
2	2.570	2.570	0.000	14622496	459.6	465.5	
						RPD = 0.83	
5 Propane							M
1	2.507	2.506	0.001	27563548	722.6	720.8	
2	4.910	4.914	-0.004	24648508	722.6	720.9	M
						RPD = 0.01	
6 Acetylene							
1	4.112	4.121	-0.009	12305009	426.7	419.4	
2	2.725	2.724	0.001	14408475	426.7	429.2	
						RPD = 2.31	
7 Butane							
1	4.402	4.407	-0.005	37132422	952.3	944.1	
2	6.412	6.415	-0.003	33490336	952.3	917.1	
						RPD = 2.90	
8 isobutylene							Ma
1	5.315	5.322	-0.007	33544265	919.4	910.0	M
2	6.257	6.260	-0.003	29144072	919.4	891.2	a
						RPD = 2.08	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00035 Amount Added: 800.00 Units: uL

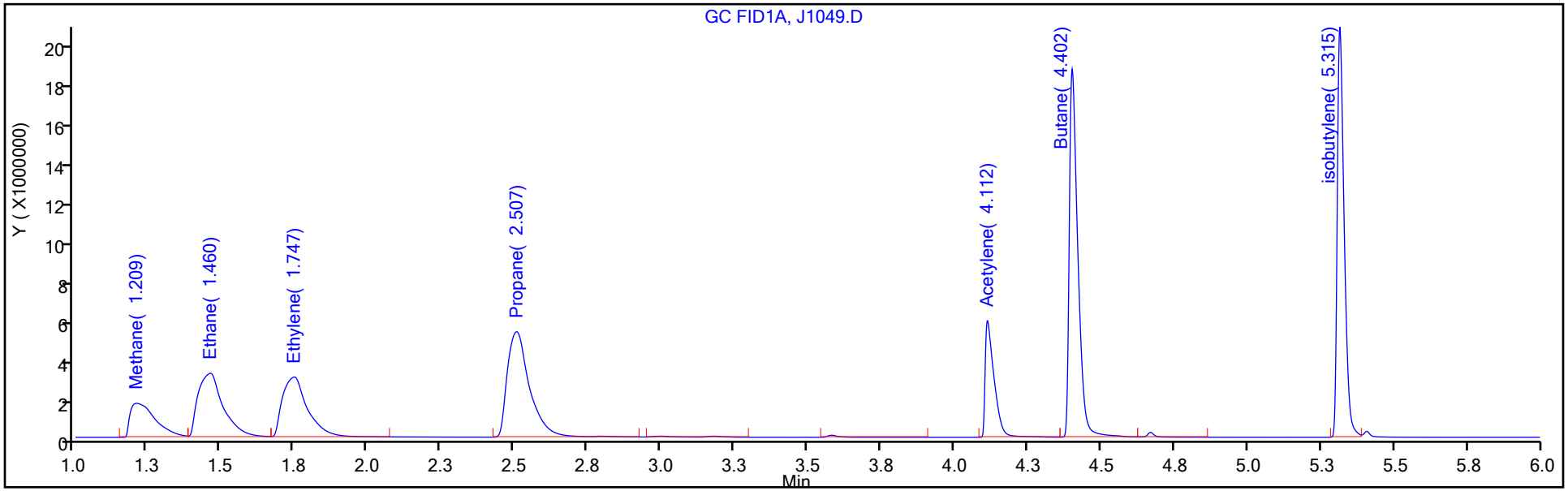
Report Date: 23-Nov-2022 11:28:57 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

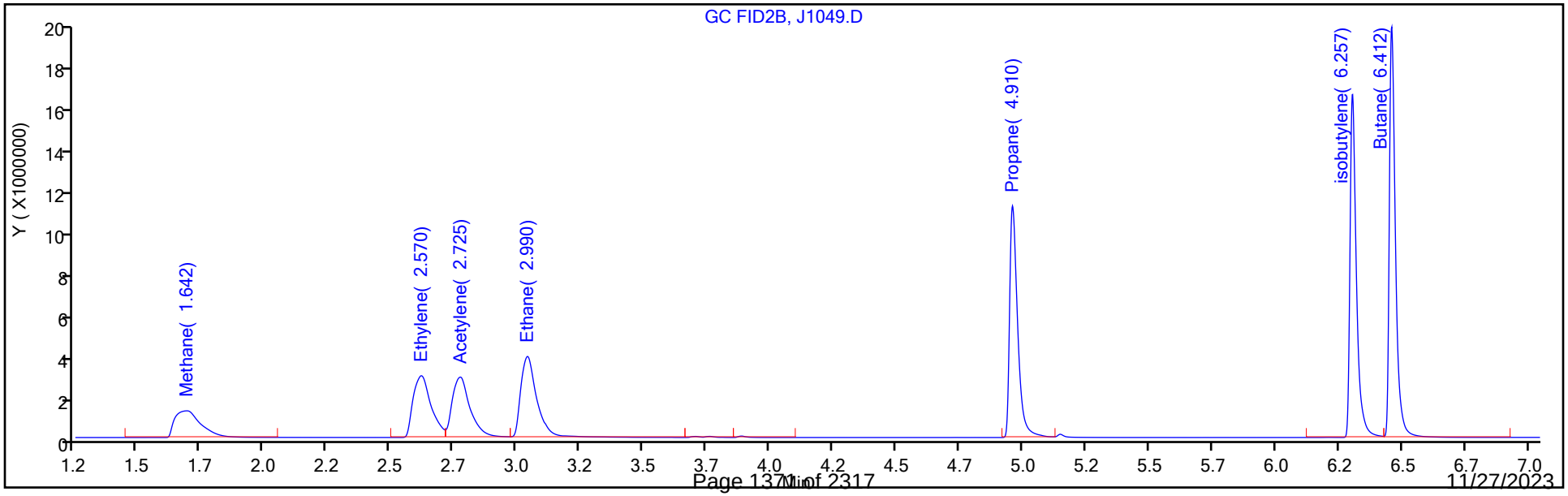
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D

Injection Date:	22-Nov-2022 17:11:46	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic RSK 800 uL			Worklist Smp#:	9
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

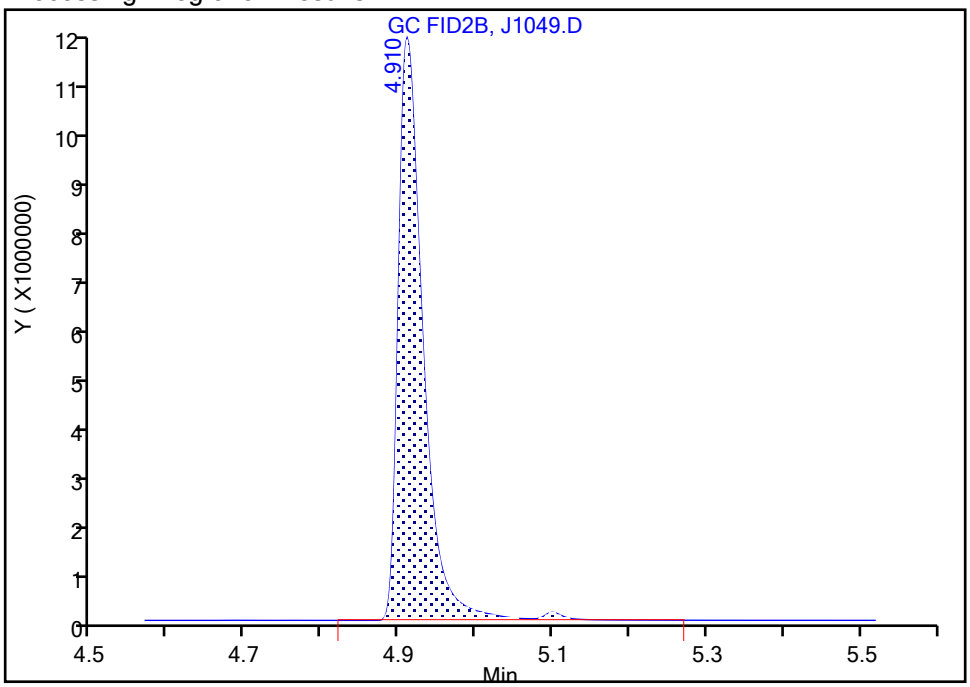
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D
Injection Date: 22-Nov-2022 17:11:46 Instrument ID: VGC_J
Lims ID: ic RSK 800 uL
Client ID:
Operator ID: JH ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

5 Propane, CAS: 74-98-6

Signal: 2

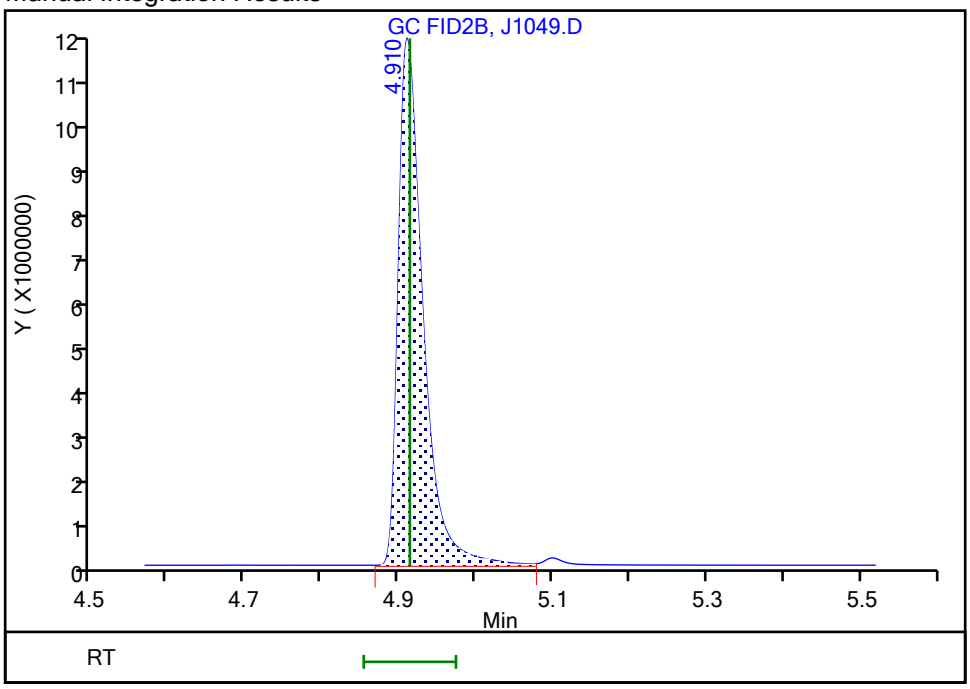
Processing Integration Results

RT: 4.91
Area: 24941920
Amount: 728.0253
Amount Units: ug/l



Manual Integration Results

RT: 4.91
Area: 24648508
Amount: 720.8851
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:17:40
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

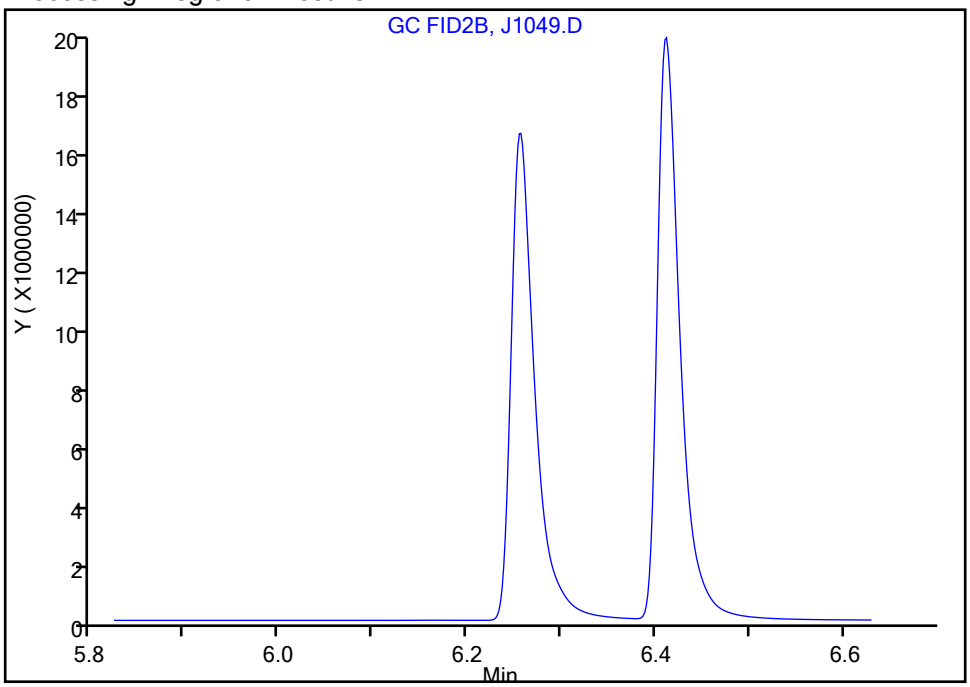
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1049.D				
Injection Date:	22-Nov-2022 17:11:46	Instrument ID:	VGC_J		
Lims ID:	ic RSK 800 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	9	Worklist Smp#:	9
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

8 isobutylene, CAS: 115-11-7

Signal: 2

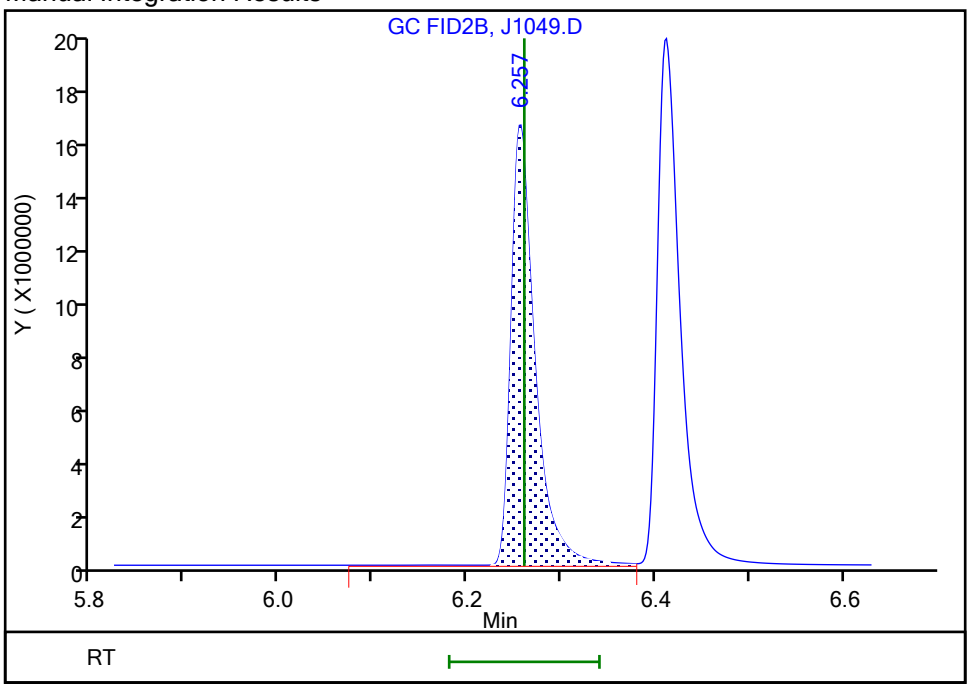
Not Detected
Expected RT: 6.26

Processing Integration Results



Manual Integration Results

RT: 6.26
Area: 29144072
Amount: 891.2315
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:18:00
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1050.D				
Lims ID:	ic Me 50 uL				
Client ID:					
Sample Type:	IC	Calib Level:	8		
Inject. Date:	22-Nov-2022 17:25:36	ALS Bottle#:	10	Worklist Smp#:	10
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Sample Info:	ic Me 50 uL				
Operator ID:	JH	Instrument ID:	VGC_J		
Sublist:	chrom-RSK_J*sub5				
Method:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m				
Limit Group:	GCV - RSK 175				
Method Label:	DV-GC-0025: Dissolved Gases in Water by RSK-175				
Last Update:	23-Nov-2022 13:14:39	Calib Date:	22-Nov-2022 17:53:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D				
Column 1 :	Rt-Alumina BOND/KCl (0.53 mm)		Det: GC FID1A		
Column 2 :	HP-PLOT/Q (0.53 mm)		Det: GC FID2B		
Process Host:	CTX1625				

First Level Reviewer: DJQ7 Date: 22-Nov-2022 18:07:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.207	1.209	-0.002	65400484	1626.3	1688.4	
2	1.640	1.640	0.000	58327040	1626.3	1647.8	M
						RPD = 2.44	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

RSK175methane_00011 Amount Added: 50.00 Units: uL

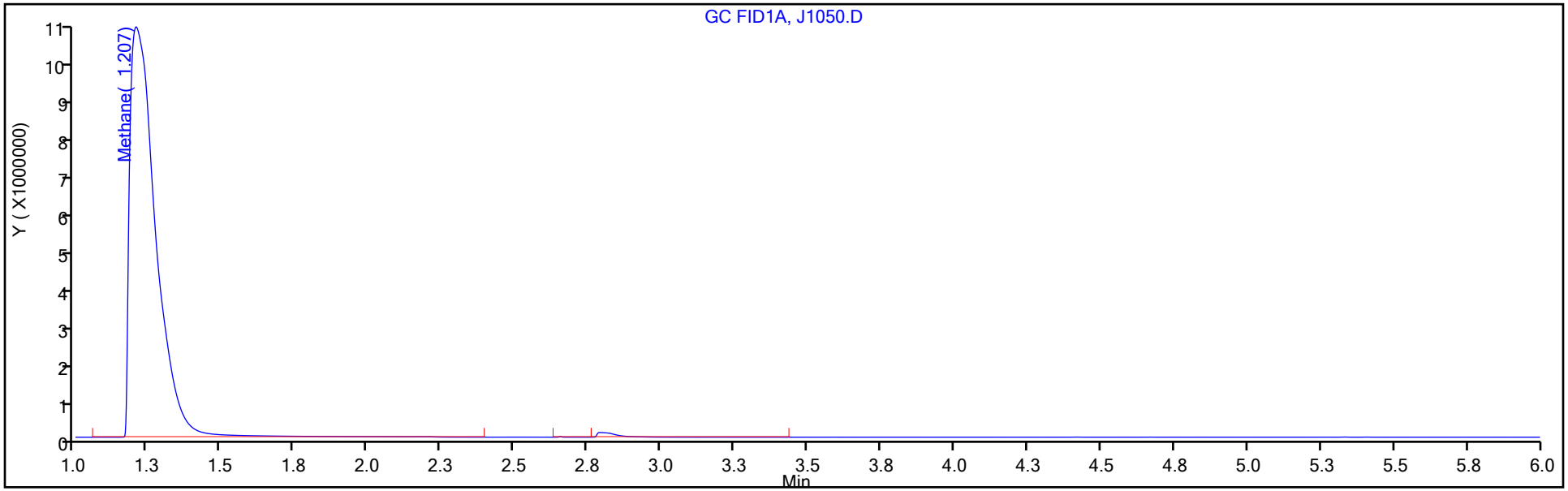
Report Date: 23-Nov-2022 13:14:40 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

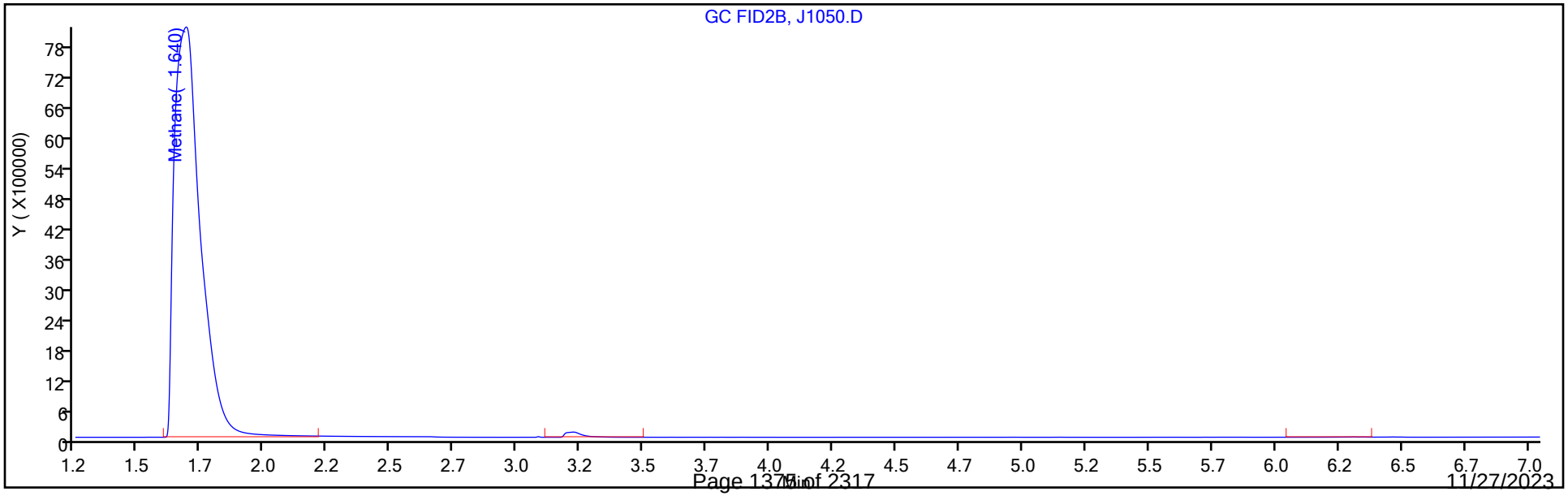
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1050.D

Injection Date:	22-Nov-2022 17:25:36	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic Me 50 uL			Worklist Smp#:	10
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

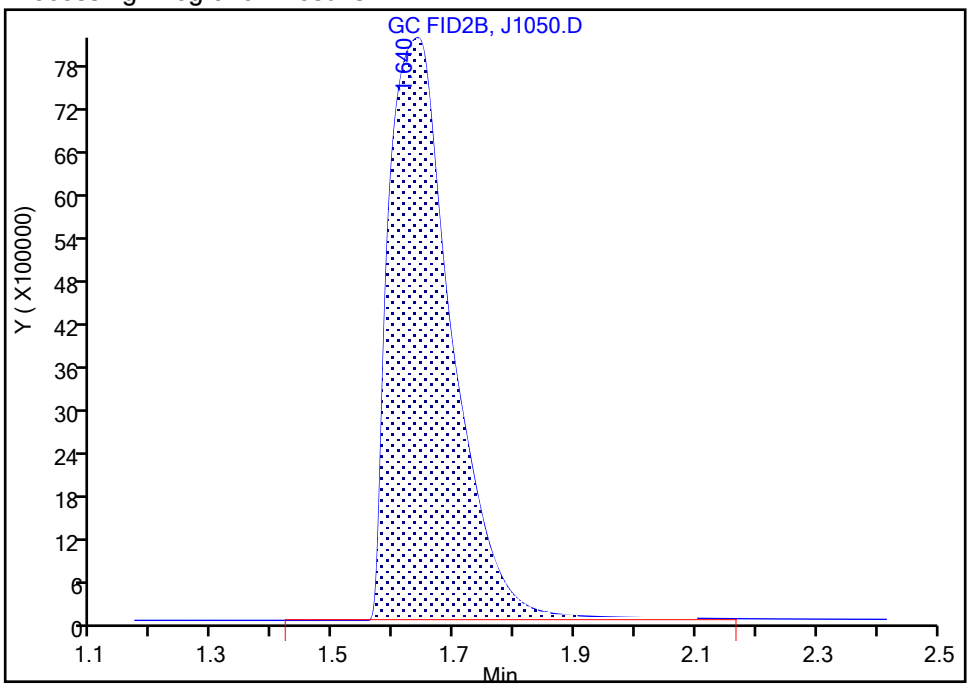
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1050.D
Injection Date: 22-Nov-2022 17:25:36 Instrument ID: VGC_J
Lims ID: ic Me 50 uL
Client ID:
Operator ID: JH ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

2 Methane, CAS: 74-82-8

Signal: 2

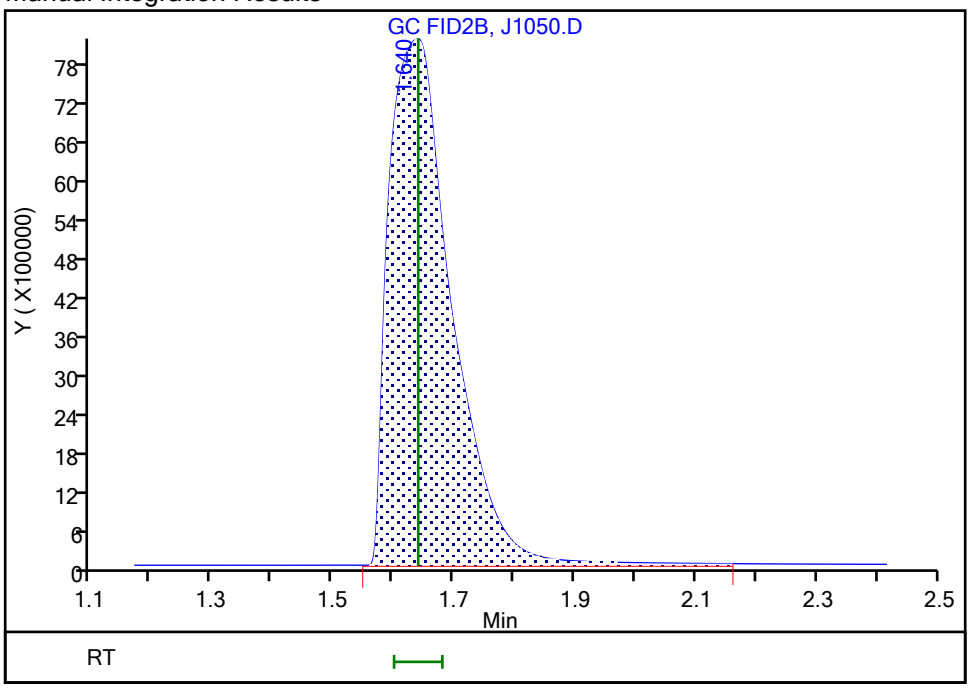
Processing Integration Results

RT: 1.64
Area: 57843006
Amount: 1570.3355
Amount Units: ug/l



Manual Integration Results

RT: 1.64
Area: 58327040
Amount: 1647.7817
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 18:04:05
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1051.D				
Lims ID:	ic Me 200 uL				
Client ID:					
Sample Type:	IC	Calib Level:	9		
Inject. Date:	22-Nov-2022 17:39:26	ALS Bottle#:	11	Worklist Smp#:	11
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Sample Info:	ic Me 200 uL				
Operator ID:	JH	Instrument ID:	VGC_J		
Sublist:	chrom-RSK_J*sub5				
Method:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m				
Limit Group:	GCV - RSK 175				
Method Label:	DV-GC-0025: Dissolved Gases in Water by RSK-175				
Last Update:	23-Nov-2022 11:28:58	Calib Date:	22-Nov-2022 17:53:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D				
Column 1 :	Rt-Alumina BOND/KCl (0.53 mm)		Det: GC FID1A		
Column 2 :	HP-PLOT/Q (0.53 mm)		Det: GC FID2B		
Process Host:	CTX1625				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							
1	1.207	1.209	-0.002	247686566	6505.0	6400.0	
2	1.637	1.640	-0.003	222721558	6505.0	6296.6	
						RPD = 1.63	

Reagents:

RSK175methane_00011 Amount Added: 200.00 Units: uL

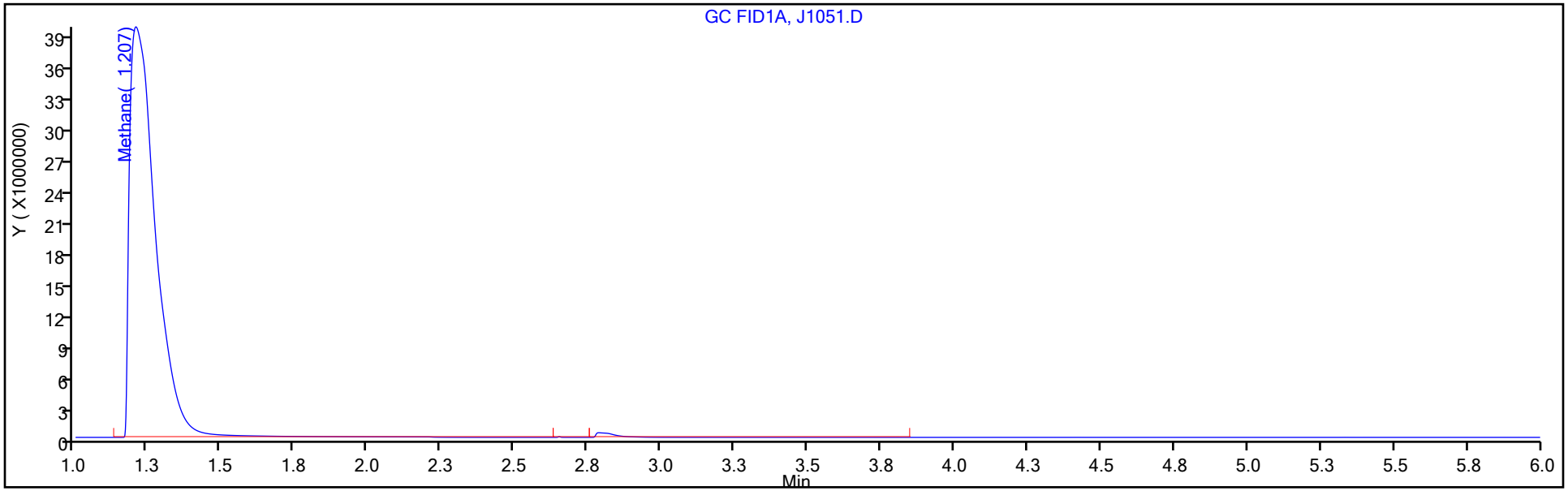
Report Date: 23-Nov-2022 11:28:58 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

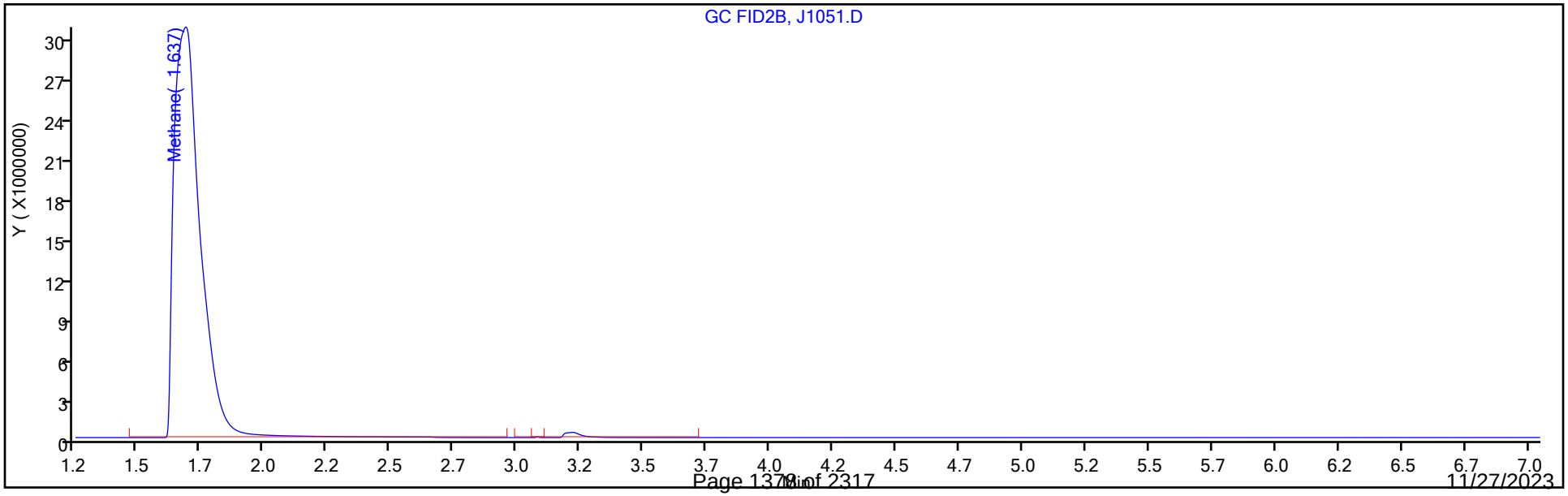
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1051.D

Injection Date:	22-Nov-2022 17:39:26	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic Me 200 uL			Worklist Smp#:	11
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D
Lims ID: ic Me 600 uL
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 22-Nov-2022 17:53:13 ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ic Me 600 uL
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:28:58 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 19:20:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.205	1.209	-0.004	740134626	19515	19129	
2	1.635	1.640	-0.005	671116476	19515	18976	M
						RPD = 0.80	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

RSK175methane_00011 Amount Added: 600.00 Units: uL

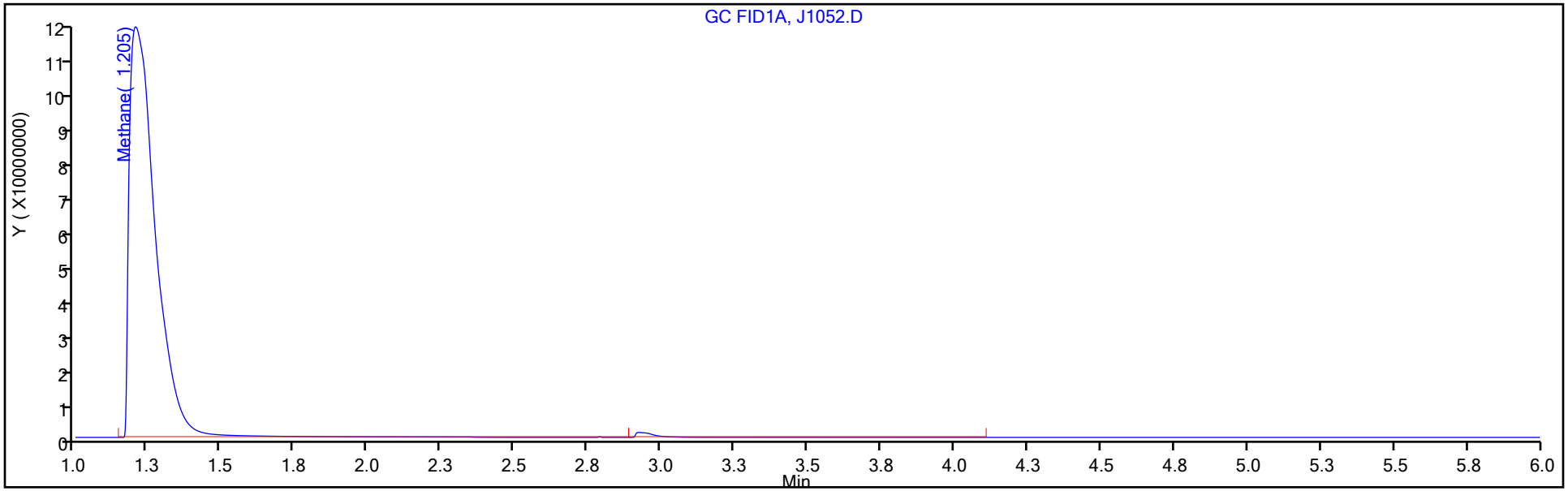
Report Date: 23-Nov-2022 11:28:59 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

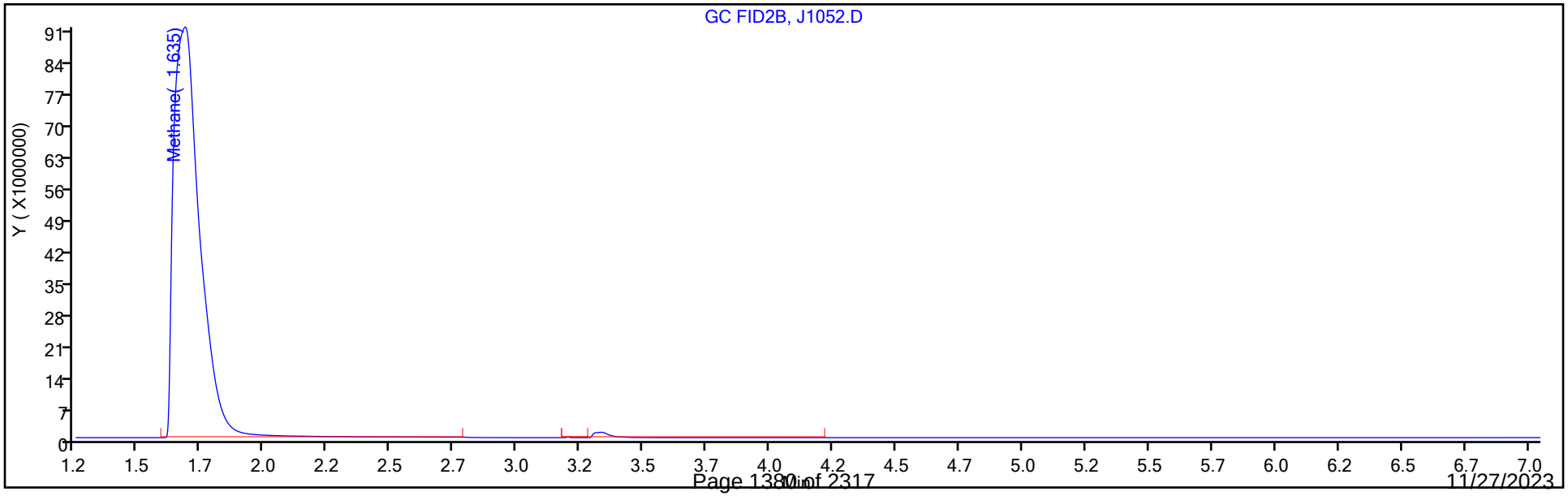
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Injection Date:	22-Nov-2022 17:53:13	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ic Me 600 uL			Worklist Smp#:	12
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

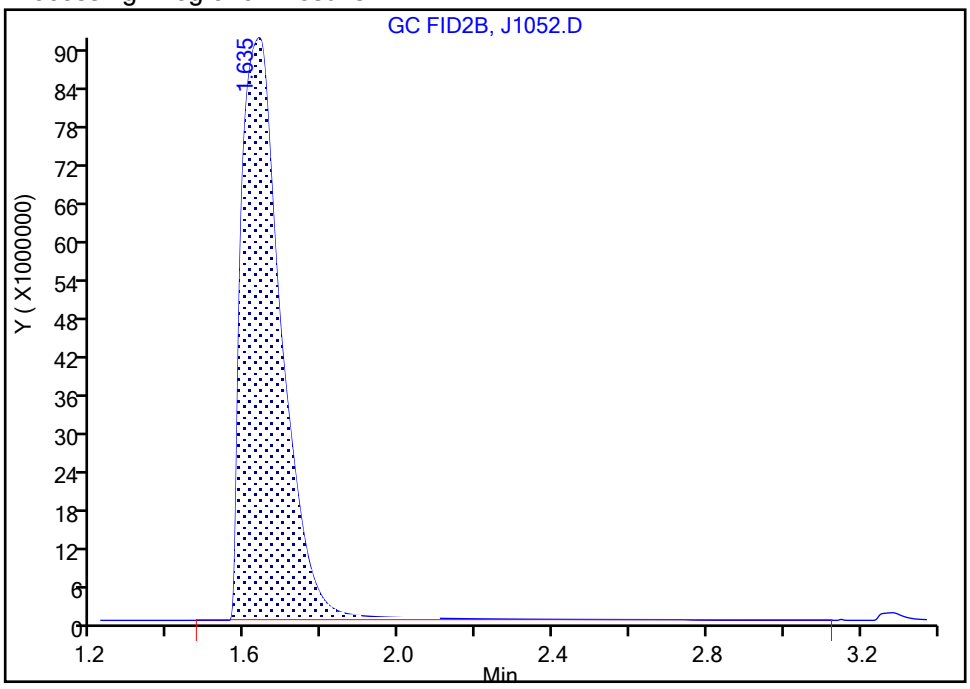
Data File:	\\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D				
Injection Date:	22-Nov-2022 17:53:13	Instrument ID:	VGC_J		
Lims ID:	ic Me 600 uL				
Client ID:					
Operator ID:	JH	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

2 Methane, CAS: 74-82-8

Signal: 2

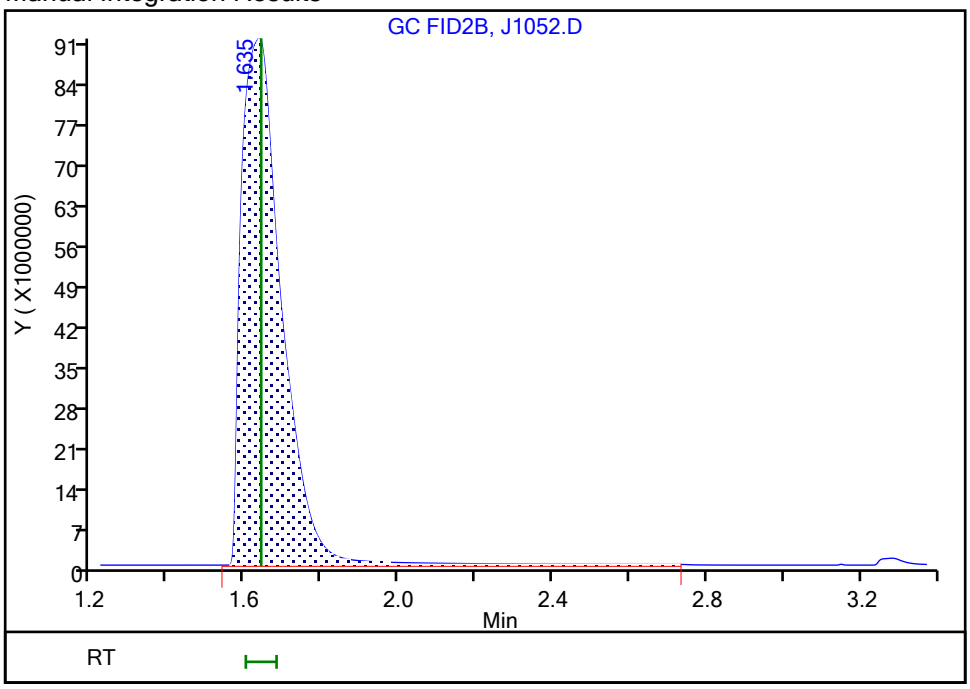
Processing Integration Results

RT: 1.63
Area: 669794857
Amount: 18844
Amount Units: ug/l



Manual Integration Results

RT: 1.63
Area: 671116476
Amount: 18976
Amount Units: ug/l



Reviewer: DJQ7, 22-Nov-2022 19:20:26

Audit Action: Manually Integrated Audit Reason: Column bleed

Calibration / Methane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

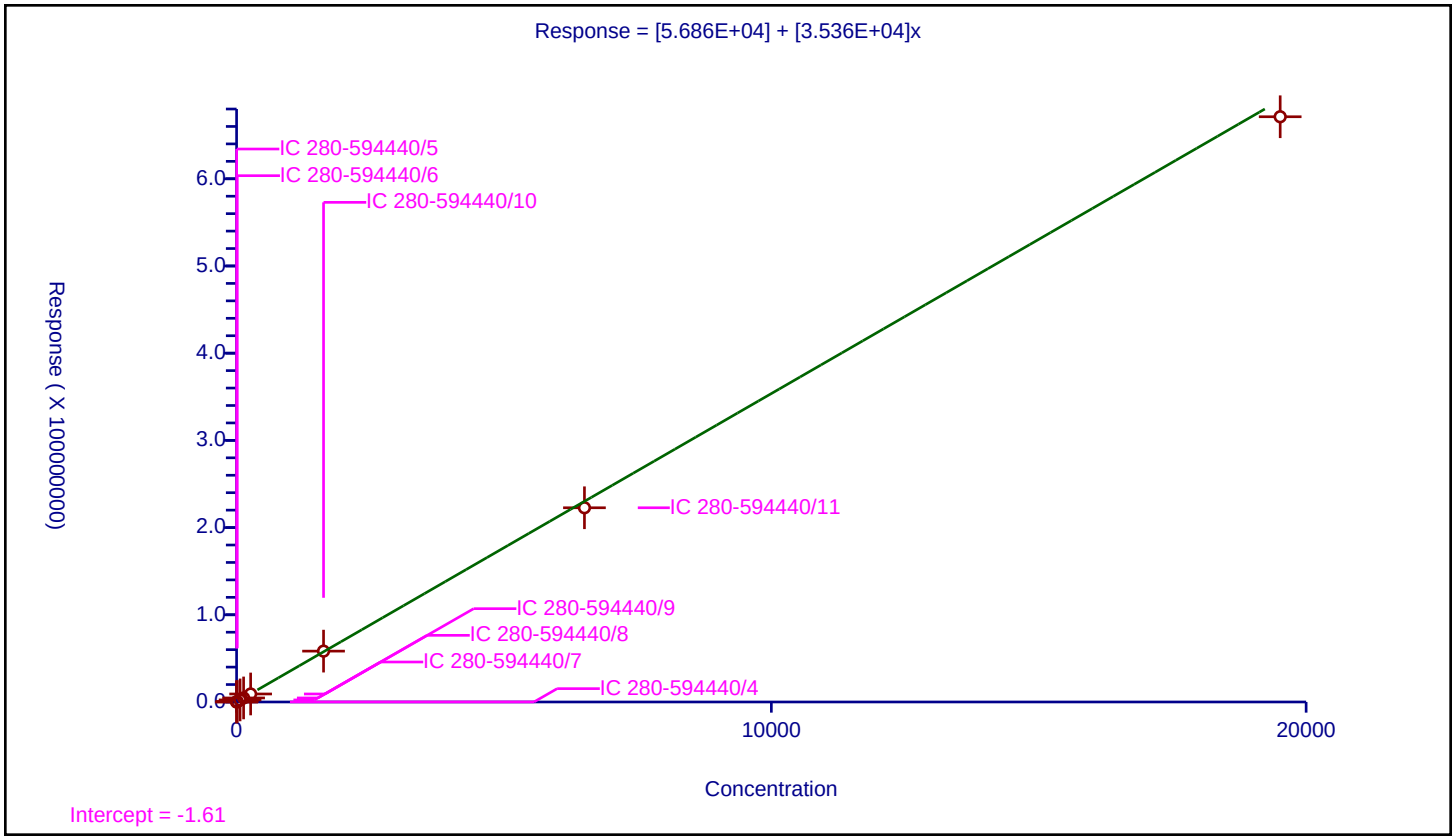
Curve Coefficients

Intercept:	5.686E+04
Slope:	3.536E+04

Error Coefficients

Standard Error:	7720000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	0.821288	84338.0			102689.983715	Y
2	IC 280-594440/5	1.642575	121029.0			73682.480252	Y
3	IC 280-594440/6	13.1406	534550.0			40679.268831	Y
4	IC 280-594440/7	65.703	2374559.0			36140.800268	Y
5	IC 280-594440/8	131.406	4645758.0			35354.2304	Y
6	IC 280-594440/9	262.812	9189020.0			34964.232988	Y
7	IC 280-594440/10	1626.25	58327040.0			35865.973866	Y
8	IC 280-594440/11	6505.0	222721558.0			34238.517756	Y
9	IC 280-594440/12	19515.0	671116476.0			34389.775865	Y



Calibration / Ethylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

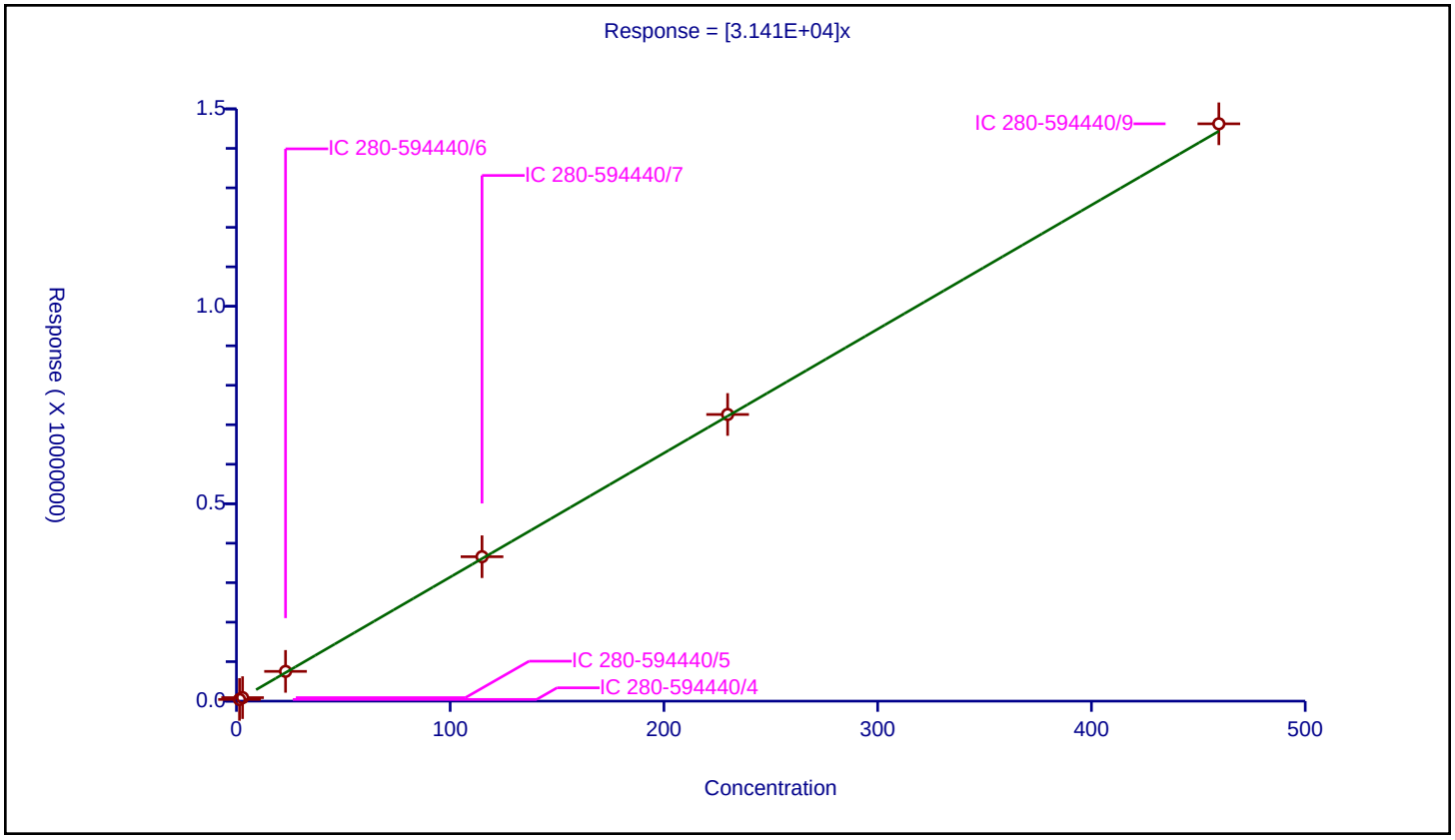
Curve Coefficients

Intercept:	0
Slope:	3.141E+04

Error Coefficients

Standard Error:	89400
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	1.43625	42544.0			29621.583986	Y
2	IC 280-594440/5	2.8725	88414.0			30779.4604	Y
3	IC 280-594440/6	22.98	754091.0			32815.100087	Y
4	IC 280-594440/7	114.9	3657619.0			31833.063534	Y
5	IC 280-594440/8	229.8	7261000.0			31597.040905	Y
6	IC 280-594440/9	459.6	14622496.0			31815.700609	Y



11/27/2023
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Calibration / Acetylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

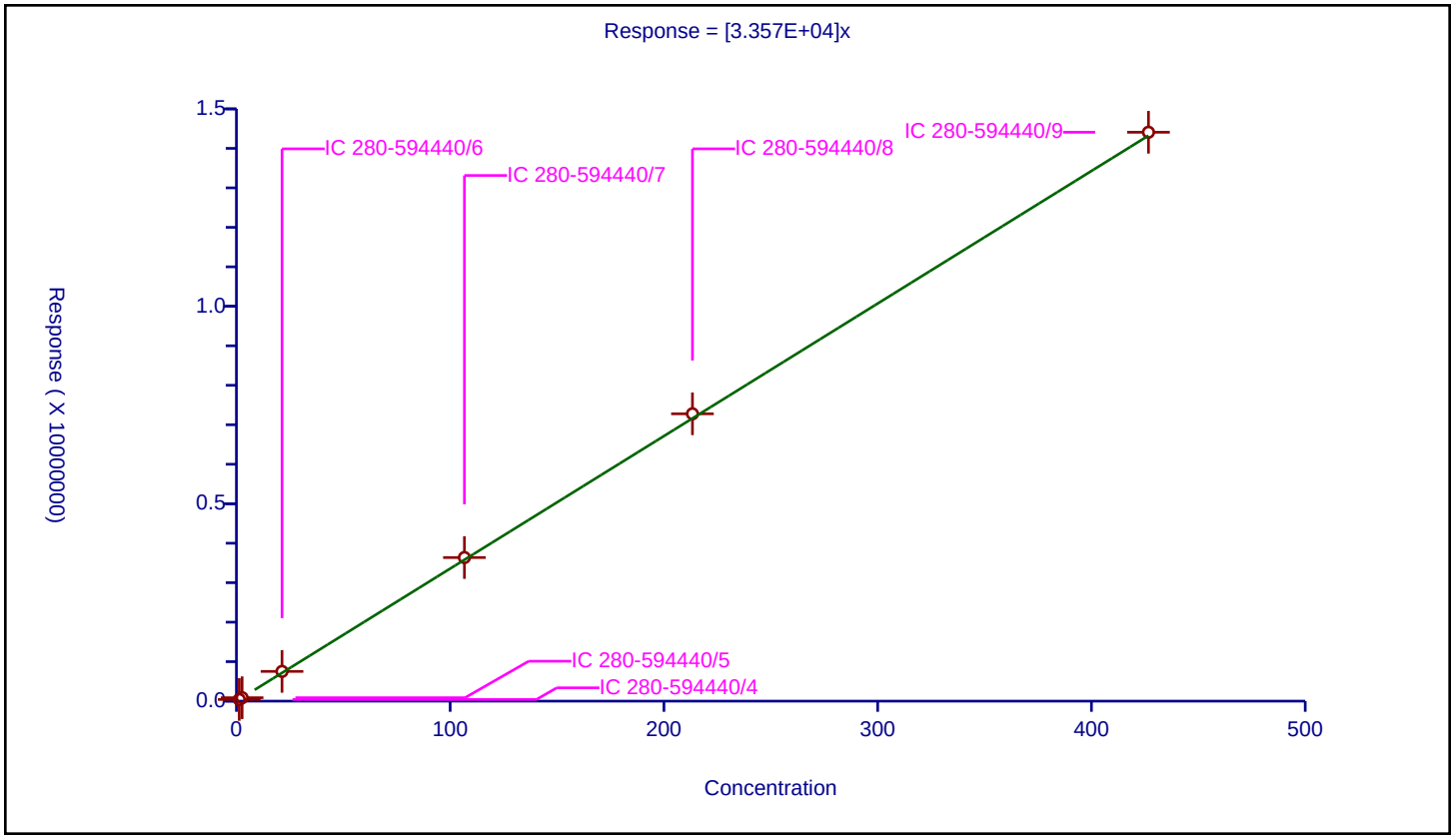
Curve Coefficients

Intercept:	0
Slope:	3.357E+04

Error Coefficients

Standard Error:	71200
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	1.333375	42181.0			31634.761414	Y
2	IC 280-594440/5	2.66675	86657.0			32495.35952	Y
3	IC 280-594440/6	21.334	753138.0			35302.240555	Y
4	IC 280-594440/7	106.67	3637167.0			34097.375082	Y
5	IC 280-594440/8	213.34	7277797.0			34113.607387	Y
6	IC 280-594440/9	426.68	14408475.0			33768.808006	Y



11/27/2023
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Calibration / Ethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

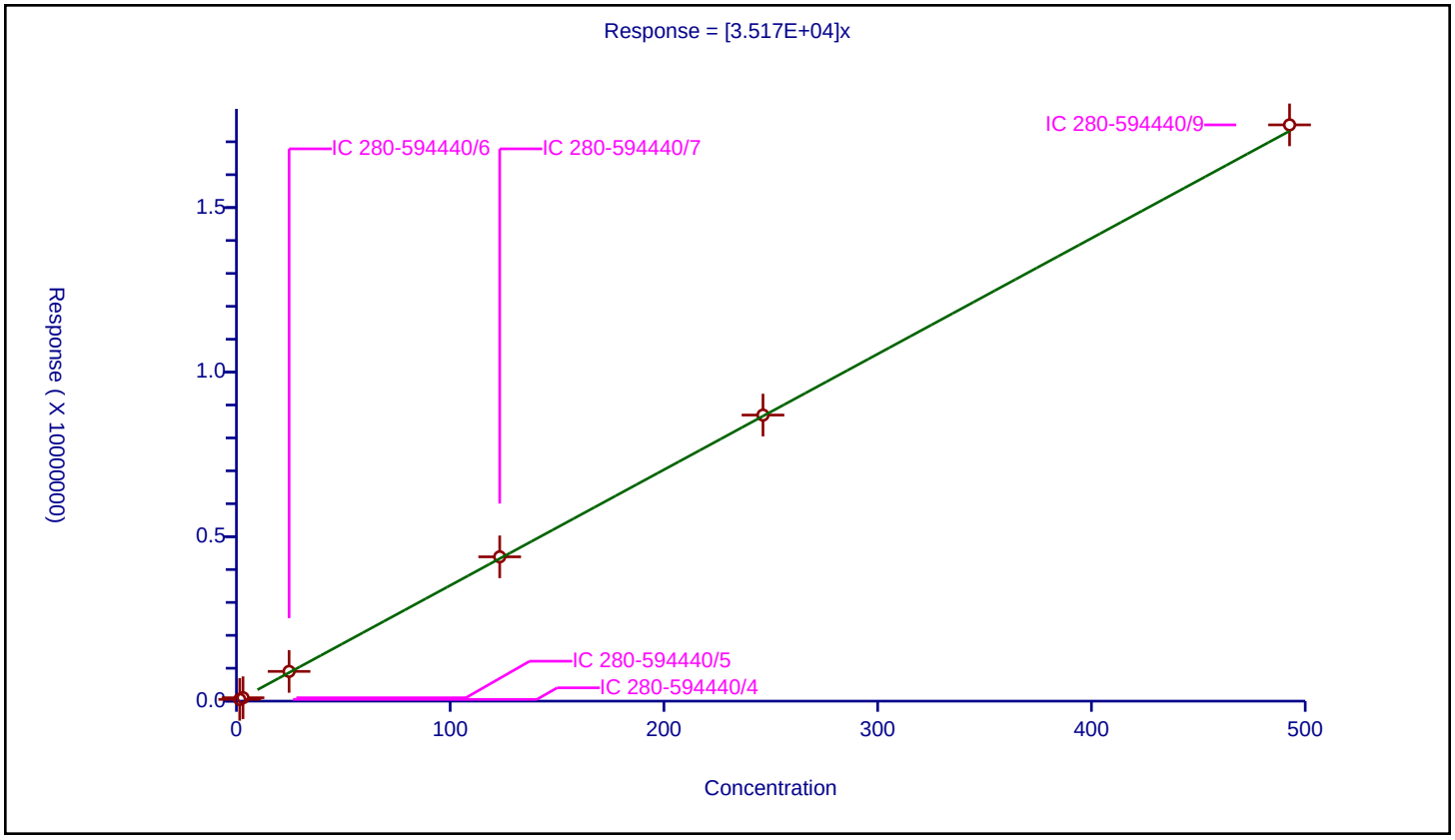
Curve Coefficients

Intercept:	0
Slope:	3.517E+04

Error Coefficients

Standard Error:	90200
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	1.539625	52685.0			34219.3716	Y
2	IC 280-594440/5	3.07925	103599.0			33644.23155	Y
3	IC 280-594440/6	24.634	903672.0			36683.932776	Y
4	IC 280-594440/7	123.17	4386486.0			35613.266217	Y
5	IC 280-594440/8	246.34	8694621.0			35295.205813	Y
6	IC 280-594440/9	492.68	17514088.0			35548.607615	Y



11/27/2023
6:53 PM

Calibration / Propane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

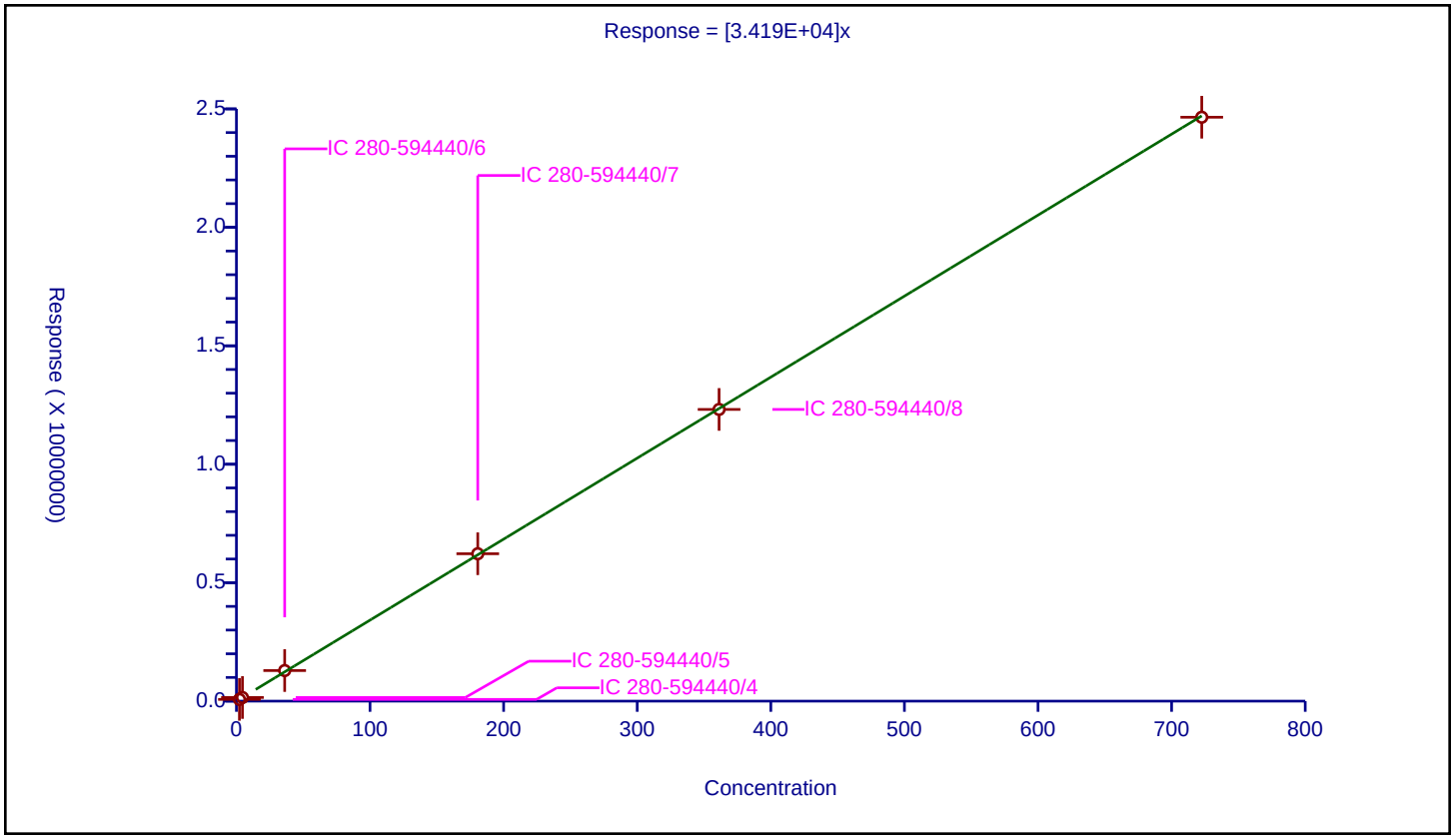
Curve Coefficients

Intercept:	0
Slope:	3.419E+04

Error Coefficients

Standard Error:	44800
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	2.258	73929.0			32740.921169	Y
2	IC 280-594440/5	4.516	153698.0			34034.100974	Y
3	IC 280-594440/6	36.128	1291157.0			35738.402347	Y
4	IC 280-594440/7	180.64	6221833.0			34443.273915	Y
5	IC 280-594440/8	361.28	12313361.0			34082.597985	Y
6	IC 280-594440/9	722.56	24648508.0			34112.749114	Y



11/27/2023
6:53 PM

Calibration / isobutylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

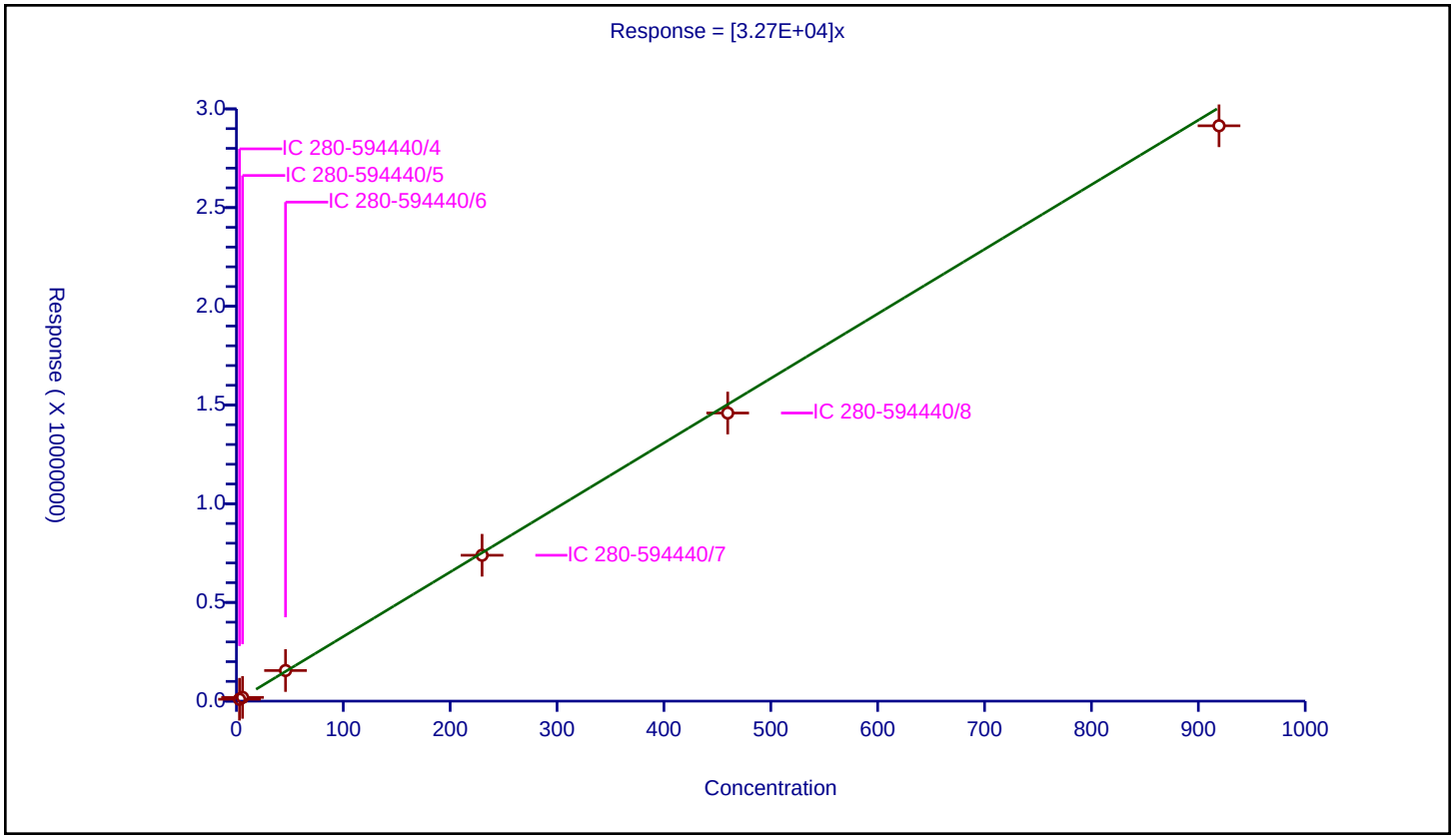
Curve Coefficients

Intercept:	0
Slope:	3.27E+04

Error Coefficients

Standard Error:	460000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	2.873	97000.0			33762.617473	Y
2	IC 280-594440/5	5.746	190198.0			33100.939784	Y
3	IC 280-594440/6	45.968	1550959.0			33739.971284	Y
4	IC 280-594440/7	229.84	7390142.0			32153.41977	Y
5	IC 280-594440/8	459.68	14593944.0			31748.050818	Y
6	IC 280-594440/9	919.36	29144072.0			31700.391577	Y



11/27/2023
6:53 PM

Calibration / Butane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

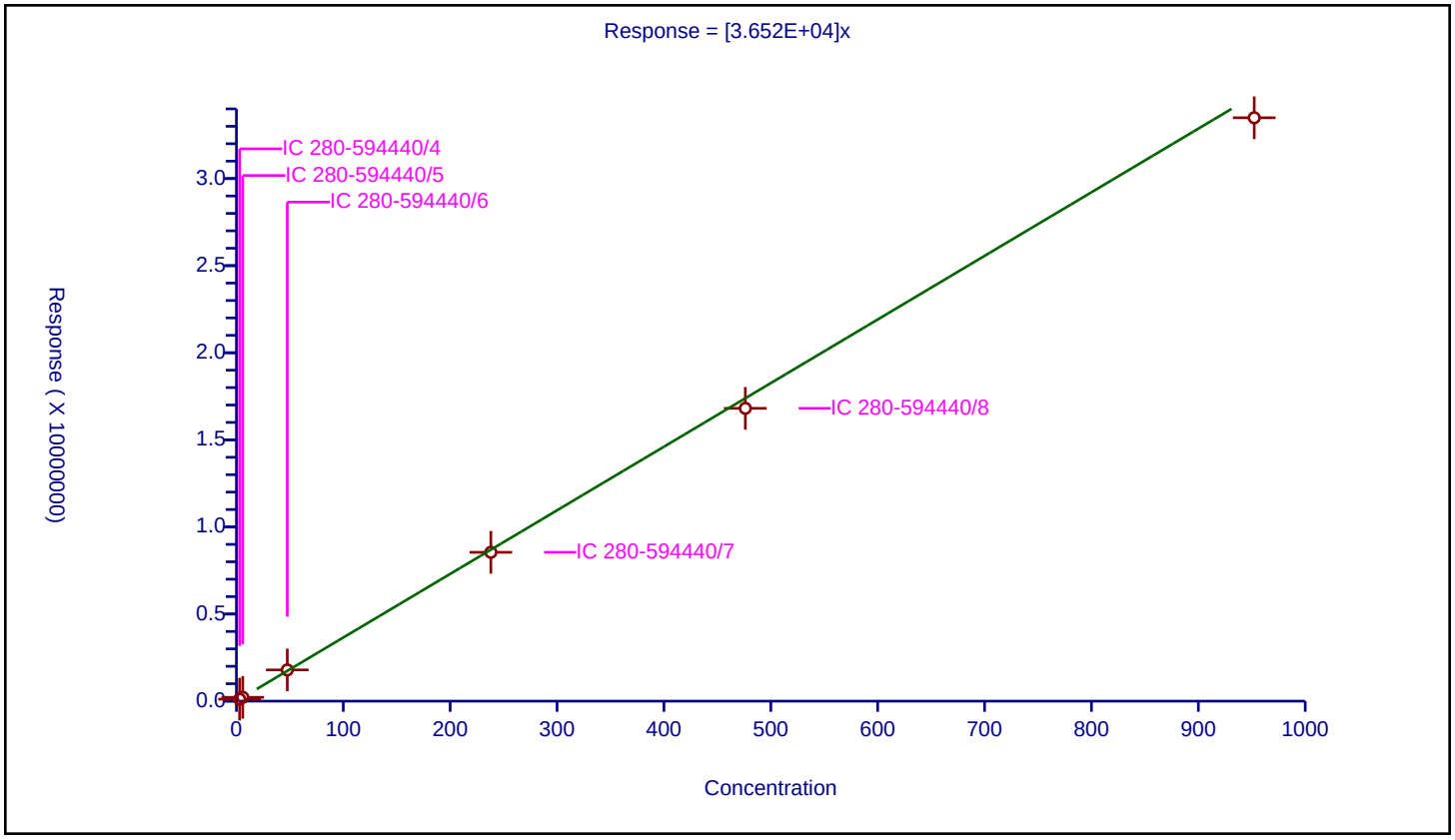
Curve Coefficients

Intercept:	0
Slope:	3.652E+04

Error Coefficients

Standard Error:	633000
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-594440/4	2.975875	113725.0			38215.650859	Y
2	IC 280-594440/5	5.95175	219395.0			36862.2674	Y
3	IC 280-594440/6	47.614	1792980.0			37656.571597	Y
4	IC 280-594440/7	238.07	8544605.0			35891.145461	Y
5	IC 280-594440/8	476.14	16809482.0			35303.654387	Y
6	IC 280-594440/9	952.28	33490336.0			35168.58067	Y



11/27/2023
6:53 PM

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-594440/14 Calibration Date: 11/22/2022 18:34

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J1055.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		38010		62.5	65.7	-4.8	20.0
Ethane	Ave	38690	35615		113	123	-7.9	20.0
Ethene	Ave	39374	37583		110	115	-4.5	20.0
Propane	Ave	38239	38585		182	181	0.9	20.0
Acetylene	Ave	29338	29607		108	107	0.9	20.0
Butane	Ave	39331	39972		242	238	1.6	20.0
isobutylene	Ave	36862	38854		242	230	5.4	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-594440/14 Calibration Date: 11/22/2022 18:34

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J1055.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.21	1.17	1.25
Ethane	1.46	1.41	1.51
Ethene	1.75	1.70	1.80
Propane	2.51	2.45	2.57
Acetylene	4.13	4.04	4.20
Butane	4.41	4.33	4.49
isobutylene	5.33	5.24	5.40

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1055.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 22-Nov-2022 18:34:40 ALS Bottle#: 12 Worklist Smp#: 14
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ICV RSK 200 uL
Operator ID: JH Instrument ID: VGC_J
Sublist:

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:29:30 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 19:21:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							
1	1.207	1.209	-0.002	2497400	65.7	62.5	
2	1.638	1.640	-0.002	2381206	65.7	65.7	
						RPD = 4.98	
3 Ethane							
1	1.459	1.461	-0.002	4386642	123.2	113.4	
2	2.988	2.990	-0.002	4197578	123.2	119.4	
						RPD = 5.14	
4 Ethylene							
1	1.745	1.746	-0.001	4318313	114.9	109.7	
2	2.567	2.570	-0.003	3637727	114.9	115.8	
						RPD = 5.45	
5 Propane							
1	2.509	2.506	0.003	6969939	180.6	182.3	
2	4.913	4.914	-0.001	6311003	180.6	184.6	
						RPD = 1.26	
6 Acetylene							
1	4.130	4.121	0.009	3158129	106.7	107.6	
2	2.722	2.724	-0.002	3654653	106.7	108.9	
						RPD = 1.13	
7 Butane							
1	4.414	4.407	0.007	9516113	238.1	241.9	
2	6.417	6.415	0.002	8445554	238.1	231.3	
						RPD = 4.51	
8 isobutylene							
1	5.329	5.322	0.007	8930120	229.8	242.3	
2	6.260	6.260	0.000	7601227	229.8	232.4	
						RPD = 4.13	

QC Flag Legend

Processing Flags

Reagents:

RSK7gasMathes_00034 Amount Added: 200.00 Units: uL

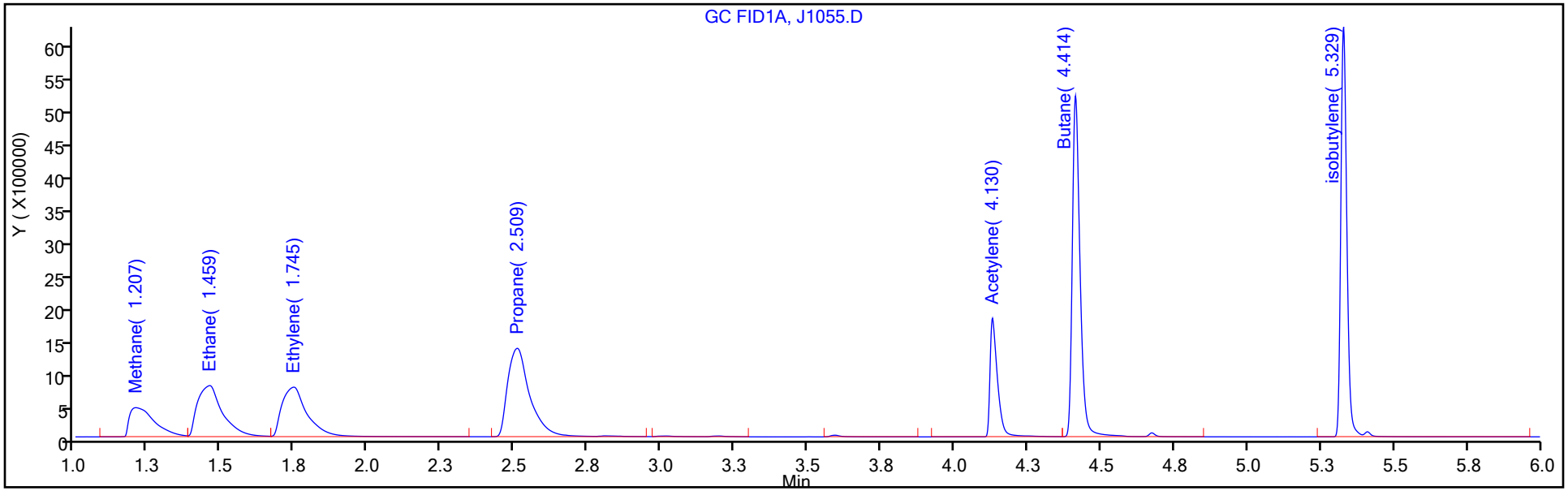
Report Date: 23-Nov-2022 11:29:32 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

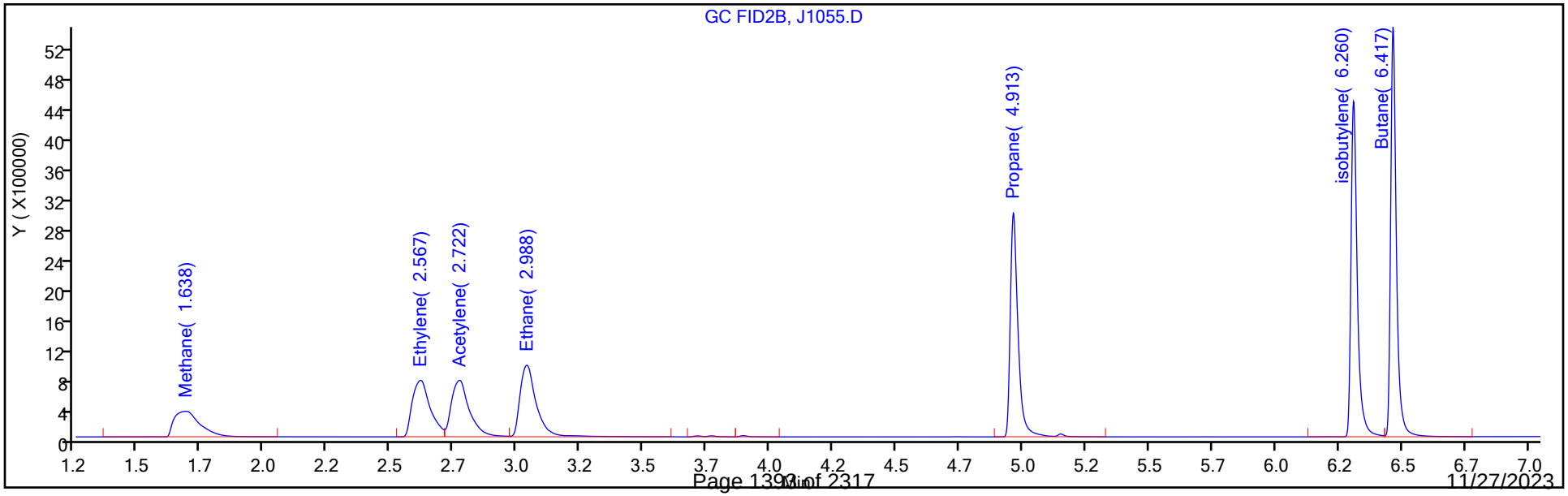
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1055.D

Injection Date:	22-Nov-2022 18:34:40	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-594440/14 Calibration Date: 11/22/2022 18:34

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J1055.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		36242		65.7	65.7	0.0	20.0
Ethene	Ave	31410	31660		116	115	0.8	20.0
Acetylene	Ave	33569	34261		109	107	2.1	20.0
Ethane	Ave	35167	34080		119	123	-3.1	20.0
Propane	Ave	34192	34937		185	181	2.2	20.0
isobutylene	Ave	32701	33072		232	230	1.1	20.0
Butane	Ave	36516	35475		231	238	-2.9	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICV 280-594440/14 Calibration Date: 11/22/2022 18:34

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J1055.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.64	1.60	1.68
Ethene	2.57	2.52	2.62
Acetylene	2.72	2.64	2.80
Ethane	2.99	2.94	3.04
Propane	4.91	4.85	4.97
isobutylene	6.26	6.18	6.34
Butane	6.42	6.34	6.50

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1055.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 22-Nov-2022 18:34:40 ALS Bottle#: 12 Worklist Smp#: 14
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ICV RSK 200 uL
Operator ID: JH Instrument ID: VGC_J
Sublist:

Method: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 23-Nov-2022 11:29:30 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1625

First Level Reviewer: DJQ7 Date: 22-Nov-2022 19:21:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							
1	1.207	1.209	-0.002	2497400	65.7	62.5	
2	1.638	1.640	-0.002	2381206	65.7	65.7	
						RPD = 4.98	
3 Ethane							
1	1.459	1.461	-0.002	4386642	123.2	113.4	
2	2.988	2.990	-0.002	4197578	123.2	119.4	
						RPD = 5.14	
4 Ethylene							
1	1.745	1.746	-0.001	4318313	114.9	109.7	
2	2.567	2.570	-0.003	3637727	114.9	115.8	
						RPD = 5.45	
5 Propane							
1	2.509	2.506	0.003	6969939	180.6	182.3	
2	4.913	4.914	-0.001	6311003	180.6	184.6	
						RPD = 1.26	
6 Acetylene							
1	4.130	4.121	0.009	3158129	106.7	107.6	
2	2.722	2.724	-0.002	3654653	106.7	108.9	
						RPD = 1.13	
7 Butane							
1	4.414	4.407	0.007	9516113	238.1	241.9	
2	6.417	6.415	0.002	8445554	238.1	231.3	
						RPD = 4.51	
8 isobutylene							
1	5.329	5.322	0.007	8930120	229.8	242.3	
2	6.260	6.260	0.000	7601227	229.8	232.4	
						RPD = 4.13	

QC Flag Legend

Processing Flags

Reagents:

RSK7gasMathes_00034 Amount Added: 200.00 Units: uL

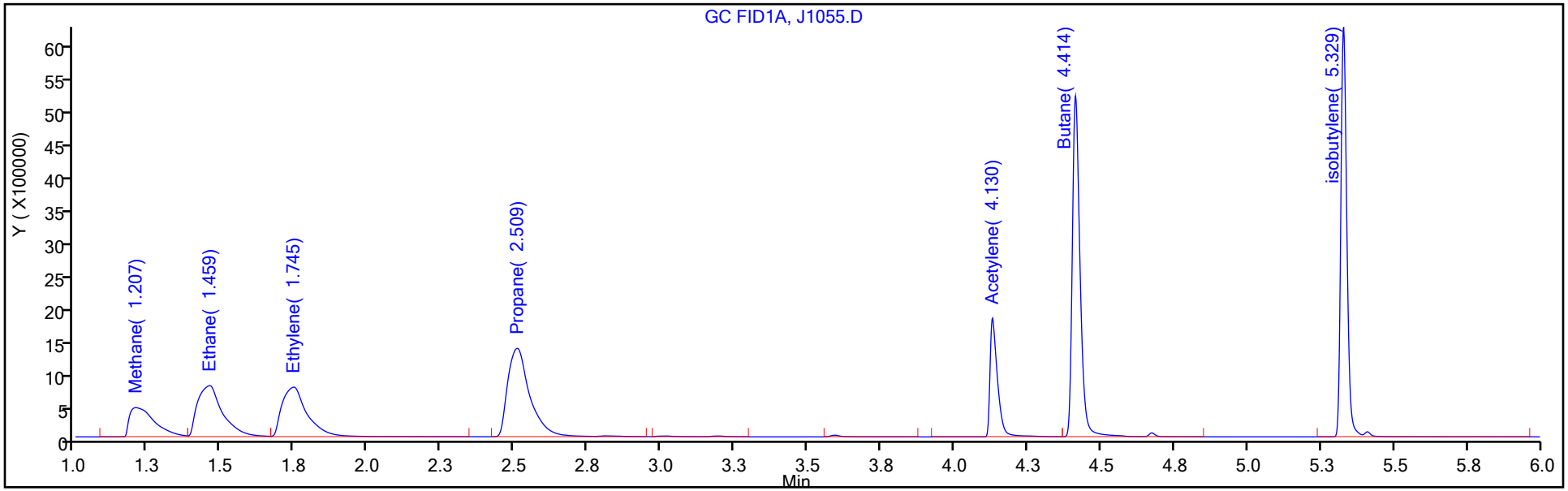
Report Date: 23-Nov-2022 11:29:32 Chrom Revision: 2.3 21-Nov-2022 18:34:02

Eurofins Denver

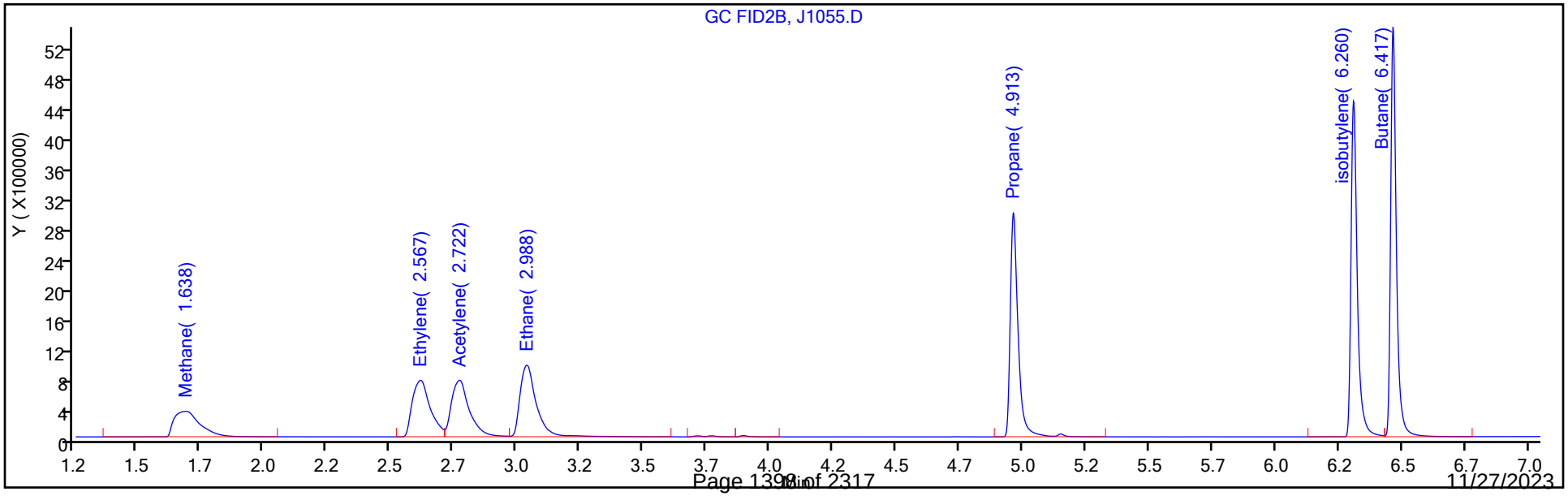
Data File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1055.D

Injection Date:	22-Nov-2022 18:34:40	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCVRT 280-609196/2 Calibration Date: 04/18/2023 17:50

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004116.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		38248		62.9	65.7	-4.2	20.0
Ethane	Ave	38690	37548		120	123	-3.0	20.0
Ethene	Ave	39374	38520		112	115	-2.2	20.0
Propane	Ave	38239	36892		174	181	-3.5	20.0
Acetylene	Ave	29338	28526		104	107	-2.8	20.0
Butane	Ave	39331	37590		228	238	-4.4	20.0
isobutylene	Ave	36862	35431		221	230	-3.9	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCVRT 280-609196/2 Calibration Date: 04/18/2023 17:50

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004116.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.22	1.18	1.26
Ethane	1.47	1.42	1.52
Ethene	1.74	1.69	1.79
Propane	2.48	2.42	2.54
Acetylene	4.04	3.96	4.12
Butane	4.35	4.27	4.43
isobutylene	5.27	5.19	5.35

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 18-Apr-2023 17:50:36 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCVRT
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:10 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 18-Apr-2023 18:45:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.224	1.224	0.000	2513009	65.7	62.9	M
2	1.663	1.663	0.000	2248621	65.7	62.0	
						RPD = 1.53	
3 Ethane							M
1	1.469	1.469	0.000	4624783	123.2	119.5	M
2	3.016	3.016	0.000	4170980	123.2	118.6	
						RPD = 0.78	
4 Ethylene							M
1	1.742	1.742	0.000	4425990	114.9	112.4	M
2	2.596	2.596	0.000	3496388	114.9	111.3	
						RPD = 0.98	
5 Propane							M
1	2.476	2.476	0.000	6664186	180.6	174.3	M
2	4.926	4.926	0.000	5899747	180.6	172.5	M
						RPD = 1.00	
6 Acetylene							M
1	4.042	4.042	0.000	3042904	106.7	103.7	M
2	2.753	2.753	0.000	3532694	106.7	105.2	
						RPD = 1.45	
7 Butane							M
1	4.351	4.351	0.000	8949100	238.1	227.5	M
2	6.426	6.426	0.000	8025884	238.1	219.8	M
						RPD = 3.46	
8 isobutylene							M
1	5.271	5.271	0.000	8143458	229.8	220.9	M
2	6.269	6.269	0.000	7078625	229.8	216.5	M
						RPD = 2.04	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00036 Amount Added: 200.00 Units: uL

Report Date: 20-Apr-2023 02:23:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D

Injection Date: 18-Apr-2023 17:50:36 Instrument ID: VGC_J Operator ID: JH

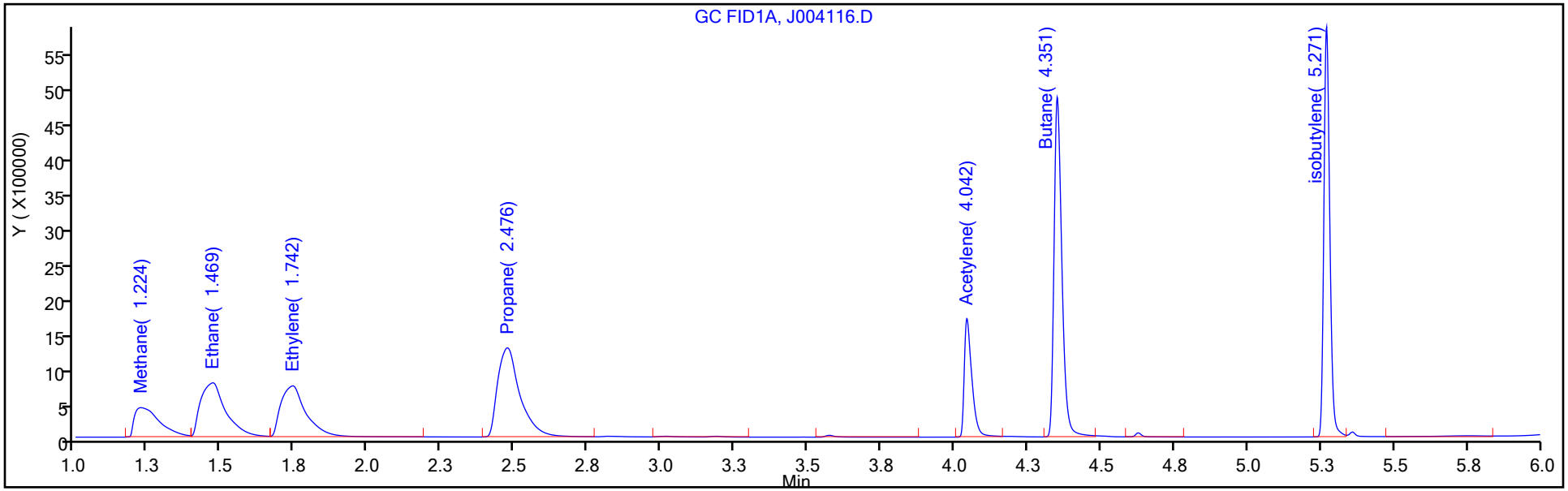
Lims ID: CCVRT Worklist Smp#: 2

Client ID:

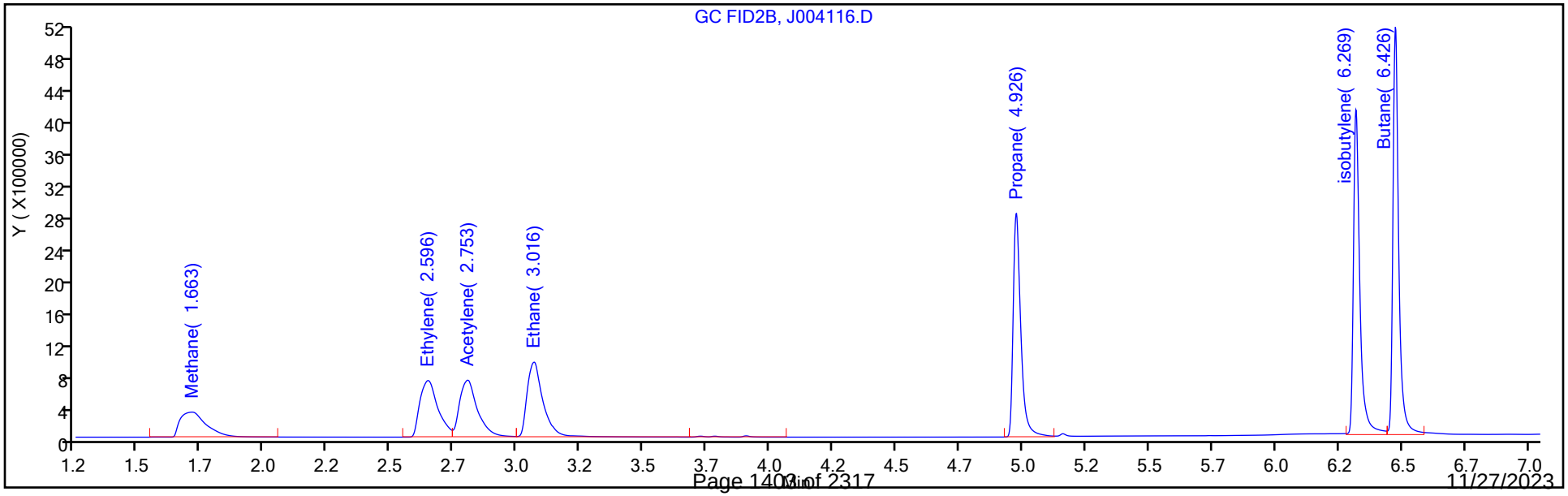
Purge Vol: 18.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: RSK_J Limit Group: GCV - RSK 175

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

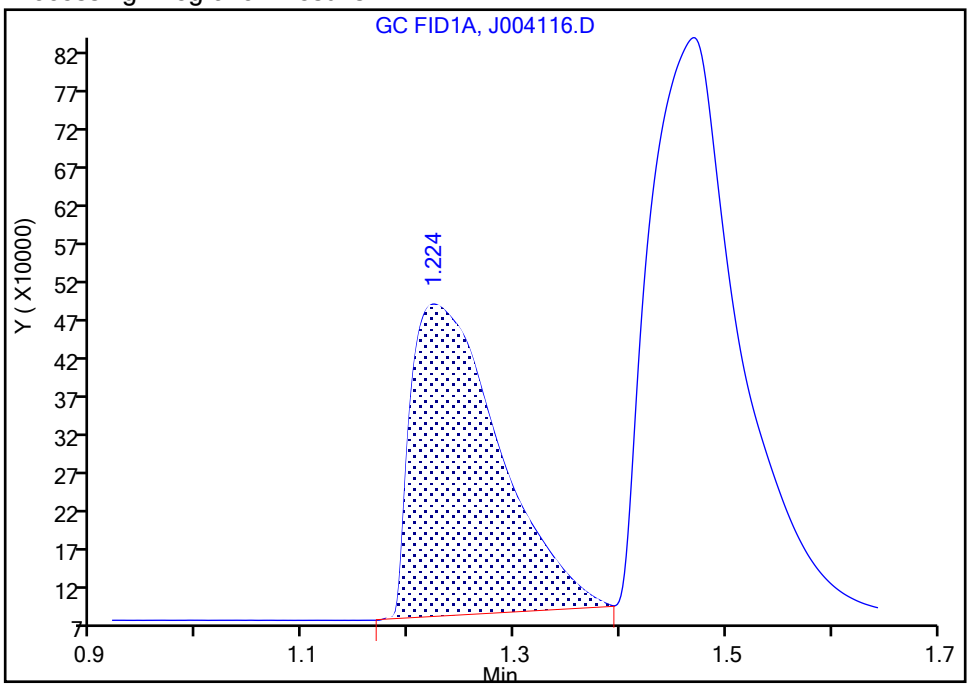
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D				
Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	JH	ALS Bottle#:	2	Worklist Smp#:	2
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

2 Methane, CAS: 74-82-8

Signal: 1

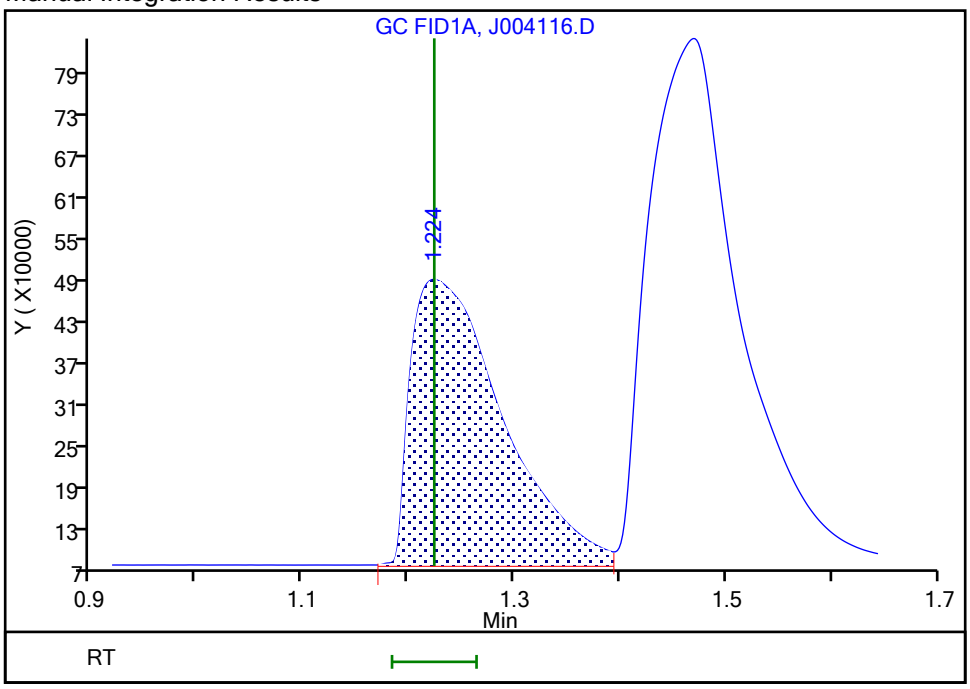
Processing Integration Results

RT: 1.22
Area: 2381279
Amount: 59.530713
Amount Units: ug/l



Manual Integration Results

RT: 1.22
Area: 2513009
Amount: 62.935586
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:29:22

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

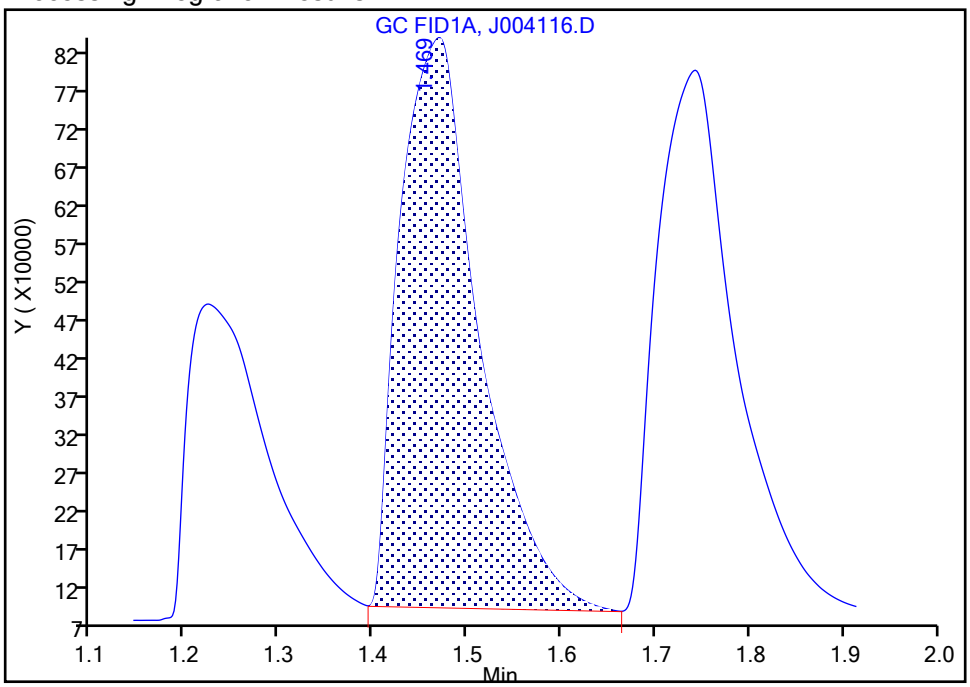
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D
Injection Date: 18-Apr-2023 17:50:36 Instrument ID: VGC_J
Lims ID: CCVRT
Client ID:
Operator ID: JH ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

3 Ethane, CAS: 74-84-0

Signal: 1

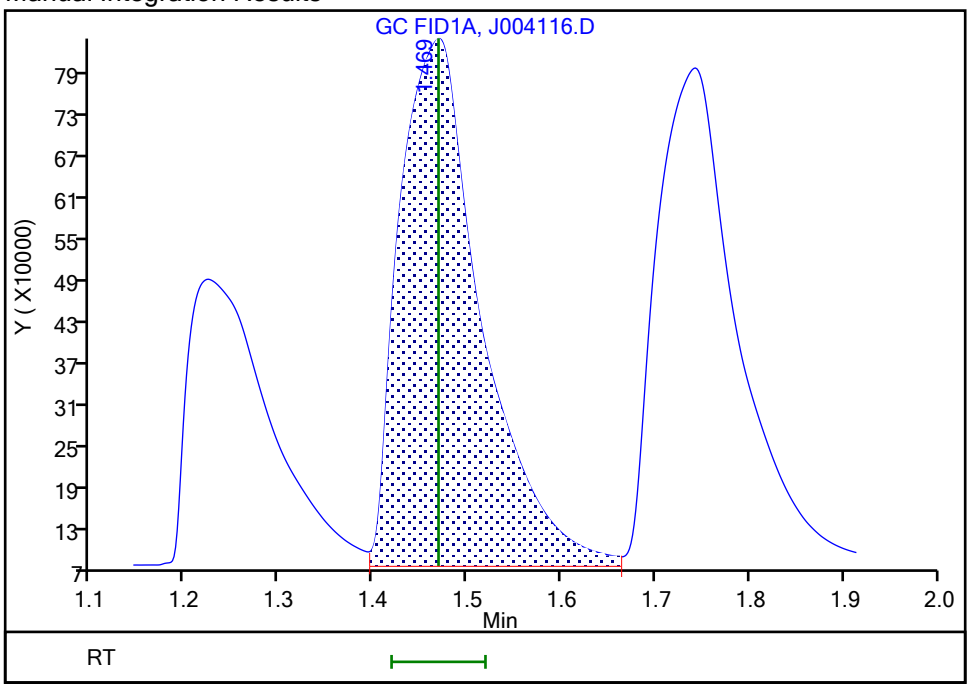
Processing Integration Results

RT: 1.47
Area: 4372202
Amount: 113.0069
Amount Units: ug/l



Manual Integration Results

RT: 1.47
Area: 4624783
Amount: 119.5353
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:36:12
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

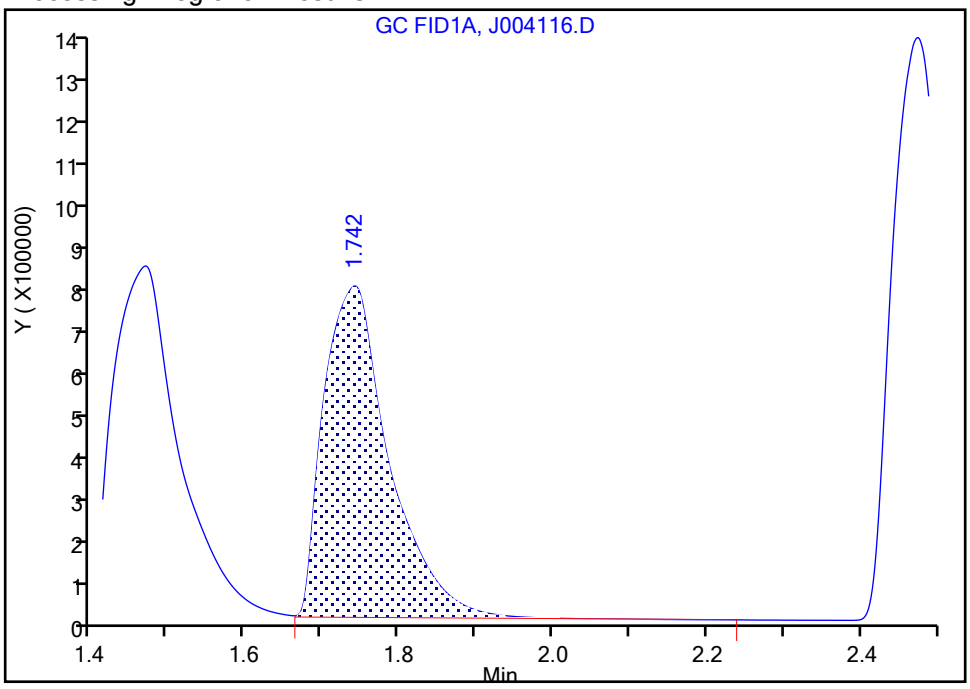
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D				
Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	JH	ALS Bottle#:	2	Worklist Smp#:	2
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

4 Ethylene, CAS: 74-85-1

Signal: 1

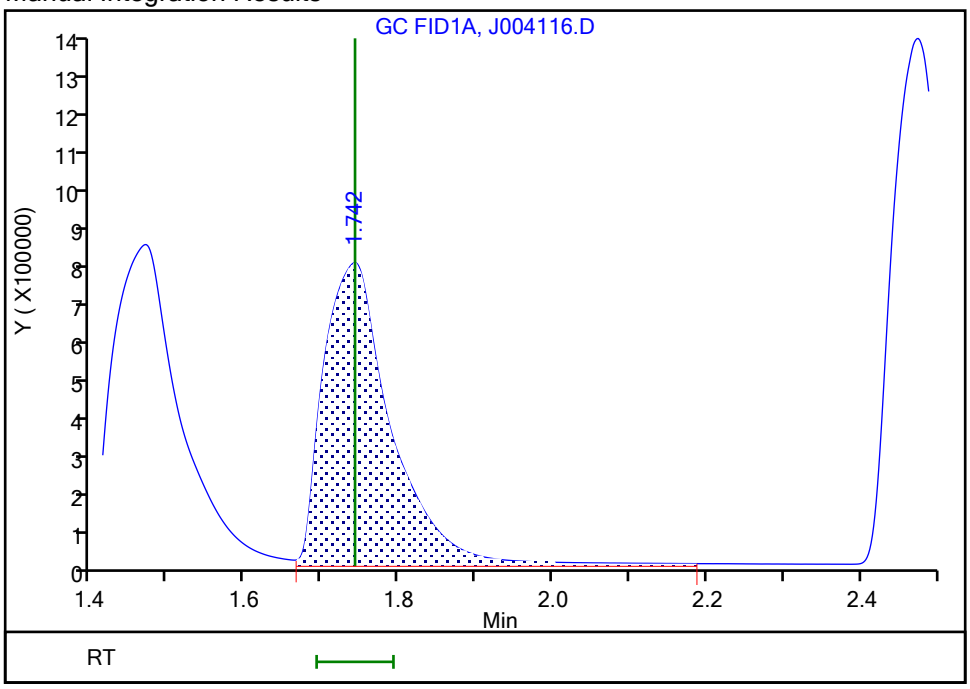
Processing Integration Results

RT: 1.74
Area: 4188519
Amount: 106.3773
Amount Units: ug/l



Manual Integration Results

RT: 1.74
Area: 4425990
Amount: 112.4084
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:36:22
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

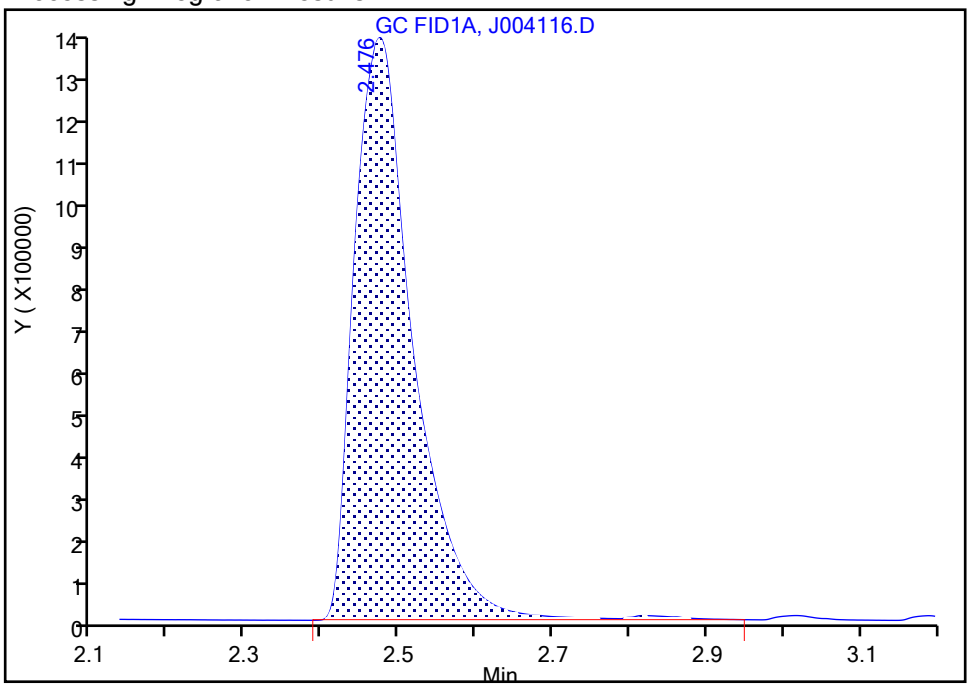
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D				
Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	JH	ALS Bottle#:	2	Worklist Smp#:	2
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

5 Propane, CAS: 74-98-6

Signal: 1

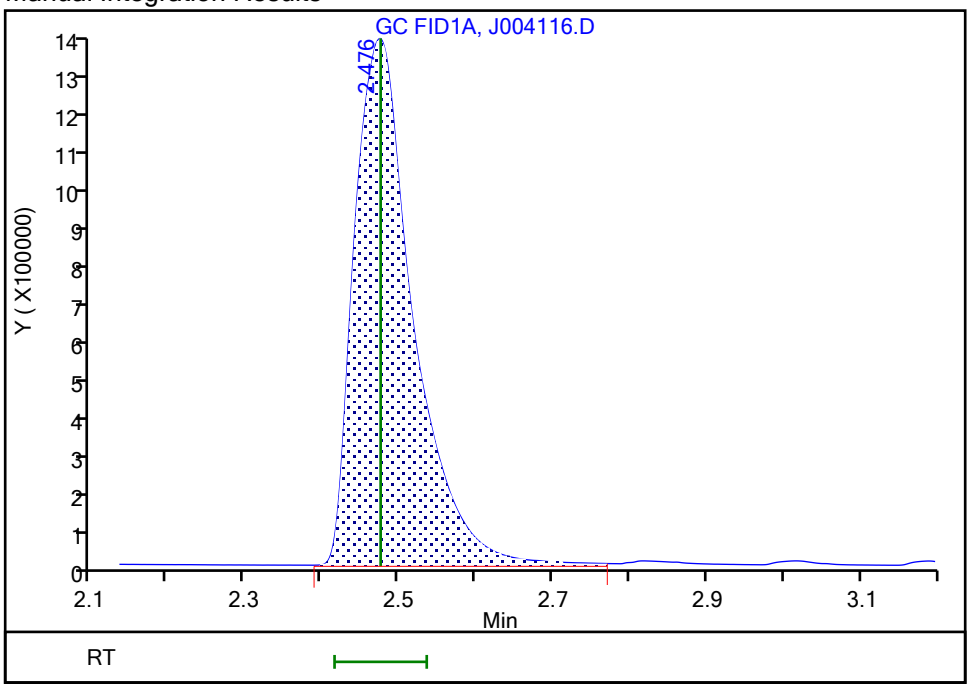
Processing Integration Results

RT: 2.48
Area: 6695764
Amount: 175.1011
Amount Units: ug/l



Manual Integration Results

RT: 2.48
Area: 6664186
Amount: 174.2753
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:36:42
Audit Action: Manually Integrated Audit Reason: Sample matrix interference

Manual Integration/User Assign Peak Report

Eurofins Denver

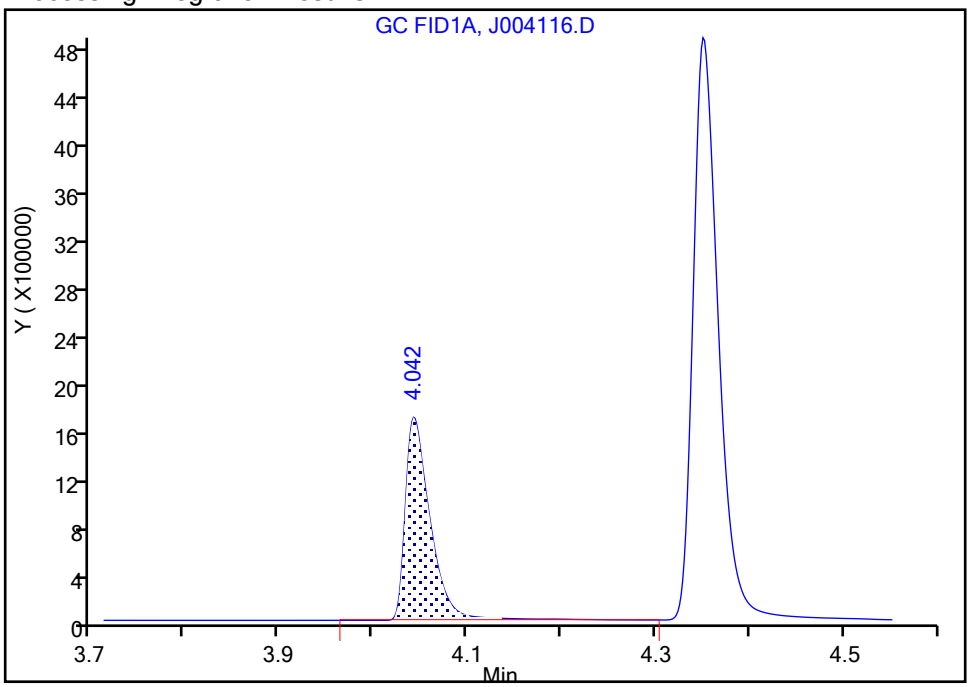
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D				
Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	JH	ALS Bottle#:	2	Worklist Smp#:	2
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

6 Acetylene, CAS: 74-86-2

Signal: 1

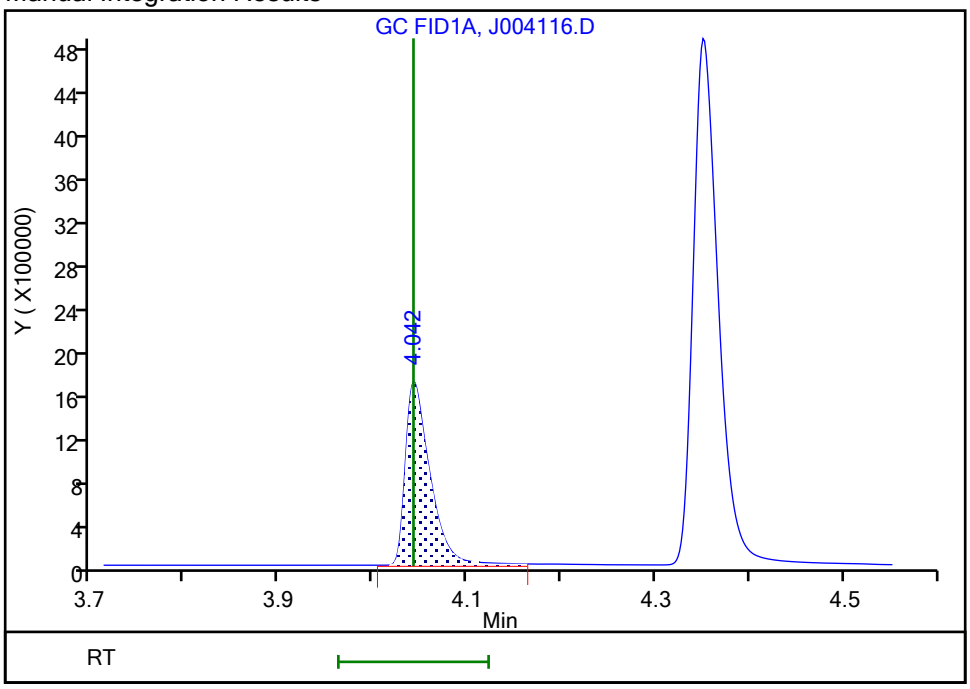
Processing Integration Results

RT: 4.04
Area: 3073596
Amount: 104.7666
Amount Units: ug/l



Manual Integration Results

RT: 4.04
Area: 3042904
Amount: 103.7204
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:37:26

Audit Action: Manually Integrated Audit Reason: Sample matrix interference

Manual Integration/User Assign Peak Report

Eurofins Denver

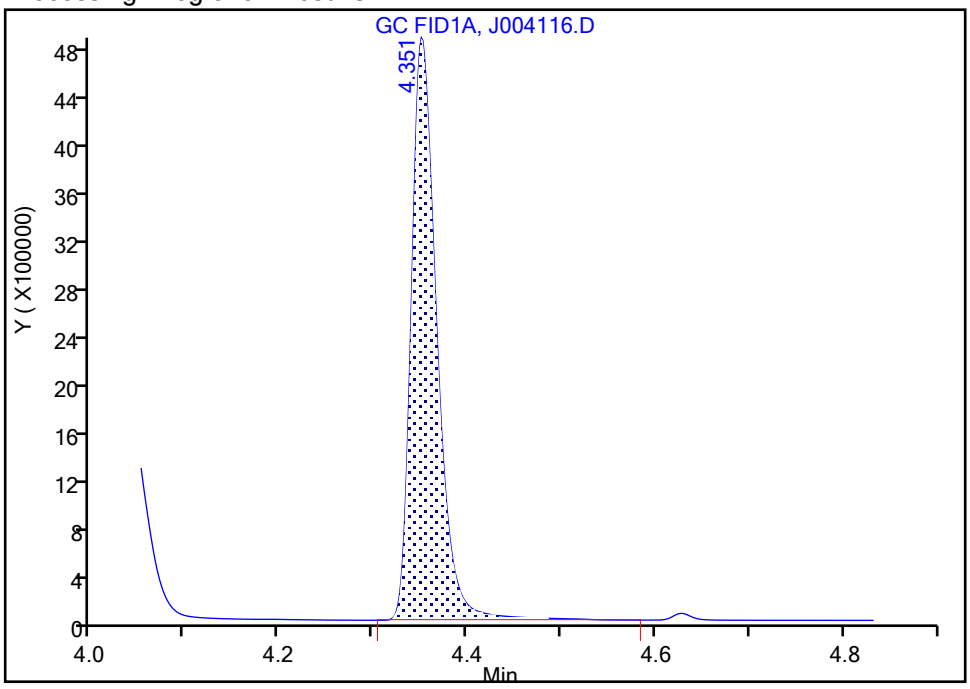
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D				
Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	JH	ALS Bottle#:	2	Worklist Smp#:	2
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

7 Butane, CAS: 106-97-8

Signal: 1

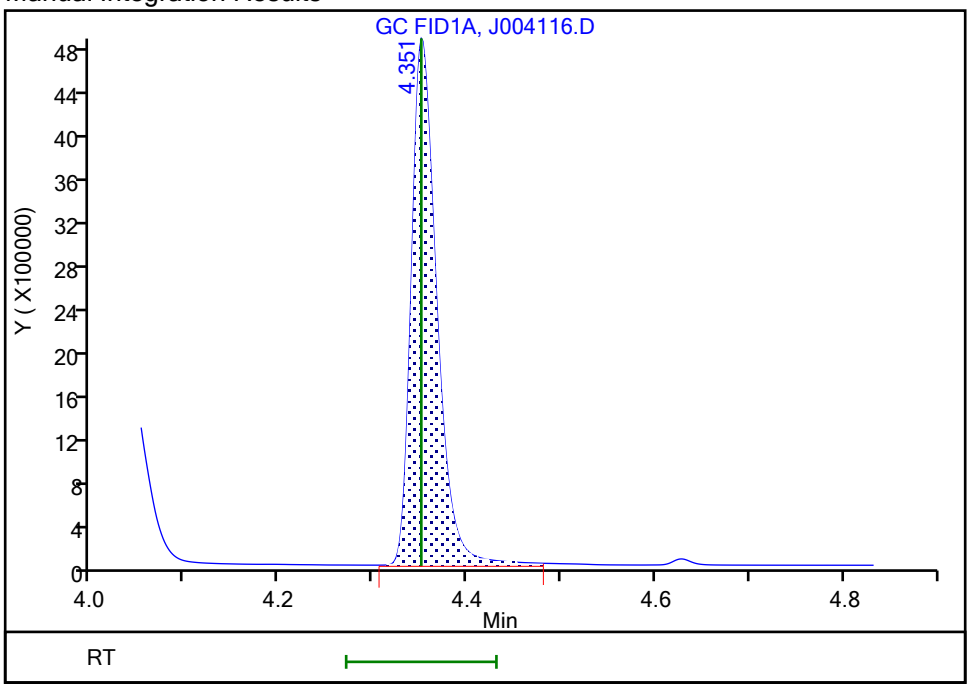
Processing Integration Results

RT: 4.35
Area: 8981435
Amount: 228.3555
Amount Units: ug/l



Manual Integration Results

RT: 4.35
Area: 8949100
Amount: 227.5333
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:37:42

Audit Action: Manually Integrated Audit Reason: Sample matrix interference

Manual Integration/User Assign Peak Report

Eurofins Denver

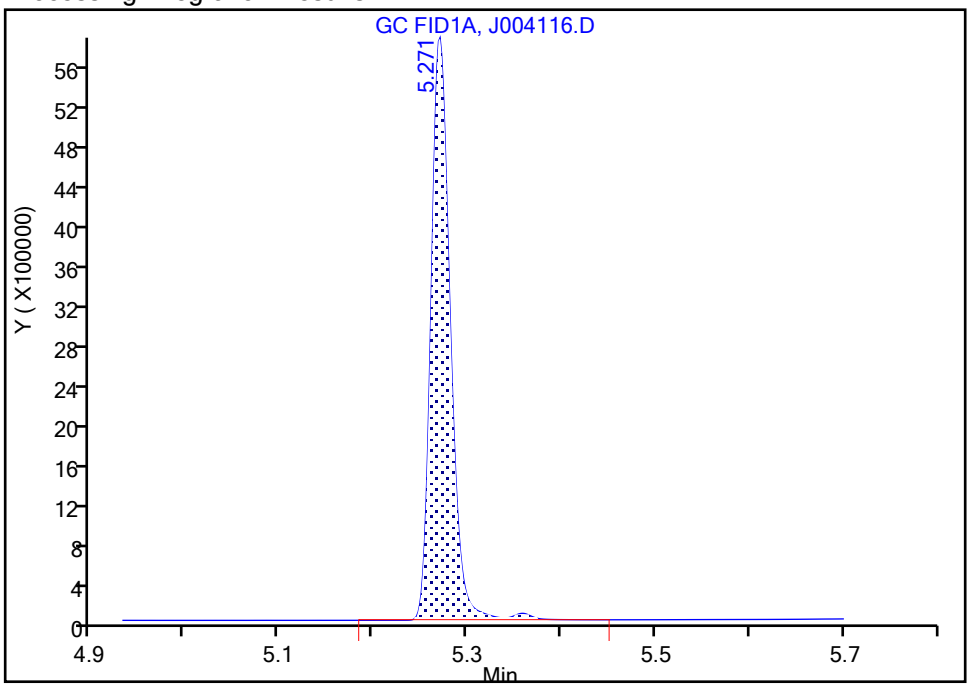
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D				
Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	JH	ALS Bottle#:	2	Worklist Smp#:	2
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

8 isobutylene, CAS: 115-11-7

Signal: 1

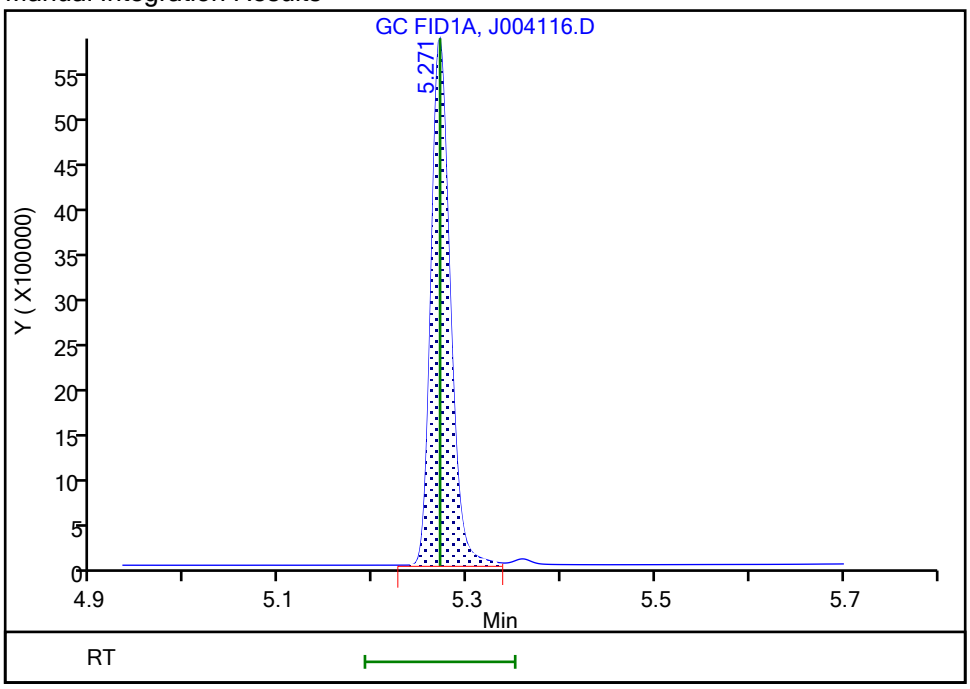
Processing Integration Results

RT: 5.27
Area: 8239052
Amount: 223.5107
Amount Units: ug/l



Manual Integration Results

RT: 5.27
Area: 8143458
Amount: 220.9174
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:38:08

Audit Action: Manually Integrated Audit Reason: Sample matrix interference

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCVRT 280-609196/2 Calibration Date: 04/18/2023 17:50

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004116.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		34224		62.0	65.7	-5.7	20.0
Ethene	Ave	31410	30430		111	115	-3.1	20.0
Acetylene	Ave	33569	33118		105	107	-1.3	20.0
Ethane	Ave	35167	33864		119	123	-3.7	20.0
Propane	Ave	34192	32660		173	181	-4.5	20.0
isobutylene	Ave	32701	30798		216	230	-5.8	20.0
Butane	Ave	36516	33712		220	238	-7.7	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCVRT 280-609196/2 Calibration Date: 04/18/2023 17:50

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004116.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.66	1.62	1.70
Ethene	2.60	2.55	2.65
Acetylene	2.75	2.67	2.83
Ethane	3.02	2.97	3.07
Propane	4.93	4.87	4.99
isobutylene	6.27	6.19	6.35
Butane	6.43	6.35	6.51

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 18-Apr-2023 17:50:36 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCVRT
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:10 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 18-Apr-2023 18:45:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.224	1.224	0.000	2513009	65.7	62.9	M
2	1.663	1.663	0.000	2248621	65.7	62.0	
						RPD = 1.53	
3 Ethane							M
1	1.469	1.469	0.000	4624783	123.2	119.5	M
2	3.016	3.016	0.000	4170980	123.2	118.6	
						RPD = 0.78	
4 Ethylene							M
1	1.742	1.742	0.000	4425990	114.9	112.4	M
2	2.596	2.596	0.000	3496388	114.9	111.3	
						RPD = 0.98	
5 Propane							M
1	2.476	2.476	0.000	6664186	180.6	174.3	M
2	4.926	4.926	0.000	5899747	180.6	172.5	M
						RPD = 1.00	
6 Acetylene							M
1	4.042	4.042	0.000	3042904	106.7	103.7	M
2	2.753	2.753	0.000	3532694	106.7	105.2	
						RPD = 1.45	
7 Butane							M
1	4.351	4.351	0.000	8949100	238.1	227.5	M
2	6.426	6.426	0.000	8025884	238.1	219.8	M
						RPD = 3.46	
8 isobutylene							M
1	5.271	5.271	0.000	8143458	229.8	220.9	M
2	6.269	6.269	0.000	7078625	229.8	216.5	M
						RPD = 2.04	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00036 Amount Added: 200.00 Units: uL

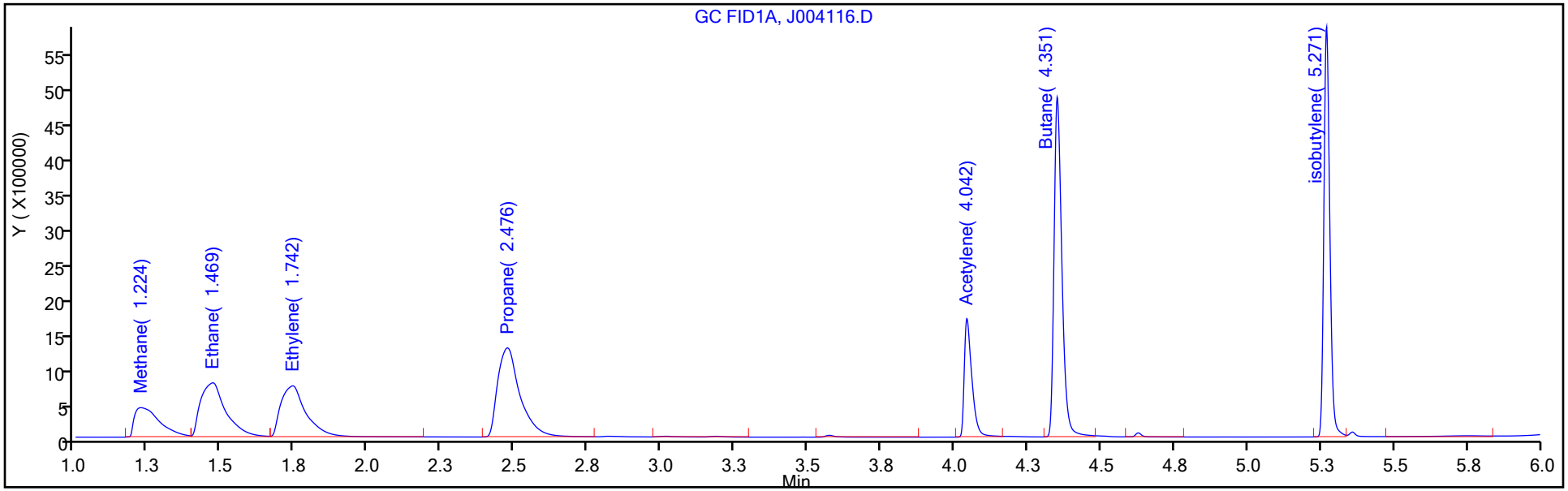
Report Date: 20-Apr-2023 02:23:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

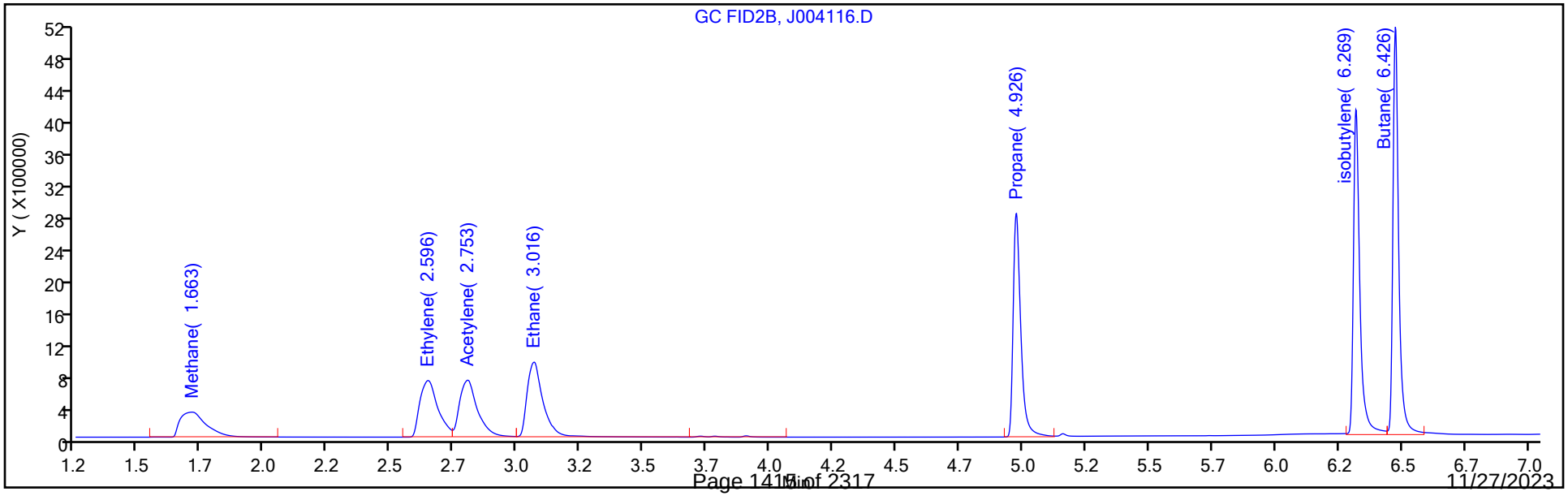
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D

Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	CCVRT			Worklist Smp#:	2
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

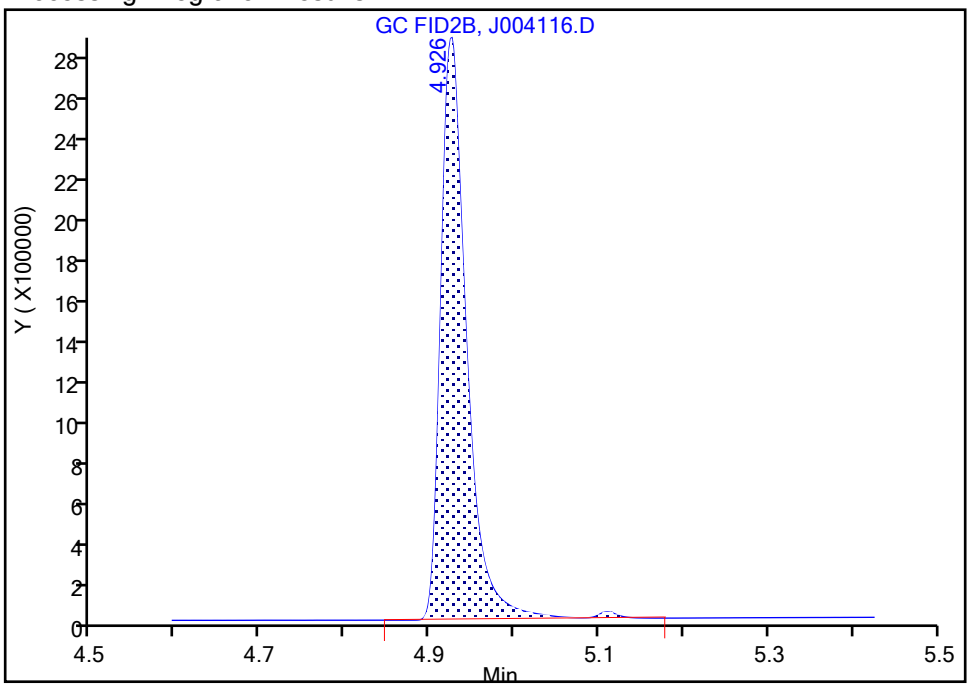
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D				
Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	JH	ALS Bottle#:	2	Worklist Smp#:	2
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

5 Propane, CAS: 74-98-6

Signal: 2

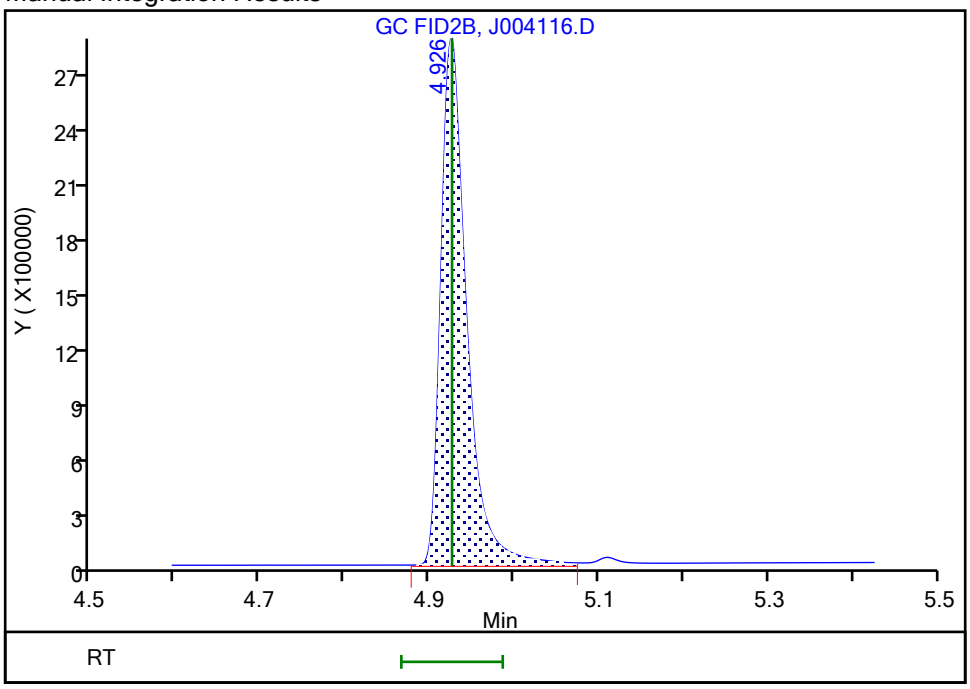
Processing Integration Results

RT: 4.93
Area: 5920420
Amount: 173.1522
Amount Units: ug/l



Manual Integration Results

RT: 4.93
Area: 5899747
Amount: 172.5475
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:36:51
Audit Action: Manually Integrated Audit Reason: Sample matrix interference

Manual Integration/User Assign Peak Report

Eurofins Denver

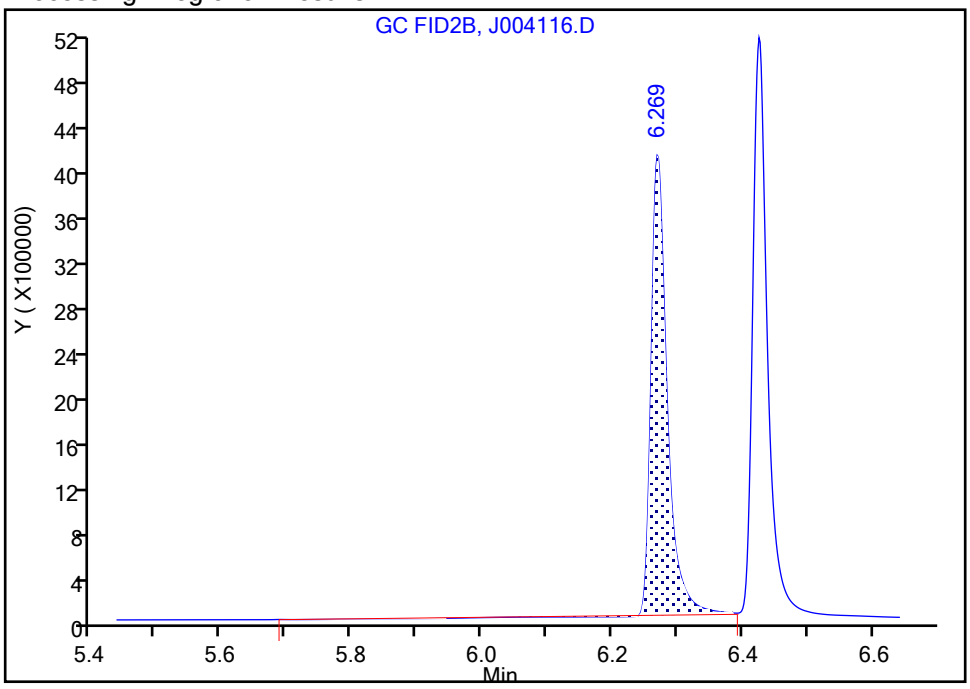
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D				
Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	JH	ALS Bottle#:	2	Worklist Smp#:	2
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

8 isobutylene, CAS: 115-11-7

Signal: 2

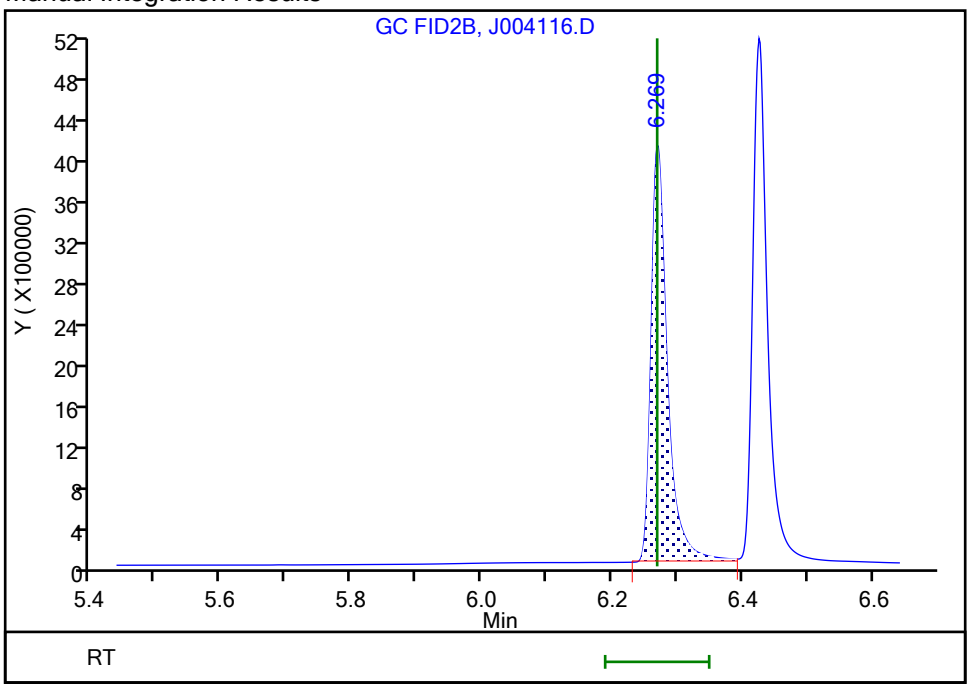
Processing Integration Results

RT: 6.27
Area: 7141906
Amount: 218.4009
Amount Units: ug/l



Manual Integration Results

RT: 6.27
Area: 7078625
Amount: 216.4658
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:38:20
Audit Action: Manually Integrated Audit Reason: Sample matrix interference

Manual Integration/User Assign Peak Report

Eurofins Denver

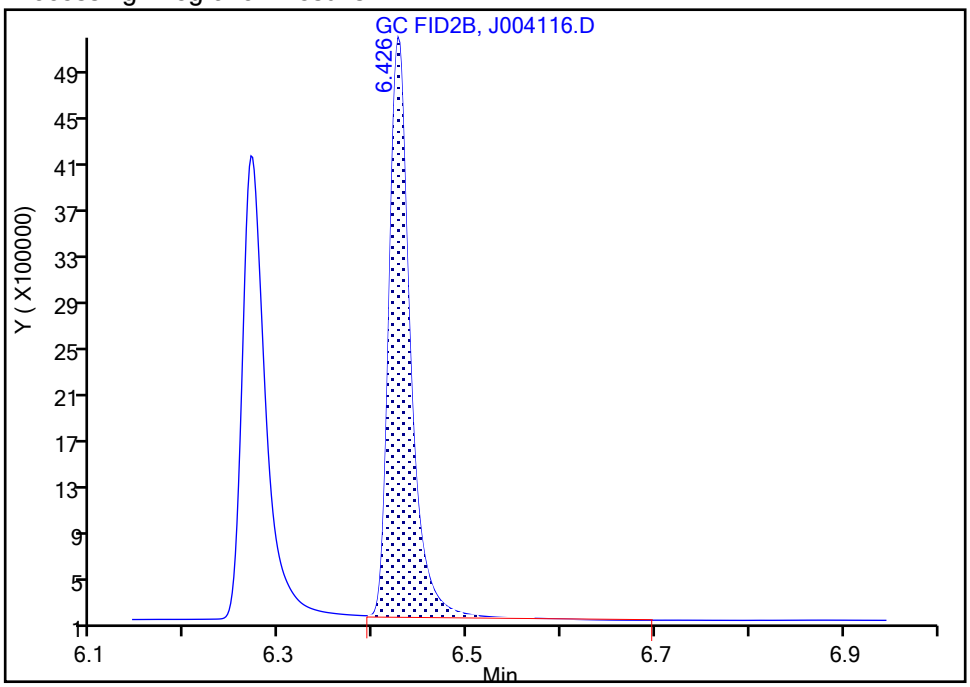
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004116.D				
Injection Date:	18-Apr-2023 17:50:36	Instrument ID:	VGC_J		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	JH	ALS Bottle#:	2	Worklist Smp#:	2
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

7 Butane, CAS: 106-97-8

Signal: 2

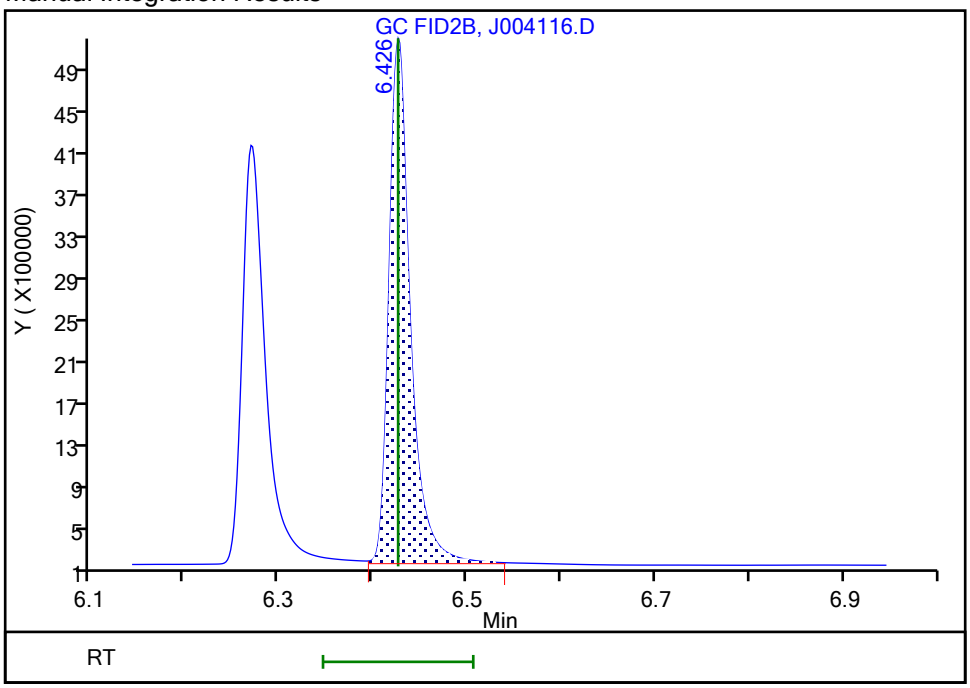
Processing Integration Results

RT: 6.43
Area: 8029098
Amount: 219.8770
Amount Units: ug/l



Manual Integration Results

RT: 6.43
Area: 8025884
Amount: 219.7890
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:38:37

Audit Action: Manually Integrated Audit Reason: Sample matrix interference

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609196/19 Calibration Date: 04/19/2023 01:12

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004137.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		39075		64.3	65.7	-2.1	20.0
Ethane	Ave	38690	38315		122	123	-1.0	20.0
Ethene	Ave	39374	38759		113	115	-1.6	20.0
Propane	Ave	38239	37547		177	181	-1.8	20.0
Acetylene	Ave	29338	28892		105	107	-1.5	20.0
Butane	Ave	39331	38449		233	238	-2.2	20.0
isobutylene	Ave	36862	36017		225	230	-2.3	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609196/19 Calibration Date: 04/19/2023 01:12

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004137.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.23	1.18	1.26
Ethane	1.48	1.42	1.52
Ethene	1.78	1.69	1.79
Propane	2.54	2.42	2.54
Acetylene	4.15	3.96	4.12
Butane	4.43	4.27	4.43
isobutylene	5.34	5.19	5.35

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Apr-2023 01:12:40 ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:21 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 20-Apr-2023 01:50:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.225	1.224	0.001	2567348	65.7	64.3	M
2	1.662	1.663	-0.001	2301492	65.7	63.5	
						RPD = 1.35	
3 Ethane							M
1	1.481	1.469	0.012	4719213	123.2	122.0	M
2	3.023	3.016	0.007	4278325	123.2	121.7	
						RPD = 0.26	
4 Ethylene							M
1	1.775	1.742	0.033	4453406	114.9	113.1	M
2	2.603	2.596	0.007	3578078	114.9	113.9	
						RPD = 0.71	
5 Propane							Ma
1	2.540	2.476	0.064	6782538	180.6	177.4	M
2	4.930	4.926	0.004	6035136	180.6	176.5	M
						RPD = 0.49	
6 Acetylene							Ma
1	4.148	4.042	0.106	3081919	106.7	105.1	M
2	2.760	2.753	0.007	3585699	106.7	106.8	a
						RPD = 1.67	
7 Butane							Ma
1	4.426	4.351	0.075	9153540	238.1	232.7	M
2	6.428	6.426	0.002	8044396	238.1	220.3	M
						RPD = 5.49	
8 isobutylene							M
1	5.340	5.271	0.069	8278262	229.8	224.6	M
2	6.273	6.269	0.004	7049907	229.8	215.6	
						RPD = 4.08	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00036 Amount Added: 200.00 Units: uL

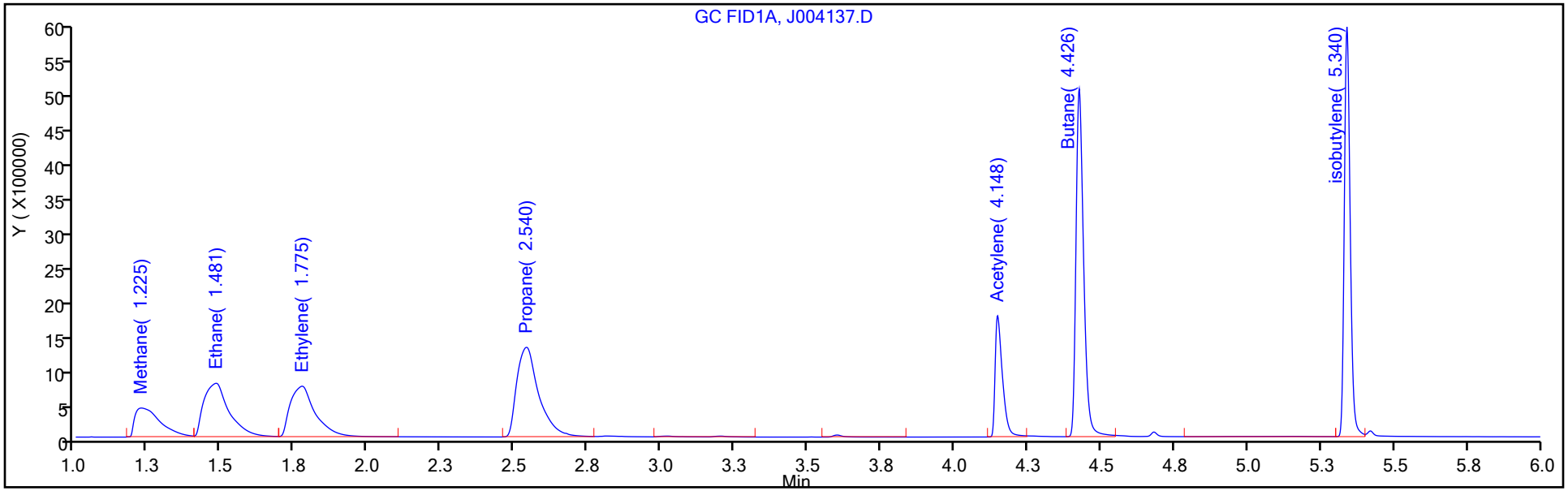
Report Date: 20-Apr-2023 02:23:21 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

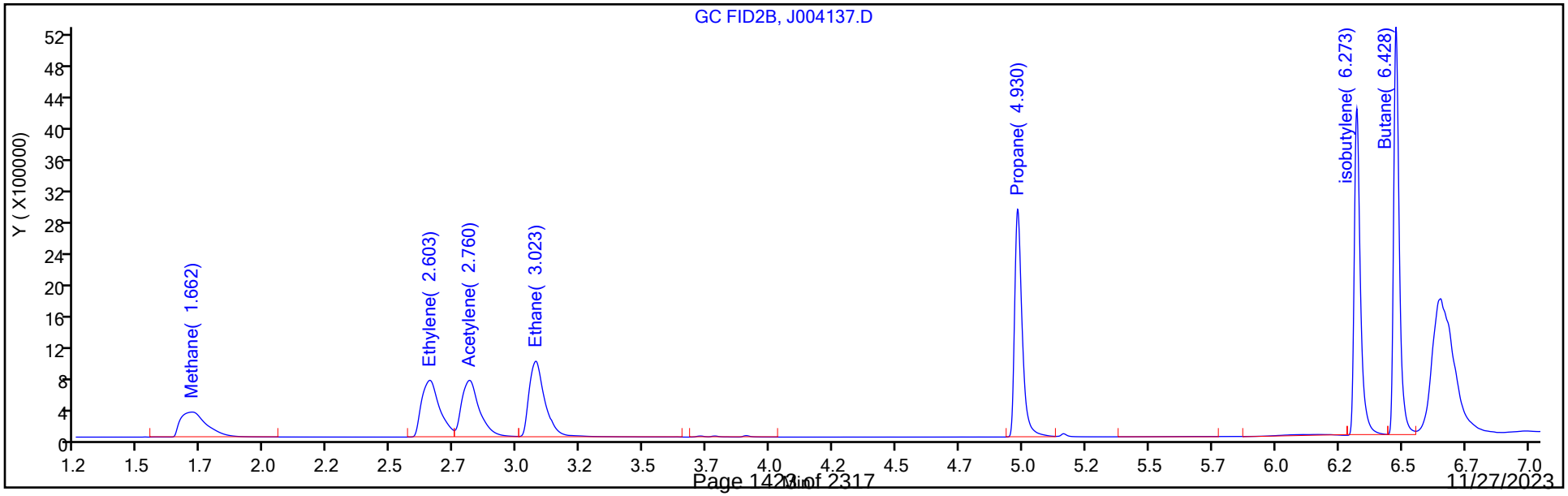
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D

Injection Date:	19-Apr-2023 01:12:40	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	CCV			Worklist Smp#:	19
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

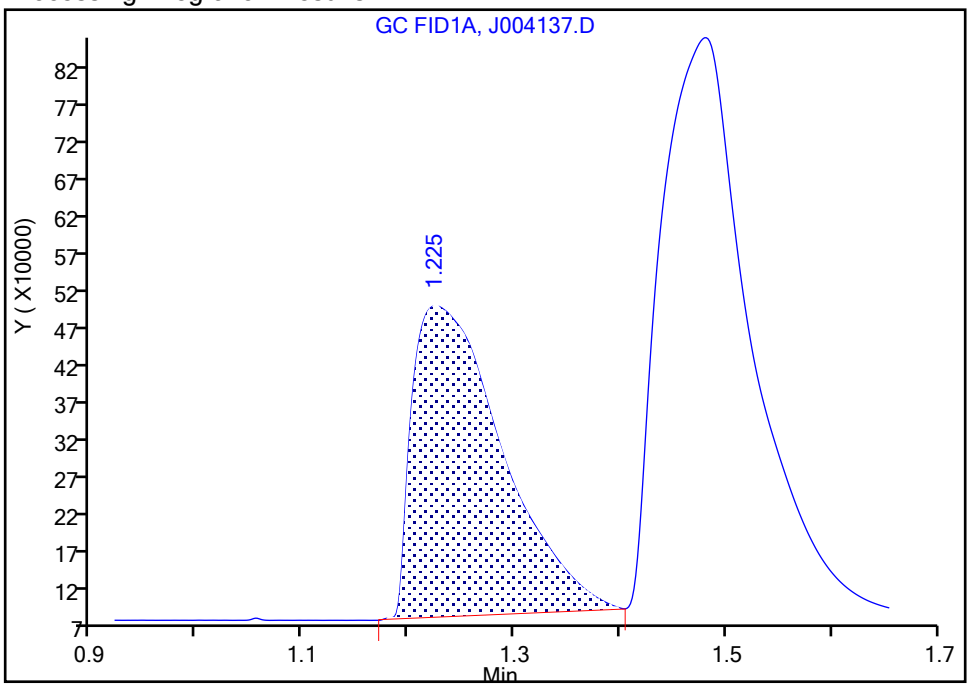
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D				
Injection Date:	19-Apr-2023 01:12:40	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

2 Methane, CAS: 74-82-8

Signal: 1

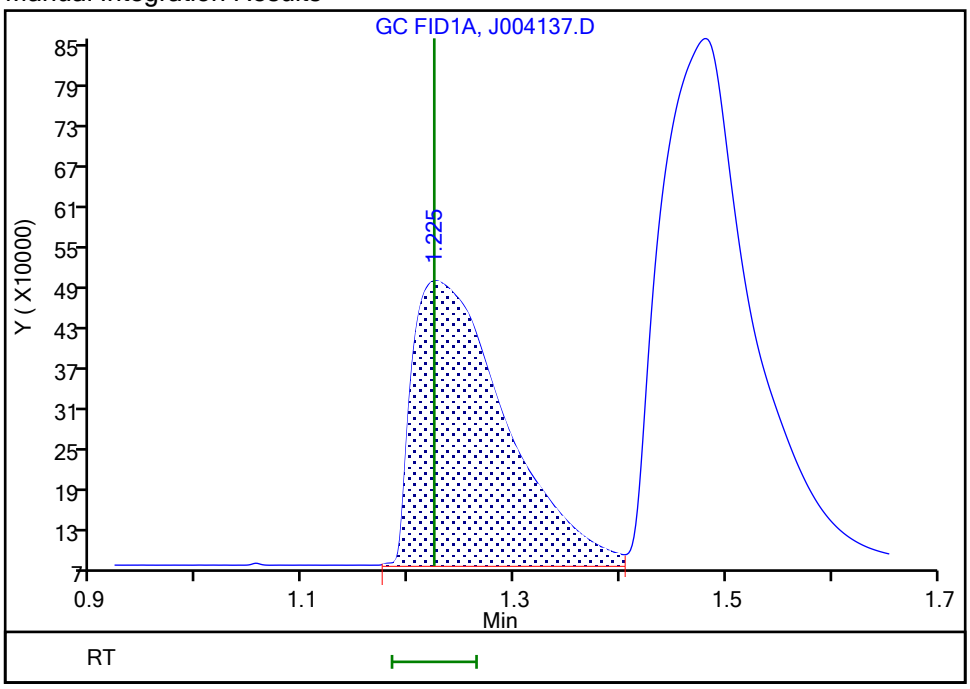
Processing Integration Results

RT: 1.22
Area: 2459180
Amount: 61.544248
Amount Units: ug/l



Manual Integration Results

RT: 1.22
Area: 2567348
Amount: 64.340105
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:46:21
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

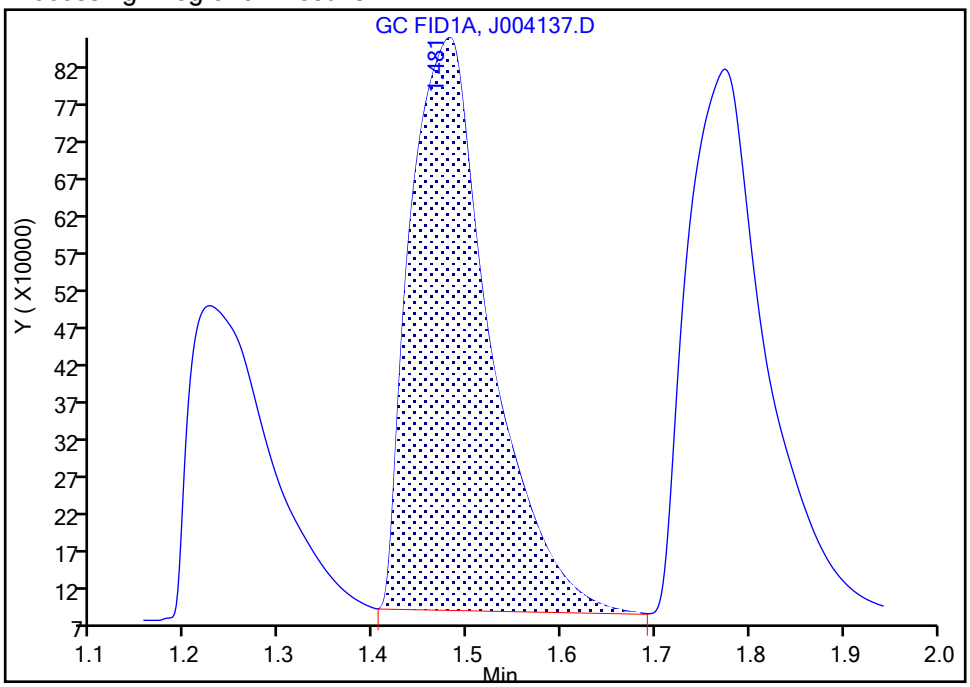
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D				
Injection Date:	19-Apr-2023 01:12:40	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

3 Ethane, CAS: 74-84-0

Signal: 1

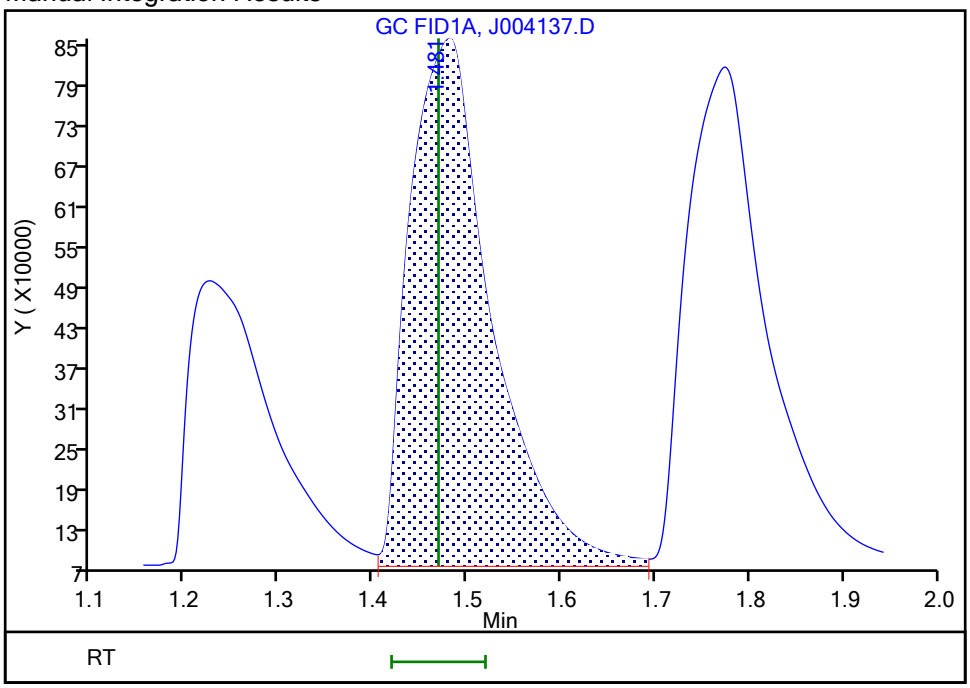
Processing Integration Results

RT: 1.48
Area: 4508484
Amount: 116.5293
Amount Units: ug/l



Manual Integration Results

RT: 1.48
Area: 4719213
Amount: 121.9760
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:46:33

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

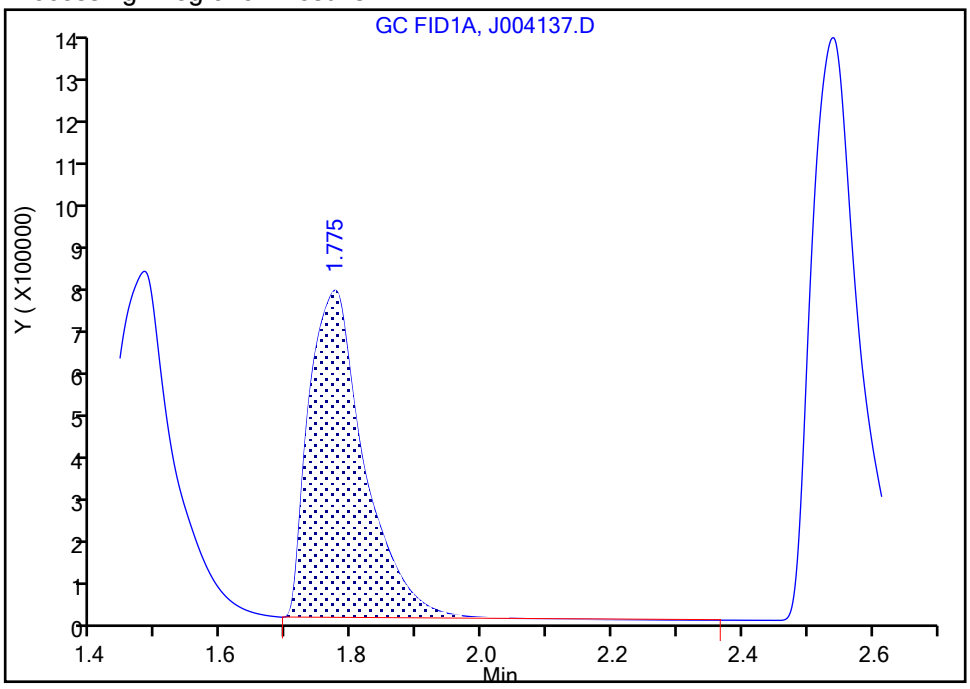
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D				
Injection Date:	19-Apr-2023 01:12:40	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

4 Ethylene, CAS: 74-85-1

Signal: 1

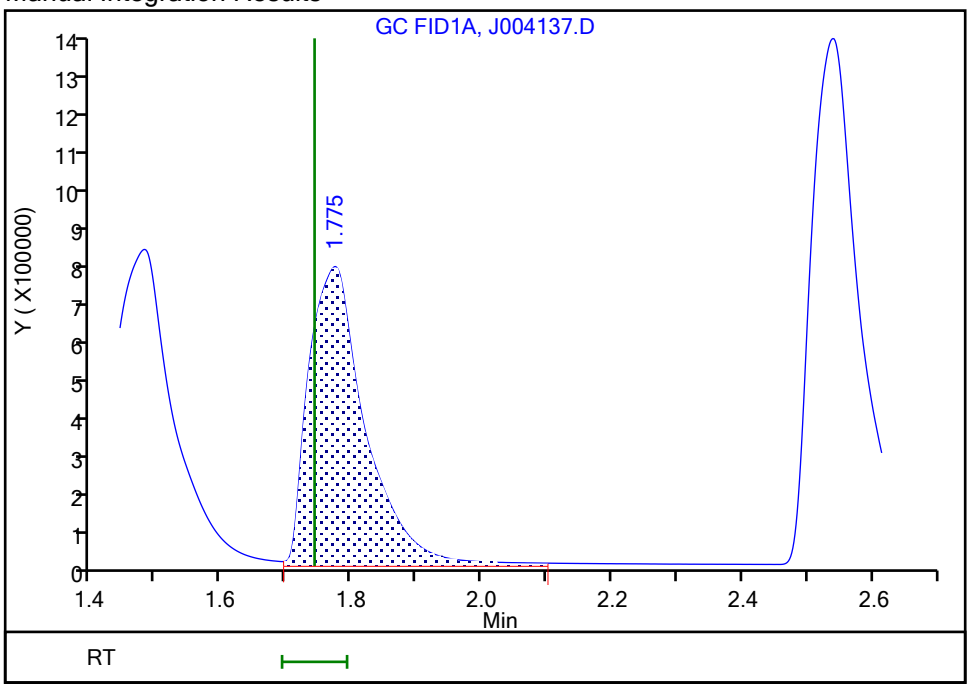
Processing Integration Results

RT: 1.77
Area: 4289555
Amount: 108.9433
Amount Units: ug/l



Manual Integration Results

RT: 1.77
Area: 4453406
Amount: 113.1047
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:46:49

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

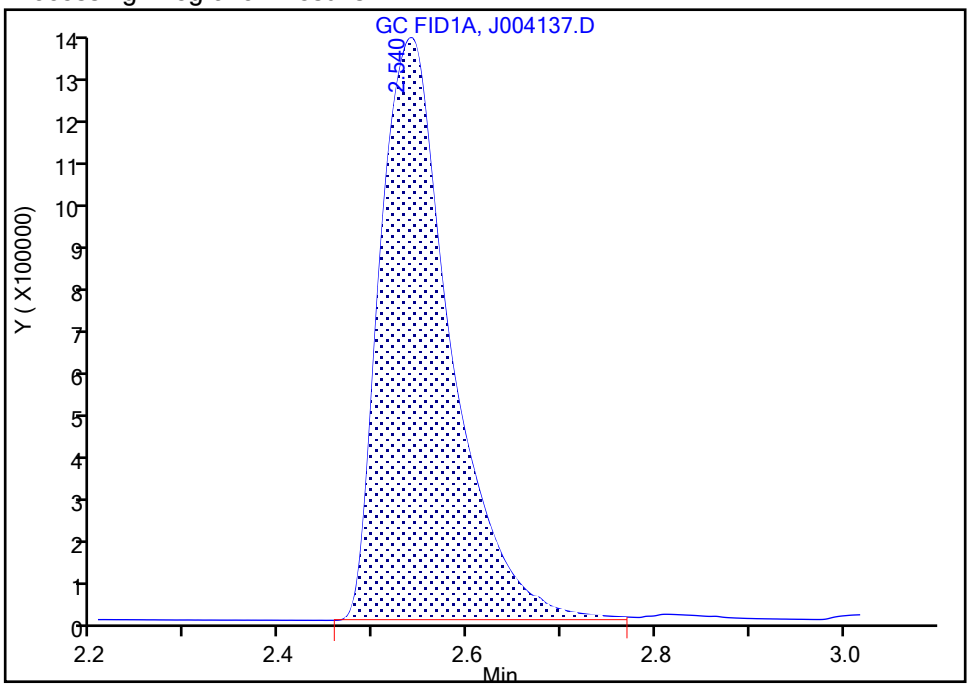
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D
Injection Date: 19-Apr-2023 01:12:40 Instrument ID: VGC_J
Lims ID: CCV
Client ID:
Operator ID: JH ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

5 Propane, CAS: 74-98-6

Signal: 1

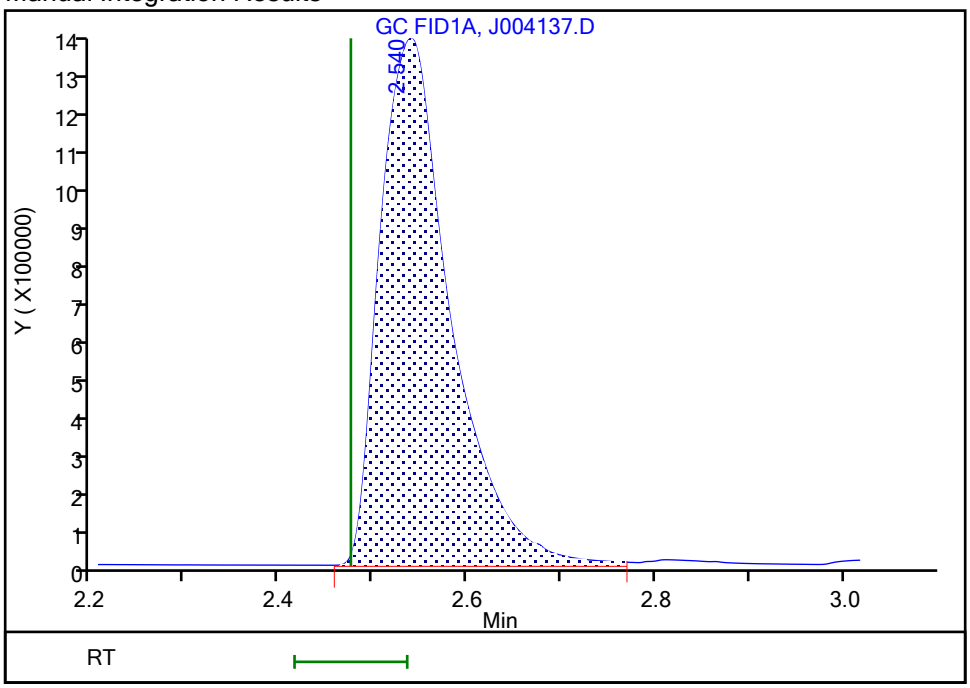
Processing Integration Results

RT: 2.54
Area: 6782538
Amount: 177.3703
Amount Units: ug/l



Manual Integration Results

RT: 2.54
Area: 6782538
Amount: 177.3703
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:47:35
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

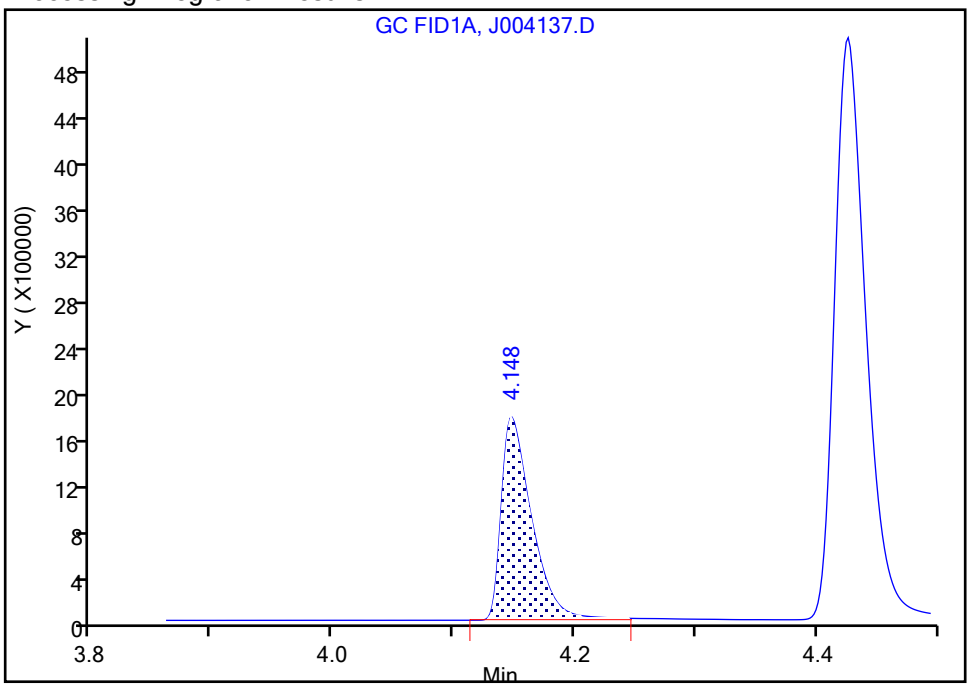
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D				
Injection Date:	19-Apr-2023 01:12:40	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

6 Acetylene, CAS: 74-86-2

Signal: 1

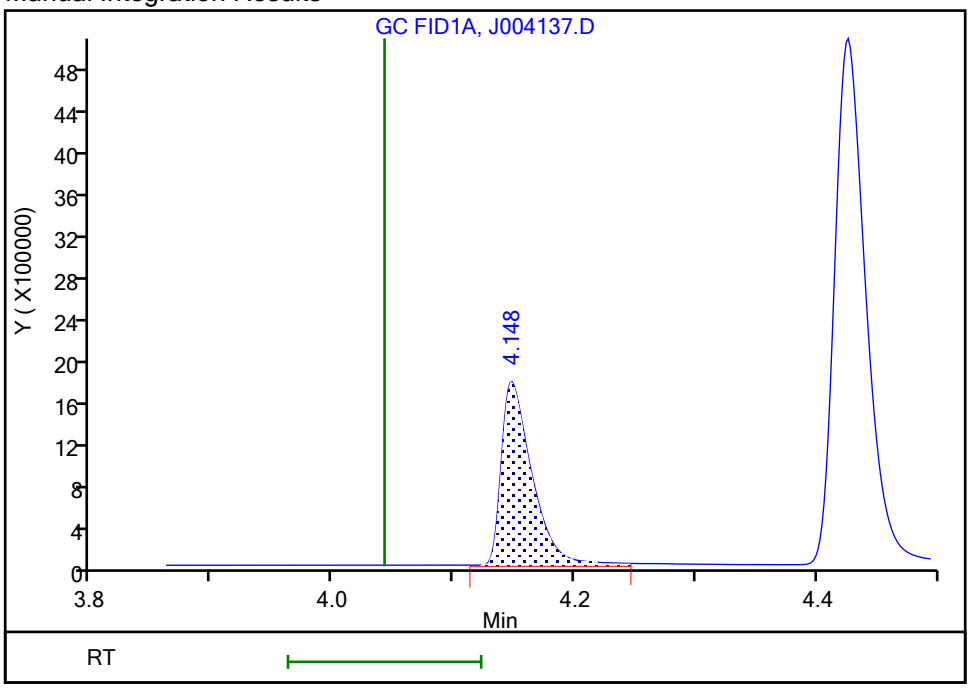
Processing Integration Results

RT: 4.15
Area: 3081919
Amount: 105.0503
Amount Units: ug/l



Manual Integration Results

RT: 4.15
Area: 3081919
Amount: 105.0503
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:48:22

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

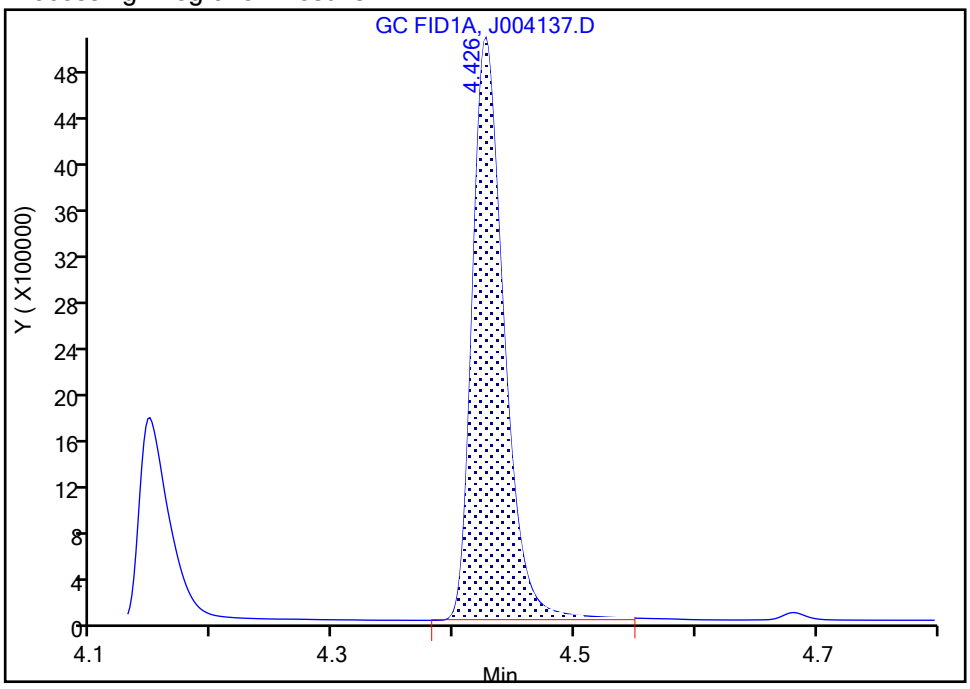
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D				
Injection Date:	19-Apr-2023 01:12:40	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

7 Butane, CAS: 106-97-8

Signal: 1

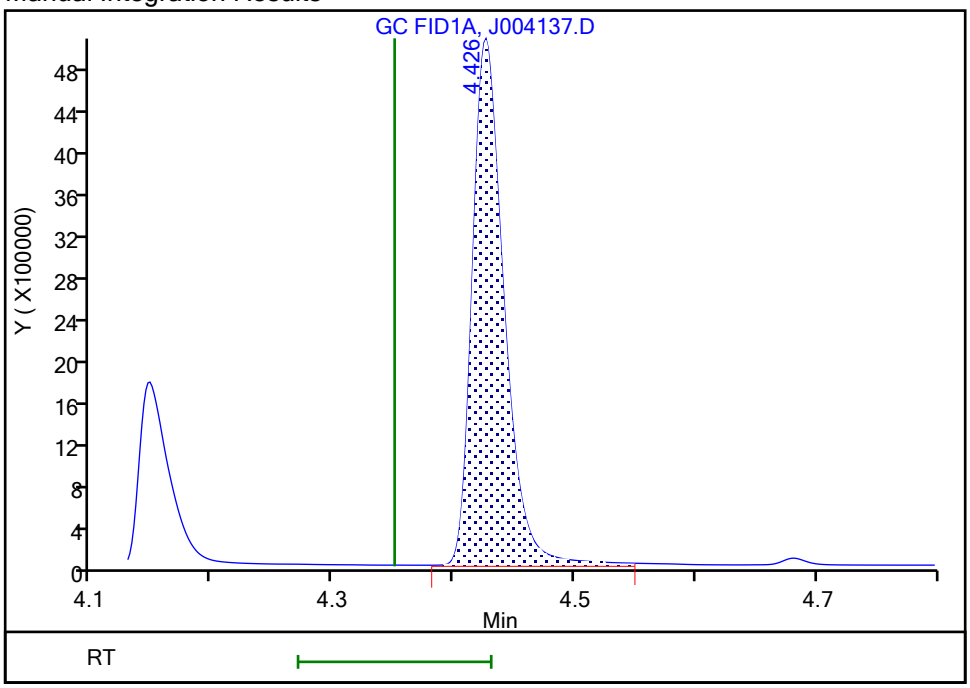
Processing Integration Results

RT: 4.43
Area: 9153540
Amount: 232.7313
Amount Units: ug/l



Manual Integration Results

RT: 4.43
Area: 9153540
Amount: 232.7313
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:48:40

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

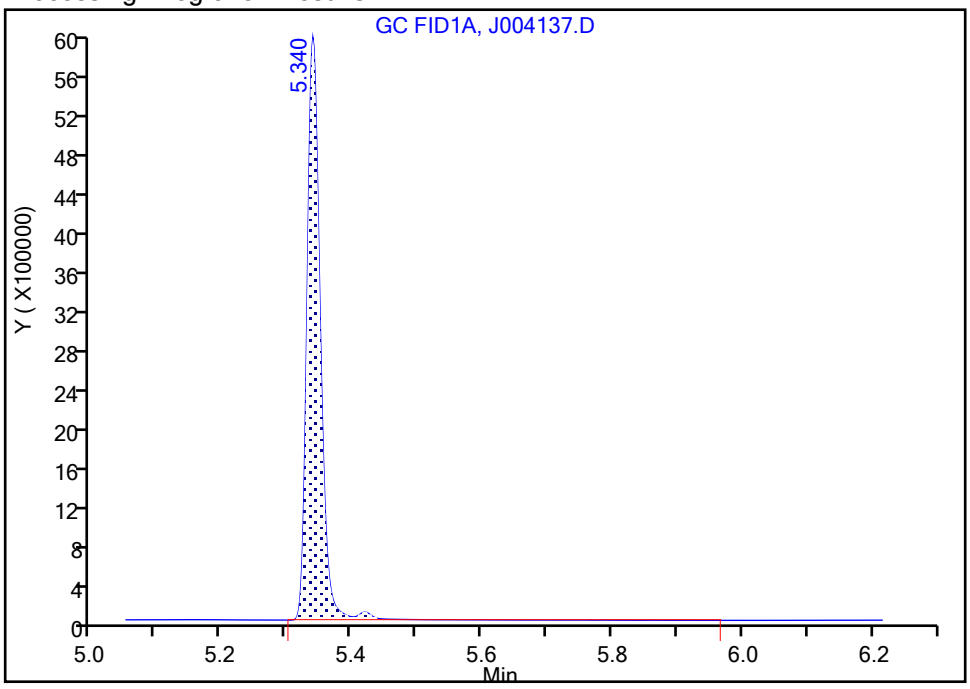
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D
Injection Date: 19-Apr-2023 01:12:40 Instrument ID: VGC_J
Lims ID: CCV
Client ID:
Operator ID: JH ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

8 isobutylene, CAS: 115-11-7

Signal: 1

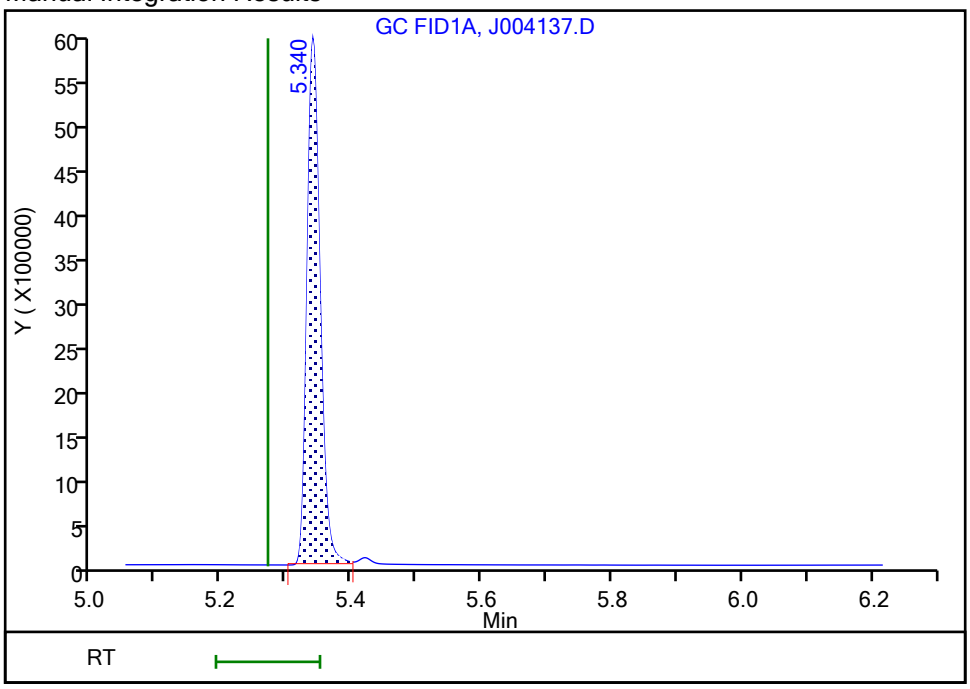
Processing Integration Results

RT: 5.34
Area: 8485777
Amount: 230.2039
Amount Units: ug/l



Manual Integration Results

RT: 5.34
Area: 8278262
Amount: 224.5744
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:50:06
Audit Action: Manually Integrated Audit Reason: Sample matrix interference

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609196/19 Calibration Date: 04/19/2023 01:12

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004137.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		35029		63.5	65.7	-3.4	20.0
Ethene	Ave	31410	31141		114	115	-0.9	20.0
Acetylene	Ave	33569	33615		107	107	0.1	20.0
Ethane	Ave	35167	34735		122	123	-1.2	20.0
Propane	Ave	34192	33410		177	181	-2.3	20.0
isobutylene	Ave	32701	30673		216	230	-6.2	20.0
Butane	Ave	36516	33790		220	238	-7.5	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609196/19 Calibration Date: 04/19/2023 01:12

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004137.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.66	1.62	1.70
Ethene	2.60	2.55	2.65
Acetylene	2.76	2.67	2.83
Ethane	3.02	2.97	3.07
Propane	4.93	4.87	4.99
isobutylene	6.27	6.19	6.35
Butane	6.43	6.35	6.51

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Apr-2023 01:12:40 ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:21 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 20-Apr-2023 01:50:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.225	1.224	0.001	2567348	65.7	64.3	M
2	1.662	1.663	-0.001	2301492	65.7	63.5	
						RPD = 1.35	
3 Ethane							M
1	1.481	1.469	0.012	4719213	123.2	122.0	M
2	3.023	3.016	0.007	4278325	123.2	121.7	
						RPD = 0.26	
4 Ethylene							M
1	1.775	1.742	0.033	4453406	114.9	113.1	M
2	2.603	2.596	0.007	3578078	114.9	113.9	
						RPD = 0.71	
5 Propane							Ma
1	2.540	2.476	0.064	6782538	180.6	177.4	M
2	4.930	4.926	0.004	6035136	180.6	176.5	M
						RPD = 0.49	
6 Acetylene							Ma
1	4.148	4.042	0.106	3081919	106.7	105.1	M
2	2.760	2.753	0.007	3585699	106.7	106.8	a
						RPD = 1.67	
7 Butane							Ma
1	4.426	4.351	0.075	9153540	238.1	232.7	M
2	6.428	6.426	0.002	8044396	238.1	220.3	M
						RPD = 5.49	
8 isobutylene							M
1	5.340	5.271	0.069	8278262	229.8	224.6	M
2	6.273	6.269	0.004	7049907	229.8	215.6	
						RPD = 4.08	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00036 Amount Added: 200.00 Units: uL

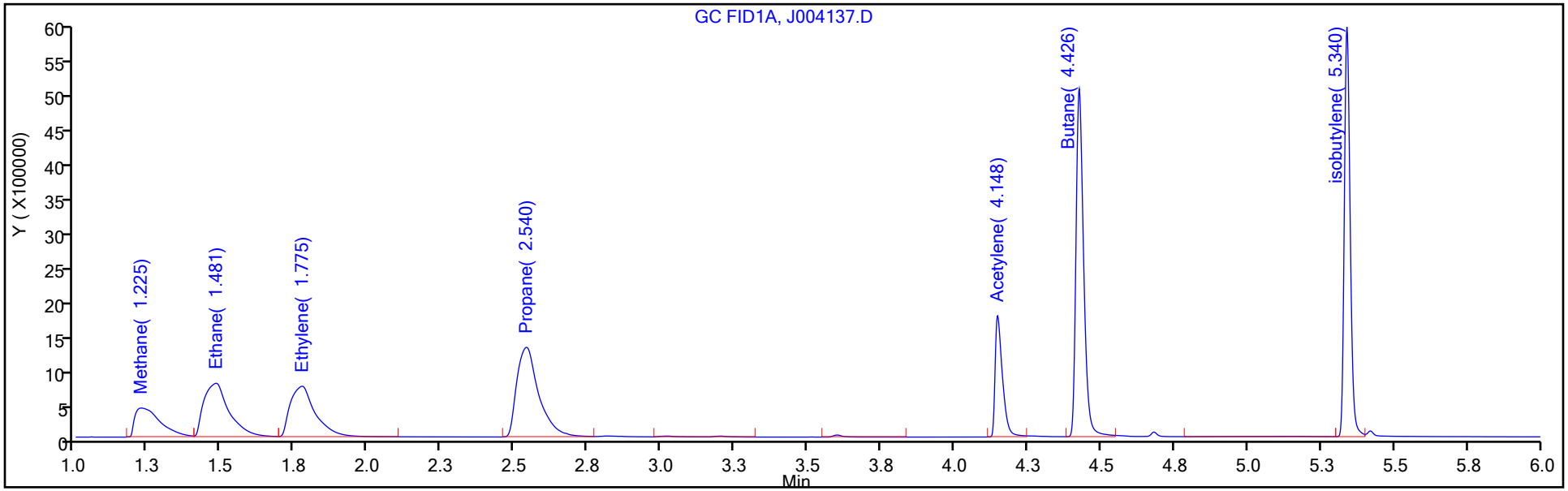
Report Date: 20-Apr-2023 02:23:22 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

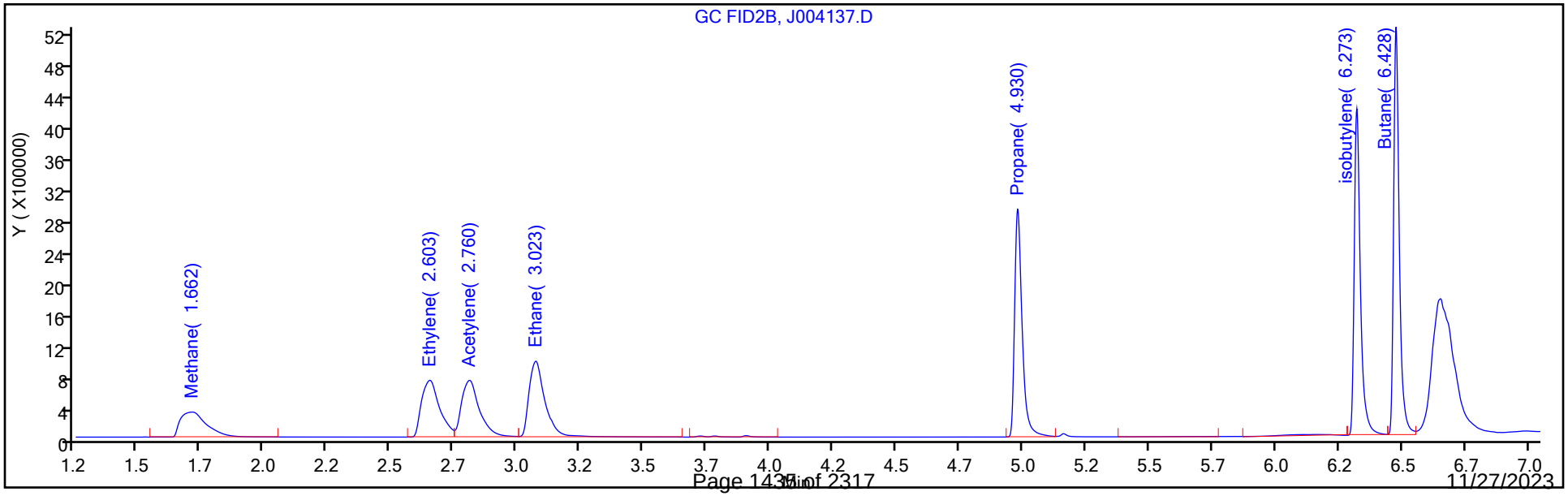
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D

Injection Date:	19-Apr-2023 01:12:40	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	CCV			Worklist Smp#:	19
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

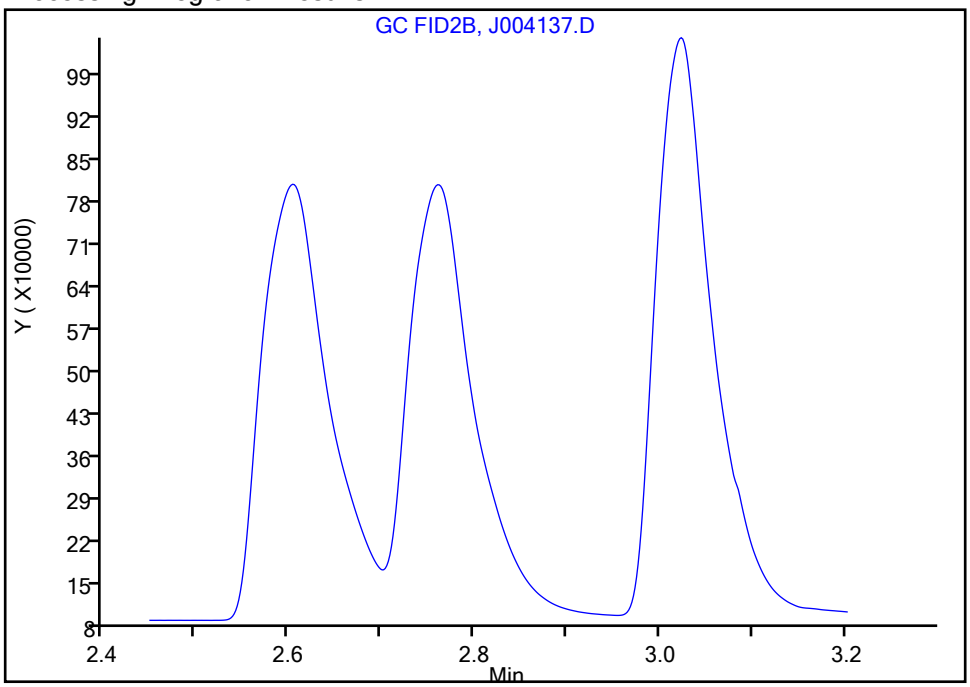
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D
Injection Date: 19-Apr-2023 01:12:40 Instrument ID: VGC_J
Lims ID: CCV
Client ID:
Operator ID: JH ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

6 Acetylene, CAS: 74-86-2

Signal: 2

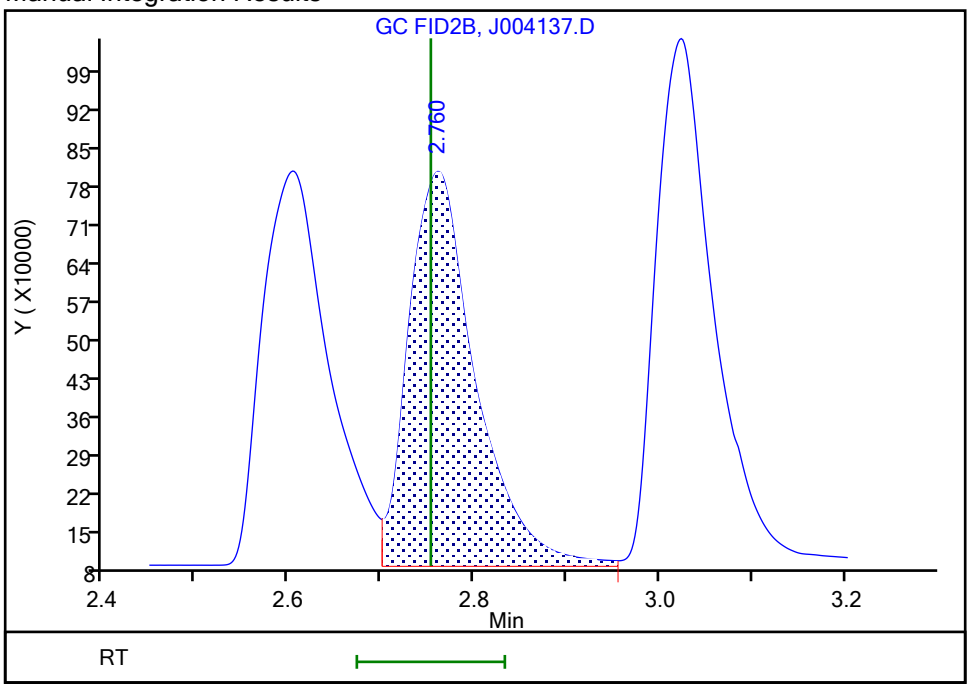
Processing Integration Results

RT: 2.75
Area: 0
Amount: 105.0503
Amount Units: ug/l



Manual Integration Results

RT: 2.76
Area: 3585699
Amount: 106.8168
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:48:25
Audit Action: Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

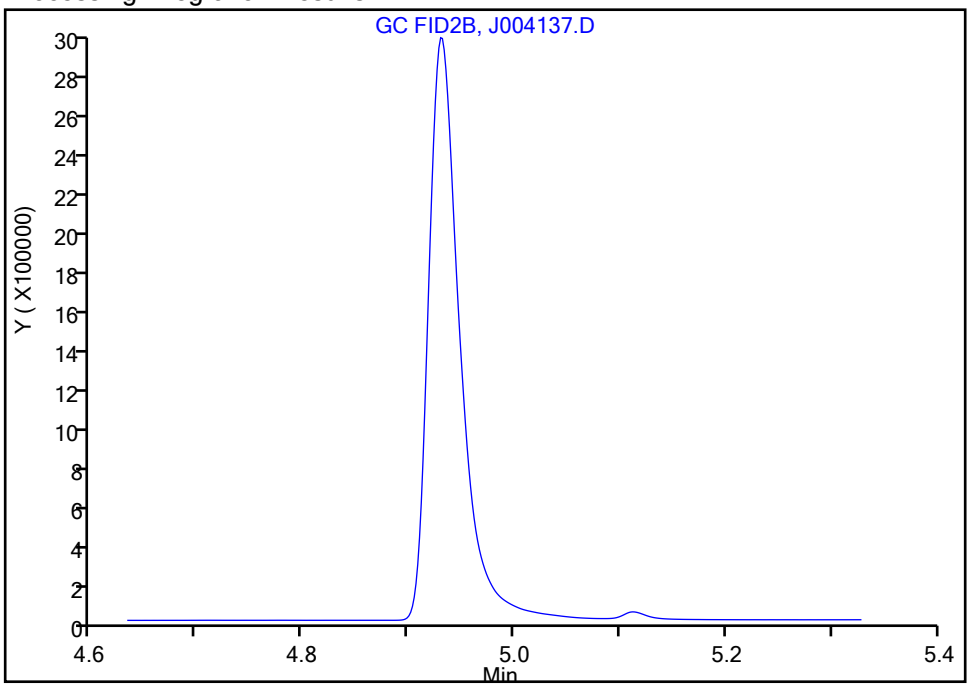
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D
Injection Date: 19-Apr-2023 01:12:40 Instrument ID: VGC_J
Lims ID: CCV
Client ID:
Operator ID: JH ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

5 Propane, CAS: 74-98-6

Signal: 2

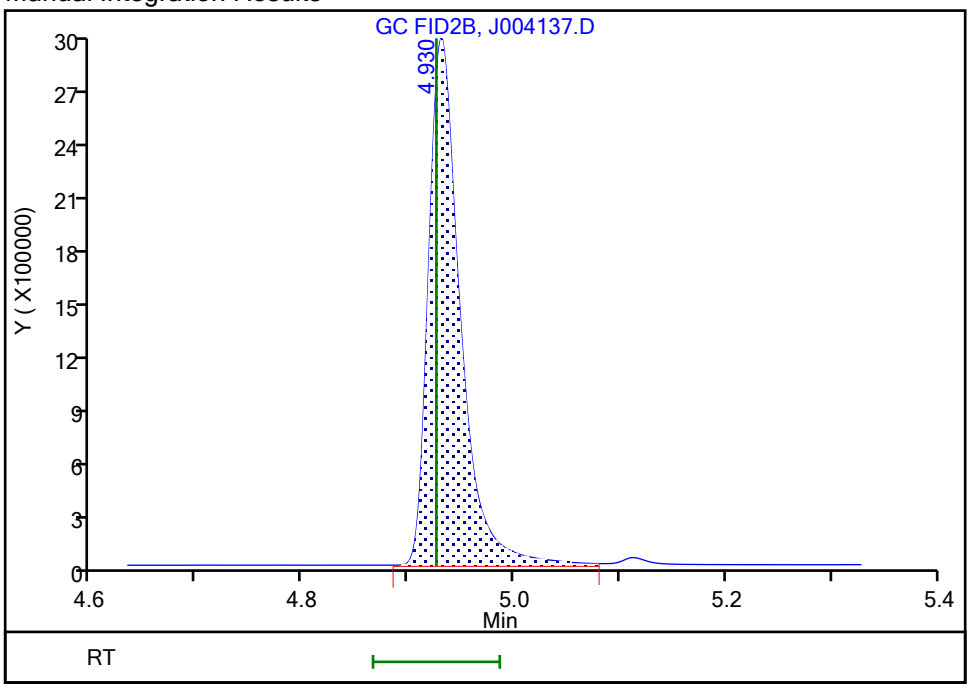
Processing Integration Results

RT: 4.93
Area: 0
Amount: 177.3703
Amount Units: ug/l



Manual Integration Results

RT: 4.93
Area: 6035136
Amount: 176.5072
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:47:48
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

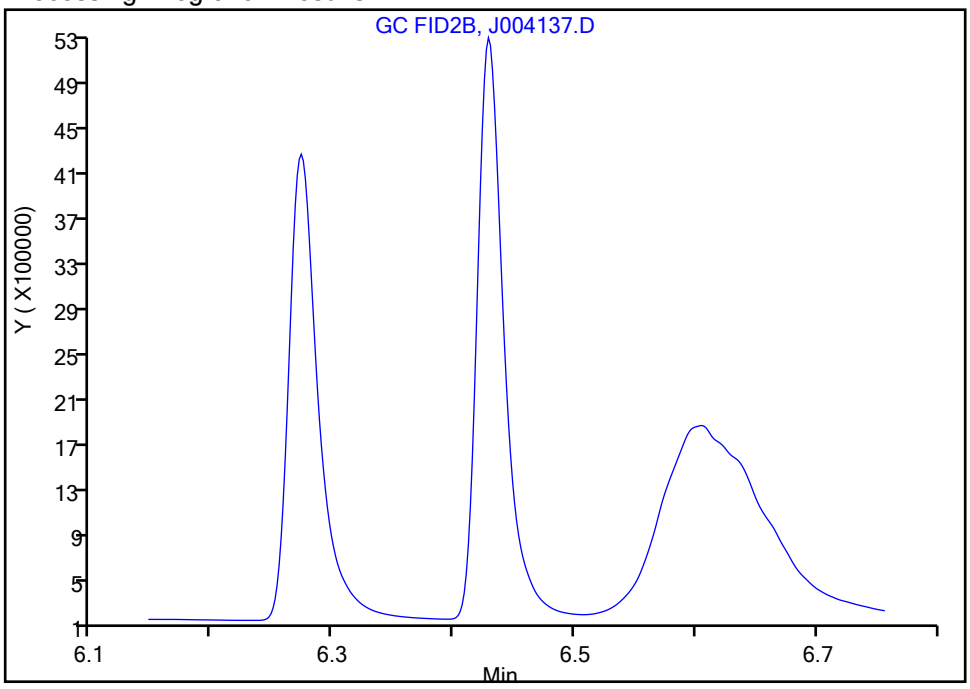
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004137.D				
Injection Date:	19-Apr-2023 01:12:40	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

7 Butane, CAS: 106-97-8

Signal: 2

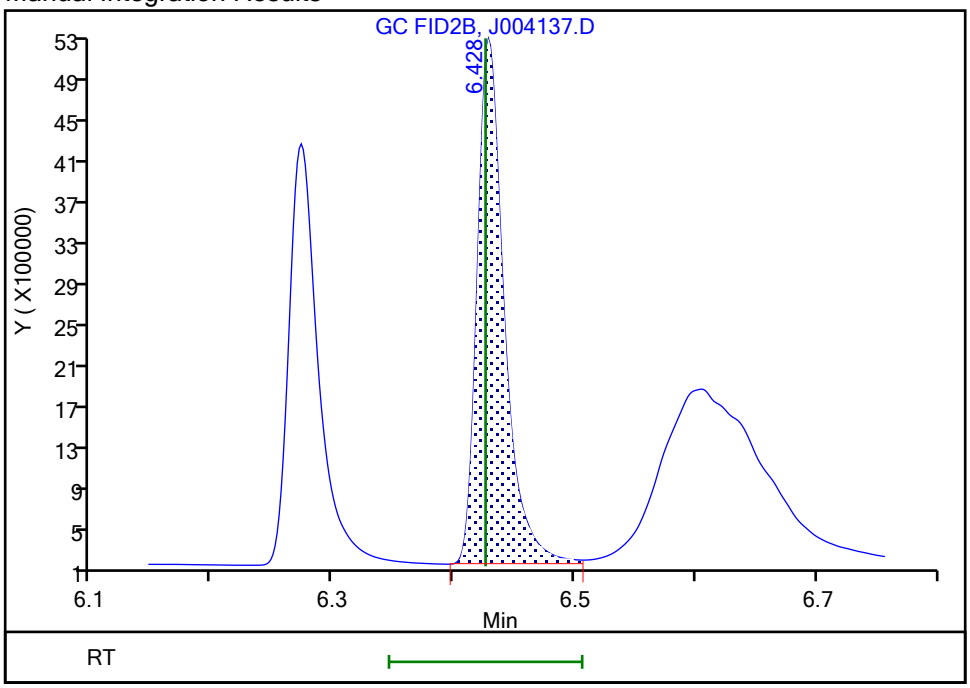
Processing Integration Results

RT: 6.43
Area: 0
Amount: 232.7313
Amount Units: ug/l



Manual Integration Results

RT: 6.43
Area: 8044396
Amount: 220.2960
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 01:49:40
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609196/33 Calibration Date: 04/19/2023 04:20

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004151.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		38786		63.8	65.7	-2.8	20.0
Ethane	Ave	38690	38060		121	123	-1.6	20.0
Ethene	Ave	39374	38651		113	115	-1.8	20.0
Propane	Ave	38239	37675		178	181	-1.5	20.0
Acetylene	Ave	29338	28798		105	107	-1.8	20.0
Butane	Ave	39331	38501		233	238	-2.1	20.0
isobutylene	Ave	36862	36162		225	230	-1.9	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609196/33 Calibration Date: 04/19/2023 04:20

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004151.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.23	1.18	1.26
Ethane	1.48	1.42	1.52
Ethene	1.78	1.69	1.79
Propane	2.54	2.42	2.54
Acetylene	4.15	3.96	4.12
Butane	4.43	4.27	4.43
isobutylene	5.34	5.19	5.35

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Apr-2023 04:20:12 ALS Bottle#: 33 Worklist Smp#: 33
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:29 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 20-Apr-2023 02:22:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.225	1.224	0.001	2548338	65.7	63.8	M
2	1.666	1.663	0.003	2289057	65.7	63.1	
						RPD = 1.14	
3 Ethane							M
1	1.482	1.469	0.013	4687907	123.2	121.2	M
2	3.024	3.016	0.008	4191736	123.2	119.2	
						RPD = 1.64	
4 Ethylene							M
1	1.777	1.742	0.035	4440947	114.9	112.8	M
2	2.606	2.596	0.010	3557205	114.9	113.2	
						RPD = 0.41	
5 Propane							Ma
1	2.544	2.476	0.068	6805676	180.6	178.0	M
2	4.932	4.926	0.006	6060876	180.6	177.3	M
						RPD = 0.40	
6 Acetylene							Ma
1	4.149	4.042	0.107	3071844	106.7	104.7	M
2	2.764	2.753	0.011	3542943	106.7	105.5	a
						RPD = 0.80	
7 Butane							Ma
1	4.429	4.351	0.078	9165837	238.1	233.0	M
2	6.429	6.426	0.003	8060183	238.1	220.7	M
						RPD = 5.43	
8 isobutylene							M
1	5.342	5.271	0.071	8311440	229.8	225.5	
2	6.274	6.269	0.005	7013005	229.8	214.5	M
						RPD = 5.01	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00036 Amount Added: 200.00 Units: uL

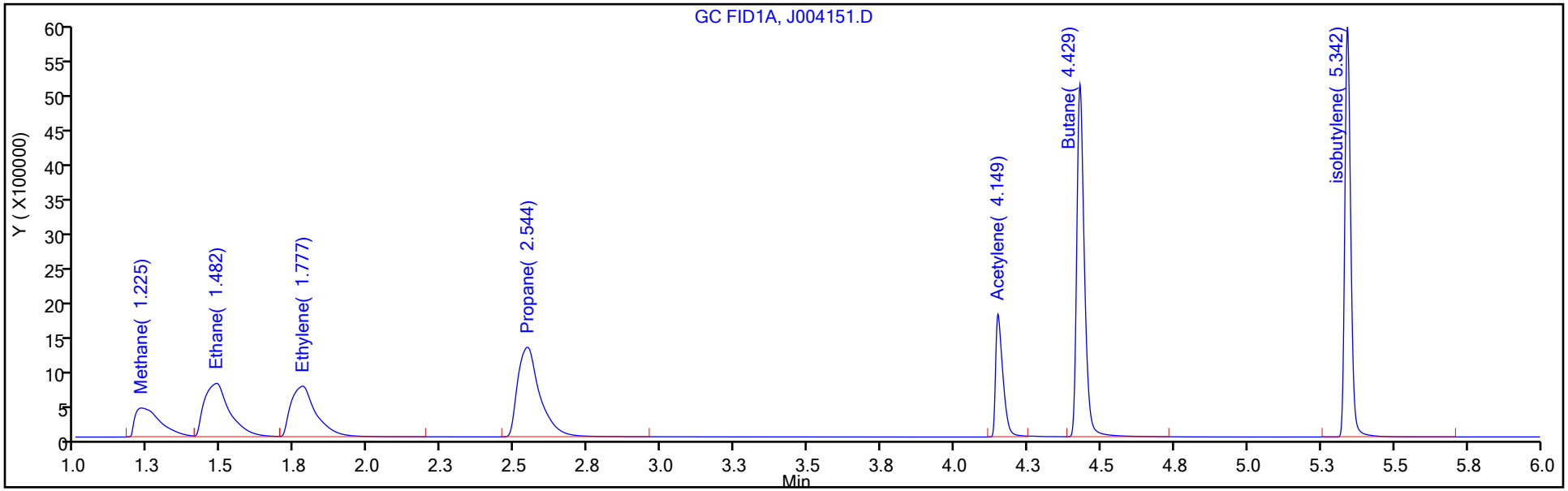
Report Date: 20-Apr-2023 02:23:29 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

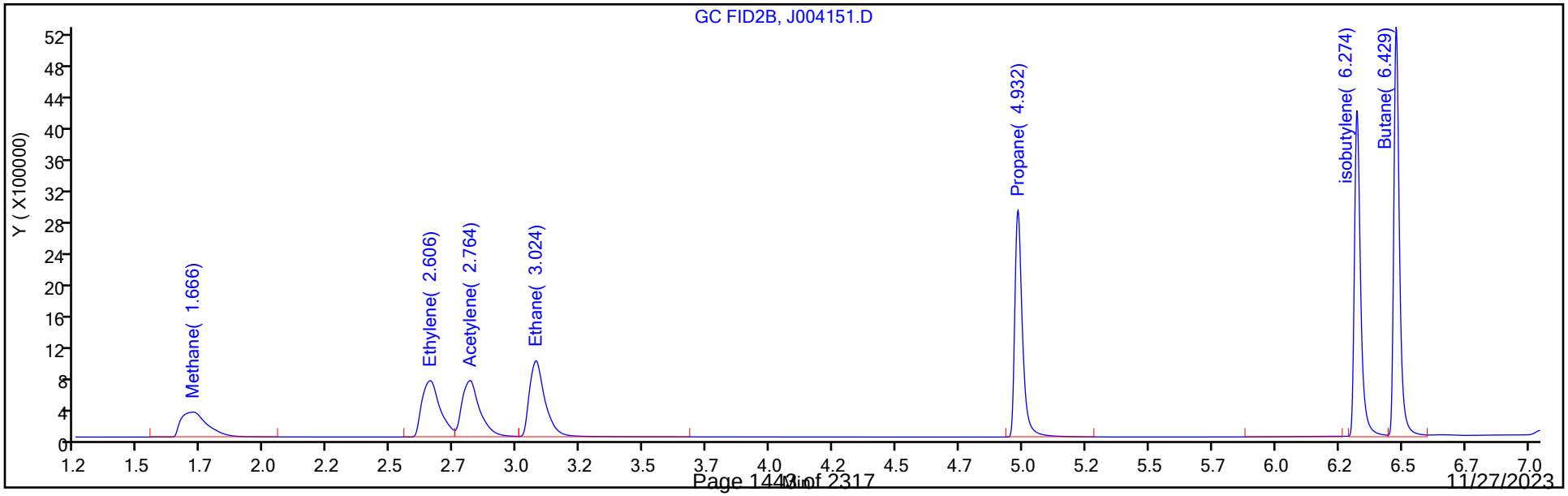
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D

Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	CCV			Worklist Smp#:	33
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

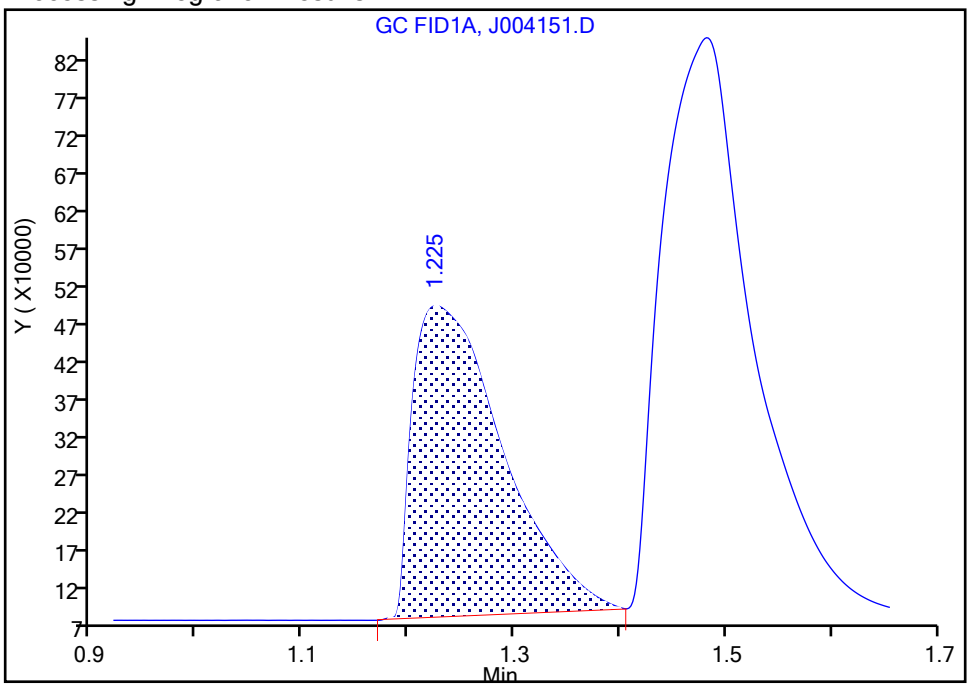
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D				
Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	33	Worklist Smp#:	33
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

2 Methane, CAS: 74-82-8

Signal: 1

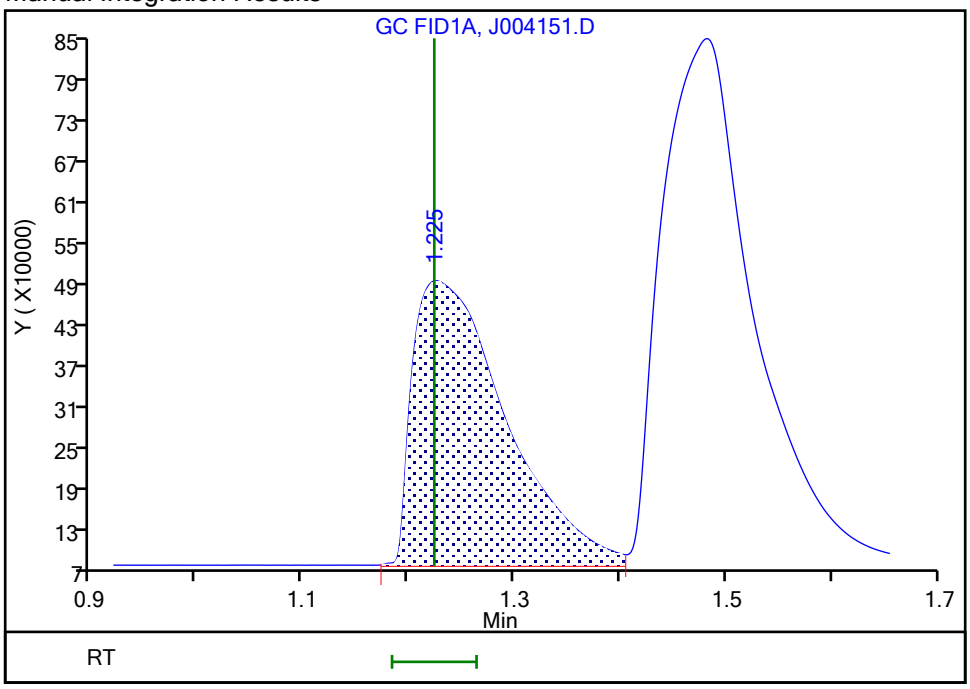
Processing Integration Results

RT: 1.23
Area: 2440595
Amount: 61.063875
Amount Units: ug/l



Manual Integration Results

RT: 1.23
Area: 2548338
Amount: 63.848747
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:20:50

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

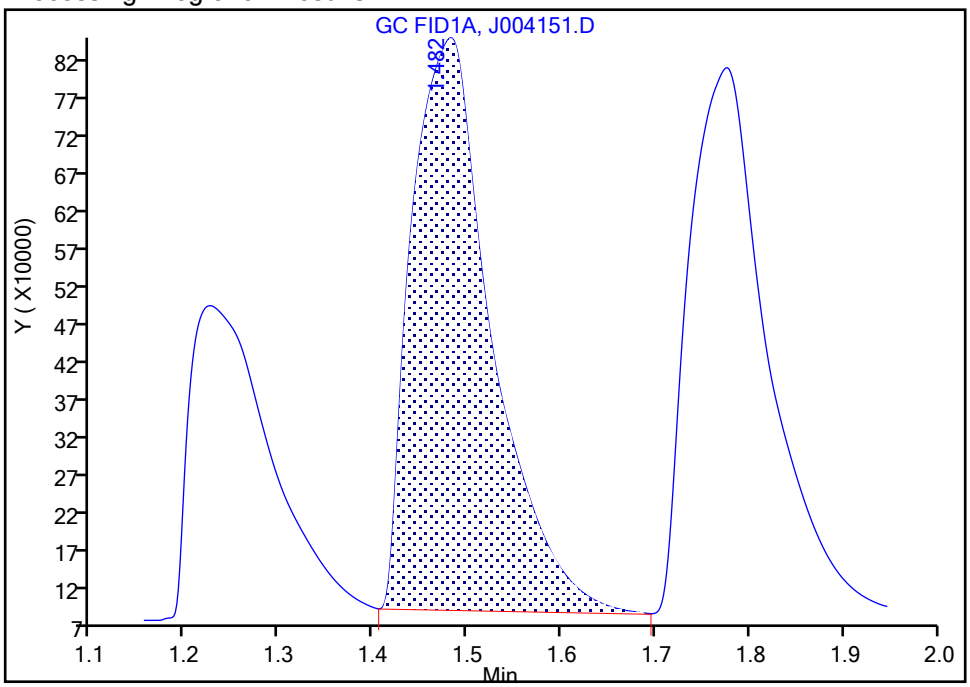
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D				
Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	33	Worklist Smp#:	33
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

3 Ethane, CAS: 74-84-0

Signal: 1

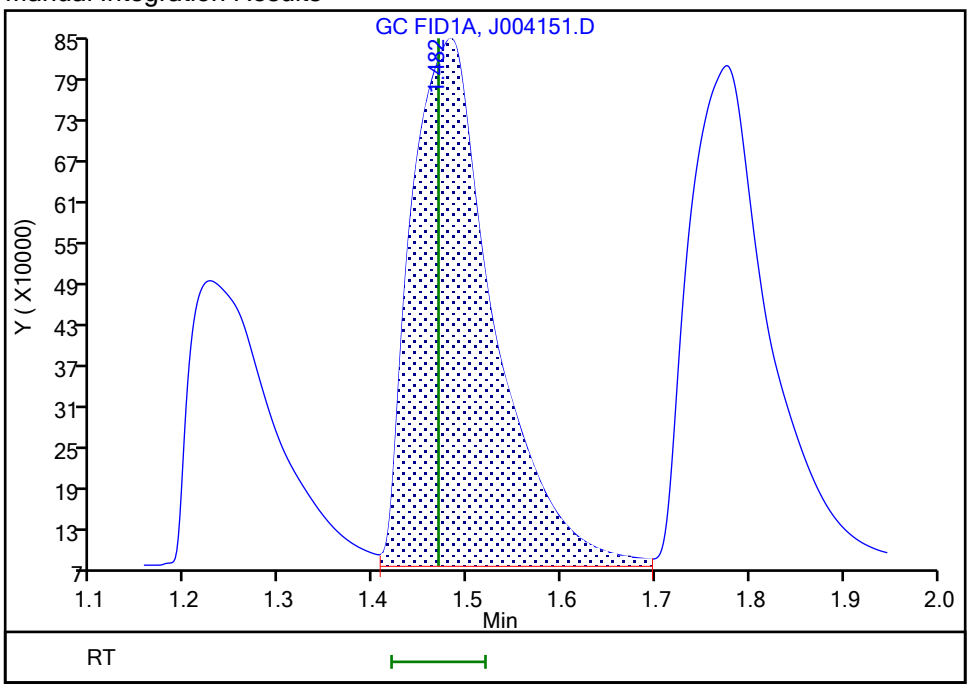
Processing Integration Results

RT: 1.48
Area: 4478233
Amount: 115.7474
Amount Units: ug/l



Manual Integration Results

RT: 1.48
Area: 4687907
Amount: 121.1668
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:21:03
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

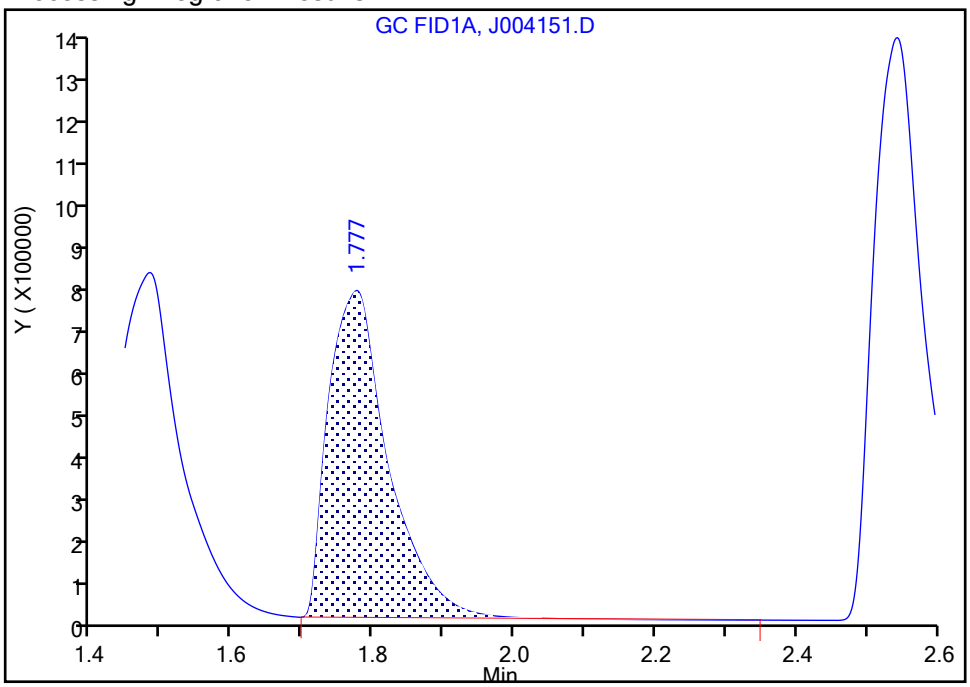
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D				
Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	33	Worklist Smp#:	33
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

4 Ethylene, CAS: 74-85-1

Signal: 1

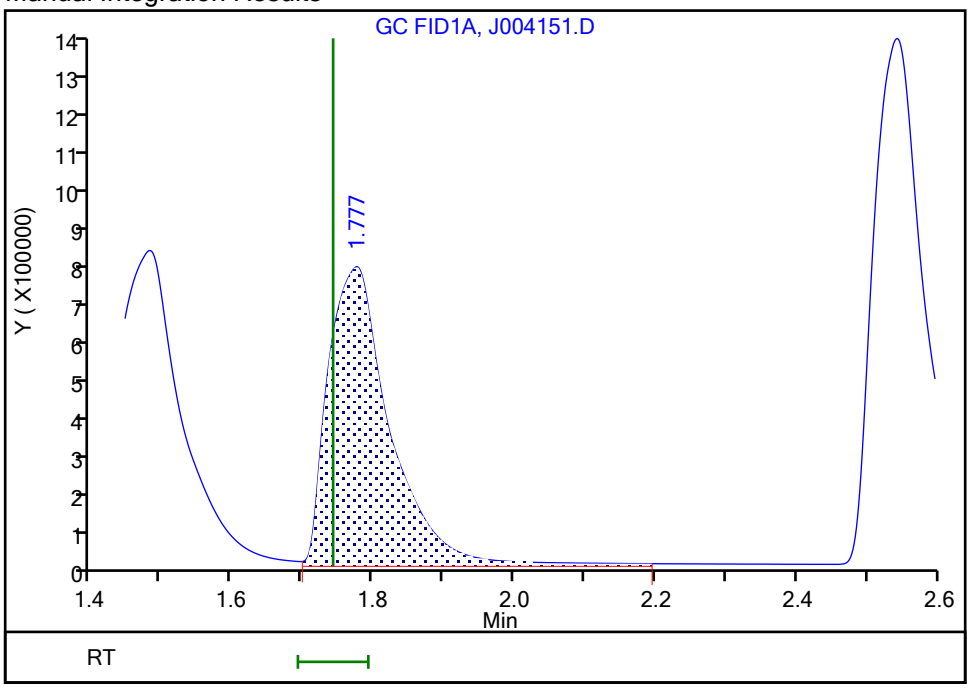
Processing Integration Results

RT: 1.78
Area: 4255496
Amount: 108.0783
Amount Units: ug/l



Manual Integration Results

RT: 1.78
Area: 4440947
Amount: 112.7883
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:21:14

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

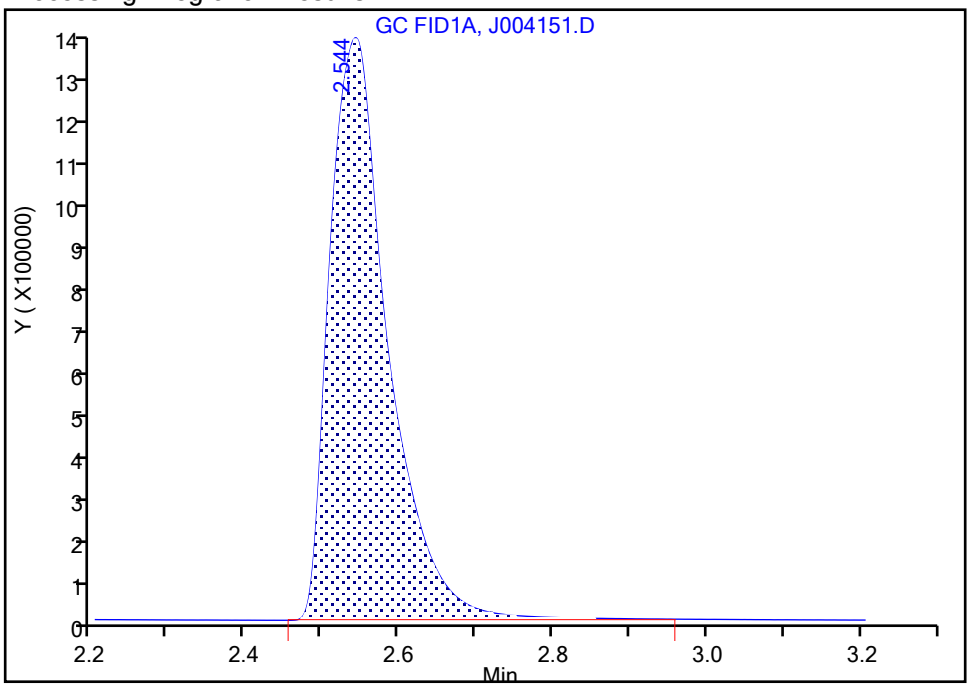
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D				
Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	33	Worklist Smp#:	33
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

5 Propane, CAS: 74-98-6

Signal: 1

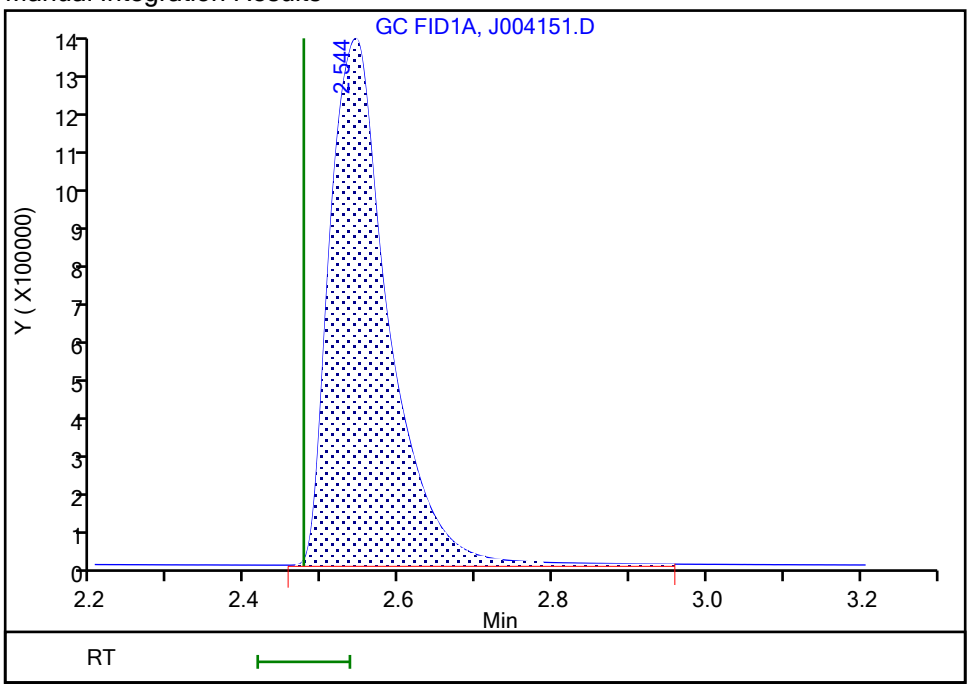
Processing Integration Results

RT: 2.54
Area: 6805676
Amount: 177.9754
Amount Units: ug/l



Manual Integration Results

RT: 2.54
Area: 6805676
Amount: 177.9754
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:21:32

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

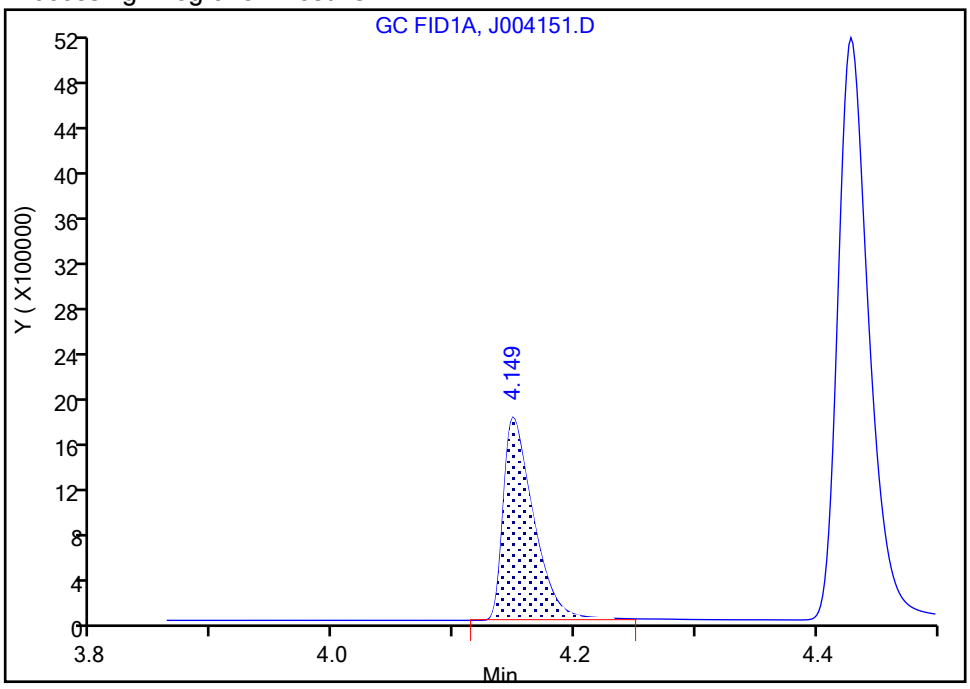
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D				
Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	33	Worklist Smp#:	33
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

6 Acetylene, CAS: 74-86-2

Signal: 1

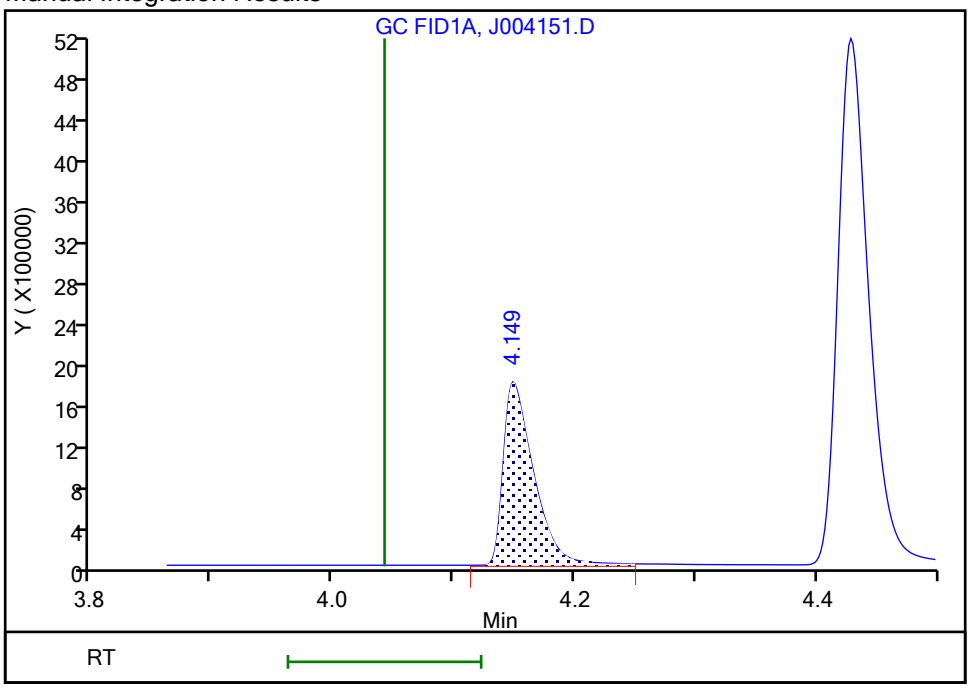
Processing Integration Results

RT: 4.15
Area: 3071844
Amount: 104.7068
Amount Units: ug/l



Manual Integration Results

RT: 4.15
Area: 3071844
Amount: 104.7068
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:21:55

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

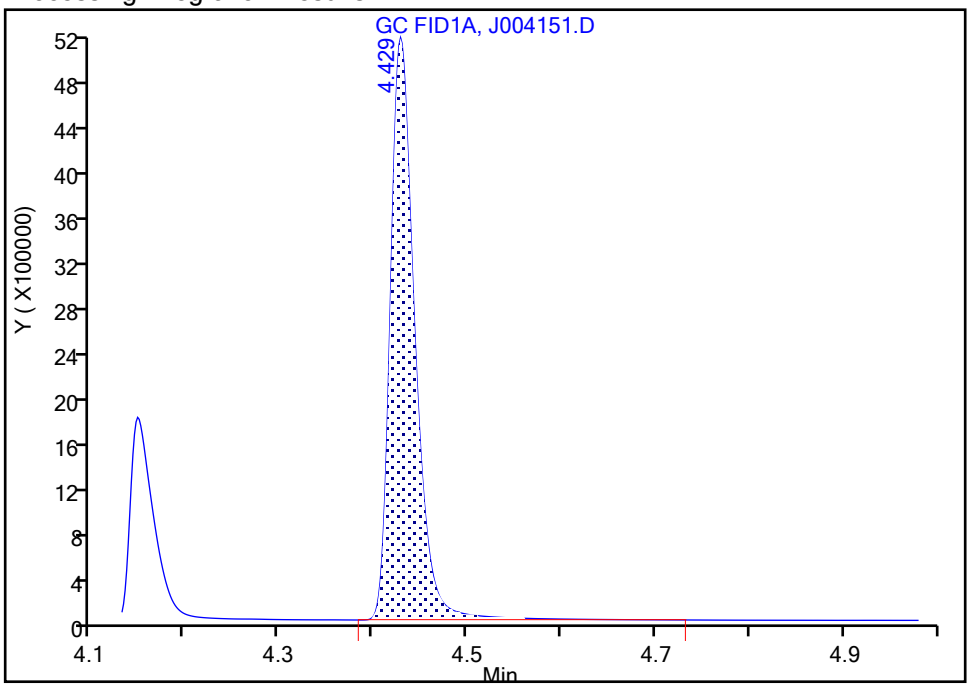
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D				
Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	33	Worklist Smp#:	33
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

7 Butane, CAS: 106-97-8

Signal: 1

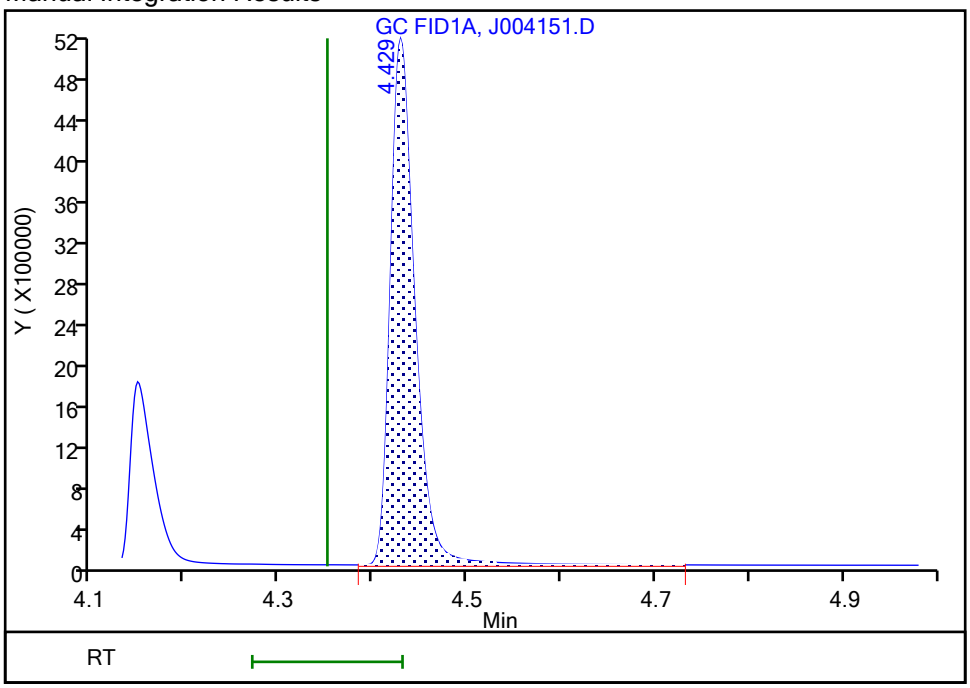
Processing Integration Results

RT: 4.43
Area: 9165837
Amount: 233.0439
Amount Units: ug/l



Manual Integration Results

RT: 4.43
Area: 9165837
Amount: 233.0439
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:22:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609196/33 Calibration Date: 04/19/2023 04:20

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004151.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		34839		63.1	65.7	-3.9	20.0
Ethene	Ave	31410	30959		113	115	-1.4	20.0
Acetylene	Ave	33569	33214		106	107	-1.1	20.0
Ethane	Ave	35167	34032		119	123	-3.2	20.0
Propane	Ave	34192	33552		177	181	-1.9	20.0
isobutylene	Ave	32701	30513		214	230	-6.7	20.0
Butane	Ave	36516	33856		221	238	-7.3	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: CCV 280-609196/33 Calibration Date: 04/19/2023 04:20

Instrument ID: VGC_J Calib Start Date: 11/22/2022 16:02

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 11/22/2022 17:53

Lab File ID: J004151.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.67	1.62	1.70
Ethene	2.61	2.55	2.65
Acetylene	2.76	2.67	2.83
Ethane	3.02	2.97	3.07
Propane	4.93	4.87	4.99
isobutylene	6.27	6.19	6.35
Butane	6.43	6.35	6.51

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Apr-2023 04:20:12 ALS Bottle#: 33 Worklist Smp#: 33
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: JH Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:29 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 20-Apr-2023 02:22:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.225	1.224	0.001	2548338	65.7	63.8	M
2	1.666	1.663	0.003	2289057	65.7	63.1	
						RPD = 1.14	
3 Ethane							M
1	1.482	1.469	0.013	4687907	123.2	121.2	M
2	3.024	3.016	0.008	4191736	123.2	119.2	
						RPD = 1.64	
4 Ethylene							M
1	1.777	1.742	0.035	4440947	114.9	112.8	M
2	2.606	2.596	0.010	3557205	114.9	113.2	
						RPD = 0.41	
5 Propane							Ma
1	2.544	2.476	0.068	6805676	180.6	178.0	M
2	4.932	4.926	0.006	6060876	180.6	177.3	M
						RPD = 0.40	
6 Acetylene							Ma
1	4.149	4.042	0.107	3071844	106.7	104.7	M
2	2.764	2.753	0.011	3542943	106.7	105.5	a
						RPD = 0.80	
7 Butane							Ma
1	4.429	4.351	0.078	9165837	238.1	233.0	M
2	6.429	6.426	0.003	8060183	238.1	220.7	M
						RPD = 5.43	
8 isobutylene							M
1	5.342	5.271	0.071	8311440	229.8	225.5	
2	6.274	6.269	0.005	7013005	229.8	214.5	M
						RPD = 5.01	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00036 Amount Added: 200.00 Units: uL

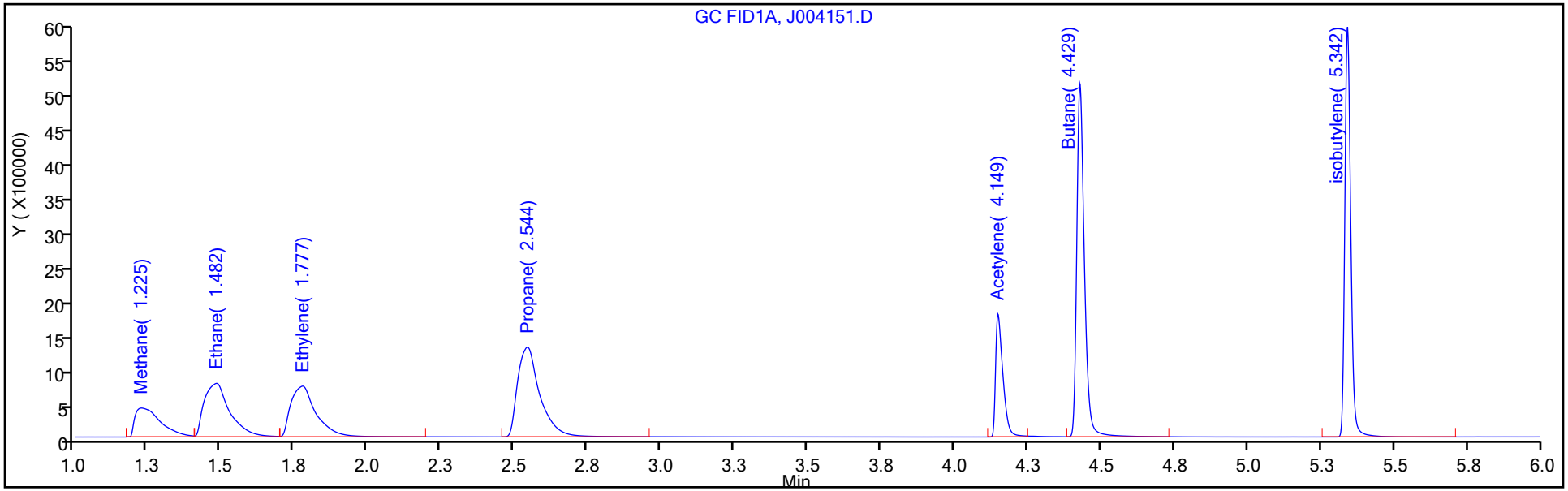
Report Date: 20-Apr-2023 02:23:29 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

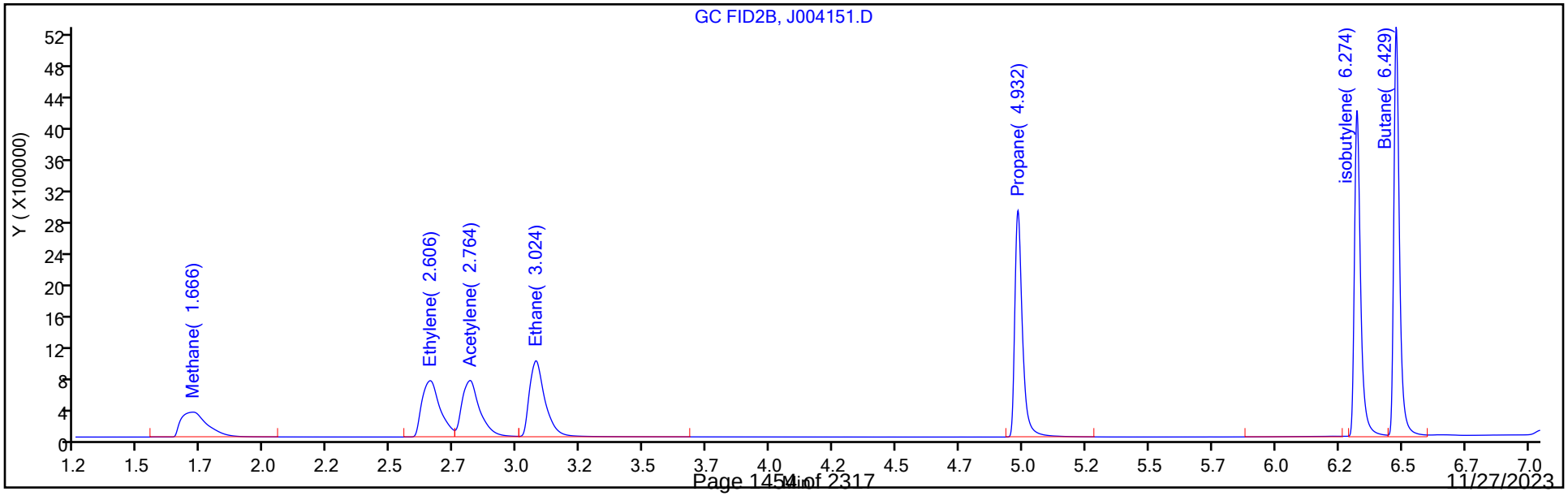
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D

Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	CCV			Worklist Smp#:	33
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

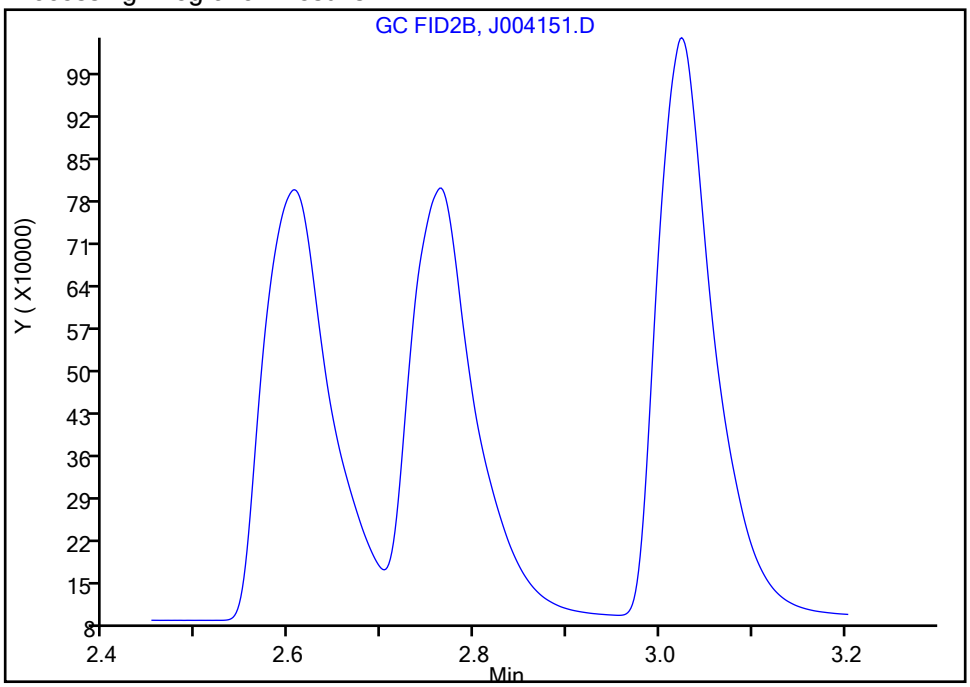
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D
Injection Date: 19-Apr-2023 04:20:12 Instrument ID: VGC_J
Lims ID: CCV
Client ID:
Operator ID: JH ALS Bottle#: 33 Worklist Smp#: 33
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

6 Acetylene, CAS: 74-86-2

Signal: 2

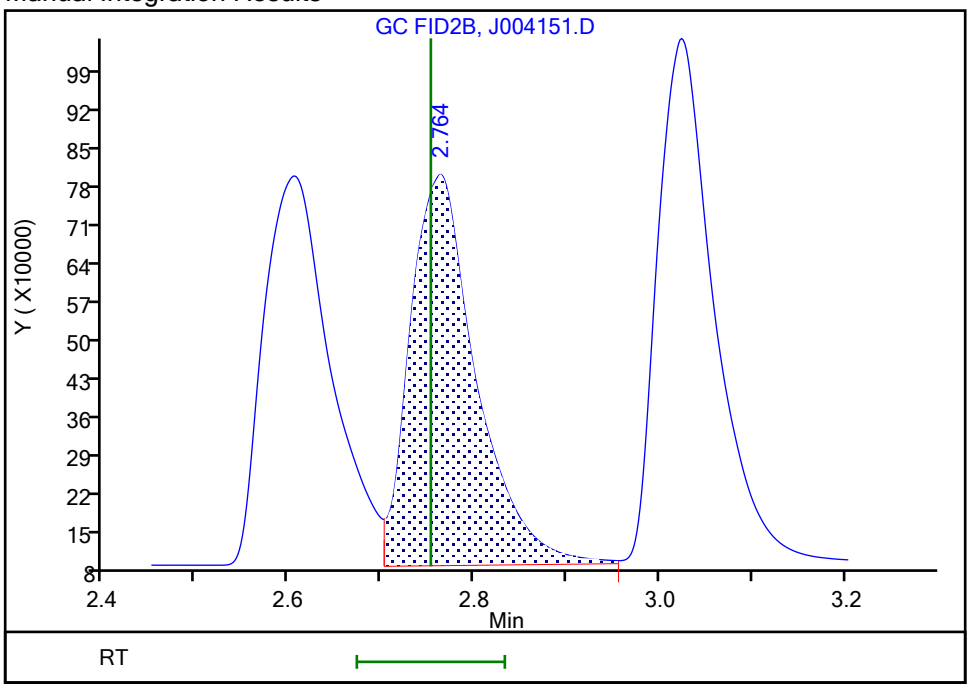
Processing Integration Results

RT: 2.75
Area: 0
Amount: 104.7068
Amount Units: ug/l



Manual Integration Results

RT: 2.76
Area: 3542943
Amount: 105.5431
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:21:58
Audit Action: Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

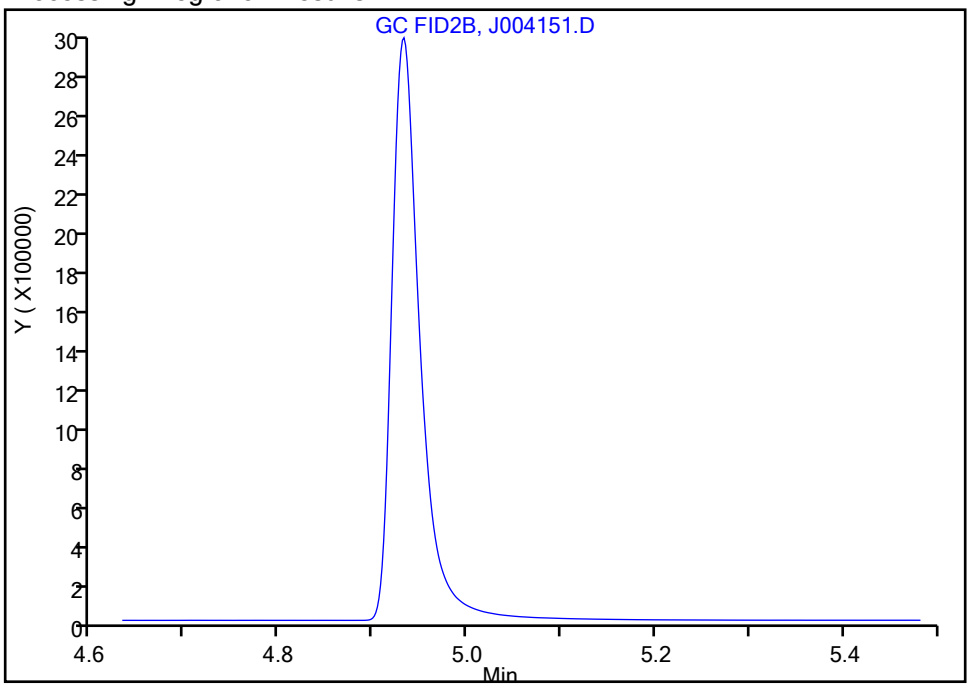
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D				
Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	33	Worklist Smp#:	33
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

5 Propane, CAS: 74-98-6

Signal: 2

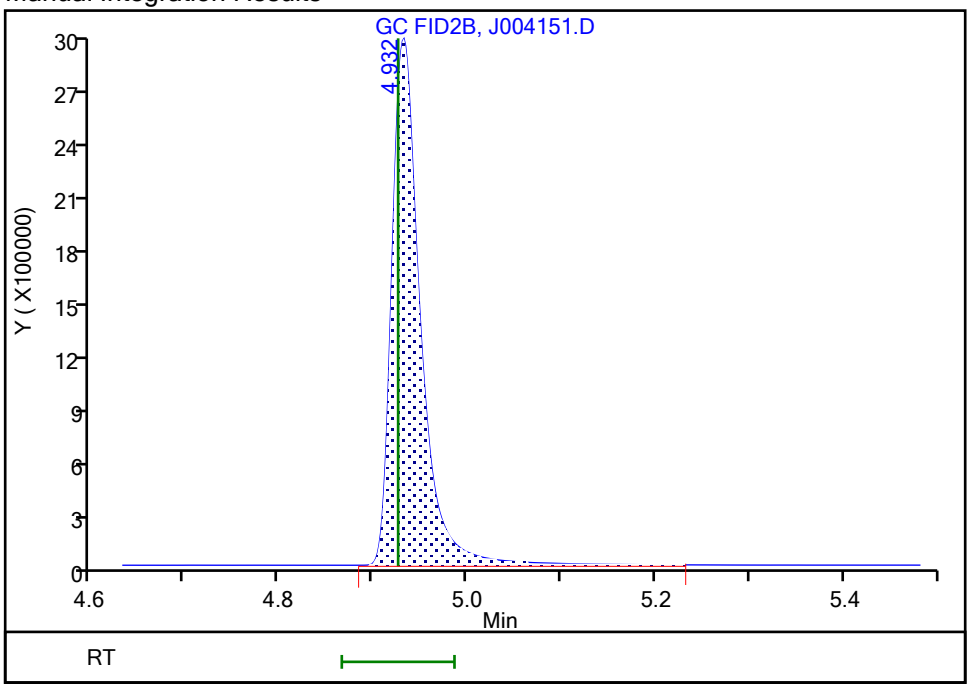
Processing Integration Results

RT: 4.93
Area: 0
Amount: 177.9754
Amount Units: ug/l



Manual Integration Results

RT: 4.93
Area: 6060876
Amount: 177.2600
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:21:44
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins Denver

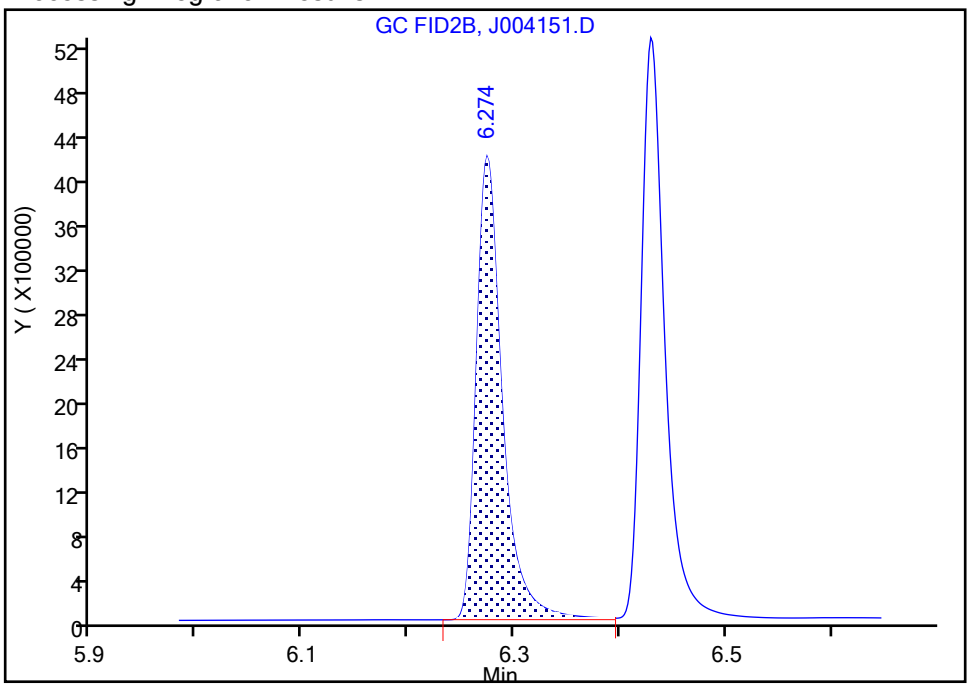
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D				
Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	33	Worklist Smp#:	33
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

8 isobutylene, CAS: 115-11-7

Signal: 2

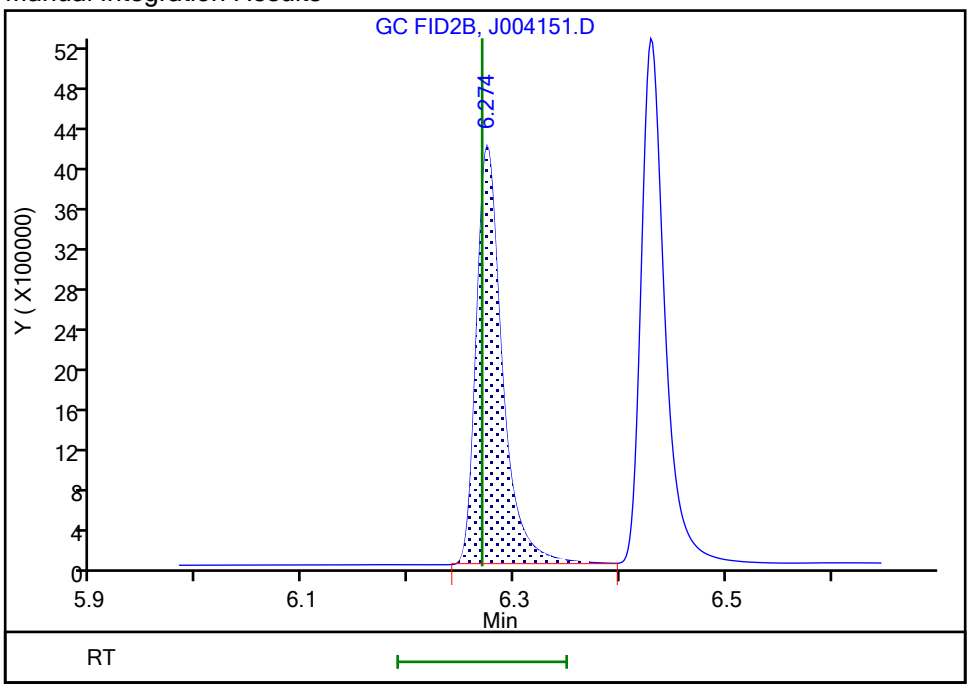
Processing Integration Results

RT: 6.27
Area: 6995602
Amount: 213.9269
Amount Units: ug/l



Manual Integration Results

RT: 6.27
Area: 7013005
Amount: 214.4591
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:22:49
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

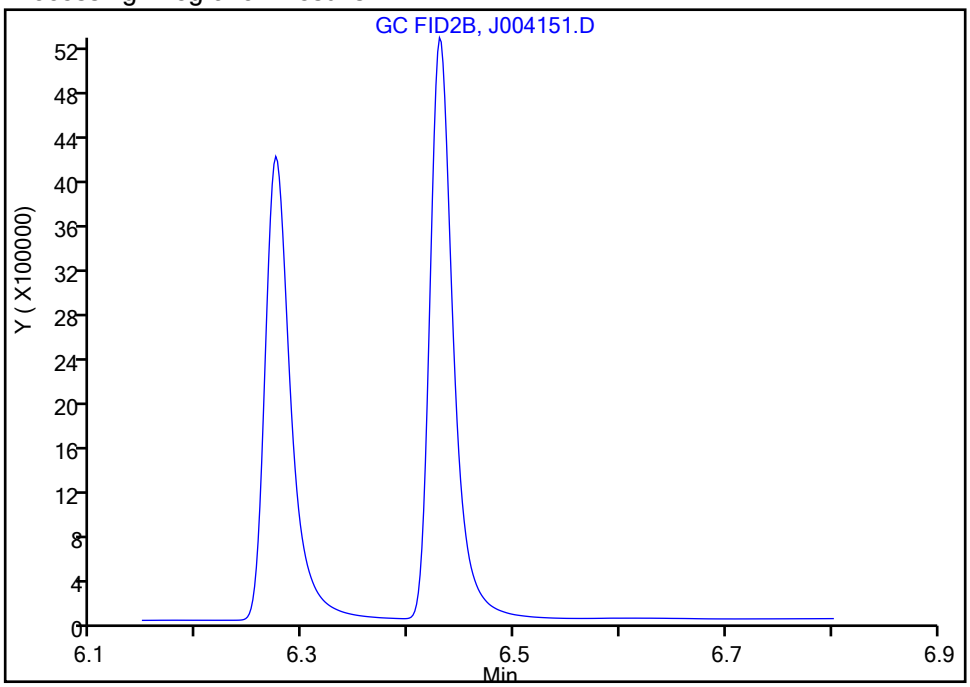
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004151.D				
Injection Date:	19-Apr-2023 04:20:12	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	JH	ALS Bottle#:	33	Worklist Smp#:	33
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

7 Butane, CAS: 106-97-8

Signal: 2

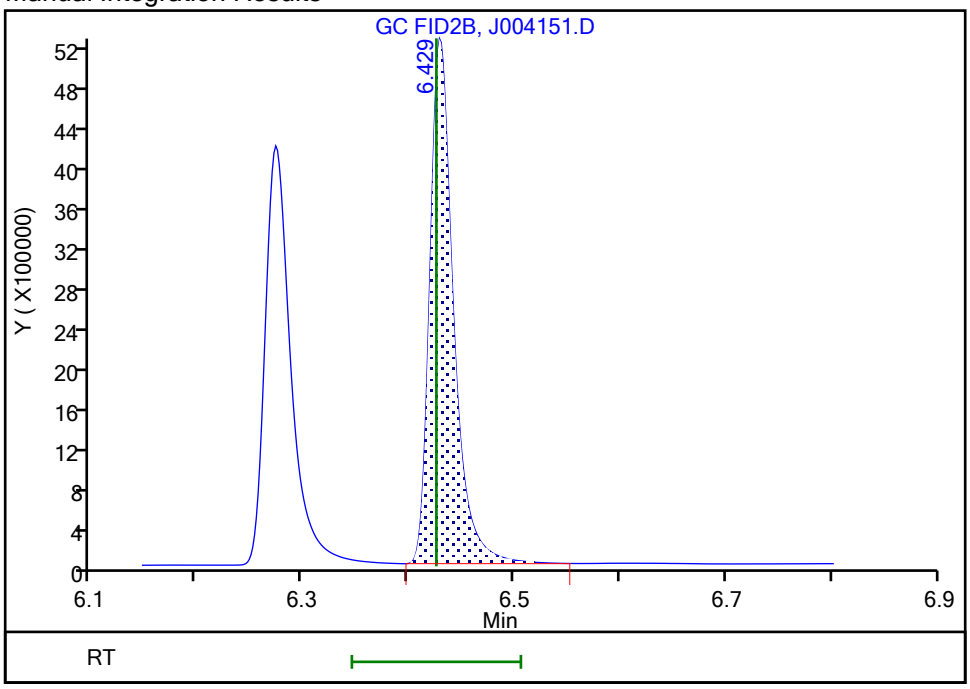
Processing Integration Results

RT: 6.43
Area: 0
Amount: 233.0439
Amount Units: ug/l



Manual Integration Results

RT: 6.43
Area: 8060183
Amount: 220.7283
Amount Units: ug/l



Reviewer: DJQ7, 20-Apr-2023 02:22:29

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609196/5

Matrix: Water | Lab File ID: J004119.D

Analysis Method: RSK-175 | Date Collected:

Sample wt/vol: 18(mL) | Date Analyzed: 04/18/2023 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: HP-Plot Q ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 5.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609196 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	ND		5.0	0.63
74-85-1	Ethene	ND		5.0	0.40
74-84-0	Ethane	ND		5.0	0.57
74-86-2	Acetylene	ND		5.0	0.73
74-98-6	Propane	ND		5.0	0.56

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004119.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 18-Apr-2023 18:31:04 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: JH Instrument ID: VGC_J

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:10 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 18-Apr-2023 19:43:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 1	1,1,1-Trifluoroethane						
1		4.377				ND	
2		5.458					
2	Methane						7
1		1.224				ND	
2		1.663					
3	Ethane						
1		1.469				ND	
2		3.016					
4	Ethylene						
1		1.742				ND	
2		2.596					
5	Propane						
1		2.476				ND	
2		4.926					
6	Acetylene						
1		4.042				ND	
2		2.753					
7	Butane						
1		4.351				ND	
2		6.426					
8	isobutylene						
1		5.271				ND	
2		6.269					

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

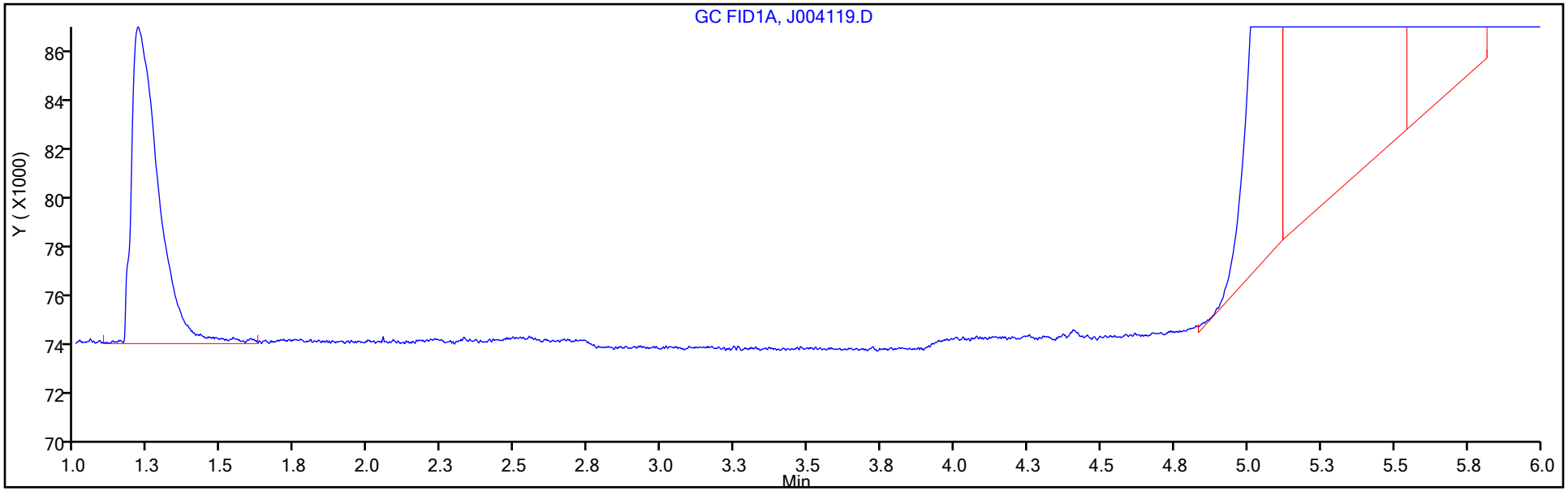
Report Date: 20-Apr-2023 02:23:13 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

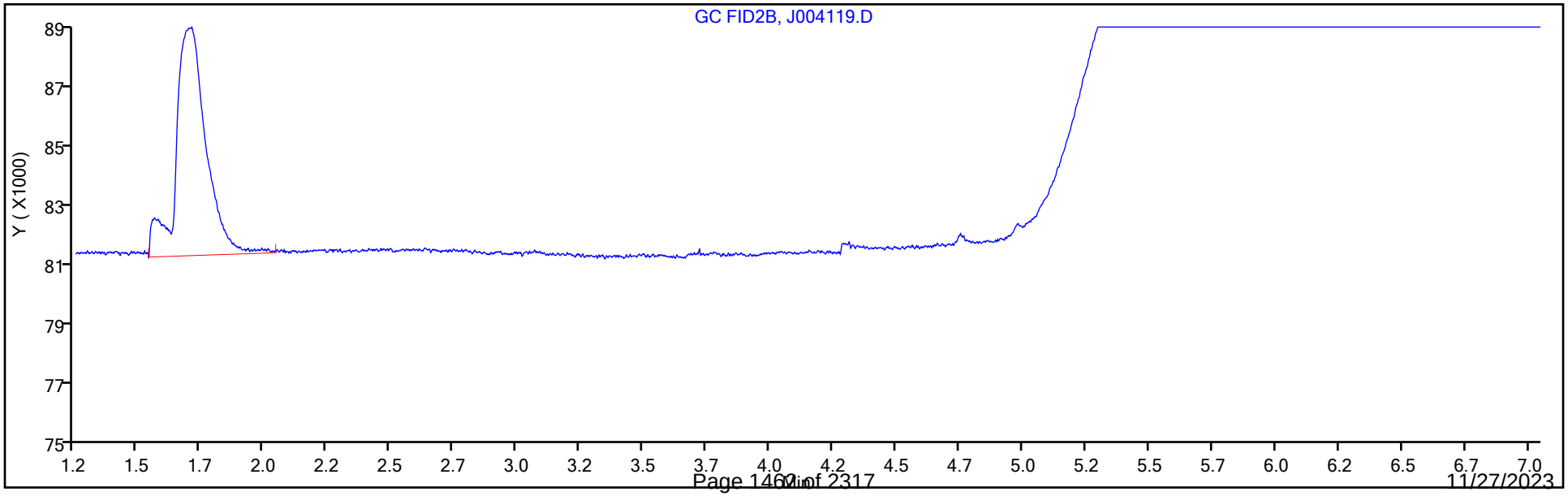
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004119.D

Injection Date:	18-Apr-2023 18:31:04	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	MB			Worklist Smp#:	5
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609196/3

Matrix: Water | Lab File ID: J004117.D

Analysis Method: RSK-175 | Date Collected:

Sample wt/vol: 18(mL) | Date Analyzed: 04/18/2023 18:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: HP-Plot Q ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 5.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609196 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	62.8		5.0	0.63
74-85-1	Ethene	113		5.0	0.40
74-84-0	Ethane	120		5.0	0.57
74-86-2	Acetylene	105		5.0	0.73
74-98-6	Propane	172		5.0	0.56

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004117.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 18-Apr-2023 18:04:05 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: JH Instrument ID: VGC_J

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:10 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 18-Apr-2023 18:26:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.221	1.224	-0.003	2541057	65.7	63.7	M
2	1.660	1.663	-0.003	2276269	65.7	62.8	
						RPD = 1.42	
3 Ethane							M
1	1.470	1.469	0.001	4674935	123.2	120.8	M
2	3.018	3.016	0.002	4225680	123.2	120.2	
						RPD = 0.56	
4 Ethylene							M
1	1.745	1.742	0.003	4447107	114.9	112.9	M
2	2.598	2.596	0.002	3536128	114.9	112.6	
						RPD = 0.32	
5 Propane							M
1	2.483	2.476	0.007	6729604	180.6	176.0	M
2	4.927	4.926	0.001	5888579	180.6	172.2	
						RPD = 2.16	
6 Acetylene							M
1	4.076	4.042	0.034	3029607	106.7	103.3	M
2	2.757	2.753	0.004	3535187	106.7	105.3	
						RPD = 1.96	
7 Butane							Ma
1	4.370	4.351	0.019	9016462	238.1	229.2	M
2	6.425	6.426	-0.001	8075053	238.1	221.1	M
						RPD = 3.60	
8 isobutylene							M
1	5.288	5.271	0.017	8205586	229.8	222.6	M
2	6.270	6.269	0.001	7242553	229.8	221.5	M
						RPD = 0.51	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

RSK7gasMathes_00036 Amount Added: 200.00 Units: uL

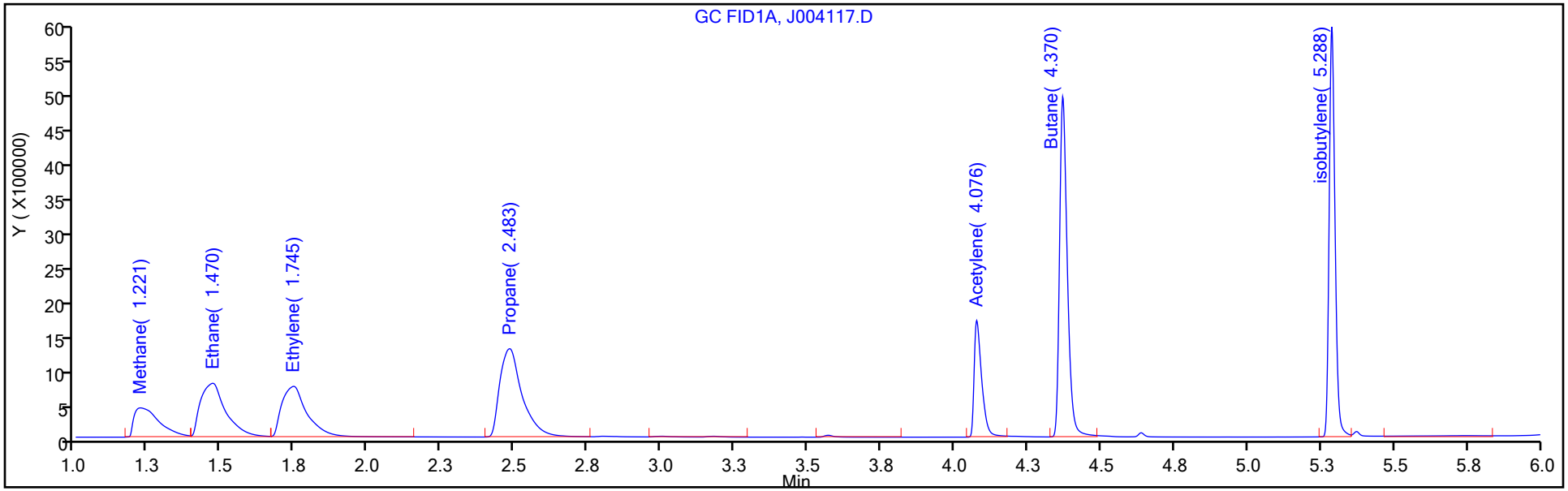
Report Date: 20-Apr-2023 02:23:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

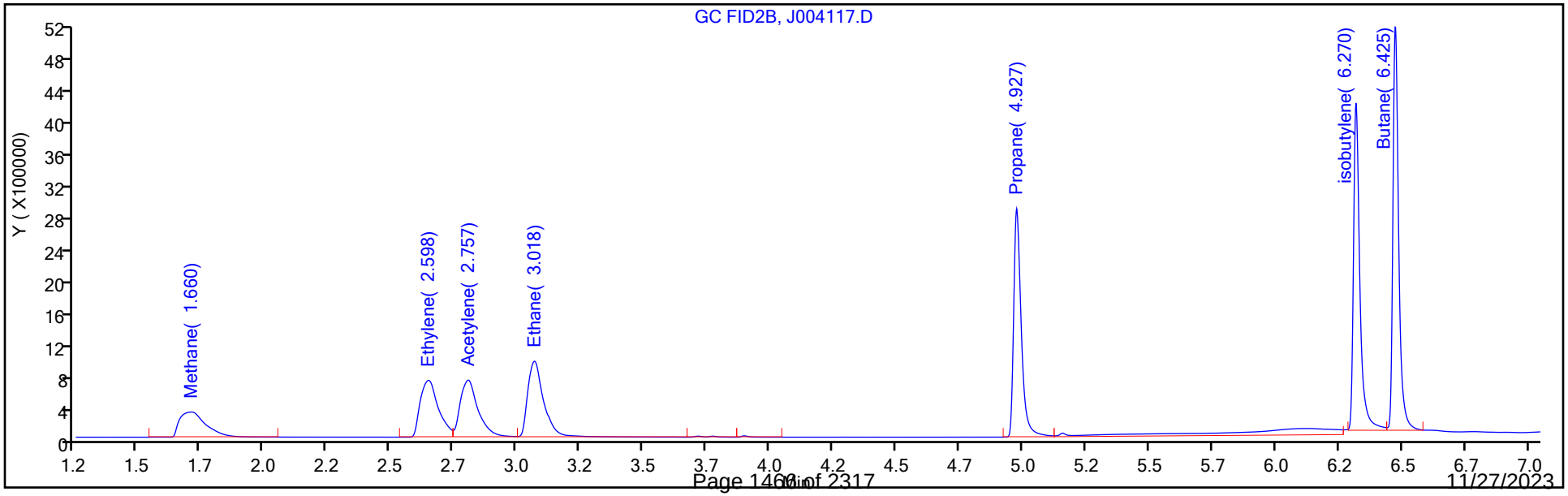
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004117.D

Injection Date:	18-Apr-2023 18:04:05	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	LCS			Worklist Smp#:	3
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609196/4

Matrix: Water | Lab File ID: J004118.D

Analysis Method: RSK-175 | Date Collected:

Sample wt/vol: 18(mL) | Date Analyzed: 04/18/2023 18:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: HP-Plot Q ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 5.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609196 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	62.4		5.0	0.63
74-85-1	Ethene	112		5.0	0.40
74-84-0	Ethane	120		5.0	0.57
74-86-2	Acetylene	105		5.0	0.73
74-98-6	Propane	174		5.0	0.56

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004118.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 18-Apr-2023 18:17:34 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: JH Instrument ID: VGC_J

Method: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 20-Apr-2023 02:23:10 Calib Date: 22-Nov-2022 17:53:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VGC_J\20221122-116367.b\J1052.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1674

First Level Reviewer: DJQ7 Date: 18-Apr-2023 18:49:12

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Methane							M
1	1.222	1.224	-0.002	2526808	65.7	63.3	M
2	1.659	1.663	-0.004	2262194	65.7	62.4	
						RPD = 1.48	
3 Ethane							M
1	1.470	1.469	0.001	4643583	123.2	120.0	M
2	3.017	3.016	0.001	4202674	123.2	119.5	
						RPD = 0.43	
4 Ethylene							M
1	1.752	1.742	0.010	4408168	114.9	112.0	M
2	2.597	2.596	0.001	3519366	114.9	112.0	
						RPD = 0.08	
5 Propane							M
1	2.497	2.476	0.021	6692355	180.6	175.0	M
2	4.926	4.926	0.000	5932774	180.6	173.5	M
						RPD = 0.86	
6 Acetylene							M
1	4.104	4.042	0.062	3046041	106.7	103.8	M
2	2.756	2.753	0.003	3535186	106.7	105.3	
						RPD = 1.42	
7 Butane							M
1	4.389	4.351	0.038	9003924	238.1	228.9	M
2	6.426	6.426	0.000	8058981	238.1	220.7	M
						RPD = 3.66	
8 isobutylene							M
1	5.305	5.271	0.034	8164384	229.8	221.5	M
2	6.271	6.269	0.002	7030095	229.8	215.0	M
						RPD = 2.98	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00036 Amount Added: 200.00 Units: uL

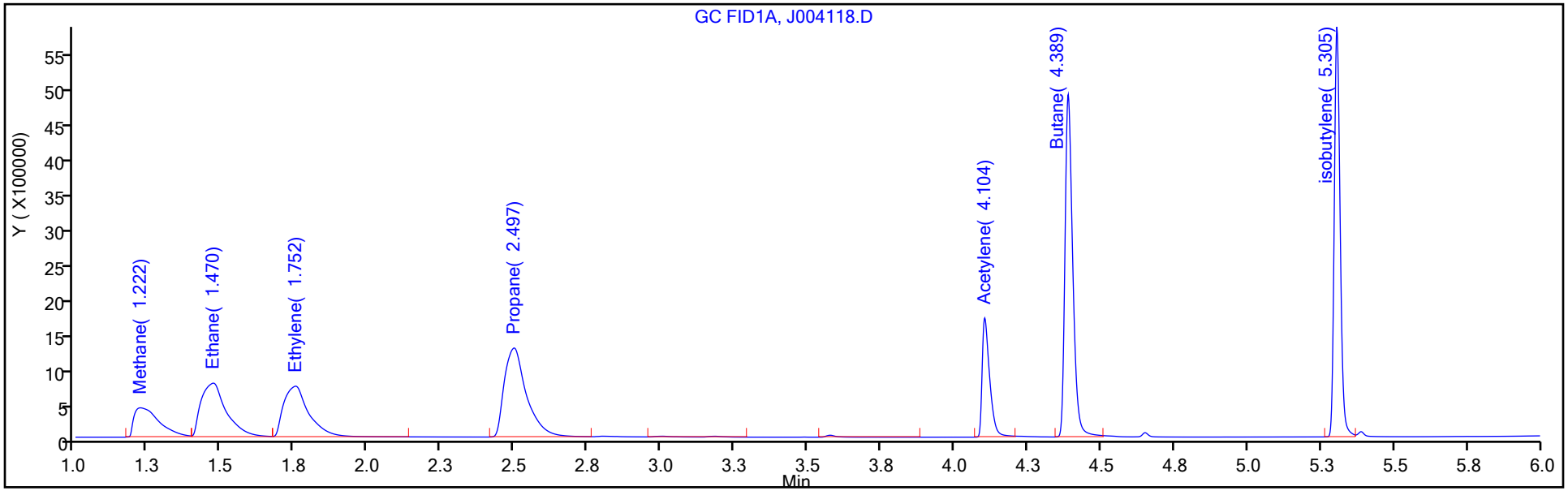
Report Date: 20-Apr-2023 02:23:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

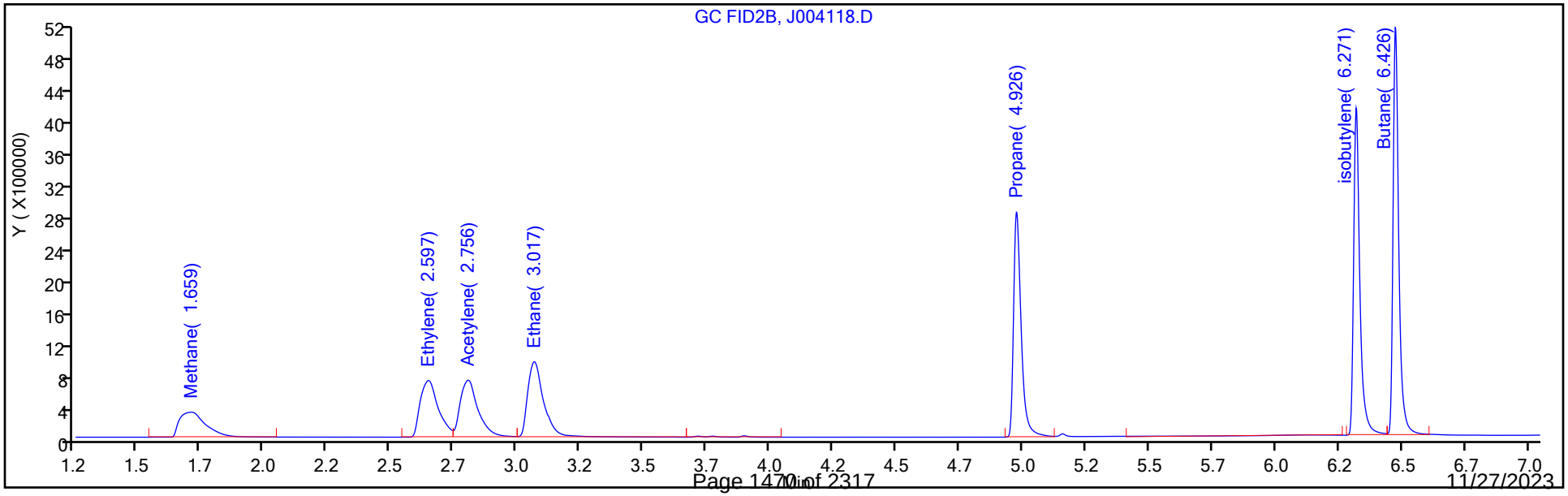
Data File: \\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004118.D

Injection Date:	18-Apr-2023 18:17:34	Instrument ID:	VGC_J	Operator ID:	JH
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

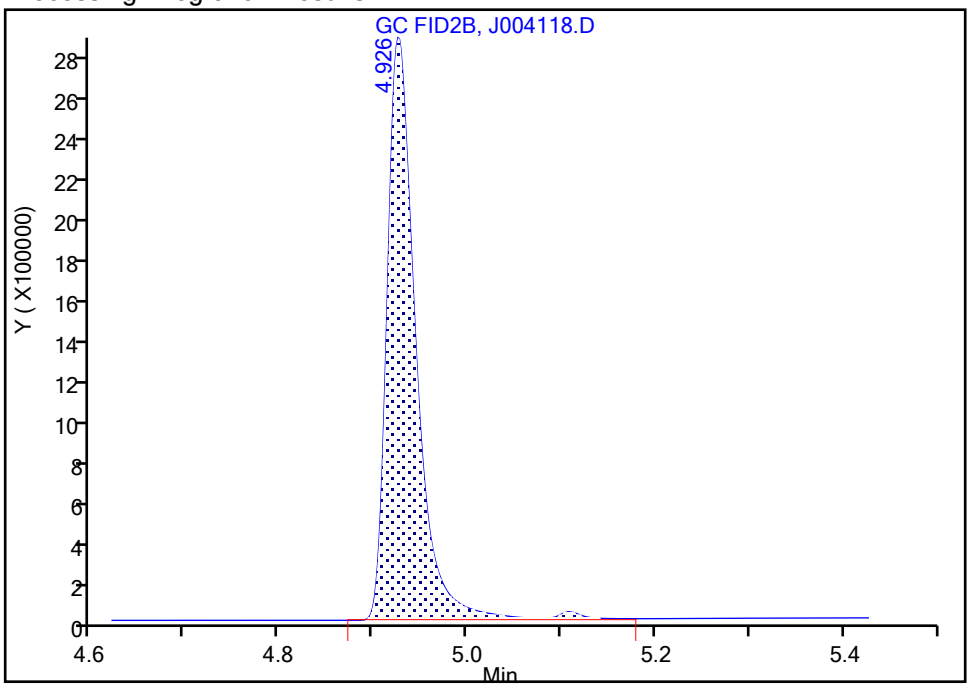
Data File:	\\chromfs\Denver\ChromData\VGC_J\20230418-120530.b\J004118.D				
Injection Date:	18-Apr-2023 18:17:34	Instrument ID:	VGC_J		
Lims ID:	LCSD				
Client ID:					
Operator ID:	JH	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	HP-PLOT/Q (0.53 mm)	Detector	GC FID2B		

5 Propane, CAS: 74-98-6

Signal: 2

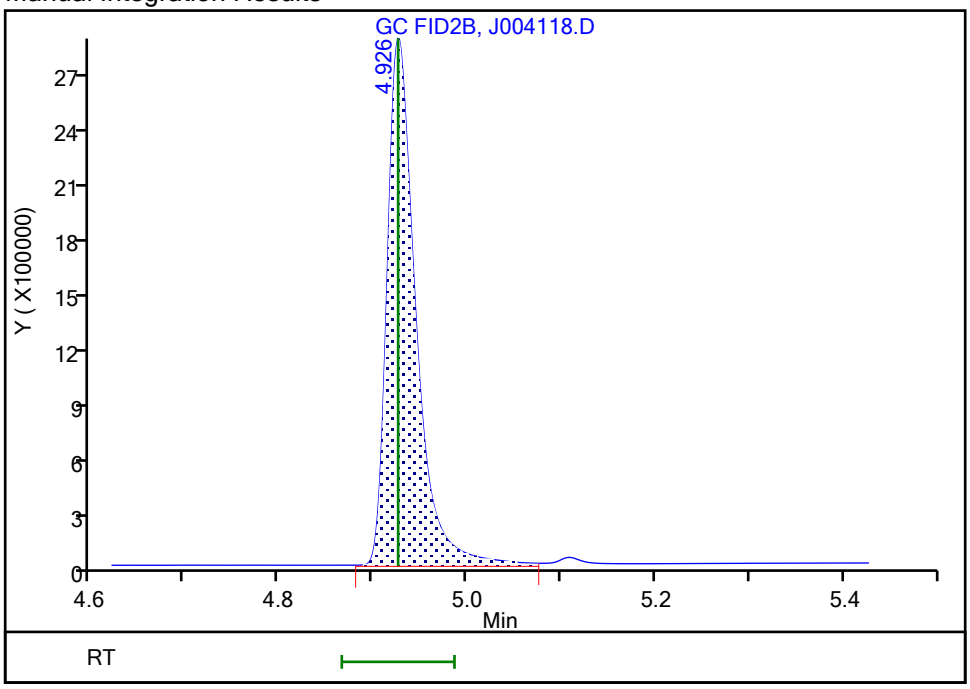
Processing Integration Results

RT: 4.93
Area: 5962562
Amount: 174.3847
Amount Units: ug/l



Manual Integration Results

RT: 4.93
Area: 5932774
Amount: 173.5135
Amount Units: ug/l



Reviewer: DJQ7, 18-Apr-2023 18:47:19

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Start Date: 11/22/2022 14:36

Analysis Batch Number: 594440 End Date: 11/22/2022 18:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 280-594440/1 RTC		11/22/2022 14:36	1		Rt-Alumina KCl 0.53(mm)
CCVRT 280-594440/1 RTC		11/22/2022 14:36	1		HP-Plot Q 0.53(mm)
CCV 280-594440/2		11/22/2022 14:49	1		Rt-Alumina KCl 0.53(mm)
CCV 280-594440/2		11/22/2022 14:49	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/22/2022 15:03	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/22/2022 15:03	1		HP-Plot Q 0.53(mm)
IC 280-594440/4		11/22/2022 16:02	1	J1044.D	Rt-Alumina KCl 0.53(mm)
IC 280-594440/4		11/22/2022 16:02	1	J1044.D	HP-Plot Q 0.53(mm)
IC 280-594440/5		11/22/2022 16:16	1	J1045.D	Rt-Alumina KCl 0.53(mm)
IC 280-594440/5		11/22/2022 16:16	1	J1045.D	HP-Plot Q 0.53(mm)
IC 280-594440/6		11/22/2022 16:30	1	J1046.D	Rt-Alumina KCl 0.53(mm)
IC 280-594440/6		11/22/2022 16:30	1	J1046.D	HP-Plot Q 0.53(mm)
IC 280-594440/7		11/22/2022 16:44	1	J1047.D	Rt-Alumina KCl 0.53(mm)
IC 280-594440/7		11/22/2022 16:44	1	J1047.D	HP-Plot Q 0.53(mm)
IC 280-594440/8		11/22/2022 16:57	1	J1048.D	Rt-Alumina KCl 0.53(mm)
IC 280-594440/8		11/22/2022 16:57	1	J1048.D	HP-Plot Q 0.53(mm)
IC 280-594440/9		11/22/2022 17:11	1	J1049.D	Rt-Alumina KCl 0.53(mm)
IC 280-594440/9		11/22/2022 17:11	1	J1049.D	HP-Plot Q 0.53(mm)
IC 280-594440/10		11/22/2022 17:25	1	J1050.D	Rt-Alumina KCl 0.53(mm)
IC 280-594440/10		11/22/2022 17:25	1	J1050.D	HP-Plot Q 0.53(mm)
IC 280-594440/11		11/22/2022 17:39	1	J1051.D	Rt-Alumina KCl 0.53(mm)
IC 280-594440/11		11/22/2022 17:39	1	J1051.D	HP-Plot Q 0.53(mm)
IC 280-594440/12		11/22/2022 17:53	1	J1052.D	Rt-Alumina KCl 0.53(mm)
IC 280-594440/12		11/22/2022 17:53	1	J1052.D	HP-Plot Q 0.53(mm)
ZZZZZ		11/22/2022 18:07	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/22/2022 18:07	1		HP-Plot Q 0.53(mm)
ICV 280-594440/14		11/22/2022 18:34	1	J1055.D	Rt-Alumina KCl 0.53(mm)
ICV 280-594440/14		11/22/2022 18:34	1	J1055.D	HP-Plot Q 0.53(mm)

GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Start Date: 04/18/2023 17:50

Analysis Batch Number: 609196 End Date: 04/19/2023 04:20

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 280-609196/2		04/18/2023 17:50	1	J004116.D	Rt-Alumina KCl 0.53(mm)
CCVRT 280-609196/2		04/18/2023 17:50	1	J004116.D	HP-Plot Q 0.53(mm)
LCS 280-609196/3		04/18/2023 18:04	1	J004117.D	Rt-Alumina KCl 0.53(mm)
LCS 280-609196/3		04/18/2023 18:04	1	J004117.D	HP-Plot Q 0.53(mm)
LCSD 280-609196/4		04/18/2023 18:17	1	J004118.D	Rt-Alumina KCl 0.53(mm)
LCSD 280-609196/4		04/18/2023 18:17	1	J004118.D	HP-Plot Q 0.53(mm)
MB 280-609196/5		04/18/2023 18:31	1	J004119.D	Rt-Alumina KCl 0.53(mm)
MB 280-609196/5		04/18/2023 18:31	1	J004119.D	HP-Plot Q 0.53(mm)
ZZZZZ		04/18/2023 22:32	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/18/2023 22:32	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/18/2023 22:45	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/18/2023 22:45	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/18/2023 22:58	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/18/2023 22:58	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/18/2023 23:12	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/18/2023 23:12	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/18/2023 23:25	10		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/18/2023 23:25	10		HP-Plot Q 0.53(mm)
ZZZZZ		04/18/2023 23:39	10		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/18/2023 23:39	10		HP-Plot Q 0.53(mm)
ZZZZZ		04/18/2023 23:52	10		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/18/2023 23:52	10		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 00:05	10		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 00:05	10		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 00:19	10		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 00:19	10		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 00:32	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 00:32	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 00:45	10		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 00:45	10		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 00:59	10		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 00:59	10		HP-Plot Q 0.53(mm)
CCV 280-609196/19		04/19/2023 01:12	1	J004137.D	Rt-Alumina KCl 0.53(mm)
CCV 280-609196/19		04/19/2023 01:12	1	J004137.D	HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 01:25	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 01:25	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 01:39	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 01:39	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 01:52	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 01:52	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 02:05	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 02:05	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 02:19	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 02:19	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 02:32	1		Rt-Alumina KCl 0.53(mm)

GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: VGC_J Start Date: 04/18/2023 17:50

Analysis Batch Number: 609196 End Date: 04/19/2023 04:20

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/19/2023 02:32	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 02:46	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 02:46	1		HP-Plot Q 0.53(mm)
280-174957-3	MW-124-Q-20230412	04/19/2023 02:59	1	J004145.D	Rt-Alumina KCl 0.53(mm)
280-174957-3	MW-124-Q-20230412	04/19/2023 02:59	1	J004145.D	HP-Plot Q 0.53(mm)
280-174957-2	MW-124-20230412	04/19/2023 03:12	1	J004146.D	Rt-Alumina KCl 0.53(mm)
280-174957-2	MW-124-20230412	04/19/2023 03:12	1	J004146.D	HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 03:26	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 03:26	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 03:39	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 03:39	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 03:53	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 03:53	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/19/2023 04:06	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/19/2023 04:06	1		HP-Plot Q 0.53(mm)
CCV 280-609196/33		04/19/2023 04:20	1	J004151.D	Rt-Alumina KCl 0.53(mm)
CCV 280-609196/33		04/19/2023 04:20	1	J004151.D	HP-Plot Q 0.53(mm)

GC VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 594440 Batch Start Date: 11/22/22 14:36 Batch Analyst: Scianna, Charles A

Batch Method: RSK-175 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	RSK175methane 00011	RSK7gasMathes 00034	RSK7gasMathes 00035	
IC 280-594440/4		RSK-175		20 mL	20 mL			2.5 uL	
IC 280-594440/5		RSK-175		20 mL	20 mL			5 uL	
IC 280-594440/6		RSK-175		20 mL	20 mL			40 uL	
IC 280-594440/7		RSK-175		20 mL	20 mL			200 uL	
IC 280-594440/8		RSK-175		20 mL	20 mL			400 uL	
IC 280-594440/9		RSK-175		20 mL	20 mL			800 uL	
IC 280-594440/10		RSK-175		20 mL	20 mL	50 uL			
IC 280-594440/11		RSK-175		20 mL	20 mL	200 uL			
IC 280-594440/12		RSK-175		20 mL	20 mL	600 uL			
ICV 280-594440/14		RSK-175		20 mL	20 mL		200 uL		

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609196 Batch Start Date: 04/18/23 17:50 Batch Analyst: Hiltner, Joseph P

Batch Method: RSK-175 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	RSK7gasMathes 00036		
CCVRT 280-609196/2		RSK-175		18 mL	18 mL	5 SU	200 uL		
LCS 280-609196/3		RSK-175		18 mL	18 mL	5 SU	200 uL		
LCSD 280-609196/4		RSK-175		18 mL	18 mL	5 SU	200 uL		
MB 280-609196/5		RSK-175		18 mL	18 mL	5 SU			
CCV 280-609196/19		RSK-175		18 mL	18 mL	5 SU	200 uL		
280-174957-G-3	MW-124-Q-20230412	RSK-175	T	18 mL	18 mL	< 2 SU			
280-174957-G-2	MW-124-20230412	RSK-175	T	18 mL	18 mL	< 2 SU			
CCV 280-609196/33		RSK-175		18 mL	18 mL	5 SU	200 uL		

Batch Notes	
pH Paper ID	HC93086

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG No.:

Project: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID	Lab Sample ID
MW-124-20230412	280-174957-2
MW-124-Q-20230412	280-174957-3
RW-15-20230411	280-174957-4
MW-105D-20230411	280-174957-5
MW-105S-20230411	280-174957-6

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-124-20230412 Lab Sample ID: 280-174957-2

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG ID.:

Matrix: Water Date Sampled: 04/12/2023 09:50

Reporting Basis: WET Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	ND	5.0	0.50	ug/L			1	6020B
7440-39-3	Barium	420	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	220000	200	32	ug/L			1	6020B
7440-43-9	Cadmium	0.29	1.0	0.19	ug/L	J		1	6020B
7440-48-4	Co	2.8	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	ND	3.0	0.50	ug/L			1	6020B
7440-50-8	Copper	3.1	2.0	0.71	ug/L			1	6020B
7439-89-6	Iron	24	200	8.7	ug/L	J		1	6020B
7440-09-7	Potassium	4800	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	73000	200	4.2	ug/L		B	1	6020B
7439-96-5	Manganese	2000	3.0	0.51	ug/L			1	6020B
7440-23-5	Sodium	100000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	15	3.0	0.83	ug/L			1	6020B
7439-92-1	Lead	ND	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	ND	5.0	1.1	ug/L			1	6020B
7440-66-6	Zinc	9.3	10	2.0	ug/L	J		1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-124-Q-20230412 | Lab Sample ID: 280-174957-3

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG ID.:

Matrix: Water | Date Sampled: 04/12/2023 10:00

Reporting Basis: WET | Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	ND	5.0	0.50	ug/L			1	6020B
7440-39-3	Barium	400	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	210000	200	32	ug/L			1	6020B
7440-43-9	Cadmium	0.30	1.0	0.19	ug/L	J		1	6020B
7440-48-4	Co	2.6	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	ND	3.0	0.50	ug/L			1	6020B
7440-50-8	Copper	3.0	2.0	0.71	ug/L			1	6020B
7439-89-6	Iron	21	200	8.7	ug/L	J		1	6020B
7440-09-7	Potassium	4600	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	69000	200	4.2	ug/L		B	1	6020B
7439-96-5	Manganese	1800	3.0	0.51	ug/L			1	6020B
7440-23-5	Sodium	95000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	15	3.0	0.83	ug/L			1	6020B
7439-92-1	Lead	ND	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	0.42	2.0	0.40	ug/L	J		1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	ND	5.0	1.1	ug/L			1	6020B
7440-66-6	Zinc	9.9	10	2.0	ug/L	J		1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: RW-15-20230411 Lab Sample ID: 280-174957-4

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG ID.:

Matrix: Water Date Sampled: 04/11/2023 16:30

Reporting Basis: WET Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	ND	5.0	0.50	ug/L			1	6020B
7440-39-3	Barium	300	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	200000	200	32	ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0	0.19	ug/L			1	6020B
7440-48-4	Co	ND	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	ND	3.0	0.50	ug/L			1	6020B
7440-50-8	Copper	7.6	2.0	0.71	ug/L			1	6020B
7439-89-6	Iron	ND	200	8.7	ug/L			1	6020B
7440-09-7	Potassium	4200	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	78000	200	4.2	ug/L		B	1	6020B
7439-96-5	Manganese	1.2	3.0	0.51	ug/L	J		1	6020B
7440-23-5	Sodium	96000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	2.6	3.0	0.83	ug/L	J		1	6020B
7439-92-1	Lead	0.25	1.0	0.23	ug/L	J		1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	ND	5.0	1.1	ug/L			1	6020B
7440-66-6	Zinc	47	10	2.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-105D-20230411 Lab Sample ID: 280-174957-5

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG ID.:

Matrix: Water Date Sampled: 04/11/2023 16:00

Reporting Basis: WET Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	0.72	5.0	0.50	ug/L	J		1	6020B
7440-39-3	Barium	310	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	230000	200	32	ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0	0.19	ug/L			1	6020B
7440-48-4	Co	ND	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	ND	3.0	0.50	ug/L			1	6020B
7440-50-8	Copper	1.0	2.0	0.71	ug/L	J		1	6020B
7439-89-6	Iron	ND	200	8.7	ug/L			1	6020B
7440-09-7	Potassium	3800	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	69000	200	4.2	ug/L		B	1	6020B
7439-96-5	Manganese	5.0	3.0	0.51	ug/L			1	6020B
7440-23-5	Sodium	64000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	ND	3.0	0.83	ug/L			1	6020B
7439-92-1	Lead	ND	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	1.2	5.0	1.1	ug/L	J		1	6020B
7440-66-6	Zinc	ND	10	2.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-105S-20230411 Lab Sample ID: 280-174957-6

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG ID.:

Matrix: Water Date Sampled: 04/11/2023 13:30

Reporting Basis: WET Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	0.66	5.0	0.50	ug/L	J		1	6020B
7440-39-3	Barium	250	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	230000	200	32	ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0	0.19	ug/L			1	6020B
7440-48-4	Co	11	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	2.3	3.0	0.50	ug/L	J		1	6020B
7440-50-8	Copper	3.0	2.0	0.71	ug/L			1	6020B
7439-89-6	Iron	15	200	8.7	ug/L	J		1	6020B
7440-09-7	Potassium	5000	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	80000	200	4.2	ug/L		B	1	6020B
7439-96-5	Manganese	520	3.0	0.51	ug/L			1	6020B
7440-23-5	Sodium	410000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	50	3.0	0.83	ug/L			1	6020B
7439-92-1	Lead	ND	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	ND	5.0	1.1	ug/L			1	6020B
7440-66-6	Zinc	ND	10	2.0	ug/L			1	6020B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

ICV Source: ms 77 icv_02964 Concentration Units: ug/L

CCV Source: ms 77 ccv_02962

Analyte	ICV 280-609048/14 04/17/2023 10:50				CCV 280-609048/54 04/17/2023 14:53				CCV 280-609048/67 04/17/2023 15:40			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	40.2		40.0	100	49.2		50.0	98	49.8		50.0	100
Arsenic	39.6		40.0	99	49.1		50.0	98	48.0		50.0	96
Barium	40.2		40.0	100	49.6		50.0	99	47.3		50.0	95
Beryllium	39.6		40.0	99	45.1		50.0	90	49.8		50.0	100
Cadmium	39.3		40.0	98	49.3		50.0	99	47.9		50.0	96
Calcium	5170		4800	108	11200		11000	102	11400		11000	104
Chromium	40.5		40.0	101	50.3		50.0	101	48.1		50.0	96
Co	39.3		40.0	98	49.5		50.0	99	47.6		50.0	95
Copper	39.6		40.0	99	48.6		50.0	97	48.3		50.0	97
Iron	843		800	105	1010		1000	101	1010		1000	101
Lead	39.6		40.0	99	48.3		50.0	97	48.1		50.0	96
Magnesium	4930		4800	103	10700		11000	97	10500		11000	96
Manganese	40.2		40.0	100	46.4		50.0	93	48.0		50.0	96
Nickel	37.6		40.0	94	48.9		50.0	98	47.4		50.0	95
Potassium	4800		4800	100	10500		11000	96	10400		11000	95
Selenium	41.5		40.0	104	50.5		50.0	101	48.6		50.0	97
Silver	79.0		80.0	99	49.3		50.0	99	46.4		50.0	93
Sodium	14100		12800	110	52900		51000	104	52300		51000	103
Thallium	39.8		40.0	99	48.7		50.0	97	48.4		50.0	97
Tin	38.3		40.0	96	50.1		50.0	100	48.8		50.0	98
Vanadium	41.1		40.0	103	49.6		50.0	99	49.3		50.0	99
Zinc	76.9		80.0	96	48.5		50.0	97	48.7		50.0	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

ICV Source: ms 77 icv_02964 Concentration Units: ug/L

CCV Source: ms 77 ccv_02962

Analyte	CCV 280-609048/78 04/17/2023 16:21				CCV 280-609048/90 04/17/2023 17:04							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	49.1		50.0	98	48.7		50.0	97				
Arsenic	48.6		50.0	97	48.0		50.0	96				
Barium	52.1		50.0	104	50.2		50.0	100				
Beryllium	46.4		50.0	93	50.7		50.0	101				
Cadmium	49.2		50.0	98	46.4		50.0	93				
Calcium	11300		11000	103	11300		11000	103				
Chromium	48.0		50.0	96	47.9		50.0	96				
Co	48.4		50.0	97	47.7		50.0	95				
Copper	48.1		50.0	96	47.7		50.0	95				
Iron	1000		1000	100	1020		1000	102				
Lead	48.1		50.0	96	47.8		50.0	96				
Magnesium	10400		11000	95	10600		11000	97				
Manganese	49.2		50.0	98	49.4		50.0	99				
Nickel	47.4		50.0	95	47.3		50.0	95				
Potassium	10400		11000	95	10400		11000	94				
Selenium	47.7		50.0	95	47.6		50.0	95				
Silver	47.3		50.0	95	46.8		50.0	94				
Sodium	51400		51000	101	51200		51000	100				
Thallium	48.2		50.0	96	48.3		50.0	97				
Tin	48.8		50.0	98	48.0		50.0	96				
Vanadium	48.0		50.0	96	48.5		50.0	97				
Zinc	49.3		50.0	99	47.2		50.0	94				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Method: 6020B Instrument ID: MT_077

Lab Sample ID: CRI 280-609048/16 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02783

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	0.964	J	96	80-120
Arsenic	5.00	5.30		106	80-120
Barium	1.00	1.20	J	120	80-120
Beryllium	1.00	1.20		120	80-120
Calcium	200	215		107	80-120
Cadmium	1.00	0.859	J	86	80-120
Co	1.00	1.10		110	80-120
Chromium	2.00	2.22	J	111	80-120
Copper	2.00	2.08		104	80-120
Iron	50.0	48.3	J	97	80-120
Potassium	120	115	J	96	80-120
Magnesium	50.0	52.7	J	105	80-120
Manganese	1.00	0.995	J	100	80-120
Sodium	300	312	J	104	80-120
Nickel	2.00	2.00	J	100	80-120
Lead	1.00	1.04		104	80-120
Antimony	2.00	2.05		103	80-120
Selenium	5.00	4.96	J	99	80-120
Tin	10.0	9.73	J	97	80-120
Thallium	1.00	0.973	J	97	80-120
Vanadium	5.00	5.45		109	80-120
Zinc	10.0	9.60	J	96	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-609048/15 04/17/2023 10:54		CCB 280-609048/55 04/17/2023 14:57		CCB 280-609048/68 04/17/2023 15:44		CCB 280-609048/79 04/17/2023 16:25	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	ND		ND		ND		ND	
Arsenic	5.0	ND		ND		ND		ND	
Barium	3.0	ND		ND		ND		ND	
Beryllium	1.0	ND		ND		ND		ND	
Cadmium	1.0	ND		ND		ND		ND	
Calcium	200	ND		ND		ND		ND	
Chromium	3.0	ND		ND		ND		ND	
Co	1.0	ND		ND		ND		ND	
Copper	2.0	ND		ND		ND		ND	
Iron	200	ND		ND		ND		ND	
Lead	1.0	ND		ND		ND		ND	
Magnesium	200	ND		4.73	J	9.47	J	6.81	J
Manganese	3.0	ND		ND		ND		ND	
Nickel	3.0	ND		ND		ND		ND	
Potassium	1000	ND		ND		ND		ND	
Selenium	5.0	ND		ND		ND		ND	
Silver	1.0	ND		ND		ND		ND	
Sodium	1000	ND		ND		411	J	89.3	J
Thallium	1.0	ND		ND		ND		ND	
Tin	10	ND		ND		ND		ND	
Vanadium	5.0	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 280-609048/91 04/17/2023 17:08							
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	ND							
Arsenic	5.0	ND							
Barium	3.0	ND							
Beryllium	1.0	ND							
Cadmium	1.0	ND							
Calcium	200	ND							
Chromium	3.0	ND							
Co	1.0	ND							
Copper	2.0	ND							
Iron	200	11.6	J						
Lead	1.0	ND							
Magnesium	200	9.02	J						
Manganese	3.0	ND							
Nickel	3.0	ND							
Potassium	1000	ND							
Selenium	5.0	ND							
Silver	1.0	ND							
Sodium	1000	76.0	J						
Thallium	1.0	ND							
Tin	10	ND							
Vanadium	5.0	ND							
Zinc	10	ND							

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-608688/1-A

Instrument Code: MT_077 Batch No.: 609048

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	ND			6020B
7440-38-2	Arsenic	ND			6020B
7440-39-3	Barium	ND			6020B
7440-41-7	Beryllium	ND			6020B
7440-70-2	Calcium	ND			6020B
7440-43-9	Cadmium	ND			6020B
7440-48-4	Co	ND			6020B
7440-47-3	Chromium	ND			6020B
7440-50-8	Copper	ND			6020B
7439-89-6	Iron	ND			6020B
7440-09-7	Potassium	ND			6020B
7439-95-4	Magnesium	4.40	J		6020B
7439-96-5	Manganese	ND			6020B
7440-23-5	Sodium	ND			6020B
7440-02-0	Nickel	ND			6020B
7439-92-1	Lead	ND			6020B
7440-36-0	Antimony	ND			6020B
7782-49-2	Selenium	ND			6020B
7440-31-5	Tin	ND			6020B
7440-28-0	Thallium	ND			6020B
7440-62-2	Vanadium	ND			6020B
7440-66-6	Zinc	ND			6020B

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICSA 280-609048/17 Instrument ID: MT_077

Lab File ID: 020ICSA.d ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.130**	
Arsenic		**0.0260**	
Barium		**1.66**	
Beryllium		**0.0420**	
Cadmium		**0.432**	
Calcium	**100000**	**101033**	**101**
Chromium		**1.15**	
Co		**0.201**	
Copper		**0.404**	
Iron	**100000**	**93936**	**94**
Lead		**0.0430**	
Magnesium	**100000**	**97750**	**98**
Manganese		**0.213**	
Nickel		**-0.0930**	
Potassium	**100000**	**95769**	**96**
Selenium		**0.0330**	
Silver		**0.0120**	
Sodium	**100000**	**100165**	**100**
Thallium		**-0.0280**	
Tin		**-0.0560**	
Vanadium		**0.446**	
Zinc		**0.760**	
Aluminum	*100000*	*98845*	*99*
Molybdenum	*2000*	*2084*	*104*
Strontium		*0.854*	
Thorium		*0.0370*	
Uranium		*0.0080*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Lab Sample ID: ICSAB 280-609048/18 Instrument ID: MT_077

Lab File ID: 021ICSB.d ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**97.5**	**97**
Arsenic	**100**	**94.7**	**95**
Barium	**100**	**96.9**	**97**
Beryllium	**100**	**99.3**	**99**
Cadmium	**100**	**96.1**	**96**
Calcium	**107000**	**105294**	**98**
Chromium	**100**	**97.9**	**98**
Co	**100**	**95.2**	**95**
Copper	**100**	**94.2**	**94**
Iron	**102000**	**94517**	**93**
Lead	**100**	**92.0**	**92**
Magnesium	**107000**	**101430**	**95**
Manganese	**100**	**95.4**	**95**
Nickel	**100**	**92.5**	**93**
Potassium	**107000**	**99168**	**93**
Selenium	**100**	**96.9**	**97**
Silver	**100**	**94.6**	**95**
Sodium	**107000**	**104659**	**98**
Thallium	**100**	**91.7**	**92**
Tin	**100**	**96.4**	**96**
Vanadium	**100**	**96.7**	**97**
Zinc	**100**	**93.6**	**94**
Aluminum	*102000*	*97715*	*96*
Molybdenum	*2100*	*2110*	*100*
Strontium	*200*	*193*	*96*
Thorium	*100*	*99.1*	*99*
Uranium	*100*	*104*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 280-608688/2-A

Lab Name: Eurofins Denver Job No.: 280-174957-1

Sample Matrix: Water LCS Source: MS spike 2_00106

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	40.0	40.3		101	85	115		6020B
Arsenic	40.0	37.6		94	85	117		6020B
Barium	40.0	39.7		99	85	118		6020B
Beryllium	40.0	35.6		89	80	125		6020B
Calcium	800	856		107	80	120		6020B
Cadmium	40.0	40.4		101	85	115		6020B
Co	40.0	38.8		97	85	120		6020B
Chromium	40.0	39.1		98	84	121		6020B
Copper	40.0	38.9		97	85	119		6020B
Iron	800	800		100	80	120		6020B
Potassium	800	764	J	96	80	120		6020B
Magnesium	800	743		93	80	120		6020B
Manganese	40.0	37.9		95	85	117		6020B
Sodium	800	818	J	102	80	120		6020B
Nickel	40.0	37.7		94	85	119		6020B
Lead	40.0	38.4		96	85	118		6020B
Antimony	40.0	38.7		97	85	115		6020B
Selenium	40.0	39.5		99	77	122		6020B
Tin	40.0	37.1		93	77	115		6020B
Thallium	40.0	39.0		98	85	118		6020B
Vanadium	40.0	38.1		95	85	120		6020B
Zinc	40.0	39.9		100	83	122		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS - TOTAL RECOVERABLE

Lab ID: LCSD 280-608688/3-A

Lab Name: Eurofins Denver Job No.: 280-174957-1

Sample Matrix: Water LCS Source: MS spike 2_00106

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Silver	40.1		40.0	100	85-115	0	6		6020B
Arsenic	37.0		40.0	92	85-117	2	10		6020B
Barium	39.1		40.0	98	85-118	1	11		6020B
Beryllium	35.3		40.0	88	80-125	1	22		6020B
Calcium	874		800	109	80-120	2	20		6020B
Cadmium	39.7		40.0	99	85-115	2	7		6020B
Co	40.0		40.0	100	85-120	3	7		6020B
Chromium	40.0		40.0	100	84-121	2	8		6020B
Copper	39.3		40.0	98	85-119	1	9		6020B
Iron	808		800	101	80-120	1	14		6020B
Potassium	761	J	800	95	80-120	0	20		6020B
Magnesium	753		800	94	80-120	1	20		6020B
Manganese	38.1		40.0	95	85-117	0	13		6020B
Sodium	858	J	800	107	80-120	5	20		6020B
Nickel	38.0		40.0	95	85-119	1	8		6020B
Lead	38.9		40.0	97	85-118	1	7		6020B
Antimony	39.2		40.0	98	85-115	1	9		6020B
Selenium	39.6		40.0	99	77-122	0	9		6020B
Tin	37.8		40.0	94	77-115	2	6		6020B
Thallium	39.6		40.0	99	85-118	1	5		6020B
Vanadium	37.3		40.0	93	85-120	2	8		6020B
Zinc	40.9		40.0	102	83-122	3	12		6020B

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020B MDL Date: 09/01/2022 00:00

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony		2	0.4
Arsenic		5	0.5
Barium		3	0.38
Beryllium		1	0.303
Cadmium		1	0.19
Calcium		200	32.29
Chromium		3	0.5
Co		1	0.33
Copper		2	0.71
Iron		200	8.67
Lead		1	0.23
Magnesium		200	4.16
Manganese		3	0.51
Nickel		3	0.83
Potassium		1000	52
Selenium		5	1
Silver		1	0.045
Sodium		1000	73.3
Thallium		1	0.21
Tin		10	0.58
Vanadium		5	1.12
Zinc		10	2

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020B XMDL Date: 01/03/2023 12:35

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony		2	0.4
Arsenic		5	0.5
Barium		3	0.38
Beryllium		1	0.303
Cadmium		1	0.19
Calcium		200	32.29
Chromium		3	0.5
Co		1	0.33
Copper		2	0.71
Iron		200	8.67
Lead		1	0.23
Magnesium		200	4.16
Manganese		3	0.51
Nickel		3	0.83
Potassium		1000	52
Selenium		5	1
Silver		1	0.045
Sodium		1000	73.3
Thallium		1	0.21
Tin		10	0.58
Vanadium		5	1.12
Zinc		10	2

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Denver Job No: 280-174957-1

SDG No.:

Instrument ID: MT_077 Date: 01/15/2020 09:21

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Silver		270	6020B
Arsenic		3600	6020B
Barium		4500	6020B
Beryllium		3600	6020B
Cadmium		3600	6020B
Co		3600	6020B
Chromium		4500	6020B
Copper		4500	6020B
Manganese		18000	6020B
Nickel		4500	6020B
Lead		4500	6020B
Antimony		3600	6020B
Selenium		3600	6020B
Tin		3600	6020B
Thallium		3600	6020B
Vanadium		3600	6020B
Zinc		4500	6020B

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-608688/1-A	04/14/2023 14:30	608688		50	50
LCS 280-608688/2-A	04/14/2023 14:30	608688		50	50
LCSD 280-608688/3-A	04/14/2023 14:30	608688		50	50
280-174957-2	04/14/2023 14:30	608688		50	50
280-174957-3	04/14/2023 14:30	608688		50	50
280-174957-4	04/14/2023 14:30	608688		50	50
280-174957-5	04/14/2023 14:30	608688		50	50
280-174957-6	04/14/2023 14:30	608688		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020B

Start Date: 04/17/2023 09:55 End Date: 04/17/2023 17:08

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn				
RINSE 280-609048/1			09:55																										
RINSE 280-609048/2			09:58																										
RINSE 280-609048/3			10:02																										
RINSE 280-609048/4			10:05																										
RINSE 280-609048/5			10:09																										
RINSE 280-609048/6			10:13																										
RINSE 280-609048/7			10:16																										
RINSE 280-609048/8			10:28																										
RINSE 280-609048/9			10:31																										
RINSE 280-609048/10			10:35																										
ICIS 280-609048/11			10:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
IC 280-609048/12	1		10:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
IC 280-609048/13	1		10:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ICV 280-609048/14	1		10:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ICB 280-609048/15	1		10:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CRI 280-609048/16	1		10:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ICSA 280-609048/17	1		11:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ICSAB 280-609048/18	1		11:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
RINSE 280-609048/19			11:10																										
LRA 280-609048/20			11:14																										
RINSE 280-609048/21			11:17																										
CCV 280-609048/22			11:21																										
CCB 280-609048/23			11:25																										
CCVL 280-609048/24			11:29																										
CCB 280-609048/25			11:32																										
CCV 280-609048/26			12:52																										
CCB 280-609048/27			12:55																										
ZZZZZZ			13:20																										
ZZZZZZ			13:24																										
CCV 280-609048/30			13:27																										
CCB 280-609048/31			13:31																										
ZZZZZZ			13:35																										
ZZZZZZ			13:38																										
ZZZZZZ			13:42																										
ZZZZZZ			13:45																										
ZZZZZZ			13:49																										
ZZZZZZ			13:53																										
ZZZZZZ			13:56																										
ZZZZZZ			14:00																										
ZZZZZZ			14:03																										
CCV 280-609048/41			14:07																										

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020B

Start Date: 04/17/2023 09:55 End Date: 04/17/2023 17:08

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn				
CCB 280-609048/42			14:10																											
CCVL 280-609048/43			14:14																											
ZZZZZZ			14:18																											
ZZZZZZ			14:21																											
ZZZZZZ			14:25																											
ZZZZZZ			14:28																											
ZZZZZZ			14:32																											
ZZZZZZ			14:35																											
ZZZZZZ			14:39																											
ZZZZZZ			14:43																											
ZZZZZZ			14:46																											
ZZZZZZ			14:50																											
CCV 280-609048/54	1		14:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB 280-609048/55	1		14:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCVL 280-609048/56			15:00																											
MB 280-608688/1-A	1	R	15:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
LCS 280-608688/2-A	1	R	15:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
LCSD 280-608688/3-A	1	R	15:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			15:15																											
ZZZZZZ			15:18																											
ZZZZZZ			15:22																											
ZZZZZZ			15:26																											
ZZZZZZ			15:29																											
ZZZZZZ			15:33																											
ZZZZZZ			15:36																											
CCV 280-609048/67	1		15:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB 280-609048/68	1		15:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			15:47																											
ZZZZZZ			15:51																											
ZZZZZZ			15:54																											
ZZZZZZ			15:58																											
ZZZZZZ			16:03																											
ZZZZZZ			16:07																											
ZZZZZZ			16:11																											
ZZZZZZ			16:14																											
280-174957-2	1	D	16:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCV 280-609048/78	1		16:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB 280-609048/79	1		16:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			16:29																											
ZZZZZZ			16:32																											
ZZZZZZ			16:36																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020B

Start Date: 04/17/2023 09:55 End Date: 04/17/2023 17:08

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn							
280-174957-3	1	D	16:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
280-174957-4	1	D	16:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
280-174957-5	1	D	16:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
280-174957-6	1	D	16:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			16:54																													
ZZZZZZ			16:57																													
ZZZZZZ			17:01																													
CCV 280-609048/90	1		17:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 280-609048/91	1		17:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						

Prep Types:
D = Dissolved
R = Total Recoverable

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.: Analysis Batch No.: 609048

ICP-MS Instrument ID: MT_077 Start Date: 04/17/2023 End Date: 04/17/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Li-6/3	Q	Element Sc/1	Q	Element Sc/2	Q
IC 280-609048/12	10:43	95		100		97		99		101	
IC 280-609048/13	10:46	99		102		98		101		100	
ICV 280-609048/14	10:50	95		98		96		99		100	
ICB 280-609048/15	10:54	98		100		99		100		100	
CRI 280-609048/16	10:59	100		101		101		101		101	
ICSA 280-609048/17	11:03	93		95		92		98		99	
ICSAB 280-609048/18	11:07	90		93		92		98		100	
CCV 280-609048/54	14:53	100		104		98		104		103	
CCB 280-609048/55	14:57	102		106		99		104		103	
MB 280-608688/1-A	15:04	103		102		99		104		104	
LCS 280-608688/2-A	15:08	104		106		98		106		104	
LCSD 280-608688/3-A	15:11	104		106		99		105		104	
CCV 280-609048/67	15:40	87		92		89		101		102	
CCB 280-609048/68	15:44	88		93		90		98		101	
280-174957-2	16:18	85		93		90		99		104	
CCV 280-609048/78	16:21	88		92		89		101		103	
CCB 280-609048/79	16:25	90		96		92		100		103	
280-174957-3	16:39	90		95		93		104		107	
280-174957-4	16:43	91		97		93		105		107	
280-174957-5	16:46	91		97		93		104		107	
280-174957-6	16:50	88		91		91		105		108	
CCV 280-609048/90	17:04	86		95		90		103		104	
CCB 280-609048/91	17:08	89		96		92		101		105	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.: Analysis Batch No.: 609048

ICP-MS Instrument ID: MT_077 Start Date: 04/17/2023 End Date: 04/17/2023

Analyte	Mass	Internal Standard Used:				
		Element In 115	Element Ho-165 165	Element Ir 193	Element Sc/1 45	Element Sc/2 45
Silver	107	X				
Arsenic	75					
Barium	137	X				
Beryllium	9					
Calcium	40				X	
Cadmium	111	X				
Co	59					
Chromium	52					
Copper	63					
Iron	56					
Potassium	39					X
Magnesium	24					X
Manganese	55					
Sodium	23					X
Nickel	60					
Lead	208		X			
Antimony	121	X				
Selenium	78					
Tin	120	X				
Thallium	205		X			
Vanadium	51					
Zinc	66					
Aluminum	27					X
Molybdenum	95	X				
Strontium	88					
Thorium	232			X		
Uranium	238			X		
Internal Standard Name on Instrument		In Internal standard	Ho-165	Ir (IS)	Sc (IS)	Sc (IS)

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.: Analysis Batch No.: 609048

ICP-MS Instrument ID: MT_077 Start Date: 04/17/2023 End Date: 04/17/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Sc/3	Q	Element Ge/1	Q	Element Ge/2	Q	Element In	Q	Element Ho-165	Q
IC 280-609048/12	10:43	101		97		98		100		99	
IC 280-609048/13	10:46	100		101		102		101		101	
ICV 280-609048/14	10:50	99		99		101		100		100	
ICB 280-609048/15	10:54	101		99		101		101		101	
CRI 280-609048/16	10:59	101		101		102		100		101	
ICSA 280-609048/17	11:03	99		97		98		95		100	
ICSAB 280-609048/18	11:07	99		95		97		96		100	
CCV 280-609048/54	14:53	103		104		105		103		106	
CCB 280-609048/55	14:57	102		105		106		105		106	
MB 280-608688/1-A	15:04	105		106		106		105		106	
LCS 280-608688/2-A	15:08	104		107		107		105		108	
LCSD 280-608688/3-A	15:11	105		107		107		106		107	
CCV 280-609048/67	15:40	102		101		103		106		104	
CCB 280-609048/68	15:44	101		100		103		104		104	
280-174957-2	16:18	106		99		106		104		106	
CCV 280-609048/78	16:21	102		101		104		106		106	
CCB 280-609048/79	16:25	104		101		105		106		106	
280-174957-3	16:39	109		104		109		106		109	
280-174957-4	16:43	109		106		110		106		109	
280-174957-5	16:46	110		105		109		108		108	
280-174957-6	16:50	109		106		109		109		109	
CCV 280-609048/90	17:04	106		103		107		109		107	
CCB 280-609048/91	17:08	106		103		107		108		107	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.: Analysis Batch No.: 609048

ICP-MS Instrument ID: MT_077 Start Date: 04/17/2023 End Date: 04/17/2023

Analyte	Mass	Internal Standard Used:				
		Element Sc/3 45	Element Li-6/1 6	Element Li-6/2 6	Element Li-6/3 6	Element Ge/1 72
Silver	107					
Arsenic	75					
Barium	137					
Beryllium	9		X			
Calcium	40					
Cadmium	111					
Co	59					
Chromium	52					
Copper	63					
Iron	56					X
Potassium	39					
Magnesium	24					
Manganese	55					
Sodium	23					
Nickel	60					
Lead	208					
Antimony	121					
Selenium	78					X
Tin	120					
Thallium	205					
Vanadium	51					
Zinc	66					
Aluminum	27					
Molybdenum	95					
Strontium	88					
Thorium	232					
Uranium	238					
Internal Standard Name on Instrument		Sc (IS)	Li-6 Internal standard	Li-6 Internal standard	Li-6 Internal standard	Ge Internal standard

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.: Analysis Batch No.: 609048

ICP-MS Instrument ID: MT_077 Start Date: 04/17/2023 End Date: 04/17/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ir	Q	Element	Q	Element	Q	Element	Q	Element	Q
IC 280-609048/12	10:43	98									
IC 280-609048/13	10:46	98									
ICV 280-609048/14	10:50	98									
ICB 280-609048/15	10:54	100									
CRI 280-609048/16	10:59	101									
ICSA 280-609048/17	11:03	95									
ICSAB 280-609048/18	11:07	94									
CCV 280-609048/54	14:53	105									
CCB 280-609048/55	14:57	107									
MB 280-608688/1-A	15:04	108									
LCS 280-608688/2-A	15:08	109									
LCSD 280-608688/3-A	15:11	109									
CCV 280-609048/67	15:40	100									
CCB 280-609048/68	15:44	102									
280-174957-2	16:18	101									
CCV 280-609048/78	16:21	102									
CCB 280-609048/79	16:25	105									
280-174957-3	16:39	104									
280-174957-4	16:43	105									
280-174957-5	16:46	104									
280-174957-6	16:50	103									
CCV 280-609048/90	17:04	103									
CCB 280-609048/91	17:08	106									
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.: Analysis Batch No.: 609048

ICP-MS Instrument ID: MT_077 Start Date: 04/17/2023 End Date: 04/17/2023

Analyte	Mass	Internal Standard Used:				
		Element Ge/2 72	Element	Element	Element	Element
Silver	107					
Arsenic	75	X				
Barium	137					
Beryllium	9					
Calcium	40					
Cadmium	111					
Co	59	X				
Chromium	52	X				
Copper	63	X				
Iron	56					
Potassium	39					
Magnesium	24					
Manganese	55	X				
Sodium	23					
Nickel	60	X				
Lead	208					
Antimony	121					
Selenium	78					
Tin	120					
Thallium	205					
Vanadium	51	X				
Zinc	66	X				
Aluminum	27					
Molybdenum	95					
Strontium	88	X				
Thorium	232					
Uranium	238					
Internal Standard Name on Instrument		Ge Internal standard				

METALS BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608688 Batch Start Date: 04/14/23 14:30 Batch Analyst: Sweet, Lydia J

Batch Method: 3005A Batch End Date: 04/14/23 20:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	ms spike 1 00017	MS spike 2 00106	
MB 280-608688/1		3005A, 6020B			50 mL	50 mL			
LCS 280-608688/2		3005A, 6020B			50 mL	50 mL	0.1 mL	0.1 mL	
LCSD 280-608688/3		3005A, 6020B			50 mL	50 mL	0.1 mL	0.1 mL	
280-174957-A-2	MW-124-20230412	3005A, 6020B	D	<2 SU	50 mL	50 mL			
280-174957-A-3	MW-124-Q-20230412	3005A, 6020B	D	<2 SU	50 mL	50 mL			
280-174957-A-4	RW-15-20230411	3005A, 6020B	D	<2 SU	50 mL	50 mL			
280-174957-A-5	MW-105D-20230411	3005A, 6020B	D	<2 SU	50 mL	50 mL			
280-174957-A-6	MW-105S-20230411	3005A, 6020B	D	<2 SU	50 mL	50 mL			

Batch Notes	
Digestion Tube/Cup ID	2210117
Pipette/Syringe/Dispenser ID	MET88
Analyst ID - Spike Analyst	MSM
Sufficient Volume for Batch QC	YES
Hydrochloric Acid ID	226031
Nitric Acid ID	225038
Digestion Unit ID	05
Thermometer ID	QA55
Thermometer Location ID	B3
Temperature - Uncorrected - Start	92 Degrees C
Temperature - Corrected - Start	91 Degrees C
Digestion Start Time	04/14/2023 14:30
Digestion End Time	04/14/2023 20:45
Temperature - Uncorrected - End	95 Degrees C
Temperature - Corrected - End	94 Degrees C

Basis	Basis Description
D	Dissolved

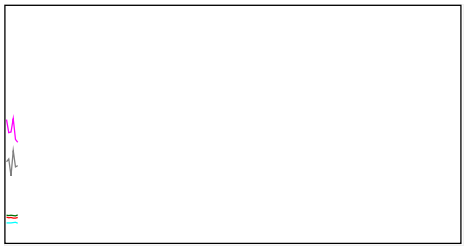
The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Current Signal

Operator Name	Denver Metals
Acq. Date-Time	4/17/2023 9:16:39 AM
Instrument Name	G3281A JP09320047
Batch Folder	D:\Agilent\ICPMH\1\DATA\ALL041723.b

[No Gas]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	100000	7993	8144	1.550
2	6	100000	7497	7693	1.646
3	59	100000	6726	6629	1.530
4	63	5000	388	377	4.604
5	70	5000	264	295	8.672
6	75	10000	3489	3482	2.260
7	89	100000	10384	10293	1.597
8	105	1000	32	29	11.897
9	118	2000	85	105	15.203
10	137	20000	1322	1426	4.287
11	140	200000	12460	12502	2.913
12	205	100000	11529	11324	1.161
13	238	10000	19554	19185	2.474
14	70/140	5	2.119 %	2.364 %	8.867
15	156/140	2	0.650 %	0.669 %	10.754

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.66 L/min	Dilution Gas	0.23 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cell Exit	-52 V
Extract 2	-190.0 V	Q1 Exit	---	Deflect	16.0 V
Omega Bias	-90 V	Cell Focus	---	Plate Bias	-50 V
Omega Lens	8.8 V	Cell Entrance	-20 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Axial Acceleration	---
He Flow	0.0 mL/min	4th Gas Flow	---	OctP RF	170 V
H2 Flow	0.0 mL/min	OctP Bias	-8.0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	147	Axis Gain	1.0026	QP Bias	-5.0 V
Mass Offset	126	Axis Offset	0.07		

Current Signal

Torch

Torch H	0.4 mm	Torch V	0.9 mm		

EM

Discriminator	4.6 mV	Analog HV	1663 V	Pulse HV	1188 V

Meter

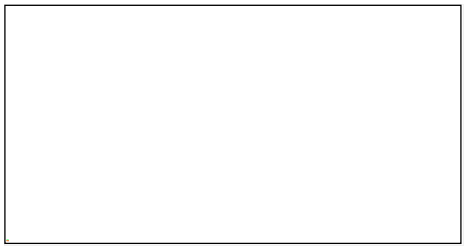
Name	Value	Unit
IF/BK Press	2.48E+2	Pa
Analyzer Press	1.56E-4	Pa
Water RF/WC/IF	1.29	L/min
Water Temp	18.3	°C
S/C Temp (L)	2.0	°C

Current Signal

Operator Name	Denver Metals
Acq. Date-Time	4/17/2023 9:16:51 AM
Instrument Name	G3281A JP09320047
Batch Folder	D:\Agilent\ICPMH\1\DATA\ALL041723.b

[HMI He]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	50	17	13	50.912
2	51	10000	71	73	2.926
3	53	10000	53	56	6.370
4	59	500	2209	2201	0.547
5	66	500	148	138	10.248
6	70	50	77	73	7.749
7	78	20	0	0	0.000
8	115	10000	2513	2505	0.452
9	118	200	30	30	2.397
10	137	2000	296	326	13.016
11	140	20000	5637	5728	2.243
12	205	20000	7016	7243	4.424
13	51/59	100	3.214 %	3.294 %	3.473
14	70/140	2	1.366 %	1.276 %	9.983
15	156/140	1	0.390 %	0.419 %	9.555

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.66 L/min	Dilution Gas	0.23 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cell Exit	-62 V
Extract 2	-175.0 V	Q1 Exit	---	Deflect	-1.6 V
Omega Bias	-90 V	Cell Focus	---	Plate Bias	-60 V
Omega Lens	8.1 V	Cell Entrance	-36 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Axial Acceleration	---
He Flow	5.0 mL/min	4th Gas Flow	---	OctP RF	170 V
H2 Flow	0.0 mL/min	OctP Bias	-18.0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	147	Axis Gain	1.0026	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	0.07		

Current Signal

Torch

Torch H	0.4 mm	Torch V	0.9 mm		

EM

Discriminator	4.6 mV	Analog HV	1663 V	Pulse HV	1188 V

Meter

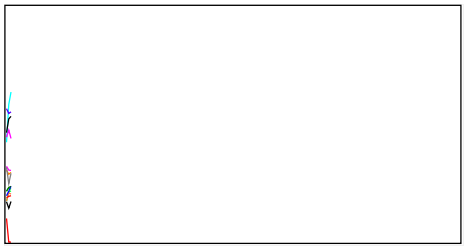
Name	Value	Unit
IF/BK Press	2.48E+2	Pa
Analyzer Press	1.80E-4	Pa
Water RF/WC/IF	1.29	L/min
Water Temp	18.3	°C
S/C Temp (L)	2.0	°C

Current Signal

Operator Name	Denver Metals
Acq. Date-Time	4/17/2023 9:17:06 AM
Instrument Name	G3281A JP09320047
Batch Folder	D:\Agilent\ICPMH\1\DATA\ALL041723.b

[HMI H2]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	500	319	274	20.285
2	9	5000	1082	1006	11.695
3	59	10000	2037	1954	9.984
4	63	200	88	91	4.176
5	70	1000	172	162	9.786
6	78	20	0	1	173.205
7	89	50000	9839	9659	2.201
8	115	50000	11161	11152	3.391
9	118	500	119	108	9.696
10	137	5000	1482	1484	3.105
11	140	50000	11808	11383	4.782
12	205	20000	11069	11106	1.828
13	238	50000	15189	15529	3.300
14	70/140	5	1.457 %	1.430 %	12.123
15	156/140	2	1.067 %	1.014 %	7.356

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.66 L/min	Dilution Gas	0.23 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cell Exit	-70 V
Extract 2	-195.0 V	Q1 Exit	---	Deflect	2.8 V
Omega Bias	-90 V	Cell Focus	---	Plate Bias	-60 V
Omega Lens	8.4 V	Cell Entrance	-24 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Axial Acceleration	---
He Flow	0.0 mL/min	4th Gas Flow	---	OctP RF	170 V
H2 Flow	4.0 mL/min	OctP Bias	-18.0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	147	Axis Gain	1.0026	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	0.07		

Current Signal

Torch

Torch H	0.4 mm	Torch V	0.9 mm		

EM

Discriminator	4.6 mV	Analog HV	1663 V	Pulse HV	1188 V

Meter

Name	Value	Unit
IF/BK Press	2.63E+2	Pa
Analyzer Press	6.35E-4	Pa
Water RF/WC/IF	1.28	L/min
Water Temp	18.3	°C
S/C Temp (L)	2.0	°C

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq. Date-Time	4/17/2023 9:24:24 AM
Report Comment	---
Instrument Name	G3281A JP09320047

[HMI H2]

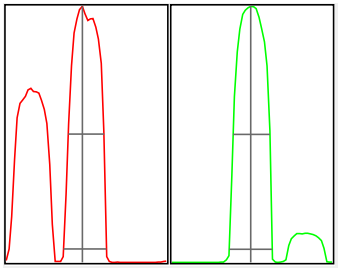
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7		218	2175.98	2.895	5.000	
9		761	7614.62	0.654	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	223	220	211	210	223
9	760	754	762	764	767

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	346.50	6.95	6.90 - 7.10	
9	1177.14	9.00	8.90 - 9.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
7	0.66	0.791	0.900	
9	0.67	0.792	0.900	

Integration Time [sec] 0.1
Acquisition Time [sec] 60.9
Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas		Dilution Gas	0.23 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching		Nebulizer Pump		Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.4 V	Deflect	2.8 V

US EPA Tune Check Report

Extract 2	-195.0 V	Cell Entrance	-24 V	Plate Bias	-60 V
Omega Bias	-90 V	Cell Exit	-70 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	4.0 mL/min	OctP RF	170 V		

QP Parameters

Mass Gain	147	Axis Gain	1.0026	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	0.07		

Hardware Settings

EM

Discriminator	4.6 mV	Analog HV	1663 V	Pulse HV	1188 V

Torch

Torch H	0.4 mm	Torch V	0.9 mm

[HMI He]

Sensitivity

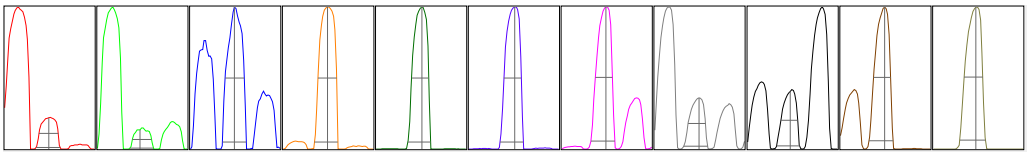
Mass	Conc. [ug/l]	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
24		290	2896.48	1.565	5.000	
25		40	404.73	3.437	5.000	
26		53	529.54	3.149	5.000	
59		1343	13429.60	1.215	5.000	
103		3472	34722.75	0.929	5.000	
115		1432	14324.94	1.955	5.000	
205		3939	39389.70	0.715	5.000	
206		1399	13990.61	1.007	5.000	
207		1230	12304.59	1.416	5.000	
208		2953	29533.04	1.070	5.000	
238		6554	65541.63	0.412	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	285	285	291	291	296
25	40	40	41	39	43
26	53	54	55	53	50
59	1330	1325	1342	1365	1353
103	3448	3516	3451	3448	3498
115	1393	1417	1442	1445	1465
205	3895	3932	3968	3958	3941
206	1385	1383	1407	1414	1406
207	1216	1217	1221	1251	1247
208	2900	2960	2963	2958	2985
238	6552	6516	6587	6544	6571

US EPA Tune Check Report

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	472.44	24.00	23.90 - 24.10	
25	64.75	24.95	24.90 - 25.10	
26	92.51	26.00	25.90 - 26.10	
59	2247.49	59.00	58.90 - 59.10	
103	6358.94	103.05	102.90 - 103.10	
115	2580.37	115.05	114.90 - 115.10	
205	7166.12	205.00	204.90 - 205.10	
206	2579.77	206.00	205.90 - 206.10	
207	2211.62	206.95	206.90 - 207.10	
208	5469.23	208.00	207.90 - 208.10	
238	11405.20	237.95	237.90 - 238.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
24	0.63	0.799	0.900	
25	0.63	0.780	0.900	
26	0.63	0.787	0.900	
59	0.61	0.772	0.900	
103	0.56	0.752	0.900	
115	0.57	0.768	0.900	
205	0.56	0.789	0.900	
206	0.57	0.788	0.900	
207	0.56	0.761	0.900	
208	0.56	0.800	0.900	
238	0.62	0.847	0.900	

Integration Time [sec] 0.1

Acquisition Time [sec] 283.400000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas Dilution Gas 0.23 L/min

US EPA Tune Check Report

RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching		Nebulizer Pump		Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.1 V	Deflect	-1.6 V
Extract 2	-175.0 V	Cell Entrance	-36 V	Plate Bias	-60 V
Omega Bias	-90 V	Cell Exit	-62 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	5.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	170 V		

QP Parameters

Mass Gain	147	Axis Gain	1.0026	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	0.07		

Hardware Settings

EM

Discriminator	4.6 mV	Analog HV	1663 V	Pulse HV	1188 V

Torch

Torch H	0.4 mm	Torch V	0.9 mm		

[No Gas]

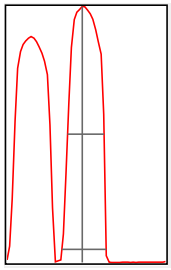
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7	10.00	5289	52887.93	0.305	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	5293	5295	5308	5264	5284

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	8060.17	6.95	6.90 - 7.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
7	0.68	0.827	0.900	

Integration Time [sec] 0.1

US EPA Tune Check Report

Acquisition Time [sec]	36.9
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas		Dilution Gas	0.23 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching		Nebulizer Pump		Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.8 V	Deflect	16.0 V
Extract 2	-190.0 V	Cell Entrance	-20 V	Plate Bias	-50 V
Omega Bias	-90 V	Cell Exit	-52 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	170 V		

QP Parameters

Mass Gain	147	Axis Gain	1.0026	QP Bias	-5.0 V
Mass Offset	126	Axis Offset	0.07		

Hardware Settings

EM

Discriminator	4.6 mV	Analog HV	1663 V	Pulse HV	1188 V

Torch

Torch H	0.4 mm	Torch V	0.9 mm

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
6	Li	0.083401	☑
9	Be	0.095873	☑
23	Na	0.102811	☑
24	Mg	0.107554	☑
27	Al	0.112574	☑
39	K	0.114410	☑
45	Sc	0.115706	☑
48	Ti	0.118586	☑
51	V	0.119484	☑
52	Cr	0.121039	☑
55	Mn	0.123426	☑
59	Co	0.127171	☑
60	Ni	0.129480	☑
63	Cu	0.132131	☑
66	Zn	0.131427	☑
72	Ge	0.130015	☑
75	As	0.128497	☑
88	Sr	0.131740	☑
89		0.129521	☑
98	Mo	0.130636	☑
102	Ru	0.133367	☑
106	Pd	0.137196	☑
114	Cd	0.139440	☑
115	In	0.141672	☑
118	Sn	0.138302	☑

	Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
	121	Sb	0.138902	☑
	138	Ba	0.140385	☑
	175	Lu	0.148809	☑
	193	Ir	0.146729	☑
	205		0.152192	☑
	208	Pb	0.152729	☑
	209	Bi	0.152995	☑
	232	Th	0.148236	☑
	238	U	0.152956	☑

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	001SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T09:44:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	002SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T09:47:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	003SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T09:51:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	004SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T09:55:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	005SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T09:58:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	006SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:02:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	007SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:05:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	008SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:09:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	009SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:13:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	010SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:16:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	011SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:28:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	012SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:31:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	013SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:35:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample List

Acq/Data Batch D:\Agilent\ICPMH\1\DATA\ALL041723.b

Block List

Acquisition Order

Sequence Order	Block Name
1	Calibration Standards
2	Unknown Samples
3	Blank Samples

Blocks

Calibration Standards

#	Skip	Sample Type	Sample Name	Comment	Vial#	File Name	Level
1		Sample	rinse-7662933		1301		
2		Sample	rinse-7662933		1301		
3		Sample	rinse-7662933		3		
4		Sample	rinse-7662933		3		
5		Sample	rinse-7662933		3		
6		Sample	rinse-7662933		3		
7		Sample	rinse-7662933		3		
8		Sample	rinse-7662933		3		
9		Sample	rinse-7662933		3		
10		Sample	rinse-7662933		3		
11		Sample	rinse-7662933		3		
12		Sample	rinse-7662933		3		
13		Sample	rinse-7662933		3		
14		CalBlk	icis-7686738		1201		1
15		CalStd	ic-7686770	cal 4	1203		4
16		CalStd	ic-7686769	cal1	1202		3
17		ICV	icv-7686814		1204		
18		ICB	icb-7686738		2101		
19		LLICV	cri-7686815		1102		
20		ICSA	icsa-7686816		2102		
21		ICSB	icsab-7686817		2103		
22		Sample	rinse		2104		
23		LR	lra-7571631		2105		
24		Sample	rinse		2106		
25		CCV	ccv-7686771		1107		
26		CCB	ccb-7686738		1307		
27		LLCCV	ccvl-7686815		1102		
28		Blank	MB 280-608367/1-A	608367 200.8/6020b	2306		
29		LCS	LCS 280-608367/2-A	608367 200.8/6020b	2307		
30		LCS	LCSD 280-608367/3-A	608367 200.8/6020b	2308		
31		Sample	280-174857-A-1-A	608367 200.8/6020b	2309		
32		Sample	280-174839-A-4-A	608367 200.8/6020b	2310		
33		Sample	280-174839-A-4-Asd@5	608367 200.8/6020b	2311		
34		Sample	280-174839-A-4-B MS	608367 200.8/6020b	2312		

Sample List

#	Skip	Sample Type	Sample Name	Comment	Vial#	File Name	Level
35		Sample	280-174839-A-4-C MSD	608367 200.8/6020b	2401		
36		Sample	280-174839-A-4-Apds	608367 200.8/6020b	2402		
37		CCV	ccv-7686771		1107		
38		CCB	ccb-7686738		1307		
39		Sample	MB 280-607692/1-A	607692 6020b	3101		
40		Sample	LCS 280-607692/2-A		3102		
41		Sample	280-174542-D-4-A		3103		
42		Sample	280-174542-D-4-A		3104		
43		Sample	280-174542-D-4-B MS		3105		
44		Sample	280-174542-D-4-C MSD		3106		
45		Sample	280-174542-D-4-A		3107		
46		Sample	280-174494-C-1-A		3108		
47		Sample	280-174494-C-2-A		3109		
48		Sample			3110		
49		Sample			3111		
50		Sample			3112		
51		Sample			3201		
52		Sample			3202		
53		Sample			3203		
54		Sample			3204		
55		Sample			3205		
56		Sample			3206		
57		Sample			3207		
58		Sample			3208		
59		Sample			3209		
60		Sample			3210		
61		Sample			3211		
62		Sample			3212		
63		Sample			3301		
64		Sample			3302		
65		Sample			3303		
66		Sample			3304		
67		Sample			3305		
68		Sample			3306		
69		Sample			3307		
70		Sample			3308		
71		Sample			3309		
72		Sample			3310		
73		Sample			3311		
74		Sample			3312		
75		Sample			3401		
76		Sample			3402		
77		Sample			3403		
78		Sample			3404		
79		Sample			3405		

Sample List

#	Skip	Sample Type	Sample Name	Comment	Vial#	File Name	Level
80		Sample			3406		
81		Sample			3407		
82		Sample			3408		
83		Sample			3409		
84		Sample			3410		
85		Sample			3411		
86		Sample			3412		

Calibration Blank Report

Sample Table

Sample Name	icis-7686738
Data File Name	014CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:39:04-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	3	No Gas	889848	0.00
Be	9	1	HMI H2	37	154.85
B	11	1	HMI H2	827	1.14
Na	23	2	HMI He	20259	0.02
Mg	24	2	HMI He	213	12.10
Al	27	2	HMI He	80	15.63
K	39	2	HMI He	42665	0.01
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	2654	0.20
Cr	52	2	HMI He	2504	0.04
Mn	55	2	HMI He	180	10.69
(Fe)	57	2	HMI He	263	6.66
Co	59	2	HMI He	70	40.82
Ni	60	2	HMI He	427	3.22
Cu	63	2	HMI He	1473	0.25
Zn	66	2	HMI He	413	9.30
As	75	2	HMI He	148	2.24
Se	78	1	HMI H2	11	731.84
Sr	88	2	HMI He	37	154.83
Zr	90	2	HMI He	617	2.66
Mo	95	2	HMI He	33	259.81
Ag	107	2	HMI He	47	95.59
Cd	111	2	HMI He	17	549.91
Sn	120	2	HMI He	943	0.65
Sb	121	2	HMI He	33	137.48
Ba	137	2	HMI He	90	32.66
W	182	2	HMI He	1180	0.50
Tl	205	2	HMI He	773	1.62
Pb	208	2	HMI He	3850	0.08
Th	232	2	HMI He	8917	0.02
U	238	2	HMI He	3070	0.20

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal standard	6	1	HMI H2	259861	0.25
Sc (IS)	45	1	HMI H2	9102038	0.20
Sc (IS)	45	2	HMI He	903588	1.20
Sc (IS)	45	3	No Gas	16459035	1.44
Ge Internal standard	72	1	HMI H2	4919618	0.65
Ge Internal standard	72	2	HMI He	1043503	0.76
In Internal standard	115	2	HMI He	3551384	1.30
Ho-165	165	2	HMI He	13518981	0.83
Ir (IS)	193	2	HMI He	10147609	0.59

Calibration Standard Report

Sample Table

Sample Name	ic-7686770
Data File Name	015CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:43:18-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	cal 4
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	3	No Gas	860901	0.00
Be	9	1	HMI H2	43	171.19
B	11	1	HMI H2	1013	1.42
Na	23	2	HMI He	20213176	0.00
Mg	24	2	HMI He	1858878	0.00
Al	27	2	HMI He	107	25.38
K	39	2	HMI He	1310165	0.00
Ti	47	2	HMI He	10	1000.00
V	51	2	HMI He	3370	0.51
Cr	52	2	HMI He	2774	0.25
Mn	55	2	HMI He	243	12.90
(Fe)	57	2	HMI He	293	5.49
Co	59	2	HMI He	147	22.93
Ni	60	2	HMI He	467	4.64
Cu	63	2	HMI He	1934	0.15
Zn	66	2	HMI He	563	1.93
As	75	2	HMI He	159	5.87
Se	78	1	HMI H2	12	277.78
Sr	88	2	HMI He	280	5.56
Zr	90	2	HMI He	660	1.51
Mo	95	2	HMI He	70	53.99
Ag	107	2	HMI He	93	6.63
Cd	111	2	HMI He	47	132.55
Sn	120	2	HMI He	937	0.17
Sb	121	2	HMI He	107	22.12
Ba	137	2	HMI He	210	12.62
W	182	2	HMI He	1203	0.56
Tl	205	2	HMI He	957	1.41
Pb	208	2	HMI He	3977	0.07
Th	232	2	HMI He	8503	0.02
U	238	2	HMI He	2870	0.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	247023	1.05	259861	95.06	60	120	
Sc (IS)	45	1	HMI H2	9030883	0.21	9102038	99.22	60	120	
Sc (IS)	45	2	HMI He	912143	0.18	903588	100.95	60	120	
Sc (IS)	45	3	No Gas	16581525	2.17	16459035	100.74	60	120	
Ge Internal standard	72	1	HMI H2	4783405	0.59	4919618	97.23	60	120	
Ge Internal standard	72	2	HMI He	1024053	0.67	1043503	98.14	60	120	
In Internal standard	115	2	HMI He	3532330	0.25	3551384	99.46	60	120	
Ho-165	165	2	HMI He	13437733	0.69	13518981	99.40	60	120	
Ir (IS)	193	2	HMI He	9970928	0.39	10147609	98.26	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7686769
Data File Name	016CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:46:50-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	cal1
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	3	No Gas	2281154	0.00
Be	9	1	HMI H2	23293	0.02
B	11	1	HMI H2	166585	0.00
Na	23	2	HMI He	456110	0.00
Mg	24	2	HMI He	191209	0.00
Al	27	2	HMI He	54698	0.00
K	39	2	HMI He	169151	0.00
Ti	47	2	HMI He	2710	0.11
V	51	2	HMI He	96892	0.00
Cr	52	2	HMI He	126563	0.00
Mn	55	2	HMI He	57680	0.01
(Fe)	57	2	HMI He	49063	0.01
Co	59	2	HMI He	195133	0.00
Ni	60	2	HMI He	55496	0.00
Cu	63	2	HMI He	149277	0.00
Zn	66	2	HMI He	28956	0.01
As	75	2	HMI He	22519	0.01
Se	78	1	HMI H2	13769	0.03
Sr	88	2	HMI He	127609	0.00
Zr	90	2	HMI He	923	0.65
Mo	95	2	HMI He	75024	0.00
Ag	107	2	HMI He	250378	0.00
Cd	111	2	HMI He	38601	0.01
Sn	120	2	HMI He	104724	0.00
Sb	121	2	HMI He	112156	0.00
Ba	137	2	HMI He	31078	0.00
W	182	2	HMI He	311706	0.00
Tl	205	2	HMI He	648719	0.00
Pb	208	2	HMI He	886745	0.00
Th	232	2	HMI He	985746	0.00
U	238	2	HMI He	1040218	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	256235	0.88	259861	98.60	60	120	
Sc (IS)	45	1	HMI H2	9159278	0.02	9102038	100.63	60	120	
Sc (IS)	45	2	HMI He	907154	0.84	903588	100.39	60	120	
Sc (IS)	45	3	No Gas	16415591	0.52	16459035	99.74	60	120	
Ge Internal standard	72	1	HMI H2	4947913	0.73	4919618	100.58	60	120	
Ge Internal standard	72	2	HMI He	1064131	0.18	1043503	101.98	60	120	
In Internal standard	115	2	HMI He	3575146	0.83	3551384	100.67	60	120	
Ho-165	165	2	HMI He	13702625	0.15	13518981	101.36	60	120	
Ir (IS)	193	2	HMI He	9985258	0.23	10147609	98.40	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7686814
Data File Name	017_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:50:25-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	116.787	ppb	0.285	1690634	80	146.0	90	110	>+\-10%
Be	9	1	6	39.619	ppb	0.687	8946	40	99.0	90	110	
B	11	1	6	848.368	ppb	2.000	136779	400	212.1	90	110	>+\-10%
Na	23	2	45	14098.569	ppb	0.383	2826988	12800	110.1	90	110	>+\-10%
Mg	24	2	45	4927.473	ppb	0.871	451666	4800	102.7	90	110	
Al	27	2	45	810.815	ppb	2.301	22028	800	101.4	90	110	
K	39	2	45	4799.002	ppb	1.081	342210	4800	100.0	90	110	
Ca	40	1	45	5173.921	ppb	0.823	7659523	4800	107.8	90	110	
(Ca)	44	1	45	4681.278	ppb	0.613	231241	4800	97.5	10	110	
V	51	2	72	41.101	ppb	1.822	40801	40	102.8	90	110	
Cr	52	2	72	40.526	ppb	1.896	52022	40	101.3	90	110	
Mn	55	2	72	40.191	ppb	4.423	22940	40	100.5	90	110	
Fe	56	1	72	843.392	ppb	1.427	2688061	800	105.4	90	110	
(Fe)	56	2	72	751.567	ppb	1.125	798011	800	93.9	90	110	
(Fe)	57	2	72	820.393	ppb	1.423	19986	800	102.5	90	110	
Co	59	2	72	39.338	ppb	1.152	75669	40	98.3	90	110	
Ni	60	2	72	37.633	ppb	4.841	20840	40	94.1	90	110	
Cu	63	2	72	39.626	ppb	1.486	59166	40	99.1	90	110	
Zn	66	2	72	76.940	ppb	2.323	22042	80	96.2	90	110	
As	75	2	72	39.572	ppb	0.958	8869	40	98.9	90	110	
Se	78	1	72	41.487	ppb	1.212	5601	40	103.7	90	110	
Sr	88	2	72	119.081	ppb	2.120	74862	80	148.9	90	110	>+\-10%
Zr	90	2	72	17.637	ppb	154.453	670	40	44.1	90	110	>+\-10%
Mo	95	2	115	40.683	ppb	0.675	30439	40	101.7	90	110	
Ag	107	2	115	79.010	ppb	1.606	197152	80	98.8	90	110	
Cd	111	2	115	39.303	ppb	3.606	15124	40	98.3	90	110	
Sn	120	2	115	38.304	ppb	1.768	40566	40	95.8	90	110	
Sb	121	2	115	40.197	ppb	1.273	44948	40	100.5	90	110	
Ba	137	2	115	40.172	ppb	1.980	12495	40	100.4	90	110	
Tl	205	2	165	39.791	ppb	0.510	256057	40	99.5	90	110	
Pb	208	2	165	39.615	ppb	1.063	350159	40	99.0	90	110	
Th	232	2	193	78.908	ppb	2.245	779495	80	98.6	90	110	
U	238	2	193	42.948	ppb	1.345	448372	40	107.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	247785	0.63	259861	95.35	60	120	
Sc (IS)	45	1	HMI H2	9051043	0.70	9102038	99.44	60	120	
Sc (IS)	45	2	HMI He	899297	0.37	903588	99.53	60	120	
Sc (IS)	45	3	No Gas	16312664	1.36	16459035	99.11	60	120	
Ge Internal standard	72	1	HMI H2	4846909	0.83	4919618	98.52	60	120	
Ge Internal standard	72	2	HMI He	1048379	1.03	1043503	100.47	60	120	
In Internal standard	115	2	HMI He	3563169	1.41	3551384	100.33	60	120	
Ho-165	165	2	HMI He	13567434	0.56	13518981	100.36	60	120	
Ir (IS)	193	2	HMI He	9983311	0.45	10147609	98.38	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7686738
Data File Name	018_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:54:00-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	1.365	ppb	95.8	904445	10	
Be	9	1	0.003	ppb	2647.5	37	0.5	
B	11	1	48.770	ppb	2.4	8819	0.5	>RL
Na	23	2	-0.336	ppb	-804.8	20156	25	
Mg	24	2	0.044	ppb	1595.2	217	25	
Al	27	2	0.866	ppb	149.9	103	15	
K	39	2	-11.056	ppb	-176.0	41876	50	
Ti	47	2	0.123	ppb	173.2	3	0.5	
V	51	2	0.386	ppb	56.8	3047	1	
Cr	52	2	-0.130	ppb	-218.1	2374	1	
Mn	55	2	0.072	ppb	133.3	223	0.5	
(Fe)	57	2	-0.677	ppb	-496.7	250	25	
Co	59	2	0.044	ppb	60.1	157	0.5	
Ni	60	2	-0.076	ppb	-192.4	390	1	
Cu	63	2	-0.019	ppb	-323.2	1463	1	
Zn	66	2	-0.157	ppb	-170.9	373	5	
As	75	2	-0.117	ppb	-97.0	124	1	
Se	78	1	-0.019	ppb	-158.9	8	1	
Sr	88	2	0.010	ppb	184.0	43	0.5	
Zr	90	2	-17.224	ppb	-184.6	573	1	
Mo	95	2	0.057	ppb	34.6	77	0.5	
Ag	107	2	-0.004	ppb	-109.7	37	1	
Cd	111	2	0.034	ppb	200.3	30	0.5	
Sn	120	2	-0.084	ppb	-158.0	867	1	
Sb	121	2	0.124	ppb	33.7	173	0.6	
Ba	137	2	-0.047	ppb	-101.4	77	0.5	
W	182	2	0.017	ppb	238.5	1240	1	
Tl	205	2	-0.005	ppb	-167.8	743	0.1	
Pb	208	2	-0.038	ppb	-30.6	3547	0.5	
Th	232	2	0.568	ppb	12.1	14558	1	
U	238	2	-0.010	ppb	-226.7	2970	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	253890	0.99	259861	97.70	60	120	
Sc (IS)	45	1	HMI H2	9084069	1.00	9102038	99.80	60	120	
Sc (IS)	45	2	HMI He	901568	0.23	903588	99.78	60	120	
Sc (IS)	45	3	No Gas	16552166	0.44	16459035	100.57	60	120	
Ge Internal standard	72	1	HMI H2	4847970	0.95	4919618	98.54	60	120	
Ge Internal standard	72	2	HMI He	1056021	0.24	1043503	101.20	60	120	
In Internal standard	115	2	HMI He	3594681	0.70	3551384	101.22	60	120	
Ho-165	165	2	HMI He	13611634	0.60	13518981	100.69	60	120	
Ir (IS)	193	2	HMI He	10150764	0.69	10147609	100.03	60	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	cri-7686815
Data File Name	019LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T10:59:26-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	12.003	ppb	10.354	982029	10	120.0	80	120	>+/-30%
Be	9	1	6	1.198	ppb	12.145	320	1	119.8	80	120	
B	11	1	6	112.633	ppb	2.631	19809	10	1126.3	80	120	>+/-30%
Na	23	2	45	312.040	ppb	2.490	83791	300	104.0	80	120	
Mg	24	2	45	52.664	ppb	4.734	5131	50	105.3	80	120	
Al	27	2	45	52.739	ppb	23.110	1537	50	105.5	80	120	
K	39	2	45	115.112	ppb	10.497	50560	120	95.9	80	120	
Ca	40	1	45	214.543	ppb	0.650	366591	200	107.3	80	120	
V	51	2	72	5.450	ppb	5.053	7806	5	109.0	80	120	
Cr	52	2	72	2.220	ppb	18.368	5281	2	111.0	80	120	
Mn	55	2	72	0.995	ppb	26.324	753	1	99.5	80	120	
Fe	56	1	72	48.276	ppb	0.549	182408	50	96.6	80	120	
(Fe)	57	2	72	51.289	ppb	7.274	1513	50	102.6	80	120	
Co	59	2	72	1.101	ppb	5.840	2210	1	110.1	80	120	
Ni	60	2	72	2.002	ppb	23.286	1530	2	100.1	80	120	
Cu	63	2	72	2.080	ppb	13.369	4557	2	104.0	80	120	
Zn	66	2	72	9.598	ppb	17.232	3144	10	96.0	80	120	
As	75	2	72	5.298	ppb	4.081	1331	5	106.0	80	120	
Se	78	1	72	4.957	ppb	10.342	695	5	99.1	80	120	
Sr	88	2	72	5.140	ppb	10.088	3300	5	102.8	80	120	
Zr	90	2	72	38.980	ppb	34.468	740	0.5	7796.0	80	120	>+/-30%
Mo	95	2	115	2.187	ppb	6.808	1667	2	109.4	80	120	
Ag	107	2	115	0.964	ppb	14.847	2450	1	96.4	80	120	
Cd	111	2	115	0.859	ppb	7.579	347	1	85.9	80	120	
Sn	120	2	115	9.731	ppb	7.212	11001	10	97.3	80	120	
Sb	121	2	115	2.054	ppb	10.151	2327	2	102.7	80	120	
Ba	137	2	115	1.199	ppb	20.892	460	1	119.9	80	120	
Tl	205	2	165	0.973	ppb	5.247	7042	1	97.3	80	120	
Pb	208	2	165	1.035	ppb	4.922	12956	1	103.5	80	120	
Th	232	2	193	1.079	ppb	5.028	19757	1	107.9	80	120	
U	238	2	193	0.992	ppb	0.093	13617	1	99.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	260444	0.72	259861	100.22	60	120	
Sc (IS)	45	1	HMI H2	9159220	0.58	9102038	100.63	60	120	
Sc (IS)	45	2	HMI He	915772	0.96	903588	101.35	60	120	
Sc (IS)	45	3	No Gas	16601017	1.39	16459035	100.86	60	120	
Ge Internal standard	72	1	HMI H2	4960200	0.81	4919618	100.82	60	120	
Ge Internal standard	72	2	HMI He	1059517	0.83	1043503	101.53	60	120	
In Internal standard	115	2	HMI He	3560455	0.47	3551384	100.26	60	120	
Ho-165	165	2	HMI He	13611386	0.98	13518981	100.68	60	120	
Ir (IS)	193	2	HMI He	10214606	1.21	10147609	100.66	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-7686816
Data File Name	020ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:03:54-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-11.225	ppb	-22.6	800287	1	
Be	9	1	6	0.042	ppb	720.0	43	1	
B	11	1	6	13.183	ppb	3.5	2837	1	>RL or LOD
Ti	47	2	45	1883.057	ppb	0.9	50126	1	>RL or LOD
V	51	2	72	0.446	ppb	47.5	2990	1	
Cr	52	2	72	1.149	ppb	10.5	3804	1	>RL or LOD
Mn	55	2	72	0.213	ppb	44.8	293	0.95	
Co	59	2	72	0.201	ppb	17.2	443	0.2	>RL or LOD
Ni	60	2	72	-0.093	ppb	-102.3	367	1	
Cu	63	2	72	0.404	ppb	25.1	2007	1	
Zn	66	2	72	0.760	ppb	25.5	610	1	
As	75	2	72	0.026	ppb	162.8	150	1	
Se	78	1	72	0.033	ppb	141.7	15	1	
Sr	88	2	72	0.854	ppb	9.1	557	1	
Zr	90	2	72	876.055	ppb	18.1	3074	1	>RL or LOD
Mo	95	2	115	2083.884	ppb	0.9	1479500	2000	>RL or LOD
Ag	107	2	115	0.012	ppb	50.8	73	1	
Cd	111	2	115	0.432	ppb	35.9	173	1	
Sn	120	2	115	-0.056	ppb	-315.1	843	1	
Sb	121	2	115	0.130	ppb	17.7	170	1	
Ba	137	2	115	1.662	ppb	3.3	573	0.95	>RL or LOD
W	182	2	165	0.083	ppb	34.9	1433	1	
Tl	205	2	165	-0.028	ppb	-94.7	593	1	
Pb	208	2	165	0.043	ppb	31.9	4217	1	
Th	232	2	193	0.037	ppb	115.5	8823	1	
U	238	2	193	0.008	ppb	232.5	2994	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	242291	0.42	259861	93.24	60	120	
Sc (IS)	45	1	HMI H2	8900429	0.38	9102038	97.79	60	120	
Sc (IS)	45	2	HMI He	891058	0.46	903588	98.61	60	120	
Sc (IS)	45	3	No Gas	16232665	0.28	16459035	98.62	60	120	
Ge Internal standard	72	1	HMI H2	4756618	0.69	4919618	96.69	60	120	
Ge Internal standard	72	2	HMI He	1017786	0.84	1043503	97.54	60	120	
In Internal standard	115	2	HMI He	3384437	1.09	3551384	95.30	60	120	
Ho-165	165	2	HMI He	13500301	1.41	13518981	99.86	60	120	
Ir (IS)	193	2	HMI He	9641882	0.76	10147609	95.02	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-7686817
Data File Name	021ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:07:24-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	178.972	ppb	2.227	2113887	100	179.0	80	120	>+\-20%
Be	9	1	6	99.320	ppb	2.898	21184	100	99.3	80	120	
B	11	1	6	1069.971	ppb	0.479	163193	100	1070.0	80	120	>+\-20%
Ca	40	1	45	105293.634	ppb	0.389	153070558	100	105293.6	80	120	>+\-20%
V	51	2	72	96.708	ppb	0.877	89418	100	96.7	80	120	
Cr	52	2	72	97.900	ppb	1.166	118177	100	97.9	80	120	
Mn	55	2	72	95.364	ppb	2.300	52454	100	95.4	80	120	
Fe	56	1	72	94516.662	ppb	0.759	287880382	100	94516.7	80	120	>+\-20%
Co	59	2	72	95.229	ppb	1.642	177156	100	95.2	80	120	
Ni	60	2	72	92.536	ppb	0.597	48993	100	92.5	80	120	
Cu	63	2	72	94.165	ppb	0.700	134096	100	94.2	80	120	
Zn	66	2	72	93.597	ppb	0.229	25865	100	93.6	80	120	
As	75	2	72	94.705	ppb	2.434	20340	100	94.7	80	120	
Se	78	1	72	96.911	ppb	1.446	12609	100	96.9	80	120	
Sr	88	2	72	192.503	ppb	2.574	117102	100	192.5	80	120	>+\-20%
Zr	90	2	72	282.332	ppb	13.968	1393	100	282.3	80	120	>+\-20%
Mo	95	2	115	2109.587	ppb	0.457	1501394	100	2109.6	80	120	>+\-20%
Ag	107	2	115	94.636	ppb	1.083	224882	100	94.6	80	120	
Cd	111	2	115	96.091	ppb	2.255	35196	100	96.1	80	120	
Sn	120	2	115	96.417	ppb	0.534	95855	100	96.4	80	120	
Sb	121	2	115	97.478	ppb	2.505	103764	100	97.5	80	120	
Ba	137	2	115	96.945	ppb	0.384	28597	100	96.9	80	120	
W	182	2	165	99.946	ppb	0.663	307100	100	99.9	80	120	
Tl	205	2	165	91.673	ppb	1.625	586305	100	91.7	80	120	
Pb	208	2	165	92.013	ppb	0.627	804601	100	92.0	80	120	
Th	232	2	193	99.072	ppb	0.321	932743	100	99.1	80	120	
U	238	2	193	104.237	ppb	0.670	1035386	100	104.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	234666	1.27	259861	90.30	60	120	
Sc (IS)	45	1	HMI H2	8939367	0.19	9102038	98.21	60	120	
Sc (IS)	45	2	HMI He	898758	0.97	903588	99.47	60	120	
Sc (IS)	45	3	No Gas	16257719	1.65	16459035	98.78	60	120	
Ge Internal standard	72	1	HMI H2	4676060	0.33	4919618	95.05	60	120	
Ge Internal standard	72	2	HMI He	1014554	0.84	1043503	97.23	60	120	
In Internal standard	115	2	HMI He	3392917	0.49	3551384	95.54	60	120	
Ho-165	165	2	HMI He	13507516	0.11	13518981	99.92	60	120	
Ir (IS)	193	2	HMI He	9536129	0.06	10147609	93.97	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	022SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:10:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-0.417	ppb	-0.417	-137.41	884709	50000	
Be	9	1	6	-0.065	ppb	-0.065	-139.00	20	2000	
B	11	1	6	26.897	ppb	26.897	3.04	5034	2000	
Na	23	2	45	45.995	ppb	45.995	12.31	29393	400000	
Mg	24	2	45	9.121	ppb	9.121	19.04	1050	400000	
Al	27	2	45	6.520	ppb	6.520	20.36	257	400000	
Si	28	2	45	-5.281	ppb	-5.281	-10.64	16085	10000	
P	31	2	45	13.667	ppb	13.667	91.46	162	10000	
K	39	2	45	12.578	ppb	12.578	89.75	43346	400000	
Ca	40	1	45	19.018	ppb	19.018	17.90	73772	400000	
Ti	47	2	45	0.617	ppb	0.617	124.77	17	4000	
V	51	2	72	0.974	ppb	0.974	41.23	3527	2000	
Cr	52	2	72	-0.070	ppb	-0.070	-197.11	2400	5000	
Mn	55	2	72	-0.040	ppb	-0.040	-146.68	157	10000	
Fe	56	1	72	24.843	ppb	24.843	17.63	102912	10000	
(Fe)	57	2	72	12.293	ppb	12.293	37.26	553	400000	
Co	59	2	72	0.011	ppb	0.011	97.23	90	2000	
Ni	60	2	72	-0.031	ppb	-0.031	-616.63	407	5000	
Cu	63	2	72	0.469	ppb	0.469	14.54	2137	5000	
Zn	66	2	72	-0.491	ppb	-0.491	-24.03	273	5000	
As	75	2	72	-0.076	ppb	-0.076	-59.33	131	2000	
Se	78	1	72	0.043	ppb	0.043	143.12	16	2000	
Sr	88	2	72	0.017	ppb	0.017	367.07	47	4000	
Zr	90	2	72	-30.803	ppb	-30.803	-151.58	523	1000	
Mo	95	2	115	3.581	ppb	3.581	8.34	2687	2000	
Ag	107	2	115	0.015	ppb	0.015	95.51	83	100	
Cd	111	2	115	-0.008	ppb	-0.008	-485.06	13	2000	
Sn	120	2	115	-0.174	ppb	-0.174	-50.28	760	2000	
Sb	121	2	115	0.106	ppb	0.106	69.96	150	1000	
Ba	137	2	115	-0.140	ppb	-0.140	-97.47	47	5000	
W	182	2	165	0.201	ppb	0.201	20.67	1784	100	
Tl	205	2	165	0.017	ppb	0.017	152.31	873	2000	
Pb	208	2	165	-0.077	ppb	-0.077	-17.74	3157	5000	
Th	232	2	193	0.352	ppb	0.352	9.83	12219	2000	
U	238	2	193	0.024	ppb	0.024	67.21	3277	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	244586	0.58	259861	94.12	60	120	
Sc (IS)	45	1	HMI H2	8955702	0.14	9102038	98.39	60	120	
Sc (IS)	45	2	HMI He	901354	0.36	903588	99.75	60	120	
Sc (IS)	45	3	No Gas	16418334	1.03	16459035	99.75	60	120	
Ge Internal standard	72	1	HMI H2	4780150	0.91	4919618	97.17	60	120	
Ge Internal standard	72	2	HMI He	1035932	0.25	1043503	99.27	60	120	
In Internal standard	115	2	HMI He	3532453	0.41	3551384	99.47	60	120	
Ho-165	165	2	HMI He	13434601	0.37	13518981	99.38	60	120	
Ir (IS)	193	2	HMI He	9990448	1.83	10147609	98.45	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	lra-7571631
Data File Name	023_LR.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:14:30-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	2090.343	ppb	1.065	410459	2000	104.5	90	110	
Na	23	2	45	197103.271	ppb	1.249	39357285	200000	98.6	90	110	
Mg	24	2	45	192161.255	ppb	1.306	17649950	200000	96.1	90	110	
Al	27	2	45	298226.998	ppb	1.049	8093727	300000	99.4	90	110	
K	39	2	45	191357.444	ppb	0.716	12025276	200000	95.7	90	110	
Ca	40	1	45	205496.103	ppb	0.666	296681022	200000	102.7	90	110	
V	51	2	72	2071.107	ppb	0.805	1843697	2000	103.6	90	110	
Cr	52	2	72	4847.461	ppb	0.428	5676371	5000	96.9	90	110	
(Cr)	53	2	72	4831.068	ppb	0.215	689922	5000	96.6	90	110	
Mn	55	2	72	9744.156	ppb	0.808	5288087	10000	97.4	90	110	
Fe	56	1	72	191783.109	ppb	0.780	580433271	200000	95.9	90	110	
Co	59	2	72	1934.677	ppb	1.120	3562251	2000	96.7	90	110	
Ni	60	2	72	4753.512	ppb	0.616	2470810	5000	95.1	90	110	
Cu	63	2	72	4917.517	ppb	0.271	6860407	5000	98.4	90	110	
Zn	66	2	72	5103.864	ppb	0.636	1375021	5000	102.1	90	110	
As	75	2	72	1996.981	ppb	0.300	421769	2000	99.8	90	110	
Se	78	1	72	1927.446	ppb	1.926	249001	2000	96.4	90	110	
(Se)	82	1	72	1684.373	ppb	1.396	110081	2000	84.2	90	110	LRS Main CR1 Failed
Sr	88	2	72	5202.888	ppb	0.352	3132557	5000	104.1	90	110	
Mo	95	2	115	2104.648	ppb	0.343	1490653	2000	105.2	90	110	
Cd	111	2	115	1915.932	ppb	1.392	698091	2000	95.8	90	110	
(Cd)	114	2	115	2025.208	ppb	1.145	1889849	2000	101.3	90	110	
Sn	120	2	115	2077.534	ppb	1.008	2036968	2000	103.9	90	110	
Sb	121	2	115	990.897	ppb	0.340	1049327	1000	99.1	90	110	
Ba	137	2	115	5351.320	ppb	0.101	1566265	5000	107.0	90	110	
Tl	205	2	165	985.793	ppb	0.341	6225662	1000	98.6	90	110	
(Pb)	206	2	165	4866.071	ppb	0.925	10221833	5000	97.3	90	110	
(Pb)	207	2	165	4813.701	ppb	0.768	9112663	5000	96.3	90	110	
Pb	208	2	165	4845.009	ppb	0.655	41688893	5000	96.9	90	110	
Th	232	2	193	1022.649	ppb	1.006	9452978	1000	102.3	90	110	
U	238	2	193	2099.299	ppb	0.866	20586550	2000	105.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	216319	0.96	259861	83.24	60	120	
Sc (IS)	45	1	HMI H2	8879216	0.57	9102038	97.55	60	120	
Sc (IS)	45	2	HMI He	901568	0.67	903588	99.78	60	120	
Sc (IS)	45	3	No Gas	15994419	2.07	16459035	97.18	60	120	
Ge Internal standard	72	1	HMI H2	4646880	1.38	4919618	94.46	60	120	
Ge Internal standard	72	2	HMI He	1004425	0.80	1043503	96.26	60	120	
In Internal standard	115	2	HMI He	3376518	0.62	3551384	95.08	60	120	
Ho-165	165	2	HMI He	13354452	0.98	13518981	98.78	60	120	
Ir (IS)	193	2	HMI He	9439797	0.82	10147609	93.02	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	024SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:17:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-4.685	ppb	-4.685	-72.96	872146	50000	
Be	9	1	6	2.033	ppb	2.033	4.01	497	2000	
B	11	1	6	8.802	ppb	8.802	22.49	2217	2000	
Na	23	2	45	149.138	ppb	149.138	15.96	50823	400000	
Mg	24	2	45	29.242	ppb	29.242	11.38	2947	400000	
Al	27	2	45	43.084	ppb	43.084	7.75	1270	400000	
Si	28	2	45	-1.426	ppb	-1.426	-181.19	17059	10000	
P	31	2	45	16.608	ppb	16.608	39.12	173	10000	
K	39	2	45	120.661	ppb	120.661	15.37	50974	400000	
Ca	40	1	45	74.502	ppb	74.502	13.31	156897	400000	
Ti	47	2	45	0.367	ppb	0.367	173.21	10	4000	
V	51	2	72	1.000	ppb	1.000	12.74	3627	2000	
Cr	52	2	72	1.906	ppb	1.906	5.12	4888	5000	
Mn	55	2	72	2.993	ppb	2.993	7.45	1894	10000	
Fe	56	1	72	78.723	ppb	78.723	15.51	277180	10000	
(Fe)	57	2	72	35.458	ppb	35.458	14.79	1127	400000	
Co	59	2	72	1.607	ppb	1.607	3.83	3187	2000	
Ni	60	2	72	1.847	ppb	1.847	21.48	1443	5000	
Cu	63	2	72	3.674	ppb	3.674	11.25	6892	5000	
Zn	66	2	72	1.299	ppb	1.299	23.14	787	5000	
As	75	2	72	0.679	ppb	0.679	4.90	301	2000	
Se	78	1	72	1.488	ppb	1.488	24.77	213	2000	
Sr	88	2	72	2.008	ppb	2.008	1.91	1310	4000	
Zr	90	2	72	-9.554	ppb	-9.554	-73.77	597	1000	
Mo	95	2	115	5.958	ppb	5.958	8.27	4561	2000	
Ag	107	2	115	0.002	ppb	0.002	902.90	53	100	
Cd	111	2	115	1.423	ppb	1.423	22.86	573	2000	
Sn	120	2	115	16.089	ppb	16.089	3.96	17871	2000	
Sb	121	2	115	7.211	ppb	7.211	9.55	8226	1000	
Ba	137	2	115	1.802	ppb	1.802	11.62	657	5000	
W	182	2	165	-0.051	ppb	-0.051	-23.99	1030	100	
Tl	205	2	165	0.975	ppb	0.975	5.57	7039	2000	
Pb	208	2	165	1.321	ppb	1.321	10.15	15427	5000	
Th	232	2	193	5.817	ppb	5.817	8.90	65451	2000	
U	238	2	193	0.954	ppb	0.954	5.62	12893	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	250029	1.10	259861	96.22	60	120	
Sc (IS)	45	1	HMI H2	9087842	0.64	9102038	99.84	60	120	
Sc (IS)	45	2	HMI He	916877	0.43	903588	101.47	60	120	
Sc (IS)	45	3	No Gas	16750833	1.78	16459035	101.77	60	120	
Ge Internal standard	72	1	HMI H2	4898013	0.27	4919618	99.56	60	120	
Ge Internal standard	72	2	HMI He	1057831	0.17	1043503	101.37	60	120	
In Internal standard	115	2	HMI He	3619547	1.30	3551384	101.92	60	120	
Ho-165	165	2	HMI He	13585472	1.26	13518981	100.49	60	120	
Ir (IS)	193	2	HMI He	9965479	0.65	10147609	98.21	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	025_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:21:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	51.775	ppb	2.558	11174	50	103.5	90	110	
Na	23	2	45	52160.237	ppb	0.605	10653619	51000	102.3	90	110	
Mg	24	2	45	10667.103	ppb	0.411	1000973	11000	97.0	90	110	
Al	27	2	45	1006.627	ppb	3.684	27984	1000	100.7	90	110	
K	39	2	45	10501.812	ppb	0.951	715144	11000	95.5	90	110	
Ca	40	1	45	11364.975	ppb	0.988	16828280	11000	103.3	90	110	
Ti	47	2	45	44.844	ppb	14.089	1233	50	89.7	90	110	>+\-10%
V	51	2	72	49.934	ppb	1.380	49029	50	99.9	90	110	
Cr	52	2	72	49.894	ppb	1.156	63508	50	99.8	90	110	
Mn	55	2	72	50.316	ppb	1.110	28699	50	100.6	90	110	
Fe	56	1	72	1033.616	ppb	0.065	3302381	1000	103.4	90	110	
Co	59	2	72	49.148	ppb	2.636	94571	50	98.3	90	110	
Ni	60	2	72	48.436	ppb	2.516	26719	50	96.9	90	110	
Cu	63	2	72	49.346	ppb	1.722	73362	50	98.7	90	110	
Zn	66	2	72	51.200	ppb	1.700	14817	50	102.4	90	110	
As	75	2	72	50.387	ppb	0.991	11259	50	100.8	90	110	
Se	78	1	72	48.474	ppb	0.623	6569	50	96.9	90	110	
Sr	88	2	72	100.421	ppb	1.642	63176	100	100.4	90	110	
Zr	90	2	72	120.502	ppb	78.295	970	50	241.0	90	110	>+\-10%
Mo	95	2	115	49.398	ppb	2.110	37334	50	98.8	90	110	
Ag	107	2	115	46.473	ppb	2.001	117168	50	92.9	90	110	
Cd	111	2	115	48.364	ppb	1.076	18802	50	96.7	90	110	
Sn	120	2	115	47.941	ppb	1.250	51050	50	95.9	90	110	
Sb	121	2	115	49.978	ppb	0.721	56451	50	100.0	90	110	
Ba	137	2	115	50.631	ppb	2.290	15889	50	101.3	90	110	
W	182	2	165	49.380	ppb	0.713	152512	50	98.8	90	110	
Tl	205	2	165	49.033	ppb	1.518	314320	50	98.1	90	110	
Pb	208	2	165	48.699	ppb	0.803	428161	50	97.4	90	110	
Th	232	2	193	49.699	ppb	0.379	486699	50	99.4	90	110	
U	238	2	193	49.009	ppb	0.647	503452	50	98.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	237143	2.13	259861	91.26	60	120	
Sc (IS)	45	1	HMI H2	9082457	0.80	9102038	99.78	60	120	
Sc (IS)	45	2	HMI He	920847	0.25	903588	101.91	60	120	
Sc (IS)	45	3	No Gas	16433645	0.88	16459035	99.85	60	120	
Ge Internal standard	72	1	HMI H2	4866979	1.16	4919618	98.93	60	120	
Ge Internal standard	72	2	HMI He	1048967	0.43	1043503	100.52	60	120	
In Internal standard	115	2	HMI He	3599531	1.05	3551384	101.36	60	120	
Ho-165	165	2	HMI He	13524046	0.76	13518981	100.04	60	120	
Ir (IS)	193	2	HMI He	9831476	0.27	10147609	96.88	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7686815
Data File Name	027LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:29:15-06:00
Sample Type	LLCCV
Dilution	1
Comment	6084889 6020a
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	5.272	ppb	44.594	928259	50	10.5	70	130	>+/-30%
Be	9	1	6	0.904	ppb	30.347	237	1	90.4	70	130	
Na	23	2	45	317.758	ppb	1.068	85644	300	105.9	70	130	
Mg	24	2	45	56.528	ppb	5.853	5534	50	113.1	70	130	
Al	27	2	45	58.712	ppb	14.162	1713	50	117.4	70	130	
K	39	2	45	117.959	ppb	17.119	51152	120	98.3	70	130	
Ca	40	1	45	221.370	ppb	0.968	375233	200	110.7	70	130	
V	51	2	72	5.321	ppb	2.786	7679	5	106.4	70	130	
Cr	52	2	72	2.241	ppb	7.042	5304	2	112.0	70	130	
Mn	55	2	72	1.242	ppb	4.630	893	1	124.2	70	130	
Fe	56	1	72	52.056	ppb	3.717	194512	50	104.1	70	130	
(Fe)	57	2	72	48.343	ppb	19.176	1440	50	96.7	70	130	
Co	59	2	72	0.986	ppb	7.746	1984	1	98.6	70	130	
Ni	60	2	72	2.009	ppb	14.713	1533	2	100.4	70	130	
Cu	63	2	72	2.262	ppb	7.521	4821	2	113.1	70	130	
Zn	66	2	72	10.247	ppb	8.002	3327	10	102.5	70	130	
As	75	2	72	4.992	ppb	4.843	1261	5	99.8	70	130	
Se	78	1	72	5.299	ppb	5.464	741	5	106.0	70	130	
Sr	88	2	72	5.731	ppb	5.031	3674	5	114.6	70	130	
Zr	90	2	72	61.894	ppb	48.182	807	0.5	12378.9	70	130	>+/-30%
Mo	95	2	115	2.189	ppb	14.626	1697	2	109.4	70	130	
Ag	107	2	115	0.893	ppb	9.699	2314	1	89.3	70	130	
Cd	111	2	115	0.955	ppb	20.734	390	1	95.5	70	130	
Sn	120	2	115	9.284	ppb	1.463	10724	10	92.8	70	130	
Sb	121	2	115	2.365	ppb	6.991	2720	2	118.3	70	130	
Ba	137	2	115	1.280	ppb	36.744	493	1	128.0	70	130	
W	182	2	165	-0.044	ppb	-42.176	1057	1	-4.4	70	130	>+/-30%
Tl	205	2	165	0.963	ppb	2.509	7005	1	96.3	70	130	
Pb	208	2	165	0.991	ppb	7.712	12616	1	99.1	70	130	
Th	232	2	193	1.068	ppb	6.984	19484	1	106.8	70	130	
U	238	2	193	1.017	ppb	2.720	13764	1	101.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	246324	1.06	259861	94.79	60	120	
Sc (IS)	45	1	HMI H2	9121959	0.14	9102038	100.22	60	120	
Sc (IS)	45	2	HMI He	923142	0.10	903588	102.16	60	120	
Sc (IS)	45	3	No Gas	16485454	0.88	16459035	100.16	60	120	
Ge Internal standard	72	1	HMI H2	4959190	1.66	4919618	100.80	60	120	
Ge Internal standard	72	2	HMI He	1058665	0.26	1043503	101.45	60	120	
In Internal standard	115	2	HMI He	3622550	0.67	3551384	102.00	60	120	
Ho-165	165	2	HMI He	13672117	1.13	13518981	101.13	60	120	
Ir (IS)	193	2	HMI He	10130491	0.23	10147609	99.83	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	028_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:32:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-0.199	ppb	-1133.3	907150	10	
Be	9	1	6	0.109	ppb	139.7	60	0.5	
B	11	1	6	11.995	ppb	6.6	2730	0.5	>RL
Na	23	2	45	-2.059	ppb	-59.5	20059	25	
Mg	24	2	45	2.310	ppb	20.8	430	25	
Al	27	2	45	1.426	ppb	26.8	120	15	
K	39	2	45	-6.957	ppb	-158.1	42662	50	
Ti	47	2	45	0.122	ppb	173.2	3	0.5	
V	51	2	72	0.604	ppb	69.9	3257	1	
Cr	52	2	72	-0.063	ppb	-219.2	2460	1	
Mn	55	2	72	0.077	ppb	144.2	227	0.5	
(Fe)	57	2	72	1.112	ppb	256.0	293	25	
Co	59	2	72	0.011	ppb	91.0	93	0.5	
Ni	60	2	72	0.001	ppb	23890.2	433	1	
Cu	63	2	72	0.057	ppb	103.1	1577	1	
Zn	66	2	72	0.028	ppb	1241.3	427	5	
As	75	2	72	-0.073	ppb	-176.6	134	1	
Se	78	1	72	0.000	ppb	29981.5	11	1	
Sr	88	2	72	-0.017	ppb	-197.0	27	0.5	
Zr	90	2	72	-38.802	ppb	-149.2	510	1	
Mo	95	2	115	0.066	ppb	95.2	83	0.5	
Ag	107	2	115	-0.003	ppb	-239.9	40	1	
Cd	111	2	115	0.000	ppb	42695.0	17	0.5	
Sn	120	2	115	-0.011	ppb	-1194.5	937	1	
Sb	121	2	115	0.131	ppb	28.7	180	0.6	
Ba	137	2	115	0.051	ppb	306.7	107	0.5	
W	182	2	165	-0.078	ppb	-34.4	950	1	
Tl	205	2	165	-0.051	ppb	-25.0	450	0.1	
Pb	208	2	165	-0.077	ppb	-20.3	3207	0.5	
Th	232	2	193	-0.001	ppb	-1538.6	8840	1	
U	238	2	193	0.042	ppb	66.1	3484	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	249538	1.08	259861	96.03	60	120	
Sc (IS)	45	1	HMI H2	9221898	0.33	9102038	101.32	60	120	
Sc (IS)	45	2	HMI He	912826	0.40	903588	101.02	60	120	
Sc (IS)	45	3	No Gas	16808524	1.56	16459035	102.12	60	120	
Ge Internal standard	72	1	HMI H2	4952217	1.25	4919618	100.66	60	120	
Ge Internal standard	72	2	HMI He	1057667	0.74	1043503	101.36	60	120	
In Internal standard	115	2	HMI He	3569017	0.77	3551384	100.50	60	120	
Ho-165	165	2	HMI He	13641014	0.57	13518981	100.90	60	120	
Ir (IS)	193	2	HMI He	10074230	0.36	10147609	99.28	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608367/1-A
Data File Name	029_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:36:23-06:00
Sample Type	Blank
Dilution	1
Comment	608367 6020b
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	-4.355	ppb	-32.29802819	868138	10
Be	9	1	6	0.034	ppb	324.578054	43	0.5
B	11	1	6	6.130	ppb	14.75312855	1800	0.5
Na	23	2	45	-1.932	ppb	-89.35185064	20002	25
Mg	24	2	45	2.325	ppb	41.76990306	430	25
Al	27	2	45	7.169	ppb	8.246744402	277	15
K	39	2	45	-24.823	ppb	-28.09545429	41358	50
Ti	47	2	45	0.122	ppb	173.2050808	3	0.5
V	51	2	72	1.051	ppb	28.8325464	3657	1
Cr	52	2	72	0.117	ppb	49.3350266	2670	1
Mn	55	2	72	0.219	ppb	29.96557741	307	0.5
(Fe)	57	2	72	2.948	ppb	63.89231861	337	25
Co	59	2	72	0.005	ppb	214.0356118	80	0.5
Ni	60	2	72	-0.405	ppb	-55.18170187	210	1
Cu	63	2	72	1.812	ppb	1.670163452	4137	1
Zn	66	2	72	1.064	ppb	15.34556615	717	5
As	75	2	72	-0.036	ppb	-245.1865931	142	1
Se	78	1	72	0.000	ppb	9843.959732	11	1
Sr	88	2	72	0.052	ppb	0.893132729	70	0.5
Zr	90	2	72	-24.681	ppb	-219.1139582	550	1
Mo	95	2	115	0.089	ppb	54.21871423	100	0.5
Ag	107	2	115	-0.010	ppb	-63.71939336	23	1
Cd	111	2	115	-0.009	ppb	-682.3420836	13	0.5
Sn	120	2	115	-0.132	ppb	-21.25514547	810	1
Sb	121	2	115	0.072	ppb	56.59468247	113	0.6
Ba	137	2	115	-0.110	ppb	-60.51649241	57	0.5
W	182	2	165	-0.054	ppb	-23.06953103	1007	1
Tl	205	2	165	-0.044	ppb	-11.47396731	487	0.1
Pb	208	2	165	-0.018	ppb	-15.98073978	3667	0.5
Th	232	2	193	-0.050	ppb	-39.95627285	8449	1
U	238	2	193	0.008	ppb	220.125633	3171	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	251803	0.57	259861	96.90	60	120	
Sc (IS)	45	1	HMI H2	9161523	0.75	9102038	100.65	60	120	
Sc (IS)	45	2	HMI He	909096	0.44	903588	100.61	60	120	
Sc (IS)	45	3	No Gas	16627201	1.10	16459035	101.02	60	120	
Ge Internal standard	72	1	HMI H2	4907283	0.44	4919618	99.75	60	120	
Ge Internal standard	72	2	HMI He	1053061	0.42	1043503	100.92	60	120	
In Internal standard	115	2	HMI He	3565471	0.49	3551384	100.40	60	120	
Ho-165	165	2	HMI He	13429097	0.80	13518981	99.34	60	120	
Ir (IS)	193	2	HMI He	10185113	0.82	10147609	100.37	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608367/2-A
Data File Name	030_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:40:05-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608367 6020b
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	42.040	42.040	ppb	15.060	1202217	400	10.5	80	120	>+/-20%
Be	9	1	6	41.278	41.278	ppb	5.891	9416	40	103.2	80	120	
Na	23	2	45	1148.494	1148.494	ppb	2.226	253642	40	2871.2	80	120	>+/-20%
Mg	24	2	45	806.216	806.216	ppb	1.661	75524	40	2015.5	80	120	>+/-20%
Al	27	2	45	828.996	828.996	ppb	3.229	22960	40	2072.5	80	120	>+/-20%
K	39	2	45	816.456	816.456	ppb	0.517	95277	40	2041.1	80	120	>+/-20%
V	51	2	72	42.493	42.493	ppb	1.630	42836	40	106.2	80	120	
Cr	52	2	72	43.355	43.355	ppb	1.585	56450	40	108.4	80	120	
Mn	55	2	72	41.728	41.728	ppb	2.333	24232	40	104.3	80	120	
(Fe)	57	2	72	852.409	852.409	ppb	1.141	21117	40	2131.0	80	120	>+/-20%
Co	59	2	72	42.901	42.901	ppb	0.569	83958	40	107.3	80	120	
Ni	60	2	72	41.291	41.291	ppb	2.740	23224	40	103.2	80	120	
Cu	63	2	72	42.701	42.701	ppb	1.348	64757	40	106.8	80	120	
Zn	66	2	72	43.192	43.192	ppb	1.806	12775	40	108.0	80	120	
As	75	2	72	41.294	41.294	ppb	1.473	9411	40	103.2	80	120	
Se	78	1	72	42.821	42.821	ppb	3.557	5940	40	107.1	80	120	
Mo	95	2	115	42.371	42.371	ppb	2.986	31712	40	105.9	80	120	
Ag	107	2	115	43.523	43.523	ppb	0.673	108682	40	108.8	80	120	
Cd	111	2	115	42.376	42.376	ppb	3.575	16316	40	105.9	80	120	
Sn	120	2	115	39.596	39.596	ppb	3.308	41920	40	99.0	80	120	
Sb	121	2	115	41.195	41.195	ppb	2.166	46084	40	103.0	80	120	
Ba	137	2	115	43.150	43.150	ppb	2.882	13423	40	107.9	80	120	
W	182	2	165	-0.063	-0.063	ppb	-59.524	1003	40	-0.2	80	120	>+/-20%
Tl	205	2	165	42.269	42.269	ppb	0.531	275394	40	105.7	80	120	
Pb	208	2	165	42.202	42.202	ppb	1.044	377474	40	105.5	80	120	
Th	232	2	193	39.584	39.584	ppb	0.849	407232	40	99.0	80	120	
U	238	2	193	40.739	40.739	ppb	0.560	438194	40	101.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	250373	0.27	259861	96.35	60	120	
Sc (IS)	45	1	HMI H2	9248591	0.50	9102038	101.61	60	120	
Sc (IS)	45	2	HMI He	916785	0.50	903588	101.46	60	120	
Sc (IS)	45	3	No Gas	16721370	1.54	16459035	101.59	60	120	
Ge Internal standard	72	1	HMI H2	4980235	1.21	4919618	101.23	60	120	
Ge Internal standard	72	2	HMI He	1066721	0.76	1043503	102.22	60	120	
In Internal standard	115	2	HMI He	3564621	0.42	3551384	100.37	60	120	
Ho-165	165	2	HMI He	13739445	0.76	13518981	101.63	60	120	
Ir (IS)	193	2	HMI He	10281994	0.76	10147609	101.32	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCSD 280-608367/3-A
Data File Name	031_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:43:43-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608367 6020b
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	41.838	41.838	ppb	2.157	1206224	400	10.5	80	120	>+/-20%
Be	9	1	6	41.307	41.307	ppb	3.389	9690	40	103.3	80	120	
Na	23	2	45	892.507	892.507	ppb	1.923	202689	40	2231.3	80	120	>+/-20%
Mg	24	2	45	814.880	814.880	ppb	1.126	76705	40	2037.2	80	120	>+/-20%
Al	27	2	45	845.289	845.289	ppb	2.720	23524	40	2113.2	80	120	>+/-20%
K	39	2	45	844.914	844.914	ppb	5.899	97557	40	2112.3	80	120	>+/-20%
V	51	2	72	43.304	43.304	ppb	1.696	43678	40	108.3	80	120	
Cr	52	2	72	43.393	43.393	ppb	1.251	56600	40	108.5	80	120	
Mn	55	2	72	43.327	43.327	ppb	3.633	25203	40	108.3	80	120	
(Fe)	57	2	72	821.284	821.284	ppb	2.617	20393	40	2053.2	80	120	>+/-20%
Co	59	2	72	42.115	42.115	ppb	0.786	82568	40	105.3	80	120	
Ni	60	2	72	41.320	41.320	ppb	0.705	23284	40	103.3	80	120	
Cu	63	2	72	43.461	43.461	ppb	0.504	66002	40	108.7	80	120	
Zn	66	2	72	44.995	44.995	ppb	0.718	13316	40	112.5	80	120	
As	75	2	72	41.719	41.719	ppb	1.201	9523	40	104.3	80	120	
Se	78	1	72	40.303	40.303	ppb	3.594	5656	40	100.8	80	120	
Mo	95	2	115	41.736	41.736	ppb	3.162	31565	40	104.3	80	120	
Ag	107	2	115	42.488	42.488	ppb	0.853	107193	40	106.2	80	120	
Cd	111	2	115	41.830	41.830	ppb	1.748	16272	40	104.6	80	120	
Sn	120	2	115	39.947	39.947	ppb	1.626	42715	40	99.9	80	120	
Sb	121	2	115	42.128	42.128	ppb	2.803	47612	40	105.3	80	120	
Ba	137	2	115	41.141	41.141	ppb	4.682	12932	40	102.9	80	120	
W	182	2	165	-0.081	-0.081	ppb	-16.959	947	40	-0.2	80	120	>+/-20%
Tl	205	2	165	42.059	42.059	ppb	1.009	274203	40	105.1	80	120	
Pb	208	2	165	41.896	41.896	ppb	0.364	375016	40	104.7	80	120	
Th	232	2	193	40.049	40.049	ppb	2.403	413477	40	100.1	80	120	
U	238	2	193	41.256	41.256	ppb	1.059	445422	40	103.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	257474	1.18	259861	99.08	60	120	
Sc (IS)	45	1	HMI H2	9280958	0.73	9102038	101.97	60	120	
Sc (IS)	45	2	HMI He	921396	1.36	903588	101.97	60	120	
Sc (IS)	45	3	No Gas	16794161	2.19	16459035	102.04	60	120	
Ge Internal standard	72	1	HMI H2	5038798	0.87	4919618	102.42	60	120	
Ge Internal standard	72	2	HMI He	1068607	0.51	1043503	102.41	60	120	
In Internal standard	115	2	HMI He	3601357	0.44	3551384	101.41	60	120	
Ho-165	165	2	HMI He	13748322	0.78	13518981	101.70	60	120	
Ir (IS)	193	2	HMI He	10321640	0.63	10147609	101.71	60	120	

Sample Report

Sample Table

Sample Name	280-174857-A-1-A
Data File Name	032SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:47:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608367 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	2.069	ppb	2.069	36.87	899193	50000	
Be	9	1	6	-0.093	ppb	-0.093	-57.62	13	2000	
B	11	1	6	55.263	ppb	55.263	2.29	9216	2000	
Na	23	2	45	89600.679	ppb	89600.679	0.55	17300429	400000	
Mg	24	2	45	37745.976	ppb	37745.976	1.47	3350394	400000	
Al	27	2	45	25.398	ppb	25.398	8.28	743	400000	
Si	28	2	45	581.366	ppb	581.366	0.46	116507	10000	
P	31	2	45	67.378	ppb	67.378	16.70	307	10000	
K	39	2	45	8221.103	ppb	8221.103	0.86	538627	400000	
Ca	40	1	45	100128.517	ppb	100128.517	0.66	143807351	400000	
Ti	47	2	45	0.382	ppb	0.382	173.21	10	4000	
V	51	2	72	1.177	ppb	1.177	15.09	3681	2000	
Cr	52	2	72	0.349	ppb	0.349	13.89	2880	5000	
Mn	55	2	72	293.596	ppb	293.596	0.48	163007	10000	
Fe	56	1	72	278.847	ppb	278.847	0.43	901055	10000	
(Fe)	57	2	72	295.197	ppb	295.197	5.01	7209	400000	
Co	59	2	72	0.190	ppb	0.190	38.10	427	2000	
Ni	60	2	72	1.438	ppb	1.438	11.76	1183	5000	
Cu	63	2	72	2.562	ppb	2.562	2.61	5101	5000	
Zn	66	2	72	2.814	ppb	2.814	10.58	1180	5000	
As	75	2	72	2.147	ppb	2.147	4.73	609	2000	
Se	78	1	72	1.744	ppb	1.744	19.54	244	2000	
Sr	88	2	72	851.794	ppb	851.794	0.54	524138	4000	
Zr	90	2	72	-18.531	ppb	-18.531	-237.08	553	1000	
Mo	95	2	115	7.233	ppb	7.233	1.74	5238	2000	
Ag	107	2	115	0.009	ppb	0.009	26.05	67	100	
Cd	111	2	115	0.002	ppb	0.002	3933.30	17	2000	
Sn	120	2	115	-0.065	ppb	-0.065	-31.57	847	2000	
Sb	121	2	115	0.441	ppb	0.441	7.76	507	1000	
Ba	137	2	115	123.333	ppb	123.333	1.71	36764	5000	
W	182	2	165	0.016	ppb	0.016	89.25	1217	100	
Tl	205	2	165	-0.012	ppb	-0.012	-104.53	690	2000	
Pb	208	2	165	0.035	ppb	0.035	98.76	4114	5000	
Th	232	2	193	0.481	ppb	0.481	18.58	13463	2000	
U	238	2	193	2.116	ppb	2.116	2.69	24946	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	236684	0.77	259861	91.08	60	120	
Sc (IS)	45	1	HMI H2	8831777	0.82	9102038	97.03	60	120	
Sc (IS)	45	2	HMI He	871225	0.80	903588	96.42	60	120	
Sc (IS)	45	3	No Gas	16367034	2.47	16459035	99.44	60	120	
Ge Internal standard	72	1	HMI H2	4819939	0.44	4919618	97.97	60	120	
Ge Internal standard	72	2	HMI He	1026510	1.01	1043503	98.37	60	120	
In Internal standard	115	2	HMI He	3431152	0.76	3551384	96.61	60	120	
Ho-165	165	2	HMI He	13375855	0.45	13518981	98.94	60	120	
Ir (IS)	193	2	HMI He	9978352	1.20	10147609	98.33	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-A
Data File Name	033SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:51:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608367 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	3.840	ppb	3.840	91.46	902664	50000	
Be	9	1	6	-0.051	ppb	-0.051	-136.20	23	2000	
B	11	1	6	94.364	ppb	94.364	2.74	15808	2000	
Na	23	2	45	22175.491	ppb	22175.491	1.83	4425613	400000	
Mg	24	2	45	28828.649	ppb	28828.649	0.87	2636030	400000	
Al	27	2	45	9.644	ppb	9.644	10.33	340	400000	
Si	28	2	45	285.433	ppb	285.433	1.99	67551	10000	
P	31	2	45	278.405	ppb	278.405	8.79	923	10000	
K	39	2	45	11578.223	ppb	11578.223	0.85	764065	400000	
Ca	40	1	45	78575.470	ppb	78575.470	0.25	114410915	400000	
Ti	47	2	45	0.498	ppb	0.498	114.83	13	4000	
V	51	2	72	0.642	ppb	0.642	36.15	3274	2000	
Cr	52	2	72	1.496	ppb	1.496	19.50	4357	5000	
Mn	55	2	72	9.323	ppb	9.323	1.84	5481	10000	
Fe	56	1	72	60.228	ppb	60.228	1.51	215714	10000	
(Fe)	57	2	72	64.063	ppb	64.063	10.73	1810	400000	
Co	59	2	72	0.157	ppb	0.157	49.41	373	2000	
Ni	60	2	72	2.444	ppb	2.444	9.48	1760	5000	
Cu	63	2	72	3.273	ppb	3.273	10.20	6268	5000	
Zn	66	2	72	5.425	ppb	5.425	9.44	1947	5000	
As	75	2	72	0.863	ppb	0.863	6.79	341	2000	
Se	78	1	72	0.974	ppb	0.974	31.42	141	2000	
Sr	88	2	72	159.734	ppb	159.734	1.39	100770	4000	
Zr	90	2	72	-11.800	ppb	-11.800	-315.47	587	1000	
Mo	95	2	115	18.728	ppb	18.728	1.97	13806	2000	
Ag	107	2	115	0.006	ppb	0.006	147.33	60	100	
Cd	111	2	115	-0.043	ppb	-0.043	0.00	0	2000	
Sn	120	2	115	-0.181	ppb	-0.181	-74.93	747	2000	
Sb	121	2	115	0.840	ppb	0.840	7.37	957	1000	
Ba	137	2	115	25.002	ppb	25.002	4.82	7686	5000	
W	182	2	165	0.022	ppb	0.022	447.12	1260	100	
Tl	205	2	165	-0.002	ppb	-0.002	-973.66	770	2000	
Pb	208	2	165	0.089	ppb	0.089	55.36	4677	5000	
Th	232	2	193	0.064	ppb	0.064	68.21	9494	2000	
U	238	2	193	0.115	ppb	0.115	21.62	4261	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	246119	1.00	259861	94.71	60	120	
Sc (IS)	45	1	HMI H2	8952867	0.93	9102038	98.36	60	120	
Sc (IS)	45	2	HMI He	897434	0.40	903588	99.32	60	120	
Sc (IS)	45	3	No Gas	16211598	1.48	16459035	98.50	60	120	
Ge Internal standard	72	1	HMI H2	4841435	0.84	4919618	98.41	60	120	
Ge Internal standard	72	2	HMI He	1052068	0.37	1043503	100.82	60	120	
In Internal standard	115	2	HMI He	3506286	1.70	3551384	98.73	60	120	
Ho-165	165	2	HMI He	13663929	0.35	13518981	101.07	60	120	
Ir (IS)	193	2	HMI He	10090541	0.73	10147609	99.44	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-Asd@5
Data File Name	034SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:54:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608367 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-4.238	ppb	-4.238	-59.20	850757	50000	
Be	9	1	6	-0.097	ppb	-0.097	-26.11	13	2000	
B	11	1	6	25.789	ppb	25.789	12.20	4944	2000	
Na	23	2	45	4442.599	ppb	4442.599	1.84	899530	400000	
Mg	24	2	45	5777.405	ppb	5777.405	0.77	526596	400000	
Al	27	2	45	27.400	ppb	27.400	10.27	817	400000	
Si	28	2	45	61.538	ppb	61.538	6.01	27760	10000	
P	31	2	45	68.828	ppb	68.828	26.65	319	10000	
K	39	2	45	2392.238	ppb	2392.238	1.93	190810	400000	
Ca	40	1	45	16281.152	ppb	16281.152	0.59	23861936	400000	
Ti	47	2	45	0.745	ppb	0.745	99.58	20	4000	
V	51	2	72	0.876	ppb	0.876	7.95	3467	2000	
Cr	52	2	72	0.107	ppb	0.107	181.20	2637	5000	
Mn	55	2	72	9.693	ppb	9.693	1.46	5651	10000	
Fe	56	1	72	38.268	ppb	38.268	0.91	148397	10000	
(Fe)	57	2	72	42.875	ppb	42.875	8.06	1290	400000	
Co	59	2	72	0.042	ppb	0.042	45.82	150	2000	
Ni	60	2	72	0.295	ppb	0.295	33.18	587	5000	
Cu	63	2	72	1.012	ppb	1.012	4.65	2944	5000	
Zn	66	2	72	3.060	ppb	3.060	8.84	1270	5000	
As	75	2	72	0.103	ppb	0.103	138.51	171	2000	
Se	78	1	72	0.264	ppb	0.264	45.77	47	2000	
Sr	88	2	72	32.712	ppb	32.712	4.59	20517	4000	
Zr	90	2	72	26.336	ppb	26.336	97.81	693	1000	
Mo	95	2	115	3.852	ppb	3.852	4.27	2890	2000	
Ag	107	2	115	0.023	ppb	0.023	9.97	103	100	
Cd	111	2	115	-0.043	ppb	-0.043	0.00	0	2000	
Sn	120	2	115	-0.110	ppb	-0.110	-78.94	827	2000	
Sb	121	2	115	0.235	ppb	0.235	7.98	293	1000	
Ba	137	2	115	4.722	ppb	4.722	7.20	1537	5000	
W	182	2	165	-0.025	ppb	-0.025	-124.48	1113	100	
Tl	205	2	165	-0.042	ppb	-0.042	-52.99	510	2000	
Pb	208	2	165	1.071	ppb	1.071	3.21	13303	5000	
Th	232	2	193	0.014	ppb	0.014	282.72	9013	2000	
U	238	2	193	0.043	ppb	0.043	45.56	3514	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	248999	0.79	259861	95.82	60	120	
Sc (IS)	45	1	HMI H2	8997942	1.05	9102038	98.86	60	120	
Sc (IS)	45	2	HMI He	894312	0.75	903588	98.97	60	120	
Sc (IS)	45	3	No Gas	16277192	0.27	16459035	98.90	60	120	
Ge Internal standard	72	1	HMI H2	4904800	0.50	4919618	99.70	60	120	
Ge Internal standard	72	2	HMI He	1044627	0.45	1043503	100.11	60	120	
In Internal standard	115	2	HMI He	3536043	0.15	3551384	99.57	60	120	
Ho-165	165	2	HMI He	13645021	1.41	13518981	100.93	60	120	
Ir (IS)	193	2	HMI He	10105117	0.74	10147609	99.58	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-B MS
Data File Name	035SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T11:58:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608367 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	42.442	ppb	42.442	1.98	1180005	50000	
Be	9	1	6	43.332	ppb	43.332	1.31	9613	2000	
B	11	1	6	96.170	ppb	96.170	1.08	15928	2000	
Na	23	2	45	23180.900	ppb	23180.900	1.09	4609992	400000	
Mg	24	2	45	29920.540	ppb	29920.540	1.34	2726860	400000	
Al	27	2	45	821.187	ppb	821.187	1.60	22188	400000	
Si	28	2	45	322.708	ppb	322.708	2.34	73907	10000	
P	31	2	45	284.634	ppb	284.634	5.27	937	10000	
K	39	2	45	12534.861	ppb	12534.861	0.66	820942	400000	
Ca	40	1	45	80007.612	ppb	80007.612	0.28	116090095	400000	
Ti	47	2	45	40.427	ppb	40.427	3.32	1080	4000	
V	51	2	72	42.191	ppb	42.191	0.94	41934	2000	
Cr	52	2	72	43.119	ppb	43.119	2.40	55345	5000	
Mn	55	2	72	50.844	ppb	50.844	1.33	29066	10000	
Fe	56	1	72	914.724	ppb	914.724	0.24	2924547	10000	
(Fe)	57	2	72	892.818	ppb	892.818	1.64	21788	400000	
Co	59	2	72	41.300	ppb	41.300	1.91	79671	2000	
Ni	60	2	72	41.701	ppb	41.701	1.68	23113	5000	
Cu	63	2	72	44.244	ppb	44.244	0.71	66085	5000	
Zn	66	2	72	46.949	ppb	46.949	1.65	13653	5000	
As	75	2	72	42.501	ppb	42.501	2.52	9541	2000	
Se	78	1	72	43.667	ppb	43.667	3.39	5917	2000	
Sr	88	2	72	243.466	ppb	243.466	0.12	153474	4000	
Zr	90	2	72	61.513	ppb	61.513	13.38	800	1000	
Mo	95	2	115	61.931	ppb	61.931	1.51	45478	2000	
Ag	107	2	115	41.835	ppb	41.835	0.09	102539	100	
Cd	111	2	115	41.337	ppb	41.337	2.83	15622	2000	
Sn	120	2	115	41.348	ppb	41.348	1.95	42915	2000	
Sb	121	2	115	42.676	ppb	42.676	3.07	46850	1000	
Ba	137	2	115	68.561	ppb	68.561	0.47	20881	5000	
W	182	2	165	0.032	ppb	0.032	112.09	1287	100	
Tl	205	2	165	42.145	ppb	42.145	1.56	272412	2000	
Pb	208	2	165	42.292	ppb	42.292	1.77	375287	5000	
Th	232	2	193	41.257	ppb	41.257	0.20	414378	2000	
U	238	2	193	42.584	ppb	42.584	0.97	447458	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	243552	1.06	259861	93.72	60	120	
Sc (IS)	45	1	HMI H2	8921696	1.00	9102038	98.02	60	120	
Sc (IS)	45	2	HMI He	894473	0.96	903588	98.99	60	120	
Sc (IS)	45	3	No Gas	16371095	1.39	16459035	99.47	60	120	
Ge Internal standard	72	1	HMI H2	4865384	0.21	4919618	98.90	60	120	
Ge Internal standard	72	2	HMI He	1051389	1.14	1043503	100.76	60	120	
In Internal standard	115	2	HMI He	3498700	1.05	3551384	98.52	60	120	
Ho-165	165	2	HMI He	13631616	0.87	13518981	100.83	60	120	
Ir (IS)	193	2	HMI He	10046953	0.87	10147609	99.01	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-C MSD
Data File Name	036SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:02:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608367 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	42.902	ppb	42.902	1.91	1176662	50000	
Be	9	1	6	42.527	ppb	42.527	2.82	9486	2000	
B	11	1	6	95.983	ppb	95.983	2.82	15981	2000	
Na	23	2	45	22485.778	ppb	22485.778	0.47	4447858	400000	
Mg	24	2	45	28898.699	ppb	28898.699	0.65	2619234	400000	
Al	27	2	45	826.756	ppb	826.756	3.58	22219	400000	
Si	28	2	45	313.199	ppb	313.199	1.91	71834	10000	
P	31	2	45	288.953	ppb	288.953	2.50	945	10000	
K	39	2	45	12152.174	ppb	12152.174	1.24	792786	400000	
Ca	40	1	45	76877.968	ppb	76877.968	1.23	112924055	400000	
Ti	47	2	45	46.028	ppb	46.028	8.56	1223	4000	
V	51	2	72	43.119	ppb	43.119	2.49	42849	2000	
Cr	52	2	72	43.789	ppb	43.789	1.25	56238	5000	
Mn	55	2	72	51.039	ppb	51.039	1.79	29206	10000	
Fe	56	1	72	916.807	ppb	916.807	1.43	2952440	10000	
(Fe)	57	2	72	912.881	ppb	912.881	3.53	22296	400000	
Co	59	2	72	41.190	ppb	41.190	0.71	79547	2000	
Ni	60	2	72	43.053	ppb	43.053	1.53	23878	5000	
Cu	63	2	72	45.028	ppb	45.028	0.84	67307	5000	
Zn	66	2	72	47.236	ppb	47.236	2.78	13750	5000	
As	75	2	72	42.884	ppb	42.884	0.45	9638	2000	
Se	78	1	72	42.085	ppb	42.085	5.38	5745	2000	
Sr	88	2	72	236.330	ppb	236.330	1.65	149148	4000	
Zr	90	2	72	-40.422	ppb	-40.422	-46.15	503	1000	
Mo	95	2	115	61.090	ppb	61.090	1.46	44556	2000	
Ag	107	2	115	42.565	ppb	42.565	1.25	103589	100	
Cd	111	2	115	42.296	ppb	42.296	1.04	15875	2000	
Sn	120	2	115	41.170	ppb	41.170	3.69	42444	2000	
Sb	121	2	115	43.847	ppb	43.847	2.16	47799	1000	
Ba	137	2	115	66.432	ppb	66.432	2.93	20090	5000	
W	182	2	165	0.019	ppb	0.019	122.25	1247	100	
Tl	205	2	165	41.905	ppb	41.905	0.32	270366	2000	
Pb	208	2	165	42.163	ppb	42.163	0.75	373458	5000	
Th	232	2	193	41.076	ppb	41.076	1.30	413357	2000	
U	238	2	193	42.646	ppb	42.646	0.54	448937	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	244856	0.97	259861	94.23	60	120	
Sc (IS)	45	1	HMI H2	9032025	1.24	9102038	99.23	60	120	
Sc (IS)	45	2	HMI He	889542	0.57	903588	98.45	60	120	
Sc (IS)	45	3	No Gas	16280123	1.01	16459035	98.91	60	120	
Ge Internal standard	72	1	HMI H2	4900735	0.14	4919618	99.62	60	120	
Ge Internal standard	72	2	HMI He	1052637	0.97	1043503	100.88	60	120	
In Internal standard	115	2	HMI He	3474218	1.53	3551384	97.83	60	120	
Ho-165	165	2	HMI He	13605178	0.58	13518981	100.64	60	120	
Ir (IS)	193	2	HMI He	10066326	1.23	10147609	99.20	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-Apds
Data File Name	037SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:05:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608367 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	107.083	ppb	107.083	2.12	1641726	50000	
Be	9	1	6	106.344	ppb	106.344	0.50	23487	2000	
B	11	1	6	106.948	ppb	106.948	4.88	17586	2000	
Na	23	2	45	27389.947	ppb	27389.947	0.66	5433151	400000	
Mg	24	2	45	30182.235	ppb	30182.235	1.41	2745449	400000	
Al	27	2	45	2113.144	ppb	2113.144	1.33	56869	400000	
Si	28	2	45	365.707	ppb	365.707	2.46	81354	10000	
P	31	2	45	2391.679	ppb	2391.679	1.49	6965	10000	
K	39	2	45	13442.115	ppb	13442.115	0.62	875668	400000	
Ca	40	1	45	78725.125	ppb	78725.125	0.18	114067095	400000	
Ti	47	2	45	103.857	ppb	103.857	3.05	2770	4000	
V	51	2	72	106.716	ppb	106.716	1.78	101674	2000	
Cr	52	2	72	107.561	ppb	107.561	1.53	133900	5000	
Mn	55	2	72	112.564	ppb	112.564	3.01	63933	10000	
Fe	56	1	72	1157.189	ppb	1157.189	0.12	3665713	10000	
(Fe)	57	2	72	1146.359	ppb	1146.359	5.24	27814	400000	
Co	59	2	72	103.722	ppb	103.722	0.81	199366	2000	
Ni	60	2	72	103.553	ppb	103.553	2.78	56591	5000	
Cu	63	2	72	108.518	ppb	108.518	0.60	159439	5000	
Zn	66	2	72	220.218	ppb	220.218	3.59	62308	5000	
As	75	2	72	108.722	ppb	108.722	0.98	24104	2000	
Se	78	1	72	105.794	ppb	105.794	2.50	14214	2000	
Sr	88	2	72	262.189	ppb	262.189	1.84	164770	4000	
Zr	90	2	72	14.147	ppb	14.147	89.61	660	1000	
Mo	95	2	115	126.663	ppb	126.663	2.16	92644	2000	
Ag	107	2	115	28.006	ppb	28.006	2.21	68399	100	
Cd	111	2	115	105.294	ppb	105.294	1.50	39620	2000	
Sn	120	2	115	104.754	ppb	104.754	0.61	106900	2000	
Sb	121	2	115	105.060	ppb	105.060	1.72	114879	1000	
Ba	137	2	115	132.166	ppb	132.166	1.85	40012	5000	
W	182	2	165	130.081	ppb	130.081	0.40	404230	100	
Tl	205	2	165	105.323	ppb	105.323	0.65	681759	2000	
Pb	208	2	165	103.921	ppb	103.921	0.50	919375	5000	
Th	232	2	193	110.268	ppb	110.268	0.61	1094074	2000	
U	238	2	193	235.490	ppb	235.490	1.82	2463234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	242963	0.75	259861	93.50	60	120	
Sc (IS)	45	1	HMI H2	8908922	0.56	9102038	97.88	60	120	
Sc (IS)	45	2	HMI He	892761	0.76	903588	98.80	60	120	
Sc (IS)	45	3	No Gas	16495980	0.88	16459035	100.22	60	120	
Ge Internal standard	72	1	HMI H2	4829612	0.96	4919618	98.17	60	120	
Ge Internal standard	72	2	HMI He	1048193	0.33	1043503	100.45	60	120	
In Internal standard	115	2	HMI He	3485287	0.85	3551384	98.14	60	120	
Ho-165	165	2	HMI He	13673235	1.14	13518981	101.14	60	120	
Ir (IS)	193	2	HMI He	10059239	1.28	10147609	99.13	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	038_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:09:16-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	49.730	ppb	2.959	11021	50	99.5	90	110	
Na	23	2	45	52827.968	ppb	2.075	10474680	51000	103.6	90	110	
Mg	24	2	45	10753.440	ppb	1.425	979628	11000	97.8	90	110	
Al	27	2	45	957.353	ppb	1.459	25844	1000	95.7	90	110	
K	39	2	45	10548.430	ppb	1.561	697179	11000	95.9	90	110	
Ca	40	1	45	11328.105	ppb	0.831	16496004	11000	103.0	90	110	
Ti	47	2	45	42.680	ppb	5.718	1140	50	85.4	90	110	>+\-10%
V	51	2	72	50.168	ppb	3.397	48364	50	100.3	90	110	
Cr	52	2	72	49.146	ppb	2.157	61467	50	98.3	90	110	
Mn	55	2	72	48.056	ppb	5.908	26922	50	96.1	90	110	
Fe	56	1	72	995.297	ppb	1.078	3153066	1000	99.5	90	110	
Co	59	2	72	49.088	ppb	1.588	92754	50	98.2	90	110	
Ni	60	2	72	48.807	ppb	2.156	26435	50	97.6	90	110	
Cu	63	2	72	49.842	ppb	1.580	72756	50	99.7	90	110	
Zn	66	2	72	48.064	ppb	2.638	13683	50	96.1	90	110	
As	75	2	72	50.359	ppb	1.161	11050	50	100.7	90	110	
Se	78	1	72	48.095	ppb	1.506	6461	50	96.2	90	110	
Sr	88	2	72	98.117	ppb	1.540	60617	100	98.1	90	110	
Zr	90	2	72	1.596	ppb	3286.807	613	50	3.2	90	110	>+\-10%
Mo	95	2	115	50.351	ppb	2.626	37287	50	100.7	90	110	
Ag	107	2	115	48.192	ppb	1.795	119078	50	96.4	90	110	
Cd	111	2	115	49.684	ppb	1.566	18932	50	99.4	90	110	
Sn	120	2	115	48.197	ppb	0.840	50294	50	96.4	90	110	
Sb	121	2	115	48.668	ppb	0.793	53875	50	97.3	90	110	
Ba	137	2	115	48.356	ppb	1.709	14874	50	96.7	90	110	
W	182	2	165	50.826	ppb	1.869	157999	50	101.7	90	110	
Tl	205	2	165	49.289	ppb	2.422	318086	50	98.6	90	110	
Pb	208	2	165	48.626	ppb	1.811	430422	50	97.3	90	110	
Th	232	2	193	48.439	ppb	0.967	485803	50	96.9	90	110	
U	238	2	193	48.843	ppb	1.712	513589	50	97.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	243395	0.25	259861	93.66	60	120	
Sc (IS)	45	1	HMI H2	8932661	0.90	9102038	98.14	60	120	
Sc (IS)	45	2	HMI He	894035	0.71	903588	98.94	60	120	
Sc (IS)	45	3	No Gas	16041029	0.71	16459035	97.46	60	120	
Ge Internal standard	72	1	HMI H2	4824217	0.48	4919618	98.06	60	120	
Ge Internal standard	72	2	HMI He	1030114	0.61	1043503	98.72	60	120	
In Internal standard	115	2	HMI He	3527791	1.23	3551384	99.34	60	120	
Ho-165	165	2	HMI He	13616394	0.90	13518981	100.72	60	120	
Ir (IS)	193	2	HMI He	10064184	0.87	10147609	99.18	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	039_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:12:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-1.931	ppb	-131.1	867030	10	
Be	9	1	6	-0.054	ppb	-122.3	23	0.5	
B	11	1	6	23.818	ppb	8.1	4724	0.5	>RL
Na	23	2	45	32.846	ppb	16.3	26278	25	>RL
Mg	24	2	45	4.045	ppb	3.2	573	25	
Al	27	2	45	0.816	ppb	124.0	100	15	
K	39	2	45	-2.423	ppb	-1328.3	41625	50	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.956	ppb	38.2	3507	1	
Cr	52	2	72	-0.263	ppb	-61.6	2164	1	
Mn	55	2	72	-0.003	ppb	-3087.1	177	0.5	
(Fe)	57	2	72	0.666	ppb	366.0	277	25	
Co	59	2	72	0.009	ppb	36.6	87	0.5	
Ni	60	2	72	0.207	ppb	68.9	533	1	
Cu	63	2	72	0.153	ppb	24.4	1680	1	
Zn	66	2	72	0.582	ppb	76.3	570	5	
As	75	2	72	0.075	ppb	137.2	163	1	
Se	78	1	72	0.002	ppb	7253.6	11	1	
Sr	88	2	72	0.011	ppb	359.3	43	0.5	
Zr	90	2	72	-0.308	ppb	-5428.1	610	1	
Mo	95	2	115	0.118	ppb	39.7	120	0.5	
Ag	107	2	115	0.003	ppb	360.7	53	1	
Cd	111	2	115	-0.008	ppb	-390.3	13	0.5	
Sn	120	2	115	-0.033	ppb	-170.8	900	1	
Sb	121	2	115	0.155	ppb	40.2	203	0.6	
Ba	137	2	115	-0.118	ppb	-62.2	53	0.5	
W	182	2	165	0.203	ppb	33.0	1804	1	
Tl	205	2	165	-0.013	ppb	-69.8	693	0.1	
Pb	208	2	165	-0.093	ppb	-13.7	3047	0.5	
Th	232	2	193	0.404	ppb	9.4	13070	1	
U	238	2	193	0.019	ppb	97.6	3304	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	254300	1.61	259861	97.86	60	120	
Sc (IS)	45	1	HMI H2	9005494	0.85	9102038	98.94	60	120	
Sc (IS)	45	2	HMI He	884948	1.02	903588	97.94	60	120	
Sc (IS)	45	3	No Gas	16287679	1.81	16459035	98.96	60	120	
Ge Internal standard	72	1	HMI H2	4844538	0.99	4919618	98.47	60	120	
Ge Internal standard	72	2	HMI He	1034146	0.66	1043503	99.10	60	120	
In Internal standard	115	2	HMI He	3515691	1.11	3551384	98.99	60	120	
Ho-165	165	2	HMI He	13544276	0.99	13518981	100.19	60	120	
Ir (IS)	193	2	HMI He	10263203	0.11	10147609	101.14	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608367/1-A
Data File Name	040_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:16:24-06:00
Sample Type	Blank
Dilution	1
Comment	608367 6020b
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	-4.199	ppb	-54.01161058	858252	10
Be	9	1	6	-0.012	ppb	-197.8421182	33	0.5
B	11	1	6	8.020	ppb	13.65120671	2144	0.5
Na	23	2	45	9.079	ppb	6.575085075	21791	25
Mg	24	2	45	3.077	ppb	17.84987909	490	25
Al	27	2	45	2.031	ppb	61.01944439	133	15
K	39	2	45	-0.175	ppb	-7628.797711	42087	50
Ti	47	2	45	0.125	ppb	173.2050808	3	0.5
V	51	2	72	0.646	ppb	56.36029653	3250	1
Cr	52	2	72	-0.178	ppb	-88.55378268	2287	1
Mn	55	2	72	0.195	ppb	47.20597507	290	0.5
(Fe)	57	2	72	1.122	ppb	94.67451757	290	25
Co	59	2	72	-0.005	ppb	-427.5887348	60	0.5
Ni	60	2	72	-0.272	ppb	-72.18769396	280	1
Cu	63	2	72	1.574	ppb	17.32230465	3754	1
Zn	66	2	72	1.028	ppb	29.42198983	700	5
As	75	2	72	-0.027	ppb	-121.5594673	142	1
Se	78	1	72	-0.049	ppb	-105.3766576	4	1
Sr	88	2	72	0.091	ppb	36.57953371	93	0.5
Zr	90	2	72	-19.403	ppb	-111.7629739	560	1
Mo	95	2	115	0.036	ppb	172.502779	60	0.5
Ag	107	2	115	0.011	ppb	87.41727014	73	1
Cd	111	2	115	-0.043	ppb	-1.52416E-06	0	0.5
Sn	120	2	115	-0.286	ppb	-14.32539633	650	1
Sb	121	2	115	0.045	ppb	83.5915441	83	0.6
Ba	137	2	115	-0.066	ppb	-179.232677	70	0.5
W	182	2	165	-0.039	ppb	-175.0710959	1080	1
Tl	205	2	165	-0.063	ppb	-15.27031247	380	0.1
Pb	208	2	165	-0.070	ppb	-39.33791469	3300	0.5
Th	232	2	193	0.039	ppb	59.51992413	9520	1
U	238	2	193	0.002	ppb	1660.969246	3164	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	256040	0.67	259861	98.53	60	120	
Sc (IS)	45	1	HMI H2	9075056	0.51	9102038	99.70	60	120	
Sc (IS)	45	2	HMI He	891629	0.80	903588	98.68	60	120	
Sc (IS)	45	3	No Gas	16417281	0.76	16459035	99.75	60	120	
Ge Internal standard	72	1	HMI H2	4927306	0.93	4919618	100.16	60	120	
Ge Internal standard	72	2	HMI He	1043371	0.39	1043503	99.99	60	120	
In Internal standard	115	2	HMI He	3558493	0.28	3551384	100.20	60	120	
Ho-165	165	2	HMI He	13761649	1.17	13518981	101.80	60	120	
Ir (IS)	193	2	HMI He	10387228	1.03	10147609	102.36	60	120	

Blank Report

Sample Table

Sample Name	MB 280-607692/1-A
Data File Name	041_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:19:59-06:00
Sample Type	Blank
Dilution	1
Comment	607692 6020b
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	-3.711	ppb	-55.59240681	872851	10
Be	9	1	6	0.055	ppb	275.3820109	50	0.5
B	11	1	6	4.821	ppb	7.117586739	1647	0.5
Na	23	2	45	49.050	ppb	0.760025472	29950	25
Mg	24	2	45	3.650	ppb	14.09374731	547	25
Al	27	2	45	4.560	ppb	48.10097823	203	15
K	39	2	45	4.560	ppb	295.8880889	42772	50
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	0.534	ppb	29.68463556	3184	1
Cr	52	2	72	-0.224	ppb	-62.49744278	2257	1
Mn	55	2	72	0.148	ppb	83.00459932	267	0.5
(Fe)	57	2	72	22.478	ppb	10.18395537	810	25
Co	59	2	72	-0.016	ppb	-33.04509145	40	0.5
Ni	60	2	72	-0.369	ppb	-13.44983113	230	1
Cu	63	2	72	0.009	ppb	828.8453346	1503	1
Zn	66	2	72	1.363	ppb	18.85951289	803	5
As	75	2	72	-0.076	ppb	-150.0559664	133	1
Se	78	1	72	0.000	ppb	-341834.4542	11	1
Sr	88	2	72	0.105	ppb	38.86791057	103	0.5
Zr	90	2	72	-18.205	ppb	-164.6327396	570	1
Mo	95	2	115	0.053	ppb	127.6373436	73	0.5
Ag	107	2	115	0.002	ppb	539.9166978	53	1
Cd	111	2	115	-0.043	ppb	-1.52416E-06	0	0.5
Sn	120	2	115	0.312	ppb	70.61550757	1280	1
Sb	121	2	115	0.018	ppb	78.51060132	53	0.6
Ba	137	2	115	0.125	ppb	43.3214533	130	0.5
W	182	2	165	-0.054	ppb	-129.9243038	1037	1
Tl	205	2	165	-0.079	ppb	-7.201546993	273	0.1
Pb	208	2	165	-0.135	ppb	-10.52539795	2734	0.5
Th	232	2	193	-0.010	ppb	-216.8951682	9060	1
U	238	2	193	0.003	ppb	327.7323985	3187	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	261394	0.09	259861	100.59	60	120	
Sc (IS)	45	1	HMI H2	9125160	0.78	9102038	100.25	60	120	
Sc (IS)	45	2	HMI He	899721	0.77	903588	99.57	60	120	
Sc (IS)	45	3	No Gas	16629816	1.02	16459035	101.04	60	120	
Ge Internal standard	72	1	HMI H2	4914070	0.62	4919618	99.89	60	120	
Ge Internal standard	72	2	HMI He	1055560	0.57	1043503	101.16	60	120	
In Internal standard	115	2	HMI He	3591621	0.44	3551384	101.13	60	120	
Ho-165	165	2	HMI He	13809680	0.27	13518981	102.15	60	120	
Ir (IS)	193	2	HMI He	10430949	0.64	10147609	102.79	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-607692/2-A
Data File Name	042_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:23:37-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	607692 6020b
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	919.719	919.719	ppb	0.427	7006516	400	229.9	80	120	>+/-20%
Be	9	1	6	983.141	983.141	ppb	1.001	207801	40	2457.9	80	120	>+/-20%
Na	23	2	45	51369.538	51369.538	ppb	1.184	9982535	40	128423.8	80	120	>+/-20%
Mg	24	2	45	48993.031	48993.031	ppb	1.055	4373352	40	122482.6	80	120	>+/-20%
Al	27	2	45	9392.466	9392.466	ppb	1.189	247788	40	23481.2	80	120	>+/-20%
K	39	2	45	48865.530	48865.530	ppb	1.566	3014745	40	122163.8	80	120	>+/-20%
V	51	2	72	964.328	964.328	ppb	0.477	880651	40	2410.8	80	120	>+/-20%
Cr	52	2	72	946.548	946.548	ppb	0.610	1137229	40	2366.4	80	120	>+/-20%
Mn	55	2	72	944.452	944.452	ppb	0.578	525122	40	2361.1	80	120	>+/-20%
(Fe)	57	2	72	9823.032	9823.032	ppb	0.503	231948	40	24557.6	80	120	>+/-20%
Co	59	2	72	977.165	977.165	ppb	0.780	1842731	40	2442.9	80	120	>+/-20%
Ni	60	2	72	910.883	910.883	ppb	0.278	485276	40	2277.2	80	120	>+/-20%
Cu	63	2	72	1004.507	1004.507	ppb	1.261	1436474	40	2511.3	80	120	>+/-20%
Zn	66	2	72	945.406	945.406	ppb	1.464	261203	40	2363.5	80	120	>+/-20%
As	75	2	72	979.438	979.438	ppb	0.101	211937	40	2448.6	80	120	>+/-20%
Se	78	1	72	971.834	971.834	ppb	0.336	130037	40	2429.6	80	120	>+/-20%
Mo	95	2	115	1017.632	1017.632	ppb	0.620	718076	40	2544.1	80	120	>+/-20%
Ag	107	2	115	47.192	47.192	ppb	1.579	111209	40	118.0	80	120	
Cd	111	2	115	998.903	998.903	ppb	1.353	362618	40	2497.3	80	120	>+/-20%
Sn	120	2	115	985.802	985.802	ppb	0.727	963436	40	2464.5	80	120	>+/-20%
Sb	121	2	115	1023.264	1023.264	ppb	2.123	1079457	40	2558.2	80	120	>+/-20%
Ba	137	2	115	1008.507	1008.507	ppb	0.369	294148	40	2521.3	80	120	>+/-20%
W	182	2	165	0.045	0.045	ppb	120.325	1333	40	0.1	80	120	>+/-20%
Tl	205	2	165	1005.402	1005.402	ppb	1.321	6497501	40	2513.5	80	120	>+/-20%
Pb	208	2	165	1011.203	1011.203	ppb	0.900	8907146	40	2528.0	80	120	>+/-20%
Th	232	2	193	0.164	0.164	ppb	1.534	10398	40	0.4	80	120	>+/-20%
U	238	2	193	0.044	0.044	ppb	49.622	3487	40	0.1	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	232819	0.84	259861	89.59	60	120	
Sc (IS)	45	1	HMI H2	8883725	0.44	9102038	97.60	60	120	
Sc (IS)	45	2	HMI He	876128	0.59	903588	96.96	60	120	
Sc (IS)	45	3	No Gas	15763366	0.54	16459035	95.77	60	120	
Ge Internal standard	72	1	HMI H2	4812437	0.18	4919618	97.82	60	120	
Ge Internal standard	72	2	HMI He	1028726	0.07	1043503	98.58	60	120	
In Internal standard	115	2	HMI He	3364005	1.00	3551384	94.72	60	120	
Ho-165	165	2	HMI He	13666967	1.39	13518981	101.09	60	120	
Ir (IS)	193	2	HMI He	10008564	0.54	10147609	98.63	60	120	

Sample Report

Sample Table

Sample Name	280-174542-D-4-A
Data File Name	043SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:27:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	607692 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	2.880	ppb	2.880	60.36	890112	50000	
Be	9	1	6	0.606	ppb	0.606	30.28	167	2000	
B	11	1	6	184.273	ppb	184.273	1.75	29486	2000	
Na	23	2	45	22373.582	ppb	22373.582	1.28	4419033	400000	
Mg	24	2	45	3513.716	ppb	3513.716	0.64	318172	400000	
Al	27	2	45	13.151	ppb	13.151	14.09	430	400000	
Si	28	2	45	838.807	ppb	838.807	1.43	163941	10000	
P	31	2	45	52.231	ppb	52.231	12.58	269	10000	
K	39	2	45	2853.931	ppb	2853.931	1.25	217998	400000	
Ca	40	1	45	60661.118	ppb	60661.118	1.00	86700305	400000	
Ti	47	2	45	1.375	ppb	1.375	77.75	37	4000	
V	51	2	72	0.451	ppb	0.451	46.02	3074	2000	
Cr	52	2	72	0.094	ppb	0.094	81.36	2620	5000	
Mn	55	2	72	88.696	ppb	88.696	2.13	50227	10000	
Fe	56	1	72	306.723	ppb	306.723	0.58	986577	10000	
(Fe)	57	2	72	316.804	ppb	316.804	1.87	7849	400000	
Co	59	2	72	0.197	ppb	0.197	14.02	447	2000	
Ni	60	2	72	-0.111	ppb	-0.111	-207.92	367	5000	
Cu	63	2	72	0.507	ppb	0.507	72.28	2210	5000	
Zn	66	2	72	2.430	ppb	2.430	18.67	1093	5000	
As	75	2	72	0.774	ppb	0.774	11.93	318	2000	
Se	78	1	72	0.391	ppb	0.391	27.02	63	2000	
Sr	88	2	72	314.404	ppb	314.404	0.32	196846	4000	
Zr	90	2	72	1212.248	ppb	1212.248	11.94	4124	1000	
Mo	95	2	115	9.642	ppb	9.642	3.32	7212	2000	
Ag	107	2	115	0.009	ppb	0.009	71.98	70	100	
Cd	111	2	115	0.070	ppb	0.070	95.05	43	2000	
Sn	120	2	115	0.421	ppb	0.421	55.79	1377	2000	
Sb	121	2	115	0.815	ppb	0.815	15.13	940	1000	
Ba	137	2	115	33.317	ppb	33.317	8.19	10337	5000	
W	182	2	165	0.171	ppb	0.171	43.94	1727	100	
Tl	205	2	165	0.307	ppb	0.307	19.00	2774	2000	
Pb	208	2	165	0.212	ppb	0.212	17.65	5771	5000	
Th	232	2	193	-0.055	ppb	-0.055	-70.02	8349	2000	
U	238	2	193	0.199	ppb	0.199	7.26	5164	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	240900	0.19	259861	92.70	60	120	
Sc (IS)	45	1	HMI H2	8786891	0.21	9102038	96.54	60	120	
Sc (IS)	45	2	HMI He	888245	0.97	903588	98.30	60	120	
Sc (IS)	45	3	No Gas	16100197	0.39	16459035	97.82	60	120	
Ge Internal standard	72	1	HMI H2	4810357	0.93	4919618	97.78	60	120	
Ge Internal standard	72	2	HMI He	1044294	0.56	1043503	100.08	60	120	
In Internal standard	115	2	HMI He	3548785	1.00	3551384	99.93	60	120	
Ho-165	165	2	HMI He	13703092	0.82	13518981	101.36	60	120	
Ir (IS)	193	2	HMI He	10129630	0.71	10147609	99.82	60	120	

Sample Report

Sample Table

Sample Name	280-174542-D-4-Asd@5
Data File Name	044SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:30:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	607692 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.663	ppb	-2.663	-114.21	864023	50000	
Be	9	1	6	0.051	ppb	0.051	181.49	47	2000	
B	11	1	6	49.855	ppb	49.855	9.55	8826	2000	
Na	23	2	45	4394.589	ppb	4394.589	0.93	878419	400000	
Mg	24	2	45	729.124	ppb	729.124	1.34	65774	400000	
Al	27	2	45	7.220	ppb	7.220	32.47	270	400000	
Si	28	2	45	175.591	ppb	175.591	2.18	47286	10000	
P	31	2	45	12.983	ppb	12.983	42.15	157	10000	
K	39	2	45	593.193	ppb	593.193	1.66	78039	400000	
Ca	40	1	45	12296.073	ppb	12296.073	0.93	17911444	400000	
Ti	47	2	45	0.886	ppb	0.886	49.72	23	4000	
V	51	2	72	0.008	ppb	0.008	5173.77	2664	2000	
Cr	52	2	72	-0.391	ppb	-0.391	-31.04	2030	5000	
Mn	55	2	72	24.851	ppb	24.851	2.03	14203	10000	
Fe	56	1	72	68.229	ppb	68.229	1.16	242091	10000	
(Fe)	57	2	72	65.706	ppb	65.706	0.74	1837	400000	
Co	59	2	72	0.038	ppb	0.038	76.82	143	2000	
Ni	60	2	72	-0.253	ppb	-0.253	-63.82	290	5000	
Cu	63	2	72	0.194	ppb	0.194	36.46	1757	5000	
Zn	66	2	72	2.798	ppb	2.798	10.80	1197	5000	
As	75	2	72	-0.042	ppb	-0.042	-154.11	139	2000	
Se	78	1	72	0.099	ppb	0.099	165.23	24	2000	
Sr	88	2	72	63.106	ppb	63.106	1.48	39546	4000	
Zr	90	2	72	213.007	ppb	213.007	2.04	1233	1000	
Mo	95	2	115	1.781	ppb	1.781	1.57	1363	2000	
Ag	107	2	115	0.012	ppb	0.012	215.62	77	100	
Cd	111	2	115	0.000	ppb	0.000	324528.71	17	2000	
Sn	120	2	115	0.046	ppb	0.046	158.89	993	2000	
Sb	121	2	115	0.200	ppb	0.200	14.81	257	1000	
Ba	137	2	115	7.425	ppb	7.425	7.84	2380	5000	
W	182	2	165	-0.008	ppb	-0.008	-885.34	1177	100	
Tl	205	2	165	0.001	ppb	0.001	5225.88	790	2000	
Pb	208	2	165	1.490	ppb	1.490	8.47	17125	5000	
Th	232	2	193	-0.030	ppb	-0.030	-65.35	8680	2000	
U	238	2	193	0.037	ppb	0.037	55.98	3487	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	249170	0.73	259861	95.89	60	120	
Sc (IS)	45	1	HMI H2	8936950	0.42	9102038	98.19	60	120	
Sc (IS)	45	2	HMI He	882597	0.55	903588	97.68	60	120	
Sc (IS)	45	3	No Gas	16321014	0.74	16459035	99.16	60	120	
Ge Internal standard	72	1	HMI H2	4864353	0.44	4919618	98.88	60	120	
Ge Internal standard	72	2	HMI He	1044477	0.74	1043503	100.09	60	120	
In Internal standard	115	2	HMI He	3559293	0.95	3551384	100.22	60	120	
Ho-165	165	2	HMI He	13757497	0.14	13518981	101.76	60	120	
Ir (IS)	193	2	HMI He	10225733	0.49	10147609	100.77	60	120	

Sample Report

Sample Table

Sample Name	280-174542-D-4-B MS
Data File Name	045SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:34:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	607692 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	919.254	ppb	919.254	0.51	6958568	50000	
Be	9	1	6	974.241	ppb	974.241	1.40	201790	2000	
B	11	1	6	2143.369	ppb	2143.369	1.68	317110	2000	
Na	23	2	45	71560.051	ppb	71560.051	0.21	13723494	400000	
Mg	24	2	45	52167.929	ppb	52167.929	0.97	4598104	400000	
Al	27	2	45	9274.702	ppb	9274.702	1.05	241602	400000	
Si	28	2	45	1676.256	ppb	1676.256	1.71	302798	10000	
P	31	2	45	18654.837	ppb	18654.837	1.52	51845	10000	
K	39	2	45	51461.760	ppb	51461.760	1.05	3132668	400000	
Ca	40	1	45	110352.354	ppb	110352.354	0.48	156260044	400000	
Ti	47	2	45	962.322	ppb	962.322	2.91	24866	4000	
V	51	2	72	951.600	ppb	951.600	0.48	859999	2000	
Cr	52	2	72	942.982	ppb	942.982	0.28	1121142	5000	
Mn	55	2	72	1015.937	ppb	1015.937	0.57	558968	10000	
Fe	56	1	72	9779.912	ppb	9779.912	0.34	30074678	10000	
(Fe)	57	2	72	9865.269	ppb	9865.269	0.71	230510	400000	
Co	59	2	72	953.013	ppb	953.013	0.90	1778475	2000	
Ni	60	2	72	899.668	ppb	899.668	0.97	474300	5000	
Cu	63	2	72	984.660	ppb	984.660	0.17	1393418	5000	
Zn	66	2	72	924.336	ppb	924.336	1.72	252721	5000	
As	75	2	72	972.835	ppb	972.835	0.34	208312	2000	
Se	78	1	72	958.468	ppb	958.468	0.47	125720	2000	
Sr	88	2	72	1264.812	ppb	1264.812	1.17	771845	4000	
Zr	90	2	72	531942.505	ppb	531942.505	1.61	1501485	1000	>LDR
Mo	95	2	115	1033.539	ppb	1033.539	0.43	723445	2000	
Ag	107	2	115	46.679	ppb	46.679	1.90	109110	100	
Cd	111	2	115	988.774	ppb	988.774	0.79	356053	2000	
Sn	120	2	115	994.285	ppb	994.285	1.28	963892	2000	
Sb	121	2	115	1023.152	ppb	1023.152	1.22	1070765	1000	
Ba	137	2	115	1039.565	ppb	1039.565	0.70	300759	5000	
W	182	2	165	0.259	ppb	0.259	21.22	1970	100	
Tl	205	2	165	1002.034	ppb	1002.034	0.11	6394306	2000	
Pb	208	2	165	1006.974	ppb	1006.974	0.28	8758260	5000	
Th	232	2	193	0.052	ppb	0.052	169.93	9160	2000	
U	238	2	193	0.244	ppb	0.244	15.28	5481	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	228177	1.10	259861	87.81	60	120	
Sc (IS)	45	1	HMI H2	8707432	0.31	9102038	95.66	60	120	
Sc (IS)	45	2	HMI He	865063	0.80	903588	95.74	60	120	
Sc (IS)	45	3	No Gas	15662717	0.83	16459035	95.16	60	120	
Ge Internal standard	72	1	HMI H2	4717639	0.80	4919618	95.89	60	120	
Ge Internal standard	72	2	HMI He	1017992	0.39	1043503	97.56	60	120	
In Internal standard	115	2	HMI He	3336906	0.58	3551384	93.96	60	120	
Ho-165	165	2	HMI He	13493708	0.42	13518981	99.81	60	120	
Ir (IS)	193	2	HMI He	9850556	0.44	10147609	97.07	60	120	

Sample Report

Sample Table

Sample Name	280-174542-D-4-C MSD
Data File Name	046SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:37:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	607692 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	911.039	ppb	911.039	1.54	6852289	50000	
Be	9	1	6	1003.273	ppb	1003.273	0.82	201240	2000	
B	11	1	6	2289.613	ppb	2289.613	0.58	327978	2000	
Na	23	2	45	71452.240	ppb	71452.240	0.95	13662523	400000	
Mg	24	2	45	51825.629	ppb	51825.629	0.21	4554298	400000	
Al	27	2	45	9344.341	ppb	9344.341	0.43	242696	400000	
Si	28	2	45	1679.646	ppb	1679.646	0.61	302461	10000	
P	31	2	45	18815.888	ppb	18815.888	1.41	52138	10000	
K	39	2	45	51035.109	ppb	51035.109	1.15	3097906	400000	
Ca	40	1	45	111555.615	ppb	111555.615	0.61	156945371	400000	
Ti	47	2	45	958.787	ppb	958.787	0.76	24706	4000	
V	51	2	72	950.451	ppb	950.451	1.62	855998	2000	
Cr	52	2	72	938.285	ppb	938.285	1.01	1111717	5000	
Mn	55	2	72	1022.050	ppb	1022.050	1.23	560385	10000	
Fe	56	1	72	9867.214	ppb	9867.214	0.91	30154863	10000	
(Fe)	57	2	72	9888.563	ppb	9888.563	0.65	230260	400000	
Co	59	2	72	957.297	ppb	957.297	0.69	1780262	2000	
Ni	60	2	72	898.324	ppb	898.324	0.77	471962	5000	
Cu	63	2	72	972.552	ppb	972.552	1.15	1371558	5000	
Zn	66	2	72	919.018	ppb	919.018	0.14	250404	5000	
As	75	2	72	974.873	ppb	974.873	0.46	208026	2000	
Se	78	1	72	962.965	ppb	962.965	0.89	125531	2000	
Sr	88	2	72	1269.216	ppb	1269.216	0.88	771845	4000	
Zr	90	2	72	528955.851	ppb	528955.851	1.54	1487953	1000	>LDR
Mo	95	2	115	1040.485	ppb	1040.485	1.79	722434	2000	
Ag	107	2	115	46.936	ppb	46.936	0.84	108836	100	
Cd	111	2	115	990.516	ppb	990.516	2.18	353816	2000	
Sn	120	2	115	996.729	ppb	996.729	1.13	958526	2000	
Sb	121	2	115	1024.718	ppb	1024.718	1.63	1063768	1000	
Ba	137	2	115	1044.493	ppb	1044.493	1.80	299762	5000	
W	182	2	165	0.254	ppb	0.254	7.09	1947	100	
Tl	205	2	165	998.953	ppb	998.953	0.62	6346101	2000	
Pb	208	2	165	1015.054	ppb	1015.054	0.37	8788992	5000	
Th	232	2	193	0.041	ppb	0.041	49.61	8980	2000	
U	238	2	193	0.241	ppb	0.241	11.70	5401	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	220941	0.71	259861	85.02	60	120	
Sc (IS)	45	1	HMI H2	8651519	0.72	9102038	95.05	60	120	
Sc (IS)	45	2	HMI He	862517	0.92	903588	95.45	60	120	
Sc (IS)	45	3	No Gas	15545766	0.47	16459035	94.45	60	120	
Ge Internal standard	72	1	HMI H2	4688299	0.54	4919618	95.30	60	120	
Ge Internal standard	72	2	HMI He	1014472	0.14	1043503	97.22	60	120	
In Internal standard	115	2	HMI He	3310237	0.73	3551384	93.21	60	120	
Ho-165	165	2	HMI He	13433687	0.84	13518981	99.37	60	120	
Ir (IS)	193	2	HMI He	9776599	0.58	10147609	96.34	60	120	

Sample Report

Sample Table

Sample Name	280-174542-D-4-Apds
Data File Name	047SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:41:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	607692 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	104.600	ppb	104.600	0.59	1559813	50000	
Be	9	1	6	101.677	ppb	101.677	0.21	21654	2000	
B	11	1	6	219.657	ppb	219.657	3.56	34024	2000	
Na	23	2	45	27097.391	ppb	27097.391	0.18	5221219	400000	
Mg	24	2	45	5520.324	ppb	5520.324	1.44	487869	400000	
Al	27	2	45	2037.436	ppb	2037.436	2.24	53254	400000	
Si	28	2	45	925.259	ppb	925.259	1.46	174857	10000	
P	31	2	45	2043.879	ppb	2043.879	1.10	5799	10000	
K	39	2	45	4856.751	ppb	4856.751	1.23	333438	400000	
Ca	40	1	45	61470.415	ppb	61470.415	1.38	86478649	400000	
Ti	47	2	45	106.331	ppb	106.331	6.72	2754	4000	
V	51	2	72	97.058	ppb	97.058	2.37	90537	2000	
Cr	52	2	72	99.539	ppb	99.539	0.83	121203	5000	
Mn	55	2	72	184.247	ppb	184.247	1.29	102083	10000	
Fe	56	1	72	1330.501	ppb	1330.501	1.03	4126262	10000	
(Fe)	57	2	72	1324.537	ppb	1324.537	2.63	31344	400000	
Co	59	2	72	95.729	ppb	95.729	0.72	179713	2000	
Ni	60	2	72	93.863	ppb	93.863	0.58	50136	5000	
Cu	63	2	72	100.385	ppb	100.385	0.52	144152	5000	
Zn	66	2	72	202.164	ppb	202.164	1.12	55901	5000	
As	75	2	72	100.401	ppb	100.401	0.89	21750	2000	
Se	78	1	72	97.797	ppb	97.797	3.76	12875	2000	
Sr	88	2	72	409.790	ppb	409.790	0.27	251499	4000	
Zr	90	2	72	1524.034	ppb	1524.034	11.56	4931	1000	
Mo	95	2	115	107.913	ppb	107.913	2.04	79187	2000	
Ag	107	2	115	25.981	ppb	25.981	1.91	63684	100	
Cd	111	2	115	98.431	ppb	98.431	2.30	37161	2000	
Sn	120	2	115	98.198	ppb	98.198	1.17	100607	2000	
Sb	121	2	115	94.257	ppb	94.257	2.36	103397	1000	
Ba	137	2	115	132.137	ppb	132.137	2.68	40135	5000	
W	182	2	165	118.234	ppb	118.234	0.80	367893	100	
Tl	205	2	165	99.208	ppb	99.208	0.49	642840	2000	
Pb	208	2	165	97.295	ppb	97.295	0.82	861862	5000	
Th	232	2	193	103.962	ppb	103.962	0.90	1029636	2000	
U	238	2	193	228.942	ppb	228.942	0.35	2389587	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	234270	1.69	259861	90.15	60	120	
Sc (IS)	45	1	HMI H2	8650223	1.57	9102038	95.04	60	120	
Sc (IS)	45	2	HMI He	867139	0.84	903588	95.97	60	120	
Sc (IS)	45	3	No Gas	15841121	1.29	16459035	96.25	60	120	
Ge Internal standard	72	1	HMI H2	4732391	1.02	4919618	96.19	60	120	
Ge Internal standard	72	2	HMI He	1023711	0.63	1043503	98.10	60	120	
In Internal standard	115	2	HMI He	3497562	1.87	3551384	98.48	60	120	
Ho-165	165	2	HMI He	13686872	0.48	13518981	101.24	60	120	
Ir (IS)	193	2	HMI He	10035905	0.61	10147609	98.90	60	120	

Sample Report

Sample Table

Sample Name	280-174494-C-1-A
Data File Name	048SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:44:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	607692 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	158.390	ppb	158.390	4.26	1922711	50000	
Be	9	1	6	0.580	ppb	0.580	41.02	153	2000	
B	11	1	6	492.782	ppb	492.782	1.62	73734	2000	
Na	23	2	45	144631.618	ppb	144631.618	0.75	27684958	400000	
Mg	24	2	45	77472.601	ppb	77472.601	0.98	6820252	400000	
Al	27	2	45	8.851	ppb	8.851	18.44	307	400000	
Si	28	2	45	973.695	ppb	973.695	1.31	182513	10000	
P	31	2	45	69.779	ppb	69.779	10.01	311	10000	
K	39	2	45	7752.297	ppb	7752.297	1.16	506044	400000	
Ca	40	1	45	169896.261	ppb	169896.261	0.62	236612876	400000	
Ti	47	2	45	0.129	ppb	0.129	173.21	3	4000	
V	51	2	72	1.207	ppb	1.207	9.77	3654	2000	
Cr	52	2	72	-0.009	ppb	-0.009	-1527.88	2417	5000	
Mn	55	2	72	57.691	ppb	57.691	0.68	31708	10000	
Fe	56	1	72	9.158	ppb	9.158	0.95	52507	10000	
(Fe)	57	2	72	22.249	ppb	22.249	54.28	770	400000	
Co	59	2	72	0.436	ppb	0.436	17.70	877	2000	
Ni	60	2	72	1.877	ppb	1.877	19.80	1397	5000	
Cu	63	2	72	0.781	ppb	0.781	13.32	2527	5000	
Zn	66	2	72	2.641	ppb	2.641	17.63	1117	5000	
As	75	2	72	1.297	ppb	1.297	13.51	420	2000	
Se	78	1	72	0.654	ppb	0.654	6.83	95	2000	
Sr	88	2	72	1068.867	ppb	1068.867	0.34	648190	4000	
Zr	90	2	72	177.949	ppb	177.949	18.37	1097	1000	
Mo	95	2	115	8.582	ppb	8.582	8.95	6215	2000	
Ag	107	2	115	0.010	ppb	0.010	226.56	70	100	
Cd	111	2	115	0.110	ppb	0.110	52.09	57	2000	
Sn	120	2	115	0.092	ppb	0.092	219.15	1003	2000	
Sb	121	2	115	0.902	ppb	0.902	9.99	1003	1000	
Ba	137	2	115	27.465	ppb	27.465	2.78	8259	5000	
W	182	2	165	0.570	ppb	0.570	4.37	2924	100	
Tl	205	2	165	0.150	ppb	0.150	7.47	1730	2000	
Pb	208	2	165	0.006	ppb	0.006	250.53	3904	5000	
Th	232	2	193	0.484	ppb	0.484	7.46	13460	2000	
U	238	2	193	9.726	ppb	9.726	1.30	103593	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	229000	1.20	259861	88.12	60	120	
Sc (IS)	45	1	HMI H2	8565172	0.83	9102038	94.10	60	120	
Sc (IS)	45	2	HMI He	864061	0.28	903588	95.63	60	120	
Sc (IS)	45	3	No Gas	15853234	1.07	16459035	96.32	60	120	
Ge Internal standard	72	1	HMI H2	4648211	0.59	4919618	94.48	60	120	
Ge Internal standard	72	2	HMI He	1011644	0.59	1043503	96.95	60	120	
In Internal standard	115	2	HMI He	3432132	1.21	3551384	96.64	60	120	
Ho-165	165	2	HMI He	13510953	1.25	13518981	99.94	60	120	
Ir (IS)	193	2	HMI He	9956670	0.66	10147609	98.12	60	120	

Sample Report

Sample Table

Sample Name	280-174494-C-2-A
Data File Name	049SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:48:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	607692 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	50.413	ppb	50.413	6.39	1191266	50000	
Be	9	1	6	0.152	ppb	0.152	58.51	60	2000	
B	11	1	6	2043.238	ppb	2043.238	1.39	284501	2000	
Na	23	2	45	2596850.256	ppb	2596850.256	0.63	497141926	400000	>LDR
Mg	24	2	45	208795.419	ppb	208795.419	0.40	18395544	400000	
Al	27	2	45	5.639	ppb	5.639	14.73	223	400000	
Si	28	2	45	1564.985	ppb	1564.985	0.94	283666	10000	
P	31	2	45	331.683	ppb	331.683	4.21	1037	10000	
K	39	2	45	79053.391	ppb	79053.391	0.95	4788935	400000	
Ca	40	1	45	106615.868	ppb	106615.868	1.38	145012308	400000	
Ti	47	2	45	0.902	ppb	0.902	24.16	23	4000	
V	51	2	72	1.913	ppb	1.913	22.04	4161	2000	
Cr	52	2	72	0.566	ppb	0.566	21.29	3004	5000	
Mn	55	2	72	1631.736	ppb	1631.736	1.21	865670	10000	
Fe	56	1	72	163.154	ppb	163.154	0.38	495795	10000	
(Fe)	57	2	72	170.596	ppb	170.596	2.44	4087	400000	
Co	59	2	72	1.837	ppb	1.837	7.14	3370	2000	
Ni	60	2	72	5.811	ppb	5.811	6.31	3354	5000	
Cu	63	2	72	0.841	ppb	0.841	20.35	2534	5000	
Zn	66	2	72	11.999	ppb	11.999	8.09	3547	5000	
As	75	2	72	11.528	ppb	11.528	2.51	2519	2000	
Se	78	1	72	0.290	ppb	0.290	68.07	45	2000	
Sr	88	2	72	1560.322	ppb	1560.322	0.56	918247	4000	
Zr	90	2	72	152.021	ppb	152.021	18.34	993	1000	
Mo	95	2	115	6.116	ppb	6.116	11.68	4321	2000	
Ag	107	2	115	-0.002	ppb	-0.002	-474.16	40	100	
Cd	111	2	115	0.077	ppb	0.077	41.93	43	2000	
Sn	120	2	115	-0.053	ppb	-0.053	-172.69	837	2000	
Sb	121	2	115	0.310	ppb	0.310	19.02	357	1000	
Ba	137	2	115	86.890	ppb	86.890	0.74	25265	5000	
W	182	2	165	0.341	ppb	0.341	11.96	2080	100	
Tl	205	2	165	0.029	ppb	0.029	55.22	897	2000	
Pb	208	2	165	0.023	ppb	0.023	82.65	3790	5000	
Th	232	2	193	0.082	ppb	0.082	43.82	8550	2000	
U	238	2	193	0.955	ppb	0.955	1.95	11542	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	214703	0.14	259861	82.62	60	120	
Sc (IS)	45	1	HMI H2	8363952	0.26	9102038	91.89	60	120	
Sc (IS)	45	2	HMI He	864768	0.83	903588	95.70	60	120	
Sc (IS)	45	3	No Gas	15788686	1.76	16459035	95.93	60	120	
Ge Internal standard	72	1	HMI H2	4442856	0.57	4919618	90.31	60	120	
Ge Internal standard	72	2	HMI He	981764	0.70	1043503	94.08	60	120	
In Internal standard	115	2	HMI He	3343248	0.76	3551384	94.14	60	120	
Ho-165	165	2	HMI He	12647436	0.42	13518981	93.55	60	120	
Ir (IS)	193	2	HMI He	8916011	1.20	10147609	87.86	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	050_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:52:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	50.349	ppb	2.511	10200	50	100.7	90	110	
Na	23	2	45	53566.509	ppb	1.128	10180022	51000	105.0	90	110	
Mg	24	2	45	10843.090	ppb	1.866	946760	11000	98.6	90	110	
Al	27	2	45	989.923	ppb	1.968	25610	1000	99.0	90	110	
K	39	2	45	10579.098	ppb	0.510	670064	11000	96.2	90	110	
Ca	40	1	45	11515.966	ppb	0.221	16169994	11000	104.7	90	110	
Ti	47	2	45	47.787	ppb	4.897	1223	50	95.6	90	110	
V	51	2	72	51.133	ppb	0.964	47291	50	102.3	90	110	
Cr	52	2	72	50.025	ppb	0.568	60051	50	100.0	90	110	
Mn	55	2	72	50.405	ppb	1.162	27116	50	100.8	90	110	
Fe	56	1	72	1013.228	ppb	1.620	3081235	1000	101.3	90	110	
Co	59	2	72	49.447	ppb	1.085	89741	50	98.9	90	110	
Ni	60	2	72	48.403	ppb	5.655	25180	50	96.8	90	110	
Cu	63	2	72	49.661	ppb	0.874	69626	50	99.3	90	110	
Zn	66	2	72	48.827	ppb	2.110	13346	50	97.7	90	110	
As	75	2	72	50.510	ppb	1.076	10645	50	101.0	90	110	
Se	78	1	72	47.457	ppb	2.903	6121	50	94.9	90	110	
Sr	88	2	72	101.121	ppb	2.485	60001	100	101.1	90	110	
Zr	90	2	72	242.700	ppb	14.414	1250	50	485.4	90	110	>+\-10%
Mo	95	2	115	50.268	ppb	1.043	36492	50	100.5	90	110	
Ag	107	2	115	47.093	ppb	0.793	114076	50	94.2	90	110	
Cd	111	2	115	48.363	ppb	1.965	18064	50	96.7	90	110	
Sn	120	2	115	47.531	ppb	2.314	48615	50	95.1	90	110	
Sb	121	2	115	49.032	ppb	3.153	53190	50	98.1	90	110	
Ba	137	2	115	51.278	ppb	2.638	15458	50	102.6	90	110	
W	182	2	165	49.727	ppb	1.511	150436	50	99.5	90	110	
Tl	205	2	165	48.643	ppb	1.090	305471	50	97.3	90	110	
Pb	208	2	165	48.295	ppb	0.694	415985	50	96.6	90	110	
Th	232	2	193	49.334	ppb	0.513	473649	50	98.7	90	110	
U	238	2	193	49.608	ppb	1.276	499458	50	99.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	222485	0.51	259861	85.62	60	120	
Sc (IS)	45	1	HMI H2	8613283	0.25	9102038	94.63	60	120	
Sc (IS)	45	2	HMI He	856872	0.47	903588	94.83	60	120	
Sc (IS)	45	3	No Gas	15645670	1.15	16459035	95.06	60	120	
Ge Internal standard	72	1	HMI H2	4632054	0.76	4919618	94.15	60	120	
Ge Internal standard	72	2	HMI He	989379	0.57	1043503	94.81	60	120	
In Internal standard	115	2	HMI He	3457944	1.58	3551384	97.37	60	120	
Ho-165	165	2	HMI He	13248171	0.69	13518981	98.00	60	120	
Ir (IS)	193	2	HMI He	9637196	1.18	10147609	94.97	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	051_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:55:41-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-8.575	ppb	-5.2	771919	10	
Be	9	1	6	0.158	ppb	138.3	63	0.5	
B	11	1	6	58.521	ppb	2.6	9073	0.5	>RL
Na	23	2	45	455.637	ppb	6.9	104062	25	>RL
Mg	24	2	45	14.600	ppb	20.7	1453	25	
Al	27	2	45	1.645	ppb	121.7	117	15	
K	39	2	45	-1.303	ppb	-868.9	39778	50	
Ti	47	2	45	0.398	ppb	99.8	10	0.5	
V	51	2	72	1.984	ppb	10.1	4214	1	>RL
Cr	52	2	72	-0.349	ppb	-37.1	1954	1	
Mn	55	2	72	0.127	ppb	98.5	237	0.5	
(Fe)	57	2	72	-2.837	ppb	-64.4	183	25	
Co	59	2	72	0.032	ppb	36.1	123	0.5	
Ni	60	2	72	0.005	ppb	827.0	403	1	
Cu	63	2	72	0.641	ppb	16.9	2257	1	
Zn	66	2	72	-0.004	ppb	-4708.5	387	5	
As	75	2	72	0.031	ppb	304.6	146	1	
Se	78	1	72	0.008	ppb	882.3	11	1	
Sr	88	2	72	0.151	ppb	47.1	123	0.5	
Zr	90	2	72	-4.333	ppb	-1725.2	567	1	
Mo	95	2	115	0.150	ppb	40.3	140	0.5	
Ag	107	2	115	0.003	ppb	281.3	53	1	
Cd	111	2	115	-0.034	ppb	-45.9	3	0.5	
Sn	120	2	115	0.029	ppb	476.0	937	1	
Sb	121	2	115	0.188	ppb	14.8	233	0.6	
Ba	137	2	115	-0.011	ppb	-686.6	83	0.5	
W	182	2	165	0.143	ppb	17.4	1573	1	
Tl	205	2	165	0.006	ppb	247.0	790	0.1	
Pb	208	2	165	-0.040	ppb	-8.3	3410	0.5	
Th	232	2	193	0.351	ppb	16.5	11882	1	
U	238	2	193	0.033	ppb	38.9	3281	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	221002	1.81	259861	85.05	60	120	
Sc (IS)	45	1	HMI H2	8322186	0.36	9102038	91.43	60	120	
Sc (IS)	45	2	HMI He	844090	0.70	903588	93.42	60	120	
Sc (IS)	45	3	No Gas	15309144	2.02	16459035	93.01	60	120	
Ge Internal standard	72	1	HMI H2	4491533	0.89	4919618	91.30	60	120	
Ge Internal standard	72	2	HMI He	980333	0.44	1043503	93.95	60	120	
In Internal standard	115	2	HMI He	3419034	0.49	3551384	96.27	60	120	
Ho-165	165	2	HMI He	13160611	0.48	13518981	97.35	60	120	
Ir (IS)	193	2	HMI He	9725381	0.47	10147609	95.84	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608657/1-A
Data File Name	052_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T12:59:15-06:00
Sample Type	Blank
Dilution	1
Comment	608657 200.8
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	-10.332	ppb	-6.384954512	778578	10
Be	9	1	6	0.077	ppb	97.77433674	47	0.5
B	11	1	6	30.059	ppb	11.13746507	4991	0.5
Na	23	2	45	229.084	ppb	4.595852471	61594	25
Mg	24	2	45	10.434	ppb	17.08949044	1093	25
Al	27	2	45	-0.052	ppb	-1895.866745	73	15
K	39	2	45	-37.816	ppb	-29.36954974	37549	50
Ti	47	2	45	0.132	ppb	173.2050808	3	0.5
V	51	2	72	1.679	ppb	8.968084133	3957	1
Cr	52	2	72	-0.299	ppb	-58.19344226	2014	1
Mn	55	2	72	0.214	ppb	47.25138037	283	0.5
(Fe)	57	2	72	0.680	ppb	544.073557	263	25
Co	59	2	72	0.037	ppb	70.40411518	133	0.5
Ni	60	2	72	-0.338	ppb	-61.34328651	230	1
Cu	63	2	72	0.464	ppb	31.68699382	2020	1
Zn	66	2	72	0.183	ppb	103.4428882	437	5
As	75	2	72	0.105	ppb	72.05938101	161	1
Se	78	1	72	0.040	ppb	125.3269989	15	1
Sr	88	2	72	0.140	ppb	31.10101597	117	0.5
Zr	90	2	72	-13.470	ppb	-159.4963675	543	1
Mo	95	2	115	0.103	ppb	65.87919408	107	0.5
Ag	107	2	115	-0.005	ppb	-98.67147429	33	1
Cd	111	2	115	0.020	ppb	157.5866447	23	0.5
Sn	120	2	115	-0.266	ppb	-35.90683741	647	1
Sb	121	2	115	0.112	ppb	49.93088923	153	0.6
Ba	137	2	115	0.290	ppb	48.2009536	173	0.5
W	182	2	165	-0.017	ppb	-168.6598902	1103	1
Tl	205	2	165	-0.046	ppb	-42.57631387	467	0.1
Pb	208	2	165	-0.091	ppb	-1.860959774	2990	0.5
Th	232	2	193	-0.004	ppb	-495.3958908	8700	1
U	238	2	193	-0.008	ppb	-192.2959592	2924	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	220560	0.37	259861	84.88	60	120	
Sc (IS)	45	1	HMI H2	8390819	0.65	9102038	92.19	60	120	
Sc (IS)	45	2	HMI He	842031	0.42	903588	93.19	60	120	
Sc (IS)	45	3	No Gas	15672695	0.54	16459035	95.22	60	120	
Ge Internal standard	72	1	HMI H2	4493445	0.67	4919618	91.34	60	120	
Ge Internal standard	72	2	HMI He	982173	0.64	1043503	94.12	60	120	
In Internal standard	115	2	HMI He	3435528	0.83	3551384	96.74	60	120	
Ho-165	165	2	HMI He	13224079	0.23	13518981	97.82	60	120	
Ir (IS)	193	2	HMI He	9940247	0.63	10147609	97.96	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608657/2-A
Data File Name	053_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:02:49-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608657 200.8
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	35.122	35.122	ppb	10.904	1050982	400	8.8	80	120	>+/-20%
Be	9	1	6	38.871	38.871	ppb	4.929	7859	40	97.2	80	120	
Na	23	2	45	953.827	953.827	ppb	2.258	196517	40	2384.6	80	120	>+/-20%
Mg	24	2	45	770.323	770.323	ppb	2.211	66226	40	1925.8	80	120	>+/-20%
Al	27	2	45	760.360	760.360	ppb	2.590	19332	40	1900.9	80	120	>+/-20%
K	39	2	45	746.349	746.349	ppb	1.699	83338	40	1865.9	80	120	>+/-20%
V	51	2	72	40.402	40.402	ppb	1.616	37580	40	101.0	80	120	
Cr	52	2	72	40.665	40.665	ppb	0.891	48849	40	101.7	80	120	
Mn	55	2	72	39.977	39.977	ppb	3.779	21361	40	99.9	80	120	
(Fe)	57	2	72	805.819	805.819	ppb	4.534	18374	40	2014.5	80	120	>+/-20%
Co	59	2	72	39.942	39.942	ppb	1.553	71902	40	99.9	80	120	
Ni	60	2	72	38.807	38.807	ppb	3.623	20103	40	97.0	80	120	
Cu	63	2	72	40.297	40.297	ppb	1.418	56290	40	100.7	80	120	
Zn	66	2	72	39.375	39.375	ppb	2.255	10747	40	98.4	80	120	
As	75	2	72	38.080	38.080	ppb	3.165	7993	40	95.2	80	120	
Se	78	1	72	38.754	38.754	ppb	3.010	4893	40	96.9	80	120	
Mo	95	2	115	37.673	37.673	ppb	2.433	27361	40	94.2	80	120	
Ag	107	2	115	38.816	38.816	ppb	0.578	94049	40	97.0	80	120	
Cd	111	2	115	37.560	37.560	ppb	3.304	14033	40	93.9	80	120	
Sn	120	2	115	36.815	36.815	ppb	1.510	37876	40	92.0	80	120	
Sb	121	2	115	37.653	37.653	ppb	1.353	40877	40	94.1	80	120	
Ba	137	2	115	38.693	38.693	ppb	4.428	11685	40	96.7	80	120	
W	182	2	165	-0.060	-0.060	ppb	-47.780	970	40	-0.1	80	120	>+/-20%
Tl	205	2	165	39.609	39.609	ppb	1.956	247329	40	99.0	80	120	
Pb	208	2	165	39.912	39.912	ppb	0.488	342283	40	99.8	80	120	
Th	232	2	193	37.724	37.724	ppb	1.033	373240	40	94.3	80	120	
U	238	2	193	39.016	39.016	ppb	0.211	403276	40	97.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	221827	0.38	259861	85.36	60	120	
Sc (IS)	45	1	HMI H2	8445760	0.75	9102038	92.79	60	120	
Sc (IS)	45	2	HMI He	841328	0.17	903588	93.11	60	120	
Sc (IS)	45	3	No Gas	15242209	1.96	16459035	92.61	60	120	
Ge Internal standard	72	1	HMI H2	4530915	1.22	4919618	92.10	60	120	
Ge Internal standard	72	2	HMI He	981138	0.14	1043503	94.02	60	120	
In Internal standard	115	2	HMI He	3458622	1.07	3551384	97.39	60	120	
Ho-165	165	2	HMI He	13165021	0.09	13518981	97.38	60	120	
Ir (IS)	193	2	HMI He	9877290	0.29	10147609	97.34	60	120	

Sample Report

Sample Table

Sample Name	280-174969-A-1-A
Data File Name	054SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:06:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608657 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.839	ppb	-2.839	-43.00	809466	50000	
Be	9	1	6	-0.004	ppb	-0.004	-3826.54	30	2000	
B	11	1	6	34.410	ppb	34.410	5.81	5538	2000	
Na	23	2	45	31737.816	ppb	31737.816	0.82	5916889	400000	
Mg	24	2	45	12619.513	ppb	12619.513	4.00	1079399	400000	
Al	27	2	45	1040.025	ppb	1040.025	1.29	26355	400000	
Si	28	2	45	388.695	ppb	388.695	0.66	80312	10000	
P	31	2	45	67.126	ppb	67.126	15.29	295	10000	
K	39	2	45	1755.774	ppb	1755.774	1.77	142006	400000	
Ca	40	1	45	31586.824	ppb	31586.824	0.22	42784813	400000	
Ti	47	2	45	13.580	ppb	13.580	31.56	340	4000	
V	51	2	72	3.815	ppb	3.815	3.59	5885	2000	
Cr	52	2	72	1.154	ppb	1.154	24.50	3721	5000	
Mn	55	2	72	68.546	ppb	68.546	3.68	36985	10000	
Fe	56	1	72	1628.815	ppb	1628.815	0.68	4819173	10000	
(Fe)	57	2	72	1639.730	ppb	1639.730	2.79	37623	400000	
Co	59	2	72	0.867	ppb	0.867	1.53	1647	2000	
Ni	60	2	72	2.671	ppb	2.671	11.71	1780	5000	
Cu	63	2	72	2.467	ppb	2.467	11.35	4808	5000	
Zn	66	2	72	24.894	ppb	24.894	2.79	7028	5000	
As	75	2	72	1.309	ppb	1.309	8.95	415	2000	
Se	78	1	72	0.187	ppb	0.187	25.25	33	2000	
Sr	88	2	72	55.575	ppb	55.575	1.85	33155	4000	
Zr	90	2	72	306.918	ppb	306.918	15.56	1433	1000	
Mo	95	2	115	728.426	ppb	728.426	0.56	513362	2000	
Ag	107	2	115	0.005	ppb	0.005	122.94	57	100	
Cd	111	2	115	0.177	ppb	0.177	40.79	80	2000	
Sn	120	2	115	-0.174	ppb	-0.174	-98.53	723	2000	
Sb	121	2	115	0.552	ppb	0.552	9.01	613	1000	
Ba	137	2	115	26.670	ppb	26.670	1.42	7852	5000	
W	182	2	165	-0.008	ppb	-0.008	-204.65	1137	100	
Tl	205	2	165	0.013	ppb	0.013	101.45	840	2000	
Pb	208	2	165	0.885	ppb	0.885	4.63	11376	5000	
Th	232	2	193	0.715	ppb	0.715	8.11	15529	2000	
U	238	2	193	0.817	ppb	0.817	3.34	11332	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	217670	0.27	259861	83.76	60	120	
Sc (IS)	45	1	HMI H2	8323443	0.86	9102038	91.45	60	120	
Sc (IS)	45	2	HMI He	839475	0.77	903588	92.90	60	120	
Sc (IS)	45	3	No Gas	15315466	2.25	16459035	93.05	60	120	
Ge Internal standard	72	1	HMI H2	4519955	1.04	4919618	91.88	60	120	
Ge Internal standard	72	2	HMI He	994145	0.74	1043503	95.27	60	120	
In Internal standard	115	2	HMI He	3359651	0.63	3551384	94.60	60	120	
Ho-165	165	2	HMI He	13304681	1.07	13518981	98.41	60	120	
Ir (IS)	193	2	HMI He	9838284	0.58	10147609	96.95	60	120	

Sample Report

Sample Table

Sample Name	280-174969-A-1-B MS
Data File Name	055SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:09:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608657 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	41.754	ppb	41.754	7.09	1102984	50000	
Be	9	1	6	40.647	ppb	40.647	8.23	8136	2000	
B	11	1	6	33.745	ppb	33.745	4.72	5494	2000	
Na	23	2	45	33637.555	ppb	33637.555	0.29	6276918	400000	
Mg	24	2	45	14094.937	ppb	14094.937	0.38	1207027	400000	
Al	27	2	45	2121.220	ppb	2121.220	0.43	53739	400000	
Si	28	2	45	475.384	ppb	475.384	1.89	94796	10000	
P	31	2	45	62.300	ppb	62.300	8.61	282	10000	
K	39	2	45	2586.090	ppb	2586.090	0.12	190634	400000	
Ca	40	1	45	33668.808	ppb	33668.808	0.15	45425293	400000	
Ti	47	2	45	52.170	ppb	52.170	15.85	1310	4000	
V	51	2	72	43.225	ppb	43.225	0.93	40115	2000	
Cr	52	2	72	41.137	ppb	41.137	1.45	49494	5000	
Mn	55	2	72	111.922	ppb	111.922	0.22	59624	10000	
Fe	56	1	72	2518.017	ppb	2518.017	0.54	7491272	10000	
(Fe)	57	2	72	2531.738	ppb	2531.738	1.63	57319	400000	
Co	59	2	72	38.911	ppb	38.911	0.85	70195	2000	
Ni	60	2	72	40.523	ppb	40.523	0.59	21017	5000	
Cu	63	2	72	43.194	ppb	43.194	3.45	60367	5000	
Zn	66	2	72	63.422	ppb	63.422	1.40	17109	5000	
As	75	2	72	39.395	ppb	39.395	1.00	8281	2000	
Se	78	1	72	38.411	ppb	38.411	1.62	4873	2000	
Sr	88	2	72	137.500	ppb	137.500	1.87	81071	4000	
Zr	90	2	72	513.813	ppb	513.813	25.32	1980	1000	
Mo	95	2	115	798.275	ppb	798.275	0.62	561282	2000	
Ag	107	2	115	39.692	ppb	39.692	1.65	93200	100	
Cd	111	2	115	38.144	ppb	38.144	4.97	13810	2000	
Sn	120	2	115	36.644	ppb	36.644	1.93	36540	2000	
Sb	121	2	115	39.113	ppb	39.113	1.33	41151	1000	
Ba	137	2	115	72.384	ppb	72.384	0.95	21115	5000	
W	182	2	165	-0.010	ppb	-0.010	-582.56	1130	100	
Tl	205	2	165	39.307	ppb	39.307	0.62	248062	2000	
Pb	208	2	165	40.031	ppb	40.031	0.67	346952	5000	
Th	232	2	193	38.744	ppb	38.744	0.51	380385	2000	
U	238	2	193	40.478	ppb	40.478	0.81	415307	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	219653	0.14	259861	84.53	60	120	
Sc (IS)	45	1	HMI H2	8291139	0.60	9102038	91.09	60	120	
Sc (IS)	45	2	HMI He	840402	0.37	903588	93.01	60	120	
Sc (IS)	45	3	No Gas	15364791	1.55	16459035	93.35	60	120	
Ge Internal standard	72	1	HMI H2	4553156	1.55	4919618	92.55	60	120	
Ge Internal standard	72	2	HMI He	983190	0.27	1043503	94.22	60	120	
In Internal standard	115	2	HMI He	3351916	0.68	3551384	94.38	60	120	
Ho-165	165	2	HMI He	13305080	0.50	13518981	98.42	60	120	
Ir (IS)	193	2	HMI He	9807075	0.77	10147609	96.64	60	120	

Sample Report

Sample Table

Sample Name	280-174969-A-1-C MSD
Data File Name	056SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:13:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608657 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	39.168	ppb	39.168	4.98	1087498	50000	
Be	9	1	6	40.920	ppb	40.920	4.19	8219	2000	
B	11	1	6	30.691	ppb	30.691	6.41	5078	2000	
Na	23	2	45	32319.813	ppb	32319.813	0.63	6048371	400000	
Mg	24	2	45	13677.530	ppb	13677.530	0.41	1174461	400000	
Al	27	2	45	2090.004	ppb	2090.004	3.11	53087	400000	
Si	28	2	45	457.684	ppb	457.684	1.99	92098	10000	
P	31	2	45	59.037	ppb	59.037	9.10	274	10000	
K	39	2	45	2493.522	ppb	2493.522	0.90	185734	400000	
Ca	40	1	45	32270.469	ppb	32270.469	1.36	43734926	400000	
Ti	47	2	45	54.678	ppb	54.678	7.32	1377	4000	
V	51	2	72	41.772	ppb	41.772	0.68	39213	2000	
Cr	52	2	72	40.816	ppb	40.816	2.26	49581	5000	
Mn	55	2	72	106.532	ppb	106.532	0.70	57293	10000	
Fe	56	1	72	2448.570	ppb	2448.570	0.99	7269853	10000	
(Fe)	57	2	72	2437.012	ppb	2437.012	2.42	55694	400000	
Co	59	2	72	38.862	ppb	38.862	0.53	70761	2000	
Ni	60	2	72	40.607	ppb	40.607	4.19	21261	5000	
Cu	63	2	72	41.247	ppb	41.247	1.57	58247	5000	
Zn	66	2	72	65.930	ppb	65.930	3.21	17940	5000	
As	75	2	72	39.108	ppb	39.108	1.26	8299	2000	
Se	78	1	72	38.064	ppb	38.064	2.19	4818	2000	
Sr	88	2	72	133.068	ppb	133.068	0.88	79196	4000	
Zr	90	2	72	533.187	ppb	533.187	13.35	2054	1000	
Mo	95	2	115	777.304	ppb	777.304	0.55	547634	2000	
Ag	107	2	115	39.868	ppb	39.868	0.54	93803	100	
Cd	111	2	115	39.823	ppb	39.823	6.51	14444	2000	
Sn	120	2	115	36.462	ppb	36.462	3.38	36439	2000	
Sb	121	2	115	39.277	ppb	39.277	3.37	41401	1000	
Ba	137	2	115	68.885	ppb	68.885	5.13	20144	5000	
W	182	2	165	-0.016	ppb	-0.016	-142.85	1117	100	
Tl	205	2	165	38.971	ppb	38.971	0.93	246720	2000	
Pb	208	2	165	39.769	ppb	39.769	0.56	345788	5000	
Th	232	2	193	38.859	ppb	38.859	0.23	383197	2000	
U	238	2	193	40.566	ppb	40.566	0.61	418082	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	220519	1.34	259861	84.86	60	120	
Sc (IS)	45	1	HMI H2	8328581	0.78	9102038	91.50	60	120	
Sc (IS)	45	2	HMI He	842700	0.89	903588	93.26	60	120	
Sc (IS)	45	3	No Gas	15384638	0.63	16459035	93.47	60	120	
Ge Internal standard	72	1	HMI H2	4543362	0.80	4919618	92.35	60	120	
Ge Internal standard	72	2	HMI He	992403	0.89	1043503	95.10	60	120	
In Internal standard	115	2	HMI He	3358510	0.78	3551384	94.57	60	120	
Ho-165	165	2	HMI He	13347690	0.84	13518981	98.73	60	120	
Ir (IS)	193	2	HMI He	9851094	0.47	10147609	97.08	60	120	

Sample Report

Sample Table

Sample Name	280-174969-A-2-A
Data File Name	057SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:17:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608657 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-3.548	ppb	-3.548	-32.83	816522	50000	
Be	9	1	6	0.075	ppb	0.075	134.55	47	2000	
B	11	1	6	28.382	ppb	28.382	7.35	4788	2000	
Na	23	2	45	32357.017	ppb	32357.017	0.95	6058104	400000	
Mg	24	2	45	13028.546	ppb	13028.546	2.57	1119235	400000	
Al	27	2	45	1159.144	ppb	1159.144	4.50	29490	400000	
Si	28	2	45	411.422	ppb	411.422	2.61	84438	10000	
P	31	2	45	65.598	ppb	65.598	20.36	292	10000	
K	39	2	45	1830.233	ppb	1830.233	1.22	146988	400000	
Ca	40	1	45	32021.227	ppb	32021.227	1.42	43893328	400000	
Ti	47	2	45	22.004	ppb	22.004	34.83	554	4000	
V	51	2	72	3.212	ppb	3.212	12.00	5371	2000	
Cr	52	2	72	1.229	ppb	1.229	22.21	3821	5000	
Mn	55	2	72	71.198	ppb	71.198	1.10	38539	10000	
Fe	56	1	72	1739.668	ppb	1739.668	0.38	5232522	10000	
(Fe)	57	2	72	1750.746	ppb	1750.746	2.39	40283	400000	
Co	59	2	72	0.935	ppb	0.935	10.02	1777	2000	
Ni	60	2	72	2.233	ppb	2.233	14.98	1560	5000	
Cu	63	2	72	2.604	ppb	2.604	3.80	5014	5000	
Zn	66	2	72	25.660	ppb	25.660	10.28	7255	5000	
As	75	2	72	1.235	ppb	1.235	19.31	401	2000	
Se	78	1	72	0.339	ppb	0.339	26.61	53	2000	
Sr	88	2	72	58.513	ppb	58.513	0.16	35015	4000	
Zr	90	2	72	388.585	ppb	388.585	14.97	1663	1000	
Mo	95	2	115	740.297	ppb	740.297	0.72	530918	2000	
Ag	107	2	115	0.001	ppb	0.001	1357.91	47	100	
Cd	111	2	115	0.128	ppb	0.128	32.13	63	2000	
Sn	120	2	115	-0.136	ppb	-0.136	-40.49	773	2000	
Sb	121	2	115	0.564	ppb	0.564	8.44	637	1000	
Ba	137	2	115	27.691	ppb	27.691	7.90	8296	5000	
W	182	2	165	-0.074	ppb	-0.074	-67.79	950	100	
Tl	205	2	165	0.020	ppb	0.020	141.03	900	2000	
Pb	208	2	165	0.834	ppb	0.834	6.04	11072	5000	
Th	232	2	193	0.671	ppb	0.671	4.77	15355	2000	
U	238	2	193	0.799	ppb	0.799	4.03	11332	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	222176	0.71	259861	85.50	60	120	
Sc (IS)	45	1	HMI H2	8424481	1.64	9102038	92.56	60	120	
Sc (IS)	45	2	HMI He	843140	0.88	903588	93.31	60	120	
Sc (IS)	45	3	No Gas	15536051	0.45	16459035	94.39	60	120	
Ge Internal standard	72	1	HMI H2	4596430	0.55	4919618	93.43	60	120	
Ge Internal standard	72	2	HMI He	997335	0.35	1043503	95.58	60	120	
In Internal standard	115	2	HMI He	3418904	0.74	3551384	96.27	60	120	
Ho-165	165	2	HMI He	13469087	0.77	13518981	99.63	60	120	
Ir (IS)	193	2	HMI He	10002650	0.27	10147609	98.57	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608498/1-C
Data File Name	058_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:20:37-06:00
Sample Type	Blank
Dilution	1
Comment	608558 200.8
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	-8.480	ppb	-13.92614682	785978	10
Be	9	1	6	0.022	ppb	469.1997519	37	0.5
B	11	1	6	12.766	ppb	11.75920064	2614	0.5
Na	23	2	45	109.341	ppb	2.391832743	39459	25
Mg	24	2	45	6.269	ppb	24.12288899	740	25
Al	27	2	45	3.080	ppb	65.78275181	153	15
K	39	2	45	-24.796	ppb	-50.70506325	38495	50
Ti	47	2	45	0.132	ppb	173.2050808	3	0.5
V	51	2	72	0.309	ppb	76.99246106	2777	1
Cr	52	2	72	0.016	ppb	1145.191833	2384	1
Mn	55	2	72	0.293	ppb	68.33280948	327	0.5
(Fe)	57	2	72	8.477	ppb	53.87410738	440	25
Co	59	2	72	0.006	ppb	108.4752412	77	0.5
Ni	60	2	72	-0.496	ppb	-14.55117566	150	1
Cu	63	2	72	0.071	ppb	51.89840523	1490	1
Zn	66	2	72	0.542	ppb	51.82485689	533	5
As	75	2	72	-0.077	ppb	-106.1533251	124	1
Se	78	1	72	0.017	ppb	186.0936344	12	1
Sr	88	2	72	0.100	ppb	55.54845791	93	0.5
Zr	90	2	72	23.656	ppb	123.0427925	647	1
Mo	95	2	115	1.336	ppb	8.734945516	1003	0.5
Ag	107	2	115	-0.007	ppb	-108.7379968	30	1
Cd	111	2	115	-0.025	ppb	-120.6934796	7	0.5
Sn	120	2	115	-0.295	ppb	-16.77319135	623	1
Sb	121	2	115	0.111	ppb	60.39816441	153	0.6
Ba	137	2	115	-0.026	ppb	-528.3947263	80	0.5
W	182	2	165	-0.069	ppb	-30.86436257	953	1
Tl	205	2	165	-0.051	ppb	-43.89000162	443	0.1
Pb	208	2	165	-0.126	ppb	-16.43051919	2717	0.5
Th	232	2	193	0.043	ppb	97.81927816	9297	1
U	238	2	193	-0.007	ppb	-159.7172136	2977	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	228573	1.01	259861	87.96	60	120	
Sc (IS)	45	1	HMI H2	8387352	1.40	9102038	92.15	60	120	
Sc (IS)	45	2	HMI He	846121	0.17	903588	93.64	60	120	
Sc (IS)	45	3	No Gas	15575422	0.90	16459035	94.63	60	120	
Ge Internal standard	72	1	HMI H2	4556125	0.84	4919618	92.61	60	120	
Ge Internal standard	72	2	HMI He	986026	0.48	1043503	94.49	60	120	
In Internal standard	115	2	HMI He	3463743	0.78	3551384	97.53	60	120	
Ho-165	165	2	HMI He	13335296	1.02	13518981	98.64	60	120	
Ir (IS)	193	2	HMI He	10091657	0.92	10147609	99.45	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608498/2-E
Data File Name	059_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:24:12-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608558 200.8
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	35.226	35.226	ppb	9.785	1086150	400	8.8	80	120	>+/-20%
Be	9	1	6	37.204	37.204	ppb	4.669	7822	40	93.0	80	120	
Na	23	2	45	877.614	877.614	ppb	0.410	183967	40	2194.0	80	120	>+/-20%
Mg	24	2	45	765.431	765.431	ppb	1.340	66399	40	1913.6	80	120	>+/-20%
Al	27	2	45	757.001	757.001	ppb	2.364	19422	40	1892.5	80	120	>+/-20%
K	39	2	45	746.656	746.656	ppb	2.111	84105	40	1866.6	80	120	>+/-20%
V	51	2	72	38.759	38.759	ppb	3.238	36795	40	96.9	80	120	
Cr	52	2	72	39.683	39.683	ppb	0.641	48571	40	99.2	80	120	
Mn	55	2	72	40.796	40.796	ppb	1.808	22179	40	102.0	80	120	
(Fe)	57	2	72	818.415	818.415	ppb	1.212	18988	40	2046.0	80	120	>+/-20%
Co	59	2	72	39.712	39.712	ppb	1.292	72752	40	99.3	80	120	
Ni	60	2	72	38.224	38.224	ppb	4.317	20160	40	95.6	80	120	
Cu	63	2	72	40.507	40.507	ppb	2.016	57570	40	101.3	80	120	
Zn	66	2	72	39.320	39.320	ppb	3.750	10924	40	98.3	80	120	
As	75	2	72	38.363	38.363	ppb	2.997	8192	40	95.9	80	120	
Se	78	1	72	37.970	37.970	ppb	2.673	4881	40	94.9	80	120	
Mo	95	2	115	38.990	38.990	ppb	1.539	28439	40	97.5	80	120	
Ag	107	2	115	39.302	39.302	ppb	0.585	95635	40	98.3	80	120	
Cd	111	2	115	38.968	38.968	ppb	3.291	14621	40	97.4	80	120	
Sn	120	2	115	37.769	37.769	ppb	1.093	39002	40	94.4	80	120	
Sb	121	2	115	38.342	38.342	ppb	0.595	41799	40	95.9	80	120	
Ba	137	2	115	40.000	40.000	ppb	3.409	12132	40	100.0	80	120	
W	182	2	165	-0.126	-0.126	ppb	-34.175	797	40	-0.3	80	120	>+/-20%
Tl	205	2	165	39.381	39.381	ppb	1.347	253490	40	98.5	80	120	
Pb	208	2	165	39.398	39.398	ppb	1.650	348342	40	98.5	80	120	
Th	232	2	193	37.103	37.103	ppb	1.653	381740	40	92.8	80	120	
U	238	2	193	38.350	38.350	ppb	0.714	412101	40	95.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	230601	0.95	259861	88.74	60	120	
Sc (IS)	45	1	HMI H2	8529689	0.22	9102038	93.71	60	120	
Sc (IS)	45	2	HMI He	848902	0.61	903588	93.95	60	120	
Sc (IS)	45	3	No Gas	15739596	1.00	16459035	95.63	60	120	
Ge Internal standard	72	1	HMI H2	4614142	0.35	4919618	93.79	60	120	
Ge Internal standard	72	2	HMI He	998460	0.68	1043503	95.68	60	120	
In Internal standard	115	2	HMI He	3473389	0.45	3551384	97.80	60	120	
Ho-165	165	2	HMI He	13571630	0.42	13518981	100.39	60	120	
Ir (IS)	193	2	HMI He	10267400	0.25	10147609	101.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	060_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:27:46-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	48.462	ppb	7.430	10023	50	96.9	90	110	
Na	23	2	45	53247.163	ppb	0.852	10074490	51000	104.4	90	110	
Mg	24	2	45	10707.094	ppb	0.564	930761	11000	97.3	90	110	
Al	27	2	45	957.695	ppb	3.470	24669	1000	95.8	90	110	
K	39	2	45	10475.133	ppb	0.600	660923	11000	95.2	90	110	
Ca	40	1	45	11294.471	ppb	0.152	15566131	11000	102.7	90	110	
Ti	47	2	45	48.269	ppb	14.938	1230	50	96.5	90	110	
V	51	2	72	50.796	ppb	1.458	47324	50	101.6	90	110	
Cr	52	2	72	50.529	ppb	0.886	61055	50	101.1	90	110	
Mn	55	2	72	48.787	ppb	2.664	26435	50	97.6	90	110	
Fe	56	1	72	999.991	ppb	1.646	3021155	1000	100.0	90	110	
Co	59	2	72	49.048	ppb	3.236	89631	50	98.1	90	110	
Ni	60	2	72	48.167	ppb	4.013	25233	50	96.3	90	110	
Cu	63	2	72	48.594	ppb	1.651	68636	50	97.2	90	110	
Zn	66	2	72	49.778	ppb	2.918	13693	50	99.6	90	110	
As	75	2	72	48.981	ppb	1.844	10399	50	98.0	90	110	
Se	78	1	72	48.175	ppb	2.846	6171	50	96.4	90	110	
Sr	88	2	72	97.663	ppb	1.982	58359	100	97.7	90	110	
Zr	90	2	72	146.397	ppb	31.831	993	50	292.8	90	110	>+\-10%
Mo	95	2	115	50.147	ppb	1.819	36322	50	100.3	90	110	
Ag	107	2	115	48.133	ppb	1.090	116304	50	96.3	90	110	
Cd	111	2	115	49.522	ppb	2.850	18455	50	99.0	90	110	
Sn	120	2	115	48.786	ppb	0.873	49762	50	97.6	90	110	
Sb	121	2	115	48.379	ppb	0.757	52374	50	96.8	90	110	
Ba	137	2	115	49.559	ppb	2.406	14908	50	99.1	90	110	
W	182	2	165	49.726	ppb	2.080	152988	50	99.5	90	110	
Tl	205	2	165	48.783	ppb	0.067	311566	50	97.6	90	110	
Pb	208	2	165	48.845	ppb	0.461	427840	50	97.7	90	110	
Th	232	2	193	48.918	ppb	0.978	486520	50	97.8	90	110	
U	238	2	193	48.836	ppb	0.757	509376	50	97.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	227064	1.04	259861	87.38	60	120	
Sc (IS)	45	1	HMI H2	8453736	0.45	9102038	92.88	60	120	
Sc (IS)	45	2	HMI He	853050	0.21	903588	94.41	60	120	
Sc (IS)	45	3	No Gas	15633081	1.65	16459035	94.98	60	120	
Ge Internal standard	72	1	HMI H2	4600720	1.27	4919618	93.52	60	120	
Ge Internal standard	72	2	HMI He	996303	0.90	1043503	95.48	60	120	
In Internal standard	115	2	HMI He	3449578	1.14	3551384	97.13	60	120	
Ho-165	165	2	HMI He	13473366	0.34	13518981	99.66	60	120	
Ir (IS)	193	2	HMI He	9982074	0.59	10147609	98.37	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	061_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:31:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-10.234	ppb	-11.0	796380	10	
Be	9	1	6	0.044	ppb	157.8	43	0.5	
B	11	1	6	30.676	ppb	1.7	5511	0.5	>RL
Na	23	2	45	61.328	ppb	9.7	30922	25	>RL
Mg	24	2	45	4.621	ppb	13.5	607	25	
Al	27	2	45	1.053	ppb	296.9	103	15	
K	39	2	45	2.482	ppb	468.0	40703	50	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.134	ppb	176.7	2697	1	
Cr	52	2	72	-0.036	ppb	-729.2	2387	1	
Mn	55	2	72	0.137	ppb	64.9	250	0.5	
(Fe)	57	2	72	1.915	ppb	178.0	300	25	
Co	59	2	72	0.023	ppb	103.0	110	0.5	
Ni	60	2	72	-0.027	ppb	-85.4	400	1	
Cu	63	2	72	-0.290	ppb	-11.9	1023	1	
Zn	66	2	72	-0.126	ppb	-165.4	367	5	
As	75	2	72	-0.026	ppb	-206.7	139	1	
Se	78	1	72	0.106	ppb	30.2	24	1	
Sr	88	2	72	0.067	ppb	133.2	77	0.5	
Zr	90	2	72	18.276	ppb	143.4	650	1	>RL
Mo	95	2	115	0.177	ppb	8.3	160	0.5	
Ag	107	2	115	0.002	ppb	225.0	50	1	
Cd	111	2	115	-0.008	ppb	-542.3	13	0.5	
Sn	120	2	115	0.098	ppb	104.8	1013	1	
Sb	121	2	115	0.131	ppb	25.3	173	0.6	
Ba	137	2	115	-0.080	ppb	-128.1	63	0.5	
W	182	2	165	0.063	ppb	34.6	1377	1	
Tl	205	2	165	-0.024	ppb	-170.8	623	0.1	
Pb	208	2	165	-0.107	ppb	-11.1	2930	0.5	
Th	232	2	193	0.298	ppb	31.6	12089	1	
U	238	2	193	0.015	ppb	312.1	3284	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	239332	0.68	259861	92.10	60	120	
Sc (IS)	45	1	HMI H2	8614894	0.50	9102038	94.65	60	120	
Sc (IS)	45	2	HMI He	858974	0.97	903588	95.06	60	120	
Sc (IS)	45	3	No Gas	16017664	0.30	16459035	97.32	60	120	
Ge Internal standard	72	1	HMI H2	4696260	0.84	4919618	95.46	60	120	
Ge Internal standard	72	2	HMI He	1013122	0.89	1043503	97.09	60	120	
In Internal standard	115	2	HMI He	3446179	0.61	3551384	97.04	60	120	
Ho-165	165	2	HMI He	13565835	0.63	13518981	100.35	60	120	
Ir (IS)	193	2	HMI He	10330498	0.06	10147609	101.80	60	120	

Sample Report

Sample Table

Sample Name	280-174579-C-1-M
Data File Name	062SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:35:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608558 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	27.919	ppb	27.919	4.44	1065006	50000	
Be	9	1	6	-0.060	ppb	-0.060	-0.65	20	2000	
B	11	1	6	199.963	ppb	199.963	3.57	30678	2000	
Na	23	2	45	147699.298	ppb	147699.298	0.16	28515585	400000	
Mg	24	2	45	21313.224	ppb	21313.224	1.33	1892648	400000	
Al	27	2	45	5.057	ppb	5.057	41.32	210	400000	
Si	28	2	45	239.063	ppb	239.063	5.46	57615	10000	
P	31	2	45	663.458	ppb	663.458	4.58	1972	10000	
K	39	2	45	8774.771	ppb	8774.771	1.02	572288	400000	
Ca	40	1	45	94661.693	ppb	94661.693	1.90	134719728	400000	
Ti	47	2	45	0.638	ppb	0.638	173.21	17	4000	
V	51	2	72	1.350	ppb	1.350	3.17	3844	2000	
Cr	52	2	72	-0.105	ppb	-0.105	-129.89	2340	5000	
Mn	55	2	72	4.590	ppb	4.590	3.66	2727	10000	
Fe	56	1	72	21.089	ppb	21.089	2.99	90639	10000	
(Fe)	57	2	72	26.784	ppb	26.784	28.43	890	400000	
Co	59	2	72	0.482	ppb	0.482	20.31	977	2000	
Ni	60	2	72	1.328	ppb	1.328	15.21	1127	5000	
Cu	63	2	72	1.852	ppb	1.852	6.12	4097	5000	
Zn	66	2	72	9.952	ppb	9.952	3.98	3150	5000	
As	75	2	72	0.630	ppb	0.630	16.63	282	2000	
Se	78	1	72	1.849	ppb	1.849	4.12	255	2000	
Sr	88	2	72	726.040	ppb	726.040	0.63	447491	4000	
Zr	90	2	72	66.577	ppb	66.577	28.61	797	1000	
Mo	95	2	115	6.087	ppb	6.087	5.49	4528	2000	
Ag	107	2	115	0.010	ppb	0.010	85.05	70	100	
Cd	111	2	115	0.009	ppb	0.009	758.87	20	2000	
Sn	120	2	115	-0.064	ppb	-0.064	-121.81	870	2000	
Sb	121	2	115	0.326	ppb	0.326	2.20	393	1000	
Ba	137	2	115	58.419	ppb	58.419	0.70	17918	5000	
W	182	2	165	0.075	ppb	0.075	67.55	1430	100	
Tl	205	2	165	-0.072	ppb	-0.072	-33.26	317	2000	
Pb	208	2	165	-0.074	ppb	-0.074	-33.67	3257	5000	
Th	232	2	193	0.072	ppb	0.072	9.60	9627	2000	
U	238	2	193	13.556	ppb	13.556	1.47	145933	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	231465	0.41	259861	89.07	60	120	
Sc (IS)	45	1	HMI H2	8752202	1.44	9102038	96.16	60	120	
Sc (IS)	45	2	HMI He	871517	0.38	903588	96.45	60	120	
Sc (IS)	45	3	No Gas	16157865	0.89	16459035	98.17	60	120	
Ge Internal standard	72	1	HMI H2	4754455	1.53	4919618	96.64	60	120	
Ge Internal standard	72	2	HMI He	1028146	0.68	1043503	98.53	60	120	
In Internal standard	115	2	HMI He	3520959	0.74	3551384	99.14	60	120	
Ho-165	165	2	HMI He	13722637	0.56	13518981	101.51	60	120	
Ir (IS)	193	2	HMI He	10146411	0.72	10147609	99.99	60	120	

Sample Report

Sample Table

Sample Name	280-174579-C-1-N MS
Data File Name	063SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:38:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608558 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	63.848	ppb	63.848	4.64	1311611	50000	
Be	9	1	6	38.382	ppb	38.382	2.22	7979	2000	
B	11	1	6	209.985	ppb	209.985	1.80	31710	2000	
Na	23	2	45	153271.995	ppb	153271.995	0.56	29819371	400000	
Mg	24	2	45	22337.909	ppb	22337.909	0.94	1998922	400000	
Al	27	2	45	748.841	ppb	748.841	3.92	19876	400000	
Si	28	2	45	281.387	ppb	281.387	2.80	65402	10000	
P	31	2	45	702.277	ppb	702.277	3.36	2096	10000	
K	39	2	45	9783.008	ppb	9783.008	0.54	638225	400000	
Ca	40	1	45	98287.268	ppb	98287.268	1.49	139740448	400000	
Ti	47	2	45	37.504	ppb	37.504	12.94	983	4000	
V	51	2	72	40.599	ppb	40.599	1.49	39591	2000	
Cr	52	2	72	39.326	ppb	39.326	2.75	49621	5000	
Mn	55	2	72	42.341	ppb	42.341	0.30	23718	10000	
Fe	56	1	72	822.306	ppb	822.306	0.67	2550361	10000	
(Fe)	57	2	72	788.469	ppb	788.469	2.11	18861	400000	
Co	59	2	72	37.866	ppb	37.866	1.51	71490	2000	
Ni	60	2	72	38.938	ppb	38.938	1.44	21151	5000	
Cu	63	2	72	41.156	ppb	41.156	1.49	60264	5000	
Zn	66	2	72	50.095	ppb	50.095	3.42	14227	5000	
As	75	2	72	38.402	ppb	38.402	3.67	8453	2000	
Se	78	1	72	38.962	ppb	38.962	1.44	5117	2000	
Sr	88	2	72	832.748	ppb	832.748	0.59	513679	4000	
Zr	90	2	72	102.566	ppb	102.566	41.93	900	1000	
Mo	95	2	115	46.111	ppb	46.111	1.89	34017	2000	
Ag	107	2	115	37.931	ppb	37.931	1.50	93357	100	
Cd	111	2	115	38.286	ppb	38.286	3.34	14531	2000	
Sn	120	2	115	40.018	ppb	40.018	1.48	41746	2000	
Sb	121	2	115	38.722	ppb	38.722	2.63	42695	1000	
Ba	137	2	115	99.072	ppb	99.072	5.42	30254	5000	
W	182	2	165	0.113	ppb	0.113	22.40	1550	100	
Tl	205	2	165	37.620	ppb	37.620	0.09	245350	2000	
Pb	208	2	165	37.483	ppb	37.483	0.96	335894	5000	
Th	232	2	193	37.233	ppb	37.233	0.95	378696	2000	
U	238	2	193	52.822	ppb	52.822	2.11	559961	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	228066	1.53	259861	87.76	60	120	
Sc (IS)	45	1	HMI H2	8743852	1.72	9102038	96.06	60	120	
Sc (IS)	45	2	HMI He	878282	1.08	903588	97.20	60	120	
Sc (IS)	45	3	No Gas	16159974	0.38	16459035	98.18	60	120	
Ge Internal standard	72	1	HMI H2	4714870	1.16	4919618	95.84	60	120	
Ge Internal standard	72	2	HMI He	1028983	0.80	1043503	98.61	60	120	
In Internal standard	115	2	HMI He	3513414	0.72	3551384	98.93	60	120	
Ho-165	165	2	HMI He	13748143	1.42	13518981	101.70	60	120	
Ir (IS)	193	2	HMI He	10150847	0.74	10147609	100.03	60	120	

Sample Report

Sample Table

Sample Name	280-174579-C-1-O MSD
Data File Name	064SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:42:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608558 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	61.253	ppb	61.253	3.84	1296429	50000	
Be	9	1	6	37.460	ppb	37.460	4.62	7829	2000	
B	11	1	6	196.855	ppb	196.855	3.70	29933	2000	
Na	23	2	45	146254.594	ppb	146254.594	0.73	28347650	400000	
Mg	24	2	45	21862.533	ppb	21862.533	0.59	1949025	400000	
Al	27	2	45	744.634	ppb	744.634	2.82	19689	400000	
Si	28	2	45	274.408	ppb	274.408	1.49	63954	10000	
P	31	2	45	666.746	ppb	666.746	3.37	1989	10000	
K	39	2	45	9472.371	ppb	9472.371	0.67	616945	400000	
Ca	40	1	45	95162.624	ppb	95162.624	0.40	135854818	400000	
Ti	47	2	45	40.681	ppb	40.681	2.28	1063	4000	
V	51	2	72	40.995	ppb	40.995	1.25	39892	2000	
Cr	52	2	72	39.214	ppb	39.214	1.87	49414	5000	
Mn	55	2	72	42.564	ppb	42.564	1.66	23808	10000	
Fe	56	1	72	819.443	ppb	819.443	1.06	2557257	10000	
(Fe)	57	2	72	818.464	ppb	818.464	4.11	19536	400000	
Co	59	2	72	38.951	ppb	38.951	1.28	73425	2000	
Ni	60	2	72	39.217	ppb	39.217	1.78	21271	5000	
Cu	63	2	72	41.363	ppb	41.363	0.61	60471	5000	
Zn	66	2	72	49.221	ppb	49.221	1.61	13966	5000	
As	75	2	72	38.394	ppb	38.394	3.69	8439	2000	
Se	78	1	72	40.638	ppb	40.638	1.17	5370	2000	
Sr	88	2	72	809.792	ppb	809.792	0.85	498759	4000	
Zr	90	2	72	39.551	ppb	39.551	101.11	720	1000	
Mo	95	2	115	45.574	ppb	45.574	4.48	33496	2000	
Ag	107	2	115	38.819	ppb	38.819	1.09	95204	100	
Cd	111	2	115	38.672	ppb	38.672	2.11	14624	2000	
Sn	120	2	115	37.259	ppb	37.259	1.80	38785	2000	
Sb	121	2	115	39.402	ppb	39.402	2.99	43283	1000	
Ba	137	2	115	96.718	ppb	96.718	2.00	29438	5000	
W	182	2	165	0.099	ppb	0.099	20.68	1510	100	
Tl	205	2	165	38.566	ppb	38.566	0.65	252026	2000	
Pb	208	2	165	38.384	ppb	38.384	0.40	344623	5000	
Th	232	2	193	38.563	ppb	38.563	1.55	386680	2000	
U	238	2	193	53.496	ppb	53.496	1.10	559600	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	229353	0.92	259861	88.26	60	120	
Sc (IS)	45	1	HMI H2	8778232	0.97	9102038	96.44	60	120	
Sc (IS)	45	2	HMI He	874947	0.44	903588	96.83	60	120	
Sc (IS)	45	3	No Gas	16192029	0.71	16459035	98.38	60	120	
Ge Internal standard	72	1	HMI H2	4744444	0.97	4919618	96.44	60	120	
Ge Internal standard	72	2	HMI He	1027468	0.86	1043503	98.46	60	120	
In Internal standard	115	2	HMI He	3500708	1.12	3551384	98.57	60	120	
Ho-165	165	2	HMI He	13776838	0.19	13518981	101.91	60	120	
Ir (IS)	193	2	HMI He	10016287	1.28	10147609	98.71	60	120	

Sample Report

Sample Table

Sample Name	280-174579-C-2-C
Data File Name	065SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:45:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608558 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	24.969	ppb	24.969	2.41	1033931	50000	
Be	9	1	6	-0.009	ppb	-0.009	-1539.73	30	2000	
B	11	1	6	204.912	ppb	204.912	1.52	30658	2000	
Na	23	2	45	145228.695	ppb	145228.695	0.37	28185256	400000	
Mg	24	2	45	21251.345	ppb	21251.345	0.55	1896943	400000	
Al	27	2	45	7.424	ppb	7.424	29.62	273	400000	
Si	28	2	45	272.877	ppb	272.877	2.69	63767	10000	
P	31	2	45	680.796	ppb	680.796	2.30	2031	10000	
K	39	2	45	8729.889	ppb	8729.889	0.51	572546	400000	
Ca	40	1	45	95483.749	ppb	95483.749	1.14	135439728	400000	
Ti	47	2	45	0.508	ppb	0.508	114.39	13	4000	
V	51	2	72	1.159	ppb	1.159	8.33	3697	2000	
Cr	52	2	72	-0.098	ppb	-0.098	-113.00	2367	5000	
Mn	55	2	72	1.795	ppb	1.795	13.77	1183	10000	
Fe	56	1	72	18.492	ppb	18.492	3.24	82326	10000	
(Fe)	57	2	72	23.817	ppb	23.817	21.38	827	400000	
Co	59	2	72	0.438	ppb	0.438	16.03	900	2000	
Ni	60	2	72	1.442	ppb	1.442	13.89	1197	5000	
Cu	63	2	72	2.191	ppb	2.191	2.32	4614	5000	
Zn	66	2	72	13.170	ppb	13.170	2.12	4067	5000	
As	75	2	72	0.602	ppb	0.602	4.36	278	2000	
Se	78	1	72	1.977	ppb	1.977	14.09	271	2000	
Sr	88	2	72	734.676	ppb	734.676	1.49	456151	4000	
Zr	90	2	72	26.254	ppb	26.254	439.40	687	1000	
Mo	95	2	115	5.830	ppb	5.830	10.97	4327	2000	
Ag	107	2	115	0.007	ppb	0.007	123.15	63	100	
Cd	111	2	115	-0.026	ppb	-0.026	-59.17	7	2000	
Sn	120	2	115	-0.153	ppb	-0.153	-62.07	777	2000	
Sb	121	2	115	0.390	ppb	0.390	28.95	463	1000	
Ba	137	2	115	61.519	ppb	61.519	1.36	18829	5000	
W	182	2	165	0.121	ppb	0.121	23.07	1573	100	
Tl	205	2	165	-0.054	ppb	-0.054	-29.87	433	2000	
Pb	208	2	165	-0.056	ppb	-0.056	-34.60	3420	5000	
Th	232	2	193	0.426	ppb	0.426	6.15	13080	2000	
U	238	2	193	13.789	ppb	13.789	1.31	147633	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	225819	0.86	259861	86.90	60	120	
Sc (IS)	45	1	HMI H2	8721895	0.38	9102038	95.82	60	120	
Sc (IS)	45	2	HMI He	876055	0.36	903588	96.95	60	120	
Sc (IS)	45	3	No Gas	15989285	0.79	16459035	97.15	60	120	
Ge Internal standard	72	1	HMI H2	4738177	0.47	4919618	96.31	60	120	
Ge Internal standard	72	2	HMI He	1035756	0.24	1043503	99.26	60	120	
In Internal standard	115	2	HMI He	3514097	1.45	3551384	98.95	60	120	
Ho-165	165	2	HMI He	13729283	1.09	13518981	101.56	60	120	
Ir (IS)	193	2	HMI He	10095081	1.09	10147609	99.48	60	120	

Sample Report

Sample Table

Sample Name	280-174579-C-3-C
Data File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:49:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608558 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	23.388	ppb	23.388	7.25	1025184	50000	
Be	9	1	6	0.042	ppb	0.042	117.75	40	2000	
B	11	1	6	215.777	ppb	215.777	5.88	31830	2000	
Na	23	2	45	138800.359	ppb	138800.359	0.46	27035920	400000	
Mg	24	2	45	20709.150	ppb	20709.150	2.01	1855198	400000	
Al	27	2	45	4.988	ppb	4.988	26.54	210	400000	
Si	28	2	45	187.385	ppb	187.385	3.08	49148	10000	
P	31	2	45	1019.881	ppb	1019.881	2.87	2994	10000	
K	39	2	45	9602.230	ppb	9602.230	1.34	627865	400000	
Ca	40	1	45	87799.967	ppb	87799.967	0.98	124509445	400000	
Ti	47	2	45	0.379	ppb	0.379	99.96	10	4000	
V	51	2	72	1.081	ppb	1.081	22.50	3594	2000	
Cr	52	2	72	-0.086	ppb	-0.086	-163.37	2360	5000	
Mn	55	2	72	1.946	ppb	1.946	7.21	1257	10000	
Fe	56	1	72	30.928	ppb	30.928	1.53	121528	10000	
(Fe)	57	2	72	38.005	ppb	38.005	18.01	1153	400000	
Co	59	2	72	0.486	ppb	0.486	13.66	983	2000	
Ni	60	2	72	1.312	ppb	1.312	7.00	1117	5000	
Cu	63	2	72	2.432	ppb	2.432	7.79	4918	5000	
Zn	66	2	72	17.818	ppb	17.818	2.97	5311	5000	
As	75	2	72	0.269	ppb	0.269	27.54	204	2000	
Se	78	1	72	1.842	ppb	1.842	7.16	255	2000	
Sr	88	2	72	641.133	ppb	641.133	1.25	394588	4000	
Zr	90	2	72	85.656	ppb	85.656	51.16	850	1000	
Mo	95	2	115	7.427	ppb	7.427	4.63	5581	2000	
Ag	107	2	115	0.003	ppb	0.003	234.13	53	100	
Cd	111	2	115	-0.026	ppb	-0.026	-118.96	7	2000	
Sn	120	2	115	-0.197	ppb	-0.197	-62.58	743	2000	
Sb	121	2	115	0.329	ppb	0.329	8.46	400	1000	
Ba	137	2	115	43.970	ppb	43.970	4.03	13660	5000	
W	182	2	165	0.022	ppb	0.022	341.74	1270	100	
Tl	205	2	165	-0.068	ppb	-0.068	-17.12	347	2000	
Pb	208	2	165	-0.049	ppb	-0.049	-33.96	3490	5000	
Th	232	2	193	0.090	ppb	0.090	17.84	9844	2000	
U	238	2	193	12.303	ppb	12.303	1.29	133207	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	222997	0.81	259861	85.81	60	120	
Sc (IS)	45	1	HMI H2	8720341	1.40	9102038	95.81	60	120	
Sc (IS)	45	2	HMI He	879228	0.58	903588	97.30	60	120	
Sc (IS)	45	3	No Gas	16022022	1.25	16459035	97.34	60	120	
Ge Internal standard	72	1	HMI H2	4770663	1.07	4919618	96.97	60	120	
Ge Internal standard	72	2	HMI He	1026676	0.33	1043503	98.39	60	120	
In Internal standard	115	2	HMI He	3560802	1.29	3551384	100.27	60	120	
Ho-165	165	2	HMI He	13767645	0.90	13518981	101.84	60	120	
Ir (IS)	193	2	HMI He	10183808	1.28	10147609	100.36	60	120	

Sample Report

Sample Table

Sample Name	280-174579-C-4-C
Data File Name	067SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:53:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608558 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	20.540	ppb	20.540	2.33	1006593	50000	
Be	9	1	6	-0.025	ppb	-0.025	-109.64	27	2000	
B	11	1	6	198.879	ppb	198.879	1.23	29643	2000	
Na	23	2	45	132746.253	ppb	132746.253	0.79	25807080	400000	
Mg	24	2	45	20270.536	ppb	20270.536	1.69	1812537	400000	
Al	27	2	45	3.117	ppb	3.117	25.32	160	400000	
Si	28	2	45	193.893	ppb	193.893	1.09	50185	10000	
P	31	2	45	993.430	ppb	993.430	1.98	2914	10000	
K	39	2	45	9545.580	ppb	9545.580	0.73	623240	400000	
Ca	40	1	45	85597.332	ppb	85597.332	1.76	121726485	400000	
Ti	47	2	45	0.507	ppb	0.507	173.21	13	4000	
V	51	2	72	1.146	ppb	1.146	1.55	3687	2000	
Cr	52	2	72	-0.063	ppb	-0.063	-516.92	2410	5000	
Mn	55	2	72	1.281	ppb	1.281	14.06	897	10000	
Fe	56	1	72	32.784	ppb	32.784	3.82	127728	10000	
(Fe)	57	2	72	41.637	ppb	41.637	20.36	1250	400000	
Co	59	2	72	0.376	ppb	0.376	4.05	783	2000	
Ni	60	2	72	1.181	ppb	1.181	2.49	1057	5000	
Cu	63	2	72	2.118	ppb	2.118	7.07	4511	5000	
Zn	66	2	72	16.605	ppb	16.605	1.67	5024	5000	
As	75	2	72	0.151	ppb	0.151	33.97	180	2000	
Se	78	1	72	1.596	ppb	1.596	24.30	223	2000	
Sr	88	2	72	638.126	ppb	638.126	0.88	396443	4000	
Zr	90	2	72	23.815	ppb	23.815	172.96	680	1000	
Mo	95	2	115	7.629	ppb	7.629	3.85	5761	2000	
Ag	107	2	115	-0.009	ppb	-0.009	-107.19	23	100	
Cd	111	2	115	0.052	ppb	0.052	27.43	37	2000	
Sn	120	2	115	-0.290	ppb	-0.290	-47.63	650	2000	
Sb	121	2	115	0.344	ppb	0.344	22.46	420	1000	
Ba	137	2	115	42.762	ppb	42.762	1.66	13353	5000	
W	182	2	165	0.050	ppb	0.050	130.16	1370	100	
Tl	205	2	165	-0.075	ppb	-0.075	-8.58	303	2000	
Pb	208	2	165	-0.018	ppb	-0.018	-55.37	3794	5000	
Th	232	2	193	0.028	ppb	0.028	77.44	9257	2000	
U	238	2	193	12.319	ppb	12.319	0.87	133890	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	224830	0.76	259861	86.52	60	120	
Sc (IS)	45	1	HMI H2	8744743	0.66	9102038	96.07	60	120	
Sc (IS)	45	2	HMI He	877533	0.62	903588	97.12	60	120	
Sc (IS)	45	3	No Gas	16032872	0.51	16459035	97.41	60	120	
Ge Internal standard	72	1	HMI H2	4786447	0.65	4919618	97.29	60	120	
Ge Internal standard	72	2	HMI He	1036322	0.48	1043503	99.31	60	120	
In Internal standard	115	2	HMI He	3578388	0.91	3551384	100.76	60	120	
Ho-165	165	2	HMI He	13881476	0.46	13518981	102.68	60	120	
Ir (IS)	193	2	HMI He	10221238	0.94	10147609	100.73	60	120	

Sample Report

Sample Table

Sample Name	280-174579-C-5-C
Data File Name	068SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T13:56:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608558 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	23.082	ppb	23.082	2.55	1024815	50000	
Be	9	1	6	0.008	ppb	0.008	357.81	33	2000	
B	11	1	6	189.626	ppb	189.626	5.83	28284	2000	
Na	23	2	45	131989.187	ppb	131989.187	0.49	25831469	400000	
Mg	24	2	45	20807.070	ppb	20807.070	0.44	1872851	400000	
Al	27	2	45	12.851	ppb	12.851	4.73	420	400000	
Si	28	2	45	214.521	ppb	214.521	1.58	54120	10000	
P	31	2	45	772.544	ppb	772.544	5.05	2308	10000	
K	39	2	45	8388.752	ppb	8388.752	0.47	556400	400000	
Ca	40	1	45	89193.226	ppb	89193.226	1.22	126274938	400000	
Ti	47	2	45	0.252	ppb	0.252	173.21	7	4000	
V	51	2	72	0.771	ppb	0.771	20.34	3317	2000	
Cr	52	2	72	-0.006	ppb	-0.006	-2916.35	2460	5000	
Mn	55	2	72	1.529	ppb	1.529	13.61	1027	10000	
Fe	56	1	72	25.404	ppb	25.404	1.85	104270	10000	
(Fe)	57	2	72	30.997	ppb	30.997	19.03	990	400000	
Co	59	2	72	0.464	ppb	0.464	12.34	943	2000	
Ni	60	2	72	1.052	ppb	1.052	15.54	980	5000	
Cu	63	2	72	2.294	ppb	2.294	8.72	4728	5000	
Zn	66	2	72	10.326	ppb	10.326	7.73	3254	5000	
As	75	2	72	0.131	ppb	0.131	50.61	175	2000	
Se	78	1	72	1.501	ppb	1.501	29.32	209	2000	
Sr	88	2	72	679.161	ppb	679.161	0.07	418607	4000	
Zr	90	2	72	73.498	ppb	73.498	56.20	817	1000	
Mo	95	2	115	7.406	ppb	7.406	6.78	5521	2000	
Ag	107	2	115	-0.012	ppb	-0.012	-19.26	17	100	
Cd	111	2	115	-0.026	ppb	-0.026	-58.89	7	2000	
Sn	120	2	115	-0.206	ppb	-0.206	-30.59	727	2000	
Sb	121	2	115	0.298	ppb	0.298	21.85	363	1000	
Ba	137	2	115	44.568	ppb	44.568	5.21	13737	5000	
W	182	2	165	0.077	ppb	0.077	24.50	1443	100	
Tl	205	2	165	-0.082	ppb	-0.082	-2.89	253	2000	
Pb	208	2	165	-0.082	ppb	-0.082	-8.89	3197	5000	
Th	232	2	193	0.002	ppb	0.002	5211.54	8893	2000	
U	238	2	193	14.130	ppb	14.130	1.62	151412	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	224779	0.74	259861	86.50	60	120	
Sc (IS)	45	1	HMI H2	8705511	0.66	9102038	95.64	60	120	
Sc (IS)	45	2	HMI He	883376	0.30	903588	97.76	60	120	
Sc (IS)	45	3	No Gas	16047004	0.90	16459035	97.50	60	120	
Ge Internal standard	72	1	HMI H2	4766204	0.37	4919618	96.88	60	120	
Ge Internal standard	72	2	HMI He	1028172	0.10	1043503	98.53	60	120	
In Internal standard	115	2	HMI He	3532712	0.06	3551384	99.47	60	120	
Ho-165	165	2	HMI He	13778262	0.73	13518981	101.92	60	120	
Ir (IS)	193	2	HMI He	10108683	0.92	10147609	99.62	60	120	

Sample Report

Sample Table

Sample Name	280-174579-C-6-C
Data File Name	069SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:00:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608558 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	23.859	ppb	23.859	5.51	1044807	50000	
Be	9	1	6	-0.056	ppb	-0.056	-89.00	20	2000	
B	11	1	6	175.938	ppb	175.938	1.22	25957	2000	
Na	23	2	45	132739.292	ppb	132739.292	0.41	26008399	400000	
Mg	24	2	45	21317.138	ppb	21317.138	0.65	1920964	400000	
Al	27	2	45	4.318	ppb	4.318	9.25	193	400000	
Si	28	2	45	229.880	ppb	229.880	1.23	56865	10000	
P	31	2	45	656.093	ppb	656.093	5.18	1980	10000	
K	39	2	45	7744.643	ppb	7744.643	0.55	517497	400000	
Ca	40	1	45	91955.857	ppb	91955.857	1.16	132055238	400000	
Ti	47	2	45	0.254	ppb	0.254	173.21	7	4000	
V	51	2	72	0.459	ppb	0.459	17.74	3054	2000	
Cr	52	2	72	-0.004	ppb	-0.004	-4472.08	2480	5000	
Mn	55	2	72	1.391	ppb	1.391	20.35	957	10000	
Fe	56	1	72	24.759	ppb	24.759	1.07	101712	10000	
(Fe)	57	2	72	27.901	ppb	27.901	17.19	923	400000	
Co	59	2	72	0.369	ppb	0.369	17.39	770	2000	
Ni	60	2	72	0.542	ppb	0.542	56.98	713	5000	
Cu	63	2	72	2.252	ppb	2.252	4.77	4701	5000	
Zn	66	2	72	9.704	ppb	9.704	5.29	3104	5000	
As	75	2	72	0.158	ppb	0.158	62.23	182	2000	
Se	78	1	72	1.794	ppb	1.794	8.34	247	2000	
Sr	88	2	72	725.436	ppb	725.436	1.17	450281	4000	
Zr	90	2	72	17.999	ppb	17.999	121.90	663	1000	
Mo	95	2	115	5.903	ppb	5.903	7.50	4434	2000	
Ag	107	2	115	-0.011	ppb	-0.011	-0.38	20	100	
Cd	111	2	115	-0.026	ppb	-0.026	-117.64	7	2000	
Sn	120	2	115	-0.353	ppb	-0.353	-5.11	580	2000	
Sb	121	2	115	0.272	ppb	0.272	16.38	337	1000	
Ba	137	2	115	47.061	ppb	47.061	2.74	14587	5000	
W	182	2	165	0.015	ppb	0.015	496.42	1257	100	
Tl	205	2	165	-0.079	ppb	-0.079	-7.07	273	2000	
Pb	208	2	165	-0.128	ppb	-0.128	-12.88	2800	5000	
Th	232	2	193	-0.023	ppb	-0.023	-123.86	8713	2000	
U	238	2	193	15.185	ppb	15.185	1.21	163685	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	221843	0.33	259861	85.37	60	120	
Sc (IS)	45	1	HMI H2	8830986	1.11	9102038	97.02	60	120	
Sc (IS)	45	2	HMI He	884410	0.56	903588	97.88	60	120	
Sc (IS)	45	3	No Gas	16276324	0.29	16459035	98.89	60	120	
Ge Internal standard	72	1	HMI H2	4740261	0.25	4919618	96.35	60	120	
Ge Internal standard	72	2	HMI He	1035469	0.56	1043503	99.23	60	120	
In Internal standard	115	2	HMI He	3553658	0.51	3551384	100.06	60	120	
Ho-165	165	2	HMI He	13842289	0.58	13518981	102.39	60	120	
Ir (IS)	193	2	HMI He	10182482	0.70	10147609	100.34	60	120	

Sample Report

Sample Table

Sample Name	280-174579-C-7-C
Data File Name	070SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:03:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608558 200.8
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	25.610	ppb	25.610	4.82	1056015	50000	
Be	9	1	6	-0.055	ppb	-0.055	-241.78	20	2000	
B	11	1	6	155.016	ppb	155.016	1.42	22966	2000	
Na	23	2	45	128804.487	ppb	128804.487	0.93	25174230	400000	
Mg	24	2	45	23351.440	ppb	23351.440	1.34	2098876	400000	
Al	27	2	45	4.076	ppb	4.076	52.25	187	400000	
Si	28	2	45	265.251	ppb	265.251	0.44	62886	10000	
P	31	2	45	219.820	ppb	219.820	3.96	741	10000	
K	39	2	45	5432.786	ppb	5432.786	0.42	374536	400000	
Ca	40	1	45	104336.051	ppb	104336.051	0.91	147682711	400000	
Ti	47	2	45	0.253	ppb	0.253	86.61	7	4000	
V	51	2	72	-0.143	ppb	-0.143	-149.59	2520	2000	
Cr	52	2	72	-0.334	ppb	-0.334	-53.08	2097	5000	
Mn	55	2	72	0.764	ppb	0.764	14.81	610	10000	
Fe	56	1	72	13.931	ppb	13.931	0.25	68223	10000	
(Fe)	57	2	72	19.939	ppb	19.939	22.47	740	400000	
Co	59	2	72	0.152	ppb	0.152	27.25	360	2000	
Ni	60	2	72	0.655	ppb	0.655	26.25	780	5000	
Cu	63	2	72	1.803	ppb	1.803	7.98	4084	5000	
Zn	66	2	72	3.489	ppb	3.489	29.83	1387	5000	
As	75	2	72	0.171	ppb	0.171	85.64	186	2000	
Se	78	1	72	2.352	ppb	2.352	5.21	320	2000	
Sr	88	2	72	849.546	ppb	849.546	0.65	531048	4000	
Zr	90	2	72	38.185	ppb	38.185	130.35	727	1000	
Mo	95	2	115	3.973	ppb	3.973	4.69	2980	2000	
Ag	107	2	115	-0.008	ppb	-0.008	-77.47	27	100	
Cd	111	2	115	0.001	ppb	0.001	2845.86	17	2000	
Sn	120	2	115	-0.278	ppb	-0.278	-32.06	653	2000	
Sb	121	2	115	0.117	ppb	0.117	28.75	163	1000	
Ba	137	2	115	63.370	ppb	63.370	0.48	19513	5000	
W	182	2	165	-0.016	ppb	-0.016	-400.63	1150	100	
Tl	205	2	165	-0.081	ppb	-0.081	-8.03	257	2000	
Pb	208	2	165	-0.179	ppb	-0.179	-12.11	2330	5000	
Th	232	2	193	-0.068	ppb	-0.068	-94.25	8206	2000	
U	238	2	193	21.085	ppb	21.085	1.70	224262	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	221957	1.26	259861	85.41	60	120	
Sc (IS)	45	1	HMI H2	8704084	0.74	9102038	95.63	60	120	
Sc (IS)	45	2	HMI He	882196	0.77	903588	97.63	60	120	
Sc (IS)	45	3	No Gas	16263068	0.98	16459035	98.81	60	120	
Ge Internal standard	72	1	HMI H2	4735975	0.42	4919618	96.27	60	120	
Ge Internal standard	72	2	HMI He	1042761	0.65	1043503	99.93	60	120	
In Internal standard	115	2	HMI He	3536189	0.71	3551384	99.57	60	120	
Ho-165	165	2	HMI He	13756685	1.04	13518981	101.76	60	120	
Ir (IS)	193	2	HMI He	10102021	1.61	10147609	99.55	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	071_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:07:23-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	49.143	ppb	4.771	10110	50	98.3	90	110	
Na	23	2	45	52693.795	ppb	1.078	10217816	51000	103.3	90	110	
Mg	24	2	45	10644.535	ppb	1.802	948224	11000	96.8	90	110	
Al	27	2	45	977.572	ppb	3.297	25804	1000	97.8	90	110	
K	39	2	45	10498.691	ppb	0.505	678801	11000	95.4	90	110	
Ca	40	1	45	11343.454	ppb	0.399	16127671	11000	103.1	90	110	
Ti	47	2	45	40.993	ppb	12.841	1070	50	82.0	90	110	>+\-10%
V	51	2	72	49.083	ppb	0.792	47007	50	98.2	90	110	
Cr	52	2	72	49.601	ppb	0.574	61541	50	99.2	90	110	
Mn	55	2	72	49.242	ppb	1.779	27373	50	98.5	90	110	
Fe	56	1	72	1002.625	ppb	1.508	3093795	1000	100.3	90	110	
Co	59	2	72	48.707	ppb	0.362	91333	50	97.4	90	110	
Ni	60	2	72	47.850	ppb	1.044	25727	50	95.7	90	110	
Cu	63	2	72	48.411	ppb	0.648	70165	50	96.8	90	110	
Zn	66	2	72	49.928	ppb	2.503	14090	50	99.9	90	110	
As	75	2	72	48.333	ppb	2.030	10531	50	96.7	90	110	
Se	78	1	72	49.789	ppb	3.925	6515	50	99.6	90	110	
Sr	88	2	72	99.489	ppb	0.599	60995	100	99.5	90	110	
Zr	90	2	72	66.959	ppb	38.829	793	50	133.9	90	110	>+\-10%
Mo	95	2	115	49.493	ppb	1.312	37183	50	99.0	90	110	
Ag	107	2	115	47.368	ppb	0.219	118742	50	94.7	90	110	
Cd	111	2	115	48.344	ppb	4.474	18682	50	96.7	90	110	
Sn	120	2	115	48.056	ppb	3.668	50862	50	96.1	90	110	
Sb	121	2	115	49.088	ppb	1.255	55123	50	98.2	90	110	
Ba	137	2	115	48.503	ppb	2.928	15135	50	97.0	90	110	
W	182	2	165	50.292	ppb	0.791	157880	50	100.6	90	110	
Tl	205	2	165	48.913	ppb	1.098	318766	50	97.8	90	110	
Pb	208	2	165	48.557	ppb	0.777	434023	50	97.1	90	110	
Th	232	2	193	48.826	ppb	0.826	490875	50	97.7	90	110	
U	238	2	193	48.907	ppb	1.881	515599	50	97.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	225987	1.16	259861	86.96	60	120	
Sc (IS)	45	1	HMI H2	8721058	0.48	9102038	95.81	60	120	
Sc (IS)	45	2	HMI He	874312	1.38	903588	96.76	60	120	
Sc (IS)	45	3	No Gas	16095950	0.14	16459035	97.79	60	120	
Ge Internal standard	72	1	HMI H2	4699549	0.45	4919618	95.53	60	120	
Ge Internal standard	72	2	HMI He	1022202	0.41	1043503	97.96	60	120	
In Internal standard	115	2	HMI He	3578545	0.75	3551384	100.76	60	120	
Ho-165	165	2	HMI He	13748415	0.25	13518981	101.70	60	120	
Ir (IS)	193	2	HMI He	10090107	0.67	10147609	99.43	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	072_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:10:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-10.052	ppb	-10.6	803074	10	
Be	9	1	6	-0.001	ppb	-4628.2	33	0.5	
B	11	1	6	32.378	ppb	5.5	5718	0.5	>RL
Na	23	2	45	90.621	ppb	13.1	37245	25	>RL
Mg	24	2	45	5.524	ppb	10.0	700	25	
Al	27	2	45	1.853	ppb	64.6	127	15	
K	39	2	45	-11.852	ppb	-182.5	40670	50	
Ti	47	2	45	0.127	ppb	173.2	3	0.5	
V	51	2	72	-0.811	ppb	-27.2	1884	1	
Cr	52	2	72	-0.328	ppb	-63.1	2084	1	
Mn	55	2	72	-0.062	ppb	-19.7	143	0.5	
(Fe)	57	2	72	-2.559	ppb	-123.1	200	25	
Co	59	2	72	0.016	ppb	169.3	100	0.5	
Ni	60	2	72	0.076	ppb	263.0	463	1	
Cu	63	2	72	-0.100	ppb	-23.0	1313	1	
Zn	66	2	72	0.297	ppb	97.7	490	5	
As	75	2	72	-0.264	ppb	-24.5	90	1	
Se	78	1	72	-0.038	ppb	-47.2	5	1	
Sr	88	2	72	0.238	ppb	46.3	183	0.5	
Zr	90	2	72	8.159	ppb	452.7	633	1	>RL
Mo	95	2	115	0.116	ppb	41.9	120	0.5	
Ag	107	2	115	0.016	ppb	14.6	87	1	
Cd	111	2	115	-0.017	ppb	-264.7	10	0.5	
Sn	120	2	115	-0.022	ppb	-403.4	923	1	
Sb	121	2	115	0.167	ppb	21.7	220	0.6	
Ba	137	2	115	-0.023	ppb	-159.3	83	0.5	
W	182	2	165	-0.009	ppb	-275.4	1177	1	
Tl	205	2	165	-0.028	ppb	-61.7	607	0.1	
Pb	208	2	165	-0.124	ppb	-17.2	2830	0.5	
Th	232	2	193	0.336	ppb	19.2	12523	1	
U	238	2	193	0.019	ppb	124.8	3337	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	236940	0.51	259861	91.18	60	120	
Sc (IS)	45	1	HMI H2	8782482	1.31	9102038	96.49	60	120	
Sc (IS)	45	2	HMI He	876687	0.51	903588	97.02	60	120	
Sc (IS)	45	3	No Gas	16126844	0.84	16459035	97.98	60	120	
Ge Internal standard	72	1	HMI H2	4761285	0.82	4919618	96.78	60	120	
Ge Internal standard	72	2	HMI He	1032105	0.76	1043503	98.91	60	120	
In Internal standard	115	2	HMI He	3562482	0.40	3551384	100.31	60	120	
Ho-165	165	2	HMI He	13824076	1.21	13518981	102.26	60	120	
Ir (IS)	193	2	HMI He	10366652	0.46	10147609	102.16	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7686815
Data File Name	073LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:14:29-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	3.452	ppb	37.368	907324	50	6.9	70	130	>+/-30%
Be	9	1	6	0.779	ppb	9.322	203	1	77.9	70	130	
Na	23	2	45	359.934	ppb	1.652	89426	300	120.0	70	130	
Mg	24	2	45	58.219	ppb	6.575	5401	50	116.4	70	130	
Al	27	2	45	51.941	ppb	5.678	1447	50	103.9	70	130	
K	39	2	45	100.127	ppb	19.877	47441	120	83.4	70	130	
Ca	40	1	45	226.502	ppb	1.121	369569	200	113.3	70	130	
V	51	2	72	4.209	ppb	5.184	6485	5	84.2	70	130	
Cr	52	2	72	1.987	ppb	6.330	4878	2	99.3	70	130	
Mn	55	2	72	0.944	ppb	13.694	707	1	94.4	70	130	
Fe	56	1	72	48.639	ppb	0.804	180098	50	97.3	70	130	
(Fe)	57	2	72	40.993	ppb	8.762	1233	50	82.0	70	130	
Co	59	2	72	0.992	ppb	6.833	1950	1	99.2	70	130	
Ni	60	2	72	2.012	ppb	9.505	1500	2	100.6	70	130	
Cu	63	2	72	1.761	ppb	5.860	3991	2	88.0	70	130	
Zn	66	2	72	9.256	ppb	4.922	2977	10	92.6	70	130	
As	75	2	72	4.776	ppb	1.505	1186	5	95.5	70	130	
Se	78	1	72	5.194	ppb	7.830	713	5	103.9	70	130	
Sr	88	2	72	5.209	ppb	4.402	3267	5	104.2	70	130	
Zr	90	2	72	77.726	ppb	55.236	833	0.5	15545.3	70	130	>+/-30%
Mo	95	2	115	2.064	ppb	9.932	1573	2	103.2	70	130	
Ag	107	2	115	0.879	ppb	11.515	2237	1	87.9	70	130	
Cd	111	2	115	1.164	ppb	17.534	463	1	116.4	70	130	
Sn	120	2	115	10.139	ppb	3.550	11418	10	101.4	70	130	
Sb	121	2	115	2.165	ppb	10.551	2450	2	108.3	70	130	
Ba	137	2	115	1.404	ppb	1.053	523	1	140.4	70	130	>+/-30%
W	182	2	165	-0.052	ppb	-34.187	1040	1	-5.2	70	130	>+/-30%
Tl	205	2	165	0.939	ppb	1.902	6909	1	93.9	70	130	
Pb	208	2	165	0.993	ppb	1.265	12736	1	99.3	70	130	
Th	232	2	193	0.990	ppb	7.456	19183	1	99.0	70	130	
U	238	2	193	0.991	ppb	4.004	13834	1	99.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	239727	0.58	259861	92.25	60	120	
Sc (IS)	45	1	HMI H2	8805963	0.49	9102038	96.75	60	120	
Sc (IS)	45	2	HMI He	875802	0.52	903588	96.92	60	120	
Sc (IS)	45	3	No Gas	16340494	1.02	16459035	99.28	60	120	
Ge Internal standard	72	1	HMI H2	4866194	0.44	4919618	98.91	60	120	
Ge Internal standard	72	2	HMI He	1034520	0.52	1043503	99.14	60	120	
In Internal standard	115	2	HMI He	3558962	0.53	3551384	100.21	60	120	
Ho-165	165	2	HMI He	13779478	1.37	13518981	101.93	60	120	
Ir (IS)	193	2	HMI He	10386651	0.77	10147609	102.36	60	120	

Sample Report

Sample Table

Sample Name	280-174903-C-1-A
Data File Name	074SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:18:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-7.167	ppb	-7.167	-28.21	844360	50000	
Be	9	1	6	0.289	ppb	0.289	8.10	97	2000	
B	11	1	6	26.282	ppb	26.282	7.40	4834	2000	
Na	23	2	45	11863.843	ppb	11863.843	1.45	2343254	400000	
Mg	24	2	45	2406.024	ppb	2406.024	0.61	217045	400000	
Al	27	2	45	8.710	ppb	8.710	20.88	310	400000	
Si	28	2	45	1098.751	ppb	1098.751	0.91	208702	10000	
P	31	2	45	85.683	ppb	85.683	14.54	363	10000	
K	39	2	45	838.194	ppb	838.194	5.08	93253	400000	
Ca	40	1	45	9313.429	ppb	9313.429	0.68	13495054	400000	
Ti	47	2	45	0.507	ppb	0.507	114.41	13	4000	
V	51	2	72	-0.480	ppb	-0.480	-14.60	2257	2000	
Cr	52	2	72	0.392	ppb	0.392	19.46	3044	5000	
Mn	55	2	72	3.538	ppb	3.538	8.38	2220	10000	
Fe	56	1	72	9.195	ppb	9.195	3.20	55744	10000	
(Fe)	57	2	72	9.062	ppb	9.062	65.51	490	400000	
Co	59	2	72	0.008	ppb	0.008	375.11	87	2000	
Ni	60	2	72	2.184	ppb	2.184	10.61	1640	5000	
Cu	63	2	72	10.827	ppb	10.827	4.13	17523	5000	
Zn	66	2	72	2.364	ppb	2.364	6.60	1097	5000	
As	75	2	72	-0.113	ppb	-0.113	-84.76	126	2000	
Se	78	1	72	0.313	ppb	0.313	48.19	53	2000	
Sr	88	2	72	32.097	ppb	32.097	1.38	20537	4000	
Zr	90	2	72	-12.207	ppb	-12.207	-155.19	593	1000	
Mo	95	2	115	0.033	ppb	0.033	140.52	60	2000	
Ag	107	2	115	0.003	ppb	0.003	135.31	57	100	
Cd	111	2	115	0.008	ppb	0.008	1.52	20	2000	
Sn	120	2	115	0.816	ppb	0.816	21.61	1837	2000	
Sb	121	2	115	0.005	ppb	0.005	172.93	40	1000	
Ba	137	2	115	180.007	ppb	180.007	2.21	57118	5000	
W	182	2	165	-0.126	ppb	-0.126	-18.48	823	100	
Tl	205	2	165	-0.069	ppb	-0.069	-12.80	343	2000	
Pb	208	2	165	1.359	ppb	1.359	6.01	16237	5000	
Th	232	2	193	-0.007	ppb	-0.007	-328.75	9097	2000	
U	238	2	193	0.046	ppb	0.046	54.39	3654	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	239564	0.74	259861	92.19	60	120	
Sc (IS)	45	1	HMI H2	8882930	0.79	9102038	97.59	60	120	
Sc (IS)	45	2	HMI He	884607	0.94	903588	97.90	60	120	
Sc (IS)	45	3	No Gas	16551098	1.87	16459035	100.56	60	120	
Ge Internal standard	72	1	HMI H2	4924797	1.01	4919618	100.11	60	120	
Ge Internal standard	72	2	HMI He	1065529	0.60	1043503	102.11	60	120	
In Internal standard	115	2	HMI He	3654869	0.23	3551384	102.91	60	120	
Ho-165	165	2	HMI He	13993164	0.46	13518981	103.51	60	120	
Ir (IS)	193	2	HMI He	10432074	0.96	10147609	102.80	60	120	

Sample Report

Sample Table

Sample Name	280-174903-C-2-A
Data File Name	075SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:21:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-4.236	ppb	-4.236	-26.34	861142	50000	
Be	9	1	6	-0.080	ppb	-0.080	-64.03	17	2000	
B	11	1	6	18.188	ppb	18.188	4.83	3627	2000	
Na	23	2	45	11140.520	ppb	11140.520	1.33	2248732	400000	
Mg	24	2	45	16658.809	ppb	16658.809	2.20	1533778	400000	
Al	27	2	45	8.349	ppb	8.349	28.14	307	400000	
Si	28	2	45	1099.962	ppb	1099.962	0.36	213417	10000	
P	31	2	45	72.671	ppb	72.671	11.63	333	10000	
K	39	2	45	713.010	ppb	713.010	2.49	87411	400000	
Ca	40	1	45	42150.882	ppb	42150.882	1.14	61757902	400000	
Ti	47	2	45	0.622	ppb	0.622	125.66	17	4000	
V	51	2	72	0.368	ppb	0.368	65.58	3097	2000	
Cr	52	2	72	-0.263	ppb	-0.263	-71.60	2260	5000	
Mn	55	2	72	0.064	ppb	0.064	175.99	223	10000	
Fe	56	1	72	17.605	ppb	17.605	0.91	83629	10000	
(Fe)	57	2	72	13.518	ppb	13.518	10.52	607	400000	
Co	59	2	72	0.017	ppb	0.017	109.07	107	2000	
Ni	60	2	72	-0.438	ppb	-0.438	-11.28	197	5000	
Cu	63	2	72	0.559	ppb	0.559	14.15	2364	5000	
Zn	66	2	72	2.616	ppb	2.616	14.07	1183	5000	
As	75	2	72	0.200	ppb	0.200	32.55	199	2000	
Se	78	1	72	0.404	ppb	0.404	41.88	67	2000	
Sr	88	2	72	59.907	ppb	59.907	1.21	38797	4000	
Zr	90	2	72	-22.360	ppb	-22.360	-161.67	570	1000	
Mo	95	2	115	0.256	ppb	0.256	24.22	227	2000	
Ag	107	2	115	0.006	ppb	0.006	95.11	63	100	
Cd	111	2	115	-0.035	ppb	-0.035	-42.80	3	2000	
Sn	120	2	115	-0.254	ppb	-0.254	-9.41	690	2000	
Sb	121	2	115	0.035	ppb	0.035	95.30	73	1000	
Ba	137	2	115	445.913	ppb	445.913	0.54	139016	5000	
W	182	2	165	-0.137	ppb	-0.137	-47.45	790	100	
Tl	205	2	165	-0.080	ppb	-0.080	-12.42	273	2000	
Pb	208	2	165	0.467	ppb	0.467	11.57	8238	5000	
Th	232	2	193	-0.051	ppb	-0.051	-48.74	8590	2000	
U	238	2	193	3.482	ppb	3.482	2.41	40601	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	242606	1.25	259861	93.36	60	120	
Sc (IS)	45	1	HMI H2	9005991	1.15	9102038	98.94	60	120	
Sc (IS)	45	2	HMI He	903636	1.13	903588	100.01	60	120	
Sc (IS)	45	3	No Gas	16476179	0.73	16459035	100.10	60	120	
Ge Internal standard	72	1	HMI H2	4978302	1.42	4919618	101.19	60	120	
Ge Internal standard	72	2	HMI He	1079404	1.00	1043503	103.44	60	120	
In Internal standard	115	2	HMI He	3594385	0.50	3551384	101.21	60	120	
Ho-165	165	2	HMI He	14057143	0.43	13518981	103.98	60	120	
Ir (IS)	193	2	HMI He	10359448	0.21	10147609	102.09	60	120	

Sample Report

Sample Table

Sample Name	280-174903-B-3-A
Data File Name	076SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:25:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-4.697	ppb	-4.697	-53.78	878751	50000	
Be	9	1	6	-0.039	ppb	-0.039	-323.60	27	2000	
B	11	1	6	16.119	ppb	16.119	11.18	3394	2000	
Na	23	2	45	11067.575	ppb	11067.575	2.82	2249164	400000	
Mg	24	2	45	14445.835	ppb	14445.835	0.59	1339104	400000	
Al	27	2	45	5.809	ppb	5.809	61.13	240	400000	
Si	28	2	45	1085.666	ppb	1085.666	1.19	212279	10000	
P	31	2	45	73.785	ppb	73.785	9.36	339	10000	
K	39	2	45	712.983	ppb	712.983	1.60	88008	400000	
Ca	40	1	45	36491.786	ppb	36491.786	1.31	53861474	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.193	ppb	0.193	181.72	2934	2000	
Cr	52	2	72	0.158	ppb	0.158	104.95	2794	5000	
Mn	55	2	72	0.439	ppb	0.439	11.03	443	10000	
Fe	56	1	72	17.169	ppb	17.169	3.80	82473	10000	
(Fe)	57	2	72	17.793	ppb	17.793	22.88	713	400000	
Co	59	2	72	0.004	ppb	0.004	10.27	80	2000	
Ni	60	2	72	-0.136	ppb	-0.136	-104.55	367	5000	
Cu	63	2	72	0.205	ppb	0.205	60.10	1834	5000	
Zn	66	2	72	7.881	ppb	7.881	10.65	2714	5000	
As	75	2	72	0.217	ppb	0.217	23.95	203	2000	
Se	78	1	72	0.612	ppb	0.612	65.26	96	2000	
Sr	88	2	72	56.204	ppb	56.204	1.09	36472	4000	
Zr	90	2	72	-16.098	ppb	-16.098	-120.75	590	1000	
Mo	95	2	115	0.350	ppb	0.350	33.39	300	2000	
Ag	107	2	115	0.001	ppb	0.001	803.56	50	100	
Cd	111	2	115	0.033	ppb	0.033	132.13	30	2000	
Sn	120	2	115	-0.189	ppb	-0.189	-50.77	763	2000	
Sb	121	2	115	0.067	ppb	0.067	35.63	110	1000	
Ba	137	2	115	394.022	ppb	394.022	2.39	123898	5000	
W	182	2	165	-0.120	ppb	-0.120	-52.06	853	100	
Tl	205	2	165	-0.067	ppb	-0.067	-17.51	360	2000	
Pb	208	2	165	-0.014	ppb	-0.014	-45.60	3914	5000	
Th	232	2	193	-0.037	ppb	-0.037	-59.77	8803	2000	
U	238	2	193	2.959	ppb	2.959	2.82	35250	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	249309	1.22	259861	95.94	60	120	
Sc (IS)	45	1	HMI H2	9071238	0.27	9102038	99.66	60	120	
Sc (IS)	45	2	HMI He	909738	0.74	903588	100.68	60	120	
Sc (IS)	45	3	No Gas	16879837	1.92	16459035	102.56	60	120	
Ge Internal standard	72	1	HMI H2	4994606	0.62	4919618	101.52	60	120	
Ge Internal standard	72	2	HMI He	1081446	0.95	1043503	103.64	60	120	
In Internal standard	115	2	HMI He	3624962	0.78	3551384	102.07	60	120	
Ho-165	165	2	HMI He	14175351	0.83	13518981	104.86	60	120	
Ir (IS)	193	2	HMI He	10441885	0.97	10147609	102.90	60	120	

Sample Report

Sample Table

Sample Name	280-174903-B-4-A
Data File Name	077SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:28:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-5.113	ppb	-5.113	-35.11	884340	50000	
Be	9	1	6	-0.083	ppb	-0.083	-80.26	17	2000	
B	11	1	6	14.357	ppb	14.357	3.85	3137	2000	
Na	23	2	45	10793.469	ppb	10793.469	0.61	2203649	400000	
Mg	24	2	45	14005.436	ppb	14005.436	2.16	1303825	400000	
Al	27	2	45	2.884	ppb	2.884	103.96	160	400000	
Si	28	2	45	1051.110	ppb	1051.110	1.34	206968	10000	
P	31	2	45	92.315	ppb	92.315	28.99	395	10000	
K	39	2	45	693.618	ppb	693.618	2.04	87157	400000	
Ca	40	1	45	35612.726	ppb	35612.726	0.63	53278849	400000	
Ti	47	2	45	0.366	ppb	0.366	100.42	10	4000	
V	51	2	72	0.427	ppb	0.427	35.99	3180	2000	
Cr	52	2	72	-0.190	ppb	-0.190	-91.26	2370	5000	
Mn	55	2	72	0.559	ppb	0.559	33.56	517	10000	
Fe	56	1	72	9.077	ppb	9.077	1.42	57045	10000	
(Fe)	57	2	72	11.037	ppb	11.037	13.86	550	400000	
Co	59	2	72	-0.015	ppb	-0.015	-103.87	43	2000	
Ni	60	2	72	-0.281	ppb	-0.281	-42.70	287	5000	
Cu	63	2	72	1.261	ppb	1.261	29.79	3440	5000	
Zn	66	2	72	1.745	ppb	1.745	2.16	940	5000	
As	75	2	72	0.273	ppb	0.273	77.13	217	2000	
Se	78	1	72	0.650	ppb	0.650	6.01	103	2000	
Sr	88	2	72	53.670	ppb	53.670	4.17	35055	4000	
Zr	90	2	72	-36.131	ppb	-36.131	-146.25	533	1000	
Mo	95	2	115	0.217	ppb	0.217	6.58	200	2000	
Ag	107	2	115	-0.012	ppb	-0.012	-18.39	17	100	
Cd	111	2	115	-0.018	ppb	-0.018	-144.83	10	2000	
Sn	120	2	115	-0.287	ppb	-0.287	-22.48	663	2000	
Sb	121	2	115	0.020	ppb	0.020	65.54	57	1000	
Ba	137	2	115	386.649	ppb	386.649	1.02	121958	5000	
W	182	2	165	-0.156	ppb	-0.156	-12.07	733	100	
Tl	205	2	165	-0.079	ppb	-0.079	-15.68	283	2000	
Pb	208	2	165	0.029	ppb	0.029	109.91	4290	5000	
Th	232	2	193	-0.033	ppb	-0.033	-129.99	8903	2000	
U	238	2	193	0.049	ppb	0.049	55.84	3721	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	251622	0.96	259861	96.83	60	120	
Sc (IS)	45	1	HMI H2	9194418	1.16	9102038	101.01	60	120	
Sc (IS)	45	2	HMI He	913708	0.88	903588	101.12	60	120	
Sc (IS)	45	3	No Gas	17043642	1.38	16459035	103.55	60	120	
Ge Internal standard	72	1	HMI H2	5073876	0.81	4919618	103.14	60	120	
Ge Internal standard	72	2	HMI He	1088931	1.49	1043503	104.35	60	120	
In Internal standard	115	2	HMI He	3636465	0.95	3551384	102.40	60	120	
Ho-165	165	2	HMI He	14147244	0.51	13518981	104.65	60	120	
Ir (IS)	193	2	HMI He	10516820	0.29	10147609	103.64	60	120	

Sample Report

Sample Table

Sample Name	280-174903-B-5-A
Data File Name	078SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:32:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-4.324	ppb	-4.324	-5.99	888884	50000	
Be	9	1	6	0.018	ppb	0.018	1112.73	40	2000	
B	11	1	6	14.218	ppb	14.218	4.47	3127	2000	
Na	23	2	45	11192.323	ppb	11192.323	1.36	2296385	400000	
Mg	24	2	45	14442.745	ppb	14442.745	2.31	1351505	400000	
Al	27	2	45	3.197	ppb	3.197	50.31	170	400000	
Si	28	2	45	1095.999	ppb	1095.999	0.88	216189	10000	
P	31	2	45	85.326	ppb	85.326	3.79	376	10000	
K	39	2	45	728.161	ppb	728.161	5.67	89815	400000	
Ca	40	1	45	36550.406	ppb	36550.406	0.58	55151786	400000	
Ti	47	2	45	0.482	ppb	0.482	86.60	13	4000	
V	51	2	72	0.211	ppb	0.211	81.52	2980	2000	
Cr	52	2	72	-0.177	ppb	-0.177	-99.66	2394	5000	
Mn	55	2	72	0.608	ppb	0.608	40.37	547	10000	
Fe	56	1	72	15.614	ppb	15.614	2.62	78578	10000	
(Fe)	57	2	72	16.563	ppb	16.563	28.88	690	400000	
Co	59	2	72	0.010	ppb	0.010	324.33	93	2000	
Ni	60	2	72	-0.082	ppb	-0.082	-25.21	400	5000	
Cu	63	2	72	0.069	ppb	0.069	51.21	1647	5000	
Zn	66	2	72	1.144	ppb	1.144	22.32	767	5000	
As	75	2	72	0.184	ppb	0.184	108.59	197	2000	
Se	78	1	72	0.395	ppb	0.395	7.24	67	2000	
Sr	88	2	72	54.803	ppb	54.803	2.89	35897	4000	
Zr	90	2	72	23.759	ppb	23.759	51.50	717	1000	
Mo	95	2	115	0.284	ppb	0.284	43.39	253	2000	
Ag	107	2	115	0.001	ppb	0.001	689.69	50	100	
Cd	111	2	115	-0.035	ppb	-0.035	-41.62	3	2000	
Sn	120	2	115	-0.422	ppb	-0.422	-27.43	527	2000	
Sb	121	2	115	0.025	ppb	0.025	169.90	63	1000	
Ba	137	2	115	396.395	ppb	396.395	3.00	126505	5000	
W	182	2	165	-0.138	ppb	-0.138	-11.47	803	100	
Tl	205	2	165	-0.082	ppb	-0.082	-19.88	263	2000	
Pb	208	2	165	-0.157	ppb	-0.157	-14.41	2630	5000	
Th	232	2	193	-0.056	ppb	-0.056	-49.94	8653	2000	
U	238	2	193	0.003	ppb	0.003	1064.84	3211	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	252535	1.05	259861	97.18	60	120	
Sc (IS)	45	1	HMI H2	9273360	0.25	9102038	101.88	60	120	
Sc (IS)	45	2	HMI He	918514	1.56	903588	101.65	60	120	
Sc (IS)	45	3	No Gas	17019363	1.31	16459035	103.40	60	120	
Ge Internal standard	72	1	HMI H2	5069551	1.18	4919618	103.05	60	120	
Ge Internal standard	72	2	HMI He	1091691	0.49	1043503	104.62	60	120	
In Internal standard	115	2	HMI He	3679487	0.74	3551384	103.61	60	120	
Ho-165	165	2	HMI He	14316080	0.51	13518981	105.90	60	120	
Ir (IS)	193	2	HMI He	10506490	1.30	10147609	103.54	60	120	

Sample Report

Sample Table

Sample Name	280-174903-B-6-A
Data File Name	079SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:35:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-3.763	ppb	-3.763	-15.85	900762	50000	
Be	9	1	6	-0.054	ppb	-0.054	-92.14	23	2000	
B	11	1	6	15.248	ppb	15.248	8.54	3300	2000	
Na	23	2	45	11044.455	ppb	11044.455	1.34	2278551	400000	
Mg	24	2	45	14044.615	ppb	14044.615	1.10	1321602	400000	
Al	27	2	45	2.810	ppb	2.810	45.24	160	400000	
Si	28	2	45	1097.761	ppb	1097.761	0.81	217705	10000	
P	31	2	45	89.080	ppb	89.080	15.27	389	10000	
K	39	2	45	732.341	ppb	732.341	3.65	90572	400000	
Ca	40	1	45	36162.484	ppb	36162.484	0.91	54815331	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.535	ppb	0.535	12.00	3310	2000	
Cr	52	2	72	-0.099	ppb	-0.099	-177.18	2507	5000	
Mn	55	2	72	0.603	ppb	0.603	17.64	547	10000	
Fe	56	1	72	2.234	ppb	2.234	9.90	34784	10000	
(Fe)	57	2	72	1.986	ppb	1.986	113.07	327	400000	
Co	59	2	72	-0.005	ppb	-0.005	-476.02	63	2000	
Ni	60	2	72	0.273	ppb	0.273	45.23	603	5000	
Cu	63	2	72	1.478	ppb	1.478	16.77	3801	5000	
Zn	66	2	72	3.545	ppb	3.545	8.15	1477	5000	
As	75	2	72	0.301	ppb	0.301	16.44	225	2000	
Se	78	1	72	0.548	ppb	0.548	30.57	89	2000	
Sr	88	2	72	54.436	ppb	54.436	0.64	35840	4000	
Zr	90	2	72	23.772	ppb	23.772	157.04	720	1000	
Mo	95	2	115	0.252	ppb	0.252	61.59	227	2000	
Ag	107	2	115	-0.006	ppb	-0.006	-210.59	33	100	
Cd	111	2	115	-0.035	ppb	-0.035	-42.93	3	2000	
Sn	120	2	115	-0.175	ppb	-0.175	-36.75	780	2000	
Sb	121	2	115	0.020	ppb	0.020	202.86	57	1000	
Ba	137	2	115	400.938	ppb	400.938	0.71	126246	5000	
W	182	2	165	-0.144	ppb	-0.144	-16.87	777	100	
Tl	205	2	165	-0.094	ppb	-0.094	-9.91	183	2000	
Pb	208	2	165	0.033	ppb	0.033	18.44	4357	5000	
Th	232	2	193	-0.022	ppb	-0.022	-215.47	9050	2000	
U	238	2	193	-0.001	ppb	-0.001	-479.96	3184	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	253050	0.55	259861	97.38	60	120	
Sc (IS)	45	1	HMI H2	9315836	0.43	9102038	102.35	60	120	
Sc (IS)	45	2	HMI He	923530	0.97	903588	102.21	60	120	
Sc (IS)	45	3	No Gas	17168896	1.76	16459035	104.31	60	120	
Ge Internal standard	72	1	HMI H2	5125675	0.58	4919618	104.19	60	120	
Ge Internal standard	72	2	HMI He	1097203	0.38	1043503	105.15	60	120	
In Internal standard	115	2	HMI He	3630047	0.75	3551384	102.21	60	120	
Ho-165	165	2	HMI He	14237841	0.70	13518981	105.32	60	120	
Ir (IS)	193	2	HMI He	10558785	0.98	10147609	104.05	60	120	

Sample Report

Sample Table

Sample Name	280-174903-B-7-A
Data File Name	080SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:39:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-3.630	ppb	-3.630	-56.27	900330	50000	
Be	9	1	6	0.029	ppb	0.029	329.60	43	2000	
B	11	1	6	13.361	ppb	13.361	5.70	3044	2000	
Na	23	2	45	11047.778	ppb	11047.778	0.60	2285607	400000	
Mg	24	2	45	14187.126	ppb	14187.126	0.82	1338792	400000	
Al	27	2	45	2.914	ppb	2.914	12.10	163	400000	
Si	28	2	45	1085.744	ppb	1085.744	0.99	216098	10000	
P	31	2	45	89.550	ppb	89.550	15.15	391	10000	
K	39	2	45	728.681	ppb	728.681	4.12	90584	400000	
Ca	40	1	45	35680.207	ppb	35680.207	1.43	54464494	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.551	ppb	0.551	24.35	3364	2000	
Cr	52	2	72	-0.142	ppb	-0.142	-161.39	2480	5000	
Mn	55	2	72	0.431	ppb	0.431	12.63	450	10000	
Fe	56	1	72	0.719	ppb	0.719	41.83	29697	10000	
(Fe)	57	2	72	0.023	ppb	0.023	12835.88	280	400000	
Co	59	2	72	-0.002	ppb	-0.002	-1258.71	70	2000	
Ni	60	2	72	-0.070	ppb	-0.070	-155.38	413	5000	
Cu	63	2	72	0.046	ppb	0.046	88.23	1637	5000	
Zn	66	2	72	0.678	ppb	0.678	54.48	640	5000	
As	75	2	72	0.139	ppb	0.139	23.75	190	2000	
Se	78	1	72	0.549	ppb	0.549	25.68	89	2000	
Sr	88	2	72	53.394	ppb	53.394	1.40	35550	4000	
Zr	90	2	72	9.147	ppb	9.147	440.34	683	1000	
Mo	95	2	115	0.208	ppb	0.208	19.88	197	2000	
Ag	107	2	115	-0.003	ppb	-0.003	-293.20	40	100	
Cd	111	2	115	-0.026	ppb	-0.026	-110.27	7	2000	
Sn	120	2	115	-0.287	ppb	-0.287	-73.44	677	2000	
Sb	121	2	115	0.007	ppb	0.007	240.79	43	1000	
Ba	137	2	115	389.902	ppb	389.902	0.08	125347	5000	
W	182	2	165	-0.147	ppb	-0.147	-11.58	773	100	
Tl	205	2	165	-0.094	ppb	-0.094	-6.59	183	2000	
Pb	208	2	165	-0.195	ppb	-0.195	-12.74	2277	5000	
Th	232	2	193	-0.091	ppb	-0.091	-41.56	8399	2000	
U	238	2	193	-0.022	ppb	-0.022	-63.18	2980	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	257469	1.79	259861	99.08	60	120	
Sc (IS)	45	1	HMI H2	9381552	0.58	9102038	103.07	60	120	
Sc (IS)	45	2	HMI He	926079	1.10	903588	102.49	60	120	
Sc (IS)	45	3	No Gas	17142701	1.47	16459035	104.15	60	120	
Ge Internal standard	72	1	HMI H2	5120678	0.47	4919618	104.09	60	120	
Ge Internal standard	72	2	HMI He	1109456	0.74	1043503	106.32	60	120	
In Internal standard	115	2	HMI He	3706136	0.98	3551384	104.36	60	120	
Ho-165	165	2	HMI He	14302082	0.39	13518981	105.79	60	120	
Ir (IS)	193	2	HMI He	10640058	1.39	10147609	104.85	60	120	

Sample Report

Sample Table

Sample Name	280-174903-B-8-A
Data File Name	081SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:43:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.761	ppb	-2.761	-16.13	908735	50000	
Be	9	1	6	-0.085	ppb	-0.085	-56.72	17	2000	
B	11	1	6	13.165	ppb	13.165	10.22	3047	2000	
Na	23	2	45	11202.544	ppb	11202.544	1.00	2329789	400000	
Mg	24	2	45	14198.795	ppb	14198.795	0.49	1347034	400000	
Al	27	2	45	2.055	ppb	2.055	46.63	140	400000	
Si	28	2	45	1082.880	ppb	1082.880	1.28	216734	10000	
P	31	2	45	88.080	ppb	88.080	2.69	389	10000	
K	39	2	45	736.398	ppb	736.398	3.79	91577	400000	
Ca	40	1	45	36147.020	ppb	36147.020	1.66	55301659	400000	
Ti	47	2	45	0.360	ppb	0.360	0.31	10	4000	
V	51	2	72	0.611	ppb	0.611	42.18	3424	2000	
Cr	52	2	72	-0.004	ppb	-0.004	-8598.47	2660	5000	
Mn	55	2	72	0.315	ppb	0.315	47.20	380	10000	
Fe	56	1	72	96.126	ppb	96.126	1.51	351367	10000	
(Fe)	57	2	72	101.858	ppb	101.858	5.58	2870	400000	
Co	59	2	72	-0.006	ppb	-0.006	-271.10	63	2000	
Ni	60	2	72	0.388	ppb	0.388	47.44	677	5000	
Cu	63	2	72	3.213	ppb	3.213	8.35	6518	5000	
Zn	66	2	72	35.119	ppb	35.119	3.42	10887	5000	
As	75	2	72	0.262	ppb	0.262	32.70	219	2000	
Se	78	1	72	0.412	ppb	0.412	33.50	71	2000	
Sr	88	2	72	54.940	ppb	54.940	2.79	36582	4000	
Zr	90	2	72	-7.176	ppb	-7.176	-143.60	633	1000	
Mo	95	2	115	0.214	ppb	0.214	10.56	200	2000	
Ag	107	2	115	-0.003	ppb	-0.003	-210.49	40	100	
Cd	111	2	115	-0.035	ppb	-0.035	-41.10	3	2000	
Sn	120	2	115	-0.133	ppb	-0.133	-68.88	837	2000	
Sb	121	2	115	0.022	ppb	0.022	140.28	60	1000	
Ba	137	2	115	388.044	ppb	388.044	1.47	123982	5000	
W	182	2	165	-0.136	ppb	-0.136	-35.53	807	100	
Tl	205	2	165	-0.085	ppb	-0.085	-8.09	240	2000	
Pb	208	2	165	0.025	ppb	0.025	124.77	4310	5000	
Th	232	2	193	-0.070	ppb	-0.070	-20.63	8586	2000	
U	238	2	193	0.000	ppb	0.000	-5821.77	3204	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	260499	0.54	259861	100.25	60	120	
Sc (IS)	45	1	HMI H2	9403532	1.20	9102038	103.31	60	120	
Sc (IS)	45	2	HMI He	931029	0.31	903588	103.04	60	120	
Sc (IS)	45	3	No Gas	17181142	0.98	16459035	104.39	60	120	
Ge Internal standard	72	1	HMI H2	5172441	1.32	4919618	105.14	60	120	
Ge Internal standard	72	2	HMI He	1109691	1.02	1043503	106.34	60	120	
In Internal standard	115	2	HMI He	3683449	1.20	3551384	103.72	60	120	
Ho-165	165	2	HMI He	14306725	1.31	13518981	105.83	60	120	
Ir (IS)	193	2	HMI He	10596382	0.36	10147609	104.42	60	120	

Sample Report

Sample Table

Sample Name	280-174903-B-9-A
Data File Name	082SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:46:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.676	ppb	-2.676	-86.72	910802	50000	
Be	9	1	6	0.015	ppb	0.015	844.36	40	2000	
B	11	1	6	15.137	ppb	15.137	6.75	3350	2000	
Na	23	2	45	11200.581	ppb	11200.581	0.97	2327671	400000	
Mg	24	2	45	14208.964	ppb	14208.964	1.27	1347044	400000	
Al	27	2	45	5.631	ppb	5.631	70.87	240	400000	
Si	28	2	45	1090.050	ppb	1090.050	1.79	217895	10000	
P	31	2	45	85.495	ppb	85.495	6.79	381	10000	
K	39	2	45	729.677	ppb	729.677	2.71	91077	400000	
Ca	40	1	45	35753.348	ppb	35753.348	1.20	55276388	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.943	ppb	0.943	45.75	3747	2000	
Cr	52	2	72	0.084	ppb	0.084	59.71	2770	5000	
Mn	55	2	72	0.053	ppb	0.053	157.83	223	10000	
Fe	56	1	72	3.164	ppb	3.164	0.90	38652	10000	
(Fe)	57	2	72	2.240	ppb	2.240	209.35	337	400000	
Co	59	2	72	-0.012	ppb	-0.012	-40.79	50	2000	
Ni	60	2	72	-0.146	ppb	-0.146	-63.54	370	5000	
Cu	63	2	72	0.083	ppb	0.083	74.07	1694	5000	
Zn	66	2	72	2.852	ppb	2.852	3.62	1287	5000	
As	75	2	72	0.268	ppb	0.268	42.24	220	2000	
Se	78	1	72	0.389	ppb	0.389	57.53	68	2000	
Sr	88	2	72	52.020	ppb	52.020	3.19	34624	4000	
Zr	90	2	72	-1.633	ppb	-1.633	-1730.39	650	1000	
Mo	95	2	115	0.307	ppb	0.307	13.94	273	2000	
Ag	107	2	115	-0.011	ppb	-0.011	-34.03	20	100	
Cd	111	2	115	-0.018	ppb	-0.018	-138.70	10	2000	
Sn	120	2	115	-0.318	ppb	-0.318	-25.62	643	2000	
Sb	121	2	115	0.016	ppb	0.016	31.74	53	1000	
Ba	137	2	115	381.661	ppb	381.661	1.92	122760	5000	
W	182	2	165	-0.183	ppb	-0.183	-25.22	657	100	
Tl	205	2	165	-0.084	ppb	-0.084	-16.31	250	2000	
Pb	208	2	165	-0.134	ppb	-0.134	-16.34	2850	5000	
Th	232	2	193	-0.036	ppb	-0.036	-83.55	8916	2000	
U	238	2	193	0.009	ppb	0.009	271.15	3304	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	258229	0.12	259861	99.37	60	120	
Sc (IS)	45	1	HMI H2	9502195	1.13	9102038	104.40	60	120	
Sc (IS)	45	2	HMI He	930348	0.26	903588	102.96	60	120	
Sc (IS)	45	3	No Gas	17208480	1.25	16459035	104.55	60	120	
Ge Internal standard	72	1	HMI H2	5228846	0.43	4919618	106.29	60	120	
Ge Internal standard	72	2	HMI He	1109176	0.06	1043503	106.29	60	120	
In Internal standard	115	2	HMI He	3708255	0.69	3551384	104.42	60	120	
Ho-165	165	2	HMI He	14372828	0.84	13518981	106.32	60	120	
Ir (IS)	193	2	HMI He	10576456	0.25	10147609	104.23	60	120	

Sample Report

Sample Table

Sample Name	280-174903-B-10-A
Data File Name	083SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:50:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	6084889 6020a
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.791	ppb	-2.791	-46.76	905507	50000	
Be	9	1	6	0.025	ppb	0.025	87.96	43	2000	
B	11	1	6	11.817	ppb	11.817	11.47	2864	2000	
Na	23	2	45	11219.413	ppb	11219.413	1.10	2343021	400000	
Mg	24	2	45	14434.219	ppb	14434.219	1.95	1375072	400000	
Al	27	2	45	2.393	ppb	2.393	89.79	150	400000	
Si	28	2	45	1096.344	ppb	1096.344	0.12	220132	10000	
P	31	2	45	76.881	ppb	76.881	8.42	357	10000	
K	39	2	45	740.143	ppb	740.143	1.84	92204	400000	
Ca	40	1	45	36368.056	ppb	36368.056	0.48	56298761	400000	
Ti	47	2	45	0.594	ppb	0.594	124.54	17	4000	
V	51	2	72	0.713	ppb	0.713	19.73	3537	2000	
Cr	52	2	72	0.042	ppb	0.042	455.12	2727	5000	
Mn	55	2	72	0.960	ppb	0.960	4.01	770	10000	
Fe	56	1	72	103.577	ppb	103.577	2.20	382653	10000	
(Fe)	57	2	72	108.574	ppb	108.574	6.00	3054	400000	
Co	59	2	72	-0.012	ppb	-0.012	-41.67	50	2000	
Ni	60	2	72	29.648	ppb	29.648	1.65	17547	5000	
Cu	63	2	72	5.779	ppb	5.779	2.00	10514	5000	
Zn	66	2	72	63.420	ppb	63.420	4.59	19389	5000	
As	75	2	72	0.217	ppb	0.217	50.58	209	2000	
Se	78	1	72	0.542	ppb	0.542	42.96	91	2000	
Sr	88	2	72	55.642	ppb	55.642	0.63	37200	4000	
Zr	90	2	72	-43.676	ppb	-43.676	-49.80	523	1000	
Mo	95	2	115	0.250	ppb	0.250	24.88	230	2000	
Ag	107	2	115	-0.011	ppb	-0.011	-68.31	20	100	
Cd	111	2	115	-0.043	ppb	-0.043	0.00	0	2000	
Sn	120	2	115	-0.210	ppb	-0.210	-39.73	763	2000	
Sb	121	2	115	0.010	ppb	0.010	127.49	47	1000	
Ba	137	2	115	395.272	ppb	395.272	3.06	127685	5000	
W	182	2	165	-0.132	ppb	-0.132	-9.26	827	100	
Tl	205	2	165	-0.081	ppb	-0.081	-3.78	273	2000	
Pb	208	2	165	0.545	ppb	0.545	2.14	9188	5000	
Th	232	2	193	-0.054	ppb	-0.054	-91.15	8856	2000	
U	238	2	193	3.128	ppb	3.128	0.99	38120	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	264409	1.40	259861	101.75	60	120	
Sc (IS)	45	1	HMI H2	9513819	0.35	9102038	104.52	60	120	
Sc (IS)	45	2	HMI He	934917	0.54	903588	103.47	60	120	
Sc (IS)	45	3	No Gas	17125399	1.35	16459035	104.05	60	120	
Ge Internal standard	72	1	HMI H2	5257090	0.68	4919618	106.86	60	120	
Ge Internal standard	72	2	HMI He	1114154	0.67	1043503	106.77	60	120	
In Internal standard	115	2	HMI He	3725066	1.44	3551384	104.89	60	120	
Ho-165	165	2	HMI He	14440793	0.60	13518981	106.82	60	120	
Ir (IS)	193	2	HMI He	10731872	0.69	10147609	105.76	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	084_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:53:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	45.136	ppb	3.286	10640	50	90.3	90	110	
Na	23	2	45	52946.086	ppb	1.206	10953271	51000	103.8	90	110	
Mg	24	2	45	10680.255	ppb	0.887	1015184	11000	97.1	90	110	
Al	27	2	45	948.942	ppb	0.959	26725	1000	94.9	90	110	
K	39	2	45	10547.876	ppb	1.492	727288	11000	95.9	90	110	
Ca	40	1	45	11181.102	ppb	0.657	17281591	11000	101.6	90	110	
Ti	47	2	45	47.937	ppb	12.120	1337	50	95.9	90	110	
V	51	2	72	49.627	ppb	3.707	50855	50	99.3	90	110	
Cr	52	2	72	50.342	ppb	1.671	66830	50	100.7	90	110	
Mn	55	2	72	46.449	ppb	1.689	27657	50	92.9	90	110	
Fe	56	1	72	1009.084	ppb	1.108	3394132	1000	100.9	90	110	
Co	59	2	72	49.499	ppb	1.177	99392	50	99.0	90	110	
Ni	60	2	72	48.857	ppb	2.210	28121	50	97.7	90	110	
Cu	63	2	72	48.584	ppb	0.558	75385	50	97.2	90	110	
Zn	66	2	72	48.545	ppb	4.992	14687	50	97.1	90	110	
As	75	2	72	49.114	ppb	2.811	11452	50	98.2	90	110	
Se	78	1	72	50.546	ppb	2.322	7210	50	101.1	90	110	
Sr	88	2	72	96.858	ppb	0.795	63578	100	96.9	90	110	
Zr	90	2	72	106.705	ppb	24.195	970	50	213.4	90	110	>+\-10%
Mo	95	2	115	51.024	ppb	1.997	39325	50	102.0	90	110	
Ag	107	2	115	49.282	ppb	1.879	126737	50	98.6	90	110	
Cd	111	2	115	49.281	ppb	5.077	19539	50	98.6	90	110	
Sn	120	2	115	50.061	ppb	1.690	54321	50	100.1	90	110	
Sb	121	2	115	49.206	ppb	0.571	56689	50	98.4	90	110	
Ba	137	2	115	49.629	ppb	2.401	15885	50	99.3	90	110	
W	182	2	165	49.711	ppb	0.387	163314	50	99.4	90	110	
Tl	205	2	165	48.650	ppb	1.891	331794	50	97.3	90	110	
Pb	208	2	165	48.299	ppb	0.728	451782	50	96.6	90	110	
Th	232	2	193	47.324	ppb	1.754	502680	50	94.6	90	110	
U	238	2	193	47.615	ppb	1.639	530179	50	95.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	258774	0.93	259861	99.58	60	120	
Sc (IS)	45	1	HMI H2	9480477	0.48	9102038	104.16	60	120	
Sc (IS)	45	2	HMI He	932741	1.28	903588	103.23	60	120	
Sc (IS)	45	3	No Gas	17022051	0.31	16459035	103.42	60	120	
Ge Internal standard	72	1	HMI H2	5122810	0.60	4919618	104.13	60	120	
Ge Internal standard	72	2	HMI He	1094485	1.45	1043503	104.89	60	120	
In Internal standard	115	2	HMI He	3671256	0.28	3551384	103.38	60	120	
Ho-165	165	2	HMI He	14386544	0.62	13518981	106.42	60	120	
Ir (IS)	193	2	HMI He	10654657	0.20	10147609	105.00	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	085_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T14:57:24-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-2.870	ppb	-58.4	890722	10	
Be	9	1	6	-0.101	ppb	-62.0	13	0.5	
B	11	1	6	23.447	ppb	10.7	4871	0.5	>RL
Na	23	2	45	52.067	ppb	15.8	31664	25	>RL
Mg	24	2	45	4.733	ppb	25.5	670	25	
Al	27	2	45	0.503	ppb	335.6	97	15	
K	39	2	45	12.685	ppb	23.8	44854	50	
Ti	47	2	45	0.361	ppb	173.2	10	0.5	
V	51	2	72	-0.423	ppb	-28.4	2404	1	
Cr	52	2	72	-0.161	ppb	-45.8	2450	1	
Mn	55	2	72	-0.063	ppb	-108.4	153	0.5	
(Fe)	57	2	72	-1.028	ppb	-92.5	253	25	
Co	59	2	72	0.026	ppb	48.1	127	0.5	
Ni	60	2	72	0.018	ppb	512.7	463	1	
Cu	63	2	72	-0.215	ppb	-24.8	1233	1	
Zn	66	2	72	-0.117	ppb	-86.2	403	5	
As	75	2	72	-0.205	ppb	-15.4	110	1	
Se	78	1	72	-0.022	ppb	-124.6	8	1	
Sr	88	2	72	0.097	ppb	73.7	103	0.5	
Zr	90	2	72	-24.218	ppb	-131.2	580	1	
Mo	95	2	115	0.096	ppb	100.4	110	0.5	
Ag	107	2	115	0.011	ppb	113.0	77	1	
Cd	111	2	115	-0.043	ppb	0.0	0	0.5	
Sn	120	2	115	-0.130	ppb	-144.3	850	1	
Sb	121	2	115	0.064	ppb	34.6	110	0.6	
Ba	137	2	115	0.131	ppb	160.2	137	0.5	
W	182	2	165	-0.007	ppb	-410.8	1223	1	
Tl	205	2	165	-0.034	ppb	-36.2	590	0.1	
Pb	208	2	165	-0.147	ppb	-5.6	2717	0.5	
Th	232	2	193	0.328	ppb	15.7	13026	1	
U	238	2	193	0.010	ppb	128.9	3401	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	265280	1.30	259861	102.09	60	120	
Sc (IS)	45	1	HMI H2	9504717	0.42	9102038	104.42	60	120	
Sc (IS)	45	2	HMI He	932530	0.57	903588	103.20	60	120	
Sc (IS)	45	3	No Gas	16854046	1.57	16459035	102.40	60	120	
Ge Internal standard	72	1	HMI H2	5167574	0.46	4919618	105.04	60	120	
Ge Internal standard	72	2	HMI He	1107991	0.51	1043503	106.18	60	120	
In Internal standard	115	2	HMI He	3731473	0.71	3551384	105.07	60	120	
Ho-165	165	2	HMI He	14296316	0.83	13518981	105.75	60	120	
Ir (IS)	193	2	HMI He	10857262	1.26	10147609	106.99	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7686815
Data File Name	086LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:00:58-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	4.741	ppb	19.674	961317	50	9.5	70	130	>+/-30%
Be	9	1	6	1.116	ppb	35.421	310	1	111.6	70	130	
Na	23	2	45	344.941	ppb	2.493	91550	300	115.0	70	130	
Mg	24	2	45	53.693	ppb	6.501	5288	50	107.4	70	130	
Al	27	2	45	49.278	ppb	5.458	1457	50	98.6	70	130	
K	39	2	45	124.058	ppb	14.613	51743	120	103.4	70	130	
Ca	40	1	45	217.267	ppb	0.956	382396	200	108.6	70	130	
V	51	2	72	4.457	ppb	5.578	7152	5	89.1	70	130	
Cr	52	2	72	1.788	ppb	7.757	4941	2	89.4	70	130	
Mn	55	2	72	1.013	ppb	4.122	793	1	101.3	70	130	
Fe	56	1	72	50.191	ppb	0.545	196519	50	100.4	70	130	
(Fe)	57	2	72	45.195	ppb	14.465	1420	50	90.4	70	130	
Co	59	2	72	0.958	ppb	12.611	2010	1	95.8	70	130	
Ni	60	2	72	1.858	ppb	4.752	1510	2	92.9	70	130	
Cu	63	2	72	1.749	ppb	1.802	4234	2	87.5	70	130	
Zn	66	2	72	9.433	ppb	1.647	3224	10	94.3	70	130	
As	75	2	72	5.022	ppb	1.344	1320	5	100.4	70	130	
Se	78	1	72	4.636	ppb	1.350	677	5	92.7	70	130	
Sr	88	2	72	5.512	ppb	3.012	3681	5	110.2	70	130	
Zr	90	2	72	46.641	ppb	113.982	793	0.5	9328.2	70	130	>+/-30%
Mo	95	2	115	2.089	ppb	1.567	1663	2	104.4	70	130	
Ag	107	2	115	1.018	ppb	12.218	2697	1	101.8	70	130	
Cd	111	2	115	0.946	ppb	15.542	397	1	94.6	70	130	
Sn	120	2	115	9.510	ppb	2.820	11248	10	95.1	70	130	
Sb	121	2	115	2.027	ppb	8.408	2397	2	101.3	70	130	
Ba	137	2	115	1.384	ppb	10.629	540	1	138.4	70	130	>+/-30%
W	182	2	165	-0.092	ppb	-19.905	947	1	-9.2	70	130	>+/-30%
Tl	205	2	165	0.924	ppb	8.362	7045	1	92.4	70	130	
Pb	208	2	165	0.968	ppb	6.839	12959	1	96.8	70	130	
Th	232	2	193	0.938	ppb	2.956	19637	1	93.8	70	130	
U	238	2	193	0.955	ppb	7.448	14154	1	95.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	268949	0.67	259861	103.50	60	120	
Sc (IS)	45	1	HMI H2	9450000	1.24	9102038	103.82	60	120	
Sc (IS)	45	2	HMI He	926711	0.13	903588	102.56	60	120	
Sc (IS)	45	3	No Gas	17142759	0.85	16459035	104.15	60	120	
Ge Internal standard	72	1	HMI H2	5168762	0.65	4919618	105.06	60	120	
Ge Internal standard	72	2	HMI He	1102173	0.16	1043503	105.62	60	120	
In Internal standard	115	2	HMI He	3717084	0.39	3551384	104.67	60	120	
Ho-165	165	2	HMI He	14267023	1.03	13518981	105.53	60	120	
Ir (IS)	193	2	HMI He	10932245	0.64	10147609	107.73	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608688/1-A
Data File Name	087_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:04:34-06:00
Sample Type	Blank
Dilution	1
Comment	608688 6020b
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	-5.939	ppb	-51.2680395	891625	10
Be	9	1	6	-0.114	ppb	-36.23366193	10	0.5
B	11	1	6	8.992	ppb	14.27464518	2404	0.5
Na	23	2	45	11.946	ppb	36.88996223	23467	25
Mg	24	2	45	4.396	ppb	26.44247683	640	25
Al	27	2	45	3.087	ppb	21.32674742	170	15
K	39	2	45	6.525	ppb	388.6454854	44620	50
Ti	47	2	45	0.239	ppb	86.61259634	7	0.5
V	51	2	72	-0.440	ppb	-74.68142744	2390	1
Cr	52	2	72	-0.262	ppb	-19.08609445	2324	1
Mn	55	2	72	0.070	ppb	182.2037853	233	0.5
(Fe)	57	2	72	1.590	ppb	263.1042011	320	25
Co	59	2	72	-0.002	ppb	-569.4629295	70	0.5
Ni	60	2	72	-0.094	ppb	-150.4362979	400	1
Cu	63	2	72	-0.290	ppb	-30.19376116	1120	1
Zn	66	2	72	0.105	ppb	224.4792745	470	5
As	75	2	72	-0.091	ppb	-96.40496022	137	1
Se	78	1	72	0.005	ppb	1405.545103	12	1
Sr	88	2	72	0.077	ppb	34.19833698	90	0.5
Zr	90	2	72	-3.775	ppb	-1025.322561	643	1
Mo	95	2	115	0.002	ppb	1825.330461	37	0.5
Ag	107	2	115	-0.006	ppb	-70.44262976	33	1
Cd	111	2	115	-0.027	ppb	-104.9801154	7	0.5
Sn	120	2	115	-0.343	ppb	-3.191850541	620	1
Sb	121	2	115	0.021	ppb	141.5929511	60	0.6
Ba	137	2	115	-0.004	ppb	-1800.336539	93	0.5
W	182	2	165	-0.150	ppb	-28.41800985	763	1
Tl	205	2	165	-0.081	ppb	-8.147440117	270	0.1
Pb	208	2	165	-0.177	ppb	-5.042419334	2444	0.5
Th	232	2	193	-0.080	ppb	-60.89623055	8806	1
U	238	2	193	0.001	ppb	789.5266368	3344	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	267057	0.35	259861	102.77	60	120	
Sc (IS)	45	1	HMI H2	9475112	0.99	9102038	104.10	60	120	
Sc (IS)	45	2	HMI He	936098	0.95	903588	103.60	60	120	
Sc (IS)	45	3	No Gas	17302302	1.69	16459035	105.12	60	120	
Ge Internal standard	72	1	HMI H2	5212239	1.38	4919618	105.95	60	120	
Ge Internal standard	72	2	HMI He	1109831	0.55	1043503	106.36	60	120	
In Internal standard	115	2	HMI He	3734348	1.35	3551384	105.15	60	120	
Ho-165	165	2	HMI He	14325814	1.39	13518981	105.97	60	120	
Ir (IS)	193	2	HMI He	11001947	0.24	10147609	108.42	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608688/2-A
Data File Name	088_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:08:10-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608688 6020b
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	33.284	33.284	ppb	8.410	1164580	400	8.3	80	120	>+/-20%
Be	9	1	6	35.606	35.606	ppb	1.594	8739	40	89.0	80	120	
Na	23	2	45	818.155	818.155	ppb	0.604	190873	40	2045.4	80	120	>+/-20%
Mg	24	2	45	743.262	743.262	ppb	1.351	71232	40	1858.2	80	120	>+/-20%
Al	27	2	45	733.815	733.815	ppb	6.339	20797	40	1834.5	80	120	>+/-20%
K	39	2	45	764.147	764.147	ppb	2.455	94047	40	1910.4	80	120	>+/-20%
V	51	2	72	38.134	38.134	ppb	4.879	40373	40	95.3	80	120	
Cr	52	2	72	39.121	39.121	ppb	1.852	53386	40	97.8	80	120	
Mn	55	2	72	37.897	37.897	ppb	2.341	22970	40	94.7	80	120	
(Fe)	57	2	72	744.922	744.922	ppb	2.142	19282	40	1862.3	80	120	>+/-20%
Co	59	2	72	38.790	38.790	ppb	1.065	79175	40	97.0	80	120	
Ni	60	2	72	37.735	37.735	ppb	1.420	22176	40	94.3	80	120	
Cu	63	2	72	38.902	38.902	ppb	1.395	61669	40	97.3	80	120	
Zn	66	2	72	39.887	39.887	ppb	4.543	12338	40	99.7	80	120	
As	75	2	72	37.604	37.604	ppb	2.838	8952	40	94.0	80	120	
Se	78	1	72	39.536	39.536	ppb	3.184	5809	40	98.8	80	120	
Mo	95	2	115	38.787	38.787	ppb	1.486	30423	40	97.0	80	120	
Ag	107	2	115	40.318	40.318	ppb	0.982	105502	40	100.8	80	120	
Cd	111	2	115	40.412	40.412	ppb	1.836	16306	40	101.0	80	120	
Sn	120	2	115	37.098	37.098	ppb	2.341	41211	40	92.7	80	120	
Sb	121	2	115	38.690	38.690	ppb	2.291	45356	40	96.7	80	120	
Ba	137	2	115	39.671	39.671	ppb	5.049	12936	40	99.2	80	120	
W	182	2	165	-0.138	-0.138	ppb	-7.134	813	40	-0.3	80	120	>+/-20%
Tl	205	2	165	39.023	39.023	ppb	0.593	269296	40	97.6	80	120	
Pb	208	2	165	38.425	38.425	ppb	0.562	364331	40	96.1	80	120	
Th	232	2	193	36.007	36.007	ppb	0.914	399198	40	90.0	80	120	
U	238	2	193	37.198	37.198	ppb	0.655	430515	40	93.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	269207	0.78	259861	103.60	60	120	
Sc (IS)	45	1	HMI H2	9686066	0.76	9102038	106.42	60	120	
Sc (IS)	45	2	HMI He	937696	0.63	903588	103.77	60	120	
Sc (IS)	45	3	No Gas	17081304	2.18	16459035	103.78	60	120	
Ge Internal standard	72	1	HMI H2	5274737	0.48	4919618	107.22	60	120	
Ge Internal standard	72	2	HMI He	1112490	0.51	1043503	106.61	60	120	
In Internal standard	115	2	HMI He	3735106	0.56	3551384	105.17	60	120	
Ho-165	165	2	HMI He	14549263	0.14	13518981	107.62	60	120	
Ir (IS)	193	2	HMI He	11056031	0.75	10147609	108.95	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-608688/3-A
Data File Name	089SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:11:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	36.641	ppb	36.641	10.65	1200161	50000	
Be	9	1	6	35.348	ppb	35.348	1.22	8719	2000	
B	11	1	6	3.461	ppb	3.461	15.25	1467	2000	
Na	23	2	45	857.635	ppb	857.635	1.45	199592	400000	
Mg	24	2	45	752.956	ppb	752.956	0.66	72347	400000	
Al	27	2	45	742.159	ppb	742.159	2.33	21087	400000	
Si	28	2	45	44.148	ppb	44.148	4.83	25957	10000	
P	31	2	45	2.305	ppb	2.305	141.19	135	10000	
K	39	2	45	760.537	ppb	760.537	3.90	94057	400000	
Ca	40	1	45	874.216	ppb	874.216	2.13	1400214	400000	
Ti	47	2	45	35.726	ppb	35.726	1.77	1003	4000	
V	51	2	72	37.308	ppb	37.308	1.54	39661	2000	
Cr	52	2	72	39.997	ppb	39.997	1.58	54657	5000	
Mn	55	2	72	38.074	ppb	38.074	2.04	23133	10000	
Fe	56	1	72	808.212	ppb	808.212	0.34	2786512	10000	
(Fe)	57	2	72	754.800	ppb	754.800	0.89	19579	400000	
Co	59	2	72	40.013	ppb	40.013	1.49	81861	2000	
Ni	60	2	72	37.992	ppb	37.992	1.41	22376	5000	
Cu	63	2	72	39.250	ppb	39.250	1.65	62358	5000	
Zn	66	2	72	40.899	ppb	40.899	5.38	12672	5000	
As	75	2	72	36.973	ppb	36.973	1.02	8825	2000	
Se	78	1	72	39.617	ppb	39.617	6.13	5785	2000	
Sr	88	2	72	76.380	ppb	76.380	3.07	51087	4000	
Zr	90	2	72	-12.475	ppb	-12.475	-35.42	620	1000	
Mo	95	2	115	39.785	ppb	39.785	1.49	31298	2000	
Ag	107	2	115	40.120	ppb	40.120	1.02	105300	100	
Cd	111	2	115	39.701	ppb	39.701	2.31	16065	2000	
Sn	120	2	115	37.751	ppb	37.751	2.48	42050	2000	
Sb	121	2	115	39.248	ppb	39.248	1.24	46151	1000	
Ba	137	2	115	39.131	ppb	39.131	5.64	12802	5000	
W	182	2	165	-0.127	ppb	-0.127	-14.66	847	100	
Tl	205	2	165	39.610	ppb	39.610	0.70	271678	2000	
Pb	208	2	165	38.899	ppb	38.899	0.40	366523	5000	
Th	232	2	193	36.635	ppb	36.635	1.17	407004	2000	
U	238	2	193	37.620	ppb	37.620	0.69	436482	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	270571	0.42	259861	104.12	60	120	
Sc (IS)	45	1	HMI H2	9508948	0.91	9102038	104.47	60	120	
Sc (IS)	45	2	HMI He	940185	0.38	903588	104.05	60	120	
Sc (IS)	45	3	No Gas	17239292	0.62	16459035	104.74	60	120	
Ge Internal standard	72	1	HMI H2	5240591	0.64	4919618	106.52	60	120	
Ge Internal standard	72	2	HMI He	1115138	0.77	1043503	106.86	60	120	
In Internal standard	115	2	HMI He	3746297	0.80	3551384	105.49	60	120	
Ho-165	165	2	HMI He	14460397	0.82	13518981	106.96	60	120	
Ir (IS)	193	2	HMI He	11084052	1.15	10147609	109.23	60	120	

Sample Report

Sample Table

Sample Name	280-174914-A-1-B
Data File Name	090SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:15:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	8.008	ppb	8.008	9.32	974430	50000	
Be	9	1	6	0.017	ppb	0.017	1043.20	40	2000	
B	11	1	6	40.293	ppb	40.293	4.91	7505	2000	
Na	23	2	45	208312.084	ppb	208312.084	1.00	42930556	400000	
Mg	24	2	45	21092.026	ppb	21092.026	0.62	1999776	400000	
Al	27	2	45	352.036	ppb	352.036	0.85	9943	400000	
Si	28	2	45	333.193	ppb	333.193	1.44	78817	10000	
P	31	2	45	6346.354	ppb	6346.354	0.73	19057	10000	
K	39	2	45	19824.294	ppb	19824.294	1.82	1325074	400000	
Ca	40	1	45	80920.405	ppb	80920.405	0.99	124144605	400000	
Ti	47	2	45	5.744	ppb	5.744	42.85	160	4000	
V	51	2	72	-0.045	ppb	-0.045	-645.17	2774	2000	
Cr	52	2	72	5.373	ppb	5.373	6.74	9593	5000	
Mn	55	2	72	49.317	ppb	49.317	2.67	29707	10000	
Fe	56	1	72	4417.941	ppb	4417.941	0.85	15109586	10000	
(Fe)	57	2	72	4254.710	ppb	4254.710	2.04	108336	400000	
Co	59	2	72	1.929	ppb	1.929	11.83	3991	2000	
Ni	60	2	72	9.600	ppb	9.600	5.71	5955	5000	
Cu	63	2	72	149.863	ppb	149.863	0.52	232088	5000	
Zn	66	2	72	202.879	ppb	202.879	2.80	60698	5000	
As	75	2	72	0.430	ppb	0.430	44.83	258	2000	
Se	78	1	72	0.653	ppb	0.653	42.16	107	2000	
Sr	88	2	72	626.683	ppb	626.683	0.54	416140	4000	
Zr	90	2	72	180.064	ppb	180.064	35.89	1207	1000	
Mo	95	2	115	35.206	ppb	35.206	2.57	27394	2000	
Ag	107	2	115	0.568	ppb	0.568	1.69	1523	100	
Cd	111	2	115	0.357	ppb	0.357	13.57	160	2000	
Sn	120	2	115	3.741	ppb	3.741	6.44	5008	2000	
Sb	121	2	115	0.489	ppb	0.489	8.52	603	1000	
Ba	137	2	115	108.349	ppb	108.349	0.83	34890	5000	
W	182	2	165	0.531	ppb	0.531	11.18	2980	100	
Tl	205	2	165	-0.030	ppb	-0.030	-32.08	620	2000	
Pb	208	2	165	5.186	ppb	5.186	1.75	52084	5000	
Th	232	2	193	0.556	ppb	0.556	5.54	15259	2000	
U	238	2	193	2.248	ppb	2.248	3.06	28285	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	256550	0.75	259861	98.73	60	120	
Sc (IS)	45	1	HMI H2	9433068	0.20	9102038	103.64	60	120	
Sc (IS)	45	2	HMI He	930552	1.13	903588	102.98	60	120	
Sc (IS)	45	3	No Gas	16958035	1.06	16459035	103.03	60	120	
Ge Internal standard	72	1	HMI H2	5241679	1.06	4919618	106.55	60	120	
Ge Internal standard	72	2	HMI He	1107691	0.17	1043503	106.15	60	120	
In Internal standard	115	2	HMI He	3705107	0.47	3551384	104.33	60	120	
Ho-165	165	2	HMI He	14362682	0.21	13518981	106.24	60	120	
Ir (IS)	193	2	HMI He	10721258	0.50	10147609	105.65	60	120	

Sample Report

Sample Table

Sample Name	280-174914-A-1-Bsd@5
Data File Name	091SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:18:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-8.055	ppb	-8.055	-48.26	865722	50000	
Be	9	1	6	-0.082	ppb	-0.082	-82.36	17	2000	
B	11	1	6	10.621	ppb	10.621	18.67	2510	2000	
Na	23	2	45	41351.358	ppb	41351.358	1.17	8542888	400000	
Mg	24	2	45	3952.350	ppb	3952.350	1.76	375076	400000	
Al	27	2	45	70.886	ppb	70.886	9.30	2070	400000	
Si	28	2	45	67.449	ppb	67.449	4.80	29987	10000	
P	31	2	45	1236.953	ppb	1236.953	2.93	3818	10000	
K	39	2	45	3623.858	ppb	3623.858	0.99	278275	400000	
Ca	40	1	45	15748.998	ppb	15748.998	0.30	24090936	400000	
Ti	47	2	45	1.677	ppb	1.677	53.48	47	4000	
V	51	2	72	-0.621	ppb	-0.621	-18.63	2194	2000	
Cr	52	2	72	0.768	ppb	0.768	30.67	3624	5000	
Mn	55	2	72	16.570	ppb	16.570	2.53	10040	10000	
Fe	56	1	72	890.286	ppb	890.286	1.22	3006475	10000	
(Fe)	57	2	72	846.867	ppb	846.867	0.74	21638	400000	
Co	59	2	72	0.349	ppb	0.349	13.34	777	2000	
Ni	60	2	72	1.693	ppb	1.693	27.94	1413	5000	
Cu	63	2	72	30.053	ppb	30.053	1.29	47465	5000	
Zn	66	2	72	41.618	ppb	41.618	2.87	12712	5000	
As	75	2	72	-0.142	ppb	-0.142	-80.15	124	2000	
Se	78	1	72	0.146	ppb	0.146	32.72	32	2000	
Sr	88	2	72	124.076	ppb	124.076	2.04	81866	4000	
Zr	90	2	72	-8.655	ppb	-8.655	-165.46	623	1000	
Mo	95	2	115	7.181	ppb	7.181	10.22	5698	2000	
Ag	107	2	115	0.118	ppb	0.118	19.60	360	100	
Cd	111	2	115	0.081	ppb	0.081	135.29	50	2000	
Sn	120	2	115	0.709	ppb	0.709	15.78	1770	2000	
Sb	121	2	115	0.149	ppb	0.149	19.01	210	1000	
Ba	137	2	115	21.140	ppb	21.140	6.65	6985	5000	
W	182	2	165	-0.008	ppb	-0.008	-409.21	1223	100	
Tl	205	2	165	-0.072	ppb	-0.072	-14.59	330	2000	
Pb	208	2	165	2.464	ppb	2.464	3.58	26837	5000	
Th	232	2	193	0.033	ppb	0.033	117.08	9740	2000	
U	238	2	193	0.437	ppb	0.437	6.36	8099	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	249719	0.27	259861	96.10	60	120	
Sc (IS)	45	1	HMI H2	9390265	0.18	9102038	103.17	60	120	
Sc (IS)	45	2	HMI He	931007	1.06	903588	103.03	60	120	
Sc (IS)	45	3	No Gas	17097730	1.09	16459035	103.88	60	120	
Ge Internal standard	72	1	HMI H2	5137853	0.40	4919618	104.44	60	120	
Ge Internal standard	72	2	HMI He	1100147	0.51	1043503	105.43	60	120	
In Internal standard	115	2	HMI He	3758590	1.82	3551384	105.83	60	120	
Ho-165	165	2	HMI He	14332231	0.47	13518981	106.02	60	120	
Ir (IS)	193	2	HMI He	10698843	1.31	10147609	105.43	60	120	

Sample Report

Sample Table

Sample Name	280-174914-A-1-C MS
Data File Name	092SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:22:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	41.641	ppb	41.641	1.98	1202029	50000	
Be	9	1	6	37.274	ppb	37.274	4.57	8332	2000	
B	11	1	6	38.270	ppb	38.270	4.17	6852	2000	
Na	23	2	45	208479.788	ppb	208479.788	1.18	42352443	400000	
Mg	24	2	45	21948.023	ppb	21948.023	0.88	2051208	400000	
Al	27	2	45	1073.491	ppb	1073.491	1.58	29724	400000	
Si	28	2	45	364.796	ppb	364.796	0.90	83423	10000	
P	31	2	45	6377.859	ppb	6377.859	2.49	18877	10000	
K	39	2	45	20939.056	ppb	20939.056	0.57	1377272	400000	
Ca	40	1	45	81619.267	ppb	81619.267	0.49	122695138	400000	
Ti	47	2	45	50.959	ppb	50.959	14.57	1397	4000	
V	51	2	72	38.080	ppb	38.080	3.35	39220	2000	
Cr	52	2	72	43.198	ppb	43.198	2.19	57068	5000	
Mn	55	2	72	87.690	ppb	87.690	1.79	51454	10000	
Fe	56	1	72	5230.657	ppb	5230.657	1.31	17188953	10000	
(Fe)	57	2	72	5269.365	ppb	5269.365	0.90	131006	400000	
Co	59	2	72	39.970	ppb	39.970	3.35	79352	2000	
Ni	60	2	72	45.431	ppb	45.431	3.34	25881	5000	
Cu	63	2	72	189.342	ppb	189.342	0.87	286045	5000	
Zn	66	2	72	243.713	ppb	243.713	1.29	71147	5000	
As	75	2	72	37.601	ppb	37.601	1.87	8707	2000	
Se	78	1	72	36.456	ppb	36.456	5.46	5117	2000	
Sr	88	2	72	720.123	ppb	720.123	1.10	467125	4000	
Zr	90	2	72	42.486	ppb	42.486	56.60	767	1000	
Mo	95	2	115	72.692	ppb	72.692	0.83	56486	2000	
Ag	107	2	115	38.498	ppb	38.498	0.95	99852	100	
Cd	111	2	115	38.100	ppb	38.100	1.67	15238	2000	
Sn	120	2	115	41.679	ppb	41.679	0.34	45774	2000	
Sb	121	2	115	38.415	ppb	38.415	3.07	44633	1000	
Ba	137	2	115	144.038	ppb	144.038	1.93	46316	5000	
W	182	2	165	0.613	ppb	0.613	7.33	3197	100	
Tl	205	2	165	38.318	ppb	38.318	0.16	256895	2000	
Pb	208	2	165	44.416	ppb	44.416	1.46	408465	5000	
Th	232	2	193	27.821	ppb	27.821	0.78	295010	2000	
U	238	2	193	41.163	ppb	41.163	1.05	452077	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	245208	0.76	259861	94.36	60	120	
Sc (IS)	45	1	HMI H2	9242813	0.92	9102038	101.55	60	120	
Sc (IS)	45	2	HMI He	917246	0.50	903588	101.51	60	120	
Sc (IS)	45	3	No Gas	16754941	1.22	16459035	101.80	60	120	
Ge Internal standard	72	1	HMI H2	5037724	0.15	4919618	102.40	60	120	
Ge Internal standard	72	2	HMI He	1082109	0.51	1043503	103.70	60	120	
In Internal standard	115	2	HMI He	3702369	0.78	3551384	104.25	60	120	
Ho-165	165	2	HMI He	14133904	0.84	13518981	104.55	60	120	
Ir (IS)	193	2	HMI He	10499139	0.36	10147609	103.46	60	120	

Sample Report

Sample Table

Sample Name	280-174914-A-1-D MSD
Data File Name	093SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:26:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	41.068	ppb	41.068	1.30	1181606	50000	
Be	9	1	6	38.741	ppb	38.741	3.70	8439	2000	
B	11	1	6	40.144	ppb	40.144	5.08	6968	2000	
Na	23	2	45	199993.506	ppb	199993.506	1.21	40300549	400000	
Mg	24	2	45	21120.839	ppb	21120.839	2.87	1957640	400000	
Al	27	2	45	1088.939	ppb	1088.939	1.40	29907	400000	
Si	28	2	45	359.293	ppb	359.293	0.47	81762	10000	
P	31	2	45	6301.872	ppb	6301.872	1.67	18502	10000	
K	39	2	45	20013.687	ppb	20013.687	0.67	1307795	400000	
Ca	40	1	45	80116.386	ppb	80116.386	0.55	119410072	400000	
Ti	47	2	45	46.034	ppb	46.034	16.97	1250	4000	
V	51	2	72	37.973	ppb	37.973	3.68	39013	2000	
Cr	52	2	72	44.498	ppb	44.498	1.91	58533	5000	
Mn	55	2	72	87.388	ppb	87.388	0.08	51129	10000	
Fe	56	1	72	5263.647	ppb	5263.647	0.56	17221243	10000	
(Fe)	57	2	72	5167.479	ppb	5167.479	0.70	128105	400000	
Co	59	2	72	39.534	ppb	39.534	1.25	78257	2000	
Ni	60	2	72	46.668	ppb	46.668	2.38	26492	5000	
Cu	63	2	72	190.122	ppb	190.122	0.98	286383	5000	
Zn	66	2	72	234.818	ppb	234.818	0.08	68365	5000	
As	75	2	72	37.857	ppb	37.857	1.76	8740	2000	
Se	78	1	72	37.971	ppb	37.971	4.68	5305	2000	
Sr	88	2	72	697.912	ppb	697.912	0.72	451389	4000	
Zr	90	2	72	63.622	ppb	63.622	74.74	827	1000	
Mo	95	2	115	72.110	ppb	72.110	1.47	55703	2000	
Ag	107	2	115	37.802	ppb	37.802	2.74	97472	100	
Cd	111	2	115	38.312	ppb	38.312	2.47	15238	2000	
Sn	120	2	115	39.636	ppb	39.636	1.25	43320	2000	
Sb	121	2	115	37.720	ppb	37.720	1.60	43571	1000	
Ba	137	2	115	141.751	ppb	141.751	0.77	45316	5000	
W	182	2	165	0.491	ppb	0.491	23.22	2807	100	
Tl	205	2	165	37.905	ppb	37.905	0.88	254528	2000	
Pb	208	2	165	42.842	ppb	42.842	0.49	394730	5000	
Th	232	2	193	29.598	ppb	29.598	0.36	310060	2000	
U	238	2	193	40.915	ppb	40.915	2.02	444752	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	239037	0.16	259861	91.99	60	120	
Sc (IS)	45	1	HMI H2	9164180	0.27	9102038	100.68	60	120	
Sc (IS)	45	2	HMI He	909894	1.35	903588	100.70	60	120	
Sc (IS)	45	3	No Gas	16526800	0.63	16459035	100.41	60	120	
Ge Internal standard	72	1	HMI H2	5015656	0.48	4919618	101.95	60	120	
Ge Internal standard	72	2	HMI He	1078939	0.76	1043503	103.40	60	120	
In Internal standard	115	2	HMI He	3680814	1.49	3551384	103.64	60	120	
Ho-165	165	2	HMI He	14154951	1.05	13518981	104.70	60	120	
Ir (IS)	193	2	HMI He	10391659	1.26	10147609	102.40	60	120	

Sample Report

Sample Table

Sample Name	280-174914-A-1-B pds
Data File Name	094SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:29:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	97.591	ppb	97.591	2.74	1573791	50000	
Be	9	1	6	104.419	ppb	104.419	0.15	21938	2000	
B	11	1	6	46.556	ppb	46.556	5.38	7695	2000	
Na	23	2	45	204036.274	ppb	204036.274	0.40	40964361	400000	
Mg	24	2	45	22547.299	ppb	22547.299	0.64	2082564	400000	
Al	27	2	45	2305.166	ppb	2305.166	1.64	62980	400000	
Si	28	2	45	413.495	ppb	413.495	0.49	91162	10000	
P	31	2	45	8166.721	ppb	8166.721	1.21	23855	10000	
K	39	2	45	21413.508	ppb	21413.508	0.79	1390955	400000	
Ca	40	1	45	81865.252	ppb	81865.252	0.96	120524902	400000	
Ti	47	2	45	119.288	ppb	119.288	9.57	3231	4000	
V	51	2	72	99.661	ppb	99.661	2.00	97140	2000	
Cr	52	2	72	103.053	ppb	103.053	1.83	131125	5000	
Mn	55	2	72	145.003	ppb	145.003	1.29	84048	10000	
Fe	56	1	72	5295.917	ppb	5295.917	1.09	17193703	10000	
(Fe)	57	2	72	5265.075	ppb	5265.075	0.88	129492	400000	
Co	59	2	72	98.850	ppb	98.850	0.52	194040	2000	
Ni	60	2	72	105.400	ppb	105.400	1.95	58818	5000	
Cu	63	2	72	245.870	ppb	245.870	1.43	367009	5000	
Zn	66	2	72	396.588	ppb	396.588	3.14	114251	5000	
As	75	2	72	99.021	ppb	99.021	0.97	22432	2000	
Se	78	1	72	99.713	ppb	99.713	2.18	13809	2000	
Sr	88	2	72	727.950	ppb	727.950	1.54	467123	4000	
Zr	90	2	72	184.707	ppb	184.707	18.29	1180	1000	
Mo	95	2	115	134.889	ppb	134.889	0.55	103163	2000	
Ag	107	2	115	25.902	ppb	25.902	1.79	66160	100	
Cd	111	2	115	96.364	ppb	96.364	1.08	37919	2000	
Sn	120	2	115	101.657	ppb	101.657	0.46	108521	2000	
Sb	121	2	115	95.489	ppb	95.489	1.58	109194	1000	
Ba	137	2	115	210.287	ppb	210.287	0.98	66532	5000	
W	182	2	165	122.258	ppb	122.258	2.11	393327	100	
Tl	205	2	165	97.363	ppb	97.363	1.65	652395	2000	
Pb	208	2	165	101.119	ppb	101.119	1.12	926118	5000	
Th	232	2	193	101.871	ppb	101.871	1.24	1052291	2000	
U	238	2	193	224.388	ppb	224.388	1.18	2442414	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	231116	0.75	259861	88.94	60	120	
Sc (IS)	45	1	HMI H2	9052162	0.25	9102038	99.45	60	120	
Sc (IS)	45	2	HMI He	906477	0.53	903588	100.32	60	120	
Sc (IS)	45	3	No Gas	16481231	0.48	16459035	100.13	60	120	
Ge Internal standard	72	1	HMI H2	4977301	0.70	4919618	101.17	60	120	
Ge Internal standard	72	2	HMI He	1070456	0.51	1043503	102.58	60	120	
In Internal standard	115	2	HMI He	3644944	0.41	3551384	102.63	60	120	
Ho-165	165	2	HMI He	14154206	0.72	13518981	104.70	60	120	
Ir (IS)	193	2	HMI He	10465748	0.48	10147609	103.14	60	120	

Sample Report

Sample Table

Sample Name	280-174955-C-11-A
Data File Name	095SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:33:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	755.148	ppb	755.148	0.14	6459116	50000	
Be	9	1	6	0.123	ppb	0.123	148.77	53	2000	
B	11	1	6	3780.127	ppb	3780.127	0.73	516177	2000	
Na	23	2	45	1042765.765	ppb	1042765.765	0.48	217802437	400000	
Mg	24	2	45	192237.212	ppb	192237.212	0.67	18477006	400000	
Al	27	2	45	817.547	ppb	817.547	5.15	23303	400000	
Si	28	2	45	965.979	ppb	965.979	0.61	197835	10000	
P	31	2	45	148.402	ppb	148.402	10.98	577	10000	
K	39	2	45	79760.837	ppb	79760.837	0.80	5270865	400000	
Ca	40	1	45	103092.182	ppb	103092.182	0.24	151776454	400000	
Ti	47	2	45	41.307	ppb	41.307	8.68	1163	4000	
V	51	2	72	3.328	ppb	3.328	4.44	5948	2000	
Cr	52	2	72	0.655	ppb	0.655	35.23	3427	5000	
Mn	55	2	72	786.517	ppb	786.517	0.12	460640	10000	
Fe	56	1	72	1746.531	ppb	1746.531	1.44	5541245	10000	
(Fe)	57	2	72	1727.826	ppb	1727.826	0.75	43197	400000	
Co	59	2	72	5.426	ppb	5.426	3.95	10851	2000	
Ni	60	2	72	11.717	ppb	11.717	5.78	7012	5000	
Cu	63	2	72	6.086	ppb	6.086	3.10	10687	5000	
Zn	66	2	72	8.773	ppb	8.773	10.17	2977	5000	
As	75	2	72	7.567	ppb	7.567	9.42	1877	2000	
Se	78	1	72	7.033	ppb	7.033	8.82	959	2000	
Sr	88	2	72	1599.520	ppb	1599.520	0.40	1038912	4000	
Zr	90	2	72	646.132	ppb	646.132	10.80	2580	1000	
Mo	95	2	115	14.238	ppb	14.238	5.58	11008	2000	
Ag	107	2	115	0.025	ppb	0.025	105.87	113	100	
Cd	111	2	115	0.108	ppb	0.108	81.68	60	2000	
Sn	120	2	115	-0.209	ppb	-0.209	-36.37	753	2000	
Sb	121	2	115	0.608	ppb	0.608	28.54	737	1000	
Ba	137	2	115	27.518	ppb	27.518	5.47	8856	5000	
W	182	2	165	7.594	ppb	7.594	1.93	25315	100	
Tl	205	2	165	0.060	ppb	0.060	37.58	1200	2000	
Pb	208	2	165	2.552	ppb	2.552	5.47	27017	5000	
Th	232	2	193	1.082	ppb	1.082	6.12	19173	2000	
U	238	2	193	23.802	ppb	23.802	0.88	247695	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	210785	0.33	259861	81.11	60	120	
Sc (IS)	45	1	HMI H2	9053107	0.76	9102038	99.46	60	120	
Sc (IS)	45	2	HMI He	943451	1.41	903588	104.41	60	120	
Sc (IS)	45	3	No Gas	17241749	0.81	16459035	104.76	60	120	
Ge Internal standard	72	1	HMI H2	4848985	0.80	4919618	98.56	60	120	
Ge Internal standard	72	2	HMI He	1083536	0.27	1043503	103.84	60	120	
In Internal standard	115	2	HMI He	3675196	1.00	3551384	103.49	60	120	
Ho-165	165	2	HMI He	14002495	0.56	13518981	103.58	60	120	
Ir (IS)	193	2	HMI He	9898257	1.68	10147609	97.54	60	120	

Sample Report

Sample Table

Sample Name	280-174955-C-12-A
Data File Name	096SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:36:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	1120.069	ppb	1120.069	1.00	8899213	50000	
Be	9	1	6	0.435	ppb	0.435	49.07	107	2000	
B	11	1	6	4305.905	ppb	4305.905	1.44	556029	2000	
Na	23	2	45	1694112.199	ppb	1694112.199	0.32	349282528	400000	
Mg	24	2	45	261045.374	ppb	261045.374	0.55	24767985	400000	
Al	27	2	45	3706.358	ppb	3706.358	0.20	103986	400000	
Si	28	2	45	1903.608	ppb	1903.608	0.77	367780	10000	
P	31	2	45	716.811	ppb	716.811	3.33	2266	10000	
K	39	2	45	128800.255	ppb	128800.255	0.26	8374878	400000	
Ca	40	1	45	155705.939	ppb	155705.939	0.53	229782843	400000	
Ti	47	2	45	204.841	ppb	204.841	6.17	5698	4000	
V	51	2	72	11.426	ppb	11.426	2.17	13469	2000	
Cr	52	2	72	7.955	ppb	7.955	2.77	12418	5000	
Mn	55	2	72	930.785	ppb	930.785	0.19	535390	10000	
Fe	56	1	72	8722.334	ppb	8722.334	0.52	27412745	10000	
(Fe)	57	2	72	8599.978	ppb	8599.978	0.51	210111	400000	
Co	59	2	72	5.083	ppb	5.083	0.88	9987	2000	
Ni	60	2	72	11.991	ppb	11.991	3.36	7038	5000	
Cu	63	2	72	13.981	ppb	13.981	2.24	22166	5000	
Zn	66	2	72	25.306	ppb	25.306	3.82	7642	5000	
As	75	2	72	14.894	ppb	14.894	3.23	3483	2000	
Se	78	1	72	0.885	ppb	0.885	38.31	129	2000	
Sr	88	2	72	2300.448	ppb	2300.448	0.94	1467515	4000	
Zr	90	2	72	2085.940	ppb	2085.940	3.51	6782	1000	
Mo	95	2	115	26.765	ppb	26.765	1.24	20260	2000	
Ag	107	2	115	0.043	ppb	0.043	10.31	157	100	
Cd	111	2	115	0.137	ppb	0.137	49.88	70	2000	
Sn	120	2	115	0.427	ppb	0.427	20.98	1403	2000	
Sb	121	2	115	0.646	ppb	0.646	9.24	763	1000	
Ba	137	2	115	91.391	ppb	91.391	2.77	28630	5000	
W	182	2	165	17.610	ppb	17.610	1.88	55790	100	
Tl	205	2	165	0.051	ppb	0.051	3.59	1110	2000	
Pb	208	2	165	10.837	ppb	10.837	2.26	99434	5000	
Th	232	2	193	2.967	ppb	2.967	3.40	35698	2000	
U	238	2	193	15.891	ppb	15.891	2.28	158644	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	199376	0.59	259861	76.72	60	120	
Sc (IS)	45	1	HMI H2	9075758	0.99	9102038	99.71	60	120	
Sc (IS)	45	2	HMI He	931265	0.59	903588	103.06	60	120	
Sc (IS)	45	3	No Gas	16805461	1.21	16459035	102.10	60	120	
Ge Internal standard	72	1	HMI H2	4820988	0.71	4919618	98.00	60	120	
Ge Internal standard	72	2	HMI He	1064234	0.38	1043503	101.99	60	120	
In Internal standard	115	2	HMI He	3602714	0.18	3551384	101.45	60	120	
Ho-165	165	2	HMI He	13682555	0.54	13518981	101.21	60	120	
Ir (IS)	193	2	HMI He	9439528	1.15	10147609	93.02	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	097_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:40:31-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	49.802	ppb	0.988	10217	50	99.6	90	110	
Na	23	2	45	52282.820	ppb	0.886	10721664	51000	102.5	90	110	
Mg	24	2	45	10531.146	ppb	0.834	992192	11000	95.7	90	110	
Al	27	2	45	950.622	ppb	1.791	26538	1000	95.1	90	110	
K	39	2	45	10442.744	ppb	0.458	714231	11000	94.9	90	110	
Ca	40	1	45	11407.602	ppb	1.003	17155688	11000	103.7	90	110	
Ti	47	2	45	46.466	ppb	3.879	1283	50	92.9	90	110	
V	51	2	72	49.299	ppb	2.003	49775	50	98.6	90	110	
Cr	52	2	72	48.116	ppb	1.350	63026	50	96.2	90	110	
Mn	55	2	72	48.048	ppb	0.911	28168	50	96.1	90	110	
Fe	56	1	72	1010.851	ppb	0.789	3285594	1000	101.1	90	110	
Co	59	2	72	47.582	ppb	0.572	94085	50	95.2	90	110	
Ni	60	2	72	47.386	ppb	3.221	26869	50	94.8	90	110	
Cu	63	2	72	48.264	ppb	1.687	73767	50	96.5	90	110	
Zn	66	2	72	48.726	ppb	1.411	14510	50	97.5	90	110	
As	75	2	72	47.978	ppb	0.837	11023	50	96.0	90	110	
Se	78	1	72	48.600	ppb	3.855	6700	50	97.2	90	110	
Sr	88	2	72	101.946	ppb	1.845	65907	100	101.9	90	110	
Zr	90	2	72	312.543	ppb	10.582	1570	50	625.1	90	110	>+\-10%
Mo	95	2	115	47.342	ppb	2.962	37308	50	94.7	90	110	
Ag	107	2	115	46.397	ppb	1.556	121957	50	92.8	90	110	
Cd	111	2	115	47.904	ppb	1.086	19416	50	95.8	90	110	
Sn	120	2	115	48.753	ppb	2.263	54092	50	97.5	90	110	
Sb	121	2	115	49.764	ppb	2.638	58592	50	99.5	90	110	
Ba	137	2	115	47.266	ppb	5.736	15475	50	94.5	90	110	
W	182	2	165	49.160	ppb	0.828	157252	50	98.3	90	110	
Tl	205	2	165	48.385	ppb	0.507	321243	50	96.8	90	110	
Pb	208	2	165	48.115	ppb	0.909	438167	50	96.2	90	110	
Th	232	2	193	49.252	ppb	0.875	498421	50	98.5	90	110	
U	238	2	193	48.618	ppb	1.016	516073	50	97.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	225284	1.55	259861	86.69	60	120	
Sc (IS)	45	1	HMI H2	9224817	0.27	9102038	101.35	60	120	
Sc (IS)	45	2	HMI He	924537	0.25	903588	102.32	60	120	
Sc (IS)	45	3	No Gas	16818331	2.85	16459035	102.18	60	120	
Ge Internal standard	72	1	HMI H2	4950405	0.30	4919618	100.63	60	120	
Ge Internal standard	72	2	HMI He	1077871	0.32	1043503	103.29	60	120	
In Internal standard	115	2	HMI He	3752923	1.63	3551384	105.67	60	120	
Ho-165	165	2	HMI He	14006180	0.61	13518981	103.60	60	120	
Ir (IS)	193	2	HMI He	10158101	0.30	10147609	100.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	098_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:44:05-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-13.919	ppb	-2.1	797922	10	
Be	9	1	6	-0.059	ppb	-1.9	20	0.5	
B	11	1	6	72.008	ppb	8.2	11331	0.5	>RL
Na	23	2	45	410.532	ppb	5.4	102924	25	>RL
Mg	24	2	45	9.467	ppb	22.9	1090	25	
Al	27	2	45	-0.263	ppb	-523.9	73	15	
K	39	2	45	-34.554	ppb	-51.5	40710	50	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.303	ppb	-31.1	2440	1	
Cr	52	2	72	-0.283	ppb	-85.1	2220	1	
Mn	55	2	72	0.313	ppb	26.9	367	0.5	
(Fe)	57	2	72	1.340	ppb	317.6	303	25	
Co	59	2	72	0.006	ppb	183.9	83	0.5	
Ni	60	2	72	-0.028	ppb	-713.4	423	1	
Cu	63	2	72	0.482	ppb	2.9	2234	1	
Zn	66	2	72	-0.269	ppb	-88.2	347	5	
As	75	2	72	-0.222	ppb	-41.0	103	1	
Se	78	1	72	0.156	ppb	48.0	32	1	
Sr	88	2	72	0.247	ppb	32.1	197	0.5	
Zr	90	2	72	2.199	ppb	1249.7	640	1	>RL
Mo	95	2	115	0.089	ppb	52.5	103	0.5	
Ag	107	2	115	0.001	ppb	1303.6	50	1	
Cd	111	2	115	-0.035	ppb	-41.4	3	0.5	
Sn	120	2	115	-0.072	ppb	-75.4	900	1	
Sb	121	2	115	0.164	ppb	46.2	223	0.6	
Ba	137	2	115	-0.115	ppb	-70.2	57	0.5	
W	182	2	165	0.144	ppb	42.7	1690	1	
Tl	205	2	165	-0.055	ppb	-5.5	437	0.1	
Pb	208	2	165	-0.109	ppb	-23.1	3020	0.5	
Th	232	2	193	0.413	ppb	12.6	13210	1	
U	238	2	193	0.003	ppb	572.3	3150	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	227751	1.17	259861	87.64	60	120	
Sc (IS)	45	1	HMI H2	8933069	1.00	9102038	98.14	60	120	
Sc (IS)	45	2	HMI He	908311	0.31	903588	100.52	60	120	
Sc (IS)	45	3	No Gas	16569684	0.89	16459035	100.67	60	120	
Ge Internal standard	72	1	HMI H2	4897684	1.19	4919618	99.55	60	120	
Ge Internal standard	72	2	HMI He	1072702	0.18	1043503	102.80	60	120	
In Internal standard	115	2	HMI He	3679862	0.95	3551384	103.62	60	120	
Ho-165	165	2	HMI He	14084593	0.66	13518981	104.18	60	120	
Ir (IS)	193	2	HMI He	10299988	0.14	10147609	101.50	60	120	

Sample Report

Sample Table

Sample Name	280-174955-C-13-A
Data File Name	099SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:47:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	1163.550	ppb	1163.550	0.43	9479398	50000	
Be	9	1	6	0.225	ppb	0.225	52.59	67	2000	
B	11	1	6	5693.295	ppb	5693.295	1.26	711606	2000	
Na	23	2	45	1352470.144	ppb	1352470.144	0.38	280213042	400000	
Mg	24	2	45	349449.511	ppb	349449.511	0.47	33316528	400000	
Al	27	2	45	2400.994	ppb	2400.994	0.41	67719	400000	
Si	28	2	45	2186.307	ppb	2186.307	0.63	421812	10000	
P	31	2	45	320.733	ppb	320.733	5.77	1089	10000	
K	39	2	45	127469.806	ppb	127469.806	0.45	8329602	400000	
Ca	40	1	45	240941.217	ppb	240941.217	1.42	344086648	400000	
Ti	47	2	45	128.812	ppb	128.812	3.42	3601	4000	
V	51	2	72	23.641	ppb	23.641	1.92	25287	2000	
Cr	52	2	72	4.040	ppb	4.040	0.95	7659	5000	
Mn	55	2	72	2366.583	ppb	2366.583	1.75	1377886	10000	
Fe	56	1	72	5509.802	ppb	5509.802	0.71	16978665	10000	
(Fe)	57	2	72	5409.812	ppb	5409.812	2.21	133905	400000	
Co	59	2	72	10.134	ppb	10.134	1.08	20090	2000	
Ni	60	2	72	24.037	ppb	24.037	6.92	13843	5000	
Cu	63	2	72	17.558	ppb	17.558	4.46	27787	5000	
Zn	66	2	72	17.416	ppb	17.416	3.07	5458	5000	
As	75	2	72	39.948	ppb	39.948	1.92	9203	2000	
Se	78	1	72	3.333	ppb	3.333	6.36	448	2000	
Sr	88	2	72	3613.421	ppb	3613.421	0.86	2333842	4000	
Zr	90	2	72	1814.400	ppb	1814.400	2.10	6055	1000	
Mo	95	2	115	39.631	ppb	39.631	3.66	30323	2000	
Ag	107	2	115	0.049	ppb	0.049	18.46	173	100	
Cd	111	2	115	0.440	ppb	0.440	23.54	190	2000	
Sn	120	2	115	-0.054	ppb	-0.054	-150.59	910	2000	
Sb	121	2	115	1.029	ppb	1.029	12.58	1210	1000	
Ba	137	2	115	80.055	ppb	80.055	2.54	25375	5000	
W	182	2	165	7.231	ppb	7.231	0.83	23873	100	
Tl	205	2	165	0.195	ppb	0.195	6.97	2064	2000	
Pb	208	2	165	7.823	ppb	7.823	1.47	73654	5000	
Th	232	2	193	2.070	ppb	2.070	3.72	27887	2000	
U	238	2	193	47.568	ppb	47.568	0.49	477348	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	193039	0.90	259861	74.29	60	120	
Sc (IS)	45	1	HMI H2	8783740	1.14	9102038	96.50	60	120	
Sc (IS)	45	2	HMI He	935813	0.96	903588	103.57	60	120	
Sc (IS)	45	3	No Gas	17298325	0.98	16459035	105.10	60	120	
Ge Internal standard	72	1	HMI H2	4724365	0.49	4919618	96.03	60	120	
Ge Internal standard	72	2	HMI He	1077550	1.01	1043503	103.26	60	120	
In Internal standard	115	2	HMI He	3643366	1.02	3551384	102.59	60	120	
Ho-165	165	2	HMI He	13831510	0.73	13518981	102.31	60	120	
Ir (IS)	193	2	HMI He	9602265	0.35	10147609	94.63	60	120	

Sample Report

Sample Table

Sample Name	280-174972-E-1-B
Data File Name	100SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:51:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	25.093	ppb	25.093	8.50	1100771	50000	
Be	9	1	6	-0.106	ppb	-0.106	-0.59	10	2000	
B	11	1	6	397.119	ppb	397.119	2.51	58068	2000	
Na	23	2	45	71643.785	ppb	71643.785	0.31	14880098	400000	
Mg	24	2	45	48076.464	ppb	48076.464	0.81	4589174	400000	
Al	27	2	45	3.206	ppb	3.206	65.13	173	400000	
Si	28	2	45	1485.488	ppb	1485.488	1.00	292610	10000	
P	31	2	45	61.078	ppb	61.078	4.61	311	10000	
K	39	2	45	7549.897	ppb	7549.897	0.53	535518	400000	
Ca	40	1	45	185932.034	ppb	185932.034	0.83	282729016	400000	
Ti	47	2	45	0.477	ppb	0.477	114.65	13	4000	
V	51	2	72	-0.237	ppb	-0.237	-75.09	2577	2000	
Cr	52	2	72	-0.090	ppb	-0.090	-192.27	2534	5000	
Mn	55	2	72	321.111	ppb	321.111	0.12	191761	10000	
Fe	56	1	72	2856.931	ppb	2856.931	0.80	9425640	10000	
(Fe)	57	2	72	2791.507	ppb	2791.507	1.93	70948	400000	
Co	59	2	72	1.574	ppb	1.574	1.85	3260	2000	
Ni	60	2	72	2.343	ppb	2.343	7.39	1790	5000	
Cu	63	2	72	3.123	ppb	3.123	4.76	6348	5000	
Zn	66	2	72	3.299	ppb	3.299	8.73	1413	5000	
As	75	2	72	24.662	ppb	24.662	3.02	5881	2000	
Se	78	1	72	2.221	ppb	2.221	28.39	323	2000	
Sr	88	2	72	598.282	ppb	598.282	0.90	396025	4000	
Zr	90	2	72	146.356	ppb	146.356	35.25	1100	1000	
Mo	95	2	115	0.574	ppb	0.574	10.50	483	2000	
Ag	107	2	115	-0.003	ppb	-0.003	-291.44	40	100	
Cd	111	2	115	-0.010	ppb	-0.010	-286.08	13	2000	
Sn	120	2	115	-0.209	ppb	-0.209	-20.65	763	2000	
Sb	121	2	115	0.133	ppb	0.133	40.45	190	1000	
Ba	137	2	115	670.568	ppb	670.568	0.62	216604	5000	
W	182	2	165	0.043	ppb	0.043	72.91	1390	100	
Tl	205	2	165	-0.080	ppb	-0.080	-15.21	277	2000	
Pb	208	2	165	-0.076	ppb	-0.076	-11.09	3380	5000	
Th	232	2	193	0.019	ppb	0.019	180.08	9160	2000	
U	238	2	193	2.446	ppb	2.446	3.98	29013	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	223289	1.27	259861	85.93	60	120	
Sc (IS)	45	1	HMI H2	9351928	0.67	9102038	102.75	60	120	
Sc (IS)	45	2	HMI He	936878	0.14	903588	103.68	60	120	
Sc (IS)	45	3	No Gas	17010889	1.50	16459035	103.35	60	120	
Ge Internal standard	72	1	HMI H2	5051016	0.31	4919618	102.67	60	120	
Ge Internal standard	72	2	HMI He	1104174	0.27	1043503	105.81	60	120	
In Internal standard	115	2	HMI He	3724981	0.21	3551384	104.89	60	120	
Ho-165	165	2	HMI He	14348071	1.24	13518981	106.13	60	120	
Ir (IS)	193	2	HMI He	10206742	0.57	10147609	100.58	60	120	

Sample Report

Sample Table

Sample Name	280-174885-A-5-E
Data File Name	101SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:54:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	59.805	ppb	59.805	3.98	1335446	50000	
Be	9	1	6	0.211	ppb	0.211	51.67	73	2000	
B	11	1	6	99.166	ppb	99.166	3.94	14894	2000	
Na	23	2	45	40988.807	ppb	40988.807	0.43	8336703	400000	
Mg	24	2	45	37018.788	ppb	37018.788	1.36	3456654	400000	
Al	27	2	45	364.717	ppb	364.717	1.73	10143	400000	
Si	28	2	45	1600.414	ppb	1600.414	0.23	307042	10000	
P	31	2	45	5.535	ppb	5.535	194.02	141	10000	
K	39	2	45	2861.946	ppb	2861.946	0.74	225445	400000	
Ca	40	1	45	57830.945	ppb	57830.945	0.61	84855512	400000	
Ti	47	2	45	0.122	ppb	0.122	173.21	3	4000	
V	51	2	72	-0.335	ppb	-0.335	-31.21	2454	2000	
Cr	52	2	72	0.380	ppb	0.380	39.89	3104	5000	
Mn	55	2	72	555.944	ppb	555.944	0.85	328154	10000	
Fe	56	1	72	127.424	ppb	127.424	0.91	433607	10000	
(Fe)	57	2	72	129.223	ppb	129.223	5.99	3511	400000	
Co	59	2	72	51.148	ppb	51.148	0.91	102441	2000	
Ni	60	2	72	270.211	ppb	270.211	1.07	153101	5000	
Cu	63	2	72	1.863	ppb	1.863	6.05	4367	5000	
Zn	66	2	72	642.280	ppb	642.280	1.44	188471	5000	
As	75	2	72	0.030	ppb	0.030	419.49	162	2000	
Se	78	1	72	1.319	ppb	1.319	10.60	191	2000	
Sr	88	2	72	177.167	ppb	177.167	1.78	115983	4000	
Zr	90	2	72	14.887	ppb	14.887	256.94	690	1000	
Mo	95	2	115	0.151	ppb	0.151	17.88	153	2000	
Ag	107	2	115	2.291	ppb	2.291	1.96	6051	100	
Cd	111	2	115	22.758	ppb	22.758	1.39	9206	2000	
Sn	120	2	115	-0.414	ppb	-0.414	-27.53	543	2000	
Sb	121	2	115	0.055	ppb	0.055	107.39	100	1000	
Ba	137	2	115	35.610	ppb	35.610	4.65	11641	5000	
W	182	2	165	-0.024	ppb	-0.024	-99.13	1163	100	
Tl	205	2	165	0.844	ppb	0.844	4.89	6488	2000	
Pb	208	2	165	0.448	ppb	0.448	10.95	8155	5000	
Th	232	2	193	0.038	ppb	0.038	127.14	9303	2000	
U	238	2	193	0.390	ppb	0.390	6.45	7185	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	221081	1.68	259861	85.08	60	120	
Sc (IS)	45	1	HMI H2	9020655	0.39	9102038	99.11	60	120	
Sc (IS)	45	2	HMI He	916474	0.44	903588	101.43	60	120	
Sc (IS)	45	3	No Gas	16809758	0.94	16459035	102.13	60	120	
Ge Internal standard	72	1	HMI H2	4909225	0.55	4919618	99.79	60	120	
Ge Internal standard	72	2	HMI He	1091825	0.41	1043503	104.63	60	120	
In Internal standard	115	2	HMI He	3741644	0.75	3551384	105.36	60	120	
Ho-165	165	2	HMI He	14223903	0.34	13518981	105.21	60	120	
Ir (IS)	193	2	HMI He	10155675	0.50	10147609	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-174885-A-5-F MS
Data File Name	102SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T15:58:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	97.316	ppb	97.316	1.44	1576807	50000	
Be	9	1	6	39.099	ppb	39.099	7.65	7755	2000	
B	11	1	6	71.895	ppb	71.895	1.41	10821	2000	
Na	23	2	45	42129.072	ppb	42129.072	0.87	8500095	400000	
Mg	24	2	45	37857.595	ppb	37857.595	0.57	3507072	400000	
Al	27	2	45	1124.664	ppb	1124.664	1.42	30862	400000	
Si	28	2	45	1627.179	ppb	1627.179	0.32	309422	10000	
P	31	2	45	18.242	ppb	18.242	47.06	177	10000	
K	39	2	45	3606.225	ppb	3606.225	1.14	270664	400000	
Ca	40	1	45	58869.411	ppb	58869.411	1.48	85874149	400000	
Ti	47	2	45	35.841	ppb	35.841	8.27	973	4000	
V	51	2	72	36.948	ppb	36.948	1.18	38171	2000	
Cr	52	2	72	37.684	ppb	37.684	2.50	50156	5000	
Mn	55	2	72	592.974	ppb	592.974	0.55	347155	10000	
Fe	56	1	72	916.388	ppb	916.388	1.82	2944144	10000	
(Fe)	57	2	72	892.170	ppb	892.170	0.74	22426	400000	
Co	59	2	72	87.847	ppb	87.847	0.51	174466	2000	
Ni	60	2	72	309.187	ppb	309.187	1.86	173698	5000	
Cu	63	2	72	39.099	ppb	39.099	2.24	60330	5000	
Zn	66	2	72	678.208	ppb	678.208	0.16	197384	5000	
As	75	2	72	36.924	ppb	36.924	1.38	8560	2000	
Se	78	1	72	36.980	ppb	36.980	2.80	5038	2000	
Sr	88	2	72	255.523	ppb	255.523	1.07	165917	4000	
Zr	90	2	72	176.599	ppb	176.599	38.45	1170	1000	
Mo	95	2	115	38.492	ppb	38.492	2.03	29972	2000	
Ag	107	2	115	38.778	ppb	38.778	1.29	100738	100	
Cd	111	2	115	62.366	ppb	62.366	0.70	24974	2000	
Sn	120	2	115	37.458	ppb	37.458	0.59	41301	2000	
Sb	121	2	115	37.530	ppb	37.530	1.82	43681	1000	
Ba	137	2	115	75.921	ppb	75.921	1.11	24497	5000	
W	182	2	165	-0.040	ppb	-0.040	-134.40	1110	100	
Tl	205	2	165	39.041	ppb	39.041	0.56	262402	2000	
Pb	208	2	165	38.494	ppb	38.494	1.07	355456	5000	
Th	232	2	193	38.448	ppb	38.448	0.25	389096	2000	
U	238	2	193	39.747	ppb	39.747	1.17	420358	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	217731	0.62	259861	83.79	60	120	
Sc (IS)	45	1	HMI H2	8969355	1.87	9102038	98.54	60	120	
Sc (IS)	45	2	HMI He	909233	0.37	903588	100.62	60	120	
Sc (IS)	45	3	No Gas	16532879	0.78	16459035	100.45	60	120	
Ge Internal standard	72	1	HMI H2	4889662	0.86	4919618	99.39	60	120	
Ge Internal standard	72	2	HMI He	1082993	0.40	1043503	103.78	60	120	
In Internal standard	115	2	HMI He	3708120	0.69	3551384	104.41	60	120	
Ho-165	165	2	HMI He	14170251	0.56	13518981	104.82	60	120	
Ir (IS)	193	2	HMI He	10107455	0.22	10147609	99.60	60	120	

Sample Report

Sample Table

Sample Name	280-174885-A-5-G MSD
Data File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:03:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	100.580	ppb	100.580	1.18	1599215	50000	
Be	9	1	6	38.072	ppb	38.072	3.48	7562	2000	
B	11	1	6	61.775	ppb	61.775	4.93	9396	2000	
Na	23	2	45	42800.998	ppb	42800.998	0.46	8655881	400000	
Mg	24	2	45	38634.396	ppb	38634.396	0.34	3587469	400000	
Al	27	2	45	1122.154	ppb	1122.154	1.68	30865	400000	
Si	28	2	45	1666.464	ppb	1666.464	0.49	317219	10000	
P	31	2	45	3.478	ppb	3.478	149.76	134	10000	
K	39	2	45	3698.098	ppb	3698.098	0.73	277121	400000	
Ca	40	1	45	60335.547	ppb	60335.547	1.17	86728702	400000	
Ti	47	2	45	38.704	ppb	38.704	12.18	1053	4000	
V	51	2	72	37.404	ppb	37.404	2.81	38418	2000	
Cr	52	2	72	37.775	ppb	37.775	1.85	50022	5000	
Mn	55	2	72	613.243	ppb	613.243	0.39	357230	10000	
Fe	56	1	72	915.959	ppb	915.959	2.34	2926897	10000	
(Fe)	57	2	72	895.463	ppb	895.463	0.43	22396	400000	
Co	59	2	72	89.214	ppb	89.214	0.93	176294	2000	
Ni	60	2	72	312.397	ppb	312.397	2.19	174625	5000	
Cu	63	2	72	39.535	ppb	39.535	1.87	60688	5000	
Zn	66	2	72	700.422	ppb	700.422	0.85	202818	5000	
As	75	2	72	37.004	ppb	37.004	1.83	8536	2000	
Se	78	1	72	37.528	ppb	37.528	2.35	5084	2000	
Sr	88	2	72	260.555	ppb	260.555	0.74	168344	4000	
Zr	90	2	72	93.679	ppb	93.679	58.49	917	1000	
Mo	95	2	115	37.340	ppb	37.340	3.37	29317	2000	
Ag	107	2	115	37.660	ppb	37.660	0.13	98653	100	
Cd	111	2	115	60.263	ppb	60.263	1.87	24333	2000	
Sn	120	2	115	37.197	ppb	37.197	3.00	41371	2000	
Sb	121	2	115	38.540	ppb	38.540	2.41	45229	1000	
Ba	137	2	115	76.769	ppb	76.769	2.66	24977	5000	
W	182	2	165	-0.061	ppb	-0.061	-43.12	1037	100	
Tl	205	2	165	39.162	ppb	39.162	0.82	261938	2000	
Pb	208	2	165	38.635	ppb	38.635	1.23	355043	5000	
Th	232	2	193	38.580	ppb	38.580	0.88	390438	2000	
U	238	2	193	40.134	ppb	40.134	0.35	424470	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	217923	2.38	259861	83.86	60	120	
Sc (IS)	45	1	HMI H2	8837852	1.15	9102038	97.10	60	120	
Sc (IS)	45	2	HMI He	911372	0.52	903588	100.86	60	120	
Sc (IS)	45	3	No Gas	16528085	2.04	16459035	100.42	60	120	
Ge Internal standard	72	1	HMI H2	4862511	0.51	4919618	98.84	60	120	
Ge Internal standard	72	2	HMI He	1077606	0.51	1043503	103.27	60	120	
In Internal standard	115	2	HMI He	3739104	0.85	3551384	105.29	60	120	
Ho-165	165	2	HMI He	14102699	1.82	13518981	104.32	60	120	
Ir (IS)	193	2	HMI He	10108687	1.13	10147609	99.62	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-1-B
Data File Name	104SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:07:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-6.547	ppb	-6.547	-48.65	854623	50000	
Be	9	1	6	-0.021	ppb	-0.021	-365.73	27	2000	
B	11	1	6	36.908	ppb	36.908	3.32	5918	2000	
Na	23	2	45	6321.042	ppb	6321.042	2.21	1290518	400000	
Mg	24	2	45	14543.006	ppb	14543.006	1.06	1345254	400000	
Al	27	2	45	3.039	ppb	3.039	46.45	163	400000	
Si	28	2	45	2464.348	ppb	2464.348	0.72	459056	10000	
P	31	2	45	11.461	ppb	11.461	29.35	157	10000	
K	39	2	45	4636.160	ppb	4636.160	0.99	335167	400000	
Ca	40	1	45	40373.889	ppb	40373.889	0.53	58106101	400000	
Ti	47	2	45	0.489	ppb	0.489	173.21	13	4000	
V	51	2	72	20.448	ppb	20.448	3.33	22112	2000	
Cr	52	2	72	196.790	ppb	196.790	1.05	248281	5000	
Mn	55	2	72	0.613	ppb	0.613	5.95	540	10000	
Fe	56	1	72	4.670	ppb	4.670	0.77	40620	10000	
(Fe)	57	2	72	6.493	ppb	6.493	30.17	430	400000	
Co	59	2	72	0.059	ppb	0.059	56.80	187	2000	
Ni	60	2	72	0.847	ppb	0.847	42.30	907	5000	
Cu	63	2	72	11.434	ppb	11.434	1.45	18524	5000	
Zn	66	2	72	12.871	ppb	12.871	8.72	4124	5000	
As	75	2	72	2.905	ppb	2.905	4.02	807	2000	
Se	78	1	72	0.821	ppb	0.821	24.58	121	2000	
Sr	88	2	72	292.379	ppb	292.379	1.09	187807	4000	
Zr	90	2	72	4.501	ppb	4.501	642.20	647	1000	
Mo	95	2	115	0.604	ppb	0.604	9.65	507	2000	
Ag	107	2	115	-0.003	ppb	-0.003	-110.09	40	100	
Cd	111	2	115	0.031	ppb	0.031	77.06	30	2000	
Sn	120	2	115	-0.201	ppb	-0.201	-46.49	770	2000	
Sb	121	2	115	0.216	ppb	0.216	39.22	287	1000	
Ba	137	2	115	78.666	ppb	78.666	1.22	25448	5000	
W	182	2	165	0.050	ppb	0.050	87.86	1390	100	
Tl	205	2	165	-0.045	ppb	-0.045	-27.84	503	2000	
Pb	208	2	165	-0.014	ppb	-0.014	-142.77	3890	5000	
Th	232	2	193	0.510	ppb	0.510	8.17	13951	2000	
U	238	2	193	2.310	ppb	2.310	3.24	27350	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	218728	0.60	259861	84.17	60	120	
Sc (IS)	45	1	HMI H2	8845804	0.80	9102038	97.18	60	120	
Sc (IS)	45	2	HMI He	907769	0.60	903588	100.46	60	120	
Sc (IS)	45	3	No Gas	16661401	1.17	16459035	101.23	60	120	
Ge Internal standard	72	1	HMI H2	4851065	0.77	4919618	98.61	60	120	
Ge Internal standard	72	2	HMI He	1071459	1.08	1043503	102.68	60	120	
In Internal standard	115	2	HMI He	3718327	0.95	3551384	104.70	60	120	
Ho-165	165	2	HMI He	14107440	0.26	13518981	104.35	60	120	
Ir (IS)	193	2	HMI He	10124343	0.55	10147609	99.77	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-2-B
Data File Name	105SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:11:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-5.301	ppb	-5.301	-34.30	871544	50000	
Be	9	1	6	-0.073	ppb	-0.073	-104.14	17	2000	
B	11	1	6	31.625	ppb	31.625	1.63	5248	2000	
Na	23	2	45	5976.244	ppb	5976.244	1.18	1221430	400000	
Mg	24	2	45	13633.473	ppb	13633.473	1.27	1261175	400000	
Al	27	2	45	1.691	ppb	1.691	69.16	127	400000	
Si	28	2	45	2461.639	ppb	2461.639	0.91	458590	10000	
P	31	2	45	12.842	ppb	12.842	19.66	161	10000	
K	39	2	45	4343.815	ppb	4343.815	1.82	316762	400000	
Ca	40	1	45	36886.080	ppb	36886.080	1.66	53239404	400000	
Ti	47	2	45	0.123	ppb	0.123	173.21	3	4000	
V	51	2	72	21.041	ppb	21.041	3.32	22913	2000	
Cr	52	2	72	74.735	ppb	74.735	0.99	96883	5000	
Mn	55	2	72	0.438	ppb	0.438	18.30	443	10000	
Fe	56	1	72	0.274	ppb	0.274	52.36	27043	10000	
(Fe)	57	2	72	1.491	ppb	1.491	24.49	310	400000	
Co	59	2	72	0.016	ppb	0.016	148.34	103	2000	
Ni	60	2	72	0.447	ppb	0.447	29.86	693	5000	
Cu	63	2	72	4.714	ppb	4.714	0.85	8616	5000	
Zn	66	2	72	7.527	ppb	7.527	10.02	2614	5000	
As	75	2	72	2.785	ppb	2.785	8.42	788	2000	
Se	78	1	72	0.343	ppb	0.343	18.75	57	2000	
Sr	88	2	72	270.521	ppb	270.521	1.19	175590	4000	
Zr	90	2	72	35.603	ppb	35.603	139.18	747	1000	
Mo	95	2	115	0.443	ppb	0.443	18.33	383	2000	
Ag	107	2	115	-0.011	ppb	-0.011	-58.54	20	100	
Cd	111	2	115	-0.027	ppb	-0.027	-106.38	7	2000	
Sn	120	2	115	-0.244	ppb	-0.244	-16.25	730	2000	
Sb	121	2	115	0.072	ppb	0.072	46.87	120	1000	
Ba	137	2	115	76.711	ppb	76.711	1.46	25021	5000	
W	182	2	165	0.038	ppb	0.038	227.10	1353	100	
Tl	205	2	165	-0.078	ppb	-0.078	-9.60	287	2000	
Pb	208	2	165	-0.059	ppb	-0.059	-18.02	3484	5000	
Th	232	2	193	0.076	ppb	0.076	68.28	9664	2000	
U	238	2	193	2.367	ppb	2.367	1.64	28024	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	221961	0.86	259861	85.42	60	120	
Sc (IS)	45	1	HMI H2	8870781	0.35	9102038	97.46	60	120	
Sc (IS)	45	2	HMI He	907836	0.20	903588	100.47	60	120	
Sc (IS)	45	3	No Gas	16820461	0.88	16459035	102.20	60	120	
Ge Internal standard	72	1	HMI H2	4907535	0.95	4919618	99.75	60	120	
Ge Internal standard	72	2	HMI He	1082609	0.61	1043503	103.75	60	120	
In Internal standard	115	2	HMI He	3748627	0.23	3551384	105.55	60	120	
Ho-165	165	2	HMI He	14117504	0.50	13518981	104.43	60	120	
Ir (IS)	193	2	HMI He	10147429	0.89	10147609	100.00	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-3-B
Data File Name	106SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:14:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-3.701	ppb	-3.701	-43.99	885860	50000	
Be	9	1	6	-0.073	ppb	-0.073	-194.00	17	2000	
B	11	1	6	31.155	ppb	31.155	7.86	5244	2000	
Na	23	2	45	6321.188	ppb	6321.188	0.85	1299517	400000	
Mg	24	2	45	13240.742	ppb	13240.742	0.88	1233174	400000	
Al	27	2	45	6.758	ppb	6.758	41.02	267	400000	
Si	28	2	45	2497.720	ppb	2497.720	0.71	468215	10000	
P	31	2	45	16.573	ppb	16.573	68.37	173	10000	
K	39	2	45	4296.865	ppb	4296.865	0.58	315934	400000	
Ca	40	1	45	36120.927	ppb	36120.927	0.59	53119386	400000	
Ti	47	2	45	0.368	ppb	0.368	173.21	10	4000	
V	51	2	72	19.387	ppb	19.387	3.18	21504	2000	
Cr	52	2	72	79.326	ppb	79.326	1.12	103525	5000	
Mn	55	2	72	1.818	ppb	1.818	12.90	1260	10000	
Fe	56	1	72	12.528	ppb	12.528	4.67	66135	10000	
(Fe)	57	2	72	11.876	ppb	11.876	58.86	573	400000	
Co	59	2	72	0.050	ppb	0.050	68.81	173	2000	
Ni	60	2	72	1.100	ppb	1.100	21.37	1067	5000	
Cu	63	2	72	57.802	ppb	57.802	0.84	89159	5000	
Zn	66	2	72	54.260	ppb	54.260	6.37	16312	5000	
As	75	2	72	3.409	ppb	3.409	3.89	937	2000	
Se	78	1	72	0.402	ppb	0.402	44.35	65	2000	
Sr	88	2	72	283.151	ppb	283.151	0.24	185307	4000	
Zr	90	2	72	-2.461	ppb	-2.461	-1627.27	637	1000	
Mo	95	2	115	0.779	ppb	0.779	7.50	650	2000	
Ag	107	2	115	-0.010	ppb	-0.010	-59.54	23	100	
Cd	111	2	115	-0.035	ppb	-0.035	-40.22	3	2000	
Sn	120	2	115	-0.280	ppb	-0.280	-1.76	693	2000	
Sb	121	2	115	0.027	ppb	0.027	64.21	67	1000	
Ba	137	2	115	100.014	ppb	100.014	1.49	32678	5000	
W	182	2	165	0.011	ppb	0.011	318.80	1277	100	
Tl	205	2	165	-0.098	ppb	-0.098	-5.02	153	2000	
Pb	208	2	165	0.956	ppb	0.956	8.76	12806	5000	
Th	232	2	193	0.033	ppb	0.033	248.11	9327	2000	
U	238	2	193	1.907	ppb	1.907	2.41	23390	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	224712	0.78	259861	86.47	60	120	
Sc (IS)	45	1	HMI H2	9037914	0.63	9102038	99.30	60	120	
Sc (IS)	45	2	HMI He	914009	0.46	903588	101.15	60	120	
Sc (IS)	45	3	No Gas	16874619	1.42	16459035	102.52	60	120	
Ge Internal standard	72	1	HMI H2	4901801	0.33	4919618	99.64	60	120	
Ge Internal standard	72	2	HMI He	1091582	0.79	1043503	104.61	60	120	
In Internal standard	115	2	HMI He	3758880	1.04	3551384	105.84	60	120	
Ho-165	165	2	HMI He	14214650	0.56	13518981	105.15	60	120	
Ir (IS)	193	2	HMI He	10239707	0.90	10147609	100.91	60	120	

Sample Report

Sample Table

Sample Name	280-174957-A-2-A
Data File Name	107SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:18:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	20.099	ppb	20.099	8.28	1087023	50000	
Be	9	1	6	0.028	ppb	0.028	278.40	37	2000	
B	11	1	6	330.282	ppb	330.282	2.26	47884	2000	
Na	23	2	45	100348.519	ppb	100348.519	0.35	20808056	400000	
Mg	24	2	45	72994.377	ppb	72994.377	0.54	6958882	400000	
Al	27	2	45	1.911	ppb	1.911	60.16	137	400000	
Si	28	2	45	1419.516	ppb	1419.516	0.93	280061	10000	
P	31	2	45	15.830	ppb	15.830	63.91	175	10000	
K	39	2	45	4783.545	ppb	4783.545	0.43	355073	400000	
Ca	40	1	45	218613.511	ppb	218613.511	0.39	319622849	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.201	ppb	-0.201	-92.41	2607	2000	
Cr	52	2	72	-0.189	ppb	-0.189	-47.57	2400	5000	
Mn	55	2	72	1972.701	ppb	1972.701	3.57	1174437	10000	
Fe	56	1	72	23.542	ppb	23.542	1.30	100899	10000	
(Fe)	57	2	72	36.497	ppb	36.497	16.86	1200	400000	
Co	59	2	72	2.836	ppb	2.836	2.54	5801	2000	
Ni	60	2	72	15.089	ppb	15.089	4.19	9050	5000	
Cu	63	2	72	3.143	ppb	3.143	11.73	6365	5000	
Zn	66	2	72	9.258	ppb	9.258	2.90	3170	5000	
As	75	2	72	0.119	ppb	0.119	32.91	184	2000	
Se	78	1	72	0.276	ppb	0.276	56.99	48	2000	
Sr	88	2	72	773.141	ppb	773.141	0.97	510573	4000	
Zr	90	2	72	84.141	ppb	84.141	64.69	907	1000	
Mo	95	2	115	1.398	ppb	1.398	27.81	1113	2000	
Ag	107	2	115	-0.005	ppb	-0.005	-101.15	37	100	
Cd	111	2	115	0.291	ppb	0.291	41.79	133	2000	
Sn	120	2	115	-0.280	ppb	-0.280	-36.68	680	2000	
Sb	121	2	115	0.201	ppb	0.201	34.32	267	1000	
Ba	137	2	115	423.103	ppb	423.103	0.62	135317	5000	
W	182	2	165	0.013	ppb	0.013	231.89	1290	100	
Tl	205	2	165	0.056	ppb	0.056	19.25	1197	2000	
Pb	208	2	165	-0.188	ppb	-0.188	-15.25	2337	5000	
Th	232	2	193	-0.007	ppb	-0.007	-425.53	8950	2000	
U	238	2	193	3.778	ppb	3.778	2.98	43409	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	220810	0.36	259861	84.97	60	120	
Sc (IS)	45	1	HMI H2	8991837	0.51	9102038	98.79	60	120	
Sc (IS)	45	2	HMI He	935723	0.45	903588	103.56	60	120	
Sc (IS)	45	3	No Gas	17365192	0.97	16459035	105.51	60	120	
Ge Internal standard	72	1	HMI H2	4882823	0.41	4919618	99.25	60	120	
Ge Internal standard	72	2	HMI He	1101604	0.69	1043503	105.57	60	120	
In Internal standard	115	2	HMI He	3687010	1.10	3551384	103.82	60	120	
Ho-165	165	2	HMI He	14288299	0.44	13518981	105.69	60	120	
Ir (IS)	193	2	HMI He	10267375	0.68	10147609	101.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	108_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:21:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	46.441	ppb	2.343	9656	50	92.9	90	110	
Na	23	2	45	51420.499	ppb	0.533	10559921	51000	100.8	90	110	
Mg	24	2	45	10421.470	ppb	1.101	983197	11000	94.7	90	110	
Al	27	2	45	969.137	ppb	2.891	27089	1000	96.9	90	110	
K	39	2	45	10445.838	ppb	1.141	715410	11000	95.0	90	110	
Ca	40	1	45	11305.906	ppb	0.091	16864536	11000	102.8	90	110	
Ti	47	2	45	44.958	ppb	1.766	1243	50	89.9	90	110	>+\-10%
V	51	2	72	48.006	ppb	0.612	48946	50	96.0	90	110	
Cr	52	2	72	48.009	ppb	2.064	63417	50	96.0	90	110	
Mn	55	2	72	49.193	ppb	1.051	29076	50	98.4	90	110	
Fe	56	1	72	1003.887	ppb	1.380	3276694	1000	100.4	90	110	
Co	59	2	72	48.401	ppb	0.220	96505	50	96.8	90	110	
Ni	60	2	72	47.426	ppb	2.996	27116	50	94.9	90	110	
Cu	63	2	72	48.061	ppb	0.602	74075	50	96.1	90	110	
Zn	66	2	72	49.295	ppb	3.379	14797	50	98.6	90	110	
As	75	2	72	48.632	ppb	1.054	11265	50	97.3	90	110	
Se	78	1	72	47.663	ppb	4.393	6596	50	95.3	90	110	
Sr	88	2	72	98.560	ppb	2.267	64251	100	98.6	90	110	
Zr	90	2	72	116.686	ppb	20.110	993	50	233.4	90	110	>+\-10%
Mo	95	2	115	48.364	ppb	0.870	38122	50	96.7	90	110	
Ag	107	2	115	47.283	ppb	1.981	124358	50	94.6	90	110	
Cd	111	2	115	49.204	ppb	1.679	19953	50	98.4	90	110	
Sn	120	2	115	48.818	ppb	0.802	54197	50	97.6	90	110	
Sb	121	2	115	49.100	ppb	2.382	57842	50	98.2	90	110	
Ba	137	2	115	52.123	ppb	3.972	17057	50	104.2	90	110	
W	182	2	165	48.914	ppb	0.679	159349	50	97.8	90	110	
Tl	205	2	165	48.161	ppb	0.170	325648	50	96.3	90	110	
Pb	208	2	165	48.139	ppb	0.841	446466	50	96.3	90	110	
Th	232	2	193	48.879	ppb	0.628	503017	50	97.8	90	110	
U	238	2	193	48.790	ppb	0.222	526575	50	97.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	228301	0.54	259861	87.85	60	120	
Sc (IS)	45	1	HMI H2	9149636	0.32	9102038	100.52	60	120	
Sc (IS)	45	2	HMI He	925869	1.04	903588	102.47	60	120	
Sc (IS)	45	3	No Gas	16744789	1.07	16459035	101.74	60	120	
Ge Internal standard	72	1	HMI H2	4971385	1.29	4919618	101.05	60	120	
Ge Internal standard	72	2	HMI He	1086897	0.08	1043503	104.16	60	120	
In Internal standard	115	2	HMI He	3754401	0.72	3551384	105.72	60	120	
Ho-165	165	2	HMI He	14263955	0.23	13518981	105.51	60	120	
Ir (IS)	193	2	HMI He	10328698	0.75	10147609	101.78	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	109_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:25:23-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-15.497	ppb	-5.4	811009	10	
Be	9	1	6	-0.046	ppb	-259.2	23	0.5	
B	11	1	6	40.377	ppb	3.1	6848	0.5	>RL
Na	23	2	45	89.308	ppb	8.2	39182	25	>RL
Mg	24	2	45	6.813	ppb	9.4	863	25	
Al	27	2	45	-0.678	ppb	-109.6	63	15	
K	39	2	45	-38.704	ppb	-29.6	41348	50	
Ti	47	2	45	0.121	ppb	173.2	3	0.5	
V	51	2	72	-0.832	ppb	-9.4	1984	1	
Cr	52	2	72	-0.255	ppb	-22.0	2307	1	
Mn	55	2	72	0.495	ppb	12.1	483	0.5	
(Fe)	57	2	72	-1.474	ppb	-183.3	240	25	
Co	59	2	72	0.035	ppb	108.3	143	0.5	
Ni	60	2	72	-0.191	ppb	-84.0	340	1	
Cu	63	2	72	0.125	ppb	75.7	1740	1	
Zn	66	2	72	-0.047	ppb	-288.4	420	5	
As	75	2	72	-0.283	ppb	-3.5	91	1	
Se	78	1	72	-0.001	ppb	-5074.9	11	1	
Sr	88	2	72	0.235	ppb	59.4	193	0.5	
Zr	90	2	72	-8.083	ppb	-222.2	623	1	
Mo	95	2	115	0.090	ppb	56.4	107	0.5	
Ag	107	2	115	0.019	ppb	70.5	100	1	
Cd	111	2	115	-0.027	ppb	-53.3	7	0.5	
Sn	120	2	115	-0.011	ppb	-561.8	987	1	
Sb	121	2	115	0.151	ppb	36.1	213	0.6	
Ba	137	2	115	0.004	ppb	3205.3	97	0.5	
W	182	2	165	0.010	ppb	498.6	1280	1	
Tl	205	2	165	-0.047	ppb	-9.6	503	0.1	
Pb	208	2	165	-0.159	ppb	-14.6	2610	0.5	
Th	232	2	193	0.312	ppb	12.8	12573	1	
U	238	2	193	0.016	ppb	38.5	3391	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	233697	0.61	259861	89.93	60	120	
Sc (IS)	45	1	HMI H2	9112047	1.08	9102038	100.11	60	120	
Sc (IS)	45	2	HMI He	928520	0.45	903588	102.76	60	120	
Sc (IS)	45	3	No Gas	17079984	1.18	16459035	103.77	60	120	
Ge Internal standard	72	1	HMI H2	4979173	1.28	4919618	101.21	60	120	
Ge Internal standard	72	2	HMI He	1097534	1.02	1043503	105.18	60	120	
In Internal standard	115	2	HMI He	3761730	0.84	3551384	105.92	60	120	
Ho-165	165	2	HMI He	14306701	0.53	13518981	105.83	60	120	
Ir (IS)	193	2	HMI He	10621697	0.42	10147609	104.67	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-12-B
Data File Name	110SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:29:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-9.637	ppb	-9.637	-21.63	878090	50000	
Be	9	1	6	0.035	ppb	0.035	720.70	40	2000	
B	11	1	6	31.417	ppb	31.417	4.03	5398	2000	
Na	23	2	45	11115.096	ppb	11115.096	1.73	2329689	400000	
Mg	24	2	45	6905.444	ppb	6905.444	0.75	660314	400000	
Al	27	2	45	10.624	ppb	10.624	15.16	383	400000	
Si	28	2	45	1498.713	ppb	1498.713	0.72	295509	10000	
P	31	2	45	32.109	ppb	32.109	3.77	224	10000	
K	39	2	45	4516.623	ppb	4516.623	0.55	338640	400000	
Ca	40	1	45	26038.212	ppb	26038.212	0.58	38560980	400000	
Ti	47	2	45	2.147	ppb	2.147	60.51	60	4000	
V	51	2	72	31.636	ppb	31.636	4.09	34383	2000	
Cr	52	2	72	7.854	ppb	7.854	5.09	13006	5000	
Mn	55	2	72	2.019	ppb	2.019	8.64	1423	10000	
Fe	56	1	72	83.482	ppb	83.482	1.99	299367	10000	
(Fe)	57	2	72	82.433	ppb	82.433	11.10	2410	400000	
Co	59	2	72	0.075	ppb	0.075	24.84	230	2000	
Ni	60	2	72	4.576	ppb	4.576	6.64	3127	5000	
Cu	63	2	72	0.487	ppb	0.487	49.33	2350	5000	
Zn	66	2	72	1.559	ppb	1.559	58.43	917	5000	
As	75	2	72	8.735	ppb	8.735	2.97	2228	2000	
Se	78	1	72	0.715	ppb	0.715	26.68	111	2000	
Sr	88	2	72	123.284	ppb	123.284	0.97	83239	4000	
Zr	90	2	72	-0.561	ppb	-0.561	-4590.00	663	1000	
Mo	95	2	115	2.049	ppb	2.049	6.82	1674	2000	
Ag	107	2	115	0.010	ppb	0.010	145.19	77	100	
Cd	111	2	115	-0.002	ppb	-0.002	-2121.63	17	2000	
Sn	120	2	115	-0.247	ppb	-0.247	-46.18	740	2000	
Sb	121	2	115	0.199	ppb	0.199	34.92	273	1000	
Ba	137	2	115	19.047	ppb	19.047	1.02	6388	5000	
W	182	2	165	0.701	ppb	0.701	13.37	3587	100	
Tl	205	2	165	-0.085	ppb	-0.085	-13.49	250	2000	
Pb	208	2	165	-0.117	ppb	-0.117	-18.54	3050	5000	
Th	232	2	193	0.056	ppb	0.056	36.72	9884	2000	
U	238	2	193	1.782	ppb	1.782	1.33	22799	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	229674	0.91	259861	88.38	60	120	
Sc (IS)	45	1	HMI H2	9098459	0.71	9102038	99.96	60	120	
Sc (IS)	45	2	HMI He	938283	0.74	903588	103.84	60	120	
Sc (IS)	45	3	No Gas	17571055	1.27	16459035	106.76	60	120	
Ge Internal standard	72	1	HMI H2	5014542	0.64	4919618	101.93	60	120	
Ge Internal standard	72	2	HMI He	1125846	0.99	1043503	107.89	60	120	
In Internal standard	115	2	HMI He	3810595	0.78	3551384	107.30	60	120	
Ho-165	165	2	HMI He	14572532	1.43	13518981	107.79	60	120	
Ir (IS)	193	2	HMI He	10585572	1.55	10147609	104.32	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-12-C MS
Data File Name	111SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:32:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	27.390	ppb	27.390	13.72	1130935	50000	
Be	9	1	6	38.871	ppb	38.871	4.79	8222	2000	
B	11	1	6	25.891	ppb	25.891	7.29	4627	2000	
Na	23	2	45	11826.900	ppb	11826.900	1.49	2476597	400000	
Mg	24	2	45	7573.429	ppb	7573.429	0.46	723941	400000	
Al	27	2	45	768.876	ppb	768.876	0.94	21791	400000	
Si	28	2	45	1493.607	ppb	1493.607	0.35	294458	10000	
P	31	2	45	27.875	ppb	27.875	36.32	211	10000	
K	39	2	45	5166.554	ppb	5166.554	0.16	380870	400000	
Ca	40	1	45	26678.391	ppb	26678.391	0.35	39923126	400000	
Ti	47	2	45	34.496	ppb	34.496	12.75	967	4000	
V	51	2	72	69.920	ppb	69.920	3.05	72019	2000	
Cr	52	2	72	46.427	ppb	46.427	0.39	63170	5000	
Mn	55	2	72	40.676	ppb	40.676	0.90	24763	10000	
Fe	56	1	72	917.462	ppb	917.462	1.55	3036019	10000	
(Fe)	57	2	72	877.955	ppb	877.955	3.06	22783	400000	
Co	59	2	72	37.993	ppb	37.993	1.26	77930	2000	
Ni	60	2	72	41.495	ppb	41.495	5.51	24465	5000	
Cu	63	2	72	39.316	ppb	39.316	0.21	62619	5000	
Zn	66	2	72	41.380	ppb	41.380	1.95	12849	5000	
As	75	2	72	46.998	ppb	46.998	1.25	11203	2000	
Se	78	1	72	39.624	ppb	39.624	5.16	5560	2000	
Sr	88	2	72	200.087	ppb	200.087	1.77	134114	4000	
Zr	90	2	72	54.788	ppb	54.788	6.47	830	1000	
Mo	95	2	115	40.399	ppb	40.399	1.77	32236	2000	
Ag	107	2	115	38.771	ppb	38.771	0.57	103217	100	
Cd	111	2	115	38.821	ppb	38.821	2.83	15938	2000	
Sn	120	2	115	38.487	ppb	38.487	2.39	43461	2000	
Sb	121	2	115	38.693	ppb	38.693	0.61	46148	1000	
Ba	137	2	115	59.211	ppb	59.211	2.62	19600	5000	
W	182	2	165	0.670	ppb	0.670	12.04	3464	100	
Tl	205	2	165	39.023	ppb	39.023	1.44	268221	2000	
Pb	208	2	165	38.783	ppb	38.783	0.95	366219	5000	
Th	232	2	193	38.506	ppb	38.506	2.42	405700	2000	
U	238	2	193	41.189	ppb	41.189	1.76	453424	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	232041	1.40	259861	89.29	60	120	
Sc (IS)	45	1	HMI H2	9193951	1.01	9102038	101.01	60	120	
Sc (IS)	45	2	HMI He	937960	0.86	903588	103.80	60	120	
Sc (IS)	45	3	No Gas	17216830	0.45	16459035	104.60	60	120	
Ge Internal standard	72	1	HMI H2	5035565	0.81	4919618	102.36	60	120	
Ge Internal standard	72	2	HMI He	1117987	0.94	1043503	107.14	60	120	
In Internal standard	115	2	HMI He	3800055	0.50	3551384	107.00	60	120	
Ho-165	165	2	HMI He	14491071	0.36	13518981	107.19	60	120	
Ir (IS)	193	2	HMI He	10524049	0.60	10147609	103.71	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-12-D MSD
Data File Name	112SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:36:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	27.487	ppb	27.487	2.20	1143909	50000	
Be	9	1	6	36.458	ppb	36.458	5.07	7785	2000	
B	11	1	6	26.625	ppb	26.625	6.79	4778	2000	
Na	23	2	45	11729.370	ppb	11729.370	0.73	2455640	400000	
Mg	24	2	45	7517.309	ppb	7517.309	0.31	718288	400000	
Al	27	2	45	751.201	ppb	751.201	4.48	21284	400000	
Si	28	2	45	1472.538	ppb	1472.538	1.71	290463	10000	
P	31	2	45	25.495	ppb	25.495	5.26	204	10000	
K	39	2	45	5130.855	ppb	5130.855	0.33	378394	400000	
Ca	40	1	45	25896.075	ppb	25896.075	0.45	39175832	400000	
Ti	47	2	45	37.489	ppb	37.489	10.04	1050	4000	
V	51	2	72	69.594	ppb	69.594	2.71	72223	2000	
Cr	52	2	72	47.343	ppb	47.343	1.94	64826	5000	
Mn	55	2	72	39.671	ppb	39.671	0.89	24325	10000	
Fe	56	1	72	921.204	ppb	921.204	0.18	3114962	10000	
(Fe)	57	2	72	877.612	ppb	877.612	5.48	22947	400000	
Co	59	2	72	37.680	ppb	37.680	1.00	77842	2000	
Ni	60	2	72	40.183	ppb	40.183	1.12	23868	5000	
Cu	63	2	72	38.855	ppb	38.855	1.45	62344	5000	
Zn	66	2	72	40.665	ppb	40.665	6.48	12729	5000	
As	75	2	72	46.322	ppb	46.322	1.71	11121	2000	
Se	78	1	72	37.610	ppb	37.610	5.31	5392	2000	
Sr	88	2	72	196.356	ppb	196.356	0.95	132555	4000	
Zr	90	2	72	30.690	ppb	30.690	195.50	760	1000	
Mo	95	2	115	40.076	ppb	40.076	3.42	31926	2000	
Ag	107	2	115	38.616	ppb	38.616	1.88	102630	100	
Cd	111	2	115	37.891	ppb	37.891	3.65	15531	2000	
Sn	120	2	115	37.342	ppb	37.342	2.45	42117	2000	
Sb	121	2	115	38.071	ppb	38.071	1.88	45325	1000	
Ba	137	2	115	59.220	ppb	59.220	4.92	19566	5000	
W	182	2	165	0.731	ppb	0.731	8.85	3671	100	
Tl	205	2	165	38.630	ppb	38.630	1.62	266054	2000	
Pb	208	2	165	38.415	ppb	38.415	1.09	363500	5000	
Th	232	2	193	38.736	ppb	38.736	1.27	409371	2000	
U	238	2	193	40.416	ppb	40.416	1.35	446386	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	234189	0.91	259861	90.12	60	120	
Sc (IS)	45	1	HMI H2	9294187	0.62	9102038	102.11	60	120	
Sc (IS)	45	2	HMI He	937598	1.05	903588	103.76	60	120	
Sc (IS)	45	3	No Gas	17402210	2.47	16459035	105.73	60	120	
Ge Internal standard	72	1	HMI H2	5146044	0.27	4919618	104.60	60	120	
Ge Internal standard	72	2	HMI He	1125863	1.33	1043503	107.89	60	120	
In Internal standard	115	2	HMI He	3793196	1.03	3551384	106.81	60	120	
Ho-165	165	2	HMI He	14519999	0.51	13518981	107.40	60	120	
Ir (IS)	193	2	HMI He	10557000	0.89	10147609	104.03	60	120	

Sample Report

Sample Table

Sample Name	280-174957-A-3-A
Data File Name	113SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:39:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	15.646	ppb	15.646	5.21	1091995	50000	
Be	9	1	6	0.128	ppb	0.128	73.84	60	2000	
B	11	1	6	300.150	ppb	300.150	1.48	46005	2000	
Na	23	2	45	95119.278	ppb	95119.278	1.65	20295280	400000	
Mg	24	2	45	68591.220	ppb	68591.220	1.27	6728508	400000	
Al	27	2	45	1.438	ppb	1.438	87.11	127	400000	
Si	28	2	45	1328.348	ppb	1328.348	1.24	270831	10000	
P	31	2	45	8.808	ppb	8.808	37.81	158	10000	
K	39	2	45	4559.264	ppb	4559.264	0.56	350390	400000	
Ca	40	1	45	206312.895	ppb	206312.895	1.29	316190082	400000	
Ti	47	2	45	0.234	ppb	0.234	86.61	7	4000	
V	51	2	72	-0.356	ppb	-0.356	-71.05	2524	2000	
Cr	52	2	72	-0.506	ppb	-0.506	-11.07	2050	5000	
Mn	55	2	72	1821.574	ppb	1821.574	0.62	1115322	10000	
Fe	56	1	72	20.924	ppb	20.924	1.45	96624	10000	
(Fe)	57	2	72	33.781	ppb	33.781	12.71	1163	400000	
Co	59	2	72	2.612	ppb	2.612	1.87	5501	2000	
Ni	60	2	72	14.740	ppb	14.740	4.16	9106	5000	
Cu	63	2	72	3.016	ppb	3.016	2.70	6345	5000	
Zn	66	2	72	9.869	ppb	9.869	5.23	3447	5000	
As	75	2	72	0.169	ppb	0.169	45.52	201	2000	
Se	78	1	72	0.204	ppb	0.204	36.76	40	2000	
Sr	88	2	72	736.251	ppb	736.251	0.52	500062	4000	
Zr	90	2	72	90.415	ppb	90.415	27.14	953	1000	
Mo	95	2	115	1.417	ppb	1.417	5.41	1157	2000	
Ag	107	2	115	0.014	ppb	0.014	126.24	87	100	
Cd	111	2	115	0.301	ppb	0.301	15.94	140	2000	
Sn	120	2	115	-0.312	ppb	-0.312	-16.43	660	2000	
Sb	121	2	115	0.421	ppb	0.421	11.42	533	1000	
Ba	137	2	115	397.104	ppb	397.104	2.34	129973	5000	
W	182	2	165	0.023	ppb	0.023	140.80	1357	100	
Tl	205	2	165	0.074	ppb	0.074	21.91	1350	2000	
Pb	208	2	165	-0.171	ppb	-0.171	-15.03	2560	5000	
Th	232	2	193	0.473	ppb	0.473	20.29	14084	2000	
U	238	2	193	3.588	ppb	3.588	1.21	42322	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	233092	0.93	259861	89.70	60	120	
Sc (IS)	45	1	HMI H2	9425837	0.43	9102038	103.56	60	120	
Sc (IS)	45	2	HMI He	962971	1.99	903588	106.57	60	120	
Sc (IS)	45	3	No Gas	17988780	0.59	16459035	109.29	60	120	
Ge Internal standard	72	1	HMI H2	5096473	0.37	4919618	103.59	60	120	
Ge Internal standard	72	2	HMI He	1133018	0.84	1043503	108.58	60	120	
In Internal standard	115	2	HMI He	3772408	1.49	3551384	106.22	60	120	
Ho-165	165	2	HMI He	14668823	0.36	13518981	108.51	60	120	
Ir (IS)	193	2	HMI He	10501726	0.49	10147609	103.49	60	120	

Sample Report

Sample Table

Sample Name	280-174957-A-4-A
Data File Name	114SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:43:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	12.126	ppb	12.126	13.76	1058693	50000	
Be	9	1	6	0.016	ppb	0.016	169.59	37	2000	
B	11	1	6	362.801	ppb	362.801	0.49	56048	2000	
Na	23	2	45	95510.867	ppb	95510.867	0.32	20511033	400000	
Mg	24	2	45	77723.687	ppb	77723.687	1.18	7673608	400000	
Al	27	2	45	2.656	ppb	2.656	60.75	163	400000	
Si	28	2	45	1158.002	ppb	1158.002	0.84	239966	10000	
P	31	2	45	48.841	ppb	48.841	20.19	283	10000	
K	39	2	45	4233.805	ppb	4233.805	0.56	330711	400000	
Ca	40	1	45	202216.385	ppb	202216.385	0.98	312814602	400000	
Ti	47	2	45	0.229	ppb	0.229	173.21	7	4000	
V	51	2	72	-0.491	ppb	-0.491	-30.33	2420	2000	
Cr	52	2	72	-0.204	ppb	-0.204	-31.10	2480	5000	
Mn	55	2	72	1.207	ppb	1.207	9.74	947	10000	
Fe	56	1	72	4.892	ppb	4.892	11.92	44350	10000	
(Fe)	57	2	72	18.006	ppb	18.006	15.16	763	400000	
Co	59	2	72	0.166	ppb	0.166	39.24	427	2000	
Ni	60	2	72	2.644	ppb	2.644	11.41	2040	5000	
Cu	63	2	72	7.574	ppb	7.574	1.44	13693	5000	
Zn	66	2	72	47.160	ppb	47.160	6.94	14971	5000	
As	75	2	72	0.416	ppb	0.416	34.54	263	2000	
Se	78	1	72	0.668	ppb	0.668	11.04	108	2000	
Sr	88	2	72	787.599	ppb	787.599	0.83	541905	4000	
Zr	90	2	72	28.914	ppb	28.914	66.12	770	1000	
Mo	95	2	115	0.090	ppb	0.090	21.96	107	2000	
Ag	107	2	115	-0.001	ppb	-0.001	-751.82	47	100	
Cd	111	2	115	0.006	ppb	0.006	418.91	20	2000	
Sn	120	2	115	-0.228	ppb	-0.228	-52.91	753	2000	
Sb	121	2	115	0.094	ppb	0.094	29.30	147	1000	
Ba	137	2	115	299.716	ppb	299.716	0.92	98213	5000	
W	182	2	165	-0.059	ppb	-0.059	-12.16	1087	100	
Tl	205	2	165	-0.061	ppb	-0.061	-5.62	413	2000	
Pb	208	2	165	0.247	ppb	0.247	9.17	6521	5000	
Th	232	2	193	0.108	ppb	0.108	11.39	10458	2000	
U	238	2	193	5.502	ppb	5.502	1.64	63957	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	235590	0.16	259861	90.66	60	120	
Sc (IS)	45	1	HMI H2	9514108	0.56	9102038	104.53	60	120	
Sc (IS)	45	2	HMI He	969051	0.48	903588	107.24	60	120	
Sc (IS)	45	3	No Gas	17880093	0.62	16459035	108.63	60	120	
Ge Internal standard	72	1	HMI H2	5206613	0.22	4919618	105.83	60	120	
Ge Internal standard	72	2	HMI He	1147773	0.61	1043503	109.99	60	120	
In Internal standard	115	2	HMI He	3776834	0.45	3551384	106.35	60	120	
Ho-165	165	2	HMI He	14693939	0.81	13518981	108.69	60	120	
Ir (IS)	193	2	HMI He	10628422	0.35	10147609	104.74	60	120	

Sample Report

Sample Table

Sample Name	280-174957-A-5-A
Data File Name	115SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:46:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	9.837	ppb	9.837	31.33	1049902	50000	
Be	9	1	6	-0.109	ppb	-0.109	-42.97	10	2000	
B	11	1	6	139.175	ppb	139.175	4.53	21915	2000	
Na	23	2	45	63638.638	ppb	63638.638	0.73	13689970	400000	
Mg	24	2	45	68507.794	ppb	68507.794	1.86	6771222	400000	
Al	27	2	45	1.728	ppb	1.728	91.33	137	400000	
Si	28	2	45	1328.491	ppb	1328.491	0.46	272934	10000	
P	31	2	45	40.883	ppb	40.883	26.18	259	10000	
K	39	2	45	3844.741	ppb	3844.741	1.69	304869	400000	
Ca	40	1	45	231578.570	ppb	231578.570	1.44	357115128	400000	
Ti	47	2	45	0.117	ppb	0.117	173.21	3	4000	
V	51	2	72	1.245	ppb	1.245	20.27	4147	2000	
Cr	52	2	72	-0.113	ppb	-0.113	-72.27	2580	5000	
Mn	55	2	72	4.995	ppb	4.995	4.12	3267	10000	
Fe	56	1	72	6.382	ppb	6.382	6.00	49076	10000	
(Fe)	57	2	72	21.867	ppb	21.867	23.12	857	400000	
Co	59	2	72	0.034	ppb	0.034	57.74	147	2000	
Ni	60	2	72	0.234	ppb	0.234	72.65	603	5000	
Cu	63	2	72	1.036	ppb	1.036	10.06	3244	5000	
Zn	66	2	72	0.973	ppb	0.973	28.11	747	5000	
As	75	2	72	0.718	ppb	0.718	27.90	333	2000	
Se	78	1	72	0.543	ppb	0.543	23.20	89	2000	
Sr	88	2	72	702.942	ppb	702.942	1.04	479429	4000	
Zr	90	2	72	41.643	ppb	41.643	86.61	803	1000	
Mo	95	2	115	0.204	ppb	0.204	31.35	200	2000	
Ag	107	2	115	-0.004	ppb	-0.004	-95.62	40	100	
Cd	111	2	115	-0.027	ppb	-0.027	-51.84	7	2000	
Sn	120	2	115	-0.260	ppb	-0.260	-24.27	727	2000	
Sb	121	2	115	0.106	ppb	0.106	22.14	163	1000	
Ba	137	2	115	310.594	ppb	310.594	1.74	103049	5000	
W	182	2	165	0.181	ppb	0.181	22.09	1877	100	
Tl	205	2	165	-0.091	ppb	-0.091	-7.34	210	2000	
Pb	208	2	165	-0.205	ppb	-0.205	-8.16	2233	5000	
Th	232	2	193	0.010	ppb	0.010	270.81	9370	2000	
U	238	2	193	6.100	ppb	6.100	2.28	70015	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	235145	1.09	259861	90.49	60	120	
Sc (IS)	45	1	HMI H2	9484782	0.72	9102038	104.21	60	120	
Sc (IS)	45	2	HMI He	970243	1.24	903588	107.38	60	120	
Sc (IS)	45	3	No Gas	18027062	0.46	16459035	109.53	60	120	
Ge Internal standard	72	1	HMI H2	5173208	0.85	4919618	105.15	60	120	
Ge Internal standard	72	2	HMI He	1137679	0.62	1043503	109.03	60	120	
In Internal standard	115	2	HMI He	3823940	0.44	3551384	107.67	60	120	
Ho-165	165	2	HMI He	14637716	0.11	13518981	108.28	60	120	
Ir (IS)	193	2	HMI He	10545530	0.33	10147609	103.92	60	120	

Sample Report

Sample Table

Sample Name	280-174957-A-6-A
Data File Name	116SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:50:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	20.860	ppb	20.860	3.96	1132772	50000	
Be	9	1	6	-0.124	ppb	-0.124	-22.35	7	2000	
B	11	1	6	1022.360	ppb	1022.360	2.46	152675	2000	
Na	23	2	45	414324.207	ppb	414324.207	1.14	89840022	400000	
Mg	24	2	45	80019.964	ppb	80019.964	0.37	7983443	400000	
Al	27	2	45	1.472	ppb	1.472	63.05	130	400000	
Si	28	2	45	1110.575	ppb	1110.575	1.09	233327	10000	
P	31	2	45	26.421	ppb	26.421	16.38	216	10000	
K	39	2	45	4960.277	ppb	4960.277	0.38	383592	400000	
Ca	40	1	45	226889.020	ppb	226889.020	0.64	353387768	400000	
Ti	47	2	45	0.113	ppb	0.113	173.21	3	4000	
V	51	2	72	-0.294	ppb	-0.294	-45.40	2597	2000	
Cr	52	2	72	2.330	ppb	2.330	7.04	5818	5000	
Mn	55	2	72	522.395	ppb	522.395	0.53	321284	10000	
Fe	56	1	72	15.318	ppb	15.318	2.11	79462	10000	
(Fe)	57	2	72	27.854	ppb	27.854	6.91	1013	400000	
Co	59	2	72	11.452	ppb	11.452	2.33	23955	2000	
Ni	60	2	72	50.467	ppb	50.467	1.91	30172	5000	
Cu	63	2	72	3.048	ppb	3.048	6.27	6422	5000	
Zn	66	2	72	1.026	ppb	1.026	31.84	763	5000	
As	75	2	72	0.657	ppb	0.657	10.31	319	2000	
Se	78	1	72	0.930	ppb	0.930	33.50	145	2000	
Sr	88	2	72	791.480	ppb	791.480	0.68	539761	4000	
Zr	90	2	72	235.031	ppb	235.031	12.71	1413	1000	
Mo	95	2	115	1.948	ppb	1.948	10.23	1610	2000	
Ag	107	2	115	-0.016	ppb	-0.016	-26.02	7	100	
Cd	111	2	115	-0.003	ppb	-0.003	-428.99	17	2000	
Sn	120	2	115	-0.387	ppb	-0.387	-19.60	590	2000	
Sb	121	2	115	0.301	ppb	0.301	23.24	400	1000	
Ba	137	2	115	253.774	ppb	253.774	1.84	84866	5000	
W	182	2	165	-0.041	ppb	-0.041	-133.90	1153	100	
Tl	205	2	165	-0.045	ppb	-0.045	-48.14	527	2000	
Pb	208	2	165	-0.197	ppb	-0.197	-4.08	2337	5000	
Th	232	2	193	0.052	ppb	0.052	54.12	9724	2000	
U	238	2	193	13.173	ppb	13.173	1.20	146341	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	229702	0.40	259861	88.39	60	120	
Sc (IS)	45	1	HMI H2	9579633	1.28	9102038	105.25	60	120	
Sc (IS)	45	2	HMI He	979226	0.70	903588	108.37	60	120	
Sc (IS)	45	3	No Gas	18003941	0.51	16459035	109.39	60	120	
Ge Internal standard	72	1	HMI H2	5190362	1.26	4919618	105.50	60	120	
Ge Internal standard	72	2	HMI He	1137625	0.87	1043503	109.02	60	120	
In Internal standard	115	2	HMI He	3853367	0.67	3551384	108.50	60	120	
Ho-165	165	2	HMI He	14789016	0.94	13518981	109.39	60	120	
Ir (IS)	193	2	HMI He	10464100	0.81	10147609	103.12	60	120	

Sample Report

Sample Table

Sample Name	280-174962-A-2-A
Data File Name	117SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:54:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	12.142	ppb	12.142	4.50	1062588	50000	
Be	9	1	6	-0.012	ppb	-0.012	-725.10	30	2000	
B	11	1	6	249.851	ppb	249.851	2.43	37846	2000	
Na	23	2	45	116629.344	ppb	116629.344	0.19	25353476	400000	
Mg	24	2	45	92047.914	ppb	92047.914	0.89	9200887	400000	
Al	27	2	45	2.590	ppb	2.590	31.24	163	400000	
Si	28	2	45	1394.988	ppb	1394.988	1.12	288896	10000	
P	31	2	45	62.379	ppb	62.379	17.19	329	10000	
K	39	2	45	5132.124	ppb	5132.124	1.08	396060	400000	
Ca	40	1	45	303498.687	ppb	303498.687	1.13	475864060	400000	
Ti	47	2	45	0.113	ppb	0.113	173.21	3	4000	
V	51	2	72	1.730	ppb	1.730	1.91	4708	2000	
Cr	52	2	72	0.853	ppb	0.853	7.35	3921	5000	
Mn	55	2	72	52.357	ppb	52.357	1.42	32877	10000	
Fe	56	1	72	8.903	ppb	8.903	2.03	57761	10000	
(Fe)	57	2	72	23.993	ppb	23.993	6.54	927	400000	
Co	59	2	72	0.431	ppb	0.431	18.46	990	2000	
Ni	60	2	72	1.936	ppb	1.936	16.39	1630	5000	
Cu	63	2	72	2.381	ppb	2.381	2.66	5451	5000	
Zn	66	2	72	1.485	ppb	1.485	19.14	917	5000	
As	75	2	72	1.234	ppb	1.234	9.26	464	2000	
Se	78	1	72	0.754	ppb	0.754	6.76	120	2000	
Sr	88	2	72	947.509	ppb	947.509	0.20	656142	4000	
Zr	90	2	72	21.064	ppb	21.064	174.63	750	1000	
Mo	95	2	115	0.283	ppb	0.283	32.12	263	2000	
Ag	107	2	115	0.012	ppb	0.012	136.04	83	100	
Cd	111	2	115	-0.011	ppb	-0.011	-342.70	13	2000	
Sn	120	2	115	-0.310	ppb	-0.310	-42.05	673	2000	
Sb	121	2	115	0.064	ppb	0.064	52.35	113	1000	
Ba	137	2	115	486.174	ppb	486.174	0.30	161591	5000	
W	182	2	165	-0.062	ppb	-0.062	-57.66	1080	100	
Tl	205	2	165	-0.080	ppb	-0.080	-21.29	287	2000	
Pb	208	2	165	-0.186	ppb	-0.186	-7.56	2437	5000	
Th	232	2	193	-0.018	ppb	-0.018	-143.96	9003	2000	
U	238	2	193	6.935	ppb	6.935	0.84	78464	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	229611	0.21	259861	88.36	60	120	
Sc (IS)	45	1	HMI H2	9644200	1.18	9102038	105.96	60	120	
Sc (IS)	45	2	HMI He	981118	0.46	903588	108.58	60	120	
Sc (IS)	45	3	No Gas	17943060	1.37	16459035	109.02	60	120	
Ge Internal standard	72	1	HMI H2	5189534	0.54	4919618	105.49	60	120	
Ge Internal standard	72	2	HMI He	1155191	0.54	1043503	110.70	60	120	
In Internal standard	115	2	HMI He	3832214	0.95	3551384	107.91	60	120	
Ho-165	165	2	HMI He	14762999	0.42	13518981	109.20	60	120	
Ir (IS)	193	2	HMI He	10453086	1.18	10147609	103.01	60	120	

Sample Report

Sample Table

Sample Name	280-174962-A-2-B MS
Data File Name	118SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T16:57:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	49.697	ppb	49.697	2.57	1317760	50000	
Be	9	1	6	39.735	ppb	39.735	5.04	8092	2000	
B	11	1	6	225.122	ppb	225.122	3.13	33273	2000	
Na	23	2	45	115698.588	ppb	115698.588	1.04	24581509	400000	
Mg	24	2	45	91722.889	ppb	91722.889	1.47	8960673	400000	
Al	27	2	45	757.723	ppb	757.723	2.90	21955	400000	
Si	28	2	45	1396.368	ppb	1396.368	1.73	282597	10000	
P	31	2	45	68.000	ppb	68.000	21.06	339	10000	
K	39	2	45	5819.770	ppb	5819.770	0.87	432878	400000	
Ca	40	1	45	301788.397	ppb	301788.397	0.66	463958140	400000	
Ti	47	2	45	39.561	ppb	39.561	6.04	1133	4000	
V	51	2	72	40.775	ppb	40.775	1.94	43725	2000	
Cr	52	2	72	38.720	ppb	38.720	0.77	53787	5000	
Mn	55	2	72	89.463	ppb	89.463	3.29	54901	10000	
Fe	56	1	72	791.242	ppb	791.242	1.39	2664659	10000	
(Fe)	57	2	72	766.868	ppb	766.868	3.48	20186	400000	
Co	59	2	72	36.845	ppb	36.845	2.52	76519	2000	
Ni	60	2	72	37.426	ppb	37.426	3.15	22382	5000	
Cu	63	2	72	38.478	ppb	38.478	0.60	62077	5000	
Zn	66	2	72	37.475	ppb	37.475	1.52	11821	5000	
As	75	2	72	38.630	ppb	38.630	5.55	9351	2000	
Se	78	1	72	37.997	ppb	37.997	1.65	5418	2000	
Sr	88	2	72	1023.045	ppb	1023.045	0.94	694110	4000	
Zr	90	2	72	124.898	ppb	124.898	33.90	1060	1000	
Mo	95	2	115	38.275	ppb	38.275	1.05	30570	2000	
Ag	107	2	115	37.523	ppb	37.523	1.41	99966	100	
Cd	111	2	115	37.562	ppb	37.562	2.50	15435	2000	
Sn	120	2	115	38.996	ppb	38.996	1.03	44056	2000	
Sb	121	2	115	39.009	ppb	39.009	0.79	46559	1000	
Ba	137	2	115	525.314	ppb	525.314	0.06	173260	5000	
W	182	2	165	-0.116	ppb	-0.116	-49.79	887	100	
Tl	205	2	165	37.634	ppb	37.634	0.39	259330	2000	
Pb	208	2	165	37.246	ppb	37.246	0.19	352721	5000	
Th	232	2	193	38.528	ppb	38.528	2.15	399868	2000	
U	238	2	193	46.190	ppb	46.190	0.77	500500	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	223625	1.81	259861	86.06	60	120	
Sc (IS)	45	1	HMI H2	9455519	0.42	9102038	103.88	60	120	
Sc (IS)	45	2	HMI He	958936	0.81	903588	106.13	60	120	
Sc (IS)	45	3	No Gas	17532814	0.13	16459035	106.52	60	120	
Ge Internal standard	72	1	HMI H2	5118454	1.51	4919618	104.04	60	120	
Ge Internal standard	72	2	HMI He	1131839	0.35	1043503	108.47	60	120	
In Internal standard	115	2	HMI He	3802977	1.19	3551384	107.08	60	120	
Ho-165	165	2	HMI He	14526004	0.61	13518981	107.45	60	120	
Ir (IS)	193	2	HMI He	10366525	0.39	10147609	102.16	60	120	

Sample Report

Sample Table

Sample Name	280-174962-A-2-C MSD
Data File Name	119SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:01:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608688 6020b
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	46.759	ppb	46.759	3.03	1313143	50000	
Be	9	1	6	38.266	ppb	38.266	2.59	7749	2000	
B	11	1	6	232.121	ppb	232.121	1.94	34071	2000	
Na	23	2	45	120771.201	ppb	120771.201	0.41	25667065	400000	
Mg	24	2	45	96265.286	ppb	96265.286	1.44	9407786	400000	
Al	27	2	45	738.673	ppb	738.673	2.55	21414	400000	
Si	28	2	45	1455.420	ppb	1455.420	0.85	293888	10000	
P	31	2	45	52.815	ppb	52.815	14.98	293	10000	
K	39	2	45	6034.220	ppb	6034.220	0.86	447308	400000	
Ca	40	1	45	315357.934	ppb	315357.934	0.82	481196699	400000	
Ti	47	2	45	36.875	ppb	36.875	5.37	1057	4000	
V	51	2	72	40.667	ppb	40.667	3.40	43801	2000	
Cr	52	2	72	39.212	ppb	39.212	1.38	54670	5000	
Mn	55	2	72	93.779	ppb	93.779	2.30	57795	10000	
Fe	56	1	72	805.387	ppb	805.387	1.94	2704810	10000	
(Fe)	57	2	72	780.525	ppb	780.525	3.08	20627	400000	
Co	59	2	72	36.937	ppb	36.937	1.17	77048	2000	
Ni	60	2	72	37.732	ppb	37.732	4.30	22660	5000	
Cu	63	2	72	38.423	ppb	38.423	0.32	62260	5000	
Zn	66	2	72	39.316	ppb	39.316	2.86	12435	5000	
As	75	2	72	38.450	ppb	38.450	0.31	9349	2000	
Se	78	1	72	39.182	ppb	39.182	1.84	5572	2000	
Sr	88	2	72	1056.509	ppb	1056.509	0.23	719949	4000	
Zr	90	2	72	33.224	ppb	33.224	166.27	777	1000	
Mo	95	2	115	39.769	ppb	39.769	2.21	31225	2000	
Ag	107	2	115	38.380	ppb	38.380	2.18	100533	100	
Cd	111	2	115	39.123	ppb	39.123	1.33	15802	2000	
Sn	120	2	115	39.271	ppb	39.271	2.35	43614	2000	
Sb	121	2	115	40.231	ppb	40.231	2.47	47211	1000	
Ba	137	2	115	559.962	ppb	559.962	1.06	181571	5000	
W	182	2	165	-0.030	ppb	-0.030	-95.39	1180	100	
Tl	205	2	165	37.803	ppb	37.803	1.10	263251	2000	
Pb	208	2	165	37.348	ppb	37.348	0.64	357419	5000	
Th	232	2	193	38.907	ppb	38.907	0.86	405388	2000	
U	238	2	193	46.629	ppb	46.629	0.57	507320	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	222189	1.04	259861	85.50	60	120	
Sc (IS)	45	1	HMI H2	9384889	0.18	9102038	103.11	60	120	
Sc (IS)	45	2	HMI He	959216	0.10	903588	106.16	60	120	
Sc (IS)	45	3	No Gas	17766910	0.96	16459035	107.95	60	120	
Ge Internal standard	72	1	HMI H2	5104387	0.55	4919618	103.76	60	120	
Ge Internal standard	72	2	HMI He	1136769	0.73	1043503	108.94	60	120	
In Internal standard	115	2	HMI He	3738845	0.40	3551384	105.28	60	120	
Ho-165	165	2	HMI He	14680414	0.48	13518981	108.59	60	120	
Ir (IS)	193	2	HMI He	10409708	1.21	10147609	102.58	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	120_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:04:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	50.696	ppb	4.533	10347	50	101.4	90	110	
Na	23	2	45	51164.688	ppb	0.062	10685878	51000	100.3	90	110	
Mg	24	2	45	10616.098	ppb	2.977	1018672	11000	96.5	90	110	
Al	27	2	45	967.477	ppb	3.621	27503	1000	96.7	90	110	
K	39	2	45	10384.512	ppb	0.699	723563	11000	94.4	90	110	
Ca	40	1	45	11342.690	ppb	1.086	17365194	11000	103.1	90	110	
Ti	47	2	45	49.407	ppb	14.306	1390	50	98.8	90	110	
V	51	2	72	48.515	ppb	0.692	50798	50	97.0	90	110	
Cr	52	2	72	47.935	ppb	1.518	65070	50	95.9	90	110	
Mn	55	2	72	49.377	ppb	2.322	29988	50	98.8	90	110	
Fe	56	1	72	1015.761	ppb	1.469	3371565	1000	101.6	90	110	
Co	59	2	72	47.692	ppb	1.063	97709	50	95.4	90	110	
Ni	60	2	72	47.259	ppb	1.271	27767	50	94.5	90	110	
Cu	63	2	72	47.665	ppb	2.170	75498	50	95.3	90	110	
Zn	66	2	72	47.221	ppb	0.228	14584	50	94.4	90	110	
As	75	2	72	47.972	ppb	1.889	11421	50	95.9	90	110	
Se	78	1	72	47.632	ppb	1.595	6708	50	95.3	90	110	
Sr	88	2	72	98.412	ppb	1.269	65921	100	98.4	90	110	
Zr	90	2	72	64.814	ppb	27.901	860	50	129.6	90	110	>+\-10%
Mo	95	2	115	48.328	ppb	0.745	39215	50	96.7	90	110	
Ag	107	2	115	46.767	ppb	1.410	126601	50	93.5	90	110	
Cd	111	2	115	46.404	ppb	1.825	19372	50	92.8	90	110	
Sn	120	2	115	47.965	ppb	1.147	54832	50	95.9	90	110	
Sb	121	2	115	48.695	ppb	1.248	59054	50	97.4	90	110	
Ba	137	2	115	50.226	ppb	3.115	16920	50	100.5	90	110	
W	182	2	165	48.234	ppb	1.019	159914	50	96.5	90	110	
Tl	205	2	165	48.339	ppb	1.296	332595	50	96.7	90	110	
Pb	208	2	165	47.837	ppb	1.230	451474	50	95.7	90	110	
Th	232	2	193	49.605	ppb	0.604	517348	50	99.2	90	110	
U	238	2	193	48.284	ppb	0.936	528279	50	96.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	224101	1.36	259861	86.24	60	120	
Sc (IS)	45	1	HMI H2	9391206	0.89	9102038	103.18	60	120	
Sc (IS)	45	2	HMI He	941563	0.39	903588	104.20	60	120	
Sc (IS)	45	3	No Gas	17368810	0.53	16459035	105.53	60	120	
Ge Internal standard	72	1	HMI H2	5056441	1.84	4919618	102.78	60	120	
Ge Internal standard	72	2	HMI He	1116836	0.36	1043503	107.03	60	120	
In Internal standard	115	2	HMI He	3864682	0.88	3551384	108.82	60	120	
Ho-165	165	2	HMI He	14515142	0.66	13518981	107.37	60	120	
Ir (IS)	193	2	HMI He	10470185	0.38	10147609	103.18	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	121_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:08:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-19.267	ppb	-5.1	800304	10	
Be	9	1	6	-0.092	ppb	-30.0	13	0.5	
B	11	1	6	36.683	ppb	1.0	6241	0.5	>RL
Na	23	2	45	76.039	ppb	12.9	37058	25	>RL
Mg	24	2	45	9.016	ppb	12.6	1090	25	
Al	27	2	45	3.617	ppb	22.0	187	15	
K	39	2	45	-71.698	ppb	-41.8	39875	50	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-1.229	ppb	-7.0	1627	1	
Cr	52	2	72	-0.249	ppb	-68.3	2357	1	
Mn	55	2	72	0.232	ppb	36.1	333	0.5	
(Fe)	57	2	72	9.036	ppb	22.4	513	25	
Co	59	2	72	0.041	ppb	24.4	160	0.5	
Ni	60	2	72	-0.024	ppb	-176.3	443	1	
Cu	63	2	72	0.392	ppb	30.5	2187	1	
Zn	66	2	72	0.227	ppb	106.2	510	5	
As	75	2	72	-0.262	ppb	-18.9	97	1	
Se	78	1	72	0.026	ppb	224.5	15	1	
Sr	88	2	72	0.374	ppb	15.7	290	0.5	
Zr	90	2	72	-44.047	ppb	-114.6	523	1	
Mo	95	2	115	0.055	ppb	22.4	80	0.5	
Ag	107	2	115	0.017	ppb	53.8	97	1	
Cd	111	2	115	-0.043	ppb	0.0	0	0.5	
Sn	120	2	115	0.000	ppb	25608.4	1017	1	
Sb	121	2	115	0.115	ppb	33.1	173	0.6	
Ba	137	2	115	-0.021	ppb	-428.8	90	0.5	
W	182	2	165	-0.023	ppb	-83.2	1180	1	
Tl	205	2	165	-0.033	ppb	-39.3	597	0.1	
Pb	208	2	165	-0.162	ppb	-15.2	2600	0.5	
Th	232	2	193	0.376	ppb	12.3	13367	1	
U	238	2	193	0.002	ppb	509.4	3264	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	231890	0.83	259861	89.24	60	120	
Sc (IS)	45	1	HMI H2	9174382	0.77	9102038	100.79	60	120	
Sc (IS)	45	2	HMI He	944352	1.57	903588	104.51	60	120	
Sc (IS)	45	3	No Gas	17443138	1.64	16459035	105.98	60	120	
Ge Internal standard	72	1	HMI H2	5052277	1.27	4919618	102.70	60	120	
Ge Internal standard	72	2	HMI He	1117802	0.49	1043503	107.12	60	120	
In Internal standard	115	2	HMI He	3825127	0.39	3551384	107.71	60	120	
Ho-165	165	2	HMI He	14391639	0.69	13518981	106.46	60	120	
Ir (IS)	193	2	HMI He	10725210	0.92	10147609	105.69	60	120	

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	122SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:11:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-22.396	ppb	-22.396	-4.78	809302	50000	
Be	9	1	6	-0.062	ppb	-0.062	-152.13	20	2000	
B	11	1	6	15.471	ppb	15.471	8.75	3114	2000	
Na	23	2	45	-10.700	ppb	-10.700	-19.97	19925	400000	
Mg	24	2	45	4.671	ppb	4.671	30.47	707	400000	
Al	27	2	45	0.847	ppb	0.847	298.67	113	400000	
Si	28	2	45	-12.510	ppb	-12.510	-16.73	16305	10000	
P	31	2	45	-6.979	ppb	-6.979	-32.79	113	10000	
K	39	2	45	-74.499	ppb	-74.499	-15.71	41756	400000	
Ca	40	1	45	-7.791	ppb	-7.791	-3.49	37516	400000	
Ti	47	2	45	0.337	ppb	0.337	99.85	10	4000	
V	51	2	72	-2.296	ppb	-2.296	-2.12	607	2000	
Cr	52	2	72	-1.100	ppb	-1.100	-3.73	1327	5000	
Mn	55	2	72	0.034	ppb	0.034	274.51	227	10000	
Fe	56	1	72	1.926	ppb	1.926	266.38	35067	10000	
(Fe)	57	2	72	-2.793	ppb	-2.793	-62.49	223	400000	
Co	59	2	72	-0.008	ppb	-0.008	-89.19	63	2000	
Ni	60	2	72	-0.515	ppb	-0.515	-36.60	170	5000	
Cu	63	2	72	0.339	ppb	0.339	26.24	2237	5000	
Zn	66	2	72	-0.459	ppb	-0.459	-1.91	323	5000	
As	75	2	72	-0.567	ppb	-0.567	-6.04	27	2000	
Se	78	1	72	-0.051	ppb	-0.051	-89.49	4	2000	
Sr	88	2	72	0.078	ppb	0.078	70.29	97	4000	
Zr	90	2	72	10.804	ppb	10.804	112.42	737	1000	
Mo	95	2	115	-0.002	ppb	-0.002	-909.33	37	2000	
Ag	107	2	115	-0.012	ppb	-0.012	-29.73	20	100	
Cd	111	2	115	-0.036	ppb	-0.036	-37.00	3	2000	
Sn	120	2	115	-0.577	ppb	-0.577	-9.03	400	2000	
Sb	121	2	115	0.009	ppb	0.009	521.05	50	1000	
Ba	137	2	115	-0.189	ppb	-0.189	-8.55	37	5000	
W	182	2	165	-0.120	ppb	-0.120	-9.08	900	100	
Tl	205	2	165	-0.072	ppb	-0.072	-1.13	343	2000	
Pb	208	2	165	-0.128	ppb	-0.128	-6.97	3027	5000	
Th	232	2	193	-0.102	ppb	-0.102	-34.09	8600	2000	
U	238	2	193	0.025	ppb	0.025	13.27	3634	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	236073	0.81	259861	90.85	60	120	
Sc (IS)	45	1	HMI H2	9670419	0.56	9102038	106.24	60	120	
Sc (IS)	45	2	HMI He	993174	0.23	903588	109.91	60	120	
Sc (IS)	45	3	No Gas	18162172	0.85	16459035	110.35	60	120	
Ge Internal standard	72	1	HMI H2	5349427	1.42	4919618	108.74	60	120	
Ge Internal standard	72	2	HMI He	1187295	1.03	1043503	113.78	60	120	
In Internal standard	115	2	HMI He	4075633	0.51	3551384	114.76	60	120	
Ho-165	165	2	HMI He	14971221	0.13	13518981	110.74	60	120	
Ir (IS)	193	2	HMI He	11044826	0.42	10147609	108.84	60	120	

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	123SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:15:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-19.166	ppb	-19.166	-19.57	837226	50000	
Be	9	1	6	-0.094	ppb	-0.094	-74.73	13	2000	
B	11	1	6	11.445	ppb	11.445	1.89	2504	2000	
Na	23	2	45	-13.995	ppb	-13.995	-20.71	19205	400000	
Mg	24	2	45	4.072	ppb	4.072	19.46	647	400000	
Al	27	2	45	1.182	ppb	1.182	58.79	123	400000	
Si	28	2	45	-6.493	ppb	-6.493	-22.58	17493	10000	
P	31	2	45	-2.768	ppb	-2.768	-200.24	126	10000	
K	39	2	45	-58.498	ppb	-58.498	-28.09	42865	400000	
Ca	40	1	45	-8.145	ppb	-8.145	-5.81	36921	400000	
Ti	47	2	45	0.449	ppb	0.449	43.00	13	4000	
V	51	2	72	-2.414	ppb	-2.414	-3.17	483	2000	
Cr	52	2	72	-0.865	ppb	-0.865	-10.88	1653	5000	
Mn	55	2	72	0.007	ppb	0.007	454.05	210	10000	
Fe	56	1	72	-0.552	ppb	-0.552	-18.56	26515	10000	
(Fe)	57	2	72	-3.304	ppb	-3.304	-26.95	210	400000	
Co	59	2	72	0.005	ppb	0.005	344.33	90	2000	
Ni	60	2	72	-0.465	ppb	-0.465	-10.78	200	5000	
Cu	63	2	72	-0.066	ppb	-0.066	-140.96	1570	5000	
Zn	66	2	72	-0.451	ppb	-0.451	-50.68	327	5000	
As	75	2	72	-0.522	ppb	-0.522	-7.87	39	2000	
Se	78	1	72	-0.042	ppb	-0.042	-97.90	5	2000	
Sr	88	2	72	0.072	ppb	0.072	87.08	93	4000	
Zr	90	2	72	-36.123	ppb	-36.123	-48.13	583	1000	
Mo	95	2	115	-0.021	ppb	-0.021	-57.46	20	2000	
Ag	107	2	115	-0.006	ppb	-0.006	-68.00	37	100	
Cd	111	2	115	-0.012	ppb	-0.012	-109.64	13	2000	
Sn	120	2	115	-0.666	ppb	-0.666	-3.93	290	2000	
Sb	121	2	115	-0.001	ppb	-0.001	-4955.99	37	1000	
Ba	137	2	115	-0.110	ppb	-0.110	-84.61	63	5000	
W	182	2	165	-0.173	ppb	-0.173	-22.49	713	100	
Tl	205	2	165	-0.084	ppb	-0.084	-15.23	260	2000	
Pb	208	2	165	-0.098	ppb	-0.098	-12.48	3287	5000	
Th	232	2	193	-0.061	ppb	-0.061	-6.78	8996	2000	
U	238	2	193	-0.010	ppb	-0.010	-179.81	3207	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	236508	1.08	259861	91.01	60	120	
Sc (IS)	45	1	HMI H2	9662011	1.09	9102038	106.15	60	120	
Sc (IS)	45	2	HMI He	993471	1.13	903588	109.95	60	120	
Sc (IS)	45	3	No Gas	18230169	1.13	16459035	110.76	60	120	
Ge Internal standard	72	1	HMI H2	5332585	1.05	4919618	108.39	60	120	
Ge Internal standard	72	2	HMI He	1189363	1.13	1043503	113.98	60	120	
In Internal standard	115	2	HMI He	4011905	1.02	3551384	112.97	60	120	
Ho-165	165	2	HMI He	14846099	0.69	13518981	109.82	60	120	
Ir (IS)	193	2	HMI He	10979164	0.71	10147609	108.19	60	120	

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	124SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:19:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-16.210	ppb	-16.210	-14.91	870440	50000	
Be	9	1	6	-0.078	ppb	-0.078	-172.42	17	2000	
B	11	1	6	9.407	ppb	9.407	10.15	2194	2000	
Na	23	2	45	-11.848	ppb	-11.848	-19.50	19826	400000	
Mg	24	2	45	5.630	ppb	5.630	14.49	810	400000	
Al	27	2	45	2.258	ppb	2.258	84.94	157	400000	
Si	28	2	45	-5.646	ppb	-5.646	-34.82	17790	10000	
P	31	2	45	-8.512	ppb	-8.512	-30.50	109	10000	
K	39	2	45	-67.768	ppb	-67.768	-7.30	42548	400000	
Ca	40	1	45	-8.880	ppb	-8.880	-11.58	35936	400000	
Ti	47	2	45	0.557	ppb	0.557	125.11	17	4000	
V	51	2	72	-2.257	ppb	-2.257	-8.22	657	2000	
Cr	52	2	72	-1.078	ppb	-1.078	-6.28	1377	5000	
Mn	55	2	72	-0.033	ppb	-0.033	-186.01	187	10000	
Fe	56	1	72	-0.652	ppb	-0.652	-14.47	26375	10000	
(Fe)	57	2	72	-4.488	ppb	-4.488	-55.97	180	400000	
Co	59	2	72	-0.014	ppb	-0.014	-0.74	50	2000	
Ni	60	2	72	-0.555	ppb	-0.555	-11.88	147	5000	
Cu	63	2	72	-0.206	ppb	-0.206	-15.13	1357	5000	
Zn	66	2	72	-0.515	ppb	-0.515	-51.18	310	5000	
As	75	2	72	-0.540	ppb	-0.540	-2.21	35	2000	
Se	78	1	72	-0.042	ppb	-0.042	-97.24	5	2000	
Sr	88	2	72	0.112	ppb	0.112	61.68	123	4000	
Zr	90	2	72	-20.450	ppb	-20.450	-167.86	643	1000	
Mo	95	2	115	-0.025	ppb	-0.025	-70.70	17	2000	
Ag	107	2	115	-0.013	ppb	-0.013	-41.48	17	100	
Cd	111	2	115	-0.043	ppb	-0.043	0.00	0	2000	
Sn	120	2	115	-0.609	ppb	-0.609	-15.08	360	2000	
Sb	121	2	115	0.009	ppb	0.009	165.52	50	1000	
Ba	137	2	115	-0.141	ppb	-0.141	-50.19	53	5000	
W	182	2	165	-0.182	ppb	-0.182	-10.17	690	100	
Tl	205	2	165	-0.079	ppb	-0.079	-2.76	297	2000	
Pb	208	2	165	-0.067	ppb	-0.067	-17.27	3624	5000	
Th	232	2	193	-0.049	ppb	-0.049	-60.07	9210	2000	
U	238	2	193	-0.002	ppb	-0.002	-964.65	3337	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	236716	0.11	259861	91.09	60	120	
Sc (IS)	45	1	HMI H2	9707137	0.29	9102038	106.65	60	120	
Sc (IS)	45	2	HMI He	1000866	0.63	903588	110.77	60	120	
Sc (IS)	45	3	No Gas	18449158	0.72	16459035	112.09	60	120	
Ge Internal standard	72	1	HMI H2	5375183	0.51	4919618	109.26	60	120	
Ge Internal standard	72	2	HMI He	1204453	0.45	1043503	115.42	60	120	
In Internal standard	115	2	HMI He	4056456	0.45	3551384	114.22	60	120	
Ho-165	165	2	HMI He	15002906	0.40	13518981	110.98	60	120	
Ir (IS)	193	2	HMI He	11090380	0.80	10147609	109.29	60	120	

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	125SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:22:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-16.984	ppb	-16.984	-23.86	867184	50000	
Be	9	1	6	-0.037	ppb	-0.037	-371.47	27	2000	
B	11	1	6	8.670	ppb	8.670	2.96	2164	2000	
Na	23	2	45	-16.784	ppb	-16.784	-14.69	18964	400000	
Mg	24	2	45	5.240	ppb	5.240	19.06	780	400000	
Al	27	2	45	-0.538	ppb	-0.538	-127.58	73	400000	
Si	28	2	45	-6.314	ppb	-6.314	-5.52	17877	10000	
P	31	2	45	-5.228	ppb	-5.228	-146.47	121	10000	
K	39	2	45	-68.987	ppb	-68.987	-9.37	42992	400000	
Ca	40	1	45	-9.897	ppb	-9.897	-3.98	34730	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-2.396	ppb	-2.396	-5.64	520	2000	
Cr	52	2	72	-1.065	ppb	-1.065	-12.66	1427	5000	
Mn	55	2	72	-0.014	ppb	-0.014	-279.47	203	10000	
Fe	56	1	72	-0.688	ppb	-0.688	-29.58	26469	10000	
(Fe)	57	2	72	-3.275	ppb	-3.275	-59.99	217	400000	
Co	59	2	72	-0.008	ppb	-0.008	-119.56	63	2000	
Ni	60	2	72	-0.496	ppb	-0.496	-26.82	187	5000	
Cu	63	2	72	-0.407	ppb	-0.407	-12.77	1040	5000	
Zn	66	2	72	-0.635	ppb	-0.635	-4.78	277	5000	
As	75	2	72	-0.565	ppb	-0.565	-7.49	29	2000	
Se	78	1	72	-0.016	ppb	-0.016	-258.10	9	2000	
Sr	88	2	72	0.068	ppb	0.068	24.61	93	4000	
Zr	90	2	72	-2.661	ppb	-2.661	-1869.51	713	1000	
Mo	95	2	115	-0.025	ppb	-0.025	-97.63	17	2000	
Ag	107	2	115	-0.004	ppb	-0.004	-151.10	43	100	
Cd	111	2	115	-0.043	ppb	-0.043	0.00	0	2000	
Sn	120	2	115	-0.583	ppb	-0.583	-12.42	390	2000	
Sb	121	2	115	-0.009	ppb	-0.009	-51.96	27	1000	
Ba	137	2	115	-0.122	ppb	-0.122	-101.86	60	5000	
W	182	2	165	-0.195	ppb	-0.195	-6.93	653	100	
Tl	205	2	165	-0.086	ppb	-0.086	-3.42	250	2000	
Pb	208	2	165	-0.025	ppb	-0.025	-58.25	4067	5000	
Th	232	2	193	-0.086	ppb	-0.086	-26.46	8816	2000	
U	238	2	193	-0.022	ppb	-0.022	-70.15	3104	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	246139	0.44	259861	94.72	60	120	
Sc (IS)	45	1	HMI H2	9818535	0.70	9102038	107.87	60	120	
Sc (IS)	45	2	HMI He	1013336	0.18	903588	112.15	60	120	
Sc (IS)	45	3	No Gas	18504426	0.81	16459035	112.43	60	120	
Ge Internal standard	72	1	HMI H2	5420775	0.85	4919618	110.19	60	120	
Ge Internal standard	72	2	HMI He	1229010	3.20	1043503	117.78	60	120	
In Internal standard	115	2	HMI He	4046983	0.20	3551384	113.96	60	120	
Ho-165	165	2	HMI He	15133143	0.42	13518981	111.94	60	120	
Ir (IS)	193	2	HMI He	11090782	0.47	10147609	109.29	60	120	

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	126SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:26:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-16.466	ppb	-16.466	-10.01	872990	50000	
Be	9	1	6	-0.051	ppb	-0.051	-50.53	23	2000	
B	11	1	6	8.342	ppb	8.342	6.50	2114	2000	
Na	23	2	45	-15.700	ppb	-15.700	-15.77	19118	400000	
Mg	24	2	45	5.608	ppb	5.608	21.10	813	400000	
Al	27	2	45	-0.202	ppb	-0.202	-1148.78	83	400000	
Si	28	2	45	-6.930	ppb	-6.930	-28.59	17670	10000	
P	31	2	45	1.741	ppb	1.741	230.30	143	10000	
K	39	2	45	-55.310	ppb	-55.310	-24.24	43741	400000	
Ca	40	1	45	-9.739	ppb	-9.739	-1.33	35435	400000	
Ti	47	2	45	0.223	ppb	0.223	173.21	7	4000	
V	51	2	72	-2.448	ppb	-2.448	-1.68	453	2000	
Cr	52	2	72	-1.049	ppb	-1.049	-9.39	1417	5000	
Mn	55	2	72	-0.074	ppb	-0.074	-40.89	160	10000	
Fe	56	1	72	-0.597	ppb	-0.597	-31.64	26899	10000	
(Fe)	57	2	72	-2.186	ppb	-2.186	-281.89	243	400000	
Co	59	2	72	-0.025	ppb	-0.025	-69.31	27	2000	
Ni	60	2	72	-0.485	ppb	-0.485	-14.72	190	5000	
Cu	63	2	72	-0.324	ppb	-0.324	-32.56	1160	5000	
Zn	66	2	72	-0.433	ppb	-0.433	-56.46	337	5000	
As	75	2	72	-0.491	ppb	-0.491	-15.07	47	2000	
Se	78	1	72	-0.052	ppb	-0.052	-51.23	4	2000	
Sr	88	2	72	0.038	ppb	0.038	124.74	70	4000	
Zr	90	2	72	-32.278	ppb	-32.278	-118.00	603	1000	
Mo	95	2	115	0.006	ppb	0.006	304.06	43	2000	
Ag	107	2	115	-0.003	ppb	-0.003	-341.66	47	100	
Cd	111	2	115	-0.036	ppb	-0.036	-37.12	3	2000	
Sn	120	2	115	-0.554	ppb	-0.554	-12.52	427	2000	
Sb	121	2	115	-0.006	ppb	-0.006	-2.94	30	1000	
Ba	137	2	115	-0.180	ppb	-0.180	-15.68	40	5000	
W	182	2	165	-0.178	ppb	-0.178	-9.62	710	100	
Tl	205	2	165	-0.087	ppb	-0.087	-4.44	240	2000	
Pb	208	2	165	-0.030	ppb	-0.030	-107.70	4007	5000	
Th	232	2	193	-0.083	ppb	-0.083	-32.84	8826	2000	
U	238	2	193	-0.029	ppb	-0.029	-103.77	3014	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	246402	0.24	259861	94.82	60	120	
Sc (IS)	45	1	HMI H2	9946319	0.46	9102038	109.28	60	120	
Sc (IS)	45	2	HMI He	1008474	0.81	903588	111.61	60	120	
Sc (IS)	45	3	No Gas	18547143	1.31	16459035	112.69	60	120	
Ge Internal standard	72	1	HMI H2	5443124	0.90	4919618	110.64	60	120	
Ge Internal standard	72	2	HMI He	1204083	0.60	1043503	115.39	60	120	
In Internal standard	115	2	HMI He	4078349	0.80	3551384	114.84	60	120	
Ho-165	165	2	HMI He	15101379	0.50	13518981	111.71	60	120	
Ir (IS)	193	2	HMI He	11077106	1.24	10147609	109.16	60	120	

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	127SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:29:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-15.194	ppb	-15.194	-16.15	882882	50000	
Be	9	1	6	-0.095	ppb	-0.095	-72.06	13	2000	
B	11	1	6	8.417	ppb	8.417	15.08	2114	2000	
Na	23	2	45	-18.866	ppb	-18.866	-12.86	18561	400000	
Mg	24	2	45	6.212	ppb	6.212	4.73	883	400000	
Al	27	2	45	1.411	ppb	1.411	86.97	133	400000	
Si	28	2	45	-5.062	ppb	-5.062	-47.57	18190	10000	
P	31	2	45	-0.245	ppb	-0.245	-2439.39	137	10000	
K	39	2	45	-56.287	ppb	-56.287	-33.05	44035	400000	
Ca	40	1	45	-9.827	ppb	-9.827	-7.32	35288	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-2.322	ppb	-2.322	-2.74	593	2000	
Cr	52	2	72	-1.027	ppb	-1.027	-10.71	1460	5000	
Mn	55	2	72	-0.066	ppb	-0.066	-88.22	167	10000	
Fe	56	1	72	-0.582	ppb	-0.582	-59.64	27103	10000	
(Fe)	57	2	72	-1.061	ppb	-1.061	-271.87	277	400000	
Co	59	2	72	-0.014	ppb	-0.014	-109.92	50	2000	
Ni	60	2	72	-0.424	ppb	-0.424	-38.11	230	5000	
Cu	63	2	72	-0.418	ppb	-0.418	-12.85	1010	5000	
Zn	66	2	72	-0.727	ppb	-0.727	-17.59	243	5000	
As	75	2	72	-0.531	ppb	-0.531	-6.33	37	2000	
Se	78	1	72	-0.043	ppb	-0.043	-70.32	5	2000	
Sr	88	2	72	0.157	ppb	0.157	53.58	157	4000	
Zr	90	2	72	1.830	ppb	1.830	815.35	723	1000	
Mo	95	2	115	-0.037	ppb	-0.037	-18.03	7	2000	
Ag	107	2	115	-0.004	ppb	-0.004	-194.08	43	100	
Cd	111	2	115	-0.028	ppb	-0.028	-92.94	7	2000	
Sn	120	2	115	-0.594	ppb	-0.594	-3.75	383	2000	
Sb	121	2	115	-0.017	ppb	-0.017	-26.41	17	1000	
Ba	137	2	115	-0.171	ppb	-0.171	-9.70	43	5000	
W	182	2	165	-0.176	ppb	-0.176	-11.26	713	100	
Tl	205	2	165	-0.082	ppb	-0.082	-17.75	280	2000	
Pb	208	2	165	-0.039	ppb	-0.039	-101.84	3914	5000	
Th	232	2	193	-0.080	ppb	-0.080	-65.06	8917	2000	
U	238	2	193	-0.030	ppb	-0.030	-17.53	3027	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	245036	0.39	259861	94.30	60	120	
Sc (IS)	45	1	HMI H2	9944171	0.56	9102038	109.25	60	120	
Sc (IS)	45	2	HMI He	1016814	0.27	903588	112.53	60	120	
Sc (IS)	45	3	No Gas	18544144	0.74	16459035	112.67	60	120	
Ge Internal standard	72	1	HMI H2	5473058	0.49	4919618	111.25	60	120	
Ge Internal standard	72	2	HMI He	1214465	0.06	1043503	116.38	60	120	
In Internal standard	115	2	HMI He	4107954	0.48	3551384	115.67	60	120	
Ho-165	165	2	HMI He	15063884	0.67	13518981	111.43	60	120	
Ir (IS)	193	2	HMI He	11148827	0.96	10147609	109.87	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-7686738
Data File Name	128CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:33:21-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	3	No Gas	885015	0.00
Be	9	1	HMI H2	20	500.00
B	11	1	HMI H2	2107	0.17
Na	23	2	HMI He	26825	0.02
Mg	24	2	HMI He	1147	1.74
Al	27	2	HMI He	53	20.30
K	39	2	HMI He	43711	0.00
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	1470	0.81
Cr	52	2	HMI He	2460	0.21
Mn	55	2	HMI He	280	7.65
(Fe)	57	2	HMI He	247	11.19
Co	59	2	HMI He	50	40.00
Ni	60	2	HMI He	617	1.09
Cu	63	2	HMI He	1670	1.04
Zn	66	2	HMI He	503	3.45
As	75	2	HMI He	105	21.12
Se	78	1	HMI H2	5	1623.80
Sr	88	2	HMI He	290	4.76
Zr	90	2	HMI He	650	1.79
Mo	95	2	HMI He	33	226.50
Ag	107	2	HMI He	53	146.37
Cd	111	2	HMI He	10	1732.05
Sn	120	2	HMI He	923	0.24
Sb	121	2	HMI He	43	312.04
Ba	137	2	HMI He	83	64.94
W	182	2	HMI He	860	0.72
Tl	205	2	HMI He	220	10.33
Pb	208	2	HMI He	3200	0.05
Th	232	2	HMI He	10097	0.06
U	238	2	HMI He	3040	0.15

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal standard	6	1	HMI H2	253490	0.70
Sc (IS)	45	1	HMI H2	9587331	0.45
Sc (IS)	45	2	HMI He	964862	0.59
Sc (IS)	45	3	No Gas	17821643	1.42
Ge Internal standard	72	1	HMI H2	5262568	1.39
Ge Internal standard	72	2	HMI He	1150133	0.93
In Internal standard	115	2	HMI He	3923278	0.28
Ho-165	165	2	HMI He	14697450	0.11
Ir (IS)	193	2	HMI He	10905184	0.33

Calibration Standard Report

Sample Table

Sample Name	ic-7686770
Data File Name	129CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:36:55-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	cal 4
ISTD Ref File Name	128CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	3	No Gas	832359	0.00
Be	9	1	HMI H2	53	162.38
B	11	1	HMI H2	2207	0.11
Na	23	2	HMI He	21078672	0.00
Mg	24	2	HMI He	1908832	0.00
Al	27	2	HMI He	147	19.36
K	39	2	HMI He	1402728	0.00
Ti	47	2	HMI He	13	649.52
V	51	2	HMI He	1347	1.67
Cr	52	2	HMI He	2407	0.12
Mn	55	2	HMI He	410	5.74
(Fe)	57	2	HMI He	267	8.48
Co	59	2	HMI He	200	7.50
Ni	60	2	HMI He	580	0.59
Cu	63	2	HMI He	2584	0.29
Zn	66	2	HMI He	510	3.15
As	75	2	HMI He	104	16.64
Se	78	1	HMI H2	4	2500.00
Sr	88	2	HMI He	490	5.12
Zr	90	2	HMI He	693	2.43
Mo	95	2	HMI He	83	71.04
Ag	107	2	HMI He	110	46.02
Cd	111	2	HMI He	33	187.35
Sn	120	2	HMI He	1133	0.37
Sb	121	2	HMI He	103	70.91
Ba	137	2	HMI He	290	9.44
W	182	2	HMI He	1013	0.49
Tl	205	2	HMI He	570	4.00
Pb	208	2	HMI He	3560	0.04
Th	232	2	HMI He	9524	0.03
U	238	2	HMI He	3357	0.18

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	240077	0.88	253490	94.71	60	120	
Sc (IS)	45	1	HMI H2	9454574	0.53	9587331	98.62	60	120	
Sc (IS)	45	2	HMI He	962322	0.83	964862	99.74	60	120	
Sc (IS)	45	3	No Gas	17893665	0.93	17821643	100.40	60	120	
Ge Internal standard	72	1	HMI H2	5100963	0.47	5262568	96.93	60	120	
Ge Internal standard	72	2	HMI He	1113400	0.36	1150133	96.81	60	120	
In Internal standard	115	2	HMI He	3848078	0.21	3923278	98.08	60	120	
Ho-165	165	2	HMI He	14702259	0.99	14697450	100.03	60	120	
Ir (IS)	193	2	HMI He	10833354	0.37	10905184	99.34	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7686769
Data File Name	130CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:40:30-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	cal1
ISTD Ref File Name	128CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	3	No Gas	2200338	0.00
Be	9	1	HMI H2	20790	0.01
B	11	1	HMI H2	152181	0.00
Na	23	2	HMI He	468164	0.00
Mg	24	2	HMI He	193014	0.00
Al	27	2	HMI He	55291	0.00
K	39	2	HMI He	172466	0.00
Ti	47	2	HMI He	2550	0.23
V	51	2	HMI He	100504	0.00
Cr	52	2	HMI He	131865	0.00
Mn	55	2	HMI He	58848	0.00
(Fe)	57	2	HMI He	50327	0.00
Co	59	2	HMI He	205659	0.00
Ni	60	2	HMI He	57406	0.00
Cu	63	2	HMI He	155516	0.00
Zn	66	2	HMI He	29901	0.01
As	75	2	HMI He	23335	0.01
Se	78	1	HMI H2	14006	0.01
Sr	88	2	HMI He	135552	0.00
Zr	90	2	HMI He	970	1.05
Mo	95	2	HMI He	79207	0.00
Ag	107	2	HMI He	263338	0.00
Cd	111	2	HMI He	40994	0.01
Sn	120	2	HMI He	112828	0.00
Sb	121	2	HMI He	119380	0.00
Ba	137	2	HMI He	34288	0.00
W	182	2	HMI He	335105	0.00
Tl	205	2	HMI He	697441	0.00
Pb	208	2	HMI He	953811	0.00
Th	232	2	HMI He	1045022	0.00
U	238	2	HMI He	1099589	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	243913	0.70	253490	96.22	60	120	
Sc (IS)	45	1	HMI H2	9468505	0.12	9587331	98.76	60	120	
Sc (IS)	45	2	HMI He	951823	0.41	964862	98.65	60	120	
Sc (IS)	45	3	No Gas	17218631	1.18	17821643	96.62	60	120	
Ge Internal standard	72	1	HMI H2	5208893	1.05	5262568	98.98	60	120	
Ge Internal standard	72	2	HMI He	1135242	0.43	1150133	98.71	60	120	
In Internal standard	115	2	HMI He	3847124	0.90	3923278	98.06	60	120	
Ho-165	165	2	HMI He	14611146	0.50	14697450	99.41	60	120	
Ir (IS)	193	2	HMI He	10886222	0.50	10905184	99.83	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7686814
Data File Name	131_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:44:01-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	121.364	ppb	4.551	1687248	80	151.7	90	110	>+\-10%
Be	9	1	6	39.561	ppb	1.183	8129	40	98.9	90	110	
B	11	1	6	846.774	ppb	0.520	127477	400	211.7	90	110	>+\-10%
Na	23	2	45	14003.830	ppb	2.020	2899343	12800	109.4	90	110	
Mg	24	2	45	4894.298	ppb	0.849	456126	4800	102.0	90	110	
Al	27	2	45	803.371	ppb	3.728	21915	800	100.4	90	110	
K	39	2	45	4735.690	ppb	1.327	356160	4800	98.7	90	110	
Ca	40	1	45	5180.982	ppb	0.211	7895317	4800	107.9	90	110	
(Ca)	44	1	45	4797.997	ppb	0.853	239525	4800	100.0	10	110	
V	51	2	72	38.505	ppb	1.799	39414	40	96.3	90	110	
Cr	52	2	72	39.528	ppb	0.561	53359	40	98.8	90	110	
Mn	55	2	72	40.555	ppb	1.762	23924	40	101.4	90	110	
Fe	56	1	72	823.887	ppb	1.511	2781676	800	103.0	90	110	
(Fe)	56	2	72	738.289	ppb	0.219	814493	800	92.3	90	110	
(Fe)	57	2	72	802.442	ppb	2.800	20246	800	100.3	90	110	
Co	59	2	72	39.320	ppb	1.193	80538	40	98.3	90	110	
Ni	60	2	72	38.929	ppb	2.820	22623	40	97.3	90	110	
Cu	63	2	72	39.465	ppb	1.520	62094	40	98.7	90	110	
Zn	66	2	72	79.114	ppb	1.016	23654	80	98.9	90	110	
As	75	2	72	39.837	ppb	1.554	9317	40	99.6	90	110	
Se	78	1	72	40.943	ppb	7.904	5665	40	102.4	90	110	
Sr	88	2	72	118.759	ppb	1.124	80254	80	148.4	90	110	>+\-10%
Zr	90	2	72	14.489	ppb	63.211	687	40	36.2	90	110	>+\-10%
Mo	95	2	115	41.911	ppb	1.478	32868	40	104.8	90	110	
Ag	107	2	115	80.333	ppb	1.221	209302	80	100.4	90	110	
Cd	111	2	115	38.383	ppb	3.325	15572	40	96.0	90	110	
Sn	120	2	115	39.876	ppb	1.787	45052	40	99.7	90	110	
Sb	121	2	115	41.039	ppb	1.830	48495	40	102.6	90	110	
Ba	137	2	115	40.309	ppb	0.232	13723	40	100.8	90	110	
Tl	205	2	165	39.359	ppb	0.917	276049	40	98.4	90	110	
Pb	208	2	165	39.205	ppb	0.634	377800	40	98.0	90	110	
Th	232	2	193	80.765	ppb	1.454	842782	80	101.0	90	110	
U	238	2	193	43.394	ppb	0.472	477079	40	108.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	240721	0.33	253490	94.96	60	120	
Sc (IS)	45	1	HMI H2	9331101	1.00	9587331	97.33	60	120	
Sc (IS)	45	2	HMI He	937980	0.75	964862	97.21	60	120	
Sc (IS)	45	3	No Gas	17378305	0.80	17821643	97.51	60	120	
Ge Internal standard	72	1	HMI H2	5142494	0.45	5262568	97.72	60	120	
Ge Internal standard	72	2	HMI He	1130230	0.78	1150133	98.27	60	120	
In Internal standard	115	2	HMI He	3806085	1.00	3923278	97.01	60	120	
Ho-165	165	2	HMI He	14686044	0.47	14697450	99.92	60	120	
Ir (IS)	193	2	HMI He	10845631	0.72	10905184	99.45	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	132_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:47:46-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	50.045	ppb	2.325	10160	50	100.1	90	110	
Na	23	2	45	53129.902	ppb	1.525	10977390	51000	104.2	90	110	
Mg	24	2	45	10759.878	ppb	0.802	1006022	11000	97.8	90	110	
Al	27	2	45	972.528	ppb	2.442	26645	1000	97.3	90	110	
K	39	2	45	10341.920	ppb	0.644	730844	11000	94.0	90	110	
Ca	40	1	45	11160.566	ppb	0.877	16848193	11000	101.5	90	110	
Ti	47	2	45	56.867	ppb	21.636	1433	50	113.7	90	110	>+\-10%
V	51	2	72	50.122	ppb	4.043	50517	50	100.2	90	110	
Cr	52	2	72	48.824	ppb	0.662	64893	50	97.6	90	110	
Mn	55	2	72	49.060	ppb	2.768	28686	50	98.1	90	110	
Fe	56	1	72	1004.681	ppb	1.593	3329967	1000	100.5	90	110	
Co	59	2	72	48.212	ppb	3.138	98068	50	96.4	90	110	
Ni	60	2	72	48.470	ppb	1.955	27824	50	96.9	90	110	
Cu	63	2	72	48.234	ppb	1.866	75010	50	96.5	90	110	
Zn	66	2	72	50.320	ppb	4.344	15117	50	100.6	90	110	
As	75	2	72	49.608	ppb	0.702	11498	50	99.2	90	110	
Se	78	1	72	49.886	ppb	1.848	6786	50	99.8	90	110	
Sr	88	2	72	97.770	ppb	1.435	65663	100	97.8	90	110	
Zr	90	2	72	29.259	ppb	114.481	730	50	58.5	90	110	>+\-10%
Mo	95	2	115	50.897	ppb	2.053	40218	50	101.8	90	110	
Ag	107	2	115	48.731	ppb	1.423	127982	50	97.5	90	110	
Cd	111	2	115	49.188	ppb	0.708	20110	50	98.4	90	110	
Sn	120	2	115	48.052	ppb	2.197	54519	50	96.1	90	110	
Sb	121	2	115	49.557	ppb	1.917	59018	50	99.1	90	110	
Ba	137	2	115	49.248	ppb	4.822	16876	50	98.5	90	110	
W	182	2	165	49.539	ppb	1.169	166055	50	99.1	90	110	
Tl	205	2	165	48.234	ppb	0.560	335748	50	96.5	90	110	
Pb	208	2	165	48.142	ppb	0.709	459760	50	96.3	90	110	
Th	232	2	193	49.953	ppb	1.523	527031	50	99.9	90	110	
U	238	2	193	49.179	ppb	0.665	542306	50	98.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	237973	0.69	253490	93.88	60	120	
Sc (IS)	45	1	HMI H2	9285277	1.05	9587331	96.85	60	120	
Sc (IS)	45	2	HMI He	942295	1.02	964862	97.66	60	120	
Sc (IS)	45	3	No Gas	17488226	1.28	17821643	98.13	60	120	
Ge Internal standard	72	1	HMI H2	5056363	0.35	5262568	96.08	60	120	
Ge Internal standard	72	2	HMI He	1122514	0.73	1150133	97.60	60	120	
In Internal standard	115	2	HMI He	3835953	0.75	3923278	97.77	60	120	
Ho-165	165	2	HMI He	14577569	0.56	14697450	99.18	60	120	
Ir (IS)	193	2	HMI He	10885913	0.67	10905184	99.82	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	133_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:51:47-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	1.116	ppb	355.4	870029	10	
Be	9	1	6	0.066	ppb	110.2	33	0.5	
B	11	1	6	27.974	ppb	4.8	6301	0.5	>RL
Na	23	2	45	17.472	ppb	23.0	29800	25	
Mg	24	2	45	-0.967	ppb	-56.7	1030	25	
Al	27	2	45	6.502	ppb	14.2	230	15	
K	39	2	45	1.914	ppb	1105.0	42822	50	
Ti	47	2	45	1.052	ppb	107.8	27	0.5	>RL
V	51	2	72	-0.189	ppb	-69.3	1260	1	
Cr	52	2	72	-0.051	ppb	-182.1	2354	1	
Mn	55	2	72	0.014	ppb	1207.2	283	0.5	
(Fe)	57	2	72	4.959	ppb	119.0	367	25	
Co	59	2	72	0.054	ppb	23.2	160	0.5	
Ni	60	2	72	-0.494	ppb	-32.7	327	1	
Cu	63	2	72	-0.027	ppb	-533.0	1600	1	
Zn	66	2	72	-0.096	ppb	-122.0	467	5	
As	75	2	72	-0.107	ppb	-130.7	78	1	
Se	78	1	72	0.039	ppb	43.4	11	1	
Sr	88	2	72	-0.186	ppb	-35.2	160	0.5	
Zr	90	2	72	-17.151	ppb	-136.0	583	1	
Mo	95	2	115	0.082	ppb	87.0	97	0.5	
Ag	107	2	115	0.002	ppb	498.8	57	1	
Cd	111	2	115	0.009	ppb	160.3	13	0.5	
Sn	120	2	115	0.001	ppb	3567.9	903	1	
Sb	121	2	115	0.141	ppb	26.9	210	0.6	
Ba	137	2	115	0.035	ppb	338.5	93	0.5	
W	182	2	165	0.131	ppb	26.1	1293	1	
Tl	205	2	165	0.045	ppb	9.9	533	0.1	
Pb	208	2	165	-0.057	ppb	-53.6	2640	0.5	
Th	232	2	193	0.353	ppb	2.4	13887	1	
U	238	2	193	0.042	ppb	51.8	3531	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	246795	0.50	253490	97.36	60	120	
Sc (IS)	45	1	HMI H2	9451527	0.25	9587331	98.58	60	120	
Sc (IS)	45	2	HMI He	942458	0.53	964862	97.68	60	120	
Sc (IS)	45	3	No Gas	17367868	0.58	17821643	97.45	60	120	
Ge Internal standard	72	1	HMI H2	5176857	0.73	5262568	98.37	60	120	
Ge Internal standard	72	2	HMI He	1130760	0.46	1150133	98.32	60	120	
In Internal standard	115	2	HMI He	3832166	0.72	3923278	97.68	60	120	
Ho-165	165	2	HMI He	14631581	0.79	14697450	99.55	60	120	
Ir (IS)	193	2	HMI He	11005302	0.12	10905184	100.92	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7686815
Data File Name	134LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:55:21-06:00
Sample Type	LLCCV
Dilution	1
Comment	6084889 6020a
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	11.067	ppb	35.311	930747	50	22.1	70	130	>+/-30%
Be	9	1	6	1.041	ppb	32.068	240	1	104.1	70	130	
Na	23	2	45	307.749	ppb	1.005	89993	300	102.6	70	130	
Mg	24	2	45	48.391	ppb	10.727	5661	50	96.8	70	130	
Al	27	2	45	55.283	ppb	2.860	1570	50	110.6	70	130	
K	39	2	45	92.380	ppb	6.978	49032	120	77.0	70	130	
Ca	40	1	45	214.097	ppb	0.968	391382	200	107.0	70	130	
V	51	2	72	5.065	ppb	5.854	6462	5	101.3	70	130	
Cr	52	2	72	2.242	ppb	5.927	5324	2	112.1	70	130	
Mn	55	2	72	1.141	ppb	17.177	943	1	114.1	70	130	
Fe	56	1	72	50.308	ppb	0.421	194008	50	100.6	70	130	
(Fe)	57	2	72	52.627	ppb	10.606	1560	50	105.3	70	130	
Co	59	2	72	1.123	ppb	12.789	2357	1	112.3	70	130	
Ni	60	2	72	2.013	ppb	4.281	1750	2	100.6	70	130	
Cu	63	2	72	2.007	ppb	7.824	4731	2	100.4	70	130	
Zn	66	2	72	9.991	ppb	2.460	3431	10	99.9	70	130	
As	75	2	72	4.999	ppb	6.628	1263	5	100.0	70	130	
Se	78	1	72	5.122	ppb	9.493	717	5	102.4	70	130	
Sr	88	2	72	4.645	ppb	3.583	3424	5	92.9	70	130	
Zr	90	2	72	27.819	ppb	277.106	733	0.5	5563.7	70	130	>+/-30%
Mo	95	2	115	1.999	ppb	21.427	1603	2	99.9	70	130	
Ag	107	2	115	1.035	ppb	8.574	2764	1	103.5	70	130	
Cd	111	2	115	0.876	ppb	8.556	367	1	87.6	70	130	
Sn	120	2	115	9.648	ppb	5.749	11638	10	96.5	70	130	
Sb	121	2	115	2.268	ppb	4.032	2734	2	113.4	70	130	
Ba	137	2	115	1.279	ppb	5.911	517	1	127.9	70	130	
W	182	2	165	0.041	ppb	152.242	997	1	4.1	70	130	>+/-30%
Tl	205	2	165	0.967	ppb	2.867	6995	1	96.7	70	130	
Pb	208	2	165	1.088	ppb	4.438	13590	1	108.8	70	130	
Th	232	2	193	1.012	ppb	4.880	20902	1	101.2	70	130	
U	238	2	193	1.051	ppb	4.630	14815	1	105.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	248732	0.35	253490	98.12	60	120	
Sc (IS)	45	1	HMI H2	9388333	0.71	9587331	97.92	60	120	
Sc (IS)	45	2	HMI He	946046	0.67	964862	98.05	60	120	
Sc (IS)	45	3	No Gas	17244071	1.33	17821643	96.76	60	120	
Ge Internal standard	72	1	HMI H2	5169299	0.90	5262568	98.23	60	120	
Ge Internal standard	72	2	HMI He	1133880	0.61	1150133	98.59	60	120	
In Internal standard	115	2	HMI He	3825732	1.36	3923278	97.51	60	120	
Ho-165	165	2	HMI He	14685309	0.45	14697450	99.92	60	120	
Ir (IS)	193	2	HMI He	11075663	1.07	10905184	101.56	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-7686816
Data File Name	135ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T17:58:55-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-9.224	ppb	-25.3	807299	1	
Be	9	1	6	0.008	ppb	1121.4	20	1	
B	11	1	6	14.839	ppb	4.6	4107	1	>RL or LOD
Ti	47	2	45	1995.761	ppb	1.4	50744	1	>RL or LOD
V	51	2	72	-0.149	ppb	-38.6	1273	1	
Cr	52	2	72	1.220	ppb	15.2	3911	1	>RL or LOD
Mn	55	2	72	0.135	ppb	103.5	347	0.95	
Co	59	2	72	0.219	ppb	16.3	487	0.2	>RL or LOD
Ni	60	2	72	-0.332	ppb	-35.9	410	1	
Cu	63	2	72	0.711	ppb	12.2	2674	1	
Zn	66	2	72	0.239	ppb	48.4	553	1	
As	75	2	72	-0.019	ppb	-706.1	97	1	
Se	78	1	72	0.160	ppb	29.5	27	1	
Sr	88	2	72	0.566	ppb	30.7	653	1	
Zr	90	2	72	775.557	ppb	27.8	3104	1	>RL or LOD
Mo	95	2	115	2091.705	ppb	1.5	1582493	2000	>RL or LOD
Ag	107	2	115	0.023	ppb	11.4	107	1	
Cd	111	2	115	0.300	ppb	40.3	127	1	
Sn	120	2	115	-0.036	ppb	-184.6	827	1	
Sb	121	2	115	0.146	ppb	31.3	207	1	
Ba	137	2	115	1.209	ppb	24.3	473	0.95	>RL or LOD
W	182	2	165	0.090	ppb	48.9	1160	1	
Tl	205	2	165	0.005	ppb	191.4	257	1	
Pb	208	2	165	0.019	ppb	117.1	3374	1	
Th	232	2	193	0.054	ppb	52.6	10214	1	
U	238	2	193	0.065	ppb	35.5	3594	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	235408	0.93	253490	92.87	60	120	
Sc (IS)	45	1	HMI H2	9254851	1.27	9587331	96.53	60	120	
Sc (IS)	45	2	HMI He	949012	0.63	964862	98.36	60	120	
Sc (IS)	45	3	No Gas	17527196	0.78	17821643	98.35	60	120	
Ge Internal standard	72	1	HMI H2	5031960	1.35	5262568	95.62	60	120	
Ge Internal standard	72	2	HMI He	1107991	1.32	1150133	96.34	60	120	
In Internal standard	115	2	HMI He	3675702	0.79	3923278	93.69	60	120	
Ho-165	165	2	HMI He	14665181	0.62	14697450	99.78	60	120	
Ir (IS)	193	2	HMI He	10454132	0.28	10905184	95.86	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-7686817
Data File Name	136ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:02:26-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	177.344	ppb	0.831	2101145	100	177.3	80	120	>+\-20%
Be	9	1	6	103.773	ppb	2.383	20276	100	103.8	80	120	
B	11	1	6	1066.671	ppb	0.735	152406	100	1066.7	80	120	>+\-20%
Ca	40	1	45	103888.670	ppb	1.076	158906568	100	103888.7	80	120	>+\-20%
V	51	2	72	94.664	ppb	2.076	93865	100	94.7	80	120	
Cr	52	2	72	97.015	ppb	1.090	126199	100	97.0	80	120	
Mn	55	2	72	94.675	ppb	0.058	54945	100	94.7	80	120	
Fe	56	1	72	94397.853	ppb	1.440	307518302	100	94397.9	80	120	>+\-20%
Co	59	2	72	92.513	ppb	1.037	187575	100	92.5	80	120	
Ni	60	2	72	90.764	ppb	3.160	51414	100	90.8	80	120	
Cu	63	2	72	93.166	ppb	0.881	142950	100	93.2	80	120	
Zn	66	2	72	93.874	ppb	2.902	27704	100	93.9	80	120	
As	75	2	72	94.772	ppb	0.639	21809	100	94.8	80	120	
Se	78	1	72	99.478	ppb	1.692	13390	100	99.5	80	120	
Sr	88	2	72	193.686	ppb	0.871	129418	100	193.7	80	120	>+\-20%
Zr	90	2	72	317.733	ppb	19.263	1660	100	317.7	80	120	>+\-20%
Mo	95	2	115	2120.378	ppb	1.850	1623999	100	2120.4	80	120	>+\-20%
Ag	107	2	115	95.481	ppb	1.100	243215	100	95.5	80	120	
Cd	111	2	115	93.689	ppb	3.532	37144	100	93.7	80	120	
Sn	120	2	115	96.687	ppb	0.565	105541	100	96.7	80	120	
Sb	121	2	115	99.014	ppb	2.032	114336	100	99.0	80	120	
Ba	137	2	115	98.598	ppb	3.694	32702	100	98.6	80	120	
W	182	2	165	98.003	ppb	1.454	330813	100	98.0	80	120	
Tl	205	2	165	90.579	ppb	0.517	636373	100	90.6	80	120	
Pb	208	2	165	89.666	ppb	0.923	861806	100	89.7	80	120	
Th	232	2	193	100.946	ppb	0.660	1007218	100	100.9	80	120	
U	238	2	193	104.580	ppb	1.725	1097826	100	104.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	229209	0.33	253490	90.42	60	120	
Sc (IS)	45	1	HMI H2	9440855	0.85	9587331	98.47	60	120	
Sc (IS)	45	2	HMI He	957800	0.39	964862	99.27	60	120	
Sc (IS)	45	3	No Gas	17664295	0.06	17821643	99.12	60	120	
Ge Internal standard	72	1	HMI H2	5005857	0.51	5262568	95.12	60	120	
Ge Internal standard	72	2	HMI He	1119155	0.93	1150133	97.31	60	120	
In Internal standard	115	2	HMI He	3721223	0.82	3923278	94.85	60	120	
Ho-165	165	2	HMI He	14718128	0.97	14697450	100.14	60	120	
Ir (IS)	193	2	HMI He	10395446	1.30	10905184	95.33	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	137SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:05:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-6.708	ppb	-6.708	-52.51	833925	50000	
Be	9	1	6	0.157	ppb	0.157	96.55	50	2000	
B	11	1	6	23.623	ppb	23.623	4.03	5401	2000	
Na	23	2	45	23.768	ppb	23.768	46.94	31550	400000	
Mg	24	2	45	11.653	ppb	11.653	29.58	2240	400000	
Al	27	2	45	15.156	ppb	15.156	9.27	473	400000	
Si	28	2	45	-6.502	ppb	-6.502	-46.04	18280	10000	
P	31	2	45	9.278	ppb	9.278	57.37	183	10000	
K	39	2	45	30.529	ppb	30.529	32.16	45395	400000	
Ca	40	1	45	35.733	ppb	35.733	15.39	120146	400000	
Ti	47	2	45	1.822	ppb	1.822	32.78	47	4000	
V	51	2	72	-0.040	ppb	-0.040	-226.64	1413	2000	
Cr	52	2	72	0.001	ppb	0.001	7352.75	2430	5000	
Mn	55	2	72	-0.131	ppb	-0.131	-13.77	200	10000	
Fe	56	1	72	41.903	ppb	41.903	16.11	165032	10000	
(Fe)	57	2	72	18.473	ppb	18.473	27.39	707	400000	
Co	59	2	72	0.052	ppb	0.052	30.31	157	2000	
Ni	60	2	72	-0.210	ppb	-0.210	-67.52	490	5000	
Cu	63	2	72	-0.031	ppb	-0.031	-304.42	1600	5000	
Zn	66	2	72	-0.272	ppb	-0.272	-139.04	417	5000	
As	75	2	72	-0.050	ppb	-0.050	-68.13	92	2000	
Se	78	1	72	0.079	ppb	0.079	132.53	16	2000	
Sr	88	2	72	-0.206	ppb	-0.206	-43.56	147	4000	
Zr	90	2	72	-6.799	ppb	-6.799	-349.01	620	1000	
Mo	95	2	115	3.213	ppb	3.213	5.65	2587	2000	
Ag	107	2	115	0.005	ppb	0.005	111.24	67	100	
Cd	111	2	115	0.033	ppb	0.033	153.88	23	2000	
Sn	120	2	115	0.001	ppb	0.001	6871.80	910	2000	
Sb	121	2	115	0.142	ppb	0.142	15.26	213	1000	
Ba	137	2	115	0.023	ppb	0.023	436.72	90	5000	
W	182	2	165	0.230	ppb	0.230	28.74	1627	100	
Tl	205	2	165	0.098	ppb	0.098	21.64	903	2000	
Pb	208	2	165	-0.062	ppb	-0.062	-8.65	2600	5000	
Th	232	2	193	0.359	ppb	0.359	25.01	13613	2000	
U	238	2	193	0.056	ppb	0.056	26.72	3597	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	236343	0.95	253490	93.24	60	120	
Sc (IS)	45	1	HMI H2	9382910	0.50	9587331	97.87	60	120	
Sc (IS)	45	2	HMI He	956491	0.84	964862	99.13	60	120	
Sc (IS)	45	3	No Gas	17729780	0.97	17821643	99.48	60	120	
Ge Internal standard	72	1	HMI H2	5144700	1.77	5262568	97.76	60	120	
Ge Internal standard	72	2	HMI He	1135544	0.29	1150133	98.73	60	120	
In Internal standard	115	2	HMI He	3861566	1.01	3923278	98.43	60	120	
Ho-165	165	2	HMI He	14631250	0.42	14697450	99.55	60	120	
Ir (IS)	193	2	HMI He	10739932	0.96	10905184	98.48	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	138_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:09:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	50.527	ppb	2.839	9990	50	101.1	90	110	
Na	23	2	45	52195.220	ppb	0.501	10951961	51000	102.3	90	110	
Mg	24	2	45	10685.262	ppb	0.922	1014467	11000	97.1	90	110	
Al	27	2	45	958.201	ppb	3.192	26652	1000	95.8	90	110	
K	39	2	45	10196.539	ppb	0.563	732314	11000	92.7	90	110	
Ca	40	1	45	11139.139	ppb	0.676	16968323	11000	101.3	90	110	
Ti	47	2	45	52.519	ppb	4.847	1347	50	105.0	90	110	
V	51	2	72	50.355	ppb	2.662	50955	50	100.7	90	110	
Cr	52	2	72	48.746	ppb	1.860	65044	50	97.5	90	110	
Mn	55	2	72	50.170	ppb	1.996	29447	50	100.3	90	110	
Fe	56	1	72	986.006	ppb	1.639	3298346	1000	98.6	90	110	
Co	59	2	72	48.261	ppb	1.160	98551	50	96.5	90	110	
Ni	60	2	72	47.255	ppb	4.736	27253	50	94.5	90	110	
Cu	63	2	72	47.528	ppb	1.232	74233	50	95.1	90	110	
Zn	66	2	72	48.377	ppb	1.135	14614	50	96.8	90	110	
As	75	2	72	50.449	ppb	2.723	11738	50	100.9	90	110	
Se	78	1	72	49.361	ppb	3.308	6775	50	98.7	90	110	
Sr	88	2	72	98.790	ppb	1.638	66613	100	98.8	90	110	
Zr	90	2	72	79.753	ppb	49.604	897	50	159.5	90	110	>+\-10%
Mo	95	2	115	51.010	ppb	0.345	40485	50	102.0	90	110	
Ag	107	2	115	47.924	ppb	1.183	126423	50	95.8	90	110	
Cd	111	2	115	49.520	ppb	1.419	20334	50	99.0	90	110	
Sn	120	2	115	48.021	ppb	1.358	54728	50	96.0	90	110	
Sb	121	2	115	49.034	ppb	1.057	58646	50	98.1	90	110	
Ba	137	2	115	49.614	ppb	4.788	17080	50	99.2	90	110	
W	182	2	165	48.436	ppb	0.893	163237	50	96.9	90	110	
Tl	205	2	165	47.758	ppb	1.689	334176	50	95.5	90	110	
Pb	208	2	165	47.693	ppb	1.371	457901	50	95.4	90	110	
Th	232	2	193	49.438	ppb	1.550	511167	50	98.9	90	110	
U	238	2	193	49.316	ppb	1.938	532783	50	98.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	231681	1.49	253490	91.40	60	120	
Sc (IS)	45	1	HMI H2	9369739	1.83	9587331	97.73	60	120	
Sc (IS)	45	2	HMI He	956852	1.20	964862	99.17	60	120	
Sc (IS)	45	3	No Gas	17777234	0.34	17821643	99.75	60	120	
Ge Internal standard	72	1	HMI H2	5102918	1.41	5262568	96.97	60	120	
Ge Internal standard	72	2	HMI He	1126948	0.51	1150133	97.98	60	120	
In Internal standard	115	2	HMI He	3852728	0.13	3923278	98.20	60	120	
Ho-165	165	2	HMI He	14654709	0.65	14697450	99.71	60	120	
Ir (IS)	193	2	HMI He	10666499	0.79	10905184	97.81	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	139_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:13:05-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-2.981	ppb	-71.1	851819	10	
Be	9	1	6	0.248	ppb	19.9	70	0.5	
B	11	1	6	27.133	ppb	7.0	6045	0.5	>RL
Na	23	2	45	10.205	ppb	42.7	28598	25	
Mg	24	2	45	-2.671	ppb	-29.3	880	25	
Al	27	2	45	5.447	ppb	30.1	203	15	
K	39	2	45	-1.800	ppb	-854.9	43026	50	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.128	ppb	-97.6	1327	1	
Cr	52	2	72	0.027	ppb	271.6	2467	1	
Mn	55	2	72	-0.057	ppb	-144.8	243	0.5	
(Fe)	57	2	72	11.269	ppb	24.8	527	25	
Co	59	2	72	0.029	ppb	17.8	110	0.5	
Ni	60	2	72	-0.234	ppb	-38.9	477	1	
Cu	63	2	72	-0.163	ppb	-21.9	1397	1	
Zn	66	2	72	0.043	ppb	531.5	510	5	
As	75	2	72	-0.101	ppb	-53.8	80	1	
Se	78	1	72	0.001	ppb	3043.6	5	1	
Sr	88	2	72	-0.211	ppb	-74.5	143	0.5	
Zr	90	2	72	-34.226	ppb	-83.6	530	1	
Mo	95	2	115	0.231	ppb	28.7	217	0.5	
Ag	107	2	115	0.023	ppb	91.2	113	1	
Cd	111	2	115	-0.016	ppb	-88.9	3	0.5	
Sn	120	2	115	0.090	ppb	8.2	1010	1	
Sb	121	2	115	0.087	ppb	22.0	147	0.6	
Ba	137	2	115	-0.035	ppb	-364.5	70	0.5	
W	182	2	165	0.118	ppb	39.2	1247	1	
Tl	205	2	165	0.056	ppb	19.5	610	0.1	
Pb	208	2	165	-0.054	ppb	-15.3	2664	0.5	
Th	232	2	193	0.358	ppb	9.4	13804	1	
U	238	2	193	0.045	ppb	41.2	3537	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	241665	0.82	253490	95.34	60	120	
Sc (IS)	45	1	HMI H2	9384453	0.53	9587331	97.88	60	120	
Sc (IS)	45	2	HMI He	952393	0.58	964862	98.71	60	120	
Sc (IS)	45	3	No Gas	17562416	1.23	17821643	98.55	60	120	
Ge Internal standard	72	1	HMI H2	5123958	0.49	5262568	97.37	60	120	
Ge Internal standard	72	2	HMI He	1136323	0.77	1150133	98.80	60	120	
In Internal standard	115	2	HMI He	3863568	1.01	3923278	98.48	60	120	
Ho-165	165	2	HMI He	14581799	0.71	14697450	99.21	60	120	
Ir (IS)	193	2	HMI He	10897309	0.93	10905184	99.93	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608084/1-A
Data File Name	140_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:16:41-06:00
Sample Type	Blank
Dilution	1
Comment	608084 6020b
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	-3.182	ppb	-96.1757992	855095	10
Be	9	1	6	-0.060	ppb	-93.60565375	7	0.5
B	11	1	6	8.924	ppb	2.972393377	3387	0.5
Na	23	2	45	-8.722	ppb	-19.08369103	24562	25
Mg	24	2	45	-3.415	ppb	-55.50230372	807	25
Al	27	2	45	4.278	ppb	67.11146197	170	15
K	39	2	45	-3.923	ppb	-287.2630265	42715	50
Ti	47	2	45	0.918	ppb	65.65067145	23	0.5
V	51	2	72	-0.102	ppb	-37.75121546	1350	1
Cr	52	2	72	0.012	ppb	1940.441296	2444	1
Mn	55	2	72	-0.108	ppb	-49.71205992	213	0.5
(Fe)	57	2	72	12.641	ppb	39.33374945	560	25
Co	59	2	72	0.013	ppb	56.72693398	77	0.5
Ni	60	2	72	-0.214	ppb	-94.92392772	487	1
Cu	63	2	72	0.007	ppb	1653.189993	1657	1
Zn	66	2	72	0.216	ppb	205.5065539	560	5
As	75	2	72	-0.055	ppb	-99.36202861	91	1
Se	78	1	72	0.039	ppb	151.496693	11	1
Sr	88	2	72	-0.206	ppb	-51.44689632	147	0.5
Zr	90	2	72	-9.629	ppb	-90.09673604	610	1
Mo	95	2	115	0.099	ppb	44.23982918	110	0.5
Ag	107	2	115	-0.010	ppb	-60.12561348	27	1
Cd	111	2	115	-0.024	ppb	0	0	0.5
Sn	120	2	115	-0.125	ppb	-12.49341479	760	1
Sb	121	2	115	0.035	ppb	14.98813219	83	0.6
Ba	137	2	115	0.203	ppb	81.73377071	150	0.5
W	182	2	165	-0.010	ppb	-270.8113851	827	1
Tl	205	2	165	0.008	ppb	70.15479497	277	0.1
Pb	208	2	165	-0.082	ppb	-36.24851743	2424	0.5
Th	232	2	193	-0.059	ppb	-36.27053476	9654	1
U	238	2	193	0.022	ppb	57.95138226	3344	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	245389	2.48	253490	96.80	60	120	
Sc (IS)	45	1	HMI H2	9465000	3.06	9587331	98.72	60	120	
Sc (IS)	45	2	HMI He	948647	0.65	964862	98.32	60	120	
Sc (IS)	45	3	No Gas	17660001	0.56	17821643	99.09	60	120	
Ge Internal standard	72	1	HMI H2	5185313	3.35	5262568	98.53	60	120	
Ge Internal standard	72	2	HMI He	1134375	0.38	1150133	98.63	60	120	
In Internal standard	115	2	HMI He	3818735	0.43	3923278	97.34	60	120	
Ho-165	165	2	HMI He	14728694	0.57	14697450	100.21	60	120	
Ir (IS)	193	2	HMI He	11101229	0.20	10905184	101.80	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608084/23-A
Data File Name	141_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:20:15-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608084 6020b
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	40.847	40.847	ppb	3.181	1153719	400	10.2	80	120	>+/-20%
Be	9	1	6	39.173	39.173	ppb	3.700	8192	40	97.9	80	120	
Na	23	2	45	838.629	838.629	ppb	2.568	200653	40	2096.6	80	120	>+/-20%
Mg	24	2	45	769.611	769.611	ppb	1.490	73585	40	1924.0	80	120	>+/-20%
Al	27	2	45	795.669	795.669	ppb	2.329	21985	40	1989.2	80	120	>+/-20%
K	39	2	45	757.746	757.746	ppb	0.962	93869	40	1894.4	80	120	>+/-20%
V	51	2	72	40.280	40.280	ppb	4.011	41245	40	100.7	80	120	
Cr	52	2	72	40.737	40.737	ppb	2.843	55011	40	101.8	80	120	
Mn	55	2	72	39.853	39.853	ppb	2.324	23561	40	99.6	80	120	
(Fe)	57	2	72	816.280	816.280	ppb	2.597	20630	40	2040.7	80	120	>+/-20%
Co	59	2	72	41.213	41.213	ppb	0.969	84568	40	103.0	80	120	
Ni	60	2	72	40.435	40.435	ppb	3.995	23514	40	101.1	80	120	
Cu	63	2	72	41.198	41.198	ppb	0.490	64871	40	103.0	80	120	
Zn	66	2	72	42.252	42.252	ppb	2.616	12886	40	105.6	80	120	
As	75	2	72	40.071	40.071	ppb	1.649	9389	40	100.2	80	120	
Se	78	1	72	41.124	41.124	ppb	2.168	5664	40	102.8	80	120	
Mo	95	2	115	39.463	39.463	ppb	2.091	31314	40	98.7	80	120	
Ag	107	2	115	41.221	41.221	ppb	1.068	108683	40	103.1	80	120	
Cd	111	2	115	39.993	39.993	ppb	5.310	16419	40	100.0	80	120	
Sn	120	2	115	38.291	38.291	ppb	1.950	43794	40	95.7	80	120	
Sb	121	2	115	40.215	40.215	ppb	2.354	48074	40	100.5	80	120	
Ba	137	2	115	39.821	39.821	ppb	1.130	13717	40	99.6	80	120	
W	182	2	165	0.050	0.050	ppb	44.545	1027	40	0.1	80	120	>+/-20%
Tl	205	2	165	40.042	40.042	ppb	2.128	280293	40	100.1	80	120	
Pb	208	2	165	40.188	40.188	ppb	1.675	386454	40	100.5	80	120	
Th	232	2	193	38.507	38.507	ppb	0.305	417242	40	96.3	80	120	
U	238	2	193	39.585	39.585	ppb	1.316	446368	40	99.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	245041	1.04	253490	96.67	60	120	
Sc (IS)	45	1	HMI H2	9351554	0.35	9587331	97.54	60	120	
Sc (IS)	45	2	HMI He	949918	0.92	964862	98.45	60	120	
Sc (IS)	45	3	No Gas	17581818	0.93	17821643	98.65	60	120	
Ge Internal standard	72	1	HMI H2	5118597	0.63	5262568	97.26	60	120	
Ge Internal standard	72	2	HMI He	1132291	0.40	1150133	98.45	60	120	
In Internal standard	115	2	HMI He	3850608	0.83	3923278	98.15	60	120	
Ho-165	165	2	HMI He	14659114	0.99	14697450	99.74	60	120	
Ir (IS)	193	2	HMI He	11116376	0.55	10905184	101.94	60	120	

Sample Report

Sample Table

Sample Name	280-174736-A-19-A
Data File Name	142SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:23:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	11.954	ppb	11.954	20.88	930317	50000	
Be	9	1	6	0.039	ppb	0.039	316.03	27	2000	
B	11	1	6	87.593	ppb	87.593	4.56	14810	2000	
Na	23	2	45	30859.738	ppb	30859.738	0.71	6285975	400000	
Mg	24	2	45	20856.397	ppb	20856.397	0.78	1918067	400000	
Al	27	2	45	33.872	ppb	33.872	18.87	963	400000	
Si	28	2	45	2316.821	ppb	2316.821	0.47	401345	10000	
P	31	2	45	999.835	ppb	999.835	3.67	2856	10000	
K	39	2	45	4981.128	ppb	4981.128	0.53	368213	400000	
Ca	40	1	45	67334.591	ppb	67334.591	1.43	101541585	400000	
Ti	47	2	45	1.472	ppb	1.472	68.62	37	4000	
V	51	2	72	0.167	ppb	0.167	41.75	1593	2000	
Cr	52	2	72	0.074	ppb	0.074	187.69	2487	5000	
Mn	55	2	72	213.349	ppb	213.349	1.22	123355	10000	
Fe	56	1	72	4786.316	ppb	4786.316	1.19	15976521	10000	
(Fe)	57	2	72	4771.220	ppb	4771.220	0.94	117910	400000	
Co	59	2	72	0.093	ppb	0.093	23.72	237	2000	
Ni	60	2	72	-0.178	ppb	-0.178	-51.70	500	5000	
Cu	63	2	72	-0.125	ppb	-0.125	-16.26	1433	5000	
Zn	66	2	72	1.419	ppb	1.419	14.05	900	5000	
As	75	2	72	3.633	ppb	3.633	7.91	933	2000	
Se	78	1	72	0.079	ppb	0.079	160.86	16	2000	
Sr	88	2	72	320.479	ppb	320.479	1.20	213750	4000	
Zr	90	2	72	42.660	ppb	42.660	44.44	770	1000	
Mo	95	2	115	2.624	ppb	2.624	11.49	2050	2000	
Ag	107	2	115	0.017	ppb	0.017	75.00	93	100	
Cd	111	2	115	0.010	ppb	0.010	400.47	13	2000	
Sn	120	2	115	-0.196	ppb	-0.196	-5.56	667	2000	
Sb	121	2	115	0.108	ppb	0.108	22.52	167	1000	
Ba	137	2	115	426.377	ppb	426.377	2.17	141812	5000	
W	182	2	165	0.066	ppb	0.066	30.43	1073	100	
Tl	205	2	165	0.035	ppb	0.035	43.42	463	2000	
Pb	208	2	165	-0.053	ppb	-0.053	-12.51	2670	5000	
Th	232	2	193	0.427	ppb	0.427	4.83	14271	2000	
U	238	2	193	0.041	ppb	0.041	48.82	3434	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	237981	0.15	253490	93.88	60	120	
Sc (IS)	45	1	HMI H2	9305491	0.48	9587331	97.06	60	120	
Sc (IS)	45	2	HMI He	927337	0.96	964862	96.11	60	120	
Sc (IS)	45	3	No Gas	17123733	1.44	17821643	96.08	60	120	
Ge Internal standard	72	1	HMI H2	5121748	0.87	5262568	97.32	60	120	
Ge Internal standard	72	2	HMI He	1118040	0.31	1150133	97.21	60	120	
In Internal standard	115	2	HMI He	3738501	0.61	3923278	95.29	60	120	
Ho-165	165	2	HMI He	14568444	0.98	14697450	99.12	60	120	
Ir (IS)	193	2	HMI He	10712714	0.40	10905184	98.24	60	120	

Sample Report

Sample Table

Sample Name	280-174736-A-20-A
Data File Name	143SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:27:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	17.587	ppb	17.587	17.92	965789	50000	
Be	9	1	6	0.022	ppb	0.022	252.85	23	2000	
B	11	1	6	211.264	ppb	211.264	1.55	33006	2000	
Na	23	2	45	33545.087	ppb	33545.087	0.38	6810327	400000	
Mg	24	2	45	25002.872	ppb	25002.872	0.98	2292223	400000	
Al	27	2	45	3.546	ppb	3.546	93.39	147	400000	
Si	28	2	45	3310.258	ppb	3310.258	0.76	563638	10000	
P	31	2	45	2142.018	ppb	2142.018	1.59	5926	10000	
K	39	2	45	9952.290	ppb	9952.290	1.47	691640	400000	
Ca	40	1	45	72579.555	ppb	72579.555	0.22	108555425	400000	
Ti	47	2	45	1.078	ppb	1.078	22.37	27	4000	
V	51	2	72	0.253	ppb	0.253	16.81	1657	2000	
Cr	52	2	72	0.050	ppb	0.050	301.64	2427	5000	
Mn	55	2	72	1193.659	ppb	1193.659	1.19	680679	10000	
Fe	56	1	72	6834.512	ppb	6834.512	1.06	22422645	10000	
(Fe)	57	2	72	6879.504	ppb	6879.504	0.96	167877	400000	
Co	59	2	72	0.103	ppb	0.103	42.63	253	2000	
Ni	60	2	72	-0.295	ppb	-0.295	-67.31	430	5000	
Cu	63	2	72	-0.225	ppb	-0.225	-53.90	1267	5000	
Zn	66	2	72	0.267	ppb	0.267	60.90	560	5000	
As	75	2	72	51.846	ppb	51.846	1.06	11821	2000	
Se	78	1	72	0.041	ppb	0.041	148.17	11	2000	
Sr	88	2	72	454.361	ppb	454.361	1.69	299285	4000	
Zr	90	2	72	53.944	ppb	53.944	38.88	797	1000	
Mo	95	2	115	1.490	ppb	1.490	17.41	1157	2000	
Ag	107	2	115	0.001	ppb	0.001	1050.42	53	100	
Cd	111	2	115	-0.007	ppb	-0.007	-435.89	7	2000	
Sn	120	2	115	-0.175	ppb	-0.175	-62.94	677	2000	
Sb	121	2	115	0.058	ppb	0.058	68.37	107	1000	
Ba	137	2	115	386.097	ppb	386.097	0.99	126058	5000	
W	182	2	165	0.194	ppb	0.194	14.15	1497	100	
Tl	205	2	165	-0.012	ppb	-0.012	-50.08	133	2000	
Pb	208	2	165	-0.087	ppb	-0.087	-14.67	2347	5000	
Th	232	2	193	0.017	ppb	0.017	100.82	10020	2000	
U	238	2	193	0.033	ppb	0.033	44.66	3321	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	238565	0.63	253490	94.11	60	120	
Sc (IS)	45	1	HMI H2	9229384	0.76	9587331	96.27	60	120	
Sc (IS)	45	2	HMI He	924520	0.87	964862	95.82	60	120	
Sc (IS)	45	3	No Gas	17086071	1.16	17821643	95.87	60	120	
Ge Internal standard	72	1	HMI H2	5036484	1.15	5262568	95.70	60	120	
Ge Internal standard	72	2	HMI He	1104666	0.63	1150133	96.05	60	120	
In Internal standard	115	2	HMI He	3669178	0.99	3923278	93.52	60	120	
Ho-165	165	2	HMI He	14551121	0.41	14697450	99.00	60	120	
Ir (IS)	193	2	HMI He	10639183	0.63	10905184	97.56	60	120	

Sample Report

Sample Table

Sample Name	280-174736-A-21-A
Data File Name	144SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:30:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	7.997	ppb	7.997	28.40	919499	50000	
Be	9	1	6	0.004	ppb	0.004	3067.10	20	2000	
B	11	1	6	86.915	ppb	86.915	3.17	15044	2000	
Na	23	2	45	22284.036	ppb	22284.036	0.78	4580300	400000	
Mg	24	2	45	22138.371	ppb	22138.371	1.00	2051290	400000	
Al	27	2	45	6.830	ppb	6.830	18.14	237	400000	
Si	28	2	45	2134.653	ppb	2134.653	0.28	374040	10000	
P	31	2	45	942.559	ppb	942.559	3.20	2721	10000	
K	39	2	45	4150.291	ppb	4150.291	0.41	316144	400000	
Ca	40	1	45	69905.509	ppb	69905.509	0.32	105618985	400000	
Ti	47	2	45	0.398	ppb	0.398	99.44	10	4000	
V	51	2	72	0.149	ppb	0.149	122.36	1580	2000	
Cr	52	2	72	-0.077	ppb	-0.077	-243.68	2300	5000	
Mn	55	2	72	177.260	ppb	177.260	1.77	102852	10000	
Fe	56	1	72	9211.973	ppb	9211.973	1.39	30843258	10000	
(Fe)	57	2	72	9329.250	ppb	9329.250	1.02	231047	400000	
Co	59	2	72	0.088	ppb	0.088	25.79	227	2000	
Ni	60	2	72	-0.162	ppb	-0.162	-142.17	510	5000	
Cu	63	2	72	-0.272	ppb	-0.272	-28.64	1213	5000	
Zn	66	2	72	0.493	ppb	0.493	73.70	633	5000	
As	75	2	72	5.080	ppb	5.080	5.07	1269	2000	
Se	78	1	72	0.078	ppb	0.078	36.98	16	2000	
Sr	88	2	72	316.500	ppb	316.500	1.28	211776	4000	
Zr	90	2	72	10.030	ppb	10.030	121.76	667	1000	
Mo	95	2	115	3.217	ppb	3.217	7.86	2494	2000	
Ag	107	2	115	-0.003	ppb	-0.003	-417.84	43	100	
Cd	111	2	115	-0.016	ppb	-0.016	-93.79	3	2000	
Sn	120	2	115	-0.155	ppb	-0.155	-78.57	707	2000	
Sb	121	2	115	0.013	ppb	0.013	207.41	57	1000	
Ba	137	2	115	487.275	ppb	487.275	0.82	161178	5000	
W	182	2	165	0.030	ppb	0.030	64.19	960	100	
Tl	205	2	165	-0.003	ppb	-0.003	-157.30	197	2000	
Pb	208	2	165	-0.087	ppb	-0.087	-4.00	2374	5000	
Th	232	2	193	-0.080	ppb	-0.080	-39.66	9153	2000	
U	238	2	193	0.021	ppb	0.021	13.05	3234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	243374	0.36	253490	96.01	60	120	
Sc (IS)	45	1	HMI H2	9322886	0.71	9587331	97.24	60	120	
Sc (IS)	45	2	HMI He	934269	0.85	964862	96.83	60	120	
Sc (IS)	45	3	No Gas	17418185	1.15	17821643	97.74	60	120	
Ge Internal standard	72	1	HMI H2	5141346	0.92	5262568	97.70	60	120	
Ge Internal standard	72	2	HMI He	1121633	0.92	1150133	97.52	60	120	
In Internal standard	115	2	HMI He	3717856	0.44	3923278	94.76	60	120	
Ho-165	165	2	HMI He	14700805	0.65	14697450	100.02	60	120	
Ir (IS)	193	2	HMI He	10766695	0.45	10905184	98.73	60	120	

Sample Report

Sample Table

Sample Name	280-174740-J-1-A
Data File Name	145SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:34:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	2017.024	ppb	2017.024	1.21	12476716	50000	
Be	9	1	6	0.066	ppb	0.066	316.47	20	2000	
B	11	1	6	23208.450	ppb	23208.450	1.02	2102611	2000	>LDR
Na	23	2	45	17318830.938	ppb	17318830.938	0.18	3409340109	400000	>LDR
Mg	24	2	45	17190.149	ppb	17190.149	0.28	1534274	400000	
Al	27	2	45	1363.900	ppb	1363.900	1.38	35665	400000	
Si	28	2	45	5539.094	ppb	5539.094	3.65	905801	10000	
P	31	2	45	8664.898	ppb	8664.898	2.56	22884	10000	
K	39	2	45	4161743.256	ppb	4161743.256	0.43	264504829	400000	>LDR
Ca	40	1	45	946052.219	ppb	946052.219	0.82	1240012355	400000	
Ti	47	2	45	4.562	ppb	4.562	27.19	110	4000	
V	51	2	72	31.024	ppb	31.024	0.36	27897	2000	
Cr	52	2	72	188.104	ppb	188.104	0.39	213171	5000	
Mn	55	2	72	11219.489	ppb	11219.489	0.43	5697329	10000	
Fe	56	1	72	3289.459	ppb	3289.459	2.14	9081066	10000	
(Fe)	57	2	72	3284.185	ppb	3284.185	1.95	71510	400000	
Co	59	2	72	67.332	ppb	67.332	1.08	120047	2000	
Ni	60	2	72	772.390	ppb	772.390	1.70	380790	5000	
Cu	63	2	72	469.802	ppb	469.802	1.15	628043	5000	
Zn	66	2	72	15.176	ppb	15.176	6.79	4297	5000	
As	75	2	72	518.646	ppb	518.646	1.46	104540	2000	
Se	78	1	72	465.017	ppb	465.017	1.36	52918	2000	
Sr	88	2	72	1124.095	ppb	1124.095	0.58	659306	4000	
Zr	90	2	72	114.747	ppb	114.747	47.72	883	1000	
Mo	95	2	115	14995.039	ppb	14995.039	0.91	9987357	2000	>LDR
Ag	107	2	115	0.278	ppb	0.278	39.11	660	100	
Cd	111	2	115	3.254	ppb	3.254	16.44	1130	2000	
Sn	120	2	115	3.643	ppb	3.643	5.24	4191	2000	
Sb	121	2	115	751.355	ppb	751.355	1.01	754236	1000	
Ba	137	2	115	2.020	ppb	2.020	14.87	650	5000	
W	182	2	165	208.179	ppb	208.179	1.14	519350	100	
Tl	205	2	165	0.011	ppb	0.011	76.93	220	2000	
Pb	208	2	165	0.506	ppb	0.506	8.60	5961	5000	
Th	232	2	193	0.094	ppb	0.094	18.09	6789	2000	
U	238	2	193	0.774	ppb	0.774	5.61	7079	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	147099	0.98	253490	58.03	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8092757	1.44	9587331	84.41	60	120	
Sc (IS)	45	2	HMI He	899855	0.63	964862	93.26	60	120	
Sc (IS)	45	3	No Gas	14896014	2.00	17821643	83.58	60	120	
Ge Internal standard	72	1	HMI H2	4233973	2.01	5262568	80.45	60	120	
Ge Internal standard	72	2	HMI He	984092	0.80	1150133	85.56	60	120	
In Internal standard	115	2	HMI He	3235774	0.10	3923278	82.48	60	120	
Ho-165	165	2	HMI He	10891858	0.51	14697450	74.11	60	120	
Ir (IS)	193	2	HMI He	6685659	0.81	10905184	61.31	60	120	

Sample Report

Sample Table

Sample Name	280-174771-C-11-A
Data File Name	146SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:38:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-10.662	ppb	-10.662	-26.83	845245	50000	
Be	9	1	6	-0.074	ppb	-0.074	-42.89	3	2000	
B	11	1	6	348.759	ppb	348.759	5.65	48208	2000	
Na	23	2	45	11873.048	ppb	11873.048	8.09	2716044	400000	
Mg	24	2	45	10.458	ppb	10.458	9.59	2304	400000	
Al	27	2	45	34.042	ppb	34.042	10.09	1080	400000	
Si	28	2	45	169.214	ppb	169.214	16.80	52138	10000	
P	31	2	45	22.864	ppb	22.864	34.62	239	10000	
K	39	2	45	1500.155	ppb	1500.155	18.48	156452	400000	
Ca	40	1	45	489.911	ppb	489.911	12.68	840905	400000	
Ti	47	2	45	0.362	ppb	0.362	99.82	10	4000	
V	51	2	72	-0.348	ppb	-0.348	-49.38	1190	2000	
Cr	52	2	72	0.931	ppb	0.931	21.84	3904	5000	
Mn	55	2	72	8.588	ppb	8.588	4.47	5711	10000	
Fe	56	1	72	89.840	ppb	89.840	0.67	328724	10000	
(Fe)	57	2	72	87.470	ppb	87.470	5.89	2617	400000	
Co	59	2	72	0.077	ppb	0.077	41.67	223	2000	
Ni	60	2	72	-0.080	ppb	-0.080	-385.49	603	5000	
Cu	63	2	72	0.855	ppb	0.855	35.38	3184	5000	
Zn	66	2	72	1.652	ppb	1.652	9.09	1057	5000	
As	75	2	72	0.035	ppb	0.035	98.09	120	2000	
Se	78	1	72	0.326	ppb	0.326	36.15	51	2000	
Sr	88	2	72	0.558	ppb	0.558	24.92	713	4000	
Zr	90	2	72	33.854	ppb	33.854	164.99	807	1000	
Mo	95	2	115	32.822	ppb	32.822	6.41	27932	2000	
Ag	107	2	115	-0.008	ppb	-0.008	-50.78	33	100	
Cd	111	2	115	0.006	ppb	0.006	409.71	13	2000	
Sn	120	2	115	0.118	ppb	0.118	30.22	1113	2000	
Sb	121	2	115	2.077	ppb	2.077	14.12	2707	1000	
Ba	137	2	115	0.896	ppb	0.896	19.59	417	5000	
W	182	2	165	0.643	ppb	0.643	3.85	3020	100	
Tl	205	2	165	-0.006	ppb	-0.006	-115.80	177	2000	
Pb	208	2	165	0.091	ppb	0.091	6.83	4064	5000	
Th	232	2	193	-0.041	ppb	-0.041	-54.14	8783	2000	
U	238	2	193	0.034	ppb	0.034	18.91	3097	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	216299	1.50	253490	85.33	60	120	
Sc (IS)	45	1	HMI H2	9737243	0.10	9587331	101.56	60	120	
Sc (IS)	45	2	HMI He	1034909	0.82	964862	107.26	60	120	
Sc (IS)	45	3	No Gas	18581925	1.81	17821643	104.27	60	120	
Ge Internal standard	72	1	HMI H2	5196875	0.93	5262568	98.75	60	120	
Ge Internal standard	72	2	HMI He	1221222	2.64	1150133	106.18	60	120	
In Internal standard	115	2	HMI He	4129202	0.22	3923278	105.25	60	120	
Ho-165	165	2	HMI He	14685976	0.43	14697450	99.92	60	120	
Ir (IS)	193	2	HMI He	9903833	0.28	10905184	90.82	60	120	

Sample Report

Sample Table

Sample Name	280-174771-C-42-A
Data File Name	147SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:41:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-5.870	ppb	-5.870	-79.92	832304	50000	
Be	9	1	6	0.193	ppb	0.193	16.66	53	2000	
B	11	1	6	111.178	ppb	111.178	3.64	16835	2000	
Na	23	2	45	8073.128	ppb	8073.128	2.58	1782884	400000	
Mg	24	2	45	242.827	ppb	242.827	4.58	25102	400000	
Al	27	2	45	1614.178	ppb	1614.178	0.33	46601	400000	
Si	28	2	45	255.112	ppb	255.112	2.37	65277	10000	
P	31	2	45	731.690	ppb	731.690	3.22	2283	10000	
K	39	2	45	749.566	ppb	749.566	2.54	97627	400000	
Ca	40	1	45	541.113	ppb	541.113	0.37	901327	400000	
Ti	47	2	45	20.181	ppb	20.181	24.93	537	4000	
V	51	2	72	1.826	ppb	1.826	2.27	3377	2000	
Cr	52	2	72	6.989	ppb	6.989	6.23	11885	5000	
Mn	55	2	72	36.696	ppb	36.696	1.24	22546	10000	
Fe	56	1	72	1704.283	ppb	1704.283	1.28	5767550	10000	
(Fe)	57	2	72	1699.345	ppb	1699.345	1.18	44320	400000	
Co	59	2	72	0.660	ppb	0.660	16.32	1457	2000	
Ni	60	2	72	1.757	ppb	1.757	11.93	1663	5000	
Cu	63	2	72	5.875	ppb	5.875	9.08	11071	5000	
Zn	66	2	72	9.462	ppb	9.462	10.26	3397	5000	
As	75	2	72	0.187	ppb	0.187	23.18	152	2000	
Se	78	1	72	0.192	ppb	0.192	14.20	32	2000	
Sr	88	2	72	0.772	ppb	0.772	26.00	837	4000	
Zr	90	2	72	425.068	ppb	425.068	8.48	2107	1000	
Mo	95	2	115	9.346	ppb	9.346	4.32	7756	2000	
Ag	107	2	115	-0.005	ppb	-0.005	-183.95	40	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	1.638	ppb	1.638	13.43	2857	2000	
Sb	121	2	115	0.352	ppb	0.352	20.17	483	1000	
Ba	137	2	115	8.738	ppb	8.738	7.90	3204	5000	
W	182	2	165	0.106	ppb	0.106	19.89	1200	100	
Tl	205	2	165	0.010	ppb	0.010	57.59	287	2000	
Pb	208	2	165	0.487	ppb	0.487	5.41	7754	5000	
Th	232	2	193	0.202	ppb	0.202	15.13	11215	2000	
U	238	2	193	0.076	ppb	0.076	42.40	3564	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	219336	0.52	253490	86.53	60	120	
Sc (IS)	45	1	HMI H2	9522571	0.68	9587331	99.32	60	120	
Sc (IS)	45	2	HMI He	993730	0.73	964862	102.99	60	120	
Sc (IS)	45	3	No Gas	17569990	0.79	17821643	98.59	60	120	
Ge Internal standard	72	1	HMI H2	5177707	0.63	5262568	98.39	60	120	
Ge Internal standard	72	2	HMI He	1175642	0.86	1150133	102.22	60	120	
In Internal standard	115	2	HMI He	4013942	0.54	3923278	102.31	60	120	
Ho-165	165	2	HMI He	14501490	0.26	14697450	98.67	60	120	
Ir (IS)	193	2	HMI He	10029399	0.68	10905184	91.97	60	120	

Sample Report

Sample Table

Sample Name	280-174771-C-45-A
Data File Name	148SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:45:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-12.822	ppb	-12.822	-14.25	751001	50000	
Be	9	1	6	0.148	ppb	0.148	170.43	43	2000	
B	11	1	6	67.054	ppb	67.054	1.66	10564	2000	
Na	23	2	45	2424.729	ppb	2424.729	3.70	531531	400000	
Mg	24	2	45	9.836	ppb	9.836	24.72	2060	400000	
Al	27	2	45	30.561	ppb	30.561	20.23	897	400000	
Si	28	2	45	33.906	ppb	33.906	5.22	25046	10000	
P	31	2	45	42.719	ppb	42.719	20.27	275	10000	
K	39	2	45	117.224	ppb	117.224	9.37	51021	400000	
Ca	40	1	45	123.676	ppb	123.676	1.39	247070	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.133	ppb	-0.133	-166.44	1307	2000	
Cr	52	2	72	0.800	ppb	0.800	15.55	3427	5000	
Mn	55	2	72	5.269	ppb	5.269	2.79	3327	10000	
Fe	56	1	72	36.234	ppb	36.234	0.85	140355	10000	
(Fe)	57	2	72	38.311	ppb	38.311	14.97	1190	400000	
Co	59	2	72	0.073	ppb	0.073	37.37	197	2000	
Ni	60	2	72	-0.057	ppb	-0.057	-253.60	570	5000	
Cu	63	2	72	4.167	ppb	4.167	8.86	7972	5000	
Zn	66	2	72	1.751	ppb	1.751	49.12	1000	5000	
As	75	2	72	-0.005	ppb	-0.005	-2103.76	101	2000	
Se	78	1	72	0.083	ppb	0.083	72.32	16	2000	
Sr	88	2	72	0.270	ppb	0.270	45.58	463	4000	
Zr	90	2	72	23.051	ppb	23.051	80.81	710	1000	
Mo	95	2	115	3.216	ppb	3.216	7.80	2627	2000	
Ag	107	2	115	-0.012	ppb	-0.012	-30.26	20	100	
Cd	111	2	115	0.016	ppb	0.016	86.70	17	2000	
Sn	120	2	115	0.703	ppb	0.703	19.30	1724	2000	
Sb	121	2	115	0.293	ppb	0.293	12.54	400	1000	
Ba	137	2	115	0.880	ppb	0.880	5.53	390	5000	
W	182	2	165	0.031	ppb	0.031	49.84	933	100	
Tl	205	2	165	-0.002	ppb	-0.002	-536.84	197	2000	
Pb	208	2	165	-0.063	ppb	-0.063	-20.81	2517	5000	
Th	232	2	193	-0.044	ppb	-0.044	-88.37	8903	2000	
U	238	2	193	0.020	ppb	0.020	148.27	3010	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	213039	1.07	253490	84.04	60	120	
Sc (IS)	45	1	HMI H2	9135917	0.67	9587331	95.29	60	120	
Sc (IS)	45	2	HMI He	952198	0.31	964862	98.69	60	120	
Sc (IS)	45	3	No Gas	16818633	0.73	17821643	94.37	60	120	
Ge Internal standard	72	1	HMI H2	4946756	0.63	5262568	94.00	60	120	
Ge Internal standard	72	2	HMI He	1123034	0.48	1150133	97.64	60	120	
In Internal standard	115	2	HMI He	3918569	0.27	3923278	99.88	60	120	
Ho-165	165	2	HMI He	14251494	0.43	14697450	96.97	60	120	
Ir (IS)	193	2	HMI He	10067344	0.75	10905184	92.32	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	149_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:48:58-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	56.612	ppb	0.782	9513	50	113.2	90	110	>+\-10%
Na	23	2	45	51503.503	ppb	0.630	10526617	51000	101.0	90	110	
Mg	24	2	45	10565.477	ppb	0.429	977104	11000	96.0	90	110	
Al	27	2	45	991.360	ppb	2.001	26862	1000	99.1	90	110	
K	39	2	45	10270.101	ppb	0.710	718141	11000	93.4	90	110	
Ca	40	1	45	11461.769	ppb	0.268	16468716	11000	104.2	90	110	
Ti	47	2	45	51.785	ppb	8.382	1293	50	103.6	90	110	
V	51	2	72	48.034	ppb	2.060	46896	50	96.1	90	110	
Cr	52	2	72	49.121	ppb	2.224	63136	50	98.2	90	110	
Mn	55	2	72	51.302	ppb	0.132	29006	50	102.6	90	110	
Fe	56	1	72	1011.438	ppb	1.224	3150810	1000	101.1	90	110	
Co	59	2	72	47.353	ppb	0.614	93166	50	94.7	90	110	
Ni	60	2	72	46.667	ppb	1.620	25934	50	93.3	90	110	
Cu	63	2	72	49.049	ppb	0.220	73761	50	98.1	90	110	
Zn	66	2	72	49.114	ppb	3.658	14287	50	98.2	90	110	
As	75	2	72	50.842	ppb	0.893	11396	50	101.7	90	110	
Se	78	1	72	47.012	ppb	2.415	6011	50	94.0	90	110	
Sr	88	2	72	103.371	ppb	1.779	67142	100	103.4	90	110	
Zr	90	2	72	36.970	ppb	51.979	730	50	73.9	90	110	>+\-10%
Mo	95	2	115	48.479	ppb	0.914	37905	50	97.0	90	110	
Ag	107	2	115	45.876	ppb	2.230	119203	50	91.8	90	110	
Cd	111	2	115	48.226	ppb	4.820	19509	50	96.5	90	110	
Sn	120	2	115	47.305	ppb	2.247	53113	50	94.6	90	110	
Sb	121	2	115	49.862	ppb	2.389	58736	50	99.7	90	110	
Ba	137	2	115	48.448	ppb	5.222	16426	50	96.9	90	110	
W	182	2	165	46.914	ppb	2.428	152251	50	93.8	90	110	
Tl	205	2	165	47.061	ppb	1.424	317073	50	94.1	90	110	
Pb	208	2	165	46.279	ppb	1.166	427921	50	92.6	90	110	
Th	232	2	193	51.874	ppb	1.357	490205	50	103.7	90	110	
U	238	2	193	50.971	ppb	1.871	503636	50	101.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	196996	0.37	253490	77.71	60	120	
Sc (IS)	45	1	HMI H2	8838234	0.82	9587331	92.19	60	120	
Sc (IS)	45	2	HMI He	931992	0.62	964862	96.59	60	120	
Sc (IS)	45	3	No Gas	16470309	1.13	17821643	92.42	60	120	
Ge Internal standard	72	1	HMI H2	4752738	0.89	5262568	90.31	60	120	
Ge Internal standard	72	2	HMI He	1085768	0.31	1150133	94.40	60	120	
In Internal standard	115	2	HMI He	3795631	1.85	3923278	96.75	60	120	
Ho-165	165	2	HMI He	14110502	0.73	14697450	96.01	60	120	
Ir (IS)	193	2	HMI He	9757446	0.92	10905184	89.48	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	150_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:52:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-14.762	ppb	-9.4	728050	10	
Be	9	1	6	0.276	ppb	178.0	63	0.5	
B	11	1	6	64.510	ppb	6.2	9546	0.5	>RL
Na	23	2	45	961.061	ppb	2.6	219326	25	>RL
Mg	24	2	45	-3.709	ppb	-20.2	757	25	
Al	27	2	45	5.210	ppb	51.2	190	15	
K	39	2	45	26.228	ppb	125.0	43443	50	
Ti	47	2	45	0.136	ppb	173.2	3	0.5	
V	51	2	72	-0.246	ppb	-54.3	1150	1	
Cr	52	2	72	0.116	ppb	185.6	2454	1	
Mn	55	2	72	0.927	ppb	18.7	780	0.5	>RL
(Fe)	57	2	72	8.867	ppb	35.1	443	25	
Co	59	2	72	0.037	ppb	60.6	120	0.5	
Ni	60	2	72	-0.270	ppb	-35.2	433	1	
Cu	63	2	72	1.943	ppb	8.5	4411	1	>RL
Zn	66	2	72	0.194	ppb	96.0	527	5	
As	75	2	72	0.026	ppb	270.1	105	1	
Se	78	1	72	-0.006	ppb	-941.2	4	1	
Sr	88	2	72	-0.169	ppb	-11.4	163	0.5	
Zr	90	2	72	2.945	ppb	1702.2	620	1	>RL
Mo	95	2	115	0.217	ppb	20.8	200	0.5	
Ag	107	2	115	0.012	ppb	221.0	83	1	
Cd	111	2	115	-0.007	ppb	-199.3	7	0.5	
Sn	120	2	115	0.077	ppb	35.4	970	1	
Sb	121	2	115	0.141	ppb	6.4	207	0.6	
Ba	137	2	115	0.130	ppb	131.1	123	0.5	
W	182	2	165	0.136	ppb	36.6	1257	1	
Tl	205	2	165	0.046	ppb	49.1	520	0.1	
Pb	208	2	165	-0.055	ppb	-30.0	2550	0.5	
Th	232	2	193	0.394	ppb	6.6	12953	1	
U	238	2	193	0.025	ppb	125.4	3030	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	198879	1.66	253490	78.46	60	120	
Sc (IS)	45	1	HMI H2	8684588	0.77	9587331	90.58	60	120	
Sc (IS)	45	2	HMI He	921491	0.94	964862	95.50	60	120	
Sc (IS)	45	3	No Gas	16588012	1.76	17821643	93.08	60	120	
Ge Internal standard	72	1	HMI H2	4725895	0.36	5262568	89.80	60	120	
Ge Internal standard	72	2	HMI He	1080092	0.64	1150133	93.91	60	120	
In Internal standard	115	2	HMI He	3763690	0.87	3923278	95.93	60	120	
Ho-165	165	2	HMI He	14012161	0.45	14697450	95.34	60	120	
Ir (IS)	193	2	HMI He	9957590	1.09	10905184	91.31	60	120	

Sample Report

Sample Table

Sample Name	280-174725-A-1-A
Data File Name	151SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:56:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-12.353	ppb	-12.353	-9.23	719117	50000	
Be	9	1	6	0.009	ppb	0.009	1389.19	17	2000	
B	11	1	6	65.154	ppb	65.154	2.28	9326	2000	
Na	23	2	45	29410.466	ppb	29410.466	0.76	5818163	400000	
Mg	24	2	45	22349.628	ppb	22349.628	1.00	1995649	400000	
Al	27	2	45	16.979	ppb	16.979	9.41	493	400000	
Si	28	2	45	2164.804	ppb	2164.804	0.39	365316	10000	
P	31	2	45	10.078	ppb	10.078	152.87	174	10000	
K	39	2	45	5104.422	ppb	5104.422	2.24	365337	400000	
Ca	40	1	45	71314.862	ppb	71314.862	0.04	98453775	400000	
Ti	47	2	45	1.383	ppb	1.383	46.36	33	4000	
V	51	2	72	22.087	ppb	22.087	0.77	22042	2000	
Cr	52	2	72	15.047	ppb	15.047	2.03	20697	5000	
Mn	55	2	72	1.744	ppb	1.744	13.87	1227	10000	
Fe	56	1	72	44.587	ppb	44.587	0.80	159341	10000	
(Fe)	57	2	72	55.356	ppb	55.356	4.98	1540	400000	
Co	59	2	72	0.124	ppb	0.124	30.01	287	2000	
Ni	60	2	72	3.277	ppb	3.277	4.33	2334	5000	
Cu	63	2	72	2.010	ppb	2.010	5.44	4477	5000	
Zn	66	2	72	1.693	ppb	1.693	32.22	940	5000	
As	75	2	72	1.607	ppb	1.607	14.79	451	2000	
Se	78	1	72	2.635	ppb	2.635	15.98	339	2000	
Sr	88	2	72	281.744	ppb	281.744	0.93	180304	4000	
Zr	90	2	72	2.204	ppb	2.204	1442.63	613	1000	
Mo	95	2	115	5.232	ppb	5.232	6.63	4007	2000	
Ag	107	2	115	0.001	ppb	0.001	722.97	53	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	-0.166	ppb	-0.166	-38.02	690	2000	
Sb	121	2	115	0.104	ppb	0.104	43.84	160	1000	
Ba	137	2	115	75.696	ppb	75.696	1.24	24927	5000	
W	182	2	165	33.083	ppb	33.083	2.14	106373	100	
Tl	205	2	165	-0.001	ppb	-0.001	-596.10	203	2000	
Pb	208	2	165	-0.064	ppb	-0.064	-24.96	2457	5000	
Th	232	2	193	0.093	ppb	0.093	61.14	9824	2000	
U	238	2	193	1.594	ppb	1.594	3.28	18256	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	192620	0.15	253490	75.99	60	120	
Sc (IS)	45	1	HMI H2	8518882	0.86	9587331	88.86	60	120	
Sc (IS)	45	2	HMI He	900433	0.84	964862	93.32	60	120	
Sc (IS)	45	3	No Gas	16039459	1.11	17821643	90.00	60	120	
Ge Internal standard	72	1	HMI H2	4712950	0.88	5262568	89.56	60	120	
Ge Internal standard	72	2	HMI He	1072555	0.46	1150133	93.25	60	120	
In Internal standard	115	2	HMI He	3691496	0.40	3923278	94.09	60	120	
Ho-165	165	2	HMI He	13948294	0.62	14697450	94.90	60	120	
Ir (IS)	193	2	HMI He	9686434	0.43	10905184	88.82	60	120	

Sample Report

Sample Table

Sample Name	280-174725-A-4-A
Data File Name	152SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T18:59:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-12.150	ppb	-12.150	-10.71	732825	50000	
Be	9	1	6	0.215	ppb	0.215	28.12	50	2000	
B	11	1	6	52.755	ppb	52.755	4.93	7792	2000	
Na	23	2	45	65259.743	ppb	65259.743	0.53	12872437	400000	
Mg	24	2	45	24965.831	ppb	24965.831	0.65	2227920	400000	
Al	27	2	45	4997.750	ppb	4997.750	2.97	130546	400000	
Si	28	2	45	3351.853	ppb	3351.853	1.04	555304	10000	
P	31	2	45	1726.732	ppb	1726.732	2.08	4679	10000	
K	39	2	45	8224.265	ppb	8224.265	0.83	563409	400000	
Ca	40	1	45	70625.541	ppb	70625.541	0.56	97772679	400000	
Ti	47	2	45	602.685	ppb	602.685	2.01	14530	4000	
V	51	2	72	45.159	ppb	45.159	2.46	43217	2000	
Cr	52	2	72	60.650	ppb	60.650	1.20	75732	5000	
Mn	55	2	72	213.554	ppb	213.554	2.11	117308	10000	
Fe	56	1	72	13281.643	ppb	13281.643	1.58	40354238	10000	
(Fe)	57	2	72	13636.859	ppb	13636.859	0.59	319775	400000	
Co	59	2	72	4.709	ppb	4.709	0.92	9106	2000	
Ni	60	2	72	21.785	ppb	21.785	2.90	12148	5000	
Cu	63	2	72	21.390	ppb	21.390	0.86	32339	5000	
Zn	66	2	72	191.649	ppb	191.649	0.59	53193	5000	
As	75	2	72	2.611	ppb	2.611	5.60	665	2000	
Se	78	1	72	4.844	ppb	4.844	7.90	612	2000	
Sr	88	2	72	298.025	ppb	298.025	0.52	188876	4000	
Zr	90	2	72	2344.148	ppb	2344.148	12.85	7789	1000	
Mo	95	2	115	7.541	ppb	7.541	4.30	5715	2000	
Ag	107	2	115	0.419	ppb	0.419	9.96	1100	100	
Cd	111	2	115	0.061	ppb	0.061	86.09	33	2000	
Sn	120	2	115	0.557	ppb	0.557	19.47	1457	2000	
Sb	121	2	115	0.584	ppb	0.584	9.06	703	1000	
Ba	137	2	115	118.725	ppb	118.725	2.09	38745	5000	
W	182	2	165	4.344	ppb	4.344	1.53	14684	100	
Tl	205	2	165	0.035	ppb	0.035	34.88	440	2000	
Pb	208	2	165	5.544	ppb	5.544	0.73	53382	5000	
Th	232	2	193	1.250	ppb	1.250	5.63	20361	2000	
U	238	2	193	2.309	ppb	2.309	1.15	25079	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	191034	0.37	253490	75.36	60	120	
Sc (IS)	45	1	HMI H2	8542524	0.55	9587331	89.10	60	120	
Sc (IS)	45	2	HMI He	899915	0.58	964862	93.27	60	120	
Sc (IS)	45	3	No Gas	16315768	0.51	17821643	91.55	60	120	
Ge Internal standard	72	1	HMI H2	4666794	0.85	5262568	88.68	60	120	
Ge Internal standard	72	2	HMI He	1062279	0.31	1150133	92.36	60	120	
In Internal standard	115	2	HMI He	3663278	1.52	3923278	93.37	60	120	
Ho-165	165	2	HMI He	13956880	0.67	14697450	94.96	60	120	
Ir (IS)	193	2	HMI He	9629434	0.67	10905184	88.30	60	120	

Sample Report

Sample Table

Sample Name	160-49562-A-1-A
Data File Name	153SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:03:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	13.472	ppb	13.472	10.34	887635	50000	
Be	9	1	6	-0.013	ppb	-0.013	-246.93	13	2000	
B	11	1	6	105.024	ppb	105.024	2.44	14387	2000	
Na	23	2	45	16961.501	ppb	16961.501	1.17	3362622	400000	
Mg	24	2	45	15339.945	ppb	15339.945	0.52	1368725	400000	
Al	27	2	45	118.063	ppb	118.063	11.47	3130	400000	
Si	28	2	45	215.448	ppb	215.448	2.06	52735	10000	
P	31	2	45	143.610	ppb	143.610	4.46	524	10000	
K	39	2	45	2074.810	ppb	2074.810	0.99	172547	400000	
Ca	40	1	45	58199.472	ppb	58199.472	1.95	81036284	400000	
Ti	47	2	45	1.798	ppb	1.798	53.26	43	4000	
V	51	2	72	0.524	ppb	0.524	35.72	1867	2000	
Cr	52	2	72	0.228	ppb	0.228	21.54	2580	5000	
Mn	55	2	72	21.480	ppb	21.480	2.55	12178	10000	
Fe	56	1	72	116.263	ppb	116.263	0.76	377516	10000	
(Fe)	57	2	72	124.924	ppb	124.924	6.40	3194	400000	
Co	59	2	72	0.123	ppb	0.123	18.90	287	2000	
Ni	60	2	72	0.335	ppb	0.335	77.18	757	5000	
Cu	63	2	72	4.725	ppb	4.725	6.21	8446	5000	
Zn	66	2	72	16.605	ppb	16.605	5.55	5094	5000	
As	75	2	72	0.177	ppb	0.177	24.88	137	2000	
Se	78	1	72	0.354	ppb	0.354	31.15	49	2000	
Sr	88	2	72	144.373	ppb	144.373	1.24	92742	4000	
Zr	90	2	72	465.778	ppb	465.778	7.89	2054	1000	
Mo	95	2	115	32.249	ppb	32.249	1.87	24663	2000	
Ag	107	2	115	-0.009	ppb	-0.009	-48.52	27	100	
Cd	111	2	115	0.153	ppb	0.153	43.84	70	2000	
Sn	120	2	115	-0.312	ppb	-0.312	-10.96	537	2000	
Sb	121	2	115	0.103	ppb	0.103	94.69	160	1000	
Ba	137	2	115	60.577	ppb	60.577	1.20	20067	5000	
W	182	2	165	0.177	ppb	0.177	14.22	1393	100	
Tl	205	2	165	0.001	ppb	0.001	570.45	217	2000	
Pb	208	2	165	0.030	ppb	0.030	99.35	3337	5000	
Th	232	2	193	0.012	ppb	0.012	251.47	9267	2000	
U	238	2	193	26.209	ppb	26.209	0.75	263787	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	197214	1.91	253490	77.80	60	120	
Sc (IS)	45	1	HMI H2	8591673	0.90	9587331	89.61	60	120	
Sc (IS)	45	2	HMI He	899508	0.48	964862	93.23	60	120	
Sc (IS)	45	3	No Gas	16159816	0.55	17821643	90.68	60	120	
Ge Internal standard	72	1	HMI H2	4692412	0.84	5262568	89.17	60	120	
Ge Internal standard	72	2	HMI He	1075117	0.19	1150133	93.48	60	120	
In Internal standard	115	2	HMI He	3710551	0.34	3923278	94.58	60	120	
Ho-165	165	2	HMI He	14066599	0.14	14697450	95.71	60	120	
Ir (IS)	193	2	HMI He	9887493	0.34	10905184	90.67	60	120	

Sample Report

Sample Table

Sample Name	160-49562-A-5-D
Data File Name	154SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:06:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	41.058	ppb	41.058	2.44	1049327	50000	
Be	9	1	6	0.049	ppb	0.049	72.90	23	2000	
B	11	1	6	179.030	ppb	179.030	1.57	22966	2000	
Na	23	2	45	12632.664	ppb	12632.664	0.78	2525100	400000	
Mg	24	2	45	15533.463	ppb	15533.463	1.05	1393882	400000	
Al	27	2	45	625.896	ppb	625.896	4.08	16482	400000	
Si	28	2	45	306.935	ppb	306.935	1.04	67772	10000	
P	31	2	45	188.213	ppb	188.213	3.75	645	10000	
K	39	2	45	2230.320	ppb	2230.320	1.21	183459	400000	
Ca	40	1	45	59185.669	ppb	59185.669	1.35	81936649	400000	
Ti	47	2	45	2.887	ppb	2.887	24.48	70	4000	
V	51	2	72	0.732	ppb	0.732	28.76	2060	2000	
Cr	52	2	72	0.855	ppb	0.855	35.86	3347	5000	
Mn	55	2	72	49.962	ppb	49.962	2.60	27967	10000	
Fe	56	1	72	393.854	ppb	393.854	4.63	1216387	10000	
(Fe)	57	2	72	400.857	ppb	400.857	2.24	9733	400000	
Co	59	2	72	0.379	ppb	0.379	17.62	783	2000	
Ni	60	2	72	0.583	ppb	0.583	50.25	890	5000	
Cu	63	2	72	9.216	ppb	9.216	5.40	14987	5000	
Zn	66	2	72	30.270	ppb	30.270	1.64	8896	5000	
As	75	2	72	0.335	ppb	0.335	35.08	172	2000	
Se	78	1	72	0.250	ppb	0.250	33.23	36	2000	
Sr	88	2	72	150.400	ppb	150.400	1.45	96568	4000	
Zr	90	2	72	249.608	ppb	249.608	37.83	1383	1000	
Mo	95	2	115	32.913	ppb	32.913	3.87	25147	2000	
Ag	107	2	115	0.004	ppb	0.004	275.11	60	100	
Cd	111	2	115	0.500	ppb	0.500	35.11	207	2000	
Sn	120	2	115	-0.061	ppb	-0.061	-325.31	807	2000	
Sb	121	2	115	0.147	ppb	0.147	6.56	210	1000	
Ba	137	2	115	63.059	ppb	63.059	1.78	20868	5000	
W	182	2	165	0.307	ppb	0.307	18.21	1814	100	
Tl	205	2	165	0.005	ppb	0.005	169.46	243	2000	
Pb	208	2	165	0.770	ppb	0.770	4.63	10112	5000	
Th	232	2	193	0.005	ppb	0.005	173.30	9150	2000	
U	238	2	193	65.714	ppb	65.714	0.35	653347	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	193787	0.75	253490	76.45	60	120	
Sc (IS)	45	1	HMI H2	8542008	0.63	9587331	89.10	60	120	
Sc (IS)	45	2	HMI He	904624	0.40	964862	93.76	60	120	
Sc (IS)	45	3	No Gas	15969739	1.21	17821643	89.61	60	120	
Ge Internal standard	72	1	HMI H2	4658373	0.98	5262568	88.52	60	120	
Ge Internal standard	72	2	HMI He	1074749	0.59	1150133	93.45	60	120	
In Internal standard	115	2	HMI He	3707102	0.74	3923278	94.49	60	120	
Ho-165	165	2	HMI He	14066614	0.88	14697450	95.71	60	120	
Ir (IS)	193	2	HMI He	9828786	0.57	10905184	90.13	60	120	

Sample Report

Sample Table

Sample Name	160-49562-A-5-Dsd@5
Data File Name	155SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:10:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.330	ppb	-2.330	-193.66	789419	50000	
Be	9	1	6	0.047	ppb	0.047	263.31	23	2000	
B	11	1	6	64.696	ppb	64.696	2.89	9366	2000	
Na	23	2	45	2840.498	ppb	2840.498	0.49	582066	400000	
Mg	24	2	45	3100.299	ppb	3100.299	0.43	276588	400000	
Al	27	2	45	150.729	ppb	150.729	6.06	3971	400000	
Si	28	2	45	61.686	ppb	61.686	19.21	28025	10000	
P	31	2	45	42.763	ppb	42.763	6.63	259	10000	
K	39	2	45	455.835	ppb	455.835	4.93	69480	400000	
Ca	40	1	45	12237.410	ppb	12237.410	1.20	17023410	400000	
Ti	47	2	45	0.278	ppb	0.278	86.61	7	4000	
V	51	2	72	0.004	ppb	0.004	6844.97	1373	2000	
Cr	52	2	72	0.149	ppb	0.149	115.21	2474	5000	
Mn	55	2	72	16.999	ppb	16.999	3.57	9653	10000	
Fe	56	1	72	87.849	ppb	87.849	0.85	288096	10000	
(Fe)	57	2	72	97.381	ppb	97.381	1.86	2530	400000	
Co	59	2	72	0.071	ppb	0.071	25.63	183	2000	
Ni	60	2	72	-0.462	ppb	-0.462	-24.69	327	5000	
Cu	63	2	72	2.501	ppb	2.501	5.20	5184	5000	
Zn	66	2	72	8.539	ppb	8.539	11.81	2837	5000	
As	75	2	72	0.069	ppb	0.069	85.56	113	2000	
Se	78	1	72	0.047	ppb	0.047	100.62	11	2000	
Sr	88	2	72	30.701	ppb	30.701	2.73	19856	4000	
Zr	90	2	72	83.330	ppb	83.330	42.29	863	1000	
Mo	95	2	115	6.574	ppb	6.574	4.69	5051	2000	
Ag	107	2	115	-0.005	ppb	-0.005	-84.62	37	100	
Cd	111	2	115	0.086	ppb	0.086	44.40	43	2000	
Sn	120	2	115	-0.050	ppb	-0.050	-333.94	820	2000	
Sb	121	2	115	0.045	ppb	0.045	76.39	93	1000	
Ba	137	2	115	13.656	ppb	13.656	3.23	4584	5000	
W	182	2	165	0.032	ppb	0.032	128.47	923	100	
Tl	205	2	165	0.001	ppb	0.001	1379.31	217	2000	
Pb	208	2	165	1.560	ppb	1.560	6.81	17278	5000	
Th	232	2	193	-0.054	ppb	-0.054	-96.64	8660	2000	
U	238	2	193	13.456	ppb	13.456	2.08	136945	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	194629	1.75	253490	76.78	60	120	
Sc (IS)	45	1	HMI H2	8559313	1.06	9587331	89.28	60	120	
Sc (IS)	45	2	HMI He	896597	0.80	964862	92.92	60	120	
Sc (IS)	45	3	No Gas	16192549	0.82	17821643	90.86	60	120	
Ge Internal standard	72	1	HMI H2	4649753	1.74	5262568	88.36	60	120	
Ge Internal standard	72	2	HMI He	1070851	0.17	1150133	93.11	60	120	
In Internal standard	115	2	HMI He	3709826	0.53	3923278	94.56	60	120	
Ho-165	165	2	HMI He	14022822	0.63	14697450	95.41	60	120	
Ir (IS)	193	2	HMI He	9900860	1.13	10905184	90.79	60	120	

Sample Report

Sample Table

Sample Name	160-49562-A-5-E MS
Data File Name	156SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:13:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	79.440	ppb	79.440	4.96	1280517	50000	
Be	9	1	6	44.408	ppb	44.408	4.56	7475	2000	
B	11	1	6	168.242	ppb	168.242	4.17	22068	2000	
Na	23	2	45	13422.987	ppb	13422.987	1.48	2672826	400000	
Mg	24	2	45	16364.147	ppb	16364.147	1.02	1463570	400000	
Al	27	2	45	1512.656	ppb	1512.656	0.93	39627	400000	
Si	28	2	45	354.239	ppb	354.239	0.87	75144	10000	
P	31	2	45	182.934	ppb	182.934	6.20	629	10000	
K	39	2	45	2995.793	ppb	2995.793	1.71	231604	400000	
Ca	40	1	45	59268.267	ppb	59268.267	0.63	82358560	400000	
Ti	47	2	45	61.043	ppb	61.043	23.22	1474	4000	
V	51	2	72	39.878	ppb	39.878	1.44	38963	2000	
Cr	52	2	72	40.563	ppb	40.563	1.24	52266	5000	
Mn	55	2	72	87.721	ppb	87.721	1.67	49150	10000	
Fe	56	1	72	1218.488	ppb	1218.488	0.46	3723328	10000	
(Fe)	57	2	72	1190.501	ppb	1190.501	1.43	28595	400000	
Co	59	2	72	37.775	ppb	37.775	2.95	73944	2000	
Ni	60	2	72	37.632	ppb	37.632	4.64	20920	5000	
Cu	63	2	72	47.099	ppb	47.099	0.52	70523	5000	
Zn	66	2	72	72.248	ppb	72.248	4.13	20680	5000	
As	75	2	72	39.568	ppb	39.568	2.33	8845	2000	
Se	78	1	72	38.855	ppb	38.855	3.69	4879	2000	
Sr	88	2	72	232.488	ppb	232.488	0.36	149882	4000	
Zr	90	2	72	567.428	ppb	567.428	11.84	2380	1000	
Mo	95	2	115	72.304	ppb	72.304	1.23	55091	2000	
Ag	107	2	115	38.533	ppb	38.533	1.36	97619	100	
Cd	111	2	115	39.111	ppb	39.111	2.25	15421	2000	
Sn	120	2	115	38.349	ppb	38.349	1.35	42147	2000	
Sb	121	2	115	40.024	ppb	40.024	1.28	45978	1000	
Ba	137	2	115	101.391	ppb	101.391	3.82	33430	5000	
W	182	2	165	0.364	ppb	0.364	21.87	1977	100	
Tl	205	2	165	39.184	ppb	39.184	0.40	260900	2000	
Pb	208	2	165	39.626	ppb	39.626	0.23	362486	5000	
Th	232	2	193	40.519	ppb	40.519	1.83	395684	2000	
U	238	2	193	107.516	ppb	107.516	0.83	1089140	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	197280	0.74	253490	77.83	60	120	
Sc (IS)	45	1	HMI H2	8573869	1.18	9587331	89.43	60	120	
Sc (IS)	45	2	HMI He	901660	0.38	964862	93.45	60	120	
Sc (IS)	45	3	No Gas	15870132	1.20	17821643	89.05	60	120	
Ge Internal standard	72	1	HMI H2	4667449	0.55	5262568	88.69	60	120	
Ge Internal standard	72	2	HMI He	1080160	0.84	1150133	93.92	60	120	
In Internal standard	115	2	HMI He	3699806	1.31	3923278	94.30	60	120	
Ho-165	165	2	HMI He	13942002	0.39	14697450	94.86	60	120	
Ir (IS)	193	2	HMI He	10031141	0.65	10905184	91.99	60	120	

Sample Report

Sample Table

Sample Name	160-49562-A-5-F MSD
Data File Name	157SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:17:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	81.444	ppb	81.444	4.01	1301943	50000	
Be	9	1	6	43.833	ppb	43.833	3.16	7302	2000	
B	11	1	6	172.740	ppb	172.740	2.71	22378	2000	
Na	23	2	45	13575.512	ppb	13575.512	0.56	2666150	400000	
Mg	24	2	45	16482.107	ppb	16482.107	0.83	1454004	400000	
Al	27	2	45	1483.051	ppb	1483.051	1.21	38324	400000	
Si	28	2	45	349.984	ppb	349.984	2.30	73449	10000	
P	31	2	45	164.091	ppb	164.091	4.27	571	10000	
K	39	2	45	2986.359	ppb	2986.359	0.89	227857	400000	
Ca	40	1	45	59637.194	ppb	59637.194	0.69	82044085	400000	
Ti	47	2	45	51.338	ppb	51.338	5.38	1223	4000	
V	51	2	72	40.865	ppb	40.865	2.48	39447	2000	
Cr	52	2	72	39.330	ppb	39.330	1.57	50180	5000	
Mn	55	2	72	86.639	ppb	86.639	2.18	48003	10000	
Fe	56	1	72	1198.321	ppb	1198.321	0.84	3657230	10000	
(Fe)	57	2	72	1176.011	ppb	1176.011	1.18	27934	400000	
Co	59	2	72	38.409	ppb	38.409	1.96	74343	2000	
Ni	60	2	72	38.354	ppb	38.354	3.57	21067	5000	
Cu	63	2	72	47.381	ppb	47.381	0.86	70139	5000	
Zn	66	2	72	71.052	ppb	71.052	4.47	20120	5000	
As	75	2	72	39.412	ppb	39.412	0.40	8712	2000	
Se	78	1	72	38.379	ppb	38.379	7.12	4814	2000	
Sr	88	2	72	233.657	ppb	233.657	0.57	148937	4000	
Zr	90	2	72	286.302	ppb	286.302	12.02	1487	1000	
Mo	95	2	115	72.075	ppb	72.075	3.42	54409	2000	
Ag	107	2	115	38.262	ppb	38.262	1.17	96039	100	
Cd	111	2	115	39.614	ppb	39.614	2.45	15478	2000	
Sn	120	2	115	37.886	ppb	37.886	2.39	41261	2000	
Sb	121	2	115	39.393	ppb	39.393	1.60	44834	1000	
Ba	137	2	115	102.956	ppb	102.956	2.60	33637	5000	
W	182	2	165	0.303	ppb	0.303	14.53	1794	100	
Tl	205	2	165	38.718	ppb	38.718	1.78	259282	2000	
Pb	208	2	165	39.202	ppb	39.202	0.74	360670	5000	
Th	232	2	193	40.255	ppb	40.255	0.70	392767	2000	
U	238	2	193	107.211	ppb	107.211	0.86	1084925	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	195218	0.68	253490	77.01	60	120	
Sc (IS)	45	1	HMI H2	8488097	0.46	9587331	88.53	60	120	
Sc (IS)	45	2	HMI He	889399	0.54	964862	92.18	60	120	
Sc (IS)	45	3	No Gas	15980033	1.78	17821643	89.67	60	120	
Ge Internal standard	72	1	HMI H2	4661325	0.34	5262568	88.58	60	120	
Ge Internal standard	72	2	HMI He	1067993	0.24	1150133	92.86	60	120	
In Internal standard	115	2	HMI He	3665582	0.29	3923278	93.43	60	120	
Ho-165	165	2	HMI He	14021427	0.36	14697450	95.40	60	120	
Ir (IS)	193	2	HMI He	10020473	0.18	10905184	91.89	60	120	

Sample Report

Sample Table

Sample Name	160-49562-A-5-Dpds
Data File Name	158SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:21:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	131.394	ppb	131.394	1.40	1598413	50000	
Be	9	1	6	110.307	ppb	110.307	2.47	18434	2000	
B	11	1	6	172.870	ppb	172.870	1.77	22485	2000	
Na	23	2	45	17546.635	ppb	17546.635	0.52	3459320	400000	
Mg	24	2	45	17137.146	ppb	17137.146	0.68	1520879	400000	
Al	27	2	45	2776.917	ppb	2776.917	2.03	72151	400000	
Si	28	2	45	395.327	ppb	395.327	1.54	81116	10000	
P	31	2	45	2288.910	ppb	2288.910	3.20	6118	10000	
K	39	2	45	4190.329	ppb	4190.329	0.51	305296	400000	
Ca	40	1	45	59280.147	ppb	59280.147	1.32	81561399	400000	
Ti	47	2	45	112.963	ppb	112.963	11.78	2707	4000	
V	51	2	72	97.311	ppb	97.311	0.52	90980	2000	
Cr	52	2	72	97.248	ppb	97.248	1.36	119301	5000	
Mn	55	2	72	146.379	ppb	146.379	0.45	79988	10000	
Fe	56	1	72	1410.436	ppb	1410.436	1.46	4301869	10000	
(Fe)	57	2	72	1425.766	ppb	1425.766	1.35	33428	400000	
Co	59	2	72	94.053	ppb	94.053	0.45	179864	2000	
Ni	60	2	72	94.254	ppb	94.254	3.19	50340	5000	
Cu	63	2	72	103.732	ppb	103.732	0.82	149949	5000	
Zn	66	2	72	235.598	ppb	235.598	0.73	64877	5000	
As	75	2	72	98.809	ppb	98.809	1.12	21442	2000	
Se	78	1	72	95.597	ppb	95.597	2.46	11985	2000	
Sr	88	2	72	247.171	ppb	247.171	0.78	155708	4000	
Zr	90	2	72	425.380	ppb	425.380	3.88	1894	1000	
Mo	95	2	115	130.258	ppb	130.258	0.60	97827	2000	
Ag	107	2	115	25.483	ppb	25.483	2.45	63667	100	
Cd	111	2	115	97.195	ppb	97.195	0.80	37775	2000	
Sn	120	2	115	96.308	ppb	96.308	0.63	103049	2000	
Sb	121	2	115	96.441	ppb	96.441	0.31	109163	1000	
Ba	137	2	115	163.981	ppb	163.981	1.13	53265	5000	
W	182	2	165	112.643	ppb	112.643	1.17	360292	100	
Tl	205	2	165	95.087	ppb	95.087	2.09	633157	2000	
Pb	208	2	165	95.027	ppb	95.027	1.16	865504	5000	
Th	232	2	193	107.227	ppb	107.227	1.58	1025018	2000	
U	238	2	193	304.315	ppb	304.315	0.46	3057535	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	196030	1.67	253490	77.33	60	120	
Sc (IS)	45	1	HMI H2	8489188	0.46	9587331	88.55	60	120	
Sc (IS)	45	2	HMI He	894737	0.70	964862	92.73	60	120	
Sc (IS)	45	3	No Gas	15826094	0.94	17821643	88.80	60	120	
Ge Internal standard	72	1	HMI H2	4662699	0.73	5262568	88.60	60	120	
Ge Internal standard	72	2	HMI He	1055629	0.65	1150133	91.78	60	120	
In Internal standard	115	2	HMI He	3647426	0.40	3923278	92.97	60	120	
Ho-165	165	2	HMI He	13950564	0.75	14697450	94.92	60	120	
Ir (IS)	193	2	HMI He	9965822	1.27	10905184	91.39	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	159_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:24:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	55.741	ppb	2.400	9226	50	111.5	90	110	>+\-10%
Na	23	2	45	51311.917	ppb	2.018	9983214	51000	100.6	90	110	
Mg	24	2	45	10698.762	ppb	0.829	941877	11000	97.3	90	110	
Al	27	2	45	999.522	ppb	2.471	25780	1000	100.0	90	110	
K	39	2	45	10269.112	ppb	0.714	683589	11000	93.4	90	110	
Ca	40	1	45	11280.139	ppb	0.582	15487522	11000	102.5	90	110	
Ti	47	2	45	51.767	ppb	7.071	1230	50	103.5	90	110	
V	51	2	72	49.420	ppb	0.632	46288	50	98.8	90	110	
Cr	52	2	72	49.070	ppb	1.183	60560	50	98.1	90	110	
Mn	55	2	72	50.382	ppb	1.649	27357	50	100.8	90	110	
Fe	56	1	72	996.817	ppb	0.203	3001320	1000	99.7	90	110	
Co	59	2	72	47.927	ppb	0.687	90542	50	95.9	90	110	
Ni	60	2	72	48.059	ppb	1.811	25627	50	96.1	90	110	
Cu	63	2	72	47.982	ppb	2.564	69315	50	96.0	90	110	
Zn	66	2	72	51.480	ppb	2.079	14357	50	103.0	90	110	
As	75	2	72	49.405	ppb	1.447	10636	50	98.8	90	110	
Se	78	1	72	48.890	ppb	4.547	6040	50	97.8	90	110	
Sr	88	2	72	102.893	ppb	1.543	64170	100	102.9	90	110	
Zr	90	2	72	82.111	ppb	57.016	837	50	164.2	90	110	>+\-10%
Mo	95	2	115	48.501	ppb	1.938	36582	50	97.0	90	110	
Ag	107	2	115	46.648	ppb	1.182	116940	50	93.3	90	110	
Cd	111	2	115	48.324	ppb	3.565	18859	50	96.6	90	110	
Sn	120	2	115	48.224	ppb	1.337	52223	50	96.4	90	110	
Sb	121	2	115	49.974	ppb	1.429	56799	50	99.9	90	110	
Ba	137	2	115	50.370	ppb	1.436	16476	50	100.7	90	110	
W	182	2	165	47.992	ppb	0.746	153591	50	96.0	90	110	
Tl	205	2	165	47.385	ppb	0.366	314857	50	94.8	90	110	
Pb	208	2	165	47.511	ppb	0.869	433170	50	95.0	90	110	
Th	232	2	193	51.055	ppb	1.034	491851	50	102.1	90	110	
U	238	2	193	50.335	ppb	1.145	506935	50	100.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	194027	0.43	253490	76.54	60	120	
Sc (IS)	45	1	HMI H2	8445000	0.92	9587331	88.08	60	120	
Sc (IS)	45	2	HMI He	887231	0.67	964862	91.95	60	120	
Sc (IS)	45	3	No Gas	16001921	0.64	17821643	89.79	60	120	
Ge Internal standard	72	1	HMI H2	4592854	0.34	5262568	87.27	60	120	
Ge Internal standard	72	2	HMI He	1042543	0.10	1150133	90.65	60	120	
In Internal standard	115	2	HMI He	3661219	0.42	3923278	93.32	60	120	
Ho-165	165	2	HMI He	13915092	0.27	14697450	94.68	60	120	
Ir (IS)	193	2	HMI He	9943890	0.48	10905184	91.18	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	160_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:28:13-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-11.367	ppb	-8.0	727358	10	
Be	9	1	6	0.197	ppb	50.7	50	0.5	
B	11	1	6	39.278	ppb	2.6	6585	0.5	>RL
Na	23	2	45	281.609	ppb	2.2	79621	25	>RL
Mg	24	2	45	-3.196	ppb	-39.6	777	25	
Al	27	2	45	2.868	ppb	54.8	123	15	
K	39	2	45	-13.835	ppb	-151.7	39477	50	
Ti	47	2	45	0.280	ppb	173.2	7	0.5	
V	51	2	72	-0.002	ppb	-7961.9	1347	1	
Cr	52	2	72	-0.133	ppb	-24.1	2094	1	
Mn	55	2	72	0.227	ppb	61.1	380	0.5	
(Fe)	57	2	72	8.069	ppb	46.1	413	25	
Co	59	2	72	0.062	ppb	79.8	163	0.5	
Ni	60	2	72	-0.244	ppb	-65.6	437	1	
Cu	63	2	72	0.765	ppb	12.8	2620	1	
Zn	66	2	72	0.034	ppb	832.3	470	5	
As	75	2	72	-0.007	ppb	-388.7	95	1	
Se	78	1	72	0.163	ppb	111.7	25	1	
Sr	88	2	72	-0.199	ppb	-49.0	140	0.5	
Zr	90	2	72	0.321	ppb	1647.2	597	1	
Mo	95	2	115	0.158	ppb	59.0	150	0.5	
Ag	107	2	115	0.007	ppb	180.9	67	1	
Cd	111	2	115	0.010	ppb	287.2	13	0.5	
Sn	120	2	115	0.120	ppb	78.6	990	1	
Sb	121	2	115	0.226	ppb	25.3	297	0.6	
Ba	137	2	115	-0.034	ppb	-361.1	67	0.5	
W	182	2	165	0.407	ppb	14.2	2107	1	
Tl	205	2	165	0.051	ppb	21.8	547	0.1	
Pb	208	2	165	-0.053	ppb	-57.4	2547	0.5	
Th	232	2	193	0.498	ppb	15.2	14191	1	
U	238	2	193	0.061	ppb	19.7	3454	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	202678	0.12	253490	79.95	60	120	
Sc (IS)	45	1	HMI H2	8491884	0.91	9587331	88.57	60	120	
Sc (IS)	45	2	HMI He	890596	0.25	964862	92.30	60	120	
Sc (IS)	45	3	No Gas	16084180	1.01	17821643	90.25	60	120	
Ge Internal standard	72	1	HMI H2	4647131	1.81	5262568	88.31	60	120	
Ge Internal standard	72	2	HMI He	1053295	1.16	1150133	91.58	60	120	
In Internal standard	115	2	HMI He	3662989	0.50	3923278	93.37	60	120	
Ho-165	165	2	HMI He	13898275	0.49	14697450	94.56	60	120	
Ir (IS)	193	2	HMI He	10137969	0.22	10905184	92.96	60	120	

Sample Report

Sample Table

Sample Name	160-49562-A-6-A
Data File Name	161SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:31:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	44.345	ppb	44.345	4.73	1072453	50000	
Be	9	1	6	0.158	ppb	0.158	111.84	43	2000	
B	11	1	6	163.520	ppb	163.520	3.79	22192	2000	
Na	23	2	45	12793.128	ppb	12793.128	0.55	2513705	400000	
Mg	24	2	45	15776.476	ppb	15776.476	1.07	1391716	400000	
Al	27	2	45	60.094	ppb	60.094	12.18	1600	400000	
Si	28	2	45	252.804	ppb	252.804	2.51	58056	10000	
P	31	2	45	113.505	ppb	113.505	5.89	440	10000	
K	39	2	45	2154.999	ppb	2154.999	0.45	175635	400000	
Ca	40	1	45	58129.748	ppb	58129.748	0.57	80393449	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.427	ppb	0.427	25.91	1757	2000	
Cr	52	2	72	0.228	ppb	0.228	74.06	2554	5000	
Mn	55	2	72	13.241	ppb	13.241	6.91	7525	10000	
Fe	56	1	72	13.752	ppb	13.752	2.97	64656	10000	
(Fe)	57	2	72	20.091	ppb	20.091	10.41	700	400000	
Co	59	2	72	0.156	ppb	0.156	21.74	347	2000	
Ni	60	2	72	0.149	ppb	0.149	304.73	650	5000	
Cu	63	2	72	4.784	ppb	4.784	4.99	8442	5000	
Zn	66	2	72	11.594	ppb	11.594	8.97	3661	5000	
As	75	2	72	0.067	ppb	0.067	221.57	112	2000	
Se	78	1	72	0.353	ppb	0.353	67.96	49	2000	
Sr	88	2	72	147.747	ppb	147.747	1.46	93903	4000	
Zr	90	2	72	42.827	ppb	42.827	72.20	733	1000	
Mo	95	2	115	33.249	ppb	33.249	2.84	25251	2000	
Ag	107	2	115	-0.007	ppb	-0.007	-91.38	33	100	
Cd	111	2	115	0.307	ppb	0.307	30.16	130	2000	
Sn	120	2	115	-0.032	ppb	-0.032	-404.05	833	2000	
Sb	121	2	115	0.166	ppb	0.166	50.92	230	1000	
Ba	137	2	115	58.236	ppb	58.236	0.23	19162	5000	
W	182	2	165	0.421	ppb	0.421	14.68	2180	100	
Tl	205	2	165	0.112	ppb	0.112	163.07	972	2000	
Pb	208	2	165	0.592	ppb	0.592	191.30	8566	5000	
Th	232	2	193	0.045	ppb	0.045	62.04	9800	2000	
U	238	2	193	64.670	ppb	64.670	0.72	662068	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	203638	0.27	253490	80.33	60	120	
Sc (IS)	45	1	HMI H2	8533056	0.99	9587331	89.00	60	120	
Sc (IS)	45	2	HMI He	889348	0.51	964862	92.17	60	120	
Sc (IS)	45	3	No Gas	16009676	0.22	17821643	89.83	60	120	
Ge Internal standard	72	1	HMI H2	4704767	0.22	5262568	89.40	60	120	
Ge Internal standard	72	2	HMI He	1063751	0.43	1150133	92.49	60	120	
In Internal standard	115	2	HMI He	3685257	0.53	3923278	93.93	60	120	
Ho-165	165	2	HMI He	14085420	1.02	14697450	95.84	60	120	
Ir (IS)	193	2	HMI He	10120279	0.23	10905184	92.80	60	120	

Sample Report

Sample Table

Sample Name	160-49563-A-2-A
Data File Name	162SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:35:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	67.704	ppb	67.704	4.41	1233702	50000	
Be	9	1	6	0.025	ppb	0.025	623.45	20	2000	
B	11	1	6	233.314	ppb	233.314	0.28	30618	2000	
Na	23	2	45	14204.794	ppb	14204.794	1.44	2804150	400000	
Mg	24	2	45	14843.493	ppb	14843.493	1.24	1316825	400000	
Al	27	2	45	181.160	ppb	181.160	5.43	4751	400000	
Si	28	2	45	276.052	ppb	276.052	3.58	62081	10000	
P	31	2	45	186.726	ppb	186.726	10.74	633	10000	
K	39	2	45	2415.001	ppb	2415.001	1.59	193038	400000	
Ca	40	1	45	62175.787	ppb	62175.787	1.27	86184782	400000	
Ti	47	2	45	4.172	ppb	4.172	29.71	100	4000	
V	51	2	72	0.513	ppb	0.513	15.82	1834	2000	
Cr	52	2	72	0.792	ppb	0.792	23.34	3230	5000	
Mn	55	2	72	57.764	ppb	57.764	0.34	31905	10000	
Fe	56	1	72	217.917	ppb	217.917	0.92	692017	10000	
(Fe)	57	2	72	236.521	ppb	236.521	8.53	5768	400000	
Co	59	2	72	0.321	ppb	0.321	9.33	663	2000	
Ni	60	2	72	0.616	ppb	0.616	68.26	897	5000	
Cu	63	2	72	8.613	ppb	8.613	3.07	13936	5000	
Zn	66	2	72	34.240	ppb	34.240	2.47	9880	5000	
As	75	2	72	0.341	ppb	0.341	31.68	171	2000	
Se	78	1	72	0.330	ppb	0.330	30.45	47	2000	
Sr	88	2	72	171.706	ppb	171.706	0.25	108882	4000	
Zr	90	2	72	28.097	ppb	28.097	104.84	687	1000	
Mo	95	2	115	51.883	ppb	51.883	0.95	39098	2000	
Ag	107	2	115	0.000	ppb	0.000	2981.95	50	100	
Cd	111	2	115	0.712	ppb	0.712	10.75	287	2000	
Sn	120	2	115	-0.091	ppb	-0.091	-131.24	763	2000	
Sb	121	2	115	0.170	ppb	0.170	16.00	233	1000	
Ba	137	2	115	60.746	ppb	60.746	2.03	19840	5000	
W	182	2	165	0.501	ppb	0.501	9.98	2414	100	
Tl	205	2	165	0.006	ppb	0.006	18.92	247	2000	
Pb	208	2	165	0.445	ppb	0.445	5.99	7071	5000	
Th	232	2	193	0.005	ppb	0.005	980.62	9390	2000	
U	238	2	193	88.326	ppb	88.326	1.22	900377	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	201520	1.32	253490	79.50	60	120	
Sc (IS)	45	1	HMI H2	8553308	0.95	9587331	89.21	60	120	
Sc (IS)	45	2	HMI He	894342	0.43	964862	92.69	60	120	
Sc (IS)	45	3	No Gas	16208783	0.20	17821643	90.95	60	120	
Ge Internal standard	72	1	HMI H2	4720503	0.68	5262568	89.70	60	120	
Ge Internal standard	72	2	HMI He	1061770	0.29	1150133	92.32	60	120	
In Internal standard	115	2	HMI He	3658381	0.97	3923278	93.25	60	120	
Ho-165	165	2	HMI He	13946155	0.86	14697450	94.89	60	120	
Ir (IS)	193	2	HMI He	10089089	1.05	10905184	92.52	60	120	

Sample Report

Sample Table

Sample Name	160-49563-A-3-A
Data File Name	163SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:38:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	71.083	ppb	71.083	2.83	1242044	50000	
Be	9	1	6	0.102	ppb	0.102	118.75	33	2000	
B	11	1	6	238.718	ppb	238.718	2.98	31246	2000	
Na	23	2	45	14582.043	ppb	14582.043	0.36	2867136	400000	
Mg	24	2	45	14828.215	ppb	14828.215	1.89	1310691	400000	
Al	27	2	45	35.873	ppb	35.873	8.25	977	400000	
Si	28	2	45	251.164	ppb	251.164	0.43	57906	10000	
P	31	2	45	188.856	ppb	188.856	3.96	637	10000	
K	39	2	45	2405.782	ppb	2405.782	1.34	191741	400000	
Ca	40	1	45	62513.149	ppb	62513.149	0.71	86735542	400000	
Ti	47	2	45	0.420	ppb	0.420	100.21	10	4000	
V	51	2	72	0.247	ppb	0.247	71.42	1597	2000	
Cr	52	2	72	0.513	ppb	0.513	66.19	2910	5000	
Mn	55	2	72	39.825	ppb	39.825	1.35	22212	10000	
Fe	56	1	72	32.368	ppb	32.368	2.19	122071	10000	
(Fe)	57	2	72	32.422	ppb	32.422	8.46	993	400000	
Co	59	2	72	0.226	ppb	0.226	36.92	483	2000	
Ni	60	2	72	0.306	ppb	0.306	74.10	737	5000	
Cu	63	2	72	7.294	ppb	7.294	2.53	12112	5000	
Zn	66	2	72	26.449	ppb	26.449	4.99	7785	5000	
As	75	2	72	0.211	ppb	0.211	56.57	144	2000	
Se	78	1	72	0.384	ppb	0.384	37.82	53	2000	
Sr	88	2	72	174.179	ppb	174.179	1.12	111124	4000	
Zr	90	2	72	1.901	ppb	1.901	2414.44	610	1000	
Mo	95	2	115	53.665	ppb	53.665	3.52	40482	2000	
Ag	107	2	115	-0.003	ppb	-0.003	-236.27	43	100	
Cd	111	2	115	0.728	ppb	0.728	17.60	293	2000	
Sn	120	2	115	-0.046	ppb	-0.046	-227.46	813	2000	
Sb	121	2	115	0.193	ppb	0.193	47.49	260	1000	
Ba	137	2	115	59.367	ppb	59.367	4.08	19409	5000	
W	182	2	165	0.455	ppb	0.455	12.88	2280	100	
Tl	205	2	165	0.011	ppb	0.011	63.13	283	2000	
Pb	208	2	165	-0.037	ppb	-0.037	-57.81	2720	5000	
Th	232	2	193	-0.047	ppb	-0.047	-146.87	8980	2000	
U	238	2	193	89.274	ppb	89.274	1.17	919671	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	201251	0.72	253490	79.39	60	120	
Sc (IS)	45	1	HMI H2	8560883	0.46	9587331	89.29	60	120	
Sc (IS)	45	2	HMI He	891021	0.42	964862	92.35	60	120	
Sc (IS)	45	3	No Gas	16041445	1.37	17821643	90.01	60	120	
Ge Internal standard	72	1	HMI H2	4721496	0.70	5262568	89.72	60	120	
Ge Internal standard	72	2	HMI He	1068278	0.14	1150133	92.88	60	120	
In Internal standard	115	2	HMI He	3662074	0.21	3923278	93.34	60	120	
Ho-165	165	2	HMI He	14032541	1.10	14697450	95.48	60	120	
Ir (IS)	193	2	HMI He	10196627	1.73	10905184	93.50	60	120	

Sample Report

Sample Table

Sample Name	280-174725-A-2-D
Data File Name	164SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:42:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-8.948	ppb	-8.948	-5.36	740037	50000	
Be	9	1	6	0.043	ppb	0.043	206.61	23	2000	
B	11	1	6	44.002	ppb	44.002	2.80	7178	2000	
Na	23	2	45	29697.314	ppb	29697.314	1.07	5739732	400000	
Mg	24	2	45	22583.332	ppb	22583.332	0.37	1970299	400000	
Al	27	2	45	4.751	ppb	4.751	42.62	170	400000	
Si	28	2	45	2118.875	ppb	2118.875	0.97	349725	10000	
P	31	2	45	15.737	ppb	15.737	117.32	185	10000	
K	39	2	45	5030.523	ppb	5030.523	1.41	352375	400000	
Ca	40	1	45	69987.874	ppb	69987.874	0.77	97503275	400000	
Ti	47	2	45	0.283	ppb	0.283	86.61	7	4000	
V	51	2	72	22.415	ppb	22.415	1.15	22022	2000	
Cr	52	2	72	13.784	ppb	13.784	3.86	18871	5000	
Mn	55	2	72	0.726	ppb	0.726	17.71	653	10000	
Fe	56	1	72	7.286	ppb	7.286	3.98	44928	10000	
(Fe)	57	2	72	14.860	ppb	14.860	20.38	573	400000	
Co	59	2	72	0.112	ppb	0.112	53.18	260	2000	
Ni	60	2	72	3.317	ppb	3.317	6.13	2320	5000	
Cu	63	2	72	0.730	ppb	0.730	29.03	2580	5000	
Zn	66	2	72	1.159	ppb	1.159	34.38	780	5000	
As	75	2	72	1.481	ppb	1.481	5.05	417	2000	
Se	78	1	72	2.931	ppb	2.931	19.69	376	2000	
Sr	88	2	72	273.200	ppb	273.200	0.70	172281	4000	
Zr	90	2	72	-13.609	ppb	-13.609	-322.90	557	1000	
Mo	95	2	115	5.770	ppb	5.770	7.83	4351	2000	
Ag	107	2	115	-0.010	ppb	-0.010	-58.21	23	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	-0.119	ppb	-0.119	-71.20	730	2000	
Sb	121	2	115	0.044	ppb	0.044	140.47	90	1000	
Ba	137	2	115	73.534	ppb	73.534	2.08	23862	5000	
W	182	2	165	32.901	ppb	32.901	1.31	106212	100	
Tl	205	2	165	-0.004	ppb	-0.004	-123.26	183	2000	
Pb	208	2	165	-0.097	ppb	-0.097	-17.92	2167	5000	
Th	232	2	193	-0.041	ppb	-0.041	-135.96	8833	2000	
U	238	2	193	1.549	ppb	1.549	2.26	18329	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	202788	0.23	253490	80.00	60	120	
Sc (IS)	45	1	HMI H2	8596494	0.39	9587331	89.67	60	120	
Sc (IS)	45	2	HMI He	879747	0.51	964862	91.18	60	120	
Sc (IS)	45	3	No Gas	16029088	0.54	17821643	89.94	60	120	
Ge Internal standard	72	1	HMI H2	4712655	0.43	5262568	89.55	60	120	
Ge Internal standard	72	2	HMI He	1056850	0.51	1150133	91.89	60	120	
In Internal standard	115	2	HMI He	3637645	0.35	3923278	92.72	60	120	
Ho-165	165	2	HMI He	14002597	0.31	14697450	95.27	60	120	
Ir (IS)	193	2	HMI He	9965347	0.79	10905184	91.38	60	120	

Sample Report

Sample Table

Sample Name	280-174725-A-2-E MS
Data File Name	165SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:46:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	39.361	ppb	39.361	9.58	1038687	50000	
Be	9	1	6	44.326	ppb	44.326	4.96	7619	2000	
B	11	1	6	33.612	ppb	33.612	6.51	5841	2000	
Na	23	2	45	29716.708	ppb	29716.708	0.67	5747552	400000	
Mg	24	2	45	23074.840	ppb	23074.840	0.73	2014503	400000	
Al	27	2	45	798.092	ppb	798.092	2.58	20436	400000	
Si	28	2	45	2111.374	ppb	2111.374	0.82	348795	10000	
P	31	2	45	10.562	ppb	10.562	60.34	171	10000	
K	39	2	45	5701.749	ppb	5701.749	1.16	394348	400000	
Ca	40	1	45	69637.965	ppb	69637.965	1.75	96429619	400000	
Ti	47	2	45	42.122	ppb	42.122	3.65	993	4000	
V	51	2	72	61.446	ppb	61.446	3.02	57854	2000	
Cr	52	2	72	54.675	ppb	54.675	0.33	67959	5000	
Mn	55	2	72	41.643	ppb	41.643	1.38	22903	10000	
Fe	56	1	72	819.629	ppb	819.629	0.52	2531948	10000	
(Fe)	57	2	72	793.374	ppb	793.374	0.55	18671	400000	
Co	59	2	72	38.235	ppb	38.235	2.09	73031	2000	
Ni	60	2	72	40.413	ppb	40.413	4.51	21875	5000	
Cu	63	2	72	39.539	ppb	39.539	0.35	58013	5000	
Zn	66	2	72	41.568	ppb	41.568	2.66	11808	5000	
As	75	2	72	40.322	ppb	40.322	2.47	8793	2000	
Se	78	1	72	42.215	ppb	42.215	3.66	5344	2000	
Sr	88	2	72	351.873	ppb	351.873	0.87	221207	4000	
Zr	90	2	72	47.289	ppb	47.289	61.48	740	1000	
Mo	95	2	115	44.226	ppb	44.226	0.56	33128	2000	
Ag	107	2	115	38.679	ppb	38.679	1.59	96284	100	
Cd	111	2	115	39.511	ppb	39.511	2.65	15315	2000	
Sn	120	2	115	39.063	ppb	39.063	2.39	42163	2000	
Sb	121	2	115	40.445	ppb	40.445	2.49	45650	1000	
Ba	137	2	115	112.946	ppb	112.946	1.82	36587	5000	
W	182	2	165	31.626	ppb	31.626	1.44	101950	100	
Tl	205	2	165	38.778	ppb	38.778	0.57	258874	2000	
Pb	208	2	165	38.331	ppb	38.331	0.53	351644	5000	
Th	232	2	193	40.857	ppb	40.857	0.41	396327	2000	
U	238	2	193	43.420	ppb	43.420	0.32	438655	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	201369	0.92	253490	79.44	60	120	
Sc (IS)	45	1	HMI H2	8545487	0.99	9587331	89.13	60	120	
Sc (IS)	45	2	HMI He	880343	0.12	964862	91.24	60	120	
Sc (IS)	45	3	No Gas	15970241	0.81	17821643	89.61	60	120	
Ge Internal standard	72	1	HMI H2	4704754	0.31	5262568	89.40	60	120	
Ge Internal standard	72	2	HMI He	1053947	0.08	1150133	91.64	60	120	
In Internal standard	115	2	HMI He	3635638	1.11	3923278	92.67	60	120	
Ho-165	165	2	HMI He	13978604	0.53	14697450	95.11	60	120	
Ir (IS)	193	2	HMI He	9965875	0.33	10905184	91.39	60	120	

Sample Report

Sample Table

Sample Name	280-174725-A-2-F MSD
Data File Name	166SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:49:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	39.974	ppb	39.974	5.28	1043250	50000	
Be	9	1	6	44.983	ppb	44.983	5.58	7819	2000	
B	11	1	6	33.428	ppb	33.428	7.36	5885	2000	
Na	23	2	45	31599.756	ppb	31599.756	1.81	6103632	400000	
Mg	24	2	45	24251.353	ppb	24251.353	0.89	2115009	400000	
Al	27	2	45	813.226	ppb	813.226	3.01	20803	400000	
Si	28	2	45	2235.448	ppb	2235.448	1.22	367857	10000	
P	31	2	45	18.125	ppb	18.125	52.69	191	10000	
K	39	2	45	6012.265	ppb	6012.265	1.39	413217	400000	
Ca	40	1	45	73474.179	ppb	73474.179	0.67	100975742	400000	
Ti	47	2	45	45.270	ppb	45.270	4.14	1067	4000	
V	51	2	72	63.538	ppb	63.538	0.85	59430	2000	
Cr	52	2	72	55.134	ppb	55.134	2.42	68105	5000	
Mn	55	2	72	42.632	ppb	42.632	3.43	23301	10000	
Fe	56	1	72	822.014	ppb	822.014	0.43	2543811	10000	
(Fe)	57	2	72	814.899	ppb	814.899	1.77	19058	400000	
Co	59	2	72	38.822	ppb	38.822	1.37	73717	2000	
Ni	60	2	72	41.415	ppb	41.415	2.87	22272	5000	
Cu	63	2	72	40.443	ppb	40.443	1.15	58955	5000	
Zn	66	2	72	41.544	ppb	41.544	2.27	11731	5000	
As	75	2	72	40.646	ppb	40.646	1.44	8812	2000	
Se	78	1	72	42.634	ppb	42.634	3.21	5406	2000	
Sr	88	2	72	369.845	ppb	369.845	0.90	231140	4000	
Zr	90	2	72	35.526	ppb	35.526	29.57	700	1000	
Mo	95	2	115	45.384	ppb	45.384	3.32	33676	2000	
Ag	107	2	115	40.048	ppb	40.048	0.58	98770	100	
Cd	111	2	115	40.205	ppb	40.205	2.90	15435	2000	
Sn	120	2	115	40.128	ppb	40.128	0.54	42892	2000	
Sb	121	2	115	41.646	ppb	41.646	1.87	46573	1000	
Ba	137	2	115	119.169	ppb	119.169	0.45	38244	5000	
W	182	2	165	34.144	ppb	34.144	2.45	109670	100	
Tl	205	2	165	40.175	ppb	40.175	0.77	267387	2000	
Pb	208	2	165	39.238	ppb	39.238	0.15	358808	5000	
Th	232	2	193	41.565	ppb	41.565	0.16	408108	2000	
U	238	2	193	43.383	ppb	43.383	0.46	443792	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	203693	0.28	253490	80.36	60	120	
Sc (IS)	45	1	HMI H2	8480734	0.84	9587331	88.46	60	120	
Sc (IS)	45	2	HMI He	879454	0.62	964862	91.15	60	120	
Sc (IS)	45	3	No Gas	15981279	0.79	17821643	89.67	60	120	
Ge Internal standard	72	1	HMI H2	4713166	0.33	5262568	89.56	60	120	
Ge Internal standard	72	2	HMI He	1047783	0.63	1150133	91.10	60	120	
In Internal standard	115	2	HMI He	3601787	0.63	3923278	91.81	60	120	
Ho-165	165	2	HMI He	13935930	0.88	14697450	94.82	60	120	
Ir (IS)	193	2	HMI He	10091266	0.11	10905184	92.54	60	120	

Sample Report

Sample Table

Sample Name	280-174725-A-3-A
Data File Name	167SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:53:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608084 6020b
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-8.290	ppb	-8.290	-8.60	754399	50000	
Be	9	1	6	0.081	ppb	0.081	188.06	30	2000	
B	11	1	6	23.502	ppb	23.502	17.16	4591	2000	
Na	23	2	45	65832.339	ppb	65832.339	0.98	12811807	400000	
Mg	24	2	45	22425.751	ppb	22425.751	1.55	1974630	400000	
Al	27	2	45	19.454	ppb	19.454	9.65	550	400000	
Si	28	2	45	2122.897	ppb	2122.897	0.98	353593	10000	
P	31	2	45	32.694	ppb	32.694	33.37	230	10000	
K	39	2	45	5283.853	ppb	5283.853	1.54	371501	400000	
Ca	40	1	45	63028.293	ppb	63028.293	1.81	87310109	400000	
Ti	47	2	45	1.403	ppb	1.403	46.48	33	4000	
V	51	2	72	20.856	ppb	20.856	1.57	20697	2000	
Cr	52	2	72	23.233	ppb	23.233	3.05	30425	5000	
Mn	55	2	72	0.835	ppb	0.835	26.20	717	10000	
Fe	56	1	72	188.631	ppb	188.631	0.75	597426	10000	
(Fe)	57	2	72	195.607	ppb	195.607	9.90	4814	400000	
Co	59	2	72	0.790	ppb	0.790	4.85	1567	2000	
Ni	60	2	72	0.696	ppb	0.696	5.25	940	5000	
Cu	63	2	72	1.237	ppb	1.237	4.83	3324	5000	
Zn	66	2	72	4.971	ppb	4.971	15.18	1834	5000	
As	75	2	72	1.167	ppb	1.167	12.88	351	2000	
Se	78	1	72	4.309	ppb	4.309	17.23	547	2000	
Sr	88	2	72	255.060	ppb	255.060	0.45	161746	4000	
Zr	90	2	72	16.063	ppb	16.063	287.93	650	1000	
Mo	95	2	115	5.827	ppb	5.827	11.84	4367	2000	
Ag	107	2	115	0.197	ppb	0.197	7.25	537	100	
Cd	111	2	115	0.002	ppb	0.002	1307.73	10	2000	
Sn	120	2	115	-0.020	ppb	-0.020	-348.32	830	2000	
Sb	121	2	115	0.357	ppb	0.357	6.14	440	1000	
Ba	137	2	115	63.172	ppb	63.172	0.81	20391	5000	
W	182	2	165	2.425	ppb	2.425	2.20	8586	100	
Tl	205	2	165	0.030	ppb	0.030	95.07	407	2000	
Pb	208	2	165	-0.025	ppb	-0.025	-43.23	2820	5000	
Th	232	2	193	0.455	ppb	0.455	13.08	13670	2000	
U	238	2	193	1.840	ppb	1.840	2.05	21460	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	201588	1.03	253490	79.52	60	120	
Sc (IS)	45	1	HMI H2	8548684	1.44	9587331	89.17	60	120	
Sc (IS)	45	2	HMI He	887907	1.07	964862	92.02	60	120	
Sc (IS)	45	3	No Gas	16250383	0.77	17821643	91.18	60	120	
Ge Internal standard	72	1	HMI H2	4684251	0.94	5262568	89.01	60	120	
Ge Internal standard	72	2	HMI He	1062670	0.32	1150133	92.40	60	120	
In Internal standard	115	2	HMI He	3616124	0.42	3923278	92.17	60	120	
Ho-165	165	2	HMI He	13998683	0.58	14697450	95.25	60	120	
Ir (IS)	193	2	HMI He	10064615	0.70	10905184	92.29	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	168_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T19:56:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	53.114	ppb	4.202	9463	50	106.2	90	110	
Na	23	2	45	52578.432	ppb	0.557	10339524	51000	103.1	90	110	
Mg	24	2	45	10733.864	ppb	0.391	955093	11000	97.6	90	110	
Al	27	2	45	994.230	ppb	3.610	25917	1000	99.4	90	110	
K	39	2	45	10296.321	ppb	1.060	692610	11000	93.6	90	110	
Ca	40	1	45	11207.099	ppb	0.452	15866646	11000	101.9	90	110	
Ti	47	2	45	55.670	ppb	9.695	1337	50	111.3	90	110	>+\-10%
V	51	2	72	50.095	ppb	1.734	47408	50	100.2	90	110	
Cr	52	2	72	49.429	ppb	1.626	61644	50	98.9	90	110	
Mn	55	2	72	49.375	ppb	1.478	27103	50	98.7	90	110	
Fe	56	1	72	1016.008	ppb	0.591	3110595	1000	101.6	90	110	
Co	59	2	72	47.627	ppb	0.954	90944	50	95.3	90	110	
Ni	60	2	72	47.777	ppb	1.223	25754	50	95.6	90	110	
Cu	63	2	72	48.511	ppb	1.381	70818	50	97.0	90	110	
Zn	66	2	72	47.187	ppb	2.286	13339	50	94.4	90	110	
As	75	2	72	48.857	ppb	0.901	10632	50	97.7	90	110	
Se	78	1	72	49.375	ppb	3.727	6203	50	98.7	90	110	
Sr	88	2	72	100.974	ppb	3.072	63659	100	101.0	90	110	
Zr	90	2	72	26.525	ppb	142.889	677	50	53.1	90	110	>+\-10%
Mo	95	2	115	47.911	ppb	1.158	36445	50	95.8	90	110	
Ag	107	2	115	46.766	ppb	2.001	118222	50	93.5	90	110	
Cd	111	2	115	47.301	ppb	3.374	18611	50	94.6	90	110	
Sn	120	2	115	48.118	ppb	1.991	52555	50	96.2	90	110	
Sb	121	2	115	49.362	ppb	1.120	56578	50	98.7	90	110	
Ba	137	2	115	47.293	ppb	2.788	15605	50	94.6	90	110	
W	182	2	165	48.158	ppb	1.264	155752	50	96.3	90	110	
Tl	205	2	165	47.134	ppb	0.484	316499	50	94.3	90	110	
Pb	208	2	165	47.344	ppb	0.660	436212	50	94.7	90	110	
Th	232	2	193	50.042	ppb	1.570	492413	50	100.1	90	110	
U	238	2	193	49.871	ppb	1.191	512848	50	99.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	208872	1.53	253490	82.40	60	120	
Sc (IS)	45	1	HMI H2	8707887	0.32	9587331	90.83	60	120	
Sc (IS)	45	2	HMI He	896726	0.71	964862	92.94	60	120	
Sc (IS)	45	3	No Gas	16287956	0.84	17821643	91.39	60	120	
Ge Internal standard	72	1	HMI H2	4670768	0.76	5262568	88.75	60	120	
Ge Internal standard	72	2	HMI He	1053766	0.21	1150133	91.62	60	120	
In Internal standard	115	2	HMI He	3692305	0.78	3923278	94.11	60	120	
Ho-165	165	2	HMI He	14061879	0.54	14697450	95.68	60	120	
Ir (IS)	193	2	HMI He	10152535	0.22	10905184	93.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	169_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:00:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-9.456	ppb	-8.4	758943	10	
Be	9	1	6	0.087	ppb	217.2	33	0.5	
B	11	1	6	29.401	ppb	12.7	5745	0.5	>RL
Na	23	2	45	177.468	ppb	2.9	59732	25	>RL
Mg	24	2	45	-1.679	ppb	-92.1	917	25	
Al	27	2	45	4.118	ppb	62.3	157	15	
K	39	2	45	-18.581	ppb	-90.3	39444	50	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.059	ppb	272.3	1417	1	
Cr	52	2	72	-0.070	ppb	-131.5	2194	1	
Mn	55	2	72	-0.023	ppb	-467.7	247	0.5	
(Fe)	57	2	72	6.870	ppb	27.6	390	25	
Co	59	2	72	0.033	ppb	55.4	110	0.5	
Ni	60	2	72	-0.021	ppb	-551.5	560	1	
Cu	63	2	72	0.660	ppb	9.6	2497	1	
Zn	66	2	72	-0.070	ppb	-335.5	447	5	
As	75	2	72	-0.063	ppb	-132.8	84	1	
Se	78	1	72	0.098	ppb	37.6	17	1	
Sr	88	2	72	-0.181	ppb	-66.1	153	0.5	
Zr	90	2	72	-28.888	ppb	-20.9	513	1	
Mo	95	2	115	0.131	ppb	26.8	130	0.5	
Ag	107	2	115	0.015	ppb	32.7	87	1	
Cd	111	2	115	-0.015	ppb	-97.3	3	0.5	
Sn	120	2	115	0.042	ppb	98.4	907	1	
Sb	121	2	115	0.149	ppb	36.0	210	0.6	
Ba	137	2	115	0.120	ppb	104.3	117	0.5	
W	182	2	165	0.190	ppb	21.4	1440	1	
Tl	205	2	165	0.046	ppb	16.1	523	0.1	
Pb	208	2	165	-0.062	ppb	-15.9	2507	0.5	
Th	232	2	193	0.344	ppb	22.0	13103	1	
U	238	2	193	0.044	ppb	16.3	3377	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	217521	0.71	253490	85.81	60	120	
Sc (IS)	45	1	HMI H2	8661420	0.70	9587331	90.34	60	120	
Sc (IS)	45	2	HMI He	896589	0.15	964862	92.92	60	120	
Sc (IS)	45	3	No Gas	16510034	0.40	17821643	92.64	60	120	
Ge Internal standard	72	1	HMI H2	4781143	0.75	5262568	90.85	60	120	
Ge Internal standard	72	2	HMI He	1064446	0.77	1150133	92.55	60	120	
In Internal standard	115	2	HMI He	3660000	0.58	3923278	93.29	60	120	
Ho-165	165	2	HMI He	14104352	0.50	14697450	95.96	60	120	
Ir (IS)	193	2	HMI He	10457072	0.33	10905184	95.89	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608698/1-A
Data File Name	170_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:03:54-06:00
Sample Type	Blank
Dilution	1
Comment	608698 6020
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	-8.811	ppb	-16.42040303	761797	10
Be	9	1	6	0.050	ppb	160.8578556	27	0.5
B	11	1	6	7.486	ppb	24.89443535	2824	0.5
Na	23	2	45	119.983	ppb	1.799794105	48984	25
Mg	24	2	45	-6.206	ppb	-6.854587476	520	25
Al	27	2	45	6.825	ppb	122.7773253	230	15
K	39	2	45	-5.115	ppb	-238.3738584	40737	50
Ti	47	2	45	0.411	ppb	99.94829344	10	0.5
V	51	2	72	0.161	ppb	44.34784076	1523	1
Cr	52	2	72	-0.209	ppb	-137.2310316	2040	1
Mn	55	2	72	-0.009	ppb	-525.102034	257	0.5
(Fe)	57	2	72	2.793	ppb	30.39039841	297	25
Co	59	2	72	0.019	ppb	15.39080516	83	0.5
Ni	60	2	72	-0.234	ppb	-62.24808746	450	1
Cu	63	2	72	0.445	ppb	31.93994507	2204	1
Zn	66	2	72	-0.587	ppb	-38.91831686	307	5
As	75	2	72	-0.087	ppb	-149.0831583	79	1
Se	78	1	72	0.117	ppb	115.3312652	20	1
Sr	88	2	72	-0.230	ppb	-3.685906625	123	0.5
Zr	90	2	72	17.055	ppb	428.0691215	660	1
Mo	95	2	115	0.024	ppb	54.49728969	50	0.5
Ag	107	2	115	0.001	ppb	394.8653592	53	1
Cd	111	2	115	-0.016	ppb	-93.7076676	3	0.5
Sn	120	2	115	-0.197	ppb	-19.13563909	660	1
Sb	121	2	115	0.028	ppb	206.5087954	73	0.6
Ba	137	2	115	0.297	ppb	109.4924888	177	0.5
W	182	2	165	0.053	ppb	6.543722644	1003	1
Tl	205	2	165	-0.006	ppb	-38.79080103	173	0.1
Pb	208	2	165	-0.088	ppb	-9.593733354	2284	0.5
Th	232	2	193	-0.014	ppb	-93.42723862	9570	1
U	238	2	193	0.045	ppb	12.90742063	3401	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	218585	1.08	253490	86.23	60	120	
Sc (IS)	45	1	HMI H2	8761420	0.68	9587331	91.39	60	120	
Sc (IS)	45	2	HMI He	906331	0.40	964862	93.93	60	120	
Sc (IS)	45	3	No Gas	16482319	0.57	17821643	92.48	60	120	
Ge Internal standard	72	1	HMI H2	4823671	0.53	5262568	91.66	60	120	
Ge Internal standard	72	2	HMI He	1073261	0.45	1150133	93.32	60	120	
In Internal standard	115	2	HMI He	3708359	0.40	3923278	94.52	60	120	
Ho-165	165	2	HMI He	14211359	0.53	14697450	96.69	60	120	
Ir (IS)	193	2	HMI He	10491641	0.13	10905184	96.21	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608698/2-A
Data File Name	171_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:07:29-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608698 6020
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	35.733	35.733	ppb	6.803	1063781	400	8.9	80	120	>+/-20%
Be	9	1	6	39.589	39.589	ppb	3.627	7402	40	99.0	80	120	
Na	23	2	45	903.021	903.021	ppb	1.475	206251	40	2257.6	80	120	>+/-20%
Mg	24	2	45	746.935	746.935	ppb	1.394	68856	40	1867.3	80	120	>+/-20%
Al	27	2	45	806.245	806.245	ppb	4.797	21461	40	2015.6	80	120	>+/-20%
K	39	2	45	729.107	729.107	ppb	2.559	88591	40	1822.8	80	120	>+/-20%
V	51	2	72	38.492	38.492	ppb	2.811	37637	40	96.2	80	120	
Cr	52	2	72	38.950	38.950	ppb	0.341	50256	40	97.4	80	120	
Mn	55	2	72	39.572	39.572	ppb	2.895	22306	40	98.9	80	120	
(Fe)	57	2	72	782.069	782.069	ppb	4.153	18855	40	1955.2	80	120	>+/-20%
Co	59	2	72	37.804	37.804	ppb	0.728	73964	40	94.5	80	120	
Ni	60	2	72	38.724	38.724	ppb	3.929	21498	40	96.8	80	120	
Cu	63	2	72	38.720	38.720	ppb	1.367	58226	40	96.8	80	120	
Zn	66	2	72	39.439	39.439	ppb	5.286	11501	40	98.6	80	120	
As	75	2	72	37.621	37.621	ppb	1.830	8411	40	94.1	80	120	
Se	78	1	72	38.481	38.481	ppb	1.749	5008	40	96.2	80	120	
Mo	95	2	115	36.699	36.699	ppb	3.434	28165	40	91.7	80	120	
Ag	107	2	115	38.983	38.983	ppb	0.595	99417	40	97.5	80	120	
Cd	111	2	115	38.174	38.174	ppb	3.392	15151	40	95.4	80	120	
Sn	120	2	115	35.860	35.860	ppb	3.017	39721	40	89.7	80	120	
Sb	121	2	115	38.177	38.177	ppb	0.035	44146	40	95.4	80	120	
Ba	137	2	115	39.193	39.193	ppb	3.123	13059	40	98.0	80	120	
W	182	2	165	0.047	0.047	ppb	7.748	997	40	0.1	80	120	>+/-20%
Tl	205	2	165	38.230	38.230	ppb	0.630	262501	40	95.6	80	120	
Pb	208	2	165	37.779	37.779	ppb	0.486	356518	40	94.4	80	120	
Th	232	2	193	37.161	37.161	ppb	0.719	385549	40	92.9	80	120	
U	238	2	193	38.731	38.731	ppb	0.789	417849	40	96.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	219018	0.27	253490	86.40	60	120	
Sc (IS)	45	1	HMI H2	8829875	1.29	9587331	92.10	60	120	
Sc (IS)	45	2	HMI He	915306	0.65	964862	94.86	60	120	
Sc (IS)	45	3	No Gas	16720606	0.53	17821643	93.82	60	120	
Ge Internal standard	72	1	HMI H2	4836793	0.55	5262568	91.91	60	120	
Ge Internal standard	72	2	HMI He	1079602	0.50	1150133	93.87	60	120	
In Internal standard	115	2	HMI He	3724140	0.93	3923278	94.92	60	120	
Ho-165	165	2	HMI He	14377408	0.40	14697450	97.82	60	120	
Ir (IS)	193	2	HMI He	10635129	1.53	10905184	97.52	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-4-A
Data File Name	172SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:11:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-6.721	ppb	-6.721	-11.87	785482	50000	
Be	9	1	6	-0.002	ppb	-0.002	-6225.36	17	2000	
B	11	1	6	13.970	ppb	13.970	16.23	3671	2000	
Na	23	2	45	9702.067	ppb	9702.067	2.19	1940905	400000	
Mg	24	2	45	41240.351	ppb	41240.351	1.54	3690624	400000	
Al	27	2	45	9.040	ppb	9.040	5.14	287	400000	
Si	28	2	45	425.183	ppb	425.183	1.70	86629	10000	
P	31	2	45	46.359	ppb	46.359	31.64	270	10000	
K	39	2	45	2693.342	ppb	2693.342	0.38	212583	400000	
Ca	40	1	45	52097.852	ppb	52097.852	0.49	74614392	400000	
Ti	47	2	45	0.415	ppb	0.415	99.83	10	4000	
V	51	2	72	0.081	ppb	0.081	164.19	1453	2000	
Cr	52	2	72	2.432	ppb	2.432	7.15	5291	5000	
Mn	55	2	72	129.578	ppb	129.578	0.40	72270	10000	
Fe	56	1	72	56.104	ppb	56.104	0.74	200422	10000	
(Fe)	57	2	72	61.694	ppb	61.694	11.23	1697	400000	
Co	59	2	72	0.275	ppb	0.275	16.72	583	2000	
Ni	60	2	72	1.575	ppb	1.575	16.45	1427	5000	
Cu	63	2	72	0.937	ppb	0.937	11.87	2930	5000	
Zn	66	2	72	1.262	ppb	1.262	21.08	823	5000	
As	75	2	72	0.194	ppb	0.194	88.91	141	2000	
Se	78	1	72	0.055	ppb	0.055	112.35	12	2000	
Sr	88	2	72	112.354	ppb	112.354	0.76	72361	4000	
Zr	90	2	72	21.751	ppb	21.751	278.10	677	1000	
Mo	95	2	115	4.814	ppb	4.814	5.01	3681	2000	
Ag	107	2	115	0.008	ppb	0.008	200.60	70	100	
Cd	111	2	115	0.044	ppb	0.044	119.24	27	2000	
Sn	120	2	115	-0.022	ppb	-0.022	-450.66	843	2000	
Sb	121	2	115	0.219	ppb	0.219	35.60	290	1000	
Ba	137	2	115	188.611	ppb	188.611	2.08	61839	5000	
W	182	2	165	0.043	ppb	0.043	45.30	970	100	
Tl	205	2	165	0.050	ppb	0.050	31.02	553	2000	
Pb	208	2	165	0.583	ppb	0.583	12.20	8478	5000	
Th	232	2	193	0.562	ppb	0.562	9.46	15252	2000	
U	238	2	193	1.159	ppb	1.159	2.65	15102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	217003	0.47	253490	85.61	60	120	
Sc (IS)	45	1	HMI H2	8835815	0.84	9587331	92.16	60	120	
Sc (IS)	45	2	HMI He	902679	0.79	964862	93.56	60	120	
Sc (IS)	45	3	No Gas	16699155	0.73	17821643	93.70	60	120	
Ge Internal standard	72	1	HMI H2	4852551	0.05	5262568	92.21	60	120	
Ge Internal standard	72	2	HMI He	1076992	0.19	1150133	93.64	60	120	
In Internal standard	115	2	HMI He	3683108	1.36	3923278	93.88	60	120	
Ho-165	165	2	HMI He	14199277	0.35	14697450	96.61	60	120	
Ir (IS)	193	2	HMI He	10444033	0.48	10905184	95.77	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-5-A
Data File Name	173SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:14:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-5.342	ppb	-5.342	-81.75	799029	50000	
Be	9	1	6	-0.021	ppb	-0.021	-297.73	13	2000	
B	11	1	6	12.175	ppb	12.175	1.41	3464	2000	
Na	23	2	45	8255.535	ppb	8255.535	1.28	1653302	400000	
Mg	24	2	45	33194.733	ppb	33194.733	1.43	2967376	400000	
Al	27	2	45	9.434	ppb	9.434	15.27	297	400000	
Si	28	2	45	362.512	ppb	362.512	3.53	76465	10000	
P	31	2	45	50.324	ppb	50.324	18.44	280	10000	
K	39	2	45	385.990	ppb	385.990	3.15	65421	400000	
Ca	40	1	45	41455.074	ppb	41455.074	0.71	58961271	400000	
Ti	47	2	45	0.414	ppb	0.414	99.97	10	4000	
V	51	2	72	0.184	ppb	0.184	180.85	1553	2000	
Cr	52	2	72	-0.117	ppb	-0.117	-79.10	2167	5000	
Mn	55	2	72	14.926	ppb	14.926	4.00	8579	10000	
Fe	56	1	72	16.682	ppb	16.682	0.68	76559	10000	
(Fe)	57	2	72	20.217	ppb	20.217	16.26	713	400000	
Co	59	2	72	0.061	ppb	0.061	62.29	167	2000	
Ni	60	2	72	0.180	ppb	0.180	37.17	677	5000	
Cu	63	2	72	0.468	ppb	0.468	36.93	2250	5000	
Zn	66	2	72	1.575	ppb	1.575	18.59	913	5000	
As	75	2	72	0.260	ppb	0.260	3.52	156	2000	
Se	78	1	72	0.043	ppb	0.043	161.39	11	2000	
Sr	88	2	72	100.651	ppb	100.651	1.67	65034	4000	
Zr	90	2	72	-11.853	ppb	-11.853	-340.14	573	1000	
Mo	95	2	115	2.014	ppb	2.014	3.86	1553	2000	
Ag	107	2	115	0.005	ppb	0.005	86.07	63	100	
Cd	111	2	115	0.053	ppb	0.053	128.21	30	2000	
Sn	120	2	115	-0.172	ppb	-0.172	-44.37	680	2000	
Sb	121	2	115	0.078	ppb	0.078	48.70	130	1000	
Ba	137	2	115	110.760	ppb	110.760	0.96	36236	5000	
W	182	2	165	0.109	ppb	0.109	18.45	1197	100	
Tl	205	2	165	0.021	ppb	0.021	106.25	357	2000	
Pb	208	2	165	0.090	ppb	0.090	57.14	3950	5000	
Th	232	2	193	0.042	ppb	0.042	144.44	10074	2000	
U	238	2	193	2.243	ppb	2.243	3.17	26478	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	219152	0.65	253490	86.45	60	120	
Sc (IS)	45	1	HMI H2	8772864	0.86	9587331	91.50	60	120	
Sc (IS)	45	2	HMI He	901561	0.06	964862	93.44	60	120	
Sc (IS)	45	3	No Gas	16799943	1.56	17821643	94.27	60	120	
Ge Internal standard	72	1	HMI H2	4892397	0.99	5262568	92.97	60	120	
Ge Internal standard	72	2	HMI He	1079932	0.68	1150133	93.90	60	120	
In Internal standard	115	2	HMI He	3671165	0.06	3923278	93.57	60	120	
Ho-165	165	2	HMI He	14324146	1.69	14697450	97.46	60	120	
Ir (IS)	193	2	HMI He	10431028	1.10	10905184	95.65	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-9-A
Data File Name	174SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:18:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.588	ppb	-2.588	-126.17	817408	50000	
Be	9	1	6	0.014	ppb	0.014	372.08	20	2000	
B	11	1	6	10.124	ppb	10.124	6.55	3200	2000	
Na	23	2	45	26038.158	ppb	26038.158	0.22	5195092	400000	
Mg	24	2	45	35170.090	ppb	35170.090	0.65	3164967	400000	
Al	27	2	45	7.969	ppb	7.969	33.59	260	400000	
Si	28	2	45	357.281	ppb	357.281	2.67	76130	10000	
P	31	2	45	25.674	ppb	25.674	10.57	217	10000	
K	39	2	45	1360.687	ppb	1360.687	1.92	128325	400000	
Ca	40	1	45	40686.709	ppb	40686.709	2.17	58348686	400000	
Ti	47	2	45	0.136	ppb	0.136	173.21	3	4000	
V	51	2	72	0.117	ppb	0.117	9.90	1497	2000	
Cr	52	2	72	0.189	ppb	0.189	90.96	2554	5000	
Mn	55	2	72	6.670	ppb	6.670	9.27	3994	10000	
Fe	56	1	72	246.195	ppb	246.195	0.56	801374	10000	
(Fe)	57	2	72	264.912	ppb	264.912	7.19	6565	400000	
Co	59	2	72	0.049	ppb	0.049	33.54	143	2000	
Ni	60	2	72	-0.107	ppb	-0.107	-49.34	523	5000	
Cu	63	2	72	1.096	ppb	1.096	15.69	3184	5000	
Zn	66	2	72	0.972	ppb	0.972	39.34	747	5000	
As	75	2	72	1.189	ppb	1.189	5.32	363	2000	
Se	78	1	72	0.044	ppb	0.044	39.51	11	2000	
Sr	88	2	72	124.197	ppb	124.197	1.54	80466	4000	
Zr	90	2	72	-38.200	ppb	-38.200	-40.83	493	1000	
Mo	95	2	115	2.316	ppb	2.316	6.63	1794	2000	
Ag	107	2	115	-0.005	ppb	-0.005	-226.64	37	100	
Cd	111	2	115	-0.007	ppb	-0.007	-424.37	7	2000	
Sn	120	2	115	-0.242	ppb	-0.242	-19.92	610	2000	
Sb	121	2	115	0.022	ppb	0.022	89.25	67	1000	
Ba	137	2	115	343.500	ppb	343.500	0.68	112991	5000	
W	182	2	165	0.193	ppb	0.193	36.24	1467	100	
Tl	205	2	165	0.004	ppb	0.004	105.57	243	2000	
Pb	208	2	165	-0.017	ppb	-0.017	-222.96	2954	5000	
Th	232	2	193	0.003	ppb	0.003	1067.12	9737	2000	
U	238	2	193	2.084	ppb	2.084	2.32	24942	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	220066	0.23	253490	86.81	60	120	
Sc (IS)	45	1	HMI H2	8846865	1.46	9587331	92.28	60	120	
Sc (IS)	45	2	HMI He	907598	0.47	964862	94.07	60	120	
Sc (IS)	45	3	No Gas	16798114	1.01	17821643	94.26	60	120	
Ge Internal standard	72	1	HMI H2	4856712	0.37	5262568	92.29	60	120	
Ge Internal standard	72	2	HMI He	1083879	0.63	1150133	94.24	60	120	
In Internal standard	115	2	HMI He	3696638	0.66	3923278	94.22	60	120	
Ho-165	165	2	HMI He	14290963	0.53	14697450	97.23	60	120	
Ir (IS)	193	2	HMI He	10488330	0.56	10905184	96.18	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-10-A
Data File Name	175SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:21:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	244.091	ppb	244.091	1.50	2439906	50000	
Be	9	1	6	-0.002	ppb	-0.002	-5792.78	17	2000	
B	11	1	6	10.934	ppb	10.934	7.59	3287	2000	
Na	23	2	45	70624.314	ppb	70624.314	0.26	14112446	400000	
Mg	24	2	45	73652.810	ppb	73652.810	0.09	6657379	400000	
Al	27	2	45	14.853	ppb	14.853	11.66	443	400000	
Si	28	2	45	440.990	ppb	440.990	2.59	90070	10000	
P	31	2	45	20.029	ppb	20.029	27.99	203	10000	
K	39	2	45	3944.595	ppb	3944.595	0.32	295294	400000	
Ca	40	1	45	167302.793	ppb	167302.793	0.51	241692616	400000	
Ti	47	2	45	0.408	ppb	0.408	173.21	10	4000	
V	51	2	72	0.050	ppb	0.050	404.10	1427	2000	
Cr	52	2	72	6.716	ppb	6.716	8.65	10567	5000	
Mn	55	2	72	2.023	ppb	2.023	20.01	1387	10000	
Fe	56	1	72	55.836	ppb	55.836	0.97	198685	10000	
(Fe)	57	2	72	69.296	ppb	69.296	13.29	1880	400000	
Co	59	2	72	0.056	ppb	0.056	42.92	157	2000	
Ni	60	2	72	3.923	ppb	3.923	12.61	2694	5000	
Cu	63	2	72	0.891	ppb	0.891	13.97	2867	5000	
Zn	66	2	72	19.452	ppb	19.452	6.24	5905	5000	
As	75	2	72	0.191	ppb	0.191	99.36	141	2000	
Se	78	1	72	7.487	ppb	7.487	5.02	977	2000	
Sr	88	2	72	352.974	ppb	352.974	0.84	226999	4000	
Zr	90	2	72	16.086	ppb	16.086	73.18	660	1000	
Mo	95	2	115	18.247	ppb	18.247	3.68	13650	2000	
Ag	107	2	115	0.093	ppb	0.093	57.62	280	100	
Cd	111	2	115	0.062	ppb	0.062	24.96	33	2000	
Sn	120	2	115	-0.067	ppb	-0.067	-185.61	783	2000	
Sb	121	2	115	0.204	ppb	0.204	47.07	270	1000	
Ba	137	2	115	52.922	ppb	52.922	0.09	17140	5000	
W	182	2	165	0.031	ppb	0.031	162.59	937	100	
Tl	205	2	165	0.096	ppb	0.096	7.78	870	2000	
Pb	208	2	165	0.787	ppb	0.787	5.02	10438	5000	
Th	232	2	193	-0.055	ppb	-0.055	-77.00	9100	2000	
U	238	2	193	3.465	ppb	3.465	2.93	39264	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	218547	2.40	253490	86.22	60	120	
Sc (IS)	45	1	HMI H2	8917233	0.81	9587331	93.01	60	120	
Sc (IS)	45	2	HMI He	911782	0.31	964862	94.50	60	120	
Sc (IS)	45	3	No Gas	16822667	1.59	17821643	94.39	60	120	
Ge Internal standard	72	1	HMI H2	4830986	1.02	5262568	91.80	60	120	
Ge Internal standard	72	2	HMI He	1078213	0.76	1150133	93.75	60	120	
In Internal standard	115	2	HMI He	3625746	0.67	3923278	92.42	60	120	
Ho-165	165	2	HMI He	14300833	1.05	14697450	97.30	60	120	
Ir (IS)	193	2	HMI He	10415655	0.28	10905184	95.51	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-10-Asd@5
Data File Name	176SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:25:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	49.467	ppb	49.467	4.55	1161706	50000	
Be	9	1	6	-0.007	ppb	-0.007	-1041.42	17	2000	
B	11	1	6	3.674	ppb	3.674	22.74	2410	2000	
Na	23	2	45	14955.794	ppb	14955.794	0.26	3021850	400000	
Mg	24	2	45	15943.391	ppb	15943.391	2.53	1448424	400000	
Al	27	2	45	10.394	ppb	10.394	18.44	327	400000	
Si	28	2	45	85.753	ppb	85.753	1.86	32545	10000	
P	31	2	45	1.741	ppb	1.741	1073.51	155	10000	
K	39	2	45	802.908	ppb	802.908	1.49	93417	400000	
Ca	40	1	45	34077.367	ppb	34077.367	0.26	50122426	400000	
Ti	47	2	45	0.273	ppb	0.273	173.21	7	4000	
V	51	2	72	-0.215	ppb	-0.215	-110.61	1190	2000	
Cr	52	2	72	1.250	ppb	1.250	11.16	3884	5000	
Mn	55	2	72	6.584	ppb	6.584	7.00	3967	10000	
Fe	56	1	72	18.351	ppb	18.351	2.63	82464	10000	
(Fe)	57	2	72	21.886	ppb	21.886	21.57	760	400000	
Co	59	2	72	0.020	ppb	0.020	88.84	87	2000	
Ni	60	2	72	0.738	ppb	0.738	28.75	987	5000	
Cu	63	2	72	1.225	ppb	1.225	12.23	3390	5000	
Zn	66	2	72	6.556	ppb	6.556	3.96	2327	5000	
As	75	2	72	-0.095	ppb	-0.095	-84.30	78	2000	
Se	78	1	72	1.561	ppb	1.561	24.09	212	2000	
Sr	88	2	72	71.484	ppb	71.484	1.47	46678	4000	
Zr	90	2	72	-7.317	ppb	-7.317	-521.59	593	1000	
Mo	95	2	115	3.733	ppb	3.733	3.58	2897	2000	
Ag	107	2	115	0.031	ppb	0.031	26.26	130	100	
Cd	111	2	115	0.044	ppb	0.044	268.16	27	2000	
Sn	120	2	115	0.100	ppb	0.100	123.46	987	2000	
Sb	121	2	115	0.074	ppb	0.074	49.51	127	1000	
Ba	137	2	115	10.583	ppb	10.583	4.68	3587	5000	
W	182	2	165	0.011	ppb	0.011	340.68	880	100	
Tl	205	2	165	0.019	ppb	0.019	68.73	343	2000	
Pb	208	2	165	1.675	ppb	1.675	2.48	18835	5000	
Th	232	2	193	-0.051	ppb	-0.051	-60.53	9300	2000	
U	238	2	193	0.752	ppb	0.752	4.24	10991	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	228122	1.92	253490	89.99	60	120	
Sc (IS)	45	1	HMI H2	9070011	0.32	9587331	94.60	60	120	
Sc (IS)	45	2	HMI He	915822	0.56	964862	94.92	60	120	
Sc (IS)	45	3	No Gas	16838619	0.23	17821643	94.48	60	120	
Ge Internal standard	72	1	HMI H2	4928272	1.16	5262568	93.65	60	120	
Ge Internal standard	72	2	HMI He	1089593	0.30	1150133	94.74	60	120	
In Internal standard	115	2	HMI He	3728524	0.67	3923278	95.04	60	120	
Ho-165	165	2	HMI He	14403522	1.12	14697450	98.00	60	120	
Ir (IS)	193	2	HMI He	10604227	0.47	10905184	97.24	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-10-B MS
Data File Name	177SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:28:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	282.074	ppb	282.074	2.41	2722142	50000	
Be	9	1	6	43.005	ppb	43.005	1.23	8026	2000	
B	11	1	6	8.893	ppb	8.893	19.22	3014	2000	
Na	23	2	45	72013.699	ppb	72013.699	1.43	14436049	400000	
Mg	24	2	45	75295.603	ppb	75295.603	1.74	6827394	400000	
Al	27	2	45	797.532	ppb	797.532	4.15	21214	400000	
Si	28	2	45	478.867	ppb	478.867	3.06	96518	10000	
P	31	2	45	18.080	ppb	18.080	24.56	198	10000	
K	39	2	45	4717.113	ppb	4717.113	0.58	346164	400000	
Ca	40	1	45	167595.568	ppb	167595.568	0.61	245674150	400000	
Ti	47	2	45	40.249	ppb	40.249	12.67	987	4000	
V	51	2	72	39.802	ppb	39.802	0.52	39123	2000	
Cr	52	2	72	46.767	ppb	46.767	0.73	60263	5000	
Mn	55	2	72	41.674	ppb	41.674	2.17	23627	10000	
Fe	56	1	72	834.764	ppb	834.764	0.78	2699149	10000	
(Fe)	57	2	72	835.574	ppb	835.574	1.49	20260	400000	
Co	59	2	72	37.063	ppb	37.063	1.09	72984	2000	
Ni	60	2	72	42.237	ppb	42.237	1.77	23544	5000	
Cu	63	2	72	38.749	ppb	38.749	2.22	58641	5000	
Zn	66	2	72	59.666	ppb	59.666	1.03	17266	5000	
As	75	2	72	38.248	ppb	38.248	1.33	8604	2000	
Se	78	1	72	47.097	ppb	47.097	1.72	6240	2000	
Sr	88	2	72	426.549	ppb	426.549	0.47	276394	4000	
Zr	90	2	72	33.640	ppb	33.640	176.08	720	1000	
Mo	95	2	115	57.496	ppb	57.496	1.02	43218	2000	
Ag	107	2	115	39.307	ppb	39.307	0.70	98219	100	
Cd	111	2	115	38.963	ppb	38.963	3.00	15154	2000	
Sn	120	2	115	38.501	ppb	38.501	2.05	41732	2000	
Sb	121	2	115	40.219	ppb	40.219	2.37	45566	1000	
Ba	137	2	115	93.330	ppb	93.330	0.82	30364	5000	
W	182	2	165	0.086	ppb	0.086	88.27	1123	100	
Tl	205	2	165	37.582	ppb	37.582	0.32	257942	2000	
Pb	208	2	165	38.236	ppb	38.236	0.25	360649	5000	
Th	232	2	193	38.543	ppb	38.543	0.86	395518	2000	
U	238	2	193	43.103	ppb	43.103	0.34	460035	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	218655	0.36	253490	86.26	60	120	
Sc (IS)	45	1	HMI H2	9048756	0.63	9587331	94.38	60	120	
Sc (IS)	45	2	HMI He	914808	1.40	964862	94.81	60	120	
Sc (IS)	45	3	No Gas	17031790	2.12	17821643	95.57	60	120	
Ge Internal standard	72	1	HMI H2	4925533	1.00	5262568	93.60	60	120	
Ge Internal standard	72	2	HMI He	1086556	0.48	1150133	94.47	60	120	
In Internal standard	115	2	HMI He	3649196	0.58	3923278	93.01	60	120	
Ho-165	165	2	HMI He	14371350	0.89	14697450	97.78	60	120	
Ir (IS)	193	2	HMI He	10527938	0.48	10905184	96.54	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-10-C MSD
Data File Name	178SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:32:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	287.818	ppb	287.818	2.23	2756081	50000	
Be	9	1	6	40.252	ppb	40.252	0.52	7572	2000	
B	11	1	6	8.243	ppb	8.243	33.08	2950	2000	
Na	23	2	45	72149.127	ppb	72149.127	0.79	14569999	400000	
Mg	24	2	45	75160.718	ppb	75160.718	0.60	6866163	400000	
Al	27	2	45	762.578	ppb	762.578	0.26	20443	400000	
Si	28	2	45	475.778	ppb	475.778	1.85	96736	10000	
P	31	2	45	22.987	ppb	22.987	31.24	213	10000	
K	39	2	45	4712.525	ppb	4712.525	1.04	348406	400000	
Ca	40	1	45	169503.957	ppb	169503.957	0.24	248251963	400000	
Ti	47	2	45	41.302	ppb	41.302	9.68	1020	4000	
V	51	2	72	39.487	ppb	39.487	1.87	38953	2000	
Cr	52	2	72	45.544	ppb	45.544	1.20	58944	5000	
Mn	55	2	72	41.438	ppb	41.438	1.29	23574	10000	
Fe	56	1	72	827.484	ppb	827.484	1.24	2691934	10000	
(Fe)	57	2	72	806.556	ppb	806.556	3.55	19629	400000	
Co	59	2	72	36.917	ppb	36.917	2.14	72937	2000	
Ni	60	2	72	41.850	ppb	41.850	2.05	23411	5000	
Cu	63	2	72	40.482	ppb	40.482	1.92	61398	5000	
Zn	66	2	72	59.049	ppb	59.049	1.41	17150	5000	
As	75	2	72	38.124	ppb	38.124	0.52	8605	2000	
Se	78	1	72	43.762	ppb	43.762	0.68	5833	2000	
Sr	88	2	72	433.649	ppb	433.649	0.38	281917	4000	
Zr	90	2	72	4.250	ppb	4.250	449.19	630	1000	
Mo	95	2	115	59.110	ppb	59.110	3.53	44295	2000	
Ag	107	2	115	39.863	ppb	39.863	2.04	99315	100	
Cd	111	2	115	38.873	ppb	38.873	3.69	15074	2000	
Sn	120	2	115	38.435	ppb	38.435	2.99	41542	2000	
Sb	121	2	115	40.250	ppb	40.250	2.05	45469	1000	
Ba	137	2	115	90.759	ppb	90.759	2.74	29438	5000	
W	182	2	165	0.039	ppb	0.039	32.92	967	100	
Tl	205	2	165	37.883	ppb	37.883	1.17	259373	2000	
Pb	208	2	165	38.348	ppb	38.348	0.35	360812	5000	
Th	232	2	193	39.289	ppb	39.289	1.38	404216	2000	
U	238	2	193	43.360	ppb	43.360	0.94	464156	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	220382	1.03	253490	86.94	60	120	
Sc (IS)	45	1	HMI H2	9040695	1.36	9587331	94.30	60	120	
Sc (IS)	45	2	HMI He	921512	0.67	964862	95.51	60	120	
Sc (IS)	45	3	No Gas	17003191	1.51	17821643	95.41	60	120	
Ge Internal standard	72	1	HMI H2	4954843	1.27	5262568	94.15	60	120	
Ge Internal standard	72	2	HMI He	1090151	0.23	1150133	94.78	60	120	
In Internal standard	115	2	HMI He	3638870	1.29	3923278	92.75	60	120	
Ho-165	165	2	HMI He	14336320	0.65	14697450	97.54	60	120	
Ir (IS)	193	2	HMI He	10559904	0.11	10905184	96.83	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-10-A pds
Data File Name	179SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:36:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	328.660	ppb	328.660	1.10	3065995	50000	
Be	9	1	6	108.721	ppb	108.721	2.32	20162	2000	
B	11	1	6	16.497	ppb	16.497	8.88	4017	2000	
Na	23	2	45	73930.353	ppb	73930.353	0.26	14950719	400000	
Mg	24	2	45	73870.700	ppb	73870.700	0.81	6757871	400000	
Al	27	2	45	2024.213	ppb	2024.213	0.79	54257	400000	
Si	28	2	45	516.211	ppb	516.211	0.65	103522	10000	
P	31	2	45	2122.214	ppb	2122.214	3.60	5862	10000	
K	39	2	45	5831.408	ppb	5831.408	0.50	421823	400000	
Ca	40	1	45	164681.429	ppb	164681.429	1.61	242570456	400000	
Ti	47	2	45	97.485	ppb	97.485	8.00	2410	4000	
V	51	2	72	96.672	ppb	96.672	1.34	93608	2000	
Cr	52	2	72	104.050	ppb	104.050	0.49	132018	5000	
Mn	55	2	72	100.134	ppb	100.134	1.12	56744	10000	
Fe	56	1	72	1064.501	ppb	1064.501	0.79	3422097	10000	
(Fe)	57	2	72	1046.769	ppb	1046.769	2.04	25477	400000	
Co	59	2	72	93.224	ppb	93.224	1.27	184612	2000	
Ni	60	2	72	97.850	ppb	97.850	0.86	54099	5000	
Cu	63	2	72	98.902	ppb	98.902	2.82	148103	5000	
Zn	66	2	72	216.316	ppb	216.316	2.05	61712	5000	
As	75	2	72	98.788	ppb	98.788	0.75	22200	2000	
Se	78	1	72	105.289	ppb	105.289	0.88	13890	2000	
Sr	88	2	72	440.616	ppb	440.616	1.85	287205	4000	
Zr	90	2	72	70.201	ppb	70.201	20.11	840	1000	
Mo	95	2	115	119.455	ppb	119.455	1.40	88860	2000	
Ag	107	2	115	26.151	ppb	26.151	0.88	64711	100	
Cd	111	2	115	98.833	ppb	98.833	2.31	38043	2000	
Sn	120	2	115	98.803	ppb	98.803	0.41	104693	2000	
Sb	121	2	115	97.088	ppb	97.088	1.45	108857	1000	
Ba	137	2	115	150.861	ppb	150.861	1.03	48543	5000	
W	182	2	165	115.790	ppb	115.790	0.86	380341	100	
Tl	205	2	165	94.815	ppb	94.815	0.49	648420	2000	
Pb	208	2	165	94.002	ppb	94.002	0.39	879307	5000	
Th	232	2	193	104.441	ppb	104.441	0.54	1053644	2000	
U	238	2	193	233.594	ppb	233.594	2.41	2476359	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	217573	0.36	253490	85.83	60	120	
Sc (IS)	45	1	HMI H2	9093036	0.79	9587331	94.84	60	120	
Sc (IS)	45	2	HMI He	922814	0.25	964862	95.64	60	120	
Sc (IS)	45	3	No Gas	17218450	0.63	17821643	96.62	60	120	
Ge Internal standard	72	1	HMI H2	4906144	0.22	5262568	93.23	60	120	
Ge Internal standard	72	2	HMI He	1093110	0.91	1150133	95.04	60	120	
In Internal standard	115	2	HMI He	3612825	0.79	3923278	92.09	60	120	
Ho-165	165	2	HMI He	14326218	0.61	14697450	97.47	60	120	
Ir (IS)	193	2	HMI He	10513993	1.29	10905184	96.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	180_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:39:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	51.442	ppb	1.539	9907	50	102.9	90	110	
Na	23	2	45	53108.844	ppb	1.529	10766157	51000	104.1	90	110	
Mg	24	2	45	10754.507	ppb	0.662	986593	11000	97.8	90	110	
Al	27	2	45	934.243	ppb	0.612	25116	1000	93.4	90	110	
K	39	2	45	10322.839	ppb	0.479	715838	11000	93.8	90	110	
Ca	40	1	45	11176.737	ppb	0.872	16455831	11000	101.6	90	110	
Ti	47	2	45	54.688	ppb	12.139	1353	50	109.4	90	110	
V	51	2	72	50.480	ppb	2.511	49363	50	101.0	90	110	
Cr	52	2	72	50.094	ppb	2.448	64532	50	100.2	90	110	
Mn	55	2	72	49.362	ppb	1.232	28004	50	98.7	90	110	
Fe	56	1	72	995.997	ppb	1.026	3238977	1000	99.6	90	110	
Co	59	2	72	48.163	ppb	0.432	95053	50	96.3	90	110	
Ni	60	2	72	48.403	ppb	0.511	26960	50	96.8	90	110	
Cu	63	2	72	51.022	ppb	0.711	76898	50	102.0	90	110	
Zn	66	2	72	48.559	ppb	7.162	14177	50	97.1	90	110	
As	75	2	72	49.135	ppb	2.475	11052	50	98.3	90	110	
Se	78	1	72	49.566	ppb	3.753	6613	50	99.1	90	110	
Sr	88	2	72	99.025	ppb	2.204	64532	100	99.0	90	110	
Zr	90	2	72	71.193	ppb	41.454	840	50	142.4	90	110	>+\-10%
Mo	95	2	115	47.539	ppb	1.326	36619	50	95.1	90	110	
Ag	107	2	115	48.733	ppb	0.943	124761	50	97.5	90	110	
Cd	111	2	115	48.420	ppb	4.190	19292	50	96.8	90	110	
Sn	120	2	115	47.657	ppb	1.661	52715	50	95.3	90	110	
Sb	121	2	115	48.871	ppb	2.496	56735	50	97.7	90	110	
Ba	137	2	115	47.976	ppb	1.200	16032	50	96.0	90	110	
W	182	2	165	49.603	ppb	1.552	163370	50	99.2	90	110	
Tl	205	2	165	47.756	ppb	1.075	326602	50	95.5	90	110	
Pb	208	2	165	47.621	ppb	1.227	446871	50	95.2	90	110	
Th	232	2	193	49.939	ppb	1.198	514035	50	99.9	90	110	
U	238	2	193	48.426	ppb	1.664	520986	50	96.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	225722	0.16	253490	89.05	60	120	
Sc (IS)	45	1	HMI H2	9055764	0.28	9587331	94.46	60	120	
Sc (IS)	45	2	HMI He	924547	1.17	964862	95.82	60	120	
Sc (IS)	45	3	No Gas	17095172	0.10	17821643	95.92	60	120	
Ge Internal standard	72	1	HMI H2	4960477	0.38	5262568	94.26	60	120	
Ge Internal standard	72	2	HMI He	1089124	0.58	1150133	94.70	60	120	
In Internal standard	115	2	HMI He	3739208	0.87	3923278	95.31	60	120	
Ho-165	165	2	HMI He	14322804	0.57	14697450	97.45	60	120	
Ir (IS)	193	2	HMI He	10620607	1.12	10905184	97.39	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	181_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:43:11-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-4.746	ppb	-51.7	832233	10	
Be	9	1	6	0.007	ppb	740.1	20	0.5	
B	11	1	6	20.642	ppb	3.4	4988	0.5	>RL
Na	23	2	45	96.958	ppb	3.1	45602	25	>RL
Mg	24	2	45	1.778	ppb	103.4	1270	25	
Al	27	2	45	3.527	ppb	5.9	147	15	
K	39	2	45	9.383	ppb	25.6	42772	50	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.108	ppb	-319.3	1303	1	
Cr	52	2	72	-0.084	ppb	-78.9	2250	1	
Mn	55	2	72	0.009	ppb	1446.3	273	0.5	
(Fe)	57	2	72	9.053	ppb	55.1	457	25	
Co	59	2	72	0.073	ppb	34.1	193	0.5	
Ni	60	2	72	0.149	ppb	170.3	673	1	
Cu	63	2	72	1.321	ppb	19.5	3567	1	>RL
Zn	66	2	72	0.463	ppb	47.7	613	5	
As	75	2	72	0.009	ppb	436.6	103	1	
Se	78	1	72	0.100	ppb	74.0	19	1	
Sr	88	2	72	-0.189	ppb	-47.5	153	0.5	
Zr	90	2	72	1.397	ppb	3507.9	627	1	>RL
Mo	95	2	115	0.153	ppb	47.2	150	0.5	
Ag	107	2	115	0.005	ppb	469.3	63	1	
Cd	111	2	115	-0.007	ppb	-404.1	7	0.5	
Sn	120	2	115	0.151	ppb	70.3	1047	1	
Sb	121	2	115	0.180	ppb	30.5	250	0.6	
Ba	137	2	115	-0.029	ppb	-207.6	70	0.5	
W	182	2	165	0.491	ppb	12.9	2464	1	
Tl	205	2	165	0.057	ppb	21.0	610	0.1	
Pb	208	2	165	-0.057	ppb	-37.6	2604	0.5	
Th	232	2	193	0.423	ppb	7.2	14361	1	
U	238	2	193	0.056	ppb	51.2	3624	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	237302	0.43	253490	93.61	60	120	
Sc (IS)	45	1	HMI H2	9203049	0.58	9587331	95.99	60	120	
Sc (IS)	45	2	HMI He	930468	0.26	964862	96.44	60	120	
Sc (IS)	45	3	No Gas	17406842	1.32	17821643	97.67	60	120	
Ge Internal standard	72	1	HMI H2	5060494	0.50	5262568	96.16	60	120	
Ge Internal standard	72	2	HMI He	1100966	0.86	1150133	95.73	60	120	
In Internal standard	115	2	HMI He	3748222	0.56	3923278	95.54	60	120	
Ho-165	165	2	HMI He	14422590	0.34	14697450	98.13	60	120	
Ir (IS)	193	2	HMI He	10814852	0.22	10905184	99.17	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-11-A
Data File Name	182SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:46:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	135.069	ppb	135.069	2.74	1808940	50000	
Be	9	1	6	0.030	ppb	0.030	96.86	23	2000	
B	11	1	6	13.339	ppb	13.339	8.36	3697	2000	
Na	23	2	45	97538.342	ppb	97538.342	1.05	20174552	400000	
Mg	24	2	45	57746.673	ppb	57746.673	0.86	5405796	400000	
Al	27	2	45	7.941	ppb	7.941	17.45	270	400000	
Si	28	2	45	472.338	ppb	472.338	0.52	98554	10000	
P	31	2	45	5.580	ppb	5.580	141.07	170	10000	
K	39	2	45	1751.616	ppb	1751.616	2.50	159576	400000	
Ca	40	1	45	192273.502	ppb	192273.502	0.51	285265836	400000	
Ti	47	2	45	0.131	ppb	0.131	173.21	3	4000	
V	51	2	72	-0.286	ppb	-0.286	-30.53	1140	2000	
Cr	52	2	72	10.884	ppb	10.884	2.72	16112	5000	
Mn	55	2	72	0.153	ppb	0.153	104.91	357	10000	
Fe	56	1	72	6.111	ppb	6.111	1.86	43748	10000	
(Fe)	57	2	72	14.167	ppb	14.167	23.60	583	400000	
Co	59	2	72	0.049	ppb	0.049	76.26	147	2000	
Ni	60	2	72	0.262	ppb	0.262	106.08	740	5000	
Cu	63	2	72	1.559	ppb	1.559	4.05	3947	5000	
Zn	66	2	72	0.646	ppb	0.646	10.81	670	5000	
As	75	2	72	0.041	ppb	0.041	130.59	110	2000	
Se	78	1	72	3.631	ppb	3.631	6.62	492	2000	
Sr	88	2	72	377.798	ppb	377.798	0.48	249515	4000	
Zr	90	2	72	40.831	ppb	40.831	51.31	757	1000	
Mo	95	2	115	0.172	ppb	0.172	27.75	160	2000	
Ag	107	2	115	0.003	ppb	0.003	567.94	57	100	
Cd	111	2	115	0.010	ppb	0.010	381.83	13	2000	
Sn	120	2	115	-0.024	ppb	-0.024	-689.78	833	2000	
Sb	121	2	115	0.053	ppb	0.053	66.94	100	1000	
Ba	137	2	115	123.478	ppb	123.478	1.43	40136	5000	
W	182	2	165	0.229	ppb	0.229	13.64	1603	100	
Tl	205	2	165	0.030	ppb	0.030	25.81	427	2000	
Pb	208	2	165	-0.049	ppb	-0.049	-24.18	2694	5000	
Th	232	2	193	0.007	ppb	0.007	1039.96	9981	2000	
U	238	2	193	1.575	ppb	1.575	2.75	19961	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	223779	0.97	253490	88.28	60	120	
Sc (IS)	45	1	HMI H2	9158692	0.60	9587331	95.53	60	120	
Sc (IS)	45	2	HMI He	944298	0.80	964862	97.87	60	120	
Sc (IS)	45	3	No Gas	17659357	0.91	17821643	99.09	60	120	
Ge Internal standard	72	1	HMI H2	4988439	0.66	5262568	94.79	60	120	
Ge Internal standard	72	2	HMI He	1107371	0.99	1150133	96.28	60	120	
In Internal standard	115	2	HMI He	3648073	0.67	3923278	92.99	60	120	
Ho-165	165	2	HMI He	14468059	0.40	14697450	98.44	60	120	
Ir (IS)	193	2	HMI He	10704228	0.62	10905184	98.16	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-12-A
Data File Name	183SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:50:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	55.873	ppb	55.873	2.63	1239946	50000	
Be	9	1	6	0.025	ppb	0.025	229.18	23	2000	
B	11	1	6	145.125	ppb	145.125	1.09	22709	2000	
Na	23	2	45	40630.325	ppb	40630.325	0.39	8374394	400000	
Mg	24	2	45	51701.961	ppb	51701.961	0.78	4814288	400000	
Al	27	2	45	8.137	ppb	8.137	40.99	273	400000	
Si	28	2	45	406.777	ppb	406.777	1.23	87061	10000	
P	31	2	45	12.954	ppb	12.954	57.32	189	10000	
K	39	2	45	6238.050	ppb	6238.050	0.65	456281	400000	
Ca	40	1	45	162102.586	ppb	162102.586	0.50	243234603	400000	
Ti	47	2	45	0.530	ppb	0.530	43.69	13	4000	
V	51	2	72	-0.090	ppb	-0.090	-126.75	1337	2000	
Cr	52	2	72	0.624	ppb	0.624	20.31	3174	5000	
Mn	55	2	72	3.086	ppb	3.086	8.14	2044	10000	
Fe	56	1	72	31.952	ppb	31.952	1.61	129413	10000	
(Fe)	57	2	72	39.838	ppb	39.838	11.71	1217	400000	
Co	59	2	72	0.117	ppb	0.117	37.98	283	2000	
Ni	60	2	72	0.760	ppb	0.760	12.61	1020	5000	
Cu	63	2	72	1.685	ppb	1.685	4.73	4157	5000	
Zn	66	2	72	1.908	ppb	1.908	13.50	1037	5000	
As	75	2	72	-0.025	ppb	-0.025	-163.05	96	2000	
Se	78	1	72	2.866	ppb	2.866	8.79	395	2000	
Sr	88	2	72	193.654	ppb	193.654	1.28	128694	4000	
Zr	90	2	72	15.658	ppb	15.658	62.82	680	1000	
Mo	95	2	115	0.177	ppb	0.177	35.87	167	2000	
Ag	107	2	115	0.002	ppb	0.002	511.62	57	100	
Cd	111	2	115	0.010	ppb	0.010	387.93	13	2000	
Sn	120	2	115	0.017	ppb	0.017	288.58	890	2000	
Sb	121	2	115	0.028	ppb	0.028	155.41	73	1000	
Ba	137	2	115	133.291	ppb	133.291	3.30	43943	5000	
W	182	2	165	0.328	ppb	0.328	9.79	1957	100	
Tl	205	2	165	0.004	ppb	0.004	149.91	250	2000	
Pb	208	2	165	0.132	ppb	0.132	15.17	4450	5000	
Th	232	2	193	-0.027	ppb	-0.027	-127.17	9647	2000	
U	238	2	193	3.250	ppb	3.250	1.86	38060	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	232570	0.43	253490	91.75	60	120	
Sc (IS)	45	1	HMI H2	9262221	0.23	9587331	96.61	60	120	
Sc (IS)	45	2	HMI He	939210	0.58	964862	97.34	60	120	
Sc (IS)	45	3	No Gas	17343998	0.31	17821643	97.32	60	120	
Ge Internal standard	72	1	HMI H2	5058275	0.73	5262568	96.12	60	120	
Ge Internal standard	72	2	HMI He	1113094	0.73	1150133	96.78	60	120	
In Internal standard	115	2	HMI He	3700892	0.70	3923278	94.33	60	120	
Ho-165	165	2	HMI He	14655229	0.12	14697450	99.71	60	120	
Ir (IS)	193	2	HMI He	10712729	0.66	10905184	98.24	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-13-A
Data File Name	184SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:53:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-6.421	ppb	-6.421	-61.27	831381	50000	
Be	9	1	6	0.107	ppb	0.107	92.95	40	2000	
B	11	1	6	15.252	ppb	15.252	13.31	4164	2000	
Na	23	2	45	7526.284	ppb	7526.284	0.44	1588368	400000	
Mg	24	2	45	39524.128	ppb	39524.128	0.36	3717753	400000	
Al	27	2	45	64.068	ppb	64.068	7.04	1817	400000	
Si	28	2	45	371.616	ppb	371.616	2.33	82004	10000	
P	31	2	45	22.635	ppb	22.635	22.69	218	10000	
K	39	2	45	513.330	ppb	513.330	5.67	77363	400000	
Ca	40	1	45	65779.610	ppb	65779.610	0.48	99970785	400000	
Ti	47	2	45	0.922	ppb	0.922	89.41	23	4000	
V	51	2	72	-0.085	ppb	-0.085	-326.86	1367	2000	
Cr	52	2	72	0.544	ppb	0.544	24.24	3134	5000	
Mn	55	2	72	146.958	ppb	146.958	0.37	86359	10000	
Fe	56	1	72	741.124	ppb	741.124	0.76	2533106	10000	
(Fe)	57	2	72	723.558	ppb	723.558	2.28	18364	400000	
Co	59	2	72	1.309	ppb	1.309	11.06	2740	2000	
Ni	60	2	72	1.175	ppb	1.175	28.37	1277	5000	
Cu	63	2	72	1.788	ppb	1.788	9.89	4397	5000	
Zn	66	2	72	2.745	ppb	2.745	16.28	1303	5000	
As	75	2	72	0.122	ppb	0.122	37.58	132	2000	
Se	78	1	72	0.058	ppb	0.058	56.32	13	2000	
Sr	88	2	72	144.007	ppb	144.007	1.35	97685	4000	
Zr	90	2	72	38.080	ppb	38.080	55.75	767	1000	
Mo	95	2	115	0.747	ppb	0.747	33.18	610	2000	
Ag	107	2	115	-0.007	ppb	-0.007	-86.44	33	100	
Cd	111	2	115	0.068	ppb	0.068	77.05	37	2000	
Sn	120	2	115	-0.096	ppb	-0.096	-75.41	780	2000	
Sb	121	2	115	0.030	ppb	0.030	118.73	77	1000	
Ba	137	2	115	122.674	ppb	122.674	4.00	41085	5000	
W	182	2	165	0.108	ppb	0.108	6.14	1220	100	
Tl	205	2	165	0.016	ppb	0.016	179.10	333	2000	
Pb	208	2	165	0.465	ppb	0.465	4.73	7628	5000	
Th	232	2	193	-0.004	ppb	-0.004	-449.77	10084	2000	
U	238	2	193	0.206	ppb	0.206	2.75	5321	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	235287	0.39	253490	92.82	60	120	
Sc (IS)	45	1	HMI H2	9377580	0.62	9587331	97.81	60	120	
Sc (IS)	45	2	HMI He	948695	0.80	964862	98.32	60	120	
Sc (IS)	45	3	No Gas	17627450	1.24	17821643	98.91	60	120	
Ge Internal standard	72	1	HMI H2	5200511	0.65	5262568	98.82	60	120	
Ge Internal standard	72	2	HMI He	1135221	0.52	1150133	98.70	60	120	
In Internal standard	115	2	HMI He	3759029	0.15	3923278	95.81	60	120	
Ho-165	165	2	HMI He	14664341	0.98	14697450	99.77	60	120	
Ir (IS)	193	2	HMI He	10938603	0.80	10905184	100.31	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-14-A
Data File Name	185SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T20:57:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-7.706	ppb	-7.706	-8.56	818531	50000	
Be	9	1	6	0.023	ppb	0.023	119.63	23	2000	
B	11	1	6	9.332	ppb	9.332	12.89	3330	2000	
Na	23	2	45	14303.569	ppb	14303.569	1.00	2960917	400000	
Mg	24	2	45	44679.684	ppb	44679.684	1.13	4154748	400000	
Al	27	2	45	22.448	ppb	22.448	18.91	663	400000	
Si	28	2	45	455.724	ppb	455.724	0.88	95114	10000	
P	31	2	45	301.701	ppb	301.701	6.61	979	10000	
K	39	2	45	2303.279	ppb	2303.279	1.25	195056	400000	
Ca	40	1	45	100253.507	ppb	100253.507	0.53	152613068	400000	
Ti	47	2	45	0.930	ppb	0.930	99.12	23	4000	
V	51	2	72	6.774	ppb	6.774	0.81	8066	2000	
Cr	52	2	72	1394.262	ppb	1394.262	0.83	1785829	5000	
Mn	55	2	72	599.419	ppb	599.419	1.80	347231	10000	
Fe	56	1	72	20913.328	ppb	20913.328	0.58	70108814	10000	
(Fe)	57	2	72	21017.686	ppb	21017.686	0.45	520350	400000	
Co	59	2	72	72.090	ppb	72.090	0.12	146528	2000	
Ni	60	2	72	386.023	ppb	386.023	0.43	217270	5000	
Cu	63	2	72	31.249	ppb	31.249	1.22	49147	5000	
Zn	66	2	72	12.714	ppb	12.714	13.32	4184	5000	
As	75	2	72	2.187	ppb	2.187	2.11	605	2000	
Se	78	1	72	0.184	ppb	0.184	58.80	31	2000	
Sr	88	2	72	109.189	ppb	109.189	0.29	73262	4000	
Zr	90	2	72	8.595	ppb	8.595	812.65	663	1000	
Mo	95	2	115	45.716	ppb	45.716	1.31	35470	2000	
Ag	107	2	115	0.124	ppb	0.124	18.81	370	100	
Cd	111	2	115	0.042	ppb	0.042	119.94	27	2000	
Sn	120	2	115	0.127	ppb	0.127	71.31	1027	2000	
Sb	121	2	115	0.081	ppb	0.081	65.48	137	1000	
Ba	137	2	115	396.950	ppb	396.950	2.00	133001	5000	
W	182	2	165	0.862	ppb	0.862	2.72	3731	100	
Tl	205	2	165	0.005	ppb	0.005	303.61	250	2000	
Pb	208	2	165	1.247	ppb	1.247	2.16	15024	5000	
Th	232	2	193	-0.059	ppb	-0.059	-71.03	9413	2000	
U	238	2	193	0.586	ppb	0.586	3.56	9417	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	236981	1.74	253490	93.49	60	120	
Sc (IS)	45	1	HMI H2	9394839	0.61	9587331	97.99	60	120	
Sc (IS)	45	2	HMI He	937943	0.72	964862	97.21	60	120	
Sc (IS)	45	3	No Gas	17545191	0.13	17821643	98.45	60	120	
Ge Internal standard	72	1	HMI H2	5149585	0.49	5262568	97.85	60	120	
Ge Internal standard	72	2	HMI He	1121865	0.73	1150133	97.54	60	120	
In Internal standard	115	2	HMI He	3766437	1.88	3923278	96.00	60	120	
Ho-165	165	2	HMI He	14594868	0.59	14697450	99.30	60	120	
Ir (IS)	193	2	HMI He	10829950	0.82	10905184	99.31	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-16-A
Data File Name	186SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:01:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-4.794	ppb	-4.794	-49.77	853242	50000	
Be	9	1	6	0.006	ppb	0.006	888.81	20	2000	
B	11	1	6	12.374	ppb	12.374	16.85	3821	2000	
Na	23	2	45	8916.660	ppb	8916.660	1.26	1858916	400000	
Mg	24	2	45	13705.689	ppb	13705.689	1.02	1277522	400000	
Al	27	2	45	93.809	ppb	93.809	7.46	2610	400000	
Si	28	2	45	514.291	ppb	514.291	1.88	105079	10000	
P	31	2	45	29.966	ppb	29.966	30.69	236	10000	
K	39	2	45	1310.532	ppb	1310.532	2.61	129518	400000	
Ca	40	1	45	70650.280	ppb	70650.280	0.90	107191432	400000	
Ti	47	2	45	1.854	ppb	1.854	32.59	47	4000	
V	51	2	72	0.149	ppb	0.149	101.82	1590	2000	
Cr	52	2	72	0.090	ppb	0.090	80.95	2530	5000	
Mn	55	2	72	3.076	ppb	3.076	5.12	2067	10000	
Fe	56	1	72	94.853	ppb	94.853	0.12	343925	10000	
(Fe)	57	2	72	106.186	ppb	106.186	5.84	2887	400000	
Co	59	2	72	0.103	ppb	0.103	29.79	260	2000	
Ni	60	2	72	0.555	ppb	0.555	52.87	920	5000	
Cu	63	2	72	1.164	ppb	1.164	6.52	3421	5000	
Zn	66	2	72	1.885	ppb	1.885	30.68	1047	5000	
As	75	2	72	0.144	ppb	0.144	77.98	137	2000	
Se	78	1	72	0.452	ppb	0.452	17.01	68	2000	
Sr	88	2	72	97.314	ppb	97.314	2.80	65720	4000	
Zr	90	2	72	10.819	ppb	10.819	223.68	673	1000	
Mo	95	2	115	4.129	ppb	4.129	7.39	3224	2000	
Ag	107	2	115	-0.016	ppb	-0.016	-24.26	10	100	
Cd	111	2	115	0.026	ppb	0.026	165.89	20	2000	
Sn	120	2	115	-0.208	ppb	-0.208	-22.25	657	2000	
Sb	121	2	115	0.084	ppb	0.084	66.38	140	1000	
Ba	137	2	115	93.919	ppb	93.919	2.39	31443	5000	
W	182	2	165	0.028	ppb	0.028	202.42	953	100	
Tl	205	2	165	0.004	ppb	0.004	91.45	250	2000	
Pb	208	2	165	0.013	ppb	0.013	44.53	3314	5000	
Th	232	2	193	-0.059	ppb	-0.059	-22.84	9417	2000	
U	238	2	193	38.859	ppb	38.859	0.57	426659	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	239851	0.46	253490	94.62	60	120	
Sc (IS)	45	1	HMI H2	9362395	1.01	9587331	97.65	60	120	
Sc (IS)	45	2	HMI He	939602	0.62	964862	97.38	60	120	
Sc (IS)	45	3	No Gas	17852463	0.92	17821643	100.17	60	120	
Ge Internal standard	72	1	HMI H2	5170348	0.25	5262568	98.25	60	120	
Ge Internal standard	72	2	HMI He	1128904	1.29	1150133	98.15	60	120	
In Internal standard	115	2	HMI He	3754951	0.63	3923278	95.71	60	120	
Ho-165	165	2	HMI He	14654116	0.73	14697450	99.71	60	120	
Ir (IS)	193	2	HMI He	10823299	0.28	10905184	99.25	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-16-B MS
Data File Name	187SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:04:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	37.108	ppb	37.108	5.23	1125710	50000	
Be	9	1	6	40.559	ppb	40.559	2.39	8422	2000	
B	11	1	6	9.502	ppb	9.502	14.12	3444	2000	
Na	23	2	45	9612.150	ppb	9612.150	0.42	2026471	400000	
Mg	24	2	45	14199.335	ppb	14199.335	1.42	1339793	400000	
Al	27	2	45	884.934	ppb	884.934	3.68	24478	400000	
Si	28	2	45	551.617	ppb	551.617	1.62	112696	10000	
P	31	2	45	19.287	ppb	19.287	36.58	209	10000	
K	39	2	45	2075.734	ppb	2075.734	1.25	182511	400000	
Ca	40	1	45	70903.764	ppb	70903.764	0.89	109598468	400000	
Ti	47	2	45	43.959	ppb	43.959	2.48	1120	4000	
V	51	2	72	39.433	ppb	39.433	0.68	40206	2000	
Cr	52	2	72	39.757	ppb	39.757	2.98	53483	5000	
Mn	55	2	72	41.136	ppb	41.136	3.14	24185	10000	
Fe	56	1	72	886.619	ppb	886.619	0.76	3024807	10000	
(Fe)	57	2	72	878.275	ppb	878.275	2.74	22072	400000	
Co	59	2	72	37.437	ppb	37.437	1.66	76443	2000	
Ni	60	2	72	38.158	ppb	38.158	2.89	22115	5000	
Cu	63	2	72	39.270	ppb	39.270	0.95	61602	5000	
Zn	66	2	72	39.706	ppb	39.706	3.56	12078	5000	
As	75	2	72	37.486	ppb	37.486	1.65	8745	2000	
Se	78	1	72	40.207	ppb	40.207	3.10	5624	2000	
Sr	88	2	72	172.998	ppb	172.998	2.23	116411	4000	
Zr	90	2	72	115.921	ppb	115.921	47.47	1013	1000	
Mo	95	2	115	43.673	ppb	43.673	2.37	34060	2000	
Ag	107	2	115	40.104	ppb	40.104	0.53	103951	100	
Cd	111	2	115	38.698	ppb	38.698	2.12	15615	2000	
Sn	120	2	115	38.076	ppb	38.076	1.39	42822	2000	
Sb	121	2	115	39.326	ppb	39.326	2.74	46222	1000	
Ba	137	2	115	131.226	ppb	131.226	1.51	44253	5000	
W	182	2	165	0.060	ppb	0.060	121.51	1063	100	
Tl	205	2	165	38.377	ppb	38.377	0.64	269572	2000	
Pb	208	2	165	37.617	ppb	37.617	0.47	363182	5000	
Th	232	2	193	38.502	ppb	38.502	1.40	408615	2000	
U	238	2	193	77.996	ppb	77.996	0.49	858469	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	243326	1.35	253490	95.99	60	120	
Sc (IS)	45	1	HMI H2	9538068	0.52	9587331	99.49	60	120	
Sc (IS)	45	2	HMI He	951129	0.26	964862	98.58	60	120	
Sc (IS)	45	3	No Gas	17544096	0.71	17821643	98.44	60	120	
Ge Internal standard	72	1	HMI H2	5199376	0.98	5262568	98.80	60	120	
Ge Internal standard	72	2	HMI He	1126654	0.74	1150133	97.96	60	120	
In Internal standard	115	2	HMI He	3785289	0.63	3923278	96.48	60	120	
Ho-165	165	2	HMI He	14708399	0.55	14697450	100.07	60	120	
Ir (IS)	193	2	HMI He	10888266	0.56	10905184	99.84	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-16-C MSD
Data File Name	188SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:08:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	40.704	ppb	40.704	3.07	1150040	50000	
Be	9	1	6	38.741	ppb	38.741	1.39	8002	2000	
B	11	1	6	11.080	ppb	11.080	16.09	3661	2000	
Na	23	2	45	9671.830	ppb	9671.830	1.06	2022766	400000	
Mg	24	2	45	14456.977	ppb	14456.977	0.66	1353270	400000	
Al	27	2	45	875.544	ppb	875.544	2.99	24031	400000	
Si	28	2	45	553.834	ppb	553.834	2.98	112166	10000	
P	31	2	45	22.069	ppb	22.069	10.10	215	10000	
K	39	2	45	2101.111	ppb	2101.111	0.58	182769	400000	
Ca	40	1	45	71990.520	ppb	71990.520	0.79	109927625	400000	
Ti	47	2	45	46.694	ppb	46.694	5.27	1180	4000	
V	51	2	72	39.676	ppb	39.676	0.78	40453	2000	
Cr	52	2	72	39.642	ppb	39.642	1.60	53352	5000	
Mn	55	2	72	41.628	ppb	41.628	4.80	24486	10000	
Fe	56	1	72	888.715	ppb	888.715	0.99	3012068	10000	
(Fe)	57	2	72	869.799	ppb	869.799	1.29	21865	400000	
Co	59	2	72	36.992	ppb	36.992	1.35	75554	2000	
Ni	60	2	72	37.507	ppb	37.507	3.28	21755	5000	
Cu	63	2	72	40.026	ppb	40.026	3.07	62772	5000	
Zn	66	2	72	40.998	ppb	40.998	2.33	12458	5000	
As	75	2	72	38.119	ppb	38.119	2.94	8895	2000	
Se	78	1	72	37.961	ppb	37.961	6.37	5276	2000	
Sr	88	2	72	173.476	ppb	173.476	1.65	116745	4000	
Zr	90	2	72	82.613	ppb	82.613	63.28	907	1000	
Mo	95	2	115	43.332	ppb	43.332	3.55	33566	2000	
Ag	107	2	115	40.361	ppb	40.361	2.72	103905	100	
Cd	111	2	115	37.705	ppb	37.705	1.37	15118	2000	
Sn	120	2	115	38.159	ppb	38.159	2.04	42628	2000	
Sb	121	2	115	39.198	ppb	39.198	1.27	45766	1000	
Ba	137	2	115	132.301	ppb	132.301	2.22	44320	5000	
W	182	2	165	0.044	ppb	0.044	191.73	1003	100	
Tl	205	2	165	38.591	ppb	38.591	2.03	269517	2000	
Pb	208	2	165	38.019	ppb	38.019	0.93	364911	5000	
Th	232	2	193	38.410	ppb	38.410	0.39	407713	2000	
U	238	2	193	77.678	ppb	77.678	0.35	855049	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	241956	0.54	253490	95.45	60	120	
Sc (IS)	45	1	HMI H2	9422636	0.42	9587331	98.28	60	120	
Sc (IS)	45	2	HMI He	943646	0.83	964862	97.80	60	120	
Sc (IS)	45	3	No Gas	17539976	0.28	17821643	98.42	60	120	
Ge Internal standard	72	1	HMI H2	5165403	0.11	5262568	98.15	60	120	
Ge Internal standard	72	2	HMI He	1126945	0.68	1150133	97.98	60	120	
In Internal standard	115	2	HMI He	3760823	1.85	3923278	95.86	60	120	
Ho-165	165	2	HMI He	14624064	0.61	14697450	99.50	60	120	
Ir (IS)	193	2	HMI He	10888955	0.78	10905184	99.85	60	120	

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	190SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:16:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	73.890	ppb	73.890	42.27	1543725	50000	
Be	9	1	6	-0.044	ppb	-0.044	-103.21	17	2000	
B	11	1	6	-7.805	ppb	-7.805	-7.42	1380	2000	
Na	23	2	45	1082.442	ppb	1082.442	151.43	339732	400000	
Mg	24	2	45	1231.433	ppb	1231.433	149.36	157845	400000	
Al	27	2	45	43.974	ppb	43.974	77.18	1748	400000	
Si	28	2	45	-12.492	ppb	-12.492	-228.73	23847	10000	
P	31	2	45	-23.475	ppb	-23.475	-30.83	125	10000	
K	39	2	45	-203.451	ppb	-203.451	-32.02	40644	400000	
Ca	40	1	45	26.306	ppb	26.306	50.97	171555	400000	
Ti	47	2	45	2.904	ppb	2.904	95.25	103	4000	
V	51	2	72	-1.306	ppb	-1.306	-3.42	223	2000	
Cr	52	2	72	-1.082	ppb	-1.082	-14.52	1437	5000	
Mn	55	2	72	-0.177	ppb	-0.177	-13.61	243	10000	
Fe	56	1	72	-1.728	ppb	-1.728	-12.49	30632	10000	
(Fe)	57	2	72	13.280	ppb	13.280	149.00	828	400000	
Co	59	2	72	0.022	ppb	0.022	92.80	133	2000	
Ni	60	2	72	-0.528	ppb	-0.528	-33.94	430	5000	
Cu	63	2	72	0.707	ppb	0.707	26.39	3847	5000	
Zn	66	2	72	-0.786	ppb	-0.786	-73.86	367	5000	
As	75	2	72	-0.346	ppb	-0.346	-6.33	33	2000	
Se	78	1	72	-0.014	ppb	-0.014	-186.96	5	2000	
Sr	88	2	72	4.645	ppb	4.645	158.47	4632	4000	
Zr	90	2	72	86.568	ppb	86.568	215.44	1279	1000	
Mo	95	2	115	0.285	ppb	0.285	151.55	323	2000	
Ag	107	2	115	-0.012	ppb	-0.012	-65.90	27	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	-0.503	ppb	-0.503	-13.46	437	2000	
Sb	121	2	115	0.028	ppb	0.028	123.75	97	1000	
Ba	137	2	115	1.028	ppb	1.028	139.41	547	5000	
W	182	2	165	0.233	ppb	0.233	124.88	2171	100	
Tl	205	2	165	0.010	ppb	0.010	44.48	377	2000	
Pb	208	2	165	-0.079	ppb	-0.079	-42.66	3184	5000	
Th	232	2	193	-0.074	ppb	-0.074	-76.61	12496	2000	
U	238	2	193	0.082	ppb	0.082	110.17	5271	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	394172	3.61	253490	155.50	60	120	IS Failed
Sc (IS)	45	1	HMI H2	15154716	3.13	9587331	158.07	60	120	IS Failed
Sc (IS)	45	2	HMI He	1317652	3.03	964862	136.56	60	120	IS Failed
Sc (IS)	45	3	No Gas	19820723	8.20	17821643	111.22	60	120	
Ge Internal standard	72	1	HMI H2	8357446	3.68	5262568	158.81	60	120	IS Failed
Ge Internal standard	72	2	HMI He	1595022	4.70	1150133	138.68	60	120	IS Failed
In Internal standard	115	2	HMI He	4919824	5.11	3923278	125.40	60	120	IS Failed
Ho-165	165	2	HMI He	19168282	3.79	14697450	130.42	60	120	IS Failed
Ir (IS)	193	2	HMI He	14579191	5.00	10905184	133.69	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-174983-C-17-A
Data File Name	191SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:26:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	255.764	ppb	255.764	0.98	2692816	50000	
Be	9	1	6	0.008	ppb	0.008	622.94	20	2000	
B	11	1	6	4.901	ppb	4.901	16.70	2647	2000	
Na	23	2	45	73073.994	ppb	73073.994	0.76	15779800	400000	
Mg	24	2	45	75716.135	ppb	75716.135	1.34	7395814	400000	
Al	27	2	45	22.721	ppb	22.721	14.14	703	400000	
Si	28	2	45	458.668	ppb	458.668	1.24	100437	10000	
P	31	2	45	11.967	ppb	11.967	91.37	196	10000	
K	39	2	45	4094.910	ppb	4094.910	0.69	329613	400000	
Ca	40	1	45	170309.184	ppb	170309.184	0.90	261166023	400000	
Ti	47	2	45	0.382	ppb	0.382	100.12	10	4000	
V	51	2	72	-0.185	ppb	-0.185	-89.23	1290	2000	
Cr	52	2	72	7.379	ppb	7.379	1.12	12182	5000	
Mn	55	2	72	1.693	ppb	1.693	6.19	1290	10000	
Fe	56	1	72	50.705	ppb	50.705	1.12	194295	10000	
(Fe)	57	2	72	57.813	ppb	57.813	3.88	1720	400000	
Co	59	2	72	0.081	ppb	0.081	25.46	220	2000	
Ni	60	2	72	4.736	ppb	4.736	7.35	3354	5000	
Cu	63	2	72	2.620	ppb	2.620	3.02	5775	5000	
Zn	66	2	72	20.993	ppb	20.993	4.55	6782	5000	
As	75	2	72	0.107	ppb	0.107	42.77	131	2000	
Se	78	1	72	7.652	ppb	7.652	2.33	1063	2000	
Sr	88	2	72	355.678	ppb	355.678	1.95	244888	4000	
Zr	90	2	72	21.236	ppb	21.236	285.59	723	1000	
Mo	95	2	115	18.773	ppb	18.773	2.69	14874	2000	
Ag	107	2	115	0.180	ppb	0.180	20.42	523	100	
Cd	111	2	115	0.033	ppb	0.033	114.09	23	2000	
Sn	120	2	115	-0.171	ppb	-0.171	-24.80	713	2000	
Sb	121	2	115	0.295	ppb	0.295	21.16	393	1000	
Ba	137	2	115	52.673	ppb	52.673	2.17	18074	5000	
W	182	2	165	0.032	ppb	0.032	147.39	983	100	
Tl	205	2	165	0.110	ppb	0.110	19.55	1003	2000	
Pb	208	2	165	0.815	ppb	0.815	9.10	11149	5000	
Th	232	2	193	0.039	ppb	0.039	100.05	10427	2000	
U	238	2	193	3.591	ppb	3.591	1.26	42179	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	233734	0.93	253490	92.21	60	120	
Sc (IS)	45	1	HMI H2	9466025	0.57	9587331	98.73	60	120	
Sc (IS)	45	2	HMI He	985393	1.41	964862	102.13	60	120	
Sc (IS)	45	3	No Gas	18002514	1.00	17821643	101.01	60	120	
Ge Internal standard	72	1	HMI H2	5141823	1.04	5262568	97.71	60	120	
Ge Internal standard	72	2	HMI He	1154311	0.63	1150133	100.36	60	120	
In Internal standard	115	2	HMI He	3841558	1.47	3923278	97.92	60	120	
Ho-165	165	2	HMI He	14908618	0.52	14697450	101.44	60	120	
Ir (IS)	193	2	HMI He	10825358	0.66	10905184	99.27	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	192_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:29:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	47.216	ppb	6.459	9897	50	94.4	90	110	
Na	23	2	45	52953.749	ppb	1.572	11354482	51000	103.8	90	110	
Mg	24	2	45	10730.348	ppb	3.072	1041261	11000	97.5	90	110	
Al	27	2	45	971.868	ppb	1.803	27630	1000	97.2	90	110	
K	39	2	45	10331.572	ppb	1.265	757719	11000	93.9	90	110	
Ca	40	1	45	11154.659	ppb	0.797	17240957	11000	101.4	90	110	
Ti	47	2	45	54.187	ppb	22.407	1417	50	108.4	90	110	
V	51	2	72	49.357	ppb	0.922	50838	50	98.7	90	110	
Cr	52	2	72	50.120	ppb	0.467	67975	50	100.2	90	110	
Mn	55	2	72	49.272	ppb	1.201	29430	50	98.5	90	110	
Fe	56	1	72	996.885	ppb	2.105	3385828	1000	99.7	90	110	
Co	59	2	72	48.711	ppb	0.530	101196	50	97.4	90	110	
Ni	60	2	72	48.950	ppb	3.538	28699	50	97.9	90	110	
Cu	63	2	72	50.176	ppb	1.000	79634	50	100.4	90	110	
Zn	66	2	72	47.599	ppb	2.506	14634	50	95.2	90	110	
As	75	2	72	48.566	ppb	0.626	11499	50	97.1	90	110	
Se	78	1	72	48.388	ppb	3.780	6747	50	96.8	90	110	
Sr	88	2	72	96.375	ppb	0.078	66118	100	96.4	90	110	
Zr	90	2	72	102.706	ppb	57.043	990	50	205.4	90	110	>+\-10%
Mo	95	2	115	49.153	ppb	3.710	39279	50	98.3	90	110	
Ag	107	2	115	47.725	ppb	3.160	126719	50	95.4	90	110	
Cd	111	2	115	47.893	ppb	1.880	19800	50	95.8	90	110	
Sn	120	2	115	49.105	ppb	2.433	56324	50	98.2	90	110	
Sb	121	2	115	49.318	ppb	1.396	59379	50	98.6	90	110	
Ba	137	2	115	48.396	ppb	5.513	16780	50	96.8	90	110	
W	182	2	165	49.050	ppb	1.420	166336	50	98.1	90	110	
Tl	205	2	165	47.688	ppb	0.611	335856	50	95.4	90	110	
Pb	208	2	165	47.035	ppb	0.396	454522	50	94.1	90	110	
Th	232	2	193	48.124	ppb	1.387	511514	50	96.2	90	110	
U	238	2	193	48.068	ppb	1.181	533672	50	96.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	245722	1.53	253490	96.94	60	120	
Sc (IS)	45	1	HMI H2	9507147	1.52	9587331	99.16	60	120	
Sc (IS)	45	2	HMI He	977803	1.28	964862	101.34	60	120	
Sc (IS)	45	3	No Gas	18465459	0.28	17821643	103.61	60	120	
Ge Internal standard	72	1	HMI H2	5181772	1.18	5262568	98.46	60	120	
Ge Internal standard	72	2	HMI He	1146516	1.38	1150133	99.69	60	120	
In Internal standard	115	2	HMI He	3878523	1.04	3923278	98.86	60	120	
Ho-165	165	2	HMI He	14748247	1.33	14697450	100.35	60	120	
Ir (IS)	193	2	HMI He	10959864	1.48	10905184	100.50	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	193_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:33:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-0.537	ppb	-111.9	911997	10	
Be	9	1	6	0.164	ppb	83.6	57	0.5	
B	11	1	6	16.946	ppb	4.9	4861	0.5	>RL
Na	23	2	45	65.696	ppb	7.8	41418	25	>RL
Mg	24	2	45	8.001	ppb	28.1	1947	25	
Al	27	2	45	6.289	ppb	13.4	233	15	
K	39	2	45	27.840	ppb	31.8	46435	50	
Ti	47	2	45	0.126	ppb	173.2	3	0.5	
V	51	2	72	-0.318	ppb	-27.7	1163	1	
Cr	52	2	72	0.038	ppb	353.6	2537	1	
Mn	55	2	72	-0.122	ppb	-36.8	210	0.5	
(Fe)	57	2	72	9.112	ppb	31.2	483	25	
Co	59	2	72	0.047	ppb	50.7	150	0.5	
Ni	60	2	72	0.653	ppb	19.2	1003	1	
Cu	63	2	72	1.137	ppb	6.8	3477	1	>RL
Zn	66	2	72	-0.292	ppb	-46.8	420	5	
As	75	2	72	-0.108	ppb	-49.9	80	1	
Se	78	1	72	0.151	ppb	20.8	27	1	
Sr	88	2	72	-0.067	ppb	-115.6	247	0.5	
Zr	90	2	72	5.054	ppb	830.0	673	1	>RL
Mo	95	2	115	0.076	ppb	33.6	93	0.5	
Ag	107	2	115	0.015	ppb	55.9	93	1	
Cd	111	2	115	0.041	ppb	69.9	27	0.5	
Sn	120	2	115	0.085	ppb	55.6	1007	1	
Sb	121	2	115	0.131	ppb	10.6	200	0.6	
Ba	137	2	115	0.081	ppb	157.6	110	0.5	
W	182	2	165	0.168	ppb	23.7	1443	1	
Tl	205	2	165	0.042	ppb	46.2	520	0.1	
Pb	208	2	165	-0.057	ppb	-27.8	2690	0.5	
Th	232	2	193	0.314	ppb	16.3	13690	1	
U	238	2	193	0.035	ppb	15.8	3507	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	259378	0.59	253490	102.32	60	120	
Sc (IS)	45	1	HMI H2	9661333	1.41	9587331	100.77	60	120	
Sc (IS)	45	2	HMI He	982188	1.64	964862	101.80	60	120	
Sc (IS)	45	3	No Gas	18440973	0.75	17821643	103.48	60	120	
Ge Internal standard	72	1	HMI H2	5275158	0.60	5262568	100.24	60	120	
Ge Internal standard	72	2	HMI He	1161596	1.28	1150133	101.00	60	120	
In Internal standard	115	2	HMI He	3872658	0.70	3923278	98.71	60	120	
Ho-165	165	2	HMI He	14881596	1.22	14697450	101.25	60	120	
Ir (IS)	193	2	HMI He	11176305	1.16	10905184	102.49	60	120	

Sample Report

Sample Table

Sample Name	280-174983-C-18-A
Data File Name	194SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:36:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-0.164	ppb	-0.164	-524.57	925937	50000	
Be	9	1	6	-0.031	ppb	-0.031	-172.63	13	2000	
B	11	1	6	12.477	ppb	12.477	5.16	4077	2000	
Na	23	2	45	9235.591	ppb	9235.591	1.42	2016965	400000	
Mg	24	2	45	13938.410	ppb	13938.410	0.66	1361783	400000	
Al	27	2	45	88.671	ppb	88.671	8.35	2587	400000	
Si	28	2	45	533.905	ppb	533.905	0.34	113588	10000	
P	31	2	45	28.803	ppb	28.803	22.42	244	10000	
K	39	2	45	1391.862	ppb	1391.862	1.14	141431	400000	
Ca	40	1	45	72547.057	ppb	72547.057	0.92	115544038	400000	
Ti	47	2	45	2.013	ppb	2.013	41.71	53	4000	
V	51	2	72	0.198	ppb	0.198	87.80	1717	2000	
Cr	52	2	72	-0.006	ppb	-0.006	-1098.57	2524	5000	
Mn	55	2	72	2.874	ppb	2.874	8.42	2044	10000	
Fe	56	1	72	75.634	ppb	75.634	1.08	292560	10000	
(Fe)	57	2	72	80.979	ppb	80.979	2.22	2367	400000	
Co	59	2	72	0.090	ppb	0.090	21.02	243	2000	
Ni	60	2	72	0.707	ppb	0.707	16.08	1053	5000	
Cu	63	2	72	2.846	ppb	2.846	7.13	6281	5000	
Zn	66	2	72	1.924	ppb	1.924	17.84	1107	5000	
As	75	2	72	0.347	ppb	0.347	37.05	192	2000	
Se	78	1	72	0.338	ppb	0.338	41.35	55	2000	
Sr	88	2	72	99.137	ppb	99.137	0.49	70172	4000	
Zr	90	2	72	20.881	ppb	20.881	125.71	740	1000	
Mo	95	2	115	3.979	ppb	3.979	6.61	3220	2000	
Ag	107	2	115	-0.004	ppb	-0.004	-221.84	43	100	
Cd	111	2	115	0.016	ppb	0.016	228.18	17	2000	
Sn	120	2	115	-0.018	ppb	-0.018	-662.95	897	2000	
Sb	121	2	115	0.091	ppb	0.091	4.99	153	1000	
Ba	137	2	115	95.467	ppb	95.467	0.21	33129	5000	
W	182	2	165	0.019	ppb	0.019	123.39	943	100	
Tl	205	2	165	0.010	ppb	0.010	120.48	297	2000	
Pb	208	2	165	-0.002	ppb	-0.002	-1549.46	3257	5000	
Th	232	2	193	-0.024	ppb	-0.024	-56.68	10104	2000	
U	238	2	193	39.065	ppb	39.065	0.72	443327	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	254966	0.31	253490	100.58	60	120	
Sc (IS)	45	1	HMI H2	9828172	0.60	9587331	102.51	60	120	
Sc (IS)	45	2	HMI He	984872	1.55	964862	102.07	60	120	
Sc (IS)	45	3	No Gas	18669001	1.09	17821643	104.75	60	120	
Ge Internal standard	72	1	HMI H2	5416861	0.80	5262568	102.93	60	120	
Ge Internal standard	72	2	HMI He	1183016	1.11	1150133	102.86	60	120	
In Internal standard	115	2	HMI He	3892733	0.96	3923278	99.22	60	120	
Ho-165	165	2	HMI He	15029899	0.24	14697450	102.26	60	120	
Ir (IS)	193	2	HMI He	11187755	1.49	10905184	102.59	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-1-A
Data File Name	195SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:40:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	437.224	ppb	437.224	1.90	4165493	50000	
Be	9	1	6	-0.011	ppb	-0.011	-512.77	17	2000	
B	11	1	6	141.868	ppb	141.868	2.82	22946	2000	
Na	23	2	45	345977.153	ppb	345977.153	0.83	74979407	400000	
Mg	24	2	45	83455.610	ppb	83455.610	0.78	8192643	400000	
Al	27	2	45	5.062	ppb	5.062	35.17	200	400000	
Si	28	2	45	689.864	ppb	689.864	2.85	141712	10000	
P	31	2	45	4.022	ppb	4.022	341.23	174	10000	
K	39	2	45	5107.417	ppb	5107.417	1.52	402032	400000	
Ca	40	1	45	300077.735	ppb	300077.735	0.69	472923606	400000	
Ti	47	2	45	0.126	ppb	0.126	173.21	3	4000	
V	51	2	72	-0.111	ppb	-0.111	-149.33	1380	2000	
Cr	52	2	72	0.302	ppb	0.302	21.43	2897	5000	
Mn	55	2	72	0.148	ppb	0.148	97.23	373	10000	
Fe	56	1	72	8.807	ppb	8.807	2.95	55253	10000	
(Fe)	57	2	72	27.016	ppb	27.016	15.53	947	400000	
Co	59	2	72	0.100	ppb	0.100	38.26	263	2000	
Ni	60	2	72	0.708	ppb	0.708	42.44	1040	5000	
Cu	63	2	72	7.933	ppb	7.933	2.00	14240	5000	
Zn	66	2	72	1.067	ppb	1.067	12.29	833	5000	
As	75	2	72	0.224	ppb	0.224	15.06	160	2000	
Se	78	1	72	8.041	ppb	8.041	1.54	1140	2000	
Sr	88	2	72	3615.414	ppb	3615.414	0.57	2513087	4000	
Zr	90	2	72	40.893	ppb	40.893	73.90	797	1000	
Mo	95	2	115	0.906	ppb	0.906	15.23	753	2000	
Ag	107	2	115	0.019	ppb	0.019	78.95	103	100	
Cd	111	2	115	0.009	ppb	0.009	329.40	13	2000	
Sn	120	2	115	-0.095	ppb	-0.095	-43.21	803	2000	
Sb	121	2	115	0.145	ppb	0.145	8.15	217	1000	
Ba	137	2	115	17.030	ppb	17.030	3.59	5935	5000	
W	182	2	165	0.067	ppb	0.067	68.91	1103	100	
Tl	205	2	165	0.011	ppb	0.011	134.58	300	2000	
Pb	208	2	165	-0.094	ppb	-0.094	-9.67	2337	5000	
Th	232	2	193	-0.023	ppb	-0.023	-310.15	9710	2000	
U	238	2	193	79.000	ppb	79.000	1.06	857319	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	239900	1.01	253490	94.64	60	120	
Sc (IS)	45	1	HMI H2	9730343	2.08	9587331	101.49	60	120	
Sc (IS)	45	2	HMI He	990255	0.64	964862	102.63	60	120	
Sc (IS)	45	3	No Gas	18892128	0.56	17821643	106.01	60	120	
Ge Internal standard	72	1	HMI H2	5250342	1.25	5262568	99.77	60	120	
Ge Internal standard	72	2	HMI He	1166674	1.42	1150133	101.44	60	120	
In Internal standard	115	2	HMI He	3865382	0.63	3923278	98.52	60	120	
Ho-165	165	2	HMI He	14921415	0.82	14697450	101.52	60	120	
Ir (IS)	193	2	HMI He	10736176	0.43	10905184	98.45	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-1-B MS
Data File Name	196SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:44:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	471.630	ppb	471.630	0.88	4307718	50000	
Be	9	1	6	40.456	ppb	40.456	5.72	8302	2000	
B	11	1	6	146.312	ppb	146.312	2.25	23657	2000	
Na	23	2	45	343786.944	ppb	343786.944	0.43	74590834	400000	
Mg	24	2	45	84839.856	ppb	84839.856	0.58	8338128	400000	
Al	27	2	45	762.264	ppb	762.264	4.86	21988	400000	
Si	28	2	45	735.043	ppb	735.043	1.65	149850	10000	
P	31	2	45	8.153	ppb	8.153	29.85	186	10000	
K	39	2	45	5831.992	ppb	5831.992	0.73	453230	400000	
Ca	40	1	45	301336.250	ppb	301336.250	0.57	482797286	400000	
Ti	47	2	45	37.293	ppb	37.293	11.30	990	4000	
V	51	2	72	38.718	ppb	38.718	0.82	41071	2000	
Cr	52	2	72	38.433	ppb	38.433	1.01	53841	5000	
Mn	55	2	72	38.859	ppb	38.859	1.60	23775	10000	
Fe	56	1	72	790.709	ppb	790.709	0.32	2789521	10000	
(Fe)	57	2	72	813.231	ppb	813.231	2.24	21264	400000	
Co	59	2	72	37.967	ppb	37.967	0.93	80605	2000	
Ni	60	2	72	38.010	ppb	38.010	1.82	22907	5000	
Cu	63	2	72	43.180	ppb	43.180	2.16	70255	5000	
Zn	66	2	72	37.634	ppb	37.634	0.71	11931	5000	
As	75	2	72	37.885	ppb	37.885	1.41	9190	2000	
Se	78	1	72	46.569	ppb	46.569	1.77	6728	2000	
Sr	88	2	72	3665.018	ppb	3665.018	0.49	2558177	4000	
Zr	90	2	72	56.318	ppb	56.318	45.03	853	1000	
Mo	95	2	115	41.338	ppb	41.338	0.42	32680	2000	
Ag	107	2	115	37.889	ppb	37.889	0.22	99551	100	
Cd	111	2	115	37.699	ppb	37.699	1.97	15418	2000	
Sn	120	2	115	38.436	ppb	38.436	4.10	43795	2000	
Sb	121	2	115	38.807	ppb	38.807	4.57	46245	1000	
Ba	137	2	115	56.613	ppb	56.613	2.87	19399	5000	
W	182	2	165	0.025	ppb	0.025	215.73	960	100	
Tl	205	2	165	36.761	ppb	36.761	0.78	262533	2000	
Pb	208	2	165	36.420	ppb	36.420	0.84	357578	5000	
Th	232	2	193	39.190	ppb	39.190	1.11	406929	2000	
U	238	2	193	119.402	ppb	119.402	0.90	1284729	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	240493	0.87	253490	94.87	60	120	
Sc (IS)	45	1	HMI H2	9891147	0.42	9587331	103.17	60	120	
Sc (IS)	45	2	HMI He	991403	0.59	964862	102.75	60	120	
Sc (IS)	45	3	No Gas	18414202	1.64	17821643	103.32	60	120	
Ge Internal standard	72	1	HMI H2	5371256	0.88	5262568	102.07	60	120	
Ge Internal standard	72	2	HMI He	1171462	0.71	1150133	101.85	60	120	
In Internal standard	115	2	HMI He	3836889	0.96	3923278	97.80	60	120	
Ho-165	165	2	HMI He	14952585	0.69	14697450	101.74	60	120	
Ir (IS)	193	2	HMI He	10657852	1.31	10905184	97.73	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-1-C MSD
Data File Name	197SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:47:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	462.701	ppb	462.701	0.39	4069242	50000	
Be	9	1	6	41.183	ppb	41.183	4.22	8066	2000	
B	11	1	6	155.030	ppb	155.030	3.40	23804	2000	
Na	23	2	45	340956.567	ppb	340956.567	0.51	72583409	400000	
Mg	24	2	45	84259.898	ppb	84259.898	0.78	8125303	400000	
Al	27	2	45	748.576	ppb	748.576	2.58	21184	400000	
Si	28	2	45	719.527	ppb	719.527	0.97	144331	10000	
P	31	2	45	3.274	ppb	3.274	201.60	169	10000	
K	39	2	45	5806.213	ppb	5806.213	0.30	442909	400000	
Ca	40	1	45	301402.320	ppb	301402.320	0.87	474429406	400000	
Ti	47	2	45	41.667	ppb	41.667	14.98	1087	4000	
V	51	2	72	38.367	ppb	38.367	2.05	40015	2000	
Cr	52	2	72	38.462	ppb	38.462	2.12	52945	5000	
Mn	55	2	72	38.726	ppb	38.726	0.96	23284	10000	
Fe	56	1	72	786.526	ppb	786.526	0.93	2732387	10000	
(Fe)	57	2	72	788.937	ppb	788.937	2.98	20280	400000	
Co	59	2	72	37.139	ppb	37.139	0.49	77486	2000	
Ni	60	2	72	37.883	ppb	37.883	2.02	22439	5000	
Cu	63	2	72	42.001	ppb	42.001	3.44	67216	5000	
Zn	66	2	72	40.670	ppb	40.670	3.92	12629	5000	
As	75	2	72	37.446	ppb	37.446	3.52	8926	2000	
Se	78	1	72	45.033	ppb	45.033	3.20	6407	2000	
Sr	88	2	72	3726.543	ppb	3726.543	0.66	2556184	4000	
Zr	90	2	72	72.856	ppb	72.856	9.30	893	1000	
Mo	95	2	115	39.879	ppb	39.879	2.23	31281	2000	
Ag	107	2	115	37.563	ppb	37.563	0.64	97938	100	
Cd	111	2	115	36.372	ppb	36.372	7.75	14751	2000	
Sn	120	2	115	37.456	ppb	37.456	1.86	42384	2000	
Sb	121	2	115	38.470	ppb	38.470	1.31	45479	1000	
Ba	137	2	115	57.199	ppb	57.199	1.45	19449	5000	
W	182	2	165	0.045	ppb	0.045	98.47	1010	100	
Tl	205	2	165	36.606	ppb	36.606	1.86	256426	2000	
Pb	208	2	165	36.778	ppb	36.778	0.64	354145	5000	
Th	232	2	193	39.588	ppb	39.588	0.34	405774	2000	
U	238	2	193	120.291	ppb	120.291	0.15	1277980	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	229477	0.67	253490	90.53	60	120	
Sc (IS)	45	1	HMI H2	9718013	1.28	9587331	101.36	60	120	
Sc (IS)	45	2	HMI He	972736	0.84	964862	100.82	60	120	
Sc (IS)	45	3	No Gas	17659041	0.81	17821643	99.09	60	120	
Ge Internal standard	72	1	HMI H2	5289156	0.83	5262568	100.51	60	120	
Ge Internal standard	72	2	HMI He	1151230	0.73	1150133	100.10	60	120	
In Internal standard	115	2	HMI He	3807759	1.66	3923278	97.06	60	120	
Ho-165	165	2	HMI He	14666752	0.29	14697450	99.79	60	120	
Ir (IS)	193	2	HMI He	10522924	1.20	10905184	96.49	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-2-A
Data File Name	198SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:51:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	34.359	ppb	34.359	7.75	1138870	50000	
Be	9	1	6	0.079	ppb	0.079	270.04	33	2000	
B	11	1	6	85.354	ppb	85.354	3.42	13849	2000	
Na	23	2	45	192869.683	ppb	192869.683	0.69	40553697	400000	
Mg	24	2	45	82775.748	ppb	82775.748	0.93	7881672	400000	
Al	27	2	45	4.905	ppb	4.905	50.82	190	400000	
Si	28	2	45	750.042	ppb	750.042	1.17	147742	10000	
P	31	2	45	43.329	ppb	43.329	14.57	279	10000	
K	39	2	45	860.573	ppb	860.573	3.71	101888	400000	
Ca	40	1	45	322848.828	ppb	322848.828	0.79	496953659	400000	
Ti	47	2	45	0.129	ppb	0.129	173.21	3	4000	
V	51	2	72	0.019	ppb	0.019	829.65	1477	2000	
Cr	52	2	72	-0.021	ppb	-0.021	-481.12	2410	5000	
Mn	55	2	72	4.279	ppb	4.279	4.02	2794	10000	
Fe	56	1	72	11.349	ppb	11.349	4.44	63476	10000	
(Fe)	57	2	72	32.690	ppb	32.690	16.05	1067	400000	
Co	59	2	72	0.158	ppb	0.158	27.73	377	2000	
Ni	60	2	72	2.986	ppb	2.986	15.03	2314	5000	
Cu	63	2	72	3.979	ppb	3.979	10.74	7795	5000	
Zn	66	2	72	1.461	ppb	1.461	27.05	930	5000	
As	75	2	72	1.014	ppb	1.014	7.68	341	2000	
Se	78	1	72	2.445	ppb	2.445	23.91	348	2000	
Sr	88	2	72	2547.093	ppb	2547.093	1.15	1729268	4000	
Zr	90	2	72	162.979	ppb	162.979	24.44	1180	1000	
Mo	95	2	115	2.371	ppb	2.371	12.85	1870	2000	
Ag	107	2	115	0.120	ppb	0.120	26.40	360	100	
Cd	111	2	115	0.034	ppb	0.034	83.43	23	2000	
Sn	120	2	115	-0.258	ppb	-0.258	-42.01	603	2000	
Sb	121	2	115	0.267	ppb	0.267	9.19	353	1000	
Ba	137	2	115	32.637	ppb	32.637	2.36	11014	5000	
W	182	2	165	0.062	ppb	0.062	68.32	1053	100	
Tl	205	2	165	0.049	ppb	0.049	27.43	557	2000	
Pb	208	2	165	-0.102	ppb	-0.102	-22.68	2197	5000	
Th	232	2	193	0.347	ppb	0.347	15.86	13210	2000	
U	238	2	193	50.935	ppb	50.935	1.41	542750	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	227623	1.10	253490	89.80	60	120	
Sc (IS)	45	1	HMI H2	9502997	0.57	9587331	99.12	60	120	
Sc (IS)	45	2	HMI He	960536	0.56	964862	99.55	60	120	
Sc (IS)	45	3	No Gas	18051194	0.62	17821643	101.29	60	120	
Ge Internal standard	72	1	HMI H2	5212196	0.52	5262568	99.04	60	120	
Ge Internal standard	72	2	HMI He	1139405	0.56	1150133	99.07	60	120	
In Internal standard	115	2	HMI He	3767507	1.10	3923278	96.03	60	120	
Ho-165	165	2	HMI He	14492889	0.48	14697450	98.61	60	120	
Ir (IS)	193	2	HMI He	10521917	0.46	10905184	96.49	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-A
Data File Name	199SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:54:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	30.290	ppb	30.290	9.86	1137093	50000	
Be	9	1	6	0.075	ppb	0.075	170.91	33	2000	
B	11	1	6	67.008	ppb	67.008	2.13	11634	2000	
Na	23	2	45	129315.577	ppb	129315.577	1.55	27947964	400000	
Mg	24	2	45	26266.320	ppb	26266.320	1.49	2570677	400000	
Al	27	2	45	5.665	ppb	5.665	16.71	217	400000	
Si	28	2	45	685.650	ppb	685.650	0.58	140505	10000	
P	31	2	45	2.027	ppb	2.027	443.44	167	10000	
K	39	2	45	334.249	ppb	334.249	5.75	68007	400000	
Ca	40	1	45	90947.966	ppb	90947.966	0.98	144286955	400000	
Ti	47	2	45	0.249	ppb	0.249	173.21	7	4000	
V	51	2	72	0.355	ppb	0.355	66.86	1864	2000	
Cr	52	2	72	-0.135	ppb	-0.135	-36.88	2327	5000	
Mn	55	2	72	16.026	ppb	16.026	8.07	9970	10000	
Fe	56	1	72	166.062	ppb	166.062	0.69	595753	10000	
(Fe)	57	2	72	184.673	ppb	184.673	8.18	5021	400000	
Co	59	2	72	0.265	ppb	0.265	5.09	613	2000	
Ni	60	2	72	1.208	ppb	1.208	9.40	1337	5000	
Cu	63	2	72	2.577	ppb	2.577	8.88	5791	5000	
Zn	66	2	72	1.432	ppb	1.432	17.85	947	5000	
As	75	2	72	0.277	ppb	0.277	45.99	174	2000	
Se	78	1	72	4.068	ppb	4.068	9.92	583	2000	
Sr	88	2	72	780.030	ppb	780.030	1.48	544740	4000	
Zr	90	2	72	18.875	ppb	18.875	99.13	727	1000	
Mo	95	2	115	1.093	ppb	1.093	8.42	913	2000	
Ag	107	2	115	0.003	ppb	0.003	4.84	60	100	
Cd	111	2	115	0.016	ppb	0.016	309.51	17	2000	
Sn	120	2	115	-0.199	ppb	-0.199	-72.33	693	2000	
Sb	121	2	115	0.137	ppb	0.137	57.13	210	1000	
Ba	137	2	115	109.041	ppb	109.041	0.44	38000	5000	
W	182	2	165	0.903	ppb	0.903	7.17	3947	100	
Tl	205	2	165	0.004	ppb	0.004	101.51	250	2000	
Pb	208	2	165	-0.023	ppb	-0.023	-11.82	3020	5000	
Th	232	2	193	0.020	ppb	0.020	202.31	10214	2000	
U	238	2	193	13.678	ppb	13.678	1.48	151976	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	234787	1.52	253490	92.62	60	120	
Sc (IS)	45	1	HMI H2	9791555	1.11	9587331	102.13	60	120	
Sc (IS)	45	2	HMI He	987091	1.45	964862	102.30	60	120	
Sc (IS)	45	3	No Gas	18491023	0.38	17821643	103.76	60	120	
Ge Internal standard	72	1	HMI H2	5278772	0.33	5262568	100.31	60	120	
Ge Internal standard	72	2	HMI He	1171741	1.55	1150133	101.88	60	120	
In Internal standard	115	2	HMI He	3910535	0.55	3923278	99.68	60	120	
Ho-165	165	2	HMI He	14888972	0.92	14697450	101.30	60	120	
Ir (IS)	193	2	HMI He	10811692	0.88	10905184	99.14	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-B MS
Data File Name	200SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T21:58:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	67.257	ppb	67.257	1.36	1405732	50000	
Be	9	1	6	40.590	ppb	40.590	0.73	8356	2000	
B	11	1	6	64.449	ppb	64.449	5.65	11571	2000	
Na	23	2	45	134717.903	ppb	134717.903	0.84	29045077	400000	
Mg	24	2	45	27909.240	ppb	27909.240	0.89	2724834	400000	
Al	27	2	45	758.628	ppb	758.628	0.49	21731	400000	
Si	28	2	45	761.132	ppb	761.132	0.58	153398	10000	
P	31	2	45	6.289	ppb	6.289	40.43	179	10000	
K	39	2	45	1098.261	ppb	1098.261	0.90	120972	400000	
Ca	40	1	45	93591.092	ppb	93591.092	0.57	148929028	400000	
Ti	47	2	45	40.548	ppb	40.548	5.96	1070	4000	
V	51	2	72	39.956	ppb	39.956	1.64	42362	2000	
Cr	52	2	72	39.443	ppb	39.443	0.86	55222	5000	
Mn	55	2	72	56.104	ppb	56.104	0.51	34216	10000	
Fe	56	1	72	965.391	ppb	965.391	0.79	3376822	10000	
(Fe)	57	2	72	941.866	ppb	941.866	2.56	24606	400000	
Co	59	2	72	37.031	ppb	37.031	0.09	78663	2000	
Ni	60	2	72	37.943	ppb	37.943	0.88	22880	5000	
Cu	63	2	72	39.700	ppb	39.700	1.23	64767	5000	
Zn	66	2	72	40.606	ppb	40.606	2.62	12839	5000	
As	75	2	72	38.345	ppb	38.345	2.56	9304	2000	
Se	78	1	72	42.094	ppb	42.094	3.01	6043	2000	
Sr	88	2	72	878.183	ppb	878.183	0.67	613518	4000	
Zr	90	2	72	59.217	ppb	59.217	41.66	863	1000	
Mo	95	2	115	39.569	ppb	39.569	2.90	31592	2000	
Ag	107	2	115	38.643	ppb	38.643	0.87	102543	100	
Cd	111	2	115	38.218	ppb	38.218	3.38	15785	2000	
Sn	120	2	115	37.304	ppb	37.304	2.45	42962	2000	
Sb	121	2	115	38.859	ppb	38.859	2.15	46753	1000	
Ba	137	2	115	150.531	ppb	150.531	2.08	51950	5000	
W	182	2	165	1.042	ppb	1.042	8.39	4407	100	
Tl	205	2	165	37.551	ppb	37.551	0.67	266153	2000	
Pb	208	2	165	37.430	ppb	37.430	0.60	364641	5000	
Th	232	2	193	39.000	ppb	39.000	1.51	408450	2000	
U	238	2	193	54.585	ppb	54.585	1.35	593934	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	241158	0.91	253490	95.13	60	120	
Sc (IS)	45	1	HMI H2	9820694	0.60	9587331	102.43	60	120	
Sc (IS)	45	2	HMI He	984641	1.10	964862	102.05	60	120	
Sc (IS)	45	3	No Gas	18511375	0.65	17821643	103.87	60	120	
Ge Internal standard	72	1	HMI H2	5334497	1.16	5262568	101.37	60	120	
Ge Internal standard	72	2	HMI He	1172078	0.60	1150133	101.91	60	120	
In Internal standard	115	2	HMI He	3875270	0.77	3923278	98.78	60	120	
Ho-165	165	2	HMI He	14840230	0.50	14697450	100.97	60	120	
Ir (IS)	193	2	HMI He	10747870	0.30	10905184	98.56	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-C MSD
Data File Name	201SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:01:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608698 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	68.860	ppb	68.860	0.70	1403310	50000	
Be	9	1	6	41.895	ppb	41.895	8.31	8706	2000	
B	11	1	6	67.426	ppb	67.426	8.21	12135	2000	
Na	23	2	45	131451.558	ppb	131451.558	0.92	28614332	400000	
Mg	24	2	45	27344.479	ppb	27344.479	0.12	2695393	400000	
Al	27	2	45	758.371	ppb	758.371	2.88	21931	400000	
Si	28	2	45	733.535	ppb	733.535	0.86	149984	10000	
P	31	2	45	3.642	ppb	3.642	404.76	173	10000	
K	39	2	45	1080.234	ppb	1080.234	0.47	120869	400000	
Ca	40	1	45	93172.919	ppb	93172.919	0.19	148972238	400000	
Ti	47	2	45	42.187	ppb	42.187	4.20	1123	4000	
V	51	2	72	39.680	ppb	39.680	3.05	41876	2000	
Cr	52	2	72	38.885	ppb	38.885	0.46	54215	5000	
Mn	55	2	72	55.892	ppb	55.892	0.38	33925	10000	
Fe	56	1	72	959.055	ppb	959.055	0.42	3372174	10000	
(Fe)	57	2	72	911.362	ppb	911.362	2.85	23701	400000	
Co	59	2	72	38.044	ppb	38.044	1.42	80428	2000	
Ni	60	2	72	38.194	ppb	38.194	1.36	22917	5000	
Cu	63	2	72	40.330	ppb	40.330	2.97	65459	5000	
Zn	66	2	72	40.346	ppb	40.346	4.43	12699	5000	
As	75	2	72	37.787	ppb	37.787	0.53	9127	2000	
Se	78	1	72	42.747	ppb	42.747	2.89	6167	2000	
Sr	88	2	72	861.118	ppb	861.118	1.09	598741	4000	
Zr	90	2	72	41.724	ppb	41.724	76.17	800	1000	
Mo	95	2	115	41.644	ppb	41.644	3.57	33132	2000	
Ag	107	2	115	39.741	ppb	39.741	2.17	105096	100	
Cd	111	2	115	39.635	ppb	39.635	4.61	16312	2000	
Sn	120	2	115	38.338	ppb	38.338	3.72	43975	2000	
Sb	121	2	115	39.204	ppb	39.204	1.49	47017	1000	
Ba	137	2	115	150.869	ppb	150.869	2.70	51890	5000	
W	182	2	165	0.889	ppb	0.889	2.11	3891	100	
Tl	205	2	165	38.000	ppb	38.000	0.70	269529	2000	
Pb	208	2	165	37.517	ppb	37.517	0.86	365725	5000	
Th	232	2	193	38.981	ppb	38.981	0.90	412290	2000	
U	238	2	193	53.609	ppb	53.609	0.24	589140	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	243585	0.95	253490	96.09	60	120	
Sc (IS)	45	1	HMI H2	9867559	0.54	9587331	102.92	60	120	
Sc (IS)	45	2	HMI He	994057	0.71	964862	103.03	60	120	
Sc (IS)	45	3	No Gas	18327801	1.22	17821643	102.84	60	120	
Ge Internal standard	72	1	HMI H2	5361995	0.16	5262568	101.89	60	120	
Ge Internal standard	72	2	HMI He	1166511	0.35	1150133	101.42	60	120	
In Internal standard	115	2	HMI He	3862294	1.03	3923278	98.45	60	120	
Ho-165	165	2	HMI He	14850990	0.62	14697450	101.04	60	120	
Ir (IS)	193	2	HMI He	10854019	0.32	10905184	99.53	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	202_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:05:23-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	48.755	ppb	6.168	10434	50	97.5	90	110	
Na	23	2	45	52781.017	ppb	0.912	11462873	51000	103.5	90	110	
Mg	24	2	45	10878.829	ppb	3.493	1069042	11000	98.9	90	110	
Al	27	2	45	955.988	ppb	3.767	27530	1000	95.6	90	110	
K	39	2	45	10252.031	ppb	0.618	761878	11000	93.2	90	110	
Ca	40	1	45	11033.096	ppb	0.248	17697805	11000	100.3	90	110	
Ti	47	2	45	53.771	ppb	7.919	1427	50	107.5	90	110	
V	51	2	72	49.038	ppb	0.997	50868	50	98.1	90	110	
Cr	52	2	72	49.367	ppb	1.586	67449	50	98.7	90	110	
Mn	55	2	72	48.701	ppb	2.056	29290	50	97.4	90	110	
Fe	56	1	72	988.515	ppb	1.584	3470527	1000	98.9	90	110	
Co	59	2	72	47.824	ppb	2.325	100033	50	95.6	90	110	
Ni	60	2	72	48.221	ppb	3.057	28472	50	96.4	90	110	
Cu	63	2	72	49.504	ppb	1.048	79135	50	99.0	90	110	
Zn	66	2	72	48.093	ppb	3.254	14884	50	96.2	90	110	
As	75	2	72	48.577	ppb	2.456	11582	50	97.2	90	110	
Se	78	1	72	47.078	ppb	2.272	6781	50	94.2	90	110	
Sr	88	2	72	96.765	ppb	1.557	66837	100	96.8	90	110	
Zr	90	2	72	55.123	ppb	43.129	837	50	110.2	90	110	>+\-10%
Mo	95	2	115	49.264	ppb	1.286	39573	50	98.5	90	110	
Ag	107	2	115	48.977	ppb	1.863	130745	50	98.0	90	110	
Cd	111	2	115	47.974	ppb	2.906	19940	50	95.9	90	110	
Sn	120	2	115	47.811	ppb	3.129	55157	50	95.6	90	110	
Sb	121	2	115	48.479	ppb	3.575	58693	50	97.0	90	110	
Ba	137	2	115	49.016	ppb	1.342	17077	50	98.0	90	110	
W	182	2	165	47.816	ppb	1.242	164135	50	95.6	90	110	
Tl	205	2	165	46.977	ppb	0.418	334770	50	94.0	90	110	
Pb	208	2	165	46.397	ppb	0.434	453748	50	92.8	90	110	
Th	232	2	193	48.837	ppb	1.707	515864	50	97.7	90	110	
U	238	2	193	48.478	ppb	1.843	534967	50	97.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	250916	1.14	253490	98.98	60	120	
Sc (IS)	45	1	HMI H2	9865538	1.02	9587331	102.90	60	120	
Sc (IS)	45	2	HMI He	990371	0.17	964862	102.64	60	120	
Sc (IS)	45	3	No Gas	18370581	0.36	17821643	103.08	60	120	
Ge Internal standard	72	1	HMI H2	5355854	1.26	5262568	101.77	60	120	
Ge Internal standard	72	2	HMI He	1154376	0.42	1150133	100.37	60	120	
In Internal standard	115	2	HMI He	3899157	0.85	3923278	99.39	60	120	
Ho-165	165	2	HMI He	14923744	1.00	14697450	101.54	60	120	
Ir (IS)	193	2	HMI He	10894115	0.73	10905184	99.90	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	203_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:08:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-0.804	ppb	-119.0	916542	10	
Be	9	1	6	0.011	ppb	459.6	23	0.5	
B	11	1	6	17.475	ppb	18.8	5048	0.5	>RL
Na	23	2	45	114.267	ppb	10.0	52552	25	>RL
Mg	24	2	45	12.376	ppb	28.1	2404	25	
Al	27	2	45	3.169	ppb	34.7	147	15	
K	39	2	45	13.687	ppb	21.5	46067	50	
Ti	47	2	45	0.251	ppb	86.6	7	0.5	
V	51	2	72	-0.504	ppb	-14.1	1023	1	
Cr	52	2	72	0.112	ppb	41.2	2767	1	
Mn	55	2	72	-0.161	ppb	-43.6	197	0.5	
(Fe)	57	2	72	8.084	ppb	34.1	477	25	
Co	59	2	72	0.075	ppb	25.7	217	0.5	
Ni	60	2	72	0.578	ppb	56.3	1000	1	
Cu	63	2	72	1.220	ppb	18.3	3774	1	>RL
Zn	66	2	72	-0.132	ppb	-191.7	493	5	
As	75	2	72	-0.048	ppb	-169.5	100	1	
Se	78	1	72	0.098	ppb	48.0	20	1	
Sr	88	2	72	0.307	ppb	37.0	533	0.5	
Zr	90	2	72	-42.726	ppb	-61.7	537	1	
Mo	95	2	115	0.158	ppb	39.0	163	0.5	
Ag	107	2	115	0.023	ppb	18.9	117	1	
Cd	111	2	115	0.000	ppb	-8209.5	10	0.5	
Sn	120	2	115	0.016	ppb	214.3	957	1	
Sb	121	2	115	0.131	ppb	28.4	207	0.6	
Ba	137	2	115	0.034	ppb	528.3	97	0.5	
W	182	2	165	0.130	ppb	30.1	1327	1	
Tl	205	2	165	0.083	ppb	20.2	820	0.1	
Pb	208	2	165	-0.052	ppb	-52.7	2760	0.5	
Th	232	2	193	0.344	ppb	10.3	14204	1	
U	238	2	193	0.039	ppb	45.0	3601	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	264748	0.48	253490	104.44	60	120	
Sc (IS)	45	1	HMI H2	10033924	0.72	9587331	104.66	60	120	
Sc (IS)	45	2	HMI He	995550	0.62	964862	103.18	60	120	
Sc (IS)	45	3	No Gas	18572935	0.47	17821643	104.22	60	120	
Ge Internal standard	72	1	HMI H2	5502043	0.11	5262568	104.55	60	120	
Ge Internal standard	72	2	HMI He	1219169	5.26	1150133	106.00	60	120	
In Internal standard	115	2	HMI He	3984540	0.54	3923278	101.56	60	120	
Ho-165	165	2	HMI He	15030361	0.62	14697450	102.27	60	120	
Ir (IS)	193	2	HMI He	11335052	0.37	10905184	103.94	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608798/1-A
Data File Name	204_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:12:29-06:00
Sample Type	Blank
Dilution	1
Comment	608798 6020
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	-0.867	ppb	-347.0991554	938963	10
Be	9	1	6	0.054	ppb	122.8180074	33	0.5
B	11	1	6	1.337	ppb	111.6563579	2440	0.5
Na	23	2	45	45.553	ppb	9.234942347	38494	25
Mg	24	2	45	0.774	ppb	64.77896431	1290	25
Al	27	2	45	3.513	ppb	45.455789	160	15
K	39	2	45	-13.271	ppb	-176.4889934	45211	50
Ti	47	2	45	0.371	ppb	173.2050808	10	0.5
V	51	2	72	-0.429	ppb	-17.9253532	1087	1
Cr	52	2	72	-0.233	ppb	-32.81943123	2250	1
Mn	55	2	72	0.045	ppb	537.7125103	320	0.5
(Fe)	57	2	72	19.454	ppb	9.500060269	773	25
Co	59	2	72	0.037	ppb	63.64864864	133	0.5
Ni	60	2	72	0.093	ppb	175.233446	700	1
Cu	63	2	72	0.844	ppb	20.0622161	3117	1
Zn	66	2	72	0.207	ppb	94.27997252	590	5
As	75	2	72	-0.125	ppb	-12.47065467	79	1
Se	78	1	72	0.061	ppb	52.39377824	15	1
Sr	88	2	72	0.243	ppb	19.25484529	477	0.5
Zr	90	2	72	1.143	ppb	961.4822364	683	1
Mo	95	2	115	0.011	ppb	166.9705417	43	0.5
Ag	107	2	115	-0.009	ppb	-40.36424987	30	1
Cd	111	2	115	-0.001	ppb	-6125.215258	10	0.5
Sn	120	2	115	-0.107	ppb	-156.5795011	817	1
Sb	121	2	115	0.034	ppb	58.70026623	87	0.6
Ba	137	2	115	0.014	ppb	690.0263171	90	0.5
W	182	2	165	-0.018	ppb	-72.32581056	827	1
Tl	205	2	165	0.016	ppb	69.88157358	347	0.1
Pb	208	2	165	-0.103	ppb	-2.929559922	2287	0.5
Th	232	2	193	-0.008	ppb	-486.9975599	10501	1
U	238	2	193	0.030	ppb	47.9343583	3534	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	267140	0.55	253490	105.38	60	120	
Sc (IS)	45	1	HMI H2	10201427	0.44	9587331	106.41	60	120	
Sc (IS)	45	2	HMI He	1019279	1.15	964862	105.64	60	120	
Sc (IS)	45	3	No Gas	19037469	2.32	17821643	106.82	60	120	
Ge Internal standard	72	1	HMI H2	5558205	1.10	5262568	105.62	60	120	
Ge Internal standard	72	2	HMI He	1201011	0.35	1150133	104.42	60	120	
In Internal standard	115	2	HMI He	4001323	0.87	3923278	101.99	60	120	
Ho-165	165	2	HMI He	15185783	0.06	14697450	103.32	60	120	
Ir (IS)	193	2	HMI He	11436829	0.33	10905184	104.88	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608798/18-A
Data File Name	205_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:16:03-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608798 6020
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	39.011	39.011	ppb	4.649	1228383	400	9.8	80	120	>+/-20%
Be	9	1	6	36.060	36.060	ppb	6.435	8389	40	90.1	80	120	
Na	23	2	45	996.613	996.613	ppb	1.822	250874	40	2491.5	80	120	>+/-20%
Mg	24	2	45	720.684	720.684	ppb	1.378	74114	40	1801.7	80	120	>+/-20%
Al	27	2	45	745.303	745.303	ppb	1.755	22132	40	1863.3	80	120	>+/-20%
K	39	2	45	764.004	764.004	ppb	1.663	101299	40	1910.0	80	120	>+/-20%
V	51	2	72	36.458	36.458	ppb	5.125	41038	40	91.1	80	120	
Cr	52	2	72	37.688	37.688	ppb	2.527	55978	40	94.2	80	120	
Mn	55	2	72	37.271	37.271	ppb	2.560	24172	40	93.2	80	120	
(Fe)	57	2	72	726.983	726.983	ppb	2.269	20166	40	1817.5	80	120	>+/-20%
Co	59	2	72	36.490	36.490	ppb	4.506	82028	40	91.2	80	120	
Ni	60	2	72	36.738	36.738	ppb	4.420	23467	40	91.8	80	120	
Cu	63	2	72	37.668	37.668	ppb	2.215	65159	40	94.2	80	120	
Zn	66	2	72	38.649	38.649	ppb	2.648	12966	40	96.6	80	120	
As	75	2	72	35.548	35.548	ppb	1.895	9142	40	88.9	80	120	
Se	78	1	72	38.116	38.116	ppb	2.205	5777	40	95.3	80	120	
Mo	95	2	115	38.487	38.487	ppb	1.724	31689	40	96.2	80	120	
Ag	107	2	115	39.074	39.074	ppb	1.580	106914	40	97.7	80	120	
Cd	111	2	115	37.434	37.434	ppb	1.451	15945	40	93.6	80	120	
Sn	120	2	115	36.532	36.532	ppb	1.745	43410	40	91.3	80	120	
Sb	121	2	115	37.988	37.988	ppb	0.997	47134	40	95.0	80	120	
Ba	137	2	115	37.051	37.051	ppb	2.595	13250	40	92.6	80	120	
W	182	2	165	0.017	0.017	ppb	178.902	953	40	0.0	80	120	>+/-20%
Tl	205	2	165	37.419	37.419	ppb	1.637	272581	40	93.5	80	120	
Pb	208	2	165	36.637	36.637	ppb	0.914	366889	40	91.6	80	120	
Th	232	2	193	35.278	35.278	ppb	1.398	397280	40	88.2	80	120	
U	238	2	193	36.601	36.601	ppb	1.280	428202	40	91.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	272512	0.60	253490	107.50	60	120	
Sc (IS)	45	1	HMI H2	10359026	0.50	9587331	108.05	60	120	
Sc (IS)	45	2	HMI He	1020615	0.89	964862	105.78	60	120	
Sc (IS)	45	3	No Gas	18926330	0.70	17821643	106.20	60	120	
Ge Internal standard	72	1	HMI H2	5632726	0.64	5262568	107.03	60	120	
Ge Internal standard	72	2	HMI He	1241498	3.19	1150133	107.94	60	120	
In Internal standard	115	2	HMI He	3996061	0.69	3923278	101.86	60	120	
Ho-165	165	2	HMI He	15252625	0.20	14697450	103.78	60	120	
Ir (IS)	193	2	HMI He	11528202	1.10	10905184	105.71	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-1-A
Data File Name	206SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:19:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	15.856	ppb	15.856	13.78	1071714	50000	
Be	9	1	6	0.156	ppb	0.156	99.25	57	2000	
B	11	1	6	475.513	ppb	475.513	0.78	81107	2000	
Na	23	2	45	53948.672	ppb	53948.672	0.32	12153152	400000	
Mg	24	2	45	4659.874	ppb	4659.874	0.56	475711	400000	
Al	27	2	45	7.494	ppb	7.494	45.67	280	400000	
Si	28	2	45	633.480	ppb	633.480	0.62	136694	10000	
P	31	2	45	5.170	ppb	5.170	304.74	184	10000	
K	39	2	45	2485.227	ppb	2485.227	1.87	226832	400000	
Ca	40	1	45	34777.562	ppb	34777.562	0.31	58431147	400000	
Ti	47	2	45	0.488	ppb	0.488	173.21	13	4000	
V	51	2	72	-0.489	ppb	-0.489	-9.36	1060	2000	
Cr	52	2	72	0.114	ppb	0.114	36.68	2824	5000	
Mn	55	2	72	42.835	ppb	42.835	0.74	27811	10000	
Fe	56	1	72	13.248	ppb	13.248	29.43	76810	10000	
(Fe)	57	2	72	11.285	ppb	11.285	17.10	577	400000	
Co	59	2	72	0.220	ppb	0.220	1.21	550	2000	
Ni	60	2	72	0.658	ppb	0.658	24.65	1077	5000	
Cu	63	2	72	0.968	ppb	0.968	19.51	3441	5000	
Zn	66	2	72	1.331	ppb	1.331	8.72	973	5000	
As	75	2	72	4.447	ppb	4.447	3.66	1246	2000	
Se	78	1	72	0.084	ppb	0.084	17.34	19	2000	
Sr	88	2	72	479.238	ppb	479.238	2.68	355546	4000	
Zr	90	2	72	-6.653	ppb	-6.653	-232.59	680	1000	
Mo	95	2	115	2.451	ppb	2.451	6.82	2060	2000	
Ag	107	2	115	0.010	ppb	0.010	87.63	83	100	
Cd	111	2	115	0.015	ppb	0.015	179.04	17	2000	
Sn	120	2	115	1.238	ppb	1.238	6.65	2390	2000	
Sb	121	2	115	0.186	ppb	0.186	9.19	277	1000	
Ba	137	2	115	20.688	ppb	20.688	2.89	7472	5000	
W	182	2	165	0.042	ppb	0.042	172.23	1037	100	
Tl	205	2	165	0.058	ppb	0.058	23.73	650	2000	
Pb	208	2	165	0.023	ppb	0.023	105.36	3537	5000	
Th	232	2	193	0.441	ppb	0.441	10.76	15032	2000	
U	238	2	193	0.194	ppb	0.194	3.58	5298	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	269427	1.47	253490	106.29	60	120	
Sc (IS)	45	1	HMI H2	10360924	0.53	9587331	108.07	60	120	
Sc (IS)	45	2	HMI He	1027318	0.71	964862	106.47	60	120	
Sc (IS)	45	3	No Gas	19183552	1.46	17821643	107.64	60	120	
Ge Internal standard	72	1	HMI H2	5721587	0.62	5262568	108.72	60	120	
Ge Internal standard	72	2	HMI He	1244649	2.05	1150133	108.22	60	120	
In Internal standard	115	2	HMI He	4015109	0.31	3923278	102.34	60	120	
Ho-165	165	2	HMI He	15182793	0.85	14697450	103.30	60	120	
Ir (IS)	193	2	HMI He	11172270	0.74	10905184	102.45	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-1-Asd@5
Data File Name	207SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:23:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	2.327	ppb	2.327	71.61	979249	50000	
Be	9	1	6	0.131	ppb	0.131	17.52	53	2000	
B	11	1	6	111.038	ppb	111.038	4.44	21467	2000	
Na	23	2	45	11430.342	ppb	11430.342	2.72	2606763	400000	
Mg	24	2	45	950.142	ppb	950.142	3.49	98319	400000	
Al	27	2	45	5.117	ppb	5.117	59.70	210	400000	
Si	28	2	45	144.389	ppb	144.389	6.66	47397	10000	
P	31	2	45	-5.277	ppb	-5.277	-257.84	153	10000	
K	39	2	45	541.927	ppb	541.927	3.48	86176	400000	
Ca	40	1	45	7173.138	ppb	7173.138	0.96	12235143	400000	
Ti	47	2	45	0.239	ppb	0.239	86.60	7	4000	
V	51	2	72	-0.553	ppb	-0.553	-12.50	1067	2000	
Cr	52	2	72	-0.160	ppb	-0.160	-89.71	2620	5000	
Mn	55	2	72	8.827	ppb	8.827	5.21	6428	10000	
Fe	56	1	72	4.456	ppb	4.456	3.62	44627	10000	
(Fe)	57	2	72	3.740	ppb	3.740	104.36	400	400000	
Co	59	2	72	0.057	ppb	0.057	66.21	197	2000	
Ni	60	2	72	0.508	ppb	0.508	72.95	1057	5000	
Cu	63	2	72	0.591	ppb	0.591	19.27	3020	5000	
Zn	66	2	72	2.062	ppb	2.062	29.22	1303	5000	
As	75	2	72	0.799	ppb	0.799	9.87	342	2000	
Se	78	1	72	0.014	ppb	0.014	486.81	8	2000	
Sr	88	2	72	90.930	ppb	90.930	2.17	72927	4000	
Zr	90	2	72	1.040	ppb	1.040	4091.14	760	1000	
Mo	95	2	115	0.515	ppb	0.515	28.88	467	2000	
Ag	107	2	115	0.013	ppb	0.013	78.75	90	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	0.222	ppb	0.222	21.18	1220	2000	
Sb	121	2	115	0.020	ppb	0.020	161.06	70	1000	
Ba	137	2	115	4.207	ppb	4.207	11.23	1610	5000	
W	182	2	165	0.012	ppb	0.012	342.53	930	100	
Tl	205	2	165	0.023	ppb	0.023	49.24	393	2000	
Pb	208	2	165	0.259	ppb	0.259	10.67	5861	5000	
Th	232	2	193	-0.006	ppb	-0.006	-588.66	10378	2000	
U	238	2	193	0.051	ppb	0.051	67.23	3724	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	279891	1.85	253490	110.41	60	120	
Sc (IS)	45	1	HMI H2	10468854	0.76	9587331	109.19	60	120	
Sc (IS)	45	2	HMI He	1031266	1.42	964862	106.88	60	120	
Sc (IS)	45	3	No Gas	19362170	0.81	17821643	108.64	60	120	
Ge Internal standard	72	1	HMI H2	5801278	0.45	5262568	110.24	60	120	
Ge Internal standard	72	2	HMI He	1340279	2.18	1150133	116.53	60	120	
In Internal standard	115	2	HMI He	4068933	1.49	3923278	103.71	60	120	
Ho-165	165	2	HMI He	15165689	0.61	14697450	103.19	60	120	
Ir (IS)	193	2	HMI He	11283686	0.79	10905184	103.47	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-1-E MS
Data File Name	208SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:26:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	53.194	ppb	53.194	1.77	1349121	50000	
Be	9	1	6	38.756	ppb	38.756	3.57	9136	2000	
B	11	1	6	476.060	ppb	476.060	0.28	83203	2000	
Na	23	2	45	53914.622	ppb	53914.622	0.60	12371760	400000	
Mg	24	2	45	5309.267	ppb	5309.267	1.13	551917	400000	
Al	27	2	45	730.564	ppb	730.564	3.75	22239	400000	
Si	28	2	45	668.623	ppb	668.623	1.51	145783	10000	
P	31	2	45	6.931	ppb	6.931	52.15	193	10000	
K	39	2	45	3203.355	ppb	3203.355	1.91	284103	400000	
Ca	40	1	45	35296.490	ppb	35296.490	1.02	59916106	400000	
Ti	47	2	45	40.436	ppb	40.436	5.39	1133	4000	
V	51	2	72	35.822	ppb	35.822	5.23	42147	2000	
Cr	52	2	72	37.341	ppb	37.341	3.93	57941	5000	
Mn	55	2	72	77.878	ppb	77.878	2.21	52400	10000	
Fe	56	1	72	780.268	ppb	780.268	0.70	2990892	10000	
(Fe)	57	2	72	725.460	ppb	725.460	0.46	21027	400000	
Co	59	2	72	35.644	ppb	35.644	1.61	83747	2000	
Ni	60	2	72	35.538	ppb	35.538	0.70	23748	5000	
Cu	63	2	72	36.397	ppb	36.397	3.68	65804	5000	
Zn	66	2	72	36.061	ppb	36.061	3.58	12669	5000	
As	75	2	72	39.626	ppb	39.626	1.62	10630	2000	
Se	78	1	72	39.566	ppb	39.566	3.66	6212	2000	
Sr	88	2	72	528.490	ppb	528.490	2.66	408372	4000	
Zr	90	2	72	35.430	ppb	35.430	75.33	867	1000	
Mo	95	2	115	41.308	ppb	41.308	0.79	34438	2000	
Ag	107	2	115	37.966	ppb	37.966	1.06	105196	100	
Cd	111	2	115	37.701	ppb	37.701	5.53	16262	2000	
Sn	120	2	115	38.464	ppb	38.464	2.56	46225	2000	
Sb	121	2	115	37.486	ppb	37.486	1.75	47098	1000	
Ba	137	2	115	58.504	ppb	58.504	1.33	21135	5000	
W	182	2	165	0.070	ppb	0.070	47.12	1133	100	
Tl	205	2	165	36.987	ppb	36.987	1.42	268789	2000	
Pb	208	2	165	36.999	ppb	36.999	1.37	369566	5000	
Th	232	2	193	36.582	ppb	36.582	1.73	398494	2000	
U	238	2	193	38.247	ppb	38.247	0.58	433057	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	276095	0.79	253490	108.92	60	120	
Sc (IS)	45	1	HMI H2	10469332	1.57	9587331	109.20	60	120	
Sc (IS)	45	2	HMI He	1046439	1.01	964862	108.45	60	120	
Sc (IS)	45	3	No Gas	19152081	1.27	17821643	107.47	60	120	
Ge Internal standard	72	1	HMI H2	5835246	0.14	5262568	110.88	60	120	
Ge Internal standard	72	2	HMI He	1296604	3.02	1150133	112.74	60	120	
In Internal standard	115	2	HMI He	4046147	0.44	3923278	103.13	60	120	
Ho-165	165	2	HMI He	15215902	1.13	14697450	103.53	60	120	
Ir (IS)	193	2	HMI He	11159965	0.71	10905184	102.34	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-1-F MSD
Data File Name	209SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:30:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	51.605	ppb	51.605	2.70	1342709	50000	
Be	9	1	6	37.037	ppb	37.037	7.04	8893	2000	
B	11	1	6	479.217	ppb	479.217	1.47	85263	2000	
Na	23	2	45	53644.442	ppb	53644.442	0.81	12331064	400000	
Mg	24	2	45	5264.781	ppb	5264.781	0.21	548280	400000	
Al	27	2	45	760.775	ppb	760.775	1.50	23200	400000	
Si	28	2	45	664.955	ppb	664.955	0.86	145362	10000	
P	31	2	45	2.950	ppb	2.950	428.82	181	10000	
K	39	2	45	3178.988	ppb	3178.988	1.33	282819	400000	
Ca	40	1	45	34576.451	ppb	34576.451	1.08	60045197	400000	
Ti	47	2	45	40.592	ppb	40.592	3.62	1140	4000	
V	51	2	72	35.855	ppb	35.855	2.51	42147	2000	
Cr	52	2	72	37.198	ppb	37.198	4.41	57647	5000	
Mn	55	2	72	78.334	ppb	78.334	2.68	52630	10000	
Fe	56	1	72	782.221	ppb	782.221	1.27	3005700	10000	
(Fe)	57	2	72	719.129	ppb	719.129	1.39	20814	400000	
Co	59	2	72	35.631	ppb	35.631	1.62	83613	2000	
Ni	60	2	72	35.450	ppb	35.450	1.88	23658	5000	
Cu	63	2	72	36.295	ppb	36.295	3.09	65546	5000	
Zn	66	2	72	38.061	ppb	38.061	5.45	13319	5000	
As	75	2	72	39.693	ppb	39.693	3.10	10631	2000	
Se	78	1	72	38.175	ppb	38.175	2.03	6009	2000	
Sr	88	2	72	529.300	ppb	529.300	2.72	408454	4000	
Zr	90	2	72	-2.543	ppb	-2.543	-453.18	723	1000	
Mo	95	2	115	40.190	ppb	40.190	0.92	33602	2000	
Ag	107	2	115	38.628	ppb	38.628	2.35	107320	100	
Cd	111	2	115	36.866	ppb	36.866	4.16	15942	2000	
Sn	120	2	115	38.378	ppb	38.378	2.35	46252	2000	
Sb	121	2	115	38.081	ppb	38.081	1.10	47983	1000	
Ba	137	2	115	57.385	ppb	57.385	3.29	20788	5000	
W	182	2	165	0.058	ppb	0.058	46.07	1097	100	
Tl	205	2	165	37.145	ppb	37.145	1.02	270657	2000	
Pb	208	2	165	36.702	ppb	36.702	0.88	367609	5000	
Th	232	2	193	37.374	ppb	37.374	1.84	410749	2000	
U	238	2	193	38.200	ppb	38.200	1.52	436684	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	281135	0.80	253490	110.91	60	120	
Sc (IS)	45	1	HMI H2	10709279	0.46	9587331	111.70	60	120	
Sc (IS)	45	2	HMI He	1048283	0.40	964862	108.65	60	120	
Sc (IS)	45	3	No Gas	19230258	0.53	17821643	107.90	60	120	
Ge Internal standard	72	1	HMI H2	5850059	0.91	5262568	111.16	60	120	
Ge Internal standard	72	2	HMI He	1294864	2.63	1150133	112.58	60	120	
In Internal standard	115	2	HMI He	4058005	1.33	3923278	103.43	60	120	
Ho-165	165	2	HMI He	15256004	0.64	14697450	103.80	60	120	
Ir (IS)	193	2	HMI He	11267766	0.83	10905184	103.32	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-1-A pds
Data File Name	210SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:33:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	107.861	ppb	107.861	1.64	1794159	50000	
Be	9	1	6	94.985	ppb	94.985	3.43	22896	2000	
B	11	1	6	500.007	ppb	500.007	1.24	89377	2000	
Na	23	2	45	57090.919	ppb	57090.919	3.92	13443443	400000	
Mg	24	2	45	6389.770	ppb	6389.770	3.78	681499	400000	
Al	27	2	45	1846.698	ppb	1846.698	4.13	57608	400000	
Si	28	2	45	706.308	ppb	706.308	3.78	156863	10000	
P	31	2	45	1903.752	ppb	1903.752	3.06	6142	10000	
K	39	2	45	4300.403	ppb	4300.403	3.58	374900	400000	
Ca	40	1	45	36172.024	ppb	36172.024	0.98	63049757	400000	
Ti	47	2	45	98.803	ppb	98.803	3.99	2847	4000	
V	51	2	72	88.419	ppb	88.419	1.39	106014	2000	
Cr	52	2	72	88.525	ppb	88.525	1.90	139301	5000	
Mn	55	2	72	126.858	ppb	126.858	1.47	88792	10000	
Fe	56	1	72	999.490	ppb	999.490	1.21	3847709	10000	
(Fe)	57	2	72	880.055	ppb	880.055	2.38	26522	400000	
Co	59	2	72	86.321	ppb	86.321	1.33	211357	2000	
Ni	60	2	72	85.914	ppb	85.914	1.54	58825	5000	
Cu	63	2	72	87.357	ppb	87.357	2.06	161987	5000	
Zn	66	2	72	178.374	ppb	178.374	1.91	63024	5000	
As	75	2	72	92.862	ppb	92.862	2.56	25802	2000	
Se	78	1	72	95.615	ppb	95.615	2.33	15102	2000	
Sr	88	2	72	529.529	ppb	529.529	1.91	426661	4000	
Zr	90	2	72	22.700	ppb	22.700	170.87	853	1000	
Mo	95	2	115	102.045	ppb	102.045	1.93	84930	2000	
Ag	107	2	115	25.180	ppb	25.180	0.21	69715	100	
Cd	111	2	115	94.938	ppb	94.938	0.26	40890	2000	
Sn	120	2	115	96.684	ppb	96.684	1.59	114630	2000	
Sb	121	2	115	93.041	ppb	93.041	0.92	116715	1000	
Ba	137	2	115	116.560	ppb	116.560	3.18	41977	5000	
W	182	2	165	112.985	ppb	112.985	1.01	395173	100	
Tl	205	2	165	92.978	ppb	92.978	1.15	677044	2000	
Pb	208	2	165	91.348	ppb	91.348	1.62	909941	5000	
Th	232	2	193	100.927	ppb	100.927	1.35	1081423	2000	
U	238	2	193	218.857	ppb	218.857	0.19	2464020	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	282748	0.63	253490	111.54	60	120	
Sc (IS)	45	1	HMI H2	10749618	0.32	9587331	112.12	60	120	
Sc (IS)	45	2	HMI He	1075267	4.61	964862	111.44	60	120	
Sc (IS)	45	3	No Gas	19543319	0.32	17821643	109.66	60	120	
Ge Internal standard	72	1	HMI H2	5872830	1.15	5262568	111.60	60	120	
Ge Internal standard	72	2	HMI He	1351802	2.53	1150133	117.53	60	120	
In Internal standard	115	2	HMI He	4042006	0.98	3923278	103.03	60	120	
Ho-165	165	2	HMI He	15254351	0.42	14697450	103.79	60	120	
Ir (IS)	193	2	HMI He	11162845	0.45	10905184	102.36	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-2-A
Data File Name	211SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:37:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	12.143	ppb	12.143	9.86	1060992	50000	
Be	9	1	6	0.172	ppb	0.172	36.95	63	2000	
B	11	1	6	527.289	ppb	527.289	2.58	93464	2000	
Na	23	2	45	87920.059	ppb	87920.059	1.25	20360144	400000	
Mg	24	2	45	3045.788	ppb	3045.788	0.58	320372	400000	
Al	27	2	45	24.270	ppb	24.270	29.30	803	400000	
Si	28	2	45	506.361	ppb	506.361	1.34	116727	10000	
P	31	2	45	3.946	ppb	3.946	32.19	185	10000	
K	39	2	45	2499.579	ppb	2499.579	0.37	234478	400000	
Ca	40	1	45	19440.229	ppb	19440.229	1.27	33852110	400000	
Ti	47	2	45	0.353	ppb	0.353	0.89	10	4000	
V	51	2	72	0.080	ppb	0.080	149.87	1807	2000	
Cr	52	2	72	1.144	ppb	1.144	18.28	4611	5000	
Mn	55	2	72	4.344	ppb	4.344	9.69	3334	10000	
Fe	56	1	72	70.708	ppb	70.708	0.68	301347	10000	
(Fe)	57	2	72	64.686	ppb	64.686	5.37	2204	400000	
Co	59	2	72	0.167	ppb	0.167	22.53	463	2000	
Ni	60	2	72	1.659	ppb	1.659	7.94	1834	5000	
Cu	63	2	72	3.491	ppb	3.491	5.97	8282	5000	
Zn	66	2	72	19.228	ppb	19.228	7.20	7259	5000	
As	75	2	72	1.313	ppb	1.313	11.60	483	2000	
Se	78	1	72	0.172	ppb	0.172	30.97	33	2000	
Sr	88	2	72	337.645	ppb	337.645	2.31	269927	4000	
Zr	90	2	72	-27.322	ppb	-27.322	-114.37	650	1000	
Mo	95	2	115	2.986	ppb	2.986	19.84	2524	2000	
Ag	107	2	115	-0.001	ppb	-0.001	-321.42	53	100	
Cd	111	2	115	0.022	ppb	0.022	103.58	20	2000	
Sn	120	2	115	0.197	ppb	0.197	104.10	1183	2000	
Sb	121	2	115	0.410	ppb	0.410	7.86	560	1000	
Ba	137	2	115	19.023	ppb	19.023	3.18	6932	5000	
W	182	2	165	2.034	ppb	2.034	2.44	7982	100	
Tl	205	2	165	0.107	ppb	0.107	18.32	1003	2000	
Pb	208	2	165	0.529	ppb	0.529	6.16	8561	5000	
Th	232	2	193	0.576	ppb	0.576	6.52	16593	2000	
U	238	2	193	0.210	ppb	0.210	6.90	5521	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	280759	0.09	253490	110.76	60	120	
Sc (IS)	45	1	HMI H2	10728625	0.90	9587331	111.90	60	120	
Sc (IS)	45	2	HMI He	1057068	0.89	964862	109.56	60	120	
Sc (IS)	45	3	No Gas	19501408	0.95	17821643	109.43	60	120	
Ge Internal standard	72	1	HMI H2	5931523	0.94	5262568	112.71	60	120	
Ge Internal standard	72	2	HMI He	1340892	3.38	1150133	116.59	60	120	
In Internal standard	115	2	HMI He	4047167	0.62	3923278	103.16	60	120	
Ho-165	165	2	HMI He	15236332	0.36	14697450	103.67	60	120	
Ir (IS)	193	2	HMI He	11263394	1.47	10905184	103.28	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-3-A
Data File Name	212SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:40:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	24.750	ppb	24.750	14.71	818109	50000	
Be	9	1	6	0.142	ppb	0.142	4.10	50	2000	
B	11	1	6	639.837	ppb	639.837	5.13	100712	2000	
Na	23	2	45	90760.657	ppb	90760.657	4.73	15492028	400000	
Mg	24	2	45	6349.821	ppb	6349.821	4.31	491356	400000	
Al	27	2	45	1052.401	ppb	1052.401	6.51	23843	400000	
Si	28	2	45	982.028	ppb	982.028	5.06	152044	10000	
P	31	2	45	105.170	ppb	105.170	11.47	367	10000	
K	39	2	45	4181.697	ppb	4181.697	5.76	265374	400000	
Ca	40	1	45	42988.056	ppb	42988.056	4.21	65640094	400000	
Ti	47	2	45	31.341	ppb	31.341	11.20	653	4000	
V	51	2	72	4.747	ppb	4.747	7.69	5024	2000	
Cr	52	2	72	4.987	ppb	4.987	16.73	7245	5000	
Mn	55	2	72	71.986	ppb	71.986	6.93	34647	10000	
Fe	56	1	72	1203.513	ppb	1203.513	4.83	4093271	10000	
(Fe)	57	2	72	1466.427	ppb	1466.427	3.91	30191	400000	
Co	59	2	72	0.855	ppb	0.855	14.23	1477	2000	
Ni	60	2	72	2.538	ppb	2.538	11.71	1673	5000	
Cu	63	2	72	2.337	ppb	2.337	9.64	4281	5000	
Zn	66	2	72	4.472	ppb	4.472	3.84	1480	5000	
As	75	2	72	4.250	ppb	4.250	2.69	892	2000	
Se	78	1	72	0.049	ppb	0.049	102.58	12	2000	
Sr	88	2	72	738.420	ppb	738.420	3.71	408142	4000	
Zr	90	2	72	239.783	ppb	239.783	2.68	1167	1000	
Mo	95	2	115	0.925	ppb	0.925	28.88	607	2000	
Ag	107	2	115	-0.001	ppb	-0.001	-581.85	40	100	
Cd	111	2	115	0.027	ppb	0.027	171.28	17	2000	
Sn	120	2	115	0.128	ppb	0.128	78.20	833	2000	
Sb	121	2	115	0.152	ppb	0.152	95.22	177	1000	
Ba	137	2	115	30.797	ppb	30.797	7.69	8409	5000	
W	182	2	165	0.526	ppb	0.526	6.19	2050	100	
Tl	205	2	165	0.039	ppb	0.039	26.69	383	2000	
Pb	208	2	165	1.100	ppb	1.100	6.86	10692	5000	
Th	232	2	193	0.439	ppb	0.439	10.13	11262	2000	
U	238	2	193	0.406	ppb	0.406	5.58	5768	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	250627	2.50	253490	98.87	60	120	
Sc (IS)	45	1	HMI H2	9424722	2.40	9587331	98.30	60	120	
Sc (IS)	45	2	HMI He	779911	3.07	964862	80.83	60	120	
Sc (IS)	45	3	No Gas	13788840	1.21	17821643	77.37	60	120	
Ge Internal standard	72	1	HMI H2	5199098	2.69	5262568	98.79	60	120	
Ge Internal standard	72	2	HMI He	927863	2.76	1150133	80.67	60	120	
In Internal standard	115	2	HMI He	3050736	2.57	3923278	77.76	60	120	
Ho-165	165	2	HMI He	11458521	3.00	14697450	77.96	60	120	
Ir (IS)	193	2	HMI He	8386401	2.74	10905184	76.90	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-4-A
Data File Name	213SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:44:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	32.768	ppb	32.768	3.18	934836	50000	
Be	9	1	6	0.116	ppb	0.116	25.17	37	2000	
B	11	1	6	884.709	ppb	884.709	1.19	114257	2000	
Na	23	2	45	133576.382	ppb	133576.382	1.47	23343875	400000	
Mg	24	2	45	10146.712	ppb	10146.712	1.14	803615	400000	
Al	27	2	45	7.724	ppb	7.724	23.93	223	400000	
Si	28	2	45	900.567	ppb	900.567	2.74	144132	10000	
P	31	2	45	20.941	ppb	20.941	38.96	179	10000	
K	39	2	45	5072.093	ppb	5072.093	2.54	321993	400000	
Ca	40	1	45	69384.608	ppb	69384.608	1.95	84903929	400000	
Ti	47	2	45	0.158	ppb	0.158	173.21	3	4000	
V	51	2	72	0.228	ppb	0.228	41.91	1400	2000	
Cr	52	2	72	0.824	ppb	0.824	38.12	2914	5000	
Mn	55	2	72	0.789	ppb	0.789	8.90	617	10000	
Fe	56	1	72	11.207	ppb	11.207	4.97	50511	10000	
(Fe)	57	2	72	15.174	ppb	15.174	17.64	520	400000	
Co	59	2	72	0.042	ppb	0.042	76.62	113	2000	
Ni	60	2	72	1.726	ppb	1.726	13.25	1327	5000	
Cu	63	2	72	1.797	ppb	1.797	1.98	3681	5000	
Zn	66	2	72	3.993	ppb	3.993	13.48	1393	5000	
As	75	2	72	0.902	ppb	0.902	2.35	261	2000	
Se	78	1	72	0.057	ppb	0.057	189.16	11	2000	
Sr	88	2	72	1104.397	ppb	1104.397	1.04	623364	4000	
Zr	90	2	72	1.593	ppb	1.593	478.12	540	1000	
Mo	95	2	115	5.184	ppb	5.184	9.24	3331	2000	
Ag	107	2	115	0.013	ppb	0.013	124.72	70	100	
Cd	111	2	115	0.007	ppb	0.007	780.40	10	2000	
Sn	120	2	115	1.356	ppb	1.356	17.82	1950	2000	
Sb	121	2	115	0.103	ppb	0.103	66.88	133	1000	
Ba	137	2	115	36.077	ppb	36.077	3.17	9997	5000	
W	182	2	165	0.344	ppb	0.344	11.44	1610	100	
Tl	205	2	165	0.018	ppb	0.018	70.09	277	2000	
Pb	208	2	165	-0.065	ppb	-0.065	-32.04	2060	5000	
Th	232	2	193	0.029	ppb	0.029	11.76	8139	2000	
U	238	2	193	1.343	ppb	1.343	7.19	13921	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	206682	2.23	253490	81.53	60	120	
Sc (IS)	45	1	HMI H2	7551016	0.41	9587331	78.76	60	120	
Sc (IS)	45	2	HMI He	798184	1.42	964862	82.73	60	120	
Sc (IS)	45	3	No Gas	14965992	0.90	17821643	83.98	60	120	
Ge Internal standard	72	1	HMI H2	4179596	0.45	5262568	79.42	60	120	
Ge Internal standard	72	2	HMI He	947137	1.25	1150133	82.35	60	120	
In Internal standard	115	2	HMI He	3096502	1.25	3923278	78.93	60	120	
Ho-165	165	2	HMI He	11735530	1.16	14697450	79.85	60	120	
Ir (IS)	193	2	HMI He	8537860	1.10	10905184	78.29	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	214_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:47:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	69.889	ppb	1.687	12455	50	139.8	90	110	>+\-10%
Na	23	2	45	84763.321	ppb	0.952	13704882	51000	166.2	90	110	>+\-10%
Mg	24	2	45	18006.695	ppb	0.625	1318117	11000	163.7	90	110	>+\-10%
Al	27	2	45	1501.439	ppb	2.819	32191	1000	150.1	90	110	>+\-10%
K	39	2	45	16539.563	ppb	0.354	895418	11000	150.4	90	110	>+\-10%
Ca	40	1	45	16962.590	ppb	0.833	21110939	11000	154.2	90	110	>+\-10%
Ti	47	2	45	79.554	ppb	19.927	1573	50	159.1	90	110	>+\-10%
V	51	2	72	79.407	ppb	3.322	60942	50	158.8	90	110	>+\-10%
Cr	52	2	72	80.616	ppb	1.298	81221	50	161.2	90	110	>+\-10%
Mn	55	2	72	77.278	ppb	0.683	34644	50	154.6	90	110	>+\-10%
Fe	56	1	72	1551.302	ppb	1.605	4206164	1000	155.1	90	110	>+\-10%
Co	59	2	72	77.129	ppb	0.865	120667	50	154.3	90	110	>+\-10%
Ni	60	2	72	77.505	ppb	3.024	33952	50	155.0	90	110	>+\-10%
Cu	63	2	72	76.581	ppb	1.282	90888	50	153.2	90	110	>+\-10%
Zn	66	2	72	77.239	ppb	1.476	17653	50	154.5	90	110	>+\-10%
As	75	2	72	75.628	ppb	0.885	13445	50	151.3	90	110	>+\-10%
Se	78	1	72	74.155	ppb	2.087	8270	50	148.3	90	110	>+\-10%
Sr	88	2	72	146.591	ppb	1.389	75636	100	146.6	90	110	>+\-10%
Zr	90	2	72	82.222	ppb	44.530	693	50	164.4	90	110	>+\-10%
Mo	95	2	115	76.984	ppb	1.078	45662	50	154.0	90	110	>+\-10%
Ag	107	2	115	75.912	ppb	1.683	149676	50	151.8	90	110	>+\-10%
Cd	111	2	115	75.985	ppb	2.053	23318	50	152.0	90	110	>+\-10%
Sn	120	2	115	75.331	ppb	2.878	63785	50	150.7	90	110	>+\-10%
Sb	121	2	115	75.579	ppb	2.938	67541	50	151.2	90	110	>+\-10%
Ba	137	2	115	75.705	ppb	1.438	19449	50	151.4	90	110	>+\-10%
W	182	2	165	76.989	ppb	1.497	191330	50	154.0	90	110	>+\-10%
Tl	205	2	165	74.087	ppb	2.212	382922	50	148.2	90	110	>+\-10%
Pb	208	2	165	73.126	ppb	1.225	517468	50	146.3	90	110	>+\-10%
Th	232	2	193	75.005	ppb	1.248	579745	50	150.0	90	110	>+\-10%
U	238	2	193	74.693	ppb	1.405	606088	50	149.4	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	208996	0.82	253490	82.45	60	120	
Sc (IS)	45	1	HMI H2	7665151	0.82	9587331	79.95	60	120	
Sc (IS)	45	2	HMI He	738016	0.98	964862	76.49	60	120	
Sc (IS)	45	3	No Gas	14174480	0.65	17821643	79.54	60	120	
Ge Internal standard	72	1	HMI H2	4146928	0.35	5262568	78.80	60	120	
Ge Internal standard	72	2	HMI He	863560	0.55	1150133	75.08	60	120	
In Internal standard	115	2	HMI He	2880423	1.93	3923278	73.42	60	120	
Ho-165	165	2	HMI He	10827000	0.80	14697450	73.67	60	120	
Ir (IS)	193	2	HMI He	8026195	0.67	10905184	73.60	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	215_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:51:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-4.851	ppb	-17.5	687560	10	
Be	9	1	6	0.065	ppb	138.3	30	0.5	
B	11	1	6	47.181	ppb	7.6	8332	0.5	>RL
Na	23	2	45	152.131	ppb	6.1	47166	25	>RL
Mg	24	2	45	8.606	ppb	3.0	1577	25	
Al	27	2	45	7.165	ppb	28.4	203	15	
K	39	2	45	257.538	ppb	3.6	49028	50	>RL
Ti	47	2	45	0.485	ppb	100.0	10	0.5	
V	51	2	72	-0.040	ppb	-364.4	1143	1	
Cr	52	2	72	0.714	ppb	53.3	2714	1	
Mn	55	2	72	0.147	ppb	117.4	293	0.5	
(Fe)	57	2	72	14.766	ppb	19.3	497	25	
Co	59	2	72	0.072	ppb	43.8	160	0.5	
Ni	60	2	72	2.169	ppb	7.9	1490	1	>RL
Cu	63	2	72	1.108	ppb	7.5	2714	1	>RL
Zn	66	2	72	0.568	ppb	162.5	537	5	
As	75	2	72	-0.047	ppb	-164.9	75	1	
Se	78	1	72	0.155	ppb	54.3	23	1	
Sr	88	2	72	0.314	ppb	10.1	403	0.5	
Zr	90	2	72	1.295	ppb	1344.8	523	1	>RL
Mo	95	2	115	0.192	ppb	19.8	147	0.5	
Ag	107	2	115	0.025	ppb	50.5	93	1	
Cd	111	2	115	0.048	ppb	97.5	23	0.5	
Sn	120	2	115	0.434	ppb	52.9	1103	1	
Sb	121	2	115	0.281	ppb	8.7	300	0.6	
Ba	137	2	115	0.005	ppb	3781.9	67	0.5	
W	182	2	165	0.449	ppb	14.2	1857	1	
Tl	205	2	165	0.084	ppb	7.9	633	0.1	
Pb	208	2	165	-0.027	ppb	-57.6	2304	0.5	
Th	232	2	193	0.609	ppb	8.2	13087	1	
U	238	2	193	0.065	ppb	16.6	2994	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	223147	0.99	253490	88.03	60	120	
Sc (IS)	45	1	HMI H2	7910139	1.79	9587331	82.51	60	120	
Sc (IS)	45	2	HMI He	772155	0.64	964862	80.03	60	120	
Sc (IS)	45	3	No Gas	14394185	1.45	17821643	80.77	60	120	
Ge Internal standard	72	1	HMI H2	4363412	0.98	5262568	82.91	60	120	
Ge Internal standard	72	2	HMI He	919093	0.70	1150133	79.91	60	120	
In Internal standard	115	2	HMI He	3052224	1.12	3923278	77.80	60	120	
Ho-165	165	2	HMI He	11514536	0.23	14697450	78.34	60	120	
Ir (IS)	193	2	HMI He	8699126	0.65	10905184	79.77	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-5-A
Data File Name	216SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:55:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	9.148	ppb	9.148	9.85	701897	50000	
Be	9	1	6	0.107	ppb	0.107	63.97	33	2000	
B	11	1	6	82.844	ppb	82.844	2.00	11641	2000	
Na	23	2	45	23713.610	ppb	23713.610	0.82	3558625	400000	
Mg	24	2	45	14024.743	ppb	14024.743	0.37	949340	400000	
Al	27	2	45	44.716	ppb	44.716	20.55	923	400000	
Si	28	2	45	2905.510	ppb	2905.510	0.46	366823	10000	
P	31	2	45	35.936	ppb	35.936	31.92	183	10000	
K	39	2	45	3142.559	ppb	3142.559	1.47	182334	400000	
Ca	40	1	45	231378.076	ppb	231378.076	1.04	266129149	400000	
Ti	47	2	45	1.828	ppb	1.828	96.87	33	4000	
V	51	2	72	9.143	ppb	9.143	6.38	7605	2000	
Cr	52	2	72	153.672	ppb	153.672	1.17	145684	5000	
Mn	55	2	72	3.987	ppb	3.987	5.30	1890	10000	
Fe	56	1	72	108.757	ppb	108.757	2.08	296168	10000	
(Fe)	57	2	72	123.081	ppb	123.081	6.09	2407	400000	
Co	59	2	72	0.204	ppb	0.204	20.95	340	2000	
Ni	60	2	72	2.440	ppb	2.440	21.02	1443	5000	
Cu	63	2	72	1.546	ppb	1.546	8.49	2914	5000	
Zn	66	2	72	2.336	ppb	2.336	23.80	857	5000	
As	75	2	72	2.007	ppb	2.007	7.87	412	2000	
Se	78	1	72	0.468	ppb	0.468	48.54	53	2000	
Sr	88	2	72	834.291	ppb	834.291	0.47	408485	4000	
Zr	90	2	72	31.548	ppb	31.548	227.37	540	1000	
Mo	95	2	115	59.616	ppb	59.616	0.70	33339	2000	
Ag	107	2	115	-0.004	ppb	-0.004	-147.26	30	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	0.196	ppb	0.196	20.05	793	2000	
Sb	121	2	115	0.546	ppb	0.546	22.05	490	1000	
Ba	137	2	115	24.316	ppb	24.316	1.87	5928	5000	
W	182	2	165	0.530	ppb	0.530	9.38	1834	100	
Tl	205	2	165	0.018	ppb	0.018	68.99	240	2000	
Pb	208	2	165	-0.015	ppb	-0.015	-191.41	2120	5000	
Th	232	2	193	0.086	ppb	0.086	85.71	7619	2000	
U	238	2	193	1.963	ppb	1.963	0.68	17057	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	196295	0.52	253490	77.44	60	120	
Sc (IS)	45	1	HMI H2	7100095	0.73	9587331	74.06	60	120	
Sc (IS)	45	2	HMI He	682336	0.57	964862	70.72	60	120	
Sc (IS)	45	3	No Gas	13183726	0.99	17821643	73.98	60	120	
Ge Internal standard	72	1	HMI H2	3920085	1.64	5262568	74.49	60	120	
Ge Internal standard	72	2	HMI He	821433	0.58	1150133	71.42	60	120	
In Internal standard	115	2	HMI He	2714961	0.38	3923278	69.20	60	120	
Ho-165	165	2	HMI He	10200005	0.29	14697450	69.40	60	120	
Ir (IS)	193	2	HMI He	7560832	0.29	10905184	69.33	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-6-A
Data File Name	217SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T22:58:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	26.190	ppb	26.190	6.08	1093546	50000	
Be	9	1	6	0.148	ppb	0.148	40.31	40	2000	
B	11	1	6	109.913	ppb	109.913	3.04	14824	2000	
Na	23	2	45	87924.827	ppb	87924.827	19.99	16162057	400000	
Mg	24	2	45	16223.011	ppb	16223.011	19.39	1351053	400000	
Al	27	2	45	153.920	ppb	153.920	26.75	3809	400000	
Si	28	2	45	1173.980	ppb	1173.980	20.64	192632	10000	
P	31	2	45	35.376	ppb	35.376	39.46	227	10000	
K	39	2	45	7000.524	ppb	7000.524	21.47	452947	400000	
Ca	40	1	45	171321.873	ppb	171321.873	1.09	203805630	400000	
Ti	47	2	45	2.694	ppb	2.694	81.21	57	4000	
V	51	2	72	4.018	ppb	4.018	27.08	4784	2000	
Cr	52	2	72	0.825	ppb	0.825	21.57	3124	5000	
Mn	55	2	72	15.503	ppb	15.503	18.43	8256	10000	
Fe	56	1	72	139.038	ppb	139.038	1.44	387619	10000	
(Fe)	57	2	72	136.022	ppb	136.022	26.10	3200	400000	
Co	59	2	72	0.322	ppb	0.322	32.45	620	2000	
Ni	60	2	72	2.266	ppb	2.266	12.68	1694	5000	
Cu	63	2	72	1.278	ppb	1.278	38.53	3190	5000	
Zn	66	2	72	2.530	ppb	2.530	36.00	1090	5000	
As	75	2	72	0.652	ppb	0.652	20.63	227	2000	
Se	78	1	72	0.280	ppb	0.280	55.28	35	2000	
Sr	88	2	72	948.549	ppb	948.549	19.97	564923	4000	
Zr	90	2	72	46.464	ppb	46.464	83.27	723	1000	
Mo	95	2	115	1.287	ppb	1.287	19.56	897	2000	
Ag	107	2	115	0.006	ppb	0.006	111.42	57	100	
Cd	111	2	115	0.015	ppb	0.015	236.30	13	2000	
Sn	120	2	115	-0.059	ppb	-0.059	-291.03	717	2000	
Sb	121	2	115	0.150	ppb	0.150	40.40	187	1000	
Ba	137	2	115	128.366	ppb	128.366	17.99	37563	5000	
W	182	2	165	0.104	ppb	0.104	50.26	1020	100	
Tl	205	2	165	0.013	ppb	0.013	115.23	260	2000	
Pb	208	2	165	-0.044	ppb	-0.044	-56.61	2370	5000	
Th	232	2	193	0.007	ppb	0.007	437.75	8590	2000	
U	238	2	193	0.735	ppb	0.735	18.24	9290	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	195139	0.42	253490	76.98	60	120	
Sc (IS)	45	1	HMI H2	7343667	1.03	9587331	76.60	60	120	
Sc (IS)	45	2	HMI He	857352	16.05	964862	88.86	60	120	
Sc (IS)	45	3	No Gas	18259141	1.26	17821643	102.45	60	120	
Ge Internal standard	72	1	HMI H2	4069187	1.81	5262568	77.32	60	120	
Ge Internal standard	72	2	HMI He	1020994	16.02	1150133	88.77	60	120	
In Internal standard	115	2	HMI He	3346442	15.62	3923278	85.30	60	120	
Ho-165	165	2	HMI He	12591352	15.41	14697450	85.67	60	120	
Ir (IS)	193	2	HMI He	9233759	14.93	10905184	84.67	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-7-A
Data File Name	218SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:02:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	40.202	ppb	40.202	7.51	1177561	50000	
Be	9	1	6	0.024	ppb	0.024	520.65	27	2000	
B	11	1	6	583.544	ppb	583.544	1.60	98579	2000	
Na	23	2	45	65341.601	ppb	65341.601	0.28	13921889	400000	
Mg	24	2	45	18092.942	ppb	18092.942	0.90	1744410	400000	
Al	27	2	45	24.921	ppb	24.921	2.71	757	400000	
Si	28	2	45	755.679	ppb	755.679	1.11	150489	10000	
P	31	2	45	-0.437	ppb	-0.437	-626.86	158	10000	
K	39	2	45	4635.326	ppb	4635.326	0.79	362234	400000	
Ca	40	1	45	130379.936	ppb	130379.936	0.65	215663603	400000	
Ti	47	2	45	0.257	ppb	0.257	173.21	7	4000	
V	51	2	72	-0.105	ppb	-0.105	-116.57	1373	2000	
Cr	52	2	72	2.066	ppb	2.066	0.77	5198	5000	
Mn	55	2	72	1.261	ppb	1.261	19.97	1033	10000	
Fe	56	1	72	14.774	ppb	14.774	3.23	80096	10000	
(Fe)	57	2	72	17.585	ppb	17.585	17.62	697	400000	
Co	59	2	72	0.049	ppb	0.049	39.73	153	2000	
Ni	60	2	72	1.860	ppb	1.860	15.99	1697	5000	
Cu	63	2	72	0.956	ppb	0.956	20.88	3177	5000	
Zn	66	2	72	1.138	ppb	1.138	37.60	847	5000	
As	75	2	72	0.048	ppb	0.048	144.99	117	2000	
Se	78	1	72	0.123	ppb	0.123	57.89	24	2000	
Sr	88	2	72	1718.296	ppb	1718.296	0.49	1184030	4000	
Zr	90	2	72	-10.232	ppb	-10.232	-118.53	620	1000	
Mo	95	2	115	0.537	ppb	0.537	23.07	447	2000	
Ag	107	2	115	0.005	ppb	0.005	366.68	63	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	0.419	ppb	0.419	20.70	1340	2000	
Sb	121	2	115	0.065	ppb	0.065	46.94	117	1000	
Ba	137	2	115	25.692	ppb	25.692	3.76	8649	5000	
W	182	2	165	0.024	ppb	0.024	53.41	910	100	
Tl	205	2	165	-0.001	ppb	-0.001	-165.47	203	2000	
Pb	208	2	165	-0.133	ppb	-0.133	-5.91	1863	5000	
Th	232	2	193	-0.091	ppb	-0.091	-58.39	8706	2000	
U	238	2	193	0.233	ppb	0.233	8.19	5335	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	268218	0.31	253490	105.81	60	120	
Sc (IS)	45	1	HMI H2	10209762	0.44	9587331	106.49	60	120	
Sc (IS)	45	2	HMI He	972053	0.36	964862	100.75	60	120	
Sc (IS)	45	3	No Gas	18014678	0.50	17821643	101.08	60	120	
Ge Internal standard	72	1	HMI H2	5560155	0.95	5262568	105.65	60	120	
Ge Internal standard	72	2	HMI He	1156360	0.49	1150133	100.54	60	120	
In Internal standard	115	2	HMI He	3751407	0.48	3923278	95.62	60	120	
Ho-165	165	2	HMI He	14199636	0.64	14697450	96.61	60	120	
Ir (IS)	193	2	HMI He	10382436	0.99	10905184	95.21	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-8-A
Data File Name	219SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:05:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	43.355	ppb	43.355	2.07	1187287	50000	
Be	9	1	6	-0.001	ppb	-0.001	-103.10	20	2000	
B	11	1	6	679.162	ppb	679.162	1.49	109216	2000	
Na	23	2	45	105717.880	ppb	105717.880	1.85	22168155	400000	
Mg	24	2	45	16509.877	ppb	16509.877	2.04	1567824	400000	
Al	27	2	45	3.621	ppb	3.621	56.97	153	400000	
Si	28	2	45	777.282	ppb	777.282	2.76	151894	10000	
P	31	2	45	4.936	ppb	4.936	105.91	171	10000	
K	39	2	45	4594.916	ppb	4594.916	0.92	354064	400000	
Ca	40	1	45	114105.417	ppb	114105.417	0.45	180096937	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.315	ppb	-0.315	-77.92	1143	2000	
Cr	52	2	72	0.201	ppb	0.201	88.97	2694	5000	
Mn	55	2	72	7.961	ppb	7.961	5.04	4951	10000	
Fe	56	1	72	210.157	ppb	210.157	1.07	751865	10000	
(Fe)	57	2	72	216.823	ppb	216.823	6.83	5688	400000	
Co	59	2	72	0.151	ppb	0.151	33.99	360	2000	
Ni	60	2	72	1.422	ppb	1.422	18.37	1420	5000	
Cu	63	2	72	1.077	ppb	1.077	1.73	3311	5000	
Zn	66	2	72	2.442	ppb	2.442	29.37	1217	5000	
As	75	2	72	1.179	ppb	1.179	14.80	378	2000	
Se	78	1	72	0.047	ppb	0.047	159.01	12	2000	
Sr	88	2	72	1475.392	ppb	1475.392	1.39	1000195	4000	
Zr	90	2	72	43.537	ppb	43.537	45.90	787	1000	
Mo	95	2	115	0.551	ppb	0.551	44.10	447	2000	
Ag	107	2	115	-0.003	ppb	-0.003	-507.74	43	100	
Cd	111	2	115	0.027	ppb	0.027	188.00	20	2000	
Sn	120	2	115	-0.120	ppb	-0.120	-45.11	733	2000	
Sb	121	2	115	0.014	ppb	0.014	93.64	57	1000	
Ba	137	2	115	26.457	ppb	26.457	1.34	8693	5000	
W	182	2	165	0.096	ppb	0.096	50.30	1117	100	
Tl	205	2	165	-0.006	ppb	-0.006	-43.60	170	2000	
Pb	208	2	165	-0.080	ppb	-0.080	-19.72	2297	5000	
Th	232	2	193	-0.047	ppb	-0.047	-48.15	8997	2000	
U	238	2	193	0.203	ppb	0.203	1.89	4931	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	256144	0.76	253490	101.05	60	120	
Sc (IS)	45	1	HMI H2	9741385	0.66	9587331	101.61	60	120	
Sc (IS)	45	2	HMI He	957501	1.18	964862	99.24	60	120	
Sc (IS)	45	3	No Gas	17827055	0.52	17821643	100.03	60	120	
Ge Internal standard	72	1	HMI H2	5311735	1.03	5262568	100.93	60	120	
Ge Internal standard	72	2	HMI He	1137638	1.15	1150133	98.91	60	120	
In Internal standard	115	2	HMI He	3661640	0.47	3923278	93.33	60	120	
Ho-165	165	2	HMI He	13875457	0.53	14697450	94.41	60	120	
Ir (IS)	193	2	HMI He	10212988	0.48	10905184	93.65	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-9-A
Data File Name	220SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:09:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	16.323	ppb	16.323	7.48	952674	50000	
Be	9	1	6	-0.003	ppb	-0.003	-3140.45	20	2000	
B	11	1	6	731.291	ppb	731.291	0.89	119785	2000	
Na	23	2	45	67207.968	ppb	67207.968	1.48	14187328	400000	
Mg	24	2	45	8302.389	ppb	8302.389	0.27	793746	400000	
Al	27	2	45	12.655	ppb	12.655	38.60	407	400000	
Si	28	2	45	819.885	ppb	819.885	1.03	160122	10000	
P	31	2	45	45.872	ppb	45.872	19.20	287	10000	
K	39	2	45	4053.699	ppb	4053.699	1.04	319345	400000	
Ca	40	1	45	92535.700	ppb	92535.700	1.25	148980234	400000	
Ti	47	2	45	0.646	ppb	0.646	34.69	17	4000	
V	51	2	72	0.501	ppb	0.501	36.65	1964	2000	
Cr	52	2	72	0.189	ppb	0.189	67.65	2694	5000	
Mn	55	2	72	33.351	ppb	33.351	2.66	19959	10000	
Fe	56	1	72	18.914	ppb	18.914	3.33	92921	10000	
(Fe)	57	2	72	19.064	ppb	19.064	9.20	727	400000	
Co	59	2	72	0.111	ppb	0.111	45.77	280	2000	
Ni	60	2	72	2.423	ppb	2.423	1.03	2000	5000	
Cu	63	2	72	1.076	ppb	1.076	19.25	3327	5000	
Zn	66	2	72	2.552	ppb	2.552	29.27	1257	5000	
As	75	2	72	1.779	ppb	1.779	8.37	521	2000	
Se	78	1	72	0.618	ppb	0.618	41.15	96	2000	
Sr	88	2	72	1029.864	ppb	1029.864	0.90	702053	4000	
Zr	90	2	72	40.337	ppb	40.337	27.36	780	1000	
Mo	95	2	115	0.734	ppb	0.734	7.74	593	2000	
Ag	107	2	115	-0.008	ppb	-0.008	-49.47	30	100	
Cd	111	2	115	0.026	ppb	0.026	164.88	20	2000	
Sn	120	2	115	-0.190	ppb	-0.190	-53.19	670	2000	
Sb	121	2	115	0.112	ppb	0.112	26.59	170	1000	
Ba	137	2	115	96.988	ppb	96.988	1.75	32151	5000	
W	182	2	165	0.072	ppb	0.072	18.38	1040	100	
Tl	205	2	165	-0.007	ppb	-0.007	-137.43	163	2000	
Pb	208	2	165	-0.056	ppb	-0.056	-56.90	2510	5000	
Th	232	2	193	-0.104	ppb	-0.104	-24.02	8439	2000	
U	238	2	193	1.051	ppb	1.051	6.92	13654	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	261283	0.91	253490	103.07	60	120	
Sc (IS)	45	1	HMI H2	9936404	0.55	9587331	103.64	60	120	
Sc (IS)	45	2	HMI He	963154	0.49	964862	99.82	60	120	
Sc (IS)	45	3	No Gas	16999731	0.59	17821643	95.39	60	120	
Ge Internal standard	72	1	HMI H2	5433876	1.14	5262568	103.26	60	120	
Ge Internal standard	72	2	HMI He	1143741	0.48	1150133	99.44	60	120	
In Internal standard	115	2	HMI He	3718677	0.59	3923278	94.78	60	120	
Ho-165	165	2	HMI He	13853272	0.75	14697450	94.26	60	120	
Ir (IS)	193	2	HMI He	10206884	0.18	10905184	93.60	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-10-A
Data File Name	221SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:12:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	39.989	ppb	39.989	1.12	946015	50000	
Be	9	1	6	-0.037	ppb	-0.037	-150.28	10	2000	
B	11	1	6	1426.039	ppb	1426.039	0.62	187653	2000	
Na	23	2	45	95312.557	ppb	95312.557	0.97	16521479	400000	
Mg	24	2	45	16254.308	ppb	16254.308	1.38	1275804	400000	
Al	27	2	45	9.569	ppb	9.569	25.48	263	400000	
Si	28	2	45	894.479	ppb	894.479	1.82	142061	10000	
P	31	2	45	27.065	ppb	27.065	42.00	192	10000	
K	39	2	45	6724.540	ppb	6724.540	2.02	411606	400000	
Ca	40	1	45	80443.979	ppb	80443.979	1.04	102686538	400000	
Ti	47	2	45	0.313	ppb	0.313	173.21	7	4000	
V	51	2	72	0.074	ppb	0.074	75.37	1267	2000	
Cr	52	2	72	1.406	ppb	1.406	25.39	3531	5000	
Mn	55	2	72	10.825	ppb	10.825	4.63	5498	10000	
Fe	56	1	72	20.304	ppb	20.304	3.79	78379	10000	
(Fe)	57	2	72	31.270	ppb	31.270	27.24	853	400000	
Co	59	2	72	0.062	ppb	0.062	24.06	147	2000	
Ni	60	2	72	2.375	ppb	2.375	11.35	1627	5000	
Cu	63	2	72	1.885	ppb	1.885	3.53	3777	5000	
Zn	66	2	72	0.781	ppb	0.781	20.60	603	5000	
As	75	2	72	1.227	ppb	1.227	14.77	323	2000	
Se	78	1	72	0.088	ppb	0.088	59.05	15	2000	
Sr	88	2	72	1804.912	ppb	1804.912	0.92	1014254	4000	
Zr	90	2	72	3.566	ppb	3.566	715.15	543	1000	
Mo	95	2	115	2.062	ppb	2.062	9.07	1330	2000	
Ag	107	2	115	-0.004	ppb	-0.004	-259.30	33	100	
Cd	111	2	115	0.007	ppb	0.007	466.67	10	2000	
Sn	120	2	115	-0.148	ppb	-0.148	-114.15	590	2000	
Sb	121	2	115	0.055	ppb	0.055	59.98	87	1000	
Ba	137	2	115	74.830	ppb	74.830	3.90	20524	5000	
W	182	2	165	0.071	ppb	0.071	39.91	857	100	
Tl	205	2	165	-0.005	ppb	-0.005	-270.28	147	2000	
Pb	208	2	165	-0.080	ppb	-0.080	-10.70	1903	5000	
Th	232	2	193	-0.133	ppb	-0.133	-16.21	6852	2000	
U	238	2	193	0.270	ppb	0.270	20.12	4721	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	211763	0.21	253490	83.54	60	120	
Sc (IS)	45	1	HMI H2	7877425	0.49	9587331	82.16	60	120	
Sc (IS)	45	2	HMI He	791336	0.68	964862	82.02	60	120	
Sc (IS)	45	3	No Gas	14490102	0.51	17821643	81.31	60	120	
Ge Internal standard	72	1	HMI H2	4352824	0.31	5262568	82.71	60	120	
Ge Internal standard	72	2	HMI He	943014	0.59	1150133	81.99	60	120	
In Internal standard	115	2	HMI He	3075255	1.37	3923278	78.38	60	120	
Ho-165	165	2	HMI He	11476059	1.19	14697450	78.08	60	120	
Ir (IS)	193	2	HMI He	8572405	0.51	10905184	78.61	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-11-A
Data File Name	222SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:16:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	82.068	ppb	82.068	5.52	1001360	50000	
Be	9	1	6	0.025	ppb	0.025	238.41	20	2000	
B	11	1	6	1728.617	ppb	1728.617	1.82	215397	2000	
Na	23	2	45	166832.381	ppb	166832.381	1.38	25231665	400000	
Mg	24	2	45	37148.172	ppb	37148.172	1.80	2544380	400000	
Al	27	2	45	27.865	ppb	27.865	20.75	597	400000	
Si	28	2	45	1201.935	ppb	1201.935	2.34	161837	10000	
P	31	2	45	63.290	ppb	63.290	28.30	241	10000	
K	39	2	45	10680.585	ppb	10680.585	1.64	552333	400000	
Ca	40	1	45	154947.604	ppb	154947.604	1.83	188565971	400000	
Ti	47	2	45	1.079	ppb	1.079	100.18	20	4000	
V	51	2	72	0.590	ppb	0.590	26.98	1490	2000	
Cr	52	2	72	1.858	ppb	1.858	9.19	3537	5000	
Mn	55	2	72	114.523	ppb	114.523	3.45	49287	10000	
Fe	56	1	72	2260.447	ppb	2260.447	0.88	6107199	10000	
(Fe)	57	2	72	2362.740	ppb	2362.740	0.58	43478	400000	
Co	59	2	72	0.938	ppb	0.938	9.98	1447	2000	
Ni	60	2	72	7.204	ppb	7.204	14.89	3441	5000	
Cu	63	2	72	2.080	ppb	2.080	9.66	3547	5000	
Zn	66	2	72	12.885	ppb	12.885	11.26	3137	5000	
As	75	2	72	14.304	ppb	14.304	6.70	2507	2000	
Se	78	1	72	0.035	ppb	0.035	208.28	8	2000	
Sr	88	2	72	4059.915	ppb	4059.915	0.16	2009590	4000	
Zr	90	2	72	-8.459	ppb	-8.459	-479.75	450	1000	
Mo	95	2	115	1.063	ppb	1.063	3.35	613	2000	
Ag	107	2	115	0.004	ppb	0.004	451.56	43	100	
Cd	111	2	115	0.034	ppb	0.034	59.87	17	2000	
Sn	120	2	115	0.385	ppb	0.385	64.25	937	2000	
Sb	121	2	115	0.080	ppb	0.080	60.41	97	1000	
Ba	137	2	115	56.045	ppb	56.045	4.16	13510	5000	
W	182	2	165	0.192	ppb	0.192	14.00	1043	100	
Tl	205	2	165	0.004	ppb	0.004	355.63	173	2000	
Pb	208	2	165	0.118	ppb	0.118	15.90	3000	5000	
Th	232	2	193	-0.094	ppb	-0.094	-22.65	6242	2000	
U	238	2	193	0.337	ppb	0.337	18.51	4608	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	200862	0.24	253490	79.24	60	120	
Sc (IS)	45	1	HMI H2	7512532	1.09	9587331	78.36	60	120	
Sc (IS)	45	2	HMI He	690836	0.47	964862	71.60	60	120	
Sc (IS)	45	3	No Gas	12256214	2.01	17821643	68.77	60	120	
Ge Internal standard	72	1	HMI H2	4138312	0.24	5262568	78.64	60	120	
Ge Internal standard	72	2	HMI He	830761	0.75	1150133	72.23	60	120	
In Internal standard	115	2	HMI He	2699027	0.88	3923278	68.80	60	120	
Ho-165	165	2	HMI He	10191249	1.70	14697450	69.34	60	120	
Ir (IS)	193	2	HMI He	7462851	1.38	10905184	68.43	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-12-A
Data File Name	223SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:20:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-6.016	ppb	-6.016	-12.04	474351	50000	
Be	9	1	6	0.084	ppb	0.084	181.64	27	2000	
B	11	1	6	7411.924	ppb	7411.924	2.01	813955	2000	
Na	23	2	45	284481.793	ppb	284481.793	2.07	39940819	400000	
Mg	24	2	45	48092.378	ppb	48092.378	2.00	3058682	400000	
Al	27	2	45	32.315	ppb	32.315	7.41	637	400000	
Si	28	2	45	1203.898	ppb	1203.898	2.58	150505	10000	
P	31	2	45	474.403	ppb	474.403	9.01	992	10000	
K	39	2	45	2329.532	ppb	2329.532	3.48	134589	400000	
Ca	40	1	45	670495.701	ppb	670495.701	0.24	732447429	400000	
Ti	47	2	45	0.766	ppb	0.766	173.21	13	4000	
V	51	2	72	2.258	ppb	2.258	6.20	2467	2000	
Cr	52	2	72	1.070	ppb	1.070	18.69	2554	5000	
Mn	55	2	72	17015.861	ppb	17015.861	2.93	6665247	10000	
Fe	56	1	72	9306.024	ppb	9306.024	1.14	22240471	10000	
(Fe)	57	2	72	9317.490	ppb	9317.490	2.41	156203	400000	
Co	59	2	72	34.696	ppb	34.696	1.01	47753	2000	
Ni	60	2	72	48.493	ppb	48.493	5.24	18818	5000	
Cu	63	2	72	4.095	ppb	4.095	13.05	5308	5000	
Zn	66	2	72	46.870	ppb	46.870	10.21	9536	5000	
As	75	2	72	24.596	ppb	24.596	2.63	3892	2000	
Se	78	1	72	0.855	ppb	0.855	17.39	88	2000	
Sr	88	2	72	2358.858	ppb	2358.858	3.48	1066900	4000	
Zr	90	2	72	69.684	ppb	69.684	79.28	583	1000	
Mo	95	2	115	1.275	ppb	1.275	16.27	683	2000	
Ag	107	2	115	-0.004	ppb	-0.004	-74.21	27	100	
Cd	111	2	115	0.063	ppb	0.063	68.56	23	2000	
Sn	120	2	115	0.240	ppb	0.240	69.05	770	2000	
Sb	121	2	115	0.262	ppb	0.262	11.75	233	1000	
Ba	137	2	115	74.180	ppb	74.180	6.45	16696	5000	
W	182	2	165	0.062	ppb	0.062	71.67	687	100	
Tl	205	2	165	0.106	ppb	0.106	15.61	620	2000	
Pb	208	2	165	0.485	ppb	0.485	3.87	5037	5000	
Th	232	2	193	-0.047	ppb	-0.047	-40.53	6168	2000	
U	238	2	193	5.176	ppb	5.176	3.41	38425	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	178089	0.78	253490	70.25	60	120	
Sc (IS)	45	1	HMI H2	6744485	0.54	9587331	70.35	60	120	
Sc (IS)	45	2	HMI He	641648	1.79	964862	66.50	60	120	
Sc (IS)	45	3	No Gas	10026445	1.67	17821643	56.26	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	3669806	0.74	5262568	69.73	60	120	
Ge Internal standard	72	2	HMI He	759512	2.62	1150133	66.04	60	120	
In Internal standard	115	2	HMI He	2523359	0.47	3923278	64.32	60	120	
Ho-165	165	2	HMI He	9446497	1.61	14697450	64.27	60	120	
Ir (IS)	193	2	HMI He	6996780	1.00	10905184	64.16	60	120	

Sample Report

Sample Table

Sample Name	280-175032-A-13-A
Data File Name	224SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:23:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608798 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	176.864	ppb	176.864	2.24	604862	50000	
Be	9	1	6	0.261	ppb	0.261	90.42	40	2000	
B	11	1	6	3071.717	ppb	3071.717	1.10	252822	2000	
Na	23	2	45	238179.289	ppb	238179.289	9.63	21042304	400000	
Mg	24	2	45	38709.664	ppb	38709.664	9.60	1549180	400000	
Al	27	2	45	2974.616	ppb	2974.616	10.27	34851	400000	
Si	28	2	45	2490.358	ppb	2490.358	8.24	187350	10000	
P	31	2	45	365.245	ppb	365.245	9.55	497	10000	
K	39	2	45	15306.396	ppb	15306.396	10.11	454551	400000	
Ca	40	1	45	208057.291	ppb	208057.291	1.35	167502528	400000	
Ti	47	2	45	81.106	ppb	81.106	23.11	870	4000	
V	51	2	72	14.147	ppb	14.147	4.69	6762	2000	
Cr	52	2	72	20.406	ppb	20.406	12.80	12565	5000	
Mn	55	2	72	50.832	ppb	50.832	5.31	13132	10000	
Fe	56	1	72	4249.922	ppb	4249.922	1.84	7739741	10000	
(Fe)	57	2	72	4999.108	ppb	4999.108	6.51	54775	400000	
Co	59	2	72	0.848	ppb	0.848	16.00	783	2000	
Ni	60	2	72	6.899	ppb	6.899	16.93	1970	5000	
Cu	63	2	72	7.259	ppb	7.259	8.14	5598	5000	
Zn	66	2	72	18.970	ppb	18.970	14.85	2657	5000	
As	75	2	72	7.236	ppb	7.236	13.47	778	2000	
Se	78	1	72	0.211	ppb	0.211	13.46	19	2000	
Sr	88	2	72	3973.662	ppb	3973.662	8.63	1172483	4000	
Zr	90	2	72	615.946	ppb	615.946	19.82	1174	1000	
Mo	95	2	115	2.531	ppb	2.531	10.24	860	2000	
Ag	107	2	115	-0.005	ppb	-0.005	-193.53	17	100	
Cd	111	2	115	0.106	ppb	0.106	163.15	23	2000	
Sn	120	2	115	0.848	ppb	0.848	23.54	780	2000	
Sb	121	2	115	0.254	ppb	0.254	44.75	143	1000	
Ba	137	2	115	141.127	ppb	141.127	8.83	20374	5000	
W	182	2	165	0.542	ppb	0.542	39.56	1103	100	
Tl	205	2	165	0.049	ppb	0.049	20.94	233	2000	
Pb	208	2	165	1.514	ppb	1.514	16.42	7298	5000	
Th	232	2	193	0.804	ppb	0.804	24.35	7719	2000	
U	238	2	193	1.305	ppb	1.305	2.16	7312	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	133147	2.49	253490	52.53	60	120	IS Failed
Sc (IS)	45	1	HMI H2	4970686	1.93	9587331	51.85	60	120	IS Failed
Sc (IS)	45	2	HMI He	405924	8.82	964862	42.07	60	120	IS Failed
Sc (IS)	45	3	No Gas	5093322	0.64	17821643	28.58	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	2793329	1.05	5262568	53.08	60	120	IS Failed
Ge Internal standard	72	2	HMI He	497383	7.57	1150133	43.25	60	120	IS Failed
In Internal standard	115	2	HMI He	1628392	8.18	3923278	41.51	60	120	IS Failed
Ho-165	165	2	HMI He	6114968	8.85	14697450	41.61	60	120	IS Failed
Ir (IS)	193	2	HMI He	4588729	7.79	10905184	42.08	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	225_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:27:04-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	251.592	ppb	2.936	13439	50	503.2	90	110	>+\-10%
Na	23	2	45	258452.554	ppb	7.157	15291429	51000	506.8	90	110	>+\-10%
Mg	24	2	45	54277.029	ppb	6.325	1455138	11000	493.4	90	110	>+\-10%
Al	27	2	45	4481.950	ppb	7.664	35167	1000	448.2	90	110	>+\-10%
K	39	2	45	50751.475	ppb	6.719	981294	11000	461.4	90	110	>+\-10%
Ca	40	1	45	68527.670	ppb	2.543	23721269	11000	623.0	90	110	>+\-10%
Ti	47	2	45	233.479	ppb	16.786	1683	50	467.0	90	110	>+\-10%
V	51	2	72	229.833	ppb	8.614	67808	50	459.7	90	110	>+\-10%
Cr	52	2	72	230.477	ppb	7.064	89073	50	461.0	90	110	>+\-10%
Mn	55	2	72	239.129	ppb	5.967	41589	50	478.3	90	110	>+\-10%
Fe	56	1	72	6101.775	ppb	0.890	4603386	1000	610.2	90	110	>+\-10%
Co	59	2	72	216.130	ppb	7.682	131584	50	432.3	90	110	>+\-10%
Ni	60	2	72	225.598	ppb	5.982	38148	50	451.2	90	110	>+\-10%
Cu	63	2	72	222.861	ppb	6.773	102062	50	445.7	90	110	>+\-10%
Zn	66	2	72	214.554	ppb	4.617	18851	50	429.1	90	110	>+\-10%
As	75	2	72	210.434	ppb	8.346	14501	50	420.9	90	110	>+\-10%
Se	78	1	72	284.332	ppb	1.352	8849	50	568.7	90	110	>+\-10%
Sr	88	2	72	426.181	ppb	7.399	85441	100	426.2	90	110	>+\-10%
Zr	90	2	72	419.411	ppb	23.045	597	50	838.8	90	110	>+\-10%
Mo	95	2	115	262.931	ppb	6.454	53589	50	525.9	90	110	>+\-10%
Ag	107	2	115	251.183	ppb	6.324	170201	50	502.4	90	110	>+\-10%
Cd	111	2	115	248.995	ppb	7.842	26249	50	498.0	90	110	>+\-10%
Sn	120	2	115	250.927	ppb	5.613	72519	50	501.9	90	110	>+\-10%
Sb	121	2	115	250.091	ppb	5.270	76849	50	500.2	90	110	>+\-10%
Ba	137	2	115	247.832	ppb	6.000	21853	50	495.7	90	110	>+\-10%
W	182	2	165	234.140	ppb	6.548	221080	50	468.3	90	110	>+\-10%
Tl	205	2	165	226.016	ppb	6.484	444739	50	452.0	90	110	>+\-10%
Pb	208	2	165	224.042	ppb	6.073	601995	50	448.1	90	110	>+\-10%
Th	232	2	193	219.978	ppb	5.556	661836	50	440.0	90	110	>+\-10%
U	238	2	193	221.367	ppb	5.993	703289	50	442.7	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	62681	1.67	253490	24.73	60	120	IS Failed
Sc (IS)	45	1	HMI H2	2137335	3.86	9587331	22.29	60	120	IS Failed
Sc (IS)	45	2	HMI He	271191	6.75	964862	28.11	60	120	IS Failed
Sc (IS)	45	3	No Gas	5511228	0.48	17821643	30.92	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	1158018	2.97	5262568	22.00	60	120	IS Failed
Ge Internal standard	72	2	HMI He	337295	6.85	1150133	29.33	60	120	IS Failed
In Internal standard	115	2	HMI He	992604	6.34	3923278	25.30	60	120	IS Failed
Ho-165	165	2	HMI He	4134390	6.39	14697450	28.13	60	120	IS Failed
Ir (IS)	193	2	HMI He	3158019	6.30	10905184	28.96	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	226_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:30:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	9.158	ppb	11.2	213555	10	
Be	9	1	6	0.316	ppb	170.0	20	0.5	
B	11	1	6	432.289	ppb	0.7	15794	0.5	>RL
Na	23	2	45	954.522	ppb	3.4	45367	25	>RL
Mg	24	2	45	60.456	ppb	8.1	1377	25	>RL
Al	27	2	45	14.308	ppb	78.7	90	15	
K	39	2	45	2249.350	ppb	2.0	39149	50	>RL
Ti	47	2	45	1.320	ppb	173.2	7	0.5	>RL
V	51	2	72	1.606	ppb	14.4	707	1	>RL
Cr	52	2	72	6.145	ppb	7.7	2410	1	>RL
Mn	55	2	72	10.459	ppb	17.5	1483	0.5	>RL
(Fe)	57	2	72	52.429	ppb	55.8	360	25	>RL
Co	59	2	72	0.325	ppb	27.7	167	0.5	
Ni	60	2	72	9.046	ppb	27.5	1337	1	>RL
Cu	63	2	72	5.738	ppb	7.0	2430	1	>RL
Zn	66	2	72	4.712	ppb	4.8	437	5	
As	75	2	72	0.996	ppb	5.9	78	1	
Se	78	1	72	0.832	ppb	61.4	24	1	
Sr	88	2	72	4.416	ppb	8.8	760	0.5	>RL
Zr	90	2	72	-50.691	ppb	-116.4	110	1	
Mo	95	2	115	0.892	ppb	8.2	137	0.5	>RL
Ag	107	2	115	0.125	ppb	73.7	70	1	
Cd	111	2	115	0.108	ppb	121.3	10	0.5	
Sn	120	2	115	4.062	ppb	22.3	1007	1	>RL
Sb	121	2	115	1.068	ppb	35.5	243	0.6	>RL
Ba	137	2	115	1.132	ppb	21.6	87	0.5	>RL
W	182	2	165	1.299	ppb	10.5	1090	1	>RL
Tl	205	2	165	0.489	ppb	36.1	757	0.1	>RL
Pb	208	2	165	0.571	ppb	12.0	1803	0.5	>RL
Th	232	2	193	2.654	ppb	6.3	8169	1	>RL
U	238	2	193	0.159	ppb	35.5	1040	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	57561	1.85	253490	22.71	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1824212	0.74	9587331	19.03	60	120	IS Failed
Sc (IS)	45	2	HMI He	191803	1.80	964862	19.88	60	120	IS Failed
Sc (IS)	45	3	No Gas	4011027	0.85	17821643	22.51	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	1030580	0.93	5262568	19.58	60	120	IS Failed
Ge Internal standard	72	2	HMI He	263467	1.60	1150133	22.91	60	120	IS Failed
In Internal standard	115	2	HMI He	711143	1.18	3923278	18.13	60	120	IS Failed
Ho-165	165	2	HMI He	3066578	2.91	14697450	20.86	60	120	IS Failed
Ir (IS)	193	2	HMI He	2369568	1.48	10905184	21.73	60	120	IS Failed

Blank Report

Sample Table

Sample Name	MB 280-608805/1-A
Data File Name	227_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:34:12-06:00
Sample Type	Blank
Dilution	1
Comment	608805 6020
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	3	45	2.320	ppb	31.11270946	303605	10
Be	9	1	6	0.028	ppb	745.1489031	10	0.5
B	11	1	6	136.910	ppb	6.08726709	9073	0.5
Na	23	2	45	629.940	ppb	1.180350243	54331	25
Mg	24	2	45	28.600	ppb	7.47574604	1320	25
Al	27	2	45	27.504	ppb	36.74615484	280	15
K	39	2	45	1066.615	ppb	3.416717707	39574	50
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	0.782	ppb	36.05642359	790	1
Cr	52	2	72	3.495	ppb	6.324115054	2464	1
Mn	55	2	72	6.113	ppb	3.749616688	1367	0.5
(Fe)	57	2	72	28.849	ppb	45.38547124	343	25
Co	59	2	72	0.113	ppb	44.79564969	100	0.5
Ni	60	2	72	4.390	ppb	18.58582767	1100	1
Cu	63	2	72	3.057	ppb	18.82036134	2250	1
Zn	66	2	72	4.404	ppb	42.18598934	637	5
As	75	2	72	0.330	ppb	46.22851857	64	1
Se	78	1	72	0.141	ppb	82.7017583	9	1
Sr	88	2	72	2.302	ppb	9.655787503	653	0.5
Zr	90	2	72	99.538	ppb	22.38500097	343	1
Mo	95	2	115	0.215	ppb	11.3099282	63	0.5
Ag	107	2	115	0.033	ppb	118.3399309	43	1
Cd	111	2	115	0.054	ppb	250.4410857	10	0.5
Sn	120	2	115	1.916	ppb	7.795640022	953	1
Sb	121	2	115	0.152	ppb	110.4042991	70	0.6
Ba	137	2	115	1.850	ppb	20.49906351	223	0.5
W	182	2	165	0.210	ppb	26.02462701	540	1
Tl	205	2	165	0.068	ppb	33.97360401	240	0.1
Pb	208	2	165	0.224	ppb	14.65433244	1843	0.5
Th	232	2	193	0.178	ppb	27.062464	4321	1
U	238	2	193	0.004	ppb	1213.686769	1117	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	98031	1.38	253490	38.67	60	120	IS Failed
Sc (IS)	45	1	HMI H2	3403093	0.81	9587331	35.50	60	120	IS Failed
Sc (IS)	45	2	HMI He	328072	0.10	964862	34.00	60	120	IS Failed
Sc (IS)	45	3	No Gas	6003907	1.11	17821643	33.69	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	1946055	1.17	5262568	36.98	60	120	IS Failed
Ge Internal standard	72	2	HMI He	402373	1.32	1150133	34.98	60	120	IS Failed
In Internal standard	115	2	HMI He	1202221	0.56	3923278	30.64	60	120	IS Failed
Ho-165	165	2	HMI He	5067897	0.47	14697450	34.48	60	120	IS Failed
Ir (IS)	193	2	HMI He	3944220	0.55	10905184	36.17	60	120	IS Failed

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608805/2-A
Data File Name	228_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:37:48-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608805 6020
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	115.842	115.842	ppb	2.331	751094	400	29.0	80	120	>+/-20%
Be	9	1	6	184.930	184.930	ppb	7.511	11448	40	462.3	80	120	>+/-20%
Na	23	2	45	7122.372	7122.372	ppb	3.433	289686	40	17805.9	80	120	>+/-20%
Mg	24	2	45	5712.771	5712.771	ppb	1.763	103689	40	14281.9	80	120	>+/-20%
Al	27	2	45	5552.684	5552.684	ppb	2.375	29446	40	13881.7	80	120	>+/-20%
K	39	2	45	8006.966	8006.966	ppb	3.980	111555	40	20017.4	80	120	>+/-20%
V	51	2	72	261.981	261.981	ppb	2.949	57038	40	655.0	80	120	>+/-20%
Cr	52	2	72	267.667	267.667	ppb	3.035	76243	40	669.2	80	120	>+/-20%
Mn	55	2	72	262.160	262.160	ppb	1.189	33625	40	655.4	80	120	>+/-20%
(Fe)	57	2	72	5115.141	5115.141	ppb	4.842	28048	40	12787.9	80	120	>+/-20%
Co	59	2	72	256.235	256.235	ppb	3.234	115142	40	640.6	80	120	>+/-20%
Ni	60	2	72	258.541	258.541	ppb	3.427	32225	40	646.4	80	120	>+/-20%
Cu	63	2	72	267.144	267.144	ppb	3.009	90185	40	667.9	80	120	>+/-20%
Zn	66	2	72	257.987	257.987	ppb	2.691	16686	40	645.0	80	120	>+/-20%
As	75	2	72	229.953	229.953	ppb	2.777	11698	40	574.9	80	120	>+/-20%
Se	78	1	72	178.444	178.444	ppb	6.482	6959	40	446.1	80	120	>+/-20%
Mo	95	2	115	321.807	321.807	ppb	2.756	44756	40	804.5	80	120	>+/-20%
Ag	107	2	115	325.848	325.848	ppb	3.092	150668	40	814.6	80	120	>+/-20%
Cd	111	2	115	304.990	304.990	ppb	3.182	21952	40	762.5	80	120	>+/-20%
Sn	120	2	115	298.926	298.926	ppb	4.591	58886	40	747.3	80	120	>+/-20%
Sb	121	2	115	295.922	295.922	ppb	5.599	61998	40	739.8	80	120	>+/-20%
Ba	137	2	115	302.071	302.071	ppb	5.751	18151	40	755.2	80	120	>+/-20%
W	182	2	165	0.542	0.542	ppb	38.243	540	40	1.4	80	120	>+/-20%
Tl	205	2	165	273.117	273.117	ppb	3.582	384298	40	682.8	80	120	>+/-20%
Pb	208	2	165	272.268	272.268	ppb	3.235	522958	40	680.7	80	120	>+/-20%
Th	232	2	193	258.305	258.305	ppb	3.355	561323	40	645.8	80	120	>+/-20%
U	238	2	193	265.763	265.763	ppb	3.698	610203	40	664.4	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	72782	3.66	253490	28.71	60	120	IS Failed
Sc (IS)	45	1	HMI H2	2429507	3.16	9587331	25.34	60	120	IS Failed
Sc (IS)	45	2	HMI He	182755	2.52	964862	18.94	60	120	IS Failed
Sc (IS)	45	3	No Gas	7912792	0.38	17821643	44.40	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	1452290	2.97	5262568	27.60	60	120	IS Failed
Ge Internal standard	72	2	HMI He	248162	1.88	1150133	21.58	60	120	IS Failed
In Internal standard	115	2	HMI He	675831	2.45	3923278	17.23	60	120	IS Failed
Ho-165	165	2	HMI He	2950004	2.44	14697450	20.07	60	120	IS Failed
Ir (IS)	193	2	HMI He	2278385	2.39	10905184	20.89	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175050-A-1-A
Data File Name	229SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:41:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	47.061	ppb	47.061	4.77	378781	50000	
Be	9	1	6	0.564	ppb	0.564	69.82	60	2000	
B	11	1	6	205.762	ppb	205.762	8.22	14460	2000	
Na	23	2	45	616087.239	ppb	616087.239	12.88	23282904	400000	
Mg	24	2	45	252010.948	ppb	252010.948	12.12	4317144	400000	
Al	27	2	45	1563.354	ppb	1563.354	14.14	7840	400000	
Si	28	2	45	13211.660	ppb	13211.660	13.68	409669	10000	
P	31	2	45	3403.084	ppb	3403.084	11.44	1744	10000	
K	39	2	45	12207.199	ppb	12207.199	12.69	156858	400000	
Ca	40	1	45	203532.383	ppb	203532.383	2.63	126773105	400000	
Ti	47	2	45	24.568	ppb	24.568	55.29	110	4000	
V	51	2	72	4.400	ppb	4.400	19.52	1213	2000	
Cr	52	2	72	11.749	ppb	11.749	9.56	3704	5000	
Mn	55	2	72	2528.269	ppb	2528.269	10.23	310352	10000	
Fe	56	1	72	1878.651	ppb	1878.651	3.97	2684634	10000	
(Fe)	57	2	72	3921.454	ppb	3921.454	15.13	20553	400000	
Co	59	2	72	0.940	ppb	0.940	37.06	423	2000	
Ni	60	2	72	10.994	ppb	10.994	16.52	1433	5000	
Cu	63	2	72	8.524	ppb	8.524	11.66	3097	5000	
Zn	66	2	72	13.056	ppb	13.056	15.81	907	5000	
As	75	2	72	2.020	ppb	2.020	28.30	119	2000	
Se	78	1	72	0.325	ppb	0.325	31.41	21	2000	
Sr	88	2	72	2925.441	ppb	2925.441	10.40	414598	4000	
Zr	90	2	72	230.081	ppb	230.081	43.59	290	1000	
Mo	95	2	115	7.635	ppb	7.635	20.11	983	2000	
Ag	107	2	115	0.106	ppb	0.106	91.45	53	100	
Cd	111	2	115	0.326	ppb	0.326	55.43	23	2000	
Sn	120	2	115	3.278	ppb	3.278	42.56	733	2000	
Sb	121	2	115	1.196	ppb	1.196	35.32	237	1000	
Ba	137	2	115	3155.287	ppb	3155.287	11.44	175732	5000	
W	182	2	165	0.618	ppb	0.618	20.39	553	100	
Tl	205	2	165	0.385	ppb	0.385	13.41	550	2000	
Pb	208	2	165	1.479	ppb	1.479	6.12	3294	5000	
Th	232	2	193	4.122	ppb	4.122	7.91	10194	2000	
U	238	2	193	0.299	ppb	0.299	4.86	1227	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	107168	0.67	253490	42.28	60	120	IS Failed
Sc (IS)	45	1	HMI H2	3845992	1.50	9587331	40.12	60	120	IS Failed
Sc (IS)	45	2	HMI He	174364	11.26	964862	18.07	60	120	IS Failed
Sc (IS)	45	3	No Gas	5567256	2.06	17821643	31.24	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	2188480	1.91	5262568	41.59	60	120	IS Failed
Ge Internal standard	72	2	HMI He	239516	10.45	1150133	20.83	60	120	IS Failed
In Internal standard	115	2	HMI He	631176	10.50	3923278	16.09	60	120	IS Failed
Ho-165	165	2	HMI He	2787255	10.08	14697450	18.96	60	120	IS Failed
Ir (IS)	193	2	HMI He	2110809	9.30	10905184	19.36	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175050-A-1-Asd@5
Data File Name	230SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:44:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-7.338	ppb	-7.338	-9.62	762880	50000	
Be	9	1	6	0.019	ppb	0.019	138.86	23	2000	
B	11	1	6	37.484	ppb	37.484	3.67	7715	2000	
Na	23	2	45	20206.248	ppb	20206.248	0.70	3903085	400000	
Mg	24	2	45	7912.672	ppb	7912.672	1.95	689120	400000	
Al	27	2	45	49.073	ppb	49.073	15.32	1297	400000	
Si	28	2	45	443.925	ppb	443.925	4.08	87115	10000	
P	31	2	45	123.354	ppb	123.354	3.15	459	10000	
K	39	2	45	438.274	ppb	438.274	5.57	66899	400000	
Ca	40	1	45	15271.722	ppb	15271.722	0.57	22901517	400000	
Ti	47	2	45	0.142	ppb	0.142	173.21	3	4000	
V	51	2	72	-0.513	ppb	-0.513	-30.62	873	2000	
Cr	52	2	72	0.304	ppb	0.304	37.69	2607	5000	
Mn	55	2	72	97.121	ppb	97.121	0.18	52805	10000	
Fe	56	1	72	138.764	ppb	138.764	2.11	484527	10000	
(Fe)	57	2	72	159.810	ppb	159.810	4.12	3921	400000	
Co	59	2	72	0.081	ppb	0.081	26.81	200	2000	
Ni	60	2	72	1.215	ppb	1.215	18.58	1200	5000	
Cu	63	2	72	0.853	ppb	0.853	5.78	2734	5000	
Zn	66	2	72	2.997	ppb	2.997	10.44	1273	5000	
As	75	2	72	-0.041	ppb	-0.041	-112.10	87	2000	
Se	78	1	72	0.031	ppb	0.031	219.59	9	2000	
Sr	88	2	72	111.274	ppb	111.274	1.07	69780	4000	
Zr	90	2	72	-24.232	ppb	-24.232	-78.01	520	1000	
Mo	95	2	115	0.186	ppb	0.186	54.06	160	2000	
Ag	107	2	115	0.009	ppb	0.009	74.92	67	100	
Cd	111	2	115	-0.006	ppb	-0.006	-280.04	7	2000	
Sn	120	2	115	-0.007	ppb	-0.007	-489.88	800	2000	
Sb	121	2	115	0.058	ppb	0.058	69.89	100	1000	
Ba	137	2	115	96.587	ppb	96.587	3.37	29516	5000	
W	182	2	165	0.025	ppb	0.025	189.43	840	100	
Tl	205	2	165	0.003	ppb	0.003	200.83	217	2000	
Pb	208	2	165	0.332	ppb	0.332	8.78	5667	5000	
Th	232	2	193	0.019	ppb	0.019	171.89	9283	2000	
U	238	2	193	0.033	ppb	0.033	35.97	3064	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	245863	1.11	253490	96.99	60	120	
Sc (IS)	45	1	HMI H2	9232921	0.29	9587331	96.30	60	120	
Sc (IS)	45	2	HMI He	877517	1.68	964862	90.95	60	120	
Sc (IS)	45	3	No Gas	16302134	0.17	17821643	91.47	60	120	
Ge Internal standard	72	1	HMI H2	5095247	0.87	5262568	96.82	60	120	
Ge Internal standard	72	2	HMI He	1048605	1.07	1150133	91.17	60	120	
In Internal standard	115	2	HMI He	3427752	0.43	3923278	87.37	60	120	
Ho-165	165	2	HMI He	13068065	1.28	14697450	88.91	60	120	
Ir (IS)	193	2	HMI He	9831774	0.61	10905184	90.16	60	120	

Sample Report

Sample Table

Sample Name	280-175050-A-1-B MS
Data File Name	231SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:48:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	77.315	ppb	77.315	1.37	1056430	50000	
Be	9	1	6	56.076	ppb	56.076	3.22	9693	2000	
B	11	1	6	87.110	ppb	87.110	1.64	12548	2000	
Na	23	2	45	122841.298	ppb	122841.298	2.91	19349001	400000	
Mg	24	2	45	51540.661	ppb	51540.661	3.90	3674824	400000	
Al	27	2	45	1479.550	ppb	1479.550	5.20	30912	400000	
Si	28	2	45	2682.512	ppb	2682.512	4.34	358069	10000	
P	31	2	45	710.896	ppb	710.896	4.97	1609	10000	
K	39	2	45	3390.487	ppb	3390.487	1.03	204847	400000	
Ca	40	1	45	93457.110	ppb	93457.110	2.11	115767992	400000	
Ti	47	2	45	63.532	ppb	63.532	12.83	1223	4000	
V	51	2	72	62.533	ppb	62.533	4.10	48033	2000	
Cr	52	2	72	61.639	ppb	61.639	2.33	62300	5000	
Mn	55	2	72	639.550	ppb	639.550	3.99	284044	10000	
Fe	56	1	72	2016.883	ppb	2016.883	3.08	5549106	10000	
(Fe)	57	2	72	2043.224	ppb	2043.224	3.17	38957	400000	
Co	59	2	72	58.160	ppb	58.160	3.61	90643	2000	
Ni	60	2	72	59.294	ppb	59.294	6.03	25974	5000	
Cu	63	2	72	61.188	ppb	61.188	2.63	72592	5000	
Zn	66	2	72	58.669	ppb	58.669	6.97	13443	5000	
As	75	2	72	57.808	ppb	57.808	2.97	10255	2000	
Se	78	1	72	55.478	ppb	55.478	4.61	6285	2000	
Sr	88	2	72	795.044	ppb	795.044	3.12	407644	4000	
Zr	90	2	72	208.660	ppb	208.660	31.17	1004	1000	
Mo	95	2	115	63.970	ppb	63.970	4.18	37020	2000	
Ag	107	2	115	60.813	ppb	60.813	3.92	116983	100	
Cd	111	2	115	60.456	ppb	60.456	2.75	18108	2000	
Sn	120	2	115	57.167	ppb	57.167	3.89	47392	2000	
Sb	121	2	115	59.747	ppb	59.747	4.48	52107	1000	
Ba	137	2	115	641.197	ppb	641.197	3.64	160265	5000	
W	182	2	165	0.031	ppb	0.031	76.32	697	100	
Tl	205	2	165	59.754	ppb	59.754	3.74	303055	2000	
Pb	208	2	165	59.338	ppb	59.338	3.80	412410	5000	
Th	232	2	193	57.742	ppb	57.742	4.27	443530	2000	
U	238	2	193	59.175	ppb	59.175	3.60	475885	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	202635	1.31	253490	79.94	60	120	
Sc (IS)	45	1	HMI H2	7645971	1.14	9587331	79.75	60	120	
Sc (IS)	45	2	HMI He	719483	1.68	964862	74.57	60	120	
Sc (IS)	45	3	No Gas	13227104	1.10	17821643	74.22	60	120	
Ge Internal standard	72	1	HMI H2	4213465	1.09	5262568	80.06	60	120	
Ge Internal standard	72	2	HMI He	860410	1.34	1150133	74.81	60	120	
In Internal standard	115	2	HMI He	2810579	1.21	3923278	71.64	60	120	
Ho-165	165	2	HMI He	10626790	1.62	14697450	72.30	60	120	
Ir (IS)	193	2	HMI He	7950697	2.36	10905184	72.91	60	120	

Sample Report

Sample Table

Sample Name	280-175050-A-1-C MSD
Data File Name	232SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:52:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	180.427	ppb	180.427	1.56	758854	50000	
Be	9	1	6	80.402	ppb	80.402	6.23	10487	2000	
B	11	1	6	120.305	ppb	120.305	3.08	12609	2000	
Na	23	2	45	250269.460	ppb	250269.460	7.61	21185586	400000	
Mg	24	2	45	103955.459	ppb	103955.459	8.47	3984196	400000	
Al	27	2	45	2963.268	ppb	2963.268	5.12	33310	400000	
Si	28	2	45	5464.331	ppb	5464.331	8.01	384090	10000	
P	31	2	45	1420.933	ppb	1420.933	7.19	1667	10000	
K	39	2	45	7275.348	ppb	7275.348	8.56	216219	400000	
Ca	40	1	45	133333.973	ppb	133333.973	2.69	121849128	400000	
Ti	47	2	45	150.032	ppb	150.032	11.11	1553	4000	
V	51	2	72	121.906	ppb	121.906	8.71	50928	2000	
Cr	52	2	72	127.937	ppb	127.937	8.62	70030	5000	
Mn	55	2	72	1264.407	ppb	1264.407	7.02	308979	10000	
Fe	56	1	72	2864.980	ppb	2864.980	1.60	5815026	10000	
(Fe)	57	2	72	4110.467	ppb	4110.467	9.83	42986	400000	
Co	59	2	72	116.620	ppb	116.620	7.45	100002	2000	
Ni	60	2	72	119.615	ppb	119.615	6.21	28596	5000	
Cu	63	2	72	122.435	ppb	122.435	7.31	79246	5000	
Zn	66	2	72	120.931	ppb	120.931	4.27	15054	5000	
As	75	2	72	113.181	ppb	113.181	8.41	11003	2000	
Se	78	1	72	82.940	ppb	82.940	2.69	6940	2000	
Sr	88	2	72	1578.302	ppb	1578.302	7.53	445181	4000	
Zr	90	2	72	302.004	ppb	302.004	10.65	683	1000	
Mo	95	2	115	124.023	ppb	124.023	8.26	39462	2000	
Ag	107	2	115	124.964	ppb	124.964	8.15	132206	100	
Cd	111	2	115	117.878	ppb	117.878	8.94	19402	2000	
Sn	120	2	115	118.164	ppb	118.164	10.26	53437	2000	
Sb	121	2	115	118.807	ppb	118.807	9.08	56949	1000	
Ba	137	2	115	1286.487	ppb	1286.487	9.90	176674	5000	
W	182	2	165	0.225	ppb	0.225	36.14	643	100	
Tl	205	2	165	118.483	ppb	118.483	7.04	332244	2000	
Pb	208	2	165	118.063	ppb	118.063	7.01	452551	5000	
Th	232	2	193	119.618	ppb	119.618	7.27	503190	2000	
U	238	2	193	122.327	ppb	122.327	8.74	541739	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	153154	2.82	253490	60.42	60	120	
Sc (IS)	45	1	HMI H2	5642504	2.03	9587331	58.85	60	120	IS Failed
Sc (IS)	45	2	HMI He	387919	5.95	964862	40.20	60	120	IS Failed
Sc (IS)	45	3	No Gas	6315822	0.22	17821643	35.44	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	3111199	0.90	5262568	59.12	60	120	IS Failed
Ge Internal standard	72	2	HMI He	474731	5.95	1150133	41.28	60	120	IS Failed
In Internal standard	115	2	HMI He	1551220	6.97	3923278	39.54	60	120	IS Failed
Ho-165	165	2	HMI He	5890147	5.63	14697450	40.08	60	120	IS Failed
Ir (IS)	193	2	HMI He	4401326	5.83	10905184	40.36	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175050-A-1-A pds
Data File Name	233SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:55:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	96438.238	ppb	96438.238	1.74	1122947	50000	
Be	9	1	6	1193.423	ppb	1193.423	10.54	29059	2000	
B	11	1	6	845.664	ppb	845.664	10.67	15120	2000	
Na	23	2	45	3328216.905	ppb	3328216.905	47.77	24346113	400000	>LDR
Mg	24	2	45	1367454.142	ppb	1367454.142	47.95	4524975	400000	
Al	27	2	45	82702.570	ppb	82702.570	48.17	80131	400000	
Si	28	2	45	70058.214	ppb	70058.214	47.10	418419	10000	>LDR
P	31	2	45	88208.761	ppb	88208.761	45.76	8663	10000	>LDR
K	39	2	45	140954.534	ppb	140954.534	46.75	335449	400000	
Ca	40	1	45	1008849.443	ppb	1008849.443	8.43	141144371	400000	
Ti	47	2	45	4291.622	ppb	4291.622	48.93	3821	4000	
V	51	2	72	1902.462	ppb	1902.462	16.66	135740	2000	
Cr	52	2	72	1941.504	ppb	1941.504	16.03	181187	5000	
Mn	55	2	72	9060.477	ppb	9060.477	18.15	381387	10000	
Fe	56	1	72	21271.004	ppb	21271.004	6.48	7591724	10000	
(Fe)	57	2	72	30297.732	ppb	30297.732	17.11	54604	400000	
Co	59	2	72	1803.588	ppb	1803.588	16.54	266935	2000	
Ni	60	2	72	1812.291	ppb	1812.291	17.96	74032	5000	
Cu	63	2	72	1898.540	ppb	1898.540	18.02	210074	5000	
Zn	66	2	72	3666.044	ppb	3666.044	18.67	77438	5000	
As	75	2	72	1722.669	ppb	1722.669	17.35	28794	2000	
Se	78	1	72	1227.307	ppb	1227.307	5.44	18093	2000	
Sr	88	2	72	10119.747	ppb	10119.747	17.64	492113	4000	
Zr	90	2	72	2975.172	ppb	2975.172	4.38	760	1000	
Mo	95	2	115	4308.118	ppb	4308.118	47.06	108309	2000	
Ag	107	2	115	1105.358	ppb	1105.358	48.47	91983	100	>LDR
Cd	111	2	115	3961.957	ppb	3961.957	46.77	51627	2000	
Sn	120	2	115	4145.394	ppb	4145.394	47.78	147040	2000	
Sb	121	2	115	3905.000	ppb	3905.000	47.44	147772	1000	
Ba	137	2	115	20170.738	ppb	20170.738	49.06	217957	5000	
W	182	2	165	4935.146	ppb	4935.146	49.26	545035	100	>LDR
Tl	205	2	165	4017.767	ppb	4017.767	49.77	924262	2000	
Pb	208	2	165	3966.472	ppb	3966.472	48.97	1247070	5000	
Th	232	2	193	4549.053	ppb	4549.053	47.80	1616610	2000	
U	238	2	193	8864.362	ppb	8864.362	47.62	3339371	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	28704	5.76	253490	11.32	60	120	IS Failed
Sc (IS)	45	1	HMI H2	866655	5.91	9587331	9.04	60	120	IS Failed
Sc (IS)	45	2	HMI He	38307	40.94	964862	3.97	60	120	IS Failed
Sc (IS)	45	3	No Gas	29771	2.16	17821643	0.17	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	549019	3.21	5262568	10.43	60	120	IS Failed
Ge Internal standard	72	2	HMI He	83226	16.50	1150133	7.24	60	120	IS Failed
In Internal standard	115	2	HMI He	139397	40.02	3923278	3.55	60	120	IS Failed
Ho-165	165	2	HMI He	554874	40.08	14697450	3.78	60	120	IS Failed
Ir (IS)	193	2	HMI He	426977	39.56	10905184	3.92	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175050-A-2-A
Data File Name	234SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-17T23:59:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	4.238	ppb	4.238	20.50	556778	50000	
Be	9	1	6	87.607	ppb	87.607	26.15	627	2000	
B	11	1	6	3298.175	ppb	3298.175	2.59	17209	2000	
Na	23	2	45	219064.139	ppb	219064.139	49.86	20936554	400000	
Mg	24	2	45	65333.908	ppb	65333.908	50.52	2823268	400000	
Al	27	2	45	333.600	ppb	333.600	110.85	3637	400000	
Si	28	2	45	4520.055	ppb	4520.055	51.07	360269	10000	
P	31	2	45	1502.381	ppb	1502.381	61.63	1939	10000	
K	39	2	45	4594.047	ppb	4594.047	57.60	161150	400000	
Ca	40	1	45	12949460.800	ppb	12949460.800	13.02	104485125	400000	>LDR
Ti	47	2	45	19.053	ppb	19.053	117.86	187	4000	
V	51	2	72	9.808	ppb	9.808	141.10	4441	2000	
Cr	52	2	72	13.238	ppb	13.238	117.75	8176	5000	
Mn	55	2	72	1061.580	ppb	1061.580	45.97	296827	10000	
Fe	56	1	72	59697.303	ppb	59697.303	4.41	4892218	10000	>LDR
(Fe)	57	2	72	2807.694	ppb	2807.694	49.02	33449	400000	
Co	59	2	72	9.566	ppb	9.566	137.71	7540	2000	
Ni	60	2	72	13.952	ppb	13.952	108.53	3587	5000	
Cu	63	2	72	15.637	ppb	15.637	98.12	11045	5000	
Zn	66	2	72	27.454	ppb	27.454	101.76	3647	5000	
As	75	2	72	19.532	ppb	19.532	90.59	2009	2000	
Se	78	1	72	119.517	ppb	119.517	36.13	400	2000	
Sr	88	2	72	869.411	ppb	869.411	48.41	279190	4000	
Zr	90	2	72	85.873	ppb	85.873	74.32	463	1000	
Mo	95	2	115	14.879	ppb	14.879	108.66	4624	2000	
Ag	107	2	115	2.312	ppb	2.312	153.81	2124	100	
Cd	111	2	115	9.074	ppb	9.074	149.36	1304	2000	
Sn	120	2	115	9.658	ppb	9.658	139.17	4345	2000	
Sb	121	2	115	8.440	ppb	8.440	146.25	3571	1000	
Ba	137	2	115	603.927	ppb	603.927	51.91	92922	5000	
W	182	2	165	13.000	ppb	13.000	127.41	16894	100	
Tl	205	2	165	8.344	ppb	8.344	150.94	20783	2000	
Pb	208	2	165	8.562	ppb	8.562	149.56	30645	5000	
Th	232	2	193	11.997	ppb	11.997	124.17	53052	2000	
U	238	2	193	17.680	ppb	17.680	146.83	71797	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	8448	4.64	253490	3.33	60	120	IS Failed
Sc (IS)	45	1	HMI H2	50300	11.01	9587331	0.52	60	120	IS Failed
Sc (IS)	45	2	HMI He	488626	32.05	964862	50.64	60	120	IS Failed
Sc (IS)	45	3	No Gas	10850834	3.36	17821643	60.89	60	120	
Ge Internal standard	72	1	HMI H2	126118	5.48	5262568	2.40	60	120	IS Failed
Ge Internal standard	72	2	HMI He	595732	29.65	1150133	51.80	60	120	IS Failed
In Internal standard	115	2	HMI He	1934944	30.70	3923278	49.32	60	120	IS Failed
Ho-165	165	2	HMI He	7384900	29.55	14697450	50.25	60	120	IS Failed
Ir (IS)	193	2	HMI He	5587654	30.06	10905184	51.24	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175050-A-3-A
Data File Name	235SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:02:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	22049.376	ppb	22049.376	4.35	184108	50000	
Be	9	1	6	3.222	ppb	3.222	89.38	20	2000	
B	11	1	6	2429.908	ppb	2429.908	9.26	10664	2000	
Na	23	2	45	589784228.738	ppb	589784228.738	5.85	36482133	400000	>LDR
Mg	24	2	45	103060613.352	ppb	103060613.352	5.29	2888972	400000	>LDR
Al	27	2	45	48145.928	ppb	48145.928	35.08	397	400000	
Si	28	2	45	5935326.592	ppb	5935326.592	5.59	298853	10000	>LDR
P	31	2	45	430825.776	ppb	430825.776	10.92	355	10000	>LDR
K	39	2	45	8971721.967	ppb	8971721.967	4.43	179251	400000	>LDR
Ca	40	1	45	174567914.652	ppb	174567914.652	5.28	194627177	400000	>LDR
Ti	47	2	45	2162.428	ppb	2162.428	93.38	17	4000	
V	51	2	72	24.721	ppb	24.721	11.83	853	2000	
Cr	52	2	72	50.441	ppb	50.441	11.75	2217	5000	
Mn	55	2	72	39494.351	ppb	39494.351	7.96	758760	10000	
Fe	56	1	72	6164.593	ppb	6164.593	5.08	376353	10000	
(Fe)	57	2	72	3793.918	ppb	3793.918	6.63	3127	400000	
Co	59	2	72	19.252	ppb	19.252	15.75	1297	2000	
Ni	60	2	72	79.216	ppb	79.216	19.54	1500	5000	
Cu	63	2	72	74.127	ppb	74.127	6.74	3801	5000	
Zn	66	2	72	72.112	ppb	72.112	23.05	713	5000	
As	75	2	72	183.571	ppb	183.571	13.29	1398	2000	
Se	78	1	72	5.794	ppb	5.794	32.00	15	2000	
Sr	88	2	72	15873.107	ppb	15873.107	7.60	352169	4000	
Zr	90	2	72	155.750	ppb	155.750	262.13	37	1000	
Mo	95	2	115	1150.603	ppb	1150.603	13.01	957	2000	
Ag	107	2	115	21.752	ppb	21.752	34.15	60	100	
Cd	111	2	115	101.150	ppb	101.150	48.71	43	2000	
Sn	120	2	115	638.025	ppb	638.025	17.07	750	2000	
Sb	121	2	115	109.262	ppb	109.262	28.42	137	1000	
Ba	137	2	115	888660.091	ppb	888660.091	0.29	318916	5000	>LDR
W	182	2	165	3176.976	ppb	3176.976	7.56	1964	100	>LDR
Tl	205	2	165	297.662	ppb	297.662	13.55	383	2000	
Pb	208	2	165	844.593	ppb	844.593	7.74	1480	5000	
Th	232	2	193	495.781	ppb	495.781	17.39	3000	2000	
U	238	2	193	1795.086	ppb	1795.086	10.06	11542	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	7118	7.05	253490	2.81	60	120	IS Failed
Sc (IS)	45	1	HMI H2	6888	2.78	9587331	0.07	60	120	IS Failed
Sc (IS)	45	2	HMI He	283	5.39	964862	0.03	60	120	IS Failed
Sc (IS)	45	3	No Gas	21274	4.00	17821643	0.12	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	93992	9.15	5262568	1.79	60	120	IS Failed
Ge Internal standard	72	2	HMI He	37393	8.10	1150133	3.25	60	120	IS Failed
In Internal standard	115	2	HMI He	4036	1.22	3923278	0.10	60	120	IS Failed
Ho-165	165	2	HMI He	2697	3.34	14697450	0.02	60	120	IS Failed
Ir (IS)	193	2	HMI He	6415	9.02	10905184	0.06	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175050-A-4-A
Data File Name	236SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:06:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	25003.487	ppb	25003.487	0.41	253769	50000	
Be	9	1	6	2.049	ppb	2.049	39.77	13	2000	
B	11	1	6	2153.724	ppb	2153.724	4.26	9626	2000	
Na	23	2	45	1134614870.292	ppb	1134614870.292	13.38	44955086	400000	>LDR
Mg	24	2	45	323096491.912	ppb	323096491.912	13.61	5798509	400000	>LDR
Al	27	2	45	165812.488	ppb	165812.488	32.70	860	400000	
Si	28	2	45	13373805.328	ppb	13373805.328	13.70	431156	10000	>LDR
P	31	2	45	951722.243	ppb	951722.243	14.42	503	10000	>LDR
K	39	2	45	12471787.881	ppb	12471787.881	14.30	159388	400000	>LDR
Ca	40	1	45	186973518.708	ppb	186973518.708	2.04	251983830	400000	>LDR
Ti	47	2	45	1555.182	ppb	1555.182	173.21	7	4000	
V	51	2	72	53.517	ppb	53.517	18.50	2054	2000	
Cr	52	2	72	52.304	ppb	52.304	15.53	2647	5000	
Mn	55	2	72	45393.316	ppb	45393.316	9.70	1007101	10000	
Fe	56	1	72	1974.529	ppb	1974.529	29.88	127744	10000	
(Fe)	57	2	72	1145.280	ppb	1145.280	3.66	1100	400000	
Co	59	2	72	55.379	ppb	55.379	6.49	4324	2000	
Ni	60	2	72	104.101	ppb	104.101	3.81	2274	5000	
Cu	63	2	72	70.975	ppb	70.975	10.36	4197	5000	
Zn	66	2	72	137.853	ppb	137.853	4.25	1560	5000	
As	75	2	72	37.349	ppb	37.349	5.49	334	2000	
Se	78	1	72	8.660	ppb	8.660	17.71	23	2000	
Sr	88	2	72	18483.213	ppb	18483.213	10.05	473365	4000	
Zr	90	2	72	347.063	ppb	347.063	78.63	70	1000	
Mo	95	2	115	1341.836	ppb	1341.836	0.64	1113	2000	
Ag	107	2	115	16.859	ppb	16.859	32.41	47	100	
Cd	111	2	115	598.304	ppb	598.304	6.52	257	2000	
Sn	120	2	115	560.699	ppb	560.699	9.54	660	2000	
Sb	121	2	115	87.784	ppb	87.784	14.02	110	1000	
Ba	137	2	115	846066.071	ppb	846066.071	2.77	303133	5000	>LDR
W	182	2	165	3977.434	ppb	3977.434	24.28	1654	100	>LDR
Tl	205	2	165	366.118	ppb	366.118	32.90	327	2000	
Pb	208	2	165	1075.236	ppb	1075.236	23.69	1273	5000	
Th	232	2	193	136.231	ppb	136.231	1.89	1850	2000	
U	238	2	193	2694.813	ppb	2694.813	11.58	38184	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	7225	4.90	253490	2.85	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8322	2.76	9587331	0.09	60	120	IS Failed
Sc (IS)	45	2	HMI He	183	13.73	964862	0.02	60	120	IS Failed
Sc (IS)	45	3	No Gas	25847	1.59	17821643	0.15	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	97918	8.86	5262568	1.86	60	120	IS Failed
Ge Internal standard	72	2	HMI He	43275	9.95	1150133	3.76	60	120	IS Failed
In Internal standard	115	2	HMI He	4032	3.54	3923278	0.10	60	120	IS Failed
Ho-165	165	2	HMI He	1867	16.96	14697450	0.01	60	120	IS Failed
Ir (IS)	193	2	HMI He	14167	9.60	10905184	0.13	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	237_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:09:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	3127.532	ppb	7.319	13986	50	6255.1	90	110	>+\-10%
Na	23	2	45	827800406.104	ppb	71.663	16498561	51000	1623138.1	90	110	>+\-10%
Mg	24	2	45	173213915.986	ppb	73.162	1554724	11000	1574672.0	90	110	>+\-10%
Al	27	2	45	13986057.781	ppb	72.283	36901	1000	1398605.8	90	110	>+\-10%
K	39	2	45	160050122.330	ppb	71.173	1031890	11000	1455001.1	90	110	>+\-10%
Ca	40	1	45	71392567.617	ppb	4.139	27858093	11000	649023.3	90	110	>+\-10%
Ti	47	2	45	728750.346	ppb	78.011	1734	50	1457500.7	90	110	>+\-10%
V	51	2	72	2025.025	ppb	5.867	71651	50	4050.0	90	110	>+\-10%
Cr	52	2	72	2067.283	ppb	4.882	95613	50	4134.6	90	110	>+\-10%
Mn	55	2	72	2060.721	ppb	6.979	43080	50	4121.4	90	110	>+\-10%
Fe	56	1	72	65067.568	ppb	7.395	4740591	1000	6506.8	90	110	>+\-10%
Co	59	2	72	1930.499	ppb	4.702	141711	50	3861.0	90	110	>+\-10%
Ni	60	2	72	2003.232	ppb	3.500	40661	50	4006.5	90	110	>+\-10%
Cu	63	2	72	2001.585	ppb	6.261	109961	50	4003.2	90	110	>+\-10%
Zn	66	2	72	1866.038	ppb	1.491	19629	50	3732.1	90	110	>+\-10%
As	75	2	72	1801.790	ppb	5.895	14942	50	3603.6	90	110	>+\-10%
Se	78	1	72	2876.197	ppb	9.800	8641	50	5752.4	90	110	>+\-10%
Sr	88	2	72	3789.817	ppb	2.912	91573	100	3789.8	90	110	>+\-10%
Zr	90	2	72	1272.494	ppb	46.782	170	50	2545.0	90	110	>+\-10%
Mo	95	2	115	88180.609	ppb	8.328	57787	50	176361.2	90	110	>+\-10%
Ag	107	2	115	82923.498	ppb	6.558	180882	50	165847.0	90	110	>+\-10%
Cd	111	2	115	82990.594	ppb	9.984	28126	50	165981.2	90	110	>+\-10%
Sn	120	2	115	84029.726	ppb	6.995	77884	50	168059.5	90	110	>+\-10%
Sb	121	2	115	80786.824	ppb	9.461	79736	50	161573.6	90	110	>+\-10%
Ba	137	2	115	83999.949	ppb	7.807	23789	50	167999.9	90	110	>+\-10%
W	182	2	165	819164.384	ppb	20.743	239878	50	1638328.8	90	110	>+\-10%
Tl	205	2	165	782515.690	ppb	21.487	477522	50	1565031.4	90	110	>+\-10%
Pb	208	2	165	777362.167	ppb	21.229	646991	50	1554724.3	90	110	>+\-10%
Th	232	2	193	98189.462	ppb	20.363	706002	50	196378.9	90	110	>+\-10%
U	238	2	193	99010.311	ppb	20.167	754409	50	198020.6	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	5265	5.57	253490	2.08	60	120	IS Failed
Sc (IS)	45	1	HMI H2	2414	6.48	9587331	0.03	60	120	IS Failed
Sc (IS)	45	2	HMI He	123	56.95	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	2774	4.54	17821643	0.02	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	112487	9.78	5262568	2.14	60	120	IS Failed
Ge Internal standard	72	2	HMI He	40592	4.93	1150133	3.53	60	120	IS Failed
In Internal standard	115	2	HMI He	3198	8.32	3923278	0.08	60	120	IS Failed
Ho-165	165	2	HMI He	1313	18.42	14697450	0.01	60	120	IS Failed
Ir (IS)	193	2	HMI He	7749	17.80	10905184	0.07	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	238_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:13:28-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	35017.984	ppb	12.4	23200	10	>RL
Be	9	1	6	10.849	ppb	59.2	60	0.5	>RL
B	11	1	6	2528.849	ppb	1.9	10070	0.5	>RL
Na	23	2	45	2120335.740	ppb	18.2	57363	25	>RL
Mg	24	2	45	278507.631	ppb	16.4	3427	25	>RL
Al	27	2	45	33811.851	ppb	28.5	120	15	>RL
K	39	2	45	4004930.484	ppb	21.0	34837	50	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	23.358	ppb	16.9	820	1	>RL
Cr	52	2	72	51.984	ppb	7.4	2354	1	>RL
Mn	55	2	72	55.924	ppb	17.3	1100	0.5	>RL
(Fe)	57	2	72	398.042	ppb	37.3	337	25	>RL
Co	59	2	72	3.811	ppb	43.5	260	0.5	>RL
Ni	60	2	72	70.124	ppb	11.9	1357	1	>RL
Cu	63	2	72	44.783	ppb	24.1	2337	1	>RL
Zn	66	2	72	34.711	ppb	28.6	363	5	>RL
As	75	2	72	8.292	ppb	36.6	67	1	>RL
Se	78	1	72	8.052	ppb	29.8	23	1	>RL
Sr	88	2	72	33.490	ppb	18.0	763	0.5	>RL
Zr	90	2	72	-168.566	ppb	-28.1	3	1	
Mo	95	2	115	271.976	ppb	29.0	197	0.5	>RL
Ag	107	2	115	44.271	ppb	26.5	107	1	>RL
Cd	111	2	115	8.595	ppb	173.7	3	0.5	>RL
Sn	120	2	115	902.516	ppb	17.4	927	1	>RL
Sb	121	2	115	239.083	ppb	15.1	260	0.6	>RL
Ba	137	2	115	780.314	ppb	17.9	243	0.5	>RL
W	182	2	165	7086.233	ppb	16.5	1777	1	>RL
Tl	205	2	165	1574.601	ppb	19.4	823	0.1	>RL
Pb	208	2	165	2024.056	ppb	14.1	1443	0.5	>RL
Th	232	2	193	2137.897	ppb	8.6	9370	1	>RL
U	238	2	193	155.104	ppb	21.0	720	0.5	>RL

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	6430	5.36	253490	2.54	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1927	9.08	9587331	0.02	60	120	IS Failed
Sc (IS)	45	2	HMI He	127	19.87	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	1704	9.99	17821643	0.01	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	103404	10.70	5262568	1.96	60	120	IS Failed
Ge Internal standard	72	2	HMI He	38272	11.19	1150133	3.33	60	120	IS Failed
In Internal standard	115	2	HMI He	3518	3.58	3923278	0.09	60	120	IS Failed
Ho-165	165	2	HMI He	1107	10.47	14697450	0.01	60	120	IS Failed
Ir (IS)	193	2	HMI He	4651	16.96	10905184	0.04	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175050-A-5-A
Data File Name	239SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:17:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	29793.076	ppb	29793.076	19.93	22489	50000	
Be	9	1	6	8.036	ppb	8.036	88.50	37	2000	
B	11	1	6	1528.167	ppb	1528.167	1.38	4884	2000	
Na	23	2	45	13787717.004	ppb	13787717.004	59.34	295070	400000	>LDR
Mg	24	2	45	2143854.928	ppb	2143854.928	62.08	20706	400000	>LDR
Al	27	2	45	57434.023	ppb	57434.023	20.00	167	400000	
Si	28	2	45	1092201.587	ppb	1092201.587	20.09	19048	10000	>LDR
P	31	2	45	395575.222	ppb	395575.222	20.39	113	10000	>LDR
K	39	2	45	5276813.764	ppb	5276813.764	13.48	36691	400000	>LDR
Ca	40	1	45	5952651.313	ppb	5952651.313	19.42	1634219	400000	>LDR
Ti	47	2	45	1382.470	ppb	1382.470	173.21	3	4000	
V	51	2	72	21.112	ppb	21.112	8.45	773	2000	
Cr	52	2	72	49.954	ppb	49.954	13.15	2320	5000	
Mn	55	2	72	439.385	ppb	439.385	31.46	9000	10000	
Fe	56	1	72	537.090	ppb	537.090	13.26	34797	10000	
(Fe)	57	2	72	372.632	ppb	372.632	53.97	333	400000	
Co	59	2	72	2.377	ppb	2.377	28.90	170	2000	
Ni	60	2	72	46.568	ppb	46.568	10.69	940	5000	
Cu	63	2	72	42.898	ppb	42.898	2.61	2344	5000	
Zn	66	2	72	53.018	ppb	53.018	6.10	557	5000	
As	75	2	72	8.739	ppb	8.739	8.88	74	2000	
Se	78	1	72	2.845	ppb	2.845	79.10	8	2000	
Sr	88	2	72	123.037	ppb	123.037	46.09	2924	4000	
Zr	90	2	72	-76.843	ppb	-76.843	-134.58	13	1000	
Mo	95	2	115	91.297	ppb	91.297	43.96	67	2000	
Ag	107	2	115	42.347	ppb	42.347	60.71	103	100	
Cd	111	2	115	61.933	ppb	61.933	21.15	23	2000	
Sn	120	2	115	759.989	ppb	759.989	12.92	777	2000	
Sb	121	2	115	108.629	ppb	108.629	46.78	120	1000	
Ba	137	2	115	6970.546	ppb	6970.546	48.67	2214	5000	
W	182	2	165	6210.174	ppb	6210.174	40.52	1070	100	>LDR
Tl	205	2	165	781.770	ppb	781.770	21.59	293	2000	
Pb	208	2	165	2361.298	ppb	2361.298	34.09	1180	5000	
Th	232	2	193	389.001	ppb	389.001	18.78	2874	2000	
U	238	2	193	39.672	ppb	39.672	32.52	330	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	5149	4.92	253490	2.03	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1680	7.78	9587331	0.02	60	120	IS Failed
Sc (IS)	45	2	HMI He	100	17.33	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	1970	18.30	17821643	0.01	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	99122	10.54	5262568	1.88	60	120	IS Failed
Ge Internal standard	72	2	HMI He	39355	4.71	1150133	3.42	60	120	IS Failed
In Internal standard	115	2	HMI He	3521	4.88	3923278	0.09	60	120	IS Failed
Ho-165	165	2	HMI He	827	34.22	14697450	0.01	60	120	IS Failed
Ir (IS)	193	2	HMI He	7986	24.12	10905184	0.07	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-2-A
Data File Name	240SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:20:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	3141.227	ppb	3141.227	6.66	113803	50000	
Be	9	1	6	4.447	ppb	4.447	92.75	17	2000	
B	11	1	6	1827.871	ppb	1827.871	11.33	5064	2000	
Na	23	2	45	333508014.654	ppb	333508014.654	92.64	2917322	400000	>LDR
Mg	24	2	45	455880809.860	ppb	455880809.860	93.66	1799151	400000	>LDR
Al	27	2	45	370334.227	ppb	370334.227	108.50	380	400000	
Si	28	2	45	93463308.892	ppb	93463308.892	93.33	661817	10000	>LDR
P	31	2	45	1716761.558	ppb	1716761.558	92.61	199	10000	>LDR
K	39	2	45	77860780.960	ppb	77860780.960	93.09	218938	400000	>LDR
Ca	40	1	45	22031900.052	ppb	22031900.052	11.64	38625584	400000	>LDR
Ti	47	2	45	10072.155	ppb	10072.155	74.00	13	4000	
V	51	2	72	501.353	ppb	501.353	8.51	18931	2000	
Cr	52	2	72	140.596	ppb	140.596	7.38	7012	5000	
Mn	55	2	72	55.313	ppb	55.313	13.74	1243	10000	
Fe	56	1	72	1047.081	ppb	1047.081	17.02	80773	10000	
(Fe)	57	2	72	654.367	ppb	654.367	35.58	627	400000	
Co	59	2	72	2.388	ppb	2.388	40.03	187	2000	
Ni	60	2	72	40.352	ppb	40.352	31.04	890	5000	
Cu	63	2	72	48.862	ppb	48.862	15.55	2914	5000	
Zn	66	2	72	70.777	ppb	70.777	8.37	810	5000	
As	75	2	72	265.986	ppb	265.986	11.32	2350	2000	
Se	78	1	72	57.921	ppb	57.921	13.44	184	2000	
Sr	88	2	72	3397.994	ppb	3397.994	11.35	87251	4000	
Zr	90	2	72	48.971	ppb	48.971	343.28	30	1000	
Mo	95	2	115	5487.539	ppb	5487.539	13.77	3931	2000	
Ag	107	2	115	25.261	ppb	25.261	35.56	60	100	
Cd	111	2	115	9.196	ppb	9.196	173.66	3	2000	
Sn	120	2	115	693.263	ppb	693.263	7.99	703	2000	
Sb	121	2	115	104.816	ppb	104.816	35.33	113	1000	
Ba	137	2	115	18175.393	ppb	18175.393	3.10	5631	5000	
W	182	2	165	5248.313	ppb	5248.313	31.38	957	100	>LDR
Tl	205	2	165	399.966	ppb	399.966	26.97	153	2000	
Pb	208	2	165	2958.084	ppb	2958.084	27.69	1537	5000	
Th	232	2	193	246.245	ppb	246.245	28.14	1500	2000	
U	238	2	193	1050.408	ppb	1050.408	28.63	6782	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	4494	7.73	253490	1.77	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10947	14.45	9587331	0.11	60	120	IS Failed
Sc (IS)	45	2	HMI He	73	83.32	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	89303	4.84	17821643	0.50	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	119515	13.38	5262568	2.27	60	120	IS Failed
Ge Internal standard	72	2	HMI He	43245	4.62	1150133	3.76	60	120	IS Failed
In Internal standard	115	2	HMI He	3486	2.32	3923278	0.09	60	120	IS Failed
Ho-165	165	2	HMI He	843	29.05	14697450	0.01	60	120	IS Failed
Ir (IS)	193	2	HMI He	6769	30.78	10905184	0.06	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-3-A
Data File Name	241SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:24:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	5455.962	ppb	5455.962	1.01	76381	50000	
Be	9	1	6	2.537	ppb	2.537	118.38	13	2000	
B	11	1	6	1428.798	ppb	1428.798	13.37	4991	2000	
Na	23	2	45	86181455.457	ppb	86181455.457	21.89	2566882	400000	>LDR
Mg	24	2	45	96547691.413	ppb	96547691.413	22.22	1302493	400000	>LDR
Al	27	2	45	85466.452	ppb	85466.452	85.28	310	400000	
Si	28	2	45	26714825.820	ppb	26714825.820	23.58	646238	10000	>LDR
P	31	2	45	887754.166	ppb	887754.166	30.32	349	10000	>LDR
K	39	2	45	27707324.536	ppb	27707324.536	23.30	266002	400000	>LDR
Ca	40	1	45	4295682.455	ppb	4295682.455	42.84	27434225	400000	>LDR
Ti	47	2	45	4948.517	ppb	4948.517	102.98	17	4000	
V	51	2	72	776.390	ppb	776.390	16.58	22549	2000	
Cr	52	2	72	217.748	ppb	217.748	16.56	8319	5000	
Mn	55	2	72	43.230	ppb	43.230	33.79	737	10000	
Fe	56	1	72	823.659	ppb	823.659	8.07	54075	10000	
(Fe)	57	2	72	468.023	ppb	468.023	7.21	353	400000	
Co	59	2	72	1.790	ppb	1.790	23.45	113	2000	
Ni	60	2	72	36.540	ppb	36.540	21.28	623	5000	
Cu	63	2	72	44.838	ppb	44.838	22.19	2057	5000	
Zn	66	2	72	87.548	ppb	87.548	37.14	753	5000	
As	75	2	72	127.806	ppb	127.806	14.40	874	2000	
Se	78	1	72	17.833	ppb	17.833	23.57	48	2000	
Sr	88	2	72	3340.832	ppb	3340.832	18.82	65974	4000	
Zr	90	2	72	243.272	ppb	243.272	133.23	40	1000	
Mo	95	2	115	1303.066	ppb	1303.066	10.70	873	2000	
Ag	107	2	115	10.883	ppb	10.883	88.59	23	100	
Cd	111	2	115	8.683	ppb	8.683	173.68	3	2000	
Sn	120	2	115	687.079	ppb	687.079	20.10	650	2000	
Sb	121	2	115	62.981	ppb	62.981	30.00	63	1000	
Ba	137	2	115	13625.887	ppb	13625.887	5.65	3957	5000	
W	182	2	165	4185.138	ppb	4185.138	46.10	640	100	>LDR
Tl	205	2	165	832.399	ppb	832.399	54.66	253	2000	
Pb	208	2	165	3032.675	ppb	3032.675	40.46	1320	5000	
Th	232	2	193	261.977	ppb	261.977	16.87	983	2000	
U	238	2	193	578.963	ppb	578.963	29.53	2260	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	5664	8.47	253490	2.23	60	120	IS Failed
Sc (IS)	45	1	HMI H2	44496	41.05	9587331	0.46	60	120	IS Failed
Sc (IS)	45	2	HMI He	140	18.90	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	35021	1.55	17821643	0.20	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	100149	3.24	5262568	1.90	60	120	IS Failed
Ge Internal standard	72	2	HMI He	33752	14.40	1150133	2.93	60	120	IS Failed
In Internal standard	115	2	HMI He	3277	8.69	3923278	0.08	60	120	IS Failed
Ho-165	165	2	HMI He	760	44.45	14697450	0.01	60	120	IS Failed
Ir (IS)	193	2	HMI He	4037	22.90	10905184	0.04	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-4-A
Data File Name	242SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:27:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	6932.557	ppb	6932.557	3.57	86438	50000	
Be	9	1	6	4.541	ppb	4.541	91.93	17	2000	
B	11	1	6	1636.048	ppb	1636.048	11.65	4271	2000	
Na	23	2	45	133704945.424	ppb	133704945.424	30.55	3006781	400000	>LDR
Mg	24	2	45	129460423.881	ppb	129460423.881	29.51	1321427	400000	>LDR
Al	27	2	45	83662.391	ppb	83662.391	29.53	253	400000	
Si	28	2	45	33067288.512	ppb	33067288.512	30.55	605076	10000	>LDR
P	31	2	45	1039386.547	ppb	1039386.547	30.86	312	10000	>LDR
K	39	2	45	32355617.605	ppb	32355617.605	30.45	234909	400000	>LDR
Ca	40	1	45	24846140.247	ppb	24846140.247	1.60	26632225	400000	>LDR
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	770.075	ppb	770.075	13.40	22826	2000	
Cr	52	2	72	229.687	ppb	229.687	11.81	8966	5000	
Mn	55	2	72	38.217	ppb	38.217	16.51	680	10000	
Fe	56	1	72	603.304	ppb	603.304	12.54	32998	10000	
(Fe)	57	2	72	391.994	ppb	391.994	20.49	300	400000	
Co	59	2	72	2.002	ppb	2.002	38.32	123	2000	
Ni	60	2	72	32.542	ppb	32.542	17.10	577	5000	
Cu	63	2	72	38.497	ppb	38.497	15.57	1817	5000	
Zn	66	2	72	104.795	ppb	104.795	28.68	923	5000	
As	75	2	72	150.019	ppb	150.019	13.42	1046	2000	
Se	78	1	72	30.406	ppb	30.406	41.46	71	2000	
Sr	88	2	72	3402.893	ppb	3402.893	13.36	68762	4000	
Zr	90	2	72	144.892	ppb	144.892	51.24	33	1000	
Mo	95	2	115	2019.963	ppb	2019.963	7.10	1193	2000	
Ag	107	2	115	25.436	ppb	25.436	63.54	50	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	732.902	ppb	732.902	24.36	613	2000	
Sb	121	2	115	88.212	ppb	88.212	23.22	80	1000	
Ba	137	2	115	16046.910	ppb	16046.910	5.18	4101	5000	
W	182	2	165	141856.865	ppb	141856.865	38.53	12439	100	>LDR
Tl	205	2	165	834.589	ppb	834.589	30.60	157	2000	
Pb	208	2	165	4551.269	ppb	4551.269	42.53	1120	5000	
Th	232	2	193	343.417	ppb	343.417	14.20	680	2000	
U	238	2	193	1709.262	ppb	1709.262	7.36	3577	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	4217	3.62	253490	1.66	60	120	IS Failed
Sc (IS)	45	1	HMI H2	6618	3.77	9587331	0.07	60	120	IS Failed
Sc (IS)	45	2	HMI He	110	32.78	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	31357	2.36	17821643	0.18	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	83872	12.09	5262568	1.59	60	120	IS Failed
Ge Internal standard	72	2	HMI He	34306	13.14	1150133	2.98	60	120	IS Failed
In Internal standard	115	2	HMI He	2882	9.59	3923278	0.07	60	120	IS Failed
Ho-165	165	2	HMI He	433	45.54	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	2080	3.00	10905184	0.02	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-5-A
Data File Name	243SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:31:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	7539.891	ppb	7539.891	3.64	101075	50000	
Be	9	1	6	4.503	ppb	4.503	117.68	13	2000	
B	11	1	6	1745.669	ppb	1745.669	9.98	3894	2000	
Na	23	2	45	357986857.144	ppb	357986857.144	53.20	3755646	400000	>LDR
Mg	24	2	45	413023260.935	ppb	413023260.935	53.91	1958048	400000	>LDR
Al	27	2	45	289585.873	ppb	289585.873	78.35	373	400000	
Si	28	2	45	71588702.882	ppb	71588702.882	53.11	611008	10000	>LDR
P	31	2	45	3426459.317	ppb	3426459.317	54.28	479	10000	>LDR
K	39	2	45	68832166.142	ppb	68832166.142	53.11	233032	400000	>LDR
Ca	40	1	45	48549498.324	ppb	48549498.324	0.87	48880514	400000	>LDR
Ti	47	2	45	1555.279	ppb	1555.279	173.21	3	4000	
V	51	2	72	643.456	ppb	643.456	16.30	20043	2000	
Cr	52	2	72	167.329	ppb	167.329	12.21	6895	5000	
Mn	55	2	72	27.766	ppb	27.766	10.44	530	10000	
Fe	56	1	72	919.103	ppb	919.103	11.09	48645	10000	
(Fe)	57	2	72	677.028	ppb	677.028	22.07	540	400000	
Co	59	2	72	1.731	ppb	1.731	23.55	113	2000	
Ni	60	2	72	38.450	ppb	38.450	29.98	697	5000	
Cu	63	2	72	46.911	ppb	46.911	23.18	2304	5000	
Zn	66	2	72	236.778	ppb	236.778	15.21	2210	5000	
As	75	2	72	217.271	ppb	217.271	13.78	1590	2000	
Se	78	1	72	36.622	ppb	36.622	4.40	80	2000	
Sr	88	2	72	5519.256	ppb	5519.256	13.11	117417	4000	
Zr	90	2	72	-8.322	ppb	-8.322	-1001.60	20	1000	
Mo	95	2	115	4078.372	ppb	4078.372	3.08	2384	2000	
Ag	107	2	115	61.029	ppb	61.029	65.15	117	100	
Cd	111	2	115	51.470	ppb	51.470	173.29	17	2000	
Sn	120	2	115	1341.409	ppb	1341.409	8.65	1103	2000	
Sb	121	2	115	243.590	ppb	243.590	12.09	213	1000	
Ba	137	2	115	30116.434	ppb	30116.434	4.27	7582	5000	>LDR
W	182	2	165	208857.775	ppb	208857.775	12.84	10404	100	>LDR
Tl	205	2	165	985.107	ppb	985.107	2.23	103	2000	
Pb	208	2	165	8912.557	ppb	8912.557	15.59	1260	5000	
Th	232	2	193	447.230	ppb	447.230	20.67	690	2000	
U	238	2	193	11505.783	ppb	11505.783	6.40	18666	2000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	3618	9.29	253490	1.43	60	120	IS Failed
Sc (IS)	45	1	HMI H2	6218	5.90	9587331	0.06	60	120	IS Failed
Sc (IS)	45	2	HMI He	57	44.41	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	33771	3.69	17821643	0.19	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	81531	14.40	5262568	1.55	60	120	IS Failed
Ge Internal standard	72	2	HMI He	36098	12.43	1150133	3.14	60	120	IS Failed
In Internal standard	115	2	HMI He	2836	6.19	3923278	0.07	60	120	IS Failed
Ho-165	165	2	HMI He	220	12.03	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1614	5.76	10905184	0.01	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-6-A
Data File Name	244SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:35:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	28232.817	ppb	28232.817	6.87	18284	50000	
Be	9	1	6	5.185	ppb	5.185	100.43	20	2000	
B	11	1	6	1268.908	ppb	1268.908	2.07	3404	2000	
Na	23	2	45	14136340.779	ppb	14136340.779	56.79	151851	400000	>LDR
Mg	24	2	45	804812.172	ppb	804812.172	57.01	3901	400000	
Al	27	2	45	414194.608	ppb	414194.608	55.63	590	400000	
Si	28	2	45	3055537.660	ppb	3055537.660	58.30	26505	10000	>LDR
P	31	2	45	703585.742	ppb	703585.742	62.99	99	10000	>LDR
K	39	2	45	10016874.814	ppb	10016874.814	59.56	34406	400000	>LDR
Ca	40	1	45	2665900.916	ppb	2665900.916	12.15	358046	400000	>LDR
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	24.276	ppb	24.276	22.17	860	2000	
Cr	52	2	72	62.992	ppb	62.992	14.76	2844	5000	
Mn	55	2	72	21.668	ppb	21.668	1.68	443	10000	
Fe	56	1	72	677.751	ppb	677.751	10.04	40420	10000	
(Fe)	57	2	72	370.686	ppb	370.686	29.14	323	400000	
Co	59	2	72	1.174	ppb	1.174	20.37	83	2000	
Ni	60	2	72	34.483	ppb	34.483	14.56	690	5000	
Cu	63	2	72	33.341	ppb	33.341	15.71	1794	5000	
Zn	66	2	72	79.598	ppb	79.598	26.25	813	5000	
As	75	2	72	10.018	ppb	10.018	15.13	82	2000	
Se	78	1	72	2.983	ppb	2.983	98.15	8	2000	
Sr	88	2	72	43.490	ppb	43.490	30.18	997	4000	
Zr	90	2	72	-82.472	ppb	-82.472	-157.90	13	1000	
Mo	95	2	115	77.631	ppb	77.631	42.62	47	2000	
Ag	107	2	115	4.857	ppb	4.857	12.12	10	100	
Cd	111	2	115	29.750	ppb	29.750	92.84	10	2000	
Sn	120	2	115	1081.975	ppb	1081.975	12.72	950	2000	
Sb	121	2	115	304.924	ppb	304.924	26.28	280	1000	
Ba	137	2	115	2499.909	ppb	2499.909	30.01	657	5000	
W	182	2	165	11539.325	ppb	11539.325	17.81	580	100	>LDR
Tl	205	2	165	838.887	ppb	838.887	35.68	90	2000	
Pb	208	2	165	8077.203	ppb	8077.203	2.06	1173	5000	
Th	232	2	193	426.277	ppb	426.277	20.71	590	2000	
U	238	2	193	50.994	ppb	50.994	37.53	77	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	4313	4.83	253490	1.70	60	120	IS Failed
Sc (IS)	45	1	HMI H2	837	11.11	9587331	0.01	60	120	IS Failed
Sc (IS)	45	2	HMI He	60	50.00	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	1653	4.46	17821643	0.01	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	91358	12.18	5262568	1.74	60	120	IS Failed
Ge Internal standard	72	2	HMI He	38773	8.90	1150133	3.37	60	120	IS Failed
In Internal standard	115	2	HMI He	3026	12.50	3923278	0.08	60	120	IS Failed
Ho-165	165	2	HMI He	223	13.68	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1447	11.90	10905184	0.01	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-7-A
Data File Name	245SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:38:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	5874.942	ppb	5874.942	3.05	76874	50000	
Be	9	1	6	7.403	ppb	7.403	93.89	27	2000	
B	11	1	6	1784.132	ppb	1784.132	26.12	4097	2000	
Na	23	2	45	257488975.790	ppb	257488975.790	42.79	2503448	400000	>LDR
Mg	24	2	45	309304690.790	ppb	309304690.790	41.76	1367034	400000	>LDR
Al	27	2	45	372309.841	ppb	372309.841	30.86	497	400000	
Si	28	2	45	78145599.965	ppb	78145599.965	41.46	620931	10000	>LDR
P	31	2	45	2741285.224	ppb	2741285.224	36.99	361	10000	>LDR
K	39	2	45	80891402.911	ppb	80891402.911	42.50	254077	400000	>LDR
Ca	40	1	45	24033000.355	ppb	24033000.355	0.48	26772898	400000	>LDR
Ti	47	2	45	7465.338	ppb	7465.338	173.21	10	4000	
V	51	2	72	711.274	ppb	711.274	5.01	20280	2000	
Cr	52	2	72	242.163	ppb	242.163	7.46	9063	5000	
Mn	55	2	72	27.975	ppb	27.975	20.13	483	10000	
Fe	56	1	72	682.075	ppb	682.075	7.15	33331	10000	
(Fe)	57	2	72	473.056	ppb	473.056	16.68	350	400000	
Co	59	2	72	1.517	ppb	1.517	36.98	90	2000	
Ni	60	2	72	47.998	ppb	47.998	4.24	803	5000	
Cu	63	2	72	37.750	ppb	37.750	11.68	1710	5000	
Zn	66	2	72	211.499	ppb	211.499	15.95	1790	5000	
As	75	2	72	108.049	ppb	108.049	9.79	722	2000	
Se	78	1	72	21.087	ppb	21.087	49.21	41	2000	
Sr	88	2	72	3555.185	ppb	3555.185	4.97	69080	4000	
Zr	90	2	72	58.433	ppb	58.433	458.20	23	1000	
Mo	95	2	115	1741.747	ppb	1741.747	19.81	983	2000	
Ag	107	2	115	280.956	ppb	280.956	23.83	527	100	
Cd	111	2	115	11.110	ppb	11.110	173.58	3	2000	
Sn	120	2	115	1115.093	ppb	1115.093	12.59	893	2000	
Sb	121	2	115	50.819	ppb	50.819	57.28	43	1000	
Ba	137	2	115	25408.796	ppb	25408.796	1.93	6245	5000	>LDR
W	182	2	165	14650.416	ppb	14650.416	43.89	793	100	>LDR
Tl	205	2	165	1053.898	ppb	1053.898	32.27	123	2000	
Pb	208	2	165	7671.427	ppb	7671.427	35.19	1213	5000	
Th	232	2	193	333.795	ppb	333.795	20.47	417	2000	
U	238	2	193	2012.522	ppb	2012.522	7.78	2650	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	3807	15.95	253490	1.50	60	120	IS Failed
Sc (IS)	45	1	HMI H2	6878	3.78	9587331	0.07	60	120	IS Failed
Sc (IS)	45	2	HMI He	50	40.00	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	32810	4.01	17821643	0.18	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	74637	9.85	5262568	1.42	60	120	IS Failed
Ge Internal standard	72	2	HMI He	32698	8.03	1150133	2.84	60	120	IS Failed
In Internal standard	115	2	HMI He	2766	6.46	3923278	0.07	60	120	IS Failed
Ho-165	165	2	HMI He	267	38.49	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1313	9.18	10905184	0.01	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	246_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:42:13-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	4600.689	ppb	8.803	11414	50	9201.4	90	110	>+\-10%
Na	23	2	45	1721652466.114	ppb	24.449	14456508	51000	3375789.1	90	110	>+\-10%
Mg	24	2	45	359722939.262	ppb	24.412	1368940	11000	3270208.5	90	110	>+\-10%
Al	27	2	45	29041347.838	ppb	25.608	32298	1000	2904134.8	90	110	>+\-10%
K	39	2	45	327919675.048	ppb	25.117	887940	11000	2981088.0	90	110	>+\-10%
Ca	40	1	45	128487106.701	ppb	8.915	19711719	11000	1168064.6	90	110	>+\-10%
Ti	47	2	45	1696668.534	ppb	15.093	1774	50	3393337.1	90	110	>+\-10%
V	51	2	72	1907.696	ppb	17.238	62959	50	3815.4	90	110	>+\-10%
Cr	52	2	72	1925.558	ppb	19.341	82871	50	3851.1	90	110	>+\-10%
Mn	55	2	72	1871.806	ppb	18.243	36464	50	3743.6	90	110	>+\-10%
Fe	56	1	72	73420.834	ppb	7.378	3823456	1000	7342.1	90	110	>+\-10%
Co	59	2	72	1817.909	ppb	19.057	124161	50	3635.8	90	110	>+\-10%
Ni	60	2	72	1817.771	ppb	19.597	34286	50	3635.5	90	110	>+\-10%
Cu	63	2	72	1860.417	ppb	18.391	95233	50	3720.8	90	110	>+\-10%
Zn	66	2	72	1785.688	ppb	17.612	17493	50	3571.4	90	110	>+\-10%
As	75	2	72	1622.817	ppb	17.581	12549	50	3245.6	90	110	>+\-10%
Se	78	1	72	3397.209	ppb	13.474	7270	50	6794.4	90	110	>+\-10%
Sr	88	2	72	3459.876	ppb	19.503	77685	100	3459.9	90	110	>+\-10%
Zr	90	2	72	1474.163	ppb	34.714	193	50	2948.3	90	110	>+\-10%
Mo	95	2	115	111590.665	ppb	13.103	49597	50	223181.3	90	110	>+\-10%
Ag	107	2	115	107057.798	ppb	11.327	158432	50	214115.6	90	110	>+\-10%
Cd	111	2	115	104578.372	ppb	10.982	24095	50	209156.7	90	110	>+\-10%
Sn	120	2	115	108267.153	ppb	11.146	68113	50	216534.3	90	110	>+\-10%
Sb	121	2	115	102806.306	ppb	12.420	68900	50	205612.6	90	110	>+\-10%
Ba	137	2	115	105369.285	ppb	13.779	20224	50	210738.6	90	110	>+\-10%
W	182	2	165	4422694.551	ppb	57.961	210030	50	8845389.1	90	110	>+\-10%
Tl	205	2	165	4314877.483	ppb	57.502	427765	50	8629755.0	90	110	>+\-10%
Pb	208	2	165	4245879.784	ppb	56.861	575768	50	8491759.6	90	110	>+\-10%
Th	232	2	193	417043.927	ppb	10.862	627809	50	834087.9	90	110	>+\-10%
U	238	2	193	419016.883	ppb	10.163	668689	50	838033.8	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	2922	5.15	253490	1.15	60	120	IS Failed
Sc (IS)	45	1	HMI H2	950	5.26	9587331	0.01	60	120	IS Failed
Sc (IS)	45	2	HMI He	40	25.00	964862	0.00	60	120	IS Failed
Sc (IS)	45	3	No Gas	1840	12.10	17821643	0.01	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	80505	12.48	5262568	1.53	60	120	IS Failed
Ge Internal standard	72	2	HMI He	38642	19.17	1150133	3.36	60	120	IS Failed
In Internal standard	115	2	HMI He	2181	11.19	3923278	0.06	60	120	IS Failed
Ho-165	165	2	HMI He	263	58.01	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1597	11.59	10905184	0.01	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	247_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:45:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	46644.616	ppb	24.6	18117	10	>RL
Be	9	1	6	2.843	ppb	178.8	10	0.5	>RL
B	11	1	6	3425.324	ppb	8.0	8769	0.5	>RL
Na	23	2	45	13798177.472	ppb	51.7	38310	25	>RL
Mg	24	2	45	1590848.420	ppb	53.1	1990	25	>RL
Al	27	2	45	298673.094	ppb	59.2	107	15	>RL
K	39	2	45	34770426.191	ppb	49.3	31617	50	>RL
Ti	47	2	45	37326.690	ppb	173.2	10	0.5	>RL
V	51	2	72	19.951	ppb	13.4	803	1	>RL
Cr	52	2	72	39.700	ppb	7.9	2050	1	>RL
Mn	55	2	72	14.208	ppb	42.3	320	0.5	>RL
(Fe)	57	2	72	257.063	ppb	28.5	253	25	>RL
Co	59	2	72	2.176	ppb	18.4	173	0.5	>RL
Ni	60	2	72	38.227	ppb	13.8	853	1	>RL
Cu	63	2	72	27.928	ppb	9.6	1704	1	>RL
Zn	66	2	72	24.060	ppb	15.3	290	5	>RL
As	75	2	72	4.796	ppb	12.2	46	1	>RL
Se	78	1	72	5.399	ppb	21.9	13	1	>RL
Sr	88	2	72	13.457	ppb	12.8	357	0.5	>RL
Zr	90	2	72	-171.741	ppb	-24.4	3	1	
Mo	95	2	115	251.950	ppb	6.1	140	0.5	>RL
Ag	107	2	115	55.456	ppb	35.1	103	1	>RL
Cd	111	2	115	139.566	ppb	9.3	40	0.5	>RL
Sn	120	2	115	1123.609	ppb	9.3	880	1	>RL
Sb	121	2	115	220.496	ppb	34.6	183	0.6	>RL
Ba	137	2	115	397.025	ppb	38.9	93	0.5	>RL
W	182	2	165	23459.957	ppb	17.8	1170	1	>RL
Tl	205	2	165	7253.762	ppb	32.3	740	0.1	>RL
Pb	208	2	165	8399.461	ppb	38.1	1157	0.5	>RL
Th	232	2	193	6568.499	ppb	6.8	8146	1	>RL
U	238	2	193	388.960	ppb	33.4	500	0.5	>RL

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	4161	8.09	253490	1.64	60	120	IS Failed
Sc (IS)	45	1	HMI H2	623	14.56	9587331	0.01	60	120	IS Failed
Sc (IS)	45	2	HMI He	17	69.28	964862	0.00	60	120	IS Failed
Sc (IS)	45	3	No Gas	1037	27.03	17821643	0.01	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	93014	18.18	5262568	1.77	60	120	IS Failed
Ge Internal standard	72	2	HMI He	43374	10.61	1150133	3.77	60	120	IS Failed
In Internal standard	115	2	HMI He	2706	9.81	3923278	0.07	60	120	IS Failed
Ho-165	165	2	HMI He	223	22.09	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1310	12.84	10905184	0.01	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-8-A
Data File Name	248SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:49:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	5389.447	ppb	5389.447	2.51	61255	50000	
Be	9	1	6	9.964	ppb	9.964	112.53	30	2000	
B	11	1	6	2635.872	ppb	2635.872	14.47	5364	2000	
Na	23	2	45	494714526.296	ppb	494714526.296	99.78	2342863	400000	>LDR
Mg	24	2	45	562672535.562	ppb	562672535.562	100.68	1201731	400000	>LDR
Al	27	2	45	763941.615	ppb	763941.615	88.52	507	400000	
Si	28	2	45	141541773.921	ppb	141541773.921	100.35	543994	10000	>LDR
P	31	2	45	3902815.875	ppb	3902815.875	101.37	243	10000	>LDR
K	39	2	45	157343995.073	ppb	157343995.073	101.99	236504	400000	>LDR
Ca	40	1	45	31074178.507	ppb	31074178.507	2.98	27532603	400000	>LDR
Ti	47	2	45	15997.153	ppb	15997.153	120.19	10	4000	
V	51	2	72	648.576	ppb	648.576	17.46	21855	2000	
Cr	52	2	72	186.308	ppb	186.308	15.36	8302	5000	
Mn	55	2	72	14.534	ppb	14.534	35.43	307	10000	
Fe	56	1	72	723.004	ppb	723.004	12.64	38770	10000	
(Fe)	57	2	72	431.996	ppb	431.996	40.65	367	400000	
Co	59	2	72	2.090	ppb	2.090	52.73	143	2000	
Ni	60	2	72	33.708	ppb	33.708	21.14	670	5000	
Cu	63	2	72	26.690	ppb	26.690	10.02	1463	5000	
Zn	66	2	72	55.195	ppb	55.195	17.43	570	5000	
As	75	2	72	77.141	ppb	77.141	12.67	615	2000	
Se	78	1	72	23.797	ppb	23.797	24.68	52	2000	
Sr	88	2	72	2933.853	ppb	2933.853	15.36	67507	4000	
Zr	90	2	72	282.405	ppb	282.405	30.36	53	1000	
Mo	95	2	115	1553.368	ppb	1553.368	6.75	877	2000	
Ag	107	2	115	27.036	ppb	27.036	90.20	50	100	
Cd	111	2	115	46.304	ppb	46.304	86.69	13	2000	
Sn	120	2	115	908.827	ppb	908.827	4.97	727	2000	
Sb	121	2	115	151.636	ppb	151.636	65.50	130	1000	
Ba	137	2	115	16178.114	ppb	16178.114	8.41	3957	5000	
W	182	2	165	9315.247	ppb	9315.247	37.41	507	100	>LDR
Tl	205	2	165	2086.205	ppb	2086.205	12.73	247	2000	
Pb	208	2	165	8738.335	ppb	8738.335	18.70	1387	5000	
Th	232	2	193	2199.288	ppb	2199.288	4.52	2317	2000	
U	238	2	193	3220.997	ppb	3220.997	6.10	3584	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	3324	11.80	253490	1.31	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5474	6.07	9587331	0.06	60	120	IS Failed
Sc (IS)	45	2	HMI He	40	75.00	964862	0.00	60	120	IS Failed
Sc (IS)	45	3	No Gas	28428	1.55	17821643	0.16	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	82425	13.93	5262568	1.57	60	120	IS Failed
Ge Internal standard	72	2	HMI He	39236	15.42	1150133	3.41	60	120	IS Failed
In Internal standard	115	2	HMI He	2746	3.28	3923278	0.07	60	120	IS Failed
Ho-165	165	2	HMI He	250	20.00	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1107	6.78	10905184	0.01	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-9-A
Data File Name	249SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:53:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	5123.347	ppb	5123.347	1.20	42185	50000	
Be	9	1	6	2.114	ppb	2.114	90.40	7	2000	
B	11	1	6	1958.739	ppb	1958.739	9.05	4161	2000	
Na	23	2	45	197447911.322	ppb	197447911.322	44.56	2974300	400000	>LDR
Mg	24	2	45	203424851.310	ppb	203424851.310	44.27	1389605	400000	>LDR
Al	27	2	45	230735.854	ppb	230735.854	50.62	447	400000	
Si	28	2	45	39631536.141	ppb	39631536.141	44.61	485790	10000	>LDR
P	31	2	45	2144862.765	ppb	2144862.765	47.31	426	10000	>LDR
K	39	2	45	44684102.561	ppb	44684102.561	44.73	217072	400000	>LDR
Ca	40	1	45	46746445.500	ppb	46746445.500	2.77	39739924	400000	>LDR
Ti	47	2	45	2488.446	ppb	2488.446	173.21	3	4000	
V	51	2	72	744.608	ppb	744.608	9.22	27657	2000	
Cr	52	2	72	166.996	ppb	166.996	11.07	8169	5000	
Mn	55	2	72	42.122	ppb	42.122	25.21	923	10000	
Fe	56	1	72	1310.694	ppb	1310.694	15.06	63672	10000	
(Fe)	57	2	72	581.360	ppb	581.360	12.20	553	400000	
Co	59	2	72	1.360	ppb	1.360	20.77	107	2000	
Ni	60	2	72	21.932	ppb	21.932	11.48	490	5000	
Cu	63	2	72	36.682	ppb	36.682	12.74	2170	5000	
Zn	66	2	72	152.735	ppb	152.735	7.63	1703	5000	
As	75	2	72	73.749	ppb	73.749	12.82	647	2000	
Se	78	1	72	27.018	ppb	27.018	31.81	55	2000	
Sr	88	2	72	3397.506	ppb	3397.506	11.06	85877	4000	
Zr	90	2	72	293.487	ppb	293.487	173.74	63	1000	
Mo	95	2	115	4605.469	ppb	4605.469	8.30	2184	2000	
Ag	107	2	115	29.638	ppb	29.638	103.19	47	100	
Cd	111	2	115	96.491	ppb	96.491	68.18	23	2000	
Sn	120	2	115	935.645	ppb	935.645	16.52	630	2000	
Sb	121	2	115	61.900	ppb	61.900	98.00	43	1000	
Ba	137	2	115	23171.573	ppb	23171.573	7.83	4748	5000	
W	182	2	165	32633.601	ppb	32633.601	22.89	2264	100	>LDR
Tl	205	2	165	1441.926	ppb	1441.926	18.53	210	2000	
Pb	208	2	165	9120.840	ppb	9120.840	29.00	1783	5000	
Th	232	2	193	1358.330	ppb	1358.330	30.30	1213	2000	
U	238	2	193	7092.717	ppb	7092.717	14.58	6735	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	3438	5.68	253490	1.36	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5248	4.58	9587331	0.05	60	120	IS Failed
Sc (IS)	45	2	HMI He	83	59.20	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	20567	1.13	17821643	0.12	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	75580	17.92	5262568	1.44	60	120	IS Failed
Ge Internal standard	72	2	HMI He	42764	10.86	1150133	3.72	60	120	IS Failed
In Internal standard	115	2	HMI He	2309	4.33	3923278	0.06	60	120	IS Failed
Ho-165	165	2	HMI He	313	21.25	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	957	16.67	10905184	0.01	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-10-A
Data File Name	250SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T00:56:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	4893.452	ppb	4893.452	3.71	44300	50000	
Be	9	1	6	9.856	ppb	9.856	89.72	23	2000	
B	11	1	6	2521.114	ppb	2521.114	20.93	3917	2000	
Na	23	2	45	106056374.433	ppb	106056374.433	10.76	2836944	400000	>LDR
Mg	24	2	45	108581479.152	ppb	108581479.152	9.74	1316852	400000	>LDR
Al	27	2	45	68744.494	ppb	68744.494	22.25	250	400000	
Si	28	2	45	21276749.409	ppb	21276749.409	8.92	463887	10000	>LDR
P	31	2	45	1246961.695	ppb	1246961.695	14.18	443	10000	>LDR
K	39	2	45	24011924.193	ppb	24011924.193	11.03	207284	400000	>LDR
Ca	40	1	45	45421802.009	ppb	45421802.009	2.52	29291745	400000	>LDR
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	598.450	ppb	598.450	15.89	25697	2000	
Cr	52	2	72	129.977	ppb	129.977	9.95	7439	5000	
Mn	55	2	72	19.923	ppb	19.923	19.55	517	10000	
Fe	56	1	72	800.635	ppb	800.635	23.75	32185	10000	
(Fe)	57	2	72	338.225	ppb	338.225	48.91	367	400000	
Co	59	2	72	0.728	ppb	0.728	48.02	70	2000	
Ni	60	2	72	14.979	ppb	14.979	14.55	407	5000	
Cu	63	2	72	25.286	ppb	25.286	6.54	1774	5000	
Zn	66	2	72	52.319	ppb	52.319	12.72	693	5000	
As	75	2	72	62.352	ppb	62.352	16.22	631	2000	
Se	78	1	72	15.249	ppb	15.249	72.89	23	2000	
Sr	88	2	72	2802.130	ppb	2802.130	14.58	82107	4000	
Zr	90	2	72	-5.185	ppb	-5.185	-3324.97	27	1000	
Mo	95	2	115	3930.733	ppb	3930.733	12.87	1887	2000	
Ag	107	2	115	30.571	ppb	30.571	70.10	50	100	
Cd	111	2	115	29.319	ppb	29.319	173.35	7	2000	
Sn	120	2	115	939.598	ppb	939.598	5.54	640	2000	
Sb	121	2	115	128.281	ppb	128.281	23.06	93	1000	
Ba	137	2	115	22157.460	ppb	22157.460	10.72	4598	5000	
W	182	2	165	22149.342	ppb	22149.342	26.81	1890	100	>LDR
Tl	205	2	165	1176.585	ppb	1176.585	36.43	207	2000	
Pb	208	2	165	4190.958	ppb	4190.958	23.68	1023	5000	
Th	232	2	193	767.324	ppb	767.324	30.49	753	2000	
U	238	2	193	5813.686	ppb	5813.686	13.65	6145	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	2557	13.14	253490	1.01	60	120	IS Failed
Sc (IS)	45	1	HMI H2	3984	10.40	9587331	0.04	60	120	IS Failed
Sc (IS)	45	2	HMI He	123	12.38	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	22599	2.55	17821643	0.13	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	63978	28.45	5262568	1.22	60	120	IS Failed
Ge Internal standard	72	2	HMI He	50000	17.21	1150133	4.35	60	120	IS Failed
In Internal standard	115	2	HMI He	2346	8.13	3923278	0.06	60	120	IS Failed
Ho-165	165	2	HMI He	390	24.46	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1067	18.21	10905184	0.01	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175038-F-11-A
Data File Name	251SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T01:00:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608805 6020
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	6550.039	ppb	6550.039	2.12	60008	50000	
Be	9	1	6	6.126	ppb	6.126	114.15	13	2000	
B	11	1	6	2485.965	ppb	2485.965	1.21	3871	2000	
Na	23	2	45	189182421.922	ppb	189182421.922	48.02	2498766	400000	>LDR
Mg	24	2	45	164702828.468	ppb	164702828.468	47.39	986993	400000	>LDR
Al	27	2	45	80412.367	ppb	80412.367	60.72	133	400000	
Si	28	2	45	43782733.195	ppb	43782733.195	46.91	472585	10000	>LDR
P	31	2	45	1158274.647	ppb	1158274.647	59.56	192	10000	>LDR
K	39	2	45	48043763.006	ppb	48043763.006	47.74	204728	400000	>LDR
Ca	40	1	45	27726607.264	ppb	27726607.264	14.68	14249576	400000	>LDR
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	476.653	ppb	476.653	6.00	20750	2000	
Cr	52	2	72	130.284	ppb	130.284	4.93	7499	5000	
Mn	55	2	72	12.328	ppb	12.328	15.90	327	10000	
Fe	56	1	72	466.888	ppb	466.888	26.83	20517	10000	
(Fe)	57	2	72	189.437	ppb	189.437	15.96	220	400000	
Co	59	2	72	0.609	ppb	0.609	59.08	57	2000	
Ni	60	2	72	19.917	ppb	19.917	24.18	527	5000	
Cu	63	2	72	16.115	ppb	16.115	15.56	1163	5000	
Zn	66	2	72	31.150	ppb	31.150	27.15	427	5000	
As	75	2	72	73.572	ppb	73.572	7.99	752	2000	
Se	78	1	72	27.202	ppb	27.202	15.61	51	2000	
Sr	88	2	72	1641.668	ppb	1641.668	5.00	48590	4000	
Zr	90	2	72	-195.939	ppb	-195.939	0.00	0	1000	
Mo	95	2	115	1222.537	ppb	1222.537	19.32	577	2000	
Ag	107	2	115	6.349	ppb	6.349	5.65	10	100	
Cd	111	2	115	14.179	ppb	14.179	173.50	3	2000	
Sn	120	2	115	1052.174	ppb	1052.174	5.83	703	2000	
Sb	121	2	115	69.644	ppb	69.644	32.49	50	1000	
Ba	137	2	115	12334.997	ppb	12334.997	12.79	2510	5000	
W	182	2	165	7323.534	ppb	7323.534	31.03	477	100	>LDR
Tl	205	2	165	1192.248	ppb	1192.248	17.32	167	2000	
Pb	208	2	165	5388.239	ppb	5388.239	33.98	980	5000	
Th	232	2	193	552.766	ppb	552.766	9.28	533	2000	
U	238	2	193	3009.989	ppb	3009.989	19.43	3037	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	2515	3.55	253490	0.99	60	120	IS Failed
Sc (IS)	45	1	HMI H2	3234	21.59	9587331	0.03	60	120	IS Failed
Sc (IS)	45	2	HMI He	73	56.78	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	23010	2.53	17821643	0.13	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	70509	32.86	5262568	1.34	60	120	IS Failed
Ge Internal standard	72	2	HMI He	49770	6.14	1150133	4.33	60	120	IS Failed
In Internal standard	115	2	HMI He	2299	5.80	3923278	0.06	60	120	IS Failed
Ho-165	165	2	HMI He	300	30.55	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1020	14.14	10905184	0.01	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7686771
Data File Name	252_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T01:03:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	4918.408	ppb	16.107	7815	50	9836.8	90	110	>+\-10%
Na	23	2	45	2662375413.008	ppb	87.793	11654749	51000	5220343.9	90	110	>+\-10%
Mg	24	2	45	551176173.366	ppb	89.970	1076690	11000	5010692.5	90	110	>+\-10%
Al	27	2	45	43463905.523	ppb	86.758	25400	1000	4346390.6	90	110	>+\-10%
K	39	2	45	494561294.869	ppb	87.929	697508	11000	4496011.8	90	110	>+\-10%
Ca	40	1	45	138214794.725	ppb	20.964	13559372	11000	1256498.1	90	110	>+\-10%
Ti	47	2	45	2160966.525	ppb	86.550	1183	50	4321933.0	90	110	>+\-10%
V	51	2	72	1351.492	ppb	17.101	49654	50	2703.0	90	110	>+\-10%
Cr	52	2	72	1369.931	ppb	18.509	65683	50	2739.9	90	110	>+\-10%
Mn	55	2	72	1324.060	ppb	20.851	28632	50	2648.1	90	110	>+\-10%
Fe	56	1	72	70272.248	ppb	15.571	2659130	1000	7027.2	90	110	>+\-10%
Co	59	2	72	1305.161	ppb	16.829	99452	50	2610.3	90	110	>+\-10%
Ni	60	2	72	1313.675	ppb	15.623	27711	50	2627.3	90	110	>+\-10%
Cu	63	2	72	1357.295	ppb	16.688	77478	50	2714.6	90	110	>+\-10%
Zn	66	2	72	1230.847	ppb	16.615	13456	50	2461.7	90	110	>+\-10%
As	75	2	72	1125.609	ppb	17.272	9690	50	2251.2	90	110	>+\-10%
Se	78	1	72	3160.917	ppb	13.546	4958	50	6321.8	90	110	>+\-10%
Sr	88	2	72	2454.276	ppb	16.475	61554	100	2454.3	90	110	>+\-10%
Zr	90	2	72	819.038	ppb	81.315	117	50	1638.1	90	110	>+\-10%
Mo	95	2	115	104317.747	ppb	8.737	39690	50	208635.5	90	110	>+\-10%
Ag	107	2	115	101084.270	ppb	9.991	127800	50	202168.5	90	110	>+\-10%
Cd	111	2	115	95240.262	ppb	5.294	18789	50	190480.5	90	110	>+\-10%
Sn	120	2	115	103571.172	ppb	7.365	55735	50	207142.3	90	110	>+\-10%
Sb	121	2	115	95894.101	ppb	10.365	54939	50	191788.2	90	110	>+\-10%
Ba	137	2	115	96881.724	ppb	6.821	15942	50	193763.4	90	110	>+\-10%
W	182	2	165	2065029.956	ppb	20.349	173079	50	4130059.9	90	110	>+\-10%
Tl	205	2	165	2011087.821	ppb	18.797	352405	50	4022175.6	90	110	>+\-10%
Pb	208	2	165	1979935.871	ppb	19.567	472457	50	3959871.7	90	110	>+\-10%
Th	232	2	193	373132.342	ppb	27.855	511936	50	746264.7	90	110	>+\-10%
U	238	2	193	377050.589	ppb	27.048	548803	50	754101.2	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	1878	11.26	253490	0.74	60	120	IS Failed
Sc (IS)	45	1	HMI H2	617	13.11	9587331	0.01	60	120	IS Failed
Sc (IS)	45	2	HMI He	33	75.50	964862	0.00	60	120	IS Failed
Sc (IS)	45	3	No Gas	1317	10.37	17821643	0.01	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	59603	23.66	5262568	1.13	60	120	IS Failed
Ge Internal standard	72	2	HMI He	42867	16.60	1150133	3.73	60	120	IS Failed
In Internal standard	115	2	HMI He	1857	7.98	3923278	0.05	60	120	IS Failed
Ho-165	165	2	HMI He	377	20.28	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1520	27.78	10905184	0.01	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7686738
Data File Name	253_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T01:07:23-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	41716.629	ppb	7.0	14073	10	>RL
Be	9	1	6	12.744	ppb	63.5	33	0.5	>RL
B	11	1	6	4604.822	ppb	18.4	8763	0.5	>RL
Na	23	2	45	5798782.468	ppb	52.4	33747	25	>RL
Mg	24	2	45	838422.724	ppb	55.2	2167	25	>RL
Al	27	2	45	123079.461	ppb	74.7	83	15	>RL
K	39	2	45	14875592.509	ppb	53.0	27807	50	>RL
Ti	47	2	45	7998.576	ppb	120.2	7	0.5	>RL
V	51	2	72	13.381	ppb	25.5	620	1	>RL
Cr	52	2	72	28.508	ppb	11.5	1687	1	>RL
Mn	55	2	72	11.101	ppb	31.7	293	0.5	>RL
(Fe)	57	2	72	219.583	ppb	19.6	243	25	>RL
Co	59	2	72	2.142	ppb	41.7	187	0.5	>RL
Ni	60	2	72	21.329	ppb	12.0	560	1	>RL
Cu	63	2	72	18.974	ppb	26.8	1297	1	>RL
Zn	66	2	72	17.941	ppb	8.5	250	5	>RL
As	75	2	72	5.525	ppb	60.2	56	1	>RL
Se	78	1	72	11.112	ppb	8.7	19	1	>RL
Sr	88	2	72	8.788	ppb	23.6	277	0.5	>RL
Zr	90	2	72	-129.885	ppb	-54.0	10	1	
Mo	95	2	115	268.390	ppb	6.3	113	0.5	>RL
Ag	107	2	115	50.841	ppb	50.4	70	1	>RL
Cd	111	2	115	105.860	ppb	18.5	23	0.5	>RL
Sn	120	2	115	1379.737	ppb	13.2	820	1	>RL
Sb	121	2	115	287.431	ppb	64.5	177	0.6	>RL
Ba	137	2	115	330.286	ppb	20.0	60	0.5	>RL
W	182	2	165	8605.707	ppb	5.2	760	1	>RL
Tl	205	2	165	4119.981	ppb	12.6	763	0.1	>RL
Pb	208	2	165	4486.801	ppb	19.8	1137	0.5	>RL
Th	232	2	193	7615.122	ppb	10.7	9070	1	>RL
U	238	2	193	384.726	ppb	11.0	483	0.5	>RL

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	3137	14.48	253490	1.24	60	120	IS Failed
Sc (IS)	45	1	HMI H2	547	5.59	9587331	0.01	60	120	IS Failed
Sc (IS)	45	2	HMI He	37	78.73	964862	0.00	60	120	IS Failed
Sc (IS)	45	3	No Gas	863	6.38	17821643	0.00	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	61424	25.82	5262568	1.17	60	120	IS Failed
Ge Internal standard	72	2	HMI He	49277	20.38	1150133	4.28	60	120	IS Failed
In Internal standard	115	2	HMI He	2057	8.65	3923278	0.05	60	120	IS Failed
Ho-165	165	2	HMI He	387	5.38	14697450	0.00	60	120	IS Failed
Ir (IS)	193	2	HMI He	1260	14.83	10905184	0.01	60	120	IS Failed

Sample Report

Sample Table

Sample Name	173983-1
Data File Name	254SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T01:11:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	Total Bottle Check
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	338123.322	ppb	338123.322	6.69	291208	50000	>LDR
Be	9	1	6	6.109	ppb	6.109	175.82	7	2000	
B	11	1	6	9377.779	ppb	9377.779	10.46	6341	2000	
Na	23	2	45	1049204432.444	ppb	1049204432.444	38.69	13311916	400000	>LDR
Mg	24	2	45	1490175561.892	ppb	1490175561.892	38.10	8577508	400000	>LDR
Al	27	2	45	505666.394	ppb	505666.394	46.27	837	400000	
Si	28	2	45	2644111.870	ppb	2644111.870	37.94	27343	10000	>LDR
P	31	2	45	315521.232	ppb	315521.232	28.71	55	10000	>LDR
K	39	2	45	168731480.939	ppb	168731480.939	38.48	691345	400000	>LDR
Ca	40	1	45	958998432.902	ppb	958998432.902	12.13	505069059	400000	>LDR
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	109.715	ppb	109.715	31.91	107	2000	
Cr	52	2	72	317.376	ppb	317.376	49.31	383	5000	
Mn	55	2	72	110872.208	ppb	110872.208	25.50	62411	10000	>LDR
Fe	56	1	72	43888.908	ppb	43888.908	25.50	391512	10000	
(Fe)	57	2	72	205098.852	ppb	205098.852	27.04	4924	400000	
Co	59	2	72	315.673	ppb	315.673	8.40	640	2000	
Ni	60	2	72	981.164	ppb	981.164	27.57	540	5000	
Cu	63	2	72	1160.437	ppb	1160.437	32.27	1700	5000	
Zn	66	2	72	9902.897	ppb	9902.897	22.22	2814	5000	
As	75	2	72	120.054	ppb	120.054	22.63	27	2000	
Se	78	1	72	61.424	ppb	61.424	31.09	23	2000	
Sr	88	2	72	2599969.470	ppb	2599969.470	26.09	1688220	4000	>LDR
Zr	90	2	72	-195.939	ppb	-195.939	0.00	0	1000	
Mo	95	2	115	411.584	ppb	411.584	54.32	100	2000	
Ag	107	2	115	24.246	ppb	24.246	86.10	20	100	
Cd	111	2	115	49.703	ppb	49.703	173.29	7	2000	
Sn	120	2	115	416.354	ppb	416.354	17.75	147	2000	
Sb	121	2	115	240.497	ppb	240.497	15.10	90	1000	
Ba	137	2	115	9665.779	ppb	9665.779	29.16	1030	5000	
W	182	2	165	867.325	ppb	867.325	44.51	160	100	>LDR
Tl	205	2	165	2702.774	ppb	2702.774	29.82	1043	2000	
Pb	208	2	165	2056.645	ppb	2056.645	27.12	1083	5000	
Th	232	2	193	749.841	ppb	749.841	42.79	413	2000	
U	238	2	193	9944.885	ppb	9944.885	10.85	5982	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	1103	12.81	253490	0.44	60	120	IS Failed
Sc (IS)	45	1	HMI H2	3330	31.75	9587331	0.03	60	120	IS Failed
Sc (IS)	45	2	HMI He	63	32.87	964862	0.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	2210	6.70	17821643	0.01	60	120	IS Failed
Ge Internal standard	72	1	HMI H2	13913	8.77	5262568	0.26	60	120	IS Failed
Ge Internal standard	72	2	HMI He	1133	22.06	1150133	0.10	60	120	IS Failed
In Internal standard	115	2	HMI He	1202	4.99	3923278	0.03	60	120	IS Failed
Ho-165	165	2	HMI He	830	14.21	14697450	0.01	60	120	IS Failed
Ir (IS)	193	2	HMI He	603	15.04	10905184	0.01	60	120	IS Failed

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	255SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T07:54:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-8.838	ppb	-8.838	-6.05	782807	50000	
Be	9	1	6	0.348	ppb	0.348	71.54	80	2000	
B	11	1	6	-2.233	ppb	-2.233	-24.53	1490	2000	
Na	23	2	45	-35.784	ppb	-35.784	-3.84	17483	400000	
Mg	24	2	45	3.120	ppb	3.120	51.03	1313	400000	
Al	27	2	45	3.601	ppb	3.601	20.57	140	400000	
Si	28	2	45	26.199	ppb	26.199	100.26	21785	10000	
P	31	2	45	21.407	ppb	21.407	21.38	198	10000	
K	39	2	45	-40.020	ppb	-40.020	-23.10	37202	400000	
Ca	40	1	45	-6.167	ppb	-6.167	-6.20	51824	400000	
Ti	47	2	45	0.287	ppb	0.287	86.61	7	4000	
V	51	2	72	-0.918	ppb	-0.918	-18.73	503	2000	
Cr	52	2	72	-0.511	ppb	-0.511	-26.28	1640	5000	
Mn	55	2	72	-0.085	ppb	-0.085	-7.13	210	10000	
Fe	56	1	72	3.470	ppb	3.470	7.37	33384	10000	
(Fe)	57	2	72	12.672	ppb	12.672	9.59	520	400000	
Co	59	2	72	0.021	ppb	0.021	13.76	87	2000	
Ni	60	2	72	3.711	ppb	3.711	9.95	2520	5000	
Cu	63	2	72	-0.262	ppb	-0.262	-27.20	1153	5000	
Zn	66	2	72	-0.564	ppb	-0.564	-15.23	307	5000	
As	75	2	72	-0.292	ppb	-0.292	-10.17	33	2000	
Se	78	1	72	0.047	ppb	0.047	79.01	11	2000	
Sr	88	2	72	-0.158	ppb	-0.158	-52.53	167	4000	
Zr	90	2	72	-7.951	ppb	-7.951	-436.57	570	1000	
Mo	95	2	115	0.047	ppb	0.047	133.23	67	2000	
Ag	107	2	115	-0.005	ppb	-0.005	-213.78	37	100	
Cd	111	2	115	0.002	ppb	0.002	1532.37	10	2000	
Sn	120	2	115	-0.479	ppb	-0.479	-8.61	353	2000	
Sb	121	2	115	0.023	ppb	0.023	174.73	67	1000	
Ba	137	2	115	-0.137	ppb	-0.137	-12.47	33	5000	
W	182	2	165	-0.007	ppb	-0.007	-470.61	807	100	
Tl	205	2	165	0.003	ppb	0.003	631.84	230	2000	
Pb	208	2	165	0.206	ppb	0.206	8.09	4977	5000	
Th	232	2	193	-0.155	ppb	-0.155	-31.92	8493	2000	
U	238	2	193	0.006	ppb	0.006	48.78	3104	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	214821	1.85	253490	84.75	60	120	
Sc (IS)	45	1	HMI H2	8614536	0.49	9587331	89.85	60	120	
Sc (IS)	45	2	HMI He	875616	1.69	964862	90.75	60	120	
Sc (IS)	45	3	No Gas	16940263	0.58	17821643	95.05	60	120	
Ge Internal standard	72	1	HMI H2	4734515	0.99	5262568	89.97	60	120	
Ge Internal standard	72	2	HMI He	1052242	1.58	1150133	91.49	60	120	
In Internal standard	115	2	HMI He	3683387	0.74	3923278	93.89	60	120	
Ho-165	165	2	HMI He	14154985	1.61	14697450	96.31	60	120	
Ir (IS)	193	2	HMI He	10902660	1.17	10905184	99.98	60	120	

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	256SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T07:58:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-6.888	ppb	-6.888	-17.67	804961	50000	
Be	9	1	6	0.068	ppb	0.068	179.59	33	2000	
B	11	1	6	-3.915	ppb	-3.915	-20.43	1443	2000	
Na	23	2	45	-27.781	ppb	-27.781	-9.28	20166	400000	
Mg	24	2	45	5.133	ppb	5.133	22.70	1577	400000	
Al	27	2	45	5.515	ppb	5.515	10.87	200	400000	
Si	28	2	45	-14.693	ppb	-14.693	-43.84	16385	10000	
P	31	2	45	-9.690	ppb	-9.690	-104.44	126	10000	
K	39	2	45	-3.529	ppb	-3.529	-290.38	41833	400000	
Ca	40	1	45	-14.971	ppb	-14.971	-1.95	43353	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.887	ppb	-0.887	-9.11	563	2000	
Cr	52	2	72	-0.441	ppb	-0.441	-19.57	1824	5000	
Mn	55	2	72	-0.159	ppb	-0.159	-33.59	180	10000	
Fe	56	1	72	4.802	ppb	4.802	3.01	40891	10000	
(Fe)	57	2	72	2.589	ppb	2.589	228.67	303	400000	
Co	59	2	72	0.029	ppb	0.029	26.24	107	2000	
Ni	60	2	72	4.201	ppb	4.201	6.45	2940	5000	
Cu	63	2	72	-0.071	ppb	-0.071	-172.86	1510	5000	
Zn	66	2	72	-0.511	ppb	-0.511	-18.53	340	5000	
As	75	2	72	-0.266	ppb	-0.266	-19.67	41	2000	
Se	78	1	72	-0.028	ppb	-0.028	-59.25	1	2000	
Sr	88	2	72	-0.323	ppb	-0.323	-30.93	67	4000	
Zr	90	2	72	-1.143	ppb	-1.143	-444.92	627	1000	
Mo	95	2	115	0.001	ppb	0.001	3592.01	33	2000	
Ag	107	2	115	-0.008	ppb	-0.008	-120.50	30	100	
Cd	111	2	115	-0.016	ppb	-0.016	-90.52	3	2000	
Sn	120	2	115	-0.457	ppb	-0.457	-20.12	390	2000	
Sb	121	2	115	-0.007	ppb	-0.007	-65.15	33	1000	
Ba	137	2	115	-0.170	ppb	-0.170	-71.01	23	5000	
W	182	2	165	-0.033	ppb	-0.033	-51.04	733	100	
Tl	205	2	165	0.002	ppb	0.002	706.65	227	2000	
Pb	208	2	165	0.102	ppb	0.102	16.75	4097	5000	
Th	232	2	193	-0.188	ppb	-0.188	-5.96	8299	2000	
U	238	2	193	0.014	ppb	0.014	128.17	3251	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	244509	1.09	253490	96.46	60	120	
Sc (IS)	45	1	HMI H2	9445105	0.87	9587331	98.52	60	120	
Sc (IS)	45	2	HMI He	928500	0.62	964862	96.23	60	120	
Sc (IS)	45	3	No Gas	17137756	1.06	17821643	96.16	60	120	
Ge Internal standard	72	1	HMI H2	5164436	0.79	5262568	98.14	60	120	
Ge Internal standard	72	2	HMI He	1114528	0.46	1150133	96.90	60	120	
In Internal standard	115	2	HMI He	3804243	0.69	3923278	96.97	60	120	
Ho-165	165	2	HMI He	14424345	0.99	14697450	98.14	60	120	
Ir (IS)	193	2	HMI He	11107342	0.94	10905184	101.85	60	120	

Sample Report

Sample Table

Sample Name	rinse-7662933
Data File Name	257SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ALL041723.b
Acq Date Time	2023-04-18T08:01:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	128CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-7.305	ppb	-7.305	-22.12	816530	50000	
Be	9	1	6	0.269	ppb	0.269	106.80	77	2000	
B	11	1	6	-5.264	ppb	-5.264	-17.74	1270	2000	
Na	23	2	45	-24.581	ppb	-24.581	-9.18	21230	400000	
Mg	24	2	45	6.049	ppb	6.049	51.59	1693	400000	
Al	27	2	45	4.761	ppb	4.761	53.64	183	400000	
Si	28	2	45	-17.314	ppb	-17.314	-8.59	16272	10000	
P	31	2	45	-8.606	ppb	-8.606	-70.13	131	10000	
K	39	2	45	5.425	ppb	5.425	238.67	43260	400000	
Ca	40	1	45	-15.026	ppb	-15.026	-6.12	43514	400000	
Ti	47	2	45	0.132	ppb	0.132	173.21	3	4000	
V	51	2	72	-0.876	ppb	-0.876	-12.31	583	2000	
Cr	52	2	72	-0.675	ppb	-0.675	-9.93	1553	5000	
Mn	55	2	72	-0.124	ppb	-0.124	-52.51	203	10000	
Fe	56	1	72	4.290	ppb	4.290	6.07	40317	10000	
(Fe)	57	2	72	4.279	ppb	4.279	94.74	350	400000	
Co	59	2	72	0.031	ppb	0.031	85.17	113	2000	
Ni	60	2	72	5.184	ppb	5.184	6.42	3551	5000	
Cu	63	2	72	-0.021	ppb	-0.021	-464.49	1613	5000	
Zn	66	2	72	-0.520	ppb	-0.520	-10.68	343	5000	
As	75	2	72	-0.289	ppb	-0.289	-15.84	37	2000	
Se	78	1	72	0.009	ppb	0.009	462.89	7	2000	
Sr	88	2	72	-0.359	ppb	-0.359	-8.66	43	4000	
Zr	90	2	72	10.580	ppb	10.580	343.18	677	1000	
Mo	95	2	115	0.001	ppb	0.001	2277.50	33	2000	
Ag	107	2	115	-0.003	ppb	-0.003	-279.78	43	100	
Cd	111	2	115	-0.016	ppb	-0.016	-88.21	3	2000	
Sn	120	2	115	-0.547	ppb	-0.547	-2.19	293	2000	
Sb	121	2	115	-0.011	ppb	-0.011	-159.87	30	1000	
Ba	137	2	115	-0.122	ppb	-0.122	-63.99	40	5000	
W	182	2	165	-0.040	ppb	-0.040	-127.86	723	100	
Tl	205	2	165	0.002	ppb	0.002	174.45	233	2000	
Pb	208	2	165	0.096	ppb	0.096	36.16	4107	5000	
Th	232	2	193	-0.150	ppb	-0.150	-15.38	8776	2000	
U	238	2	193	-0.003	ppb	-0.003	-800.81	3084	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal standard	6	1	HMI H2	250582	1.06	253490	98.85	60	120	
Sc (IS)	45	1	HMI H2	9501138	1.14	9587331	99.10	60	120	
Sc (IS)	45	2	HMI He	946886	0.45	964862	98.14	60	120	
Sc (IS)	45	3	No Gas	17444781	1.53	17821643	97.89	60	120	
Ge Internal standard	72	1	HMI H2	5315549	0.25	5262568	101.01	60	120	
Ge Internal standard	72	2	HMI He	1133797	1.46	1150133	98.58	60	120	
In Internal standard	115	2	HMI He	3847632	0.70	3923278	98.07	60	120	
Ho-165	165	2	HMI He	14643735	0.89	14697450	99.63	60	120	
Ir (IS)	193	2	HMI He	11198202	1.45	10905184	102.69	60	120	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG No.:

Project: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID	Lab Sample ID
MW-124-20230412	280-174957-2
MW-124-Q-20230412	280-174957-3
RW-15-20230411	280-174957-4
MW-105D-20230411	280-174957-5
MW-105S-20230411	280-174957-6

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-124-20230412 Lab Sample ID: 280-174957-2

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG ID.:

Matrix: Water Date Sampled: 04/12/2023 09:50

Reporting Basis: WET Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	1.4	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	5.6	1.0	0.18	mg/L			2	9056A
16887-00-6	Chloride	310	30	10	mg/L			10	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L			1	9056A
14808-79-8	Sulfate	120	10	2.1	mg/L			2	9056A
7440-44-0	Total Organic Carbon - Duplicates	5.1	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-124-Q-20230412 Lab Sample ID: 280-174957-3

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG ID.:

Matrix: Water Date Sampled: 04/12/2023 10:00

Reporting Basis: WET Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	1.4	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	5.6	1.0	0.18	mg/L			2	9056A
16887-00-6	Chloride	330	15	5.1	mg/L			5	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L			1	9056A
14808-79-8	Sulfate	120	10	2.1	mg/L			2	9056A
7440-44-0	Total Organic Carbon - Duplicates	4.9	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: RW-15-20230411 Lab Sample ID: 280-174957-4

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG ID.:

Matrix: Water Date Sampled: 04/11/2023 16:30

Reporting Basis: WET Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	1.5	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	2.2	0.50	0.090	mg/L		H	1	9056A
16887-00-6	Chloride	310	15	5.1	mg/L			5	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L		H	1	9056A
14808-79-8	Sulfate	98	25	5.2	mg/L			5	9056A
7440-44-0	Total Organic Carbon - Duplicates	4.4	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-105D-20230411 Lab Sample ID: 280-174957-5

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG ID.:

Matrix: Water Date Sampled: 04/11/2023 16:00

Reporting Basis: WET Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	0.76	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	0.71	0.50	0.090	mg/L		H	1	9056A
16887-00-6	Chloride	280	15	5.1	mg/L			5	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L		H F2 F1	1	9056A
14808-79-8	Sulfate	79	5.0	1.0	mg/L			1	9056A
7440-44-0	Total Organic Carbon - Duplicates	1.9	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-105S-20230411 Lab Sample ID: 280-174957-6

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG ID.:

Matrix: Water Date Sampled: 04/11/2023 13:30

Reporting Basis: WET Date Received: 04/13/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	1.4	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	14	0.50	0.090	mg/L		H E	1	9056A
14797-55-8	Nitrate as N	13	2.5	0.45	mg/L		H	5	9056A
16887-00-6	Chloride	470	15	5.1	mg/L			5	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L		H	1	9056A
14808-79-8	Sulfate	200	10	2.1	mg/L			2	9056A
7440-44-0	Total Organic Carbon - Duplicates	7.2	1.0	0.35	mg/L			1	9060A

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Analyst: MEC Batch Start Date: 02/28/2023

Reporting Units: mg/L Analytical Batch No.: 603592

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	18:40	Bromide	1.96	2.00	98	90-110		IC ICV 5_00396
			Chloride	78.2	80.0	98	90-110		Cl ICV Std_00006
			Sulfate	79.3	80.0	99	90-110		IC SO4 ICV_00024
8	ICB	18:56	Bromide	ND					
			Chloride	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Analyst: EJS Batch Start Date: 04/03/2023

Reporting Units: mg/L Analytical Batch No.: 607366

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	17:54	Bromide	1.92	2.00	96	90-110		IC ICV 5_00402
			Chloride	84.5	80.0	106	90-110		Cl ICV Std_00006
			Sulfate	85.7	80.0	107	90-110		IC SO4 ICV_00024
8	ICB	18:06	Bromide	ND					
			Chloride	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Analyst: EJS Batch Start Date: 04/13/2023

Reporting Units: mg/L Analytical Batch No.: 608624

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	15:39	Nitrate as N	2.37	2.50	95	90-110		IC LCS_01947
			Nitrite as N	2.28	2.50	91	90-110		IC LCS_01947
2	CCB	15:55	Nitrate as N	ND					
			Nitrite as N	ND					
17	CCV	20:30	Nitrate as N	2.40	2.50	96	90-110		IC LCS_01947
			Nitrite as N	2.27	2.50	91	90-110		IC LCS_01947
18	CCB	20:46	Nitrate as N	ND					
			Nitrite as N	ND					
29	CCV	23:42	Nitrate as N	2.39	2.50	96	90-110		IC LCS_01947
			Nitrite as N	2.28	2.50	91	90-110		IC LCS_01947
30	CCB	23:58	Nitrate as N	ND					
			Nitrite as N	ND					
41	CCV	02:54	Nitrate as N	2.37	2.50	95	90-110		IC LCS_01947
			Nitrite as N	2.27	2.50	91	90-110		IC LCS_01947
42	CCB	03:10	Nitrate as N	ND					
			Nitrite as N	ND					
53	CCV	06:05	Nitrate as N	2.39	2.50	96	90-110		IC LCS_01947
			Nitrite as N	2.30	2.50	92	90-110		IC LCS_01947
54	CCB	06:21	Nitrate as N	ND					
			Nitrite as N	ND					
58	CCV	07:25	Nitrate as N	2.41	2.50	96	90-110		IC LCS_01947
			Nitrite as N	2.30	2.50	92	90-110		IC LCS_01947
59	CCB	07:41	Nitrate as N	ND					
			Nitrite as N	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Analyst: EJS Batch Start Date: 04/13/2023

Reporting Units: mg/L Analytical Batch No.: 608625

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	15:39	Bromide	2.30	2.50	92	90-110		IC LCS_01947
			Sulfate	49.3	50.0	99	90-110		IC LCS_01947
2	CCB	15:55	Bromide	ND					
			Sulfate	ND					
17	CCV	20:30	Bromide	2.32	2.50	93	90-110		IC LCS_01947
			Sulfate	49.5	50.0	99	90-110		IC LCS_01947
18	CCB	20:46	Bromide	ND					
			Sulfate	ND					
29	CCV	23:42	Bromide	2.34	2.50	94	90-110		IC LCS_01947
			Sulfate	50.1	50.0	100	90-110		IC LCS_01947
30	CCB	23:58	Bromide	ND					
			Sulfate	ND					
41	CCV	02:54	Bromide	2.33	2.50	93	90-110		IC LCS_01947
			Sulfate	49.6	50.0	99	90-110		IC LCS_01947
42	CCB	03:10	Bromide	ND					
			Sulfate	ND					
53	CCV	06:05	Bromide	2.35	2.50	94	90-110		IC LCS_01947
			Sulfate	50.3	50.0	101	90-110		IC LCS_01947
54	CCB	06:21	Bromide	ND					
			Sulfate	ND					
58	CCV	07:25	Bromide	2.34	2.50	94	90-110		IC LCS_01947
			Sulfate	50.1	50.0	100	90-110		IC LCS_01947
59	CCB	07:41	Bromide	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Analyst: EJS Batch Start Date: 04/14/2023

Reporting Units: mg/L Analytical Batch No.: 608788

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	14:28	Nitrate as N	2.38	2.50	95	90-110		IC LCS_01947
2	CCB	14:40	Nitrate as N	ND					
17	CCV	17:44	Nitrate as N	2.33	2.50	93	90-110		IC LCS_01947
18	CCB	17:56	Nitrate as N	ND					
29	CCV	20:08	Nitrate as N	2.35	2.50	94	90-110		IC LCS_01947
30	CCB	20:20	Nitrate as N	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Analyst: EJS Batch Start Date: 04/14/2023

Reporting Units: mg/L Analytical Batch No.: 608789

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	14:28	Chloride	47.7	50.0	95	90-110		IC LCS_01947
2	CCB	14:40	Chloride	ND					
17	CCV	17:44	Chloride	47.6	50.0	95	90-110		IC LCS_01947
18	CCB	17:56	Chloride	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Analyst: EJS Batch Start Date: 04/27/2023

Reporting Units: mg/L Analytical Batch No.: 610429

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	14:19	Chloride	47.4	50.0	95	90-110		IC LCS_01950
			Sulfate	50.0	50.0	100	90-110		IC LCS_01950
2	CCB	14:31	Chloride	ND					
			Sulfate	ND					
17	CCV	17:31	Chloride	47.1	50.0	94	90-110		IC LCS_01950
			Sulfate	49.4	50.0	99	90-110		IC LCS_01950
18	CCB	17:43	Chloride	ND					
			Sulfate	ND					
29	CCV	10:16	Chloride	47.7	50.0	95	90-110		IC LCS_01950
			Sulfate	49.5	50.0	99	90-110		IC LCS_01950
30	CCB	10:28	Chloride	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Analyst: EJS Batch Start Date: 04/28/2023

Reporting Units: mg/L Analytical Batch No.: 610539

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	15:28	Chloride	47.8	50.0	96	90-110		IC LCS_01950
2	CCB	15:40	Chloride	ND					
17	CCV	18:40	Chloride	47.6	50.0	95	90-110		IC LCS_01950
18	CCB	18:52	Chloride	ND					
29	CCV	21:03	Chloride	47.3	50.0	95	90-110		IC LCS_01950
30	CCB	21:15	Chloride	ND					
41	CCV	23:27	Chloride	47.8	50.0	96	90-110		IC LCS_01950
42	CCB	23:39	Chloride	ND					
53	CCV	01:50	Chloride	47.3	50.0	95	90-110		IC LCS_01950
54	CCB	02:02	Chloride	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Analyst: ABW Batch Start Date: 04/20/2023

Reporting Units: mg/L Analytical Batch No.: 609693

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	16:47	Total Organic Carbon - Duplicates	19.7	20.0	98	90-110		TOC ICV Std_00051
2	ICB	17:02	Total Organic Carbon - Duplicates	ND					
15	CCV	20:29	Total Organic Carbon - Duplicates	24.4	25.0	97	90-110		TOC LCS Std_00057
16	CCB	20:43	Total Organic Carbon - Duplicates	ND					
27	CCV	23:28	Total Organic Carbon - Duplicates	24.7	25.0	99	90-110		TOC LCS Std_00057
28	CCB	23:42	Total Organic Carbon - Duplicates	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 608624 Date: 04/13/2023 17:34							
9056A	MB 280-608624/6	Nitrate as N	ND		mg/L	0.50	1
9056A	MB 280-608624/6	Nitrite as N	ND		mg/L	0.50	1
Batch ID: 608625 Date: 04/13/2023 17:34							
9056A	MB 280-608625/6	Bromide	ND		mg/L	0.50	1
9056A	MB 280-608625/6	Sulfate	ND		mg/L	5.0	1
Batch ID: 608624 Date: 04/14/2023 04:30							
9056A	MB 280-608624/47	Nitrate as N	ND		mg/L	0.50	1
9056A	MB 280-608624/47	Nitrite as N	ND		mg/L	0.50	1
Batch ID: 608625 Date: 04/14/2023 04:30							
9056A	MB 280-608625/47	Bromide	ND		mg/L	0.50	1
9056A	MB 280-608625/47	Sulfate	ND		mg/L	5.0	1
Batch ID: 608788 Date: 04/14/2023 15:28							
9056A	MB 280-608788/6	Nitrate as N	ND		mg/L	0.50	1
Batch ID: 608789 Date: 04/14/2023 15:28							
9056A	MB 280-608789/6	Chloride	ND		mg/L	3.0	1
Batch ID: 610429 Date: 04/27/2023 15:19							
9056A	MB 280-610429/6	Chloride	ND		mg/L	3.0	1
9056A	MB 280-610429/6	Sulfate	ND		mg/L	5.0	1
Batch ID: 610539 Date: 04/28/2023 16:28							
9056A	MB 280-610539/6	Chloride	ND		mg/L	3.0	1
Batch ID: 609693 Date: 04/20/2023 17:33							
9060A	MB 280-609693/4	Total Organic Carbon - Duplicates	ND		mg/L	1.0	1
9060A	MB 280-609693/4	TOC Result 2	ND		mg/L	1.0	1
9060A	MB 280-609693/4	TOC Result 1	ND		mg/L	1.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608624 Date: 04/14/2023 05:49											
9056A	280-174957-5	Nitrate as N	0.71		mg/L						H
9056A	280-174957-5 MS	Nitrate as N	6.24		mg/L	5.00	111	80-120			E
9056A	280-174957-5	Nitrite as N	ND		mg/L						H F2 F1
9056A	280-174957-5 MS	Nitrite as N	0.832		mg/L	5.00	17	80-120			F1
Batch ID: 608625 Date: 04/14/2023 05:49											
9056A	280-174957-5	Bromide	0.76		mg/L						
9056A	280-174957-5 MS	Bromide	6.14		mg/L	5.00	108	80-120			E
9056A	280-174957-5	Sulfate	79		mg/L						
9056A	280-174957-5 MS	Sulfate	134		mg/L	50.0	109	80-120			E

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608624 Date: 04/14/2023 06:37											
9056A	280-174957-5 MSD	Nitrate as N	6.19		mg/L	5.00	110	80-120	1	20	E
9056A	280-174957-5 MSD	Nitrite as N	1.84		mg/L	5.00	37	80-120	75	20	F2 F1
Batch ID: 608625 Date: 04/14/2023 06:37											
9056A	280-174957-5 MSD	Bromide	6.01		mg/L	5.00	105	80-120	2	20	E
9056A	280-174957-5 MSD	Sulfate	133		mg/L	50.0	108	80-120	0	20	E

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 608624 Date: 04/14/2023 05:33								
9056A	MW-105D-20230411	280-174957-5	Nitrate as N	0.71	mg/L			
9056A	MW-105D-20230411	280-174957-5 DU	Nitrate as N	0.698	mg/L	1	15	
9056A	MW-105D-20230411	280-174957-5	Nitrite as N	ND	mg/L			
9056A	MW-105D-20230411	280-174957-5 DU	Nitrite as N	ND	mg/L	NC	15	
Batch ID: 608625 Date: 04/14/2023 05:33								
9056A	MW-105D-20230411	280-174957-5	Bromide	0.76	mg/L			
9056A	MW-105D-20230411	280-174957-5 DU	Bromide	0.725	mg/L	5	15	
9056A	MW-105D-20230411	280-174957-5	Sulfate	79	mg/L			
9056A	MW-105D-20230411	280-174957-5 DU	Sulfate	78.9	mg/L	0.2	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608624	Date: 04/13/2023 16:27										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608624/4	Nitrate as N	2.35		mg/L	2.50	94	90-110	0	10	
9056A	LCS 280-608624/4	Nitrite as N	2.28		mg/L	2.50	91	90-110	0	10	
Batch ID: 608625	Date: 04/13/2023 16:27										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608625/4	Bromide	2.29		mg/L	2.50	92	90-110	0	10	
9056A	LCS 280-608625/4	Sulfate	49.1		mg/L	50.0	98	90-110	0	10	
Batch ID: 608624	Date: 04/14/2023 03:58										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608624/45	Nitrate as N	2.38		mg/L	2.50	95	90-110	3	10	
9056A	LCS 280-608624/45	Nitrite as N	2.29		mg/L	2.50	91	90-110	0	10	
Batch ID: 608625	Date: 04/14/2023 03:58										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608625/45	Bromide	2.32		mg/L	2.50	93	90-110	1	10	
9056A	LCS 280-608625/45	Sulfate	49.8		mg/L	50.0	100	90-110	1	10	
Batch ID: 608788	Date: 04/14/2023 15:04										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608788/4	Nitrate as N	2.38		mg/L	2.50	95	90-110	1	10	
Batch ID: 608789	Date: 04/14/2023 15:04										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608789/4	Chloride	47.4		mg/L	50.0	95	90-110	1	10	
Batch ID: 610429	Date: 04/27/2023 14:55										
						LCS Source: IC LCS_01950					
9056A	LCS 280-610429/4	Chloride	46.8		mg/L	50.0	94	90-110	1	10	
9056A	LCS 280-610429/4	Sulfate	49.1		mg/L	50.0	98	90-110	0	10	
Batch ID: 610539	Date: 04/28/2023 16:04										
						LCS Source: IC LCS_01950					
9056A	LCS 280-610539/4	Chloride	47.5		mg/L	50.0	95	90-110	0	10	
Batch ID: 609693	Date: 04/20/2023 17:18										
						LCS Source: TOC LCS Std_00057					
9060A	LCS 280-609693/3	Total Organic Carbon - Duplicates	24.4		mg/L	25.0	98	88-112			
9060A	LCS 280-609693/3	TOC Result 2	23.9		mg/L	25.0	96	88-112			
9060A	LCS 280-609693/3	TOC Result 1	24.9		mg/L	25.0	99	88-112			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608624	Date: 04/13/2023 17:18										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608624/5	Nitrate as N	2.36		mg/L	2.50	94	90-110	0	10	
9056A	LCSD 280-608624/5	Nitrite as N	2.27		mg/L	2.50	91	90-110	0	10	
Batch ID: 608625	Date: 04/13/2023 17:18										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608625/5	Bromide	2.28		mg/L	2.50	91	90-110	0	10	
9056A	LCSD 280-608625/5	Sulfate	49.2		mg/L	50.0	98	90-110	0	10	
Batch ID: 608624	Date: 04/14/2023 04:14										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608624/46	Nitrate as N	2.46		mg/L	2.50	98	90-110	3	10	
9056A	LCSD 280-608624/46	Nitrite as N	2.29		mg/L	2.50	92	90-110	0	10	
Batch ID: 608625	Date: 04/14/2023 04:14										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608625/46	Bromide	2.35		mg/L	2.50	94	90-110	1	10	
9056A	LCSD 280-608625/46	Sulfate	50.3		mg/L	50.0	101	90-110	1	10	
Batch ID: 608788	Date: 04/14/2023 15:16										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608788/5	Nitrate as N	2.36		mg/L	2.50	94	90-110	1	10	
Batch ID: 608789	Date: 04/14/2023 15:16										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608789/5	Chloride	47.7		mg/L	50.0	95	90-110	1	10	
Batch ID: 610429	Date: 04/27/2023 15:07										
						LCSD Source: IC LCS_01950					
9056A	LCSD 280-610429/5	Chloride	47.1		mg/L	50.0	94	90-110	1	10	
9056A	LCSD 280-610429/5	Sulfate	49.2		mg/L	50.0	98	90-110	0	10	
Batch ID: 610539	Date: 04/28/2023 16:16										
						LCSD Source: IC LCS_01950					
9056A	LCSD 280-610539/5	Chloride	47.3		mg/L	50.0	95	90-110	0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608624	Date: 04/13/2023 16:11										
						LCS Source: IC Cal low_00703					
9056A	MRL 280-608624/3	Nitrate as N	0.246	J	mg/L	0.250	98	50-150			
9056A	MRL 280-608624/3	Nitrite as N	0.248	J	mg/L	0.250	99	50-150			
Batch ID: 608625	Date: 04/13/2023 16:11										
						LCS Source: IC CAL cl/so4_00475					
9056A	MRL 280-608625/3	Sulfate	2.05	J	mg/L	2.50	82	50-150			
						LCS Source: IC Cal low_00703					
9056A	MRL 280-608625/3	Bromide	0.255	J	mg/L	0.250	102	50-150			
Batch ID: 608788	Date: 04/14/2023 14:52										
						LCS Source: IC Cal low_00703					
9056A	MRL 280-608788/3	Nitrate as N	0.235	J	mg/L	0.250	94	50-150			
Batch ID: 608789	Date: 04/14/2023 14:52										
						LCS Source: IC CAL cl/so4_00475					
9056A	MRL 280-608789/3	Chloride	2.05	J	mg/L	2.50	82	50-150			
Batch ID: 610429	Date: 04/27/2023 14:43										
						LCS Source: IC CAL cl/so4_00477					
9056A	MRL 280-610429/3	Chloride	2.16	J	mg/L	2.50	86	50-150			
9056A	MRL 280-610429/3	Sulfate	2.48	J	mg/L	2.50	99	50-150			
Batch ID: 610539	Date: 04/28/2023 15:52										
						LCS Source: IC CAL cl/so4_00477					
9056A	MRL 280-610539/3	Chloride	2.20	J	mg/L	2.50	88	50-150			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

16A-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Eurofins Denver Job No: 280-174957-1

SDG No.: Analysis Batch No.: 603592

Instrument ID: WC_IonChrom13 Calibration ID: 77678

Start Date: 02/28/2023 17:05 End Date: 02/28/2023 18:24

Analytical Method: 9056A

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Bromide	1.0000	6440000	-305000	WLR	Inverse Conc
Sulfate	1.0000	12000000	482000	WLR	Inverse Conc

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-174957-1

SDG No.: Analysis Batch No.: 603592

Instrument ID: WC_IonChrom13 Calibration ID: 77678

Start Date: 02/28/2023 17:05 End Date: 02/28/2023 18:24

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Bromide				0.20	0.21	7	0.50	0.49	-3
Sulfate	0.50	0.58	16	1.3	1.2	-4	2.5	2.2	-11

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-174957-1

SDG No.: Analysis Batch No.: 603592

Instrument ID: WC_IonChrom13 Calibration ID: 77678

Start Date: 02/28/2023 17:05 End Date: 02/28/2023 18:24

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Bromide	1.0	0.95	-5	2.5	2.5	-2	5.0	5.1	2
Sulfate	30.0	29.4	-2	60.0	60.0	0	100	101	1

16A-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Eurofins Denver Job No: 280-174957-1

SDG No.: Analysis Batch No.: 607366

Instrument ID: WC_IonChrom15 Calibration ID: 78779

Start Date: 04/03/2023 16:42 End Date: 04/03/2023 17:42

Analytical Method: 9056A

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Chloride	0.9985	3900000	-729000	WLR	Inverse Conc
Sulfate	0.9995	2660000	-588000	WLR	Inverse Conc

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-174957-1

SDG No.: Analysis Batch No.: 607366

Instrument ID: WC_IonChrom15 Calibration ID: 78779

Start Date: 04/03/2023 16:42 End Date: 04/03/2023 17:42

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Chloride	0.50	0.61	22	1.3	1.2	-3	2.5	2.2	-12
Sulfate	0.50	0.61	21	1.3	1.1	-9	2.5	2.3	-9

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-174957-1

SDG No.: Analysis Batch No.: 607366

Instrument ID: WC_IonChrom15 Calibration ID: 78779

Start Date: 04/03/2023 16:42 End Date: 04/03/2023 17:42

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Chloride	30.0	27.0	-10	60.0	58.1	-3	100	105	5
Sulfate	30.0	28.5	-5	60.0	58.7	-2	100	103	3

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom13

Method: 9056A MDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.233
Nitrate as N		0.5	0.0901
Nitrite as N		0.5	0.049
Sulfate		5	1.03

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom13

Method: 9056A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.233
Nitrate as N		0.5	0.0901
Nitrite as N		0.5	0.0494
Sulfate		5	1.03

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom15

Method: 9056A MDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		3	1.02
Nitrate as N		0.5	0.0901
Sulfate		5	1.03

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom15

Method: 9056A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		3	1.02
Nitrate as N		0.5	0.0901
Sulfate		5	1.03

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI5

Method: 9060A MDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Organic Carbon - Duplicates		1	0.345

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-174957-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI5

Method: 9060A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Organic Carbon - Duplicates		1	0.345

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom13 Analysis Method: 9056A

Start Date: 02/28/2023 17:05 End Date: 02/28/2023 20:16

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
STD 280-603592/1 IC	1		17:05	X	X	X																								
STD 280-603592/2 IC	1		17:21	X	X	X																								
STD 280-603592/3 IC	1		17:36	X	X	X																								
STD 280-603592/4 IC	1		17:52	X	X	X																								
STD 280-603592/5 IC	1		18:08	X	X	X																								
STD 280-603592/6 IC	1		18:24	X	X	X																								
ICV 280-603592/7	1		18:40	X	X	X																								
ICB 280-603592/8	1		18:56	X	X	X																								
RTC 280-603592/9			19:12																											
ZZZZZZ			19:28																											
ZZZZZZ			19:44																											
ZZZZZZ			20:00																											
ZZZZZZ			20:16																											

Prep Types:
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FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom13 Analysis Method: 9056A

Start Date: 04/13/2023 15:39 End Date: 04/14/2023 07:41

Lab Sample Id	D/F	Type	Time	Analytes																										
				NO2-N	NO3																									
CCV 280-608624/1	1		15:39	X	X																									
CCB 280-608624/2	1		15:55	X	X																									
MRL 280-608624/3	1	T	16:11	X	X																									
LCS 280-608624/4	1	T	16:27	X	X																									
LCSD 280-608624/5	1	T	17:18	X	X																									
MB 280-608624/6	1	T	17:34	X	X																									
ZZZZZZ			17:50																											
280-174957-2	1	T	18:06	X																										
280-174957-2	2	T	18:22		X																									
ZZZZZZ			18:38																											
ZZZZZZ			18:54																											
ZZZZZZ			19:09																											
ZZZZZZ			19:25																											
ZZZZZZ			19:41																											
ZZZZZZ			19:57																											
280-174957-3	1	T	20:13	X																										
CCV 280-608624/17	1		20:30	X	X																									
CCB 280-608624/18	1		20:46	X	X																									
280-174957-3	2	T	21:02		X																									
ZZZZZZ			21:18																											
ZZZZZZ			21:34																											
ZZZZZZ			21:50																											
ZZZZZZ			22:06																											
ZZZZZZ			22:22																											
ZZZZZZ			22:38																											
ZZZZZZ			22:54																											
ZZZZZZ			23:10																											
ZZZZZZ			23:26																											
CCV 280-608624/29	1		23:42	X	X																									
CCB 280-608624/30	1		23:58	X	X																									
ZZZZZZ			00:14																											
ZZZZZZ			00:30																											
ZZZZZZ			00:46																											
ZZZZZZ			01:02																											
ZZZZZZ			01:18																											
ZZZZZZ			01:34																											
ZZZZZZ			01:50																											
ZZZZZZ			02:06																											
ZZZZZZ			02:22																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom13 Analysis Method: 9056A

Start Date: 04/13/2023 15:39 End Date: 04/14/2023 07:41

Lab Sample Id	D/F	Type	Time	Analytes																										
				NO2-N	NO3																									
ZZZZZZ			02:38																											
CCV 280-608624/41	1		02:54	X	X																									
CCB 280-608624/42	1		03:10	X	X																									
ZZZZZZ			03:26																											
280-174957-4	1	T	03:42	X	X																									
LCS 280-608624/45	1	T	03:58	X	X																									
LCSD 280-608624/46	1	T	04:14	X	X																									
MB 280-608624/47	1	T	04:30	X	X																									
280-174957-6	1	T	04:46	X	X																									
ZZZZZZ			05:02																											
280-174957-5	1	T	05:17	X	X																									
280-174957-5 DU	1	T	05:33	X	X																									
280-174957-5 MS	1	T	05:49	X	X																									
CCV 280-608624/53	1		06:05	X	X																									
CCB 280-608624/54	1		06:21	X	X																									
280-174957-5 MSD	1	T	06:37	X	X																									
ZZZZZZ			06:53																											
ZZZZZZ			07:09																											
CCV 280-608624/58	1		07:25	X	X																									
CCB 280-608624/59	1		07:41	X	X																									

Prep Types:
T = Total/NA

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom13 Analysis Method: 9056A

Start Date: 04/13/2023 15:39 End Date: 04/14/2023 07:41

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 280-608625/1	1		15:39	X	X																								
CCB 280-608625/2	1		15:55	X	X																								
MRL 280-608625/3	1	T	16:11	X	X																								
LCS 280-608625/4	1	T	16:27	X	X																								
LCSD 280-608625/5	1	T	17:18	X	X																								
MB 280-608625/6	1	T	17:34	X	X																								
ZZZZZZ			17:50																										
280-174957-2	1	T	18:06	X																									
280-174957-2	2	T	18:22		X																								
ZZZZZZ			18:54																										
280-174957-3	1	T	20:13	X																									
CCV 280-608625/17	1		20:30	X	X																								
CCB 280-608625/18	1		20:46	X	X																								
280-174957-3	2	T	21:02		X																								
ZZZZZZ			21:18																										
ZZZZZZ			21:34																										
ZZZZZZ			21:50																										
ZZZZZZ			22:06																										
ZZZZZZ			22:22																										
ZZZZZZ			22:38																										
ZZZZZZ			22:54																										
ZZZZZZ			23:10																										
ZZZZZZ			23:26																										
CCV 280-608625/29	1		23:42	X	X																								
CCB 280-608625/30	1		23:58	X	X																								
ZZZZZZ			00:14																										
ZZZZZZ			00:30																										
ZZZZZZ			00:46																										
ZZZZZZ			02:22																										
CCV 280-608625/41	1		02:54	X	X																								
CCB 280-608625/42	1		03:10	X	X																								
280-174957-4	1	T	03:42	X																									
LCS 280-608625/45	1	T	03:58	X	X																								
LCSD 280-608625/46	1	T	04:14	X	X																								
MB 280-608625/47	1	T	04:30	X	X																								
280-174957-6	1	T	04:46	X																									
280-174957-6	2	T	05:02		X																								
280-174957-5	1	T	05:17	X	X																								
280-174957-5 DU	1	T	05:33	X	X																								
280-174957-5 MS	1	T	05:49	X	X																								
CCV 280-608625/53	1		06:05	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom13 Analysis Method: 9056A

Start Date: 04/13/2023 15:39 End Date: 04/14/2023 07:41

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCB 280-608625/54	1		06:21	X	X																								
280-174957-5 MSD	1	T	06:37	X	X																								
CCV 280-608625/58	1		07:25	X	X																								
CCB 280-608625/59	1		07:41	X	X																								

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 | Analysis Method: 9056A

Start Date: 04/03/2023 16:42 | End Date: 04/04/2023 19:35

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
STD 280-607366/1 IC	1		16:42	X	X	X																								
STD 280-607366/2 IC	1		16:54	X	X	X																								
STD 280-607366/3 IC	1		17:06	X	X	X																								
STD 280-607366/4 IC	1		17:18	X	X	X																								
STD 280-607366/5 IC	1		17:30	X	X	X																								
STD 280-607366/6 IC	1		17:42	X	X	X																								
ICV 280-607366/7	1		17:54	X	X	X																								
ICB 280-607366/8	1		18:06	X	X	X																								
RTC 280-607366/9			18:18																											
ZZZZZZ			18:30																											
ZZZZZZ			18:42																											
ZZZZZZ			18:54																											
ZZZZZZ			19:06																											
ZZZZZZ			19:17																											
ZZZZZZ			19:29																											
ZZZZZZ			19:41																											
ZZZZZZ			19:54																											
ZZZZZZ			20:05																											
ZZZZZZ			20:17																											
ZZZZZZ			20:29																											
ZZZZZZ			20:41																											
ZZZZZZ			20:53																											
ZZZZZZ			21:05																											
CCV 280-607366/24			21:17																											
CCB 280-607366/25			21:29																											
ZZZZZZ			21:41																											
ZZZZZZ			21:53																											
ZZZZZZ			22:05																											
ZZZZZZ			22:17																											
ZZZZZZ			22:29																											
ZZZZZZ			22:41																											
ZZZZZZ			22:53																											
ZZZZZZ			23:05																											
ZZZZZZ			23:17																											
ZZZZZZ			23:28																											
CCV 280-607366/36			23:40																											
CCB 280-607366/37			23:52																											
ZZZZZZ			00:04																											
ZZZZZZ			00:16																											
ZZZZZZ			00:28																											
ZZZZZZ			00:40																											

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/03/2023 16:42 End Date: 04/04/2023 19:35

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
ZZZZZZ			00:52																											
ZZZZZZ			01:04																											
ZZZZZZ			01:16																											
ZZZZZZ			01:28																											
ZZZZZZ			01:40																											
ZZZZZZ			01:52																											
CCV 280-607366/48			02:04																											
CCB 280-607366/49			02:16																											
ZZZZZZ			02:28																											
ZZZZZZ			02:40																											
ZZZZZZ			02:52																											
ZZZZZZ			03:03																											
ZZZZZZ			03:15																											
ZZZZZZ			03:27																											
ZZZZZZ			03:39																											
ZZZZZZ			03:51																											
ZZZZZZ			04:03																											
ZZZZZZ			04:15																											
CCV 280-607366/60			04:27																											
CCB 280-607366/61			04:39																											
ZZZZZZ			04:51																											
ZZZZZZ			05:03																											
ZZZZZZ			05:15																											
ZZZZZZ			05:27																											
ZZZZZZ			05:39																											
ZZZZZZ			05:51																											
ZZZZZZ			06:03																											
ZZZZZZ			06:14																											
ZZZZZZ			06:26																											
ZZZZZZ			09:25																											
CCV 280-607366/72			10:25																											
CCB 280-607366/73			10:37																											
ZZZZZZ			10:49																											
ZZZZZZ			11:01																											
ZZZZZZ			11:13																											
ZZZZZZ			11:25																											
ZZZZZZ			11:37																											
ZZZZZZ			11:49																											
ZZZZZZ			12:01																											
ZZZZZZ			12:13																											
ZZZZZZ			12:25																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver | Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 | Analysis Method: 9056A

Start Date: 04/03/2023 16:42 | End Date: 04/04/2023 19:35

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
ZZZZZZ			12:37																											
CCV 280-607366/84			12:49																											
CCB 280-607366/85			13:00																											
ZZZZZZ			13:12																											
ZZZZZZ			13:24																											
ZZZZZZ			13:36																											
ZZZZZZ			13:48																											
ZZZZZZ			14:00																											
ZZZZZZ			14:12																											
ZZZZZZ			14:24																											
ZZZZZZ			14:36																											
ZZZZZZ			14:48																											
ZZZZZZ			15:00																											
CCV 280-607366/96			15:12																											
CCB 280-607366/97			15:24																											
ZZZZZZ			15:36																											
ZZZZZZ			15:48																											
ZZZZZZ			16:00																											
ZZZZZZ			16:12																											
ZZZZZZ			16:24																											
ZZZZZZ			16:36																											
ZZZZZZ			16:48																											
ZZZZZZ			17:00																											
ZZZZZZ			17:12																											
ZZZZZZ			17:24																											
CCV 280-607366/108			17:36																											
CCB 280-607366/109			17:48																											
ZZZZZZ			18:00																											
ZZZZZZ			18:12																											
ZZZZZZ			18:24																											
ZZZZZZ			18:35																											
ZZZZZZ			18:47																											
ZZZZZZ			18:59																											
ZZZZZZ			19:11																											
CCV 280-607366/117			19:23																											
CCB 280-607366/118			19:35																											

Prep Types:
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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/14/2023 14:28 End Date: 04/14/2023 20:20

Lab Sample Id	D/F	Type	Time	Analytes																								
				NO3																								
CCV 280-608788/1	1		14:28	X																								
CCB 280-608788/2	1		14:40	X																								
MRL 280-608788/3	1	T	14:52	X																								
LCS 280-608788/4	1	T	15:04	X																								
LCSD 280-608788/5	1	T	15:16	X																								
MB 280-608788/6	1	T	15:28	X																								
ZZZZZZ			15:44																									
ZZZZZZ			15:56																									
ZZZZZZ			16:08																									
ZZZZZZ			16:20																									
ZZZZZZ			16:32																									
ZZZZZZ			16:44																									
ZZZZZZ			16:56																									
ZZZZZZ			17:08																									
ZZZZZZ			17:20																									
ZZZZZZ			17:32																									
CCV 280-608788/17	1		17:44	X																								
CCB 280-608788/18	1		17:56	X																								
ZZZZZZ			18:08																									
ZZZZZZ			18:20																									
ZZZZZZ			18:32																									
ZZZZZZ			18:44																									
ZZZZZZ			18:56																									
ZZZZZZ			19:08																									
280-174957-6	5	T	19:20	X																								
CCV 280-608788/29	1		20:08	X																								
CCB 280-608788/30	1		20:20	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/14/2023 14:28 End Date: 04/15/2023 13:04

Lab Sample Id	D/F	Type	Time	Analytes
				Cl-
CCV 280-608789/1	1		14:28	X
CCB 280-608789/2	1		14:40	X
MRL 280-608789/3	1	T	14:52	X
LCS 280-608789/4	1	T	15:04	X
LCSD 280-608789/5	1	T	15:16	X
MB 280-608789/6	1	T	15:28	X
ZZZZZZ			15:44	
ZZZZZZ			15:56	
ZZZZZZ			16:08	
ZZZZZZ			16:20	
ZZZZZZ			17:20	
ZZZZZZ			17:32	
CCV 280-608789/17	1		17:44	X
CCB 280-608789/18	1		17:56	X
ZZZZZZ			18:08	
ZZZZZZ			18:20	
ZZZZZZ			18:32	
ZZZZZZ			18:44	
ZZZZZZ			18:56	
ZZZZZZ			19:08	
280-174957-6	5	T	19:20	X
ZZZZZZ			19:32	
ZZZZZZ			19:44	
ZZZZZZ			19:56	
CCV 280-608789/29			20:08	
CCB 280-608789/30			20:20	
ZZZZZZ			20:32	
ZZZZZZ			20:44	
ZZZZZZ			20:56	
ZZZZZZ			21:08	
ZZZZZZ			21:20	
ZZZZZZ			21:32	
ZZZZZZ			21:43	
ZZZZZZ			21:55	
ZZZZZZ			22:07	
ZZZZZZ			22:19	
CCV 280-608789/41			22:31	
CCB 280-608789/42			22:43	
ZZZZZZ			22:56	
ZZZZZZ			23:08	
ZZZZZZ			23:20	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/14/2023 14:28 End Date: 04/15/2023 13:04

Lab Sample Id	D/F	Type	Time	Analytes																								
				CL-																								
ZZZZZZ			23:32																									
ZZZZZZ			23:43																									
ZZZZZZ			23:55																									
ZZZZZZ			00:07																									
ZZZZZZ			00:19																									
ZZZZZZ			00:31																									
ZZZZZZ			00:43																									
CCV 280-608789/53			00:55																									
CCB 280-608789/54			01:07																									
ZZZZZZ			01:19																									
ZZZZZZ			01:31																									
ZZZZZZ			01:43																									
ZZZZZZ			01:55																									
ZZZZZZ			02:07																									
ZZZZZZ			02:19																									
ZZZZZZ			02:31																									
ZZZZZZ			02:43																									
ZZZZZZ			02:55																									
ZZZZZZ			03:07																									
CCV 280-608789/65			03:18																									
CCB 280-608789/66			03:30																									
ZZZZZZ			03:42																									
ZZZZZZ			03:54																									
ZZZZZZ			04:06																									
ZZZZZZ			04:18																									
ZZZZZZ			04:30																									
ZZZZZZ			04:42																									
ZZZZZZ			04:54																									
ZZZZZZ			05:06																									
ZZZZZZ			05:18																									
ZZZZZZ			05:30																									
CCV 280-608789/77			05:42																									
CCB 280-608789/78			05:54																									
ZZZZZZ			06:06																									
ZZZZZZ			06:18																									
ZZZZZZ			06:30																									
ZZZZZZ			06:42																									
ZZZZZZ			06:53																									
ZZZZZZ			07:05																									
ZZZZZZ			07:17																									
ZZZZZZ			07:29																									

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/14/2023 14:28 End Date: 04/15/2023 13:04

Lab Sample Id	D/F	Type	Time	Analytes																									
				Cl-																									
ZZZZZZ			07:41																										
ZZZZZZ			07:53																										
CCV 280-608789/89			08:05																										
CCB 280-608789/90			08:17																										
ZZZZZZ			08:29																										
ZZZZZZ			08:41																										
ZZZZZZ			08:53																										
CCV 280-608789/94			09:05																										
CCB 280-608789/95			09:17																										
ZZZZZZ			09:29																										
ZZZZZZ			09:41																										
ZZZZZZ			09:53																										
ZZZZZZ			10:05																										
ZZZZZZ			10:17																										
ZZZZZZ			10:29																										
ZZZZZZ			10:40																										
ZZZZZZ			10:52																										
ZZZZZZ			11:04																										
ZZZZZZ			11:16																										
CCV 280-608789/106			11:28																										
CCB 280-608789/107			11:40																										
ZZZZZZ			11:52																										
ZZZZZZ			12:04																										
ZZZZZZ			12:16																										
ZZZZZZ			12:28																										
ZZZZZZ			12:40																										
CCV 280-608789/113			12:52																										
CCB 280-608789/114			13:04																										

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/27/2023 14:19 End Date: 04/28/2023 12:16

Lab Sample Id	D/F	Type	Time	Analytes																									
				CL-	SO4																								
CCV 280-610429/1	1		14:19	X	X																								
CCB 280-610429/2	1		14:31	X	X																								
MRL 280-610429/3	1	T	14:43	X	X																								
LCS 280-610429/4	1	T	14:55	X	X																								
LCSD 280-610429/5	1	T	15:07	X	X																								
MB 280-610429/6	1	T	15:19	X	X																								
ZZZZZZ			15:31																										
ZZZZZZ			15:43																										
ZZZZZZ			15:55																										
ZZZZZZ			16:07																										
ZZZZZZ			16:19																										
ZZZZZZ			16:31																										
ZZZZZZ			16:43																										
280-174957-3	5	T	16:55	X																									
280-174957-4	5	T	17:07	X	X																								
280-174957-5	5	T	17:19	X																									
CCV 280-610429/17	1		17:31	X	X																								
CCB 280-610429/18	1		17:43	X	X																								
ZZZZZZ			08:17																										
ZZZZZZ			08:29																										
ZZZZZZ			08:40																										
ZZZZZZ			08:52																										
ZZZZZZ			09:04																										
ZZZZZZ			09:16																										
ZZZZZZ			09:28																										
ZZZZZZ			09:40																										
ZZZZZZ			09:52																										
ZZZZZZ			10:04																										
CCV 280-610429/29	1		10:16	X	X																								
CCB 280-610429/30	1		10:28	X	X																								
ZZZZZZ			10:40																										
ZZZZZZ			10:52																										
ZZZZZZ			11:04																										
ZZZZZZ			11:16																										
ZZZZZZ			11:28																										
ZZZZZZ			11:40																										
ZZZZZZ			11:52																										
CCV 280-610429/38			12:04																										
CCB 280-610429/39			12:16																										

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/27/2023 14:19 End Date: 04/28/2023 12:16

Lab Sample Id	D/F	Type	Time	Analytes																								
				CL-	SO4																							

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/28/2023 15:28 End Date: 04/29/2023 08:36

Lab Sample Id	D/F	Type	Time	Analytes
				Cl-
CCV 280-610539/1	1		15:28	X
CCB 280-610539/2	1		15:40	X
MRL 280-610539/3	1	T	15:52	X
LCS 280-610539/4	1	T	16:04	X
LCSD 280-610539/5	1	T	16:16	X
MB 280-610539/6	1	T	16:28	X
ZZZZZZ			17:28	
ZZZZZZ			17:40	
ZZZZZZ			17:40	
ZZZZZZ			17:52	
ZZZZZZ			17:52	
ZZZZZZ			18:04	
ZZZZZZ			18:04	
ZZZZZZ			18:16	
ZZZZZZ			18:16	
ZZZZZZ			18:28	
CCV 280-610539/17	1		18:40	X
CCB 280-610539/18	1		18:52	X
ZZZZZZ			19:04	
ZZZZZZ			19:16	
ZZZZZZ			19:27	
ZZZZZZ			19:39	
ZZZZZZ			19:51	
ZZZZZZ			20:03	
ZZZZZZ			20:15	
ZZZZZZ			20:27	
ZZZZZZ			20:39	
ZZZZZZ			20:51	
CCV 280-610539/29	1		21:03	X
CCB 280-610539/30	1		21:15	X
ZZZZZZ			21:27	
ZZZZZZ			21:39	
ZZZZZZ			21:51	
ZZZZZZ			22:03	
ZZZZZZ			22:15	
ZZZZZZ			22:27	
ZZZZZZ			22:39	
ZZZZZZ			22:51	
280-174957-2	10	T	23:03	X
ZZZZZZ			23:15	
CCV 280-610539/41	1		23:27	X

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/28/2023 15:28 End Date: 04/29/2023 08:36

Lab Sample Id	D/F	Type	Time	Analytes
				Cl-
CCB 280-610539/42	1		23:39	X
ZZZZZZ			23:51	
ZZZZZZ			00:03	
ZZZZZZ			00:15	
ZZZZZZ			00:27	
ZZZZZZ			00:39	
ZZZZZZ			00:51	
ZZZZZZ			01:02	
ZZZZZZ			01:14	
ZZZZZZ			01:26	
ZZZZZZ			01:38	
CCV 280-610539/53	1		01:50	X
CCB 280-610539/54	1		02:02	X
ZZZZZZ			02:14	
ZZZZZZ			02:26	
ZZZZZZ			02:38	
ZZZZZZ			02:50	
ZZZZZZ			03:02	
ZZZZZZ			03:14	
ZZZZZZ			03:26	
ZZZZZZ			03:38	
ZZZZZZ			03:50	
ZZZZZZ			04:02	
CCV 280-610539/65			04:14	
CCB 280-610539/66			04:26	
ZZZZZZ			04:38	
ZZZZZZ			04:49	
ZZZZZZ			05:01	
ZZZZZZ			05:13	
ZZZZZZ			05:25	
ZZZZZZ			05:37	
ZZZZZZ			05:49	
ZZZZZZ			06:01	
ZZZZZZ			06:13	
ZZZZZZ			06:25	
CCV 280-610539/77			06:37	
CCB 280-610539/78			06:49	
ZZZZZZ			07:01	
ZZZZZZ			07:13	
ZZZZZZ			07:25	
ZZZZZZ			07:37	

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/28/2023 15:28 End Date: 04/29/2023 08:36

Lab Sample Id	D/F	Type	Time	Analytes																								
				CL-																								
ZZZZZZ			07:49																									
ZZZZZZ			08:01																									
ZZZZZZ			08:13																									
CCV 280-610539/86			08:25																									
CCB 280-610539/87			08:36																									

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_SHI5 Analysis Method: 9060A

Start Date: 04/20/2023 16:47 End Date: 04/21/2023 16:22

Lab Sample Id	D/F	Type	Time	Analytes																										
				TOC1	TOC2	TOCD																								
ICV 280-609693/1	1		16:47	X	X	X																								
ICB 280-609693/2	1		17:02			X																								
LCS 280-609693/3	1	T	17:18	X	X	X																								
MB 280-609693/4	1	T	17:33			X																								
ZZZZZZ			17:49																											
ZZZZZZ			18:04																											
ZZZZZZ			18:22																											
ZZZZZZ			18:36																											
ZZZZZZ			18:53																											
ZZZZZZ			19:09																											
ZZZZZZ			19:26																											
ZZZZZZ			19:42																											
280-174957-2	1	T	19:56			X																								
280-174957-3	1	T	20:12			X																								
CCV 280-609693/15	1		20:29	X	X	X																								
CCB 280-609693/16	1		20:43			X																								
280-174957-4	1	T	20:59			X																								
280-174957-5	1	T	21:16			X																								
280-174957-6	1	T	21:32			X																								
ZZZZZZ			21:48																											
ZZZZZZ			22:02																											
ZZZZZZ			22:17																											
ZZZZZZ			22:31																											
ZZZZZZ			22:45																											
ZZZZZZ			22:59																											
ZZZZZZ			23:13																											
CCV 280-609693/27	1		23:28	X	X	X																								
CCB 280-609693/28	1		23:42			X																								
ZZZZZZ			23:58																											
ZZZZZZ			00:13																											
ZZZZZZ			00:29																											
ZZZZZZ			00:43																											
ZZZZZZ			00:57																											
ZZZZZZ			01:11																											
ZZZZZZ			01:28																											
ZZZZZZ			01:44																											
ZZZZZZ			01:58																											
ZZZZZZ			02:15																											
CCV 280-609693/39			02:30																											
CCB 280-609693/40			02:44																											

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_SHI5 Analysis Method: 9060A

Start Date: 04/20/2023 16:47 End Date: 04/21/2023 16:22

Lab Sample Id	D/F	Type	Time	Analytes																										
				TOC1	TOC2	TOCD																								
ZZZZZZ			03:01																											
ZZZZZZ			03:17																											
ZZZZZZ			03:33																											
ZZZZZZ			03:47																											
ZZZZZZ			04:04																											
ZZZZZZ			04:18																											
ZZZZZZ			04:36																											
ZZZZZZ			04:53																											
ZZZZZZ			05:09																											
ZZZZZZ			05:25																											
CCV 280-609693/51			05:40																											
CCB 280-609693/52			05:55																											
ZZZZZZ			06:11																											
ZZZZZZ			06:25																											
ZZZZZZ			06:47																											
ZZZZZZ			07:02																											
ZZZZZZ			07:23																											
ZZZZZZ			07:37																											
ZZZZZZ			07:51																											
ZZZZZZ			08:11																											
ZZZZZZ			08:25																											
ZZZZZZ			08:39																											
CCV 280-609693/63			08:59																											
CCB 280-609693/64			09:13																											
ZZZZZZ			09:27																											
ZZZZZZ			09:42																											
ZZZZZZ			09:56																											
ZZZZZZ			10:11																											
ZZZZZZ			10:27																											
ZZZZZZ			10:42																											
ZZZZZZ			10:56																											
ZZZZZZ			11:10																											
ZZZZZZ			11:24																											
ZZZZZZ			11:46																											
CCV 280-609693/75			12:01																											
CCB 280-609693/76			12:15																											
ZZZZZZ			12:30																											
ZZZZZZ			12:44																											
ZZZZZZ			12:58																											
ZZZZZZ			13:12																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Instrument ID: WC_SHI5 Analysis Method: 9060A

Start Date: 04/20/2023 16:47 End Date: 04/21/2023 16:22

Lab Sample Id	D/F	Type	Time	Analytes																										
				TOC1	TOC2	TOCD																								
ZZZZZZ			13:27																											
ZZZZZZ			13:41																											
ZZZZZZ			13:55																											
ZZZZZZ			14:12																											
ZZZZZZ			14:26																											
ZZZZZZ			14:42																											
CCV 280-609693/87			14:56																											
CCB 280-609693/88			15:11																											
ZZZZZZ			15:25																											
ZZZZZZ			15:39																											
ZZZZZZ			15:53																											
CCV 280-609693/92			16:08																											
CCB 280-609693/93			16:22																											

Prep Types:
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 603591 Batch Start Date: 02/28/23 17:05 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00467	IC Cal low 00694		
STD 280-603591/1 IC		9056A		10 mL	10 mL	0.04 mL			
STD 280-603591/2 IC		9056A		10 mL	10 mL	0.1 mL	0.08 mL		
STD 280-603591/3 IC		9056A		10 mL	10 mL	0.2 mL	0.2 mL		
STD 280-603591/4 IC		9056A		10 mL	10 mL	2.4 mL	0.4 mL		
STD 280-603591/5 IC		9056A		10 mL	10 mL	4.8 mL	1 mL		
STD 280-603591/6 IC		9056A		10 mL	10 mL	8 mL	2 mL		

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, 100IC
Sufficient Volume for Batch QC	yes
Eluent 1 ID	IC10 Eluent_00006
Batch Comment	MEC

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 603592 Batch Start Date: 02/28/23 17:05 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cl ICV Std 00006	IC CAL cl/so4 00467	IC Cal low 00694	IC ICV 5 00396
STD 280-603592/1 IC		9056A		10 mL	10 mL		0.04 mL		
STD 280-603592/2 IC		9056A		10 mL	10 mL		0.1 mL	0.08 mL	
STD 280-603592/3 IC		9056A		10 mL	10 mL		0.2 mL	0.2 mL	
STD 280-603592/4 IC		9056A		10 mL	10 mL		2.4 mL	0.4 mL	
STD 280-603592/5 IC		9056A		10 mL	10 mL		4.8 mL	1 mL	
STD 280-603592/6 IC		9056A		10 mL	10 mL		8 mL	2 mL	
ICV 280-603592/7		9056A		10 mL	10 mL	0.8 mL			0.8 mL
ICB 280-603592/8		9056A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00024					
STD 280-603592/1 IC		9056A							
STD 280-603592/2 IC		9056A							
STD 280-603592/3 IC		9056A							
STD 280-603592/4 IC		9056A							
STD 280-603592/5 IC		9056A							
STD 280-603592/6 IC		9056A							
ICV 280-603592/7		9056A		0.8 mL					
ICB 280-603592/8		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 603592 Batch Start Date: 02/28/23 17:05 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, 100IC
Sufficient Volume for Batch QC	yes
Eluent 1 ID	IC10 eluent_00006
Batch Comment	MEC

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 607365 Batch Start Date: 04/03/23 16:42 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00473	IC Cal low 00701		
STD 280-607365/2 IC		9056A		10 mL	10 mL	0.1 mL	0.08 mL		
STD 280-607365/3 IC		9056A		10 mL	10 mL	0.2 mL	0.2 mL		
STD 280-607365/4 IC		9056A		10 mL	10 mL	2.4 mL	0.4 mL		
STD 280-607365/5 IC		9056A		10 mL	10 mL	4.8 mL	1 mL		
STD 280-607365/6 IC		9056A		10 mL	10 mL	8 mL	2 mL		

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00004
Batch Comment	EJS

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 607366 Batch Start Date: 04/03/23 16:42 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cl ICV Std 00006	IC CAL cl/so4 00473	IC Cal low 00701	IC ICV 5 00402
STD 280-607366/1 IC		9056A		10 mL	10 mL		0.04 mL		
STD 280-607366/2 IC		9056A		10 mL	10 mL		0.1 mL	0.08 mL	
STD 280-607366/3 IC		9056A		10 mL	10 mL		0.2 mL	0.2 mL	
STD 280-607366/4 IC		9056A		10 mL	10 mL		2.4 mL	0.4 mL	
STD 280-607366/5 IC		9056A		10 mL	10 mL		4.8 mL	1 mL	
STD 280-607366/6 IC		9056A		10 mL	10 mL		8 mL	2 mL	
ICV 280-607366/7		9056A		10 mL	10 mL	0.8 mL			0.8 mL
ICB 280-607366/8		9056A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00024					
STD 280-607366/1 IC		9056A							
STD 280-607366/2 IC		9056A							
STD 280-607366/3 IC		9056A							
STD 280-607366/4 IC		9056A							
STD 280-607366/5 IC		9056A							
STD 280-607366/6 IC		9056A							
ICV 280-607366/7		9056A		0.8 mL					
ICB 280-607366/8		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 607366 Batch Start Date: 04/03/23 16:42 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00004
Batch Comment	EJS

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608624 Batch Start Date: 04/13/23 15:39 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	ICMS/MSD WEEK 00814
CCV 280-608624/1		9056A		5 mL	5 mL			10 mL	
CCB 280-608624/2		9056A		5 mL	5 mL				
MRL 280-608624/3		9056A		5 mL	5 mL	0.2 mL	0.1 mL		
LCS 280-608624/4		9056A		5 mL	5 mL			10 mL	
LCSD 280-608624/5		9056A		5 mL	5 mL			10 mL	
MB 280-608624/6		9056A		5 mL	5 mL				
280-174957-C-2	MW-124-20230412	9056A	T	5 mL	5 mL				
280-174957-C-2	MW-124-20230412	9056A	T	5 mL	5 mL				
280-174957-C-3	MW-124-Q-20230412	9056A	T	5 mL	5 mL				
CCV 280-608624/17		9056A		5 mL	5 mL			10 mL	
CCB 280-608624/18		9056A		5 mL	5 mL				
280-174957-C-3	MW-124-Q-20230412	9056A	T	5 mL	5 mL				
CCV 280-608624/29		9056A		5 mL	5 mL			10 mL	
CCB 280-608624/30		9056A		5 mL	5 mL				
CCV 280-608624/41		9056A		5 mL	5 mL			10 mL	
CCB 280-608624/42		9056A		5 mL	5 mL				
280-174957-C-4	RW-15-20230411	9056A	T	5 mL	5 mL				
LCS 280-608624/45		9056A		5 mL	5 mL			10 mL	
LCSD 280-608624/46		9056A		5 mL	5 mL			10 mL	
MB 280-608624/47		9056A		5 mL	5 mL				
280-174957-C-6	MW-105S-20230411	9056A	T	5 mL	5 mL				
280-174957-C-5	MW-105D-20230411	9056A	T	5 mL	5 mL				
280-174957-C-5 DU	MW-105D-20230411	9056A	T	5 mL	5 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608624 Batch Start Date: 04/13/23 15:39 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	ICMS/MSD WEEK 00814
280-174957-C-5 MS	MW-105D-20230411	9056A	T	5 mL	5 mL				0.1 mL
CCV 280-608624/53		9056A		5 mL	5 mL			10 mL	
CCB 280-608624/54		9056A		5 mL	5 mL				
280-174957-C-5 MSD	MW-105D-20230411	9056A	T	5 mL	5 mL				0.1 mL
CCV 280-608624/58		9056A		5 mL	5 mL			10 mL	
CCB 280-608624/59		9056A		5 mL	5 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	IC10 ELUENT_00006
Batch Comment	EJS

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608625 Batch Start Date: 04/13/23 15:39 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	ICMS/MSD WEEK 00814
CCV 280-608625/1		9056A		5 mL	5 mL			10 mL	
CCB 280-608625/2		9056A		5 mL	5 mL				
MRL 280-608625/3		9056A		5 mL	5 mL	0.2 mL	0.1 mL		
LCS 280-608625/4		9056A		5 mL	5 mL			10 mL	
LCSD 280-608625/5		9056A		5 mL	5 mL			10 mL	
MB 280-608625/6		9056A		5 mL	5 mL				
280-174957-C-2	MW-124-20230412	9056A	T	5 mL	5 mL				
280-174957-C-2	MW-124-20230412	9056A	T	5 mL	5 mL				
280-174957-C-3	MW-124-Q-20230412	9056A	T	5 mL	5 mL				
CCV 280-608625/17		9056A		5 mL	5 mL			10 mL	
CCB 280-608625/18		9056A		5 mL	5 mL				
280-174957-C-3	MW-124-Q-20230412	9056A	T	5 mL	5 mL				
CCV 280-608625/29		9056A		5 mL	5 mL			10 mL	
CCB 280-608625/30		9056A		5 mL	5 mL				
CCV 280-608625/41		9056A		5 mL	5 mL			10 mL	
CCB 280-608625/42		9056A		5 mL	5 mL				
280-174957-C-4	RW-15-20230411	9056A	T	5 mL	5 mL				
LCS 280-608625/45		9056A		5 mL	5 mL			10 mL	
LCSD 280-608625/46		9056A		5 mL	5 mL			10 mL	
MB 280-608625/47		9056A		5 mL	5 mL				
280-174957-C-6	MW-105S-20230411	9056A	T	5 mL	5 mL				
280-174957-C-6	MW-105S-20230411	9056A	T	5 mL	5 mL				
280-174957-C-5	MW-105D-20230411	9056A	T	5 mL	5 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608625 Batch Start Date: 04/13/23 15:39 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	ICMS/MSD WEEK 00814
280-174957-C-5 DU	MW-105D-20230411	9056A	T	5 mL	5 mL				
280-174957-C-5 MS	MW-105D-20230411	9056A	T	5 mL	5 mL				0.1 mL
CCV 280-608625/53		9056A		5 mL	5 mL			10 mL	
CCB 280-608625/54		9056A		5 mL	5 mL				
280-174957-C-5 MSD	MW-105D-20230411	9056A	T	5 mL	5 mL				0.1 mL
CCV 280-608625/58		9056A		5 mL	5 mL			10 mL	
CCB 280-608625/59		9056A		5 mL	5 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	IC10 ELUENT_00006
Batch Comment	EJS

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608788 Batch Start Date: 04/14/23 14:28 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	
CCV 280-608788/1		9056A		5 mL	5 mL			10 mL	
CCB 280-608788/2		9056A		5 mL	5 mL				
MRL 280-608788/3		9056A		5 mL	5 mL	0.2 mL	0.1 mL		
LCS 280-608788/4		9056A		5 mL	5 mL			10 mL	
LCSD 280-608788/5		9056A		5 mL	5 mL			10 mL	
MB 280-608788/6		9056A		5 mL	5 mL				
CCV 280-608788/17		9056A		5 mL	5 mL			10 mL	
CCB 280-608788/18		9056A		5 mL	5 mL				
280-174957-C-6	MW-105S-20230411	9056A	T	5 mL	5 mL				
CCV 280-608788/29		9056A		5 mL	5 mL			10 mL	
CCB 280-608788/30		9056A		5 mL	5 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, 100CJ, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00007
Batch Comment	EJS

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 608789 Batch Start Date: 04/14/23 14:28 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	
CCV 280-608789/1		9056A		5 mL	5 mL			10 mL	
CCB 280-608789/2		9056A		5 mL	5 mL				
MRL 280-608789/3		9056A		5 mL	5 mL	0.2 mL	0.1 mL		
LCS 280-608789/4		9056A		5 mL	5 mL			10 mL	
LCSD 280-608789/5		9056A		5 mL	5 mL			10 mL	
MB 280-608789/6		9056A		5 mL	5 mL				
CCV 280-608789/17		9056A		5 mL	5 mL			10 mL	
CCB 280-608789/18		9056A		5 mL	5 mL				
280-174957-C-6	MW-105S-20230411	9056A	T	5 mL	5 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00007
Batch Comment	EJS

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 610429 Batch Start Date: 04/27/23 14:19 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00477	IC Cal low 00706	IC LCS 01950	
CCV 280-610429/1		9056A		5 mL	5 mL			10 mL	
CCB 280-610429/2		9056A		5 mL	5 mL				
MRL 280-610429/3		9056A		5 mL	5 mL	0.2 mL	0.1 mL		
LCS 280-610429/4		9056A		5 mL	5 mL			10 mL	
LCSD 280-610429/5		9056A		5 mL	5 mL			10 mL	
MB 280-610429/6		9056A		5 mL	5 mL				
280-174957-C-3	MW-124-Q-20230412	9056A	T	5 mL	5 mL				
280-174957-C-4	RW-15-20230411	9056A	T	5 mL	5 mL				
280-174957-C-5	MW-105D-20230411	9056A	T	5 mL	5 mL				
CCV 280-610429/17		9056A		5 mL	5 mL			10 mL	
CCB 280-610429/18		9056A		5 mL	5 mL				
CCV 280-610429/29		9056A		5 mL	5 mL			10 mL	
CCB 280-610429/30		9056A		5 mL	5 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ , IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00006
Batch Comment	MEC, REVIEWED BY EJS

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 610539 Batch Start Date: 04/28/23 15:28 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00477	IC Cal low 00706	IC LCS 01950	
CCV 280-610539/1		9056A		5 mL	5 mL			10 mL	
CCB 280-610539/2		9056A		5 mL	5 mL				
MRL 280-610539/3		9056A		5 mL	5 mL	0.2 mL	0.1 mL		
LCS 280-610539/4		9056A		5 mL	5 mL			10 mL	
LCSD 280-610539/5		9056A		5 mL	5 mL			10 mL	
MB 280-610539/6		9056A		5 mL	5 mL				
CCV 280-610539/17		9056A		5 mL	5 mL			10 mL	
CCB 280-610539/18		9056A		5 mL	5 mL				
CCV 280-610539/29		9056A		5 mL	5 mL			10 mL	
CCB 280-610539/30		9056A		5 mL	5 mL				
280-174957-C-2	MW-124-20230412	9056A	T	5 mL	5 mL				
CCV 280-610539/41		9056A		5 mL	5 mL			10 mL	
CCB 280-610539/42		9056A		5 mL	5 mL				
CCV 280-610539/53		9056A		5 mL	5 mL			10 mL	
CCB 280-610539/54		9056A		5 mL	5 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00007
Batch Comment	EJS

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 610539 Batch Start Date: 04/28/23 15:28 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609693 Batch Start Date: 04/20/23 16:47 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	TOC ICV Std 00051	TOC LCS Std 00057	AnalysisComment
ICV 280-609693/1		9060A		50 mL	50 mL	<2 SU	1 mL		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
ICB 280-609693/2		9060A		20 mL	20 mL	<2 SU			The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
LCS 280-609693/3		9060A		200 mL	200 mL	<2 SU		5 mL	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
MB 280-609693/4		9060A		20 mL	20 mL	<2 SU			The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-2	MW-124-20230412	9060A	T	20 mL	20 mL	<2 SU			The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-3	MW-124-Q-20230412	9060A	T	20 mL	20 mL	<2 SU			The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
CCV 280-609693/15		9060A		200 mL	200 mL	<2 SU		5 mL	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609693 Batch Start Date: 04/20/23 16:47 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	TOC ICV Std 00051	TOC LCS Std 00057	AnalysisComment
CCB 280-609693/16		9060A		20 mL	20 mL	<2 SU			The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-4	RW-15-20230411	9060A	T	20 mL	20 mL	<2 SU			The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-5	MW-105D-20230411	9060A	T	20 mL	20 mL	<2 SU			The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-6	MW-105S-20230411	9060A	T	20 mL	20 mL	<2 SU			The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
CCV 280-609693/27		9060A		200 mL	200 mL	<2 SU		5 mL	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
CCB 280-609693/28		9060A		20 mL	20 mL	<2 SU			The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609693 Batch Start Date: 04/20/23 16:47 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Batch Notes	
Acid ID	0.2% H2SO4_00457, H2SO4_00214
Combustion Catylyst ID	S638-92069-02
Pipette/Syringe/Dispenser ID	BWH 5000,1000 MS
Vial Lot Number	705212201761
Batch Comment	Run and reviewed by ABW

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609702 Batch Start Date: 04/20/23 16:47 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	TOC ICV Std 00051	AnalysisComment
LCS 280-609702/3		9060A		100 mL	100 mL	<2 SU	<2 SU	2.5 mL	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
MB 280-609702/4		9060A		20 mL	20 mL	<2 SU	<2 SU		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-2	MW-124-20230412	9060A	T						The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-3	MW-124-Q-20230412	9060A	T						The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-4	RW-15-20230411	9060A	T						The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-5	MW-105D-20230411	9060A	T						The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-174957-B-6	MW-105S-20230411	9060A	T						The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-174957-1

SDG No.:

Batch Number: 609702 Batch Start Date: 04/20/23 16:47 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Batch Notes	
Acid ID	0.2% H2SO4_00457, H2SO4_00214
Combustion Catylyst ID	S638-92069-02
Pipette/Syringe/Dispenser ID	BWH 5000,1000 MS
pH Paper ID	HC205981
Batch Comment	Run and reviewed by ABW

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Instrument: WC_IonChrom13 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 02-Mar-2023 14:51:48
No.Compounds:7
Sublist: chrom-Anions-IC13*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-15.917 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17205
Inj Date: 28-Feb-2023 17:05:00 Worklist: 119025 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17365
Inj Date: 28-Feb-2023 17:21:00 Worklist: 119025 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17525
Inj Date: 28-Feb-2023 17:36:00 Worklist: 119025 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18085
Inj Date: 28-Feb-2023 17:52:00 Worklist: 119025 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18244
Inj Date: 28-Feb-2023 18:08:00 Worklist: 119025 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18404
Inj Date: 28-Feb-2023 18:24:00 Worklist: 119025 Sample#: 6

Start Cal Date: 28-Feb-2023 17:05:00 End Cal Date: 28-Feb-2023 18:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
25550290	28404102	31518266	34887786	37372618		-3204369			0.998
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			37058128		
5110058	14202051	31518266	87219464	186863088					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
2 Chloride			Signal: 1						
12627594	13950813	14713682	16496659	16735745	16806087	-2846645			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		16768440		
M6313797	17438516	36784204	494899763	1004144688	1680608715				
119025(1)	119025(2)	119025(3)	119025(4)	119025(5)	119025(6)				
4 Bromide			Signal: 1						
5371145	5654930	5831694	6215221	6482146		-304945			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			6435532		
M1074229	M2827465	5831694	15538053	32410730					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
14914790	11898737	10945896	11802968	12038010	12129031	482428			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		12026120		
M7457395	M14873421	M27364741	354089035	722280611	1212903103				
119025(1)	119025(2)	119025(3)	119025(4)	119025(5)	119025(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Instrument: WC_IonChrom13 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 02-Mar-2023 14:51:48
No.Compounds:7
Sublist: chrom-Anions-IC13*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-15.917 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17205
Inj Date: 28-Feb-2023 17:05:00 Worklist: 119025 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17365
Inj Date: 28-Feb-2023 17:21:00 Worklist: 119025 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17525
Inj Date: 28-Feb-2023 17:36:00 Worklist: 119025 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18085
Inj Date: 28-Feb-2023 17:52:00 Worklist: 119025 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18244
Inj Date: 28-Feb-2023 18:08:00 Worklist: 119025 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18404
Inj Date: 28-Feb-2023 18:24:00 Worklist: 119025 Sample#: 6

Start Cal Date: 28-Feb-2023 17:05:00 End Cal Date: 28-Feb-2023 18:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
33023980	35193560	36848085	39004007	39206527		-1604230			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			39414506		
6604796	17596780	36848085	97510017	196032634					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
31353555	34242202	36561770	39458955	40961308		-2537359			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			40879816		
M6270711	17121101	36561770	98647387	204806542					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
7 Orthophosphate as P				Signal: 1					
54426850	82954388	119001523	126093582	116101016		-13832297			0.995
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			123507022		
10885370	41477194	119001523	315233954	580505078					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	28-Feb-2023 18:40:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-007				
Misc. Info.:	280-0119025-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	02-Mar-2023 14:51:48	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: LVW8		Date:	02-Mar-2023 14:52:22		
Start Cal Date:	28-Feb-2023 17:05:00				
End Cal Date:	28-Feb-2023 18:24:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	1.83	-8.4	10.0	91.6	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	2.32	* 15.9	10.0	115.9	

Report Date: 02-Mar-2023 14:52:38 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	28-Feb-2023 18:40:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-007				
Misc. Info.:	280-0119025-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions 28D				
Last Update:	02-Mar-2023 14:52:37	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: LVW8		Date:	02-Mar-2023 14:52:37		
Start Cal Date:	28-Feb-2023 17:05:00				
End Cal Date:	28-Feb-2023 18:24:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.82	-8.8	10.0	91.2	
2 Chloride	80.0	78.2	-2.3	10.0	97.7	
4 Bromide	2.00	1.96	-2.1	10.0	97.9	
6 Sulfate	80.0	79.3	-0.9	10.0	99.1	

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-172				
Lims ID:	STD L1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	28-Feb-2023 17:05:00	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-001				
Misc. Info.:	280-0119025-001				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions-IC13*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	02-Mar-2023 14:10:16	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: XAY4		Date:	01-Mar-2023 10:08:18		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.120				ND	
2 Chloride	4.340	4.340	0.000	6313797	NC	NC	M
3 Nitrite as N		5.058				ND	
4 Bromide		6.342				ND	
5 Nitrate as N		7.087				ND	
7 Orthophosphate as P	9.803	9.803	0.000	133400		0.1131	
6 Sulfate	10.833	10.833	0.000	7457395	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

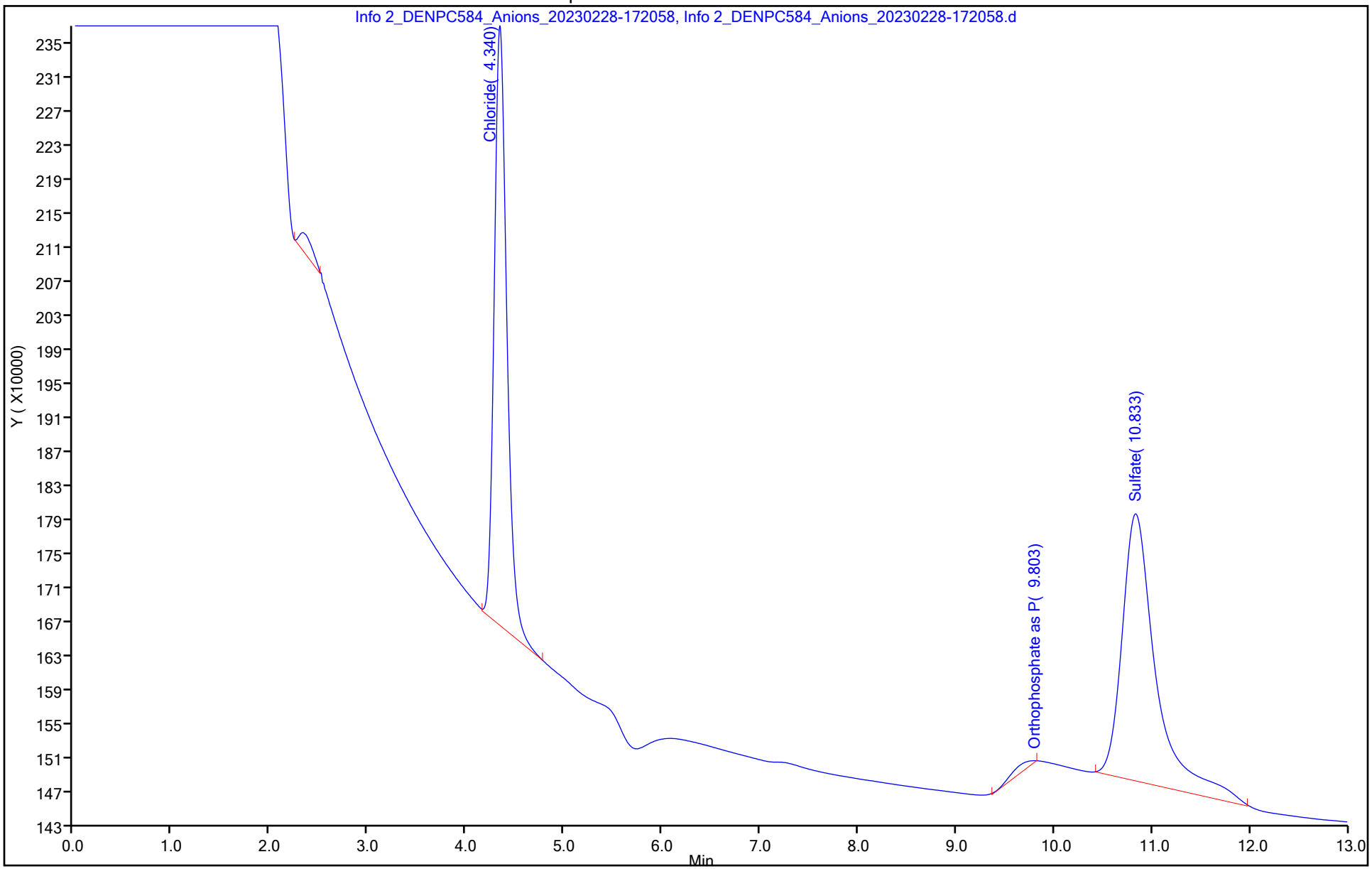
Reagents:

IC CAL cl/so4_00467	Amount Added:	0.04	Units: mL
IC Cal low_00694	Amount Added:	0.00	Units: mL

Report Date: 02-Mar-2023 14:10:16 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-172058.d				
Injection Date:	28-Feb-2023 17:05:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L1			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-173				
Lims ID:	STD L2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	28-Feb-2023 17:21:00	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-002				
Misc. Info.:	280-0119025-002				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions-IC13*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	02-Mar-2023 14:10:17	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: XAY4		Date:	01-Mar-2023 10:09:05		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.117	3.117	0.000	5110058	NC	NC	
2 Chloride	4.338	4.338	0.000	17438516	NC	NC	
3 Nitrite as N	5.065	5.065	0.000	6604796	0.2000	0.2083	
4 Bromide	6.347	6.347	0.000	1074229	NC	NC	M
5 Nitrate as N	7.130	7.130	0.000	6270711	0.2000	0.2155	M
7 Orthophosphate as P	9.642	9.642	0.000	10885370	0.2000	0.2001	
6 Sulfate	10.815	10.815	0.000	14873421	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

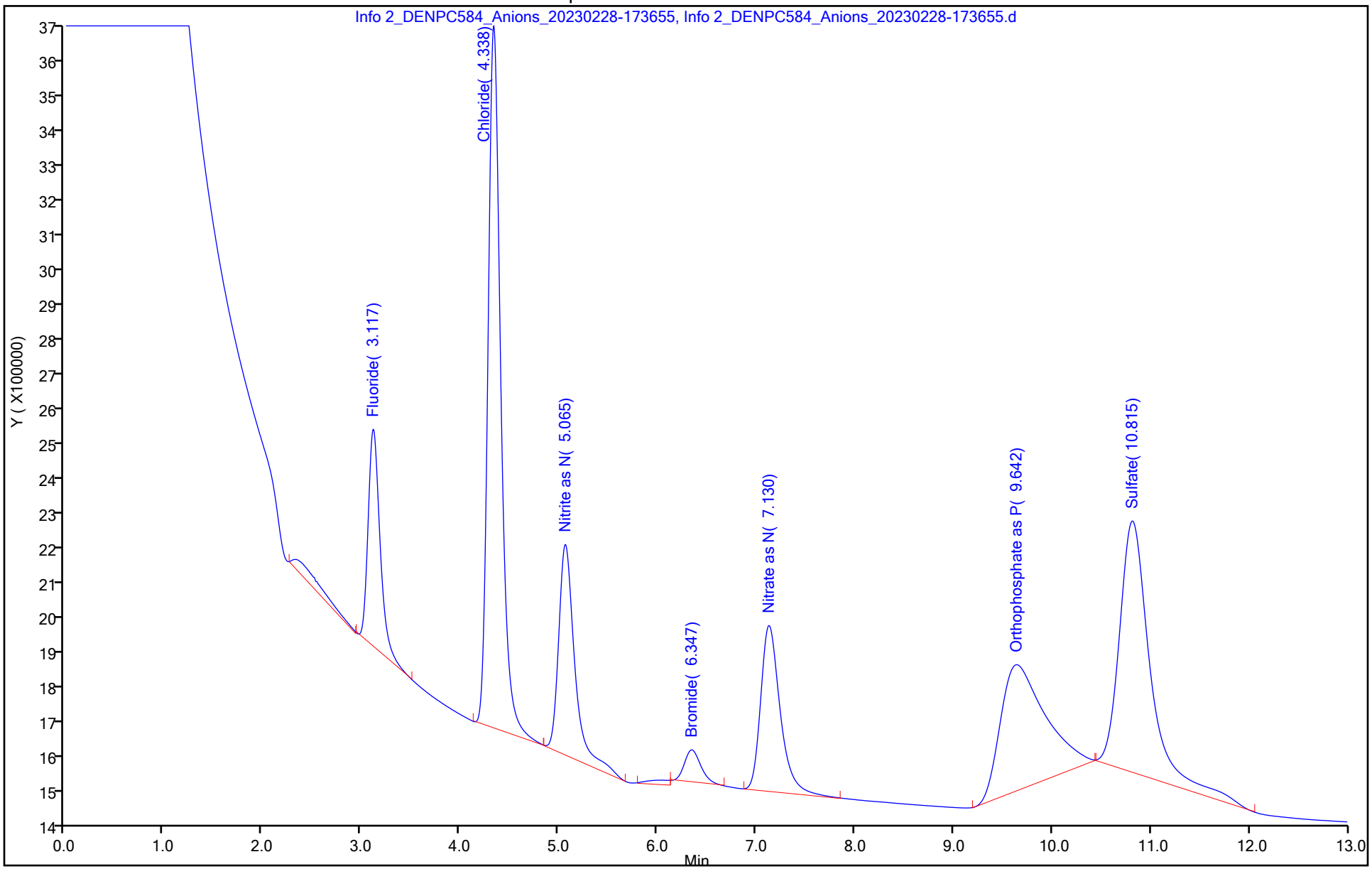
IC CAL cl/so4_00467	Amount Added:	0.10	Units: mL
IC Cal low_00694	Amount Added:	0.08	Units: mL

Report Date: 02-Mar-2023 14:10:17 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-173655.d

Injection Date:	28-Feb-2023 17:21:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-173

Injection Date: 28-Feb-2023 17:21:00 Instrument ID: WC_IonChrom13

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions

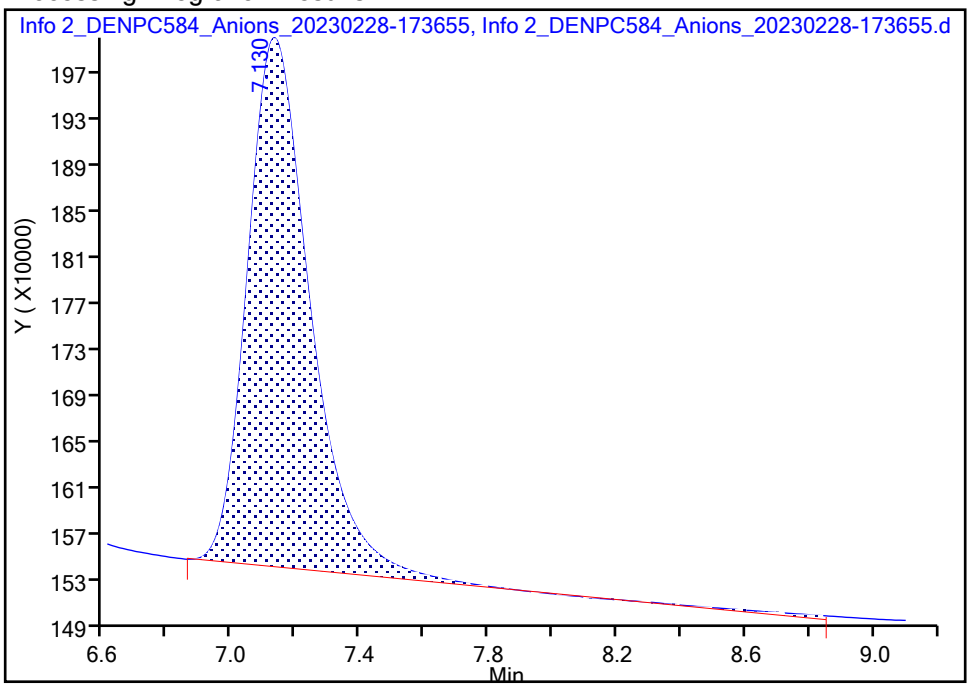
Column: Detector 0005

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

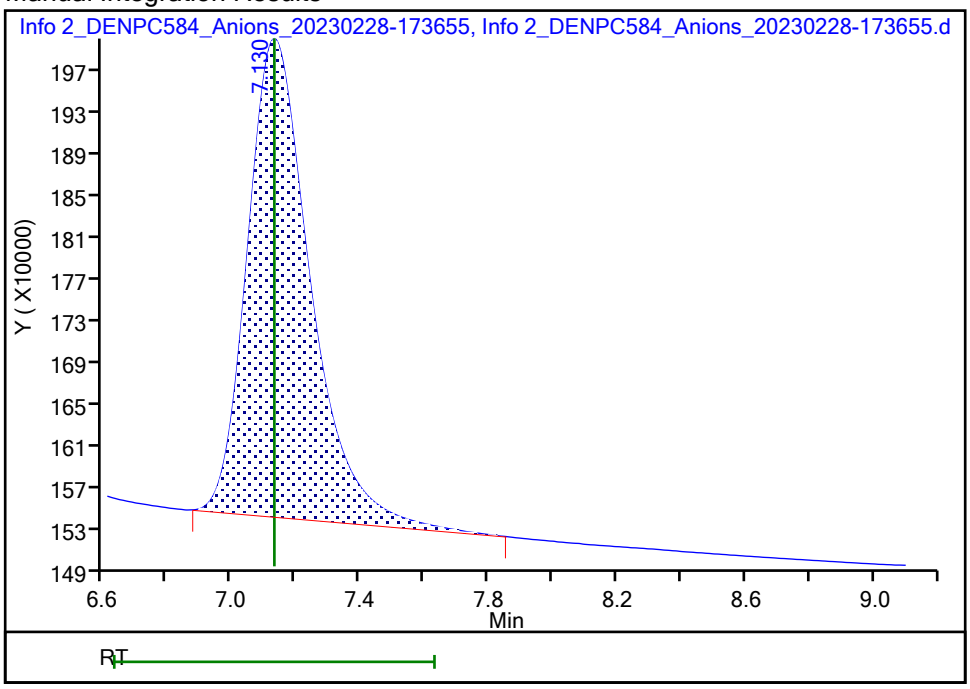
Processing Integration Results

RT: 7.13
Area: 6395664
Amount: 0.216404
Amount Units: ug/ml



Manual Integration Results

RT: 7.13
Area: 6270711
Amount: 0.215463
Amount Units: ug/ml



Reviewer: XAY4, 01-Mar-2023 10:08:35

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-175
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 28-Feb-2023 17:36:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0119025-003
Misc. Info.: 280-0119025-003
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 02-Mar-2023 14:10:18 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1676

First Level Reviewer: XAY4 Date: 01-Mar-2023 10:09:26

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.117	3.117	0.000	14202051	NC	NC	
2 Chloride	4.335	4.335	0.000	36784204	NC	NC	
3 Nitrite as N	5.060	5.060	0.000	17596780	0.5000	0.4872	
4 Bromide	6.340	6.340	0.000	2827465	NC	NC	M
5 Nitrate as N	7.110	7.110	0.000	17121101	0.5000	0.4809	
7 Orthophosphate as P	9.613	9.613	0.000	41477194	0.5000	0.4478	
6 Sulfate	10.805	10.805	0.000	27364741	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

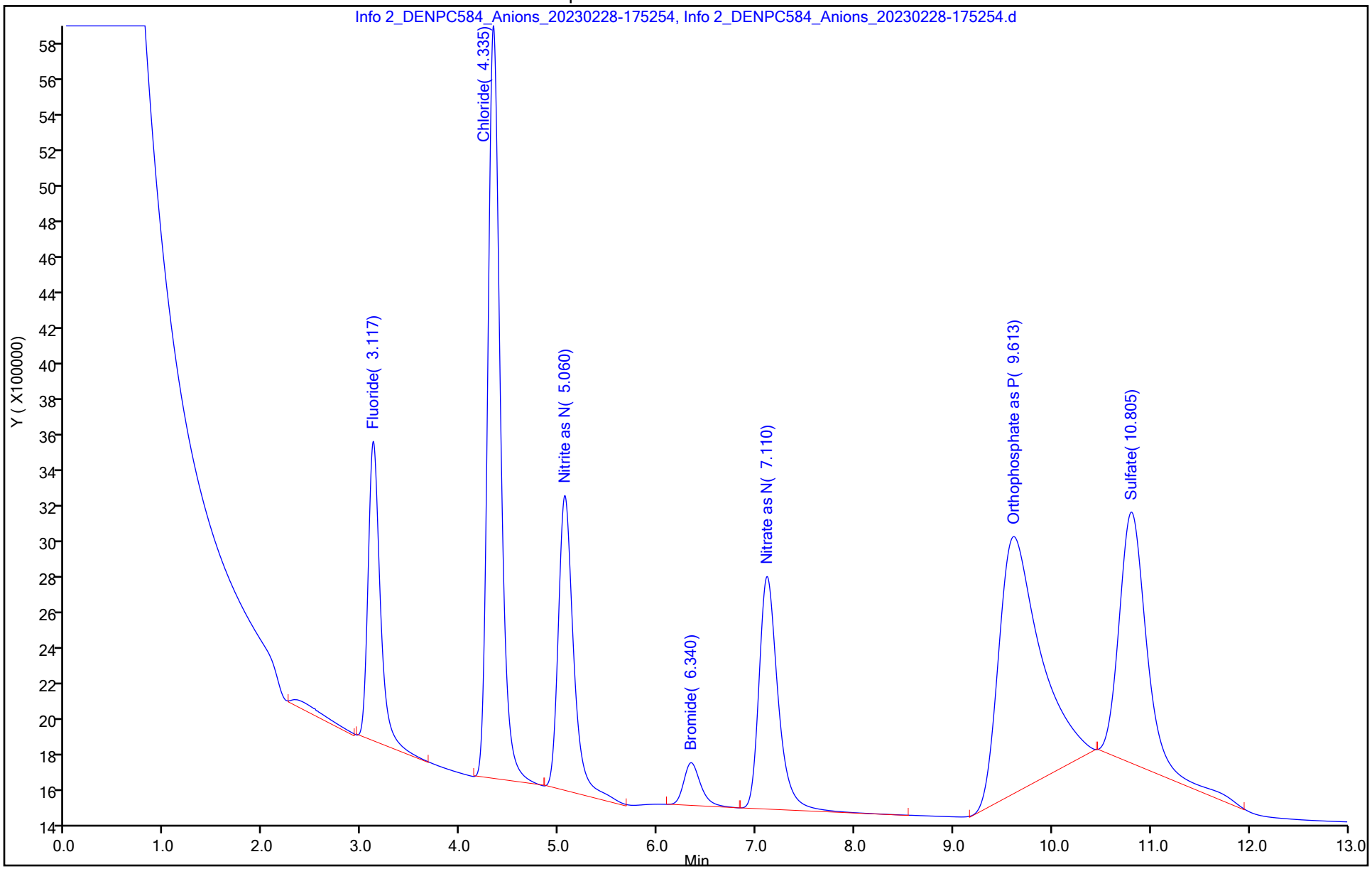
Reagents:

IC CAL cl/so4_00467 Amount Added: 0.20 Units: mL
IC Cal low_00694 Amount Added: 0.20 Units: mL

Report Date: 02-Mar-2023 14:10:18 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-175254.d				
Injection Date:	28-Feb-2023 17:36:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-180
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 28-Feb-2023 17:52:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0119025-004
Misc. Info.: 280-0119025-004
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 02-Mar-2023 14:10:18 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1676

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.118	3.118	0.000	31518266	NC	NC	
2 Chloride	4.345	4.345	0.000	494899763	NC	NC	
3 Nitrite as N	5.058	5.058	0.000	36848085	1.00	0.9756	
4 Bromide	6.333	6.333	0.000	5831694	NC	NC	
5 Nitrate as N	7.093	7.093	0.000	36561770	1.00	0.9564	
7 Orthophosphate as P	9.580	9.580	0.000	119001523	1.00	1.08	
6 Sulfate	10.787	10.787	0.000	354089035	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

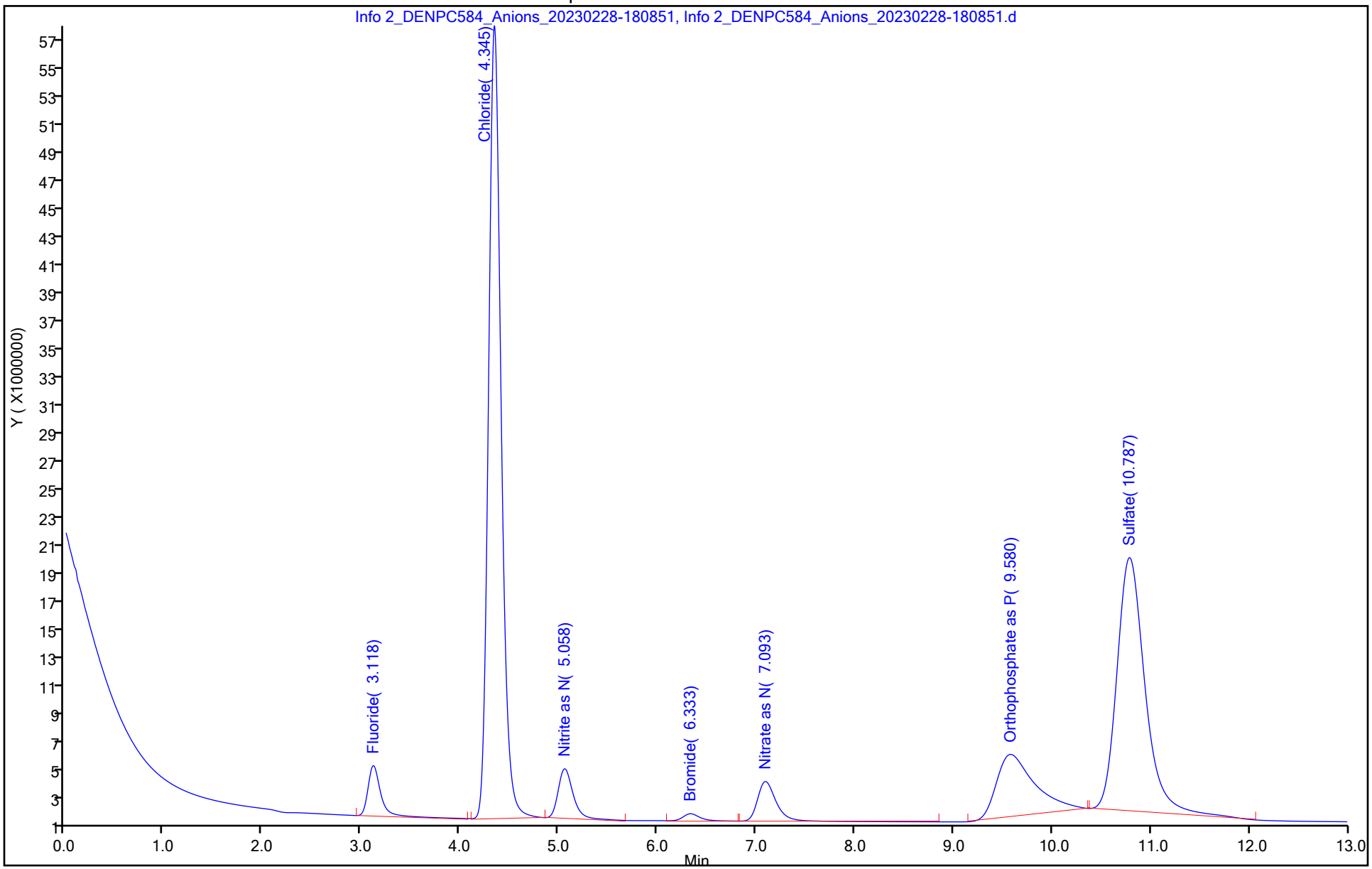
Reagents:

IC CAL cl/so4_00467 Amount Added: 2.40 Units: mL
IC Cal low_00694 Amount Added: 0.40 Units: mL

Report Date: 02-Mar-2023 14:10:19 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-180851.d				
Injection Date:	28-Feb-2023 17:52:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-182				
Lims ID:	STD L5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	28-Feb-2023 18:08:00	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-005				
Misc. Info.:	280-0119025-005				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions-IC13*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	02-Mar-2023 14:10:19	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1676				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.125	3.125	0.000	87219464	NC	NC	
2 Chloride	4.365	4.365	0.000	1004144688	NC	NC	
3 Nitrite as N	5.058	5.058	0.000	97510017	2.50	2.51	
4 Bromide	6.343	6.343	0.000	15538053	NC	NC	
5 Nitrate as N	7.083	7.083	0.000	98647387	2.50	2.48	
7 Orthophosphate as P	9.557	9.557	0.000	315233954	2.50	2.66	
6 Sulfate	10.785	10.785	0.000	722280611	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

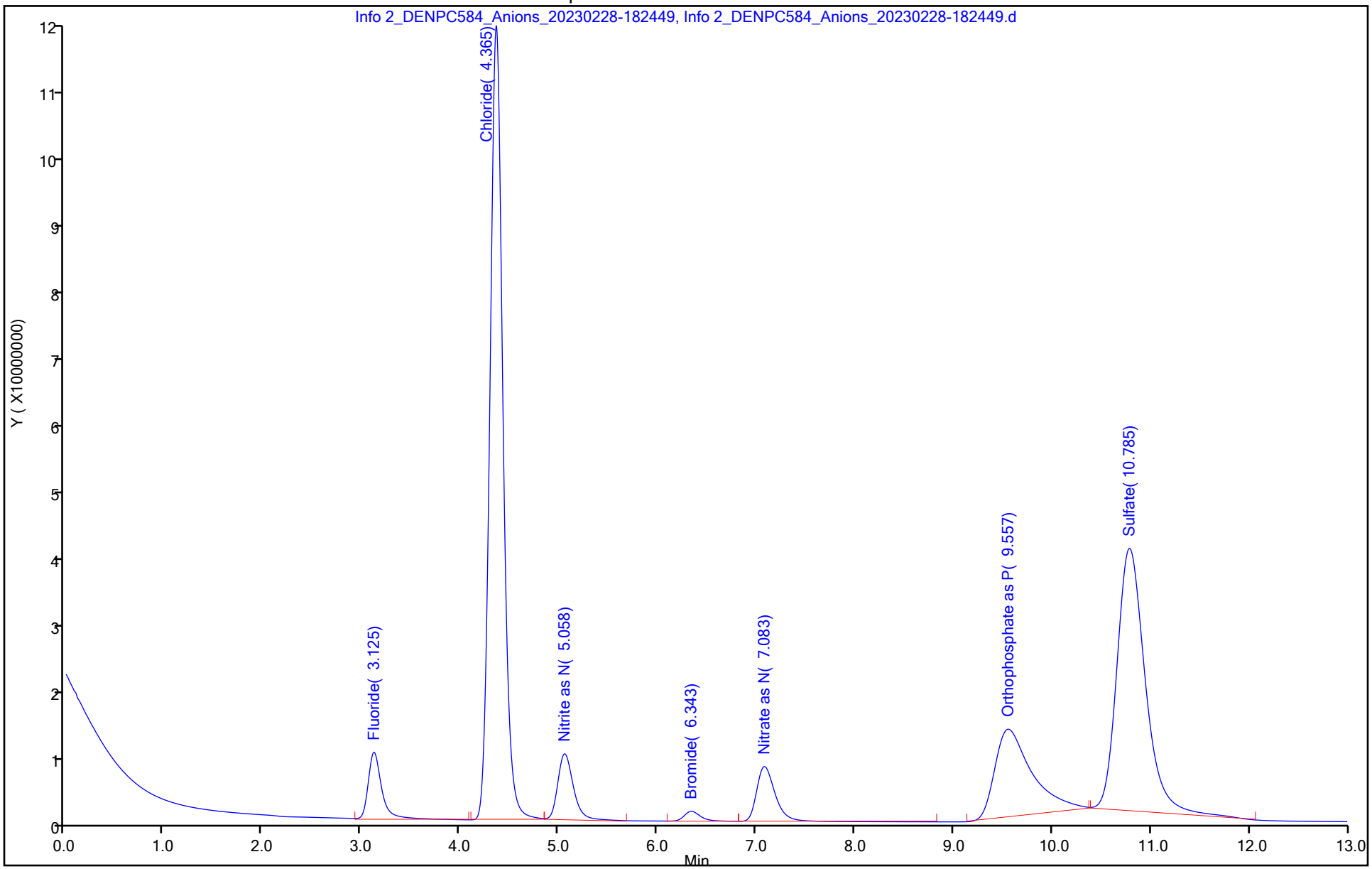
Reagents:

IC CAL cl/so4_00467	Amount Added:	4.80	Units: mL
IC Cal low_00694	Amount Added:	1.00	Units: mL

Report Date: 02-Mar-2023 14:10:19 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-182449.d				
Injection Date:	28-Feb-2023 18:08:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 28-Feb-2023 18:24:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0119025-006
Misc. Info.: 280-0119025-006
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 02-Mar-2023 14:10:20 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1676

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.132	3.132	0.000	186863088	NC	NC	
2 Chloride	4.385	4.385	0.000	1680608715	NC	NC	
3 Nitrite as N	5.053	5.053	0.000	196032634	5.00	5.01	
4 Bromide	6.353	6.353	0.000	32410730	NC	NC	
5 Nitrate as N	7.075	7.075	0.000	204806542	5.00	5.07	
7 Orthophosphate as P	9.532	9.532	0.000	580505078	5.00	4.81	
6 Sulfate	10.773	10.773	0.000	1212903103	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

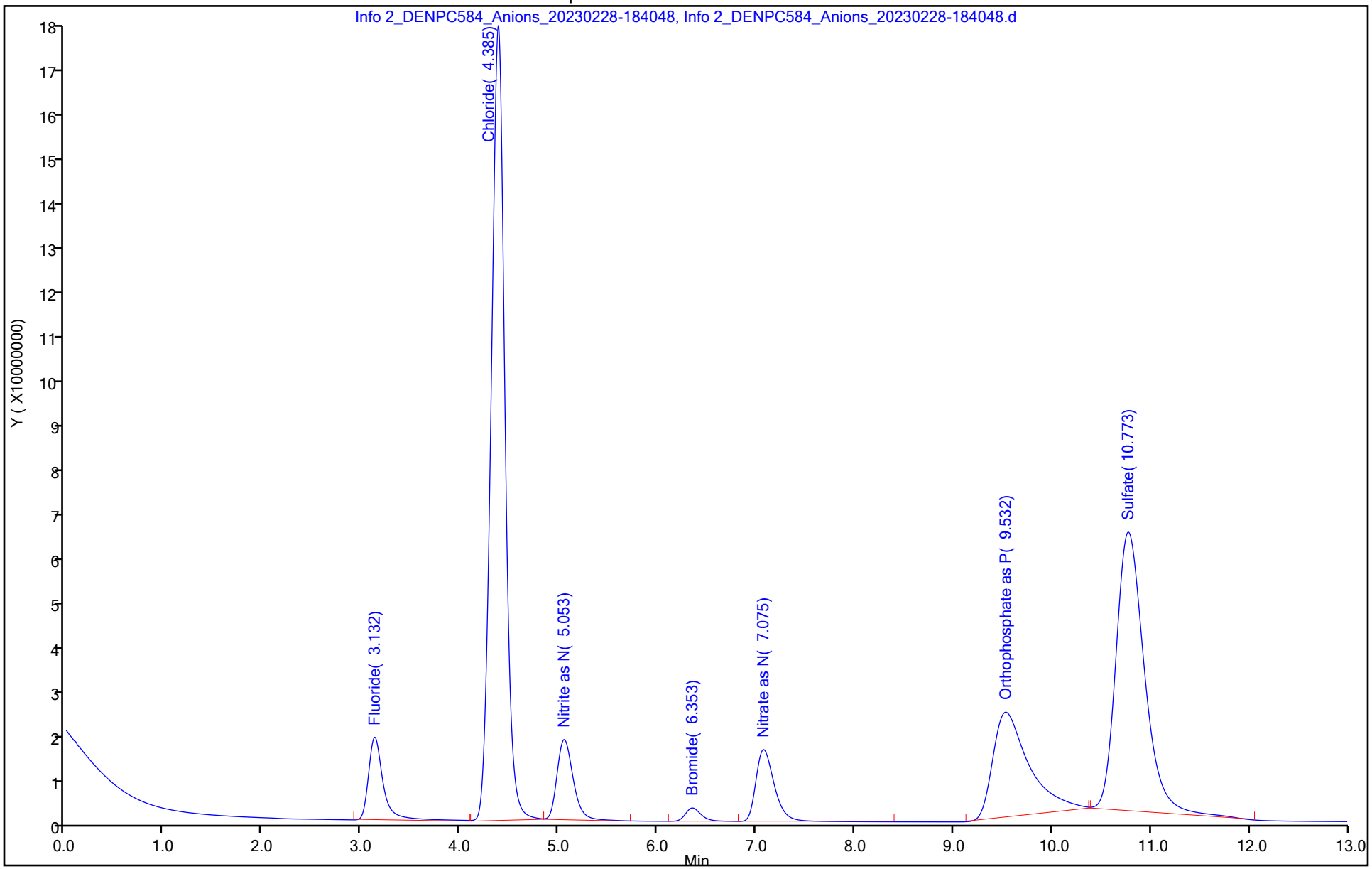
Reagents:

IC CAL cl/so4_00467 Amount Added: 8.00 Units: mL
IC Cal low_00694 Amount Added: 2.00 Units: mL

Report Date: 02-Mar-2023 14:10:20 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184048.d				
Injection Date:	28-Feb-2023 18:24:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-172				
Lims ID:	STD L1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	28-Feb-2023 17:05:00	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-001				
Misc. Info.:	280-0119025-001				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions-IC13*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions 28D				
Last Update:	02-Mar-2023 14:10:16	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: XAY4		Date:	01-Mar-2023 10:08:18		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.120				ND	
2 Chloride	4.340	4.340	0.000	6313797	0.5000	0.5463	M
3 Nitrite as N		5.058				ND	
4 Bromide		6.342				ND	
5 Nitrate as N		7.087				ND	
7 Orthophosphate as P	9.803	9.803	0.000	133400		NC	
6 Sulfate	10.833	10.833	0.000	7457395	0.5000	0.5800	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

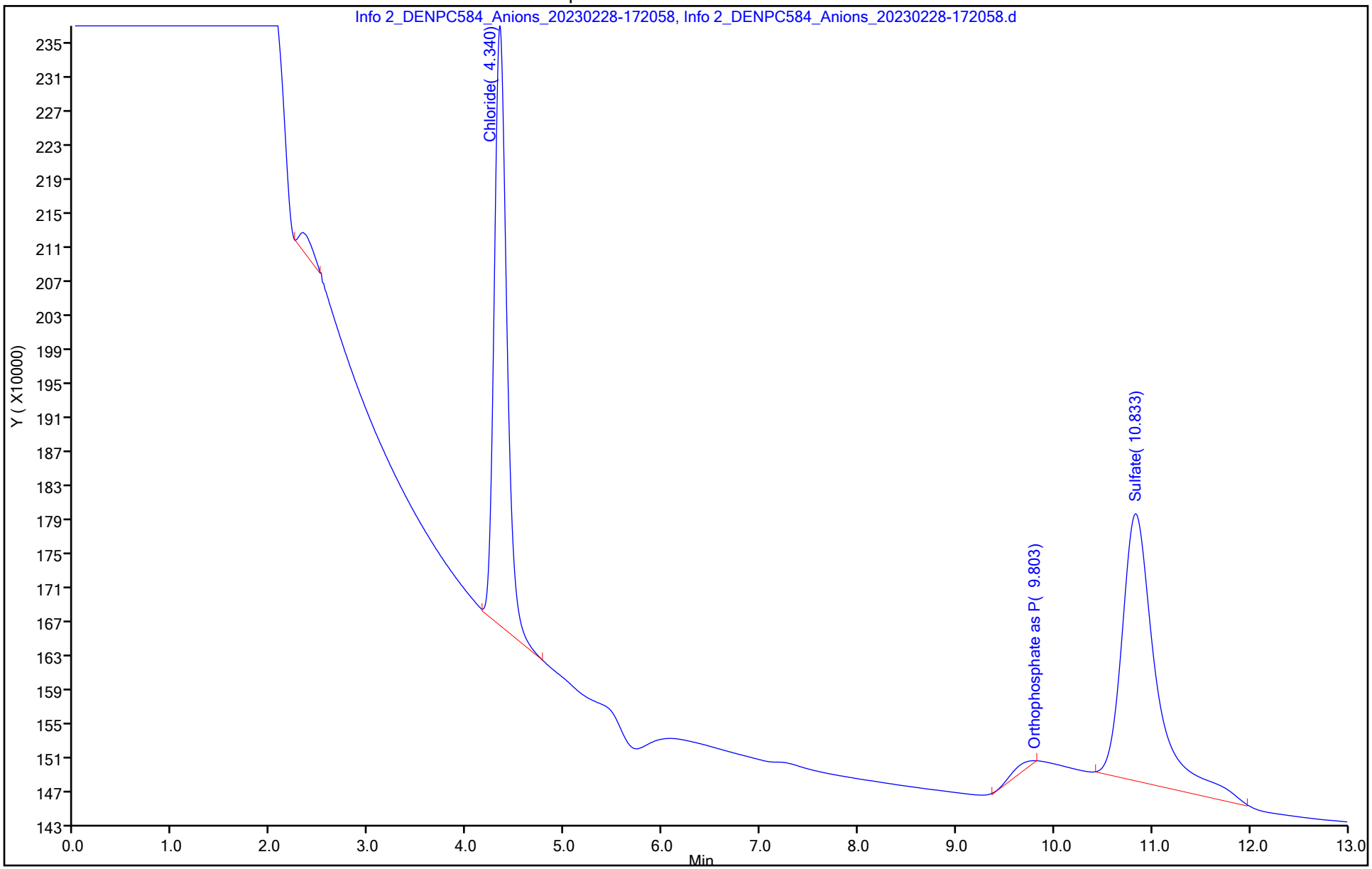
Reagents:

IC CAL cl/so4_00467	Amount Added:	0.04	Units: mL
IC Cal low_00694	Amount Added:	0.00	Units: mL

Report Date: 02-Mar-2023 14:10:16 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-172058.d				
Injection Date:	28-Feb-2023 17:05:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L1			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-172

Injection Date: 28-Feb-2023 17:05:00 Instrument ID: WC_IonChrom13

Lims ID: STD L1

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

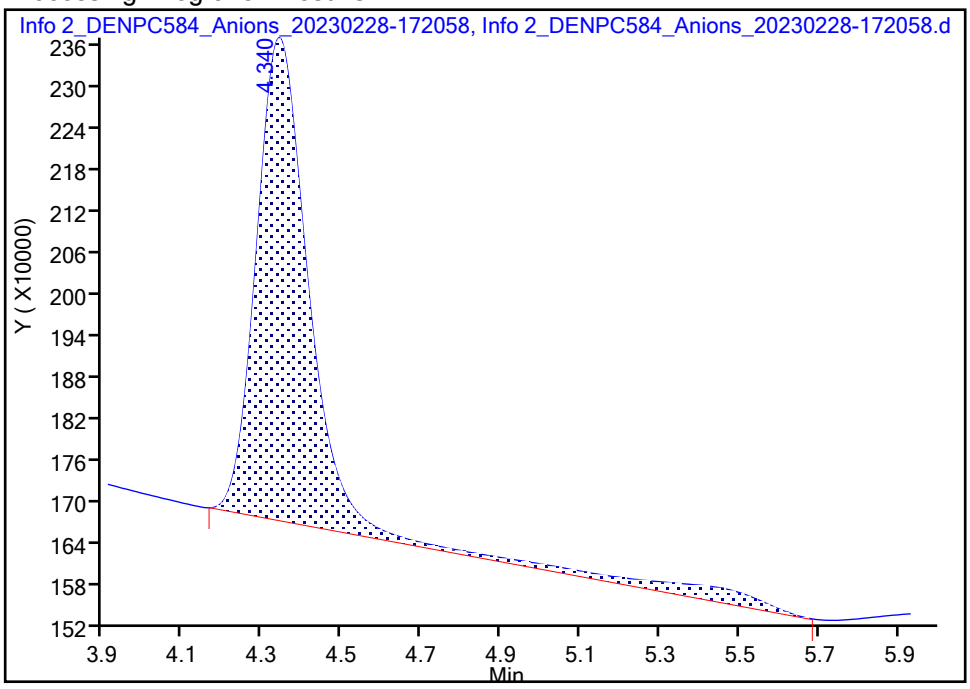
Column: Detector 0005

2 Chloride, CAS: 16887-00-6

Signal: 1

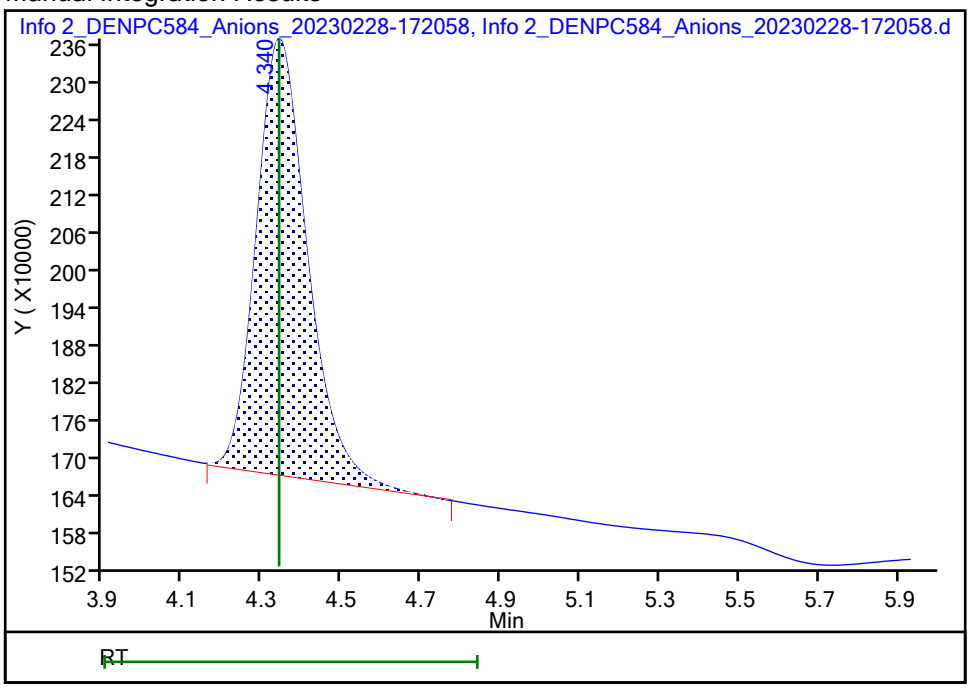
Processing Integration Results

RT: 4.34
Area: 7012435
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 4.34
Area: 6313797
Amount: 0.546291
Amount Units: ug/ml



Reviewer: XAY4, 01-Mar-2023 10:08:00

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-172

Injection Date: 28-Feb-2023 17:05:00 Instrument ID: WC_IonChrom13

Lims ID: STD L1

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

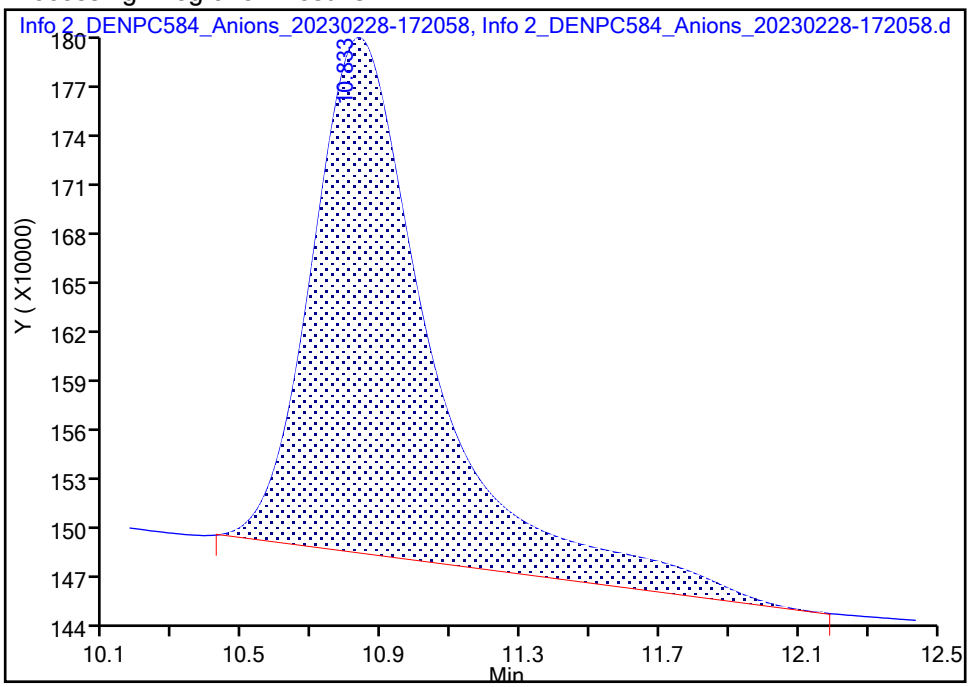
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

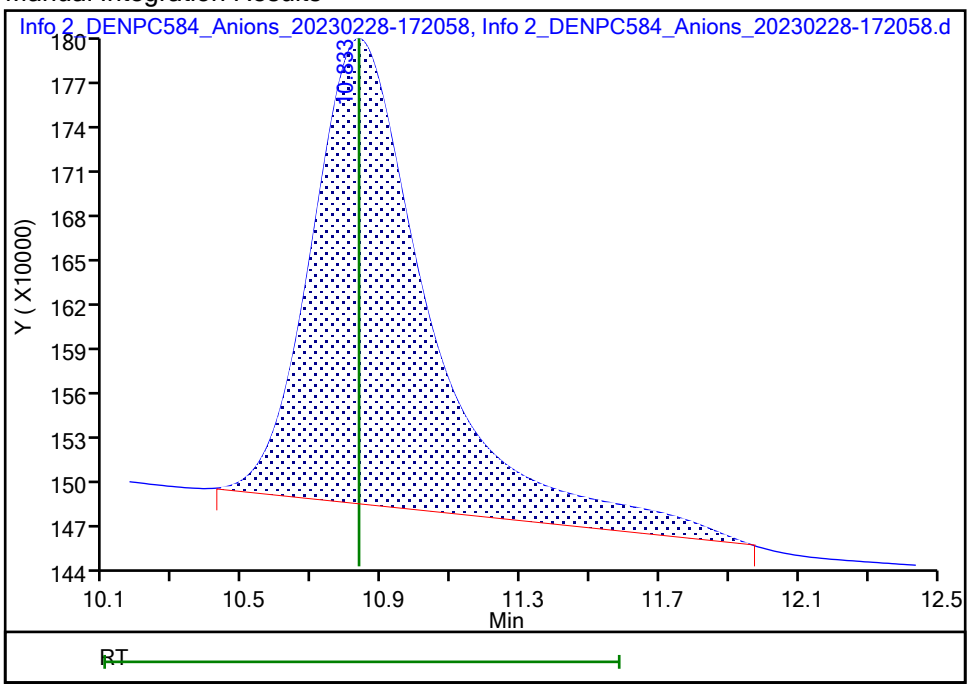
Processing Integration Results

RT: 10.83
Area: 7581089
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.83
Area: 7457395
Amount: 0.579985
Amount Units: ug/ml



Reviewer: XAY4, 01-Mar-2023 10:08:14

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-173
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 28-Feb-2023 17:21:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0119025-002
Misc. Info.: 280-0119025-002
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 02-Mar-2023 14:10:17 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1676

First Level Reviewer: XAY4 Date: 01-Mar-2023 10:09:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.117	3.117	0.000	5110058	0.2000	0.2244	
2 Chloride	4.338	4.338	0.000	17438516	1.25	1.21	
3 Nitrite as N	5.065	5.065	0.000	6604796	NC	NC	
4 Bromide	6.347	6.347	0.000	1074229	0.2000	0.2143	M
5 Nitrate as N	7.130	7.130	0.000	6270711	NC	NC	M
7 Orthophosphate as P	9.642	9.642	0.000	10885370	NC	NC	
6 Sulfate	10.815	10.815	0.000	14873421	1.25	1.20	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

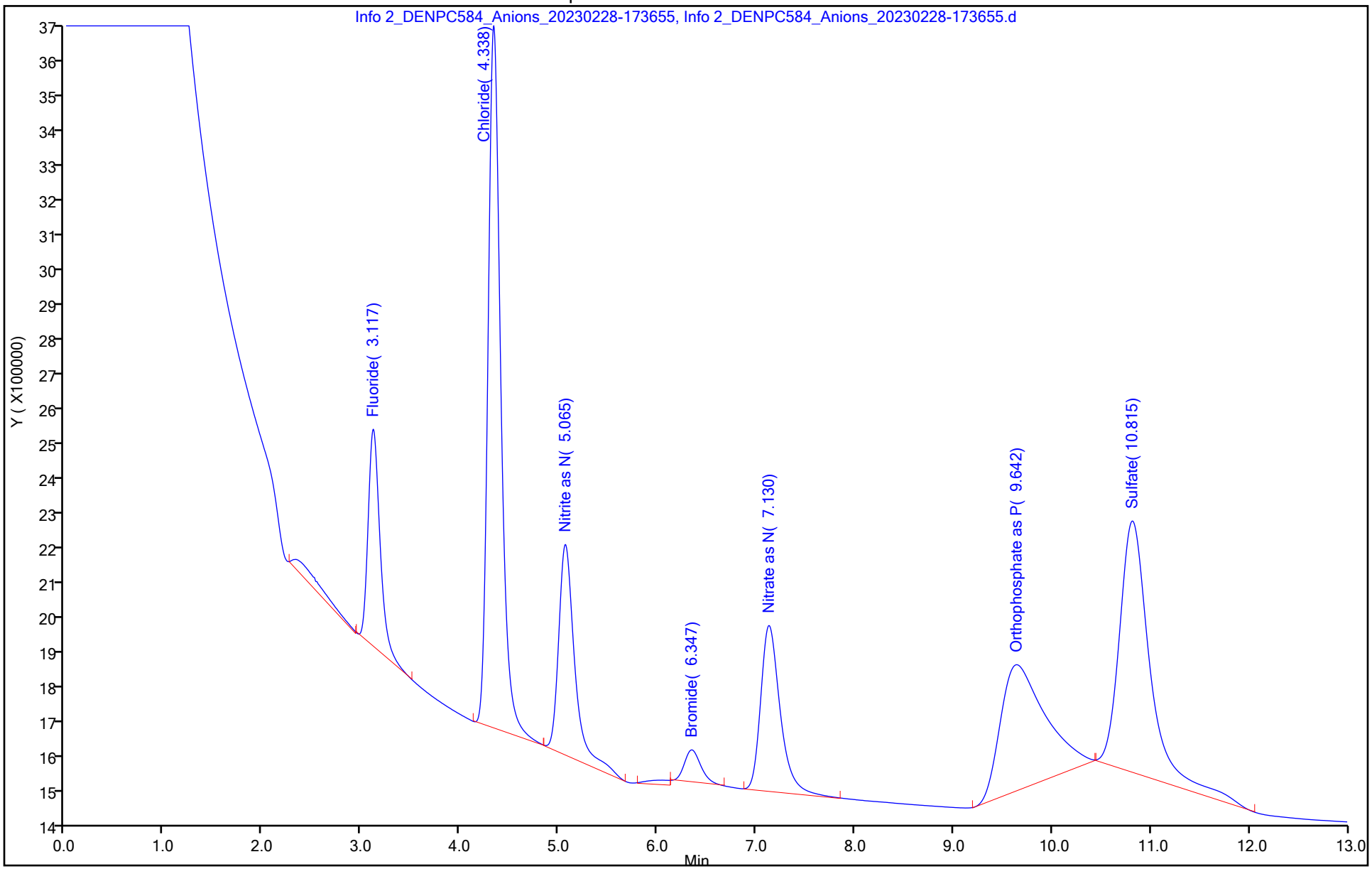
Reagents:

IC CAL cl/so4_00467 Amount Added: 0.10 Units: mL
IC Cal low_00694 Amount Added: 0.08 Units: mL

Report Date: 02-Mar-2023 14:10:17 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-173655.d				
Injection Date:	28-Feb-2023 17:21:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-173

Injection Date: 28-Feb-2023 17:21:00 Instrument ID: WC_IonChrom13

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

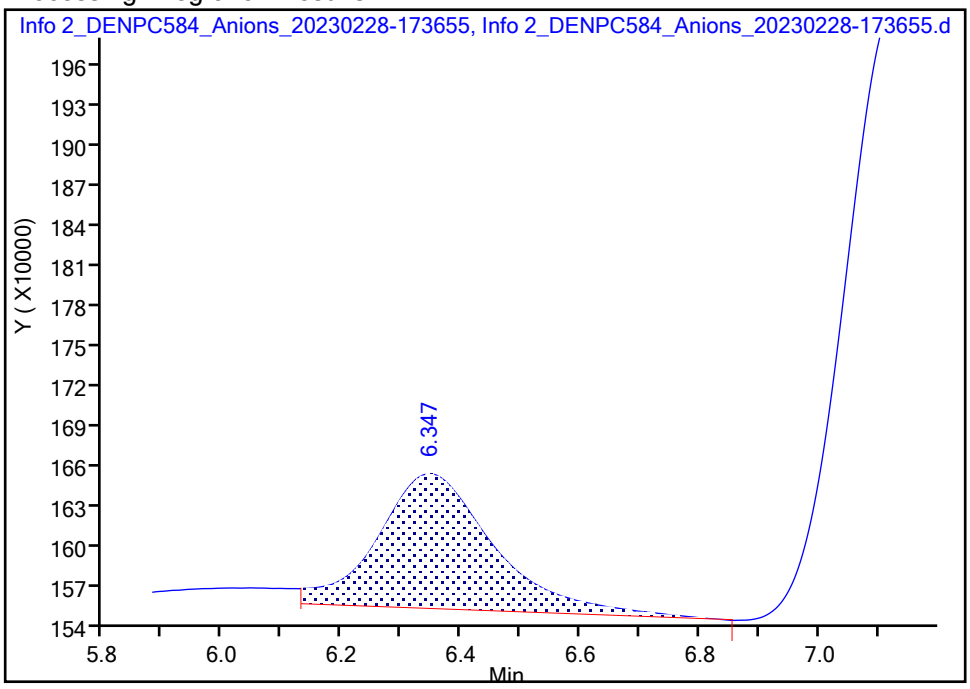
Column: Detector 0005

4 Bromide, CAS: 24959-67-9

Signal: 1

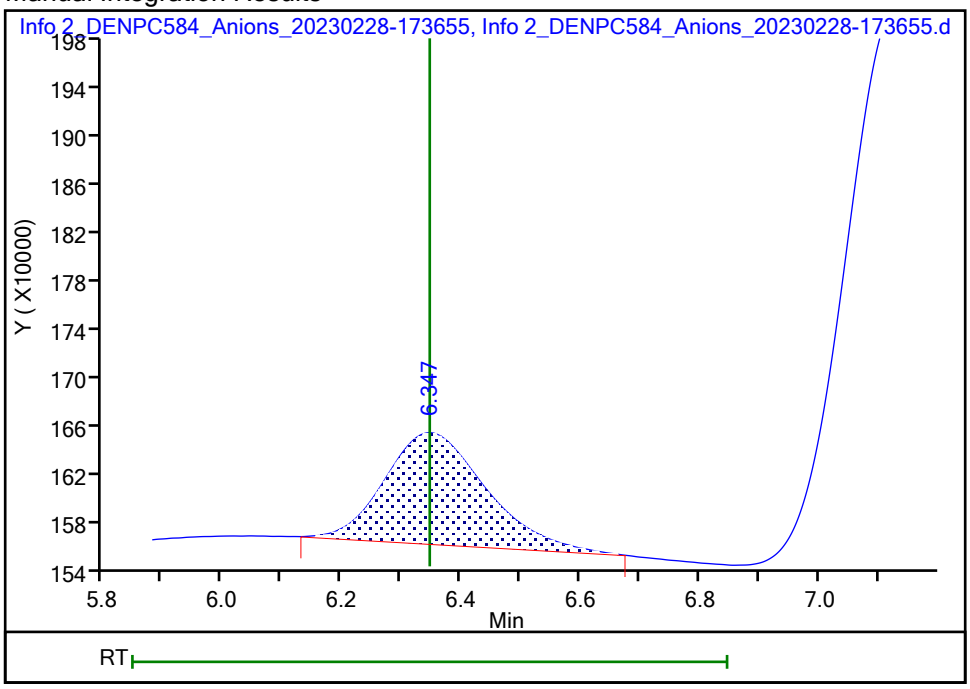
Processing Integration Results

RT: 6.35
Area: 1370412
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 6.35
Area: 1074229
Amount: 0.214306
Amount Units: ug/ml



Reviewer: XAY4, 01-Mar-2023 10:08:44

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-173

Injection Date: 28-Feb-2023 17:21:00 Instrument ID: WC_IonChrom13

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

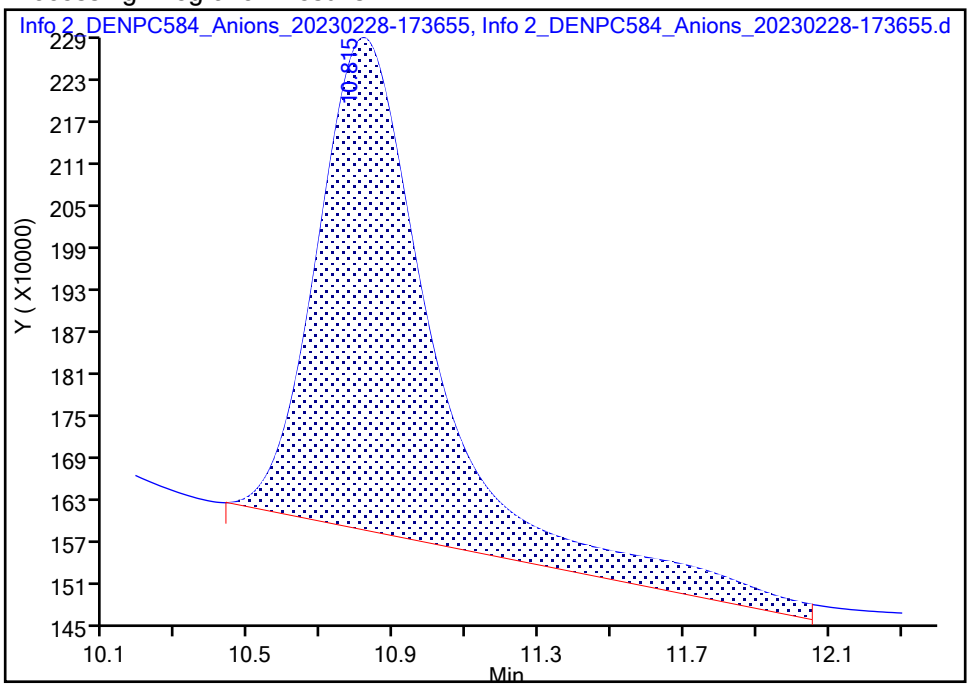
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

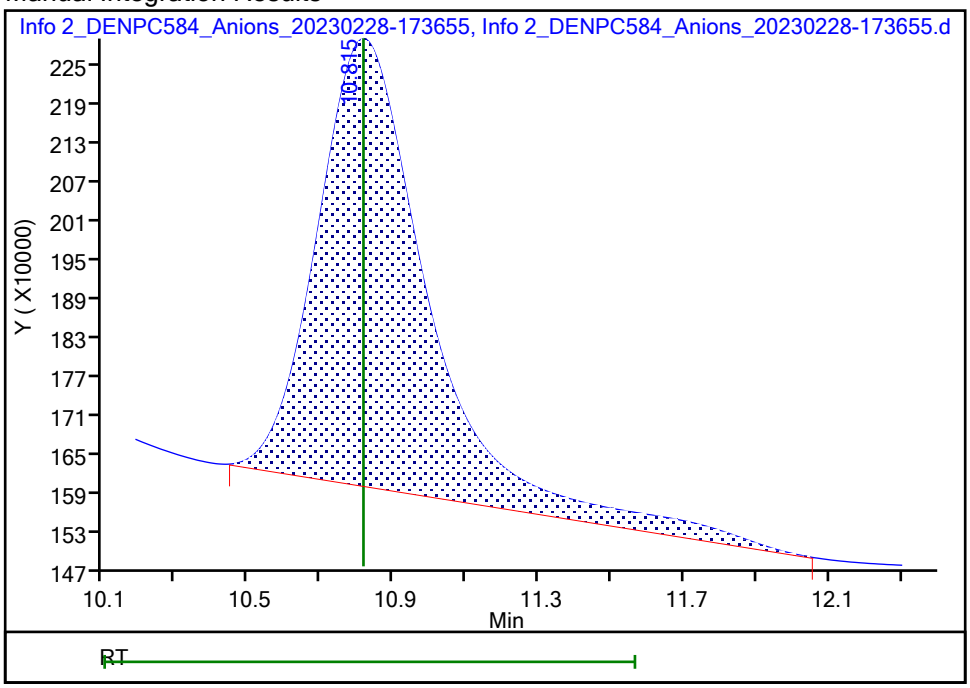
Processing Integration Results

RT: 10.82
Area: 15996750
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.82
Area: 14873421
Amount: 1.196645
Amount Units: ug/ml



Reviewer: XAY4, 01-Mar-2023 10:08:57

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-175				
Lims ID:	STD L3				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	28-Feb-2023 17:36:00	ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-003				
Misc. Info.:	280-0119025-003				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions-IC13*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions 28D				
Last Update:	02-Mar-2023 14:10:18	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: XAY4		Date:	01-Mar-2023 10:09:26		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.117	3.117	0.000	14202051	0.5000	0.4697	
2 Chloride	4.335	4.335	0.000	36784204	2.50	2.36	
3 Nitrite as N	5.060	5.060	0.000	17596780	NC	NC	
4 Bromide	6.340	6.340	0.000	2827465	0.5000	0.4867	M
5 Nitrate as N	7.110	7.110	0.000	17121101	NC	NC	
7 Orthophosphate as P	9.613	9.613	0.000	41477194	NC	NC	
6 Sulfate	10.805	10.805	0.000	27364741	2.50	2.24	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

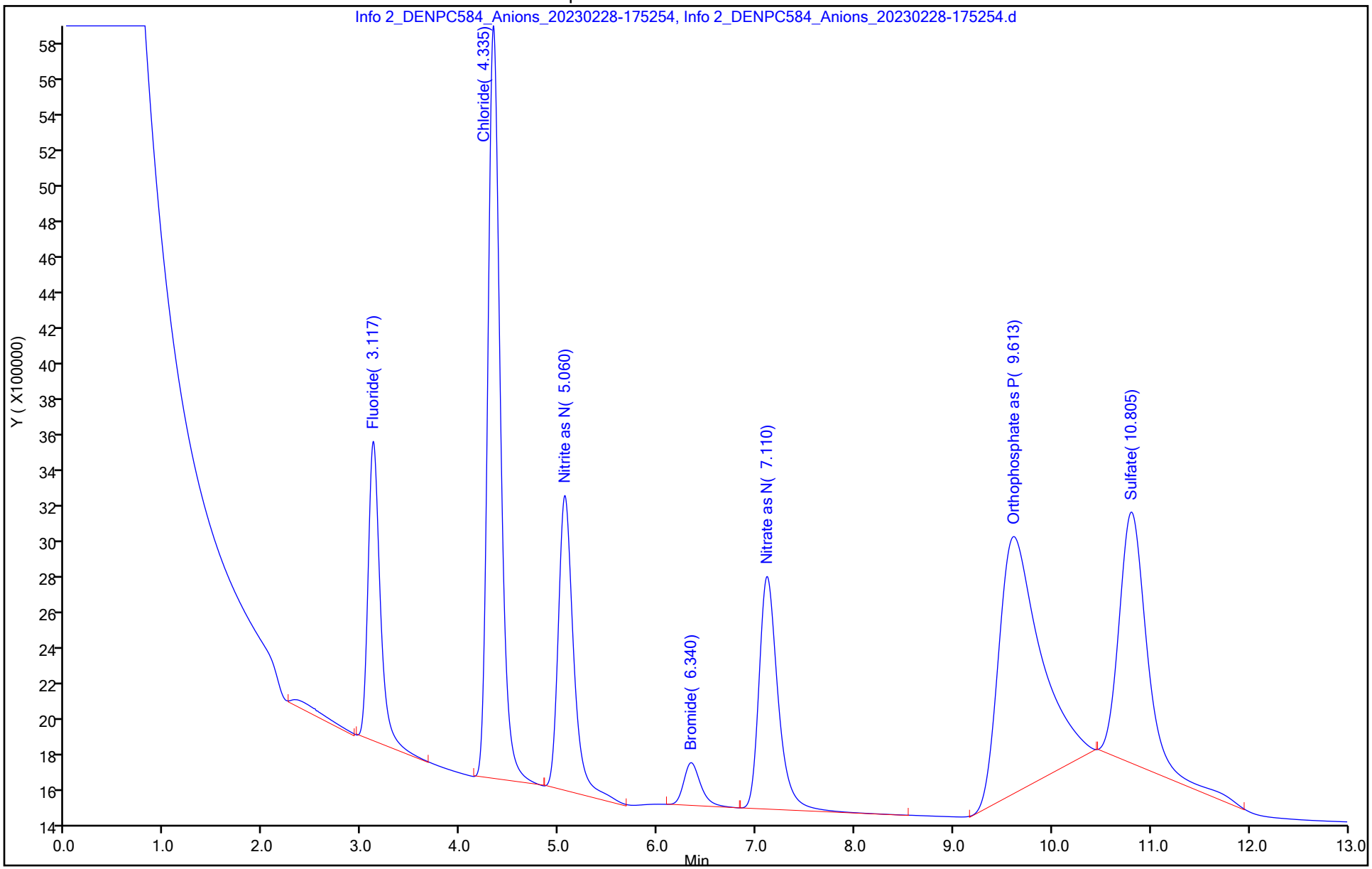
Reagents:

IC CAL cl/so4_00467	Amount Added:	0.20	Units: mL
IC Cal low_00694	Amount Added:	0.20	Units: mL

Report Date: 02-Mar-2023 14:10:18 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-175254.d				
Injection Date:	28-Feb-2023 17:36:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

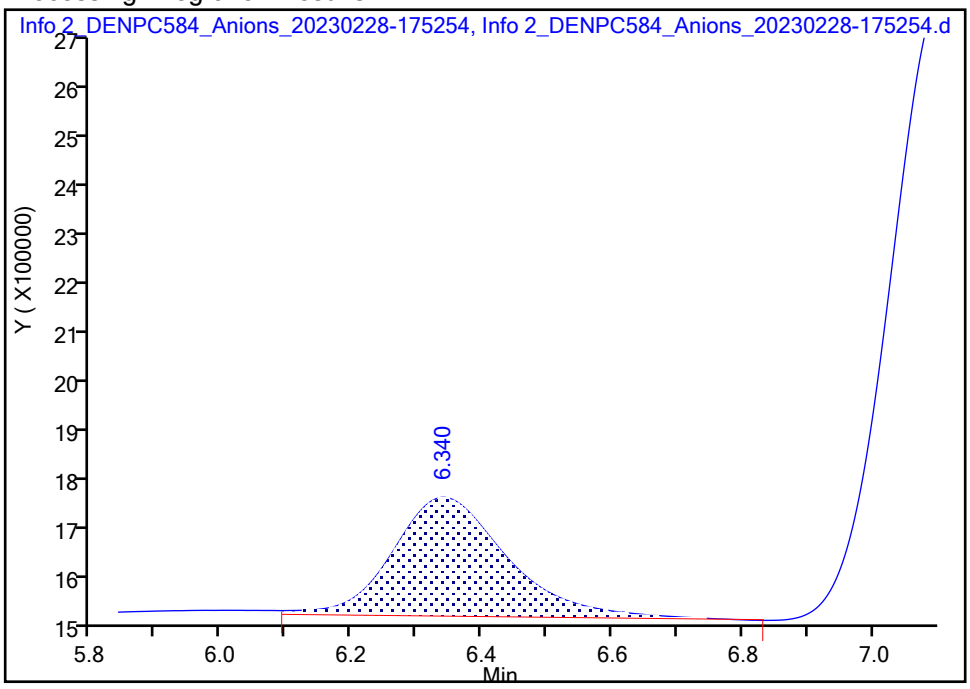
Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-175
Injection Date: 28-Feb-2023 17:36:00 Instrument ID: WC_IonChrom13
Lims ID: STD L3
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions-IC13 Limit Group: Wet - Anions 28D
Column: Detector 0005

4 Bromide, CAS: 24959-67-9

Signal: 1

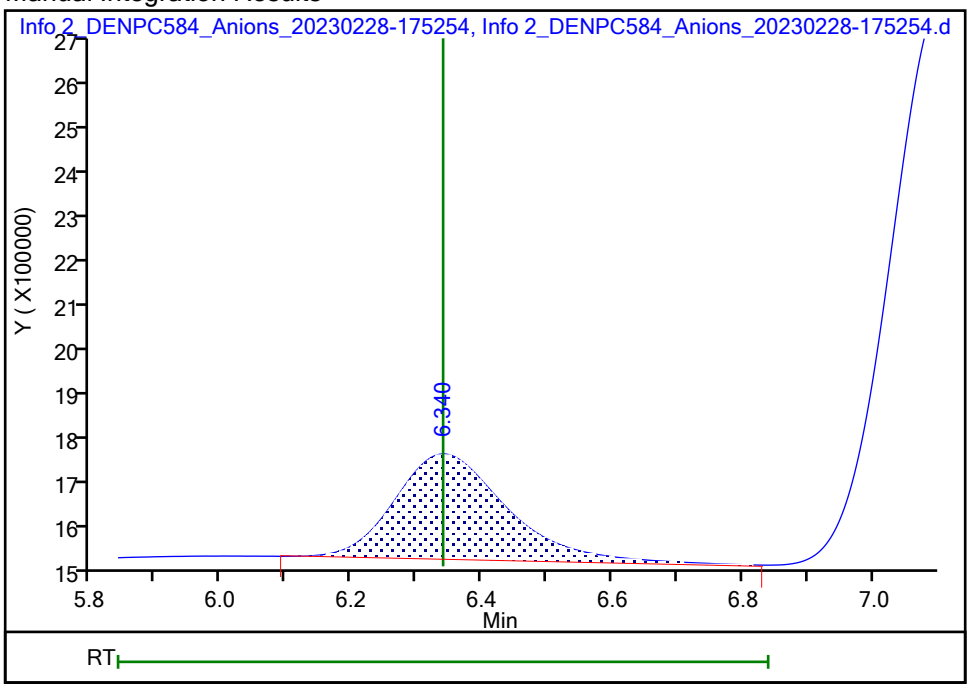
Processing Integration Results

RT: 6.34
Area: 3013378
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 6.34
Area: 2827465
Amount: 0.486737
Amount Units: ug/ml



Reviewer: XAY4, 01-Mar-2023 10:09:15
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

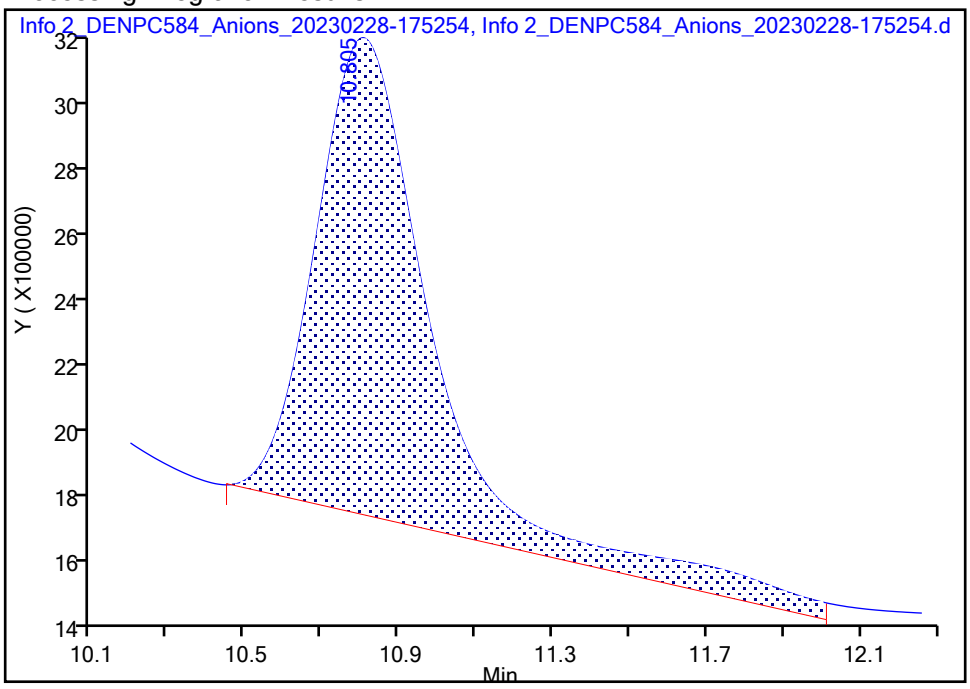
Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-175
Injection Date: 28-Feb-2023 17:36:00 Instrument ID: WC_IonChrom13
Lims ID: STD L3
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions-IC13 Limit Group: Wet - Anions 28D
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

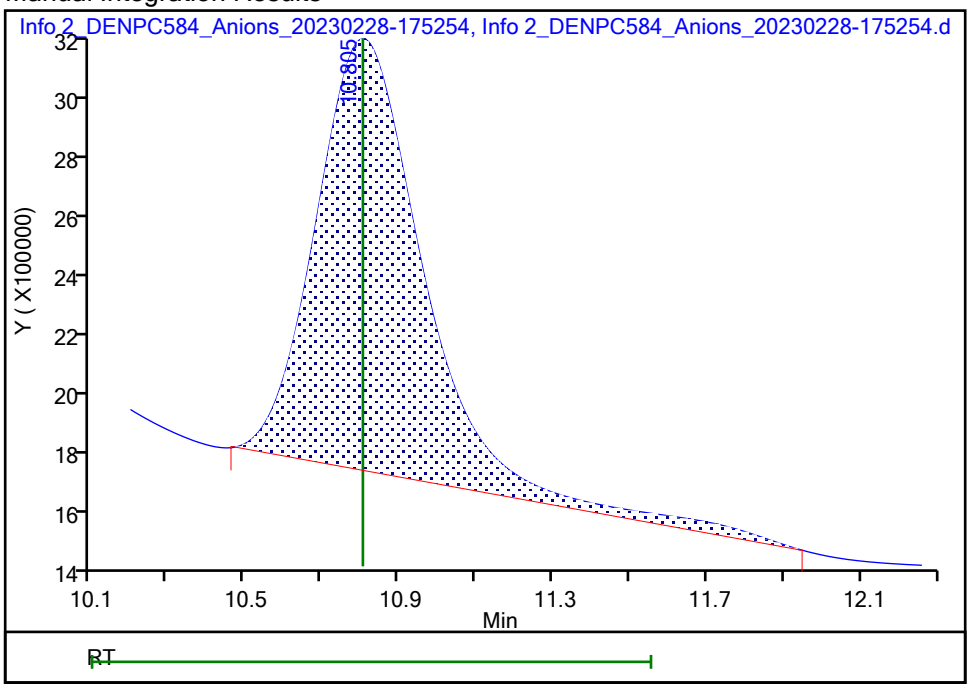
Processing Integration Results

RT: 10.81
Area: 30089797
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.81
Area: 27364741
Amount: 2.235327
Amount Units: ug/ml



Reviewer: XAY4, 01-Mar-2023 10:09:23
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-180
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 28-Feb-2023 17:52:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0119025-004
Misc. Info.: 280-0119025-004
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 02-Mar-2023 14:10:18 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1676

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.118	3.118	0.000	31518266	1.00	0.9370	
2 Chloride	4.345	4.345	0.000	494899763	30.0	29.7	
3 Nitrite as N	5.058	5.058	0.000	36848085	NC	NC	
4 Bromide	6.333	6.333	0.000	5831694	1.00	0.9536	
5 Nitrate as N	7.093	7.093	0.000	36561770	NC	NC	
7 Orthophosphate as P	9.580	9.580	0.000	119001523	NC	NC	
6 Sulfate	10.787	10.787	0.000	354089035	30.0	29.4	

QC Flag Legend

Processing Flags
NC - Not Calibrated

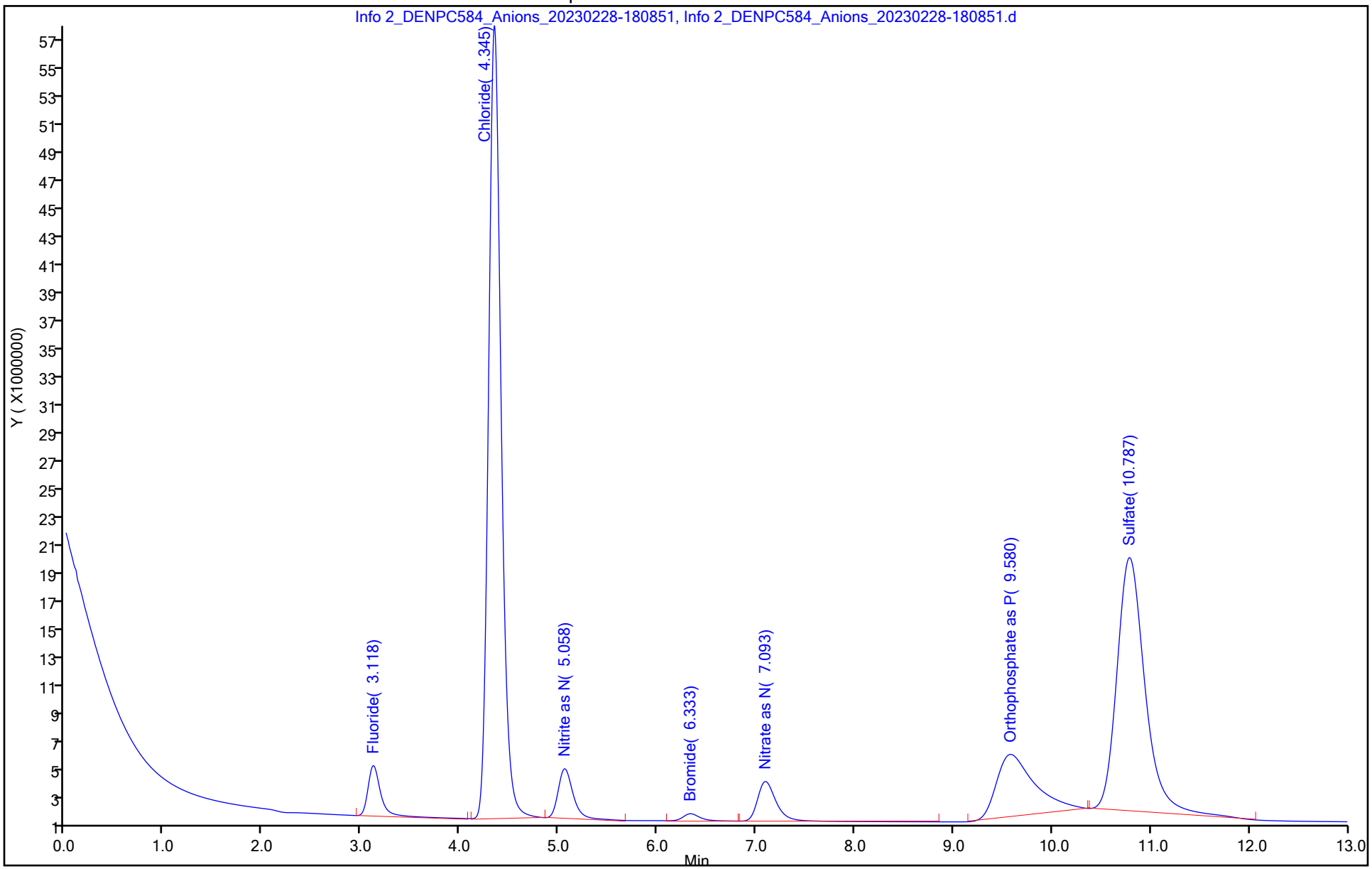
Reagents:

IC CAL cl/so4_00467 Amount Added: 2.40 Units: mL
IC Cal low_00694 Amount Added: 0.40 Units: mL

Report Date: 02-Mar-2023 14:10:19 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-180851.d				
Injection Date:	28-Feb-2023 17:52:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-182
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 28-Feb-2023 18:08:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0119025-005
Misc. Info.: 280-0119025-005
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 02-Mar-2023 14:10:19 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1676

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.125	3.125	0.000	87219464	2.50	2.44	
2 Chloride	4.365	4.365	0.000	1004144688	60.0	60.1	
3 Nitrite as N	5.058	5.058	0.000	97510017	NC	NC	
4 Bromide	6.343	6.343	0.000	15538053	2.50	2.46	
5 Nitrate as N	7.083	7.083	0.000	98647387	NC	NC	
7 Orthophosphate as P	9.557	9.557	0.000	315233954	NC	NC	
6 Sulfate	10.785	10.785	0.000	722280611	60.0	60.0	

QC Flag Legend

Processing Flags
NC - Not Calibrated

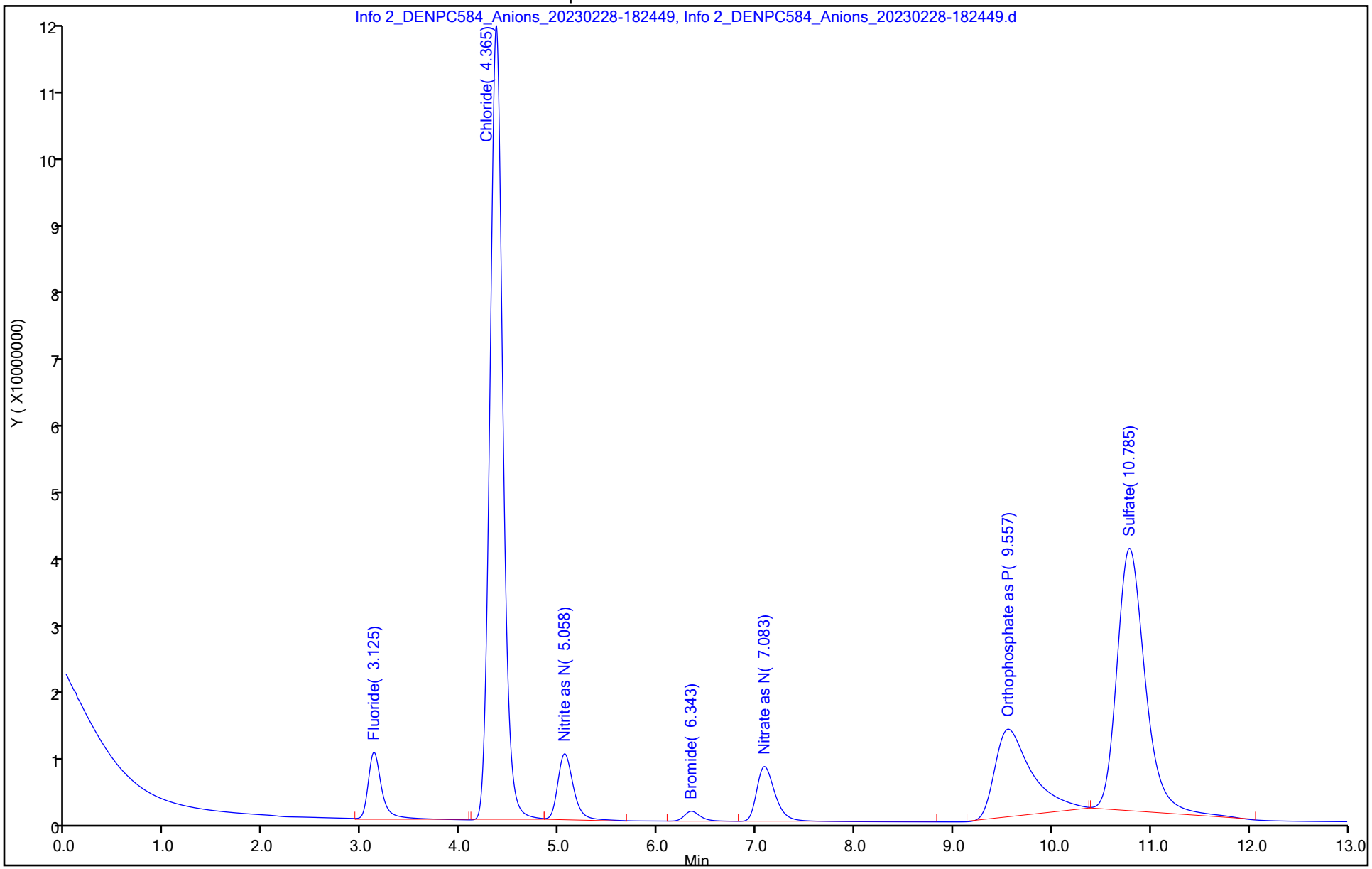
Reagents:

IC CAL cl/so4_00467 Amount Added: 4.80 Units: mL
IC Cal low_00694 Amount Added: 1.00 Units: mL

Report Date: 02-Mar-2023 14:10:19 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-182449.d				
Injection Date:	28-Feb-2023 18:08:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 28-Feb-2023 18:24:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0119025-006
Misc. Info.: 280-0119025-006
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 02-Mar-2023 14:10:20 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1676

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.132	3.132	0.000	186863088	5.00	5.13	
2 Chloride	4.385	4.385	0.000	1680608715	100.0	100.4	
3 Nitrite as N	5.053	5.053	0.000	196032634	NC	NC	
4 Bromide	6.353	6.353	0.000	32410730	5.00	5.08	
5 Nitrate as N	7.075	7.075	0.000	204806542	NC	NC	
7 Orthophosphate as P	9.532	9.532	0.000	580505078	NC	NC	
6 Sulfate	10.773	10.773	0.000	1212903103	100.0	100.8	

QC Flag Legend

Processing Flags
NC - Not Calibrated

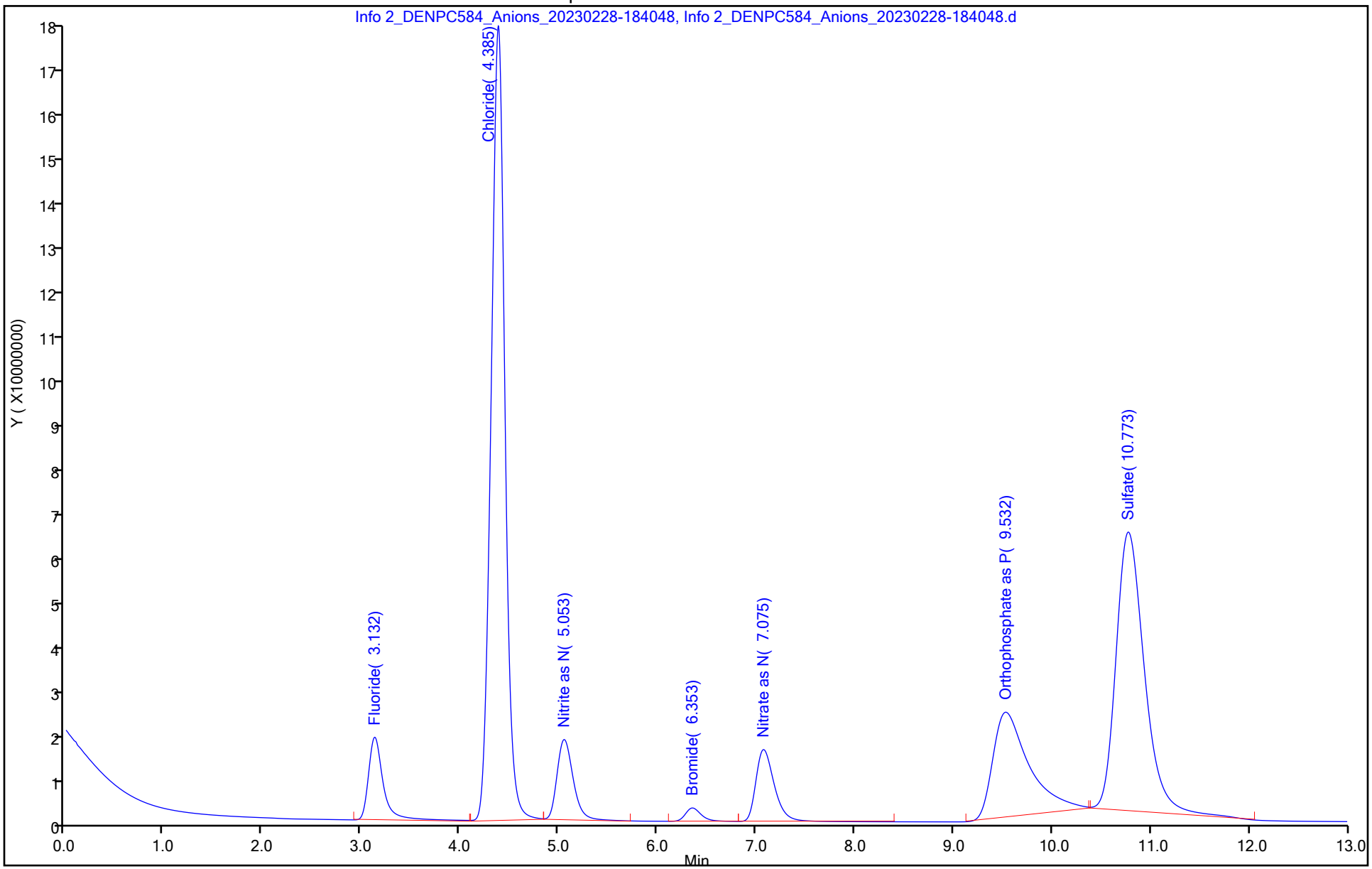
Reagents:

IC CAL cl/so4_00467 Amount Added: 8.00 Units: mL
IC Cal low_00694 Amount Added: 2.00 Units: mL

Report Date: 02-Mar-2023 14:10:20 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184048.d				
Injection Date:	28-Feb-2023 18:24:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Instrument: WC_IonChrom13 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 02-Mar-2023 14:51:48
No.Compounds:7
Sublist: chrom-Anions-IC13*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-15.917 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17205
Inj Date: 28-Feb-2023 17:05:00 Worklist: 119025 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17365
Inj Date: 28-Feb-2023 17:21:00 Worklist: 119025 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17525
Inj Date: 28-Feb-2023 17:36:00 Worklist: 119025 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18085
Inj Date: 28-Feb-2023 17:52:00 Worklist: 119025 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18244
Inj Date: 28-Feb-2023 18:08:00 Worklist: 119025 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18404
Inj Date: 28-Feb-2023 18:24:00 Worklist: 119025 Sample#: 6

Start Cal Date: 28-Feb-2023 17:05:00 End Cal Date: 28-Feb-2023 18:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
25550290	28404102	31518266	34887786	37372618		-3204369			0.998
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			37058128		
5110058	14202051	31518266	87219464	186863088					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
2 Chloride			Signal: 1						
12627594	13950813	14713682	16496659	16735745	16806087	-2846645			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		16768440		
M6313797	17438516	36784204	494899763	1004144688	1680608715				
119025(1)	119025(2)	119025(3)	119025(4)	119025(5)	119025(6)				
4 Bromide			Signal: 1						
5371145	5654930	5831694	6215221	6482146		-304945			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			6435532		
M1074229	M2827465	5831694	15538053	32410730					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
14914790	11898737	10945896	11802968	12038010	12129031	482428			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		12026120		
M7457395	M14873421	M27364741	354089035	722280611	1212903103				
119025(1)	119025(2)	119025(3)	119025(4)	119025(5)	119025(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Instrument: WC_IonChrom13 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 02-Mar-2023 14:51:48
No.Compounds:7
Sublist: chrom-Anions-IC13*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-15.917 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17205
Inj Date: 28-Feb-2023 17:05:00 Worklist: 119025 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17365
Inj Date: 28-Feb-2023 17:21:00 Worklist: 119025 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17525
Inj Date: 28-Feb-2023 17:36:00 Worklist: 119025 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18085
Inj Date: 28-Feb-2023 17:52:00 Worklist: 119025 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18244
Inj Date: 28-Feb-2023 18:08:00 Worklist: 119025 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18404
Inj Date: 28-Feb-2023 18:24:00 Worklist: 119025 Sample#: 6

Start Cal Date: 28-Feb-2023 17:05:00 End Cal Date: 28-Feb-2023 18:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
33023980	35193560	36848085	39004007	39206527		-1604230			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			39414506		
6604796	17596780	36848085	97510017	196032634					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
31353555	34242202	36561770	39458955	40961308		-2537359			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			40879816		
M6270711	17121101	36561770	98647387	204806542					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
7 Orthophosphate as P				Signal: 1					
54426850	82954388	119001523	126093582	116101016		-13832297			0.995
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			123507022		
10885370	41477194	119001523	315233954	580505078					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					

Report Date: 02-Mar-2023 14:52:23 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	28-Feb-2023 18:40:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-007				
Misc. Info.:	280-0119025-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	02-Mar-2023 14:51:48	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: LVW8		Date:	02-Mar-2023 14:52:22		
Start Cal Date:	28-Feb-2023 17:05:00				
End Cal Date:	28-Feb-2023 18:24:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	1.83	-8.4	10.0	91.6	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	2.32	* 15.9	10.0	115.9	

Report Date: 02-Mar-2023 14:52:38 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	28-Feb-2023 18:40:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-007				
Misc. Info.:	280-0119025-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions 28D				
Last Update:	02-Mar-2023 14:52:37	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: LVW8		Date:	02-Mar-2023 14:52:37		
Start Cal Date:	28-Feb-2023 17:05:00				
End Cal Date:	28-Feb-2023 18:24:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.82	-8.8	10.0	91.2	
2 Chloride	80.0	78.2	-2.3	10.0	97.7	
4 Bromide	2.00	1.96	-2.1	10.0	97.9	
6 Sulfate	80.0	79.3	-0.9	10.0	99.1	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-185
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 28-Feb-2023 18:40:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0119025-007
Misc. Info.: 280-0119025-007
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 22-Mar-2023 11:01:32 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1651

First Level Reviewer: LVW8 Date: 22-Mar-2023 11:01:32

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.120	3.120	0.000	64401451	2.00	1.82	
2 Chloride	4.375	4.375	0.000	1308131615	80.0	78.2	
3 Nitrite as N	5.058	5.058	0.000	70597281	NC	NC	
4 Bromide	6.342	6.342	0.000	12290976	2.00	1.96	
5 Nitrate as N	7.087	7.087	0.000	78760388	NC	NC	
7 Orthophosphate as P	9.560	9.560	0.000	272512363	NC	NC	
6 Sulfate	10.773	10.773	0.000	953618158	80.0	79.3	

QC Flag Legend

Processing Flags
NC - Not Calibrated

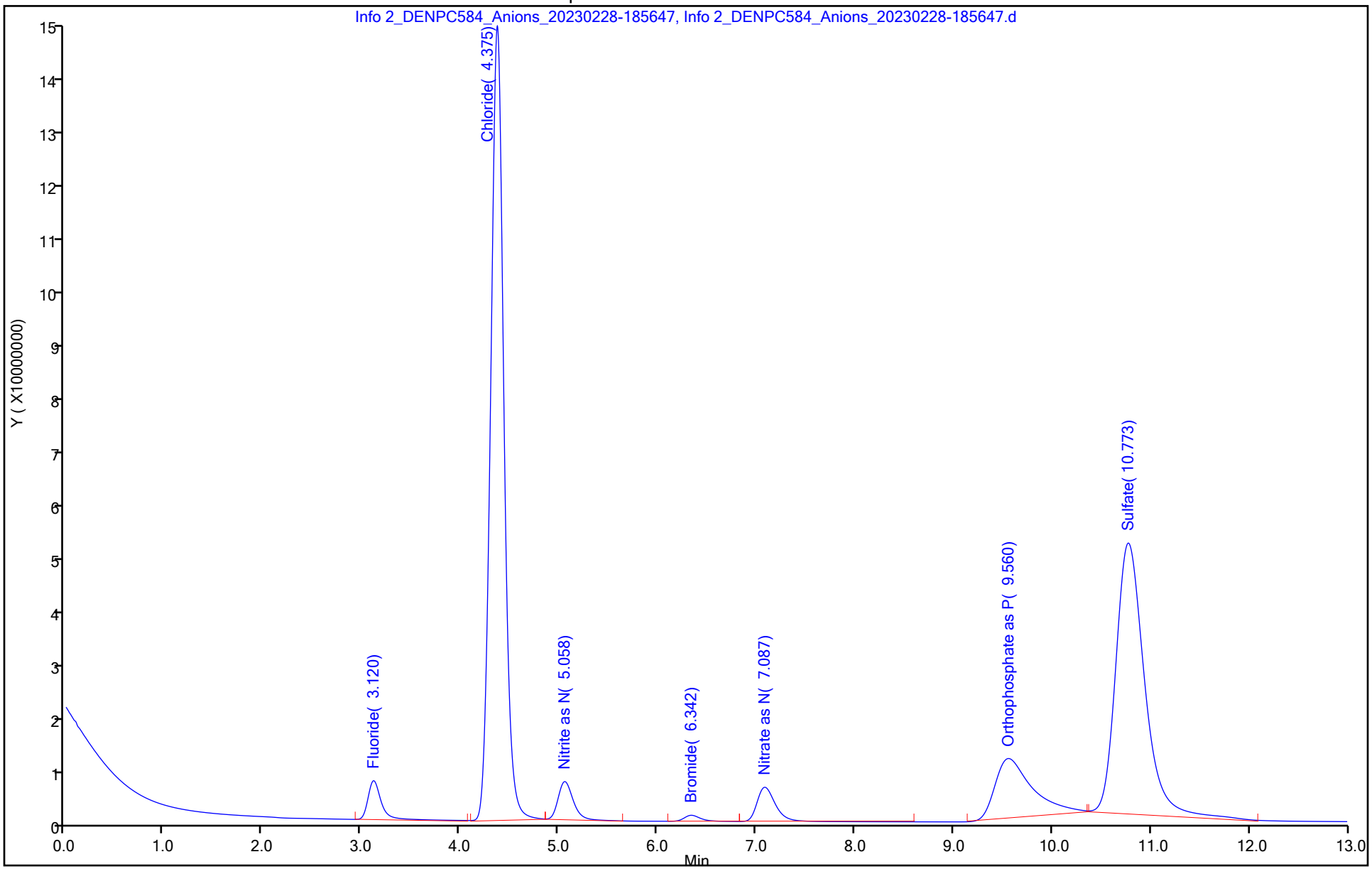
Reagents:

IC SO4 ICV_00024	Amount Added:	0.80	Units: mL
Cl ICV Std_00006	Amount Added:	0.80	Units: mL
IC ICV 5_00396	Amount Added:	0.80	Units: mL

Report Date: 22-Mar-2023 11:01:32 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-185647.d				
Injection Date:	28-Feb-2023 18:40:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-191				
Lims ID:	ICB				
Client ID:					
Sample Type:	ICB				
Inject. Date:	28-Feb-2023 18:56:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-008				
Misc. Info.:	280-0119025-008				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions 28D				
Last Update:	02-Mar-2023 14:51:25	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1676				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.768	9.532	0.236	10504786		NC	
6 Sulfate	10.913	10.773	0.140	6814816		0.5266	

QC Flag Legend

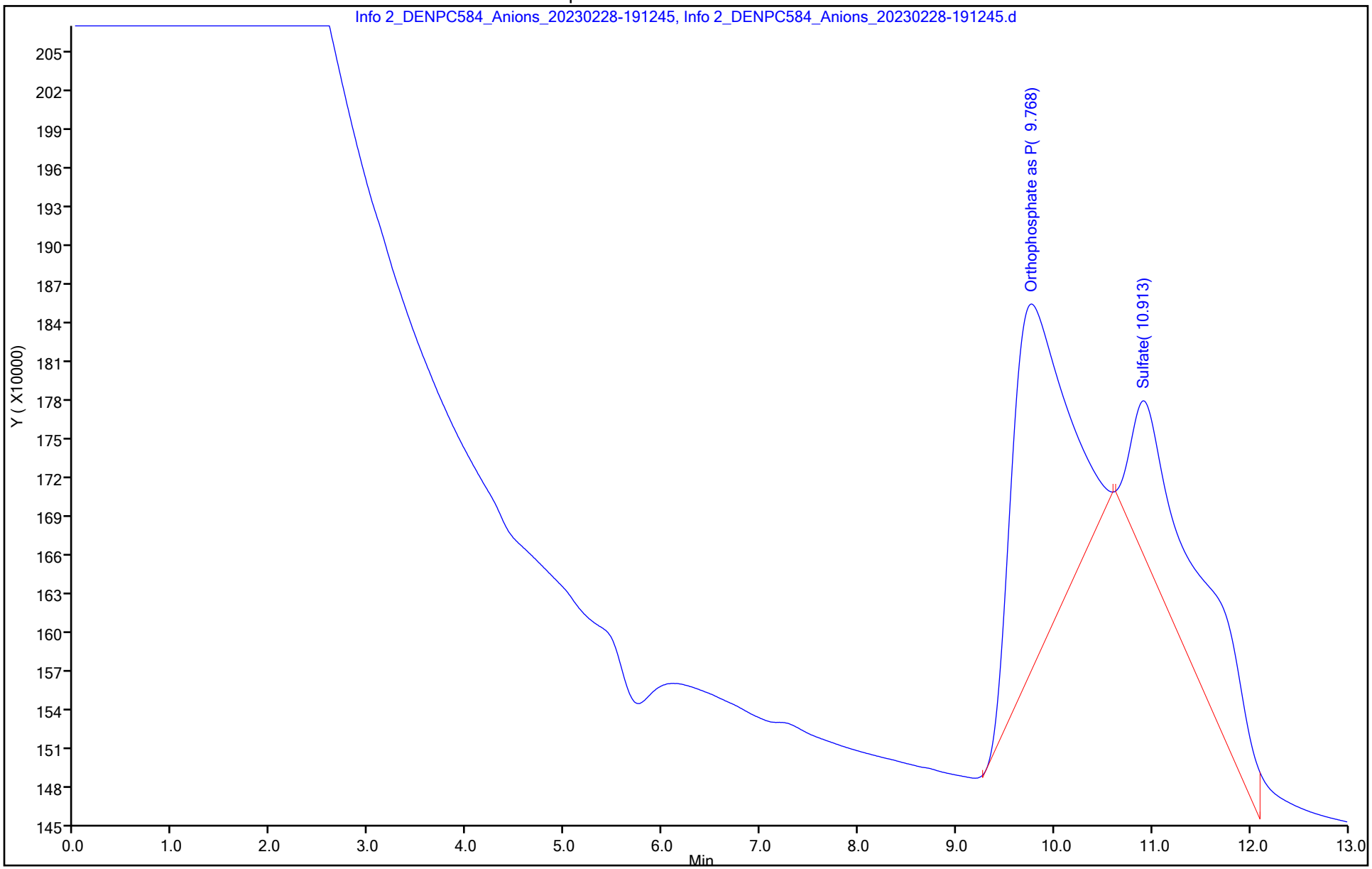
Processing Flags
NC - Not Calibrated

Report Date: 02-Mar-2023 14:51:40 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-191245.d

Injection Date:	28-Feb-2023 18:56:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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IC Instrument Information

WL: 120396 **Inst ID:** DU3 **Analysis Date:** 4/13/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	174966	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174957	5	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174967	10	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174962	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174884	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
957	5	F Cl NO2 Br NO3 PO4 SO4	2x	test
962	1	F Cl NO2 Br NO3 PO4 SO4	5x	test
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Instrument: WC_IonChrom13 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 02-Mar-2023 14:51:48
No.Compounds:7
Sublist: chrom-Anions-IC13*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-15.917 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17205
Inj Date: 28-Feb-2023 17:05:00 Worklist: 119025 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17365
Inj Date: 28-Feb-2023 17:21:00 Worklist: 119025 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17525
Inj Date: 28-Feb-2023 17:36:00 Worklist: 119025 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18085
Inj Date: 28-Feb-2023 17:52:00 Worklist: 119025 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18244
Inj Date: 28-Feb-2023 18:08:00 Worklist: 119025 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18404
Inj Date: 28-Feb-2023 18:24:00 Worklist: 119025 Sample#: 6

Start Cal Date: 28-Feb-2023 17:05:00 End Cal Date: 28-Feb-2023 18:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
25550290	28404102	31518266	34887786	37372618		-3204369			0.998
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			37058128		
5110058	14202051	31518266	87219464	186863088					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
2 Chloride			Signal: 1						
12627594	13950813	14713682	16496659	16735745	16806087	-2846645			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		16768440		
M6313797	17438516	36784204	494899763	1004144688	1680608715				
119025(1)	119025(2)	119025(3)	119025(4)	119025(5)	119025(6)				
4 Bromide			Signal: 1						
5371145	5654930	5831694	6215221	6482146		-304945			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			6435532		
M1074229	M2827465	5831694	15538053	32410730					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
14914790	11898737	10945896	11802968	12038010	12129031	482428			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		12026120		
M7457395	M14873421	M27364741	354089035	722280611	1212903103				
119025(1)	119025(2)	119025(3)	119025(4)	119025(5)	119025(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Instrument: WC_IonChrom13 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 02-Mar-2023 14:51:48
No.Compounds:7
Sublist: chrom-Anions-IC13*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-15.917 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17205
Inj Date: 28-Feb-2023 17:05:00 Worklist: 119025 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17365
Inj Date: 28-Feb-2023 17:21:00 Worklist: 119025 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17525
Inj Date: 28-Feb-2023 17:36:00 Worklist: 119025 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18085
Inj Date: 28-Feb-2023 17:52:00 Worklist: 119025 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18244
Inj Date: 28-Feb-2023 18:08:00 Worklist: 119025 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18404
Inj Date: 28-Feb-2023 18:24:00 Worklist: 119025 Sample#: 6

Start Cal Date: 28-Feb-2023 17:05:00 End Cal Date: 28-Feb-2023 18:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
33023980	35193560	36848085	39004007	39206527		-1604230			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			39414506		
6604796	17596780	36848085	97510017	196032634					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
31353555	34242202	36561770	39458955	40961308		-2537359			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			40879816		
M6270711	17121101	36561770	98647387	204806542					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
7 Orthophosphate as P				Signal: 1					
54426850	82954388	119001523	126093582	116101016		-13832297			0.995
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			123507022		
10885370	41477194	119001523	315233954	580505078					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	28-Feb-2023 18:40:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-007				
Misc. Info.:	280-0119025-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	02-Mar-2023 14:51:48	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: LVW8		Date:	02-Mar-2023 14:52:22		
Start Cal Date:	28-Feb-2023 17:05:00				
End Cal Date:	28-Feb-2023 18:24:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	1.83	-8.4	10.0	91.6	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	2.32	* 15.9	10.0	115.9	

Report Date: 02-Mar-2023 14:52:38 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	28-Feb-2023 18:40:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-007				
Misc. Info.:	280-0119025-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions 28D				
Last Update:	02-Mar-2023 14:52:37	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: LVW8		Date:	02-Mar-2023 14:52:37		
Start Cal Date:	28-Feb-2023 17:05:00				
End Cal Date:	28-Feb-2023 18:24:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.82	-8.8	10.0	91.2	
2 Chloride	80.0	78.2	-2.3	10.0	97.7	
4 Bromide	2.00	1.96	-2.1	10.0	97.9	
6 Sulfate	80.0	79.3	-0.9	10.0	99.1	

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-155				
Lims ID:	CCV				
Client ID:					
Sample Type:	CCV				
Inject. Date:	13-Apr-2023 15:39:00	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120396-001				
Misc. Info.:	280-0120396-001				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions-IC13*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 12:41:56	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1620				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.083	3.132	-0.049	79192286	NC	NC	
2 Chloride	4.253	4.385	-0.132	820347730	NC	NC	
3 Nitrite as N	4.918	5.053	-0.135	88419997	2.50	2.28	
4 Bromide	6.108	6.353	-0.245	14497645	NC	NC	
5 Nitrate as N	6.832	7.075	-0.243	94445332	2.50	2.37	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.115	10.773	-0.658	592956758	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

Reagents:

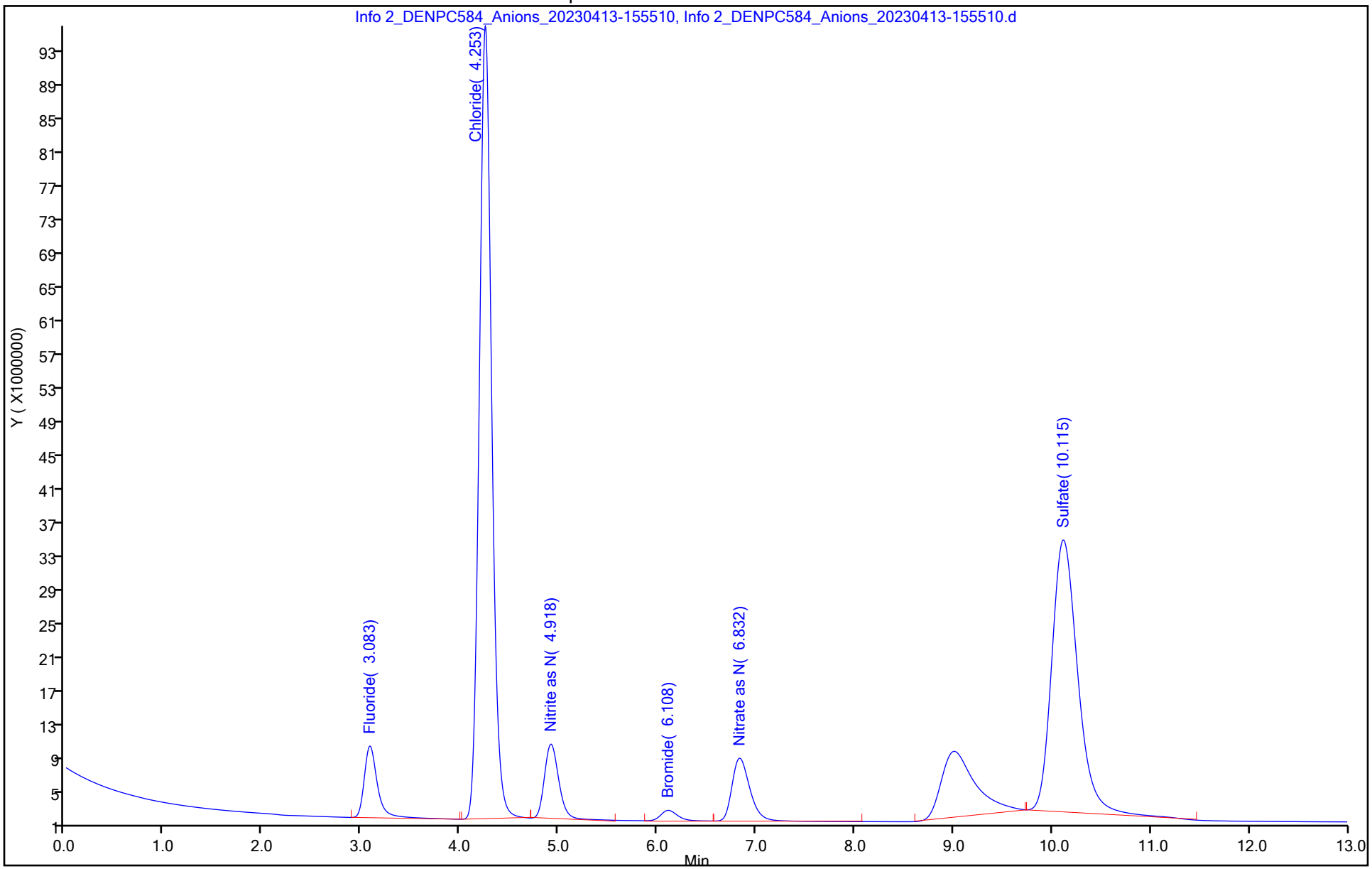
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:41:56 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-155510.d

Injection Date:	13-Apr-2023 15:39:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-161
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 13-Apr-2023 15:55:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-002
Misc. Info.: 280-0120396-002
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:46:23

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.163	9.532	-0.369	6426470		0.1640	
6 Sulfate	10.267	10.773	-0.506	1111412		NC	M

QC Flag Legend

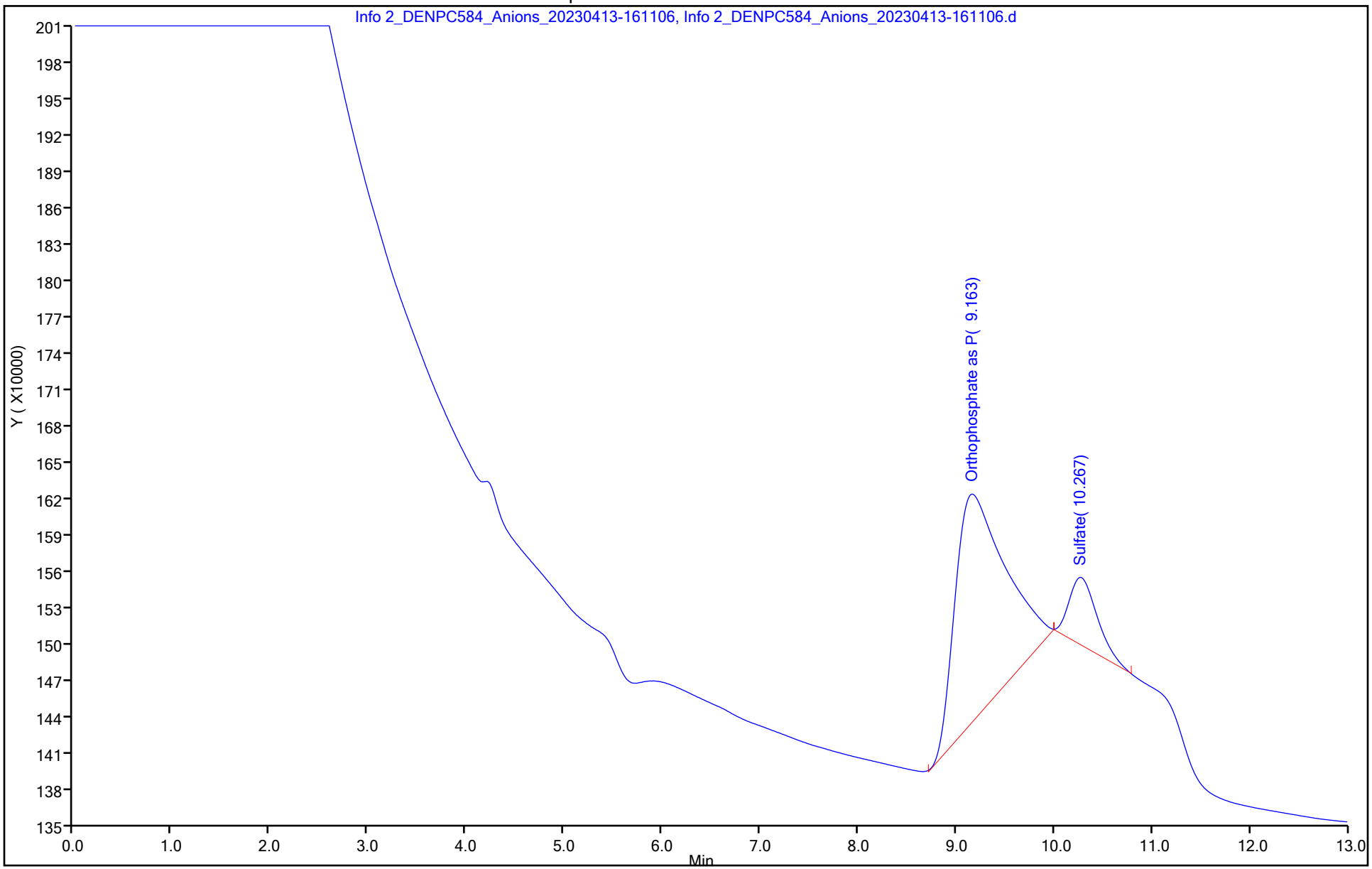
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:41:57 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-161106.d

Injection Date:	13-Apr-2023 15:55:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-162
Lims ID: MRL
Client ID:
Sample Type: MRL
Inject. Date: 13-Apr-2023 16:11:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-003
Misc. Info.: 280-0120396-003
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 13-Apr-2023 17:38:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	6199702	NC	NC	
2 Chloride	4.243	4.385	-0.142	36552311	NC	NC	
3 Nitrite as N	4.935	5.053	-0.118	8159370	0.2500	0.2477	
4 Bromide	6.143	6.353	-0.210	1338706	NC	NC	
5 Nitrate as N	6.898	7.075	-0.177	7522792	0.2500	0.2461	
7 Orthophosphate as P	9.097	9.532	-0.435	14030086	0.2500	0.2256	
6 Sulfate	10.163	10.773	-0.610	25141346	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

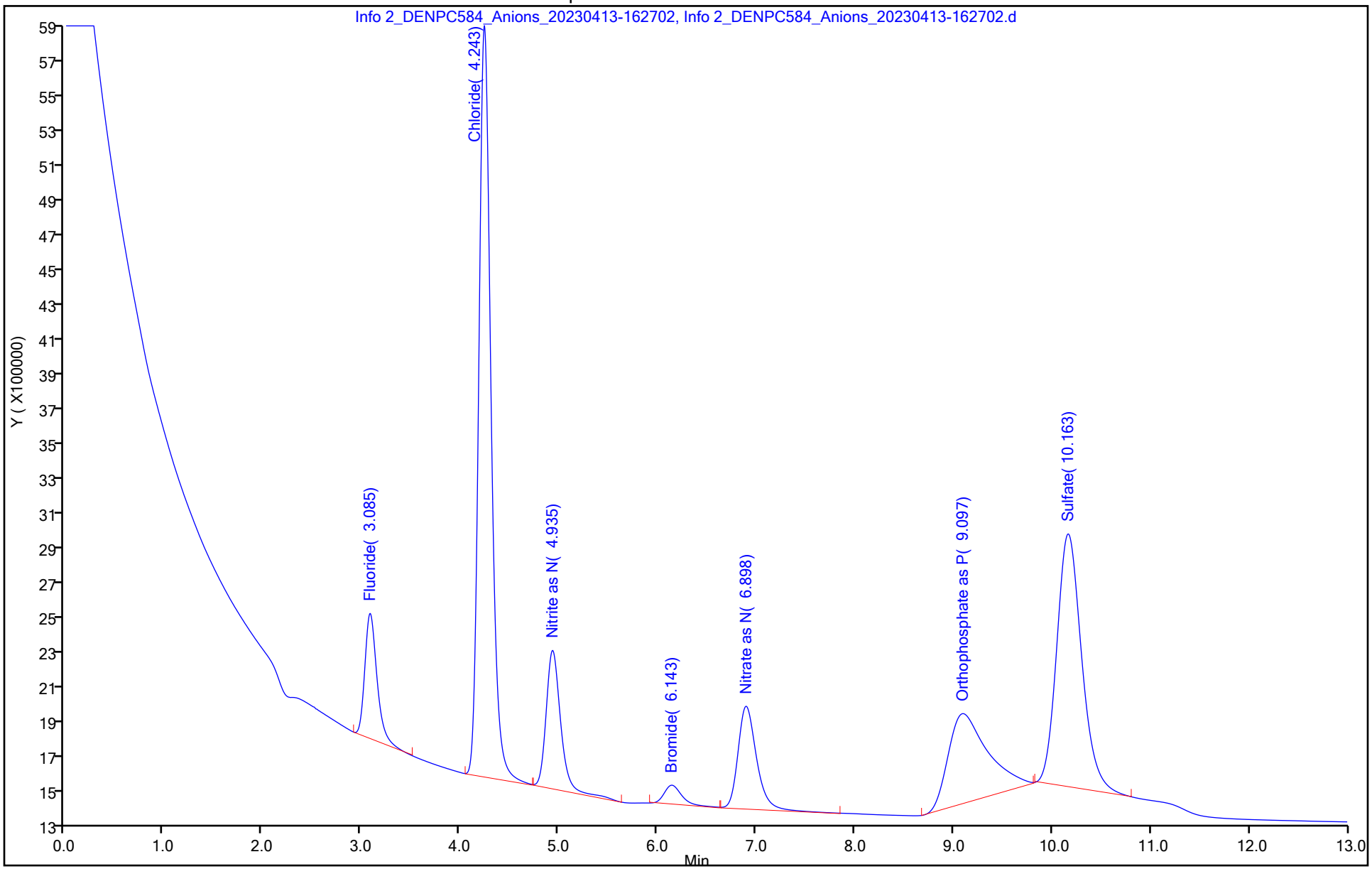
IC Cal low_00703 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL

Report Date: 14-Apr-2023 12:41:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-162702.d

Injection Date:	13-Apr-2023 16:11:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	MRL			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-164
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 13-Apr-2023 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-004
Misc. Info.: 280-0120396-004
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.088	3.132	-0.044	80060853	NC	NC	
2 Chloride	4.260	4.385	-0.125	815986162	NC	NC	
3 Nitrite as N	4.927	5.053	-0.126	88123036	2.50	2.28	
4 Bromide	6.132	6.353	-0.221	14432270	NC	NC	
5 Nitrate as N	6.853	7.075	-0.222	93441634	2.50	2.35	
7 Orthophosphate as P	9.033	9.532	-0.499	190867786	2.50	1.66	
6 Sulfate	10.143	10.773	-0.630	591168455	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

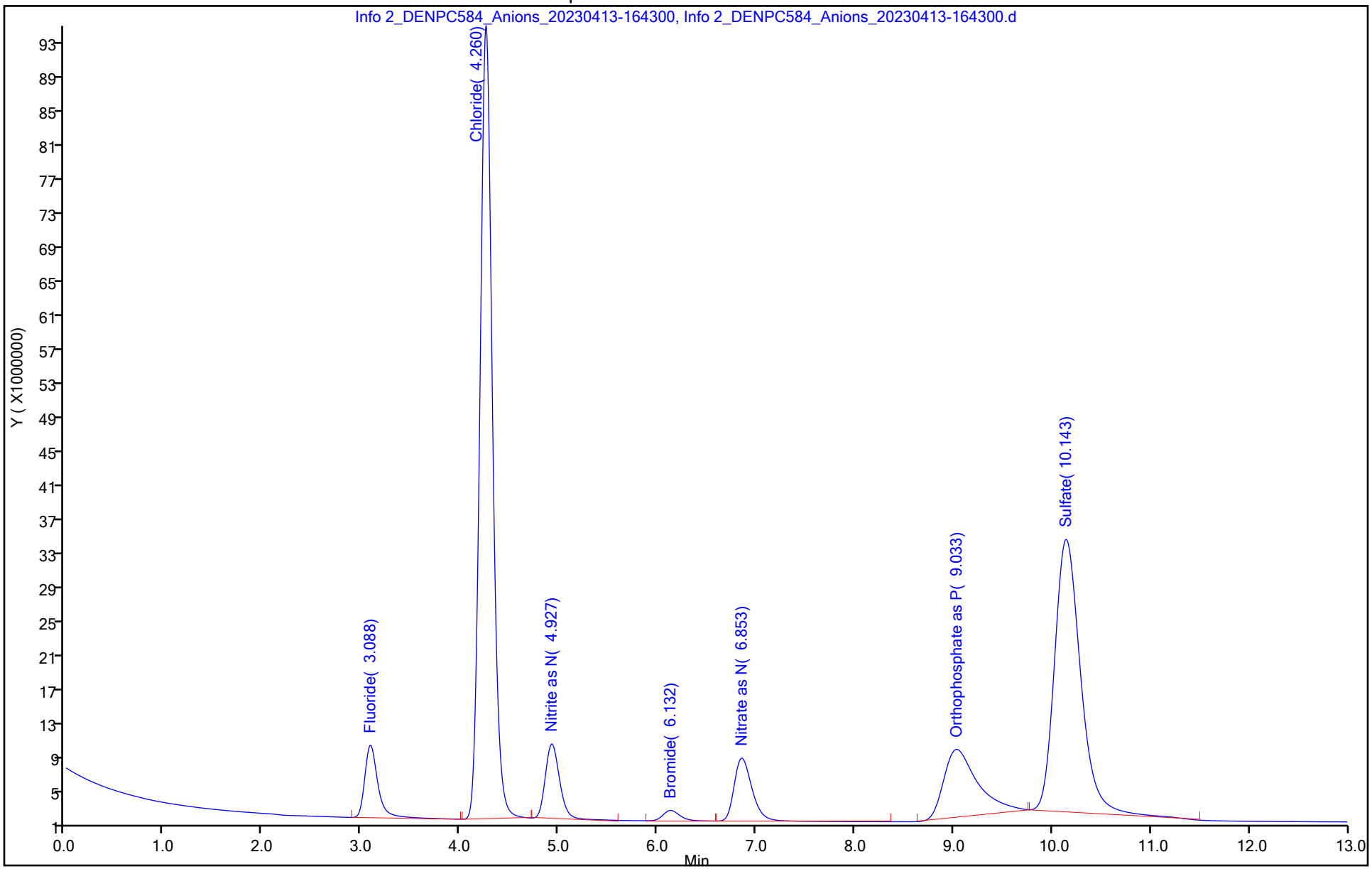
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:41:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-164300.d

Injection Date:	13-Apr-2023 16:27:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-173
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 13-Apr-2023 17:18:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-005
Misc. Info.: 280-0120396-005
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.097	3.132	-0.035	80808185	NC	NC	
2 Chloride	4.267	4.385	-0.118	818775152	NC	NC	
3 Nitrite as N	4.933	5.053	-0.120	87996817	2.50	2.27	
4 Bromide	6.142	6.353	-0.211	14375721	NC	NC	
5 Nitrate as N	6.862	7.075	-0.213	93832266	2.50	2.36	
7 Orthophosphate as P	9.033	9.532	-0.499	187994855	2.50	1.63	
6 Sulfate	10.142	10.773	-0.631	592252712	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

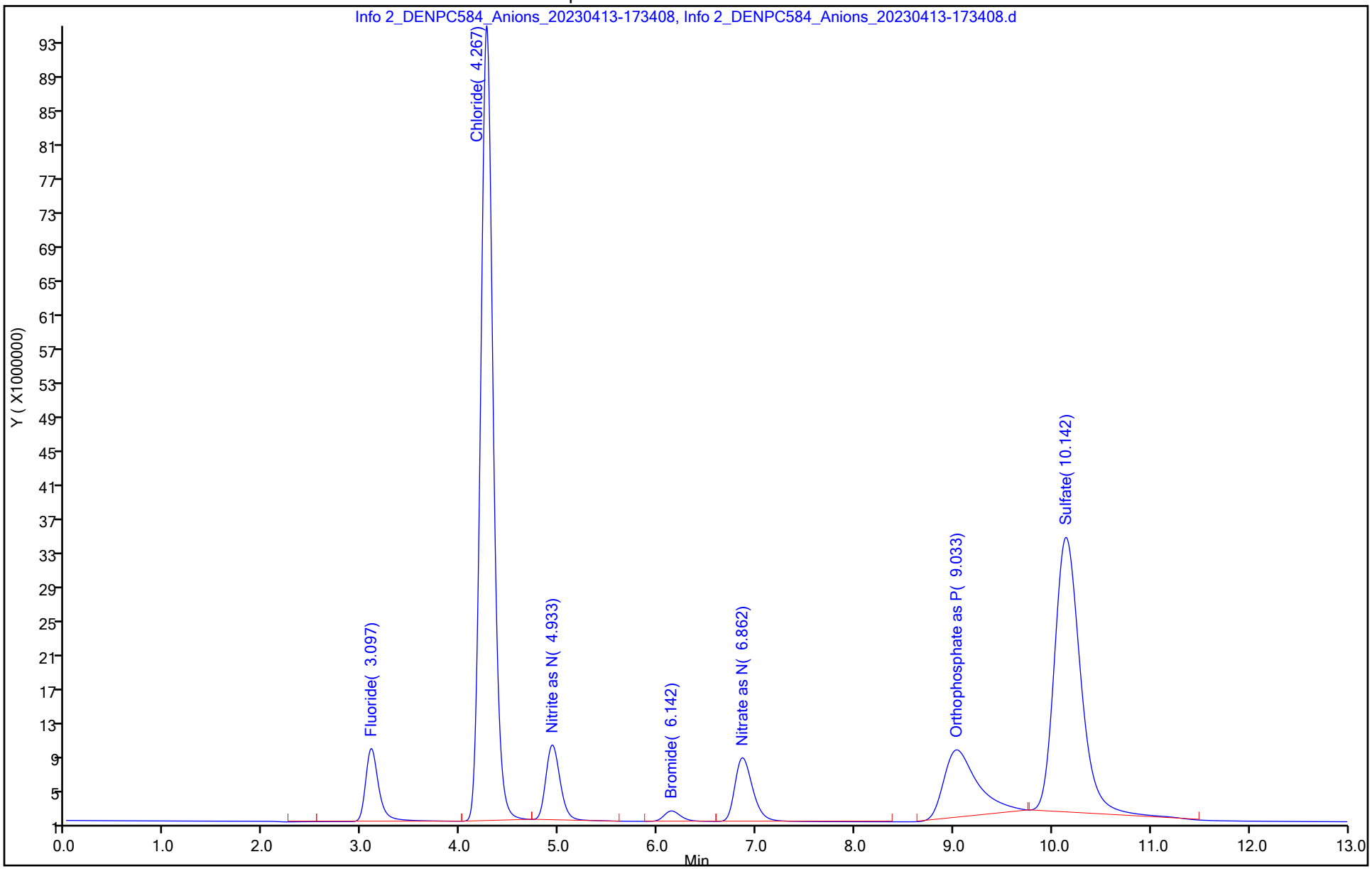
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:00 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-173408.d

Injection Date:	13-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-175
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 13-Apr-2023 17:34:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-006
Misc. Info.: 280-0120396-006
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:46:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.192	9.532	-0.340	5830951		0.1592	
6 Sulfate	10.305	10.773	-0.468	1323247		NC	M

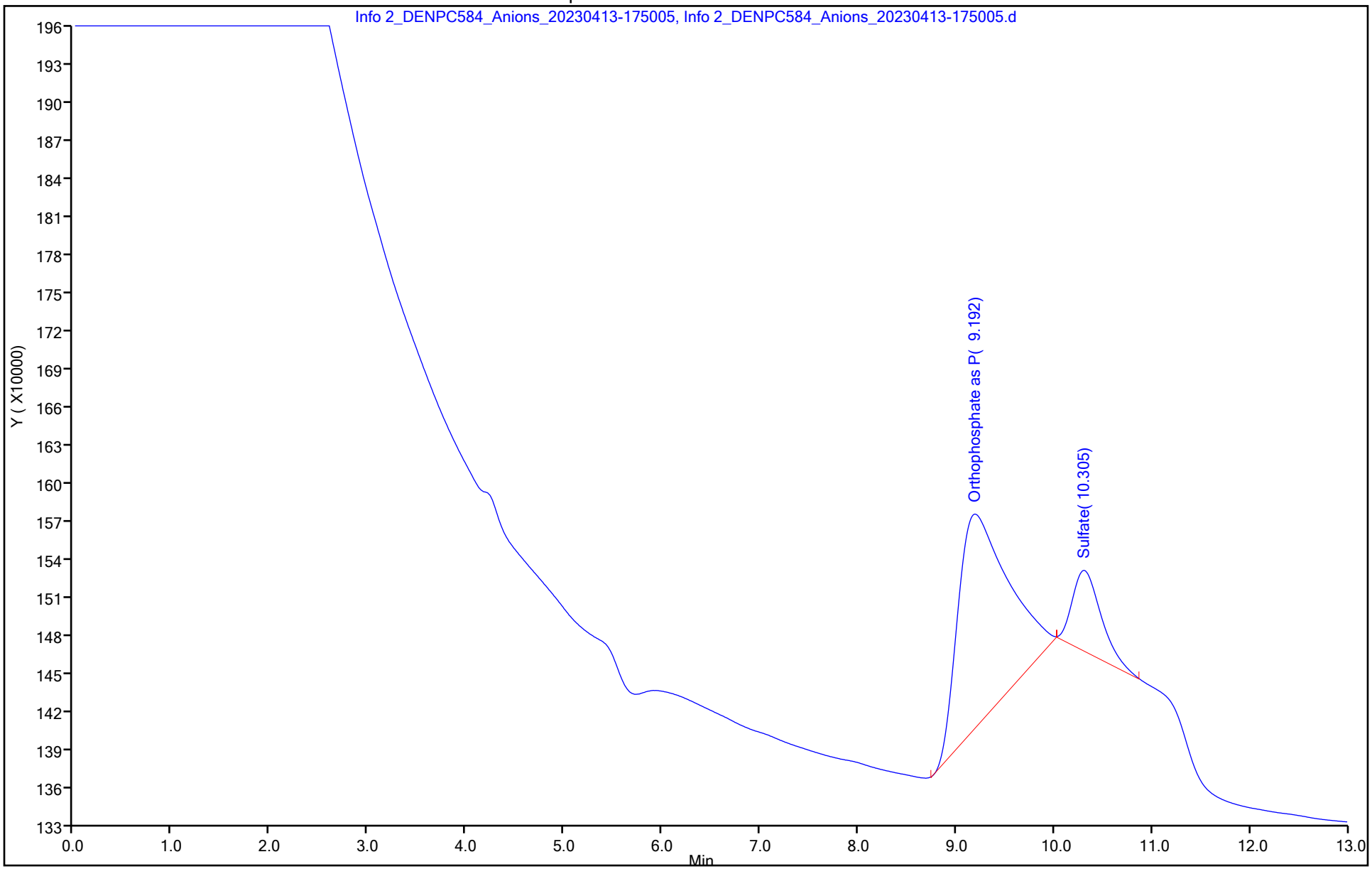
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:00 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-175005.d				
Injection Date:	13-Apr-2023 17:34:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-182
Lims ID: 280-174957-C-2
Client ID: MW-124-20230412
Sample Type: Client
Inject. Date: 13-Apr-2023 18:06:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-008
Misc. Info.: 280-0120396-008
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.108	3.132	-0.024	5264076	NC	
2 Chloride	4.375	4.385	-0.010	5439710617	NC	
3 Nitrite as N		5.053			ND	
4 Bromide	6.380	6.353	0.027	8827563	NC	
5 Nitrate as N	7.028	7.075	-0.047	242563874	6.00	E
7 Orthophosphate as P	9.333	9.532	-0.199	2927743	0.1357	
6 Sulfate	10.273	10.773	-0.500	1471224035	NC	

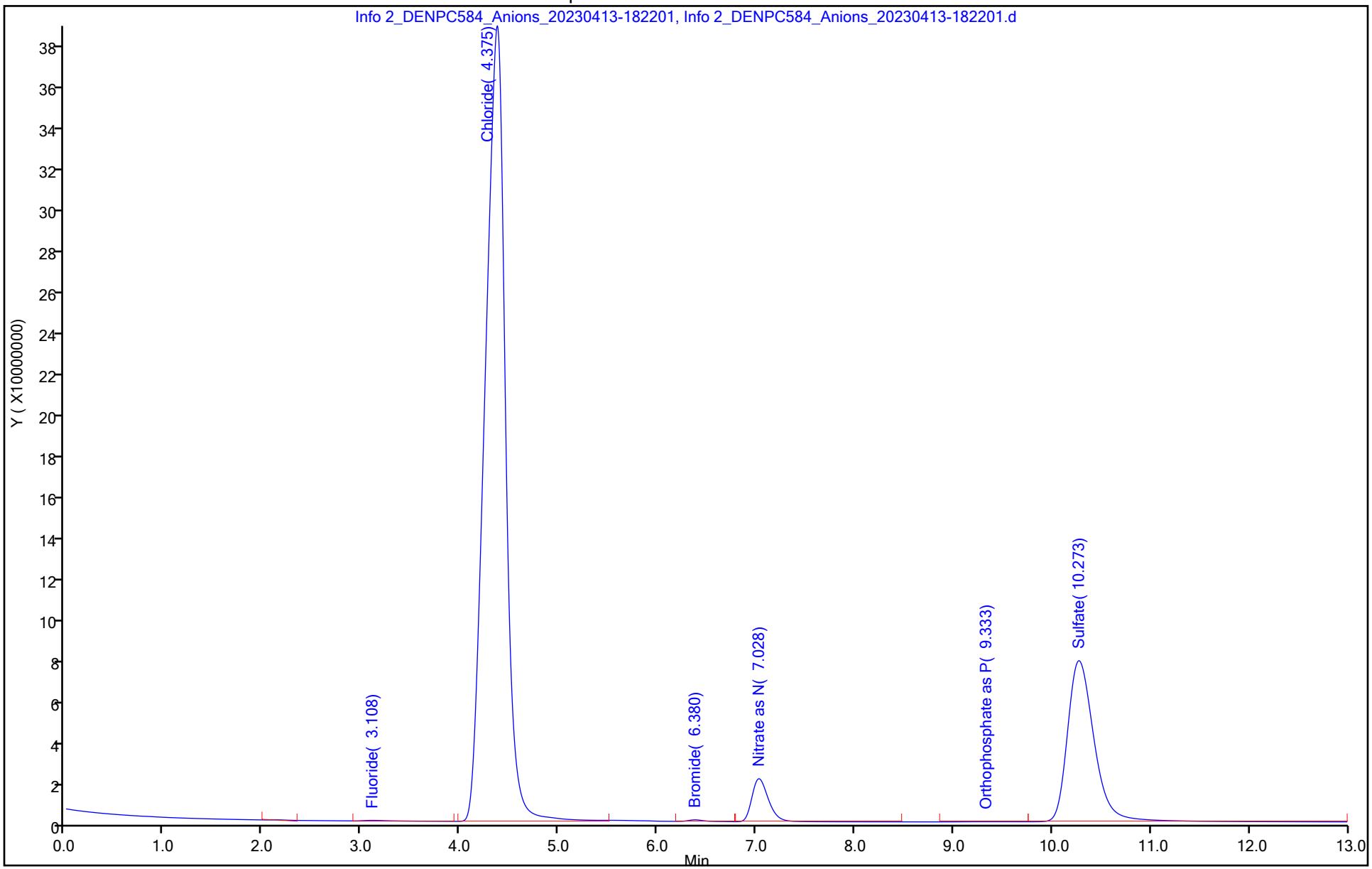
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:02 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-182201.d				
Injection Date:	13-Apr-2023 18:06:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-2	Lab Sample ID:	280-174957-2	Worklist Smp#:	8
Client ID:	MW-124-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-183				
Lims ID:	280-174957-C-2				
Client ID:	MW-124-20230412				
Sample Type:	Client				
Inject. Date:	13-Apr-2023 18:22:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	2.0000		
Sample Info:	280-0120396-009				
Misc. Info.:	280-0120396-009				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 12:41:56	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1620				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.095	3.132	-0.037	2408509	NC	
2 Chloride	4.315	4.385	-0.070	2629562614	NC	
3 Nitrite as N	4.932	5.053	-0.121	3134438	0.1202	
4 Bromide	6.318	6.353	-0.035	4143564	NC	
5 Nitrate as N	6.992	7.075	-0.083	112773758	2.82	
7 Orthophosphate as P	9.317	9.532	-0.215	3091950	0.1370	
6 Sulfate	10.252	10.773	-0.521	742507415	NC	

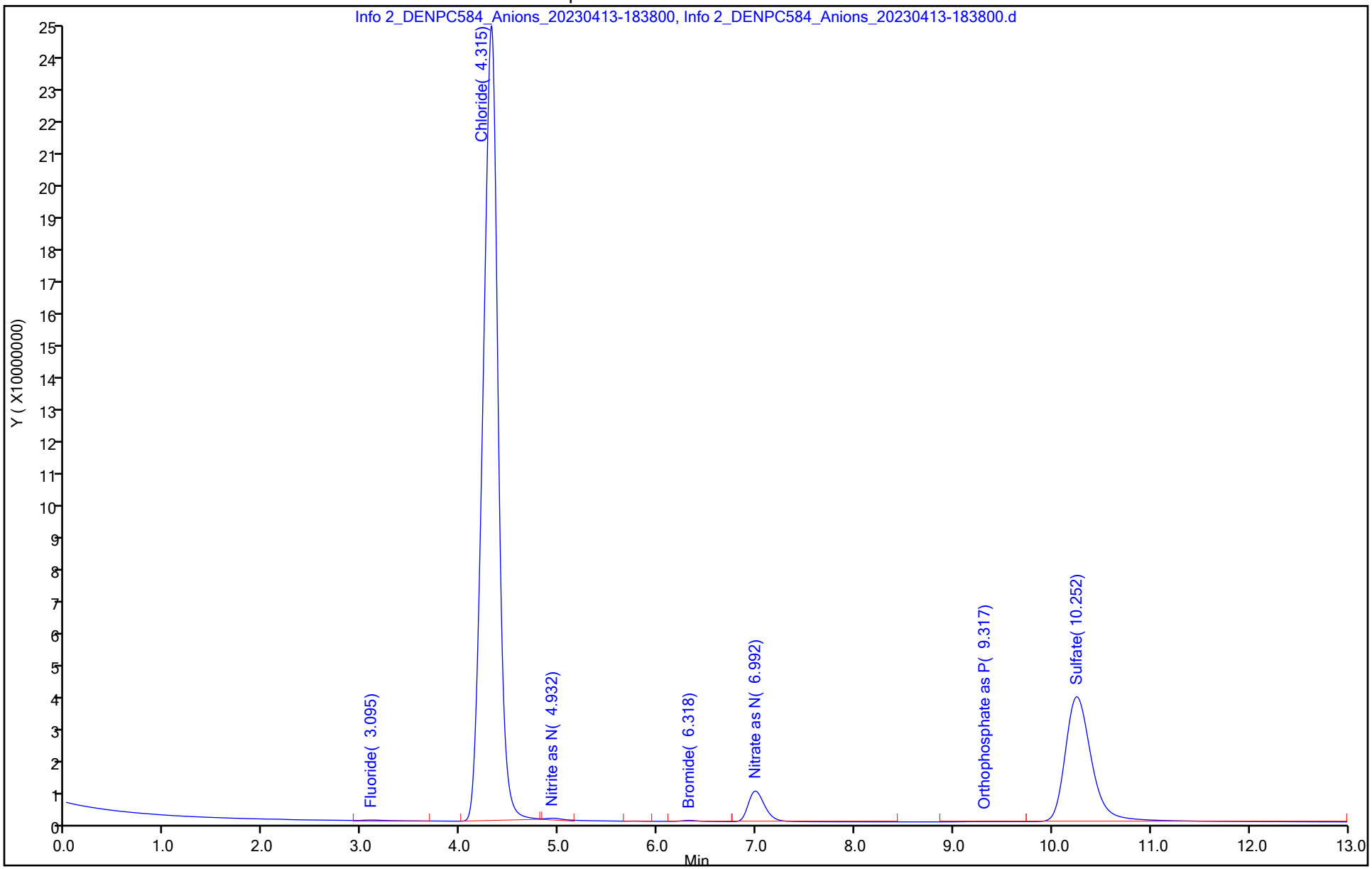
QC Flag Legend

Processing Flags
NC - Not Calibrated

Report Date: 14-Apr-2023 12:42:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-183800.d				
Injection Date:	13-Apr-2023 18:22:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-2	Lab Sample ID:	280-174957-2	Worklist Smp#:	9
Client ID:	MW-124-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	2.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-202
Lims ID: 280-174957-C-3
Client ID: MW-124-Q-20230412
Sample Type: Client
Inject. Date: 13-Apr-2023 20:13:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-016
Misc. Info.: 280-0120396-016
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.093	3.132	-0.039	4961484	NC	
2 Chloride	4.375	4.385	-0.010	5451369776	NC	
3 Nitrite as N		5.053			ND	
4 Bromide	6.365	6.353	0.012	8790186	NC	
5 Nitrate as N	7.023	7.075	-0.052	241348960	5.97	E
7 Orthophosphate as P	9.330	9.532	-0.202	1134893	0.1212	
6 Sulfate	10.263	10.773	-0.510	1456621277	NC	

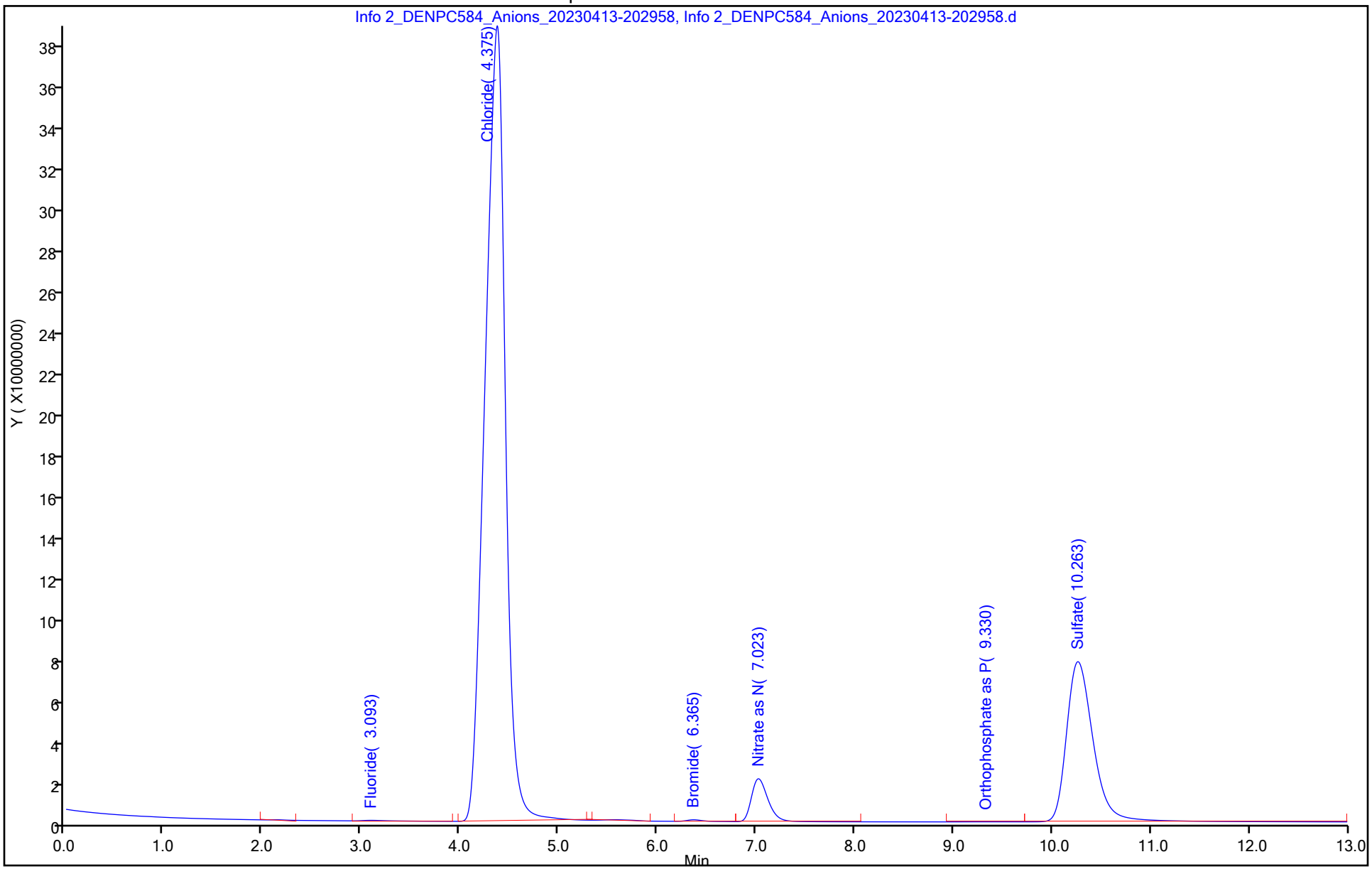
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-202958.d				
Injection Date:	13-Apr-2023 20:13:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-3	Lab Sample ID:	280-174957-3	Worklist Smp#:	16
Client ID:	MW-124-Q-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-204				
Lims ID:	ccv				
Client ID:					
Sample Type:	CCV				
Inject. Date:	13-Apr-2023 20:30:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120396-017				
Misc. Info.:	280-0120396-017				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions-IC13*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 12:42:09	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1620				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	77657182	NC	NC	
2 Chloride	4.262	4.385	-0.123	825419429	NC	NC	
3 Nitrite as N	4.932	5.053	-0.121	88058789	2.50	2.27	
4 Bromide	6.123	6.353	-0.230	14655000	NC	NC	
5 Nitrate as N	6.857	7.075	-0.218	95417989	2.50	2.40	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.128	10.773	-0.645	596358518	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

Reagents:

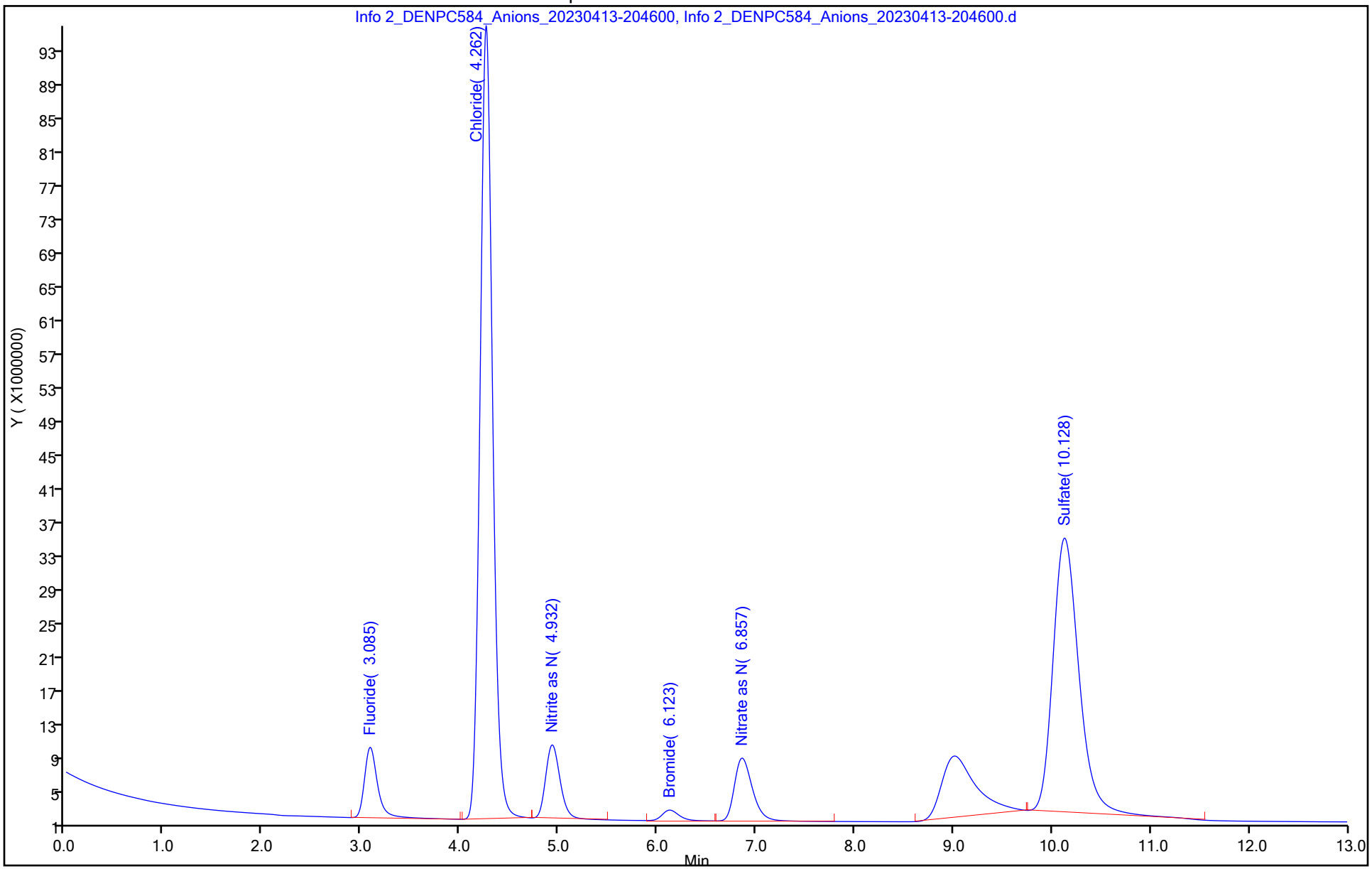
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-204600.d

Injection Date:	13-Apr-2023 20:30:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-210
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 13-Apr-2023 20:46:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-018
Misc. Info.: 280-0120396-018
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:09 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:47:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.180	9.532	-0.352	5317758		0.1551	
6 Sulfate	10.290	10.773	-0.483	998875		NC	M

QC Flag Legend

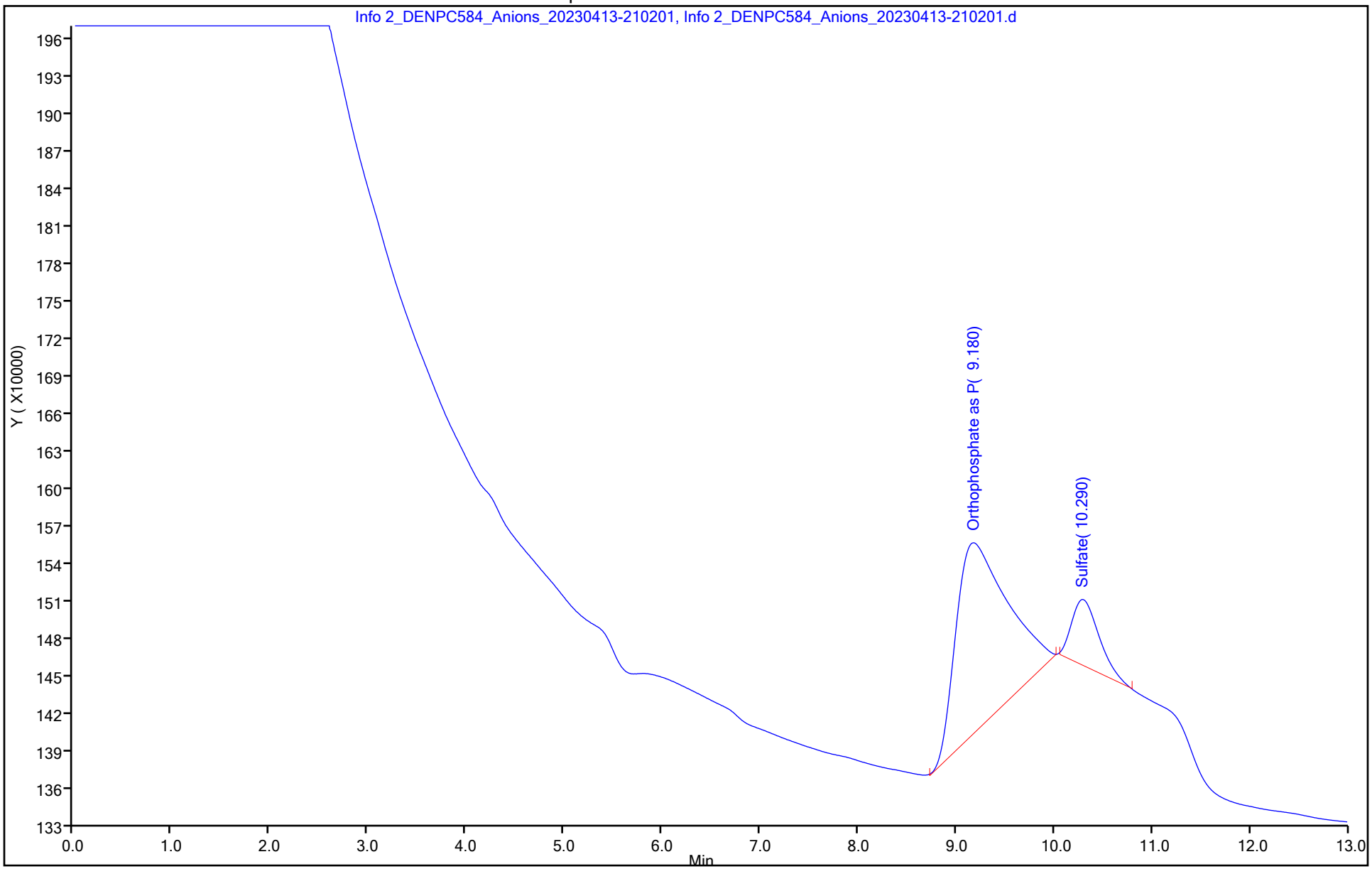
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-210201.d

Injection Date:	13-Apr-2023 20:46:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-21
Lims ID: 280-174957-C-3
Client ID: MW-124-Q-20230412
Sample Type: Client
Inject. Date: 13-Apr-2023 21:02:00 ALS Bottle#: 0 Worklist Smp#: 19
Injection Vol: 10.0 ul Dil. Factor: 2.0000
Sample Info: 280-0120396-019
Misc. Info.: 280-0120396-019
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:38 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1683

First Level Reviewer: sripenp Date: 17-Apr-2023 18:02:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	2149982	NC	
2 Chloride	4.313	4.385	-0.072	2637604837	NC	
3 Nitrite as N	4.933	5.053	-0.120	3447394	0.1282	
4 Bromide	6.308	6.353	-0.045	3813935	NC	
5 Nitrate as N	6.982	7.075	-0.093	112586592	2.82	
7 Orthophosphate as P	9.280	9.532	-0.252	3266687	0.1384	
6 Sulfate	10.242	10.773	-0.531	729105889	NC	

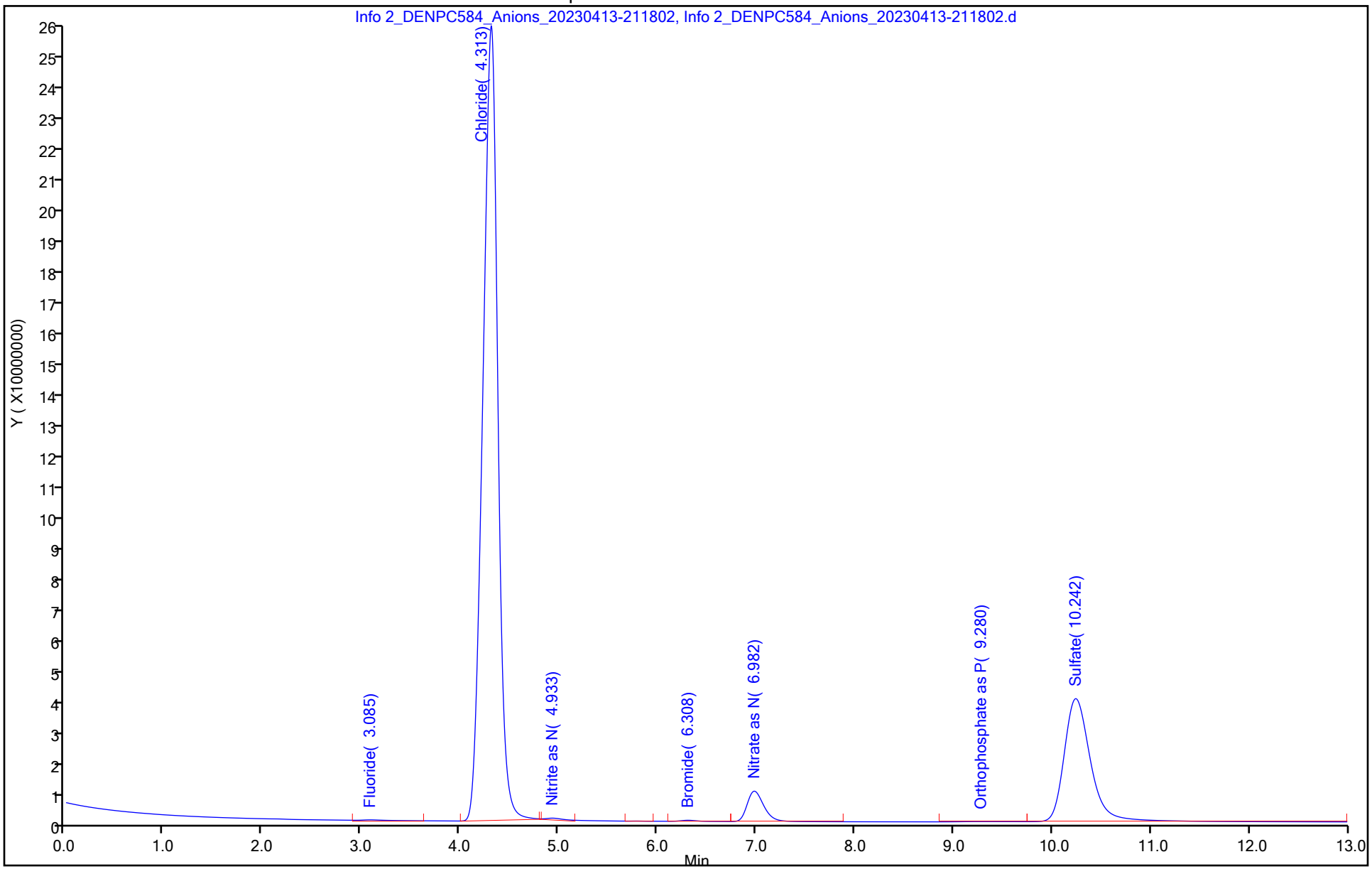
QC Flag Legend

Processing Flags
NC - Not Calibrated

Report Date: 17-Apr-2023 18:02:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-211802.d				
Injection Date:	13-Apr-2023 21:02:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-3	Lab Sample ID:	280-174957-3	Worklist Smp#:	19
Client ID:	MW-124-Q-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	2.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-235				
Lims ID:	ccv				
Client ID:					
Sample Type:	CCV				
Inject. Date:	13-Apr-2023 23:42:00	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120396-029				
Misc. Info.:	280-0120396-029				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions-IC13*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 12:42:18	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1620				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.090	3.132	-0.042	77313857	NC	NC	
2 Chloride	4.263	4.385	-0.122	827635728	NC	NC	
3 Nitrite as N	4.930	5.053	-0.123	88409308	2.50	2.28	
4 Bromide	6.105	6.353	-0.248	14743842	NC	NC	
5 Nitrate as N	6.837	7.075	-0.238	95283455	2.50	2.39	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.135	10.773	-0.638	602833776	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

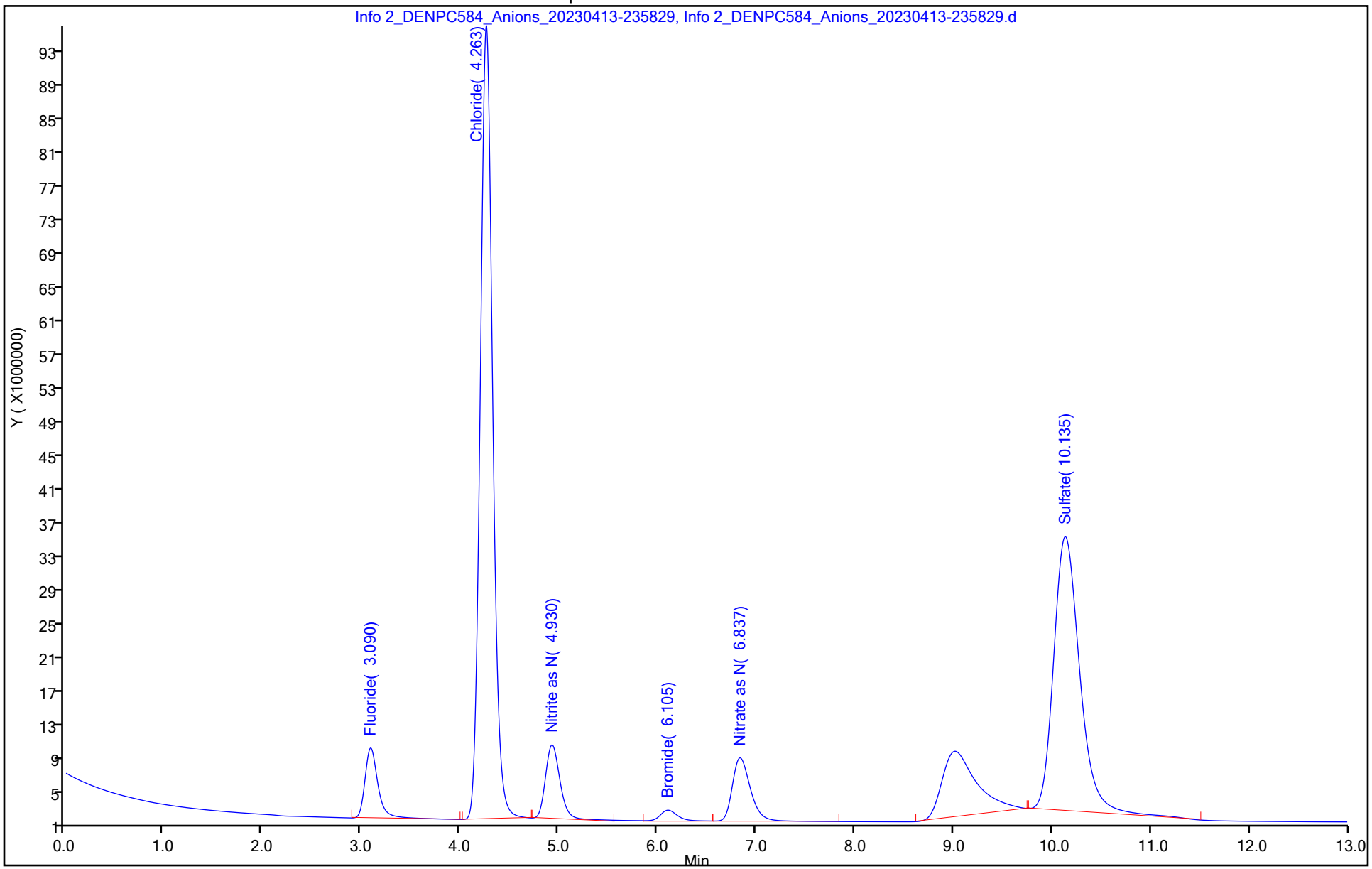
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:18 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-235829.d				
Injection Date:	13-Apr-2023 23:42:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	29
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-001
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 13-Apr-2023 23:58:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-030
Misc. Info.: 280-0120396-030
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:18 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:48:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.170	9.532	-0.362	11007537		0.2011	
6 Sulfate	10.285	10.773	-0.488	874075		NC	M

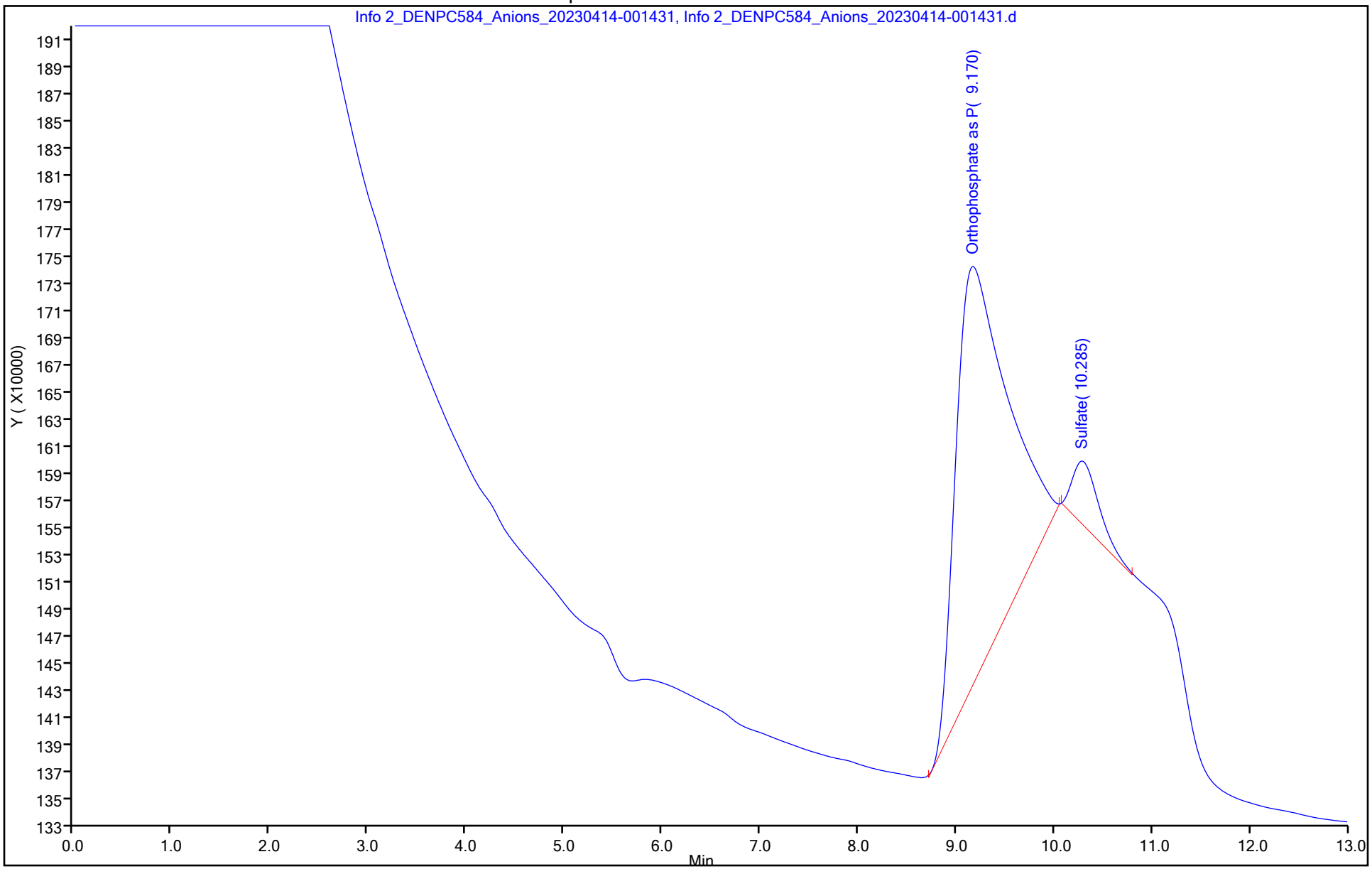
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-001431.d				
Injection Date:	13-Apr-2023 23:58:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	30
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-03				
Lims ID:	ccv				
Client ID:					
Sample Type:	CCV				
Inject. Date:	14-Apr-2023 02:54:00	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120396-041				
Misc. Info.:	280-0120396-041				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions-IC13*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 12:42:24	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1620				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.082	3.132	-0.050	76245932	NC	NC	
2 Chloride	4.257	4.385	-0.128	823350451	NC	NC	
3 Nitrite as N	4.927	5.053	-0.126	87905689	2.50	2.27	
4 Bromide	6.107	6.353	-0.246	14658527	NC	NC	
5 Nitrate as N	6.842	7.075	-0.233	94412294	2.50	2.37	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.122	10.773	-0.651	596675544	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

Reagents:

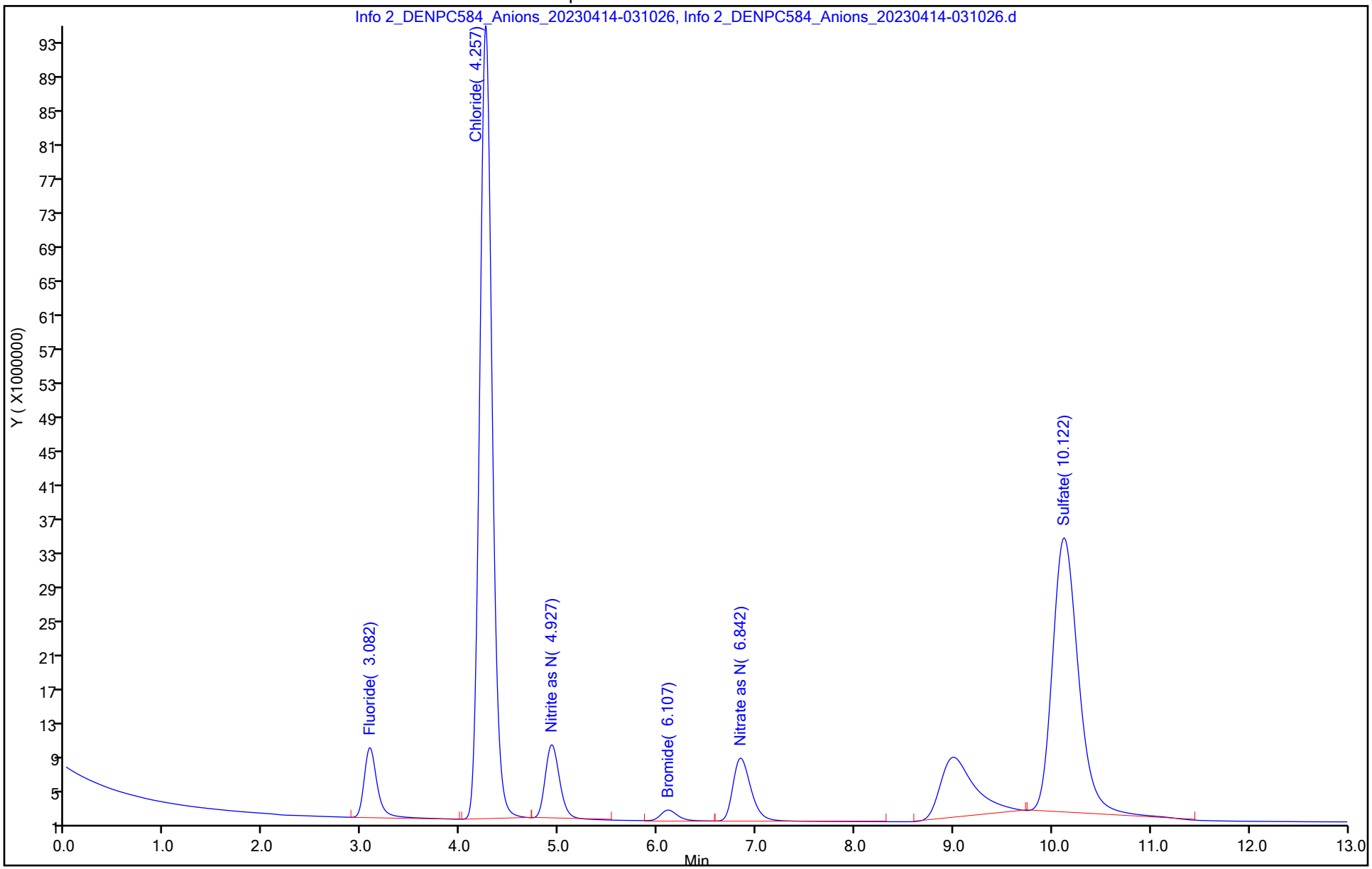
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-031026.d

Injection Date:	14-Apr-2023 02:54:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	41
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-032
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 03:10:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-042
Misc. Info.: 280-0120396-042
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:48:47

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.157	9.532	-0.375	6910397		0.1679	
6 Sulfate	10.275	10.773	-0.498	860779		NC	M

QC Flag Legend

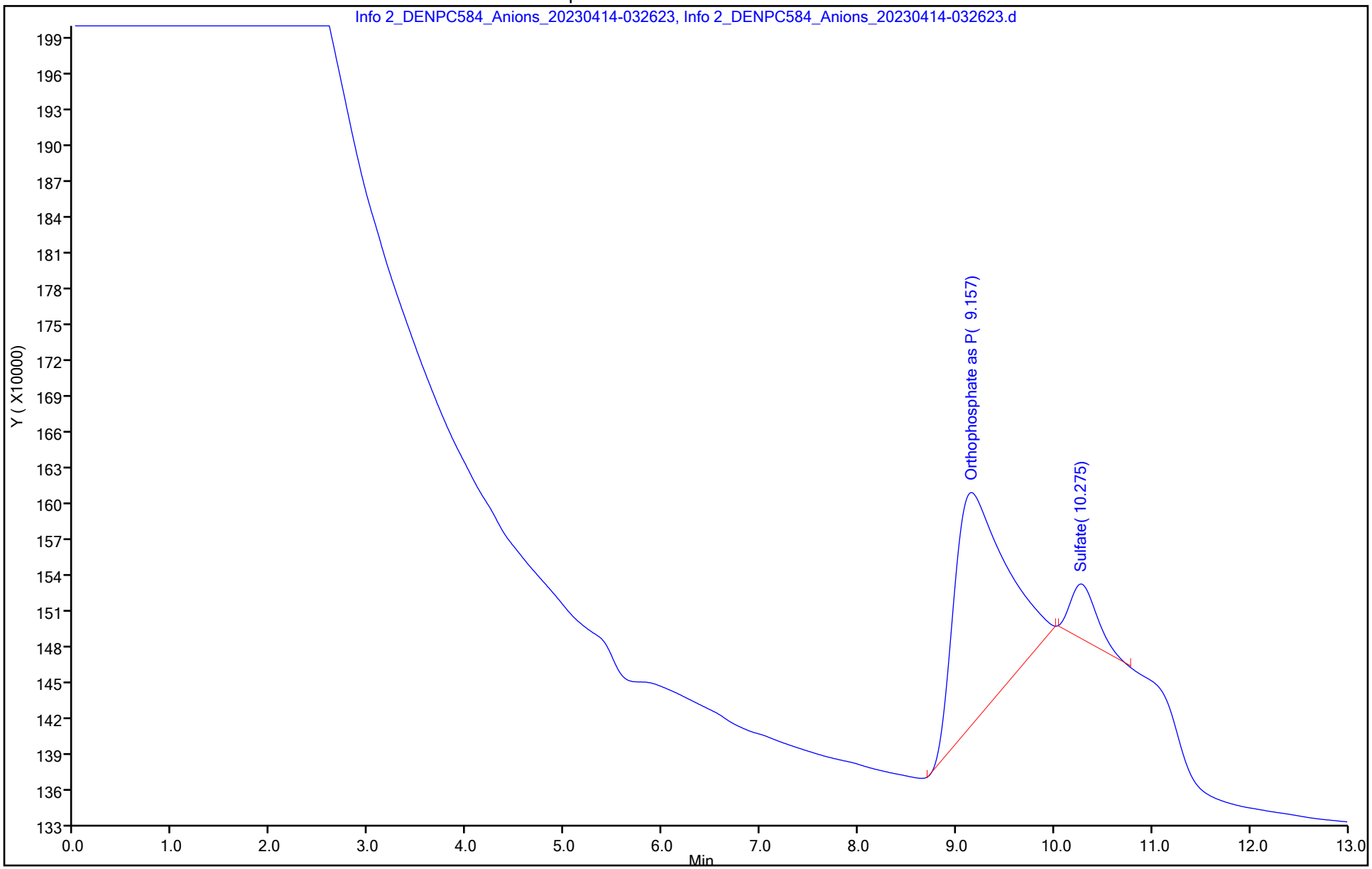
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-032623.d

Injection Date:	14-Apr-2023 03:10:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	42
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-035
Lims ID: 280-174957-C-4
Client ID: RW-15-20230411
Sample Type: Client
Inject. Date: 14-Apr-2023 03:42:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-044
Misc. Info.: 280-0120396-044
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	6057209	NC	
2 Chloride	4.400	4.385	0.015	6327895565	NC	
3 Nitrite as N		5.053			ND	
4 Bromide	6.330	6.353	-0.023	9549373	NC	
5 Nitrate as N	7.020	7.075	-0.055	88270892	2.22	
7 Orthophosphate as P	9.333	9.532	-0.199	6181063	0.1620	
6 Sulfate	10.227	10.773	-0.546	1757479145	NC	

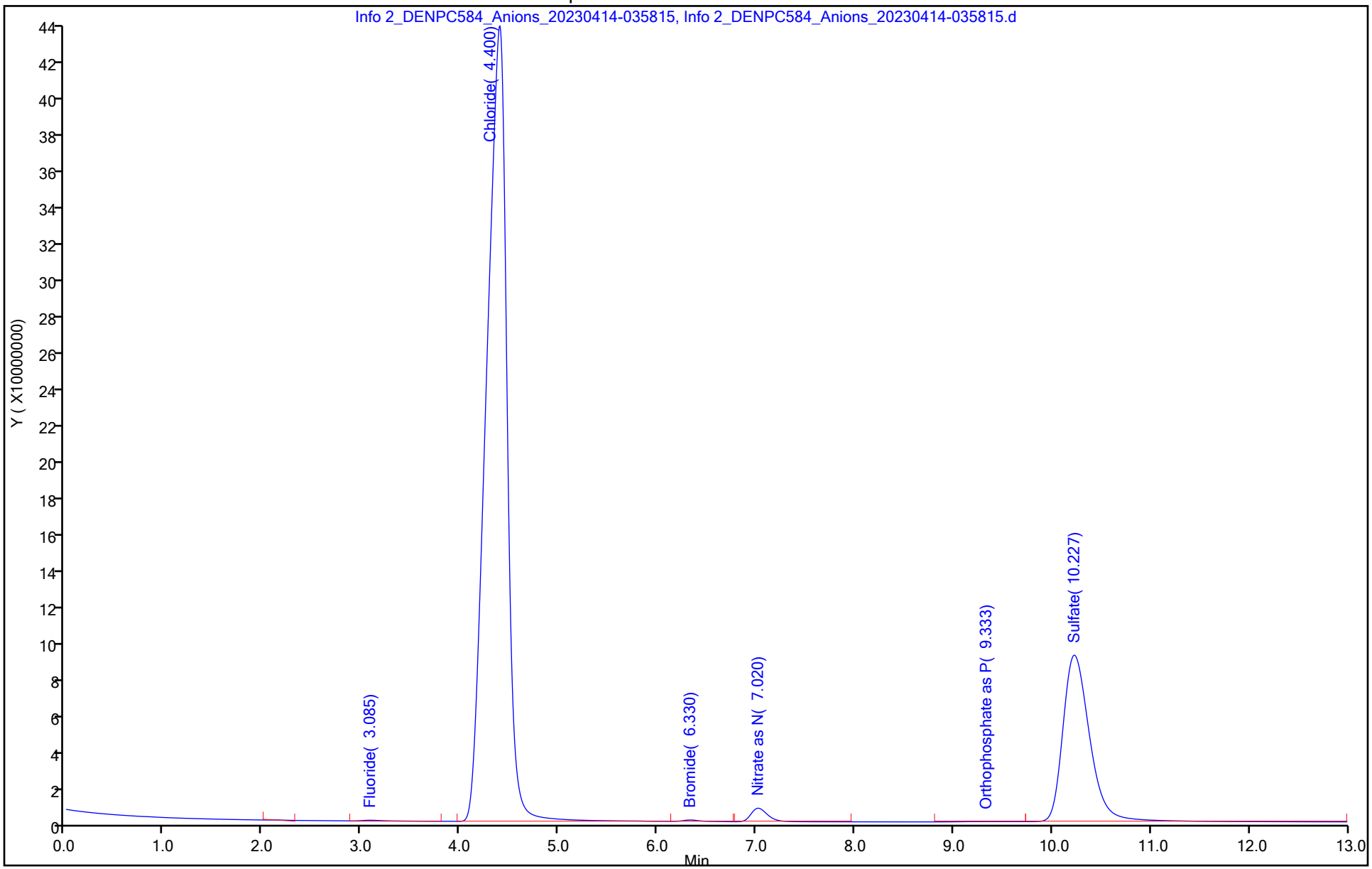
QC Flag Legend

Processing Flags
NC - Not Calibrated

Report Date: 14-Apr-2023 12:42:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-035815.d				
Injection Date:	14-Apr-2023 03:42:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-4	Lab Sample ID:	280-174957-4	Worklist Smp#:	44
Client ID:	RW-15-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-04
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 14-Apr-2023 03:58:00 ALS Bottle#: 0 Worklist Smp#: 45
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-045
Misc. Info.: 280-0120396-045
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.088	3.132	-0.044	76472057	NC	NC	
2 Chloride	4.267	4.385	-0.118	827501645	NC	NC	
3 Nitrite as N	4.940	5.053	-0.113	88510258	2.50	2.29	
4 Bromide	6.125	6.353	-0.228	14593835	NC	NC	
5 Nitrate as N	6.865	7.075	-0.210	94676037	2.50	2.38	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.127	10.773	-0.646	599552890	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

Reagents:

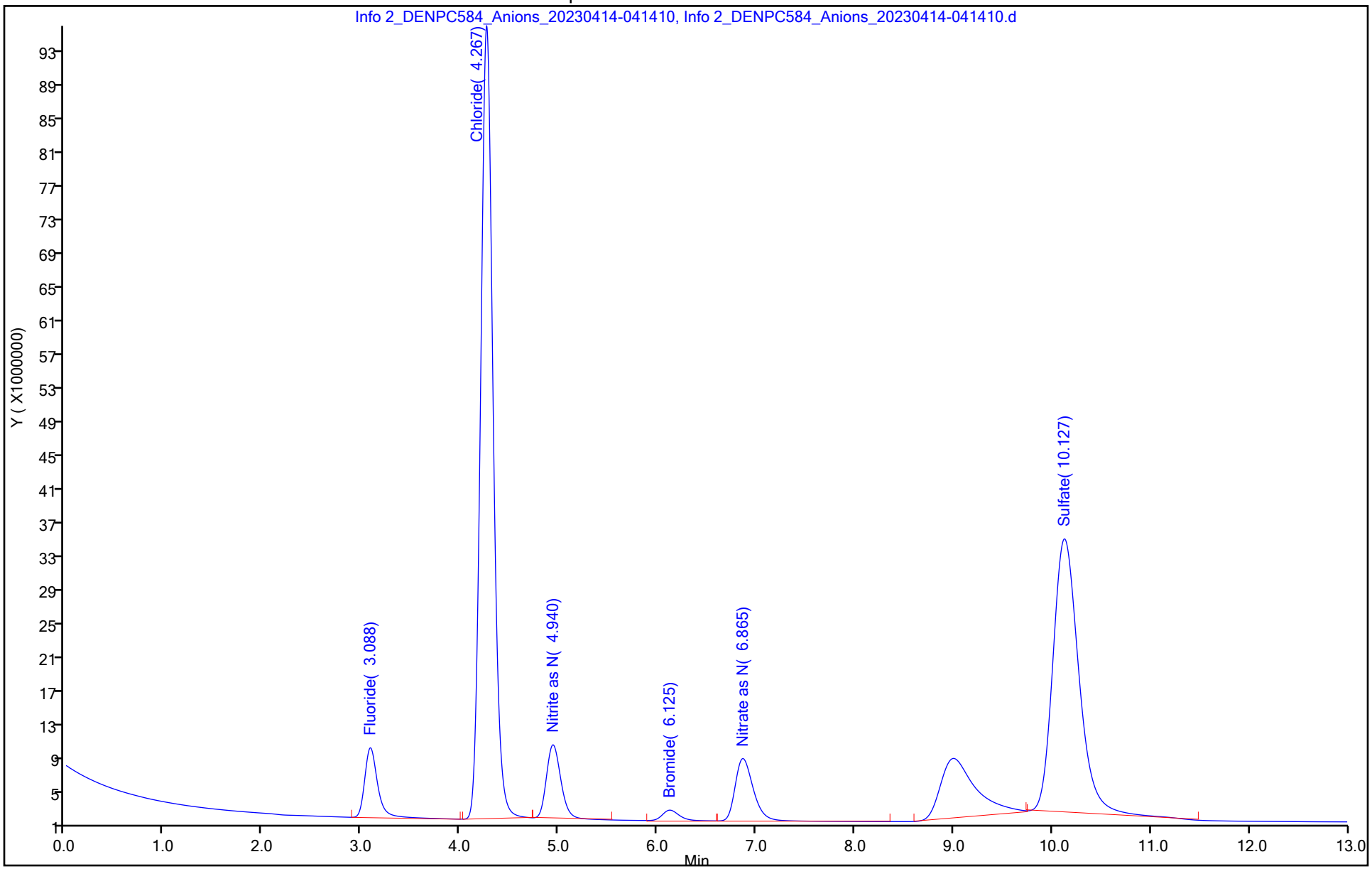
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:27 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-041410.d

Injection Date:	14-Apr-2023 03:58:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	lcs			Worklist Smp#:	45
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-043
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 14-Apr-2023 04:14:00 ALS Bottle#: 0 Worklist Smp#: 46
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-046
Misc. Info.: 280-0120396-046
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	79105757	NC	NC	
2 Chloride	4.262	4.385	-0.123	833054076	NC	NC	
3 Nitrite as N	4.933	5.053	-0.120	88824484	2.50	2.29	
4 Bromide	6.132	6.353	-0.221	14790822	NC	NC	
5 Nitrate as N	6.865	7.075	-0.210	97874134	2.50	2.46	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.123	10.773	-0.650	605463892	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

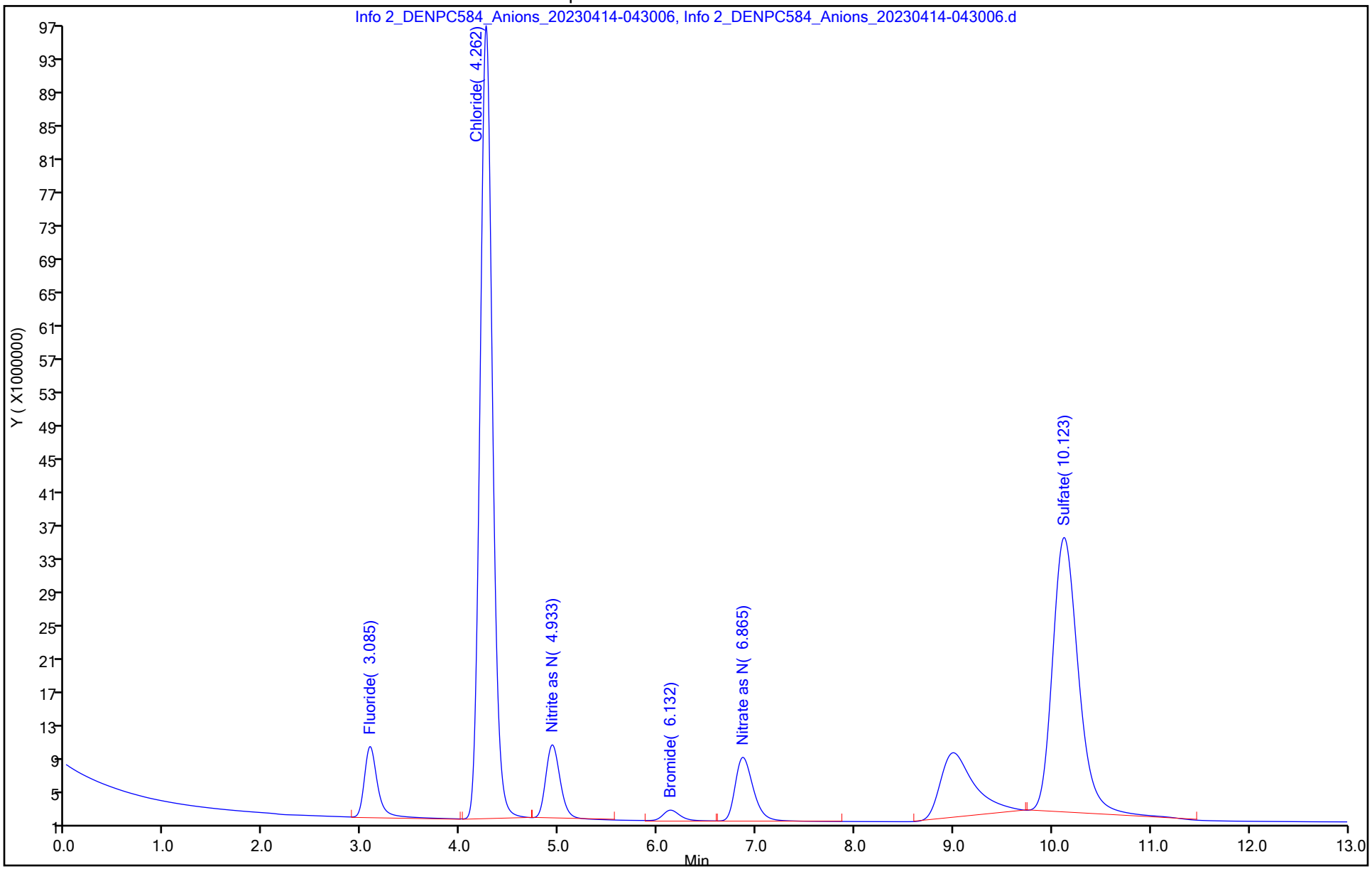
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:28 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-043006.d				
Injection Date:	14-Apr-2023 04:14:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	lcsd			Worklist Smp#:	46
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-044
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 14-Apr-2023 04:30:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-047
Misc. Info.: 280-0120396-047
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:49:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.167	9.532	-0.365	6744039		0.1666	
6 Sulfate	10.290	10.773	-0.483	1044644		NC	M

QC Flag Legend

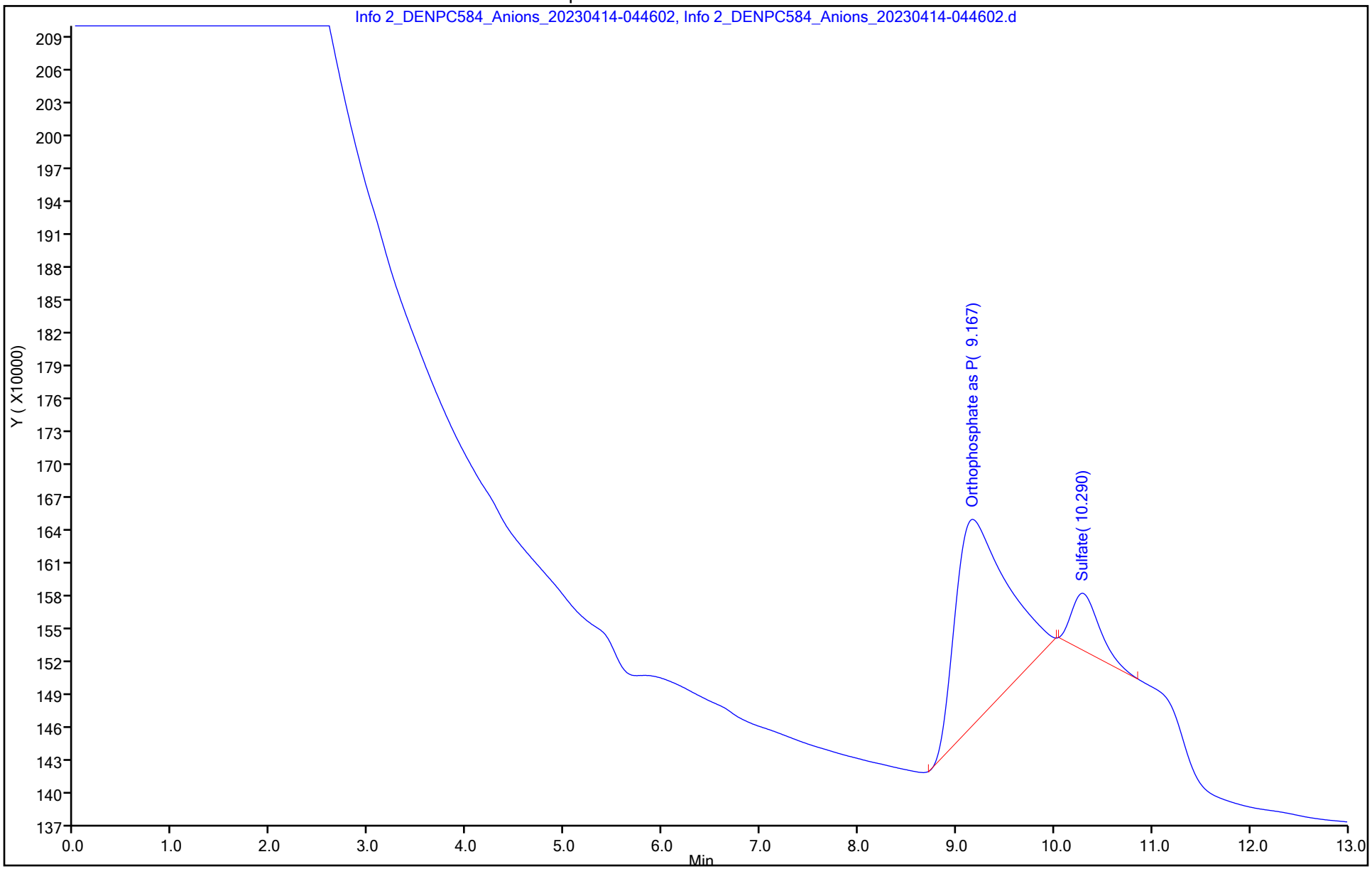
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:29 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-044602.d

Injection Date:	14-Apr-2023 04:30:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	mb			Worklist Smp#:	47
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-050				
Lims ID:	280-174957-C-6				
Client ID:	MW-105S-20230411				
Sample Type:	Client				
Inject. Date:	14-Apr-2023 04:46:00	ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120396-048				
Misc. Info.:	280-0120396-048				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 12:42:24	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1620				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.052	3.132	-0.080	4671893	NC	
2 Chloride	4.365	4.385	-0.020	7258097165	NC	
3 Nitrite as N		5.053			ND	
4 Bromide	6.435	6.353	0.082	9019944	NC	
5 Nitrate as N	7.062	7.075	-0.013	554669666	13.6	E
7 Orthophosphate as P	9.288	9.532	-0.244	2019305	0.1283	
6 Sulfate	10.253	10.773	-0.520	2385312767	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

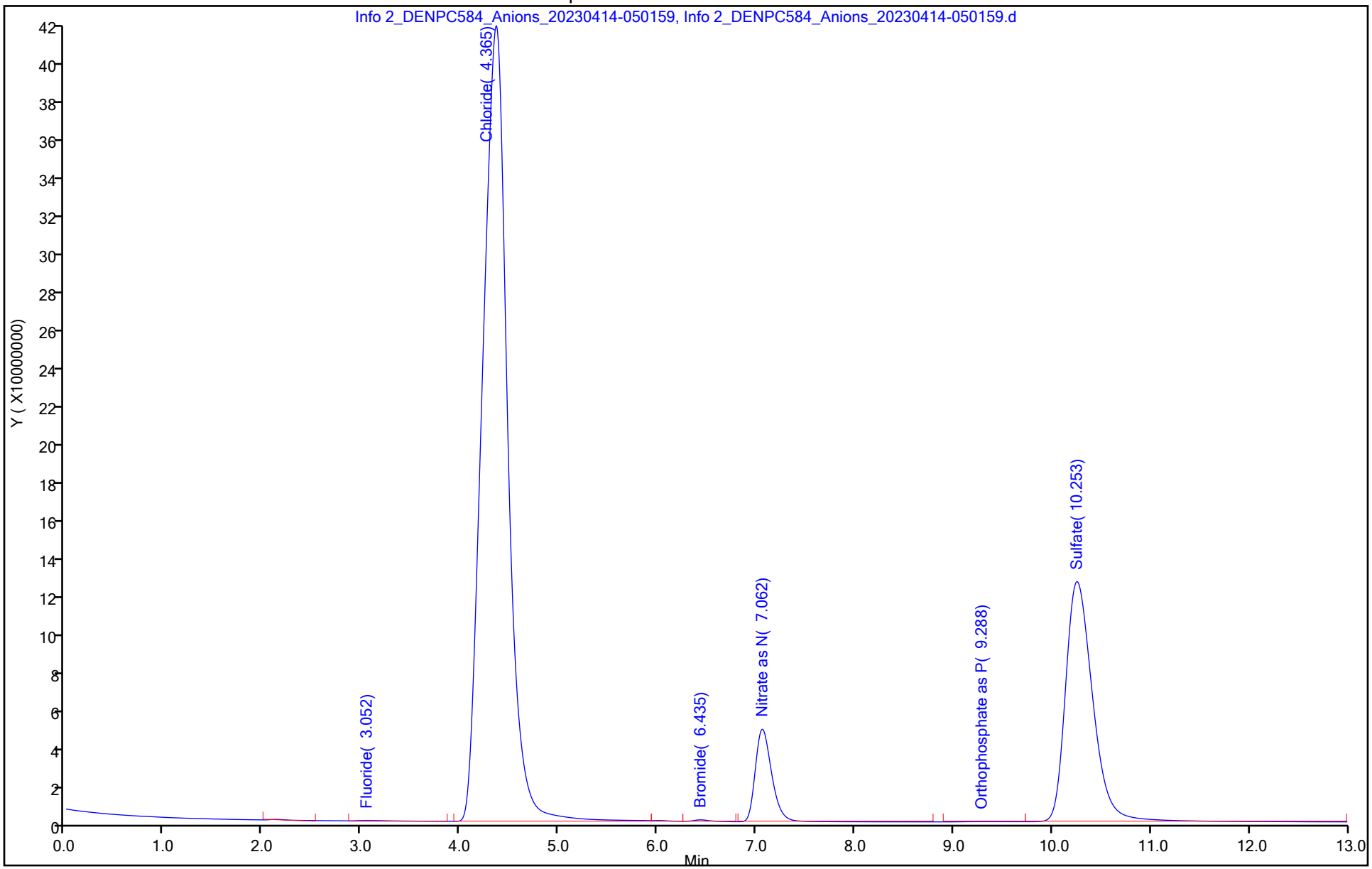
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:30 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-050159.d

Injection Date:	14-Apr-2023 04:46:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-6	Lab Sample ID:	280-174957-6	Worklist Smp#:	48
Client ID:	MW-105S-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-053
Lims ID: 280-174957-C-5
Client ID: MW-105D-20230411
Sample Type: Client
Inject. Date: 14-Apr-2023 05:17:00 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-050
Misc. Info.: 280-0120396-050
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.083	3.132	-0.049	2829737	NC	
2 Chloride	4.362	4.385	-0.023	4706942290	NC	
3 Nitrite as N		5.053			ND	
4 Bromide	6.368	6.353	0.015	4610766	NC	
5 Nitrate as N	7.082	7.075	0.007	26293669	0.7053	
7 Orthophosphate as P	9.427	9.532	-0.105	3343279	0.1391	
6 Sulfate	10.257	10.773	-0.516	951683807	NC	

QC Flag Legend

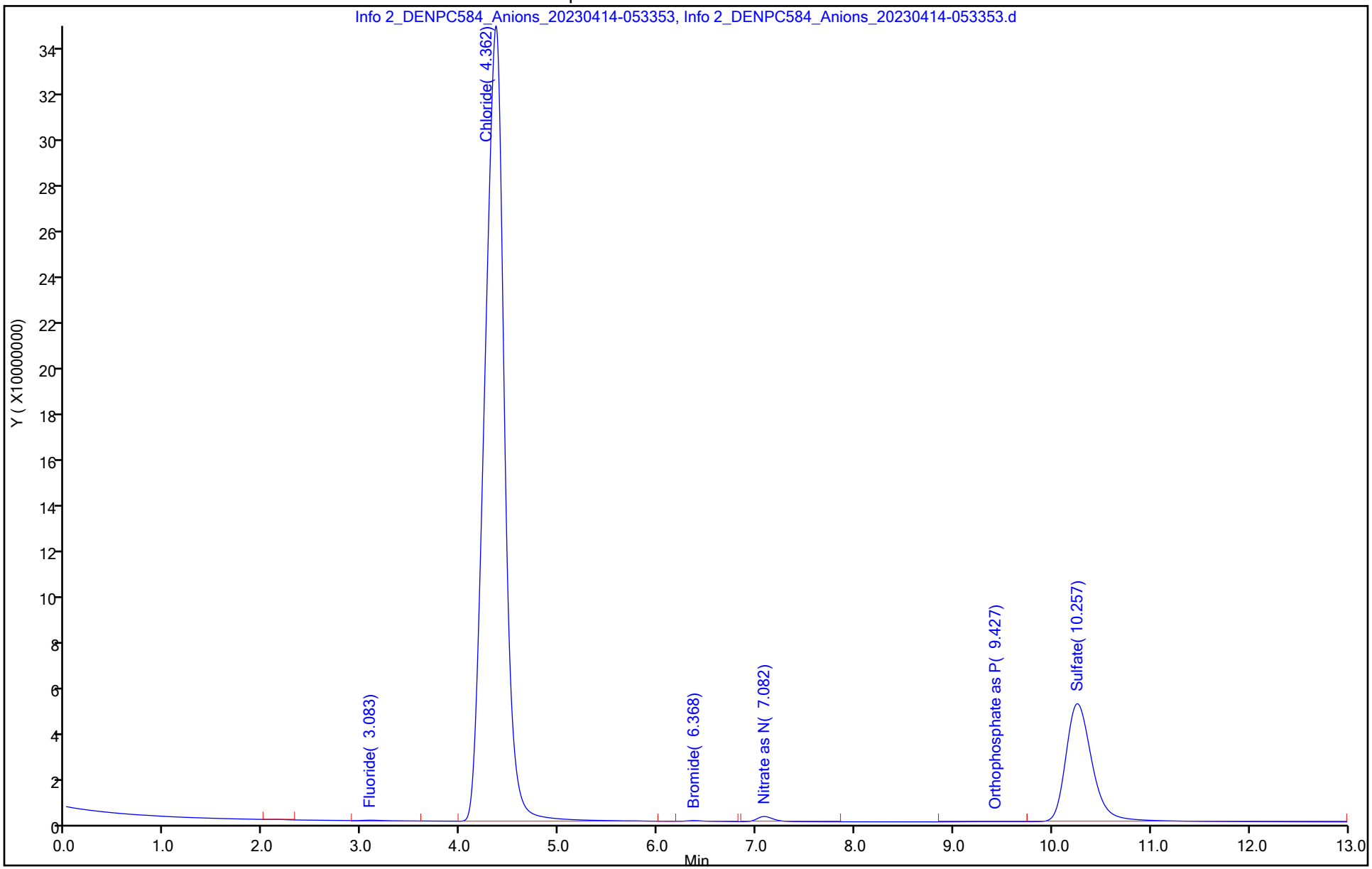
Processing Flags
NC - Not Calibrated

Report Date: 14-Apr-2023 12:42:32 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-053353.d

Injection Date:	14-Apr-2023 05:17:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-5	Lab Sample ID:	280-174957-5	Worklist Smp#:	50
Client ID:	MW-105D-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-054
Lims ID: 280-174957-C-5 DU
Client ID:
Sample Type: DU
Inject. Date: 14-Apr-2023 05:33:00 ALS Bottle#: 0 Worklist Smp#: 51
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-051
Misc. Info.: 280-0120396-051
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.080	3.132	-0.052	2812052		NC	
2 Chloride	4.360	4.385	-0.025	4713232308		NC	
3 Nitrite as N		5.053				ND	
4 Bromide	6.363	6.353	0.010	4360972		NC	
5 Nitrate as N	7.080	7.075	0.005	25985532		0.6977	
7 Orthophosphate as P	9.425	9.532	-0.107	3299144		0.1387	
6 Sulfate	10.253	10.773	-0.520	949757962		NC	

QC Flag Legend

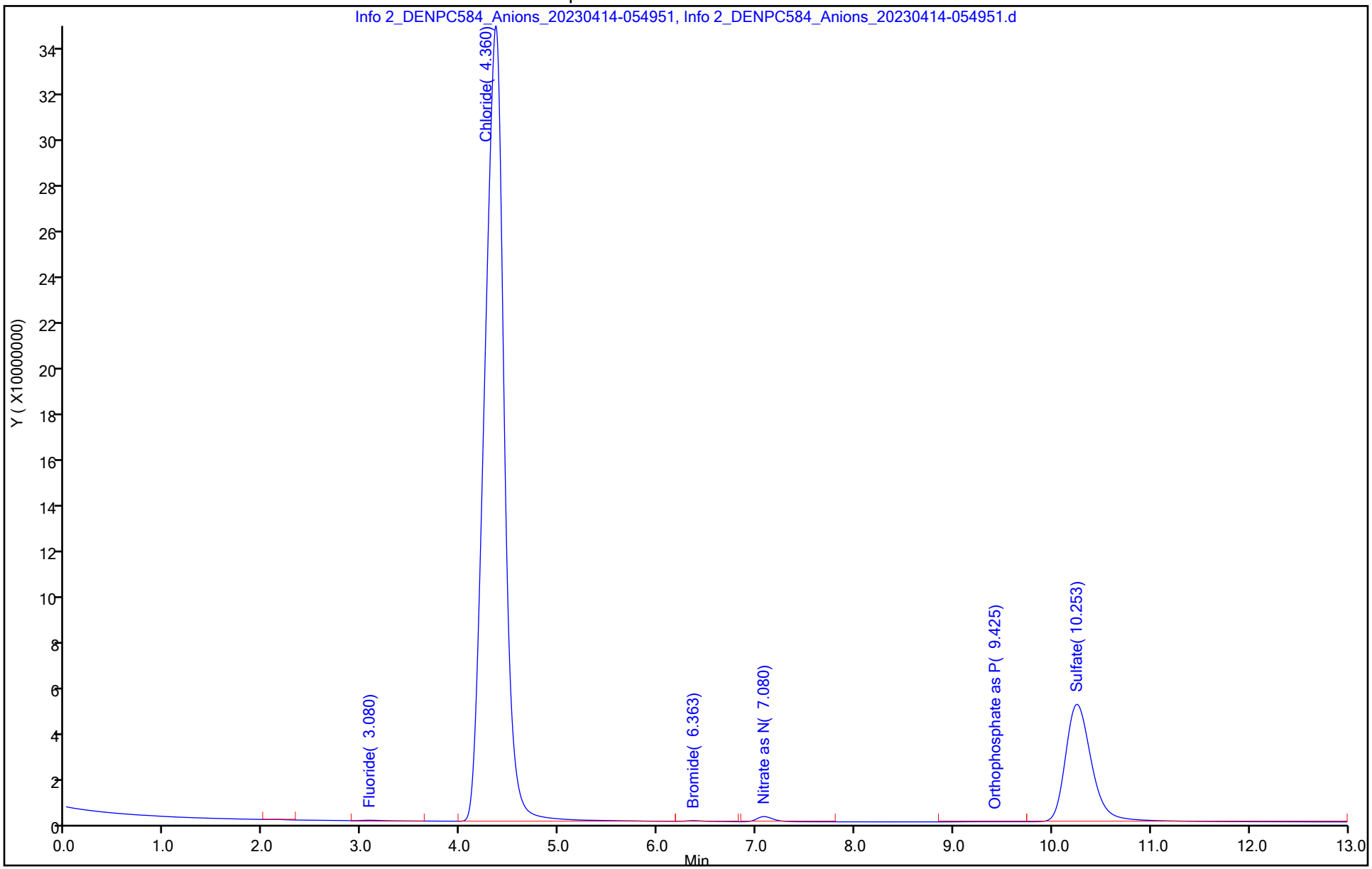
Processing Flags
NC - Not Calibrated

Report Date: 14-Apr-2023 12:42:33 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-054951.d

Injection Date:	14-Apr-2023 05:33:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-5 DU			Worklist Smp#:	51
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-060
Lims ID: 280-174957-C-5 MS
Client ID:
Sample Type: MS
Inject. Date: 14-Apr-2023 05:49:00 ALS Bottle#: 0 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-052
Misc. Info.: 280-0120396-052
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.088	3.132	-0.044	203206718	NC	NC	
2 Chloride	4.375	4.385	-0.010	5513349716	NC	NC	
3 Nitrite as N	4.928	5.053	-0.125	31191154	5.00	0.8321	
4 Bromide	6.337	6.353	-0.016	39204685	NC	NC	
5 Nitrate as N	7.015	7.075	-0.060	252741210	5.00	6.24	E
7 Orthophosphate as P	9.113	9.532	-0.419	302361849	5.00	2.56	
6 Sulfate	10.222	10.773	-0.551	1607037730	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

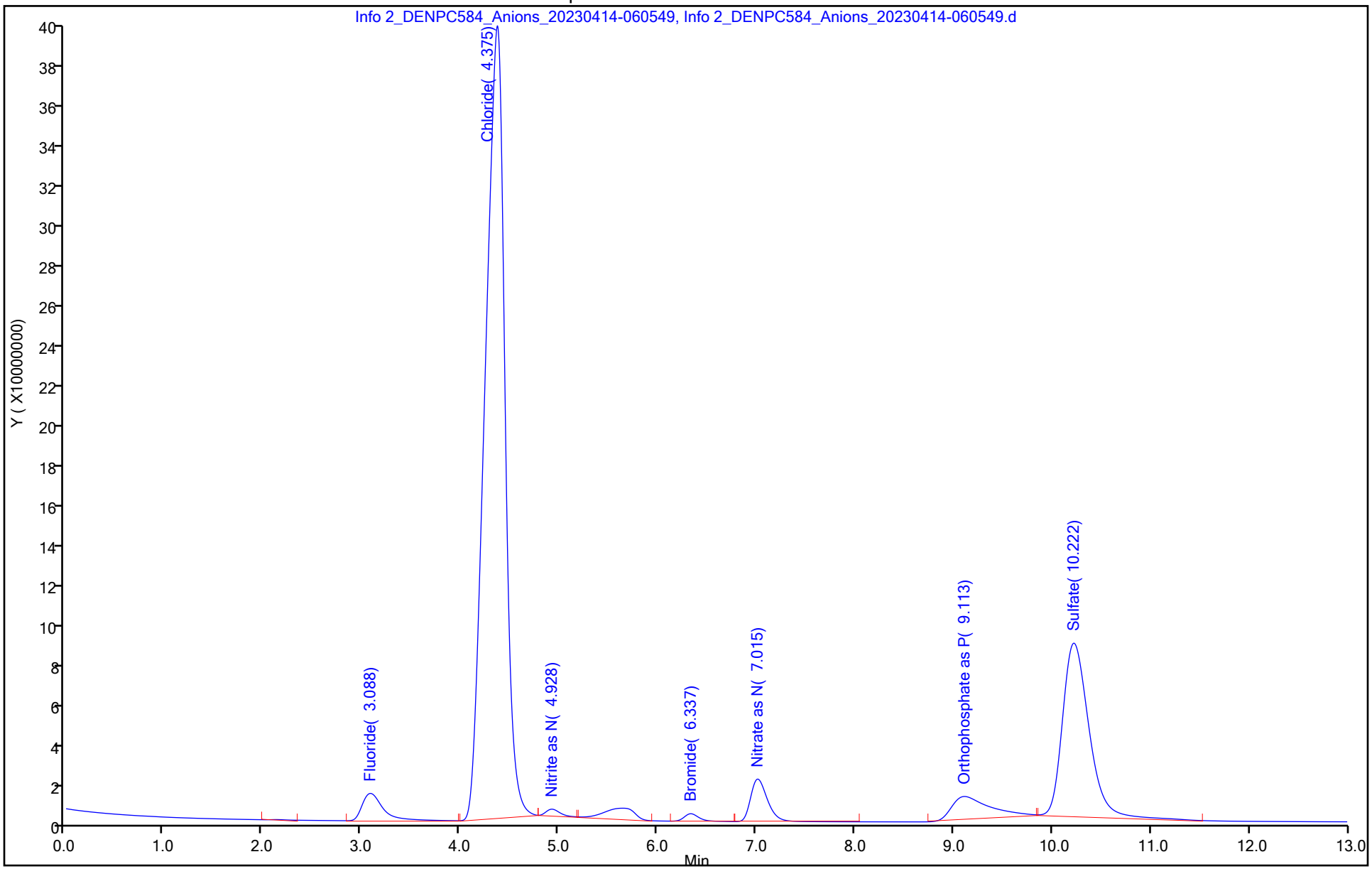
Reagents:

ICMS/MSD WEEK_00814 Amount Added: 0.10 Units: mL

Report Date: 14-Apr-2023 12:42:34 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-060549.d				
Injection Date:	14-Apr-2023 05:49:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-5 MS			Worklist Smp#:	52
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-062
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 06:05:00 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-053
Misc. Info.: 280-0120396-053
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:35 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	77121120	NC	NC	
2 Chloride	4.265	4.385	-0.120	831386823	NC	NC	
3 Nitrite as N	4.940	5.053	-0.113	88922203	2.50	2.30	
4 Bromide	6.122	6.353	-0.231	14805101	NC	NC	
5 Nitrate as N	6.867	7.075	-0.208	95112046	2.50	2.39	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.117	10.773	-0.656	604958092	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

Reagents:

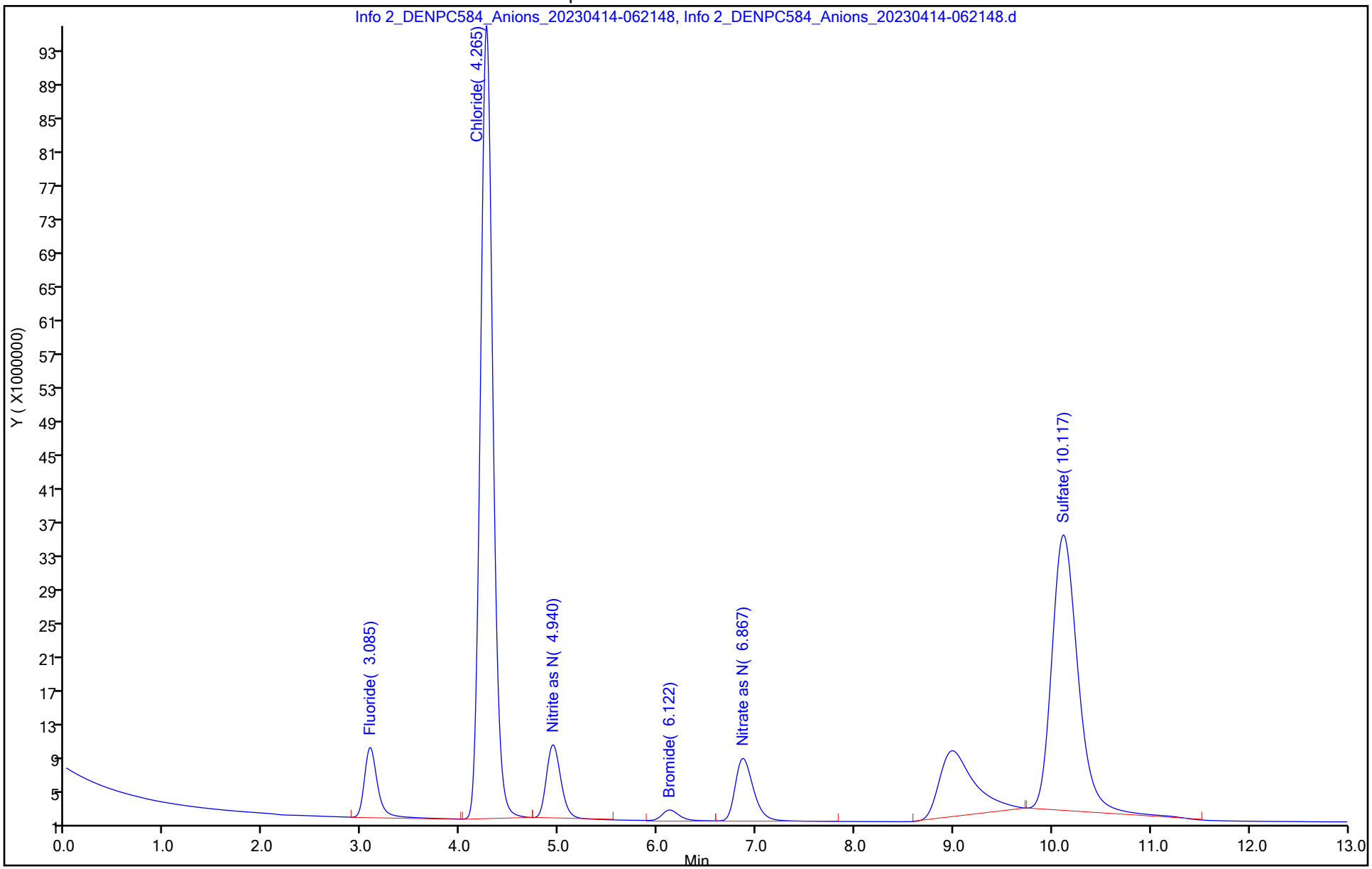
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-062148.d

Injection Date:	14-Apr-2023 06:05:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	53
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-063
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 06:21:00 ALS Bottle#: 0 Worklist Smp#: 54
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-054
Misc. Info.: 280-0120396-054
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:35 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:49:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.137	9.532	-0.395	10396778		0.1962	
6 Sulfate	10.258	10.773	-0.515	744037		NC	M

QC Flag Legend

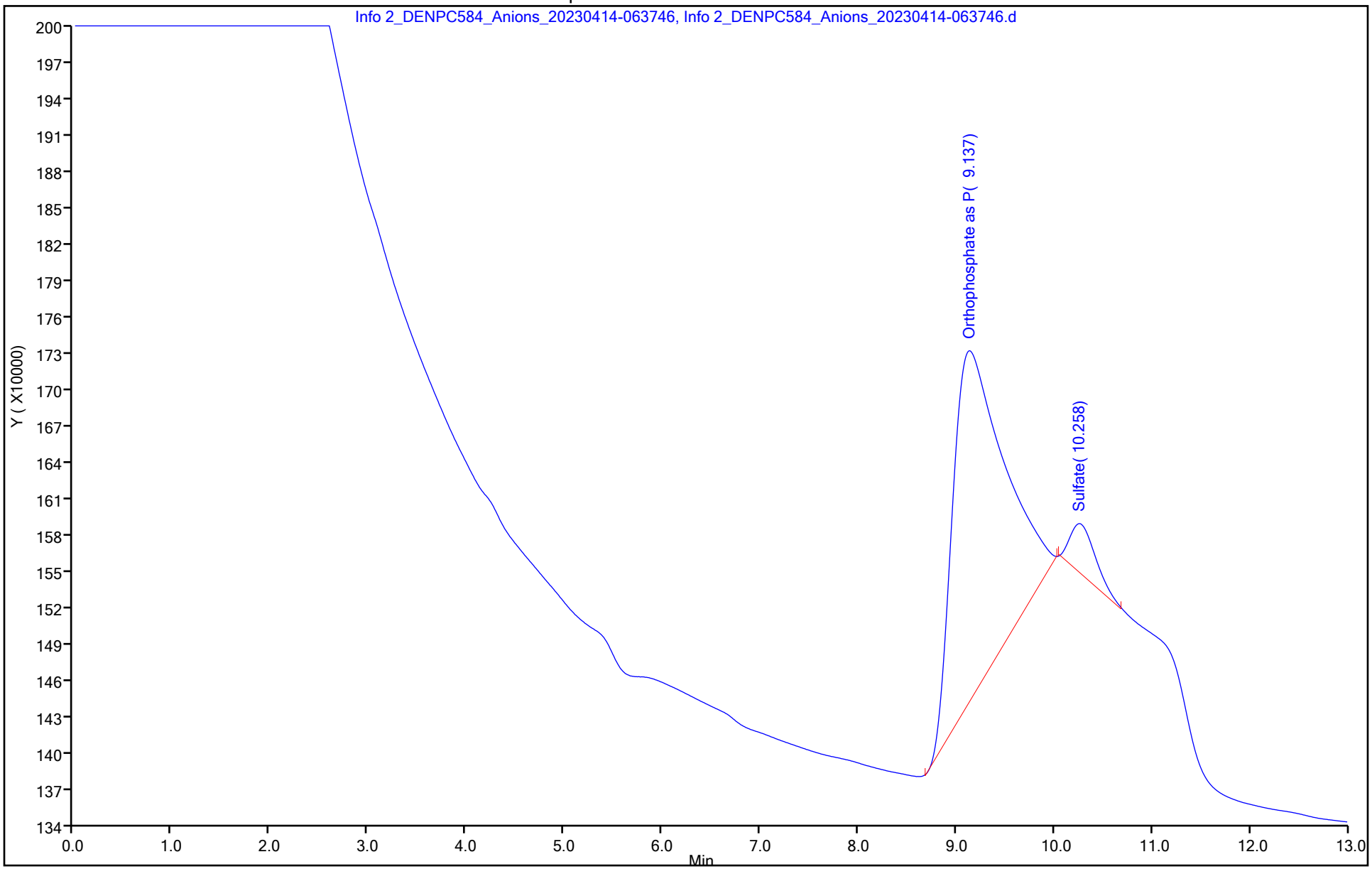
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-063746.d

Injection Date:	14-Apr-2023 06:21:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	54
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-065
Lims ID: 280-174957-C-5 MSD
Client ID:
Sample Type: MSD
Inject. Date: 14-Apr-2023 06:37:00 ALS Bottle#: 0 Worklist Smp#: 55
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-055
Misc. Info.: 280-0120396-055
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:35 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.087	3.132	-0.045	204698414	NC	NC	
2 Chloride	4.372	4.385	-0.013	5505994343	NC	NC	
3 Nitrite as N	4.932	5.053	-0.121	70944630	5.00	1.84	
4 Bromide	6.333	6.353	-0.020	38391735	NC	NC	
5 Nitrate as N	7.000	7.075	-0.075	250440626	5.00	6.19	E
7 Orthophosphate as P	9.123	9.532	-0.409	315560205	5.00	2.67	
6 Sulfate	10.235	10.773	-0.538	1601875350	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

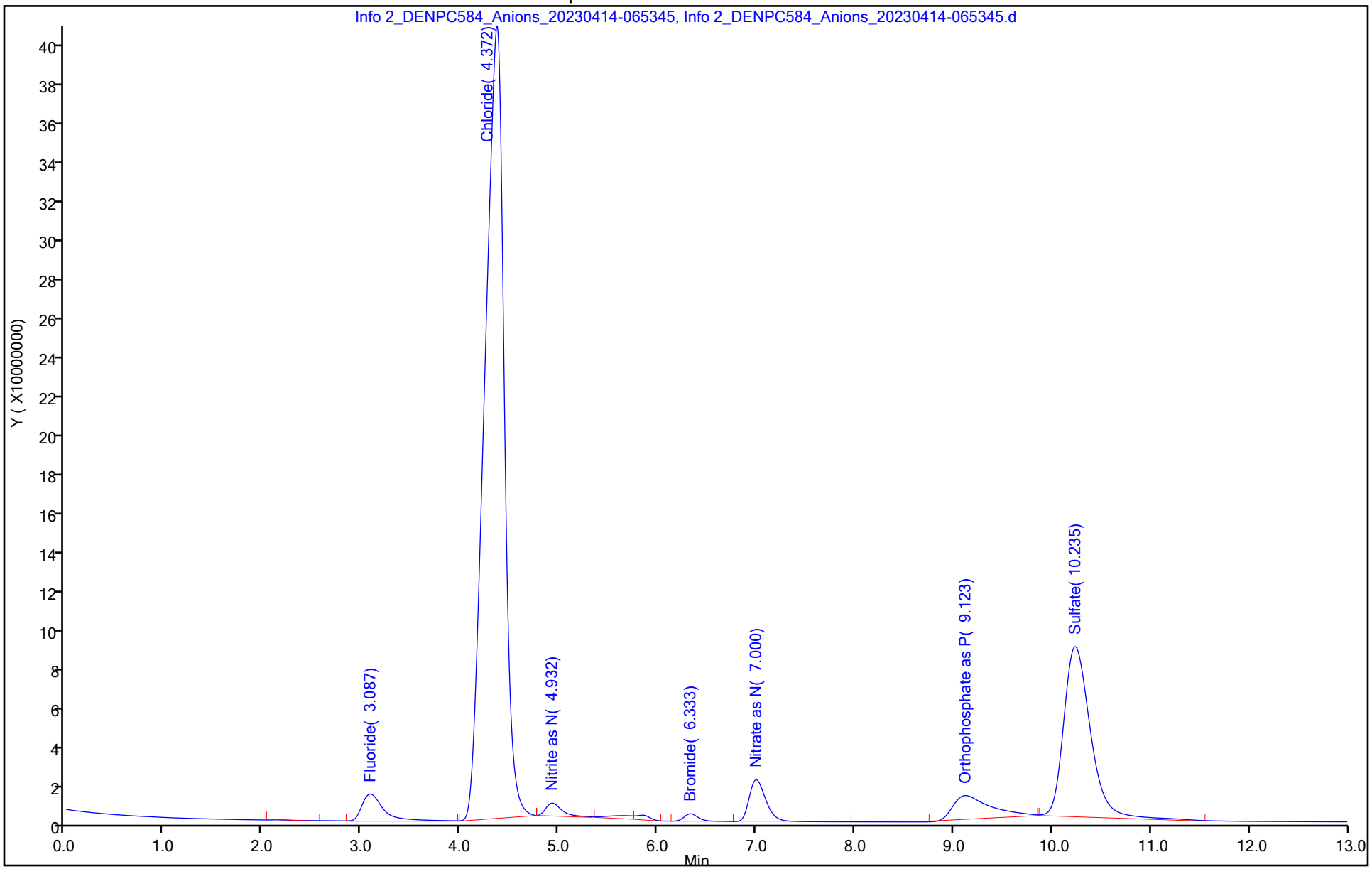
Reagents:

ICMS/MSD WEEK_00814 Amount Added: 0.10 Units: mL

Report Date: 14-Apr-2023 12:42:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-065345.d				
Injection Date:	14-Apr-2023 06:37:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-5 MSD			Worklist Smp#:	55
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-074
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 07:25:00 ALS Bottle#: 0 Worklist Smp#: 58
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-058
Misc. Info.: 280-0120396-058
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:38 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.090	3.132	-0.042	76697646	NC	NC	
2 Chloride	4.267	4.385	-0.118	831674522	NC	NC	
3 Nitrite as N	4.938	5.053	-0.115	89131171	2.50	2.30	
4 Bromide	6.117	6.353	-0.236	14763179	NC	NC	
5 Nitrate as N	6.855	7.075	-0.220	96083191	2.50	2.41	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.138	10.773	-0.635	602869339	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

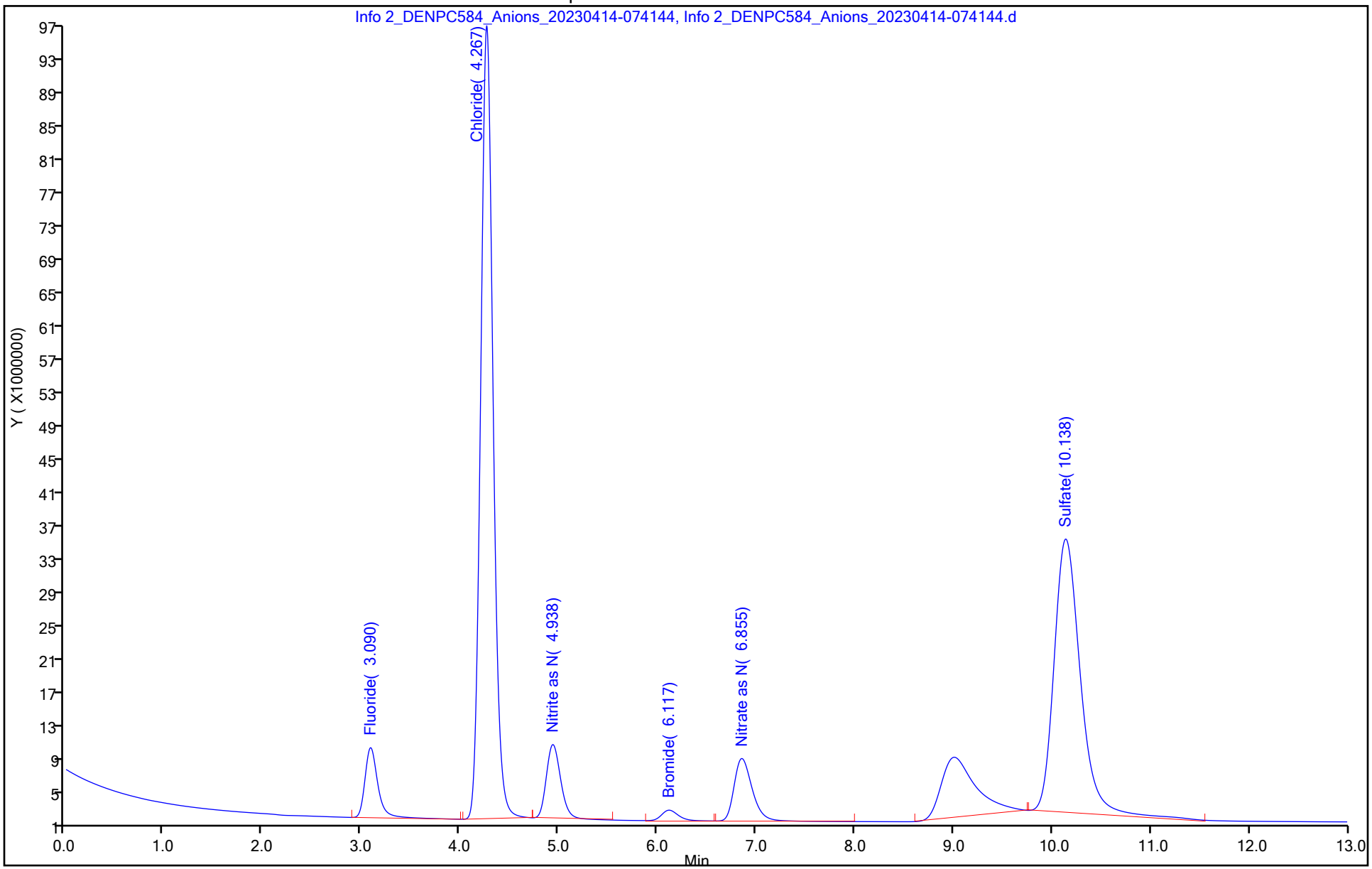
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-074144.d				
Injection Date:	14-Apr-2023 07:25:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	58
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-075
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 07:41:00 ALS Bottle#: 0 Worklist Smp#: 59
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-059
Misc. Info.: 280-0120396-059
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 12:42:38 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:55:32

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.157	9.532	-0.375	8360854		0.1797	
6 Sulfate	10.290	10.773	-0.483	787750		NC	M

QC Flag Legend

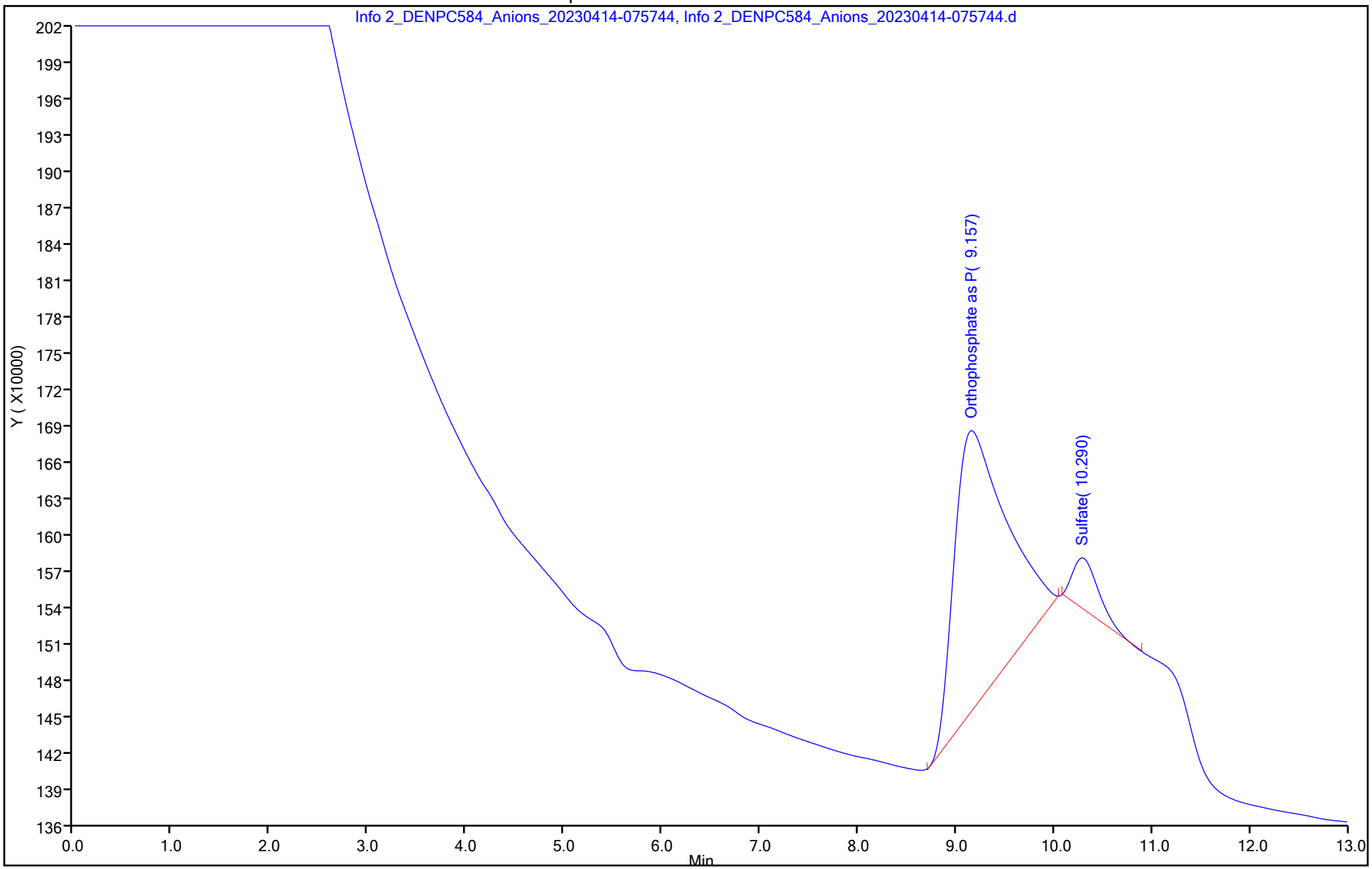
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-075744.d

Injection Date:	14-Apr-2023 07:41:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	59
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions		



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IC Instrument Information

WL: 120396 **Inst ID:** DU3 **Analysis Date:** 4/13/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	174966	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174957	5	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174967	10	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174962	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174884	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
957	5	F Cl NO2 Br NO3 PO4 SO4	2x	test
962	1	F Cl NO2 Br NO3 PO4 SO4	5x	test
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Instrument: WC_IonChrom13 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 02-Mar-2023 14:51:48
No.Compounds:7
Sublist: chrom-Anions-IC13*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-15.917 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17205
Inj Date: 28-Feb-2023 17:05:00 Worklist: 119025 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17365
Inj Date: 28-Feb-2023 17:21:00 Worklist: 119025 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17525
Inj Date: 28-Feb-2023 17:36:00 Worklist: 119025 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18085
Inj Date: 28-Feb-2023 17:52:00 Worklist: 119025 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18244
Inj Date: 28-Feb-2023 18:08:00 Worklist: 119025 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18404
Inj Date: 28-Feb-2023 18:24:00 Worklist: 119025 Sample#: 6

Start Cal Date: 28-Feb-2023 17:05:00 End Cal Date: 28-Feb-2023 18:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride				Signal: 1					
Error: raw_COD									
25550290	28404102	31518266	34887786	37372618		-3204369			0.998
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			37058128		
5110058	14202051	31518266	87219464	186863088					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
2 Chloride				Signal: 1					
12627594	13950813	14713682	16496659	16735745	16806087	-2846645			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		16768440		
M6313797	17438516	36784204	494899763	1004144688	1680608715				
119025(1)	119025(2)	119025(3)	119025(4)	119025(5)	119025(6)				
4 Bromide				Signal: 1					
5371145	5654930	5831694	6215221	6482146		-304945			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			6435532		
M1074229	M2827465	5831694	15538053	32410730					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
6 Sulfate				Signal: 1					
Error: raw_COD									
14914790	11898737	10945896	11802968	12038010	12129031	482428			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		12026120		
M7457395	M14873421	M27364741	354089035	722280611	1212903103				
119025(1)	119025(2)	119025(3)	119025(4)	119025(5)	119025(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m
Instrument: WC_IonChrom13 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 02-Mar-2023 14:51:48
No.Compounds:7
Sublist: chrom-Anions-IC13*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-15.917 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17205
Inj Date: 28-Feb-2023 17:05:00 Worklist: 119025 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17365
Inj Date: 28-Feb-2023 17:21:00 Worklist: 119025 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-17525
Inj Date: 28-Feb-2023 17:36:00 Worklist: 119025 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18085
Inj Date: 28-Feb-2023 17:52:00 Worklist: 119025 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18244
Inj Date: 28-Feb-2023 18:08:00 Worklist: 119025 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18404
Inj Date: 28-Feb-2023 18:24:00 Worklist: 119025 Sample#: 6

Start Cal Date: 28-Feb-2023 17:05:00 End Cal Date: 28-Feb-2023 18:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
33023980	35193560	36848085	39004007	39206527		-1604230			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			39414506		
6604796	17596780	36848085	97510017	196032634					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
31353555	34242202	36561770	39458955	40961308		-2537359			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			40879816		
M6270711	17121101	36561770	98647387	204806542					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					
7 Orthophosphate as P				Signal: 1					
54426850	82954388	119001523	126093582	116101016		-13832297			0.995
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			123507022		
10885370	41477194	119001523	315233954	580505078					
119025(2)	119025(3)	119025(4)	119025(5)	119025(6)					

Report Date: 02-Mar-2023 14:52:23 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	28-Feb-2023 18:40:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-007				
Misc. Info.:	280-0119025-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions				
Last Update:	02-Mar-2023 14:51:48	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: LVW8		Date:	02-Mar-2023 14:52:22		
Start Cal Date:	28-Feb-2023 17:05:00				
End Cal Date:	28-Feb-2023 18:24:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	1.83	-8.4	10.0	91.6	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	2.32	* 15.9	10.0	115.9	

Report Date: 02-Mar-2023 14:52:38 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	28-Feb-2023 18:40:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0119025-007				
Misc. Info.:	280-0119025-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Anions-IC13.m				
Limit Group:	Wet - Anions 28D				
Last Update:	02-Mar-2023 14:52:37	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-18				
Column 1 :			Det: 0005		
Process Host:	CTX1676				
First Level Reviewer: LVW8		Date:	02-Mar-2023 14:52:37		
Start Cal Date:	28-Feb-2023 17:05:00				
End Cal Date:	28-Feb-2023 18:24:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.82	-8.8	10.0	91.2	
2 Chloride	80.0	78.2	-2.3	10.0	97.7	
4 Bromide	2.00	1.96	-2.1	10.0	97.9	
6 Sulfate	80.0	79.3	-0.9	10.0	99.1	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-155
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Apr-2023 15:39:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-001
Misc. Info.: 280-0120396-001
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.083	3.132	-0.049	79192286	2.50	2.22	
2 Chloride	4.253	4.385	-0.132	820347730	50.0	49.1	
3 Nitrite as N	4.918	5.053	-0.135	88419997	NC	NC	
4 Bromide	6.108	6.353	-0.245	14497645	2.50	2.30	
5 Nitrate as N	6.832	7.075	-0.243	94445332	NC	NC	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.115	10.773	-0.658	592956758	50.0	49.3	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

Reagents:

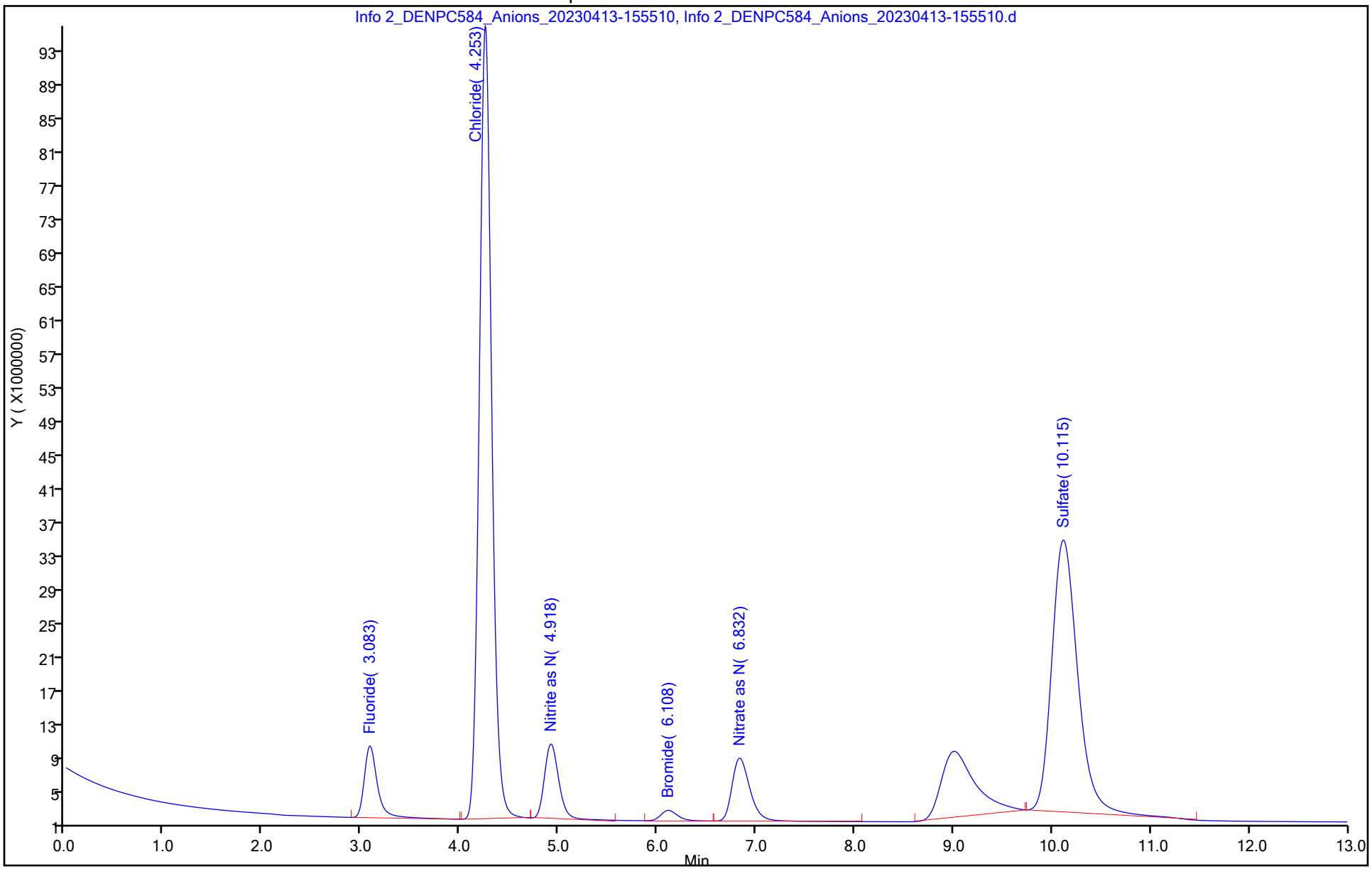
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:41:56 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-155510.d

Injection Date:	13-Apr-2023 15:39:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-161
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 13-Apr-2023 15:55:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-002
Misc. Info.: 280-0120396-002
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:46:23

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.163	9.532	-0.369	6426470		NC	
6 Sulfate	10.267	10.773	-0.506	1111412		0.0523	M

QC Flag Legend

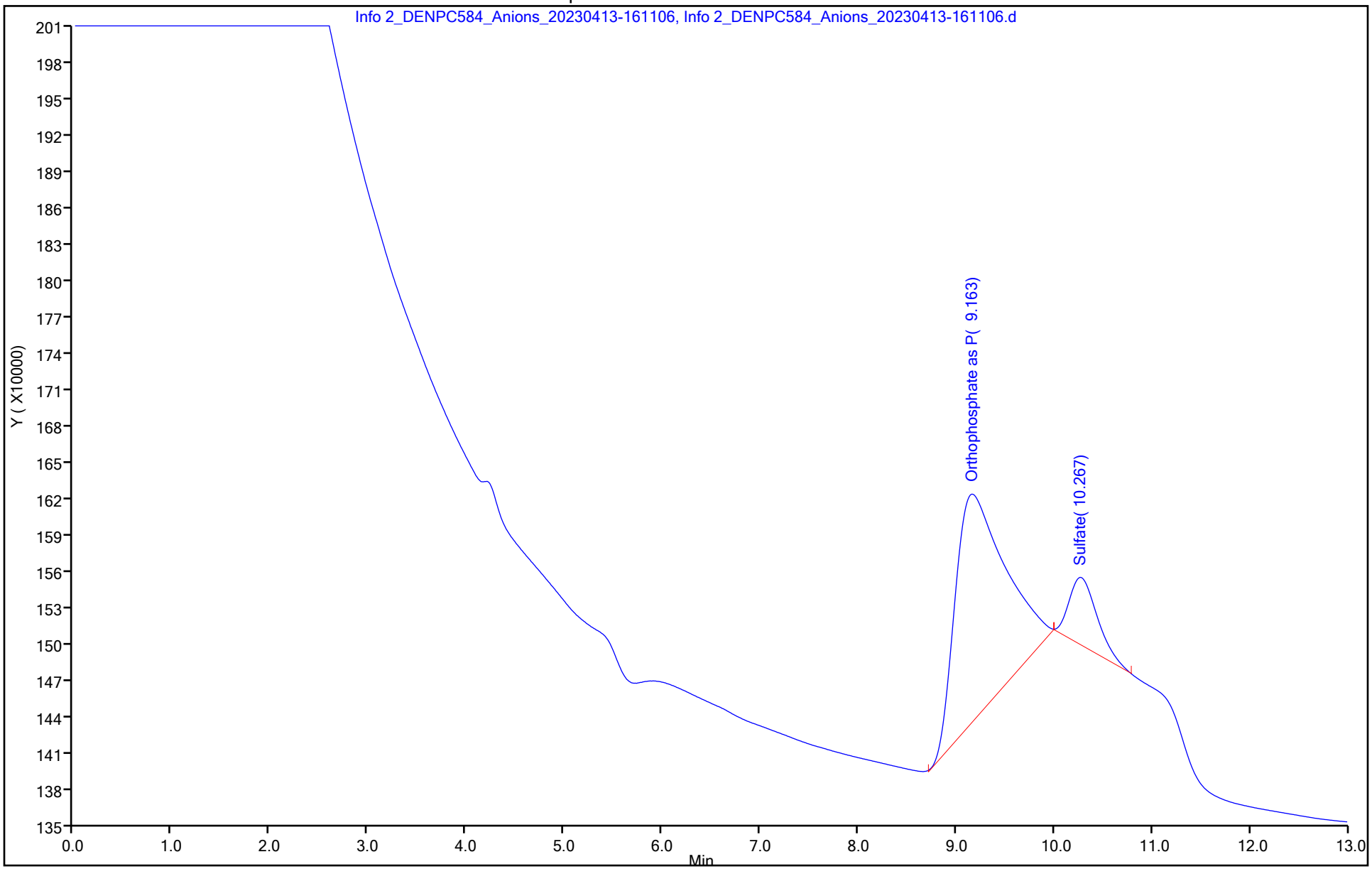
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:41:57 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-161106.d

Injection Date:	13-Apr-2023 15:55:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-161

Injection Date: 13-Apr-2023 15:55:00 Instrument ID: WC_IonChrom13

Lims ID: CCB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

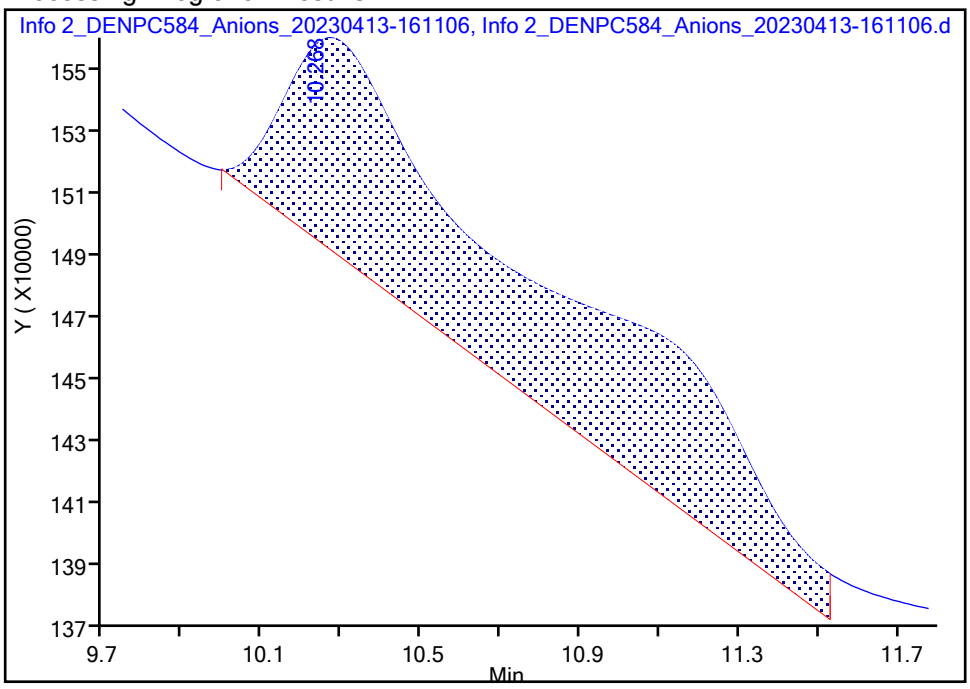
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

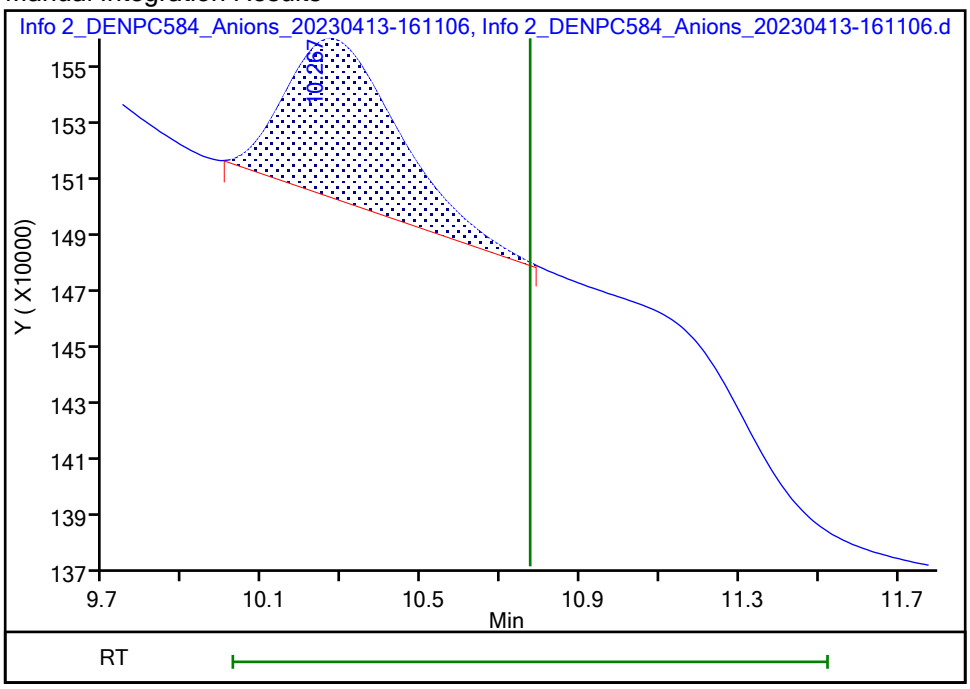
Processing Integration Results

RT: 10.27
Area: 3689768
Amount: 0.266698
Amount Units: ug/ml



Manual Integration Results

RT: 10.27
Area: 1111412
Amount: 0.052302
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 10:46:20

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-162
Lims ID: MRL
Client ID:
Sample Type: MRL
Inject. Date: 13-Apr-2023 16:11:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-003
Misc. Info.: 280-0120396-003
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 13-Apr-2023 17:38:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	6199702	0.2500	0.2538	
2 Chloride	4.243	4.385	-0.142	36552311	2.50	2.35	
3 Nitrite as N	4.935	5.053	-0.118	8159370	NC	NC	
4 Bromide	6.143	6.353	-0.210	1338706	0.2500	0.2554	
5 Nitrate as N	6.898	7.075	-0.177	7522792	NC	NC	
7 Orthophosphate as P	9.097	9.532	-0.435	14030086	NC	NC	
6 Sulfate	10.163	10.773	-0.610	25141346	2.50	2.05	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

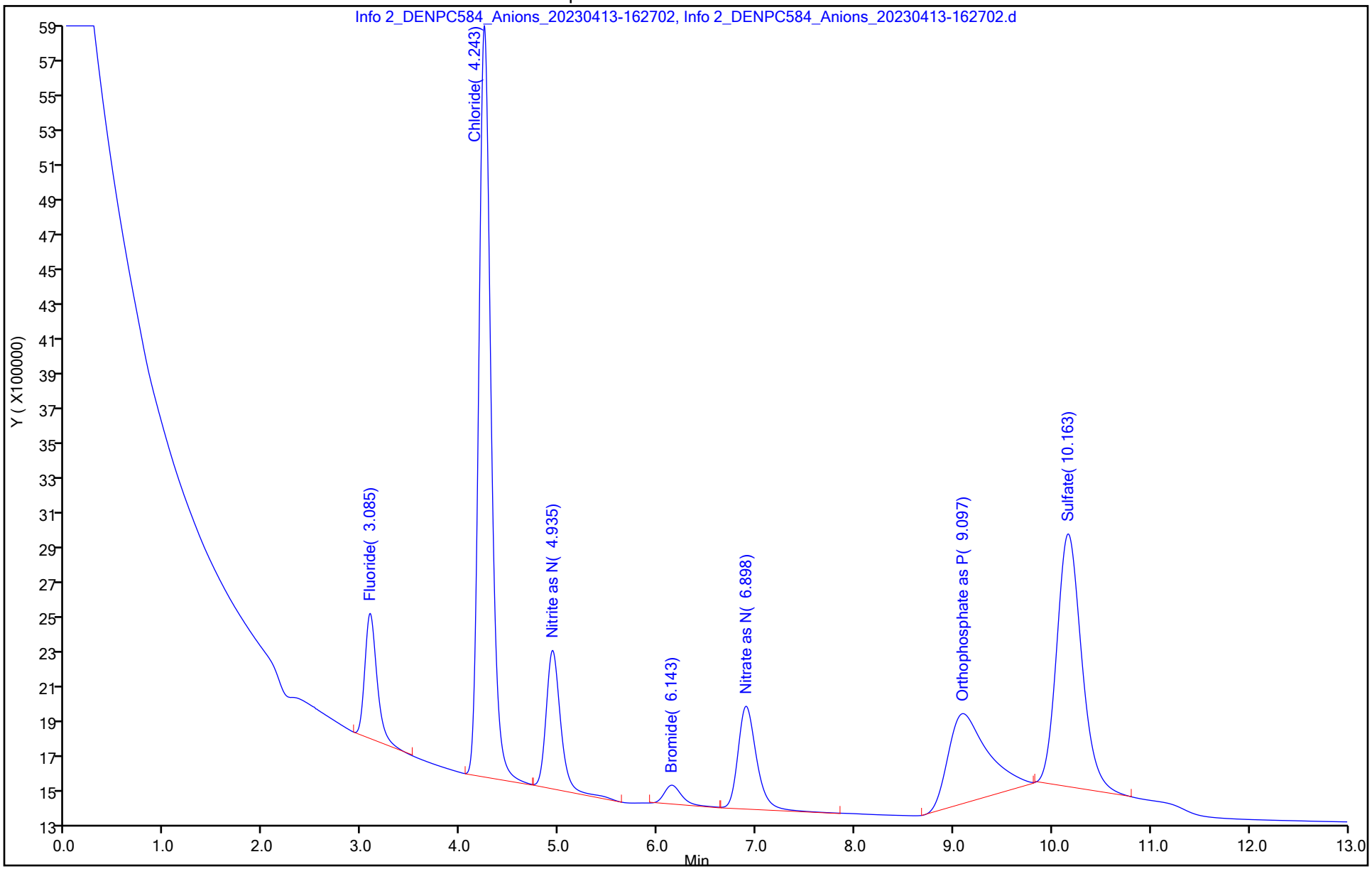
IC Cal low_00703 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL

Report Date: 14-Apr-2023 12:41:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-162702.d

Injection Date:	13-Apr-2023 16:11:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	MRL			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-162

Injection Date: 13-Apr-2023 16:11:00 Instrument ID: WC_IonChrom13

Lims ID: MRL

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

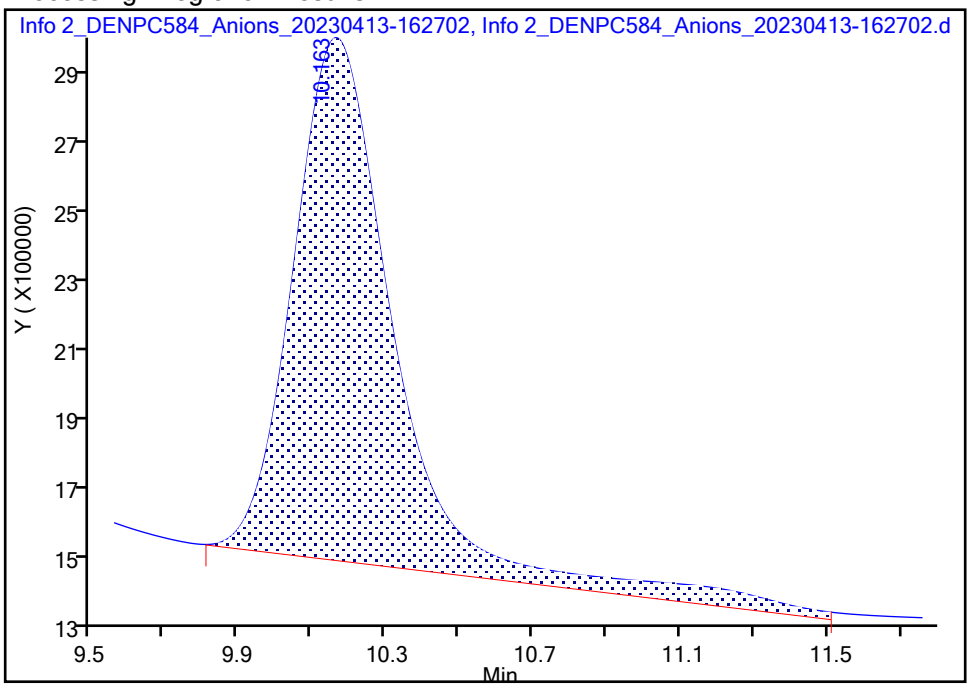
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

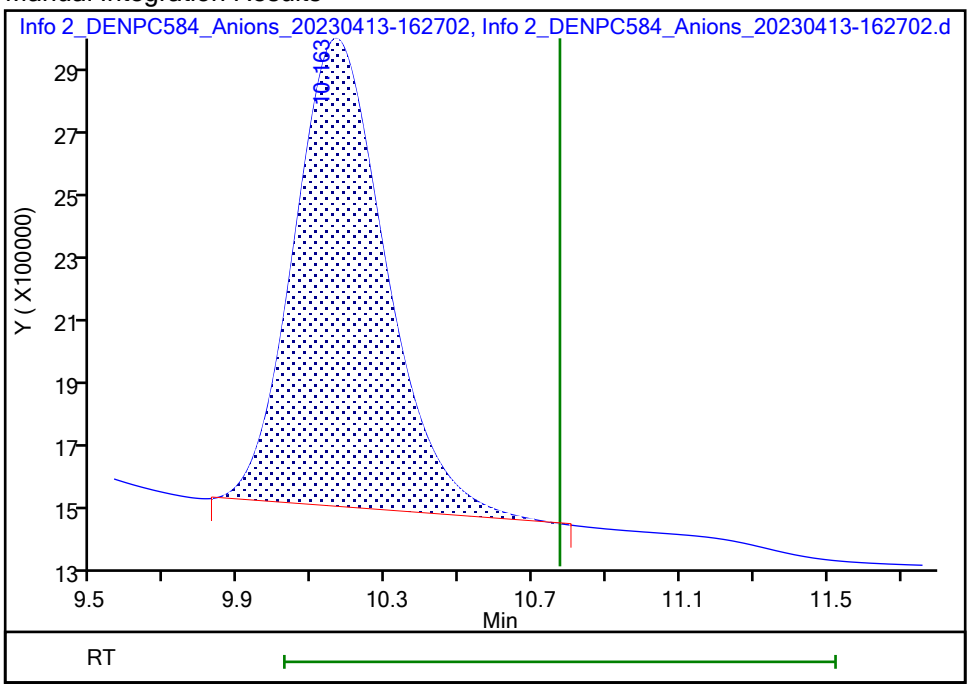
Processing Integration Results

RT: 10.16
Area: 28385378
Amount: 2.320196
Amount Units: ug/ml



Manual Integration Results

RT: 10.16
Area: 25141346
Amount: 2.050447
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 10:46:29

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-164
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 13-Apr-2023 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-004
Misc. Info.: 280-0120396-004
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.088	3.132	-0.044	80060853	2.50	2.25	
2 Chloride	4.260	4.385	-0.125	815986162	50.0	48.8	
3 Nitrite as N	4.927	5.053	-0.126	88123036	NC	NC	
4 Bromide	6.132	6.353	-0.221	14432270	2.50	2.29	
5 Nitrate as N	6.853	7.075	-0.222	93441634	NC	NC	
7 Orthophosphate as P	9.033	9.532	-0.499	190867786	NC	NC	
6 Sulfate	10.143	10.773	-0.630	591168455	50.0	49.1	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

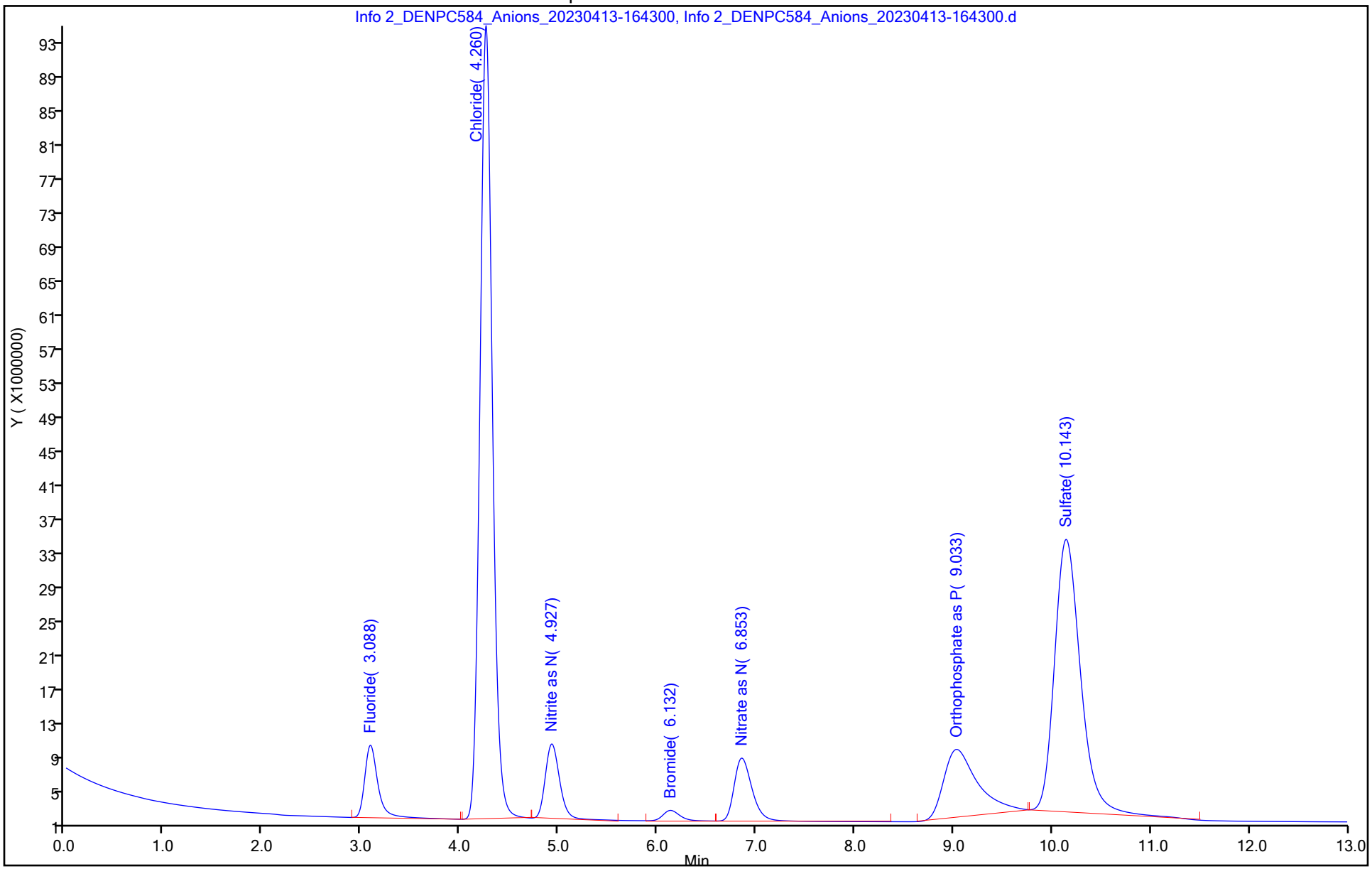
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:41:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-164300.d

Injection Date:	13-Apr-2023 16:27:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-173
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 13-Apr-2023 17:18:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-005
Misc. Info.: 280-0120396-005
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.097	3.132	-0.035	80808185	2.50	2.27	
2 Chloride	4.267	4.385	-0.118	818775152	50.0	49.0	
3 Nitrite as N	4.933	5.053	-0.120	87996817	NC	NC	
4 Bromide	6.142	6.353	-0.211	14375721	2.50	2.28	
5 Nitrate as N	6.862	7.075	-0.213	93832266	NC	NC	
7 Orthophosphate as P	9.033	9.532	-0.499	187994855	NC	NC	
6 Sulfate	10.142	10.773	-0.631	592252712	50.0	49.2	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

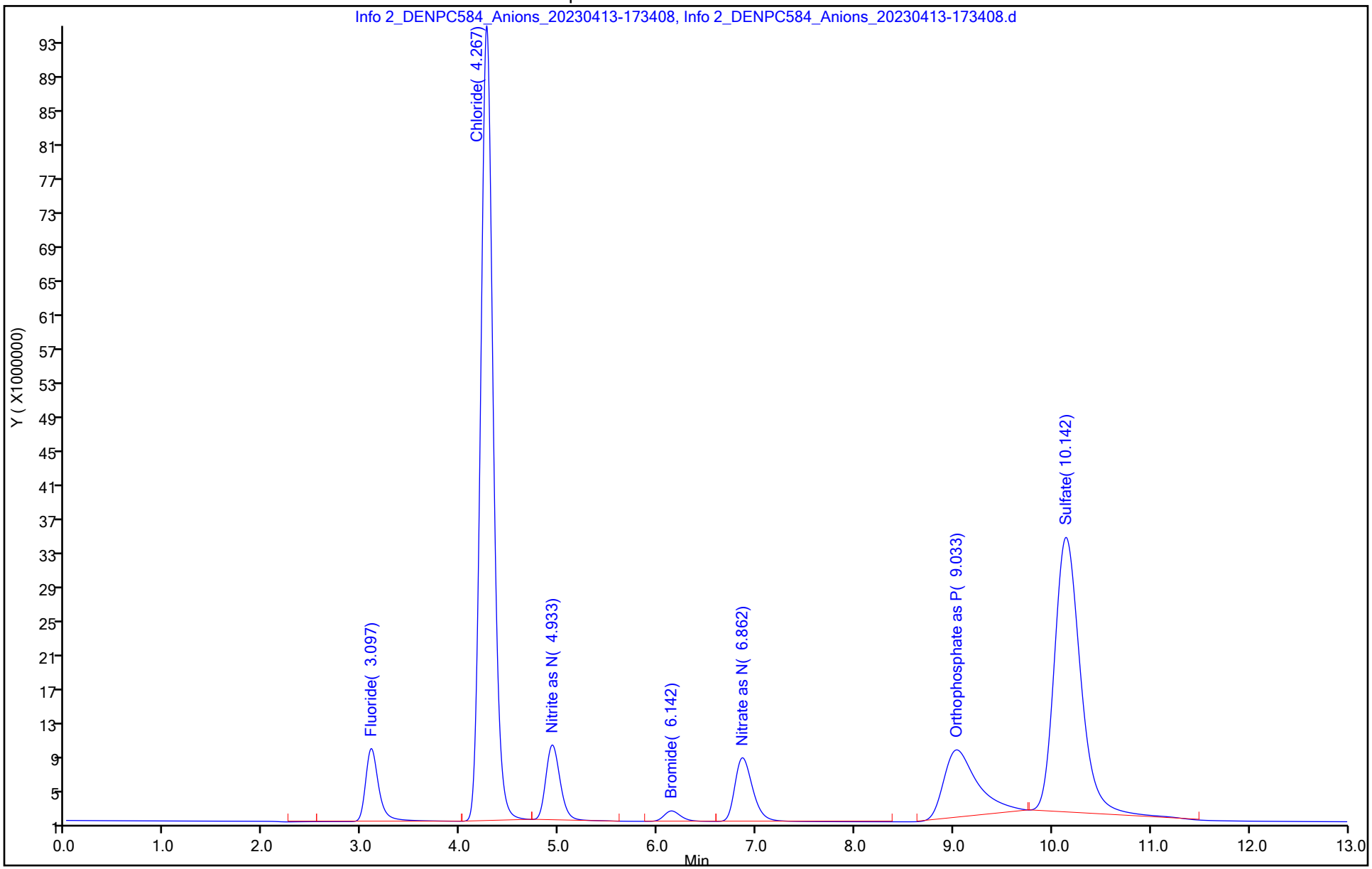
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:00 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-173408.d

Injection Date:	13-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-175
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 13-Apr-2023 17:34:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-006
Misc. Info.: 280-0120396-006
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:46:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.192	9.532	-0.340	5830951		NC	
6 Sulfate	10.305	10.773	-0.468	1323247		0.0699	M

QC Flag Legend

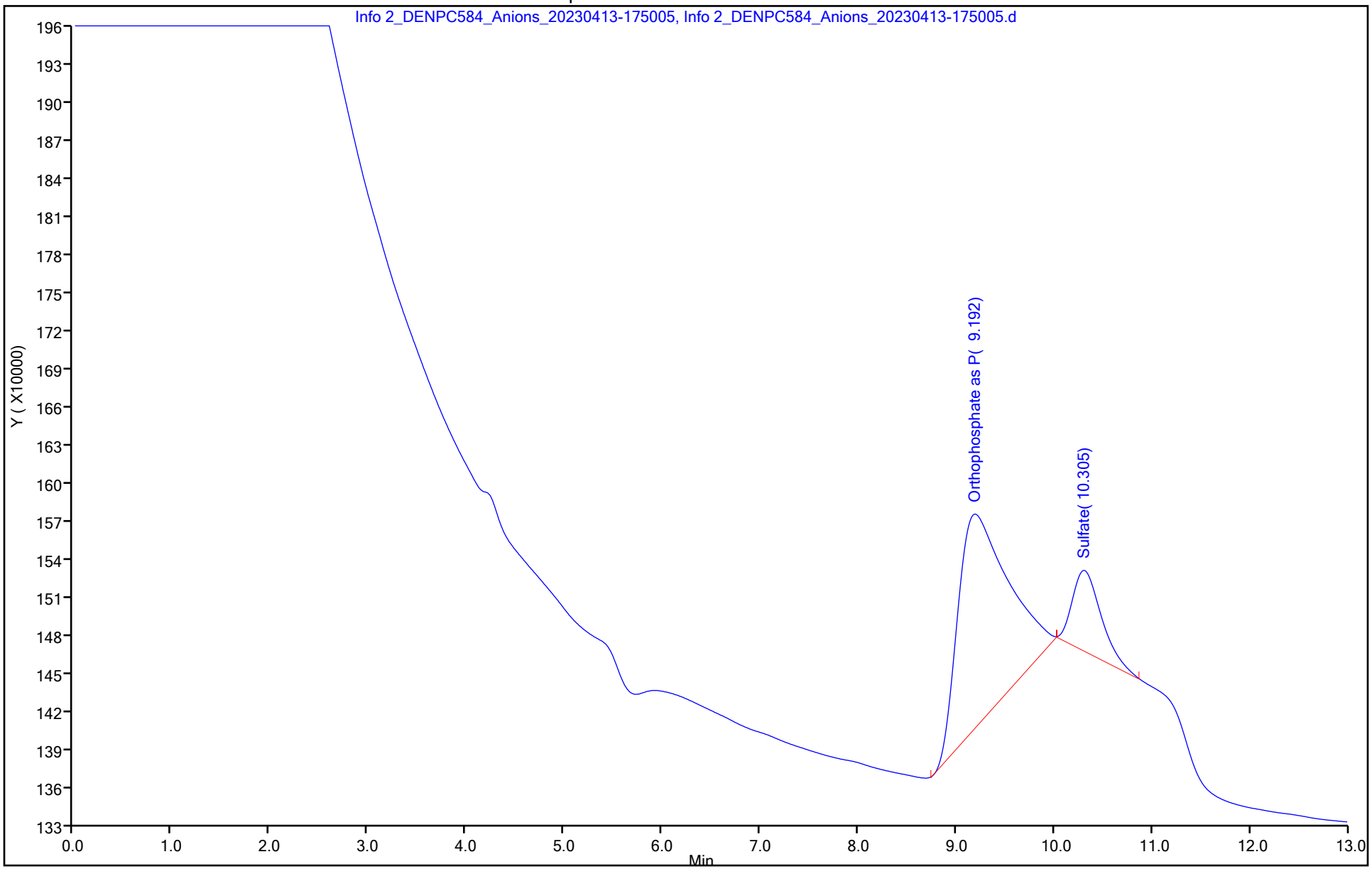
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:00 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-175005.d

Injection Date:	13-Apr-2023 17:34:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-175

Injection Date: 13-Apr-2023 17:34:00 Instrument ID: WC_IonChrom13

Lims ID: MB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6

Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

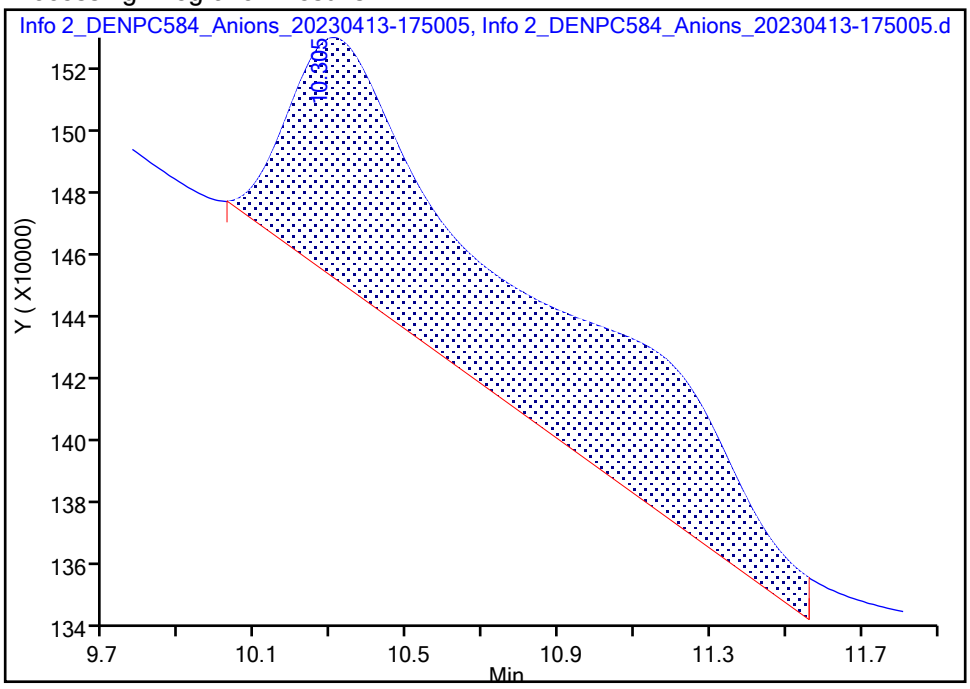
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

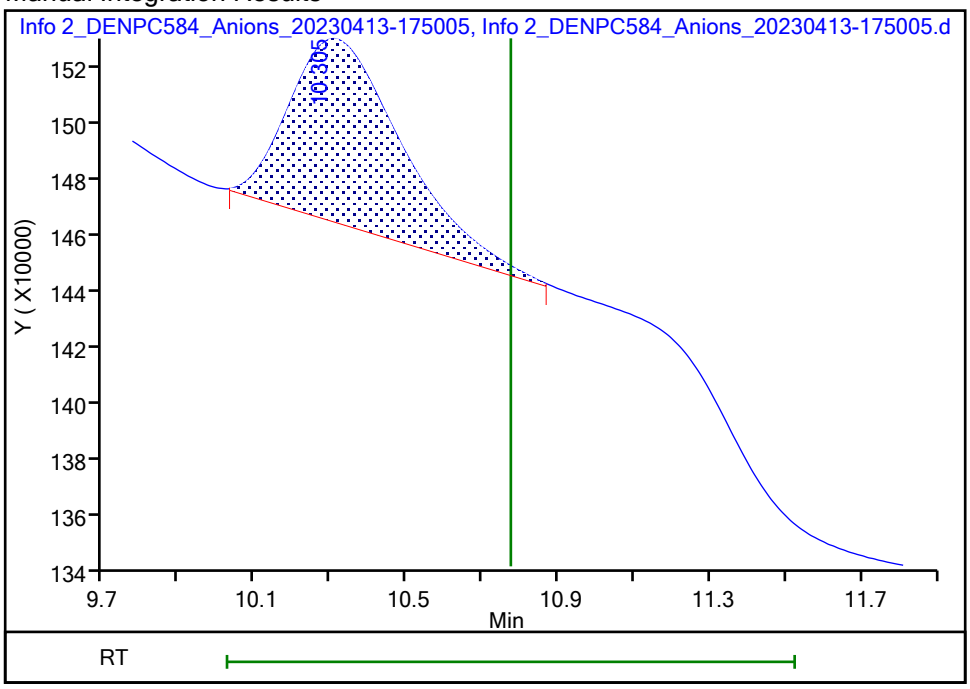
Processing Integration Results

RT: 10.31
Area: 3851419
Amount: 0.280140
Amount Units: ug/ml



Manual Integration Results

RT: 10.31
Area: 1323247
Amount: 0.069916
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 10:45:50

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-182
Lims ID: 280-174957-C-2
Client ID: MW-124-20230412
Sample Type: Client
Inject. Date: 13-Apr-2023 18:06:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-008
Misc. Info.: 280-0120396-008
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.108	3.132	-0.024	5264076	0.2285	
2 Chloride	4.375	4.385	-0.010	5439710617	324.6	E
3 Nitrite as N		5.053			ND	
4 Bromide	6.380	6.353	0.027	8827563	1.42	
5 Nitrate as N	7.028	7.075	-0.047	242563874	NC	
7 Orthophosphate as P	9.333	9.532	-0.199	2927743	NC	
6 Sulfate	10.273	10.773	-0.500	1471224035	122.3	E

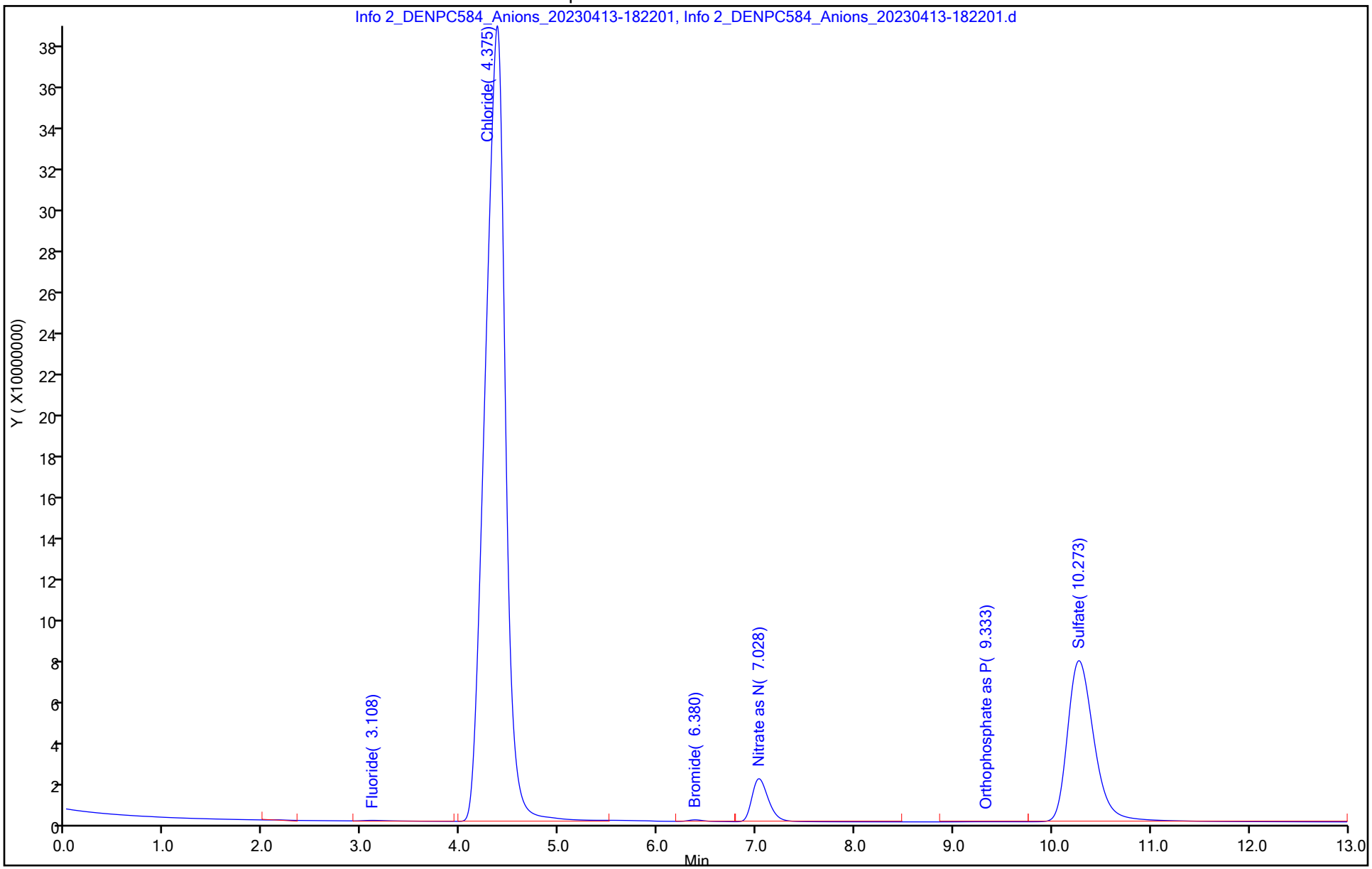
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:02 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-182201.d				
Injection Date:	13-Apr-2023 18:06:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-2	Lab Sample ID:	280-174957-2	Worklist Smp#:	8
Client ID:	MW-124-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-183				
Lims ID:	280-174957-C-2				
Client ID:	MW-124-20230412				
Sample Type:	Client				
Inject. Date:	13-Apr-2023 18:22:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	2.0000		
Sample Info:	280-0120396-009				
Misc. Info.:	280-0120396-009				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 12:41:56	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1620				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.095	3.132	-0.037	2408509	0.1515	
2 Chloride	4.315	4.385	-0.070	2629562614	157.0	E
3 Nitrite as N	4.932	5.053	-0.121	3134438	NC	
4 Bromide	6.318	6.353	-0.035	4143564	0.6912	
5 Nitrate as N	6.992	7.075	-0.083	112773758	NC	
7 Orthophosphate as P	9.317	9.532	-0.215	3091950	NC	
6 Sulfate	10.252	10.773	-0.521	742507415	61.7	

QC Flag Legend

Processing Flags

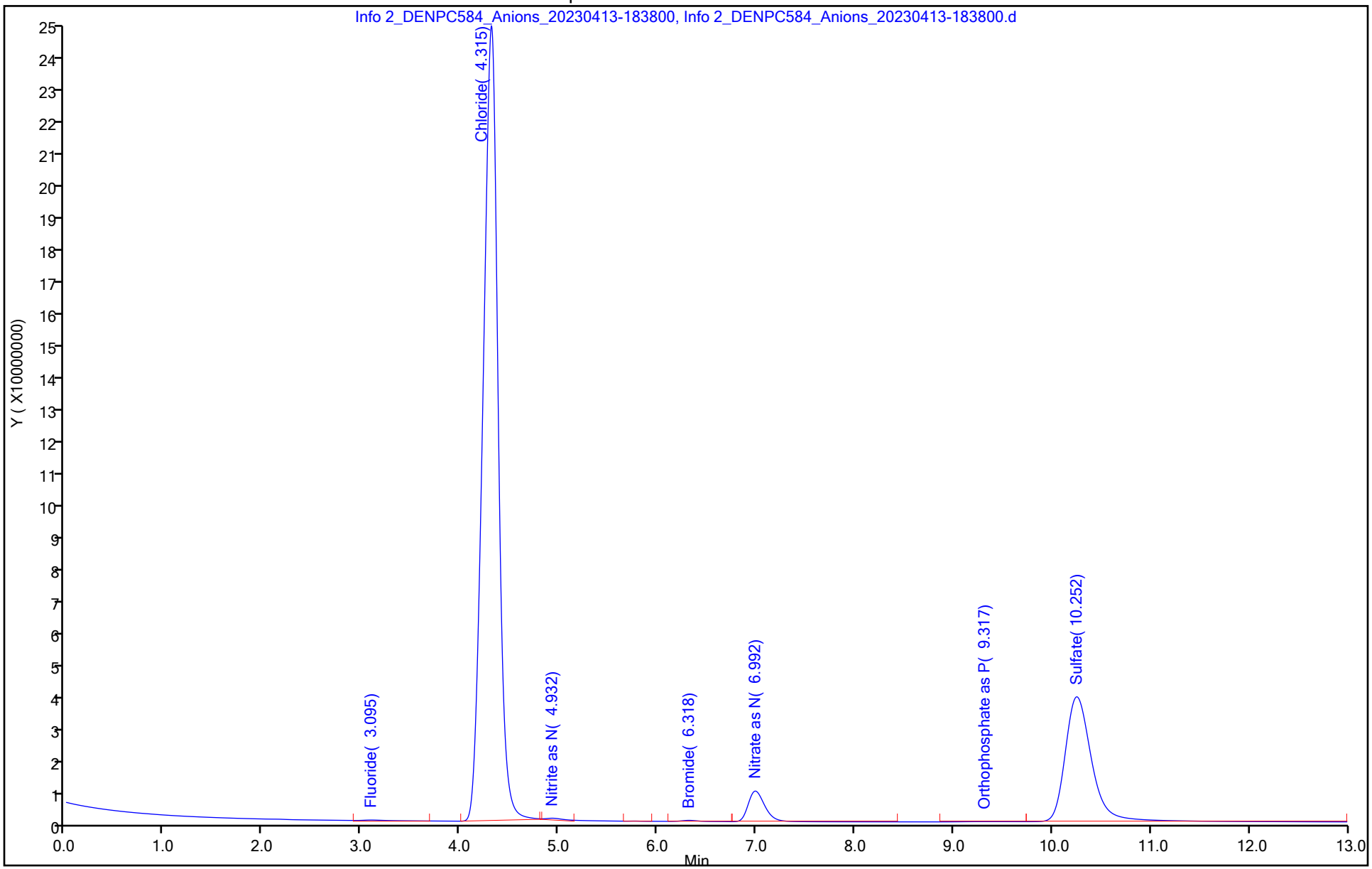
NC - Not Calibrated

E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-183800.d				
Injection Date:	13-Apr-2023 18:22:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-2	Lab Sample ID:	280-174957-2	Worklist Smp#:	9
Client ID:	MW-124-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	2.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-202
Lims ID: 280-174957-C-3
Client ID: MW-124-Q-20230412
Sample Type: Client
Inject. Date: 13-Apr-2023 20:13:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-016
Misc. Info.: 280-0120396-016
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:41:56 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.093	3.132	-0.039	4961484	0.2204	
2 Chloride	4.375	4.385	-0.010	5451369776	325.3	E
3 Nitrite as N		5.053			ND	
4 Bromide	6.365	6.353	0.012	8790186	1.41	
5 Nitrate as N	7.023	7.075	-0.052	241348960	NC	
7 Orthophosphate as P	9.330	9.532	-0.202	1134893	NC	
6 Sulfate	10.263	10.773	-0.510	1456621277	121.1	E

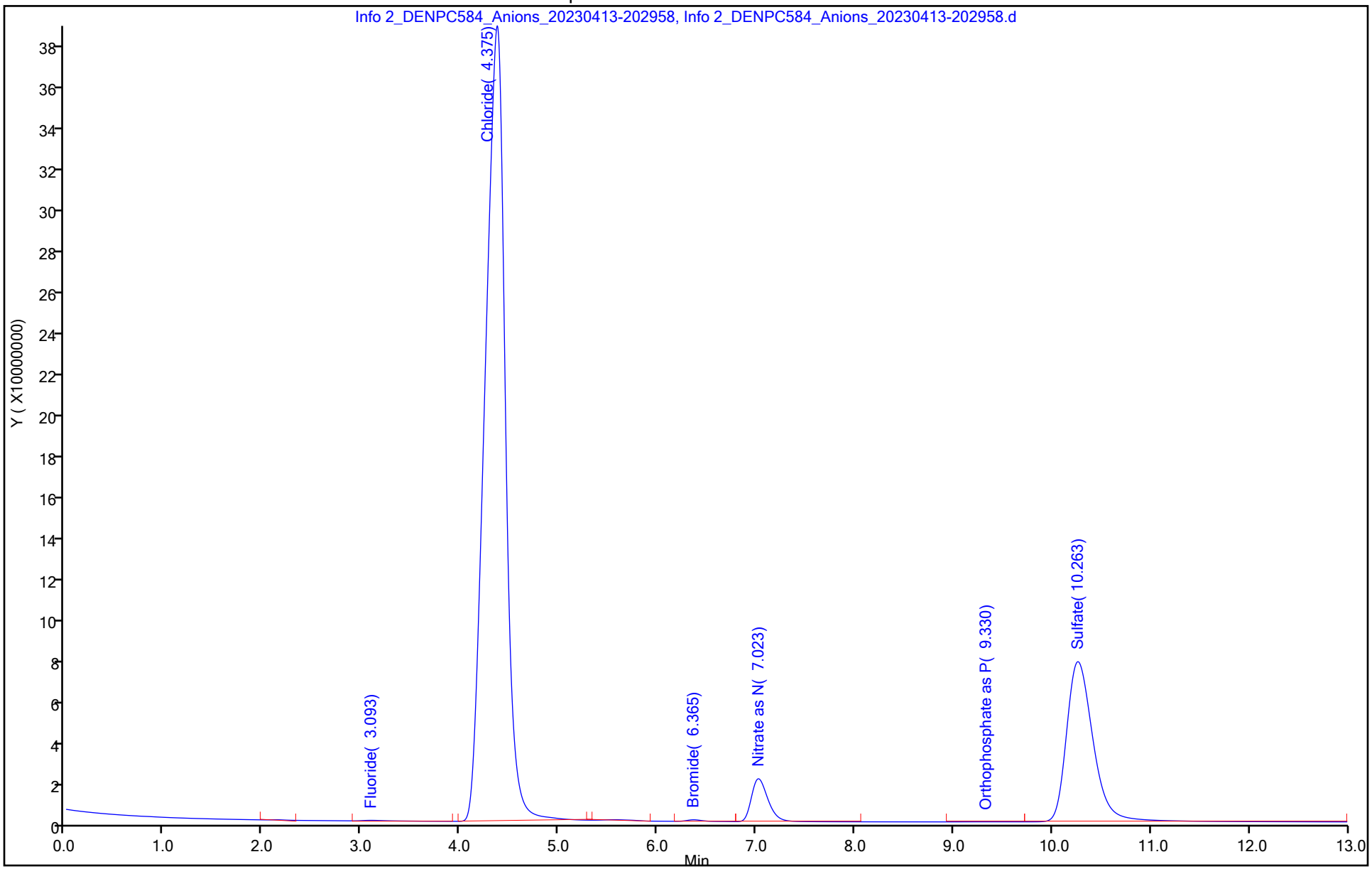
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-202958.d				
Injection Date:	13-Apr-2023 20:13:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-3	Lab Sample ID:	280-174957-3	Worklist Smp#:	16
Client ID:	MW-124-Q-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-204
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 13-Apr-2023 20:30:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-017
Misc. Info.: 280-0120396-017
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:09 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	77657182	2.50	2.18	
2 Chloride	4.262	4.385	-0.123	825419429	50.0	49.4	
3 Nitrite as N	4.932	5.053	-0.121	88058789	NC	NC	
4 Bromide	6.123	6.353	-0.230	14655000	2.50	2.32	
5 Nitrate as N	6.857	7.075	-0.218	95417989	NC	NC	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.128	10.773	-0.645	596358518	50.0	49.5	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

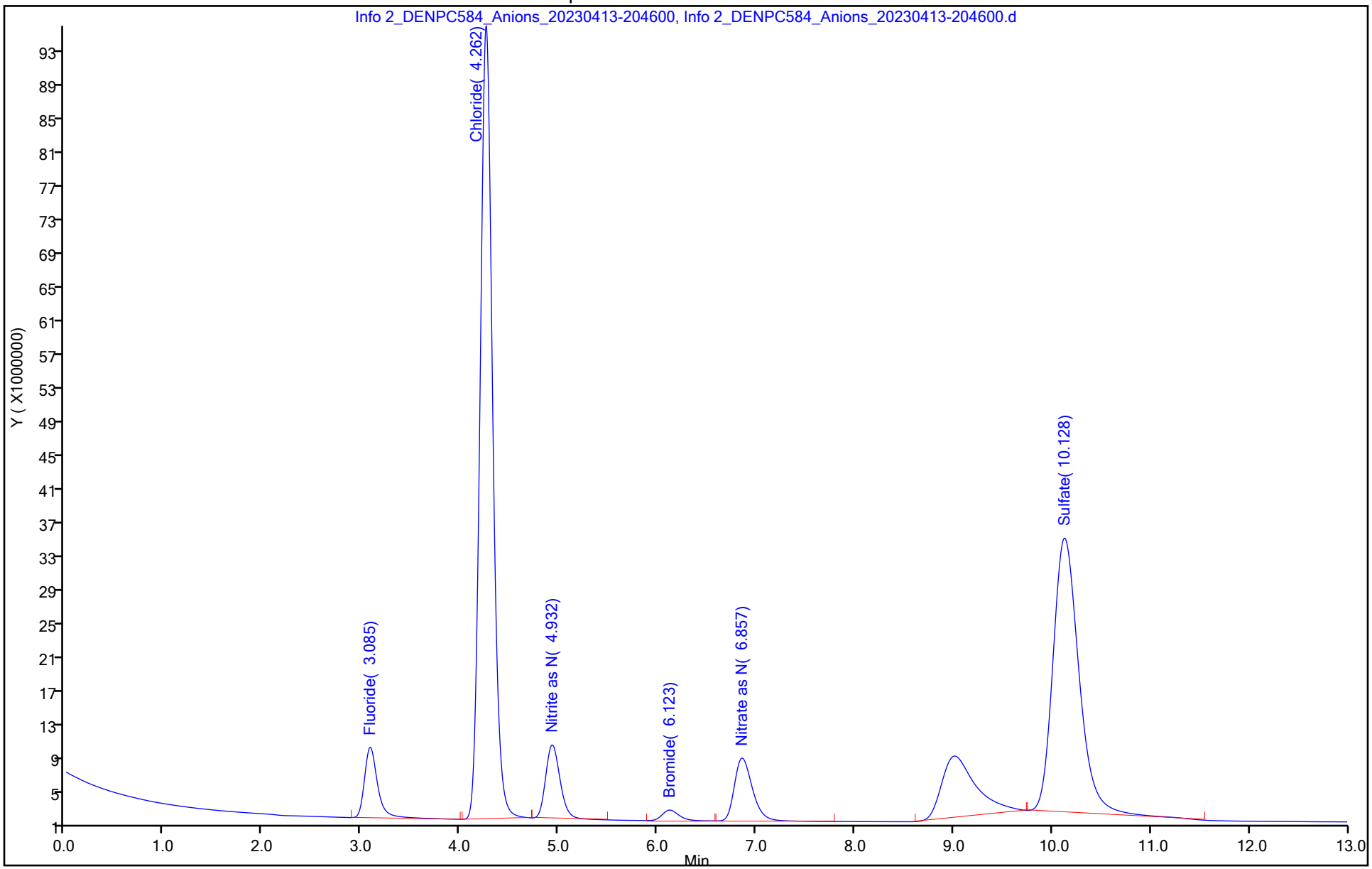
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-204600.d				
Injection Date:	13-Apr-2023 20:30:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-210
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 13-Apr-2023 20:46:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-018
Misc. Info.: 280-0120396-018
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:09 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:47:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.180	9.532	-0.352	5317758		NC	
6 Sulfate	10.290	10.773	-0.483	998875		0.0429	M

QC Flag Legend

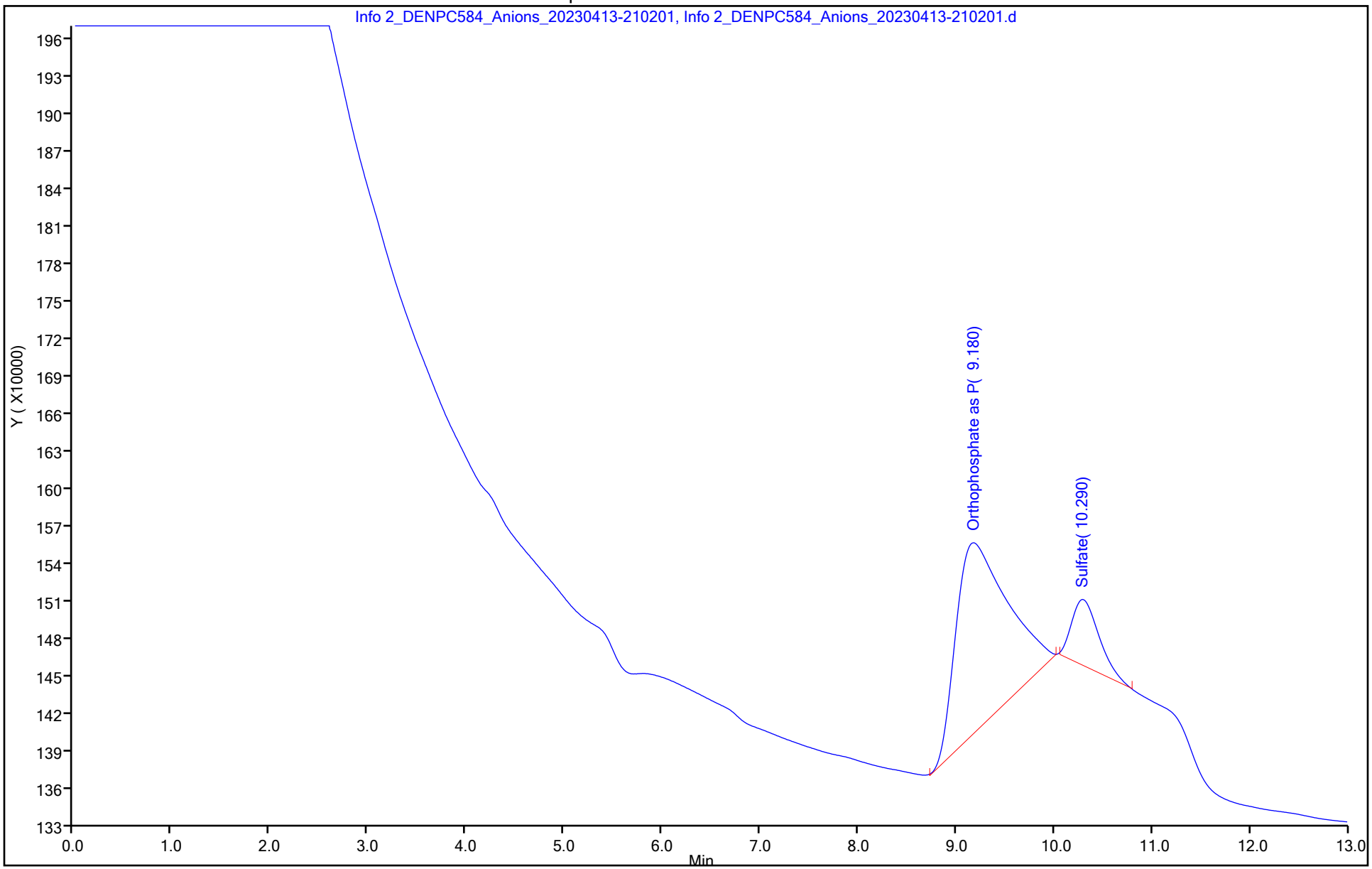
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-210201.d

Injection Date:	13-Apr-2023 20:46:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-210

Injection Date: 13-Apr-2023 20:46:00 Instrument ID: WC_IonChrom13

Lims ID: ccb

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 18

Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

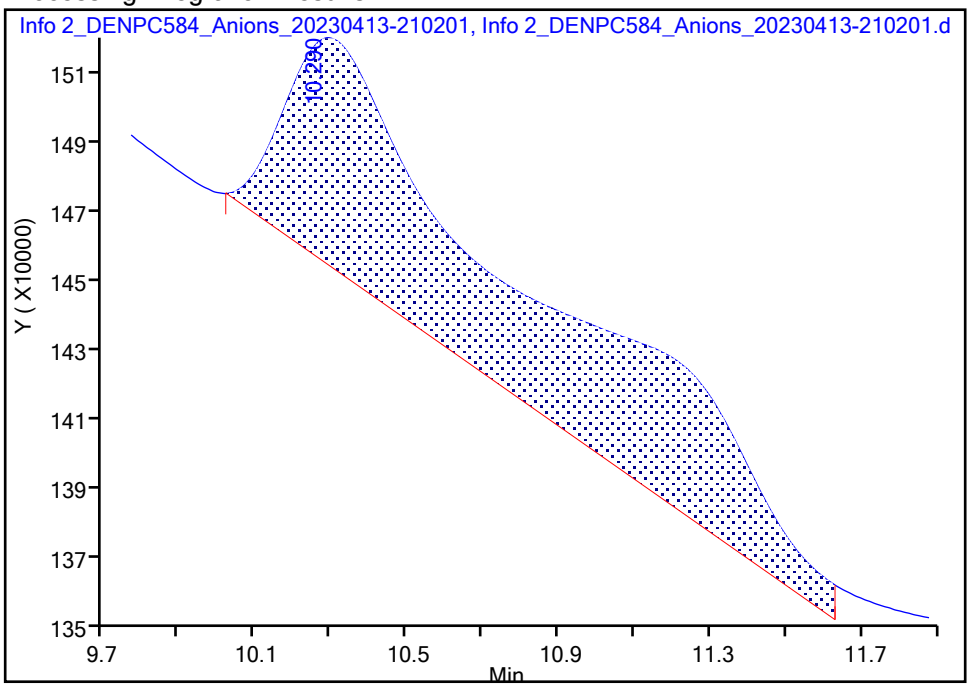
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

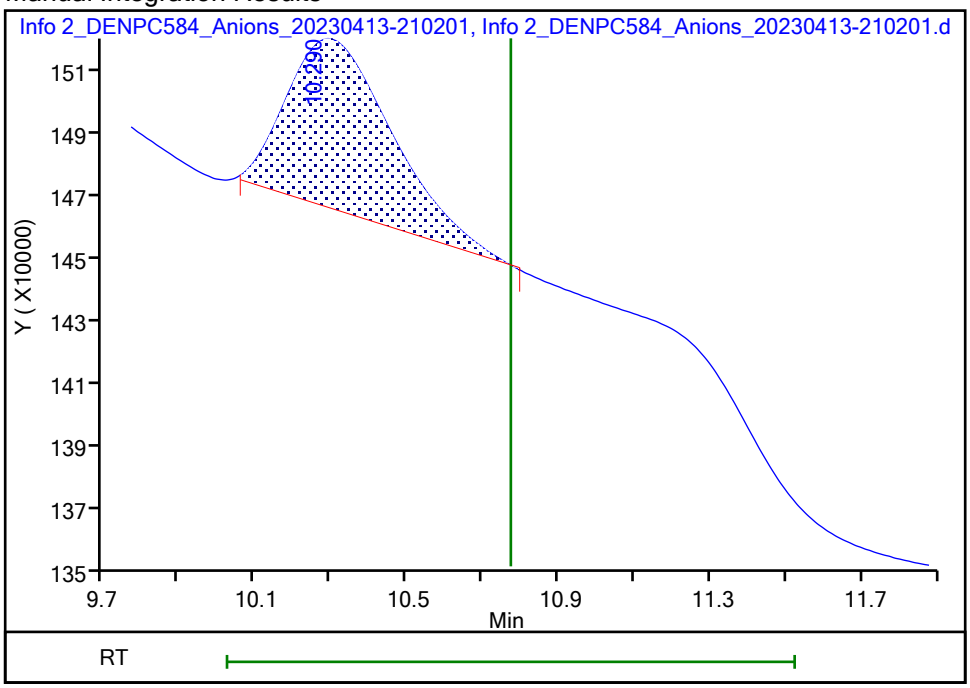
Processing Integration Results

RT: 10.29
Area: 3215055
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.29
Area: 998875
Amount: 0.042944
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 10:47:18

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-21
Lims ID: 280-174957-C-3
Client ID: MW-124-Q-20230412
Sample Type: Client
Inject. Date: 13-Apr-2023 21:02:00 ALS Bottle#: 0 Worklist Smp#: 19
Injection Vol: 10.0 ul Dil. Factor: 2.0000
Sample Info: 280-0120396-019
Misc. Info.: 280-0120396-019
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:38 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1683

First Level Reviewer: sripenp Date: 17-Apr-2023 18:02:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	2149982	0.1445	
2 Chloride	4.313	4.385	-0.072	2637604837	157.5	E
3 Nitrite as N	4.933	5.053	-0.120	3447394	NC	
4 Bromide	6.308	6.353	-0.045	3813935	0.6400	
5 Nitrate as N	6.982	7.075	-0.093	112586592	NC	
7 Orthophosphate as P	9.280	9.532	-0.252	3266687	NC	
6 Sulfate	10.242	10.773	-0.531	729105889	60.6	

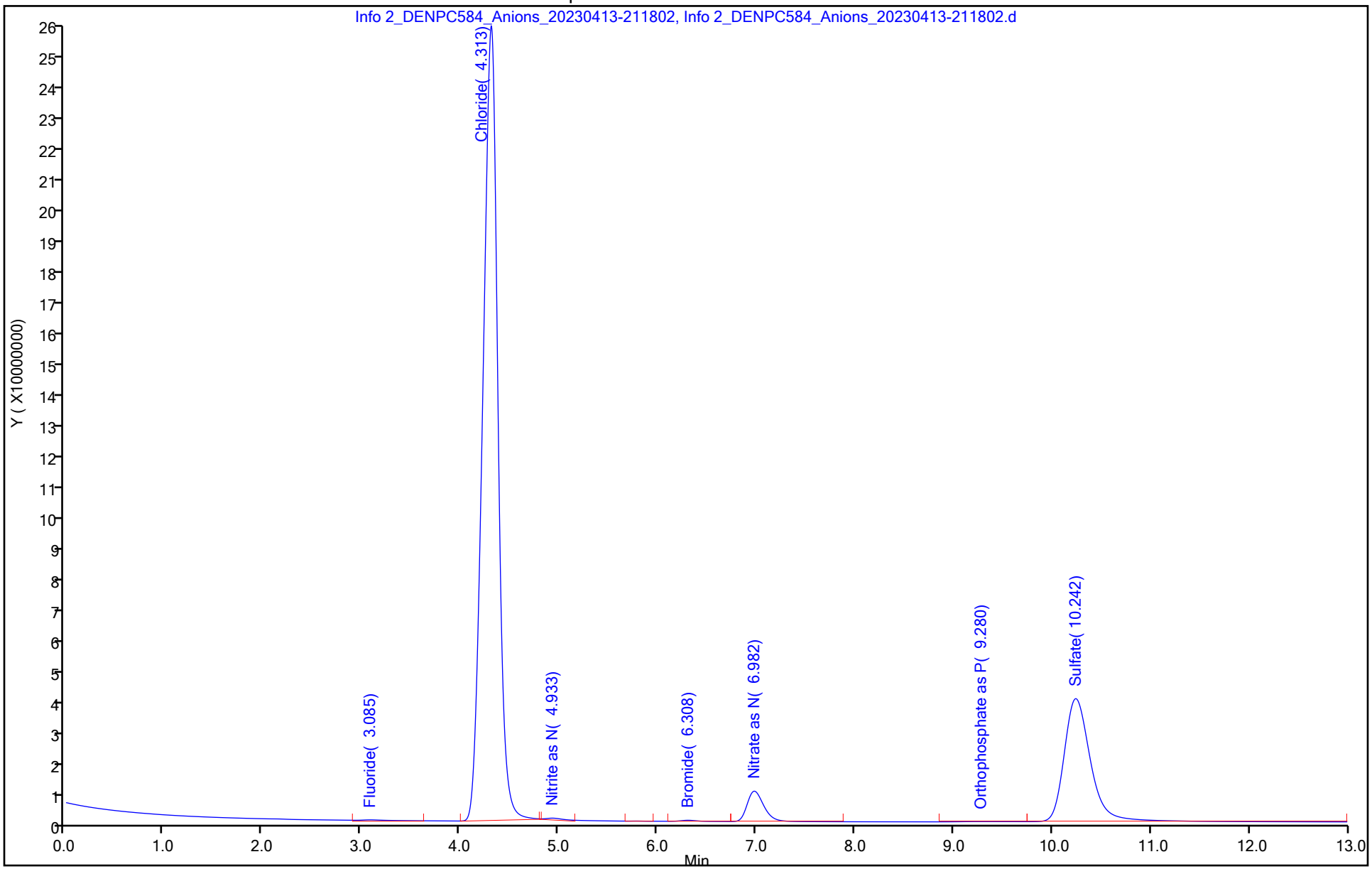
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 17-Apr-2023 18:02:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-211802.d				
Injection Date:	13-Apr-2023 21:02:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-3	Lab Sample ID:	280-174957-3	Worklist Smp#:	19
Client ID:	MW-124-Q-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	2.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-235
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 13-Apr-2023 23:42:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-029
Misc. Info.: 280-0120396-029
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:18 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.090	3.132	-0.042	77313857	2.50	2.17	
2 Chloride	4.263	4.385	-0.122	827635728	50.0	49.5	
3 Nitrite as N	4.930	5.053	-0.123	88409308	NC	NC	
4 Bromide	6.105	6.353	-0.248	14743842	2.50	2.34	
5 Nitrate as N	6.837	7.075	-0.238	95283455	NC	NC	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.135	10.773	-0.638	602833776	50.0	50.1	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

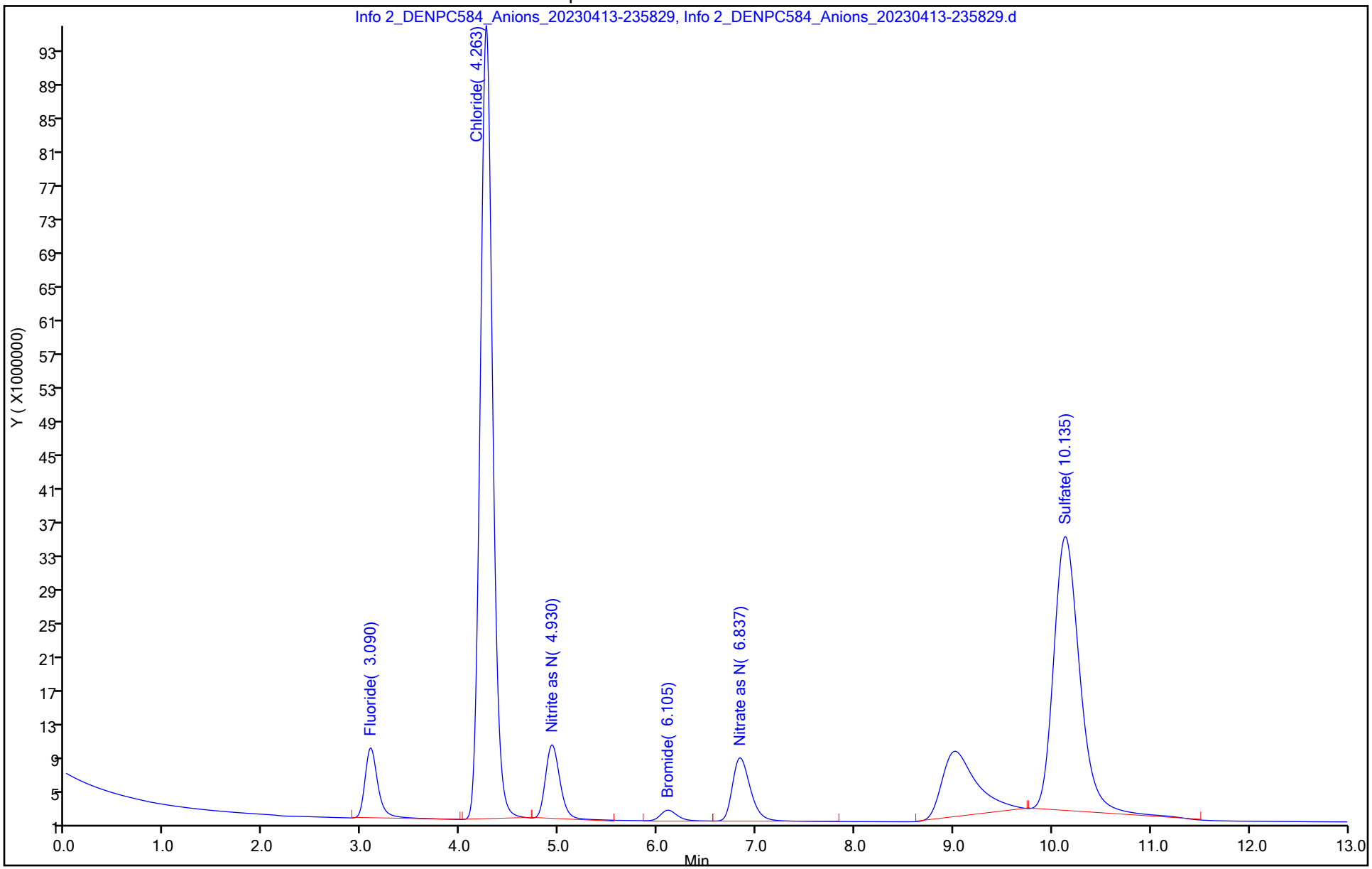
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:18 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230413-235829.d				
Injection Date:	13-Apr-2023 23:42:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	29
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-001				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	13-Apr-2023 23:58:00	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120396-030				
Misc. Info.:	280-0120396-030				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom13		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 12:42:18	Calib Date:	28-Feb-2023 18:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184				
Column 1 :			Det: 0005		
Process Host:	CTX1620				
First Level Reviewer: XAY4		Date:	14-Apr-2023 10:48:14		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.170	9.532	-0.362	11007537		NC	
6 Sulfate	10.285	10.773	-0.488	874075		0.0326	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

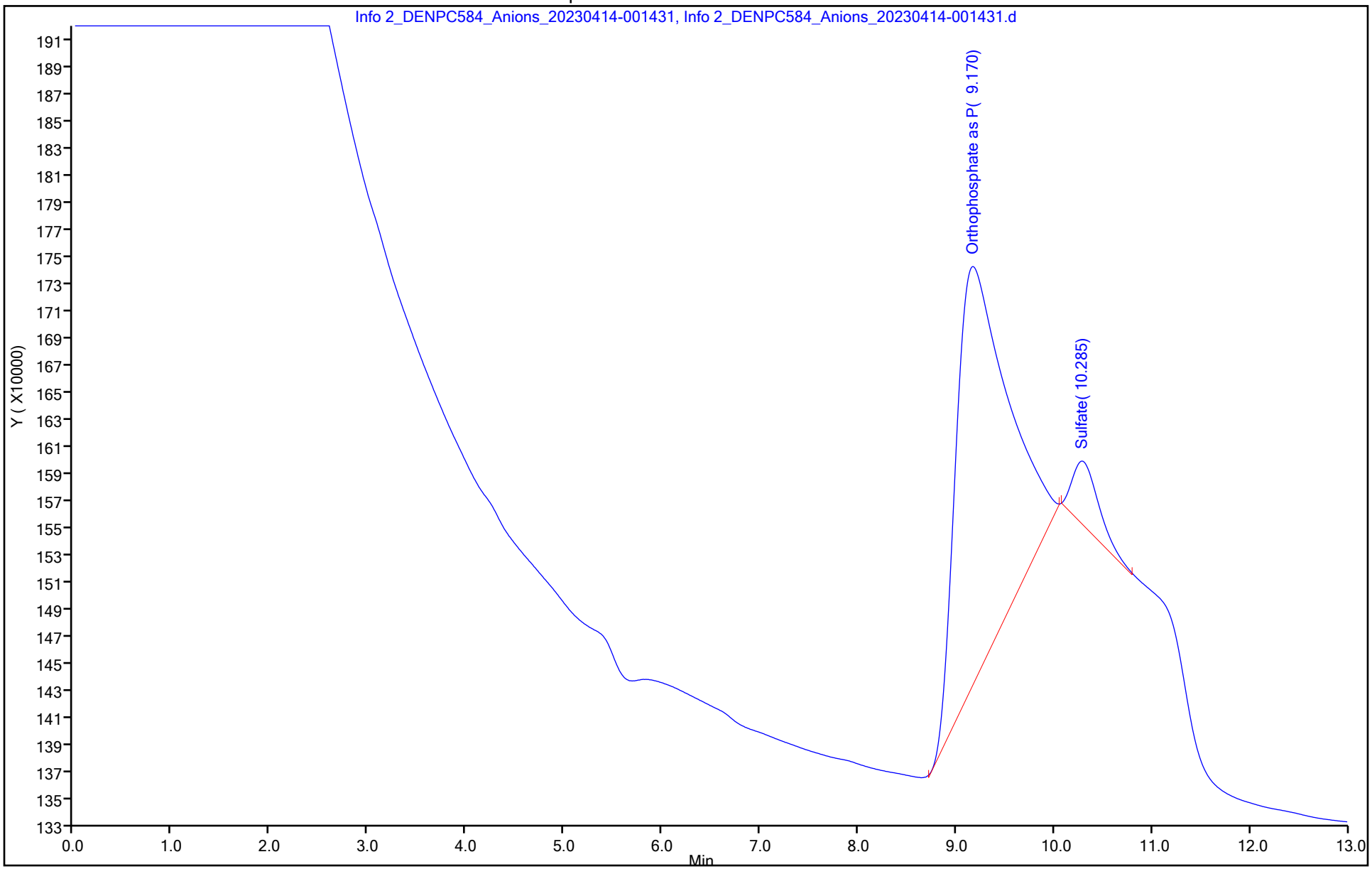
Review Flags

M - Manually Integrated

Report Date: 14-Apr-2023 12:42:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-001431.d				
Injection Date:	13-Apr-2023 23:58:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	30
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-001

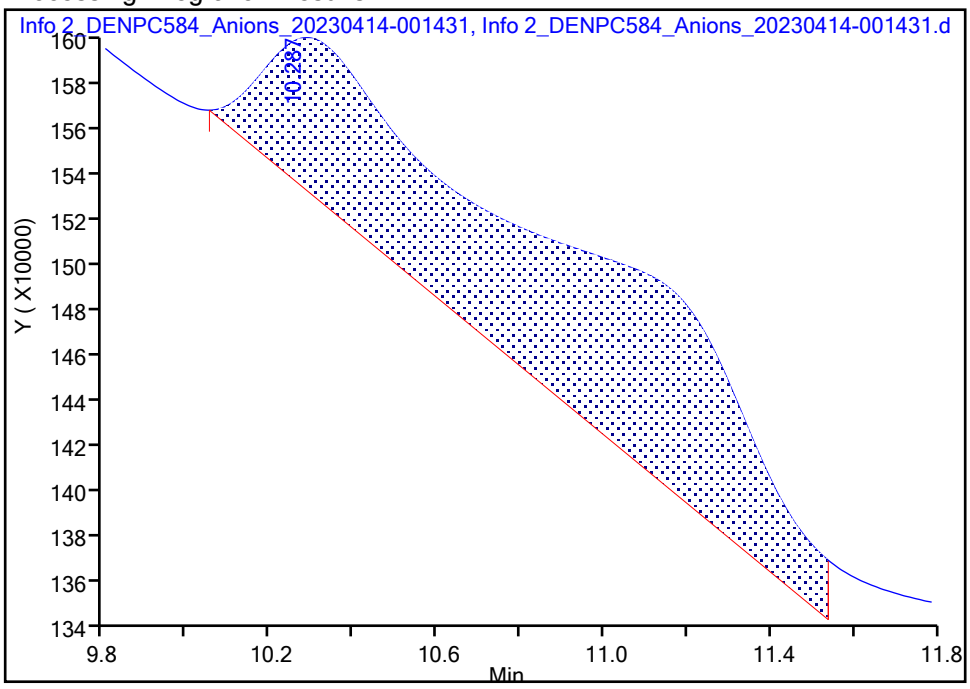
Injection Date:	13-Apr-2023 23:58:00	Instrument ID:	WC_IonChrom13
Lims ID:	ccb		
Client ID:			
Operator ID:	wetchemd	ALS Bottle#:	0 Worklist Smp#: 30
Injection Vol:	10.0 ul	Dil. Factor:	1.0000
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D
Column:		Detector	0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

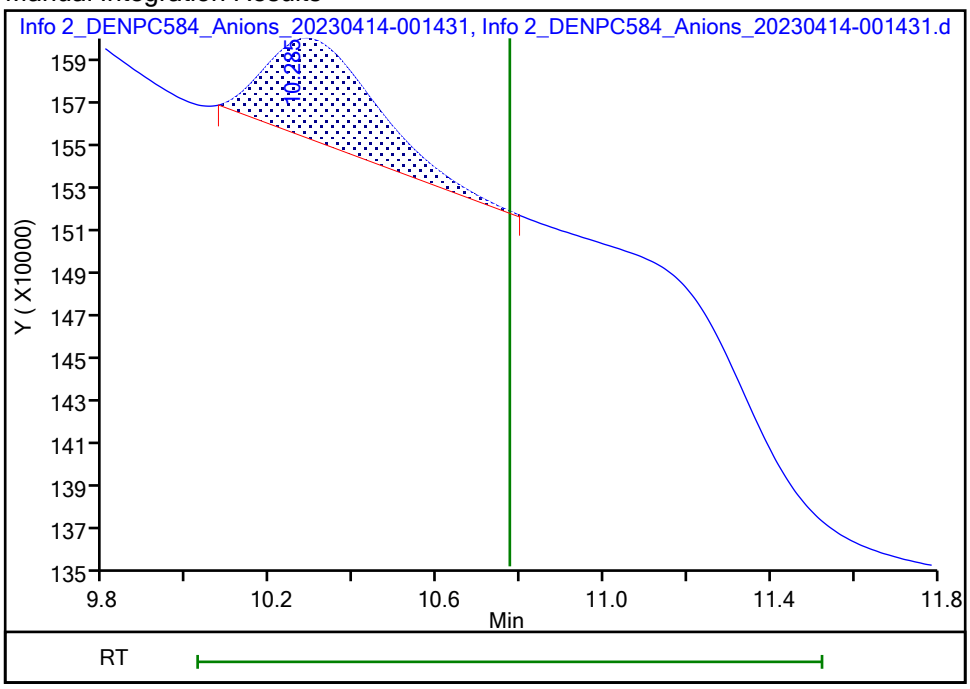
Processing Integration Results

RT: 10.29
Area: 5133588
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.29
Area: 874075
Amount: 0.032566
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 10:48:11

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-03
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 02:54:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-041
Misc. Info.: 280-0120396-041
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.082	3.132	-0.050	76245932	2.50	2.14	
2 Chloride	4.257	4.385	-0.128	823350451	50.0	49.3	
3 Nitrite as N	4.927	5.053	-0.126	87905689	NC	NC	
4 Bromide	6.107	6.353	-0.246	14658527	2.50	2.33	
5 Nitrate as N	6.842	7.075	-0.233	94412294	NC	NC	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.122	10.773	-0.651	596675544	50.0	49.6	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

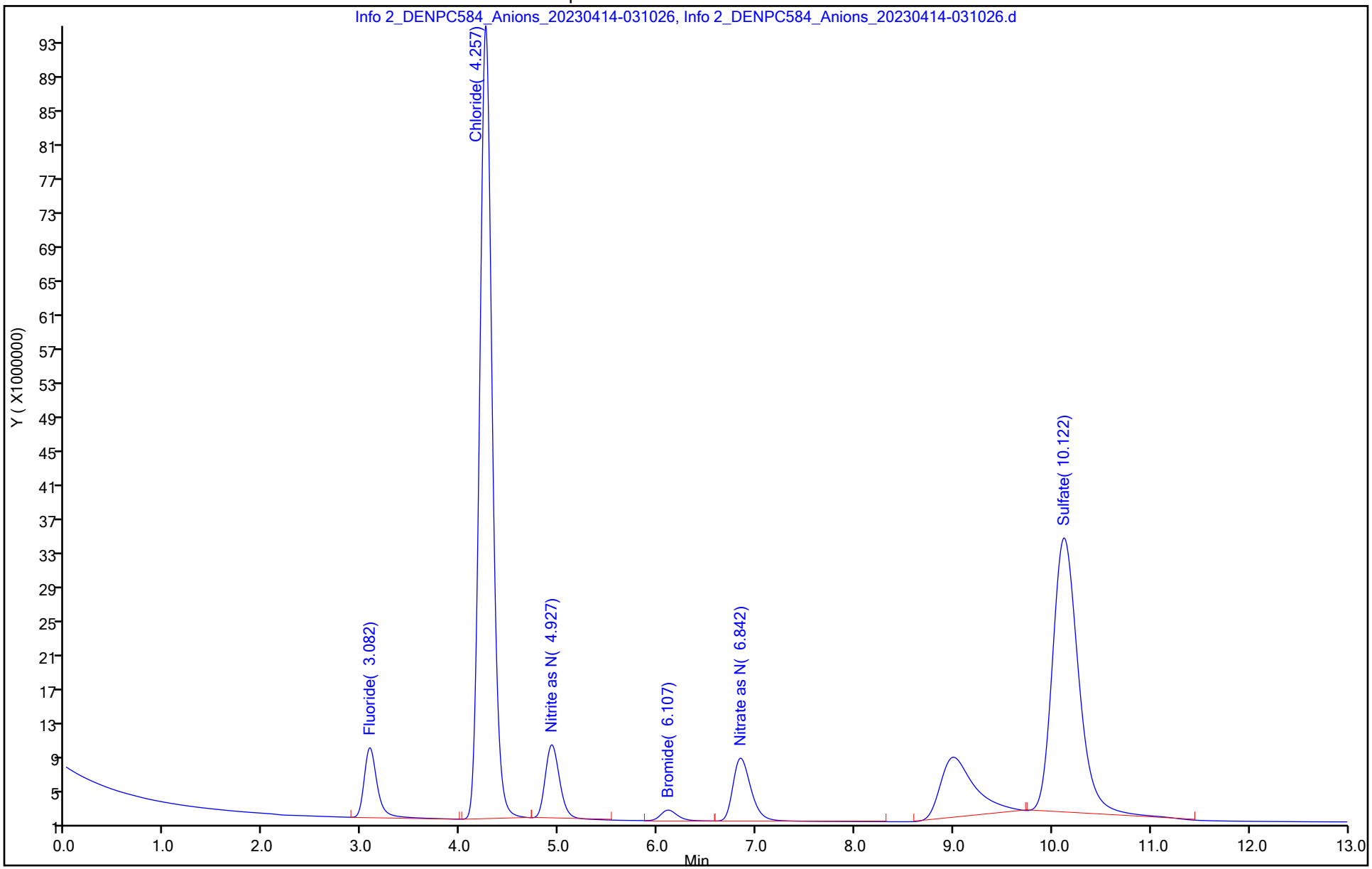
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-031026.d				
Injection Date:	14-Apr-2023 02:54:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	41
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-032
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 03:10:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-042
Misc. Info.: 280-0120396-042
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:48:47

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.157	9.532	-0.375	6910397		NC	
6 Sulfate	10.275	10.773	-0.498	860779		0.0315	M

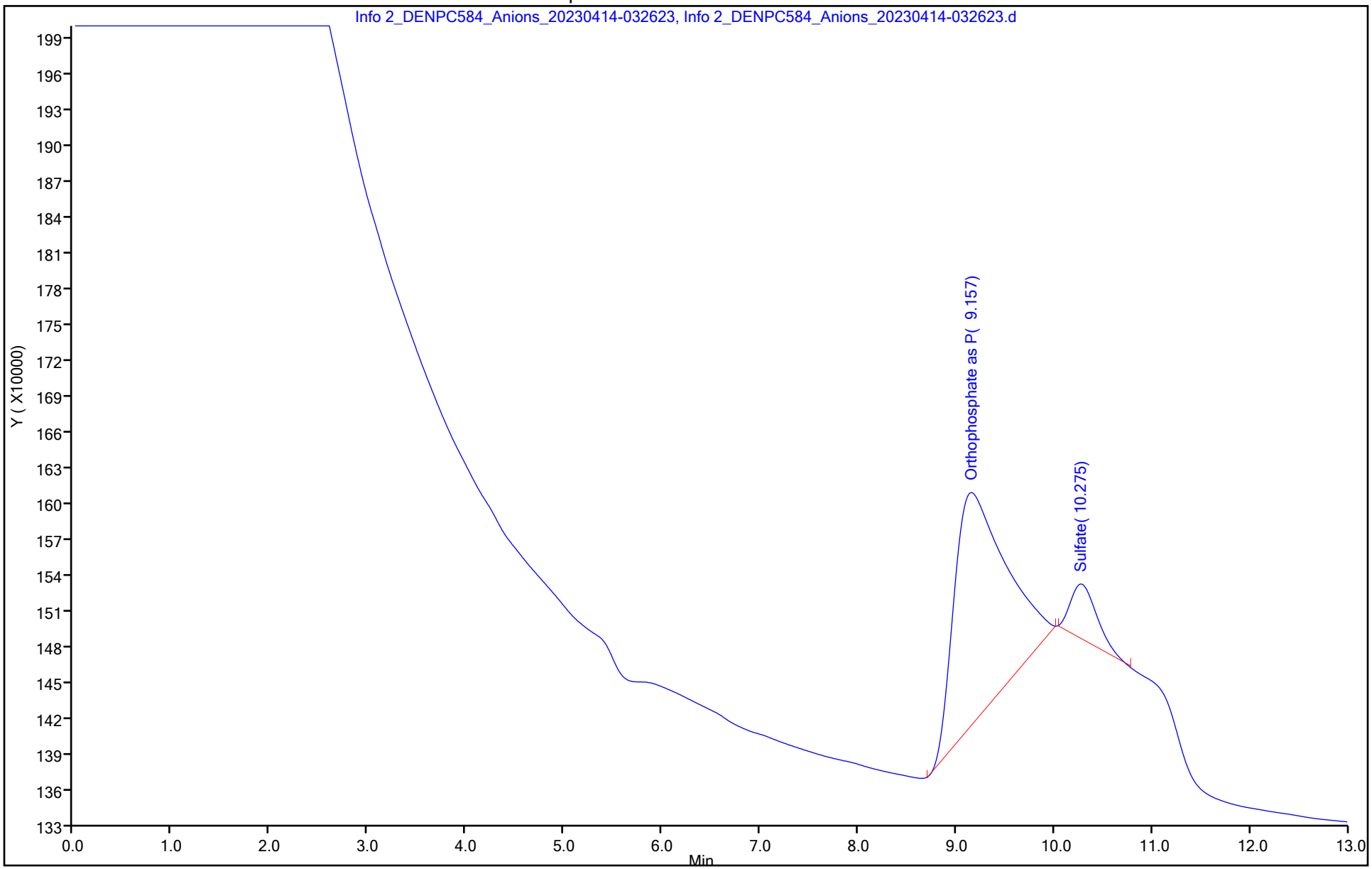
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-032623.d				
Injection Date:	14-Apr-2023 03:10:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	42
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-032

Injection Date: 14-Apr-2023 03:10:00 Instrument ID: WC_IonChrom13

Lims ID: ccb

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 42

Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

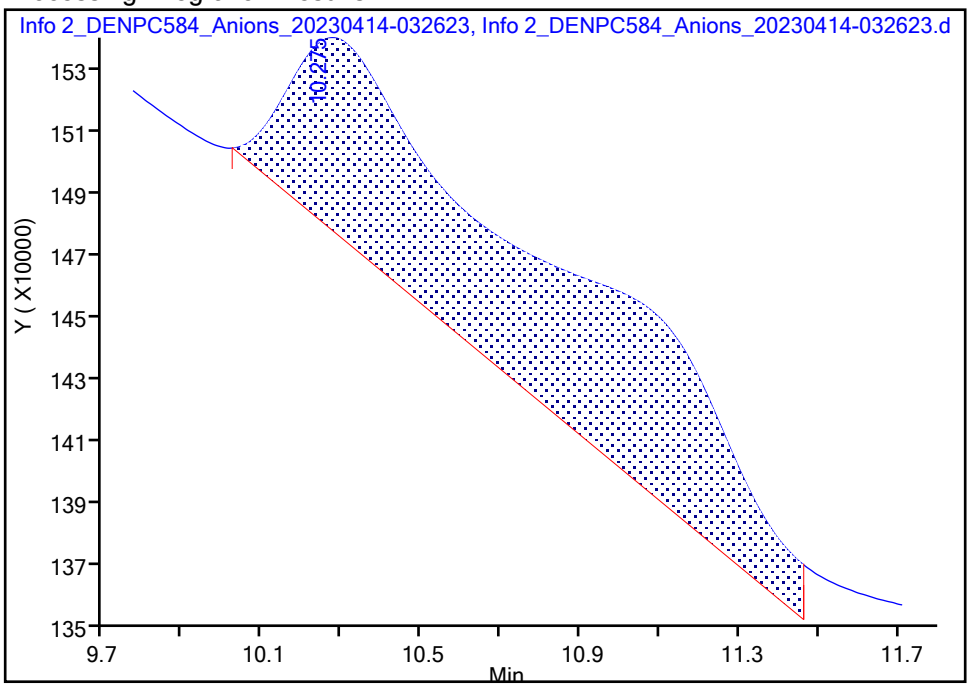
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

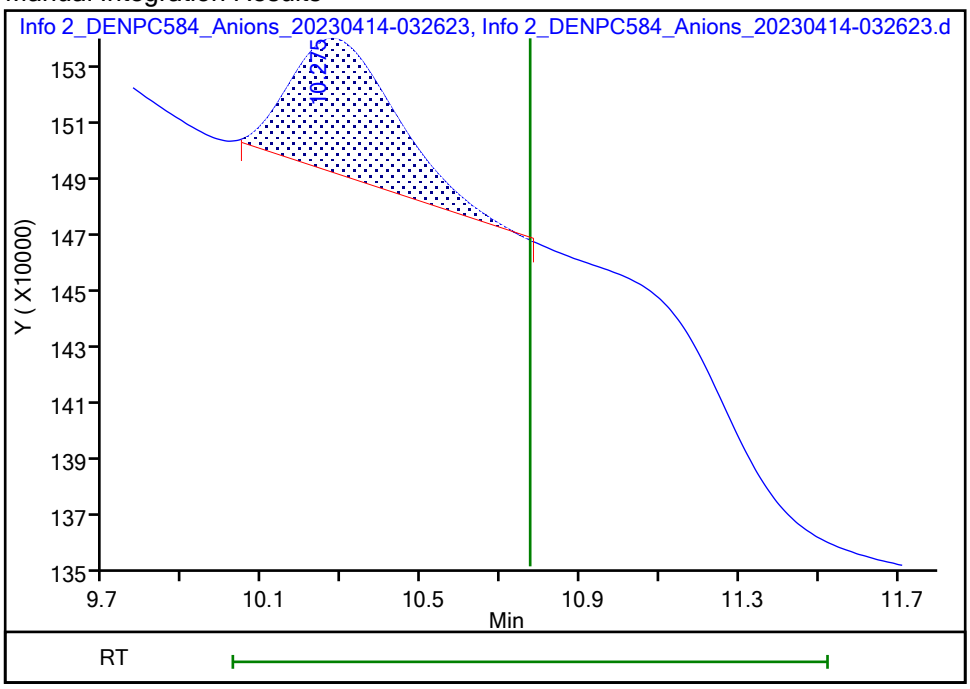
Processing Integration Results

RT: 10.28
Area: 3688787
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.28
Area: 860779
Amount: 0.031461
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 10:48:44

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-035
Lims ID: 280-174957-C-4
Client ID: RW-15-20230411
Sample Type: Client
Inject. Date: 14-Apr-2023 03:42:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-044
Misc. Info.: 280-0120396-044
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	6057209	0.2499	
2 Chloride	4.400	4.385	0.015	6327895565	377.5	E
3 Nitrite as N		5.053			ND	
4 Bromide	6.330	6.353	-0.023	9549373	1.53	
5 Nitrate as N	7.020	7.075	-0.055	88270892	NC	
7 Orthophosphate as P	9.333	9.532	-0.199	6181063	NC	
6 Sulfate	10.227	10.773	-0.546	1757479145	146.1	E

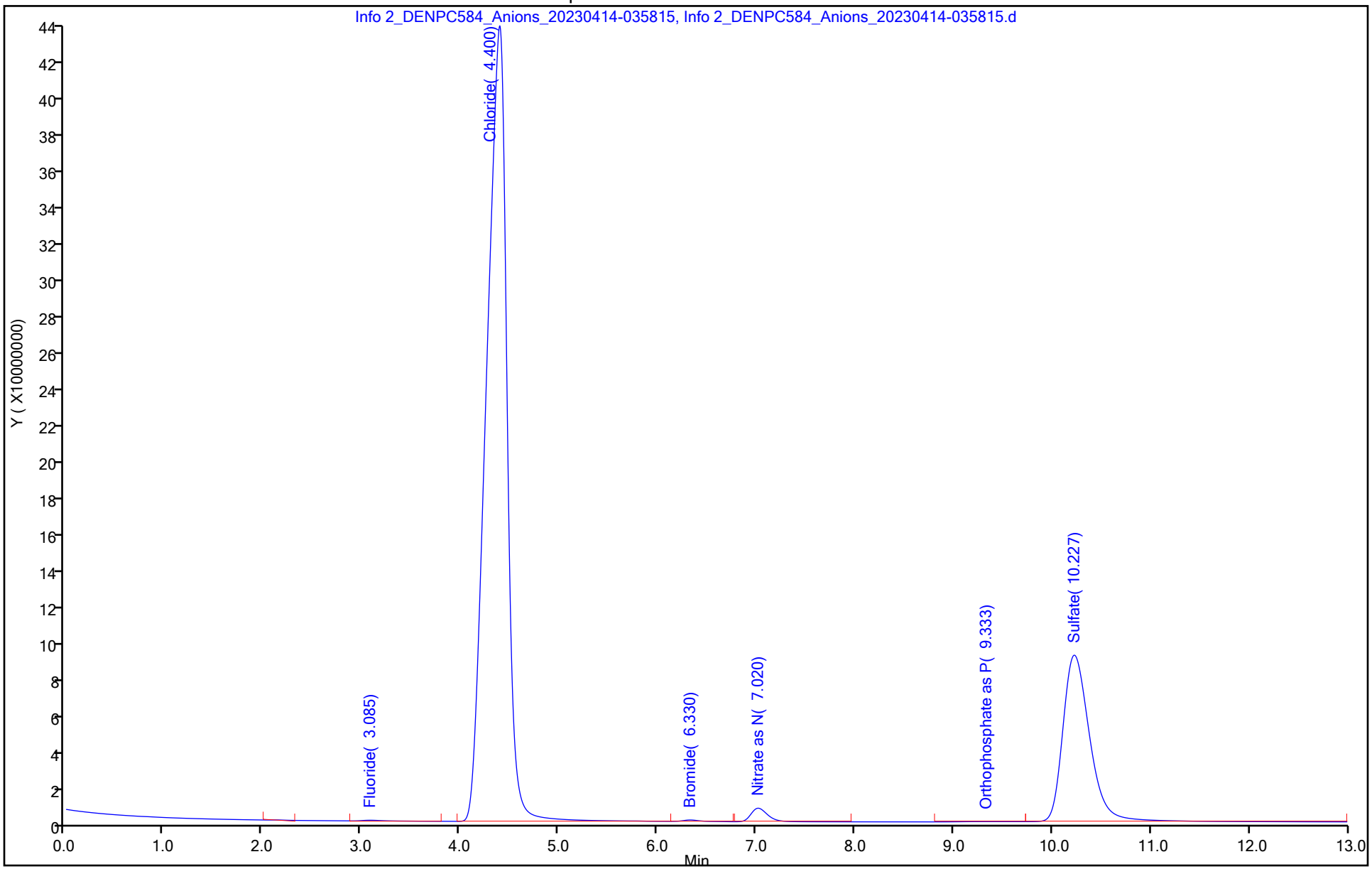
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-035815.d				
Injection Date:	14-Apr-2023 03:42:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-4	Lab Sample ID:	280-174957-4	Worklist Smp#:	44
Client ID:	RW-15-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-04
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 14-Apr-2023 03:58:00 ALS Bottle#: 0 Worklist Smp#: 45
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-045
Misc. Info.: 280-0120396-045
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.088	3.132	-0.044	76472057	2.50	2.15	
2 Chloride	4.267	4.385	-0.118	827501645	50.0	49.5	
3 Nitrite as N	4.940	5.053	-0.113	88510258	NC	NC	
4 Bromide	6.125	6.353	-0.228	14593835	2.50	2.32	
5 Nitrate as N	6.865	7.075	-0.210	94676037	NC	NC	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.127	10.773	-0.646	599552890	50.0	49.8	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

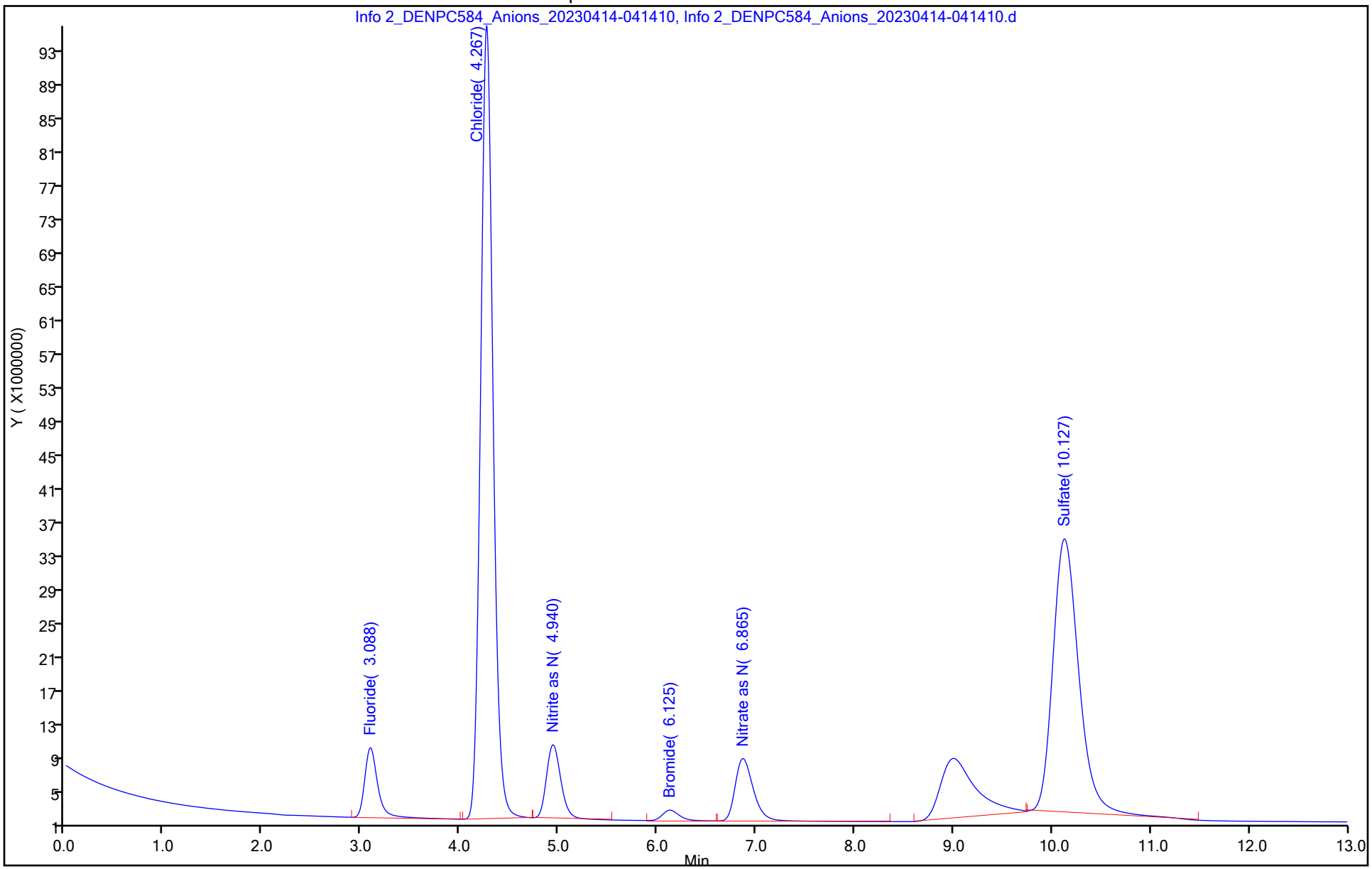
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:27 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-041410.d				
Injection Date:	14-Apr-2023 03:58:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	lcs			Worklist Smp#:	45
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-043
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 14-Apr-2023 04:14:00 ALS Bottle#: 0 Worklist Smp#: 46
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-046
Misc. Info.: 280-0120396-046
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	79105757	2.50	2.22	
2 Chloride	4.262	4.385	-0.123	833054076	50.0	49.8	
3 Nitrite as N	4.933	5.053	-0.120	88824484	NC	NC	
4 Bromide	6.132	6.353	-0.221	14790822	2.50	2.35	
5 Nitrate as N	6.865	7.075	-0.210	97874134	NC	NC	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.123	10.773	-0.650	605463892	50.0	50.3	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

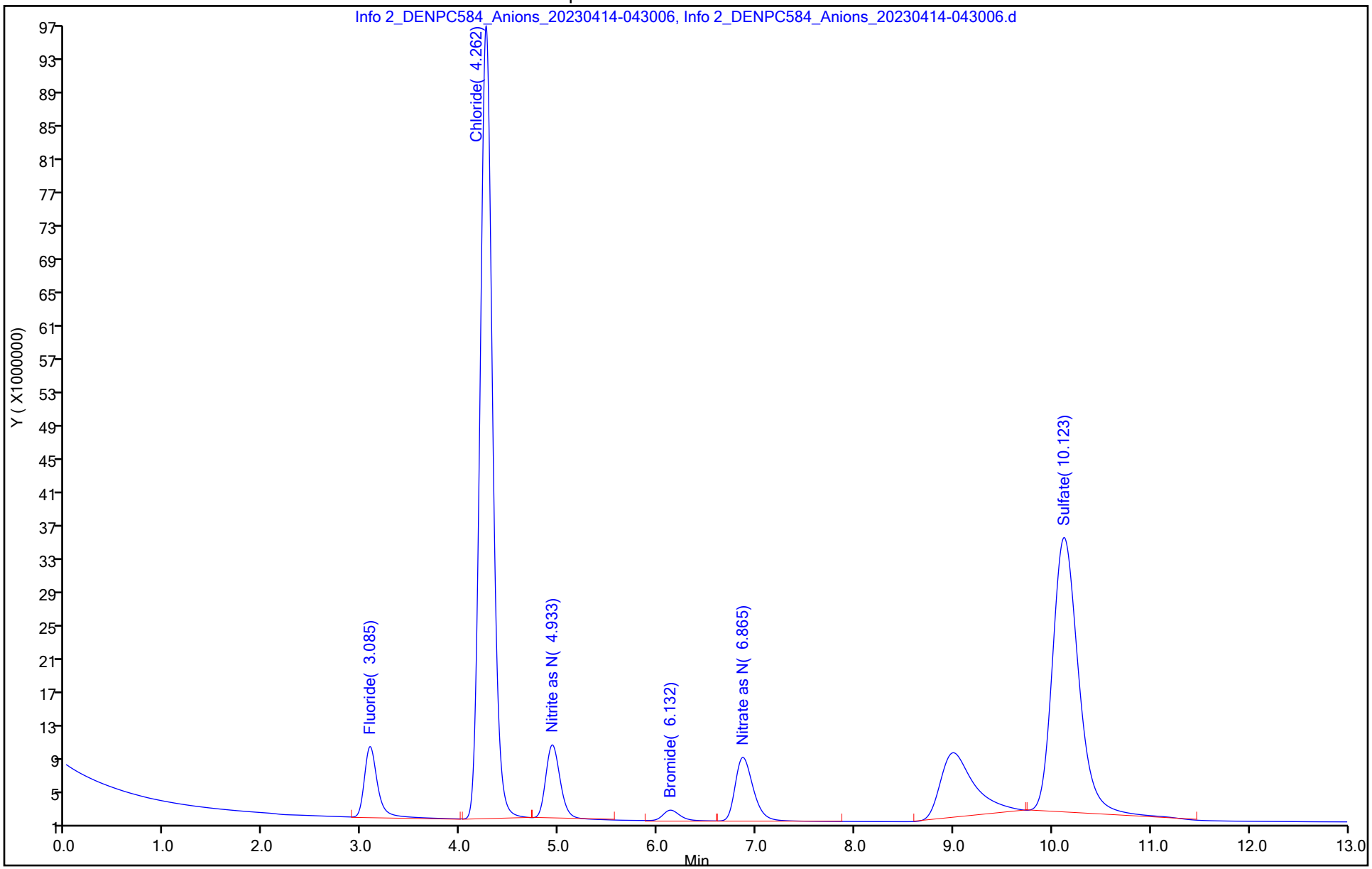
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:28 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-043006.d				
Injection Date:	14-Apr-2023 04:14:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	lcsd			Worklist Smp#:	46
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-044
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 14-Apr-2023 04:30:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-047
Misc. Info.: 280-0120396-047
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:49:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.167	9.532	-0.365	6744039		NC	
6 Sulfate	10.290	10.773	-0.483	1044644		0.0467	M

QC Flag Legend

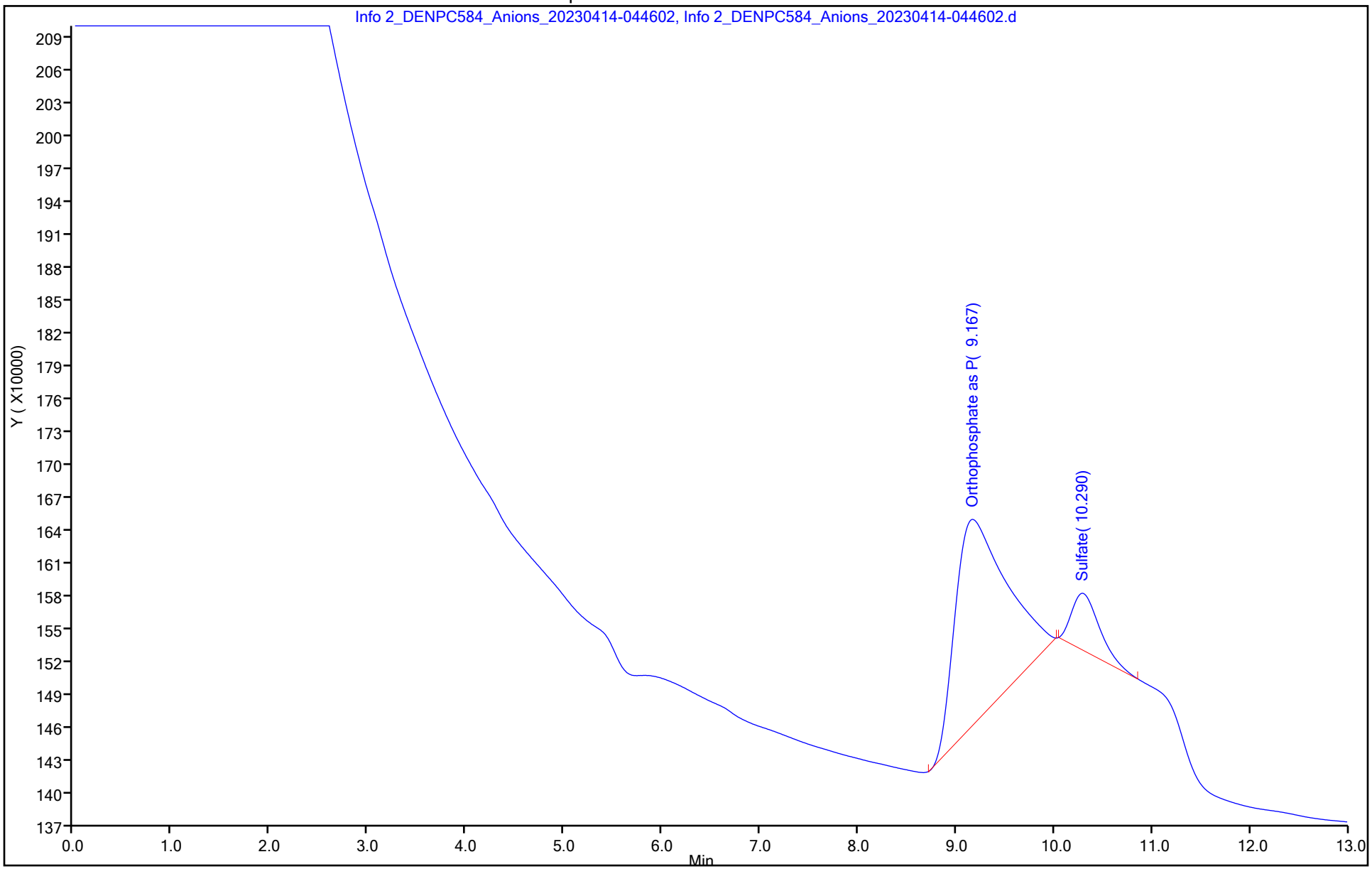
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:29 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-044602.d

Injection Date:	14-Apr-2023 04:30:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	mb			Worklist Smp#:	47
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-044

Injection Date: 14-Apr-2023 04:30:00 Instrument ID: WC_IonChrom13

Lims ID: mb

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 47

Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

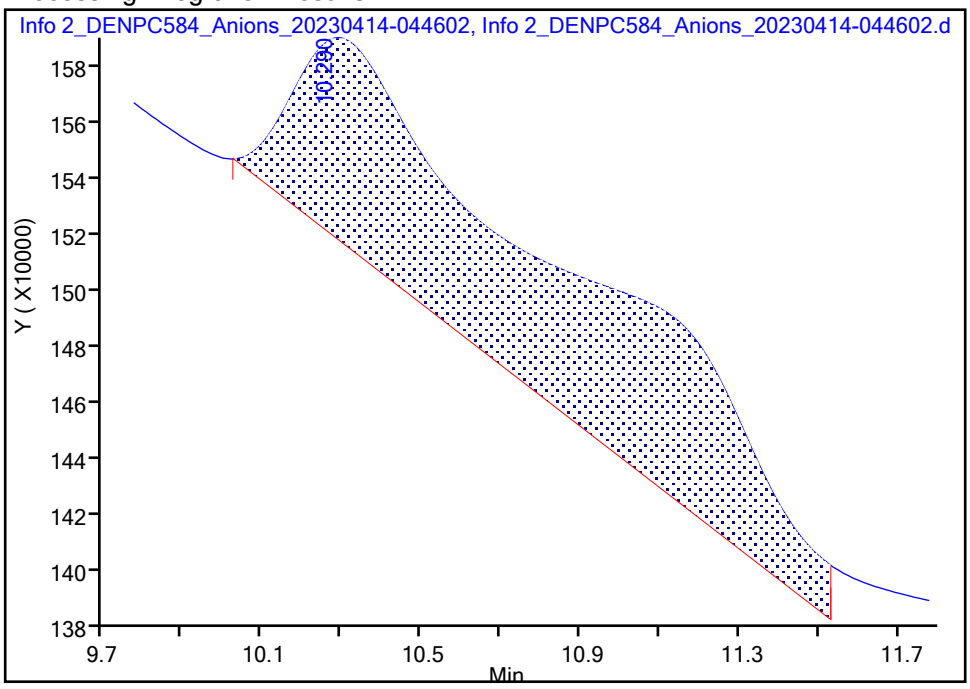
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

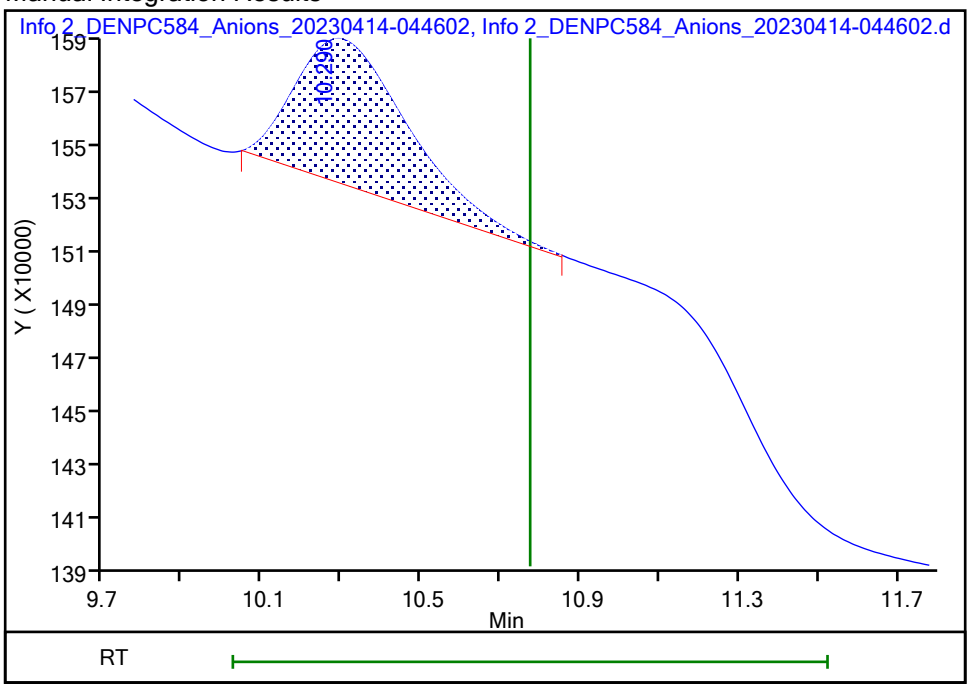
Processing Integration Results

RT: 10.29
Area: 4120362
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.29
Area: 1044644
Amount: 0.046750
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 10:49:03

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-050
Lims ID: 280-174957-C-6
Client ID: MW-105S-20230411
Sample Type: Client
Inject. Date: 14-Apr-2023 04:46:00 ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-048
Misc. Info.: 280-0120396-048
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.052	3.132	-0.080	4671893	0.2125	
2 Chloride	4.365	4.385	-0.020	7258097165	433.0	E
3 Nitrite as N		5.053			ND	
4 Bromide	6.435	6.353	0.082	9019944	1.45	
5 Nitrate as N	7.062	7.075	-0.013	554669666	NC	
7 Orthophosphate as P	9.288	9.532	-0.244	2019305	NC	
6 Sulfate	10.253	10.773	-0.520	2385312767	198.3	E

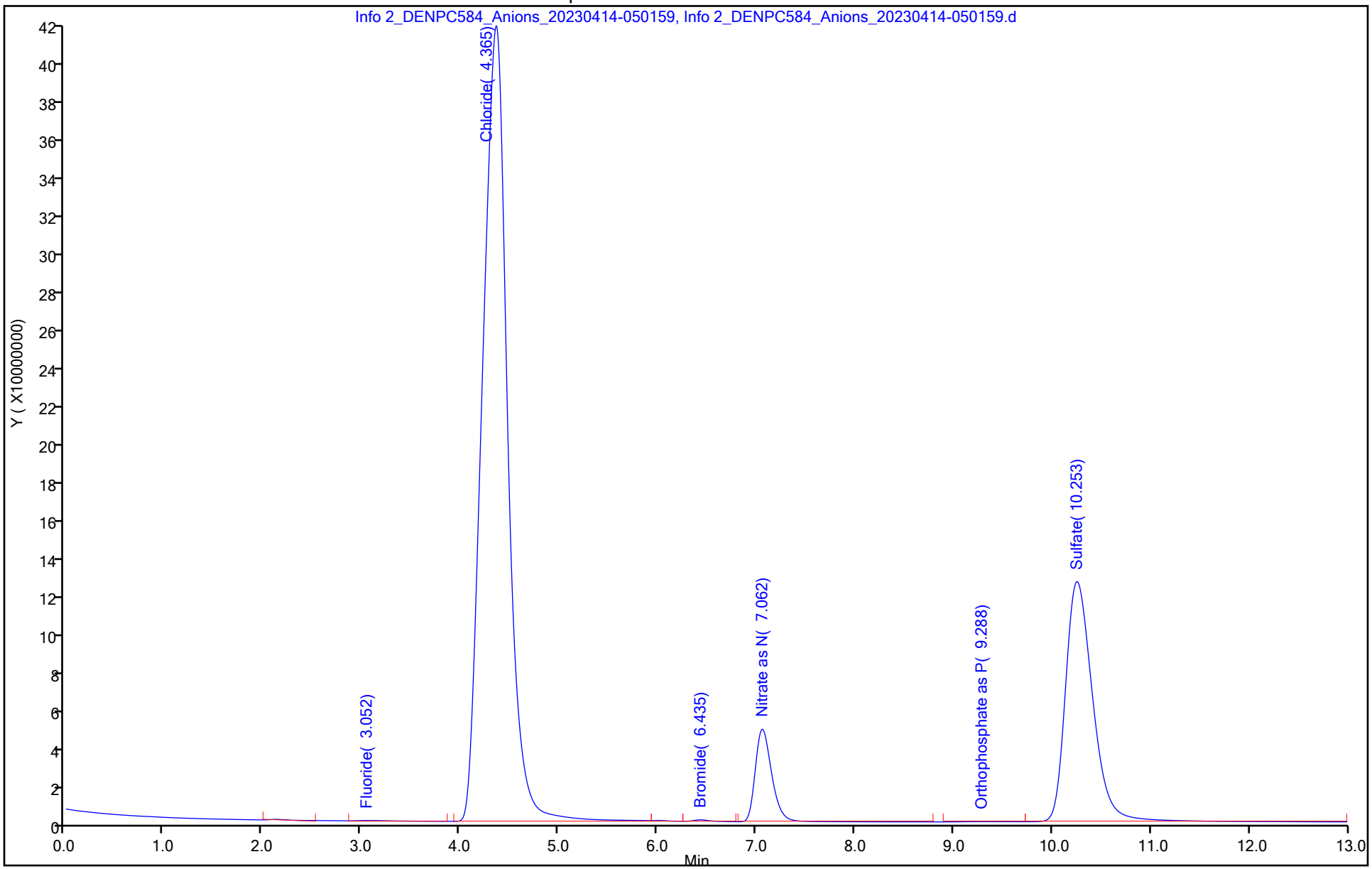
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:30 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-050159.d				
Injection Date:	14-Apr-2023 04:46:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-6	Lab Sample ID:	280-174957-6	Worklist Smp#:	48
Client ID:	MW-105S-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-05
Lims ID: 280-174957-C-6
Client ID: MW-105S-20230411
Sample Type: Client
Inject. Date: 14-Apr-2023 05:02:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 10.0 ul Dil. Factor: 2.0000
Sample Info: 280-0120396-049
Misc. Info.: 280-0120396-049
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.060	3.132	-0.072	2070158	0.1423	
2 Chloride	4.322	4.385	-0.063	3592055106	214.4	E
3 Nitrite as N		5.053			ND	
4 Bromide	6.340	6.353	-0.013	4381572	0.7282	
5 Nitrate as N	6.993	7.075	-0.082	268821398	NC	
7 Orthophosphate as P	9.272	9.532	-0.260	1760161	NC	
6 Sulfate	10.225	10.773	-0.548	1193088129	99.2	

QC Flag Legend

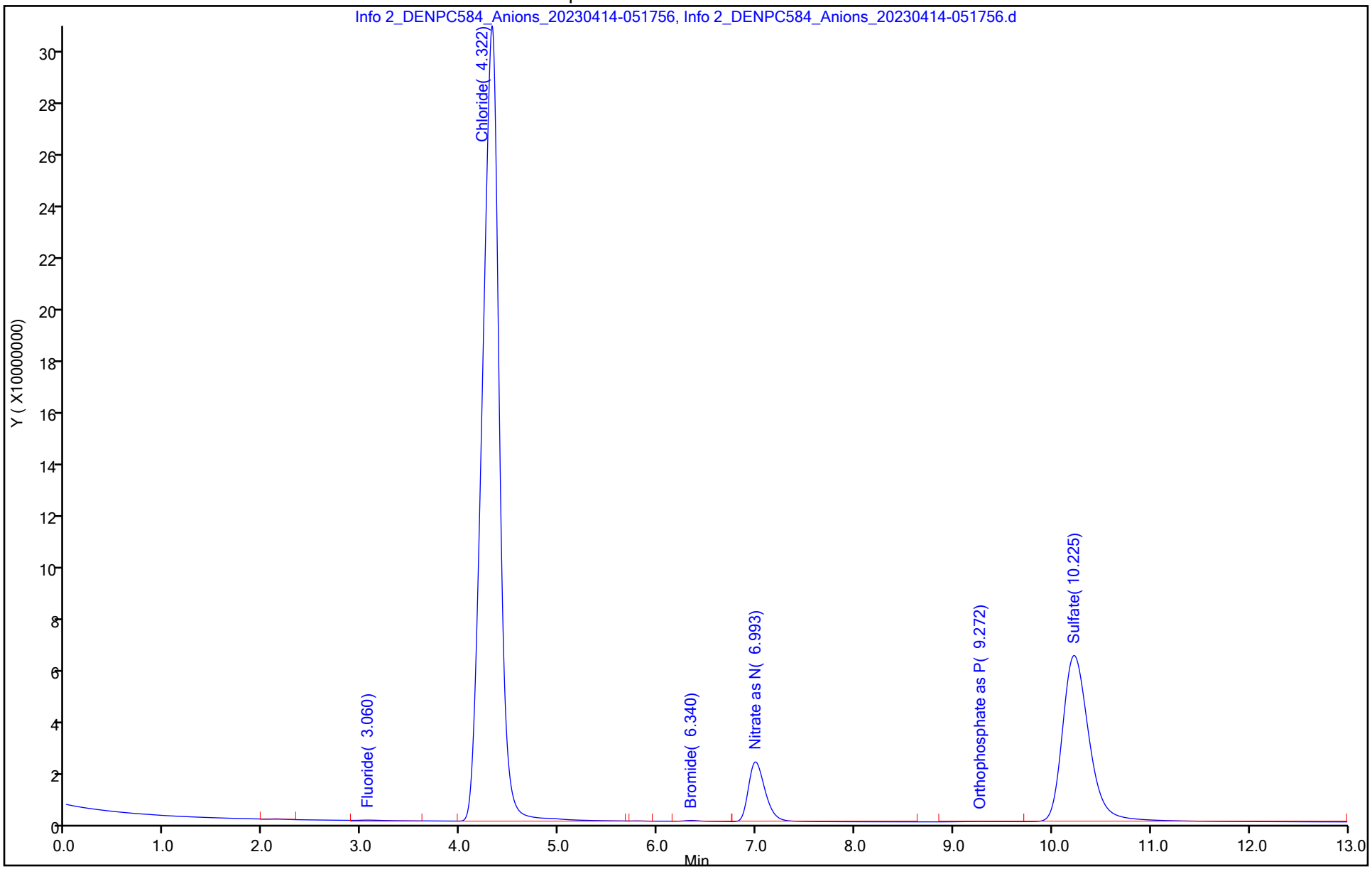
Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:31 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-051756.d

Injection Date:	14-Apr-2023 05:02:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-6	Lab Sample ID:	280-174957-6	Worklist Smp#:	49
Client ID:	MW-105S-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	2.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-053
Lims ID: 280-174957-C-5
Client ID: MW-105D-20230411
Sample Type: Client
Inject. Date: 14-Apr-2023 05:17:00 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-050
Misc. Info.: 280-0120396-050
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.083	3.132	-0.049	2829737	0.1628	
2 Chloride	4.362	4.385	-0.023	4706942290	280.9	E
3 Nitrite as N		5.053			ND	
4 Bromide	6.368	6.353	0.015	4610766	0.7638	
5 Nitrate as N	7.082	7.075	0.007	26293669	NC	
7 Orthophosphate as P	9.427	9.532	-0.105	3343279	NC	
6 Sulfate	10.257	10.773	-0.516	951683807	79.1	

QC Flag Legend

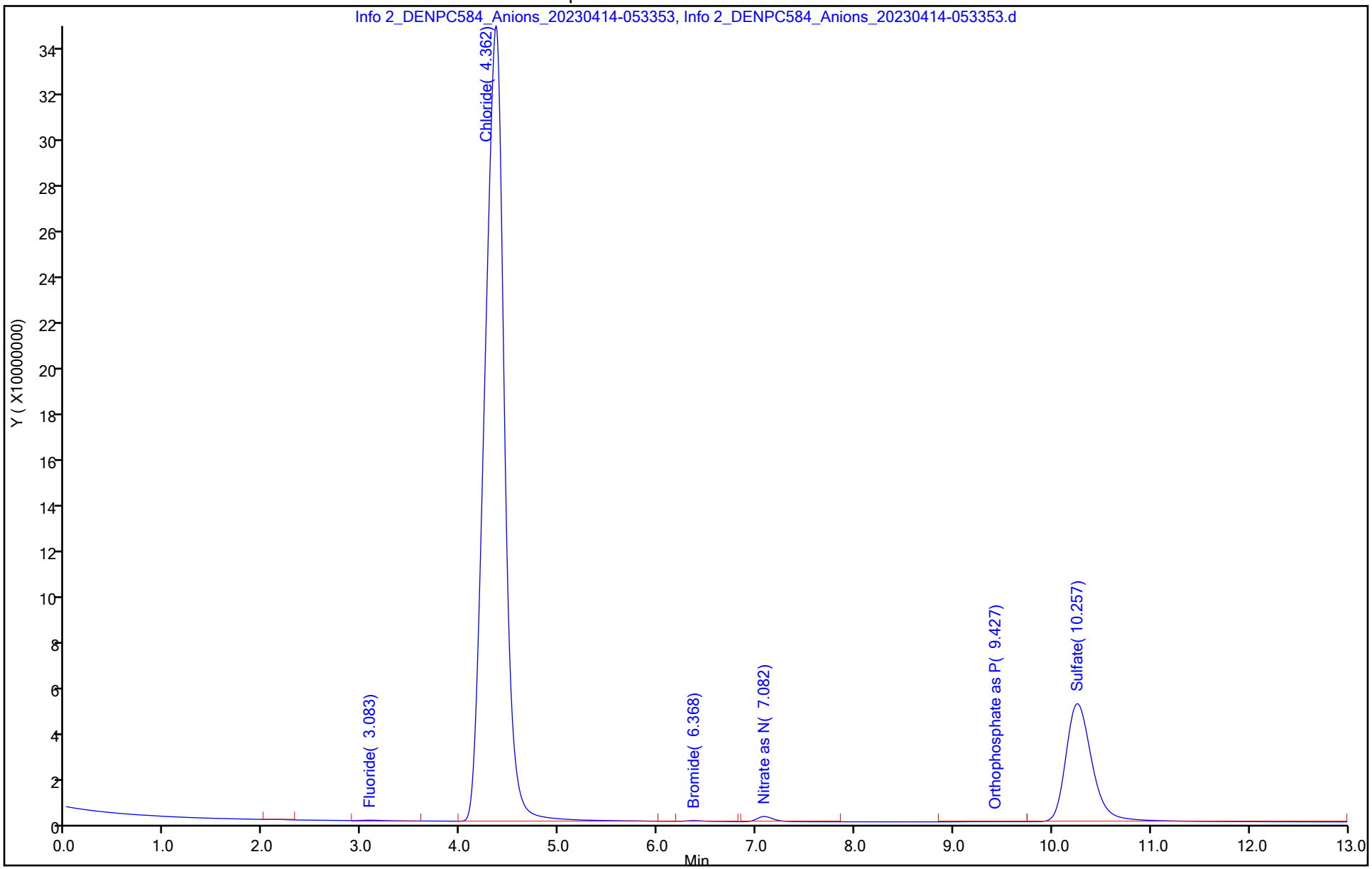
Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:32 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-053353.d

Injection Date:	14-Apr-2023 05:17:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-5	Lab Sample ID:	280-174957-5	Worklist Smp#:	50
Client ID:	MW-105D-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-054
Lims ID: 280-174957-C-5 DU
Client ID:
Sample Type: DU
Inject. Date: 14-Apr-2023 05:33:00 ALS Bottle#: 0 Worklist Smp#: 51
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-051
Misc. Info.: 280-0120396-051
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.080	3.132	-0.052	2812052		0.1624	
2 Chloride	4.360	4.385	-0.025	4713232308		281.2	E
3 Nitrite as N		5.053				ND	
4 Bromide	6.363	6.353	0.010	4360972		0.7250	
5 Nitrate as N	7.080	7.075	0.005	25985532		NC	
7 Orthophosphate as P	9.425	9.532	-0.107	3299144		NC	
6 Sulfate	10.253	10.773	-0.520	949757962		78.9	

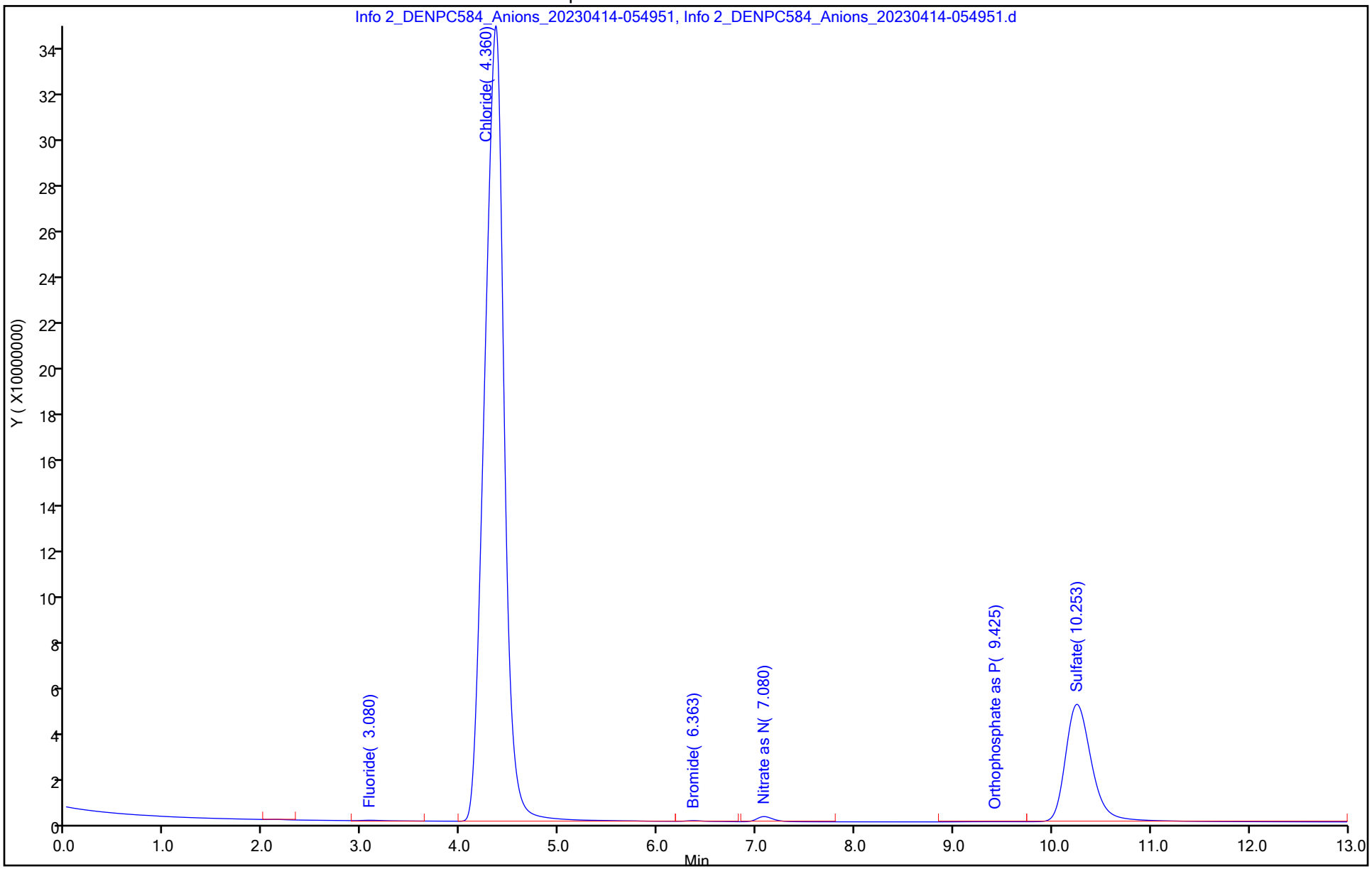
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Report Date: 14-Apr-2023 12:42:33 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-054951.d				
Injection Date:	14-Apr-2023 05:33:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-5 DU			Worklist Smp#:	51
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-060
Lims ID: 280-174957-C-5 MS
Client ID:
Sample Type: MS
Inject. Date: 14-Apr-2023 05:49:00 ALS Bottle#: 0 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-052
Misc. Info.: 280-0120396-052
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:24 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.088	3.132	-0.044	203206718	5.00	5.57	E
2 Chloride	4.375	4.385	-0.010	5513349716	50.0	329.0	E
3 Nitrite as N	4.928	5.053	-0.125	31191154	NC	NC	
4 Bromide	6.337	6.353	-0.016	39204685	5.00	6.14	E
5 Nitrate as N	7.015	7.075	-0.060	252741210	NC	NC	
7 Orthophosphate as P	9.113	9.532	-0.419	302361849	NC	NC	
6 Sulfate	10.222	10.773	-0.551	1607037730	50.0	133.6	E

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

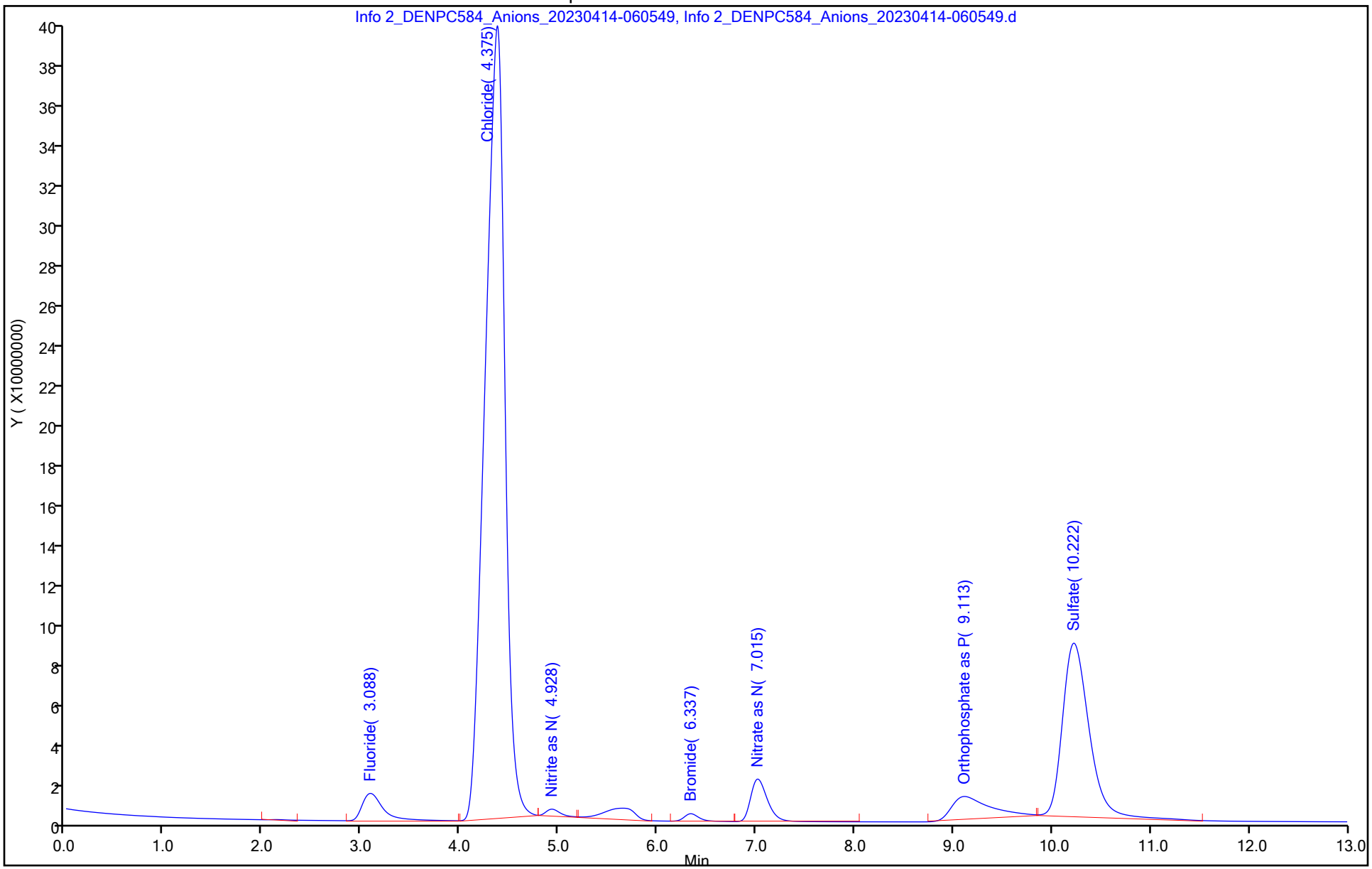
Reagents:

ICMS/MSD WEEK_00814 Amount Added: 0.10 Units: mL

Report Date: 14-Apr-2023 12:42:34 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-060549.d				
Injection Date:	14-Apr-2023 05:49:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-5 MS			Worklist Smp#:	52
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-062
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 06:05:00 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-053
Misc. Info.: 280-0120396-053
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:35 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.085	3.132	-0.047	77121120	2.50	2.17	
2 Chloride	4.265	4.385	-0.120	831386823	50.0	49.8	
3 Nitrite as N	4.940	5.053	-0.113	88922203	NC	NC	
4 Bromide	6.122	6.353	-0.231	14805101	2.50	2.35	
5 Nitrate as N	6.867	7.075	-0.208	95112046	NC	NC	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.117	10.773	-0.656	604958092	50.0	50.3	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

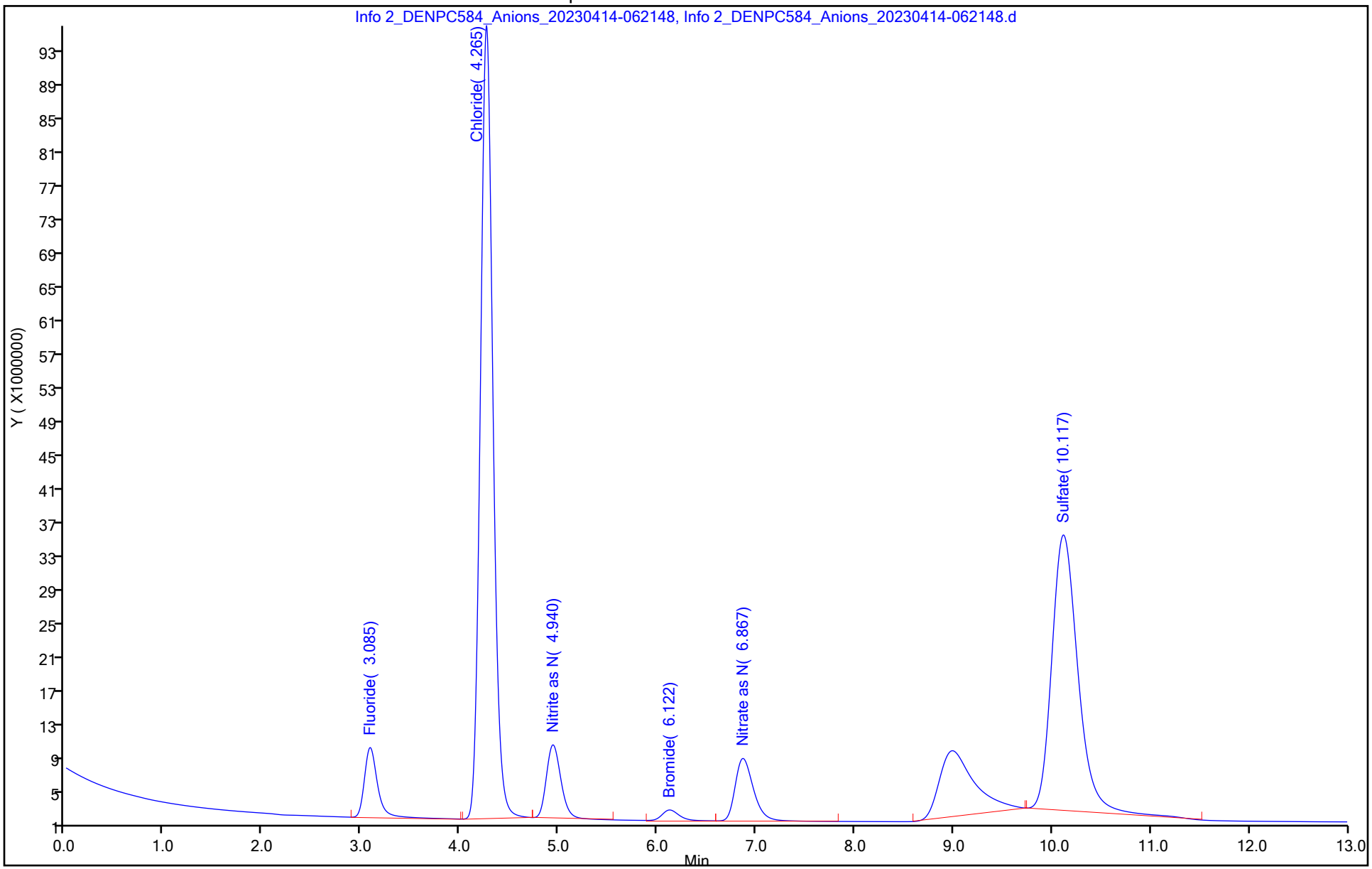
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-062148.d				
Injection Date:	14-Apr-2023 06:05:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	53
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-063
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 06:21:00 ALS Bottle#: 0 Worklist Smp#: 54
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-054
Misc. Info.: 280-0120396-054
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:35 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:49:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.137	9.532	-0.395	10396778		NC	
6 Sulfate	10.258	10.773	-0.515	744037		0.0218	M

QC Flag Legend

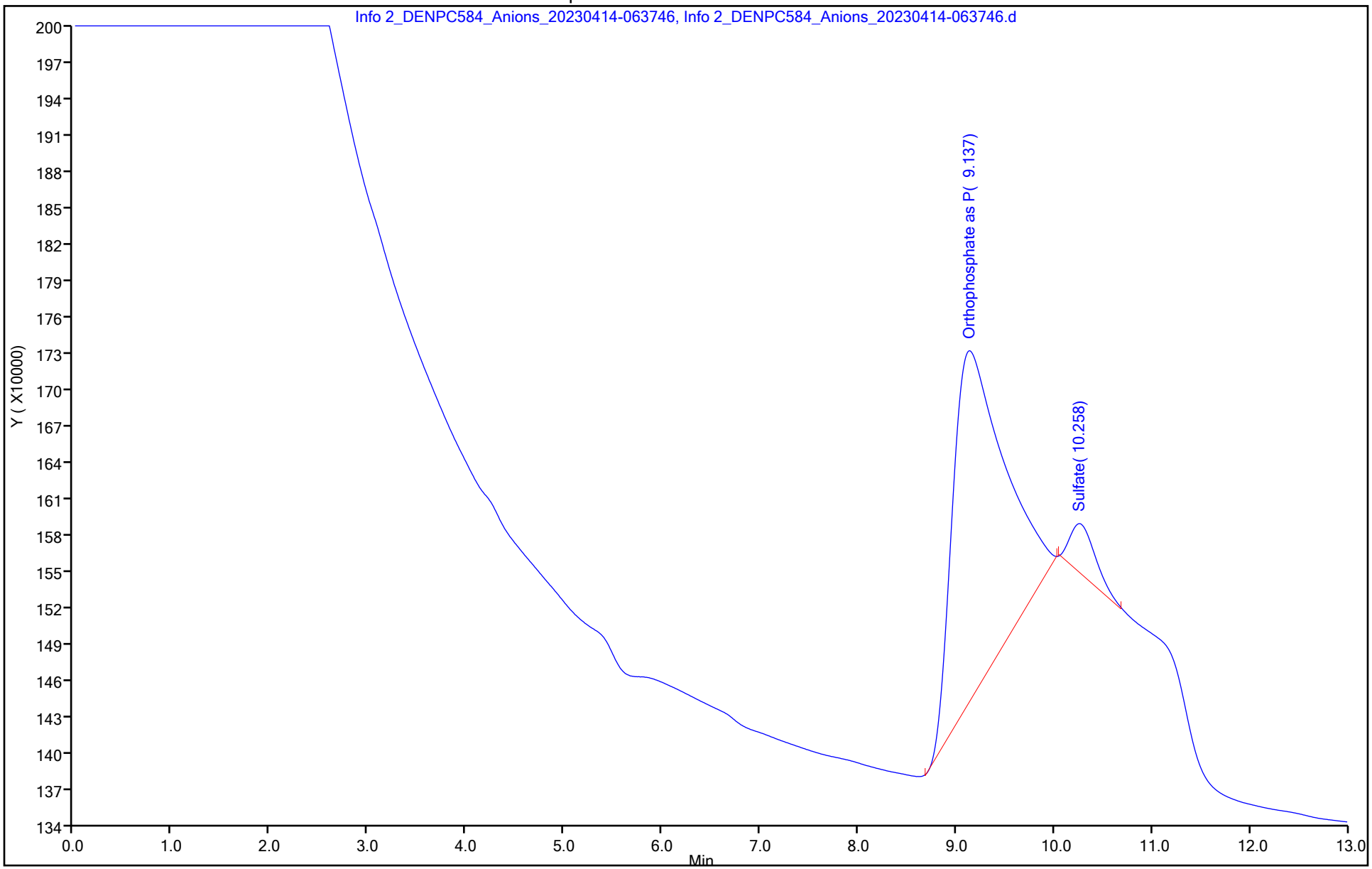
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-063746.d

Injection Date:	14-Apr-2023 06:21:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	54
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-063

Injection Date: 14-Apr-2023 06:21:00 Instrument ID: WC_IonChrom13

Lims ID: ccb

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 54

Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

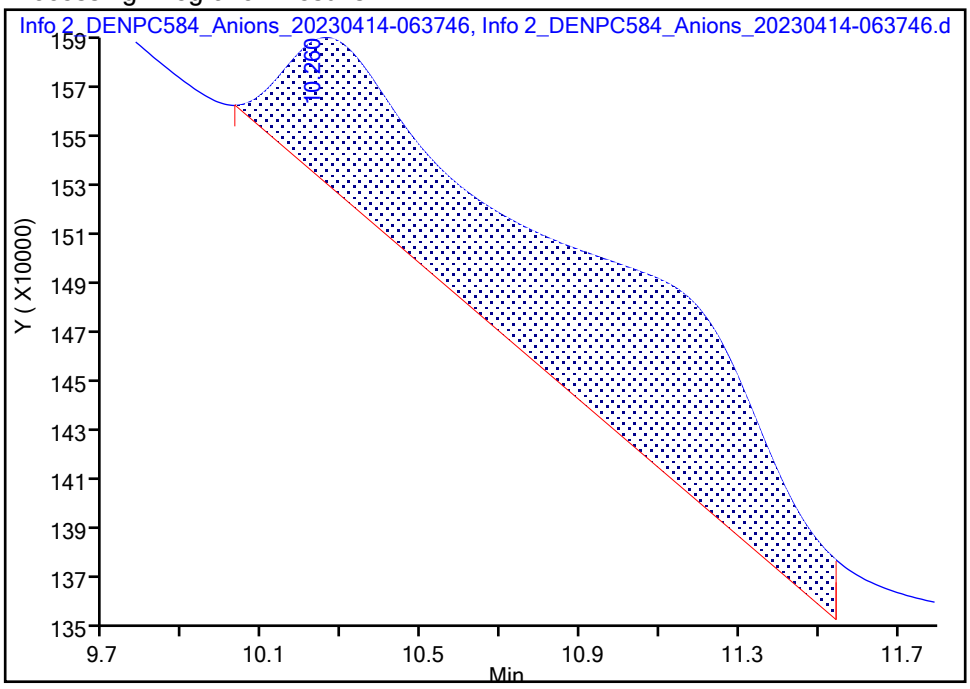
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

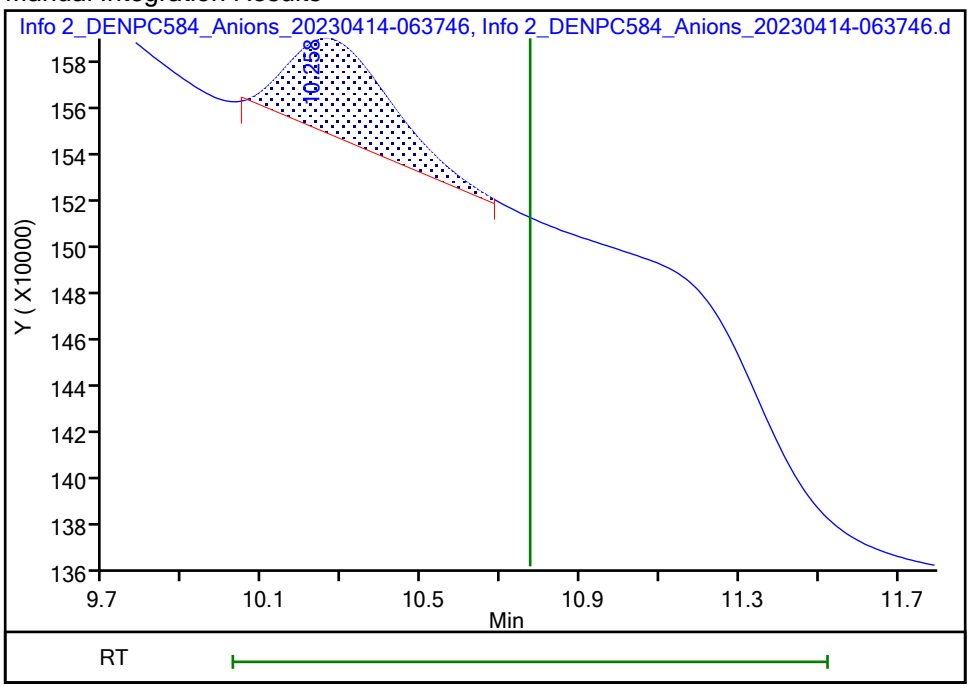
Processing Integration Results

RT: 10.26
Area: 4644348
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.26
Area: 744037
Amount: 0.021753
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 10:49:25

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-065
Lims ID: 280-174957-C-5 MSD
Client ID:
Sample Type: MSD
Inject. Date: 14-Apr-2023 06:37:00 ALS Bottle#: 0 Worklist Smp#: 55
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-055
Misc. Info.: 280-0120396-055
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:35 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.087	3.132	-0.045	204698414	5.00	5.61	E
2 Chloride	4.372	4.385	-0.013	5505994343	50.0	328.5	E
3 Nitrite as N	4.932	5.053	-0.121	70944630	NC	NC	
4 Bromide	6.333	6.353	-0.020	38391735	5.00	6.01	E
5 Nitrate as N	7.000	7.075	-0.075	250440626	NC	NC	
7 Orthophosphate as P	9.123	9.532	-0.409	315560205	NC	NC	
6 Sulfate	10.235	10.773	-0.538	1601875350	50.0	133.2	E

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

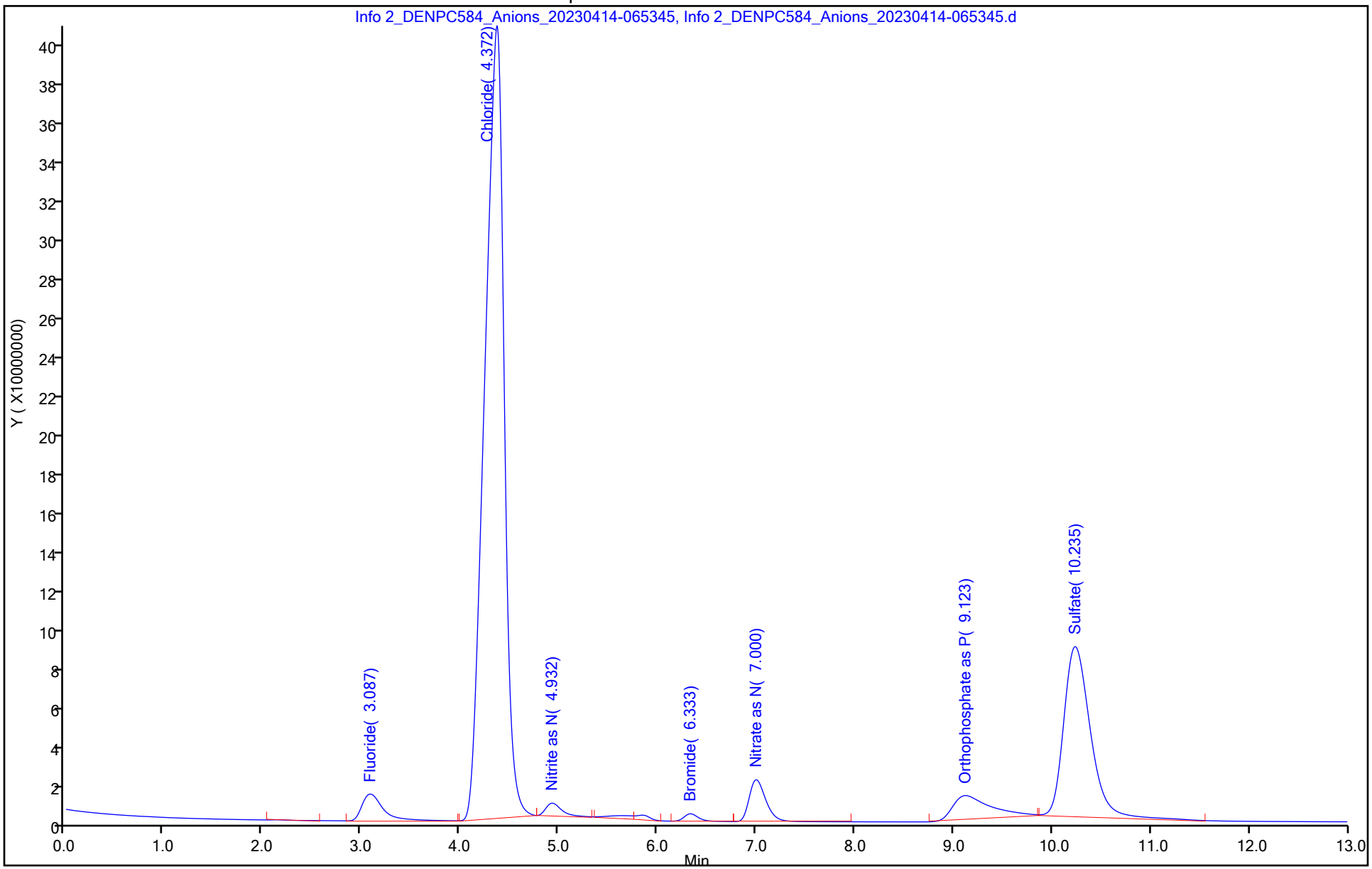
Reagents:

ICMS/MSD WEEK_00814 Amount Added: 0.10 Units: mL

Report Date: 14-Apr-2023 12:42:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-065345.d				
Injection Date:	14-Apr-2023 06:37:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	280-174957-C-5 MSD			Worklist Smp#:	55
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-074
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 07:25:00 ALS Bottle#: 0 Worklist Smp#: 58
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-058
Misc. Info.: 280-0120396-058
Operator ID: wetchemd Instrument ID: WC_IonChrom13
Sublist: chrom-Anions-IC13*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:38 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.090	3.132	-0.042	76697646	2.50	2.16	
2 Chloride	4.267	4.385	-0.118	831674522	50.0	49.8	
3 Nitrite as N	4.938	5.053	-0.115	89131171	NC	NC	
4 Bromide	6.117	6.353	-0.236	14763179	2.50	2.34	
5 Nitrate as N	6.855	7.075	-0.220	96083191	NC	NC	
7 Orthophosphate as P		9.532			ND	ND	
6 Sulfate	10.138	10.773	-0.635	602869339	50.0	50.1	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

Reagents:

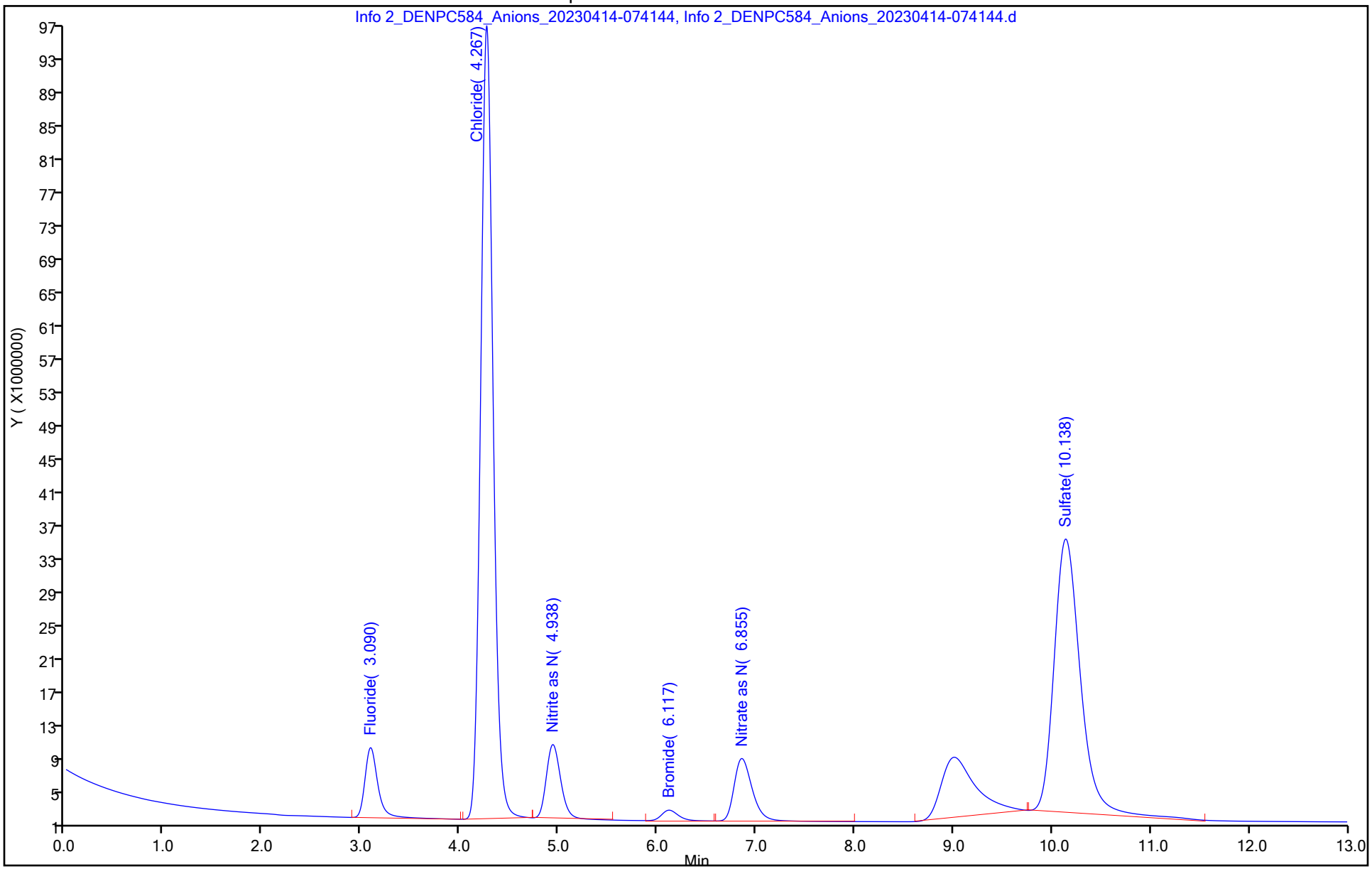
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 14-Apr-2023 12:42:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-074144.d

Injection Date:	14-Apr-2023 07:25:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	58
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-075
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 07:41:00 ALS Bottle#: 0 Worklist Smp#: 59
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120396-059
Misc. Info.: 280-0120396-059
Operator ID: wetchemd Instrument ID: WC_IonChrom13

Method: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Anions-IC13.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 12:42:38 Calib Date: 28-Feb-2023 18:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230228-119025.b\Info 2_DENPC584_Anions_20230228-184

Column 1 : Det: 0005
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 10:55:32

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.132				ND	
2 Chloride		4.385				ND	
3 Nitrite as N		5.053				ND	
4 Bromide		6.353				ND	
5 Nitrate as N		7.075				ND	
7 Orthophosphate as P	9.157	9.532	-0.375	8360854		NC	
6 Sulfate	10.290	10.773	-0.483	787750		0.0254	M

QC Flag Legend

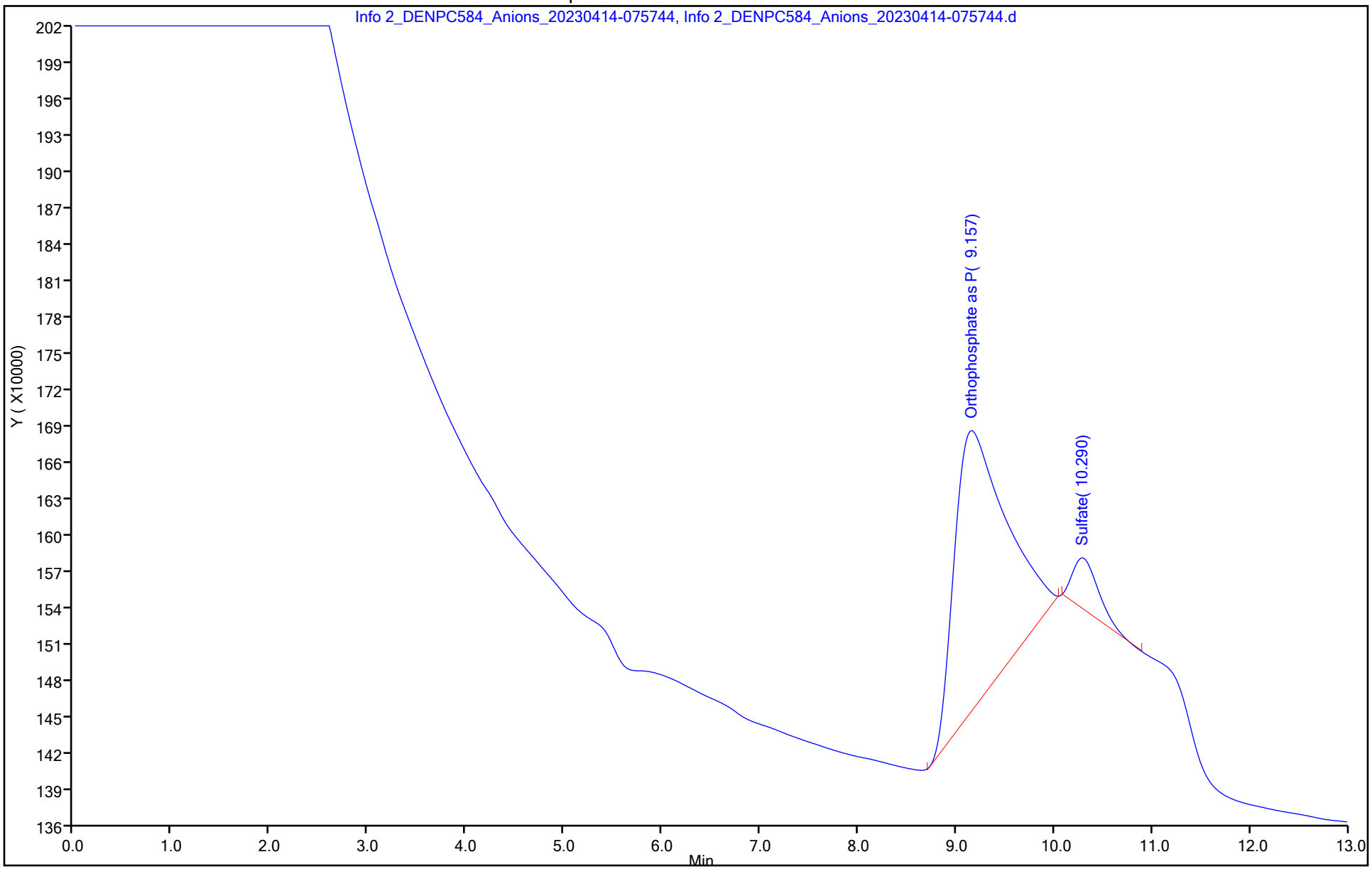
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 14-Apr-2023 12:42:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-075744.d

Injection Date:	14-Apr-2023 07:41:00	Instrument ID:	WC_IonChrom13	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	59
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-IC13	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom13\20230413-120396.b\Info 2_DENPC584_Anions_20230414-075

Injection Date: 14-Apr-2023 07:41:00 Instrument ID: WC_IonChrom13

Lims ID: ccb

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 59

Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: Anions-IC13 Limit Group: Wet - Anions 28D

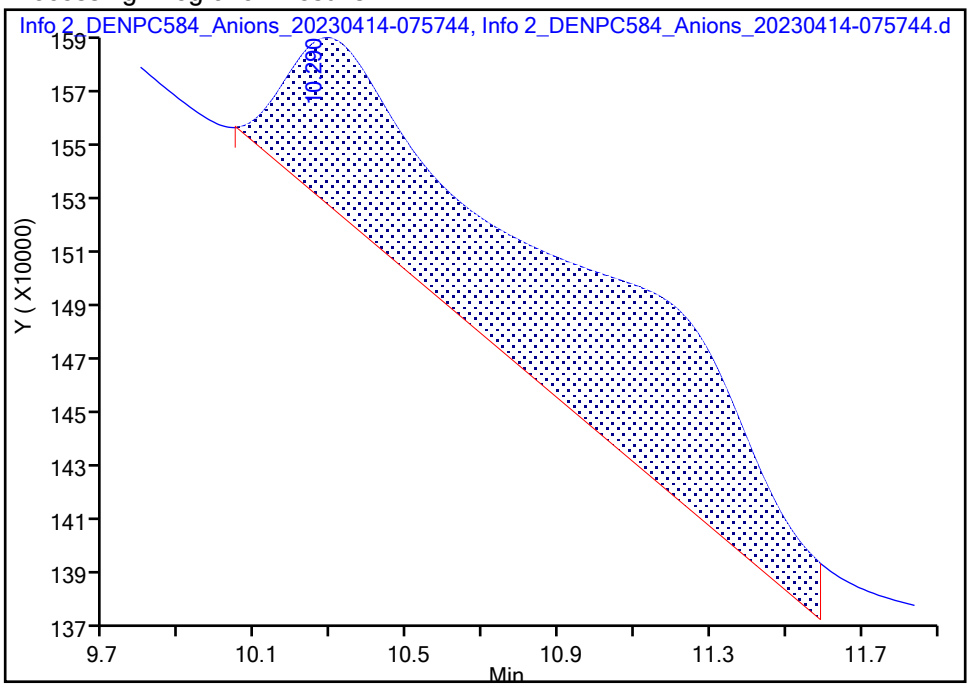
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

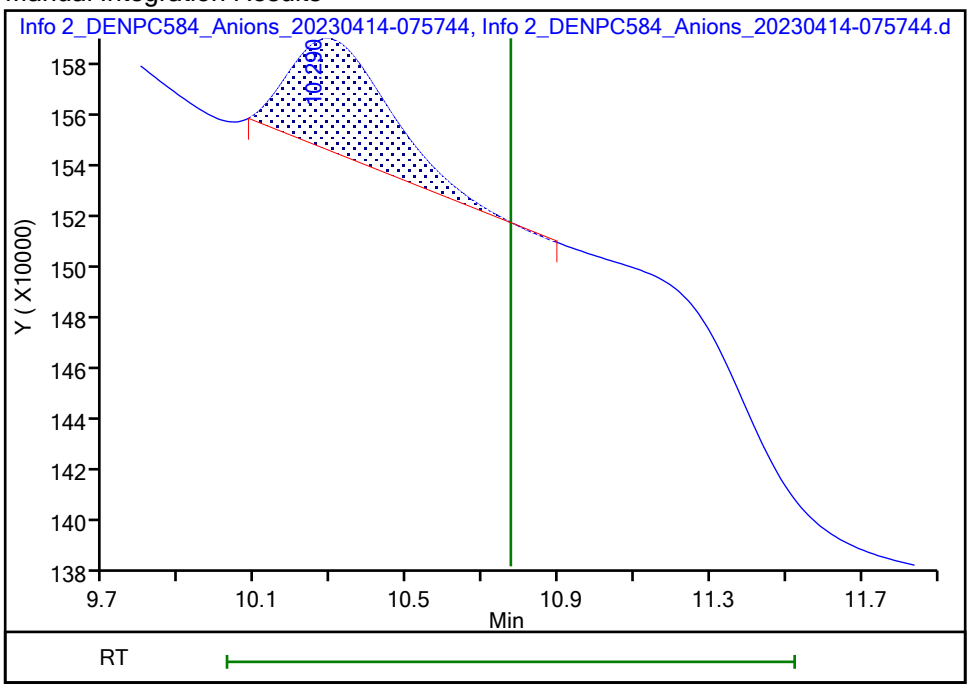
Processing Integration Results

RT: 10.29
Area: 4228058
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.29
Area: 787750
Amount: 0.025388
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 10:49:49

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	03-Apr-2023 17:54:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120083-007				
Misc. Info.:	ICV				
Operator ID:		Instrument ID:	WC_IonChrom15		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	04-Apr-2023 11:53:33	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1646				
First Level Reviewer: XAY4		Date:	04-Apr-2023 10:06:27		
Start Cal Date:	03-Apr-2023 16:42:00				
End Cal Date:	03-Apr-2023 17:42:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 03-Apr-2023 16:54:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-002
Misc. Info.: STD L2
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:17:57 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.927	1.927	0.000	514755	NC	NC	Ma
2 Chloride	2.700	2.700	0.000	4009670	NC	NC	M
3 Nitrite as N	3.230	3.230	0.000	1566723	0.2000	0.2056	M
4 Bromide	3.833	3.833	0.000	220121	NC	NC	
5 Nitrate as N	4.303	4.303	0.000	1304923	0.2000	0.2088	
7 Orthophosphate as P	5.760	5.760	0.000	446882	0.2000	0.1925	
6 Sulfate	6.540	6.540	0.000	2443469	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.10 Units: mL
IC Cal low_00701 Amount Added: 0.08 Units: mL

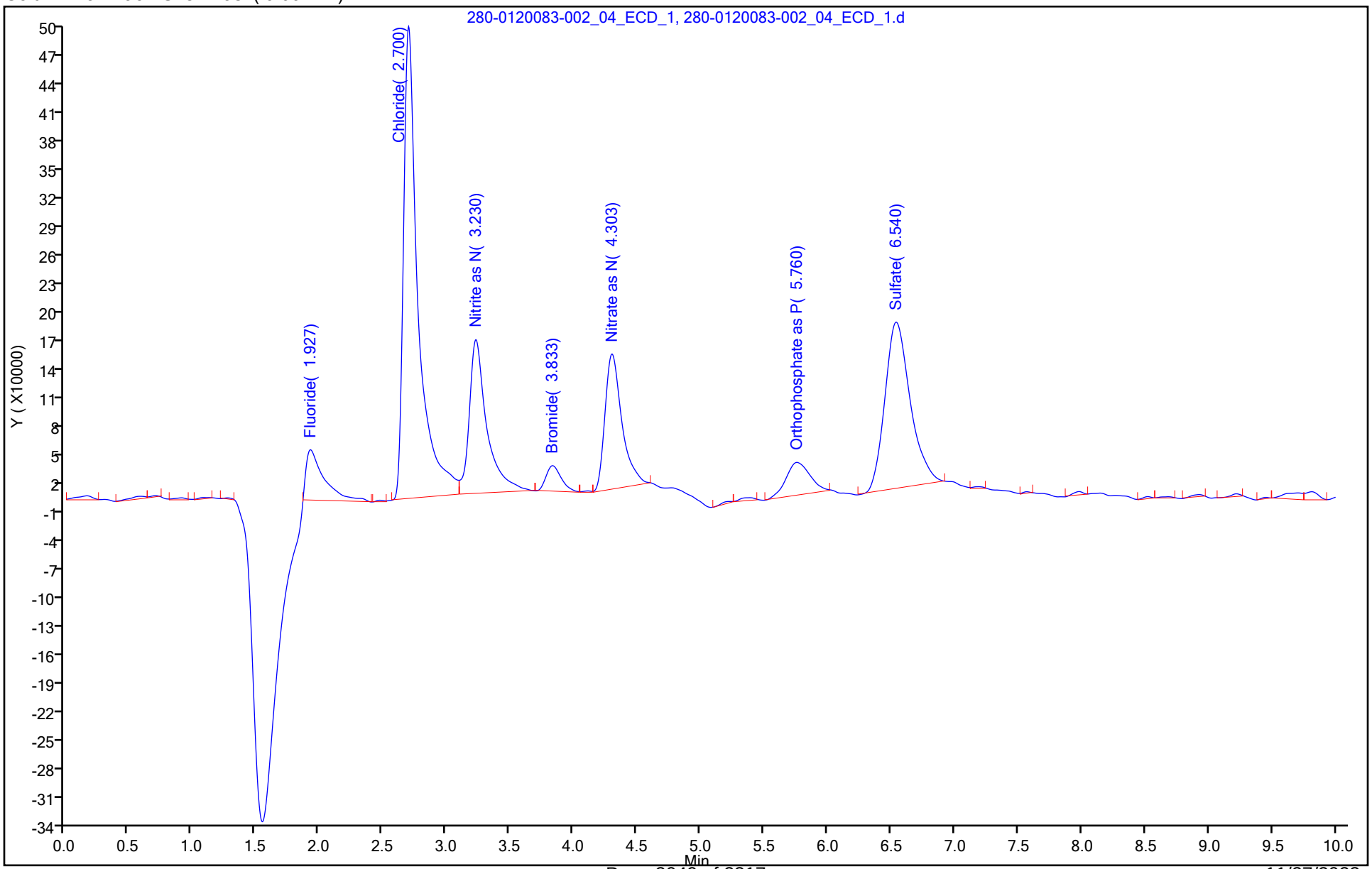
Report Date: 04-Apr-2023 11:17:58 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d

Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

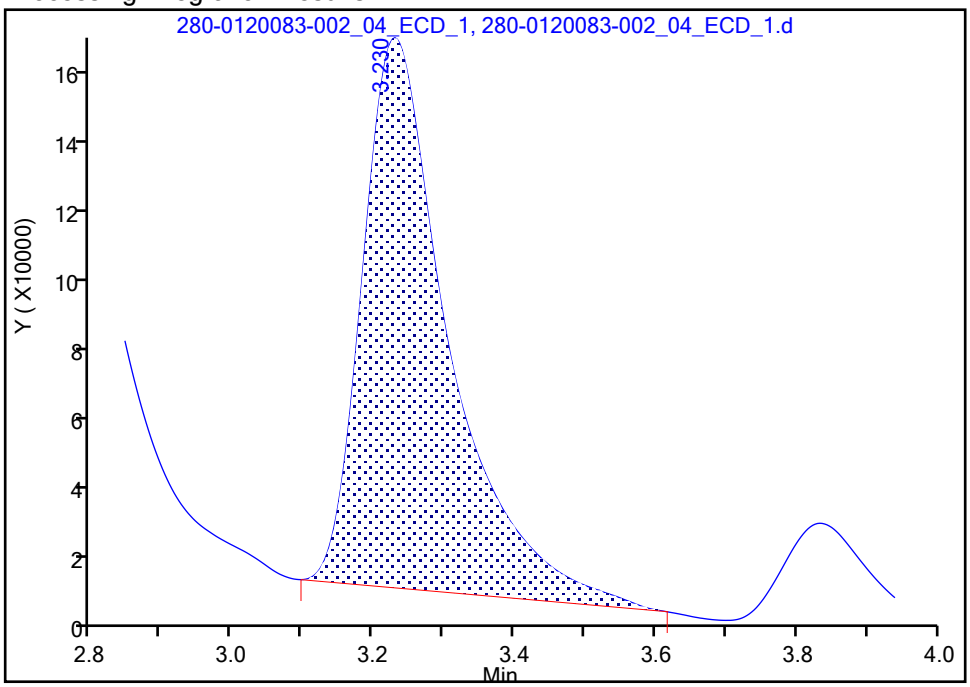
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d				
Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

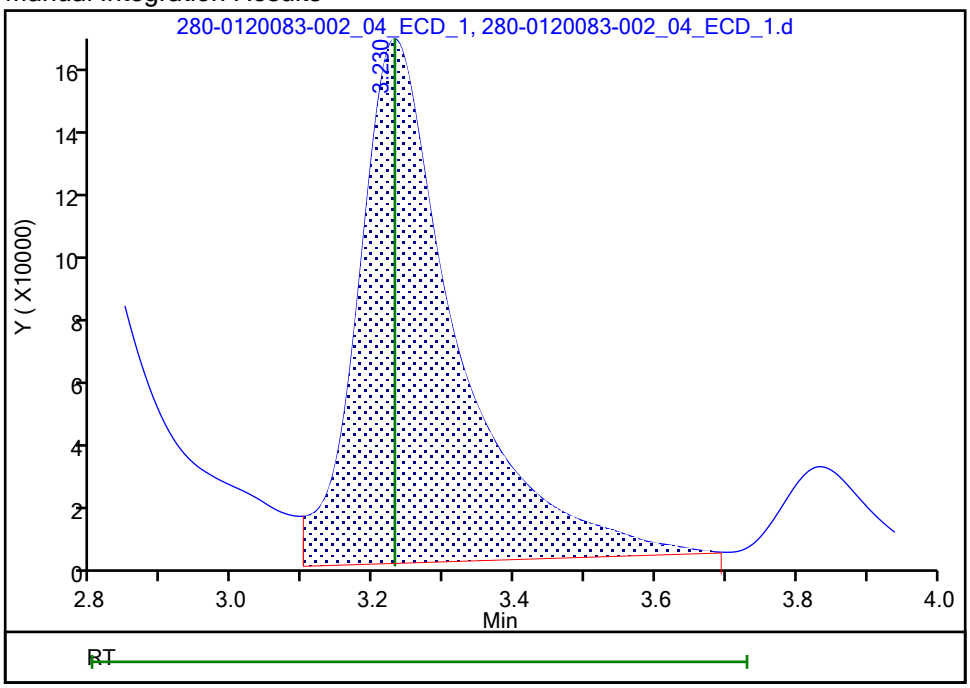
Processing Integration Results

RT: 3.23
Area: 1284445
Amount: 0.207767
Amount Units: ug/ml



Manual Integration Results

RT: 3.23
Area: 1566723
Amount: 0.205634
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:09:27
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 03-Apr-2023 17:06:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-003
Misc. Info.: STD L3
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:17:58 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:49

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.923	1.923	0.000	1716859	NC	NC	M
2 Chloride	2.700	2.700	0.000	7890362	NC	NC	M
3 Nitrite as N	3.230	3.230	0.000	3703597	0.5000	0.4365	M
4 Bromide	3.830	3.830	0.000	543772	NC	NC	
5 Nitrate as N	4.303	4.303	0.000	3752523	0.5000	0.5083	
7 Orthophosphate as P	5.767	5.767	0.000	1406263	0.5000	0.5418	
6 Sulfate	6.543	6.543	0.000	5485179	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.20 Units: mL
IC Cal low_00701 Amount Added: 0.20 Units: mL

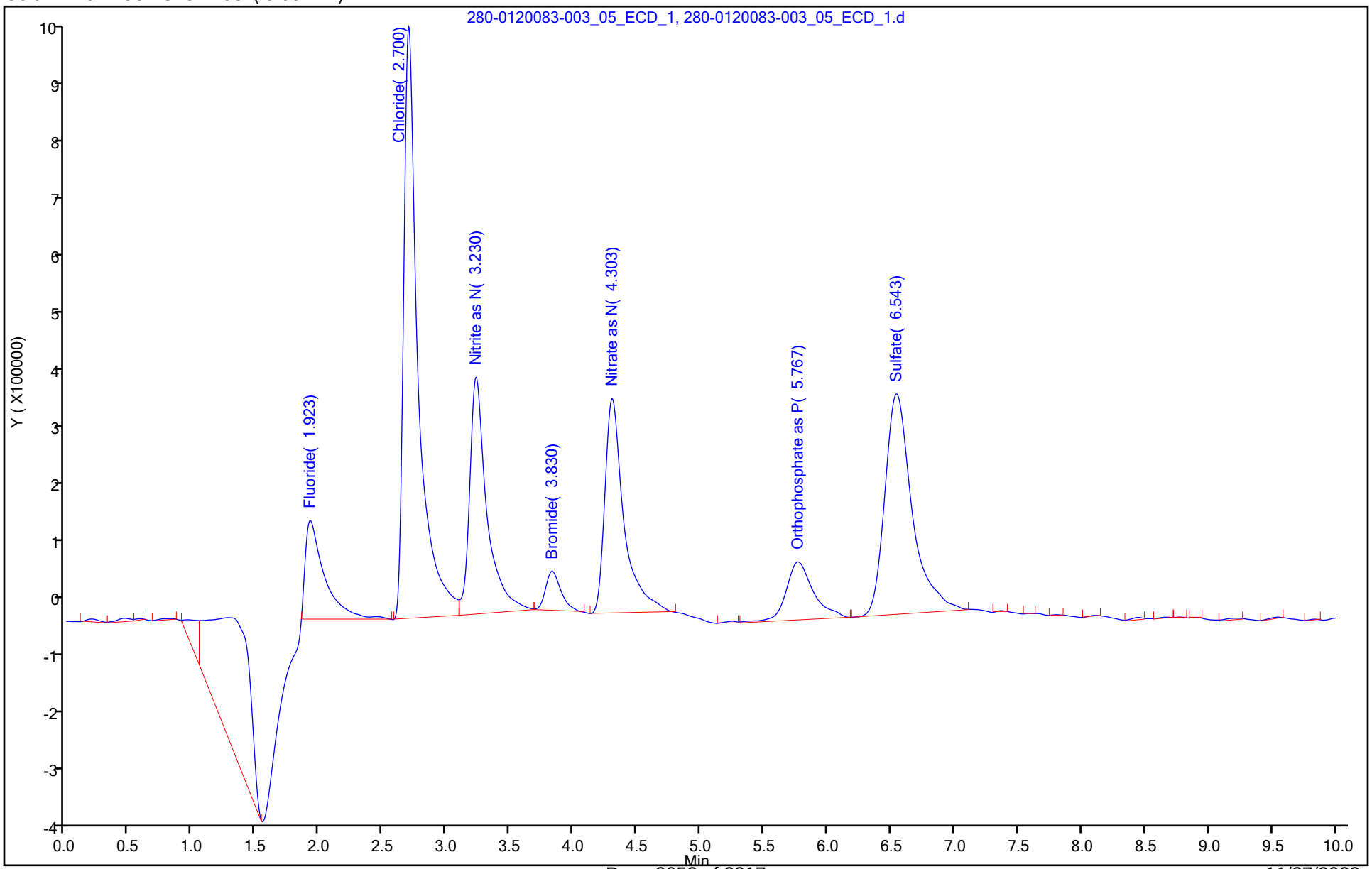
Report Date: 04-Apr-2023 11:17:58 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d

Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

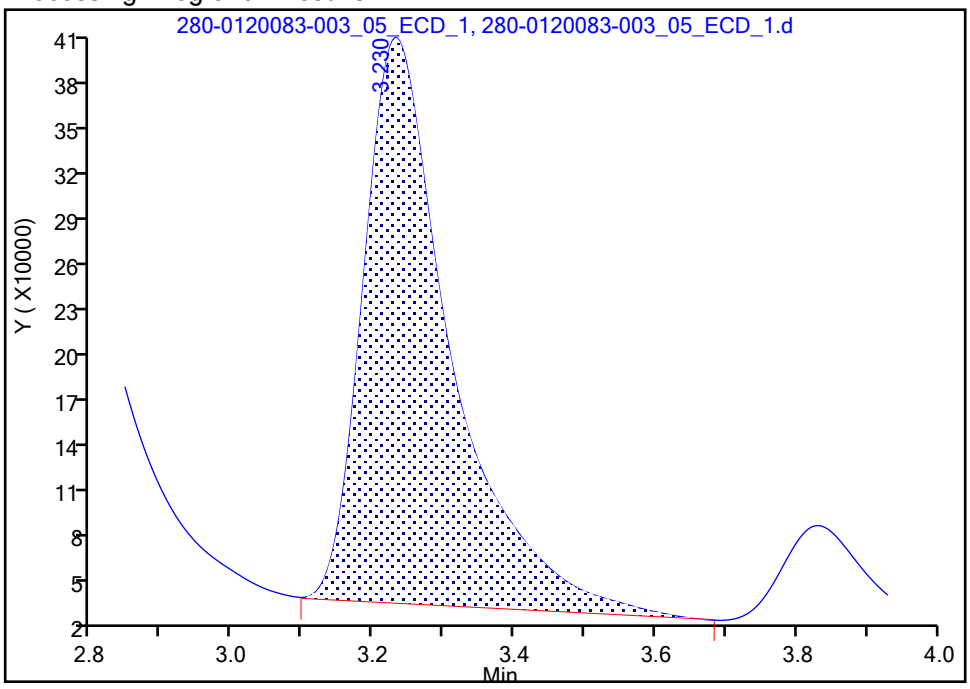
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d				
Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

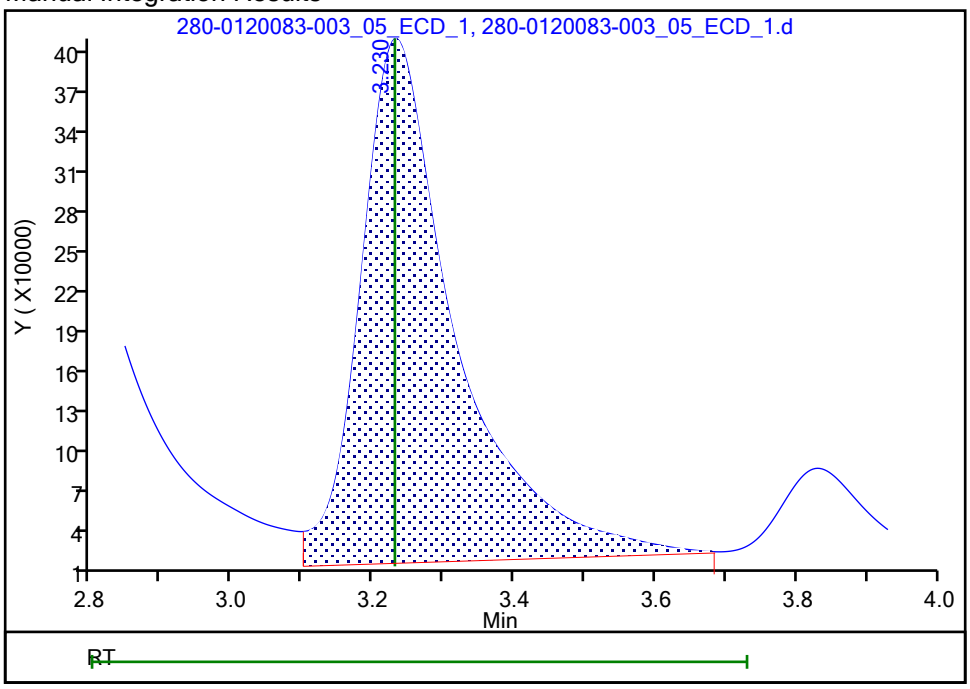
Processing Integration Results

RT: 3.23
Area: 3262468
Amount: 0.520633
Amount Units: ug/ml



Manual Integration Results

RT: 3.23
Area: 3703597
Amount: 0.436516
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:09:44
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 03-Apr-2023 17:18:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-004
Misc. Info.: STD L4
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:17:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	5002458	NC	NC	Ma
2 Chloride	2.703	2.703	0.000	104633916	NC	NC	M
3 Nitrite as N	3.227	3.227	0.000	9946553	1.00	1.11	Ma
4 Bromide	3.827	3.827	0.000	1082846	NC	NC	
5 Nitrate as N	4.300	4.300	0.000	7262541	1.00	0.9377	
7 Orthophosphate as P	5.763	5.763	0.000	2563153	1.00	0.9629	
6 Sulfate	6.550	6.550	0.000	75166700	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 2.40 Units: mL
IC Cal low_00701 Amount Added: 0.40 Units: mL

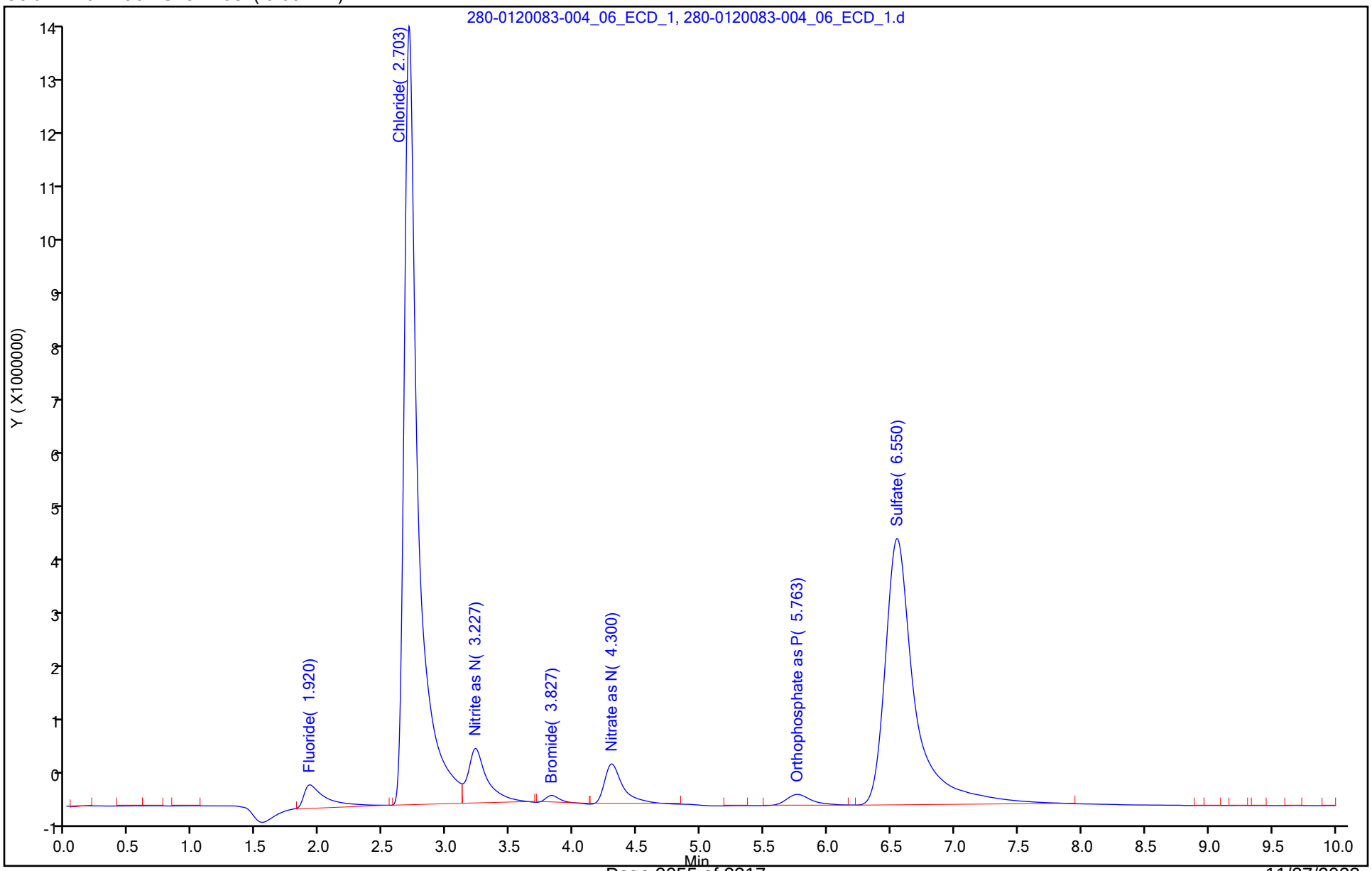
Report Date: 04-Apr-2023 11:17:59 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d

Injection Date:	03-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

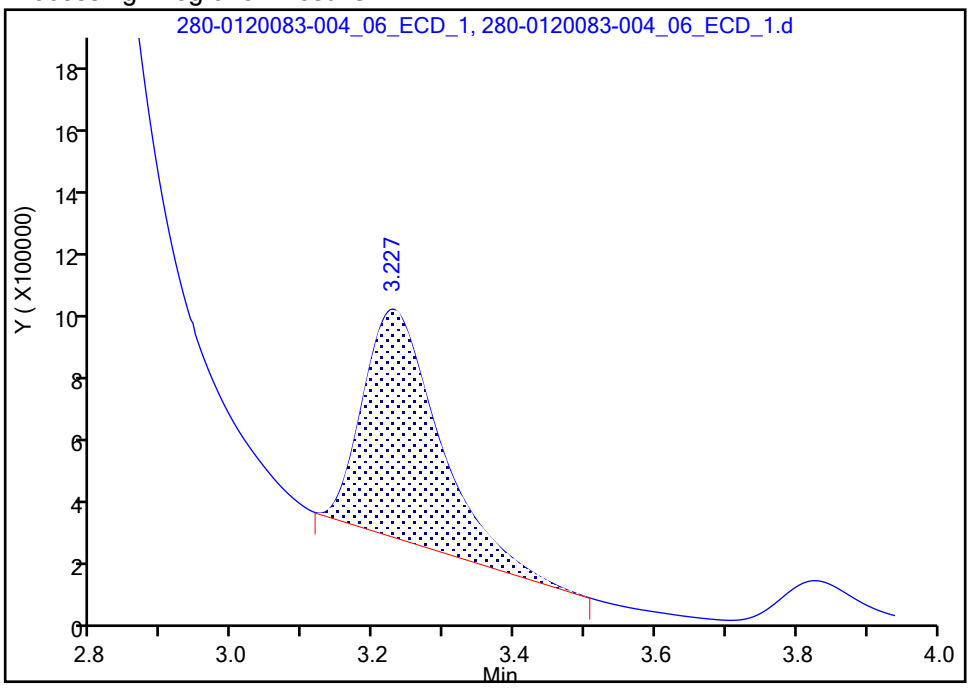
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Injection Date: 03-Apr-2023 17:18:00 Instrument ID: WC_IonChrom15
Lims ID: STD L4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

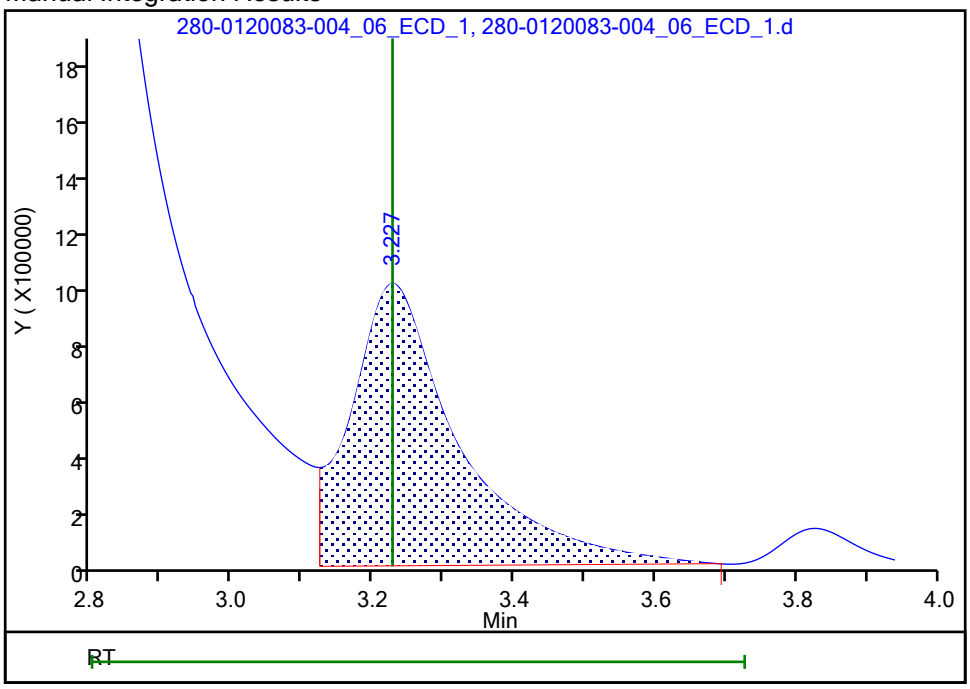
Processing Integration Results

RT: 3.23
Area: 5142333
Amount: 0.833184
Amount Units: ug/ml



Manual Integration Results

RT: 3.23
Area: 9946553
Amount: 1.111049
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:09
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 03-Apr-2023 17:30:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-005
Misc. Info.: STD L5
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:17:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	11696825	NC	NC	Ma
2 Chloride	2.710	2.710	0.000	225809574	NC	NC	M
3 Nitrite as N	3.230	3.230	0.000	22727090	2.50	2.49	Ma
4 Bromide	3.827	3.827	0.000	2730351	NC	NC	
5 Nitrate as N	4.300	4.300	0.000	19732616	2.50	2.46	
7 Orthophosphate as P	5.763	5.763	0.000	6654551	2.50	2.45	
6 Sulfate	6.557	6.557	0.000	155347554	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 4.80 Units: mL
IC Cal low_00701 Amount Added: 1.00 Units: mL

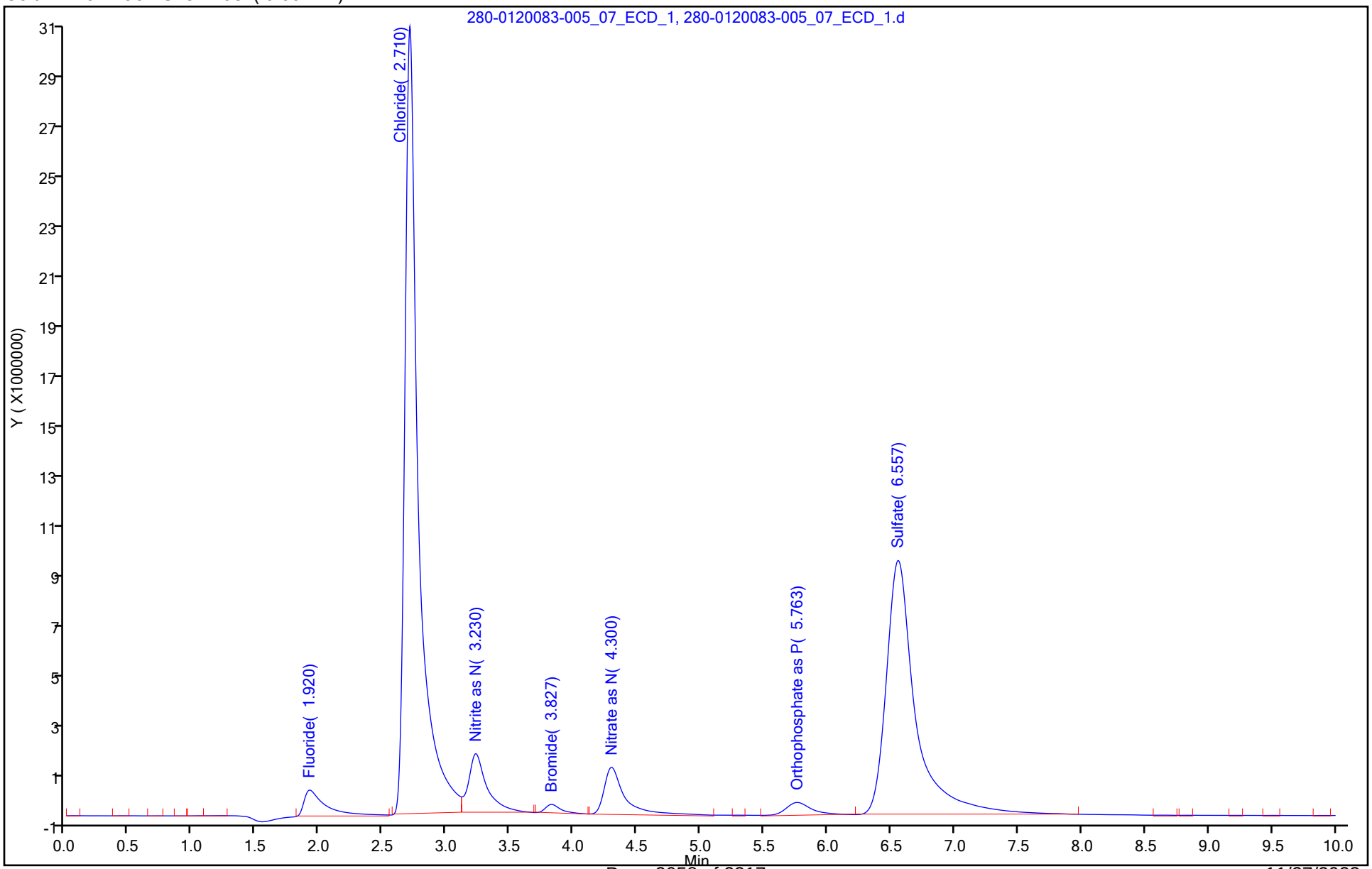
Report Date: 04-Apr-2023 11:17:59 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d

Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

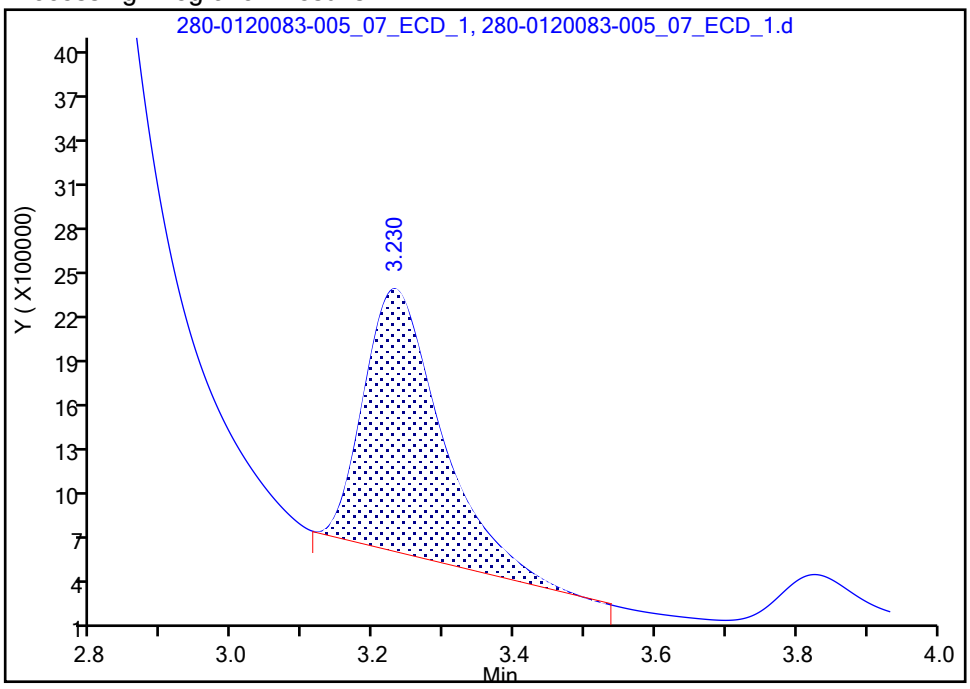
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d				
Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L5				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

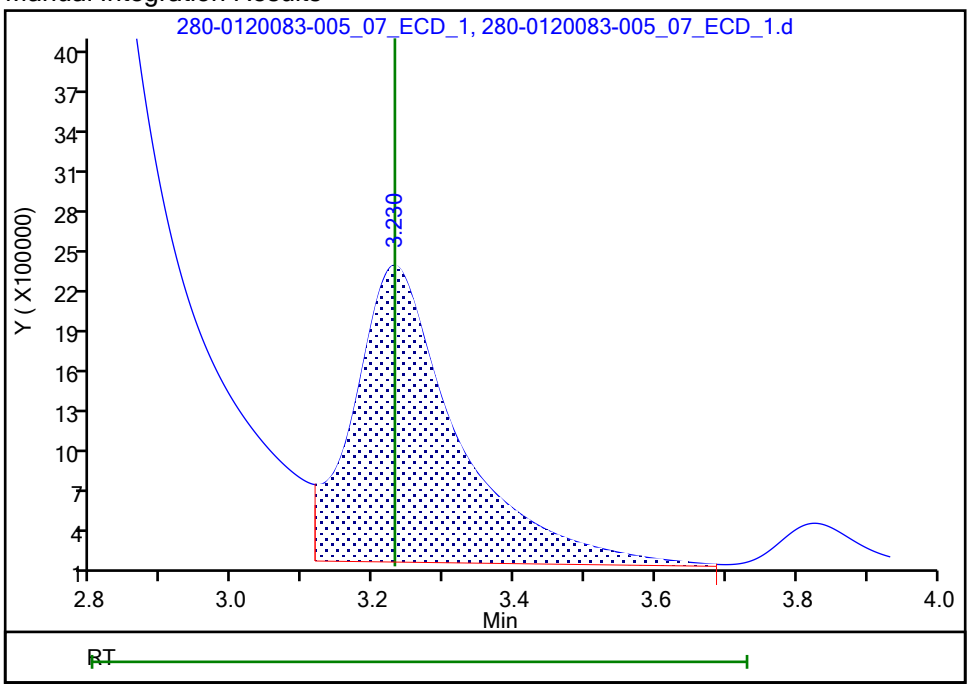
Processing Integration Results

RT: 3.23
Area: 13749384
Amount: 2.160355
Amount Units: ug/ml



Manual Integration Results

RT: 3.23
Area: 22727090
Amount: 2.491948
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:35

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 03-Apr-2023 17:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-006
Misc. Info.: STD L6
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:18:00 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	24054194	NC	NC	Ma
2 Chloride	2.717	2.717	0.000	408580005	NC	NC	M
3 Nitrite as N	3.230	3.230	0.000	45521852	5.00	4.95	Ma
4 Bromide	3.823	3.823	0.000	5641478	NC	NC	
5 Nitrate as N	4.293	4.293	0.000	41136324	5.00	5.08	
7 Orthophosphate as P	5.757	5.757	0.000	13790470	5.00	5.05	
6 Sulfate	6.563	6.563	0.000	273226252	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 8.00 Units: mL
IC Cal low_00701 Amount Added: 2.00 Units: mL

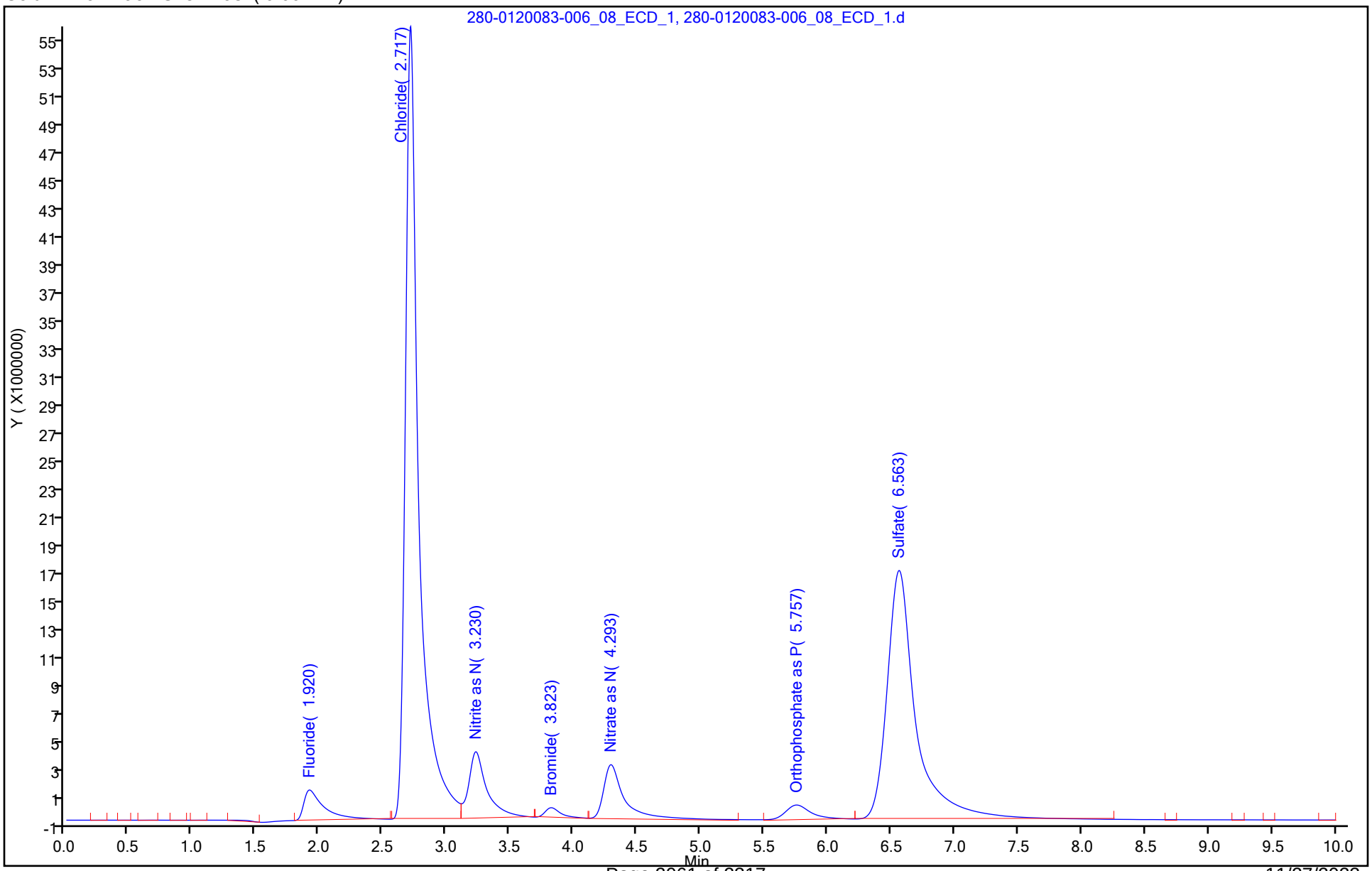
Report Date: 04-Apr-2023 11:18:00 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Injection Date:	03-Apr-2023 17:42:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

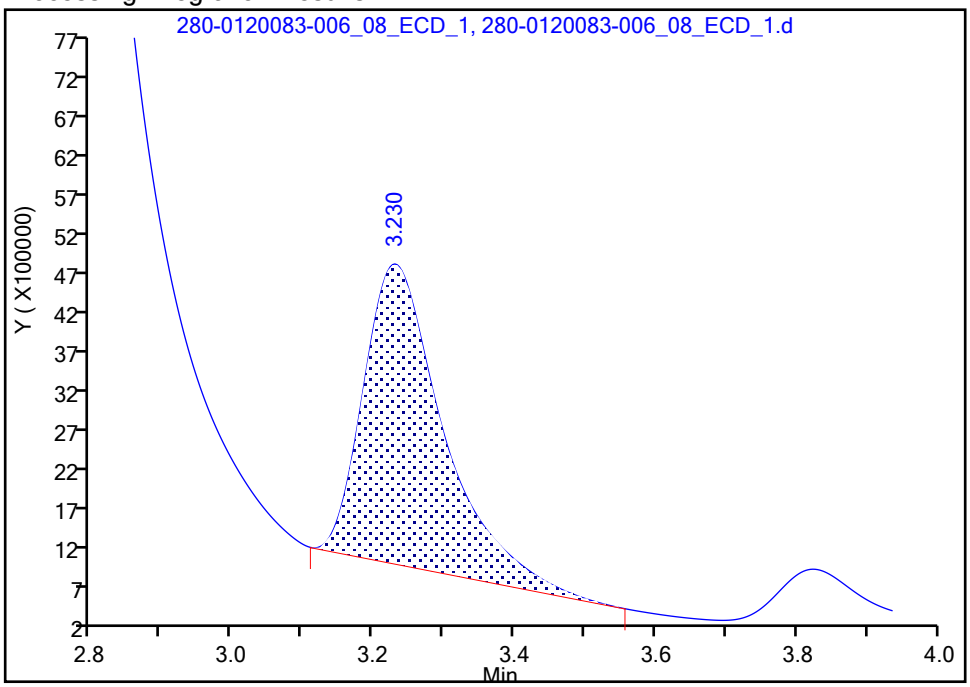
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Injection Date:	03-Apr-2023 17:42:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

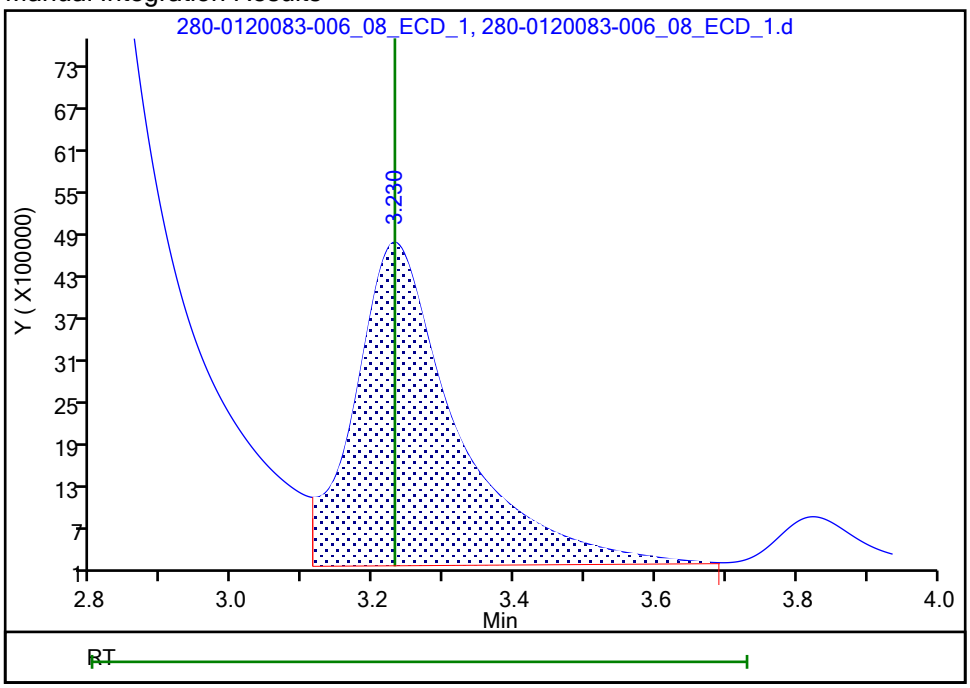
Processing Integration Results

RT: 3.23
Area: 30164058
Amount: 4.170397
Amount Units: ug/ml



Manual Integration Results

RT: 3.23
Area: 45521852
Amount: 4.954853
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:59

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_E
Lims ID: STD L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 03-Apr-2023 16:42:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120028-002280-0120083-001
Misc. Info.: STD L1
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:57 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride	2.700	2.700	0.000	1651846	0.5000	0.6109	M
3 Nitrite as N		3.230				ND	M
4 Bromide		3.823				ND	U
5 Nitrate as N		4.297				ND	U
7 Orthophosphate as P		5.763				ND	U
6 Sulfate	6.540	6.540	0.000	1025703	0.5000	0.6073	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.04 Units: mL
IC Cal low_00701 Amount Added: 0.00 Units: mL

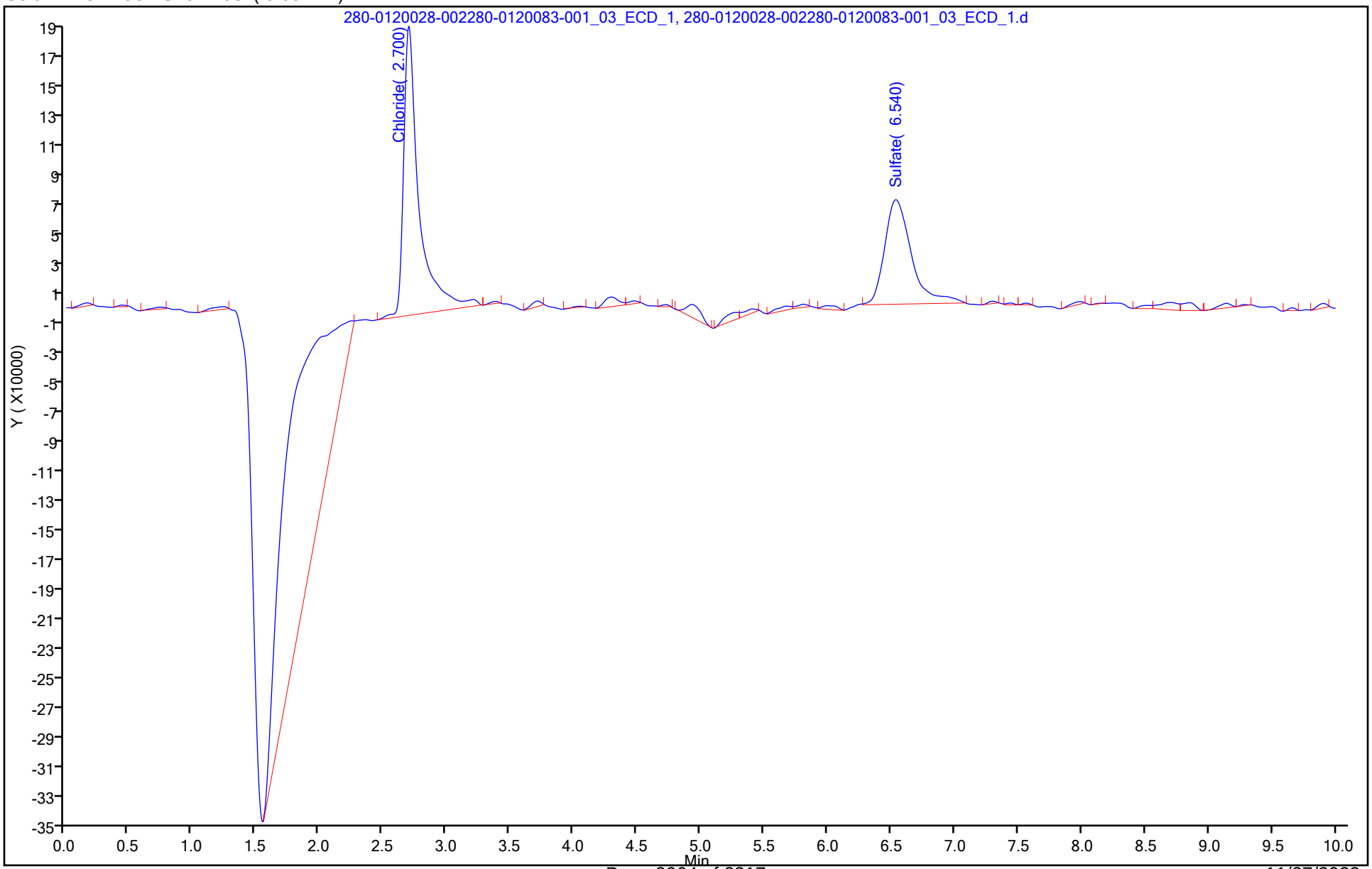
Report Date: 04-Apr-2023 11:17:57 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD_1.d

Injection Date:	03-Apr-2023 16:42:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L1			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

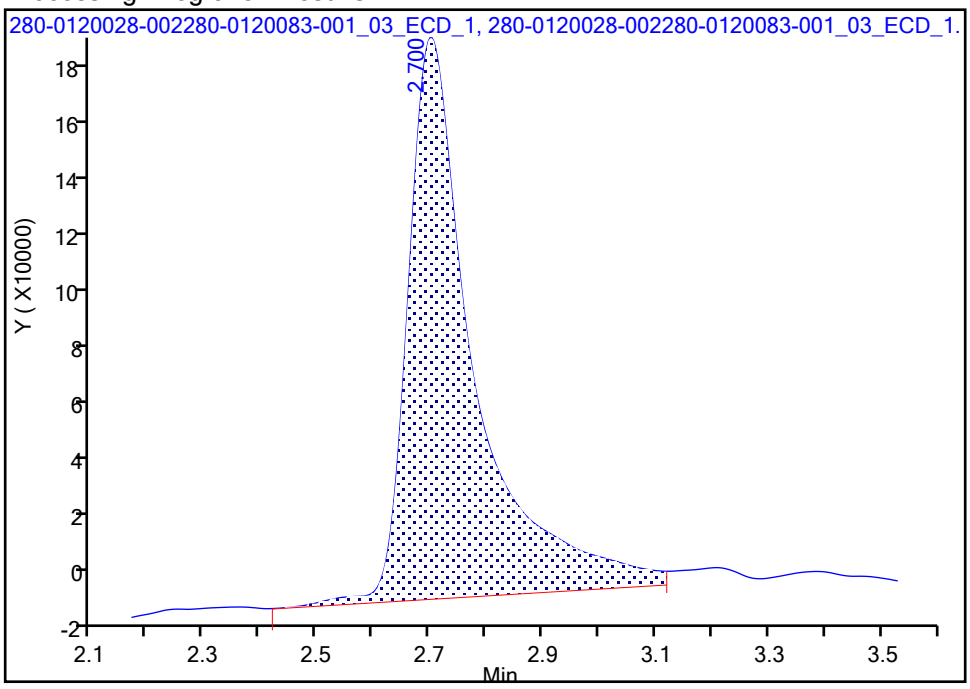
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_E
Injection Date: 03-Apr-2023 16:42:00 Instrument ID: WC_IonChrom15
Lims ID: STD L1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6

Signal: 1

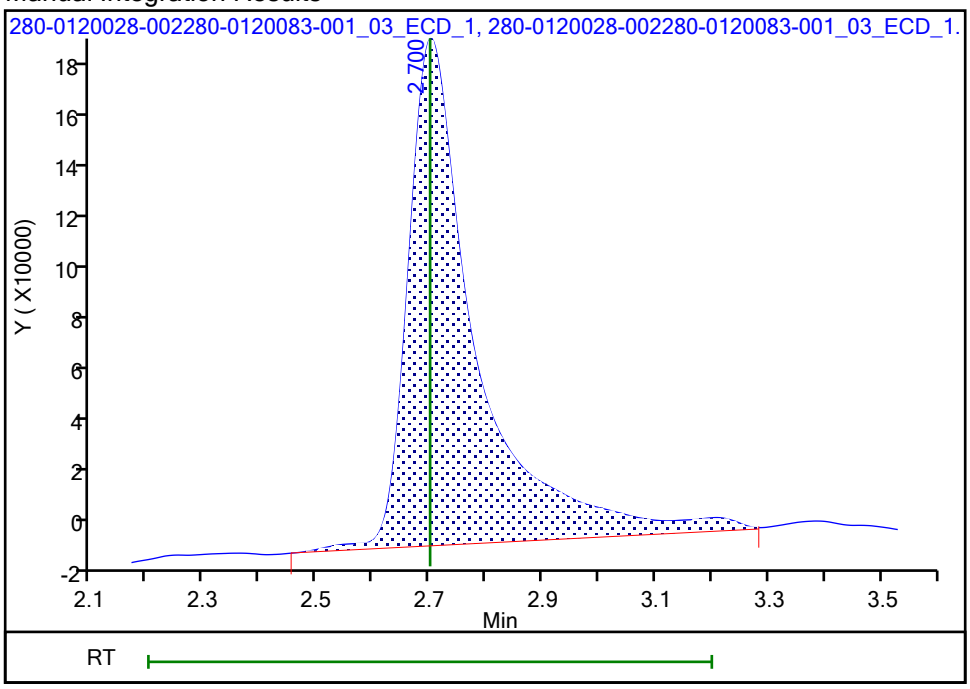
Processing Integration Results

RT: 2.70
Area: 1622548
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 1651846
Amount: 0.610935
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:06:44
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

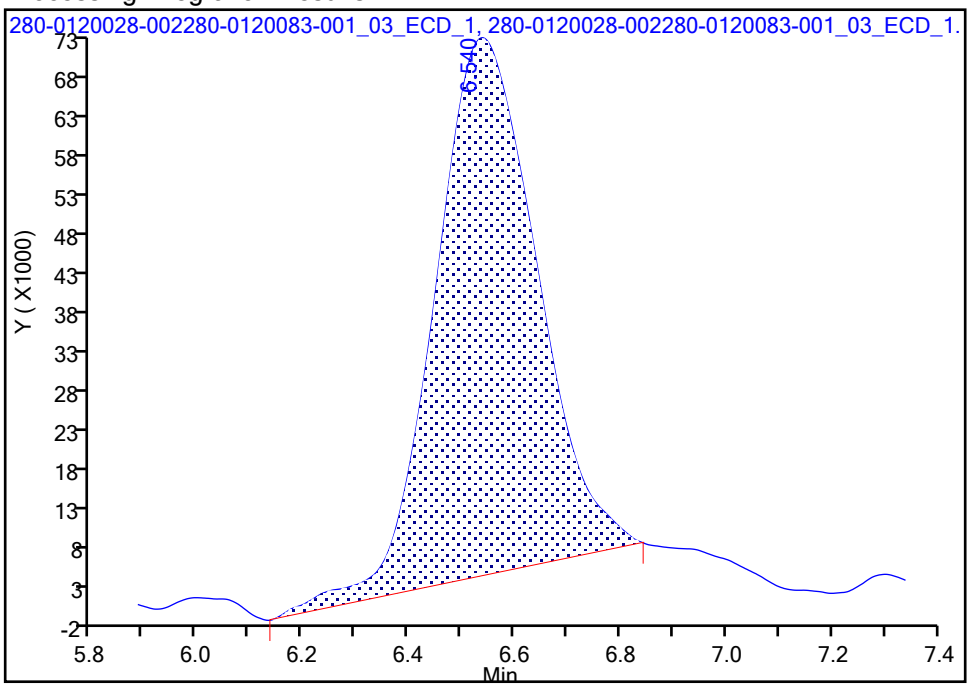
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_E
Injection Date: 03-Apr-2023 16:42:00 Instrument ID: WC_IonChrom15
Lims ID: STD L1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

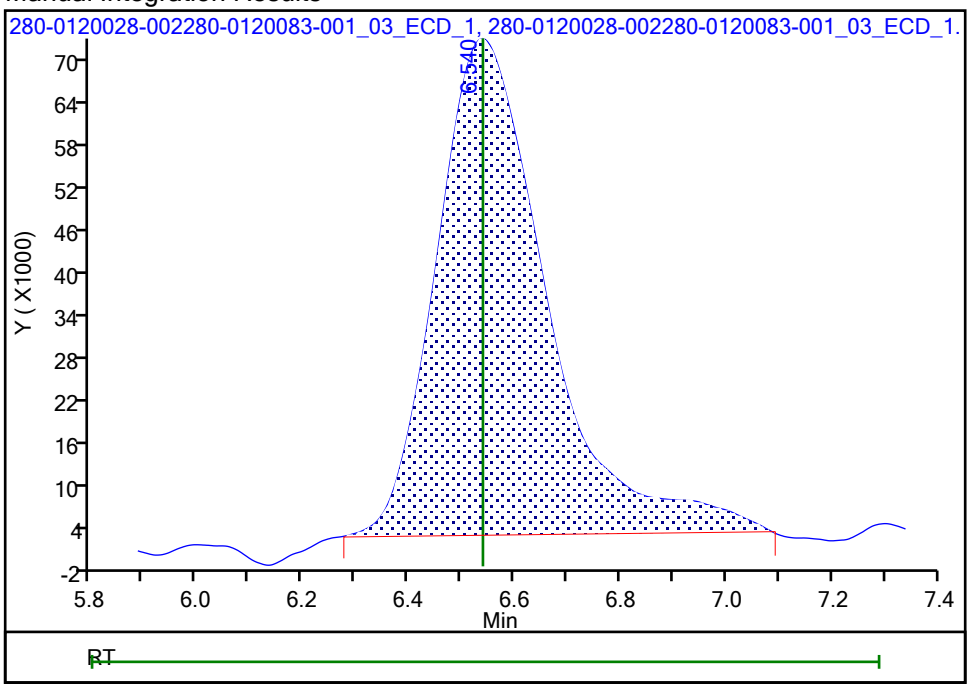
Processing Integration Results

RT: 6.54
Area: 926322
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 6.54
Area: 1025703
Amount: 0.607346
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:07:02
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 03-Apr-2023 16:54:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-002
Misc. Info.: STD L2
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:57 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.927	1.927	0.000	514755	0.2000	0.2028	Ma
2 Chloride	2.700	2.700	0.000	4009670	1.25	1.22	M
3 Nitrite as N	3.230	3.230	0.000	1566723	NC	NC	M
4 Bromide	3.833	3.833	0.000	220121	0.2000	0.2066	
5 Nitrate as N	4.303	4.303	0.000	1304923	NC	NC	
7 Orthophosphate as P	5.760	5.760	0.000	446882	NC	NC	
6 Sulfate	6.540	6.540	0.000	2443469	1.25	1.14	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.10 Units: mL
IC Cal low_00701 Amount Added: 0.08 Units: mL

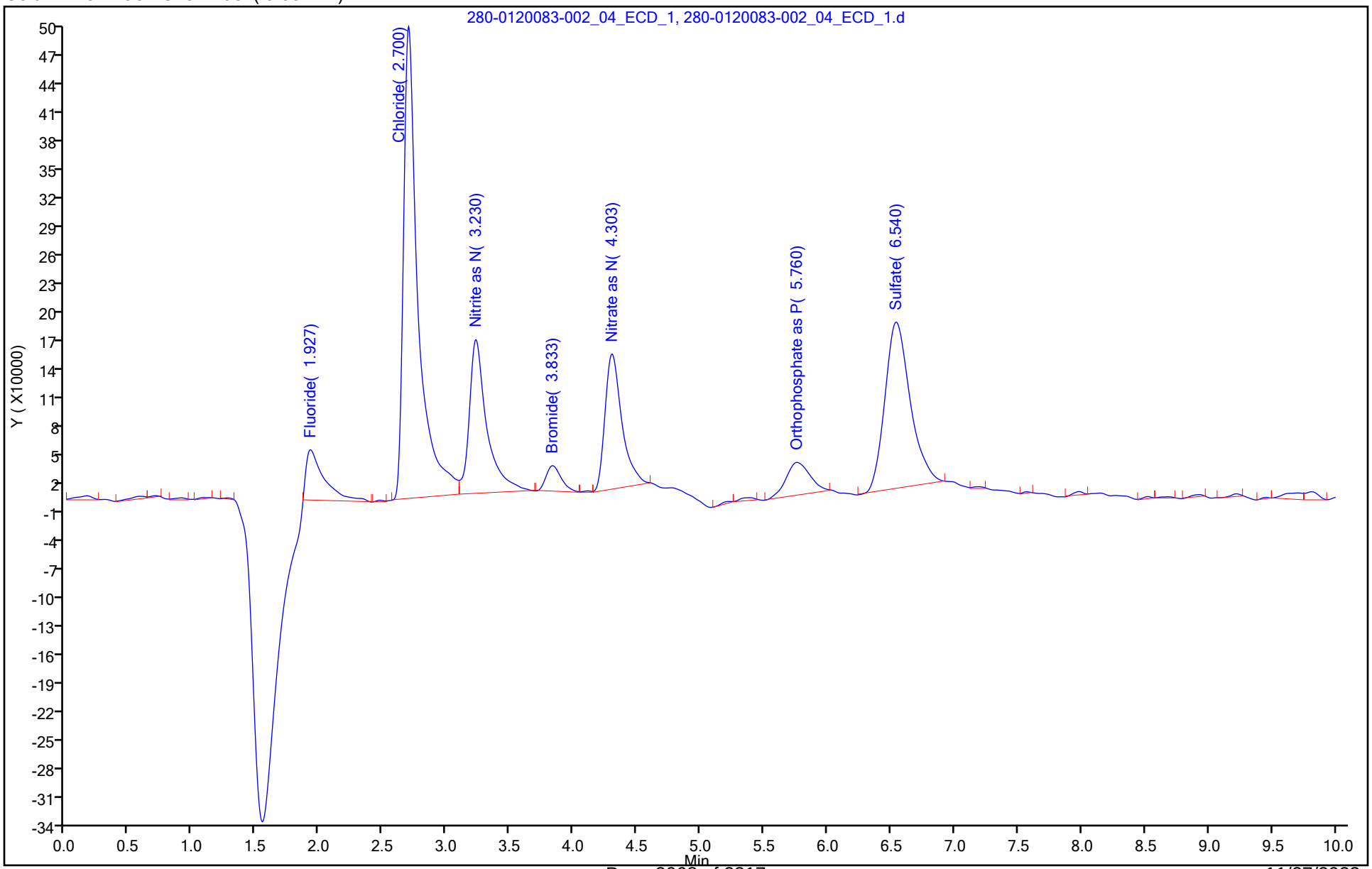
Report Date: 04-Apr-2023 11:17:58 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d

Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

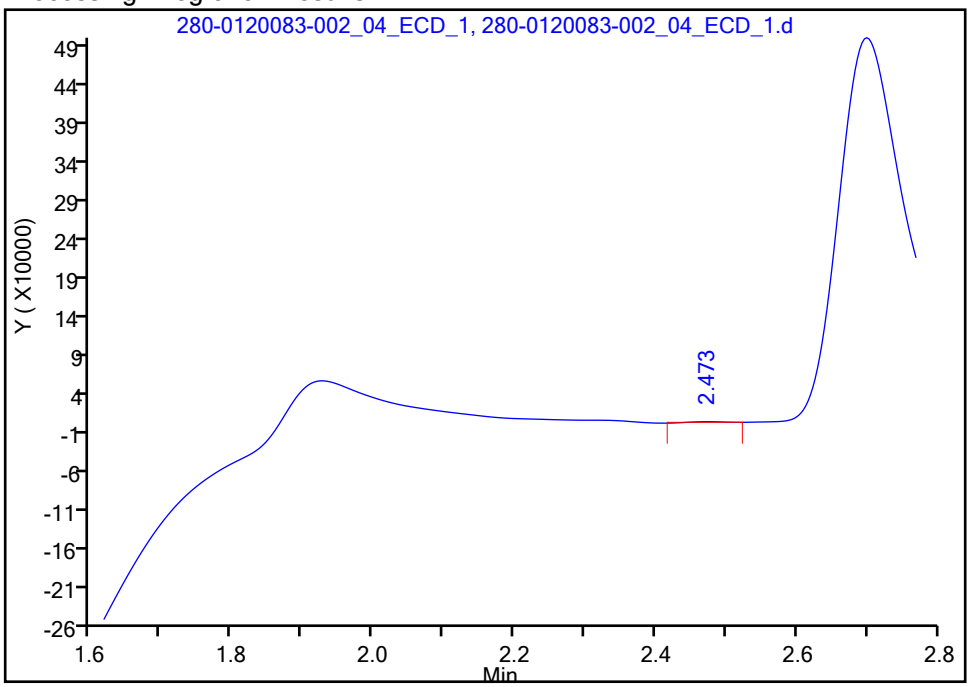
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d				
Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

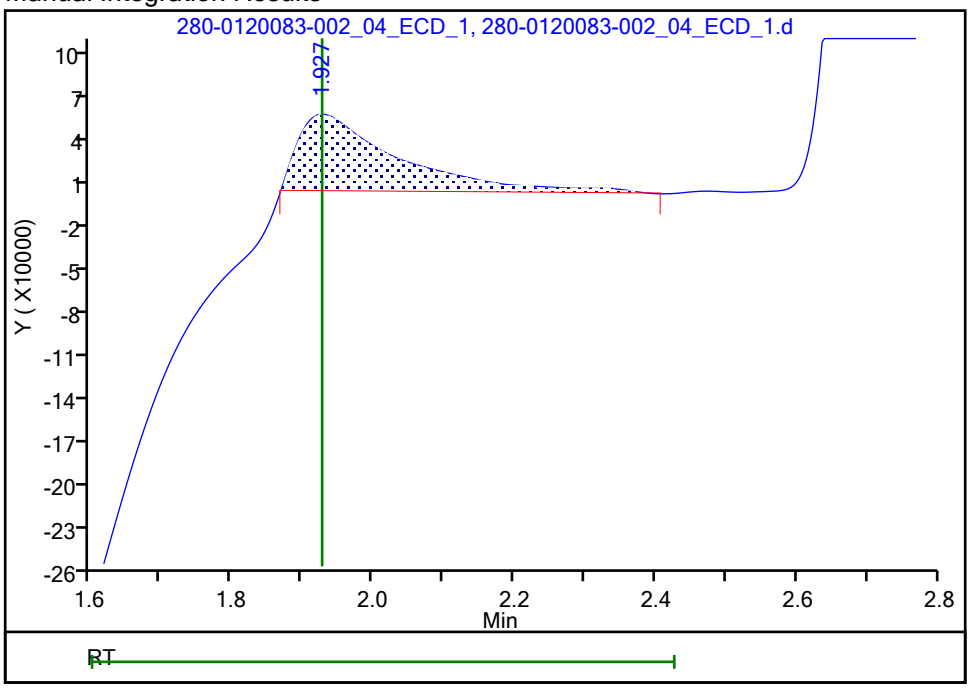
RT: 2.47
Area: 4318
Amount: 0
Amount Units: ug/ml

Processing Integration Results



RT: 1.93
Area: 514755
Amount: 0.202821
Amount Units: ug/ml

Manual Integration Results



Reviewer: XAY4, 04-Apr-2023 10:07:17
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

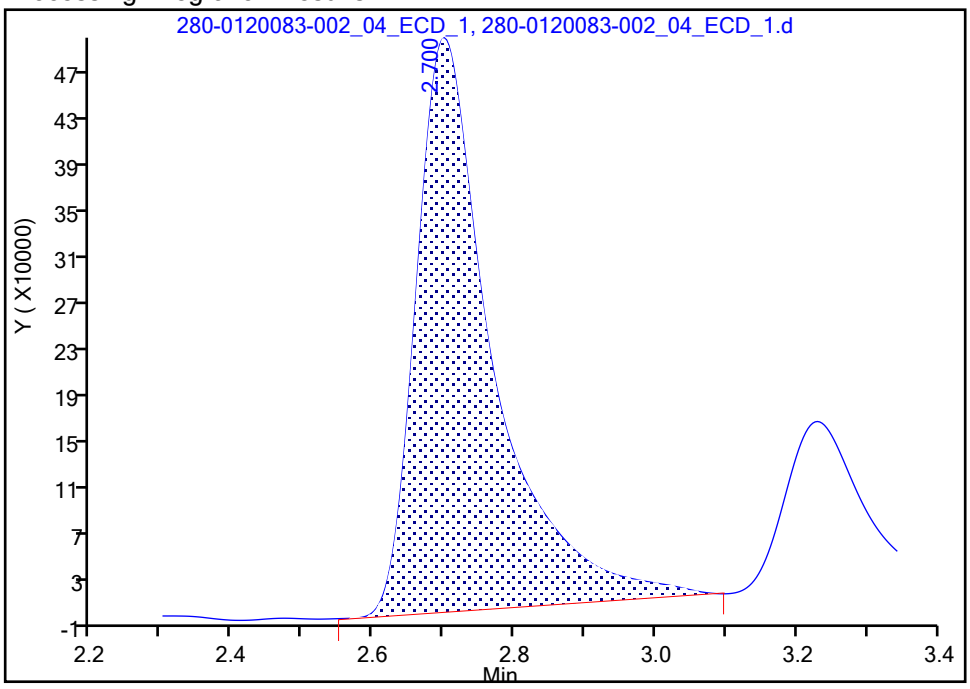
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d				
Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

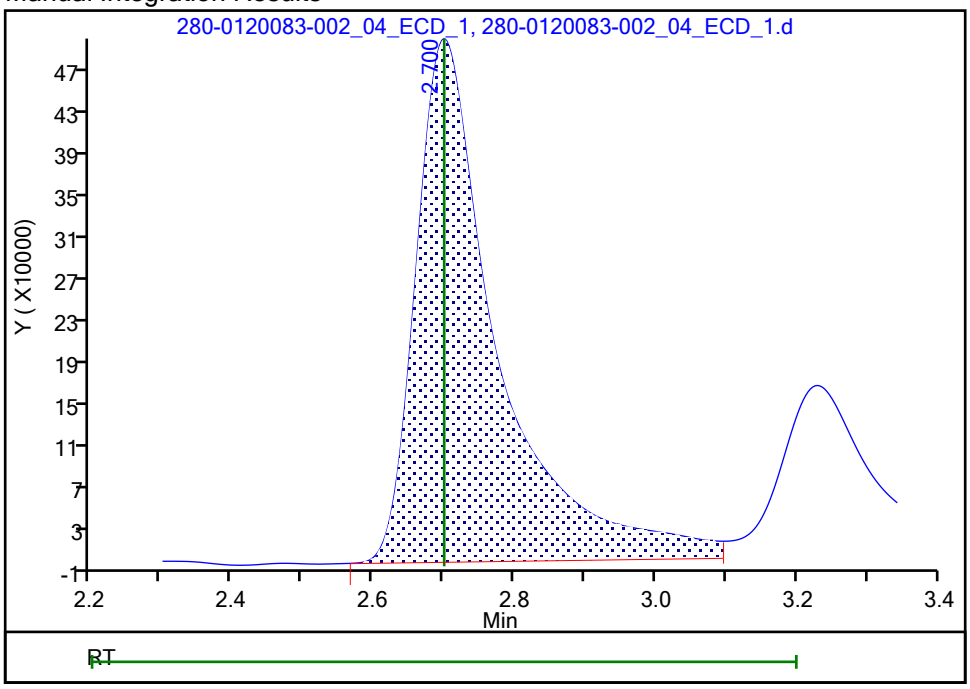
Processing Integration Results

RT: 2.70
Area: 3768322
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 4009670
Amount: 1.216005
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:09:23

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 03-Apr-2023 17:06:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-003
Misc. Info.: STD L3
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:58 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:49

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.923	1.923	0.000	1716859	0.5000	0.4463	M
2 Chloride	2.700	2.700	0.000	7890362	2.50	2.21	M
3 Nitrite as N	3.230	3.230	0.000	3703597	NC	NC	M
4 Bromide	3.830	3.830	0.000	543772	0.5000	0.4965	
5 Nitrate as N	4.303	4.303	0.000	3752523	NC	NC	
7 Orthophosphate as P	5.767	5.767	0.000	1406263	NC	NC	
6 Sulfate	6.543	6.543	0.000	5485179	2.50	2.29	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.20 Units: mL
IC Cal low_00701 Amount Added: 0.20 Units: mL

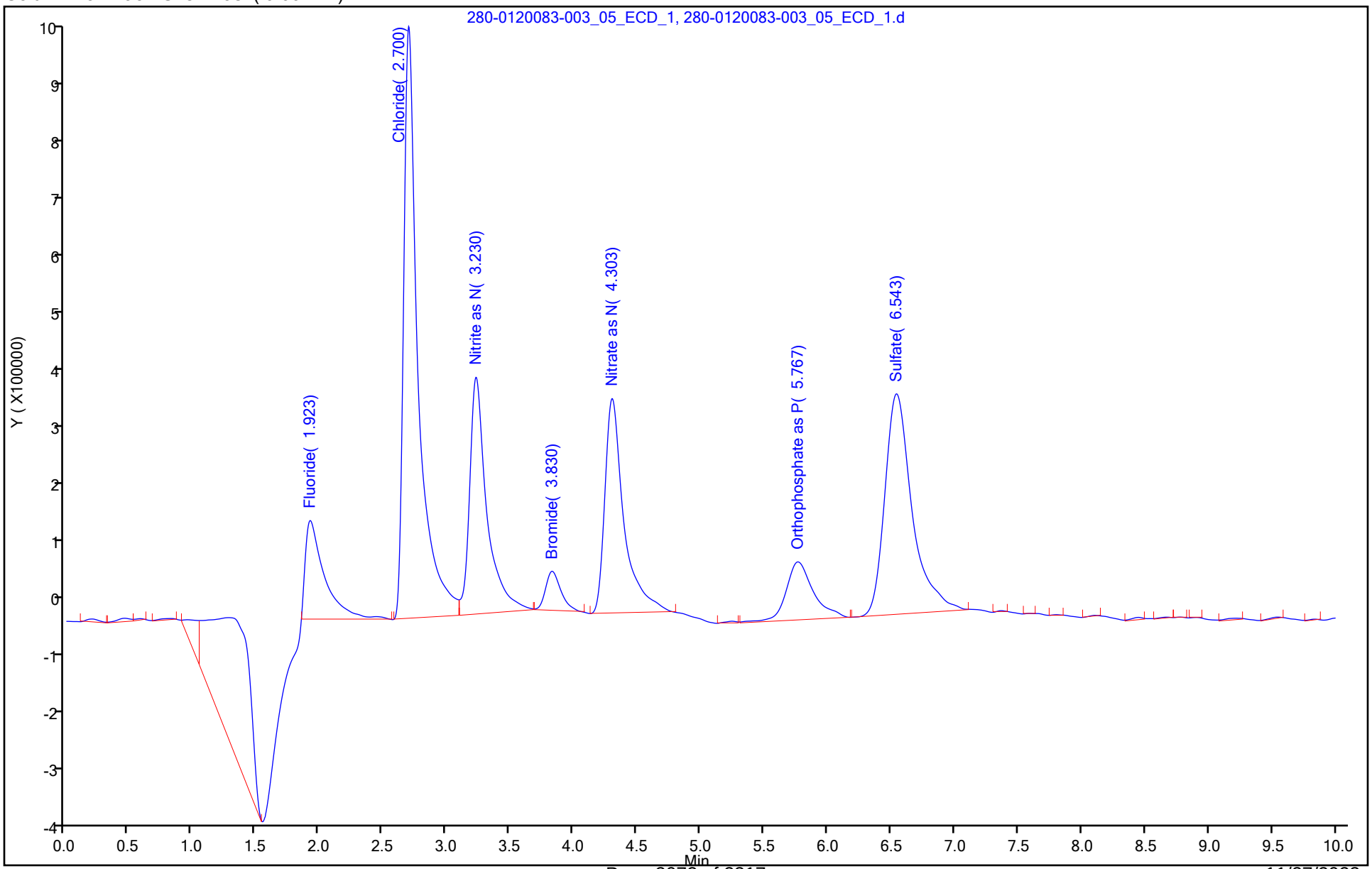
Report Date: 04-Apr-2023 11:17:58 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d

Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

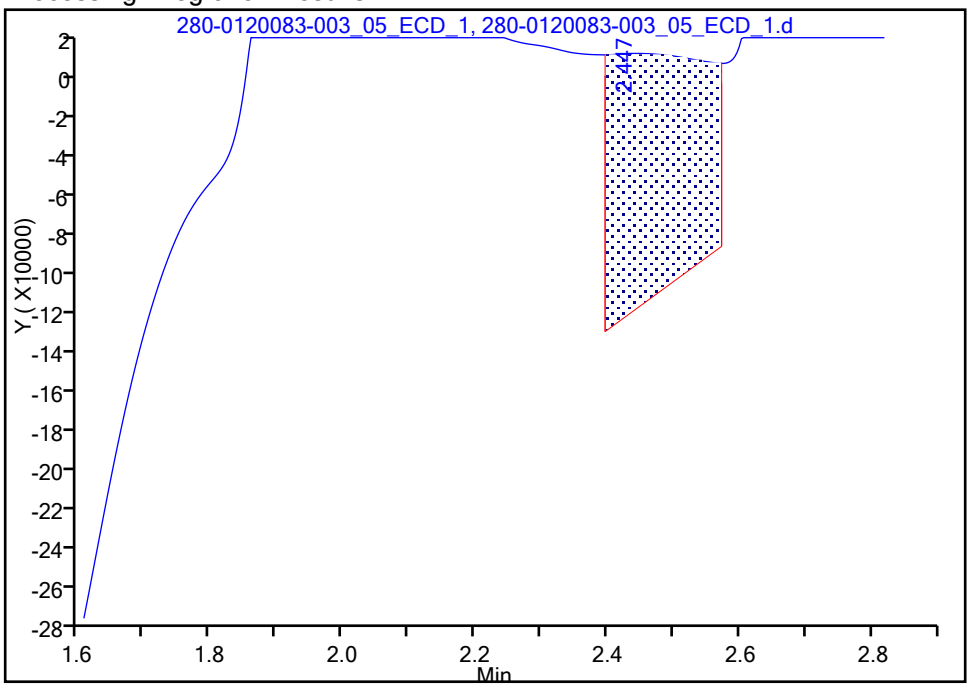
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d				
Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

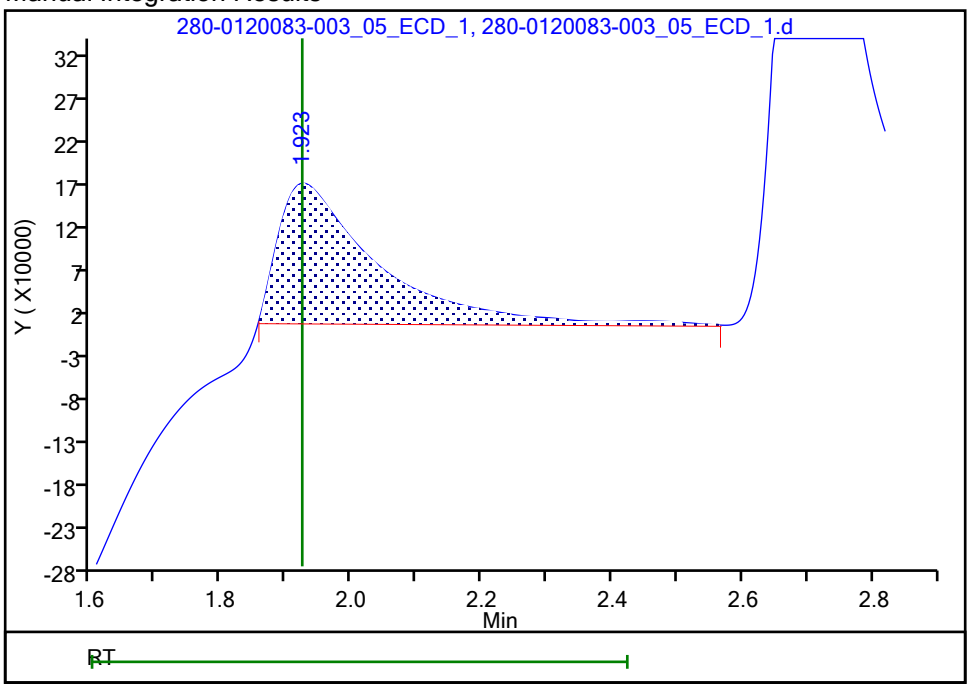
RT: 2.45
Area: 1236234
Amount: 0
Amount Units: ug/ml

Processing Integration Results



RT: 1.92
Area: 1716859
Amount: 0.446324
Amount Units: ug/ml

Manual Integration Results



Reviewer: XAY4, 04-Apr-2023 10:07:36
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

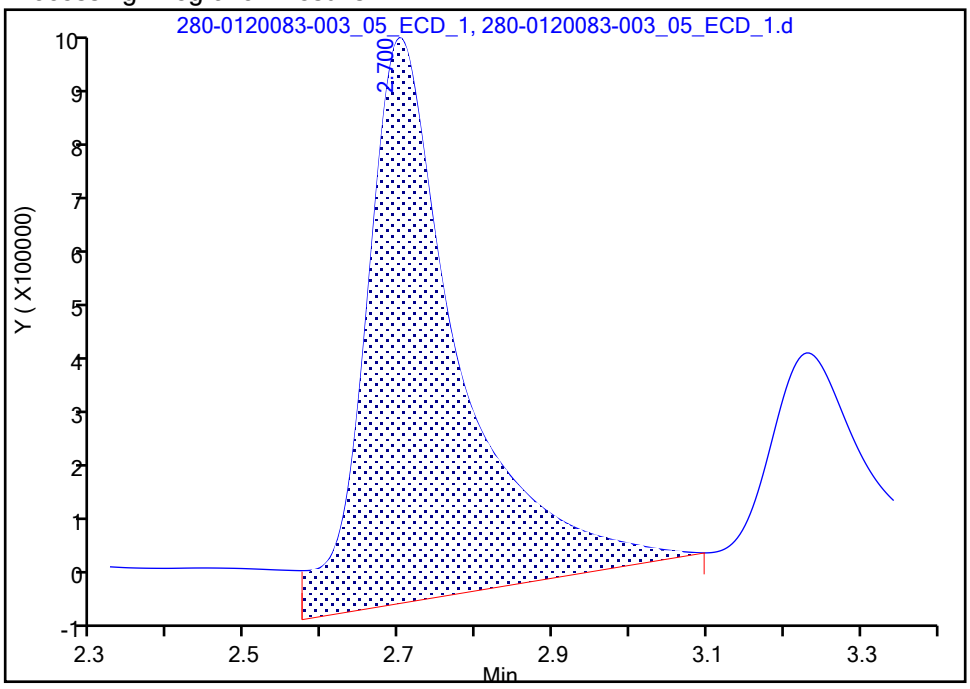
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d				
Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

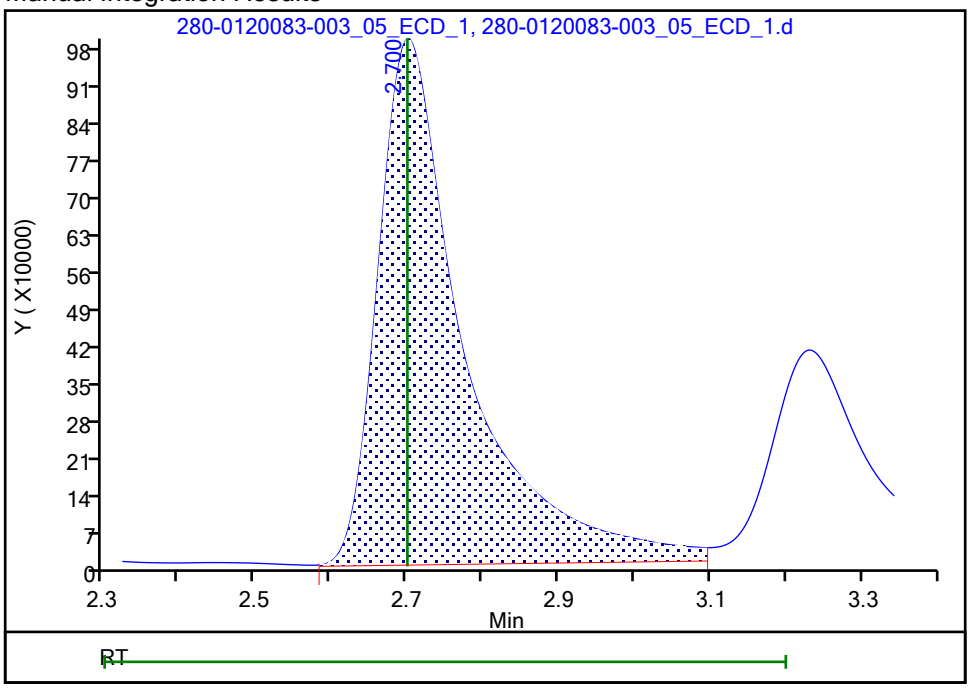
Processing Integration Results

RT: 2.70
Area: 8952138
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 7890362
Amount: 2.211878
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:09:49
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 03-Apr-2023 17:18:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-004
Misc. Info.: STD L4
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	5002458	1.00	1.11	Ma
2 Chloride	2.703	2.703	0.000	104633916	30.0	27.0	M
3 Nitrite as N	3.227	3.227	0.000	9946553	NC	NC	Ma
4 Bromide	3.827	3.827	0.000	1082846	1.00	0.9794	
5 Nitrate as N	4.300	4.300	0.000	7262541	NC	NC	
7 Orthophosphate as P	5.763	5.763	0.000	2563153	NC	NC	
6 Sulfate	6.550	6.550	0.000	75166700	30.0	28.5	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 2.40 Units: mL
IC Cal low_00701 Amount Added: 0.40 Units: mL

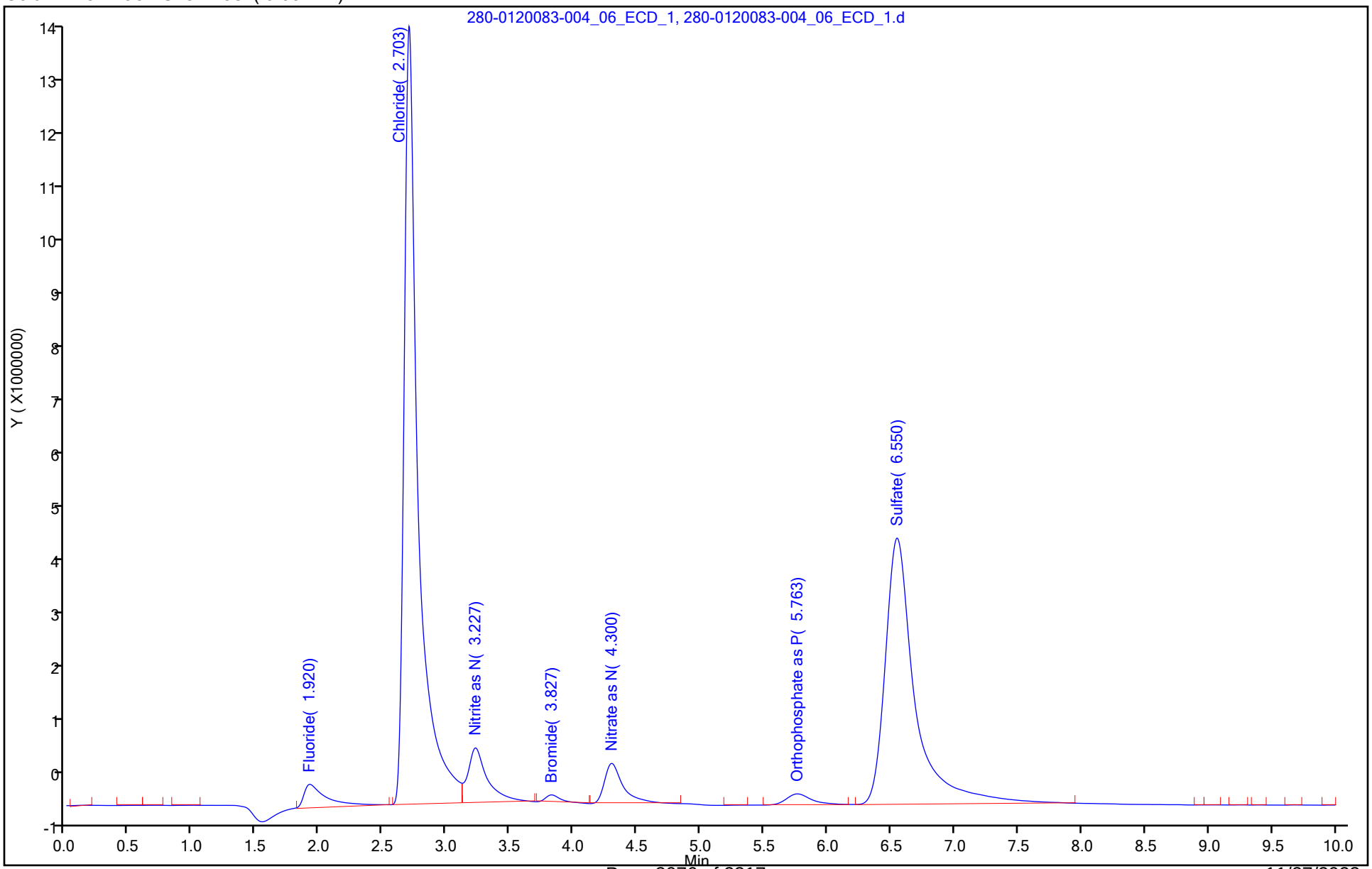
Report Date: 04-Apr-2023 11:17:59 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d

Injection Date:	03-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

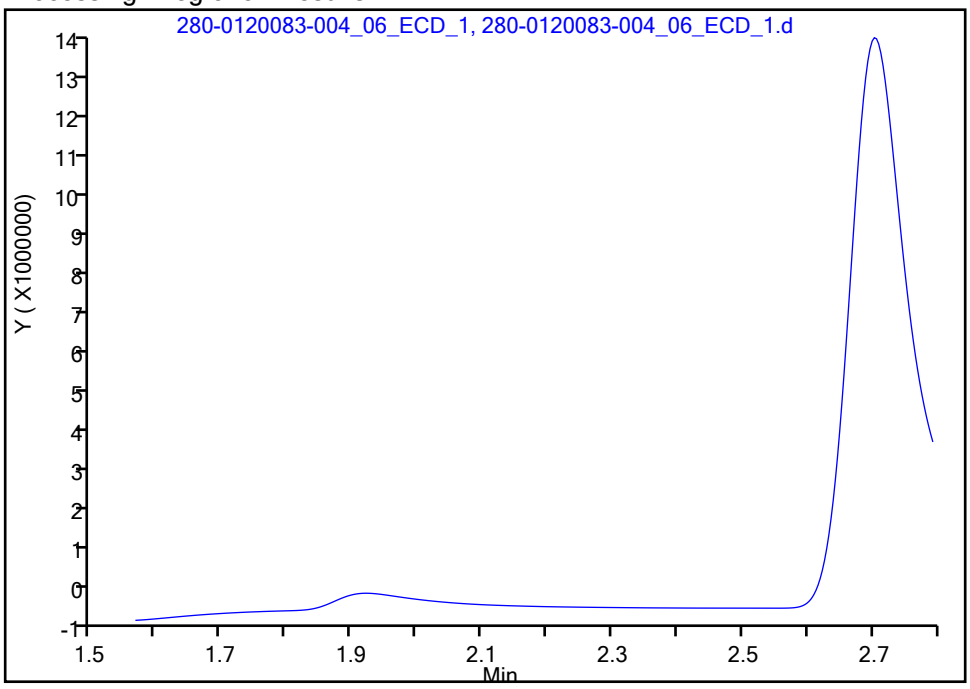
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Injection Date: 03-Apr-2023 17:18:00 Instrument ID: WC_IonChrom15
Lims ID: STD L4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

1 Fluoride, CAS: 16984-48-8

Signal: 1

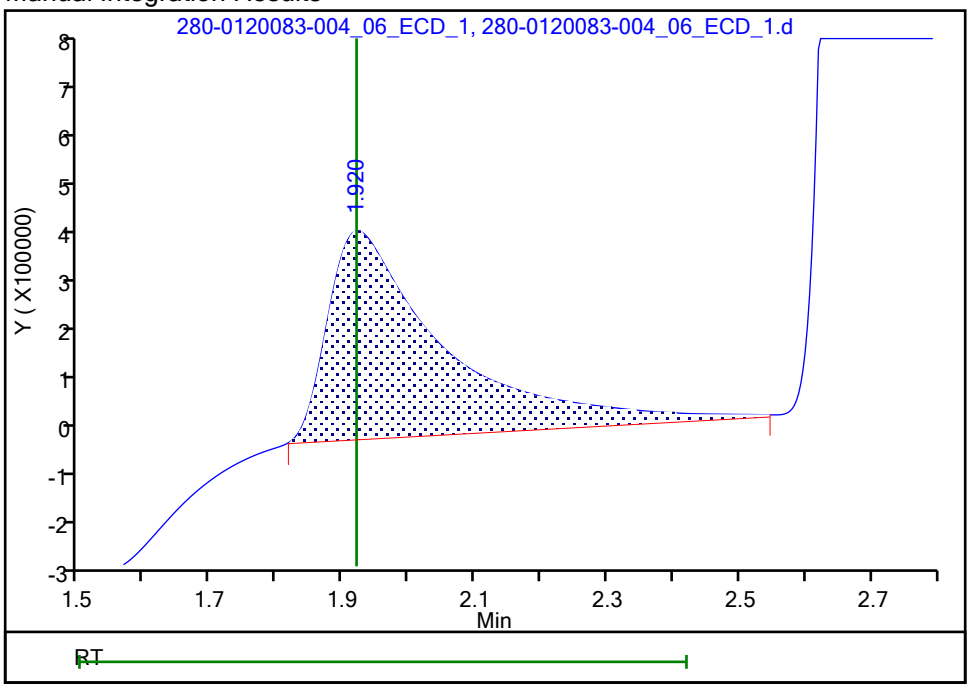
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 5002458
Amount: 1.111870
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:07:59
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

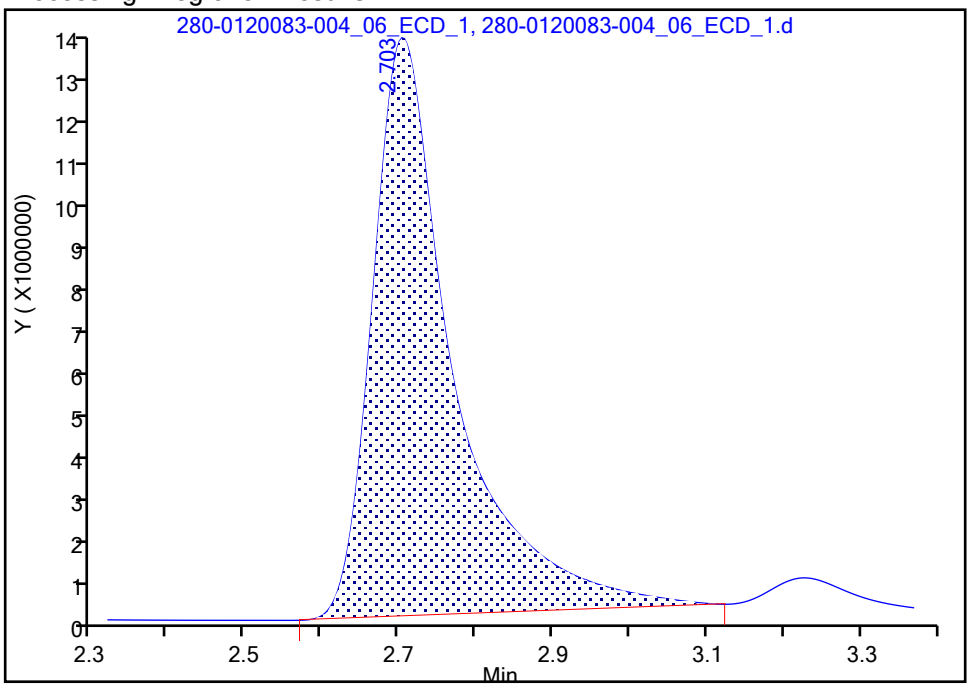
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d				
Injection Date:	03-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L4				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

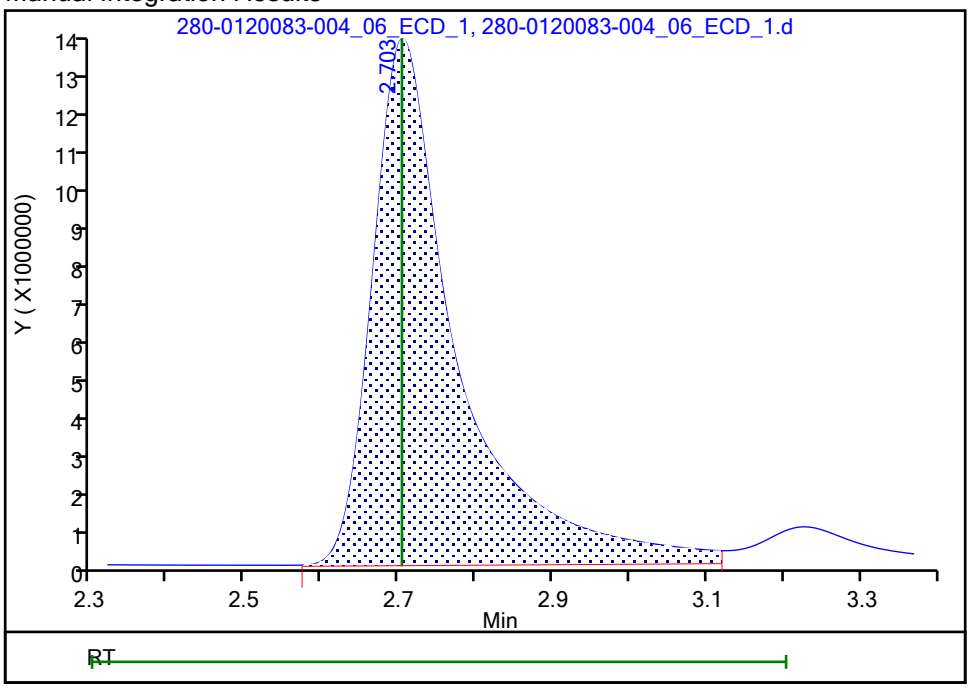
Processing Integration Results

RT: 2.70
Area: 99363161
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 104633916
Amount: 27.038454
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:01
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 03-Apr-2023 17:30:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-005
Misc. Info.: STD L5
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	11696825	2.50	2.47	Ma
2 Chloride	2.710	2.710	0.000	225809574	60.0	58.1	M
3 Nitrite as N	3.230	3.230	0.000	22727090	NC	NC	Ma
4 Bromide	3.827	3.827	0.000	2730351	2.50	2.46	
5 Nitrate as N	4.300	4.300	0.000	19732616	NC	NC	
7 Orthophosphate as P	5.763	5.763	0.000	6654551	NC	NC	
6 Sulfate	6.557	6.557	0.000	155347554	60.0	58.7	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 4.80 Units: mL
IC Cal low_00701 Amount Added: 1.00 Units: mL

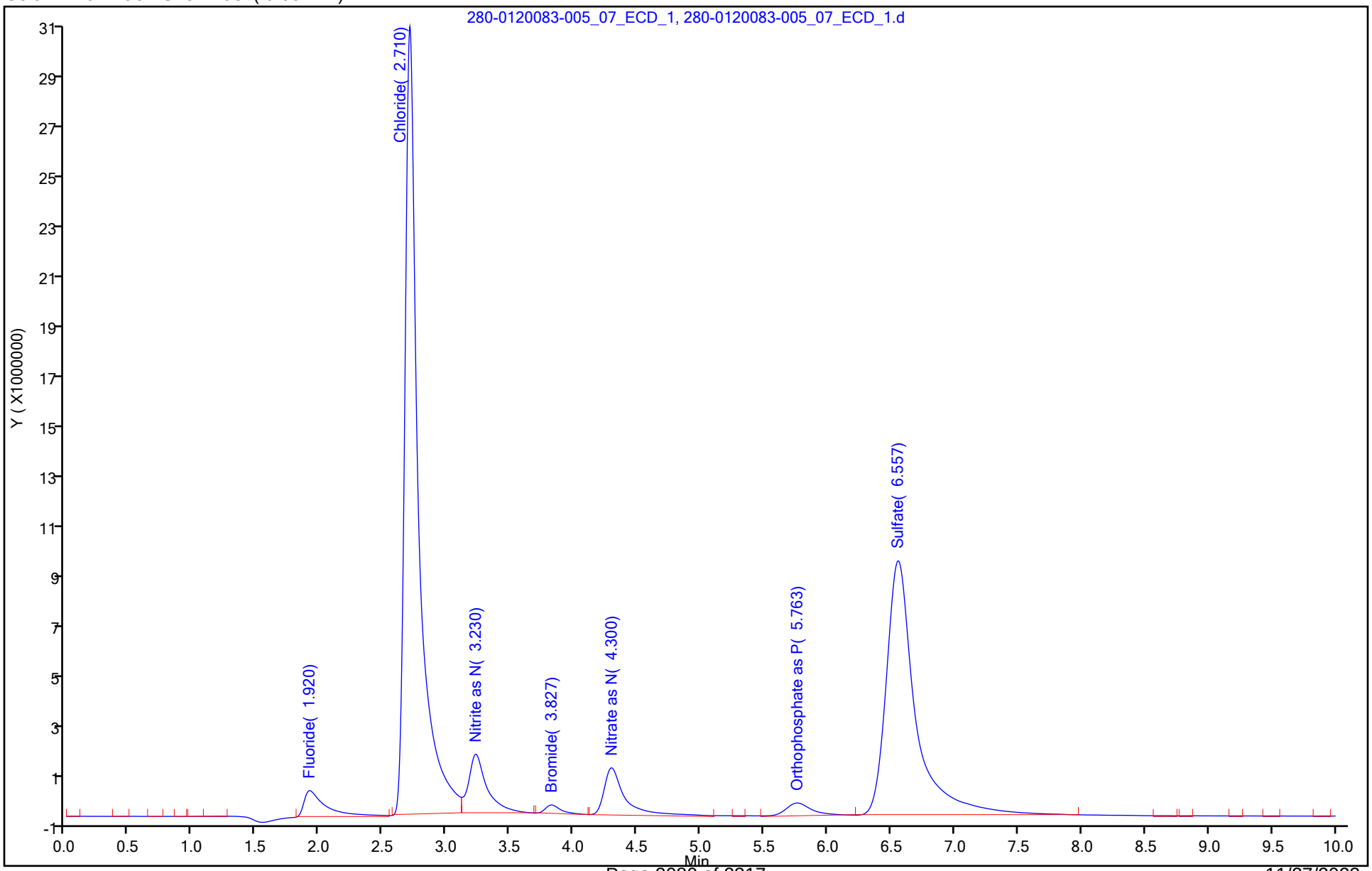
Report Date: 04-Apr-2023 11:17:59 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d

Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

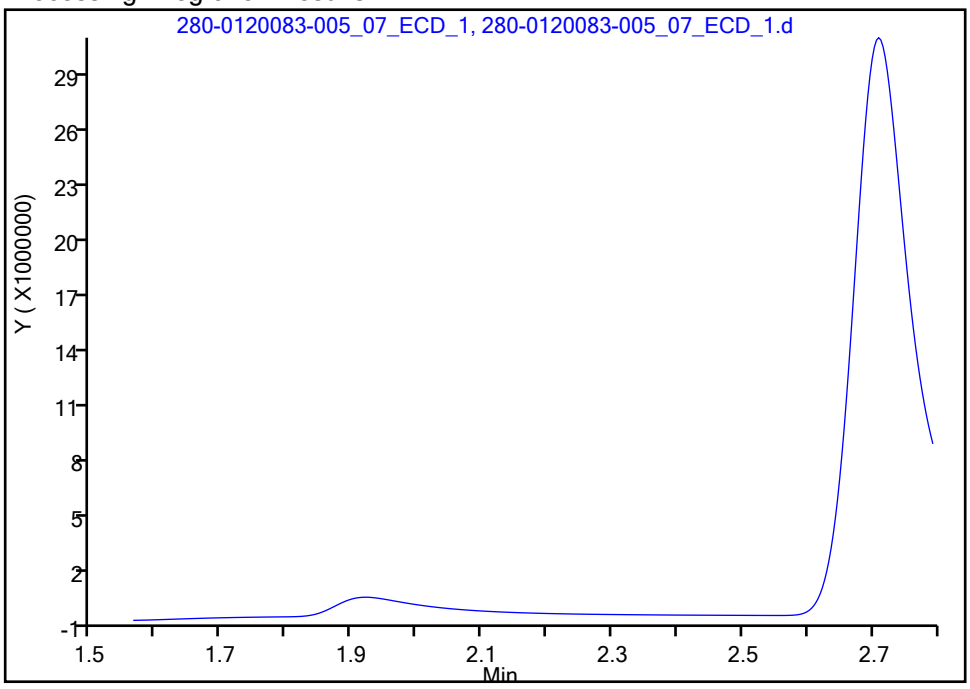
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d				
Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L5				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

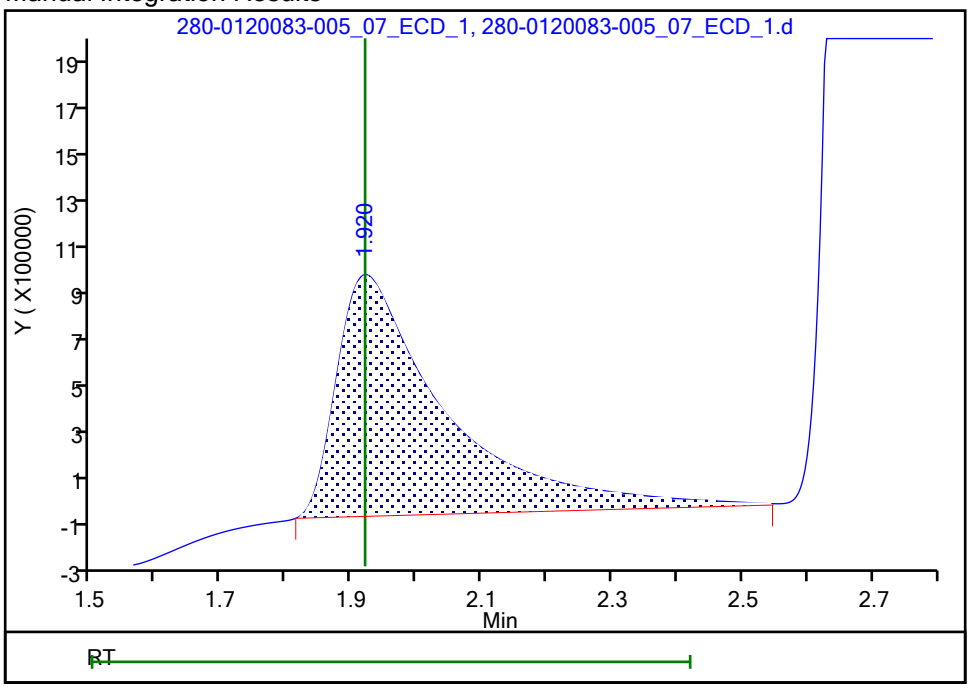
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 11696825
Amount: 2.467911
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:08:15
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

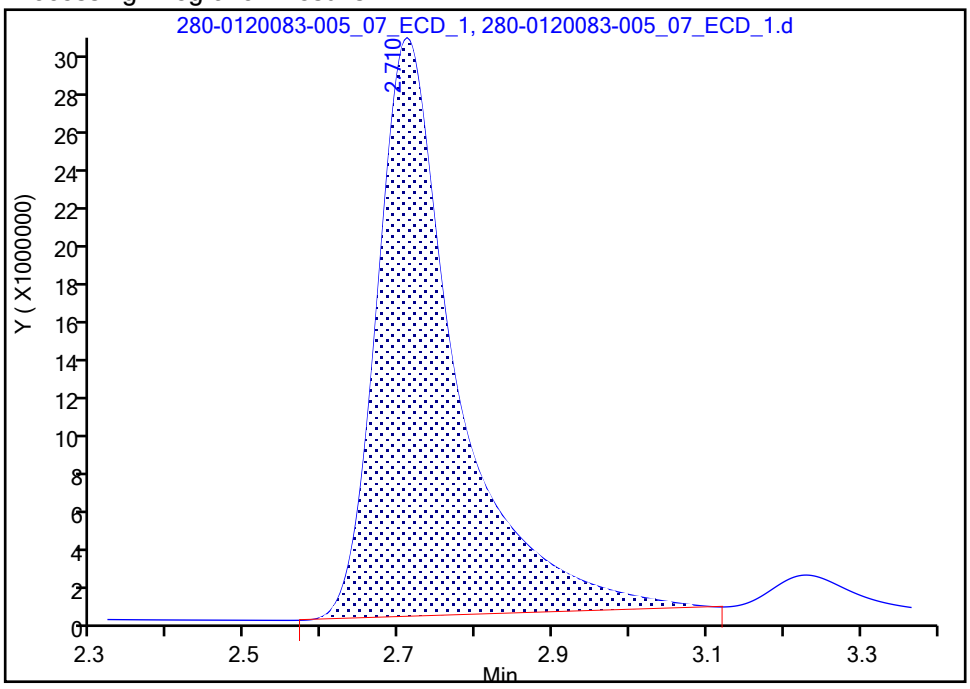
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d				
Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L5				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

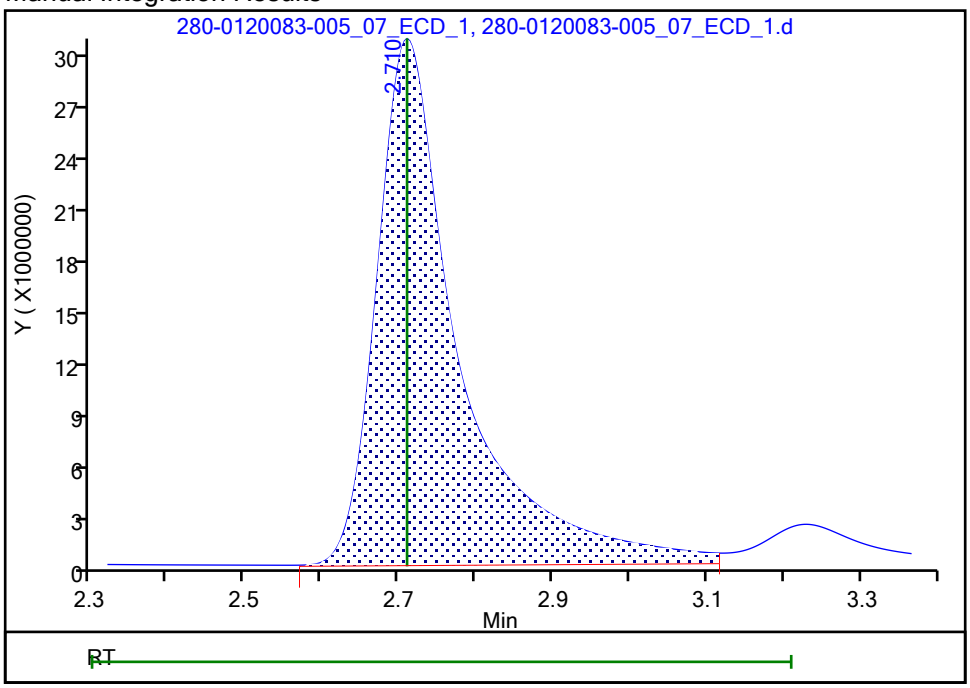
Processing Integration Results

RT: 2.71
Area: 216176281
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.71
Area: 225809574
Amount: 58.134858
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:25
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 03-Apr-2023 17:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-006
Misc. Info.: STD L6
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:18:00 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	24054194	5.00	4.97	Ma
2 Chloride	2.717	2.717	0.000	408580005	100.0	105.0	M
3 Nitrite as N	3.230	3.230	0.000	45521852	NC	NC	Ma
4 Bromide	3.823	3.823	0.000	5641478	5.00	5.06	
5 Nitrate as N	4.293	4.293	0.000	41136324	NC	NC	
7 Orthophosphate as P	5.757	5.757	0.000	13790470	NC	NC	
6 Sulfate	6.563	6.563	0.000	273226252	100.0	103.0	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 8.00 Units: mL
IC Cal low_00701 Amount Added: 2.00 Units: mL

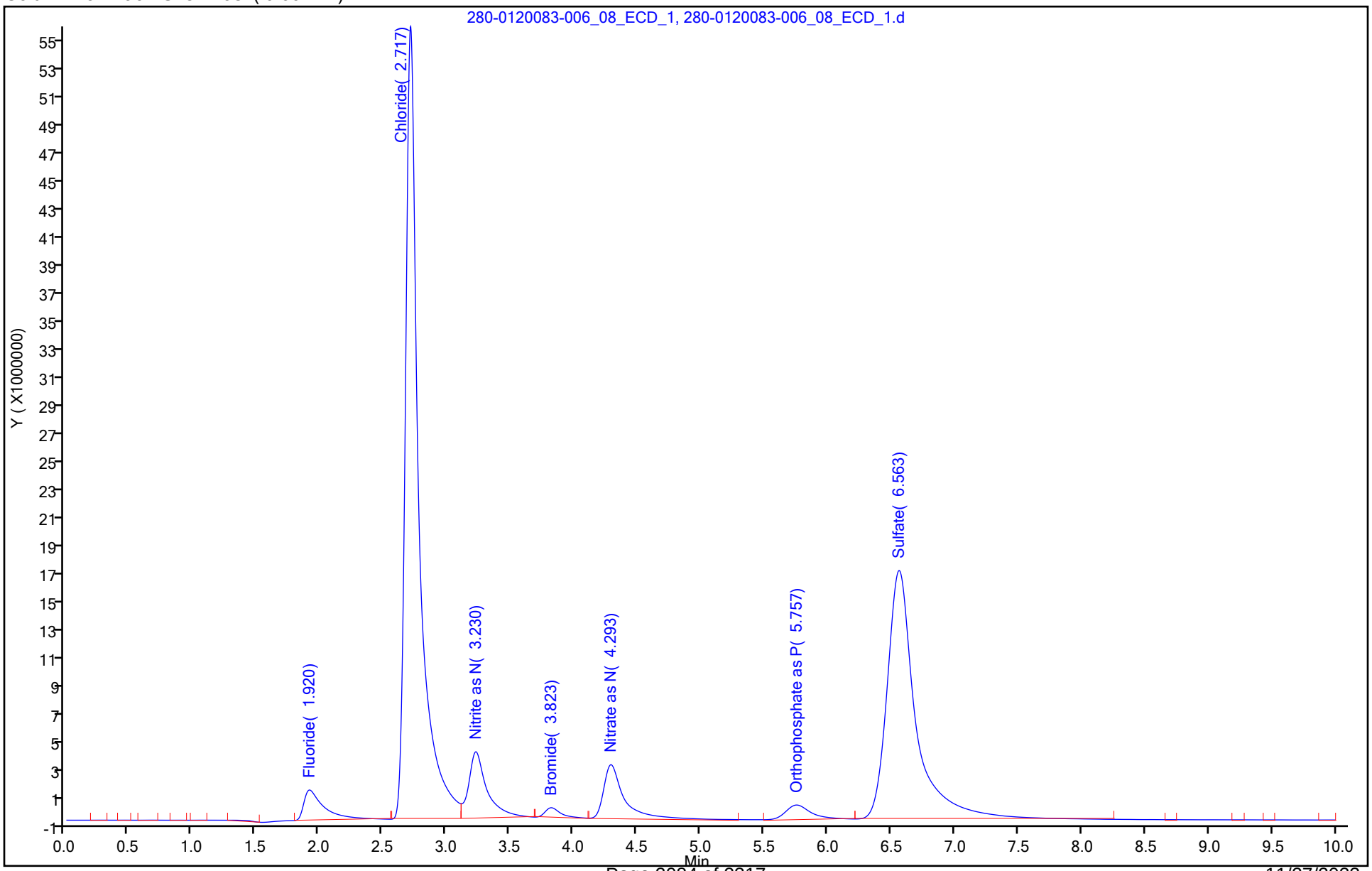
Report Date: 04-Apr-2023 11:18:00 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Injection Date:	03-Apr-2023 17:42:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

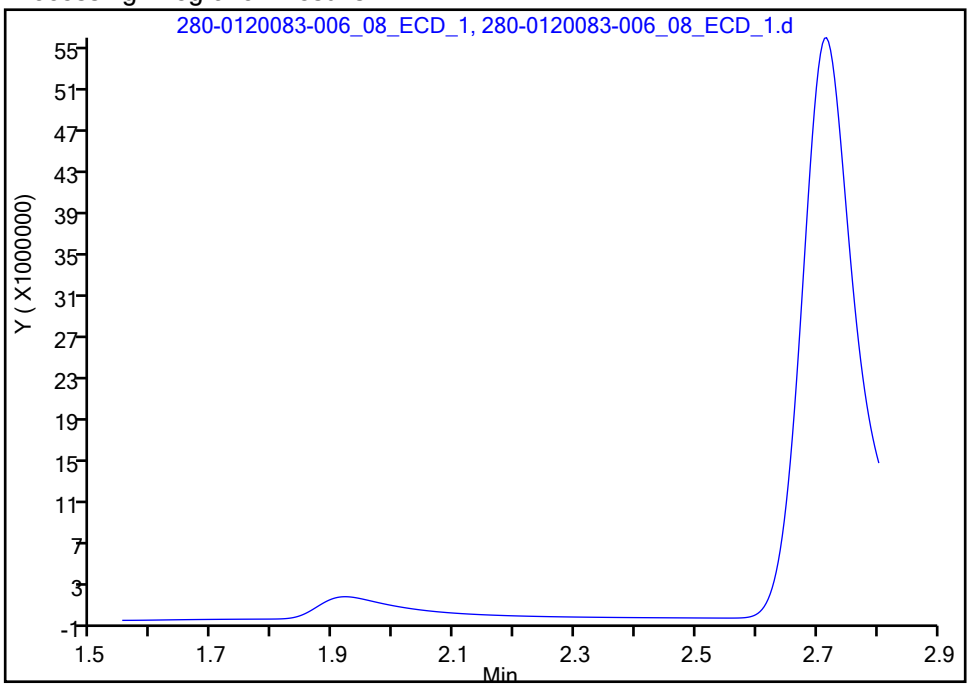
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Injection Date:	03-Apr-2023 17:42:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

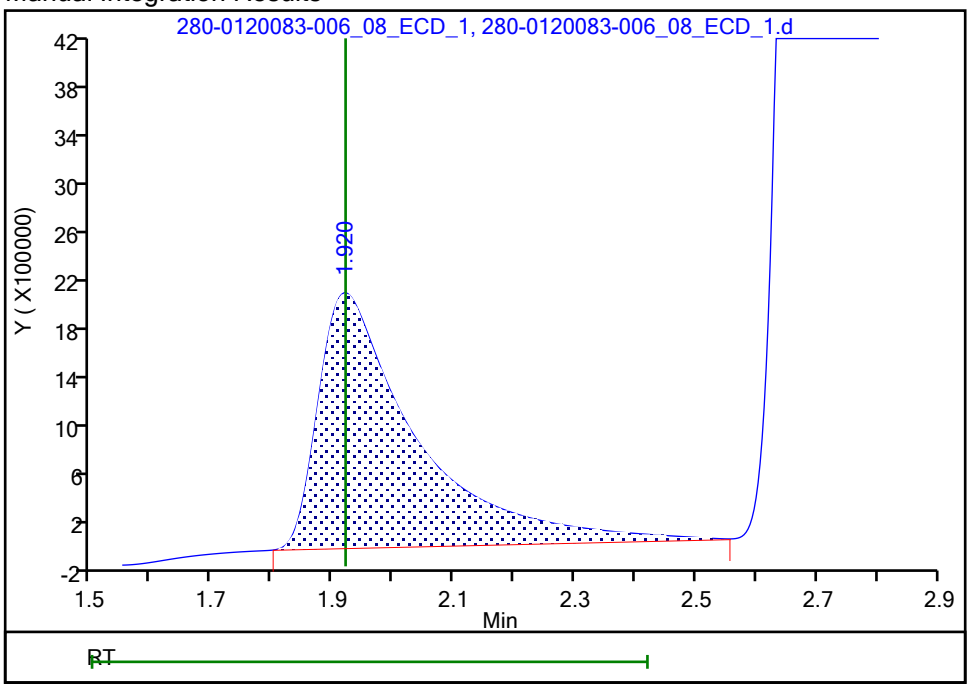
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 24054194
Amount: 4.971075
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:08:29
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

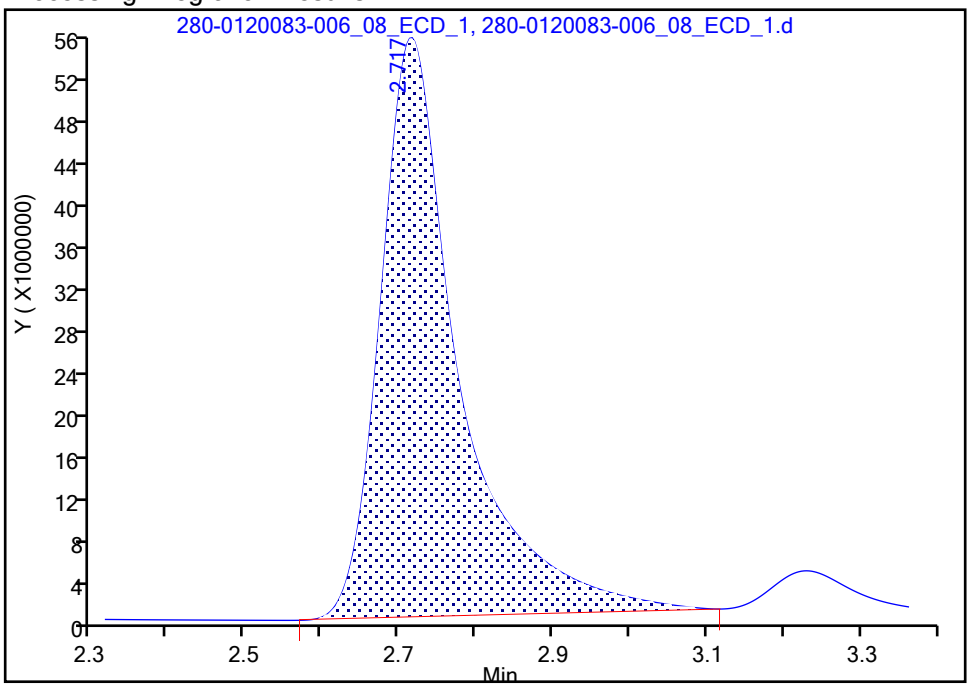
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Injection Date:	03-Apr-2023 17:42:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

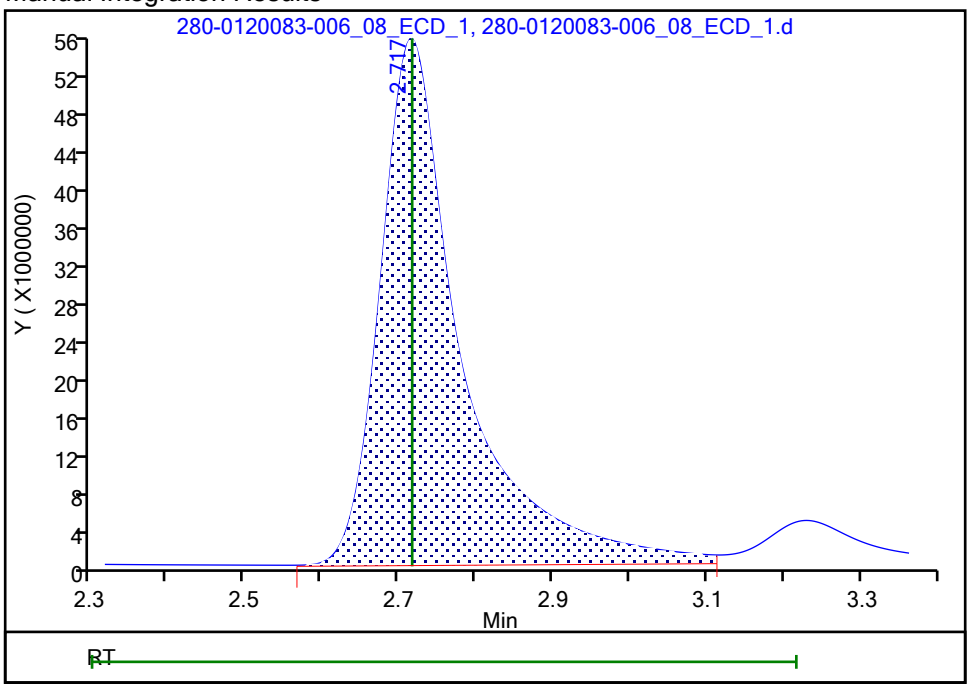
Processing Integration Results

RT: 2.72
Area: 393078326
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.72
Area: 408580005
Amount: 105.0379
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:51
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 120083 **Inst ID:** IC15 **Analysis Date:** 4/4/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	173969	1	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	173607	15	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	173854	21	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	173760	1	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	49218	8	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	173855	2	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	49222	2	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	49221	1	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174060	7	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	~~173607~~ EJS 4/4		F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason	
969	1	(F) (Cl) NO2 Br NO3 PO4 (SO4)	200x	rerun	
607	15	(F) (Cl) NO2 Br NO3 PO4 (SO4)	5,500,200x	rerun	
~~854~~ EJS 4/4	~~21~~	F Cl NO2 Br NO3 PO4 SO4	~~100x~~	~~reran~~	EJS 4/4
855	2	(F) (Cl) NO2 Br NO3 PO4 (SO4)	100x	rerun	
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:53:33 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	9279739	2.00	1.98	M
2 Chloride	2.717	2.717	0.000	328549047	80.0	84.5	M
3 Nitrite as N	3.227	3.227	0.000	20889847	NC	NC	Ma
4 Bromide	3.827	3.827	0.000	2137744	2.00	1.92	
5 Nitrate as N	4.300	4.300	0.000	15854770	NC	NC	
7 Orthophosphate as P	5.763	5.763	0.000	5351617	NC	NC	
6 Sulfate	6.563	6.563	0.000	227136614	80.0	85.7	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC SO4 ICV_00024	Amount Added:	0.80	Units: mL
Cl ICV Std_00006	Amount Added:	0.80	Units: mL
IC ICV 5_00402	Amount Added:	0.80	Units: mL

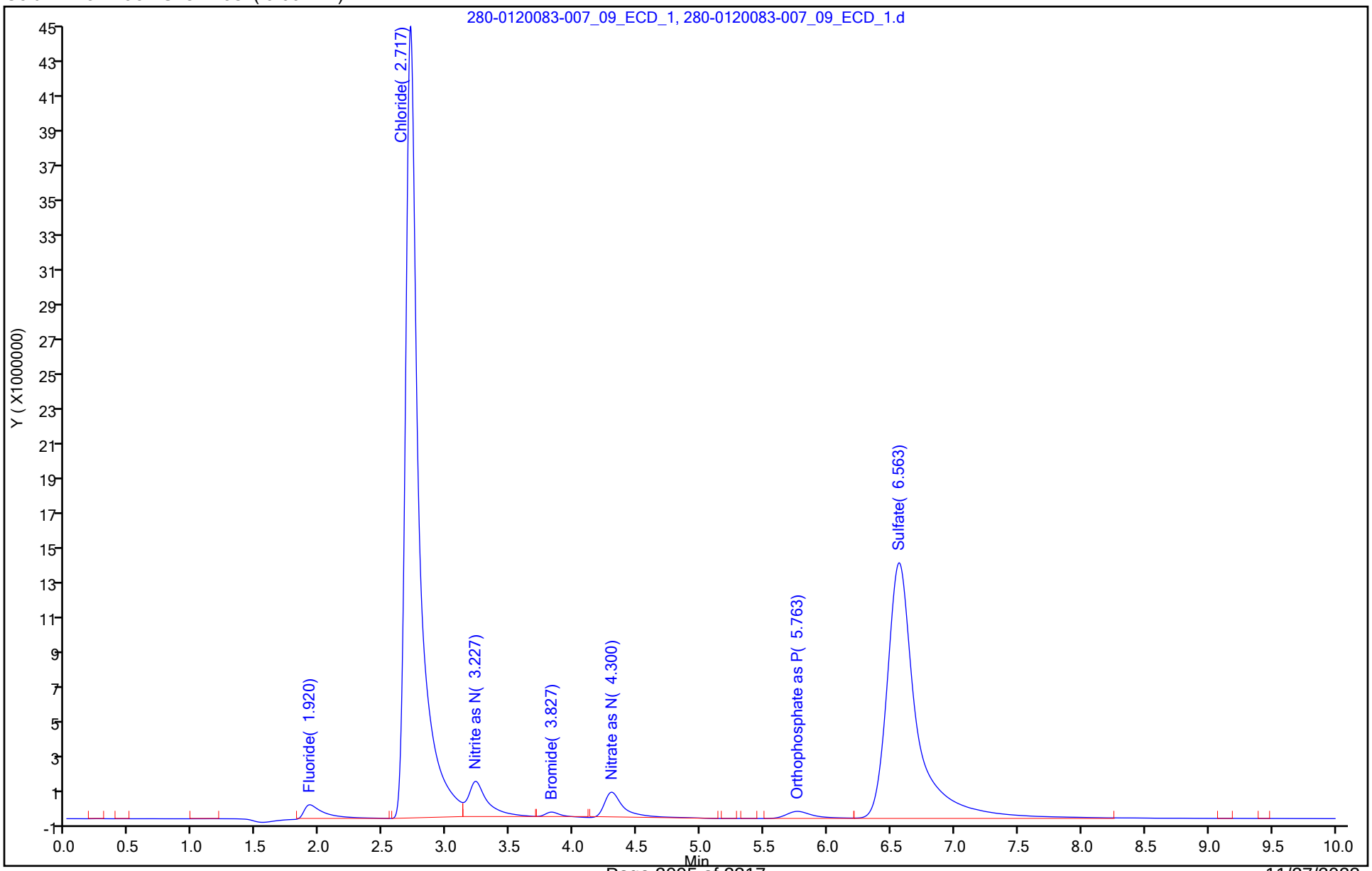
Report Date: 04-Apr-2023 11:53:49 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d

Injection Date:	03-Apr-2023 17:54:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

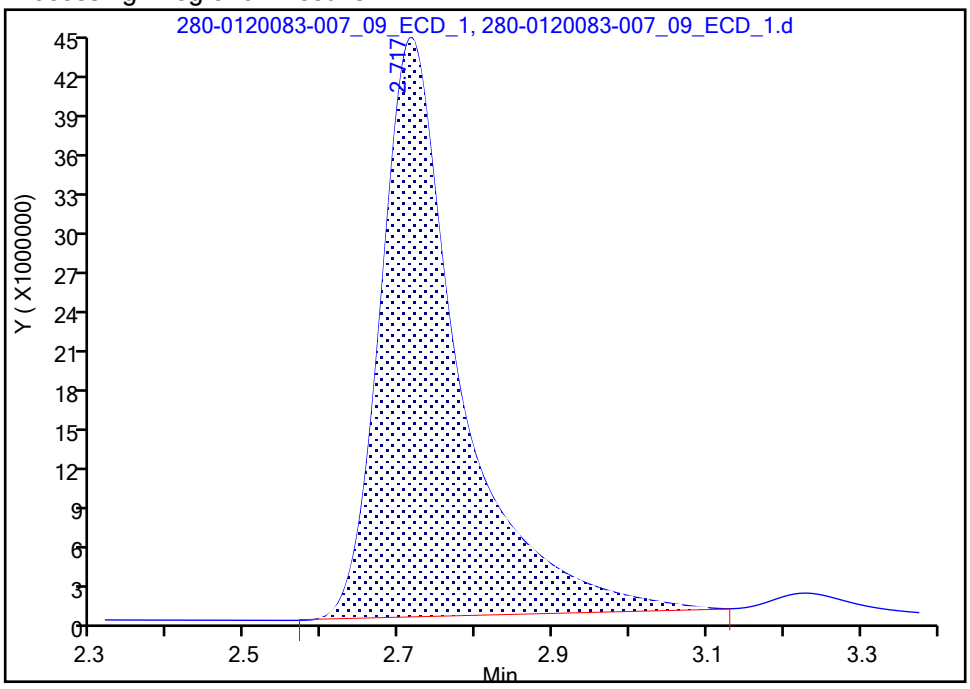
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d				
Injection Date:	03-Apr-2023 17:54:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ICV				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

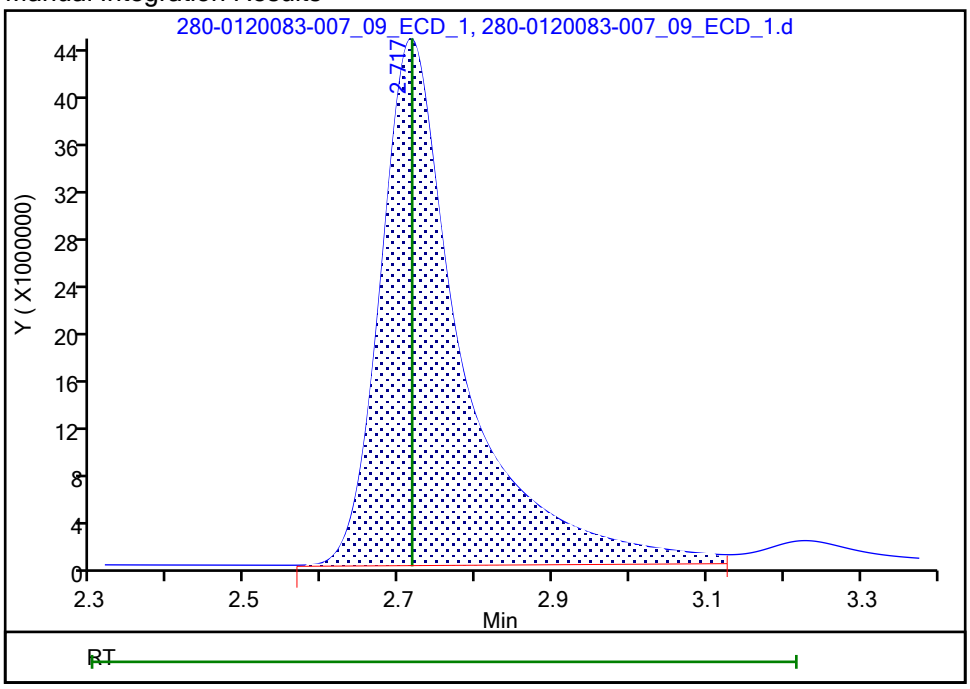
Processing Integration Results

RT: 2.72
Area: 315873449
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.72
Area: 328549047
Amount: 84.500122
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:13:57

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-008_10_ECD_1.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 03-Apr-2023 18:06:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-008
Misc. Info.: ICB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:52:16 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 11:51:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride	2.707	2.707	0.000	90380		0.2102	M
3 Nitrite as N	3.270	3.230	0.040	16278		NC	
4 Bromide	3.710	3.823	-0.113	7406		0.0161	
5 Nitrate as N	4.310	4.297	0.013	15246		NC	
7 Orthophosphate as P	5.837	5.763	0.074	23300		NC	
6 Sulfate	6.507	6.557	-0.050	10924		0.2255	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

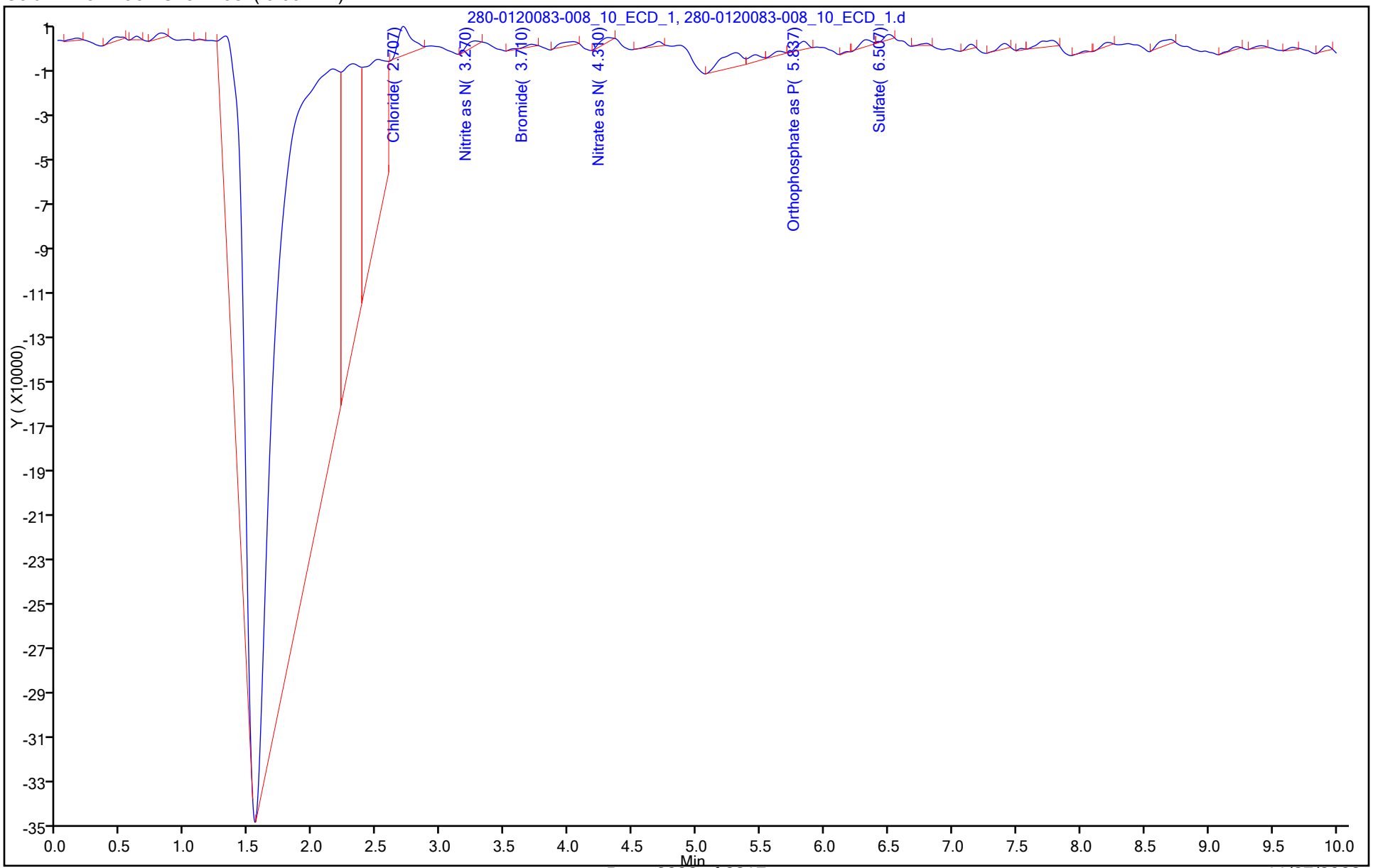
Report Date: 04-Apr-2023 11:52:18 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-008_10_ECD_1.d

Injection Date:	03-Apr-2023 18:06:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

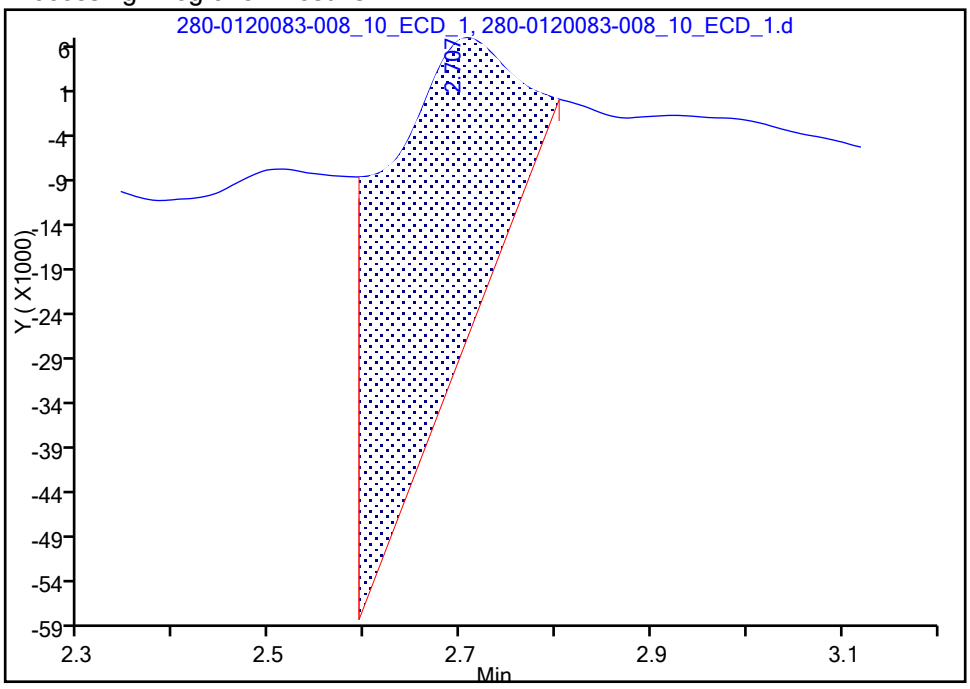
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-008_10_ECD_1.d				
Injection Date:	03-Apr-2023 18:06:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ICB				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

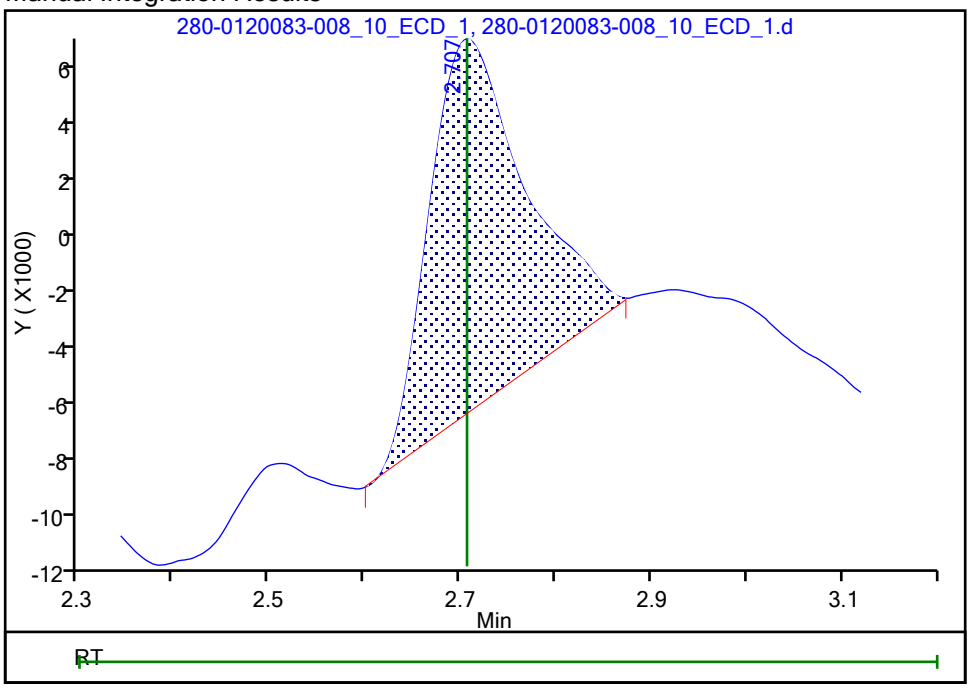
Processing Integration Results

RT: 2.71
Area: 368023
Amount: 0.281477
Amount Units: ug/ml



Manual Integration Results

RT: 2.71
Area: 90380
Amount: 0.210227
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 11:51:01
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 120436 **Inst ID:** 7245 **Analysis Date:** 4/14/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	175046	5	F Cl NO2 Br NO3 PO4 SO4	MS/D	
EJS 4/14 ☐	~~175046~~ 175045	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174957	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174579	7	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174589	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174592	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174502	9	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	160-48349	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174290	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174289	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174291	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174293	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174360	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174361	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
EJS 4/14	174357 ~~174357~~ 174357a	1 1	F F		

Dilutions

Job No.	Samples	Anions	Dilution	Reason
045	6	F Cl NO2 Br NO3 PO4 SO4	2.5x	test
957	1	F Cl NO2 Br NO3 PO4 SO4	5x	test
579	7	F Cl NO2 Br NO3 PO4 SO4	10x	test
502	9	F Cl NO2 Br NO3 PO4 SO4	10x	test
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:53:33 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-001_02_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 14:28:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-001
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:59:57 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 14-Apr-2023 16:15:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11095659	NC	NC	M
2 Chloride	2.703	2.703	0.000	185328048	NC	NC	M
3 Nitrite as N	3.220	3.220	0.000	23638669	2.50	2.59	M
4 Bromide	3.810	3.810	0.000	2505783	NC	NC	M
5 Nitrate as N	4.277	4.277	0.000	19015948	2.50	2.38	
7 Orthophosphate as P	5.770	5.770	0.000	6098576	2.50	2.25	
6 Sulfate	6.530	6.530	0.000	127678970	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

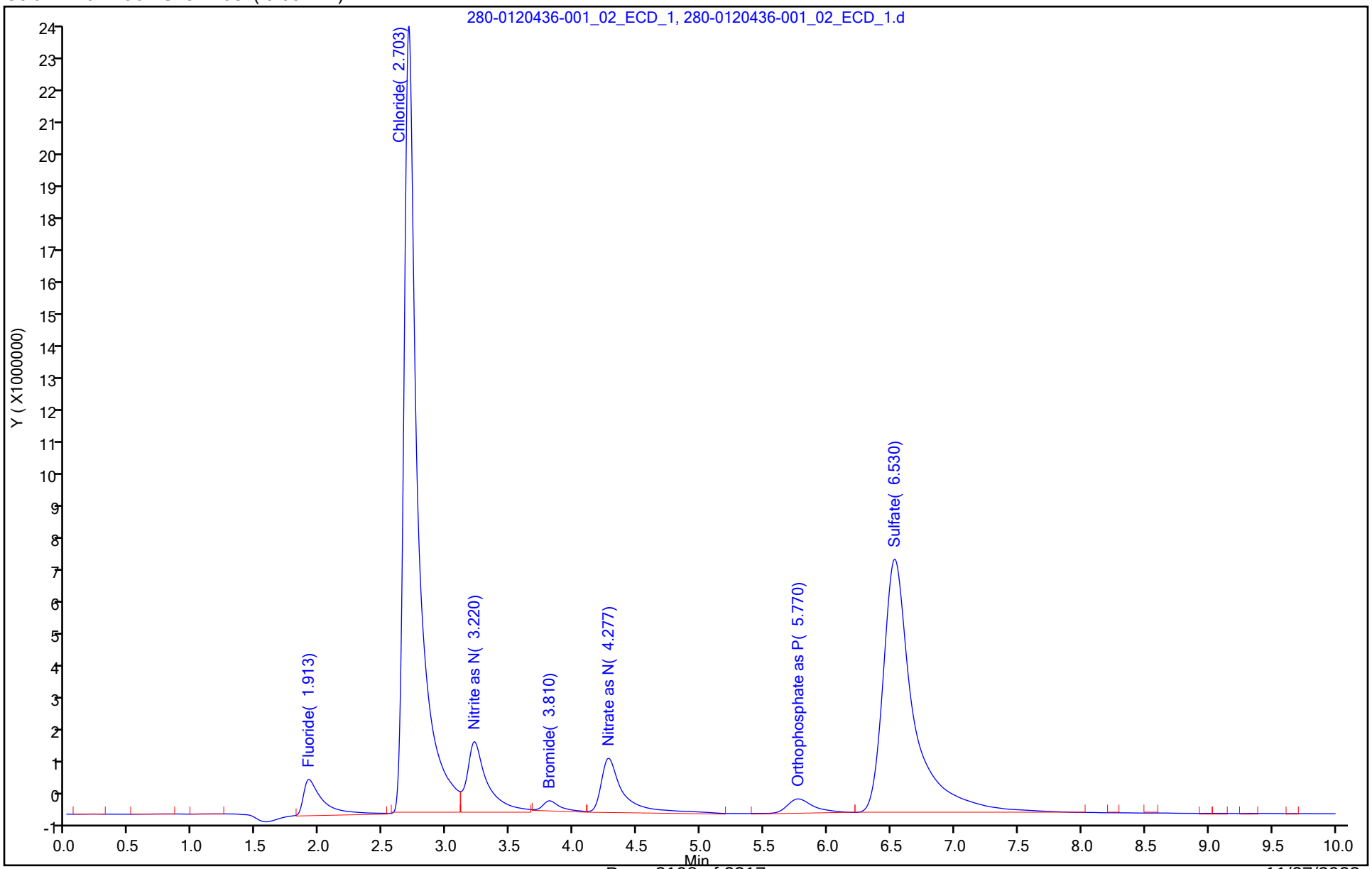
Report Date: 17-Apr-2023 10:59:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-001_02_ECD_1.d

Injection Date:	14-Apr-2023 14:28:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-002_03_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 14:40:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-002
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:51:31 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:50:55

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride		2.757				ND	U
3 Nitrite as N	3.297	3.297	0.000	7704		0.0372	
4 Bromide	4.070	4.070	0.000	10263		NC	
5 Nitrate as N	4.293	4.293	0.000	5686		0.0499	
7 Orthophosphate as P	5.843	5.843	0.000	7924		0.0327	
6 Sulfate	6.630	6.630	0.000	47148		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

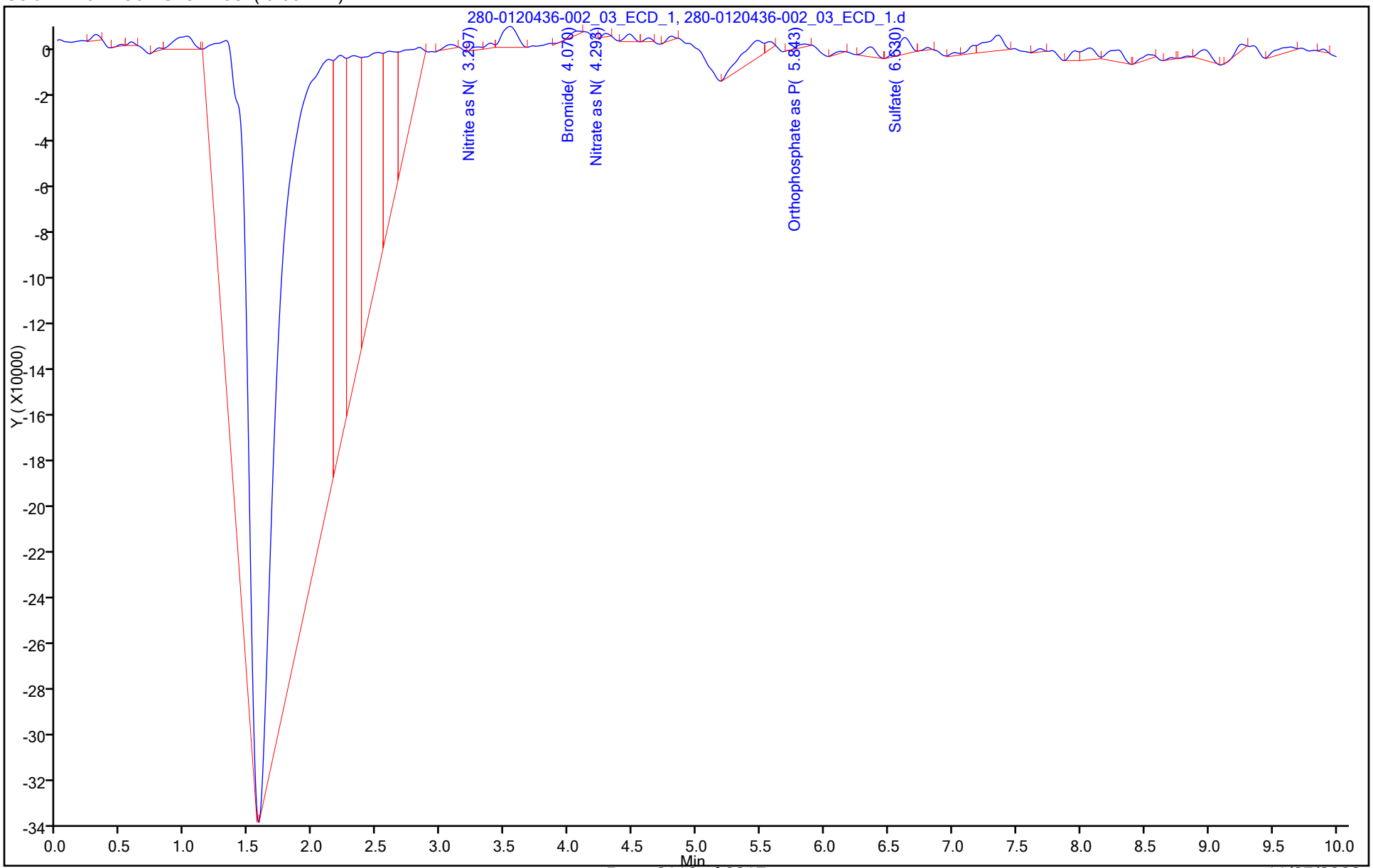
Report Date: 17-Apr-2023 10:51:31 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-002_03_ECD_1.d

Injection Date:	14-Apr-2023 14:40:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-003_04_ECD_1.d
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 14-Apr-2023 14:52:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-003
Misc. Info.: MRL
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:47:23 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:04:54

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	783127	NC	NC	M
2 Chloride	2.693	2.693	0.000	7272307	NC	NC	a
3 Nitrite as N	3.217	3.217	0.000	1455387	0.2500	0.1936	
4 Bromide	3.813	3.813	0.000	286710	NC	NC	
5 Nitrate as N	4.277	4.277	0.000	1517159	0.2500	0.2348	
7 Orthophosphate as P	5.780	5.780	0.000	549399	0.2500	0.2298	
6 Sulfate	6.513	6.513	0.000	5254238	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC Cal low_00703 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL

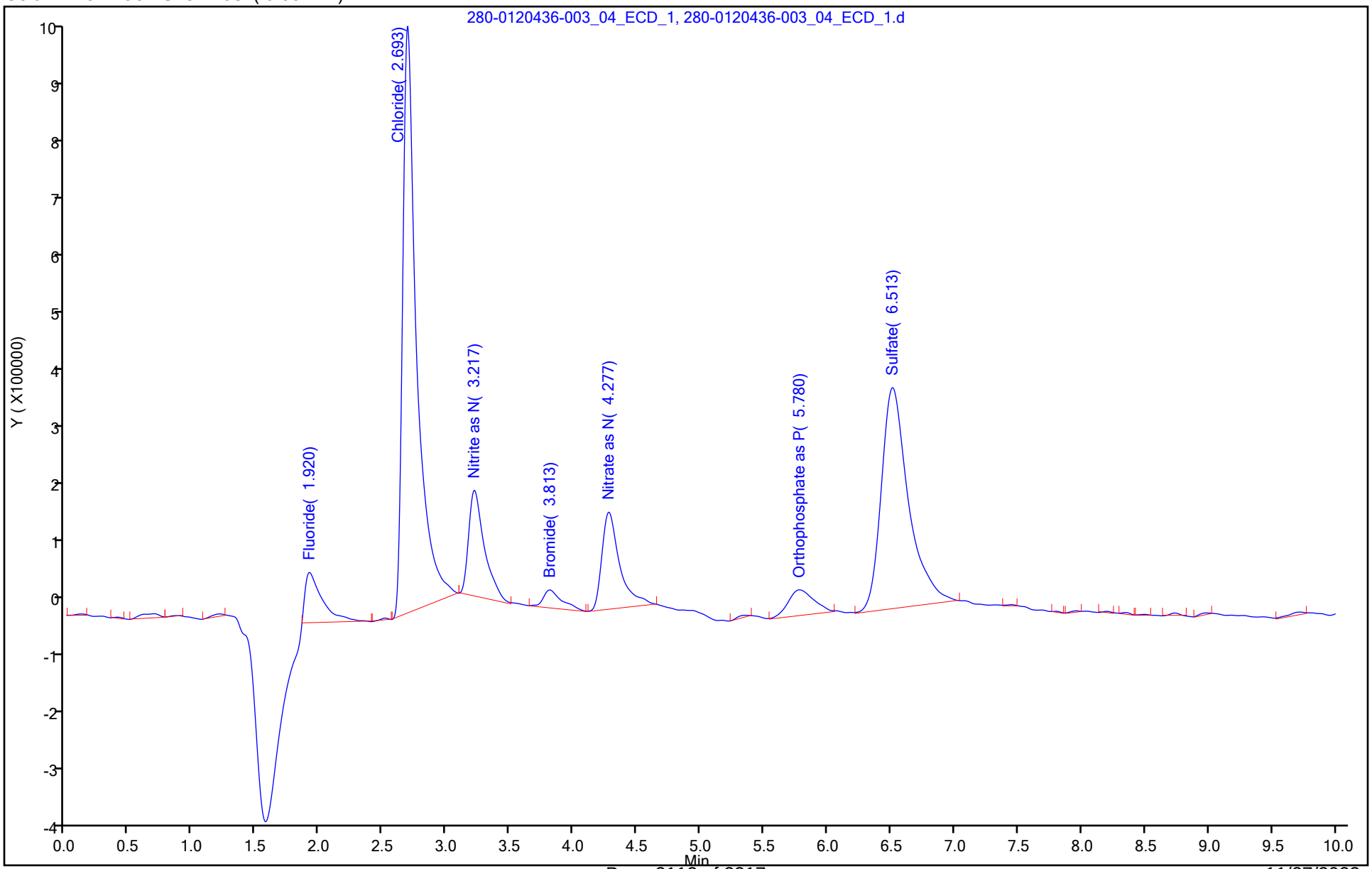
Report Date: 17-Apr-2023 10:47:23 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-003_04_ECD_1.d

Injection Date:	14-Apr-2023 14:52:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-004_05_ECD_1.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 14-Apr-2023 15:04:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-004
Misc. Info.: LCS
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:47:19 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:47:00

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11207746	NC	NC	M
2 Chloride	2.703	2.703	0.000	183927479	NC	NC	M
3 Nitrite as N	3.220	3.220	0.000	21627667	2.50	2.37	Ma
4 Bromide	3.810	3.810	0.000	2548091	NC	NC	M
5 Nitrate as N	4.277	4.277	0.000	19026240	2.50	2.38	
7 Orthophosphate as P	5.767	5.767	0.000	6123991	2.50	2.26	
6 Sulfate	6.530	6.530	0.000	127604667	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

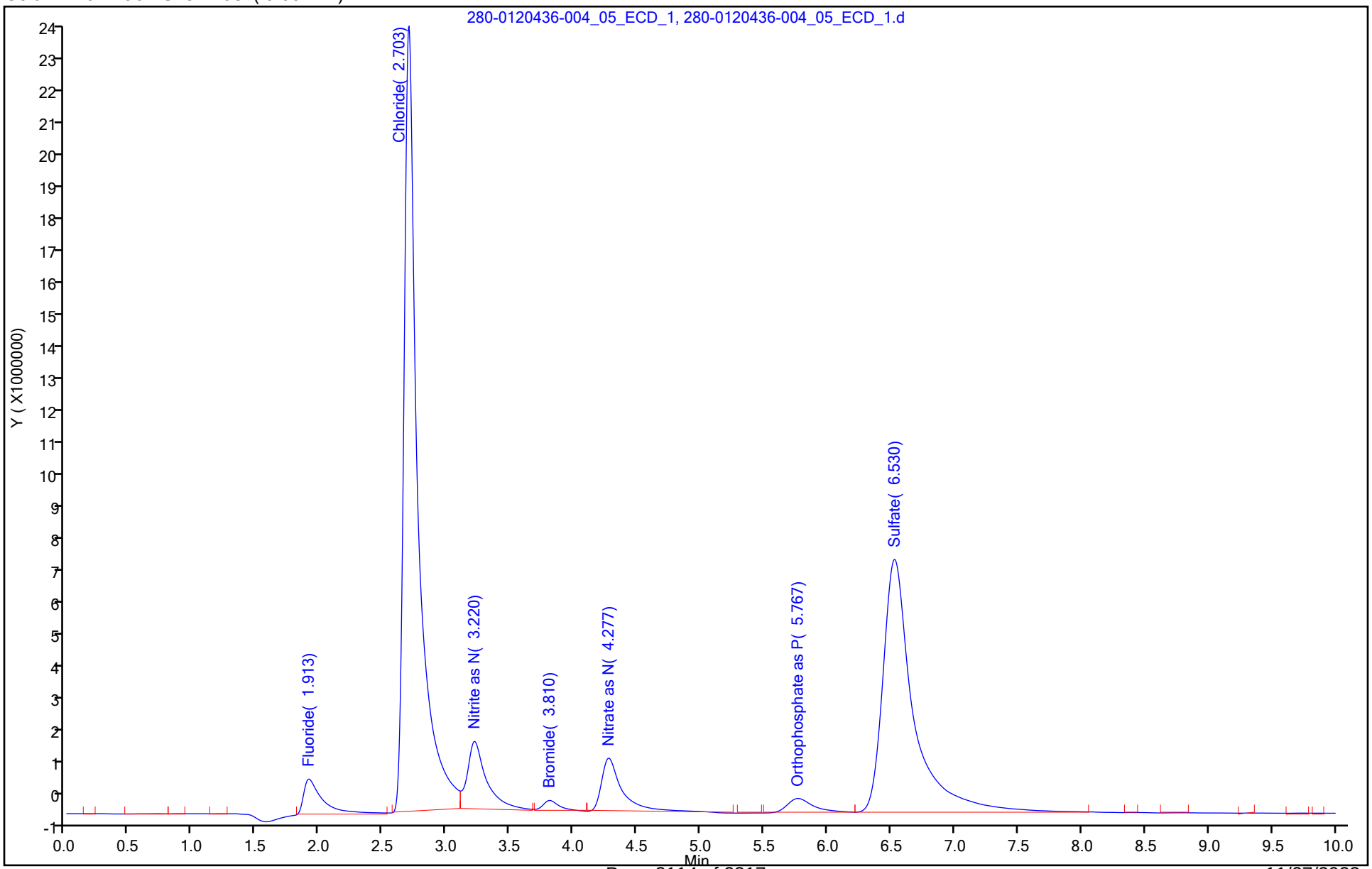
Report Date: 17-Apr-2023 10:47:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-004_05_ECD_1.d

Injection Date:	14-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-005_06_ECD_1.d
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 14-Apr-2023 15:16:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-005
Misc. Info.: LCSD
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:47:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:04:37

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	10815739	NC	NC	M
2 Chloride	2.703	2.703	0.000	184990476	NC	NC	M
3 Nitrite as N	3.220	3.220	0.000	22751084	2.50	2.49	M
4 Bromide	3.813	3.813	0.000	2638934	NC	NC	M
5 Nitrate as N	4.277	4.277	0.000	18847369	2.50	2.36	
7 Orthophosphate as P	5.767	5.767	0.000	6121197	2.50	2.26	
6 Sulfate	6.527	6.527	0.000	127418983	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

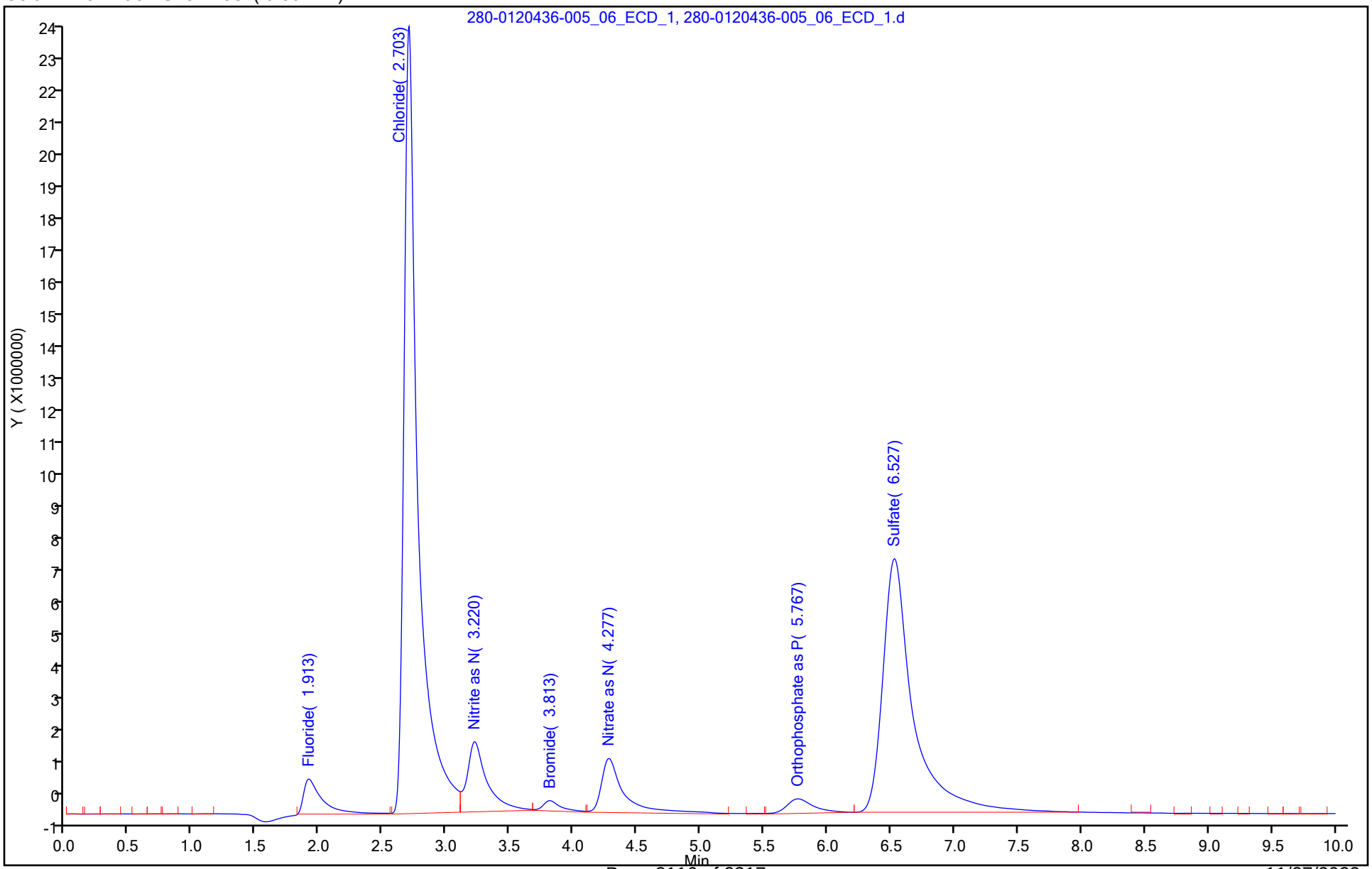
Report Date: 17-Apr-2023 10:47:20 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-005_06_ECD_1.d

Injection Date:	14-Apr-2023 15:16:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-006_07_ECD_1.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 14-Apr-2023 15:28:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-006
Misc. Info.: MB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:51:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:51:20

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride	2.757	2.757	0.000	10452		NC	
3 Nitrite as N	3.213	3.213	0.000	13940		0.0379	
4 Bromide	3.847	3.847	0.000	2001		NC	
5 Nitrate as N	4.370	4.370	0.000	14275		0.0509	
7 Orthophosphate as P	5.797	5.797	0.000	62059		0.0524	
6 Sulfate	6.463	6.463	0.000	34351		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

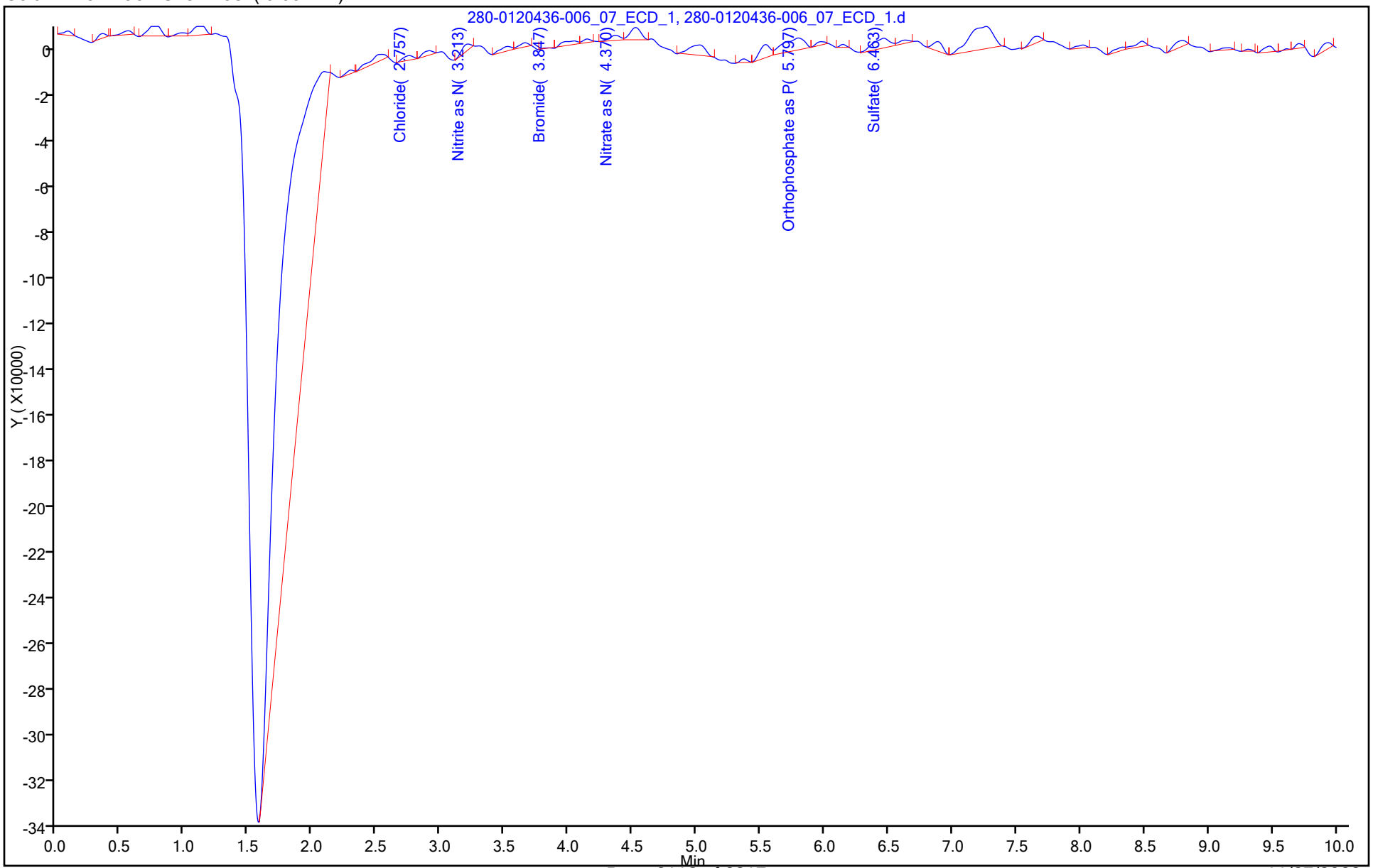
Report Date: 17-Apr-2023 10:51:32 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-006_07_ECD_1.d

Injection Date:	14-Apr-2023 15:28:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-017_18_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 17:44:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-017
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:32:12 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:02:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11240208	NC	NC	M
2 Chloride	2.700	2.703	-0.003	184891173	NC	NC	Ma
3 Nitrite as N	3.217	3.220	-0.003	22690090	2.50	2.49	Ma
4 Bromide	3.810	3.810	0.000	2534702	NC	NC	Ma
5 Nitrate as N	4.277	4.277	0.000	18656235	2.50	2.33	
7 Orthophosphate as P	5.763	5.767	-0.004	6100817	2.50	2.25	
6 Sulfate	6.523	6.530	-0.007	126608531	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

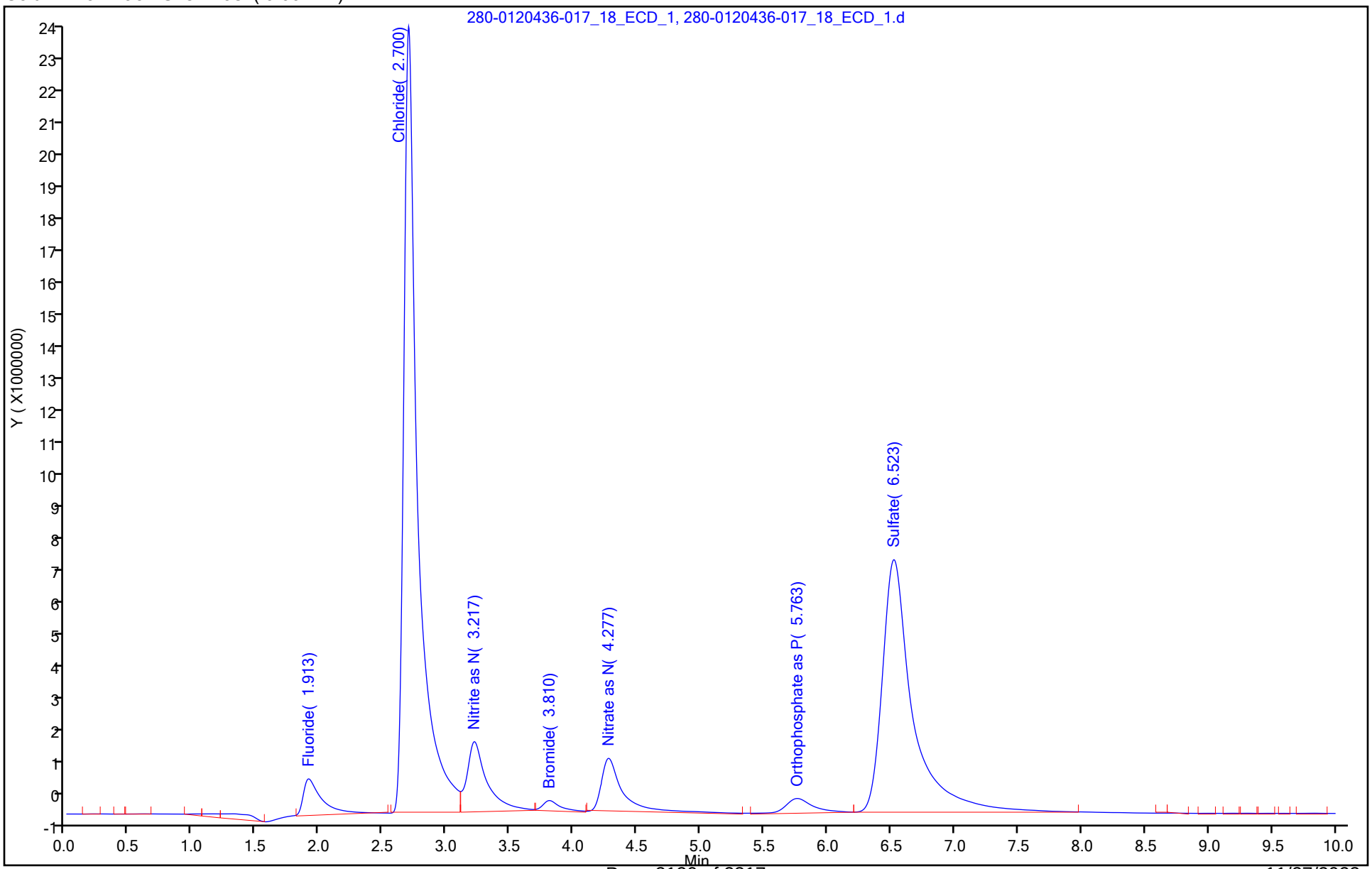
Report Date: 17-Apr-2023 10:32:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-017_18_ECD_1.d

Injection Date:	14-Apr-2023 17:44:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-018_19_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 17:56:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-018
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:32:05 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:18:37

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.913				ND	U
2 Chloride	2.767	2.703	0.064	4750		NC	
3 Nitrite as N	3.120	3.220	-0.100	11105		0.0376	
4 Bromide	3.883	3.810	0.073	8817		NC	
5 Nitrate as N	4.237	4.277	-0.040	27006		0.0525	
7 Orthophosphate as P	5.747	5.767	-0.020	22884		0.0381	
6 Sulfate	6.520	6.530	-0.010	23010		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

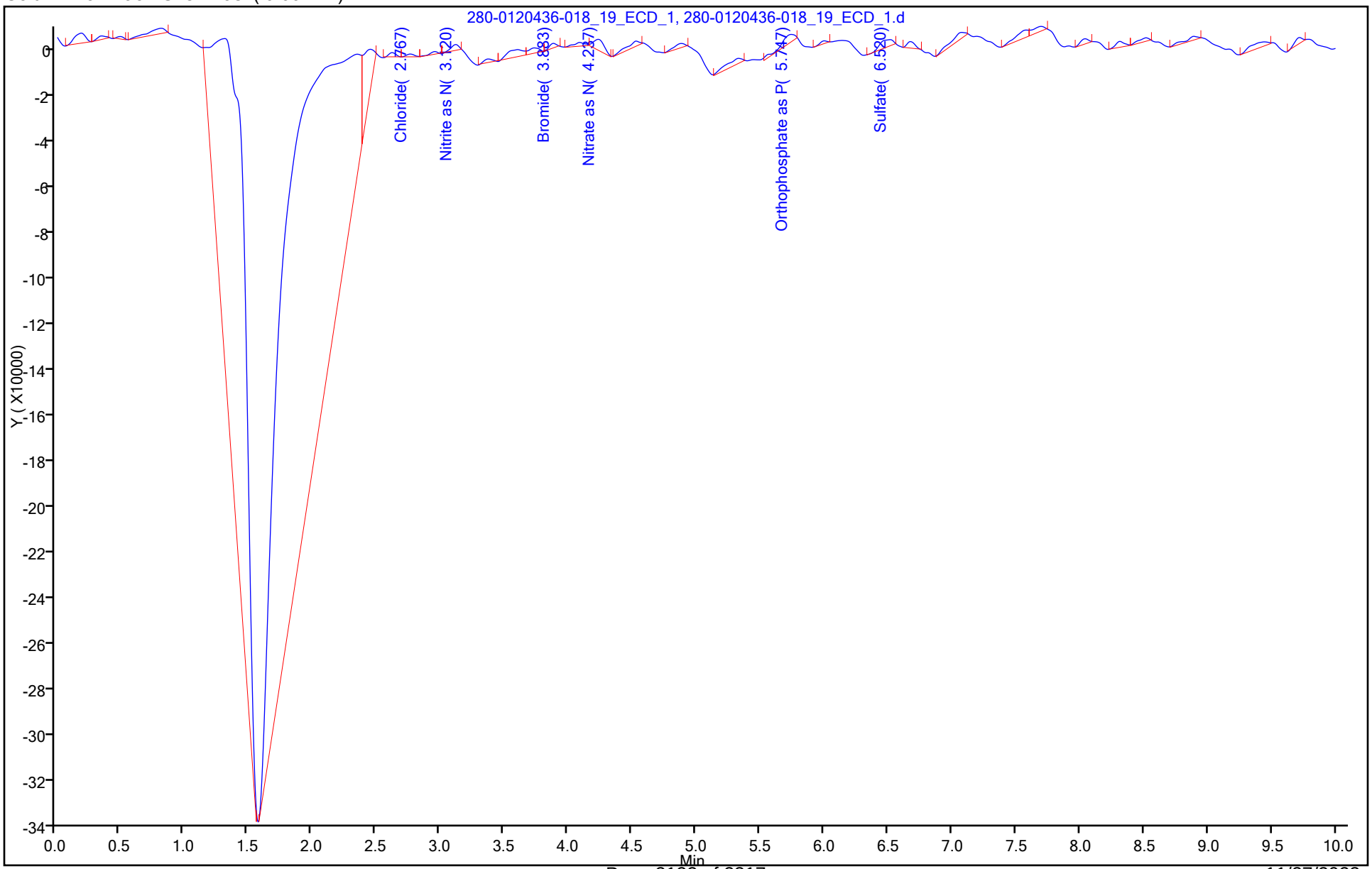
Report Date: 17-Apr-2023 10:32:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-018_19_ECD_1.d

Injection Date:	14-Apr-2023 17:56:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-025_26_ECD_1.d
Lims ID: 280-174957-C-6
Client ID: MW-105S-20230411
Sample Type: Client
Inject. Date: 14-Apr-2023 19:20:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 5.0000
Sample Info: 280-0120436-025
Misc. Info.: 280-174957-C-6
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:32:05 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.173	1.913	0.260	7684	NC	
2 Chloride	2.707	2.703	0.004	363002841	NC	
3 Nitrite as N		3.220			ND	
4 Bromide	3.800	3.810	-0.010	938281	NC	
5 Nitrate as N	4.287	4.277	0.010	20185371	2.52	
7 Orthophosphate as P	6.183	5.767	0.416	7837	0.0327	
6 Sulfate	6.523	6.530	-0.007	96789889	NC	

QC Flag Legend

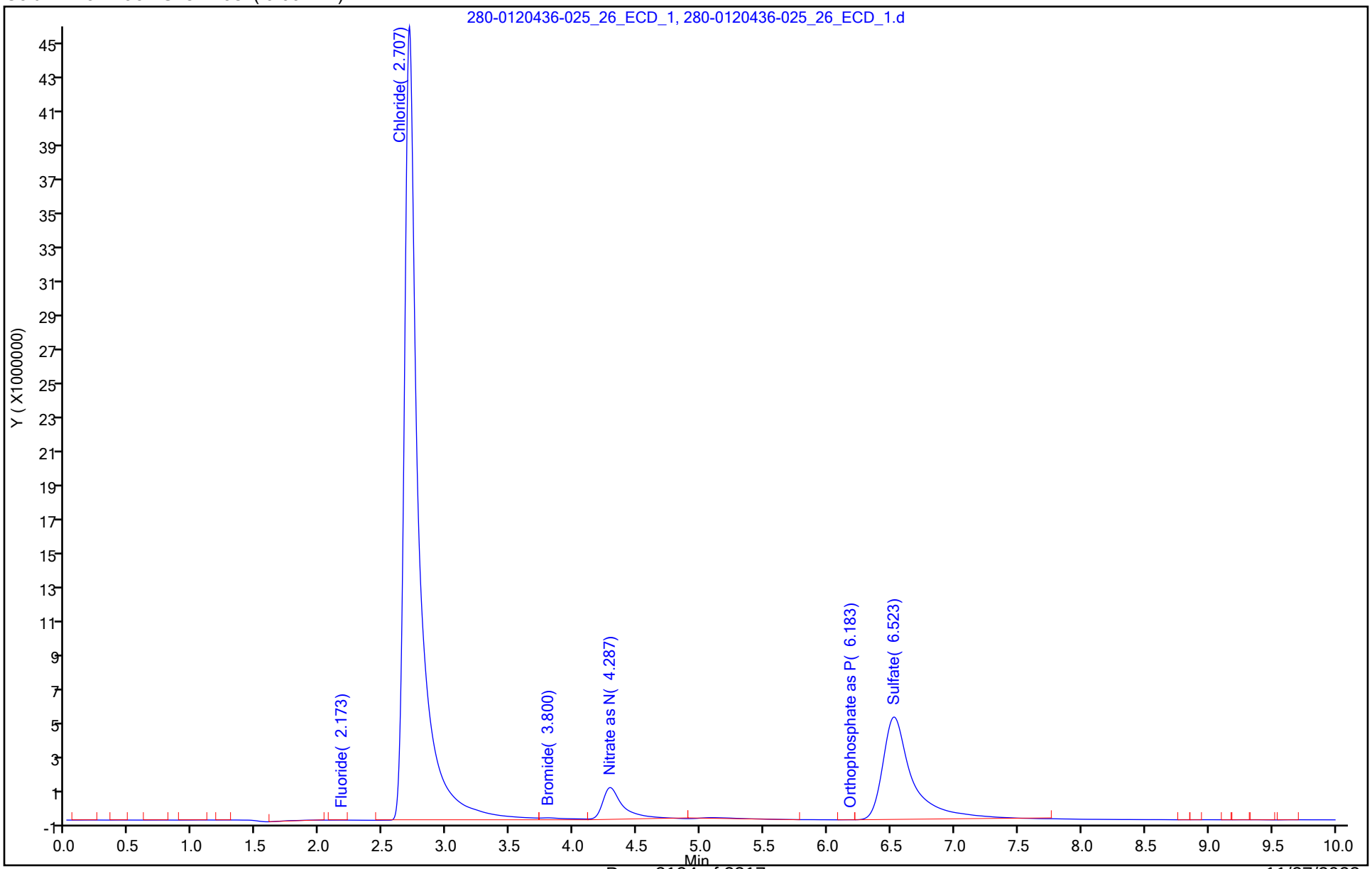
Processing Flags
NC - Not Calibrated

Report Date: 17-Apr-2023 10:32:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-025_26_ECD_1.d				
Injection Date:	14-Apr-2023 19:20:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-174957-C-6	Lab Sample ID:	280-174957-6	Worklist Smp#:	25
Client ID:	MW-105S-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-029_30_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 20:08:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-029
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:32:05 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:06:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.913	-0.003	11380762	NC	NC	M
2 Chloride	2.697	2.703	-0.006	184676416	NC	NC	M
3 Nitrite as N	3.213	3.220	-0.007	22527648	2.50	2.47	M
4 Bromide	3.803	3.810	-0.007	2525888	NC	NC	M
5 Nitrate as N	4.267	4.277	-0.010	18819158	2.50	2.35	
7 Orthophosphate as P	5.770	5.767	0.003	6089905	2.50	2.25	
6 Sulfate	6.510	6.530	-0.020	128069217	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

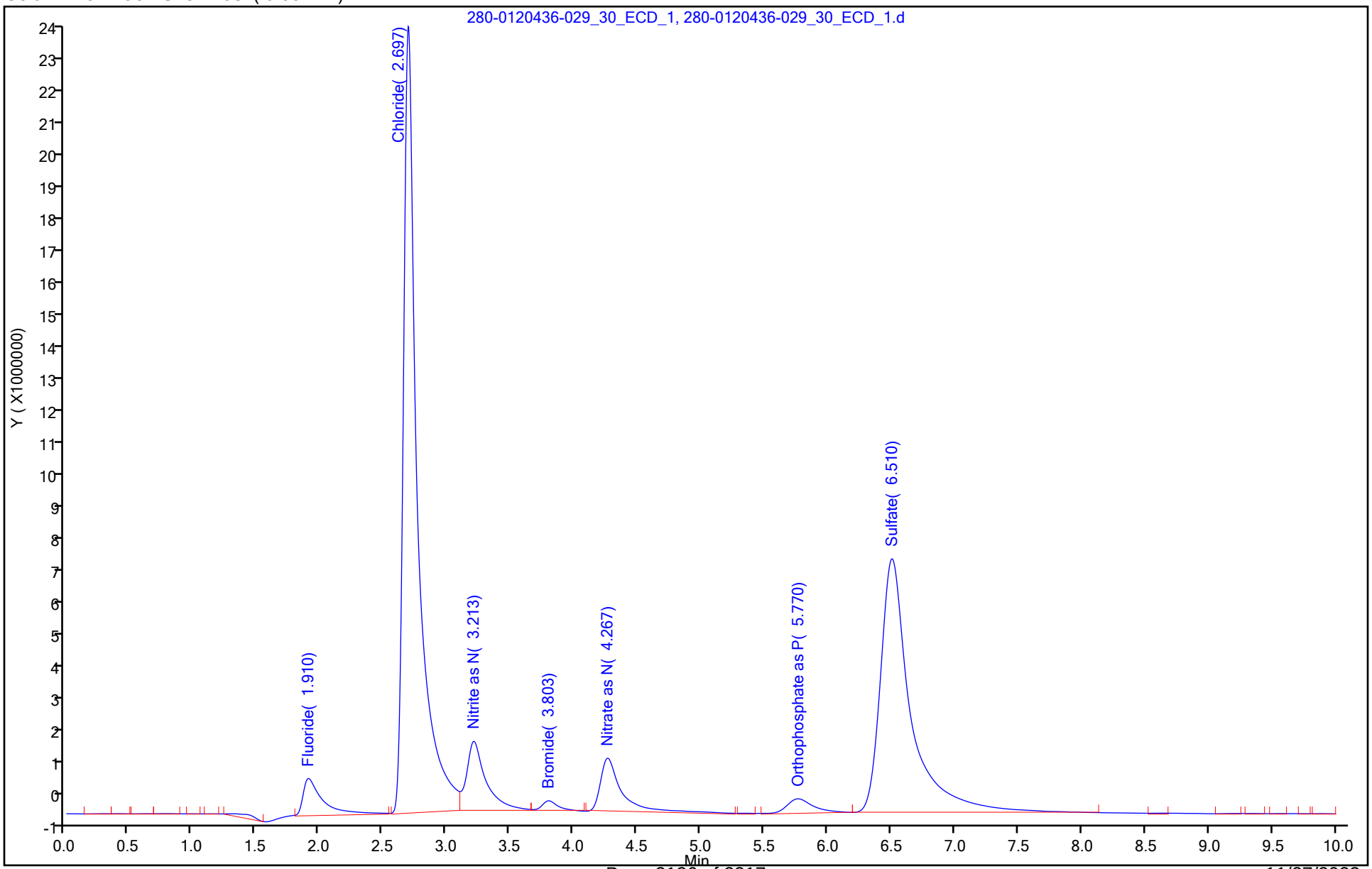
Report Date: 17-Apr-2023 10:32:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-029_30_ECD_1.d

Injection Date:	14-Apr-2023 20:08:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	29
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-030_31_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 20:20:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-030
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 17-Apr-2023 10:32:00 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:21:58

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.913				ND	U
2 Chloride	2.607	2.703	-0.096	10222		NC	
3 Nitrite as N	3.173	3.220	-0.047	15163		0.0380	
4 Bromide	3.813	3.810	0.003	6465		NC	
5 Nitrate as N	4.427	4.277	0.150	10920		0.0505	
7 Orthophosphate as P	5.670	5.767	-0.097	11854		0.0341	
6 Sulfate	6.470	6.530	-0.060	7686		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

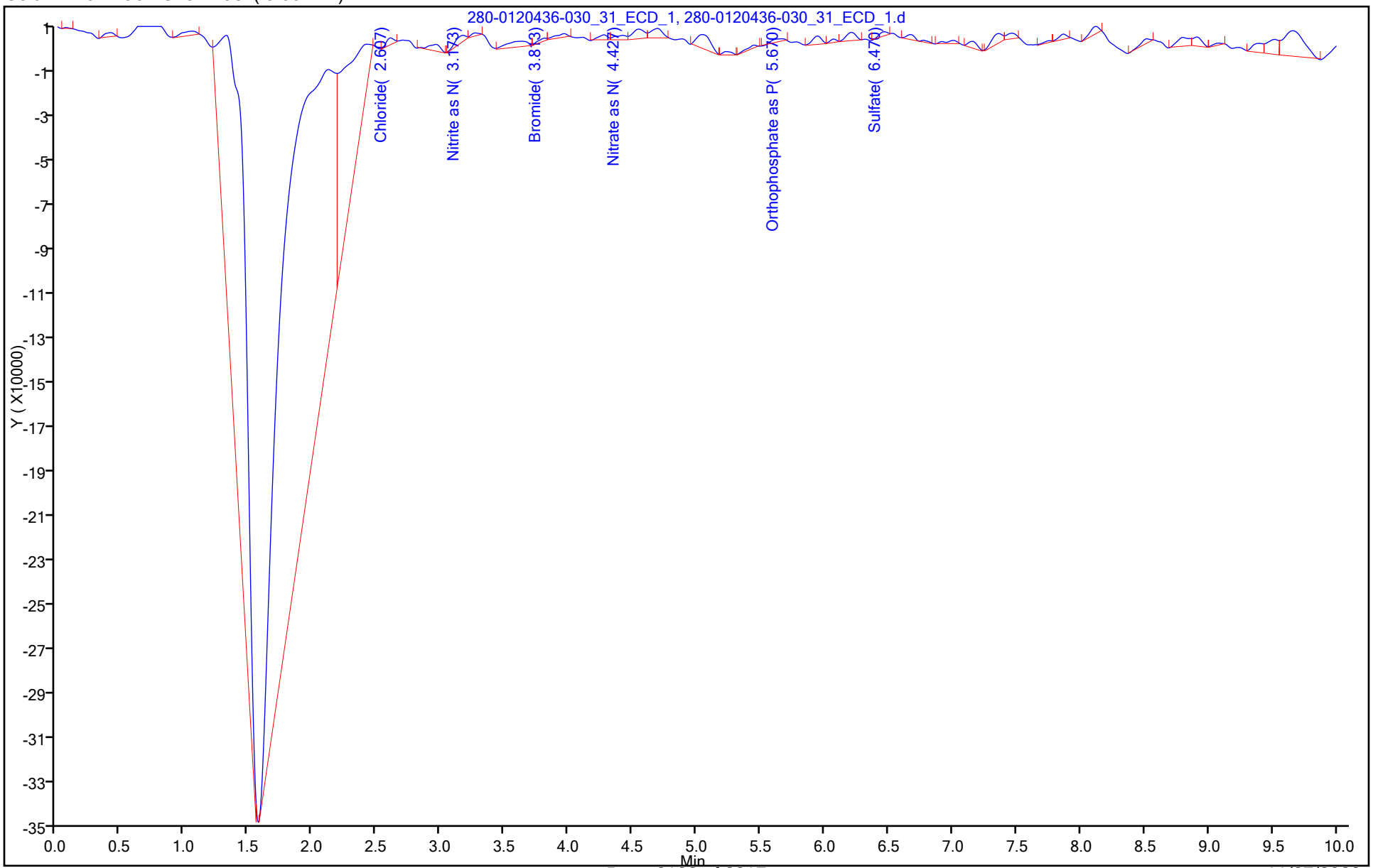
Report Date: 17-Apr-2023 10:32:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-030_31_ECD_1.d

Injection Date:	14-Apr-2023 20:20:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	30
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions		

Column: Ion Pac AS18 - Fast (0.00 mm)



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IC Instrument Information

WL: 120436 **Inst ID:** I-45 **Analysis Date:** 4/14/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	175046	5	F Cl NO2 Br NO3 PO4 SO4	MS/D	
EJS 4/14 ☐	~~175046~~ 175045	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174957	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174579	7	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174589	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174592	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174502	9	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	160-48349	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174290	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174289	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174291	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174293	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174360	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174361	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
EJS 4/14	174357 ~~174357~~ 174357a	1 1	F F		

Dilutions

Job No.	Samples	Anions	Dilution	Reason
045	6	F Cl NO2 Br NO3 PO4 SO4	2.5x	test
957	1	F Cl NO2 Br NO3 PO4 SO4	5x	test
579	7	F Cl NO2 Br NO3 PO4 SO4	10x	test
502	9	F Cl NO2 Br NO3 PO4 SO4	10x	test
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	03-Apr-2023 17:54:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120083-007				
Misc. Info.:	ICV				
Operator ID:		Instrument ID:	WC_IonChrom15		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	04-Apr-2023 11:53:33	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1646				
First Level Reviewer: XAY4		Date:	04-Apr-2023 10:06:27		
Start Cal Date:	03-Apr-2023 16:42:00				
End Cal Date:	03-Apr-2023 17:42:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-001_02_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 14:28:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-001
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 17-Apr-2023 10:59:57 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 14-Apr-2023 16:15:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11095659	2.50	2.35	M
2 Chloride	2.703	2.703	0.000	185328048	50.0	47.7	M
3 Nitrite as N	3.220	3.220	0.000	23638669	NC	NC	M
4 Bromide	3.810	3.810	0.000	2505783	2.50	2.25	M
5 Nitrate as N	4.277	4.277	0.000	19015948	NC	NC	
7 Orthophosphate as P	5.770	5.770	0.000	6098576	NC	NC	
6 Sulfate	6.530	6.530	0.000	127678970	50.0	48.3	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

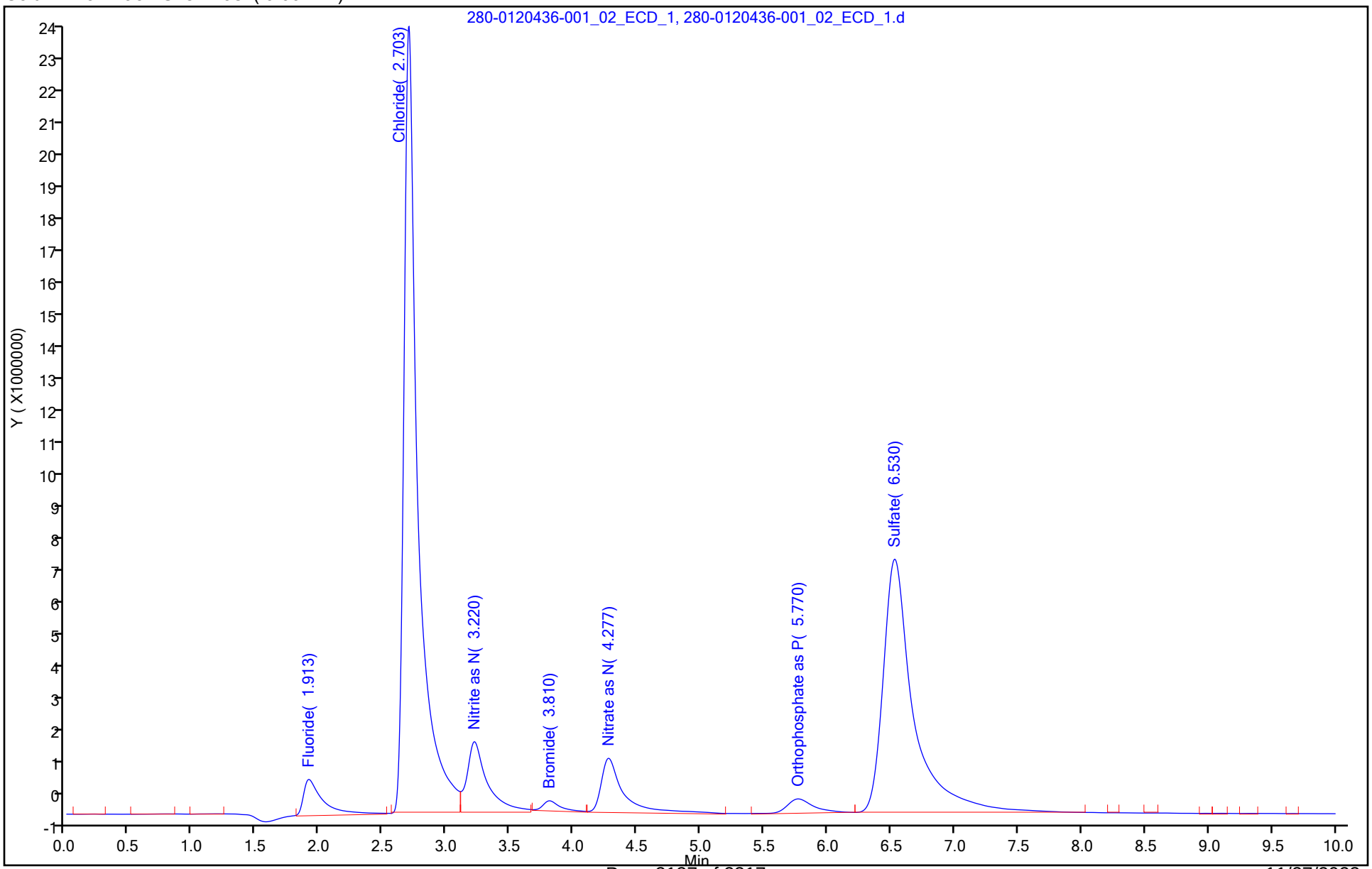
Report Date: 17-Apr-2023 10:59:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-001_02_ECD_1.d

Injection Date:	14-Apr-2023 14:28:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

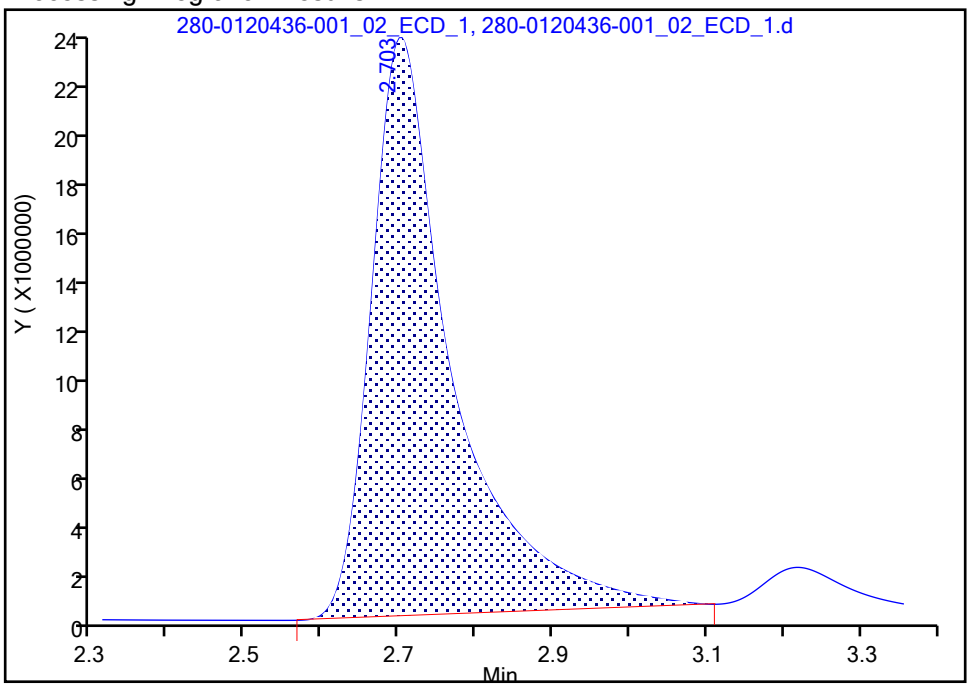
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-001_02_ECD_1.d				
Injection Date:	14-Apr-2023 14:28:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

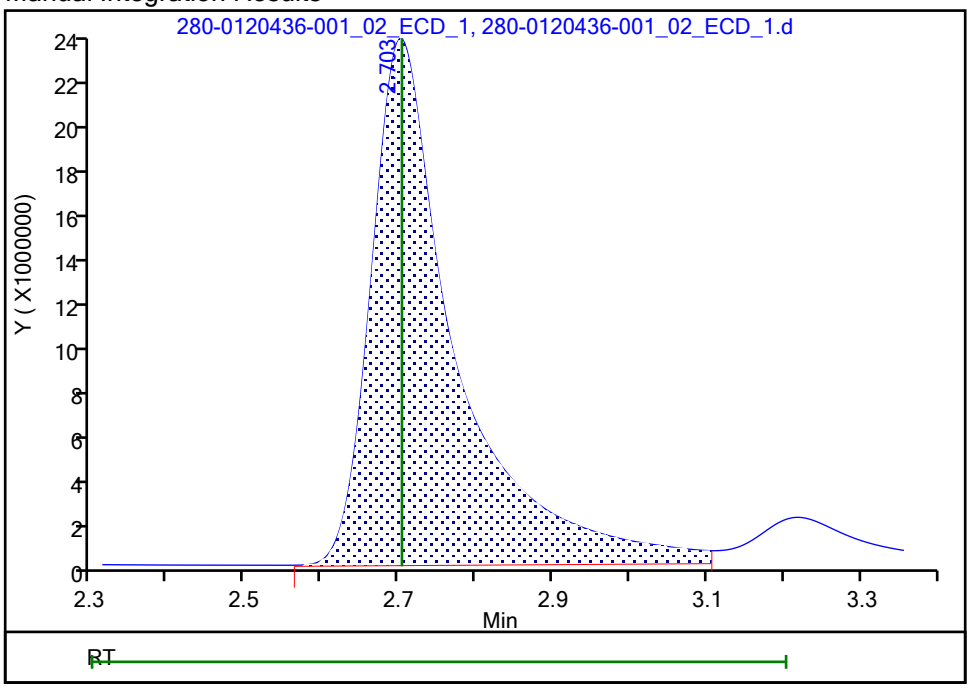
Processing Integration Results

RT: 2.70
Area: 175363426
Amount: 45.189240
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 185328048
Amount: 47.746387
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 16:14:51
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-002_03_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 14:40:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-002
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 17-Apr-2023 10:51:31 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:50:55

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride		2.757				ND	U
3 Nitrite as N	3.297	3.297	0.000	7704		NC	
4 Bromide	4.070	4.070	0.000	10263		0.0187	
5 Nitrate as N	4.293	4.293	0.000	5686		NC	
7 Orthophosphate as P	5.843	5.843	0.000	7924		NC	
6 Sulfate	6.630	6.630	0.000	47148		0.2391	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

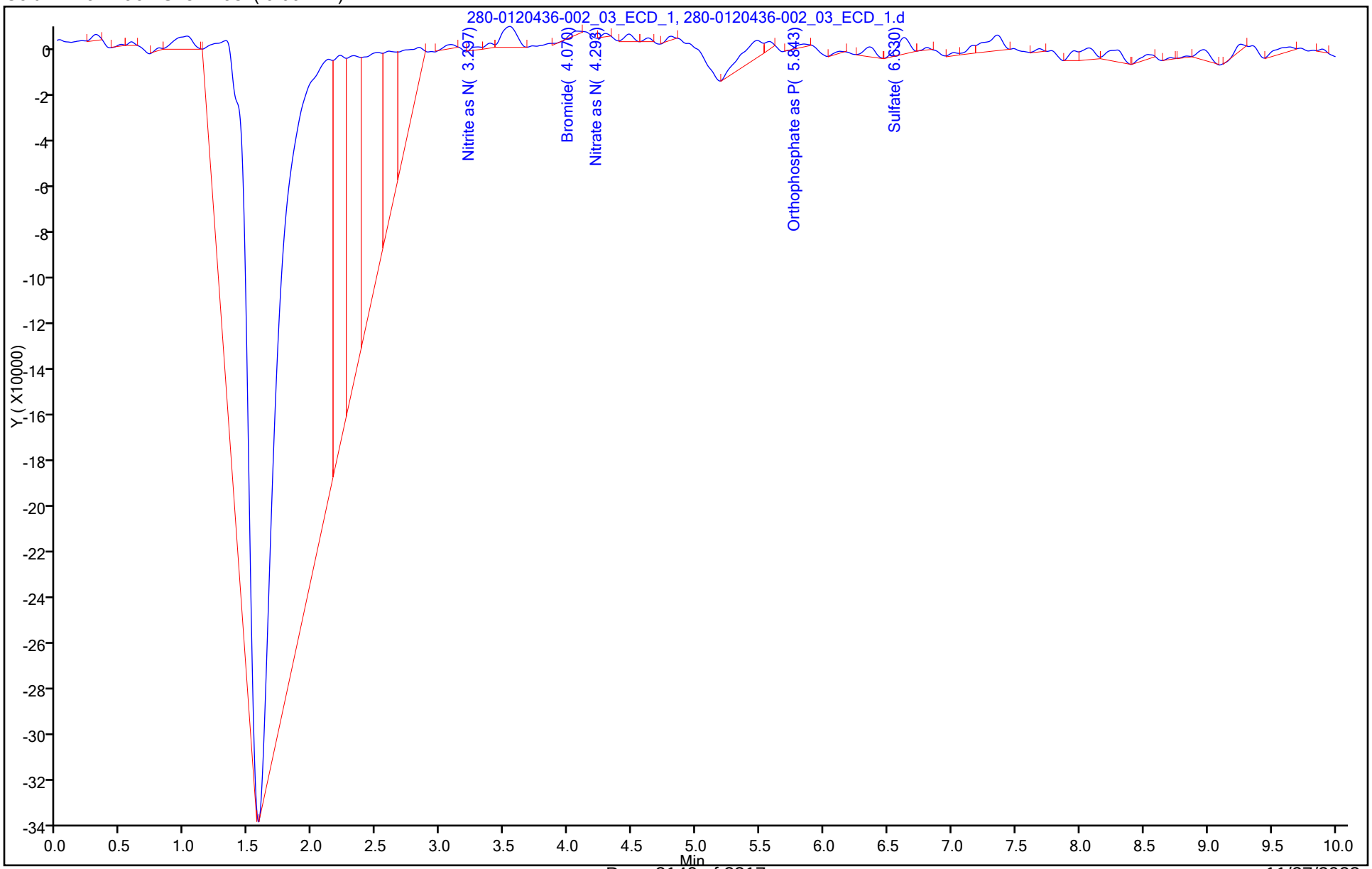
Report Date: 17-Apr-2023 10:51:31 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-002_03_ECD_1.d

Injection Date:	14-Apr-2023 14:40:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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User Disabled Compound Report

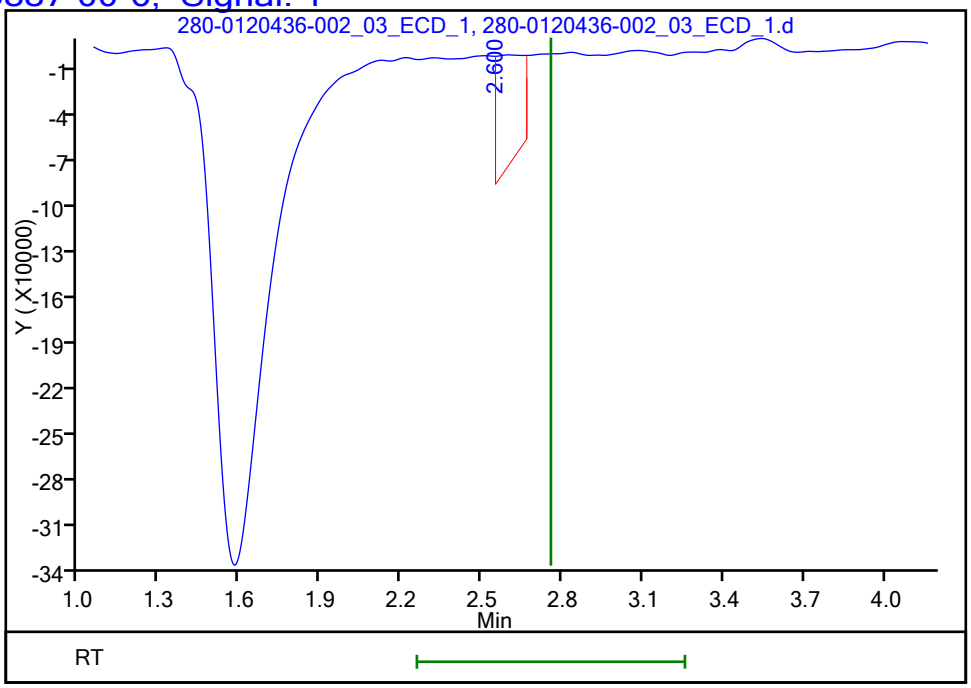
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-002_03_ECD_1.d
Injection Date: 14-Apr-2023 14:40:00 Instrument ID: WC_IonChrom15
Lims ID: ccb
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D

Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 2.60
Response: 484371
Amount: 0



Reviewer: XAY4, 17-Apr-2023 10:50:55
Audit Action: Manually Integrated Audit Reason:

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-003_04_ECD_1.d
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 14-Apr-2023 14:52:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-003
Misc. Info.: MRL
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 17-Apr-2023 10:47:23 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:04:54

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	783127	0.2500	0.2572	M
2 Chloride	2.693	2.693	0.000	7272307	2.50	2.05	a
3 Nitrite as N	3.217	3.217	0.000	1455387	NC	NC	
4 Bromide	3.813	3.813	0.000	286710	0.2500	0.2663	
5 Nitrate as N	4.277	4.277	0.000	1517159	NC	NC	
7 Orthophosphate as P	5.780	5.780	0.000	549399	NC	NC	
6 Sulfate	6.513	6.513	0.000	5254238	2.50	2.20	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC Cal low_00703 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL

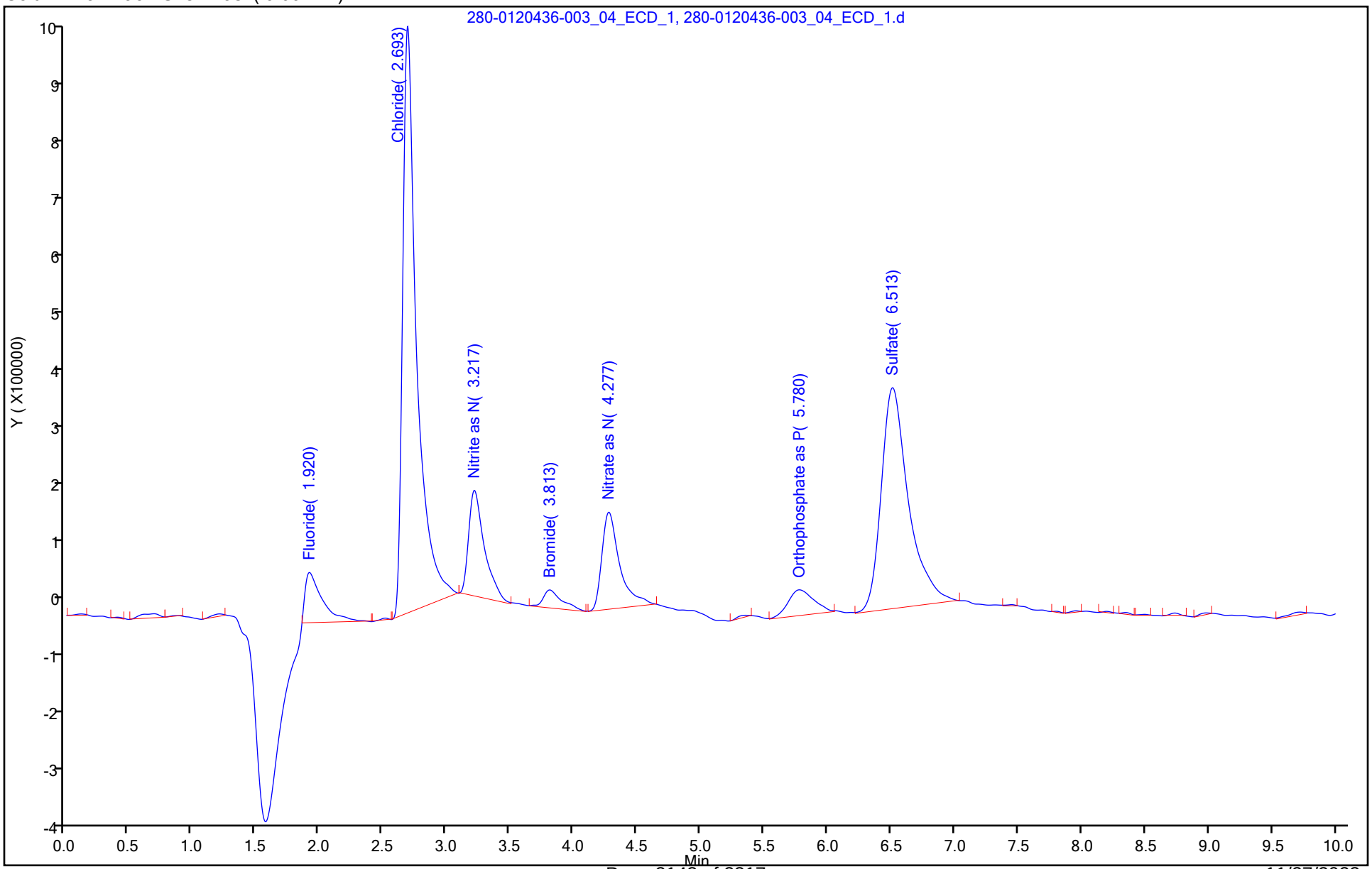
Report Date: 17-Apr-2023 10:47:23 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-003_04_ECD_1.d

Injection Date:	14-Apr-2023 14:52:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

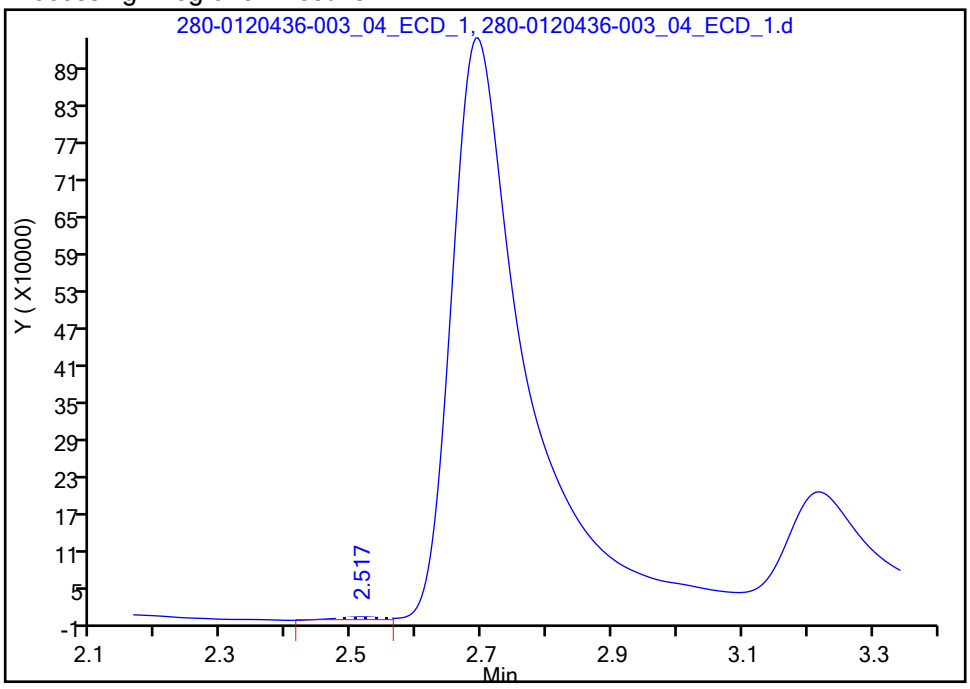
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-003_04_ECD_1.d				
Injection Date:	14-Apr-2023 14:52:00	Instrument ID:	WC_IonChrom15		
Lims ID:	mrl				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

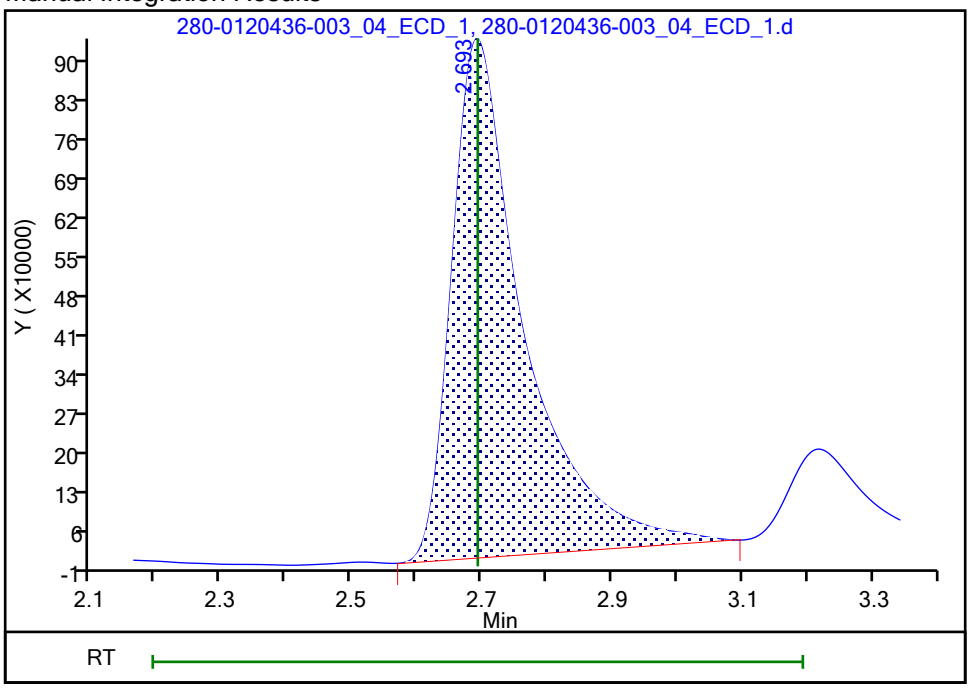
Processing Integration Results

RT: 2.52
Area: 14770
Amount: 0.190824
Amount Units: ug/ml



Manual Integration Results

RT: 2.69
Area: 7272307
Amount: 2.053272
Amount Units: ug/ml



Reviewer: XAY4, 17-Apr-2023 10:04:47

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-004_05_ECD_1.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 14-Apr-2023 15:04:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-004
Misc. Info.: LCS
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 17-Apr-2023 10:47:19 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:47:00

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11207746	2.50	2.37	M
2 Chloride	2.703	2.703	0.000	183927479	50.0	47.4	M
3 Nitrite as N	3.220	3.220	0.000	21627667	NC	NC	Ma
4 Bromide	3.810	3.810	0.000	2548091	2.50	2.29	M
5 Nitrate as N	4.277	4.277	0.000	19026240	NC	NC	
7 Orthophosphate as P	5.767	5.767	0.000	6123991	NC	NC	
6 Sulfate	6.530	6.530	0.000	127604667	50.0	48.2	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

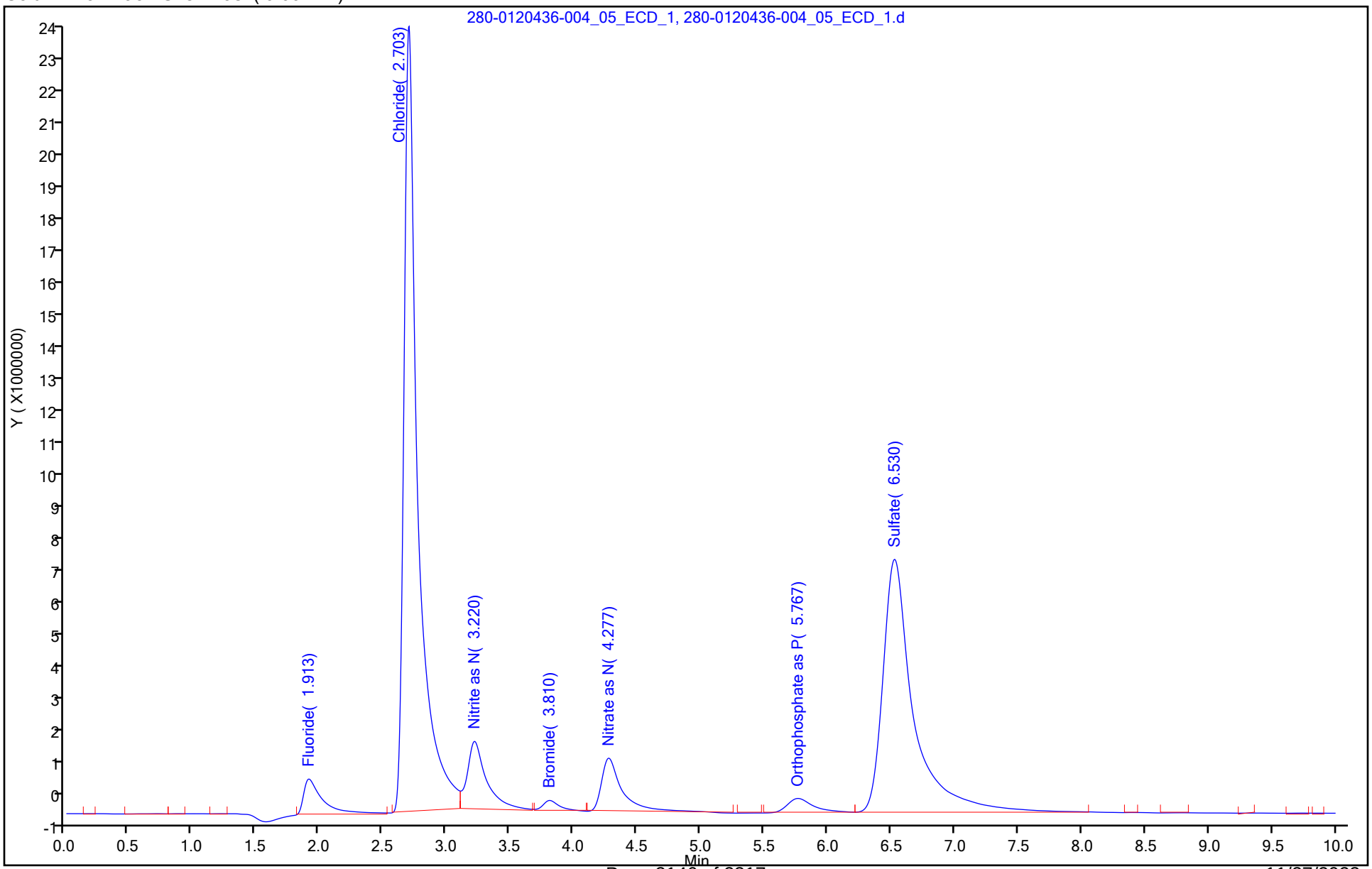
Report Date: 17-Apr-2023 10:47:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-004_05_ECD_1.d

Injection Date:	14-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

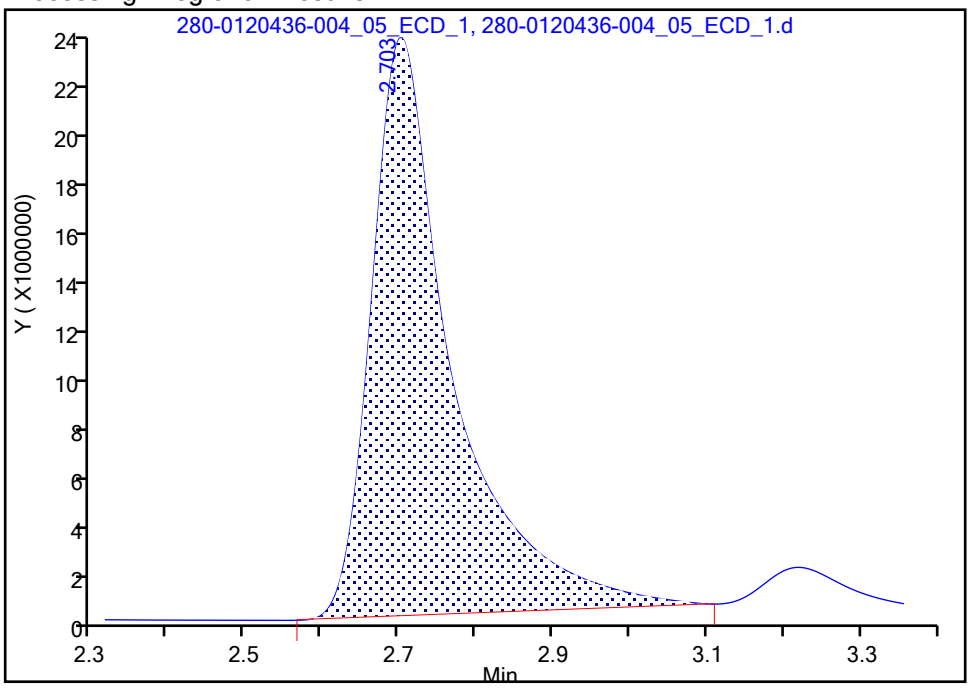
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-004_05_ECD_1.d				
Injection Date:	14-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom15		
Lims ID:	lcs				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

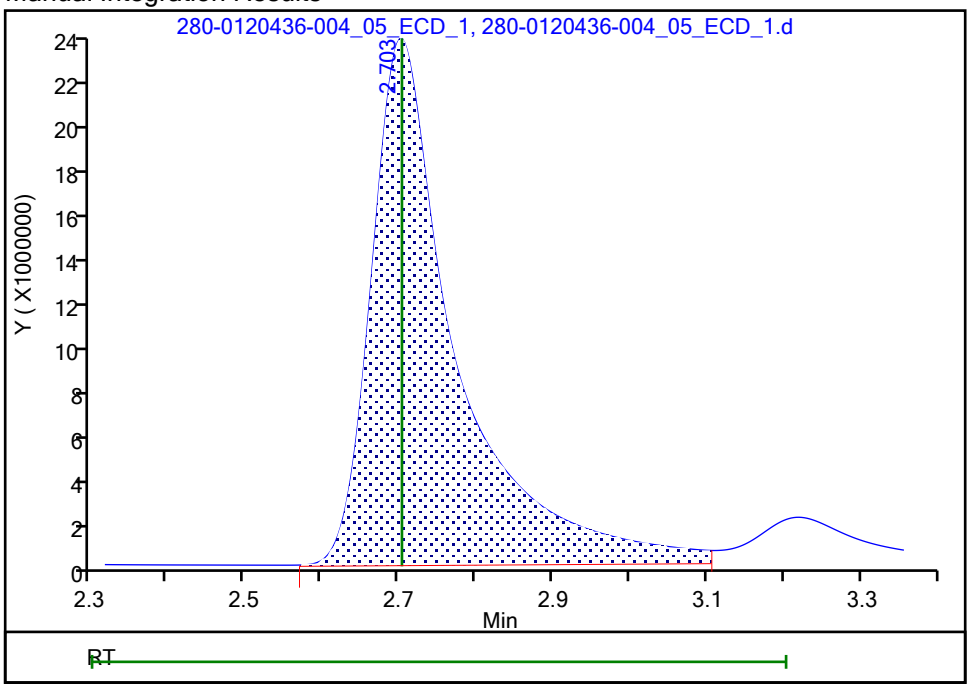
Processing Integration Results

RT: 2.70
Area: 175015503
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 183927479
Amount: 47.386969
Amount Units: ug/ml



Reviewer: XAY4, 17-Apr-2023 10:03:03
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-005_06_ECD_1.d
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 14-Apr-2023 15:16:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-005
Misc. Info.: LCSD
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 17-Apr-2023 10:47:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:04:37

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	10815739	2.50	2.29	M
2 Chloride	2.703	2.703	0.000	184990476	50.0	47.7	M
3 Nitrite as N	3.220	3.220	0.000	22751084	NC	NC	M
4 Bromide	3.813	3.813	0.000	2638934	2.50	2.37	M
5 Nitrate as N	4.277	4.277	0.000	18847369	NC	NC	
7 Orthophosphate as P	5.767	5.767	0.000	6121197	NC	NC	
6 Sulfate	6.527	6.527	0.000	127418983	50.0	48.2	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

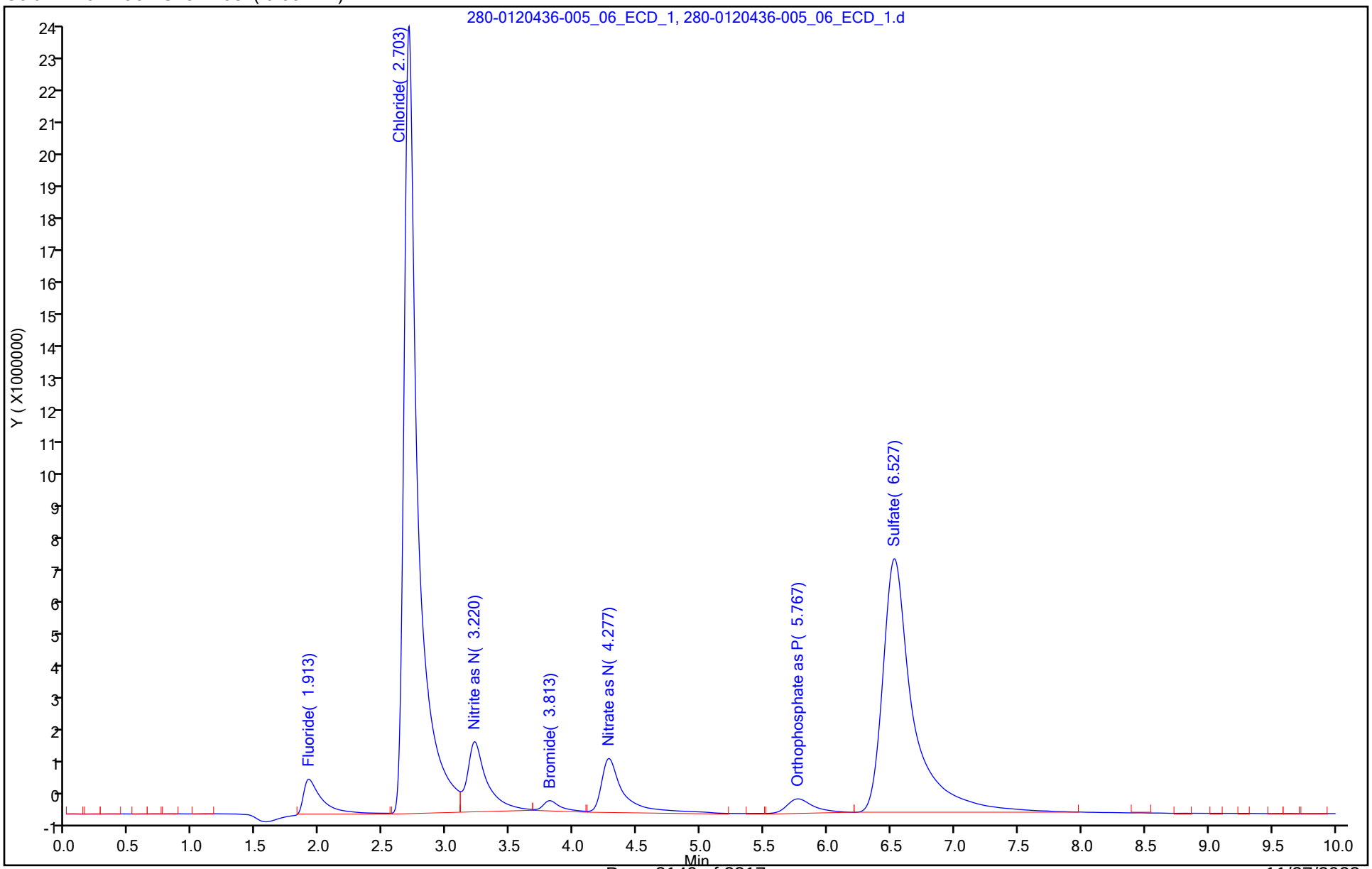
Report Date: 17-Apr-2023 10:47:20 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-005_06_ECD_1.d

Injection Date:	14-Apr-2023 15:16:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

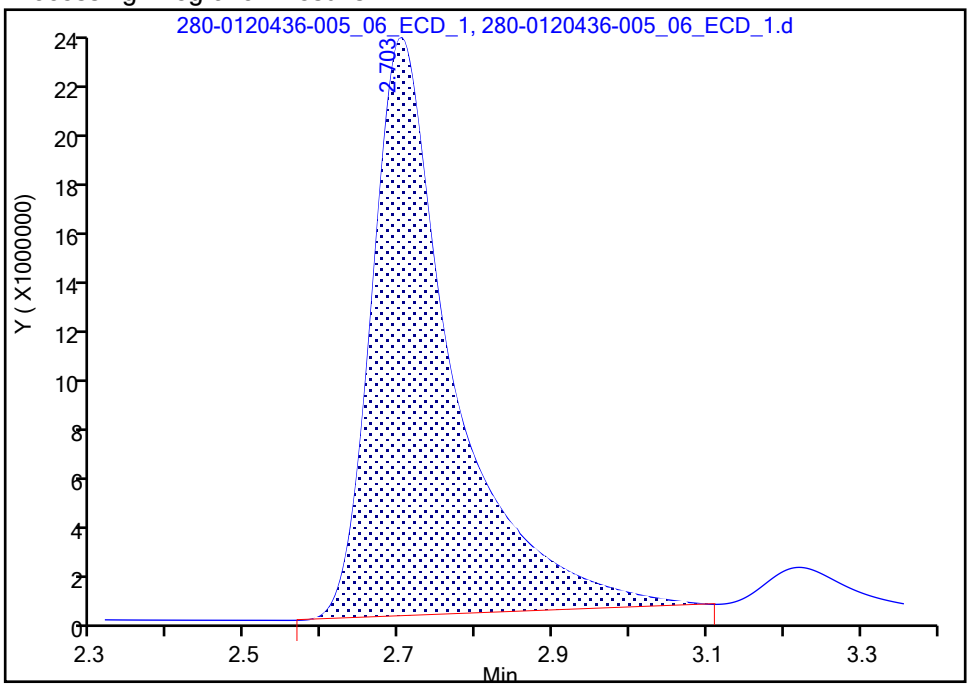
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-005_06_ECD_1.d				
Injection Date:	14-Apr-2023 15:16:00	Instrument ID:	WC_IonChrom15		
Lims ID:	lcsd				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

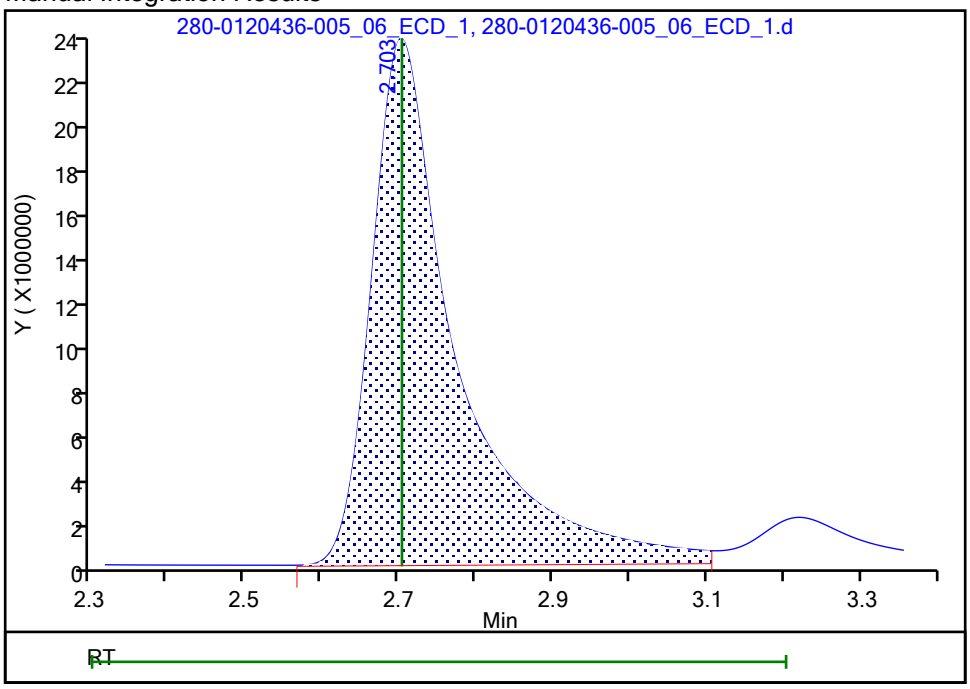
Processing Integration Results

RT: 2.70
Area: 175300201
Amount: 45.173015
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 184990476
Amount: 47.659758
Amount Units: ug/ml



Reviewer: XAY4, 17-Apr-2023 10:03:47
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-006_07_ECD_1.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 14-Apr-2023 15:28:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-006
Misc. Info.: MB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 17-Apr-2023 10:51:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:51:20

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride	2.757	2.757	0.000	10452		0.1897	
3 Nitrite as N	3.213	3.213	0.000	13940		NC	
4 Bromide	3.847	3.847	0.000	2001		0.0113	
5 Nitrate as N	4.370	4.370	0.000	14275		NC	
7 Orthophosphate as P	5.797	5.797	0.000	62059		NC	
6 Sulfate	6.463	6.463	0.000	34351		0.2343	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

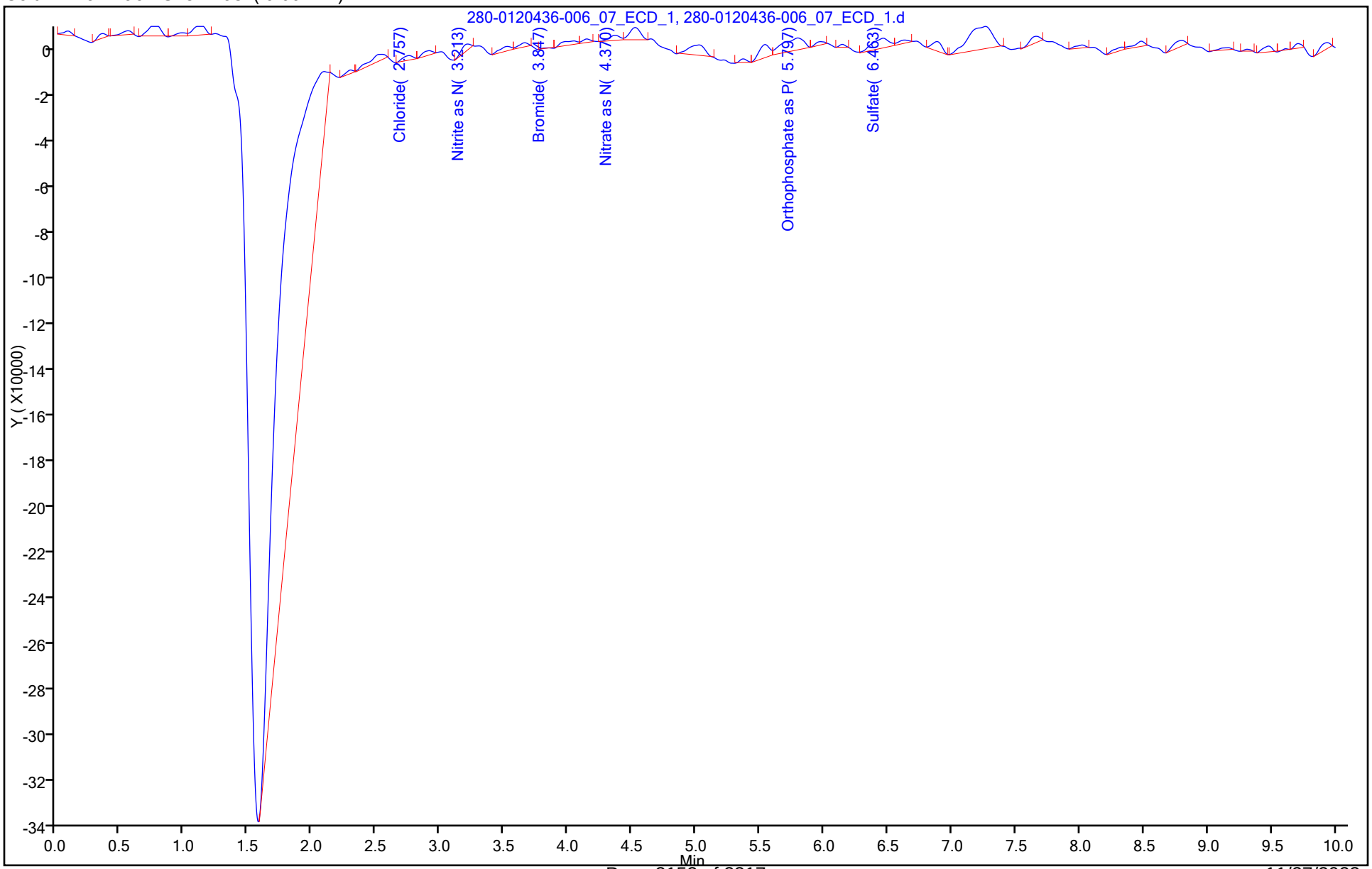
Report Date: 17-Apr-2023 10:51:32 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-006_07_ECD_1.d

Injection Date:	14-Apr-2023 15:28:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-017_18_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 14-Apr-2023 17:44:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-017
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 17-Apr-2023 10:32:12 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:02:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11240208	2.50	2.38	M
2 Chloride	2.700	2.703	-0.003	184891173	50.0	47.6	Ma
3 Nitrite as N	3.217	3.220	-0.003	22690090	NC	NC	Ma
4 Bromide	3.810	3.810	0.000	2534702	2.50	2.28	Ma
5 Nitrate as N	4.277	4.277	0.000	18656235	NC	NC	
7 Orthophosphate as P	5.763	5.767	-0.004	6100817	NC	NC	
6 Sulfate	6.523	6.530	-0.007	126608531	50.0	47.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

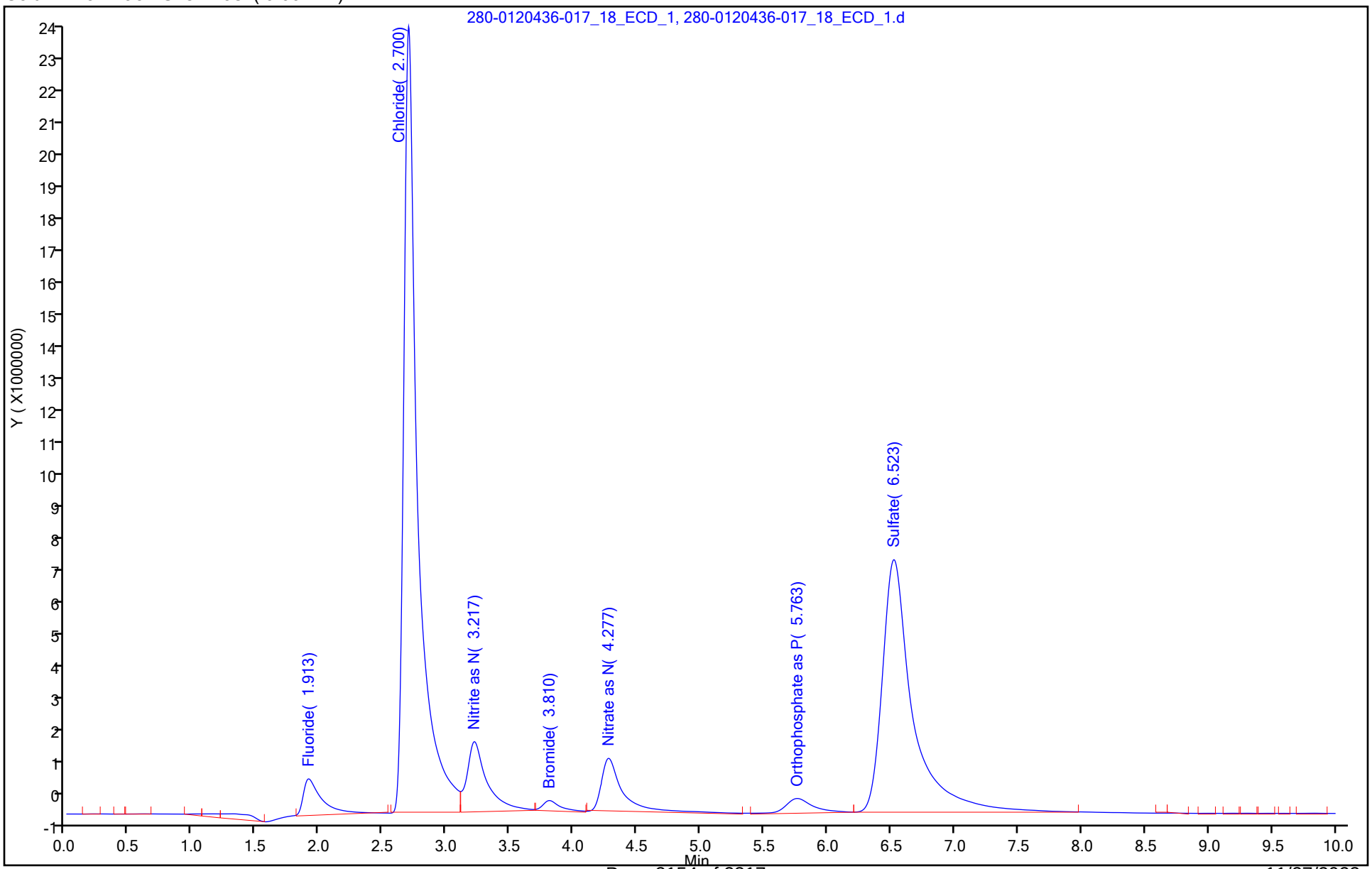
Report Date: 17-Apr-2023 10:32:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-017_18_ECD_1.d

Injection Date:	14-Apr-2023 17:44:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

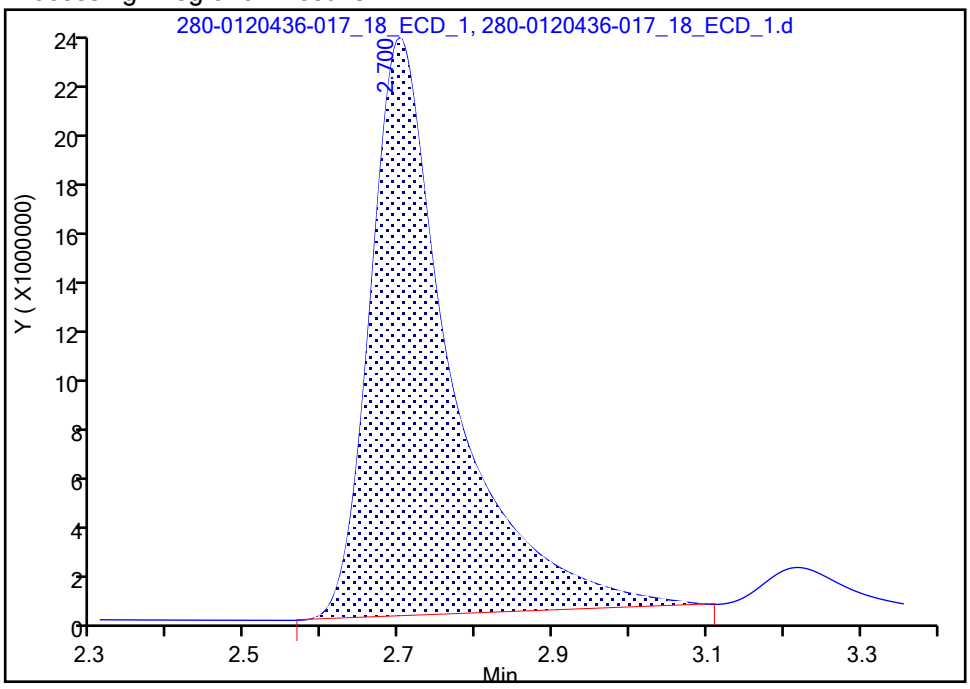
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-017_18_ECD_1.d				
Injection Date:	14-Apr-2023 17:44:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

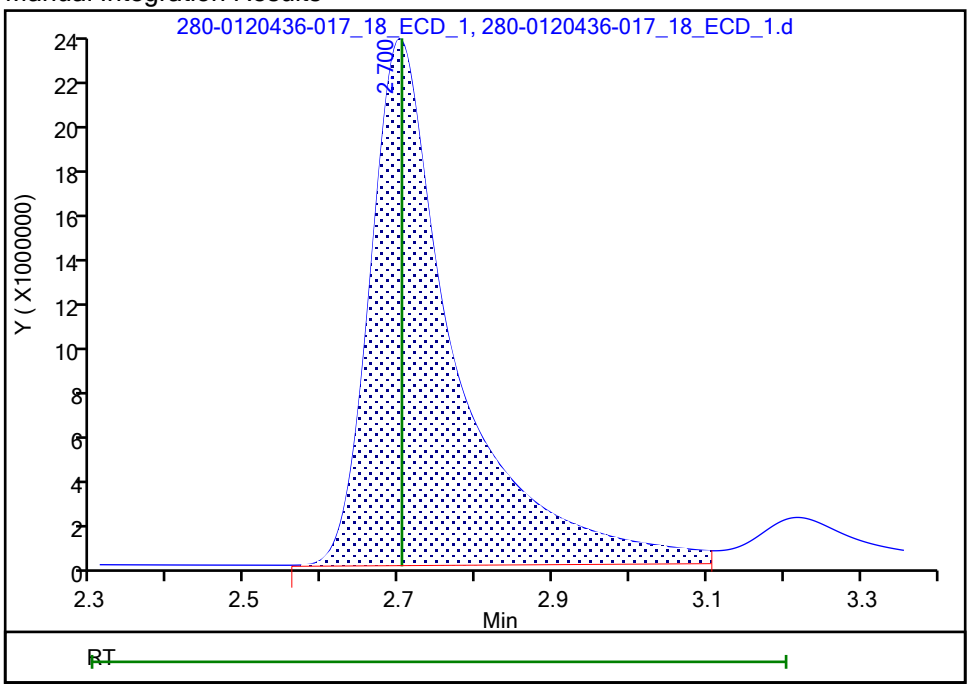
Processing Integration Results

RT: 2.70
Area: 175042382
Amount: 45.106853
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 184891173
Amount: 47.634275
Amount Units: ug/ml



Reviewer: XAY4, 17-Apr-2023 10:01:57

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-018_19_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 14-Apr-2023 17:56:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120436-018
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 17-Apr-2023 10:32:05 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

First Level Reviewer: XAY4 Date: 17-Apr-2023 10:18:37

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.913				ND	U
2 Chloride	2.767	2.703	0.064	4750		0.1883	
3 Nitrite as N	3.120	3.220	-0.100	11105		NC	
4 Bromide	3.883	3.810	0.073	8817		0.0174	
5 Nitrate as N	4.237	4.277	-0.040	27006		NC	
7 Orthophosphate as P	5.747	5.767	-0.020	22884		NC	
6 Sulfate	6.520	6.530	-0.010	23010		0.2300	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

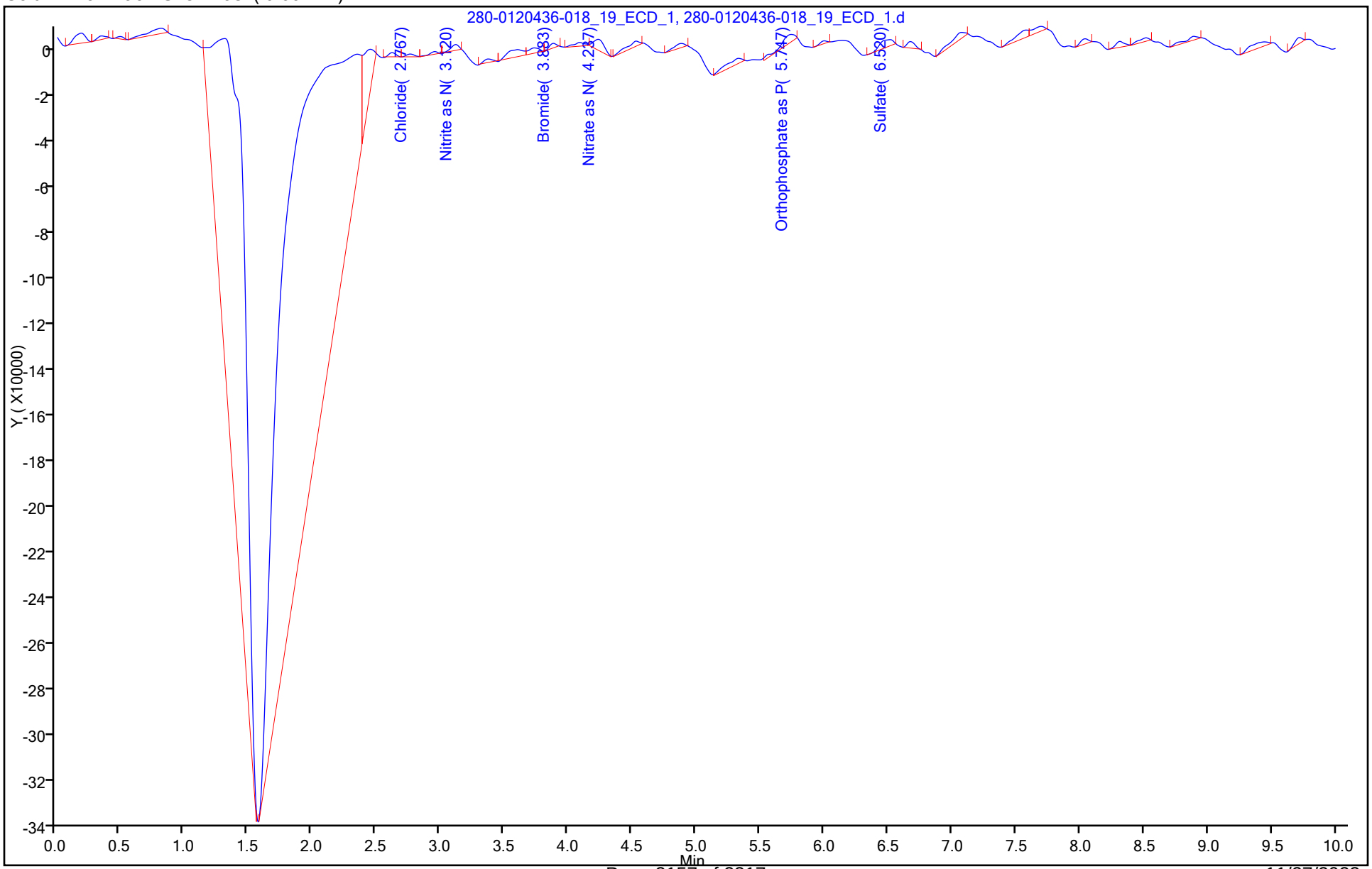
Report Date: 17-Apr-2023 10:32:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-018_19_ECD_1.d

Injection Date:	14-Apr-2023 17:56:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-025_26_ECD_1.d
Lims ID: 280-174957-C-6
Client ID: MW-105S-20230411
Sample Type: Client
Inject. Date: 14-Apr-2023 19:20:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 5.0000
Sample Info: 280-0120436-025
Misc. Info.: 280-174957-C-6
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 17-Apr-2023 10:32:05 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1603

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.173	1.913	0.260	7684	0.1001	
2 Chloride	2.707	2.703	0.004	363002841	93.3	
3 Nitrite as N		3.220			ND	
4 Bromide	3.800	3.810	-0.010	938281	0.8499	
5 Nitrate as N	4.287	4.277	0.010	20185371	NC	
7 Orthophosphate as P	6.183	5.767	0.416	7837	NC	
6 Sulfate	6.523	6.530	-0.007	96789889	36.6	

QC Flag Legend

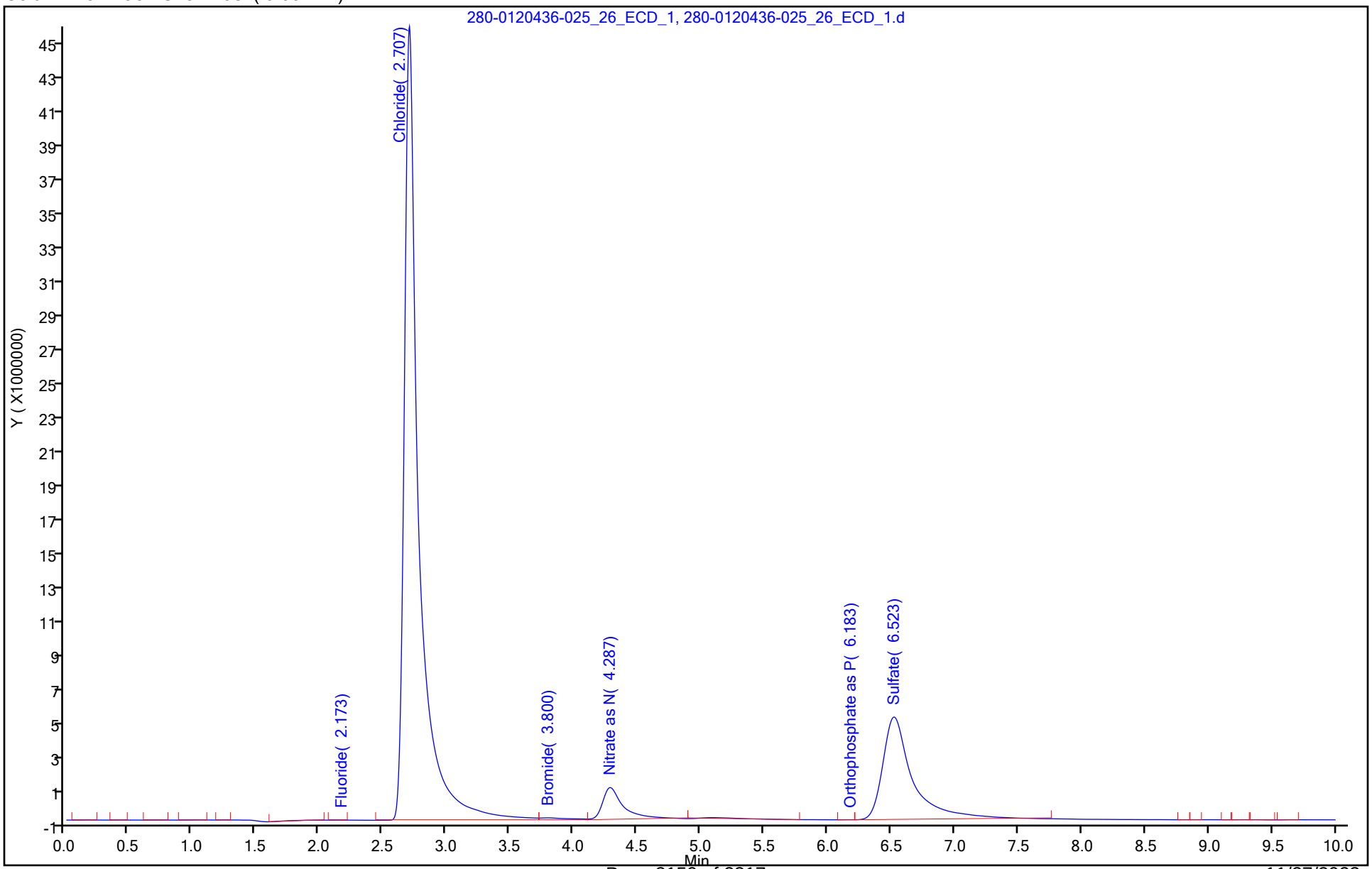
Processing Flags
NC - Not Calibrated

Report Date: 17-Apr-2023 10:32:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230414-120436.b\280-0120436-025_26_ECD_1.d				
Injection Date:	14-Apr-2023 19:20:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-174957-C-6	Lab Sample ID:	280-174957-6	Worklist Smp#:	25
Client ID:	MW-105S-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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IC Instrument Information

WL: 120849 **Inst ID:** ICIS **Analysis Date:** 4/27/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	174693	2	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	175304	3	F (Cl) NO2 (Br) NO3 PO4 (SO4)	MS/D	
☐	174957	4	F (Cl) NO2 (Br) NO3 PO4 (SO4)	MS/D	
☐	174960	4	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	174962	1	F (Cl) NO2 (Br) NO3 PO4 (SO4)	MS/D	
☐	174968	3	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
893	2	F (Cl) NO2 Br NO3 PO4 (SO4)	2.5x	test
304	1	F (Cl) NO2 (Br) NO3 PO4 (SO4)	5x	test
957	4	F (Cl) NO2 (Br) NO3 PO4 (SO4)	5x	test
962	1	F (Cl) NO2 (Br) NO3 PO4 (SO4)	10x	test
968	3	F (Cl) NO2 Br NO3 PO4 (SO4)	5,10x	test
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:53:33 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-001_02_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 14:19:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-001
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 10:04:16 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 09:48:42

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	11648472	2.50	2.46	M
2 Chloride	2.680	2.680	0.000	183948480	50.0	47.4	M
3 Nitrite as N		2.683			NC	ND	M
4 Bromide	3.763	3.763	0.000	2615443	2.50	2.35	
5 Nitrate as N	4.213	4.213	0.000	19224323	NC	NC	
7 Orthophosphate as P	5.607	5.607	0.000	6031660	NC	NC	
6 Sulfate	6.357	6.357	0.000	132264973	50.0	50.0	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

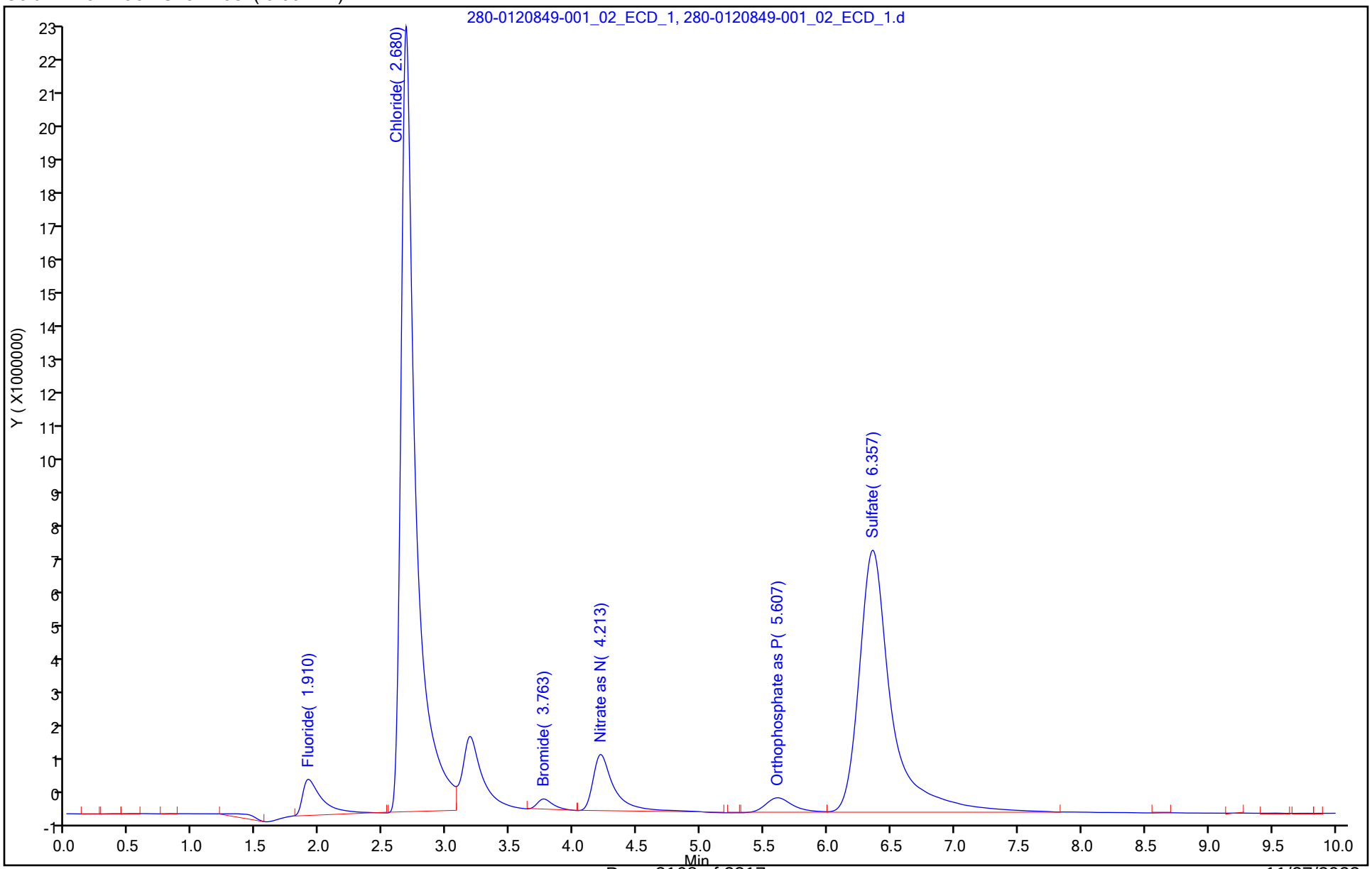
Report Date: 28-Apr-2023 10:04:16 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-001_02_ECD_1.d

Injection Date:	27-Apr-2023 14:19:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

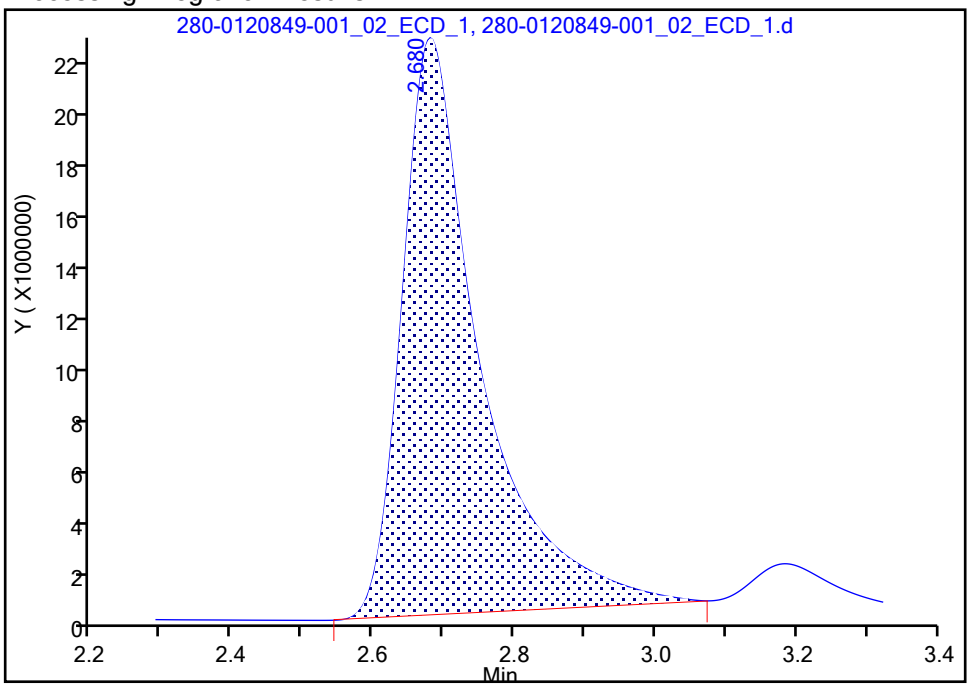
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-001_02_ECD_1.d				
Injection Date:	27-Apr-2023 14:19:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

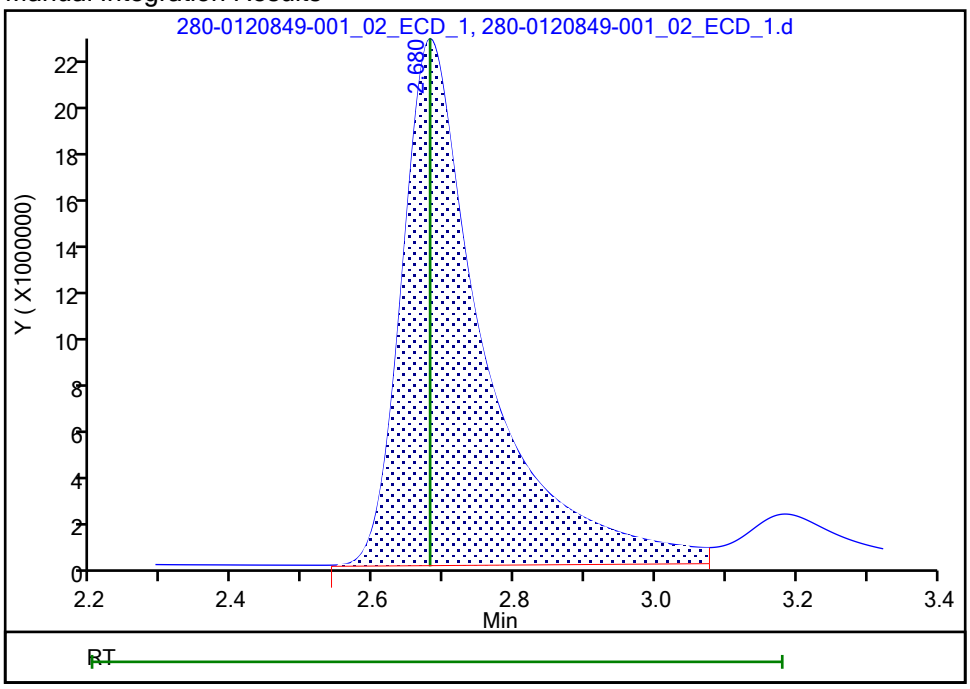
Processing Integration Results

RT: 2.68
Area: 173455450
Amount: 44.699610
Amount Units: ug/ml



Manual Integration Results

RT: 2.68
Area: 183948480
Amount: 47.392358
Amount Units: ug/ml



Reviewer: XAY4, 28-Apr-2023 09:51:19
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-002_03_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 27-Apr-2023 14:31:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-002
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 10:04:16 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 10:02:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride		2.680				ND	U
3 Nitrite as N	3.163	3.163	0.000	4629		NC	
4 Bromide	3.720	3.720	0.000	26585		0.0333	
5 Nitrate as N	4.303	4.303	0.000	42426		NC	
7 Orthophosphate as P	5.537	5.537	0.000	40424		NC	
6 Sulfate	6.457	6.457	0.000	40595		0.2367	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

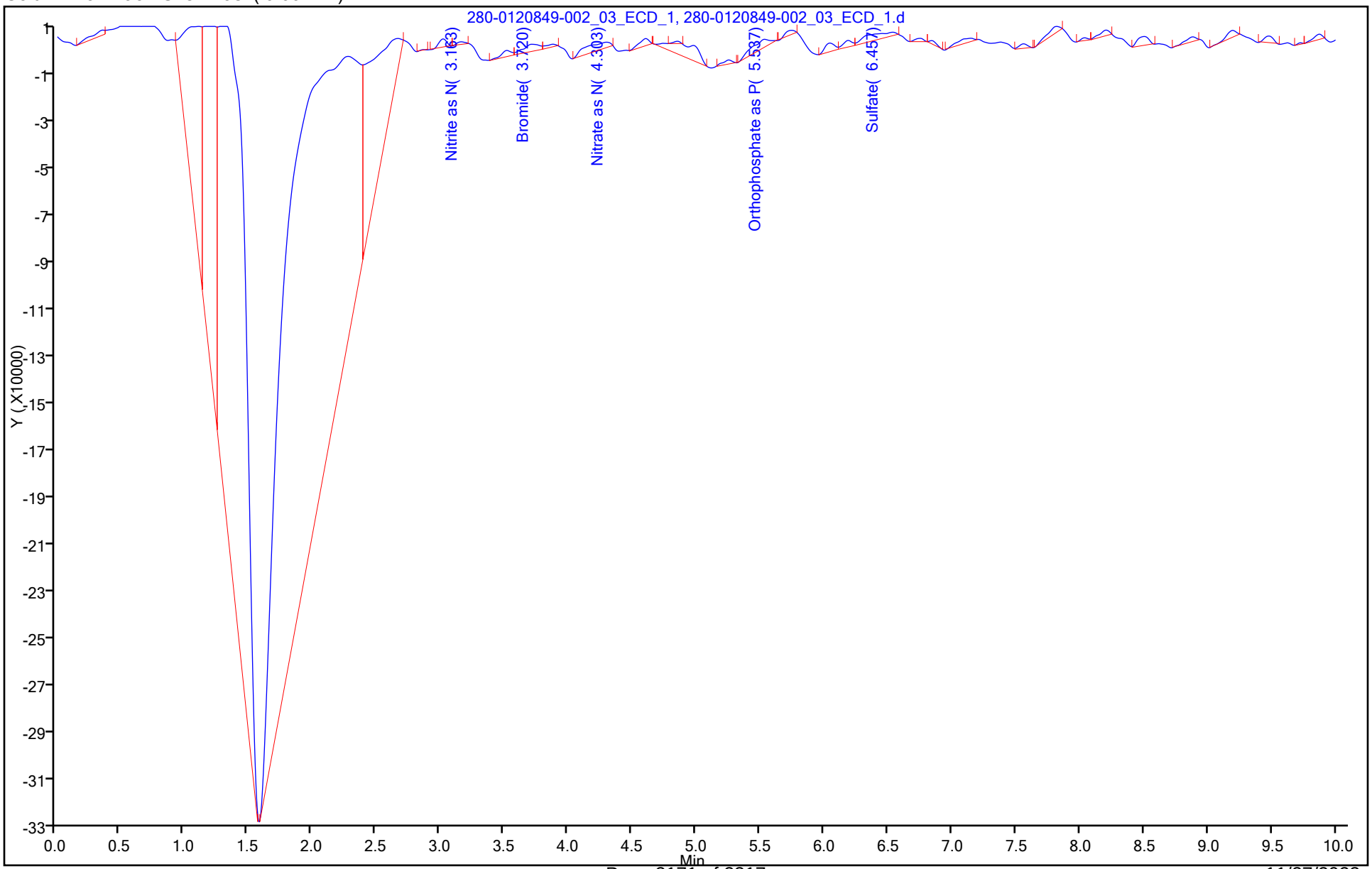
Report Date: 28-Apr-2023 10:04:17 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-002_03_ECD_1.d

Injection Date:	27-Apr-2023 14:31:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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User Disabled Compound Report

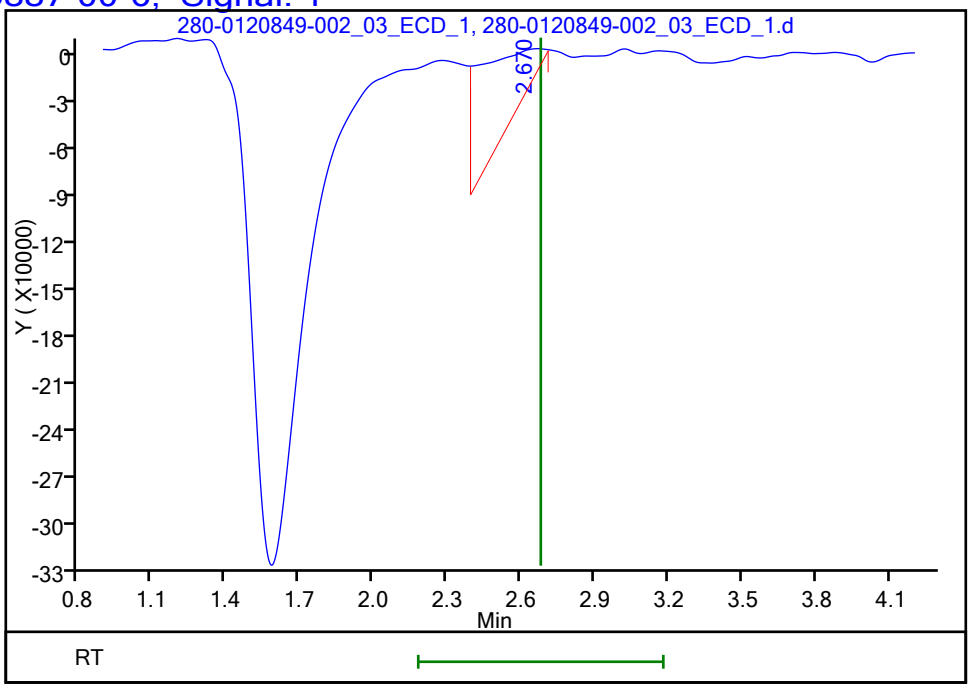
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-002_03_ECD_1.d
Injection Date: 27-Apr-2023 14:31:00 Instrument ID: WC_IonChrom15
Lims ID: ccb
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D

Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 2.67
Response: 768881
Amount: 0.384346



Reviewer: XAY4, 28-Apr-2023 10:02:45
Audit Action: Manually Integrated Audit Reason:

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-003_04_ECD_1.d
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 27-Apr-2023 14:43:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-003
Misc. Info.: MRL
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 10:04:17 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 10:03:20

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	663778	0.2500	0.2330	M
2 Chloride	2.673	2.673	0.000	7670093	2.50	2.16	M
3 Nitrite as N	3.183	3.183	0.000	1587784	NC	NC	
4 Bromide	3.763	3.763	0.000	311198	0.2500	0.2882	
5 Nitrate as N	4.213	4.213	0.000	1603161	NC	NC	
7 Orthophosphate as P	5.610	5.610	0.000	401239	NC	NC	
6 Sulfate	6.340	6.340	0.000	6008749	2.50	2.48	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC Cal low_00706 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00477 Amount Added: 0.20 Units: mL

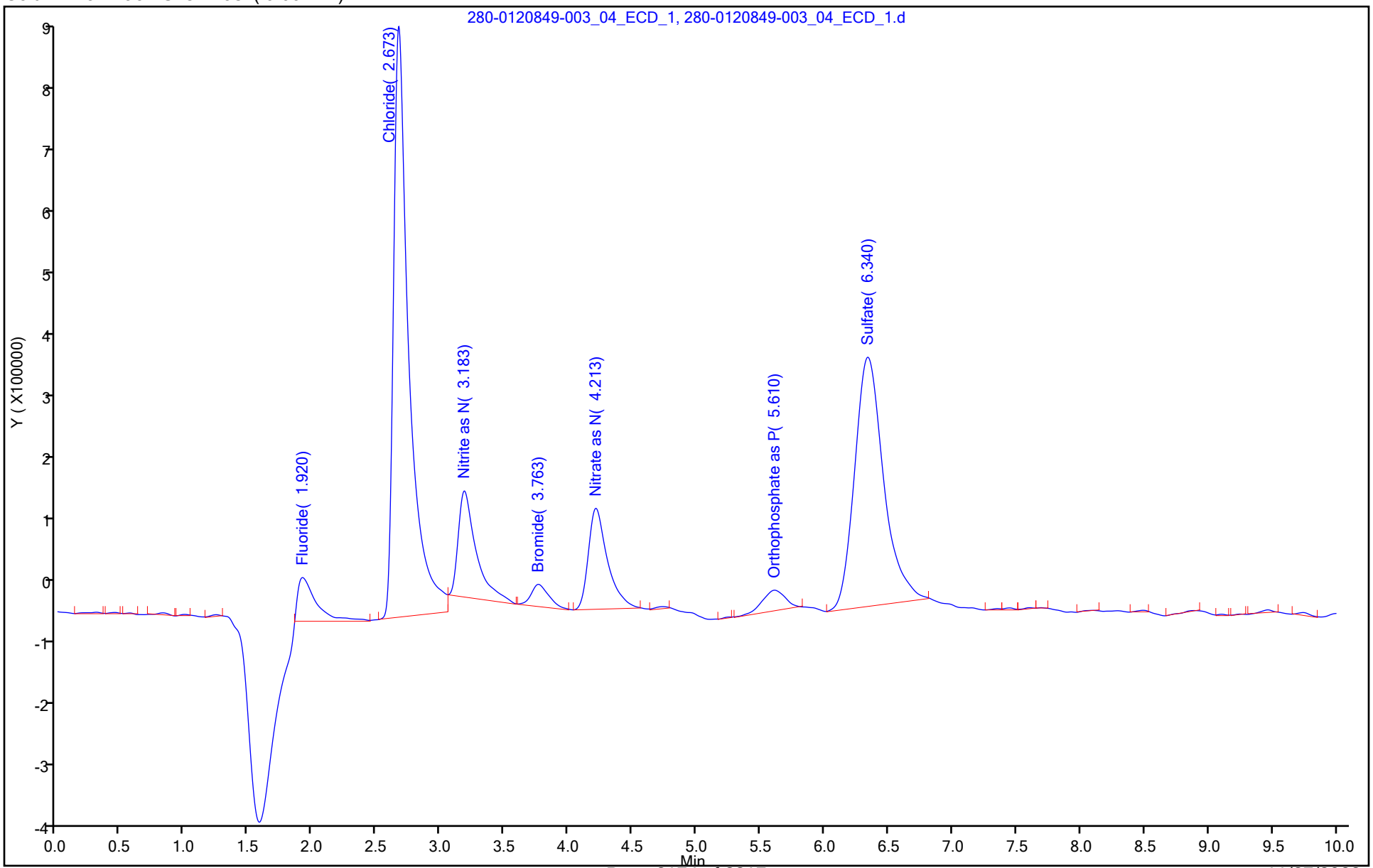
Report Date: 28-Apr-2023 10:04:17 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-003_04_ECD_1.d

Injection Date:	27-Apr-2023 14:43:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

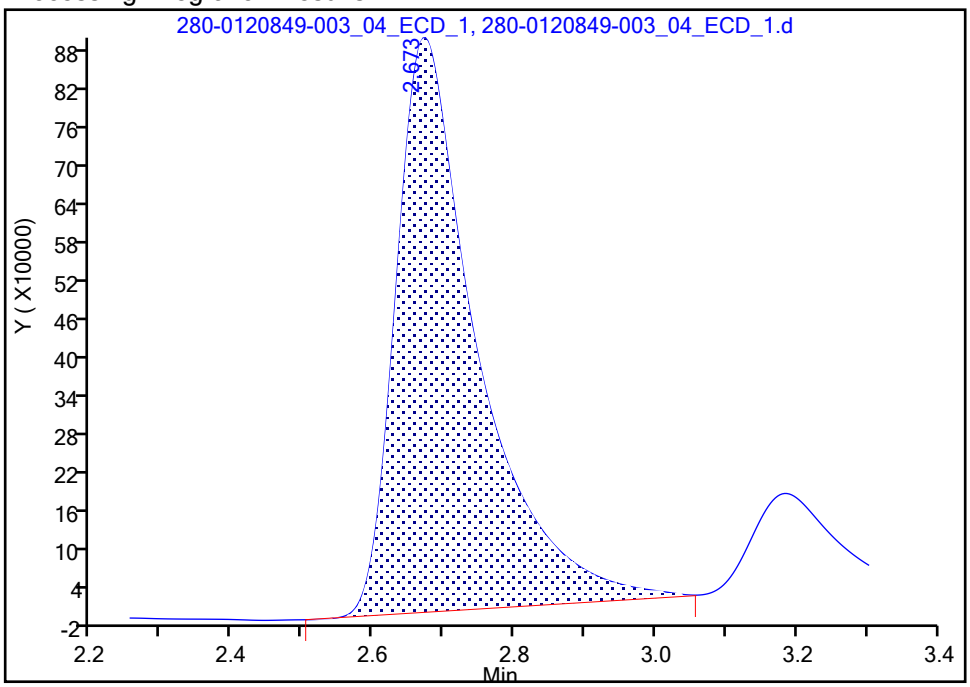
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-003_04_ECD_1.d				
Injection Date:	27-Apr-2023 14:43:00	Instrument ID:	WC_IonChrom15		
Lims ID:	mrl				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

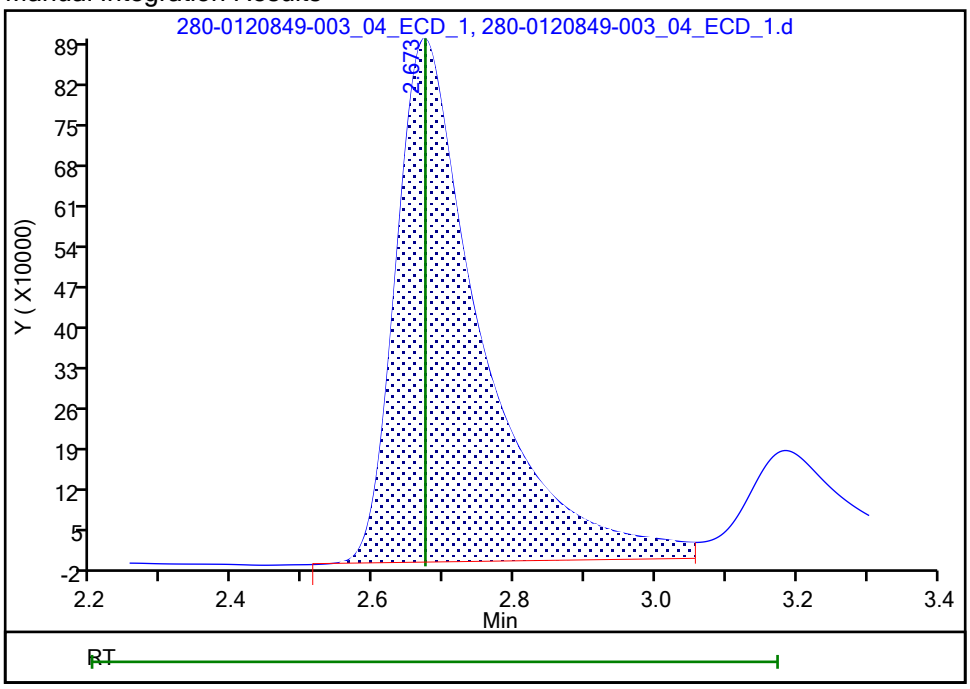
Processing Integration Results

RT: 2.67
Area: 7256748
Amount: 2.049279
Amount Units: ug/ml



Manual Integration Results

RT: 2.67
Area: 7670093
Amount: 2.155352
Amount Units: ug/ml



Reviewer: XAY4, 28-Apr-2023 10:03:09
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-004_05_ECD_1.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 14:55:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-004
Misc. Info.: LCS
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 10:04:18 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 10:03:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11042800	2.50	2.34	M
2 Chloride	2.683	2.683	0.000	181663762	50.0	46.8	M
3 Nitrite as N		3.183			NC	ND	M
4 Bromide	3.767	3.767	0.000	2503348	2.50	2.25	
5 Nitrate as N	4.217	4.217	0.000	19071763	NC	NC	
7 Orthophosphate as P	5.610	5.610	0.000	6107518	NC	NC	
6 Sulfate	6.357	6.357	0.000	130025456	50.0	49.1	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

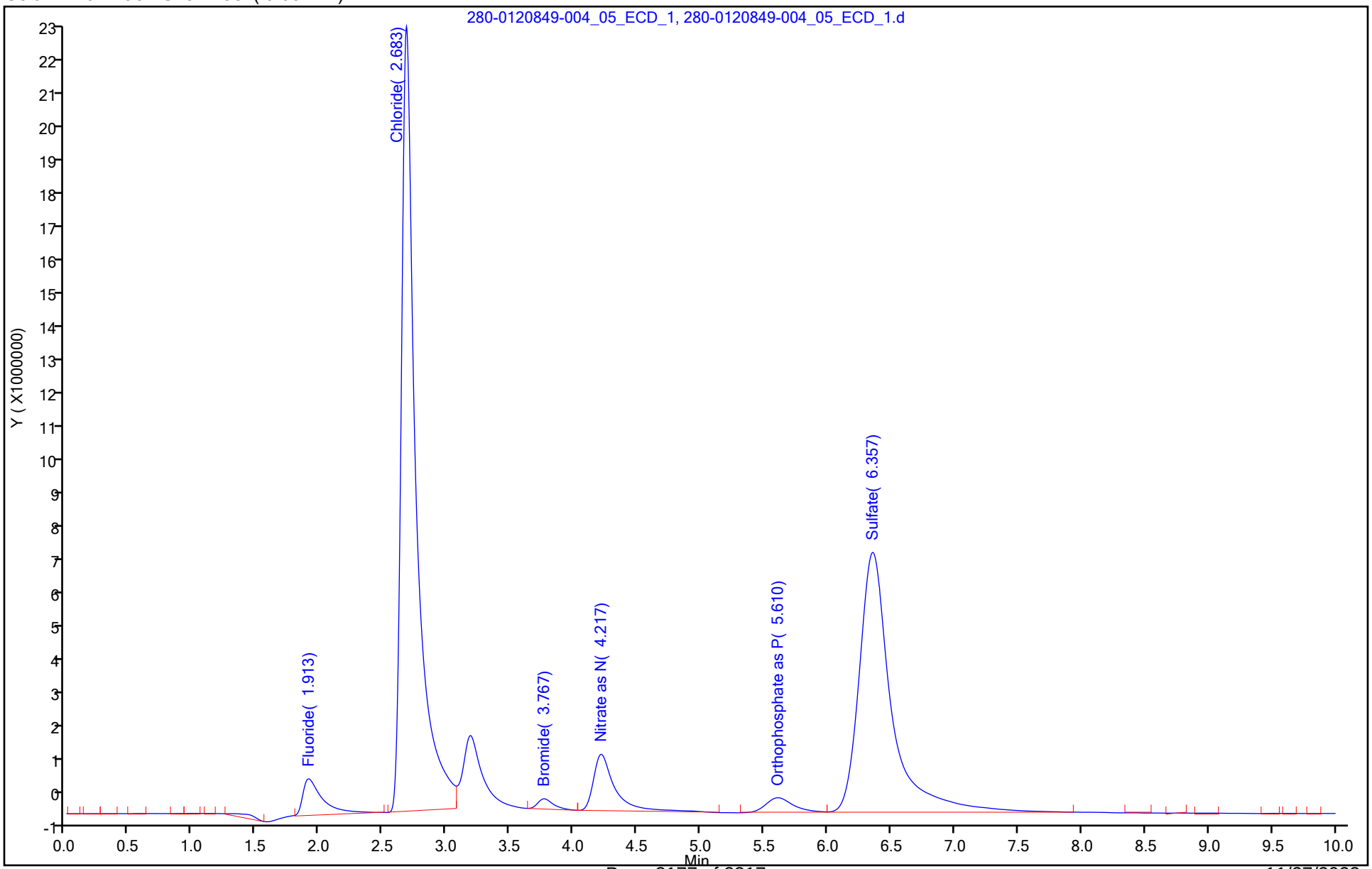
Report Date: 28-Apr-2023 10:04:18 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-004_05_ECD_1.d

Injection Date:	27-Apr-2023 14:55:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

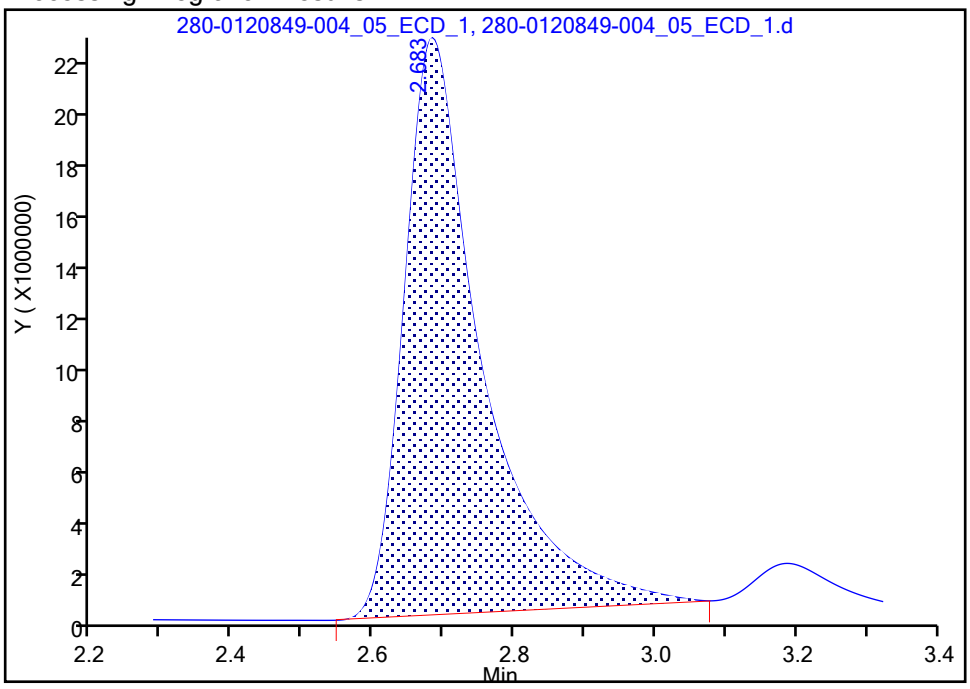
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-004_05_ECD_1.d				
Injection Date:	27-Apr-2023 14:55:00	Instrument ID:	WC_IonChrom15		
Lims ID:	lcs				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

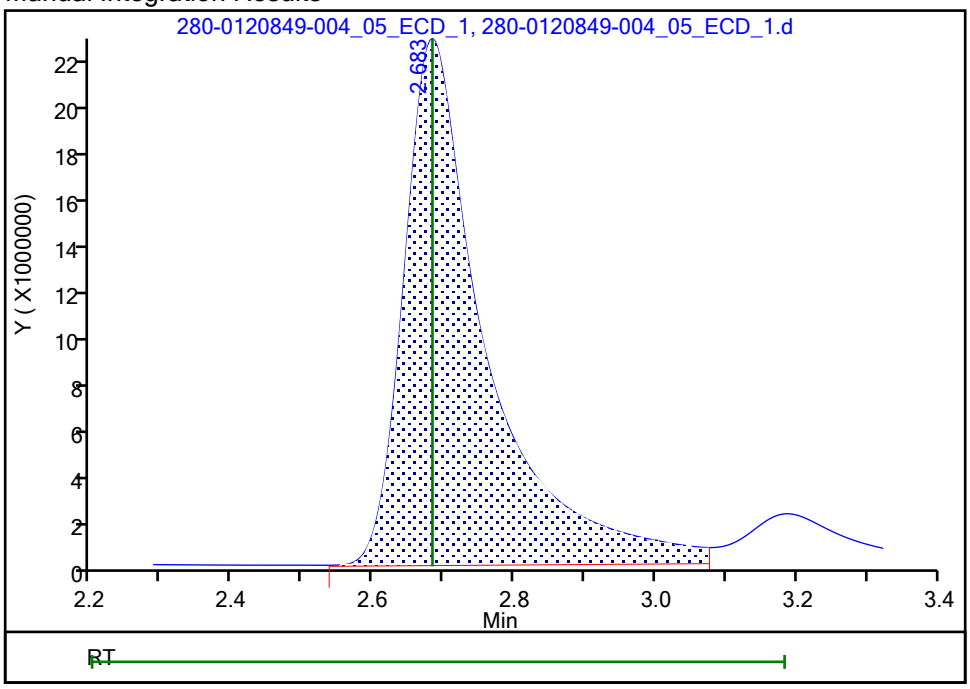
Processing Integration Results

RT: 2.68
Area: 171478786
Amount: 44.192354
Amount Units: ug/ml



Manual Integration Results

RT: 2.68
Area: 181663762
Amount: 46.806048
Amount Units: ug/ml



Reviewer: XAY4, 28-Apr-2023 10:03:31
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-005_06_ECD_1.d
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 15:07:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-005
Misc. Info.: LCSD
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 10:04:19 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 10:03:54

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	11028908	2.50	2.33	M
2 Chloride	2.683	2.683	0.000	182639191	50.0	47.1	M
3 Nitrite as N		3.183			NC	ND	M
4 Bromide	3.767	3.767	0.000	2504000	2.50	2.25	
5 Nitrate as N	4.217	4.217	0.000	19079899	NC	NC	
7 Orthophosphate as P	5.610	5.610	0.000	6027878	NC	NC	
6 Sulfate	6.357	6.357	0.000	130174003	50.0	49.2	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

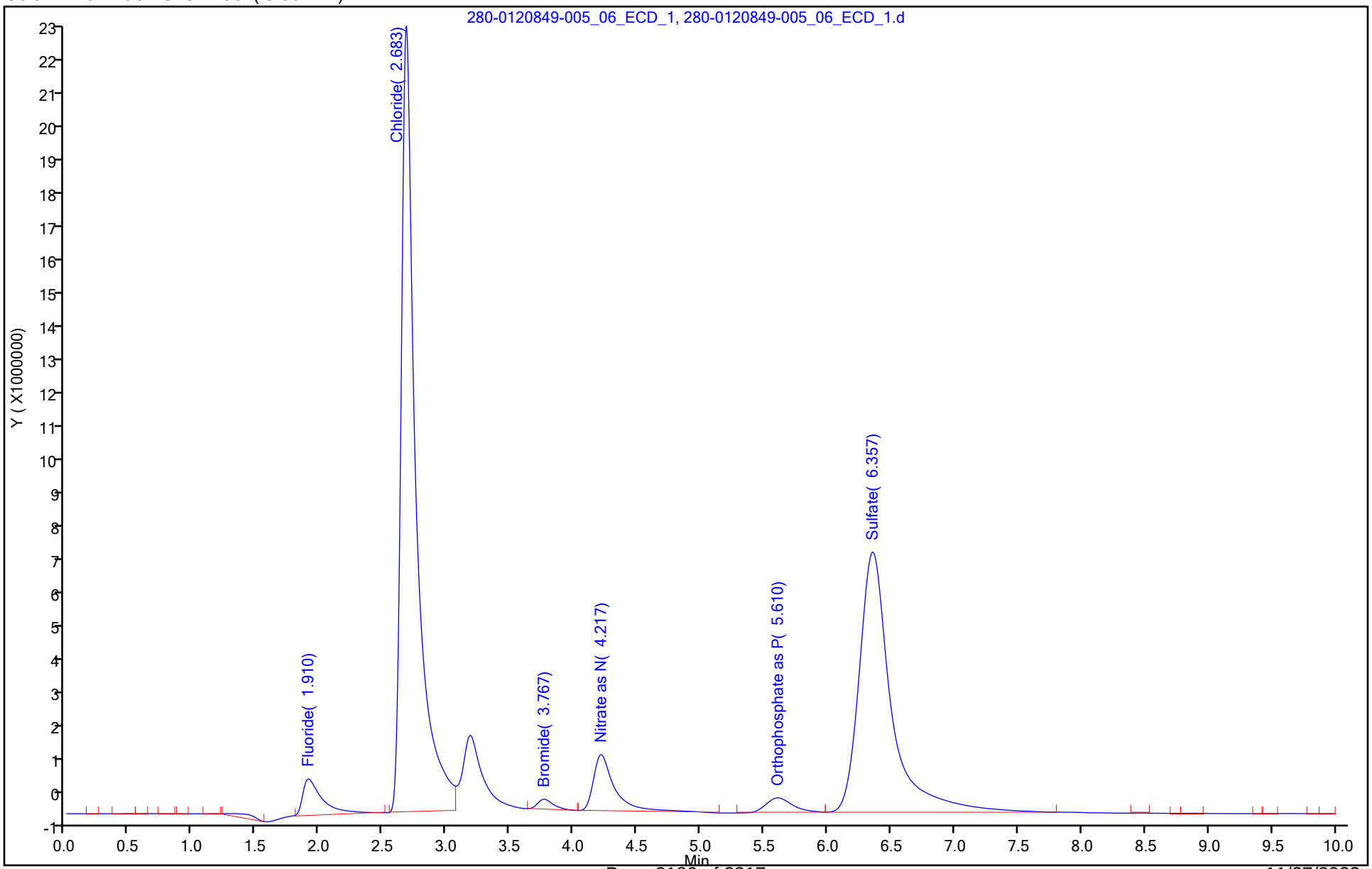
Report Date: 28-Apr-2023 10:04:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-005_06_ECD_1.d

Injection Date:	27-Apr-2023 15:07:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

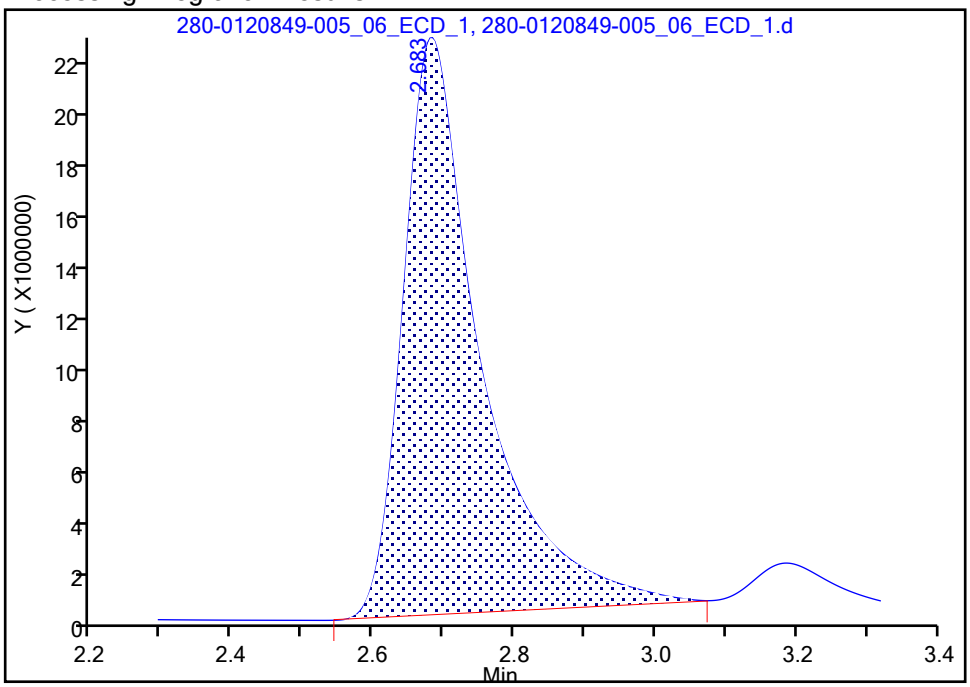
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-005_06_ECD_1.d				
Injection Date:	27-Apr-2023 15:07:00	Instrument ID:	WC_IonChrom15		
Lims ID:	lcsd				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

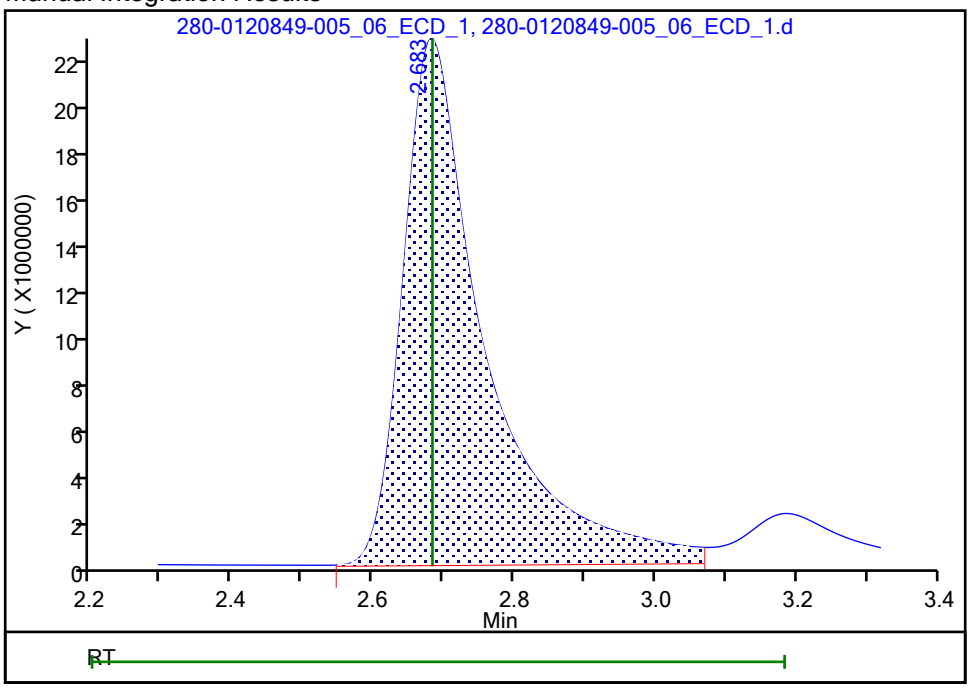
Processing Integration Results

RT: 2.68
Area: 171793433
Amount: 44.273099
Amount Units: ug/ml



Manual Integration Results

RT: 2.68
Area: 182639191
Amount: 47.056365
Amount Units: ug/ml



Reviewer: XAY4, 28-Apr-2023 10:03:48
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-006_07_ECD_1.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 27-Apr-2023 15:19:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-006
Misc. Info.: MB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 10:04:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 10:02:53

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.680	2.680	0.000	5646		0.1885	
3 Nitrite as N	3.317	3.317	0.000	9272		NC	
4 Bromide	3.750	3.750	0.000	11911		0.0201	
5 Nitrate as N	4.333	4.333	0.000	24716		NC	
7 Orthophosphate as P	5.587	5.587	0.000	10190		NC	
6 Sulfate	6.340	6.340	0.000	5321		0.2234	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

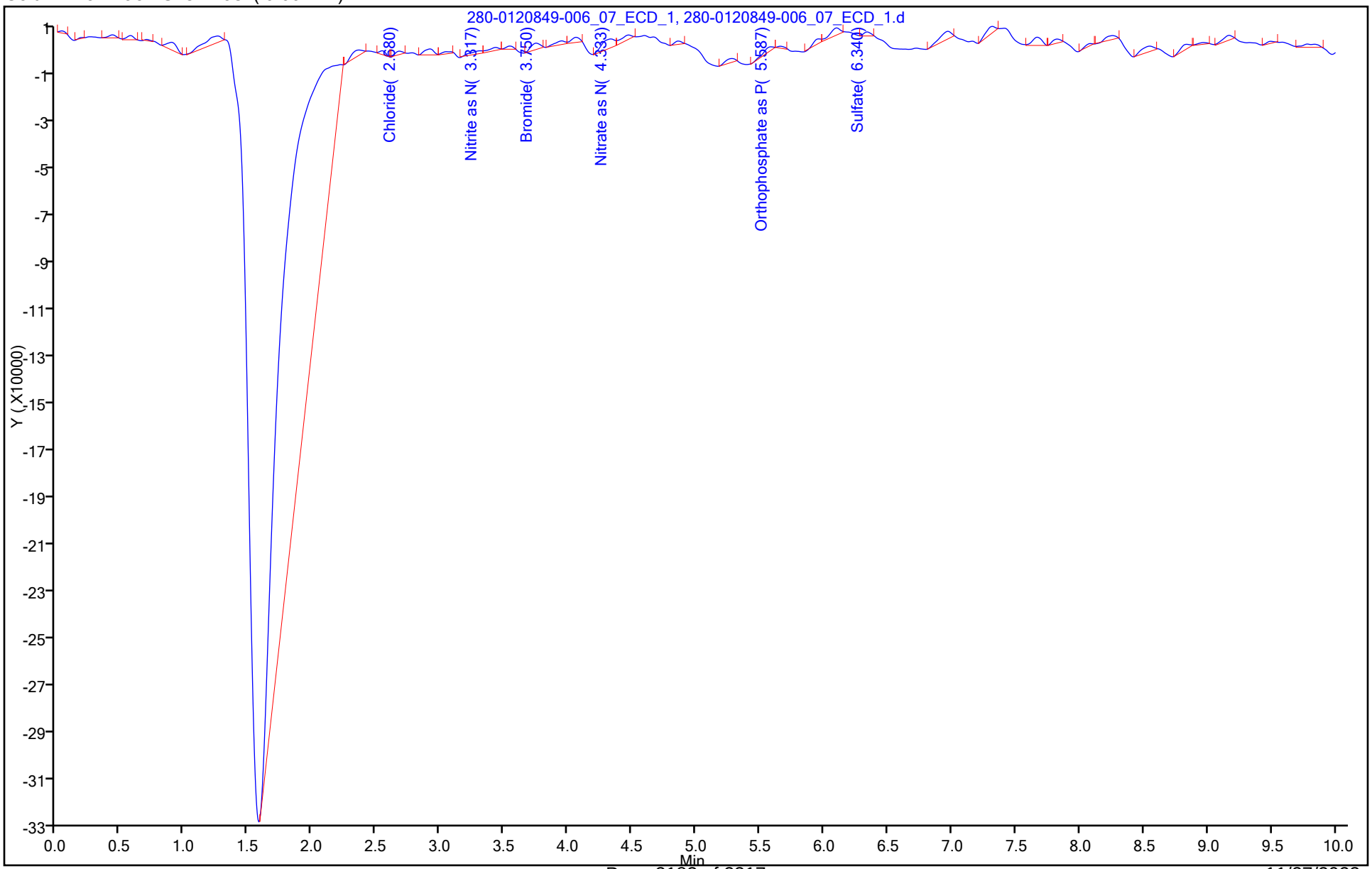
Report Date: 28-Apr-2023 10:04:20 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-006_07_ECD_1.d

Injection Date:	27-Apr-2023 15:19:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-014_15_ECD_1.d
Lims ID: 280-174957-C-3
Client ID: MW-124-Q-20230412
Sample Type: Client
Inject. Date: 27-Apr-2023 16:55:00 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 10.0 ul Dil. Factor: 5.0000
Sample Info: 280-0120849-014
Misc. Info.: 280-174957-C-3
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 09:53:02 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.137	2.220	-0.083	9773	0.1005	
2 Chloride	2.687	2.680	0.007	259697693	66.8	
3 Nitrite as N		3.317			ND	
4 Bromide	3.760	3.750	0.010	840025	0.7619	
5 Nitrate as N	4.227	4.333	-0.106	8430218	NC	
7 Orthophosphate as P		5.587			ND	
6 Sulfate	6.370	6.340	0.030	54100668	20.6	

QC Flag Legend

Processing Flags
NC - Not Calibrated

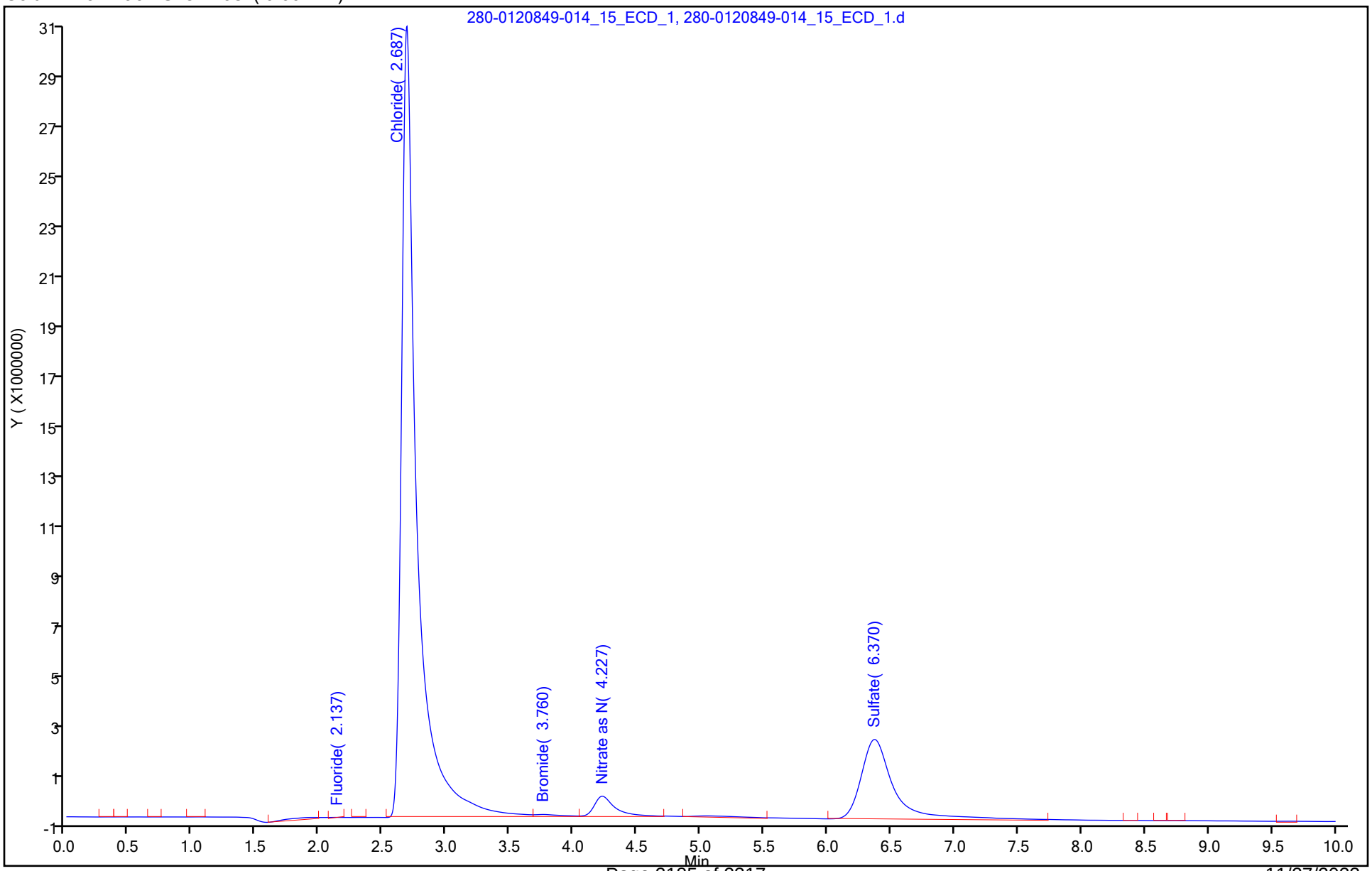
Report Date: 28-Apr-2023 09:53:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-014_15_ECD_1.d

Injection Date:	27-Apr-2023 16:55:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-174957-C-3	Lab Sample ID:	280-174957-3	Worklist Smp#:	14
Client ID:	MW-124-Q-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-015_16_ECD_1.d				
Lims ID:	280-174957-C-4				
Client ID:	RW-15-20230411				
Sample Type:	Client				
Inject. Date:	27-Apr-2023 17:07:00	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	10.0 ul	Dil. Factor:	5.0000		
Sample Info:	280-0120849-015				
Misc. Info.:	280-174957-C-4				
Operator ID:		Instrument ID:	WC_IonChrom15		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	28-Apr-2023 09:53:02	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1608				

First Level Reviewer: XAY4 Date: 28-Apr-2023 09:50:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride		2.220			ND	U
2 Chloride	2.690	2.680	0.010	239730211	61.7	M
3 Nitrite as N		3.317			ND	
4 Bromide	3.763	3.750	0.013	2152124	1.94	
5 Nitrate as N	4.233	4.333	-0.100	9028505	NC	
7 Orthophosphate as P	5.140	5.587	-0.447	497133	NC	
6 Sulfate	6.393	6.340	0.053	51379060	19.6	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

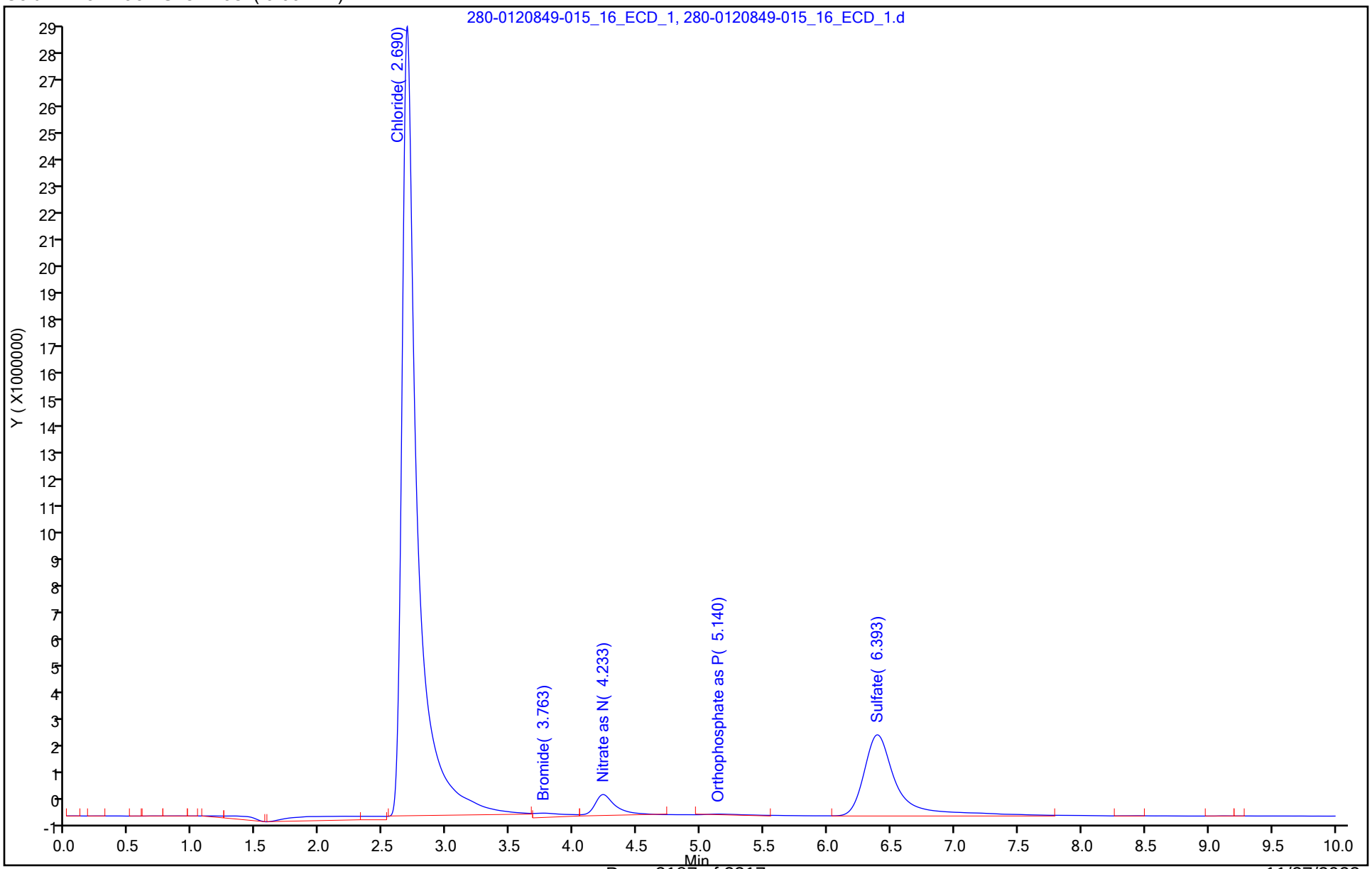
Report Date: 28-Apr-2023 09:53:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-015_16_ECD_1.d

Injection Date:	27-Apr-2023 17:07:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-174957-C-4	Lab Sample ID:	280-174957-4	Worklist Smp#:	15
Client ID:	RW-15-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

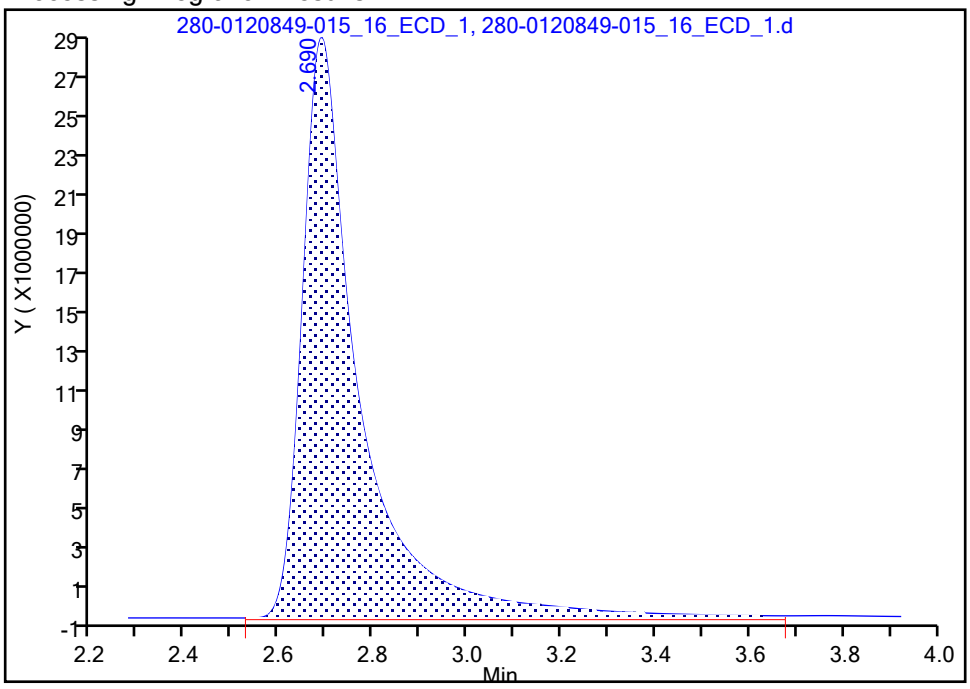
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-015_16_ECD_1.d				
Injection Date:	27-Apr-2023 17:07:00	Instrument ID:	WC_IonChrom15		
Lims ID:	280-174957-C-4	Lab Sample ID:	280-174957-4		
Client ID:	RW-15-20230411				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	10.0 ul	Dil. Factor:	5.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

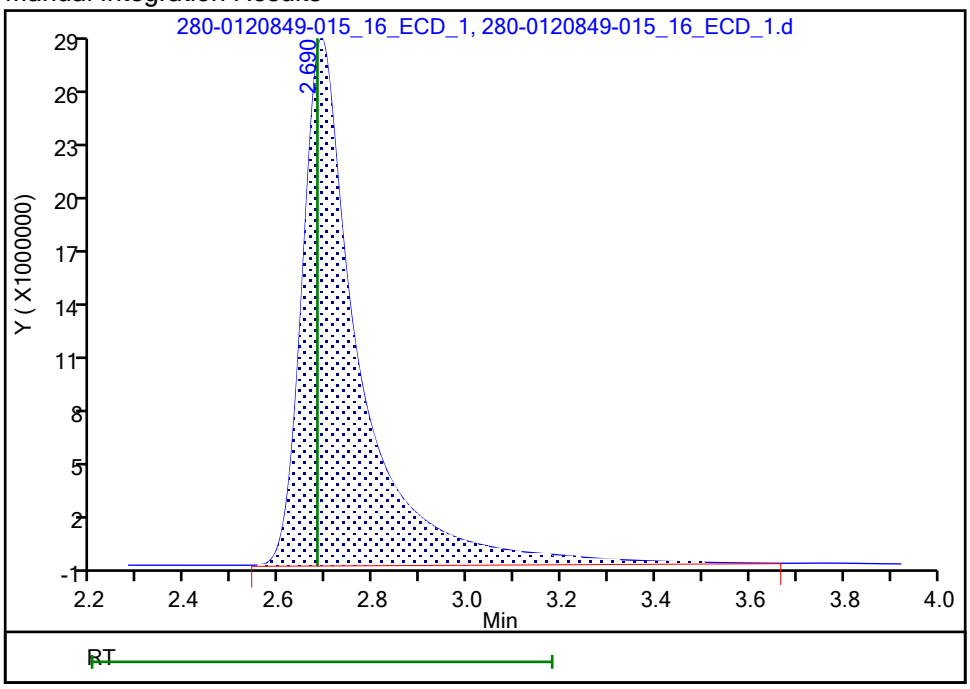
Processing Integration Results

RT: 2.69
Area: 248280638
Amount: 63.901440
Amount Units: ug/ml



Manual Integration Results

RT: 2.69
Area: 239730211
Amount: 61.707207
Amount Units: ug/ml



Reviewer: XAY4, 28-Apr-2023 09:50:39
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-016_17_ECD_1.d
Lims ID: 280-174957-C-5
Client ID: MW-105D-20230411
Sample Type: Client
Inject. Date: 27-Apr-2023 17:19:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 10.0 ul Dil. Factor: 5.0000
Sample Info: 280-0120849-016
Misc. Info.: 280-174957-C-5
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 09:53:02 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.327	2.220	0.107	3303	0.0992	
2 Chloride	2.687	2.680	0.007	214646373	55.3	
3 Nitrite as N		3.317			ND	
4 Bromide	3.753	3.750	0.003	1291553	1.17	
5 Nitrate as N	4.237	4.333	-0.096	1767037	NC	
7 Orthophosphate as P	5.960	5.587	0.373	5447	NC	
6 Sulfate	6.393	6.340	0.053	31808357	12.2	

QC Flag Legend

Processing Flags
NC - Not Calibrated

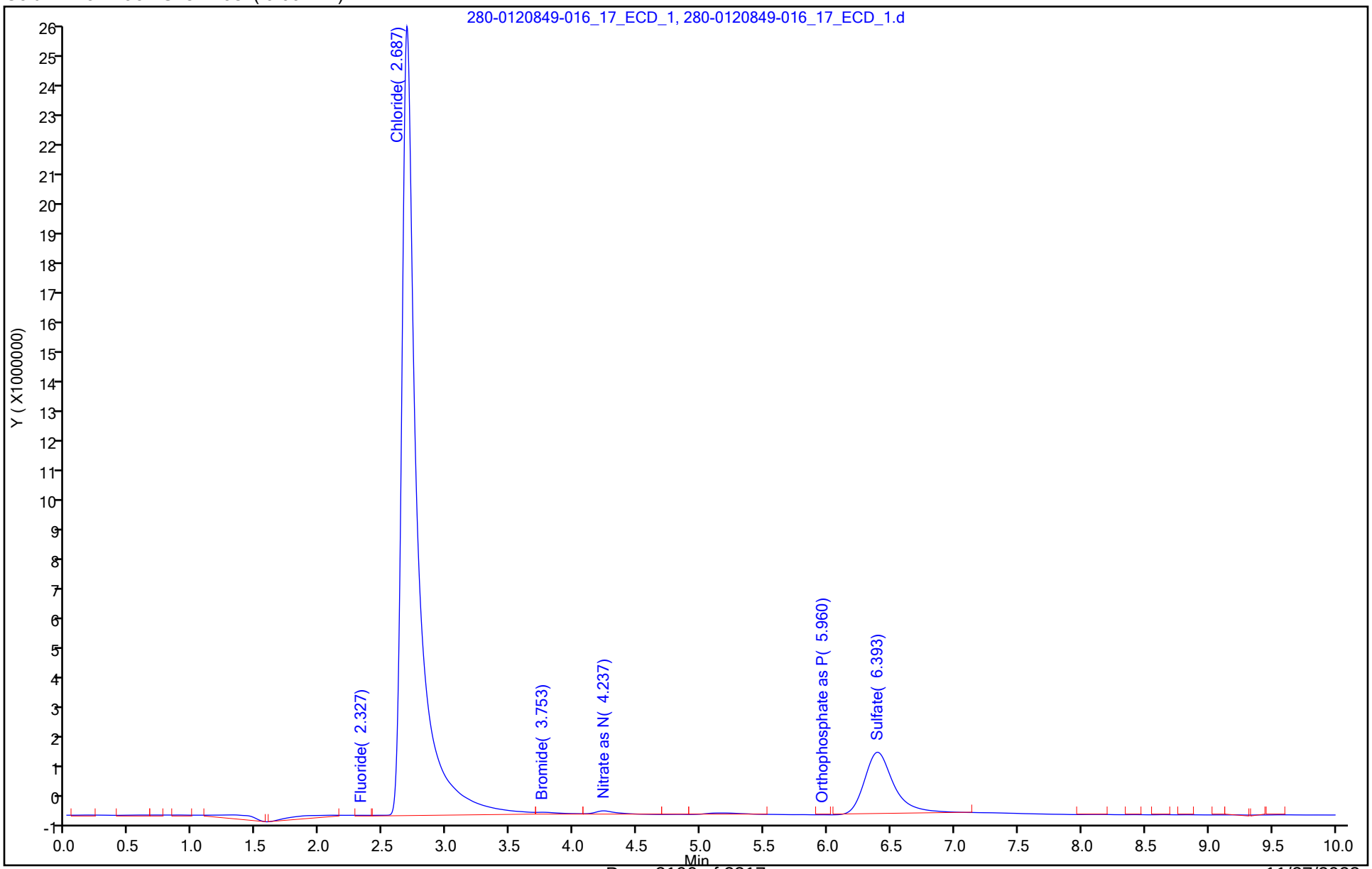
Report Date: 28-Apr-2023 09:53:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-016_17_ECD_1.d

Injection Date:	27-Apr-2023 17:19:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-174957-C-5	Lab Sample ID:	280-174957-5	Worklist Smp#:	16
Client ID:	MW-105D-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-017_18_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 17:31:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-017
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 09:53:08 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 09:49:51

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	2.220	-0.307	11396184	2.50	2.41	M
2 Chloride	2.687	2.680	0.007	182942013	50.0	47.1	M
3 Nitrite as N	3.193	3.317	-0.124	23286620	NC	NC	Ma
4 Bromide	3.773	3.750	0.023	2675693	2.50	2.41	M
5 Nitrate as N	4.227	4.333	-0.106	19354287	NC	NC	
7 Orthophosphate as P	5.660	5.587	0.073	5954367	NC	NC	
6 Sulfate	6.393	6.340	0.053	130673080	50.0	49.4	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

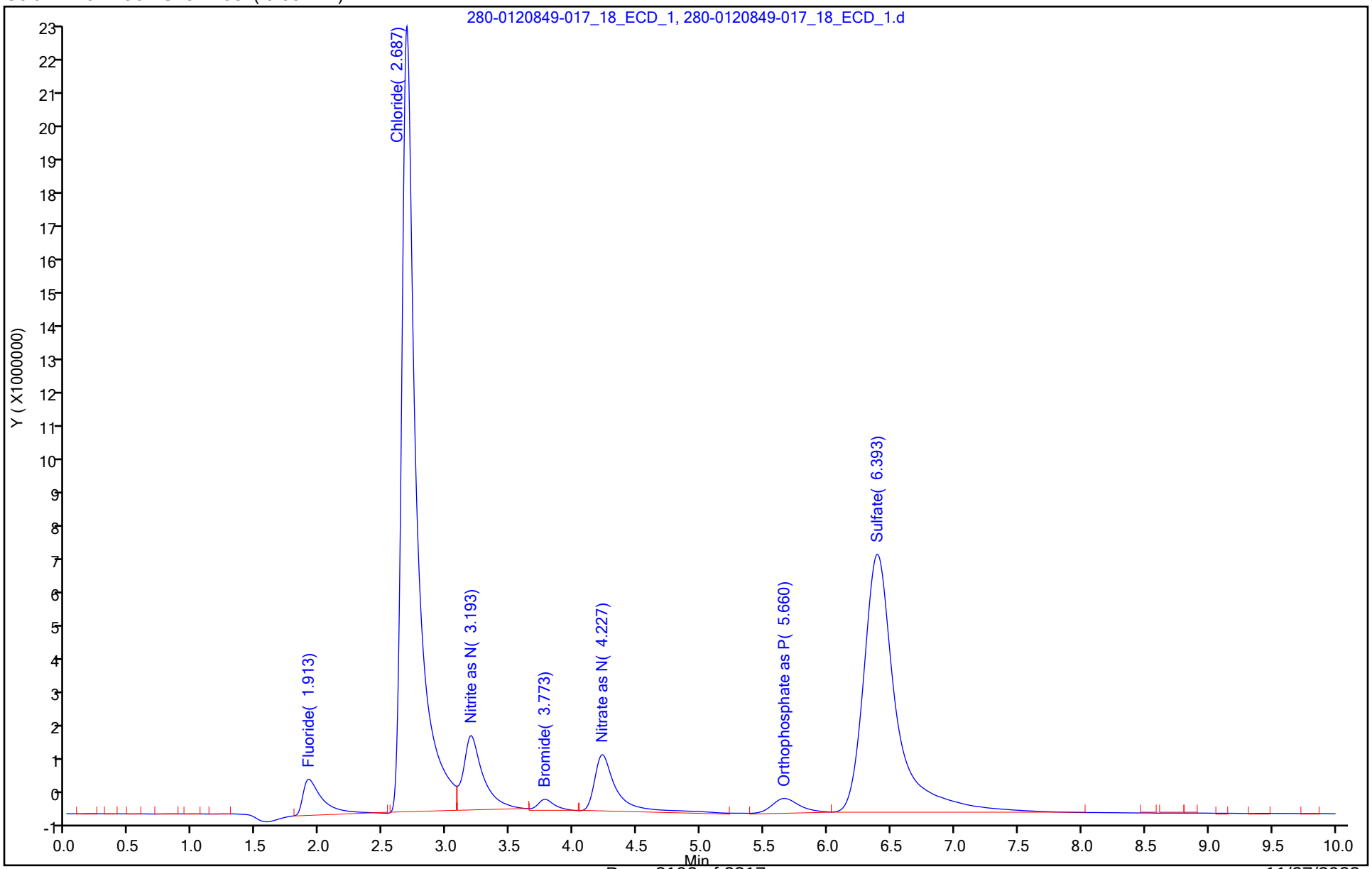
Report Date: 28-Apr-2023 09:53:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-017_18_ECD_1.d

Injection Date:	27-Apr-2023 17:31:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

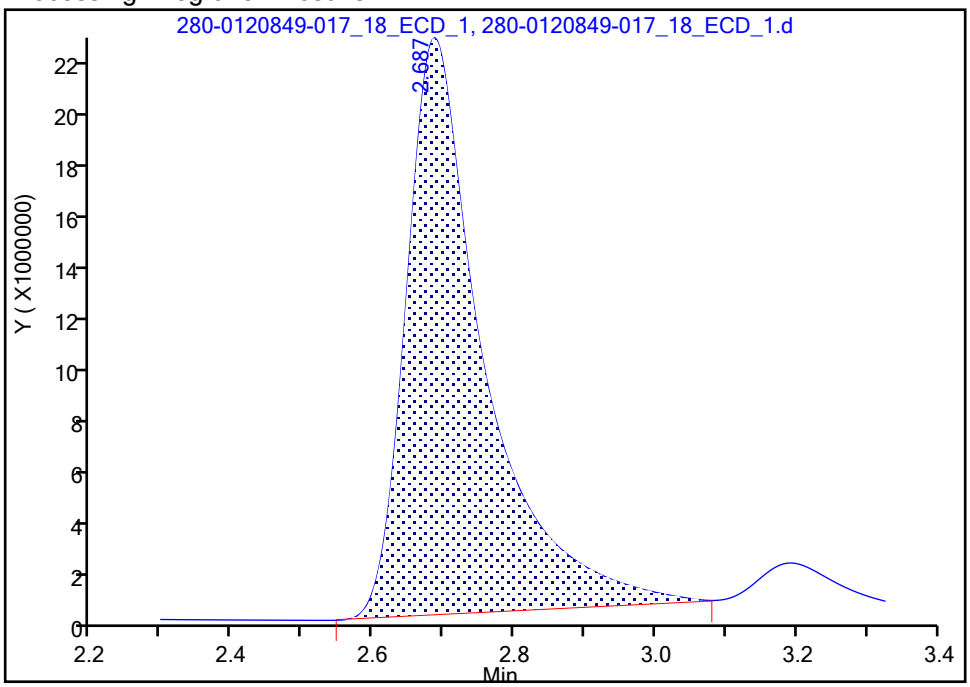
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-017_18_ECD_1.d				
Injection Date:	27-Apr-2023 17:31:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

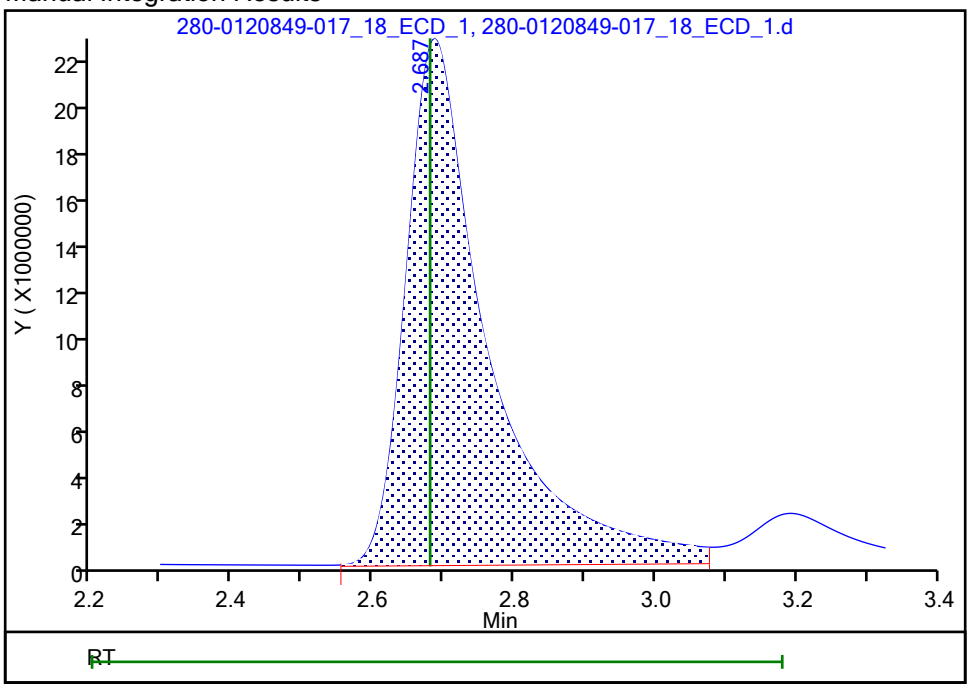
Processing Integration Results

RT: 2.69
Area: 172256276
Amount: 44.391875
Amount Units: ug/ml



Manual Integration Results

RT: 2.69
Area: 182942013
Amount: 47.134076
Amount Units: ug/ml



Reviewer: XAY4, 28-Apr-2023 09:48:56

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-018_19_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 27-Apr-2023 17:43:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-018
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 09:53:08 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 09:50:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.220				ND	U
2 Chloride		2.680				ND	U
3 Nitrite as N	3.520	3.317	0.203	25834		NC	
4 Bromide	3.673	3.750	-0.077	46777		0.0514	
5 Nitrate as N	4.250	4.333	-0.083	8852		NC	
7 Orthophosphate as P	5.540	5.587	-0.047	107836		NC	
6 Sulfate	6.320	6.340	-0.020	6142		0.2237	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

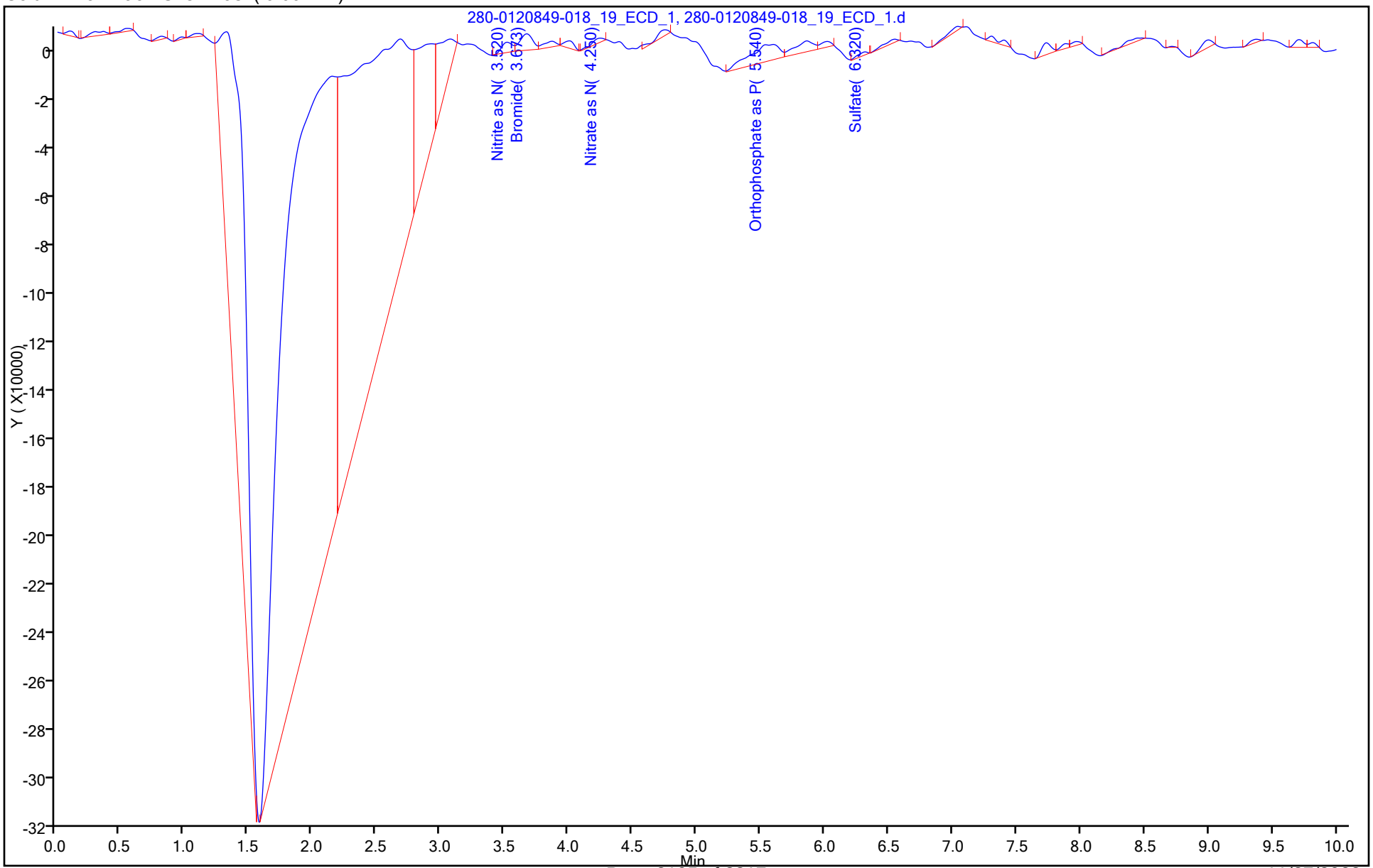
Report Date: 28-Apr-2023 09:53:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-018_19_ECD_1.d

Injection Date:	27-Apr-2023 17:43:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

User Disabled Compound Report

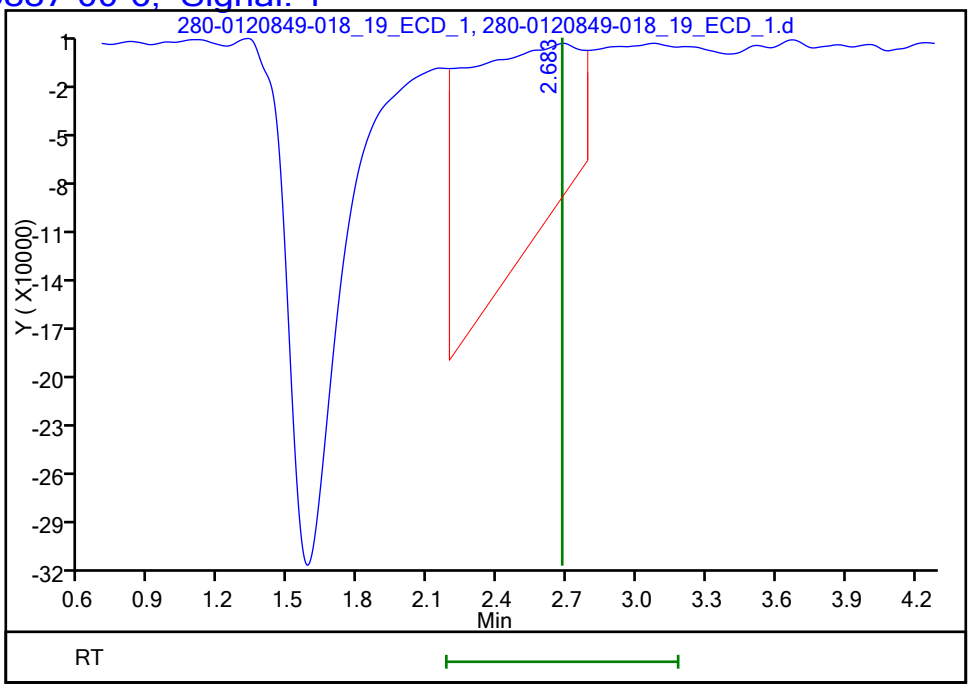
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-018_19_ECD_1.d
Injection Date: 27-Apr-2023 17:43:00 Instrument ID: WC_IonChrom15
Lims ID: ccb
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D

Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 2.68
Response: 4409070
Amount: 1.318501



Reviewer: XAY4, 28-Apr-2023 09:50:08
Audit Action: Manually Integrated Audit Reason:

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-029_30_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 28-Apr-2023 10:16:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-029
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 14:04:11 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 14:03:41

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.910	0.003	11546176	2.50	2.44	M
2 Chloride	2.683	2.680	0.003	184969771	50.0	47.7	M
3 Nitrite as N		3.317			NC	ND	M
4 Bromide	3.767	3.750	0.017	2698326	2.50	2.43	M
5 Nitrate as N	4.217	4.333	-0.116	19355371	NC	NC	
7 Orthophosphate as P	5.650	5.587	0.063	6014436	NC	NC	
6 Sulfate	6.397	6.340	0.057	130975462	50.0	49.5	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

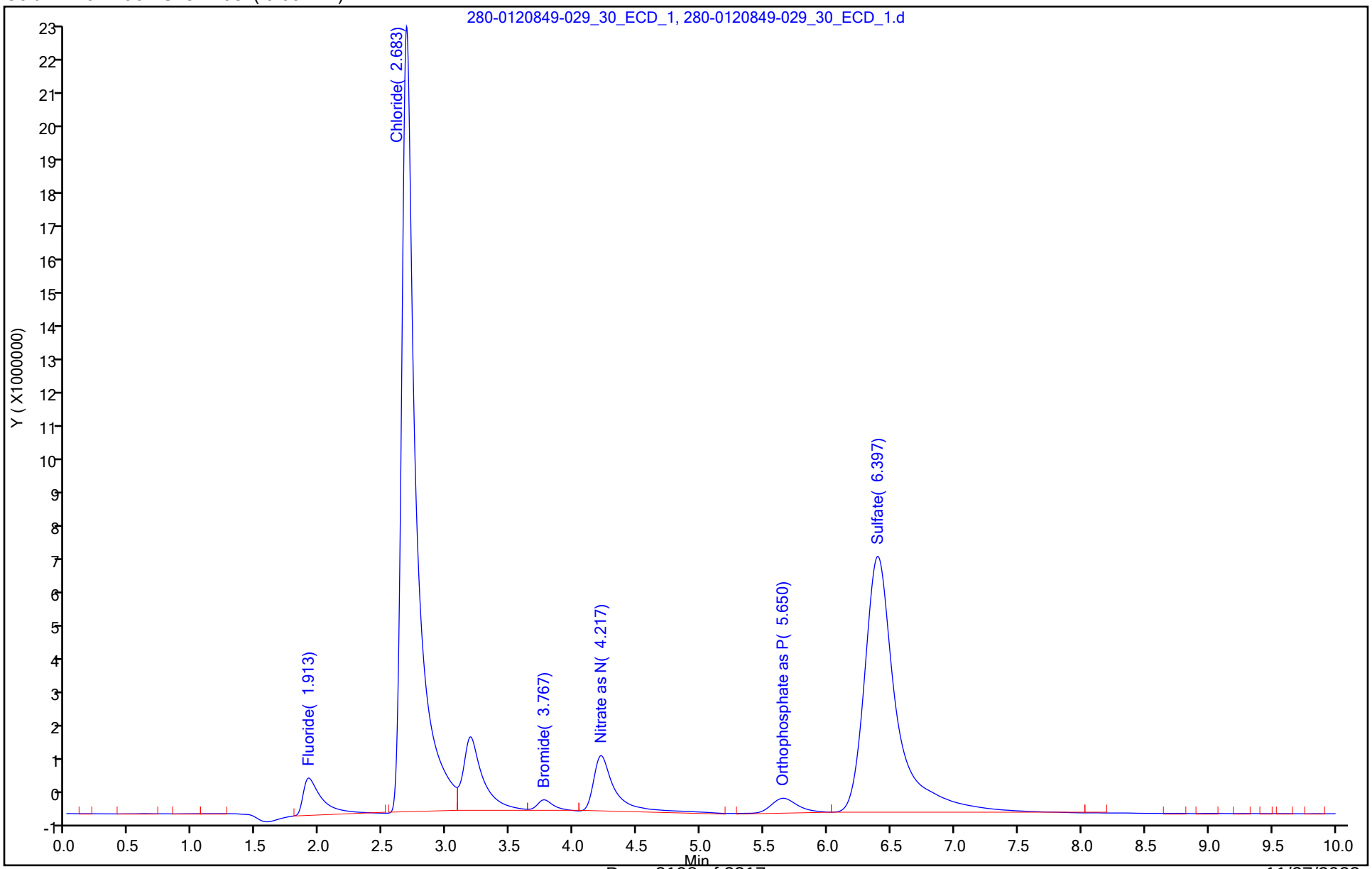
Report Date: 28-Apr-2023 14:04:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-029_30_ECD_1.d

Injection Date:	28-Apr-2023 10:16:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	29
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

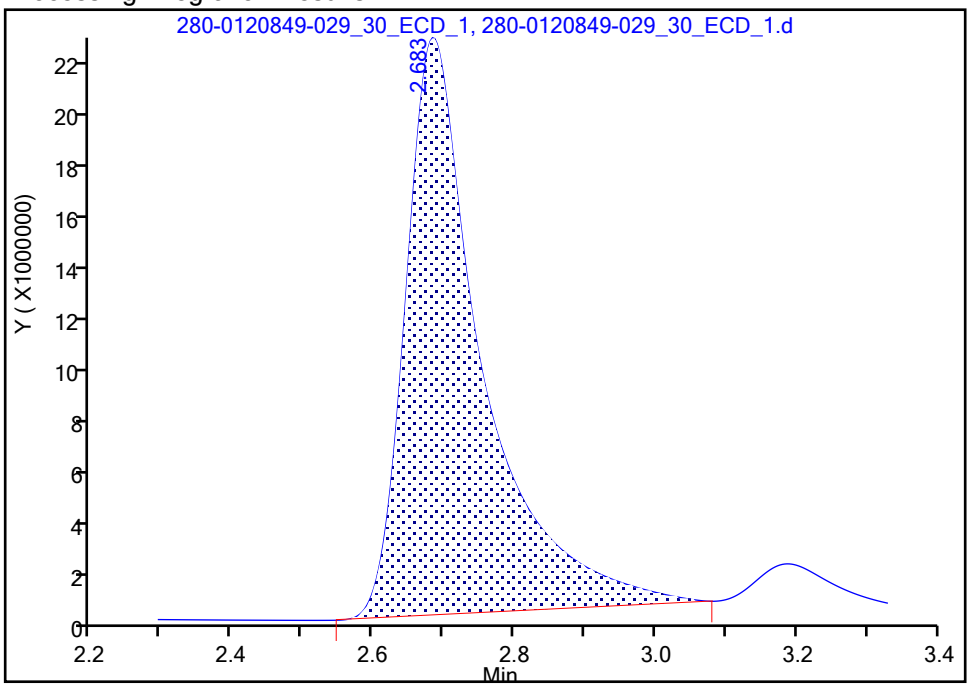
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-029_30_ECD_1.d				
Injection Date:	28-Apr-2023 10:16:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

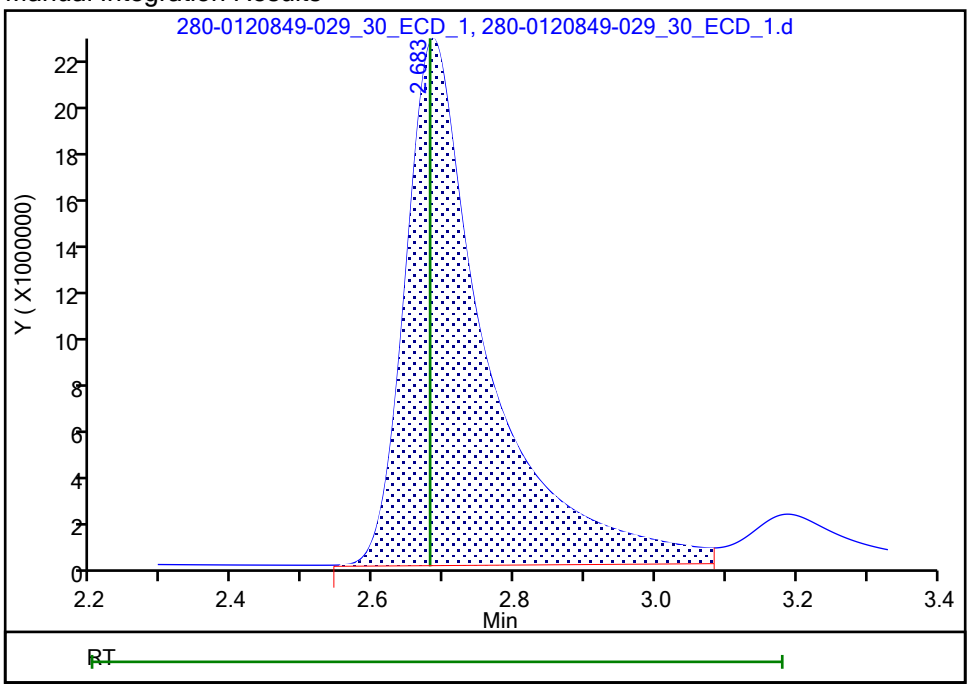
Processing Integration Results

RT: 2.68
Area: 173769587
Amount: 44.780225
Amount Units: ug/ml



Manual Integration Results

RT: 2.68
Area: 184969771
Amount: 47.654445
Amount Units: ug/ml



Reviewer: XAY4, 28-Apr-2023 13:58:50

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-030_31_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 28-Apr-2023 10:28:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120849-030
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 28-Apr-2023 14:00:56 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1608

First Level Reviewer: XAY4 Date: 28-Apr-2023 13:59:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.593	2.680	-0.087	16948		0.1914	
3 Nitrite as N	3.213	3.317	-0.104	54426		NC	
4 Bromide	3.687	3.750	-0.063	42220		0.0473	
5 Nitrate as N	4.463	4.333	0.130	4953		NC	
7 Orthophosphate as P	5.630	5.587	0.043	27535		NC	
6 Sulfate	6.347	6.340	0.007	33430		0.2340	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

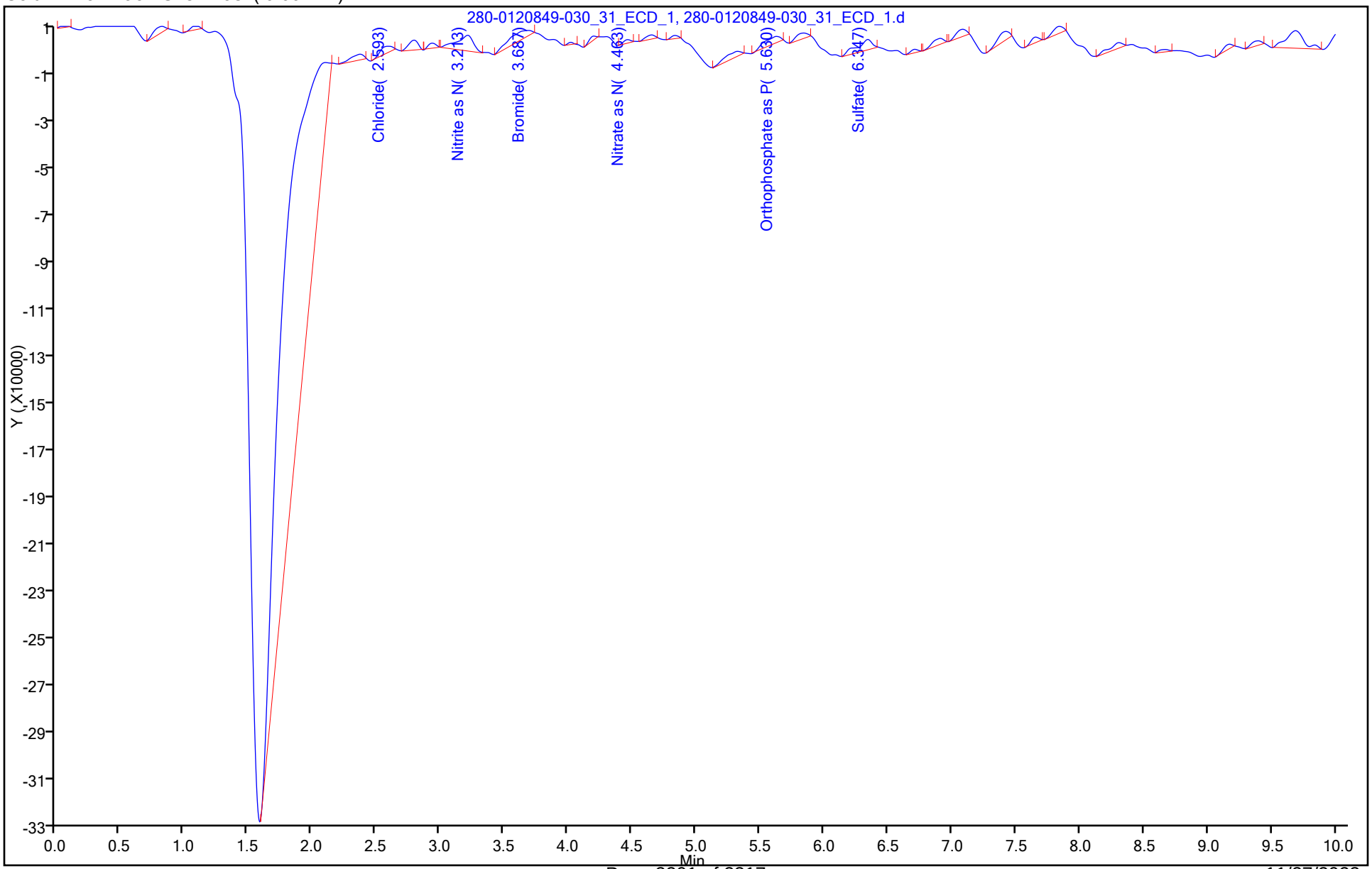
Report Date: 28-Apr-2023 14:00:57 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230427-120849.b\280-0120849-030_31_ECD_1.d

Injection Date:	28-Apr-2023 10:28:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	30
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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IC Instrument Information

WL: 120879 **Inst ID:** IC15 **Analysis Date:** 9/28/23 **Analyst:** GTS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	175761	5	F (Cl) NO2 Br (NO3) PO4 (SO4)	MS/D	
☐	175191	10	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	174957	1	F (Cl) NO2 (Br) NO3 PO4 (SO4)	MS/D	
☐	175257	7	F (Cl) NO2 (Br) NO3 PO4 (SO4)	MS/D	
☐	174968	8	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
761	5	F (Cl) NO2 Br (NO3) PO4 (SO4)	50x	test
191	10	(F) (Cl) NO2 Br NO3 PO4 (SO4)	10x, 20x	test
957	1	F (Cl) NO2 (Br) NO3 PO4 (SO4)	10x	test
257	7	F (Cl) NO2 (Br) NO3 PO4 (SO4)	10x	test
968	8	F (Cl) NO2 Br NO3 PO4 (SO4)	5x, 10x	test
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:53:33 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-001_02_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 28-Apr-2023 15:28:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-001
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:08 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 10:00:12

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11602041	2.50	2.45	M
2 Chloride	2.687	2.687	0.000	185404445	50.0	47.8	M
3 Nitrite as N	3.190	3.190	0.000	12873455	NC	NC	
4 Bromide	3.770	3.770	0.000	2532999	2.50	2.28	
5 Nitrate as N	4.220	4.220	0.000	19504713	NC	NC	
7 Orthophosphate as P	5.650	5.650	0.000	6138009	NC	NC	
6 Sulfate	6.403	6.403	0.000	131676909	50.0	49.8	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

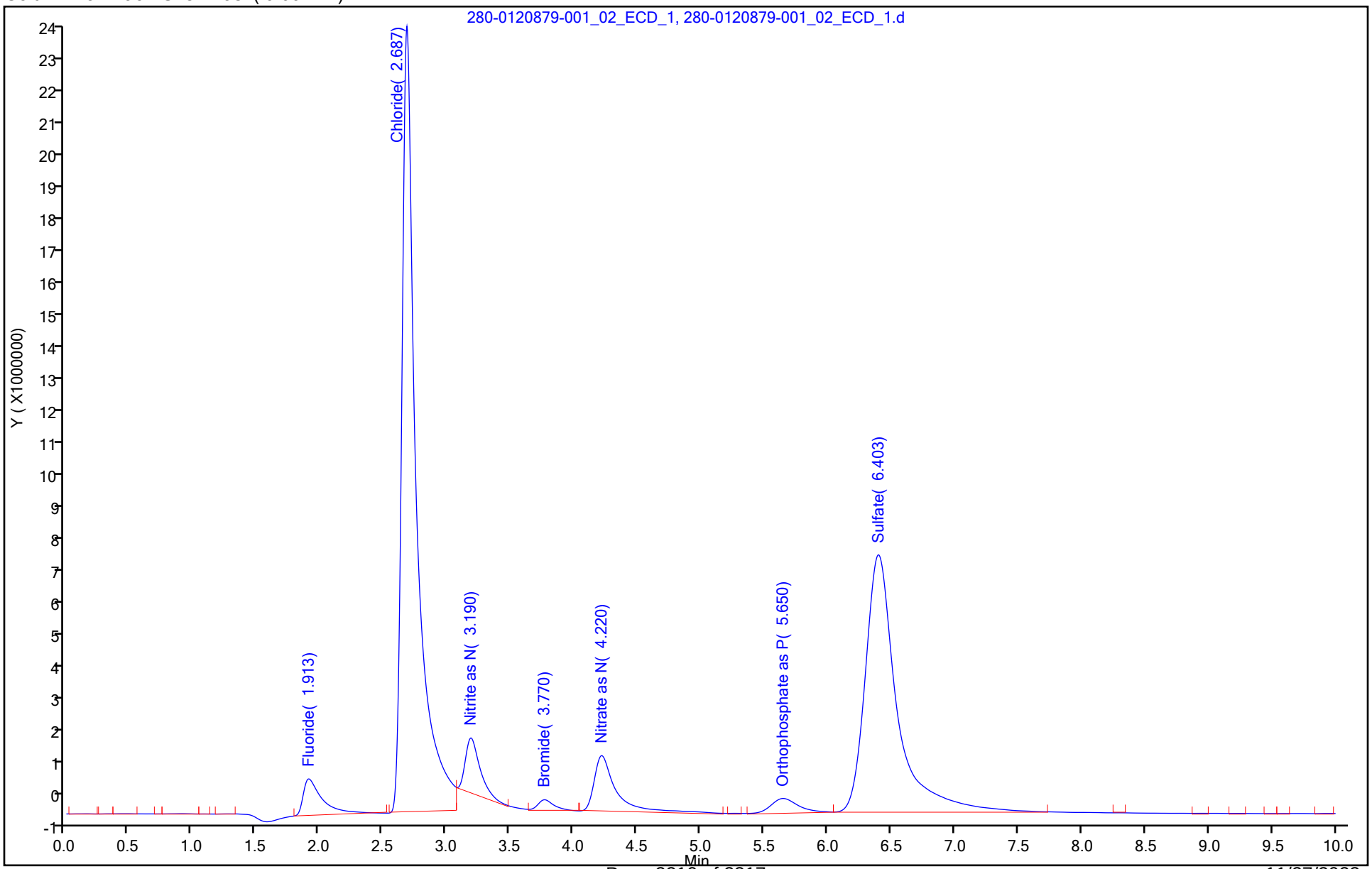
Report Date: 01-May-2023 12:31:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-001_02_ECD_1.d

Injection Date:	28-Apr-2023 15:28:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

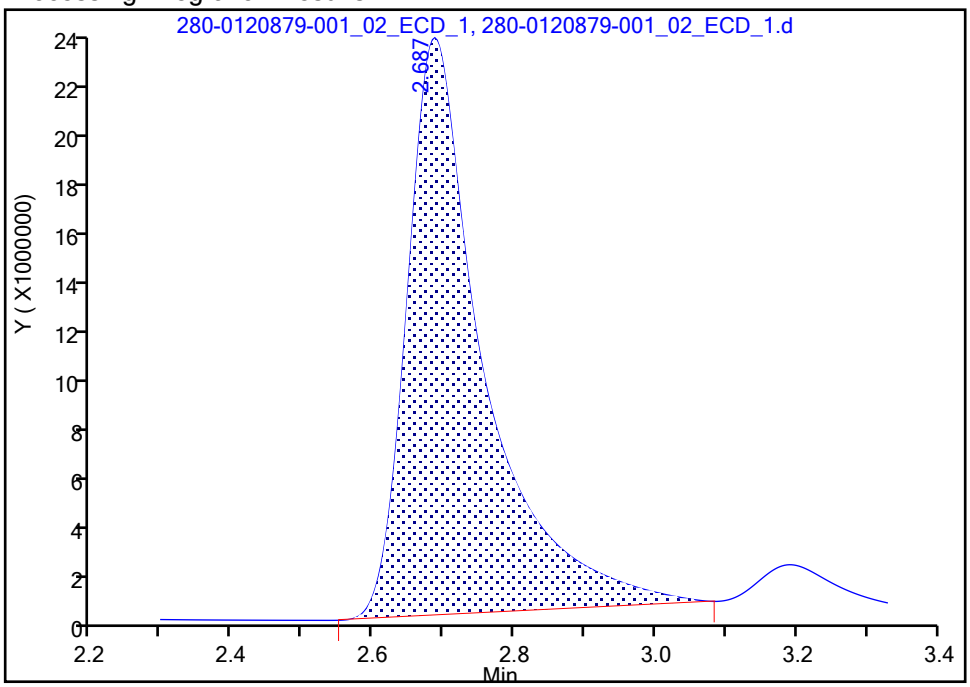
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-001_02_ECD_1.d				
Injection Date:	28-Apr-2023 15:28:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

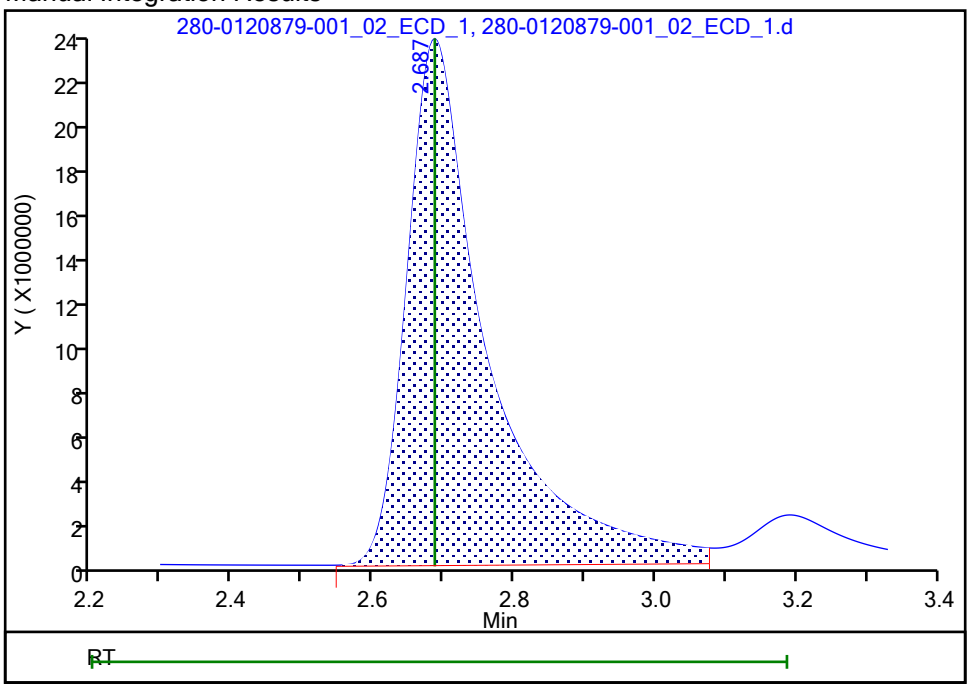
Processing Integration Results

RT: 2.69
Area: 174964982
Amount: 45.086990
Amount Units: ug/ml



Manual Integration Results

RT: 2.69
Area: 185404445
Amount: 47.765992
Amount Units: ug/ml



Reviewer: XAY4, 01-May-2023 10:00:04
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-002_03_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 28-Apr-2023 15:40:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-002
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:08 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 10:00:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.913				ND	U
2 Chloride	2.683	2.683	0.000	10977		0.1899	
3 Nitrite as N	3.233	3.233	0.000	11130		NC	
4 Bromide	3.837	3.837	0.000	6504		0.0153	
5 Nitrate as N	4.227	4.227	0.000	12844		NC	
7 Orthophosphate as P	5.627	5.627	0.000	17107		NC	
6 Sulfate	6.443	6.443	0.000	73507		0.2490	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

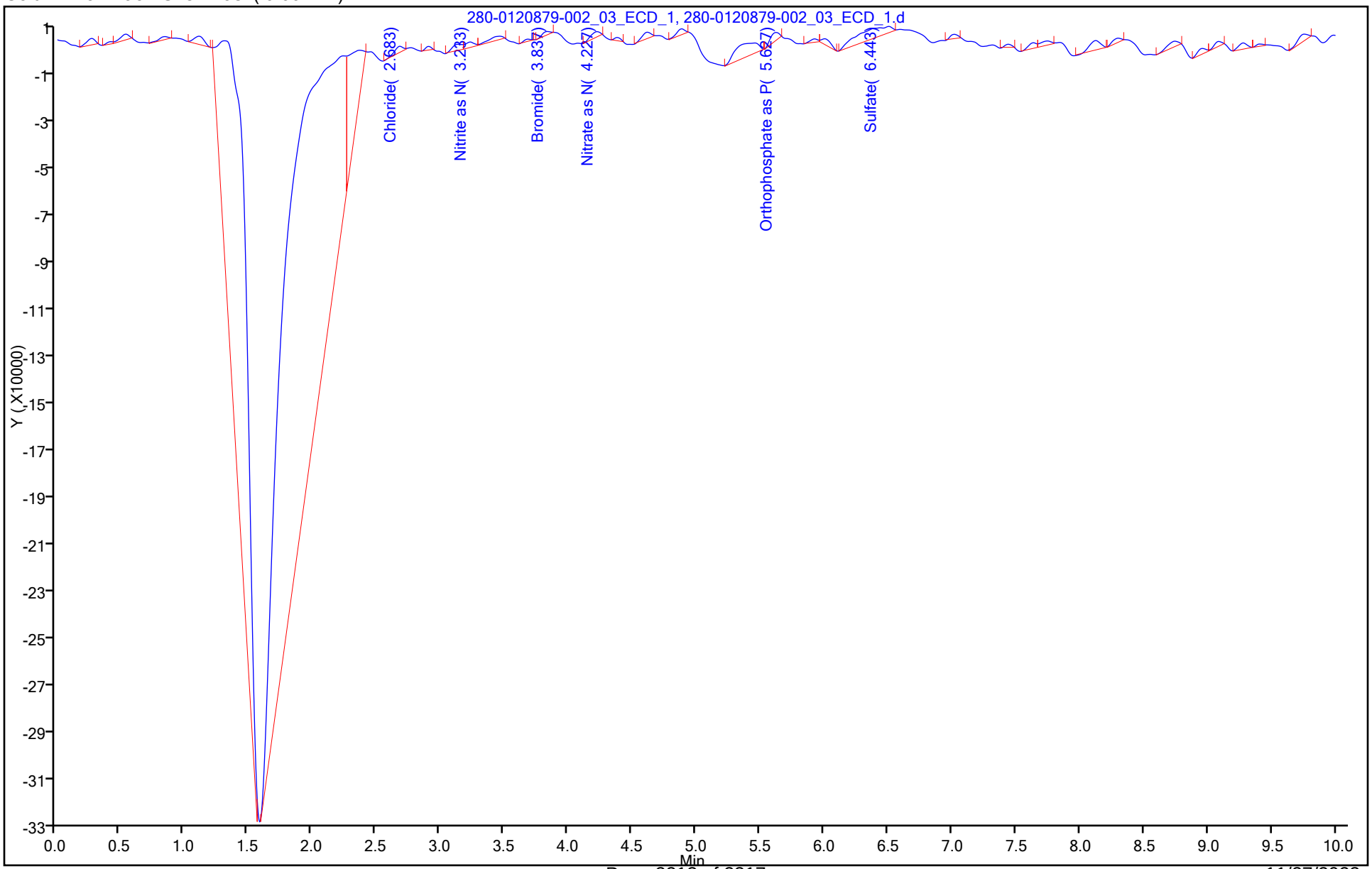
Report Date: 01-May-2023 12:31:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-002_03_ECD_1.d

Injection Date:	28-Apr-2023 15:40:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-003_04_ECD_1.d
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 28-Apr-2023 15:52:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-003
Misc. Info.: MRL
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:09 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 10:00:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.923	1.923	0.000	589726	0.2500	0.2180	M
2 Chloride	2.677	2.677	0.000	7829085	2.50	2.20	M
3 Nitrite as N	3.193	3.193	0.000	1668931	NC	NC	
4 Bromide	3.777	3.777	0.000	211743	0.2500	0.1991	
5 Nitrate as N	4.223	4.223	0.000	1622411	NC	NC	
7 Orthophosphate as P	5.670	5.670	0.000	472351	NC	NC	
6 Sulfate	6.387	6.387	0.000	6307220	2.50	2.59	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC Cal low_00706 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00477 Amount Added: 0.20 Units: mL

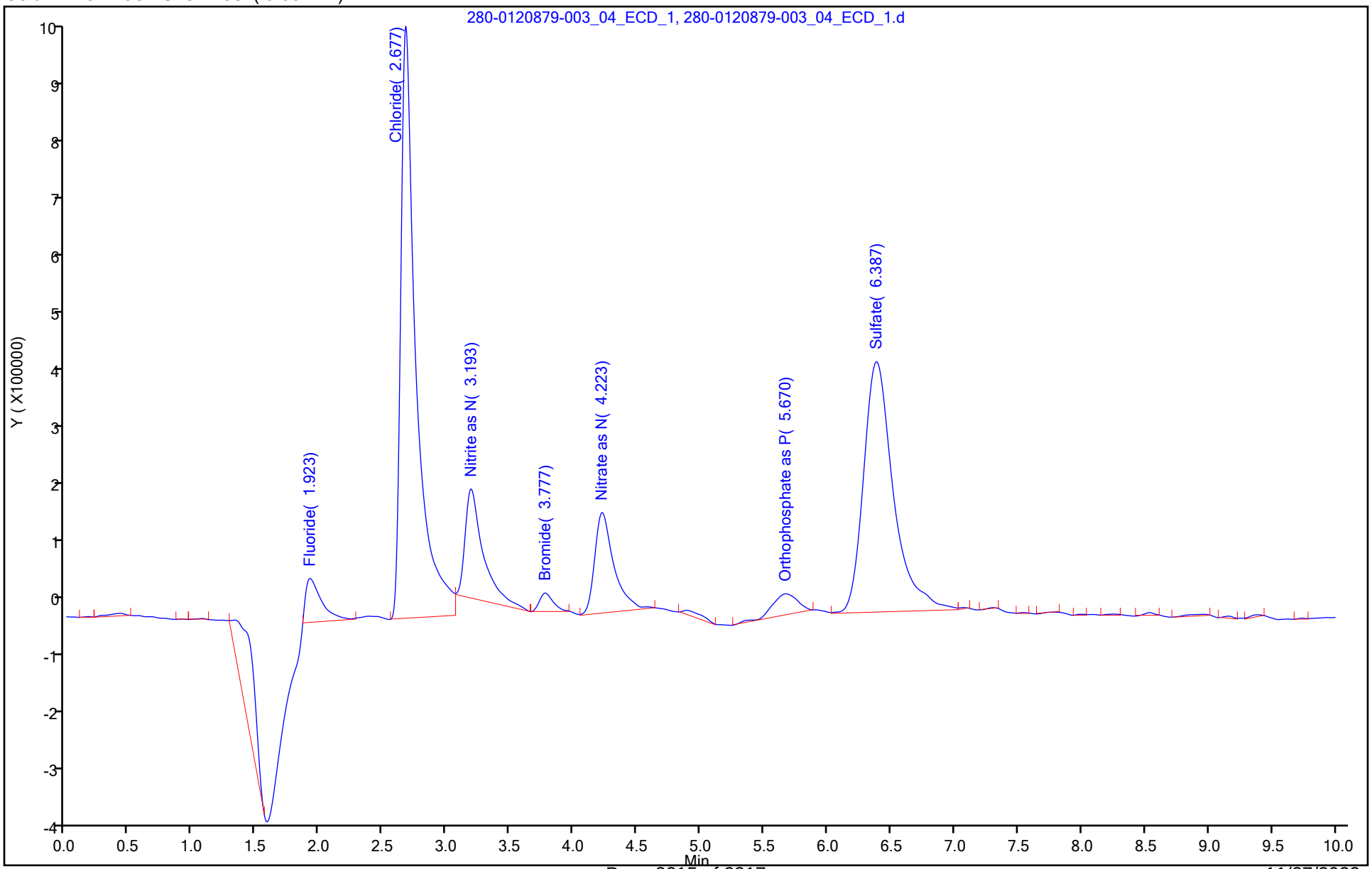
Report Date: 01-May-2023 12:31:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-003_04_ECD_1.d

Injection Date:	28-Apr-2023 15:52:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

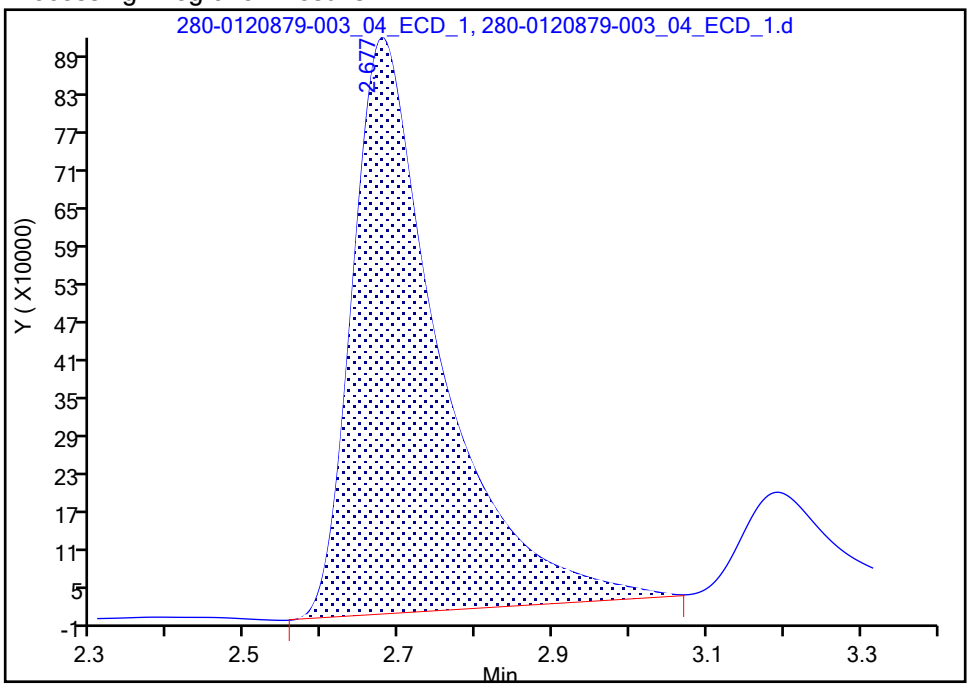
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-003_04_ECD_1.d				
Injection Date:	28-Apr-2023 15:52:00	Instrument ID:	WC_IonChrom15		
Lims ID:	mrl				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

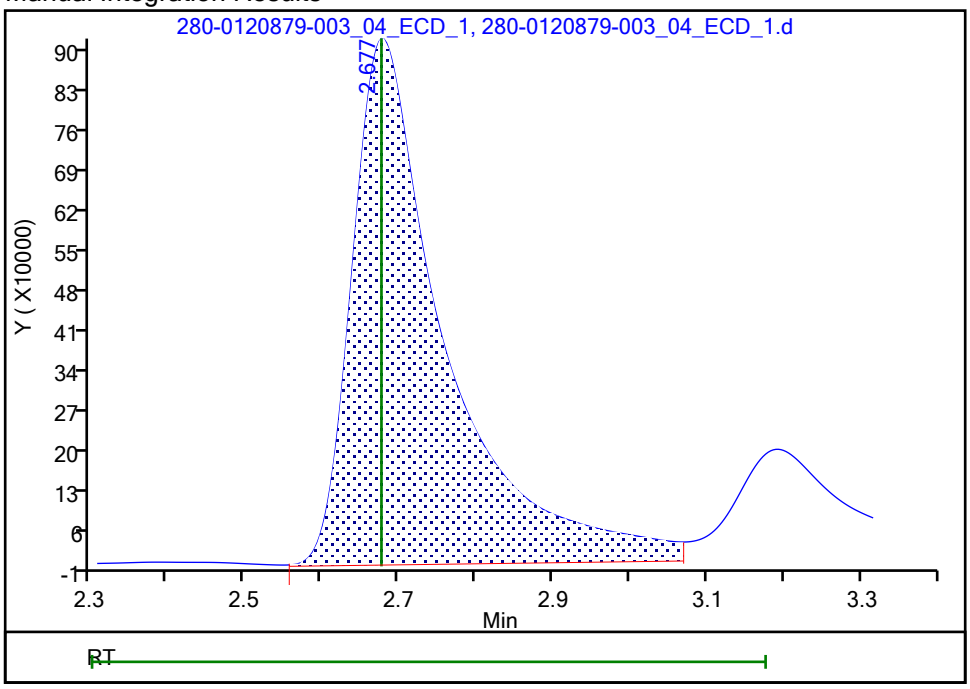
Processing Integration Results

RT: 2.68
Area: 7294736
Amount: 2.059027
Amount Units: ug/ml



Manual Integration Results

RT: 2.68
Area: 7829085
Amount: 2.196153
Amount Units: ug/ml



Reviewer: XAY4, 01-May-2023 10:00:33

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-004_05_ECD_1.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 28-Apr-2023 16:04:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-004
Misc. Info.: LCS
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:10 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 10:01:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11399803	2.50	2.41	M
2 Chloride	2.687	2.687	0.000	184408538	50.0	47.5	M
3 Nitrite as N		3.193			NC	ND	M
4 Bromide	3.773	3.773	0.000	2581567	2.50	2.32	
5 Nitrate as N	4.223	4.223	0.000	19335690	NC	NC	
7 Orthophosphate as P	5.657	5.657	0.000	6037850	NC	NC	
6 Sulfate	6.403	6.403	0.000	129554978	50.0	49.0	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

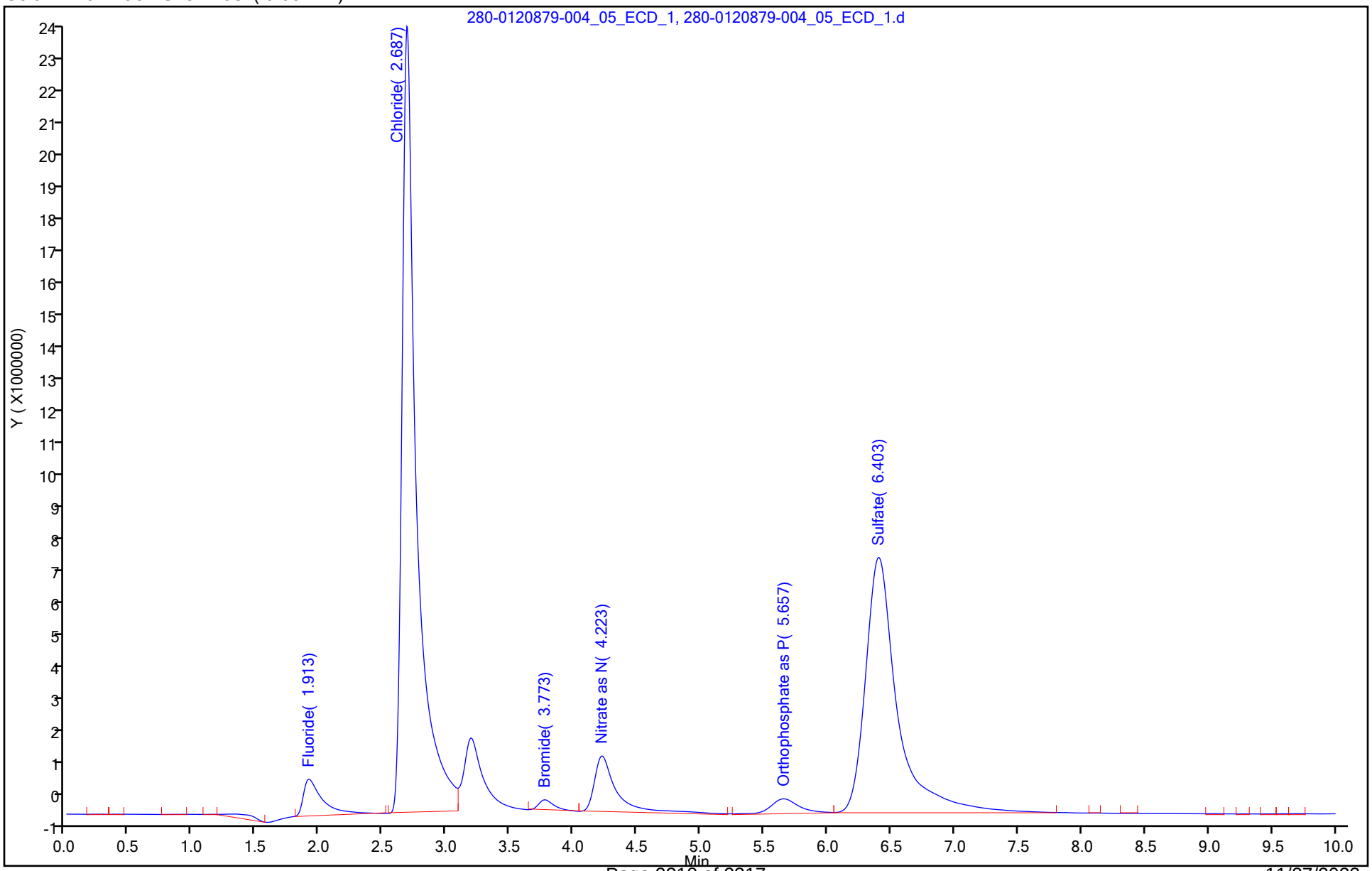
Report Date: 01-May-2023 12:31:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-004_05_ECD_1.d

Injection Date:	28-Apr-2023 16:04:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

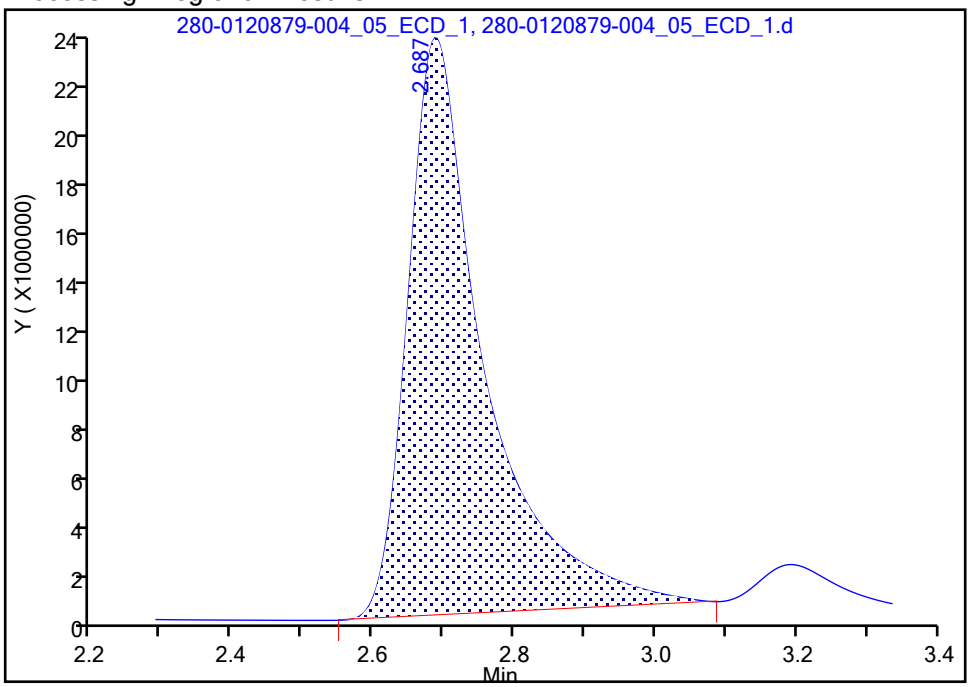
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-004_05_ECD_1.d				
Injection Date:	28-Apr-2023 16:04:00	Instrument ID:	WC_IonChrom15		
Lims ID:	lcs				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

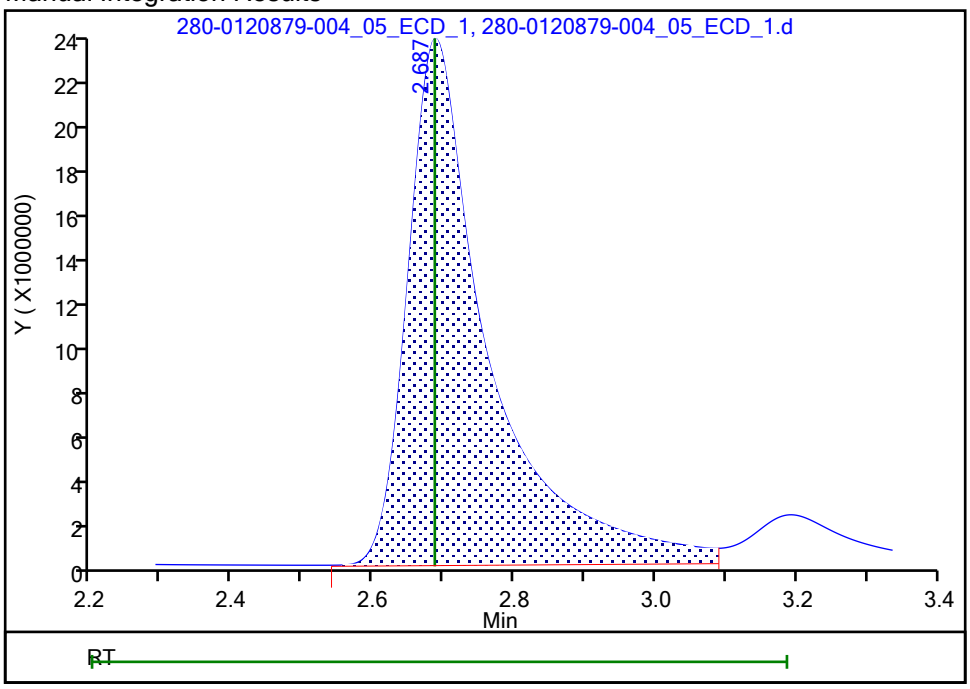
Processing Integration Results

RT: 2.69
Area: 173564594
Amount: 44.727619
Amount Units: ug/ml



Manual Integration Results

RT: 2.69
Area: 184408538
Amount: 47.510420
Amount Units: ug/ml



Reviewer: XAY4, 01-May-2023 10:00:53
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-005_06_ECD_1.d
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 28-Apr-2023 16:16:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-005
Misc. Info.: LCSD
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:11 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 10:01:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	11588060	2.50	2.45	M
2 Chloride	2.687	2.687	0.000	183737586	50.0	47.3	M
3 Nitrite as N		3.193			NC	ND	M
4 Bromide	3.773	3.773	0.000	2522103	2.50	2.27	
5 Nitrate as N	4.223	4.223	0.000	19271247	NC	NC	
7 Orthophosphate as P	5.650	5.650	0.000	6065324	NC	NC	
6 Sulfate	6.400	6.400	0.000	129819398	50.0	49.1	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

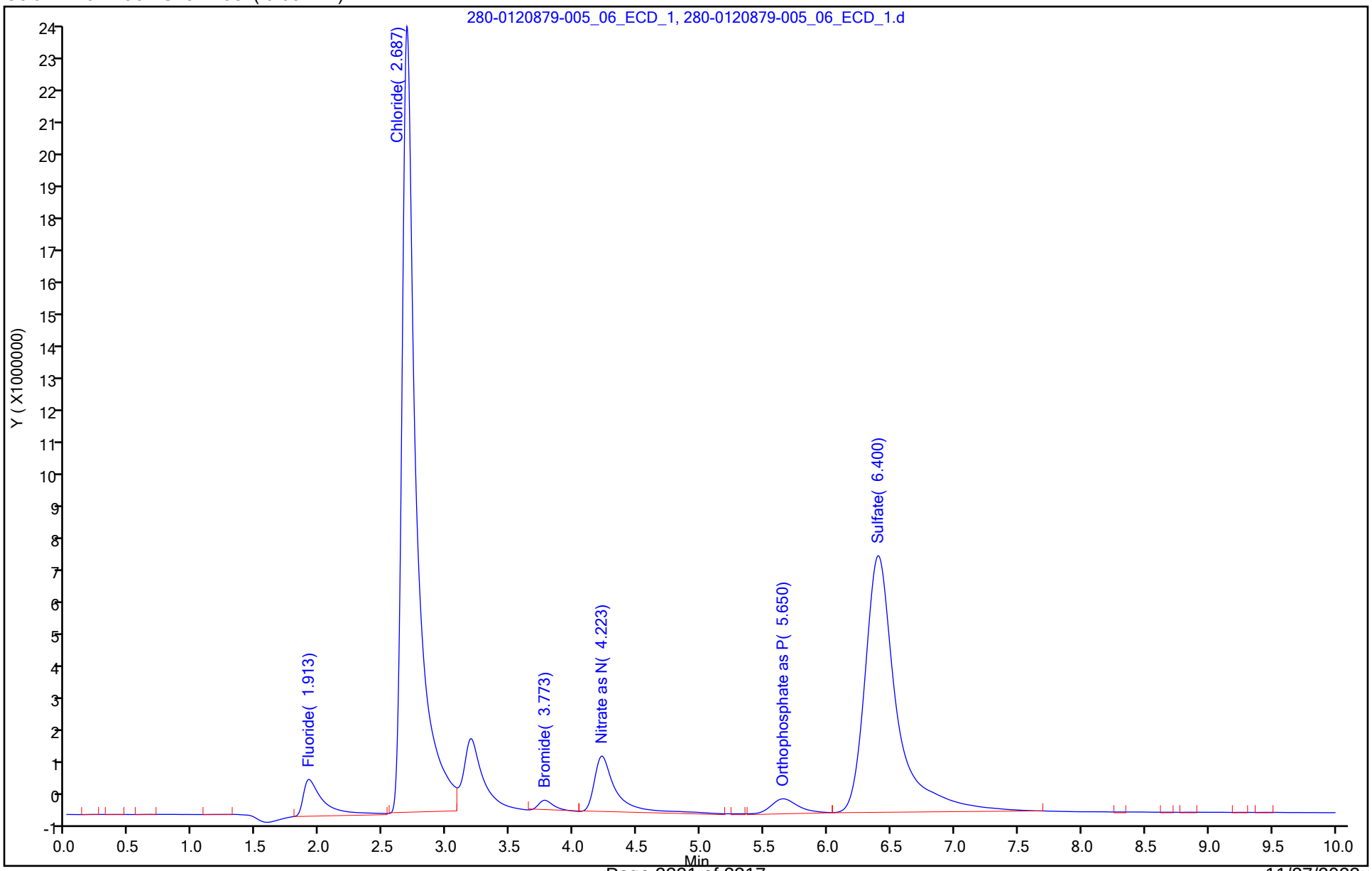
Report Date: 01-May-2023 12:31:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-005_06_ECD_1.d

Injection Date:	28-Apr-2023 16:16:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

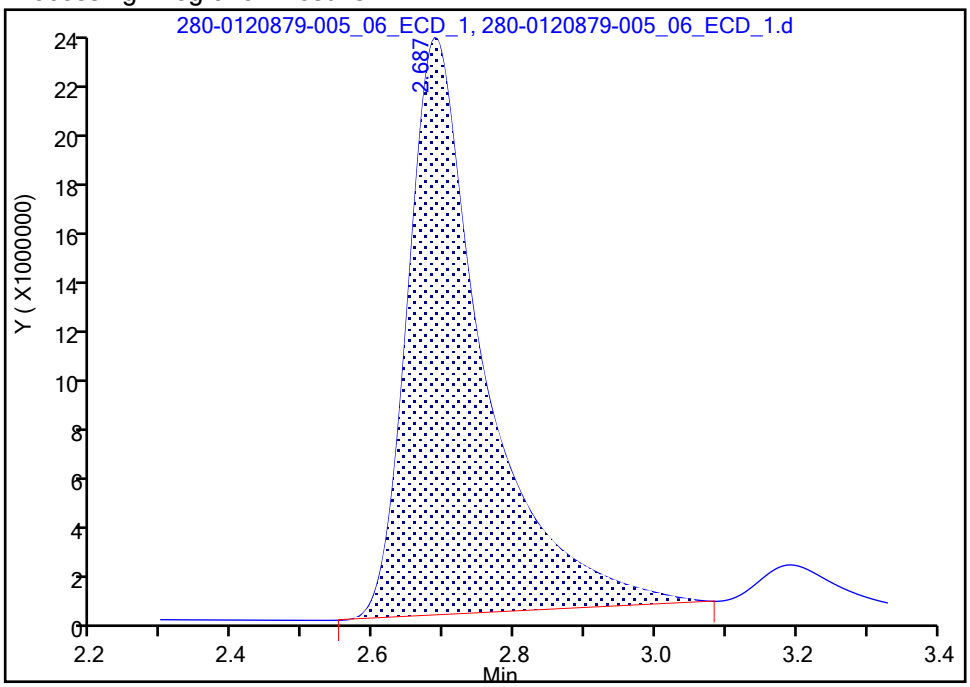
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-005_06_ECD_1.d				
Injection Date:	28-Apr-2023 16:16:00	Instrument ID:	WC_IonChrom15		
Lims ID:	lcsd				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

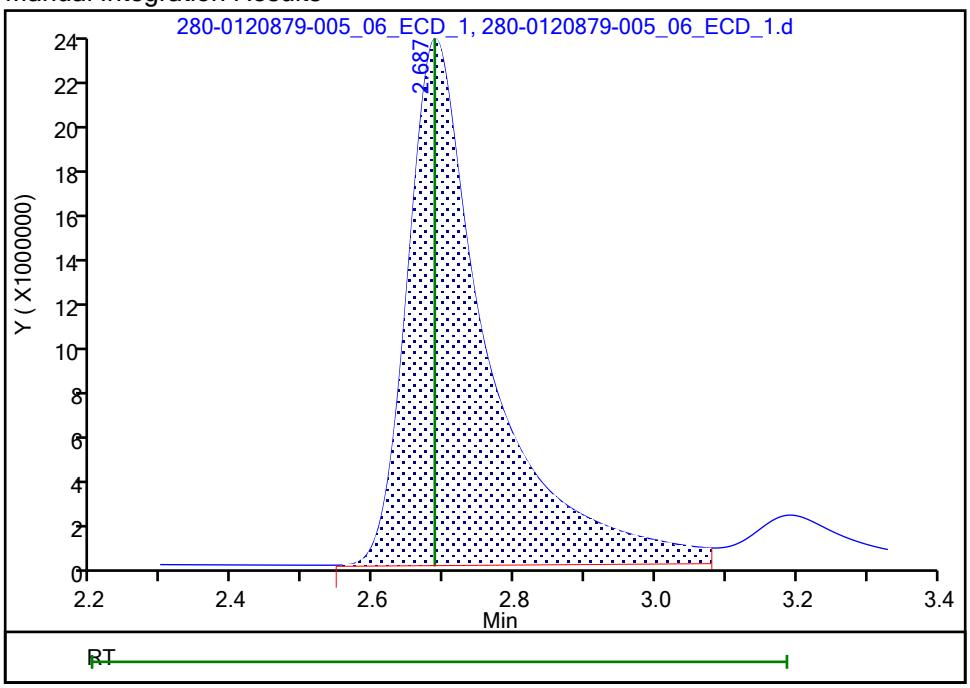
Processing Integration Results

RT: 2.69
Area: 173225778
Amount: 44.640671
Amount Units: ug/ml



Manual Integration Results

RT: 2.69
Area: 183737586
Amount: 47.338238
Amount Units: ug/ml



Reviewer: XAY4, 01-May-2023 10:01:16
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-006_07_ECD_1.d				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	28-Apr-2023 16:28:00	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120879-006				
Misc. Info.:	MB				
Operator ID:		Instrument ID:	WC_IonChrom15		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	01-May-2023 12:31:11	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1628				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.913				ND	
2 Chloride	2.650	2.650	0.000	223552		0.2444	
3 Nitrite as N	3.280	3.280	0.000	11198		NC	
4 Bromide	3.797	3.797	0.000	25780		0.0326	
5 Nitrate as N	4.127	4.127	0.000	2009		NC	
7 Orthophosphate as P	5.637	5.637	0.000	10646		NC	
6 Sulfate	6.487	6.487	0.000	4208		0.2230	

QC Flag Legend

Processing Flags
NC - Not Calibrated

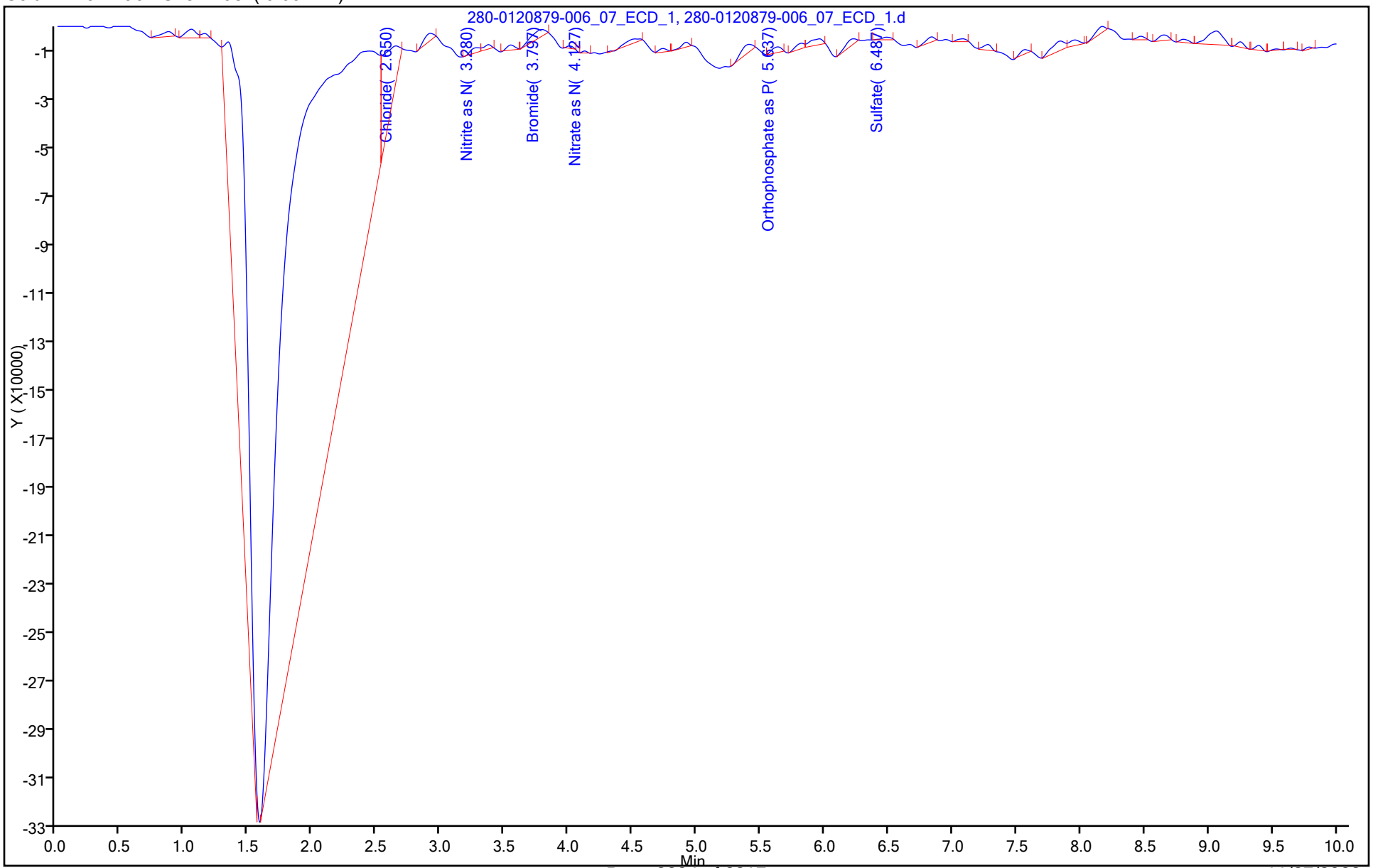
Report Date: 01-May-2023 12:31:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-006_07_ECD_1.d

Injection Date:	28-Apr-2023 16:28:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-017_18_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 28-Apr-2023 18:40:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-017
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:18 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 09:59:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.917	1.913	0.004	11873414	2.50	2.50	M
2 Chloride	2.690	2.650	0.040	184905746	50.0	47.6	M
3 Nitrite as N	3.197	3.280	-0.083	12800998	NC	NC	
4 Bromide	3.783	3.797	-0.014	2617546	2.50	2.35	
5 Nitrate as N	4.233	4.127	0.106	19785918	NC	NC	
7 Orthophosphate as P	5.637	5.637	0.000	5826892	NC	NC	
6 Sulfate	6.363	6.487	-0.124	128232671	50.0	48.5	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

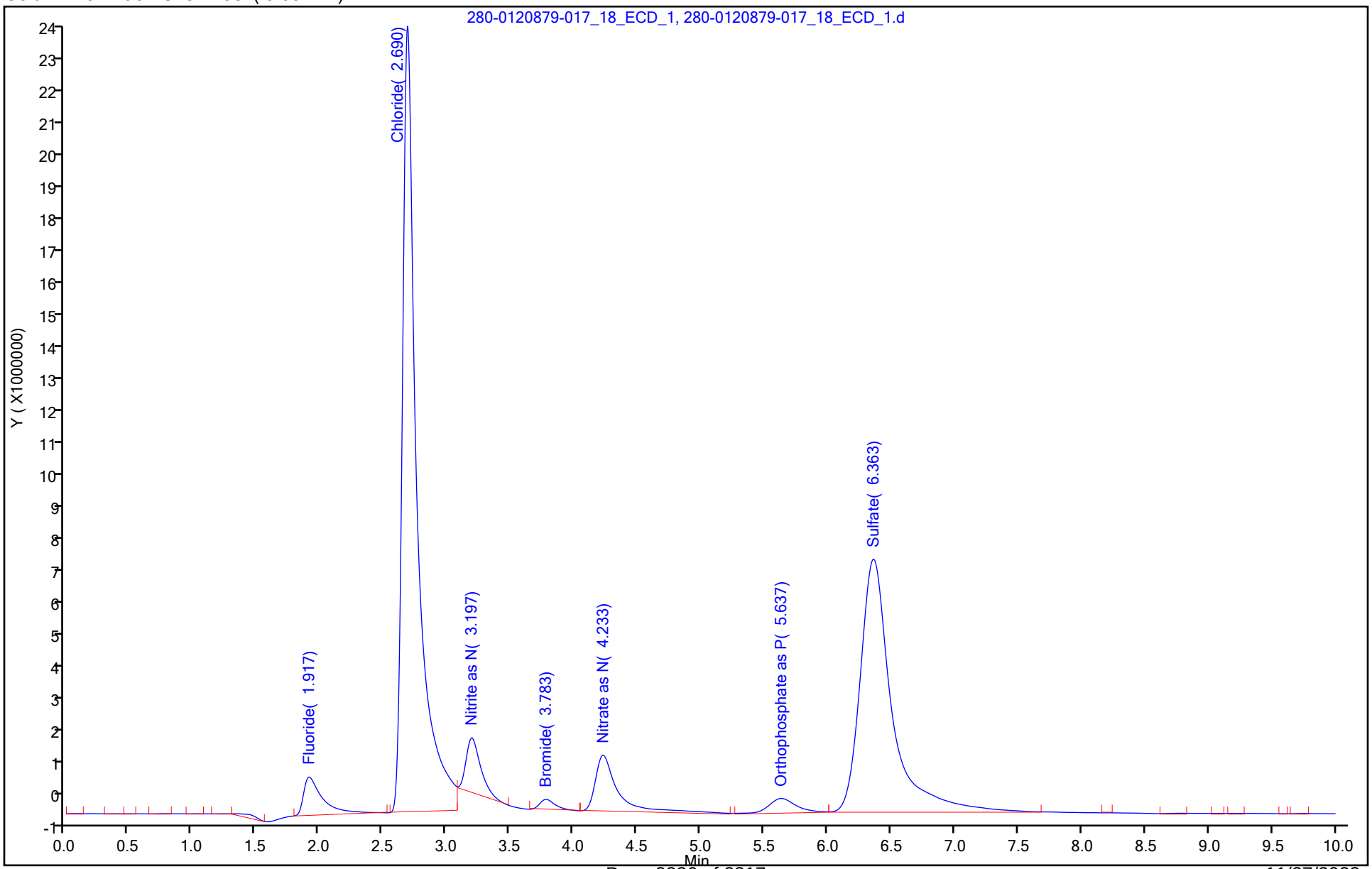
Report Date: 01-May-2023 12:31:18 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-017_18_ECD_1.d

Injection Date:	28-Apr-2023 18:40:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

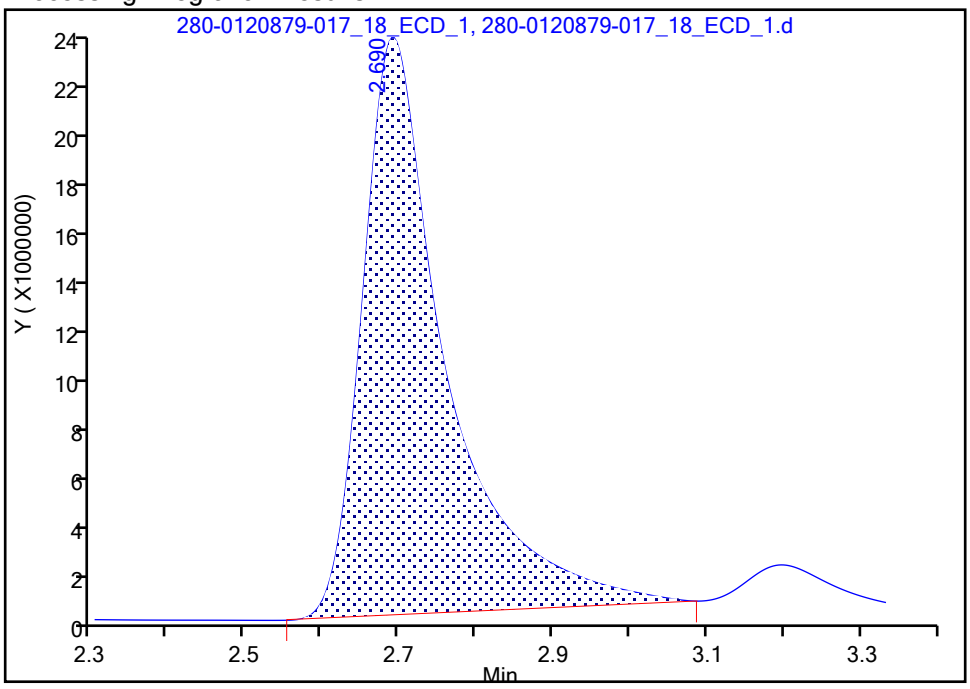
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-017_18_ECD_1.d				
Injection Date:	28-Apr-2023 18:40:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

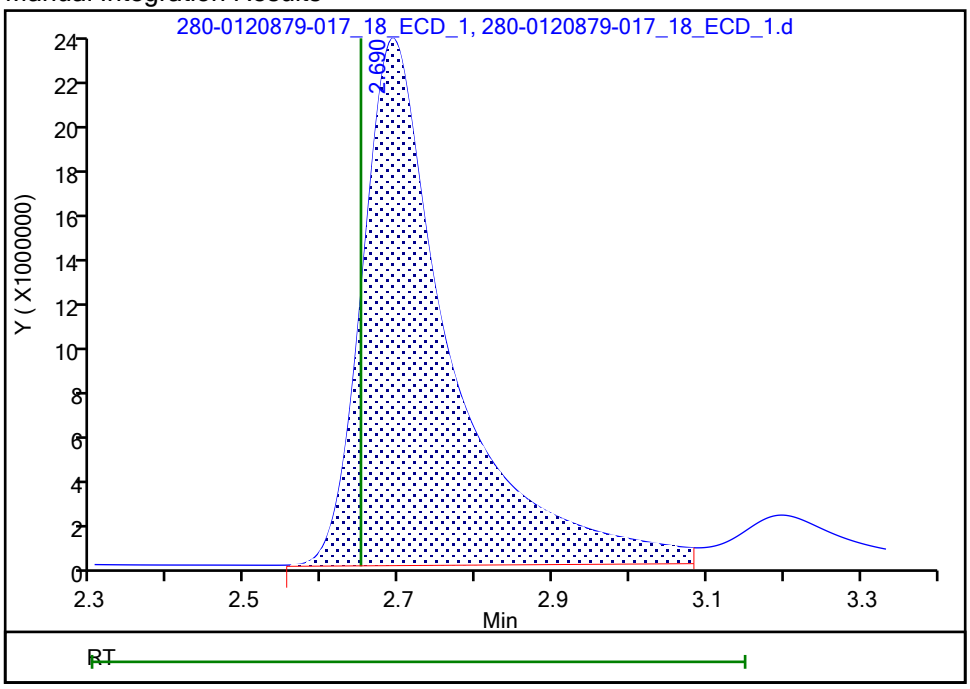
Processing Integration Results

RT: 2.69
Area: 173901262
Amount: 44.814016
Amount Units: ug/ml



Manual Integration Results

RT: 2.69
Area: 184905746
Amount: 47.638014
Amount Units: ug/ml



Reviewer: XAY4, 01-May-2023 09:59:42
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-018_19_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 28-Apr-2023 18:52:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-018
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:18 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 12:19:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.913				ND	U
2 Chloride		2.650				ND	U
3 Nitrite as N	3.303	3.280	0.023	23079		NC	
4 Bromide	3.817	3.797	0.020	8216		0.0168	
5 Nitrate as N	4.053	4.127	-0.074	4496		NC	
7 Orthophosphate as P	5.503	5.637	-0.134	96493		NC	
6 Sulfate	6.403	6.487	-0.084	12751		0.2262	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

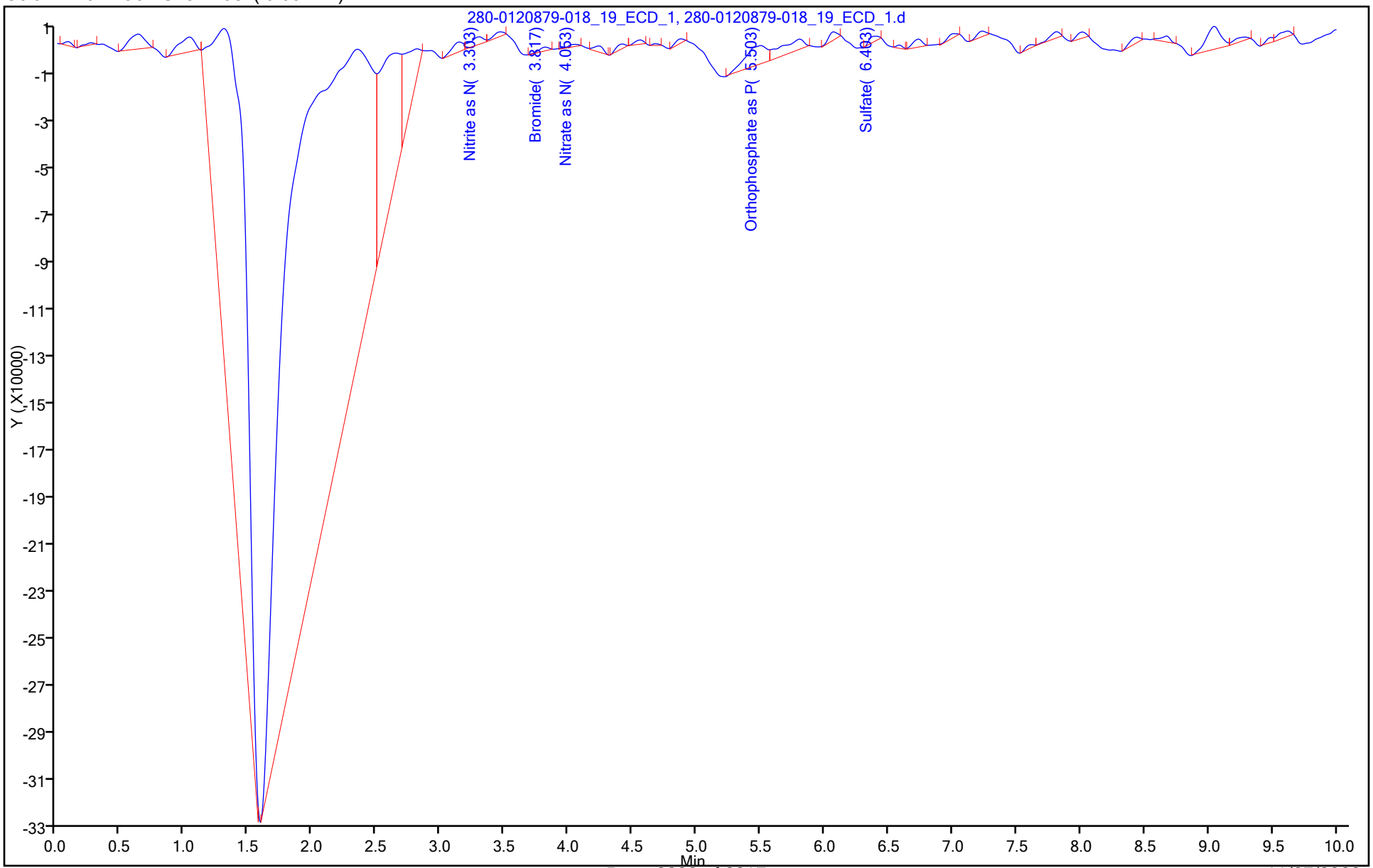
Report Date: 01-May-2023 12:31:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-018_19_ECD_1.d

Injection Date:	28-Apr-2023 18:52:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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User Disabled Compound Report

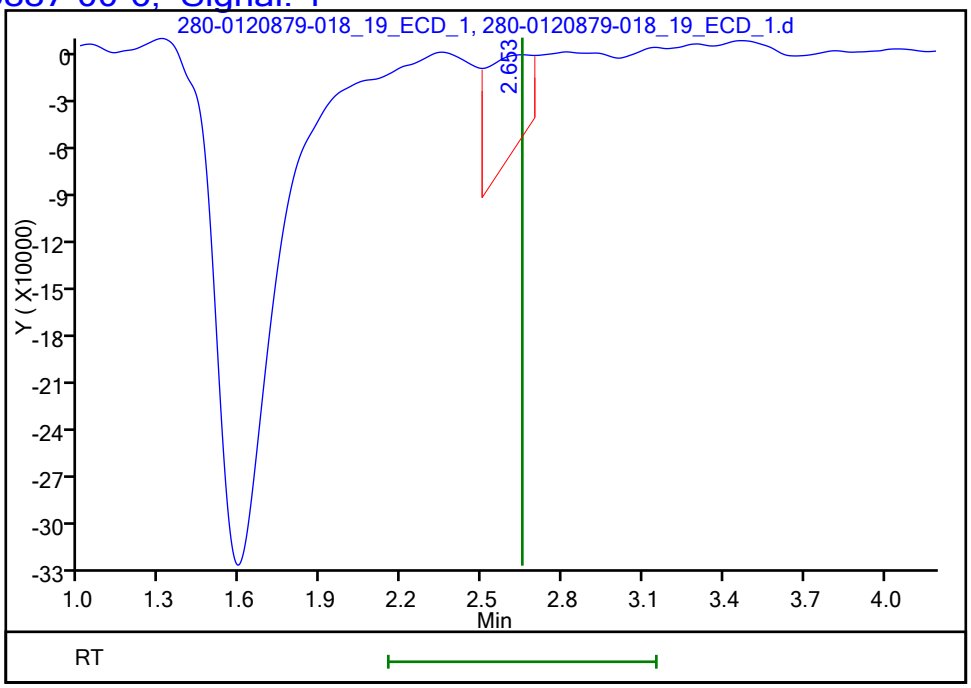
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-018_19_ECD_1.d
Injection Date: 28-Apr-2023 18:52:00 Instrument ID: WC_IonChrom15
Lims ID: ccb
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D

Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 2.65
Response: 732283
Amount: 0.374954



Reviewer: XAY4, 01-May-2023 12:19:43
Audit Action: Manually Integrated Audit Reason:

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-029_30_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 28-Apr-2023 21:03:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-029
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:24 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 10:01:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.917	1.913	0.004	11891192	2.50	2.51	M
2 Chloride	2.693	2.650	0.043	183667820	50.0	47.3	M
3 Nitrite as N		3.280			NC	ND	M
4 Bromide	3.787	3.797	-0.010	2626250	2.50	2.36	
5 Nitrate as N	4.237	4.127	0.110	17757188	NC	NC	
7 Orthophosphate as P	5.637	5.637	0.000	5904422	NC	NC	
6 Sulfate	6.370	6.487	-0.117	129628913	50.0	49.0	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

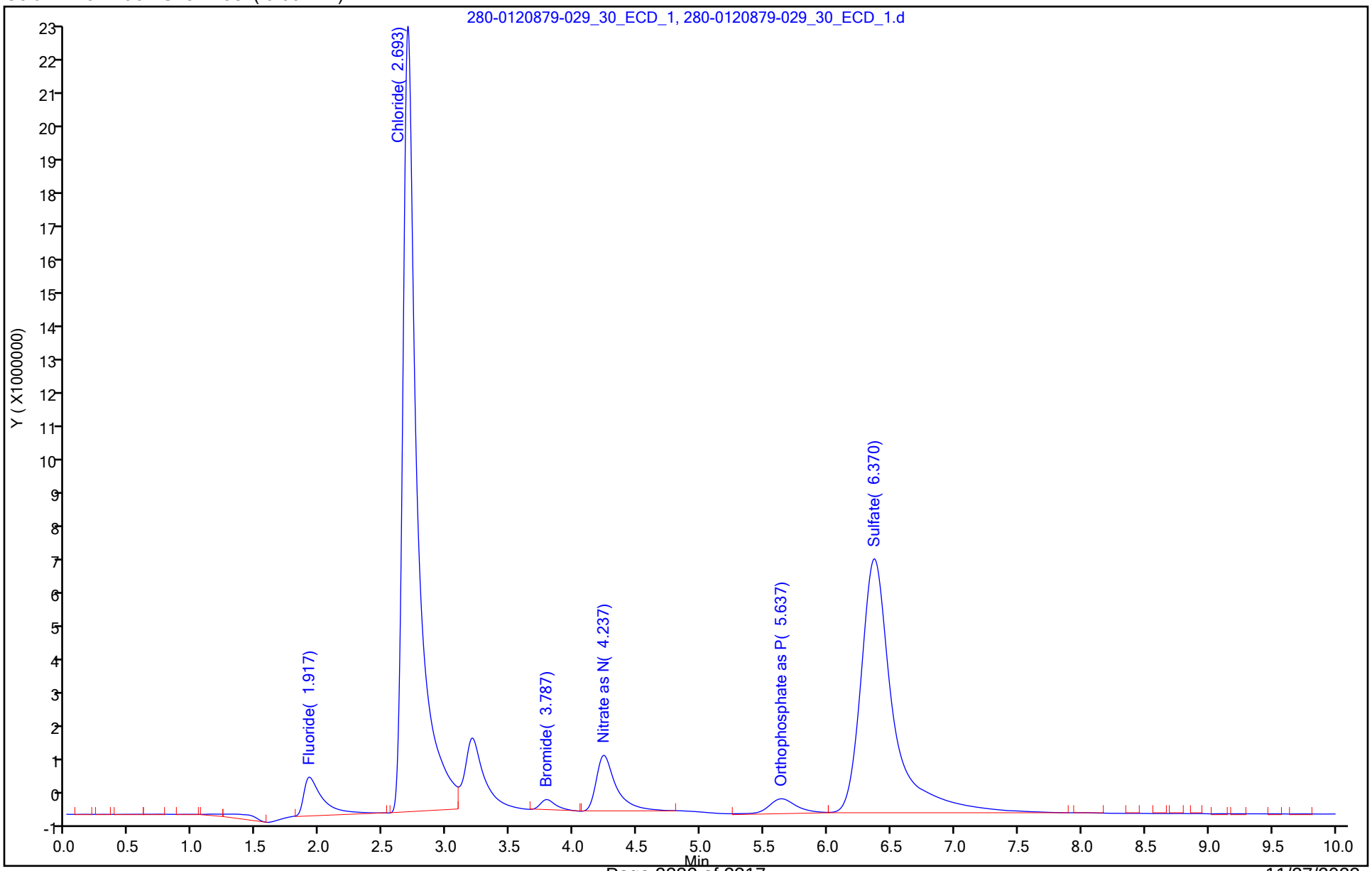
Report Date: 01-May-2023 12:31:24 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-029_30_ECD_1.d

Injection Date:	28-Apr-2023 21:03:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	29
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

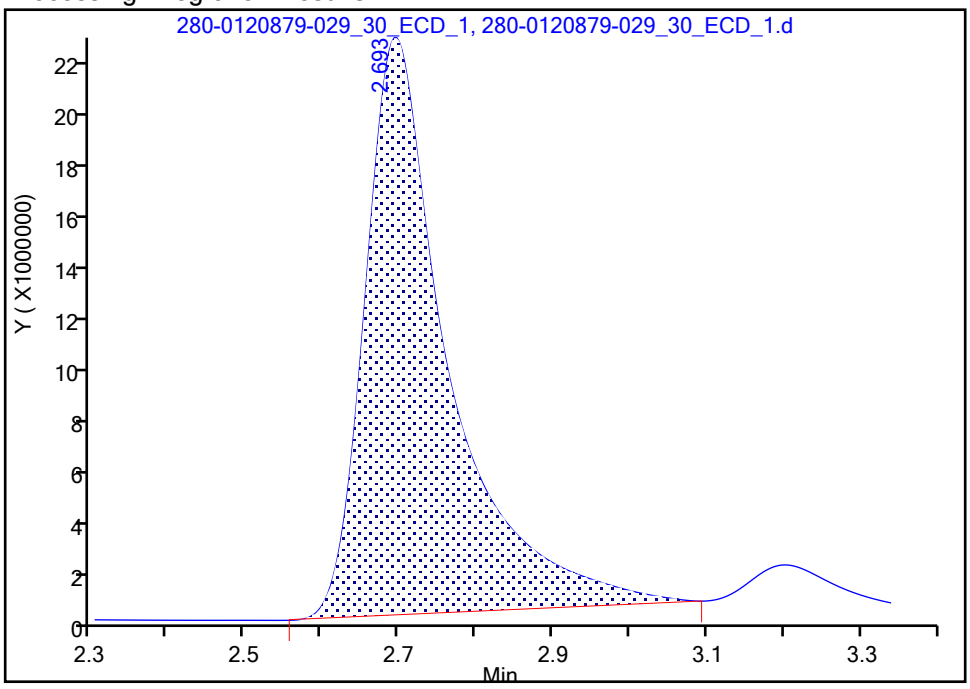
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-029_30_ECD_1.d				
Injection Date:	28-Apr-2023 21:03:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

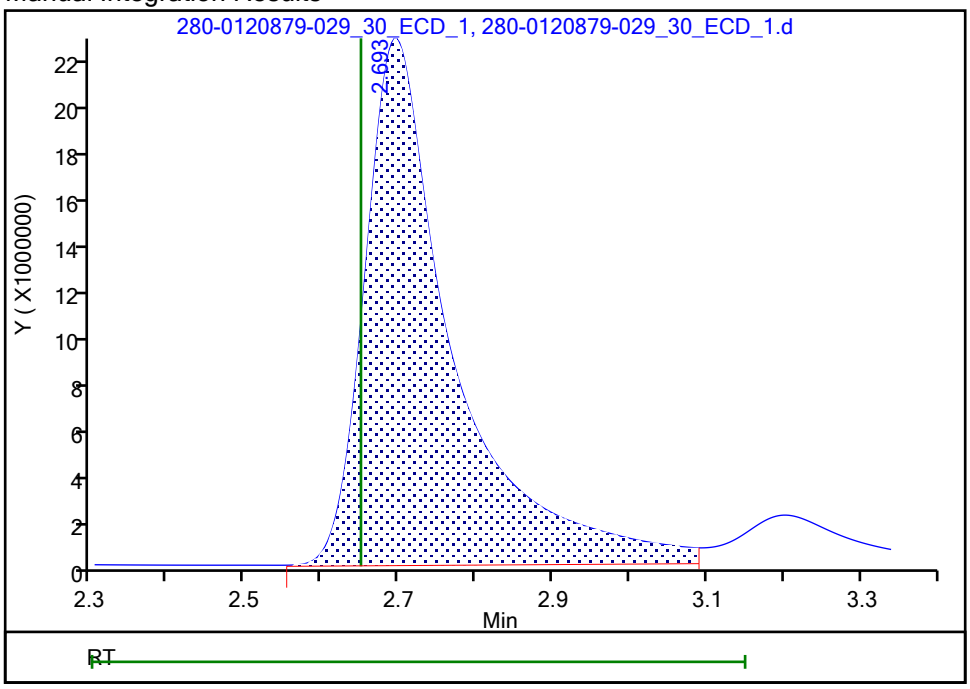
Processing Integration Results

RT: 2.69
Area: 173481862
Amount: 44.706388
Amount Units: ug/ml



Manual Integration Results

RT: 2.69
Area: 183667820
Amount: 47.320335
Amount Units: ug/ml



Reviewer: XAY4, 01-May-2023 10:01:43
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-030_31_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 28-Apr-2023 21:15:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-030
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:24 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 10:01:57

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.913				ND	U
2 Chloride		2.650				ND	U
3 Nitrite as N	3.363	3.280	0.083	2436		NC	
4 Bromide	3.797	3.797	0.000	12591		0.0207	
5 Nitrate as N	4.210	4.127	0.083	9859		NC	
7 Orthophosphate as P	5.723	5.637	0.086	104415		NC	
6 Sulfate	6.520	6.487	0.033	13907		0.2266	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

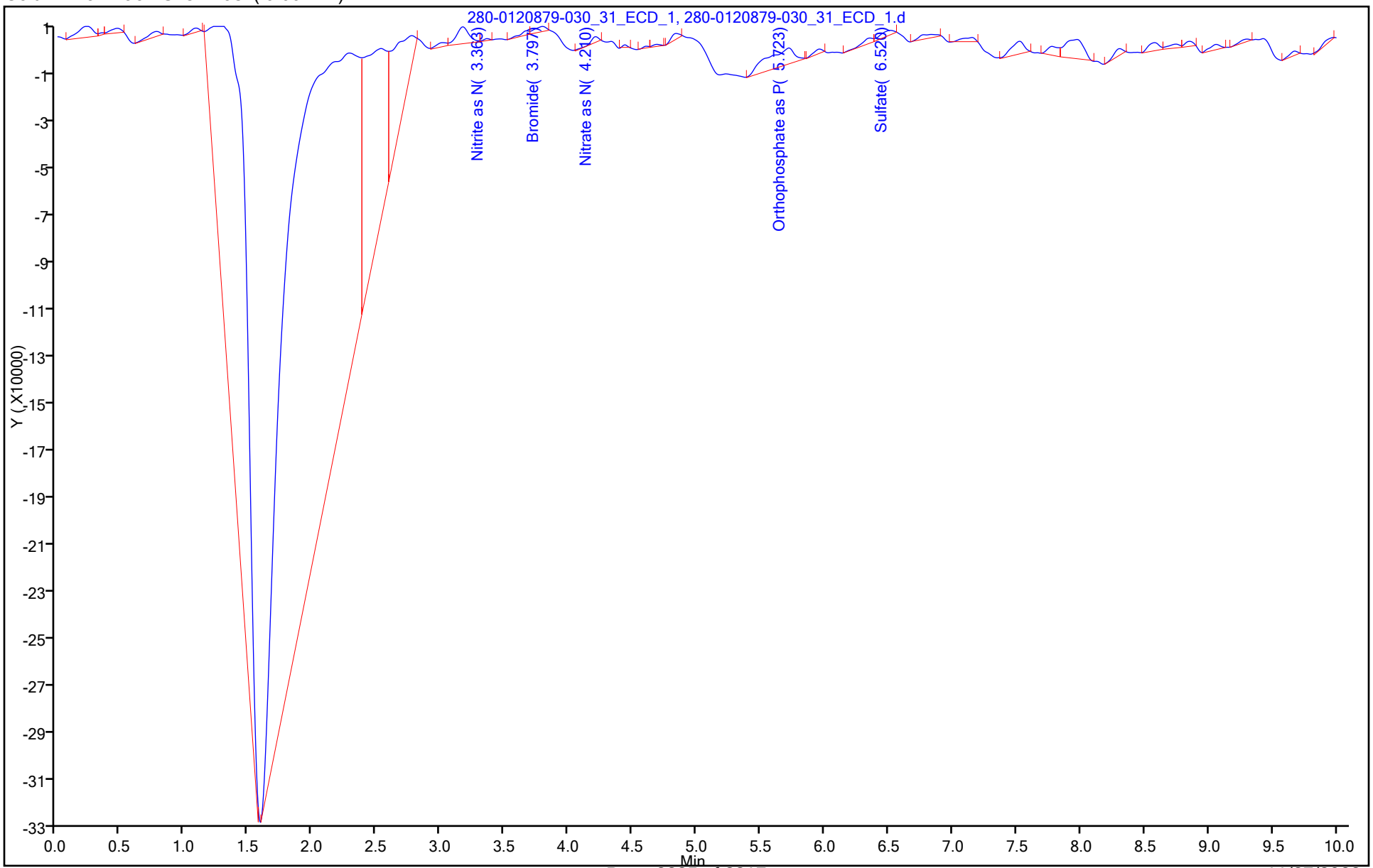
Report Date: 01-May-2023 12:31:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-030_31_ECD_1.d

Injection Date:	28-Apr-2023 21:15:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	30
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
6:53 PM

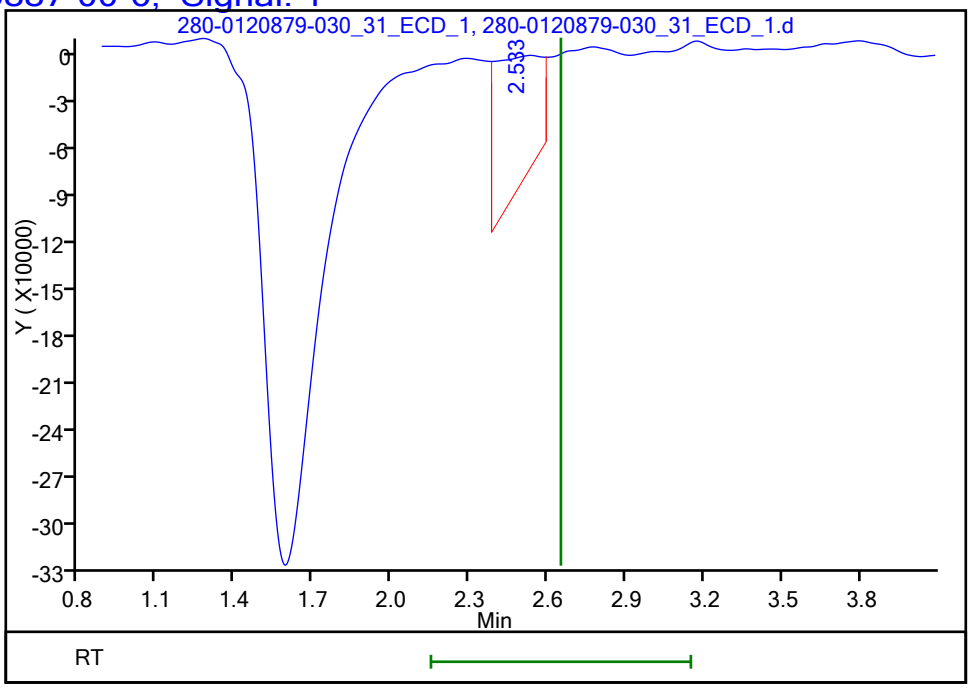
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-030_31_ECD_1.d
Injection Date: 28-Apr-2023 21:15:00 Instrument ID: WC_IonChrom15
Lims ID: ccb
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 2.53
Response: 1016994
Amount: 0.448017



Reviewer: XAY4, 01-May-2023 10:01:57
Audit Action: Manually Integrated Audit Reason:

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-039_40_ECD_1.d				
Lims ID:	280-174957-C-2				
Client ID:	MW-124-20230412				
Sample Type:	Client				
Inject. Date:	28-Apr-2023 23:03:00	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	10.0 ul	Dil. Factor:	10.0000		
Sample Info:	280-0120879-039				
Misc. Info.:	280-174957-C-2				
Operator ID:		Instrument ID:	WC_IonChrom15		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	01-May-2023 12:31:24	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1628				
First Level Reviewer: XAY4		Date:	01-May-2023 12:25:44		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride		1.913			ND	U
2 Chloride	2.680	2.650	0.030	120411815	31.1	M
3 Nitrite as N		3.280			ND	
4 Bromide	3.757	3.797	-0.040	1592248	1.44	
5 Nitrate as N	4.217	4.127	0.090	4816140	NC	
7 Orthophosphate as P	5.167	5.637	-0.470	73777	NC	
6 Sulfate	6.343	6.487	-0.144	26530333	10.2	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

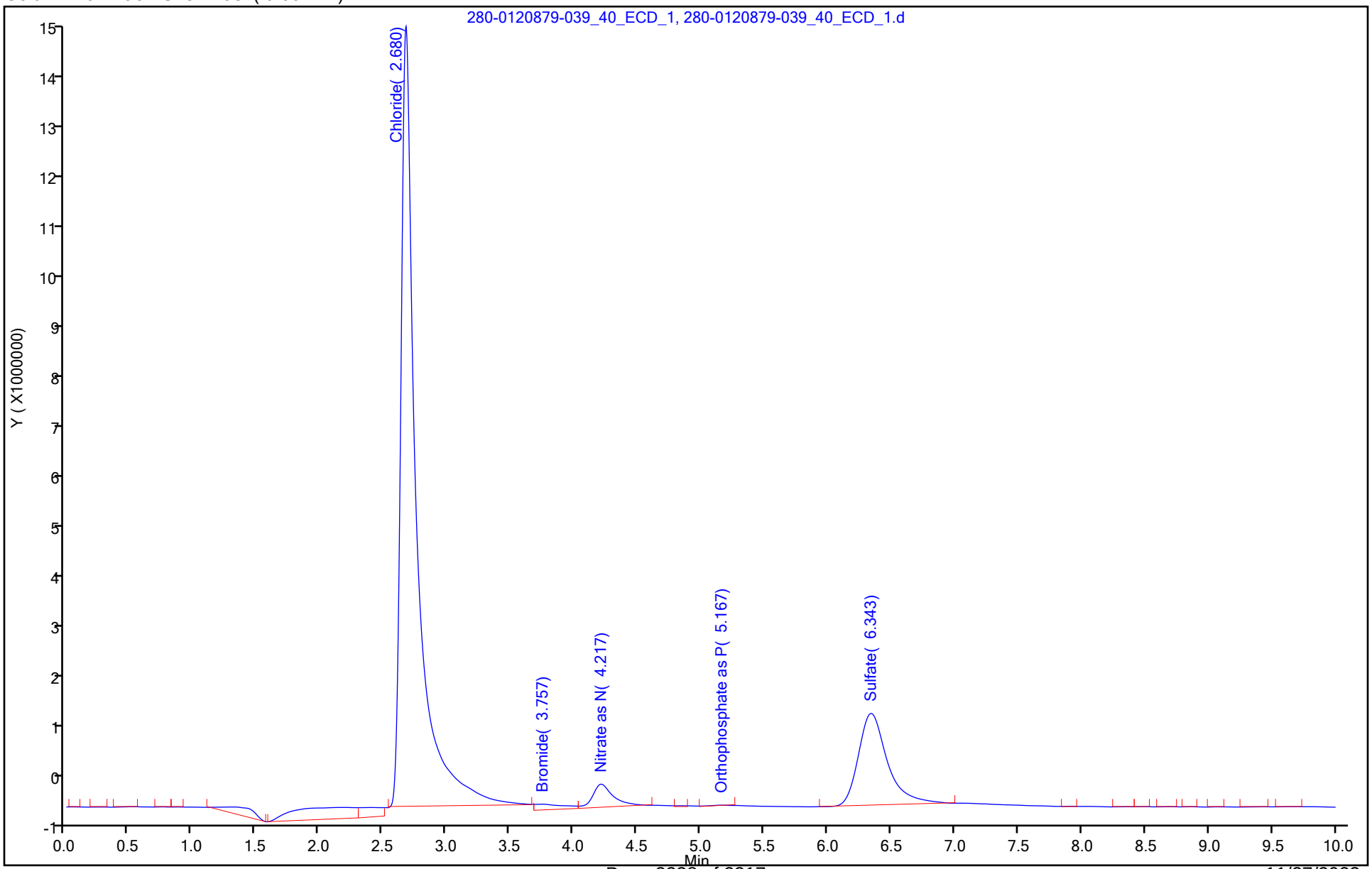
Report Date: 01-May-2023 12:31:30 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-039_40_ECD_1.d

Injection Date:	28-Apr-2023 23:03:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-174957-C-2	Lab Sample ID:	280-174957-2	Worklist Smp#:	39
Client ID:	MW-124-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

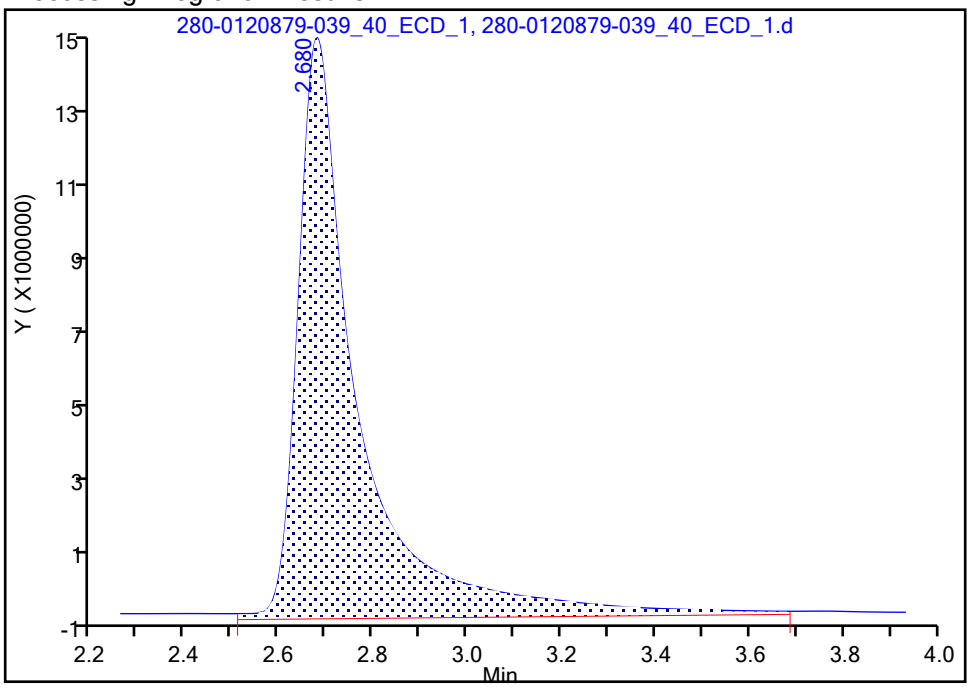
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-039_40_ECD_1.d				
Injection Date:	28-Apr-2023 23:03:00	Instrument ID:	WC_IonChrom15		
Lims ID:	280-174957-C-2	Lab Sample ID:	280-174957-2		
Client ID:	MW-124-20230412				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	10.0 ul	Dil. Factor:	10.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

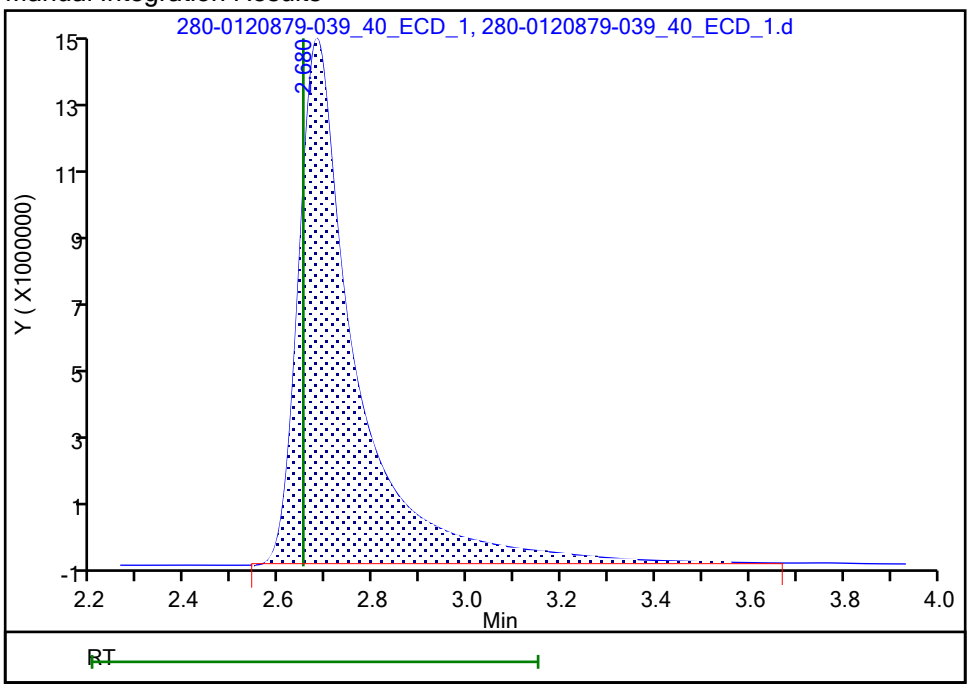
Processing Integration Results

RT: 2.68
Area: 130298657
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.68
Area: 120411815
Amount: 31.087419
Amount Units: ug/ml



Reviewer: XAY4, 01-May-2023 12:25:29

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-041_42_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 28-Apr-2023 23:27:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-041
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:30 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 10:02:39

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.913	-0.003	12130619	2.50	2.56	M
2 Chloride	2.683	2.650	0.033	185547365	50.0	47.8	M
3 Nitrite as N	3.187	3.280	-0.093	12836254	NC	NC	
4 Bromide	3.767	3.797	-0.030	2617155	2.50	2.35	
5 Nitrate as N	4.213	4.127	0.086	19808507	NC	NC	
7 Orthophosphate as P	5.617	5.637	-0.020	5966767	NC	NC	
6 Sulfate	6.350	6.487	-0.137	129179734	50.0	48.8	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

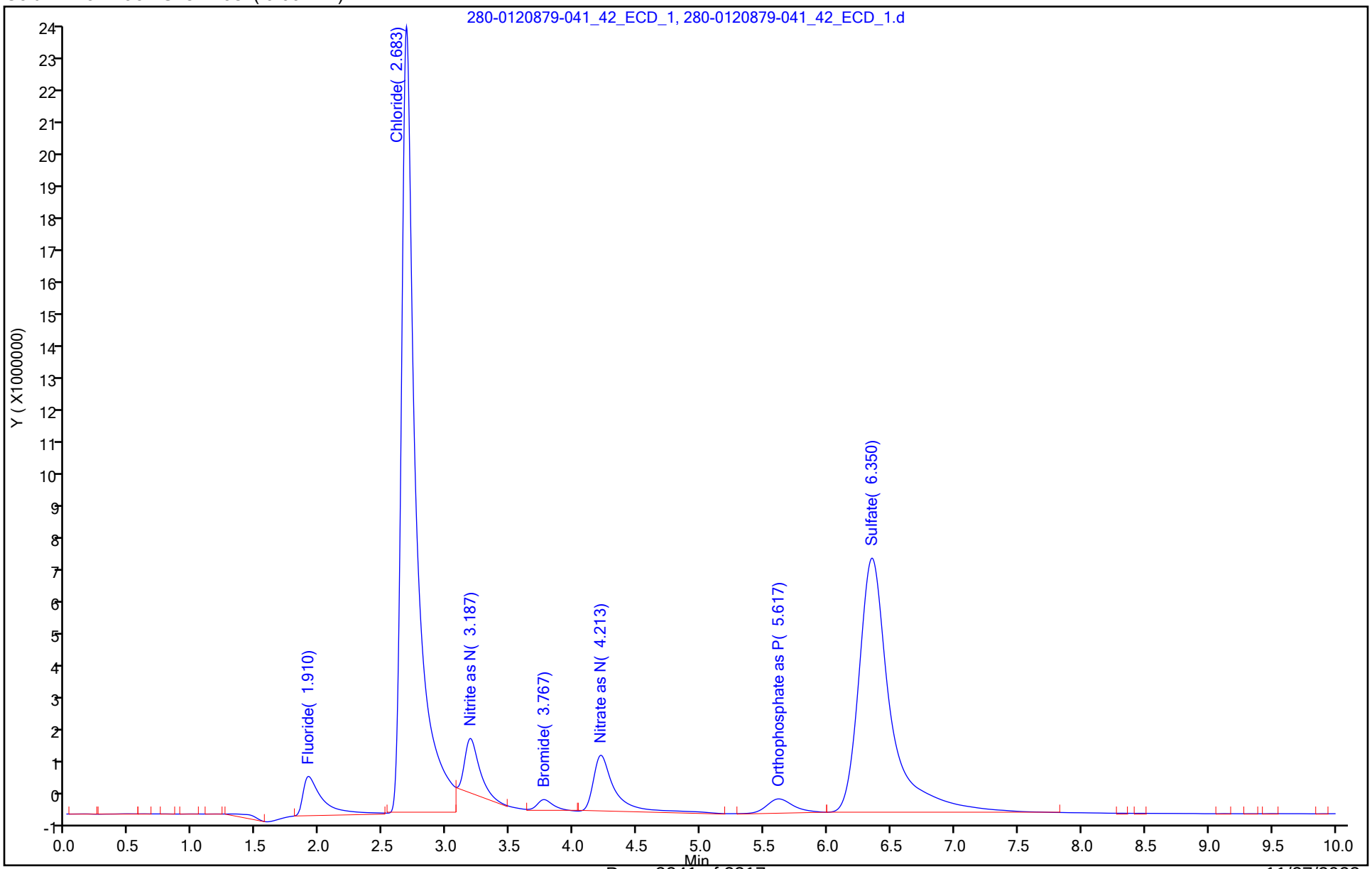
Report Date: 01-May-2023 12:31:31 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-041_42_ECD_1.d

Injection Date:	28-Apr-2023 23:27:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	41
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

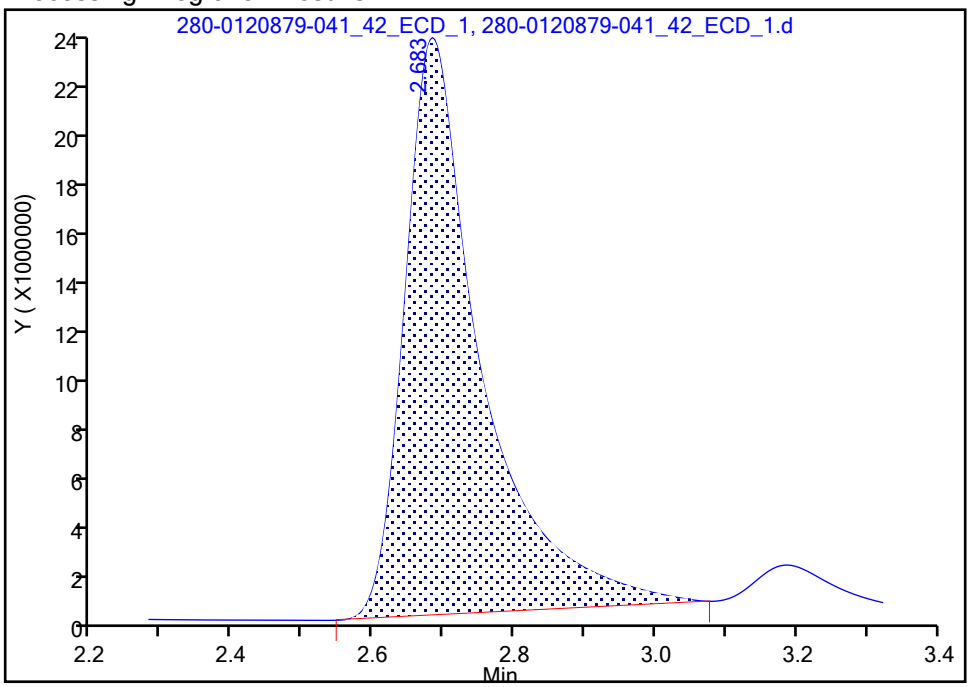
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-041_42_ECD_1.d
Injection Date: 28-Apr-2023 23:27:00 Instrument ID: WC_IonChrom15
Lims ID: ccv
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6

Signal: 1

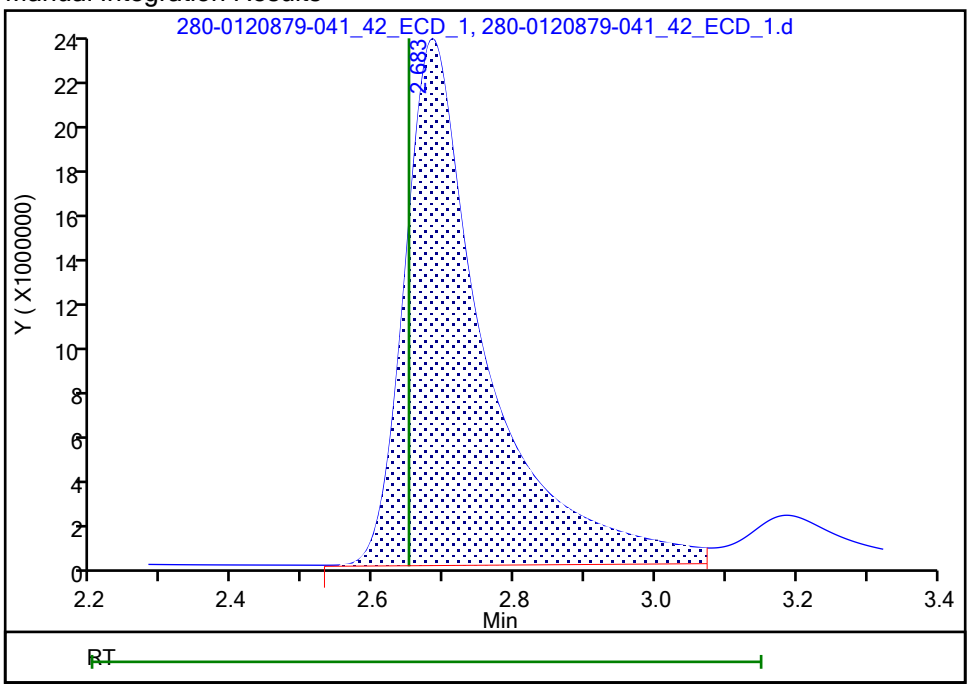
Processing Integration Results

RT: 2.68
Area: 174034307
Amount: 44.848158
Amount Units: ug/ml



Manual Integration Results

RT: 2.68
Area: 185547365
Amount: 47.802668
Amount Units: ug/ml



Reviewer: XAY4, 01-May-2023 10:02:34
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-042_43_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 28-Apr-2023 23:39:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-042
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:30 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 12:26:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.913				ND	U
2 Chloride	2.690	2.650	0.040	12645		0.1903	
3 Nitrite as N	3.407	3.280	0.127	9231		NC	
4 Bromide	3.733	3.797	-0.064	99220		0.0983	
5 Nitrate as N	4.150	4.127	0.023	10847		NC	
7 Orthophosphate as P	5.530	5.637	-0.107	9876		NC	
6 Sulfate	6.407	6.487	-0.080	34214		0.2343	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

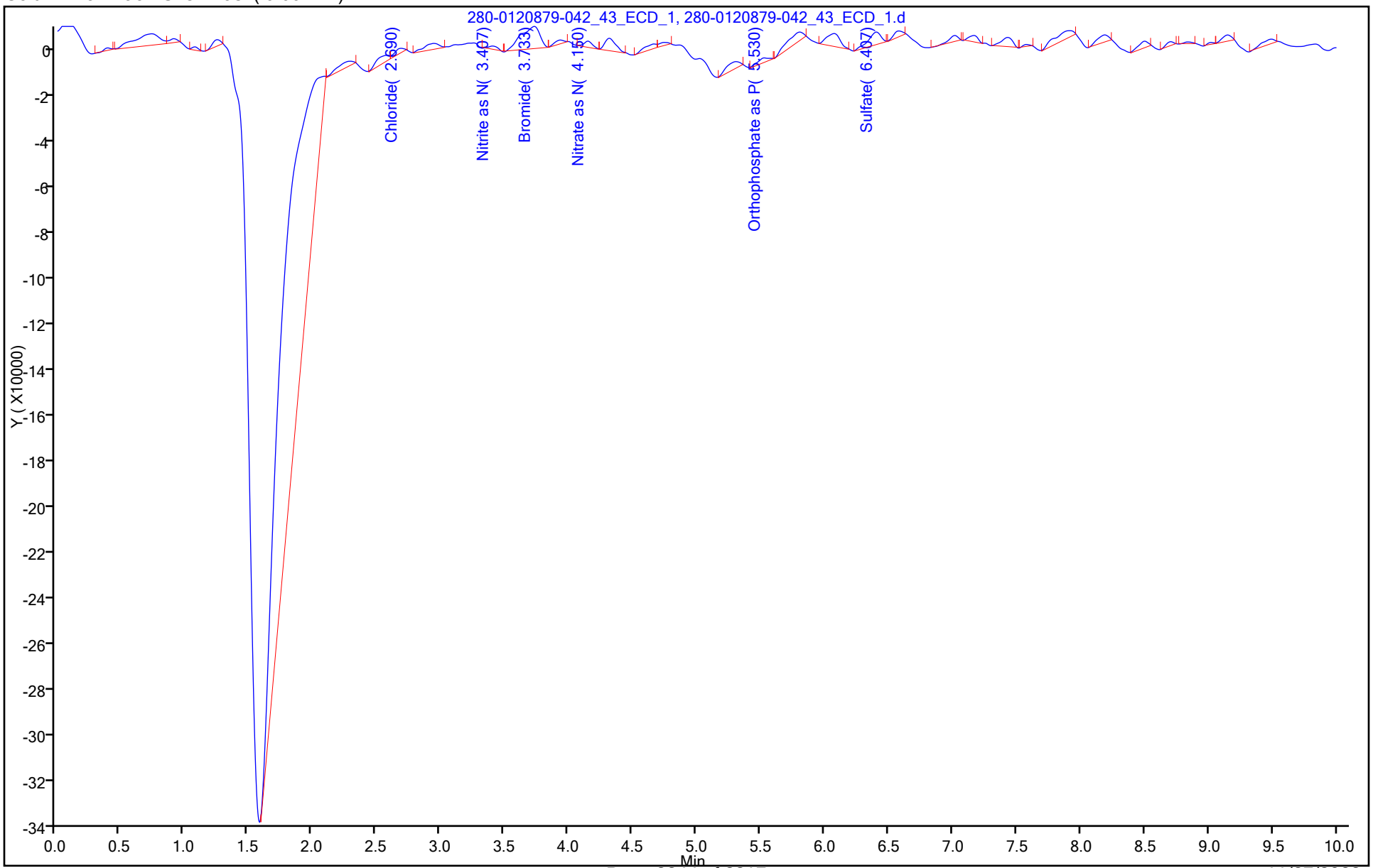
Report Date: 01-May-2023 12:31:31 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-042_43_ECD_1.d

Injection Date:	28-Apr-2023 23:39:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	42
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-053_54_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 29-Apr-2023 01:50:00 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-053
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:37 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 10:02:55

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.913	1.913	0.000	12009017	2.50	2.53	M
2 Chloride	2.683	2.650	0.033	183460642	50.0	47.3	M
3 Nitrite as N	3.187	3.280	-0.093	12713184	NC	NC	
4 Bromide	3.767	3.797	-0.030	2573531	2.50	2.31	
5 Nitrate as N	4.213	4.127	0.086	19741082	NC	NC	
7 Orthophosphate as P	5.620	5.637	-0.017	6042597	NC	NC	
6 Sulfate	6.350	6.487	-0.137	128142773	50.0	48.4	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

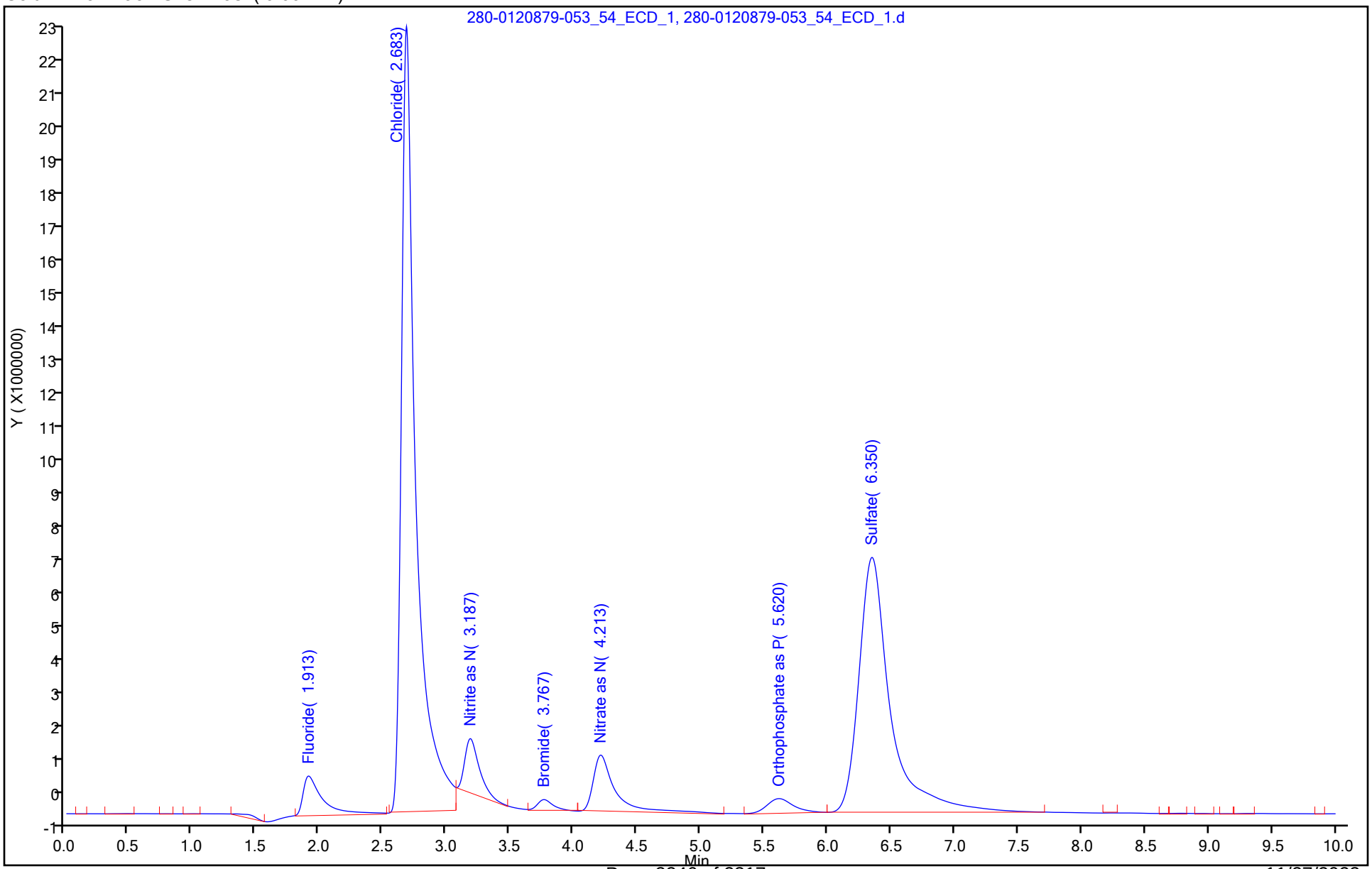
Report Date: 01-May-2023 12:31:37 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-053_54_ECD_1.d

Injection Date:	29-Apr-2023 01:50:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	53
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

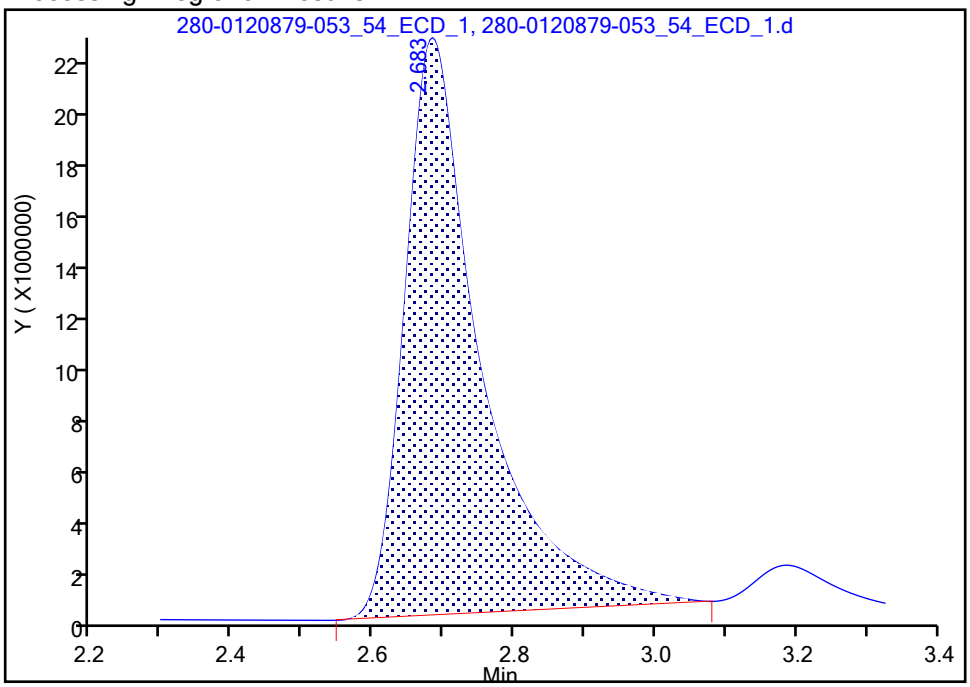
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-053_54_ECD_1.d				
Injection Date:	29-Apr-2023 01:50:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

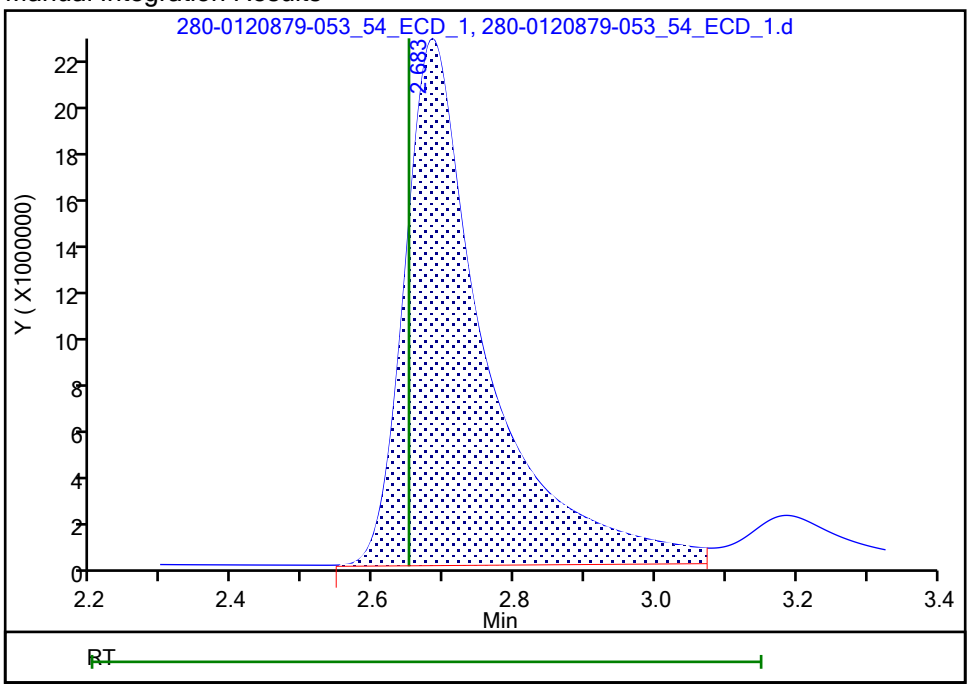
Processing Integration Results

RT: 2.68
Area: 173634569
Amount: 44.745576
Amount Units: ug/ml



Manual Integration Results

RT: 2.68
Area: 183460642
Amount: 47.267168
Amount Units: ug/ml



Reviewer: XAY4, 01-May-2023 10:02:50

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-054_55_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 29-Apr-2023 02:02:00 ALS Bottle#: 0 Worklist Smp#: 54
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120879-054
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 12:31:37 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 12:27:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.913				ND	U
2 Chloride	2.550	2.650	-0.100	1877		0.1875	
3 Nitrite as N	3.303	3.280	0.023	20012		NC	
4 Bromide	3.687	3.797	-0.110	3417		0.0125	
5 Nitrate as N	4.160	4.127	0.033	7882		NC	
7 Orthophosphate as P	5.687	5.637	0.050	7263		NC	
6 Sulfate	6.480	6.487	-0.007	38591		0.2359	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

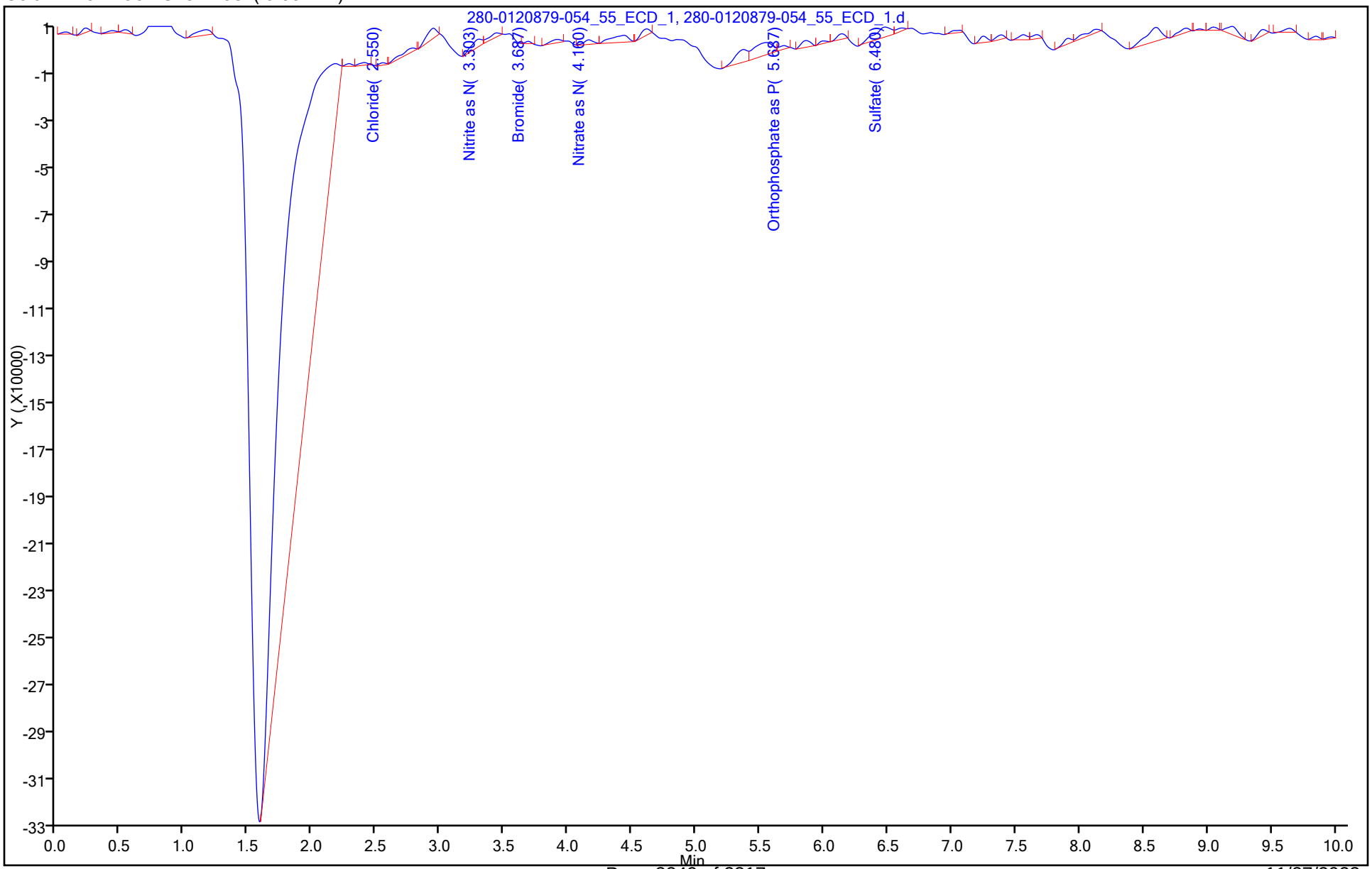
Report Date: 01-May-2023 12:31:37 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230428-120879.b\280-0120879-054_55_ECD_1.d

Injection Date:	29-Apr-2023 02:02:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	54
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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	Analysis	Sample Name	Sample ID	ObjectID
1	NPOC	ICV		0L-10900100866-10101000-134B11422933-0000
2	NPOC	ICB		0L-10900100866-10101000-134B11422933-0001
3	NPOC	LCS		0L-10900100866-10101000-134B11422933-0002
4	NPOC	MB		0L-10900100866-10101000-134B11422933-0003
5	NPOC	TIC		0L-10900100866-10101000-134B11422933-0004
6	NPOC	280-174962-b-2		0L-10900100866-10101000-134B11422933-0005
7	NPOC	MS 280-174962-b-2		0L-10900100866-10101000-134B11422933-0006
8	NPOC	MSD 280-174962-b-2		0L-10900100866-10101000-134B11422933-0007
9	NPOC	280-174936-a-3		0L-10900100866-10101000-134B11422933-0008
10	NPOC	280-174936-a-4		0L-10900100866-10101000-134B11422933-0009
11	NPOC	280-174936-a-5		0L-10900100866-10101000-134B11422933-000A
12	NPOC	280-174936-a-6		0L-10900100866-10101000-134B11422933-000B
13	NPOC	280-174957-b-2		0L-10900100866-10101000-134B11422933-000C
14	NPOC	280-174957-b-3		0L-10900100866-10101000-134B11422933-000D
15	NPOC	CCV		0L-10900100866-10101000-134B11422933-000E
16	NPOC	CCB		0L-10900100866-10101000-134B11422933-000F
17	NPOC	280-174957-b-4		0L-10900100866-10101000-134B11422933-0010
18	NPOC	280-174957-b-5		0L-10900100866-10101000-134B11422933-0011
19	NPOC	280-174957-b-6		0L-10900100866-10101000-134B11422933-0012
20	NPOC	280-175001-a-6		0L-10900100866-10101000-134B11422933-0013
21	NPOC	MS 280-175001-a-6		0L-10900100866-10101000-134B11422933-0014
22	NPOC	MSD 280-175001-a-6		0L-10900100866-10101000-134B11422933-0015
23	NPOC	580-125876-h-6		0L-10900100866-10101000-134B11422933-0016
24	NPOC	580-125876-h-7		0L-10900100866-10101000-134B11422933-0017
25	NPOC	280-175196-d-6		0L-10900100866-10101000-134B11422933-0018
26	NPOC	280-174884-d-9		0L-10900100866-10101000-134B11422933-0019
27	NPOC	CCV		0L-10900100866-10101000-134B11422933-001A
28	NPOC	CCB		0L-10900100866-10101000-134B11422933-001B
29	NPOC	LCS		0L-10900100866-10101000-134B11422933-001C
30	NPOC	MB		0L-10900100866-10101000-134B11422933-001D
31	NPOC	TIC		0L-10900100866-10101000-134B11422933-001E
32	NPOC	280-174960-c-1		0L-10900100866-10101000-134B11422933-001F
33	NPOC	MS 280-174960-c-1		0L-10900100866-10101000-134B11422933-0020
34	NPOC	MSD 280-174960-c-1		0L-10900100866-10101000-134B11422933-0021
35	NPOC	280-174960-c-2		0L-10900100866-10101000-134B11422933-0022
36	NPOC	280-174960-c-3		0L-10900100866-10101000-134B11422933-0023
37	NPOC	280-174960-d-4		0L-10900100866-10101000-134B11422933-0024
38	NPOC	280-174689-v-1		0L-10900100866-10101000-134B11422933-0025
39	NPOC	CCV		0L-10900100866-10101000-134B11422933-0026
40	NPOC	CCB		0L-10900100866-10101000-134B11422933-0027
41	NPOC	280-174881-b-1		0L-10900100866-10101000-134B11422933-0028
42	NPOC	280-174965-l-1		0L-10900100866-10101000-134B11422933-0029
43	NPOC	280-174965-k-2		0L-10900100866-10101000-134B11422933-002A
44	NPOC	280-174965-k-3		0L-10900100866-10101000-134B11422933-002B
45	NPOC	280-174965-k-4		0L-10900100866-10101000-134B11422933-002C
46	NPOC	280-174965-k-5		0L-10900100866-10101000-134B11422933-002D
47	NPOC	MS 280-174965-k-5		0L-10900100866-10101000-134B11422933-002E
48	NPOC	MSD 280-174965-k-5		0L-10900100866-10101000-134B11422933-002F
49	NPOC	280-174965-k-6		0L-10900100866-10101000-134B11422933-0030
50	NPOC	280-174965-k-7		0L-10900100866-10101000-134B11422933-0031
51	NPOC	CCV		0L-10900100866-10101000-134B11422933-0032
52	NPOC	CCB		0L-10900100866-10101000-134B11422933-0033
53	NPOC	280-174967-b-1		0L-10900100866-10101000-134B11422933-0034

	Origin	Manual Dilution	Result	Notes	Comment
1	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:19.71mg/L		
2	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.08307mg/L		
3	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.34mg/L		
4	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.08371mg/L		
5	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1903mg/L		
6	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:4.606mg/L		
7	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:28.03mg/L		
8	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:28.97mg/L		
9	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:1.393mg/L		
10	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:1.202mg/L		
11	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.8323mg/L		
12	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.7998mg/L		
13	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:5.111mg/L		
14	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:4.963mg/L		
15	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.61mg/L		
16	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1668mg/L		
17	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:4.475mg/L		
18	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:1.911mg/L		
19	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:7.290mg/L		
20	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.6390mg/L		
21	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.47mg/L		
22	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.11mg/L		
23	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	10.00	NPOC:152.5mg/L		
24	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	10.00	NPOC:170.2mg/L		
25	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.4562mg/L		
26	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.4511mg/L		
27	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.55mg/L		
28	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1201mg/L		
29	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:23.99mg/L		
30	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1141mg/L		
31	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1442mg/L		
32	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.8301mg/L		
33	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.43mg/L		
34	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:25.02mg/L		
35	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.7406mg/L		
36	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.8863mg/L		
37	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.7684mg/L		
38	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	2.000	NPOC:50.81mg/L		
39	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.39mg/L		
40	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1445mg/L		
41	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.8102mg/L		
42	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:9.848mg/L		
43	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:3.998mg/L		
44	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:15.51mg/L		
45	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:10.96mg/L		
46	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:46.08mg/L		
47	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:70.03mg/L		
48	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:70.11mg/L		
49	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:9.763mg/L		
50	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:3.032mg/L		
51	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:25.13mg/L		
52	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1537mg/L		
53	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.5375mg/L		

	Status	Action	Date / Time	Vial
1	Completed		4/20/2023 4:54:12 PM	1
2	Completed		4/20/2023 5:10:42 PM	2
3	Completed		4/20/2023 5:25:32 PM	3
4	Completed		4/20/2023 5:42:03 PM	4
5	Completed		4/20/2023 5:56:19 PM	5
6	Completed		4/20/2023 6:12:40 PM	6
7	Completed		4/20/2023 6:29:02 PM	7
8	Completed		4/20/2023 6:43:34 PM	8
9	Completed		4/20/2023 7:00:00 PM	9
10	Completed		4/20/2023 7:16:14 PM	10
11	Completed		4/20/2023 7:32:23 PM	11
12	Completed		4/20/2023 7:48:48 PM	12
13	Completed		4/20/2023 8:03:01 PM	13
14	Completed		4/20/2023 8:19:21 PM	14
15	Completed		4/20/2023 8:35:47 PM	15
16	Completed		4/20/2023 8:49:59 PM	16
17	Completed		4/20/2023 9:06:19 PM	17
18	Completed		4/20/2023 9:22:37 PM	18
19	Completed		4/20/2023 9:38:46 PM	19
20	Completed		4/20/2023 9:54:55 PM	20
21	Completed		4/20/2023 10:08:59 PM	21
22	Completed		4/20/2023 10:23:20 PM	22
23	Completed		4/20/2023 10:37:29 PM	23
24	Completed		4/20/2023 10:51:38 PM	24
25	Completed		4/20/2023 11:05:47 PM	25
26	Completed		4/20/2023 11:19:57 PM	26
27	Completed		4/20/2023 11:34:48 PM	27
28	Completed		4/20/2023 11:51:06 PM	28
29	Completed		4/21/2023 12:05:17 AM	29
30	Completed		4/21/2023 12:19:30 AM	30
31	Completed		4/21/2023 12:35:44 AM	31
32	Completed		4/21/2023 12:49:48 AM	32
33	Completed		4/21/2023 1:04:03 AM	33
34	Completed		4/21/2023 1:18:23 AM	34
35	Completed		4/21/2023 1:34:48 AM	35
36	Completed		4/21/2023 1:50:58 AM	36
37	Completed		4/21/2023 2:07:14 AM	37
38	Completed		4/21/2023 2:22:34 AM	38
39	Completed		4/21/2023 2:36:58 AM	39
40	Completed		4/21/2023 2:53:19 AM	40
41	Completed		4/21/2023 3:07:24 AM	41
42	Completed		4/21/2023 3:23:47 AM	42
43	Completed		4/21/2023 3:40:06 AM	43
44	Completed		4/21/2023 3:54:11 AM	44
45	Completed		4/21/2023 4:10:46 AM	45
46	Completed		4/21/2023 4:25:48 AM	46
47	Completed		4/21/2023 4:42:48 AM	47
48	Completed		4/21/2023 4:59:29 AM	48
49	Completed		4/21/2023 5:15:40 AM	49
50	Completed		4/21/2023 5:32:53 AM	50
51	Completed		4/21/2023 5:47:14 AM	51
52	Completed		4/21/2023 6:03:29 AM	52
53	Completed		4/21/2023 6:17:34 AM	53

	Analysis	Sample Name	Sample ID	ObjectID
54	NPOC	280-174967-d-2		0L-10900100866-10101000-134B11422933-0035
55	NPOC	280-174967-b-3		0L-10900100866-10101000-134B11422933-0036
56	NPOC	280-174967-c-4		0L-10900100866-10101000-134B11422933-0037
57	NPOC	280-174967-c-5		0L-10900100866-10101000-134B11422933-0038
58	NPOC	280-174967-d-6		0L-10900100866-10101000-134B11422933-0039
59	NPOC	280-174967-c-7		0L-10900100866-10101000-134B11422933-003A
60	NPOC	LCS		0L-10900100866-10101000-134B11422933-003B
61	NPOC	MB		0L-10900100866-10101000-134B11422933-003C
62	NPOC	280-174967-D-8		0L-10900100866-10101000-134B11422933-003D
63	NPOC	CCV		0L-10900100866-10101000-134B11422933-003E
64	NPOC	CCB		0L-10900100866-10101000-134B11422934-0000
65	NPOC	MS 280-174967-D-8		0L-10900100866-10101000-134B11422934-0001
66	NPOC	MSD 280-174967-D-8		0L-10900100866-10101000-134B11422934-0002
67	NPOC	280-174967-c-9		0L-10900100866-10101000-134B11422934-0003
68	NPOC	280-174967-b-10		0L-10900100866-10101000-134B11422934-0004
69	NPOC	280-175038-e-2		0L-10900100866-10101000-134B11422934-0005
70	NPOC	280-175038-d-3		0L-10900100866-10101000-134B11422934-0006
71	NPOC	280-175038-d-4		0L-10900100866-10101000-134B11422934-0007
72	NPOC	280-175038-e-5		0L-10900100866-10101000-134B11422934-0008
73	NPOC	280-175038-d-6		0L-10900100866-10101000-134B11422934-0009
74	NPOC	280-175038-e-7		0L-10900100866-10101000-134B11422934-000A
75	NPOC	CCV		0L-10900100866-10101000-134B11422934-000B
76	NPOC	CCB		0L-10900100866-10101000-134B11422934-000C
77	NPOC	280-175038-e-8		0L-10900100866-10101000-134B11422934-000D
78	NPOC	280-175038-d-9		0L-10900100866-10101000-134B11422934-000E
79	NPOC	MS 280-175038-d-9		0L-10900100866-10101000-134B11422934-000F
80	NPOC	MSD 280-175038-d-9		0L-10900100866-10101000-134B11422934-0010
81	NPOC	280-175038-e-10		0L-10900100866-10101000-134B11422934-0011
82	NPOC	280-175038-e-11		0L-10900100866-10101000-134B11422934-0012
83	NPOC	280-175196-d-1		0L-10900100866-10101000-134B11422934-0013
84	NPOC	280-175196-d-2		0L-10900100866-10101000-134B11422934-0014
85	NPOC	280-175196-d-3		0L-10900100866-10101000-134B11422934-0015
86	NPOC	280-175196-d-4		0L-10900100866-10101000-134B11422934-0016
87	NPOC	CCV		0L-10900100866-10101000-134B11422934-0017
88	NPOC	CCB		0L-10900100866-10101000-134B11422934-0018
89	NPOC	280-175196-d-5		0L-10900100866-10101000-134B11422934-0019
90	NPOC	280-175273-a-1		0L-10900100866-10101000-134B11422934-001A
91	NPOC	280-175273-a-2		0L-10900100866-10101000-134B11422934-001B
92	NPOC	CCV		0L-10900100866-10101000-134B11422934-001C
93	NPOC	CCB		0L-10900100866-10101000-134B11422934-001D

	Origin	Manual Dilution	Result	Notes	Comment
54	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:1.166mg/L		
55	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:1.857mg/L		
56	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.7261mg/L		
57	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.4480mg/L		
58	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.2463mg/L		
59	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.7649mg/L		
60	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:25.07mg/L		
61	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1070mg/L		
62	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.9857mg/L		
63	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.97mg/L		
64	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1196mg/L		
65	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:25.30mg/L		
66	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.97mg/L		
67	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:1.875mg/L		
68	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.6071mg/L		
69	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.3212mg/L		
70	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.3271mg/L		
71	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.2553mg/L		
72	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.3767mg/L		
73	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1973mg/L		
74	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1372mg/L		
75	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.71mg/L		
76	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1266mg/L		
77	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.3318mg/L		
78	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.4001mg/L		
79	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.93mg/L		
80	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:24.86mg/L		
81	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.4020mg/L		
82	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.2743mg/L		
83	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:1.998mg/L		
84	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.4734mg/L		
85	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:1.464mg/L		
86	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.4964mg/L		
87	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:25.09mg/L		
88	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1361mg/L		
89	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:1.303mg/L		
90	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:11.20mg/L		
91	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:10.82mg/L		
92	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:25.65mg/L		
93	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	1.000	NPOC:0.1449mg/L		

	Status	Action	Date / Time	Vial
54	Completed		4/21/2023 6:39:59 AM	54
55	Completed		4/21/2023 6:54:09 AM	55
56	Completed		4/21/2023 7:13:33 AM	56
57	Completed		4/21/2023 7:29:54 AM	57
58	Completed		4/21/2023 7:44:04 AM	58
59	Completed		4/21/2023 8:03:23 AM	59
60	Completed		4/21/2023 8:17:34 AM	60
61	Completed		4/21/2023 8:31:48 AM	61
62	Completed		4/21/2023 8:51:12 AM	62
63	Completed		4/21/2023 9:05:25 AM	63
64	Completed		4/21/2023 9:19:42 AM	64
65	Completed		4/21/2023 9:34:22 AM	65
66	Completed		4/21/2023 9:48:40 AM	66
67	Completed		4/21/2023 10:03:21 AM	67
68	Completed		4/21/2023 10:17:53 AM	68
69	Completed		4/21/2023 10:34:09 AM	69
70	Completed		4/21/2023 10:48:15 AM	70
71	Completed		4/21/2023 11:02:30 AM	71
72	Completed		4/21/2023 11:16:49 AM	72
73	Completed		4/21/2023 11:31:00 AM	73
74	Completed		4/21/2023 11:53:19 AM	74
75	Completed		4/21/2023 12:07:51 PM	75
76	Completed		4/21/2023 12:22:11 PM	76
77	Completed		4/21/2023 12:36:26 PM	77
78	Completed		4/21/2023 12:50:38 PM	78
79	Completed		4/21/2023 1:04:54 PM	79
80	Completed		4/21/2023 1:19:19 PM	80
81	Completed		4/21/2023 1:33:35 PM	81
82	Completed		4/21/2023 1:47:51 PM	82
83	Completed		4/21/2023 2:02:03 PM	83
84	Completed		4/21/2023 2:18:20 PM	84
85	Completed		4/21/2023 2:32:27 PM	85
86	Completed		4/21/2023 2:48:48 PM	86
87	Completed		4/21/2023 3:03:06 PM	87
88	Completed		4/21/2023 3:17:19 PM	88
89	Completed		4/21/2023 3:31:32 PM	89
90	Completed		4/21/2023 3:45:45 PM	90
91	Completed		4/21/2023 4:00:09 PM	91
92	Completed		4/21/2023 4:14:36 PM	92
93	Completed		4/21/2023 4:28:58 PM	93

TOC-L Cal Curve Information
C:\TOC-L\CalCurves\Calibration 10 31 22 Auto Dilution Cal.2023 01 11 17 08 24.cal

Date of Creation	1/11/2023 6:36:30 PM
User	321
System	TOC-LCSN

Cal. Curve

Sample Name:	NPOC Auto Dilution Calibration_10_31_2022_Calibration_01_11_2023
Sample ID:	Calibration_01_11_2023
Object ID	0L-10900100866-10101000-134AFDF281FF-0000
Cal. Curve:	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status	Completed
Comment:	

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1.000	*******		1/11/2023 5:16:22 PM
2	0.000	50uL	1.000	*******		1/11/2023 5:18:31 PM
3	0.000	50uL	1.000	*******		1/11/2023 5:20:40 PM
4	0.000	50uL	1.000	*******		1/11/2023 5:22:53 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	0.000
SD Area	0.000
CV Area	0.00%
Vial	92
No Washes	2

Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1.831	50uL	50.00	*******		1/11/2023 5:31:33 PM
2	1.695	50uL	50.00	*******		1/11/2023 5:33:42 PM
3	1.706	50uL	50.00	*******		1/11/2023 5:35:51 PM
4	1.810	50uL	50.00	*******		1/11/2023 5:38:01 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	1.761
SD Area	0.06995
CV Area	3.97%
Vial	93
No Washes	2

Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.36	50uL	10.00	*******		1/11/2023 5:45:35 PM
2	9.992	50uL	10.00	*******		1/11/2023 5:47:44 PM
3	10.19	50uL	10.00	*******		1/11/2023 5:49:53 PM
4	10.25	50uL	10.00	*******		1/11/2023 5:52:02 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	10.20
SD Area	0.1543
CV Area	1.51%
Vial	93
No Washes	2

Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	20.20	50uL	5.000	*******		1/11/2023 5:59:35 PM
2	19.90	50uL	5.000	*******		1/11/2023 6:02:08 PM
3	19.34	50uL	5.000	*******		1/11/2023 6:04:17 PM
4	20.09	50uL	5.000	*******		1/11/2023 6:06:26 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	19.88
SD Area	0.3823
CV Area	1.92%
Vial	93
No Washes	2

Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	51.81	50uL	2.000	*******		1/11/2023 6:14:06 PM
2	50.71	50uL	2.000	*******		1/11/2023 6:16:18 PM
3	50.03	50uL	2.000	*******		1/11/2023 6:18:33 PM
4	51.10	50uL	2.000	*******		1/11/2023 6:20:51 PM

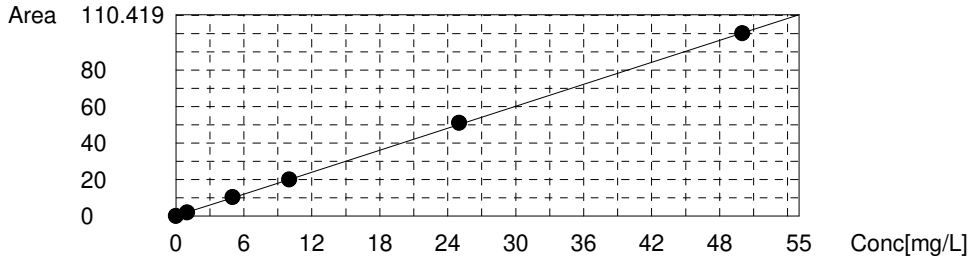
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	50.91
SD Area	0.7440
CV Area	1.46%
Vial	93
No Washes	2

Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1.000	*******	E	1/11/2023 6:27:42 PM
2	94.65	50uL	1.000	*******		1/11/2023 6:29:51 PM
3	100.3	50uL	1.000	*******		1/11/2023 6:32:08 PM
4	102.0	50uL	1.000	*******		1/11/2023 6:34:18 PM
5	103.3	50uL	1.000	*******		1/11/2023 6:36:30 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	100.1
SD Area	3.812
CV Area	3.81%
Vial	93
No Washes	2

Slope:	2.007
Intercept	0.02950
r^2	0.9999
r	1.0000
RSE(%)	N/A
Zero Shift	No



TOC-Control L Report

ABW
2023_04_20_001.tlx

Instr.Information

Instrument Options TOC/ASI/
Catalyst Regular Sensitivity

Sample

Sample Name: ICV
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

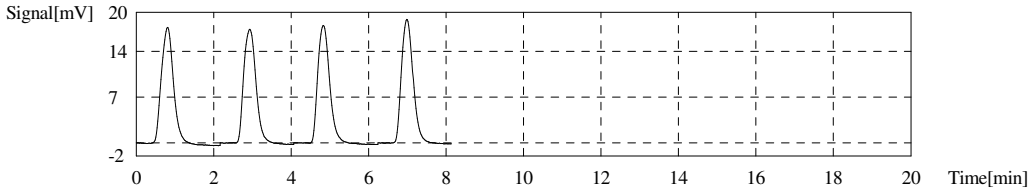
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:19.71mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	39.89	19.86mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 4:47:26 PM
2	39.04	19.44mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 4:49:37 PM
3	39.33	19.58mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 4:52:02 PM
4	40.10	19.97mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 4:54:12 PM

Mean Area 39.59
Mean Conc. 19.71mg/L



Sample

Sample Name: ICB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

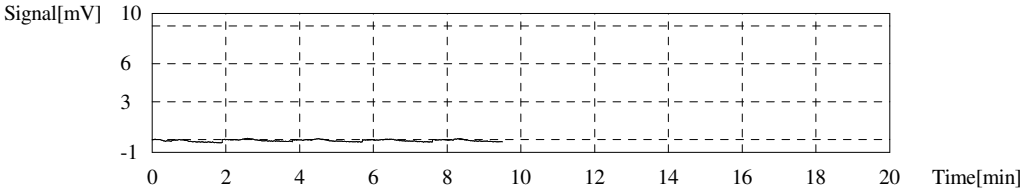
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.08307mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1766	0.07329mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:02:06 PM
2	0.3043	0.1369mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:04:15 PM
3	0.1396	0.05486mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:06:24 PM
4	0.000	-0.01470mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:08:33 PM
5	0.1644	0.06721mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:10:42 PM

Mean Area 0.1962
Mean Conc. 0.08307mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

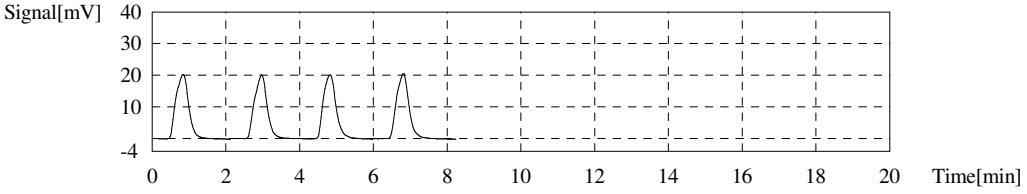
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.34mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	49.96	24.88mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:18:44 PM
2	48.08	23.94mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:20:53 PM
3	48.80	24.30mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:23:02 PM
4	48.70	24.25mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:25:32 PM

Mean Area 48.89
Mean Conc. 24.34mg/L



Sample

Sample Name: MB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

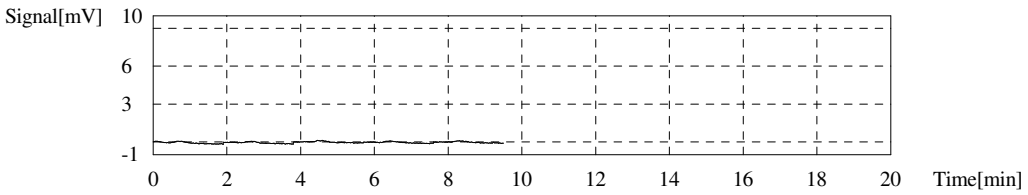
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.08371mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3146	0.1421mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:33:26 PM
2	0.000	-0.01470mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:35:35 PM
3	0.000	-0.01470mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:37:44 PM
4	0.2507	0.1102mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:39:53 PM
5	0.2247	0.09726mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:42:03 PM

Mean Area 0.1975
Mean Conc. 0.08371mg/L



Sample

Sample Name: TIC
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

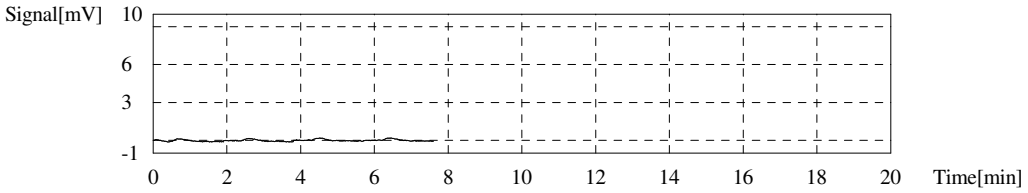
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1903mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5153	0.2421mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:49:52 PM
2	0.4025	0.1858mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:52:01 PM
3	0.3535	0.1614mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:54:10 PM
4	0.3748	0.1720mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 5:56:19 PM

Mean Area 0.4115
Mean Conc. 0.1903mg/L



Sample

Sample Name: 280-174962-b-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

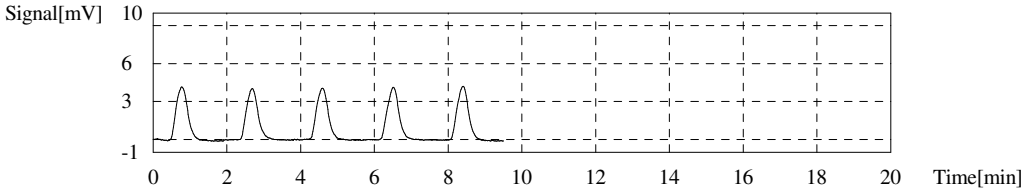
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.606mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.385	4.661mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:04:13 PM
2	8.851	4.395mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:06:22 PM
3	9.089	4.514mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:08:27 PM
4	9.239	4.589mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:10:35 PM
5	9.381	4.659mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:12:40 PM

Mean Area 9.274
Mean Conc. 4.606mg/L



Sample

Sample Name: MS 280-174962-b-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

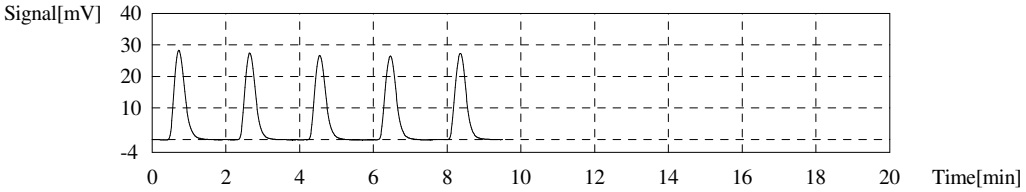
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:28.03mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	58.13	28.95mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:20:29 PM
2	55.74	27.76mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:22:34 PM
3	55.51	27.64mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:24:43 PM
4	56.52	28.15mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:26:52 PM
5	57.35	28.56mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:29:02 PM

Mean Area 56.28
Mean Conc. 28.03mg/L



Sample

Sample Name: MSD 280-174962-b-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

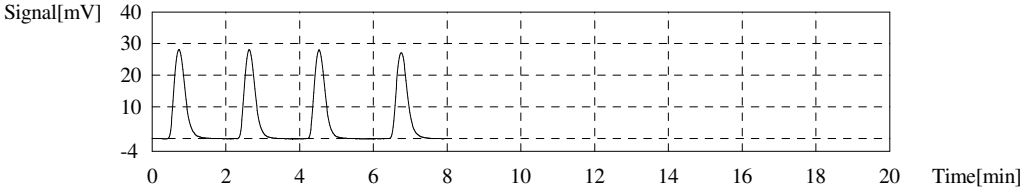
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:28.97mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.52	29.64mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:36:51 PM
2	57.59	28.68mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:38:57 PM
3	57.75	28.76mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:41:25 PM
4	57.84	28.80mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:43:34 PM

Mean Area 58.18
Mean Conc. 28.97mg/L



Sample

Sample Name: 280-174936-a-3
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

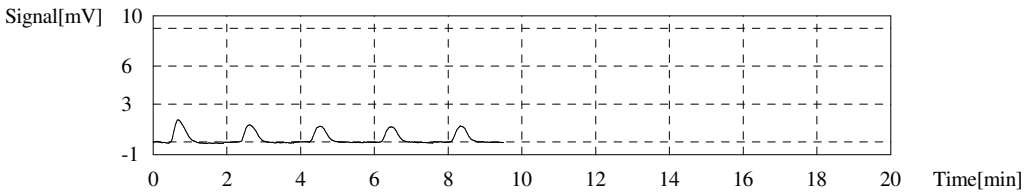
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.393mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.869	1.913mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:51:28 PM
2	3.076	1.518mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:53:37 PM
3	2.679	1.320mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:55:46 PM
4	2.731	1.346mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 6:57:55 PM
5	2.815	1.388mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:00:00 PM

Mean Area 2.825
Mean Conc. 1.393mg/L



Sample

Sample Name: 280-174936-a-4
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

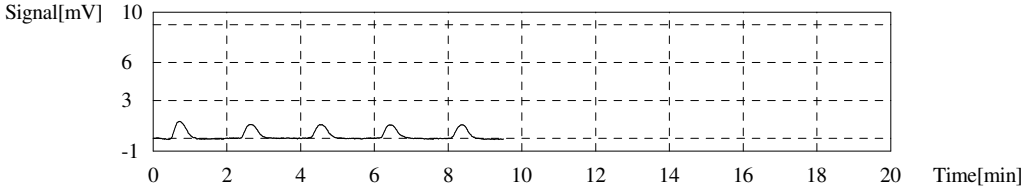
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.202mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.052	1.506mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:07:49 PM
2	2.466	1.214mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:09:54 PM
3	2.535	1.248mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:11:59 PM
4	2.349	1.156mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:14:09 PM
5	2.417	1.190mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:16:14 PM

Mean Area 2.442
Mean Conc. 1.202mg/L



Sample

Sample Name: 280-174936-a-5
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

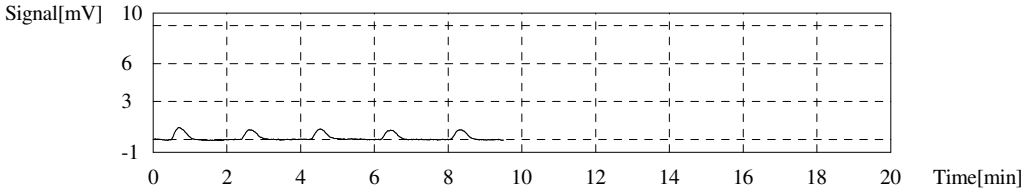
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.8323mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.057	1.010mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:24:02 PM
2	1.740	0.8523mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:26:08 PM
3	1.710	0.8373mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:28:13 PM
4	1.649	0.8069mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:30:18 PM
5	1.701	0.8328mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:32:23 PM

Mean Area 1.700
Mean Conc. 0.8323mg/L



Sample

Sample Name: 280-174936-a-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

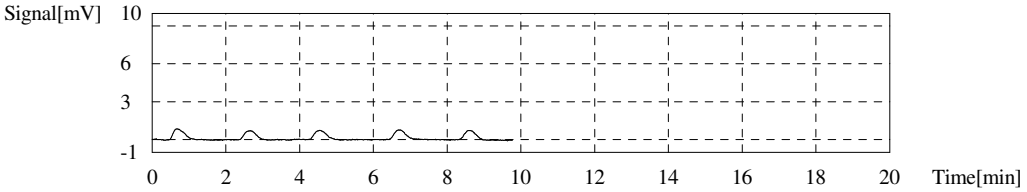
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7998mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.834	0.8991mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:40:12 PM
2	1.611	0.7880mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:42:17 PM
3	1.796	0.8802mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:44:38 PM
4	1.524	0.7446mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:46:43 PM
5	1.608	0.7865mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:48:48 PM

Mean Area 1.635
Mean Conc. 0.7998mg/L



Sample

Sample Name: 280-174957-b-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

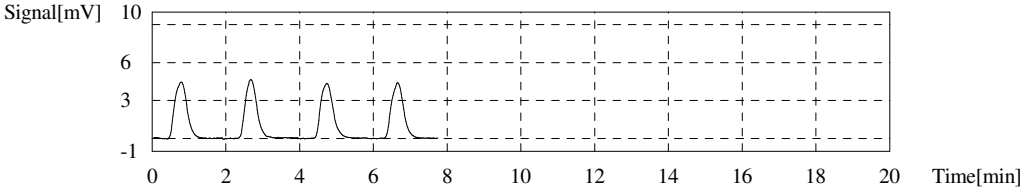
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.111mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.47	5.202mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:56:37 PM
2	10.26	5.097mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 7:58:51 PM
3	10.32	5.127mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:00:56 PM
4	10.10	5.018mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:03:01 PM

Mean Area 10.29
Mean Conc. 5.111mg/L



Sample

Sample Name: 280-174957-b-3
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

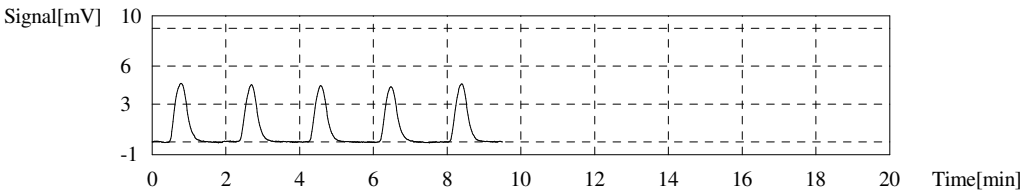
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.963mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.22	5.576mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:10:54 PM
2	9.859	4.898mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:12:59 PM
3	9.774	4.855mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:15:07 PM
4	9.970	4.953mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:17:12 PM
5	10.36	5.147mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:19:21 PM

Mean Area 9.991
Mean Conc. 4.963mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

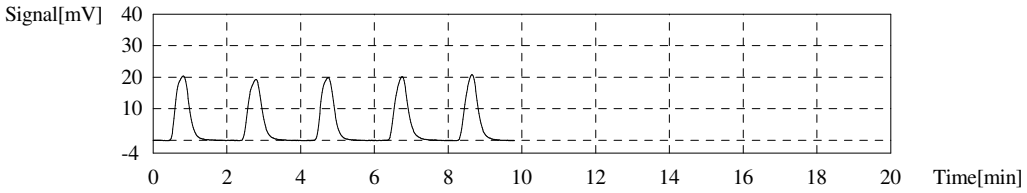
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.61mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.01	25.40mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:27:12 PM
2	49.10	24.45mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:29:22 PM
3	48.77	24.28mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:31:32 PM
4	49.89	24.84mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:33:37 PM
5	49.91	24.85mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:35:47 PM

Mean Area 49.42
Mean Conc. 24.61mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

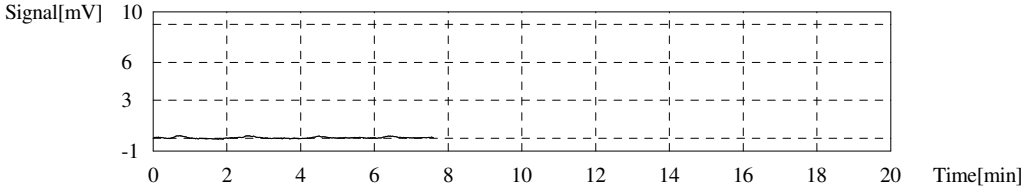
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1668mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4762	0.2226mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:43:36 PM
2	0.3369	0.1532mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:45:46 PM
3	0.2721	0.1209mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:47:51 PM
4	0.3715	0.1704mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:49:59 PM

Mean Area 0.3642
Mean Conc. 0.1668mg/L



Sample

Sample Name: 280-174957-b-4
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

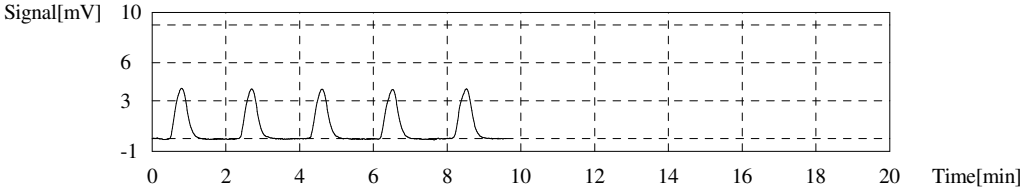
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.475mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.322	4.630mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:57:53 PM
2	8.899	4.419mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 8:59:58 PM
3	8.926	4.433mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:02:03 PM
4	9.158	4.548mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:04:14 PM
5	9.064	4.501mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:06:19 PM

Mean Area 9.012
Mean Conc. 4.475mg/L



Sample

Sample Name: 280-174957-b-5
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

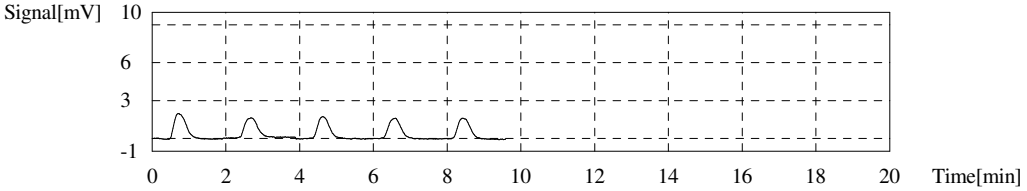
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.911mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.584	2.269mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:14:08 PM
2	3.924	1.940mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:16:18 PM
3	3.945	1.951mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:18:27 PM
4	3.732	1.845mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:20:32 PM
5	3.861	1.909mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:22:37 PM

Mean Area 3.866
Mean Conc. 1.911mg/L



Sample

Sample Name: 280-174957-b-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

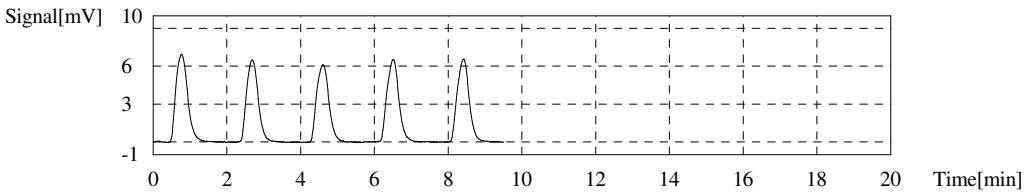
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.290mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.63	7.773mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:30:26 PM
2	14.50	7.210mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:32:31 PM
3	14.40	7.160mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:34:36 PM
4	14.78	7.349mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:36:41 PM
5	14.96	7.439mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:38:46 PM

Mean Area 14.66
Mean Conc. 7.290mg/L



Sample

Sample Name: 280-175001-a-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

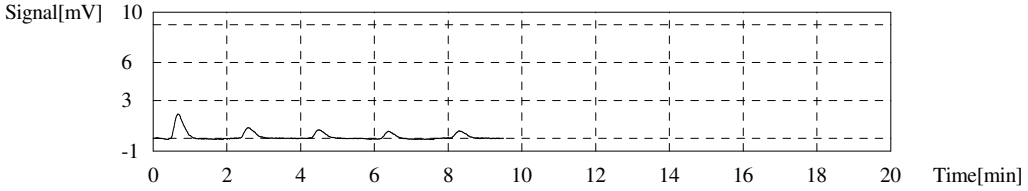
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6390mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.583	1.771mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:46:35 PM
2	1.692	0.8283mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:48:40 PM
3	1.254	0.6101mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:50:45 PM
4	1.181	0.5737mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:52:50 PM
5	1.121	0.5438mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 9:54:55 PM

Mean Area 1.312
Mean Conc. 0.6390mg/L



Sample

Sample Name: MS 280-175001-a-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

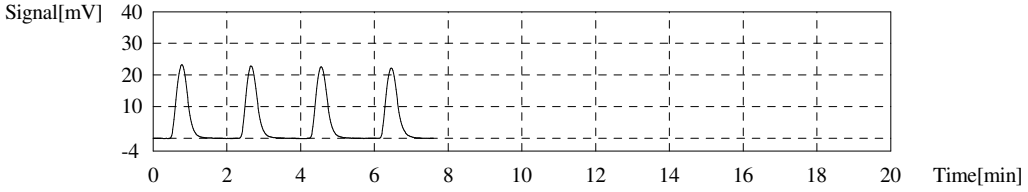
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.47mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	50.18	24.99mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:02:44 PM
2	48.90	24.35mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:04:49 PM
3	48.53	24.17mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:06:54 PM
4	48.97	24.38mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:08:59 PM

Mean Area 49.15
Mean Conc. 24.47mg/L



Sample

Sample Name: MSD 280-175001-a-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

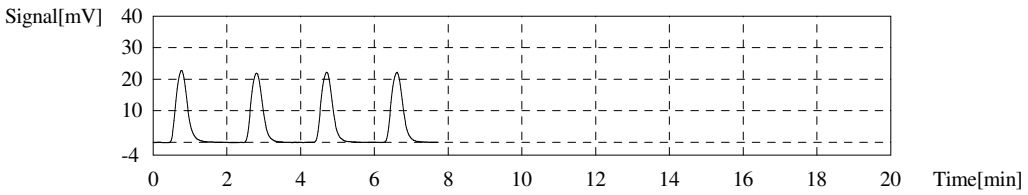
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.11mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	49.35	24.57mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:17:01 PM
2	47.49	23.65mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:19:10 PM
3	48.26	24.03mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:21:15 PM
4	48.58	24.19mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:23:20 PM

Mean Area 48.42
Mean Conc. 24.11mg/L



Sample

Sample Name: 580-125876-h-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

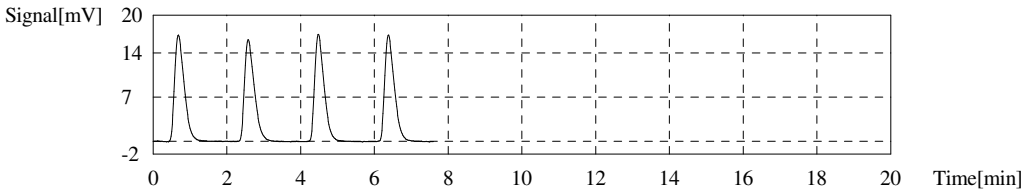
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	10.00	NPOC:152.5mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.03	154.5mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:31:14 PM
2	30.28	150.7mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:33:19 PM
3	30.35	151.1mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:35:24 PM
4	30.86	153.6mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:37:29 PM

Mean Area 30.63
Mean Conc. 152.5mg/L



Sample

Sample Name: 580-125876-h-7
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

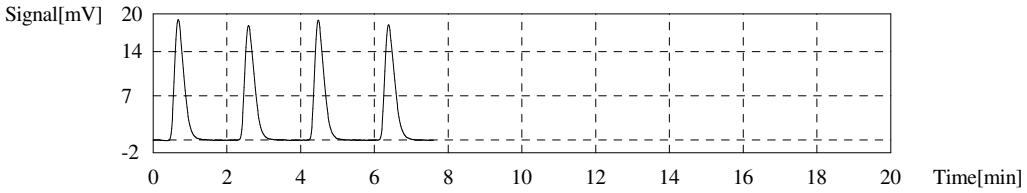
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	10.00	NPOC:170.2mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	34.73	172.9mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:45:23 PM
2	33.82	168.4mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:47:28 PM
3	33.92	168.9mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:49:33 PM
4	34.27	170.6mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:51:38 PM

Mean Area 34.19
Mean Conc. 170.2mg/L



Sample

Sample Name: 280-175196-d-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

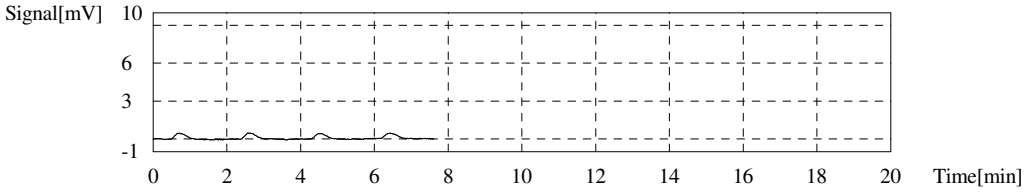
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4562mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.039	0.5030mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 10:59:32 PM
2	0.9017	0.4346mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:01:37 PM
3	0.9117	0.4396mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:03:42 PM
4	0.9280	0.4477mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:05:47 PM

Mean Area 0.9451
Mean Conc. 0.4562mg/L



Sample

Sample Name: 280-174884-d-9
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

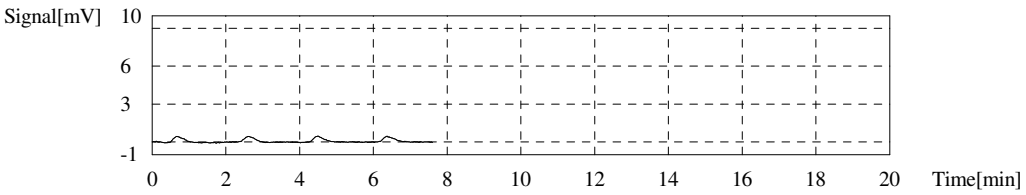
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4511mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.030	0.4985mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:13:41 PM
2	0.8438	0.4057mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:15:46 PM
3	0.9278	0.4476mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:17:51 PM
4	0.9376	0.4525mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:19:57 PM

Mean Area 0.9348
Mean Conc. 0.4511mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

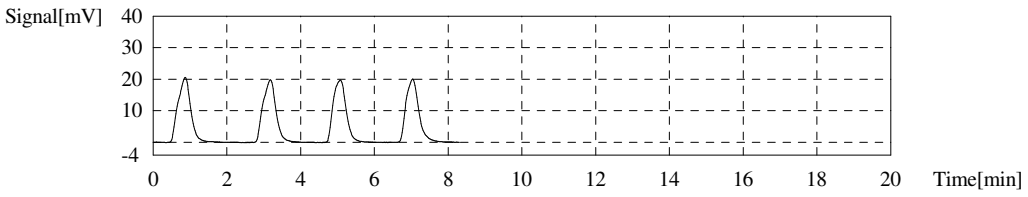
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.55mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	50.38	25.09mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:28:16 PM
2	48.89	24.34mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:30:23 PM
3	48.82	24.31mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:32:32 PM
4	49.08	24.44mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:34:48 PM

Mean Area 49.29
Mean Conc. 24.55mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

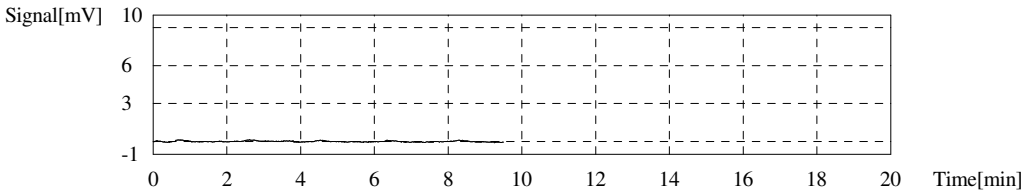
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1201mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4306	0.1998mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:42:42 PM
2	0.2109	0.09038mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:44:47 PM
3	0.2511	0.1104mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:46:56 PM
4	0.000	-0.01470mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:49:01 PM
5	0.1899	0.07992mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:51:06 PM

Mean Area 0.2706
Mean Conc. 0.1201mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

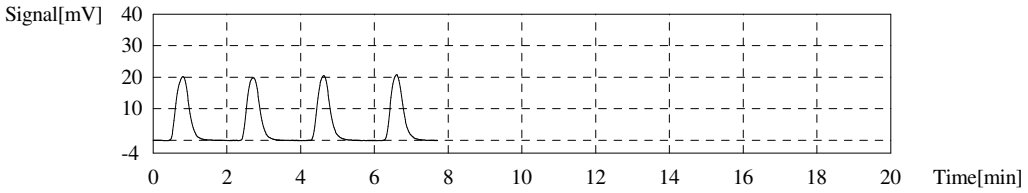
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.99mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	49.04	24.42mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/20/2023 11:58:57 PM
2	47.35	23.58mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:01:02 AM
3	47.96	23.88mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:03:12 AM
4	48.36	24.08mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:05:17 AM

Mean Area 48.18
Mean Conc. 23.99mg/L



Sample

Sample Name: MB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

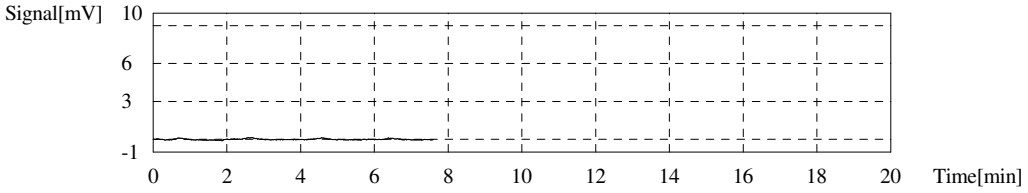
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1141mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2613	0.1155mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:13:11 AM
2	0.3784	0.1738mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:15:20 AM
3	0.2128	0.09133mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:17:25 AM
4	0.1817	0.07583mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:19:30 AM

Mean Area 0.2586
Mean Conc. 0.1141mg/L



Sample

Sample Name: TIC
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

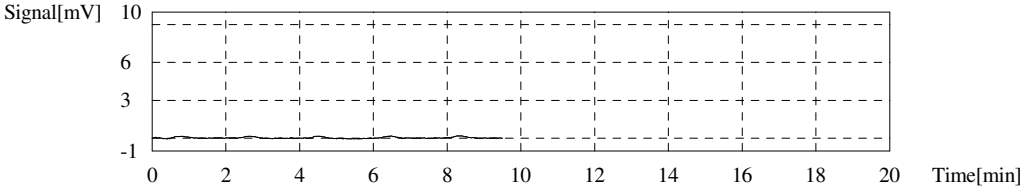
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1442mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4605	0.2147mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:27:24 AM
2	0.2518	0.1108mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:29:29 AM
3	0.2627	0.1162mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:31:34 AM
4	0.3996	0.1844mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:33:39 AM
5	0.3618	0.1656mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:35:44 AM

Mean Area 0.3190
Mean Conc. 0.1442mg/L



Sample

Sample Name: 280-174960-c-1
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

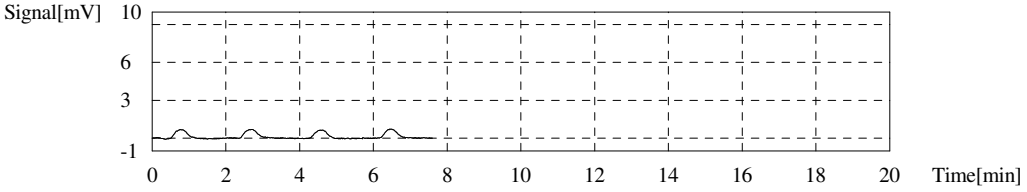
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.8301mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.796	0.8802mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:43:33 AM
2	1.684	0.8244mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:45:38 AM
3	1.605	0.7850mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:47:43 AM
4	1.697	0.8308mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:49:48 AM

Mean Area 1.696
Mean Conc. 0.8301mg/L



Sample

Sample Name: MS 280-174960-c-1
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

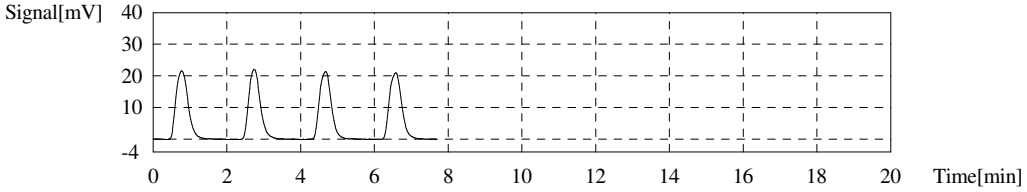
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.43mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	50.01	24.90mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:57:47 AM
2	48.75	24.28mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:59:53 AM
3	48.24	24.02mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:01:58 AM
4	49.25	24.52mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:04:03 AM

Mean Area 49.06
Mean Conc. 24.43mg/L



Sample

Sample Name: MSD 280-174960-c-1
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

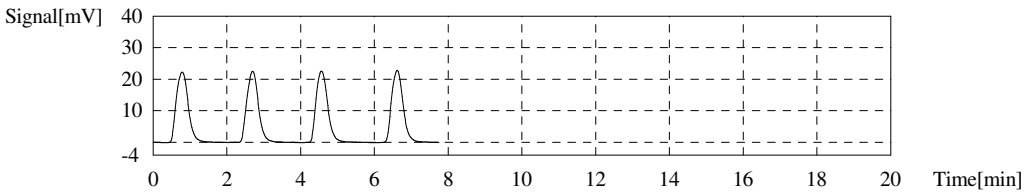
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.02mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.09	25.44mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:11:58 AM
2	49.87	24.83mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:14:03 AM
3	49.99	24.89mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:16:17 AM
4	50.02	24.91mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:18:23 AM

Mean Area 50.24
Mean Conc. 25.02mg/L



Sample

Sample Name: 280-174960-c-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

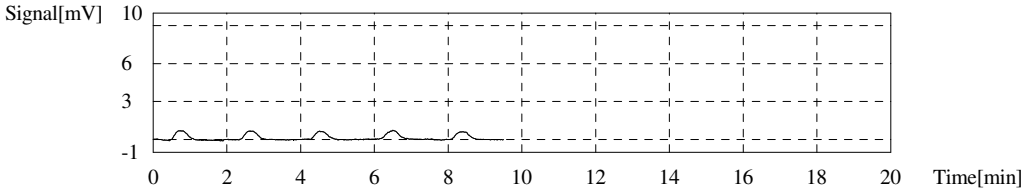
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7406mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.833	0.8986mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:26:18 AM
2	1.600	0.7825mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:28:28 AM
3	1.359	0.6624mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:30:38 AM
4	1.609	0.7870mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:32:43 AM
5	1.496	0.7307mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:34:48 AM

Mean Area 1.516
Mean Conc. 0.7406mg/L



Sample

Sample Name: 280-174960-c-3
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

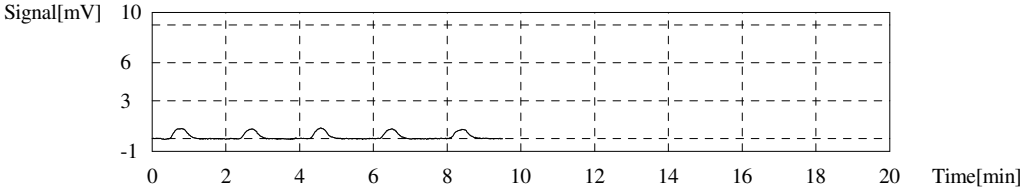
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.8863mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.128	1.046mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:42:38 AM
2	1.740	0.8523mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:44:43 AM
3	1.920	0.9419mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:46:48 AM
4	1.787	0.8757mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:48:53 AM
5	1.786	0.8752mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:50:58 AM

Mean Area 1.808
Mean Conc. 0.8863mg/L



Sample

Sample Name: 280-174960-d-4
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

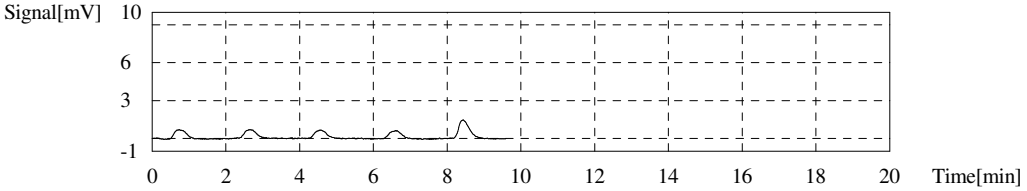
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7684mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.727	0.8458mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:58:48 AM
2	1.480	0.7227mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:00:53 AM
3	1.556	0.7606mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:03:04 AM
4	1.524	0.7446mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:05:09 AM
5	2.991	1.476mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:07:14 AM

Mean Area 1.572
Mean Conc. 0.7684mg/L



Sample

Sample Name: 280-174689-v-1
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

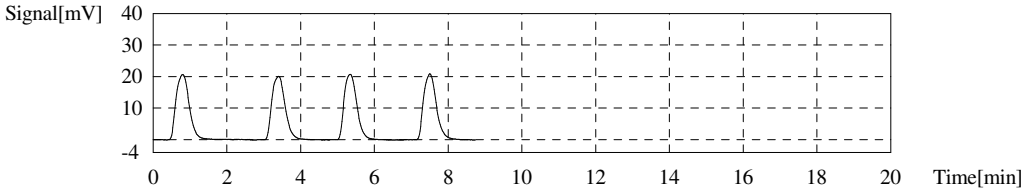
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:50.81mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.24	52.03mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:15:47 AM
2	50.67	50.46mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:17:59 AM
3	50.22	50.01mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:20:19 AM
4	50.94	50.73mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:22:34 AM

Mean Area 51.02
Mean Conc. 50.81mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

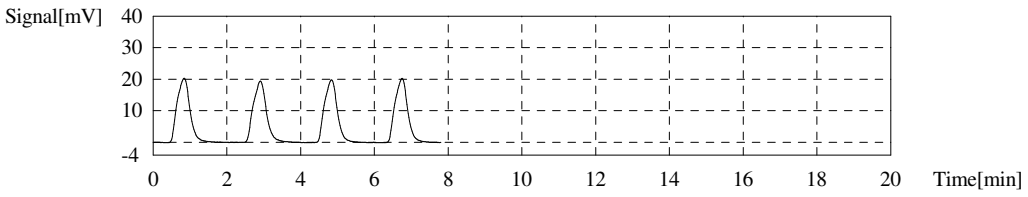
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.39mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	50.16	24.98mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:30:39 AM
2	48.51	24.16mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:32:47 AM
3	48.24	24.02mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:34:53 AM
4	49.02	24.41mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:36:58 AM

Mean Area 48.98
Mean Conc. 24.39mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

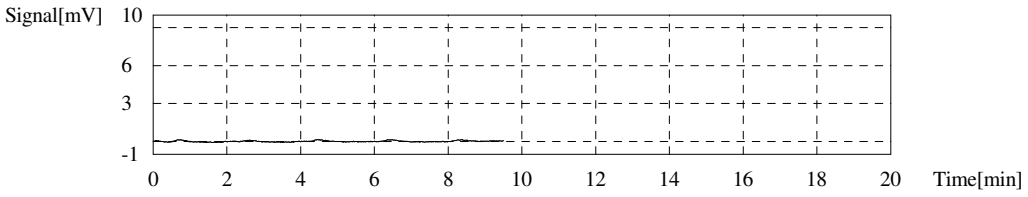
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1445mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3377	0.1536mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:44:54 AM
2	0.2107	0.09028mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:47:00 AM
3	0.000	-0.01470mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:49:09 AM
4	0.4036	0.1864mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:51:14 AM
5	0.3260	0.1477mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:53:19 AM

Mean Area 0.3195
Mean Conc. 0.1445mg/L



Sample

Sample Name: 280-174881-b-1
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

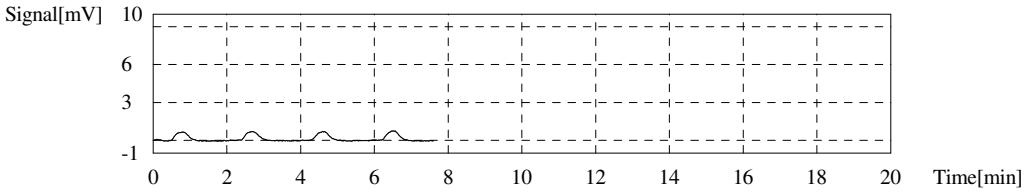
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.8102mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.672	0.8184mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:01:09 AM
2	1.638	0.8014mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:03:14 AM
3	1.674	0.8194mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:05:19 AM
4	1.638	0.8014mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:07:24 AM

Mean Area 1.656
Mean Conc. 0.8102mg/L



Sample

Sample Name: 280-174965-l-1
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

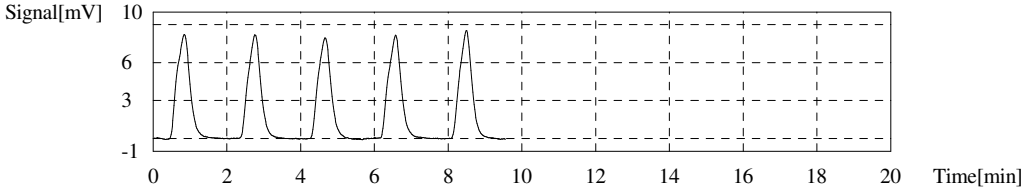
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.848mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	20.64	10.27mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:15:19 AM
2	19.69	9.796mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:17:24 AM
3	19.65	9.776mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:19:29 AM
4	19.82	9.861mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:21:41 AM
5	20.02	9.960mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:23:47 AM

Mean Area 19.80
Mean Conc. 9.848mg/L



Sample

Sample Name: 280-174965-k-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

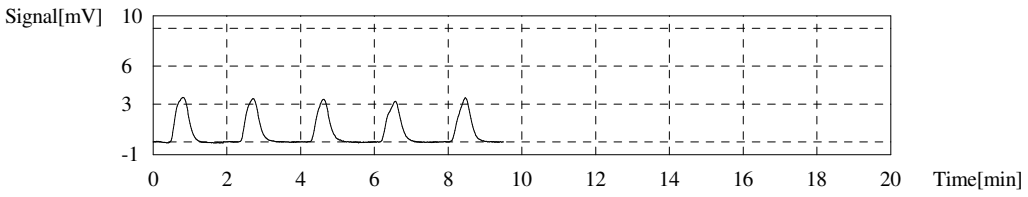
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.998mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.929	4.434mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:31:37 AM
2	8.176	4.059mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:33:47 AM
3	7.963	3.953mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:35:52 AM
4	7.838	3.891mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:37:57 AM
5	8.235	4.088mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:40:06 AM

Mean Area 8.053
Mean Conc. 3.998mg/L



Sample

Sample Name: 280-174965-k-3
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

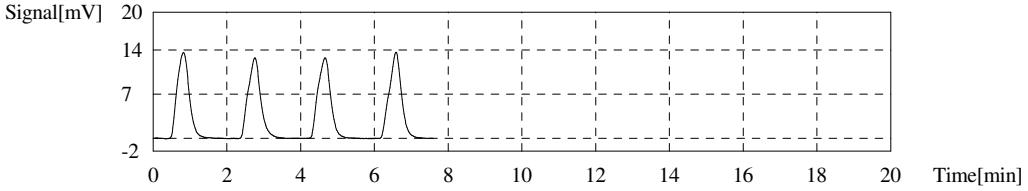
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:15.51mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.49	15.68mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:47:56 AM
2	30.52	15.19mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:50:01 AM
3	30.82	15.34mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:52:06 AM
4	31.80	15.83mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:54:11 AM

Mean Area 31.16
Mean Conc. 15.51mg/L



Sample

Sample Name: 280-174965-k-4
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

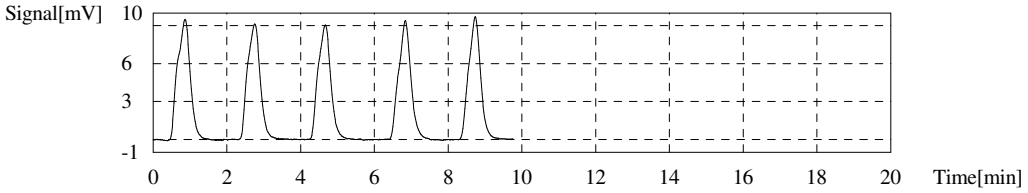
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.96mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	23.35	11.62mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:02:06 AM
2	22.05	10.97mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:04:11 AM
3	21.83	10.86mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:06:32 AM
4	22.11	11.00mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:08:41 AM
5	22.12	11.01mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:10:46 AM

Mean Area 22.03
Mean Conc. 10.96mg/L



Sample

Sample Name: 280-174965-k-5
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

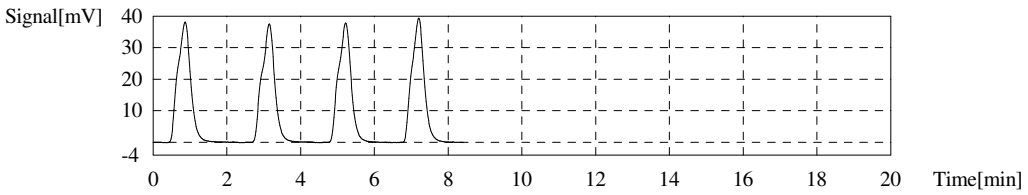
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:46.08mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	94.11	46.88mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:18:58 AM
2	91.33	45.49mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:21:17 AM
3	91.40	45.53mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:23:32 AM
4	93.21	46.43mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:25:48 AM

Mean Area 92.51
Mean Conc. 46.08mg/L



Sample

Sample Name: MS 280-174965-k-5
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

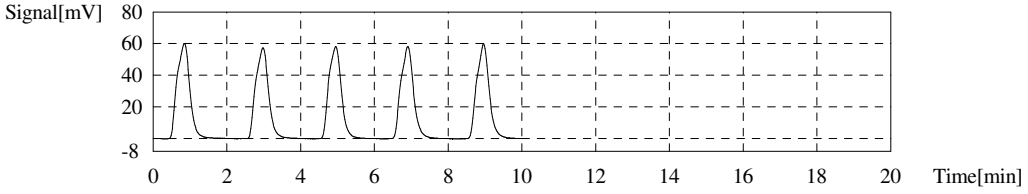
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:70.03mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	146.7	73.08mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:33:57 AM
2	139.9	69.69mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:36:12 AM
3	139.1	69.29mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:38:23 AM
4	140.9	70.19mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:40:37 AM
5	142.4	70.94mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:42:48 AM

Mean Area 140.6
Mean Conc. 70.03mg/L



Sample

Sample Name: MSD 280-174965-k-5
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

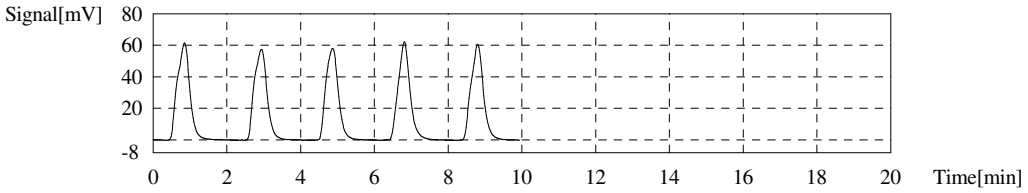
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:70.11mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	147.4	73.43mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:50:50 AM
2	140.1	69.79mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:53:02 AM
3	138.4	68.94mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:55:08 AM
4	140.8	70.14mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:57:18 AM
5	143.7	71.58mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:59:29 AM

Mean Area 140.8
Mean Conc. 70.11mg/L



Sample

Sample Name: 280-174965-k-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

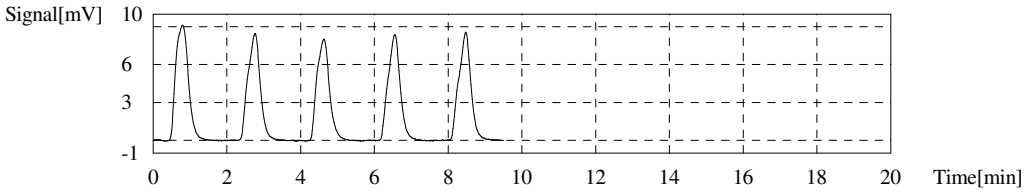
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.763mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.32	11.11mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:07:19 AM
2	19.99	9.945mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:09:24 AM
3	19.29	9.597mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:11:30 AM
4	19.51	9.706mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:13:35 AM
5	19.71	9.806mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:15:40 AM

Mean Area 19.63
Mean Conc. 9.763mg/L



Sample

Sample Name: 280-174965-k-7
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

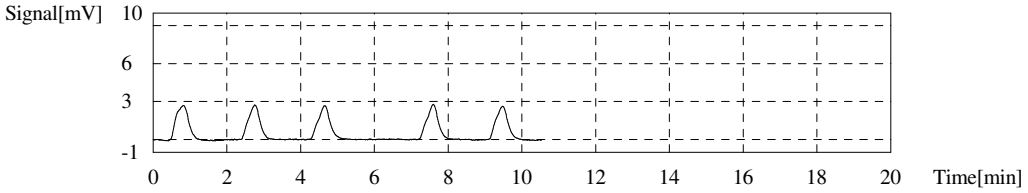
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.032mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.723	3.335mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:23:30 AM
2	6.089	3.019mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:25:35 AM
3	6.260	3.104mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:28:44 AM
4	5.989	2.969mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:30:48 AM
5	6.123	3.036mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:32:53 AM

Mean Area 6.115
Mean Conc. 3.032mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

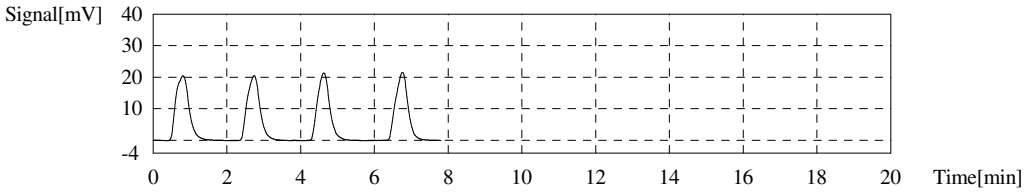
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.13mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.43	25.61mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:40:43 AM
2	49.95	24.87mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:42:48 AM
3	49.91	24.85mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:45:05 AM
4	50.57	25.18mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:47:14 AM

Mean Area 50.46
Mean Conc. 25.13mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

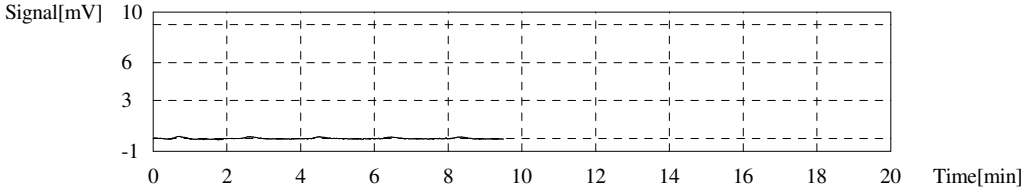
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1537mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4080	0.1886mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:55:09 AM
2	0.2677	0.1187mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:57:14 AM
3	0.1539	0.06198mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 5:59:19 AM
4	0.2971	0.1333mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:01:24 AM
5	0.3794	0.1743mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:03:29 AM

Mean Area 0.3381
Mean Conc. 0.1537mg/L



Sample

Sample Name: 280-174967-b-1
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

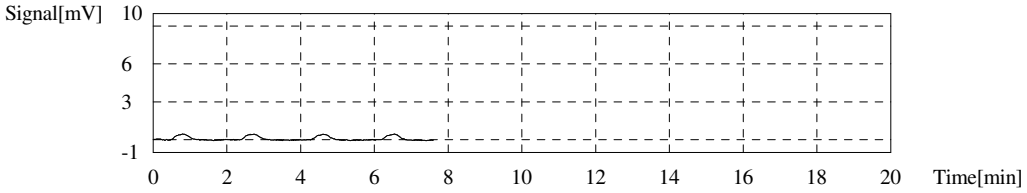
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5375mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.133	0.5498mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:11:19 AM
2	1.129	0.5478mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:13:24 AM
3	1.102	0.5344mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:15:29 AM
4	1.069	0.5179mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:17:34 AM

Mean Area 1.108
Mean Conc. 0.5375mg/L



Sample

Sample Name: 280-174967-d-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

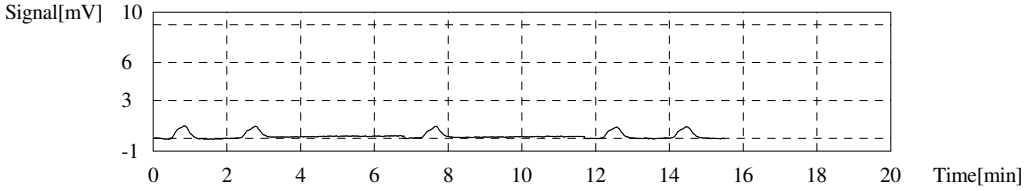
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.166mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.394	1.178mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:25:29 AM
2	2.868	1.414mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:30:34 AM
3	2.530	1.246mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:35:45 AM
4	2.236	1.099mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:37:54 AM
5	2.316	1.139mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:39:59 AM

Mean Area 2.369
Mean Conc. 1.166mg/L



Sample

Sample Name: 280-174967-b-3
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

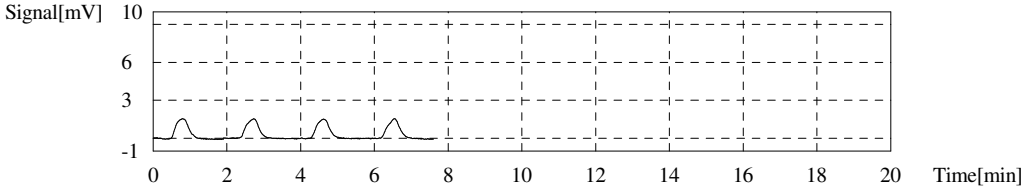
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.857mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.854	1.906mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:47:50 AM
2	3.648	1.803mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:49:59 AM
3	3.791	1.874mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:52:04 AM
4	3.735	1.846mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 6:54:09 AM

Mean Area 3.757
Mean Conc. 1.857mg/L



Sample

Sample Name: 280-174967-c-4
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

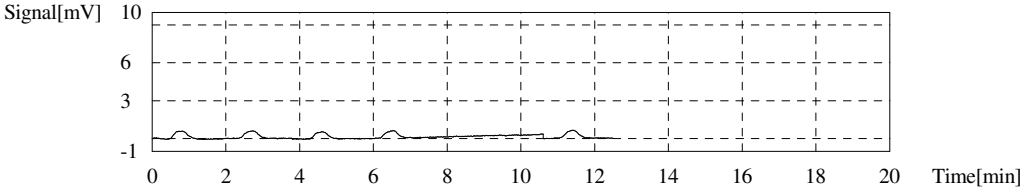
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7261mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.641	0.8029mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:02:05 AM
2	1.338	0.6520mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:04:10 AM
3	1.372	0.6689mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:06:15 AM
4	1.022	0.4945mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:11:24 AM
5	1.596	0.7805mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:13:33 AM

Mean Area 1.487
Mean Conc. 0.7261mg/L



Sample

Sample Name: 280-174967-c-5
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

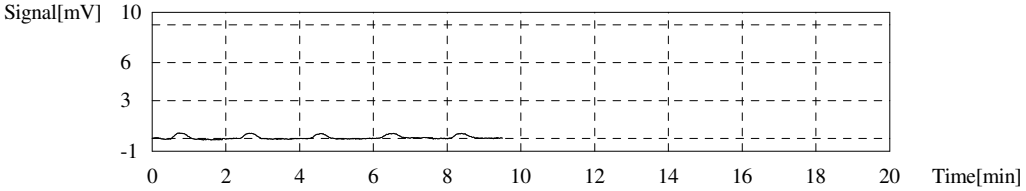
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4480mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.306	0.6360mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:21:23 AM
2	0.9306	0.4490mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:23:32 AM
3	0.8809	0.4242mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:25:40 AM
4	0.9084	0.4379mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:27:45 AM
5	0.9950	0.4811mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:29:54 AM

Mean Area 0.9287
Mean Conc. 0.4480mg/L



Sample

Sample Name: 280-174967-d-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

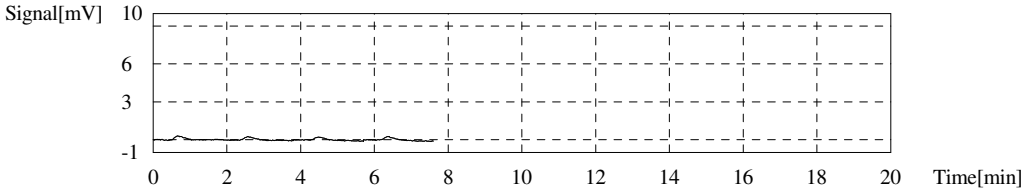
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2463mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5642	0.2664mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:37:44 AM
2	0.5271	0.2479mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:39:49 AM
3	0.4466	0.2078mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:41:54 AM
4	0.5578	0.2632mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:44:04 AM

Mean Area 0.5239
Mean Conc. 0.2463mg/L



Sample

Sample Name: 280-174967-c-7
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

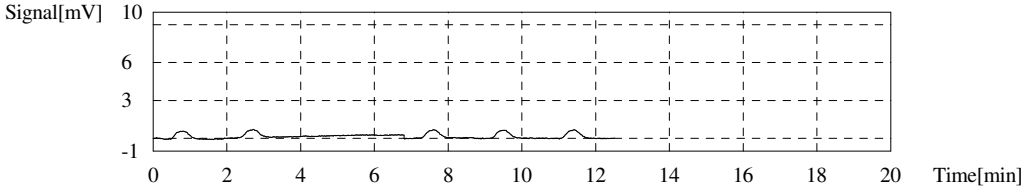
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7649mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.564	0.7646mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:51:59 AM
2	2.140	1.052mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:57:05 AM
3	1.443	0.7043mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 7:59:13 AM
4	1.644	0.8044mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:01:18 AM
5	1.608	0.7865mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:03:23 AM

Mean Area 1.565
Mean Conc. 0.7649mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

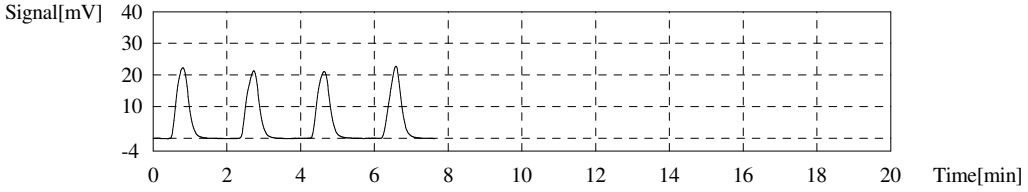
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.07mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.18	25.49mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:11:13 AM
2	49.90	24.85mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:13:20 AM
3	49.80	24.80mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:15:29 AM
4	50.49	25.14mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:17:34 AM

Mean Area 50.34
Mean Conc. 25.07mg/L



Sample

Sample Name: MB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

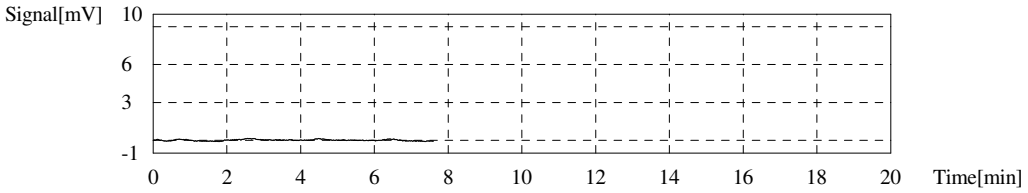
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1070mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3340	0.1517mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:25:29 AM
2	0.1681	0.06906mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:27:38 AM
3	0.2328	0.1013mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:29:43 AM
4	0.2421	0.1059mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:31:48 AM

Mean Area 0.2442
Mean Conc. 0.1070mg/L



Sample

Sample Name: 280-174967-D-8
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

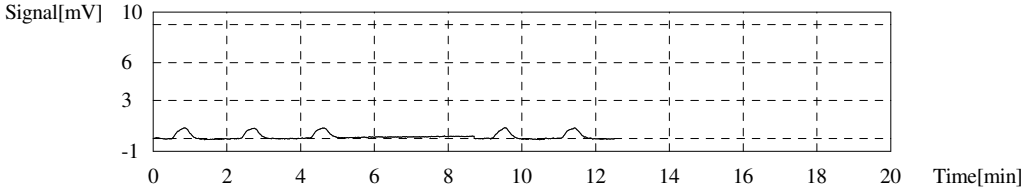
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9857mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.065	1.014mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:39:43 AM
2	2.014	0.9888mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:41:49 AM
3	2.351	1.157mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:46:54 AM
4	1.924	0.9439mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:49:03 AM
5	2.028	0.9958mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:51:12 AM

Mean Area 2.008
Mean Conc. 0.9857mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

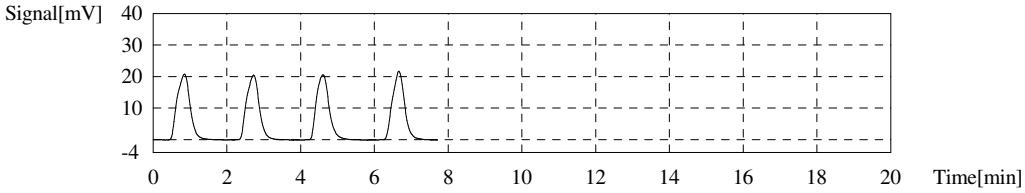
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.97mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.23	25.51mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 8:59:03 AM
2	49.41	24.60mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:01:08 AM
3	49.56	24.68mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:03:20 AM
4	50.34	25.07mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:05:25 AM

Mean Area 50.14
Mean Conc. 24.97mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

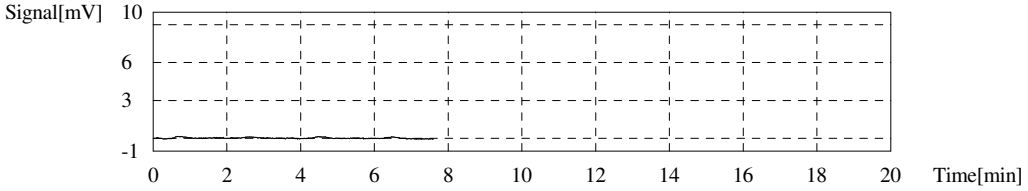
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1196mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3709	0.1701mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:13:20 AM
2	0.2000	0.08495mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:15:29 AM
3	0.2493	0.1095mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:17:34 AM
4	0.2580	0.1139mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:19:42 AM

Mean Area 0.2696
Mean Conc. 0.1196mg/L



Sample

Sample Name: MS 280-174967-D-8
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

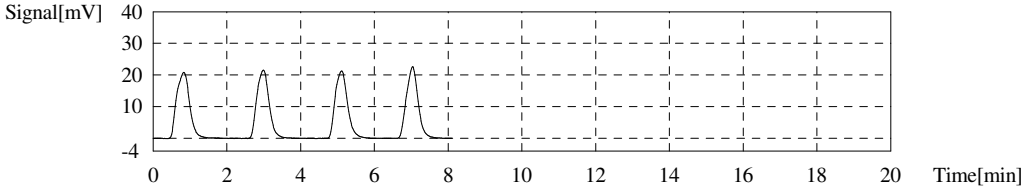
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.30mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.92	25.85mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:27:53 AM
2	50.51	25.15mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:30:12 AM
3	50.16	24.98mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:32:17 AM
4	50.60	25.20mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:34:22 AM

Mean Area 50.80
Mean Conc. 25.30mg/L



Sample

Sample Name: MSD 280-174967-D-8
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

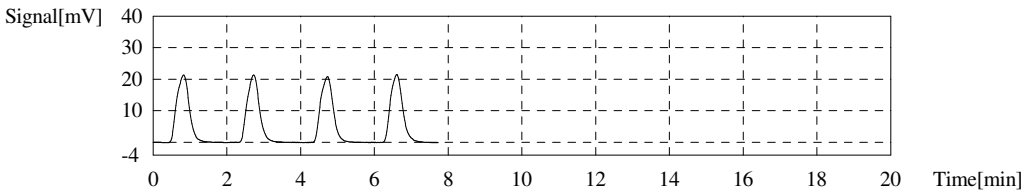
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.97mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.17	25.48mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:42:17 AM
2	49.63	24.71mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:44:28 AM
3	49.54	24.67mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:46:33 AM
4	50.27	25.03mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:48:40 AM

Mean Area 50.15
Mean Conc. 24.97mg/L



Sample

Sample Name: 280-174967-c-9
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

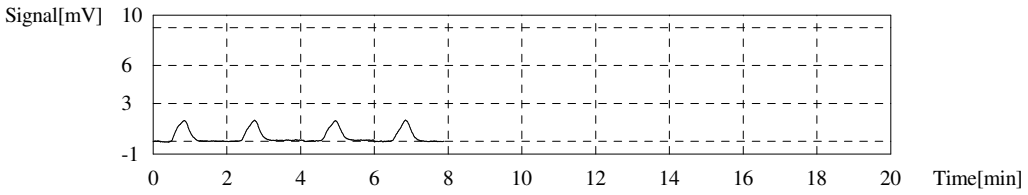
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.875mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.903	1.930mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:56:36 AM
2	3.767	1.862mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 9:59:02 AM
3	3.688	1.823mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:01:11 AM
4	3.809	1.883mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:03:21 AM

Mean Area 3.792
Mean Conc. 1.875mg/L



Sample

Sample Name: 280-174967-b-10
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

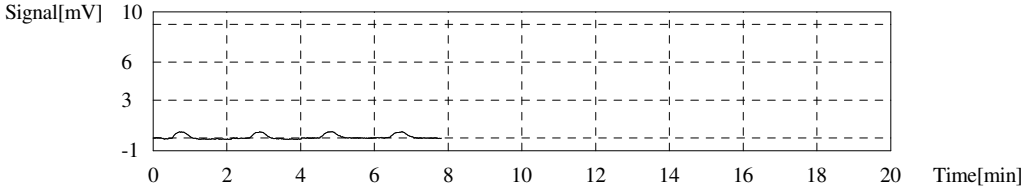
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6071mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.289	0.6275mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:11:30 AM
2	1.202	0.5842mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:13:39 AM
3	1.245	0.6056mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:15:47 AM
4	1.256	0.6111mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:17:53 AM

Mean Area 1.248
Mean Conc. 0.6071mg/L



Sample

Sample Name: 280-175038-e-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

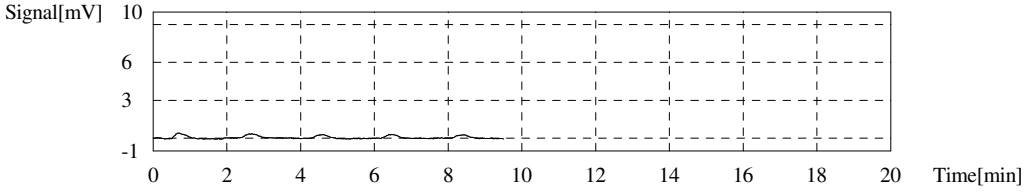
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.3212mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.9538	0.4605mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:25:49 AM
2	0.7502	0.3591mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:27:54 AM
3	0.7453	0.3566mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:29:59 AM
4	0.6188	0.2936mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:32:04 AM
5	0.5820	0.2753mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:34:09 AM

Mean Area 0.6741
Mean Conc. 0.3212mg/L



Sample

Sample Name: 280-175038-d-3
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

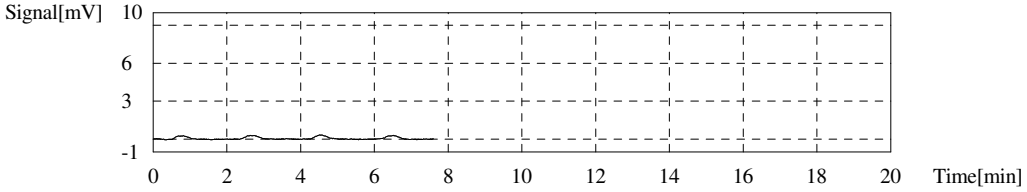
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.3271mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6986	0.3334mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:42:00 AM
2	0.6736	0.3209mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:44:05 AM
3	0.7721	0.3700mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:46:10 AM
4	0.5994	0.2840mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:48:15 AM

Mean Area 0.6859
Mean Conc. 0.3271mg/L



Sample

Sample Name: 280-175038-d-4
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

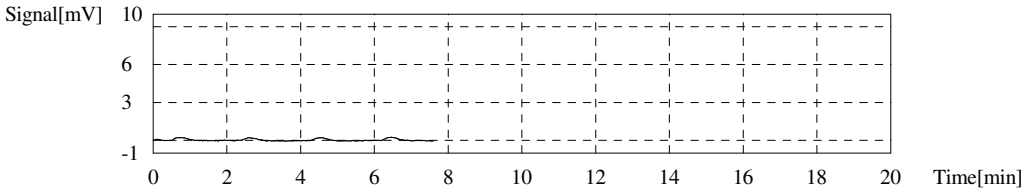
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2553mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5662	0.2674mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:56:11 AM
2	0.4587	0.2138mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 10:58:16 AM
3	0.5566	0.2626mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:00:25 AM
4	0.5858	0.2772mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:02:30 AM

Mean Area 0.5418
Mean Conc. 0.2553mg/L



Sample

Sample Name: 280-175038-e-5
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

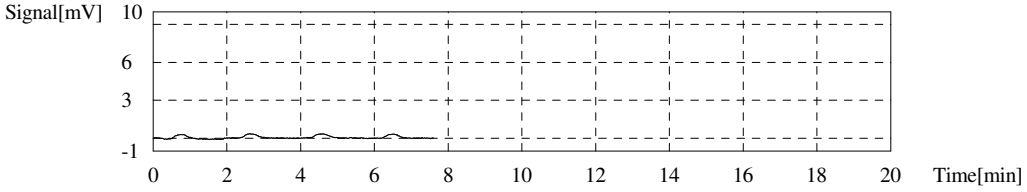
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.3767mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.9013	0.4344mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:10:26 AM
2	0.7753	0.3716mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:12:35 AM
3	0.7406	0.3543mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:14:40 AM
4	0.7250	0.3465mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:16:49 AM

Mean Area 0.7856
Mean Conc. 0.3767mg/L



Sample

Sample Name: 280-175038-d-6
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

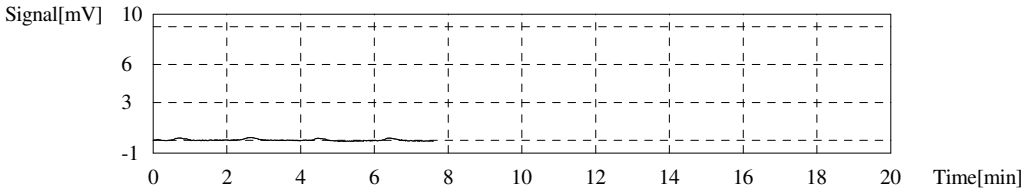
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1973mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4300	0.1995mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:24:45 AM
2	0.4918	0.2303mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:26:50 AM
3	0.3247	0.1471mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:28:55 AM
4	0.4552	0.2121mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:31:00 AM

Mean Area 0.4254
Mean Conc. 0.1973mg/L



Sample

Sample Name: 280-175038-e-7
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

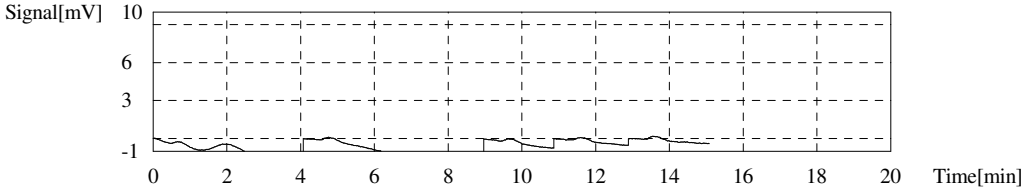
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1372mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.819	1.888mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:41:07 AM
2	0.000	-0.01470mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:46:20 AM
3	0.3547	0.1620mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:48:33 AM
4	0.4720	0.2205mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:50:52 AM
5	0.3924	0.1808mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 11:53:19 AM

Mean Area 0.3048
Mean Conc. 0.1372mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

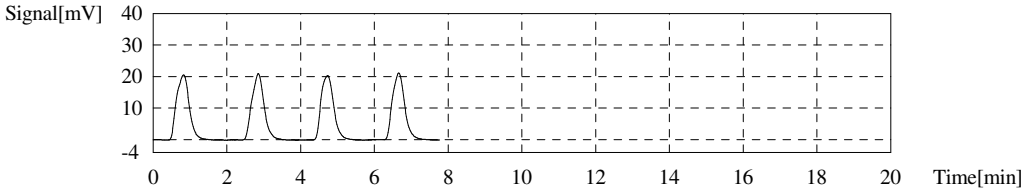
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.71mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	50.57	25.18mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:01:18 PM
2	49.27	24.53mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:03:29 PM
3	49.16	24.48mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:05:39 PM
4	49.49	24.64mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:07:51 PM

Mean Area 49.62
Mean Conc. 24.71mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

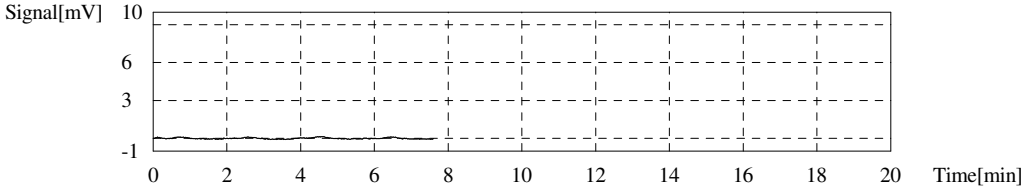
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1266mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3163	0.1429mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:15:48 PM
2	0.2647	0.1172mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:17:57 PM
3	0.3130	0.1413mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:20:06 PM
4	0.2404	0.1051mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:22:11 PM

Mean Area 0.2836
Mean Conc. 0.1266mg/L



Sample

Sample Name: 280-175038-e-8
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

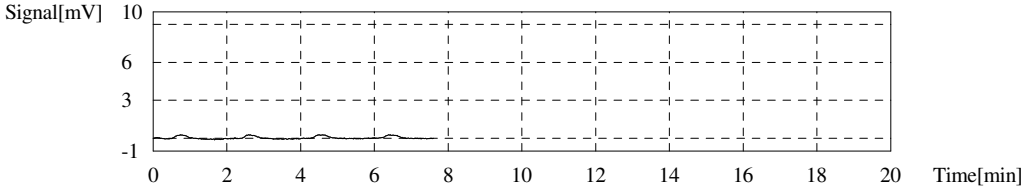
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.3318mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7534	0.3607mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:30:08 PM
2	0.6632	0.3157mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:32:16 PM
3	0.7061	0.3371mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:34:21 PM
4	0.6594	0.3138mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:36:26 PM

Mean Area 0.6955
Mean Conc. 0.3318mg/L



Sample

Sample Name: 280-175038-d-9
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

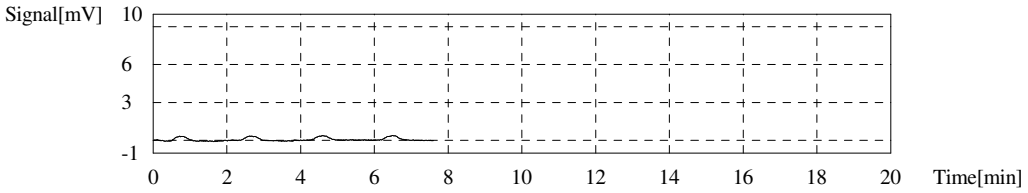
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4001mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.8602	0.4139mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:44:23 PM
2	0.7950	0.3814mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:46:28 PM
3	0.8136	0.3907mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:48:33 PM
4	0.8613	0.4144mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:50:38 PM

Mean Area 0.8325
Mean Conc. 0.4001mg/L



Sample

Sample Name: MS 280-175038-d-9
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

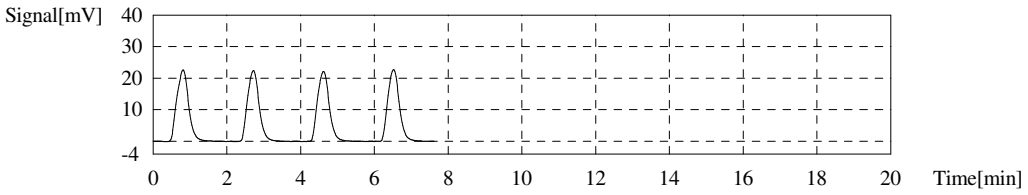
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.93mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.23	25.51mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 12:58:36 PM
2	49.60	24.70mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:00:44 PM
3	49.49	24.64mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:02:49 PM
4	49.90	24.85mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:04:54 PM

Mean Area 50.06
Mean Conc. 24.93mg/L



Sample

Sample Name: MSD 280-175038-d-9
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

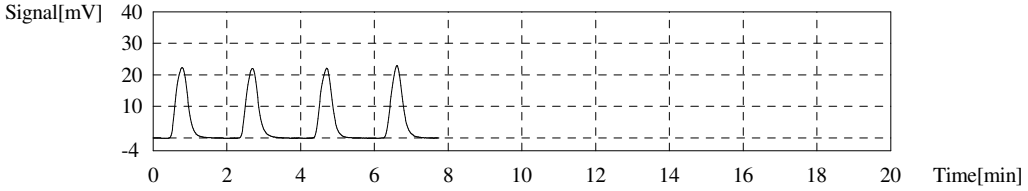
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.86mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	50.57	25.18mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:12:51 PM
2	49.62	24.71mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:15:06 PM
3	49.11	24.45mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:17:11 PM
4	50.38	25.09mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:19:19 PM

Mean Area 49.92
Mean Conc. 24.86mg/L



Sample

Sample Name: 280-175038-e-10
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

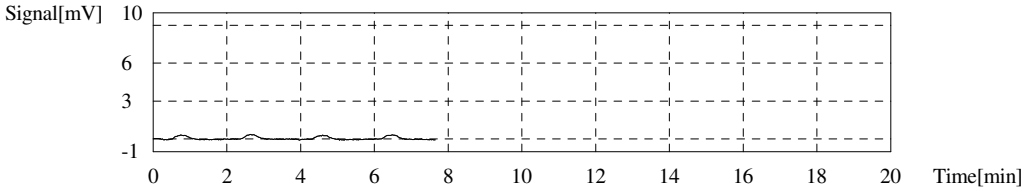
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4020mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.8844	0.4260mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:27:16 PM
2	0.8298	0.3988mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:29:21 PM
3	0.8074	0.3876mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:31:26 PM
4	0.8240	0.3959mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:33:35 PM

Mean Area 0.8364
Mean Conc. 0.4020mg/L



Sample

Sample Name: 280-175038-e-11
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

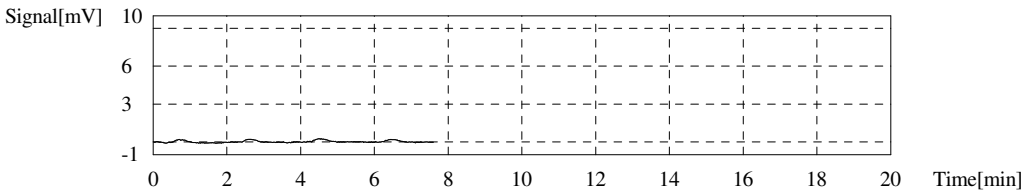
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2743mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6363	0.3023mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:41:32 PM
2	0.5180	0.2434mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:43:41 PM
3	0.5730	0.2708mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:45:46 PM
4	0.5926	0.2806mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:47:51 PM

Mean Area 0.5800
Mean Conc. 0.2743mg/L



Sample

Sample Name: 280-175196-d-1
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

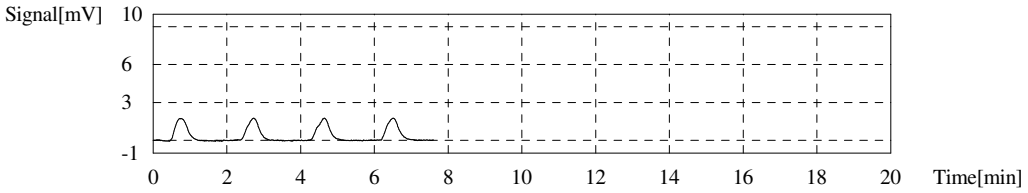
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.998mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.094	2.025mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:55:48 PM
2	4.010	1.983mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:57:53 PM
3	4.103	2.030mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 1:59:58 PM
4	3.948	1.952mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:02:03 PM

Mean Area 4.039
Mean Conc. 1.998mg/L



Sample

Sample Name: 280-175196-d-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

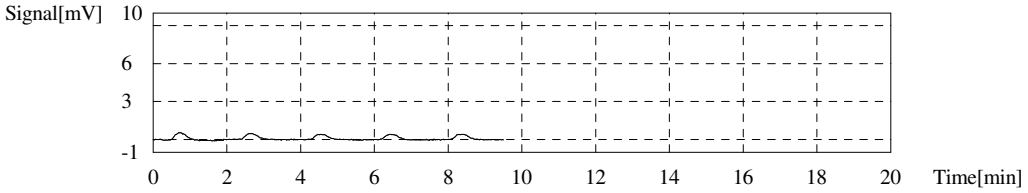
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4734mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.360	0.6629mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:10:00 PM
2	0.9988	0.4830mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:12:05 PM
3	0.9862	0.4767mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:14:10 PM
4	0.9801	0.4736mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:16:15 PM
5	0.9535	0.4604mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:18:20 PM

Mean Area 0.9797
Mean Conc. 0.4734mg/L



Sample

Sample Name: 280-175196-d-3
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

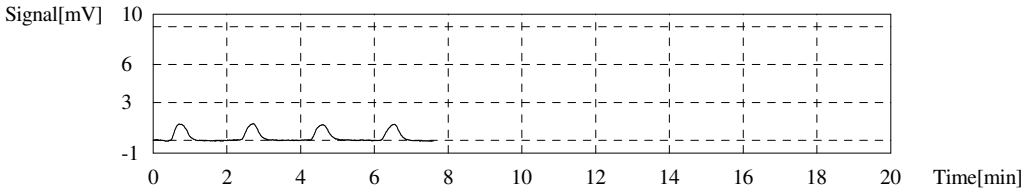
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.464mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.084	1.522mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:26:12 PM
2	2.903	1.432mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:28:17 PM
3	2.886	1.423mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:30:22 PM
4	2.997	1.479mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:32:27 PM

Mean Area 2.968
Mean Conc. 1.464mg/L



Sample

Sample Name: 280-175196-d-4
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

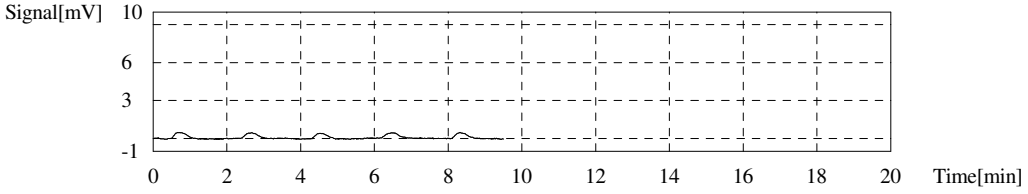
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4964mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.278	0.6221mg/L	50uL	1.000	E	Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:40:24 PM
2	1.061	0.5139mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:42:33 PM
3	0.9551	0.4612mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:44:38 PM
4	1.081	0.5239mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:46:43 PM
5	1.006	0.4865mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:48:48 PM

Mean Area 1.026
Mean Conc. 0.4964mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

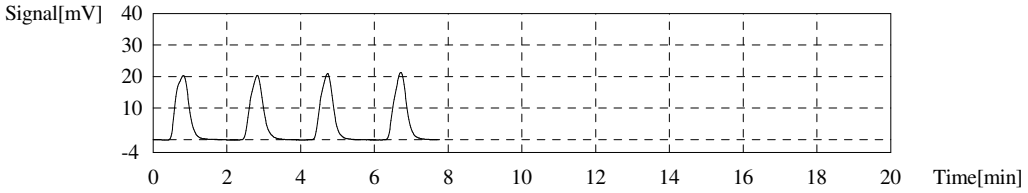
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.09mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.14	25.47mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:56:46 PM
2	49.94	24.87mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 2:58:51 PM
3	50.01	24.90mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:01:01 PM
4	50.44	25.12mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:03:06 PM

Mean Area 50.38
Mean Conc. 25.09mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

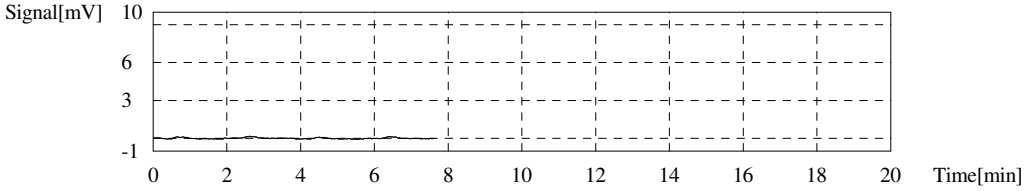
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1361mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3550	0.1622mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:11:04 PM
2	0.2911	0.1303mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:13:09 PM
3	0.2906	0.1301mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:15:14 PM
4	0.2742	0.1219mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:17:19 PM

Mean Area 0.3027
Mean Conc. 0.1361mg/L



Sample

Sample Name: 280-175196-d-5
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

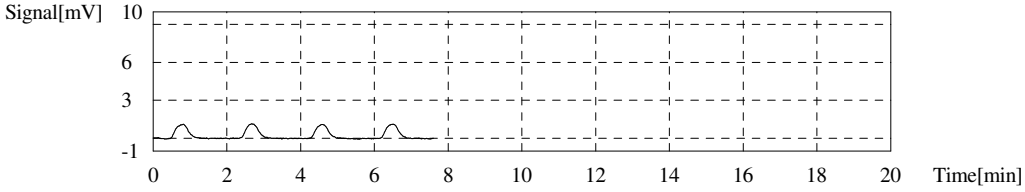
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.303mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.716	1.339mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:25:17 PM
2	2.637	1.299mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:27:22 PM
3	2.570	1.266mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:29:27 PM
4	2.653	1.307mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:31:32 PM

Mean Area 2.644
Mean Conc. 1.303mg/L



Sample

Sample Name: 280-175273-a-1
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

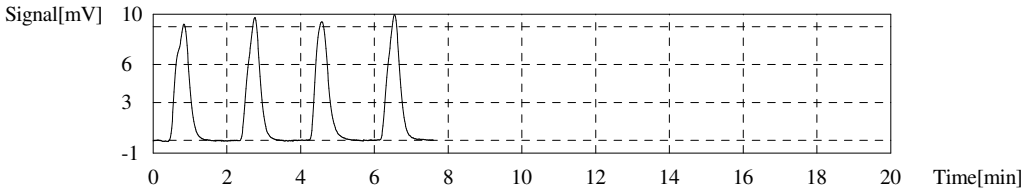
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.20mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.81	11.35mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:39:30 PM
2	22.28	11.09mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:41:35 PM
3	22.26	11.08mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:43:40 PM
4	22.68	11.29mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:45:45 PM

Mean Area 22.51
Mean Conc. 11.20mg/L



Sample

Sample Name: 280-175273-a-2
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

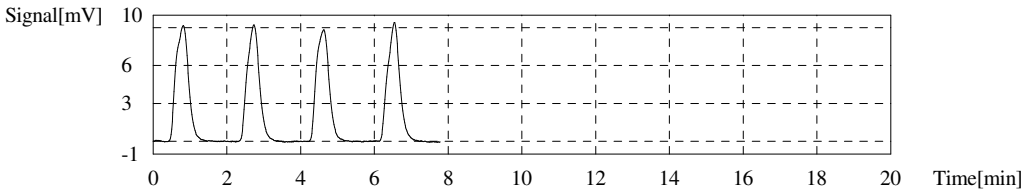
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.82mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.16	11.03mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:53:43 PM
2	21.60	10.75mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:55:48 PM
3	21.36	10.63mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 3:57:53 PM
4	21.86	10.88mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:00:09 PM

Mean Area 21.75
Mean Conc. 10.82mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

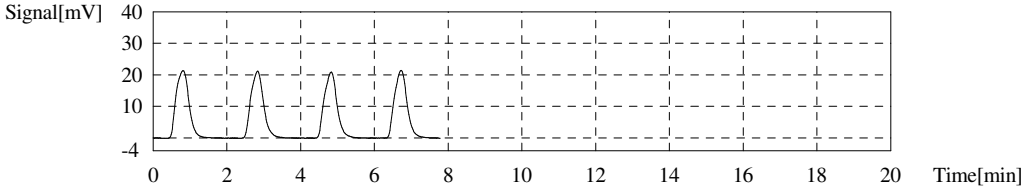
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.65mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.74	26.26mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:08:13 PM
2	51.30	25.55mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:10:23 PM
3	50.45	25.12mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:12:28 PM
4	51.58	25.69mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:14:36 PM

Mean Area 51.52
Mean Conc. 25.65mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal
Status Completed
Chk. Result

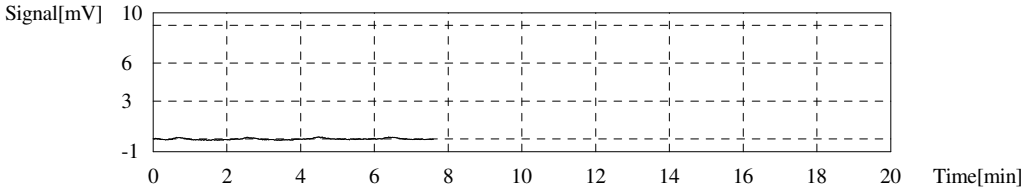
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1449mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2835	0.1266mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:22:34 PM
2	0.3956	0.1824mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:24:44 PM
3	0.2308	0.1003mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:26:53 PM
4	0.3717	0.1705mg/L	50uL	1.000		Calibration_10_31_22_Auto Dilution_Cal.2023_01_11_17_08_24.cal	4/21/2023 4:28:58 PM

Mean Area 0.3204
Mean Conc. 0.1449mg/L



Shi 5 TOC

9060

	Analysis	Sample Name	Result	Notes	Vial
1*	NPOC	ICV			1
2*	NPOC	ICB			2
3*	NPOC	LCS			3
4*	NPOC	MB			4
5*	NPOC	TIC			5
6*	NPOC	280-174962-b-2			6
7*	NPOC	MS 280-174962-b-2			7
8*	NPOC	MSD 280-174962-b-2			8
9*	NPOC	280-174936-a-3			9
10*	NPOC	280-174936-a-4			10
11*	NPOC	280-174936-a-5			11
12*	NPOC	280-174936-a-6			12
13*	NPOC	280-174957-b-2			13
14*	NPOC	280-174957-b-3			14
15*	NPOC	CCV			15
16*	NPOC	CCB			16
17*	NPOC	280-174957-b-4			17
18*	NPOC	280-174957-b-5			18
19*	NPOC	280-174957-b-6			19
20*	NPOC	280-175001-a-6			20
21*	NPOC	MS 280-175001-a-6			21
22*	NPOC	MSD 280-175001-a-6			22
23*	NPOC	580-125876-h-6		10x RR	23
24*	NPOC	580-125876-h-7		10x RR	24
25*	NPOC	280-175196-d-6		5310	25
26*	NPOC	280-174884-d-9			26
27*	NPOC	CCV			27
28*	NPOC	CCB			28
29*	NPOC	LCS			29
30*	NPOC	MB			30
31*	NPOC	TIC			31
32*	NPOC	280-174960-c-1			32
33*	NPOC	MS 280-174960-c-1			33
34*	NPOC	MSD 280-174960-c-1			34
35*	NPOC	280-174960-c-2			35
36*	NPOC	280-174960-c-3			36
37*	NPOC	280-174960-d-4			37
38*	NPOC	280-174689-v-1		2xRR	38
39*	NPOC	CCV			39
40*	NPOC	CCB			40
41*	NPOC	280-174881-b-1		RR 1x	41
42*	NPOC	280-174965-l-1			42
43*	NPOC	280-174965-k-2			43
44*	NPOC	280-174965-k-3			44
45*	NPOC	280-174965-k-4			45
46*	NPOC	280-174965-k-5			46
47*	NPOC	MS 280-174965-k-5			47
48*	NPOC	MSD 280-174965-k-5			48
49*	NPOC	280-174965-k-6			49
50*	NPOC	280-174965-k-7			50
51*	NPOC	CCV			51
52*	NPOC	CCB			52
53*	NPOC	280-174967-b-1			53

5310

SHIS TOC

	Analysis	Sample Name	Result	Notes	Vial
54*	NPOC	280-174967-d-2			54
55*	NPOC	280-174967-b-3			55
56*	NPOC	280-174967-c-4			56
57*	NPOC	280-174967-c-5			57
58*	NPOC	280-174967-d-6			58
59*	NPOC	280-174967-c-7			59
60*	NPOC	LCS			60
61*	NPOC	MB			61
62*	NPOC	280-174967-D-8			62
63*	NPOC	CCV			63
64*	NPOC	CCB			64
65*	NPOC	MS 280-174967-D-8			65
66*	NPOC	MSD 280-174967-D-8			66
67*	NPOC	280-174967-c-9			67
68*	NPOC	280-174967-b-10			68
69*	NPOC	280-175038-e-2			69
70*	NPOC	280-175038-d-3			70
71*	NPOC	280-175038-d-4			71
72*	NPOC	280-175038-e-5			72
73*	NPOC	280-175038-d-6			73
74*	NPOC	280-175038-e-7			74
75*	NPOC	CCV			75
76*	NPOC	CCB			76
77*	NPOC	280-175038-e-8			77
78*	NPOC	280-175038-d-9			78
79*	NPOC	MS 280-175038-d-9			79
80*	NPOC	MSD 280-175038-d-9			80
81*	NPOC	280-175038-e-10			81
82*	NPOC	280-175038-e-11			82
83*	NPOC	280-175196-d-1			83
84*	NPOC	280-175196-d-2			84
85*	NPOC	280-175196-d-3			85
86*	NPOC	280-175196-d-4			86
87*	NPOC	CCV			87
88*	NPOC	CCB			88
89*	NPOC	280-175196-d-5			89
90*	NPOC	280-175273-a-1			90
91*	NPOC	280-175273-a-2			91
92*	NPOC	CCV			92
93*	NPOC	CCB			93

BWH 5000, 1000 MS

Shipping and Receiving Documents

Eurofins TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Bieniulis, Dylan T.	Carrier Tracking No(s):	COC No:
Client Contact: Mary Lou Fox	Phone:	E-Mail: Dylan.Bieniulis@et.eurofinsus.com		Page:
Company: CDM Smith, Inc.				Job #:
Address: 14432 S.E. Eastgate Way Suite 100	Due Date Requested:			
City: Bellvue	TAT Requested (days): 15 business days			
State, Zip: WA, 98007				
Phone: 425-519-8300	PO #: 98961			
Email: FoxML@cdmsmith.com	WO #:			
Project Name: Bannock Ft. Hall Mine LF, Idaho	Project #: 28018772			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D - VOCs	8011 - EDB, DBCP, and 1,2,3-TCP	6020B - Total Metals	6020B - Dissolved Metals (Field Filtered)	7470A - Total Mercury	8270E - SVOCs	8321A - Herbicides and Pentachlorophenol	8270E_SIM - Benzo[a]pyrene	8081B - OC Pesticides and 8082A - PCBs	8141B OP Pesticides	8290 - 2,3,7,8-TCDD (ETA SACRAMENTO)	4500_CN_E - Total Cyanide	SM4500_S2_D - Total Sulfide	9056A - Anions (NO3, NO2, Cl, SO4, and Br)	9060A - TOC	RSK-175 - Dissolved Gases (MEEA)	2320B - Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	A	D	D	D	N	N	N	N	N	N	B	C/B	N	S	A	N		
TB-04-20230412	041223	1410	G	W			X																	3	
MW-124-20230412	041223	0950	G	W			X			X										X	X	X		9	
MW-124-Q-20230412	041223	1000	G	W			X			X										X	X	X		9	
RW-15-20230411	041123	1630	G	W						X										X	X			5	
MW-105D-20230411	041123	1600	G	W			X			X										X	X			9	VOC BOTH PRES+UNPRES
MW-105S-20230411	041123	1330	G	W			X			X										X	X			9	VOC BOTH PRES+UNPRES
EB-01-20230411	041123	1545	G	W			X																	3	

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
Other:

280-174957 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	[signature]	04122023		[signature]	4-13-23 0930	EHADEN
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.6°C IR14 CF0.1

11/27/2023

Login Sample Receipt Checklist

Client: CDM Smith Inc

Job Number: 280-174957-1

Login Number: 174957
List Number: 1
Creator: Held, Wesley

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Headspace larger than 1/4" in one or more vials, one vial with accpt. headspace
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mary Lou Fox
CDM Smith Inc
14432 S.E. Eastgate Way
Suite 100
Bellevue WA 98007-6493

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JOB DESCRIPTION

Bannock Ft. Hall Mine LF, Idaho

JOB NUMBER

280-175122-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

Eurofins Denver

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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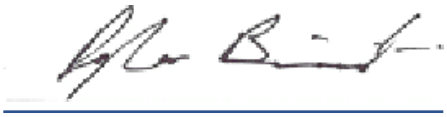
Authorization



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Revision 1

Authorized for release by
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303 736-0138

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: CDM Smith Inc

Project: Bannock Ft. Hall Mine LF, Idaho

Report Number: 280-175122-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

REVISION - 1
Following an internal data quality review it was determined that due to analyst error cis-1,2-dichloroethene detections were improperly reported as non-detect due to improperly defining peaks related to co-elution of cis-1,2-dichloroethene and ethyl acetate for sample RW-1-20230413 (280-175122-1) and MP-2-20230411 (280-175122-2). The issue has been corrected and revised results are reported for cis-1,2-dichloroethene for the impacted samples.

RECEIPT
The samples were received on 04/17/2023; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.8 C.

The following samples were received outside of holding time for the requested 9056A Nitrate/Nitrite analyses: RW-1-20230413 (280-175122-1), MP-2-20230411 (280-175122-2) and MW-118D-20230412 (280-175122-3).

VOLATILE ORGANIC COMPOUNDS BY GC/MS
Samples RW-1-20230413 (280-175122-1), MP-2-20230411 (280-175122-2), MW-118D-20230412 (280-175122-3), MP-3-20230413 (280-175122-4), MW-111D-20230414 (280-175122-5), MW-123-20230415 (280-175122-6), MW-102S-20230414 (280-175122-7), MW-115S-20230415 (280-175122-8) and TB-07-20230416 (280-175122-9) were analyzed for Volatile Organic Compounds by GC/MS in accordance with SW-846 8260D. The samples were analyzed on 04/21/2023, 04/25/2023, 04/26/2023, 04/27/2023 and 04/28/2023.

A continuing calibration verification (CCV) associated with batch 280-609932 recovered outside the control limit of 20%D for Methyl methacrylate (-22.3%D). This analyte is a poor performer. The LCS/LCSD recovered within control limits therefore the data were reported.

A continuing calibration verification (CCV) associated with batch 280-609932 recovered outside the control limit of 20%D for 1,2-Dibromo-3-Chloropropane (-21.5%D). This analyte is a poor performer. The LCS/LCSD recovered within control limits therefore the data were reported.

The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 280-610121: Allyl chloride, Dichlorodifluoromethane and Iodomethane. These compounds are not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. The associated samples were non-detect for the affected analytes and the LCS/LCSD pair recovered within acceptable limits; therefore, the data have been reported.

A continuing calibration verification (CCV) associated with batch 280-610123 recovered outside the control limit (20%D) for Acrolein (-28.0%D), Dichlorodifluoromethane (-22.9%D), Iodomethane (-33.8%D), Isobutyl alcohol (-24.6%D) and trans-1,4-Dichloro-2-butene (-25.5%D). These analytes are considered poor performing compounds. The LCS/LCSD recovered within control limits therefore the data were qualified and reported.

A continuing calibration verification (CCV) associated with batch 280-610347 recovered above the upper control limit for 3-Chloro-1-propene(28.5%D, limit 20%D) , 4-Methyl-2-pentanone (MIBK) (22.3%D, limit 20%D), Acrylonitrile (21.1%D, limit 20%D), Vinyl Acetate (21.5%D, limit 20%D), and Propionitrile (22.1%D, limit 20%D). These analytes are poor performing compounds that recovered within control limits in both the LCS/LCSD. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 280-610347: Dichlorodifluoromethane (-28.3%D, limit 20%D). this is a poor performing analyte that recovered within control limits in both the LCS/LCSD. The associated samples were non-detect for the affected analytes.; therefore, the data have been reported.

The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 280-610485: Isobutyl alcohol (-22.8%D, limit 20%D) Methyl methacrylate (-26.0%D, limit 20%D) and 1,2 Dibromo-3-Chloropropene (-22.9%D, limit 20%D). This is a poor performing compound that recovered within control limits in both the LCS/LCSD. The associated samples were non-detect for the affected analytes; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 280-610485 recovered above the upper control limit for 3-Chloro-1-propene (22.7%D, limit 20%D), Vinyl Chloride (30.6%D, limit 20%D and Chloroethane (21.1%D, limit 20%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample containers: MW-102S-20230414 (280-175122-7).

After a re-review of raw data due to an error in spectral data interpretation by a lab analyst, the following sample results for the analyte cis-1,2-Dichloroethene have been determined to have changed from a ND result to a detected concentration: RW-1-20230413 (280-175122-1) and MP-2-20230411 (280-175122-2).

Samples RW-1-20230413 (280-175122-1)[4X], MP-2-20230411 (280-175122-2)[4X] and MP-3-20230413 (280-175122-4)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP/MS)

Samples RW-1-20230413 (280-175122-1), MP-2-20230411 (280-175122-2) and MW-118D-20230412 (280-175122-3) were analyzed for Dissolved Metals (ICP/MS) in accordance with SW846 6020B. The samples were prepared on 04/18/2023 and analyzed on 04/18/2023, 04/19/2023 and 04/20/2023.

Zinc was detected in method blank MB 280-608984/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (28 DAYS)

Samples RW-1-20230413 (280-175122-1), MP-2-20230411 (280-175122-2) and MW-118D-20230412 (280-175122-3) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A (28 Days). The samples were analyzed on 04/17/2023 and 04/30/2023.

Bromide failed the recovery criteria low for the MS and MSD of sample MP-2-20230411 (280-175122-2) in batch 280-610654. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. Refer to the QC report for details.

The concentration of the matrix spike reagent caused the results for the matrix spike and matrix spike duplicate (MS/MSD) to be above the highest point of the calibration range for bromide: (280-175122-C-2 MS) and (280-175122-C-2 MSD). Data has been qualified and reported.

Samples RW-1-20230413 (280-175122-1)[20X], MP-2-20230411 (280-175122-2)[10X] and MW-118D-20230412 (280-175122-3)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (48 HOURS)

Samples RW-1-20230413 (280-175122-1), MP-2-20230411 (280-175122-2) and MW-118D-20230412 (280-175122-3) were analyzed for anions (48 hours) in accordance with EPA SW-846 Method 9056A (48 Hours). The samples were analyzed on 04/17/2023.

The following samples were received and analyzed outside of holding time: RW-1-20230413 (280-175122-1), MP-2-20230411 (280-175122-2) and MW-118D-20230412 (280-175122-3).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL ORGANIC CARBON

Samples RW-1-20230413 (280-175122-1), MP-2-20230411 (280-175122-2) and MW-118D-20230412 (280-175122-3) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 04/21/2023.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: CDM Smith Inc
Job ID: 280-175122-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID: RW-1-20230413
Lab Sample ID: 280-175122-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.8	J	4.0	0.88	ug/L	4		8260D	Total/NA
1,2-Dichlorobenzene	2.2	J	4.0	1.5	ug/L	4		8260D	Total/NA
Chloroform	2.6	J	4.0	1.4	ug/L	4		8260D	Total/NA
cis-1,2-Dichloroethene	26		4.0	1.3	ug/L	4		8260D	Total/NA
Tetrachloroethene	26		4.0	1.6	ug/L	4		8260D	Total/NA
Trichloroethene	250		4.0	1.2	ug/L	4		8260D	Total/NA
Vinyl chloride	3.0	J	8.0	2.0	ug/L	4		8260D	Total/NA
Arsenic	0.62	J	5.0	0.50	ug/L	1		6020B	Dissolved
Barium	340		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	210000		2000	320	ug/L	10		6020B	Dissolved
Copper	1.3	J	2.0	0.71	ug/L	1		6020B	Dissolved
Iron	44	J	200	8.7	ug/L	1		6020B	Dissolved
Potassium	4800		1000	52	ug/L	1		6020B	Dissolved
Magnesium	74000		200	4.2	ug/L	1		6020B	Dissolved
Manganese	390		3.0	0.51	ug/L	1		6020B	Dissolved
Sodium	100000		1000	73	ug/L	1		6020B	Dissolved
Nickel	8.7		3.0	0.83	ug/L	1		6020B	Dissolved
Vanadium	1.2	J	5.0	1.1	ug/L	1		6020B	Dissolved
Bromide	2.8		0.50	0.23	mg/L	1		9056A	Total/NA
Nitrate as N	2.3	H H3	0.50	0.090	mg/L	1		9056A	Total/NA
Chloride	350		60	20	mg/L	20		9056A	Total/NA
Sulfate	110		100	21	mg/L	20		9056A	Total/NA
Total Organic Carbon - Duplicates	5.1		1.0	0.35	mg/L	1		9060A	Total/NA

Client Sample ID: MP-2-20230411
Lab Sample ID: 280-175122-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.7	J	4.0	0.88	ug/L	4		8260D	Total/NA
Chloroform	1.6	J	4.0	1.4	ug/L	4		8260D	Total/NA
cis-1,2-Dichloroethene	20		4.0	1.3	ug/L	4		8260D	Total/NA
Tetrachloroethene	19		4.0	1.6	ug/L	4		8260D	Total/NA
Trichloroethene	180		4.0	1.2	ug/L	4		8260D	Total/NA
Vinyl chloride	3.7	J	8.0	2.0	ug/L	4		8260D	Total/NA
Arsenic	0.91	J	5.0	0.50	ug/L	1		6020B	Dissolved
Barium	370		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	210000		2000	320	ug/L	10		6020B	Dissolved
Copper	1.1	J	2.0	0.71	ug/L	1		6020B	Dissolved
Iron	8.8	J	200	8.7	ug/L	1		6020B	Dissolved
Potassium	4200		1000	52	ug/L	1		6020B	Dissolved
Magnesium	67000		200	4.2	ug/L	1		6020B	Dissolved
Manganese	3.5		3.0	0.51	ug/L	1		6020B	Dissolved
Sodium	86000		1000	73	ug/L	1		6020B	Dissolved
Nickel	2.0	J	3.0	0.83	ug/L	1		6020B	Dissolved
Vanadium	2.5	J	5.0	1.1	ug/L	1		6020B	Dissolved
Bromide	2.1	F1	0.50	0.23	mg/L	1		9056A	Total/NA
Nitrate as N	2.2	H H3	0.50	0.090	mg/L	1		9056A	Total/NA
Chloride	310		30	10	mg/L	10		9056A	Total/NA
Sulfate	120		50	10	mg/L	10		9056A	Total/NA
Total Organic Carbon - Duplicates	3.9		1.0	0.35	mg/L	1		9060A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: CDM Smith Inc
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Job ID: 280-175122-1

Client Sample ID: MW-118D-20230412 — Lab Sample ID: 280-175122-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	7.8		1.0	0.22	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	0.48	J	1.0	0.23	ug/L	1		8260D	Total/NA
1,2-Dichlorobenzene	1.1		1.0	0.37	ug/L	1		8260D	Total/NA
1,2-Dichloropropane	0.90	J	1.0	0.52	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	0.52	J	1.0	0.39	ug/L	1		8260D	Total/NA
Benzene	0.47	J	1.0	0.31	ug/L	1		8260D	Total/NA
Chloroform	0.37	J	1.0	0.36	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	4.6		1.0	0.32	ug/L	1		8260D	Total/NA
Dichlorodifluoromethane	3.2		3.0	0.96	ug/L	1		8260D	Total/NA
Tetrachloroethene	9.9		1.0	0.40	ug/L	1		8260D	Total/NA
Trichloroethene	58		1.0	0.30	ug/L	1		8260D	Total/NA
Arsenic	1.2	J	5.0	0.50	ug/L	1		6020B	Dissolved
Barium	520		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	270000		2000	320	ug/L	10		6020B	Dissolved
Co	4.0		1.0	0.33	ug/L	1		6020B	Dissolved
Chromium	0.62	J	3.0	0.50	ug/L	1		6020B	Dissolved
Copper	4.0		2.0	0.71	ug/L	1		6020B	Dissolved
Iron	23	J	200	8.7	ug/L	1		6020B	Dissolved
Potassium	5700		1000	52	ug/L	1		6020B	Dissolved
Magnesium	96000		200	4.2	ug/L	1		6020B	Dissolved
Manganese	23		3.0	0.51	ug/L	1		6020B	Dissolved
Sodium	170000		1000	73	ug/L	1		6020B	Dissolved
Nickel	70		3.0	0.83	ug/L	1		6020B	Dissolved
Lead	2.8		1.0	0.23	ug/L	1		6020B	Dissolved
Vanadium	2.6	J	5.0	1.1	ug/L	1		6020B	Dissolved
Bromide	3.8		0.50	0.23	mg/L	1		9056A	Total/NA
Nitrate as N	2.2	H H3	0.50	0.090	mg/L	1		9056A	Total/NA
Chloride	640		60	20	mg/L	20		9056A	Total/NA
Sulfate	80		5.0	1.0	mg/L	1		9056A	Total/NA
Total Organic Carbon - Duplicates	11		1.0	0.35	mg/L	1		9060A	Total/NA

Client Sample ID: MP-3-20230413 — Lab Sample ID: 280-175122-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.1		2.0	0.72	ug/L	2		8260D	Total/NA
cis-1,2-Dichloroethene	4.3		2.0	0.64	ug/L	2		8260D	Total/NA
Tetrachloroethene	19		2.0	0.81	ug/L	2		8260D	Total/NA
Trichloroethene	110		2.0	0.60	ug/L	2		8260D	Total/NA

Client Sample ID: MW-111D-20230414 — Lab Sample ID: 280-175122-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	24		1.0	0.22	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	0.43	J	1.0	0.23	ug/L	1		8260D	Total/NA
1,2-Dichlorobenzene	8.9		1.0	0.37	ug/L	1		8260D	Total/NA
1,2-Dichloropropane	2.4		1.0	0.52	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	3.6		1.0	0.39	ug/L	1		8260D	Total/NA
Benzene	7.3		1.0	0.31	ug/L	1		8260D	Total/NA
Chlorobenzene	6.7		1.0	0.42	ug/L	1		8260D	Total/NA
Chloroform	0.48	J	1.0	0.36	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	9.2		1.0	0.32	ug/L	1		8260D	Total/NA
Dichlorodifluoromethane	6.5		3.0	0.96	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-111D-20230414 (Continued) — Lab Sample ID: 280-175122-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
o-Xylene	0.74	J	1.0	0.33	ug/L	1		8260D	Total/NA
Tetrachloroethene	1.6		1.0	0.40	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	1.3		1.0	0.37	ug/L	1		8260D	Total/NA
Trichloroethene	110		1.0	0.30	ug/L	1		8260D	Total/NA
Vinyl chloride	6.1		2.0	0.51	ug/L	1		8260D	Total/NA
Xylenes, Total	0.74	J	1.0	0.33	ug/L	1		8260D	Total/NA

Client Sample ID: MW-123-20230415 — Lab Sample ID: 280-175122-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	4.2		1.0	0.40	ug/L	1		8260D	Total/NA
Trichloroethene	56		1.0	0.30	ug/L	1		8260D	Total/NA

Client Sample ID: MW-102S-20230414 — Lab Sample ID: 280-175122-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.91	J	1.0	0.40	ug/L	1		8260D	Total/NA
Trichloroethene	2.0		1.0	0.30	ug/L	1		8260D	Total/NA

Client Sample ID: MW-115S-20230415 — Lab Sample ID: 280-175122-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.45	J	1.0	0.30	ug/L	1		8260D	Total/NA

Client Sample ID: TB-07-20230416 — Lab Sample ID: 280-175122-9

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: RW-1-20230413
Lab Sample ID: 280-175122-1

Date Collected: 04/13/23 15:20
Matrix: Water

Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		4.0	2.3	ug/L			04/26/23 17:27	4
1,1,1-Trichloroethane	ND		4.0	1.6	ug/L			04/26/23 17:27	4
1,1,2,2-Tetrachloroethane	ND		4.0	0.84	ug/L			04/26/23 17:27	4
1,1,2-Trichloroethane	ND		4.0	1.1	ug/L			04/26/23 17:27	4
1,1-Dichloroethane	**1.8**	**J**	4.0	0.88	ug/L			04/26/23 17:27	4
1,1-Dichloroethene	ND		4.0	0.92	ug/L			04/26/23 17:27	4
1,1-Dichloropropene	ND		4.0	1.7	ug/L			04/26/23 17:27	4
1,2,3-Trichloropropane	ND		10	3.4	ug/L			04/26/23 17:27	4
1,2,4-Trichlorobenzene	ND		4.0	2.3	ug/L			04/26/23 17:27	4
1,2-Dibromo-3-Chloropropane	ND		20	7.0	ug/L			04/26/23 17:27	4
1,2-Dibromoethane	ND		4.0	1.6	ug/L			04/26/23 17:27	4
1,2-Dichlorobenzene	**2.2**	**J**	4.0	1.5	ug/L			04/26/23 17:27	4
1,2-Dichloroethane	ND		4.0	2.2	ug/L			04/26/23 17:27	4
1,2-Dichloropropane	ND		4.0	2.1	ug/L			04/26/23 17:27	4
1,3-Dichlorobenzene	ND		4.0	1.3	ug/L			04/26/23 17:27	4
1,3-Dichloropropane	ND		4.0	1.5	ug/L			04/26/23 17:27	4
1,4-Dichlorobenzene	ND		4.0	1.6	ug/L			04/26/23 17:27	4
2,2-Dichloropropane	ND		4.0	1.5	ug/L			04/26/23 17:27	4
2-Butanone (MEK)	ND		60	24	ug/L			04/26/23 17:27	4
2-Hexanone	ND		20	6.8	ug/L			04/26/23 17:27	4
4-Methyl-2-pentanone (MIBK)	ND		20	3.9	ug/L			04/26/23 17:27	4
Acetone	ND		60	26	ug/L			04/26/23 17:27	4
Acetonitrile	ND		120	38	ug/L			04/26/23 17:27	4
Acrolein	ND		80	19	ug/L			04/26/23 17:27	4
Acrylonitrile	ND		80	18	ug/L			04/26/23 17:27	4
Allyl chloride	ND		8.0	0.68	ug/L			04/26/23 17:27	4
Benzene	ND		4.0	1.2	ug/L			04/26/23 17:27	4
Bromoform	ND		8.0	4.8	ug/L			04/26/23 17:27	4
Bromomethane	ND		20	9.4	ug/L			04/26/23 17:27	4
Carbon disulfide	ND		8.0	2.5	ug/L			04/26/23 17:27	4
Carbon tetrachloride	ND		4.0	2.3	ug/L			04/26/23 17:27	4
Chlorobenzene	ND		4.0	1.7	ug/L			04/26/23 17:27	4
Chlorobromomethane	ND		4.0	1.6	ug/L			04/26/23 17:27	4
Chlorodibromomethane	ND		8.0	2.5	ug/L			04/26/23 17:27	4
Chloroethane	ND		16	5.5	ug/L			04/26/23 17:27	4
Chloroform	**2.6**	**J**	4.0	1.4	ug/L			04/26/23 17:27	4
Chloromethane	ND		8.0	3.0	ug/L			04/26/23 17:27	4
Chloroprene	ND		12	4.7	ug/L			04/26/23 17:27	4
cis-1,2-Dichloroethene	**26**		4.0	1.3	ug/L			04/26/23 17:27	4
cis-1,3-Dichloropropene	ND		8.0	2.5	ug/L			04/26/23 17:27	4
Dibromomethane	ND		4.0	1.4	ug/L			04/26/23 17:27	4
Dichlorobromomethane	ND		4.0	1.5	ug/L			04/26/23 17:27	4
Dichlorodifluoromethane	ND		12	3.8	ug/L			04/26/23 17:27	4
Ethyl methacrylate	ND		12	3.4	ug/L			04/26/23 17:27	4
Ethylbenzene	ND		4.0	1.2	ug/L			04/26/23 17:27	4
Iodomethane	ND		20	10	ug/L			04/26/23 17:27	4
Isobutyl alcohol	ND		440	150	ug/L			04/26/23 17:27	4
Methacrylonitrile	ND		60	21	ug/L			04/26/23 17:27	4
Methyl methacrylate	ND		16	4.4	ug/L			04/26/23 17:27	4

Client Sample ID: RW-1-20230413
Date Collected: 04/13/23 15:20
Date Received: 04/17/23 09:00

Lab Sample ID: 280-175122-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		8.0	3.8	ug/L			04/26/23 17:27	4
m-Xylene & p-Xylene	ND		8.0	1.4	ug/L			04/26/23 17:27	4
o-Xylene	ND		4.0	1.3	ug/L			04/26/23 17:27	4
Propionitrile	ND		80	15	ug/L			04/26/23 17:27	4
Styrene	ND		4.0	1.4	ug/L			04/26/23 17:27	4
Tetrachloroethene	**26**		4.0	1.6	ug/L			04/26/23 17:27	4
Toluene	ND		4.0	1.3	ug/L			04/26/23 17:27	4
trans-1,2-Dichloroethene	ND		4.0	1.5	ug/L			04/26/23 17:27	4
trans-1,3-Dichloropropene	ND		8.0	2.6	ug/L			04/26/23 17:27	4
trans-1,4-Dichloro-2-butene	ND		12	5.5	ug/L			04/26/23 17:27	4
Trichloroethene	**250**		4.0	1.2	ug/L			04/26/23 17:27	4
Trichlorofluoromethane	ND		8.0	2.3	ug/L			04/26/23 17:27	4
Vinyl acetate	ND		12	3.8	ug/L			04/26/23 17:27	4
Vinyl chloride	**3.0**	**J**	8.0	2.0	ug/L			04/26/23 17:27	4
Xylenes, Total	ND		4.0	1.3	ug/L			04/26/23 17:27	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 127*		*04/26/23 17:27*	*4*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/26/23 17:27*	*4*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/26/23 17:27*	*4*
Toluene-d8 (Surr)	*101*		*80 - 125*		*04/26/23 17:27*	*4*

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/18/23 07:56	04/18/23 18:47	1
Arsenic	**0.62**	**J**	5.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:47	1
Barium	**340**		3.0	0.38	ug/L		04/18/23 07:56	04/18/23 18:47	1
Beryllium	ND		1.0	0.30	ug/L		04/18/23 07:56	04/19/23 16:18	1
Calcium	**210000**		2000	320	ug/L		04/18/23 07:56	04/20/23 17:37	10
Cadmium	ND		1.0	0.19	ug/L		04/18/23 07:56	04/18/23 18:47	1
Co	ND		1.0	0.33	ug/L		04/18/23 07:56	04/18/23 18:47	1
Chromium	ND		3.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:47	1
Copper	**1.3**	**J**	2.0	0.71	ug/L		04/18/23 07:56	04/18/23 18:47	1
Iron	**44**	**J**	200	8.7	ug/L		04/18/23 07:56	04/18/23 18:47	1
Potassium	**4800**		1000	52	ug/L		04/18/23 07:56	04/18/23 18:47	1
Magnesium	**74000**		200	4.2	ug/L		04/18/23 07:56	04/19/23 16:18	1
Manganese	**390**		3.0	0.51	ug/L		04/18/23 07:56	04/19/23 16:18	1
Sodium	**100000**		1000	73	ug/L		04/18/23 07:56	04/19/23 16:18	1
Nickel	**8.7**		3.0	0.83	ug/L		04/18/23 07:56	04/18/23 18:47	1
Lead	ND		1.0	0.23	ug/L		04/18/23 07:56	04/18/23 18:47	1
Antimony	ND		2.0	0.40	ug/L		04/18/23 07:56	04/18/23 18:47	1
Selenium	ND		5.0	1.0	ug/L		04/18/23 07:56	04/18/23 18:47	1
Tin	ND		10	0.58	ug/L		04/18/23 07:56	04/18/23 18:47	1
Thallium	ND		1.0	0.21	ug/L		04/18/23 07:56	04/18/23 18:47	1
Vanadium	**1.2**	**J**	5.0	1.1	ug/L		04/18/23 07:56	04/18/23 18:47	1
Zinc	ND		10	2.0	ug/L		04/18/23 07:56	04/18/23 18:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**2.8**		0.50	0.23	mg/L			04/30/23 03:21	1

Client Sample ID: RW-1-20230413
Lab Sample ID: 280-175122-1

Date Collected: 04/13/23 15:20
Matrix: Water
Date Received: 04/17/23 09:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (SW846 9056A)	**2.3**	**H H3**	0.50	0.090	mg/L			04/17/23 13:43	1
Chloride (SW846 9056A)	**350**		60	20	mg/L			04/17/23 13:58	20
Nitrite as N (SW846 9056A)	ND	H H3	0.50	0.049	mg/L			04/17/23 13:43	1
Sulfate (SW846 9056A)	**110**		100	21	mg/L			04/17/23 13:58	20
Total Organic Carbon - Duplicates (SW846 9060A)	**5.1**		1.0	0.35	mg/L			04/21/23 17:58	1

Client Sample ID: MP-2-20230411
Lab Sample ID: 280-175122-2

Date Collected: 04/11/23 14:40
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		4.0	2.3	ug/L			04/25/23 03:05	4
1,1,1-Trichloroethane	ND		4.0	1.6	ug/L			04/25/23 03:05	4
1,1,2,2-Tetrachloroethane	ND		4.0	0.84	ug/L			04/25/23 03:05	4
1,1,2-Trichloroethane	ND		4.0	1.1	ug/L			04/25/23 03:05	4
1,1-Dichloroethane	**1.7**	**J**	4.0	0.88	ug/L			04/25/23 03:05	4
1,1-Dichloroethene	ND		4.0	0.92	ug/L			04/25/23 03:05	4
1,1-Dichloropropene	ND		4.0	1.7	ug/L			04/25/23 03:05	4
1,2,3-Trichloropropane	ND		10	3.4	ug/L			04/25/23 03:05	4
1,2,4-Trichlorobenzene	ND		4.0	2.3	ug/L			04/25/23 03:05	4
1,2-Dibromo-3-Chloropropane	ND		20	7.0	ug/L			04/25/23 03:05	4
1,2-Dibromoethane	ND		4.0	1.6	ug/L			04/25/23 03:05	4
1,2-Dichlorobenzene	ND		4.0	1.5	ug/L			04/25/23 03:05	4
1,2-Dichloroethane	ND		4.0	2.2	ug/L			04/25/23 03:05	4
1,2-Dichloropropane	ND		4.0	2.1	ug/L			04/25/23 03:05	4
1,3-Dichlorobenzene	ND		4.0	1.3	ug/L			04/25/23 03:05	4
1,3-Dichloropropane	ND		4.0	1.5	ug/L			04/25/23 03:05	4
1,4-Dichlorobenzene	ND		4.0	1.6	ug/L			04/25/23 03:05	4
2,2-Dichloropropane	ND		4.0	1.5	ug/L			04/25/23 03:05	4
2-Butanone (MEK)	ND		60	24	ug/L			04/25/23 03:05	4
2-Hexanone	ND		20	6.8	ug/L			04/25/23 03:05	4
4-Methyl-2-pentanone (MIBK)	ND		20	3.9	ug/L			04/25/23 03:05	4
Acetone	ND		60	26	ug/L			04/25/23 03:05	4
Acetonitrile	ND		120	38	ug/L			04/25/23 03:05	4
Acrolein	ND		80	19	ug/L			04/25/23 03:05	4
Acrylonitrile	ND		80	18	ug/L			04/25/23 03:05	4
Allyl chloride	ND		8.0	0.68	ug/L			04/25/23 03:05	4
Benzene	ND		4.0	1.2	ug/L			04/25/23 03:05	4
Bromoform	ND		8.0	4.8	ug/L			04/25/23 03:05	4
Bromomethane	ND		20	9.4	ug/L			04/25/23 03:05	4
Carbon disulfide	ND		8.0	2.5	ug/L			04/25/23 03:05	4
Carbon tetrachloride	ND		4.0	2.3	ug/L			04/25/23 03:05	4
Chlorobenzene	ND		4.0	1.7	ug/L			04/25/23 03:05	4
Chlorobromomethane	ND		4.0	1.6	ug/L			04/25/23 03:05	4
Chlorodibromomethane	ND		8.0	2.5	ug/L			04/25/23 03:05	4
Chloroethane	ND		16	5.5	ug/L			04/25/23 03:05	4
Chloroform	**1.6**	**J**	4.0	1.4	ug/L			04/25/23 03:05	4
Chloromethane	ND		8.0	3.0	ug/L			04/25/23 03:05	4

Client Sample ID: MP-2-20230411
Lab Sample ID: 280-175122-2

Date Collected: 04/11/23 14:40
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroprene	ND		12	4.7	ug/L			04/25/23 03:05	4
cis-1,2-Dichloroethene	**20**		4.0	1.3	ug/L			04/25/23 03:05	4
cis-1,3-Dichloropropene	ND		8.0	2.5	ug/L			04/25/23 03:05	4
Dibromomethane	ND		4.0	1.4	ug/L			04/25/23 03:05	4
Dichlorobromomethane	ND		4.0	1.5	ug/L			04/25/23 03:05	4
Dichlorodifluoromethane	ND		12	3.8	ug/L			04/25/23 03:05	4
Ethyl methacrylate	ND		12	3.4	ug/L			04/25/23 03:05	4
Ethylbenzene	ND		4.0	1.2	ug/L			04/25/23 03:05	4
Iodomethane	ND		20	10	ug/L			04/25/23 03:05	4
Isobutyl alcohol	ND		440	150	ug/L			04/25/23 03:05	4
Methacrylonitrile	ND		60	21	ug/L			04/25/23 03:05	4
Methyl methacrylate	ND		16	4.4	ug/L			04/25/23 03:05	4
Methylene Chloride	ND		8.0	3.8	ug/L			04/25/23 03:05	4
m-Xylene & p-Xylene	ND		8.0	1.4	ug/L			04/25/23 03:05	4
o-Xylene	ND		4.0	1.3	ug/L			04/25/23 03:05	4
Propionitrile	ND		80	15	ug/L			04/25/23 03:05	4
Styrene	ND		4.0	1.4	ug/L			04/25/23 03:05	4
Tetrachloroethene	**19**		4.0	1.6	ug/L			04/25/23 03:05	4
Toluene	ND		4.0	1.3	ug/L			04/25/23 03:05	4
trans-1,2-Dichloroethene	ND		4.0	1.5	ug/L			04/25/23 03:05	4
trans-1,3-Dichloropropene	ND		8.0	2.6	ug/L			04/25/23 03:05	4
trans-1,4-Dichloro-2-butene	ND		12	5.5	ug/L			04/25/23 03:05	4
Trichloroethene	**180**		4.0	1.2	ug/L			04/25/23 03:05	4
Trichlorofluoromethane	ND		8.0	2.3	ug/L			04/25/23 03:05	4
Vinyl acetate	ND		12	3.8	ug/L			04/25/23 03:05	4
Vinyl chloride	**3.7**	**J**	8.0	2.0	ug/L			04/25/23 03:05	4
Xylenes, Total	ND		4.0	1.3	ug/L			04/25/23 03:05	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 127*		*04/25/23 03:05*	*4*
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*		*04/25/23 03:05*	*4*
Dibromofluoromethane (Surr)	*103*		*77 - 120*		*04/25/23 03:05*	*4*
Toluene-d8 (Surr)	*99*		*80 - 125*		*04/25/23 03:05*	*4*

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/18/23 07:56	04/18/23 18:49	1
Arsenic	**0.91**	**J**	5.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:49	1
Barium	**370**		3.0	0.38	ug/L		04/18/23 07:56	04/18/23 18:49	1
Beryllium	ND		1.0	0.30	ug/L		04/18/23 07:56	04/19/23 16:20	1
Calcium	**210000**		2000	320	ug/L		04/18/23 07:56	04/20/23 17:39	10
Cadmium	ND		1.0	0.19	ug/L		04/18/23 07:56	04/18/23 18:49	1
Co	ND		1.0	0.33	ug/L		04/18/23 07:56	04/18/23 18:49	1
Chromium	ND		3.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:49	1
Copper	**1.1**	**J**	2.0	0.71	ug/L		04/18/23 07:56	04/18/23 18:49	1
Iron	**8.8**	**J**	200	8.7	ug/L		04/18/23 07:56	04/18/23 18:49	1
Potassium	**4200**		1000	52	ug/L		04/18/23 07:56	04/18/23 18:49	1
Magnesium	**67000**		200	4.2	ug/L		04/18/23 07:56	04/18/23 18:49	1
Manganese	**3.5**		3.0	0.51	ug/L		04/18/23 07:56	04/19/23 16:20	1
Sodium	**86000**		1000	73	ug/L		04/18/23 07:56	04/19/23 16:20	1

Client Sample ID: MP-2-20230411
Lab Sample ID: 280-175122-2

Date Collected: 04/11/23 14:40
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**2.0**	**J**	3.0	0.83	ug/L		04/18/23 07:56	04/18/23 18:49	1
Lead	ND		1.0	0.23	ug/L		04/18/23 07:56	04/18/23 18:49	1
Antimony	ND		2.0	0.40	ug/L		04/18/23 07:56	04/18/23 18:49	1
Selenium	ND		5.0	1.0	ug/L		04/18/23 07:56	04/18/23 18:49	1
Tin	ND		10	0.58	ug/L		04/18/23 07:56	04/18/23 18:49	1
Thallium	ND		1.0	0.21	ug/L		04/18/23 07:56	04/18/23 18:49	1
Vanadium	**2.5**	**J**	5.0	1.1	ug/L		04/18/23 07:56	04/18/23 18:49	1
Zinc	ND		10	2.0	ug/L		04/18/23 07:56	04/18/23 18:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**2.1**	**F1**	0.50	0.23	mg/L			04/30/23 02:33	1
Nitrate as N (SW846 9056A)	**2.2**	**H H3**	0.50	0.090	mg/L			04/17/23 14:13	1
Chloride (SW846 9056A)	**310**		30	10	mg/L			04/17/23 14:28	10
Nitrite as N (SW846 9056A)	ND	H H3	0.50	0.049	mg/L			04/17/23 14:13	1
Sulfate (SW846 9056A)	**120**		50	10	mg/L			04/17/23 14:28	10
Total Organic Carbon - Duplicates (SW846 9060A)	**3.9**		1.0	0.35	mg/L			04/21/23 18:12	1

Client Sample ID: MW-118D-20230412
Lab Sample ID: 280-175122-3

Date Collected: 04/12/23 17:05
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/26/23 14:30	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/26/23 14:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/26/23 14:30	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/26/23 14:30	1
1,1-Dichloroethane	**7.8**		1.0	0.22	ug/L			04/26/23 14:30	1
1,1-Dichloroethene	**0.48**	**J**	1.0	0.23	ug/L			04/26/23 14:30	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/26/23 14:30	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/26/23 14:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/26/23 14:30	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/26/23 14:30	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/26/23 14:30	1
1,2-Dichlorobenzene	**1.1**		1.0	0.37	ug/L			04/26/23 14:30	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/26/23 14:30	1
1,2-Dichloropropane	**0.90**	**J**	1.0	0.52	ug/L			04/26/23 14:30	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/26/23 14:30	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 14:30	1
1,4-Dichlorobenzene	**0.52**	**J**	1.0	0.39	ug/L			04/26/23 14:30	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 14:30	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/26/23 14:30	1
2-Hexanone	ND		5.0	1.7	ug/L			04/26/23 14:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/26/23 14:30	1
Acetone	ND		15	6.6	ug/L			04/26/23 14:30	1
Acetonitrile	ND		30	9.6	ug/L			04/26/23 14:30	1
Acrolein	ND		20	4.9	ug/L			04/26/23 14:30	1
Acrylonitrile	ND		20	4.5	ug/L			04/26/23 14:30	1

Client Sample ID: MW-118D-20230412
Lab Sample ID: 280-175122-3

Date Collected: 04/12/23 17:05
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		2.0	0.17	ug/L			04/26/23 14:30	1
Benzene	**0.47**	**J**	1.0	0.31	ug/L			04/26/23 14:30	1
Bromoform	ND		2.0	1.2	ug/L			04/26/23 14:30	1
Bromomethane	ND		5.0	2.4	ug/L			04/26/23 14:30	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/26/23 14:30	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/26/23 14:30	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/26/23 14:30	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/26/23 14:30	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/26/23 14:30	1
Chloroethane	ND		4.0	1.4	ug/L			04/26/23 14:30	1
Chloroform	**0.37**	**J**	1.0	0.36	ug/L			04/26/23 14:30	1
Chloromethane	ND		2.0	0.75	ug/L			04/26/23 14:30	1
Chloroprene	ND		3.0	1.2	ug/L			04/26/23 14:30	1
cis-1,2-Dichloroethene	**4.6**		1.0	0.32	ug/L			04/26/23 14:30	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/26/23 14:30	1
Dibromomethane	ND		1.0	0.34	ug/L			04/26/23 14:30	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/26/23 14:30	1
Dichlorodifluoromethane	**3.2**		3.0	0.96	ug/L			04/26/23 14:30	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/26/23 14:30	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/26/23 14:30	1
Iodomethane	ND		5.0	2.6	ug/L			04/26/23 14:30	1
Isobutyl alcohol	ND		110	37	ug/L			04/26/23 14:30	1
Methacrylonitrile	ND		15	5.3	ug/L			04/26/23 14:30	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/26/23 14:30	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/26/23 14:30	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/26/23 14:30	1
o-Xylene	ND		1.0	0.33	ug/L			04/26/23 14:30	1
Propionitrile	ND		20	3.7	ug/L			04/26/23 14:30	1
Styrene	ND		1.0	0.36	ug/L			04/26/23 14:30	1
Tetrachloroethene	**9.9**		1.0	0.40	ug/L			04/26/23 14:30	1
Toluene	ND		1.0	0.32	ug/L			04/26/23 14:30	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/26/23 14:30	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/26/23 14:30	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/26/23 14:30	1
Trichloroethene	**58**		1.0	0.30	ug/L			04/26/23 14:30	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/26/23 14:30	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/26/23 14:30	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/26/23 14:30	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/26/23 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*		*04/26/23 14:30*	*1*
4-Bromofluorobenzene (Surr)	*96*		*78 - 120*		*04/26/23 14:30*	*1*
Dibromofluoromethane (Surr)	*108*		*77 - 120*		*04/26/23 14:30*	*1*
Toluene-d8 (Surr)	*101*		*80 - 125*		*04/26/23 14:30*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/18/23 07:56	04/18/23 18:54	1
Arsenic	**1.2**	**J**	5.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:54	1

Client Sample ID: MW-118D-20230412
Lab Sample ID: 280-175122-3
Date Collected: 04/12/23 17:05
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**520**		3.0	0.38	ug/L		04/18/23 07:56	04/18/23 18:54	1
Beryllium	ND		1.0	0.30	ug/L		04/18/23 07:56	04/19/23 16:25	1
Calcium	**270000**		2000	320	ug/L		04/18/23 07:56	04/20/23 17:41	10
Cadmium	ND		1.0	0.19	ug/L		04/18/23 07:56	04/18/23 18:54	1
Co	**4.0**		1.0	0.33	ug/L		04/18/23 07:56	04/18/23 18:54	1
Chromium	**0.62**	**J**	3.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:54	1
Copper	**4.0**		2.0	0.71	ug/L		04/18/23 07:56	04/18/23 18:54	1
Iron	**23**	**J**	200	8.7	ug/L		04/18/23 07:56	04/18/23 18:54	1
Potassium	**5700**		1000	52	ug/L		04/18/23 07:56	04/18/23 18:54	1
Magnesium	**96000**		200	4.2	ug/L		04/18/23 07:56	04/19/23 16:25	1
Manganese	**23**		3.0	0.51	ug/L		04/18/23 07:56	04/19/23 16:25	1
Sodium	**170000**		1000	73	ug/L		04/18/23 07:56	04/19/23 16:25	1
Nickel	**70**		3.0	0.83	ug/L		04/18/23 07:56	04/18/23 18:54	1
Lead	**2.8**		1.0	0.23	ug/L		04/18/23 07:56	04/18/23 18:54	1
Antimony	ND		2.0	0.40	ug/L		04/18/23 07:56	04/18/23 18:54	1
Selenium	ND		5.0	1.0	ug/L		04/18/23 07:56	04/18/23 18:54	1
Tin	ND		10	0.58	ug/L		04/18/23 07:56	04/18/23 18:54	1
Thallium	ND		1.0	0.21	ug/L		04/18/23 07:56	04/18/23 18:54	1
Vanadium	**2.6**	**J**	5.0	1.1	ug/L		04/18/23 07:56	04/18/23 18:54	1
Zinc	ND		10	2.0	ug/L		04/18/23 07:56	04/18/23 18:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**3.8**		0.50	0.23	mg/L			04/30/23 01:57	1
Nitrate as N (SW846 9056A)	**2.2**	**H H3**	0.50	0.090	mg/L			04/17/23 14:43	1
Chloride (SW846 9056A)	**640**		60	20	mg/L			04/17/23 14:58	20
Nitrite as N (SW846 9056A)	ND	H H3	0.50	0.049	mg/L			04/17/23 14:43	1
Sulfate (SW846 9056A)	**80**		5.0	1.0	mg/L			04/17/23 14:43	1
Total Organic Carbon - Duplicates (SW846 9060A)	**11**		1.0	0.35	mg/L			04/21/23 18:57	1

Client Sample ID: MP-3-20230413
Lab Sample ID: 280-175122-4
Date Collected: 04/13/23 16:26
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0	1.2	ug/L			04/27/23 18:49	2
1,1,1-Trichloroethane	ND		2.0	0.78	ug/L			04/27/23 18:49	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			04/27/23 18:49	2
1,1,2-Trichloroethane	ND		2.0	0.54	ug/L			04/27/23 18:49	2
1,1-Dichloroethane	ND		2.0	0.44	ug/L			04/27/23 18:49	2
1,1-Dichloroethene	ND		2.0	0.46	ug/L			04/27/23 18:49	2
1,1-Dichloropropene	ND		2.0	0.83	ug/L			04/27/23 18:49	2
1,2,3-Trichloropropane	ND		5.0	1.7	ug/L			04/27/23 18:49	2
1,2,4-Trichlorobenzene	ND		2.0	1.2	ug/L			04/27/23 18:49	2
1,2-Dibromo-3-Chloropropane	ND		10	3.5	ug/L			04/27/23 18:49	2
1,2-Dibromoethane	ND		2.0	0.81	ug/L			04/27/23 18:49	2
1,2-Dichlorobenzene	ND		2.0	0.74	ug/L			04/27/23 18:49	2
1,2-Dichloroethane	ND		2.0	1.1	ug/L			04/27/23 18:49	2

Client Sample ID: MP-3-20230413
Lab Sample ID: 280-175122-4

Date Collected: 04/13/23 16:26
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		2.0	1.0	ug/L			04/27/23 18:49	2
1,3-Dichlorobenzene	ND		2.0	0.67	ug/L			04/27/23 18:49	2
1,3-Dichloropropane	ND		2.0	0.76	ug/L			04/27/23 18:49	2
1,4-Dichlorobenzene	ND		2.0	0.78	ug/L			04/27/23 18:49	2
2,2-Dichloropropane	ND		2.0	0.76	ug/L			04/27/23 18:49	2
2-Butanone (MEK)	ND		30	12	ug/L			04/27/23 18:49	2
2-Hexanone	ND		10	3.4	ug/L			04/27/23 18:49	2
4-Methyl-2-pentanone (MIBK)	ND		10	2.0	ug/L			04/27/23 18:49	2
Acetone	ND		30	13	ug/L			04/27/23 18:49	2
Acetonitrile	ND		60	19	ug/L			04/27/23 18:49	2
Acrolein	ND		40	9.7	ug/L			04/27/23 18:49	2
Acrylonitrile	ND		40	8.9	ug/L			04/27/23 18:49	2
Allyl chloride	ND		4.0	0.34	ug/L			04/27/23 18:49	2
Benzene	ND		2.0	0.62	ug/L			04/27/23 18:49	2
Bromoform	ND		4.0	2.4	ug/L			04/27/23 18:49	2
Bromomethane	ND		10	4.7	ug/L			04/27/23 18:49	2
Carbon disulfide	ND		4.0	1.3	ug/L			04/27/23 18:49	2
Carbon tetrachloride	ND		2.0	1.1	ug/L			04/27/23 18:49	2
Chlorobenzene	ND		2.0	0.84	ug/L			04/27/23 18:49	2
Chlorobromomethane	ND		2.0	0.81	ug/L			04/27/23 18:49	2
Chlorodibromomethane	ND		4.0	1.2	ug/L			04/27/23 18:49	2
Chloroethane	ND		8.0	2.7	ug/L			04/27/23 18:49	2
Chloroform	**2.1**		2.0	0.72	ug/L			04/27/23 18:49	2
Chloromethane	ND		4.0	1.5	ug/L			04/27/23 18:49	2
Chloroprene	ND		6.0	2.3	ug/L			04/27/23 18:49	2
cis-1,2-Dichloroethene	**4.3**		2.0	0.64	ug/L			04/27/23 18:49	2
cis-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/27/23 18:49	2
Dibromomethane	ND		2.0	0.69	ug/L			04/27/23 18:49	2
Dichlorobromomethane	ND		2.0	0.77	ug/L			04/27/23 18:49	2
Dichlorodifluoromethane	ND		6.0	1.9	ug/L			04/27/23 18:49	2
Ethyl methacrylate	ND		6.0	1.7	ug/L			04/27/23 18:49	2
Ethylbenzene	ND		2.0	0.61	ug/L			04/27/23 18:49	2
Iodomethane	ND		10	5.2	ug/L			04/27/23 18:49	2
Isobutyl alcohol	ND		220	73	ug/L			04/27/23 18:49	2
Methacrylonitrile	ND		30	11	ug/L			04/27/23 18:49	2
Methyl methacrylate	ND		8.0	2.2	ug/L			04/27/23 18:49	2
Methylene Chloride	ND		4.0	1.9	ug/L			04/27/23 18:49	2
m-Xylene & p-Xylene	ND		4.0	0.71	ug/L			04/27/23 18:49	2
o-Xylene	ND		2.0	0.66	ug/L			04/27/23 18:49	2
Propionitrile	ND		40	7.4	ug/L			04/27/23 18:49	2
Styrene	ND		2.0	0.71	ug/L			04/27/23 18:49	2
Tetrachloroethene	**19**		2.0	0.81	ug/L			04/27/23 18:49	2
Toluene	ND		2.0	0.64	ug/L			04/27/23 18:49	2
trans-1,2-Dichloroethene	ND		2.0	0.74	ug/L			04/27/23 18:49	2
trans-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/27/23 18:49	2
trans-1,4-Dichloro-2-butene	ND		6.0	2.8	ug/L			04/27/23 18:49	2
Trichloroethene	**110**		2.0	0.60	ug/L			04/27/23 18:49	2
Trichlorofluoromethane	ND		4.0	1.1	ug/L			04/27/23 18:49	2
Vinyl acetate	ND		6.0	1.9	ug/L			04/27/23 18:49	2

Client Sample ID: MP-3-20230413
Lab Sample ID: 280-175122-4

Date Collected: 04/13/23 16:26
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		4.0	1.0	ug/L			04/27/23 18:49	2
Xylenes, Total	ND		2.0	0.66	ug/L			04/27/23 18:49	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 127*		*04/27/23 18:49*	*2*
4-Bromofluorobenzene (Surr)	*99*		*78 - 120*		*04/27/23 18:49*	*2*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/27/23 18:49*	*2*
Toluene-d8 (Surr)	*99*		*80 - 125*		*04/27/23 18:49*	*2*

Client Sample ID: MW-111D-20230414
Lab Sample ID: 280-175122-5

Date Collected: 04/14/23 15:30
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/21/23 16:28	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/21/23 16:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/21/23 16:28	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/21/23 16:28	1
1,1-Dichloroethane	**24**		1.0	0.22	ug/L			04/21/23 16:28	1
1,1-Dichloroethene	**0.43**	**J**	1.0	0.23	ug/L			04/21/23 16:28	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/21/23 16:28	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/21/23 16:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/21/23 16:28	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/21/23 16:28	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/21/23 16:28	1
1,2-Dichlorobenzene	**8.9**		1.0	0.37	ug/L			04/21/23 16:28	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/21/23 16:28	1
1,2-Dichloropropane	**2.4**		1.0	0.52	ug/L			04/21/23 16:28	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/21/23 16:28	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/21/23 16:28	1
1,4-Dichlorobenzene	**3.6**		1.0	0.39	ug/L			04/21/23 16:28	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/21/23 16:28	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/21/23 16:28	1
2-Hexanone	ND		5.0	1.7	ug/L			04/21/23 16:28	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/21/23 16:28	1
Acetone	ND		15	6.6	ug/L			04/21/23 16:28	1
Acetonitrile	ND		30	9.6	ug/L			04/21/23 16:28	1
Acrolein	ND		20	4.9	ug/L			04/21/23 16:28	1
Acrylonitrile	ND		20	4.5	ug/L			04/21/23 16:28	1
Allyl chloride	ND		2.0	0.17	ug/L			04/21/23 16:28	1
Benzene	**7.3**		1.0	0.31	ug/L			04/21/23 16:28	1
Bromoform	ND		2.0	1.2	ug/L			04/21/23 16:28	1
Bromomethane	ND		5.0	2.4	ug/L			04/21/23 16:28	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/21/23 16:28	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/21/23 16:28	1
Chlorobenzene	**6.7**		1.0	0.42	ug/L			04/21/23 16:28	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/21/23 16:28	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/21/23 16:28	1
Chloroethane	ND		4.0	1.4	ug/L			04/21/23 16:28	1

Client Sample ID: MW-111D-20230414
Lab Sample ID: 280-175122-5

Date Collected: 04/14/23 15:30
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	**0.48**	**J**	1.0	0.36	ug/L			04/21/23 16:28	1
Chloromethane	ND		2.0	0.75	ug/L			04/21/23 16:28	1
Chloroprene	ND		3.0	1.2	ug/L			04/21/23 16:28	1
cis-1,2-Dichloroethene	**9.2**		1.0	0.32	ug/L			04/21/23 16:28	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/21/23 16:28	1
Dibromomethane	ND		1.0	0.34	ug/L			04/21/23 16:28	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/21/23 16:28	1
Dichlorodifluoromethane	**6.5**		3.0	0.96	ug/L			04/21/23 16:28	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/21/23 16:28	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/21/23 16:28	1
Iodomethane	ND		5.0	2.6	ug/L			04/21/23 16:28	1
Isobutyl alcohol	ND		110	37	ug/L			04/21/23 16:28	1
Methacrylonitrile	ND		15	5.3	ug/L			04/21/23 16:28	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/21/23 16:28	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/21/23 16:28	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/21/23 16:28	1
o-Xylene	**0.74**	**J**	1.0	0.33	ug/L			04/21/23 16:28	1
Propionitrile	ND		20	3.7	ug/L			04/21/23 16:28	1
Styrene	ND		1.0	0.36	ug/L			04/21/23 16:28	1
Tetrachloroethene	**1.6**		1.0	0.40	ug/L			04/21/23 16:28	1
Toluene	ND		1.0	0.32	ug/L			04/21/23 16:28	1
trans-1,2-Dichloroethene	**1.3**		1.0	0.37	ug/L			04/21/23 16:28	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/21/23 16:28	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/21/23 16:28	1
Trichloroethene	**110**		1.0	0.30	ug/L			04/21/23 16:28	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/21/23 16:28	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/21/23 16:28	1
Vinyl chloride	**6.1**		2.0	0.51	ug/L			04/21/23 16:28	1
Xylenes, Total	**0.74**	**J**	1.0	0.33	ug/L			04/21/23 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 127*		*04/21/23 16:28*	*1*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*		*04/21/23 16:28*	*1*
Dibromofluoromethane (Surr)	*106*		*77 - 120*		*04/21/23 16:28*	*1*
Toluene-d8 (Surr)	*108*		*80 - 125*		*04/21/23 16:28*	*1*

Client Sample ID: MW-123-20230415
Lab Sample ID: 280-175122-6

Date Collected: 04/15/23 14:55
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/28/23 03:17	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/28/23 03:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/28/23 03:17	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/28/23 03:17	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/28/23 03:17	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/28/23 03:17	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/28/23 03:17	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/28/23 03:17	1

Client Sample ID: MW-123-20230415
Lab Sample ID: 280-175122-6

Date Collected: 04/15/23 14:55
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/28/23 03:17	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/28/23 03:17	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/28/23 03:17	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/28/23 03:17	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/28/23 03:17	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/28/23 03:17	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/28/23 03:17	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/28/23 03:17	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/28/23 03:17	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/28/23 03:17	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/28/23 03:17	1
2-Hexanone	ND		5.0	1.7	ug/L			04/28/23 03:17	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/28/23 03:17	1
Acetone	ND		15	6.6	ug/L			04/28/23 03:17	1
Acetonitrile	ND		30	9.6	ug/L			04/28/23 03:17	1
Acrolein	ND		20	4.9	ug/L			04/28/23 03:17	1
Acrylonitrile	ND		20	4.5	ug/L			04/28/23 03:17	1
Allyl chloride	ND		2.0	0.17	ug/L			04/28/23 03:17	1
Benzene	ND		1.0	0.31	ug/L			04/28/23 03:17	1
Bromoform	ND		2.0	1.2	ug/L			04/28/23 03:17	1
Bromomethane	ND		5.0	2.4	ug/L			04/28/23 03:17	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/28/23 03:17	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/28/23 03:17	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/28/23 03:17	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/28/23 03:17	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/28/23 03:17	1
Chloroethane	ND		4.0	1.4	ug/L			04/28/23 03:17	1
Chloroform	ND		1.0	0.36	ug/L			04/28/23 03:17	1
Chloromethane	ND		2.0	0.75	ug/L			04/28/23 03:17	1
Chloroprene	ND		3.0	1.2	ug/L			04/28/23 03:17	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/28/23 03:17	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/28/23 03:17	1
Dibromomethane	ND		1.0	0.34	ug/L			04/28/23 03:17	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/28/23 03:17	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/28/23 03:17	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/28/23 03:17	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/28/23 03:17	1
Iodomethane	ND		5.0	2.6	ug/L			04/28/23 03:17	1
Isobutyl alcohol	ND		110	37	ug/L			04/28/23 03:17	1
Methacrylonitrile	ND		15	5.3	ug/L			04/28/23 03:17	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/28/23 03:17	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/28/23 03:17	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/28/23 03:17	1
o-Xylene	ND		1.0	0.33	ug/L			04/28/23 03:17	1
Propionitrile	ND		20	3.7	ug/L			04/28/23 03:17	1
Styrene	ND		1.0	0.36	ug/L			04/28/23 03:17	1
Tetrachloroethene	**4.2**		1.0	0.40	ug/L			04/28/23 03:17	1
Toluene	ND		1.0	0.32	ug/L			04/28/23 03:17	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/28/23 03:17	1

Client Sample ID: MW-123-20230415
Lab Sample ID: 280-175122-6

Date Collected: 04/15/23 14:55
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/28/23 03:17	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/28/23 03:17	1
Trichloroethene	**56**		1.0	0.30	ug/L			04/28/23 03:17	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/28/23 03:17	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/28/23 03:17	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/28/23 03:17	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/28/23 03:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 127*		*04/28/23 03:17*	*1*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*		*04/28/23 03:17*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*04/28/23 03:17*	*1*
Toluene-d8 (Surr)	*102*		*80 - 125*		*04/28/23 03:17*	*1*

Client Sample ID: MW-102S-20230414
Lab Sample ID: 280-175122-7

Date Collected: 04/14/23 14:30
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 15:44	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 15:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 15:44	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 15:44	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/27/23 15:44	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 15:44	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 15:44	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 15:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 15:44	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 15:44	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 15:44	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 15:44	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 15:44	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 15:44	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 15:44	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 15:44	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 15:44	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 15:44	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 15:44	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 15:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 15:44	1
Acetone	ND		15	6.6	ug/L			04/27/23 15:44	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 15:44	1
Acrolein	ND		20	4.9	ug/L			04/27/23 15:44	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 15:44	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 15:44	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 15:44	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 15:44	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 15:44	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 15:44	1

Client Sample ID: MW-102S-20230414
Lab Sample ID: 280-175122-7

Date Collected: 04/14/23 14:30
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 15:44	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 15:44	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 15:44	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 15:44	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 15:44	1
Chloroform	ND		1.0	0.36	ug/L			04/27/23 15:44	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 15:44	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 15:44	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/27/23 15:44	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 15:44	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 15:44	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 15:44	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/27/23 15:44	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 15:44	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 15:44	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 15:44	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 15:44	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 15:44	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 15:44	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 15:44	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 15:44	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 15:44	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 15:44	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 15:44	1
Tetrachloroethene	**0.91**	**J**	1.0	0.40	ug/L			04/27/23 15:44	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 15:44	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 15:44	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 15:44	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 15:44	1
Trichloroethene	**2.0**		1.0	0.30	ug/L			04/27/23 15:44	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 15:44	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 15:44	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 15:44	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 127*		*04/27/23 15:44*	*1*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/27/23 15:44*	*1*
Dibromofluoromethane (Surr)	*103*		*77 - 120*		*04/27/23 15:44*	*1*
Toluene-d8 (Surr)	*100*		*80 - 125*		*04/27/23 15:44*	*1*

Client Sample ID: MW-115S-20230415
Lab Sample ID: 280-175122-8

Date Collected: 04/15/23 10:30
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/28/23 03:38	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/28/23 03:38	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/28/23 03:38	1

Client Sample ID: MW-115S-20230415
Lab Sample ID: 280-175122-8

Date Collected: 04/15/23 10:30
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/28/23 03:38	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/28/23 03:38	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/28/23 03:38	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/28/23 03:38	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/28/23 03:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/28/23 03:38	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/28/23 03:38	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/28/23 03:38	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/28/23 03:38	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/28/23 03:38	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/28/23 03:38	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/28/23 03:38	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/28/23 03:38	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/28/23 03:38	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/28/23 03:38	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/28/23 03:38	1
2-Hexanone	ND		5.0	1.7	ug/L			04/28/23 03:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/28/23 03:38	1
Acetone	ND		15	6.6	ug/L			04/28/23 03:38	1
Acetonitrile	ND		30	9.6	ug/L			04/28/23 03:38	1
Acrolein	ND		20	4.9	ug/L			04/28/23 03:38	1
Acrylonitrile	ND		20	4.5	ug/L			04/28/23 03:38	1
Allyl chloride	ND		2.0	0.17	ug/L			04/28/23 03:38	1
Benzene	ND		1.0	0.31	ug/L			04/28/23 03:38	1
Bromoform	ND		2.0	1.2	ug/L			04/28/23 03:38	1
Bromomethane	ND		5.0	2.4	ug/L			04/28/23 03:38	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/28/23 03:38	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/28/23 03:38	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/28/23 03:38	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/28/23 03:38	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/28/23 03:38	1
Chloroethane	ND		4.0	1.4	ug/L			04/28/23 03:38	1
Chloroform	ND		1.0	0.36	ug/L			04/28/23 03:38	1
Chloromethane	ND		2.0	0.75	ug/L			04/28/23 03:38	1
Chloroprene	ND		3.0	1.2	ug/L			04/28/23 03:38	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/28/23 03:38	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/28/23 03:38	1
Dibromomethane	ND		1.0	0.34	ug/L			04/28/23 03:38	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/28/23 03:38	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/28/23 03:38	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/28/23 03:38	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/28/23 03:38	1
Iodomethane	ND		5.0	2.6	ug/L			04/28/23 03:38	1
Isobutyl alcohol	ND		110	37	ug/L			04/28/23 03:38	1
Methacrylonitrile	ND		15	5.3	ug/L			04/28/23 03:38	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/28/23 03:38	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/28/23 03:38	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/28/23 03:38	1
o-Xylene	ND		1.0	0.33	ug/L			04/28/23 03:38	1

Client Sample ID: MW-115S-20230415
Lab Sample ID: 280-175122-8

Date Collected: 04/15/23 10:30
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		20	3.7	ug/L			04/28/23 03:38	1
Styrene	ND		1.0	0.36	ug/L			04/28/23 03:38	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/28/23 03:38	1
Toluene	ND		1.0	0.32	ug/L			04/28/23 03:38	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/28/23 03:38	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/28/23 03:38	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/28/23 03:38	1
Trichloroethene	**0.45**	**J**	1.0	0.30	ug/L			04/28/23 03:38	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/28/23 03:38	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/28/23 03:38	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/28/23 03:38	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/28/23 03:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 127*		*04/28/23 03:38*	*1*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/28/23 03:38*	*1*
Dibromofluoromethane (Surr)	*103*		*77 - 120*		*04/28/23 03:38*	*1*
Toluene-d8 (Surr)	*100*		*80 - 125*		*04/28/23 03:38*	*1*

Client Sample ID: TB-07-20230416
Lab Sample ID: 280-175122-9

Date Collected: 04/16/23 10:40
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/28/23 00:12	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/28/23 00:12	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/28/23 00:12	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/28/23 00:12	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/28/23 00:12	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/28/23 00:12	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/28/23 00:12	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/28/23 00:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/28/23 00:12	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/28/23 00:12	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/28/23 00:12	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/28/23 00:12	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/28/23 00:12	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/28/23 00:12	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/28/23 00:12	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/28/23 00:12	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/28/23 00:12	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/28/23 00:12	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/28/23 00:12	1
2-Hexanone	ND		5.0	1.7	ug/L			04/28/23 00:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/28/23 00:12	1
Acetone	ND		15	6.6	ug/L			04/28/23 00:12	1
Acetonitrile	ND		30	9.6	ug/L			04/28/23 00:12	1
Acrolein	ND		20	4.9	ug/L			04/28/23 00:12	1
Acrylonitrile	ND		20	4.5	ug/L			04/28/23 00:12	1

Client Sample ID: TB-07-20230416
Lab Sample ID: 280-175122-9

Date Collected: 04/16/23 10:40
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		2.0	0.17	ug/L			04/28/23 00:12	1
Benzene	ND		1.0	0.31	ug/L			04/28/23 00:12	1
Bromoform	ND		2.0	1.2	ug/L			04/28/23 00:12	1
Bromomethane	ND		5.0	2.4	ug/L			04/28/23 00:12	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/28/23 00:12	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/28/23 00:12	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/28/23 00:12	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/28/23 00:12	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/28/23 00:12	1
Chloroethane	ND		4.0	1.4	ug/L			04/28/23 00:12	1
Chloroform	ND		1.0	0.36	ug/L			04/28/23 00:12	1
Chloromethane	ND		2.0	0.75	ug/L			04/28/23 00:12	1
Chloroprene	ND		3.0	1.2	ug/L			04/28/23 00:12	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/28/23 00:12	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/28/23 00:12	1
Dibromomethane	ND		1.0	0.34	ug/L			04/28/23 00:12	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/28/23 00:12	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/28/23 00:12	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/28/23 00:12	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/28/23 00:12	1
Iodomethane	ND		5.0	2.6	ug/L			04/28/23 00:12	1
Isobutyl alcohol	ND		110	37	ug/L			04/28/23 00:12	1
Methacrylonitrile	ND		15	5.3	ug/L			04/28/23 00:12	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/28/23 00:12	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/28/23 00:12	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/28/23 00:12	1
o-Xylene	ND		1.0	0.33	ug/L			04/28/23 00:12	1
Propionitrile	ND		20	3.7	ug/L			04/28/23 00:12	1
Styrene	ND		1.0	0.36	ug/L			04/28/23 00:12	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/28/23 00:12	1
Toluene	ND		1.0	0.32	ug/L			04/28/23 00:12	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/28/23 00:12	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/28/23 00:12	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/28/23 00:12	1
Trichloroethene	ND		1.0	0.30	ug/L			04/28/23 00:12	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/28/23 00:12	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/28/23 00:12	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/28/23 00:12	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/28/23 00:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 127*		*04/28/23 00:12*	*1*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*		*04/28/23 00:12*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/28/23 00:12*	*1*
Toluene-d8 (Surr)	*102*		*80 - 125*		*04/28/23 00:12*	*1*

Default Detection Limits

Client: CDM Smith Inc
Job ID: 280-175122-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units
1,1,1,2-Tetrachloroethane	1.0	0.58	ug/L
1,1,1-Trichloroethane	1.0	0.39	ug/L
1,1,2,2-Tetrachloroethane	1.0	0.21	ug/L
1,1,2-Trichloroethane	1.0	0.27	ug/L
1,1-Dichloroethane	1.0	0.22	ug/L
1,1-Dichloroethene	1.0	0.23	ug/L
1,1-Dichloropropene	1.0	0.42	ug/L
1,2,3-Trichloropropane	2.5	0.86	ug/L
1,2,4-Trichlorobenzene	1.0	0.58	ug/L
1,2-Dibromo-3-Chloropropane	5.0	1.8	ug/L
1,2-Dibromoethane	1.0	0.40	ug/L
1,2-Dichlorobenzene	1.0	0.37	ug/L
1,2-Dichloroethane	1.0	0.54	ug/L
1,2-Dichloropropane	1.0	0.52	ug/L
1,3-Dichlorobenzene	1.0	0.33	ug/L
1,3-Dichloropropane	1.0	0.38	ug/L
1,4-Dichlorobenzene	1.0	0.39	ug/L
2,2-Dichloropropane	1.0	0.38	ug/L
2-Butanone (MEK)	15	6.0	ug/L
2-Hexanone	5.0	1.7	ug/L
4-Methyl-2-pentanone (MIBK)	5.0	0.98	ug/L
Acetone	15	6.6	ug/L
Acetonitrile	30	9.6	ug/L
Acrolein	20	4.9	ug/L
Acrylonitrile	20	4.5	ug/L
Allyl chloride	2.0	0.17	ug/L
Benzene	1.0	0.31	ug/L
Bromoform	2.0	1.2	ug/L
Bromomethane	5.0	2.4	ug/L
Carbon disulfide	2.0	0.63	ug/L
Carbon tetrachloride	1.0	0.57	ug/L
Chlorobenzene	1.0	0.42	ug/L
Chlorobromomethane	1.0	0.40	ug/L
Chlorodibromomethane	2.0	0.62	ug/L
Chloroethane	4.0	1.4	ug/L
Chloroform	1.0	0.36	ug/L
Chloromethane	2.0	0.75	ug/L
Chloroprene	3.0	1.2	ug/L
cis-1,2-Dichloroethene	1.0	0.32	ug/L
cis-1,3-Dichloropropene	2.0	0.63	ug/L
Dibromomethane	1.0	0.34	ug/L
Dichlorobromomethane	1.0	0.39	ug/L
Dichlorodifluoromethane	3.0	0.96	ug/L
Ethyl methacrylate	3.0	0.86	ug/L
Ethylbenzene	1.0	0.30	ug/L
Iodomethane	5.0	2.6	ug/L
Isobutyl alcohol	110	37	ug/L
Methacrylonitrile	15	5.3	ug/L
Methyl methacrylate	4.0	1.1	ug/L
Methylene Chloride	2.0	0.94	ug/L
m-Xylene & p-Xylene	2.0	0.36	ug/L
o-Xylene	1.0	0.33	ug/L
Propionitrile	20	3.7	ug/L

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	RL	MDL	Units
Styrene	1.0	0.36	ug/L
Tetrachloroethene	1.0	0.40	ug/L
Toluene	1.0	0.32	ug/L
trans-1,2-Dichloroethene	1.0	0.37	ug/L
trans-1,3-Dichloropropene	2.0	0.65	ug/L
trans-1,4-Dichloro-2-butene	3.0	1.4	ug/L
Trichloroethene	1.0	0.30	ug/L
Trichlorofluoromethane	2.0	0.57	ug/L
Vinyl acetate	3.0	0.94	ug/L
Vinyl chloride	2.0	0.51	ug/L
Xylenes, Total	1.0	0.33	ug/L

Method: 6020B - Metals (ICP/MS) - Dissolved

Prep: 3005A

Analyte	RL	MDL	Units
Antimony	2.0	0.40	ug/L
Arsenic	5.0	0.50	ug/L
Barium	3.0	0.38	ug/L
Beryllium	1.0	0.30	ug/L
Cadmium	1.0	0.19	ug/L
Calcium	200	32	ug/L
Chromium	3.0	0.50	ug/L
Co	1.0	0.33	ug/L
Copper	2.0	0.71	ug/L
Iron	200	8.7	ug/L
Lead	1.0	0.23	ug/L
Magnesium	200	4.2	ug/L
Manganese	3.0	0.51	ug/L
Nickel	3.0	0.83	ug/L
Potassium	1000	52	ug/L
Selenium	5.0	1.0	ug/L
Silver	1.0	0.045	ug/L
Sodium	1000	73	ug/L
Thallium	1.0	0.21	ug/L
Tin	10	0.58	ug/L
Vanadium	5.0	1.1	ug/L
Zinc	10	2.0	ug/L

General Chemistry

Analyte	RL	MDL	Units
Bromide	0.50	0.23	mg/L
Chloride	3.0	1.0	mg/L
Nitrate as N	0.50	0.090	mg/L
Nitrite as N	0.50	0.049	mg/L
Sulfate	5.0	1.0	mg/L
Total Organic Carbon - Duplicates	1.0	0.35	mg/L

Surrogate Summary

Client: CDM Smith Inc
Job ID: 280-175122-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-127)	(78-120)	(77-120)	(80-125)
280-175122-1	RW-1-20230413	96	102	102	101
280-175122-2	MP-2-20230411	101	101	103	99
280-175122-3	MW-118D-20230412	103	96	108	101
280-175122-4	MP-3-20230413	95	99	102	99
280-175122-5	MW-111D-20230414	116	103	106	108
280-175122-6	MW-123-20230415	91	103	101	102
280-175122-7	MW-102S-20230414	95	102	103	100
280-175122-8	MW-115S-20230415	93	102	103	100
280-175122-9	TB-07-20230416	92	103	102	102
LCS 280-609561/1002	Lab Control Sample	114	104	107	106
LCS 280-609561/1003	Lab Control Sample	115	106	110	105
LCS 280-609932/1002	Lab Control Sample	100	99	103	100
LCS 280-609932/1003	Lab Control Sample	102	102	103	102
LCS 280-610121/1002	Lab Control Sample	97	102	104	101
LCS 280-610121/1003	Lab Control Sample	99	100	106	100
LCS 280-610123/1002	Lab Control Sample	103	95	109	102
LCS 280-610123/1003	Lab Control Sample	106	95	109	100
LCS 280-610347/1002	Lab Control Sample	94	102	102	102
LCS 280-610347/1003	Lab Control Sample	95	101	101	101
LCS 280-610485/1002	Lab Control Sample	93	100	103	103
LCS 280-610485/1003	Lab Control Sample	91	100	102	101
LCSD 280-609561/4	Lab Control Sample Dup	115	104	107	106
LCSD 280-609561/5	Lab Control Sample Dup	114	107	107	107
LCSD 280-609932/4	Lab Control Sample Dup	102	102	104	101
LCSD 280-609932/5	Lab Control Sample Dup	103	100	103	103
LCSD 280-610121/4	Lab Control Sample Dup	96	104	103	101
LCSD 280-610121/5	Lab Control Sample Dup	98	103	103	99
LCSD 280-610123/4	Lab Control Sample Dup	105	95	109	101
LCSD 280-610123/5	Lab Control Sample Dup	105	96	108	103
LCSD 280-610347/4	Lab Control Sample Dup	97	102	102	101
LCSD 280-610347/5	Lab Control Sample Dup	96	100	103	100
LCSD 280-610485/4	Lab Control Sample Dup	95	99	103	101
LCSD 280-610485/5	Lab Control Sample Dup	93	101	103	101
MB 280-609561/7	Method Blank	113	103	107	107
MB 280-609932/7	Method Blank	99	102	104	102
MB 280-610121/7	Method Blank	94	98	103	102
MB 280-610123/7	Method Blank	104	95	108	102
MB 280-610347/7	Method Blank	97	99	102	100
MB 280-610485/7	Method Blank	92	103	102	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 280-609561/7
Matrix: Water
Analysis Batch: 609561

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/21/23 09:22	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/21/23 09:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/21/23 09:22	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/21/23 09:22	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/21/23 09:22	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/21/23 09:22	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/21/23 09:22	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/21/23 09:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/21/23 09:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/21/23 09:22	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/21/23 09:22	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/21/23 09:22	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/21/23 09:22	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/21/23 09:22	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/21/23 09:22	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/21/23 09:22	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/21/23 09:22	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/21/23 09:22	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/21/23 09:22	1
2-Hexanone	ND		5.0	1.7	ug/L			04/21/23 09:22	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/21/23 09:22	1
Acetone	ND		15	6.6	ug/L			04/21/23 09:22	1
Acetonitrile	ND		30	9.6	ug/L			04/21/23 09:22	1
Acrolein	ND		20	4.9	ug/L			04/21/23 09:22	1
Acrylonitrile	ND		20	4.5	ug/L			04/21/23 09:22	1
Allyl chloride	ND		2.0	0.17	ug/L			04/21/23 09:22	1
Benzene	ND		1.0	0.31	ug/L			04/21/23 09:22	1
Bromoform	ND		2.0	1.2	ug/L			04/21/23 09:22	1
Bromomethane	ND		5.0	2.4	ug/L			04/21/23 09:22	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/21/23 09:22	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/21/23 09:22	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/21/23 09:22	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/21/23 09:22	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/21/23 09:22	1
Chloroethane	ND		4.0	1.4	ug/L			04/21/23 09:22	1
Chloroform	ND		1.0	0.36	ug/L			04/21/23 09:22	1
Chloromethane	ND		2.0	0.75	ug/L			04/21/23 09:22	1
Chloroprene	ND		3.0	1.2	ug/L			04/21/23 09:22	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/21/23 09:22	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/21/23 09:22	1
Dibromomethane	ND		1.0	0.34	ug/L			04/21/23 09:22	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/21/23 09:22	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/21/23 09:22	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/21/23 09:22	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/21/23 09:22	1
Iodomethane	ND		5.0	2.6	ug/L			04/21/23 09:22	1
Isobutyl alcohol	ND		110	37	ug/L			04/21/23 09:22	1
Methacrylonitrile	ND		15	5.3	ug/L			04/21/23 09:22	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-609561/7
Matrix: Water
Analysis Batch: 609561

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl methacrylate	ND		4.0	1.1	ug/L			04/21/23 09:22	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/21/23 09:22	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/21/23 09:22	1
o-Xylene	ND		1.0	0.33	ug/L			04/21/23 09:22	1
Propionitrile	ND		20	3.7	ug/L			04/21/23 09:22	1
Styrene	ND		1.0	0.36	ug/L			04/21/23 09:22	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/21/23 09:22	1
Toluene	ND		1.0	0.32	ug/L			04/21/23 09:22	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/21/23 09:22	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/21/23 09:22	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/21/23 09:22	1
Trichloroethene	ND		1.0	0.30	ug/L			04/21/23 09:22	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/21/23 09:22	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/21/23 09:22	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/21/23 09:22	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/21/23 09:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 127*		*04/21/23 09:22*	*1*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*		*04/21/23 09:22*	*1*
Dibromofluoromethane (Surr)	*107*		*77 - 120*		*04/21/23 09:22*	*1*
Toluene-d8 (Surr)	*107*		*80 - 125*		*04/21/23 09:22*	*1*

Lab Sample ID: LCS 280-609561/1002
Matrix: Water
Analysis Batch: 609561

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	46.8		ug/L		94	74 - 121
1,1,1-Trichloroethane	50.0	51.5		ug/L		103	62 - 132
1,1,2,2-Tetrachloroethane	50.0	49.4		ug/L		99	72 - 122
1,1,2-Trichloroethane	50.0	49.2		ug/L		98	72 - 128
1,1-Dichloroethane	50.0	50.1		ug/L		100	66 - 130
1,1-Dichloroethene	50.0	45.5		ug/L		91	62 - 130
1,1-Dichloropropene	50.0	51.0		ug/L		102	64 - 133
1,2,3-Trichloropropane	50.0	48.0		ug/L		96	74 - 123
1,2,4-Trichlorobenzene	50.0	46.2		ug/L		92	73 - 124
1,2-Dibromo-3-Chloropropane	50.0	43.2		ug/L		86	58 - 122
1,2-Dibromoethane	50.0	47.9		ug/L		96	81 - 118
1,2-Dichlorobenzene	50.0	48.6		ug/L		97	77 - 121
1,2-Dichloroethane	50.0	49.1		ug/L		98	61 - 130
1,2-Dichloropropane	50.0	49.1		ug/L		98	68 - 127
1,3-Dichlorobenzene	50.0	49.1		ug/L		98	76 - 121
1,3-Dichloropropane	50.0	49.7		ug/L		99	80 - 118
1,4-Dichlorobenzene	50.0	47.7		ug/L		95	76 - 119
2,2-Dichloropropane	50.0	49.6		ug/L		99	57 - 140
2-Butanone (MEK)	200	193		ug/L		97	53 - 135
2-Hexanone	200	200		ug/L		100	58 - 134

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609561/1002
Matrix: Water
Analysis Batch: 609561

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Methyl-2-pentanone (MIBK)	200	207		ug/L		103	56 - 135
Acetone	200	190		ug/L		95	50 - 137
Acrolein	494	511		ug/L		104	10 - 207
Acrylonitrile	500	513		ug/L		103	65 - 133
Allyl chloride	50.0	49.6		ug/L		99	57 - 136
Benzene	50.0	50.4		ug/L		101	69 - 126
Bromoform	50.0	44.4		ug/L		89	57 - 125
Bromomethane	50.0	52.9		ug/L		106	25 - 163
Carbon disulfide	50.0	44.0		ug/L		88	56 - 128
Carbon tetrachloride	50.0	47.8		ug/L		96	60 - 133
Chlorobenzene	50.0	48.7		ug/L		97	78 - 118
Chlorobromomethane	50.0	47.9		ug/L		96	71 - 130
Chlorodibromomethane	50.0	45.6		ug/L		91	71 - 122
Chloroethane	50.0	50.3		ug/L		101	52 - 144
Chloroform	50.0	50.4		ug/L		101	68 - 128
Chloromethane	50.0	53.3		ug/L		107	43 - 142
cis-1,2-Dichloroethene	50.0	49.9		ug/L		100	69 - 126
cis-1,3-Dichloropropene	50.0	47.9		ug/L		96	75 - 120
Dibromomethane	50.0	47.5		ug/L		95	68 - 129
Dichlorobromomethane	50.0	49.4		ug/L		99	67 - 126
Dichlorodifluoromethane	50.0	45.5		ug/L		91	26 - 152
Ethyl methacrylate	50.0	48.4		ug/L		97	69 - 126
Ethylbenzene	50.0	47.8		ug/L		96	76 - 121
Iodomethane	50.0	46.7		ug/L		93	37 - 145
Isobutyl alcohol	1250	1290		ug/L		103	46 - 132
Methylene Chloride	50.0	46.9		ug/L		94	64 - 128
m-Xylene & p-Xylene	50.0	48.3		ug/L		97	76 - 122
o-Xylene	50.0	48.5		ug/L		97	77 - 120
Styrene	50.0	48.7		ug/L		97	79 - 120
Tetrachloroethene	50.0	48.3		ug/L		97	72 - 127
Toluene	50.0	50.7		ug/L		101	68 - 127
trans-1,2-Dichloroethene	50.0	47.3		ug/L		95	66 - 129
trans-1,3-Dichloropropene	50.0	48.7		ug/L		97	66 - 127
trans-1,4-Dichloro-2-butene	50.0	48.0		ug/L		96	44 - 131
Trichloroethene	50.0	48.6		ug/L		97	70 - 125
Trichlorofluoromethane	50.0	49.4		ug/L		99	57 - 144
Vinyl acetate	100	112		ug/L		112	61 - 139
Vinyl chloride	50.0	52.3		ug/L		105	53 - 141
Xylenes, Total	100	96.8		ug/L		97	77 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 127*
4-Bromofluorobenzene (Surr)	*104*		*78 - 120*
Dibromofluoromethane (Surr)	*107*		*77 - 120*
Toluene-d8 (Surr)	*106*		*80 - 125*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609561/1003
Matrix: Water
Analysis Batch: 609561

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			250	236		ug/L		95	45 - 142		
Chloroprene			25.0	29.2		ug/L		117	53 - 147		
Methacrylonitrile			250	244		ug/L		98	47 - 142		
Methyl methacrylate			50.0	40.4		ug/L		81	60 - 131		
Propionitrile			250	225		ug/L		90	52 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*115*		*70 - 127*
4-Bromofluorobenzene (Surr)	*106*		*78 - 120*
Dibromofluoromethane (Surr)	*110*		*77 - 120*
Toluene-d8 (Surr)	*105*		*80 - 125*

Lab Sample ID: LCSD 280-609561/4
Matrix: Water
Analysis Batch: 609561

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			50.0	46.3		ug/L		93	74 - 121	1	20
1,1,1-Trichloroethane			50.0	52.5		ug/L		105	62 - 132	2	20
1,1,2,2-Tetrachloroethane			50.0	50.2		ug/L		100	72 - 122	2	20
1,1,2-Trichloroethane			50.0	50.5		ug/L		101	72 - 128	3	20
1,1-Dichloroethane			50.0	51.4		ug/L		103	66 - 130	3	20
1,1-Dichloroethene			50.0	46.4		ug/L		93	62 - 130	2	21
1,1-Dichloropropene			50.0	50.7		ug/L		101	64 - 133	1	20
1,2,3-Trichloropropane			50.0	49.0		ug/L		98	74 - 123	2	20
1,2,4-Trichlorobenzene			50.0	46.8		ug/L		94	73 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	42.5		ug/L		85	58 - 122	2	21
1,2-Dibromoethane			50.0	47.8		ug/L		96	81 - 118	0	20
1,2-Dichlorobenzene			50.0	49.0		ug/L		98	77 - 121	1	20
1,2-Dichloroethane			50.0	50.0		ug/L		100	61 - 130	2	20
1,2-Dichloropropane			50.0	50.3		ug/L		101	68 - 127	2	20
1,3-Dichlorobenzene			50.0	49.7		ug/L		99	76 - 121	1	20
1,3-Dichloropropane			50.0	50.4		ug/L		101	80 - 118	1	20
1,4-Dichlorobenzene			50.0	47.6		ug/L		95	76 - 119	0	20
2,2-Dichloropropane			50.0	49.2		ug/L		98	57 - 140	1	22
2-Butanone (MEK)			200	196		ug/L		98	53 - 135	1	20
2-Hexanone			200	202		ug/L		101	58 - 134	1	21
4-Methyl-2-pentanone (MIBK)			200	209		ug/L		104	56 - 135	1	20
Acetone			200	183		ug/L		92	50 - 137	4	21
Acrolein			494	514		ug/L		104	10 - 207	1	23
Acrylonitrile			500	515		ug/L		103	65 - 133	0	20
Allyl chloride			50.0	50.4		ug/L		101	57 - 136	2	20
Benzene			50.0	50.3		ug/L		101	69 - 126	0	20
Bromoform			50.0	42.6		ug/L		85	57 - 125	4	20
Bromomethane			50.0	51.3		ug/L		103	25 - 163	3	40
Carbon disulfide			50.0	43.6		ug/L		87	56 - 128	1	20
Carbon tetrachloride			50.0	49.0		ug/L		98	60 - 133	2	20
Chlorobenzene			50.0	48.9		ug/L		98	78 - 118	0	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609561/4
Matrix: Water
Analysis Batch: 609561

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorobromomethane			50.0	48.7		ug/L		97	71 - 130	2	20
Chlorodibromomethane			50.0	46.4		ug/L		93	71 - 122	2	20
Chloroethane			50.0	48.5		ug/L		97	52 - 144	4	30
Chloroform			50.0	51.3		ug/L		103	68 - 128	2	20
Chloromethane			50.0	52.4		ug/L		105	43 - 142	2	20
cis-1,2-Dichloroethene			50.0	50.8		ug/L		102	69 - 126	2	20
cis-1,3-Dichloropropene			50.0	48.4		ug/L		97	75 - 120	1	20
Dibromomethane			50.0	50.2		ug/L		100	68 - 129	5	20
Dichlorobromomethane			50.0	50.8		ug/L		102	67 - 126	3	20
Dichlorodifluoromethane			50.0	44.5		ug/L		89	26 - 152	2	21
Ethyl methacrylate			50.0	48.2		ug/L		96	69 - 126	0	20
Ethylbenzene			50.0	47.8		ug/L		96	76 - 121	0	20
Iodomethane			50.0	47.4		ug/L		95	37 - 145	1	38
Isobutyl alcohol			1250	1320		ug/L		105	46 - 132	2	30
Methylene Chloride			50.0	48.1		ug/L		96	64 - 128	2	20
m-Xylene & p-Xylene			50.0	48.1		ug/L		96	76 - 122	0	20
o-Xylene			50.0	48.1		ug/L		96	77 - 120	1	20
Styrene			50.0	49.1		ug/L		98	79 - 120	1	20
Tetrachloroethene			50.0	48.7		ug/L		97	72 - 127	1	20
Toluene			50.0	51.4		ug/L		103	68 - 127	1	20
trans-1,2-Dichloroethene			50.0	47.4		ug/L		95	66 - 129	0	20
trans-1,3-Dichloropropene			50.0	49.7		ug/L		99	66 - 127	2	20
trans-1,4-Dichloro-2-butene			50.0	47.5		ug/L		95	44 - 131	1	24
Trichloroethene			50.0	48.7		ug/L		97	70 - 125	0	20
Trichlorofluoromethane			50.0	48.9		ug/L		98	57 - 144	1	28
Vinyl acetate			100	113		ug/L		113	61 - 139	2	23
Vinyl chloride			50.0	50.4		ug/L		101	53 - 141	4	25
Xylenes, Total			100	96.2		ug/L		96	77 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*115*		*70 - 127*
4-Bromofluorobenzene (Surr)	*104*		*78 - 120*
Dibromofluoromethane (Surr)	*107*		*77 - 120*
Toluene-d8 (Surr)	*106*		*80 - 125*

Lab Sample ID: LCSD 280-609561/5
Matrix: Water
Analysis Batch: 609561

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	249		ug/L		100	45 - 142	5	20
Chloroprene			25.0	28.8		ug/L		115	53 - 147	1	20
Methacrylonitrile			250	259		ug/L		104	47 - 142	6	20
Methyl methacrylate			50.0	42.8		ug/L		86	60 - 131	6	20
Propionitrile			250	243		ug/L		97	52 - 138	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 127*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609561/5
Matrix: Water
Analysis Batch: 609561

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*107*		*78 - 120*
Dibromofluoromethane (Surr)	*107*		*77 - 120*
Toluene-d8 (Surr)	*107*		*80 - 125*

Lab Sample ID: MB 280-609932/7
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/24/23 20:30	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/24/23 20:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/24/23 20:30	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/24/23 20:30	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/24/23 20:30	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/24/23 20:30	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/24/23 20:30	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/24/23 20:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/24/23 20:30	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/24/23 20:30	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/24/23 20:30	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/24/23 20:30	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/24/23 20:30	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/24/23 20:30	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/24/23 20:30	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/24/23 20:30	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/24/23 20:30	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/24/23 20:30	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/24/23 20:30	1
2-Hexanone	ND		5.0	1.7	ug/L			04/24/23 20:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/24/23 20:30	1
Acetone	ND		15	6.6	ug/L			04/24/23 20:30	1
Acetonitrile	ND		30	9.6	ug/L			04/24/23 20:30	1
Acrolein	ND		20	4.9	ug/L			04/24/23 20:30	1
Acrylonitrile	ND		20	4.5	ug/L			04/24/23 20:30	1
Allyl chloride	ND		2.0	0.17	ug/L			04/24/23 20:30	1
Benzene	ND		1.0	0.31	ug/L			04/24/23 20:30	1
Bromoform	ND		2.0	1.2	ug/L			04/24/23 20:30	1
Bromomethane	ND		5.0	2.4	ug/L			04/24/23 20:30	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/24/23 20:30	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/24/23 20:30	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/24/23 20:30	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/24/23 20:30	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/24/23 20:30	1
Chloroethane	ND		4.0	1.4	ug/L			04/24/23 20:30	1
Chloroform	ND		1.0	0.36	ug/L			04/24/23 20:30	1
Chloromethane	ND		2.0	0.75	ug/L			04/24/23 20:30	1
Chloroprene	ND		3.0	1.2	ug/L			04/24/23 20:30	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/24/23 20:30	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-609932/7
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/24/23 20:30	1
Dibromomethane	ND		1.0	0.34	ug/L			04/24/23 20:30	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/24/23 20:30	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/24/23 20:30	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/24/23 20:30	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/24/23 20:30	1
Iodomethane	ND		5.0	2.6	ug/L			04/24/23 20:30	1
Isobutyl alcohol	ND		110	37	ug/L			04/24/23 20:30	1
Methacrylonitrile	ND		15	5.3	ug/L			04/24/23 20:30	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/24/23 20:30	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/24/23 20:30	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/24/23 20:30	1
o-Xylene	ND		1.0	0.33	ug/L			04/24/23 20:30	1
Propionitrile	ND		20	3.7	ug/L			04/24/23 20:30	1
Styrene	ND		1.0	0.36	ug/L			04/24/23 20:30	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/24/23 20:30	1
Toluene	ND		1.0	0.32	ug/L			04/24/23 20:30	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/24/23 20:30	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/24/23 20:30	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/24/23 20:30	1
Trichloroethene	ND		1.0	0.30	ug/L			04/24/23 20:30	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/24/23 20:30	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/24/23 20:30	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/24/23 20:30	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/24/23 20:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 127*		*04/24/23 20:30*	*1*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/24/23 20:30*	*1*
Dibromofluoromethane (Surr)	*104*		*77 - 120*		*04/24/23 20:30*	*1*
Toluene-d8 (Surr)	*102*		*80 - 125*		*04/24/23 20:30*	*1*

Lab Sample ID: LCS 280-609932/1002
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	49.0		ug/L		98	74 - 121
1,1,1-Trichloroethane	50.0	51.4		ug/L		103	62 - 132
1,1,2,2-Tetrachloroethane	50.0	45.1		ug/L		90	72 - 122
1,1,2-Trichloroethane	50.0	50.1		ug/L		100	72 - 128
1,1-Dichloroethane	50.0	54.5		ug/L		109	66 - 130
1,1-Dichloroethene	50.0	51.7		ug/L		103	62 - 130
1,1-Dichloropropene	50.0	52.5		ug/L		105	64 - 133
1,2,3-Trichloropropane	50.0	43.3		ug/L		87	74 - 123
1,2,4-Trichlorobenzene	50.0	49.7		ug/L		99	73 - 124
1,2-Dibromo-3-Chloropropane	50.0	39.3		ug/L		79	58 - 122
1,2-Dibromoethane	50.0	47.7		ug/L		95	81 - 118

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609932/1002
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	50.0	46.8		ug/L		94	77 - 121
1,2-Dichloroethane	50.0	48.8		ug/L		98	61 - 130
1,2-Dichloropropane	50.0	54.1		ug/L		108	68 - 127
1,3-Dichlorobenzene	50.0	47.9		ug/L		96	76 - 121
1,3-Dichloropropane	50.0	49.5		ug/L		99	80 - 118
1,4-Dichlorobenzene	50.0	45.8		ug/L		92	76 - 119
2,2-Dichloropropane	50.0	54.6		ug/L		109	57 - 140
2-Butanone (MEK)	200	213		ug/L		106	53 - 135
2-Hexanone	200	210		ug/L		105	58 - 134
4-Methyl-2-pentanone (MIBK)	200	225		ug/L		112	56 - 135
Acetone	200	191		ug/L		95	50 - 137
Acrolein	494	452		ug/L		92	10 - 207
Acrylonitrile	500	544		ug/L		109	65 - 133
Allyl chloride	50.0	62.8		ug/L		126	57 - 136
Benzene	50.0	53.1		ug/L		106	69 - 126
Bromoform	50.0	47.7		ug/L		95	57 - 125
Bromomethane	50.0	40.8		ug/L		82	25 - 163
Carbon disulfide	50.0	53.5		ug/L		107	56 - 128
Carbon tetrachloride	50.0	53.6		ug/L		107	60 - 133
Chlorobenzene	50.0	48.9		ug/L		98	78 - 118
Chlorobromomethane	50.0	50.3		ug/L		101	71 - 130
Chlorodibromomethane	50.0	47.4		ug/L		95	71 - 122
Chloroethane	50.0	64.0		ug/L		128	52 - 144
Chloroform	50.0	50.1		ug/L		100	68 - 128
Chloromethane	50.0	53.7		ug/L		107	43 - 142
cis-1,2-Dichloroethene	50.0	51.0		ug/L		102	69 - 126
cis-1,3-Dichloropropene	50.0	52.4		ug/L		105	75 - 120
Dibromomethane	50.0	48.0		ug/L		96	68 - 129
Dichlorobromomethane	50.0	50.0		ug/L		100	67 - 126
Dichlorodifluoromethane	50.0	59.2		ug/L		118	26 - 152
Ethyl methacrylate	50.0	51.6		ug/L		103	69 - 126
Ethylbenzene	50.0	48.4		ug/L		97	76 - 121
Iodomethane	50.0	44.6		ug/L		89	37 - 145
Isobutyl alcohol	1250	1130		ug/L		91	46 - 132
Methylene Chloride	50.0	48.0		ug/L		96	64 - 128
m-Xylene & p-Xylene	50.0	50.8		ug/L		102	76 - 122
o-Xylene	50.0	49.3		ug/L		99	77 - 120
Styrene	50.0	51.0		ug/L		102	79 - 120
Tetrachloroethene	50.0	54.0		ug/L		108	72 - 127
Toluene	50.0	52.1		ug/L		104	68 - 127
trans-1,2-Dichloroethene	50.0	54.1		ug/L		108	66 - 129
trans-1,3-Dichloropropene	50.0	54.0		ug/L		108	66 - 127
trans-1,4-Dichloro-2-butene	50.0	42.6		ug/L		85	44 - 131
Trichloroethene	50.0	51.5		ug/L		103	70 - 125
Trichlorofluoromethane	50.0	61.1		ug/L		122	57 - 144
Vinyl acetate	100	120		ug/L		120	61 - 139
Vinyl chloride	50.0	68.1		ug/L		136	53 - 141
Xylenes, Total	100	100		ug/L		100	77 - 120

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-609932/1002
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 127*
4-Bromofluorobenzene (Surr)	*99*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Lab Sample ID: LCS 280-609932/1003
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			250	234		ug/L		94	45 - 142		
Chloroprene			25.0	25.4		ug/L		101	53 - 147		
Methacrylonitrile			250	233		ug/L		93	47 - 142		
Methyl methacrylate			50.0	38.9		ug/L		78	60 - 131		
Propionitrile			250	246		ug/L		98	52 - 138		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*102*		*80 - 125*

Lab Sample ID: LCSD 280-609932/4
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			50.0	48.5		ug/L		97	74 - 121	1	20
1,1,1-Trichloroethane			50.0	51.0		ug/L		102	62 - 132	1	20
1,1,2,2-Tetrachloroethane			50.0	47.7		ug/L		95	72 - 122	6	20
1,1,2-Trichloroethane			50.0	50.2		ug/L		100	72 - 128	0	20
1,1-Dichloroethane			50.0	54.8		ug/L		110	66 - 130	1	20
1,1-Dichloroethene			50.0	51.5		ug/L		103	62 - 130	0	21
1,1-Dichloropropene			50.0	53.1		ug/L		106	64 - 133	1	20
1,2,3-Trichloropropane			50.0	46.5		ug/L		93	74 - 123	7	20
1,2,4-Trichlorobenzene			50.0	50.4		ug/L		101	73 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	43.9		ug/L		88	58 - 122	11	21
1,2-Dibromoethane			50.0	47.2		ug/L		94	81 - 118	1	20
1,2-Dichlorobenzene			50.0	47.4		ug/L		95	77 - 121	1	20
1,2-Dichloroethane			50.0	49.3		ug/L		99	61 - 130	1	20
1,2-Dichloropropane			50.0	54.5		ug/L		109	68 - 127	1	20
1,3-Dichlorobenzene			50.0	49.1		ug/L		98	76 - 121	2	20
1,3-Dichloropropane			50.0	49.7		ug/L		99	80 - 118	0	20
1,4-Dichlorobenzene			50.0	46.1		ug/L		92	76 - 119	1	20
2,2-Dichloropropane			50.0	53.4		ug/L		107	57 - 140	2	22
2-Butanone (MEK)			200	222		ug/L		111	53 - 135	4	20
2-Hexanone			200	213		ug/L		106	58 - 134	1	21
4-Methyl-2-pentanone (MIBK)			200	232		ug/L		116	56 - 135	3	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609932/4
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone			200	203		ug/L		101	50 - 137	6	21
Acrolein			494	466		ug/L		94	10 - 207	3	23
Acrylonitrile			500	555		ug/L		111	65 - 133	2	20
Allyl chloride			50.0	61.6		ug/L		123	57 - 136	2	20
Benzene			50.0	52.6		ug/L		105	69 - 126	1	20
Bromoform			50.0	48.9		ug/L		98	57 - 125	3	20
Bromomethane			50.0	49.0		ug/L		98	25 - 163	18	40
Carbon disulfide			50.0	52.3		ug/L		105	56 - 128	2	20
Carbon tetrachloride			50.0	52.9		ug/L		106	60 - 133	1	20
Chlorobenzene			50.0	48.2		ug/L		96	78 - 118	1	20
Chlorobromomethane			50.0	51.2		ug/L		102	71 - 130	2	20
Chlorodibromomethane			50.0	47.3		ug/L		95	71 - 122	0	20
Chloroethane			50.0	62.6		ug/L		125	52 - 144	2	30
Chloroform			50.0	50.4		ug/L		101	68 - 128	1	20
Chloromethane			50.0	53.9		ug/L		108	43 - 142	0	20
cis-1,2-Dichloroethene			50.0	50.7		ug/L		101	69 - 126	1	20
cis-1,3-Dichloropropene			50.0	52.2		ug/L		104	75 - 120	0	20
Dibromomethane			50.0	48.5		ug/L		97	68 - 129	1	20
Dichlorobromomethane			50.0	50.2		ug/L		100	67 - 126	0	20
Dichlorodifluoromethane			50.0	56.9		ug/L		114	26 - 152	4	21
Ethyl methacrylate			50.0	52.0		ug/L		104	69 - 126	1	20
Ethylbenzene			50.0	47.8		ug/L		96	76 - 121	1	20
Iodomethane			50.0	43.9		ug/L		88	37 - 145	2	38
Isobutyl alcohol			1250	1190		ug/L		95	46 - 132	5	30
Methylene Chloride			50.0	48.1		ug/L		96	64 - 128	0	20
m-Xylene & p-Xylene			50.0	49.1		ug/L		98	76 - 122	4	20
o-Xylene			50.0	47.8		ug/L		96	77 - 120	3	20
Styrene			50.0	50.7		ug/L		101	79 - 120	1	20
Tetrachloroethene			50.0	52.4		ug/L		105	72 - 127	3	20
Toluene			50.0	52.1		ug/L		104	68 - 127	0	20
trans-1,2-Dichloroethene			50.0	54.1		ug/L		108	66 - 129	0	20
trans-1,3-Dichloropropene			50.0	54.9		ug/L		110	66 - 127	2	20
trans-1,4-Dichloro-2-butene			50.0	45.7		ug/L		91	44 - 131	7	24
Trichloroethene			50.0	50.9		ug/L		102	70 - 125	1	20
Trichlorofluoromethane			50.0	59.1		ug/L		118	57 - 144	3	28
Vinyl acetate			100	123		ug/L		123	61 - 139	3	23
Vinyl chloride			50.0	67.0		ug/L		134	53 - 141	2	25
Xylenes, Total			100	96.9		ug/L		97	77 - 120	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-609932/5
Matrix: Water
Analysis Batch: 609932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	252		ug/L		101	45 - 142	7	20
Chloroprene			25.0	25.9		ug/L		104	53 - 147	2	20
Methacrylonitrile			250	241		ug/L		96	47 - 142	3	20
Methyl methacrylate			50.0	42.2		ug/L		84	60 - 131	8	20
Propionitrile			250	254		ug/L		102	52 - 138	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*103*		*80 - 125*

Lab Sample ID: MB 280-610121/7
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/26/23 11:43	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/26/23 11:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/26/23 11:43	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/26/23 11:43	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/26/23 11:43	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/26/23 11:43	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/26/23 11:43	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/26/23 11:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/26/23 11:43	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/26/23 11:43	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/26/23 11:43	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/26/23 11:43	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/26/23 11:43	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/26/23 11:43	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/26/23 11:43	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 11:43	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/26/23 11:43	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 11:43	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/26/23 11:43	1
2-Hexanone	ND		5.0	1.7	ug/L			04/26/23 11:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/26/23 11:43	1
Acetone	ND		15	6.6	ug/L			04/26/23 11:43	1
Acetonitrile	ND		30	9.6	ug/L			04/26/23 11:43	1
Acrolein	ND		20	4.9	ug/L			04/26/23 11:43	1
Acrylonitrile	ND		20	4.5	ug/L			04/26/23 11:43	1
Allyl chloride	ND		2.0	0.17	ug/L			04/26/23 11:43	1
Benzene	ND		1.0	0.31	ug/L			04/26/23 11:43	1
Bromoform	ND		2.0	1.2	ug/L			04/26/23 11:43	1
Bromomethane	ND		5.0	2.4	ug/L			04/26/23 11:43	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/26/23 11:43	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/26/23 11:43	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610121/7
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	0.42	ug/L			04/26/23 11:43	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/26/23 11:43	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/26/23 11:43	1
Chloroethane	ND		4.0	1.4	ug/L			04/26/23 11:43	1
Chloroform	ND		1.0	0.36	ug/L			04/26/23 11:43	1
Chloromethane	ND		2.0	0.75	ug/L			04/26/23 11:43	1
Chloroprene	ND		3.0	1.2	ug/L			04/26/23 11:43	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/26/23 11:43	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/26/23 11:43	1
Dibromomethane	ND		1.0	0.34	ug/L			04/26/23 11:43	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/26/23 11:43	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/26/23 11:43	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/26/23 11:43	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/26/23 11:43	1
Iodomethane	ND		5.0	2.6	ug/L			04/26/23 11:43	1
Isobutyl alcohol	ND		110	37	ug/L			04/26/23 11:43	1
Methacrylonitrile	ND		15	5.3	ug/L			04/26/23 11:43	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/26/23 11:43	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/26/23 11:43	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/26/23 11:43	1
o-Xylene	ND		1.0	0.33	ug/L			04/26/23 11:43	1
Propionitrile	ND		20	3.7	ug/L			04/26/23 11:43	1
Styrene	ND		1.0	0.36	ug/L			04/26/23 11:43	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/26/23 11:43	1
Toluene	ND		1.0	0.32	ug/L			04/26/23 11:43	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/26/23 11:43	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/26/23 11:43	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/26/23 11:43	1
Trichloroethene	ND		1.0	0.30	ug/L			04/26/23 11:43	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/26/23 11:43	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/26/23 11:43	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/26/23 11:43	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/26/23 11:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*		*04/26/23 11:43*	*1*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*		*04/26/23 11:43*	*1*
Dibromofluoromethane (Surr)	*103*		*77 - 120*		*04/26/23 11:43*	*1*
Toluene-d8 (Surr)	*102*		*80 - 125*		*04/26/23 11:43*	*1*

Lab Sample ID: LCS 280-610121/1002
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	25.0	24.4		ug/L		98	74 - 121
1,1,1-Trichloroethane	25.0	25.7		ug/L		103	62 - 132
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		98	72 - 122

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610121/1002
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,2-Trichloroethane	25.0	26.7		ug/L		107	72 - 128
1,1-Dichloroethane	25.0	28.6		ug/L		115	66 - 130
1,1-Dichloroethene	25.0	26.5		ug/L		106	62 - 130
1,1-Dichloropropene	25.0	26.4		ug/L		106	64 - 133
1,2,3-Trichloropropane	25.0	23.4		ug/L		93	74 - 123
1,2,4-Trichlorobenzene	25.0	25.3		ug/L		101	73 - 124
1,2-Dibromo-3-Chloropropane	25.0	22.9		ug/L		91	58 - 122
1,2-Dibromoethane	25.0	24.9		ug/L		100	81 - 118
1,2-Dichlorobenzene	25.0	24.8		ug/L		99	77 - 121
1,2-Dichloroethane	25.0	24.4		ug/L		98	61 - 130
1,2-Dichloropropane	25.0	27.9		ug/L		112	68 - 127
1,3-Dichlorobenzene	25.0	25.3		ug/L		101	76 - 121
1,3-Dichloropropane	25.0	25.8		ug/L		103	80 - 118
1,4-Dichlorobenzene	25.0	24.2		ug/L		97	76 - 119
2,2-Dichloropropane	25.0	26.9		ug/L		108	57 - 140
2-Butanone (MEK)	100	114		ug/L		114	53 - 135
2-Hexanone	100	110		ug/L		110	58 - 134
4-Methyl-2-pentanone (MIBK)	100	117		ug/L		117	56 - 135
Acetone	100	100		ug/L		100	50 - 137
Acrolein	247	244		ug/L		99	10 - 207
Acrylonitrile	250	299		ug/L		120	65 - 133
Allyl chloride	25.0	32.2		ug/L		129	57 - 136
Benzene	25.0	27.5		ug/L		110	69 - 126
Bromoform	25.0	25.2		ug/L		101	57 - 125
Bromomethane	25.0	22.2		ug/L		89	25 - 163
Carbon disulfide	25.0	27.5		ug/L		110	56 - 128
Carbon tetrachloride	25.0	25.4		ug/L		101	60 - 133
Chlorobenzene	25.0	25.2		ug/L		101	78 - 118
Chlorobromomethane	25.0	26.2		ug/L		105	71 - 130
Chlorodibromomethane	25.0	24.5		ug/L		98	71 - 122
Chloroethane	25.0	26.6		ug/L		107	52 - 144
Chloroform	25.0	26.5		ug/L		106	68 - 128
Chloromethane	25.0	23.0		ug/L		92	43 - 142
cis-1,2-Dichloroethene	25.0	26.9		ug/L		108	69 - 126
cis-1,3-Dichloropropene	25.0	26.7		ug/L		107	75 - 120
Dibromomethane	25.0	26.1		ug/L		104	68 - 129
Dichlorobromomethane	25.0	25.7		ug/L		103	67 - 126
Dichlorodifluoromethane	25.0	17.7		ug/L		71	26 - 152
Ethyl methacrylate	25.0	28.2		ug/L		113	69 - 126
Ethylbenzene	25.0	25.6		ug/L		102	76 - 121
Iodomethane	25.0	18.9		ug/L		76	37 - 145
Isobutyl alcohol	625	538		ug/L		86	46 - 132
Methylene Chloride	25.0	25.6		ug/L		102	64 - 128
m-Xylene & p-Xylene	25.0	26.5		ug/L		106	76 - 122
o-Xylene	25.0	26.0		ug/L		104	77 - 120
Styrene	25.0	26.7		ug/L		107	79 - 120
Tetrachloroethene	25.0	25.2		ug/L		101	72 - 127
Toluene	25.0	26.9		ug/L		108	68 - 127
trans-1,2-Dichloroethene	25.0	28.0		ug/L		112	66 - 129

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610121/1002
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
trans-1,3-Dichloropropene			25.0	27.5		ug/L		110	66 - 127		
trans-1,4-Dichloro-2-butene			25.0	22.5		ug/L		90	44 - 131		
Trichloroethene			25.0	25.9		ug/L		104	70 - 125		
Trichlorofluoromethane			25.0	20.9		ug/L		84	57 - 144		
Vinyl acetate			50.0	58.3		ug/L		117	61 - 139		
Vinyl chloride			25.0	27.5		ug/L		110	53 - 141		
Xylenes, Total			50.0	52.5		ug/L		105	77 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Lab Sample ID: LCS 280-610121/1003
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			250	254		ug/L		102	45 - 142		
Chloroprene			25.0	26.0		ug/L		104	53 - 147		
Methacrylonitrile			250	243		ug/L		97	47 - 142		
Methyl methacrylate			50.0	43.0		ug/L		86	60 - 131		
Propionitrile			250	248		ug/L		99	52 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 127*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*
Dibromofluoromethane (Surr)	*106*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Lab Sample ID: LCSD 280-610121/4
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			25.0	24.9		ug/L		99	74 - 121	2	20
1,1,1-Trichloroethane			25.0	25.4		ug/L		102	62 - 132	1	20
1,1,2,2-Tetrachloroethane			25.0	24.4		ug/L		98	72 - 122	0	20
1,1,2-Trichloroethane			25.0	26.0		ug/L		104	72 - 128	3	20
1,1-Dichloroethane			25.0	27.4		ug/L		110	66 - 130	4	20
1,1-Dichloroethene			25.0	26.5		ug/L		106	62 - 130	0	21
1,1-Dichloropropene			25.0	25.6		ug/L		103	64 - 133	3	20
1,2,3-Trichloropropane			25.0	23.9		ug/L		95	74 - 123	2	20
1,2,4-Trichlorobenzene			25.0	26.7		ug/L		107	73 - 124	5	20
1,2-Dibromo-3-Chloropropane			25.0	22.8		ug/L		91	58 - 122	0	21
1,2-Dibromoethane			25.0	25.3		ug/L		101	81 - 118	2	20
1,2-Dichlorobenzene			25.0	24.4		ug/L		98	77 - 121	2	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610121/4
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane			25.0	23.8		ug/L		95	61 - 130	2	20
1,2-Dichloropropane			25.0	27.4		ug/L		110	68 - 127	2	20
1,3-Dichlorobenzene			25.0	25.4		ug/L		102	76 - 121	0	20
1,3-Dichloropropane			25.0	25.7		ug/L		103	80 - 118	0	20
1,4-Dichlorobenzene			25.0	24.3		ug/L		97	76 - 119	1	20
2,2-Dichloropropane			25.0	26.3		ug/L		105	57 - 140	2	22
2-Butanone (MEK)			100	108		ug/L		108	53 - 135	6	20
2-Hexanone			100	104		ug/L		104	58 - 134	6	21
4-Methyl-2-pentanone (MIBK)			100	110		ug/L		110	56 - 135	6	20
Acetone			100	96.2		ug/L		96	50 - 137	4	21
Acrolein			247	247		ug/L		100	10 - 207	1	23
Acrylonitrile			250	286		ug/L		114	65 - 133	5	20
Allyl chloride			25.0	30.3		ug/L		121	57 - 136	6	20
Benzene			25.0	27.8		ug/L		111	69 - 126	1	20
Bromoform			25.0	24.8		ug/L		99	57 - 125	2	20
Bromomethane			25.0	22.4		ug/L		90	25 - 163	1	40
Carbon disulfide			25.0	27.8		ug/L		111	56 - 128	1	20
Carbon tetrachloride			25.0	25.7		ug/L		103	60 - 133	1	20
Chlorobenzene			25.0	25.5		ug/L		102	78 - 118	1	20
Chlorobromomethane			25.0	27.1		ug/L		108	71 - 130	3	20
Chlorodibromomethane			25.0	24.1		ug/L		96	71 - 122	2	20
Chloroethane			25.0	26.1		ug/L		105	52 - 144	2	30
Chloroform			25.0	26.2		ug/L		105	68 - 128	1	20
Chloromethane			25.0	23.0		ug/L		92	43 - 142	0	20
cis-1,2-Dichloroethene			25.0	27.0		ug/L		108	69 - 126	0	20
cis-1,3-Dichloropropene			25.0	26.9		ug/L		107	75 - 120	1	20
Dibromomethane			25.0	25.7		ug/L		103	68 - 129	2	20
Dichlorobromomethane			25.0	25.9		ug/L		104	67 - 126	1	20
Dichlorodifluoromethane			25.0	17.3		ug/L		69	26 - 152	2	21
Ethyl methacrylate			25.0	27.4		ug/L		109	69 - 126	3	20
Ethylbenzene			25.0	25.6		ug/L		103	76 - 121	0	20
Iodomethane			25.0	21.1		ug/L		84	37 - 145	11	38
Isobutyl alcohol			625	568		ug/L		91	46 - 132	6	30
Methylene Chloride			25.0	26.2		ug/L		105	64 - 128	2	20
m-Xylene & p-Xylene			25.0	26.4		ug/L		105	76 - 122	1	20
o-Xylene			25.0	25.6		ug/L		102	77 - 120	2	20
Styrene			25.0	26.8		ug/L		107	79 - 120	0	20
Tetrachloroethene			25.0	26.0		ug/L		104	72 - 127	3	20
Toluene			25.0	27.1		ug/L		108	68 - 127	1	20
trans-1,2-Dichloroethene			25.0	28.0		ug/L		112	66 - 129	0	20
trans-1,3-Dichloropropene			25.0	27.6		ug/L		110	66 - 127	0	20
trans-1,4-Dichloro-2-butene			25.0	22.4		ug/L		89	44 - 131	1	24
Trichloroethene			25.0	26.4		ug/L		106	70 - 125	2	20
Trichlorofluoromethane			25.0	20.8		ug/L		83	57 - 144	0	28
Vinyl acetate			50.0	60.0		ug/L		120	61 - 139	3	23
Vinyl chloride			25.0	27.8		ug/L		111	53 - 141	1	25
Xylenes, Total			50.0	52.0		ug/L		104	77 - 120	1	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610121/4
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 127*
4-Bromofluorobenzene (Surr)	*104*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Lab Sample ID: LCSD 280-610121/5
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	265		ug/L		106	45 - 142	4	20
Chloroprene			25.0	27.1		ug/L		108	53 - 147	4	20
Methacrylonitrile			250	260		ug/L		104	47 - 142	7	20
Methyl methacrylate			50.0	47.7		ug/L		95	60 - 131	10	20
Propionitrile			250	278		ug/L		111	52 - 138	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 127*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*99*		*80 - 125*

Lab Sample ID: MB 280-610123/7
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/26/23 10:12	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/26/23 10:12	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/26/23 10:12	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/26/23 10:12	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/26/23 10:12	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/26/23 10:12	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/26/23 10:12	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/26/23 10:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/26/23 10:12	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/26/23 10:12	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/26/23 10:12	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/26/23 10:12	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/26/23 10:12	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/26/23 10:12	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/26/23 10:12	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 10:12	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/26/23 10:12	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 10:12	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/26/23 10:12	1
2-Hexanone	ND		5.0	1.7	ug/L			04/26/23 10:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/26/23 10:12	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610123/7
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		15	6.6	ug/L			04/26/23 10:12	1
Acetonitrile	ND		30	9.6	ug/L			04/26/23 10:12	1
Acrolein	ND		20	4.9	ug/L			04/26/23 10:12	1
Acrylonitrile	ND		20	4.5	ug/L			04/26/23 10:12	1
Allyl chloride	ND		2.0	0.17	ug/L			04/26/23 10:12	1
Benzene	ND		1.0	0.31	ug/L			04/26/23 10:12	1
Bromoform	ND		2.0	1.2	ug/L			04/26/23 10:12	1
Bromomethane	ND		5.0	2.4	ug/L			04/26/23 10:12	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/26/23 10:12	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/26/23 10:12	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/26/23 10:12	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/26/23 10:12	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/26/23 10:12	1
Chloroethane	ND		4.0	1.4	ug/L			04/26/23 10:12	1
Chloroform	ND		1.0	0.36	ug/L			04/26/23 10:12	1
Chloromethane	ND		2.0	0.75	ug/L			04/26/23 10:12	1
Chloroprene	ND		3.0	1.2	ug/L			04/26/23 10:12	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/26/23 10:12	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/26/23 10:12	1
Dibromomethane	ND		1.0	0.34	ug/L			04/26/23 10:12	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/26/23 10:12	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/26/23 10:12	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/26/23 10:12	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/26/23 10:12	1
Iodomethane	ND		5.0	2.6	ug/L			04/26/23 10:12	1
Isobutyl alcohol	ND		110	37	ug/L			04/26/23 10:12	1
Methacrylonitrile	ND		15	5.3	ug/L			04/26/23 10:12	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/26/23 10:12	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/26/23 10:12	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/26/23 10:12	1
o-Xylene	ND		1.0	0.33	ug/L			04/26/23 10:12	1
Propionitrile	ND		20	3.7	ug/L			04/26/23 10:12	1
Styrene	ND		1.0	0.36	ug/L			04/26/23 10:12	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/26/23 10:12	1
Toluene	ND		1.0	0.32	ug/L			04/26/23 10:12	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/26/23 10:12	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/26/23 10:12	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/26/23 10:12	1
Trichloroethene	ND		1.0	0.30	ug/L			04/26/23 10:12	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/26/23 10:12	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/26/23 10:12	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/26/23 10:12	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/26/23 10:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 127*		*04/26/23 10:12*	*1*
4-Bromofluorobenzene (Surr)	*95*		*78 - 120*		*04/26/23 10:12*	*1*
Dibromofluoromethane (Surr)	*108*		*77 - 120*		*04/26/23 10:12*	*1*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610123/7
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 125		04/26/23 10:12	1

Lab Sample ID: LCS 280-610123/1002
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	47.2		ug/L		94	74 - 121
1,1,1-Trichloroethane	50.0	48.3		ug/L		97	62 - 132
1,1,2,2-Tetrachloroethane	50.0	45.3		ug/L		91	72 - 122
1,1,2-Trichloroethane	50.0	51.4		ug/L		103	72 - 128
1,1-Dichloroethane	50.0	49.2		ug/L		98	66 - 130
1,1-Dichloroethene	50.0	48.8		ug/L		98	62 - 130
1,1-Dichloropropene	50.0	49.3		ug/L		99	64 - 133
1,2,3-Trichloropropane	50.0	46.3		ug/L		93	74 - 123
1,2,4-Trichlorobenzene	50.0	48.8		ug/L		98	73 - 124
1,2-Dibromo-3-Chloropropane	50.0	43.7		ug/L		87	58 - 122
1,2-Dibromoethane	50.0	48.4		ug/L		97	81 - 118
1,2-Dichlorobenzene	50.0	48.6		ug/L		97	77 - 121
1,2-Dichloroethane	50.0	48.0		ug/L		96	61 - 130
1,2-Dichloropropane	50.0	48.2		ug/L		96	68 - 127
1,3-Dichlorobenzene	50.0	47.5		ug/L		95	76 - 121
1,3-Dichloropropane	50.0	47.8		ug/L		96	80 - 118
1,4-Dichlorobenzene	50.0	47.0		ug/L		94	76 - 119
2,2-Dichloropropane	50.0	47.1		ug/L		94	57 - 140
2-Butanone (MEK)	200	166		ug/L		83	53 - 135
2-Hexanone	200	161		ug/L		81	58 - 134
4-Methyl-2-pentanone (MIBK)	200	175		ug/L		88	56 - 135
Acetone	200	171		ug/L		86	50 - 137
Acrolein	494	368		ug/L		74	10 - 207
Acrylonitrile	500	449		ug/L		90	65 - 133
Allyl chloride	50.0	40.1		ug/L		80	57 - 136
Benzene	50.0	48.9		ug/L		98	69 - 126
Bromoform	50.0	48.7		ug/L		97	57 - 125
Bromomethane	50.0	50.4		ug/L		101	25 - 163
Carbon disulfide	50.0	45.3		ug/L		91	56 - 128
Carbon tetrachloride	50.0	48.0		ug/L		96	60 - 133
Chlorobenzene	50.0	48.3		ug/L		97	78 - 118
Chlorobromomethane	50.0	49.4		ug/L		99	71 - 130
Chlorodibromomethane	50.0	49.3		ug/L		99	71 - 122
Chloroethane	50.0	40.8		ug/L		82	52 - 144
Chloroform	50.0	48.6		ug/L		97	68 - 128
Chloromethane	50.0	40.2		ug/L		80	43 - 142
cis-1,2-Dichloroethene	50.0	49.3		ug/L		99	69 - 126
cis-1,3-Dichloropropene	50.0	44.6		ug/L		89	75 - 120
Dibromomethane	50.0	50.5		ug/L		101	68 - 129
Dichlorobromomethane	50.0	49.1		ug/L		98	67 - 126
Dichlorodifluoromethane	50.0	38.5		ug/L		77	26 - 152

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610123/1002
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethyl methacrylate	50.0	43.3		ug/L		87	69 - 126
Ethylbenzene	50.0	48.3		ug/L		97	76 - 121
Iodomethane	50.0	33.1		ug/L		66	37 - 145
Isobutyl alcohol	1250	942		ug/L		75	46 - 132
Methylene Chloride	50.0	48.1		ug/L		96	64 - 128
m-Xylene & p-Xylene	50.0	47.8		ug/L		96	76 - 122
o-Xylene	50.0	47.6		ug/L		95	77 - 120
Styrene	50.0	48.2		ug/L		96	79 - 120
Tetrachloroethene	50.0	48.6		ug/L		97	72 - 127
Toluene	50.0	50.0		ug/L		100	68 - 127
trans-1,2-Dichloroethene	50.0	48.5		ug/L		97	66 - 129
trans-1,3-Dichloropropene	50.0	46.9		ug/L		94	66 - 127
trans-1,4-Dichloro-2-butene	50.0	37.2		ug/L		74	44 - 131
Trichloroethene	50.0	45.5		ug/L		91	70 - 125
Trichlorofluoromethane	50.0	44.5		ug/L		89	57 - 144
Vinyl acetate	100	91.1		ug/L		91	61 - 139
Vinyl chloride	50.0	42.4		ug/L		85	53 - 141
Xylenes, Total	100	95.4		ug/L		95	77 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*
4-Bromofluorobenzene (Surr)	*95*		*78 - 120*
Dibromofluoromethane (Surr)	*109*		*77 - 120*
Toluene-d8 (Surr)	*102*		*80 - 125*

Lab Sample ID: LCS 280-610123/1003
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetonitrile	250	227		ug/L		91	45 - 142
Chloroprene	25.0	21.9		ug/L		87	53 - 147
Methacrylonitrile	250	235		ug/L		94	47 - 142
Methyl methacrylate	50.0	50.1		ug/L		100	60 - 131
Propionitrile	250	228		ug/L		91	52 - 138

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 127*
4-Bromofluorobenzene (Surr)	*95*		*78 - 120*
Dibromofluoromethane (Surr)	*109*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Lab Sample ID: LCSD 280-610123/4
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	50.0	46.9		ug/L		94	74 - 121	1	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610123/4
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane			50.0	47.2		ug/L		94	62 - 132	2	20
1,1,2,2-Tetrachloroethane			50.0	46.2		ug/L		92	72 - 122	2	20
1,1,2-Trichloroethane			50.0	51.5		ug/L		103	72 - 128	0	20
1,1-Dichloroethane			50.0	48.7		ug/L		97	66 - 130	1	20
1,1-Dichloroethene			50.0	47.0		ug/L		94	62 - 130	4	21
1,1-Dichloropropene			50.0	48.6		ug/L		97	64 - 133	1	20
1,2,3-Trichloropropane			50.0	47.6		ug/L		95	74 - 123	3	20
1,2,4-Trichlorobenzene			50.0	49.4		ug/L		99	73 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	45.4		ug/L		91	58 - 122	4	21
1,2-Dibromoethane			50.0	47.6		ug/L		95	81 - 118	2	20
1,2-Dichlorobenzene			50.0	47.8		ug/L		96	77 - 121	2	20
1,2-Dichloroethane			50.0	48.6		ug/L		97	61 - 130	1	20
1,2-Dichloropropane			50.0	48.2		ug/L		96	68 - 127	0	20
1,3-Dichlorobenzene			50.0	47.1		ug/L		94	76 - 121	1	20
1,3-Dichloropropane			50.0	47.2		ug/L		94	80 - 118	1	20
1,4-Dichlorobenzene			50.0	46.7		ug/L		93	76 - 119	1	20
2,2-Dichloropropane			50.0	45.8		ug/L		92	57 - 140	3	22
2-Butanone (MEK)			200	181		ug/L		91	53 - 135	9	20
2-Hexanone			200	172		ug/L		86	58 - 134	6	21
4-Methyl-2-pentanone (MIBK)			200	186		ug/L		93	56 - 135	6	20
Acetone			200	186		ug/L		93	50 - 137	8	21
Acrolein			494	385		ug/L		78	10 - 207	5	23
Acrylonitrile			500	472		ug/L		94	65 - 133	5	20
Allyl chloride			50.0	40.6		ug/L		81	57 - 136	1	20
Benzene			50.0	48.7		ug/L		97	69 - 126	0	20
Bromoform			50.0	49.0		ug/L		98	57 - 125	1	20
Bromomethane			50.0	55.6		ug/L		111	25 - 163	10	40
Carbon disulfide			50.0	43.4		ug/L		87	56 - 128	4	20
Carbon tetrachloride			50.0	46.6		ug/L		93	60 - 133	3	20
Chlorobenzene			50.0	47.8		ug/L		96	78 - 118	1	20
Chlorobromomethane			50.0	49.2		ug/L		98	71 - 130	0	20
Chlorodibromomethane			50.0	48.1		ug/L		96	71 - 122	3	20
Chloroethane			50.0	45.8		ug/L		92	52 - 144	12	30
Chloroform			50.0	48.4		ug/L		97	68 - 128	0	20
Chloromethane			50.0	42.5		ug/L		85	43 - 142	6	20
cis-1,2-Dichloroethene			50.0	49.9		ug/L		100	69 - 126	1	20
cis-1,3-Dichloropropene			50.0	44.2		ug/L		88	75 - 120	1	20
Dibromomethane			50.0	50.2		ug/L		100	68 - 129	1	20
Dichlorobromomethane			50.0	48.7		ug/L		97	67 - 126	1	20
Dichlorodifluoromethane			50.0	39.6		ug/L		79	26 - 152	3	21
Ethyl methacrylate			50.0	44.0		ug/L		88	69 - 126	2	20
Ethylbenzene			50.0	47.1		ug/L		94	76 - 121	3	20
Iodomethane			50.0	33.8		ug/L		68	37 - 145	2	38
Isobutyl alcohol			1250	1090		ug/L		87	46 - 132	15	30
Methylene Chloride			50.0	48.5		ug/L		97	64 - 128	1	20
m-Xylene & p-Xylene			50.0	46.7		ug/L		93	76 - 122	2	20
o-Xylene			50.0	47.4		ug/L		95	77 - 120	0	20
Styrene			50.0	48.1		ug/L		96	79 - 120	0	20
Tetrachloroethene			50.0	47.8		ug/L		96	72 - 127	2	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610123/4
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			50.0	50.2		ug/L		100	68 - 127	0	20
trans-1,2-Dichloroethene			50.0	47.8		ug/L		96	66 - 129	2	20
trans-1,3-Dichloropropene			50.0	47.6		ug/L		95	66 - 127	2	20
trans-1,4-Dichloro-2-butene			50.0	39.9		ug/L		80	44 - 131	7	24
Trichloroethene			50.0	44.5		ug/L		89	70 - 125	2	20
Trichlorofluoromethane			50.0	46.8		ug/L		94	57 - 144	5	28
Vinyl acetate			100	93.8		ug/L		94	61 - 139	3	23
Vinyl chloride			50.0	44.5		ug/L		89	53 - 141	5	25
Xylenes, Total			100	94.1		ug/L		94	77 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 127*
4-Bromofluorobenzene (Surr)	*95*		*78 - 120*
Dibromofluoromethane (Surr)	*109*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Lab Sample ID: LCSD 280-610123/5
Matrix: Water
Analysis Batch: 610123

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	225		ug/L		90	45 - 142	1	20
Chloroprene			25.0	21.7		ug/L		87	53 - 147	1	20
Methacrylonitrile			250	232		ug/L		93	47 - 142	1	20
Methyl methacrylate			50.0	46.8		ug/L		94	60 - 131	7	20
Propionitrile			250	224		ug/L		90	52 - 138	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 127*
4-Bromofluorobenzene (Surr)	*96*		*78 - 120*
Dibromofluoromethane (Surr)	*108*		*77 - 120*
Toluene-d8 (Surr)	*103*		*80 - 125*

Lab Sample ID: MB 280-610347/7
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 12:59	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 12:59	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 12:59	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 12:59	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/27/23 12:59	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 12:59	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 12:59	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 12:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 12:59	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 12:59	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610347/7
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 12:59	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 12:59	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 12:59	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 12:59	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 12:59	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 12:59	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 12:59	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 12:59	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 12:59	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 12:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 12:59	1
Acetone	ND		15	6.6	ug/L			04/27/23 12:59	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 12:59	1
Acrolein	ND		20	4.9	ug/L			04/27/23 12:59	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 12:59	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 12:59	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 12:59	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 12:59	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 12:59	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 12:59	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 12:59	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 12:59	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 12:59	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 12:59	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 12:59	1
Chloroform	ND		1.0	0.36	ug/L			04/27/23 12:59	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 12:59	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 12:59	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/27/23 12:59	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 12:59	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 12:59	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 12:59	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/27/23 12:59	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 12:59	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 12:59	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 12:59	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 12:59	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 12:59	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 12:59	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 12:59	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 12:59	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 12:59	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 12:59	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 12:59	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/27/23 12:59	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 12:59	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 12:59	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 12:59	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 12:59	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610347/7
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		1.0	0.30	ug/L			04/27/23 12:59	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 12:59	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 12:59	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 12:59	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 127*		*04/27/23 12:59*	*1*
4-Bromofluorobenzene (Surr)	*99*		*78 - 120*		*04/27/23 12:59*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/27/23 12:59*	*1*
Toluene-d8 (Surr)	*100*		*80 - 125*		*04/27/23 12:59*	*1*

Lab Sample ID: LCS 280-610347/1002
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	25.0	26.6		ug/L		106	74 - 121
1,1,1-Trichloroethane	25.0	25.2		ug/L		101	62 - 132
1,1,2,2-Tetrachloroethane	25.0	28.1		ug/L		112	72 - 122
1,1,2-Trichloroethane	25.0	27.7		ug/L		111	72 - 128
1,1-Dichloroethane	25.0	27.9		ug/L		112	66 - 130
1,1-Dichloroethene	25.0	26.6		ug/L		106	62 - 130
1,1-Dichloropropene	25.0	25.7		ug/L		103	64 - 133
1,2,3-Trichloropropane	25.0	25.2		ug/L		101	74 - 123
1,2,4-Trichlorobenzene	25.0	28.9		ug/L		115	73 - 124
1,2-Dibromo-3-Chloropropane	25.0	23.4		ug/L		94	58 - 122
1,2-Dibromoethane	25.0	26.0		ug/L		104	81 - 118
1,2-Dichlorobenzene	25.0	26.3		ug/L		105	77 - 121
1,2-Dichloroethane	25.0	23.9		ug/L		95	61 - 130
1,2-Dichloropropane	25.0	27.7		ug/L		111	68 - 127
1,3-Dichlorobenzene	25.0	26.3		ug/L		105	76 - 121
1,3-Dichloropropane	25.0	26.8		ug/L		107	80 - 118
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	76 - 119
2,2-Dichloropropane	25.0	26.7		ug/L		107	57 - 140
2-Butanone (MEK)	100	118		ug/L		118	53 - 135
2-Hexanone	100	117		ug/L		117	58 - 134
4-Methyl-2-pentanone (MIBK)	100	122		ug/L		122	56 - 135
Acetone	100	98.5		ug/L		98	50 - 137
Acrolein	247	238		ug/L		96	10 - 207
Acrylonitrile	250	303		ug/L		121	65 - 133
Allyl chloride	25.0	32.1		ug/L		129	57 - 136
Benzene	25.0	28.1		ug/L		112	69 - 126
Bromoform	25.0	26.0		ug/L		104	57 - 125
Bromomethane	25.0	25.7		ug/L		103	25 - 163
Carbon disulfide	25.0	27.7		ug/L		111	56 - 128
Carbon tetrachloride	25.0	25.4		ug/L		102	60 - 133
Chlorobenzene	25.0	26.5		ug/L		106	78 - 118

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610347/1002
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobromomethane	25.0	26.9		ug/L		108	71 - 130
Chlorodibromomethane	25.0	25.2		ug/L		101	71 - 122
Chloroethane	25.0	27.5		ug/L		110	52 - 144
Chloroform	25.0	25.5		ug/L		102	68 - 128
Chloromethane	25.0	24.7		ug/L		99	43 - 142
cis-1,2-Dichloroethene	25.0	26.4		ug/L		105	69 - 126
cis-1,3-Dichloropropene	25.0	26.8		ug/L		107	75 - 120
Dibromomethane	25.0	25.5		ug/L		102	68 - 129
Dichlorobromomethane	25.0	25.6		ug/L		102	67 - 126
Dichlorodifluoromethane	25.0	17.9		ug/L		72	26 - 152
Ethyl methacrylate	25.0	29.0		ug/L		116	69 - 126
Ethylbenzene	25.0	26.3		ug/L		105	76 - 121
Iodomethane	25.0	20.0		ug/L		80	37 - 145
Isobutyl alcohol	625	651		ug/L		104	46 - 132
Methylene Chloride	25.0	26.0		ug/L		104	64 - 128
m-Xylene & p-Xylene	25.0	26.8		ug/L		107	76 - 122
o-Xylene	25.0	25.9		ug/L		104	77 - 120
Styrene	25.0	27.0		ug/L		108	79 - 120
Tetrachloroethene	25.0	27.2		ug/L		109	72 - 127
Toluene	25.0	27.3		ug/L		109	68 - 127
trans-1,2-Dichloroethene	25.0	28.3		ug/L		113	66 - 129
trans-1,3-Dichloropropene	25.0	28.4		ug/L		114	66 - 127
trans-1,4-Dichloro-2-butene	25.0	24.7		ug/L		99	44 - 131
Trichloroethene	25.0	26.9		ug/L		108	70 - 125
Trichlorofluoromethane	25.0	21.6		ug/L		86	57 - 144
Vinyl acetate	50.0	60.7		ug/L		121	61 - 139
Vinyl chloride	25.0	26.7		ug/L		107	53 - 141
Xylenes, Total	50.0	52.7		ug/L		105	77 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*102*		*77 - 120*
Toluene-d8 (Surr)	*102*		*80 - 125*

Lab Sample ID: LCS 280-610347/1003
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetonitrile	250	300		ug/L		120	45 - 142
Chloroprene	25.0	28.2		ug/L		113	53 - 147
Methacrylonitrile	250	286		ug/L		114	47 - 142
Methyl methacrylate	50.0	53.6		ug/L		107	60 - 131
Propionitrile	250	305		ug/L		122	52 - 138

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 127*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610347/1003
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*
Dibromofluoromethane (Surr)	*101*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Lab Sample ID: LCSD 280-610347/4
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			25.0	22.7		ug/L		91	74 - 121	16	20
1,1,1-Trichloroethane			25.0	22.8		ug/L		91	62 - 132	10	20
1,1,2,2-Tetrachloroethane			25.0	25.1		ug/L		100	72 - 122	11	20
1,1,2-Trichloroethane			25.0	25.0		ug/L		100	72 - 128	10	20
1,1-Dichloroethane			25.0	24.4		ug/L		97	66 - 130	14	20
1,1-Dichloroethene			25.0	24.2		ug/L		97	62 - 130	10	21
1,1-Dichloropropene			25.0	23.1		ug/L		92	64 - 133	11	20
1,2,3-Trichloropropane			25.0	22.5		ug/L		90	74 - 123	11	20
1,2,4-Trichlorobenzene			25.0	24.7		ug/L		99	73 - 124	16	20
1,2-Dibromo-3-Chloropropane			25.0	21.8		ug/L		87	58 - 122	7	21
1,2-Dibromoethane			25.0	23.3		ug/L		93	81 - 118	11	20
1,2-Dichlorobenzene			25.0	22.9		ug/L		92	77 - 121	14	20
1,2-Dichloroethane			25.0	21.4		ug/L		86	61 - 130	11	20
1,2-Dichloropropane			25.0	24.8		ug/L		99	68 - 127	11	20
1,3-Dichlorobenzene			25.0	22.9		ug/L		92	76 - 121	14	20
1,3-Dichloropropane			25.0	23.9		ug/L		96	80 - 118	11	20
1,4-Dichlorobenzene			25.0	22.0		ug/L		88	76 - 119	16	20
2,2-Dichloropropane			25.0	22.5		ug/L		90	57 - 140	17	22
2-Butanone (MEK)			100	113		ug/L		113	53 - 135	4	20
2-Hexanone			100	108		ug/L		108	58 - 134	7	21
4-Methyl-2-pentanone (MIBK)			100	114		ug/L		114	56 - 135	7	20
Acetone			100	93.4		ug/L		93	50 - 137	5	21
Acrolein			247	223		ug/L		90	10 - 207	7	23
Acrylonitrile			250	281		ug/L		112	65 - 133	8	20
Allyl chloride			25.0	28.5		ug/L		114	57 - 136	12	20
Benzene			25.0	24.5		ug/L		98	69 - 126	14	20
Bromoform			25.0	22.4		ug/L		90	57 - 125	15	20
Bromomethane			25.0	21.0		ug/L		84	25 - 163	20	40
Carbon disulfide			25.0	23.6		ug/L		95	56 - 128	16	20
Carbon tetrachloride			25.0	22.2		ug/L		89	60 - 133	13	20
Chlorobenzene			25.0	22.6		ug/L		91	78 - 118	16	20
Chlorobromomethane			25.0	23.0		ug/L		92	71 - 130	16	20
Chlorodibromomethane			25.0	21.7		ug/L		87	71 - 122	15	20
Chloroethane			25.0	23.6		ug/L		94	52 - 144	16	30
Chloroform			25.0	22.9		ug/L		91	68 - 128	11	20
Chloromethane			25.0	21.9		ug/L		88	43 - 142	12	20
cis-1,2-Dichloroethene			25.0	24.0		ug/L		96	69 - 126	9	20
cis-1,3-Dichloropropene			25.0	23.5		ug/L		94	75 - 120	13	20
Dibromomethane			25.0	23.3		ug/L		93	68 - 129	9	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610347/4
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorobromomethane			25.0	22.7		ug/L		91	67 - 126	12	20
Dichlorodifluoromethane			25.0	15.6		ug/L		62	26 - 152	14	21
Ethyl methacrylate			25.0	25.8		ug/L		103	69 - 126	12	20
Ethylbenzene			25.0	22.5		ug/L		90	76 - 121	16	20
Iodomethane			25.0	16.5		ug/L		66	37 - 145	20	38
Isobutyl alcohol			625	627		ug/L		100	46 - 132	4	30
Methylene Chloride			25.0	23.0		ug/L		92	64 - 128	12	20
m-Xylene & p-Xylene			25.0	23.0		ug/L		92	76 - 122	15	20
o-Xylene			25.0	22.2		ug/L		89	77 - 120	15	20
Styrene			25.0	23.5		ug/L		94	79 - 120	14	20
Tetrachloroethene			25.0	22.5		ug/L		90	72 - 127	19	20
Toluene			25.0	24.2		ug/L		97	68 - 127	12	20
trans-1,2-Dichloroethene			25.0	24.4		ug/L		98	66 - 129	15	20
trans-1,3-Dichloropropene			25.0	24.5		ug/L		98	66 - 127	15	20
trans-1,4-Dichloro-2-butene			25.0	23.0		ug/L		92	44 - 131	7	24
Trichloroethene			25.0	22.9		ug/L		92	70 - 125	16	20
Trichlorofluoromethane			25.0	18.9		ug/L		76	57 - 144	13	28
Vinyl acetate			50.0	55.6		ug/L		111	61 - 139	9	23
Vinyl chloride			25.0	23.6		ug/L		94	53 - 141	12	25
Xylenes, Total			50.0	45.2		ug/L		90	77 - 120	15	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*102*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Lab Sample ID: LCSD 280-610347/5
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	280		ug/L		112	45 - 142	7	20
Chloroprene			25.0	25.1		ug/L		100	53 - 147	12	20
Methacrylonitrile			250	270		ug/L		108	47 - 142	6	20
Methyl methacrylate			50.0	49.3		ug/L		99	60 - 131	8	20
Propionitrile			250	290		ug/L		116	52 - 138	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 127*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610485/7
Matrix: Water
Analysis Batch: 610485

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 23:10	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 23:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 23:10	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 23:10	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/27/23 23:10	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 23:10	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 23:10	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 23:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 23:10	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 23:10	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 23:10	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 23:10	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 23:10	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 23:10	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 23:10	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 23:10	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 23:10	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 23:10	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 23:10	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 23:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 23:10	1
Acetone	ND		15	6.6	ug/L			04/27/23 23:10	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 23:10	1
Acrolein	ND		20	4.9	ug/L			04/27/23 23:10	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 23:10	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 23:10	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 23:10	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 23:10	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 23:10	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 23:10	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 23:10	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 23:10	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 23:10	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 23:10	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 23:10	1
Chloroform	ND		1.0	0.36	ug/L			04/27/23 23:10	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 23:10	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 23:10	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/27/23 23:10	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 23:10	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 23:10	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 23:10	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/27/23 23:10	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 23:10	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 23:10	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 23:10	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 23:10	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 23:10	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610485/7
Matrix: Water
Analysis Batch: 610485

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 23:10	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 23:10	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 23:10	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 23:10	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 23:10	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 23:10	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/27/23 23:10	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 23:10	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 23:10	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 23:10	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 23:10	1
Trichloroethene	ND		1.0	0.30	ug/L			04/27/23 23:10	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 23:10	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 23:10	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 23:10	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 23:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 127*		*04/27/23 23:10*	*1*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*		*04/27/23 23:10*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/27/23 23:10*	*1*
Toluene-d8 (Surr)	*102*		*80 - 125*		*04/27/23 23:10*	*1*

Lab Sample ID: LCS 280-610485/1002
Matrix: Water
Analysis Batch: 610485

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	49.2		ug/L		98	74 - 121
1,1,1-Trichloroethane	50.0	49.6		ug/L		99	62 - 132
1,1,2,2-Tetrachloroethane	50.0	45.6		ug/L		91	72 - 122
1,1,2-Trichloroethane	50.0	49.7		ug/L		99	72 - 128
1,1-Dichloroethane	50.0	53.1		ug/L		106	66 - 130
1,1-Dichloroethene	50.0	53.9		ug/L		108	62 - 130
1,1-Dichloropropene	50.0	52.4		ug/L		105	64 - 133
1,2,3-Trichloropropane	50.0	42.3		ug/L		85	74 - 123
1,2,4-Trichlorobenzene	50.0	46.9		ug/L		94	73 - 124
1,2-Dibromo-3-Chloropropane	50.0	38.6		ug/L		77	58 - 122
1,2-Dibromoethane	50.0	48.4		ug/L		97	81 - 118
1,2-Dichlorobenzene	50.0	46.8		ug/L		94	77 - 121
1,2-Dichloroethane	50.0	45.0		ug/L		90	61 - 130
1,2-Dichloropropane	50.0	53.2		ug/L		106	68 - 127
1,3-Dichlorobenzene	50.0	47.9		ug/L		96	76 - 121
1,3-Dichloropropane	50.0	49.7		ug/L		99	80 - 118
1,4-Dichlorobenzene	50.0	46.5		ug/L		93	76 - 119
2,2-Dichloropropane	50.0	53.8		ug/L		108	57 - 140
2-Butanone (MEK)	200	190		ug/L		95	53 - 135
2-Hexanone	200	186		ug/L		93	58 - 134

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610485/1002
Matrix: Water
Analysis Batch: 610485

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Methyl-2-pentanone (MIBK)	200	200		ug/L		100	56 - 135
Acetone	200	165		ug/L		83	50 - 137
Acrolein	494	428		ug/L		87	10 - 207
Acrylonitrile	500	515		ug/L		103	65 - 133
Allyl chloride	50.0	61.3		ug/L		123	57 - 136
Benzene	50.0	53.0		ug/L		106	69 - 126
Bromoform	50.0	47.7		ug/L		95	57 - 125
Bromomethane	50.0	57.3		ug/L		115	25 - 163
Carbon disulfide	50.0	53.5		ug/L		107	56 - 128
Carbon tetrachloride	50.0	51.7		ug/L		103	60 - 133
Chlorobenzene	50.0	49.9		ug/L		100	78 - 118
Chlorobromomethane	50.0	50.8		ug/L		102	71 - 130
Chlorodibromomethane	50.0	47.8		ug/L		96	71 - 122
Chloroethane	50.0	60.5		ug/L		121	52 - 144
Chloroform	50.0	49.9		ug/L		100	68 - 128
Chloromethane	50.0	53.6		ug/L		107	43 - 142
cis-1,2-Dichloroethene	50.0	50.9		ug/L		102	69 - 126
cis-1,3-Dichloropropene	50.0	53.6		ug/L		107	75 - 120
Dibromomethane	50.0	47.6		ug/L		95	68 - 129
Dichlorobromomethane	50.0	49.7		ug/L		99	67 - 126
Dichlorodifluoromethane	50.0	58.2		ug/L		116	26 - 152
Ethyl methacrylate	50.0	51.1		ug/L		102	69 - 126
Ethylbenzene	50.0	50.2		ug/L		100	76 - 121
Iodomethane	50.0	48.1		ug/L		96	37 - 145
Isobutyl alcohol	1250	972		ug/L		78	46 - 132
Methylene Chloride	50.0	48.7		ug/L		97	64 - 128
m-Xylene & p-Xylene	50.0	51.4		ug/L		103	76 - 122
o-Xylene	50.0	50.2		ug/L		100	77 - 120
Styrene	50.0	52.3		ug/L		105	79 - 120
Tetrachloroethene	50.0	52.0		ug/L		104	72 - 127
Toluene	50.0	52.4		ug/L		105	68 - 127
trans-1,2-Dichloroethene	50.0	54.2		ug/L		108	66 - 129
trans-1,3-Dichloropropene	50.0	53.1		ug/L		106	66 - 127
trans-1,4-Dichloro-2-butene	50.0	40.9		ug/L		82	44 - 131
Trichloroethene	50.0	52.7		ug/L		105	70 - 125
Trichlorofluoromethane	50.0	56.4		ug/L		113	57 - 144
Vinyl acetate	100	111		ug/L		111	61 - 139
Vinyl chloride	50.0	65.3		ug/L		131	53 - 141
Xylenes, Total	100	102		ug/L		102	77 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 127*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*103*		*80 - 125*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610485/1003
Matrix: Water
Analysis Batch: 610485

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			250	212		ug/L		85	45 - 142		
Chloroprene			25.0	24.7		ug/L		99	53 - 147		
Methacrylonitrile			250	204		ug/L		82	47 - 142		
Methyl methacrylate			50.0	37.0		ug/L		74	60 - 131		
Propionitrile			250	223		ug/L		89	52 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 127*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*
Dibromofluoromethane (Surr)	*102*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Lab Sample ID: LCSD 280-610485/4
Matrix: Water
Analysis Batch: 610485

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			50.0	49.5		ug/L		99	74 - 121	1	20
1,1,1-Trichloroethane			50.0	51.9		ug/L		104	62 - 132	5	20
1,1,2,2-Tetrachloroethane			50.0	45.3		ug/L		91	72 - 122	1	20
1,1,2-Trichloroethane			50.0	51.5		ug/L		103	72 - 128	4	20
1,1-Dichloroethane			50.0	55.5		ug/L		111	66 - 130	4	20
1,1-Dichloroethene			50.0	53.2		ug/L		106	62 - 130	1	21
1,1-Dichloropropene			50.0	54.9		ug/L		110	64 - 133	5	20
1,2,3-Trichloropropane			50.0	42.9		ug/L		86	74 - 123	1	20
1,2,4-Trichlorobenzene			50.0	47.7		ug/L		95	73 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	38.4		ug/L		77	58 - 122	1	21
1,2-Dibromoethane			50.0	47.5		ug/L		95	81 - 118	2	20
1,2-Dichlorobenzene			50.0	46.8		ug/L		94	77 - 121	0	20
1,2-Dichloroethane			50.0	46.3		ug/L		93	61 - 130	3	20
1,2-Dichloropropane			50.0	54.7		ug/L		109	68 - 127	3	20
1,3-Dichlorobenzene			50.0	49.6		ug/L		99	76 - 121	4	20
1,3-Dichloropropane			50.0	50.3		ug/L		101	80 - 118	1	20
1,4-Dichlorobenzene			50.0	46.4		ug/L		93	76 - 119	0	20
2,2-Dichloropropane			50.0	54.3		ug/L		109	57 - 140	1	22
2-Butanone (MEK)			200	195		ug/L		97	53 - 135	3	20
2-Hexanone			200	188		ug/L		94	58 - 134	1	21
4-Methyl-2-pentanone (MIBK)			200	207		ug/L		103	56 - 135	3	20
Acetone			200	174		ug/L		87	50 - 137	5	21
Acrolein			494	439		ug/L		89	10 - 207	3	23
Acrylonitrile			500	531		ug/L		106	65 - 133	3	20
Allyl chloride			50.0	61.9		ug/L		124	57 - 136	1	20
Benzene			50.0	54.5		ug/L		109	69 - 126	3	20
Bromoform			50.0	48.5		ug/L		97	57 - 125	2	20
Bromomethane			50.0	60.6		ug/L		121	25 - 163	6	40
Carbon disulfide			50.0	54.8		ug/L		110	56 - 128	3	20
Carbon tetrachloride			50.0	54.0		ug/L		108	60 - 133	4	20
Chlorobenzene			50.0	49.8		ug/L		100	78 - 118	0	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610485/4
Matrix: Water
Analysis Batch: 610485

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorobromomethane			50.0	51.1		ug/L		102	71 - 130	1	20
Chlorodibromomethane			50.0	47.5		ug/L		95	71 - 122	1	20
Chloroethane			50.0	63.9		ug/L		128	52 - 144	5	30
Chloroform			50.0	50.8		ug/L		102	68 - 128	2	20
Chloromethane			50.0	56.8		ug/L		114	43 - 142	6	20
cis-1,2-Dichloroethene			50.0	52.1		ug/L		104	69 - 126	2	20
cis-1,3-Dichloropropene			50.0	53.0		ug/L		106	75 - 120	1	20
Dibromomethane			50.0	49.4		ug/L		99	68 - 129	4	20
Dichlorobromomethane			50.0	50.8		ug/L		102	67 - 126	2	20
Dichlorodifluoromethane			50.0	60.7		ug/L		121	26 - 152	4	21
Ethyl methacrylate			50.0	50.6		ug/L		101	69 - 126	1	20
Ethylbenzene			50.0	50.7		ug/L		101	76 - 121	1	20
Iodomethane			50.0	48.6		ug/L		97	37 - 145	1	38
Isobutyl alcohol			1250	1040		ug/L		83	46 - 132	7	30
Methylene Chloride			50.0	50.5		ug/L		101	64 - 128	4	20
m-Xylene & p-Xylene			50.0	51.6		ug/L		103	76 - 122	0	20
o-Xylene			50.0	50.7		ug/L		101	77 - 120	1	20
Styrene			50.0	52.2		ug/L		104	79 - 120	0	20
Tetrachloroethene			50.0	52.5		ug/L		105	72 - 127	1	20
Toluene			50.0	54.1		ug/L		108	68 - 127	3	20
trans-1,2-Dichloroethene			50.0	55.7		ug/L		111	66 - 129	3	20
trans-1,3-Dichloropropene			50.0	55.7		ug/L		111	66 - 127	5	20
trans-1,4-Dichloro-2-butene			50.0	41.6		ug/L		83	44 - 131	2	24
Trichloroethene			50.0	51.3		ug/L		103	70 - 125	3	20
Trichlorofluoromethane			50.0	59.6		ug/L		119	57 - 144	6	28
Vinyl acetate			100	115		ug/L		115	61 - 139	3	23
Vinyl chloride			50.0	67.3		ug/L		135	53 - 141	3	25
Xylenes, Total			100	102		ug/L		102	77 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 127*
4-Bromofluorobenzene (Surr)	*99*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Lab Sample ID: LCSD 280-610485/5
Matrix: Water
Analysis Batch: 610485

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	219		ug/L		88	45 - 142	3	20
Chloroprene			25.0	24.0		ug/L		96	53 - 147	3	20
Methacrylonitrile			250	202		ug/L		81	47 - 142	1	20
Methyl methacrylate			50.0	34.9		ug/L		70	60 - 131	6	20
Propionitrile			250	220		ug/L		88	52 - 138	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 127*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610485/5
Matrix: Water
Analysis Batch: 610485

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-608984/1-A
Matrix: Water
Analysis Batch: 609240

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/18/23 07:56	04/18/23 17:58	1
Arsenic	ND		5.0	0.50	ug/L		04/18/23 07:56	04/18/23 17:58	1
Barium	ND		3.0	0.38	ug/L		04/18/23 07:56	04/18/23 17:58	1
Calcium	ND		200	32	ug/L		04/18/23 07:56	04/18/23 17:58	1
Cadmium	ND		1.0	0.19	ug/L		04/18/23 07:56	04/18/23 17:58	1
Co	ND		1.0	0.33	ug/L		04/18/23 07:56	04/18/23 17:58	1
Chromium	ND		3.0	0.50	ug/L		04/18/23 07:56	04/18/23 17:58	1
Copper	ND		2.0	0.71	ug/L		04/18/23 07:56	04/18/23 17:58	1
Iron	ND		200	8.7	ug/L		04/18/23 07:56	04/18/23 17:58	1
Potassium	ND		1000	52	ug/L		04/18/23 07:56	04/18/23 17:58	1
Magnesium	ND		200	4.2	ug/L		04/18/23 07:56	04/18/23 17:58	1
Sodium	ND		1000	73	ug/L		04/18/23 07:56	04/18/23 17:58	1
Nickel	ND		3.0	0.83	ug/L		04/18/23 07:56	04/18/23 17:58	1
Lead	ND		1.0	0.23	ug/L		04/18/23 07:56	04/18/23 17:58	1
Antimony	ND		2.0	0.40	ug/L		04/18/23 07:56	04/18/23 17:58	1
Selenium	ND		5.0	1.0	ug/L		04/18/23 07:56	04/18/23 17:58	1
Tin	ND		10	0.58	ug/L		04/18/23 07:56	04/18/23 17:58	1
Thallium	ND		1.0	0.21	ug/L		04/18/23 07:56	04/18/23 17:58	1
Vanadium	ND		5.0	1.1	ug/L		04/18/23 07:56	04/18/23 17:58	1
Zinc	5.19	J	10	2.0	ug/L		04/18/23 07:56	04/18/23 17:58	1

Lab Sample ID: MB 280-608984/1-A
Matrix: Water
Analysis Batch: 609488

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		1.0	0.30	ug/L		04/18/23 07:56	04/20/23 09:29	1
Manganese	ND		3.0	0.51	ug/L		04/18/23 07:56	04/20/23 09:29	1

Lab Sample ID: LCS 280-608984/2-A
Matrix: Water
Analysis Batch: 609240

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	40.0	39.9		ug/L		100	85 - 115
Arsenic	40.0	40.6		ug/L		101	85 - 117
Barium	40.0	40.9		ug/L		102	85 - 118
Calcium	800	849		ug/L		106	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-608984/2-A
Matrix: Water
Analysis Batch: 609240

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	40.0	39.3		ug/L		98	85 - 115
Co	40.0	40.0		ug/L		100	85 - 120
Chromium	40.0	40.5		ug/L		101	84 - 121
Copper	40.0	41.1		ug/L		103	85 - 119
Iron	800	830		ug/L		104	80 - 120
Potassium	800	767	J	ug/L		96	80 - 120
Magnesium	800	724		ug/L		90	80 - 120
Sodium	800	886	J	ug/L		111	80 - 120
Nickel	40.0	39.2		ug/L		98	85 - 119
Lead	40.0	38.7		ug/L		97	85 - 118
Antimony	40.0	39.1		ug/L		98	85 - 115
Selenium	40.0	42.1		ug/L		105	77 - 122
Tin	40.0	37.1		ug/L		93	77 - 115
Thallium	40.0	38.6		ug/L		97	85 - 118
Vanadium	40.0	39.3		ug/L		98	85 - 120
Zinc	40.0	39.2		ug/L		98	83 - 122

Lab Sample ID: LCS 280-608984/2-A
Matrix: Water
Analysis Batch: 609394

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	40.0	39.1		ug/L		98	80 - 125
Manganese	40.0	41.3		ug/L		103	85 - 117

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-608955/6
Matrix: Water
Analysis Batch: 608955

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.090	mg/L			04/17/23 13:28	1
Nitrite as N	ND		0.50	0.049	mg/L			04/17/23 13:28	1

Lab Sample ID: LCS 280-608955/4
Matrix: Water
Analysis Batch: 608955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.39		mg/L		96	90 - 110
Nitrite as N	2.50	2.44		mg/L		97	90 - 110

Lab Sample ID: LCSD 280-608955/5
Matrix: Water
Analysis Batch: 608955

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	2.50	2.39		mg/L		95	90 - 110	0	10
Nitrite as N	2.50	2.42		mg/L		97	90 - 110	1	10

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MRL 280-608955/3
Matrix: Water
Analysis Batch: 608955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.250	0.233	J	mg/L		93	50 - 150
Nitrite as N	0.250	0.236	J	mg/L		94	50 - 150

Lab Sample ID: MB 280-608956/6
Matrix: Water
Analysis Batch: 608956

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			04/17/23 13:28	1
Sulfate	ND		5.0	1.0	mg/L			04/17/23 13:28	1

Lab Sample ID: LCS 280-608956/4
Matrix: Water
Analysis Batch: 608956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.4		mg/L		101	90 - 110
Sulfate	50.0	49.8		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-608956/5
Matrix: Water
Analysis Batch: 608956

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	50.0	50.4		mg/L		101	90 - 110	0	10
Sulfate	50.0	49.9		mg/L		100	90 - 110	0	10

Lab Sample ID: MRL 280-608956/3
Matrix: Water
Analysis Batch: 608956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2.50	2.40	J	mg/L		96	50 - 150
Sulfate	2.50	2.39	J	mg/L		95	50 - 150

Lab Sample ID: MB 280-610654/49
Matrix: Water
Analysis Batch: 610654

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.23	mg/L			04/29/23 22:58	1

Lab Sample ID: LCS 280-610654/47
Matrix: Water
Analysis Batch: 610654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	2.50	2.37		mg/L		95	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-610654/48
Matrix: Water
Analysis Batch: 610654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide			2.50	2.29		mg/L		92	90 - 110	3	10

Lab Sample ID: MRL 280-610654/3
Matrix: Water
Analysis Batch: 610654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide			0.250	ND		mg/L		86	50 - 150		

Lab Sample ID: 280-175122-2 MS
Matrix: Water
Analysis Batch: 610654

Client Sample ID: MP-2-20230411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide	2.1	F1	5.00	5.27	E F1	mg/L		63	80 - 120		

Lab Sample ID: 280-175122-2 MSD
Matrix: Water
Analysis Batch: 610654

Client Sample ID: MP-2-20230411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	2.1	F1	5.00	5.20	E F1	mg/L		61	80 - 120	1	20

Lab Sample ID: 280-175122-2 DU
Matrix: Water
Analysis Batch: 610654

Client Sample ID: MP-2-20230411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Bromide	2.1	F1	2.31		mg/L				8	15

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-609838/4
Matrix: Water
Analysis Batch: 609838

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1.0	0.35	mg/L			04/21/23 15:46	1

Lab Sample ID: LCS 280-609838/3
Matrix: Water
Analysis Batch: 609838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates			25.0	24.5		mg/L		98	88 - 112		
TOC Result 2			25.0	24.8		mg/L		99	88 - 112		
TOC Result 1			25.0	24.2		mg/L		97	88 - 112		

GC/MS VOA

Analysis Batch: 609561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-5	MW-111D-20230414	Total/NA	Water	8260D	
MB 280-609561/7	Method Blank	Total/NA	Water	8260D	
LCS 280-609561/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-609561/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-609561/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-609561/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 609932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-2	MP-2-20230411	Total/NA	Water	8260D	
MB 280-609932/7	Method Blank	Total/NA	Water	8260D	
LCS 280-609932/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-609932/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-609932/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-609932/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 610121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-1	RW-1-20230413	Total/NA	Water	8260D	
MB 280-610121/7	Method Blank	Total/NA	Water	8260D	
LCS 280-610121/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-610121/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-610121/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-610121/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 610123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-3	MW-118D-20230412	Total/NA	Water	8260D	
MB 280-610123/7	Method Blank	Total/NA	Water	8260D	
LCS 280-610123/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-610123/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-610123/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-610123/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 610347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-4	MP-3-20230413	Total/NA	Water	8260D	
280-175122-7	MW-102S-20230414	Total/NA	Water	8260D	
MB 280-610347/7	Method Blank	Total/NA	Water	8260D	
LCS 280-610347/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-610347/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-610347/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-610347/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 610485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-6	MW-123-20230415	Total/NA	Water	8260D	
280-175122-8	MW-115S-20230415	Total/NA	Water	8260D	
280-175122-9	TB-07-20230416	Total/NA	Water	8260D	
MB 280-610485/7	Method Blank	Total/NA	Water	8260D	
LCS 280-610485/1002	Lab Control Sample	Total/NA	Water	8260D	

GC/MS VOA (Continued)

Analysis Batch: 610485 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-610485/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-610485/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-610485/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Metals

Prep Batch: 608984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-1	RW-1-20230413	Dissolved	Water	3005A	
280-175122-2	MP-2-20230411	Dissolved	Water	3005A	
280-175122-3	MW-118D-20230412	Dissolved	Water	3005A	
MB 280-608984/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-608984/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 609240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-1	RW-1-20230413	Dissolved	Water	6020B	608984
280-175122-2	MP-2-20230411	Dissolved	Water	6020B	608984
280-175122-3	MW-118D-20230412	Dissolved	Water	6020B	608984
MB 280-608984/1-A	Method Blank	Total Recoverable	Water	6020B	608984
LCS 280-608984/2-A	Lab Control Sample	Total Recoverable	Water	6020B	608984

Analysis Batch: 609394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-1	RW-1-20230413	Dissolved	Water	6020B	608984
280-175122-2	MP-2-20230411	Dissolved	Water	6020B	608984
280-175122-3	MW-118D-20230412	Dissolved	Water	6020B	608984
LCS 280-608984/2-A	Lab Control Sample	Total Recoverable	Water	6020B	608984

Analysis Batch: 609488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-608984/1-A	Method Blank	Total Recoverable	Water	6020B	608984

Analysis Batch: 609564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-1	RW-1-20230413	Dissolved	Water	6020B	608984
280-175122-2	MP-2-20230411	Dissolved	Water	6020B	608984
280-175122-3	MW-118D-20230412	Dissolved	Water	6020B	608984

General Chemistry

Analysis Batch: 608955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-1	RW-1-20230413	Total/NA	Water	9056A	
280-175122-2	MP-2-20230411	Total/NA	Water	9056A	
280-175122-3	MW-118D-20230412	Total/NA	Water	9056A	
MB 280-608955/6	Method Blank	Total/NA	Water	9056A	
LCS 280-608955/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-608955/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-608955/3	Lab Control Sample	Total/NA	Water	9056A	

QC Association Summary

Client: CDM Smith Inc
Job ID: 280-175122-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

General Chemistry

Analysis Batch: 608956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-1	RW-1-20230413	Total/NA	Water	9056A	
280-175122-2	MP-2-20230411	Total/NA	Water	9056A	
280-175122-3	MW-118D-20230412	Total/NA	Water	9056A	
280-175122-3	MW-118D-20230412	Total/NA	Water	9056A	
MB 280-608956/6	Method Blank	Total/NA	Water	9056A	
LCS 280-608956/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-608956/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-608956/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 609838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-1	RW-1-20230413	Total/NA	Water	9060A	
280-175122-2	MP-2-20230411	Total/NA	Water	9060A	
280-175122-3	MW-118D-20230412	Total/NA	Water	9060A	
MB 280-609838/4	Method Blank	Total/NA	Water	9060A	
LCS 280-609838/3	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 610654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175122-1	RW-1-20230413	Total/NA	Water	9056A	
280-175122-2	MP-2-20230411	Total/NA	Water	9056A	
280-175122-3	MW-118D-20230412	Total/NA	Water	9056A	
MB 280-610654/49	Method Blank	Total/NA	Water	9056A	
LCS 280-610654/47	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-610654/48	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-610654/3	Lab Control Sample	Total/NA	Water	9056A	
280-175122-2 MS	MP-2-20230411	Total/NA	Water	9056A	
280-175122-2 MSD	MP-2-20230411	Total/NA	Water	9056A	
280-175122-2 DU	MP-2-20230411	Total/NA	Water	9056A	

Lab Chronicle

Client: CDM Smith Inc
Job ID: 280-175122-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID: RW-1-20230413
Lab Sample ID: 280-175122-1
Date Collected: 04/13/23 15:20
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		4	5 mL	5 mL	610121	04/26/23 17:27	MD	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609240	04/18/23 18:47	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609394	04/19/23 16:18	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		10			609564	04/20/23 17:37	LMT	EET DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	608955	04/17/23 13:43	MEC	EET DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	608956	04/17/23 13:58	MEC	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	610654	04/30/23 03:21	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	609838	04/21/23 17:58	ABW	EET DEN

Client Sample ID: MP-2-20230411
Lab Sample ID: 280-175122-2
Date Collected: 04/11/23 14:40
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		4	5 mL	5 mL	609932	04/25/23 03:05	BMJ	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609240	04/18/23 18:49	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609394	04/19/23 16:20	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		10			609564	04/20/23 17:39	LMT	EET DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	608955	04/17/23 14:13	MEC	EET DEN
Total/NA	Analysis	9056A		10	10 mL	10 mL	608956	04/17/23 14:28	MEC	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	610654	04/30/23 02:33	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	609838	04/21/23 18:12	ABW	EET DEN

Client Sample ID: MW-118D-20230412
Lab Sample ID: 280-175122-3
Date Collected: 04/12/23 17:05
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610123	04/26/23 14:30	DMC	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609240	04/18/23 18:54	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609394	04/19/23 16:25	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		10			609564	04/20/23 17:41	LMT	EET DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	608955	04/17/23 14:43	MEC	EET DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	608956	04/17/23 14:43	MEC	EET DEN

Client Sample ID: MW-118D-20230412
Lab Sample ID: 280-175122-3
Date Collected: 04/12/23 17:05
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	10 mL	10 mL	608956	04/17/23 14:58	MEC	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	610654	04/30/23 01:57	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	609838	04/21/23 18:57	ABW	EET DEN

Client Sample ID: MP-3-20230413
Lab Sample ID: 280-175122-4
Date Collected: 04/13/23 16:26
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		2	5 mL	5 mL	610347	04/27/23 18:49	MD	EET DEN

Client Sample ID: MW-111D-20230414
Lab Sample ID: 280-175122-5
Date Collected: 04/14/23 15:30
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	609561	04/21/23 16:28	ETB	EET DEN

Client Sample ID: MW-123-20230415
Lab Sample ID: 280-175122-6
Date Collected: 04/15/23 14:55
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610485	04/28/23 03:17	BMJ	EET DEN

Client Sample ID: MW-102S-20230414
Lab Sample ID: 280-175122-7
Date Collected: 04/14/23 14:30
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610347	04/27/23 15:44	MD	EET DEN

Client Sample ID: MW-115S-20230415
Lab Sample ID: 280-175122-8
Date Collected: 04/15/23 10:30
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610485	04/28/23 03:38	BMJ	EET DEN

Client Sample ID: TB-07-20230416
Lab Sample ID: 280-175122-9
Date Collected: 04/16/23 10:40
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610485	04/28/23 00:12	BMJ	EET DEN

Lab Chronicle

Client: CDM Smith Inc
Job ID: 280-175122-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: CDM Smith Inc
Job ID: 280-175122-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Laboratory: Eurofins Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4025-019	06-26-23

Method Summary

Client: CDM Smith Inc
Job ID: 280-175122-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET DEN
6020B	Metals (ICP/MS)	SW846	EET DEN
9056A	Anions, Ion Chromatography	SW846	EET DEN
9060A	Organic Carbon, Total (TOC)	SW846	EET DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET DEN
5030C	Purge and Trap	SW846	EET DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: CDM Smith Inc
Job ID: 280-175122-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-175122-1	RW-1-20230413	Water	04/13/23 15:20	04/17/23 09:00
280-175122-2	MP-2-20230411	Water	04/11/23 14:40	04/17/23 09:00
280-175122-3	MW-118D-20230412	Water	04/12/23 17:05	04/17/23 09:00
280-175122-4	MP-3-20230413	Water	04/13/23 16:26	04/17/23 09:00
280-175122-5	MW-111D-20230414	Water	04/14/23 15:30	04/17/23 09:00
280-175122-6	MW-123-20230415	Water	04/15/23 14:55	04/17/23 09:00
280-175122-7	MW-102S-20230414	Water	04/14/23 14:30	04/17/23 09:00
280-175122-8	MW-115S-20230415	Water	04/15/23 10:30	04/17/23 09:00
280-175122-9	TB-07-20230416	Water	04/16/23 10:40	04/17/23 09:00

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_MS1 Analysis Batch Number: 609046

Lab Sample ID: IC 280-609046/42 Client Sample ID:

Date Analyzed: 04/18/23 18:15 Lab File ID: MS1_8195.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.81	Assign Peak	AF7X	04/19/23 06:11
Bromomethane	2.50	Baseline	AF7X	04/19/23 06:11
Chloroethane	2.62	Assign Peak	AF7X	04/19/23 06:12
Acrolein	3.32	Baseline	AF7X	04/19/23 06:12
1,2-Dichloroethane	5.82	Assign Peak	AF7X	04/19/23 06:12
Bromoform	9.58	Assign Peak	AF7X	04/19/23 06:13
trans-1,4-Dichloro-2-butene	10.05	Assign Peak	AF7X	04/19/23 06:13
1,2-Dibromo-3-Chloropropane	12.23	Assign Peak	AF7X	04/19/23 06:13

Lab Sample ID: IC 280-609046/41 Client Sample ID:

Date Analyzed: 04/18/23 18:36 Lab File ID: MS1_8196.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane	5.82	Assign Peak	AF7X	04/19/23 06:10
Bromoform	9.58	Assign Peak	AF7X	04/19/23 06:10
1,2-Dibromo-3-Chloropropane	12.23	Assign Peak	AF7X	04/19/23 06:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_MS1 Analysis Batch Number: 609561

Lab Sample ID: MB 280-609561/7 Client Sample ID:

Date Analyzed: 04/21/23 09:22 Lab File ID: MS1_8312.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acrolein		Invalid Compound ID	AF7X	04/21/23 10:54
Carbon disulfide		Invalid Compound ID	AF7X	04/21/23 10:55

Lab Sample ID: 280-175122-5 Client Sample ID: MW-111D-20230414

Date Analyzed: 04/21/23 16:28 Lab File ID: MS1_8330.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	V8PV	04/22/23 00:55
Isobutyl alcohol		Invalid Compound ID	V8PV	04/22/23 00:56
trans-1,4-Dichloro-2-butene		Invalid Compound ID	V8PV	04/22/23 00:56
Trichlorofluoromethane		Invalid Compound ID	V8PV	04/22/23 00:55
Vinyl acetate		Invalid Compound ID	V8PV	04/22/23 00:56

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 608141

Lab Sample ID: STD010 280-608141/12 IC Client Sample ID:

Date Analyzed: 04/10/23 13:26 Lab File ID: P00473.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	1.99	Split Peak	RWB2	04/10/23 18:25

Lab Sample ID: STD020 280-608141/13 IC Client Sample ID:

Date Analyzed: 04/10/23 13:48 Lab File ID: P00474.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	1.99	Split Peak	RWB2	04/10/23 18:24

Lab Sample ID: STD10 280-608141/15 IC Client Sample ID:

Date Analyzed: 04/10/23 14:34 Lab File ID: P00476.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	1.98	Split Peak	RWB2	04/10/23 18:19

Lab Sample ID: ICIS 280-608141/16 Client Sample ID:

Date Analyzed: 04/10/23 14:57 Lab File ID: P00477.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	1.98	Split Peak	RWB2	04/10/23 18:26

Lab Sample ID: STD200 280-608141/19 IC Client Sample ID:

Date Analyzed: 04/10/23 17:06 Lab File ID: P00480.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	1.97	Split Peak	RWB2	04/10/23 18:23

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 608296

Lab Sample ID: STD005 280-608296/12 IC Client Sample ID:

Date Analyzed: 04/11/23 17:33 Lab File ID: P00506.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane		Invalid Compound ID	RWB2	04/11/23 21:34

Lab Sample ID: STD010 280-608296/13 IC Client Sample ID:

Date Analyzed: 04/11/23 17:56 Lab File ID: P00507.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	1.99	Baseline	RWB2	04/11/23 21:34
1,2-Dichloroethane	4.59	Assign Peak	RWB2	04/13/23 15:31

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 610123

Lab Sample ID: MB 280-610123/7 Client Sample ID:

Date Analyzed: 04/26/23 10:12 Lab File ID: P01132.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Iodomethane	2.78	Peak assignment corrected	Q2ZS	04/27/23 14:04
Carbon disulfide		Invalid Compound ID	NNS5	04/27/23 08:08
Isobutyl alcohol		Invalid Compound ID	V8PV	04/26/23 16:56

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 590907

Lab Sample ID: STD005 280-590907/13 IC Client Sample ID:

Date Analyzed: 10/22/22 11:33 Lab File ID: X43662.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Iodomethane	3.05	Peak assignment corrected	RWB2	10/24/22 10:37
2,2-Dichloropropane	4.22	Peak assignment corrected	RWB2	10/24/22 10:37
n-Heptane	5.04	Peak assignment corrected	RWB2	10/24/22 10:37
1,4-Dioxane	5.59	Assign Peak	RWB2	10/24/22 10:37
Toluene	6.37	Assign Peak	RWB2	10/24/22 10:37
Hexachlorobutadiene	11.91	Assign Peak	RWB2	10/24/22 10:38

Lab Sample ID: STD010 280-590907/14 IC Client Sample ID:

Date Analyzed: 10/22/22 12:14 Lab File ID: X43664.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
n-Heptane	5.04	Assign Peak	RWB2	10/22/22 13:30

Lab Sample ID: STD010 280-590907/23 IC Client Sample ID:

Date Analyzed: 10/22/22 15:19 Lab File ID: X43673.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD020 280-590907/24 IC Client Sample ID:

Date Analyzed: 10/22/22 15:40 Lab File ID: X43674.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 590907

Lab Sample ID: STD050 280-590907/25 IC Client Sample ID:

Date Analyzed: 10/22/22 16:01 Lab File ID: X43675.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD10 280-590907/26 IC Client Sample ID:

Date Analyzed: 10/22/22 16:21 Lab File ID: X43676.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD50 280-590907/27 IC Client Sample ID:

Date Analyzed: 10/22/22 16:42 Lab File ID: X43677.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.54	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD100 280-590907/28 IC Client Sample ID:

Date Analyzed: 10/22/22 17:02 Lab File ID: X43678.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.54	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD200 280-590907/29 IC Client Sample ID:

Date Analyzed: 10/22/22 17:23 Lab File ID: X43679.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.54	Peak assignment corrected	V1QB	10/23/22 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 607881

Lab Sample ID: STD 280-607881/19 IC Client Sample ID:

Date Analyzed: 04/07/23 03:14 Lab File ID: X502127.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Iodomethane	3.06	Assign Peak	BX8N	04/10/23 10:13
Toluene	6.37	Assign Peak	BX8N	04/10/23 10:14
trans-1,3-Dichloropropene	6.54	Assign Peak	BX8N	04/10/23 10:14

Lab Sample ID: STD 280-607881/18 IC Client Sample ID:

Date Analyzed: 04/07/23 03:34 Lab File ID: X502128.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	5.59	Assign Peak	BX8N	04/10/23 10:15

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 609932

Lab Sample ID: MB 280-609932/7 Client Sample ID:

Date Analyzed: 04/24/23 20:30 Lab File ID: X502755.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dibromo-3-Chloropropane		Invalid Compound ID	V8PV	04/24/23 21:21
Acetonitrile		Invalid Compound ID	V8PV	04/24/23 21:21
Bromomethane		Invalid Compound ID	V8PV	04/24/23 21:21
Isobutyl alcohol		Invalid Compound ID	V8PV	04/24/23 21:21

Lab Sample ID: 280-175122-2 Client Sample ID: MP-2-20230411

Date Analyzed: 04/25/23 03:05 Lab File ID: X502772.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane		Invalid Compound ID	NNS5	04/25/23 11:24
Isobutyl alcohol		Invalid Compound ID	NNS5	04/25/23 11:24

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 610121

Lab Sample ID: MB 280-610121/7 Client Sample ID:

Date Analyzed: 04/26/23 11:43 Lab File ID: X502851.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane		Invalid Compound ID	BX8N	04/26/23 12:15
Chloroethane		Invalid Compound ID	BX8N	04/26/23 12:15
Isobutyl alcohol		Invalid Compound ID	BX8N	04/26/23 12:15

Lab Sample ID: 280-175122-1 Client Sample ID: RW-1-20230413

Date Analyzed: 04/26/23 17:27 Lab File ID: X502867.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	4.21	Invalid Compound ID	AK2J	04/27/23 01:53
1,2-Dichloroethane		Invalid Compound ID	AK2J	04/27/23 01:53
1,3-Dichlorobenzene		Invalid Compound ID	AK2J	04/27/23 01:54
Acetonitrile		Invalid Compound ID	AK2J	04/27/23 01:53
Chlorobenzene		Invalid Compound ID	AK2J	04/27/23 01:54
Isobutyl alcohol		Invalid Compound ID	AK2J	04/27/23 01:53

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 610347

Lab Sample ID: MB 280-610347/7 Client Sample ID:

Date Analyzed: 04/27/23 12:59 Lab File ID: X502915.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane		Invalid Compound ID	BX8N	04/27/23 13:57
Isobutyl alcohol		Invalid Compound ID	BX8N	04/27/23 13:57

Lab Sample ID: 280-175122-7 Client Sample ID: MW-102S-20230414

Date Analyzed: 04/27/23 15:44 Lab File ID: X502923.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroethane		Invalid Compound ID	V8PV	04/28/23 02:35
Isobutyl alcohol		Invalid Compound ID	V8PV	04/28/23 02:35

Lab Sample ID: 280-175122-4 Client Sample ID: MP-3-20230413

Date Analyzed: 04/27/23 18:49 Lab File ID: X502932.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	4.21	Invalid Compound ID	V8PV	04/28/23 02:29
Isobutyl alcohol		Invalid Compound ID	V8PV	04/28/23 02:29

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 610485

Lab Sample ID: MB 280-610485/7 Client Sample ID:

Date Analyzed: 04/27/23 23:10 Lab File ID: X502944.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4-Trichlorobenzene		Invalid Compound ID	V8PV	04/28/23 02:54
1,2-Dibromo-3-Chloropropane		Invalid Compound ID	V8PV	04/28/23 02:54
Acetonitrile		Invalid Compound ID	V8PV	04/28/23 02:54
Allyl chloride		Invalid Compound ID	V8PV	04/28/23 02:54
Bromomethane		Invalid Compound ID	V8PV	04/28/23 02:55
Isobutyl alcohol		Invalid Compound ID	V8PV	04/28/23 02:54

Lab Sample ID: 280-175122-9 Client Sample ID: TB-07-20230416

Date Analyzed: 04/28/23 00:12 Lab File ID: X502946.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile		Invalid Compound ID	BX8N	04/28/23 05:01
Bromomethane		Invalid Compound ID	BX8N	04/28/23 05:01
Carbon disulfide		Invalid Compound ID	BX8N	04/28/23 05:01
Isobutyl alcohol		Invalid Compound ID	BX8N	04/28/23 05:00

Lab Sample ID: 280-175122-6 Client Sample ID: MW-123-20230415

Date Analyzed: 04/28/23 03:17 Lab File ID: X502955.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile		Invalid Compound ID	BX8N	04/28/23 05:48
Isobutyl alcohol		Invalid Compound ID	BX8N	04/28/23 05:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 610485

Lab Sample ID: 280-175122-8 Client Sample ID: MW-115S-20230415

Date Analyzed: 04/28/23 03:38 Lab File ID: X502956.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol		Invalid Compound ID	BX8N	04/28/23 05:49

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608435

Lab Sample ID: STD 280-608435/1 IC Client Sample ID:

Date Analyzed: 04/12/23 14:04 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Orthophosphate as P	9.45	Baseline Smoothing	LVW8	04/12/23 15:40

Lab Sample ID: STD 280-608435/2 IC Client Sample ID:

Date Analyzed: 04/12/23 14:19 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.12	Baseline Smoothing	LVW8	04/12/23 15:41
Nitrate as N	7.38	Baseline Smoothing	LVW8	04/12/23 15:41
Orthophosphate as P	9.81	Baseline Smoothing	LVW8	04/12/23 15:41

Lab Sample ID: STD 280-608435/3 IC Client Sample ID:

Date Analyzed: 04/12/23 14:34 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.12	Baseline Smoothing	LVW8	04/12/23 15:41
Nitrate as N	7.12	Baseline Smoothing	LVW8	04/12/23 15:41
Orthophosphate as P	9.41	Baseline Smoothing	LVW8	04/12/23 15:42

Lab Sample ID: STD 280-608435/4 IC Client Sample ID:

Date Analyzed: 04/12/23 14:49 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.11	Baseline Smoothing	LVW8	04/12/23 15:42
Nitrate as N	7.10	Baseline Smoothing	LVW8	04/12/23 15:42
Orthophosphate as P	9.39	Baseline Smoothing	LVW8	04/12/23 15:42

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608435

Lab Sample ID: STD 280-608435/5 IC Client Sample ID:

Date Analyzed: 04/12/23 15:04 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.11	Baseline Smoothing	LVW8	04/12/23 15:43
Nitrate as N	7.08	Baseline Smoothing	LVW8	04/12/23 15:43
Orthophosphate as P	9.37	Baseline Smoothing	LVW8	04/12/23 15:43

Lab Sample ID: STD 280-608435/6 IC Client Sample ID:

Date Analyzed: 04/12/23 15:19 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.10	Baseline Smoothing	LVW8	04/12/23 15:43
Nitrate as N	7.06	Baseline Smoothing	LVW8	04/12/23 15:43
Orthophosphate as P	9.35	Baseline Smoothing	LVW8	04/12/23 15:43

Lab Sample ID: ICV 280-608435/7 Client Sample ID:

Date Analyzed: 04/12/23 15:34 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.11	Baseline Smoothing	XAY4	04/14/23 13:56

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608436

Lab Sample ID: STD 280-608436/1 IC Client Sample ID:

Date Analyzed: 04/12/23 14:04 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.38	Baseline Smoothing	LVW8	04/12/23 15:40
Sulfate	10.65	Baseline Smoothing	LVW8	04/12/23 15:40

Lab Sample ID: STD 280-608436/2 IC Client Sample ID:

Date Analyzed: 04/12/23 14:19 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.16	Baseline Smoothing	LVW8	04/12/23 15:41
Chloride	4.38	Baseline Smoothing	LVW8	04/12/23 15:41
Sulfate	11.05	Baseline Smoothing	LVW8	04/12/23 15:41

Lab Sample ID: STD 280-608436/3 IC Client Sample ID:

Date Analyzed: 04/12/23 14:34 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.17	Baseline Smoothing	LVW8	04/12/23 15:42
Chloride	4.38	Baseline Smoothing	LVW8	04/12/23 15:41
Bromide	6.32	Baseline Smoothing	LVW8	04/12/23 15:41
Sulfate	10.65	Baseline Smoothing	LVW8	04/12/23 15:42

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608436

Lab Sample ID: STD 280-608436/4 IC Client Sample ID:

Date Analyzed: 04/12/23 14:49 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.17	Baseline Smoothing	LVW8	04/12/23 15:42
Chloride	4.39	Baseline Smoothing	LVW8	04/12/23 15:42
Bromide	6.31	Baseline Smoothing	LVW8	04/12/23 15:42
Sulfate	10.63	Baseline Smoothing	LVW8	04/12/23 15:42

Lab Sample ID: STD 280-608436/5 IC Client Sample ID:

Date Analyzed: 04/12/23 15:04 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.17	Baseline Smoothing	LVW8	04/12/23 15:43
Chloride	4.41	Baseline Smoothing	LVW8	04/12/23 15:43
Sulfate	10.61	Baseline Smoothing	LVW8	04/12/23 15:43

Lab Sample ID: STD 280-608436/6 IC Client Sample ID:

Date Analyzed: 04/12/23 15:19 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.18	Baseline Smoothing	LVW8	04/12/23 15:43
Chloride	4.43	Baseline Smoothing	LVW8	04/12/23 15:43
Sulfate	10.59	Baseline Smoothing	LVW8	04/12/23 15:43

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608436

Lab Sample ID: ICB 280-608436/8 Client Sample ID:

Date Analyzed: 04/12/23 15:49 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide		Unspecified		
Chloride		Unspecified		
Sulfate	10.60	Baseline Smoothing	XAY4	04/14/23 14:01

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608955

Lab Sample ID: CCV 280-608955/1 Client Sample ID:

Date Analyzed: 04/17/23 12:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.09	Baseline Smoothing	LVW8	04/18/23 10:45
Nitrate as N	7.05	Baseline Smoothing	LVW8	04/18/23 10:45

Lab Sample ID: MRL 280-608955/3 Client Sample ID:

Date Analyzed: 04/17/23 12:43 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.10	Baseline Smoothing	LVW8	04/18/23 10:45
Nitrate as N	7.10	Baseline Smoothing	LVW8	04/18/23 10:46

Lab Sample ID: LCS 280-608955/4 Client Sample ID:

Date Analyzed: 04/17/23 12:58 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.09	Baseline Smoothing	LVW8	04/18/23 10:46
Nitrate as N	7.04	Baseline Smoothing	LVW8	04/18/23 10:46

Lab Sample ID: LCSD 280-608955/5 Client Sample ID:

Date Analyzed: 04/17/23 13:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.09	Baseline Smoothing	LVW8	04/18/23 10:46
Nitrate as N	7.04	Baseline Smoothing	LVW8	04/18/23 10:46

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608955

Lab Sample ID: 280-175122-2 Client Sample ID: MP-2-20230411

Date Analyzed: 04/17/23 14:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrate as N	7.15	Baseline Smoothing	LVW8	04/18/23 10:48

Lab Sample ID: 280-175122-3 Client Sample ID: MW-118D-20230412

Date Analyzed: 04/17/23 14:43 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrate as N	7.16	Baseline Smoothing	LVW8	04/18/23 10:49

Lab Sample ID: CCV 280-608955/17 Client Sample ID:

Date Analyzed: 04/17/23 16:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.09	Baseline Smoothing	LVW8	04/18/23 10:51
Nitrate as N	7.05	Baseline Smoothing	LVW8	04/18/23 10:51

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608956

Lab Sample ID: CCV 280-608956/1 Client Sample ID:

Date Analyzed: 04/17/23 12:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.39	Baseline Smoothing	LVW8	04/18/23 10:45
Sulfate	10.61	Baseline Smoothing	LVW8	04/18/23 10:45

Lab Sample ID: CCB 280-608956/2 Client Sample ID:

Date Analyzed: 04/17/23 12:28 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.63	Baseline Smoothing	LVW8	04/18/23 10:45

Lab Sample ID: MRL 280-608956/3 Client Sample ID:

Date Analyzed: 04/17/23 12:43 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.37	Baseline Smoothing	LVW8	04/18/23 10:45
Sulfate	10.64	Baseline Smoothing	LVW8	04/18/23 10:46

Lab Sample ID: LCS 280-608956/4 Client Sample ID:

Date Analyzed: 04/17/23 12:58 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.39	Baseline Smoothing	LVW8	04/18/23 10:46
Sulfate	10.61	Baseline Smoothing	LVW8	04/18/23 10:46

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608956

Lab Sample ID: LCSD 280-608956/5 Client Sample ID:

Date Analyzed: 04/17/23 13:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.39	Baseline Smoothing	LVW8	04/18/23 10:46
Sulfate	10.61	Baseline Smoothing	LVW8	04/18/23 10:46

Lab Sample ID: MB 280-608956/6 Client Sample ID:

Date Analyzed: 04/17/23 13:28 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.63	Baseline Smoothing	LVW8	04/18/23 10:47

Lab Sample ID: 280-175122-1 Client Sample ID: RW-1-20230413

Date Analyzed: 04/17/23 13:58 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.38	Baseline Smoothing	LVW8	04/18/23 10:47
Sulfate	10.64	Baseline Smoothing	LVW8	04/18/23 10:48

Lab Sample ID: 280-175122-2 Client Sample ID: MP-2-20230411

Date Analyzed: 04/17/23 14:28 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.39	Baseline Smoothing	LVW8	04/18/23 10:49
Sulfate	10.65	Baseline Smoothing	LVW8	04/18/23 10:49

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608956

Lab Sample ID: 280-175122-3 Client Sample ID: MW-118D-20230412

Date Analyzed: 04/17/23 14:43 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.63	Baseline Smoothing	LVW8	04/18/23 10:49

Lab Sample ID: CCV 280-608956/17 Client Sample ID:

Date Analyzed: 04/17/23 16:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.39	Baseline Smoothing	LVW8	04/18/23 10:51
Sulfate	10.61	Baseline Smoothing	LVW8	04/18/23 10:51

Lab Sample ID: CCB 280-608956/18 Client Sample ID:

Date Analyzed: 04/17/23 16:28 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.65	Baseline Smoothing	LVW8	04/18/23 10:52

Lab Sample ID: CCV 280-608956/29 Client Sample ID:

Date Analyzed: 04/17/23 19:14 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.40	Baseline Smoothing	LVW8	04/18/23 10:56
Sulfate	10.63	Baseline Smoothing	LVW8	04/18/23 10:56

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608956

Lab Sample ID: CCB 280-608956/30 Client Sample ID:

Date Analyzed: 04/17/23 19:29 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.66	Baseline Smoothing	LVW8	04/18/23 10:56

Lab Sample ID: CCV 280-608956/41 Client Sample ID:

Date Analyzed: 04/17/23 22:14 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.40	Baseline Smoothing	LVW8	04/18/23 11:01
Sulfate	10.62	Baseline Smoothing	LVW8	04/18/23 11:01

Lab Sample ID: CCB 280-608956/42 Client Sample ID:

Date Analyzed: 04/17/23 22:29 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.67	Baseline Smoothing	LVW8	04/18/23 11:01

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 607366

Lab Sample ID: STD 280-607366/1 IC Client Sample ID:

Date Analyzed: 04/03/23 16:42 Lab File ID: 280-0120028-002280-01200 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:06
Sulfate	6.54	Baseline Smoothing	XAY4	04/04/23 10:07

Lab Sample ID: STD 280-607366/2 IC Client Sample ID:

Date Analyzed: 04/03/23 16:54 Lab File ID: 280-0120083-002_04_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.93	Baseline Smoothing	XAY4	04/04/23 10:07
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:09

Lab Sample ID: STD 280-607366/3 IC Client Sample ID:

Date Analyzed: 04/03/23 17:06 Lab File ID: 280-0120083-003_05_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:07
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:09

Lab Sample ID: STD 280-607366/4 IC Client Sample ID:

Date Analyzed: 04/03/23 17:18 Lab File ID: 280-0120083-004_06_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:07
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:10

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 607366

Lab Sample ID: STD 280-607366/5 IC Client Sample ID:

Date Analyzed: 04/03/23 17:30 Lab File ID: 280-0120083-005_07_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:08
Chloride	2.71	Baseline Smoothing	XAY4	04/04/23 10:10

Lab Sample ID: STD 280-607366/6 IC Client Sample ID:

Date Analyzed: 04/03/23 17:42 Lab File ID: 280-0120083-006_08_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:08
Chloride	2.72	Baseline Smoothing	XAY4	04/04/23 10:10

Lab Sample ID: ICV 280-607366/7 Client Sample ID:

Date Analyzed: 04/03/23 17:54 Lab File ID: 280-0120083-007_09_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:08
Chloride	2.72	Baseline Smoothing	XAY4	04/04/23 10:13

Lab Sample ID: ICB 280-607366/8 Client Sample ID:

Date Analyzed: 04/03/23 18:06 Lab File ID: 280-0120083-008_10_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.71	Baseline Smoothing	XAY4	04/04/23 11:51

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 610654

Lab Sample ID: CCV 280-610654/41 Client Sample ID:

Date Analyzed: 04/29/23 21:22 Lab File ID: 280-0120908-041_42_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 11:32

Lab Sample ID: CCV 280-610654/53 Client Sample ID:

Date Analyzed: 04/29/23 23:46 Lab File ID: 280-0120908-053_54_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 11:35
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 11:35

Lab Sample ID: CCV 280-610654/65 Client Sample ID:

Date Analyzed: 04/30/23 02:09 Lab File ID: 280-0120908-065_66_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 11:36
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 11:37

Lab Sample ID: CCV 280-610654/77 Client Sample ID:

Date Analyzed: 04/30/23 04:33 Lab File ID: 280-0120908-077_78_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 11:37
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 11:38

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
Acrolein_A_00015	10/26/22	09/24/22	Methanol, Lot 230446	20 mL	MV-568720_00043	1000 uL	Acrolein	987.5 ug/mL
.MV-568720_00043	02/28/23		RESTEK, Lot A0175809		(Purchased Reagent)		Acrolein	19750 ug/mL
Cal Dil Std_00104	10/26/22	10/22/22	P&T Methanol, Lot ED137-US	100 uL	Acrolein_A_00015	5 uL	Acrolein	49.375 ug/mL
					MV-Gas A_00136	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL
							2-Chloroethyl vinyl ether	5 ug/mL
					MV-MegaMainA_00078	5 uL	2-Butanone (MEK)	20 ug/mL
							2-Hexanone	20 ug/mL
							4-Methyl-2-pentanone (MIBK)	20 ug/mL
							Acetone	20 ug/mL
							Vinyl acetate	10 ug/mL
							Cyclohexanone	150 ug/mL
							1,1,1,2-Tetrachloroethane	5 ug/mL
							1,1,1-Trichloroethane	5 ug/mL
							1,1,2,2-Tetrachloroethane	5 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	5 ug/mL
							1,1,2-Trichloroethane	5 ug/mL
							1,1-Dichloroethane	5 ug/mL
							1,1-Dichloroethene	5 ug/mL
							1,1-Dichloropropene	5 ug/mL
							1,2,3-Trichlorobenzene	5 ug/mL
							1,2,3-Trichloropropane	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2,4-Trimethylbenzene	5 ug/mL
							1,2-Dibromo-3-Chloropropane	5 ug/mL
							1,2-Dibromoethane	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Dichloroethane	5 ug/mL
							1,2-Dichloropropane	5 ug/mL
							1,3,5-Trimethylbenzene	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dichloropropane	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	100 ug/mL
							2,2-Dichloropropane	5 ug/mL
							2-Chlorotoluene	5 ug/mL
							2-Methyl-2-propanol	50 ug/mL
							4-Chlorotoluene	5 ug/mL
							4-Isopropyltoluene	5 ug/mL
							Acrylonitrile	50 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Allyl chloride	5 ug/mL
							Benzene	5 ug/mL
							Bromobenzene	5 ug/mL
							Bromoform	5 ug/mL
							Carbon disulfide	5 ug/mL
							Carbon tetrachloride	5 ug/mL
							Chlorobenzene	5 ug/mL
							Chlorobromomethane	5 ug/mL
							Chlorodibromomethane	5 ug/mL
							Chloroform	5 ug/mL
							cis-1,2-Dichloroethene	5 ug/mL
							cis-1,3-Dichloropropene	5 ug/mL
							Cyclohexane	5 ug/mL
							Dibromomethane	5 ug/mL
							Dichlorobromomethane	5 ug/mL
							Ethyl ether	5 ug/mL
							Ethyl methacrylate	5 ug/mL
							Ethylbenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexane	5 ug/mL
							Iodomethane	5 ug/mL
							Isobutyl alcohol	125 ug/mL
							Isopropylbenzene	5 ug/mL
							m-Xylene & p-Xylene	5 ug/mL
							Methyl acetate	10 ug/mL
							Methyl tert-butyl ether	5 ug/mL
							Methylcyclohexane	5 ug/mL
							Methylene Chloride	5 ug/mL
							n-Butylbenzene	5 ug/mL
							n-Heptane	5 ug/mL
							N-Propylbenzene	5 ug/mL
							Naphthalene	5 ug/mL
							o-Xylene	5 ug/mL
							sec-Butylbenzene	5 ug/mL
							Styrene	5 ug/mL
							tert-Butylbenzene	5 ug/mL
							Tetrachloroethene	5 ug/mL
							Tetrahydrofuran	10 ug/mL
							Toluene	5 ug/mL
							trans-1,2-Dichloroethene	5 ug/mL
							trans-1,3-Dichloropropene	5 ug/mL
							trans-1,4-Dichloro-2-butene	5 ug/mL
							Trichloroethene	5 ug/mL
							1-Chlorohexane	4 ug/mL
							2-Pentanone	16 ug/mL
							sec-Butyl Alcohol	120 ug/mL
.Acrolein_A_00015	10/26/22	09/24/22	Methanol, Lot 230446	20 mL	MV-568720_00043	1000 uL	Acrolein	987.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MV-568720_00043	02/28/23		RESTEK, Lot A0175809		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-Gas A_00136	11/14/22	10/12/22	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00016	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722_00021	05/31/25		RESTEK, Lot A0184726		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
..MV-569723_00016	01/31/25		RESTEK, Lot A0180640		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-MegaMainA_00078	10/31/22	09/27/22	P&T Methanol, Lot 181124	25 mL	MV-569721_00013	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00034	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
..MV-569721_00013	01/31/25		RESTEK, Lot A0180742		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..MV-569724_00034	06/30/23		RESTEK, Lot A0179890		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..MV-CUS17739.s_00011	05/31/24		Agilent, Lot 6676357.sec		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
Cal Dil Std_00161	04/17/23	04/04/23	P&T Methanol, Lot ED137-US	100 uL	MV-Gas B_00132	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL
							2-Chloroethyl vinyl ether	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MV-MegaMain B_00082	5 uL	Acrolein	49.375 ug/mL
							2-Butanone (MEK)	20 ug/mL
							2-Hexanone	20 ug/mL
							4-Methyl-2-pentanone (MIBK)	20 ug/mL
							Acetone	20 ug/mL
							Vinyl acetate	10 ug/mL
							Cyclohexanone	150 ug/mL
							1,1,1,2-Tetrachloroethane	5 ug/mL
							1,1,1-Trichloroethane	5 ug/mL
							1,1,2,2-Tetrachloroethane	5 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	5 ug/mL
							1,1,2-Trichloroethane	5 ug/mL
							1,1-Dichloroethane	5 ug/mL
							1,1-Dichloroethene	5 ug/mL
							1,1-Dichloropropene	5 ug/mL
							1,2,3-Trichlorobenzene	5 ug/mL
							1,2,3-Trichloropropane	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2,4-Trimethylbenzene	5 ug/mL
							1,2-Dibromo-3-Chloropropane	5 ug/mL
							1,2-Dibromoethane	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Dichloroethane	5 ug/mL
							1,2-Dichloropropane	5 ug/mL
							1,3,5-Trimethylbenzene	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dichloropropane	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	100 ug/mL
							2,2-Dichloropropane	5 ug/mL
							2-Chlorotoluene	5 ug/mL
							2-Methyl-2-propanol	50 ug/mL
							4-Chlorotoluene	5 ug/mL
							4-Isopropyltoluene	5 ug/mL
							Acrylonitrile	50 ug/mL
							Allyl chloride	5 ug/mL
							Benzene	5 ug/mL
							Bromobenzene	5 ug/mL
							Bromoform	5 ug/mL
							Carbon disulfide	5 ug/mL
							Carbon tetrachloride	5 ug/mL
							Chlorobenzene	5 ug/mL
							Chlorobromomethane	5 ug/mL
							Chlorodibromomethane	5 ug/mL
							Chloroform	5 ug/mL
							cis-1,2-Dichloroethene	5 ug/mL
							cis-1,3-Dichloropropene	5 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Cyclohexane	5 ug/mL
							Dibromomethane	5 ug/mL
							Dichlorobromomethane	5 ug/mL
							Ethyl ether	5 ug/mL
							Ethyl methacrylate	5 ug/mL
							Ethylbenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexane	5 ug/mL
							Iodomethane	5 ug/mL
							Isobutyl alcohol	125 ug/mL
							Isopropylbenzene	5 ug/mL
							m-Xylene & p-Xylene	5 ug/mL
							Methyl acetate	10 ug/mL
							Methyl tert-butyl ether	5 ug/mL
							Methylcyclohexane	5 ug/mL
							Methylene Chloride	5 ug/mL
							n-Butylbenzene	5 ug/mL
							n-Heptane	5 ug/mL
							N-Propylbenzene	5 ug/mL
							Naphthalene	5 ug/mL
							o-Xylene	5 ug/mL
							sec-Butylbenzene	5 ug/mL
							Styrene	5 ug/mL
							tert-Butylbenzene	5 ug/mL
							Tetrachloroethene	5 ug/mL
							Tetrahydrofuran	10 ug/mL
							Toluene	5 ug/mL
							trans-1,2-Dichloroethene	5 ug/mL
							trans-1,3-Dichloropropene	5 ug/mL
							trans-1,4-Dichloro-2-butene	5 ug/mL
							Trichloroethene	5 ug/mL
							1-Chlorohexane	4 ug/mL
							2-Pentanone	16 ug/mL
							sec-Butyl Alcohol	120 ug/mL
.MV-Gas B_00132	04/25/23	03/25/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723.sec_00014	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
..MV-569723.sec_00014	04/30/25	RESTEK, Lot A0184002			(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-MegaMain B_00082	04/17/23	03/17/23	P&T Methanol, Lot 181124	25 mL	MV-568720.sec_00038	1250 uL	Acrolein	987.5 ug/mL
					MV-569721.sec_00009	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724.sec_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727.sec_00012	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992.sec_00007	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739_00015	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
..MV-568720.sec_00038	08/31/23		RESTEK, Lot A0181935		(Purchased Reagent)		Acrolein	19750 ug/mL
..MV-569721.sec_00009	11/30/24		RESTEK, Lot A0178490		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..MV-569724.sec_00035	01/31/24		RESTEK, Lot A0187085		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..MV-569727.sec_00012	03/21/25		RESTEK, Lot A0182847		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..MV-571992.sec_00007	06/30/23		RESTEK, Lot A0167172		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..MV-CUS17739_00015	12/31/24		Agilent, Lot 6712667		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
Cal Dil Std_00162	04/17/23	04/07/23	P&T Methanol, Lot ED137-US	100 uL	MV-Gas A_00149	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL
							2-Chloroethyl vinyl ether	5 ug/mL
					MV-MegaMainA_00086	5 uL	Acrolein	49.375 ug/mL
							2-Butanone (MEK)	20 ug/mL
							2-Hexanone	20 ug/mL
							4-Methyl-2-pentanone (MIBK)	20 ug/mL
							Acetone	20 ug/mL
							Vinyl acetate	10 ug/mL
							Cyclohexanone	150 ug/mL
							1,1,1,2-Tetrachloroethane	5 ug/mL
							1,1,1-Trichloroethane	5 ug/mL
							1,1,2,2-Tetrachloroethane	5 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	5 ug/mL
							1,1,2-Trichloroethane	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethane	5 ug/mL
							1,1-Dichloroethene	5 ug/mL
							1,1-Dichloropropene	5 ug/mL
							1,2,3-Trichlorobenzene	5 ug/mL
							1,2,3-Trichloropropane	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2,4-Trimethylbenzene	5 ug/mL
							1,2-Dibromo-3-Chloropropane	5 ug/mL
							1,2-Dibromoethane	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Dichloroethane	5 ug/mL
							1,2-Dichloropropane	5 ug/mL
							1,3,5-Trimethylbenzene	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dichloropropane	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	100 ug/mL
							2,2-Dichloropropane	5 ug/mL
							2-Chlorotoluene	5 ug/mL
							2-Methyl-2-propanol	50 ug/mL
							4-Chlorotoluene	5 ug/mL
							4-Isopropyltoluene	5 ug/mL
							Acrylonitrile	50 ug/mL
							Allyl chloride	5 ug/mL
							Benzene	5 ug/mL
							Bromobenzene	5 ug/mL
							Bromoform	5 ug/mL
							Carbon disulfide	5 ug/mL
							Carbon tetrachloride	5 ug/mL
							Chlorobenzene	5 ug/mL
							Chlorobromomethane	5 ug/mL
							Chlorodibromomethane	5 ug/mL
							Chloroform	5 ug/mL
							cis-1,2-Dichloroethene	5 ug/mL
							cis-1,3-Dichloropropene	5 ug/mL
							Cyclohexane	5 ug/mL
							Dibromomethane	5 ug/mL
							Dichlorobromomethane	5 ug/mL
							Ethyl ether	5 ug/mL
							Ethyl methacrylate	5 ug/mL
							Ethylbenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexane	5 ug/mL
							Iodomethane	5 ug/mL
							Isobutyl alcohol	125 ug/mL
							Isopropylbenzene	5 ug/mL
							m-Xylene & p-Xylene	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl acetate	10 ug/mL
							Methyl tert-butyl ether	5 ug/mL
							Methylcyclohexane	5 ug/mL
							Methylene Chloride	5 ug/mL
							n-Butylbenzene	5 ug/mL
							n-Heptane	5 ug/mL
							N-Propylbenzene	5 ug/mL
							Naphthalene	5 ug/mL
							o-Xylene	5 ug/mL
							sec-Butylbenzene	5 ug/mL
							Styrene	5 ug/mL
							tert-Butylbenzene	5 ug/mL
							Tetrachloroethene	5 ug/mL
							Tetrahydrofuran	10 ug/mL
							Toluene	5 ug/mL
							trans-1,2-Dichloroethene	5 ug/mL
							trans-1,3-Dichloropropene	5 ug/mL
							trans-1,4-Dichloro-2-butene	5 ug/mL
							Trichloroethene	5 ug/mL
							1-Chlorohexane	4 ug/mL
							2-Pentanone	16 ug/mL
							sec-Butyl Alcohol	120 ug/mL
.MV-Gas A_00149	04/25/23	03/25/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722_00021	05/31/25	RESTEK, Lot A0184726			(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
..MV-569723_00017	06/30/25	RESTEK, Lot A0186788			(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-MegaMainA_00086	04/24/23	03/23/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
..MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
..MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..MV-CUS17739.s_00011	05/31/24		Agilent, Lot 6676357.sec		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
Cal Dil Std_00165	04/17/23	04/12/23	P&T Methanol, Lot ED137-US	100 uL	MV-Gas B_00132	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL
							2-Chloroethyl vinyl ether	5 ug/mL
.MV-Gas B_00132	04/25/23	03/25/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723.sec_00014	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
..MV-569723.sec_00014	04/30/25		RESTEK, Lot A0184002		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
Cal Dil Std_00169	04/21/23	04/18/23	P&T Methanol, Lot ED137-US	100 uL	MV-Gas A_00151	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chloroethyl vinyl ether	5 ug/mL
					MV-MegaMainA_00087	5 uL	Acrolein	49.375 ug/mL
							2-Butanone (MEK)	20 ug/mL
							2-Hexanone	20 ug/mL
							4-Methyl-2-pentanone (MIBK)	20 ug/mL
							Acetone	20 ug/mL
							Vinyl acetate	10 ug/mL
							Cyclohexanone	150 ug/mL
							1,1,1,2-Tetrachloroethane	5 ug/mL
							1,1,1-Trichloroethane	5 ug/mL
							1,1,2,2-Tetrachloroethane	5 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	5 ug/mL
							1,1,2-Trichloroethane	5 ug/mL
							1,1-Dichloroethane	5 ug/mL
							1,1-Dichloroethene	5 ug/mL
							1,1-Dichloropropene	5 ug/mL
							1,2,3-Trichlorobenzene	5 ug/mL
							1,2,3-Trichloropropane	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2,4-Trimethylbenzene	5 ug/mL
							1,2-Dibromo-3-Chloropropane	5 ug/mL
							1,2-Dibromoethane	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Dichloroethane	5 ug/mL
							1,2-Dichloropropane	5 ug/mL
							1,3,5-Trimethylbenzene	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dichloropropane	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	100 ug/mL
							2,2-Dichloropropane	5 ug/mL
							2-Chlorotoluene	5 ug/mL
							2-Methyl-2-propanol	50 ug/mL
							4-Chlorotoluene	5 ug/mL
							4-Isopropyltoluene	5 ug/mL
							Acrylonitrile	50 ug/mL
							Allyl chloride	5 ug/mL
							Benzene	5 ug/mL
							Bromobenzene	5 ug/mL
							Bromoform	5 ug/mL
							Carbon disulfide	5 ug/mL
							Carbon tetrachloride	5 ug/mL
							Chlorobenzene	5 ug/mL
							Chlorobromomethane	5 ug/mL
							Chlorodibromomethane	5 ug/mL
							Chloroform	5 ug/mL
							cis-1,2-Dichloroethene	5 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,3-Dichloropropene	5 ug/mL
							Cyclohexane	5 ug/mL
							Dibromomethane	5 ug/mL
							Dichlorobromomethane	5 ug/mL
							Ethyl ether	5 ug/mL
							Ethyl methacrylate	5 ug/mL
							Ethylbenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexane	5 ug/mL
							Iodomethane	5 ug/mL
							Isobutyl alcohol	125 ug/mL
							Isopropylbenzene	5 ug/mL
							m-Xylene & p-Xylene	5 ug/mL
							Methyl acetate	10 ug/mL
							Methyl tert-butyl ether	5 ug/mL
							Methylcyclohexane	5 ug/mL
							Methylene Chloride	5 ug/mL
							n-Butylbenzene	5 ug/mL
							n-Heptane	5 ug/mL
							N-Propylbenzene	5 ug/mL
							Naphthalene	5 ug/mL
							o-Xylene	5 ug/mL
							sec-Butylbenzene	5 ug/mL
							Styrene	5 ug/mL
							tert-Butylbenzene	5 ug/mL
							Tetrachloroethene	5 ug/mL
							Tetrahydrofuran	10 ug/mL
							Toluene	5 ug/mL
							trans-1,2-Dichloroethene	5 ug/mL
							trans-1,3-Dichloropropene	5 ug/mL
							trans-1,4-Dichloro-2-butene	5 ug/mL
							Trichloroethene	5 ug/mL
							1-Chlorohexane	4 ug/mL
							2-Pentanone	16 ug/mL
							sec-Butyl Alcohol	120 ug/mL
.MV-Gas A_00151	05/17/23	04/17/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722_00021	05/31/25	RESTEK, Lot A0184726			(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
..MV-569723_00017	06/30/25		RESTEK, Lot A0186788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-MegaMainA_00087	05/11/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
..MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
..MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
Cl ICV Std_00006	10/29/23	ERA, Lot 601021m			(Purchased Reagent)		Chloride	1000 mg/L
IC CAL cl/so4_00473	04/05/23	03/29/23	Di Water, Lot na	100 mL	IC CL cal_00076	12.5 mL	Chloride	125 mg/L
					IC SO4 Cal_00008	12.5 mL	Sulfate	125 mg/L
.IC CL cal_00076	11/30/23	SPEX CertiPrep, Lot 5-146CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23	SPEX CertiPrep, Lot 5-160SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00475	04/19/23	04/12/23	Di Water, Lot na	100 mL	IC CL cal_00076	12.5 mL	Chloride	125 mg/L
					IC SO4 Cal_00008	12.5 mL	Sulfate	125 mg/L
.IC CL cal_00076	11/30/23	SPEX CertiPrep, Lot 5-146CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23	SPEX CertiPrep, Lot 5-160SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC Cal low_00701	04/05/23	03/29/23	Di Water, Lot NA	100 mL	IC BR ICV_00026	2.5 mL	Bromide	25 mg/L
					IC FL cal_00023	2.5 mL	Fluoride	25 mg/L
.IC BR ICV_00026	04/30/23	RICCA, Lot 4110L50			(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00023	01/31/24	Ricca, Lot 2207H13			(Purchased Reagent)		Fluoride	1000 mg/L
IC Cal low_00703	04/19/23	04/12/23	Di Water, Lot NA	100 mL	IC BR ICV_00026	2.5 mL	Bromide	25 mg/L
					IC FL cal_00023	2.5 mL	Fluoride	25 mg/L
					IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
					IC NO2 Cal_00007	2.5 mL	Nitrite as N	25 mg/L
					IC P04 cal_00030	2.5 mL	Orthophosphate as P	25 mg/L
.IC BR ICV_00026	04/30/23	RICCA, Lot 4110L50			(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00023	01/31/24	Ricca, Lot 2207H13			(Purchased Reagent)		Fluoride	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.IC N03 cal_00028	11/30/23		Ricca, Lot 2205B73		(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC NO2 Cal_00007	06/30/23		Ricca, Lot 2212826		(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC P04 cal_00030	07/31/24		RICCA, Lot 4208152		(Purchased Reagent)		Orthophosphate as P	1000 mg/L
IC Cal low_00706	05/03/23	04/26/23	Di Water, Lot NA	100 mL	IC BR ICV_00024	2.5 mL	Bromide	25 mg/L
.IC BR ICV_00024	10/31/23		ricca, Lot 1204B86		(Purchased Reagent)		Bromide	1000 mg/L
IC ICV 5_00402	04/05/23	03/29/23	Di Water, Lot na	100 mL	IC BR ICV_00028	2.5 mL	Bromide	25 mg/L
.IC BR ICV_00028	04/07/24		ERA, Lot 110422m		(Purchased Reagent)		Bromide	1000 mg/L
IC ICV 5_00403	04/19/23	04/12/23	Di Water, Lot na	100 mL	IC BR ICV_00028	2.5 mL	Bromide	25 mg/L
					IC NO2 ICV_00022	2.5 mL	Nitrite as N	25 mg/L
					IC NO3 ICV_00019	2.5 mL	Nitrate as N	25 mg/L
.IC BR ICV_00028	04/07/24		ERA, Lot 110422m		(Purchased Reagent)		Bromide	1000 mg/L
.IC NO2 ICV_00022	12/14/23		ERA, Lot 261221m		(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC NO3 ICV_00019	12/01/23		ERA, Lot 011221m		(Purchased Reagent)		Nitrate as N	1000 mg/L
IC LCS_01947	04/19/23	04/12/23	Di Water, Lot 27	200 mL	IC Cal low_00703	20 mL	Nitrate as N	2.5 mg/L
							Nitrite as N	2.5 mg/L
					IC CL cal_00076	10 mL	Chloride	50 mg/L
					IC SO4 Cal_00008	10 mL	Sulfate	50 mg/L
.IC Cal low_00703	04/19/23	04/12/23	Di Water, Lot NA	100 mL	IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
					IC NO2 Cal_00007	2.5 mL	Nitrite as N	25 mg/L
..IC N03 cal_00028	11/30/23		Ricca, Lot 2205B73		(Purchased Reagent)		Nitrate as N	1000 mg/L
..IC NO2 Cal_00007	06/30/23		Ricca, Lot 2212826		(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC CL cal_00076	11/30/23		SPEX CertiPrep, Lot 5-146CL-2X		(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23		SPEX CertiPrep, Lot 5-160SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC LCS_01950	05/03/23	04/26/23	Di Water, Lot 27	200 mL	IC Cal low_00706	20 mL	Bromide	2.5 mg/L
.IC Cal low_00706	05/03/23	04/26/23	Di Water, Lot NA	100 mL	IC BR ICV_00024	2.5 mL	Bromide	25 mg/L
..IC BR ICV_00024	10/31/23		ricca, Lot 1204B86		(Purchased Reagent)		Bromide	1000 mg/L
IC SO4 ICV_00024	12/01/23		ERA, Lot 021221m		(Purchased Reagent)		Sulfate	1000 mg/L
ICMS/MSD WEEK_00816	05/03/23	04/26/23	Di Water, Lot NA	5 mL	IC SPK 6 ANIO_00028	2.5 mL	Bromide	499.924 mg/L
.IC SPK 6 ANIO_00028	10/12/23	10/12/22	Di Water, Lot NA	1000 mL	IC MS/MSD Br_00004	1.2876 g	Bromide	999.847 mg/L
..IC MS/MSD Br_00004	11/13/25		FISHER, Lot A0424372		(Purchased Reagent)		Bromide	0.77652 g/g
ms 77 cal std_02955	04/19/23	04/18/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
.CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
.MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
ms 77 cal std_02956	04/20/23	04/19/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
.CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
.MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
ms 77 cal std_02957	04/21/23	04/20/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
.CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
.MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
ms 77 ccv_02963	04/19/23	04/18/23	5%HNO3/5% HCl, Lot 2225038/222836	200 mL	ms 77 cal std_02955	100 mL	Antimony	50 ug/L
							Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Co	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Manganese	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L
							Thallium	50 ug/L
							Tin	50 ug/L
							Vanadium	50 ug/L
							Calcium	11000 ug/L
							Iron	1000 ug/L
							Magnesium	11000 ug/L
							Potassium	11000 ug/L
							Sodium	51000 ug/L

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Silver	50 ug/L
							Zinc	50 ug/L
					MS Cal 4_00418	100 mL	Calcium	11000 ug/L
							Potassium	11000 ug/L
							Magnesium	11000 ug/L
							Sodium	51000 ug/L
.ms 77 cal std_02955	04/19/23	04/18/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
..CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
..MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Sodium	2000 mg/L
..MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
.MS Cal 4_00418	09/15/23	04/18/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L
							Sodium	100 mg/L
..MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
...10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L
...10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
...10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
...10000 Na_00090	08/28/24		CPI, Lot 1263195-2		(Purchased Reagent)		Sodium	10000 mg/L
ms 77 ccv_02964	04/20/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	200 mL	ms 77 cal std_02956	100 mL	Antimony	50 ug/L
							Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Co	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Manganese	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L
							Thallium	50 ug/L
							Tin	50 ug/L
							Vanadium	50 ug/L
							Calcium	11000 ug/L
							Iron	1000 ug/L
							Magnesium	11000 ug/L
							Potassium	11000 ug/L
							Sodium	51000 ug/L
							Silver	50 ug/L
							Zinc	50 ug/L
					MS Cal 4_00419	100 mL	Calcium	11000 ug/L
							Potassium	11000 ug/L
							Magnesium	11000 ug/L
							Sodium	51000 ug/L
.ms 77 cal std_02956	04/20/23	04/19/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
..CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
..MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
..MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
.MS Cal 4_00419	09/15/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L
							Sodium	100 mg/L
..MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
...10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L
...10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
...10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
...10000 Na_00090	08/28/24		CPI, Lot 1263195-2		(Purchased Reagent)		Sodium	10000 mg/L
ms 77 ccv_02965	04/21/23	04/20/23	5%HNO3/5% HCl, Lot 2225038/222836	200 mL	ms 77 cal std_02957	100 mL	Antimony	50 ug/L
							Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Co	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Manganese	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L
							Thallium	50 ug/L
							Tin	50 ug/L
							Vanadium	50 ug/L
							Calcium	11000 ug/L
							Iron	1000 ug/L
							Magnesium	11000 ug/L
							Potassium	11000 ug/L
							Silver	50 ug/L
							Zinc	50 ug/L
					MS Cal 4_00420	100 mL	Calcium	11000 ug/L
							Potassium	11000 ug/L
							Magnesium	11000 ug/L
.ms 77 cal std_02957	04/21/23	04/20/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
..CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
..MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
..MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
.MS Cal 4_00420	09/15/23	04/20/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L
..MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
...10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L
...10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
...10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
ms 77 icsa_00677	04/24/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS ICSA STOCK_00051	5 mL	Al	100 mg/L
							Calcium	100 mg/L
							Iron	100 mg/L
							Magnesium	100 mg/L
							Mo	2 mg/L
							Potassium	100 mg/L
							Sodium	100 mg/L
					MS ICSA STOCK_00052	5 mL	Al	100 mg/L
							Calcium	100 mg/L

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Iron	100 mg/L
							Magnesium	100 mg/L
							Mo	2 mg/L
							Potassium	100 mg/L
							Sodium	100 mg/L
.MS ICSA STOCK_00051	04/20/24		CPI, Lot 1267033-1		(Purchased Reagent)		Al	1000 mg/L
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Magnesium	1000 mg/L
							Mo	20 mg/L
							Potassium	1000 mg/L
							Sodium	1000 mg/L
.MS ICSA STOCK_00052	03/27/24		IV, Lot s2-meb706044		(Purchased Reagent)		Al	1000 mg/L
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Magnesium	1000 mg/L
							Mo	20 mg/L
							Potassium	1000 mg/L
							Sodium	1000 mg/L
ms 77 icsab_00672	04/24/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	CALSTD-3_00001	0.1 mL	U	0.1 mg/L
					ICV MIX-1a_00001	0.1 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Co	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Sr	0.2 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
					ICV MIX-1B_00001	0.1 mL	Antimony	0.1 mg/L
							Mo	2.1 mg/L
							Tin	0.1 mg/L
					MS ICSA STOCK_00049	10 mL	Al	102 mg/L
							Calcium	107 mg/L
							Iron	102 mg/L
							Magnesium	107 mg/L
							Mo	2.1 mg/L
							Potassium	107 mg/L
							Sodium	107 mg/L
					MS ICVMIX--5_00002	0.1 mL	Calcium	107 mg/L
							Magnesium	107 mg/L

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Potassium	107 mg/L
							Silver	0.1 mg/L
							Sodium	107 mg/L
							Sr	0.2 mg/L
							Th	0.1 mg/L
							Zinc	0.1 mg/L
					MS ICVMIX-2_00005	0.1 mL	Al	102 mg/L
							Calcium	107 mg/L
							Iron	102 mg/L
							Magnesium	107 mg/L
							Potassium	107 mg/L
							Sodium	107 mg/L
.CALSTD-3_00001	05/30/24		CPI, Lot 1285834-1		(Purchased Reagent)		U	100 mg/L
.ICV MIX-1a_00001	08/09/23		IV, Lot t2-meb722098		(Purchased Reagent)		Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Sr	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.ICV MIX-1B_00001	08/05/23		IV, Lot t2-meb722099		(Purchased Reagent)		Antimony	100 mg/L
							Mo	100 mg/L
							Tin	100 mg/L
.MS ICSA STOCK_00049	12/13/23		CPI, Lot 1208135-1		(Purchased Reagent)		Al	1000 mg/L
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Magnesium	1000 mg/L
							Mo	20 mg/L
							Potassium	1000 mg/L
							Sodium	1000 mg/L
.MS ICVMIX--5_00002	08/01/23		IV, Lot t2-meb721663		(Purchased Reagent)		Calcium	5000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Silver	100 mg/L
							Sodium	5000 mg/L
							Sr	100 mg/L
							Th	100 mg/L
							Zinc	100 mg/L
.MS ICVMIX-2_00005	05/16/23		CPI, Lot 1146029-1		(Purchased Reagent)		Al	2000 mg/L
							Calcium	2000 mg/L

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
ms 77 icv_02965	04/19/23	04/18/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	10000 Na SS_00006	0.2 mL	Sodium	12800 ug/L
					ICV MIX-1a_00001	0.1 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Co	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
					ICV MIX-1B_00001	0.1 mL	Antimony	40 ug/L
							Tin	40 ug/L
					MS ICVMIX--5_00002	0.2 mL	Calcium	4800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Silver	80 ug/L
							Sodium	12800 ug/L
							Zinc	80 ug/L
					MS ICVMIX-2_00005	0.1 mL	Calcium	4800 ug/L
							Iron	800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Sodium	12800 ug/L
.10000 Na SS_00006	04/30/24	Elemental Scientific, Lot 2209019-100ESI			(Purchased Reagent)		Sodium	10000 mg/L
.ICV MIX-1a_00001	08/09/23	IV, Lot t2-meb722098			(Purchased Reagent)		Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.ICV MIX-1B_00001	08/05/23	IV, Lot t2-meb722099			(Purchased Reagent)		Antimony	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tin	100 mg/L
.MS ICVMIX--5_00002	08/01/23		IV, Lot t2-meb721663		(Purchased Reagent)		Calcium	5000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Silver	100 mg/L
							Sodium	5000 mg/L
							Zinc	100 mg/L
.MS ICVMIX-2_00005	05/16/23		CPI, Lot 1146029-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
ms 77 icv_02966	04/20/23	04/19/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	10000 Na SS_00006	0.2 mL	Sodium	12800 ug/L
					ICV MIX-1a_00001	0.1 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Co	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
					ICV MIX-1B_00001	0.1 mL	Antimony	40 ug/L
							Tin	40 ug/L
					MS ICVMIX--5_00002	0.2 mL	Calcium	4800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Silver	80 ug/L
							Sodium	12800 ug/L
							Zinc	80 ug/L
					MS ICVMIX-2_00005	0.1 mL	Calcium	4800 ug/L
							Iron	800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Sodium	12800 ug/L
.10000 Na SS_00006	04/30/24		Elemental Scientific, Lot 2209019-100ESI		(Purchased Reagent)		Sodium	10000 mg/L
.ICV MIX-1a_00001	08/09/23		IV, Lot t2-meb722098		(Purchased Reagent)		Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.ICV MIX-1B_00001	08/05/23		IV, Lot t2-meb722099		(Purchased Reagent)		Antimony	100 mg/L
							Tin	100 mg/L
.MS ICVMIX--5_00002	08/01/23		IV, Lot t2-meb721663		(Purchased Reagent)		Calcium	5000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Silver	100 mg/L
							Sodium	5000 mg/L
							Zinc	100 mg/L
.MS ICVMIX-2_00005	05/16/23		CPI, Lot 1146029-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
ms 77 icv_02967	04/21/23	04/20/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	ICV MIX-1a_00001	0.1 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Co	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
					ICV MIX-1B_00001	0.1 mL	Antimony	40 ug/L
							Tin	40 ug/L
					MS ICVMIX--5_00002	0.2 mL	Calcium	4800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Silver	80 ug/L
							Zinc	80 ug/L
					MS ICVMIX-2_00005	0.1 mL	Calcium	4800 ug/L
							Iron	800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
.ICV MIX-1a_00001	08/09/23		IV, Lot t2-meb722098		(Purchased Reagent)		Arsenic	100 mg/L
							Barium	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.ICV MIX-1B_00001	08/05/23		IV, Lot t2-meb722099		(Purchased Reagent)		Antimony	100 mg/L
							Tin	100 mg/L
.MS ICVMIX--5_00002	08/01/23		IV, Lot t2-meb721663		(Purchased Reagent)		Calcium	5000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Silver	100 mg/L
							Zinc	100 mg/L
.MS ICVMIX-2_00005	05/16/23		CPI, Lot 1146029-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
MS 77 LLCCV_02785	04/19/23	04/18/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS LLCCV_00009	1 mL	Antimony	0.002 mg/L
							Arsenic	0.005 mg/L
							Cadmium	0.001 mg/L
							Calcium	0.2 mg/L
							Chromium	0.002 mg/L
							Co	0.001 mg/L
							Copper	0.002 mg/L
							Iron	0.05 mg/L
							Lead	0.001 mg/L
							Magnesium	0.05 mg/L
							Nickel	0.002 mg/L
							Potassium	0.12 mg/L
							Selenium	0.005 mg/L
							Silver	0.001 mg/L
							Sodium	0.3 mg/L
							Thallium	0.001 mg/L
							Tin	0.01 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L
.MS LLCCV_00009	03/22/24		IV, Lot t2-meb722097		(Purchased Reagent)		Antimony	0.2 mg/L
							Arsenic	0.5 mg/L
							Cadmium	0.1 mg/L
							Calcium	20 mg/L
							Chromium	0.2 mg/L

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Co	0.1 mg/L
							Copper	0.2 mg/L
							Iron	5 mg/L
							Lead	0.1 mg/L
							Magnesium	5 mg/L
							Nickel	0.2 mg/L
							Potassium	12 mg/L
							Selenium	0.5 mg/L
							Silver	0.1 mg/L
							Sodium	30 mg/L
							Thallium	0.1 mg/L
							Tin	1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS 77 LLCCV_02786	04/20/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS LLCCV_00009	1 mL	Antimony	0.002 mg/L
							Arsenic	0.005 mg/L
							Barium	0.001 mg/L
							Beryllium	0.001 mg/L
							Cadmium	0.001 mg/L
							Calcium	0.2 mg/L
							Chromium	0.002 mg/L
							Co	0.001 mg/L
							Copper	0.002 mg/L
							Iron	0.05 mg/L
							Lead	0.001 mg/L
							Magnesium	0.05 mg/L
							Manganese	0.001 mg/L
							Nickel	0.002 mg/L
							Selenium	0.005 mg/L
							Silver	0.001 mg/L
							Sodium	0.3 mg/L
							Thallium	0.001 mg/L
							Tin	0.01 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L
.MS LLCCV_00009	03/22/24		IV, Lot t2-meb722097		(Purchased Reagent)		Antimony	0.2 mg/L
							Arsenic	0.5 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Calcium	20 mg/L
							Chromium	0.2 mg/L
							Co	0.1 mg/L
							Copper	0.2 mg/L
							Iron	5 mg/L
							Lead	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Magnesium	5 mg/L
							Manganese	0.1 mg/L
							Nickel	0.2 mg/L
							Selenium	0.5 mg/L
							Silver	0.1 mg/L
							Sodium	30 mg/L
							Thallium	0.1 mg/L
							Tin	1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS 77 LLCCV_02787	04/21/23	04/20/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS LLCCV_00009	1 mL	Antimony	0.002 mg/L
							Arsenic	0.005 mg/L
							Barium	0.001 mg/L
							Beryllium	0.001 mg/L
							Cadmium	0.001 mg/L
							Calcium	0.2 mg/L
							Chromium	0.002 mg/L
							Co	0.001 mg/L
							Copper	0.002 mg/L
							Iron	0.05 mg/L
							Lead	0.001 mg/L
							Magnesium	0.05 mg/L
							Manganese	0.001 mg/L
							Nickel	0.002 mg/L
							Potassium	0.12 mg/L
							Selenium	0.005 mg/L
							Silver	0.001 mg/L
							Sodium	0.3 mg/L
							Thallium	0.001 mg/L
							Tin	0.01 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L
.MS LLCCV_00009	03/22/24		IV, Lot t2-meb722097		(Purchased Reagent)		Antimony	0.2 mg/L
							Arsenic	0.5 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Calcium	20 mg/L
							Chromium	0.2 mg/L
							Co	0.1 mg/L
							Copper	0.2 mg/L
							Iron	5 mg/L
							Lead	0.1 mg/L
							Magnesium	5 mg/L
							Manganese	0.1 mg/L
							Nickel	0.2 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Potassium	12 mg/L
							Selenium	0.5 mg/L
							Silver	0.1 mg/L
							Sodium	30 mg/L
							Thallium	0.1 mg/L
							Tin	1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS 79 alt cri_00013	04/19/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	50 mL	1 ppm Ba_00023	0.1 mL	Barium	0.002 mg/L
.1 ppm Ba_00023	09/16/23	03/22/23	1% HNO3, Lot 22A2562002	50 mL	1000 Ba_00021	0.05 mL	Barium	1 mg/L
..1000 Ba_00021	01/19/24		CPI, Lot 1112442-75		(Purchased Reagent)		Barium	1000 mg/L
MS 79 alt cri_00014	04/20/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	50 mL	50 K_00003	0.5 mL	Potassium	0.5 mg/L
.50 K_00003	10/03/23	04/03/23	5%HNO3/5% HCl, Lot see log book	50 mL	10000 K_00018	0.25 mL	Potassium	50 mg/L
..10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
MS Cal 4_00418	09/15/23	04/18/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L
							Sodium	100 mg/L
.MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
..10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L
..10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
..10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
..10000 Na_00090	08/28/24		CPI, Lot 1263195-2		(Purchased Reagent)		Sodium	10000 mg/L
MS Cal 4_00419	09/15/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L
							Sodium	100 mg/L
.MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
..10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L
..10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
..10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
..10000 Na_00090	08/28/24		CPI, Lot 1263195-2		(Purchased Reagent)		Sodium	10000 mg/L
MS Cal 4_00420	09/15/23	04/20/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Magnesium	20 mg/L
							Sodium	100 mg/L
.MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
..10000 Ca_00027	08/28/24	CPI, Lot 1268108-19			(Purchased Reagent)		Calcium	10000 mg/L
..10000 K_00018	08/28/24	CPI, Lot 1137797-60			(Purchased Reagent)		Potassium	10000 mg/L
..10000 Mg_00025	08/28/24	CPI, Lot 1303817-6			(Purchased Reagent)		Magnesium	10000 mg/L
..10000 Na_00090	08/28/24	CPI, Lot 1263195-2			(Purchased Reagent)		Sodium	10000 mg/L
ms spike 1_00017	07/10/23	01/10/23	1% HNO3, Lot 215109	500 mL	CALSTD-1_00002	100 mL	Antimony	20000 ug/L
							Arsenic	20000 ug/L
							Barium	20000 ug/L
							Beryllium	20000 ug/L
							Cadmium	20000 ug/L
							Chromium	20000 ug/L
							Co	20000 ug/L
							Copper	20000 ug/L
							Lead	20000 ug/L
							Li	20000 ug/L
							Manganese	20000 ug/L
							Mo	20000 ug/L
							Nickel	20000 ug/L
							Selenium	20000 ug/L
							Si	200000 ug/L
							SiO2	428000 ug/L
							Sr	20000 ug/L
							Thallium	20000 ug/L
							Tin	20000 ug/L
							Vanadium	20000 ug/L
					MS CALSTD-2_00103	100 mL	Al	400000 ug/L
							Calcium	400000 ug/L
							Iron	400000 ug/L
							Magnesium	400000 ug/L
							Potassium	400000 ug/L
							Sodium	400000 ug/L
.CALSTD-1_00002	08/08/23	CPI, Lot 1148545-1			(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Li	100 mg/L
							Manganese	100 mg/L

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Mo	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Si	1000 mg/L
							SiO2	2140 mg/L
							Sr	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Al	2000 mg/L
							Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
MS spike 2_00106	09/07/23	03/07/23	1% HNO3, Lot 275002	500 mL	1000 Ag_00018	10 mL	Silver	20 mg/L
					1000 Sr_00016	10 mL	Sr	20 mg/L
					1000 U_00045	10 mL	U	20 mg/L
					1000 Zn_00028	10 mL	Zinc	20 mg/L
					10000 Th_00027	1 mL	Th	20 mg/L
.1000 Ag_00018	03/27/24		CPI, Lot 1211976-35		(Purchased Reagent)		Silver	1000 mg/L
.1000 Sr_00016	11/26/23		CPI, Lot 1194650-4		(Purchased Reagent)		Sr	1000 mg/L
.1000 U_00045	07/03/24		CPI, Lot 1249254-2		(Purchased Reagent)		U	1000 mg/L
.1000 Zn_00028	09/24/23		CPI, Lot 1095528-109		(Purchased Reagent)		Zinc	1000 mg/L
.10000 Th_00027	09/24/23		CPI, Lot 1161822-1		(Purchased Reagent)		Th	10000 mg/L
mv-Cent BFB_00004							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
					mv-IS/SS Tune_00001	10 mL	BFB	50 ug/mL
.mv-IS/SS Tune_00001	11/30/23		Restek, Lot A0143593		(Purchased Reagent)		BFB	250 ug/mL
mv-Cent BFB_00005							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
					mv-IS/SS Tune_00001	10 mL	BFB	50 ug/mL
.mv-IS/SS Tune_00001	11/30/23		Restek, Lot A0143593		(Purchased Reagent)		BFB	250 ug/mL
mv-Cent IS_00007	07/31/23	05/20/22	P&T Methanol, Lot 1996628	5 mL	mv-30241_00010	0.1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorobenzene	50 ug/mL
.mv-30241_00010	01/31/27		Restek, Lot A0180349		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
MV-Gas A_00136	11/14/22	10/12/22	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00016	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
.MV-569722_00021	05/31/25		RESTEK, Lot A0184726		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00016	01/31/25		RESTEK, Lot A0180640		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
MV-Gas A_00150	05/08/23	04/05/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
.MV-569722_00021	05/31/25		RESTEK, Lot A0184726		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00017	06/30/25		RESTEK, Lot A0186788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
MV-Gas A_00151	05/17/23	04/17/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MV-569722_00021	05/31/25		RESTEK, Lot A0184726		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00017	06/30/25		RESTEK, Lot A0186788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
MV-Gas B_00120	11/21/22	10/18/22	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00015	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
.MV-569722.sec_00015	02/28/25		RESTEK, Lot A0182212		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
MV-Gas B_00131	04/17/23	03/16/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
.MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
MV-Gas B_00132	04/25/23	03/25/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723.sec_00014	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
.MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723.sec_00014	04/30/25		RESTEK, Lot A0184002		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
MV-Gas B_00133	05/11/23	04/12/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
.MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
mv-IS_SS_00049	11/21/22	10/07/22	P&T Methanol, Lot 198123	50 mL	mv-30241_00012	1000 uL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
					MV-567650_00030	1000 uL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.mv-30241_00012	05/31/27		Restek, Lot A0185733		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
.MV-567650_00030	05/31/26		Restek, Lot A0172587		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
mv-IS_SS_00057	04/27/23	03/15/23	P&T Methanol, Lot 198123	50 mL	mv-30241_00012	1000 uL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
					MV-567650_00030	1000 uL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.mv-30241_00012	05/31/27		Restek, Lot A0185733		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
.MV-567650_00030	05/31/26		Restek, Lot A0172587		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
mv-IS_SS_00058	05/01/23	03/29/23	P&T Methanol, Lot 198123	50 mL	mv-30241_00012	1000 uL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
					MV-567650_00030	1000 uL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.mv-30241_00012	05/31/27		Restek, Lot A0185733		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
.MV-567650_00030	05/31/26		Restek, Lot A0172587		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-MegaMain B_00076	11/21/22	10/18/22	P&T Methanol, Lot 181124	25 mL	MV-568720.sec_00038	633 uL	Acrolein	500.07 ug/mL
					MV-569721.sec_00009	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724.sec_00033	1000 uL	Vinyl acetate	200 ug/mL
					MV-571992.sec_00007	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							2,2-Dichloropropane	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	100 ug/mL
							o-Xylene	100 ug/mL
							Styrene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
							Xylenes, Total	200 ug/mL
.MV-568720.sec_00038	08/31/23		RESTEK, Lot A0181935		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721.sec_00009	11/30/24		RESTEK, Lot A0178490		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724.sec_00033	09/30/22		RESTEK, Lot A0169715		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992.sec_00007	06/30/23		RESTEK, Lot A0167172		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							Acrylonitrile	25000 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							o-Xylene	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMain B_00082	04/17/23	03/17/23	P&T Methanol, Lot 181124	25 mL	MV-568720.sec_00038	1250 uL	Acrolein	987.5 ug/mL
					MV-569721.sec_00009	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724.sec_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727.sec_00012	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992.sec_00007	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739_00015	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
.MV-568720.sec_00038	08/31/23		RESTEK, Lot A0181935		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721.sec_00009	11/30/24		RESTEK, Lot A0178490		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724.sec_00035	01/31/24		RESTEK, Lot A0187085		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727.sec_00012	03/21/25		RESTEK, Lot A0182847		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992.sec_00007	06/30/23		RESTEK, Lot A0167172		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00015	12/31/24	Agilent, Lot 6712667			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMain B_00082	04/17/23	03/17/23	P&T Methanol, Lot 181124	25 mL	MV-571992.sec_00007	1000 uL	Xylenes, Total	200 ug/mL
.MV-571992.sec_00007	06/30/23	RESTEK, Lot A0167172			(Purchased Reagent)		Xylenes, Total	5000 ug/mL
MV-MegaMain B_00083	05/17/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-568720.sec_00038	1250 uL	Acrolein	987.5 ug/mL
					MV-569721.sec_00009	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724.sec_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-571992.sec_00007	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							2,2-Dichloropropane	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl methacrylate	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethylbenzene	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	100 ug/mL
							o-Xylene	100 ug/mL
							Styrene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
							Xylenes, Total	200 ug/mL
.MV-568720.sec_00038	08/31/23		RESTEK, Lot A0181935		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721.sec_00009	11/30/24		RESTEK, Lot A0178490		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724.sec_00035	01/31/24		RESTEK, Lot A0187085		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992.sec_00007	06/30/23		RESTEK, Lot A0167172		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							o-Xylene	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00078	10/31/22	09/27/22	P&T Methanol, Lot 181124	25 mL	MV-569721_00013	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00034	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
.MV-569721_00013	01/31/25		RESTEK, Lot A0180742		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724_00034	06/30/23		RESTEK, Lot A0179890		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00078	10/31/22	09/27/22	P&T Methanol, Lot 181124	25 mL	MV-571992_00015	1000 uL	Xylenes, Total	200 ug/mL
.MV-571992_00015	09/30/24	RESTEK, Lot A0183568			(Purchased Reagent)		Xylenes, Total	5000 ug/mL
MV-MegaMainA_00086	04/24/23	03/23/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
.MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00086	04/24/23	03/23/23	P&T Methanol, Lot 181124	25 mL	MV-571992_00015	1000 uL	Xylenes, Total	200 ug/mL
.MV-571992_00015	09/30/24	RESTEK, Lot A0183568			(Purchased Reagent)		Xylenes, Total	5000 ug/mL
MV-MegaMainA_00087	05/11/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
.MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added	Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00087	05/11/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-571992_00015	1000 uL	Xylenes, Total	200 ug/mL
.MV-571992_00015	09/30/24	RESTEK, Lot A0183568			(Purchased Reagent)		Xylenes, Total	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MV-Supp A_00073	10/31/22	09/27/22	P&T Methanol, Lot 199628	20 mL	mv-570808_00013	400 uL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Chloroprene	50 ug/mL
							Isopropyl alcohol	500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					mv-570809_00011	400 uL	Ethyl acetate	100 ug/mL
							Methyl methacrylate	100 ug/mL
					mv-571993_00007	400 uL	Acetonitrile	500 ug/mL
							Isopropyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
					mv-571994_00005	600 uL	Ethanol	3000 ug/mL
.mv-570808_00013	04/30/23		Restek, Lot A0177095		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Chloroprene	2500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809_00011	12/31/22		Restek, Lot A0173205		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00007	06/30/23		RESTEK, Lot A0172903		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00005	03/31/24		RESTEK, Lot A0169978		(Purchased Reagent)		Ethanol	100000 ug/mL
MV-Supp A_00076	01/16/23	12/13/22	P&T Methanol, Lot 199628	20 mL	mv-570808_00014	400 uL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Chloroprene	50 ug/mL
							Isopropyl alcohol	500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					mv-570809_00012	400 uL	Ethyl acetate	100 ug/mL
							Methyl methacrylate	100 ug/mL
					mv-571993_00008	400 uL	Acetonitrile	500 ug/mL
							Isopropyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
					mv-571994_00005	600 uL	Ethanol	3000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					Z-020209-01_00001	2000 uL	cis-1,4-Dichloro-2-butene	100 ug/mL
.mv-570808_00014	11/30/23		Restek, Lot A0184916		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Chloroprene	2500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809_00012	07/31/23		Restek, Lot A0180509		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00008	03/31/24		RESTEK, Lot A0183035		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00005	03/31/24		RESTEK, Lot A0169978		(Purchased Reagent)		Ethanol	100000 ug/mL
.Z-020209-01_00001	08/30/24		CPI, Lot 488066		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
MV-Supp A_00080	05/01/23	03/29/23	P&T Methanol, Lot 199628	20 mL	mv-570808_00014	400 uL	Chloroprene	50 ug/mL
							Methacrylonitrile	500 ug/mL
					mv-570809_00012	400 uL	Methyl methacrylate	100 ug/mL
					mv-571993_00008	400 uL	Acetonitrile	500 ug/mL
							Propionitrile	500 ug/mL
.mv-570808_00014	11/30/23		Restek, Lot A0184916		(Purchased Reagent)		Chloroprene	2500 ug/mL
							Methacrylonitrile	25000 ug/mL
.mv-570809_00012	07/31/23		Restek, Lot A0180509		(Purchased Reagent)		Methyl methacrylate	5000 ug/mL
.mv-571993_00008	03/31/24		RESTEK, Lot A0183035		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Propionitrile	25000 ug/mL
MV-Supp B_00054	10/26/22	09/26/22	P&T Methanol, Lot 127999	20 mL	mv-570808.sec_00007	400 uL	Chloroprene	50 ug/mL
							Methacrylonitrile	500 ug/mL
					mv-570809.sec_00008	400 uL	Methyl methacrylate	100 ug/mL
					mv-571993.sec_00007	400 uL	Acetonitrile	500 ug/mL
							Propionitrile	500 ug/mL
.mv-570808.sec_00007	10/31/22		Restek, Lot A0171439		(Purchased Reagent)		Chloroprene	2500 ug/mL
							Methacrylonitrile	25000 ug/mL
.mv-570809.sec_00008	10/31/22		Restek, Lot A0171207		(Purchased Reagent)		Methyl methacrylate	5000 ug/mL
.mv-571993.sec_00007	03/31/23		RESTEK, Lot A0170862		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Propionitrile	25000 ug/mL
MV-Supp B_00057	01/03/23	12/02/22	P&T Methanol, Lot 127999	20 mL	mv-570808.sec_00008	400 uL	Chloroprene	50 ug/mL
							Methacrylonitrile	500 ug/mL
					mv-570809.sec_00009	400 uL	Methyl methacrylate	100 ug/mL
					mv-571993.sec_00007	400 uL	Acetonitrile	500 ug/mL
							Propionitrile	500 ug/mL
.mv-570808.sec_00008	10/31/23		Restek, Lot A0183834		(Purchased Reagent)		Chloroprene	2500 ug/mL
							Methacrylonitrile	25000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.mv-570809.sec_00009	12/31/22		Restek, Lot A0171207		(Purchased Reagent)		Methyl methacrylate	5000 ug/mL
.mv-571993.sec_00007	03/31/23		RESTEK, Lot A0170862		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Propionitrile	25000 ug/mL
MV-Supp B_00062	10/31/23	03/23/23	P&T Methanol, Lot 127999	20 mL	mv-570808.sec_00008	400 uL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Chloroprene	50 ug/mL
							Isopropyl alcohol	500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					mv-570809.sec_00010	400 uL	Ethyl acetate	100 ug/mL
							Methyl methacrylate	100 ug/mL
					mv-571993.sec_00008	400 uL	Acetonitrile	500 ug/mL
							Isopropyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
					mv-571994.sec_00007	600 uL	Ethanol	3000 ug/mL
					Z-020209-01.b_00001	2000 uL	cis-1,4-Dichloro-2-butene	100 ug/mL
.mv-570808.sec_00008	10/31/23		Restek, Lot A0183834		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Chloroprene	2500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809.sec_00010	10/31/23		Restek, Lot A0183813		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993.sec_00008	09/30/24		RESTEK, Lot A0189867		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994.sec_00007	06/30/25		RESTEK, Lot A0186688		(Purchased Reagent)		Ethanol	100000 ug/mL
.Z-020209-01.b_00001	08/30/24		CPI, Lot 488067		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
MV-TAOH_CUST_00004	02/08/23	09/27/22	P&T Methanol, Lot 199628	20 mL	mv-VO-TAOH-5_00015	2000 uL	cis-1,4-Dichloro-2-butene	100 ug/mL
.mv-VO-TAOH-5_00015	02/08/23		SPEX, Lot CP220812003		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
TOC ICV Std_00051	07/01/23		Ricca, Lot 2208C86		(Purchased Reagent)		TOC Result 1	1000 ppm
							TOC Result 2	1000 ppm
							Total Organic Carbon - Duplicates	1000 ppm
TOC LCS Std_00057	01/31/25		Agilent Technologies, Lot 0006719669		(Purchased Reagent)		TOC Result 1	1001 ppm
							TOC Result 2	1001 ppm
							Total Organic Carbon - Duplicates	1001 ppm

Reagent

1000 Ag_00018

CPI INTERNATIONAL

7396303
ID: 1000 Ag_00018
Exp:03/27/24 Prpd:LRD Opn:10/06/22
1000 Ag CPI

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000511

SE Std Silver (Ag) – 1000 µg/mL

Product Lot #: 1211976-35

Matrix: 5% HNO_3

Source Material Lot #: X24E070

Element	Certified Concentration & Uncertainty
Ag	1006 ± 2 µg/mL (w/v)
	999.0 ± 2.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.999% pure silver (Ag) dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3151, lot #160729**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	MAJOR	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	0.6	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	0.6	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

September 27, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

1000 Ba_00021

CPI INTERNATIONAL

7307329
ID: 1000 Ba_00021
Exp:01/19/23 Prpd:LMT Opn:08/01/22
1000 Ba

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-100041

SE Std Barium (Ba) – 1000 µg/mL

Product Lot #: 1112442-75

Matrix: 5% HNO_3

Source Material Lot #: R18E042/W21E066

Element	Certified Concentration & Uncertainty
Ba	**996.0 ± 5.0 µg/mL (w/v)**
	983.0 ± 5.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.999% pure barium nitrate [$Ba(NO_3)_2$] dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3104a, lot #140909**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	MAJOR	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	11	Y	<5
Ca	<250	Fe	<100	La	13	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<2
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

July 19, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 7, July 24, 2019

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

1000 Sr_00016

CPI INTERNATIONAL

7288163
ID: 1000 Sr_00016
Exp:11/26/23 Prpd:LMT Opn:07/18/22
1000 Sr CPI

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000531

SE Std Strontium (Sr) – 1000 µg/mL

Lot #: 1194650-4

Matrix: 5% HNO_3

Source Material Lot #: SRZ082018A1/SRE082017A2

Element	Certified Concentration & Uncertainty
Sr	997.0 ± 6.0 µg/mL (w/v)
	992.0 ± 6.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.9965% pure strontium nitrate [$Sr(NO_3)_2$] dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3153a, lot #990906**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	64	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	MAJOR	Y	1
Ca	277	Fe	<10	La	<0.5	Ni	<2	Rh	0.8	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	4
Ce	0.4	Gd	<0.2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

May 26, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

1000 u_00045

CPI INTERNATIONAL

7546096
ID: 1000 U_00045
Exp:07/03/24 Prj d:LRD Opn:01/11/23
1000 U CPI

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000641

SE Std Uranium (U) – 1000 µg/mL

Product Lot #: 1249254-2

Matrix: 5% HNO_3

Source Material Lot #: 12030222-100

Element	Certified Concentration & Uncertainty
U	995.0 ± 5.0 µg/mL (w/v)
	990.0 ± 5.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.99% pure uranyl nitrate hexahydrate [$UO_2(NO_3)_2{\cdot}6H_2O$] dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3164, lot #080521**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	4	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	3	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

January 3, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

1000 Zn_00028

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

SE Std Zinc (Zn) – 1000 µg/mL

Matrix: 5% HNO_3

7084653
ID: 1000 Zn_00028
Exp:09/24/23 Prpd:LRD Opn:03/07/22
1000 Zn CPI

Product #: TA-1000681

Lot #: 1095528-109

Source Material Lot #: L17Y005/Y28D045

Element	Certified Concentration & Uncertainty
Zn	998 ± 2 µg/mL (w/v)
	989 ± 2 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.9999% pure zinc (Zn) metal dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3168a, lot #120629**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1		
Al	3	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2		
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5		
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2		
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1		
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	3	W	<0.5		
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5		
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2		
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	MAJOR		
Ce	<0.2	Gd	<0.2												

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 24, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 7, July 24, 2019

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br-	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl-	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

10000 Ca_00027

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M91-500

Calcium (Ca) – 10,000 µg/mL

Lot #: 1268108-19

Matrix: 4% HNO_3

Element	Certified Concentration & Uncertainty
Ca	9998 ± 23 µg/mL (w/v)
	9633 ± 22 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure calcium carbonate ($CaCO_3$). The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3109a, lot #130213**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	175	Pb	<10	Sc	<50	Tl	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	234	Y	<5
Ca	MAJOR	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 K_00018

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M411-500

Potassium (K) – 10,000 µg/mL

Lot #: 1137797-60

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty
K	10,092 ± 47 µg/mL (w/v)
	9893 ± 46 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.997% pure potassium nitrate (KNO_3). The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3141a, lot #140813**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	MAJOR	Nd	<2	Re	<2	Sr	<10	Y	<5
Ca	<250	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	394	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 7, July 24, 2019

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
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- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 Mg_00025

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M311-500

Magnesium (Mg) – 10,000 µg/mL

Lot #: 1303817-6

Matrix: 4% HNO_3

Element	Certified Concentration & Uncertainty
Mg	10,060 ± 21 µg/mL (w/v)
	9544 ± 20 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure magnesium nitrate [$Mg(NO_3)_2$]. The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3131a, lot #140110**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	9	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	MAJOR	Pb	11	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	11	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	7	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	232	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	7	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	<10	Y	<5
Ca	568	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	9	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

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    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 Na SS_00006

Certificate of Analysis

Product Description: Sodium

Product Number: **S1-Na-10000x100**

Lot Number: **2209019-100ESI**

Matrix: 1% HNO3

Density: 1.028 g/mL ± 0.002 g/mL @ 21.5°C ± 0.3°C

Certified Value:

Element	µg/mL	SRM ID
Na	10000 ± 30	3152a

The Certified Value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.
* Refer to Traceability Information, Section 4

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot via ICP-OES/ICP-MS analysis. The values are reported in µg/L.

Ag	<0.1	Cu	<2	Li	<2	Rb	<0.1	Th	<0.1
Al	<10	Dy	<0.1	Lu	<0.1	Re	<0.1	Ti	<0.1
As	<0.3	Er	<0.1	Mg	<0.5	Rh	<0.1	Tl	<0.1
Au	<0.1	Eu	<0.1	Mn	<0.3	Ru	<0.1	Tm	<0.1
B	75	Fe	<5	Mo	<2	Sb	<0.1	U	<0.3
Ba	<0.1	Ga	<0.1	Na	M	Sc	<0.1	V	<0.3
Be	<0.1	Gd	<0.1	Nb	<0.1	Se	<0.5	W	<0.1
Bi	<0.1	Ge	<0.1	Nd	<0.1	Si	<350	Y	<0.1
Ca	<5	Hf	<0.1	Ni	<0.1	Sm	<0.1	Yb	<0.1
Cd	<0.1	Ho	<0.1	Os	<0.1	Sn	<3	Zn	<0.1
Ce	<0.1	In	<0.1	Pb	<3	Sr	<0.1	Zr	<0.1
Co	<0.3	Ir	<0.1	Pd	<0.1	Ta	<0.1		
Cr	<0.3	K	<5	Pr	<0.1	Tb	<0.1		
Cs	<2	La	<0.1	Pt	<0.1	Te	<0.1		

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: October 2022

Expiration Date: April 30, 2024

Certificate Issue Date: April 25, 2022

Chris Ramsgard, Product Manager Standard Solutions

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Email: esi@icpms.com | Web: www.icpms.com

11/27/2023
7:27 PM

Preparation Information:

This standard is prepared using **99.999%** pure **Sodium Carbonate** which was purchased from a qualified vendor per ISO 9001 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. Stability of this product is based upon rigorous short-term and long-term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If, during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO 17034 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

1. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in 'NIST Weights and Measures Measurement Assurance Program' with a certificate of measurement traceability to NIST primary standards. The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.
2. **Volumetric Device**
   The calibrations of volumetric vessels are verified using the ASTM method E542.
3. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.
4. **Calibration Standards**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not available, a second source standard or independent lot is used.

Accreditation:

This product has been manufactured by an ISO 9001 registered and ISO/IEC 17025 and ISO 17034 accredited laboratory

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: ESI products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from ESI.

Reagent

10000 Na_00090

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M521-500

Sodium (Na) – 10,000 µg/mL

Lot #: 1263195-2

Matrix: 3% HNO_3

Element	Certified Concentration & Uncertainty
Na	10,055 ± 29 µg/mL (w/v)
	9763 ± 28 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.997% pure sodium carbonate (Na_2CO_3). The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3152a, lot #200413**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	57	Dy	<2	In	nd	Na	MAJOR	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	8	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	<10	Y	80
Ca	<250	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	36	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 Th_00027

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous RM

Thorium (Th) – 10,000 µg/mL

Matrix: 3% HNO_3

7084654
ID: 10000 Th_00027
Exp:09/24/23 Prpd:LRD Opn:03/07/22
10,000 Th CPI

Product #: S4400-10M591

Lot #: 1161822-1

Element	Certified Concentration & Uncertainty
Th	9971 ± 49 µg/mL (w/v)
	9064 ± 44 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (RM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to, **ISO 17034**, **ISO/IEC 17025** and **ISO 9001**. This RM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using pure thorium nitrate [$Th(NO_3)_4$]. The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable method against an alternate lot as NIST SRM is not available. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	7	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	5	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	<250	Nd	15	Re	<2	Sr	<10	Y	<5
Ca	<250	Fe	<100	La	17	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	31	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 24, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034:2016 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025:2017 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001:2015 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

CAL STD 1_00002

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

ICP ICPMS CAL Mix # 1

7043158
ID: ICP CAL STD 1_00013
Exp: 06/27/23 Prpd: LRD
ICP CAL STD 1 PRIMARY

Product #: TA-CAL1

Lot #: 1148545-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	99.98 ± 0.50 mg/L	Li	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.1 ± 0.5 mg/L	Sn	100.1 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	99.98 ± 0.50 mg/L
Cd	100.1 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.1 ± 0.5 mg/L
Co	99.96 ± 0.50 mg/L	Pb	99.96 ± 0.50 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	99.91 ± 0.50 mg/L	Sb	100.1 ± 0.5 mg/L	V	99.98 ± 0.50 mg/L
Cu	99.96 ± 0.50 mg/L	Se	99.97 ± 0.50 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
As	992330R	Li	170238	Si	1004988
Ba	994427	Mn	985946	Sn	1031164
Be	992601	Mo	1086465	Sr	1051374
Cd	173172	Ni	1070210R	Ti	984754
Co	983064	Pb	983061	Tl	1059794
Cr	1099019	Sb	660984R	V	154977
Cu	1140336R	Se	993619		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

December 27, 2021
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Safety Data Sheet (SDS).

:o be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35.
ɜ analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of
ɲeity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing
:ainties.

rnational for further information about this material.

ɔared under a quality management system that is registered/accredited to the following:
Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of

ıdditional requirements specified in ISO Guide 31 and ISO Guide 35
ɜl Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and

ment Systems, Certificate Registration No. 56 100 19560101 – Requirements

T SRMs:

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163

Reagent

CALSTD-1_00002

CPI INTERNATIONAL

7150070
ID: CALSTD-1_00002
Exp:08/08/23 Prpd:LMT Opn:04/18/22
ICP-MS Cal Std 1 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1

ICP ICPMS CAL Mix # 1

Lot #: 1148545-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	99.98 ± 0.50 mg/L	Li	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.1 ± 0.5 mg/L	Sn	100.1 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	99.98 ± 0.50 mg/L
Cd	100.1 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.1 ± 0.5 mg/L
Co	99.96 ± 0.50 mg/L	Pb	99.96 ± 0.50 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	99.91 ± 0.50 mg/L	Sb	100.1 ± 0.5 mg/L	V	99.98 ± 0.50 mg/L
Cu	99.96 ± 0.50 mg/L	Se	99.97 ± 0.50 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
As	992330R	Li	170238	Si	1004988
Ba	994427	Mn	985946	Sn	1031164
Be	992601	Mo	1086465	Sr	1051374
Cd	173172	Ni	1070210R	Ti	984754
Co	983064	Pb	983061	Tl	1059794
Cr	1099019	Sb	660984R	V	154977
Cu	1140336R	Se	993619		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 8, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br-	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl-	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

11/27/2023
7:27 PM

Reagent

CALSTD-3_00001

7544723
ID: CALSTD-3_00001
Exp:05/30/24 Prpd:LMT Opn:01/10/23
ICP-MS Cal Std 3 CPI rev

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL3

ICP ICPMS CAL Mix # 3

Lot #: 1285834-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
P	1000 ± 5 mg/L	U	100.0 ± 0.5 mg/L
S	1000 ± 5 mg/L	W	100.0 ± 0.5 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #
P	1225600	U	AR19-22UX
S	1207779	W	1130700

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 30, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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F: 707.545.7901

Europe
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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

Cl ICV Std_00006

ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Chloride
Catalog Number:	047-125mL, 988-500mL
Lot No.	601021m
Starting Material:	Sodium Chloride (NaCl)
Matrix:	18 megohm deionized water
Density:	1.0005 ± 0.0003 g/mL 19.9 °C and 750 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	November 20, 2021
Expiration Date:	October 29, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Chloride	1000	1.20	3182	95.3

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1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.02

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Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 1204B86 **Product Number:** 1180

Manufacture Date: APR 26, 2022

Expiration Date: OCT 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Bromide	7647-15-6	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br^-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br^-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1180-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Jason Thomas (04/26/2022)

Operations Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 4110L50 **Product Number:** 1180

Manufacture Date: OCT 22, 2021
Expiration Date: APR 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Bromide	7647-15-6	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1180-16	500 mL natural poly	18 months
1180-4	120 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Brandy Bates

Brandy Bates (10/22/2021)
Quality Control Supervisor
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Reagent

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ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Bromide
Catalog Number:	046-125mL, 987-500mL
Lot No.	110422m
Starting Material:	Potassium Bromide (KBr)
Matrix:	18 megohm deionized water
Density:	0.9997 ± 0.0005 g/mL 21.9 °C and 753 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	April 26, 2022
Expiration Date:	April 7, 2024
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Bromide	1000	0.927	3184	98.2

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1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size:** ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.02

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Reagent

IC CL cal_00076

spex certiprep

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Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: AS-CL9-2X **Lot No.** 5-146CL-2X

Description: 1000 µg/mL Chloride

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3182*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Sodium Chloride, Lot# 09141H. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 999 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 1000 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.01	NO_3^-	<0.06
F^-	<0.05	$PO4^{-3}$	<0.03
NO_2^-	<0.05	$SO4^{-2}$	<0.08

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: Nov--2022 Certifying Officer: Katherine Cullinan, QC Manager

Page 1 of 2
Rev. 0

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO/IEC 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
- ISO Guide 35: Reference Materials – Guidance for characterization and assessment of homogeneity and stability
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:
All analytes and matrix materials are obtained and verified by Spex CertiPrep from pre-qualified vendors as per ISO 9001, ISO/IEC 17025 and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of Spex CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report, Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Legal Notice:
Spex CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against Spex CertiPrep, LLC. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall Spex CertiPrep, LLC. be liable for any loss of profits or any incidental, special, or consequential damages.

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Accredited to 17025 & 17034 ISO Certified to 9001

Reagent

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Certificate of Analysis

Fluoride Standard, 1000 ppm F^-

Lot Number: 2207H13 **Product Number:** 3173

Manufacture Date: JUL 29, 2022
Expiration Date: JAN 2024

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.
The concentration is confirmed by Fluoride ISE and is certified traceable to NIST SRM 2203.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Fluoride	7681-49-4	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Fluoride (F)	995-1005 ppm	1005 ppm

Specification	Reference
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5542)
Fluoride Stock Solution (1.00 mL = 1.00 mg F^-)	EPA (SW-846) (9056)
Fluoride Calibration Stock Solution (1,000 mg/L F^-)	EPA (SW-846) (9214)
Stock Solution, 1.0 mL = 1.0 mg F	EPA (340.3)
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5996)
Fluoride Stock Solution (1.00 mL = 1.00 mg F?)	ASTM (D 4327)
Fluoride Stock Standard Solution (1 mg of F in 1 mL)	ACS (N/A)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
3173-16	500 mL natural poly	18 months
3173-32	1 L natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (07/29/2022)
Quality Control
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Reagent

IC MS/MSD Br_00004

ACROS ORGANICS

Version	0
Molecular weight	102.89
Molecular formula	Br Na
CAS No	7647-15-6
Linear formula	NaBr
Flash point (°C)	

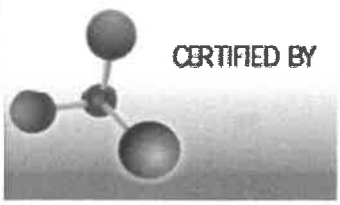
Certificate of Analysis

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Catalog Number	24690	**Quality Test / Release Date**	13 November 2020
Lot Number	A0424372	**Suggested Retest Date**	November 2025
Description	Sodium bromide,99.5%,for analysis		
Country of Origin	NETHERLANDS		
Declaration of Origin	synthetic		

Origin Comment	

Result Name	Specifications	Test Value
Appearance (Color)	White	White
Appearance (Form)	Crystalline powder	Crystalline powder
Titration Argentometric	>=99.5 %	99.7 %
pH	5 to 8.8 (5 % at 20°C)	6.9 (5 % at 20°C)
Insoluble matter	=<0.005 % (in water)	=<0.005 % (in water)
Nitrogen compounds (as N)	=<0.005 %	=<0.005 %
Chloride (Cl)	=<2000 ppm	=<100 ppm
Sulfate (SO4)	=<50 ppm	=<10 ppm
Bromate (BrO3)	=<10 ppm	=<10 ppm
Iodide (I)	=<50 ppm	=<10 ppm
Iron (Fe)	=<10 ppm	=<2 ppm
Arsenic (As)	=<2 ppm	=<1 ppm
Barium (Ba)	=<50 ppm	=<1 ppm
Calcium (Ca)	=<50 ppm	1 ppm
Magnesium (Mg)	=<50 ppm	=<1 ppm
Copper (Cu)	=<10 ppm	=<1 ppm
Nickel (Ni)	=<10 ppm	=<1 ppm
Lead (Pb)	=<10 ppm	1 ppm
Potassium (K)	=<2000 ppm	400 ppm



CERTIFIED BY

C. Wygaerts, QA Manager Issued: 12 October 2021

Acros Organics
ENA23, zone 1, nr 1350, Janssen Pharmaceuticalaan 3a, B-2440 Geel, Belgium
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1 Reagent Lane, Fair Lawn, NJ 07410,USA Fax 201-796-1329

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Certificate of Analysis

Nitrate Nitrogen Standard, 1000 ppm N (4427 ppm NO_3^-)

Lot Number: 2205B73 **Product Number:** 5459

Manufacture Date: MAY 11, 2022
Expiration Date: NOV 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrate	7757-79-1	High Purity
Chloroform	67-66-3	

Test	Specification	Result
Appearance	Colorless liquid	Passed
Nitrogen (N)	995-1005 ppm	1000 ppm

Specification	Reference
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 A)
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 B)
Stock Nitrate Solution: 1 mL = 1.0 mg NO3-N	EPA (353.2)
Stock Nitrate Solution: 1.0 mL = 1.00 mg NO3-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5459-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (05/11/2022)
Quality Control

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Certificate of Analysis

Nitrite Nitrogen Standard, 1000 ppm N (3285 ppm NO_2^-)

Lot Number: 2212826 **Product Number:** 5461

Manufacture Date: DEC 08, 2022
Expiration Date: JUN 2023

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrite	7758-09-0	ACS
Chloroform	67-66-3	

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Permanganate)	995-1005 ppm N	1005 ppm N	8040

Specification	Reference
Nitrite Solution, Stock (1.0 mL = 1.0 mg NO2-N)	ASTM (D 3867 A)
Nitrite Solution, Stock (1.0 mL = 1.0 mg NO2-N)	ASTM (D 3867 B)
Stock Nitrite Solution: 1 mL = 1.0 mg NO2-N	EPA (353.2)
Stock Nitrite Solution: 1.0 mL = 1.00 mg NO2-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5461-16	500 mL natural poly	6 months
5461-4	120 mL natural poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Myrlande Gilles (12/08/2022)
Quality Control

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Reagent

IC NO2 ICV_00022

ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Nitrite as N (NO_2-N)
Catalog Number:	053-125mL, 990-500mL
Lot No.	261221m
Starting Material:	Sodium Nitrite ($NaNO_2$)
Matrix:	18 megohm deionized water
Density:	1.0022 ± 0.0005 g/mL 21.3 °C and 740 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	December 21, 2021
Expiration Date:	December 14, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Nitrite as N (NO_2-N)	1000	0.948	-	-

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Certified Reference Material

▪ Certificate of Analysis ▪

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2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.02

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IC NO3 ICV_00019

ERA
A Waters Company

Certified Reference Material

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Product:	1000 mg/L Nitrate as N (NO_3-N)
Catalog Number:	052-125mL, 991-500mL
Lot No.	011221m
Starting Material:	Potassium Nitrate (KNO_3)
Matrix:	18 megohm deionized water
Density:	1.0029 ± 0.0005 g/mL 20.2 °C and 749 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	December 21, 2021
Expiration Date:	December 1, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Nitrate as N (NO_3-N)	1000	1.57	3185	101

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1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

Uexpanded = Expanded uncertainty.
k = Coverage factor.
Uchar = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
Uhomogen = Standard uncertainty of the homogeneity assessment.
ULTS = Standard uncertainty associated with long-term stability.
USTS = Standard uncertainty associated with short-term (transport) stability.
URSS = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability.** This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1529.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.07

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Certificate of Analysis

Phosphorus AA Standard, 1000 ppm P in H_2O

Lot Number: 4208152 **Product Number:** AP1KW

Manufacture Date: AUG 02, 2022
Expiration Date: JUL 2024

This is a single element solution that was prepared volumetrically to contain the certified value reported. The uncertainty associated with the certified value is the sum of the estimated errors due to the purity of the raw material, the volumetric preparation of the solution, and transpiration of the solution through the container wall.
The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3139.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Ammonium Dihydrogen Phosphate	7722-76-1	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Phosphorus (P)	995-1005 ppm	1000 ppm	3139

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
AP1KW-500	500 mL natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Paul Brandon (08/02/2022)
Production Manager
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Reagent

IC SO4 Cal_00008

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ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: AS-SO49-2X **Lot No.** 5-160SO4-2X

Description: 1000 µg/mL Sulfate

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3181*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Potassium Sulfate, Lot# AN07201A. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 999 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as BaSO4.

Instrumental Analysis by Ion Chromatography: 1000 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.01	NO_2^-	<0.01
Cl^-	<0.03	NO_3^-	<0.02
F^-	<0.003	$PO4^{-3}$	<0.08

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: JUL -- 2022 Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO/IEC 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
- ISO Guide 35: Reference Materials – Guidance for characterization and assessment of homogeneity and stability
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:
All analytes and matrix materials are obtained and verified by Spex CertiPrep from pre-qualified vendors as per ISO 9001, ISO/IEC 17025 and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of Spex CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:
- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report, Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Legal Notice:
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ERA
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Certified Reference Material

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Product:	1000 mg/L Sulfate
Catalog Number:	062-125mL, 995-500mL
Lot No.	021221m
Starting Material:	Potassium Sulfate (K_2SO_4)
Matrix:	18 megohm deionized water
Density:	1.0002 ± 0.0005 g/mL 20.4 °C and 748 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	December 22, 2021
Expiration Date:	December 1, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Sulfate	1000	0.994	3181	97.5

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$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability.** This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #539.02

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-67795-A
Lot Number:	T2-MEB722098
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea:

Arsenic, Barium,
Beryllium, Cadmium,
Cobalt, Chromium,
Copper, Lithium,
Manganese, Nickel,
Lead, Selenium,
Strontium, Thallium,
Vanadium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**100.0 ± 0.6 µg/mL**	**Barium, Ba**	**100.0 ± 0.4 µg/mL**
Beryllium, Be	**100.1 ± 0.5 µg/mL**	**Cadmium, Cd**	**100.0 ± 0.4 µg/mL**
Chromium, Cr	**100.0 ± 0.5 µg/mL**	**Cobalt, Co**	**100.0 ± 0.4 µg/mL**
Copper, Cu	**100.0 ± 0.4 µg/mL**	**Lead, Pb**	**100.0 ± 0.6 µg/mL**
Lithium, Li	**100.0 ± 0.4 µg/mL**	**Manganese, Mn**	**100.0 ± 0.5 µg/mL**
Nickel, Ni	**100.0 ± 0.6 µg/mL**	**Selenium, Se**	**100.0 ± 0.7 µg/mL**
Strontium, Sr	**100.0 ± 0.4 µg/mL**	**Thallium, Tl**	**100.0 ± 0.6 µg/mL**
Vanadium, V	**100.0 ± 0.4 µg/mL**		

Density: 1.031 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	traceable to 3103a	R2-AS691113
Ba	ICP Assay	3104a	140909
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
V	IC Assay	3165	160906
V	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 28, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 28, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

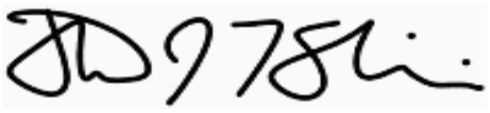
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

ICV MIX-1B_00001

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-5065
Lot Number:	T2-MEB722099
Matrix:	5% (v/v) HNO3 0.4% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon, 100 µg/mL ea: Tin, Titanium, Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**100.0 ± 0.8 µg/mL**	**Molybdenum, Mo**	**100.0 ± 0.7 µg/mL**
Silicon, Si	**1 000 ± 6 µg/mL**	**Tin, Sn**	**100.0 ± 0.7 µg/mL**
Titanium, Ti	**100.0 ± 0.7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 28, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 28, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

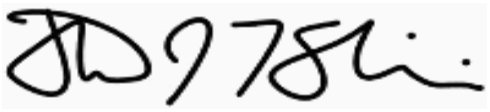
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MS CALSTD-2_00103

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

ICP ICPMS CAL Mix # 2

Matrix: 5% HNO_3

7361018
ID: MS CALSTD-2_00103
Exp:01/26/24 Prpd: Opn:09/12/22
MS CAL STD 2

Product #: TA-CAL2

Lot #: 1208136-1

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	2000 ± 10 mg/L	Fe	2000 ± 10 mg/L	Mg	2000 ± 10 mg/L
Ca	2000 ± 10 mg/L	K	2000 ± 10 mg/L	Na	2000 ± 10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1077624	Fe	1114543	Mg	1075231
Ca	1121798	K	1156013	Na	1122654

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

July 26, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br^-	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl^-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F^-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

MS CALSTD-5a_00001

CPI INTERNATIONAL

Certificate of Analysis

Custom Standard

Catalog Number: TA-CM-NOV21-DEN2 (Soln A)
Lot Number: 220527
Manufacture Date: 06/10/22

Expiration: 12/31/2023
Matrix: 2% HNO3
Hazards: Irritant, Corrosive

Analyte	Certified Concentration (ppm)
Boron (B)	1000 ± 5.75
Lithium (Li)	100 ± 0.575
Phosphorus (P)	4000 ± 23.0
Silver (Ag)	100 ± 0.575
Strontium (Sr)	100 ± 0.575
Zinc (Zn)	100 ± 0.575

Catalog Number: TA-CM-NOV21-DEN2 (Soln B)
Lot Number: 220527
Manufacture Date: 06/10/22

Expiration: 12/31/2023
Matrix: 2% HNO3
Hazards: Irritant, Corrosive

Analyte	Certified Concentration (ppm)
Thorium (Th)	100 ± 0.575

Packaging, Storage, Instructions For Use

Store at room temperature (15-30°C).

This certified reference material (CRM) is packaged in HDPE as a whole volume ready to use sample. No secondary preparative steps are necessary. Allow to equilibrate to room temperature before use. Small aliquots should be poured out of the bottle rather than directly pipetted out of bottle in order to prevent contamination or premature degradation. This CRM was manufactured by NSI Lab Solutions following quality procedures meeting the requirements of ISO 9001, ISO 17025, and ISO 17034.

Traceability Information

Analyte Source Materials: The highest purity analyte source materials are used in the manufacture of this CRM.

Method: This CRM was verified by ICP.

CPI INTERNATIONAL

Catalog Number: 4400-100113DF06
Lot Number: 220527

Balance: All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.
All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

Thermometer: All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

Glassware: All glassware used in the manufacture of our CRMs is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

Intended Uses

- Calibration of analytical instruments
- Validation of analytical methods
- Preparation of working level reference materials, i.e. "check standards"
- Detection limit studies

Uncertainty

The ± uncertainty associated with the concentration is the expanded manufacturing uncertainty at 95% confidence interval (CI) with K=2.

Homogeneity

This CRM was thoroughly mixed in production and is guaranteed homogeneous.

Ewart Morris

Ewart Morris, Inorganics Technical Manager

Mark Hammersla

Mark Hammersla, President

Reagent

MS ICSA STOCK_00049

CPI INTERNATIONAL

7284249
ID: MS ICSA STOCK_00049
Exp:12/13/23 Prpd:LMT Opn:07/14/22
ICP-MS ICS-0A STOCK SOLU

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICPMS-ICSA

ICPMS ICSA Mix

Lot #: 1208135-1

Matrix: 2% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Na	1000 ± 5 mg/L
C	1997 ± 10 mg/L	K	1000 ± 5 mg/L	P	1000 ± 5 mg/L
Ca	999.6 ± 5.0 mg/L	Mg	1000 ± 5 mg/L	S	1000 ± 5 mg/L
Cl	9999 ± 50 mg/L	Mo	20.01 ± 0.10 mg/L	Ti	19.98 ± 0.10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1077624	Fe	1114543	Na	1122654
C	P12G045	K	1156013	P	1107349
Ca	1121798	Mg	1075231	S	1154886
Cl	213900	Mo	1053794	Ti	1095555

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Trace Concentrations (µg/L)

Ag	<0.5	Co	2	Ge	<0.5	Lu	<0.2	P	MAJOR	Sb	21	Te	<1
Al	MAJOR	Cs	<0.5	Hf	<0.2	Mg	MAJOR	Pb	71	Sc	<5	Ti	MAJOR
As	<2	Cr	3	Hg	<0.5	Mn	<1	Pd	2	Se	38	Tl	<0.5
Au	44	Cu	<1	Ho	<0.2	Mo	MAJOR	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	MAJOR	Pt	<0.5	Sm	<0.2	V	<1
Ba	27	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	10	Sn	4	W	2
Bi	2	Eu	<0.2	K	MAJOR	Nd	<0.2	Re	8	Sr	21	Y	7
Ca	MAJOR	Fe	MAJOR	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	10	Ga	33	Li	18	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

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F: 707.545.7901

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

June 13, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br^-	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl^-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F^-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

MS ICSA STOCK_00051

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

ICPMS ICSA Mix

7510937

ID: MS ICSA STOCK_00051
Exp:04/20/24 Prpd:LRD Opn:12/13/22
ICP-MS ICS-0A STOCK SOLUT

Product #: TA-ICPMS-ICSA

Lot #: 1267033-1

Matrix: 2% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Na	1000 ± 5 mg/L
C	2000 ± 10 mg/L	K	1000 ± 5 mg/L	P	1000 ± 5 mg/L
Ca	1000 ± 5 mg/L	Mg	1000 ± 5 mg/L	S	1000 ± 5 mg/L
Cl	10,000 ± 50 mg/L	Mo	19.99 ± 0.10 mg/L	Ti	20.00 ± 0.10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1249289	Fe	1249266	Na	1245609
C	R11H037	K	1156013	P	1225600
Ca	1232112	Mg	1075231	S	1207779
Cl	220348	Mo	1207790	Ti	1094307

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	MAJOR	Sb	<0.5	Te	<1
Al	MAJOR	Cs	<0.5	Hf	<0.2	Mg	MAJOR	Pb	<1	Sc	<5	Ti	MAJOR
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	3	Cu	<1	Ho	<0.2	Mo	MAJOR	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	MAJOR	Pt	<0.5	Sm	<0.2	V	<1
Ba	22	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	3	W	<0.5
Bi	<0.2	Eu	<0.2	K	MAJOR	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	MAJOR	Fe	MAJOR	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	18	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

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Chuck Goudreau

Chuck Goudreau, Certifying Officer

October 20, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

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- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

MS ICSA STOCK_00052

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Certificate of Analysis

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	S2-MEB706044
Matrix:	1% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chloride,
	2 000 µg/mL ea: Carbon,
	1 000 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	20 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 3 µg/mL**	**Calcium, Ca**	**1 000 ± 4 µg/mL**
Carbon, C	**2 001 ± 4 µg/mL**	**Chloride, Cl**	**10 000.0 ± 50.0 µg/mL**
Iron, Fe	**1 000 ± 4 µg/mL**	**Magnesium, Mg**	**1 000 ± 4 µg/mL**
Molybdenum, Mo	**20.01 ± 0.12 µg/mL**	**Phosphorus, P**	**1 000 ± 6 µg/mL**
Potassium, K	**1 000 ± 4 µg/mL**	**Sodium, Na**	**1 000 ± 4 µg/mL**
Sulfur, S	**1 000 ± 4 µg/mL**	**Titanium, Ti**	**20.01 ± 0.14 µg/mL**

Density: 1.031 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000260	O	Cu	<	0.007300	M	La	<	0.000120	M	Pr	<	0.000010	M	Ta		0.000230
s	Al	<		M	Dy	<	0.000360	O	Li		0.002200	M	Pt	<	0.000120	M	Tb	<	0.000040
O	As	<	0.029000	M	Er	<	0.000040	M	Lu	<	0.000010	M	Rb		0.052000	M	Te	<	0.000860
M	Au	<	0.000240	M	Eu	<	0.000010	s	Mg	<		M	Re	<	0.000040	M	Th	<	0.000060
M	B	<	0.007400	s	Fe	<		M	Mn		0.002400	M	Rh	<	0.000080	s	Ti	<	
M	Ba		0.004600	M	Ga		0.026000	s	Mo	<		M	Ru	<	0.000290	M	Tl	<	0.000050
M	Be	<	0.000070	M	Gd	<	0.000100	s	Na	<		s	S	<		M	Tm	<	0.000010
M	Bi	<	0.000220	M	Ge	<	0.003100	M	Nb	<	0.000100	M	Sb		0.000540	M	U		0.000180
s	Ca	<		M	Hf	<	0.000100	M	Nd	<	0.000040	O	Sc	<	0.000520	O	V	<	0.002900
O	Cd	<	0.001100	M	Hg	<	0.000260	O	Ni		0.002500	M	Se	<	0.002400	M	W		0.001600
M	Ce	<	0.000220	M	Ho	<	0.000100	M	Os	<	0.000020	M	Si	<	0.024000	M	Y	<	0.000120
M	Co		0.002200	M	In	<	0.000260	s	P	<		M	Sm	<	0.000080	M	Yb	<	0.000020
M	Cr		0.020000	M	Ir	<	0.000010	M	Pb		0.000480	M	Sn		0.000430	M	Zn		0.005600
M	Cs		0.000700	s	K	<		M	Pd	<	0.000060	O	Sr		0.005800	M	Zr		0.000960

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 06, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 06, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

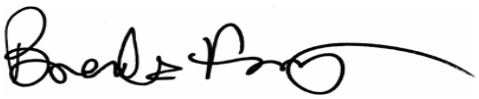
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician



Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MS ICVMIX--5_00002

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-67385
Lot Number:	T2-MEB721663
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 000 µg/mL ea: Phosphorus, Boron, 100 µg/mL ea: Silver, Lithium, Strontium, Thorium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 6 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Lithium, Li	**100.0 ± 0.4 µg/mL**	**Magnesium, Mg**	**5 000 ± 21 µg/mL**
Phosphorus, P	**1 000 ± 5 µg/mL**	**Potassium, K**	**5 000 ± 22 µg/mL**
Silver, Ag	**100.0 ± 0.4 µg/mL**	**Sodium, Na**	**5 000 ± 22 µg/mL**
Strontium, Sr	**100.0 ± 0.4 µg/mL**	**Thorium, Th**	**100.0 ± 0.5 µg/mL**
Zinc, Zn	**100.0 ± 0.4 µg/mL**		

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
B	ICP Assay	3107	190605
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 19, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 19, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

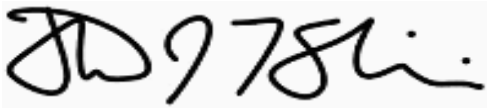
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MS ICVMIX-2_00005

CPI INTERNATIONAL

7129049
ID: MS ICVMIX-2_00005
Exp:05/16/23 Prpd:LMT Opn:04/06/22
ICP-MS ICV Std 2 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL2-SS

ICP ICPMS CAL Mix # 2

Lot #: 1146029-1

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	2000 ± 10 mg/L	Fe	2000 ± 10 mg/L	Mg	2000 ± 10 mg/L
Ca	2000 ± 10 mg/L	K	2000 ± 10 mg/L	Na	2000 ± 10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	AP18-72ALX	Fe	AR18-89FEX	Mg	AQ18-136MGX
Ca	AZ18-49CAX	K	AY18-96KX	Na	AT18-84NAX

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 16, 2021
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

MS LLCCV_00009

INORGANIC VENTURES™
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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-67794
Lot Number:	T2-MEB722097
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	30 µg/mL ea: Sodium,
	20 µg/mL ea: Calcium,
	12 µg/mL ea: Potassium,
	10 µg/mL ea: Boron, Phosphorus,
	5 µg/mL ea: Aluminum, Iron, Magnesium,
	1 µg/mL ea: Lithium, Tin, Zinc,
	0.5 µg/mL ea: Selenium, Vanadium, Strontium, Titanium, Arsenic,
	0.2 µg/mL ea: Chromium, Copper, Nickel, Molybdenum, Antimony,
	0.1 µg/mL ea: Lead, Thallium, Uranium, Thorium, Manganese, Silver, Cadmium, Cobalt, Barium, Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	4.997 ± 0.025 µg/mL	Antimony, Sb	0.2001 ± 0.0017 µg/mL
Arsenic, As	0.5003 ± 0.0030 µg/mL	Barium, Ba	0.1000 ± 0.0006 µg/mL
Beryllium, Be	0.1000 ± 0.0008 µg/mL	Boron, B	10.00 ± 0.06 µg/mL
Cadmium, Cd	0.1000 ± 0.0007 µg/mL	Calcium, Ca	20.00 ± 0.09 µg/mL
Chromium, Cr	0.2000 ± 0.0013 µg/mL	Cobalt, Co	0.1000 ± 0.0008 µg/mL
Copper, Cu	0.1998 ± 0.0009 µg/mL	Iron, Fe	4.995 ± 0.026 µg/mL
Lead, Pb	0.1000 ± 0.0007 µg/mL	Lithium, Li	1.000 ± 0.006 µg/mL
Magnesium, Mg	4.998 ± 0.026 µg/mL	Manganese, Mn	0.1000 ± 0.0008 µg/mL
Molybdenum, Mo	0.1998 ± 0.0013 µg/mL	Nickel, Ni	0.2002 ± 0.0010 µg/mL
Phosphorus, P	10.00 ± 0.05 µg/mL	Potassium, K	12.00 ± 0.06 µg/mL
Selenium, Se	0.5001 ± 0.0041 µg/mL	Silver, Ag	0.1000 ± 0.0009 µg/mL
Sodium, Na	29.98 ± 0.13 µg/mL	Strontium, Sr	0.4999 ± 0.0030 µg/mL
Thallium, Tl	0.1000 ± 0.0008 µg/mL	Thorium, Th	0.1000 ± 0.0006 µg/mL
Tin, Sn	1.000 ± 0.007 µg/mL	Titanium, Ti	0.4998 ± 0.0042 µg/mL
Uranium, U	0.1000 ± 0.0008 µg/mL	Vanadium, V	0.4996 ± 0.0029 µg/mL
Zinc, Zn	1.000 ± 0.006 µg/mL		

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Al	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Ba	Calculated		See Sec. 4.2
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Ca	Calculated		See Sec. 4.2
Cd	Calculated		See Sec. 4.2
Co	Calculated		See Sec. 4.2
Cr	Calculated		See Sec. 4.2
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
K	ICP Assay	3141a	140813
K	Calculated		See Sec. 4.2
K	Gravimetric		See Sec. 4.2
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mg	Calculated		See Sec. 4.2
Mn	Calculated		See Sec. 4.2
Mo	Calculated		See Sec. 4.2
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Calculated		See Sec. 4.2
Na	Gravimetric		See Sec. 4.2
Ni	Calculated		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
P	Calculated		See Sec. 4.2
Pb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Se	Calculated		See Sec. 4.2
Sn	Calculated		See Sec. 4.2
Sr	Calculated		See Sec. 4.2
Th	Calculated		See Sec. 4.2
Ti	Calculated		See Sec. 4.2
Tl	Calculated		See Sec. 4.2
U	Calculated		See Sec. 4.2
V	Calculated		See Sec. 4.2
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.24 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 29, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 29, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

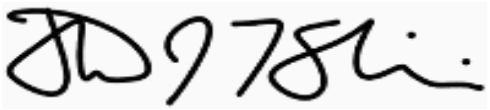
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

mv-30241_00010

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 **Lot No.:** A0180349

Description : 8260A Internal Standard Mix

8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Fluorobenzene **CAS #** 462-06-6 (Lot BCBZ5549) **Purity** 99%	2,500.6 µg/mL	+/- 14.5387 µg/mL +/- 140.2062 µg/mL +/- 143.4868 µg/mL	Gravimetric Unstressed Stressed
2	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-29571) **Purity** 99%	2,500.8 µg/mL	+/- 14.5399 µg/mL +/- 140.2174 µg/mL +/- 143.4983 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-30447) **Purity** 99%	2,500.2 µg/mL	+/- 14.5364 µg/mL +/- 140.1837 µg/mL +/- 143.4639 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Revd 4/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

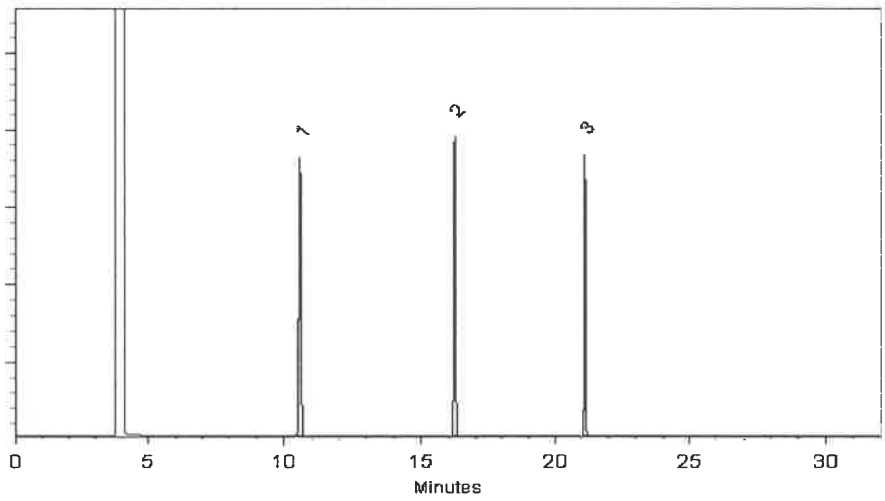
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Riglin - Operations Tech I

Date Mixed: 06-Jan-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 10-Jan-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-30241_00012

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ilac-MRA

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 **Lot No.:** A0185733

Description : 8260A Internal Standard Mix

8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Fluorobenzene **CAS #** 462-06-6 (Lot BCBZ5549) **Purity** 99%	2,504.0 µg/mL	+/- 14.5585 µg/mL +/- 140.3968 µg/mL +/- 143.6819 µg/mL	Gravimetric Unstressed Stressed
2	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-29571) **Purity** 99%	2,508.0 µg/mL	+/- 14.5817 µg/mL +/- 140.6211 µg/mL +/- 143.9114 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-30447) **Purity** 99%	2,500.6 µg/mL	+/- 14.5387 µg/mL +/- 140.2062 µg/mL +/- 143.4868 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Rcvd
8/11/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

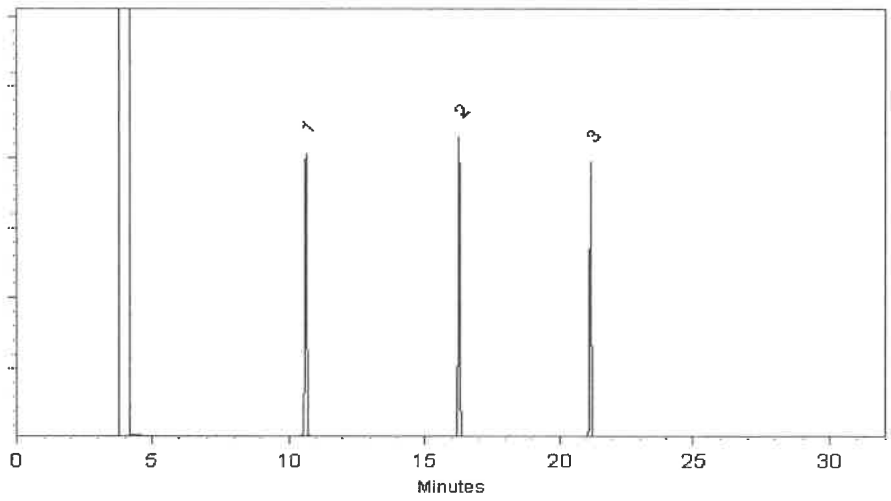
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Josh McCloskey - Operations Technician I

Date Mixed: 26-May-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 31-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-567650_00030

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0172587

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500µg/mL, P&T Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2026 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 **Purity** 99%	(Lot 012021)	2,510.9 µg/mL	+/- 14.5983 µg/mL +/- 140.7809 µg/mL +/- 144.0750 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 **Purity** 99%	(Lot PR-29377)	2,518.0 µg/mL	+/- 14.6399 µg/mL +/- 141.1818 µg/mL +/- 144.4852 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 **Purity** 99%	(Lot PR-31750)	2,500.4 µg/mL	+/- 14.5375 µg/mL +/- 140.1949 µg/mL +/- 143.4753 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 **Purity** 99%	(Lot 20401KO)	2,520.9 µg/mL	+/- 14.6567 µg/mL +/- 141.3444 µg/mL +/- 144.6516 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Rcvd 4/5/23

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

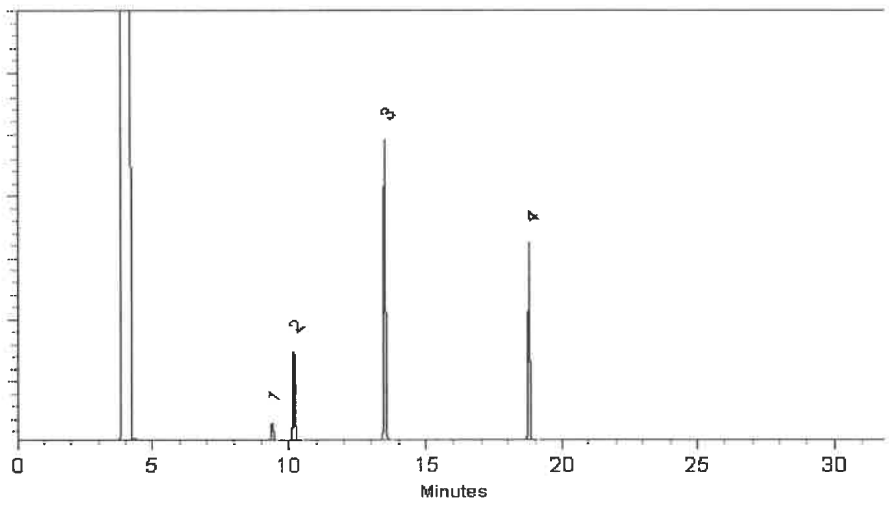
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Sam Moodler - Operations Tech I

Date Mixed: 19-May-2021 **Balance:** B707717271

Alexis Shelow - Operations Tech I

Date Passed: 21-May-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-568720.sec_00038

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720.SEC **Lot No.:** A0181935

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2023 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acrolein		19,756.8 µg/mL	+/- 115.6804	µg/mL	Gravimetric
	CAS # 107-02-8.SEC	(Lot D8402600-1024)		+/- 394.6881	µg/mL	Unstressed
	Purity 98%			+/- 885.4724	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Rcvd 6/13/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

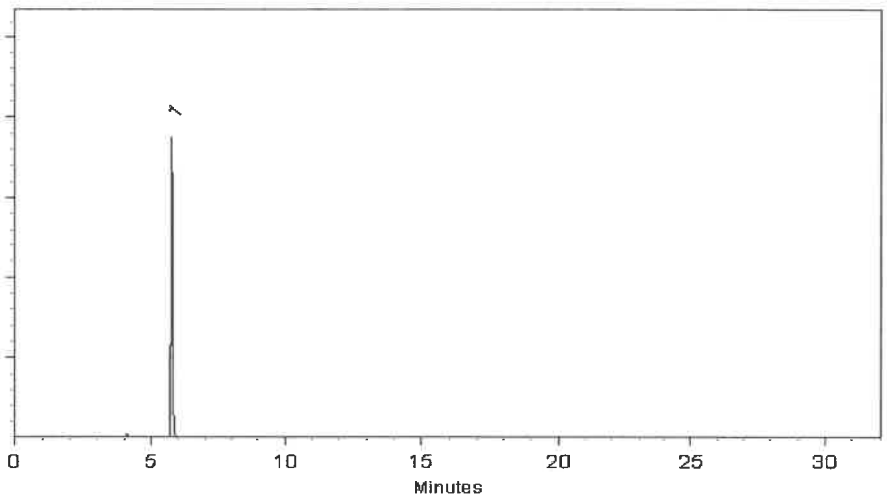
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 16-Feb-2022 **Balance:** 1128342314

Feng-Yun Lo - QC Analyst

Date Passed: 24-Feb-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-568720_00043

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0175809

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2023 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acrolein	19,891.5 µg/mL	+/- 116.4691 µg/mL	Gravimetric
	CAS # 107-02-8 (Lot RD210729)		+/- 397.3790 µg/mL	Unstressed
	Purity 99%		+/- 891.5094 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Rec'd 4/6/22 JM

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

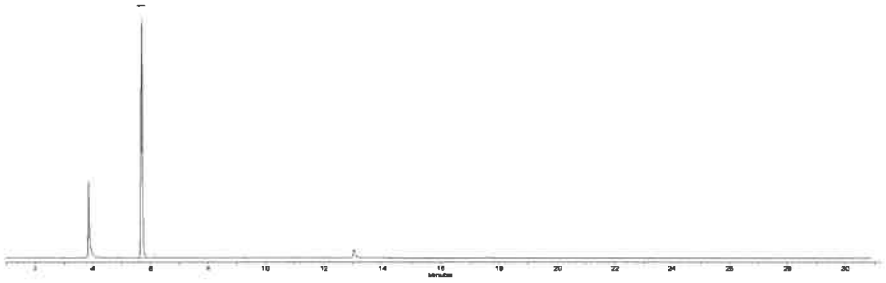
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 26-Aug-2021 **Balance:** B707717271

John Lidgett - AD Chemist

Date Passed: 02-Sep-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0187378

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acrolein	19,750.7 µg/mL	+/- 115.6445 µg/mL	Gravimetric
	CAS # 107-02-8 (Lot RD220420)		+/- 394.5655 µg/mL	Unstressed
	Purity 99%		+/- 885.1975 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

11/1/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

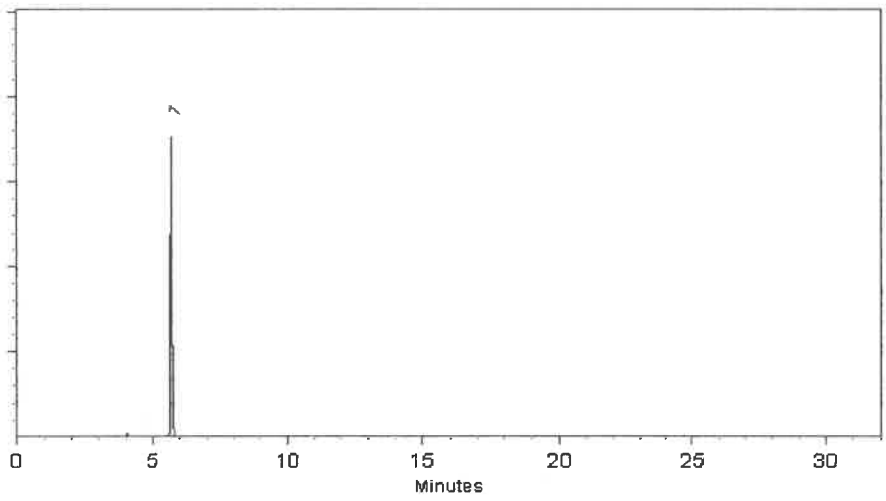
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brittany Federinko - Operations Tech I

Date Mixed: 15-Jul-2022 **Balance:** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 26-Jul-2022

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Reagent

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Recd 5/3/22

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.SEC **Lot No.:** A0178490

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot S25F025)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%		+/- 756.2625 µg/mL	Stressed
2	2-Butanone (MEK)	12,502.0 µg/mL	+/- 73.2020 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RGZ2A)		+/- 754.3508 µg/mL	Unstressed
	Purity 99%		+/- 756.1415 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,508.7 µg/mL	+/- 73.2410 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 754.7530 µg/mL	Unstressed
	Purity 99%		+/- 756.5447 µg/mL	Stressed
4	2-Hexanone	12,507.3 µg/mL	+/- 73.2332 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot Y3TUO)		+/- 754.6726 µg/mL	Unstressed
	Purity 99%		+/- 756.4641 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

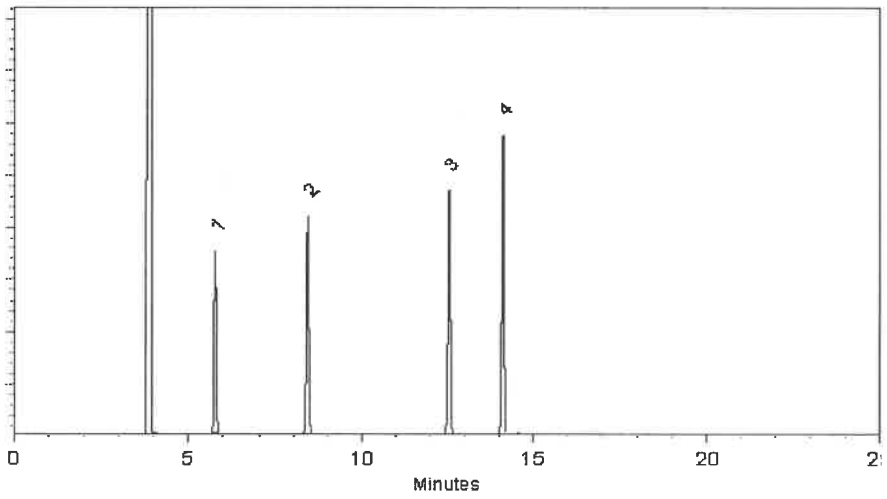
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jeff Rhoades - Mix Technician

Date Mixed: 15-Nov-2021 **Balance:** 1127510105

Clara Windle - Operations Technician I

Date Passed: 16-Nov-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-569721_00013

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0180742

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot MKCP0755) **Purity** 99%	12,524.0 µg/mL	+/- 73.3308 µg/mL +/- 755.6782 µg/mL +/- 757.4721 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot SHBN2844) **Purity** 99%	12,529.5 µg/mL	+/- 73.3630 µg/mL +/- 756.0101 µg/mL +/- 757.8048 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBN3601) **Purity** 99%	12,541.5 µg/mL	+/- 73.4332 µg/mL +/- 756.7342 µg/mL +/- 758.5305 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKCL1599) **Purity** 99%	12,548.0 µg/mL	+/- 73.4713 µg/mL +/- 757.1264 µg/mL +/- 758.9237 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Rec'd 4/4/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

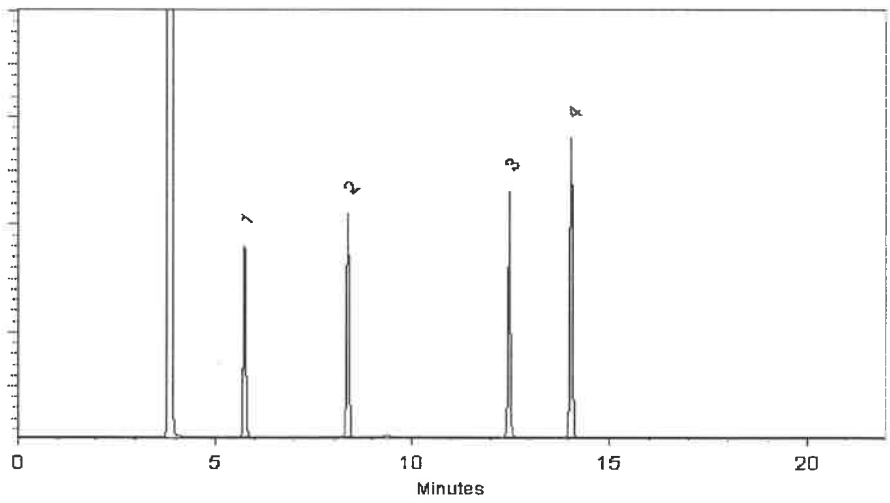
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Riglin - Operations Tech I

Date Mixed: 18-Jan-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 20-Jan-2022

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0186508

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,514.5 µg/mL	+/- 73.2751 µg/mL	Gravimetric
	CAS # 67-64-1 (Lot MKCQ7914)		+/- 755.1050 µg/mL	Unstressed
	Purity 99%		+/- 756.8975 µg/mL	Stressed
2	2-Butanone (MEK)	12,543.5 µg/mL	+/- 73.4450 µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBN2844)		+/- 756.8548 µg/mL	Unstressed
	Purity 99%		+/- 758.6515 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,528.5 µg/mL	+/- 73.3571 µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBN3601)		+/- 755.9498 µg/mL	Unstressed
	Purity 99%		+/- 757.7443 µg/mL	Stressed
4	2-Hexanone	12,528.0 µg/mL	+/- 73.3542 µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKCQ6663)		+/- 755.9196 µg/mL	Unstressed
	Purity 99%		+/- 757.7140 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

12/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

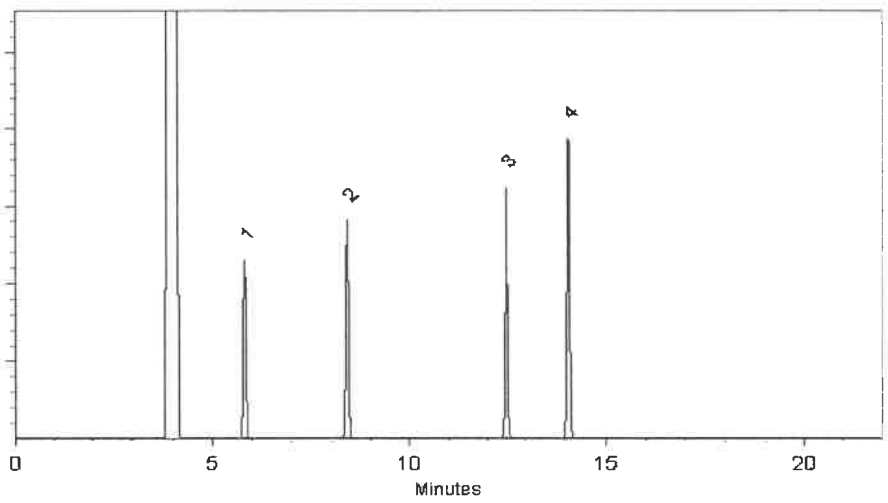
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 21-Jun-2022 **Balance:** B707717271

Marlina Cowan – Operations Tech II ARM QC

Date Passed: 23-Jun-2022

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Reagent

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0182212

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

5/17/22 dlc

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8.SEC (Lot 27545) **Purity** 99%	2,499.8 µg/mL	+/- 23.5114 µg/mL +/- 141.3717 µg/mL +/- 144.6237 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3.SEC (Lot 18343) **Purity** 99%	2,500.0 µg/mL	+/- 23.7799 µg/mL +/- 141.4309 µg/mL +/- 144.6823 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4.SEC (Lot MKBK6872V) **Purity** 99%	2,505.4 µg/mL	+/- 23.7413 µg/mL +/- 141.7224 µg/mL +/- 144.9811 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0.SEC (Lot 26996) **Purity** 99%	2,503.7 µg/mL	+/- 21.0317 µg/mL +/- 141.1961 µg/mL +/- 144.4622 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9.SEC (Lot 00017022) **Purity** 99%	2,501.7 µg/mL	+/- 22.6458 µg/mL +/- 141.3355 µg/mL +/- 144.5932 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 * (Lot 107-401039114-1) **Purity** 99%	2,513.8 µg/mL	+/- 25.5638 µg/mL +/- 142.5004 µg/mL +/- 145.7633 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 * (Lot 12841600) **Purity** 99%	2,500.0 µg/mL	+/- 14.6714 µg/mL +/- 140.1867 µg/mL +/- 143.4662 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)			2,513.5	µg/mL	+/-	23.5537	µg/mL	Gravimetric
	CAS #	75-69-4.SEC	(Lot 253600)			+/-	142.1327	µg/mL	Unstressed
	Purity	99%				+/-	145.4029	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

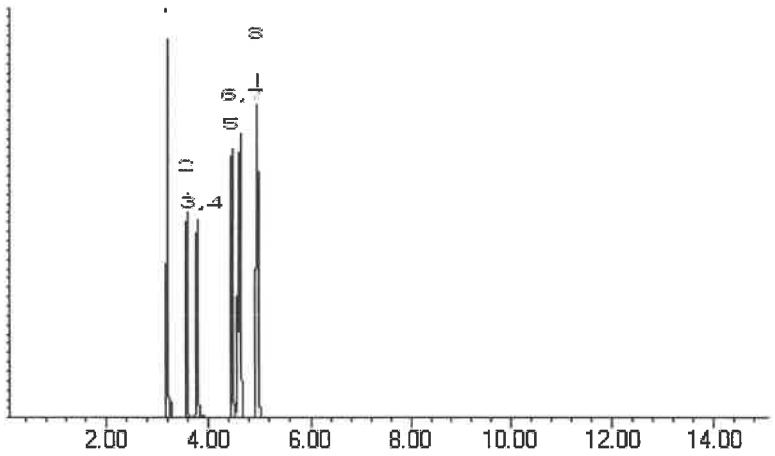
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 24-Feb-2022 **Balance:** 1127510105

Clara Windle - Operations Technician I

Date Passed: 03-Mar-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0186584

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,496.8 µg/mL	+/- 18.9786 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 27545)		+/- 140.5231 µg/mL	Unstressed
	Purity 99%		+/- 143.7866 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.1 µg/mL	+/- 22.2077 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.3425 µg/mL	Unstressed
	Purity 99%		+/- 144.6037 µg/mL	Stressed
3	Vinyl chloride	2,500.0 µg/mL	+/- 23.4271 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.3687 µg/mL	Unstressed
	Purity 99%		+/- 144.6213 µg/mL	Stressed
4	1,3-Butadiene	2,496.8 µg/mL	+/- 21.9304 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 26996)		+/- 140.9532 µg/mL	Unstressed
	Purity 99%		+/- 144.2070 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,506.4 µg/mL	+/- 22.1918 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot 00017022)		+/- 141.5223 µg/mL	Unstressed
	Purity 99%		+/- 144.7879 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,503.4 µg/mL	+/- 22.5874 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 141.4203 µg/mL	Unstressed
	Purity 98%		+/- 144.6805 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.0 µg/mL	+/- 14.6714 µg/mL	Gravimetric
	CAS # 75-43-4 * (Lot 12841600)		+/- 140.1867 µg/mL	Unstressed
	Purity 99%		+/- 143.4662 µg/mL	Stressed

11/1/22

8	Trichlorofluoromethane (CFC-11)		2,497.2	µg/mL	+/-	20.5278	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 00010739)			+/-	140.7628	µg/mL	Unstressed
	Purity 99%				+/-	144.0218	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

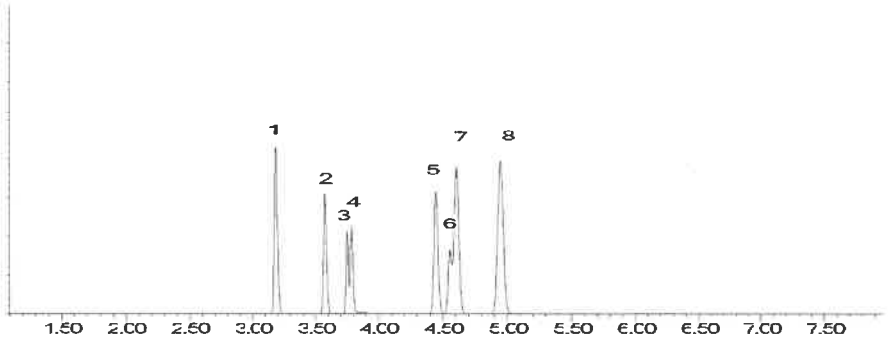
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician **Date Mixed:** 23-Jun-2022 **Balance:** 1127510105

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 27-Jun-2022

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0184726

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot 00012554) **Purity** 99%	2,500.0 µg/mL	+/- 20.3317 µg/mL +/- 140.8938 µg/mL +/- 144.1574 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBK6571) **Purity** 99%	2,500.5 µg/mL	+/- 22.8144 µg/mL +/- 141.3009 µg/mL +/- 144.5566 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 00015559) **Purity** 99%	2,500.7 µg/mL	+/- 23.2251 µg/mL +/- 141.3788 µg/mL +/- 144.6333 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot 00019375) **Purity** 99%	2,500.4 µg/mL	+/- 17.6053 µg/mL +/- 140.5467 µg/mL +/- 143.8191 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,500.2 µg/mL	+/- 24.0992 µg/mL +/- 141.4970 µg/mL +/- 144.7475 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot 107-401039114-1) **Purity** 99%	2,500.1 µg/mL	+/- 23.0388 µg/mL +/- 141.3109 µg/mL +/- 144.5651 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot 12841600) **Purity** 99%	2,500.0 µg/mL	+/- 14.5352 µg/mL +/- 140.1725 µg/mL +/- 143.4524 µg/mL	Gravimetric Unstressed Stressed

Rev'd 8/22/00

8	Trichlorofluoromethane (CFC-11)		2,500.7	µg/mL	+/-	25.4684	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot MKCL8411)			+/-	141.7630	µg/mL	Unstressed
	Purity 99%				+/-	145.0087	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

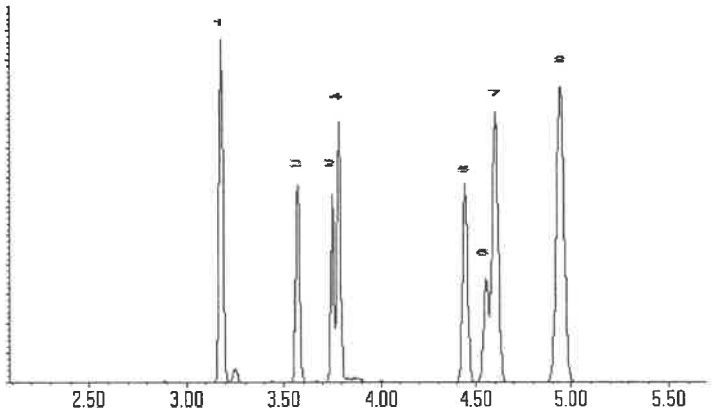
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 01-May-2022 **Balance:** B251644995

Christie Mills - Operations Technician II

Date Passed: 12-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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Catalog No. : 569723.SEC **Lot No.:** A0184002

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether	2,494.0 µg/mL	+/- 14.6362	µg/mL	Gravimetric
	CAS # 110-75-8.SEC (Lot AMBTF)		+/- 53.4339	µg/mL	Unstressed
	Purity 99%		+/- 54.9852	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Rcvd 8/22/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

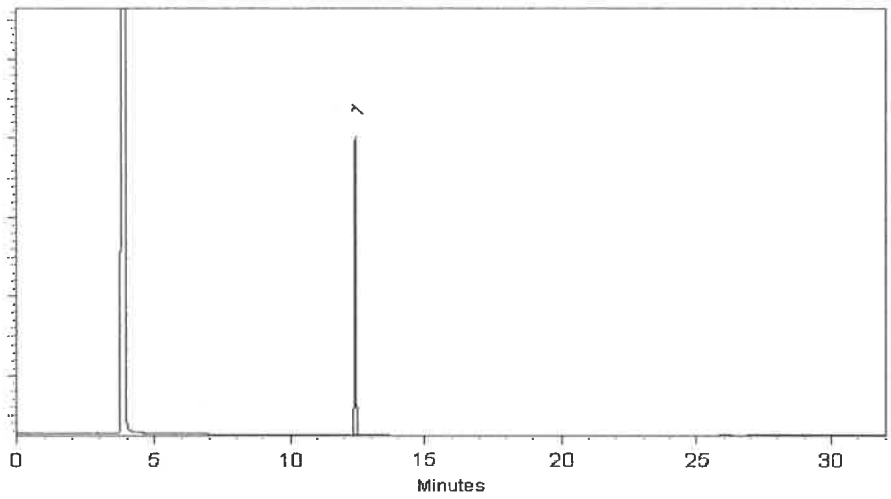
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Whitney Bennett - Operation Tech I

Date Mixed: 12-Apr-2022 **Balance:** 1127510105

Christie Mills - Operations Technician II

Date Passed: 14-Apr-2022

Manufactured under Restek's ISO 9001:2015
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Certificate #FM 80397

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723 **Lot No.:** A0180640

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether	2,503.3 µg/mL	+/- 14.6910	µg/mL	Gravimetric
	CAS # 110-75-8 (Lot MKCD0033)		+/- 53.6339	µg/mL	Unstressed
	Purity 99%		+/- 55.1910	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

6/13/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

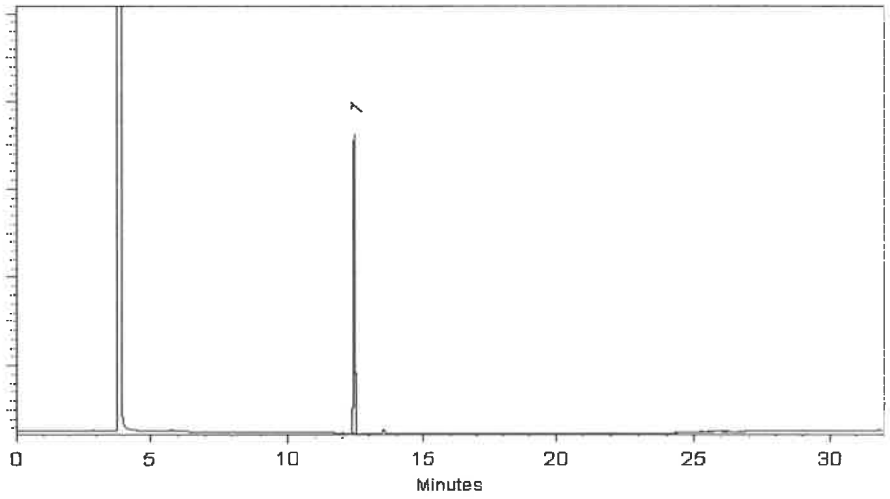
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Ashley Frantz - Quoting Technician

Date Mixed: 16-Jan-2022 **Balance:** B251644995

Marlina Cowan - Operations Tech I

Date Passed: 18-Jan-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-569723_00017

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723 **Lot No.:** A0186788

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Chloroethyl vinyl ether	2,502.7 µg/mL	+/- 14.6871 µg/mL	Gravimetric
	CAS # 110-75-8 (Lot MKCK6742)		+/- 53.6196 µg/mL	Unstressed
	Purity 99%		+/- 55.1763 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

11/1/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

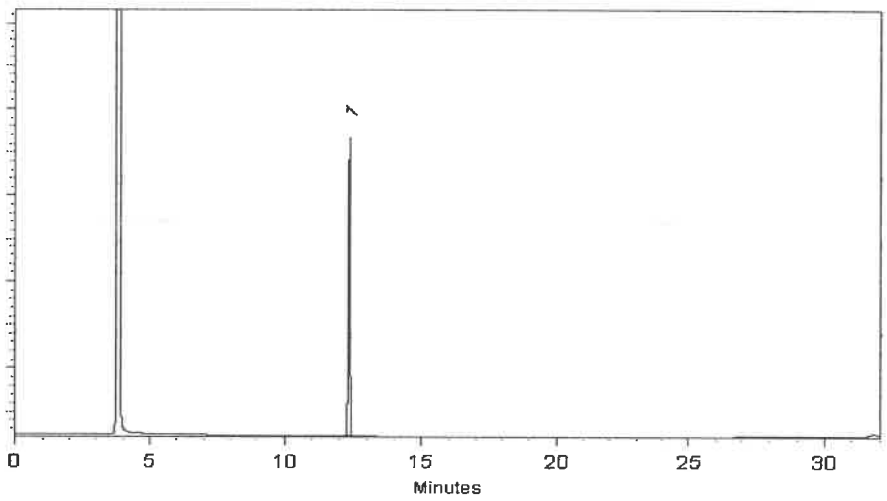
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Josh McCloskey - Operations Technician I

Date Mixed: 28-Jun-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 05-Jul-2022

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MV-569724.sec_00033

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724.SEC **Lot No.:** A0169715

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2022 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl acetate	5,004.5 µg/mL	+/- 29.3024 µg/mL	Gravimetric
	CAS # 108-05-4.SEC (Lot 190320CGKJ)		+/- 301.9636 µg/mL	Unstressed
	Purity 99%		+/- 302.6804 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods . Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Rcvd 12/30/21

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

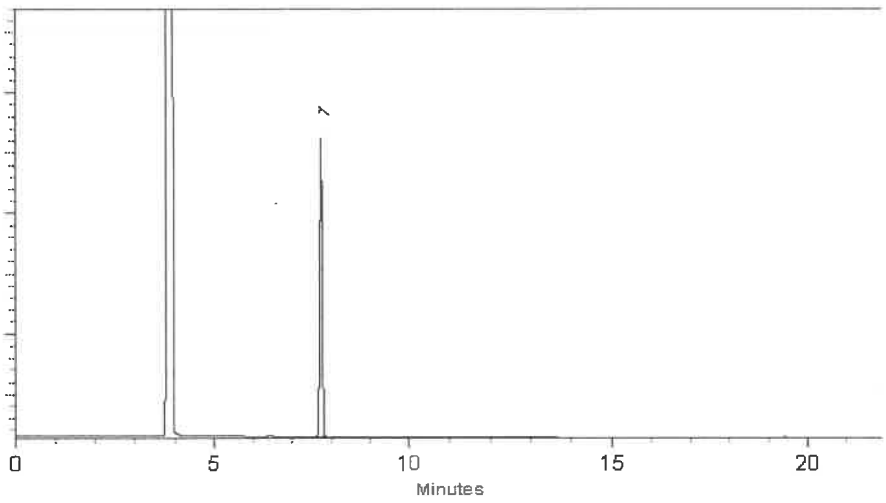
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 03-Mar-2021 **Balance:** 1127510105

Alexis Shelow - Operations Tech I

Date Passed: 05-Mar-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724.SEC **Lot No.:** A0187085

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl acetate	5,012.0 µg/mL	+/- 29.4132 µg/mL	Gravimetric
	CAS # 108-05-4.SEC (Lot 190320CGKJ)		+/- 302.4226 µg/mL	Unstressed
	Purity 99%		+/- 303.1405 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Rcvd 12/30/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

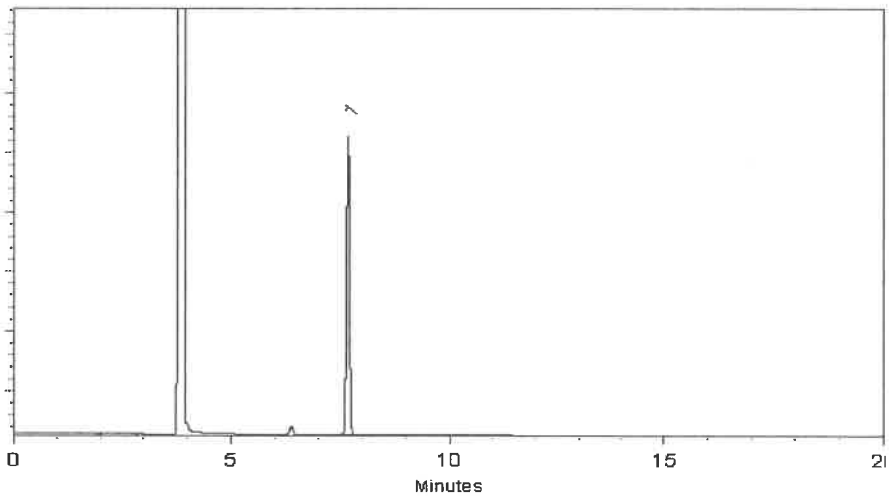
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Katelyn McGinni - Operations Tech I

Date Mixed: 08-Jul-2022 **Balance:** 1128342314

Christie Mills - Operations Tech II - ARM QC

Date Passed: 12-Jul-2022

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Catalog No. : 569724 **Lot No.:** A0179890

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2023 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,036.0 µg/mL	+/- 29.4869	µg/mL	Gravimetric
	CAS # 108-05-4 (Lot RD210830)		+/- 303.8642	µg/mL	Unstressed
	Purity 99%		+/- 304.5856	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Rcvd 6/13/22

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods . Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

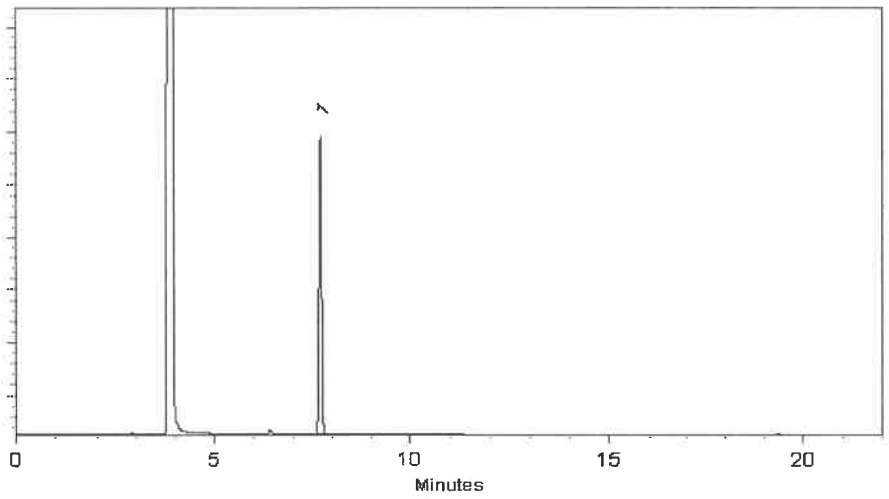
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 22-Dec-2021 **Balance:** B251644995

Fang-Yue Lo - QC Analyst

Date Passed: 29-Dec-2021

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724 **Lot No.:** A0187365

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl acetate	5,022.0 µg/mL	+/- 29.4049 µg/mL	Gravimetric
	CAS # 108-05-4 (Lot RD220630)		+/- 303.0195 µg/mL	Unstressed
	Purity 99%		+/- 303.7388 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Rcvd 12/30/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

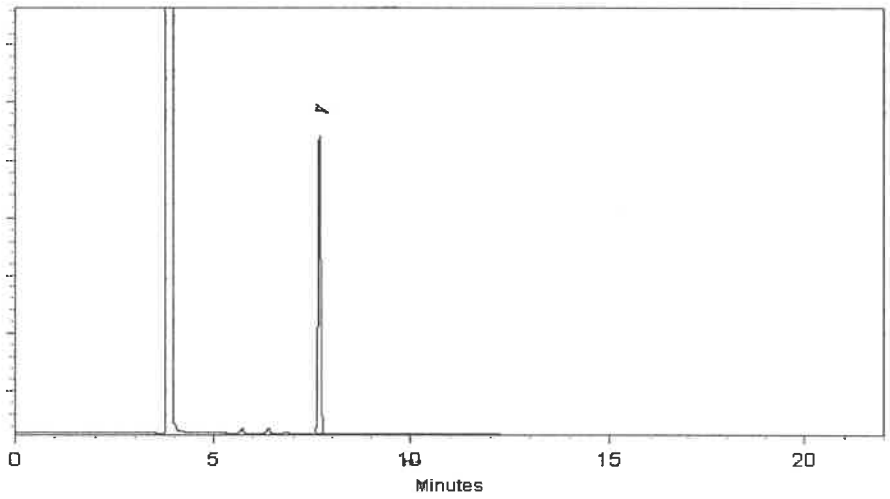
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 15-Jul-2022 **Balance:** B707717271

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 21-Jul-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727.SEC **Lot No.:** A0182847

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,032.7 µg/mL	+/- 146.5718 µg/mL	Gravimetric
	CAS # 108-94-1.SEC (Lot GA3TF)		+/- 1,510.4313 µg/mL	Unstressed
	Purity 99%		+/- 1,514.0168 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Rec'd
7-12-22
CDS

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

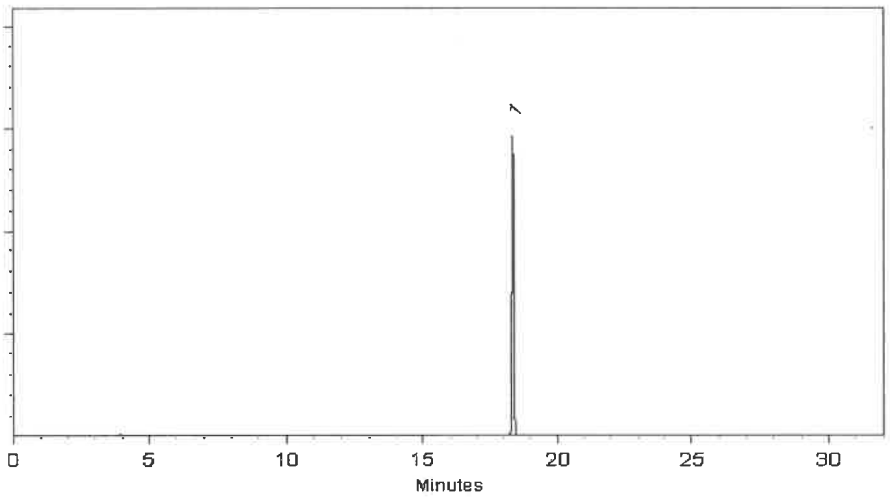
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jess Hoy - Operations Tech I

Date Mixed: 14-Mar-2022 **Balance:** 1128342314

Clara Windle - Operations Technician I

Date Passed: 18-Mar-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-569727_00020

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 **Lot No.:** A0182677

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,249.5 µg/mL	+/- 147.8414 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot 10211916)		+/- 1,523.5147 µg/mL	Unstressed
	Purity 99%		+/- 1,527.1313 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Revd 4/26/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

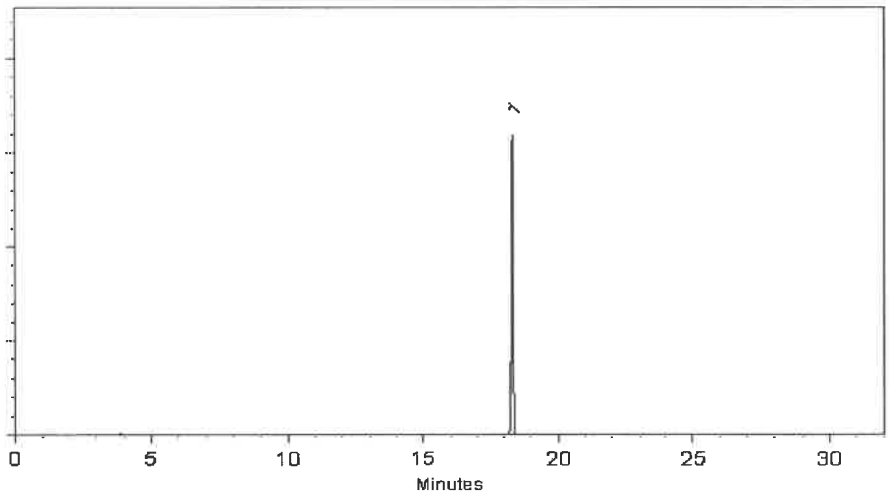
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brittany Federinko - Operations Tech I

Date Mixed: 08-Mar-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 10-Mar-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-570808.sec_00007

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808.SEC **Lot No.:** A0171439

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2022 **Storage:** 0°C or colder

Ship: Ambient

Rec'd 11/1/21 GM

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0.SEC (Lot TFT5I) **Purity** 99%	25,183.3 µg/mL	+/- 147.4540 µg/mL +/- 1,245.8875 µg/mL +/- 1,276.8616 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 * (Lot 210413JLM) **Purity** 99%	2,522.7 µg/mL	+/- 14.8044 µg/mL +/- 124.8071 µg/mL +/- 127.9098 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 * (Lot 1012014) **Purity** 99%	25,147.7 µg/mL	+/- 147.2451 µg/mL +/- 1,244.1230 µg/mL +/- 1,275.0532 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (Isooctane) **CAS #** 540-84-1.SEC (Lot 8014900) **Purity** 99%	2,518.0 µg/mL	+/- 14.7770 µg/mL +/- 124.5762 µg/mL +/- 127.6731 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3.SEC (Lot 6B6UL) **Purity** 99%	63,095.0 µg/mL	+/- 369.4160 µg/mL +/- 3,121.4777 µg/mL +/- 3,199.0811 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9.SEC (Lot F43IA) **Purity** 99%	5,038.0 µg/mL	+/- 29.4986 µg/mL +/- 249.2435 µg/mL +/- 255.4399 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5.SEC (Lot 8171700) **Purity** 99%	2,525.0 µg/mL	+/- 14.8181 µg/mL +/- 124.9226 µg/mL +/- 128.0281 µg/mL	Gravimetric Unstressed Stressed

8	1,2,3-Trimethylbenzene **CAS #** 526-73-8.SEC **Purity** 98%	(Lot 11407900)	2,521.2	µg/mL	+/- 14.7959 +/- 124.7352 +/- 127.8361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Benzyl chloride **CAS #** 100-44-7.SEC **Purity** 99%	(Lot H29N03)	2,516.3	µg/mL	+/- 14.7673 +/- 124.4938 +/- 127.5886	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3,5-Trichlorobenzene **CAS #** 108-70-3.SEC **Purity** 99%	(Lot I28U021)	2,523.0	µg/mL	+/- 14.8064 +/- 124.8236 +/- 127.9267	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

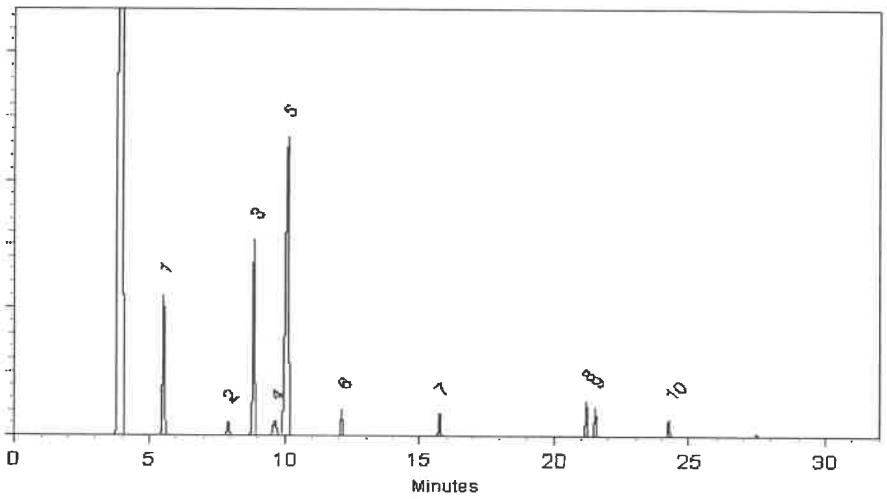
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cory Meyer - Operations Tech I

Alexis Shelow - Operations Tech I

Date Mixed: 19-Apr-2021 **Balance:** 1128342314

Date Passed: 21-Apr-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

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mv-570808.sec_00008

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808.SEC **Lot No.:** A0183834

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0.SEC (Lot G6HNF) **Purity** 99%	25,061.5 µg/mL	+/- 146.7406 µg/mL +/- 1,239.8601 µg/mL +/- 1,270.6843 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 * (Lot 220304JEAN) **Purity** 99%	2,518.0 µg/mL	+/- 14.7770 µg/mL +/- 124.5762 µg/mL +/- 127.6731 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 * (Lot 1012020) **Purity** 99%	25,079.5 µg/mL	+/- 146.8460 µg/mL +/- 1,240.7506 µg/mL +/- 1,271.5969 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (Isooctane) **CAS #** 540-84-1.SEC (Lot 11566800) **Purity** 99%	2,509.5 µg/mL	+/- 14.7272 µg/mL +/- 124.1557 µg/mL +/- 127.2422 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3.SEC (Lot RSHAH) **Purity** 99%	62,722.5 µg/mL	+/- 367.2351 µg/mL +/- 3,103.0492 µg/mL +/- 3,180.1943 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9.SEC (Lot F43IA) **Purity** 99%	5,021.5 µg/mL	+/- 29.4020 µg/mL +/- 248.4272 µg/mL +/- 254.6033 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5.SEC (Lot 13075400) **Purity** 99%	2,515.5 µg/mL	+/- 14.7624 µg/mL +/- 124.4526 µg/mL +/- 127.5464 µg/mL	Gravimetric Unstressed Stressed

10/31/22

8	1,2,3-Trimethylbenzene		2,514.0	µg/mL	+/-	14.7536	µg/mL	Gravimetric
	CAS # 526-73-8.SEC	(Lot 12203300)			+/-	124.3783	µg/mL	Unstressed
	Purity 99%				+/-	127.4703	µg/mL	Stressed
9	Benzyl chloride		2,513.5	µg/mL	+/-	14.7506	µg/mL	Gravimetric
	CAS # 100-44-7.SEC	(Lot H29N03)			+/-	124.3536	µg/mL	Unstressed
	Purity 99%				+/-	127.4450	µg/mL	Stressed
10	1,3,5-Trichlorobenzene		2,516.5	µg/mL	+/-	14.7682	µg/mL	Gravimetric
	CAS # 108-70-3.SEC	(Lot I28U021)			+/-	124.5020	µg/mL	Unstressed
	Purity 99%				+/-	127.5971	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

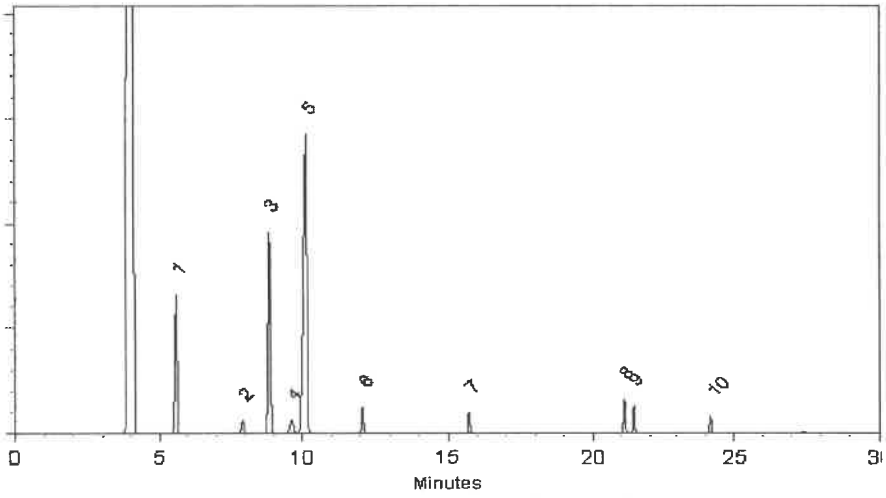
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Katelyn McGinni - Operations Tech I

Date Mixed: 07-Apr-2022 **Balance:** 1127510105

Clara Windle - Operations Technician I

Date Passed: 12-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-570808_00013

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Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808 **Lot No.:** A0177095

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0 (Lot SHBH7211) **Purity** 99%	25,197.0 µg/mL	+/- 147.5340 µg/mL +/- 1,246.5636 µg/mL +/- 1,277.5545 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 (Lot 210413JLM) **Purity** 99%	2,522.5 µg/mL	+/- 14.8034 µg/mL +/- 124.7989 µg/mL +/- 127.9013 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 (Lot 1012020) **Purity** 99%	25,122.5 µg/mL	+/- 147.0978 µg/mL +/- 1,242.8779 µg/mL +/- 1,273.7771 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (isooctane) **CAS #** 540-84-1 (Lot MKCF8045) **Purity** 99%	2,522.5 µg/mL	+/- 14.8034 µg/mL +/- 124.7989 µg/mL +/- 127.9013 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3 (Lot SHBM5061) **Purity** 99%	62,707.0 µg/mL	+/- 367.1443 µg/mL +/- 3,102.2823 µg/mL +/- 3,179.4084 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9 (Lot BCCB9352) **Purity** 97%	5,025.1 µg/mL	+/- 29.4230 µg/mL +/- 248.6045 µg/mL +/- 254.7851 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5 (Lot BCBS3368V) **Purity** 98%	2,523.0 µg/mL	+/- 14.8064 µg/mL +/- 124.8241 µg/mL +/- 127.9272 µg/mL	Gravimetric Unstressed Stressed

2/13/24

8	1,2,3-Trimethylbenzene **CAS #** 526-73-8 **Purity** 99%	(Lot 8776.10-14)	2,508.0	µg/mL	+/- 14.7183 +/- 124.0815 +/- 127.1661	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Benzyl chloride **CAS #** 100-44-7 **Purity** 99%	(Lot SHBH2102V)	2,519.0	µg/mL	+/- 14.7829 +/- 124.6257 +/- 127.7238	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3,5-Trichlorobenzene **CAS #** 108-70-3 **Purity** 99%	(Lot 11319AS)	2,512.0	µg/mL	+/- 14.7418 +/- 124.2794 +/- 127.3689	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

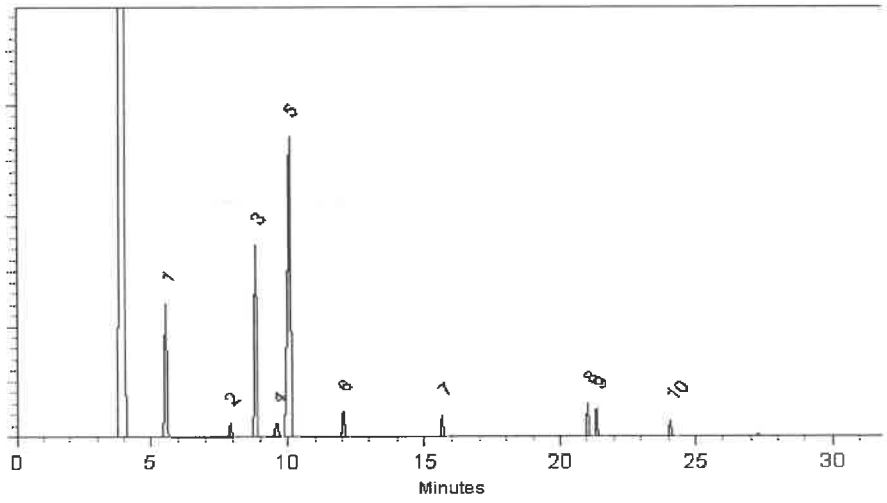
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 04-Oct-2021 **Balance:** B707717271

Alexis Shelow - Operations Tech I

Date Passed: 06-Oct-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-570808_00014

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808 **Lot No.:** A0184916

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0 (Lot SHBN1353) **Purity** 99%	25,010.5 µg/mL	+/- 146.4420 µg/mL +/- 1,237.3370 µg/mL +/- 1,268.0985 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 (Lot 220304JEAN) **Purity** 99%	2,514.0 µg/mL	+/- 14.7536 µg/mL +/- 124.3783 µg/mL +/- 127.4703 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 (Lot 1012020) **Purity** 99%	25,025.5 µg/mL	+/- 146.5298 µg/mL +/- 1,238.0790 µg/mL +/- 1,268.8590 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (isooctane) **CAS #** 540-84-1 (Lot MKCM6627) **Purity** 99%	2,504.0 µg/mL	+/- 14.6949 µg/mL +/- 123.8836 µg/mL +/- 126.9633 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3 (Lot SHBN6854) **Purity** 99%	62,503.0 µg/mL	+/- 365.9499 µg/mL +/- 3,092.1899 µg/mL +/- 3,169.0651 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9 (Lot BCCB9352) **Purity** 97%	5,008.6 µg/mL	+/- 29.3264 µg/mL +/- 247.7887 µg/mL +/- 253.9490 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5 (Lot BCBS3368V) **Purity** 98%	2,504.9 µg/mL	+/- 14.7000 µg/mL +/- 123.9271 µg/mL +/- 127.0079 µg/mL	Gravimetric Unstressed Stressed

12/5/22

8	1,2,3-Trimethylbenzene		2,505.4	µg/mL	+/-	14.7029	µg/mL	Gravimetric
	CAS # 526-73-8	(Lot 8776.10-36)			+/-	123.9514	µg/mL	Unstressed
	Purity 98%				+/-	127.0327	µg/mL	Stressed
9	Benzyl chloride		2,503.0	µg/mL	+/-	14.6890	µg/mL	Gravimetric
	CAS # 100-44-7	(Lot SHBH2102V)			+/-	123.8341	µg/mL	Unstressed
	Purity 99%				+/-	126.9126	µg/mL	Stressed
10	1,3,5-Trichlorobenzene		2,507.5	µg/mL	+/-	14.7154	µg/mL	Gravimetric
	CAS # 108-70-3	(Lot 11319AS)			+/-	124.0568	µg/mL	Unstressed
	Purity 99%				+/-	127.1407	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

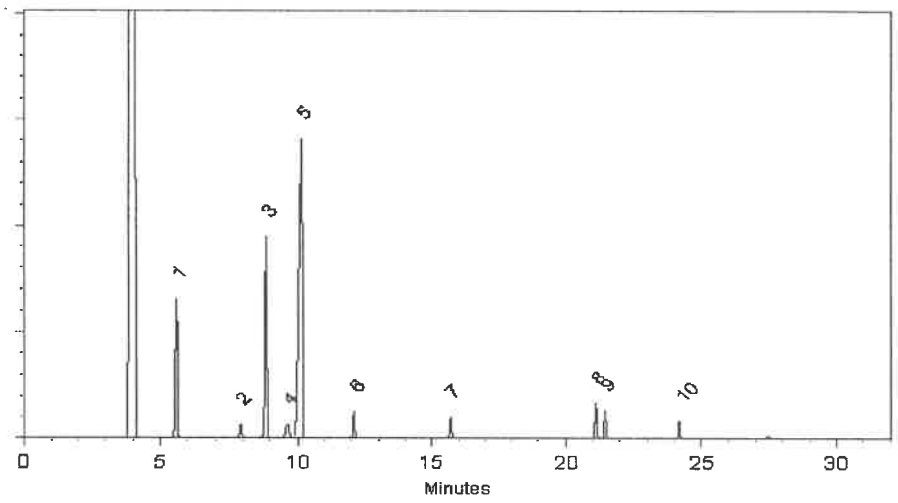
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 04-May-2022 **Balance:** B251644995

Christie Mills - Operations Technician II

Date Passed: 17-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-570809.sec_00008

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809.SEC **Lot No.:** A0171207

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Rec'd 12/13/21

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2022 **Storage:** 0°C or colder

Ship: Ambient

GW

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6.SEC (Lot C386A-GG) **Purity** 99%	5,030.0 µg/mL	+/- 29.4518 µg/mL +/- 303.5022 µg/mL +/- 304.2227 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5.SEC (Lot YIFAM-TG) **Purity** 99%	2,515.0 µg/mL	+/- 14.7594 µg/mL +/- 151.7544 µg/mL +/- 152.1146 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6.SEC (Lot G01X021) **Purity** 99%	5,029.0 µg/mL	+/- 29.4459 µg/mL +/- 303.4419 µg/mL +/- 304.1622 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4.SEC (Lot V2L2G-GT) **Purity** 99%	2,510.0 µg/mL	+/- 14.7301 µg/mL +/- 151.4527 µg/mL +/- 151.8122 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

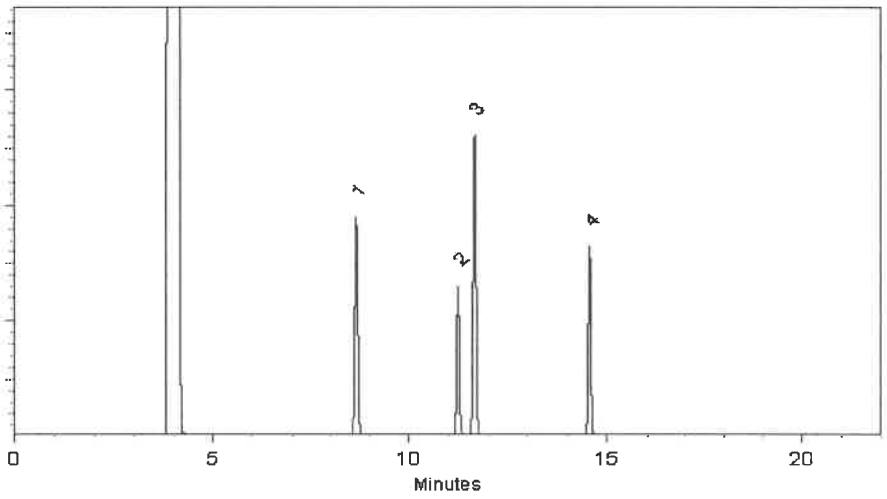
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cory Meyer - Operations Tech I

Date Mixed: 12-Apr-2021 **Balance:** 1127510105

Alexis Shelow - Operations Tech I

Date Passed: 15-Apr-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-570809.sec_00009

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Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809.SEC **Lot No.:** A0171207

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2022 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate	5,030.0 µg/mL	+/- 29.4518 µg/mL	Gravimetric
	CAS # 141-78-6.SEC (Lot C386A-GG)		+/- 303.5022 µg/mL	Unstressed
	Purity 99%		+/- 304.2227 µg/mL	Stressed
2	Ethyl acrylate	2,515.0 µg/mL	+/- 14.7594 µg/mL	Gravimetric
	CAS # 140-88-5.SEC (Lot YIFAM-TG)		+/- 151.7544 µg/mL	Unstressed
	Purity 99%		+/- 152.1146 µg/mL	Stressed
3	Methyl methacrylate	5,029.0 µg/mL	+/- 29.4459 µg/mL	Gravimetric
	CAS # 80-62-6.SEC (Lot G01X021)		+/- 303.4419 µg/mL	Unstressed
	Purity 99%		+/- 304.1622 µg/mL	Stressed
4	Butyl acetate	2,510.0 µg/mL	+/- 14.7301 µg/mL	Gravimetric
	CAS # 123-86-4.SEC (Lot V2L2G-GT)		+/- 151.4527 µg/mL	Unstressed
	Purity 99%		+/- 151.8122 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

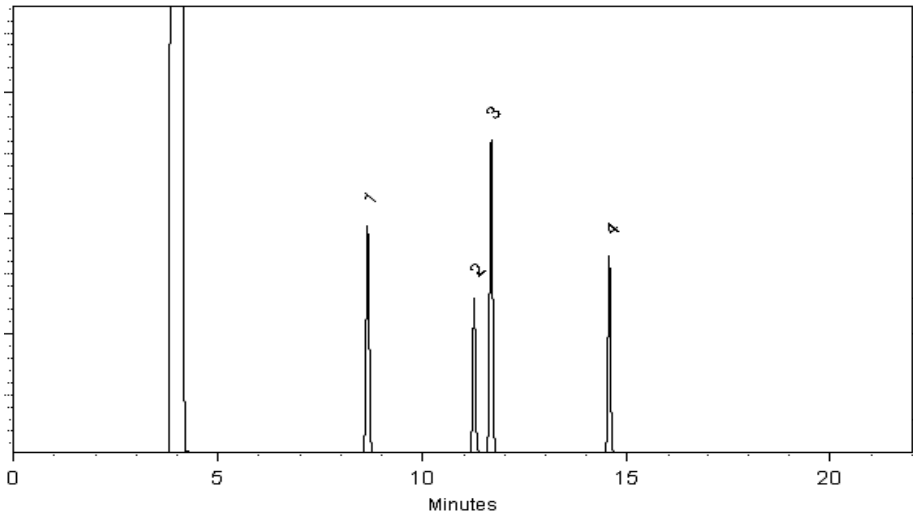
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cory Meyer - Operations Tech I

Date Mixed: 12-Apr-2021 **Balance:** 1127510105

Alexis Shelow - Operations Tech I

Date Passed: 15-Apr-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Standard Verification Form

Standard Information			
Vendor Standard Name	8260 List#2/ std#7		
Vendor	RESTEK		
Lot number	A0171207		
Initial Verification	☐	Re-Verification	x

TALS "Reagent" Information	
TALS Standard ID	MV-SUPP B_00056
COA Reviewed against what is in TALS	☒

Verification Information and Data			
Verified by	Seifert J	Instrument ID	VMS_G2
Verification Date	11/02/2022	Method Reference	EPA8260
ID of Standard Used for Verification	**lcs**	Batch # / Chrom Work List #	WL 115716
Attach to this form: formulary report , COA and data used for verification **Attach to standard in TALS: this form and all supporting documentation including the original CoA**			
See Acceptance Criteria Below:			
Approved for Use	☒	Not Approved for Use	☐
New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.			
New Expiration Date:	12/01/2022		

1st Level Review Judy Seifert Date: 11/02/2022

2nd Level Review _____ Date: _____

QA Review (Re-verification only)		Date:

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\VMS_G2\20221102-115716.b\G2_8617.D

Lims ID: lcs Inj. Date: 02-Nov-2022 13:36:30

Worklist ID: 280-0115716-035 Instrument: VMS_G2

Method: SO_VMSG2_8260

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 5030B
$ 8 Dibromofluoromethane (S	50.0	49.5	98.9	75-121
$ 9 1,2-Dichloroethane-d4 (	50.0	51.2	102.5	58-140
$ 10 Toluene-d8 (Surr)	50.0	49.4	98.8	80-126
$ 11 4-Bromofluorobenzene (S	50.0	49.8	99.5	76-127
42 Ethanol	3000.0	4085.0	136.2	50-150
51 Isopropyl alcohol	500.0	475.4	95.1	50-150
54 Acetonitrile	500.0	689.8	138.0	50-150
66 Isopropyl ether	50.0	61.8	123.6	50-150
68 2-Chloro-1,3-butadiene	50.0	64.5	129.0	64-135
69 Tert-butyl ethyl ether	50.0	69.9	139.8	50-150
70 Ethyl acetate	100.0	108.7	108.7	52-167
73 Propionitrile	500.0	476.0	95.2	50-150
76 Methacrylonitrile	500.0	589.2	117.8	50-150
86 Tert-amyl methyl ether	50.0	62.0	123.9	50-150
88 n-Butanol	1250.0	1053.0	84.2	70-130
91 Methyl methacrylate	100.0	90.7	90.7	50-150
97 2-Nitropropane	100.0	59.1	59.1	
120 cis-1,4-Dichloro-2-bute	100.0	103.2	103.2	
135 1,2,3-Trimethylbenzene	50.0	52.1	104.2	50-150
140 1,3,5-Trichlorobenzene	50.0	59.2	118.4	50-150

Samples for Limit Group: 1, Lims Prep Method: 5030B

280-168226-A-13-A 280-168226-A-14-A 280-168226-A-15-A
280-168226-A-16-A 280-168226-A-17-A 280-168226-A-18-A
280-168021-D-1-A 280-168021-B-3-A 280-168021-C-4-A

Reagent

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mv-570809.sec_00010

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809.SEC **Lot No.:** A0183813

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6.SEC (Lot C386A-GG) **Purity** 99%	5,040.0 µg/mL	+/- 29.5103 µg/mL +/- 304.1056 µg/mL +/- 304.8275 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5.SEC (Lot YIFAM-TG) **Purity** 99%	2,510.0 µg/mL	+/- 14.7301 µg/mL +/- 151.4527 µg/mL +/- 151.8122 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6.SEC (Lot G01X021) **Purity** 99%	5,035.0 µg/mL	+/- 29.4810 µg/mL +/- 303.8039 µg/mL +/- 304.5251 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4.SEC (Lot V2L2G-GT) **Purity** 99%	2,500.0 µg/mL	+/- 14.6714 µg/mL +/- 150.8493 µg/mL +/- 151.2073 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

12/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

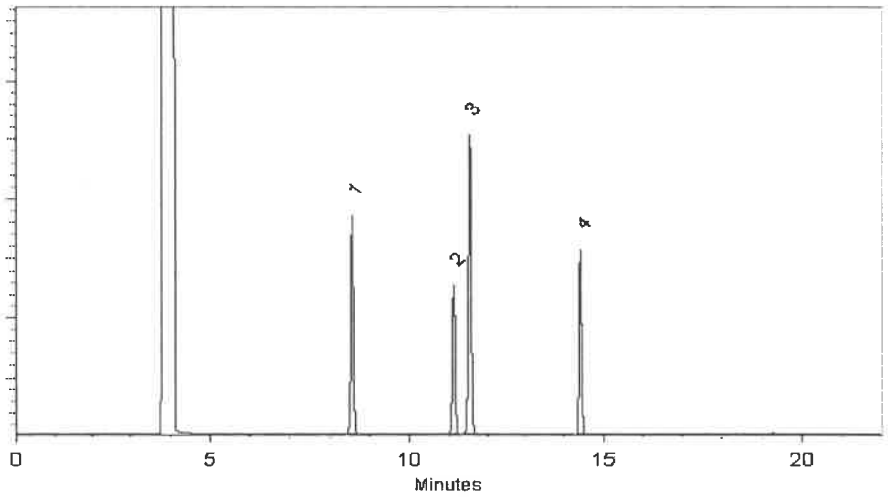
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jess Hoy - Operations Tech I

Date Mixed: 07-Apr-2022 **Balance:** 1127510105

Marlina Cowan - Operations Tech I

Date Passed: 13-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-570809_00011

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809 **Lot No.:** A0173205

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Rec'd 12/13/21 GM

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2022 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6 (Lot SHBM3421) **Purity** 99%	5,011.0 µg/mL	+/- 29.3405 µg/mL +/- 302.3558 µg/mL +/- 303.0735 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5 (Lot 10129902) **Purity** 99%	2,505.5 µg/mL	+/- 14.7037 µg/mL +/- 151.1811 µg/mL +/- 151.5400 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6 (Lot MKCN3027) **Purity** 99%	5,010.5 µg/mL	+/- 29.3376 µg/mL +/- 302.3256 µg/mL +/- 303.0433 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4 (Lot SHBM7214) **Purity** 99%	2,507.5 µg/mL	+/- 14.7154 µg/mL +/- 151.3018 µg/mL +/- 151.6610 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

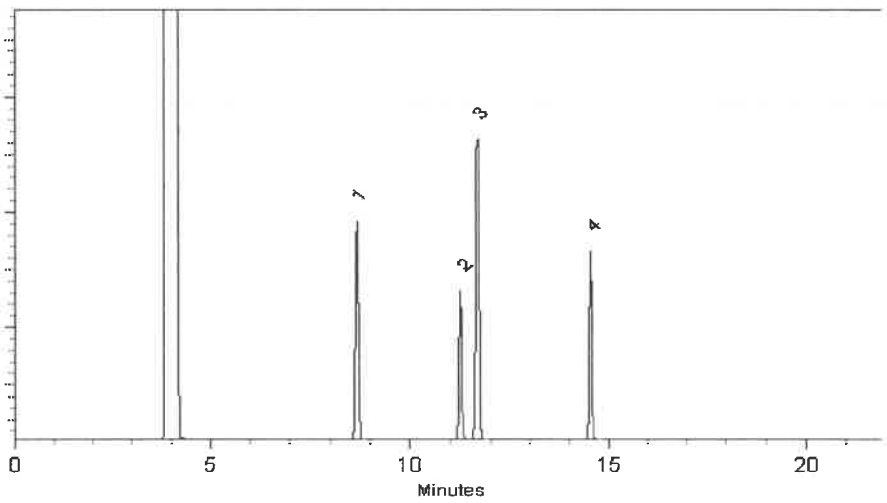
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 09-Jun-2021 **Balance:** B251644995

Alexis Shelow - Operations Tech I

Date Passed: 11-Jun-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-570809_00012

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809 **Lot No.:** A0180509

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6 (Lot SHBN3179) **Purity** 98%	5,000.5 µg/mL	+/- 29.2787 µg/mL +/- 301.7192 µg/mL +/- 302.4354 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5 (Lot 10129902) **Purity** 99%	2,508.0 µg/mL	+/- 14.7183 µg/mL +/- 151.3320 µg/mL +/- 151.6912 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6 (Lot MKCN3027) **Purity** 99%	5,009.0 µg/mL	+/- 29.3288 µg/mL +/- 302.2351 µg/mL +/- 302.9526 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4 (Lot SHBM7214) **Purity** 99%	2,513.5 µg/mL	+/- 14.7506 µg/mL +/- 151.6638 µg/mL +/- 152.0239 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

10/31/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

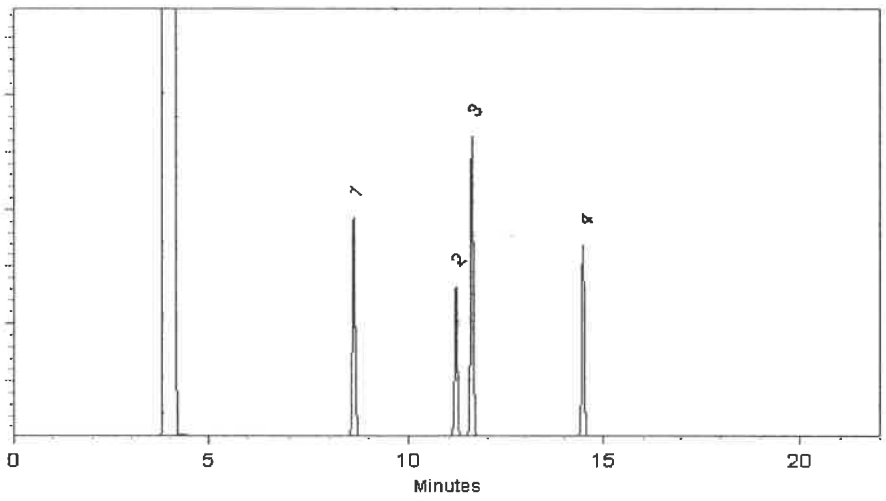
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Morgan Craighead - Mix Technician

Date Mixed: 11-Jan-2022 **Balance:** B442140311

Clara Windle - Operations Technician I

Date Passed: 13-Jan-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-571992.sec_00007

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992.SEC **Lot No.:** A0167172

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC (Lot F23X068) **Purity** 99%	2,501.7 µg/mL	+/- 14.5449 µg/mL +/- 150.9366 µg/mL +/- 151.2950 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,500.8 µg/mL	+/- 14.5401 µg/mL +/- 150.8864 µg/mL +/- 151.2446 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 7692300) **Purity** 99%	2,501.2 µg/mL	+/- 14.5420 µg/mL +/- 150.9065 µg/mL +/- 151.2647 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot HGCHN) **Purity** 99%	25,001.2 µg/mL	+/- 145.3513 µg/mL +/- 1,508.4304 µg/mL +/- 1,512.0117 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9.SEC (Lot UCNEL) **Purity** 99%	5,000.2 µg/mL	+/- 29.0714 µg/mL +/- 301.6822 µg/mL +/- 302.3985 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot Y25A027) **Purity** 99%	2,501.0 µg/mL	+/- 14.5410 µg/mL +/- 150.8964 µg/mL +/- 151.2547 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot H3HGC) **Purity** 99%	2,501.7 µg/mL	+/- 14.5449 µg/mL +/- 150.9366 µg/mL +/- 151.2950 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 75-09-2.SEC	(Lot FGM02)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
9	Carbon disulfide		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 75-15-0.SEC	(Lot MKBL1376V)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
10	Acrylonitrile		25,000.7	µg/mL	+/-	145.3484	µg/mL	Gravimetric
	CAS # 107-13-1.SEC	(Lot V54AD)			+/-	1,508.4003	µg/mL	Unstressed
	Purity 99%				+/-	1,511.9815	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC	(Lot ZHKYA)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
12	cis-1,2-Dichloroethene		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 156-59-2.SEC	(Lot YZO5O)			+/-	150.8461	µg/mL	Unstressed
	Purity 99%				+/-	151.2043	µg/mL	Stressed
13	n-Hexane (C6)		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot 10188491)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
14	1,1-Dichloroethane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 75-34-3.SEC	(Lot 1026.30-2)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
15	2,2-Dichloropropane		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 594-20-7.SEC	(Lot I7E8E)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
16	trans-1,2-Dichloroethene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 156-60-5.SEC	(Lot L5QOH)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,500.7	µg/mL	+/-	363.3653	µg/mL	Gravimetric
	CAS # 78-83-1.SEC	(Lot YNG3K)			+/-	3,770.9403	µg/mL	Unstressed
	Purity 99%				+/-	3,779.8932	µg/mL	Stressed
18	Chloroform		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
19	Bromochloromethane		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 8529200)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
20	Tetrahydrofuran		5,001.5	µg/mL	+/-	29.0792	µg/mL	Gravimetric
	CAS # 109-99-9.SEC	(Lot 8DAOJ)			+/-	301.7627	µg/mL	Unstressed
	Purity 99%				+/-	302.4791	µg/mL	Stressed
21	1,1,1-Trichloroethane		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 71-55-6.SEC	(Lot 7998000)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
22	Cyclohexane		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed
23	1,1-Dichloropropene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 556500)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed

24	Carbon tetrachloride		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
25	n-Heptane (C7)		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 142-82-5.SEC	(Lot TFHUC)			+/-	150.8461	µg/mL	Unstressed
	Purity 99%				+/-	151.2043	µg/mL	Stressed
26	1,2-Dichloroethane		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 107-06-2.SEC	(Lot 00016165)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
27	Benzene		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 71-43-2.SEC	(Lot B28Y008)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
28	Trichloroethene		2,501.3	µg/mL	+/-	14.5430	µg/mL	Gravimetric
	CAS # 79-01-6.SEC	(Lot H04X050)			+/-	150.9165	µg/mL	Unstressed
	Purity 99%				+/-	151.2748	µg/mL	Stressed
29	Methylcyclohexane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 108-87-2.SEC	(Lot 24MSD-CD)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
30	1,2-Dichloropropane		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 78-87-5.SEC	(Lot ERRBI-RH)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed
31	1,4-Dioxane		50,000.7	µg/mL	+/-	290.6930	µg/mL	Gravimetric
	CAS # 123-91-1.SEC	(Lot 8CALO)			+/-	3,016.7603	µg/mL	Unstressed
	Purity 99%				+/-	3,023.9226	µg/mL	Stressed
32	Dibromomethane		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 74-95-3.SEC	(Lot MOKKJ)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 10061-01-5.SEC	(Lot 7ZLXJ-TJ)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed
34	Toluene		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 108-88-3.SEC	(Lot YND2B-BD)			+/-	150.8461	µg/mL	Unstressed
	Purity 99%				+/-	151.2043	µg/mL	Stressed
35	Ethyl methacrylate		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 97-63-2.SEC	(Lot AQSPO)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 10061-02-6.SEC	(Lot ZDMSL)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 79-00-5.SEC	(Lot 9245400)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed
38	1,3-Dichloropropane		2,501.8	µg/mL	+/-	14.5459	µg/mL	Gravimetric
	CAS # 142-28-9.SEC	(Lot IQCON)			+/-	150.9467	µg/mL	Unstressed
	Purity 99%				+/-	151.3051	µg/mL	Stressed
39	Tetrachloroethene		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 127-18-4.SEC	(Lot F09W014)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed

40	Dibromochloromethane		2,502.8	µg/mL	+/-	14.5513	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10206360)			+/-	151.0027	µg/mL	Unstressed
	Purity 97%				+/-	151.3612	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,500.3	µg/mL	+/-	14.5372	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 8529900)			+/-	150.8562	µg/mL	Unstressed
	Purity 99%				+/-	151.2143	µg/mL	Stressed
42	Chlorobenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
43	m-Xylene		1,251.3	µg/mL	+/-	7.2922	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	75.5001	µg/mL	Unstressed
	Purity 99%				+/-	75.6793	µg/mL	Stressed
44	p-Xylene		1,250.3	µg/mL	+/-	7.2863	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot D6UOA)			+/-	75.4398	µg/mL	Unstressed
	Purity 99%				+/-	75.6189	µg/mL	Stressed
45	Ethylbenzene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
46	1,1,1,2-Tetrachloroethane		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot 9366000)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
47	o-Xylene		2,501.8	µg/mL	+/-	14.5459	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01)			+/-	150.9467	µg/mL	Unstressed
	Purity 99%				+/-	151.3051	µg/mL	Stressed
48	Styrene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot QGQ7F)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot WVREC)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed
50	Bromoform		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 9170700)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
51	Bromodichloromethane		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 13780)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane		2,500.5	µg/mL	+/-	14.5379	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot BCCB0724)			+/-	150.8644	µg/mL	Unstressed
	Purity 98%				+/-	151.2226	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot GUHZN)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-3)			+/-	150.8661	µg/mL	Unstressed
	Purity 97%				+/-	151.2243	µg/mL	Stressed
55	n-Propylbenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed

56	Bromobenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 8DKWJ)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot TOOOF)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
58	2-Chlorotoluene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
59	4-Chlorotoluene		2,501.3	µg/mL	+/-	14.5430	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot S5SKD)			+/-	150.9165	µg/mL	Unstressed
	Purity 99%				+/-	151.2748	µg/mL	Stressed
60	tert-Butylbenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot D6OHC)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot JMIYD)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
62	sec-Butylbenzene		2,501.3	µg/mL	+/-	14.5430	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot O4HRF)			+/-	150.9165	µg/mL	Unstressed
	Purity 99%				+/-	151.2748	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 5221800)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,500.3	µg/mL	+/-	14.5372	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	150.8562	µg/mL	Unstressed
	Purity 99%				+/-	151.2143	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
66	n-Butylbenzene		2,500.3	µg/mL	+/-	14.5372	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot MMPGA)			+/-	150.8562	µg/mL	Unstressed
	Purity 99%				+/-	151.2143	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot R6QDM)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot Q135-105)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot IGLFA)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
70	Hexachlorobutadiene		2,501.5	µg/mL	+/-	14.5438	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 10550800)			+/-	150.9247	µg/mL	Unstressed
	Purity 97%				+/-	151.2830	µg/mL	Stressed
71	Naphthalene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot AM5NG)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

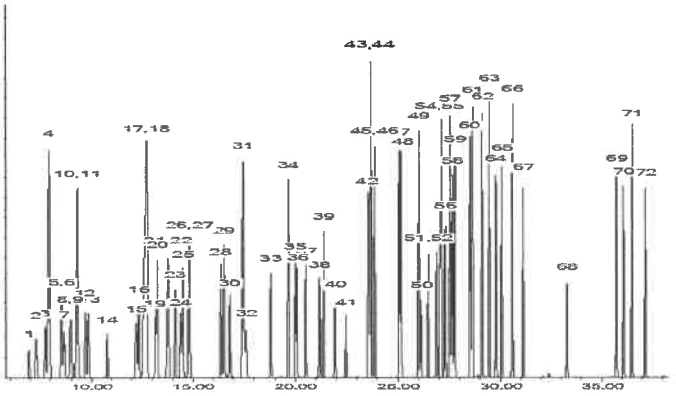
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 13-Dec-2020 **Balance:** 1127510105

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Dec-2020

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-571992_00015

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992 **Lot No.:** A0183568

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7 (Lot SHBN4280) **Purity** 99%	2,506.6 µg/mL	+/- 14.5737 µg/mL +/- 151.2358 µg/mL +/- 151.5949 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00016133) **Purity** 99%	2,514.5 µg/mL	+/- 14.6195 µg/mL +/- 151.7109 µg/mL +/- 152.0711 µg/mL	Gravimetric Unstressed Stressed
3	1,1-dichloroethene **CAS #** 75-35-4 (Lot SHBG8609V) **Purity** 99%	2,515.1 µg/mL	+/- 14.6232 µg/mL +/- 151.7486 µg/mL +/- 152.1089 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot 101619K21F-1) **Purity** 99%	25,080.8 µg/mL	+/- 145.8140 µg/mL +/- 1,513.2321 µg/mL +/- 1,516.8247 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9 (Lot SHBM1320) **Purity** 99%	5,026.6 µg/mL	+/- 29.2252 µg/mL +/- 303.2786 µg/mL +/- 303.9986 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot RD220125) **Purity** 99%	2,505.3 µg/mL	+/- 14.5657 µg/mL +/- 151.1528 µg/mL +/- 151.5117 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot RD211021) **Purity** 99%	2,509.1 µg/mL	+/- 14.5883 µg/mL +/- 151.3866 µg/mL +/- 151.7460 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,513.3	µg/mL	+/-	14.6123	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBP1417)			+/-	151.6355	µg/mL	Unstressed
	Purity 99%				+/-	151.9955	µg/mL	Stressed
9	Carbon disulfide		2,510.1	µg/mL	+/-	14.5941	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot N28F701)			+/-	151.4470	µg/mL	Unstressed
	Purity 99%				+/-	151.8065	µg/mL	Stressed
10	Acrylonitrile		25,102.9	µg/mL	+/-	145.9426	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot SHBK4954)			+/-	1,514.5670	µg/mL	Unstressed
	Purity 99%				+/-	1,518.1628	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)		2,513.8	µg/mL	+/-	14.6152	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBN6497)			+/-	151.6657	µg/mL	Unstressed
	Purity 99%				+/-	152.0258	µg/mL	Stressed
12	cis-1,2-Dichloroethene		2,515.1	µg/mL	+/-	14.6232	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKCP7830)			+/-	151.7486	µg/mL	Unstressed
	Purity 99%				+/-	152.1089	µg/mL	Stressed
13	n-Hexane (C6)		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBL9879)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
14	1,1-Dichloroethane		2,517.9	µg/mL	+/-	14.6391	µg/mL	Gravimetric
	CAS # 75-34-3	(Lot 760200)			+/-	151.9146	µg/mL	Unstressed
	Purity 99%				+/-	152.2752	µg/mL	Stressed
15	2,2-Dichloropropane		2,517.9	µg/mL	+/-	14.6391	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot RD211103)			+/-	151.9146	µg/mL	Unstressed
	Purity 99%				+/-	152.2752	µg/mL	Stressed
16	trans-1,2-Dichloroethene		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot MKBH9850V)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,633.1	µg/mL	+/-	364.1354	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot 098794J01H)			+/-	3,778.9321	µg/mL	Unstressed
	Purity 99%				+/-	3,787.9040	µg/mL	Stressed
18	chloroform		2,510.9	µg/mL	+/-	14.5984	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBN8469)			+/-	151.4922	µg/mL	Unstressed
	Purity 99%				+/-	151.8519	µg/mL	Stressed
19	Bromochloromethane		2,517.0	µg/mL	+/-	14.6341	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00008541)			+/-	151.8618	µg/mL	Unstressed
	Purity 99%				+/-	152.2223	µg/mL	Stressed
20	Tetrahydrofuran		5,036.1	µg/mL	+/-	29.2805	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBN3757)			+/-	303.8517	µg/mL	Unstressed
	Purity 99%				+/-	304.5731	µg/mL	Stressed
21	1,1,1-trichloroethane		2,509.6	µg/mL	+/-	14.5912	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot RD220215)			+/-	151.4168	µg/mL	Unstressed
	Purity 99%				+/-	151.7763	µg/mL	Stressed
22	Cyclohexane		2,510.0	µg/mL	+/-	14.5934	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot EA003-US)			+/-	151.4394	µg/mL	Unstressed
	Purity 99%				+/-	151.7990	µg/mL	Stressed
23	1,1-Dichloropropene		2,513.8	µg/mL	+/-	14.6152	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot 220217JLM)			+/-	151.6657	µg/mL	Unstressed
	Purity 99%				+/-	152.0258	µg/mL	Stressed

24	carbon tetrachloride		2,513.5	µg/mL	+/-	14.6137	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBL8097)			+/-	151.6506	µg/mL	Unstressed
	Purity 99%				+/-	152.0106	µg/mL	Stressed
25	n-Heptane (C7)		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 142-82-5	(Lot SGBL9221)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
26	1,2-Dichloroethane		2,514.4	µg/mL	+/-	14.6188	µg/mL	Gravimetric
	CAS # 107-06-2	(Lot MKCN9758)			+/-	151.7034	µg/mL	Unstressed
	Purity 99%				+/-	152.0636	µg/mL	Stressed
27	Benzene		2,509.3	µg/mL	+/-	14.5890	µg/mL	Gravimetric
	CAS # 71-43-2	(Lot MKCM9242)			+/-	151.3942	µg/mL	Unstressed
	Purity 99%				+/-	151.7536	µg/mL	Stressed
28	Trichloroethene		2,507.5	µg/mL	+/-	14.5788	µg/mL	Gravimetric
	CAS # 79-01-6	(Lot SHBL5816)			+/-	151.2886	µg/mL	Unstressed
	Purity 99%				+/-	151.6478	µg/mL	Stressed
29	Methylcyclohexane		2,510.3	µg/mL	+/-	14.5948	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBL0078)			+/-	151.4545	µg/mL	Unstressed
	Purity 99%				+/-	151.8141	µg/mL	Stressed
30	1,2-Dichloropropane		2,510.9	µg/mL	+/-	14.5984	µg/mL	Gravimetric
	CAS # 78-87-5	(Lot BCBR0882V)			+/-	151.4922	µg/mL	Unstressed
	Purity 99%				+/-	151.8519	µg/mL	Stressed
31	1,4-Dioxane		50,187.5	µg/mL	+/-	291.7792	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBM9675)			+/-	3,028.0328	µg/mL	Unstressed
	Purity 99%				+/-	3,035.2219	µg/mL	Stressed
32	Dibromomethane		2,511.0	µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 74-95-3	(Lot 10201030)			+/-	151.4998	µg/mL	Unstressed
	Purity 99%				+/-	151.8594	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,513.8	µg/mL	+/-	14.6152	µg/mL	Gravimetric
	CAS # 10061-01-5	(Lot RD220311)			+/-	151.6657	µg/mL	Unstressed
	Purity 99%				+/-	152.0258	µg/mL	Stressed
34	Toluene		2,518.4	µg/mL	+/-	14.6420	µg/mL	Gravimetric
	CAS # 108-88-3	(Lot MKCQ2779)			+/-	151.9447	µg/mL	Unstressed
	Purity 99%				+/-	152.3055	µg/mL	Stressed
35	Ethyl methacrylate		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 97-63-2	(Lot MKCL0907)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,504.5	µg/mL	+/-	14.5615	µg/mL	Gravimetric
	CAS # 10061-02-6	(Lot RD211104)			+/-	151.1083	µg/mL	Unstressed
	Purity 98%				+/-	151.4671	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,513.6	µg/mL	+/-	14.6144	µg/mL	Gravimetric
	CAS # 79-00-5	(Lot FGB01)			+/-	151.6581	µg/mL	Unstressed
	Purity 99%				+/-	152.0182	µg/mL	Stressed
38	1,3-Dichloropropane		2,513.6	µg/mL	+/-	14.6144	µg/mL	Gravimetric
	CAS # 142-28-9	(Lot BCBC6265)			+/-	151.6581	µg/mL	Unstressed
	Purity 99%				+/-	152.0182	µg/mL	Stressed
39	Tetrachloroethene		2,507.5	µg/mL	+/-	14.5788	µg/mL	Gravimetric
	CAS # 127-18-4	(Lot SHBJ7422)			+/-	151.2886	µg/mL	Unstressed
	Purity 99%				+/-	151.6478	µg/mL	Stressed

40	dibromochloromethane		2,514.8	µg/mL	+/-	14.6210	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKCM8659)			+/-	151.7260	µg/mL	Unstressed
	Purity 99%				+/-	152.0862	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,513.9	µg/mL	+/-	14.6159	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCCF5058)			+/-	151.6732	µg/mL	Unstressed
	Purity 99%				+/-	152.0333	µg/mL	Stressed
42	Chlorobenzene		2,507.9	µg/mL	+/-	14.5810	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBL8110)			+/-	151.3112	µg/mL	Unstressed
	Purity 99%				+/-	151.6704	µg/mL	Stressed
43	m-Xylene		1,260.0	µg/mL	+/-	7.3257	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot Q13G020)			+/-	76.0214	µg/mL	Unstressed
	Purity 99%				+/-	76.2019	µg/mL	Stressed
44	p-Xylene		1,258.6	µg/mL	+/-	7.3178	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot 10234437)			+/-	75.9384	µg/mL	Unstressed
	Purity 99%				+/-	76.1187	µg/mL	Stressed
45	Ethylbenzene		2,516.0	µg/mL	+/-	14.6282	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBM4308)			+/-	151.8014	µg/mL	Unstressed
	Purity 99%				+/-	152.1618	µg/mL	Stressed
46	1,1,1,2-Tetrachloroethane		2,519.1	µg/mL	+/-	14.6464	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot TMWGK)			+/-	151.9900	µg/mL	Unstressed
	Purity 99%				+/-	152.3508	µg/mL	Stressed
47	o-Xylene		2,513.5	µg/mL	+/-	14.6134	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBN5105)			+/-	151.6479	µg/mL	Unstressed
	Purity 98%				+/-	152.0079	µg/mL	Stressed
48	Styrene		2,509.1	µg/mL	+/-	14.5883	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot MKCP3941)			+/-	151.3866	µg/mL	Unstressed
	Purity 99%				+/-	151.7460	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,518.5	µg/mL	+/-	14.6428	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot Z20D022)			+/-	151.9523	µg/mL	Unstressed
	Purity 99%				+/-	152.3130	µg/mL	Stressed
50	bromoform		2,511.0	µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBK4455)			+/-	151.5001	µg/mL	Unstressed
	Purity 98%				+/-	151.8597	µg/mL	Stressed
51	bromodichloromethane		2,518.1	µg/mL	+/-	14.6406	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKCM7156)			+/-	151.9296	µg/mL	Unstressed
	Purity 99%				+/-	152.2903	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,512.5	µg/mL	+/-	14.6079	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot 332900)			+/-	151.5903	µg/mL	Unstressed
	Purity 99%				+/-	151.9502	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,511.8	µg/mL	+/-	14.6038	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot RD220405A)			+/-	151.5480	µg/mL	Unstressed
	Purity 95%				+/-	151.9078	µg/mL	Stressed
55	n-Propylbenzene		2,515.6	µg/mL	+/-	14.6261	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKCN1126)			+/-	151.7788	µg/mL	Unstressed
	Purity 99%				+/-	152.1392	µg/mL	Stressed

56	Bromobenzene		2,516.9	µg/mL	+/-	14.6333	µg/mL	Gravimetric
	CAS # 108-86-1	(Lot MKBD4032V)			+/-	151.8542	µg/mL	Unstressed
	Purity 99%				+/-	152.2147	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,512.3	µg/mL	+/-	14.6064	µg/mL	Gravimetric
	CAS # 108-67-8	(Lot BCCD0427)			+/-	151.5752	µg/mL	Unstressed
	Purity 99%				+/-	151.9350	µg/mL	Stressed
58	2-Chlorotoluene		2,510.9	µg/mL	+/-	14.5984	µg/mL	Gravimetric
	CAS # 95-49-8	(Lot MKCF5243)			+/-	151.4922	µg/mL	Unstressed
	Purity 99%				+/-	151.8519	µg/mL	Stressed
59	4-Chlorotoluene		2,513.1	µg/mL	+/-	14.6115	µg/mL	Gravimetric
	CAS # 106-43-4	(Lot MKCC8496)			+/-	151.6280	µg/mL	Unstressed
	Purity 99%				+/-	151.9880	µg/mL	Stressed
60	tert-Butylbenzene		2,514.6	µg/mL	+/-	14.6202	µg/mL	Gravimetric
	CAS # 98-06-6	(Lot STBD6954V)			+/-	151.7185	µg/mL	Unstressed
	Purity 99%				+/-	152.0787	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,517.1	µg/mL	+/-	14.6348	µg/mL	Gravimetric
	CAS # 95-63-6	(Lot WXBC9428V)			+/-	151.8696	µg/mL	Unstressed
	Purity 98%				+/-	152.2302	µg/mL	Stressed
62	sec-Butylbenzene		2,519.3	µg/mL	+/-	14.6471	µg/mL	Gravimetric
	CAS # 135-98-8	(Lot MKCN2920)			+/-	151.9975	µg/mL	Unstressed
	Purity 99%				+/-	152.3584	µg/mL	Stressed
63	p-Isopropyltoluene (p-Cymene)		2,512.0	µg/mL	+/-	14.6050	µg/mL	Gravimetric
	CAS # 99-87-6	(Lot MKCP6638)			+/-	151.5601	µg/mL	Unstressed
	Purity 99%				+/-	151.9199	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBZ7498)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,513.4	µg/mL	+/-	14.6130	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	151.6431	µg/mL	Unstressed
	Purity 99%				+/-	152.0031	µg/mL	Stressed
66	n-Butylbenzene		2,511.0	µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 104-51-8	(Lot 09418JJ)			+/-	151.4998	µg/mL	Unstressed
	Purity 99%				+/-	151.8594	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBN3835)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,512.4	µg/mL	+/-	14.6074	µg/mL	Gravimetric
	CAS # 96-12-8	(Lot HBMVB)			+/-	151.5855	µg/mL	Unstressed
	Purity 97%				+/-	151.9454	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,510.4	µg/mL	+/-	14.5955	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBM0526)			+/-	151.4620	µg/mL	Unstressed
	Purity 99%				+/-	151.8216	µg/mL	Stressed
70	Hexachlorobutadiene		2,509.3	µg/mL	+/-	14.5890	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot X05J)			+/-	151.3942	µg/mL	Unstressed
	Purity 99%				+/-	151.7536	µg/mL	Stressed
71	Naphthalene		2,520.6	µg/mL	+/-	14.6551	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKCH0219)			+/-	152.0805	µg/mL	Unstressed
	Purity 99%				+/-	152.4415	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,513.0	µg/mL	+/-	14.6108	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot MKBX7627V)			+/-	151.6204	µg/mL	Unstressed
	Purity 99%				+/-	151.9804	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

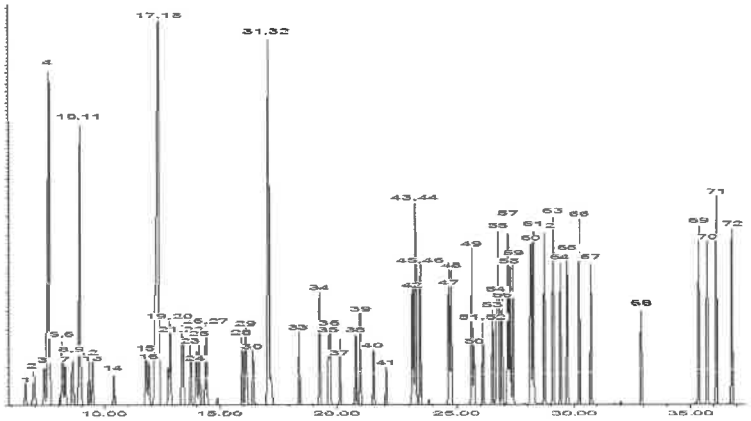
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 31-Mar-2022 **Balance:** B707717271

Feng-Yun Lo - QC Analyst

Date Passed: 21-Apr-2022

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Catalog No. : 571993.SEC **Lot No.:** A0170862

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Rec'd 12/13/21

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile	25,020.7 µg/mL	+/- 146.5015 µg/mL	Gravimetric
	CAS # 75-05-8.SEC (Lot JZJ3E)		+/- 1,237.8399 µg/mL	Unstressed
	Purity 99%		+/- 1,268.6139 µg/mL	Stressed
2	Diisopropyl ether (DIPE)	2,517.0 µg/mL	+/- 14.7712 µg/mL	Gravimetric
	CAS # 108-20-3.SEC (Lot LL7TN-SH)		+/- 124.5268 µg/mL	Unstressed
	Purity 99%		+/- 127.6224 µg/mL	Stressed
3	Ethyl-tert-butyl ether (ETBE)	2,513.0 µg/mL	+/- 14.7480 µg/mL	Gravimetric
	CAS # 637-92-3.SEC (Lot UCI5B)		+/- 124.3312 µg/mL	Unstressed
	Purity 98%		+/- 127.4220 µg/mL	Stressed
4	Propionitrile	25,200.0 µg/mL	+/- 147.5515 µg/mL	Gravimetric
	CAS # 107-12-0.SEC (Lot N44LF)		+/- 1,246.7120 µg/mL	Unstressed
	Purity 99%		+/- 1,277.7066 µg/mL	Stressed
5	tert-Amyl alcohol	25,147.7 µg/mL	+/- 147.2451 µg/mL	Gravimetric
	CAS # 75-85-4.SEC (Lot D87JO)		+/- 1,244.1230 µg/mL	Unstressed
	Purity 99%		+/- 1,275.0532 µg/mL	Stressed
6	tert-Amyl methyl ether (TAME)	2,516.7 µg/mL	+/- 14.7692 µg/mL	Gravimetric
	CAS # 994-05-8.SEC (Lot 11010100)		+/- 124.5103 µg/mL	Unstressed
	Purity 99%		+/- 127.6055 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

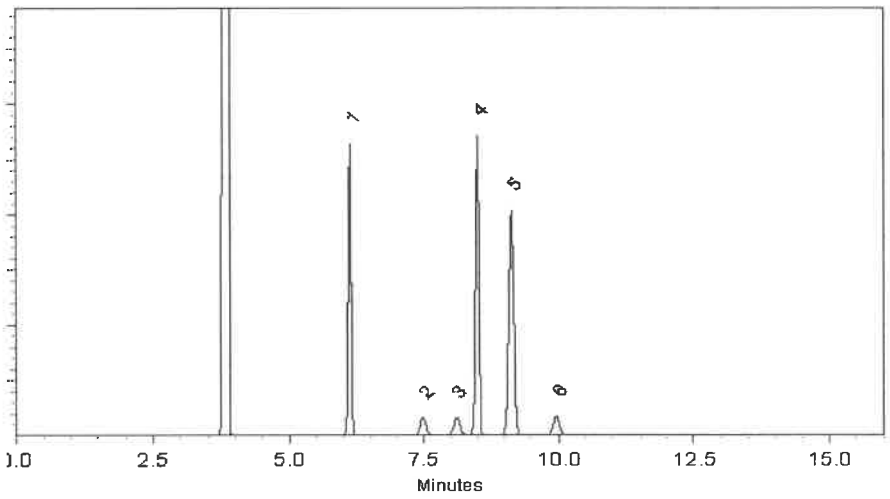
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dalton Stover - Operations Technician I

Date Mixed: 31-Mar-2021 **Balance:** 1128353505

Alexis Shelow - Operations Tech I

Date Passed: 02-Apr-2021

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Catalog No. : 571993.SEC **Lot No.:** A0189867

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8.SEC (Lot 3ZDOE) **Purity** 99%	25,064.5 µg/mL	+/- 146.7582 µg/mL +/- 1,240.0085 µg/mL +/- 1,270.8364 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3.SEC (Lot LL7TN-SH) **Purity** 99%	2,511.0 µg/mL	+/- 14.7360 µg/mL +/- 124.2299 µg/mL +/- 127.3182 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3.SEC (Lot UCI5B) **Purity** 98%	2,499.2 µg/mL	+/- 14.6667 µg/mL +/- 123.6459 µg/mL +/- 126.7197 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0.SEC (Lot N44LF) **Purity** 99%	25,000.9 µg/mL	+/- 146.3858 µg/mL +/- 1,236.8620 µg/mL +/- 1,267.6117 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4.SEC (Lot REJPI) **Purity** 99%	25,023.6 µg/mL	+/- 146.5187 µg/mL +/- 1,237.9850 µg/mL +/- 1,268.7627 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8.SEC (Lot 12075100) **Purity** 98%	2,504.0 µg/mL	+/- 14.6949 µg/mL +/- 123.8835 µg/mL +/- 126.9632 µg/mL	Gravimetric Unstressed Stressed

12/5/22

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

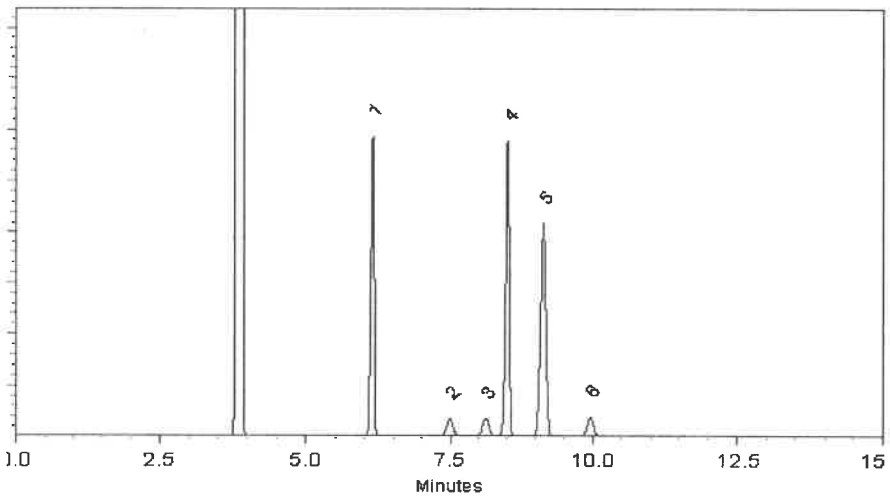
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Daniel Wasson - Operations Tech I **Date Mixed:** 22-Sep-2022 **Balance:** 1128342314

Marlina Cowan – Operations Tech II ARM QC **Date Passed:** 26-Sep-2022

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Catalog No. : 571993 **Lot No.:** A0172903

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

Rec'd 12/13/21 GM

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile	25,165.0 µg/mL	+/- 147.3466 µg/mL	Gravimetric
	CAS # 75-05-8 (Lot SHBH6233)		+/- 1,244.9805 µg/mL	Unstressed
	Purity 99%		+/- 1,275.9320 µg/mL	Stressed
2	Diisopropyl ether (DIPE)	2,519.5 µg/mL	+/- 14.7858 µg/mL	Gravimetric
	CAS # 108-20-3 (Lot SHBH1927V)		+/- 124.6504 µg/mL	Unstressed
	Purity 99%		+/- 127.7492 µg/mL	Stressed
3	Ethyl-tert-butyl ether (ETBE)	2,510.5 µg/mL	+/- 14.7330 µg/mL	Gravimetric
	CAS # 637-92-3 (Lot MKCM3774)		+/- 124.2052 µg/mL	Unstressed
	Purity 99%		+/- 127.2929 µg/mL	Stressed
4	Propionitrile	25,132.5 µg/mL	+/- 147.1563 µg/mL	Gravimetric
	CAS # 107-12-0 (Lot BCCB0845)		+/- 1,243.3726 µg/mL	Unstressed
	Purity 99%		+/- 1,274.2842 µg/mL	Stressed
5	tert-Amyl alcohol	25,074.0 µg/mL	+/- 146.8138 µg/mL	Gravimetric
	CAS # 75-85-4 (Lot STBB1898V)		+/- 1,240.4785 µg/mL	Unstressed
	Purity 99%		+/- 1,271.3181 µg/mL	Stressed
6	tert-Amyl methyl ether (TAME)	2,509.0 µg/mL	+/- 14.7242 µg/mL	Gravimetric
	CAS # 994-05-8 (Lot HMBG7745V)		+/- 124.1310 µg/mL	Unstressed
	Purity 99%		+/- 127.2168 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

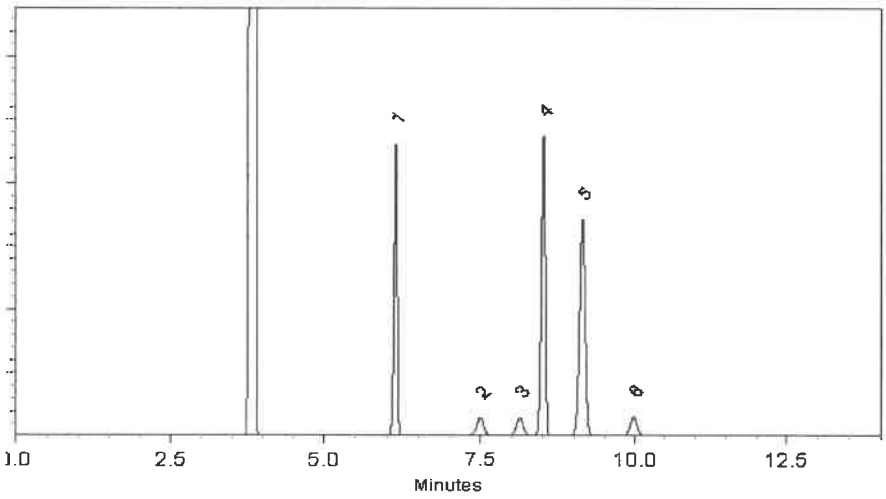
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 01-Jun-2021 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 03-Jun-2021

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Catalog No. : 571993 **Lot No.:** A0183035

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8 (Lot SHBH6233) **Purity** 99%	25,214.8 µg/mL	+/- 147.6382 µg/mL +/- 1,247.4442 µg/mL +/- 1,278.4570 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3 (Lot STBK3450) **Purity** 99%	2,501.6 µg/mL	+/- 14.6808 µg/mL +/- 123.7649 µg/mL +/- 126.8416 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3 (Lot MKCN9957) **Purity** 99%	2,516.8 µg/mL	+/- 14.7700 µg/mL +/- 124.5169 µg/mL +/- 127.6123 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0 (Lot BCCB0845) **Purity** 99%	25,121.6 µg/mL	+/- 147.0925 µg/mL +/- 1,242.8334 µg/mL +/- 1,273.7315 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4 (Lot STBB1898V) **Purity** 99%	25,096.0 µg/mL	+/- 146.9426 µg/mL +/- 1,241.5669 µg/mL +/- 1,272.4335 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8 (Lot HMBG7745V) **Purity** 99%	2,518.0 µg/mL	+/- 14.7770 µg/mL +/- 124.5762 µg/mL +/- 127.6731 µg/mL	Gravimetric Unstressed Stressed

10/31/22

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

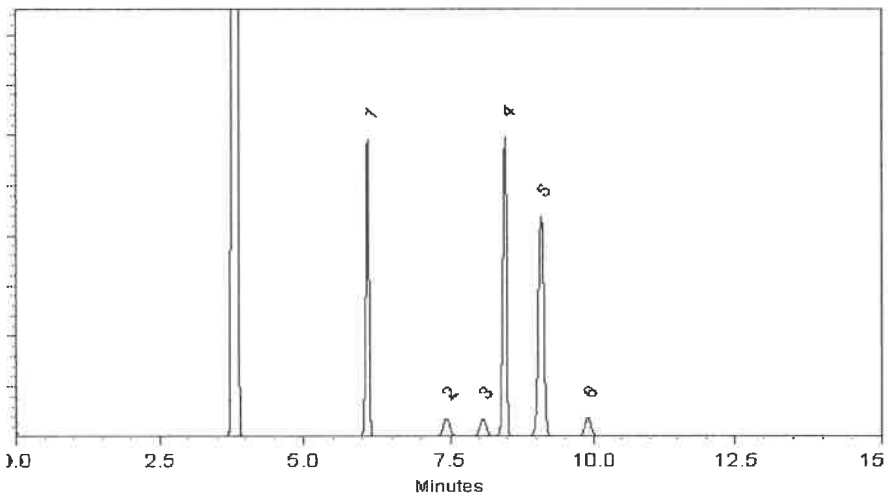
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Bethany Lowery - Operations Tech I

Date Mixed: 18-Mar-2022 **Balance:** B707717271

Feng-Yun Lo - QC Analyst

Date Passed: 22-Mar-2022

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Catalog No. : 571994.SEC **Lot No.:** A0186688

Description : 8260 Ethanol Standard

8260 Ethanol Standard 100,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethanol	100,070.0 µg/mL	+/- 585.9319 µg/mL	Gravimetric
	CAS # 64-17-5.SEC (Lot C19I26002)		+/- 2,143.6321 µg/mL	Unstressed
	Purity 99%		+/- 2,205.8869 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

12/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.# 10910)

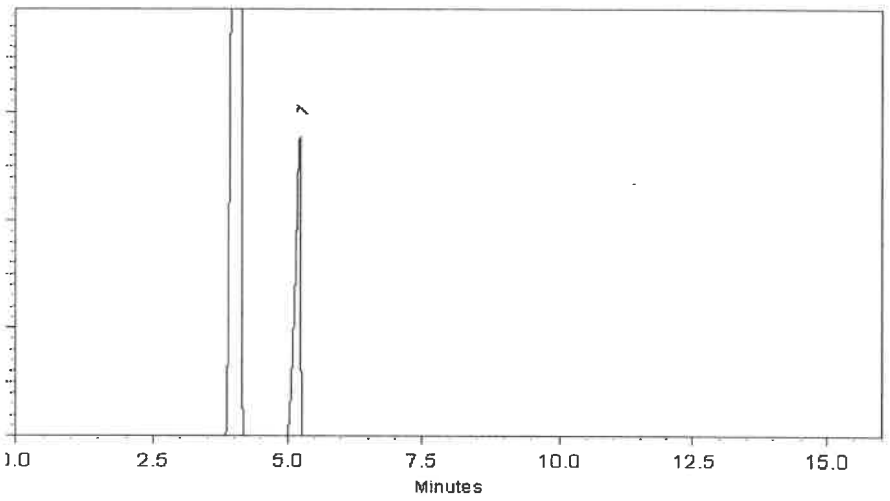
Carrier Gas:
hydrogen-constant pressure 11 psi.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Bryan Snyder - Operations Tech I

Date Mixed: 27-Jun-2022 **Balance:** 1127510105

Christie Mills - Operations Tech II - ARM QC

Date Passed: 29-Jun-2022

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571994 **Lot No.:** A0169978

Description : 8260 Ethanol Standard

8260 Ethanol Standard 100,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 0°C or colder

Ship: Ambient

REC'D 12/2/21 GM

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethanol	100,586.0 µg/mL	+/- 588.9228 µg/mL	Gravimetric
	CAS # 64-17-5 (Lot SHBM3719)		+/- 2,154.6772 µg/mL	Unstressed
	Purity 99%		+/- 2,217.2533 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.# 10910)

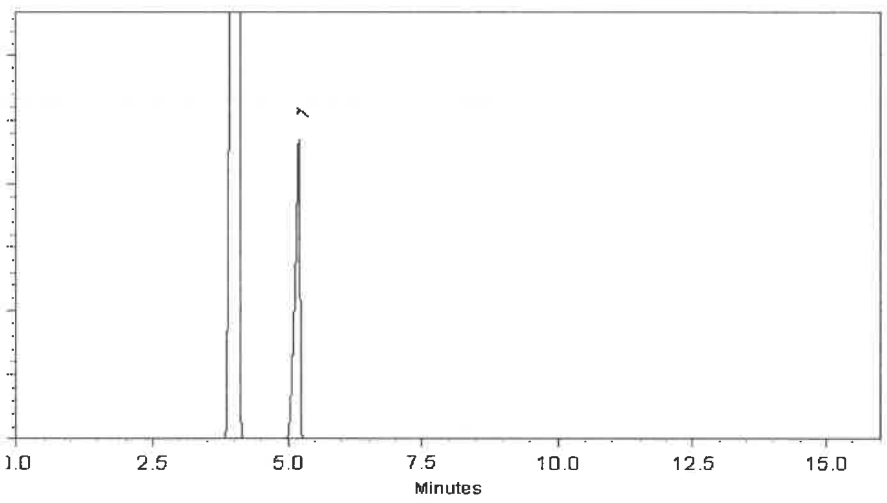
Carrier Gas:
hydrogen-constant pressure 11 psi.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Sam Moodler - Operations Tech I

Date Mixed: 10-Mar-2021 **Balance:** B707717271

Alexis Sheiow - Operations Tech I

Date Passed: 16-Mar-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-CUS17739.s_00011

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: Custom Standard
Product Number: CUS-17739
Storage Conditions: Store Frozen (-25° to -10°C).

Lot Number: 0006676357
Lot Issue Date: 15-Apr-2022
Expiration Date: 31-May-2024

Component Name	CERTIFIED VALUES Concentration		Expanded Uncertainty	CAS#	Analyte Lot
1-chlorohexane	1004	±	5 µg/mL	000544-10-5	RM15291
2-pentanone	4019	±	20 µg/mL	000107-87-9	RM13478
sec-butanol	30105	±	151 µg/mL	000078-92-2	RM01299

Matrix: methanol (purge & trap grade)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:

Rcvd 7/4/22

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

Reagent

MV-CUS17739_00015

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Custom Standard

Product Number: CUS-17739

Storage Conditions: Store Frozen (-25° to -10°C).

Lot Number: 0006712667

Lot Issue Date: 08-Nov-2022

Expiration Date: 31-Dec-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
1-chlorohexane	1004	± 5 µg/mL	000544-10-5	RM04913
2-pentanone	4015	± 20 µg/mL	000107-87-9	RM13478
sec-butanol	30099	± 150 µg/mL	000078-92-2	RM13506

Matrix: methanol (purge & trap grade)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:

Rec'd 3/17/23 qc

Agilent

Trusted Answers

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO 17034
REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

www.agilent.com/quality/
CSD-QA-015.1

ISO 17025

Reagent

mv-IS/SS Tune_00001

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570812 **Lot No.:** A0143593

Description : 8260 IS/Surrogate Mix (2016)

8260 IS/Surrogate Mix (2016) 250-5,000µg/mL, P&T Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2023 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol		5,000.1 µg/mL	+/- 29.0694 µg/mL	Gravimetric
	CAS # 25725-11-5	(Lot CD-107)		+/- 107.0521 µg/mL	Unstressed
	Purity 98%			+/- 110.1643 µg/mL	Stressed
2	Dibromofluoromethane		250.2 µg/mL	+/- 1.4580 µg/mL	Gravimetric
	CAS # 1868-53-7	(Lot 0012017)		+/- 5.3577 µg/mL	Unstressed
	Purity 99%			+/- 5.5134 µg/mL	Stressed
3	1,2-Dichloroethane-d4		250.3 µg/mL	+/- 1.4584 µg/mL	Gravimetric
	CAS # 17060-07-0	(Lot PR-29377)		+/- 5.3592 µg/mL	Unstressed
	Purity 99%			+/- 5.5149 µg/mL	Stressed
4	1,4-Dioxane-d8		5,000.5 µg/mL	+/- 29.0716 µg/mL	Gravimetric
	CAS # 17647-74-4	(Lot I-19942)		+/- 107.0602 µg/mL	Unstressed
	Purity 99%			+/- 110.1726 µg/mL	Stressed
5	Fluorobenzene		250.1 µg/mL	+/- 1.4573 µg/mL	Gravimetric
	CAS # 462-06-6	(Lot BCBK8171V)		+/- 5.3549 µg/mL	Unstressed
	Purity 99%			+/- 5.5105 µg/mL	Stressed
6	Toluene-d8		250.1 µg/mL	+/- 1.4575 µg/mL	Gravimetric
	CAS # 2037-26-5	(Lot PR-27311)		+/- 5.3556 µg/mL	Unstressed
	Purity 99%			+/- 5.5112 µg/mL	Stressed
7	Chlorobenzene-d5		250.5 µg/mL	+/- 1.4600 µg/mL	Gravimetric
	CAS # 3114-55-4	(Lot PR-23926)		+/- 5.3649 µg/mL	Unstressed
	Purity 99%			+/- 5.5208 µg/mL	Stressed

8	1-Bromo-4-fluorobenzene (BFB)		250.1	µg/mL	+/-	1.4575	µg/mL	Gravimetric
	CAS # 460-00-4	(Lot 20401KO)			+/-	5.3556	µg/mL	Unstressed
	Purity 99%				+/-	5.5112	µg/mL	Stressed
9	1,4-Dichlorobenzene-d4		250.2	µg/mL	+/-	1.4580	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)			+/-	5.3577	µg/mL	Unstressed
	Purity 99%				+/-	5.5134	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

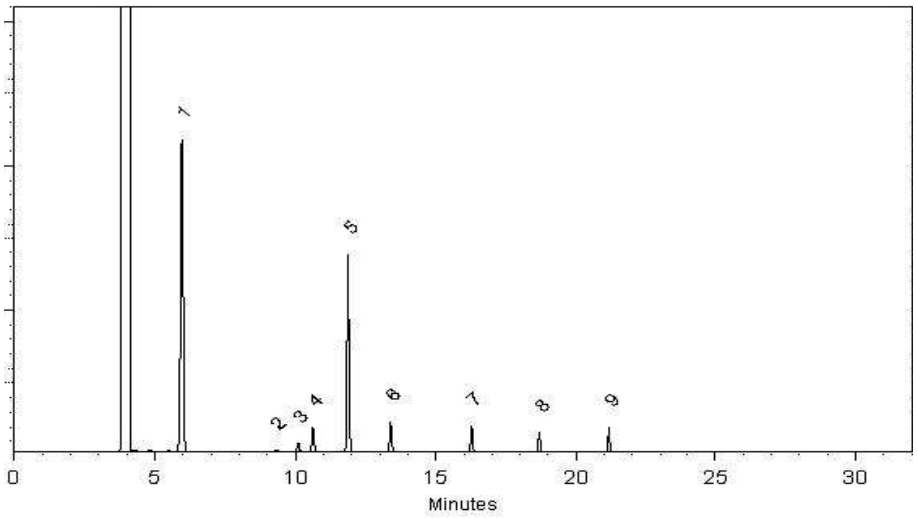
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 29-Nov-2018 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 18-Dec-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

mv-VO-TAOH-5_00015

spex certiprep

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEXertificate®
Certificate of Reference Material

ILAC-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: VO-TAOH-5

Description: Custom Organic Standard

Matrix: Methanol (Purge & Trap Grade)

Lot No. CP220812003

Manufactured Date: August 12, 2022

Expiration Date: February 8, 2023

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
Ethylene oxide	75-21-8	50000 µg/mL	99.8%	49980 µg/mL	± 1799 µg/mL
cis-1,4-Dichloro-2-butene	1476-11-5	1000 µg/mL	95%	980 µg/mL	± 35 µg/mL
Propylene oxide	75-56-9	50000 µg/mL	99%	49944 µg/mL	± 1798 µg/mL
Tetrahydrothiophene	110-01-0	1000 µg/mL	99%	998 µg/mL	± 36 µg/mL

* - Isomer ratios (when applicable) are an uncertified parameter.

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: August 12, 2022

Certifying Officer: Shannon Mara

Shannon Macieira, Operations Manager

Rev 8/25/22

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Report of Certification

Catalog Number: VO-TAOH-5 **Lot No.** CP220812003

Description: Custom Organic Standard

Matrix: Methanol (Purge & Trap Grade)

Manufactured Date: August 12, 2022

Expiration Date: February 8, 2023

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS) and ISO 17025 (accredited by A2LA), and ISO 17034 (accredited by A2LA) quality system consistent with the following standards:

- ISO 9001: Quality management systems - Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials - Selected terms and definitions
- ISO Guide 31: Reference Materials - Contents of certificates and lables
- ISO Guide 35: Refernece Materials - General and Statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement - Third Edition
- NIST Technical Note 1297

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a freezer (-35°C to -10°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and applicable only if the product is stored under the laboratory specified conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bo ttle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c=\sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Reagent

TOC ICV Std_00051

RICCA CHEMICAL COMPANY®

1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Organic Carbon Standard, 1000 ppm C

Lot Number: 2208C86 **Product Number:** 1847

Manufacture Date: AUG 08, 2022
Expiration Date: JUL 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Phosphoric Acid	7664-38-2	ACS
Potassium Acid Phthalate	877-24-7	ACS Acidimetric

Test	Specification	Result
Appearance	Colorless liquid	Passed
Carbon (C)	995-1005 ppm	1000 ppm

Specification	Reference
Organic Carbon Stock Solution	APHA (5310 B)
Potassium Hydrogen Phthalate, Stock Solution	EPA (SW-846) (9060)
Potassium Hydrogen Phthalate, Stock Solution, 1000 mg Carbon/liter	EPA (415.1)
Organic Carbon Solution, Standard (1 mL = 1 mg C)	ASTM (D 2579)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1847-16	500 mL amber glass	12 months
1847-32	1 L amber glass	12 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (08/08/2022)
Quality Control
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

RICCA CHEMICAL COMPANY®

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Organic Carbon Standard, 1000 ppm C

Product Number: 1847

Other Identifying Product Numbers: 1847-1, 1847-16, 1847-2.5, 1847-32, 1847-4, 1847-5, 1847-8

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company
Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)	800-424-9300
CHEMTREC (International)	1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Hazardous to the Aquatic Environment (Acute)	Category 3	H402	P273, P501

2.2. GHS Label Elements

Pictograms:

Signal Word:

Hazard Statements:

Hazard Number	Hazard Statement
H402	Harmful to aquatic life.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P273	Avoid release to the environment.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H_2O	18.01 g/mol	7732-18-5	99.39
Phosphoric Acid	H_3PO_4	97.99 g/mol	7664-38-2	0.40
Potassium Acid Phthalate	$HOCOC_6H_4COOK$	204.22 g/mol	877-24-7	0.21

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: May cause irritation, redness, pain, and tearing.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: May cause slight irritation.

Ingestion: Dilute with water or milk. Call a physician if necessary.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Does not present any significant health hazards. Wash areas of contact with water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause slight irritation.

4.3. Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

6.2. Cleanup and Containment Methods and Materials

Collect liquid and dilute with water. Neutralize with dilute base solutions. Resulting solution may be flushed to the sewer with excess water. For larger spills, absorb with suitable material and dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Keep tightly capped. Store in the refrigerator.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Phosphoric Acid (7664-38-2)	TWA	USA	1 mg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Phosphoric Acid (7664-38-2)	TLV-STEL	USA	3 mg/m³ STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Phosphoric Acid (7664-38-2)	TLV-TWA	USA	1 mg/m³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

8.3. Personal Protective Equipment

Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: < 2

Melting/Freezing Point: 0.0°C

Initial Boiling Point/Range: 100°C - 100°C

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.00

Solubility: Miscible

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Nitric Acid.

10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral, Rat: >3200 mg/kg (Potassium Acid Phthalate), details of toxic effects not reported other than lethal dose value. LD50, Oral, Rat: (Phosphoric Acid) 1530 mg/kg, behavioral, kidney, bladder, hair effects noted. LD50, Dermal, Rat: 2740 mg/kg (Phosphoric Acid), behavioral effects noted.

Skin Corrosion and Irritation:

Not applicable.

Serious Eye Damage and Irritation:

Not applicable.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

Safety Data Sheet

SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.

14.2. Transportation by Air - International Air Transport Association (IATA)

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG Regulations.

Safety Data Sheet

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Phosphoric Acid (CAS # 7664-38-2): 5000 lb final RQ; 2270 kg final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Not listed.

15.5. Massachusetts Right-to-Know Substance List

Phosphoric Acid (CAS # 7664-38-2): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

Phosphoric Acid (CAS # 7664-38-2): Environmental hazard
Phosphoric Acid (CAS # 7664-38-2): Present
Water (CAS # 7732-18-5): Present

15.7. New Jersey Worker and Community Right-to-Know Components

Phosphoric Acid (CAS # 7664-38-2): corrosive
Phosphoric Acid (CAS # 7664-38-2): sn 1516

15.8. California Proposition 65

Not listed.

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Phosphoric Acid (CAS # 7664-38-2): Present (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Potassium Acid Phthalate (CAS # 877-24-7): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Phosphoric Acid (CAS # 7664-38-2): Present
Water (CAS # 7732-18-5): Present
Potassium Acid Phthalate (CAS # 877-24-7): Present

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Phosphoric Acid (CAS # 7664-38-2): 231-633-2
Water (CAS # 7732-18-5): 231-791-2
Water (CAS # 7732-18-5): 232-148-9
Potassium Acid Phthalate (CAS # 877-24-7): 212-889-4

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Harmful to aquatic life.

Avoid release to the environment.

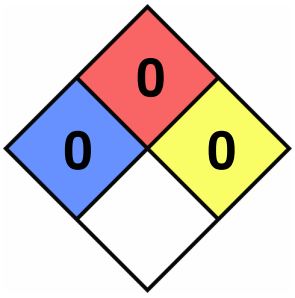
Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.
Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.
Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 0
Flammability: 0
Reactivity: 0
Special Hazard:



16.4. Document Revision

Last Revision Date: 2023-02-14

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.

Reagent

TOC LCS Std_00057

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Total Organic Carbon (TOC) Standard

Product Number: IOC-106

Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006719669

Lot Issue Date: 28-Dec-2022

Expiration Date: 31-Jan-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
potassium hydrogen phthalate (KHP) (as TOC)	1001	±	5 mg/L	000877-24-7	RM19275

Matrix: water (low TOC, < 50 ppb)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system. The analyte concentration(s) were prepared and verified by an ISO 17034 / ISO 17025 accredited laboratory and compared to calibration standards independently prepared using NIST SRM(s) when available. The certified value and uncertainty value at the 95% confidence level for each analyte is determined gravimetrically.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Agilent

Trusted Answers

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO 17034
REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

www.agilent.com/quality/
CSD-QA-040.1

ISO 17025

Reagent

Z-020209-01.b_00001

CPI INTERNATIONAL

5580 Skylane Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received:_____

Certificate of Analysis

Rev 0

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
Z-020209-01-SS	488067	-18°C +/- 4°C	P/T Methanol	8/30/2024	cis-1,4-Dichloro-2-butene Solution, 1000 mg/L, 1 ml Second Source

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
cis-1,4-dichloro-2-butene	1476-11-5	98	209.1.5.1S	999.8 ± 14.67

*Not a certified value

Rcvd 9/2022

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

Certified By: _____
Sanquetta Coakley
Chemist

Reagent

Z-020209-01_00001

CPI INTERNATIONAL

5580 Skylane Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received:_____

Certificate of Analysis

Rev 0

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
Z-020209-01	488066	-18°C +/- 4°C	P/T Methanol	8/30/2024	cis-1,4-Dichloro-2-butene Solution, 1000 mg/L, 1 ml

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
cis-1,4-dichloro-2-butene	1476-11-5	96.2	209.1.4.1P	1003 ± 12.64

*Not a certified value

Revd 9/2022

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

Certified By: _____

Sanquetta Coakley
Chemist

8260D

Volatile Organic Compounds by GC/MS

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-624SilM ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
RW-1-20230413	280-175122-1	102	96	101	102
MP-2-20230411	280-175122-2	103	101	99	101
MW-118D-20230412	280-175122-3	108	103	101	96
MP-3-20230413	280-175122-4	102	95	99	99
MW-111D-20230414	280-175122-5	106	116	108	103
MW-123-20230415	280-175122-6	101	91	102	103
MW-102S-20230414	280-175122-7	103	95	100	102
MW-115S-20230415	280-175122-8	103	93	100	102
TB-07-20230416	280-175122-9	102	92	102	103
	MB 280-609561/7	107	113	107	103
	MB 280-609932/7	104	99	102	102
	MB 280-610121/7	103	94	102	98
	MB 280-610123/7	108	104	102	95
	MB 280-610347/7	102	97	100	99
	MB 280-610485/7	102	92	102	103
	LCS 280-609561/1002	107	114	106	104
	LCS 280-609561/1003	110	115	105	106
	LCS 280-609932/1002	103	100	100	99
	LCS 280-609932/1003	103	102	102	102
	LCS 280-610121/1002	104	97	101	102
	LCS 280-610121/1003	106	99	100	100
	LCS 280-610123/1002	109	103	102	95
	LCS 280-610123/1003	109	106	100	95
	LCS 280-610347/1002	102	94	102	102
	LCS 280-610347/1003	101	95	101	101
	LCS 280-610485/1002	103	93	103	100
	LCS 280-610485/1003	102	91	101	100
	LCSD 280-609561/4	107	115	106	104
	LCSD 280-609561/5	107	114	107	107

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	77-120
DCA = 1,2-Dichloroethane-d4 (Surr)	70-127
TOL = Toluene-d8 (Surr)	80-125
BFB = 4-Bromofluorobenzene (Surr)	78-120

Column to be used to flag recovery values

FORM II 8260D

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-624SilM ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
	LCSD 280-609932/4	104	102	101	102
	LCSD 280-609932/5	103	103	103	100
	LCSD 280-610121/4	103	96	101	104
	LCSD 280-610121/5	103	98	99	103
	LCSD 280-610123/4	109	105	101	95
	LCSD 280-610123/5	108	105	103	96
	LCSD 280-610347/4	102	97	101	102
	LCSD 280-610347/5	103	96	100	100
	LCSD 280-610485/4	103	95	101	99
	LCSD 280-610485/5	103	93	101	101

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	77-120
DCA = 1,2-Dichloroethane-d4 (Surr)	70-127
TOL = Toluene-d8 (Surr)	80-125
BFB = 4-Bromofluorobenzene (Surr)	78-120

Column to be used to flag recovery values

FORM II 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -MS1_8308-LCS.d

Lab ID: LCS 280-609561/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	46.8	94	74-121	
1,1,1-Trichloroethane	50.0	51.5	103	62-132	
1,1,2,2-Tetrachloroethane	50.0	49.4	99	72-122	
1,1,2-Trichloroethane	50.0	49.2	98	72-128	
1,1-Dichloroethane	50.0	50.1	100	66-130	
1,1-Dichloroethene	50.0	45.5	91	62-130	
1,1-Dichloropropene	50.0	51.0	102	64-133	
1,2,3-Trichloropropane	50.0	48.0	96	74-123	
1,2,4-Trichlorobenzene	50.0	46.2	92	73-124	
1,2-Dibromo-3-Chloropropane	50.0	43.2	86	58-122	
1,2-Dibromoethane	50.0	47.9	96	81-118	
1,2-Dichlorobenzene	50.0	48.6	97	77-121	
1,2-Dichloroethane	50.0	49.1	98	61-130	
1,2-Dichloropropane	50.0	49.1	98	68-127	
1,3-Dichlorobenzene	50.0	49.1	98	76-121	
1,3-Dichloropropane	50.0	49.7	99	80-118	
1,4-Dichlorobenzene	50.0	47.7	95	76-119	
2,2-Dichloropropane	50.0	49.6	99	57-140	
2-Butanone (MEK)	200	193	97	53-135	
2-Hexanone	200	200	100	58-134	
4-Methyl-2-pentanone (MIBK)	200	207	103	56-135	
Acetone	200	190	95	50-137	
Acrolein	494	511	104	10-207	
Acrylonitrile	500	513	103	65-133	
Allyl chloride	50.0	49.6	99	57-136	
Benzene	50.0	50.4	101	69-126	
Bromoform	50.0	44.4	89	57-125	
Bromomethane	50.0	52.9	106	25-163	
Carbon disulfide	50.0	44.0	88	56-128	
Carbon tetrachloride	50.0	47.8	96	60-133	
Chlorobenzene	50.0	48.7	97	78-118	
Chlorobromomethane	50.0	47.9	96	71-130	
Chlorodibromomethane	50.0	45.6	91	71-122	
Chloroethane	50.0	50.3	101	52-144	
Chloroform	50.0	50.4	101	68-128	
Chloromethane	50.0	53.3	107	43-142	
cis-1,2-Dichloroethene	50.0	49.9	100	69-126	
cis-1,3-Dichloropropene	50.0	47.9	96	75-120	
Dibromomethane	50.0	47.5	95	68-129	
Dichlorobromomethane	50.0	49.4	99	67-126	
Dichlorodifluoromethane	50.0	45.5	91	26-152	
Ethyl methacrylate	50.0	48.4	97	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -MS1_8308-LCS.d

Lab ID: LCS 280-609561/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	50.0	47.8	96	76-121	
Iodomethane	50.0	46.7	93	37-145	
Isobutyl alcohol	1250	1290	103	46-132	
Methylene Chloride	50.0	46.9	94	64-128	
m-Xylene & p-Xylene	50.0	48.3	97	76-122	
o-Xylene	50.0	48.5	97	77-120	
Styrene	50.0	48.7	97	79-120	
Tetrachloroethene	50.0	48.3	97	72-127	
Toluene	50.0	50.7	101	68-127	
trans-1,2-Dichloroethene	50.0	47.3	95	66-129	
trans-1,3-Dichloropropene	50.0	48.7	97	66-127	
trans-1,4-Dichloro-2-butene	50.0	48.0	96	44-131	
Trichloroethene	50.0	48.6	97	70-125	
Trichlorofluoromethane	50.0	49.4	99	57-144	
Vinyl acetate	100	112	112	61-139	
Vinyl chloride	50.0	52.3	105	53-141	
Xylenes, Total	100	96.8	97	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -MS1_8307-LCS.d

Lab ID: LCS 280-609561/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	236	95	45-142	
Chloroprene	25.0	29.2	117	53-147	
Methacrylonitrile	250	244	98	47-142	
Methyl methacrylate	50.0	40.4	81	60-131	
Propionitrile	250	225	90	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502750-LCS.d

Lab ID: LCS 280-609932/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	49.0	98	74-121	
1,1,1-Trichloroethane	50.0	51.4	103	62-132	
1,1,2,2-Tetrachloroethane	50.0	45.1	90	72-122	
1,1,2-Trichloroethane	50.0	50.1	100	72-128	
1,1-Dichloroethane	50.0	54.5	109	66-130	
1,1-Dichloroethene	50.0	51.7	103	62-130	
1,1-Dichloropropene	50.0	52.5	105	64-133	
1,2,3-Trichloropropane	50.0	43.3	87	74-123	
1,2,4-Trichlorobenzene	50.0	49.7	99	73-124	
1,2-Dibromo-3-Chloropropane	50.0	39.3	79	58-122	
1,2-Dibromoethane	50.0	47.7	95	81-118	
1,2-Dichlorobenzene	50.0	46.8	94	77-121	
1,2-Dichloroethane	50.0	48.8	98	61-130	
1,2-Dichloropropane	50.0	54.1	108	68-127	
1,3-Dichlorobenzene	50.0	47.9	96	76-121	
1,3-Dichloropropane	50.0	49.5	99	80-118	
1,4-Dichlorobenzene	50.0	45.8	92	76-119	
2,2-Dichloropropane	50.0	54.6	109	57-140	
2-Butanone (MEK)	200	213	106	53-135	
2-Hexanone	200	210	105	58-134	
4-Methyl-2-pentanone (MIBK)	200	225	112	56-135	
Acetone	200	191	95	50-137	
Acrolein	494	452	92	10-207	
Acrylonitrile	500	544	109	65-133	
Allyl chloride	50.0	62.8	126	57-136	
Benzene	50.0	53.1	106	69-126	
Bromoform	50.0	47.7	95	57-125	
Bromomethane	50.0	40.8	82	25-163	
Carbon disulfide	50.0	53.5	107	56-128	
Carbon tetrachloride	50.0	53.6	107	60-133	
Chlorobenzene	50.0	48.9	98	78-118	
Chlorobromomethane	50.0	50.3	101	71-130	
Chlorodibromomethane	50.0	47.4	95	71-122	
Chloroethane	50.0	64.0	128	52-144	
Chloroform	50.0	50.1	100	68-128	
Chloromethane	50.0	53.7	107	43-142	
cis-1,2-Dichloroethene	50.0	51.0	102	69-126	
cis-1,3-Dichloropropene	50.0	52.4	105	75-120	
Dibromomethane	50.0	48.0	96	68-129	
Dichlorobromomethane	50.0	50.0	100	67-126	
Dichlorodifluoromethane	50.0	59.2	118	26-152	
Ethyl methacrylate	50.0	51.6	103	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502750-LCS.d

Lab ID: LCS 280-609932/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	50.0	48.4	97	76-121	
Iodomethane	50.0	44.6	89	37-145	
Isobutyl alcohol	1250	1130	91	46-132	
Methylene Chloride	50.0	48.0	96	64-128	
m-Xylene & p-Xylene	50.0	50.8	102	76-122	
o-Xylene	50.0	49.3	99	77-120	
Styrene	50.0	51.0	102	79-120	
Tetrachloroethene	50.0	54.0	108	72-127	
Toluene	50.0	52.1	104	68-127	
trans-1,2-Dichloroethene	50.0	54.1	108	66-129	
trans-1,3-Dichloropropene	50.0	54.0	108	66-127	
trans-1,4-Dichloro-2-butene	50.0	42.6	85	44-131	
Trichloroethene	50.0	51.5	103	70-125	
Trichlorofluoromethane	50.0	61.1	122	57-144	
Vinyl acetate	100	120	120	61-139	
Vinyl chloride	50.0	68.1	136	53-141	
Xylenes, Total	100	100	100	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502751-LCS.d

Lab ID: LCS 280-609932/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	234	94	45-142	
Chloroprene	25.0	25.4	101	53-147	
Methacrylonitrile	250	233	93	47-142	
Methyl methacrylate	50.0	38.9	78	60-131	
Propionitrile	250	246	98	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502847-LCS.d

Lab ID: LCS 280-610121/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	24.4	98	74-121	
1,1,1-Trichloroethane	25.0	25.7	103	62-132	
1,1,2,2-Tetrachloroethane	25.0	24.4	98	72-122	
1,1,2-Trichloroethane	25.0	26.7	107	72-128	
1,1-Dichloroethane	25.0	28.6	115	66-130	
1,1-Dichloroethene	25.0	26.5	106	62-130	
1,1-Dichloropropene	25.0	26.4	106	64-133	
1,2,3-Trichloropropane	25.0	23.4	93	74-123	
1,2,4-Trichlorobenzene	25.0	25.3	101	73-124	
1,2-Dibromo-3-Chloropropane	25.0	22.9	91	58-122	
1,2-Dibromoethane	25.0	24.9	100	81-118	
1,2-Dichlorobenzene	25.0	24.8	99	77-121	
1,2-Dichloroethane	25.0	24.4	98	61-130	
1,2-Dichloropropane	25.0	27.9	112	68-127	
1,3-Dichlorobenzene	25.0	25.3	101	76-121	
1,3-Dichloropropane	25.0	25.8	103	80-118	
1,4-Dichlorobenzene	25.0	24.2	97	76-119	
2,2-Dichloropropane	25.0	26.9	108	57-140	
2-Butanone (MEK)	100	114	114	53-135	
2-Hexanone	100	110	110	58-134	
4-Methyl-2-pentanone (MIBK)	100	117	117	56-135	
Acetone	100	100	100	50-137	
Acrolein	247	244	99	10-207	
Acrylonitrile	250	299	120	65-133	
Allyl chloride	25.0	32.2	129	57-136	
Benzene	25.0	27.5	110	69-126	
Bromoform	25.0	25.2	101	57-125	
Bromomethane	25.0	22.2	89	25-163	
Carbon disulfide	25.0	27.5	110	56-128	
Carbon tetrachloride	25.0	25.4	101	60-133	
Chlorobenzene	25.0	25.2	101	78-118	
Chlorobromomethane	25.0	26.2	105	71-130	
Chlorodibromomethane	25.0	24.5	98	71-122	
Chloroethane	25.0	26.6	107	52-144	
Chloroform	25.0	26.5	106	68-128	
Chloromethane	25.0	23.0	92	43-142	
cis-1,2-Dichloroethene	25.0	26.9	108	69-126	
cis-1,3-Dichloropropene	25.0	26.7	107	75-120	
Dibromomethane	25.0	26.1	104	68-129	
Dichlorobromomethane	25.0	25.7	103	67-126	
Dichlorodifluoromethane	25.0	17.7	71	26-152	
Ethyl methacrylate	25.0	28.2	113	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502847-LCS.d

Lab ID: LCS 280-610121/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	25.0	25.6	102	76-121	
Iodomethane	25.0	18.9	76	37-145	
Isobutyl alcohol	625	538	86	46-132	
Methylene Chloride	25.0	25.6	102	64-128	
m-Xylene & p-Xylene	25.0	26.5	106	76-122	
o-Xylene	25.0	26.0	104	77-120	
Styrene	25.0	26.7	107	79-120	
Tetrachloroethene	25.0	25.2	101	72-127	
Toluene	25.0	26.9	108	68-127	
trans-1,2-Dichloroethene	25.0	28.0	112	66-129	
trans-1,3-Dichloropropene	25.0	27.5	110	66-127	
trans-1,4-Dichloro-2-butene	25.0	22.5	90	44-131	
Trichloroethene	25.0	25.9	104	70-125	
Trichlorofluoromethane	25.0	20.9	84	57-144	
Vinyl acetate	50.0	58.3	117	61-139	
Vinyl chloride	25.0	27.5	110	53-141	
Xylenes, Total	50.0	52.5	105	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502846-LCS.d

Lab ID: LCS 280-610121/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	254	102	45-142	
Chloroprene	25.0	26.0	104	53-147	
Methacrylonitrile	250	243	97	47-142	
Methyl methacrylate	50.0	43.0	86	60-131	
Propionitrile	250	248	99	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -P01127-LCS.d

Lab ID: LCS 280-610123/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	47.2	94	74-121	
1,1,1-Trichloroethane	50.0	48.3	97	62-132	
1,1,2,2-Tetrachloroethane	50.0	45.3	91	72-122	
1,1,2-Trichloroethane	50.0	51.4	103	72-128	
1,1-Dichloroethane	50.0	49.2	98	66-130	
1,1-Dichloroethene	50.0	48.8	98	62-130	
1,1-Dichloropropene	50.0	49.3	99	64-133	
1,2,3-Trichloropropane	50.0	46.3	93	74-123	
1,2,4-Trichlorobenzene	50.0	48.8	98	73-124	
1,2-Dibromo-3-Chloropropane	50.0	43.7	87	58-122	
1,2-Dibromoethane	50.0	48.4	97	81-118	
1,2-Dichlorobenzene	50.0	48.6	97	77-121	
1,2-Dichloroethane	50.0	48.0	96	61-130	
1,2-Dichloropropane	50.0	48.2	96	68-127	
1,3-Dichlorobenzene	50.0	47.5	95	76-121	
1,3-Dichloropropane	50.0	47.8	96	80-118	
1,4-Dichlorobenzene	50.0	47.0	94	76-119	
2,2-Dichloropropane	50.0	47.1	94	57-140	
2-Butanone (MEK)	200	166	83	53-135	
2-Hexanone	200	161	81	58-134	
4-Methyl-2-pentanone (MIBK)	200	175	88	56-135	
Acetone	200	171	86	50-137	
Acrolein	494	368	74	10-207	
Acrylonitrile	500	449	90	65-133	
Allyl chloride	50.0	40.1	80	57-136	
Benzene	50.0	48.9	98	69-126	
Bromoform	50.0	48.7	97	57-125	
Bromomethane	50.0	50.4	101	25-163	
Carbon disulfide	50.0	45.3	91	56-128	
Carbon tetrachloride	50.0	48.0	96	60-133	
Chlorobenzene	50.0	48.3	97	78-118	
Chlorobromomethane	50.0	49.4	99	71-130	
Chlorodibromomethane	50.0	49.3	99	71-122	
Chloroethane	50.0	40.8	82	52-144	
Chloroform	50.0	48.6	97	68-128	
Chloromethane	50.0	40.2	80	43-142	
cis-1,2-Dichloroethene	50.0	49.3	99	69-126	
cis-1,3-Dichloropropene	50.0	44.6	89	75-120	
Dibromomethane	50.0	50.5	101	68-129	
Dichlorobromomethane	50.0	49.1	98	67-126	
Dichlorodifluoromethane	50.0	38.5	77	26-152	
Ethyl methacrylate	50.0	43.3	87	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -P01127-LCS.d

Lab ID: LCS 280-610123/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	50.0	48.3	97	76-121	
Iodomethane	50.0	33.1	66	37-145	
Isobutyl alcohol	1250	942	75	46-132	
Methylene Chloride	50.0	48.1	96	64-128	
m-Xylene & p-Xylene	50.0	47.8	96	76-122	
o-Xylene	50.0	47.6	95	77-120	
Styrene	50.0	48.2	96	79-120	
Tetrachloroethene	50.0	48.6	97	72-127	
Toluene	50.0	50.0	100	68-127	
trans-1,2-Dichloroethene	50.0	48.5	97	66-129	
trans-1,3-Dichloropropene	50.0	46.9	94	66-127	
trans-1,4-Dichloro-2-butene	50.0	37.2	74	44-131	
Trichloroethene	50.0	45.5	91	70-125	
Trichlorofluoromethane	50.0	44.5	89	57-144	
Vinyl acetate	100	91.1	91	61-139	
Vinyl chloride	50.0	42.4	85	53-141	
Xylenes, Total	100	95.4	95	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -P01128-LCS.d

Lab ID: LCS 280-610123/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	227	91	45-142	
Chloroprene	25.0	21.9	87	53-147	
Methacrylonitrile	250	235	94	47-142	
Methyl methacrylate	50.0	50.1	100	60-131	
Propionitrile	250	228	91	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502910-LCS.d

Lab ID: LCS 280-610347/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	26.6	106	74-121	
1,1,1-Trichloroethane	25.0	25.2	101	62-132	
1,1,2,2-Tetrachloroethane	25.0	28.1	112	72-122	
1,1,2-Trichloroethane	25.0	27.7	111	72-128	
1,1-Dichloroethane	25.0	27.9	112	66-130	
1,1-Dichloroethene	25.0	26.6	106	62-130	
1,1-Dichloropropene	25.0	25.7	103	64-133	
1,2,3-Trichloropropane	25.0	25.2	101	74-123	
1,2,4-Trichlorobenzene	25.0	28.9	115	73-124	
1,2-Dibromo-3-Chloropropane	25.0	23.4	94	58-122	
1,2-Dibromoethane	25.0	26.0	104	81-118	
1,2-Dichlorobenzene	25.0	26.3	105	77-121	
1,2-Dichloroethane	25.0	23.9	95	61-130	
1,2-Dichloropropane	25.0	27.7	111	68-127	
1,3-Dichlorobenzene	25.0	26.3	105	76-121	
1,3-Dichloropropane	25.0	26.8	107	80-118	
1,4-Dichlorobenzene	25.0	25.7	103	76-119	
2,2-Dichloropropane	25.0	26.7	107	57-140	
2-Butanone (MEK)	100	118	118	53-135	
2-Hexanone	100	117	117	58-134	
4-Methyl-2-pentanone (MIBK)	100	122	122	56-135	
Acetone	100	98.5	98	50-137	
Acrolein	247	238	96	10-207	
Acrylonitrile	250	303	121	65-133	
Allyl chloride	25.0	32.1	129	57-136	
Benzene	25.0	28.1	112	69-126	
Bromoform	25.0	26.0	104	57-125	
Bromomethane	25.0	25.7	103	25-163	
Carbon disulfide	25.0	27.7	111	56-128	
Carbon tetrachloride	25.0	25.4	102	60-133	
Chlorobenzene	25.0	26.5	106	78-118	
Chlorobromomethane	25.0	26.9	108	71-130	
Chlorodibromomethane	25.0	25.2	101	71-122	
Chloroethane	25.0	27.5	110	52-144	
Chloroform	25.0	25.5	102	68-128	
Chloromethane	25.0	24.7	99	43-142	
cis-1,2-Dichloroethene	25.0	26.4	105	69-126	
cis-1,3-Dichloropropene	25.0	26.8	107	75-120	
Dibromomethane	25.0	25.5	102	68-129	
Dichlorobromomethane	25.0	25.6	102	67-126	
Dichlorodifluoromethane	25.0	17.9	72	26-152	
Ethyl methacrylate	25.0	29.0	116	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502910-LCS.d

Lab ID: LCS 280-610347/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	25.0	26.3	105	76-121	
Iodomethane	25.0	20.0	80	37-145	
Isobutyl alcohol	625	651	104	46-132	
Methylene Chloride	25.0	26.0	104	64-128	
m-Xylene & p-Xylene	25.0	26.8	107	76-122	
o-Xylene	25.0	25.9	104	77-120	
Styrene	25.0	27.0	108	79-120	
Tetrachloroethene	25.0	27.2	109	72-127	
Toluene	25.0	27.3	109	68-127	
trans-1,2-Dichloroethene	25.0	28.3	113	66-129	
trans-1,3-Dichloropropene	25.0	28.4	114	66-127	
trans-1,4-Dichloro-2-butene	25.0	24.7	99	44-131	
Trichloroethene	25.0	26.9	108	70-125	
Trichlorofluoromethane	25.0	21.6	86	57-144	
Vinyl acetate	50.0	60.7	121	61-139	
Vinyl chloride	25.0	26.7	107	53-141	
Xylenes, Total	50.0	52.7	105	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502911-LCS.d

Lab ID: LCS 280-610347/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	300	120	45-142	
Chloroprene	25.0	28.2	113	53-147	
Methacrylonitrile	250	286	114	47-142	
Methyl methacrylate	50.0	53.6	107	60-131	
Propionitrile	250	305	122	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502939-LCS.d

Lab ID: LCS 280-610485/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	49.2	98	74-121	
1,1,1-Trichloroethane	50.0	49.6	99	62-132	
1,1,2,2-Tetrachloroethane	50.0	45.6	91	72-122	
1,1,2-Trichloroethane	50.0	49.7	99	72-128	
1,1-Dichloroethane	50.0	53.1	106	66-130	
1,1-Dichloroethene	50.0	53.9	108	62-130	
1,1-Dichloropropene	50.0	52.4	105	64-133	
1,2,3-Trichloropropane	50.0	42.3	85	74-123	
1,2,4-Trichlorobenzene	50.0	46.9	94	73-124	
1,2-Dibromo-3-Chloropropane	50.0	38.6	77	58-122	
1,2-Dibromoethane	50.0	48.4	97	81-118	
1,2-Dichlorobenzene	50.0	46.8	94	77-121	
1,2-Dichloroethane	50.0	45.0	90	61-130	
1,2-Dichloropropane	50.0	53.2	106	68-127	
1,3-Dichlorobenzene	50.0	47.9	96	76-121	
1,3-Dichloropropane	50.0	49.7	99	80-118	
1,4-Dichlorobenzene	50.0	46.5	93	76-119	
2,2-Dichloropropane	50.0	53.8	108	57-140	
2-Butanone (MEK)	200	190	95	53-135	
2-Hexanone	200	186	93	58-134	
4-Methyl-2-pentanone (MIBK)	200	200	100	56-135	
Acetone	200	165	83	50-137	
Acrolein	494	428	87	10-207	
Acrylonitrile	500	515	103	65-133	
Allyl chloride	50.0	61.3	123	57-136	
Benzene	50.0	53.0	106	69-126	
Bromoform	50.0	47.7	95	57-125	
Bromomethane	50.0	57.3	115	25-163	
Carbon disulfide	50.0	53.5	107	56-128	
Carbon tetrachloride	50.0	51.7	103	60-133	
Chlorobenzene	50.0	49.9	100	78-118	
Chlorobromomethane	50.0	50.8	102	71-130	
Chlorodibromomethane	50.0	47.8	96	71-122	
Chloroethane	50.0	60.5	121	52-144	
Chloroform	50.0	49.9	100	68-128	
Chloromethane	50.0	53.6	107	43-142	
cis-1,2-Dichloroethene	50.0	50.9	102	69-126	
cis-1,3-Dichloropropene	50.0	53.6	107	75-120	
Dibromomethane	50.0	47.6	95	68-129	
Dichlorobromomethane	50.0	49.7	99	67-126	
Dichlorodifluoromethane	50.0	58.2	116	26-152	
Ethyl methacrylate	50.0	51.1	102	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502939-LCS.d

Lab ID: LCS 280-610485/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	50.0	50.2	100	76-121	
Iodomethane	50.0	48.1	96	37-145	
Isobutyl alcohol	1250	972	78	46-132	
Methylene Chloride	50.0	48.7	97	64-128	
m-Xylene & p-Xylene	50.0	51.4	103	76-122	
o-Xylene	50.0	50.2	100	77-120	
Styrene	50.0	52.3	105	79-120	
Tetrachloroethene	50.0	52.0	104	72-127	
Toluene	50.0	52.4	105	68-127	
trans-1,2-Dichloroethene	50.0	54.2	108	66-129	
trans-1,3-Dichloropropene	50.0	53.1	106	66-127	
trans-1,4-Dichloro-2-butene	50.0	40.9	82	44-131	
Trichloroethene	50.0	52.7	105	70-125	
Trichlorofluoromethane	50.0	56.4	113	57-144	
Vinyl acetate	100	111	111	61-139	
Vinyl chloride	50.0	65.3	131	53-141	
Xylenes, Total	100	102	102	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502940-LCS.d

Lab ID: LCS 280-610485/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	212	85	45-142	
Chloroprene	25.0	24.7	99	53-147	
Methacrylonitrile	250	204	82	47-142	
Methyl methacrylate	50.0	37.0	74	60-131	
Propionitrile	250	223	89	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_8310.D

Lab ID: LCSD 280-609561/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	46.3	93	1	20	74-121	
1,1,1-Trichloroethane	50.0	52.5	105	2	20	62-132	
1,1,2,2-Tetrachloroethane	50.0	50.2	100	2	20	72-122	
1,1,2-Trichloroethane	50.0	50.5	101	3	20	72-128	
1,1-Dichloroethane	50.0	51.4	103	3	20	66-130	
1,1-Dichloroethene	50.0	46.4	93	2	21	62-130	
1,1-Dichloropropene	50.0	50.7	101	1	20	64-133	
1,2,3-Trichloropropane	50.0	49.0	98	2	20	74-123	
1,2,4-Trichlorobenzene	50.0	46.8	94	1	20	73-124	
1,2-Dibromo-3-Chloropropane	50.0	42.5	85	2	21	58-122	
1,2-Dibromoethane	50.0	47.8	96	0	20	81-118	
1,2-Dichlorobenzene	50.0	49.0	98	1	20	77-121	
1,2-Dichloroethane	50.0	50.0	100	2	20	61-130	
1,2-Dichloropropane	50.0	50.3	101	2	20	68-127	
1,3-Dichlorobenzene	50.0	49.7	99	1	20	76-121	
1,3-Dichloropropane	50.0	50.4	101	1	20	80-118	
1,4-Dichlorobenzene	50.0	47.6	95	0	20	76-119	
2,2-Dichloropropane	50.0	49.2	98	1	22	57-140	
2-Butanone (MEK)	200	196	98	1	20	53-135	
2-Hexanone	200	202	101	1	21	58-134	
4-Methyl-2-pentanone (MIBK)	200	209	104	1	20	56-135	
Acetone	200	183	92	4	21	50-137	
Acrolein	494	514	104	1	23	10-207	
Acrylonitrile	500	515	103	0	20	65-133	
Allyl chloride	50.0	50.4	101	2	20	57-136	
Benzene	50.0	50.3	101	0	20	69-126	
Bromoform	50.0	42.6	85	4	20	57-125	
Bromomethane	50.0	51.3	103	3	40	25-163	
Carbon disulfide	50.0	43.6	87	1	20	56-128	
Carbon tetrachloride	50.0	49.0	98	2	20	60-133	
Chlorobenzene	50.0	48.9	98	0	20	78-118	
Chlorobromomethane	50.0	48.7	97	2	20	71-130	
Chlorodibromomethane	50.0	46.4	93	2	20	71-122	
Chloroethane	50.0	48.5	97	4	30	52-144	
Chloroform	50.0	51.3	103	2	20	68-128	
Chloromethane	50.0	52.4	105	2	20	43-142	
cis-1,2-Dichloroethene	50.0	50.8	102	2	20	69-126	
cis-1,3-Dichloropropene	50.0	48.4	97	1	20	75-120	
Dibromomethane	50.0	50.2	100	5	20	68-129	
Dichlorobromomethane	50.0	50.8	102	3	20	67-126	
Dichlorodifluoromethane	50.0	44.5	89	2	21	26-152	
Ethyl methacrylate	50.0	48.2	96	0	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_8310.D

Lab ID: LCSD 280-609561/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	50.0	47.8	96	0	20	76-121	
Iodomethane	50.0	47.4	95	1	38	37-145	
Isobutyl alcohol	1250	1320	105	2	30	46-132	
Methylene Chloride	50.0	48.1	96	2	20	64-128	
m-Xylene & p-Xylene	50.0	48.1	96	0	20	76-122	
o-Xylene	50.0	48.1	96	1	20	77-120	
Styrene	50.0	49.1	98	1	20	79-120	
Tetrachloroethene	50.0	48.7	97	1	20	72-127	
Toluene	50.0	51.4	103	1	20	68-127	
trans-1,2-Dichloroethene	50.0	47.4	95	0	20	66-129	
trans-1,3-Dichloropropene	50.0	49.7	99	2	20	66-127	
trans-1,4-Dichloro-2-butene	50.0	47.5	95	1	24	44-131	
Trichloroethene	50.0	48.7	97	0	20	70-125	
Trichlorofluoromethane	50.0	48.9	98	1	28	57-144	
Vinyl acetate	100	113	113	2	23	61-139	
Vinyl chloride	50.0	50.4	101	4	25	53-141	
Xylenes, Total	100	96.2	96	1	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_8309.D

Lab ID: LCSD 280-609561/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	249	100	5	20	45-142	
Chloroprene	25.0	28.8	115	1	20	53-147	
Methacrylonitrile	250	259	104	6	20	47-142	
Methyl methacrylate	50.0	42.8	86	6	20	60-131	
Propionitrile	250	243	97	7	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502752.D

Lab ID: LCSD 280-609932/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	48.5	97	1	20	74-121	
1,1,1-Trichloroethane	50.0	51.0	102	1	20	62-132	
1,1,2,2-Tetrachloroethane	50.0	47.7	95	6	20	72-122	
1,1,2-Trichloroethane	50.0	50.2	100	0	20	72-128	
1,1-Dichloroethane	50.0	54.8	110	1	20	66-130	
1,1-Dichloroethene	50.0	51.5	103	0	21	62-130	
1,1-Dichloropropene	50.0	53.1	106	1	20	64-133	
1,2,3-Trichloropropane	50.0	46.5	93	7	20	74-123	
1,2,4-Trichlorobenzene	50.0	50.4	101	1	20	73-124	
1,2-Dibromo-3-Chloropropane	50.0	43.9	88	11	21	58-122	
1,2-Dibromoethane	50.0	47.2	94	1	20	81-118	
1,2-Dichlorobenzene	50.0	47.4	95	1	20	77-121	
1,2-Dichloroethane	50.0	49.3	99	1	20	61-130	
1,2-Dichloropropane	50.0	54.5	109	1	20	68-127	
1,3-Dichlorobenzene	50.0	49.1	98	2	20	76-121	
1,3-Dichloropropane	50.0	49.7	99	0	20	80-118	
1,4-Dichlorobenzene	50.0	46.1	92	1	20	76-119	
2,2-Dichloropropane	50.0	53.4	107	2	22	57-140	
2-Butanone (MEK)	200	222	111	4	20	53-135	
2-Hexanone	200	213	106	1	21	58-134	
4-Methyl-2-pentanone (MIBK)	200	232	116	3	20	56-135	
Acetone	200	203	101	6	21	50-137	
Acrolein	494	466	94	3	23	10-207	
Acrylonitrile	500	555	111	2	20	65-133	
Allyl chloride	50.0	61.6	123	2	20	57-136	
Benzene	50.0	52.6	105	1	20	69-126	
Bromoform	50.0	48.9	98	3	20	57-125	
Bromomethane	50.0	49.0	98	18	40	25-163	
Carbon disulfide	50.0	52.3	105	2	20	56-128	
Carbon tetrachloride	50.0	52.9	106	1	20	60-133	
Chlorobenzene	50.0	48.2	96	1	20	78-118	
Chlorobromomethane	50.0	51.2	102	2	20	71-130	
Chlorodibromomethane	50.0	47.3	95	0	20	71-122	
Chloroethane	50.0	62.6	125	2	30	52-144	
Chloroform	50.0	50.4	101	1	20	68-128	
Chloromethane	50.0	53.9	108	0	20	43-142	
cis-1,2-Dichloroethene	50.0	50.7	101	1	20	69-126	
cis-1,3-Dichloropropene	50.0	52.2	104	0	20	75-120	
Dibromomethane	50.0	48.5	97	1	20	68-129	
Dichlorobromomethane	50.0	50.2	100	0	20	67-126	
Dichlorodifluoromethane	50.0	56.9	114	4	21	26-152	
Ethyl methacrylate	50.0	52.0	104	1	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502752.D

Lab ID: LCSD 280-609932/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	50.0	47.8	96	1	20	76-121	
Iodomethane	50.0	43.9	88	2	38	37-145	
Isobutyl alcohol	1250	1190	95	5	30	46-132	
Methylene Chloride	50.0	48.1	96	0	20	64-128	
m-Xylene & p-Xylene	50.0	49.1	98	4	20	76-122	
o-Xylene	50.0	47.8	96	3	20	77-120	
Styrene	50.0	50.7	101	1	20	79-120	
Tetrachloroethene	50.0	52.4	105	3	20	72-127	
Toluene	50.0	52.1	104	0	20	68-127	
trans-1,2-Dichloroethene	50.0	54.1	108	0	20	66-129	
trans-1,3-Dichloropropene	50.0	54.9	110	2	20	66-127	
trans-1,4-Dichloro-2-butene	50.0	45.7	91	7	24	44-131	
Trichloroethene	50.0	50.9	102	1	20	70-125	
Trichlorofluoromethane	50.0	59.1	118	3	28	57-144	
Vinyl acetate	100	123	123	3	23	61-139	
Vinyl chloride	50.0	67.0	134	2	25	53-141	
Xylenes, Total	100	96.9	97	3	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502753.D

Lab ID: LCSD 280-609932/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	252	101	7	20	45-142	
Chloroprene	25.0	25.9	104	2	20	53-147	
Methacrylonitrile	250	241	96	3	20	47-142	
Methyl methacrylate	50.0	42.2	84	8	20	60-131	
Propionitrile	250	254	102	3	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502848.D

Lab ID: LCSD 280-610121/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	24.9	99	2	20	74-121	
1,1,1-Trichloroethane	25.0	25.4	102	1	20	62-132	
1,1,2,2-Tetrachloroethane	25.0	24.4	98	0	20	72-122	
1,1,2-Trichloroethane	25.0	26.0	104	3	20	72-128	
1,1-Dichloroethane	25.0	27.4	110	4	20	66-130	
1,1-Dichloroethene	25.0	26.5	106	0	21	62-130	
1,1-Dichloropropene	25.0	25.6	103	3	20	64-133	
1,2,3-Trichloropropane	25.0	23.9	95	2	20	74-123	
1,2,4-Trichlorobenzene	25.0	26.7	107	5	20	73-124	
1,2-Dibromo-3-Chloropropane	25.0	22.8	91	0	21	58-122	
1,2-Dibromoethane	25.0	25.3	101	2	20	81-118	
1,2-Dichlorobenzene	25.0	24.4	98	2	20	77-121	
1,2-Dichloroethane	25.0	23.8	95	2	20	61-130	
1,2-Dichloropropane	25.0	27.4	110	2	20	68-127	
1,3-Dichlorobenzene	25.0	25.4	102	0	20	76-121	
1,3-Dichloropropane	25.0	25.7	103	0	20	80-118	
1,4-Dichlorobenzene	25.0	24.3	97	1	20	76-119	
2,2-Dichloropropane	25.0	26.3	105	2	22	57-140	
2-Butanone (MEK)	100	108	108	6	20	53-135	
2-Hexanone	100	104	104	6	21	58-134	
4-Methyl-2-pentanone (MIBK)	100	110	110	6	20	56-135	
Acetone	100	96.2	96	4	21	50-137	
Acrolein	247	247	100	1	23	10-207	
Acrylonitrile	250	286	114	5	20	65-133	
Allyl chloride	25.0	30.3	121	6	20	57-136	
Benzene	25.0	27.8	111	1	20	69-126	
Bromoform	25.0	24.8	99	2	20	57-125	
Bromomethane	25.0	22.4	90	1	40	25-163	
Carbon disulfide	25.0	27.8	111	1	20	56-128	
Carbon tetrachloride	25.0	25.7	103	1	20	60-133	
Chlorobenzene	25.0	25.5	102	1	20	78-118	
Chlorobromomethane	25.0	27.1	108	3	20	71-130	
Chlorodibromomethane	25.0	24.1	96	2	20	71-122	
Chloroethane	25.0	26.1	105	2	30	52-144	
Chloroform	25.0	26.2	105	1	20	68-128	
Chloromethane	25.0	23.0	92	0	20	43-142	
cis-1,2-Dichloroethene	25.0	27.0	108	0	20	69-126	
cis-1,3-Dichloropropene	25.0	26.9	107	1	20	75-120	
Dibromomethane	25.0	25.7	103	2	20	68-129	
Dichlorobromomethane	25.0	25.9	104	1	20	67-126	
Dichlorodifluoromethane	25.0	17.3	69	2	21	26-152	
Ethyl methacrylate	25.0	27.4	109	3	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502848.D

Lab ID: LCSD 280-610121/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	25.0	25.6	103	0	20	76-121	
Iodomethane	25.0	21.1	84	11	38	37-145	
Isobutyl alcohol	625	568	91	6	30	46-132	
Methylene Chloride	25.0	26.2	105	2	20	64-128	
m-Xylene & p-Xylene	25.0	26.4	105	1	20	76-122	
o-Xylene	25.0	25.6	102	2	20	77-120	
Styrene	25.0	26.8	107	0	20	79-120	
Tetrachloroethene	25.0	26.0	104	3	20	72-127	
Toluene	25.0	27.1	108	1	20	68-127	
trans-1,2-Dichloroethene	25.0	28.0	112	0	20	66-129	
trans-1,3-Dichloropropene	25.0	27.6	110	0	20	66-127	
trans-1,4-Dichloro-2-butene	25.0	22.4	89	1	24	44-131	
Trichloroethene	25.0	26.4	106	2	20	70-125	
Trichlorofluoromethane	25.0	20.8	83	0	28	57-144	
Vinyl acetate	50.0	60.0	120	3	23	61-139	
Vinyl chloride	25.0	27.8	111	1	25	53-141	
Xylenes, Total	50.0	52.0	104	1	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502849.D

Lab ID: LCSD 280-610121/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	265	106	4	20	45-142	
Chloroprene	25.0	27.1	108	4	20	53-147	
Methacrylonitrile	250	260	104	7	20	47-142	
Methyl methacrylate	50.0	47.7	95	10	20	60-131	
Propionitrile	250	278	111	11	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P01129.D

Lab ID: LCSD 280-610123/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	46.9	94	1	20	74-121	
1,1,1-Trichloroethane	50.0	47.2	94	2	20	62-132	
1,1,2,2-Tetrachloroethane	50.0	46.2	92	2	20	72-122	
1,1,2-Trichloroethane	50.0	51.5	103	0	20	72-128	
1,1-Dichloroethane	50.0	48.7	97	1	20	66-130	
1,1-Dichloroethene	50.0	47.0	94	4	21	62-130	
1,1-Dichloropropene	50.0	48.6	97	1	20	64-133	
1,2,3-Trichloropropane	50.0	47.6	95	3	20	74-123	
1,2,4-Trichlorobenzene	50.0	49.4	99	1	20	73-124	
1,2-Dibromo-3-Chloropropane	50.0	45.4	91	4	21	58-122	
1,2-Dibromoethane	50.0	47.6	95	2	20	81-118	
1,2-Dichlorobenzene	50.0	47.8	96	2	20	77-121	
1,2-Dichloroethane	50.0	48.6	97	1	20	61-130	
1,2-Dichloropropane	50.0	48.2	96	0	20	68-127	
1,3-Dichlorobenzene	50.0	47.1	94	1	20	76-121	
1,3-Dichloropropane	50.0	47.2	94	1	20	80-118	
1,4-Dichlorobenzene	50.0	46.7	93	1	20	76-119	
2,2-Dichloropropane	50.0	45.8	92	3	22	57-140	
2-Butanone (MEK)	200	181	91	9	20	53-135	
2-Hexanone	200	172	86	6	21	58-134	
4-Methyl-2-pentanone (MIBK)	200	186	93	6	20	56-135	
Acetone	200	186	93	8	21	50-137	
Acrolein	494	385	78	5	23	10-207	
Acrylonitrile	500	472	94	5	20	65-133	
Allyl chloride	50.0	40.6	81	1	20	57-136	
Benzene	50.0	48.7	97	0	20	69-126	
Bromoform	50.0	49.0	98	1	20	57-125	
Bromomethane	50.0	55.6	111	10	40	25-163	
Carbon disulfide	50.0	43.4	87	4	20	56-128	
Carbon tetrachloride	50.0	46.6	93	3	20	60-133	
Chlorobenzene	50.0	47.8	96	1	20	78-118	
Chlorobromomethane	50.0	49.2	98	0	20	71-130	
Chlorodibromomethane	50.0	48.1	96	3	20	71-122	
Chloroethane	50.0	45.8	92	12	30	52-144	
Chloroform	50.0	48.4	97	0	20	68-128	
Chloromethane	50.0	42.5	85	6	20	43-142	
cis-1,2-Dichloroethene	50.0	49.9	100	1	20	69-126	
cis-1,3-Dichloropropene	50.0	44.2	88	1	20	75-120	
Dibromomethane	50.0	50.2	100	1	20	68-129	
Dichlorobromomethane	50.0	48.7	97	1	20	67-126	
Dichlorodifluoromethane	50.0	39.6	79	3	21	26-152	
Ethyl methacrylate	50.0	44.0	88	2	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P01129.D

Lab ID: LCSD 280-610123/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	50.0	47.1	94	3	20	76-121	
Iodomethane	50.0	33.8	68	2	38	37-145	
Isobutyl alcohol	1250	1090	87	15	30	46-132	
Methylene Chloride	50.0	48.5	97	1	20	64-128	
m-Xylene & p-Xylene	50.0	46.7	93	2	20	76-122	
o-Xylene	50.0	47.4	95	0	20	77-120	
Styrene	50.0	48.1	96	0	20	79-120	
Tetrachloroethene	50.0	47.8	96	2	20	72-127	
Toluene	50.0	50.2	100	0	20	68-127	
trans-1,2-Dichloroethene	50.0	47.8	96	2	20	66-129	
trans-1,3-Dichloropropene	50.0	47.6	95	2	20	66-127	
trans-1,4-Dichloro-2-butene	50.0	39.9	80	7	24	44-131	
Trichloroethene	50.0	44.5	89	2	20	70-125	
Trichlorofluoromethane	50.0	46.8	94	5	28	57-144	
Vinyl acetate	100	93.8	94	3	23	61-139	
Vinyl chloride	50.0	44.5	89	5	25	53-141	
Xylenes, Total	100	94.1	94	1	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P01130.D

Lab ID: LCSD 280-610123/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	225	90	1	20	45-142	
Chloroprene	25.0	21.7	87	1	20	53-147	
Methacrylonitrile	250	232	93	1	20	47-142	
Methyl methacrylate	50.0	46.8	94	7	20	60-131	
Propionitrile	250	224	90	2	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502912.D

Lab ID: LCSD 280-610347/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	22.7	91	16	20	74-121	
1,1,1-Trichloroethane	25.0	22.8	91	10	20	62-132	
1,1,2,2-Tetrachloroethane	25.0	25.1	100	11	20	72-122	
1,1,2-Trichloroethane	25.0	25.0	100	10	20	72-128	
1,1-Dichloroethane	25.0	24.4	97	14	20	66-130	
1,1-Dichloroethene	25.0	24.2	97	10	21	62-130	
1,1-Dichloropropene	25.0	23.1	92	11	20	64-133	
1,2,3-Trichloropropane	25.0	22.5	90	11	20	74-123	
1,2,4-Trichlorobenzene	25.0	24.7	99	16	20	73-124	
1,2-Dibromo-3-Chloropropane	25.0	21.8	87	7	21	58-122	
1,2-Dibromoethane	25.0	23.3	93	11	20	81-118	
1,2-Dichlorobenzene	25.0	22.9	92	14	20	77-121	
1,2-Dichloroethane	25.0	21.4	86	11	20	61-130	
1,2-Dichloropropane	25.0	24.8	99	11	20	68-127	
1,3-Dichlorobenzene	25.0	22.9	92	14	20	76-121	
1,3-Dichloropropane	25.0	23.9	96	11	20	80-118	
1,4-Dichlorobenzene	25.0	22.0	88	16	20	76-119	
2,2-Dichloropropane	25.0	22.5	90	17	22	57-140	
2-Butanone (MEK)	100	113	113	4	20	53-135	
2-Hexanone	100	108	108	7	21	58-134	
4-Methyl-2-pentanone (MIBK)	100	114	114	7	20	56-135	
Acetone	100	93.4	93	5	21	50-137	
Acrolein	247	223	90	7	23	10-207	
Acrylonitrile	250	281	112	8	20	65-133	
Allyl chloride	25.0	28.5	114	12	20	57-136	
Benzene	25.0	24.5	98	14	20	69-126	
Bromoform	25.0	22.4	90	15	20	57-125	
Bromomethane	25.0	21.0	84	20	40	25-163	
Carbon disulfide	25.0	23.6	95	16	20	56-128	
Carbon tetrachloride	25.0	22.2	89	13	20	60-133	
Chlorobenzene	25.0	22.6	91	16	20	78-118	
Chlorobromomethane	25.0	23.0	92	16	20	71-130	
Chlorodibromomethane	25.0	21.7	87	15	20	71-122	
Chloroethane	25.0	23.6	94	16	30	52-144	
Chloroform	25.0	22.9	91	11	20	68-128	
Chloromethane	25.0	21.9	88	12	20	43-142	
cis-1,2-Dichloroethene	25.0	24.0	96	9	20	69-126	
cis-1,3-Dichloropropene	25.0	23.5	94	13	20	75-120	
Dibromomethane	25.0	23.3	93	9	20	68-129	
Dichlorobromomethane	25.0	22.7	91	12	20	67-126	
Dichlorodifluoromethane	25.0	15.6	62	14	21	26-152	
Ethyl methacrylate	25.0	25.8	103	12	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502912.D

Lab ID: LCSD 280-610347/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	25.0	22.5	90	16	20	76-121	
Iodomethane	25.0	16.5	66	20	38	37-145	
Isobutyl alcohol	625	627	100	4	30	46-132	
Methylene Chloride	25.0	23.0	92	12	20	64-128	
m-Xylene & p-Xylene	25.0	23.0	92	15	20	76-122	
o-Xylene	25.0	22.2	89	15	20	77-120	
Styrene	25.0	23.5	94	14	20	79-120	
Tetrachloroethene	25.0	22.5	90	19	20	72-127	
Toluene	25.0	24.2	97	12	20	68-127	
trans-1,2-Dichloroethene	25.0	24.4	98	15	20	66-129	
trans-1,3-Dichloropropene	25.0	24.5	98	15	20	66-127	
trans-1,4-Dichloro-2-butene	25.0	23.0	92	7	24	44-131	
Trichloroethene	25.0	22.9	92	16	20	70-125	
Trichlorofluoromethane	25.0	18.9	76	13	28	57-144	
Vinyl acetate	50.0	55.6	111	9	23	61-139	
Vinyl chloride	25.0	23.6	94	12	25	53-141	
Xylenes, Total	50.0	45.2	90	15	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502913.D

Lab ID: LCSD 280-610347/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	280	112	7	20	45-142	
Chloroprene	25.0	25.1	100	12	20	53-147	
Methacrylonitrile	250	270	108	6	20	47-142	
Methyl methacrylate	50.0	49.3	99	8	20	60-131	
Propionitrile	250	290	116	5	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502941.D

Lab ID: LCSD 280-610485/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	49.5	99	1	20	74-121	
1,1,1-Trichloroethane	50.0	51.9	104	5	20	62-132	
1,1,2,2-Tetrachloroethane	50.0	45.3	91	1	20	72-122	
1,1,2-Trichloroethane	50.0	51.5	103	4	20	72-128	
1,1-Dichloroethane	50.0	55.5	111	4	20	66-130	
1,1-Dichloroethene	50.0	53.2	106	1	21	62-130	
1,1-Dichloropropene	50.0	54.9	110	5	20	64-133	
1,2,3-Trichloropropane	50.0	42.9	86	1	20	74-123	
1,2,4-Trichlorobenzene	50.0	47.7	95	2	20	73-124	
1,2-Dibromo-3-Chloropropane	50.0	38.4	77	1	21	58-122	
1,2-Dibromoethane	50.0	47.5	95	2	20	81-118	
1,2-Dichlorobenzene	50.0	46.8	94	0	20	77-121	
1,2-Dichloroethane	50.0	46.3	93	3	20	61-130	
1,2-Dichloropropane	50.0	54.7	109	3	20	68-127	
1,3-Dichlorobenzene	50.0	49.6	99	4	20	76-121	
1,3-Dichloropropane	50.0	50.3	101	1	20	80-118	
1,4-Dichlorobenzene	50.0	46.4	93	0	20	76-119	
2,2-Dichloropropane	50.0	54.3	109	1	22	57-140	
2-Butanone (MEK)	200	195	97	3	20	53-135	
2-Hexanone	200	188	94	1	21	58-134	
4-Methyl-2-pentanone (MIBK)	200	207	103	3	20	56-135	
Acetone	200	174	87	5	21	50-137	
Acrolein	494	439	89	3	23	10-207	
Acrylonitrile	500	531	106	3	20	65-133	
Allyl chloride	50.0	61.9	124	1	20	57-136	
Benzene	50.0	54.5	109	3	20	69-126	
Bromoform	50.0	48.5	97	2	20	57-125	
Bromomethane	50.0	60.6	121	6	40	25-163	
Carbon disulfide	50.0	54.8	110	3	20	56-128	
Carbon tetrachloride	50.0	54.0	108	4	20	60-133	
Chlorobenzene	50.0	49.8	100	0	20	78-118	
Chlorobromomethane	50.0	51.1	102	1	20	71-130	
Chlorodibromomethane	50.0	47.5	95	1	20	71-122	
Chloroethane	50.0	63.9	128	5	30	52-144	
Chloroform	50.0	50.8	102	2	20	68-128	
Chloromethane	50.0	56.8	114	6	20	43-142	
cis-1,2-Dichloroethene	50.0	52.1	104	2	20	69-126	
cis-1,3-Dichloropropene	50.0	53.0	106	1	20	75-120	
Dibromomethane	50.0	49.4	99	4	20	68-129	
Dichlorobromomethane	50.0	50.8	102	2	20	67-126	
Dichlorodifluoromethane	50.0	60.7	121	4	21	26-152	
Ethyl methacrylate	50.0	50.6	101	1	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502941.D

Lab ID: LCSD 280-610485/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	50.0	50.7	101	1	20	76-121	
Iodomethane	50.0	48.6	97	1	38	37-145	
Isobutyl alcohol	1250	1040	83	7	30	46-132	
Methylene Chloride	50.0	50.5	101	4	20	64-128	
m-Xylene & p-Xylene	50.0	51.6	103	0	20	76-122	
o-Xylene	50.0	50.7	101	1	20	77-120	
Styrene	50.0	52.2	104	0	20	79-120	
Tetrachloroethene	50.0	52.5	105	1	20	72-127	
Toluene	50.0	54.1	108	3	20	68-127	
trans-1,2-Dichloroethene	50.0	55.7	111	3	20	66-129	
trans-1,3-Dichloropropene	50.0	55.7	111	5	20	66-127	
trans-1,4-Dichloro-2-butene	50.0	41.6	83	2	24	44-131	
Trichloroethene	50.0	51.3	103	3	20	70-125	
Trichlorofluoromethane	50.0	59.6	119	6	28	57-144	
Vinyl acetate	100	115	115	3	23	61-139	
Vinyl chloride	50.0	67.3	135	3	25	53-141	
Xylenes, Total	100	102	102	1	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502942.D

Lab ID: LCSD 280-610485/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	219	88	3	20	45-142	
Chloroprene	25.0	24.0	96	3	20	53-147	
Methacrylonitrile	250	202	81	1	20	47-142	
Methyl methacrylate	50.0	34.9	70	6	20	60-131	
Propionitrile	250	220	88	1	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: MS1_8312.D Lab Sample ID: MB 280-609561/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_MS1 Date Analyzed: 04/21/2023 09:22

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-609561/1003	-MS1_8307-LCS.d	04/21/2023 07:37
	LCS 280-609561/1002	-MS1_8308-LCS.d	04/21/2023 07:58
	LCSD 280-609561/5	MS1_8309.D	04/21/2023 08:19
	LCSD 280-609561/4	MS1_8310.D	04/21/2023 08:40
MW-111D-20230414	280-175122-5	MS1_8330.D	04/21/2023 16:28

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502755.D Lab Sample ID: MB 280-609932/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_X4 Date Analyzed: 04/24/2023 20:30

GC Column: RXI-624SilMS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-609932/1002	-X502750-LCS.d	04/24/2023 18:48
	LCS 280-609932/1003	-X502751-LCS.d	04/24/2023 19:08
	LCSD 280-609932/4	X502752.D	04/24/2023 19:29
	LCSD 280-609932/5	X502753.D	04/24/2023 19:49
MP-2-20230411	280-175122-2	X502772.D	04/25/2023 03:05

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: P01132.D Lab Sample ID: MB 280-610123/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_P Date Analyzed: 04/26/2023 10:12

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-610123/1002	-P01127-LCS .d	04/26/2023 08:20
	LCS 280-610123/1003	-P01128-LCS .d	04/26/2023 08:42
	LCSD 280-610123/4	P01129.D	04/26/2023 09:06
	LCSD 280-610123/5	P01130.D	04/26/2023 09:28
MW-118D-20230412	280-175122-3	P01141.D	04/26/2023 14:30

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502851.D Lab Sample ID: MB 280-610121/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_X4 Date Analyzed: 04/26/2023 11:43

GC Column: RXI-624SilMS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-610121/1003	-X502846-LCS.d	04/26/2023 09:51
	LCS 280-610121/1002	-X502847-LCS.d	04/26/2023 10:19
	LCSD 280-610121/4	X502848.D	04/26/2023 10:41
	LCSD 280-610121/5	X502849.D	04/26/2023 11:02
RW-1-20230413	280-175122-1	X502867.D	04/26/2023 17:27

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502915.D Lab Sample ID: MB 280-610347/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_X4 Date Analyzed: 04/27/2023 12:59

GC Column: RXI-624SilMS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-610347/1002	-X502910-LCS.d	04/27/2023 11:12
	LCS 280-610347/1003	-X502911-LCS.d	04/27/2023 11:36
	LCSD 280-610347/4	X502912.D	04/27/2023 11:57
	LCSD 280-610347/5	X502913.D	04/27/2023 12:18
MW-102S-20230414	280-175122-7	X502923.D	04/27/2023 15:44
MP-3-20230413	280-175122-4	X502932.D	04/27/2023 18:49

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502944.D Lab Sample ID: MB 280-610485/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_X4 Date Analyzed: 04/27/2023 23:10

GC Column: RXI-624SilMS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-610485/1002	-X502939-LCS.d	04/27/2023 21:28
	LCS 280-610485/1003	-X502940-LCS.d	04/27/2023 21:48
	LCSD 280-610485/4	X502941.D	04/27/2023 22:09
	LCSD 280-610485/5	X502942.D	04/27/2023 22:29
TB-07-20230416	280-175122-9	X502946.D	04/28/2023 00:12
MW-123-20230415	280-175122-6	X502955.D	04/28/2023 03:17
MW-115S-20230415	280-175122-8	X502956.D	04/28/2023 03:38

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: MS1_4145.D BFB Injection Date: 12/28/2022

Instrument ID: VMS_MS1 BFB Injection Time: 07:14

Analysis Batch No.: 597846

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	22.4
75	30.0 - 60.0 % of mass 95	54.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	Greater than 50% of mass 95	72.3
175	5.0 - 9.0 % of mass 174	5.9 (8.1) 1
176	95.0 - 101.0 % of mass 174	71.1 (98.4) 1
177	5.0 - 9.0 % of mass 176	4.7 (6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 280-597846/12	MS1_4150.D	12/28/2022	11:59
	STD2 280-597846/13	MS1_4151.D	12/28/2022	12:21
	STD5 280-597846/14	MS1_4152.D	12/28/2022	12:43
	STD10 280-597846/15	MS1_4153.D	12/28/2022	13:05
	STD50 280-597846/16	MS1_4154.D	12/28/2022	13:27
	STD75 280-597846/17	MS1_4155.D	12/28/2022	13:49
	STD100 280-597846/18	MS1_4156.D	12/28/2022	14:11
	STD200 280-597846/19	MS1_4157.D	12/28/2022	14:33
	ICV 280-597846/20	MS1_4158.D	12/28/2022	14:55

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: MS1_8181.D BFB Injection Date: 04/18/2023

Instrument ID: VMS_MS1 BFB Injection Time: 09:29

Analysis Batch No.: 609046

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.3	
75	30.0 - 60.0 % of mass 95	54.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	70.0	
175	5.0 - 9.0 % of mass 174	6.1	(8.8) 1
176	95.0 - 101.0 % of mass 174	68.3	(97.5) 1
177	5.0 - 9.0 % of mass 176	4.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-609046/34	MS1_8185.D	04/18/2023	11:03
	IC 280-609046/35	MS1_8186.D	04/18/2023	11:24
	IC 280-609046/36	MS1_8187.D	04/18/2023	11:45
	ICIS 280-609046/37	MS1_8188.D	04/18/2023	12:06
	IC 280-609046/38	MS1_8189.D	04/18/2023	12:27
	IC 280-609046/39	MS1_8190.D	04/18/2023	12:49
	IC 280-609046/42	MS1_8195.D	04/18/2023	18:15
	IC 280-609046/41	MS1_8196.D	04/18/2023	18:36
	IC 280-609046/40	MS1_8197.D	04/18/2023	18:58
	ICV 280-609046/43	MS1_8198.D	04/18/2023	19:19

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: MS1_8306.D BFB Injection Date: 04/21/2023

Instrument ID: VMS_MS1 BFB Injection Time: 07:11

Analysis Batch No.: 609561

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.6	
75	30.0 - 60.0 % of mass 95	55.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	70.6	
175	5.0 - 9.0 % of mass 174	6.1	(8.7) 1
176	95.0 - 101.0 % of mass 174	67.6	(95.8) 1
177	5.0 - 9.0 % of mass 176	4.3	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-609561/3	MS1_8307.D	04/21/2023	7:37
	LCS 280-609561/1003	-MS1_8307-LCS	04/21/2023	7:37
	CCV 280-609561/2	MS1_8308.D	04/21/2023	7:58
	LCS 280-609561/1002	-MS1_8308-LCS	04/21/2023	7:58
	LCSD 280-609561/5	MS1_8309.D	04/21/2023	8:19
	LCSD 280-609561/4	MS1_8310.D	04/21/2023	8:40
	MB 280-609561/7	MS1_8312.D	04/21/2023	9:22
MW-111D-20230414	280-175122-5	MS1_8330.D	04/21/2023	16:28
	CCVC 280-609561/53	MS1_8333.D	04/21/2023	17:33
	CCVC 280-609561/54	MS1_8337.D	04/21/2023	19:11

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: BFB Injection Date:

Instrument ID: BFB Injection Time:

Lab File ID: DFTPP Injection Date:

Instrument ID: DFTPP Injection Time:

Analysis Batch No.:

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE

NOTE: All ion abundances shall be normalized to m/z 95, the nominal base peak, even though the ion abundance of m/z 174 may be up to 120% that of m/z 95. Criteria based on EPA method 524.4.

NOTE: All ion abundances MUST be normalized to m/z 198, the nominal base peak, even though the ion abundance of m/z 442 may exceed that of m/z 198.

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-608141/11	P00472.D	04/10/2023	13:03
	STD010 280-608141/12	P00473.D	04/10/2023	13:26
	STD020 280-608141/13	P00474.D	04/10/2023	13:48
	STD050 280-608141/14	P00475.D	04/10/2023	14:11
	STD10 280-608141/15	P00476.D	04/10/2023	14:34
	ICIS 280-608141/16	P00477.D	04/10/2023	14:57
	STD75 280-608141/17	P00478.D	04/10/2023	15:20
	STD100 280-608141/18	P00479.D	04/10/2023	16:43
	STD200 280-608141/19	P00480.D	04/10/2023	17:06
	STD01 280-608141/21	P00483.D	04/10/2023	18:14
	STD02 280-608141/22	P00484.D	04/10/2023	18:37
	STD05 280-608141/23	P00485.D	04/10/2023	18:59
	STD10 280-608141/24	P00486.D	04/10/2023	19:22
	STD50 280-608141/25	P00487.D	04/10/2023	19:45
	STD100 280-608141/26	P00488.D	04/10/2023	20:07
	STD200 280-608141/27	P00489.D	04/10/2023	20:30

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: P00502.D BFB Injection Date: 04/11/2023

Instrument ID: VMS_P BFB Injection Time: 15:41

Analysis Batch No.: 608296

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.9	
75	30.0 - 60.0 % of mass 95	48.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	63.9	
175	5.0 - 9.0 % of mass 174	4.9	(7.6) 1
176	95.0 - 101.0 % of mass 174	61.3	(95.9) 1
177	5.0 - 9.0 % of mass 176	3.9	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 280-608296/11	P00503.D	04/11/2023	16:17
	STD005 280-608296/12	P00506.D	04/11/2023	17:33
	STD010 280-608296/13	P00507.D	04/11/2023	17:56
	STD020 280-608296/14	P00508.D	04/11/2023	18:18
	STD050 280-608296/15	P00509.D	04/11/2023	18:41
	STD10 280-608296/16	P00510.D	04/11/2023	19:03
	ICIS 280-608296/17	P00511.D	04/11/2023	19:26
	STD75 280-608296/18	P00512.D	04/11/2023	19:48
	STD100 280-608296/19	P00513.D	04/11/2023	20:11
	STD200 280-608296/20	P00514.D	04/11/2023	20:33
	ICV 280-608296/21	P00516.D	04/11/2023	21:18

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: P00517.D BFB Injection Date: 04/12/2023

Instrument ID: VMS_P BFB Injection Time: 08:16

Analysis Batch No.: 608364

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	48.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	64.2	
175	5.0 - 9.0 % of mass 174	4.8	(7.5) 1
176	95.0 - 101.0 % of mass 174	61.5	(95.7) 1
177	5.0 - 9.0 % of mass 176	4.1	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-608364/12	P00521.D	04/12/2023	11:05
	STD050 280-608364/15	P00524.D	04/12/2023	12:13
	STD10 280-608364/16	P00525.D	04/12/2023	12:36
	STD010 280-608364/13	P00526.D	04/12/2023	12:58
	STD020 280-608364/14	P00527.D	04/12/2023	13:21
	ICIS 280-608364/17	P00528.D	04/12/2023	13:43
	STD75 280-608364/18	P00529.D	04/12/2023	14:06
	STD100 280-608364/19	P00530.D	04/12/2023	14:28
	STD200 280-608364/20	P00531.D	04/12/2023	14:51
	ICV 280-608364/21	P00533.D	04/12/2023	15:45

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: P01127P.D BFB Injection Date: 04/26/2023

Instrument ID: VMS_P BFB Injection Time: 08:20

Analysis Batch No.: 610123

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.2	
75	30.0 - 60.0 % of mass 95	49.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	69.6	
175	5.0 - 9.0 % of mass 174	5.5	(7.9) 1
176	95.0 - 101.0 % of mass 174	67.0	(96.2) 1
177	5.0 - 9.0 % of mass 176	4.5	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-610123/2	P01127.D	04/26/2023	8:20
	LCS 280-610123/1002	-P01127-LCS.d	04/26/2023	8:20
	CCV 280-610123/3	P01128.D	04/26/2023	8:42
	LCS 280-610123/1003	-P01128-LCS.d	04/26/2023	8:42
	LCSD 280-610123/4	P01129.D	04/26/2023	9:06
	LCSD 280-610123/5	P01130.D	04/26/2023	9:28
	MB 280-610123/7	P01132.D	04/26/2023	10:12
MW-118D-20230412	280-175122-3	P01141.D	04/26/2023	14:30

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X43661.D BFB Injection Date: 10/22/2022

Instrument ID: VMS_X4 BFB Injection Time: 11:07

Analysis Batch No.: 590907

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.0	
75	30.0 - 60.0 % of mass 95	50.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	73.1	
175	5.0 - 9.0 % of mass 174	6.1	(8.4) 1
176	95.0 - 101.0 % of mass 174	70.6	(96.6) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-590907/13	X43662.D	10/22/2022	11:33
	ICIS 280-590907/18	X43663.D	10/22/2022	11:54
	STD010 280-590907/14	X43664.D	10/22/2022	12:14
	STD020 280-590907/15	X43665.D	10/22/2022	12:35
	STD050 280-590907/16	X43666.D	10/22/2022	12:55
	STD10 280-590907/17	X43667.D	10/22/2022	13:16
	STD75 280-590907/19	X43668.D	10/22/2022	13:36
	STD100 280-590907/20	X43669.D	10/22/2022	13:57
	STD200 280-590907/21	X43670.D	10/22/2022	14:18
	ICV 280-590907/22	X43672.D	10/22/2022	14:59
	STD010 280-590907/23	X43673.D	10/22/2022	15:19
	STD020 280-590907/24	X43674.D	10/22/2022	15:40
	STD050 280-590907/25	X43675.D	10/22/2022	16:01
	STD10 280-590907/26	X43676.D	10/22/2022	16:21
	STD50 280-590907/27	X43677.D	10/22/2022	16:42
	STD100 280-590907/28	X43678.D	10/22/2022	17:02
	STD200 280-590907/29	X43679.D	10/22/2022	17:23
	ICV 280-590924/12	X43688.D	10/23/2022	15:09

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502125.D BFB Injection Date: 04/07/2023

Instrument ID: VMS_X4 BFB Injection Time: 02:33

Analysis Batch No.: 607881

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.3	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.4	(0.4) 1
174	Greater than 50% of mass 95	82.2	
175	5.0 - 9.0 % of mass 174	6.4	(7.8) 1
176	95.0 - 101.0 % of mass 174	78.2	(95.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD 280-607881/19	X502127.D	04/07/2023	3:14
	STD 280-607881/18	X502128.D	04/07/2023	3:34
	STD 280-607881/16	X502129.D	04/07/2023	3:55
	STD 280-607881/17	X502130.D	04/07/2023	4:15
	STD 280-607881/15	X502131.D	04/07/2023	4:36
	ICIS 280-607881/14	X502132.D	04/07/2023	4:56
	STD 280-607881/13	X502133.D	04/07/2023	5:17
	STD 280-607881/12	X502134.D	04/07/2023	5:38
	STD 280-607881/11	X502135.D	04/07/2023	5:58

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502169.D BFB Injection Date: 04/10/2023

Instrument ID: VMS_X4 BFB Injection Time: 21:51

Analysis Batch No.: 608203

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.6	
75	30.0 - 60.0 % of mass 95	50.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	81.7	
175	5.0 - 9.0 % of mass 174	6.5	(7.9) 1
176	95.0 - 101.0 % of mass 174	79.9	(97.7) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 280-608203/8	X502177.D	04/11/2023	0:52

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502749.D BFB Injection Date: 04/24/2023

Instrument ID: VMS_X4 BFB Injection Time: 18:27

Analysis Batch No.: 609932

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.4	
75	30.0 - 60.0 % of mass 95	47.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	6.1	(7.8) 1
176	95.0 - 101.0 % of mass 174	75.9	(97.3) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-609932/2	X502750.D	04/24/2023	18:48
	LCS 280-609932/1002	-X502750-LCS.	04/24/2023	18:48
	CCV 280-609932/3	X502751.D	04/24/2023	19:08
	LCS 280-609932/1003	-X502751-LCS.	04/24/2023	19:08
	LCSD 280-609932/4	X502752.D	04/24/2023	19:29
	LCSD 280-609932/5	X502753.D	04/24/2023	19:49
	MB 280-609932/7	X502755.D	04/24/2023	20:30
MP-2-20230411	280-175122-2	X502772.D	04/25/2023	3:05

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502846A.D BFB Injection Date: 04/26/2023

Instrument ID: VMS_X4 BFB Injection Time: 09:51

Analysis Batch No.: 610121

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.9	
75	30.0 - 60.0 % of mass 95	46.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.1	(0.2) 1
174	Greater than 50% of mass 95	76.8	
175	5.0 - 9.0 % of mass 174	5.9	(7.7) 1
176	95.0 - 101.0 % of mass 174	75.6	(98.3) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-610121/3	X502846.D	04/26/2023	9:51
	LCS 280-610121/1003	-X502846-LCS.	04/26/2023	9:51
	CCV 280-610121/2	X502847.D	04/26/2023	10:19
	LCS 280-610121/1002	-X502847-LCS.	04/26/2023	10:19
	LCSD 280-610121/4	X502848.D	04/26/2023	10:41
	LCSD 280-610121/5	X502849.D	04/26/2023	11:02
	MB 280-610121/7	X502851.D	04/26/2023	11:43
RW-1-20230413	280-175122-1	X502867.D	04/26/2023	17:27

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502909.D BFB Injection Date: 04/27/2023

Instrument ID: VMS_X4 BFB Injection Time: 10:51

Analysis Batch No.: 610347

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.1	
75	30.0 - 60.0 % of mass 95	45.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	5.9	
173	Less than 2.0 % of mass 174	0.2	(0.3) 1
174	Greater than 50% of mass 95	74.5	
175	5.0 - 9.0 % of mass 174	5.8	(7.8) 1
176	95.0 - 101.0 % of mass 174	71.8	(96.4) 1
177	5.0 - 9.0 % of mass 176	5.1	(7.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-610347/2	X502910.D	04/27/2023	11:12
	LCS 280-610347/1002	-X502910-LCS.	04/27/2023	11:12
	CCV 280-610347/3	X502911.D	04/27/2023	11:36
	LCS 280-610347/1003	-X502911-LCS.	04/27/2023	11:36
	LCSD 280-610347/4	X502912.D	04/27/2023	11:57
	LCSD 280-610347/5	X502913.D	04/27/2023	12:18
	MB 280-610347/7	X502915.D	04/27/2023	12:59
MW-102S-20230414	280-175122-7	X502923.D	04/27/2023	15:44
MP-3-20230413	280-175122-4	X502932.D	04/27/2023	18:49

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab File ID: X502939b.D BFB Injection Date: 04/27/2023

Instrument ID: VMS_X4 BFB Injection Time: 21:28

Analysis Batch No.: 610485

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.1	
75	30.0 - 60.0 % of mass 95	47.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	80.4	
175	5.0 - 9.0 % of mass 174	6.0	(7.5) 1
176	95.0 - 101.0 % of mass 174	78.8	(98.0) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.9) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-610485/2	X502939.D	04/27/2023	21:28
	LCS 280-610485/1002	-X502939-LCS.	04/27/2023	21:28
	CCV 280-610485/3	X502940.D	04/27/2023	21:48
	LCS 280-610485/1003	-X502940-LCS.	04/27/2023	21:48
	LCSD 280-610485/4	X502941.D	04/27/2023	22:09
	LCSD 280-610485/5	X502942.D	04/27/2023	22:29
	MB 280-610485/7	X502944.D	04/27/2023	23:10
TB-07-20230416	280-175122-9	X502946.D	04/28/2023	0:12
MW-123-20230415	280-175122-6	X502955.D	04/28/2023	3:17
MW-115S-20230415	280-175122-8	X502956.D	04/28/2023	3:38

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Sample No.: ICIS 280-609046/37 Date Analyzed: 04/18/2023 12:06

Instrument ID: VMS_MS1 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): MS1_8188.D Heated Purge: (Y/N) N

Calibration ID: 79362

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1247062	6.03	293780	8.77	475448	11.06
UPPER LIMIT		2494124	6.53	587560	9.27	950896	11.56
LOWER LIMIT		623531	5.53	146890	8.27	237724	10.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-609046/43		1180704	6.03	275927	8.77	454451	11.06
CCV 280-609561/3		1004527	6.03	239490	8.77	376743	11.06
LCS 280-609561/1003		1004527	6.03	239490	8.77	376743	11.06
LCS 280-609561/1002		1009627	6.03	242470	8.77	386005	11.06
CCV 280-609561/2		1009627	6.03	242470	8.77	386005	11.06
LCSD 280-609561/5		1006770	6.03	238566	8.77	375847	11.06
LCSD 280-609561/4		1038278	6.03	250146	8.77	401231	11.06
MB 280-609561/7		1001538	6.03	238104	8.77	383454	11.05
280-175122-5	MW-111D-20230414	974149	6.03	228778	8.77	373641	11.05
CCVC 280-609561/53		1017316	6.03	244518	8.77	390023	11.06
CCVC 280-609561/54		988615	6.03	231871	8.77	374269	11.06

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Sample No.: ICIS 280-608296/17 Date Analyzed: 04/11/2023 19:26

Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): P00511.D Heated Purge: (Y/N) N

Calibration ID: 79167

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1962770	4.77	459207	7.27	674207	9.48
UPPER LIMIT		3925540	5.27	918414	7.77	1348414	9.98
LOWER LIMIT		981385	4.27	229604	6.77	337104	8.98
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-608296/21		1982790	4.77	461637	7.27	682335	9.48

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Sample No.: ICIS 280-608364/17 Date Analyzed: 04/12/2023 13:43

Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): P00528.D Heated Purge: (Y/N) N

Calibration ID: 79197

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1829654	4.77	430210	7.27	619154	9.48
UPPER LIMIT		3659308	5.27	860420	7.77	1238308	9.98
LOWER LIMIT		914827	4.27	215105	6.77	309577	8.98
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-608364/21		1788407	4.77	418526	7.27	612227	9.48
CCV 280-610123/2		1625149	4.77	404191	7.28	616884	9.48
LCS 280-610123/1002		1625149	4.77	404191	7.28	616884	9.48
LCS 280-610123/1003		1602033	4.77	402142	7.27	585754	9.48
CCV 280-610123/3		1602033	4.77	402142	7.27	585754	9.48
LCSD 280-610123/4		1650393	4.77	415006	7.27	635435	9.48
LCSD 280-610123/5		1621422	4.77	398421	7.27	588919	9.48
MB 280-610123/7		1579293	4.77	391972	7.27	582090	9.48
280-175122-3	MW-118D-20230412	1525537	4.77	380155	7.27	552892	9.48

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Sample No.: ICIS 280-590907/18 Date Analyzed: 10/22/2022 11:54

Instrument ID: VMS_X4 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): X43663.D Heated Purge: (Y/N) N

Calibration ID: 72173

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1343824	5.06	306665	7.57	482565	9.79
UPPER LIMIT		2687648	5.56	613330	8.07	965130	10.29
LOWER LIMIT		671912	4.56	153333	7.07	241283	9.29
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-590907/22		1291679	5.06	296668	7.57	481127	9.79

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Sample No.: ICIS 280-607881/14 Date Analyzed: 04/07/2023 04:56

Instrument ID: VMS_X4 GC Column: RXI-624SilMS ID: 0.25(mm)

Lab File ID (Standard): X502132.D Heated Purge: (Y/N) N

Calibration ID: 79019

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1433467	5.06	327912	7.57	509618	9.79
UPPER LIMIT		2866934	5.56	655824	8.07	1019236	10.29
LOWER LIMIT		716734	4.56	163956	7.07	254809	9.29
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-608203/8		1472574	5.06	356963	7.57	549141	9.79
CCV 280-609932/2		1463413	5.06	353452	7.57	560008	9.79
LCS 280-609932/1002		1463413	5.06	353452	7.57	560008	9.79
LCS 280-609932/1003		1417408	5.06	339994	7.57	535901	9.79
CCV 280-609932/3		1417408	5.06	339994	7.57	535901	9.79
LCSD 280-609932/4		1432401	5.06	352466	7.57	542963	9.79
LCSD 280-609932/5		1388739	5.06	333064	7.57	540029	9.79
MB 280-609932/7		1401368	5.06	334291	7.57	536387	9.79
280-175122-2	MP-2-20230411	1386413	5.06	339136	7.57	525041	9.79
CCV 280-610121/3		2035170	5.06	505460	7.57	795445	9.79
LCS 280-610121/1003		2035170	5.06	505460	7.57	795445	9.79
CCV 280-610121/2		2064544	5.06	504405	7.57	799833	9.79
LCS 280-610121/1002		2064544	5.06	504405	7.57	799833	9.79
LCSD 280-610121/4		2094082	5.06	509073	7.57	797999	9.79
LCSD 280-610121/5		2049501	5.06	510941	7.57	790900	9.79
MB 280-610121/7		2025881	5.06	487961	7.57	789543	9.79
280-175122-1	RW-1-20230413	1972220	5.06	477005	7.57	746776	9.79
CCV 280-610347/2		2075744	5.06	498852	7.57	782929	9.79
LCS 280-610347/1002		2075744	5.06	498852	7.57	782929	9.79
LCS 280-610347/1003		2059516	5.06	497540	7.57	790650	9.79
CCV 280-610347/3		2059516	5.06	497540	7.57	790650	9.79
LCSD 280-610347/4		2083610	5.06	508261	7.57	794649	9.79
LCSD 280-610347/5		2066644	5.06	511317	7.57	795555	9.79
MB 280-610347/7		2037332	5.06	495922	7.57	787571	9.79

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Sample No.: ICIS 280-607881/14 Date Analyzed: 04/07/2023 04:56

Instrument ID: VMS_X4 GC Column: RXI-624SilMS ID: 0.25(mm)

Lab File ID (Standard): X502132.D Heated Purge: (Y/N) N

Calibration ID: 79019

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1433467	5.06	327912	7.57	509618	9.79
UPPER LIMIT		2866934	5.56	655824	8.07	1019236	10.29
LOWER LIMIT		716734	4.56	163956	7.07	254809	9.29
LAB SAMPLE ID	CLIENT SAMPLE ID						
280-175122-7	MW-102S-20230414	2031405	5.06	497204	7.57	769750	9.79
280-175122-4	MP-3-20230413	1998431	5.06	496253	7.57	779098	9.79
CCV 280-610485/2		2106634	5.06	502022	7.57	809058	9.78
LCS 280-610485/1002		2106634	5.06	502022	7.57	809058	9.78
LCS 280-610485/1003		2005972	5.06	481290	7.57	751797	9.78
CCV 280-610485/3		2005972	5.06	481290	7.57	751797	9.78
LCSD 280-610485/4		2053254	5.06	509714	7.57	805091	9.78
LCSD 280-610485/5		2042281	5.06	495630	7.57	776161	9.78
MB 280-610485/7		2038926	5.06	487849	7.57	754424	9.78
280-175122-9	TB-07-20230416	2023534	5.06	487657	7.57	755851	9.78
280-175122-6	MW-123-20230415	1984252	5.06	475486	7.57	738354	9.78
280-175122-8	MW-115S-20230415	2012710	5.06	489895	7.57	764529	9.78

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: RW-1-20230413 | Lab Sample ID: 280-175122-1

Matrix: Water | Lab File ID: X502867.D

Analysis Method: 8260D | Date Collected: 04/13/2023 15:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 17:27

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		4.0	2.3
71-55-6	1,1,1-Trichloroethane	ND		4.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.0	0.84
79-00-5	1,1,2-Trichloroethane	ND		4.0	1.1
75-34-3	1,1-Dichloroethane	1.8	J	4.0	0.88
75-35-4	1,1-Dichloroethene	ND		4.0	0.92
563-58-6	1,1-Dichloropropene	ND		4.0	1.7
96-18-4	1,2,3-Trichloropropane	ND		10	3.4
120-82-1	1,2,4-Trichlorobenzene	ND		4.0	2.3
96-12-8	1,2-Dibromo-3-Chloropropane	ND		20	7.0
106-93-4	1,2-Dibromoethane	ND		4.0	1.6
95-50-1	1,2-Dichlorobenzene	2.2	J	4.0	1.5
107-06-2	1,2-Dichloroethane	ND		4.0	2.2
78-87-5	1,2-Dichloropropane	ND		4.0	2.1
541-73-1	1,3-Dichlorobenzene	ND		4.0	1.3
142-28-9	1,3-Dichloropropane	ND		4.0	1.5
106-46-7	1,4-Dichlorobenzene	ND		4.0	1.6
594-20-7	2,2-Dichloropropane	ND		4.0	1.5
78-93-3	2-Butanone (MEK)	ND		60	24
591-78-6	2-Hexanone	ND		20	6.8
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		20	3.9
67-64-1	Acetone	ND		60	26
75-05-8	Acetonitrile	ND		120	38
107-02-8	Acrolein	ND		80	19
107-13-1	Acrylonitrile	ND		80	18
107-05-1	Allyl chloride	ND		8.0	0.68
71-43-2	Benzene	ND		4.0	1.2
75-25-2	Bromoform	ND		8.0	4.8
74-83-9	Bromomethane	ND		20	9.4
75-15-0	Carbon disulfide	ND		8.0	2.5
56-23-5	Carbon tetrachloride	ND		4.0	2.3
108-90-7	Chlorobenzene	ND		4.0	1.7
74-97-5	Chlorobromomethane	ND		4.0	1.6
124-48-1	Chlorodibromomethane	ND		8.0	2.5

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: RW-1-20230413 | Lab Sample ID: 280-175122-1

Matrix: Water | Lab File ID: X502867.D

Analysis Method: 8260D | Date Collected: 04/13/2023 15:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 17:27

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		16	5.5
67-66-3	Chloroform	2.6	J	4.0	1.4
74-87-3	Chloromethane	ND		8.0	3.0
126-99-8	Chloroprene	ND		12	4.7
156-59-2	cis-1,2-Dichloroethene	26		4.0	1.3
10061-01-5	cis-1,3-Dichloropropene	ND		8.0	2.5
74-95-3	Dibromomethane	ND		4.0	1.4
75-27-4	Dichlorobromomethane	ND		4.0	1.5
75-71-8	Dichlorodifluoromethane	ND		12	3.8
97-63-2	Ethyl methacrylate	ND		12	3.4
100-41-4	Ethylbenzene	ND		4.0	1.2
74-88-4	Iodomethane	ND		20	10
78-83-1	Isobutyl alcohol	ND		440	150
126-98-7	Methacrylonitrile	ND		60	21
80-62-6	Methyl methacrylate	ND		16	4.4
75-09-2	Methylene Chloride	ND		8.0	3.8
179601-23-1	m-Xylene & p-Xylene	ND		8.0	1.4
95-47-6	o-Xylene	ND		4.0	1.3
107-12-0	Propionitrile	ND		80	15
100-42-5	Styrene	ND		4.0	1.4
127-18-4	Tetrachloroethene	26		4.0	1.6
108-88-3	Toluene	ND		4.0	1.3
156-60-5	trans-1,2-Dichloroethene	ND		4.0	1.5
10061-02-6	trans-1,3-Dichloropropene	ND		8.0	2.6
110-57-6	trans-1,4-Dichloro-2-butene	ND		12	5.5
79-01-6	Trichloroethene	250		4.0	1.2
75-69-4	Trichlorofluoromethane	ND		8.0	2.3
108-05-4	Vinyl acetate	ND		12	3.8
75-01-4	Vinyl chloride	3.0	J	8.0	2.0
1330-20-7	Xylenes, Total	ND		4.0	1.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: RW-1-20230413 | Lab Sample ID: 280-175122-1

Matrix: Water | Lab File ID: X502867.D

Analysis Method: 8260D | Date Collected: 04/13/2023 15:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 17:27

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D
Lims ID: 280-175122-F-1
Client ID: RW-1-20230413
Sample Type: Client
Inject. Date: 26-Apr-2023 17:27:30 ALS Bottle#: 23 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 4.0000
Sample Info: 280-175122-F-1 4x
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 08:32:25 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: sangkuas Date: 21-Nov-2023 08:32:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96	4.913	4.942	-0.029	1	60	0	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1972220	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	477005	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	746776	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	94	483922	51.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	478102	48.0	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	93	2059653	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	89	682244	51.1	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	89	682244	NR	
10 Dichlorodifluoromethane	85		1.696				ND	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62	1.967	1.960	0.007	95	5561	0.7602	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94		2.239				ND	7
15 Chloroethane	64		2.332				ND	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	91	3750	0.2507	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.654				ND	
19 Ethyl ether	59	2.747	2.747	0.000	92	18308	2.75	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96		2.933				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.033				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.119				ND	7
28 Acetonitrile	41		3.161				ND	U
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.197				ND	7
31 Methylene Chloride	84		3.297				ND	
32 2-Methyl-2-propanol	59		3.333				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85	3.812	3.733	0.079	40	621	NC	
39 Vinyl acetate	43		3.784				ND	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	6876	0.4481	
41 Isopropyl ether	87		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.855				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	76	64810	6.43	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.398				ND	U
54 Chloroform	83	4.448	4.441	0.007	87	10227	0.6550	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	7
63 1,2-Dichloroethane	62		4.878				ND	U
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	98	577138	63.3	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.543				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.893				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164	6.808	6.801	0.007	96	44981	6.50	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	
89 1-Chlorohexane	91		7.559				ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
90 Chlorobenzene	112		7.602				ND	U
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.353				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.589				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.590				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	U
113 4-Isopropyltoluene	119		9.733				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	7
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	93	10594	0.5582	
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.257				ND	
166 Ethyl acrylate	55		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1				0		0.6550	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		6.43	
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

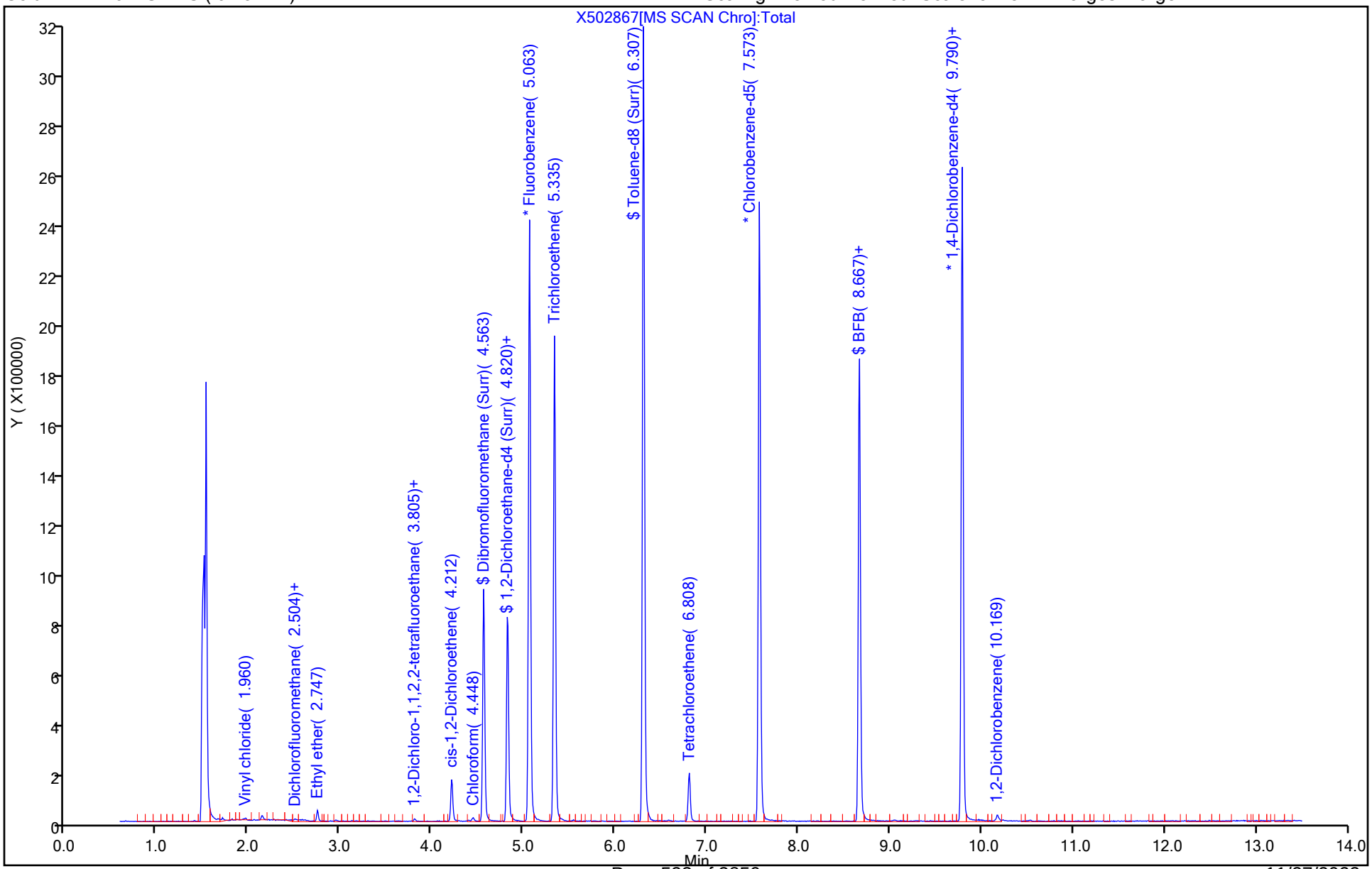
Report Date: 21-Nov-2023 08:32:25 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D

Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1	Worklist Smp#:	26
Client ID:	RW-1-20230413				
Purge Vol:	5.000 mL	Dil. Factor:	4.0000	ALS Bottle#:	23
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D				
Lims ID:	280-175122-F-1				
Client ID:	RW-1-20230413				
Sample Type:	Client				
Inject. Date:	26-Apr-2023 17:27:30	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Sample Info:	280-175122-F-1 4x				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	21-Nov-2023 08:32:25	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1617				

First Level Reviewer: sangkuas Date: 21-Nov-2023 08:32:25

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.0	102.02
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.0	95.97
$ 6 Toluene-d8 (Surr)	50.0	50.7	101.38
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.1	102.24

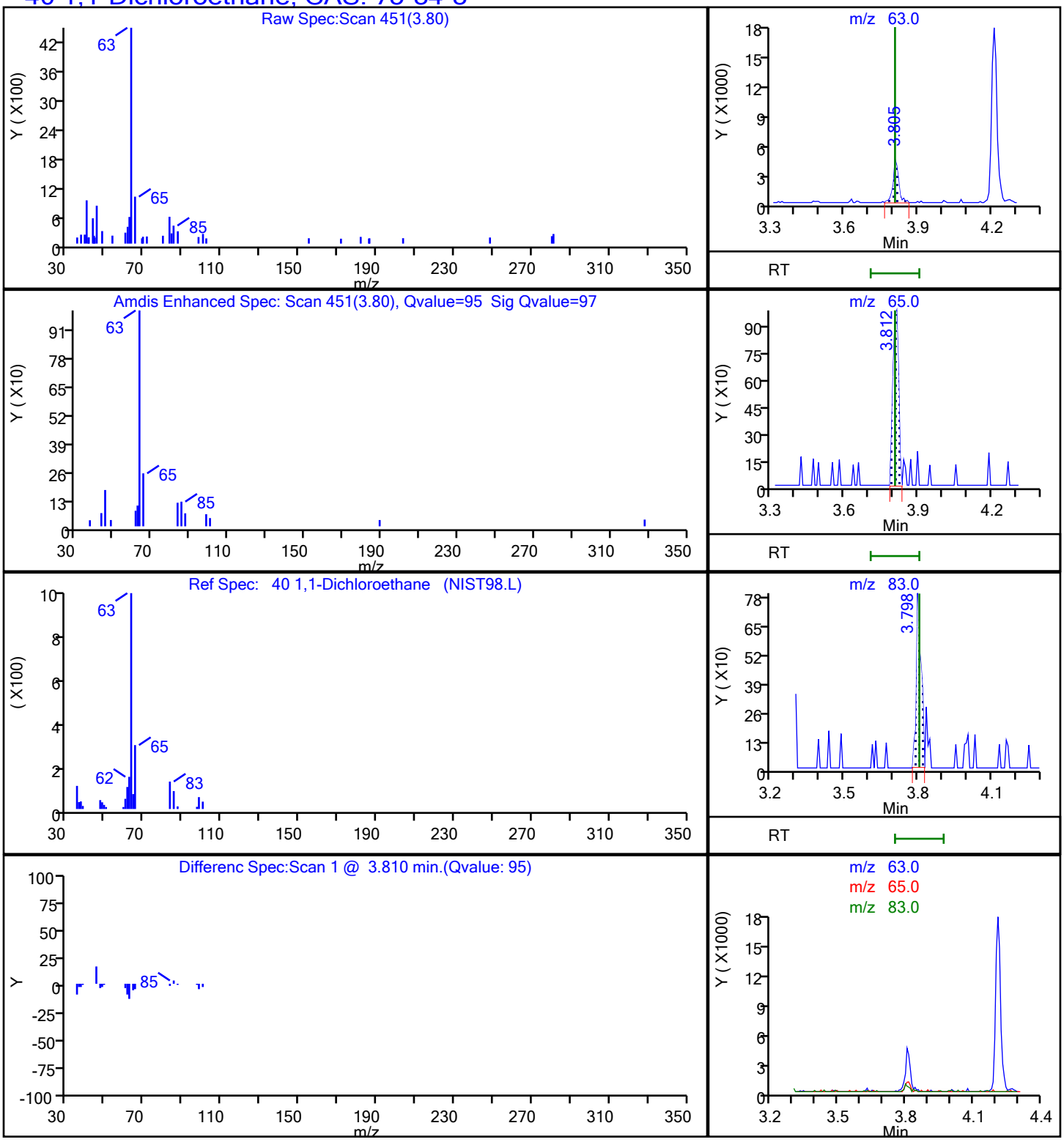
Report Date: 21-Nov-2023 08:32:25 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D

Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1
Client ID:	RW-1-20230413		
Operator ID:	MED	ALS Bottle#:	23 Worklist Smp#: 26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

40 1,1-Dichloroethane, CAS: 75-34-3

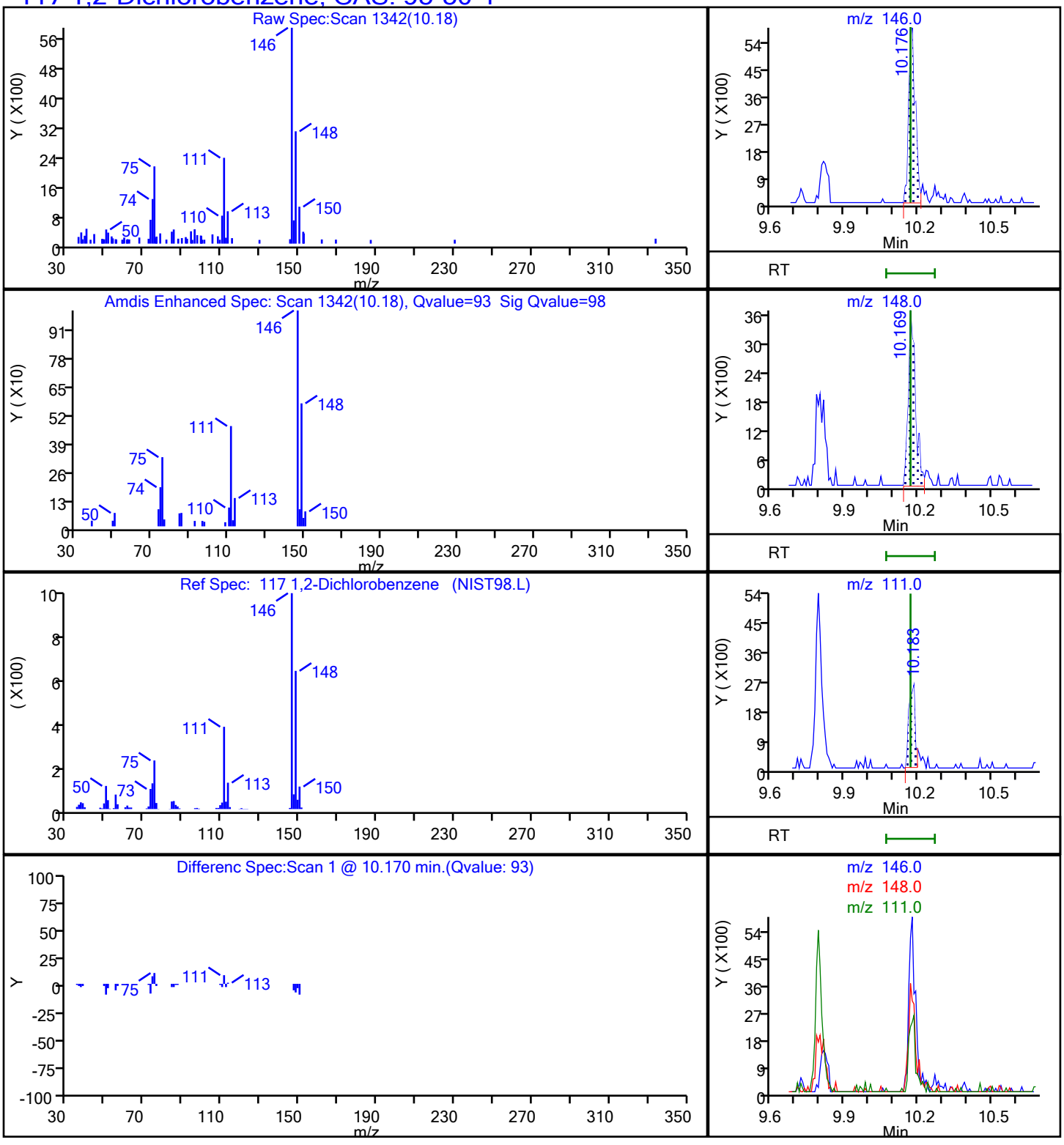


11/27/2023
7:27 PM

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D		
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1
Client ID:	RW-1-20230413		
Operator ID:	MED	ALS Bottle#:	23 Worklist Smp#: 26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

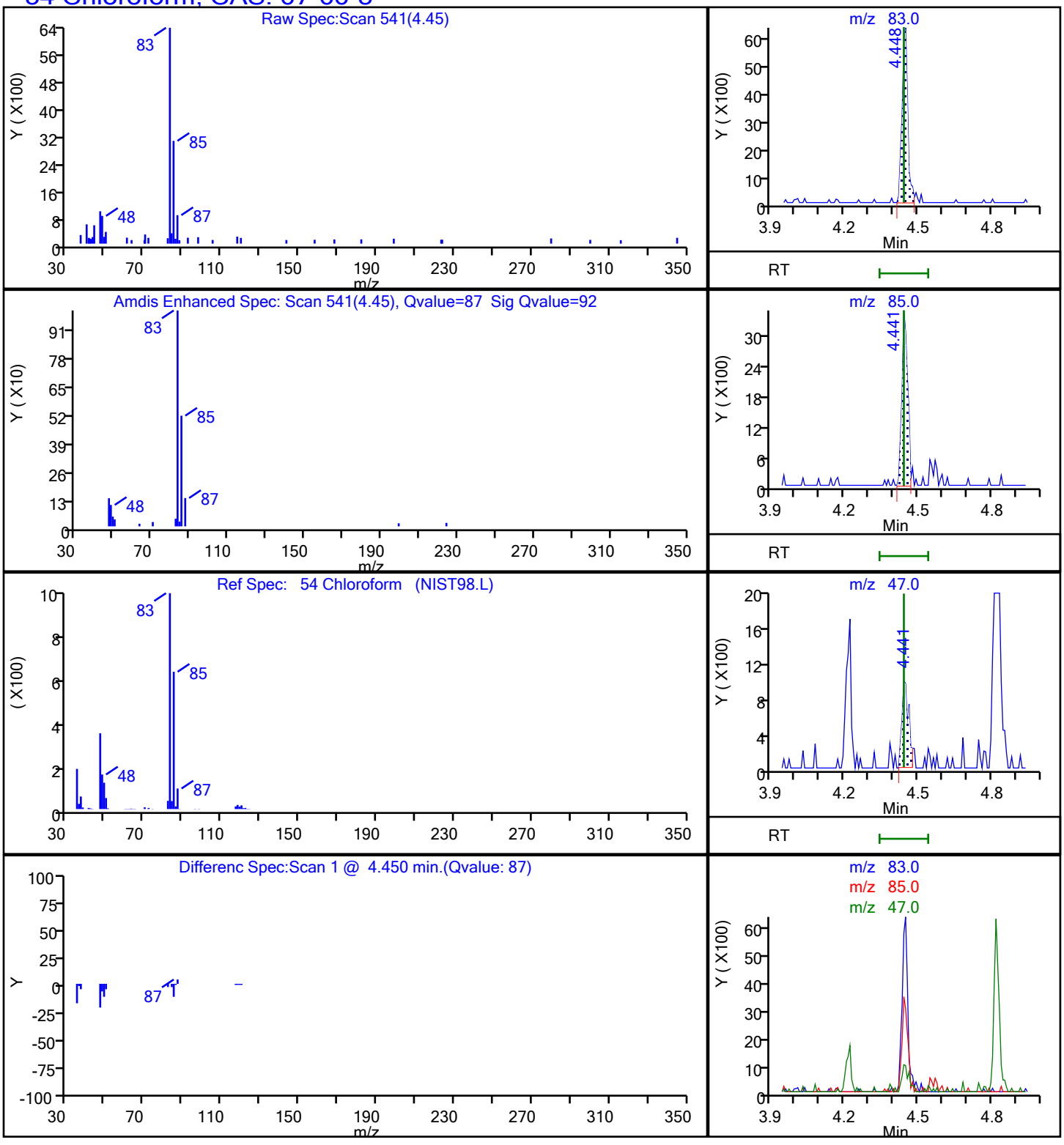
117 1,2-Dichlorobenzene, CAS: 95-50-1



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D		
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1
Client ID:	RW-1-20230413		
Operator ID:	MED	ALS Bottle#:	23 Worklist Smp#: 26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

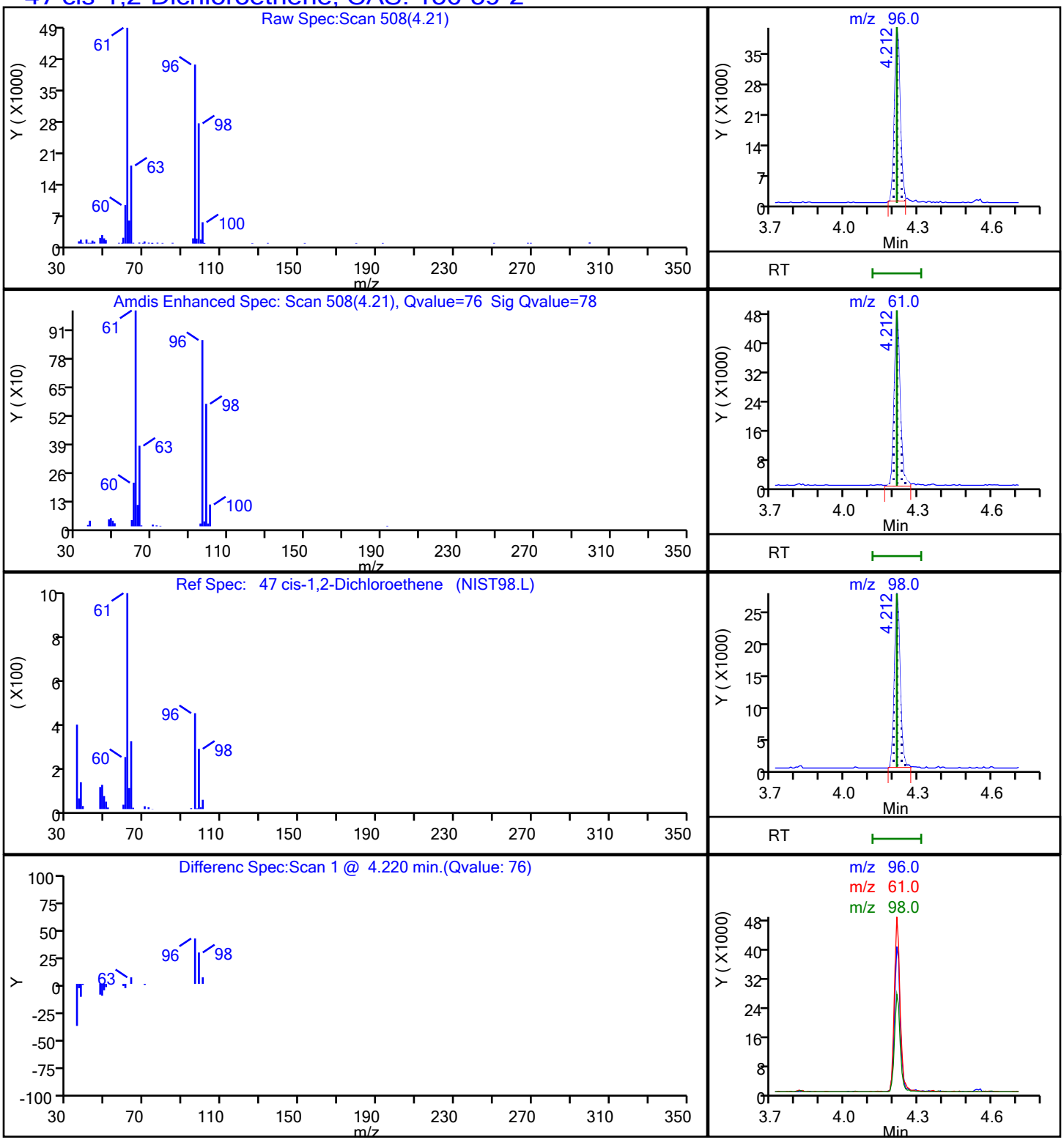
54 Chloroform, CAS: 67-66-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D		
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1
Client ID:	RW-1-20230413		
Operator ID:	MED	ALS Bottle#:	23 Worklist Smp#: 26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

47 cis-1,2-Dichloroethene, CAS: 156-59-2



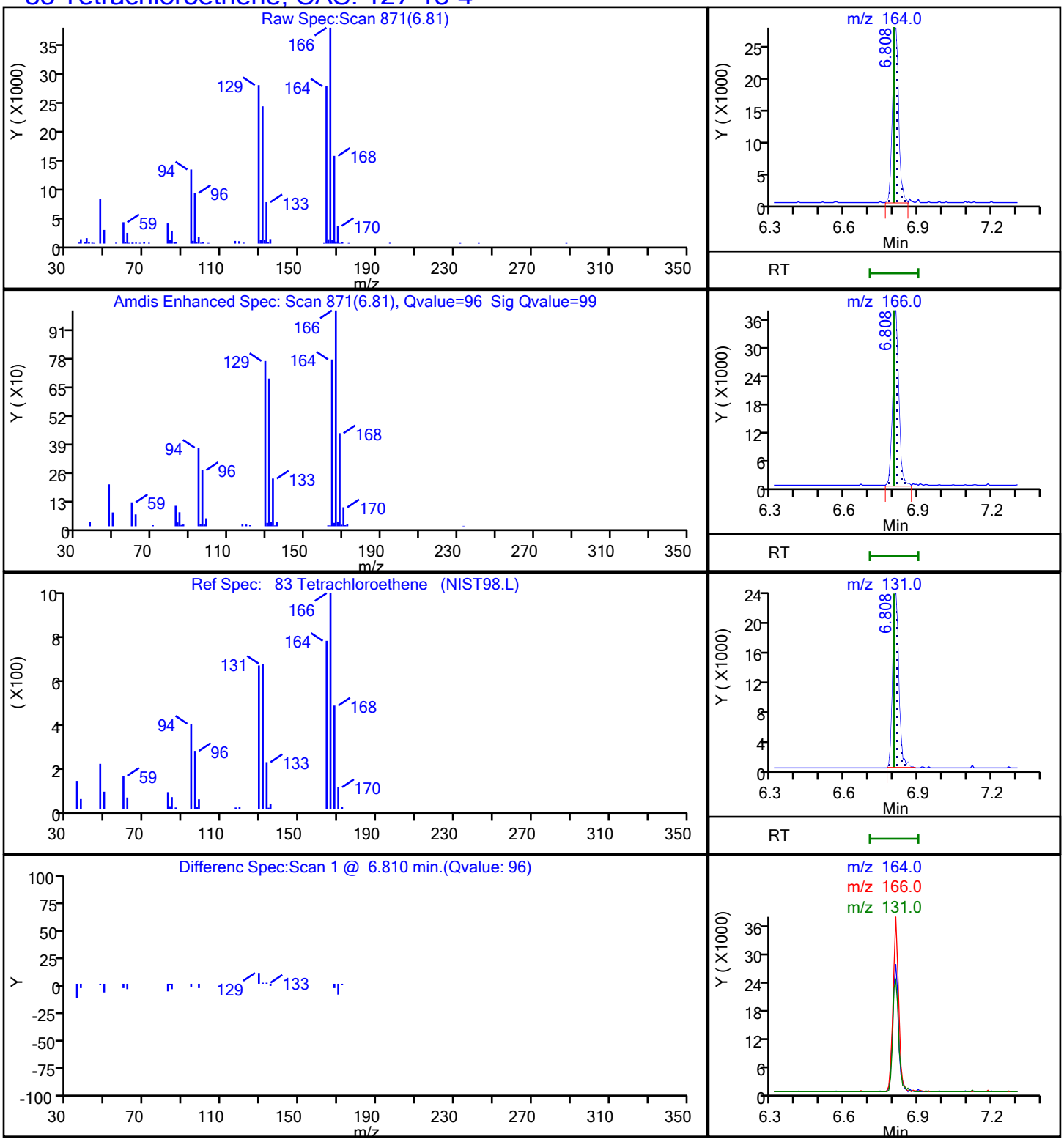
Report Date: 21-Nov-2023 08:32:25 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D

Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

83 Tetrachloroethene, CAS: 127-18-4

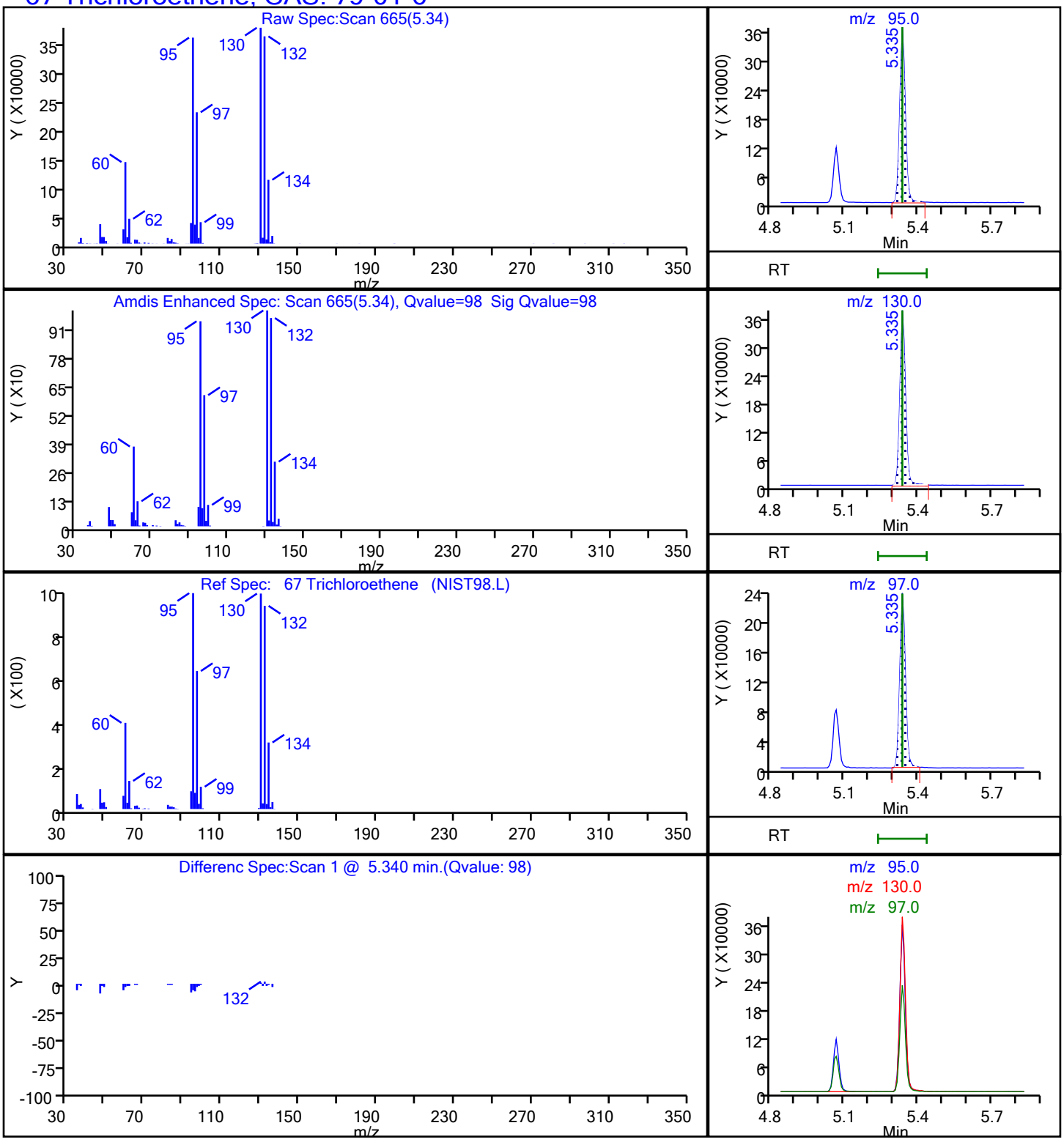


11/27/2023
7:27 PM

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D		
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1
Client ID:	RW-1-20230413		
Operator ID:	MED	ALS Bottle#:	23 Worklist Smp#: 26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

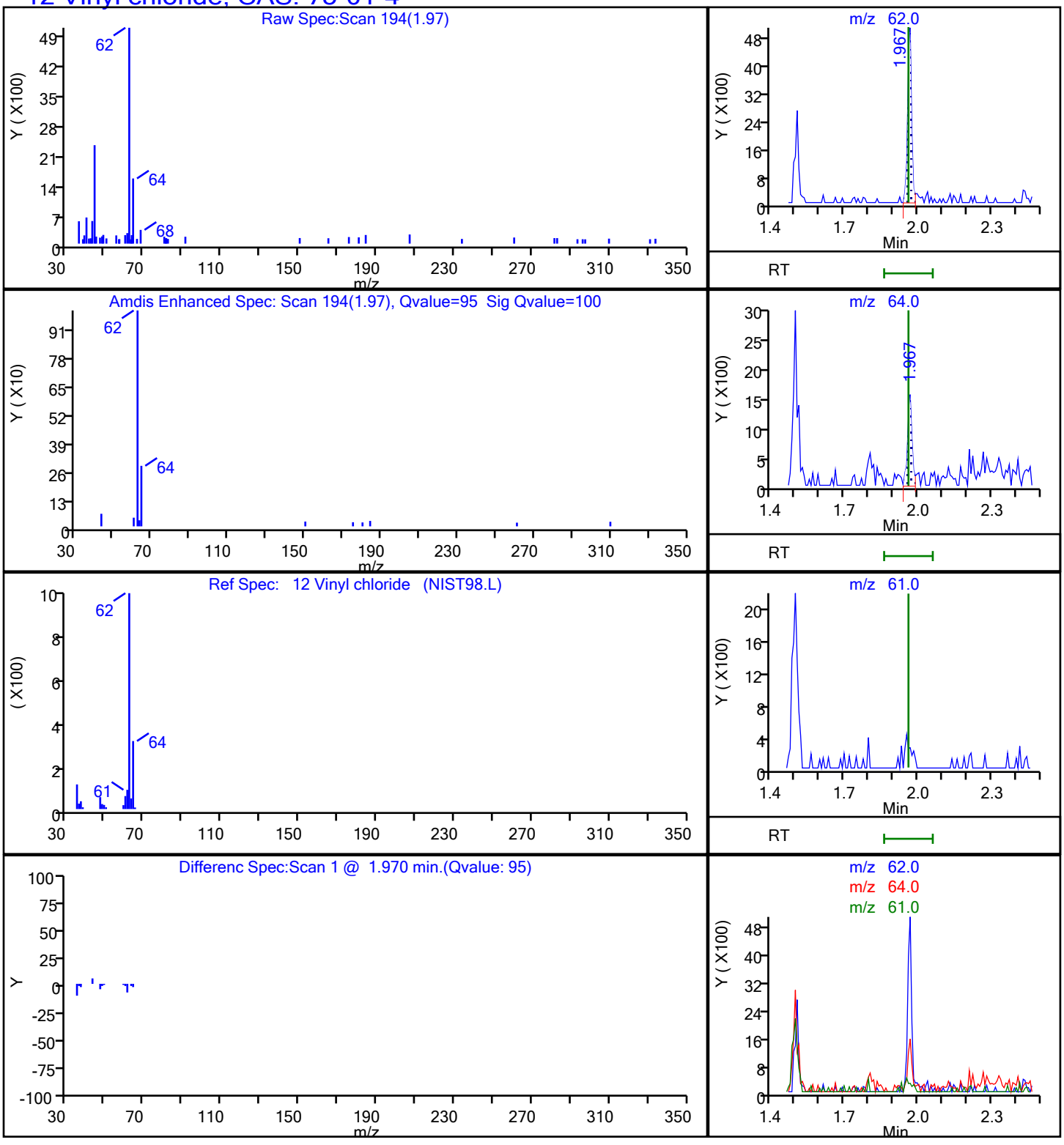
67 Trichloroethene, CAS: 79-01-6



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D		
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1
Client ID:	RW-1-20230413		
Operator ID:	MED	ALS Bottle#:	23 Worklist Smp#: 26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

12 Vinyl chloride, CAS: 75-01-4



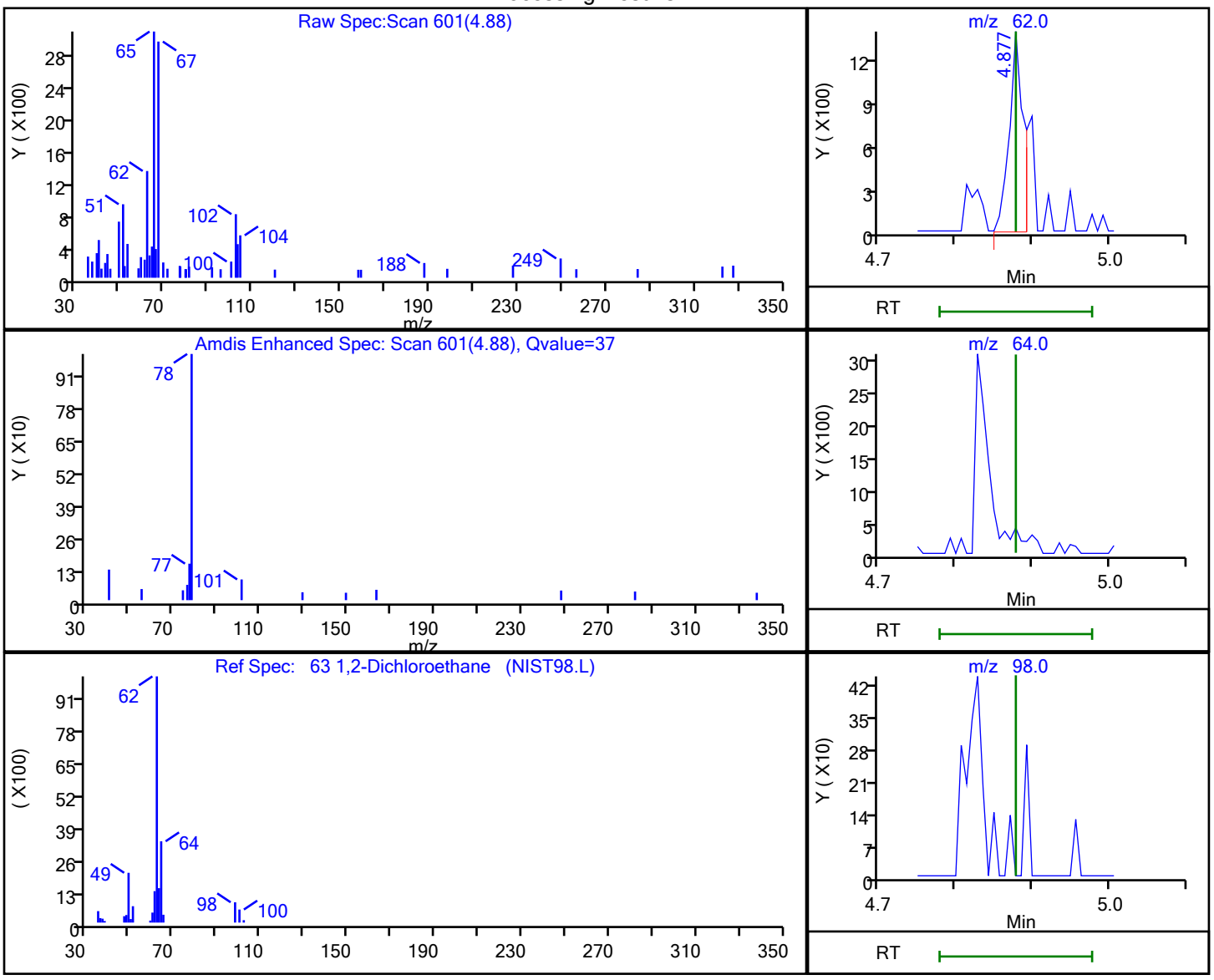
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D				
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

63 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
4.88	62.00	1722	0.148270
4.88	64.00	0	
4.88	98.00	0	

Reviewer: AK2J, 27-Apr-2023 01:53:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

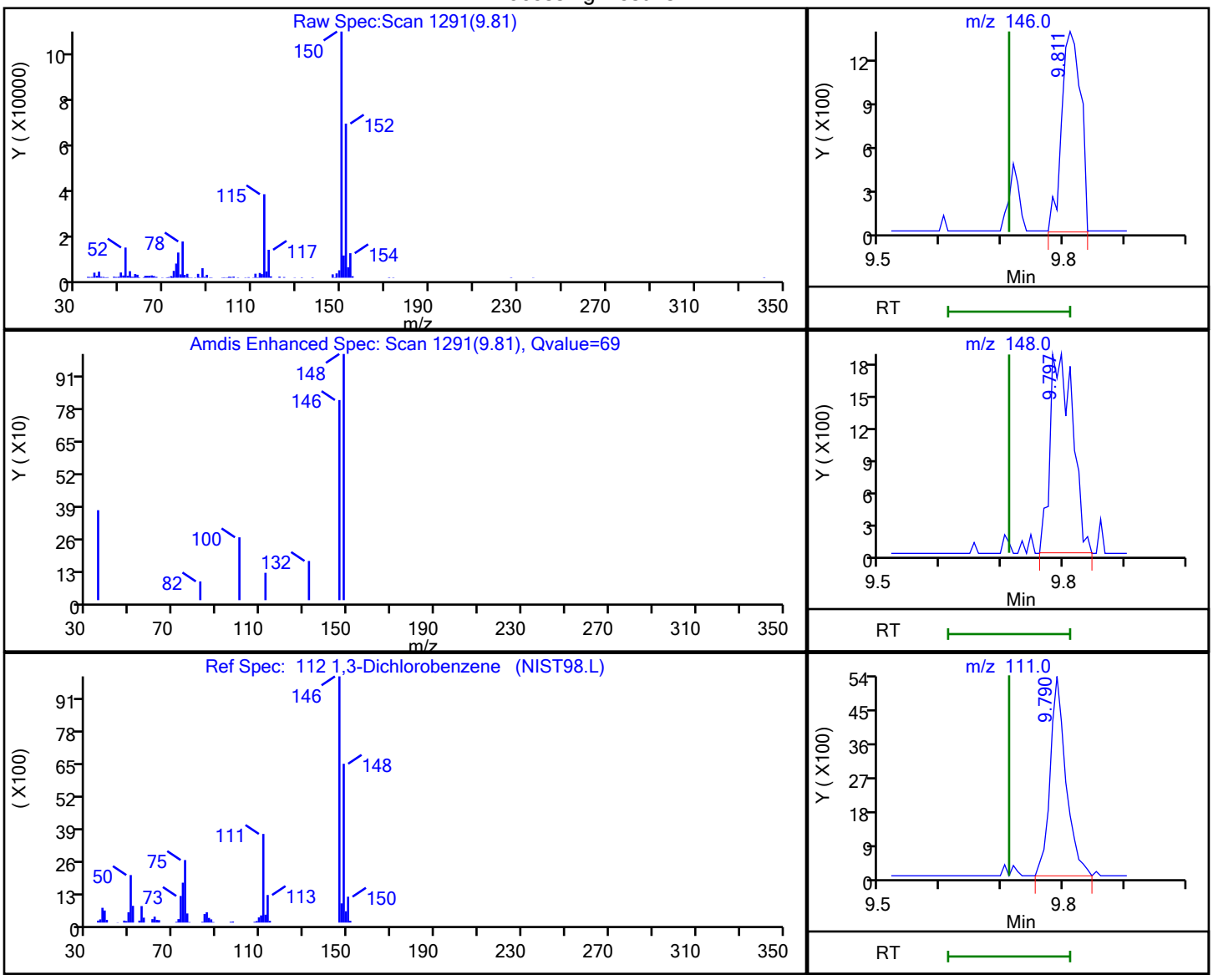
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D				
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

112 1,3-Dichlorobenzene, CAS: 541-73-1

Processing Results



RT	Mass	Response	Amount
9.81	146.00	2973	0.150807
9.80	148.00	4878	
9.79	111.00	9719	

Reviewer: AK2J, 27-Apr-2023 01:54:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

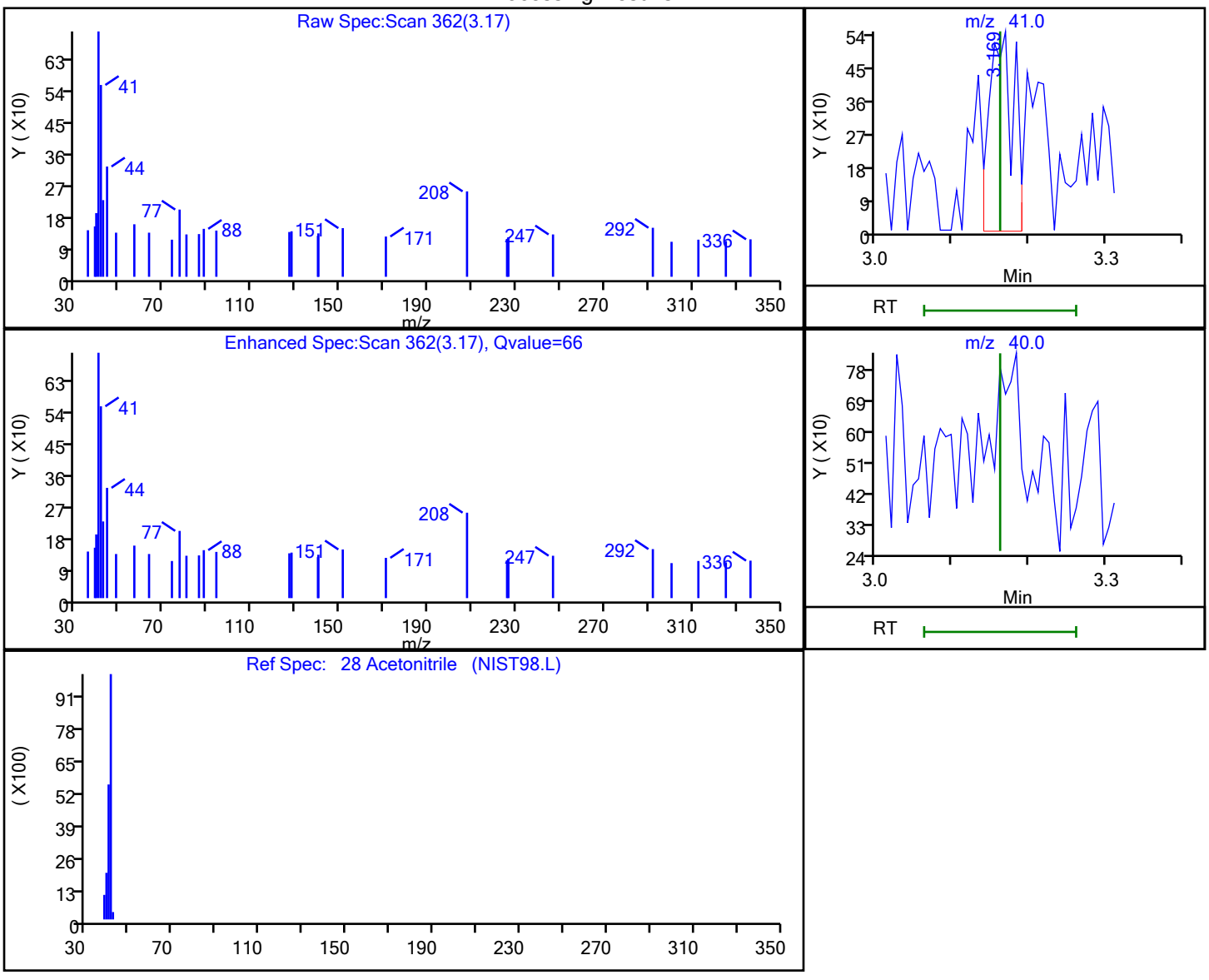
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D				
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

28 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
3.17	41.00	1224	1.111179
3.16	40.00	0	

Reviewer: AK2J, 27-Apr-2023 01:53:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

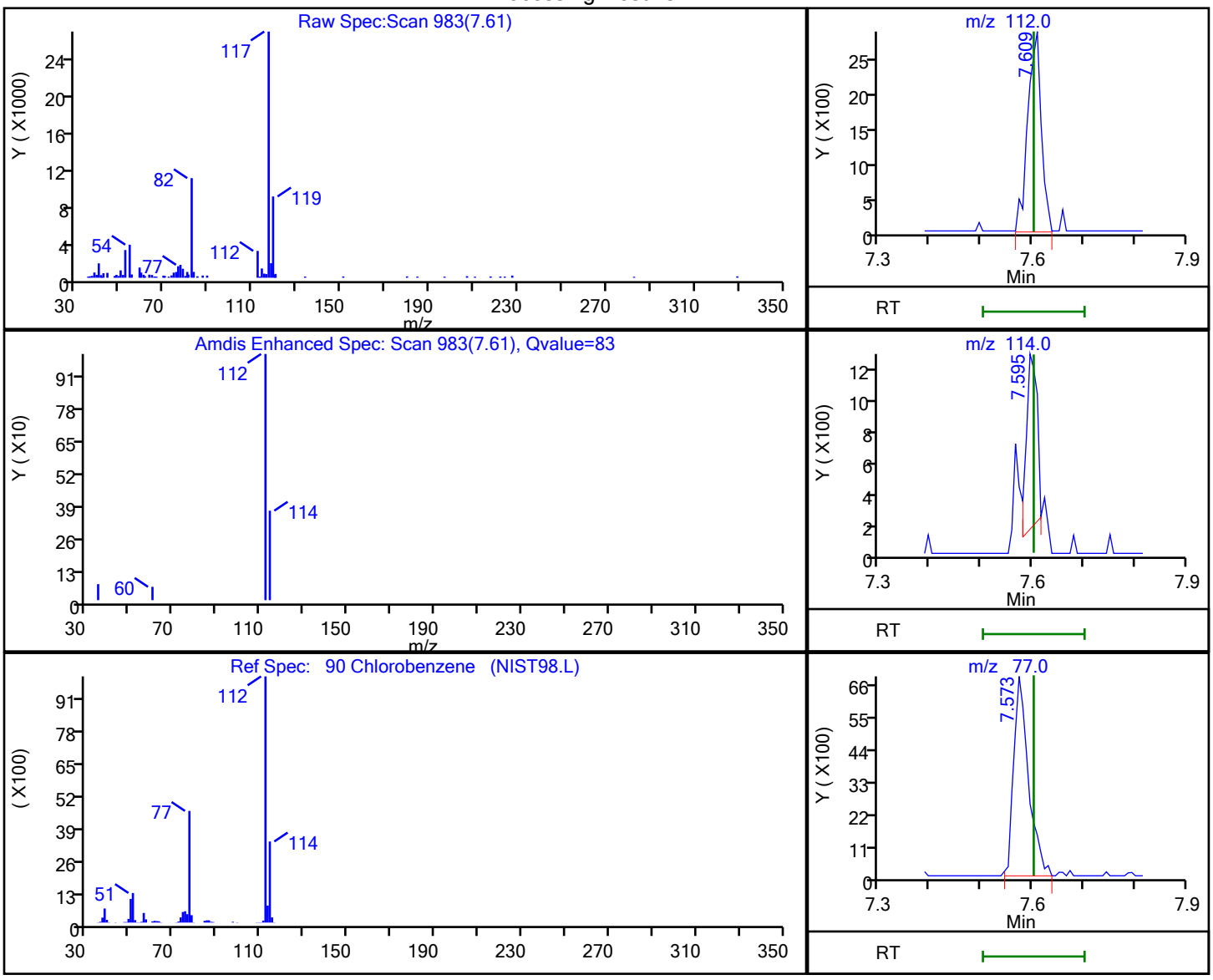
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D				
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

90 Chlorobenzene, CAS: 108-90-7

Processing Results



RT	Mass	Response	Amount
7.61	112.00	5325	0.200387
7.59	114.00	1579	
7.57	77.00	13866	

Reviewer: AK2J, 27-Apr-2023 01:54:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

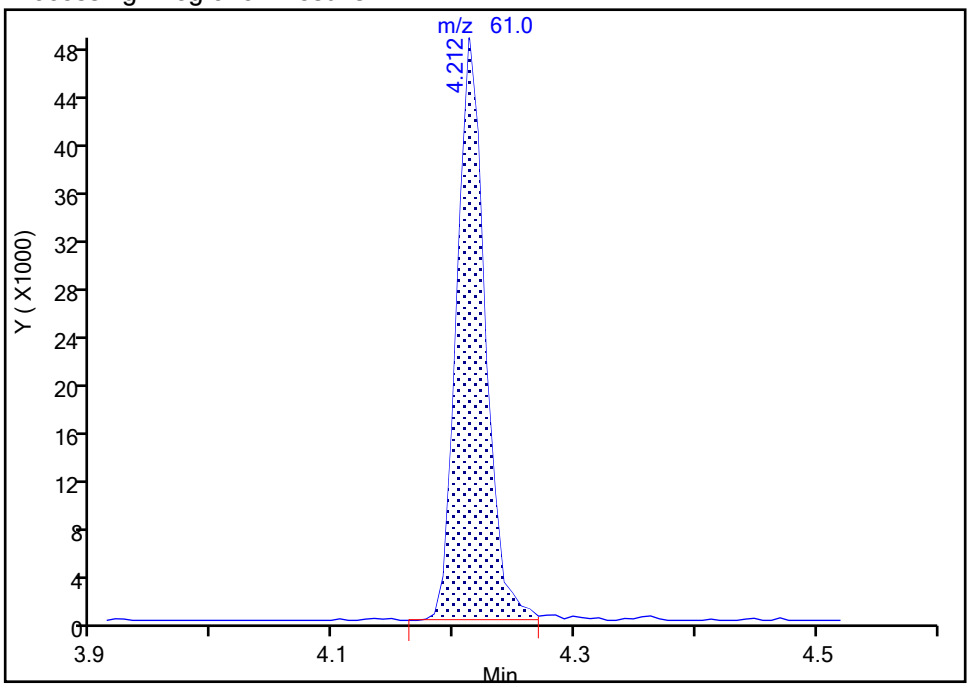
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D				
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 2

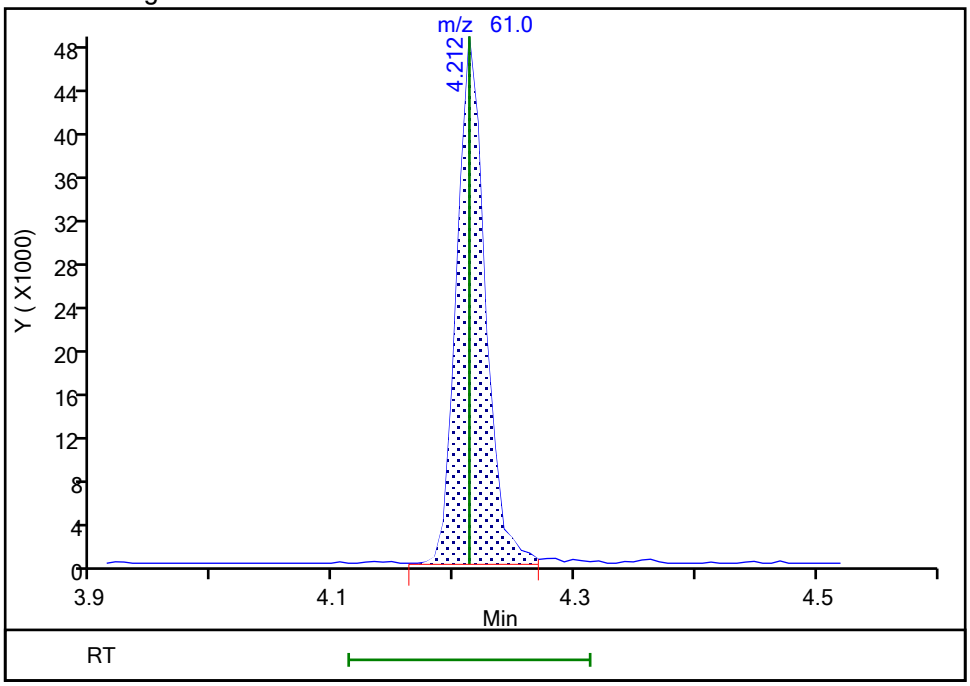
Processing Integration Results

RT: 4.21
Area: 79795
Amount: 6.432211
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 79795
Amount: 6.432211
Amount Units: ug/l



Reviewer: AK2J, 27-Apr-2023 01:53:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

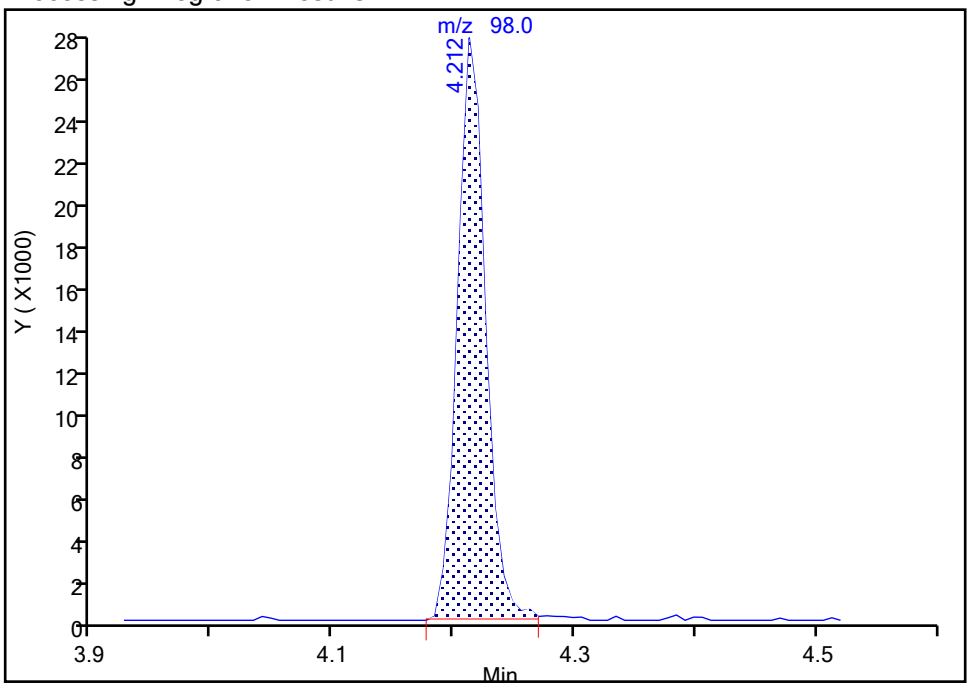
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D				
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 3

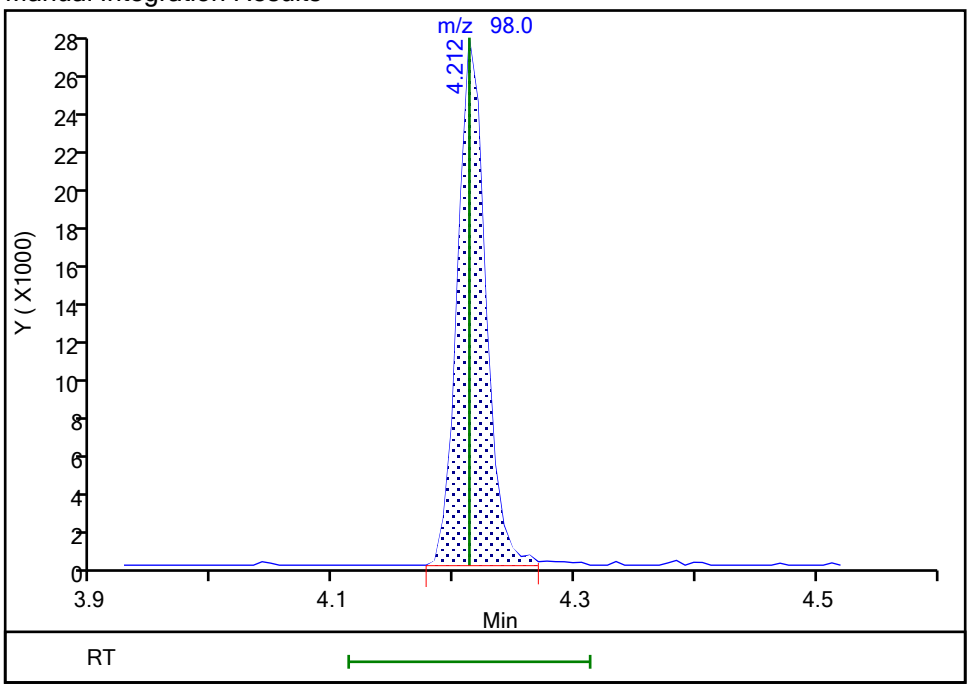
Processing Integration Results

RT: 4.21
Area: 43945
Amount: 6.432211
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 43945
Amount: 6.432211
Amount Units: ug/l



Reviewer: AK2J, 27-Apr-2023 01:53:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

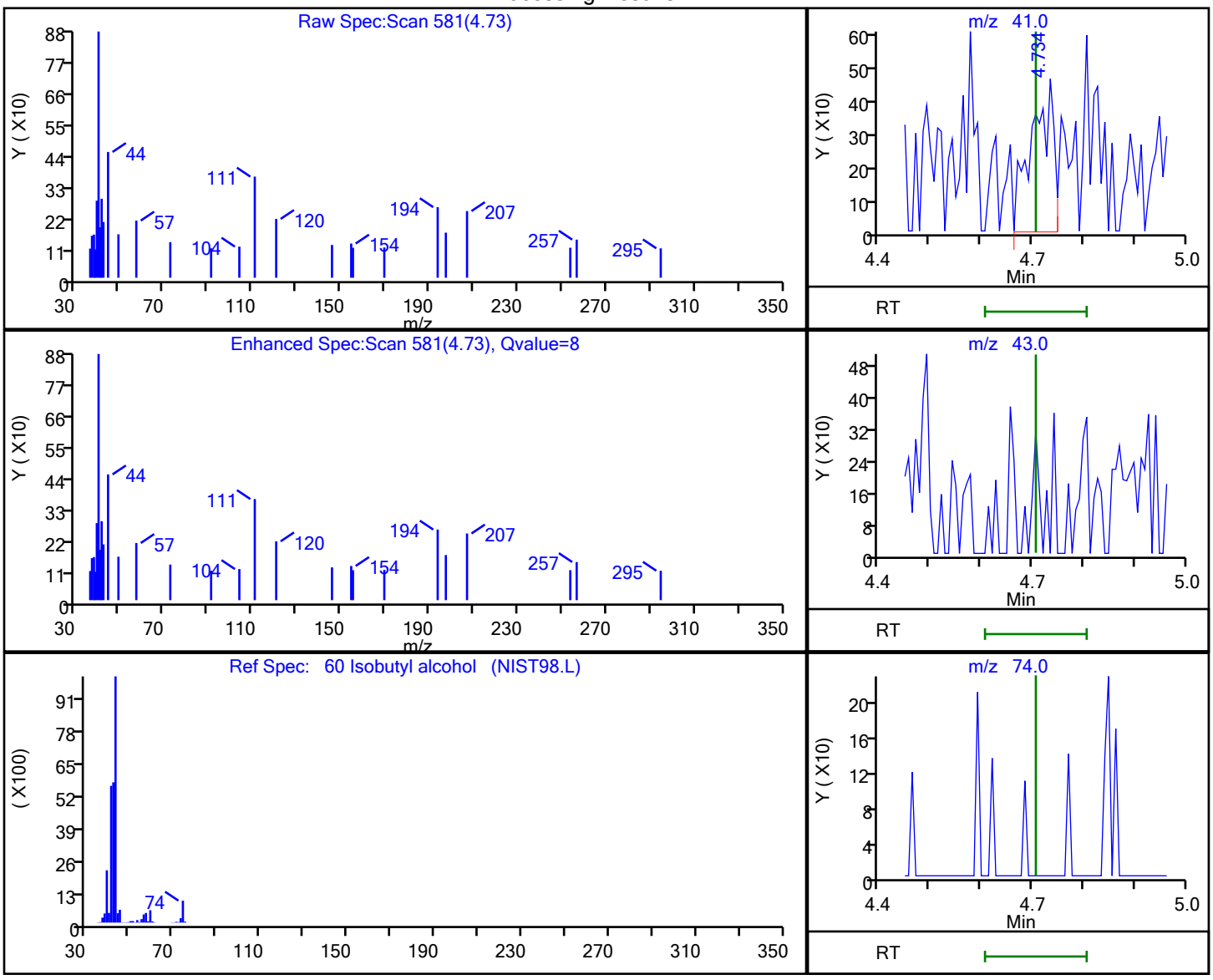
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502867.D				
Injection Date:	26-Apr-2023 17:27:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-F-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	MED	ALS Bottle#:	23	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.73	41.00	1390	16.925144
4.71	43.00	0	
4.71	74.00	0	

Reviewer: AK2J, 27-Apr-2023 01:53:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MP-2-20230411 | Lab Sample ID: 280-175122-2

Matrix: Water | Lab File ID: X502772.D

Analysis Method: 8260D | Date Collected: 04/11/2023 14:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 03:05

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		4.0	2.3
71-55-6	1,1,1-Trichloroethane	ND		4.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.0	0.84
79-00-5	1,1,2-Trichloroethane	ND		4.0	1.1
75-34-3	1,1-Dichloroethane	1.7	J	4.0	0.88
75-35-4	1,1-Dichloroethene	ND		4.0	0.92
563-58-6	1,1-Dichloropropene	ND		4.0	1.7
96-18-4	1,2,3-Trichloropropane	ND		10	3.4
120-82-1	1,2,4-Trichlorobenzene	ND		4.0	2.3
96-12-8	1,2-Dibromo-3-Chloropropane	ND		20	7.0
106-93-4	1,2-Dibromoethane	ND		4.0	1.6
95-50-1	1,2-Dichlorobenzene	ND		4.0	1.5
107-06-2	1,2-Dichloroethane	ND		4.0	2.2
78-87-5	1,2-Dichloropropane	ND		4.0	2.1
541-73-1	1,3-Dichlorobenzene	ND		4.0	1.3
142-28-9	1,3-Dichloropropane	ND		4.0	1.5
106-46-7	1,4-Dichlorobenzene	ND		4.0	1.6
594-20-7	2,2-Dichloropropane	ND		4.0	1.5
78-93-3	2-Butanone (MEK)	ND		60	24
591-78-6	2-Hexanone	ND		20	6.8
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		20	3.9
67-64-1	Acetone	ND		60	26
75-05-8	Acetonitrile	ND		120	38
107-02-8	Acrolein	ND		80	19
107-13-1	Acrylonitrile	ND		80	18
107-05-1	Allyl chloride	ND		8.0	0.68
71-43-2	Benzene	ND		4.0	1.2
75-25-2	Bromoform	ND		8.0	4.8
74-83-9	Bromomethane	ND		20	9.4
75-15-0	Carbon disulfide	ND		8.0	2.5
56-23-5	Carbon tetrachloride	ND		4.0	2.3
108-90-7	Chlorobenzene	ND		4.0	1.7
74-97-5	Chlorobromomethane	ND		4.0	1.6
124-48-1	Chlorodibromomethane	ND		8.0	2.5

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MP-2-20230411 | Lab Sample ID: 280-175122-2

Matrix: Water | Lab File ID: X502772.D

Analysis Method: 8260D | Date Collected: 04/11/2023 14:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 03:05

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		16	5.5
67-66-3	Chloroform	1.6	J	4.0	1.4
74-87-3	Chloromethane	ND		8.0	3.0
126-99-8	Chloroprene	ND		12	4.7
156-59-2	cis-1,2-Dichloroethene	20		4.0	1.3
10061-01-5	cis-1,3-Dichloropropene	ND		8.0	2.5
74-95-3	Dibromomethane	ND		4.0	1.4
75-27-4	Dichlorobromomethane	ND		4.0	1.5
75-71-8	Dichlorodifluoromethane	ND		12	3.8
97-63-2	Ethyl methacrylate	ND		12	3.4
100-41-4	Ethylbenzene	ND		4.0	1.2
74-88-4	Iodomethane	ND		20	10
78-83-1	Isobutyl alcohol	ND		440	150
126-98-7	Methacrylonitrile	ND		60	21
80-62-6	Methyl methacrylate	ND		16	4.4
75-09-2	Methylene Chloride	ND		8.0	3.8
179601-23-1	m-Xylene & p-Xylene	ND		8.0	1.4
95-47-6	o-Xylene	ND		4.0	1.3
107-12-0	Propionitrile	ND		80	15
100-42-5	Styrene	ND		4.0	1.4
127-18-4	Tetrachloroethene	19		4.0	1.6
108-88-3	Toluene	ND		4.0	1.3
156-60-5	trans-1,2-Dichloroethene	ND		4.0	1.5
10061-02-6	trans-1,3-Dichloropropene	ND		8.0	2.6
110-57-6	trans-1,4-Dichloro-2-butene	ND		12	5.5
79-01-6	Trichloroethene	180		4.0	1.2
75-69-4	Trichlorofluoromethane	ND		8.0	2.3
108-05-4	Vinyl acetate	ND		12	3.8
75-01-4	Vinyl chloride	3.7	J	8.0	2.0
1330-20-7	Xylenes, Total	ND		4.0	1.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MP-2-20230411 | Lab Sample ID: 280-175122-2

Matrix: Water | Lab File ID: X502772.D

Analysis Method: 8260D | Date Collected: 04/11/2023 14:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/25/2023 03:05

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	99		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D
Lims ID: 280-175122-E-2
Client ID: MP-2-20230411
Sample Type: Client
Inject. Date: 25-Apr-2023 03:05:30 ALS Bottle#: 23 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 4.0000
Sample Info: 280-175122-E-2 4x
Misc. Info.: 280-0120722-027
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 11:59:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1683

First Level Reviewer: NNS5 Date: 25-Apr-2023 11:25:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1386413	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	339136	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	525041	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	341895	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	354450	50.6	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1433803	49.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	91	471686	50.3	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	91	471686	NR	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	33	1350	0.2219	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62	1.960	1.967	-0.007	96	4960	0.9268	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94	2.246	2.246	0.000	1	559	0.1664	
15 Chloroethane	64		2.339				ND	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	92	3466	0.3297	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.646				ND	
19 Ethyl ether	59	2.747	2.747	0.000	89	9390	2.01	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96		2.940				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.033				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.204				ND	
31 Methylene Chloride	84		3.297				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.783				ND	
41 Isopropyl ether	87		3.805				ND	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	94	4456	0.4131	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	78	34596	4.88	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42	4.391	4.391	0.000	72	1642	1.06	
54 Chloroform	83	4.448	4.441	0.007	92	4485	0.4086	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	7
63 1,2-Dichloroethane	62		4.877				ND	U
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.028				ND	7
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	98	292334	45.1	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.893				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164	6.808	6.801	0.007	97	23128	4.70	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.166				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91	7.573	7.552	0.021	33	1693	0.1844	
90 Chlorobenzene	112	7.602	7.595	0.007	92	3094	0.1638	
91 1,1,1,2-Tetrachloroethane	131		7.666				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.788				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.588				ND	
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.589				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	7
113 4-Isopropyltoluene	119		9.732				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	7
115 1,2,3-Trimethylbenzene	105		9.832				ND	
116 n-Butylbenzene	91		10.133				ND	
117 1,2-Dichlorobenzene	146	10.183	10.169	0.014	85	3332	0.2497	
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.763				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.256				ND	
166 Ethyl acrylate	55		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1				0		0.4086	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		4.88	
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

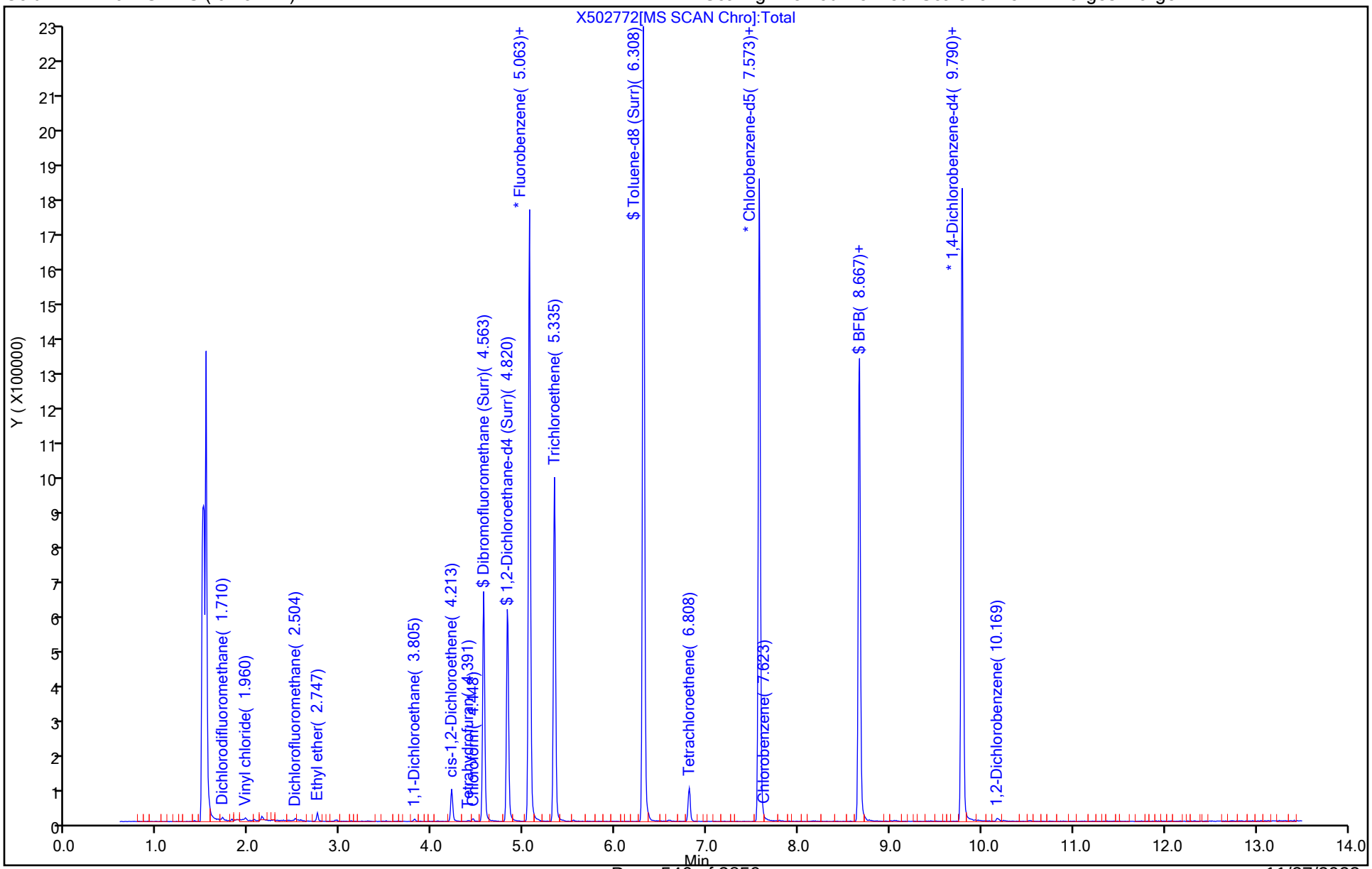
Report Date: 25-Apr-2023 12:00:27 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D

Injection Date:	25-Apr-2023 03:05:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	280-175122-E-2	Lab Sample ID:	280-175122-2	Worklist Smp#:	27
Client ID:	MP-2-20230411				
Purge Vol:	5.000 mL	Dil. Factor:	4.0000	ALS Bottle#:	23
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D
Lims ID: 280-175122-E-2
Client ID: MP-2-20230411
Sample Type: Client
Inject. Date: 25-Apr-2023 03:05:30 ALS Bottle#: 23 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 4.0000
Sample Info: 280-175122-E-2 4x
Misc. Info.: 280-0120722-027
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 11:59:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1683

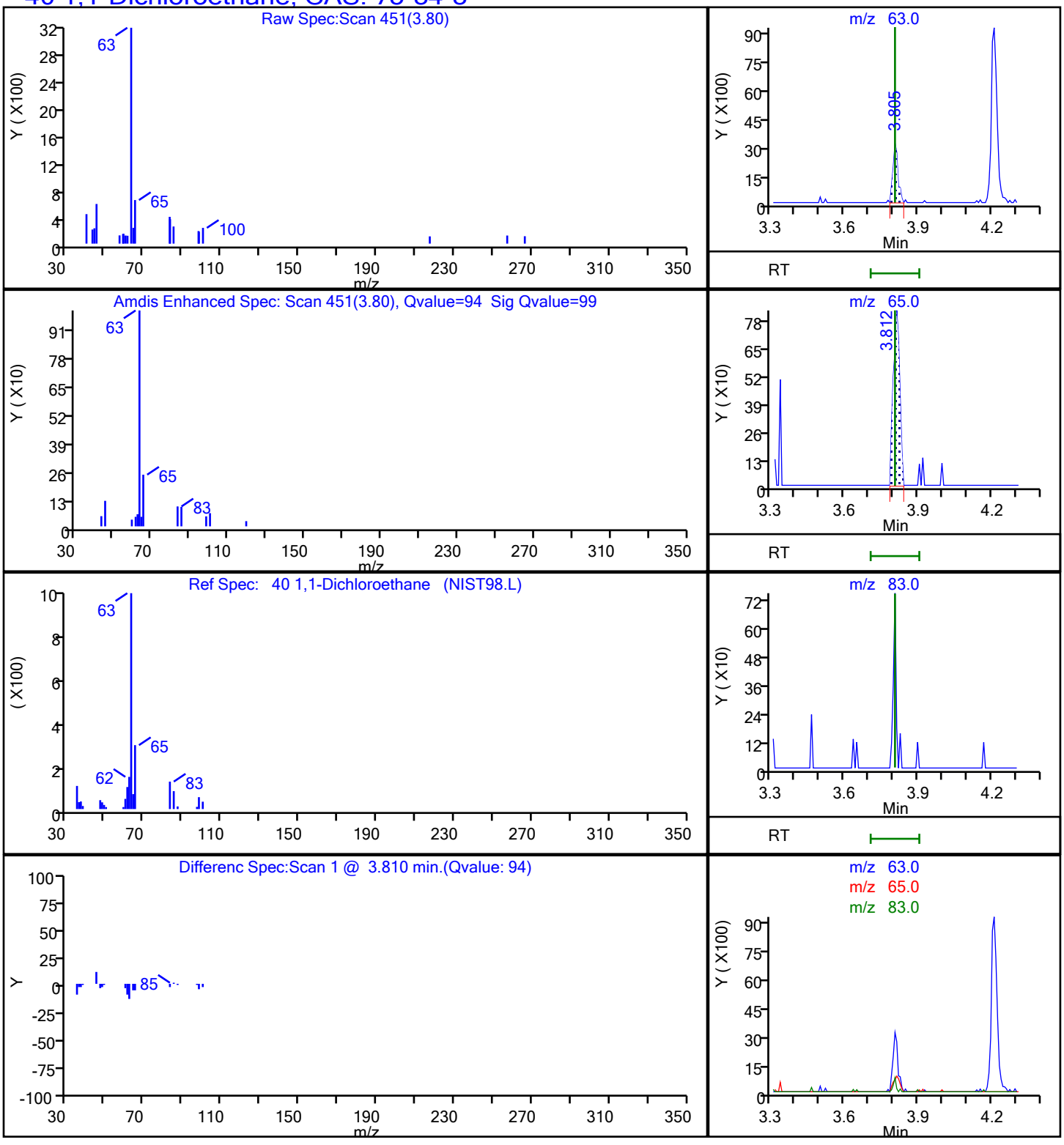
First Level Reviewer: NNS5 Date: 25-Apr-2023 11:25:08

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.53
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.6	101.21
$ 6 Toluene-d8 (Surr)	50.0	49.6	99.26
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.3	100.54

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D		
Injection Date:	25-Apr-2023 03:05:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-E-2	Lab Sample ID:	280-175122-2
Client ID:	MP-2-20230411		
Operator ID:	bj	ALS Bottle#:	23 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	4.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

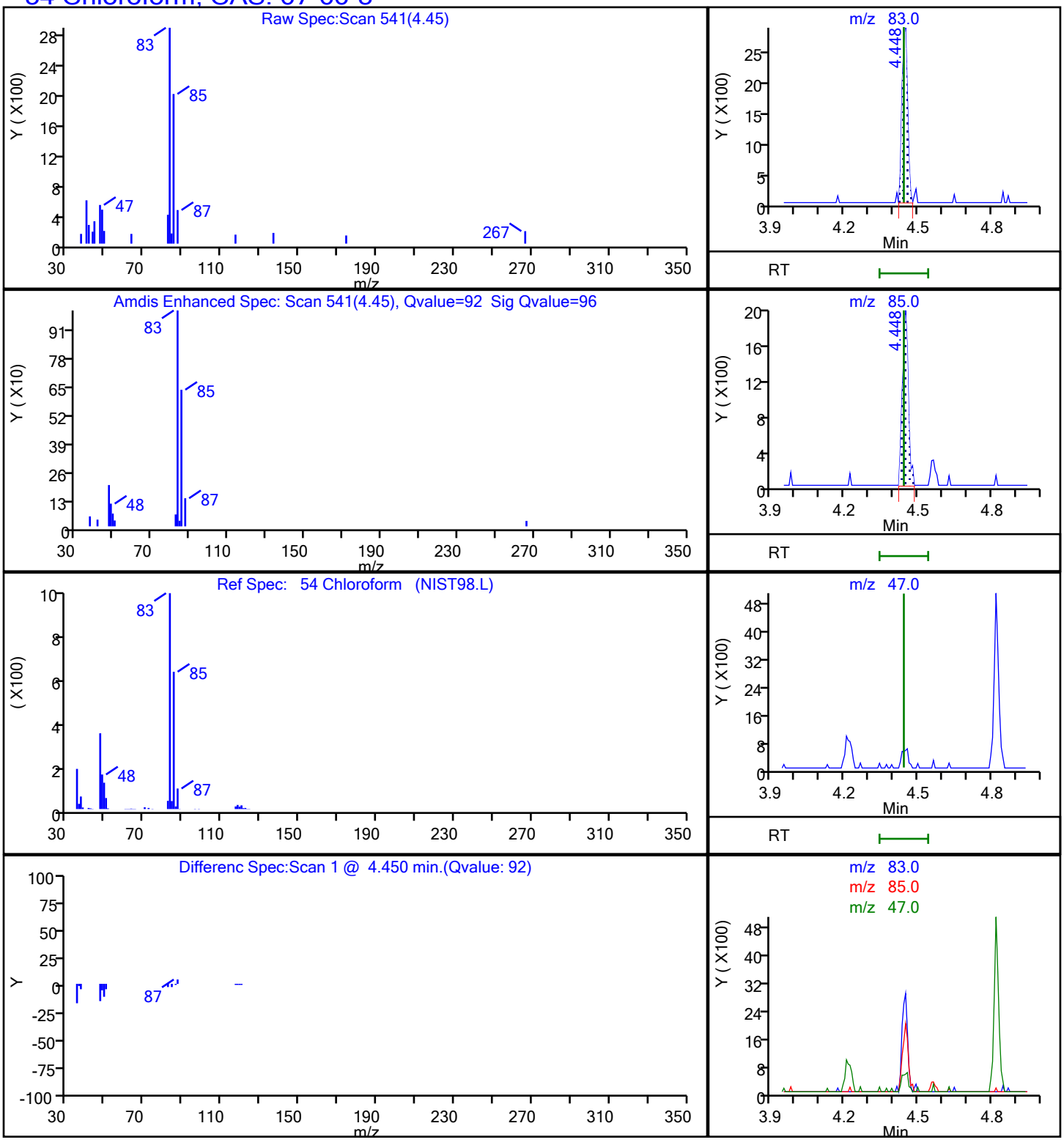
40 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D				
Injection Date:	25-Apr-2023 03:05:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-E-2	Lab Sample ID:	280-175122-2		
Client ID:	MP-2-20230411				
Operator ID:	bj	ALS Bottle#:	23	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

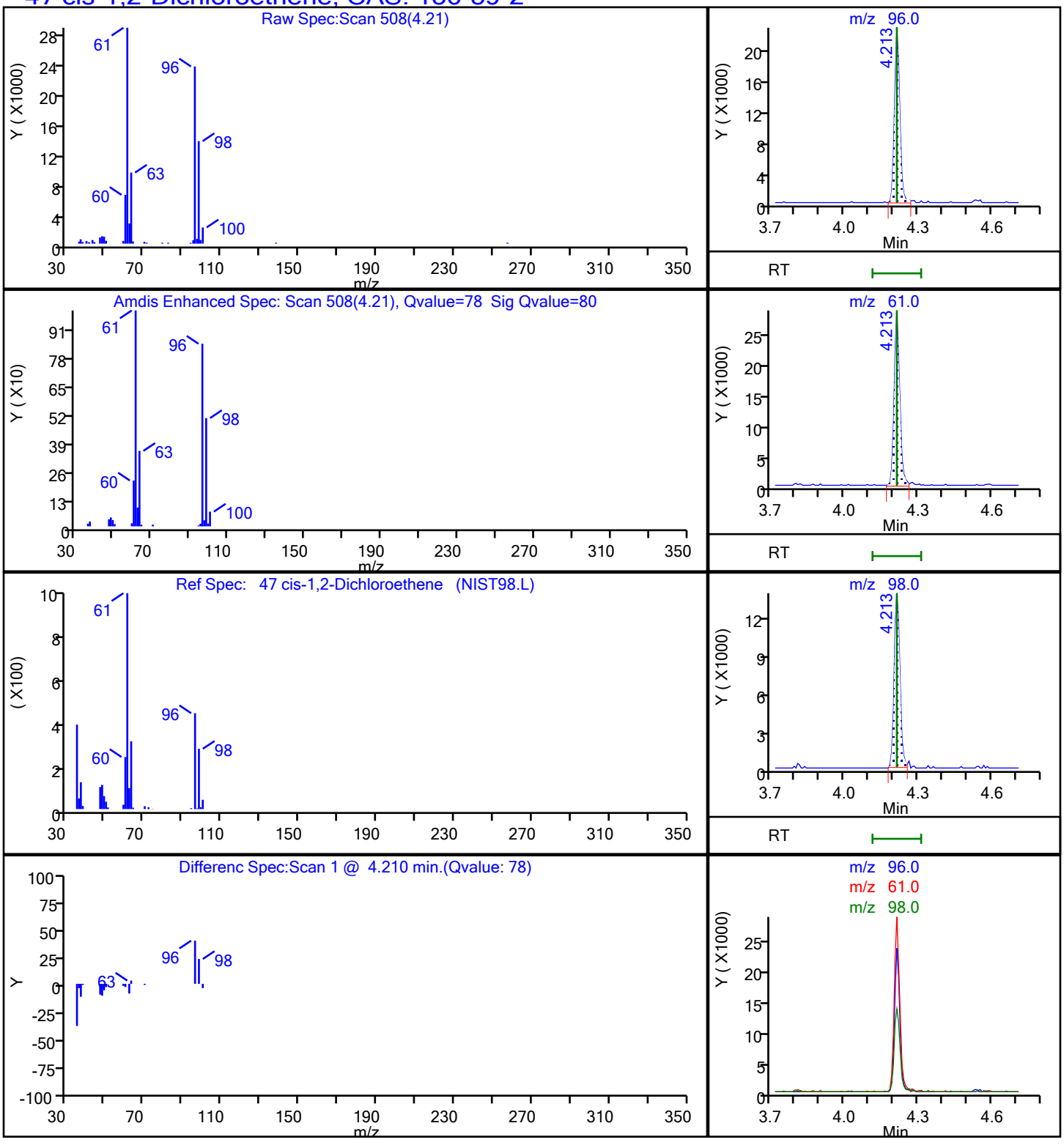
54 Chloroform, CAS: 67-66-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D				
Injection Date:	25-Apr-2023 03:05:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-E-2	Lab Sample ID:	280-175122-2		
Client ID:	MP-2-20230411				
Operator ID:	bj	ALS Bottle#:	23	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

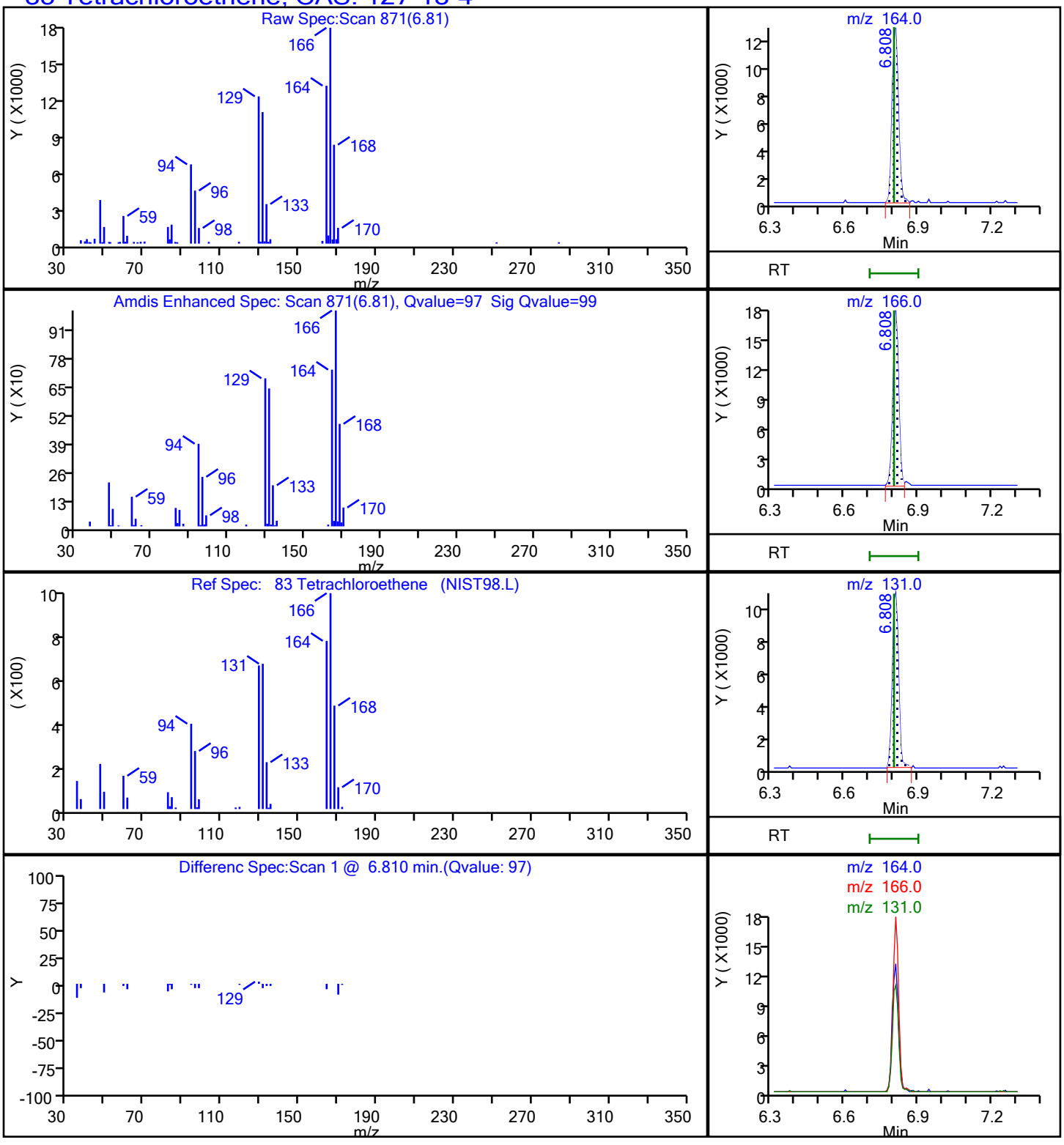
47 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D		
Injection Date:	25-Apr-2023 03:05:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-E-2	Lab Sample ID:	280-175122-2
Client ID:	MP-2-20230411		
Operator ID:	bj	ALS Bottle#:	23 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	4.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

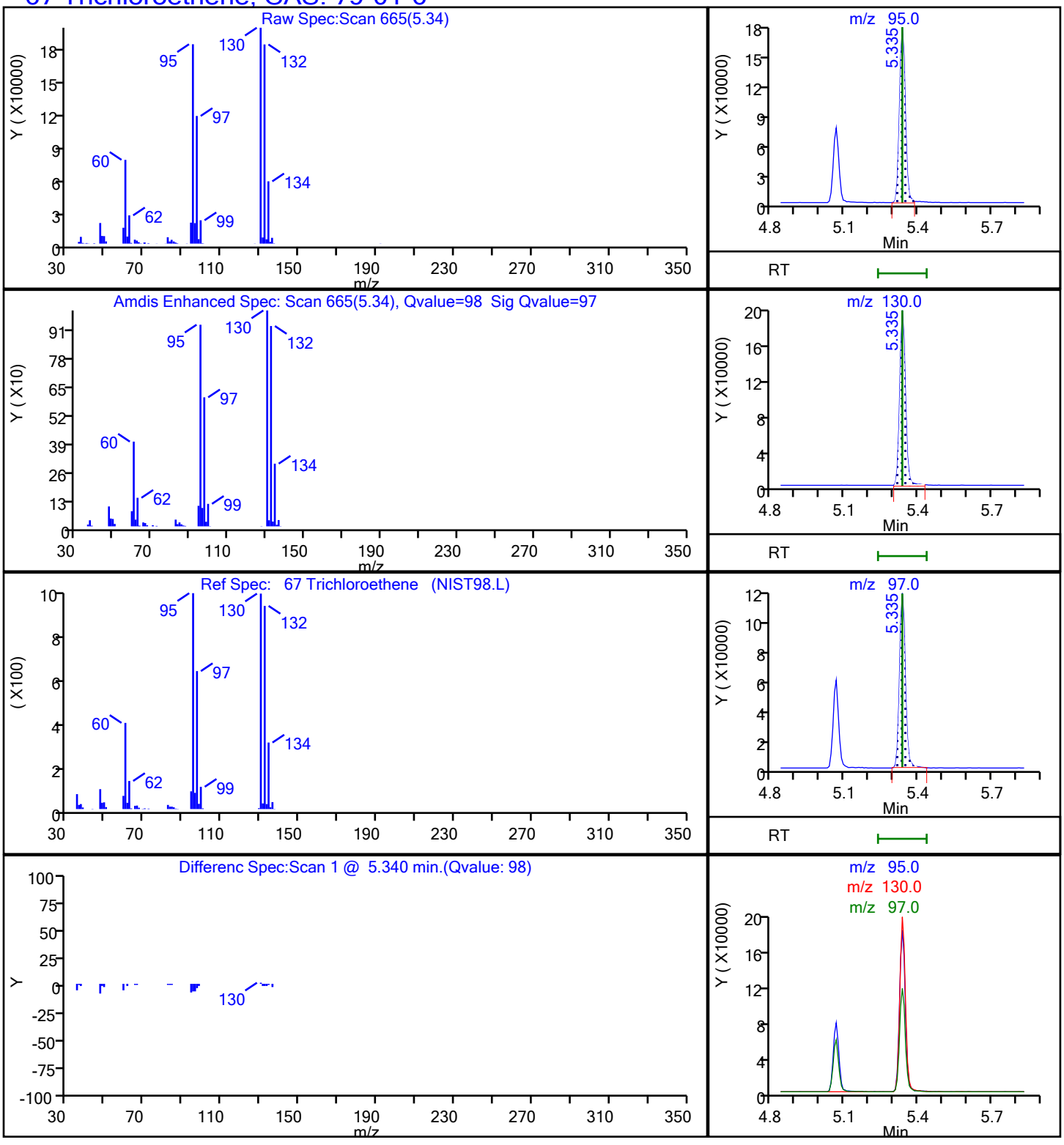
83 Tetrachloroethene, CAS: 127-18-4



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D		
Injection Date:	25-Apr-2023 03:05:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-E-2	Lab Sample ID:	280-175122-2
Client ID:	MP-2-20230411		
Operator ID:	bj	ALS Bottle#:	23 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	4.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

67 Trichloroethene, CAS: 79-01-6



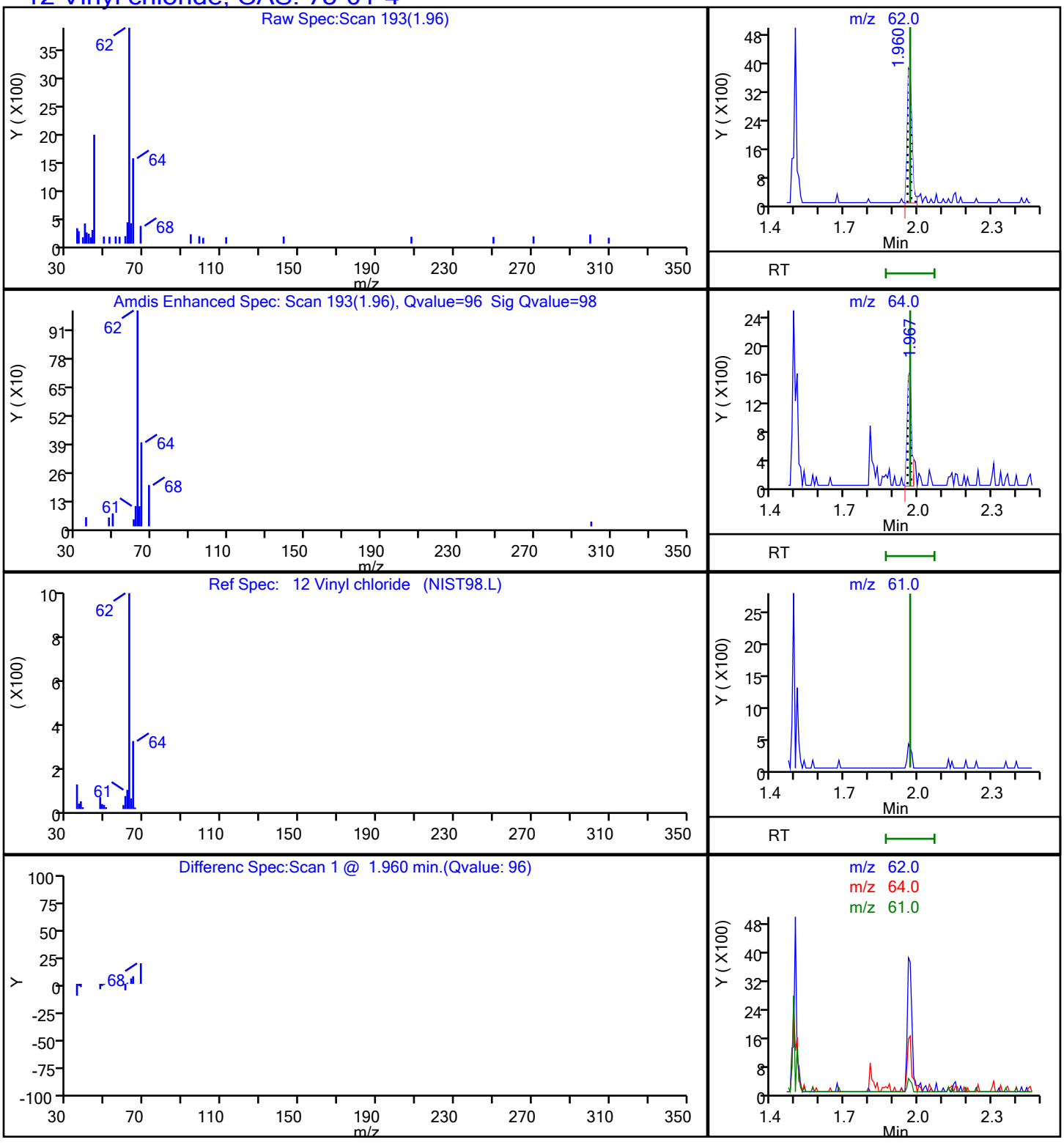
Report Date: 25-Apr-2023 12:00:27 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D

Injection Date:	25-Apr-2023 03:05:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-E-2	Lab Sample ID:	280-175122-2		
Client ID:	MP-2-20230411				
Operator ID:	bj	ALS Bottle#:	23	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

12 Vinyl chloride, CAS: 75-01-4



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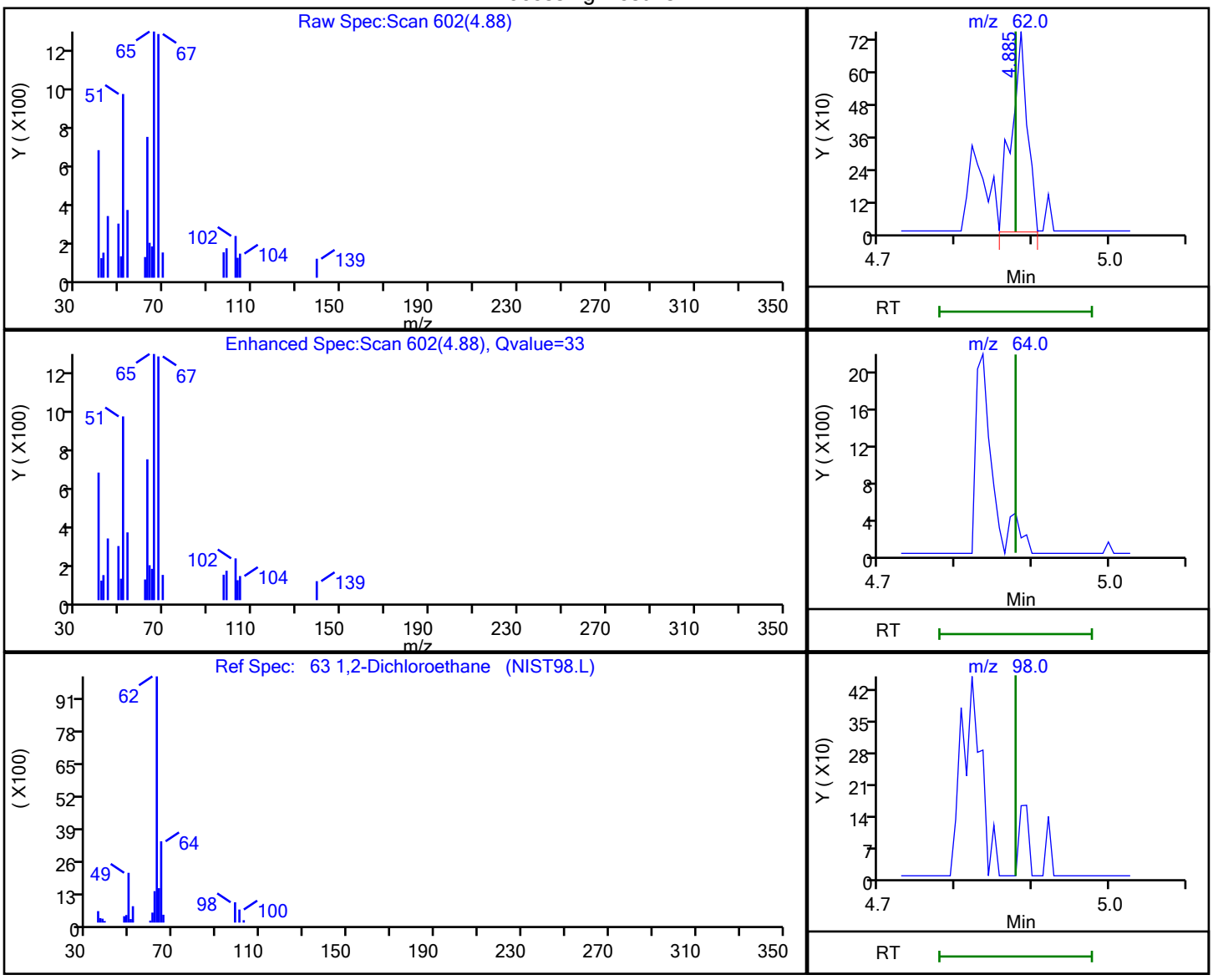
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D				
Injection Date:	25-Apr-2023 03:05:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-E-2	Lab Sample ID:	280-175122-2		
Client ID:	MP-2-20230411				
Operator ID:	bj	ALS Bottle#:	23	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

63 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
4.88	62.00	1066	0.130569
4.88	64.00	0	
4.88	98.00	0	

Reviewer: NNS5, 25-Apr-2023 11:24:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

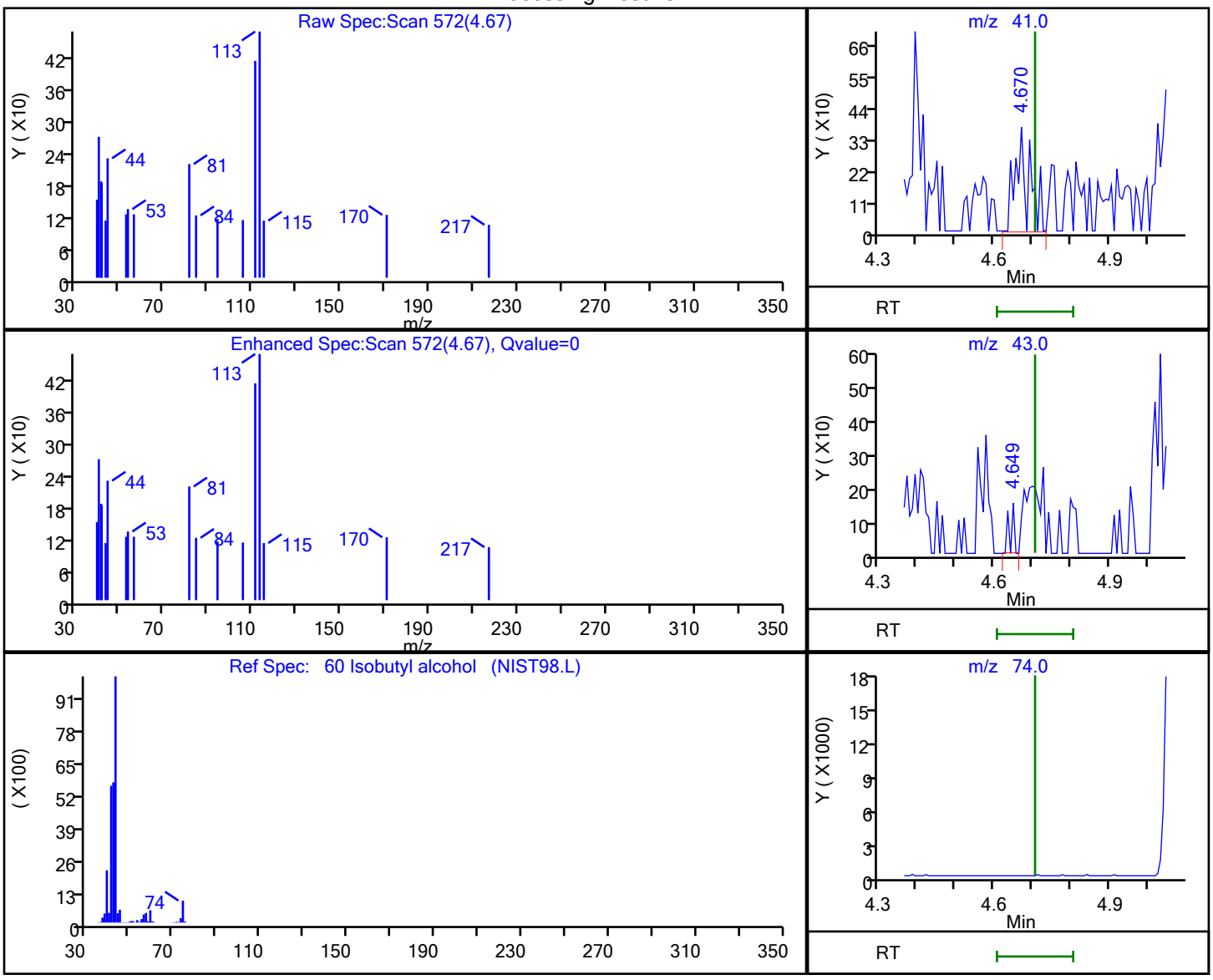
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502772.D				
Injection Date:	25-Apr-2023 03:05:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-E-2	Lab Sample ID:	280-175122-2		
Client ID:	MP-2-20230411				
Operator ID:	bj	ALS Bottle#:	23	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	4.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.67	41.00	924	16.620615
4.65	43.00	120	
4.71	74.00	0	

Reviewer: NNS5, 25-Apr-2023 11:24:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-118D-20230412 | Lab Sample ID: 280-175122-3

Matrix: Water | Lab File ID: P01141.D

Analysis Method: 8260D | Date Collected: 04/12/2023 17:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	7.8		1.0	0.22
75-35-4	1,1-Dichloroethene	0.48	J	1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	1.1		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	0.90	J	1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	0.52	J	1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	0.47	J	1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-118D-20230412 | Lab Sample ID: 280-175122-3

Matrix: Water | Lab File ID: P01141.D

Analysis Method: 8260D | Date Collected: 04/12/2023 17:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	0.37	J	1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	4.6		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	3.2		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	9.9		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	58		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-118D-20230412 | Lab Sample ID: 280-175122-3

Matrix: Water | Lab File ID: P01141.D

Analysis Method: 8260D | Date Collected: 04/12/2023 17:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	96		78-120
1868-53-7	Dibromofluoromethane (Surr)	108		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D
Lims ID: 280-175122-E-3
Client ID: MW-118D-20230412
Sample Type: Client
Inject. Date: 26-Apr-2023 14:30:30 ALS Bottle#: 15 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175122-e-3
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:35 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

First Level Reviewer: NNS5 Date: 27-Apr-2023 08:33:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1525537	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.278	-0.011	87	380155	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	552892	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	408397	54.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.523	0.001	0	458389	51.7	
$ 6 Toluene-d8 (Surr)	98	6.012	6.011	0.001	93	1648824	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	86	579639	48.1	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.365	8.365	0.000	86	579639	NR	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	98	22142	3.20	
11 Chloromethane	50		1.664				ND	
12 Vinyl chloride	62	1.727	1.727	0.000	96	4577	0.1275	
14 Bromomethane	94		1.980				ND	7
13 Ethylene oxide	43		1.991				ND	7
15 Chloroethane	64		2.075				ND	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	151125	12.7	
17 Trichlorofluoromethane	101	2.244	2.276	-0.032	95	4967	0.2216	
18 Ethanol	45		2.392				ND	
19 Ethyl ether	59	2.476	2.476	0.000	87	39220	7.01	
21 Acrolein	56		2.582				ND	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.666				ND	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	97	2651	0.4775	
24 Acetone	43		2.677				ND	7
20 Propene oxide	58	2.677	2.719	-0.042	36	2268	54.5	
25 Isopropyl alcohol	45		2.772				ND	U
26 Iodomethane	142		2.782				ND	
27 Carbon disulfide	76		2.835				ND	7
28 Acetonitrile	41		2.877				ND	
29 Methyl acetate	43		2.898				ND	
30 3-Chloro-1-propene	41		2.919				ND	
31 Methylene Chloride	84		3.014				ND	7
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	97	4029	2.09	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
33 Acrylonitrile	53		3.173				ND	
34 Methyl tert-butyl ether	73		3.194				ND	7
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	92	1367	0.2151	
36 Hexane	57		3.394				ND	
38 Vinyl acetate	43	3.510	3.500	0.010	22	1916	0.1359	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	96	87955	7.78	
40 Isopropyl ether	87		3.521				ND	
41 2-Chloro-1,3-butadiene	53		3.574				ND	
43 Tert-butyl ethyl ether	59		3.774				ND	
37 Chlorotrifluoroethene	116		3.818				ND	
44 2-Butanone (MEK)	43		3.901				ND	7
46 Ethyl acetate	43		3.912				ND	7
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	78	32445	4.56	
48 2,2-Dichloropropane	77		3.932				ND	
49 Propionitrile	54		3.943				ND	
50 sec-Butyl Alcohol	45		4.017				ND	
42 1,2-Dichloro-1,1,2,2-tetrafluoro	85		4.027				ND	
51 Methacrylonitrile	41		4.059				ND	
53 Chlorobromomethane	128		4.101				ND	
52 Tetrahydrofuran	42	4.101	4.101	0.000	85	11416	2.67	
54 Chloroform	83	4.154	4.154	0.000	92	4194	0.3655	
55 1,1,1-Trichloroethane	97		4.291				ND	
45 2-Chloro-1,1,1-Trifluoroethane	118		4.307				ND	
56 Cyclohexane	56		4.355				ND	
59 Carbon tetrachloride	117		4.407				ND	
57 1,1-Dichloropropene	75		4.407				ND	
58 Isobutyl alcohol	41	4.418	4.428	-0.010	20	836	1.52	
60 Benzene	78	4.555	4.555	0.000	90	12568	0.4707	
61 1,2-Dichloroethane	62		4.587				ND	
62 Tert-amyl methyl ether	73		4.629				ND	
63 n-Butanol	56		4.629				ND	
66 n-Heptane	43		4.745				ND	7
67 Trichloroethene	95	5.041	5.040	0.001	99	412940	57.6	
64 1,2-Dichloro-1,1,2-trifluoroetha	117		5.089				ND	
65 1,1,1-Trifluoro-2,2-dichloroetha	83	5.041	5.131	-0.089	44	5210	NC	
68 2-Pentanone	43		5.146				ND	
69 Methylcyclohexane	55		5.230				ND	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	94	6219	0.8982	
71 Methyl methacrylate	100		5.252				ND	
72 1,4-Dioxane	88	5.294	5.294	0.000	83	2919	13.5	
73 Dibromomethane	93		5.315				ND	
74 Dichlorobromomethane	83		5.442				ND	
75 2-Nitropropane	41		5.600				ND	
76 2-Chloroethyl vinyl ether	63		5.642				ND	
77 cis-1,3-Dichloropropene	75		5.790				ND	
78 4-Methyl-2-pentanone (MIBK)	43		5.885				ND	
79 Toluene	91		6.064				ND	
80 trans-1,3-Dichloropropene	75		6.244				ND	
81 Ethyl methacrylate	69		6.275				ND	
82 1,1,2-Trichloroethane	97		6.423				ND	
83 Tetrachloroethene	164	6.508	6.507	0.001	94	48239	9.92	
84 1,3-Dichloropropane	76		6.560				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 2-Hexanone	43		6.592				ND	
86 Chlorodibromomethane	129		6.761				ND	
87 Tetrahydrothiophene	60		6.782				ND	
88 Ethylene Dibromide	107		6.866				ND	
89 1-Chlorohexane	91		7.267				ND	7
90 Chlorobenzene	112	7.299	7.299	0.000	84	4851	0.2602	
91 1,1,1,2-Tetrachloroethane	131		7.373				ND	
92 Ethylbenzene	106		7.383				ND	
93 m-Xylene & p-Xylene	106		7.499				ND	7
94 o-Xylene	106		7.858				ND	
95 Styrene	104		7.869				ND	
96 Bromoform	173		8.048				ND	
97 Isopropylbenzene	105		8.196				ND	
98 cis-1,4-Dichloro-2-butene	53		8.249				ND	
99 Cyclohexanone	55		8.280				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.481				ND	
101 Bromobenzene	156		8.502				ND	
102 trans-1,4-Dichloro-2-butene	53		8.523				ND	
103 1,2,3-Trichloropropane	110		8.544				ND	
104 N-Propylbenzene	120		8.597				ND	
105 2-Chlorotoluene	126		8.681				ND	
106 1,3,5-Trimethylbenzene	105		8.766				ND	
107 4-Chlorotoluene	126		8.797				ND	
108 tert-Butylbenzene	119		9.072				ND	
127 Pentachloroethane	167		9.103				ND	
109 1,2,4-Trimethylbenzene	105		9.135				ND	
110 sec-Butylbenzene	134		9.293				ND	
111 1,3-Dichlorobenzene	146		9.409				ND	
112 4-Isopropyltoluene	119		9.441				ND	
113 1,4-Dichlorobenzene	146	9.505	9.515	-0.010	84	6879	0.5180	
114 1,2,3-Trimethylbenzene	105		9.526				ND	
115 n-Butylbenzene	91		9.842				ND	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	13432	1.11	
117 1,2-Dibromo-3-Chloropropane	157		10.644				ND	
118 1,3,5-Trichlorobenzene	180		10.824				ND	
119 1,2,4-Trichlorobenzene	180		11.457				ND	
120 Hexachlorobutadiene	225		11.604				ND	
121 Naphthalene	128		11.720				ND	
122 1,2,3-Trichlorobenzene	180		11.942				ND	
129 n-Nonyl Aldehyde	1		0.000				ND	
135 3-Methylhexane	1		0.000				ND	
136 1-Chlorohexane TIC	1		0.000				ND	
124 2,3-Dimethylpentane	1		0.000				ND	
125 2,2,3-Trimethylbutane	1		0.000				ND	
134 2,2-Dimethylpentane	1		0.000				ND	
123 3,3-Dimethylpentane	1		0.000				ND	
126 3-Ethylpentane	1		0.000				ND	
132 2-Methylhexane	1		0.000				ND	
128 2,4-Dimethylpentane	1		0.000				ND	
130 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
138 Dimethyl disulfide	1		0.000				ND	
131 Propene oxide TIC	58		3.357				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
S 139 1,2-Dichloroethene, Total (URS)	96				0		4.77	
S 144 1,2-Dichloroethene, Total	1				0		4.77	
S 145 1,3-Dichloropropene, Total	1		0.000				ND	7
S 146 Total BTEX	1				0		0.4707	
S 143 Xylenes, Total (URS)	1		0.000				ND	7
S 140 Trihalomethanes, Total	1				0		0.3655	
S 141 TAH	1				0		0	7
S 142 Xylenes, Total	106		0.000				ND	7
T 149 Propene TIC	41	1.442	1.481	-0.039	69	1250	0.0410	7
T 147 1,3-Butadiene TIC	54		1.807				ND	
T 150 4-Ethyltoluene TIC	105		8.783				ND	
T 154 Dichloroacetonitrile TIC	66		9.596				ND	
T 148 n-Nonane TIC	1		0.000				ND	
T 152 2,3-dichloro-1-propene TIC	75		0.000				ND	
T 153 2-Butoxyethanol TIC	1		0.000				ND	
T 151 Dicyclopentadiene TIC	1		0.000				ND	
T 137 Cyclohexane TIC	1		0.000				ND	
T 133 Methyl cyclohexane TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

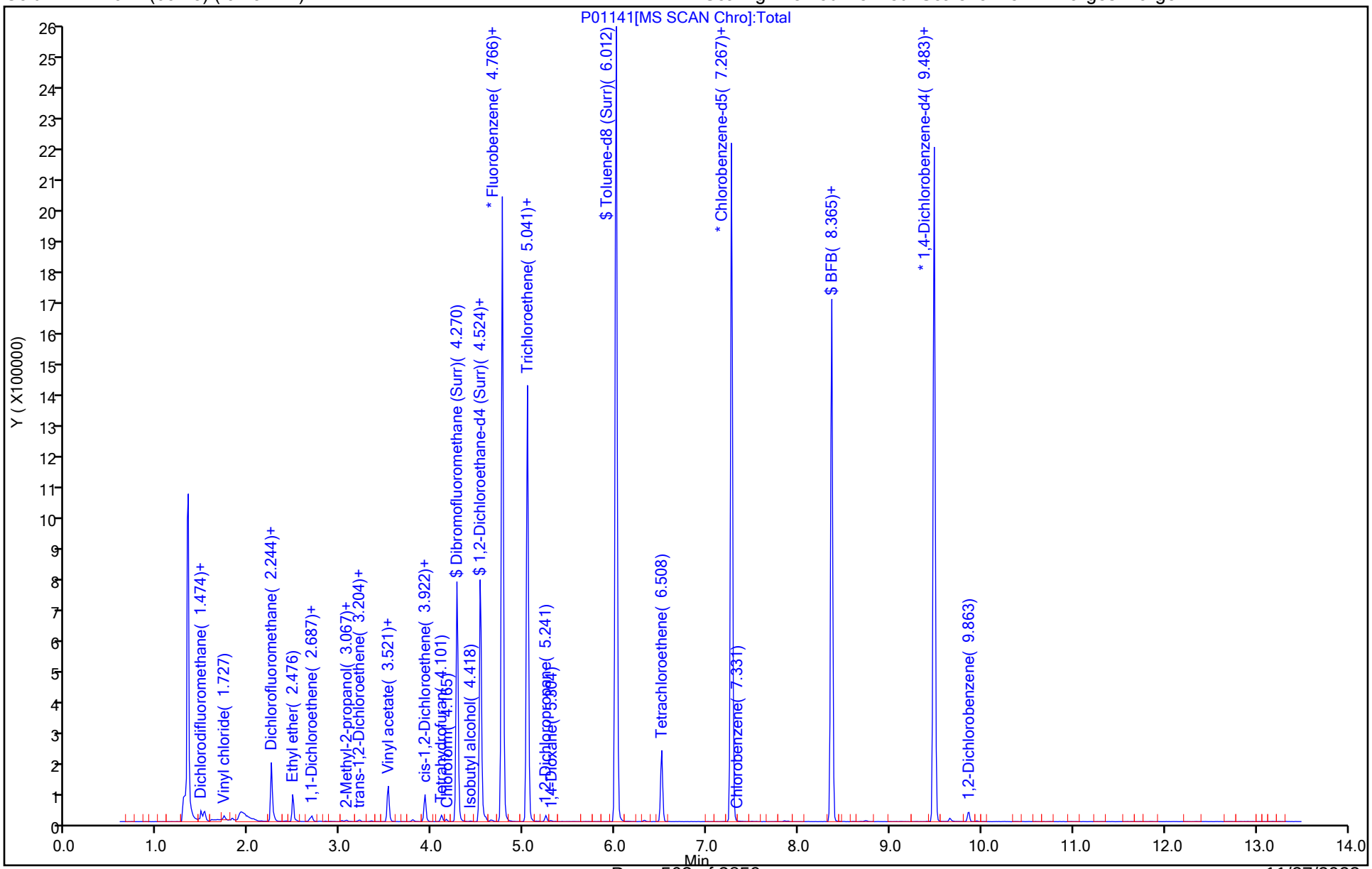
Report Date: 27-Apr-2023 12:42:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D

Injection Date:	26-Apr-2023 14:30:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	280-175122-E-3	Lab Sample ID:	280-175122-3	Worklist Smp#:	20
Client ID:	MW-118D-20230412				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D				
Lims ID:	280-175122-E-3				
Client ID:	MW-118D-20230412				
Sample Type:	Client				
Inject. Date:	26-Apr-2023 14:30:30	ALS Bottle#:	15	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175122-e-3				
Operator ID:	COULTERD	Instrument ID:	VMS_P		
Method:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	27-Apr-2023 12:40:35	Calib Date:	12-Apr-2023 14:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1641				

First Level Reviewer: NNS5 Date: 27-Apr-2023 08:33:04

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	54.2	108.49
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	51.7	103.42
$ 6 Toluene-d8 (Surr)	50.0	50.7	101.34
$ 7 4-Bromofluorobenzene (Surr)	50.0	48.1	96.24

Report Date: 27-Apr-2023 12:42:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D

Injection Date: 26-Apr-2023 14:30:30 Instrument ID: VMS_P

Lims ID: 280-175122-E-3 Lab Sample ID: 280-175122-3

Client ID: MW-118D-20230412

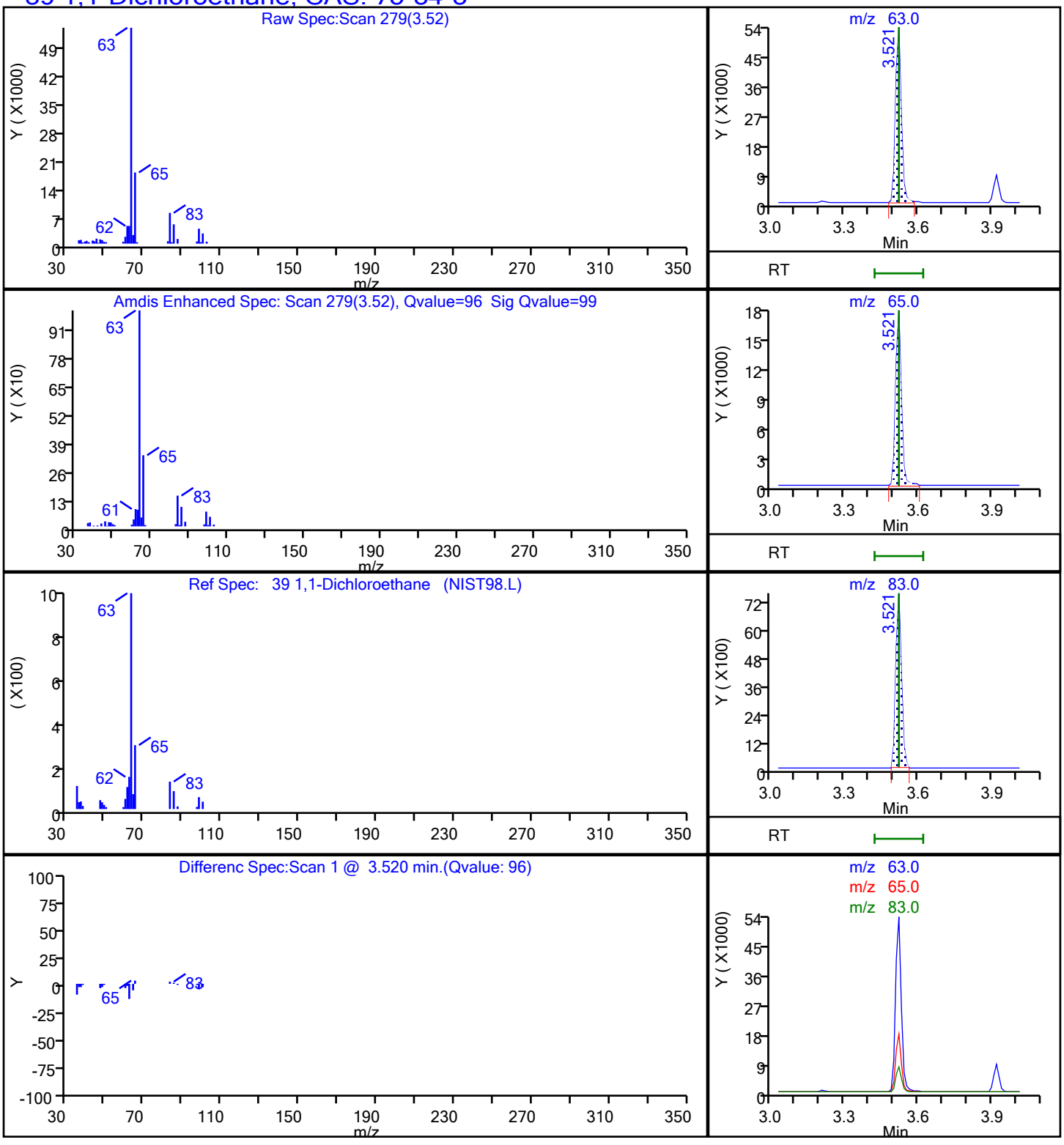
Operator ID: COULTERD ALS Bottle#: 15 Worklist Smp#: 20

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

39 1,1-Dichloroethane, CAS: 75-34-3



11/27/2023
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Report Date: 27-Apr-2023 12:42:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D

Injection Date: 26-Apr-2023 14:30:30 Instrument ID: VMS_P

Lims ID: 280-175122-E-3 Lab Sample ID: 280-175122-3

Client ID: MW-118D-20230412

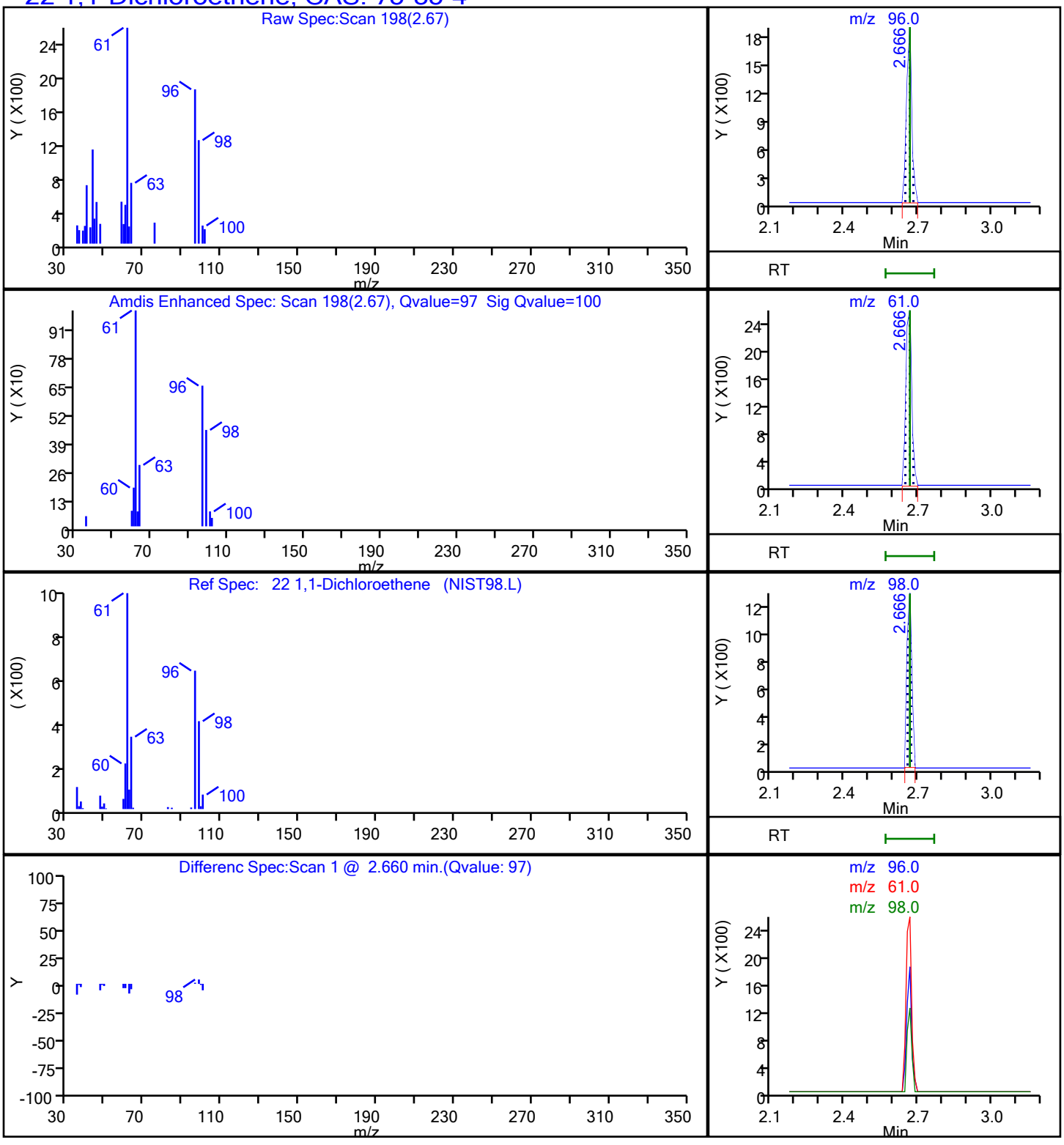
Operator ID: COULTERD ALS Bottle#: 15 Worklist Smp#: 20

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4



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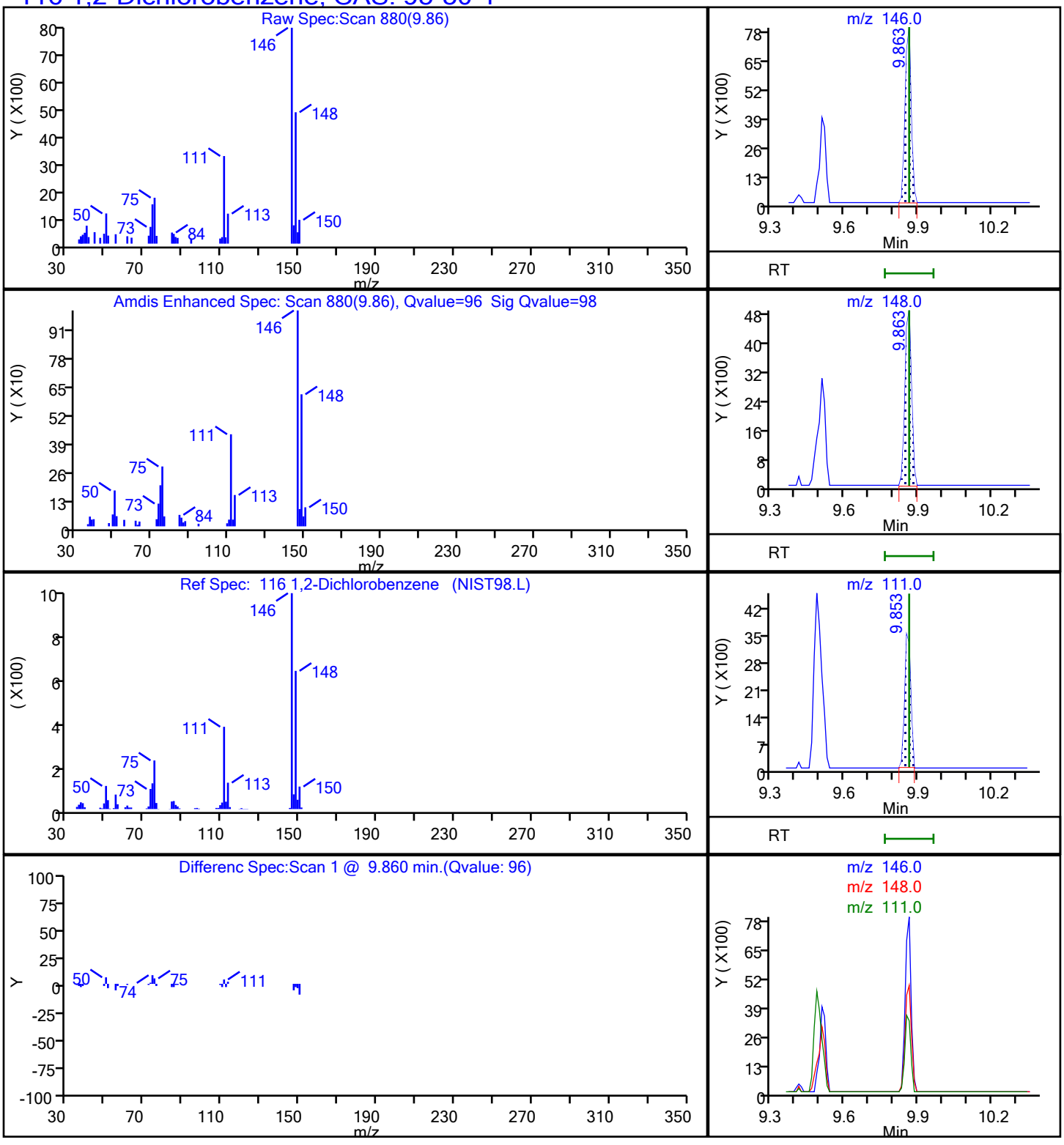
Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D				
Injection Date:	26-Apr-2023 14:30:30	Instrument ID:	VMS_P		
Lims ID:	280-175122-E-3	Lab Sample ID:	280-175122-3		
Client ID:	MW-118D-20230412				
Operator ID:	COULTERD	ALS Bottle#:	15	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

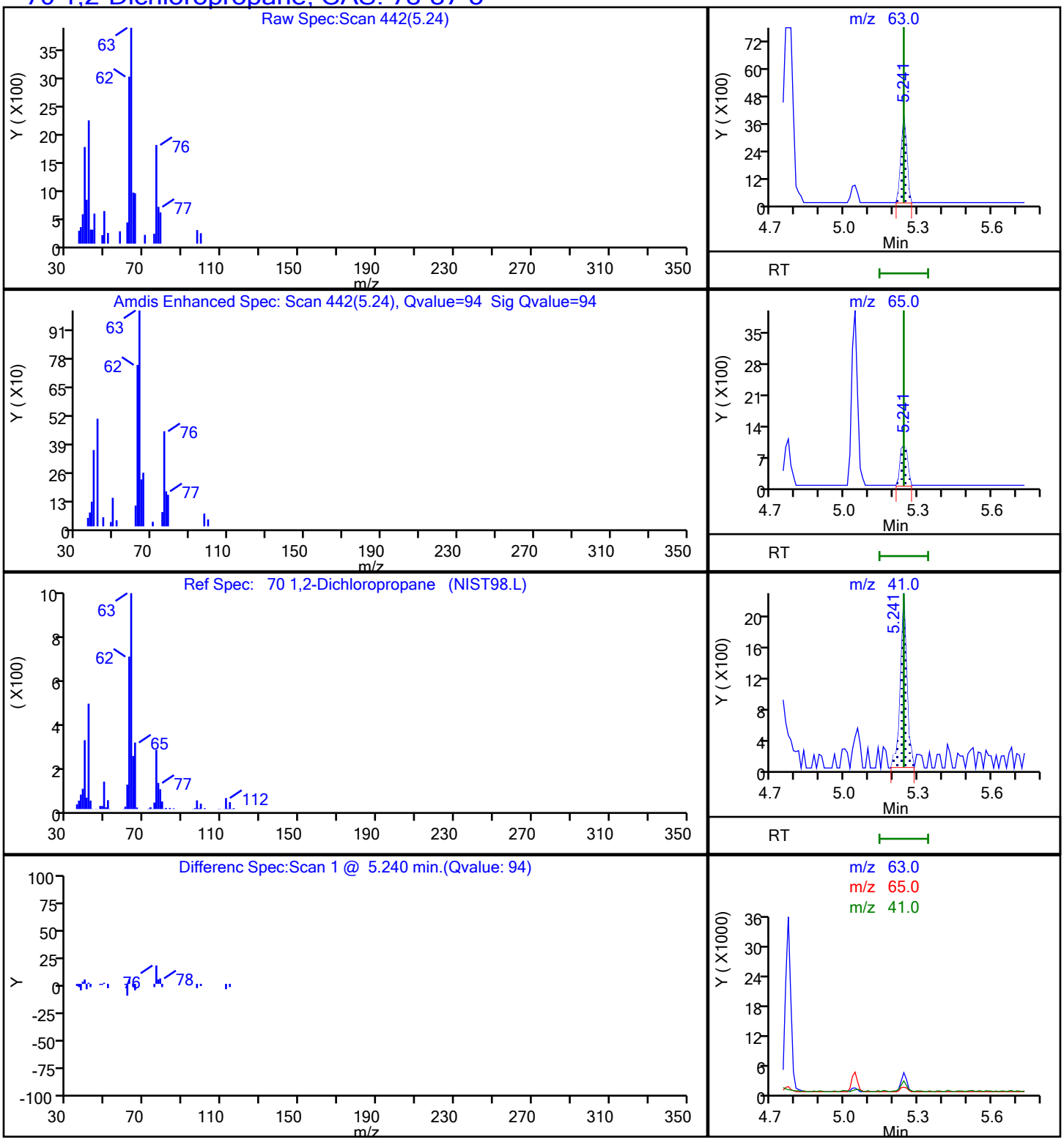
116 1,2-Dichlorobenzene, CAS: 95-50-1



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D		
Injection Date:	26-Apr-2023 14:30:30	Instrument ID:	VMS_P
Lims ID:	280-175122-E-3	Lab Sample ID:	280-175122-3
Client ID:	MW-118D-20230412		
Operator ID:	COULTERD	ALS Bottle#:	15 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

70 1,2-Dichloropropane, CAS: 78-87-5



Report Date: 27-Apr-2023 12:42:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D

Injection Date: 26-Apr-2023 14:30:30 Instrument ID: VMS_P

Lims ID: 280-175122-E-3 Lab Sample ID: 280-175122-3

Client ID: MW-118D-20230412

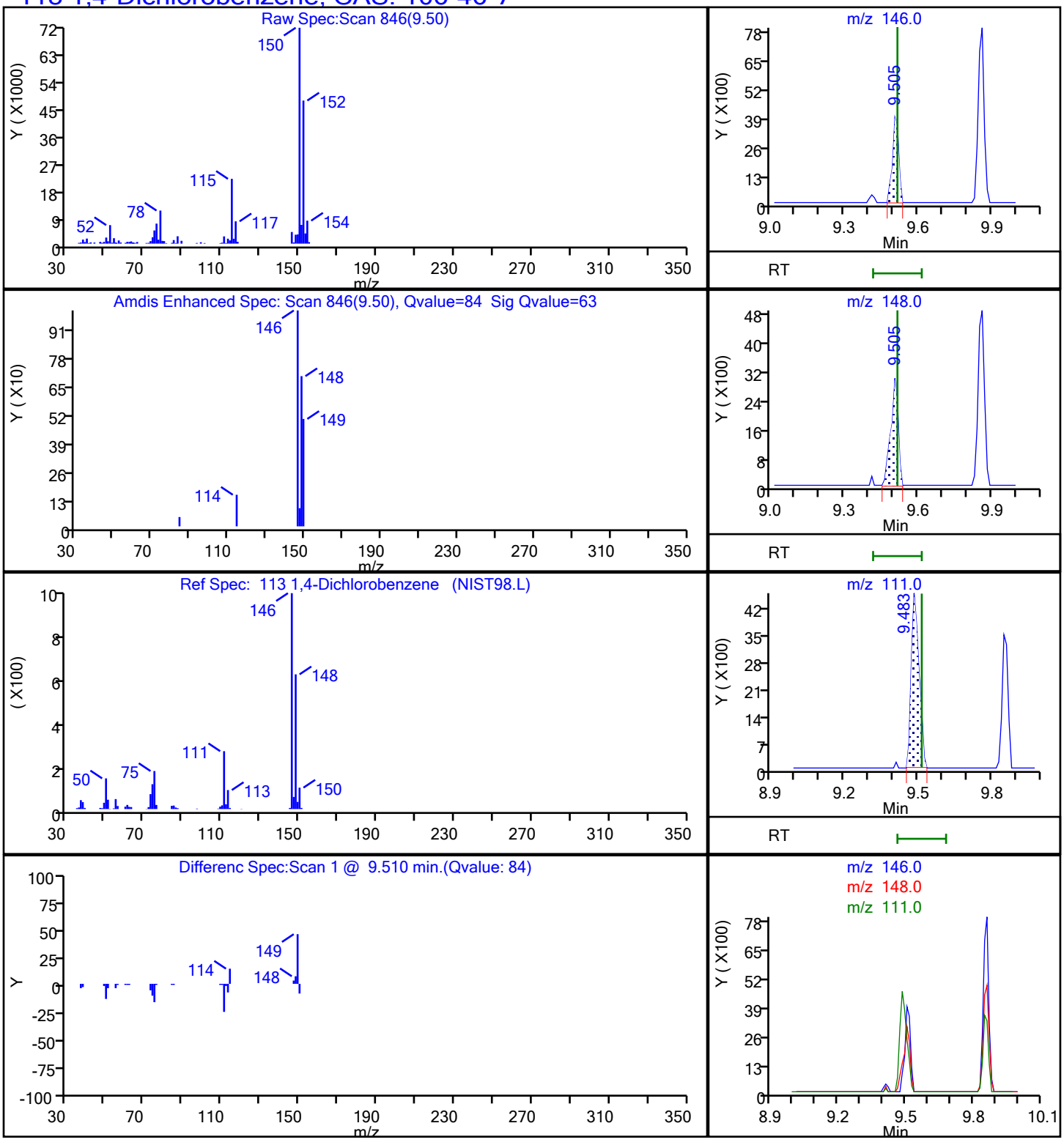
Operator ID: COULTERD ALS Bottle#: 15 Worklist Smp#: 20

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

113 1,4-Dichlorobenzene, CAS: 106-46-7



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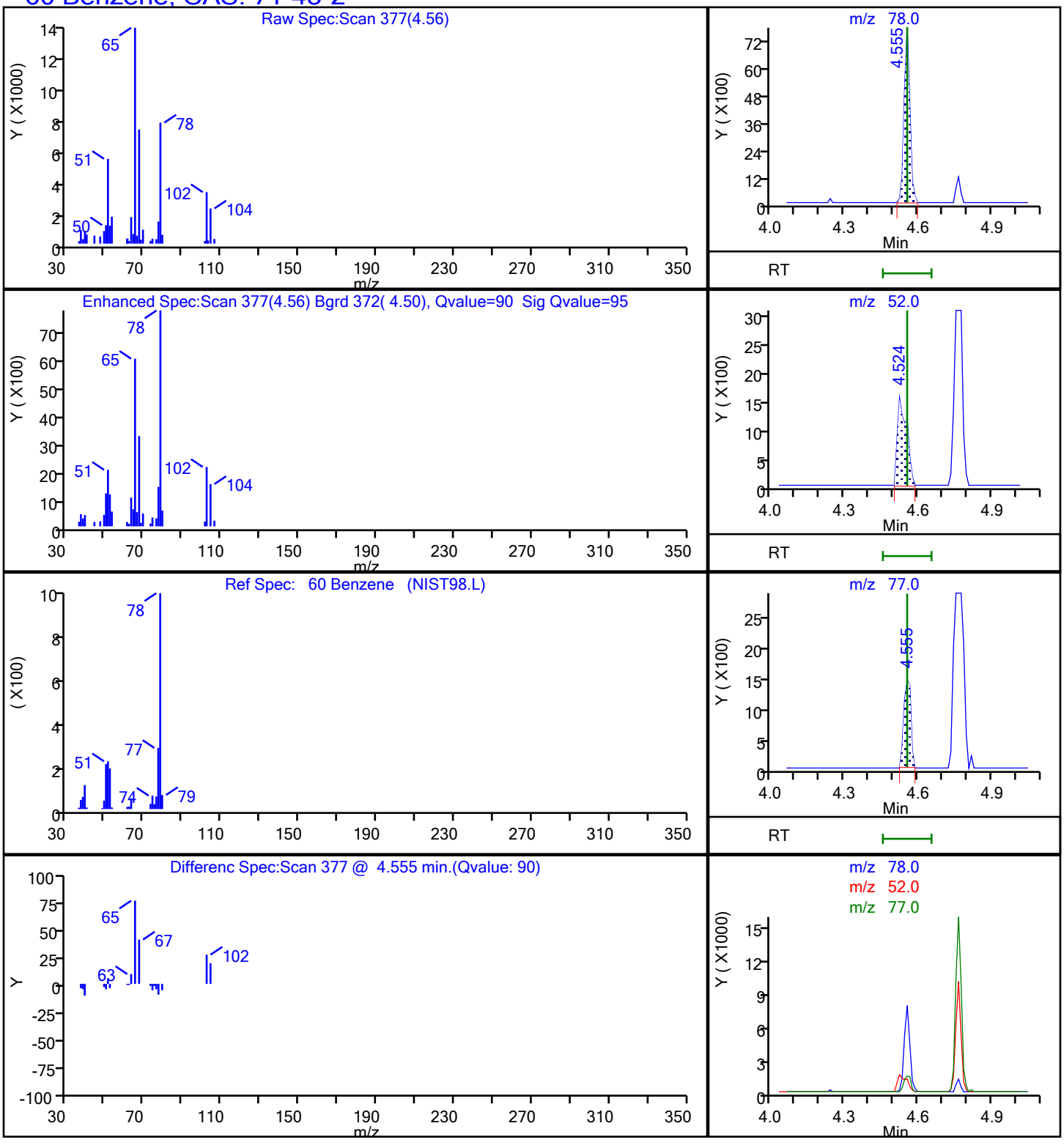
Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D		
Injection Date:	26-Apr-2023 14:30:30	Instrument ID:	VMS_P
Lims ID:	280-175122-E-3	Lab Sample ID:	280-175122-3
Client ID:	MW-118D-20230412		
Operator ID:	COULTERD	ALS Bottle#:	15 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

60 Benzene, CAS: 71-43-2



Report Date: 27-Apr-2023 12:42:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D

Injection Date: 26-Apr-2023 14:30:30 Instrument ID: VMS_P

Lims ID: 280-175122-E-3 Lab Sample ID: 280-175122-3

Client ID: MW-118D-20230412

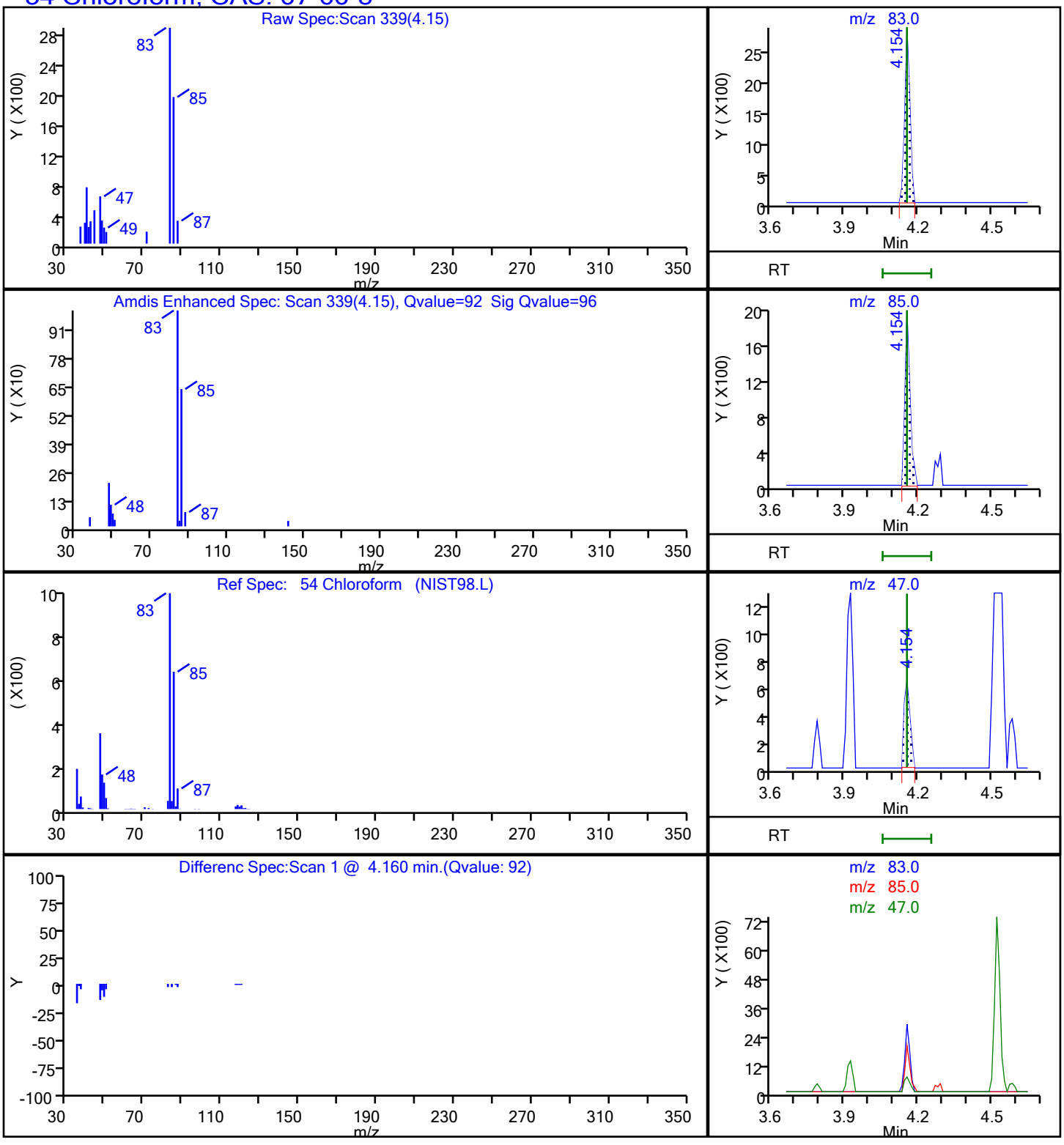
Operator ID: COULTERD ALS Bottle#: 15 Worklist Smp#: 20

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

54 Chloroform, CAS: 67-66-3



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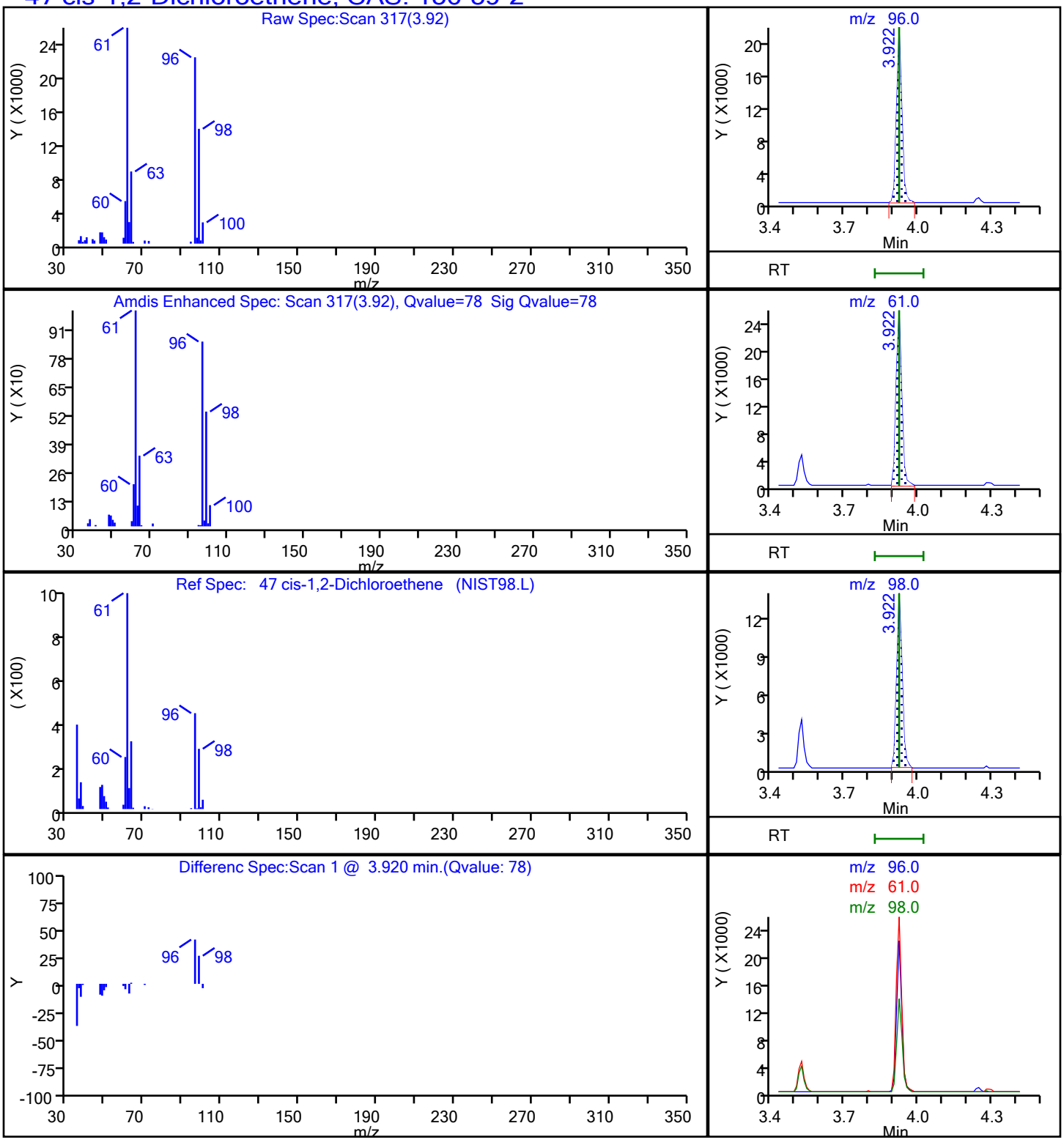
Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D				
Injection Date:	26-Apr-2023 14:30:30	Instrument ID:	VMS_P		
Lims ID:	280-175122-E-3	Lab Sample ID:	280-175122-3		
Client ID:	MW-118D-20230412				
Operator ID:	COULTERD	ALS Bottle#:	15	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

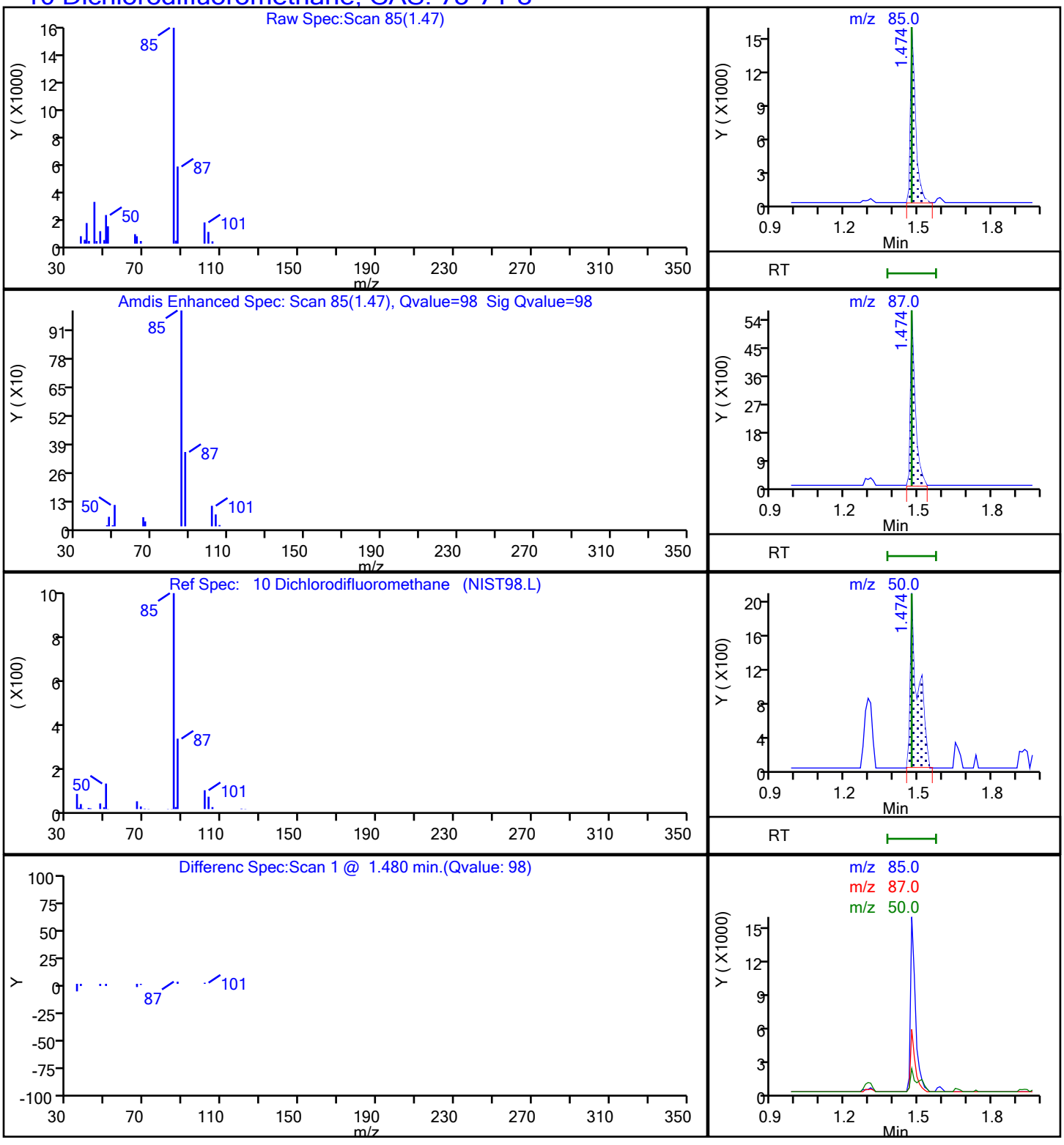
47 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D				
Injection Date:	26-Apr-2023 14:30:30	Instrument ID:	VMS_P		
Lims ID:	280-175122-E-3	Lab Sample ID:	280-175122-3		
Client ID:	MW-118D-20230412				
Operator ID:	COULTERD	ALS Bottle#:	15	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

10 Dichlorodifluoromethane, CAS: 75-71-8



Report Date: 27-Apr-2023 12:42:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D

Injection Date: 26-Apr-2023 14:30:30 Instrument ID: VMS_P

Lims ID: 280-175122-E-3 Lab Sample ID: 280-175122-3

Client ID: MW-118D-20230412

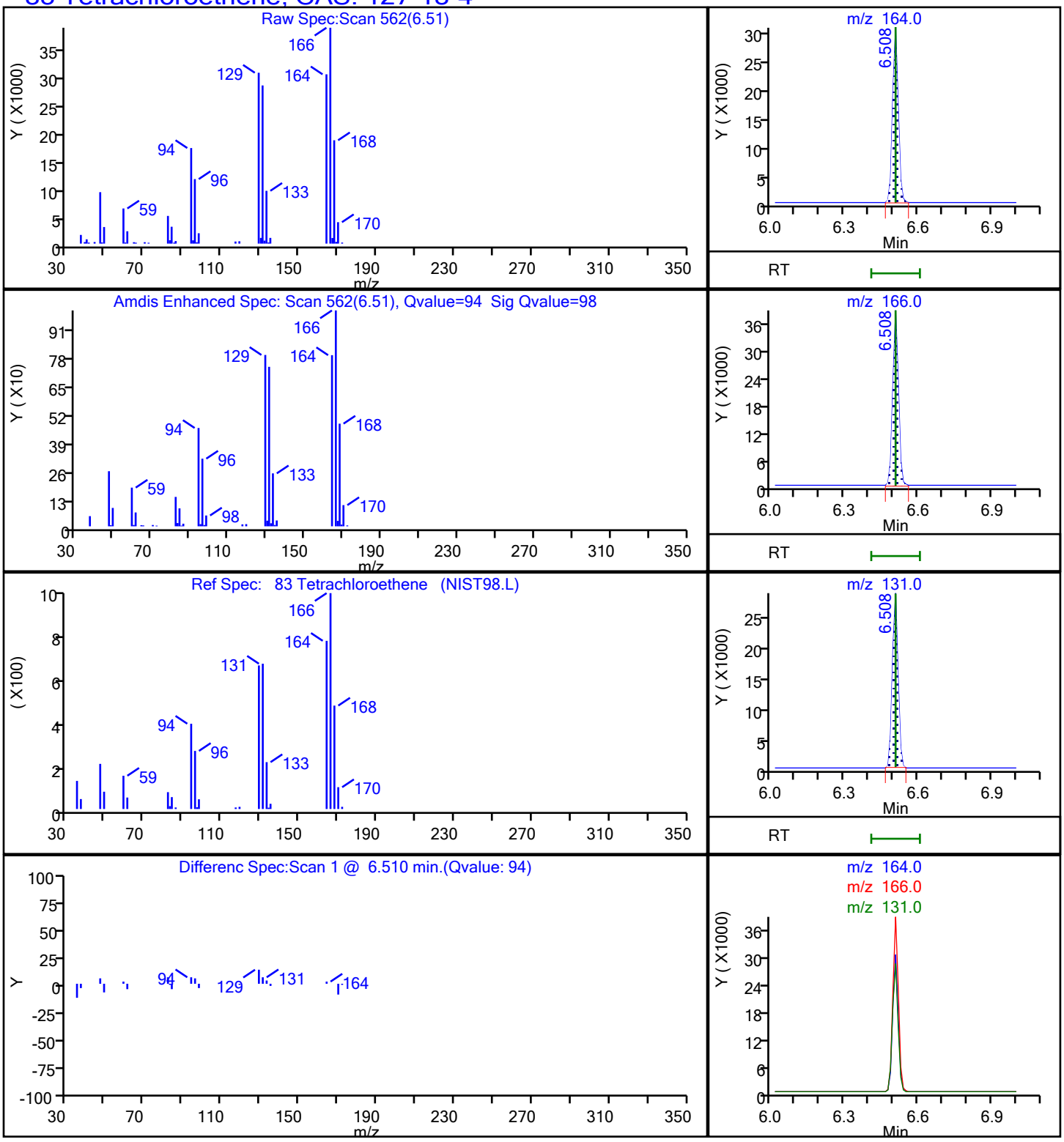
Operator ID: COULTERD ALS Bottle#: 15 Worklist Smp#: 20

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

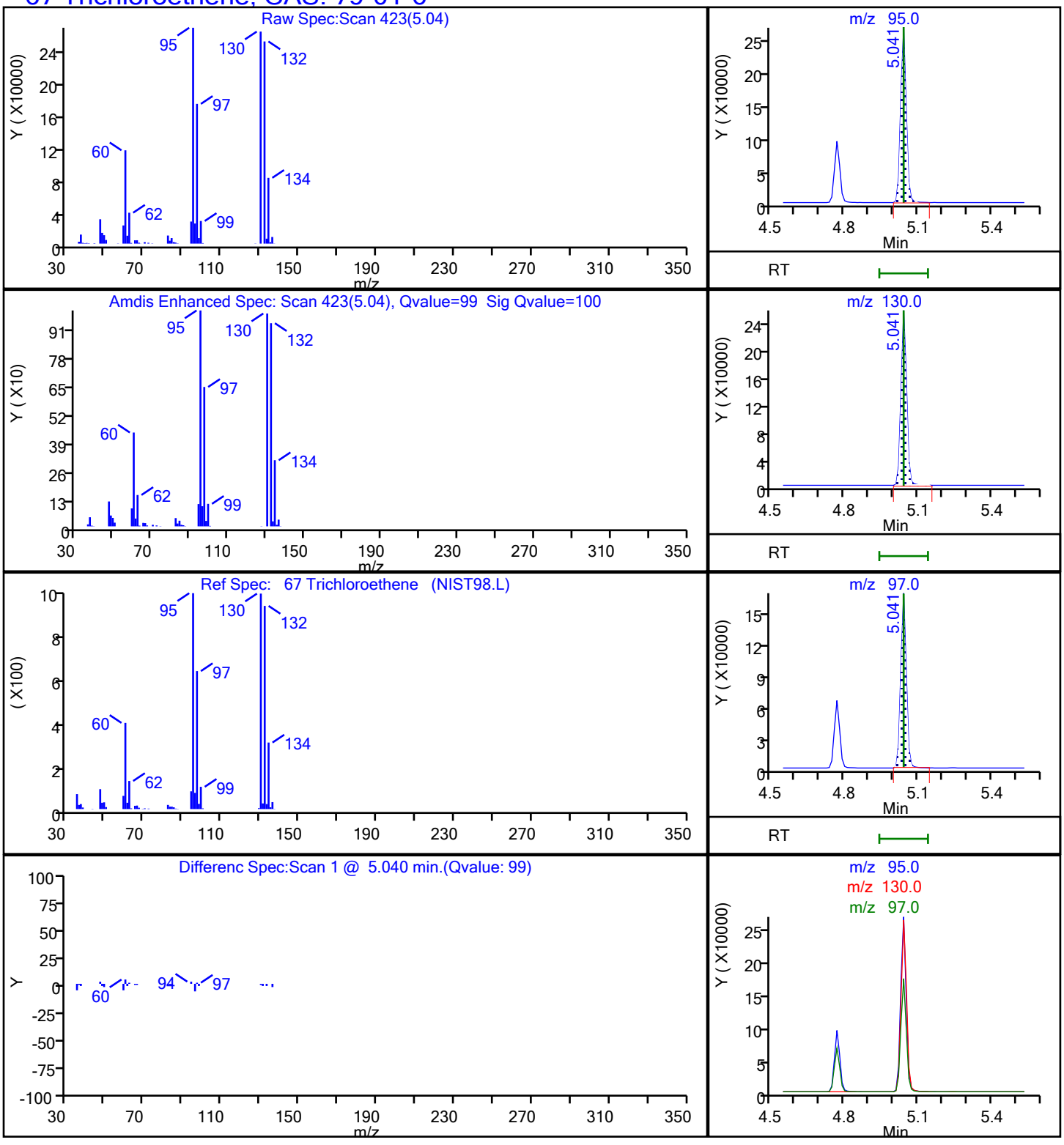
83 Tetrachloroethene, CAS: 127-18-4



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01141.D		
Injection Date:	26-Apr-2023 14:30:30	Instrument ID:	VMS_P
Lims ID:	280-175122-E-3	Lab Sample ID:	280-175122-3
Client ID:	MW-118D-20230412		
Operator ID:	COULTERD	ALS Bottle#:	15 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

67 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MP-3-20230413 | Lab Sample ID: 280-175122-4

Matrix: Water | Lab File ID: X502932.D

Analysis Method: 8260D | Date Collected: 04/13/2023 16:26

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 18:49

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		2.0	1.2
71-55-6	1,1,1-Trichloroethane	ND		2.0	0.78
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.54
75-34-3	1,1-Dichloroethane	ND		2.0	0.44
75-35-4	1,1-Dichloroethene	ND		2.0	0.46
563-58-6	1,1-Dichloropropene	ND		2.0	0.83
96-18-4	1,2,3-Trichloropropane	ND		5.0	1.7
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	ND		10	3.5
106-93-4	1,2-Dibromoethane	ND		2.0	0.81
95-50-1	1,2-Dichlorobenzene	ND		2.0	0.74
107-06-2	1,2-Dichloroethane	ND		2.0	1.1
78-87-5	1,2-Dichloropropane	ND		2.0	1.0
541-73-1	1,3-Dichlorobenzene	ND		2.0	0.67
142-28-9	1,3-Dichloropropane	ND		2.0	0.76
106-46-7	1,4-Dichlorobenzene	ND		2.0	0.78
594-20-7	2,2-Dichloropropane	ND		2.0	0.76
78-93-3	2-Butanone (MEK)	ND		30	12
591-78-6	2-Hexanone	ND		10	3.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	2.0
67-64-1	Acetone	ND		30	13
75-05-8	Acetonitrile	ND		60	19
107-02-8	Acrolein	ND		40	9.7
107-13-1	Acrylonitrile	ND		40	8.9
107-05-1	Allyl chloride	ND		4.0	0.34
71-43-2	Benzene	ND		2.0	0.62
75-25-2	Bromoform	ND		4.0	2.4
74-83-9	Bromomethane	ND		10	4.7
75-15-0	Carbon disulfide	ND		4.0	1.3
56-23-5	Carbon tetrachloride	ND		2.0	1.1
108-90-7	Chlorobenzene	ND		2.0	0.84
74-97-5	Chlorobromomethane	ND		2.0	0.81
124-48-1	Chlorodibromomethane	ND		4.0	1.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MP-3-20230413 | Lab Sample ID: 280-175122-4

Matrix: Water | Lab File ID: X502932.D

Analysis Method: 8260D | Date Collected: 04/13/2023 16:26

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 18:49

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		8.0	2.7
67-66-3	Chloroform	2.1		2.0	0.72
74-87-3	Chloromethane	ND		4.0	1.5
126-99-8	Chloroprene	ND		6.0	2.3
156-59-2	cis-1,2-Dichloroethene	4.3		2.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		4.0	1.3
74-95-3	Dibromomethane	ND		2.0	0.69
75-27-4	Dichlorobromomethane	ND		2.0	0.77
75-71-8	Dichlorodifluoromethane	ND		6.0	1.9
97-63-2	Ethyl methacrylate	ND		6.0	1.7
100-41-4	Ethylbenzene	ND		2.0	0.61
74-88-4	Iodomethane	ND		10	5.2
78-83-1	Isobutyl alcohol	ND		220	73
126-98-7	Methacrylonitrile	ND		30	11
80-62-6	Methyl methacrylate	ND		8.0	2.2
75-09-2	Methylene Chloride	ND		4.0	1.9
179601-23-1	m-Xylene & p-Xylene	ND		4.0	0.71
95-47-6	o-Xylene	ND		2.0	0.66
107-12-0	Propionitrile	ND		40	7.4
100-42-5	Styrene	ND		2.0	0.71
127-18-4	Tetrachloroethene	19		2.0	0.81
108-88-3	Toluene	ND		2.0	0.64
156-60-5	trans-1,2-Dichloroethene	ND		2.0	0.74
10061-02-6	trans-1,3-Dichloropropene	ND		4.0	1.3
110-57-6	trans-1,4-Dichloro-2-butene	ND		6.0	2.8
79-01-6	Trichloroethene	110		2.0	0.60
75-69-4	Trichlorofluoromethane	ND		4.0	1.1
108-05-4	Vinyl acetate	ND		6.0	1.9
75-01-4	Vinyl chloride	ND		4.0	1.0
1330-20-7	Xylenes, Total	ND		2.0	0.66

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MP-3-20230413 | Lab Sample ID: 280-175122-4

Matrix: Water | Lab File ID: X502932.D

Analysis Method: 8260D | Date Collected: 04/13/2023 16:26

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 18:49

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-127
460-00-4	4-Bromofluorobenzene (Surr)	99		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	99		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D
Lims ID: 280-175122-A-4
Client ID: MP-3-20230413
Sample Type: Client
Inject. Date: 27-Apr-2023 18:49:30 ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Sample Info: 280-175122-A-4 2x
Misc. Info.: 280-0120830-027
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:39:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: V8PV Date: 28-Apr-2023 02:30:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1998431	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	496253	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	779098	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	492543	51.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	480505	47.6	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	92	2098343	49.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	91	691625	49.7	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	91	691625	NR	
10 Dichlorodifluoromethane	85		1.695				ND	7
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	7
14 Bromomethane	94		2.246				ND	7
15 Chloroethane	64		2.339				ND	
16 Dichlorofluoromethane	67		2.503				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59		2.747				ND	U
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.932				ND	
23 1,1-Dichloroethene	96		2.940				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.040				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.183				ND	
30 3-Chloro-1-propene	41		3.204				ND	
31 Methylene Chloride	84		3.297				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.454				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.783				ND	
40 1,1-Dichloroethane	63		3.805				ND	
41 Isopropyl ether	87		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	76	22006	2.16	
48 2,2-Dichloropropane	77		4.227				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.398				ND	
54 Chloroform	83	4.448	4.441	0.007	92	16610	1.05	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.648				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	7
63 1,2-Dichloroethane	62		4.877				ND	7
64 Tert-amyl methyl ether	73		4.920				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	98	539727	56.9	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.542				ND	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.614				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.936				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164	6.808	6.808	0.000	93	69991	9.71	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.559				ND	U
90 Chlorobenzene	112		7.602				ND	
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.166				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.588				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.817				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.589				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.732				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146		10.168				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.256				ND	
165 t-Amyl alcohol	1		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1				0		1.05	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		2.16	
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

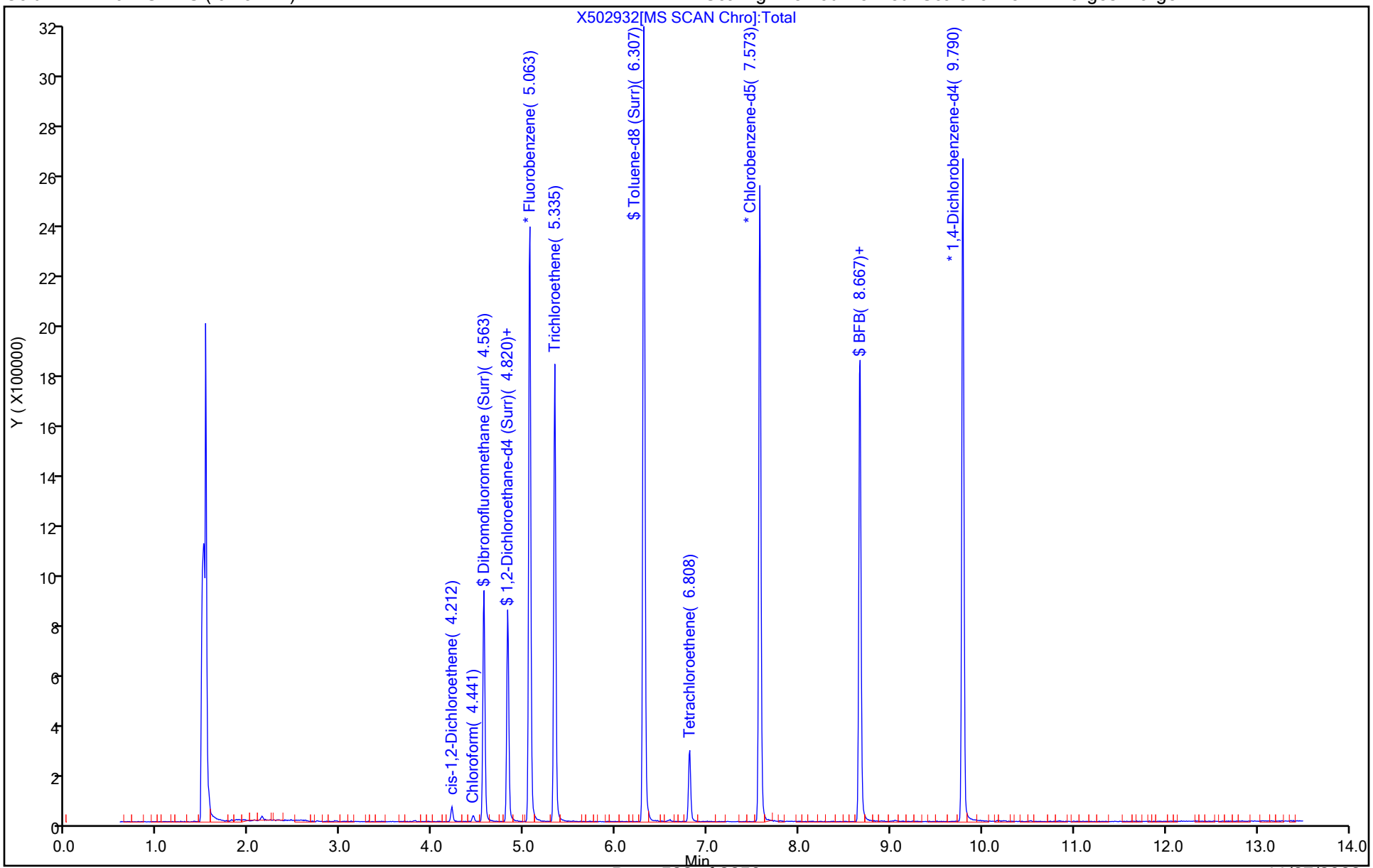
Report Date: 28-Apr-2023 02:39:52 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D

Injection Date:	27-Apr-2023 18:49:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175122-A-4	Lab Sample ID:	280-175122-4	Worklist Smp#:	27
Client ID:	MP-3-20230413				
Purge Vol:	5.000 mL	Dil. Factor:	2.0000	ALS Bottle#:	26
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

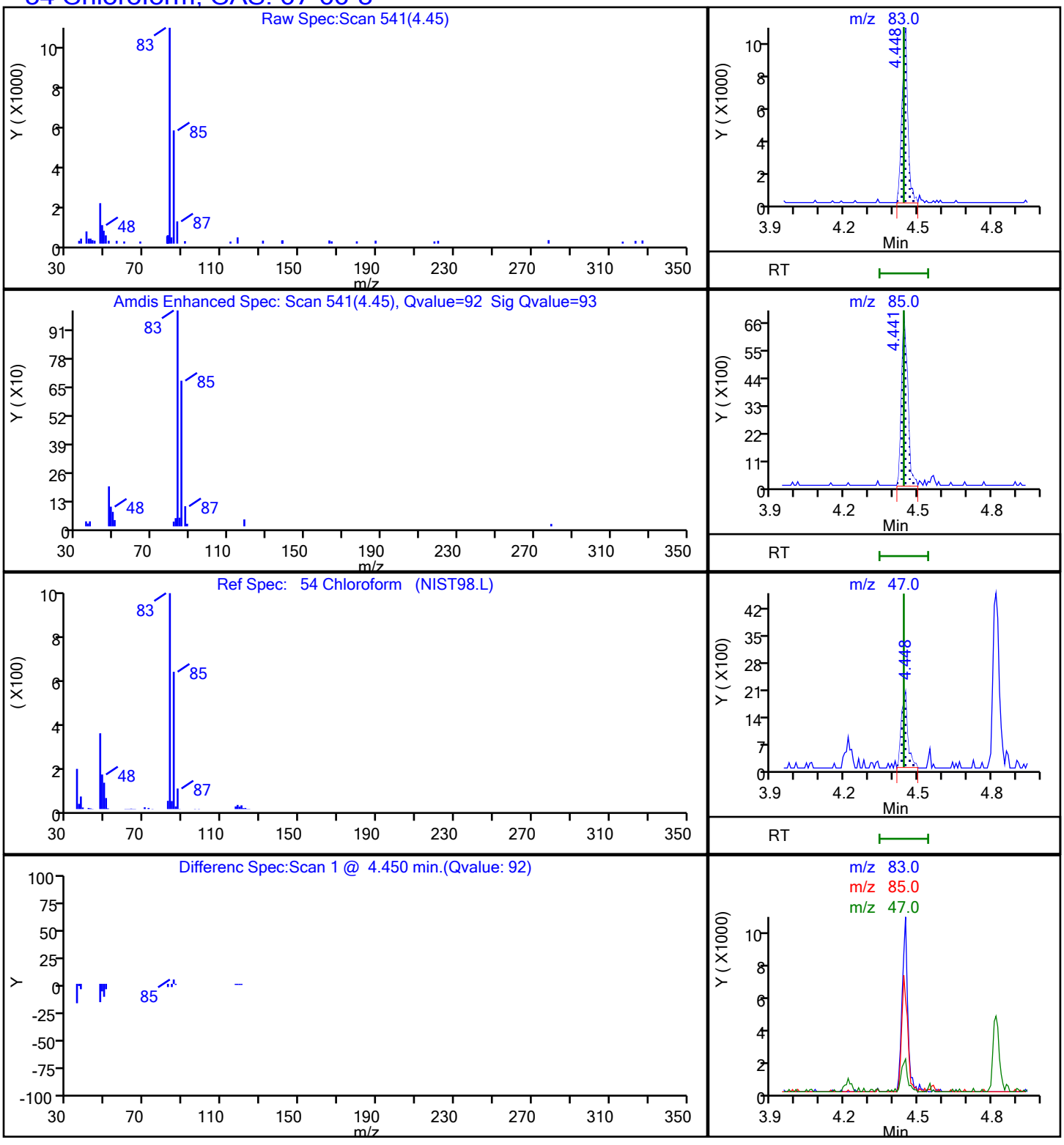
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D				
Lims ID:	280-175122-A-4				
Client ID:	MP-3-20230413				
Sample Type:	Client				
Inject. Date:	27-Apr-2023 18:49:30	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Sample Info:	280-175122-A-4 2x				
Misc. Info.:	280-0120830-027				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 02:39:26	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1608				
First Level Reviewer: V8PV		Date:	28-Apr-2023 02:30:06		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.2	102.48
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.6	95.19
$ 6 Toluene-d8 (Surr)	50.0	49.6	99.27
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.7	99.35

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D
Injection Date: 27-Apr-2023 18:49:30 Instrument ID: VMS_X4
Lims ID: 280-175122-A-4 Lab Sample ID: 280-175122-4
Client ID: MP-3-20230413
Operator ID: MED ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

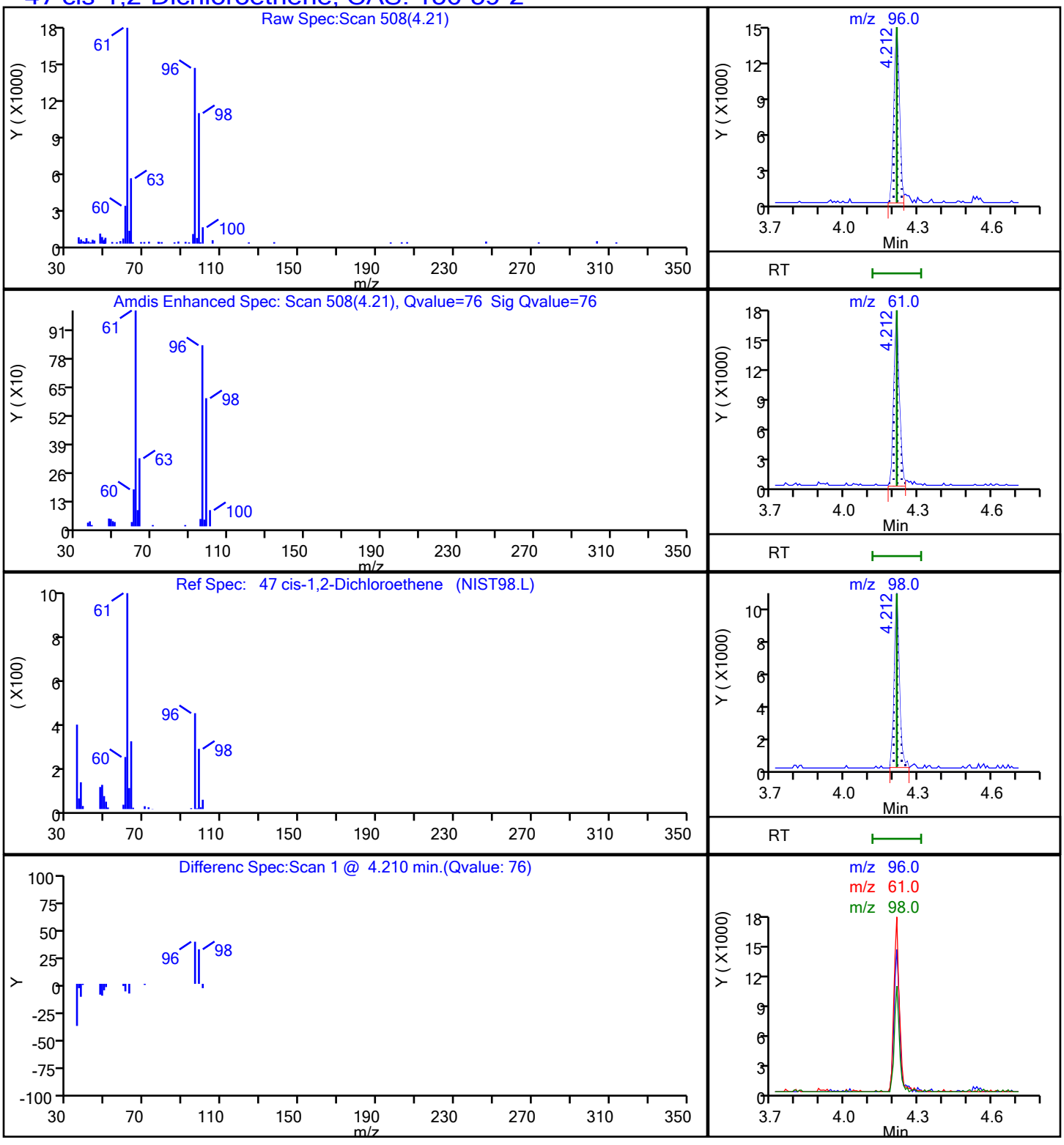
54 Chloroform, CAS: 67-66-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D		
Injection Date:	27-Apr-2023 18:49:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-A-4	Lab Sample ID:	280-175122-4
Client ID:	MP-3-20230413		
Operator ID:	MED	ALS Bottle#:	26 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

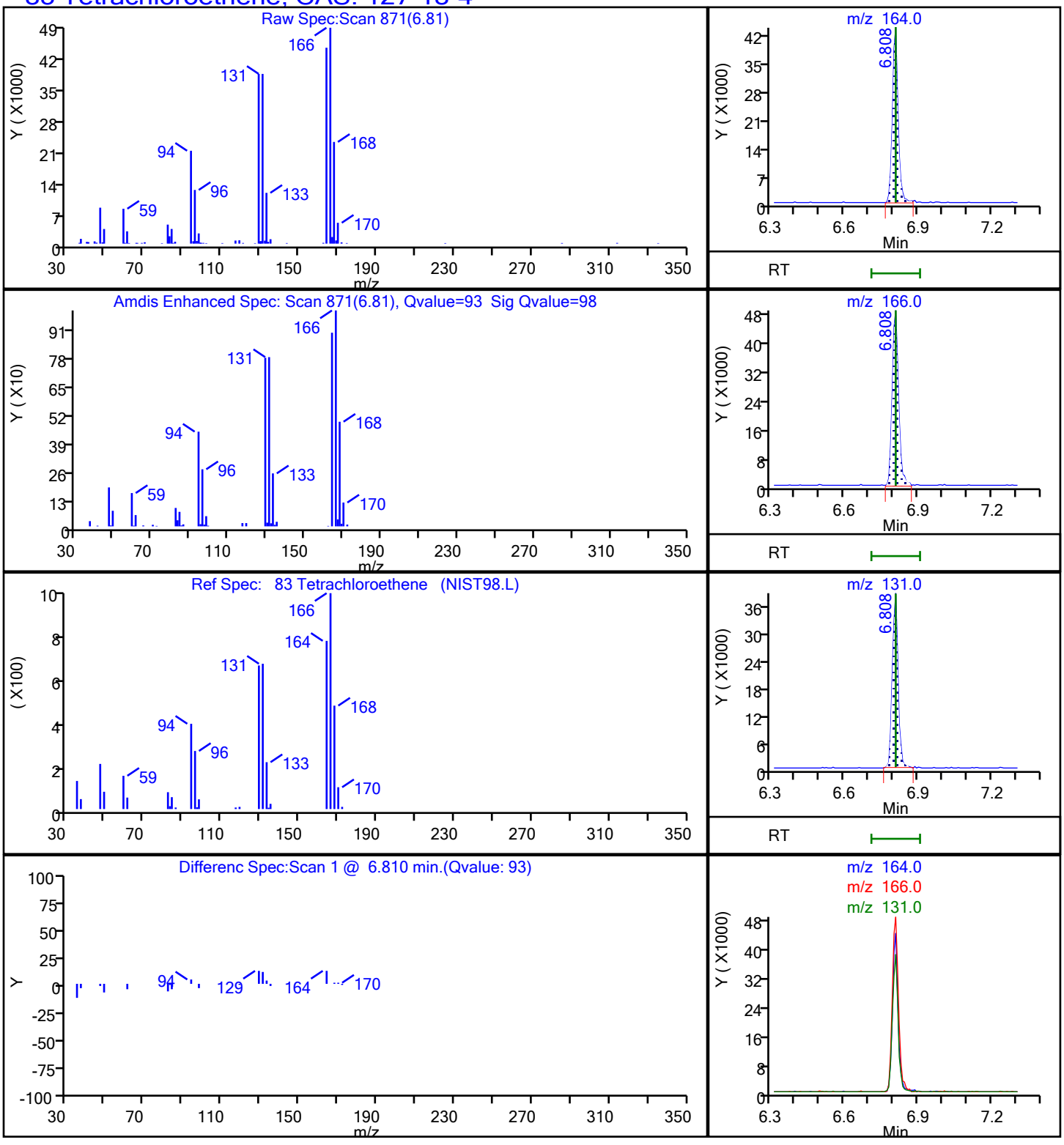
47 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D
Injection Date: 27-Apr-2023 18:49:30 Instrument ID: VMS_X4
Lims ID: 280-175122-A-4 Lab Sample ID: 280-175122-4
Client ID: MP-3-20230413
Operator ID: MED ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

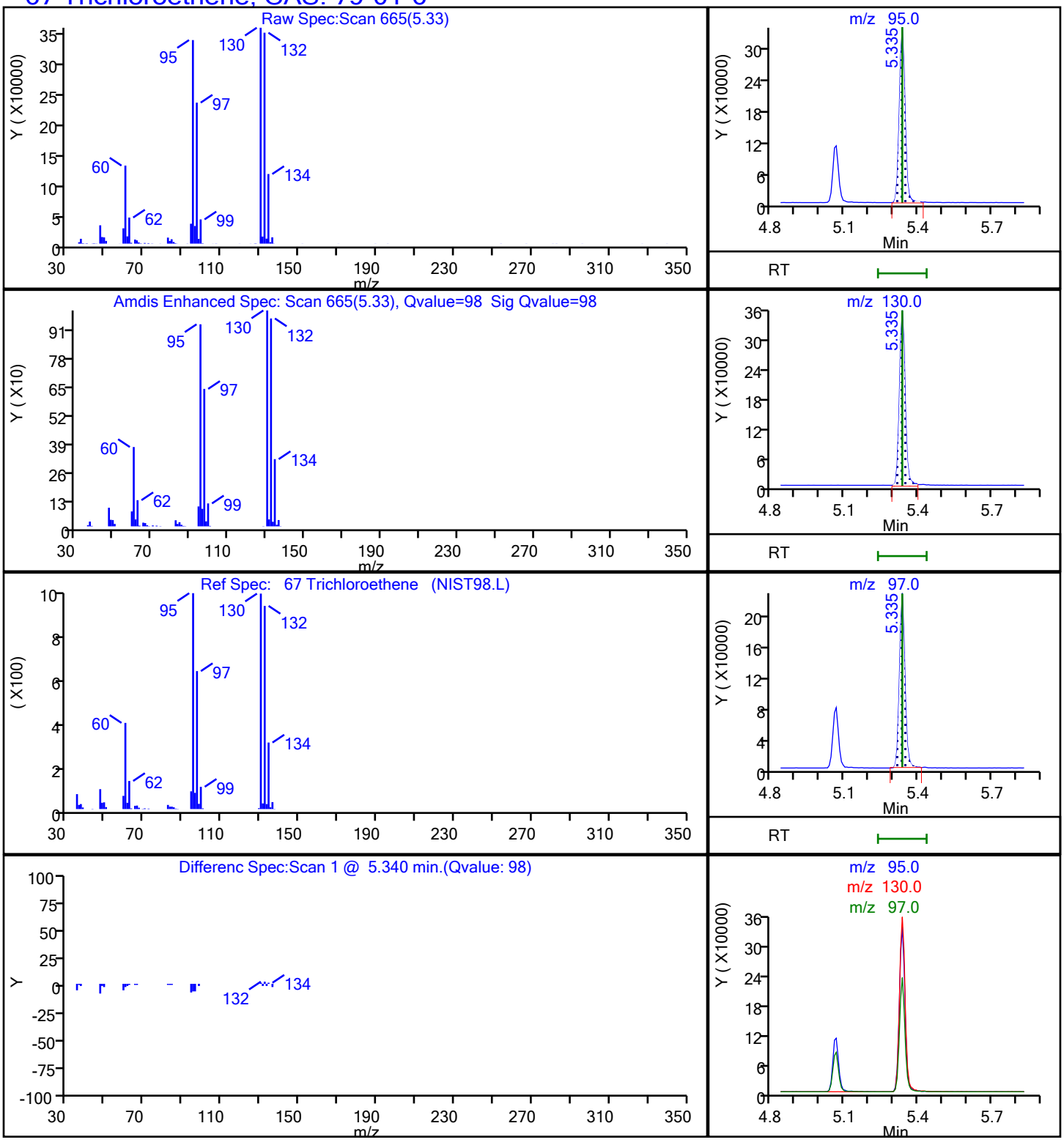
83 Tetrachloroethene, CAS: 127-18-4



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D		
Injection Date:	27-Apr-2023 18:49:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-A-4	Lab Sample ID:	280-175122-4
Client ID:	MP-3-20230413		
Operator ID:	MED	ALS Bottle#:	26 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

67 Trichloroethene, CAS: 79-01-6



Manual Integration/User Assign Peak Report

Eurofins Denver

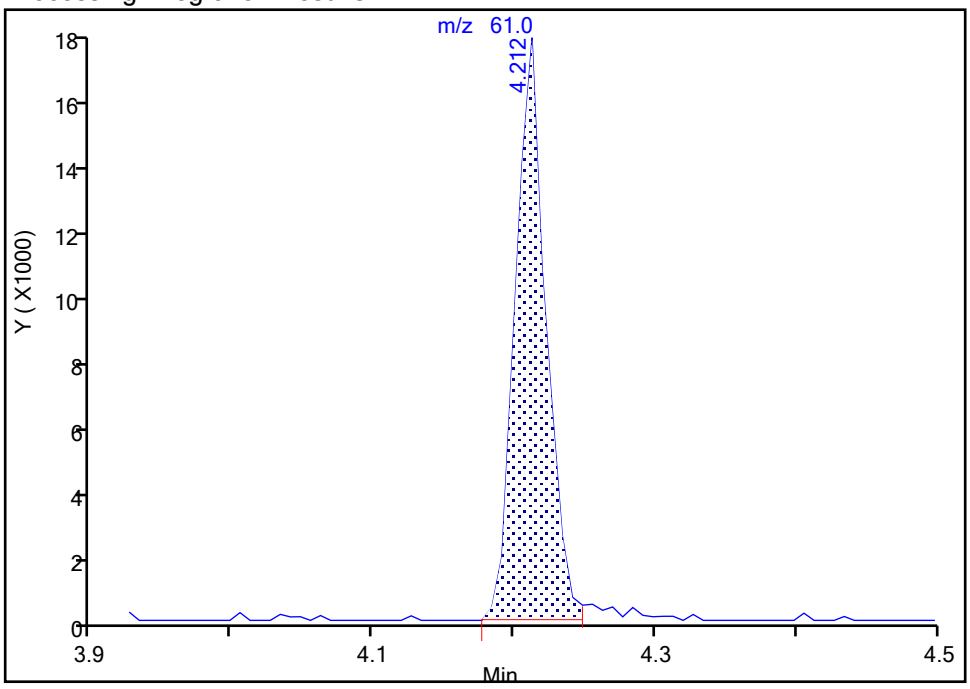
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D				
Injection Date:	27-Apr-2023 18:49:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-A-4	Lab Sample ID:	280-175122-4		
Client ID:	MP-3-20230413				
Operator ID:	MED	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 2

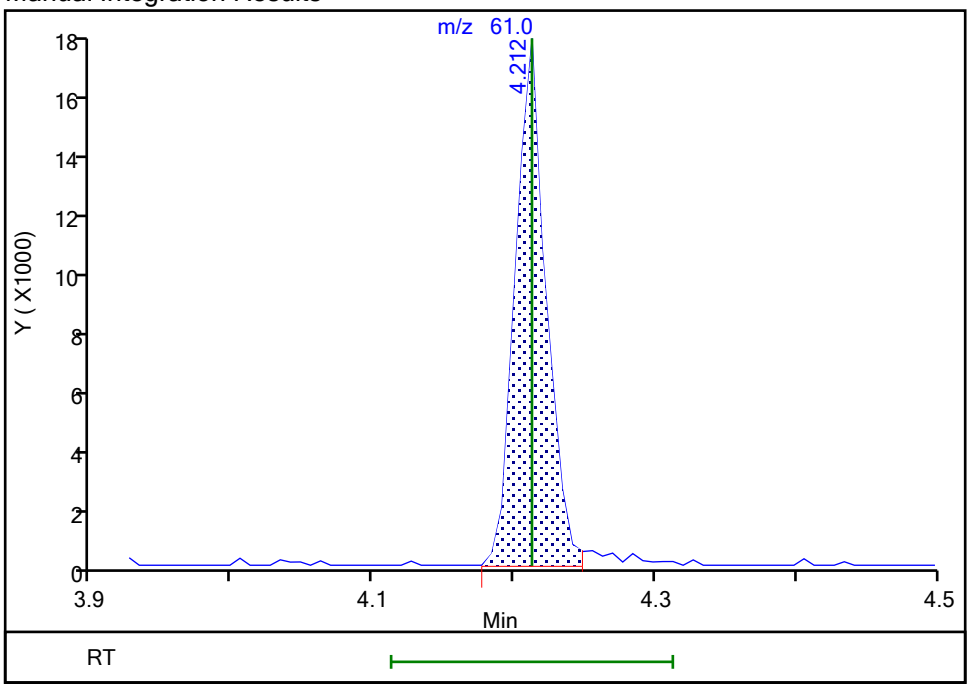
Processing Integration Results

RT: 4.21
Area: 26460
Amount: 2.155388
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 26460
Amount: 2.155388
Amount Units: ug/l



Reviewer: V8PV, 28-Apr-2023 02:29:55
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

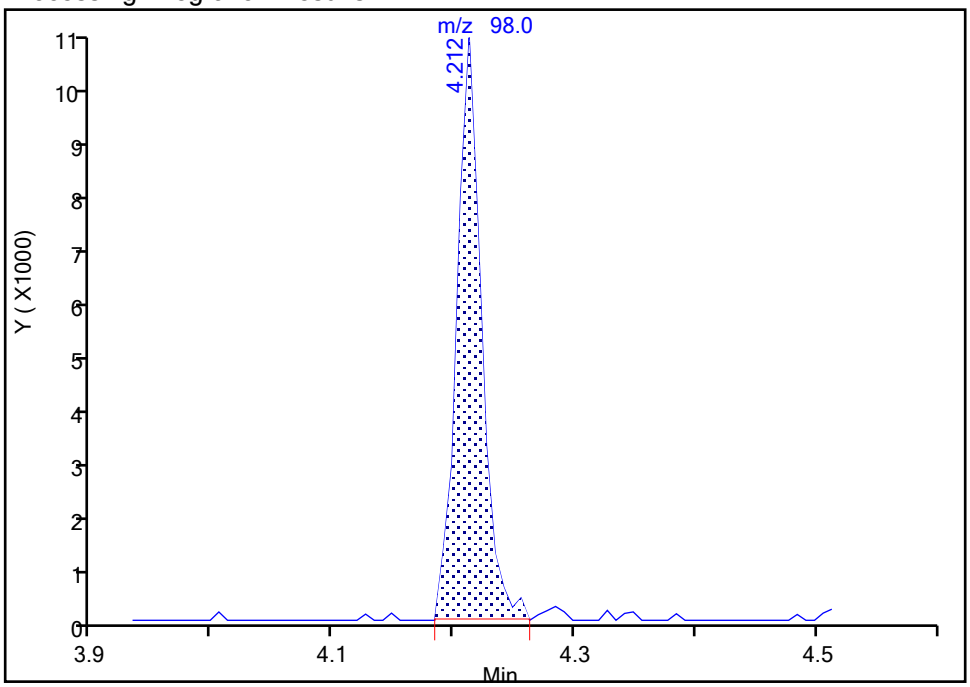
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D				
Injection Date:	27-Apr-2023 18:49:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-A-4	Lab Sample ID:	280-175122-4		
Client ID:	MP-3-20230413				
Operator ID:	MED	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 3

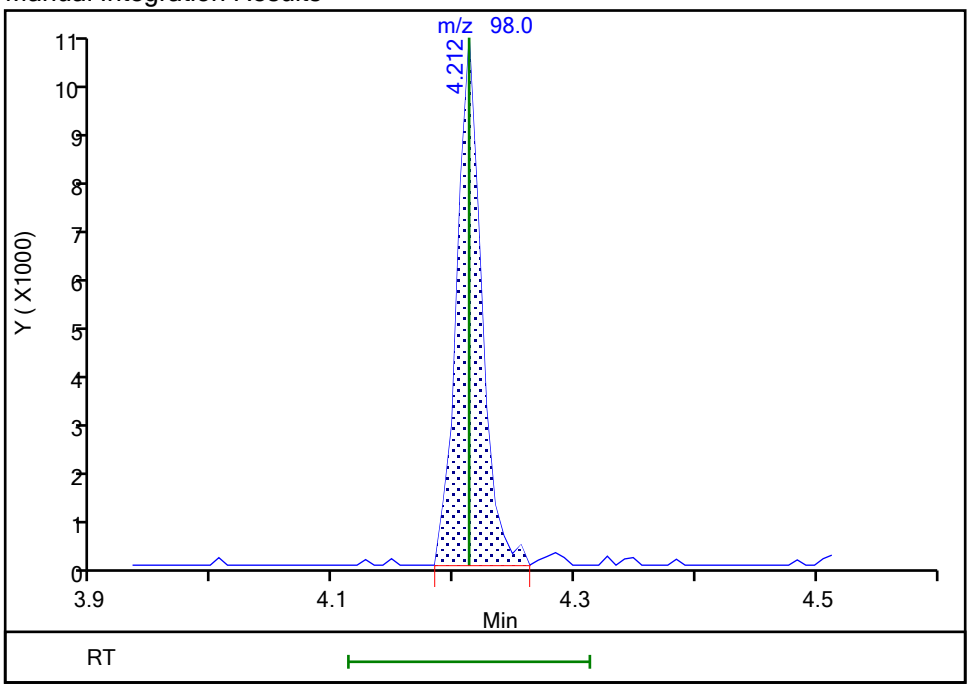
Processing Integration Results

RT: 4.21
Area: 15054
Amount: 2.155388
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 15054
Amount: 2.155388
Amount Units: ug/l



Reviewer: V8PV, 28-Apr-2023 02:29:55
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

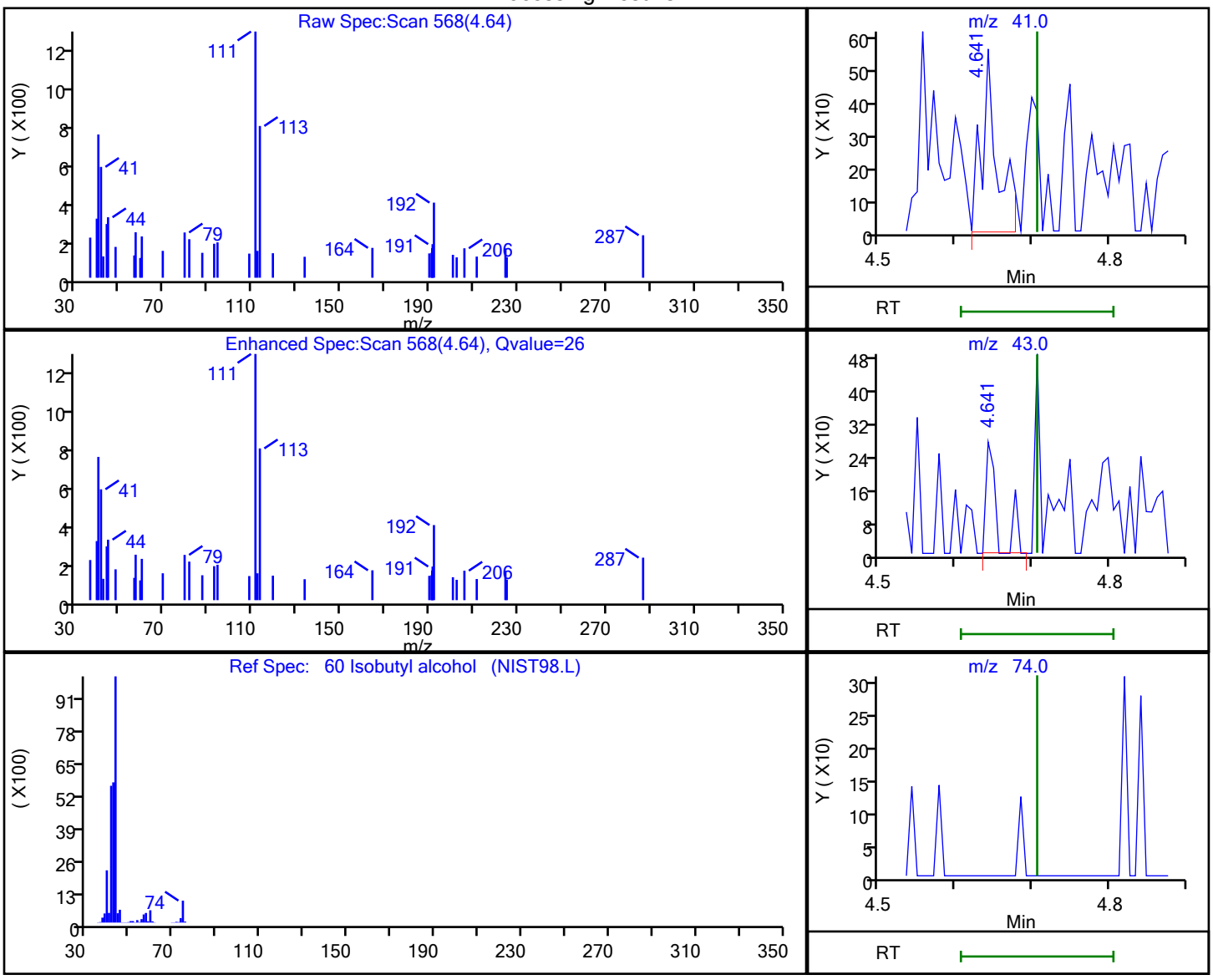
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502932.D				
Injection Date:	27-Apr-2023 18:49:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-A-4	Lab Sample ID:	280-175122-4		
Client ID:	MP-3-20230413				
Operator ID:	MED	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.64	41.00	787	14.453875
4.64	43.00	273	
4.71	74.00	0	

Reviewer: V8PV, 28-Apr-2023 02:29:51

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-111D-20230414 | Lab Sample ID: 280-175122-5

Matrix: Water | Lab File ID: MS1_8330.D

Analysis Method: 8260D | Date Collected: 04/14/2023 15:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 16:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	24		1.0	0.22
75-35-4	1,1-Dichloroethene	0.43	J	1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	8.9		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	2.4		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	3.6		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	7.3		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	6.7		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-111D-20230414 | Lab Sample ID: 280-175122-5

Matrix: Water | Lab File ID: MS1_8330.D

Analysis Method: 8260D | Date Collected: 04/14/2023 15:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 16:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	0.48	J	1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	9.2		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	6.5		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	0.74	J	1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	1.6		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	1.3		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	110		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	6.1		2.0	0.51
1330-20-7	Xylenes, Total	0.74	J	1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-111D-20230414 | Lab Sample ID: 280-175122-5

Matrix: Water | Lab File ID: MS1_8330.D

Analysis Method: 8260D | Date Collected: 04/14/2023 15:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 16:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	116		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	106		77-120
2037-26-5	Toluene-d8 (Surr)	108		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D
Lims ID: 280-175122-D-5
Client ID: MW-111D-20230414
Sample Type: Client
Inject. Date: 21-Apr-2023 16:28:30 ALS Bottle#: 24 Worklist Smp#: 50
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175122-D-5
Misc. Info.: 280-0120611-050
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 01:25:59 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: V8PV Date: 22-Apr-2023 00:56:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	97	974149	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	228778	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.045	11.059	-0.014	98	373641	50.0	
* 4 Fluorobenzene (IS)	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	91	244690	52.8	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	364425	58.0	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1062696	54.1	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	377625	51.4	
$ 9 Trifluorotoluene (Surr)	1		3.543				ND	
$ 10 BFB	95		3.732				ND	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	24402	6.54	
12 Chloromethane	50		2.009				ND	
13 Vinyl chloride	62	2.135	2.135	0.000	98	26929	6.11	
14 Ethylene oxide	43		2.260				ND	7
15 Bromomethane	94		2.498				ND	
16 Chloroethane	64		2.623				ND	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	98	252729	38.9	
18 Trichlorofluoromethane	101		2.889				ND	U
19 Ethanol	45		3.070				ND	U
20 Ethyl ether	59	3.168	3.182	-0.014	95	448909	129.9	
21 Propene oxide	58		3.238				ND	
22 Acrolein	56		3.322				ND	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	94	1292	0.4279	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.420				ND	
25 Acetone	43		3.448				ND	U
26 Iodomethane	142		3.559				ND	
27 Isopropyl alcohol	45		3.573				ND	
28 Carbon disulfide	76		3.629				ND	7
29 Acetonitrile	41		3.727				ND	
30 Methyl acetate	43		3.755				ND	
31 3-Chloro-1-propene	41		3.769				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 Methylene Chloride	84		3.894				ND	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	97	44884	81.4	
34 Acrylonitrile	53		4.104				ND	
35 Methyl tert-butyl ether	73		4.132				ND	U
36 trans-1,2-Dichloroethene	96	4.132	4.132	0.000	93	4637	1.32	
38 Chlorotrifluoroethene	116		4.248				ND	
37 Hexane	57		4.383				ND	
43 1,2-Dichloro-1,1,2,2-tetrafluoro	85	4.537	4.472	0.065	39	13404	NC	
39 Vinyl acetate	43		4.523				ND	U
40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	166470	23.9	
41 Isopropyl ether	87	4.537	4.551	-0.014	93	3603	1.13	
42 2-Chloro-1,3-butadiene	53		4.593				ND	
45 2-Chloro-1,1,1-Trifluoroethane	118		4.737				ND	
44 Tert-butyl ethyl ether	59		4.872				ND	U
46 2-Butanone (MEK)	43		5.012				ND	
47 Ethyl acetate	43		5.040				ND	U
49 2,2-Dichloropropane	77		5.040				ND	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	83	34666	9.19	
50 Propionitrile	54		5.081				ND	
51 sec-Butyl Alcohol	45		5.165				ND	
52 Methacrylonitrile	41		5.207				ND	
53 Chlorobromomethane	128		5.249				ND	
54 Tetrahydrofuran	42	5.249	5.249	0.000	90	106270	64.8	
55 Chloroform	83	5.319	5.319	0.000	95	3047	0.4808	
56 1,1,1-Trichloroethane	97		5.473				ND	
61 1,2-Dichloro-1,1,2-trifluoroetha	117		5.505				ND	
62 1,1,1-Trifluoro-2,2-dichloroetha	83		5.533				ND	
57 Cyclohexane	56	5.542	5.542	0.000	96	4459	0.6556	
58 1,1-Dichloropropene	75		5.612				ND	
59 Carbon tetrachloride	117		5.612				ND	
60 Isobutyl alcohol	41		5.654				ND	U
63 Benzene	78	5.780	5.780	0.000	98	109207	7.25	
64 1,2-Dichloroethane	62		5.822				ND	
65 Tert-amyl methyl ether	73		5.878				ND	
66 n-Heptane	43		6.003				ND	U
67 n-Butanol	56		6.227				ND	U
68 Trichloroethene	95	6.338	6.339	0.000	96	411747	112.0	
69 2-Pentanone	43		6.478				ND	
70 Methylcyclohexane	55		6.548				ND	U
71 1,2-Dichloropropane	63	6.576	6.576	0.000	91	9998	2.41	
72 Methyl methacrylate	100		6.590				ND	
73 1,4-Dioxane	88	6.632	6.632	0.000	96	3463	51.7	
74 Dibromomethane	93		6.660				ND	
75 Dichlorobromomethane	83		6.799				ND	
76 2-Nitropropane	41		6.995				ND	
77 2-Chloroethyl vinyl ether	63		7.023				ND	
78 cis-1,3-Dichloropropene	75		7.176				ND	
80 2,2-Dimethylpentane	57		7.278				ND	
79 4-Methyl-2-pentanone (MIBK)	43		7.288				ND	
81 2,4-Dimethylpentane	43		7.292				ND	
82 Toluene	91	7.484	7.484	0.000	96	4633	0.2974	
83 2,2,3-Trimethylbutane	57		7.502				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
84 trans-1,3-Dichloropropene	75		7.679				ND	
86 3,3-Dimethylpentane	43		7.682				ND	
85 Ethyl methacrylate	69		7.707				ND	
88 2-Methylhexane	43		7.810				ND	
87 1,1,2-Trichloroethane	97		7.861				ND	
92 3-Methylhexane	43	7.903	7.903	0.000	80	33127	NC	
93 2,3-Dimethylpentane	56	7.903	7.949	-0.046	55	2443	NC	
89 Tetrachloroethene	164	7.959	7.959	0.000	78	3985	1.58	
90 1,3-Dichloropropane	76		8.014				ND	
91 2-Hexanone	43		8.042				ND	
97 3-Ethylpentane	43		8.214				ND	
95 Chlorodibromomethane	129		8.224				ND	
94 Tetrahydrothiophene	60		8.224				ND	
96 Ethylene Dibromide	107		8.350				ND	
98 1-Chlorohexane	91		8.755				ND	7
99 Chlorobenzene	112	8.797	8.797	0.000	91	63488	6.65	
100 1,1,1,2-Tetrachloroethane	131		8.880				ND	
101 Ethylbenzene	106		8.880				ND	
102 m-Xylene & p-Xylene	106		9.006				ND	
103 o-Xylene	106	9.369	9.369	0.000	98	4901	0.7386	
104 Styrene	104		9.383				ND	
105 Dimethyl disulfide	94		9.388				ND	
106 Bromoform	173		9.579				ND	
107 Isopropylbenzene	105	9.718	9.718	0.000	95	9828	0.6163	
108 cis-1,4-Dichloro-2-butene	53		9.774				ND	
109 Cyclohexanone	55		9.830				ND	U
110 1,1,2,2-Tetrachloroethane	83		10.026				ND	
111 Bromobenzene	156		10.054				ND	
112 trans-1,4-Dichloro-2-butene	53		10.054				ND	U
113 1,2,3-Trichloropropane	110		10.081				ND	
114 N-Propylbenzene	120		10.137				ND	
115 2-Chlorotoluene	126	10.235	10.235	0.000	94	1684	0.4570	
116 1,3,5-Trimethylbenzene	105		10.305				ND	
117 4-Chlorotoluene	126		10.347				ND	
118 tert-Butylbenzene	119		10.626				ND	
119 1,2,4-Trimethylbenzene	105		10.682				ND	
120 sec-Butylbenzene	134		10.850				ND	
121 1,3-Dichlorobenzene	146		10.975				ND	
122 4-Isopropyltoluene	119		10.989				ND	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	93	27220	3.64	
124 1,2,3-Trimethylbenzene	105		11.101				ND	
126 Pentachloroethane	167		11.283				ND	
125 n-Butylbenzene	91		11.408				ND	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	94	59691	8.93	
128 1,2-Dibromo-3-Chloropropane	157		12.232				ND	
129 1,3,5-Trichlorobenzene	180		12.414				ND	
130 1,2,4-Trichlorobenzene	180		13.056				ND	
131 Hexachlorobutadiene	225		13.196				ND	
132 Naphthalene	128		13.336				ND	
133 n-Nonyl Aldehyde	57		13.340				ND	
134 1,2,3-Trichlorobenzene	180		13.559				ND	
141 4-Chlorobenzotrifluoride	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
138 1,4-Dibromobenzene	1		0.000				ND	
148 1-Bromo-2-chloroethane	1		0.000				ND	
146 t-Amyl alcohol	1		0.000				ND	
139 1,3-Dibromobenzene	1		0.000				ND	
137 1,2-dichloro-4-(trifluoromethyl)	1		0.000				ND	
143 Benzene, 1-bromo-3-fluoro-	1		0.000				ND	
140 4-Bromofluorobenzene	95		0.000				ND	
136 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
142 Benzene, 1-bromo-4-ethyl-	1		0.000				ND	
135 Pentachloroethane TIC	1		0.000				ND	
145 Ethyl acrylate	55		0.000				ND	
147 n-Nonane TIC	1		0.000				ND	
S 149 1,2-Dichloroethene, Total (URS)	96				0		10.5	
S 151 Trihalomethanes, Total	1				0		0.4808	
S 150 1,2-Dichloroethene, Total	1				0		10.5	
S 156 1,3-Dichloropropene, Total	1		0.000				ND	7
S 155 Xylenes, Total	106				0		0.7386	
S 154 TAH	1				0		0	
S 153 Xylenes, Total (URS)	1				0		0.7386	
S 152 Total BTEX	1				0		8.29	
T 157 Dichloroacetonitrile TIC	74		1.000				ND	
T 158 2,3-dichloro-1-propene TIC	75		1.000				ND	
T 159 Propene oxide TIC	58		5.334				ND	
T 160 Cyclohexane TIC	1		0.000				ND	
T 165 Dicyclopentadiene TIC	1		0.000				ND	
T 163 2-Butoxyethanol TIC	1		0.000				ND	
T 164 1,3-Butadiene TIC	1		0.000				ND	
T 162 4-Ethyltoluene TIC	1	10.500	0.000	10.500	91	6556	1.43	
T 166 Propene TIC	1		0.000				ND	
T 161 Methyl cyclohexane TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

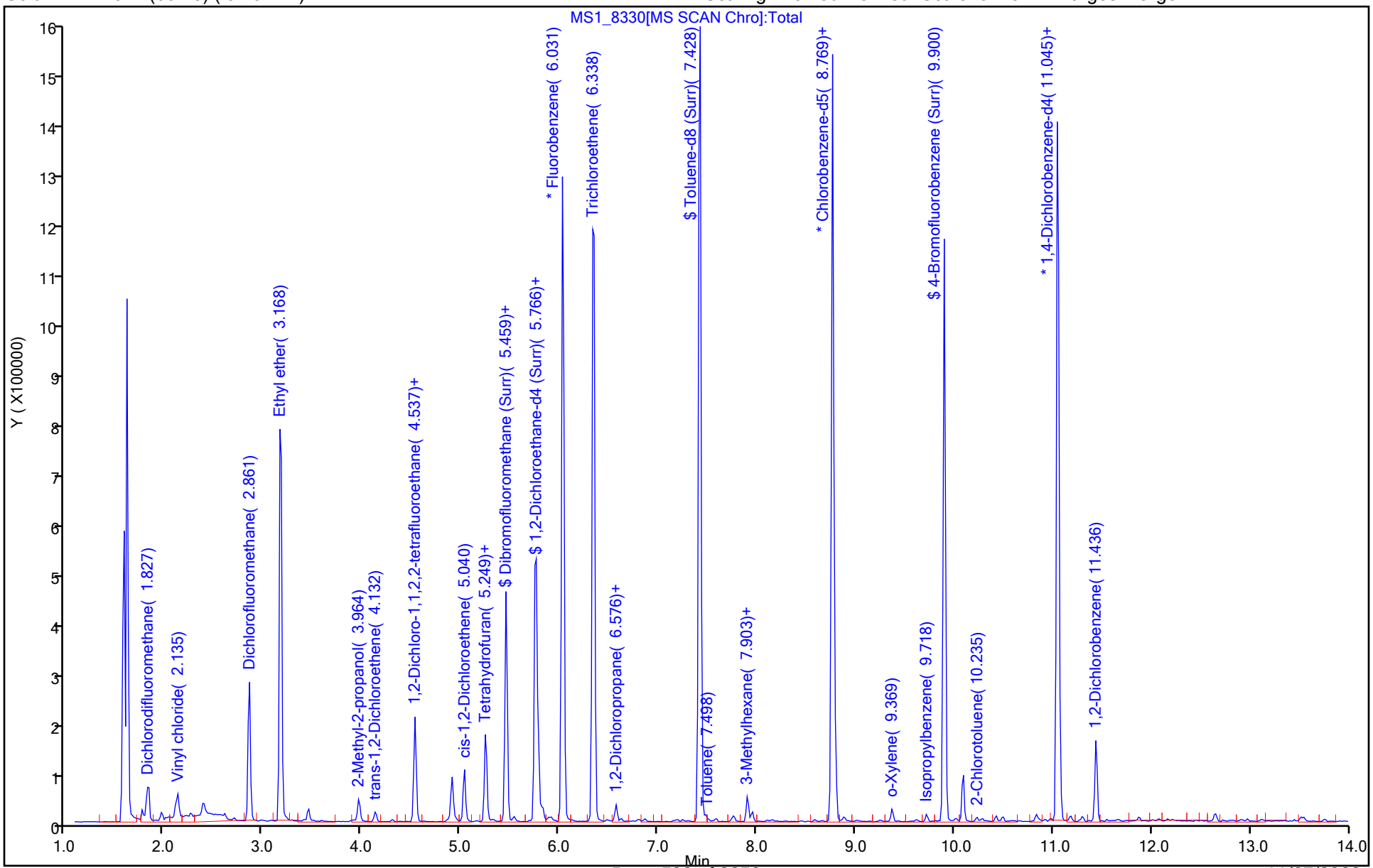
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5	Worklist Smp#:	50
Client ID:	MW-111D-20230414				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D
Lims ID: 280-175122-D-5
Client ID: MW-111D-20230414
Sample Type: Client
Inject. Date: 21-Apr-2023 16:28:30 ALS Bottle#: 24 Worklist Smp#: 50
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175122-D-5
Misc. Info.: 280-0120611-050
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 01:25:59 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: V8PV Date: 22-Apr-2023 00:56:58

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	52.8	105.56
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	58.0	116.00
$ 7 Toluene-d8 (Surr)	50.0	54.1	108.24
$ 8 4-Bromofluorobenzene (Surr)	50.0	51.4	102.90

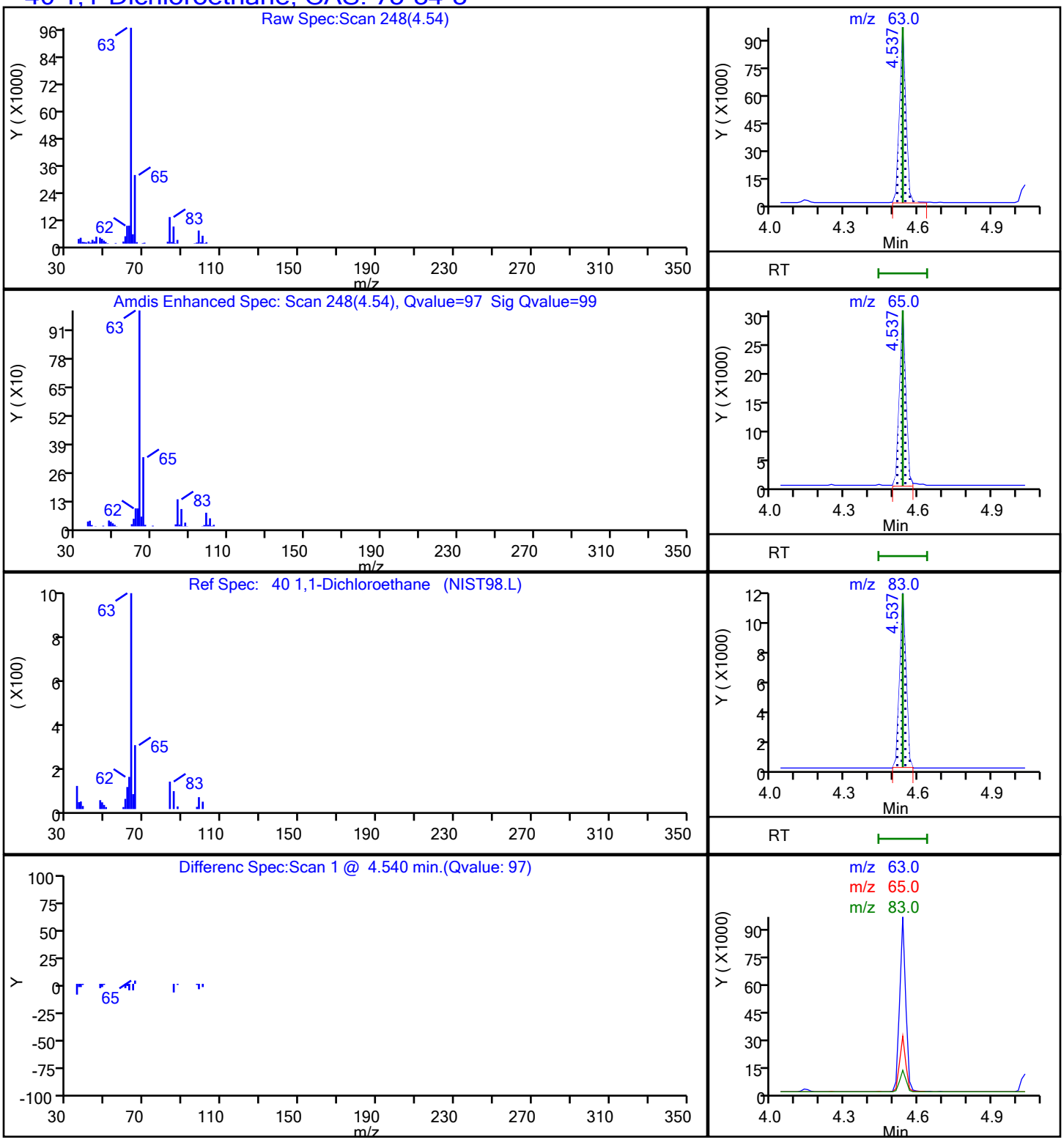
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

40 1,1-Dichloroethane, CAS: 75-34-3



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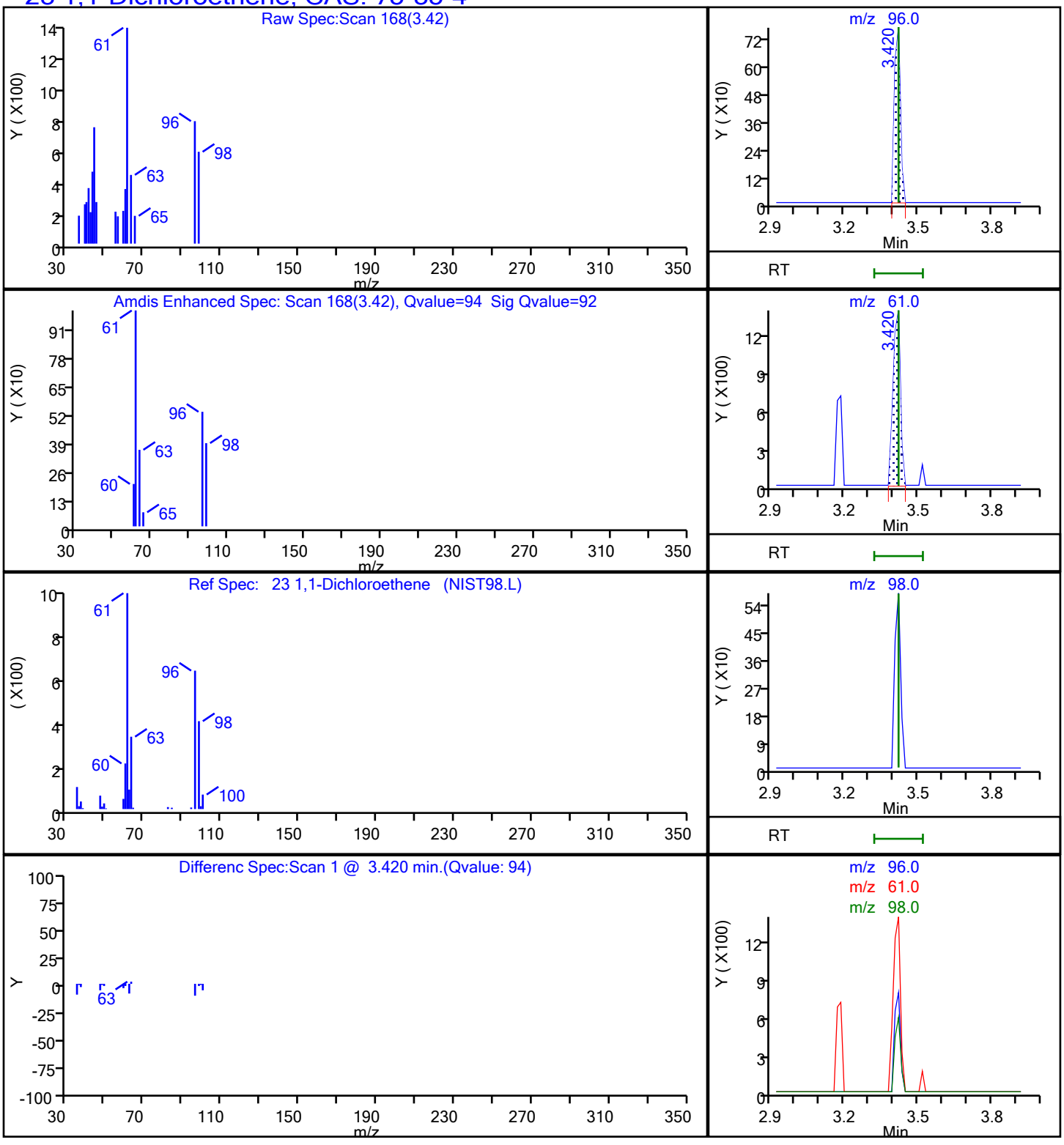
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

23 1,1-Dichloroethene, CAS: 75-35-4



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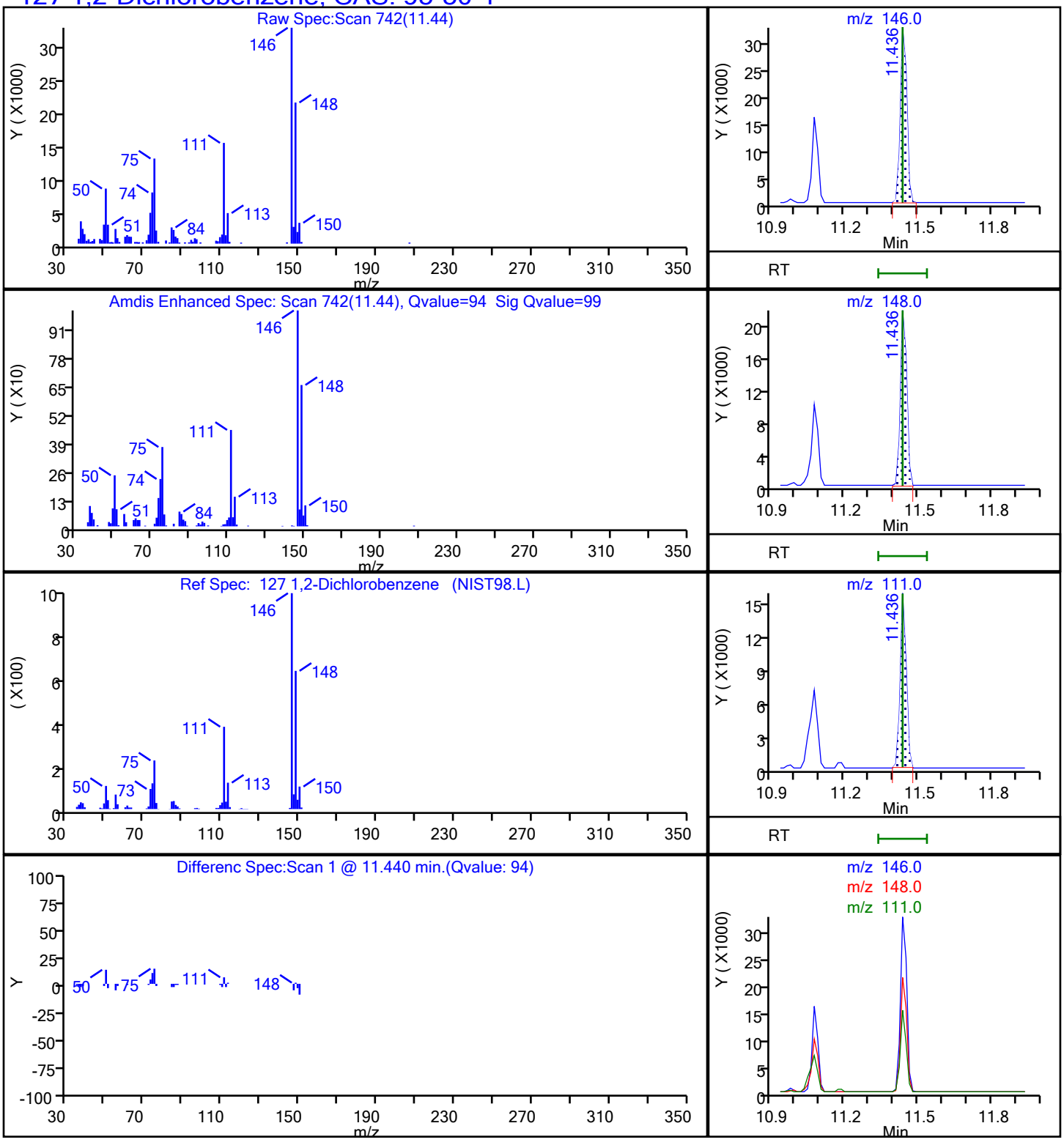
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

127 1,2-Dichlorobenzene, CAS: 95-50-1



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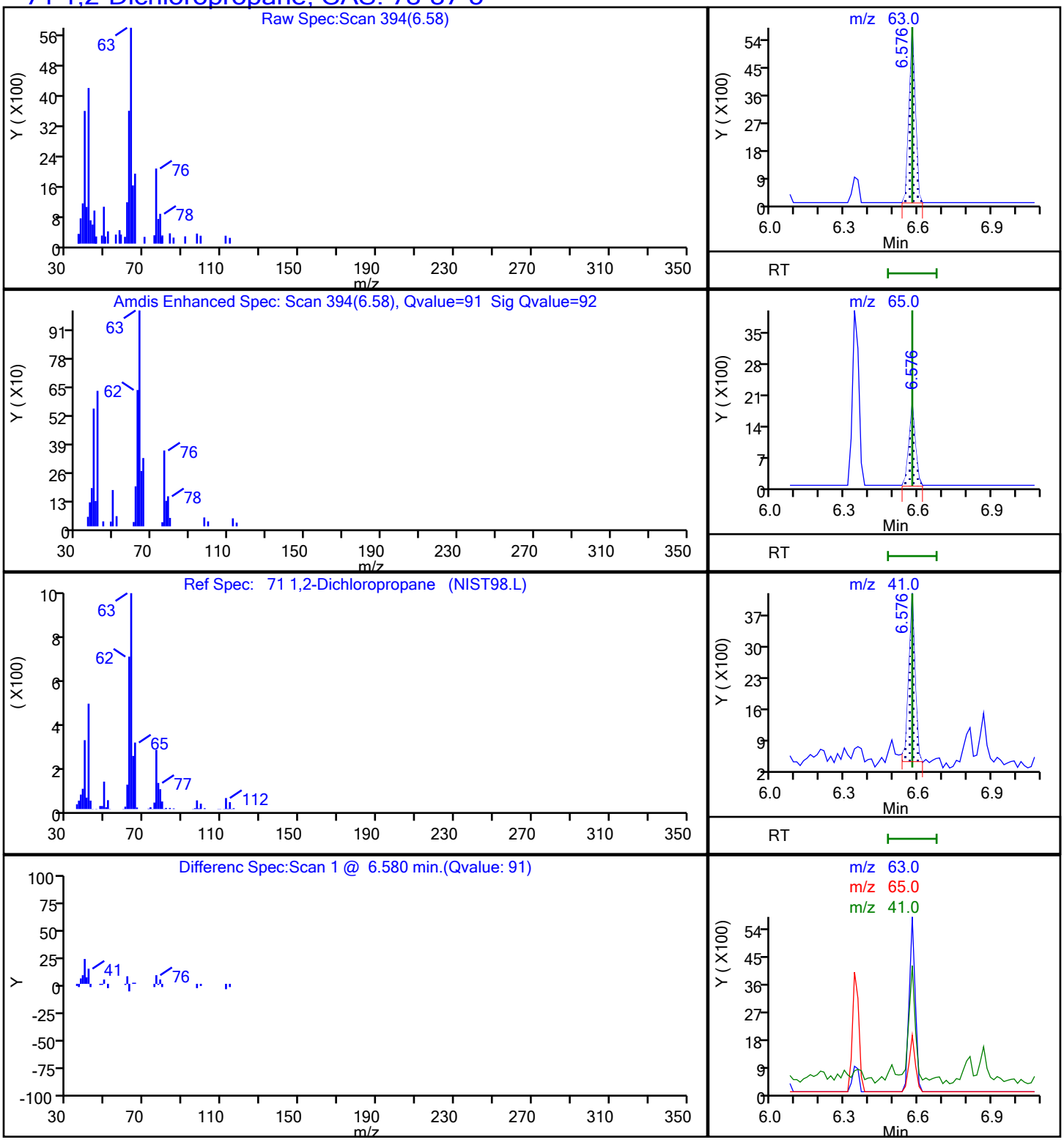
Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D		
Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5
Client ID:	MW-111D-20230414		
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24 Worklist Smp#: 50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

71 1,2-Dichloropropane, CAS: 78-87-5



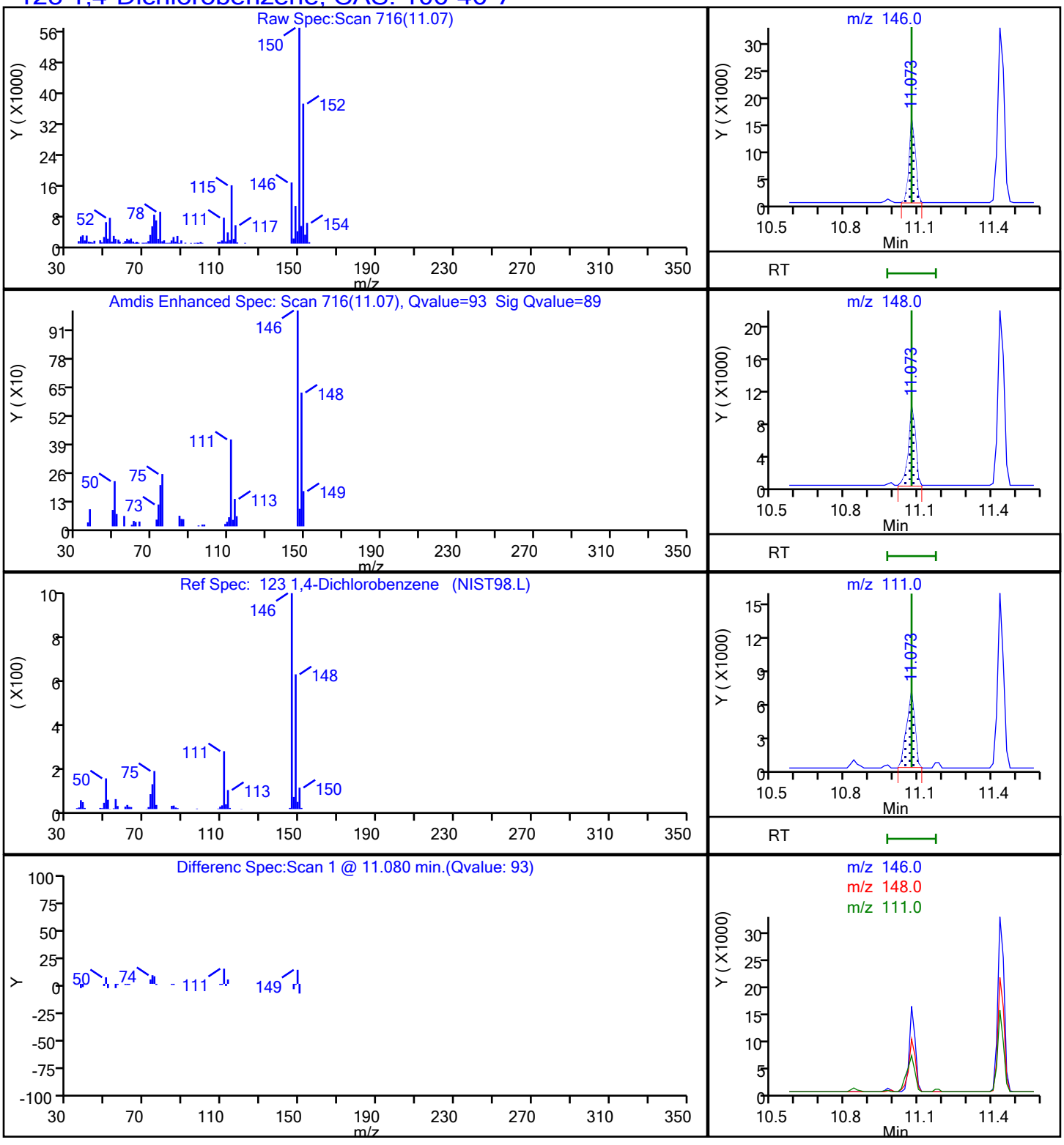
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

123 1,4-Dichlorobenzene, CAS: 106-46-7



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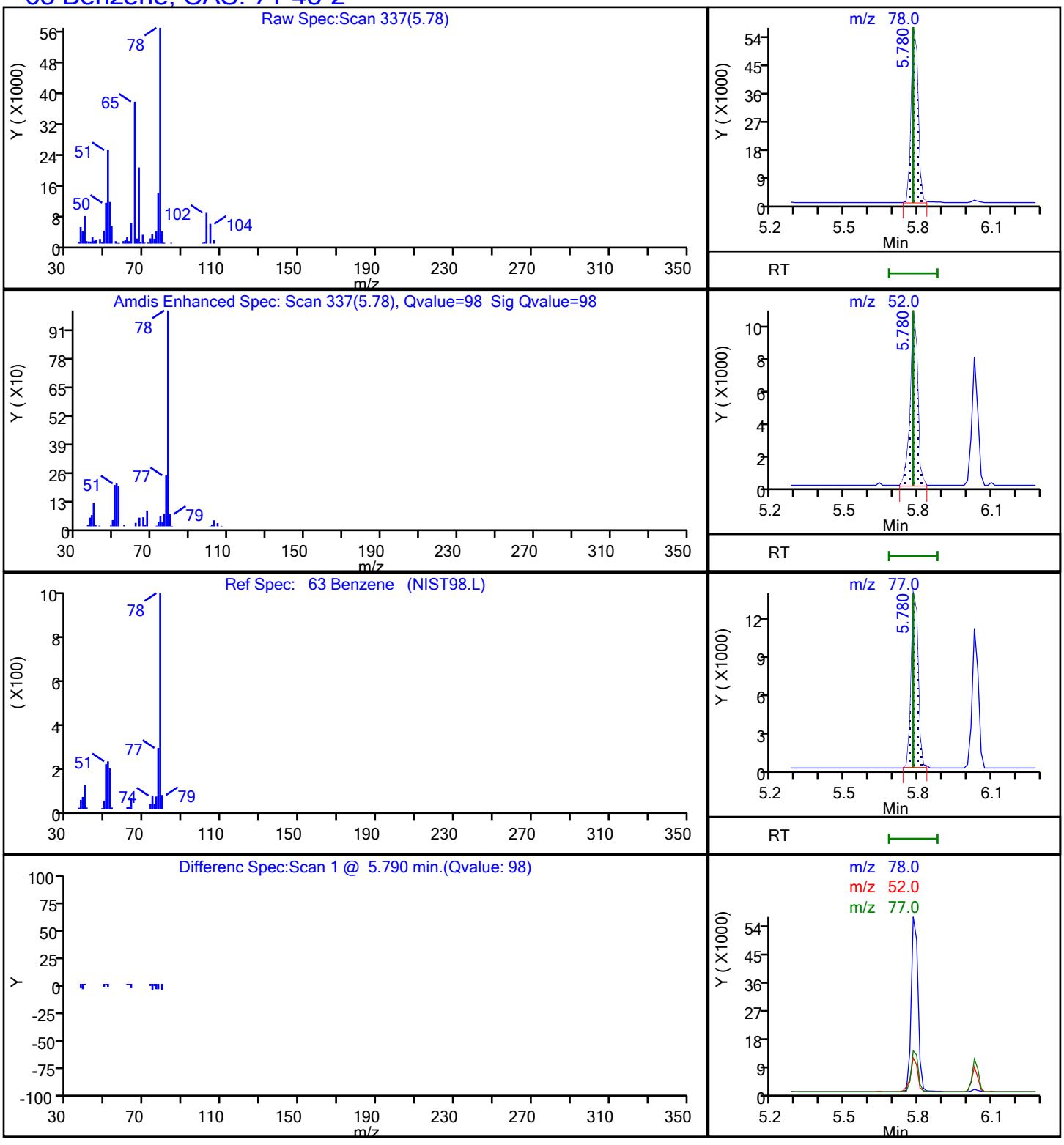
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D
Injection Date: 21-Apr-2023 16:28:30 Instrument ID: VMS_MS1
Lims ID: 280-175122-D-5 Lab Sample ID: 280-175122-5
Client ID: MW-111D-20230414
Operator ID: wickhamt/bustillose ALS Bottle#: 24 Worklist Smp#: 50
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

63 Benzene, CAS: 71-43-2



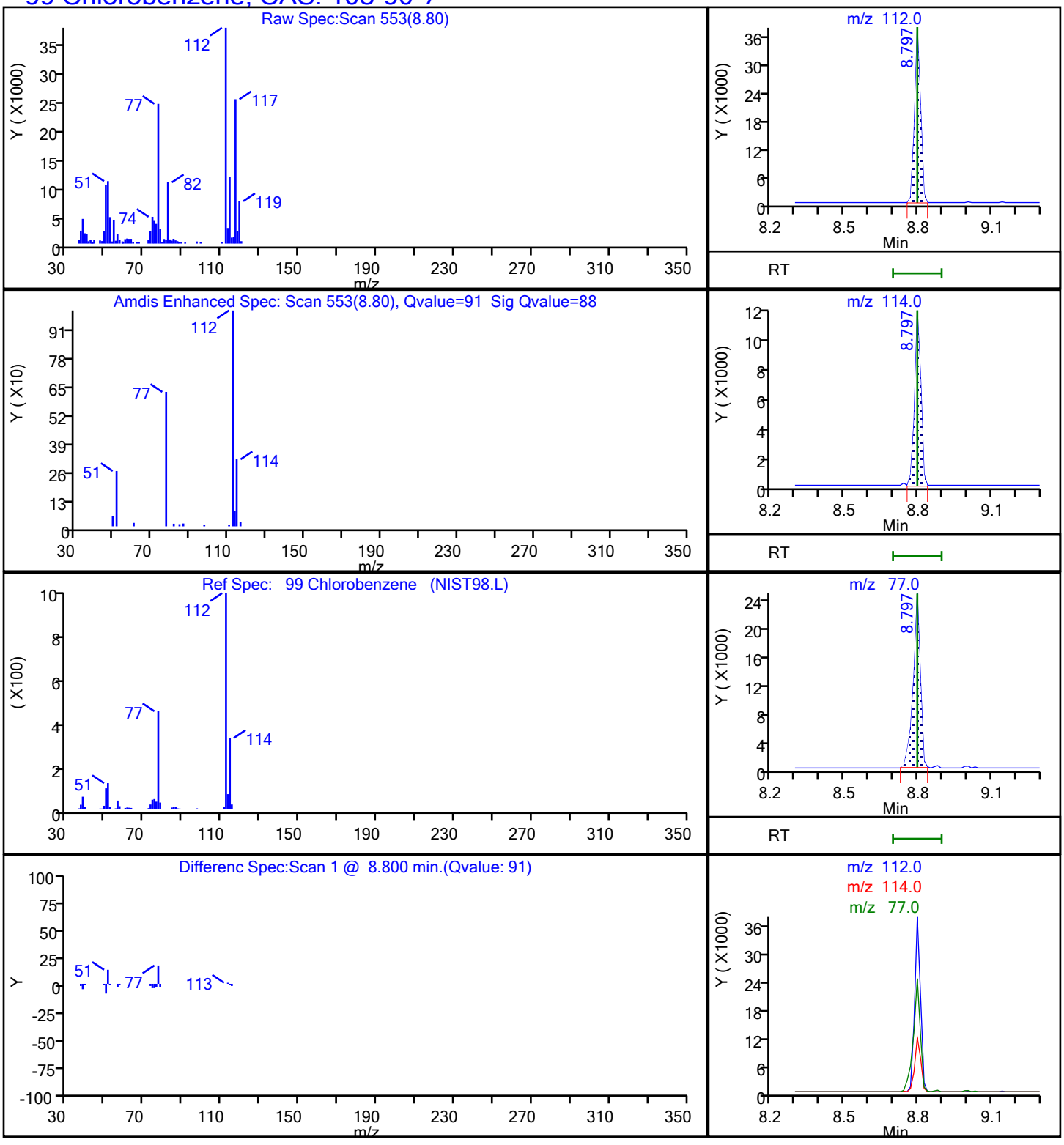
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

99 Chlorobenzene, CAS: 108-90-7



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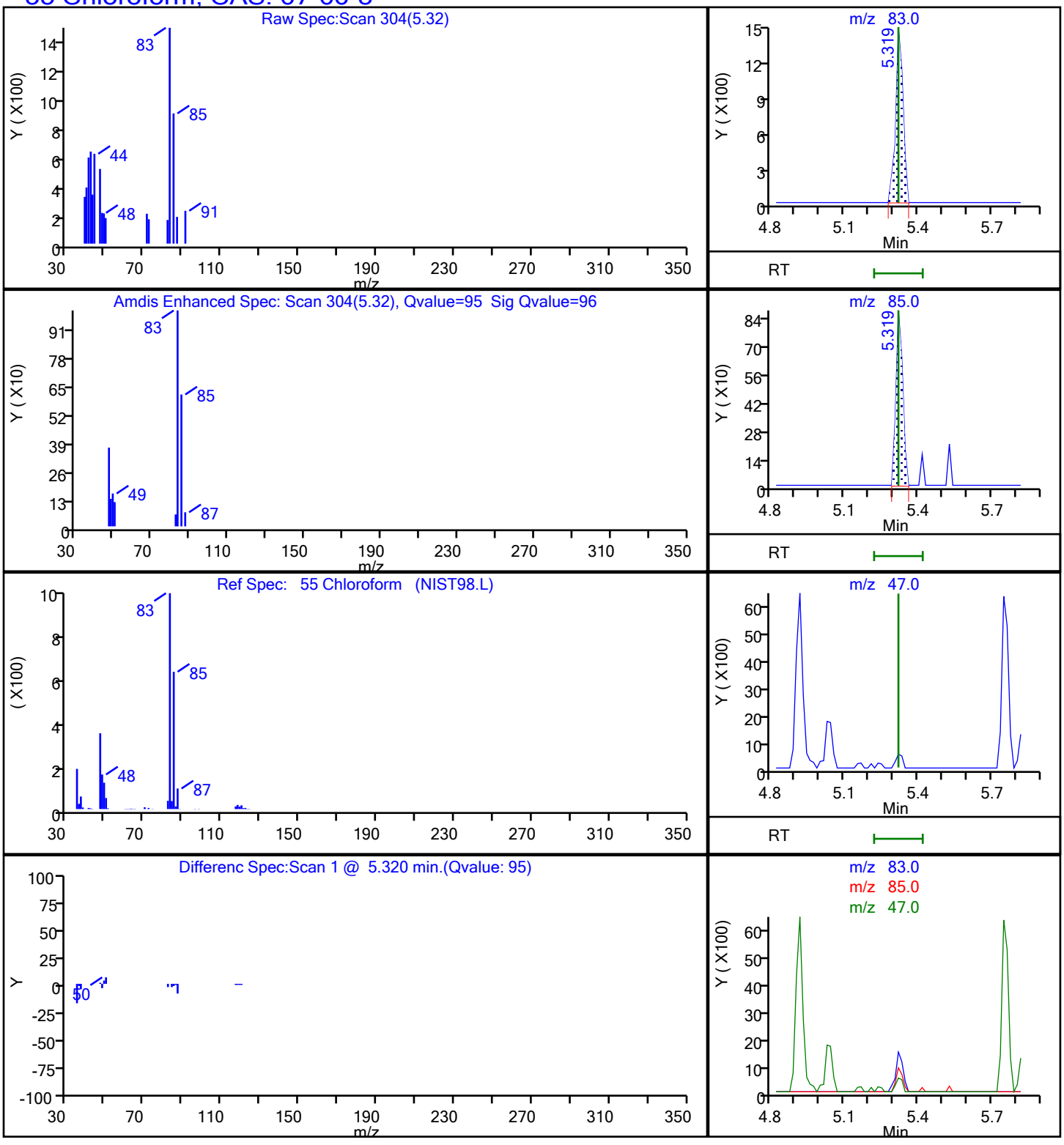
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

55 Chloroform, CAS: 67-66-3



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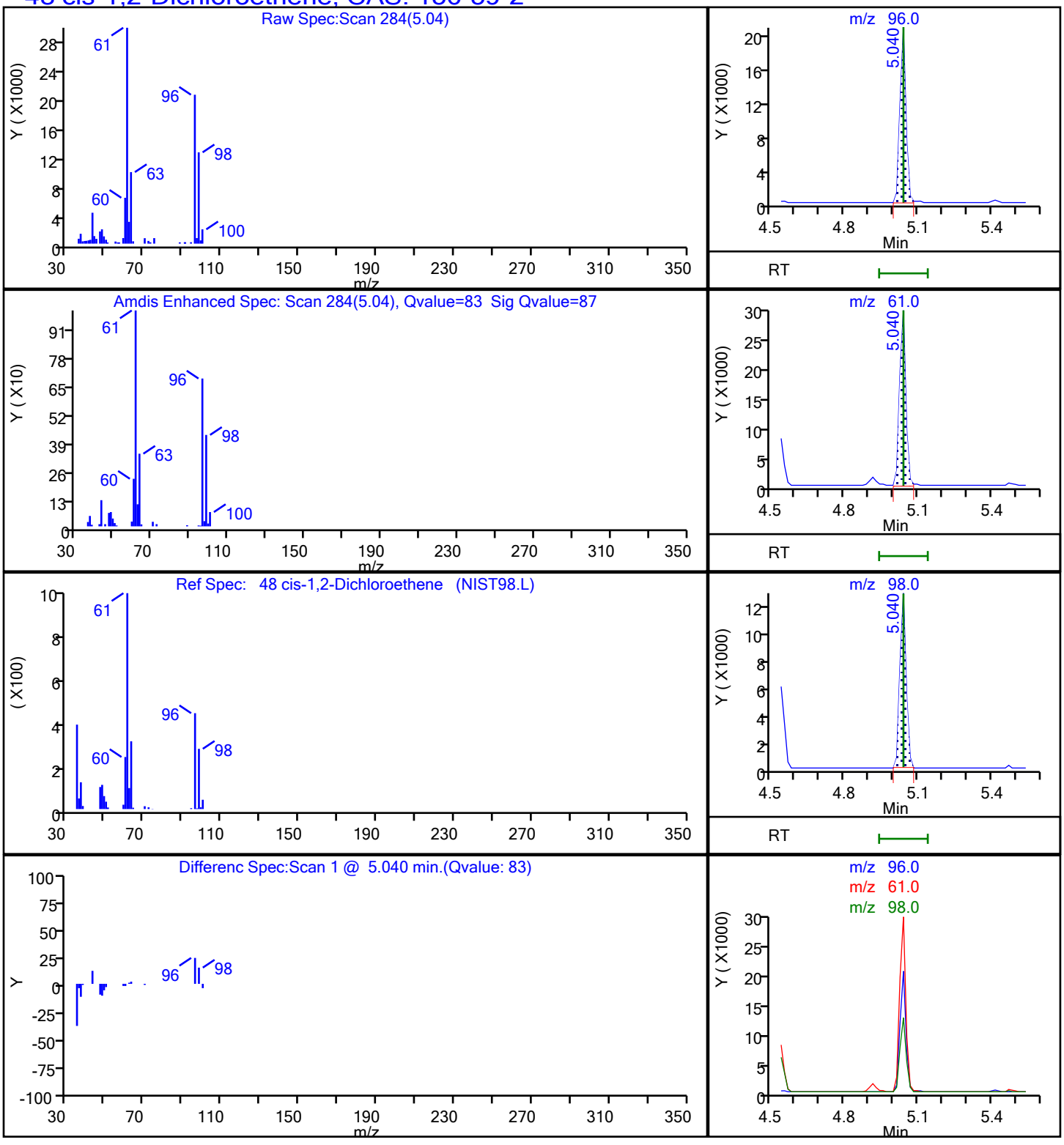
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D
Injection Date: 21-Apr-2023 16:28:30 Instrument ID: VMS_MS1
Lims ID: 280-175122-D-5 Lab Sample ID: 280-175122-5
Client ID: MW-111D-20230414
Operator ID: wickhamt/bustillose ALS Bottle#: 24 Worklist Smp#: 50
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

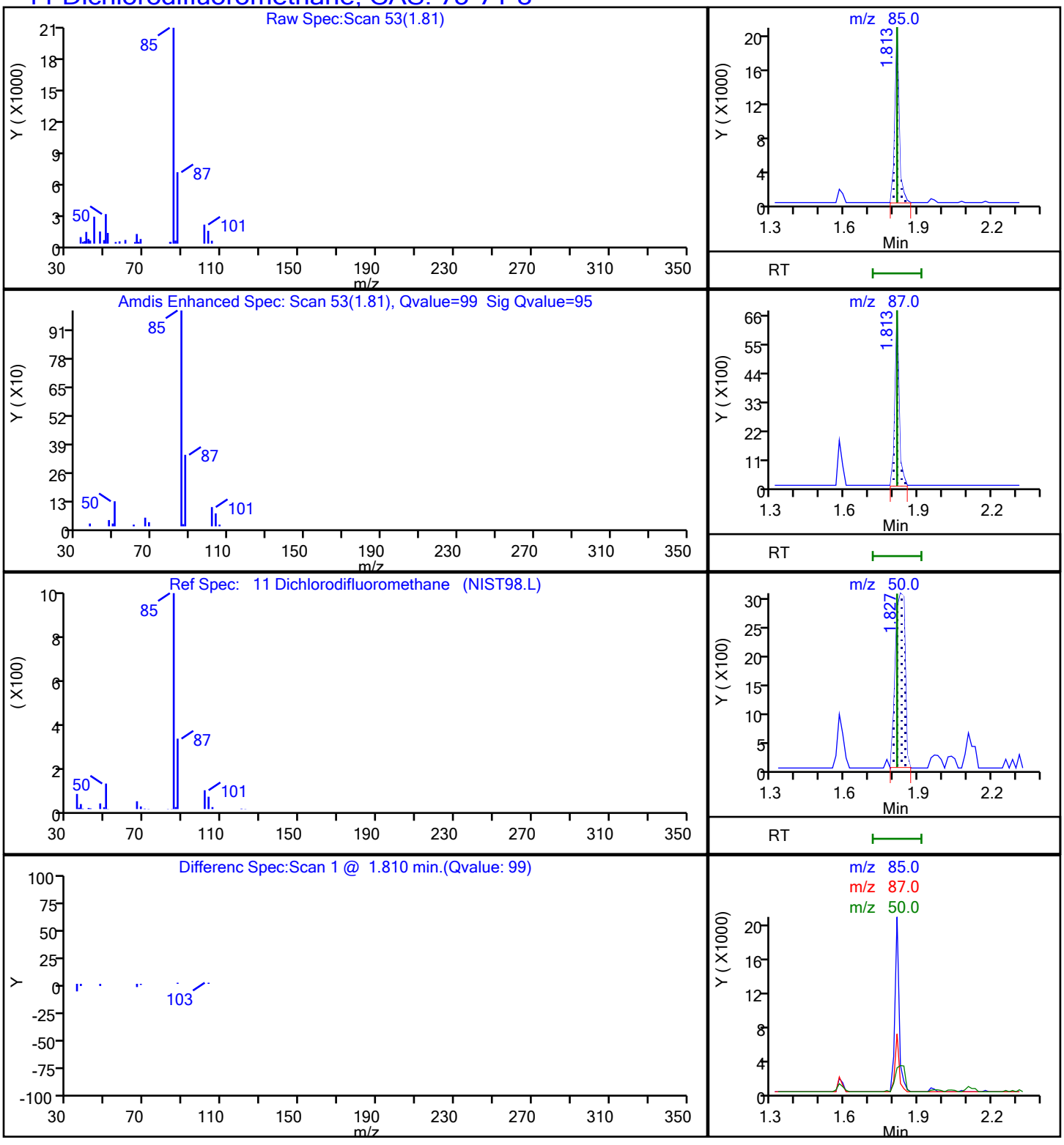
48 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D				
Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

11 Dichlorodifluoromethane, CAS: 75-71-8



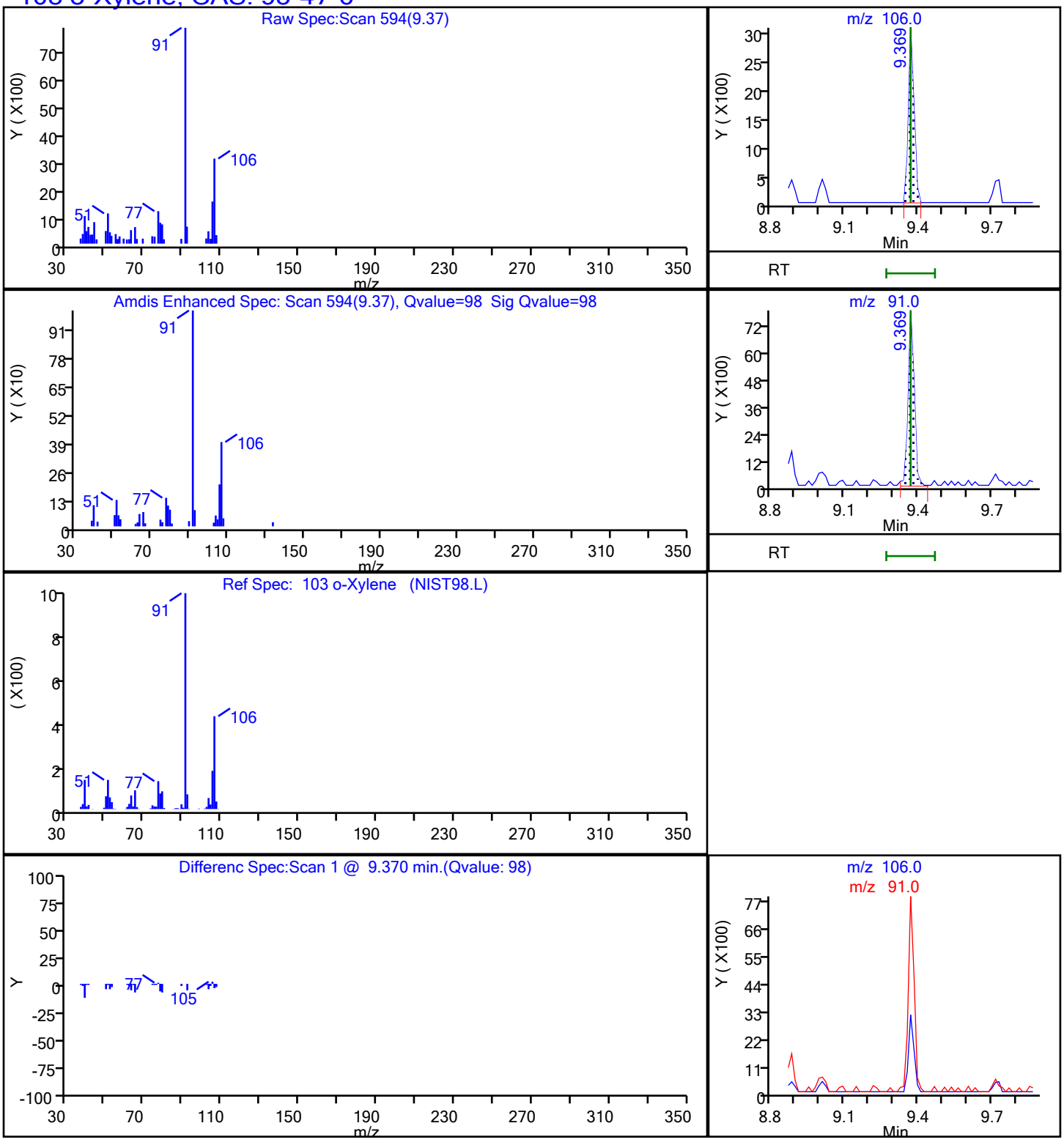
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

103 o-Xylene, CAS: 95-47-6



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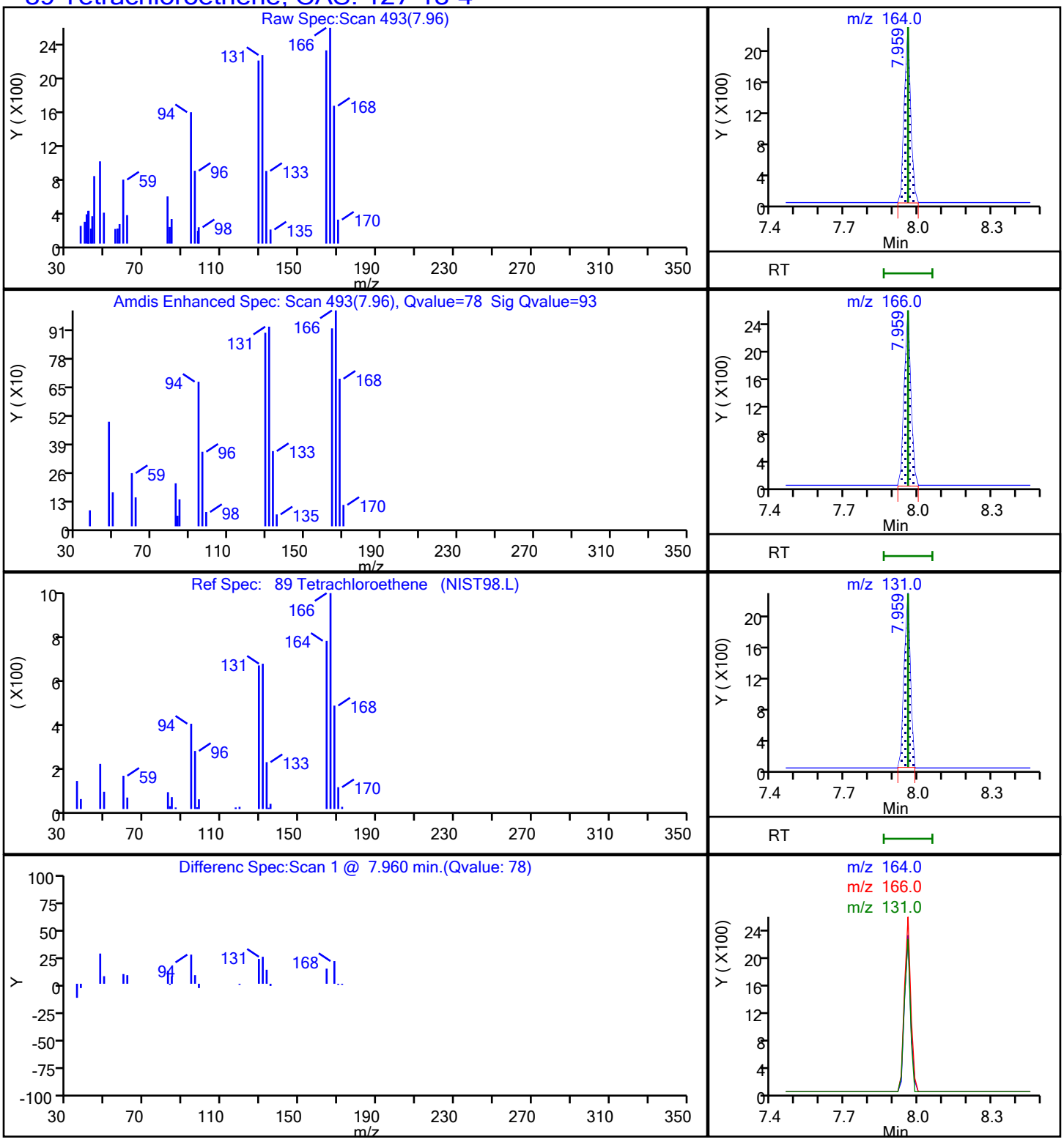
Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D		
Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5
Client ID:	MW-111D-20230414		
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24 Worklist Smp#: 50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

89 Tetrachloroethene, CAS: 127-18-4



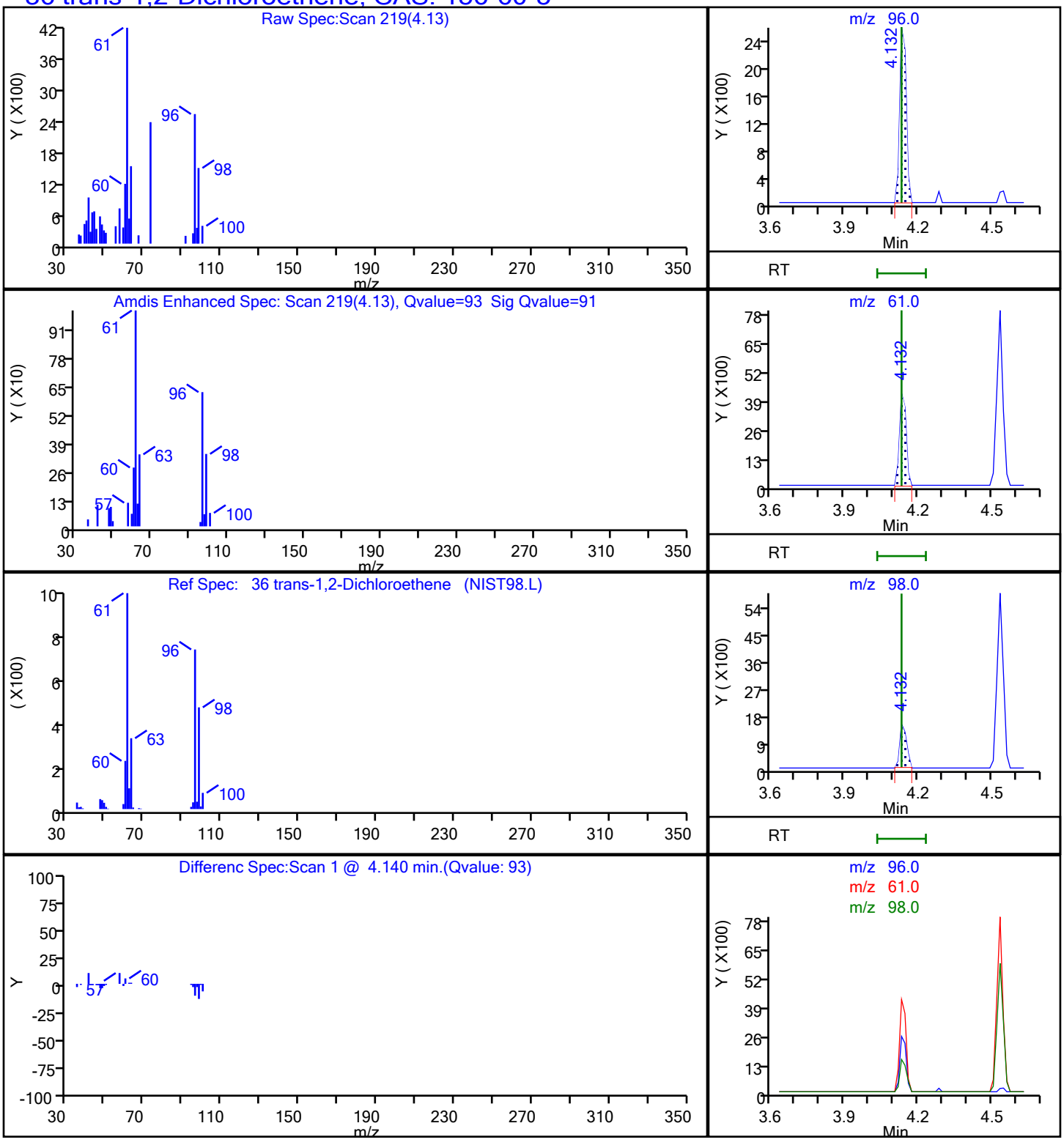
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

36 trans-1,2-Dichloroethene, CAS: 156-60-5



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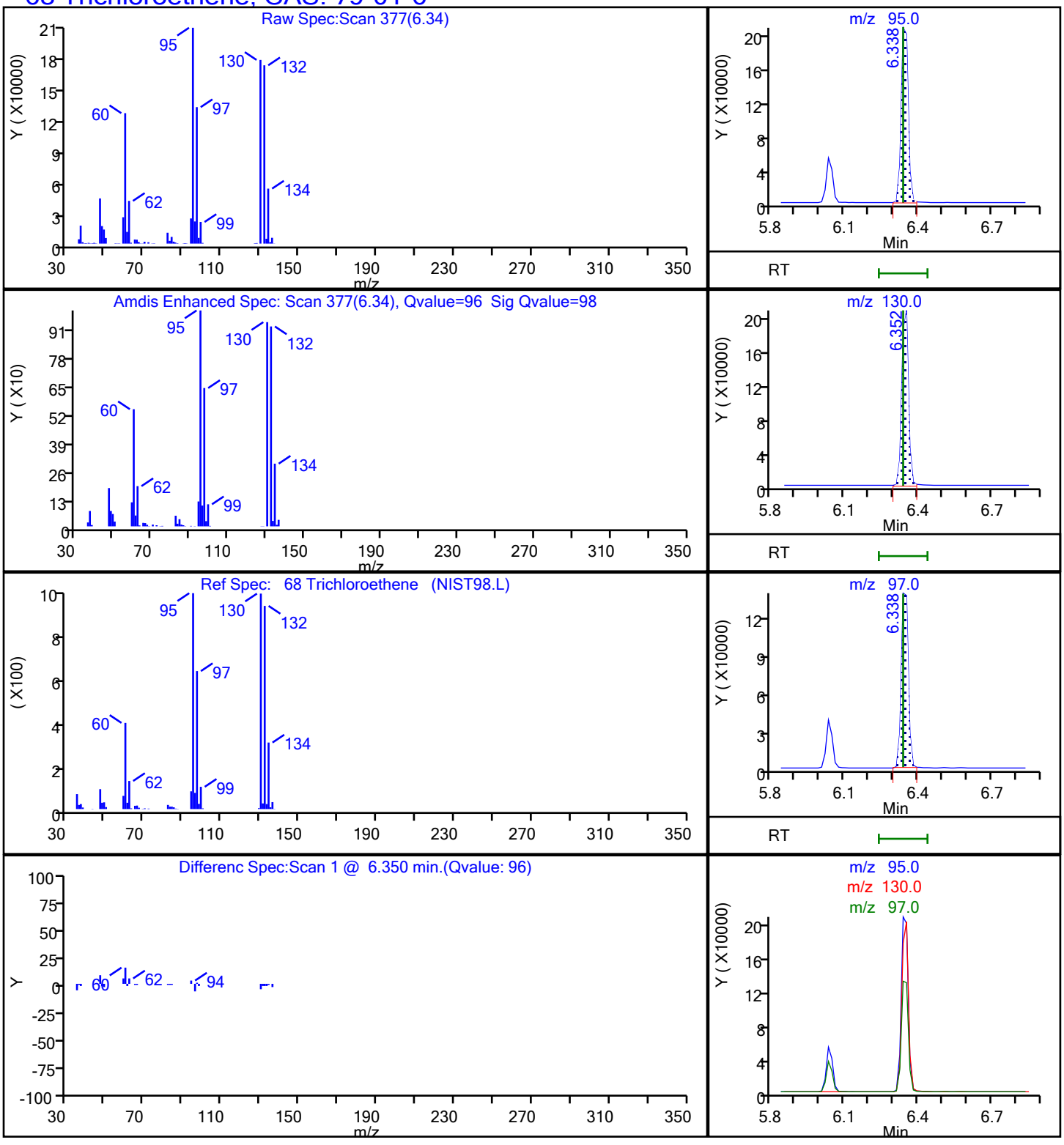
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

68 Trichloroethene, CAS: 79-01-6



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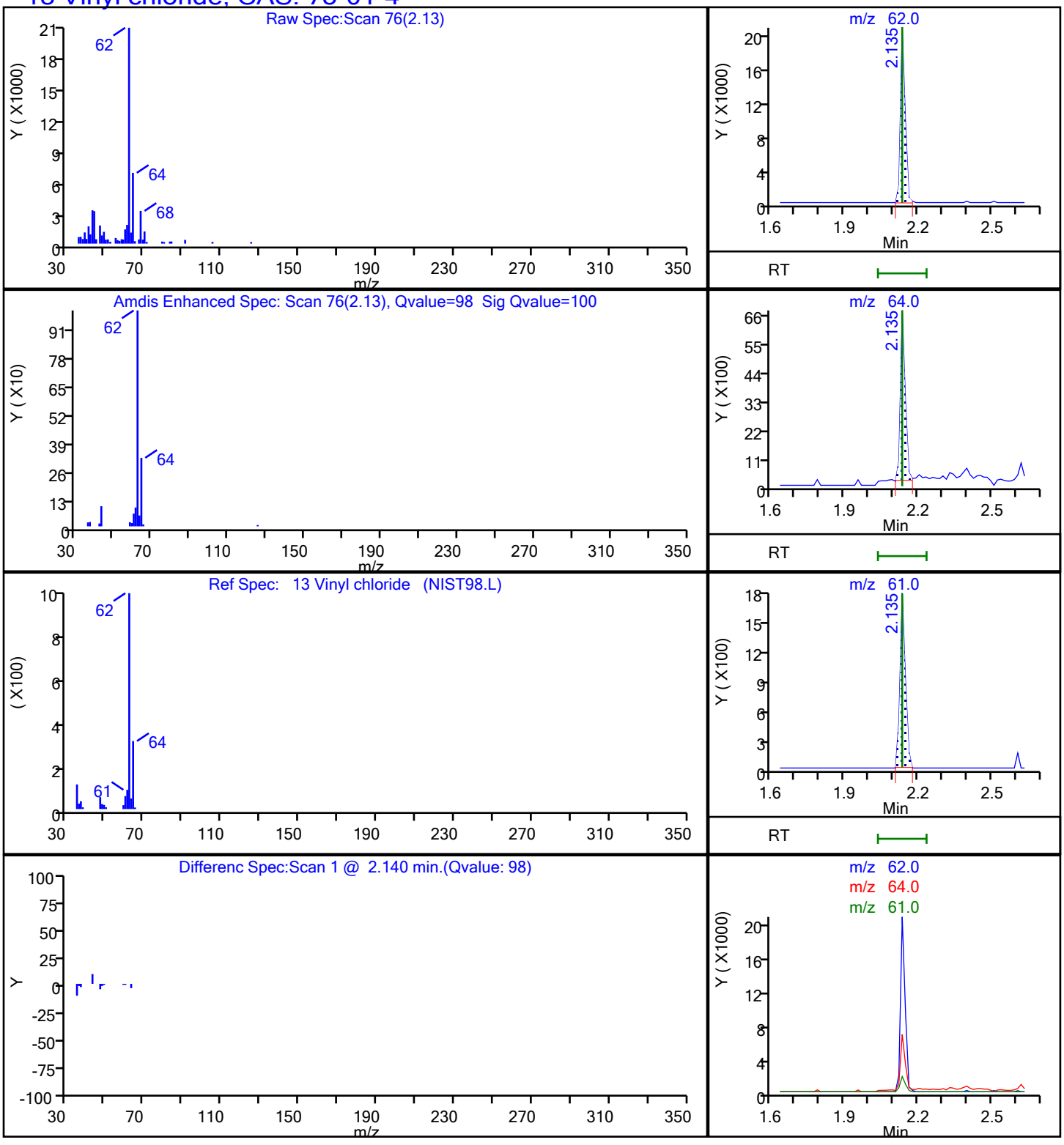
Report Date: 22-Apr-2023 01:26:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D

Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

13 Vinyl chloride, CAS: 75-01-4



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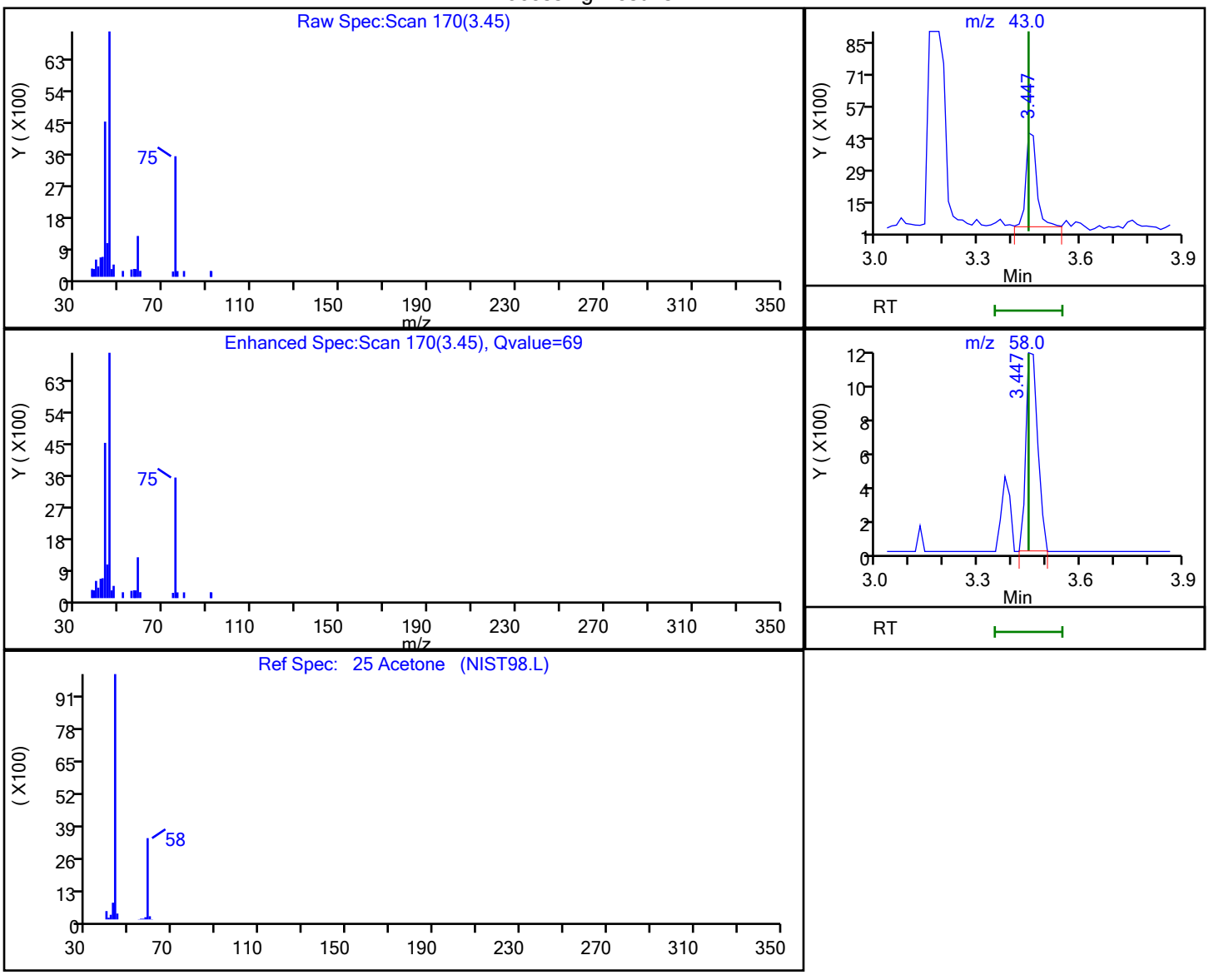
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D				
Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

25 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
3.45	43.00	9040	3.497418
3.45	58.00	2894	

Reviewer: V8PV, 22-Apr-2023 00:55:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

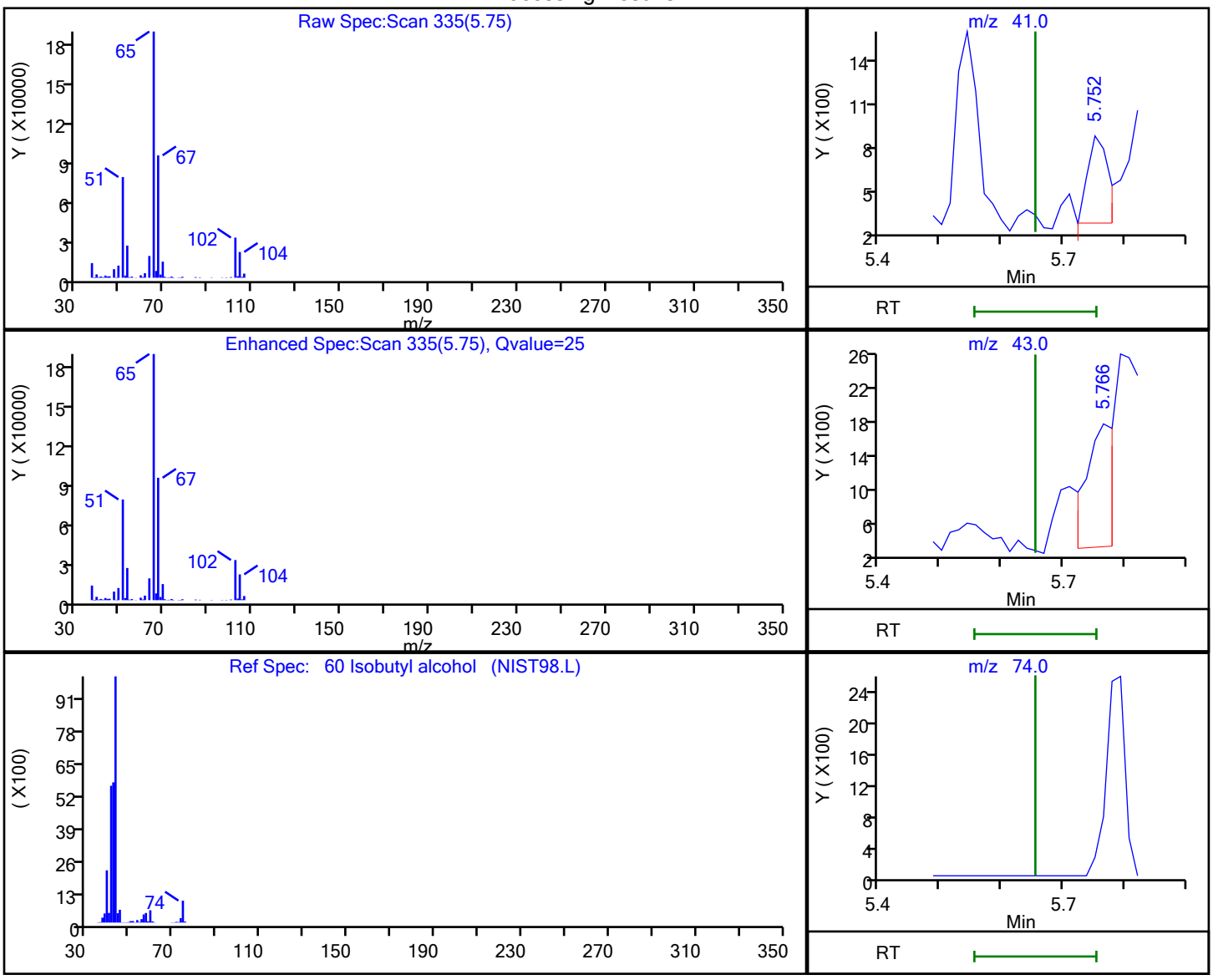
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D				
Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
5.75	41.00	1353	6.973875
5.77	43.00	4666	
5.65	74.00	0	

Reviewer: V8PV, 22-Apr-2023 00:56:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

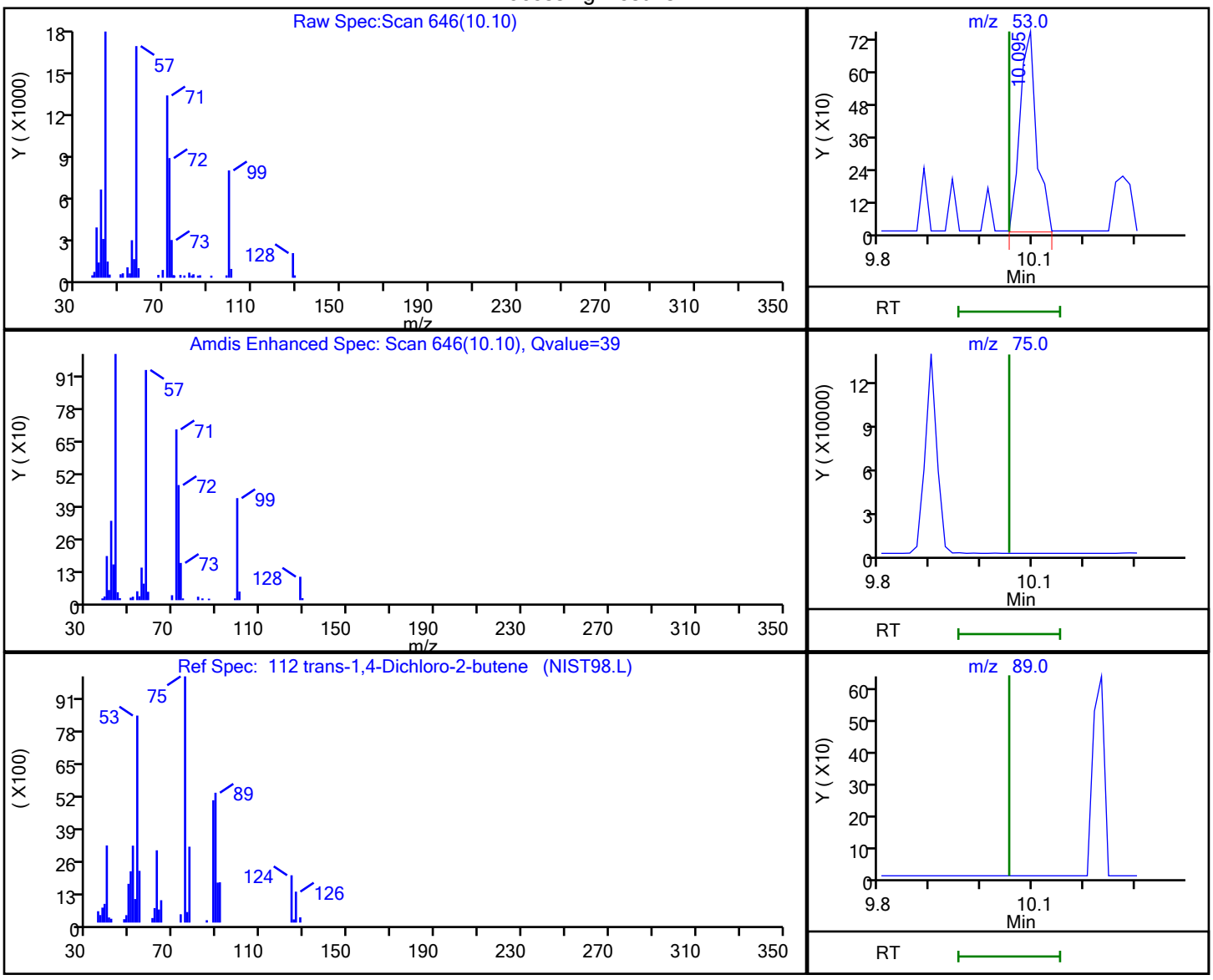
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D				
Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

112 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Processing Results



RT	Mass	Response	Amount
10.10	53.00	1663	1.318000
10.05	75.00	0	
10.05	89.00	0	

Reviewer: V8PV, 22-Apr-2023 00:56:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

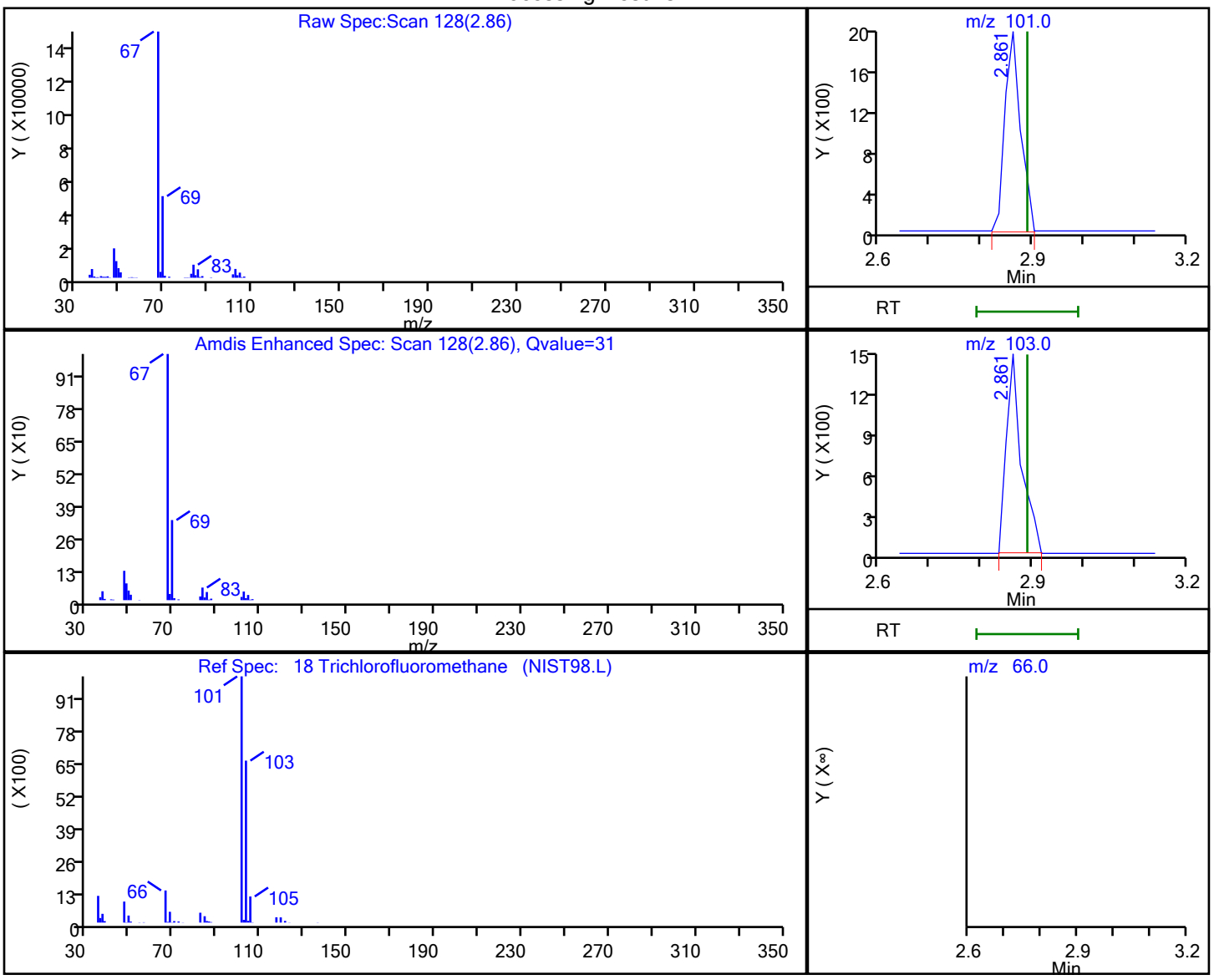
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D				
Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

18 Trichlorofluoromethane, CAS: 75-69-4

Processing Results



RT	Mass	Response	Amount
2.86	101.00	4255	2.037667
2.86	103.00	3032	
2.89	66.00	0	

Reviewer: V8PV, 22-Apr-2023 00:55:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

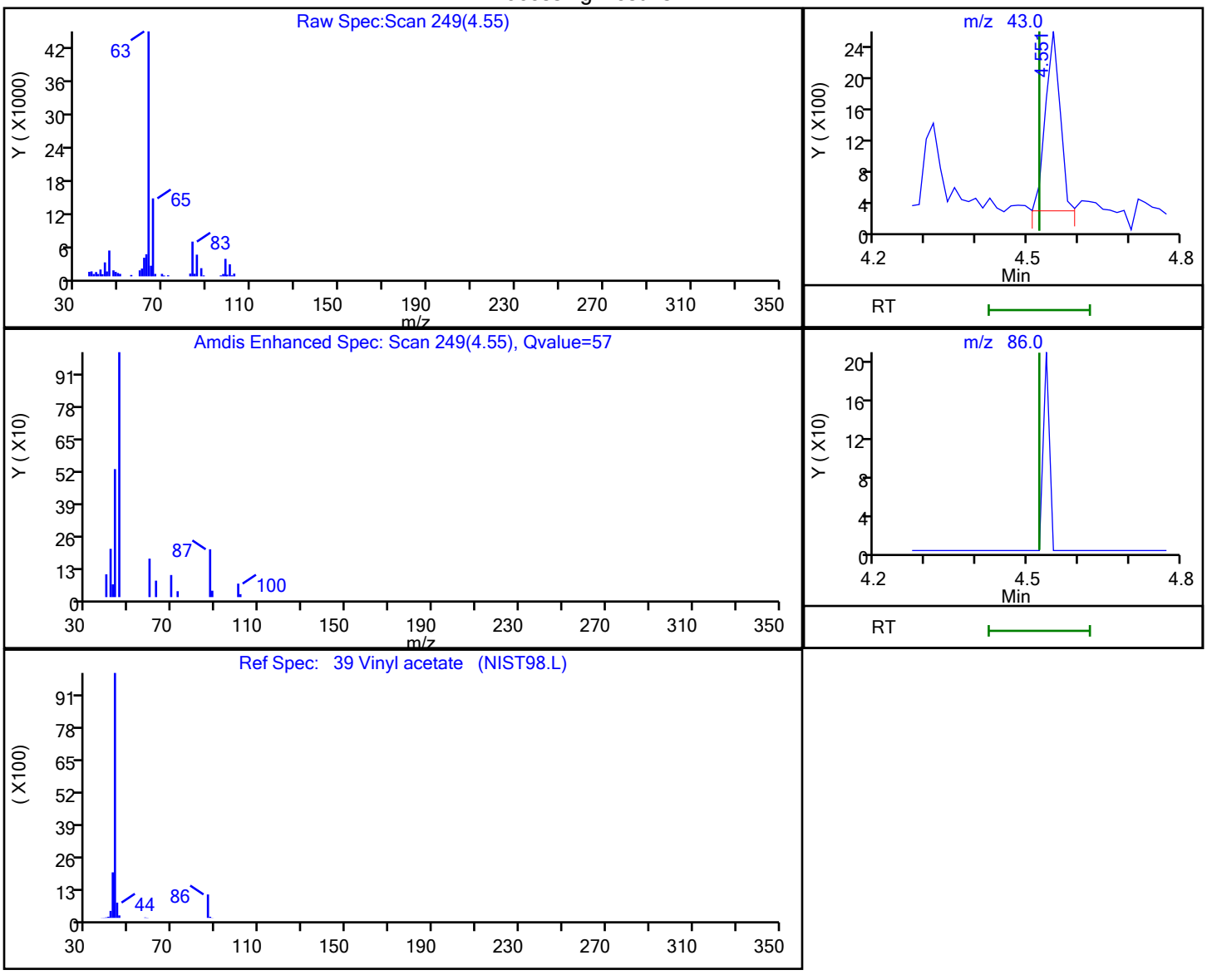
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8330.D				
Injection Date:	21-Apr-2023 16:28:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175122-D-5	Lab Sample ID:	280-175122-5		
Client ID:	MW-111D-20230414				
Operator ID:	wickhamt/bustillose	ALS Bottle#:	24	Worklist Smp#:	50
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

39 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
4.55	43.00	4532	0.496480
4.52	86.00	0	

Reviewer: V8PV, 22-Apr-2023 00:56:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-123-20230415 | Lab Sample ID: 280-175122-6

Matrix: Water | Lab File ID: X502955.D

Analysis Method: 8260D | Date Collected: 04/15/2023 14:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2023 03:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-123-20230415 | Lab Sample ID: 280-175122-6

Matrix: Water | Lab File ID: X502955.D

Analysis Method: 8260D | Date Collected: 04/15/2023 14:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2023 03:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	4.2		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	56		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-123-20230415 | Lab Sample ID: 280-175122-6

Matrix: Water | Lab File ID: X502955.D

Analysis Method: 8260D | Date Collected: 04/15/2023 14:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2023 03:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502955.D
Lims ID: 280-175122-C-6
Client ID: MW-123-20230415
Sample Type: Client
Inject. Date: 28-Apr-2023 03:17:30 ALS Bottle#: 17 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175122-C-6
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 05:52:56 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1638

First Level Reviewer: BX8N Date: 28-Apr-2023 05:49:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.056	5.056	0.000	99	1984252	50.0	
* 2 Chlorobenzene-d5	119	7.566	7.573	-0.007	84	475486	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.783	9.782	0.001	95	738354	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.556	0.007	94	484059	50.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	455471	45.4	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	2065620	51.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	678841	51.4	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.660	8.660	0.000	88	678841	NR	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	2794	0.3209	
11 Chloromethane	50		1.860				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94		2.246				ND	7
15 Chloroethane	64		2.332				ND	
16 Dichlorofluoromethane	67		2.504				ND	
17 Trichlorofluoromethane	101		2.539				ND	7
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59		2.739				ND	
21 Acrolein	56		2.854				ND	
23 1,1-Dichloroethene	96	2.933	2.933	0.000	84	1586	0.2081	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
24 Acetone	43		2.947				ND	7
25 Isopropyl alcohol	45		3.033				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	7
28 Acetonitrile	41		3.154				ND	U
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.197				ND	7
31 Methylene Chloride	84		3.290				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.447				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.676				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.776				ND	
41 Isopropyl ether	87		3.805				ND	
40 1,1-Dichloroethane	63		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	7
47 cis-1,2-Dichloroethene	96		4.212				ND	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.391				ND	
54 Chloroform	83	4.441	4.441	0.000	86	3352	0.2134	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	94	3105	0.2440	
56 Cyclohexane	56		4.641				ND	
57 1,1-Dichloropropene	75		4.692				ND	
60 Isobutyl alcohol	41		4.699				ND	U
59 Carbon tetrachloride	117		4.699				ND	
62 Benzene	78		4.849				ND	7
63 1,2-Dichloroethane	62		4.877				ND	7
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.028				ND	
66 n-Butanol	56		5.192				ND	
67 Trichloroethene	95	5.335	5.328	0.007	98	513751	56.5	
68 2-Pentanone	43		5.428				ND	
69 Methylcyclohexane	55		5.521				ND	
71 Methyl methacrylate	100		5.535				ND	
70 1,2-Dichloropropane	63		5.535				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.072				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.172				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.708				ND	
83 Tetrachloroethene	164	6.808	6.801	0.007	96	29025	4.20	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.165				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.552				ND	U
90 Chlorobenzene	112		7.595				ND	
91 1,1,1,2-Tetrachloroethane	131		7.666				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.788				ND	
94 o-Xylene	106		8.145				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.581				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.767				ND	
101 Bromobenzene	156		8.803				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.882				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.053				ND	
107 4-Chlorotoluene	126		9.096				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.582				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.732				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.825				ND	
116 n-Butylbenzene	91		10.133				ND	
117 1,2-Dichlorobenzene	146		10.161				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.941				ND	
119 1,3,5-Trichlorobenzene	180		11.127				ND	
120 1,2,4-Trichlorobenzene	180		11.763				ND	
121 Hexachlorobutadiene	225		11.899				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.249				ND	
165 t-Amyl alcohol	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1				0		0.2134	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND	7
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

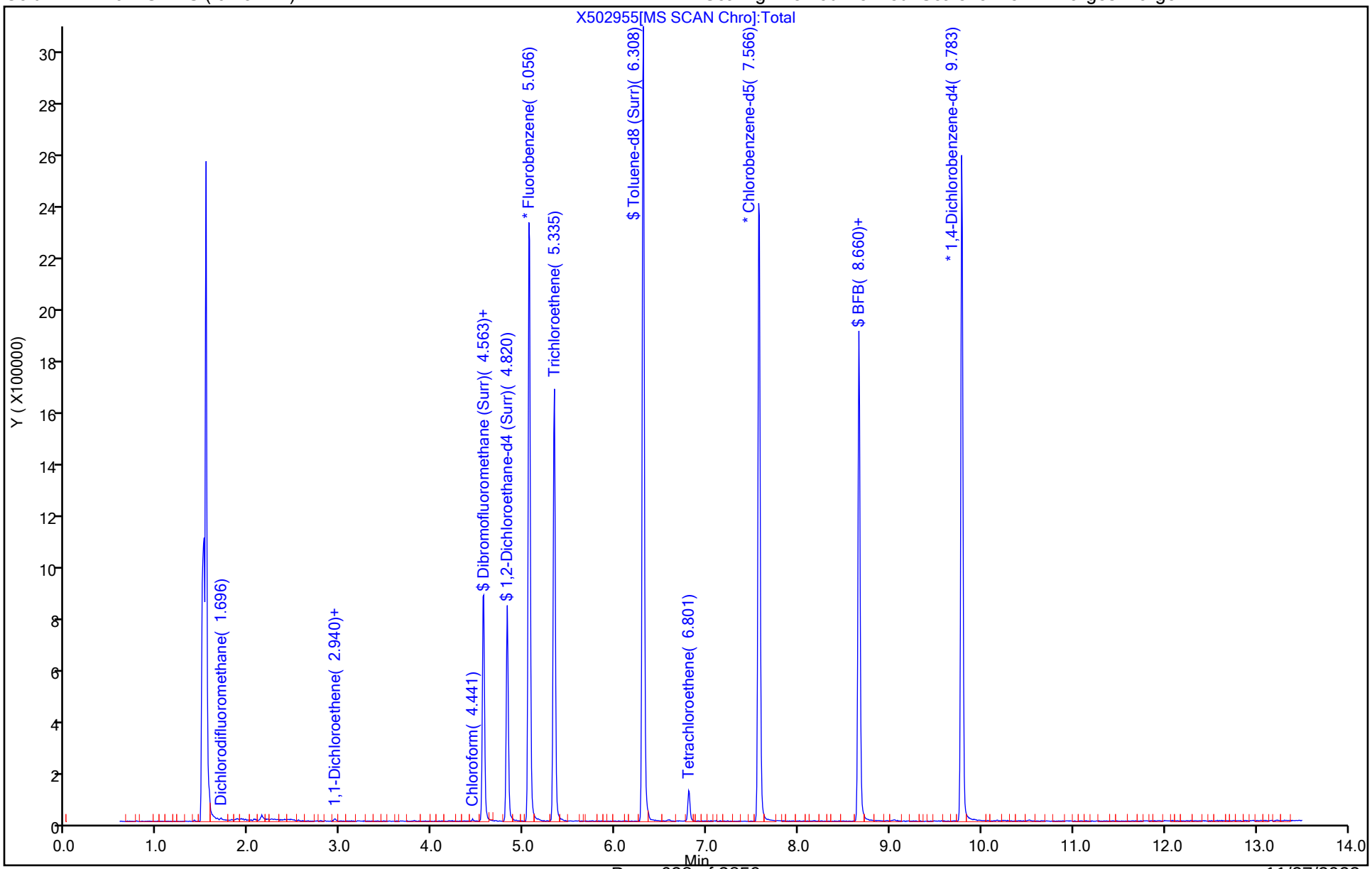
mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 28-Apr-2023 05:53:14 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502955.D				
Injection Date:	28-Apr-2023 03:17:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	280-175122-C-6	Lab Sample ID:	280-175122-6	Worklist Smp#:	21
Client ID:	MW-123-20230415				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502955.D				
Lims ID:	280-175122-C-6				
Client ID:	MW-123-20230415				
Sample Type:	Client				
Inject. Date:	28-Apr-2023 03:17:30	ALS Bottle#:	17	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175122-C-6				
Misc. Info.:	280-0120830-034				
Operator ID:	bj	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 05:52:56	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1638				

First Level Reviewer: BX8N Date: 28-Apr-2023 05:49:10

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	50.7	101.43
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	45.4	90.87
$ 6 Toluene-d8 (Surr)	50.0	51.0	101.99
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.4	102.89

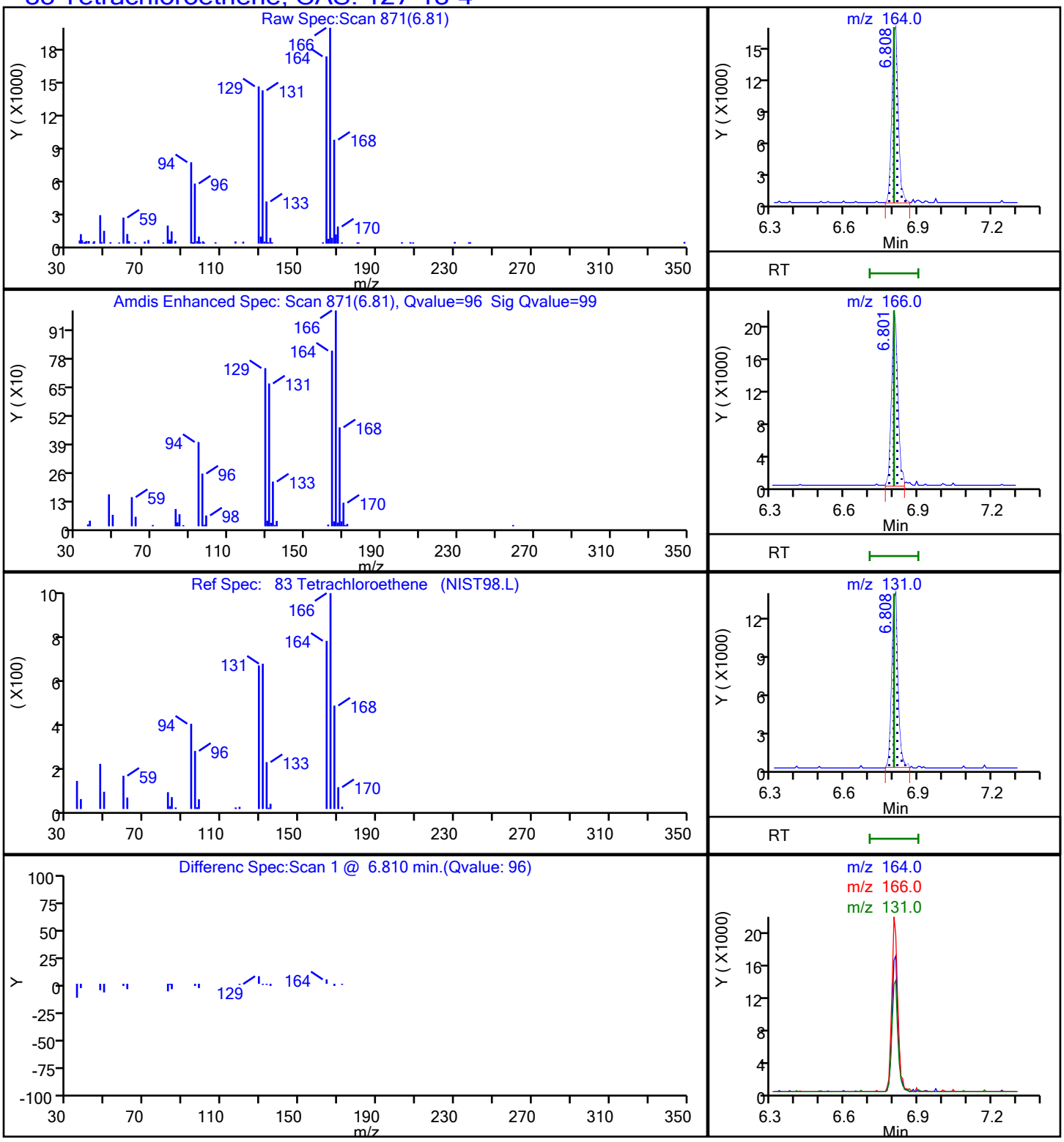
Report Date: 28-Apr-2023 05:53:14 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502955.D

Injection Date:	28-Apr-2023 03:17:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-C-6	Lab Sample ID:	280-175122-6		
Client ID:	MW-123-20230415				
Operator ID:	bj	ALS Bottle#:	17	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

83 Tetrachloroethene, CAS: 127-18-4



11/27/2023
7:27 PM

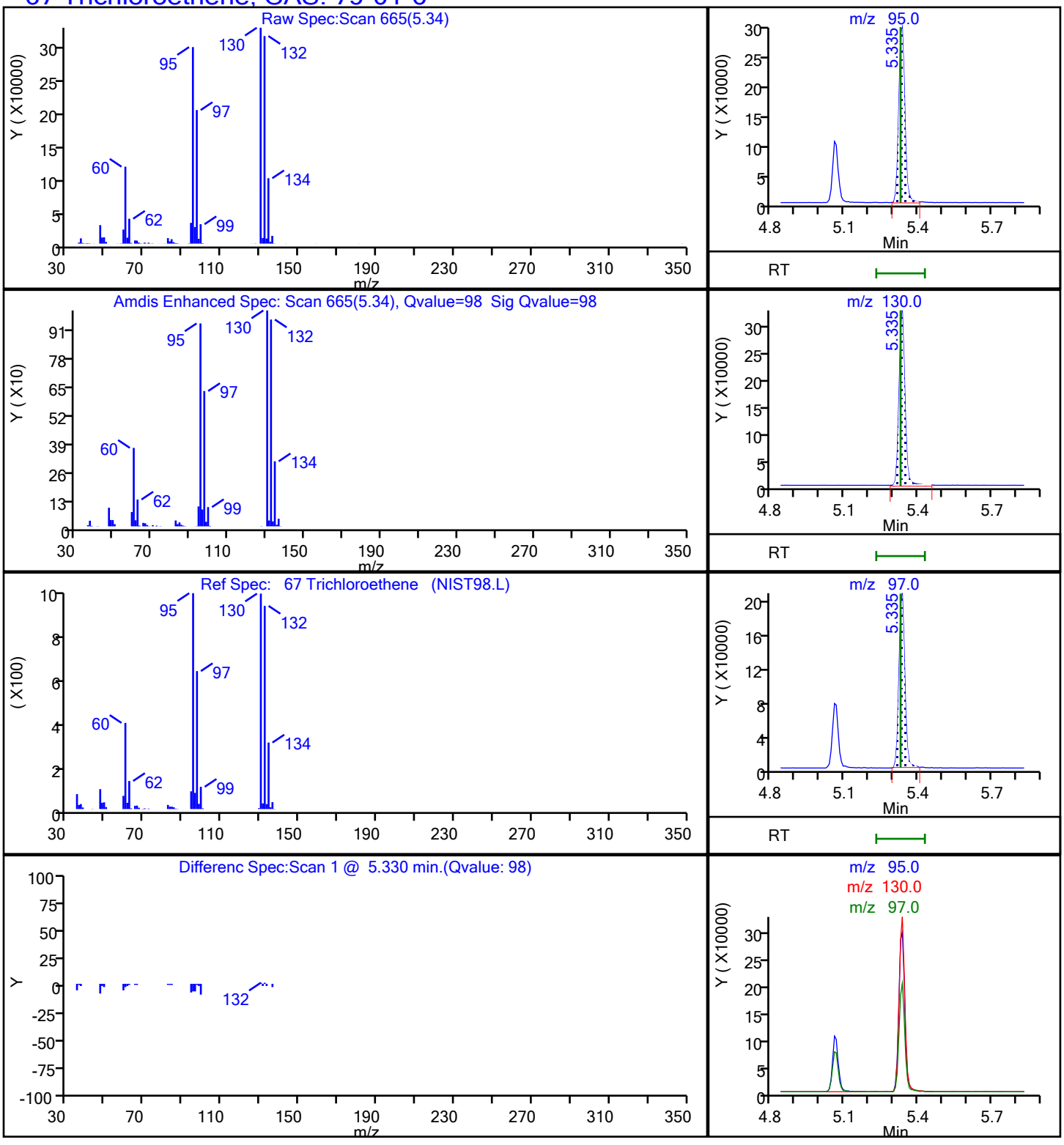
Report Date: 28-Apr-2023 05:53:14 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502955.D

Injection Date:	28-Apr-2023 03:17:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-C-6	Lab Sample ID:	280-175122-6		
Client ID:	MW-123-20230415				
Operator ID:	bj	ALS Bottle#:	17	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

67 Trichloroethene, CAS: 79-01-6



11/27/2023
7:27 PM

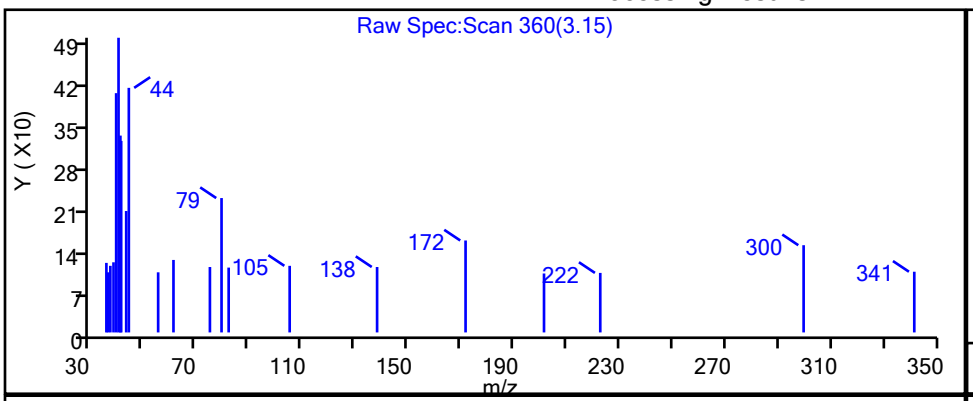
User Disabled Compound Report

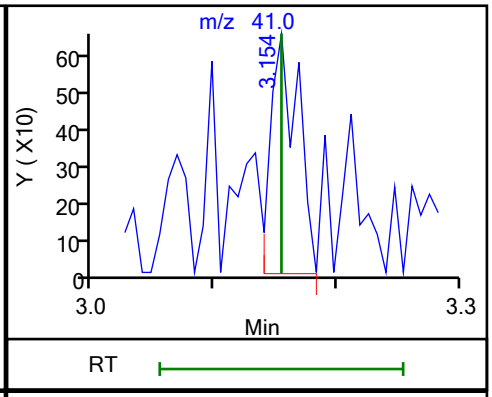
Eurofins Denver

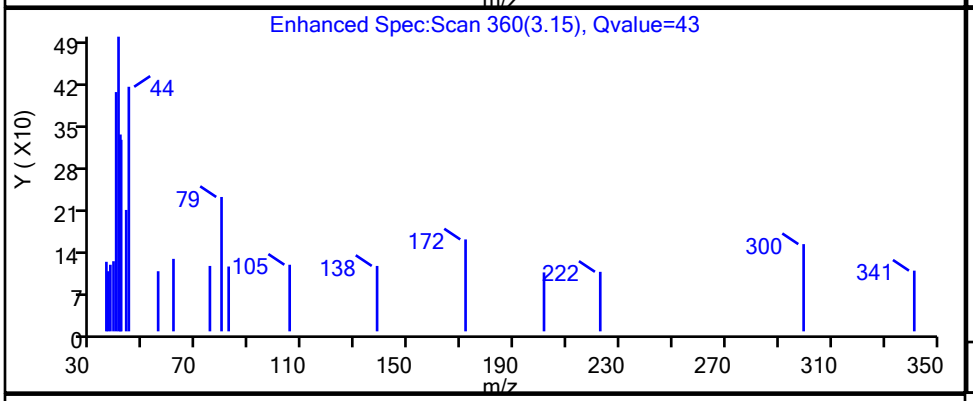
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502955.D				
Injection Date:	28-Apr-2023 03:17:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-C-6	Lab Sample ID:	280-175122-6		
Client ID:	MW-123-20230415				
Operator ID:	bj	ALS Bottle#:	17	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

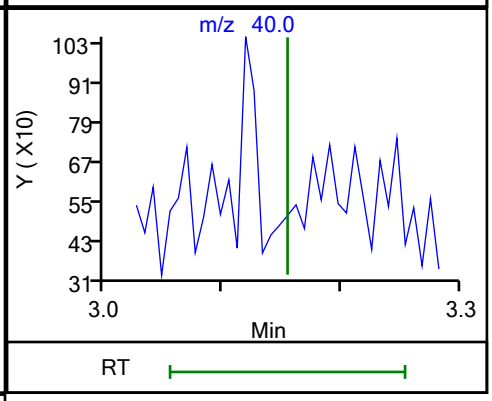
28 Acetonitrile, CAS: 75-05-8

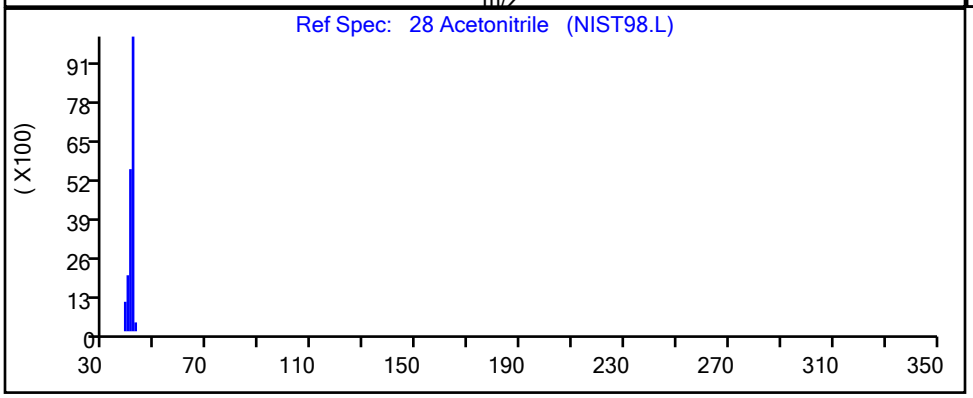
Processing Results











RT	Mass	Response	Amount
3.15	41.00	1024	0.923977
3.15	40.00	0	

Reviewer: BX8N, 28-Apr-2023 05:48:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

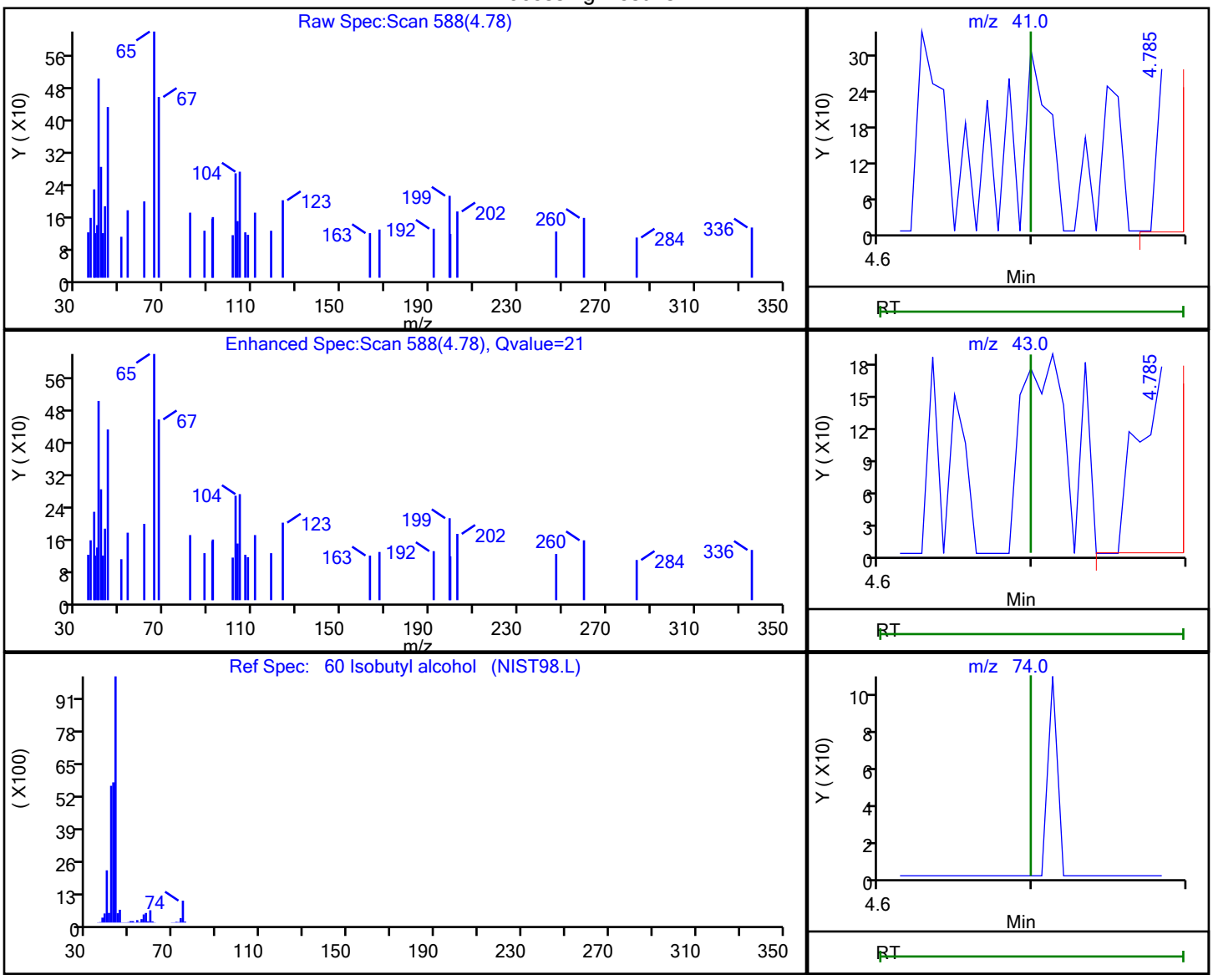
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502955.D				
Injection Date:	28-Apr-2023 03:17:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-C-6	Lab Sample ID:	280-175122-6		
Client ID:	MW-123-20230415				
Operator ID:	bj	ALS Bottle#:	17	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.78	41.00	187	12.073307
4.78	43.00	220	
4.70	74.00	0	

Reviewer: BX8N, 28-Apr-2023 05:48:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-102S-20230414 | Lab Sample ID: 280-175122-7

Matrix: Water | Lab File ID: X502923.D

Analysis Method: 8260D | Date Collected: 04/14/2023 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 15:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-102S-20230414 | Lab Sample ID: 280-175122-7

Matrix: Water | Lab File ID: X502923.D

Analysis Method: 8260D | Date Collected: 04/14/2023 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 15:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	0.91	J	1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	2.0		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-102S-20230414 | Lab Sample ID: 280-175122-7

Matrix: Water | Lab File ID: X502923.D

Analysis Method: 8260D | Date Collected: 04/14/2023 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 15:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502923.D
Lims ID: 280-175122-B-7
Client ID: MW-102S-20230414
Sample Type: Client
Inject. Date: 27-Apr-2023 15:44:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175122-B-7
Misc. Info.: 280-0120830-018
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:39:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: V8PV Date: 28-Apr-2023 02:35:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96	4.856	4.942	-0.086	1	101	0	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2031405	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	497204	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	769750	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	504732	51.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	486684	47.4	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2109762	49.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	90	700216	50.9	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	90	700216	NR	
10 Dichlorodifluoromethane	85	1.696	1.695	0.001	29	1556	0.1746	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	7
14 Bromomethane	94		2.246				ND	7
15 Chloroethane	64		2.339				ND	U
16 Dichlorofluoromethane	67		2.503				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.647				ND	U
19 Ethyl ether	59		2.747				ND	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.932				ND	
23 1,1-Dichloroethene	96		2.940				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.040				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.183				ND	
30 3-Chloro-1-propene	41		3.204				ND	
31 Methylene Chloride	84		3.297				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.454				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.783				ND	
40 1,1-Dichloroethane	63		3.805				ND	
41 Isopropyl ether	87		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96		4.212				ND	7
48 2,2-Dichloropropane	77		4.227				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.398				ND	
54 Chloroform	83		4.441				ND	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.648				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	
63 1,2-Dichloroethane	62		4.877				ND	
64 Tert-amyl methyl ether	73		4.920				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	97	18713	1.97	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.542				ND	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.614				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.936				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164	6.801	6.808	-0.007	92	6564	0.9093	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.559				ND	U
90 Chlorobenzene	112		7.602				ND	
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.166				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.588				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.817				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.589				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.732				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146		10.168				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.256				ND	
165 t-Amyl alcohol	1		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1		0.000				ND	7
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND	7
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

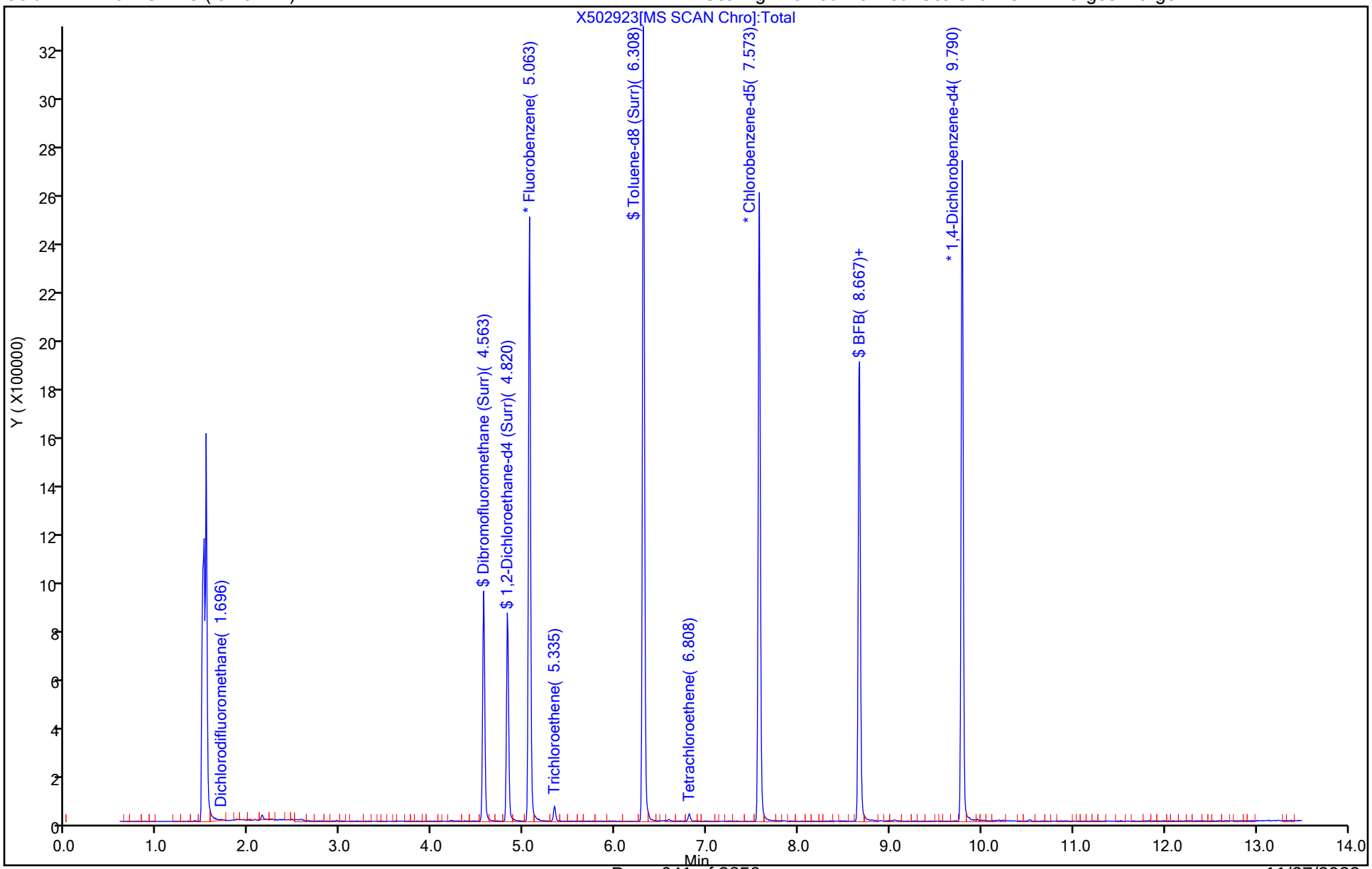
Report Date: 28-Apr-2023 02:39:41 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502923.D

Injection Date:	27-Apr-2023 15:44:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175122-B-7	Lab Sample ID:	280-175122-7	Worklist Smp#:	18
Client ID:	MW-102S-20230414				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

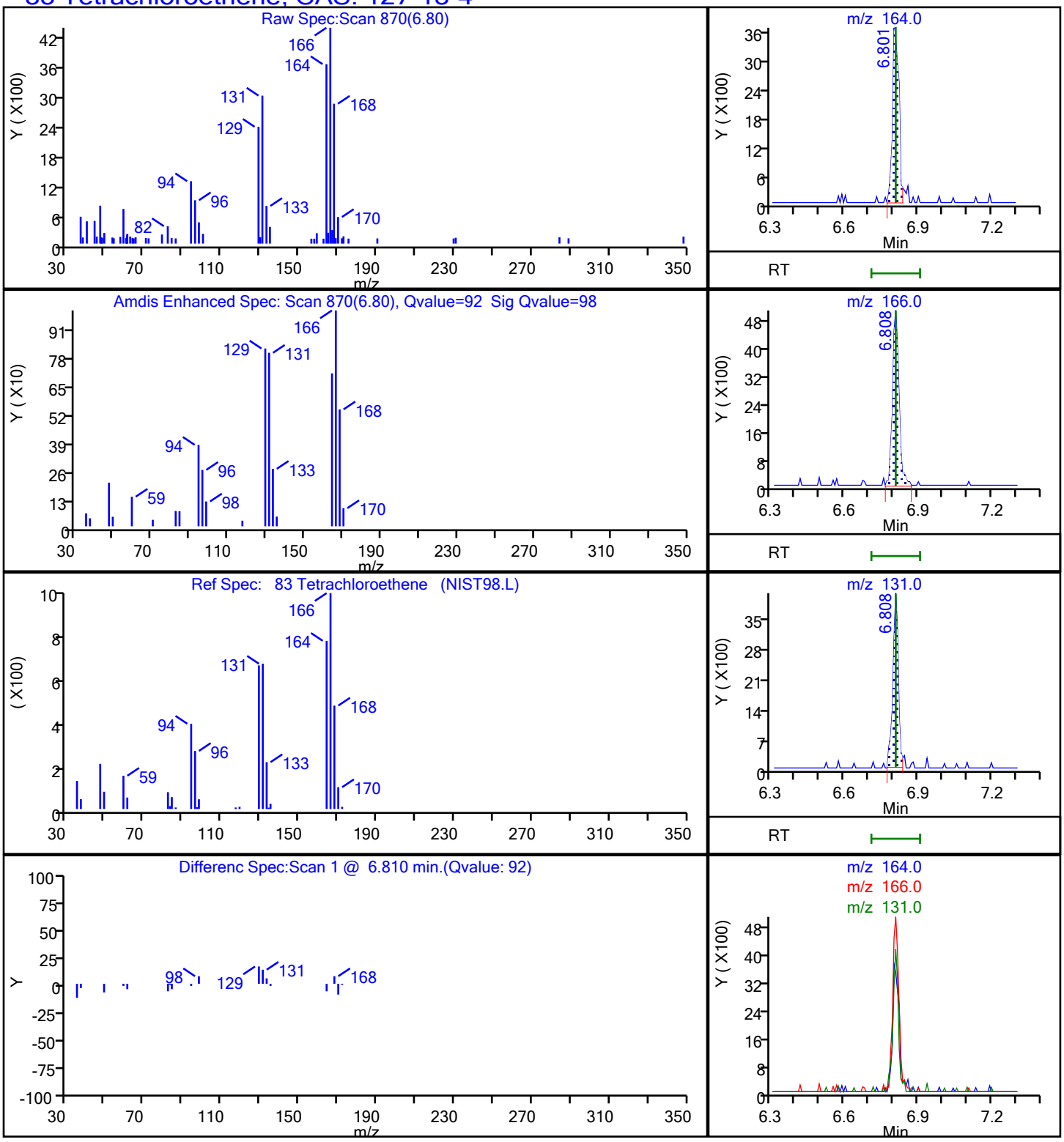
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502923.D				
Lims ID:	280-175122-B-7				
Client ID:	MW-102S-20230414				
Sample Type:	Client				
Inject. Date:	27-Apr-2023 15:44:30	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175122-B-7				
Misc. Info.:	280-0120830-018				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 02:39:26	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1608				
First Level Reviewer: V8PV		Date:	28-Apr-2023 02:35:57		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.7	103.31
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.4	94.85
$ 6 Toluene-d8 (Surr)	50.0	49.8	99.62
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.9	101.81

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502923.D		
Injection Date:	27-Apr-2023 15:44:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-B-7	Lab Sample ID:	280-175122-7
Client ID:	MW-102S-20230414		
Operator ID:	MED	ALS Bottle#:	17 Worklist Smp#: 18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

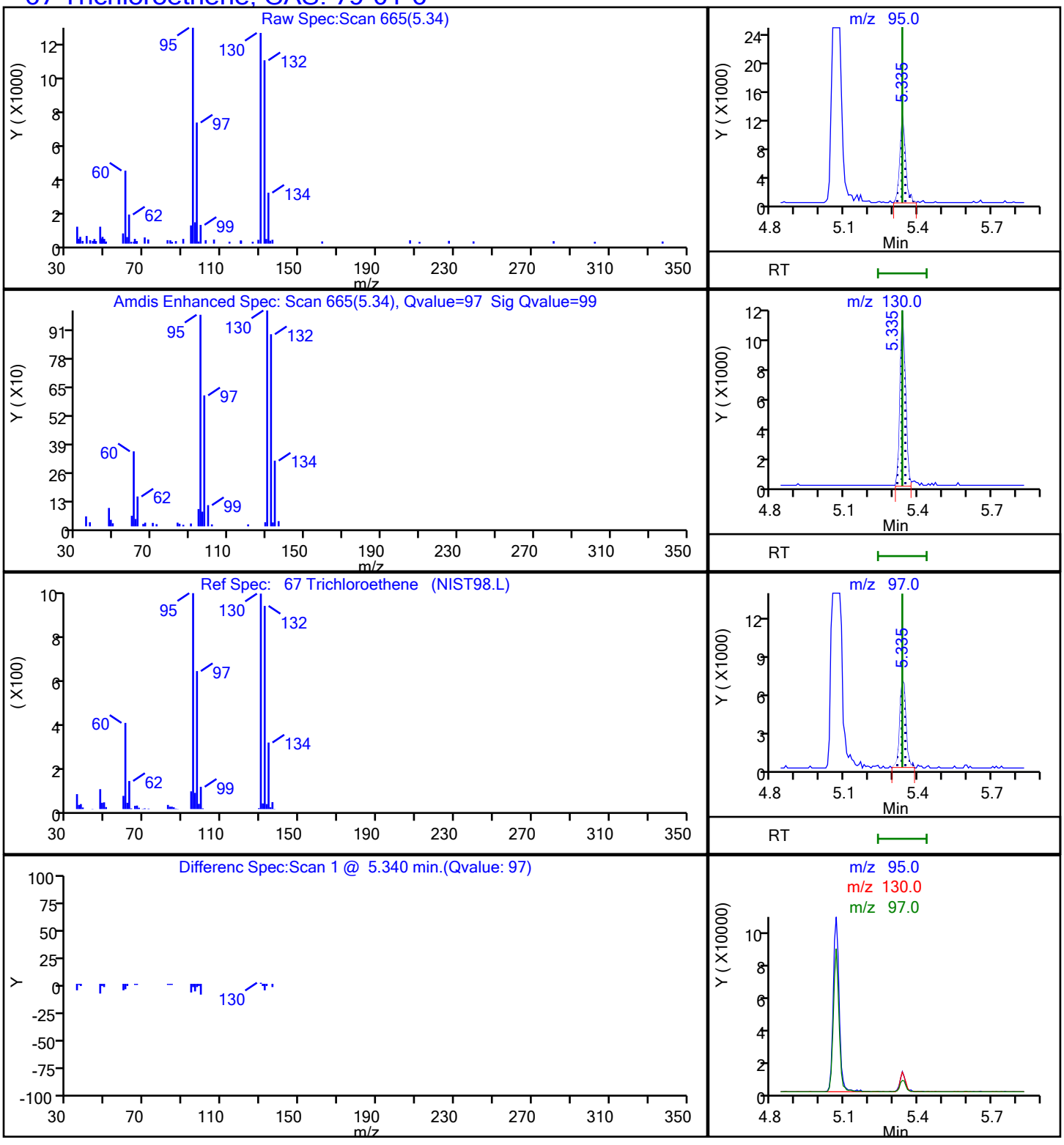
83 Tetrachloroethene, CAS: 127-18-4



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502923.D		
Injection Date:	27-Apr-2023 15:44:30	Instrument ID:	VMS_X4
Lims ID:	280-175122-B-7	Lab Sample ID:	280-175122-7
Client ID:	MW-102S-20230414		
Operator ID:	MED	ALS Bottle#:	17 Worklist Smp#: 18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

67 Trichloroethene, CAS: 79-01-6



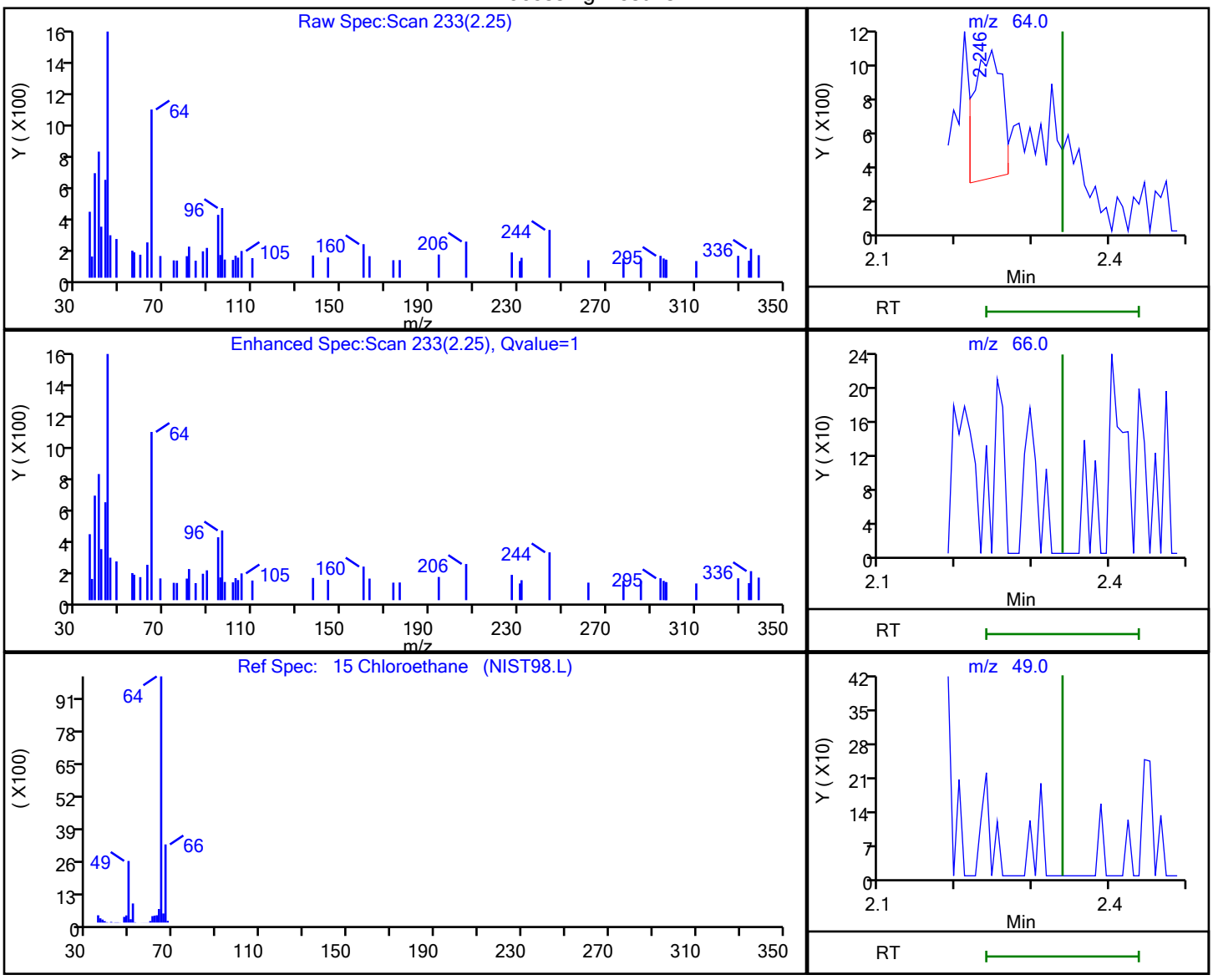
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502923.D				
Injection Date:	27-Apr-2023 15:44:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-B-7	Lab Sample ID:	280-175122-7		
Client ID:	MW-102S-20230414				
Operator ID:	MED	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

15 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.25	64.00	1906	0.308770
2.34	66.00	0	
2.34	49.00	0	

Reviewer: V8PV, 28-Apr-2023 02:35:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

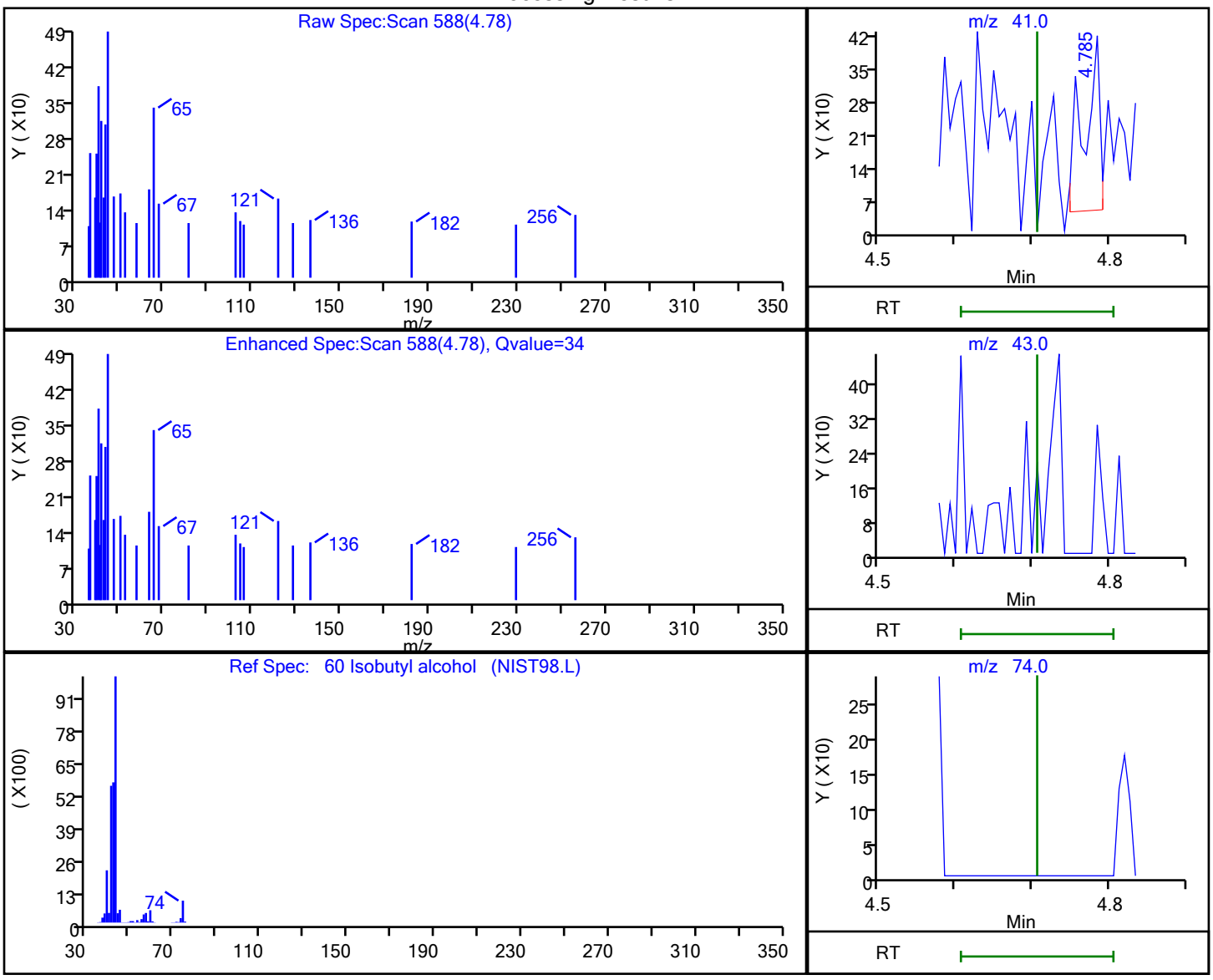
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502923.D				
Injection Date:	27-Apr-2023 15:44:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-B-7	Lab Sample ID:	280-175122-7		
Client ID:	MW-102S-20230414				
Operator ID:	MED	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.78	41.00	542	13.444656
4.71	43.00	0	
4.71	74.00	0	

Reviewer: V8PV, 28-Apr-2023 02:35:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-115S-20230415 | Lab Sample ID: 280-175122-8

Matrix: Water | Lab File ID: X502956.D

Analysis Method: 8260D | Date Collected: 04/15/2023 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2023 03:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-115S-20230415 | Lab Sample ID: 280-175122-8

Matrix: Water | Lab File ID: X502956.D

Analysis Method: 8260D | Date Collected: 04/15/2023 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2023 03:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	0.45	J	1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: MW-115S-20230415 | Lab Sample ID: 280-175122-8

Matrix: Water | Lab File ID: X502956.D

Analysis Method: 8260D | Date Collected: 04/15/2023 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2023 03:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502956.D
Lims ID: 280-175122-A-8
Client ID: MW-115S-20230415
Sample Type: Client
Inject. Date: 28-Apr-2023 03:38:30 ALS Bottle#: 18 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175122-A-8
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 05:52:56 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1638

First Level Reviewer: BX8N Date: 28-Apr-2023 05:49:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.056	5.056	0.000	99	2012710	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	489895	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	95	764529	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.556	4.556	0.000	93	497385	51.4	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	473714	46.6	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2077653	49.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	694063	50.8	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.660	8.660	0.000	87	694063	NR	
10 Dichlorodifluoromethane	85		1.696				ND	
11 Chloromethane	50		1.860				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	7
14 Bromomethane	94		2.246				ND	7
15 Chloroethane	64		2.332				ND	
16 Dichlorofluoromethane	67		2.504				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59		2.739				ND	
21 Acrolein	56		2.854				ND	
23 1,1-Dichloroethene	96		2.933				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
24 Acetone	43		2.947				ND	7
25 Isopropyl alcohol	45		3.033				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	7
28 Acetonitrile	41		3.154				ND	
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.197				ND	
31 Methylene Chloride	84		3.290				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.447				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.676				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.776				ND	
41 Isopropyl ether	87		3.805				ND	
40 1,1-Dichloroethane	63		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96		4.212				ND	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.391				ND	
54 Chloroform	83		4.441				ND	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.641				ND	
57 1,1-Dichloropropene	75		4.692				ND	
60 Isobutyl alcohol	41		4.699				ND	U
59 Carbon tetrachloride	117		4.699				ND	
62 Benzene	78		4.849				ND	
63 1,2-Dichloroethane	62		4.877				ND	7
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.028				ND	
66 n-Butanol	56		5.192				ND	
67 Trichloroethene	95	5.335	5.328	0.007	86	4262	0.4548	
68 2-Pentanone	43		5.428				ND	
69 Methylcyclohexane	55		5.521				ND	
71 Methyl methacrylate	100		5.535				ND	
70 1,2-Dichloropropane	63		5.535				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.072				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.172				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.708				ND	
83 Tetrachloroethene	164	6.808	6.801	0.007	87	1667	0.2344	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.165				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.552				ND	U
90 Chlorobenzene	112		7.595				ND	
91 1,1,1,2-Tetrachloroethane	131		7.666				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.788				ND	7
94 o-Xylene	106		8.145				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.581				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.767				ND	
101 Bromobenzene	156		8.803				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.882				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.053				ND	
107 4-Chlorotoluene	126		9.096				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.582				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.732				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.825				ND	
116 n-Butylbenzene	91		10.133				ND	
117 1,2-Dichlorobenzene	146		10.161				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.941				ND	
119 1,3,5-Trichlorobenzene	180		11.127				ND	
120 1,2,4-Trichlorobenzene	180		11.763				ND	
121 Hexachlorobutadiene	225		11.899				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.249				ND	
165 t-Amyl alcohol	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1		0.000				ND	7
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND	7
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

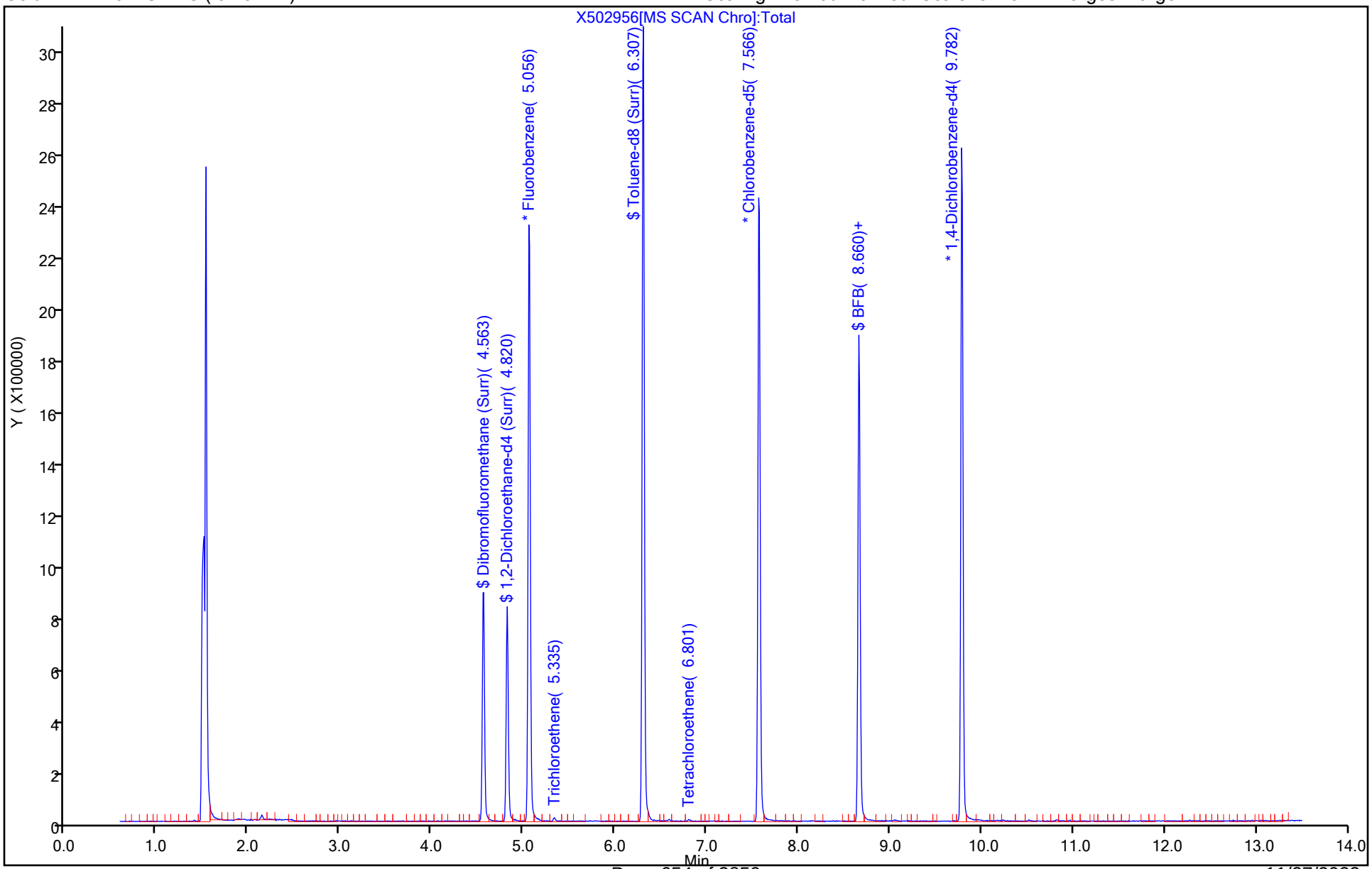
mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 28-Apr-2023 05:53:15 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502956.D				
Injection Date:	28-Apr-2023 03:38:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	280-175122-A-8	Lab Sample ID:	280-175122-8	Worklist Smp#:	22
Client ID:	MW-115S-20230415				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502956.D				
Lims ID:	280-175122-A-8				
Client ID:	MW-115S-20230415				
Sample Type:	Client				
Inject. Date:	28-Apr-2023 03:38:30	ALS Bottle#:	18	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175122-A-8				
Misc. Info.:	280-0120830-034				
Operator ID:	bj	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 05:52:56	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1638				

First Level Reviewer: BX8N Date: 28-Apr-2023 05:49:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.4	102.75
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.6	93.17
$ 6 Toluene-d8 (Surr)	50.0	49.8	99.57
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.8	101.60

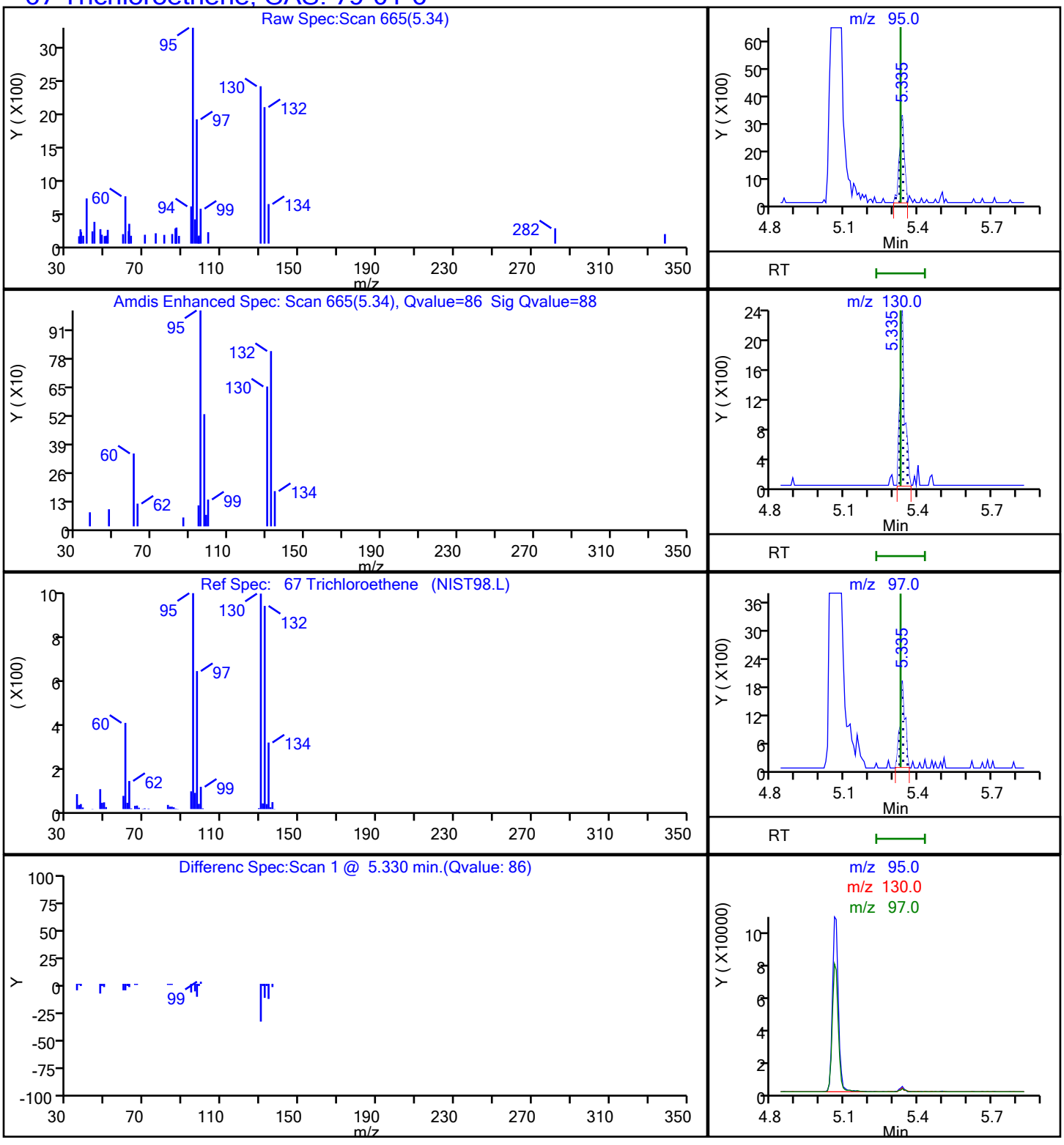
Report Date: 28-Apr-2023 05:53:15 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502956.D

Injection Date:	28-Apr-2023 03:38:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-A-8	Lab Sample ID:	280-175122-8		
Client ID:	MW-115S-20230415				
Operator ID:	bj	ALS Bottle#:	18	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

67 Trichloroethene, CAS: 79-01-6



11/27/2023
7:27 PM

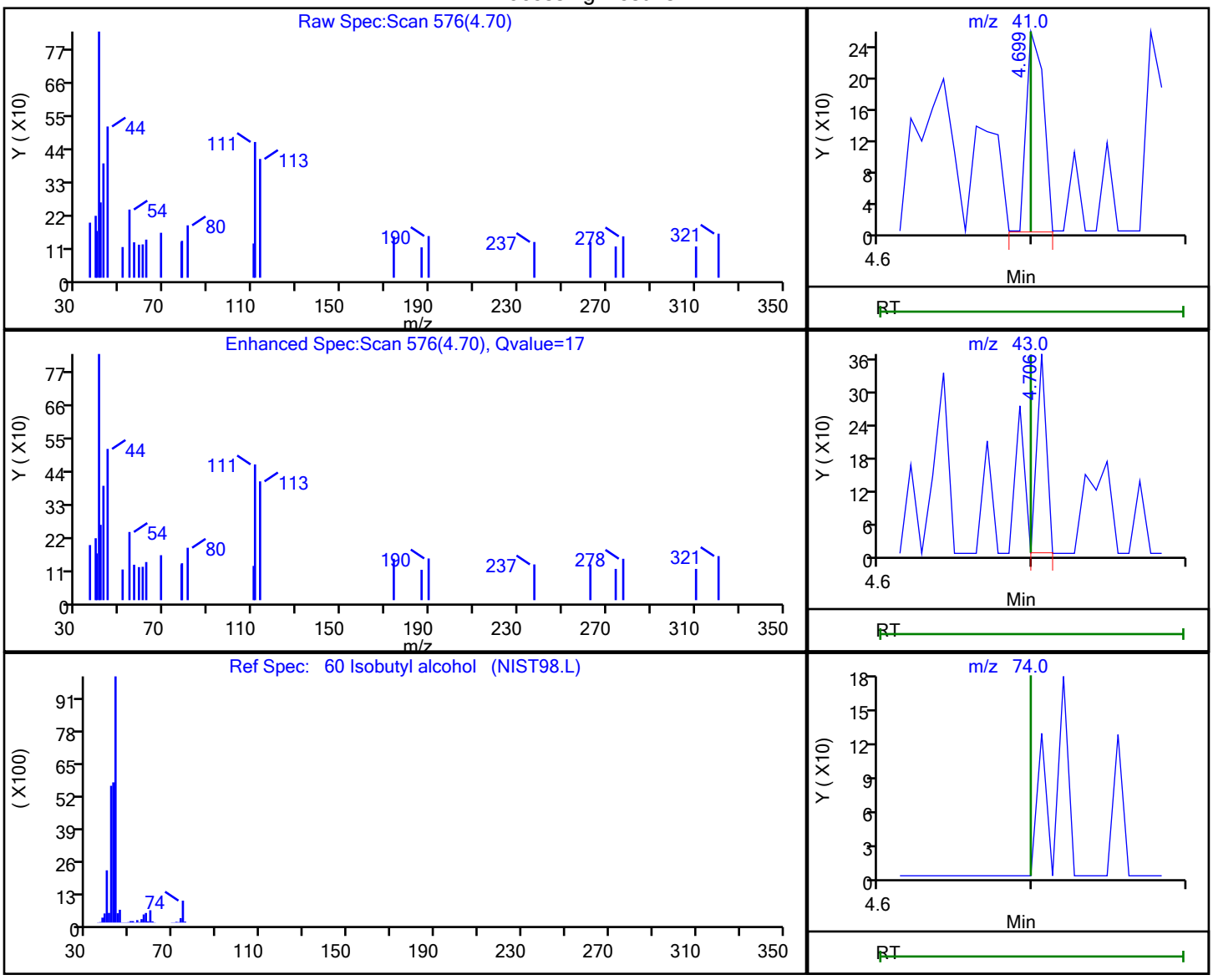
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502956.D				
Injection Date:	28-Apr-2023 03:38:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-A-8	Lab Sample ID:	280-175122-8		
Client ID:	MW-115S-20230415				
Operator ID:	bj	ALS Bottle#:	18	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.70	41.00	196	12.098252
4.71	43.00	158	
4.70	74.00	0	

Reviewer: BX8N, 28-Apr-2023 05:49:22

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: TB-07-20230416 | Lab Sample ID: 280-175122-9

Matrix: Water | Lab File ID: X502946.D

Analysis Method: 8260D | Date Collected: 04/16/2023 10:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2023 00:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: TB-07-20230416 | Lab Sample ID: 280-175122-9

Matrix: Water | Lab File ID: X502946.D

Analysis Method: 8260D | Date Collected: 04/16/2023 10:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2023 00:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: TB-07-20230416 | Lab Sample ID: 280-175122-9

Matrix: Water | Lab File ID: X502946.D

Analysis Method: 8260D | Date Collected: 04/16/2023 10:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2023 00:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502946.D
Lims ID: 280-175122-A-9
Client ID: TB-07-20230416
Sample Type: Client
Inject. Date: 28-Apr-2023 00:12:30 ALS Bottle#: 8 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175122-A-9
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 05:52:56 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1638

First Level Reviewer: BX8N Date: 28-Apr-2023 05:01:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.056	5.056	0.000	99	2023534	50.0	
* 2 Chlorobenzene-d5	119	7.566	7.573	-0.007	84	487657	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	94	755851	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.556	0.007	94	498698	51.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	470932	46.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2114952	50.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	698966	51.7	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.660	8.660	0.000	89	698966	NR	
10 Dichlorodifluoromethane	85		1.696				ND	
11 Chloromethane	50		1.860				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94		2.246				ND	U
15 Chloroethane	64		2.332				ND	
16 Dichlorofluoromethane	67		2.504				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59		2.739				ND	
21 Acrolein	56		2.854				ND	
23 1,1-Dichloroethene	96		2.933				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
24 Acetone	43		2.947				ND	7
25 Isopropyl alcohol	45		3.033				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	U
28 Acetonitrile	41		3.154				ND	U
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.197				ND	7
31 Methylene Chloride	84		3.290				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.447				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.676				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.776				ND	
41 Isopropyl ether	87		3.805				ND	
40 1,1-Dichloroethane	63		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96		4.212				ND	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42	4.391	4.391	0.000	77	3116	1.38	
54 Chloroform	83		4.441				ND	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.641				ND	
57 1,1-Dichloropropene	75		4.692				ND	
60 Isobutyl alcohol	41		4.699				ND	U
59 Carbon tetrachloride	117		4.699				ND	
62 Benzene	78		4.849				ND	
63 1,2-Dichloroethane	62		4.877				ND	7
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.028				ND	7
66 n-Butanol	56		5.192				ND	
67 Trichloroethene	95		5.328				ND	
68 2-Pentanone	43		5.428				ND	
69 Methylcyclohexane	55		5.521				ND	
71 Methyl methacrylate	100		5.535				ND	
70 1,2-Dichloropropane	63		5.535				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.072				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.172				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.708				ND	
83 Tetrachloroethene	164		6.801				ND	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.165				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.552				ND	U
90 Chlorobenzene	112		7.595				ND	
91 1,1,1,2-Tetrachloroethane	131		7.666				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.788				ND	7
94 o-Xylene	106		8.145				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.581				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.767				ND	
101 Bromobenzene	156		8.803				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.882				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.053				ND	
107 4-Chlorotoluene	126		9.096				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.582				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	7
113 4-Isopropyltoluene	119		9.732				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	7
115 1,2,3-Trimethylbenzene	105		9.825				ND	
116 n-Butylbenzene	91		10.133				ND	
117 1,2-Dichlorobenzene	146		10.161				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.941				ND	
119 1,3,5-Trichlorobenzene	180		11.127				ND	
120 1,2,4-Trichlorobenzene	180		11.763				ND	
121 Hexachlorobutadiene	225		11.899				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180	12.264	12.249	0.015	3	1888	0.2587	
165 t-Amyl alcohol	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1		0.000				ND	7
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND	7
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

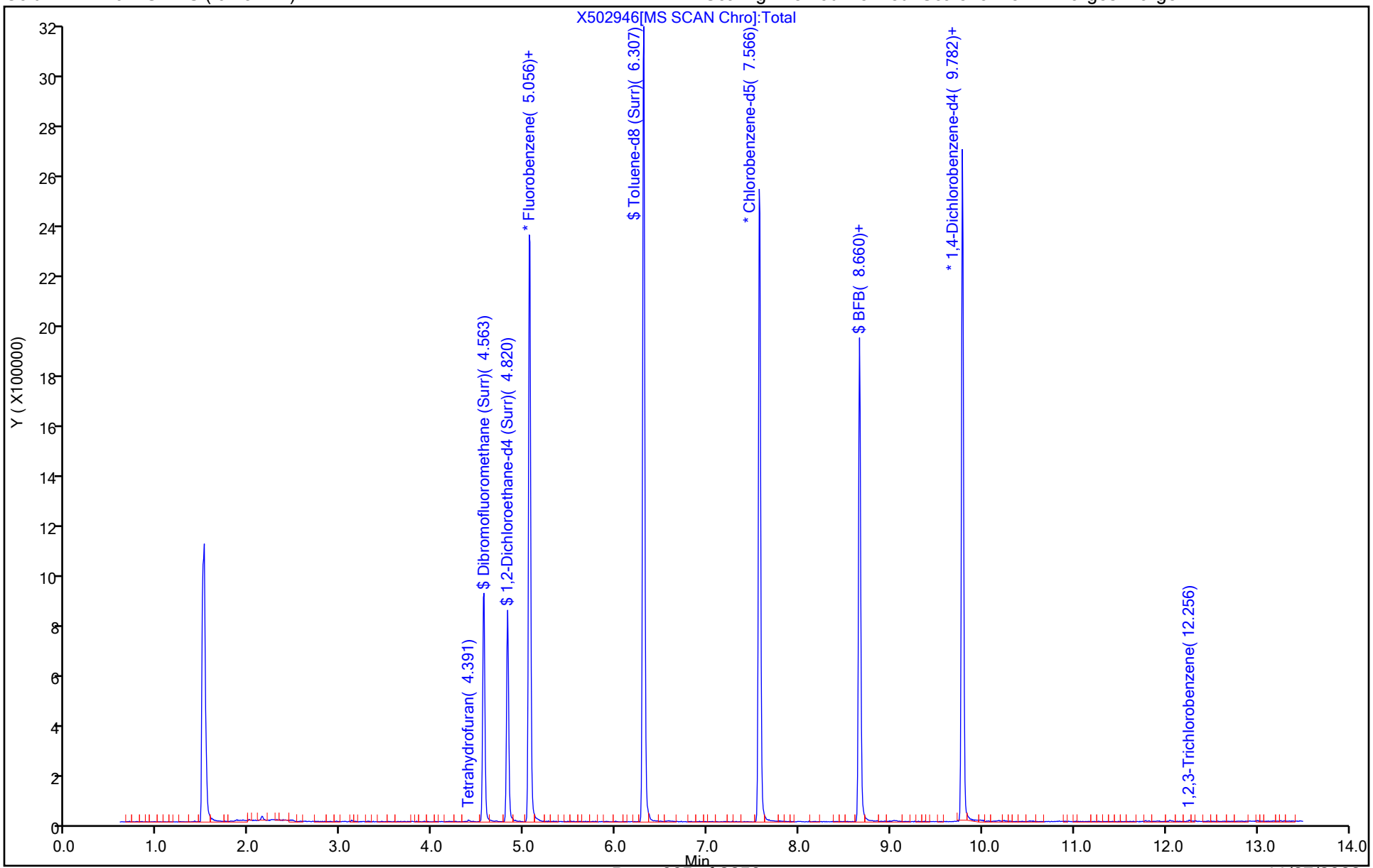
Report Date: 28-Apr-2023 05:53:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502946.D

Injection Date:	28-Apr-2023 00:12:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	280-175122-A-9	Lab Sample ID:	280-175122-9	Worklist Smp#:	12
Client ID:	TB-07-20230416				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502946.D				
Lims ID:	280-175122-A-9				
Client ID:	TB-07-20230416				
Sample Type:	Client				
Inject. Date:	28-Apr-2023 00:12:30	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175122-A-9				
Misc. Info.:	280-0120830-034				
Operator ID:	bj	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 05:52:56	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1638				

First Level Reviewer: BX8N Date: 28-Apr-2023 05:01:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.2	102.47
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.1	92.13
$ 6 Toluene-d8 (Surr)	50.0	50.9	101.82
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.7	103.49

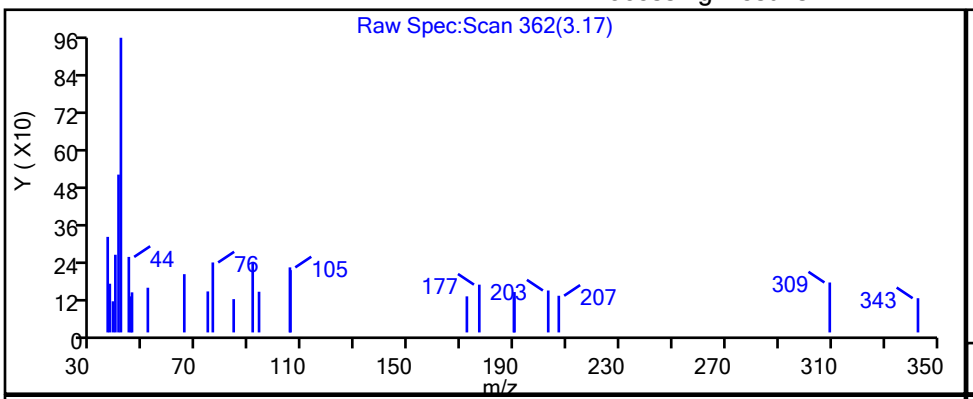
User Disabled Compound Report

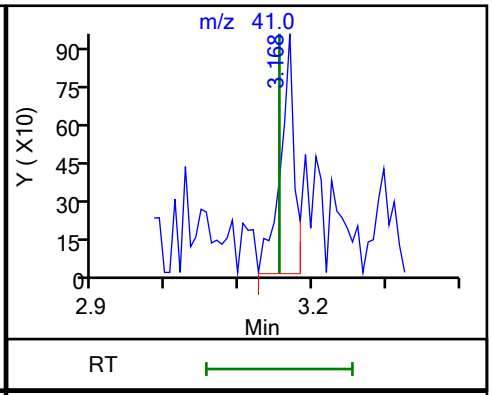
Eurofins Denver

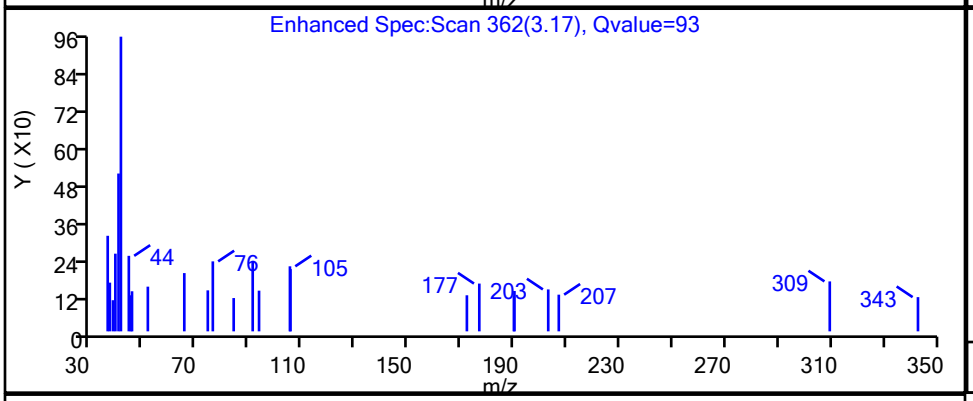
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502946.D				
Injection Date:	28-Apr-2023 00:12:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-A-9	Lab Sample ID:	280-175122-9		
Client ID:	TB-07-20230416				
Operator ID:	bj	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

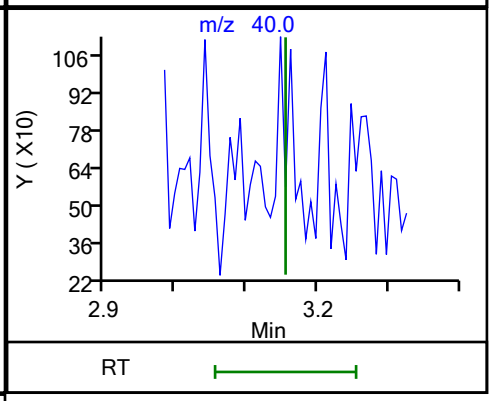
28 Acetonitrile, CAS: 75-05-8

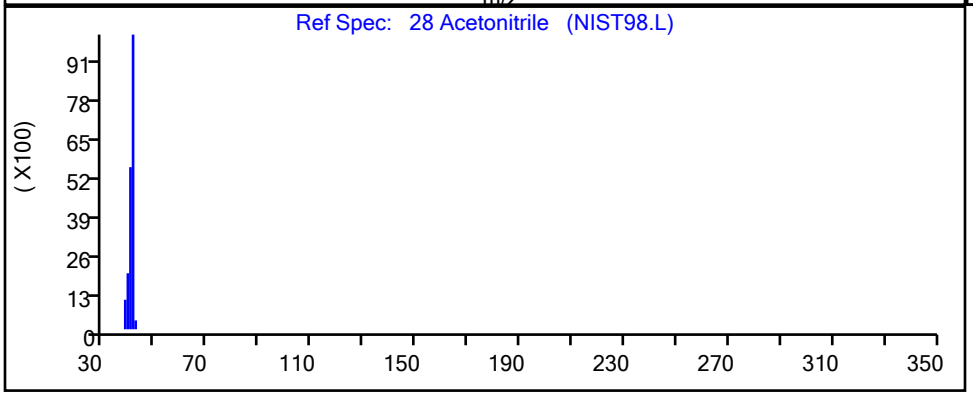
Processing Results











RT	Mass	Response	Amount
3.17	41.00	1257	1.112199
3.15	40.00	0	

Reviewer: BX8N, 28-Apr-2023 05:01:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

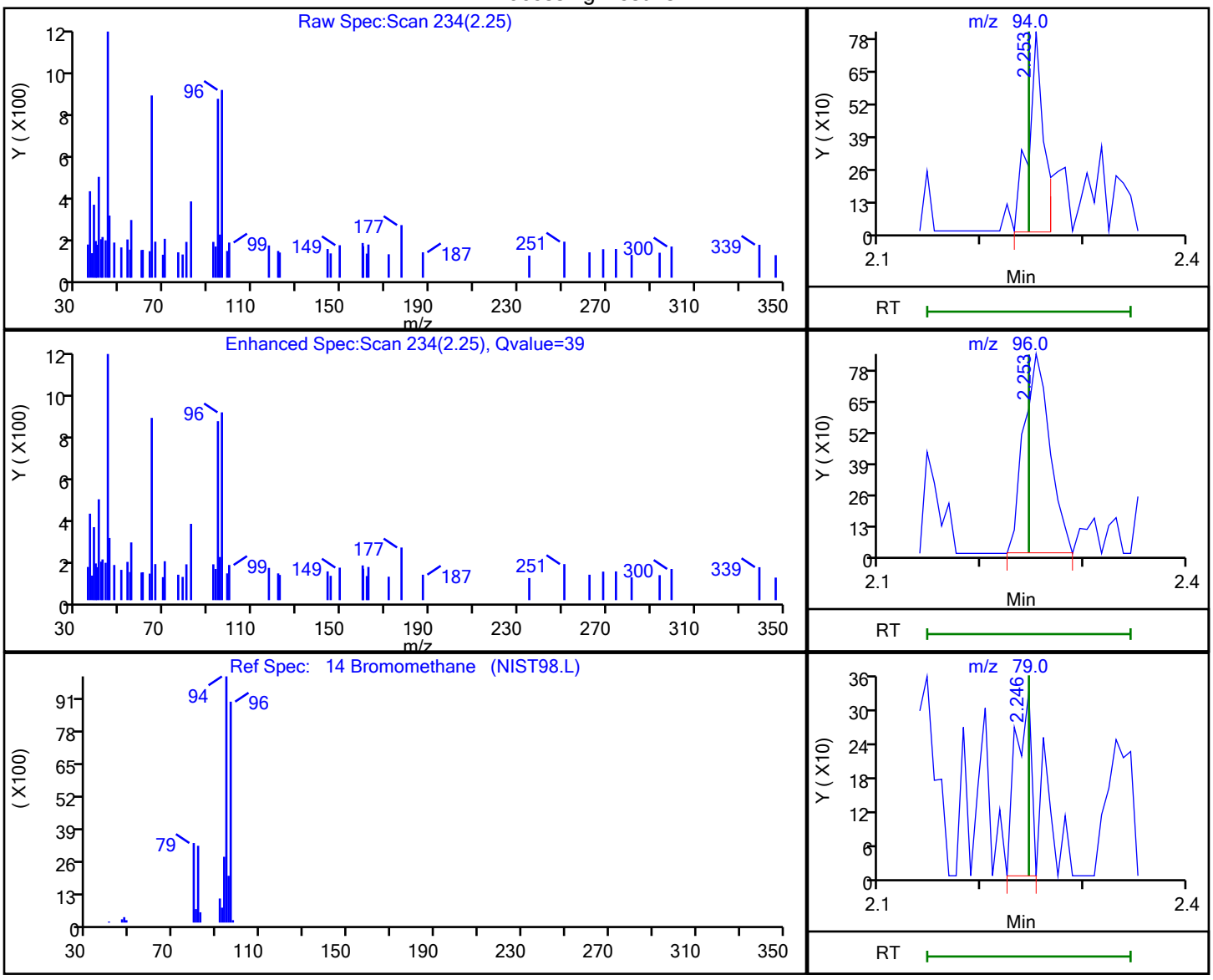
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502946.D				
Injection Date:	28-Apr-2023 00:12:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-A-9	Lab Sample ID:	280-175122-9		
Client ID:	TB-07-20230416				
Operator ID:	bj	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.25	94.00	849	0.173170
2.25	96.00	1516	
2.25	79.00	344	

Reviewer: BX8N, 28-Apr-2023 05:01:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

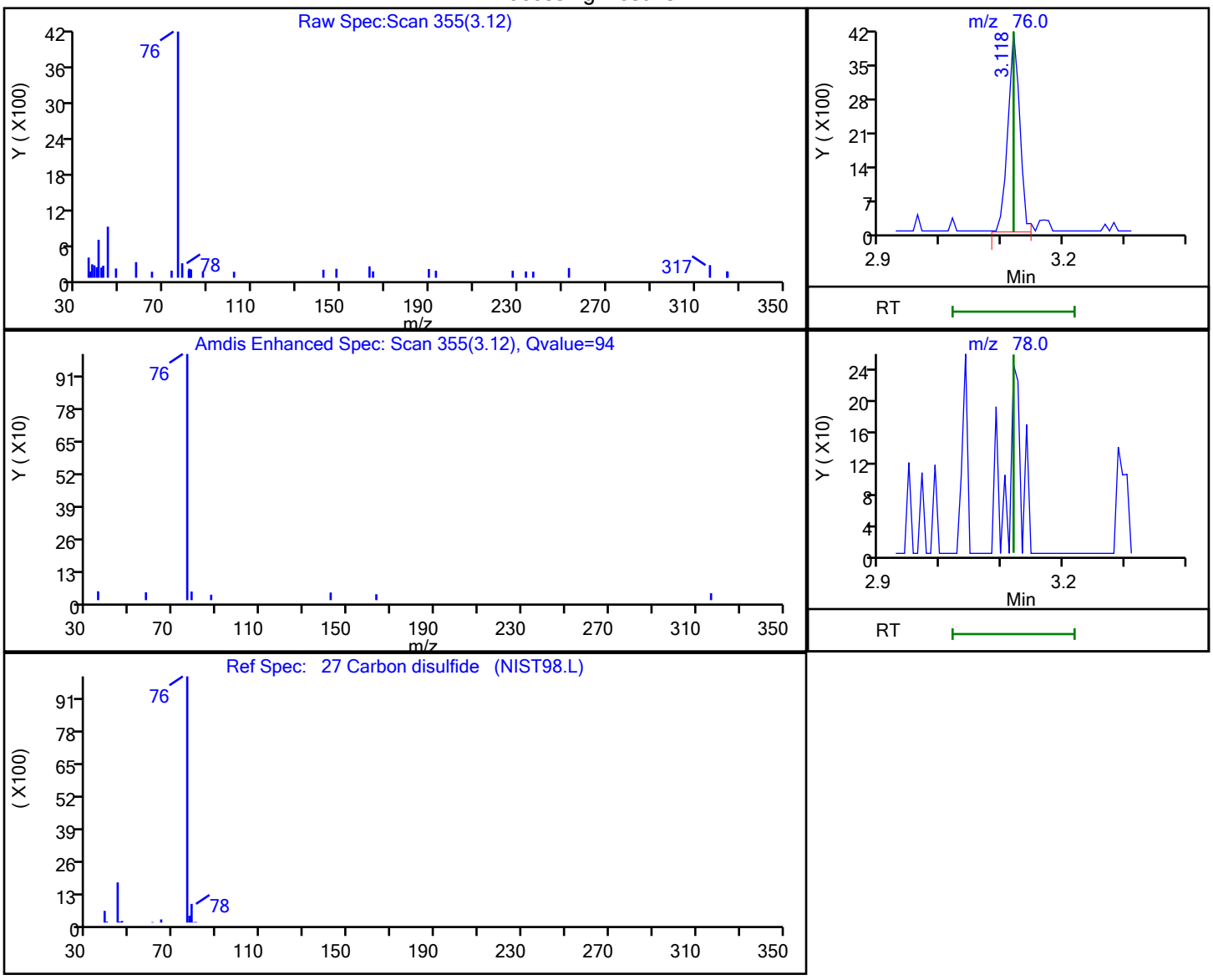
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502946.D				
Injection Date:	28-Apr-2023 00:12:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-A-9	Lab Sample ID:	280-175122-9		
Client ID:	TB-07-20230416				
Operator ID:	bj	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

27 Carbon disulfide, CAS: 75-15-0

Processing Results



RT	Mass	Response	Amount
3.12	76.00	5495	0.218146
3.12	78.00	0	

Reviewer: BX8N, 28-Apr-2023 05:01:10

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

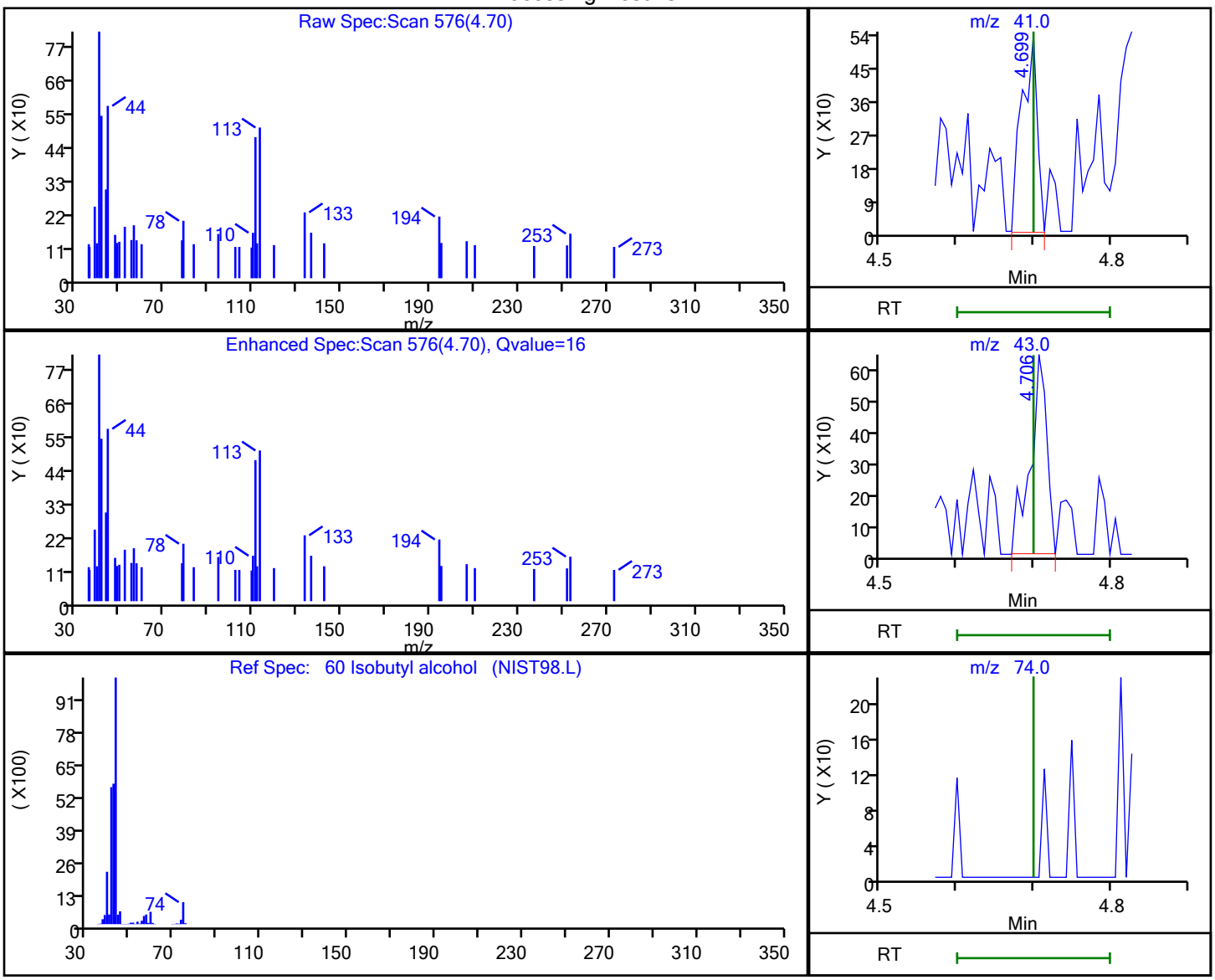
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502946.D				
Injection Date:	28-Apr-2023 00:12:30	Instrument ID:	VMS_X4		
Lims ID:	280-175122-A-9	Lab Sample ID:	280-175122-9		
Client ID:	TB-07-20230416				
Operator ID:	bj	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.70	41.00	761	14.312946
4.71	43.00	977	
4.70	74.00	0	

Reviewer: BX8N, 28-Apr-2023 05:00:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 597846

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/28/2022 11:59 Calibration End Date: 12/28/2022 14:33 Calibration ID: 75254

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-597846/12	MS1_4150.D
Level 2	STD2 280-597846/13	MS1_4151.D
Level 3	STD5 280-597846/14	MS1_4152.D
Level 4	STD10 280-597846/15	MS1_4153.D
Level 5	STD50 280-597846/16	MS1_4154.D
Level 6	STD75 280-597846/17	MS1_4155.D
Level 7	STD100 280-597846/18	MS1_4156.D
Level 8	STD200 280-597846/19	MS1_4157.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Ethanol	+++++ 0.0034	0.0042 0.0033	0.0034 +++++	0.0034	0.0034	Ave		0.0035				10.0		15.0			
Isopropyl alcohol	+++++ 0.0169	0.0166 0.0166	0.0173 +++++	0.0174	0.0161	Ave		0.0168				2.9		15.0			
Acetonitrile	+++++ 0.0367	0.0477 0.0358	0.0439 +++++	0.0395	0.0366	Ave		0.0400				12.0		15.0			
Isopropyl ether	0.1915 0.1657	0.1427 0.1715	0.1496 +++++	0.1702	0.1558	Ave		0.1639				9.9		15.0			
Chloroprene	0.3296 0.3209	0.3147 0.3290	0.2830 +++++	0.3069	0.3003	Ave		0.3120				5.4		15.0			
Tert-butyl ethyl ether	0.6592 0.6173	0.5778 0.6391	0.5939 +++++	0.6206	0.5974	Ave		0.6150				4.6		15.0			
Ethyl acetate	0.3426 0.2460	0.2599 0.2479	0.2633 +++++	0.2491	0.2438	Lin2	0.1790	0.2411							0.9970		0.9900
Propionitrile	0.0464 0.0394	0.0403 0.0386	0.0388 +++++	0.0401	0.0391	Ave		0.0404				6.7		15.0			
Methacrylonitrile	0.1823 0.1525	0.1457 0.1523	0.1567 +++++	0.1571	0.1509	Ave		0.1568				7.6		15.0			
Tert-amyl methyl ether	0.6391 0.5735	0.5357 0.5852	0.5479 +++++	0.5433	0.5526	Ave		0.5682				6.3		15.0			
n-Butanol	0.0063 0.0067	0.0050 0.0069	0.0054 +++++	0.0054	0.0064	Ave		0.0060				12.2		15.0			
Methyl methacrylate	0.0795 0.0622	0.0597 0.0636	0.0590 +++++	0.0596	0.0605	Ave		0.0634				11.4		15.0			
2-Nitropropane	0.0690 0.0550	0.0523 0.0563	0.0442 +++++	0.0432	0.0509	Lin1	-0.009	0.0542							0.9950		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 597846

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/28/2022 11:59 Calibration End Date: 12/28/2022 14:33 Calibration ID: 75254

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
cis-1,4-Dichloro-2-butene	0.2277 0.1836	0.1741 0.1878	0.1789 +++++	0.1687	0.1818	Ave		0.1861				10.4		15.0			
1,2,3-Trimethylbenzene	+++++ 2.0851	2.0001 2.1451	2.0876 +++++	2.1769	2.0768	Ave		2.0953				2.9		15.0			
1,3,5-Trichlorobenzene	+++++ 0.6840	0.6605 0.7132	0.6572 +++++	0.7022	0.6815	Ave		0.6831				3.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 597846

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 12/28/2022 11:59 | Calibration End Date: 12/28/2022 14:33 | Calibration ID: 75254

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-597846/12	MS1_4150.D
Level 2	STD2 280-597846/13	MS1_4151.D
Level 3	STD5 280-597846/14	MS1_4152.D
Level 4	STD10 280-597846/15	MS1_4153.D
Level 5	STD50 280-597846/16	MS1_4154.D
Level 6	STD75 280-597846/17	MS1_4155.D
Level 7	STD100 280-597846/18	MS1_4156.D
Level 8	STD200 280-597846/19	MS1_4157.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Ethanol	FB	Ave	+++++ 525295	16838 699579	34363 +++++	67025	344891	+++++ 4500	120 6000	300 +++++	600	3000
Isopropyl alcohol	FB	Ave	+++++ 436215	11014 587065	29048 +++++	58137	273321	+++++ 750	20.0 1000	50.0 +++++	100	500
Acetonitrile	FB	Ave	+++++ 946507	31715 1264946	73561 +++++	131529	619753	+++++ 750	20.0 1000	50.0 +++++	100	500
Isopropyl ether	FB	Ave	6491 427749	9484 605197	25057 +++++	56708	264023	1.00 75.0	2.00 100	5.00 +++++	10.0	50.0
Chloroprene	FB	Ave	11169 828424	20908 1161144	47410 +++++	102243	508709	1.00 75.0	2.00 100	5.00 +++++	10.0	50.0
Tert-butyl ethyl ether	FB	Ave	22342 1593718	38394 2255355	99500 +++++	206759	1012144	1.00 75.0	2.00 100	5.00 +++++	10.0	50.0
Ethyl acetate	FB	Lin2	23225 1270077	34539 1749485	88229 +++++	165987	826062	2.00 150	4.00 200	10.0 +++++	20.0	100
Propionitrile	FB	Ave	15718 1016428	26792 1362592	65036 +++++	133723	661883	10.0 750	20.0 1000	50.0 +++++	100	500
Methacrylonitrile	FB	Ave	61798 3936223	96781 5376077	262455 +++++	523336	2556941	10.0 750	20.0 1000	50.0 +++++	100	500
Tert-amyl methyl ether	FB	Ave	21660 1480658	35592 2065396	91801 +++++	181024	936157	1.00 75.0	2.00 100	5.00 +++++	10.0	50.0
n-Butanol	FB	Ave	5369 431191	8295 611017	22686 +++++	45281	270310	25.0 1875	50.0 2500	125 +++++	250	1250
Methyl methacrylate	FB	Ave	5388 320989	7929 448949	19778 +++++	39696	205154	2.00 150	4.00 200	10.0 +++++	20.0	100
2-Nitropropane	FB	Lin1	4678 284013	6956 397485	14807 +++++	28794	172456	2.00 150	4.00 200	10.0 +++++	20.0	100
cis-1,4-Dichloro-2-butene	DCBd4	Ave	6011 350008	8859 490419	22325 +++++	42020	224325	2.00 150	4.00 200	10.0 +++++	20.0	100
1,2,3-Trimethylbenzene	DCBd4	Ave	+++++ 1987881	50883 2801548	130272 +++++	271119	1281572	+++++ 75.0	2.00 100	5.00 +++++	10.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 597846

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 12/28/2022 11:59 | Calibration End Date: 12/28/2022 14:33 | Calibration ID: 75254

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,3,5-Trichlorobenzene	DCBd4	Ave	+++++ 652054	16804 931398	41012 +++++	87460	420533	+++++ 75.0	2.00 100	5.00 +++++	10.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4150.D
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 28-Dec-2022 11:59:30 ALS Bottle#: 1 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:05:58 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:10:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1694553	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	391772	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	659913	50.0	50.0	
19 Ethanol	45	3.071	3.071	0.000	95	9981	60.0	83.8	
27 Isopropyl alcohol	45	3.587	3.587	0.000	94	9415	10.0	16.5	
29 Acetonitrile	41	3.727	3.727	0.000	97	20977	10.0	15.5	
41 Isopropyl ether	87	4.551	4.551	0.000	94	6491	1.00	1.17	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	96	11169	1.00	1.06	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	22342	1.00	1.07	
47 Ethyl acetate	43	5.040	5.040	0.000	99	23225	2.00	2.10	
50 Propionitrile	54	5.082	5.082	0.000	96	15718	10.0	11.5	
52 Methacrylonitrile	41	5.207	5.207	0.000	92	61798	10.0	11.6	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	85	21660	1.00	1.12	
67 n-Butanol	56	6.227	6.227	0.000	87	5369	25.0	26.3	
72 Methyl methacrylate	100	6.590	6.590	0.000	93	5388	2.00	2.51	
76 2-Nitropropane	41	6.995	6.995	0.000	86	4678	2.00	2.71	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	6011	2.00	2.45	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	40124	1.00	1.45	
129 1,3,5-Trichlorobenzene	180	12.428	12.414	0.014	96	13949	1.00	1.55	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added:	1.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

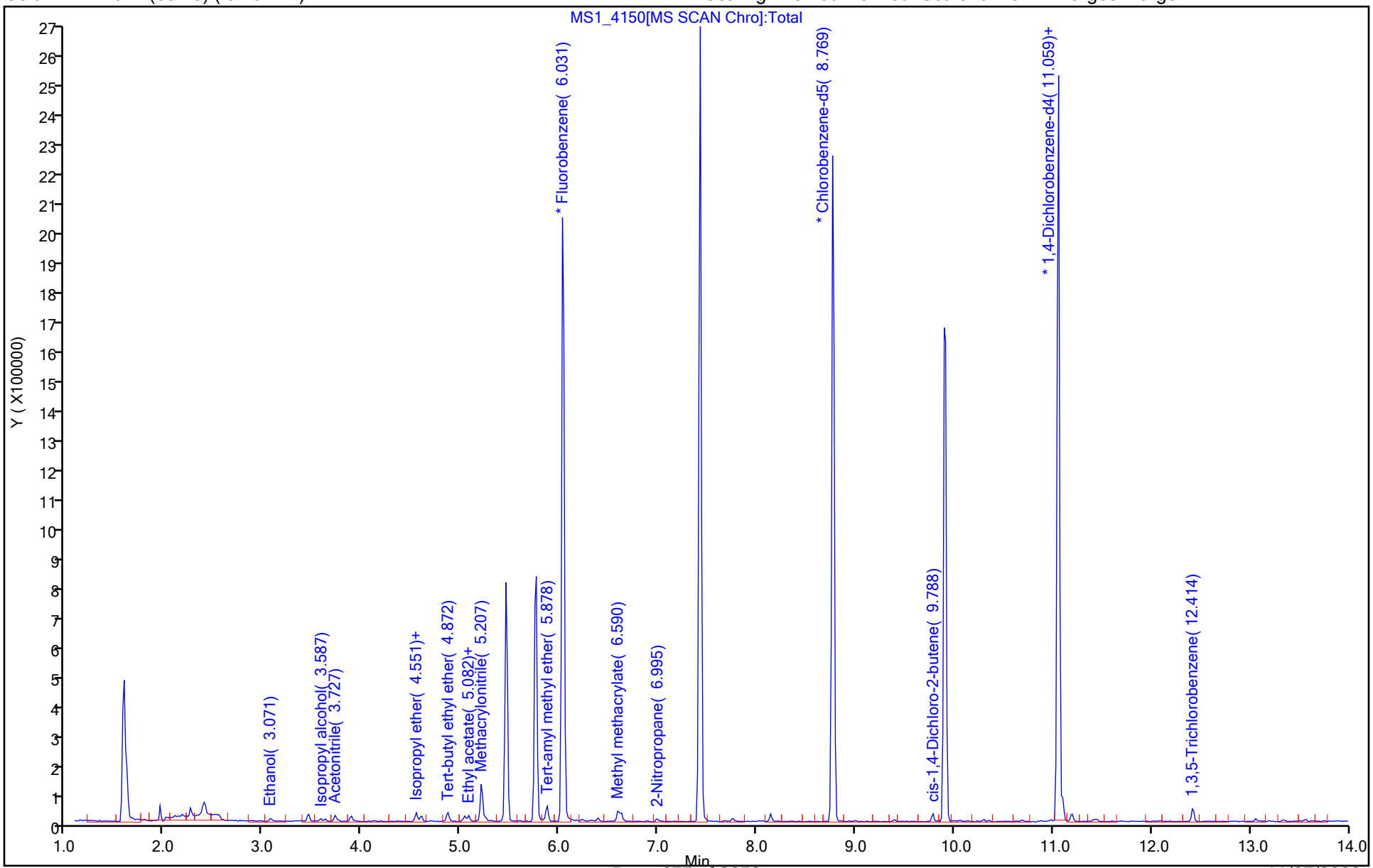
Report Date: 29-Dec-2022 11:05:59 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4150.D

Injection Date:	28-Dec-2022 11:59:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD1			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4151.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 28-Dec-2022 12:21:30 ALS Bottle#: 2 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:05:59 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:11:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1661104	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	88	397548	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	636006	50.0	50.0	
19 Ethanol	45	3.070	3.071	-0.001	99	16838	120.0	144.2	
27 Isopropyl alcohol	45	3.587	3.587	0.000	96	11014	20.0	19.7	
29 Acetonitrile	41	3.727	3.727	0.000	97	31715	20.0	23.8	
41 Isopropyl ether	87	4.551	4.551	0.000	92	9484	2.00	1.74	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	20908	2.00	2.02	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	38394	2.00	1.88	
47 Ethyl acetate	43	5.040	5.040	0.000	99	34539	4.00	3.57	
50 Propionitrile	54	5.082	5.082	0.000	99	26792	20.0	20.0	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	96781	20.0	18.6	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	85	35592	2.00	1.89	
67 n-Butanol	56	6.227	6.227	0.000	89	8295	50.0	41.4	
72 Methyl methacrylate	100	6.604	6.590	0.014	89	7929	4.00	3.76	
76 2-Nitropropane	41	6.981	6.995	-0.014	95	6956	4.00	4.03	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	8859	4.00	3.74	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	50883	2.00	1.91	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	94	16804	2.00	1.93	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added:	2.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

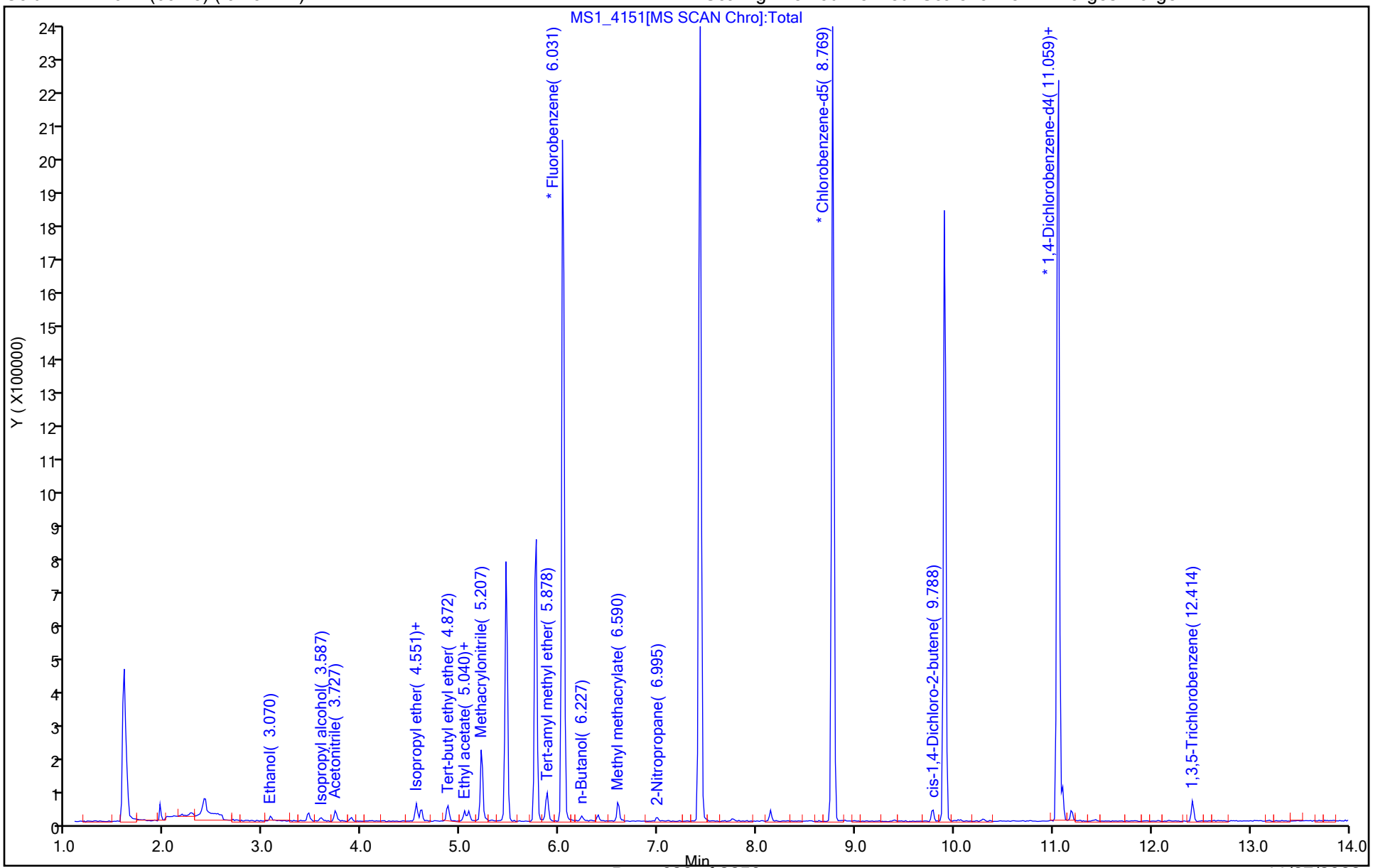
Report Date: 29-Dec-2022 11:06:00 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4151.D

Injection Date:	28-Dec-2022 12:21:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD2			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4152.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 28-Dec-2022 12:43:30 ALS Bottle#: 3 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:01 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:11:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1675413	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	392167	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	98	624037	50.0	50.0	
19 Ethanol	45	3.071	3.071	0.000	96	34363	300.0	291.9	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	29048	50.0	51.5	
29 Acetonitrile	41	3.727	3.727	0.000	99	73561	50.0	54.8	
41 Isopropyl ether	87	4.551	4.551	0.000	90	25057	5.00	4.56	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	47410	5.00	4.53	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	99500	5.00	4.83	
47 Ethyl acetate	43	5.040	5.040	0.000	100	88229	10.0	10.2	
50 Propionitrile	54	5.082	5.082	0.000	97	65036	50.0	48.1	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	262455	50.0	50.0	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	93	91801	5.00	4.82	
67 n-Butanol	56	6.227	6.227	0.000	92	22686	125.0	112.4	
72 Methyl methacrylate	100	6.590	6.590	0.000	89	19778	10.0	9.30	
76 2-Nitropropane	41	6.995	6.995	0.000	93	14807	10.0	8.32	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	22325	10.0	9.61	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	130272	5.00	4.98	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	94	41012	5.00	4.81	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added:	5.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

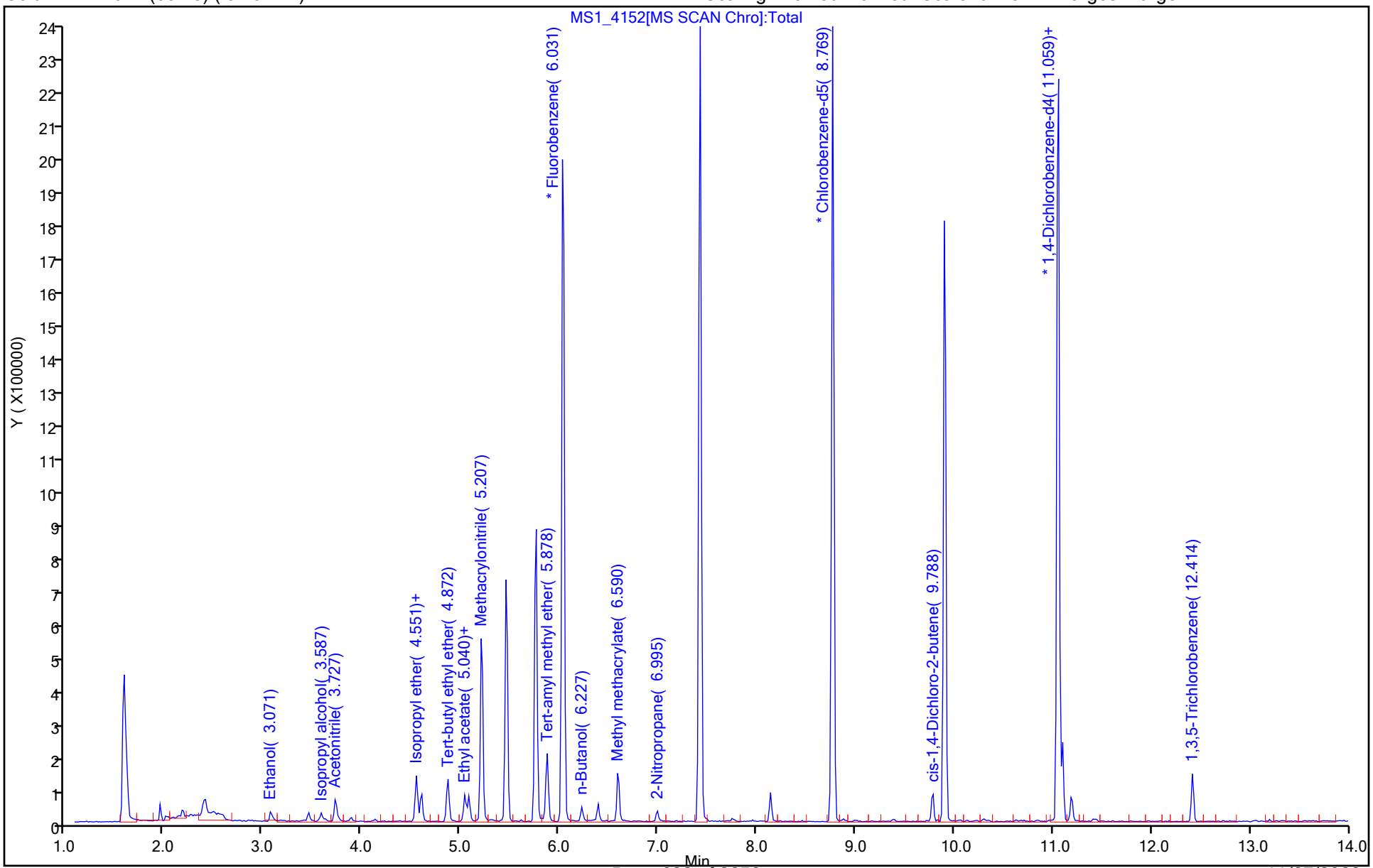
Report Date: 29-Dec-2022 11:06:01 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4152.D

Injection Date:	28-Dec-2022 12:43:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD5			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4153.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 28-Dec-2022 13:05:30 ALS Bottle#: 4 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:02 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:11:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1665925	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	383949	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	622730	50.0	50.0	
19 Ethanol	45	3.071	3.071	0.000	99	67025	600.0	572.5	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	58137	100.0	103.6	
29 Acetonitrile	41	3.727	3.727	0.000	99	131529	100.0	98.6	
41 Isopropyl ether	87	4.551	4.551	0.000	91	56708	10.0	10.4	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	102243	10.0	9.83	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	206759	10.0	10.1	
47 Ethyl acetate	43	5.040	5.040	0.000	100	165987	20.0	19.9	
50 Propionitrile	54	5.082	5.082	0.000	99	133723	100.0	99.4	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	523336	100.0	100.2	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	86	181024	10.0	9.56	
67 n-Butanol	56	6.227	6.227	0.000	93	45281	250.0	225.6	
72 Methyl methacrylate	100	6.604	6.590	0.014	91	39696	20.0	18.8	
76 2-Nitropropane	41	6.995	6.995	0.000	91	28794	20.0	16.1	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	42020	20.0	18.1	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	271119	10.0	10.4	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	87460	10.0	10.3	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added:	10.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

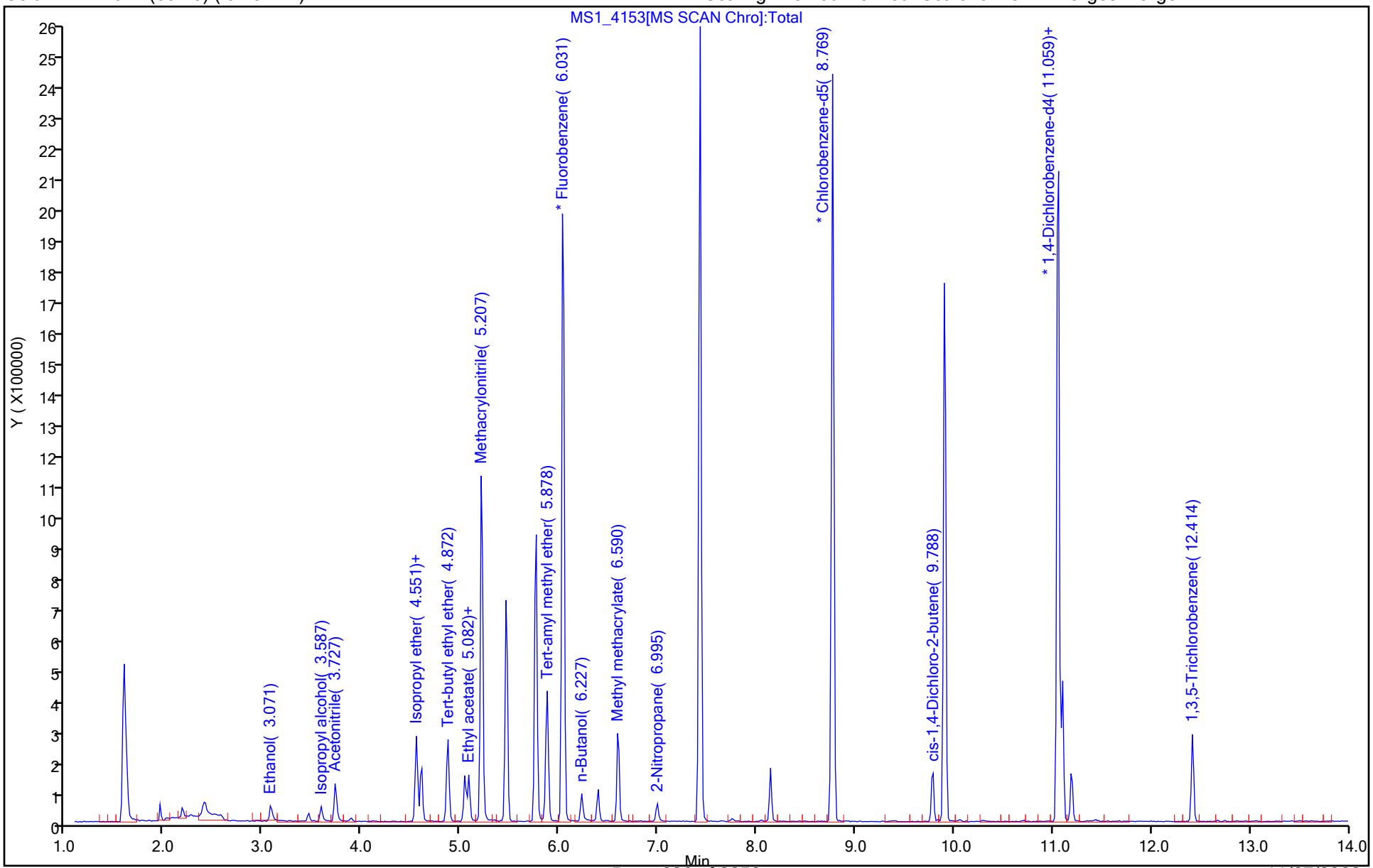
Report Date: 29-Dec-2022 11:06:02 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4153.D

Injection Date:	28-Dec-2022 13:05:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD10			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4154.D
Lims ID: STD50
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 28-Dec-2022 13:27:30 ALS Bottle#: 5 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD50
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:03 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:11:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1694109	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	387166	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	617083	50.0	50.0	
19 Ethanol	45	3.070	3.071	-0.001	100	344891	3000.0	2896.9	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	273321	500.0	479.1	
29 Acetonitrile	41	3.727	3.727	0.000	99	619753	500.0	456.9	
41 Isopropyl ether	87	4.551	4.551	0.000	92	264023	50.0	47.6	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	508709	50.0	48.1	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	1012144	50.0	48.6	
47 Ethyl acetate	43	5.040	5.040	0.000	100	826062	100.0	100.4	
50 Propionitrile	54	5.082	5.082	0.000	98	661883	500.0	483.7	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	2556941	500.0	481.4	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	88	936157	50.0	48.6	
67 n-Butanol	56	6.227	6.227	0.000	92	270310	1250.0	1324.3	
72 Methyl methacrylate	100	6.590	6.590	0.000	91	205154	100.0	95.4	
76 2-Nitropropane	41	6.995	6.995	0.000	96	172456	100.0	94.2	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	224325	100.0	97.7	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	1281572	50.0	49.6	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	420533	50.0	49.9	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added: 50.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

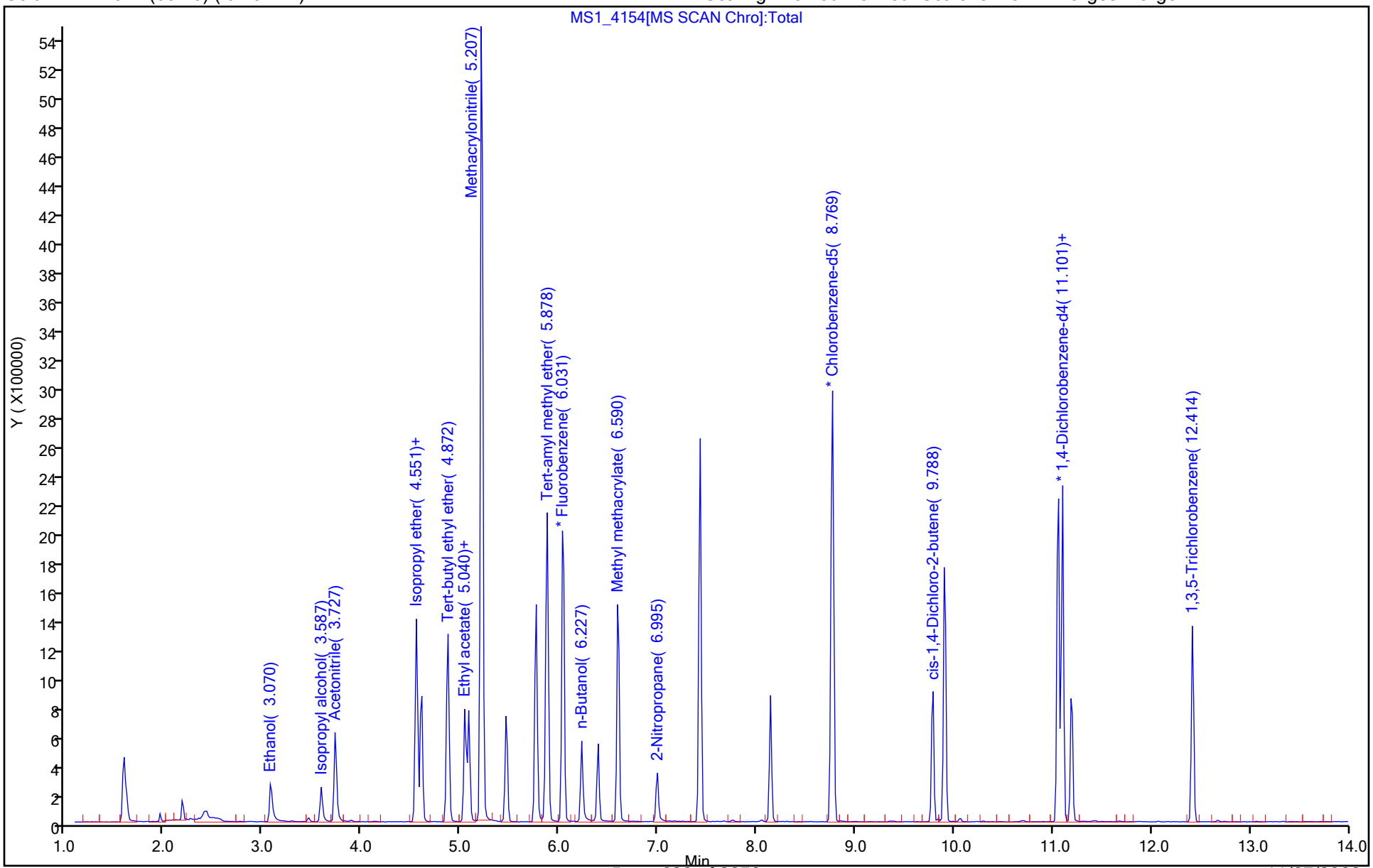
Report Date: 29-Dec-2022 11:06:03 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4154.D

Injection Date:	28-Dec-2022 13:27:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD50			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4155.D
Lims ID: STD75
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 28-Dec-2022 13:49:30 ALS Bottle#: 6 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD75
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:03 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:12:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1721115	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	399511	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	635571	50.0	50.0	
19 Ethanol	45	3.071	3.071	0.000	99	525295	4500.0	4343.0	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	436215	750.0	752.6	
29 Acetonitrile	41	3.727	3.727	0.000	99	946507	750.0	686.8	
41 Isopropyl ether	87	4.551	4.551	0.000	92	427749	75.0	75.8	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	828424	75.0	77.1	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	1593718	75.0	75.3	
47 Ethyl acetate	43	5.040	5.040	0.000	100	1270077	150.0	152.3	
50 Propionitrile	54	5.082	5.082	0.000	98	1016428	750.0	731.1	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	3936223	750.0	729.4	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	87	1480658	75.0	75.7	
67 n-Butanol	56	6.227	6.227	0.000	92	431191	1875.0	2079.3	
72 Methyl methacrylate	100	6.590	6.590	0.000	92	320989	150.0	147.0	
76 2-Nitropropane	41	6.995	6.995	0.000	98	284013	150.0	152.5	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	350008	150.0	148.0	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	1987881	75.0	74.6	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	96	652054	75.0	75.1	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added: 75.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

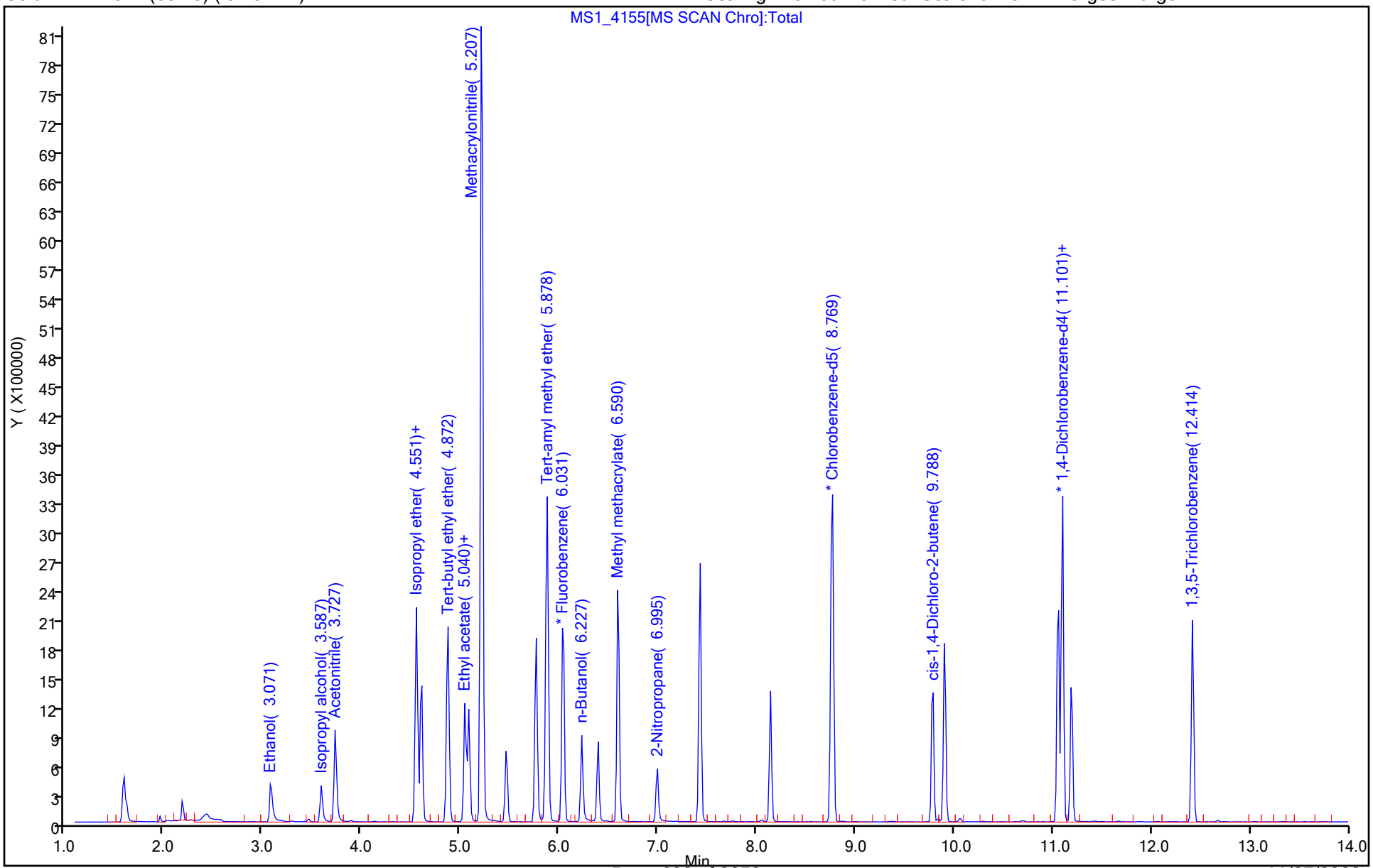
Report Date: 29-Dec-2022 11:06:04 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4155.D

Injection Date:	28-Dec-2022 13:49:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD75			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4156.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 28-Dec-2022 14:11:30 ALS Bottle#: 7 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:04 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:13:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1764613	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	414547	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	653011	50.0	50.0	
19 Ethanol	45	3.070	3.071	-0.001	99	699579	6000.0	5641.4	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	587065	1000.0	987.9	
29 Acetonitrile	41	3.727	3.727	0.000	99	1264946	1000.0	895.3	
41 Isopropyl ether	87	4.551	4.551	0.000	92	605197	100.0	104.6	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	1161144	100.0	105.4	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	2255355	100.0	103.9	
47 Ethyl acetate	43	5.040	5.040	0.000	100	1749485	200.0	204.9	
50 Propionitrile	54	5.082	5.082	0.000	98	1362592	1000.0	956.0	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	5376077	1000.0	971.6	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	88	2065396	100.0	103.0	
67 n-Butanol	56	6.227	6.227	0.000	93	611017	2500.0	2873.8	
72 Methyl methacrylate	100	6.590	6.590	0.000	91	448949	200.0	200.5	
76 2-Nitropropane	41	6.995	6.995	0.000	97	397485	200.0	208.1	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	490419	200.0	201.8	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	2801548	100.0	102.4	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	96	931398	100.0	104.4	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added: 100.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

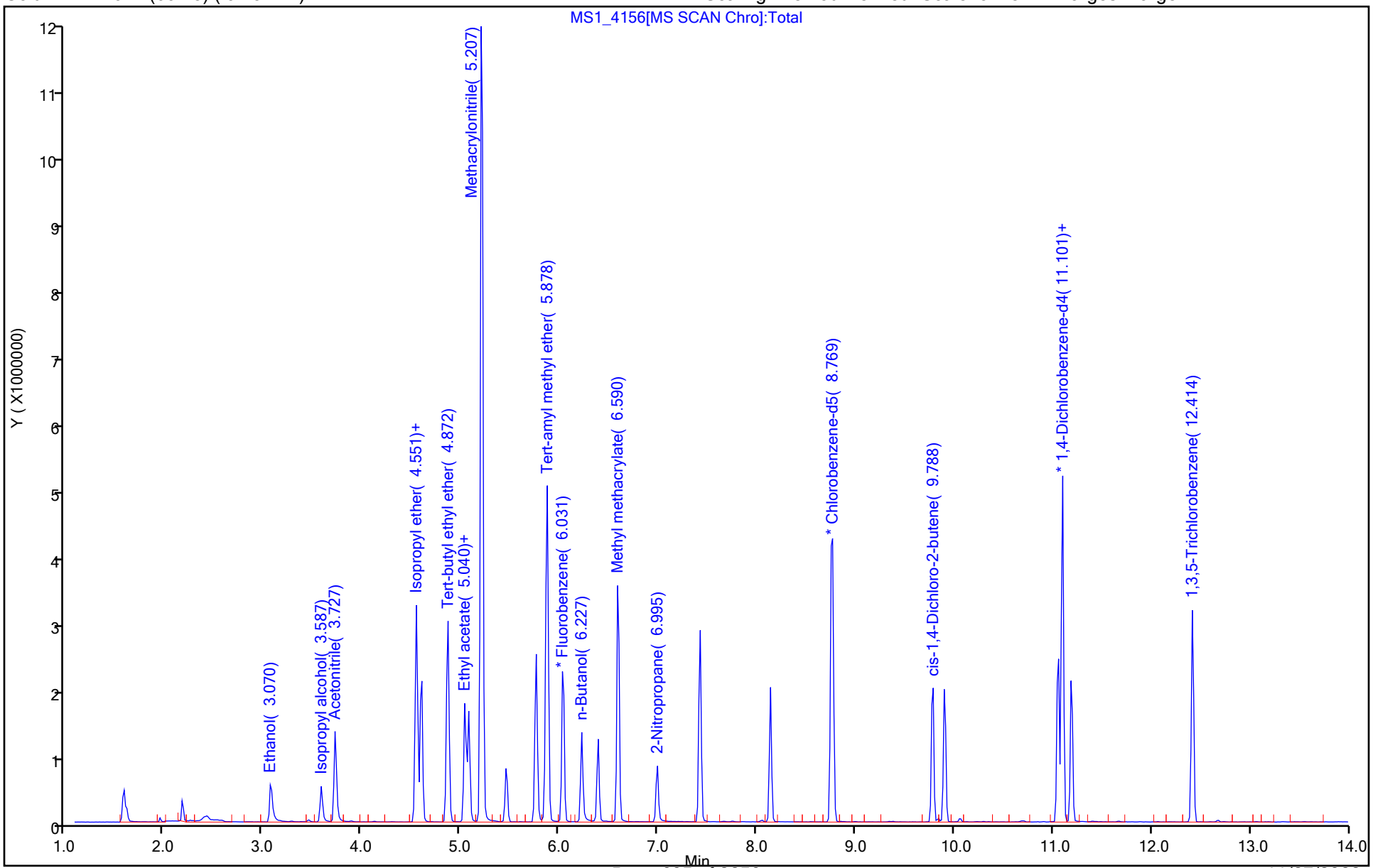
Report Date: 29-Dec-2022 11:06:05 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4156.D

Injection Date:	28-Dec-2022 14:11:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD100			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 28-Dec-2022 14:33:30 ALS Bottle#: 8 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:05 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:13:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1818385	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	422708	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	682088	50.0	50.0	
19 Ethanol	45	3.084	3.071	0.013	100	1456995	6000.0	11402	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	1224003	1000.0	1998.8	
29 Acetonitrile	41	3.727	3.727	0.000	99	2537526	1000.0	1742.9	
41 Isopropyl ether	87	4.551	4.551	0.000	92	1112718	100.0	186.7	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	2290784	100.0	201.9	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	4343521	100.0	194.2	
47 Ethyl acetate	43	5.040	5.040	0.000	100	3504759	200.0	399.0	
50 Propionitrile	54	5.081	5.082	-0.001	98	2734341	1000.0	1861.7	
52 Methacrylonitrile	41	5.207	5.207	0.000	93	10534335	1000.0	1847.6	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	94	4118930	100.0	199.3	
67 n-Butanol	56	6.227	6.227	0.000	93	1326272	2500.0	6053.4	
72 Methyl methacrylate	100	6.590	6.590	0.000	91	919424	200.0	398.5	
76 2-Nitropropane	41	6.995	6.995	0.000	98	888741	200.0	451.4	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	1011425	200.0	398.5	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	5426476	100.0	189.8	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	96	1833082	100.0	196.7	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added: 100.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

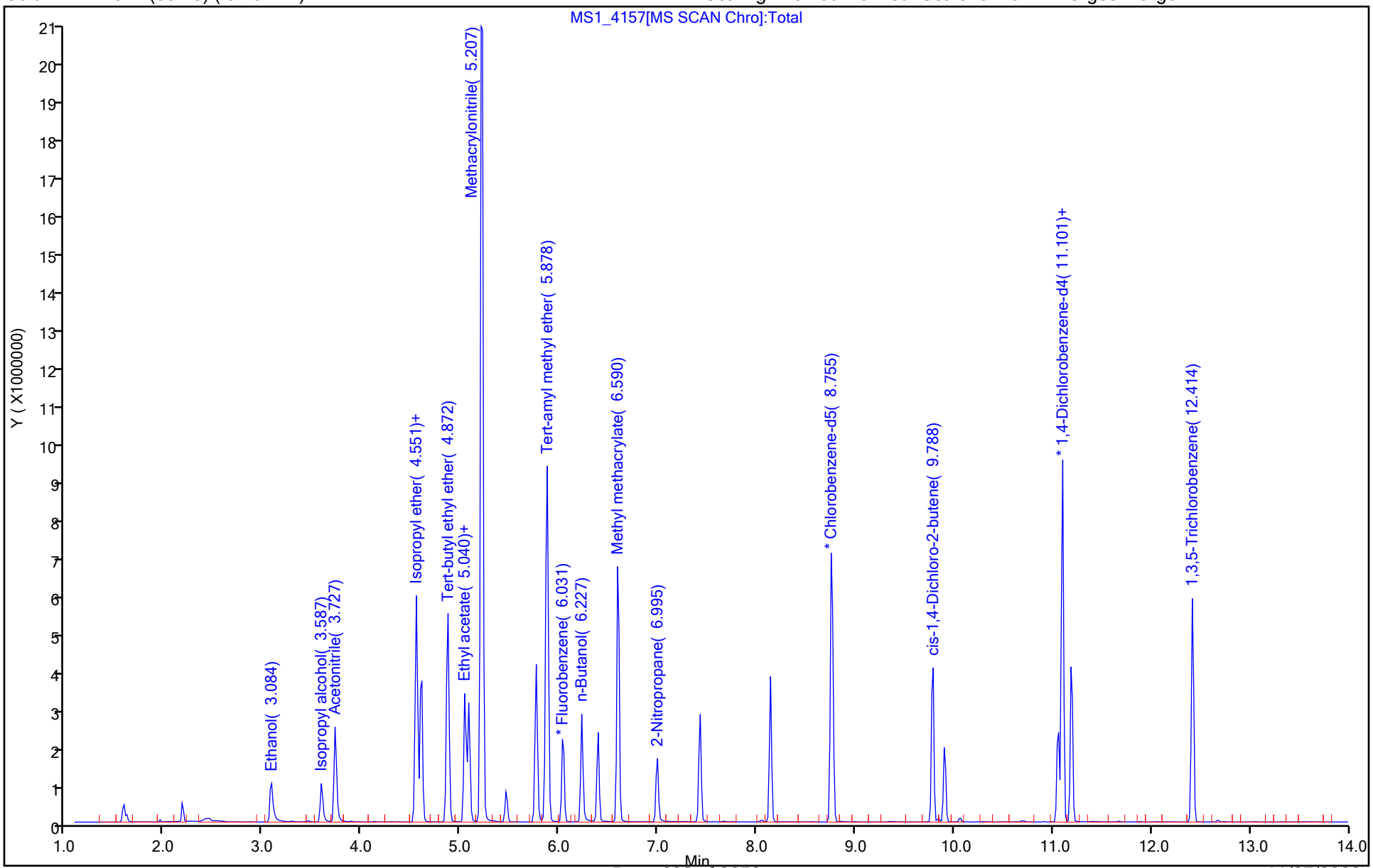
Report Date: 29-Dec-2022 11:06:06 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Injection Date:	28-Dec-2022 14:33:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD200			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Calibration / Ethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

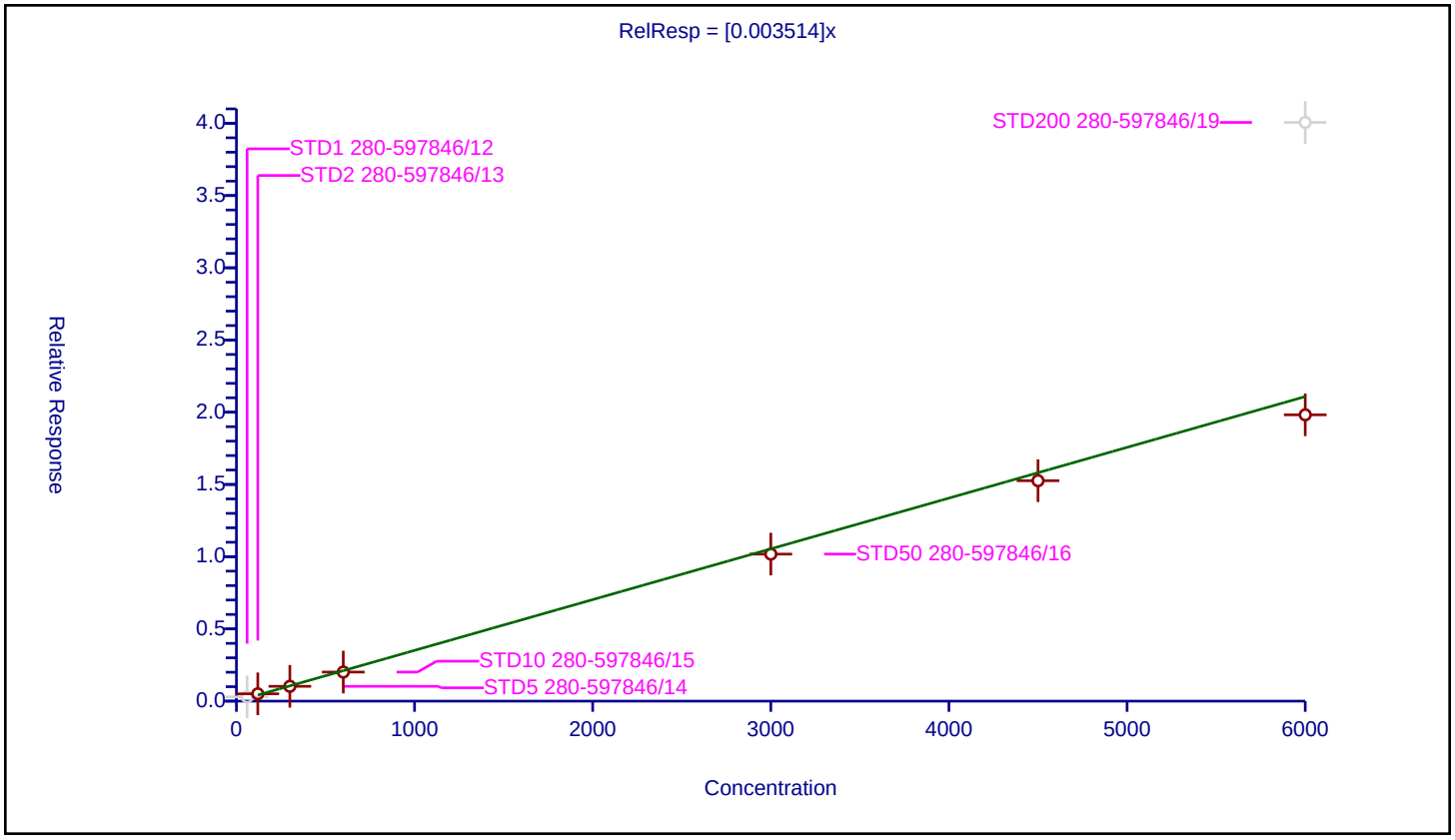
Curve Coefficients

Intercept:	0
Slope:	0.003514

Error Coefficients

Standard Error:	422000
Relative Standard Error:	10.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	60.0	0.294502	50.0	1694553.0	0.004908	N
2	STD2 280-597846/13	120.0	0.506832	50.0	1661104.0	0.004224	Y
3	STD5 280-597846/14	300.0	1.025508	50.0	1675413.0	0.003418	Y
4	STD10 280-597846/15	600.0	2.011645	50.0	1665925.0	0.003353	Y
5	STD50 280-597846/16	3000.0	10.179127	50.0	1694109.0	0.003393	Y
6	STD75 280-597846/17	4500.0	15.260311	50.0	1721115.0	0.003391	Y
7	STD100 280-597846/18	6000.0	19.822448	50.0	1764613.0	0.003304	Y
8	STD200 280-597846/19	6000.0	40.062885	50.0	1818385.0	0.006677	N



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Calibration / Isopropyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

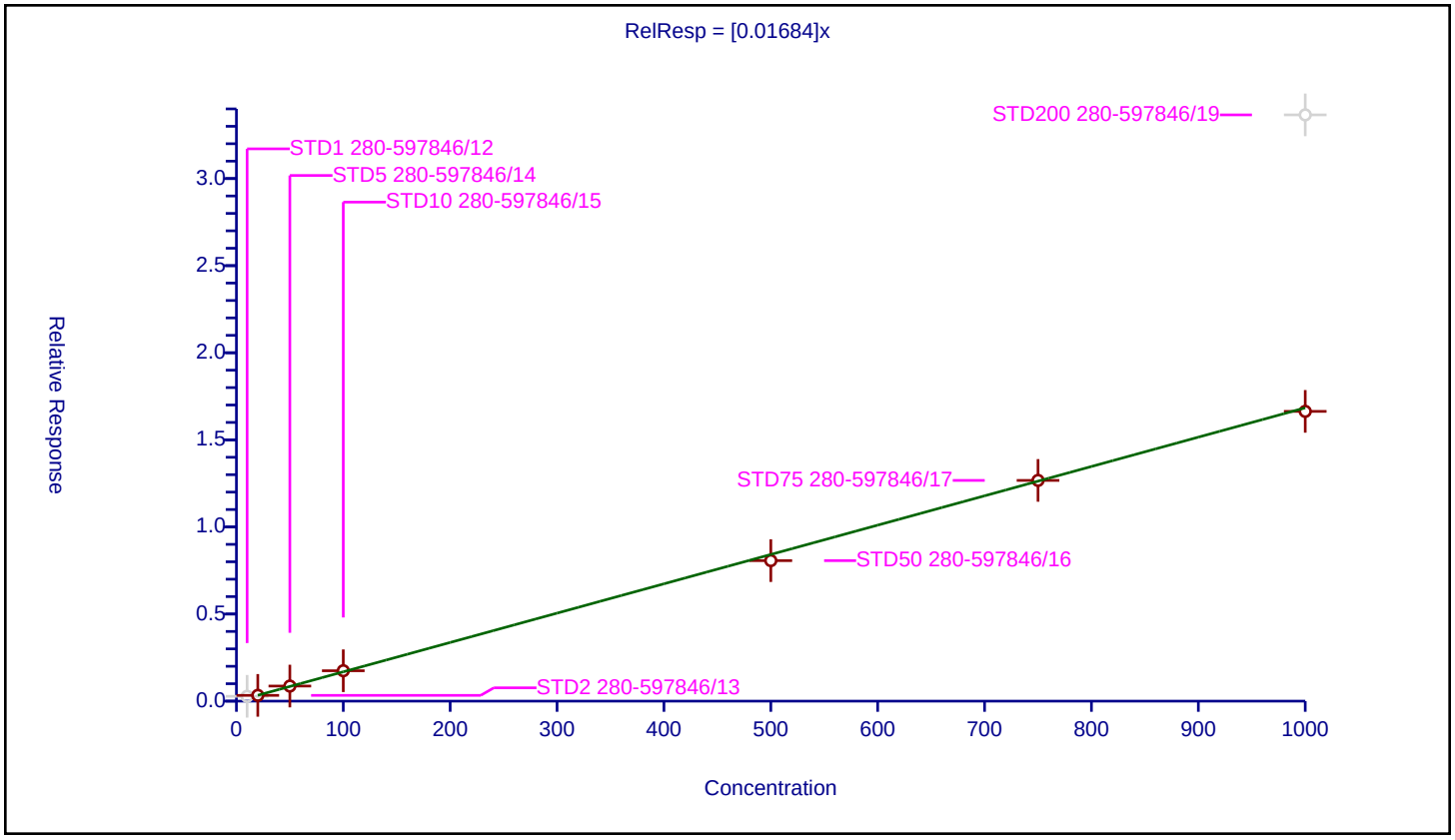
Curve Coefficients

Intercept:	0
Slope:	0.01684

Error Coefficients

Standard Error:	350000
Relative Standard Error:	2.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	10.0	0.277802	50.0	1694553.0	0.02778	N
2	STD2 280-597846/13	20.0	0.331527	50.0	1661104.0	0.016576	Y
3	STD5 280-597846/14	50.0	0.866891	50.0	1675413.0	0.017338	Y
4	STD10 280-597846/15	100.0	1.744886	50.0	1665925.0	0.017449	Y
5	STD50 280-597846/16	500.0	8.066807	50.0	1694109.0	0.016134	Y
6	STD75 280-597846/17	750.0	12.672454	50.0	1721115.0	0.016897	Y
7	STD100 280-597846/18	1000.0	16.634384	50.0	1764613.0	0.016634	Y
8	STD200 280-597846/19	1000.0	33.656321	50.0	1818385.0	0.033656	N



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Calibration / Acetonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

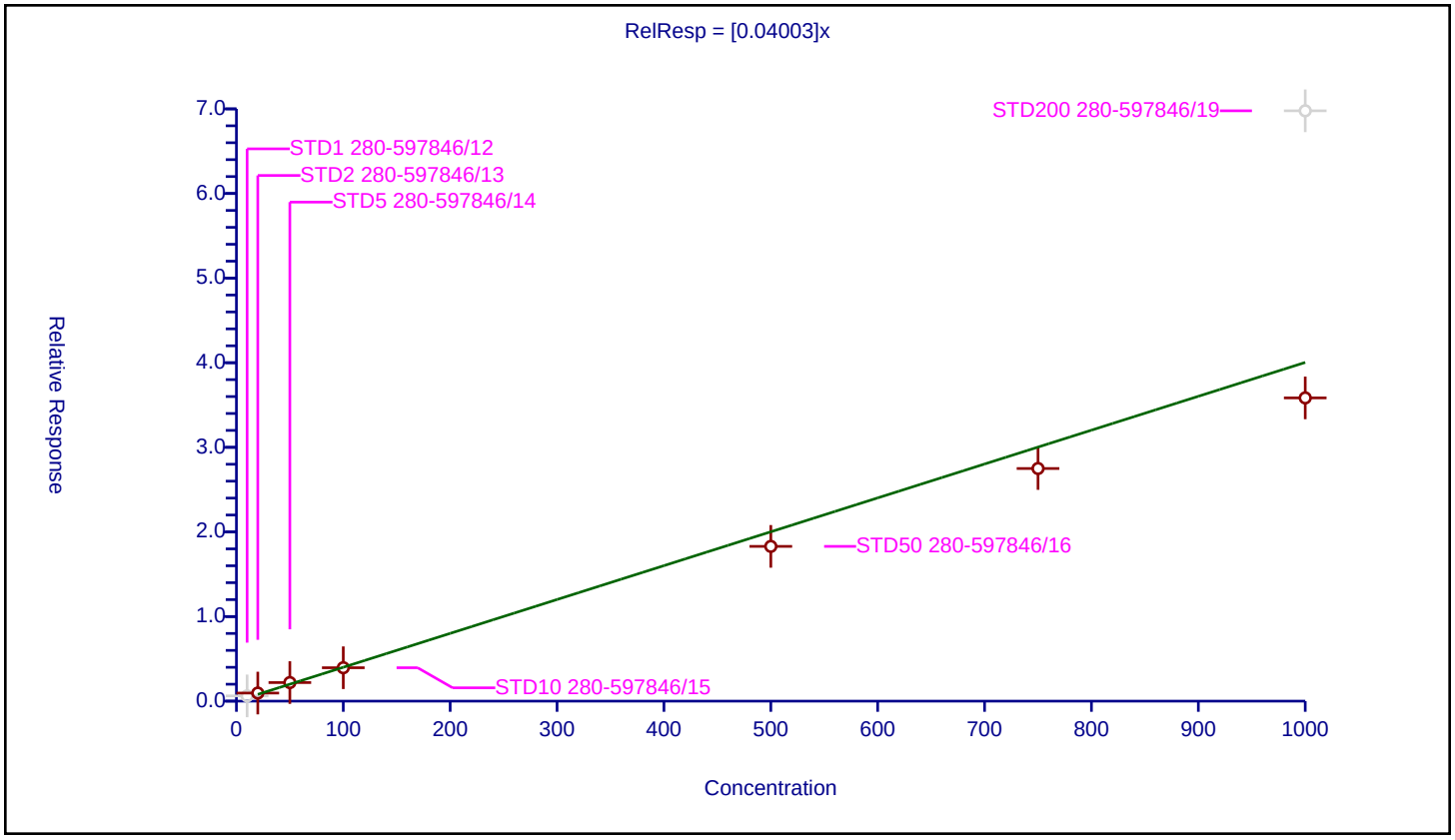
Curve Coefficients

Intercept:	0
Slope:	0.04003

Error Coefficients

Standard Error:	762000
Relative Standard Error:	12.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	10.0	0.618954	50.0	1694553.0	0.061895	N
2	STD2 280-597846/13	20.0	0.954636	50.0	1661104.0	0.047732	Y
3	STD5 280-597846/14	50.0	2.195309	50.0	1675413.0	0.043906	Y
4	STD10 280-597846/15	100.0	3.947627	50.0	1665925.0	0.039476	Y
5	STD50 280-597846/16	500.0	18.291415	50.0	1694109.0	0.036583	Y
6	STD75 280-597846/17	750.0	27.496913	50.0	1721115.0	0.036663	Y
7	STD100 280-597846/18	1000.0	35.842023	50.0	1764613.0	0.035842	Y
8	STD200 280-597846/19	1000.0	69.774168	50.0	1818385.0	0.069774	N



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Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

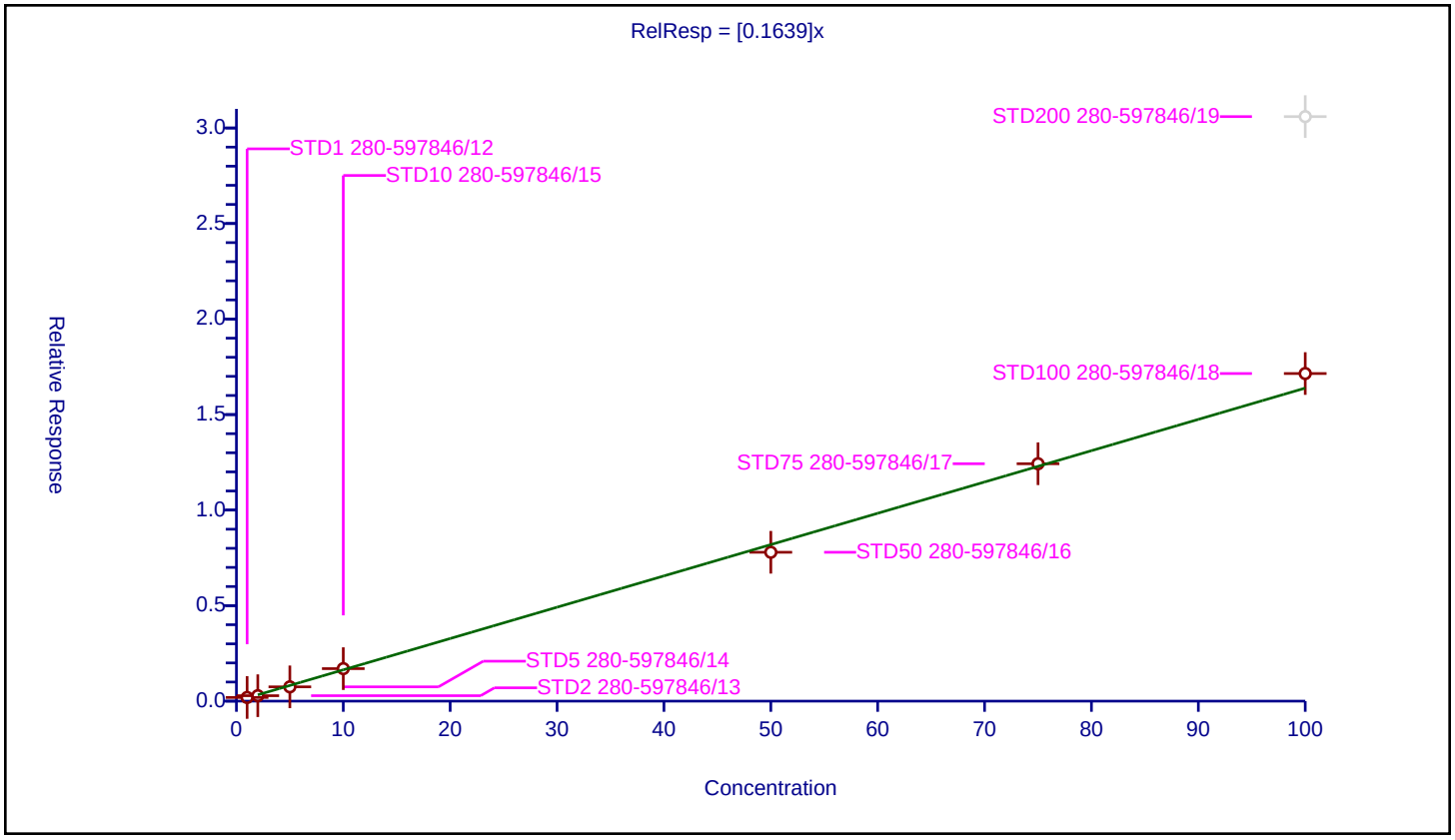
Curve Coefficients

Intercept:	0
Slope:	0.1639

Error Coefficients

Standard Error:	322000
Relative Standard Error:	9.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	0.191525	50.0	1694553.0	0.191525	Y
2	STD2 280-597846/13	2.0	0.285473	50.0	1661104.0	0.142736	Y
3	STD5 280-597846/14	5.0	0.747786	50.0	1675413.0	0.149557	Y
4	STD10 280-597846/15	10.0	1.701997	50.0	1665925.0	0.1702	Y
5	STD50 280-597846/16	50.0	7.792385	50.0	1694109.0	0.155848	Y
6	STD75 280-597846/17	75.0	12.426508	50.0	1721115.0	0.165687	Y
7	STD100 280-597846/18	100.0	17.148151	50.0	1764613.0	0.171482	Y
8	STD200 280-597846/19	100.0	30.596326	50.0	1818385.0	0.305963	N



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Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

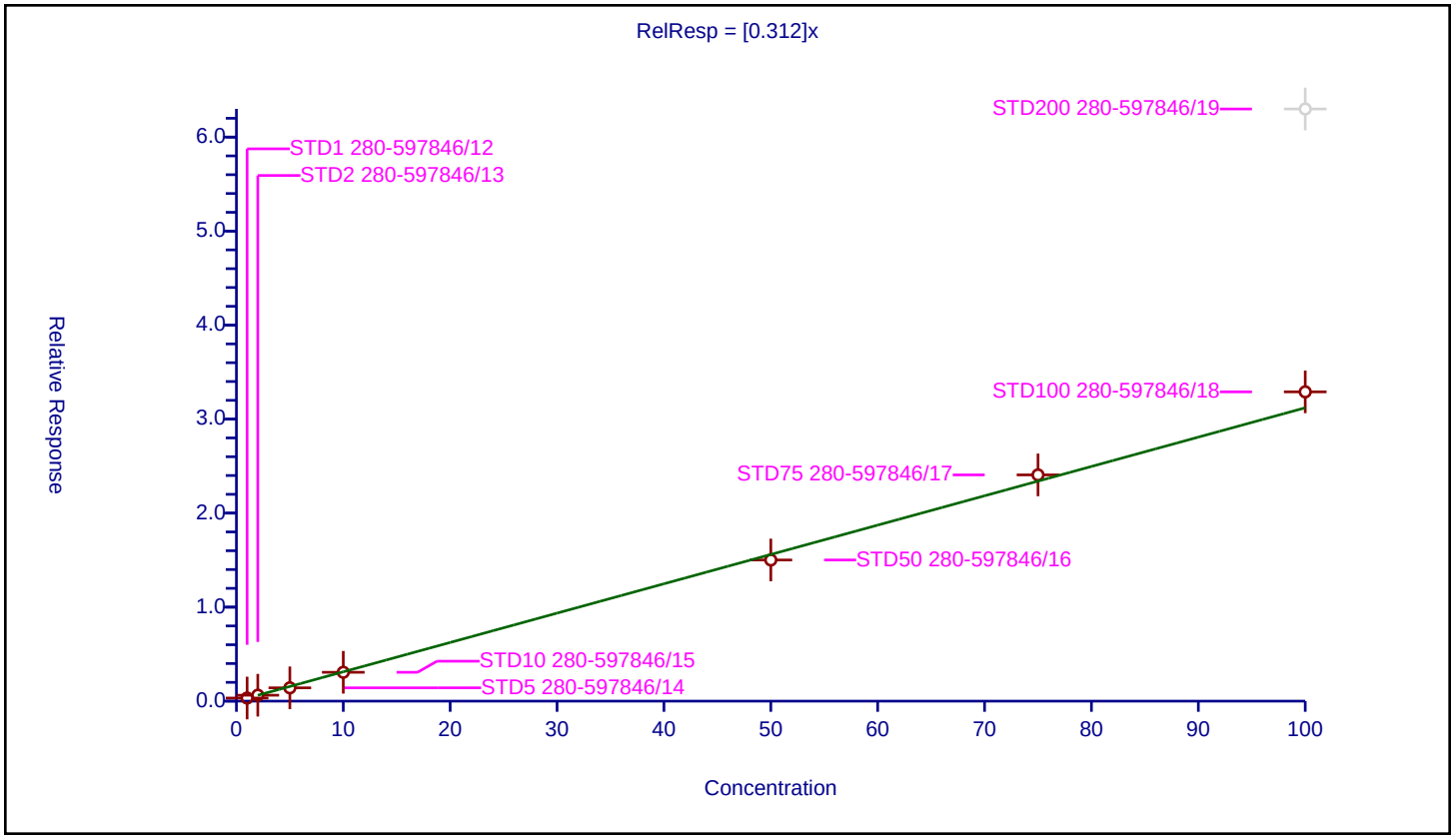
Curve Coefficients

Intercept:	0
Slope:	0.312

Error Coefficients

Standard Error:	620000
Relative Standard Error:	5.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	0.329556	50.0	1694553.0	0.329556	Y
2	STD2 280-597846/13	2.0	0.62934	50.0	1661104.0	0.31467	Y
3	STD5 280-597846/14	5.0	1.414875	50.0	1675413.0	0.282975	Y
4	STD10 280-597846/15	10.0	3.068656	50.0	1665925.0	0.306866	Y
5	STD50 280-597846/16	50.0	15.014058	50.0	1694109.0	0.300281	Y
6	STD75 280-597846/17	75.0	24.066492	50.0	1721115.0	0.320887	Y
7	STD100 280-597846/18	100.0	32.900812	50.0	1764613.0	0.329008	Y
8	STD200 280-597846/19	100.0	62.989521	50.0	1818385.0	0.629895	N



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Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

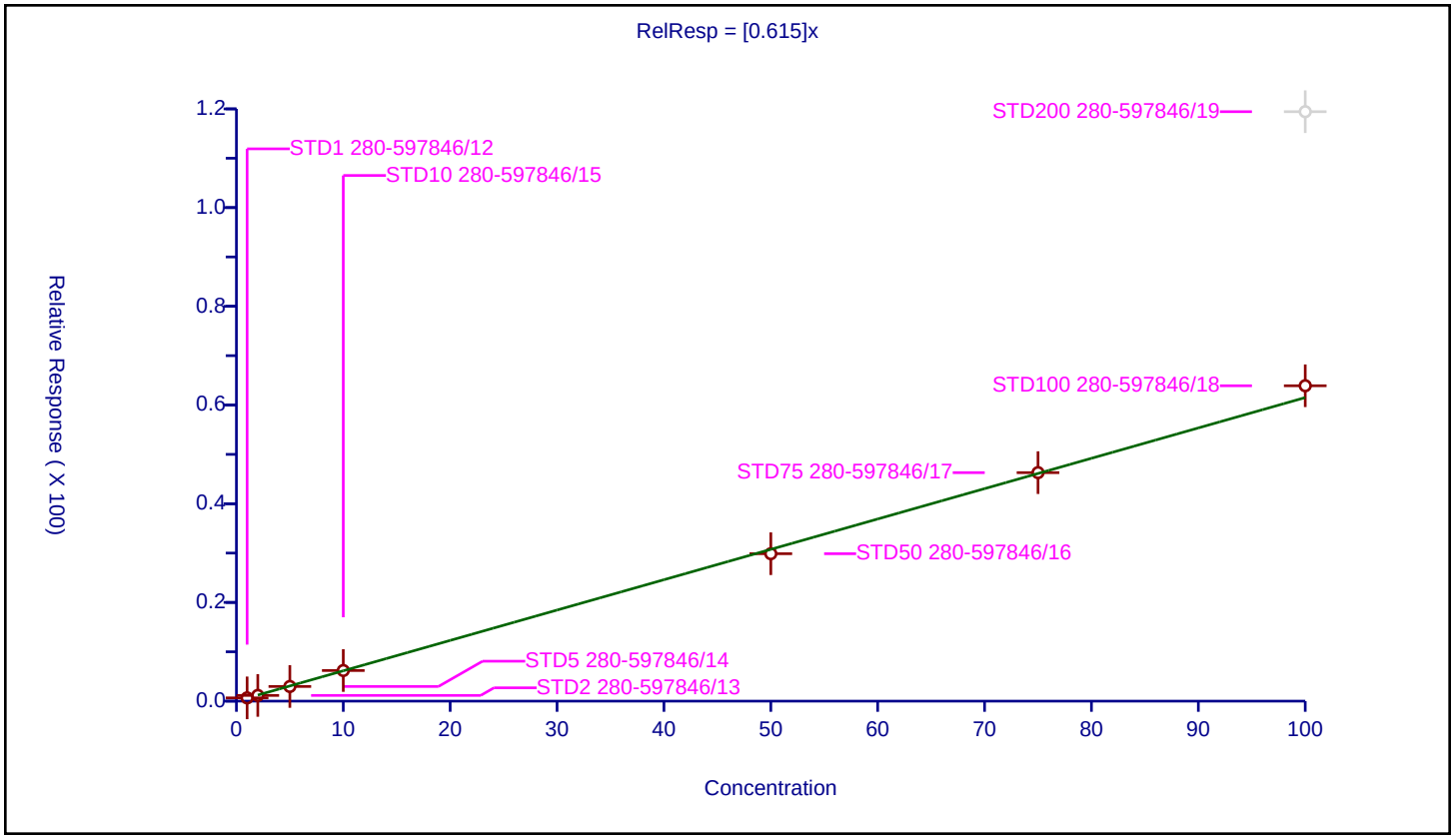
Curve Coefficients

Intercept:	0
Slope:	0.615

Error Coefficients

Standard Error:	1200000
Relative Standard Error:	4.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	0.65923	50.0	1694553.0	0.65923	Y
2	STD2 280-597846/13	2.0	1.155677	50.0	1661104.0	0.577839	Y
3	STD5 280-597846/14	5.0	2.969417	50.0	1675413.0	0.593883	Y
4	STD10 280-597846/15	10.0	6.205531	50.0	1665925.0	0.620553	Y
5	STD50 280-597846/16	50.0	29.872458	50.0	1694109.0	0.597449	Y
6	STD75 280-597846/17	75.0	46.298998	50.0	1721115.0	0.61732	Y
7	STD100 280-597846/18	100.0	63.905089	50.0	1764613.0	0.639051	Y
8	STD200 280-597846/19	100.0	119.433481	50.0	1818385.0	1.194335	N



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Calibration / Ethyl acetate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

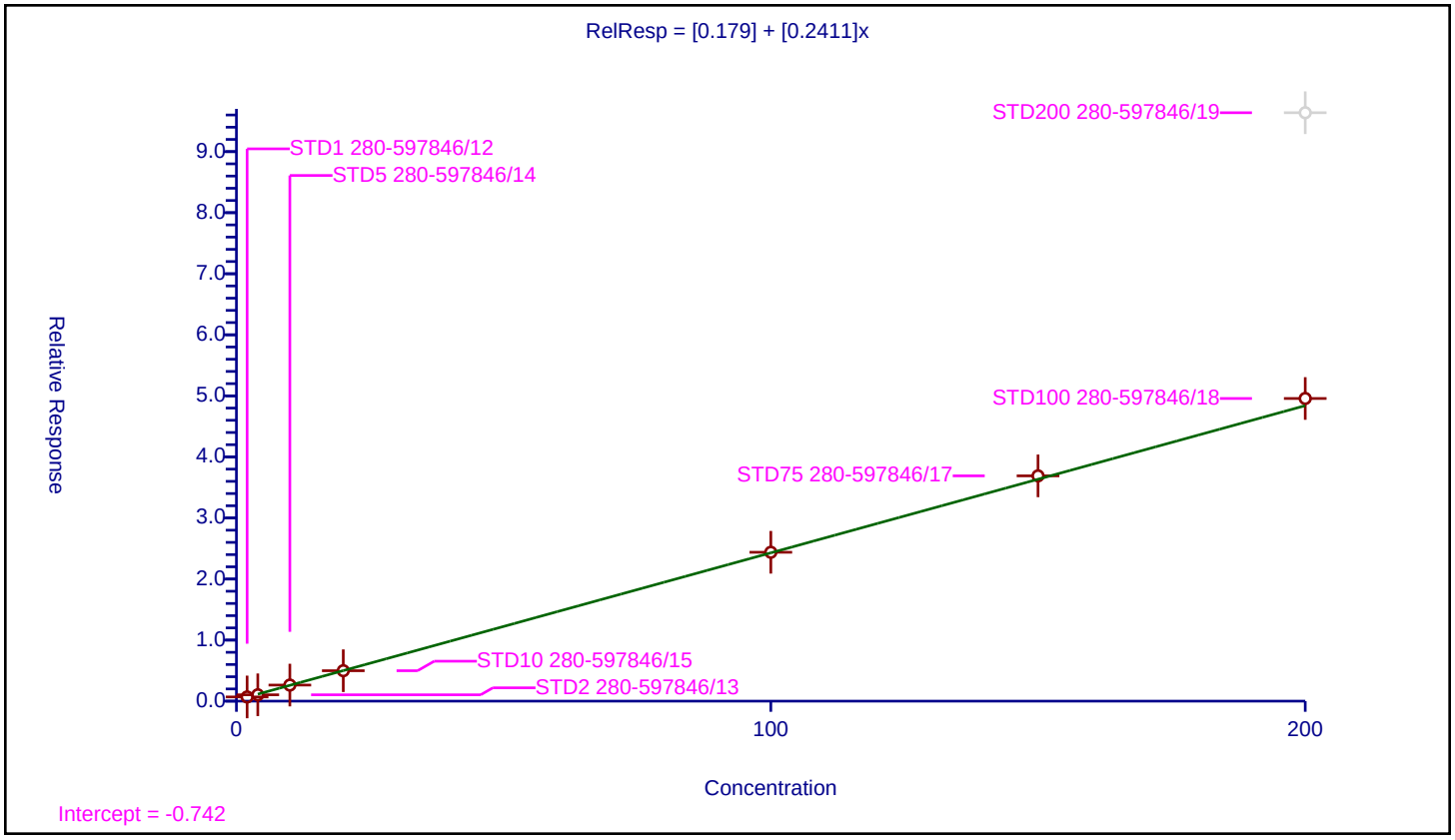
Curve Coefficients

Intercept:	0.179
Slope:	0.2411

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	2.0	0.685284	50.0	1694553.0	0.342642	Y
2	STD2 280-597846/13	4.0	1.03964	50.0	1661104.0	0.25991	Y
3	STD5 280-597846/14	10.0	2.633052	50.0	1675413.0	0.263305	Y
4	STD10 280-597846/15	20.0	4.981827	50.0	1665925.0	0.249091	Y
5	STD50 280-597846/16	100.0	24.380427	50.0	1694109.0	0.243804	Y
6	STD75 280-597846/17	150.0	36.896924	50.0	1721115.0	0.245979	Y
7	STD100 280-597846/18	200.0	49.571351	50.0	1764613.0	0.247857	Y
8	STD200 280-597846/19	200.0	96.370103	50.0	1818385.0	0.481851	N



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Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

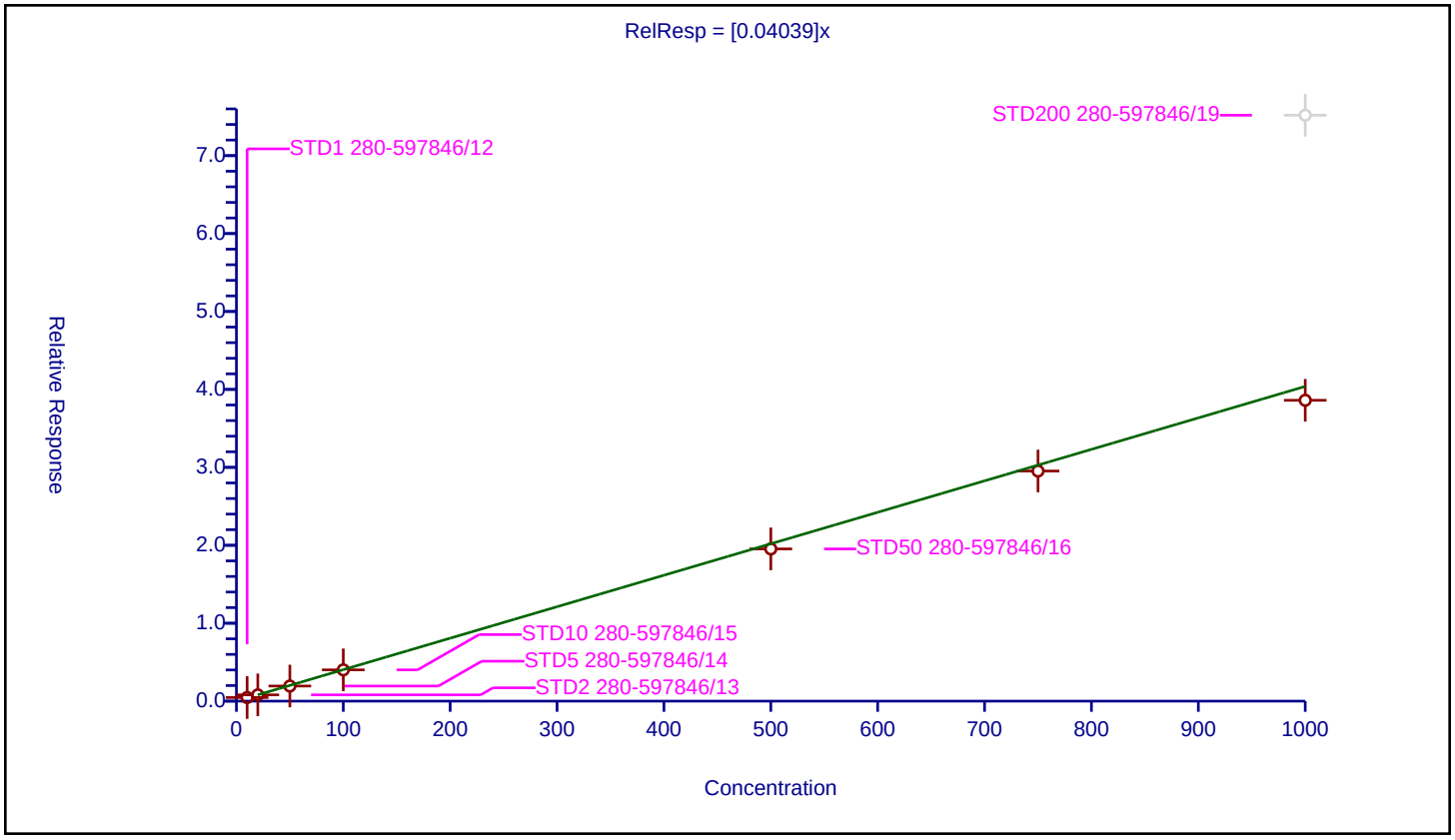
Curve Coefficients

Intercept:	0
Slope:	0.04039

Error Coefficients

Standard Error:	747000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	10.0	0.46378	50.0	1694553.0	0.046378	Y
2	STD2 280-597846/13	20.0	0.806452	50.0	1661104.0	0.040323	Y
3	STD5 280-597846/14	50.0	1.940895	50.0	1675413.0	0.038818	Y
4	STD10 280-597846/15	100.0	4.013476	50.0	1665925.0	0.040135	Y
5	STD50 280-597846/16	500.0	19.534841	50.0	1694109.0	0.03907	Y
6	STD75 280-597846/17	750.0	29.528184	50.0	1721115.0	0.039371	Y
7	STD100 280-597846/18	1000.0	38.608805	50.0	1764613.0	0.038609	Y
8	STD200 280-597846/19	1000.0	75.185975	50.0	1818385.0	0.075186	N



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Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

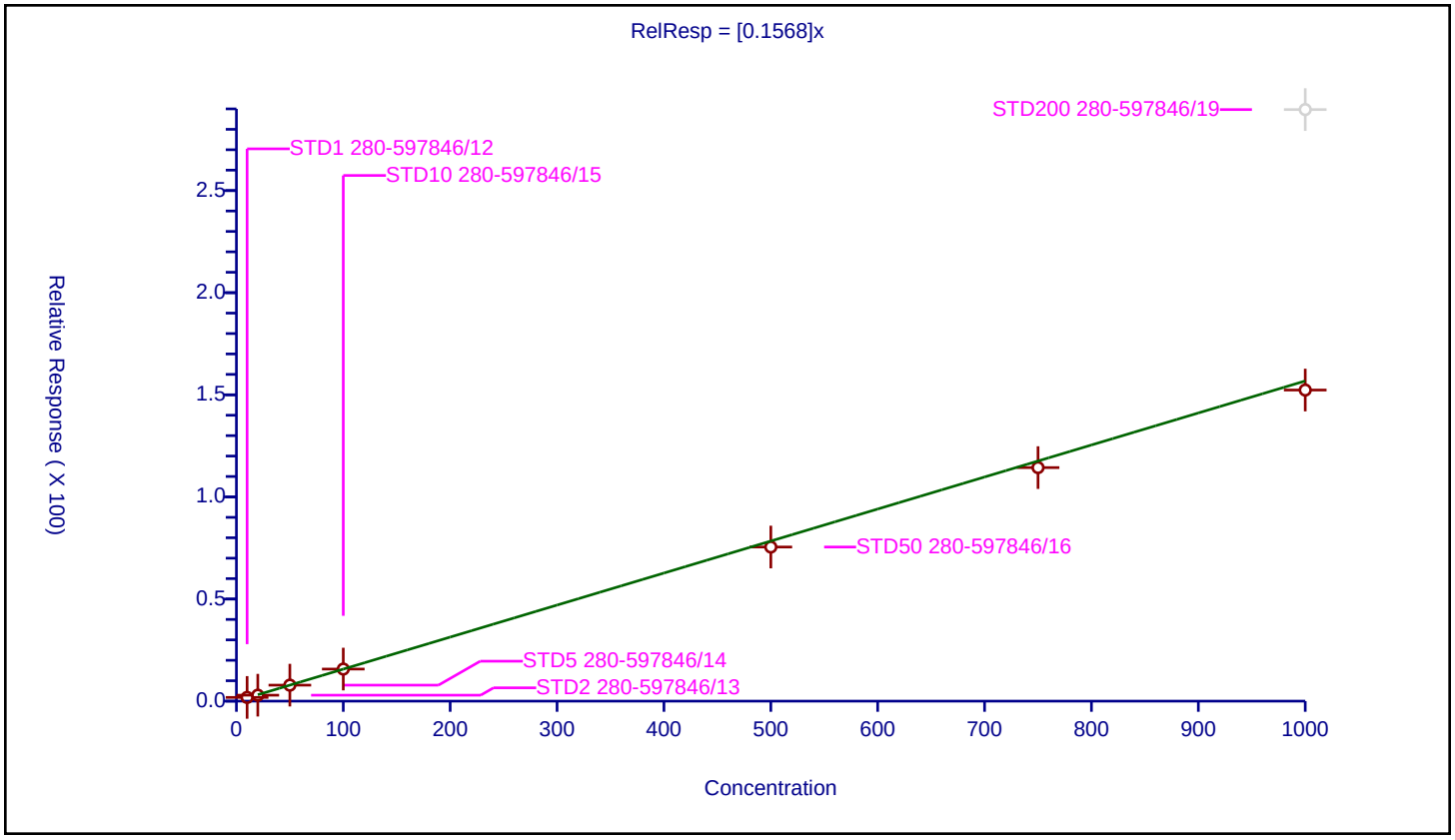
Curve Coefficients

Intercept:	0
Slope:	0.1568

Error Coefficients

Standard Error:	2920000
Relative Standard Error:	7.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	10.0	1.823431	50.0	1694553.0	0.182343	Y
2	STD2 280-597846/13	20.0	2.913153	50.0	1661104.0	0.145658	Y
3	STD5 280-597846/14	50.0	7.832546	50.0	1675413.0	0.156651	Y
4	STD10 280-597846/15	100.0	15.70707	50.0	1665925.0	0.157071	Y
5	STD50 280-597846/16	500.0	75.465658	50.0	1694109.0	0.150931	Y
6	STD75 280-597846/17	750.0	114.350959	50.0	1721115.0	0.152468	Y
7	STD100 280-597846/18	1000.0	152.330199	50.0	1764613.0	0.15233	Y
8	STD200 280-597846/19	1000.0	289.661843	50.0	1818385.0	0.289662	N



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Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

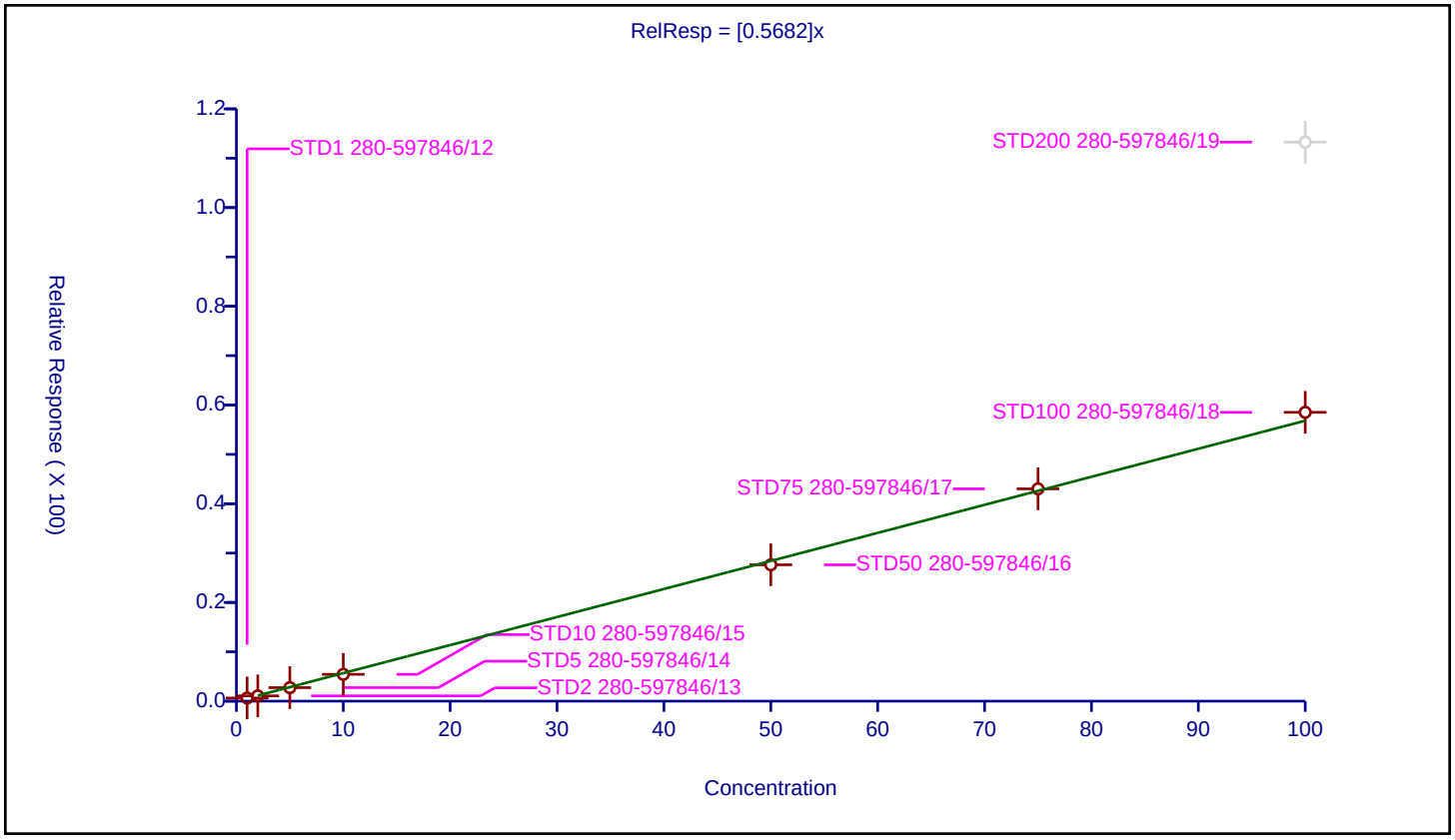
Curve Coefficients

Intercept:	0
Slope:	0.5682

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	6.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	0.639107	50.0	1694553.0	0.639107	Y
2	STD2 280-597846/13	2.0	1.071336	50.0	1661104.0	0.535668	Y
3	STD5 280-597846/14	5.0	2.739653	50.0	1675413.0	0.547931	Y
4	STD10 280-597846/15	10.0	5.433138	50.0	1665925.0	0.543314	Y
5	STD50 280-597846/16	50.0	27.629775	50.0	1694109.0	0.552595	Y
6	STD75 280-597846/17	75.0	43.014499	50.0	1721115.0	0.573527	Y
7	STD100 280-597846/18	100.0	58.522634	50.0	1764613.0	0.585226	Y
8	STD200 280-597846/19	100.0	113.257918	50.0	1818385.0	1.132579	N



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Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

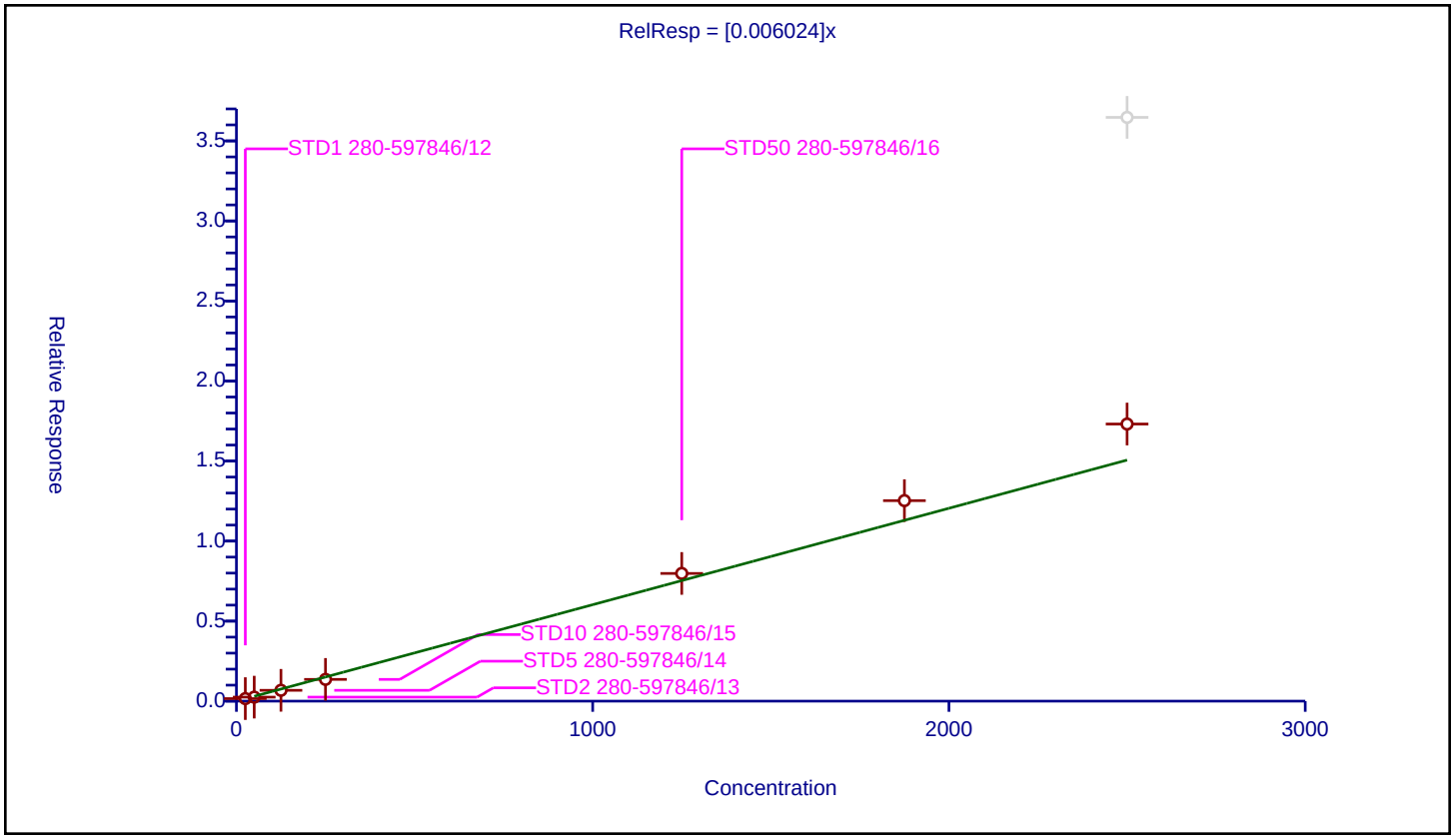
Curve Coefficients

Intercept:	0
Slope:	0.006024

Error Coefficients

Standard Error:	325000
Relative Standard Error:	12.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	25.0	0.158419	50.0	1694553.0	0.006337	Y
2	STD2 280-597846/13	50.0	0.249683	50.0	1661104.0	0.004994	Y
3	STD5 280-597846/14	125.0	0.677027	50.0	1675413.0	0.005416	Y
4	STD10 280-597846/15	250.0	1.359035	50.0	1665925.0	0.005436	Y
5	STD50 280-597846/16	1250.0	7.97794	50.0	1694109.0	0.006382	Y
6	STD75 280-597846/17	1875.0	12.526502	50.0	1721115.0	0.006681	Y
7	STD100 280-597846/18	2500.0	17.31306	50.0	1764613.0	0.006925	Y
8	STD200 280-597846/19	2500.0	36.468405	50.0	1818385.0	0.014587	N



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Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

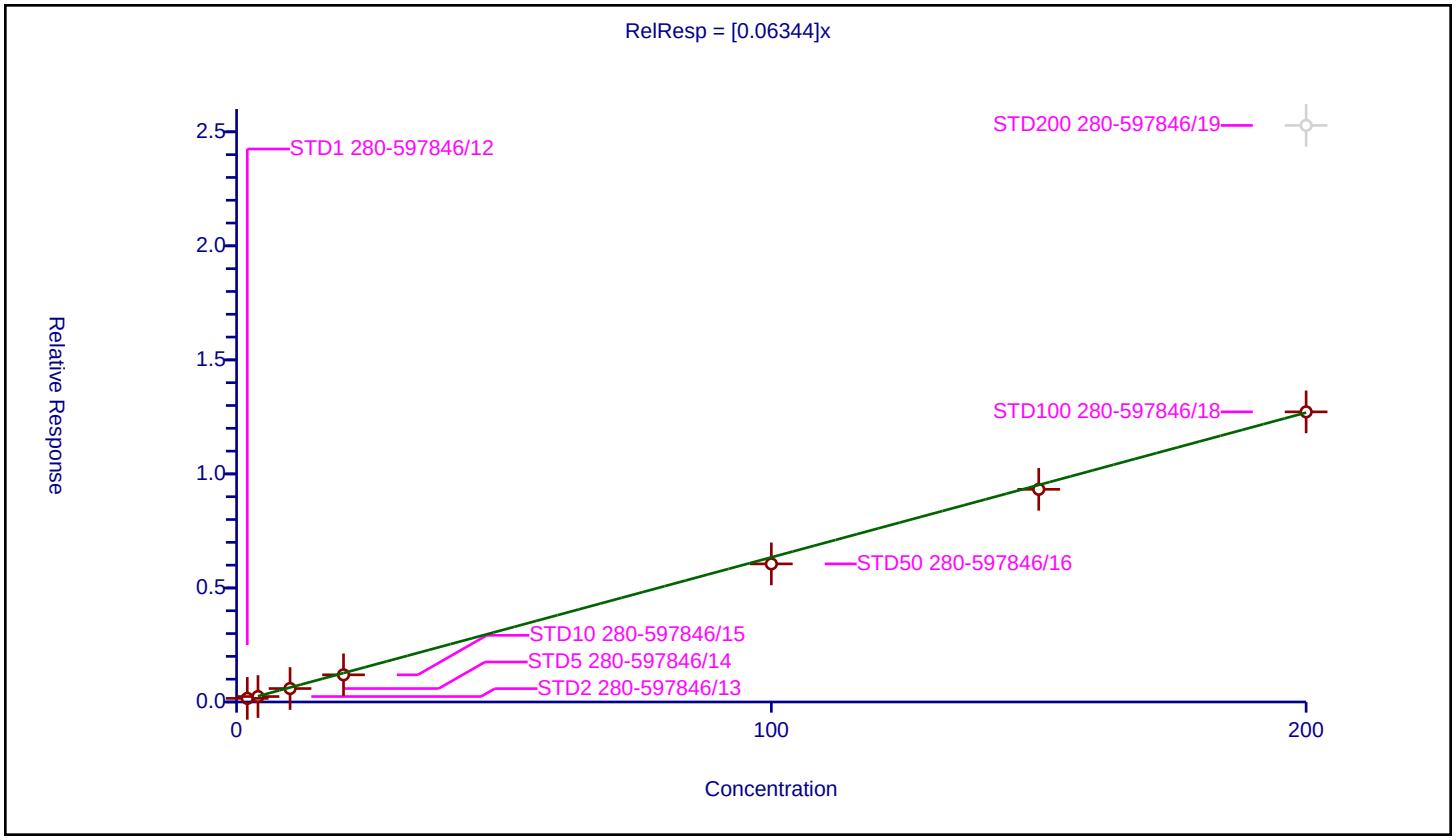
Curve Coefficients

Intercept:	0
Slope:	0.06344

Error Coefficients

Standard Error:	241000
Relative Standard Error:	11.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	2.0	0.15898	50.0	1694553.0	0.07949	Y
2	STD2 280-597846/13	4.0	0.238667	50.0	1661104.0	0.059667	Y
3	STD5 280-597846/14	10.0	0.590243	50.0	1675413.0	0.059024	Y
4	STD10 280-597846/15	20.0	1.19141	50.0	1665925.0	0.059571	Y
5	STD50 280-597846/16	100.0	6.054923	50.0	1694109.0	0.060549	Y
6	STD75 280-597846/17	150.0	9.325031	50.0	1721115.0	0.062167	Y
7	STD100 280-597846/18	200.0	12.720891	50.0	1764613.0	0.063604	Y
8	STD200 280-597846/19	200.0	25.281335	50.0	1818385.0	0.126407	N



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Calibration / 2-Nitropropane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

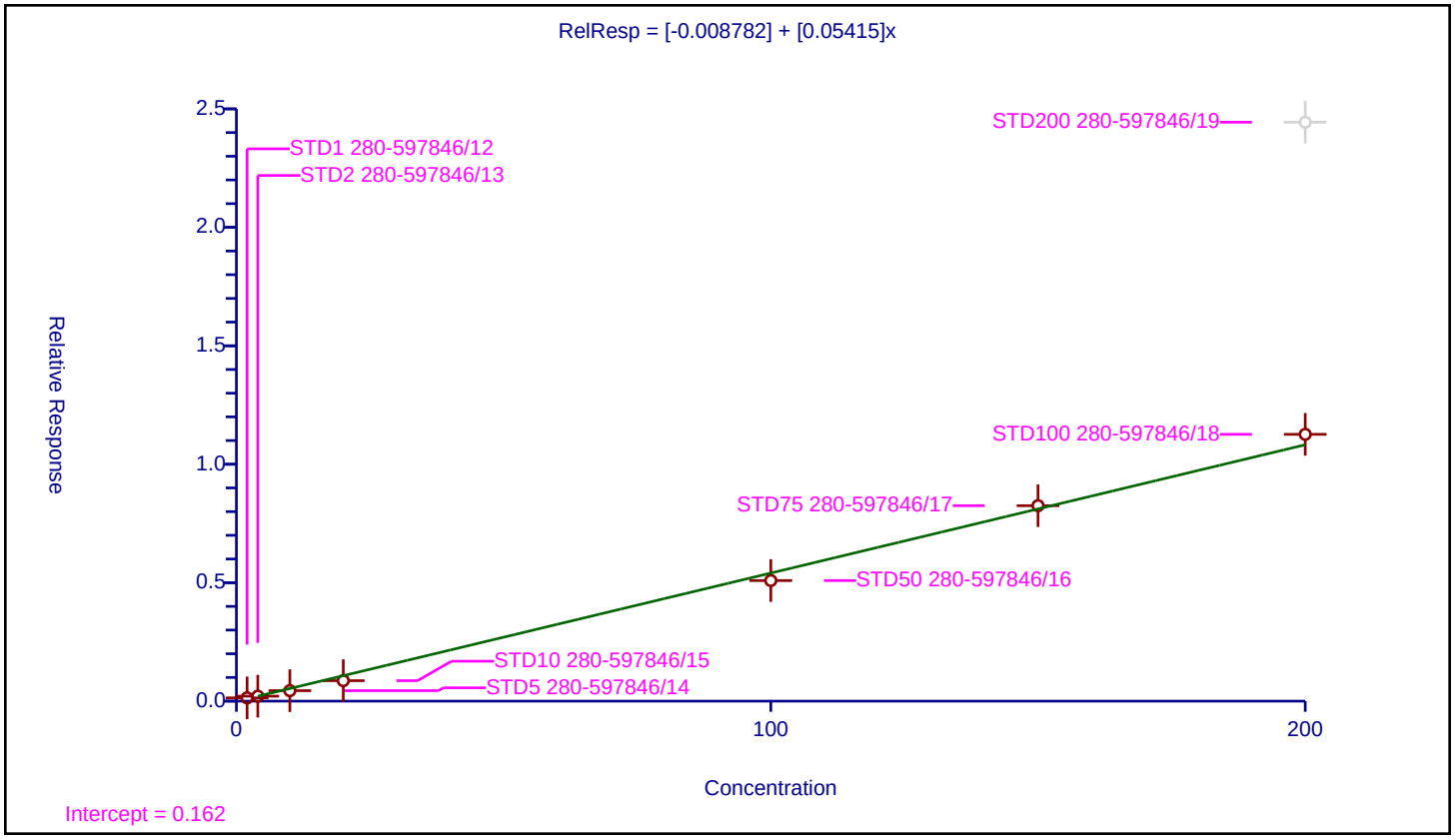
Curve Coefficients

Intercept:	-0.008782
Slope:	0.05415

Error Coefficients

Standard Error:	232000
Relative Standard Error:	19.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	2.0	0.138031	50.0	1694553.0	0.069015	Y
2	STD2 280-597846/13	4.0	0.209379	50.0	1661104.0	0.052345	Y
3	STD5 280-597846/14	10.0	0.441891	50.0	1675413.0	0.044189	Y
4	STD10 280-597846/15	20.0	0.864205	50.0	1665925.0	0.04321	Y
5	STD50 280-597846/16	100.0	5.089873	50.0	1694109.0	0.050899	Y
6	STD75 280-597846/17	150.0	8.250843	50.0	1721115.0	0.055006	Y
7	STD100 280-597846/18	200.0	11.262668	50.0	1764613.0	0.056313	Y
8	STD200 280-597846/19	200.0	24.437647	50.0	1818385.0	0.122188	N



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Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

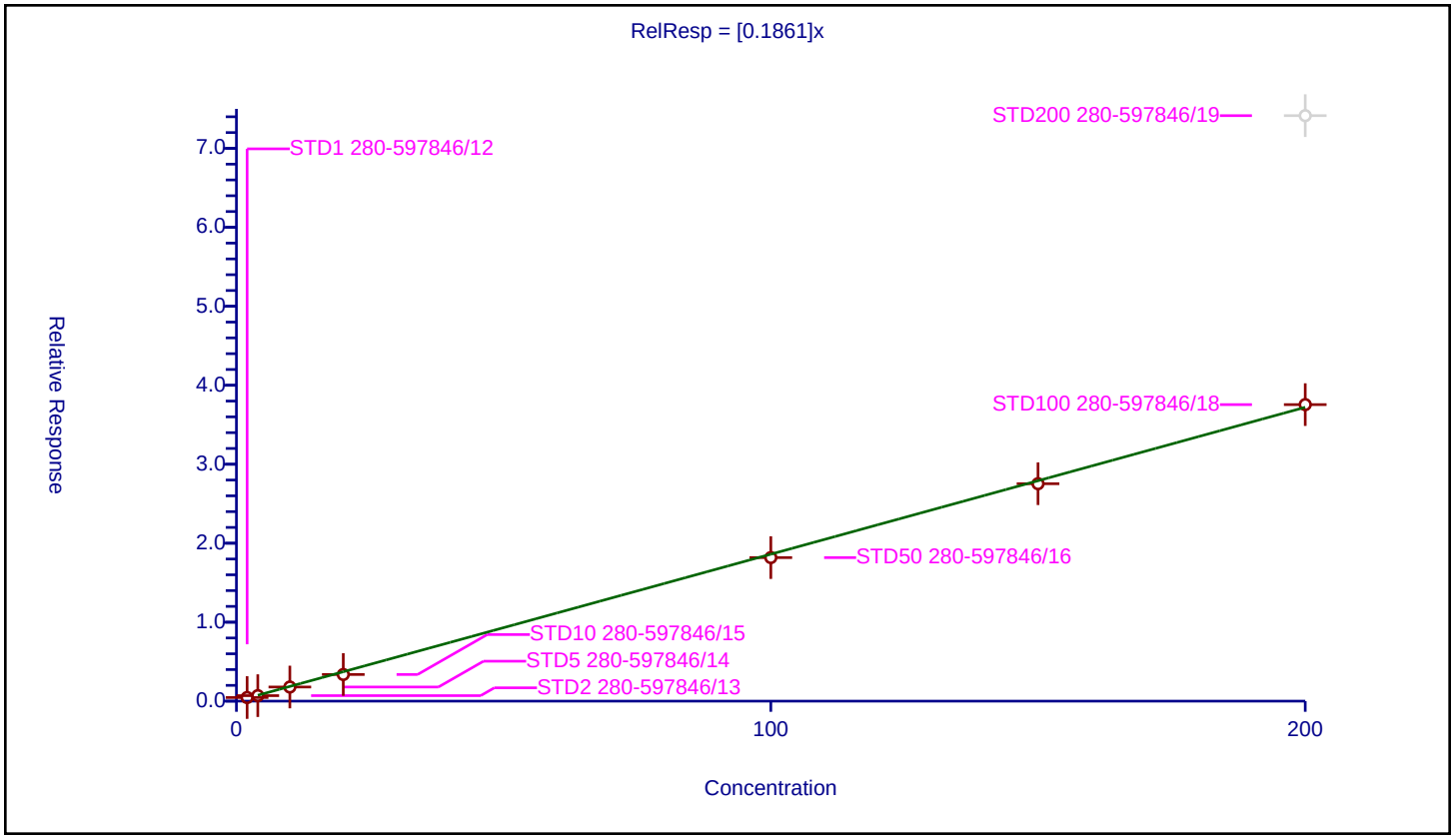
Curve Coefficients

Intercept:	0
Slope:	0.1861

Error Coefficients

Standard Error:	263000
Relative Standard Error:	10.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	2.0	0.455439	50.0	659913.0	0.227719	Y
2	STD2 280-597846/13	4.0	0.696456	50.0	636006.0	0.174114	Y
3	STD5 280-597846/14	10.0	1.788756	50.0	624037.0	0.178876	Y
4	STD10 280-597846/15	20.0	3.373854	50.0	622730.0	0.168693	Y
5	STD50 280-597846/16	100.0	18.176242	50.0	617083.0	0.181762	Y
6	STD75 280-597846/17	150.0	27.534925	50.0	635571.0	0.183566	Y
7	STD100 280-597846/18	200.0	37.550593	50.0	653011.0	0.187753	Y
8	STD200 280-597846/19	200.0	74.141826	50.0	682088.0	0.370709	N



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Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

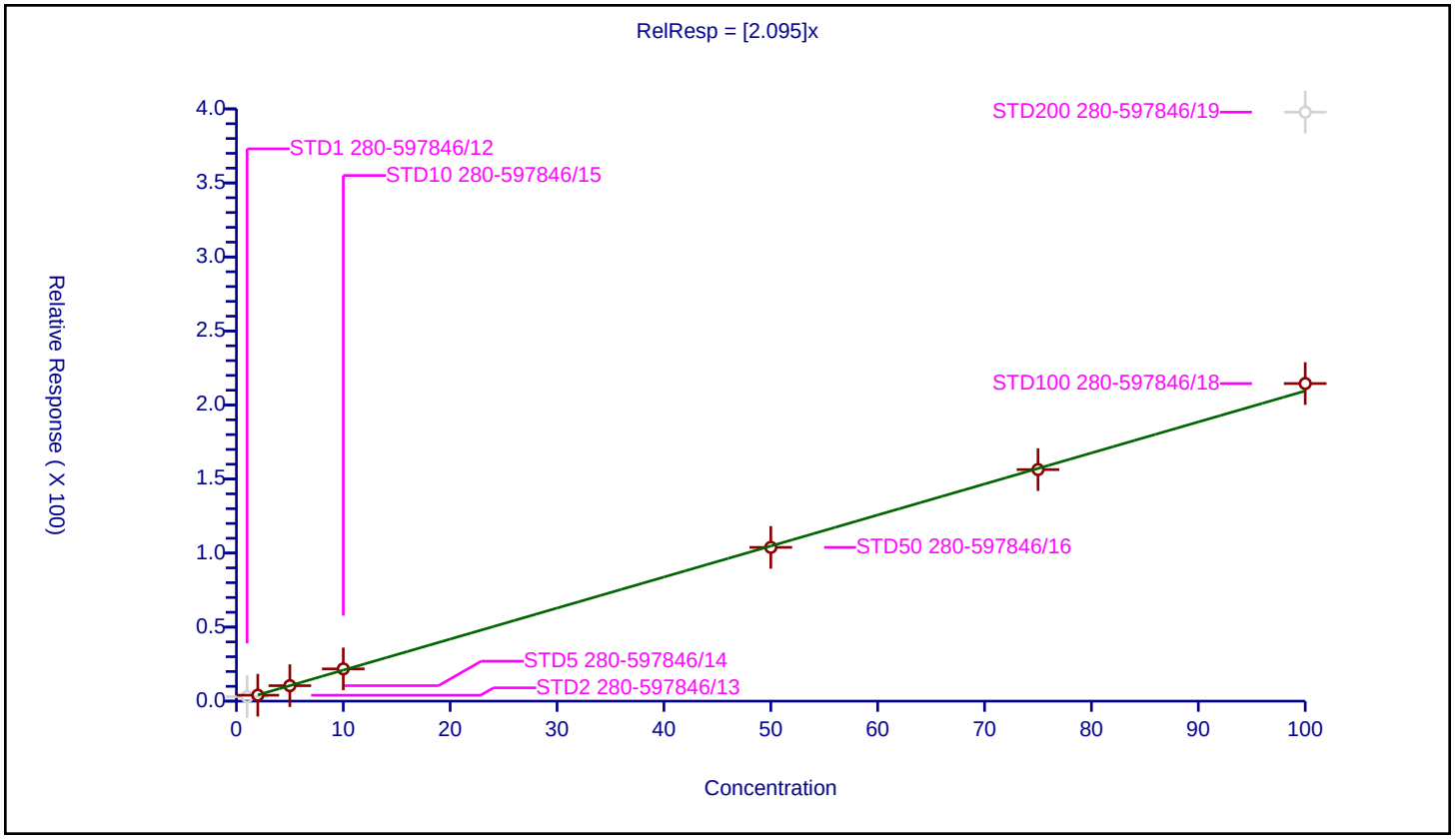
Curve Coefficients

Intercept:	0
Slope:	2.095

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	2.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	3.040098	50.0	659913.0	3.040098	N
2	STD2 280-597846/13	2.0	4.000198	50.0	636006.0	2.000099	Y
3	STD5 280-597846/14	5.0	10.437843	50.0	624037.0	2.087569	Y
4	STD10 280-597846/15	10.0	21.768583	50.0	622730.0	2.176858	Y
5	STD50 280-597846/16	50.0	103.841136	50.0	617083.0	2.076823	Y
6	STD75 280-597846/17	75.0	156.385439	50.0	635571.0	2.085139	Y
7	STD100 280-597846/18	100.0	214.510016	50.0	653011.0	2.1451	Y
8	STD200 280-597846/19	100.0	397.784157	50.0	682088.0	3.977842	N



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Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

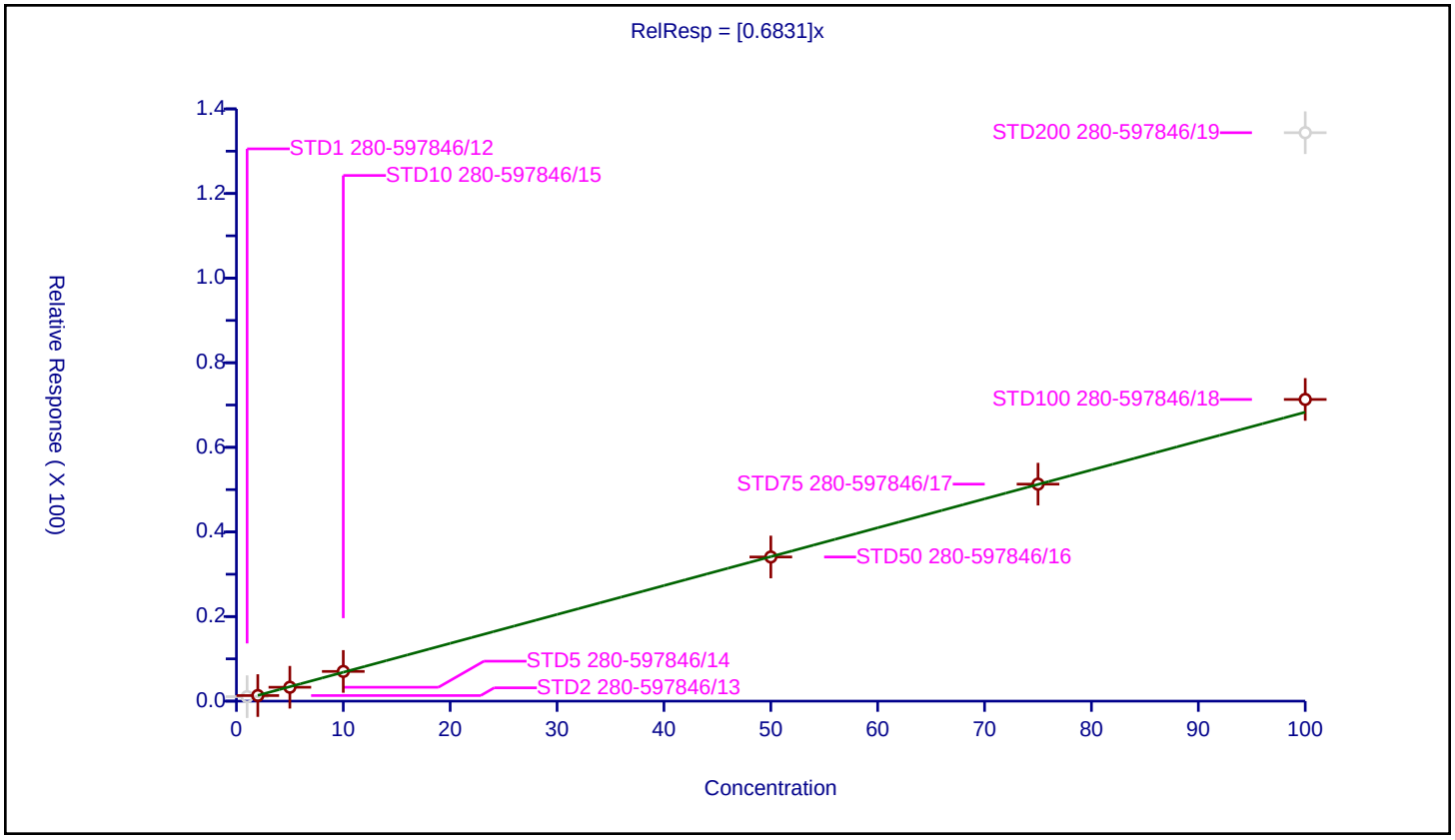
Curve Coefficients

Intercept:	0
Slope:	0.6831

Error Coefficients

Standard Error:	544000
Relative Standard Error:	3.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	1.056882	50.0	659913.0	1.056882	N
2	STD2 280-597846/13	2.0	1.321057	50.0	636006.0	0.660528	Y
3	STD5 280-597846/14	5.0	3.286023	50.0	624037.0	0.657205	Y
4	STD10 280-597846/15	10.0	7.022305	50.0	622730.0	0.702231	Y
5	STD50 280-597846/16	50.0	34.074266	50.0	617083.0	0.681485	Y
6	STD75 280-597846/17	75.0	51.296708	50.0	635571.0	0.683956	Y
7	STD100 280-597846/18	100.0	71.315644	50.0	653011.0	0.713156	Y
8	STD200 280-597846/19	100.0	134.372838	50.0	682088.0	1.343728	N



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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-609046/42	MS1_8195.D
Level 2	IC 280-609046/41	MS1_8196.D
Level 3	IC 280-609046/40	MS1_8197.D
Level 4	IC 280-609046/39	MS1_8190.D
Level 5	IC 280-609046/38	MS1_8189.D
Level 6	ICIS 280-609046/37	MS1_8188.D
Level 7	IC 280-609046/36	MS1_8187.D
Level 8	IC 280-609046/35	MS1_8186.D
Level 9	IC 280-609046/34	MS1_8185.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	+++++ 0.2353	+++++ 0.2562	0.1794 0.2474	0.1271 +++++	0.1323	Lin1	-0.376	0.2491							0.9910		0.9900
Chloromethane	+++++ 0.2399	0.2478 0.2627	0.2329 0.2608	0.1945 0.2261	0.1828	Ave		0.2309			0.1000	12.6		15.0			
Vinyl chloride	+++++ 0.2381	0.2339 0.2642	0.2138 0.2592	0.1678 0.2241	0.1634	Lin1	-0.084	0.2399							0.9910		0.9900
Bromomethane	+++++ 0.1335	0.1805 0.1385	0.1604 0.1332	0.1187 0.1147	0.1165	Lin1	0.0542	0.1245							0.9930		0.9900
Chloroethane	+++++ 0.1410	0.1466 0.1589	0.1474 0.1552	0.1073 0.1425	0.0994	Lin1	-0.044	0.1475							0.9940		0.9900
Dichlorofluoromethane	+++++ 0.3336	0.4060 0.3639	0.3139 0.3573	0.2495 0.3175	0.2410	Lin1	-0.052	0.3348							0.9940		0.9900
Trichlorofluoromethane	+++++ 0.2692	+++++ 0.2994	0.2398 0.2881	0.1525 +++++	0.1721	Lin1	-0.370	0.2889							0.9910		0.9900
Ethyl ether	+++++ 0.1849	0.1914 0.1854	0.1869 0.1733	0.1568 0.1756	0.1647	Ave		0.1774				6.8		15.0			
Acrolein	+++++ 0.0283	0.0286 0.0299	0.0256 0.0266	0.0239 0.0276	0.0260	Ave		0.0271				7.1		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 0.1230	0.1113 0.1242	0.1140 0.1196	0.0882 0.1204	0.1060	Ave		0.1133				10.5		15.0			
1,1-Dichloroethene	+++++ 0.1598	0.1791 0.1615	0.1609 0.1556	0.1196 0.1589	0.1444	Ave		0.1550				11.1		30.0			
Acetone	+++++ 0.0876	0.1457 0.0920	0.1001 0.0819	0.0832 0.0856	0.0838	Lin1	0.1651	0.0855							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	+++++ 0.2230	0.2336 0.2359	0.1799 0.2229	0.1627 0.2223	0.1767	Ave		0.2071				14.0		15.0			
Carbon disulfide	+++++ 0.5691	0.6052 0.5766	0.5476 0.5643	0.5000 0.5586	0.5322	Ave		0.5567				5.6		15.0			
Methyl acetate	+++++ 0.2004	0.2304 0.2086	0.2016 0.1885	0.1630 0.1965	0.1812	Ave		0.1963				10.1		15.0			
Allyl chloride	+++++ 0.3788	0.5654 0.3796	0.4181 0.3644	0.3749 0.3380	0.3678	Lin2	0.1921	0.3540							0.9950		0.9900
Methylene Chloride	+++++ 0.1932	0.2157 0.1921	0.2236 0.1832	0.1656 0.1848	0.1854	Ave		0.1929				9.6		15.0			
2-Methyl-2-propanol	+++++ 0.0291	0.0280 0.0324	0.0258 0.0292	0.0239 0.0314	0.0267	Ave		0.0283				10.1		15.0			
Acrylonitrile	+++++ 0.0962	0.0947 0.1008	0.0840 0.0921	0.0794 0.0949	0.0893	Ave		0.0914				7.6		15.0			
Methyl tert-butyl ether	+++++ 0.6452	0.6028 0.6519	0.5693 0.6052	0.5114 0.6241	0.5892	Ave		0.5999				7.5		15.0			
trans-1,2-Dichloroethene	+++++ 0.1828	0.2020 0.1831	0.1902 0.1759	0.1614 0.1777	0.1655	Ave		0.1798				7.2		15.0			
Hexane	+++++ 1.2133	0.9396 1.2220	0.9924 1.2035	0.8422 1.1947	1.0499	Ave		1.0822				13.6		15.0			
Vinyl acetate	+++++ 0.5095	0.4705 0.5093	0.4562 0.4752	0.4044 0.4549	0.4683	Ave		0.4685				7.1		15.0			
1,1-Dichloroethane	+++++ 0.3748	0.3804 0.3713	0.3570 0.3586	0.3115 0.3642	0.3380	Ave		0.3570			0.1000	6.3		15.0			
2-Butanone (MEK)	+++++ 0.1320	0.1545 0.1410	0.1407 0.1268	0.1195 0.1354	0.1222	Ave		0.1340				8.6		15.0			
2,2-Dichloropropane	+++++ 0.3133	0.3481 0.3168	0.3022 0.3078	0.2487 0.3131	0.2748	Ave		0.3031				9.8		15.0			
cis-1,2-Dichloroethene	+++++ 0.1997	0.2203 0.2000	0.1874 0.1928	0.1619 0.1961	0.1902	Ave		0.1936				8.4		15.0			
sec-Butyl Alcohol	+++++ 0.0243	0.0213 0.0274	0.0223 0.0248	0.0211 0.0263	0.0228	Ave		0.0238				9.7		15.0			
Chlorobromomethane	+++++ 0.0900	0.1028 0.0889	0.0899 0.0838	0.0787 0.0865	0.0877	Ave		0.0885				7.8		15.0			
Tetrahydrofuran	+++++ 0.0872	0.0778 0.0935	0.0858 0.0857	0.0745 0.0903	0.0783	Ave		0.0841				7.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chloroform	+++++ 0.3366	0.3365 0.3355	0.3267 0.3231	0.3006 0.3285	0.3145	Ave		0.3253				3.9		30.0			
1,1,1-Trichloroethane	+++++ 0.2948	0.2428 0.2943	0.2694 0.2878	0.2303 0.2880	0.2572	Ave		0.2706				9.2		15.0			
Cyclohexane	+++++ 0.3832	0.3438 0.3826	0.3517 0.3693	0.2624 0.3736	0.3260	Ave		0.3491				11.5		15.0			
1,1-Dichloropropene	+++++ 0.2913	0.2495 0.2874	0.2480 0.2797	0.2238 0.2843	0.2556	Ave		0.2649				9.1		15.0			
Carbon tetrachloride	+++++ 0.2449	0.2319 0.2437	0.2339 0.2395	0.1824 0.2385	0.2143	Ave		0.2286				9.2		15.0			
Isobutyl alcohol	+++++ 0.0102	0.0096 0.0112	0.0096 0.0102	0.0087 0.0110	0.0092	Ave		0.0100				8.6		15.0			
Benzene	+++++ 0.8137	0.7733 0.8038	0.7920 0.7752	0.6949 0.7821	0.7473	Ave		0.7728				4.8		15.0			
1,2-Dichloroethane	+++++ 0.3018	0.3586 0.3035	0.3125 0.2836	0.2638 0.2903	0.2994	Ave		0.3017				9.1		15.0			
n-Heptane	+++++ 0.2402	0.3144 0.2430	0.2388 0.2417	0.1959 0.2451	0.2042	Ave		0.2404				14.8		15.0			
Trichloroethene	+++++ 0.8197	0.9334 0.8181	0.8269 0.7860	0.6838 0.7932	0.7639	Ave		0.8031				8.7		15.0			
2-Pentanone	+++++ 0.2117	0.2097 0.2254	0.1940 0.2023	0.1802 0.2150	0.1962	Ave		0.2043				6.9		15.0			
Methylcyclohexane	+++++ 0.2725	0.2620 0.2738	0.2641 0.2653	0.1900 0.2706	0.2267	Ave		0.2531				11.7		15.0			
1,2-Dichloropropane	+++++ 0.2195	0.2432 0.2226	0.2128 0.2087	0.1862 0.2149	0.1957	Ave		0.2130				8.1		30.0			
1,4-Dioxane	+++++ 0.0033	0.0045 0.0035	0.0033 0.0031	0.0032 0.0032	0.0034	Ave		0.0034				12.9		15.0			
Dibromomethane	+++++ 0.1209	0.1224 0.1208	0.1213 0.1120	0.1050 0.1166	0.1149	Ave		0.1167				5.1		15.0			
Dichlorobromomethane	+++++ 0.2702	0.2809 0.2666	0.2514 0.2524	0.2130 0.2615	0.2380	Ave		0.2543				8.3		15.0			
2-Chloroethyl vinyl ether	+++++ 0.1555	0.1512 0.1672	0.1295 0.1558	0.1118 0.1474	0.1017	Lin1	-0.057	0.1531							0.9950		0.9900
cis-1,3-Dichloropropene	+++++ 1.5057	1.5304 1.4900	1.4729 1.4109	1.2127 1.4288	1.4107	Ave		1.4327				6.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Methyl-2-pentanone (MIBK)	+++++ 0.2691	0.2441 0.2847	0.2511 0.2556	0.2239 0.2690	0.2489	Ave		0.2558				7.3		15.0			
Toluene	+++++ 0.8372	0.8264 0.8420	0.7962 0.8097	0.6894 0.8252	0.7703	Ave		0.7996				6.3		30.0			
trans-1,3-Dichloropropene	+++++ 0.3308	0.3371 0.3343	0.3150 0.3134	0.2667 0.3221	0.3049	Ave		0.3155				7.2		15.0			
Ethyl methacrylate	+++++ 1.2568	1.3398 1.2776	1.1917 1.1766	1.0632 1.2260	1.2074	Ave		1.2174				6.7		15.0			
1,1,2-Trichloroethane	+++++ 0.1766	0.1861 0.1783	0.1601 0.1650	0.1429 0.1708	0.1598	Ave		0.1674				8.1		15.0			
Tetrachloroethene	+++++ 0.5906	0.5306 0.5832	0.5602 0.5745	0.4554 0.5735	0.5370	Ave		0.5506				8.0		15.0			
1,3-Dichloropropane	+++++ 1.4087	1.3886 1.4138	1.3509 1.3130	1.1641 1.3412	1.3210	Ave		1.3377				6.0		15.0			
2-Hexanone	+++++ 0.8130	0.8447 0.8516	0.7605 0.7715	0.6888 0.8101	0.7760	Ave		0.7895				6.7		15.0			
Chlorodibromomethane	+++++ 0.7710	0.7739 0.7781	0.6969 0.7239	0.6608 0.7472	0.7290	Ave		0.7351				5.6		15.0			
1,2-Dibromoethane	+++++ 0.7690	0.7844 0.7764	0.7785 0.7078	0.6335 0.7303	0.7326	Ave		0.7391				6.9		15.0			
1-Chlorohexane	+++++ 1.0856	1.6826 1.0737	1.1653 1.0668	0.9984 1.0573	1.0266	Lin2	0.4616	1.0112							0.9900		0.9900
Chlorobenzene	+++++ 2.1481	2.1224 2.1503	2.2146 2.0526	1.8848 2.0930	2.0232	Ave		2.0861			0.3000	4.8		15.0			
1,1,1,2-Tetrachloroethane	+++++ 0.7345	0.7806 0.7377	0.7422 0.7086	0.6234 0.7169	0.6804	Ave		0.7155				6.6		15.0			
Ethylbenzene	+++++ 1.2062	1.3491 1.2059	1.2218 1.1726	1.0156 1.2004	1.1402	Ave		1.1890				7.8		30.0			
m-Xylene & p-Xylene	+++++ 1.4938	1.4911 1.4838	1.5639 1.4364	1.3015 1.4504	1.3929	Ave		1.4517				5.4		15.0			
o-Xylene	+++++ 1.4714	1.7037 1.4627	1.5426 1.4038	1.2093 1.4231	1.3850	Ave		1.4502				9.7		15.0			
Styrene	+++++ 2.5421	2.5780 2.5041	2.5084 2.4062	2.1417 2.4547	2.3169	Ave		2.4315				5.9		15.0			
Bromoform	+++++ 0.4889	0.5108 0.4887	0.4225 0.4522	0.3890 0.4761	0.4373	Ave		0.4582			0.1000	8.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Isopropylbenzene	+++++ 2.2400	2.1089 2.2734	2.1625 2.1563	1.8352 2.2362	2.0581	Ave		2.1338				6.6		15.0			
Cyclohexanone	+++++ 0.0498	0.0583 0.0535	0.0501 0.0475	0.0456 0.0487	0.0491	Ave		0.0503				7.8		15.0			
1,1,2,2-Tetrachloroethane	+++++ 0.6745	0.6543 0.6919	0.6159 0.6303	0.5404 0.6630	0.6118	Ave		0.6353			0.3000	7.5		15.0			
Bromobenzene	+++++ 0.5237	0.5316 0.5258	0.4967 0.4882	0.4284 0.5183	0.4905	Ave		0.5004				6.7		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1822	0.2775 0.2047	0.1639 0.1720	0.1203 0.1926	0.1404	Lin1	-0.024	0.1873							0.9930		0.9900
1,2,3-Trichloropropane	+++++ 0.1990	0.2000 0.2051	0.1957 0.1882	0.1754 0.1984	0.1912	Ave		0.1941				4.7		15.0			
N-Propylbenzene	+++++ 0.6135	0.5780 0.6260	0.5685 0.5887	0.4788 0.6095	0.5505	Ave		0.5767				8.1		15.0			
2-Chlorotoluene	+++++ 0.5131	0.5038 0.5131	0.5044 0.4931	0.4468 0.5051	0.4655	Ave		0.4931				4.9		15.0			
1,3,5-Trimethylbenzene	+++++ 1.8427	1.8308 1.8793	1.7978 1.7975	1.5296 1.8270	1.6896	Ave		1.7743				6.4		15.0			
4-Chlorotoluene	+++++ 0.5384	0.5922 0.5387	0.5320 0.5117	0.4552 0.5343	0.4958	Ave		0.5248				7.5		15.0			
tert-Butylbenzene	+++++ 1.5033	1.4874 1.5371	1.3829 1.4655	1.2503 1.4877	1.3711	Ave		1.4357				6.6		15.0			
1,2,4-Trimethylbenzene	+++++ 1.9481	1.9454 1.9573	1.9349 1.8459	1.6495 1.8946	1.7821	Ave		1.8697				5.8		15.0			
sec-Butylbenzene	+++++ 0.4171	0.4185 0.4333	0.3879 0.4079	0.3181 0.4130	0.3877	Ave		0.3979				9.0		15.0			
1,3-Dichlorobenzene	+++++ 0.9749	0.9359 0.9808	0.9647 0.9256	0.8324 0.9562	0.9217	Ave		0.9365				5.1		15.0			
4-Isopropyltoluene	+++++ 1.8780	1.8432 1.8803	1.7977 1.8023	1.5032 1.8120	1.6891	Ave		1.7757				7.1		15.0			
1,4-Dichlorobenzene	+++++ 1.0048	1.2325 1.0093	1.0360 0.9562	0.8474 0.9839	0.9285	Ave		0.9998				11.1		15.0			
n-Butylbenzene	+++++ 1.6744	1.8374 1.6786	1.6020 1.6127	1.3797 1.6109	1.5391	Ave		1.6169				8.0		15.0			
1,2-Dichlorobenzene	+++++ 0.9430	0.9467 0.9323	0.8739 0.8832	0.7732 0.9081	0.8960	Ave		0.8946				6.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dibromo-3-Chloropropane	+++++ 0.1345	0.1346 0.1388	0.1277 0.1254	0.1128 0.1338	0.1226	Ave		0.1288				6.6		15.0			
1,2,4-Trichlorobenzene	+++++ 0.5129	0.5450 0.5170	0.5062 0.4849	0.4466 0.4800	0.5174	Ave		0.5013				6.0		15.0			
Hexachlorobutadiene	+++++ 0.1933	0.2536 0.1942	0.1864 0.1847	0.1678 0.1811	0.1884	Ave		0.1937				13.2		15.0			
Naphthalene	+++++ 1.6469	1.9880 1.7193	1.5643 1.5563	1.5690 1.5566	1.7197	Ave		1.6650				8.9		15.0			
1,2,3-Trichlorobenzene	+++++ 0.4265	0.4806 0.4309	0.4286 0.4020	0.3932 0.4016	0.4402	Ave		0.4254				6.6		15.0			
Dibromofluoromethane (Surr)	+++++ 0.2377	0.2416 0.2394	0.2393 0.2358	0.2365 0.2362	0.2372	Ave		0.2380				0.8		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.3240	0.3166 0.3279	0.3157 0.3229	0.3207 0.3255	0.3269	Ave		0.3225				1.4		15.0			
Toluene-d8 (Surr)	+++++ 4.2424	4.3382 4.2182	4.3702 4.2720	4.3070 4.2521	4.3319	Ave		4.2915				1.2		15.0			
4-Bromofluorobenzene (Surr)	+++++ 0.9660	0.9742 0.9852	0.9857 0.9863	0.9623 1.0080	0.9899	Ave		0.9822				1.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-609046/42	MS1_8195.D
Level 2	IC 280-609046/41	MS1_8196.D
Level 3	IC 280-609046/40	MS1_8197.D
Level 4	IC 280-609046/39	MS1_8190.D
Level 5	IC 280-609046/38	MS1_8189.D
Level 6	ICIS 280-609046/37	MS1_8188.D
Level 7	IC 280-609046/36	MS1_8187.D
Level 8	IC 280-609046/35	MS1_8186.D
Level 9	IC 280-609046/34	MS1_8185.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Lin1	+++++ 293377	+++++ 480016	8280 624434	15343 +++++	32552	+++++ 50.0	+++++ 75.0	2.00 100	5.00 +++++	10.0
Chloromethane	FB	Ave	+++++ 299134	5627 492119	10752 658315	23489 1146568	44978	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Lin1	+++++ 296881	5313 494925	9868 654278	20261 1136394	40198	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Lin1	+++++ 166480	4100 259446	7404 336200	14338 581648	28670	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloroethane	FB	Lin1	+++++ 175894	3329 297738	6805 391825	12957 722868	24445	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Lin1	+++++ 416020	9220 681672	14487 901882	30123 1610413	59297	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Lin1	+++++ 335760	+++++ 560896	11067 727237	18418 +++++	42332	+++++ 50.0	+++++ 75.0	2.00 100	5.00 +++++	10.0
Ethyl ether	FB	Ave	+++++ 230588	4346 347375	8628 437510	18938 890512	40526	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acrolein	FB	Ave	+++++ 348281	6422 553565	11662 662586	28549 1384162	63138	+++++ 494	9.88 741	19.8 988	49.4 1975	98.8
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	+++++ 153448	2527 232637	5260 301893	10656 610734	26071	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloroethene	FB	Ave	+++++ 199289	4067 302486	7427 392812	14443 806070	35523	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acetone	FB	Lin1	+++++ 436906	13236 688997	18485 827295	40209 1736182	82478	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Iodomethane	FB	Ave	+++++ 278094	5306 441872	8303 562717	19647 1127329	43480	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Carbon disulfide	FB	Ave	+++++ 709748	13744 1080063	25274 1424326	60376 2833171	130932	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methyl acetate	FB	Ave	+++++ 499906	10464 781474	18609 951369	39369 1992761	89165	+++++ 100	2.00 150	4.00 200	10.0 400	20.0
Allyl chloride	FB	Lin2	+++++ 472342	12841 711089	19300 919740	45273 1714057	90496	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Methylene Chloride	FB	Ave	+++++ 240886	4898 359908	10321 462506	19995 937129	45615	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Methyl-2-propanol	FB	Ave	+++++ 362373	6364 607099	11894 737662	28800 1593872	65730	+++++ 500	10.0 750	20.0 1000	50.0 2000	100
Acrylonitrile	FB	Ave	+++++ 1200193	21519 1888831	38749 2325742	95937 4814243	219595	+++++ 500	10.0 750	20.0 1000	50.0 2000	100
Methyl tert-butyl ether	FB	Ave	+++++ 804663	13691 1221109	26279 1527672	61754 3165217	144967	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,2-Dichloroethene	FB	Ave	+++++ 227940	4587 343029	8777 444118	19488 901347	40722	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexane	CBNZd 5	Ave	+++++ 356437	4950 542255	10578 717563	23943 1445532	59887	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl acetate	FB	Ave	+++++ 1270879	21370 1908000	42115 2398752	97660 4614048	230408	+++++ 100	2.00 150	4.00 200	10.0 400	20.0
1,1-Dichloroethane	FB	Ave	+++++ 467391	8640 695507	16478 905104	37614 1846919	83166	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Butanone (MEK)	FB	Ave	+++++ 658252	14037 1056420	25986 1280198	57722 2747075	120299	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
2,2-Dichloropropane	FB	Ave	+++++ 390647	7905 593403	13947 776875	30032 1587863	67595	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,2-Dichloroethene	FB	Ave	+++++ 249081	5004 374608	8648 486761	19553 994482	46801	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butyl Alcohol	FB	Ave	+++++ 728372	11620 1231361	24716 1502733	61078 3200417	134443	+++++ 1200	24.0 1800	48.0 2400	120 4800	240
Chlorobromomethane	FB	Ave	+++++ 112253	2335 166451	4150 211633	9505 438618	21570	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Tetrahydrofuran	FB	Ave	+++++ 217418	3532 350157	7924 432625	17999 915618	38533	+++++ 100	2.00 150	4.00 200	10.0 400	20.0
Chloroform	FB	Ave	+++++ 419777	7643 628477	15079 815661	36302 1666168	77366	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1-Trichloroethane	FB	Ave	+++++ 367595	5514 551341	12435 726429	27811 1460386	63268	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexane	FB	Ave	+++++ 477853	7808 716636	16235 932276	31689 1894971	80200	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloropropene	FB	Ave	+++++ 363275	5667 538388	11445 706003	27026 1441748	62881	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon tetrachloride	FB	Ave	+++++ 305444	5266 456501	10794 604516	22022 1209462	52733	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isobutyl alcohol	FB	Ave	+++++ 317663	5442 523741	11065 645356	26236 1393943	56617	+++++ 1250	25.0 1875	50.0 2500	125 5000	250
Benzene	FB	Ave	+++++ 1014686	17562 1505800	36558 1956686	83917 3966484	183845	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloroethane	FB	Ave	+++++ 376358	8144 568512	14424 715722	31852 1472151	73647	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Heptane	FB	Ave	+++++ 299484	7141 455187	11022 609990	23653 1243067	50231	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichloroethene	CBNZd5	Ave	+++++ 240807	4917 363010	8814 468609	19439 959750	43575	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Pentanone	FB	Ave	+++++ 844947	15244 1351049	28660 1633837	69645 3489604	154490	+++++ 160	3.20 240	6.40 320	16.0 640	32.0
Methylcyclohexane	FB	Ave	+++++ 339853	5951 512848	12191 669742	22939 1372603	55764	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloropropane	FB	Ave	+++++ 273773	5523 417006	9824 526844	22487 1089915	48139	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dioxane	FB	Ave	+++++ 82023	2043 131201	3018 157931	7731 329229	16688	+++++ 1000	20.0 1500	40.0 2000	100 4000	200
Dibromomethane	FB	Ave	+++++ 150760	2780 226292	5598 282677	12684 591313	28268	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorobromomethane	FB	Ave	+++++ 336974	6380 499439	11605 637135	25716 1326209	58554	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Lin1	+++++ 193886	3433 313234	5975 393276	13496 747736	25014	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,3-Dichloropropene	CBNZd5	Ave	+++++ 442345	8062 661164	15699 841189	34476 1728698	80466	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	+++++ 1342534	22176 2133286	46353 2581099	108161 5457686	244936	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Toluene	FB	Ave	+++++ 1044024	18770 1577223	36750 2043863	83254 4184914	189507	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,3-Dichloropropene	FB	Ave	+++++ 412532	7656 626283	14538 791020	32204 1633783	75016	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl methacrylate	CBNZd5	Ave	+++++ 369224	7058 566907	12702 701509	30227 1483361	68874	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloroethane	FB	Ave	+++++ 220185	4227 333962	7390 416554	17253 866237	39321	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Tetrachloroethene	CBNZd5	Ave	+++++ 173498	2795 258786	5971 342499	12946 693849	30631	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichloropropane	CBNZd5	Ave	+++++ 413861	7315 627334	14399 782841	33095 1622717	75352	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Hexanone	CBNZd5	Ave	+++++ 955404	17800 1511600	32424 1839952	78327 3920584	177057	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Chlorodibromomethane	CBNZd5	Ave	+++++ 226494	4077 345253	7428 431605	18786 903998	41585	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromoethane	CBNZd5	Ave	+++++ 225917	4132 344536	8298 422018	18011 883541	41788	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1-Chlorohexane	CBNZd5	Lin2	+++++ 255150	7091 381148	9937 508830	22708 1023341	46847	+++++ 40.0	0.800 60.0	1.60 80.0	4.00 160	8.00
Chlorobenzene	CBNZd5	Ave	+++++ 631063	11181 954178	23605 1223778	53582 2532349	115405	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1,2-Tetrachloroethane	CBNZd5	Ave	+++++ 215783	4112 327342	7911 422458	17724 867353	38809	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethylbenzene	CBNZd5	Ave	+++++ 354343	7107 535084	13023 699138	28872 1452410	65038	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
m-Xylene & p-Xylene	CBNZd5	Ave	+++++ 438839	7855 658394	16669 856401	37001 1754854	79452	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
o-Xylene	CBNZd5	Ave	+++++ 432263	8975 649040	16442 836959	34379 1721808	79005	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Styrene	CBNZd5	Ave	+++++ 746806	13581 1111148	26737 1434598	60888 2970001	132159	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromoform	CBNZd5	Ave	+++++ 143633	2691 216846	4503 269605	11060 576090	24943	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isopropylbenzene	DCBd4	Ave	+++++ 1064981	18155 1607141	37534 2079344	84155 4237189	193439	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexanone	CBNZd5	Ave	+++++	9218	16010	38876	84088	+++++	30.0	60.0	150	300

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			439304	712016	849071	1768516		1500	2250	3000	6000	
1,1,2,2-Tetrachloroethane	DCBd4	Ave	+++++ 320698	5633 489139	10690 607831	24783 1256198	57506	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromobenzene	DCBd4	Ave	+++++ 248981	4576 371717	8621 470790	19645 982020	46102	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,4-Dichloro-2-butene	DCBd4	Lin1	+++++ 86613	2389 144742	2844 165837	5517 364909	13199	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichloropropane	DCBd4	Ave	+++++ 94619	1722 144995	3397 181461	8043 375927	17975	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
N-Propylbenzene	DCBd4	Ave	+++++ 291700	4976 442577	9868 567636	21958 1154805	51743	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chlorotoluene	DCBd4	Ave	+++++ 243950	4337 362739	8754 475481	20491 957039	43750	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3,5-Trimethylbenzene	DCBd4	Ave	+++++ 876117	15761 1328526	31204 1733333	70142 3461717	158804	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Chlorotoluene	DCBd4	Ave	+++++ 255964	5098 380842	9233 493473	20876 1012452	46597	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
tert-Butylbenzene	DCBd4	Ave	+++++ 714737	12805 1086646	24002 1413171	57337 2818928	128871	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trimethylbenzene	DCBd4	Ave	+++++ 926204	16747 1383717	33584 1780039	75639 3589915	167498	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butylbenzene	DCBd4	Ave	+++++ 198299	3603 306348	6733 393358	14585 782540	36444	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichlorobenzene	DCBd4	Ave	+++++ 463519	8057 693390	16744 892582	38173 1811855	86629	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Isopropyltoluene	DCBd4	Ave	+++++ 892902	15868 1329261	31202 1737983	68934 3433281	158755	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dichlorobenzene	DCBd4	Ave	+++++ 477730	10610 713513	17981 922076	38861 1864279	87268	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Butylbenzene	DCBd4	Ave	+++++ 796092	15818 1186682	27805 1555156	63269 3052291	144659	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichlorobenzene	DCBd4	Ave	+++++ 448355	8150 659084	15168 851704	35458 1720754	84218	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromo-3-Chloropropane	DCBd4	Ave	+++++ 63963	1159 98157	2217 120903	5172 253472	11521	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trichlorobenzene	DCBd4	Ave	+++++ 243849	4692 365523	8786 467570	20481 909583	48632	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexachlorobutadiene	DCBd4	Ave	+++++ 91889	2183 137292	3236 178061	7695 343191	17705	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Naphthalene	DCBd4	Ave	+++++ 783012	17114 1215428	27151 1500699	71950 2949448	161630	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trichlorobenzene	DCBd4	Ave	+++++ 202794	4137 304589	7439 387611	18032 761002	41374	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 296375	274378 298917	276082 297535	285621 299531	291815	+++++ 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	+++++ 404022	359476 409440	364248 407462	387212 412664	402143	+++++ 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	+++++ 1246321	1142694 1247847	1164538 1273520	1224432 1286162	1235474	+++++ 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	+++++ 459278	419344 464331	427731 475550	441292 477484	465202	+++++ 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8185.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 18-Apr-2023 11:03:30 ALS Bottle#: 3 Worklist Smp#: 34
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:27 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 18-Apr-2023 11:39:13

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	98	1267906	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	302477	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	473698	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	299531	50.0	49.6	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	412664	50.0	50.5	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1286162	50.0	49.5	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	477484	50.0	51.3	
	11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	1063793	200.0	169.9	
	12 Chloromethane	50	2.009	2.009	0.000	99	1146568	200.0	195.8	
	13 Vinyl chloride	62	2.135	2.135	0.000	98	1136394	200.0	187.2	
	15 Bromomethane	94	2.498	2.498	0.000	91	581648	200.0	183.8	
	16 Chloroethane	64	2.624	2.623	0.001	99	722868	200.0	193.6	
	17 Dichlorofluoromethane	67	2.861	2.861	0.000	98	1610413	200.0	189.8	
	18 Trichlorofluoromethane	101	2.889	2.889	0.000	97	1221427	200.0	168.0	
	20 Ethyl ether	59	3.182	3.182	0.000	94	890512	200.0	198.0	
	22 Acrolein	56	3.322	3.322	0.000	99	1384162	1975.0	2016.3	
	24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	96	610734	200.0	212.5	
	23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	806070	200.0	205.1	
	25 Acetone	43	3.448	3.447	0.001	98	1736182	800.0	799.3	
	26 Iodomethane	142	3.559	3.559	0.000	100	1127329	200.0	214.6	
	28 Carbon disulfide	76	3.629	3.629	0.000	100	2833171	200.0	200.7	
	30 Methyl acetate	43	3.755	3.755	0.000	98	1992761	400.0	400.4	
	31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	1714057	200.0	190.4	
	32 Methylene Chloride	84	3.894	3.894	0.000	98	937129	200.0	191.5	
	33 2-Methyl-2-propanol	59	3.978	3.964	0.014	98	1593872	2000.0	2220.3	
	34 Acrylonitrile	53	4.104	4.104	0.000	97	4814243	2000.0	2076.2	
	35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	3165217	200.0	208.1	
	36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	94	901347	200.0	197.7	
	37 Hexane	57	4.383	4.383	0.000	96	1445532	200.0	220.8	
	39 Vinyl acetate	43	4.523	4.523	0.000	97	4614048	400.0	388.4	
	40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	1846919	200.0	204.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	2747075	800.0	808.3	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	994482	200.0	202.6	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	1587863	200.0	206.6	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	3200417	4800.0	5305.7	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	915618	400.0	429.2	
53 Chlorobromomethane	128	5.249	5.249	0.000	94	438618	200.0	195.4	
55 Chloroform	83	5.319	5.319	0.000	96	1666168	200.0	202.0	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	1460386	200.0	212.9	
57 Cyclohexane	56	5.542	5.542	0.000	95	1894971	200.0	214.1	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	1441748	200.0	214.6	
59 Carbon tetrachloride	117	5.612	5.612	0.000	84	1209462	200.0	208.6	
60 Isobutyl alcohol	41	5.668	5.654	0.014	93	1393943	5000.0	5520.3	
63 Benzene	78	5.780	5.794	-0.014	99	3966484	200.0	202.4	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	1472151	200.0	192.4	
66 n-Heptane	43	6.003	6.003	0.000	96	1243067	200.0	203.9	
68 Trichloroethene	95	6.353	6.352	0.001	96	959750	200.0	197.5	
69 2-Pentanone	43	6.478	6.478	0.000	98	3489604	640.0	673.5	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	1372603	200.0	213.8	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	94	1089915	200.0	201.8	
73 1,4-Dioxane	88	6.632	6.632	0.000	97	329229	4000.0	3773.6	
74 Dibromomethane	93	6.660	6.660	0.000	93	591313	200.0	199.8	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	1326209	200.0	205.7	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	747736	200.0	193.0	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	90	1728698	200.0	199.4	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	98	5457686	800.0	841.3	
82 Toluene	91	7.484	7.484	0.000	97	4184914	200.0	206.4	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	1633783	200.0	204.2	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	1483361	200.0	201.4	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	866237	200.0	204.0	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	693849	200.0	208.3	
90 1,3-Dichloropropane	76	8.015	8.014	0.000	97	1622717	200.0	200.5	
91 2-Hexanone	43	8.042	8.042	0.000	98	3920584	800.0	820.8	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	903998	200.0	203.3	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	883541	200.0	197.6	
98 1-Chlorohexane	91	8.755	8.755	0.000	90	1023341	160.0	166.8	
99 Chlorobenzene	112	8.797	8.797	0.000	91	2532349	200.0	200.7	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	867353	200.0	200.4	
101 Ethylbenzene	106	8.880	8.880	0.000	99	1452410	200.0	201.9	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	1754854	200.0	199.8	
103 o-Xylene	106	9.369	9.369	0.000	98	1721808	200.0	196.3	
104 Styrene	104	9.397	9.397	0.000	96	2970001	200.0	201.9	
106 Bromoform	173	9.579	9.579	0.000	94	576090	200.0	207.8	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	4237189	200.0	209.6	
109 Cyclohexanone	55	9.830	9.830	0.000	95	1768516	6000.0	5808.4	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	1256198	200.0	208.7	
111 Bromobenzene	156	10.054	10.053	0.001	98	982020	200.0	207.1	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	85	364909	200.0	205.7	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	375927	200.0	204.4	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	1154805	200.0	211.4	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	957039	200.0	204.9	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	3461717	200.0	205.9	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	1012452	200.0	203.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	2818928	200.0	207.3	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	3589915	200.0	202.7	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	782540	200.0	207.6	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	1811855	200.0	204.2	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	3433281	200.0	204.1	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	1864279	200.0	196.8	
125 n-Butylbenzene	91	11.408	11.408	0.000	99	3052291	200.0	199.3	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	97	1720754	200.0	203.0	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	76	253472	200.0	207.8	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	909583	200.0	191.5	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	343191	200.0	187.0	
132 Naphthalene	128	13.336	13.336	0.000	98	2949448	200.0	187.0	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	761002	200.0	188.8	
S 149 1,2-Dichloroethene, Total (URS)	96				0		400.0	400.3	
S 151 Trihalomethanes, Total	1				0		800.0	818.8	
S 150 1,2-Dichloroethene, Total	1				0		400.0	400.3	
S 156 1,3-Dichloropropene, Total	1				0		400.0	403.6	
S 155 Xylenes, Total	106				0		400.0	396.1	
S 153 Xylenes, Total (URS)	1				0		400.0	396.1	
S 152 Total BTEX	1				0			1006.8	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added: 100.00	Units: uL	
MV-Gas A_00151	Amount Added: 40.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

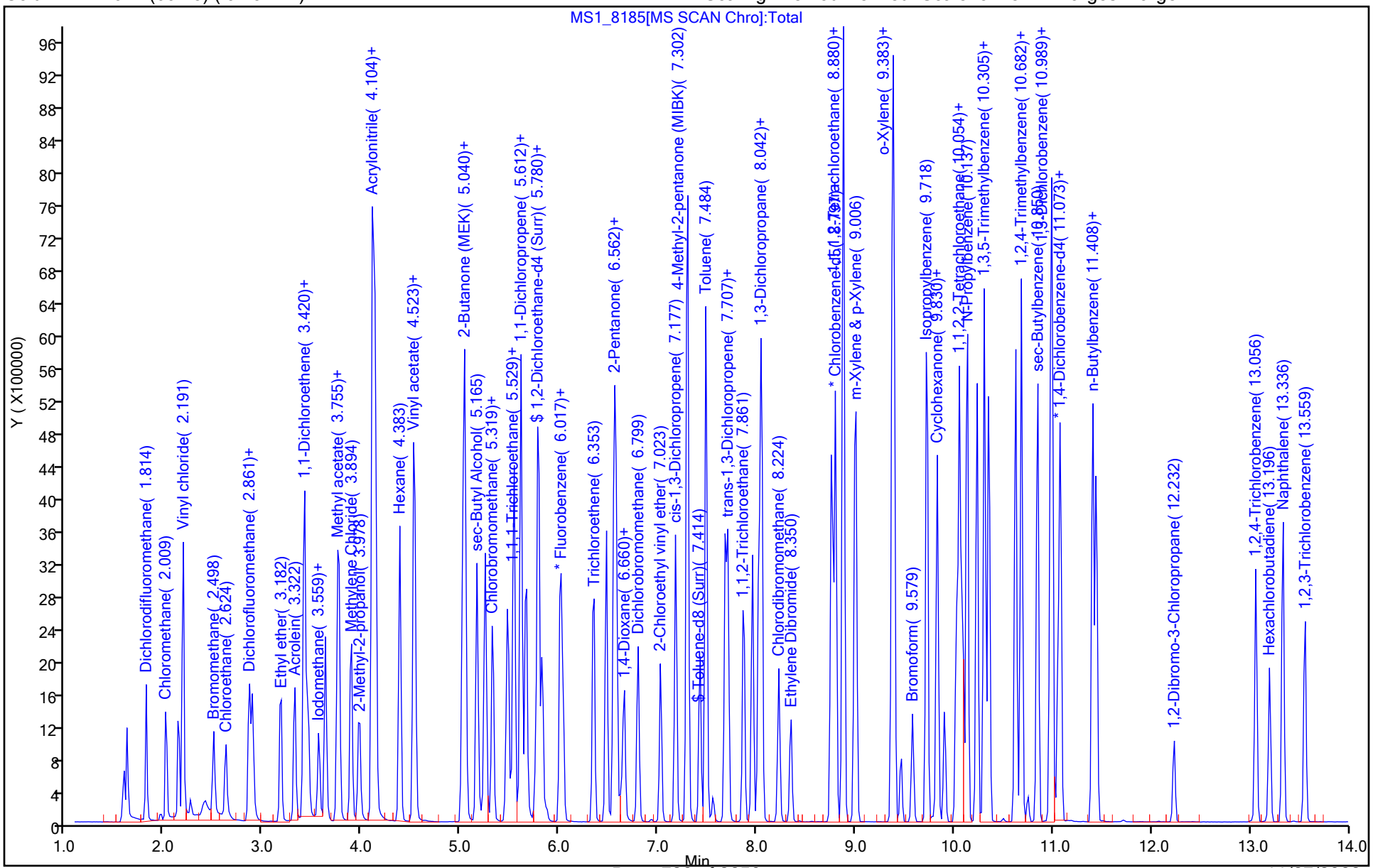
Report Date: 19-Apr-2023 07:39:28 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8185.D

Injection Date:	18-Apr-2023 11:03:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	34
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8186.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 18-Apr-2023 11:24:30 ALS Bottle#: 4 Worklist Smp#: 35
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:30 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 11:52:53

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	98	1262070	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	298110	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	482150	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	297535	50.0	49.5	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	407462	50.0	50.1	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1273520	50.0	49.8	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	475550	50.0	50.2	
	11 Dichlorodifluoromethane	85	1.814	1.813	0.001	98	624434	100.0	100.8	
	12 Chloromethane	50	2.009	2.009	0.000	99	658315	100.0	112.9	
	13 Vinyl chloride	62	2.135	2.135	0.000	98	654278	100.0	108.4	
	15 Bromomethane	94	2.498	2.498	0.000	92	336200	100.0	106.6	
	16 Chloroethane	64	2.624	2.623	0.001	99	391825	100.0	105.6	
	17 Dichlorofluoromethane	67	2.861	2.861	0.000	98	901882	100.0	106.9	
	18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	727237	100.0	101.0	
	20 Ethyl ether	59	3.182	3.182	0.000	94	437510	100.0	97.7	
	22 Acrolein	56	3.322	3.322	0.000	99	662586	987.5	969.6	
	23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	392812	100.0	100.4	
	24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	94	301893	100.0	105.5	
	25 Acetone	43	3.448	3.447	0.001	98	827295	400.0	381.6	
	26 Iodomethane	142	3.559	3.559	0.000	100	562717	100.0	107.6	
	28 Carbon disulfide	76	3.629	3.629	0.000	100	1424326	100.0	101.4	
	30 Methyl acetate	43	3.755	3.755	0.000	98	951369	200.0	192.0	
	31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	919740	100.0	102.4	
	32 Methylene Chloride	84	3.895	3.894	0.001	97	462506	100.0	95.0	
	33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	737662	1000.0	1032.3	
	34 Acrylonitrile	53	4.104	4.104	0.000	98	2325742	1000.0	1007.6	
	35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	1527672	100.0	100.9	
	36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	444118	100.0	97.8	
	37 Hexane	57	4.383	4.383	0.000	96	717563	100.0	111.2	
	39 Vinyl acetate	43	4.523	4.523	0.000	97	2398752	200.0	202.8	
	40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	905104	100.0	100.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	1280198	400.0	378.4	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	486761	100.0	99.6	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	776875	100.0	101.6	
51 sec-Butyl Alcohol	45	5.166	5.165	0.001	100	1502733	2400.0	2502.8	
54 Tetrahydrofuran	42	5.249	5.249	0.000	90	432625	200.0	203.7	
53 Chlorobromomethane	128	5.249	5.249	0.000	94	211633	100.0	94.7	
55 Chloroform	83	5.319	5.319	0.000	96	815661	100.0	99.3	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	98	726429	100.0	106.4	
57 Cyclohexane	56	5.543	5.542	0.001	95	932276	100.0	105.8	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	706003	100.0	105.6	
59 Carbon tetrachloride	117	5.612	5.612	0.000	84	604516	100.0	104.8	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	645356	2500.0	2567.5	
63 Benzene	78	5.794	5.794	0.000	98	1956686	100.0	100.3	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	715722	100.0	94.0	
66 n-Heptane	43	6.004	6.003	0.001	97	609990	100.0	100.5	
68 Trichloroethene	95	6.353	6.352	0.001	97	468609	100.0	97.9	
69 2-Pentanone	43	6.478	6.478	0.000	98	1633837	320.0	316.8	
70 Methylcyclohexane	55	6.562	6.548	0.014	95	669742	100.0	104.8	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	93	526844	100.0	98.0	
73 1,4-Dioxane	88	6.632	6.632	0.000	97	157931	2000.0	1818.5	
74 Dibromomethane	93	6.660	6.660	0.000	94	282677	100.0	95.9	
75 Dichlorobromomethane	83	6.800	6.799	0.001	98	637135	100.0	99.3	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	393276	100.0	102.1	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	90	841189	100.0	98.5	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	2581099	400.0	399.7	
82 Toluene	91	7.484	7.484	0.000	97	2043863	100.0	101.3	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	791020	100.0	99.3	
85 Ethyl methacrylate	69	7.707	7.707	0.000	92	701509	100.0	96.6	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	416554	100.0	98.6	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	342499	100.0	104.3	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	98	782841	100.0	98.2	
91 2-Hexanone	43	8.043	8.042	0.001	97	1839952	400.0	390.9	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	431605	100.0	98.5	
96 Ethylene Dibromide	107	8.350	8.350	0.000	97	422018	100.0	95.8	
98 1-Chlorohexane	91	8.755	8.755	0.000	91	508830	80.0	83.9	
99 Chlorobenzene	112	8.797	8.797	0.000	91	1223778	100.0	98.4	
100 1,1,1,2-Tetrachloroethane	131	8.881	8.880	0.001	43	422458	100.0	99.0	
101 Ethylbenzene	106	8.881	8.880	0.001	99	699138	100.0	98.6	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	856401	100.0	98.9	
103 o-Xylene	106	9.369	9.369	0.000	97	836959	100.0	96.8	
104 Styrene	104	9.397	9.397	0.000	96	1434598	100.0	99.0	
106 Bromoform	173	9.579	9.579	0.000	94	269605	100.0	98.7	
107 Isopropylbenzene	105	9.719	9.718	0.001	97	2079344	100.0	101.1	
109 Cyclohexanone	55	9.830	9.830	0.000	96	849071	3000.0	2829.5	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	607831	100.0	99.2	
111 Bromobenzene	156	10.054	10.053	0.001	99	470790	100.0	97.6	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	75	165837	100.0	91.9	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	181461	100.0	96.9	
114 N-Propylbenzene	120	10.138	10.137	0.001	99	567636	100.0	102.1	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	475481	100.0	100.0	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	1733333	100.0	101.3	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	493473	100.0	97.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	1413171	100.0	102.1	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	1780039	100.0	98.7	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	393358	100.0	102.5	
121 1,3-Dichlorobenzene	146	10.976	10.975	0.001	96	892582	100.0	98.8	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	1737983	100.0	101.5	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	922076	100.0	95.6	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	1555156	100.0	99.7	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	851704	100.0	98.7	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	77	120903	100.0	97.4	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	467570	100.0	96.7	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	178061	100.0	95.3	
132 Naphthalene	128	13.336	13.336	0.000	98	1500699	100.0	93.5	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	387611	100.0	94.5	
S 149 1,2-Dichloroethene, Total (URS)	96				0		200.0	197.5	
S 151 Trihalomethanes, Total	1				0		400.0	395.8	
S 150 1,2-Dichloroethene, Total	1				0		200.0	197.5	
S 156 1,3-Dichloropropene, Total	1				0		200.0	197.8	
S 155 Xylenes, Total	106				0		200.0	195.7	
S 153 Xylenes, Total (URS)	1				0		200.0	195.7	
S 152 Total BTEX	1				0			496.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added:	50.00	Units: uL	
MV-Gas A_00151	Amount Added:	20.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 19-Apr-2023 07:39:30 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8186.D

Injection Date: 18-Apr-2023 11:24:30 Instrument ID: VMS_MS1 Operator ID: wickhamt/bustillose

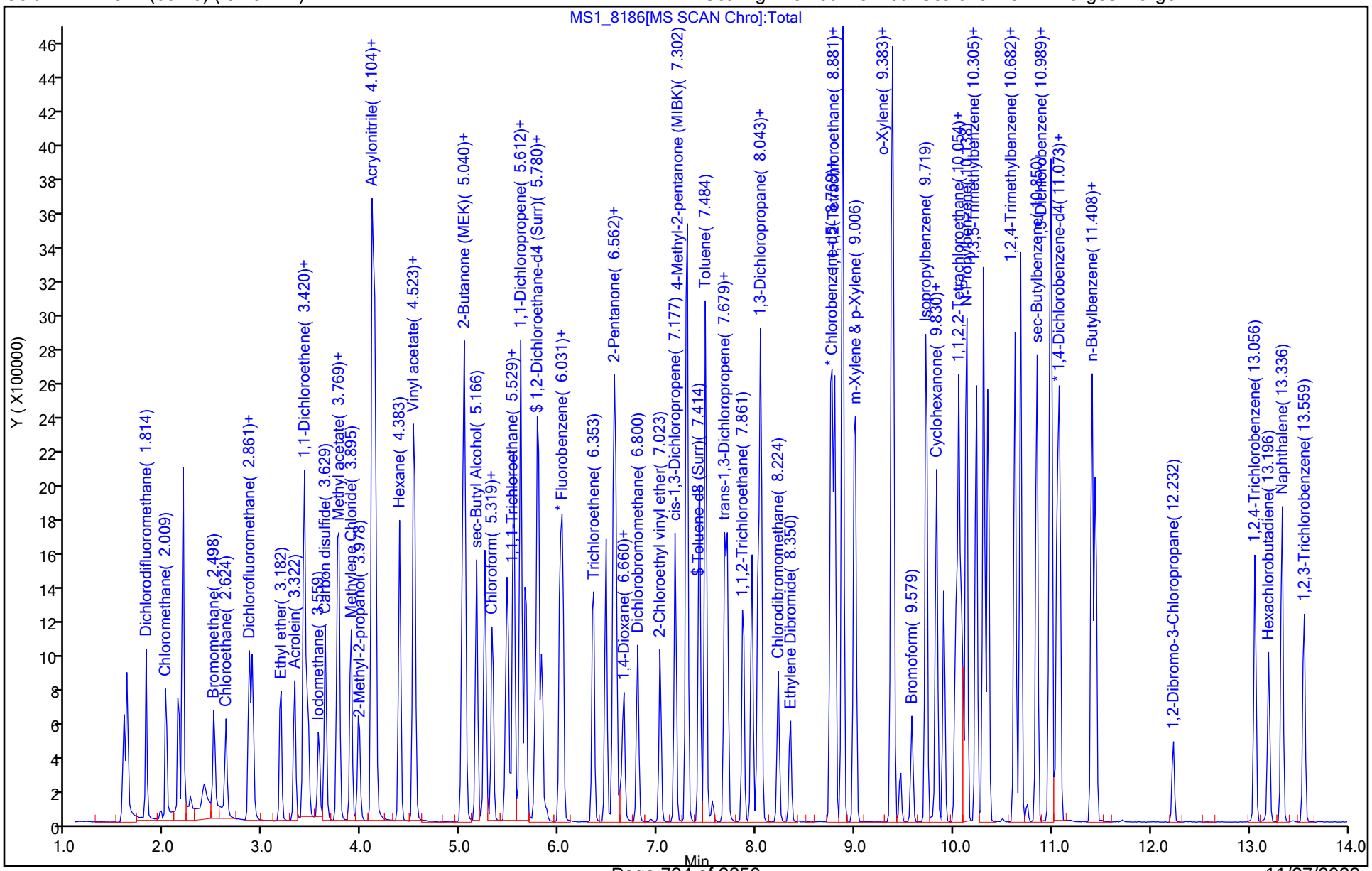
Lims ID: ic Worklist Smp#: 35

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 4

Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8187.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-Apr-2023 11:45:30 ALS Bottle#: 5 Worklist Smp#: 36
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:32 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 12:22:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1248840	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	295823	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	471295	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	298917	50.0	50.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	409440	50.0	50.8	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1247847	50.0	49.1	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	464331	50.0	50.2	
11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	480016	75.0	78.6	
12 Chloromethane	50	2.009	2.009	0.000	99	492119	75.0	85.3	
13 Vinyl chloride	62	2.135	2.135	0.000	98	494925	75.0	83.0	
15 Bromomethane	94	2.498	2.498	0.000	93	259446	75.0	83.0	
16 Chloroethane	64	2.624	2.623	0.001	99	297738	75.0	81.1	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	681672	75.0	81.7	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	560896	75.0	79.0	
20 Ethyl ether	59	3.182	3.182	0.000	94	347375	75.0	78.4	
22 Acrolein	56	3.322	3.322	0.000	99	553565	740.6	818.7	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	95	232637	75.0	82.2	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	302486	75.0	78.1	
25 Acetone	43	3.448	3.447	0.001	98	688997	300.0	320.9	
26 Iodomethane	142	3.559	3.559	0.000	100	441872	75.0	85.4	
28 Carbon disulfide	76	3.629	3.629	0.000	100	1080063	75.0	77.7	
30 Methyl acetate	43	3.755	3.755	0.000	99	781474	150.0	159.4	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	711089	75.0	79.9	
32 Methylene Chloride	84	3.895	3.894	0.001	98	359908	75.0	74.7	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	607099	750.0	858.6	
34 Acrylonitrile	53	4.104	4.104	0.000	97	1888831	750.0	827.0	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	1221109	75.0	81.5	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	343029	75.0	76.4	
37 Hexane	57	4.383	4.383	0.000	95	542255	75.0	84.7	
39 Vinyl acetate	43	4.523	4.523	0.000	97	1908000	150.0	163.0	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	695507	75.0	78.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	1056420	300.0	315.6	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	374608	75.0	77.5	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	593403	75.0	78.4	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	1231361	1800.0	2072.5	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	350157	150.0	166.6	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	166451	75.0	75.3	
55 Chloroform	83	5.319	5.319	0.000	96	628477	75.0	77.4	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	551341	75.0	81.6	
57 Cyclohexane	56	5.543	5.542	0.001	95	716636	75.0	82.2	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	538388	75.0	81.4	
59 Carbon tetrachloride	117	5.612	5.612	0.000	83	456501	75.0	79.9	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	523741	1875.0	2105.8	
63 Benzene	78	5.780	5.794	-0.014	99	1505800	75.0	78.0	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	568512	75.0	75.5	
66 n-Heptane	43	6.003	6.003	0.000	97	455187	75.0	75.8	
68 Trichloroethene	95	6.353	6.352	0.001	96	363010	75.0	76.4	
69 2-Pentanone	43	6.478	6.478	0.000	98	1351049	240.0	264.7	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	512848	75.0	81.1	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	93	417006	75.0	78.4	
73 1,4-Dioxane	88	6.632	6.632	0.000	96	131201	1500.0	1526.8	
74 Dibromomethane	93	6.660	6.660	0.000	94	226292	75.0	77.6	
75 Dichlorobromomethane	83	6.800	6.799	0.001	98	499439	75.0	78.6	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	94	313234	75.0	82.3	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	91	661164	75.0	78.0	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	2133286	300.0	333.9	
82 Toluene	91	7.484	7.484	0.000	97	1577223	75.0	79.0	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	626283	75.0	79.5	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	566907	75.0	78.7	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	333962	75.0	79.9	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	258786	75.0	79.4	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	97	627334	75.0	79.3	
91 2-Hexanone	43	8.043	8.042	0.000	97	1511600	300.0	323.6	
95 Chlorodibromomethane	129	8.224	8.224	0.000	91	345253	75.0	79.4	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	344536	75.0	78.8	
98 1-Chlorohexane	91	8.755	8.755	0.000	91	381148	60.0	63.2	
99 Chlorobenzene	112	8.797	8.797	0.000	91	954178	75.0	77.3	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	327342	75.0	77.3	
101 Ethylbenzene	106	8.880	8.880	0.000	99	535084	75.0	76.1	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	658394	75.0	76.7	
103 o-Xylene	106	9.369	9.369	0.000	97	649040	75.0	75.6	
104 Styrene	104	9.397	9.397	0.000	95	1111148	75.0	77.2	
106 Bromoform	173	9.579	9.579	0.000	94	216846	75.0	80.0	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	1607141	75.0	79.9	
109 Cyclohexanone	55	9.830	9.830	0.000	95	712016	2250.0	2391.1	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	489139	75.0	81.7	
111 Bromobenzene	156	10.054	10.053	0.001	98	371717	75.0	78.8	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	94	144742	75.0	82.1	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	144995	75.0	79.2	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	442577	75.0	81.4	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	362739	75.0	78.0	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	1328526	75.0	79.4	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	380842	75.0	77.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	1086646	75.0	80.3	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	1383717	75.0	78.5	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	306348	75.0	81.7	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	693390	75.0	78.5	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	1329261	75.0	79.4	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	713513	75.0	75.7	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	1186682	75.0	77.9	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	659084	75.0	78.2	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	76	98157	75.0	80.9	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	365523	75.0	77.4	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	137292	75.0	75.2	
132 Naphthalene	128	13.336	13.336	0.000	98	1215428	75.0	77.4	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	304589	75.0	76.0	
S 149 1,2-Dichloroethene, Total (URS)	96				0		150.0	153.9	
S 151 Trihalomethanes, Total	1				0		300.0	315.4	
S 150 1,2-Dichloroethene, Total	1				0		150.0	153.9	
S 156 1,3-Dichloropropene, Total	1				0		150.0	157.5	
S 155 Xylenes, Total	106				0		150.0	152.3	
S 153 Xylenes, Total (URS)	1				0		150.0	152.3	
S 152 Total BTEX	1				0			385.4	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added: 37.50	Units: uL	
MV-Gas A_00151	Amount Added: 15.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

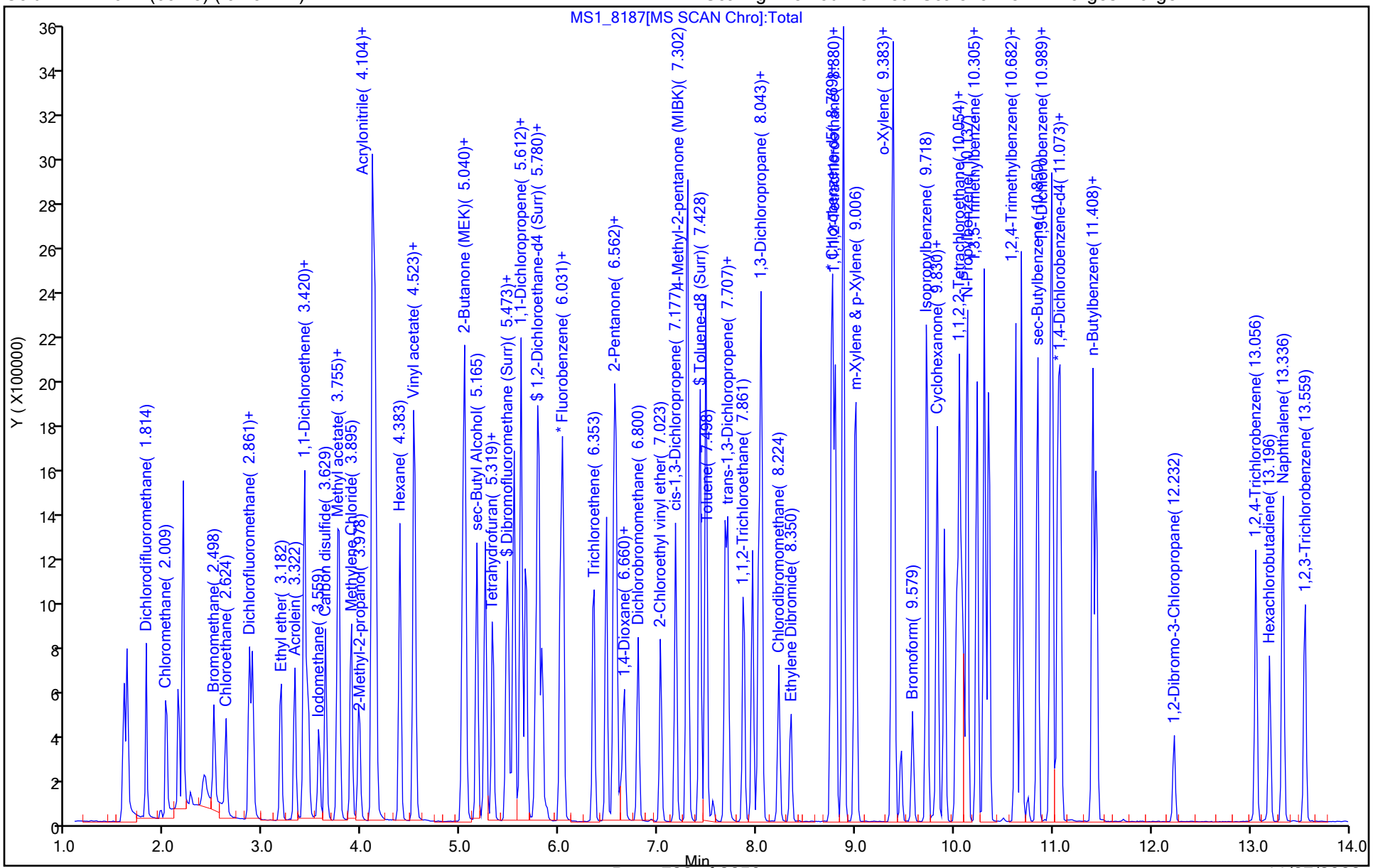
Report Date: 19-Apr-2023 07:39:33 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8187.D

Injection Date:	18-Apr-2023 11:45:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	36
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8188.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 18-Apr-2023 12:06:30 ALS Bottle#: 6 Worklist Smp#: 37
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icis
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:35 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 12:49:25

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	98	1247062	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	293780	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	475448	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	296375	50.0	49.9	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	404022	50.0	50.2	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1246321	50.0	49.4	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	459278	50.0	49.2	
	11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	293377	50.0	48.7	
	12 Chloromethane	50	2.009	2.009	0.000	99	299134	50.0	51.9	
	13 Vinyl chloride	62	2.135	2.135	0.000	98	296881	50.0	50.0	
	15 Bromomethane	94	2.498	2.498	0.000	92	166480	50.0	53.2	
	16 Chloroethane	64	2.623	2.623	0.000	100	175894	50.0	48.1	
	17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	416020	50.0	50.0	
	18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	335760	50.0	47.9	
	20 Ethyl ether	59	3.182	3.182	0.000	95	230588	50.0	52.1	
	22 Acrolein	56	3.322	3.322	0.000	99	348281	493.8	515.8	
	23 1,1-Dichloroethene	96	3.420	3.420	0.000	94	199289	50.0	51.6	
	24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	95	153448	50.0	54.3	
	25 Acetone	43	3.447	3.447	0.000	98	436906	200.0	203.1	
	26 Iodomethane	142	3.559	3.559	0.000	100	278094	50.0	53.8	
	28 Carbon disulfide	76	3.629	3.629	0.000	100	709748	50.0	51.1	
	30 Methyl acetate	43	3.755	3.755	0.000	98	499906	100.0	102.1	
	31 3-Chloro-1-propene	41	3.769	3.769	0.000	87	472342	50.0	53.0	
	32 Methylene Chloride	84	3.894	3.894	0.000	98	240886	50.0	50.1	
	33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	362373	500.0	513.2	
	34 Acrylonitrile	53	4.104	4.104	0.000	98	1200193	500.0	526.2	
	35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	804663	50.0	53.8	
	36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	227940	50.0	50.8	
	37 Hexane	57	4.383	4.383	0.000	96	356437	50.0	56.1	
	39 Vinyl acetate	43	4.523	4.523	0.000	97	1270879	100.0	108.8	
	40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	467391	50.0	52.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	658252	200.0	196.9	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	249081	50.0	51.6	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	390647	50.0	51.7	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	728372	1200.0	1227.7	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	217418	100.0	103.6	
53 Chlorobromomethane	128	5.249	5.249	0.000	94	112253	50.0	50.8	
55 Chloroform	83	5.319	5.319	0.000	96	419777	50.0	51.7	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	367595	50.0	54.5	
57 Cyclohexane	56	5.542	5.542	0.000	96	477853	50.0	54.9	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	363275	50.0	55.0	
59 Carbon tetrachloride	117	5.612	5.612	0.000	84	305444	50.0	53.6	
60 Isobutyl alcohol	41	5.654	5.654	0.000	93	317663	1250.0	1279.0	
63 Benzene	78	5.794	5.794	0.000	97	1014686	50.0	52.6	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	376358	50.0	50.0	
66 n-Heptane	43	6.003	6.003	0.000	96	299484	50.0	49.9	
68 Trichloroethene	95	6.352	6.352	0.000	96	240807	50.0	51.0	
69 2-Pentanone	43	6.478	6.478	0.000	98	844947	160.0	165.8	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	339853	50.0	53.8	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	92	273773	50.0	51.5	
73 1,4-Dioxane	88	6.632	6.632	0.000	96	82023	1000.0	955.8	
74 Dibromomethane	93	6.660	6.660	0.000	94	150760	50.0	51.8	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	336974	50.0	53.1	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	193886	50.0	51.1	
78 cis-1,3-Dichloropropene	75	7.176	7.176	0.000	91	442345	50.0	52.5	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	1342534	200.0	210.4	
82 Toluene	91	7.484	7.484	0.000	97	1044024	50.0	52.4	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	412532	50.0	52.4	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	369224	50.0	51.6	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	220185	50.0	52.7	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	173498	50.0	53.6	
90 1,3-Dichloropropane	76	8.014	8.014	0.000	97	413861	50.0	52.7	
91 2-Hexanone	43	8.042	8.042	0.000	98	955404	200.0	206.0	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	226494	50.0	52.4	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	225917	50.0	52.0	
98 1-Chlorohexane	91	8.755	8.755	0.000	90	255150	40.0	42.5	
99 Chlorobenzene	112	8.797	8.797	0.000	91	631063	50.0	51.5	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	215783	50.0	51.3	
101 Ethylbenzene	106	8.880	8.880	0.000	99	354343	50.0	50.7	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	438839	50.0	51.4	
103 o-Xylene	106	9.369	9.369	0.000	98	432263	50.0	50.7	
104 Styrene	104	9.397	9.397	0.000	95	746806	50.0	52.3	
106 Bromoform	173	9.579	9.579	0.000	93	143633	50.0	53.4	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	1064981	50.0	52.5	
109 Cyclohexanone	55	9.830	9.830	0.000	95	439304	1500.0	1485.5	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	320698	50.0	53.1	
111 Bromobenzene	156	10.053	10.053	0.000	98	248981	50.0	52.3	
112 trans-1,4-Dichloro-2-butene	53	10.053	10.053	0.000	82	86613	50.0	48.8	
113 1,2,3-Trichloropropane	110	10.095	10.095	0.000	86	94619	50.0	51.3	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	291700	50.0	53.2	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	243950	50.0	52.0	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	876117	50.0	51.9	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	255964	50.0	51.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	714737	50.0	52.4	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	926204	50.0	52.1	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	198299	50.0	52.4	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	463519	50.0	52.0	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	892902	50.0	52.9	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	95	477730	50.0	50.2	
125 n-Butylbenzene	91	11.408	11.408	0.000	99	796092	50.0	51.8	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	448355	50.0	52.7	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	77	63963	50.0	52.2	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	94	243849	50.0	51.2	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	91889	50.0	49.9	
132 Naphthalene	128	13.336	13.336	0.000	98	783012	50.0	49.5	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	202794	50.0	50.1	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	102.4	
S 151 Trihalomethanes, Total	1				0		200.0	210.7	
S 150 1,2-Dichloroethene, Total	1				0		100.0	102.4	
S 156 1,3-Dichloropropene, Total	1				0		100.0	105.0	
S 155 Xylenes, Total	106				0		100.0	102.2	
S 153 Xylenes, Total (URS)	1				0		100.0	102.2	

Reagents:

MV-MegaMainA_00087	Amount Added: 25.00	Units: uL	
MV-Gas A_00151	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

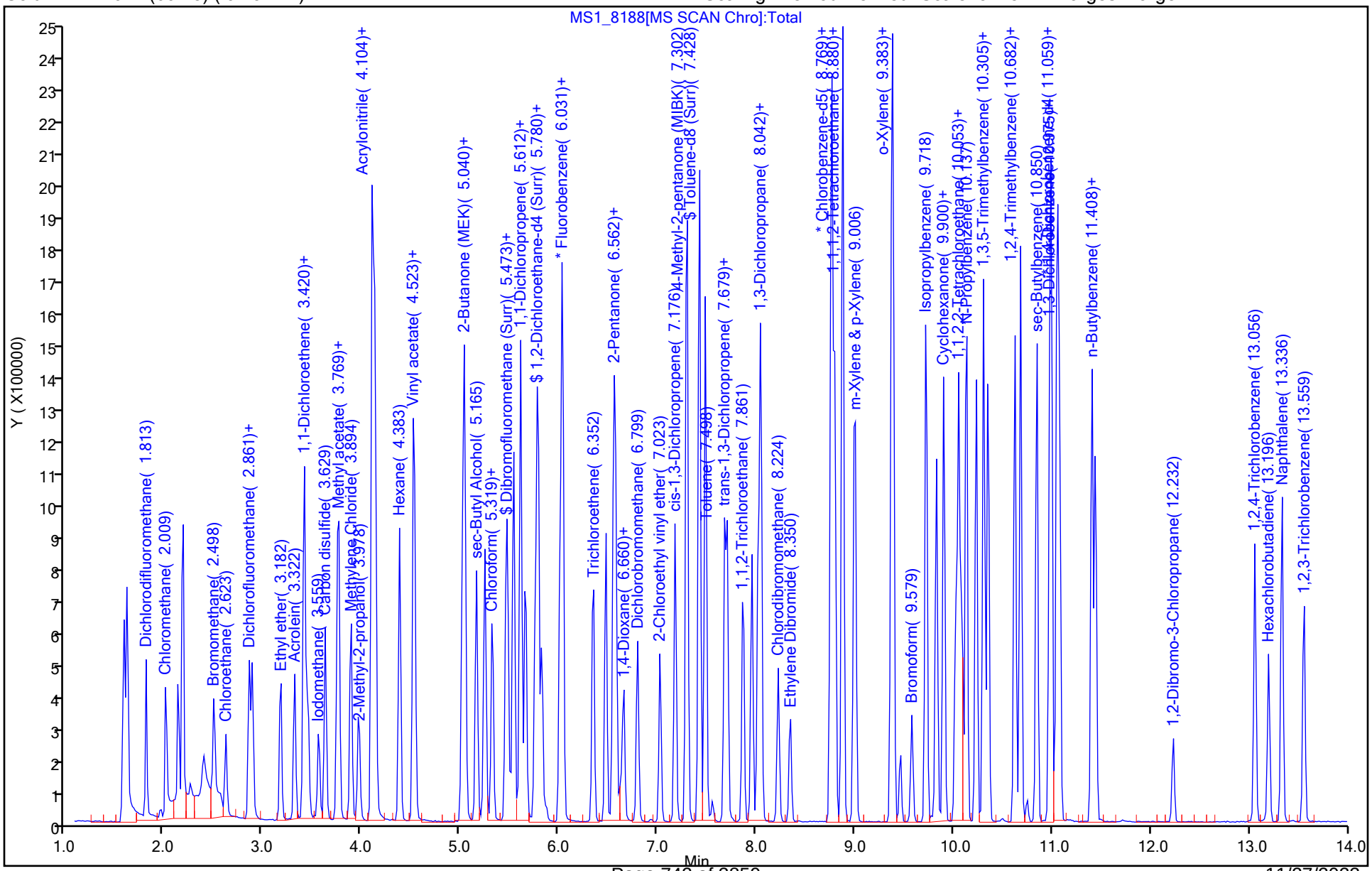
Report Date: 19-Apr-2023 07:39:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8188.D

Injection Date:	18-Apr-2023 12:06:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	icis			Worklist Smp#:	37
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8189.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Apr-2023 12:27:30 ALS Bottle#: 7 Worklist Smp#: 38
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:37 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 13:08:19

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	98	1230102	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	285207	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	469942	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	291815	50.0	49.8	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	402143	50.0	50.7	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1235474	50.0	50.5	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	465202	50.0	50.4	
	11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	32552	10.0	6.82	
	12 Chloromethane	50	2.009	2.009	0.000	99	44978	10.0	7.92	
	13 Vinyl chloride	62	2.135	2.135	0.000	98	40198	10.0	7.16	
	15 Bromomethane	94	2.498	2.498	0.000	95	28670	10.0	8.93	
	16 Chloroethane	64	2.624	2.623	0.001	99	24445	10.0	7.04	
	17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	59297	10.0	7.35	
	18 Trichlorofluoromethane	101	2.889	2.889	0.000	96	42332	10.0	7.24	
	20 Ethyl ether	59	3.182	3.182	0.000	94	40526	10.0	9.29	
	22 Acrolein	56	3.322	3.322	0.000	99	63138	98.8	94.8	
	24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	93	26071	10.0	9.35	
	23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	35523	10.0	9.32	
	25 Acetone	43	3.448	3.447	0.001	98	82478	40.0	37.3	
	26 Iodomethane	142	3.559	3.559	0.000	99	43480	10.0	8.53	
	28 Carbon disulfide	76	3.629	3.629	0.000	100	130932	10.0	9.56	
	30 Methyl acetate	43	3.755	3.755	0.000	99	89165	20.0	18.5	
	31 3-Chloro-1-propene	41	3.769	3.769	0.000	87	90496	10.0	9.85	
	32 Methylene Chloride	84	3.895	3.894	0.001	97	45615	10.0	9.61	
	33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	65730	100.0	94.4	
	34 Acrylonitrile	53	4.104	4.104	0.000	99	219595	100.0	97.6	
	35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	144967	10.0	9.82	
	36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	96	40722	10.0	9.20	
	37 Hexane	57	4.383	4.383	0.000	94	59887	10.0	9.70	
	39 Vinyl acetate	43	4.523	4.523	0.000	98	230408	20.0	20.0	
	40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	83166	10.0	9.47	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	100	120299	40.0	36.5	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	87	46801	10.0	9.83	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	67595	10.0	9.07	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	100	134443	240.0	229.7	
54 Tetrahydrofuran	42	5.249	5.249	0.000	87	38533	20.0	18.6	
53 Chlorobromomethane	128	5.249	5.249	0.000	94	21570	10.0	9.90	
55 Chloroform	83	5.319	5.319	0.000	95	77366	10.0	9.67	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	98	63268	10.0	9.50	
57 Cyclohexane	56	5.543	5.542	0.001	96	80200	10.0	9.34	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	62881	10.0	9.65	
59 Carbon tetrachloride	117	5.612	5.612	0.000	85	52733	10.0	9.38	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	56617	250.0	231.1	
63 Benzene	78	5.780	5.794	-0.014	96	183845	10.0	9.67	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	73647	10.0	9.92	
66 n-Heptane	43	6.003	6.003	0.000	96	50231	10.0	8.49	
68 Trichloroethene	95	6.353	6.352	0.001	96	43575	10.0	9.51	
69 2-Pentanone	43	6.478	6.478	0.000	98	154490	32.0	30.7	
70 Methylcyclohexane	55	6.548	6.548	0.000	94	55764	10.0	8.95	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	93	48139	10.0	9.19	
73 1,4-Dioxane	88	6.632	6.632	0.000	97	16688	200.0	197.2	
74 Dibromomethane	93	6.660	6.660	0.000	93	28268	10.0	9.84	
75 Dichlorobromomethane	83	6.800	6.799	0.001	98	58554	10.0	9.36	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	25014	10.0	7.01	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	90	80466	10.0	9.85	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	244936	40.0	38.9	
82 Toluene	91	7.484	7.484	0.000	97	189507	10.0	9.63	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	98	75016	10.0	9.66	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	68874	10.0	9.92	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	39321	10.0	9.54	
89 Tetrachloroethene	164	7.959	7.959	0.000	93	30631	10.0	9.75	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	98	75352	10.0	9.88	
91 2-Hexanone	43	8.043	8.042	0.000	98	177057	40.0	39.3	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	41585	10.0	9.92	
96 Ethylene Dibromide	107	8.350	8.350	0.000	95	41788	10.0	9.91	
98 1-Chlorohexane	91	8.755	8.755	0.000	87	46847	8.00	7.67	
99 Chlorobenzene	112	8.797	8.797	0.000	93	115405	10.0	9.70	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	38809	10.0	9.51	
101 Ethylbenzene	106	8.880	8.880	0.000	99	65038	10.0	9.59	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	79452	10.0	9.59	
103 o-Xylene	106	9.369	9.369	0.000	97	79005	10.0	9.55	
104 Styrene	104	9.397	9.397	0.000	95	132159	10.0	9.53	
106 Bromoform	173	9.579	9.579	0.000	93	24943	10.0	9.54	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	193439	10.0	9.65	
109 Cyclohexanone	55	9.830	9.830	0.000	96	84088	300.0	292.9	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	57506	10.0	9.63	
111 Bromobenzene	156	10.054	10.053	0.001	97	46102	10.0	9.80	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	72	13199	10.0	7.63	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	88	17975	10.0	9.85	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	51743	10.0	9.55	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	43750	10.0	9.44	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	158804	10.0	9.52	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	46597	10.0	9.45	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	128871	10.0	9.55	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	167498	10.0	9.53	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	36444	10.0	9.74	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	86629	10.0	9.84	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	158755	10.0	9.51	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	87268	10.0	9.29	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	144659	10.0	9.52	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	84218	10.0	10.0	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	73	11521	10.0	9.52	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	48632	10.0	10.3	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	94	17705	10.0	9.73	
132 Naphthalene	128	13.336	13.336	0.000	98	161630	10.0	10.3	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	93	41374	10.0	10.3	
S 149 1,2-Dichloroethene, Total (URS)	96				0		20.0	19.0	
S 151 Trihalomethanes, Total	1				0		40.0	38.5	
S 150 1,2-Dichloroethene, Total	1				0		20.0	19.0	
S 156 1,3-Dichloropropene, Total	1				0		20.0	19.5	
S 155 Xylenes, Total	106				0		20.0	19.1	
S 153 Xylenes, Total (URS)	1				0		20.0	19.1	
S 152 Total BTEX	1				0			48.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added:	5.00	Units: uL	
MV-Gas A_00151	Amount Added:	2.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

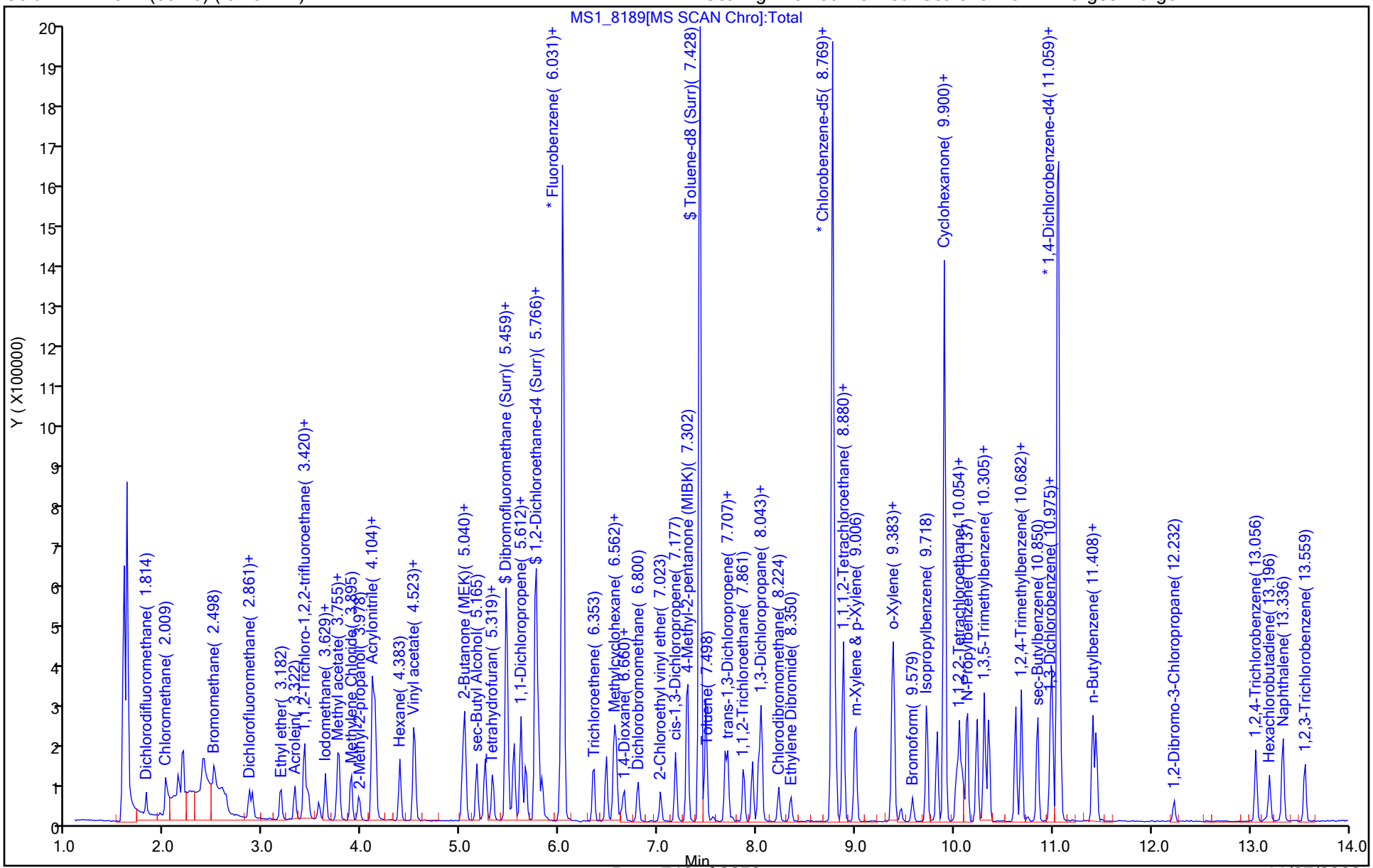
Report Date: 19-Apr-2023 07:39:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8189.D

Injection Date:	18-Apr-2023 12:27:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	38
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8190.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Apr-2023 12:49:30 ALS Bottle#: 8 Worklist Smp#: 39
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:40 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 13:23:07

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	98	1207547	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	284291	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	458568	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	285621	50.0	49.7	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.766	-0.014	0	387212	50.0	49.7	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1224432	50.0	50.2	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	441292	50.0	49.0	
	11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	15343	5.00	4.06	
	12 Chloromethane	50	2.009	2.009	0.000	98	23489	5.00	4.21	
	13 Vinyl chloride	62	2.135	2.135	0.000	97	20261	5.00	3.85	
	15 Bromomethane	94	2.498	2.498	0.000	91	14338	5.00	4.33	
	16 Chloroethane	64	2.624	2.623	0.001	98	12957	5.00	3.94	
	17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	30123	5.00	3.88	
	18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	18418	5.00	3.92	
	20 Ethyl ether	59	3.182	3.182	0.000	95	18938	5.00	4.42	
	22 Acrolein	56	3.322	3.322	0.000	99	28549	49.4	43.7	
	23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	14443	5.00	3.86	
	24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	92	10656	5.00	3.89	
	25 Acetone	43	3.462	3.447	0.015	99	40209	20.0	17.6	
	26 Iodomethane	142	3.559	3.559	0.000	100	19647	5.00	3.93	
	28 Carbon disulfide	76	3.629	3.629	0.000	100	60376	5.00	4.49	
	30 Methyl acetate	43	3.755	3.755	0.000	98	39369	10.0	8.31	
	31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	45273	5.00	4.75	
	32 Methylene Chloride	84	3.894	3.894	0.000	98	19995	5.00	4.29	
	33 2-Methyl-2-propanol	59	3.964	3.964	0.000	99	28800	50.0	42.1	
	34 Acrylonitrile	53	4.104	4.104	0.000	98	95937	50.0	43.4	
	35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	61754	5.00	4.26	
	36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	95	19488	5.00	4.49	
	37 Hexane	57	4.383	4.383	0.000	95	23943	5.00	3.89	
	39 Vinyl acetate	43	4.523	4.523	0.000	98	97660	10.0	8.63	
	40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	37614	5.00	4.36	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	57722	20.0	17.8	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	19553	5.00	4.18	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	89	30032	5.00	4.10	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	61078	120.0	106.3	
54 Tetrahydrofuran	42	5.249	5.249	0.000	90	17999	10.0	8.86	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	9505	5.00	4.45	
55 Chloroform	83	5.319	5.319	0.000	96	36302	5.00	4.62	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	96	27811	5.00	4.26	
57 Cyclohexane	56	5.542	5.542	0.000	96	31689	5.00	3.76	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	89	27026	5.00	4.22	
59 Carbon tetrachloride	117	5.612	5.612	0.000	81	22022	5.00	3.99	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	26236	125.0	109.1	
63 Benzene	78	5.780	5.794	-0.014	93	83917	5.00	4.50	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	31852	5.00	4.37	
66 n-Heptane	43	6.003	6.003	0.000	96	23653	5.00	4.07	
68 Trichloroethene	95	6.339	6.352	-0.013	97	19439	5.00	4.26	
69 2-Pentanone	43	6.478	6.478	0.000	98	69645	16.0	14.1	
70 Methylcyclohexane	55	6.562	6.548	0.014	92	22939	5.00	3.75	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	88	22487	5.00	4.37	
73 1,4-Dioxane	88	6.632	6.632	0.000	94	7731	100.0	93.0	
74 Dibromomethane	93	6.660	6.660	0.000	92	12684	5.00	4.50	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	25716	5.00	4.19	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	13496	5.00	4.02	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	90	34476	5.00	4.23	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	108161	20.0	17.5	
82 Toluene	91	7.484	7.484	0.000	98	83254	5.00	4.31	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	32204	5.00	4.23	
85 Ethyl methacrylate	69	7.707	7.707	0.000	94	30227	5.00	4.37	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	17253	5.00	4.27	
89 Tetrachloroethene	164	7.959	7.959	0.000	89	12946	5.00	4.14	
90 1,3-Dichloropropane	76	8.015	8.014	0.000	96	33095	5.00	4.35	
91 2-Hexanone	43	8.042	8.042	0.000	99	78327	20.0	17.4	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	18786	5.00	4.49	
96 Ethylene Dibromide	107	8.350	8.350	0.000	99	18011	5.00	4.29	
98 1-Chlorohexane	91	8.755	8.755	0.000	89	22708	4.00	3.49	
99 Chlorobenzene	112	8.797	8.797	0.000	92	53582	5.00	4.52	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	17724	5.00	4.36	
101 Ethylbenzene	106	8.880	8.880	0.000	99	28872	5.00	4.27	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	37001	5.00	4.48	
103 o-Xylene	106	9.369	9.369	0.000	98	34379	5.00	4.17	
104 Styrene	104	9.397	9.397	0.000	95	60888	5.00	4.40	
106 Bromoform	173	9.579	9.579	0.000	93	11060	5.00	4.25	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	84155	5.00	4.30	
109 Cyclohexanone	55	9.830	9.830	0.000	95	38876	150.0	135.9	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	95	24783	5.00	4.25	
111 Bromobenzene	156	10.054	10.053	0.001	97	19645	5.00	4.28	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	73	5517	5.00	3.34	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	88	8043	5.00	4.52	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	21958	5.00	4.15	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	20491	5.00	4.53	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	95	70142	5.00	4.31	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	20876	5.00	4.34	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	57337	5.00	4.35	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	97	75639	5.00	4.41	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	14585	5.00	4.00	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	38173	5.00	4.44	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	68934	5.00	4.23	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	94	38861	5.00	4.24	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	63269	5.00	4.27	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	93	35458	5.00	4.32	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	78	5172	5.00	4.38	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	94	20481	5.00	4.45	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	95	7695	5.00	4.33	
132 Naphthalene	128	13.336	13.336	0.000	97	71950	5.00	4.71	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	18032	5.00	4.62	
S 149 1,2-Dichloroethene, Total (URS)	96				0		10.0	8.67	
S 151 Trihalomethanes, Total	1				0		20.0	17.5	
S 150 1,2-Dichloroethene, Total	1				0		10.0	8.67	
S 156 1,3-Dichloropropene, Total	1				0		10.0	8.46	
S 155 Xylenes, Total	106				0		10.0	8.65	
S 153 Xylenes, Total (URS)	1				0		10.0	8.65	
S 152 Total BTEX	1				0			21.7	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added:	2.50	Units: uL	
MV-Gas A_00151	Amount Added:	1.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

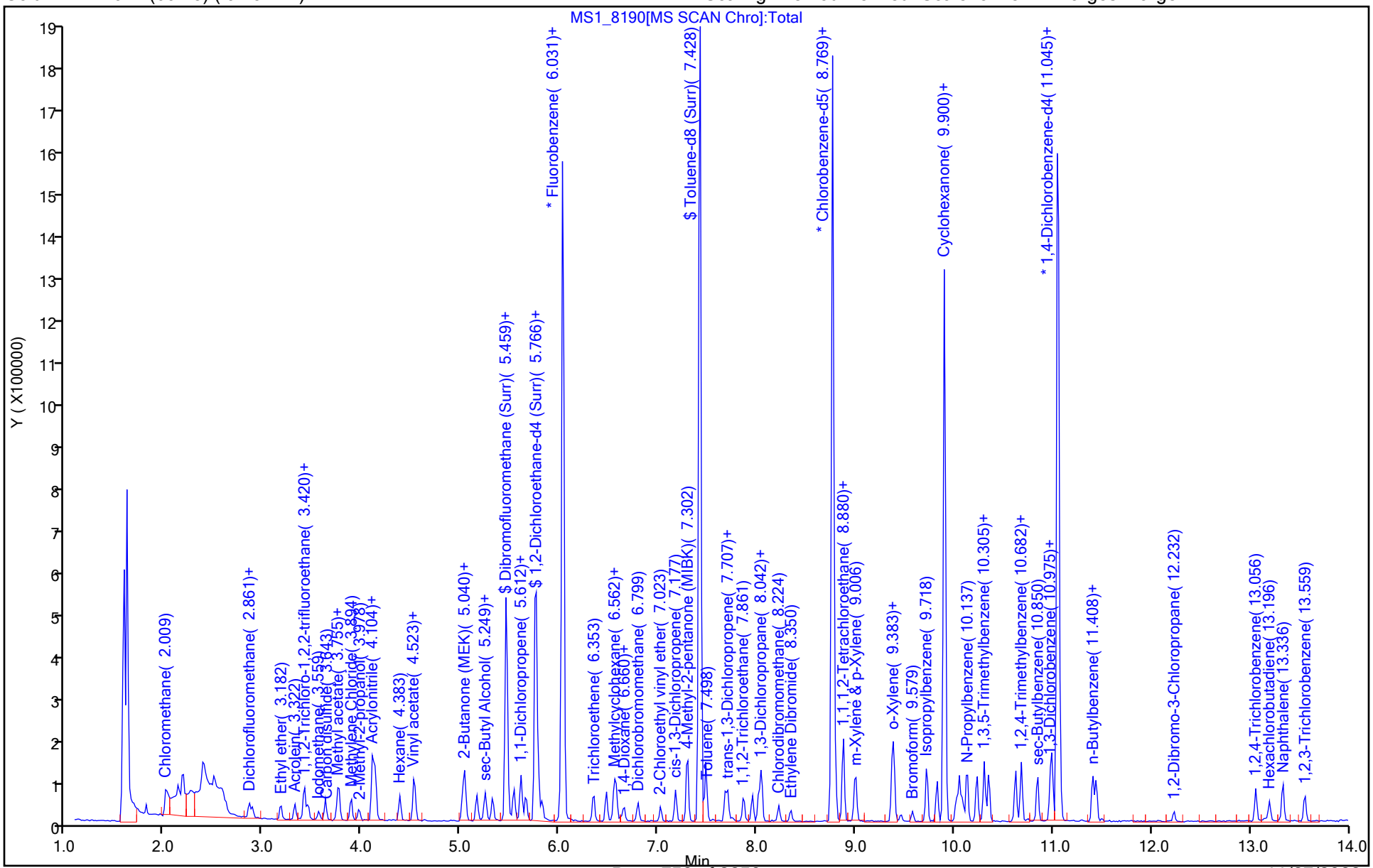
Report Date: 19-Apr-2023 07:39:40 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8190.D

Injection Date:	18-Apr-2023 12:49:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	39
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Apr-2023 18:58:30 ALS Bottle#: 15 Worklist Smp#: 40
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:42 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 19-Apr-2023 06:09:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1153908	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	266472	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	433915	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	276082	50.0	50.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.766	-0.014	0	364248	50.0	48.9	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1164538	50.0	50.9	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	427731	50.0	50.2	
11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	8280	2.00	2.95	
12 Chloromethane	50	2.009	2.009	0.000	99	10752	2.00	2.02	
13 Vinyl chloride	62	2.135	2.135	0.000	98	9868	2.00	2.13	
15 Bromomethane	94	2.498	2.498	0.000	89	7404	2.00	2.14	
16 Chloroethane	64	2.624	2.623	0.001	98	6805	2.00	2.30	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	14487	2.00	2.03	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	11067	2.00	2.94	
20 Ethyl ether	59	3.182	3.182	0.000	94	8628	2.00	2.11	
22 Acrolein	56	3.322	3.322	0.000	98	11662	19.8	18.7	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	92	5260	2.00	2.01	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	96	7427	2.00	2.08	
25 Acetone	43	3.462	3.447	0.015	99	18485	8.00	7.44	
26 Iodomethane	142	3.559	3.559	0.000	99	8303	2.00	1.74	
28 Carbon disulfide	76	3.629	3.629	0.000	99	25274	2.00	1.97	
30 Methyl acetate	43	3.755	3.755	0.000	98	18609	4.00	4.11	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	89	19300	2.00	1.82	
32 Methylene Chloride	84	3.895	3.894	0.001	93	10321	2.00	2.32	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	97	11894	20.0	18.2	
34 Acrylonitrile	53	4.104	4.104	0.000	95	38749	20.0	18.4	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	26279	2.00	1.90	
36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	95	8777	2.00	2.11	
37 Hexane	57	4.383	4.383	0.000	96	10578	2.00	1.83	
39 Vinyl acetate	43	4.523	4.523	0.000	98	42115	4.00	3.89	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	16478	2.00	2.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	100	25986	8.00	8.40	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	8648	2.00	1.94	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	13947	2.00	1.99	
51 sec-Butyl Alcohol	45	5.166	5.165	0.001	99	24716	48.0	45.0	
54 Tetrahydrofuran	42	5.263	5.249	0.014	88	7924	4.00	4.08	
53 Chlorobromomethane	128	5.249	5.249	0.000	92	4150	2.00	2.03	
55 Chloroform	83	5.319	5.319	0.000	96	15079	2.00	2.01	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	12435	2.00	1.99	
57 Cyclohexane	56	5.543	5.542	0.001	94	16235	2.00	2.02	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	11445	2.00	1.87	
59 Carbon tetrachloride	117	5.612	5.612	0.000	83	10794	2.00	2.05	
60 Isobutyl alcohol	41	5.654	5.654	0.000	90	11065	50.0	48.1	
63 Benzene	78	5.780	5.794	-0.014	98	36558	2.00	2.05	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	95	14424	2.00	2.07	
66 n-Heptane	43	6.003	6.003	0.000	91	11022	2.00	1.99	
68 Trichloroethene	95	6.339	6.352	-0.013	94	8814	2.00	2.06	
69 2-Pentanone	43	6.478	6.478	0.000	98	28660	6.40	6.08	
70 Methylcyclohexane	55	6.562	6.548	0.014	92	12191	2.00	2.09	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	91	9824	2.00	2.00	
73 1,4-Dioxane	88	6.632	6.632	0.000	92	3018	40.0	38.0	
74 Dibromomethane	93	6.660	6.660	0.000	93	5598	2.00	2.08	
75 Dichlorobromomethane	83	6.800	6.799	0.001	96	11605	2.00	1.98	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	5975	2.00	2.06	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	89	15699	2.00	2.06	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	46353	8.00	7.85	
82 Toluene	91	7.484	7.484	0.000	99	36750	2.00	1.99	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	98	14538	2.00	2.00	
85 Ethyl methacrylate	69	7.707	7.707	0.000	92	12702	2.00	1.96	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	92	7390	2.00	1.91	
89 Tetrachloroethene	164	7.959	7.959	0.000	90	5971	2.00	2.03	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	96	14399	2.00	2.02	
91 2-Hexanone	43	8.043	8.042	0.001	99	32424	8.00	7.71	
95 Chlorodibromomethane	129	8.224	8.224	0.000	88	7428	2.00	1.90	
96 Ethylene Dibromide	107	8.350	8.350	0.000	96	8298	2.00	2.11	
98 1-Chlorohexane	91	8.755	8.755	0.000	85	9937	1.60	1.39	
99 Chlorobenzene	112	8.797	8.797	0.000	96	23605	2.00	2.12	
100 1,1,1,2-Tetrachloroethane	131	8.881	8.880	0.001	44	7911	2.00	2.07	
101 Ethylbenzene	106	8.881	8.880	0.001	99	13023	2.00	2.06	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	16669	2.00	2.15	
103 o-Xylene	106	9.369	9.369	0.000	97	16442	2.00	2.13	
104 Styrene	104	9.397	9.397	0.000	94	26737	2.00	2.06	
106 Bromoform	173	9.579	9.579	0.000	91	4503	2.00	1.84	
107 Isopropylbenzene	105	9.719	9.718	0.000	96	37534	2.00	2.03	
109 Cyclohexanone	55	9.830	9.830	0.000	93	16010	60.0	59.7	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	93	10690	2.00	1.94	
111 Bromobenzene	156	10.054	10.053	0.001	97	8621	2.00	1.99	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	61	2844	2.00	1.88	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	3397	2.00	2.02	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	9868	2.00	1.97	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	8754	2.00	2.05	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	31204	2.00	2.03	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	9233	2.00	2.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	24002	2.00	1.93	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	97	33584	2.00	2.07	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	6733	2.00	1.95	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	97	16744	2.00	2.06	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	31202	2.00	2.02	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	93	17981	2.00	2.07	
125 n-Butylbenzene	91	11.408	11.408	0.000	97	27805	2.00	1.98	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	94	15168	2.00	1.95	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	74	2217	2.00	1.98	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	92	8786	2.00	2.02	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	94	3236	2.00	1.93	
132 Naphthalene	128	13.336	13.336	0.000	98	27151	2.00	1.88	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	90	7439	2.00	2.01	
S 149 1,2-Dichloroethene, Total (URS)	96				0		4.00	4.05	
S 151 Trihalomethanes, Total	1				0		8.00	7.73	
S 150 1,2-Dichloroethene, Total	1				0		4.00	4.05	
S 156 1,3-Dichloropropene, Total	1				0		4.00	4.05	
S 155 Xylenes, Total	106				0		4.00	4.28	
S 153 Xylenes, Total (URS)	1				0		4.00	4.28	
S 152 Total BTEX	1				0			10.4	

QC Flag Legend

Processing Flags

Reagents:

Cal Dil Std_00169	Amount Added:	20.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 19-Apr-2023 07:39:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Injection Date:	18-Apr-2023 18:58:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	40
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Apr-2023 18:36:30 ALS Bottle#: 14 Worklist Smp#: 41
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:44 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 19-Apr-2023 06:11:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1135581	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	263402	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	430436	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	274378	50.0	50.8	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.766	-0.014	0	359476	50.0	49.1	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1142694	50.0	50.5	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	419344	50.0	49.6	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	96	3358	1.00	2.10	
12 Chloromethane	50	2.023	2.009	0.014	96	5627	1.00	1.07	
13 Vinyl chloride	62	2.135	2.135	0.000	96	5313	1.00	1.32	
15 Bromomethane	94	2.498	2.498	0.000	82	4100	1.00	1.01	
16 Chloroethane	64	2.624	2.623	0.001	98	3329	1.00	1.29	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	9220	1.00	1.37	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	96	5763	1.00	2.16	
20 Ethyl ether	59	3.182	3.182	0.000	94	4346	1.00	1.08	
22 Acrolein	56	3.322	3.322	0.000	93	6422	9.88	10.4	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	4067	1.00	1.16	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	66	2527	1.00	0.9817	
25 Acetone	43	3.448	3.447	0.001	96	13236	4.00	4.89	
26 Iodomethane	142	3.559	3.559	0.000	99	5306	1.00	1.13	
28 Carbon disulfide	76	3.629	3.629	0.000	98	13744	1.00	1.09	
30 Methyl acetate	43	3.755	3.755	0.000	99	10464	2.00	2.35	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	90	12841	1.00	1.05	
32 Methylene Chloride	84	3.894	3.894	0.000	97	4898	1.00	1.12	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	97	6364	10.0	9.90	
34 Acrylonitrile	53	4.104	4.104	0.000	98	21519	10.0	10.4	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	13691	1.00	1.00	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	4587	1.00	1.12	
37 Hexane	57	4.383	4.383	0.000	95	4950	1.00	0.8682	
39 Vinyl acetate	43	4.523	4.523	0.000	96	21370	2.00	2.01	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	8640	1.00	1.07	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	14037	4.00	4.61	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	5004	1.00	1.14	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	76	7905	1.00	1.15	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	97	11620	24.0	21.5	
54 Tetrahydrofuran	42	5.263	5.249	0.014	69	3532	2.00	1.85	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	2335	1.00	1.16	
55 Chloroform	83	5.319	5.319	0.000	94	7643	1.00	1.03	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	93	5514	1.00	0.8973	
57 Cyclohexane	56	5.542	5.542	0.000	94	7808	1.00	0.9848	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	88	5667	1.00	0.9418	
59 Carbon tetrachloride	117	5.612	5.612	0.000	79	5266	1.00	1.01	
60 Isobutyl alcohol	41	5.654	5.654	0.000	82	5442	25.0	24.1	
63 Benzene	78	5.780	5.794	-0.014	94	17562	1.00	1.00	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	95	8144	1.00	1.19	M
66 n-Heptane	43	6.003	6.003	0.000	83	7141	1.00	1.31	
68 Trichloroethene	95	6.353	6.352	0.001	93	4917	1.00	1.16	
69 2-Pentanone	43	6.478	6.478	0.000	97	15244	3.20	3.28	
70 Methylcyclohexane	55	6.548	6.548	0.000	94	5951	1.00	1.04	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	89	5523	1.00	1.14	
73 1,4-Dioxane	88	6.632	6.632	0.000	27	2043	20.0	26.1	
74 Dibromomethane	93	6.660	6.660	0.000	96	2780	1.00	1.05	
75 Dichlorobromomethane	83	6.799	6.799	0.000	96	6380	1.00	1.10	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	89	3433	1.00	1.36	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	89	8062	1.00	1.07	
79 4-Methyl-2-pentanone (MIBK)	43	7.288	7.302	-0.014	97	22176	4.00	3.82	
82 Toluene	91	7.484	7.484	0.000	97	18770	1.00	1.03	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	97	7656	1.00	1.07	
85 Ethyl methacrylate	69	7.707	7.707	0.000	95	7058	1.00	1.10	
87 1,1,2-Trichloroethane	97	7.875	7.861	0.014	92	4227	1.00	1.11	
89 Tetrachloroethene	164	7.959	7.959	0.000	90	2795	1.00	0.9636	
90 1,3-Dichloropropane	76	8.015	8.014	0.000	95	7315	1.00	1.04	
91 2-Hexanone	43	8.042	8.042	0.000	97	17800	4.00	4.28	
95 Chlorodibromomethane	129	8.224	8.224	0.000	87	4077	1.00	1.05	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	4132	1.00	1.06	
98 1-Chlorohexane	91	8.769	8.755	0.014	33	7091	0.8000	0.8746	
99 Chlorobenzene	112	8.797	8.797	0.000	92	11181	1.00	1.02	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	4112	1.00	1.09	
101 Ethylbenzene	106	8.880	8.880	0.000	99	7107	1.00	1.13	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	7855	1.00	1.03	
103 o-Xylene	106	9.369	9.369	0.000	96	8975	1.00	1.17	
104 Styrene	104	9.397	9.397	0.000	95	13581	1.00	1.06	
106 Bromoform	173	9.579	9.579	0.000	50	2691	1.00	1.11	M
107 Isopropylbenzene	105	9.718	9.718	0.000	96	18155	1.00	0.9883	
109 Cyclohexanone	55	9.830	9.830	0.000	91	9218	30.0	34.8	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	95	5633	1.00	1.03	
111 Bromobenzene	156	10.054	10.053	0.001	96	4576	1.00	1.06	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	42	2389	1.00	1.61	
113 1,2,3-Trichloropropane	110	10.095	10.095	0.000	85	1722	1.00	1.03	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	4976	1.00	1.00	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	4337	1.00	1.02	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	15761	1.00	1.03	
117 4-Chlorotoluene	126	10.361	10.347	0.014	98	5098	1.00	1.13	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	12805	1.00	1.04	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	16747	1.00	1.04	
120 sec-Butylbenzene	134	10.850	10.850	0.000	94	3603	1.00	1.05	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	94	8057	1.00	1.00	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	96	15868	1.00	1.04	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	92	10610	1.00	1.23	
125 n-Butylbenzene	91	11.408	11.408	0.000	96	15818	1.00	1.14	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	8150	1.00	1.06	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	72	1159	1.00	1.05	M
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	91	4692	1.00	1.09	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	90	2183	1.00	1.31	
132 Naphthalene	128	13.336	13.336	0.000	97	17114	1.00	1.19	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	91	4137	1.00	1.13	
S 149 1,2-Dichloroethene, Total (URS)	96				0		2.00	2.26	
S 151 Trihalomethanes, Total	1				0		4.00	4.31	
S 150 1,2-Dichloroethene, Total	1				0		2.00	2.26	
S 156 1,3-Dichloropropene, Total	1				0		2.00	2.14	
S 155 Xylenes, Total	106				0		2.00	2.20	
S 153 Xylenes, Total (URS)	1				0		2.00	2.20	
S 152 Total BTEX	1				0			5.37	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

Cal Dil Std_00169	Amount Added:	10.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 19-Apr-2023 07:39:45 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D

Injection Date:	18-Apr-2023 18:36:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	41
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

Manual Integration/User Assign Peak Report

Eurofins Denver

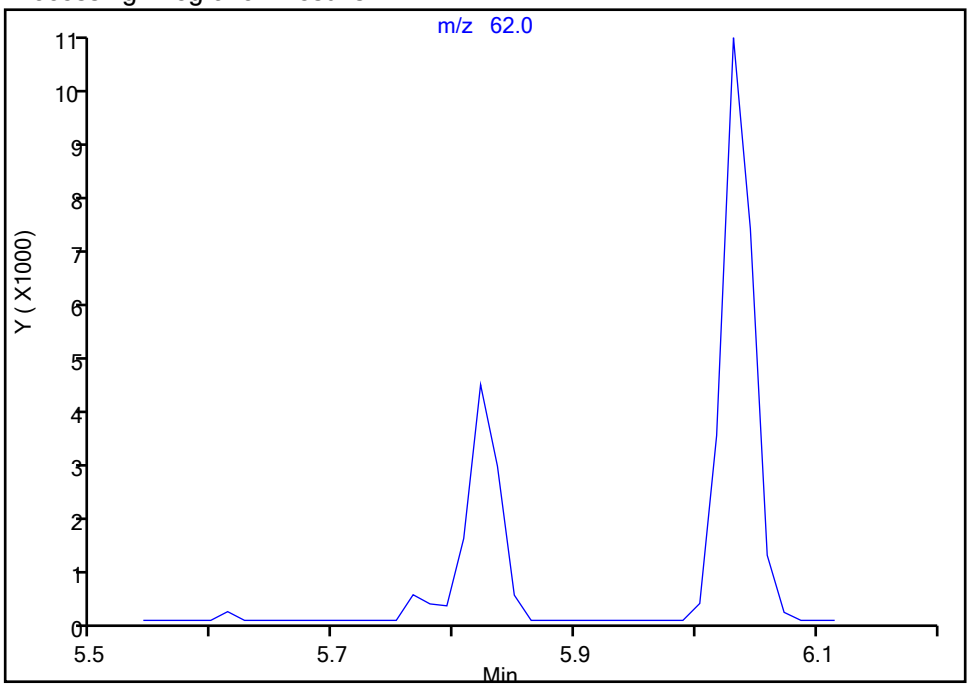
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D
Injection Date: 18-Apr-2023 18:36:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 14 Worklist Smp#: 41
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

64 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

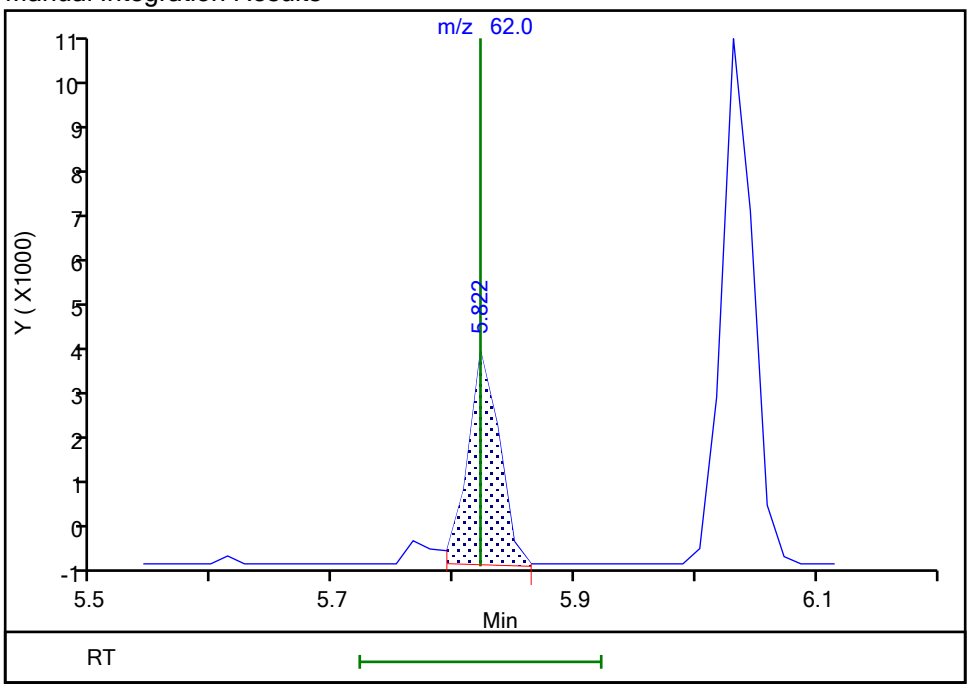
Not Detected
Expected RT: 5.82

Processing Integration Results



Manual Integration Results

RT: 5.82
Area: 8144
Amount: 1.188679
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:10:17
Audit Action: Assigned New Baseline Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

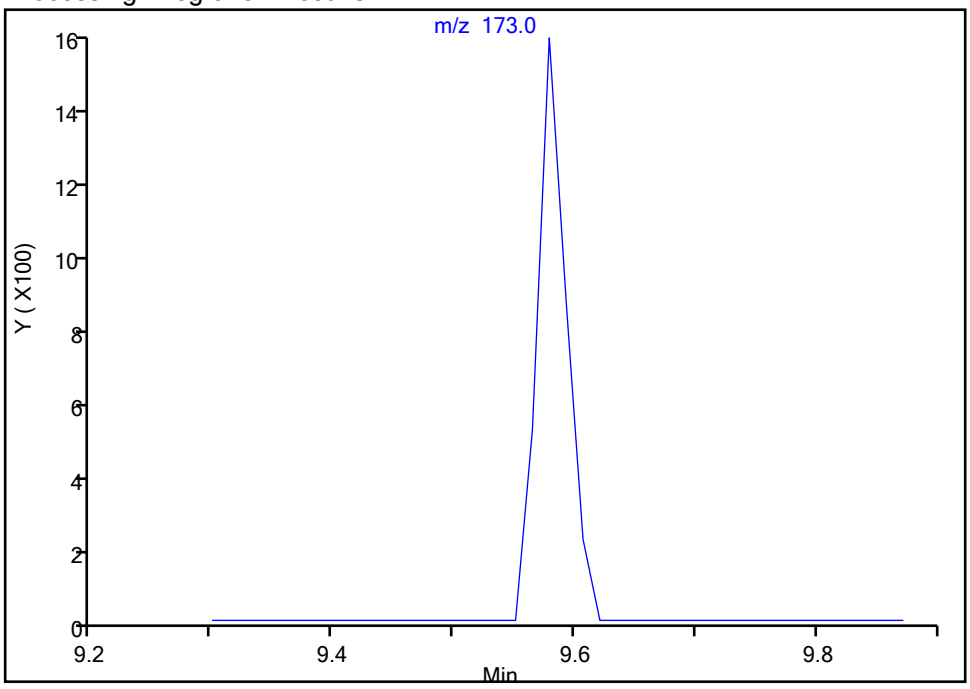
Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D				
Injection Date:	18-Apr-2023 18:36:30	Instrument ID:	VMS_MS1		
Lims ID:	ic				
Client ID:					
Operator ID:	wickhamt/bustillose	ALS Bottle#:	14	Worklist Smp#:	41
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

106 Bromoform, CAS: 75-25-2

Signal: 1

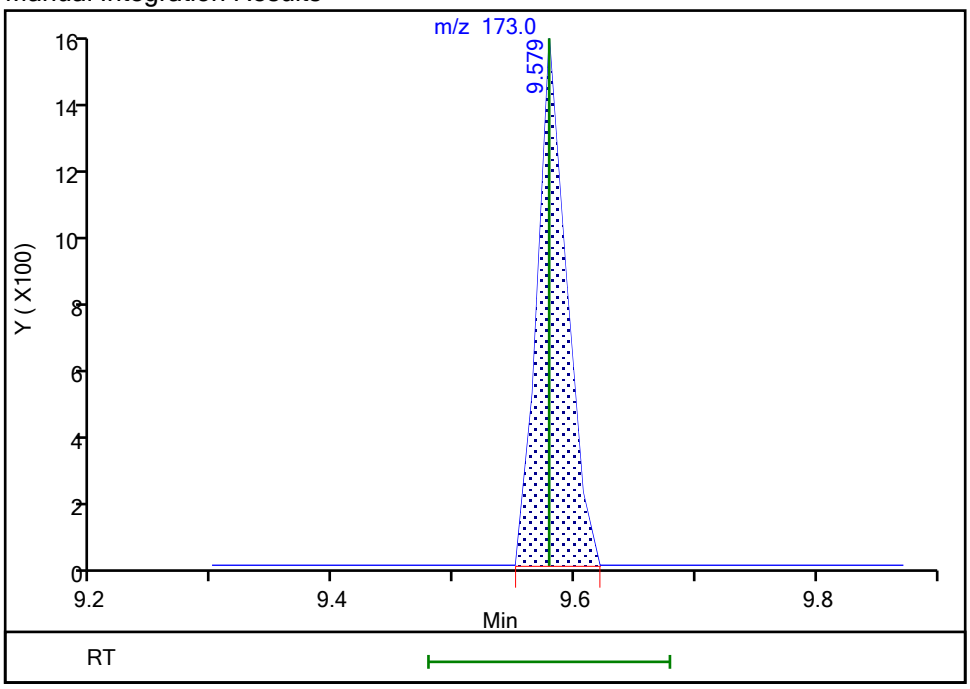
Not Detected
Expected RT: 9.58

Processing Integration Results



Manual Integration Results

RT: 9.58
Area: 2691
Amount: 1.114854
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:10:45
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

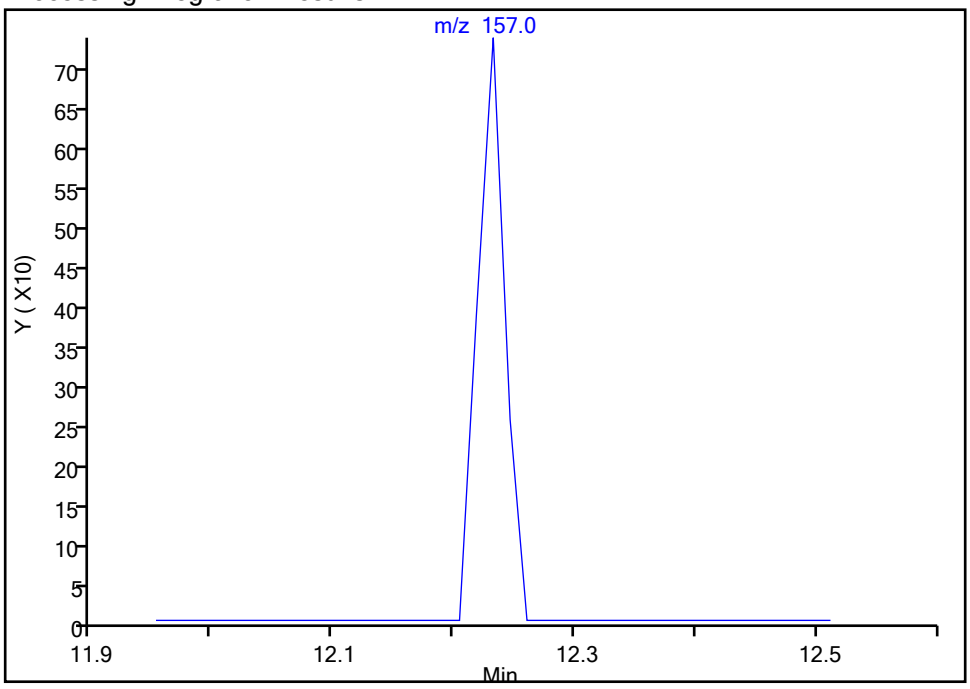
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D
Injection Date: 18-Apr-2023 18:36:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 14 Worklist Smp#: 41
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

128 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Signal: 1

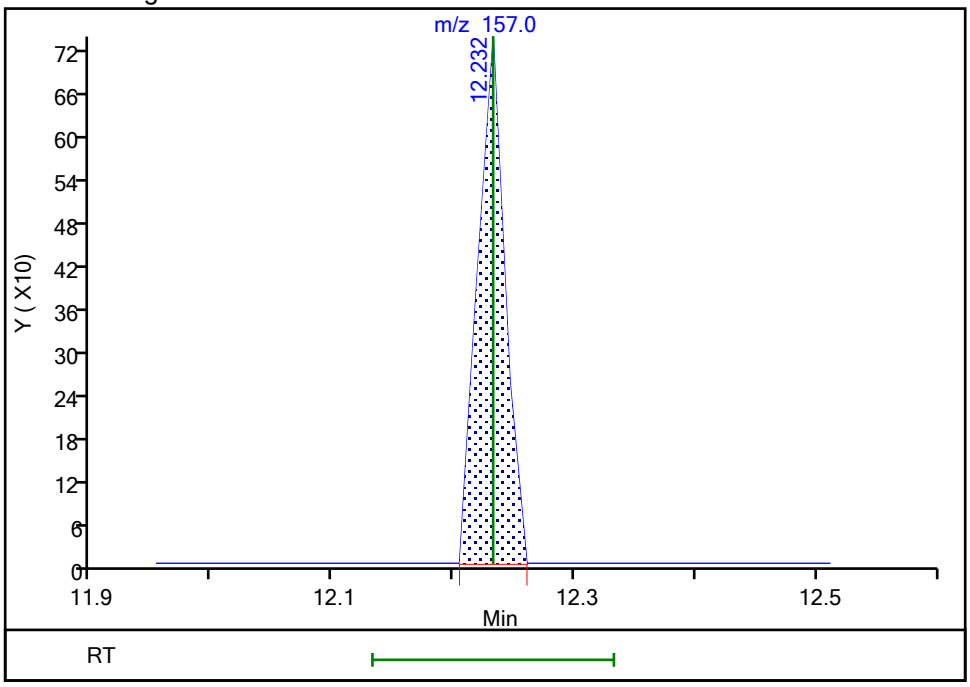
Not Detected
Expected RT: 12.23

Processing Integration Results



Manual Integration Results

RT: 12.23
Area: 1159
Amount: 1.045414
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:11:10
Audit Action: Manually Integrated Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Apr-2023 18:15:30 ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: .5
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:46 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 19-Apr-2023 06:13:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1123724	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	266567	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	427119	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	276619	50.0	51.7	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.766	-0.014	0	358198	50.0	49.4	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1129686	50.0	49.4	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	84	426658	50.0	50.9	
11 Dichlorodifluoromethane	85	1.814	1.813	0.001	30	1371	0.5000	1.75	M
12 Chloromethane	50	2.009	2.009	0.000	83	4861	0.5000	0.9366	
13 Vinyl chloride	62	2.135	2.135	0.000	97	4771	0.5000	1.23	
15 Bromomethane	94	2.498	2.498	0.000	75	3186	0.5000	0.7032	M
16 Chloroethane	64	2.624	2.623	0.001	55	701	0.5000	0.5097	M
17 Dichlorofluoromethane	67	2.861	2.861	0.000	96	5788	0.5000	0.9239	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	91	3751	0.5000	1.86	
20 Ethyl ether	59	3.168	3.182	-0.014	85	2599	0.5000	0.6519	
22 Acrolein	56	3.322	3.322	0.000	97	4017	4.94	6.60	M
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	73	1500	0.5000	0.5889	
23 1,1-Dichloroethene	96	3.406	3.420	-0.014	93	2749	0.5000	0.7893	
25 Acetone	43	3.462	3.447	0.015	98	11890	2.00	4.26	
26 Iodomethane	142	3.559	3.559	0.000	97	4526	0.5000	0.9723	
28 Carbon disulfide	76	3.629	3.629	0.000	99	17963	0.5000	1.44	
30 Methyl acetate	43	3.755	3.755	0.000	96	7622	1.00	1.73	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	87	9100	0.5000	0.6010	
32 Methylene Chloride	84	3.895	3.894	0.001	95	5180	0.5000	1.19	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	91	3480	5.00	5.47	
34 Acrylonitrile	53	4.104	4.104	0.000	98	16602	5.00	8.08	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	64	7267	0.5000	0.5390	
36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	94	3106	0.5000	0.7685	
37 Hexane	57	4.383	4.383	0.000	89	5294	0.5000	0.9176	
39 Vinyl acetate	43	4.523	4.523	0.000	99	14546	1.00	1.38	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	4.537	4.537	0.000	56	5185	0.5000	0.6463	
46 2-Butanone (MEK)	43	5.012	5.012	0.000	98	11243	2.00	3.73	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	3670	0.5000	0.8436	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	60	3886	0.5000	0.5705	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	92	7801	12.0	14.6	
54 Tetrahydrofuran	42	5.249	5.249	0.000	68	3207	1.00	1.70	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	1806	0.5000	0.9076	
55 Chloroform	83	5.319	5.319	0.000	92	4634	0.5000	0.6339	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	35	3937	0.5000	0.6475	
57 Cyclohexane	56	5.543	5.542	0.001	87	6382	0.5000	0.8135	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	90	4466	0.5000	0.7500	
59 Carbon tetrachloride	117	5.612	5.612	0.000	70	3697	0.5000	0.7195	
60 Isobutyl alcohol	41	5.640	5.654	-0.014	80	9804	12.5	43.8	
63 Benzene	78	5.780	5.794	-0.014	93	11905	0.5000	0.6855	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	82	6257	0.5000	0.9229	M
66 n-Heptane	43	6.003	6.003	0.000	97	23115	0.5000	4.28	
68 Trichloroethene	95	6.353	6.352	0.001	93	4277	0.5000	1.00	
69 2-Pentanone	43	6.478	6.478	0.000	97	9818	1.60	2.14	
70 Methylcyclohexane	55	6.562	6.548	0.014	91	5726	0.5000	1.01	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	84	3071	0.5000	0.6416	
73 1,4-Dioxane	88	6.632	6.632	0.000	92	6470	10.0	83.7	
74 Dibromomethane	93	6.660	6.660	0.000	83	2686	0.5000	1.02	
75 Dichlorobromomethane	83	6.800	6.799	0.001	95	4614	0.5000	0.8075	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	86	2163	0.5000	1.00	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	91	5754	0.5000	0.7533	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	98	13036	2.00	2.27	
82 Toluene	91	7.484	7.484	0.000	96	13242	0.5000	0.7369	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	96	5504	0.5000	0.7761	
85 Ethyl methacrylate	69	7.707	7.707	0.000	85	4586	0.5000	0.7066	
87 1,1,2-Trichloroethane	97	7.875	7.861	0.014	91	2679	0.5000	0.7119	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	2140	0.5000	0.7290	
90 1,3-Dichloropropane	76	8.029	8.014	0.015	94	4941	0.5000	0.6928	
91 2-Hexanone	43	8.043	8.042	0.001	97	10043	2.00	2.39	
95 Chlorodibromomethane	129	8.224	8.224	0.000	93	2825	0.5000	0.7208	
96 Ethylene Dibromide	107	8.350	8.350	0.000	96	3763	0.5000	0.9550	
98 1-Chlorohexane	91	8.769	8.755	0.014	33	5619	0.4000	0.5858	
99 Chlorobenzene	112	8.797	8.797	0.000	96	8507	0.5000	0.7649	
100 1,1,1,2-Tetrachloroethane	131	8.881	8.880	0.000	41	2322	0.5000	0.6087	
101 Ethylbenzene	106	8.881	8.880	0.000	98	4690	0.5000	0.7399	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	6401	0.5000	0.8271	
103 o-Xylene	106	9.383	9.369	0.014	95	5841	0.5000	0.7555	
104 Styrene	104	9.397	9.397	0.000	94	10671	0.5000	0.8232	
106 Bromoform	173	9.579	9.579	0.000	28	1405	0.5000	0.5752	M
107 Isopropylbenzene	105	9.732	9.718	0.014	95	13405	0.5000	0.7354	
109 Cyclohexanone	55	9.830	9.830	0.000	93	7277	15.0	27.1	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	93	3904	0.5000	0.7194	
111 Bromobenzene	156	10.054	10.053	0.001	94	3576	0.5000	0.8366	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	22	641	0.5000	0.5306	M
113 1,2,3-Trichloropropane	110	10.096	10.095	0.001	92	1336	0.5000	0.8056	
114 N-Propylbenzene	120	10.137	10.137	0.000	98	3692	0.5000	0.7494	
115 2-Chlorotoluene	126	10.235	10.235	0.000	94	3424	0.5000	0.8129	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	12147	0.5000	0.8014	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
117 4-Chlorotoluene	126	10.361	10.347	0.014	98	3727	0.5000	0.8314	
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	10864	0.5000	0.8858	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	96	13140	0.5000	0.8227	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	3024	0.5000	0.8896	
121 1,3-Dichlorobenzene	146	10.989	10.975	0.014	95	8248	0.5000	1.03	
122 4-Isopropyltoluene	119	11.003	10.989	0.014	97	15442	0.5000	1.02	
123 1,4-Dichlorobenzene	146	11.087	11.073	0.014	89	9732	0.5000	1.14	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	15648	0.5000	1.13	
127 1,2-Dichlorobenzene	146	11.450	11.436	0.014	91	7794	0.5000	1.02	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	21	892	0.5000	0.8108	M
130 1,2,4-Trichlorobenzene	180	13.070	13.056	0.014	91	7205	0.5000	1.68	
131 Hexachlorobutadiene	225	13.210	13.196	0.014	91	3253	0.5000	1.97	
132 Naphthalene	128	13.336	13.336	0.000	97	24636	0.5000	1.73	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	89	6692	0.5000	1.84	
S 149 1,2-Dichloroethene, Total (URS)	96				0		1.00	1.61	
S 151 Trihalomethanes, Total	1				0		2.00	2.74	
S 150 1,2-Dichloroethene, Total	1				0		1.00	1.61	
S 156 1,3-Dichloropropene, Total	1				0		1.00	1.53	
S 155 Xylenes, Total	106				0		1.00	1.58	
S 153 Xylenes, Total (URS)	1				0		1.00	1.58	
S 152 Total BTEX	1				0			3.74	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

Cal Dil Std_00169	Amount Added:	5.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 19-Apr-2023 07:39:47 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D

Injection Date:	18-Apr-2023 18:15:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	42
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

Manual Integration/User Assign Peak Report

Eurofins Denver

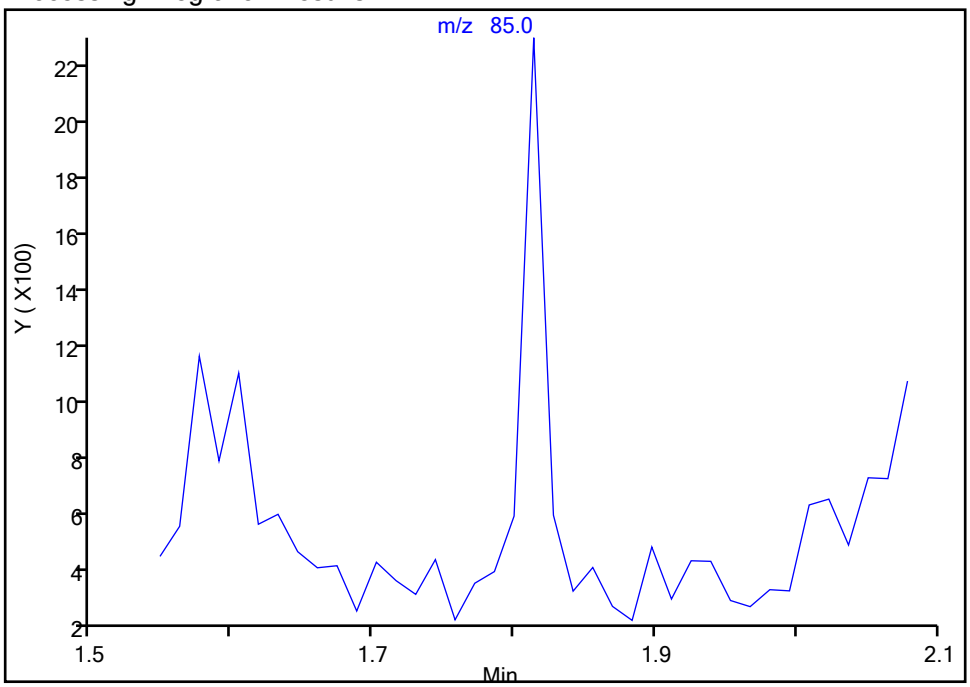
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

11 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

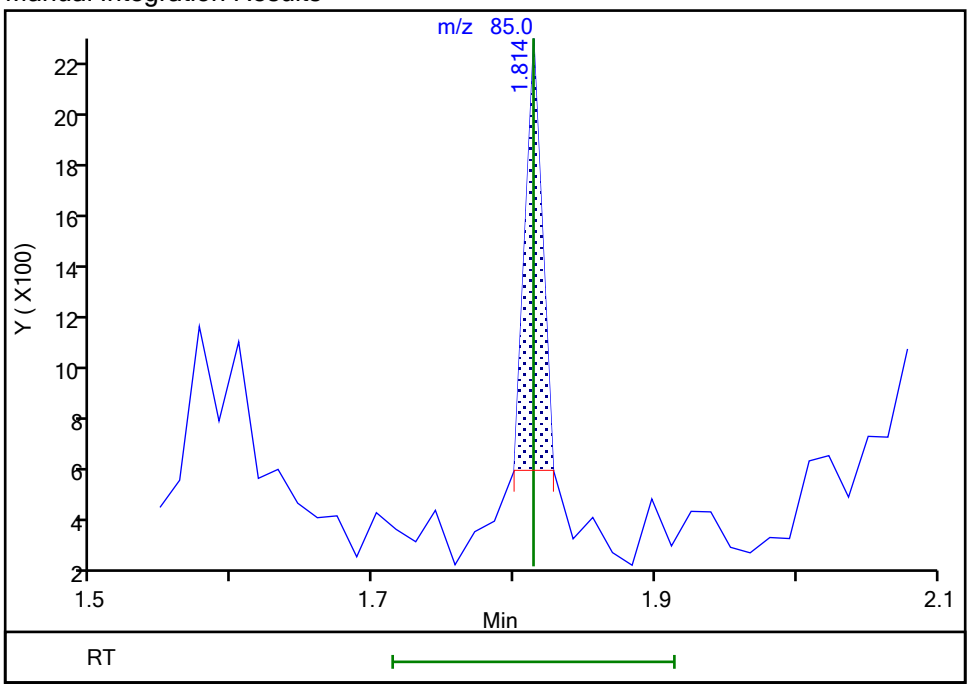
Not Detected
Expected RT: 1.81

Processing Integration Results



Manual Integration Results

RT: 1.81
Area: 1371
Amount: 1.754691
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:11:39
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

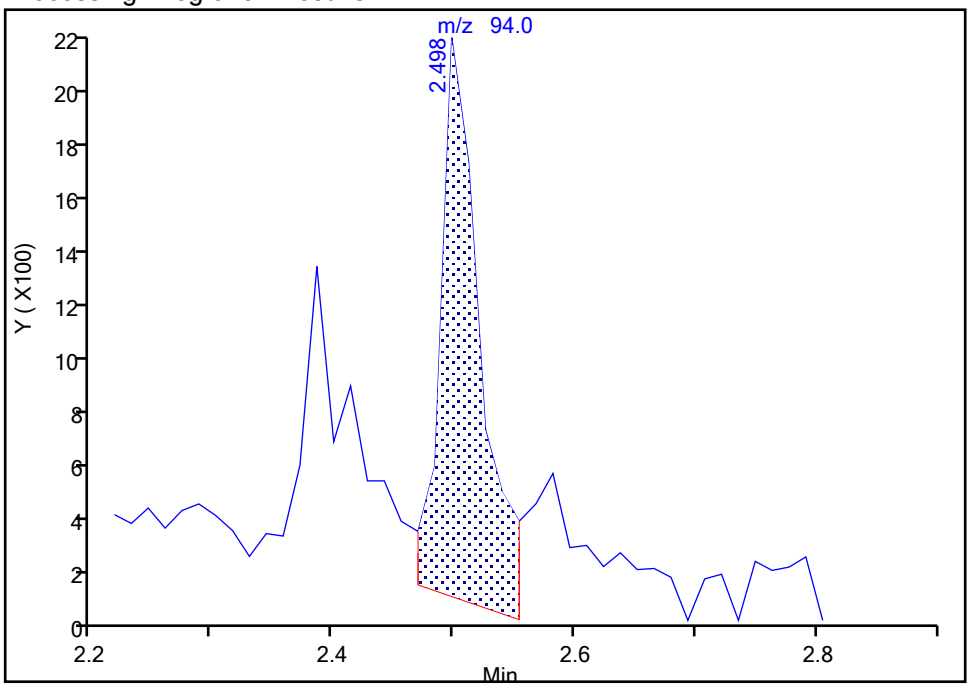
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

15 Bromomethane, CAS: 74-83-9

Signal: 1

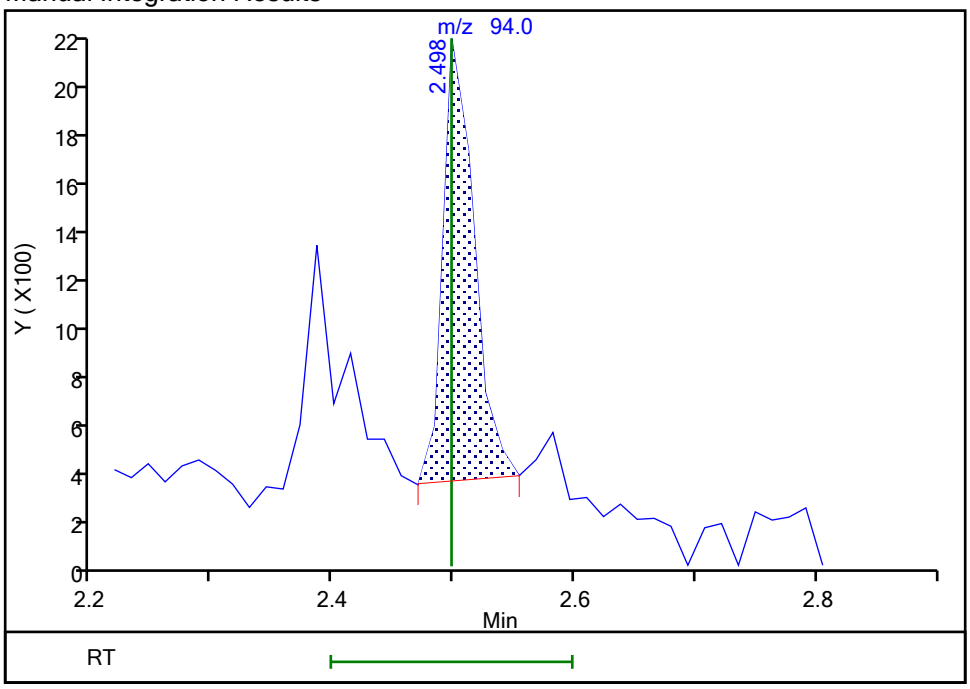
Processing Integration Results

RT: 2.50
Area: 4811
Amount: 1.263985
Amount Units: ug/l



Manual Integration Results

RT: 2.50
Area: 3186
Amount: 0.703195
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:11:53
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

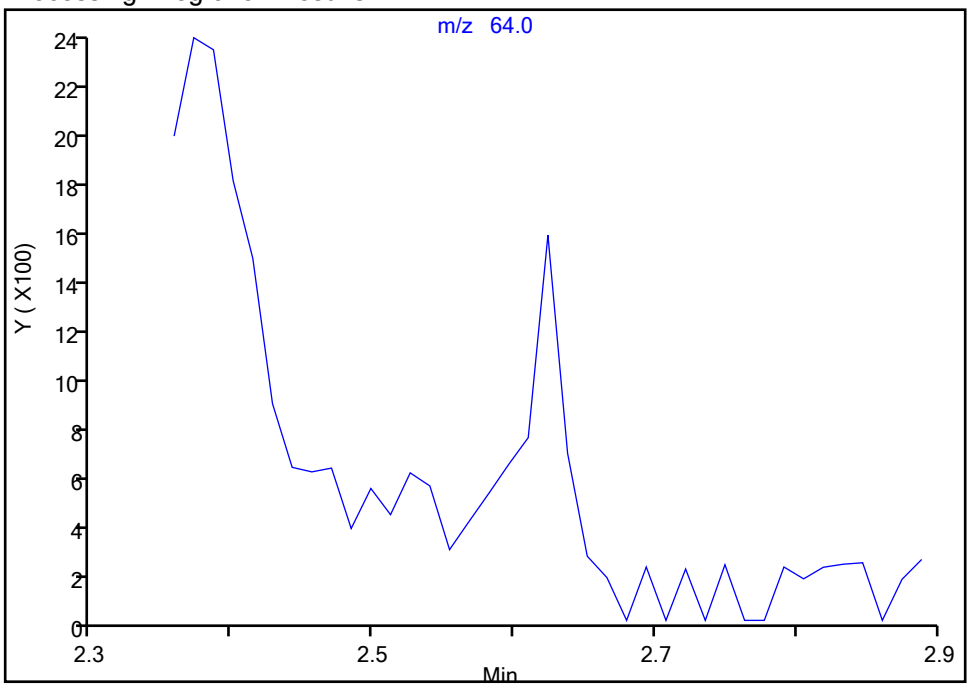
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

16 Chloroethane, CAS: 75-00-3

Signal: 1

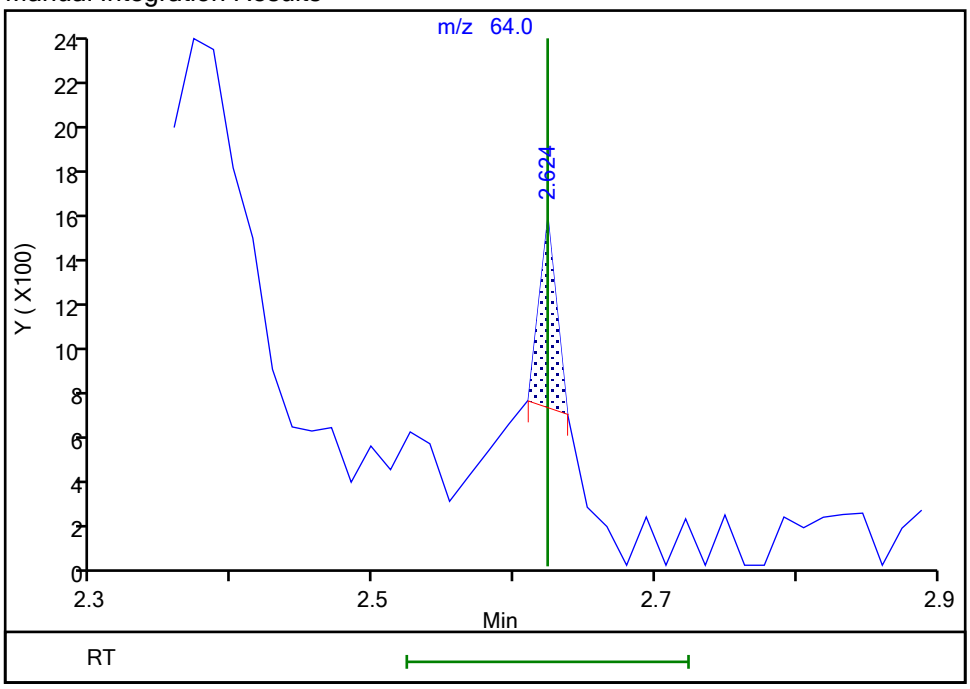
Not Detected
Expected RT: 2.62

Processing Integration Results



Manual Integration Results

RT: 2.62
Area: 701
Amount: 0.509706
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:12:06
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

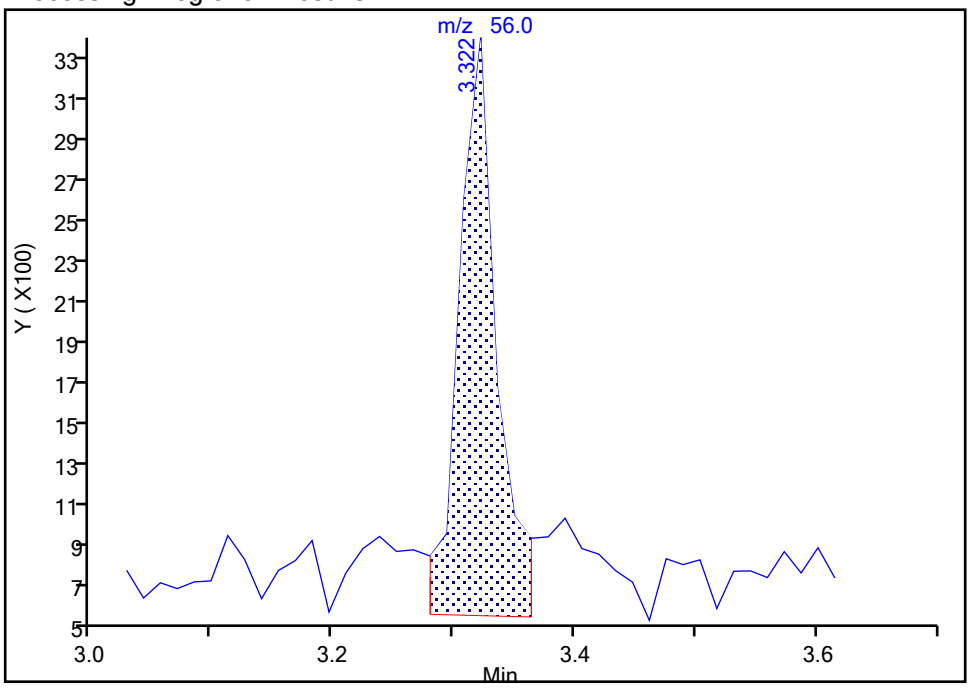
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

22 Acrolein, CAS: 107-02-8

Signal: 1

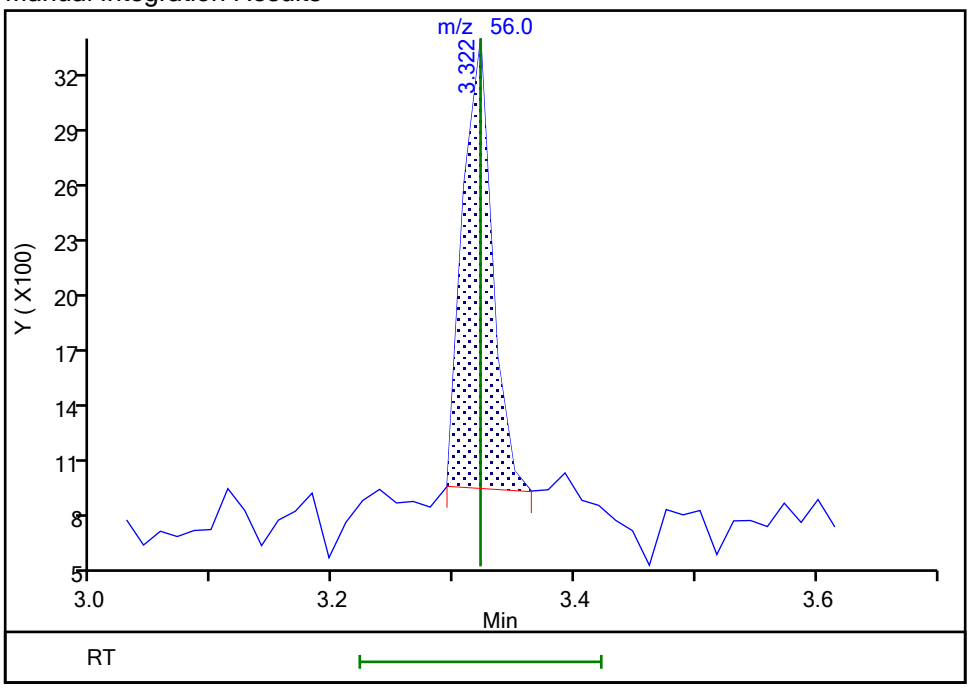
Processing Integration Results

RT: 3.32
Area: 6190
Amount: 7.797360
Amount Units: ug/l



Manual Integration Results

RT: 3.32
Area: 4017
Amount: 6.602220
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:12:21
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

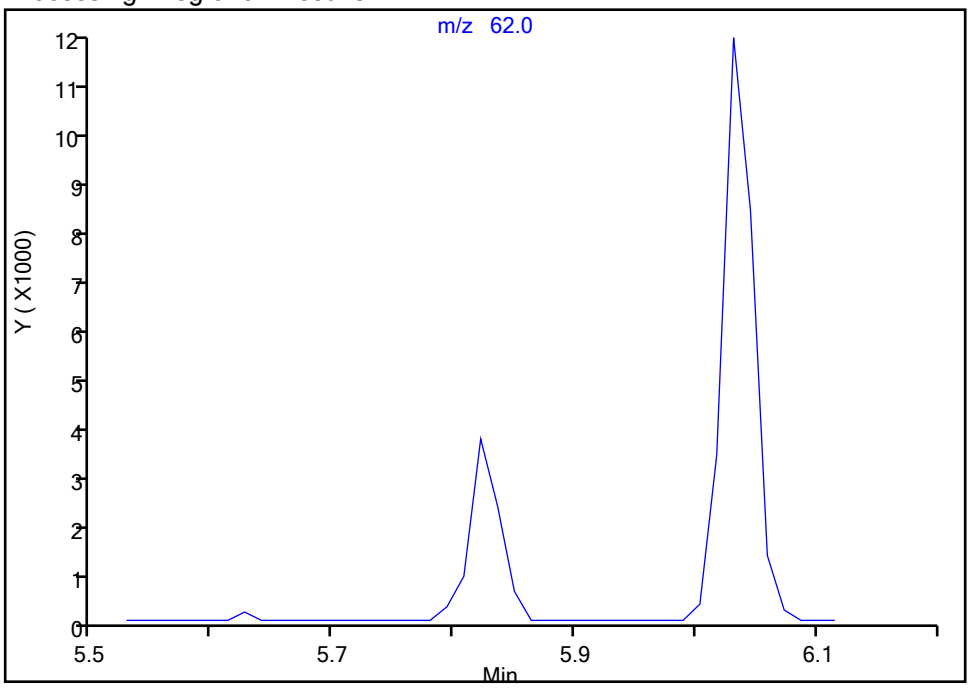
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

64 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

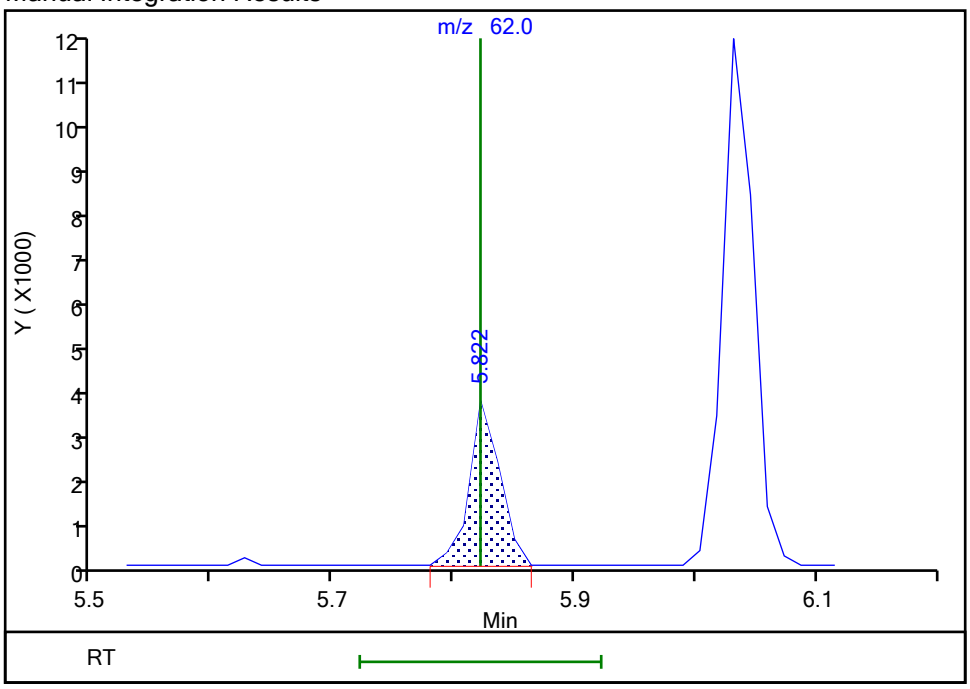
Not Detected
Expected RT: 5.82

Processing Integration Results



Manual Integration Results

RT: 5.82
Area: 6257
Amount: 0.922893
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:12:49
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

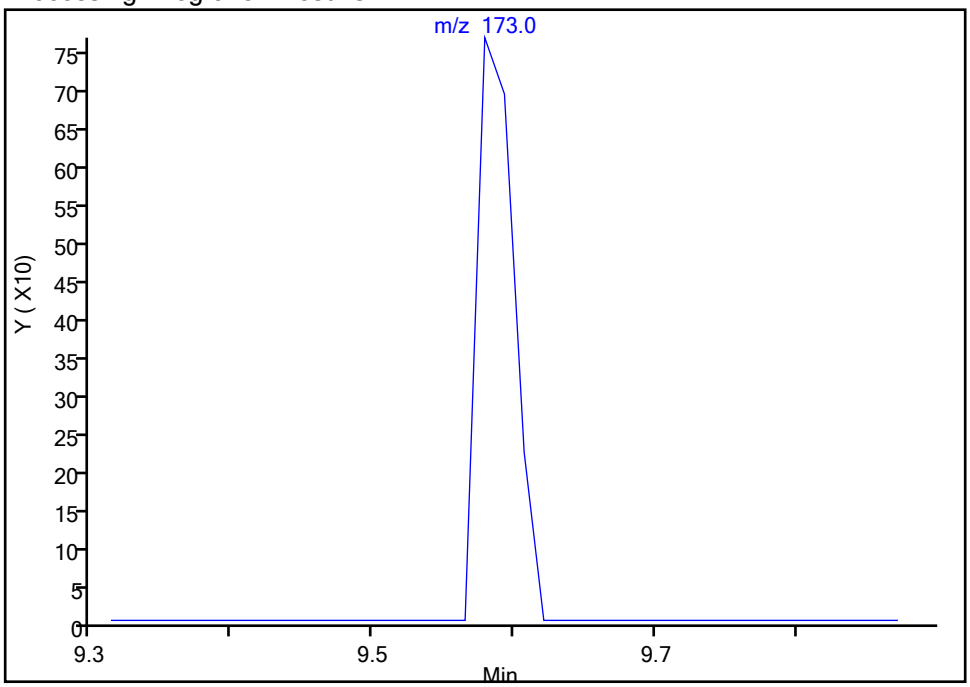
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

106 Bromoform, CAS: 75-25-2

Signal: 1

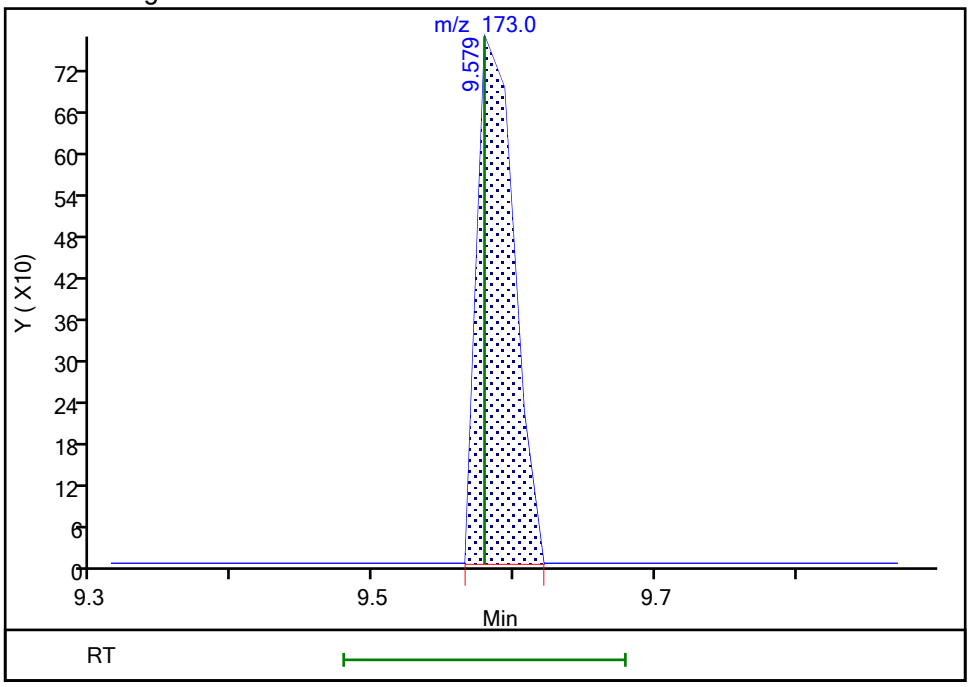
Not Detected
Expected RT: 9.58

Processing Integration Results



Manual Integration Results

RT: 9.58
Area: 1405
Amount: 0.575166
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:13:13
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

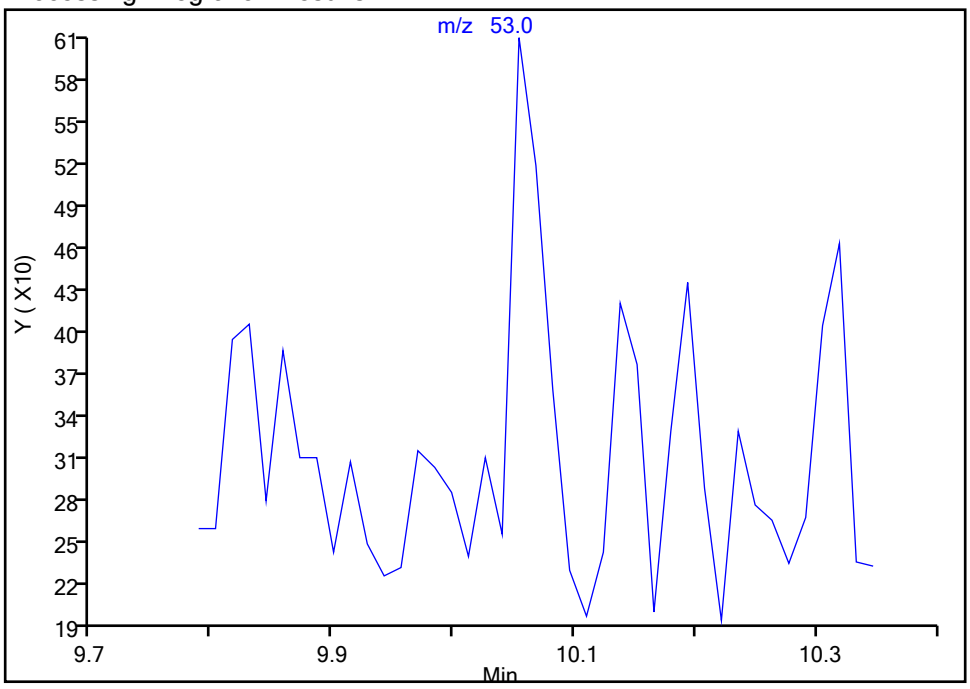
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

112 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Signal: 1

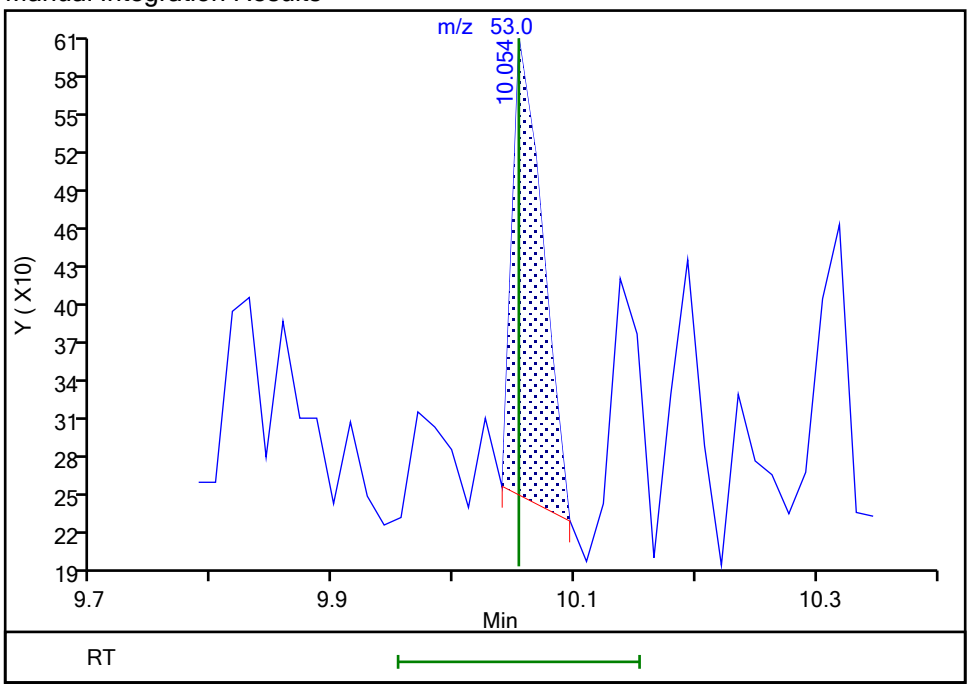
Not Detected
Expected RT: 10.05

Processing Integration Results



Manual Integration Results

RT: 10.05
Area: 641
Amount: 0.530587
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:13:25
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

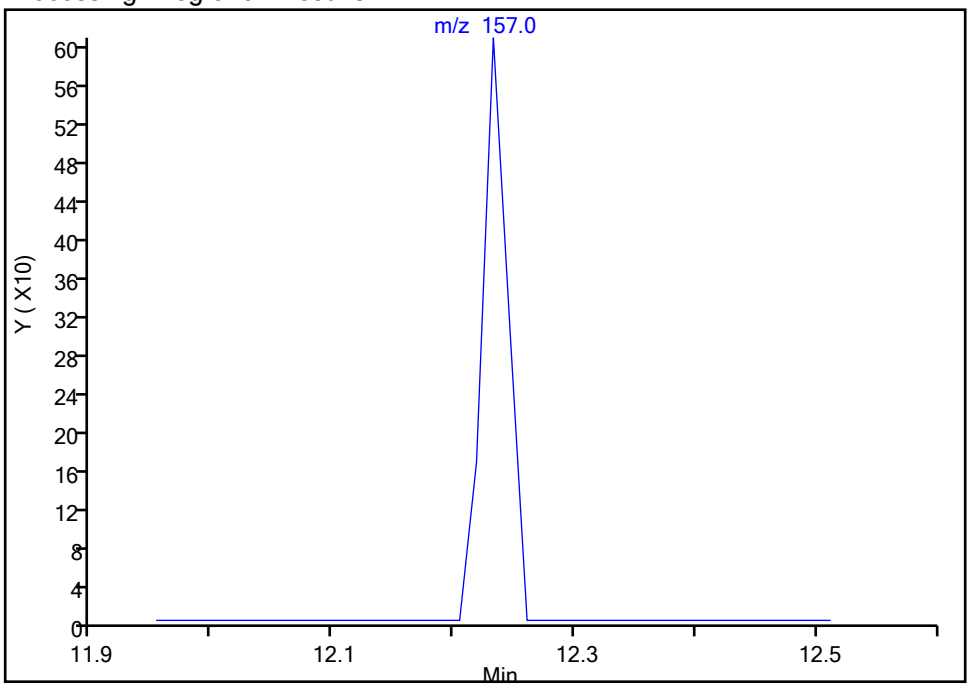
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

128 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Signal: 1

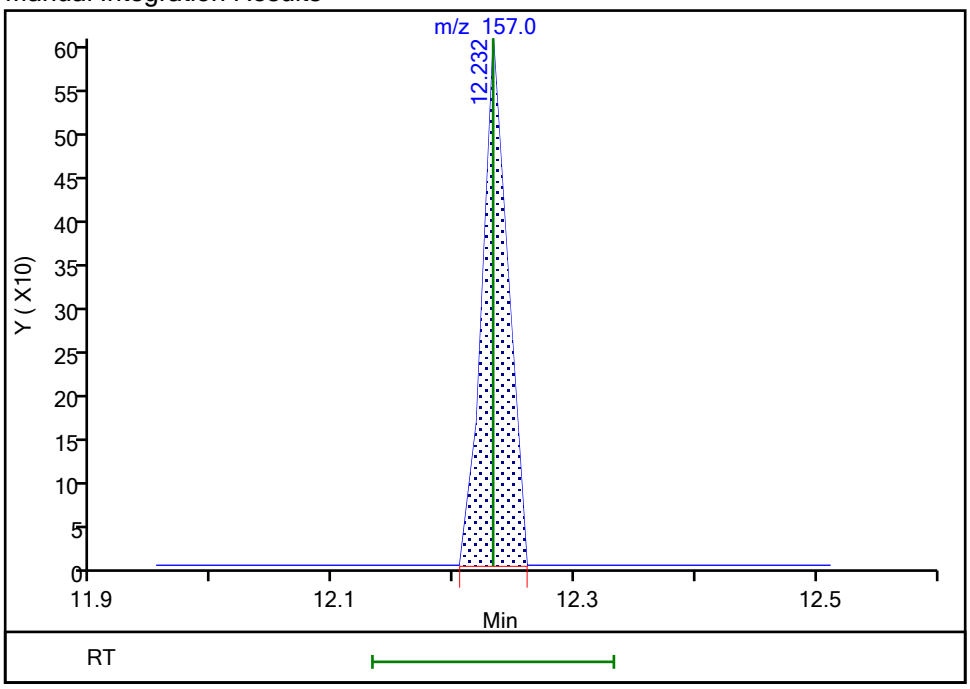
Not Detected
Expected RT: 12.23

Processing Integration Results



Manual Integration Results

RT: 12.23
Area: 892
Amount: 0.810829
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:13:44
Audit Action: Manually Integrated Audit Reason: Assign Peak

Calibration / Dichlorodifluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

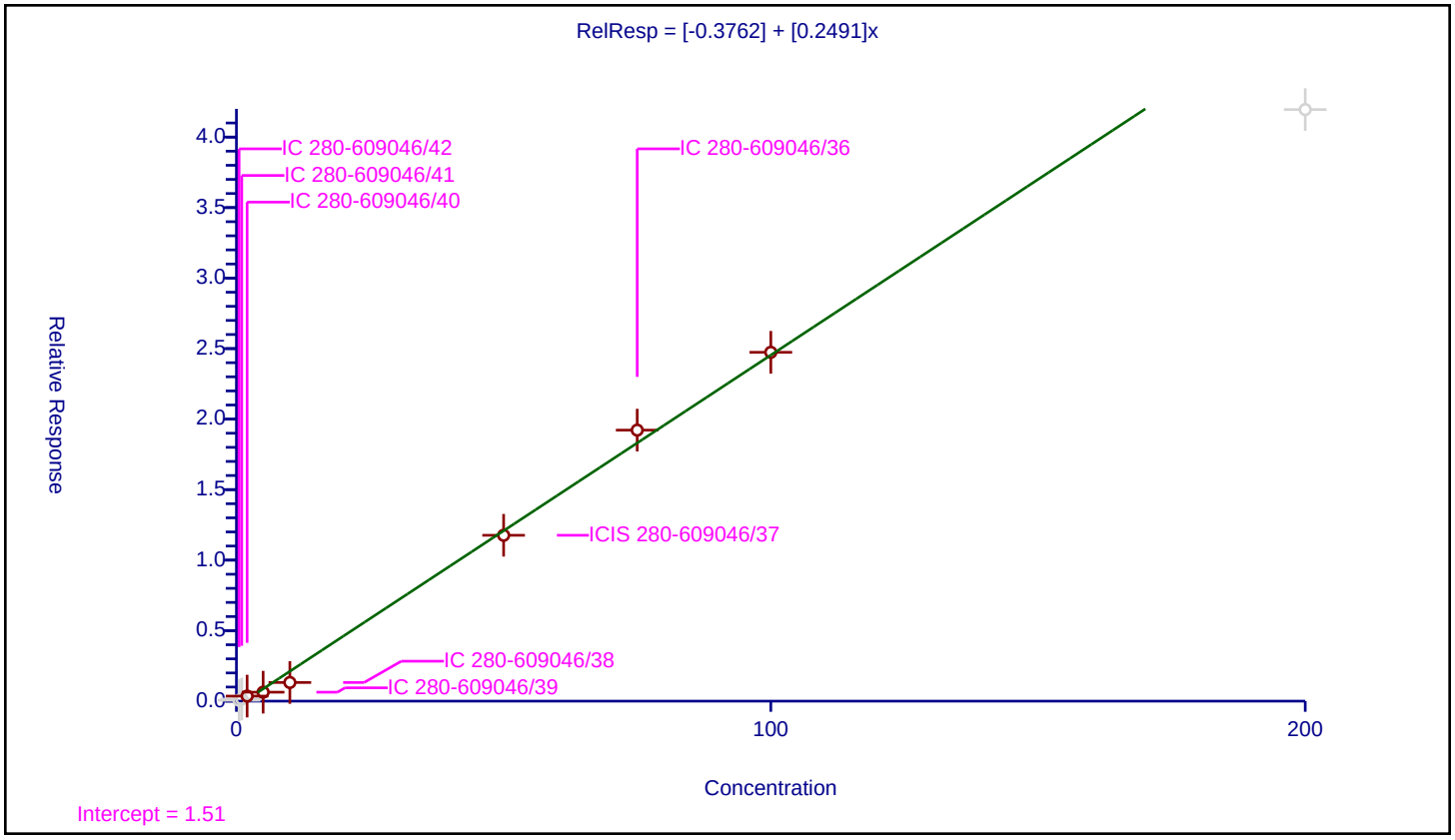
Curve Coefficients

Intercept:	-0.3762
Slope:	0.2491

Error Coefficients

Standard Error:	421000
Relative Standard Error:	30.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.061003	50.0	1123724.0	0.122005	N
2	IC 280-609046/41	1.0	0.147854	50.0	1135581.0	0.147854	N
3	IC 280-609046/40	2.0	0.358781	50.0	1153908.0	0.17939	Y
4	IC 280-609046/39	5.0	0.635296	50.0	1207547.0	0.127059	Y
5	IC 280-609046/38	10.0	1.323142	50.0	1230102.0	0.132314	Y
6	ICIS 280-609046/37	50.0	11.762727	50.0	1247062.0	0.235255	Y
7	IC 280-609046/36	75.0	19.218475	50.0	1248840.0	0.256246	Y
8	IC 280-609046/35	100.0	24.738485	50.0	1262070.0	0.247385	Y
9	IC 280-609046/34	200.0	41.950783	50.0	1267906.0	0.209754	N



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Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

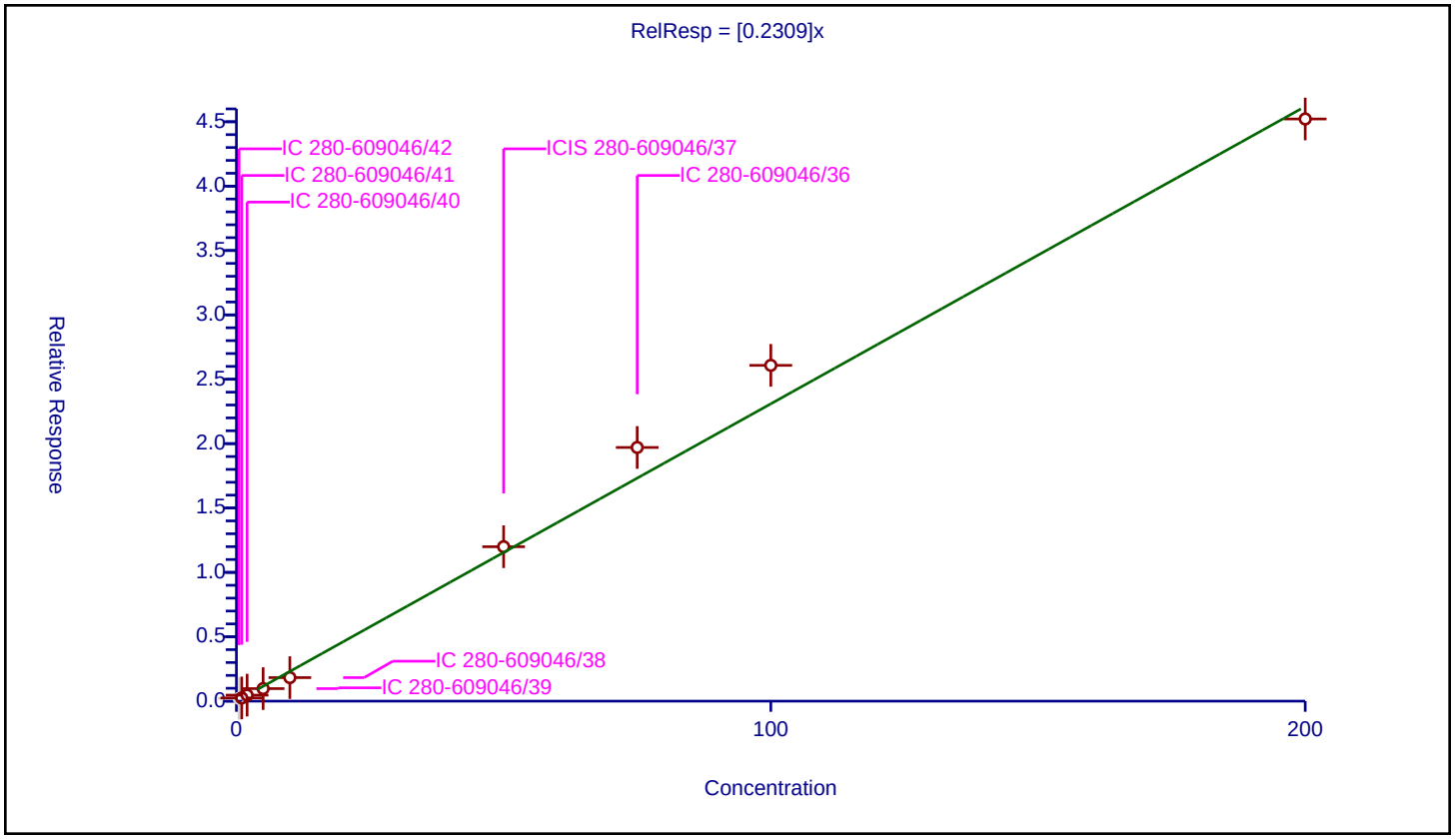
Curve Coefficients

Intercept:	0
Slope:	0.2309

Error Coefficients

Standard Error:	545000
Relative Standard Error:	12.6
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.21629	50.0	1123724.0	0.43258	N
2	IC 280-609046/41	1.0	0.247759	50.0	1135581.0	0.247759	Y
3	IC 280-609046/40	2.0	0.465895	50.0	1153908.0	0.232948	Y
4	IC 280-609046/39	5.0	0.972592	50.0	1207547.0	0.194518	Y
5	IC 280-609046/38	10.0	1.828222	50.0	1230102.0	0.182822	Y
6	ICIS 280-609046/37	50.0	11.99355	50.0	1247062.0	0.239871	Y
7	IC 280-609046/36	75.0	19.703044	50.0	1248840.0	0.262707	Y
8	IC 280-609046/35	100.0	26.080764	50.0	1262070.0	0.260808	Y
9	IC 280-609046/34	200.0	45.215024	50.0	1267906.0	0.226075	Y



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Calibration / Vinyl chloride

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

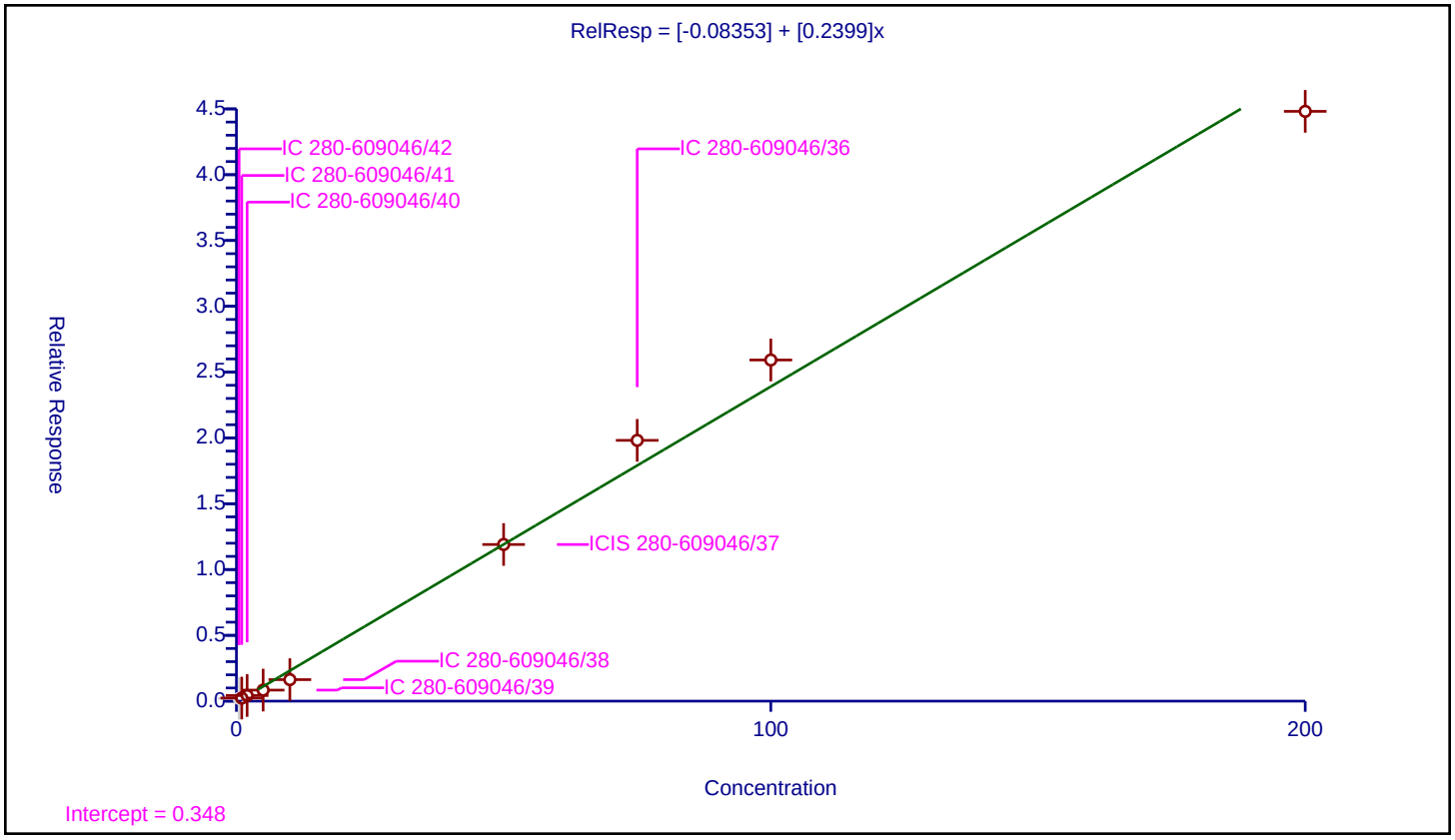
Curve Coefficients

Intercept:	-0.08353
Slope:	0.2399

Error Coefficients

Standard Error:	585000
Relative Standard Error:	21.0
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.212285	50.0	1123724.0	0.42457	N
2	IC 280-609046/41	1.0	0.233933	50.0	1135581.0	0.233933	Y
3	IC 280-609046/40	2.0	0.42759	50.0	1153908.0	0.213795	Y
4	IC 280-609046/39	5.0	0.838932	50.0	1207547.0	0.167786	Y
5	IC 280-609046/38	10.0	1.63393	50.0	1230102.0	0.163393	Y
6	ICIS 280-609046/37	50.0	11.903217	50.0	1247062.0	0.238064	Y
7	IC 280-609046/36	75.0	19.815389	50.0	1248840.0	0.264205	Y
8	IC 280-609046/35	100.0	25.920828	50.0	1262070.0	0.259208	Y
9	IC 280-609046/34	200.0	44.813811	50.0	1267906.0	0.224069	Y



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Calibration / Bromomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

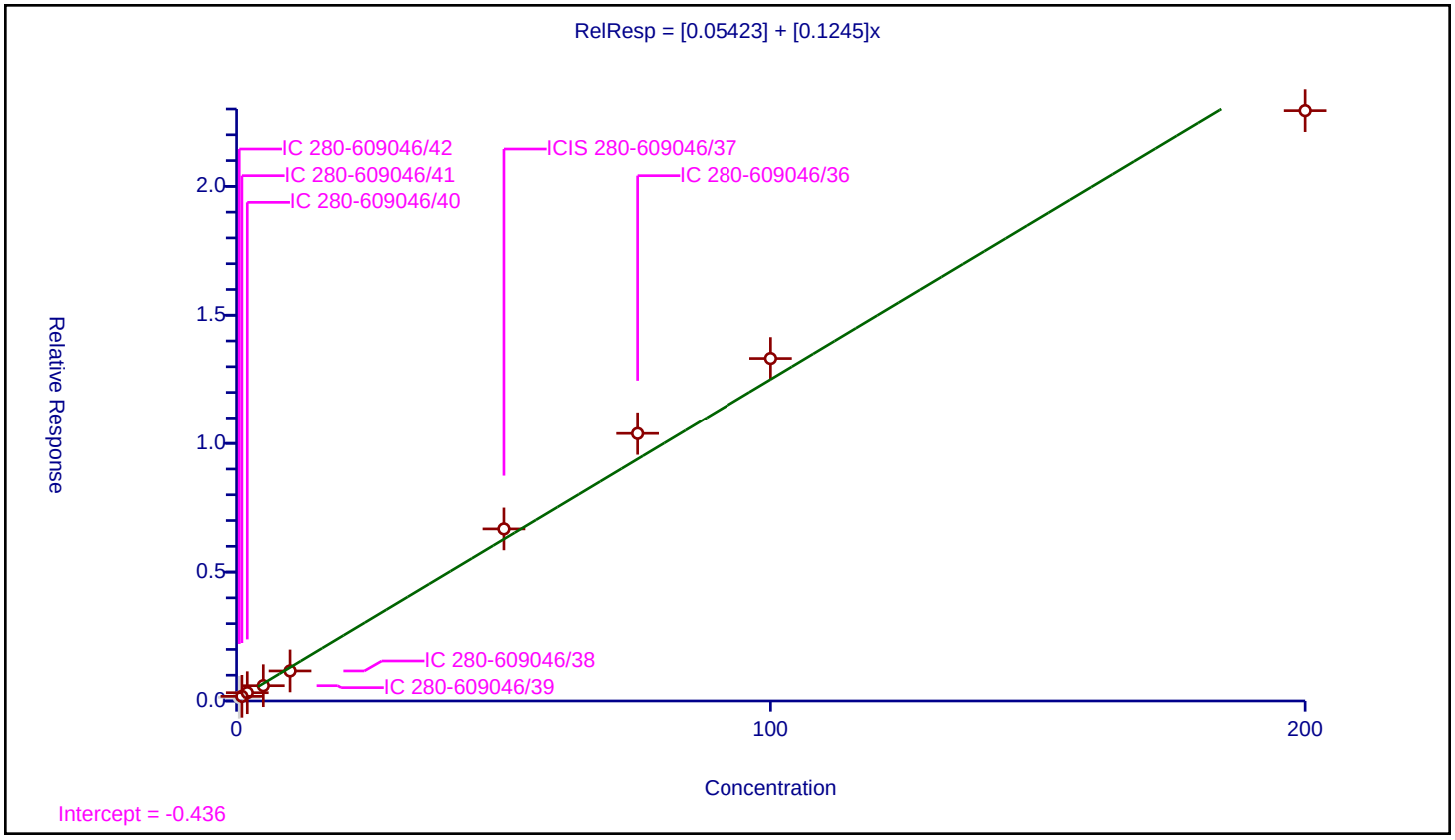
Curve Coefficients

Intercept:	0.05423
Slope:	0.1245

Error Coefficients

Standard Error:	302000
Relative Standard Error:	10.1
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.141761	50.0	1123724.0	0.283522	N
2	IC 280-609046/41	1.0	0.180524	50.0	1135581.0	0.180524	Y
3	IC 280-609046/40	2.0	0.320823	50.0	1153908.0	0.160411	Y
4	IC 280-609046/39	5.0	0.593683	50.0	1207547.0	0.118737	Y
5	IC 280-609046/38	10.0	1.165351	50.0	1230102.0	0.116535	Y
6	ICIS 280-609046/37	50.0	6.674889	50.0	1247062.0	0.133498	Y
7	IC 280-609046/36	75.0	10.38748	50.0	1248840.0	0.1385	Y
8	IC 280-609046/35	100.0	13.319388	50.0	1262070.0	0.133194	Y
9	IC 280-609046/34	200.0	22.937347	50.0	1267906.0	0.114687	Y



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Calibration / Chloroethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

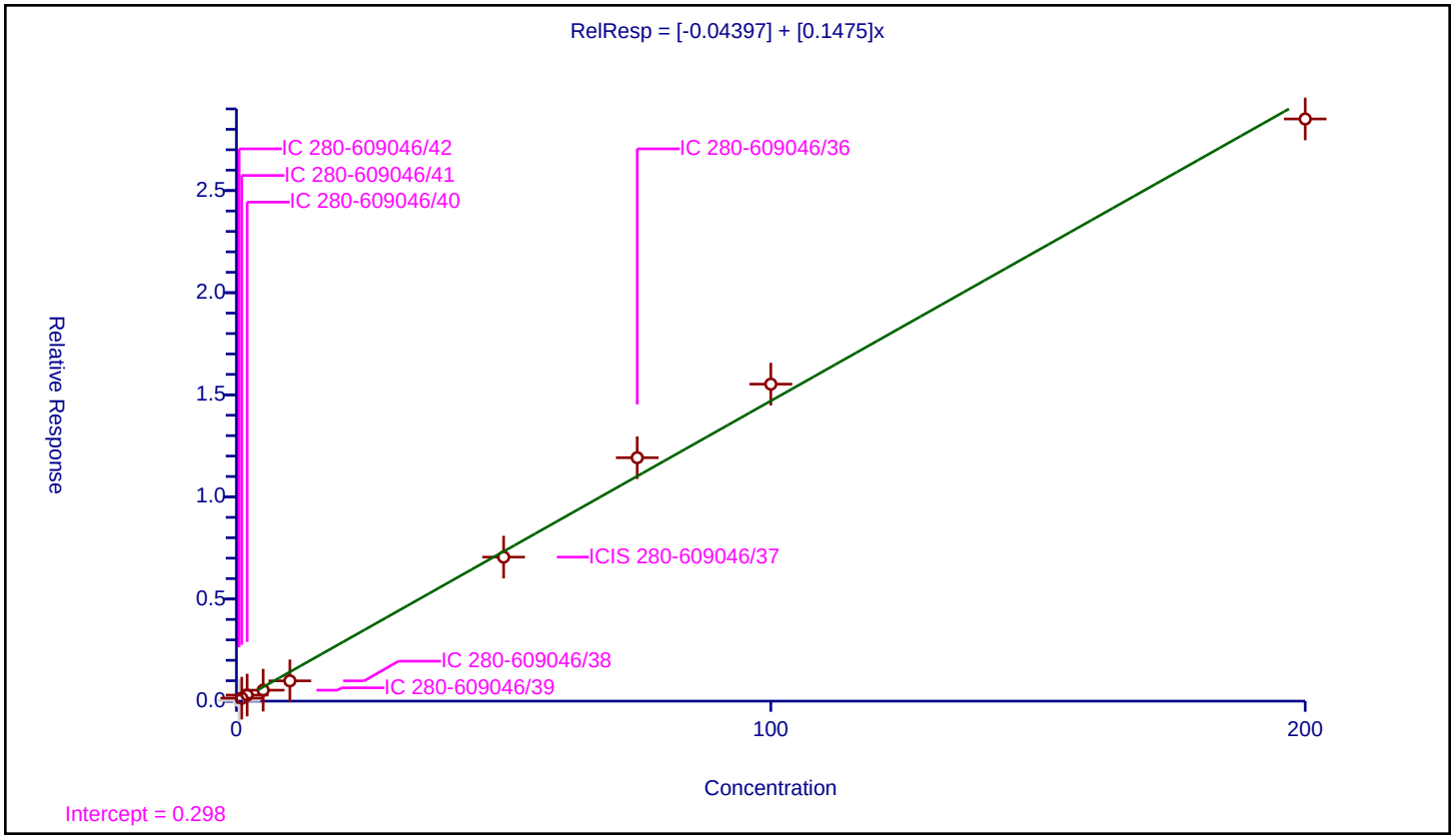
Curve Coefficients

Intercept:	-0.04397
Slope:	0.1475

Error Coefficients

Standard Error:	364000
Relative Standard Error:	20.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.031191	50.0	1123724.0	0.062382	N
2	IC 280-609046/41	1.0	0.146577	50.0	1135581.0	0.146577	Y
3	IC 280-609046/40	2.0	0.294868	50.0	1153908.0	0.147434	Y
4	IC 280-609046/39	5.0	0.536501	50.0	1207547.0	0.1073	Y
5	IC 280-609046/38	10.0	0.993617	50.0	1230102.0	0.099362	Y
6	ICIS 280-609046/37	50.0	7.052336	50.0	1247062.0	0.141047	Y
7	IC 280-609046/36	75.0	11.920582	50.0	1248840.0	0.158941	Y
8	IC 280-609046/35	100.0	15.523109	50.0	1262070.0	0.155231	Y
9	IC 280-609046/34	200.0	28.506372	50.0	1267906.0	0.142532	Y



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Calibration / Dichlorofluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

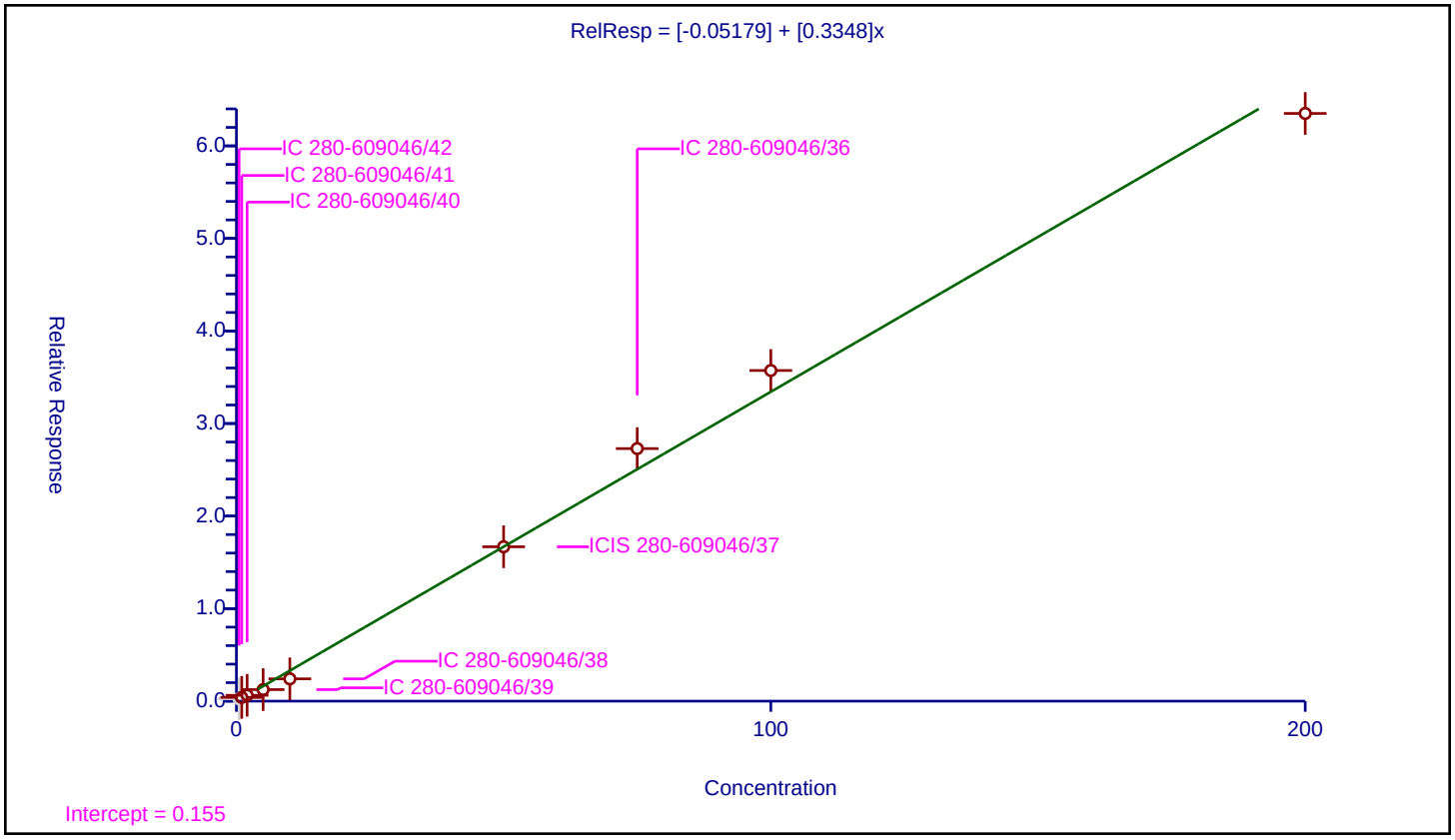
Curve Coefficients

Intercept:	-0.05179
Slope:	0.3348

Error Coefficients

Standard Error:	821000
Relative Standard Error:	21.2
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.257537	50.0	1123724.0	0.515073	N
2	IC 280-609046/41	1.0	0.40596	50.0	1135581.0	0.40596	Y
3	IC 280-609046/40	2.0	0.627736	50.0	1153908.0	0.313868	Y
4	IC 280-609046/39	5.0	1.247281	50.0	1207547.0	0.249456	Y
5	IC 280-609046/38	10.0	2.410247	50.0	1230102.0	0.241025	Y
6	ICIS 280-609046/37	50.0	16.680005	50.0	1247062.0	0.3336	Y
7	IC 280-609046/36	75.0	27.292207	50.0	1248840.0	0.363896	Y
8	IC 280-609046/35	100.0	35.730269	50.0	1262070.0	0.357303	Y
9	IC 280-609046/34	200.0	63.506798	50.0	1267906.0	0.317534	Y



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Calibration / Trichlorofluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

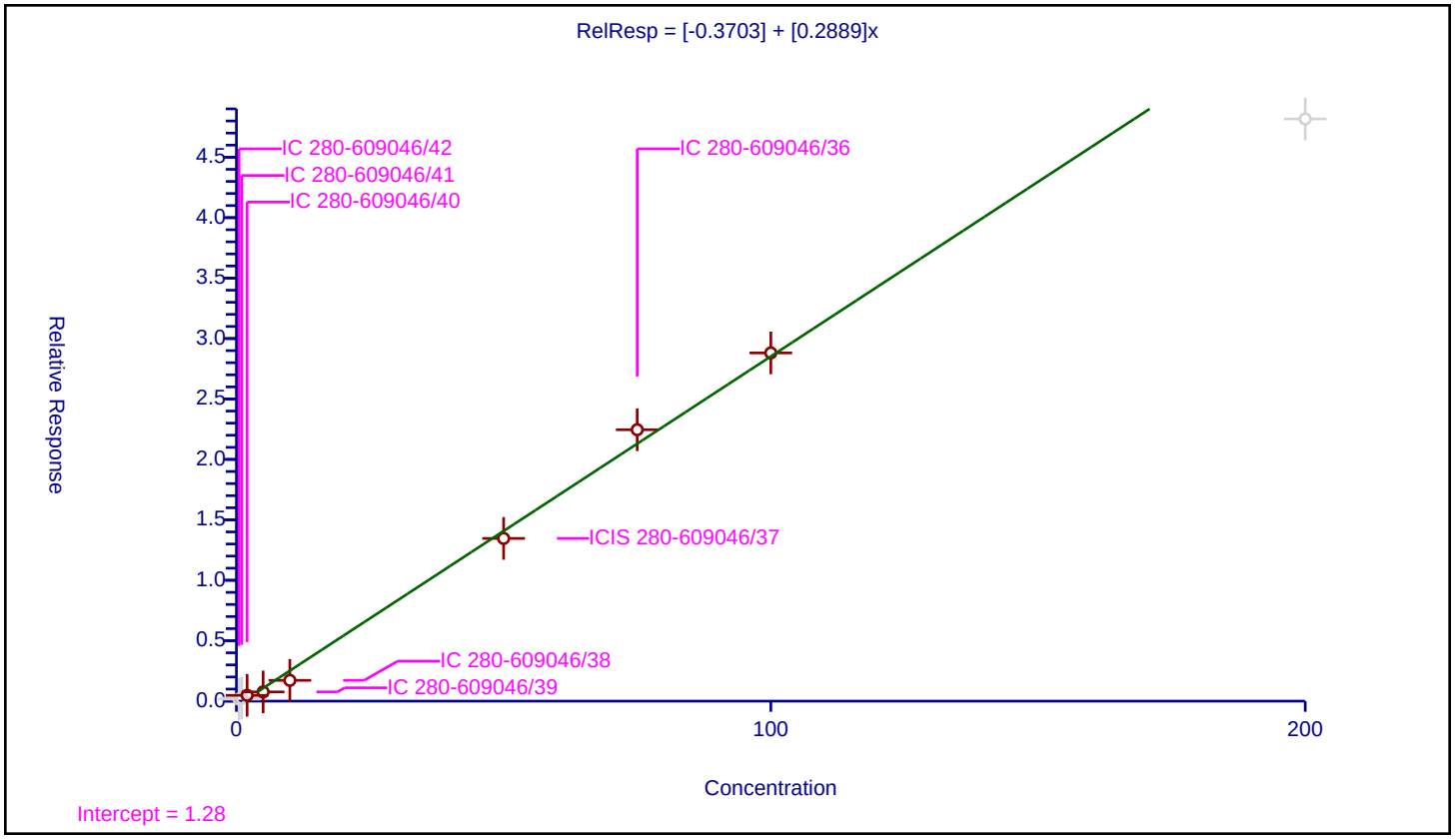
Curve Coefficients

Intercept:	-0.3703
Slope:	0.2889

Error Coefficients

Standard Error:	489000
Relative Standard Error:	29.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.1669	50.0	1123724.0	0.333801	N
2	IC 280-609046/41	1.0	0.253747	50.0	1135581.0	0.253747	N
3	IC 280-609046/40	2.0	0.479544	50.0	1153908.0	0.239772	Y
4	IC 280-609046/39	5.0	0.76262	50.0	1207547.0	0.152524	Y
5	IC 280-609046/38	10.0	1.72067	50.0	1230102.0	0.172067	Y
6	ICIS 280-609046/37	50.0	13.462041	50.0	1247062.0	0.269241	Y
7	IC 280-609046/36	75.0	22.45668	50.0	1248840.0	0.299422	Y
8	IC 280-609046/35	100.0	28.811278	50.0	1262070.0	0.288113	Y
9	IC 280-609046/34	200.0	48.167096	50.0	1267906.0	0.240835	N



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Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

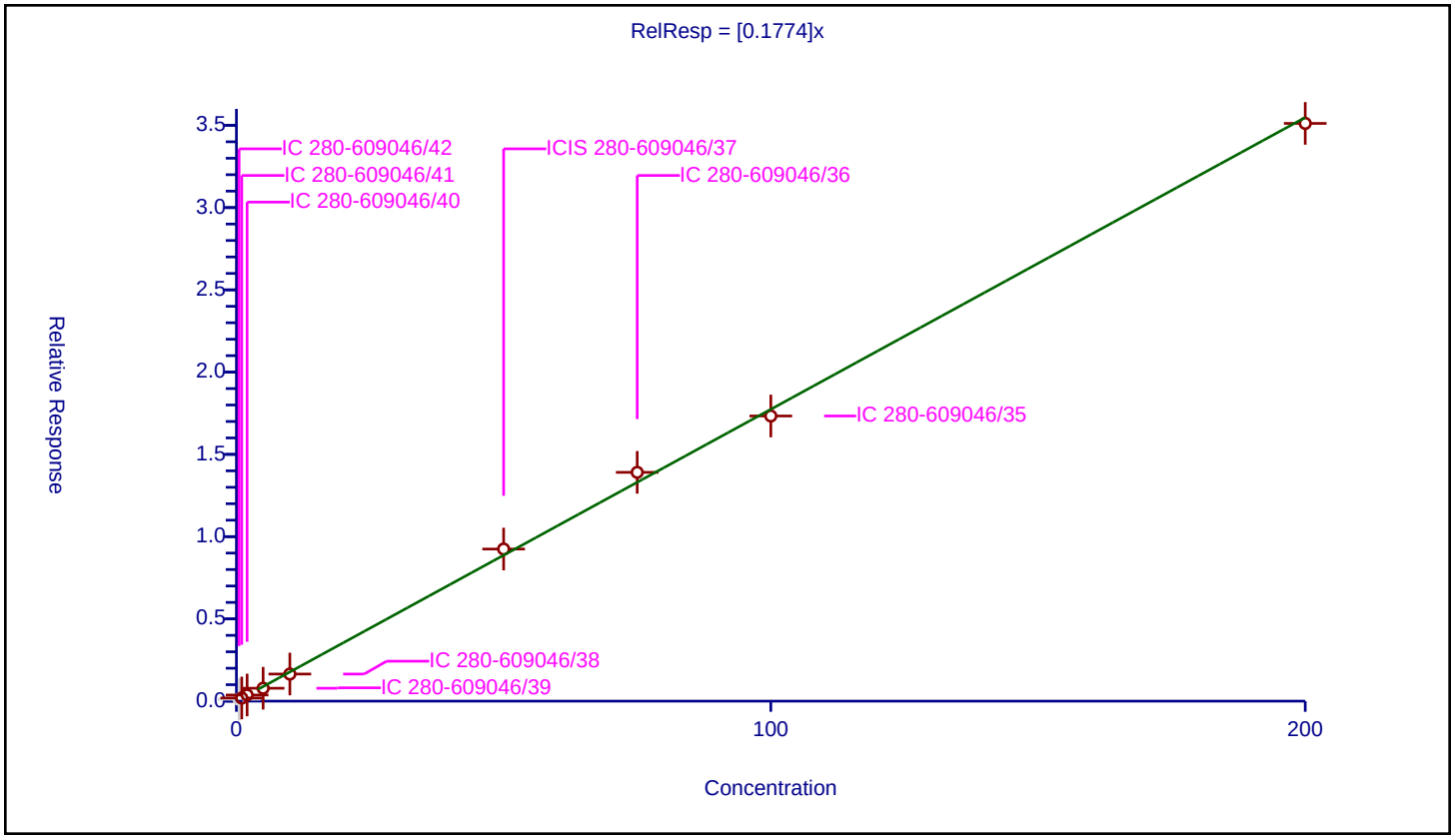
Curve Coefficients

Intercept:	0
Slope:	0.1774

Error Coefficients

Standard Error:	407000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.115642	50.0	1123724.0	0.231285	N
2	IC 280-609046/41	1.0	0.191356	50.0	1135581.0	0.191356	Y
3	IC 280-609046/40	2.0	0.37386	50.0	1153908.0	0.18693	Y
4	IC 280-609046/39	5.0	0.784152	50.0	1207547.0	0.15683	Y
5	IC 280-609046/38	10.0	1.647262	50.0	1230102.0	0.164726	Y
6	ICIS 280-609046/37	50.0	9.24525	50.0	1247062.0	0.184905	Y
7	IC 280-609046/36	75.0	13.907907	50.0	1248840.0	0.185439	Y
8	IC 280-609046/35	100.0	17.333032	50.0	1262070.0	0.17333	Y
9	IC 280-609046/34	200.0	35.11743	50.0	1267906.0	0.175587	Y



11/27/2023
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Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

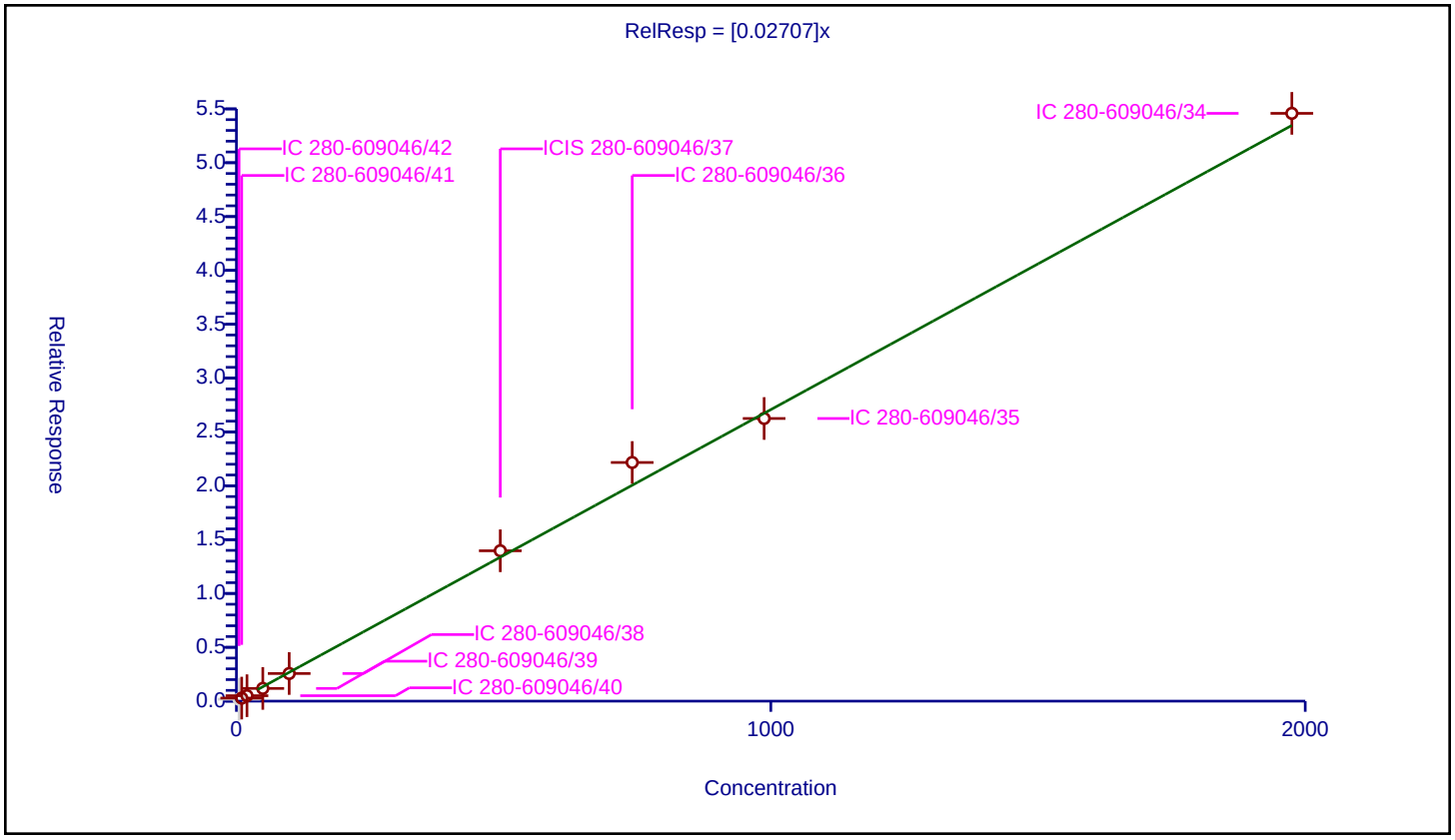
Curve Coefficients

Intercept:	0
Slope:	0.02707

Error Coefficients

Standard Error:	631000
Relative Standard Error:	7.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	4.9375	0.178736	50.0	1123724.0	0.0362	N
2	IC 280-609046/41	9.875	0.282763	50.0	1135581.0	0.028634	Y
3	IC 280-609046/40	19.75	0.505326	50.0	1153908.0	0.025586	Y
4	IC 280-609046/39	49.375	1.182107	50.0	1207547.0	0.023941	Y
5	IC 280-609046/38	98.75	2.566373	50.0	1230102.0	0.025989	Y
6	ICIS 280-609046/37	493.75	13.964061	50.0	1247062.0	0.028282	Y
7	IC 280-609046/36	740.625	22.163167	50.0	1248840.0	0.029925	Y
8	IC 280-609046/35	987.5	26.24997	50.0	1262070.0	0.026582	Y
9	IC 280-609046/34	1975.0	54.584567	50.0	1267906.0	0.027638	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

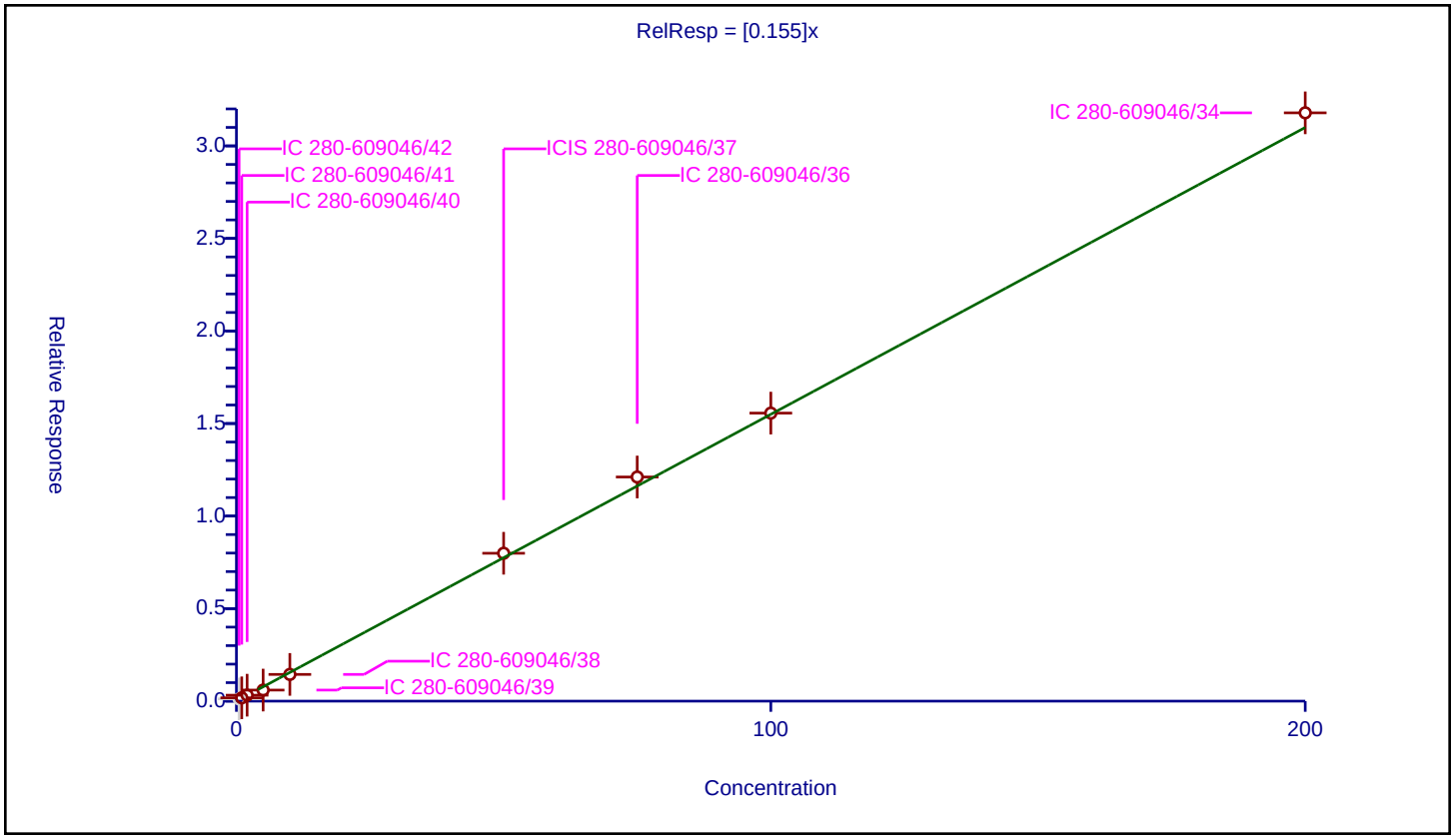
Curve Coefficients

Intercept:	0
Slope:	0.155

Error Coefficients

Standard Error:	366000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.122317	50.0	1123724.0	0.244633	N
2	IC 280-609046/41	1.0	0.179071	50.0	1135581.0	0.179071	Y
3	IC 280-609046/40	2.0	0.321819	50.0	1153908.0	0.16091	Y
4	IC 280-609046/39	5.0	0.598031	50.0	1207547.0	0.119606	Y
5	IC 280-609046/38	10.0	1.443905	50.0	1230102.0	0.14439	Y
6	ICIS 280-609046/37	50.0	7.99034	50.0	1247062.0	0.159807	Y
7	IC 280-609046/36	75.0	12.110679	50.0	1248840.0	0.161476	Y
8	IC 280-609046/35	100.0	15.562211	50.0	1262070.0	0.155622	Y
9	IC 280-609046/34	200.0	31.787451	50.0	1267906.0	0.158937	Y



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Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

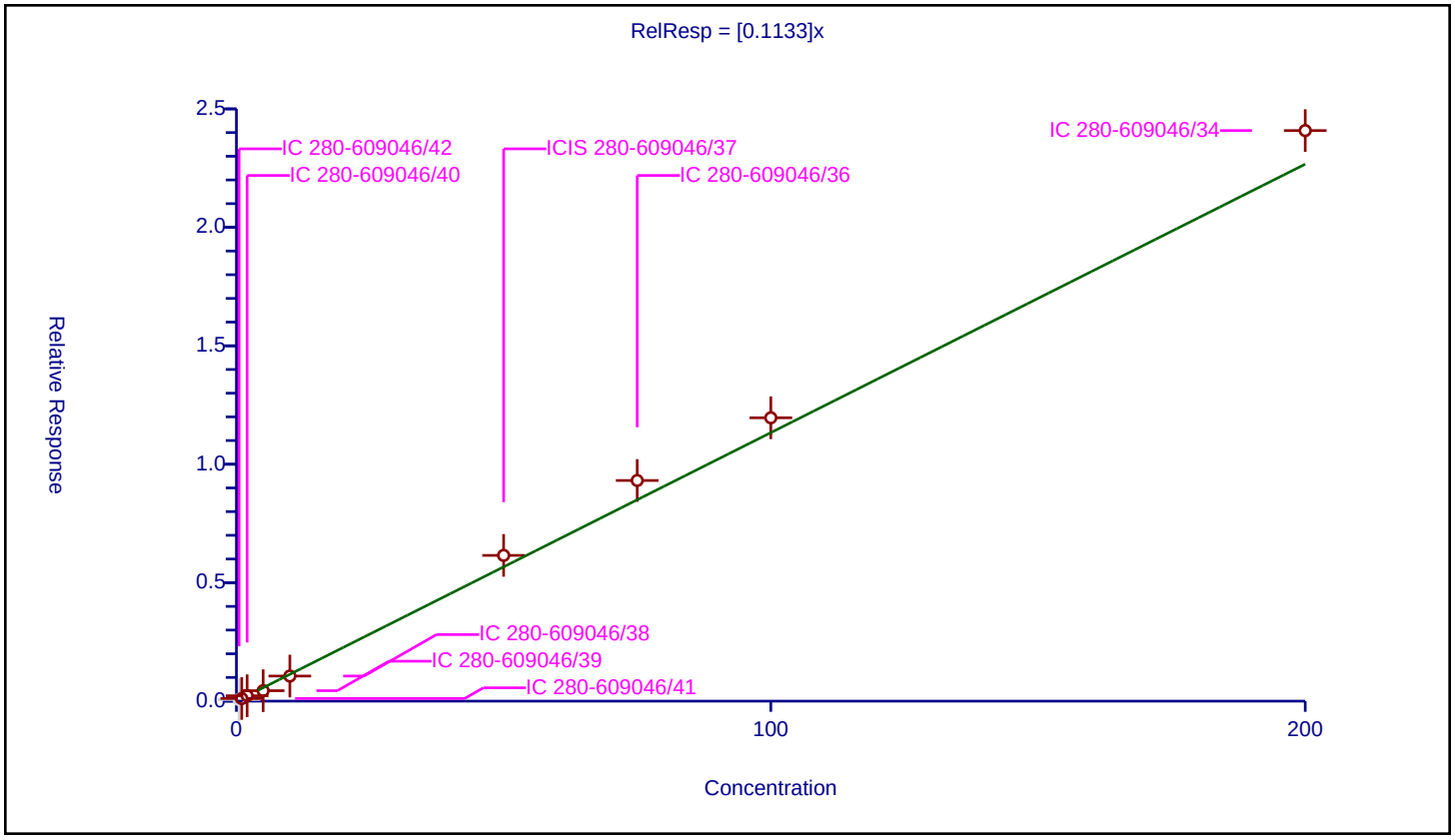
Curve Coefficients

Intercept:	0
Slope:	0.1133

Error Coefficients

Standard Error:	278000
Relative Standard Error:	10.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.066742	50.0	1123724.0	0.133485	N
2	IC 280-609046/41	1.0	0.111265	50.0	1135581.0	0.111265	Y
3	IC 280-609046/40	2.0	0.227921	50.0	1153908.0	0.113961	Y
4	IC 280-609046/39	5.0	0.441225	50.0	1207547.0	0.088245	Y
5	IC 280-609046/38	10.0	1.059709	50.0	1230102.0	0.105971	Y
6	ICIS 280-609046/37	50.0	6.152381	50.0	1247062.0	0.123048	Y
7	IC 280-609046/36	75.0	9.314124	50.0	1248840.0	0.124188	Y
8	IC 280-609046/35	100.0	11.960232	50.0	1262070.0	0.119602	Y
9	IC 280-609046/34	200.0	24.084356	50.0	1267906.0	0.120422	Y



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Calibration / Acetone

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

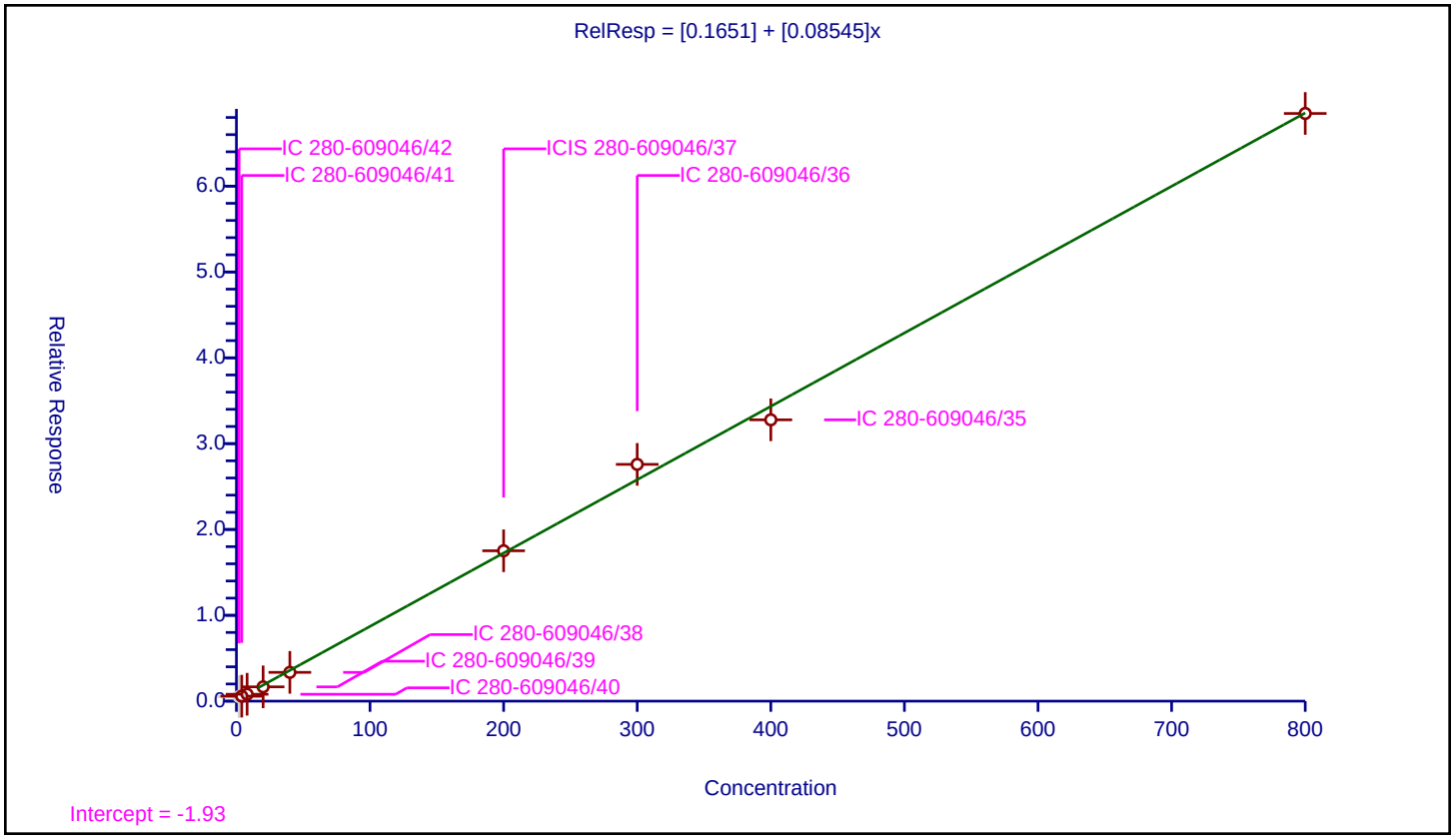
Curve Coefficients

Intercept:	0.1651
Slope:	0.08545

Error Coefficients

Standard Error:	854000
Relative Standard Error:	11.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	2.0	0.529044	50.0	1123724.0	0.264522	N
2	IC 280-609046/41	4.0	0.582785	50.0	1135581.0	0.145696	Y
3	IC 280-609046/40	8.0	0.800974	50.0	1153908.0	0.100122	Y
4	IC 280-609046/39	20.0	1.664904	50.0	1207547.0	0.083245	Y
5	IC 280-609046/38	40.0	3.352486	50.0	1230102.0	0.083812	Y
6	ICIS 280-609046/37	200.0	17.517413	50.0	1247062.0	0.087587	Y
7	IC 280-609046/36	300.0	27.585479	50.0	1248840.0	0.091952	Y
8	IC 280-609046/35	400.0	32.775321	50.0	1262070.0	0.081938	Y
9	IC 280-609046/34	800.0	68.466511	50.0	1267906.0	0.085583	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

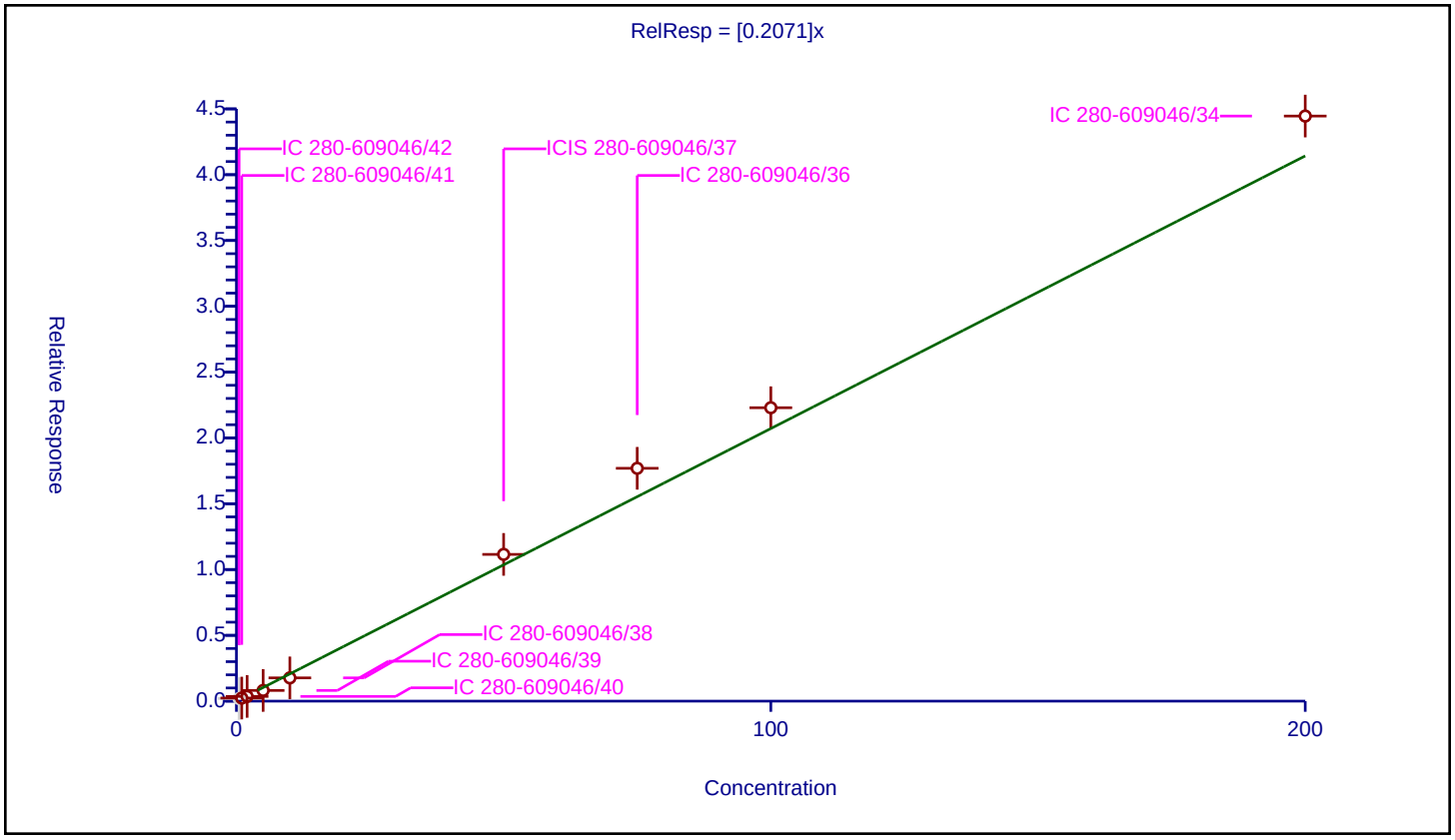
Curve Coefficients

Intercept:	0
Slope:	0.2071

Error Coefficients

Standard Error:	516000
Relative Standard Error:	14.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.201384	50.0	1123724.0	0.402768	N
2	IC 280-609046/41	1.0	0.233625	50.0	1135581.0	0.233625	Y
3	IC 280-609046/40	2.0	0.359777	50.0	1153908.0	0.179889	Y
4	IC 280-609046/39	5.0	0.813509	50.0	1207547.0	0.162702	Y
5	IC 280-609046/38	10.0	1.767333	50.0	1230102.0	0.176733	Y
6	ICIS 280-609046/37	50.0	11.149967	50.0	1247062.0	0.222999	Y
7	IC 280-609046/36	75.0	17.691298	50.0	1248840.0	0.235884	Y
8	IC 280-609046/35	100.0	22.293415	50.0	1262070.0	0.222934	Y
9	IC 280-609046/34	200.0	44.456332	50.0	1267906.0	0.222282	Y



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Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

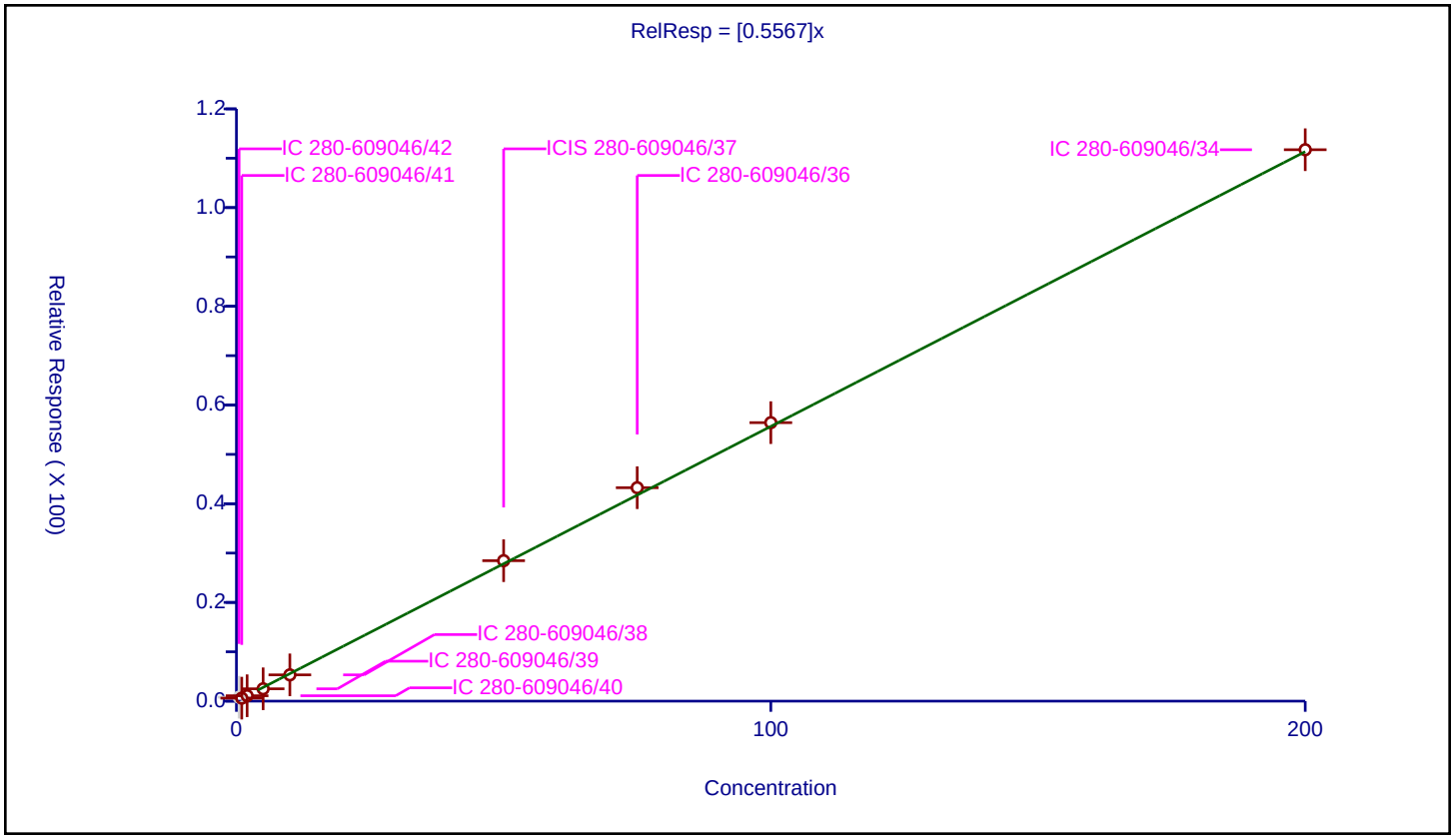
Curve Coefficients

Intercept:	0
Slope:	0.5567

Error Coefficients

Standard Error:	1300000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.799262	50.0	1123724.0	1.598524	N
2	IC 280-609046/41	1.0	0.605153	50.0	1135581.0	0.605153	Y
3	IC 280-609046/40	2.0	1.095148	50.0	1153908.0	0.547574	Y
4	IC 280-609046/39	5.0	2.499944	50.0	1207547.0	0.499989	Y
5	IC 280-609046/38	10.0	5.321998	50.0	1230102.0	0.5322	Y
6	ICIS 280-609046/37	50.0	28.456805	50.0	1247062.0	0.569136	Y
7	IC 280-609046/36	75.0	43.242649	50.0	1248840.0	0.576569	Y
8	IC 280-609046/35	100.0	56.42817	50.0	1262070.0	0.564282	Y
9	IC 280-609046/34	200.0	111.726382	50.0	1267906.0	0.558632	Y



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Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

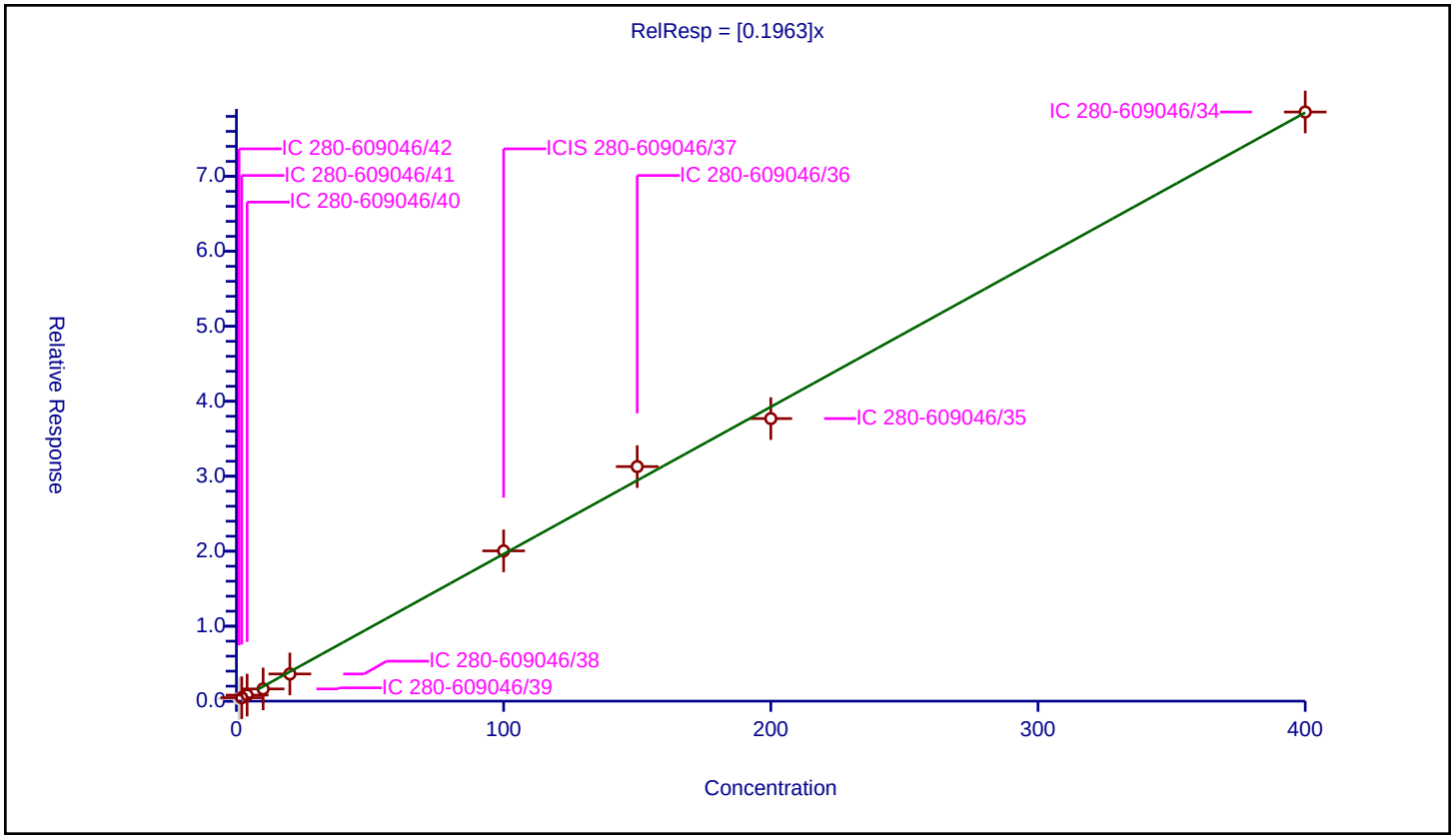
Curve Coefficients

Intercept:	0
Slope:	0.1963

Error Coefficients

Standard Error:	906000
Relative Standard Error:	10.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	1.0	0.33914	50.0	1123724.0	0.33914	N
2	IC 280-609046/41	2.0	0.460733	50.0	1135581.0	0.230367	Y
3	IC 280-609046/40	4.0	0.806347	50.0	1153908.0	0.201587	Y
4	IC 280-609046/39	10.0	1.630123	50.0	1207547.0	0.163012	Y
5	IC 280-609046/38	20.0	3.624293	50.0	1230102.0	0.181215	Y
6	ICIS 280-609046/37	100.0	20.04335	50.0	1247062.0	0.200433	Y
7	IC 280-609046/36	150.0	31.287995	50.0	1248840.0	0.208587	Y
8	IC 280-609046/35	200.0	37.690817	50.0	1262070.0	0.188454	Y
9	IC 280-609046/34	400.0	78.584729	50.0	1267906.0	0.196462	Y



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Calibration / 3-Chloro-1-propene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

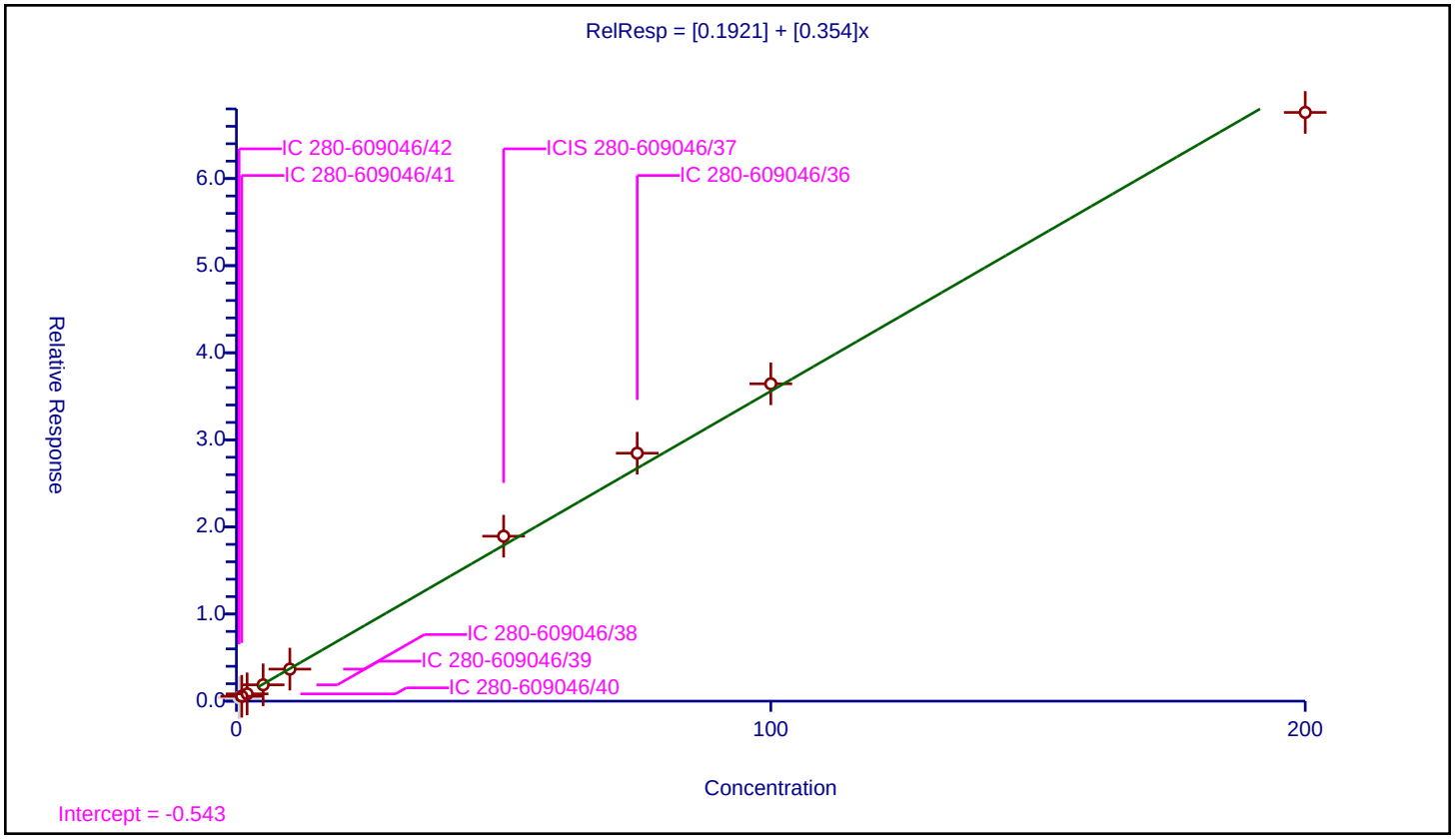
Curve Coefficients

Intercept:	0.1921
Slope:	0.354

Error Coefficients

Standard Error:	868000
Relative Standard Error:	6.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.404904	50.0	1123724.0	0.809807	N
2	IC 280-609046/41	1.0	0.565393	50.0	1135581.0	0.565393	Y
3	IC 280-609046/40	2.0	0.836289	50.0	1153908.0	0.418144	Y
4	IC 280-609046/39	5.0	1.874585	50.0	1207547.0	0.374917	Y
5	IC 280-609046/38	10.0	3.678394	50.0	1230102.0	0.367839	Y
6	ICIS 280-609046/37	50.0	18.938192	50.0	1247062.0	0.378764	Y
7	IC 280-609046/36	75.0	28.46998	50.0	1248840.0	0.3796	Y
8	IC 280-609046/35	100.0	36.437757	50.0	1262070.0	0.364378	Y
9	IC 280-609046/34	200.0	67.594009	50.0	1267906.0	0.33797	Y



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Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

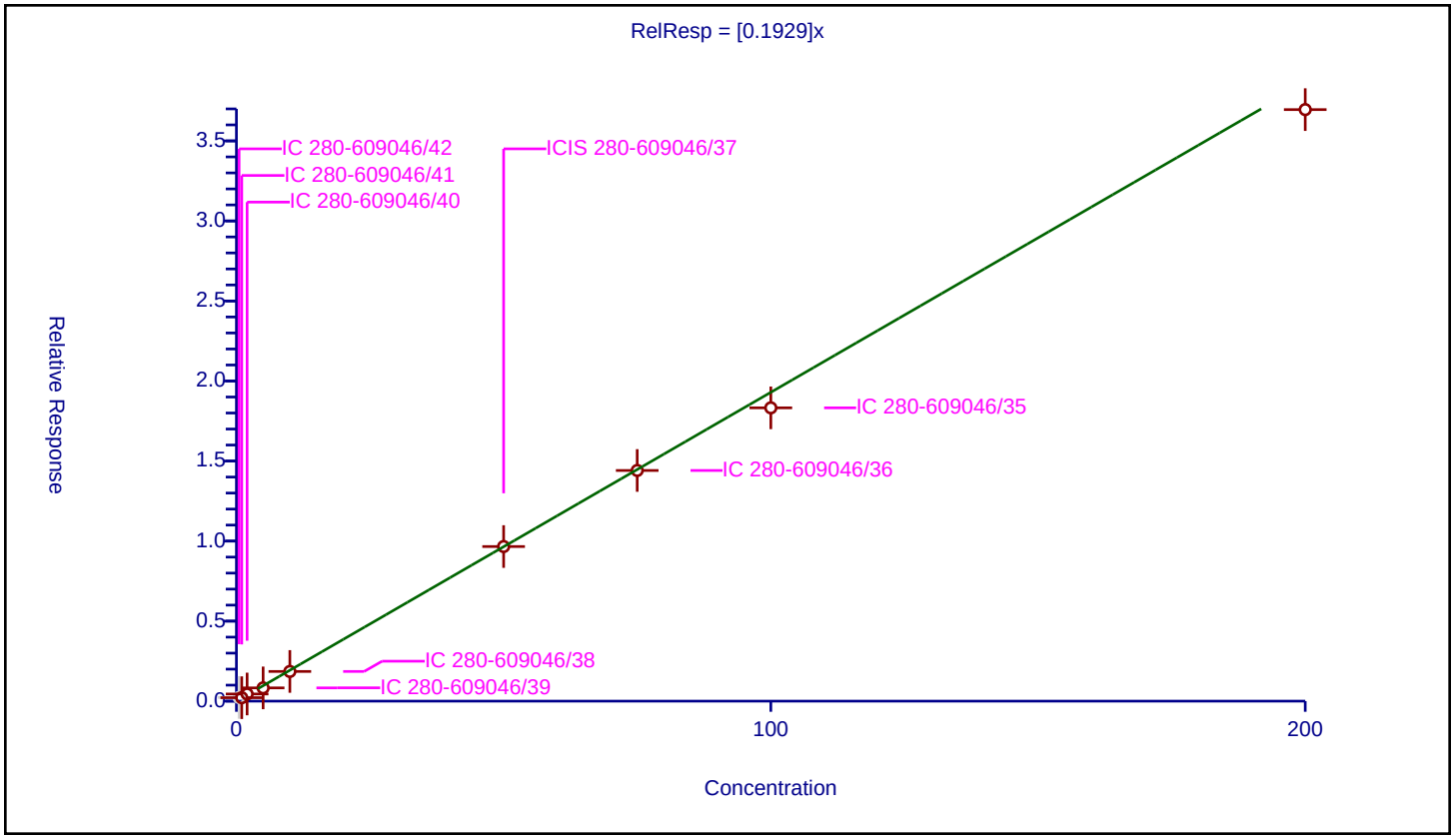
Curve Coefficients

Intercept:	0
Slope:	0.1929

Error Coefficients

Standard Error:	428000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.230484	50.0	1123724.0	0.460967	N
2	IC 280-609046/41	1.0	0.215661	50.0	1135581.0	0.215661	Y
3	IC 280-609046/40	2.0	0.447219	50.0	1153908.0	0.22361	Y
4	IC 280-609046/39	5.0	0.827918	50.0	1207547.0	0.165584	Y
5	IC 280-609046/38	10.0	1.854115	50.0	1230102.0	0.185411	Y
6	ICIS 280-609046/37	50.0	9.65814	50.0	1247062.0	0.193163	Y
7	IC 280-609046/36	75.0	14.409692	50.0	1248840.0	0.192129	Y
8	IC 280-609046/35	100.0	18.32331	50.0	1262070.0	0.183233	Y
9	IC 280-609046/34	200.0	36.955776	50.0	1267906.0	0.184779	Y



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Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

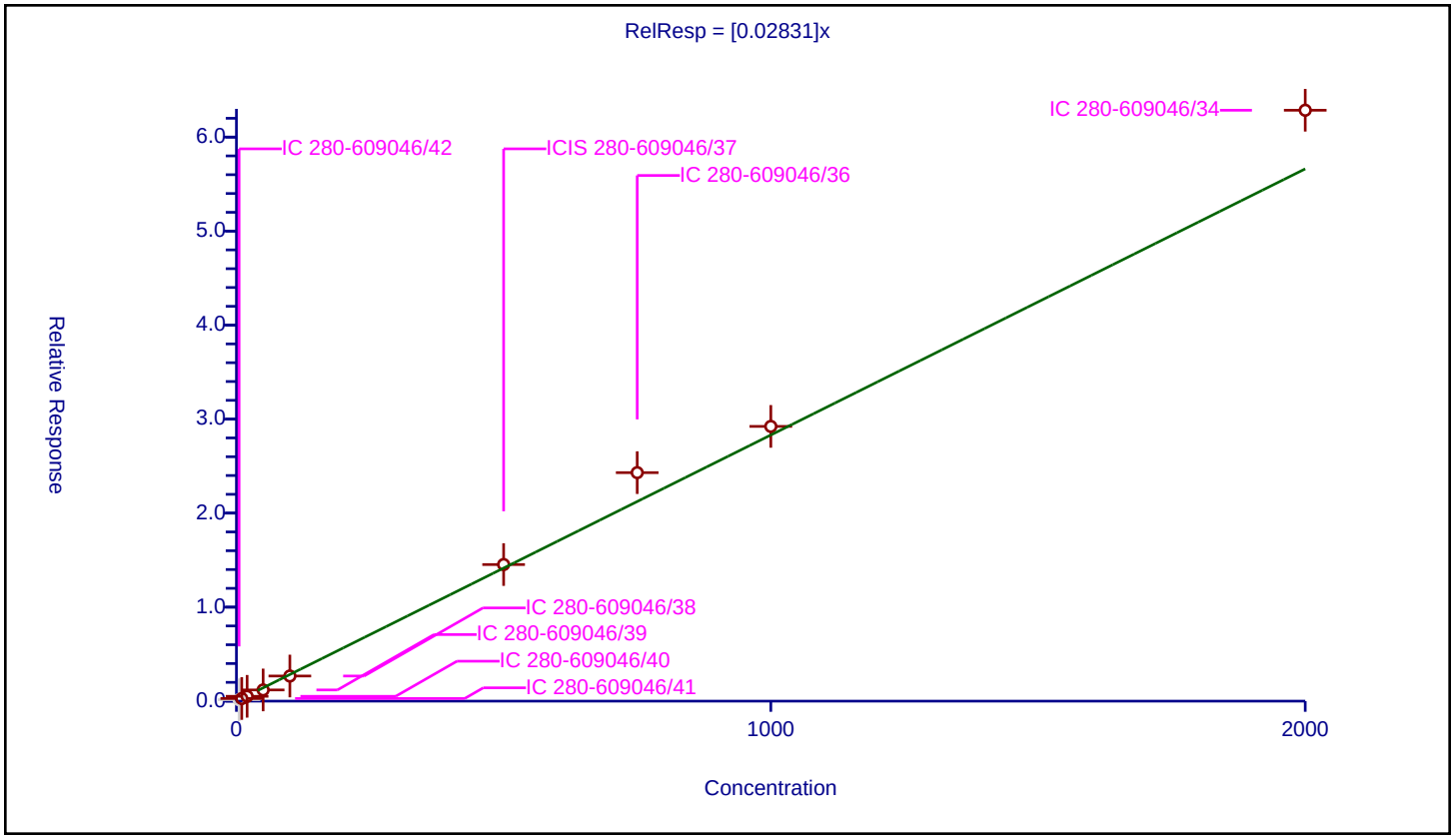
Curve Coefficients

Intercept:	0
Slope:	0.02831

Error Coefficients

Standard Error:	716000
Relative Standard Error:	10.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	5.0	0.154842	50.0	1123724.0	0.030968	N
2	IC 280-609046/41	10.0	0.280209	50.0	1135581.0	0.028021	Y
3	IC 280-609046/40	20.0	0.515379	50.0	1153908.0	0.025769	Y
4	IC 280-609046/39	50.0	1.1925	50.0	1207547.0	0.02385	Y
5	IC 280-609046/38	100.0	2.67173	50.0	1230102.0	0.026717	Y
6	ICIS 280-609046/37	500.0	14.529069	50.0	1247062.0	0.029058	Y
7	IC 280-609046/36	750.0	24.306516	50.0	1248840.0	0.032409	Y
8	IC 280-609046/35	1000.0	29.22429	50.0	1262070.0	0.029224	Y
9	IC 280-609046/34	2000.0	62.854502	50.0	1267906.0	0.031427	Y



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Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

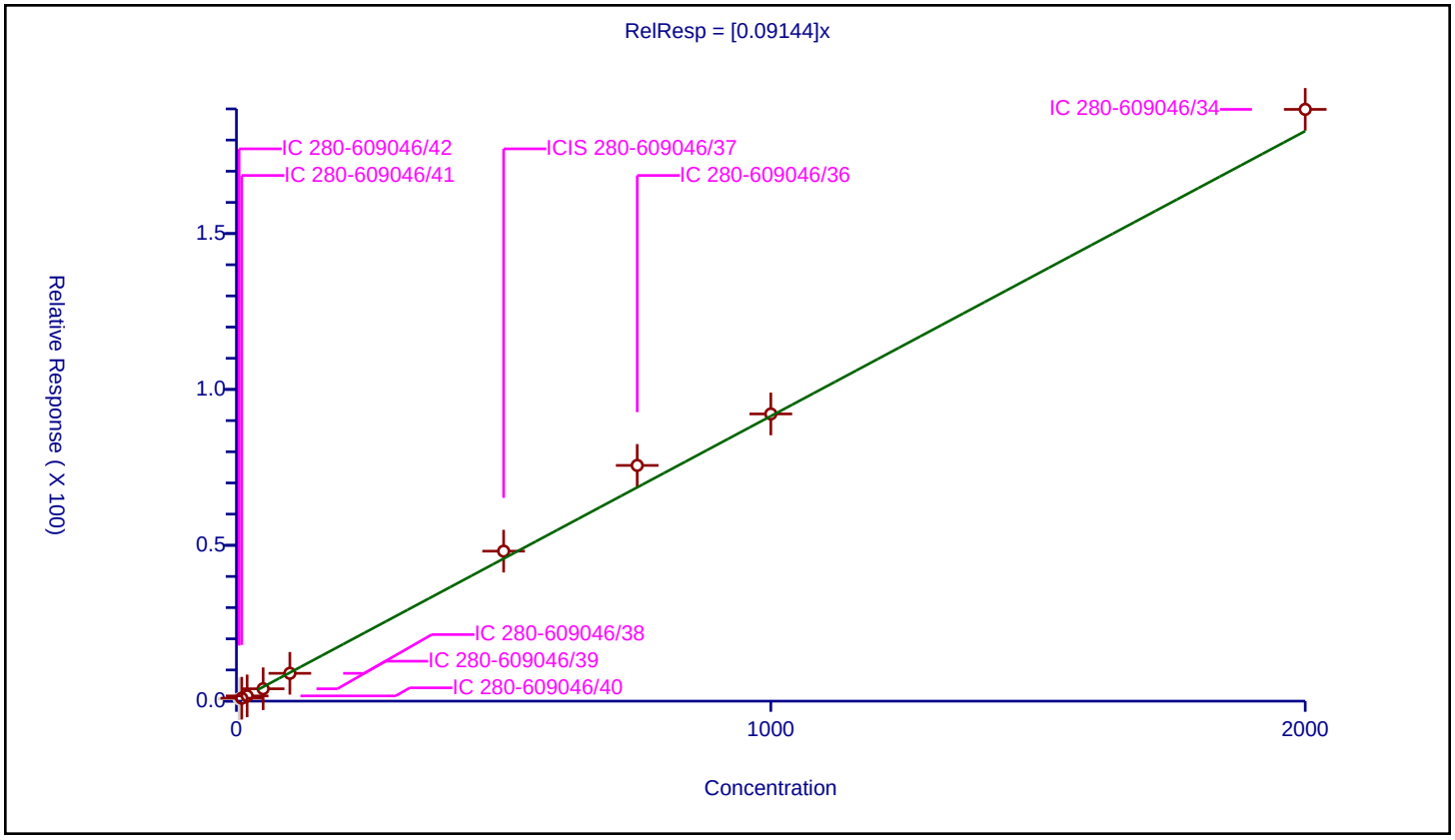
Curve Coefficients

Intercept:	0
Slope:	0.09144

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	7.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	5.0	0.738705	50.0	1123724.0	0.147741	N
2	IC 280-609046/41	10.0	0.947489	50.0	1135581.0	0.094749	Y
3	IC 280-609046/40	20.0	1.679033	50.0	1153908.0	0.083952	Y
4	IC 280-609046/39	50.0	3.972392	50.0	1207547.0	0.079448	Y
5	IC 280-609046/38	100.0	8.925886	50.0	1230102.0	0.089259	Y
6	ICIS 280-609046/37	500.0	48.120823	50.0	1247062.0	0.096242	Y
7	IC 280-609046/36	750.0	75.623419	50.0	1248840.0	0.100831	Y
8	IC 280-609046/35	1000.0	92.139976	50.0	1262070.0	0.09214	Y
9	IC 280-609046/34	2000.0	189.850155	50.0	1267906.0	0.094925	Y



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Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

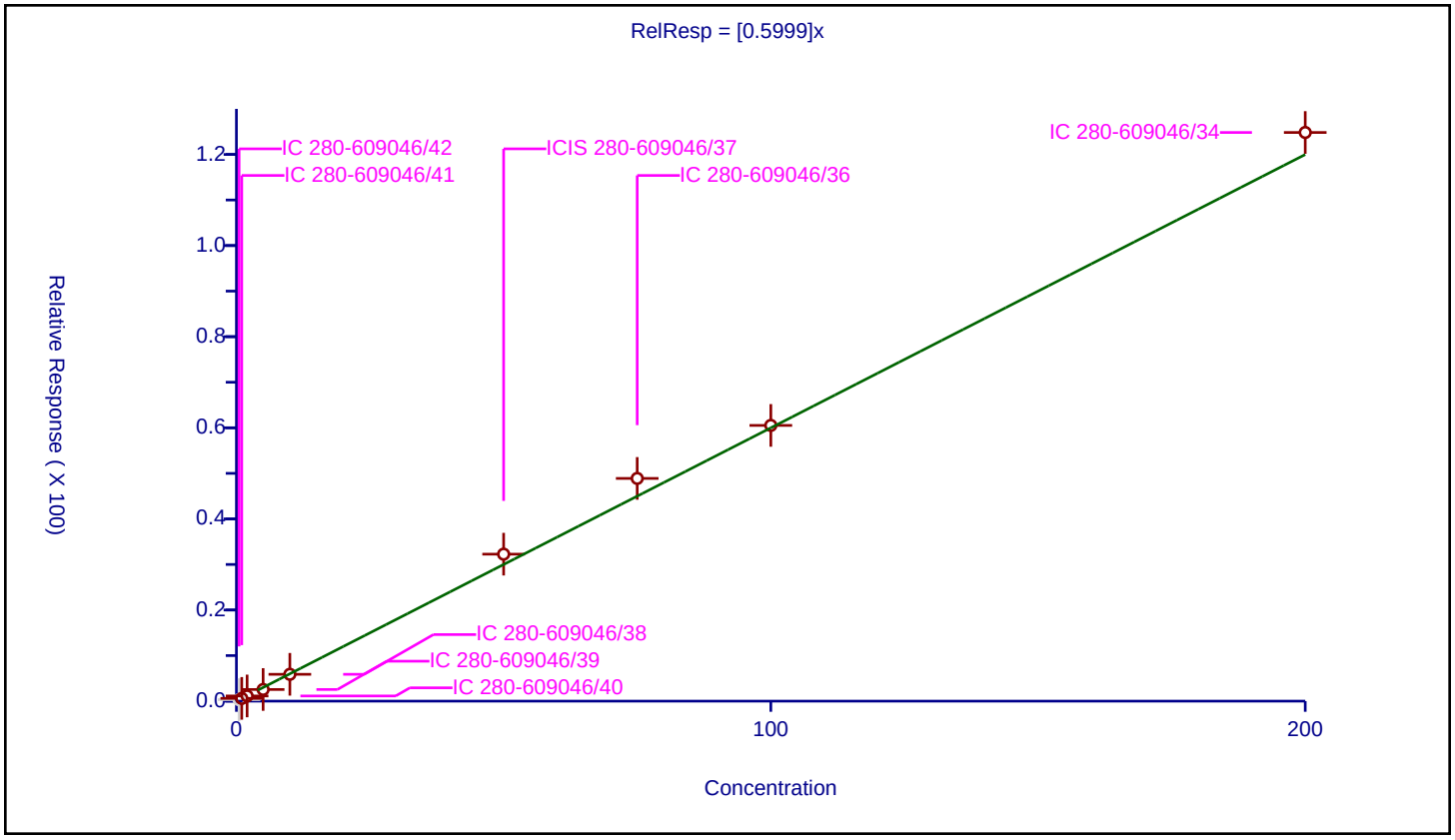
Curve Coefficients

Intercept:	0
Slope:	0.5999

Error Coefficients

Standard Error:	1440000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.323345	50.0	1123724.0	0.646689	N
2	IC 280-609046/41	1.0	0.602819	50.0	1135581.0	0.602819	Y
3	IC 280-609046/40	2.0	1.138696	50.0	1153908.0	0.569348	Y
4	IC 280-609046/39	5.0	2.557002	50.0	1207547.0	0.5114	Y
5	IC 280-609046/38	10.0	5.892479	50.0	1230102.0	0.589248	Y
6	ICIS 280-609046/37	50.0	32.262349	50.0	1247062.0	0.645247	Y
7	IC 280-609046/36	75.0	48.88973	50.0	1248840.0	0.651863	Y
8	IC 280-609046/35	100.0	60.522475	50.0	1262070.0	0.605225	Y
9	IC 280-609046/34	200.0	124.820649	50.0	1267906.0	0.624103	Y



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Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

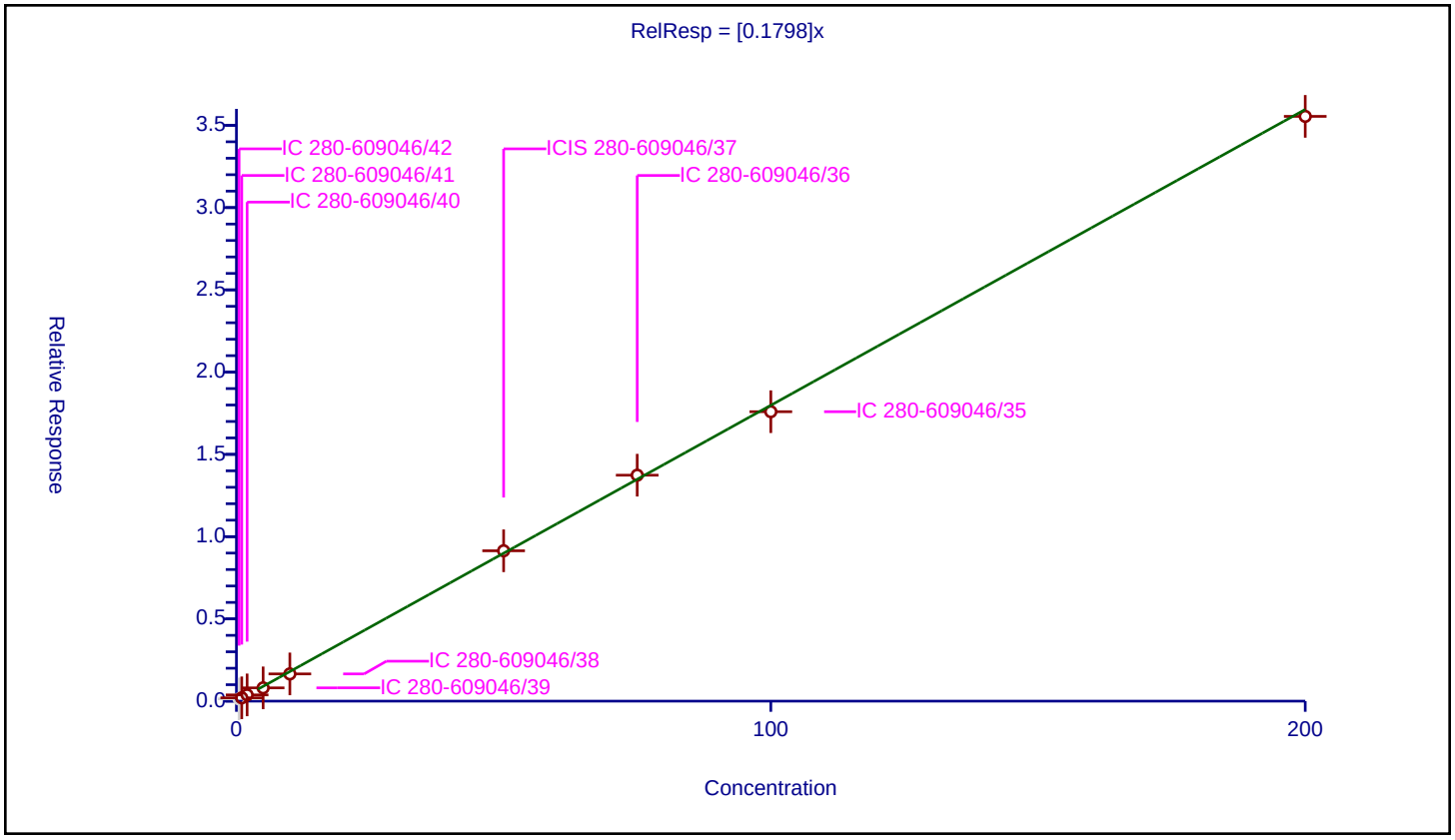
Curve Coefficients

Intercept:	0
Slope:	0.1798

Error Coefficients

Standard Error:	411000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.138201	50.0	1123724.0	0.276402	N
2	IC 280-609046/41	1.0	0.201967	50.0	1135581.0	0.201967	Y
3	IC 280-609046/40	2.0	0.380316	50.0	1153908.0	0.190158	Y
4	IC 280-609046/39	5.0	0.806925	50.0	1207547.0	0.161385	Y
5	IC 280-609046/38	10.0	1.655229	50.0	1230102.0	0.165523	Y
6	ICIS 280-609046/37	50.0	9.13908	50.0	1247062.0	0.182782	Y
7	IC 280-609046/36	75.0	13.733905	50.0	1248840.0	0.183119	Y
8	IC 280-609046/35	100.0	17.594824	50.0	1262070.0	0.175948	Y
9	IC 280-609046/34	200.0	35.544709	50.0	1267906.0	0.177724	Y



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Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

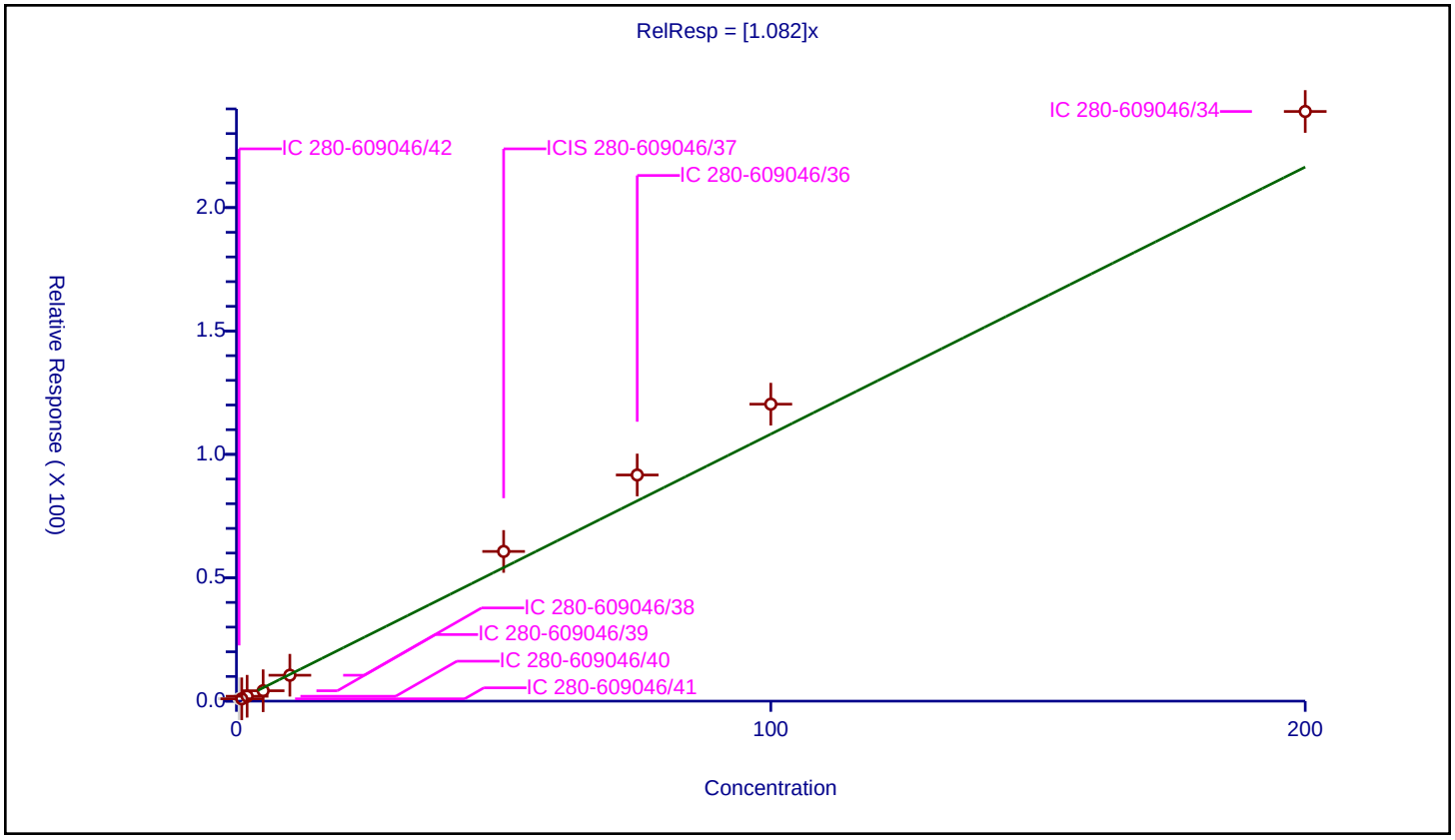
Curve Coefficients

Intercept:	0
Slope:	1.082

Error Coefficients

Standard Error:	658000
Relative Standard Error:	13.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.992996	50.0	266567.0	1.985992	N
2	IC 280-609046/41	1.0	0.939628	50.0	263402.0	0.939628	Y
3	IC 280-609046/40	2.0	1.984824	50.0	266472.0	0.992412	Y
4	IC 280-609046/39	5.0	4.211002	50.0	284291.0	0.8422	Y
5	IC 280-609046/38	10.0	10.498866	50.0	285207.0	1.049887	Y
6	ICIS 280-609046/37	50.0	60.663932	50.0	293780.0	1.213279	Y
7	IC 280-609046/36	75.0	91.651934	50.0	295823.0	1.222026	Y
8	IC 280-609046/35	100.0	120.352051	50.0	298110.0	1.203521	Y
9	IC 280-609046/34	200.0	238.949077	50.0	302477.0	1.194745	Y



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Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

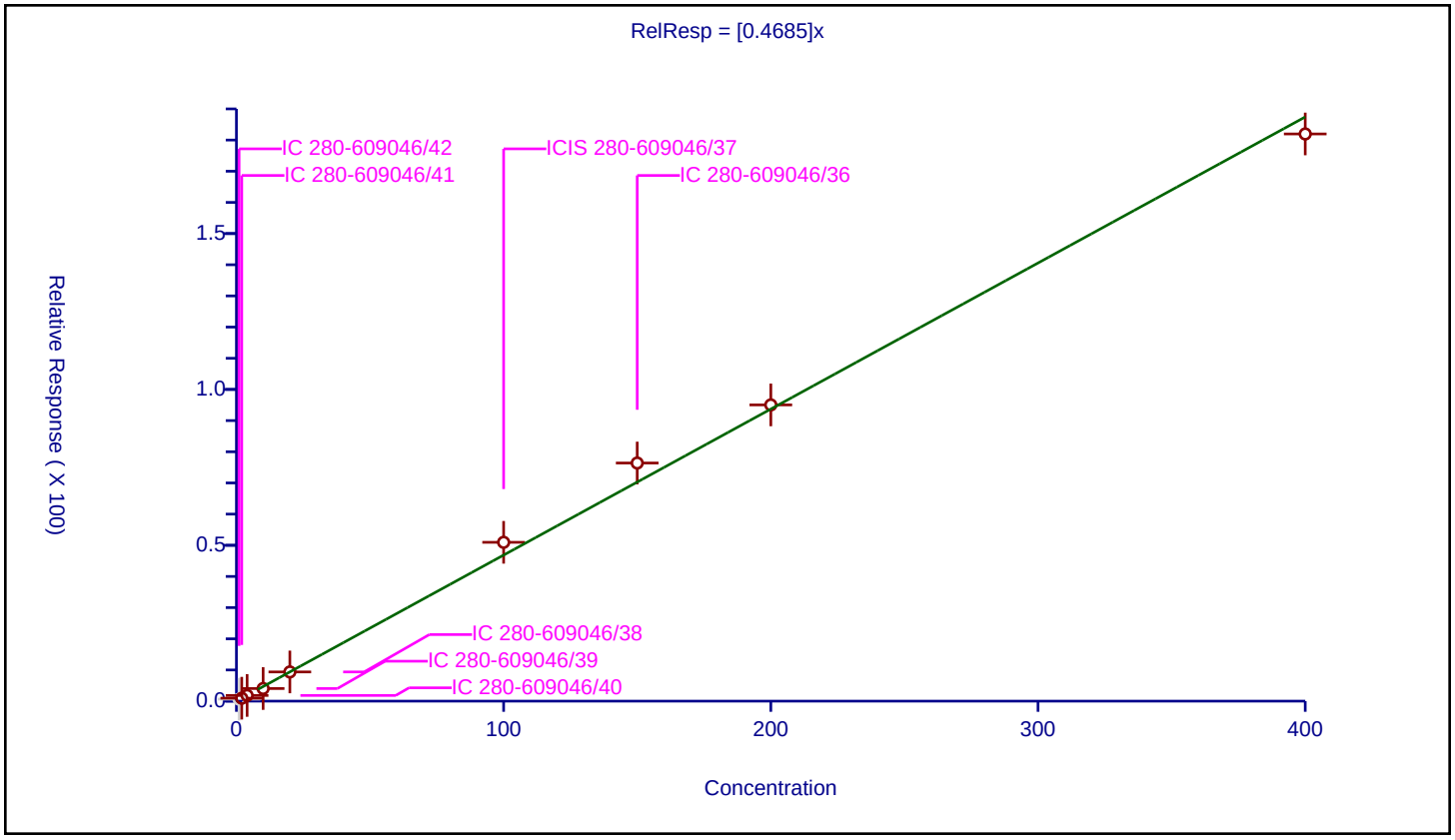
Curve Coefficients

Intercept:	0
Slope:	0.4685

Error Coefficients

Standard Error:	2150000
Relative Standard Error:	7.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	1.0	0.647223	50.0	1123724.0	0.647223	N
2	IC 280-609046/41	2.0	0.940928	50.0	1135581.0	0.470464	Y
3	IC 280-609046/40	4.0	1.824886	50.0	1153908.0	0.456221	Y
4	IC 280-609046/39	10.0	4.043735	50.0	1207547.0	0.404373	Y
5	IC 280-609046/38	20.0	9.365402	50.0	1230102.0	0.46827	Y
6	ICIS 280-609046/37	100.0	50.954924	50.0	1247062.0	0.509549	Y
7	IC 280-609046/36	150.0	76.390891	50.0	1248840.0	0.509273	Y
8	IC 280-609046/35	200.0	95.032447	50.0	1262070.0	0.475162	Y
9	IC 280-609046/34	400.0	181.955445	50.0	1267906.0	0.454889	Y



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Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

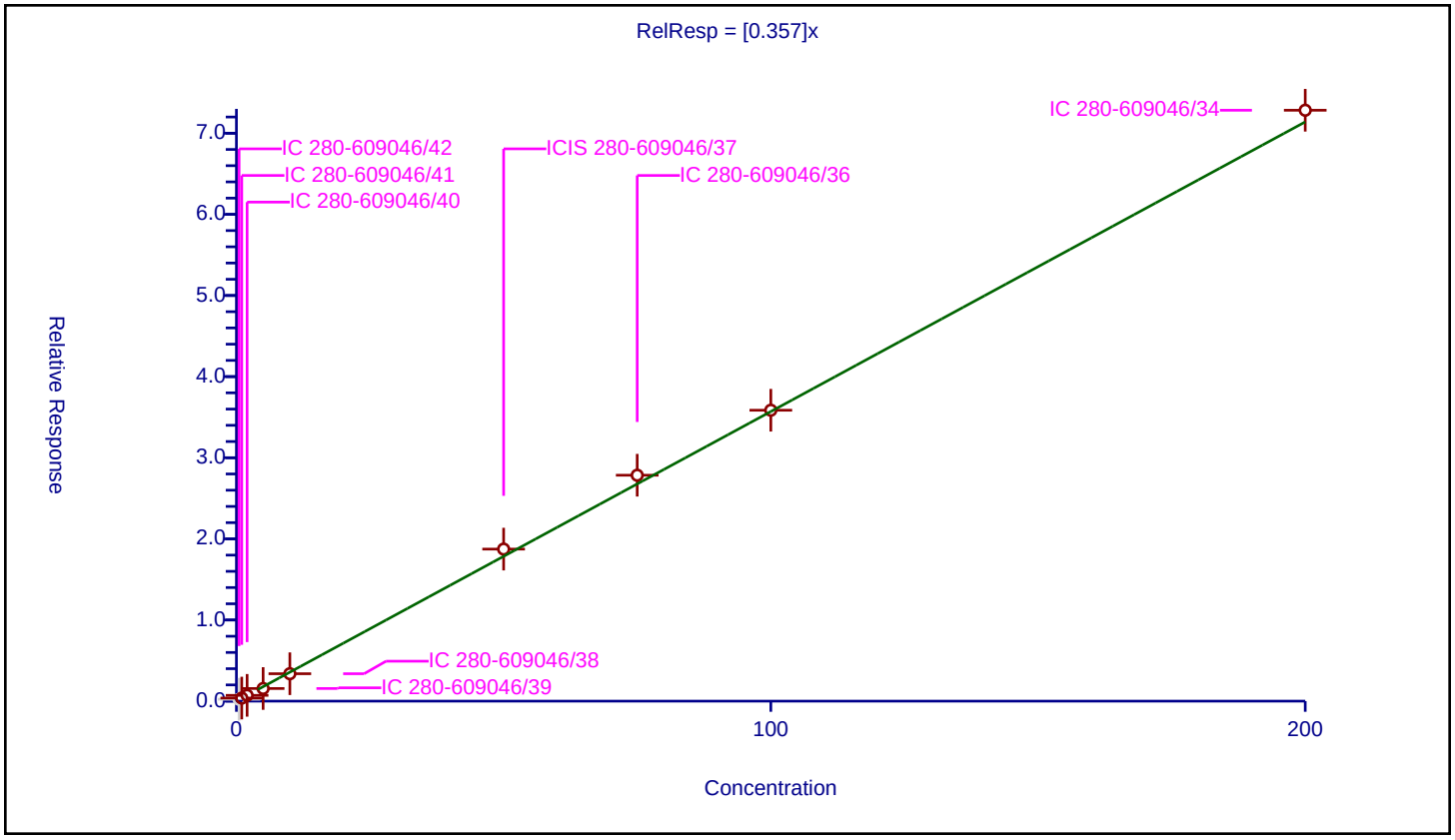
Curve Coefficients

Intercept:	0
Slope:	0.357

Error Coefficients

Standard Error:	840000
Relative Standard Error:	6.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.230706	50.0	1123724.0	0.461412	N
2	IC 280-609046/41	1.0	0.380422	50.0	1135581.0	0.380422	Y
3	IC 280-609046/40	2.0	0.714008	50.0	1153908.0	0.357004	Y
4	IC 280-609046/39	5.0	1.557455	50.0	1207547.0	0.311491	Y
5	IC 280-609046/38	10.0	3.380451	50.0	1230102.0	0.338045	Y
6	ICIS 280-609046/37	50.0	18.739686	50.0	1247062.0	0.374794	Y
7	IC 280-609046/36	75.0	27.846121	50.0	1248840.0	0.371282	Y
8	IC 280-609046/35	100.0	35.857916	50.0	1262070.0	0.358579	Y
9	IC 280-609046/34	200.0	72.833436	50.0	1267906.0	0.364167	Y



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Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

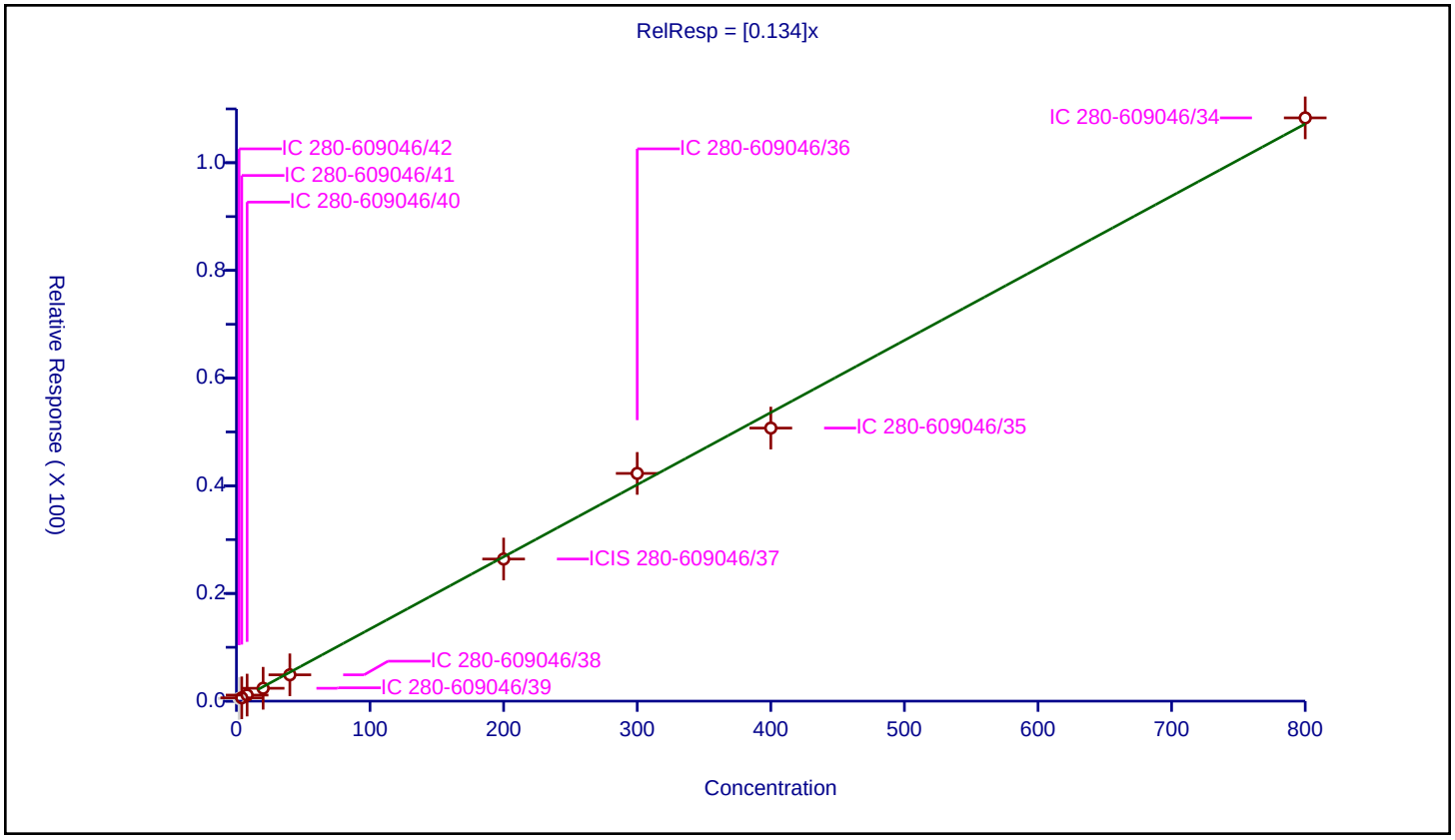
Curve Coefficients

Intercept:	0
Slope:	0.134

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	8.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	2.0	0.500256	50.0	1123724.0	0.250128	N
2	IC 280-609046/41	4.0	0.618054	50.0	1135581.0	0.154513	Y
3	IC 280-609046/40	8.0	1.126	50.0	1153908.0	0.14075	Y
4	IC 280-609046/39	20.0	2.390052	50.0	1207547.0	0.119503	Y
5	IC 280-609046/38	40.0	4.889798	50.0	1230102.0	0.122245	Y
6	ICIS 280-609046/37	200.0	26.392112	50.0	1247062.0	0.131961	Y
7	IC 280-609046/36	300.0	42.296051	50.0	1248840.0	0.140987	Y
8	IC 280-609046/35	400.0	50.718185	50.0	1262070.0	0.126795	Y
9	IC 280-609046/34	800.0	108.331178	50.0	1267906.0	0.135414	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

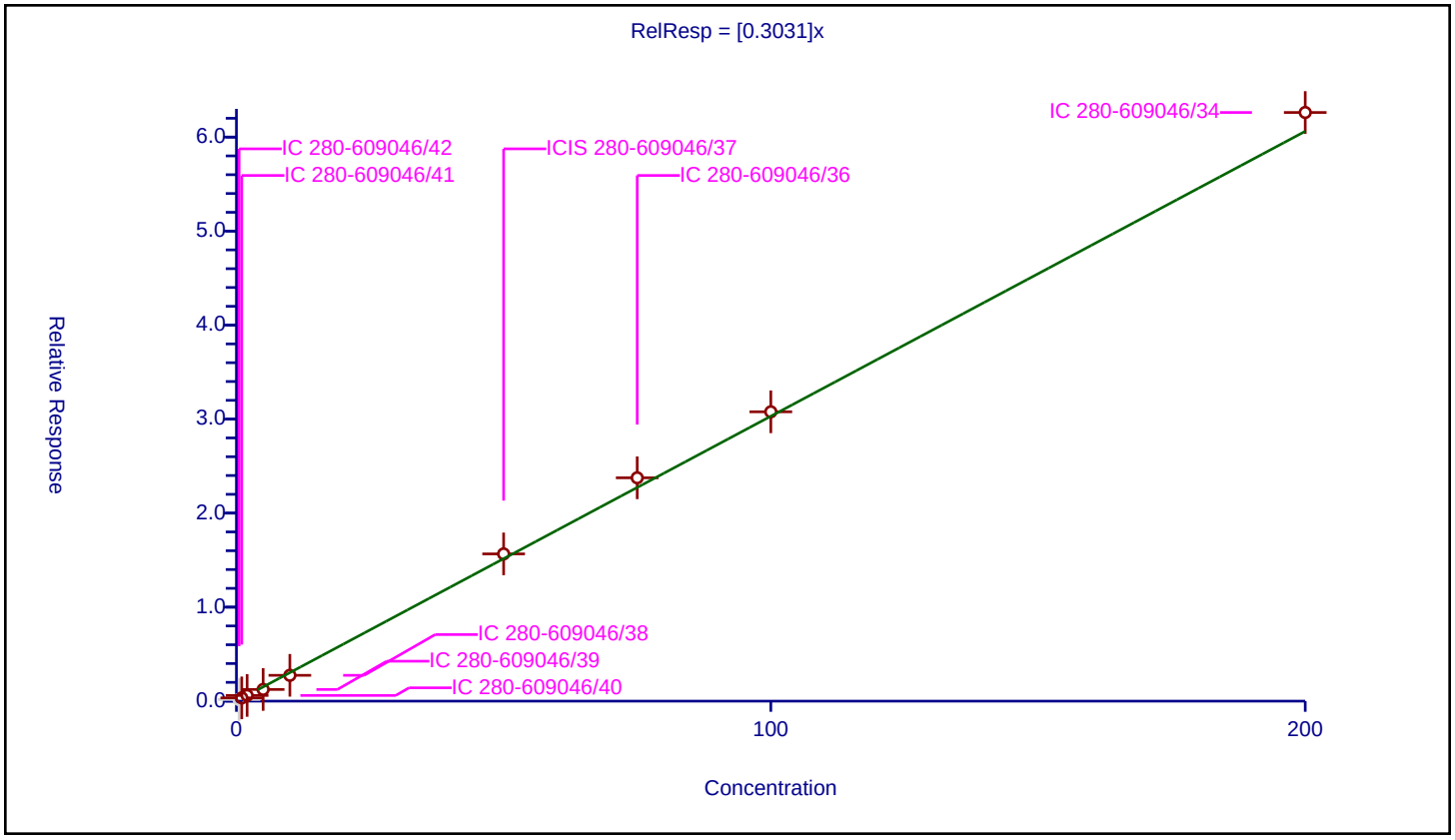
Curve Coefficients

Intercept:	0
Slope:	0.3031

Error Coefficients

Standard Error:	721000
Relative Standard Error:	9.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.172907	50.0	1123724.0	0.345814	N
2	IC 280-609046/41	1.0	0.34806	50.0	1135581.0	0.34806	Y
3	IC 280-609046/40	2.0	0.604338	50.0	1153908.0	0.302169	Y
4	IC 280-609046/39	5.0	1.243513	50.0	1207547.0	0.248703	Y
5	IC 280-609046/38	10.0	2.747536	50.0	1230102.0	0.274754	Y
6	ICIS 280-609046/37	50.0	15.662694	50.0	1247062.0	0.313254	Y
7	IC 280-609046/36	75.0	23.758168	50.0	1248840.0	0.316776	Y
8	IC 280-609046/35	100.0	30.777809	50.0	1262070.0	0.307778	Y
9	IC 280-609046/34	200.0	62.617536	50.0	1267906.0	0.313088	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

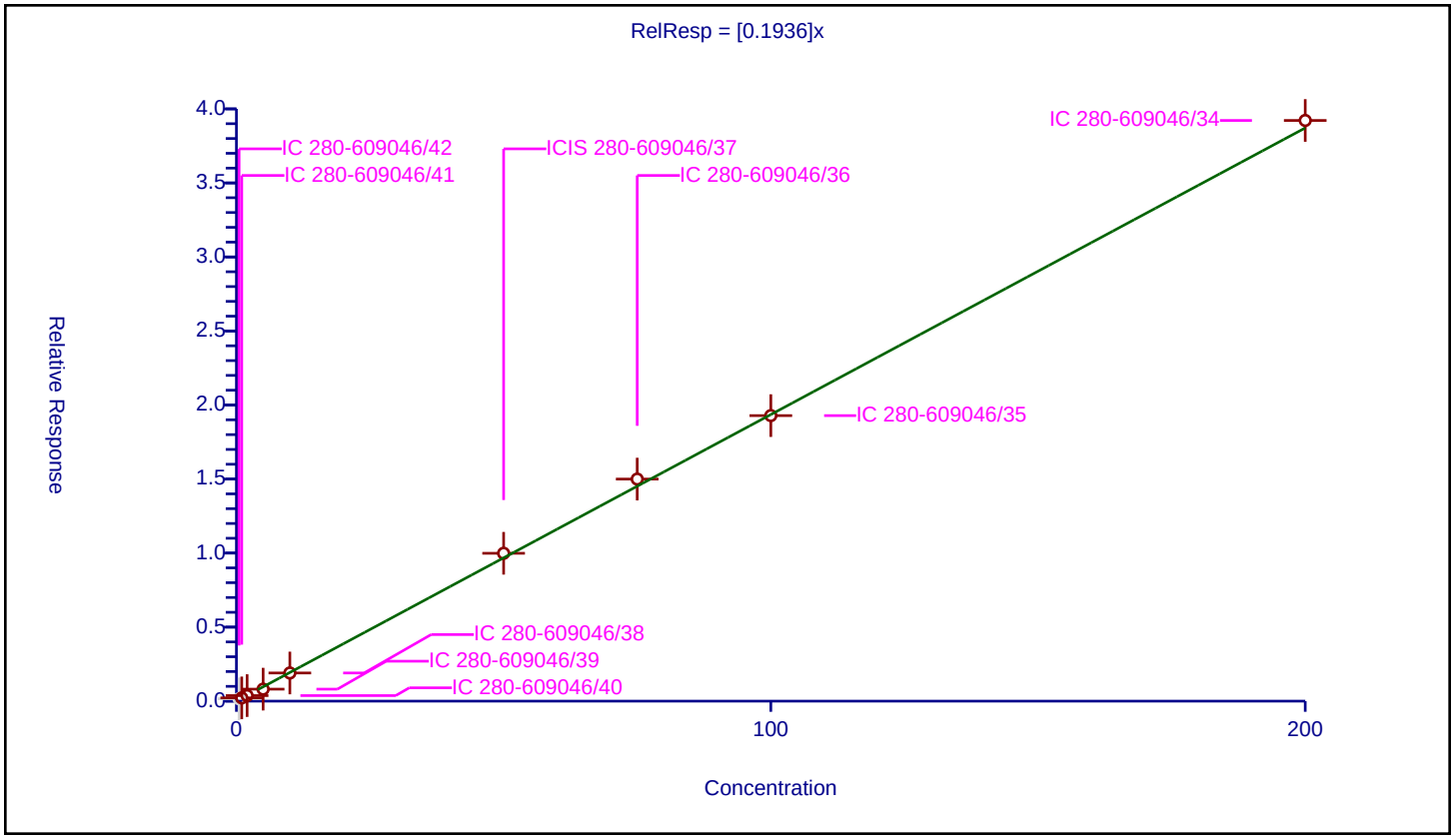
Curve Coefficients

Intercept:	0
Slope:	0.1936

Error Coefficients

Standard Error:	452000
Relative Standard Error:	8.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.163296	50.0	1123724.0	0.326593	N
2	IC 280-609046/41	1.0	0.220328	50.0	1135581.0	0.220328	Y
3	IC 280-609046/40	2.0	0.374727	50.0	1153908.0	0.187363	Y
4	IC 280-609046/39	5.0	0.809617	50.0	1207547.0	0.161923	Y
5	IC 280-609046/38	10.0	1.902322	50.0	1230102.0	0.190232	Y
6	ICIS 280-609046/37	50.0	9.986713	50.0	1247062.0	0.199734	Y
7	IC 280-609046/36	75.0	14.998238	50.0	1248840.0	0.199977	Y
8	IC 280-609046/35	100.0	19.284231	50.0	1262070.0	0.192842	Y
9	IC 280-609046/34	200.0	39.217497	50.0	1267906.0	0.196087	Y



Calibration / sec-Butyl Alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

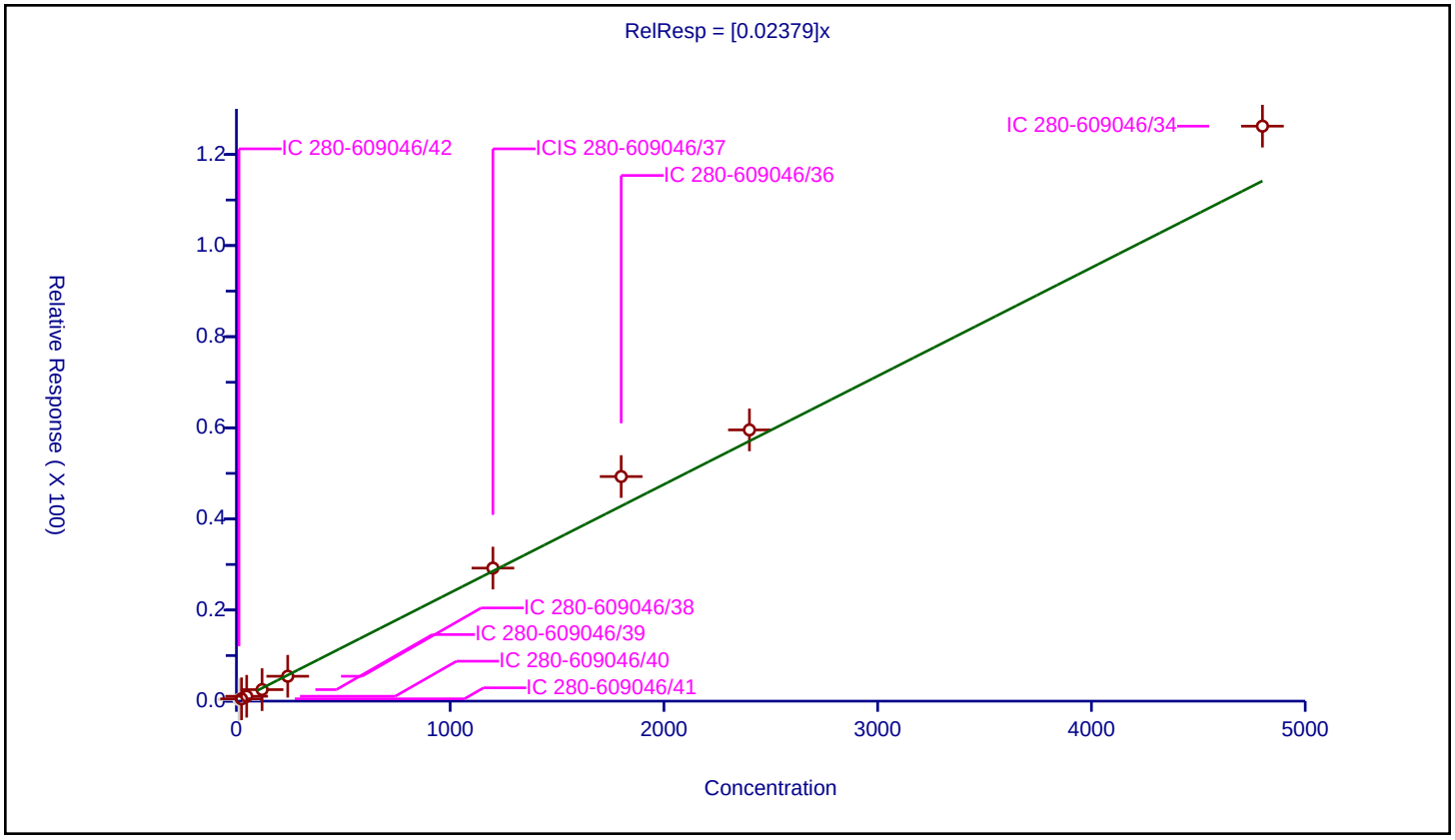
Curve Coefficients

Intercept:	0
Slope:	0.02379

Error Coefficients

Standard Error:	1440000
Relative Standard Error:	9.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	12.0	0.347105	50.0	1123724.0	0.028925	N
2	IC 280-609046/41	24.0	0.511632	50.0	1135581.0	0.021318	Y
3	IC 280-609046/40	48.0	1.070969	50.0	1153908.0	0.022312	Y
4	IC 280-609046/39	120.0	2.529011	50.0	1207547.0	0.021075	Y
5	IC 280-609046/38	240.0	5.464709	50.0	1230102.0	0.02277	Y
6	ICIS 280-609046/37	1200.0	29.20352	50.0	1247062.0	0.024336	Y
7	IC 280-609046/36	1800.0	49.300191	50.0	1248840.0	0.027389	Y
8	IC 280-609046/35	2400.0	59.534455	50.0	1262070.0	0.024806	Y
9	IC 280-609046/34	4800.0	126.208765	50.0	1267906.0	0.026293	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

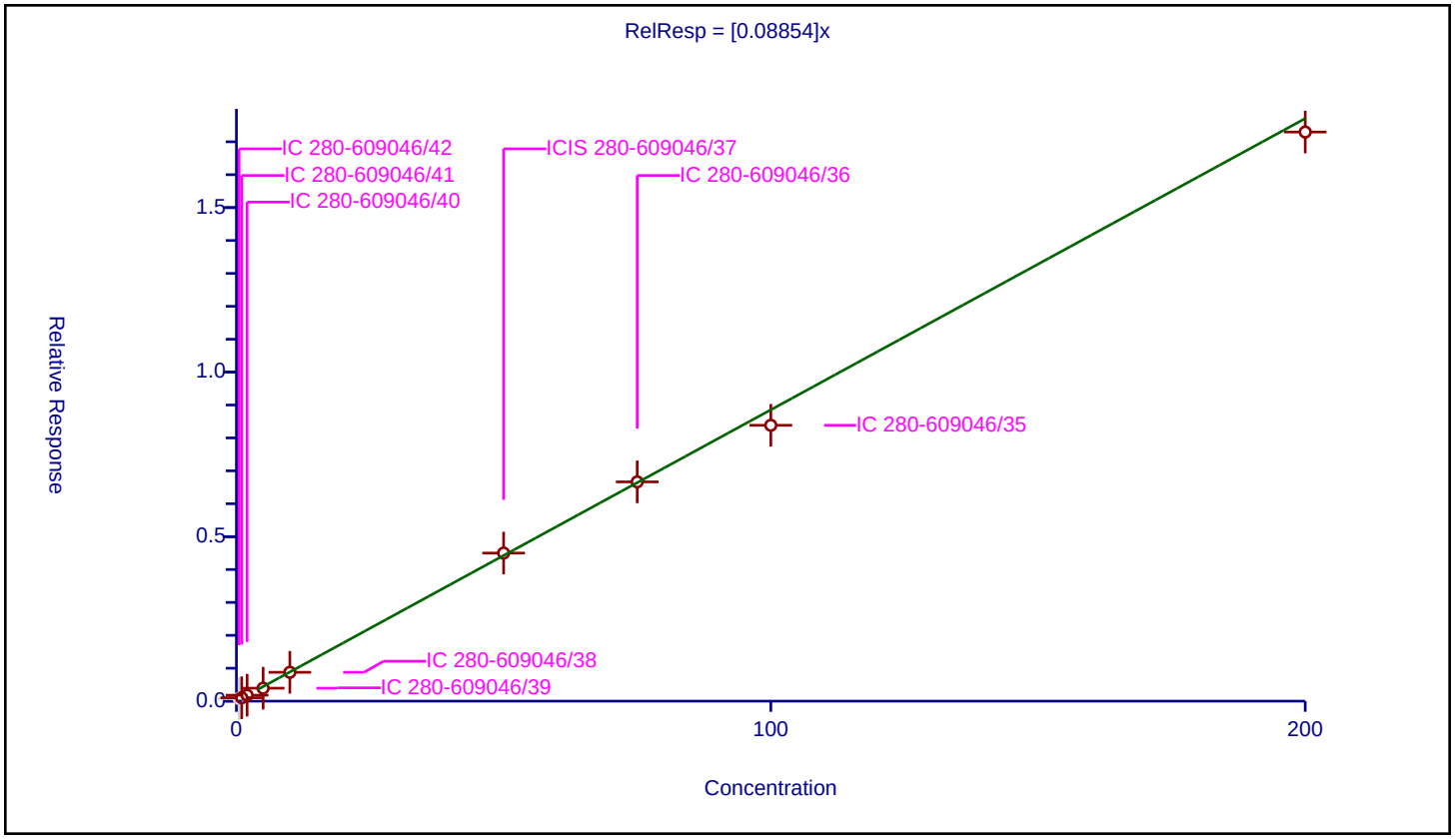
Curve Coefficients

Intercept:	0
Slope:	0.08854

Error Coefficients

Standard Error:	199000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.080358	50.0	1123724.0	0.160716	N
2	IC 280-609046/41	1.0	0.102811	50.0	1135581.0	0.102811	Y
3	IC 280-609046/40	2.0	0.179824	50.0	1153908.0	0.089912	Y
4	IC 280-609046/39	5.0	0.393566	50.0	1207547.0	0.078713	Y
5	IC 280-609046/38	10.0	0.876757	50.0	1230102.0	0.087676	Y
6	ICIS 280-609046/37	50.0	4.500698	50.0	1247062.0	0.090014	Y
7	IC 280-609046/36	75.0	6.664224	50.0	1248840.0	0.088856	Y
8	IC 280-609046/35	100.0	8.384361	50.0	1262070.0	0.083844	Y
9	IC 280-609046/34	200.0	17.296945	50.0	1267906.0	0.086485	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

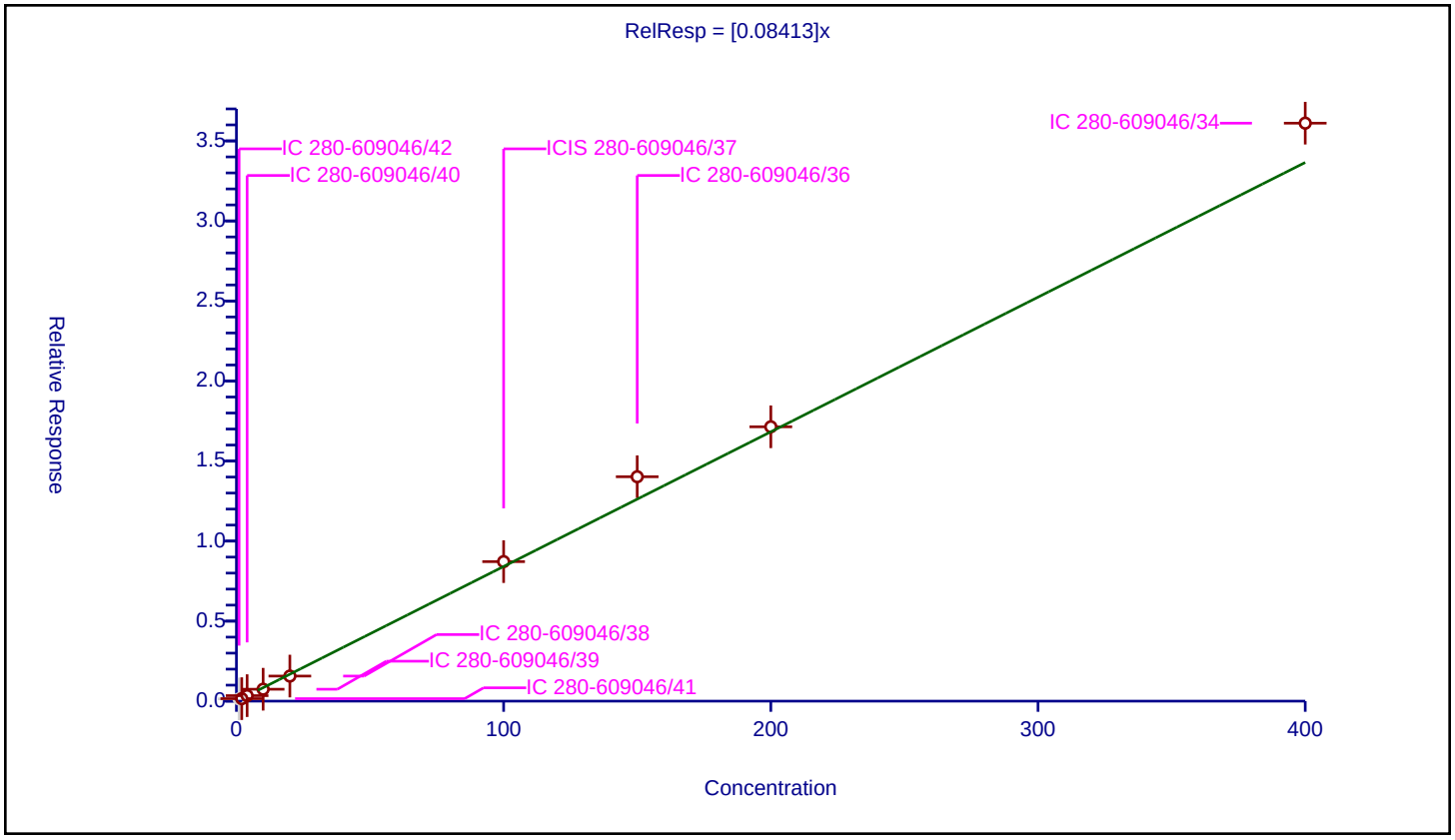
Curve Coefficients

Intercept:	0
Slope:	0.08413

Error Coefficients

Standard Error:	414000
Relative Standard Error:	7.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	1.0	0.142695	50.0	1123724.0	0.142695	N
2	IC 280-609046/41	2.0	0.155515	50.0	1135581.0	0.077758	Y
3	IC 280-609046/40	4.0	0.343355	50.0	1153908.0	0.085839	Y
4	IC 280-609046/39	10.0	0.745271	50.0	1207547.0	0.074527	Y
5	IC 280-609046/38	20.0	1.566252	50.0	1230102.0	0.078313	Y
6	ICIS 280-609046/37	100.0	8.717209	50.0	1247062.0	0.087172	Y
7	IC 280-609046/36	150.0	14.01929	50.0	1248840.0	0.093462	Y
8	IC 280-609046/35	200.0	17.139501	50.0	1262070.0	0.085698	Y
9	IC 280-609046/34	400.0	36.107487	50.0	1267906.0	0.090269	Y



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Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

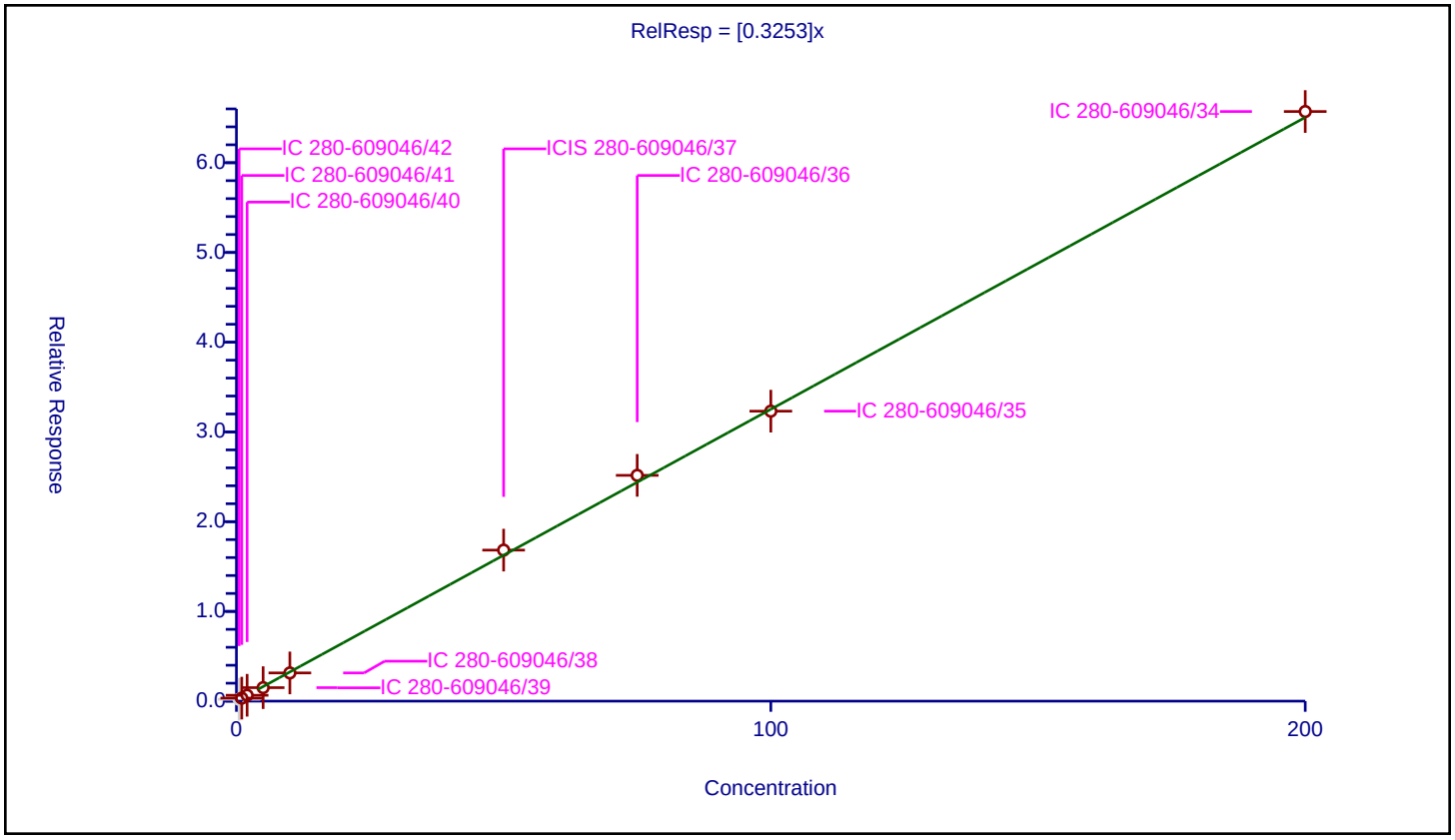
Curve Coefficients

Intercept:	0
Slope:	0.3253

Error Coefficients

Standard Error:	758000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.206189	50.0	1123724.0	0.412379	N
2	IC 280-609046/41	1.0	0.336524	50.0	1135581.0	0.336524	Y
3	IC 280-609046/40	2.0	0.653388	50.0	1153908.0	0.326694	Y
4	IC 280-609046/39	5.0	1.50313	50.0	1207547.0	0.300626	Y
5	IC 280-609046/38	10.0	3.144699	50.0	1230102.0	0.31447	Y
6	ICIS 280-609046/37	50.0	16.830639	50.0	1247062.0	0.336613	Y
7	IC 280-609046/36	75.0	25.162431	50.0	1248840.0	0.335499	Y
8	IC 280-609046/35	100.0	32.314412	50.0	1262070.0	0.323144	Y
9	IC 280-609046/34	200.0	65.705502	50.0	1267906.0	0.328528	Y



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Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

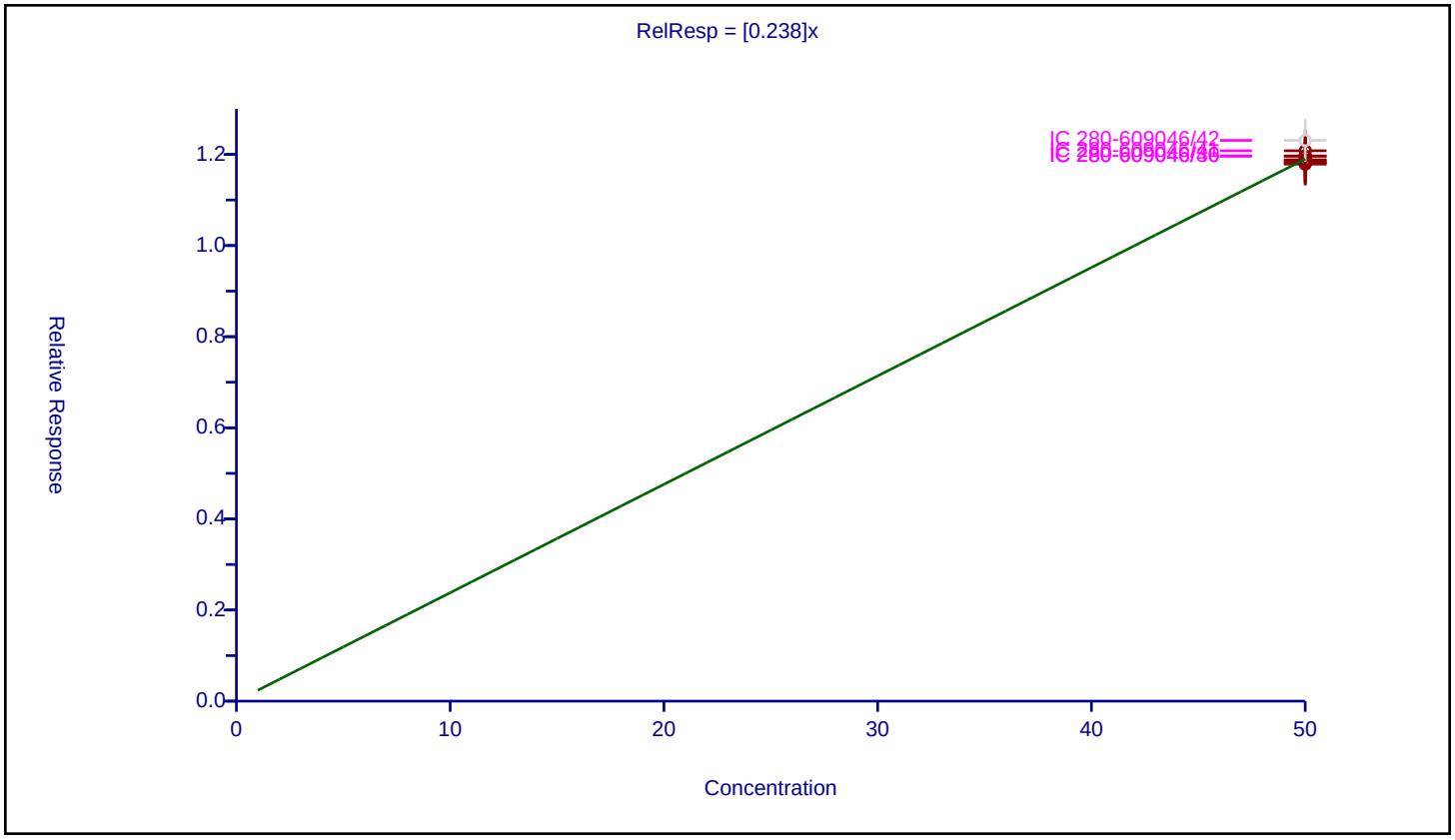
Curve Coefficients

Intercept:	0
Slope:	0.238

Error Coefficients

Standard Error:	310000
Relative Standard Error:	0.8
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/34	50.0	11.812035	50.0	1267906.0	0.236241	Y
2	IC 280-609046/35	50.0	11.787579	50.0	1262070.0	0.235752	Y
3	IC 280-609046/36	50.0	11.967786	50.0	1248840.0	0.239356	Y
4	ICIS 280-609046/37	50.0	11.88293	50.0	1247062.0	0.237659	Y
5	IC 280-609046/38	50.0	11.861415	50.0	1230102.0	0.237228	Y
6	IC 280-609046/39	50.0	11.826496	50.0	1207547.0	0.23653	Y
7	IC 280-609046/40	50.0	11.962912	50.0	1153908.0	0.239258	Y
8	IC 280-609046/41	50.0	12.080952	50.0	1135581.0	0.241619	Y
9	IC 280-609046/42	50.0	12.308138	50.0	1123724.0	0.246163	N



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

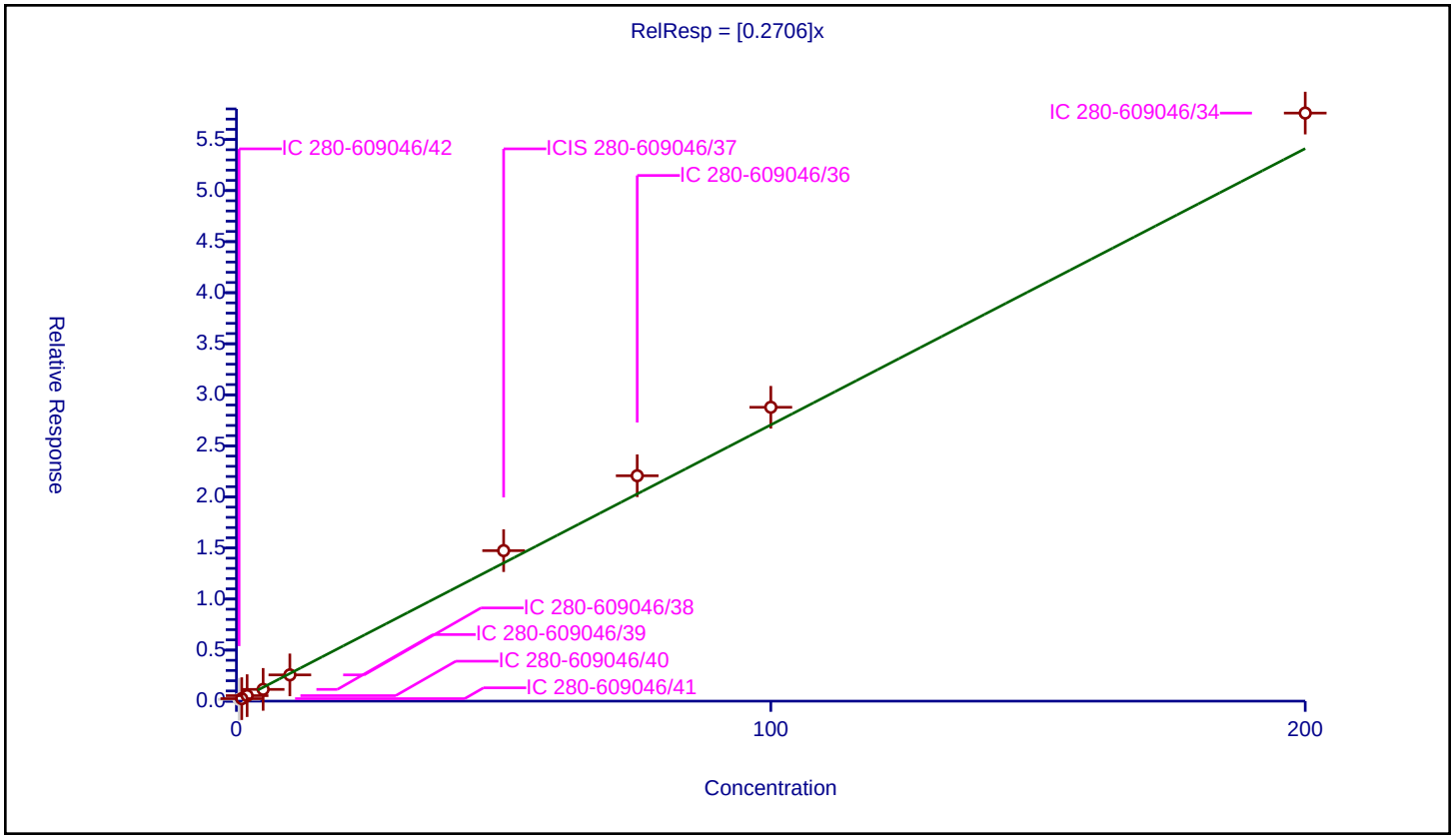
Curve Coefficients

Intercept:	0
Slope:	0.2706

Error Coefficients

Standard Error:	666000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.175176	50.0	1123724.0	0.350353	N
2	IC 280-609046/41	1.0	0.242783	50.0	1135581.0	0.242783	Y
3	IC 280-609046/40	2.0	0.538821	50.0	1153908.0	0.269411	Y
4	IC 280-609046/39	5.0	1.151549	50.0	1207547.0	0.23031	Y
5	IC 280-609046/38	10.0	2.571657	50.0	1230102.0	0.257166	Y
6	ICIS 280-609046/37	50.0	14.738441	50.0	1247062.0	0.294769	Y
7	IC 280-609046/36	75.0	22.074125	50.0	1248840.0	0.294322	Y
8	IC 280-609046/35	100.0	28.779267	50.0	1262070.0	0.287793	Y
9	IC 280-609046/34	200.0	57.590468	50.0	1267906.0	0.287952	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

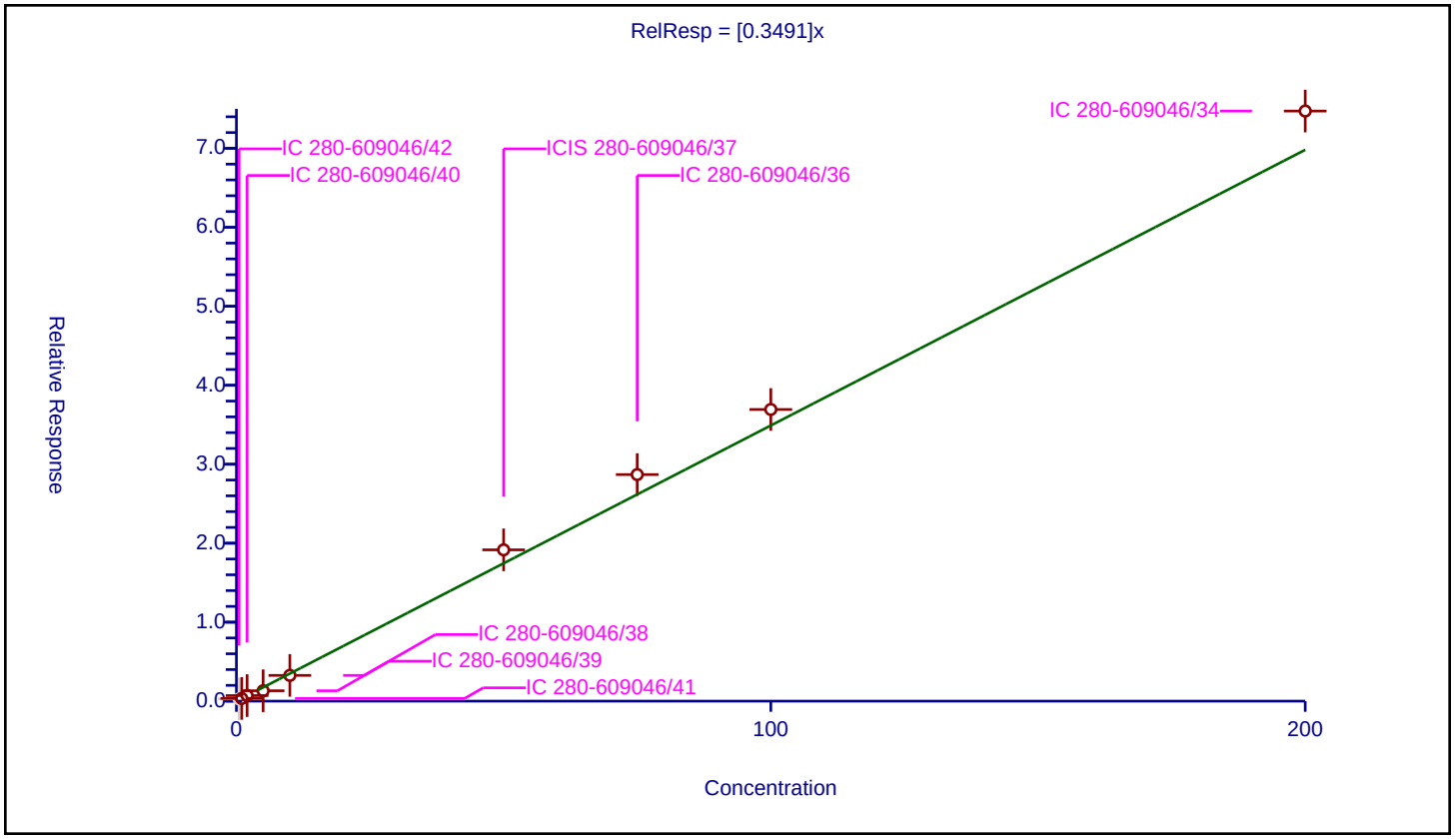
Curve Coefficients

Intercept:	0
Slope:	0.3491

Error Coefficients

Standard Error:	863000
Relative Standard Error:	11.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.283967	50.0	1123724.0	0.567933	N
2	IC 280-609046/41	1.0	0.343789	50.0	1135581.0	0.343789	Y
3	IC 280-609046/40	2.0	0.703479	50.0	1153908.0	0.351739	Y
4	IC 280-609046/39	5.0	1.312123	50.0	1207547.0	0.262425	Y
5	IC 280-609046/38	10.0	3.259892	50.0	1230102.0	0.325989	Y
6	ICIS 280-609046/37	50.0	19.159152	50.0	1247062.0	0.383183	Y
7	IC 280-609046/36	75.0	28.692066	50.0	1248840.0	0.382561	Y
8	IC 280-609046/35	100.0	36.934401	50.0	1262070.0	0.369344	Y
9	IC 280-609046/34	200.0	74.728371	50.0	1267906.0	0.373642	Y



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Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

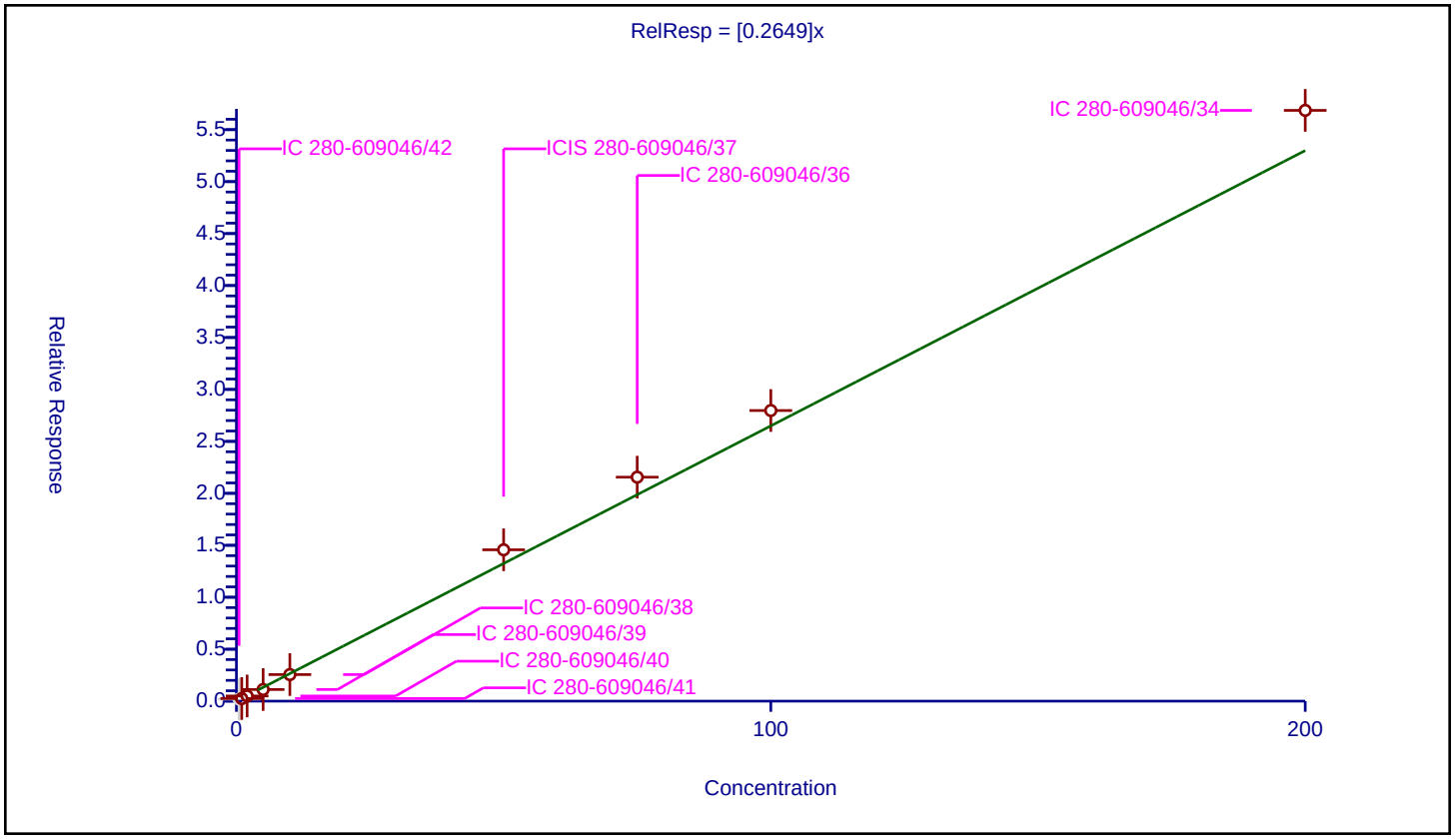
Curve Coefficients

Intercept:	0
Slope:	0.2649

Error Coefficients

Standard Error:	655000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.198714	50.0	1123724.0	0.397429	N
2	IC 280-609046/41	1.0	0.24952	50.0	1135581.0	0.24952	Y
3	IC 280-609046/40	2.0	0.495923	50.0	1153908.0	0.247962	Y
4	IC 280-609046/39	5.0	1.119045	50.0	1207547.0	0.223809	Y
5	IC 280-609046/38	10.0	2.555926	50.0	1230102.0	0.255593	Y
6	ICIS 280-609046/37	50.0	14.565234	50.0	1247062.0	0.291305	Y
7	IC 280-609046/36	75.0	21.555524	50.0	1248840.0	0.287407	Y
8	IC 280-609046/35	100.0	27.970041	50.0	1262070.0	0.2797	Y
9	IC 280-609046/34	200.0	56.855477	50.0	1267906.0	0.284277	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

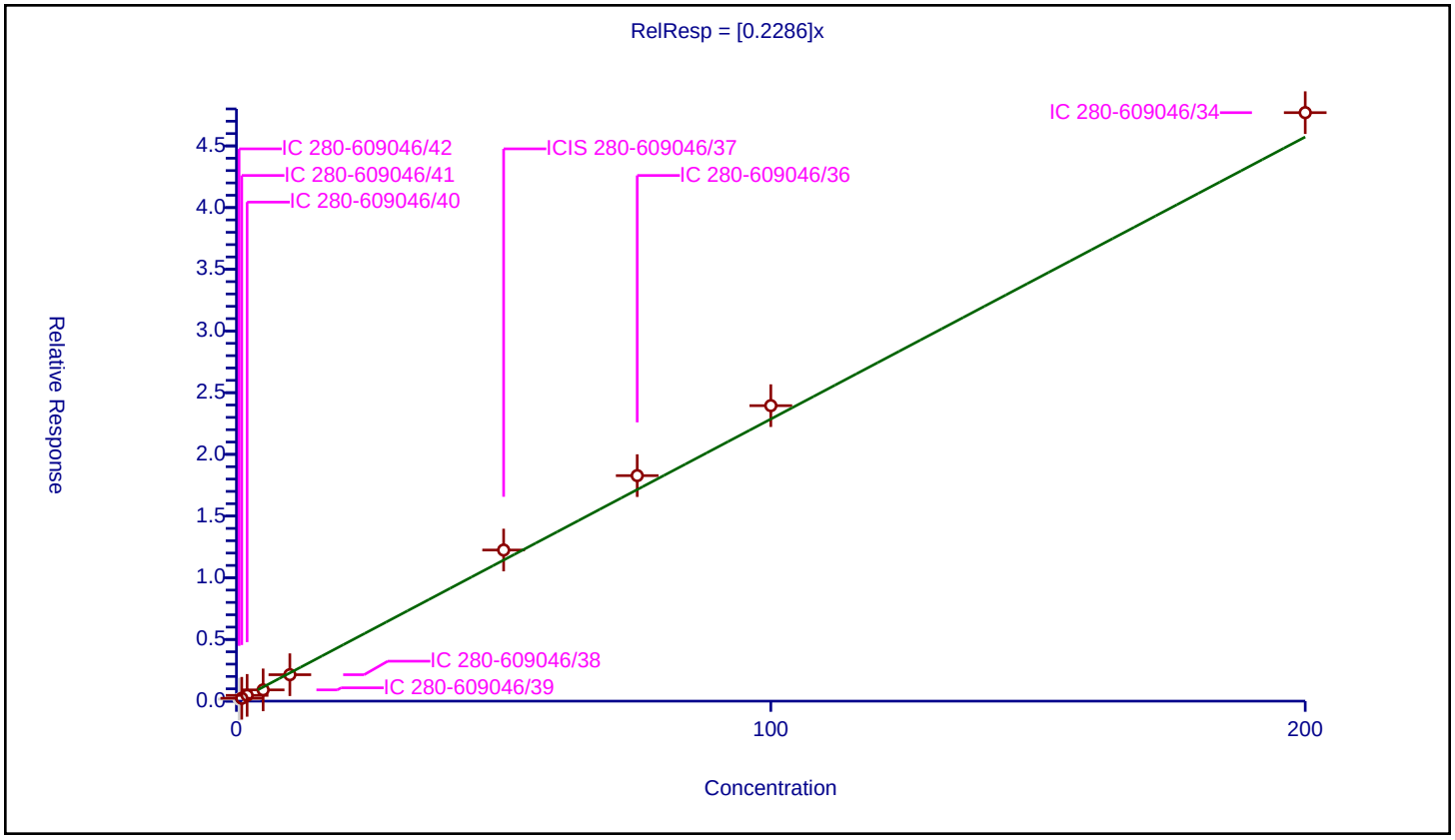
Curve Coefficients

Intercept:	0
Slope:	0.2286

Error Coefficients

Standard Error:	552000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.164498	50.0	1123724.0	0.328995	N
2	IC 280-609046/41	1.0	0.231864	50.0	1135581.0	0.231864	Y
3	IC 280-609046/40	2.0	0.467715	50.0	1153908.0	0.233857	Y
4	IC 280-609046/39	5.0	0.911849	50.0	1207547.0	0.18237	Y
5	IC 280-609046/38	10.0	2.14344	50.0	1230102.0	0.214344	Y
6	ICIS 280-609046/37	50.0	12.246544	50.0	1247062.0	0.244931	Y
7	IC 280-609046/36	75.0	18.277001	50.0	1248840.0	0.243693	Y
8	IC 280-609046/35	100.0	23.949385	50.0	1262070.0	0.239494	Y
9	IC 280-609046/34	200.0	47.695255	50.0	1267906.0	0.238476	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

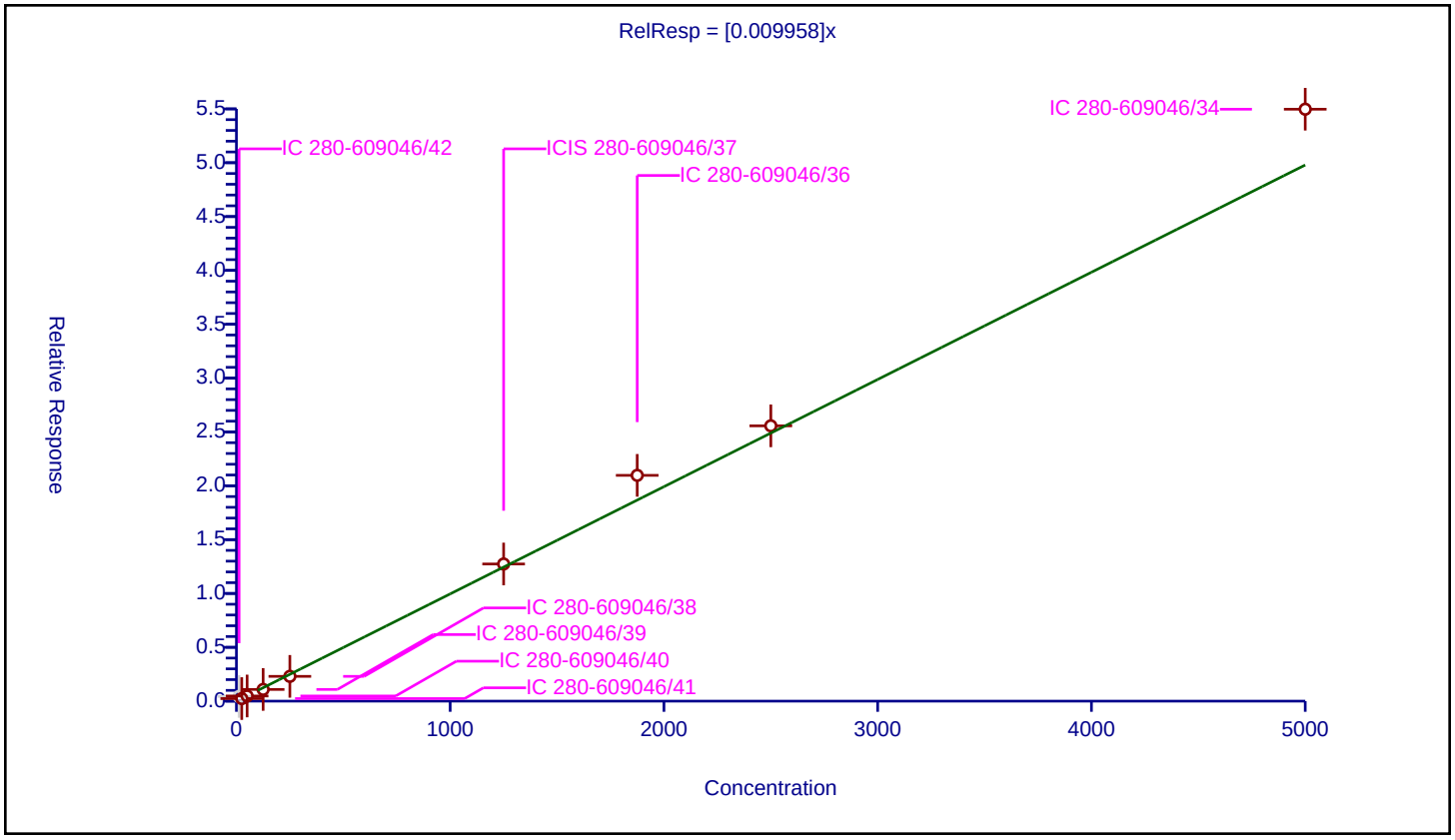
Curve Coefficients

Intercept:	0
Slope:	0.009958

Error Coefficients

Standard Error:	625000
Relative Standard Error:	8.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	12.5	0.436228	50.0	1123724.0	0.034898	N
2	IC 280-609046/41	25.0	0.239613	50.0	1135581.0	0.009585	Y
3	IC 280-609046/40	50.0	0.479458	50.0	1153908.0	0.009589	Y
4	IC 280-609046/39	125.0	1.086335	50.0	1207547.0	0.008691	Y
5	IC 280-609046/38	250.0	2.301313	50.0	1230102.0	0.009205	Y
6	ICIS 280-609046/37	1250.0	12.736456	50.0	1247062.0	0.010189	Y
7	IC 280-609046/36	1875.0	20.969099	50.0	1248840.0	0.011184	Y
8	IC 280-609046/35	2500.0	25.567362	50.0	1262070.0	0.010227	Y
9	IC 280-609046/34	5000.0	54.970282	50.0	1267906.0	0.010994	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

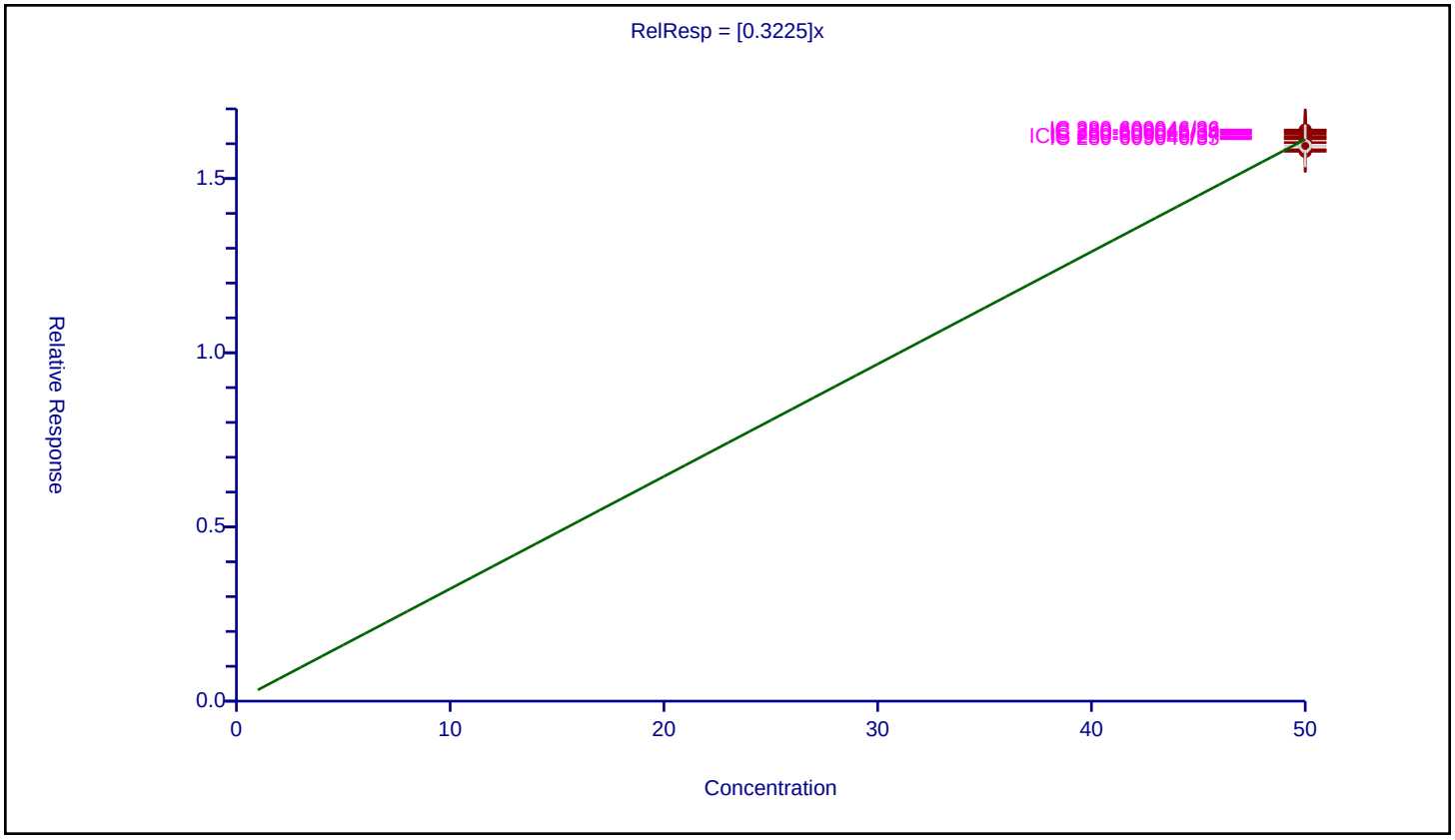
Curve Coefficients

Intercept:	0
Slope:	0.3225

Error Coefficients

Standard Error:	421000
Relative Standard Error:	1.4
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/34	50.0	16.273446	50.0	1267906.0	0.325469	Y
2	IC 280-609046/35	50.0	16.142607	50.0	1262070.0	0.322852	Y
3	IC 280-609046/36	50.0	16.392813	50.0	1248840.0	0.327856	Y
4	ICIS 280-609046/37	50.0	16.198954	50.0	1247062.0	0.323979	Y
5	IC 280-609046/38	50.0	16.345921	50.0	1230102.0	0.326918	Y
6	IC 280-609046/39	50.0	16.032999	50.0	1207547.0	0.32066	Y
7	IC 280-609046/40	50.0	15.783234	50.0	1153908.0	0.315665	Y
8	IC 280-609046/41	50.0	15.827845	50.0	1135581.0	0.316557	Y
9	IC 280-609046/42	50.0	15.937988	50.0	1123724.0	0.31876	N



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

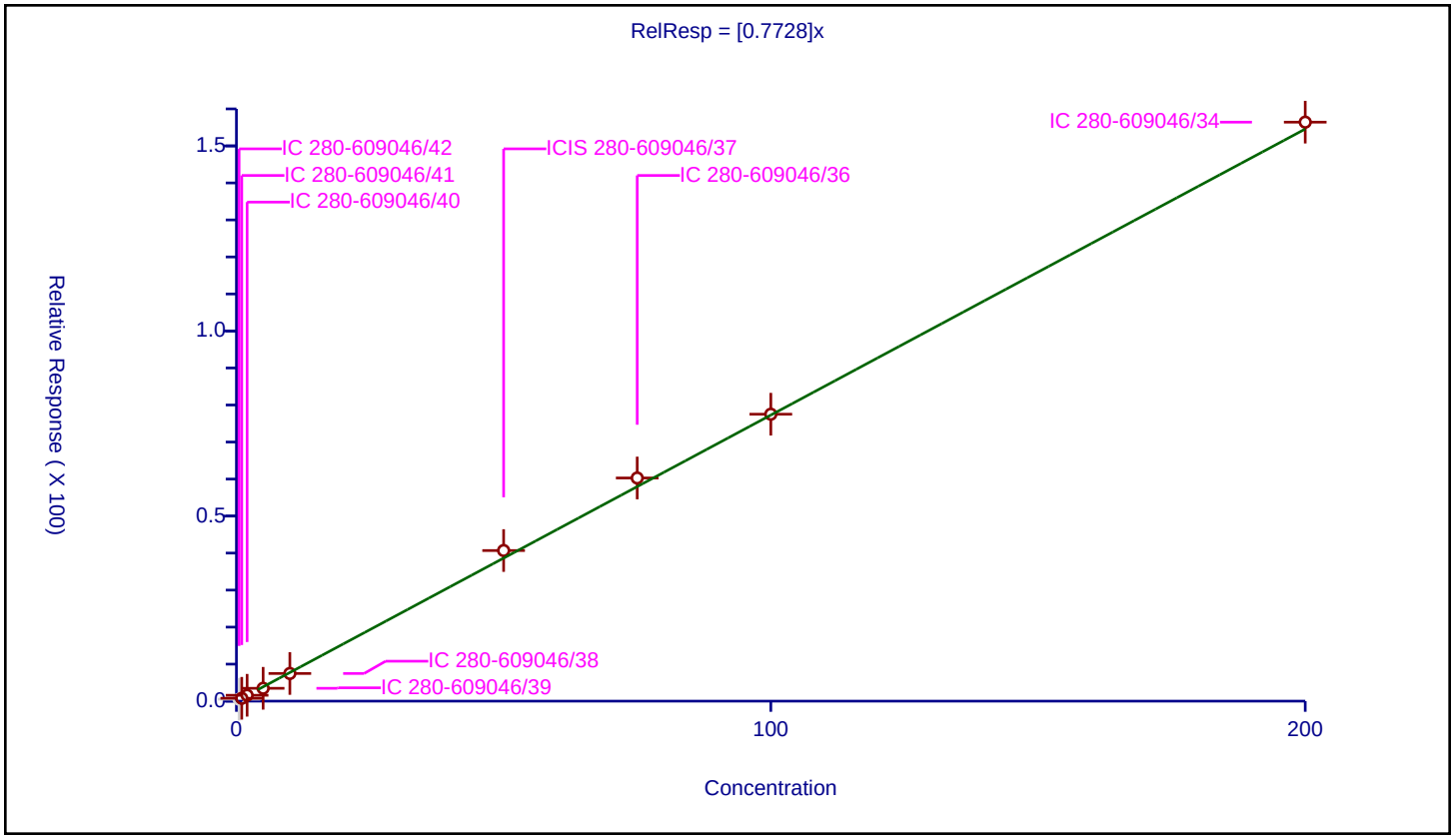
Curve Coefficients

Intercept:	0
Slope:	0.7728

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.529712	50.0	1123724.0	1.059424	N
2	IC 280-609046/41	1.0	0.773261	50.0	1135581.0	0.773261	Y
3	IC 280-609046/40	2.0	1.584095	50.0	1153908.0	0.792048	Y
4	IC 280-609046/39	5.0	3.474689	50.0	1207547.0	0.694938	Y
5	IC 280-609046/38	10.0	7.472754	50.0	1230102.0	0.747275	Y
6	ICIS 280-609046/37	50.0	40.683061	50.0	1247062.0	0.813661	Y
7	IC 280-609046/36	75.0	60.287947	50.0	1248840.0	0.803839	Y
8	IC 280-609046/35	100.0	77.518917	50.0	1262070.0	0.775189	Y
9	IC 280-609046/34	200.0	156.418693	50.0	1267906.0	0.782093	Y



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Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

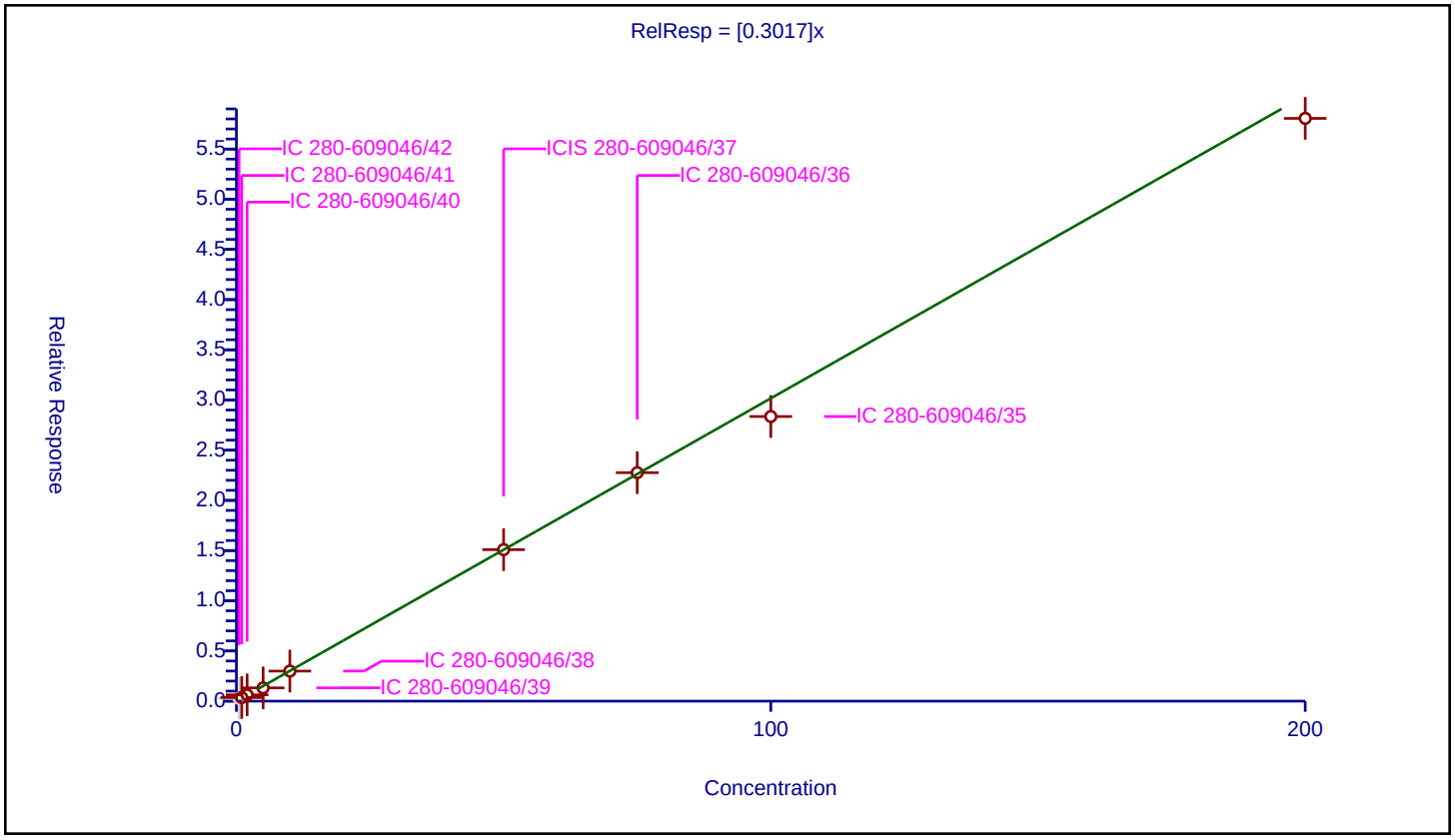
Curve Coefficients

Intercept:	0
Slope:	0.3017

Error Coefficients

Standard Error:	671000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.278405	50.0	1123724.0	0.556809	N
2	IC 280-609046/41	1.0	0.358583	50.0	1135581.0	0.358583	Y
3	IC 280-609046/40	2.0	0.625006	50.0	1153908.0	0.312503	Y
4	IC 280-609046/39	5.0	1.318872	50.0	1207547.0	0.263774	Y
5	IC 280-609046/38	10.0	2.993532	50.0	1230102.0	0.299353	Y
6	ICIS 280-609046/37	50.0	15.089787	50.0	1247062.0	0.301796	Y
7	IC 280-609046/36	75.0	22.761603	50.0	1248840.0	0.303488	Y
8	IC 280-609046/35	100.0	28.355083	50.0	1262070.0	0.283551	Y
9	IC 280-609046/34	200.0	58.054422	50.0	1267906.0	0.290272	Y



Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

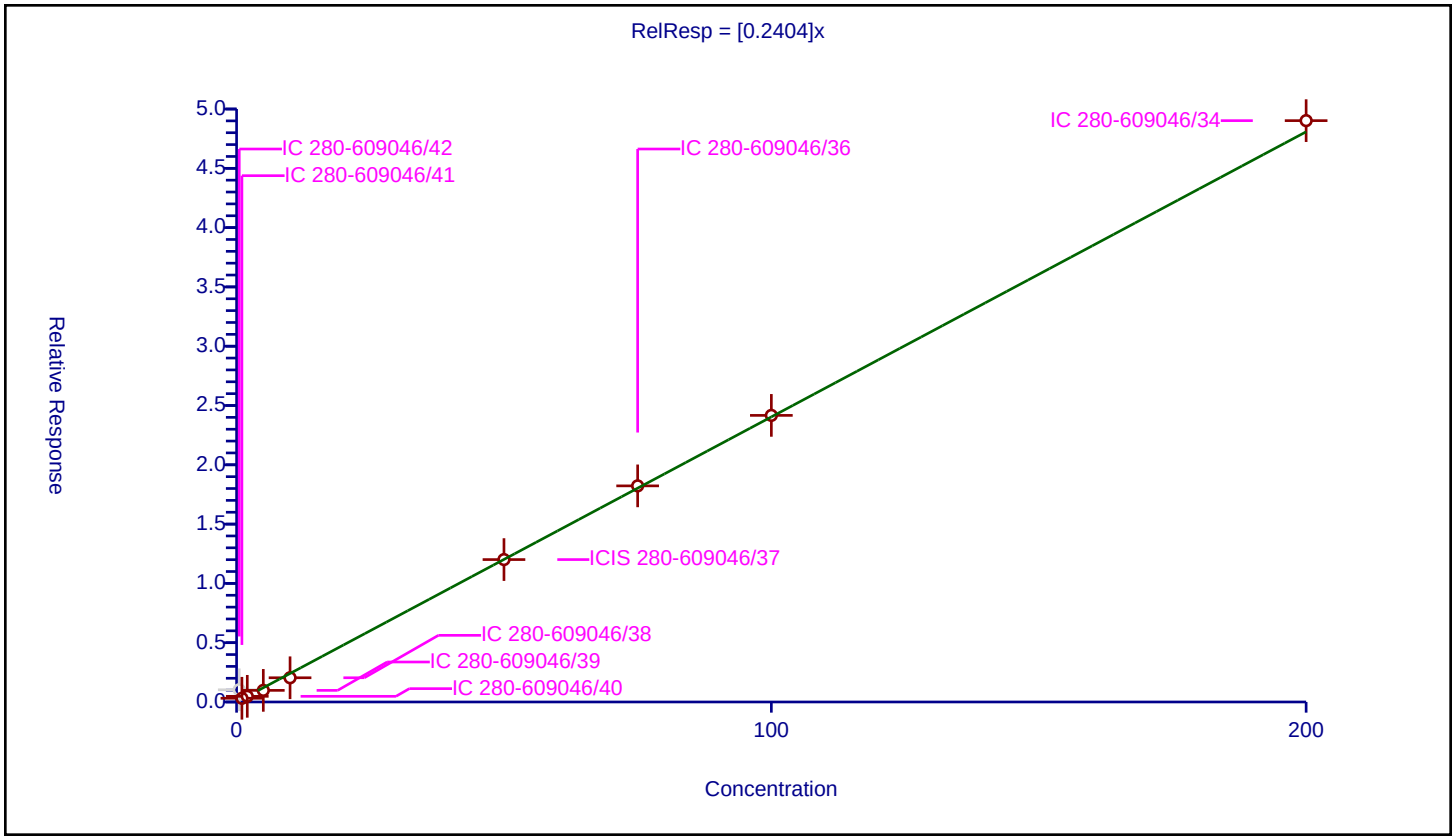
Curve Coefficients

Intercept:	0
Slope:	0.2404

Error Coefficients

Standard Error:	563000
Relative Standard Error:	14.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.968

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.0285	50.0	1123724.0	2.057	N
2	IC 280-609046/41	1.0	0.314421	50.0	1135581.0	0.314421	Y
3	IC 280-609046/40	2.0	0.477594	50.0	1153908.0	0.238797	Y
4	IC 280-609046/39	5.0	0.979382	50.0	1207547.0	0.195876	Y
5	IC 280-609046/38	10.0	2.041741	50.0	1230102.0	0.204174	Y
6	ICIS 280-609046/37	50.0	12.007583	50.0	1247062.0	0.240152	Y
7	IC 280-609046/36	75.0	18.224392	50.0	1248840.0	0.242992	Y
8	IC 280-609046/35	100.0	24.166251	50.0	1262070.0	0.241663	Y
9	IC 280-609046/34	200.0	49.020472	50.0	1267906.0	0.245102	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

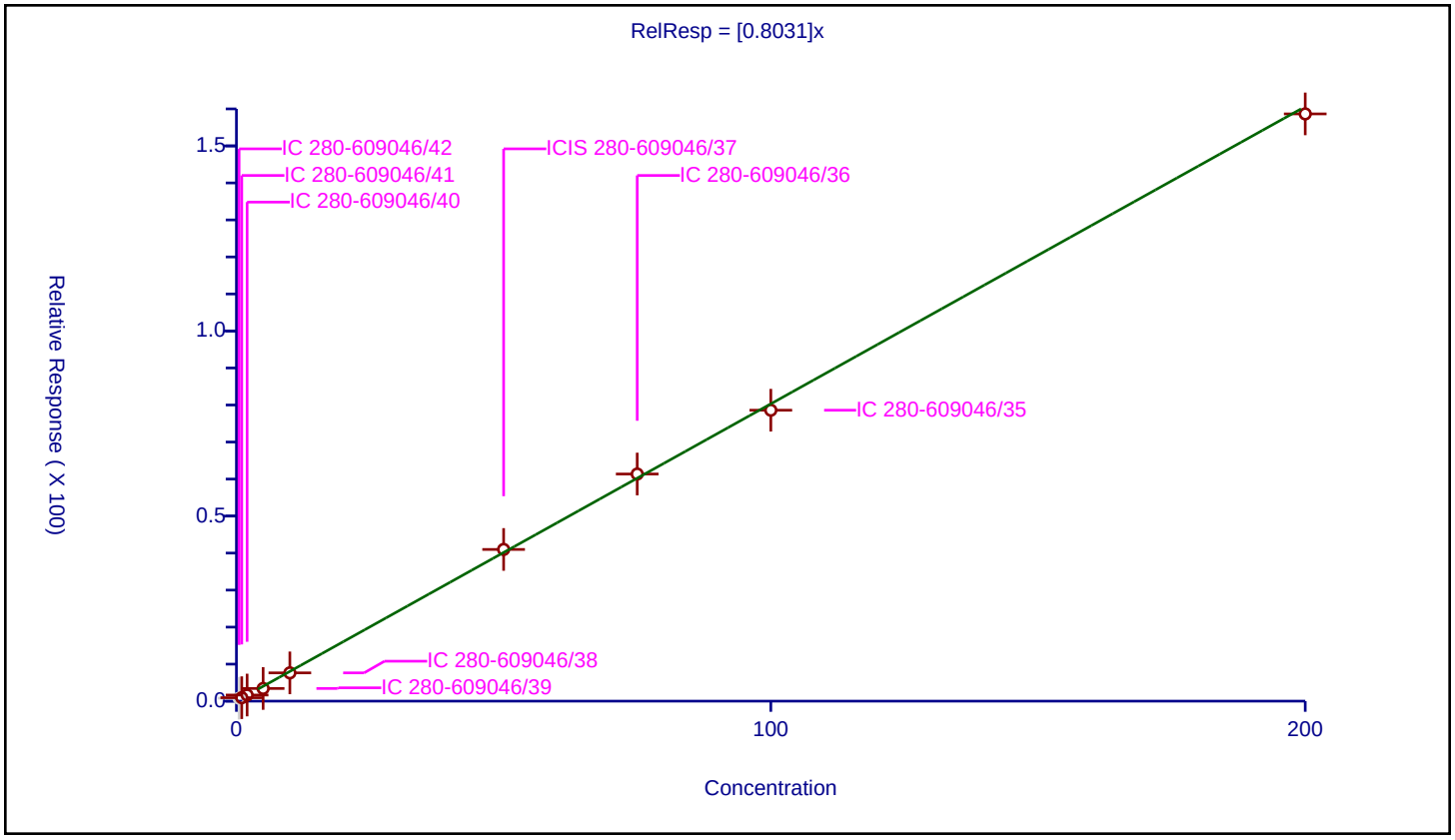
Curve Coefficients

Intercept:	0
Slope:	0.8031

Error Coefficients

Standard Error:	436000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.802237	50.0	266567.0	1.604475	N
2	IC 280-609046/41	1.0	0.933364	50.0	263402.0	0.933364	Y
3	IC 280-609046/40	2.0	1.653832	50.0	266472.0	0.826916	Y
4	IC 280-609046/39	5.0	3.418856	50.0	284291.0	0.683771	Y
5	IC 280-609046/38	10.0	7.639188	50.0	285207.0	0.763919	Y
6	ICIS 280-609046/37	50.0	40.98424	50.0	293780.0	0.819685	Y
7	IC 280-609046/36	75.0	61.355946	50.0	295823.0	0.818079	Y
8	IC 280-609046/35	100.0	78.596659	50.0	298110.0	0.785967	Y
9	IC 280-609046/34	200.0	158.648426	50.0	302477.0	0.793242	Y



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Calibration / 2-Pentanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

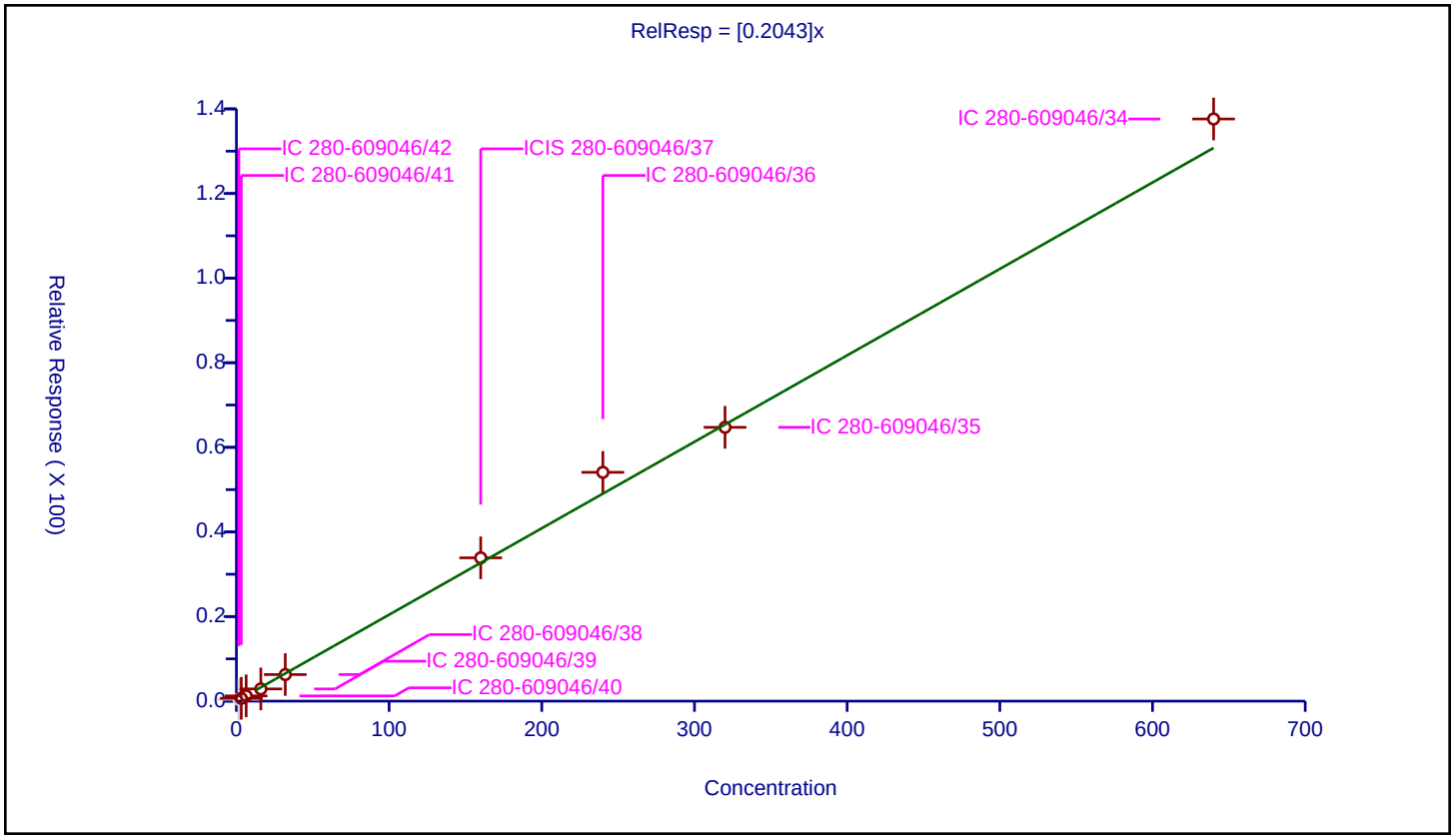
Curve Coefficients

Intercept:	0
Slope:	0.2043

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	6.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	1.6	0.436851	50.0	1123724.0	0.273032	N
2	IC 280-609046/41	3.2	0.671198	50.0	1135581.0	0.209749	Y
3	IC 280-609046/40	6.4	1.241867	50.0	1153908.0	0.194042	Y
4	IC 280-609046/39	16.0	2.883739	50.0	1207547.0	0.180234	Y
5	IC 280-609046/38	32.0	6.279561	50.0	1230102.0	0.196236	Y
6	ICIS 280-609046/37	160.0	33.877506	50.0	1247062.0	0.211734	Y
7	IC 280-609046/36	240.0	54.092158	50.0	1248840.0	0.225384	Y
8	IC 280-609046/35	320.0	64.728462	50.0	1262070.0	0.202276	Y
9	IC 280-609046/34	640.0	137.612883	50.0	1267906.0	0.21502	Y



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Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

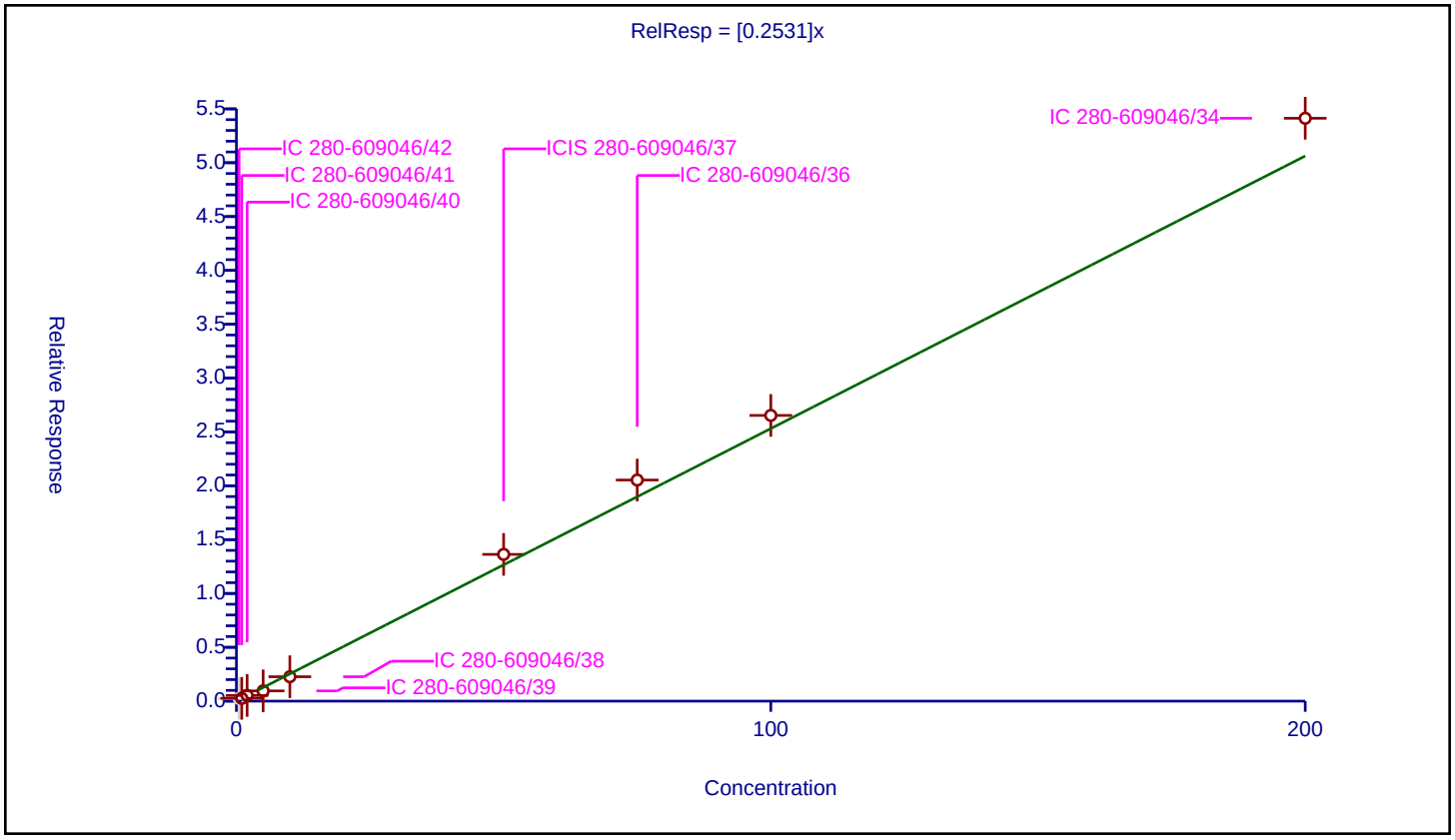
Curve Coefficients

Intercept:	0
Slope:	0.2531

Error Coefficients

Standard Error:	623000
Relative Standard Error:	11.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.254778	50.0	1123724.0	0.509556	N
2	IC 280-609046/41	1.0	0.262024	50.0	1135581.0	0.262024	Y
3	IC 280-609046/40	2.0	0.528248	50.0	1153908.0	0.264124	Y
4	IC 280-609046/39	5.0	0.949818	50.0	1207547.0	0.189964	Y
5	IC 280-609046/38	10.0	2.266641	50.0	1230102.0	0.226664	Y
6	ICIS 280-609046/37	50.0	13.626147	50.0	1247062.0	0.272523	Y
7	IC 280-609046/36	75.0	20.532975	50.0	1248840.0	0.273773	Y
8	IC 280-609046/35	100.0	26.533473	50.0	1262070.0	0.265335	Y
9	IC 280-609046/34	200.0	54.128737	50.0	1267906.0	0.270644	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

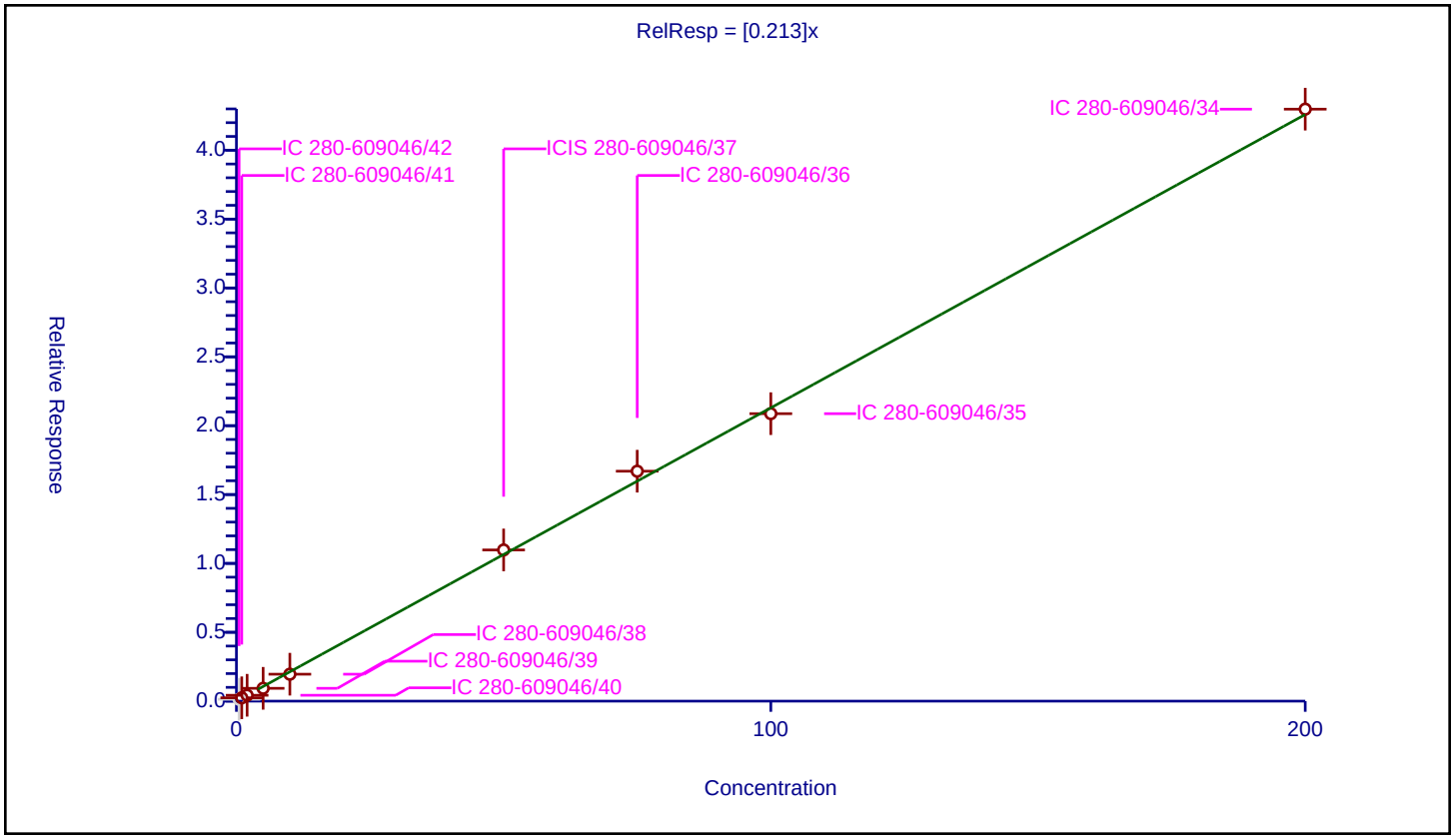
Curve Coefficients

Intercept:	0
Slope:	0.213

Error Coefficients

Standard Error:	495000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.136644	50.0	1123724.0	0.273288	N
2	IC 280-609046/41	1.0	0.243179	50.0	1135581.0	0.243179	Y
3	IC 280-609046/40	2.0	0.425684	50.0	1153908.0	0.212842	Y
4	IC 280-609046/39	5.0	0.931102	50.0	1207547.0	0.18622	Y
5	IC 280-609046/38	10.0	1.956708	50.0	1230102.0	0.195671	Y
6	ICIS 280-609046/37	50.0	10.97672	50.0	1247062.0	0.219534	Y
7	IC 280-609046/36	75.0	16.695734	50.0	1248840.0	0.22261	Y
8	IC 280-609046/35	100.0	20.872218	50.0	1262070.0	0.208722	Y
9	IC 280-609046/34	200.0	42.980907	50.0	1267906.0	0.214905	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

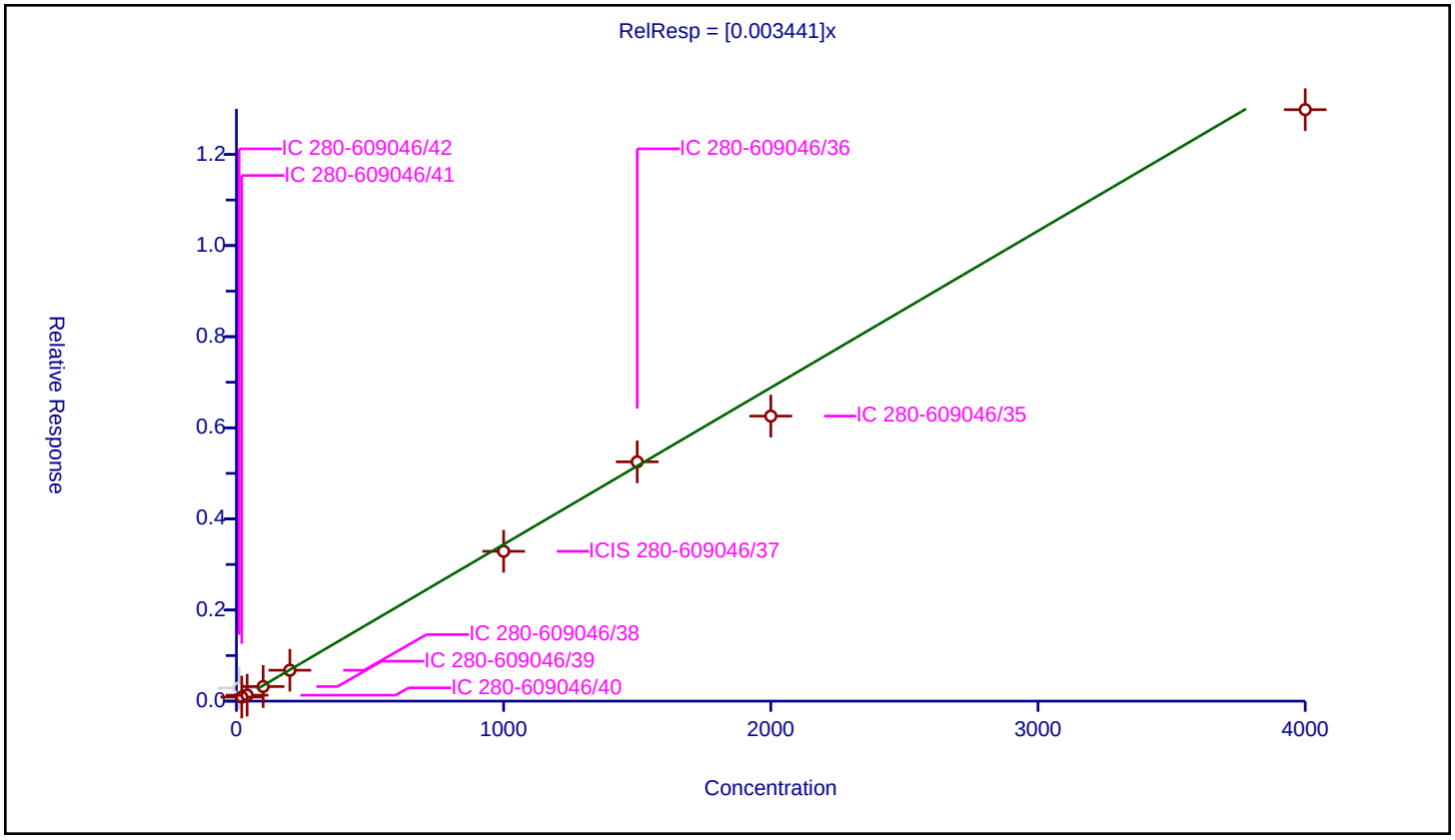
Curve Coefficients

Intercept:	0
Slope:	0.003441

Error Coefficients

Standard Error:	150000
Relative Standard Error:	12.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	10.0	0.287882	50.0	1123724.0	0.028788	N
2	IC 280-609046/41	20.0	0.089954	50.0	1135581.0	0.004498	Y
3	IC 280-609046/40	40.0	0.130773	50.0	1153908.0	0.003269	Y
4	IC 280-609046/39	100.0	0.320112	50.0	1207547.0	0.003201	Y
5	IC 280-609046/38	200.0	0.678318	50.0	1230102.0	0.003392	Y
6	ICIS 280-609046/37	1000.0	3.28865	50.0	1247062.0	0.003289	Y
7	IC 280-609046/36	1500.0	5.252915	50.0	1248840.0	0.003502	Y
8	IC 280-609046/35	2000.0	6.256824	50.0	1262070.0	0.003128	Y
9	IC 280-609046/34	4000.0	12.983179	50.0	1267906.0	0.003246	Y



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Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

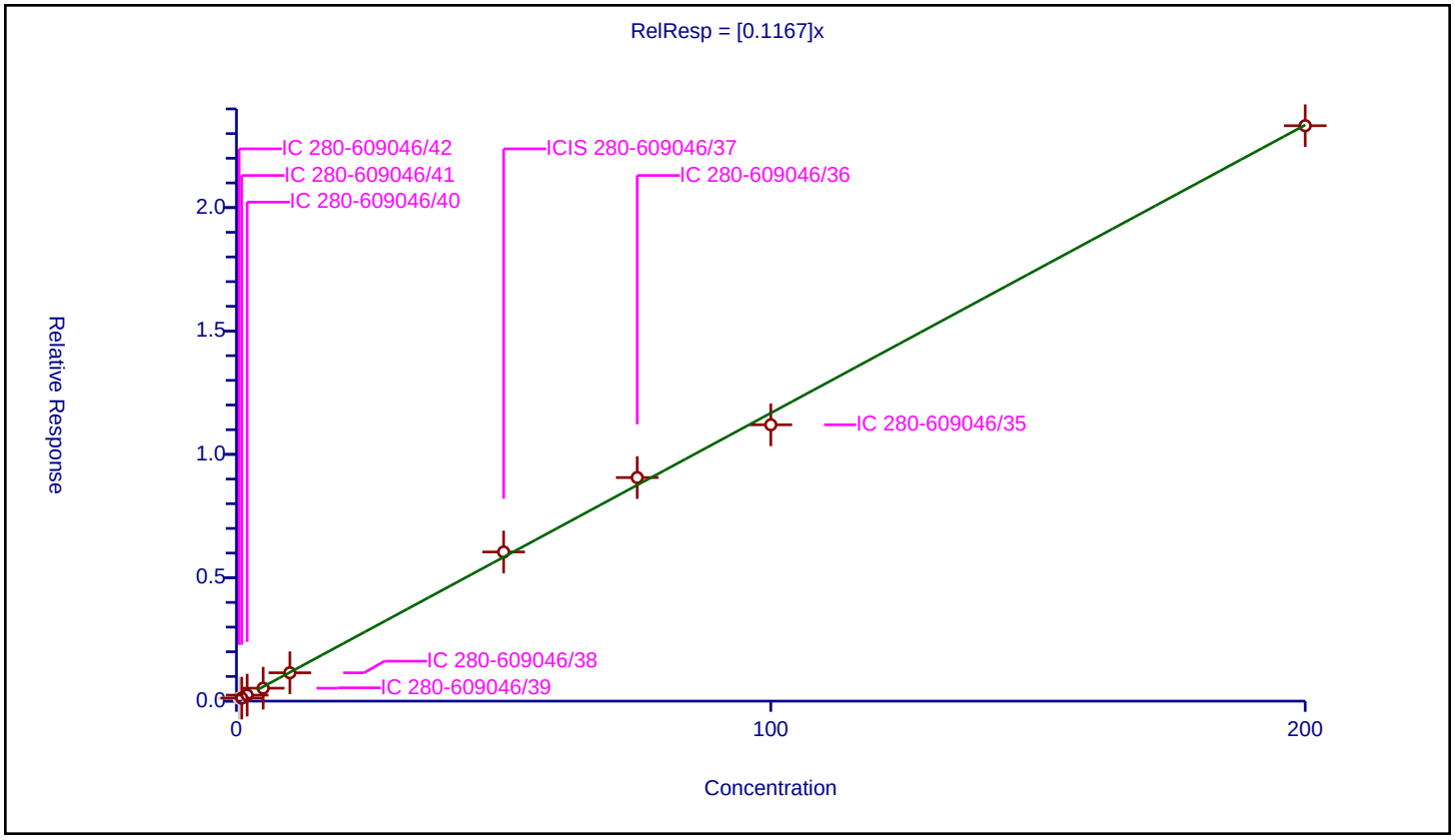
Curve Coefficients

Intercept:	0
Slope:	0.1167

Error Coefficients

Standard Error:	268000
Relative Standard Error:	5.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.119513	50.0	1123724.0	0.239027	N
2	IC 280-609046/41	1.0	0.122404	50.0	1135581.0	0.122404	Y
3	IC 280-609046/40	2.0	0.242567	50.0	1153908.0	0.121283	Y
4	IC 280-609046/39	5.0	0.525197	50.0	1207547.0	0.105039	Y
5	IC 280-609046/38	10.0	1.14901	50.0	1230102.0	0.114901	Y
6	ICIS 280-609046/37	50.0	6.044607	50.0	1247062.0	0.120892	Y
7	IC 280-609046/36	75.0	9.060088	50.0	1248840.0	0.120801	Y
8	IC 280-609046/35	100.0	11.198943	50.0	1262070.0	0.111989	Y
9	IC 280-609046/34	200.0	23.318487	50.0	1267906.0	0.116592	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

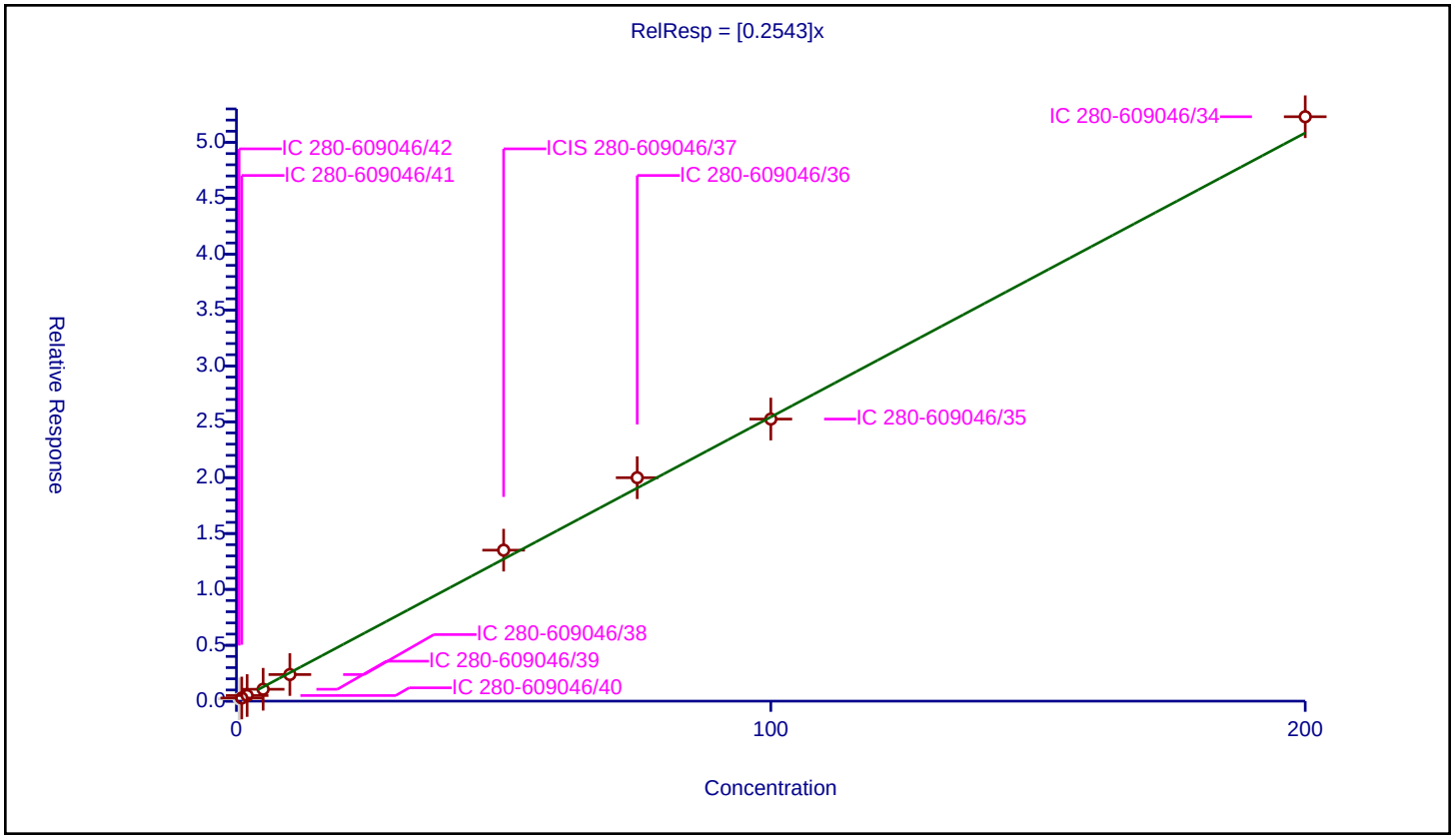
Curve Coefficients

Intercept:	0
Slope:	0.2543

Error Coefficients

Standard Error:	601000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.2053	50.0	1123724.0	0.410599	N
2	IC 280-609046/41	1.0	0.280913	50.0	1135581.0	0.280913	Y
3	IC 280-609046/40	2.0	0.502856	50.0	1153908.0	0.251428	Y
4	IC 280-609046/39	5.0	1.064803	50.0	1207547.0	0.212961	Y
5	IC 280-609046/38	10.0	2.380047	50.0	1230102.0	0.238005	Y
6	ICIS 280-609046/37	50.0	13.510716	50.0	1247062.0	0.270214	Y
7	IC 280-609046/36	75.0	19.996116	50.0	1248840.0	0.266615	Y
8	IC 280-609046/35	100.0	25.241666	50.0	1262070.0	0.252417	Y
9	IC 280-609046/34	200.0	52.299185	50.0	1267906.0	0.261496	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

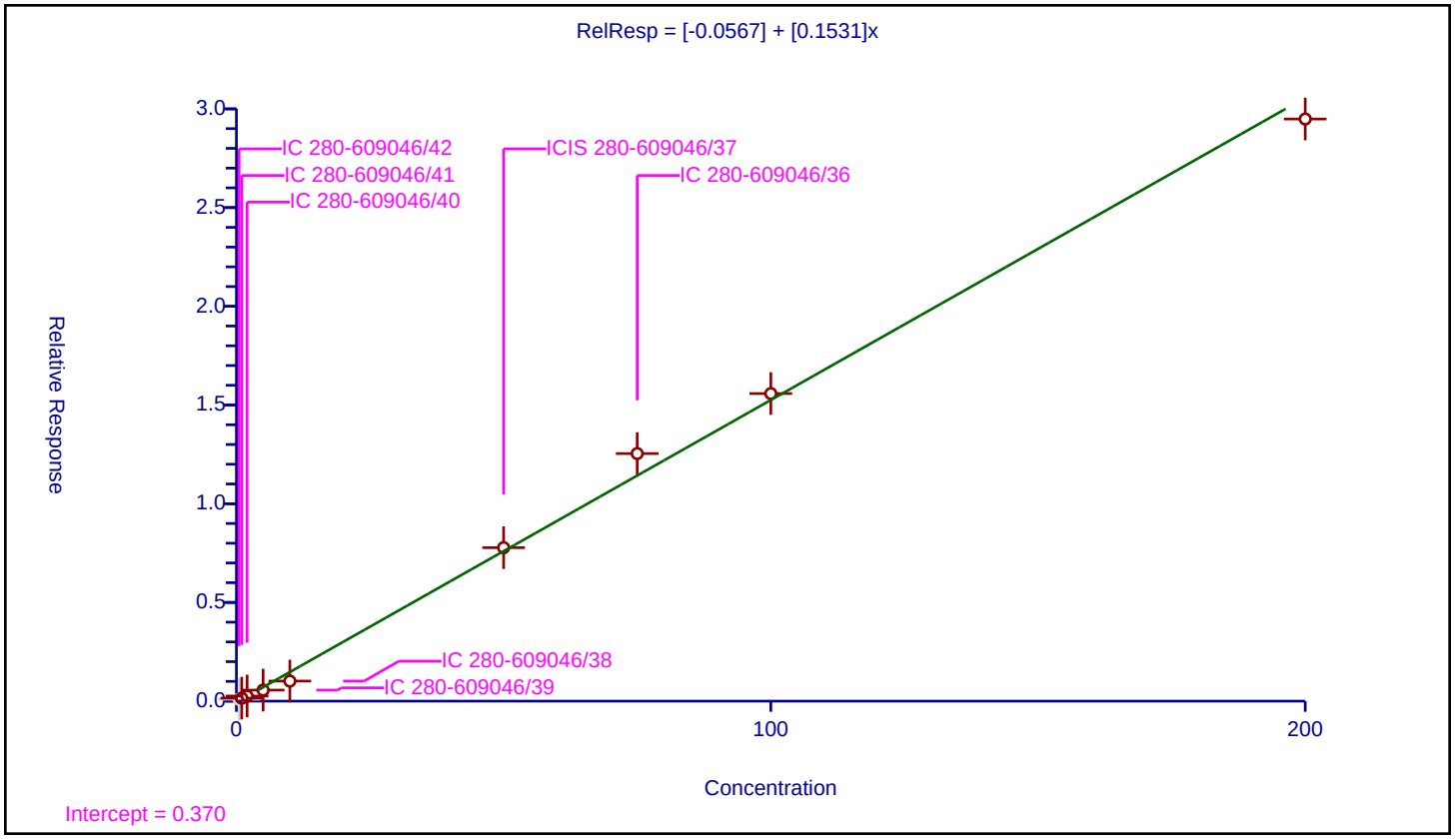
Curve Coefficients

Intercept:	-0.0567
Slope:	0.1531

Error Coefficients

Standard Error:	376000
Relative Standard Error:	21.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.096242	50.0	1123724.0	0.192485	N
2	IC 280-609046/41	1.0	0.151156	50.0	1135581.0	0.151156	Y
3	IC 280-609046/40	2.0	0.258903	50.0	1153908.0	0.129451	Y
4	IC 280-609046/39	5.0	0.558819	50.0	1207547.0	0.111764	Y
5	IC 280-609046/38	10.0	1.016745	50.0	1230102.0	0.101674	Y
6	ICIS 280-609046/37	50.0	7.773711	50.0	1247062.0	0.155474	Y
7	IC 280-609046/36	75.0	12.540998	50.0	1248840.0	0.167213	Y
8	IC 280-609046/35	100.0	15.580594	50.0	1262070.0	0.155806	Y
9	IC 280-609046/34	200.0	29.487044	50.0	1267906.0	0.147435	Y



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Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

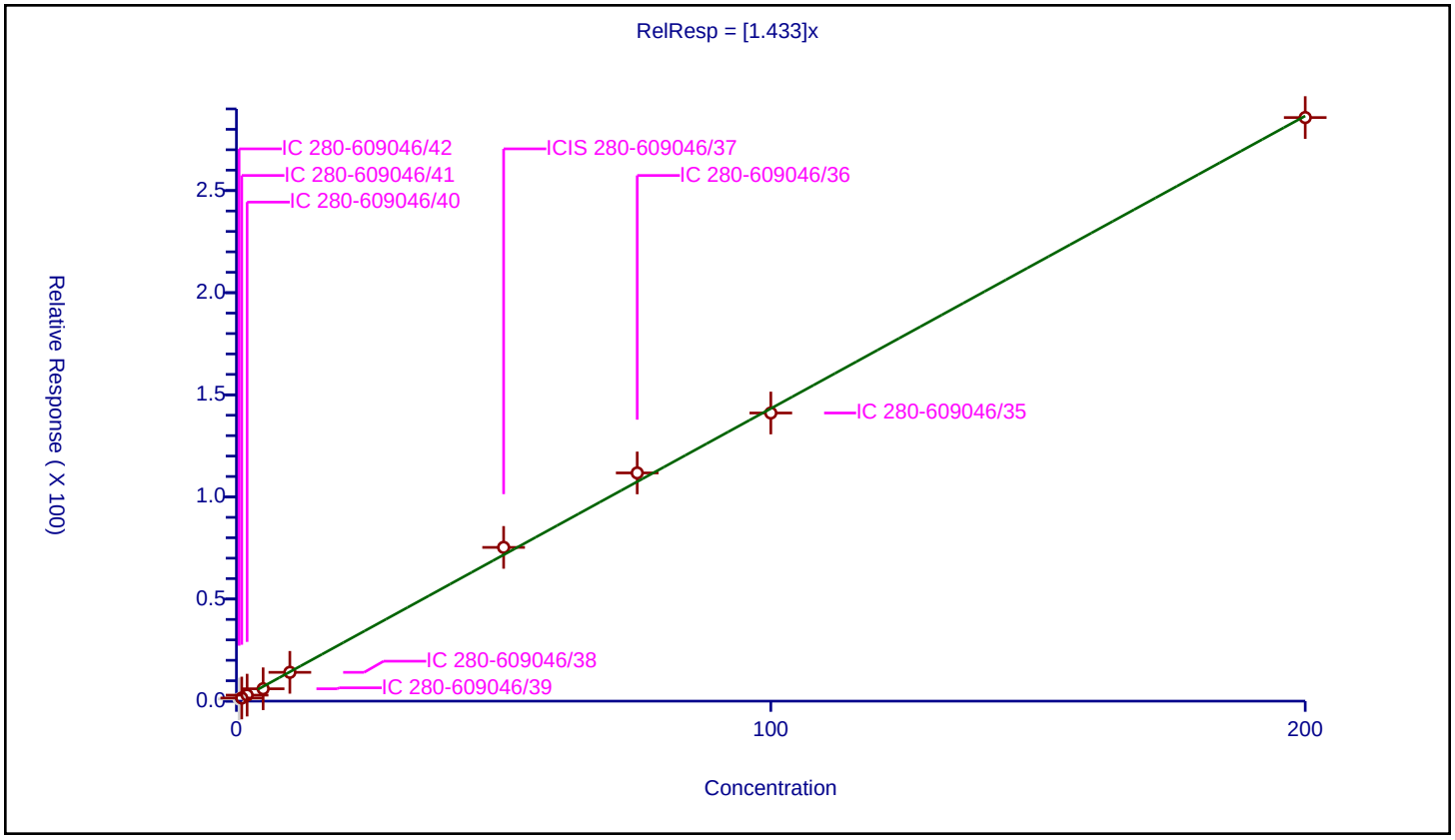
Curve Coefficients

Intercept:	0
Slope:	1.433

Error Coefficients

Standard Error:	787000
Relative Standard Error:	6.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.079278	50.0	266567.0	2.158557	N
2	IC 280-609046/41	1.0	1.53036	50.0	263402.0	1.53036	Y
3	IC 280-609046/40	2.0	2.945713	50.0	266472.0	1.472856	Y
4	IC 280-609046/39	5.0	6.063505	50.0	284291.0	1.212701	Y
5	IC 280-609046/38	10.0	14.106596	50.0	285207.0	1.41066	Y
6	ICIS 280-609046/37	50.0	75.285077	50.0	293780.0	1.505702	Y
7	IC 280-609046/36	75.0	111.749932	50.0	295823.0	1.489999	Y
8	IC 280-609046/35	100.0	141.087015	50.0	298110.0	1.41087	Y
9	IC 280-609046/34	200.0	285.756934	50.0	302477.0	1.428785	Y



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Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

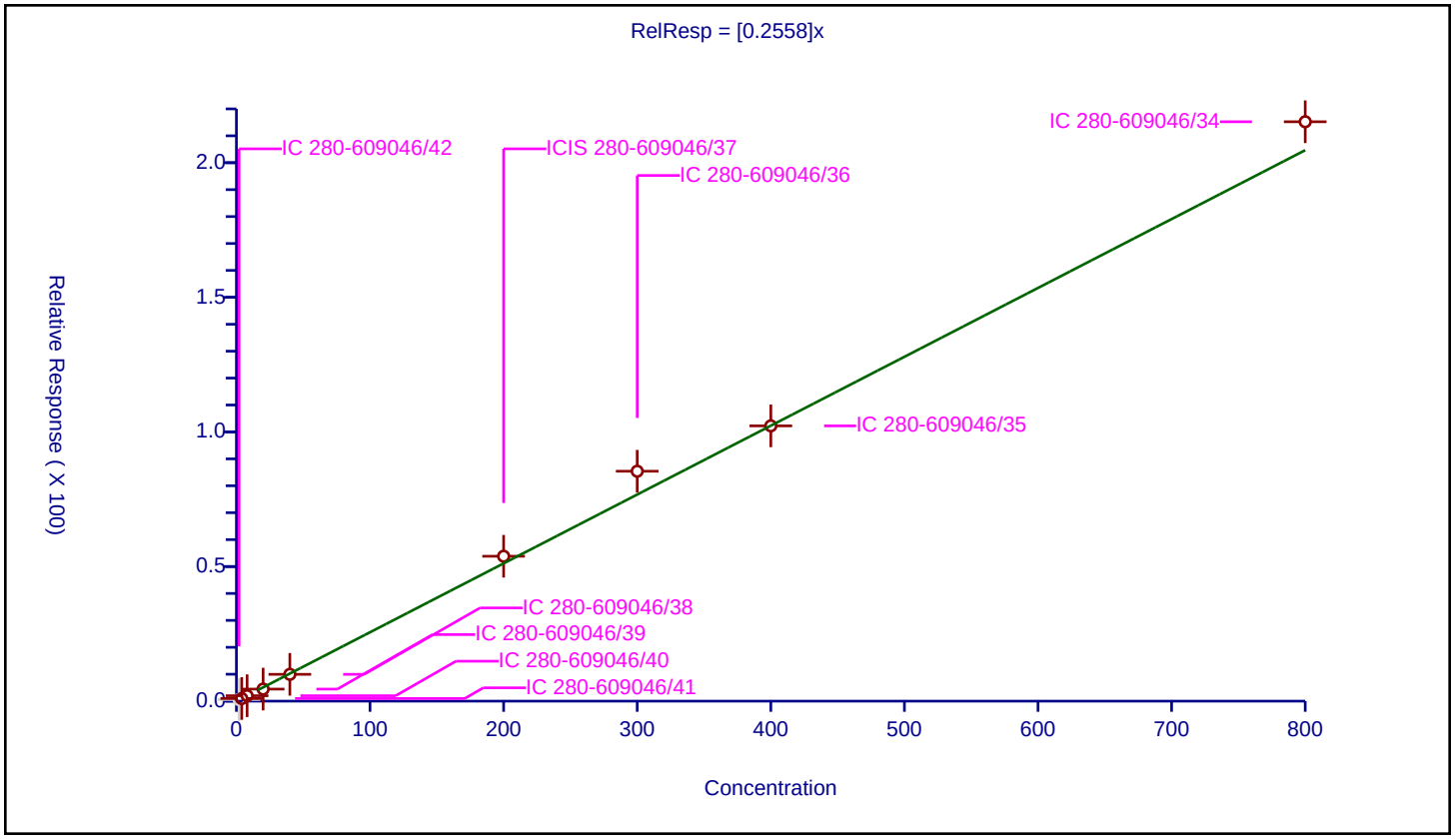
Curve Coefficients

Intercept:	0
Slope:	0.2558

Error Coefficients

Standard Error:	2470000
Relative Standard Error:	7.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	2.0	0.580036	50.0	1123724.0	0.290018	N
2	IC 280-609046/41	4.0	0.976416	50.0	1135581.0	0.244104	Y
3	IC 280-609046/40	8.0	2.008522	50.0	1153908.0	0.251065	Y
4	IC 280-609046/39	20.0	4.478542	50.0	1207547.0	0.223927	Y
5	IC 280-609046/38	40.0	9.955922	50.0	1230102.0	0.248898	Y
6	ICIS 280-609046/37	200.0	53.827877	50.0	1247062.0	0.269139	Y
7	IC 280-609046/36	300.0	85.410701	50.0	1248840.0	0.284702	Y
8	IC 280-609046/35	400.0	102.256571	50.0	1262070.0	0.255641	Y
9	IC 280-609046/34	800.0	215.224394	50.0	1267906.0	0.26903	Y



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Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

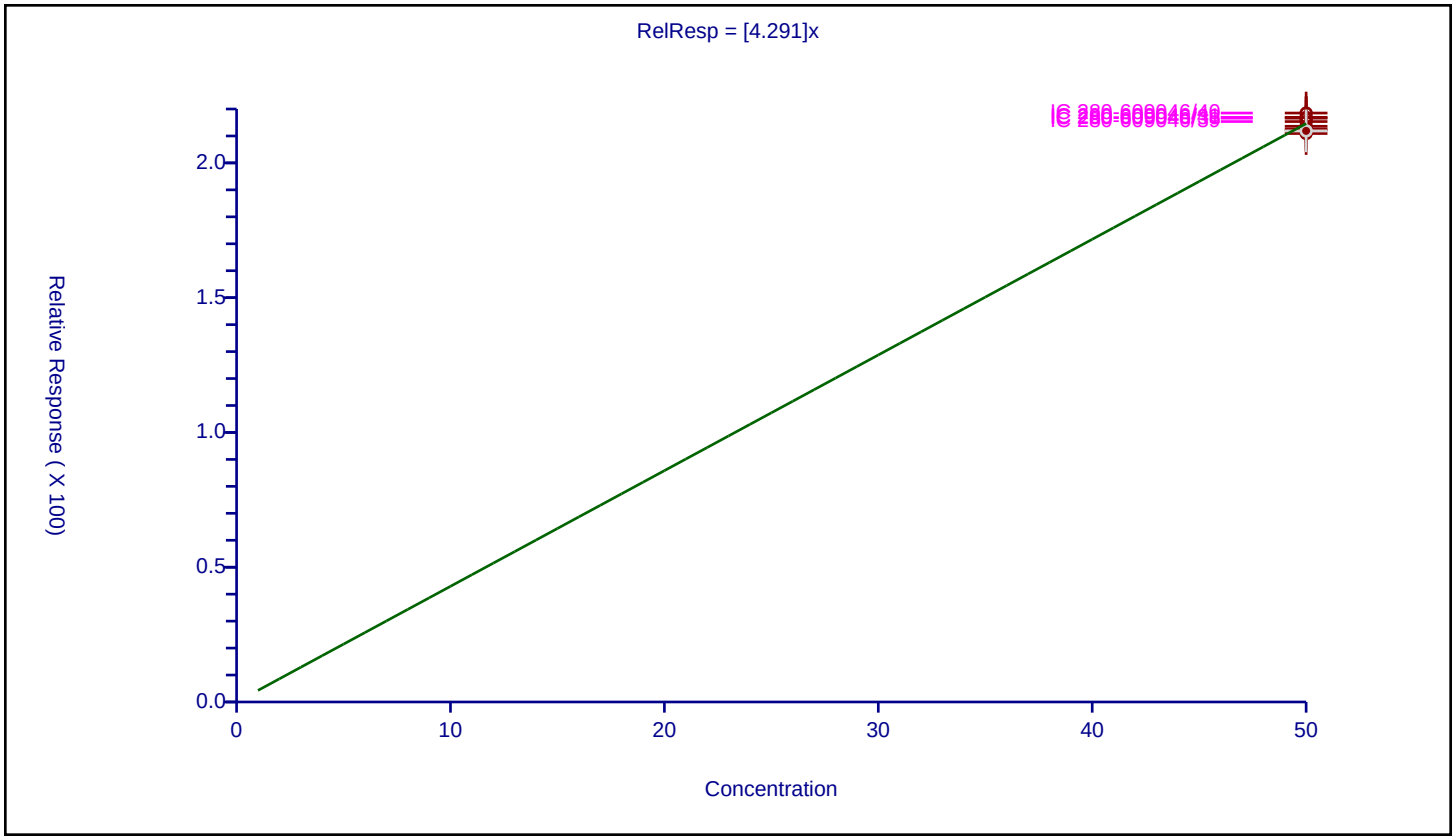
Curve Coefficients

Intercept:	0
Slope:	4.291

Error Coefficients

Standard Error:	1310000
Relative Standard Error:	1.2
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/34	50.0	212.604925	50.0	302477.0	4.252099	Y
2	IC 280-609046/35	50.0	213.599007	50.0	298110.0	4.27198	Y
3	IC 280-609046/36	50.0	210.911085	50.0	295823.0	4.218222	Y
4	ICIS 280-609046/37	50.0	212.118082	50.0	293780.0	4.242362	Y
5	IC 280-609046/38	50.0	216.59251	50.0	285207.0	4.33185	Y
6	IC 280-609046/39	50.0	215.348358	50.0	284291.0	4.306967	Y
7	IC 280-609046/40	50.0	218.510388	50.0	266472.0	4.370208	Y
8	IC 280-609046/41	50.0	216.910654	50.0	263402.0	4.338213	Y
9	IC 280-609046/42	50.0	211.895321	50.0	266567.0	4.237906	N



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

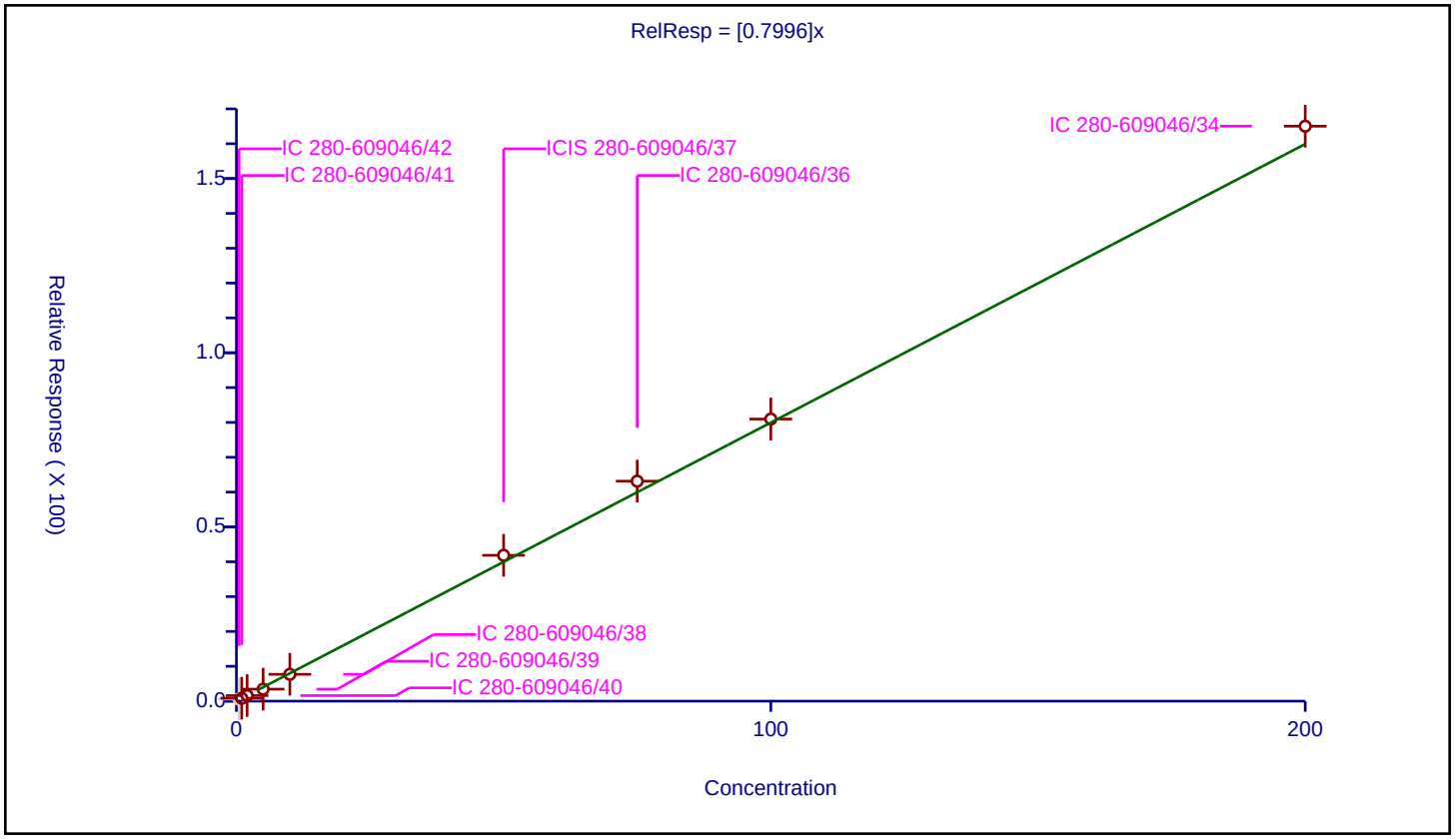
Curve Coefficients

Intercept:	0
Slope:	0.7996

Error Coefficients

Standard Error:	1900000
Relative Standard Error:	6.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.589202	50.0	1123724.0	1.178403	N
2	IC 280-609046/41	1.0	0.826449	50.0	1135581.0	0.826449	Y
3	IC 280-609046/40	2.0	1.592415	50.0	1153908.0	0.796207	Y
4	IC 280-609046/39	5.0	3.447236	50.0	1207547.0	0.689447	Y
5	IC 280-609046/38	10.0	7.702898	50.0	1230102.0	0.77029	Y
6	ICIS 280-609046/37	50.0	41.859346	50.0	1247062.0	0.837187	Y
7	IC 280-609046/36	75.0	63.147521	50.0	1248840.0	0.841967	Y
8	IC 280-609046/35	100.0	80.972648	50.0	1262070.0	0.809726	Y
9	IC 280-609046/34	200.0	165.032502	50.0	1267906.0	0.825163	Y



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Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

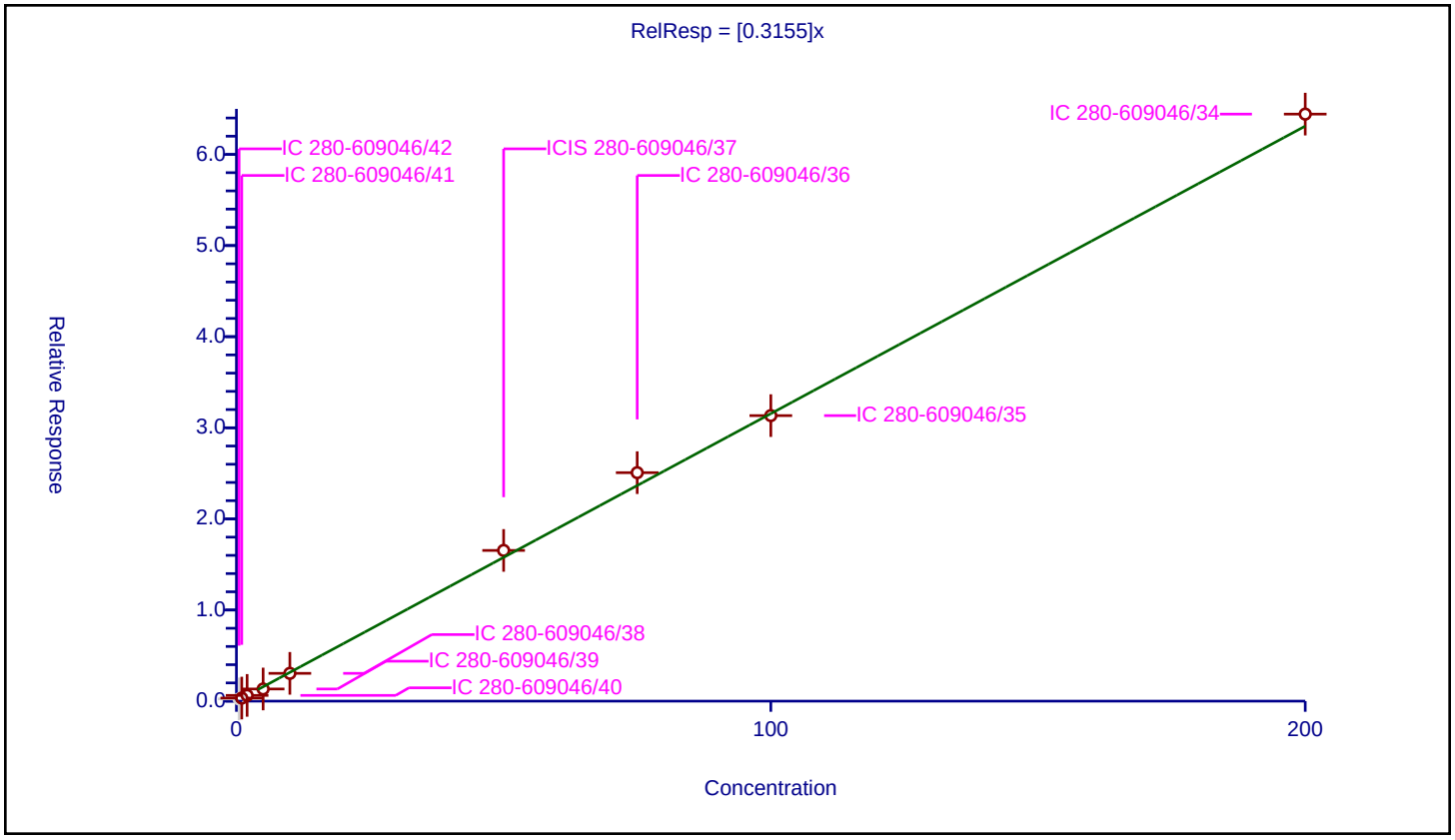
Curve Coefficients

Intercept:	0
Slope:	0.3155

Error Coefficients

Standard Error:	743000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.2449	50.0	1123724.0	0.4898	N
2	IC 280-609046/41	1.0	0.337096	50.0	1135581.0	0.337096	Y
3	IC 280-609046/40	2.0	0.629946	50.0	1153908.0	0.314973	Y
4	IC 280-609046/39	5.0	1.333447	50.0	1207547.0	0.266689	Y
5	IC 280-609046/38	10.0	3.049178	50.0	1230102.0	0.304918	Y
6	ICIS 280-609046/37	50.0	16.540156	50.0	1247062.0	0.330803	Y
7	IC 280-609046/36	75.0	25.074589	50.0	1248840.0	0.334328	Y
8	IC 280-609046/35	100.0	31.338198	50.0	1262070.0	0.313382	Y
9	IC 280-609046/34	200.0	64.428396	50.0	1267906.0	0.322142	Y



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Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

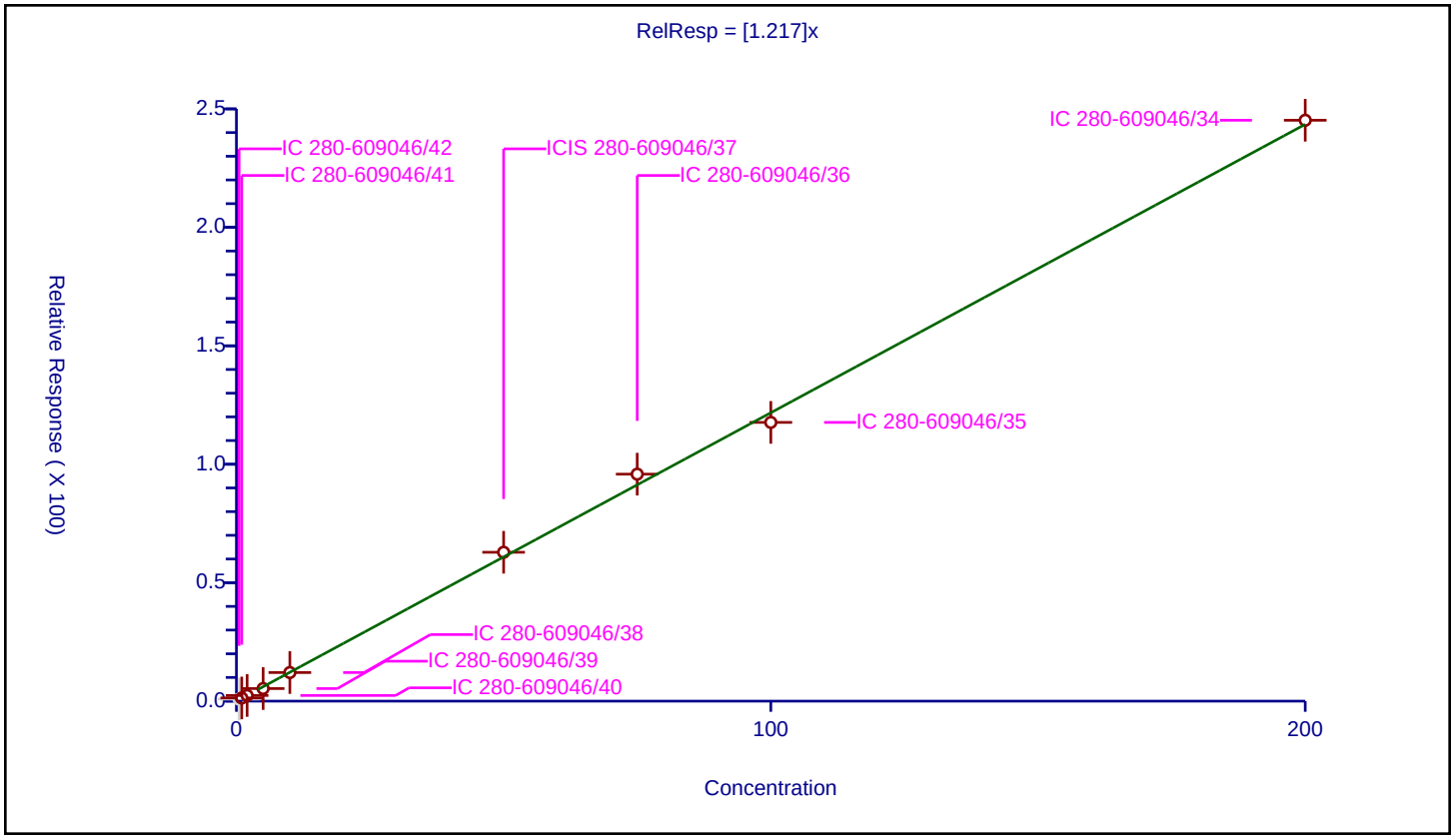
Curve Coefficients

Intercept:	0
Slope:	1.217

Error Coefficients

Standard Error:	671000
Relative Standard Error:	6.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.860196	50.0	266567.0	1.720393	N
2	IC 280-609046/41	1.0	1.339777	50.0	263402.0	1.339777	Y
3	IC 280-609046/40	2.0	2.383365	50.0	266472.0	1.191682	Y
4	IC 280-609046/39	5.0	5.316208	50.0	284291.0	1.063242	Y
5	IC 280-609046/38	10.0	12.074388	50.0	285207.0	1.207439	Y
6	ICIS 280-609046/37	50.0	62.840221	50.0	293780.0	1.256804	Y
7	IC 280-609046/36	75.0	95.818615	50.0	295823.0	1.277582	Y
8	IC 280-609046/35	100.0	117.659421	50.0	298110.0	1.176594	Y
9	IC 280-609046/34	200.0	245.20228	50.0	302477.0	1.226011	Y



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Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

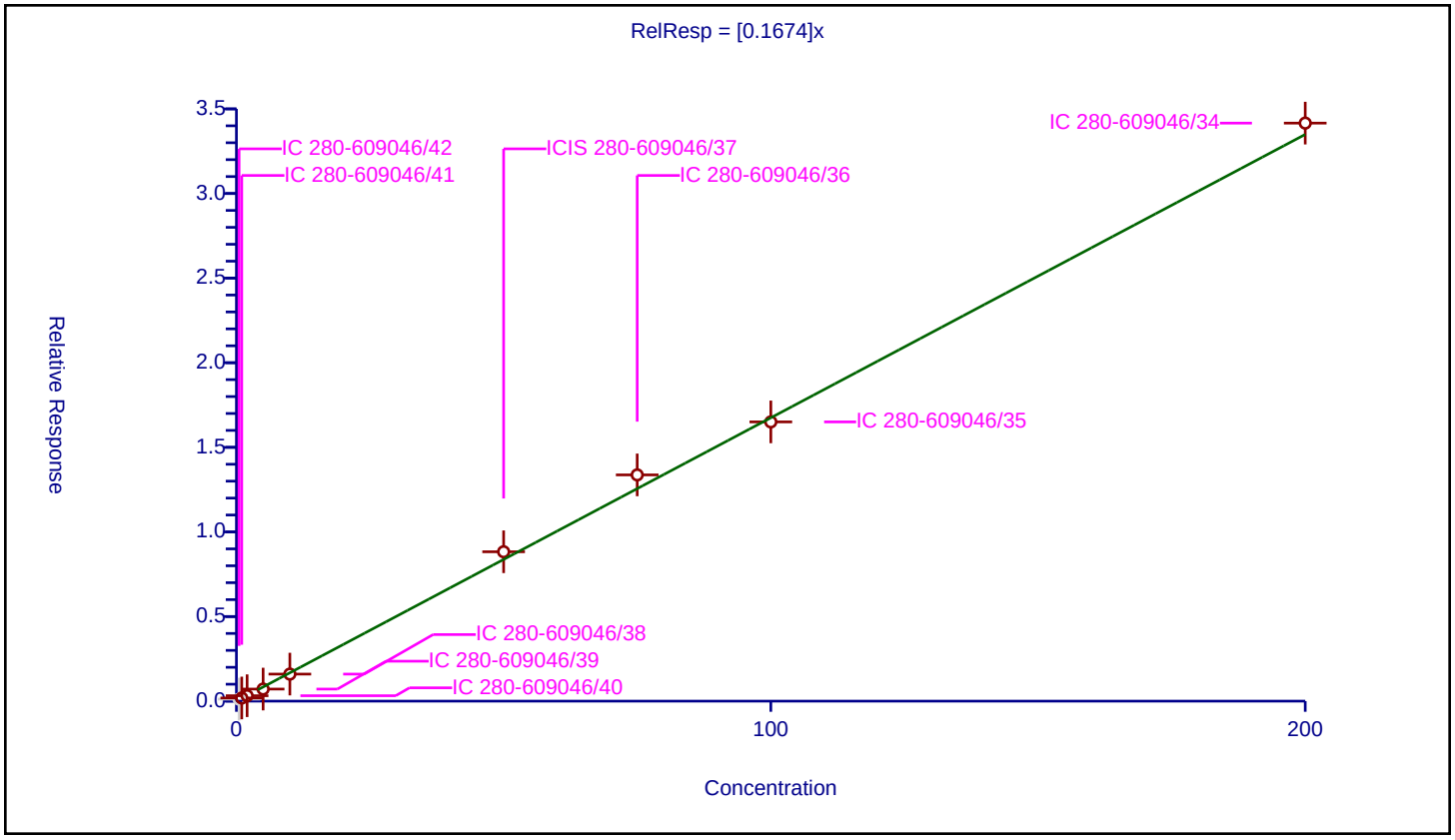
Curve Coefficients

Intercept:	0
Slope:	0.1674

Error Coefficients

Standard Error:	394000
Relative Standard Error:	8.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.119202	50.0	1123724.0	0.238404	N
2	IC 280-609046/41	1.0	0.186116	50.0	1135581.0	0.186116	Y
3	IC 280-609046/40	2.0	0.320216	50.0	1153908.0	0.160108	Y
4	IC 280-609046/39	5.0	0.714382	50.0	1207547.0	0.142876	Y
5	IC 280-609046/38	10.0	1.598282	50.0	1230102.0	0.159828	Y
6	ICIS 280-609046/37	50.0	8.82815	50.0	1247062.0	0.176563	Y
7	IC 280-609046/36	75.0	13.370888	50.0	1248840.0	0.178279	Y
8	IC 280-609046/35	100.0	16.502809	50.0	1262070.0	0.165028	Y
9	IC 280-609046/34	200.0	34.160143	50.0	1267906.0	0.170801	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

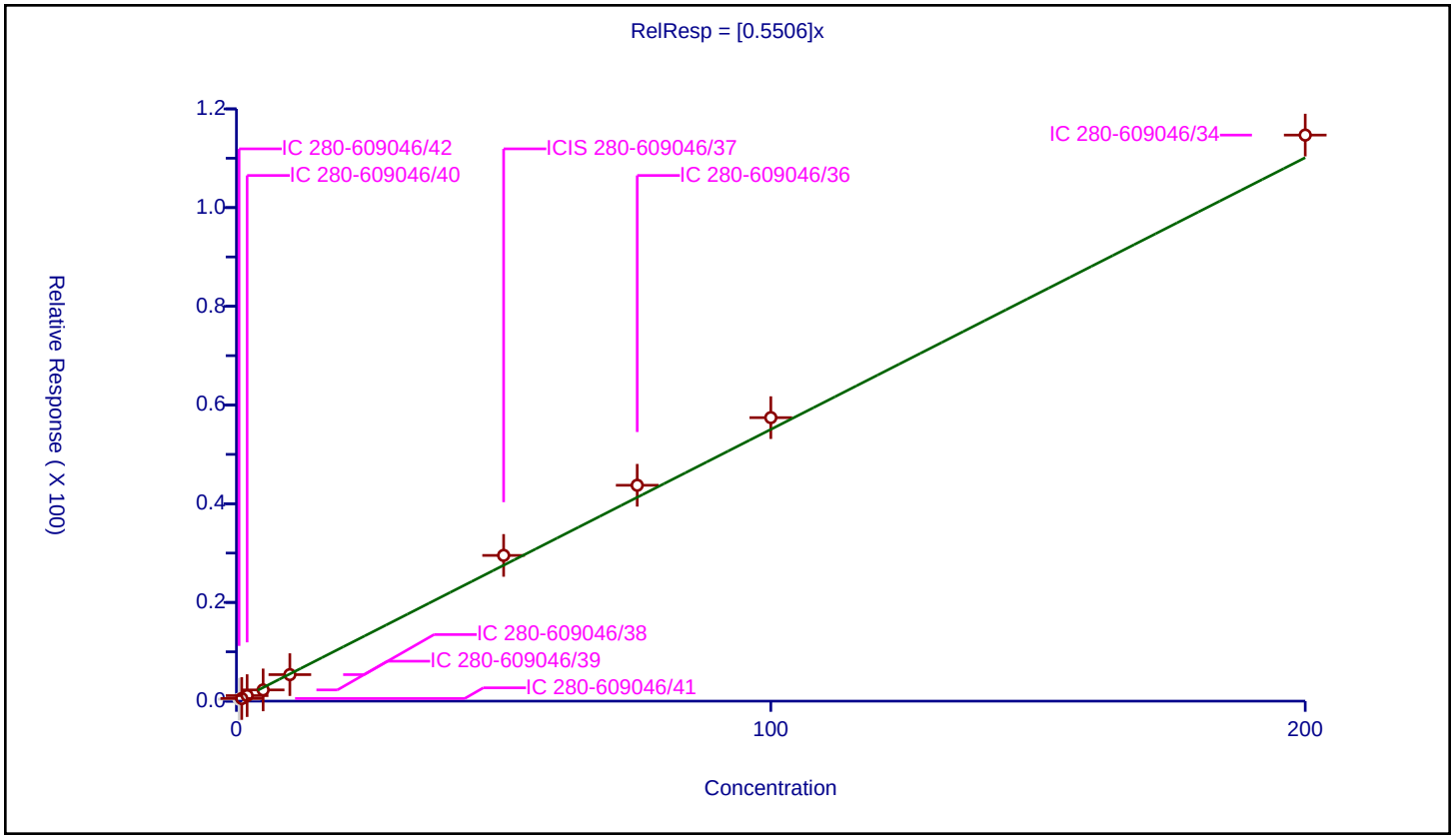
Curve Coefficients

Intercept:	0
Slope:	0.5506

Error Coefficients

Standard Error:	315000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.4014	50.0	266567.0	0.8028	N
2	IC 280-609046/41	1.0	0.530558	50.0	263402.0	0.530558	Y
3	IC 280-609046/40	2.0	1.12038	50.0	266472.0	0.56019	Y
4	IC 280-609046/39	5.0	2.276892	50.0	284291.0	0.455378	Y
5	IC 280-609046/38	10.0	5.369959	50.0	285207.0	0.536996	Y
6	ICIS 280-609046/37	50.0	29.528559	50.0	293780.0	0.590571	Y
7	IC 280-609046/36	75.0	43.740007	50.0	295823.0	0.5832	Y
8	IC 280-609046/35	100.0	57.445071	50.0	298110.0	0.574451	Y
9	IC 280-609046/34	200.0	114.694506	50.0	302477.0	0.573473	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

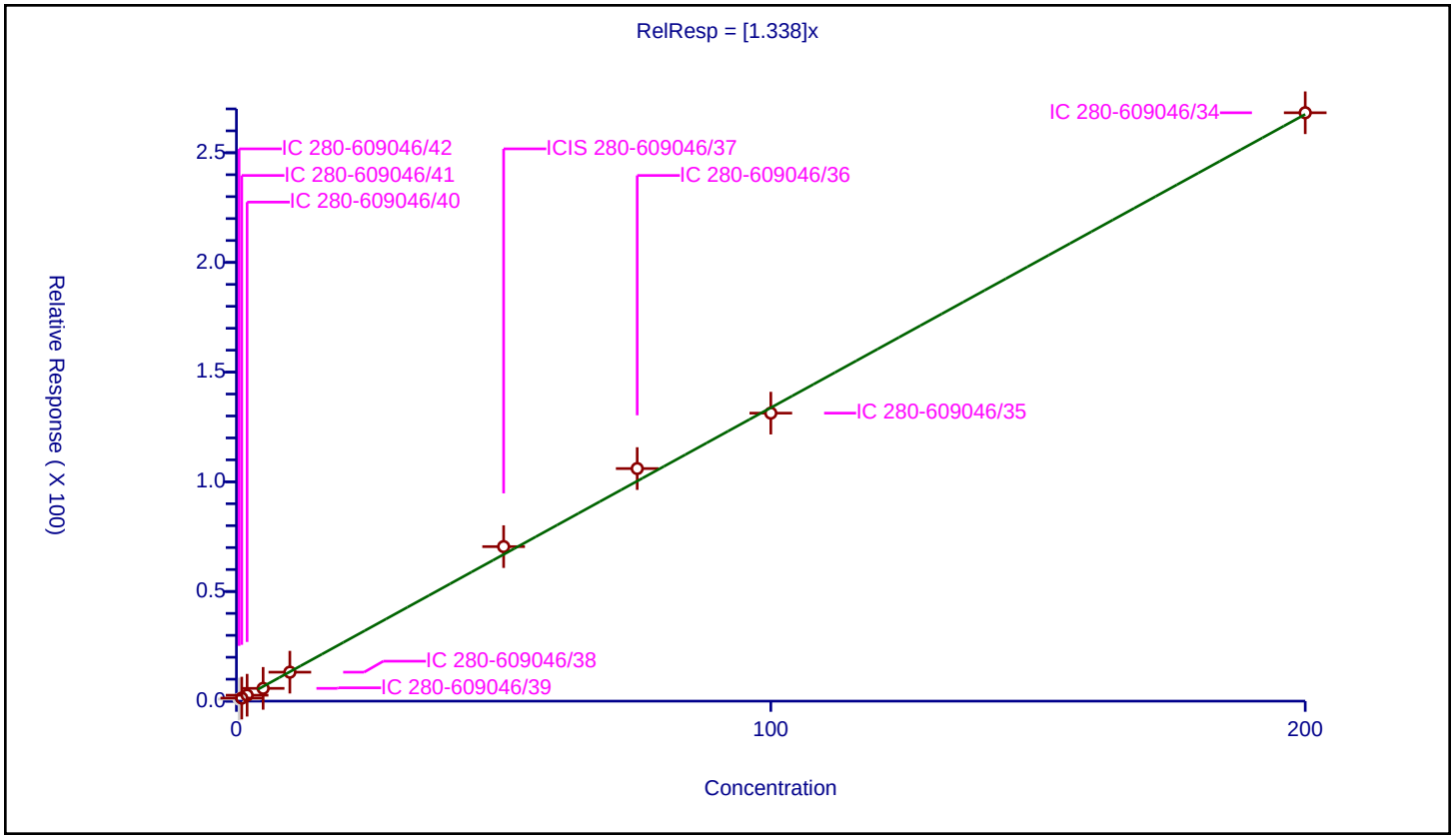
Curve Coefficients

Intercept:	0
Slope:	1.338

Error Coefficients

Standard Error:	738000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.926784	50.0	266567.0	1.853568	N
2	IC 280-609046/41	1.0	1.388562	50.0	263402.0	1.388562	Y
3	IC 280-609046/40	2.0	2.701785	50.0	266472.0	1.350892	Y
4	IC 280-609046/39	5.0	5.82062	50.0	284291.0	1.164124	Y
5	IC 280-609046/38	10.0	13.210054	50.0	285207.0	1.321005	Y
6	ICIS 280-609046/37	50.0	70.437232	50.0	293780.0	1.408745	Y
7	IC 280-609046/36	75.0	106.031985	50.0	295823.0	1.41376	Y
8	IC 280-609046/35	100.0	131.300694	50.0	298110.0	1.313007	Y
9	IC 280-609046/34	200.0	268.238081	50.0	302477.0	1.34119	Y



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Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

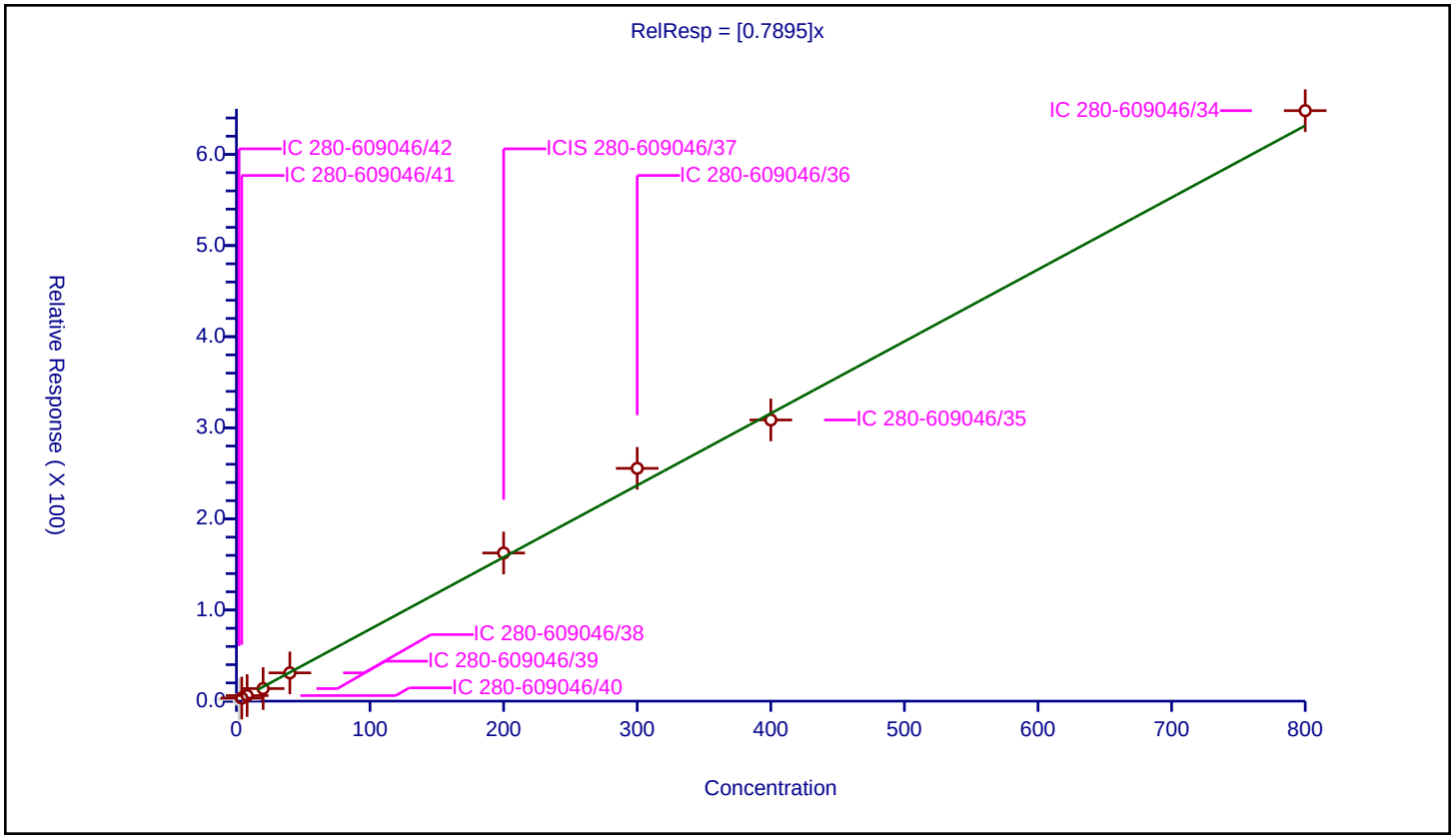
Curve Coefficients

Intercept:	0
Slope:	0.7895

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	6.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	2.0	1.883767	50.0	266567.0	0.941883	N
2	IC 280-609046/41	4.0	3.378866	50.0	263402.0	0.844716	Y
3	IC 280-609046/40	8.0	6.083941	50.0	266472.0	0.760493	Y
4	IC 280-609046/39	20.0	13.775849	50.0	284291.0	0.688792	Y
5	IC 280-609046/38	40.0	31.040087	50.0	285207.0	0.776002	Y
6	ICIS 280-609046/37	200.0	162.605351	50.0	293780.0	0.813027	Y
7	IC 280-609046/36	300.0	255.490614	50.0	295823.0	0.851635	Y
8	IC 280-609046/35	400.0	308.602865	50.0	298110.0	0.771507	Y
9	IC 280-609046/34	800.0	648.079689	50.0	302477.0	0.8101	Y



Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

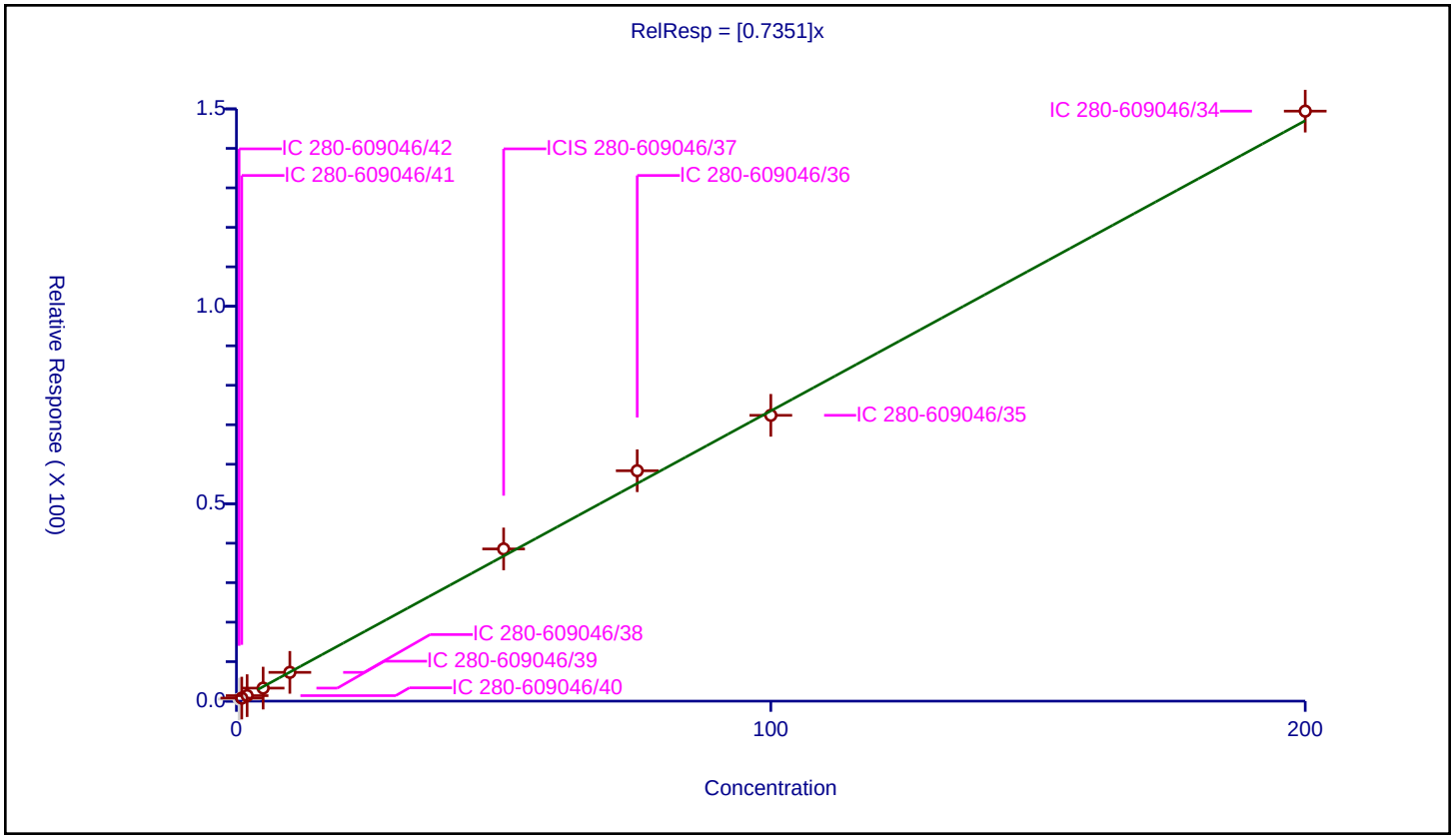
Curve Coefficients

Intercept:	0
Slope:	0.7351

Error Coefficients

Standard Error:	410000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.529886	50.0	266567.0	1.059771	N
2	IC 280-609046/41	1.0	0.773912	50.0	263402.0	0.773912	Y
3	IC 280-609046/40	2.0	1.393767	50.0	266472.0	0.696884	Y
4	IC 280-609046/39	5.0	3.304009	50.0	284291.0	0.660802	Y
5	IC 280-609046/38	10.0	7.290319	50.0	285207.0	0.729032	Y
6	ICIS 280-609046/37	50.0	38.548233	50.0	293780.0	0.770965	Y
7	IC 280-609046/36	75.0	58.354658	50.0	295823.0	0.778062	Y
8	IC 280-609046/35	100.0	72.390225	50.0	298110.0	0.723902	Y
9	IC 280-609046/34	200.0	149.432519	50.0	302477.0	0.747163	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

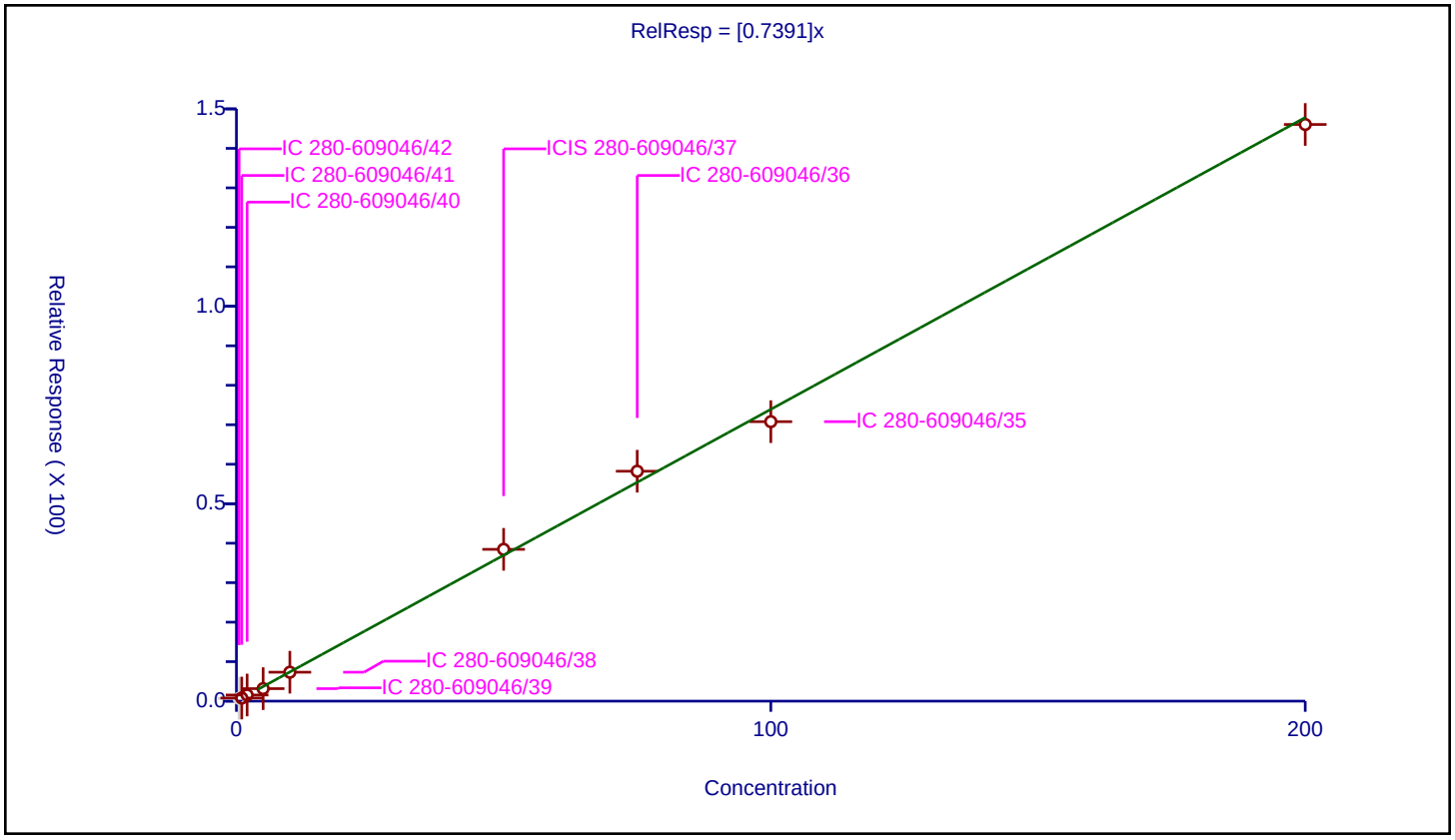
Curve Coefficients

Intercept:	0
Slope:	0.7391

Error Coefficients

Standard Error:	402000
Relative Standard Error:	6.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.705826	50.0	266567.0	1.411653	N
2	IC 280-609046/41	1.0	0.784352	50.0	263402.0	0.784352	Y
3	IC 280-609046/40	2.0	1.557012	50.0	266472.0	0.778506	Y
4	IC 280-609046/39	5.0	3.167705	50.0	284291.0	0.633541	Y
5	IC 280-609046/38	10.0	7.325907	50.0	285207.0	0.732591	Y
6	ICIS 280-609046/37	50.0	38.450031	50.0	293780.0	0.769001	Y
7	IC 280-609046/36	75.0	58.233471	50.0	295823.0	0.776446	Y
8	IC 280-609046/35	100.0	70.782262	50.0	298110.0	0.707823	Y
9	IC 280-609046/34	200.0	146.050939	50.0	302477.0	0.730255	Y



Calibration / 1-Chlorohexane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

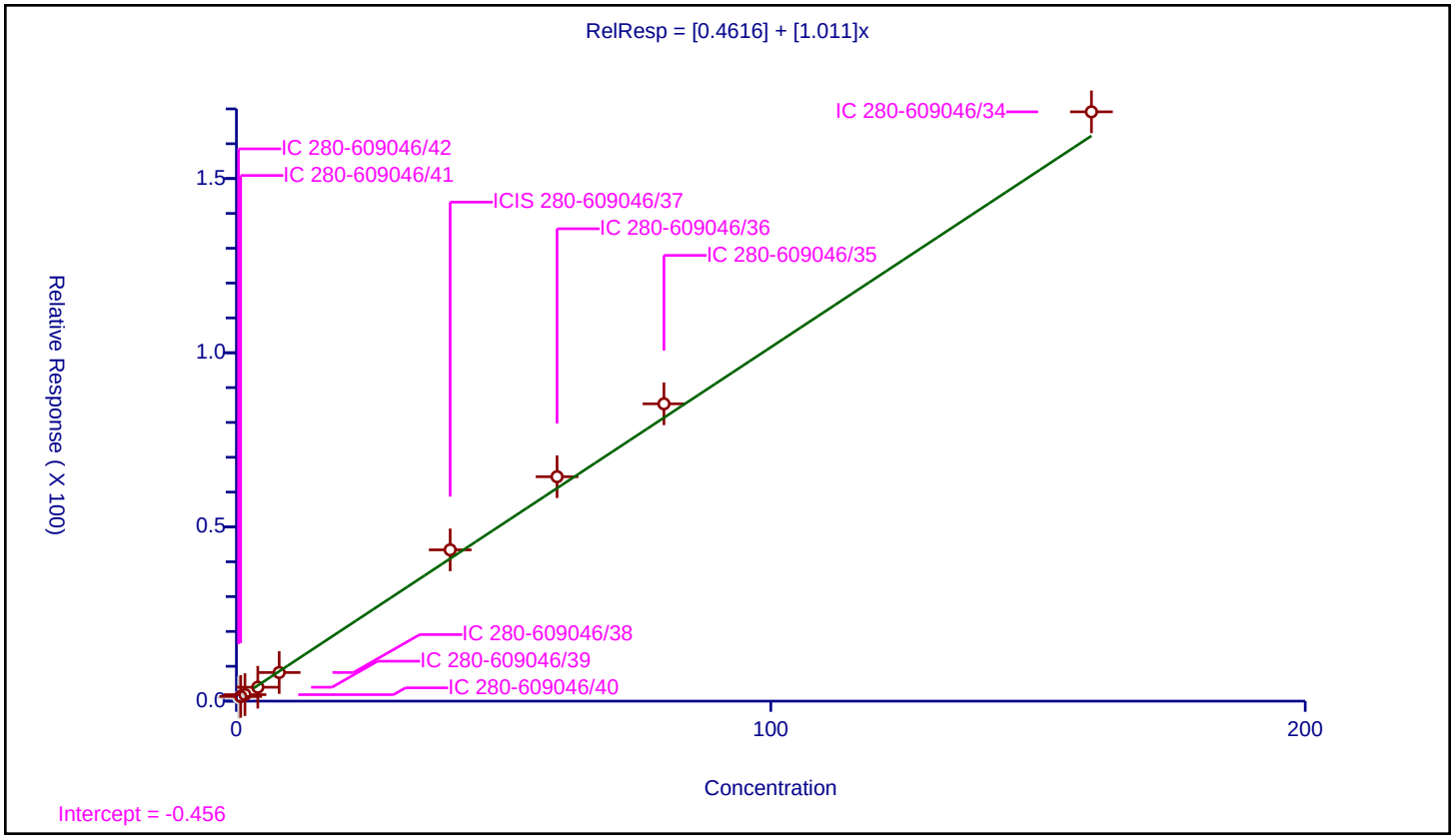
Curve Coefficients

Intercept:	0.4616
Slope:	1.011

Error Coefficients

Standard Error:	503000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.4	1.053956	50.0	266567.0	2.634891	N
2	IC 280-609046/41	0.8	1.346041	50.0	263402.0	1.682552	Y
3	IC 280-609046/40	1.6	1.864549	50.0	266472.0	1.165343	Y
4	IC 280-609046/39	4.0	3.993795	50.0	284291.0	0.998449	Y
5	IC 280-609046/38	8.0	8.212807	50.0	285207.0	1.026601	Y
6	ICIS 280-609046/37	40.0	43.425352	50.0	293780.0	1.085634	Y
7	IC 280-609046/36	60.0	64.421631	50.0	295823.0	1.073694	Y
8	IC 280-609046/35	80.0	85.342659	50.0	298110.0	1.066783	Y
9	IC 280-609046/34	160.0	169.160134	50.0	302477.0	1.057251	Y



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Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

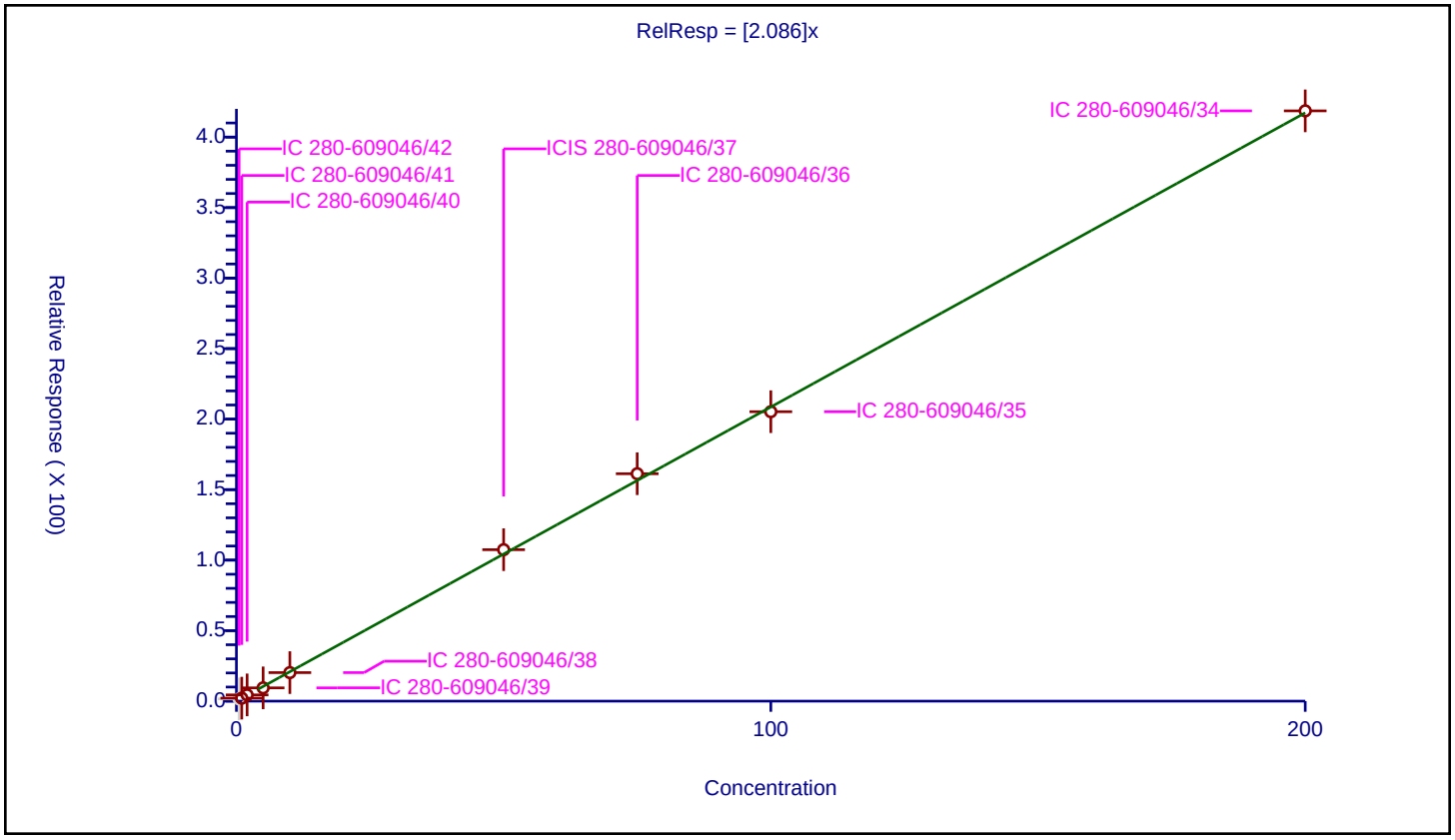
Curve Coefficients

Intercept:	0
Slope:	2.086

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.595659	50.0	266567.0	3.191318	N
2	IC 280-609046/41	1.0	2.122421	50.0	263402.0	2.122421	Y
3	IC 280-609046/40	2.0	4.429171	50.0	266472.0	2.214585	Y
4	IC 280-609046/39	5.0	9.423795	50.0	284291.0	1.884759	Y
5	IC 280-609046/38	10.0	20.231797	50.0	285207.0	2.02318	Y
6	ICIS 280-609046/37	50.0	107.40401	50.0	293780.0	2.14808	Y
7	IC 280-609046/36	75.0	161.275154	50.0	295823.0	2.150335	Y
8	IC 280-609046/35	100.0	205.256114	50.0	298110.0	2.052561	Y
9	IC 280-609046/34	200.0	418.60191	50.0	302477.0	2.09301	Y



Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

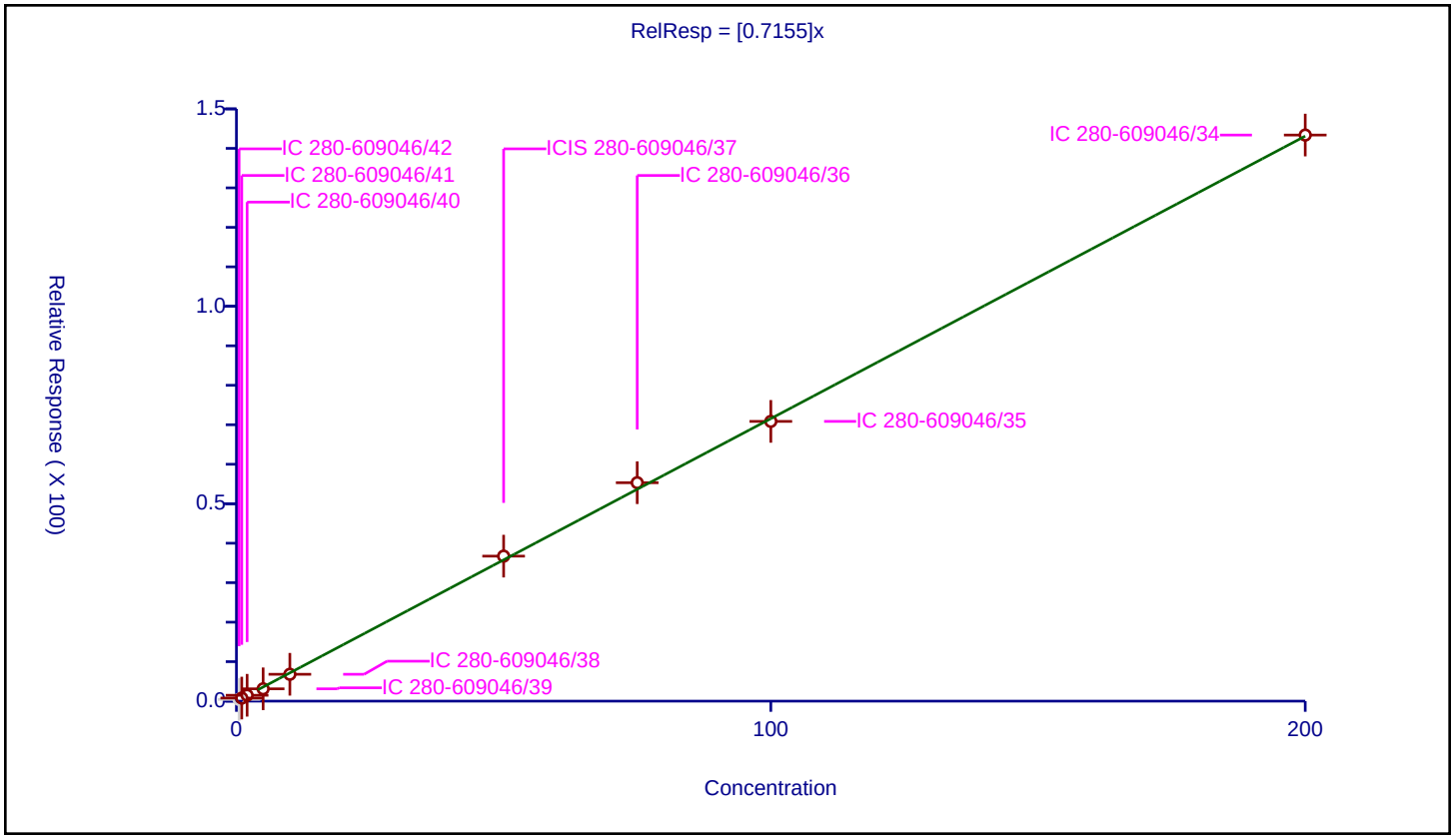
Curve Coefficients

Intercept:	0
Slope:	0.7155

Error Coefficients

Standard Error:	394000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.435538	50.0	266567.0	0.871076	N
2	IC 280-609046/41	1.0	0.780556	50.0	263402.0	0.780556	Y
3	IC 280-609046/40	2.0	1.484396	50.0	266472.0	0.742198	Y
4	IC 280-609046/39	5.0	3.117228	50.0	284291.0	0.623446	Y
5	IC 280-609046/38	10.0	6.803655	50.0	285207.0	0.680365	Y
6	ICIS 280-609046/37	50.0	36.725271	50.0	293780.0	0.734505	Y
7	IC 280-609046/36	75.0	55.327341	50.0	295823.0	0.737698	Y
8	IC 280-609046/35	100.0	70.85606	50.0	298110.0	0.708561	Y
9	IC 280-609046/34	200.0	143.375033	50.0	302477.0	0.716875	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

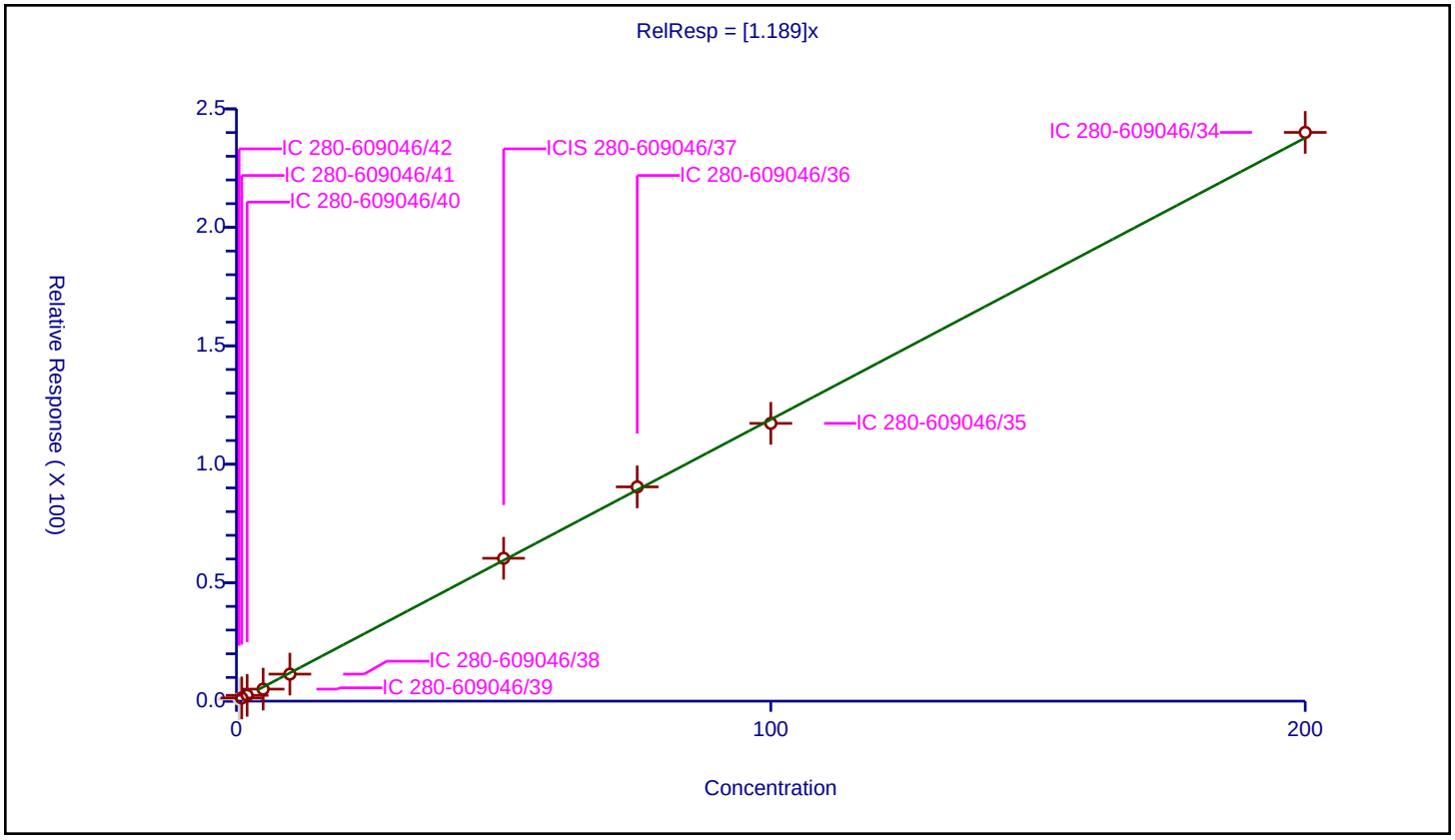
Curve Coefficients

Intercept:	0
Slope:	1.189

Error Coefficients

Standard Error:	656000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.879704	50.0	266567.0	1.759408	N
2	IC 280-609046/41	1.0	1.349079	50.0	263402.0	1.349079	Y
3	IC 280-609046/40	2.0	2.443596	50.0	266472.0	1.221798	Y
4	IC 280-609046/39	5.0	5.077896	50.0	284291.0	1.015579	Y
5	IC 280-609046/38	10.0	11.401894	50.0	285207.0	1.140189	Y
6	ICIS 280-609046/37	50.0	60.307543	50.0	293780.0	1.206151	Y
7	IC 280-609046/36	75.0	90.439891	50.0	295823.0	1.205865	Y
8	IC 280-609046/35	100.0	117.261749	50.0	298110.0	1.172617	Y
9	IC 280-609046/34	200.0	240.086023	50.0	302477.0	1.20043	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

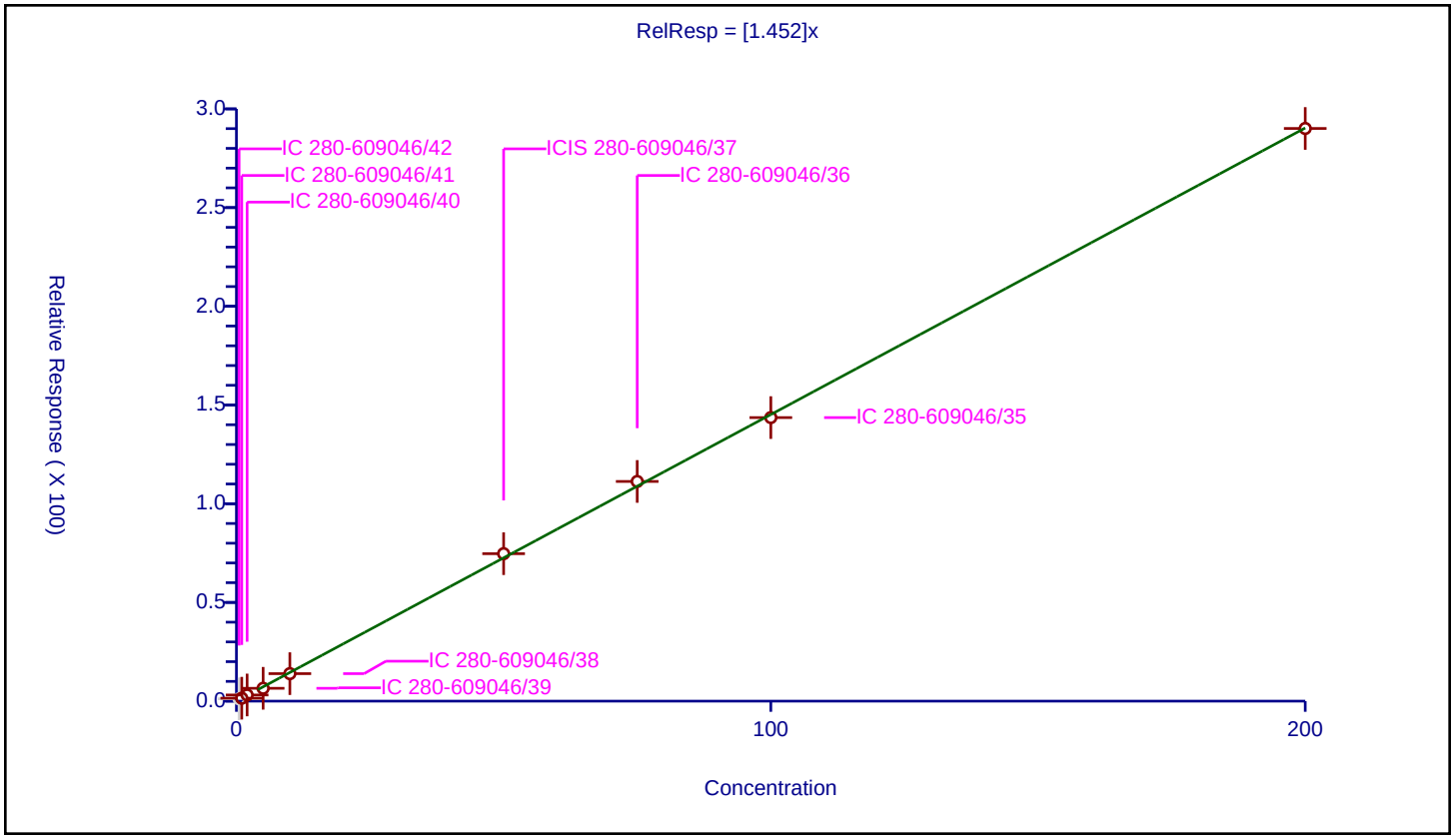
Curve Coefficients

Intercept:	0
Slope:	1.452

Error Coefficients

Standard Error:	797000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.200636	50.0	266567.0	2.401272	N
2	IC 280-609046/41	1.0	1.491067	50.0	263402.0	1.491067	Y
3	IC 280-609046/40	2.0	3.127721	50.0	266472.0	1.56386	Y
4	IC 280-609046/39	5.0	6.507593	50.0	284291.0	1.301519	Y
5	IC 280-609046/38	10.0	13.928831	50.0	285207.0	1.392883	Y
6	ICIS 280-609046/37	50.0	74.688372	50.0	293780.0	1.493767	Y
7	IC 280-609046/36	75.0	111.281746	50.0	295823.0	1.483757	Y
8	IC 280-609046/35	100.0	143.638422	50.0	298110.0	1.436384	Y
9	IC 280-609046/34	200.0	290.080568	50.0	302477.0	1.450403	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

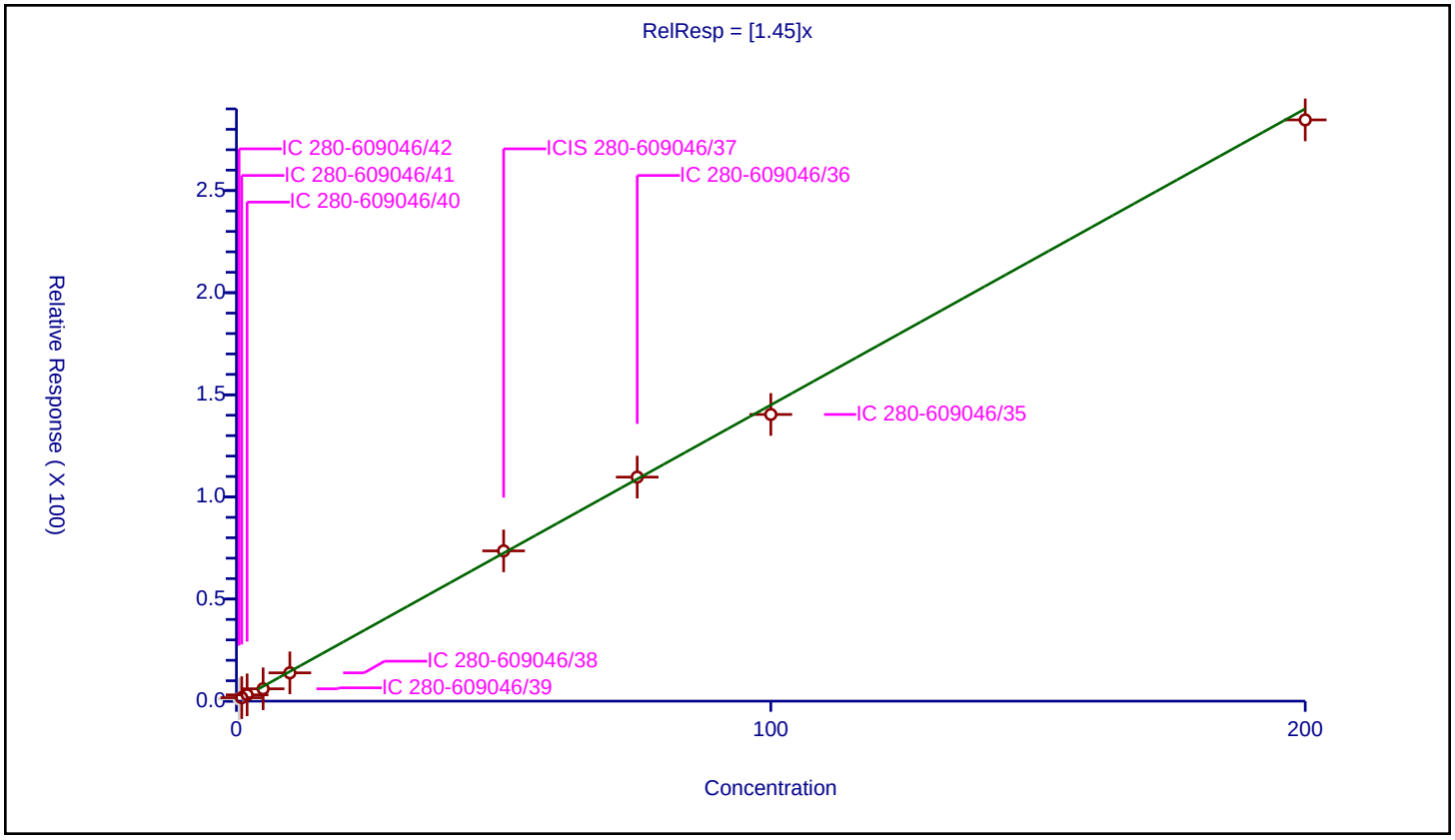
Curve Coefficients

Intercept:	0
Slope:	1.45

Error Coefficients

Standard Error:	782000
Relative Standard Error:	9.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.095597	50.0	266567.0	2.191194	N
2	IC 280-609046/41	1.0	1.70367	50.0	263402.0	1.70367	Y
3	IC 280-609046/40	2.0	3.085127	50.0	266472.0	1.542564	Y
4	IC 280-609046/39	5.0	6.046445	50.0	284291.0	1.209289	Y
5	IC 280-609046/38	10.0	13.850467	50.0	285207.0	1.385047	Y
6	ICIS 280-609046/37	50.0	73.569167	50.0	293780.0	1.471383	Y
7	IC 280-609046/36	75.0	109.700733	50.0	295823.0	1.462676	Y
8	IC 280-609046/35	100.0	140.377545	50.0	298110.0	1.403775	Y
9	IC 280-609046/34	200.0	284.618004	50.0	302477.0	1.42309	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

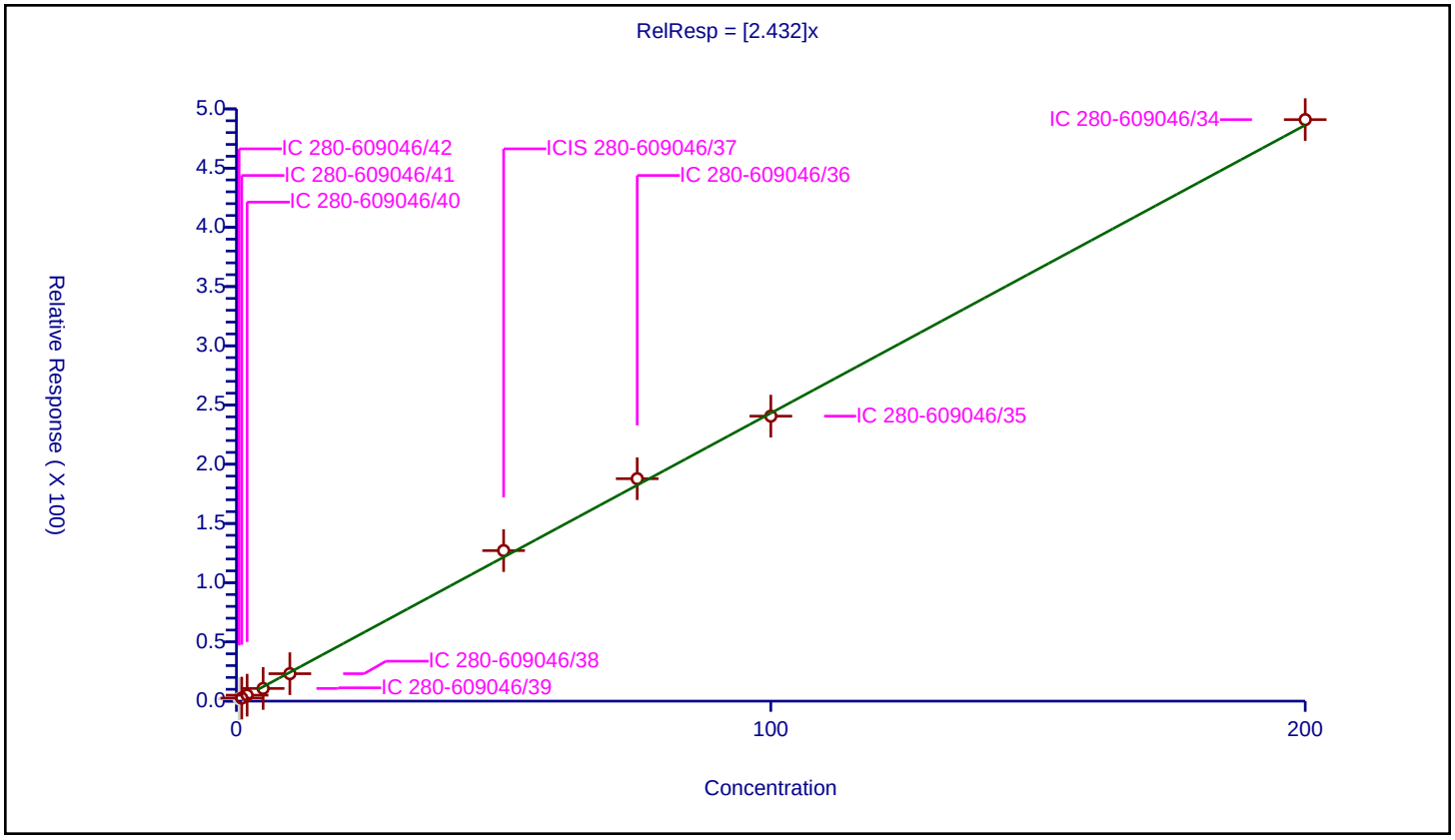
Curve Coefficients

Intercept:	0
Slope:	2.432

Error Coefficients

Standard Error:	1350000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	2.001561	50.0	266567.0	4.003121	N
2	IC 280-609046/41	1.0	2.577999	50.0	263402.0	2.577999	Y
3	IC 280-609046/40	2.0	5.01685	50.0	266472.0	2.508425	Y
4	IC 280-609046/39	5.0	10.708746	50.0	284291.0	2.141749	Y
5	IC 280-609046/38	10.0	23.168961	50.0	285207.0	2.316896	Y
6	ICIS 280-609046/37	50.0	127.102934	50.0	293780.0	2.542059	Y
7	IC 280-609046/36	75.0	187.806222	50.0	295823.0	2.504083	Y
8	IC 280-609046/35	100.0	240.615545	50.0	298110.0	2.406155	Y
9	IC 280-609046/34	200.0	490.946584	50.0	302477.0	2.454733	Y



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Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

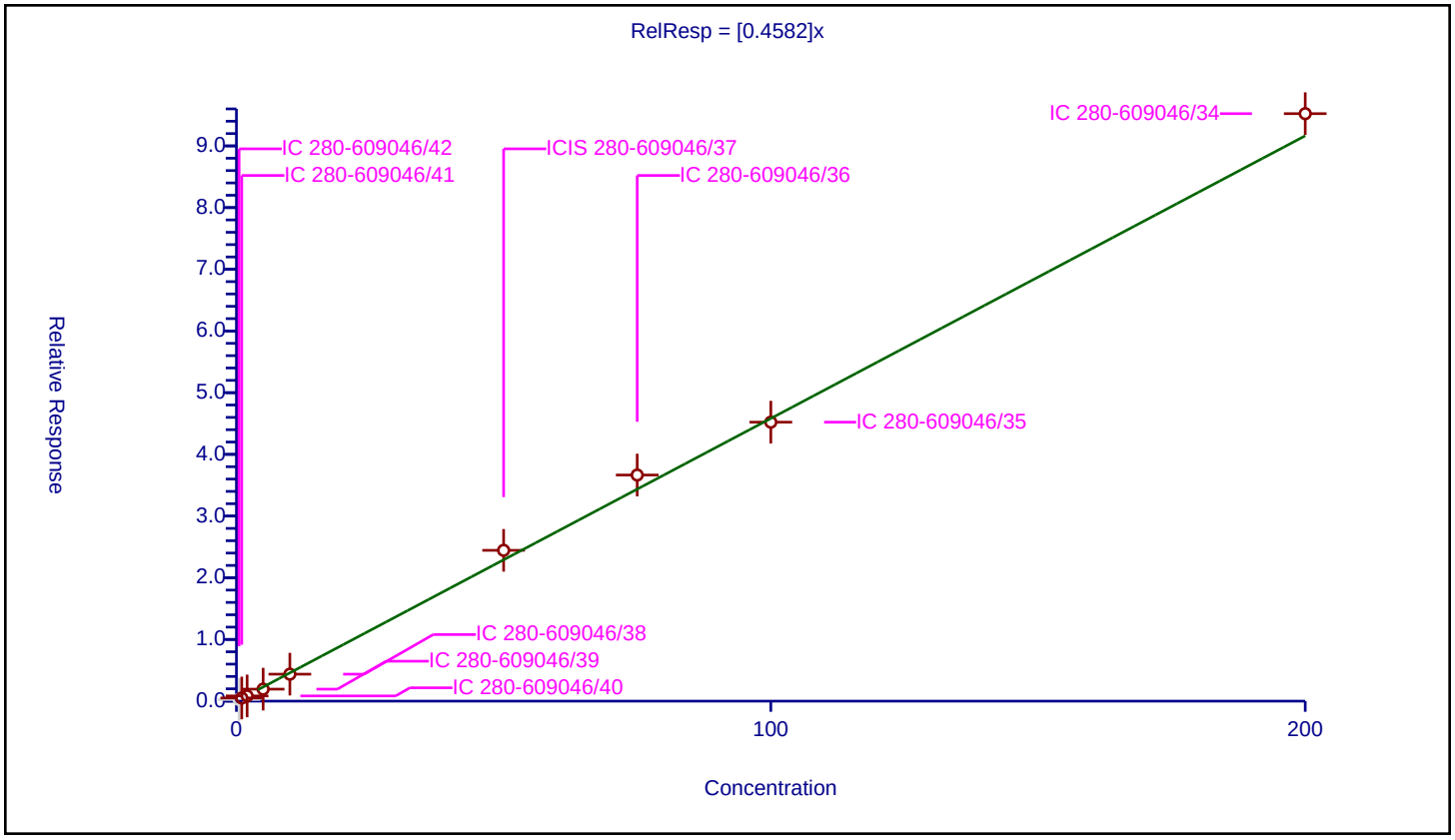
Curve Coefficients

Intercept:	0
Slope:	0.4582

Error Coefficients

Standard Error:	260000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.263536	50.0	266567.0	0.527072	N
2	IC 280-609046/41	1.0	0.510816	50.0	263402.0	0.510816	Y
3	IC 280-609046/40	2.0	0.844929	50.0	266472.0	0.422465	Y
4	IC 280-609046/39	5.0	1.94519	50.0	284291.0	0.389038	Y
5	IC 280-609046/38	10.0	4.372789	50.0	285207.0	0.437279	Y
6	ICIS 280-609046/37	50.0	24.445674	50.0	293780.0	0.488913	Y
7	IC 280-609046/36	75.0	36.651308	50.0	295823.0	0.488684	Y
8	IC 280-609046/35	100.0	45.219047	50.0	298110.0	0.45219	Y
9	IC 280-609046/34	200.0	95.228728	50.0	302477.0	0.476144	Y



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Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

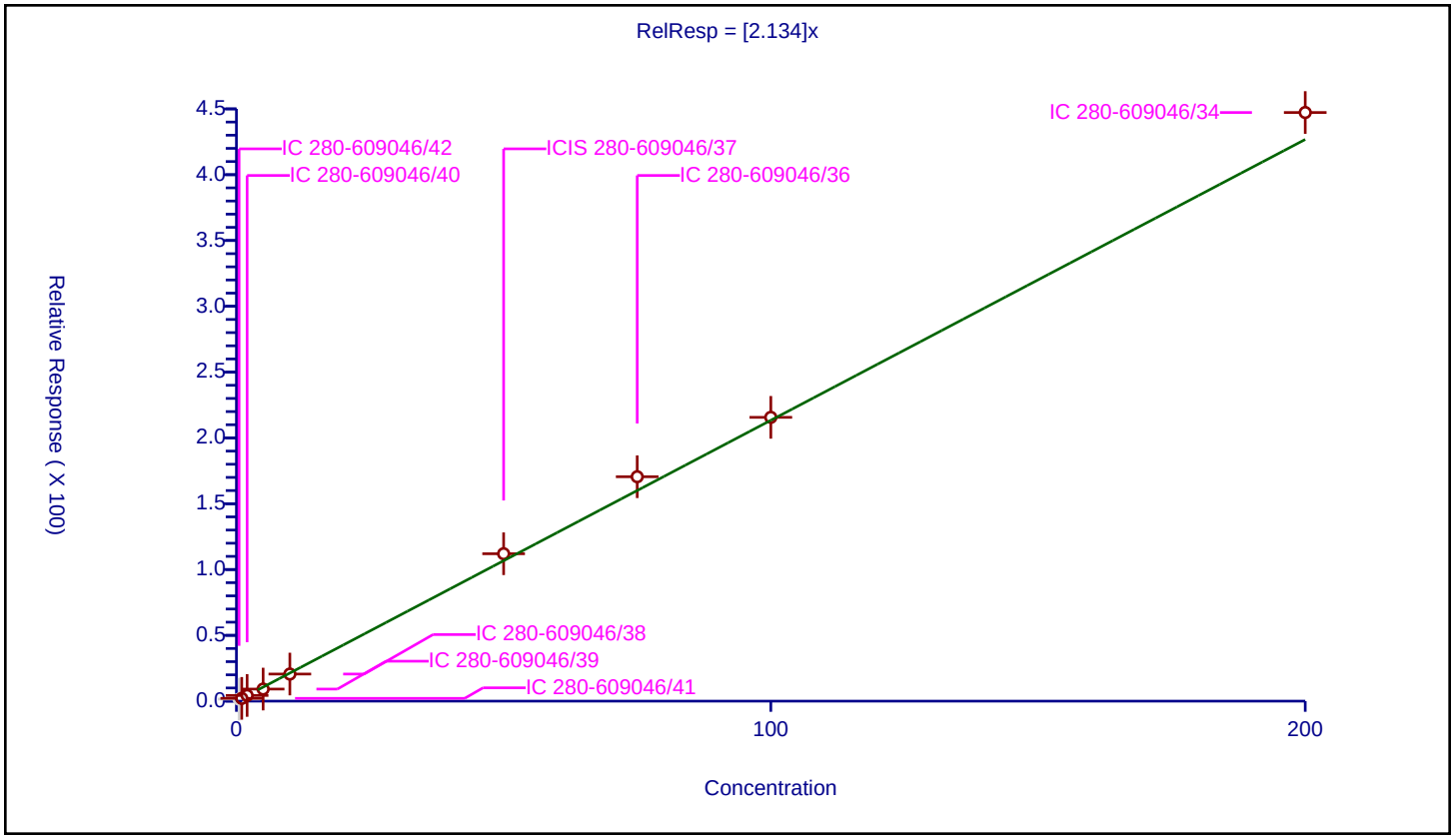
Curve Coefficients

Intercept:	0
Slope:	2.134

Error Coefficients

Standard Error:	1930000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.569235	50.0	427119.0	3.13847	N
2	IC 280-609046/41	1.0	2.108908	50.0	430436.0	2.108908	Y
3	IC 280-609046/40	2.0	4.325041	50.0	433915.0	2.16252	Y
4	IC 280-609046/39	5.0	9.175847	50.0	458568.0	1.835169	Y
5	IC 280-609046/38	10.0	20.581157	50.0	469942.0	2.058116	Y
6	ICIS 280-609046/37	50.0	111.997632	50.0	475448.0	2.239953	Y
7	IC 280-609046/36	75.0	170.502658	50.0	471295.0	2.273369	Y
8	IC 280-609046/35	100.0	215.63248	50.0	482150.0	2.156325	Y
9	IC 280-609046/34	200.0	447.245819	50.0	473698.0	2.236229	Y



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Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

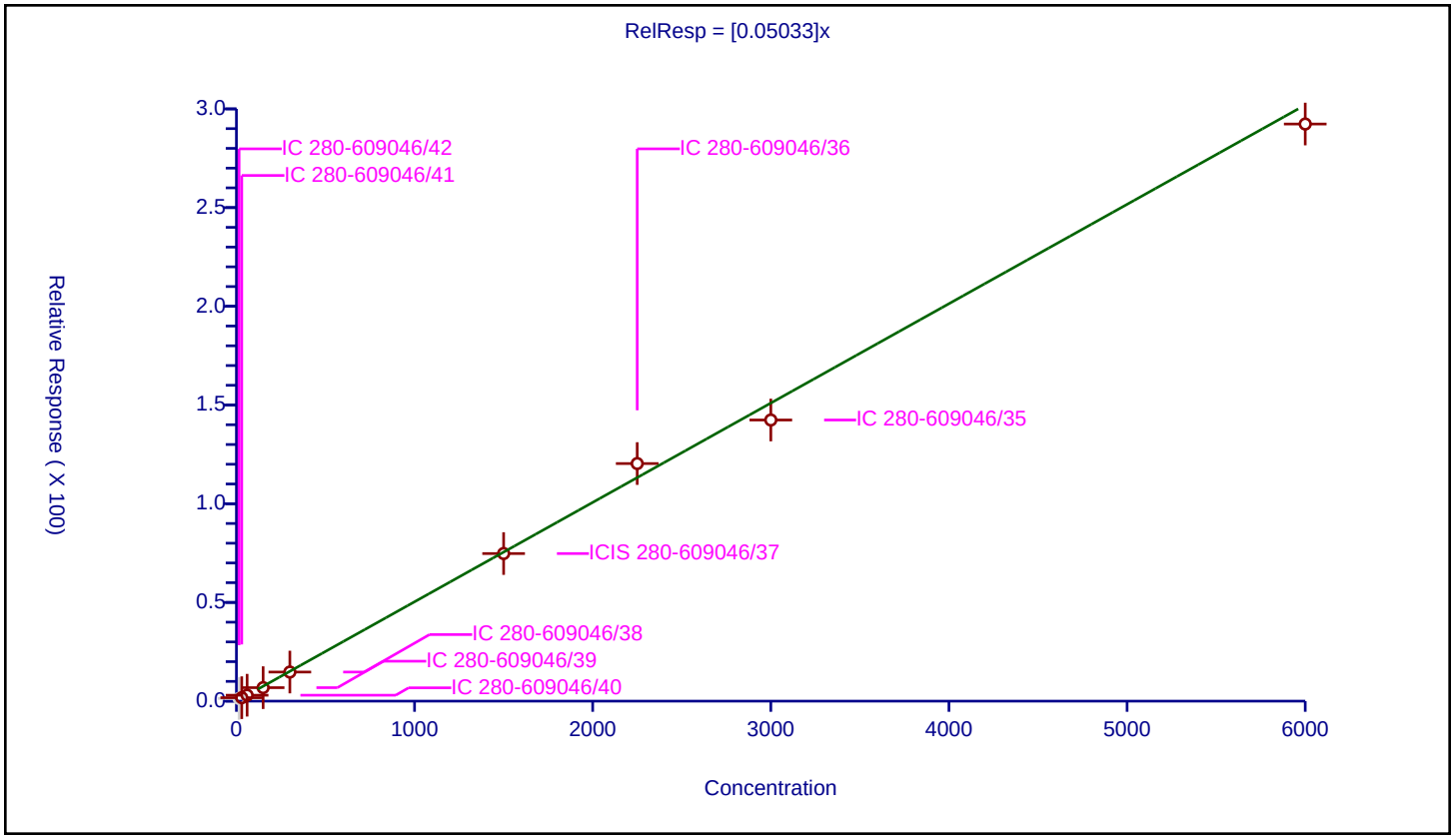
Curve Coefficients

Intercept:	0
Slope:	0.05033

Error Coefficients

Standard Error:	807000
Relative Standard Error:	7.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	15.0	1.364948	50.0	266567.0	0.090997	N
2	IC 280-609046/41	30.0	1.749797	50.0	263402.0	0.058327	Y
3	IC 280-609046/40	60.0	3.004068	50.0	266472.0	0.050068	Y
4	IC 280-609046/39	150.0	6.83736	50.0	284291.0	0.045582	Y
5	IC 280-609046/38	300.0	14.741574	50.0	285207.0	0.049139	Y
6	ICIS 280-609046/37	1500.0	74.767513	50.0	293780.0	0.049845	Y
7	IC 280-609046/36	2250.0	120.344936	50.0	295823.0	0.053487	Y
8	IC 280-609046/35	3000.0	142.40901	50.0	298110.0	0.04747	Y
9	IC 280-609046/34	6000.0	292.338922	50.0	302477.0	0.048723	Y



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Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

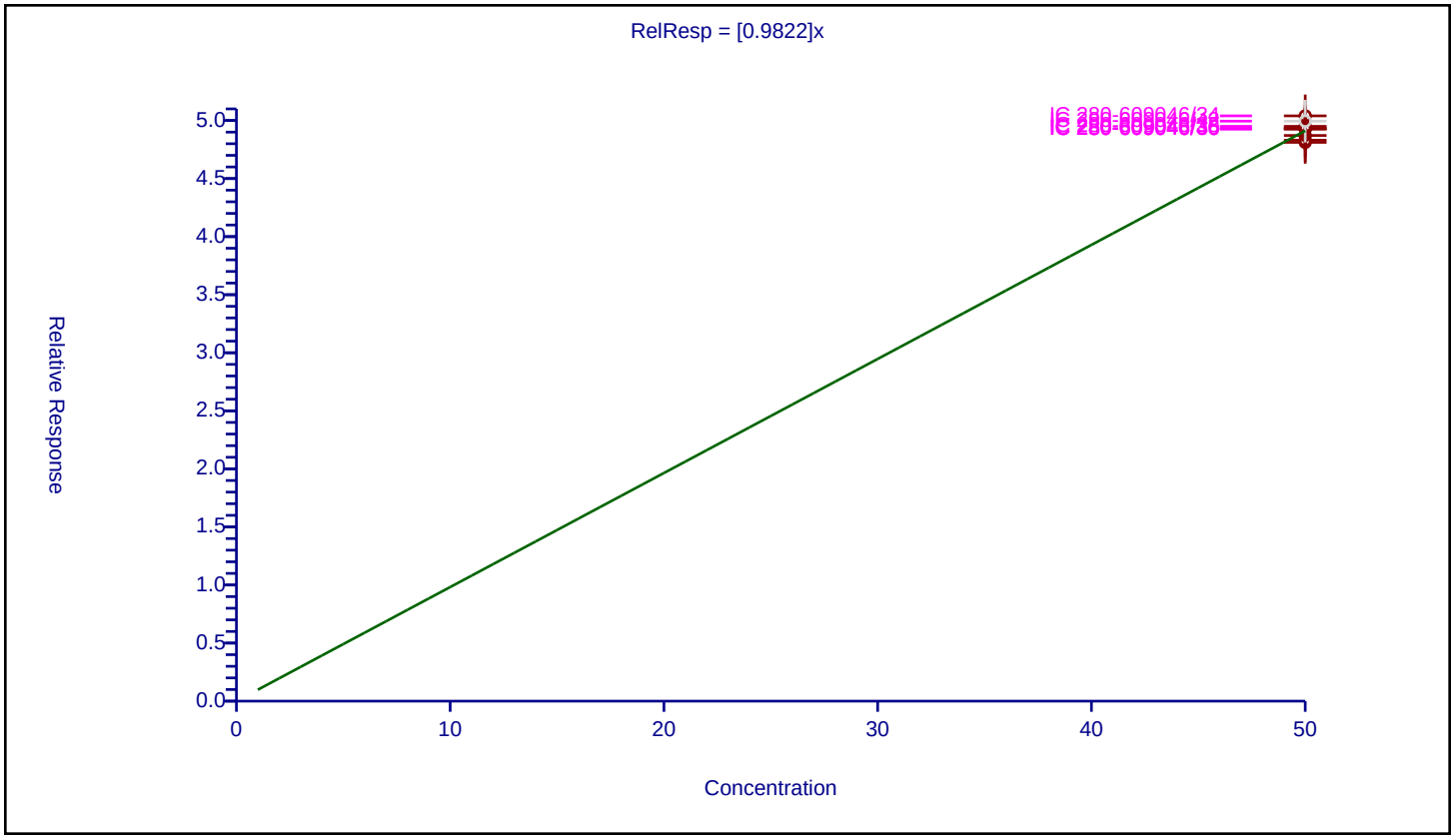
Curve Coefficients

Intercept:	0
Slope:	0.9822

Error Coefficients

Standard Error:	486000
Relative Standard Error:	1.5
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/34	50.0	50.399622	50.0	473698.0	1.007992	Y
2	IC 280-609046/35	50.0	49.315566	50.0	482150.0	0.986311	Y
3	IC 280-609046/36	50.0	49.261185	50.0	471295.0	0.985224	Y
4	ICIS 280-609046/37	50.0	48.299499	50.0	475448.0	0.96599	Y
5	IC 280-609046/38	50.0	49.495682	50.0	469942.0	0.989914	Y
6	IC 280-609046/39	50.0	48.11631	50.0	458568.0	0.962326	Y
7	IC 280-609046/40	50.0	49.287418	50.0	433915.0	0.985748	Y
8	IC 280-609046/41	50.0	48.711539	50.0	430436.0	0.974231	Y
9	IC 280-609046/42	50.0	49.946034	50.0	427119.0	0.998921	N



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Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

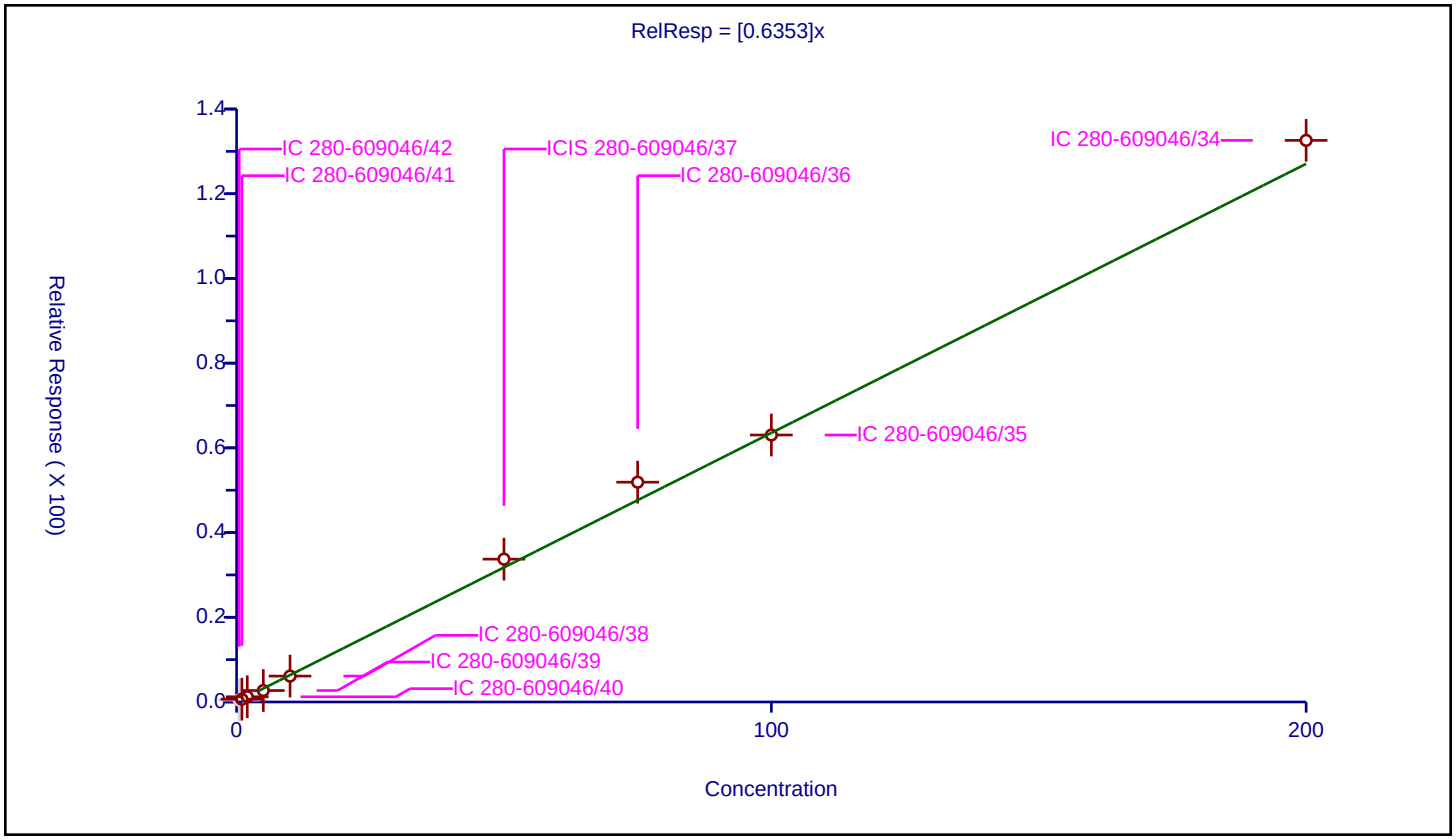
Curve Coefficients

Intercept:	0
Slope:	0.6353

Error Coefficients

Standard Error:	572000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.457015	50.0	427119.0	0.914031	N
2	IC 280-609046/41	1.0	0.654337	50.0	430436.0	0.654337	Y
3	IC 280-609046/40	2.0	1.231808	50.0	433915.0	0.615904	Y
4	IC 280-609046/39	5.0	2.702216	50.0	458568.0	0.540443	Y
5	IC 280-609046/38	10.0	6.118415	50.0	469942.0	0.611841	Y
6	ICIS 280-609046/37	50.0	33.725875	50.0	475448.0	0.674518	Y
7	IC 280-609046/36	75.0	51.893082	50.0	471295.0	0.691908	Y
8	IC 280-609046/35	100.0	63.033392	50.0	482150.0	0.630334	Y
9	IC 280-609046/34	200.0	132.594818	50.0	473698.0	0.662974	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

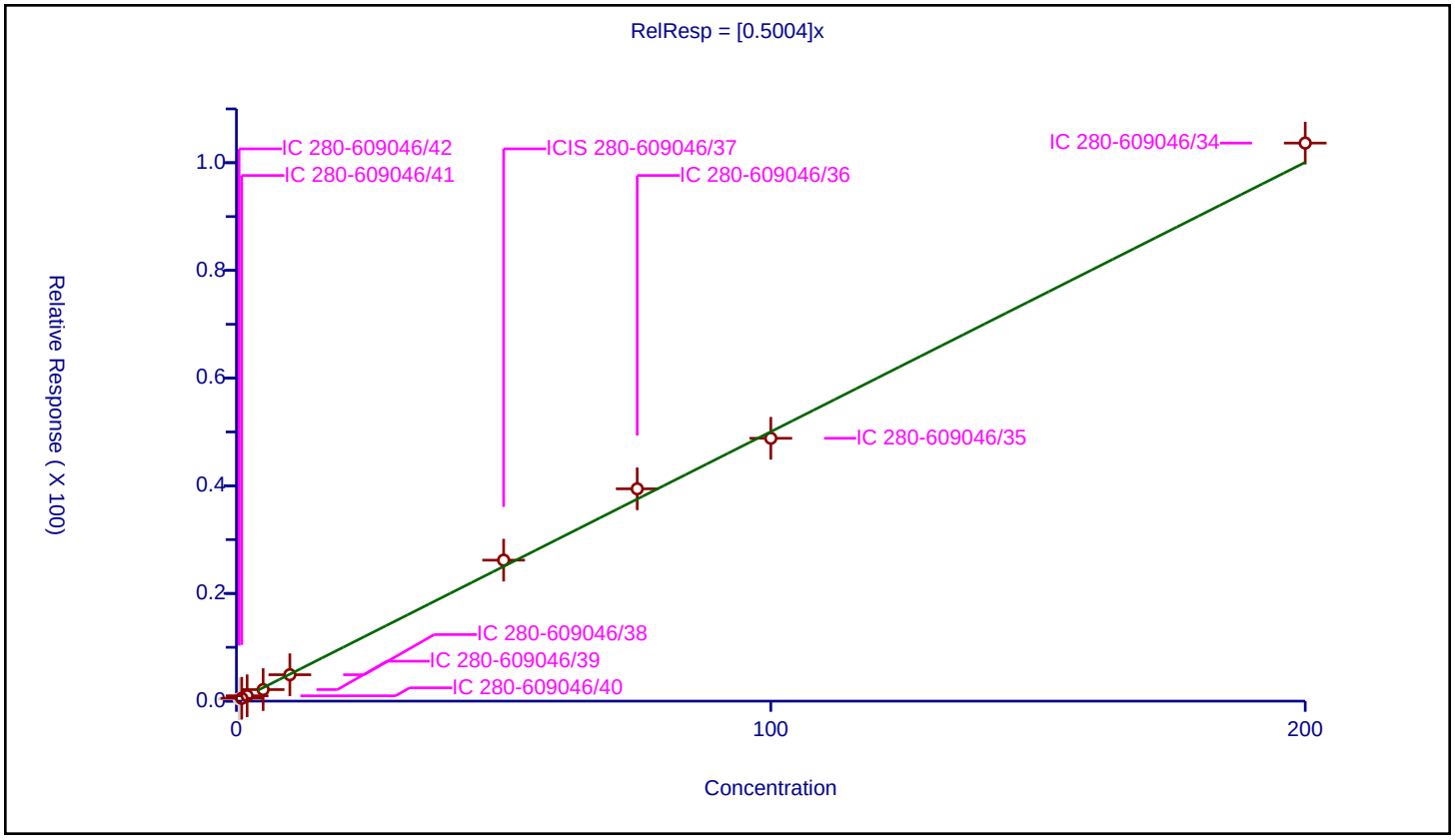
Curve Coefficients

Intercept:	0
Slope:	0.5004

Error Coefficients

Standard Error:	445000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.418619	50.0	427119.0	0.837237	N
2	IC 280-609046/41	1.0	0.531554	50.0	430436.0	0.531554	Y
3	IC 280-609046/40	2.0	0.993397	50.0	433915.0	0.496699	Y
4	IC 280-609046/39	5.0	2.141994	50.0	458568.0	0.428399	Y
5	IC 280-609046/38	10.0	4.905073	50.0	469942.0	0.490507	Y
6	ICIS 280-609046/37	50.0	26.183831	50.0	475448.0	0.523677	Y
7	IC 280-609046/36	75.0	39.435704	50.0	471295.0	0.525809	Y
8	IC 280-609046/35	100.0	48.821943	50.0	482150.0	0.488219	Y
9	IC 280-609046/34	200.0	103.654649	50.0	473698.0	0.518273	Y



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Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

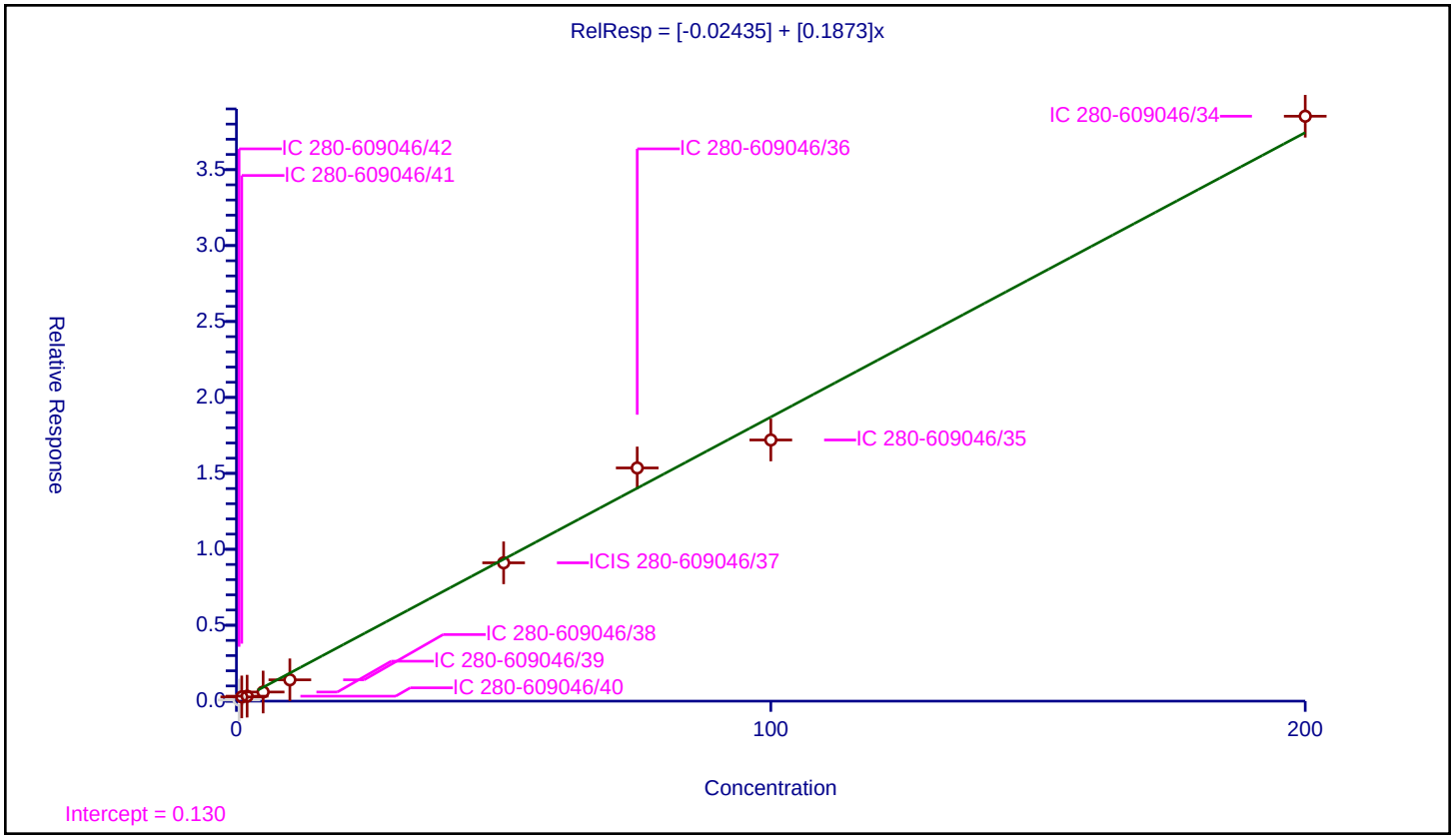
Curve Coefficients

Intercept:	-0.02435
Slope:	0.1873

Error Coefficients

Standard Error:	178000
Relative Standard Error:	30.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.075038	50.0	427119.0	0.150075	N
2	IC 280-609046/41	1.0	0.277509	50.0	430436.0	0.277509	Y
3	IC 280-609046/40	2.0	0.327714	50.0	433915.0	0.163857	Y
4	IC 280-609046/39	5.0	0.601547	50.0	458568.0	0.120309	Y
5	IC 280-609046/38	10.0	1.404322	50.0	469942.0	0.140432	Y
6	ICIS 280-609046/37	50.0	9.108567	50.0	475448.0	0.182171	Y
7	IC 280-609046/36	75.0	15.355775	50.0	471295.0	0.204744	Y
8	IC 280-609046/35	100.0	17.197656	50.0	482150.0	0.171977	Y
9	IC 280-609046/34	200.0	38.517051	50.0	473698.0	0.192585	Y



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Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

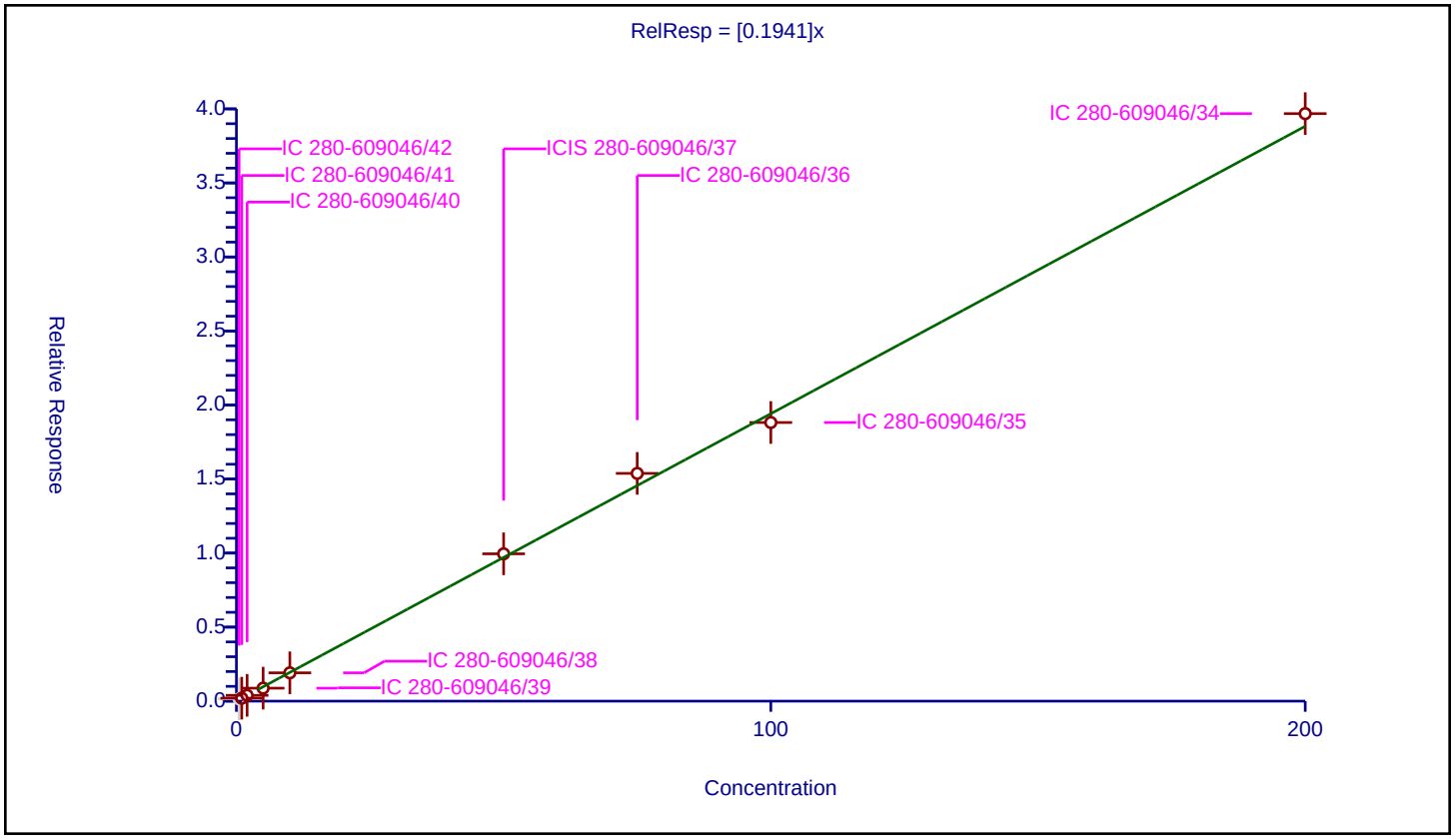
Curve Coefficients

Intercept:	0
Slope:	0.1941

Error Coefficients

Standard Error:	171000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.156397	50.0	427119.0	0.312793	N
2	IC 280-609046/41	1.0	0.20003	50.0	430436.0	0.20003	Y
3	IC 280-609046/40	2.0	0.391436	50.0	433915.0	0.195718	Y
4	IC 280-609046/39	5.0	0.876969	50.0	458568.0	0.175394	Y
5	IC 280-609046/38	10.0	1.91247	50.0	469942.0	0.191247	Y
6	ICIS 280-609046/37	50.0	9.95051	50.0	475448.0	0.19901	Y
7	IC 280-609046/36	75.0	15.382616	50.0	471295.0	0.205102	Y
8	IC 280-609046/35	100.0	18.817899	50.0	482150.0	0.188179	Y
9	IC 280-609046/34	200.0	39.680028	50.0	473698.0	0.1984	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

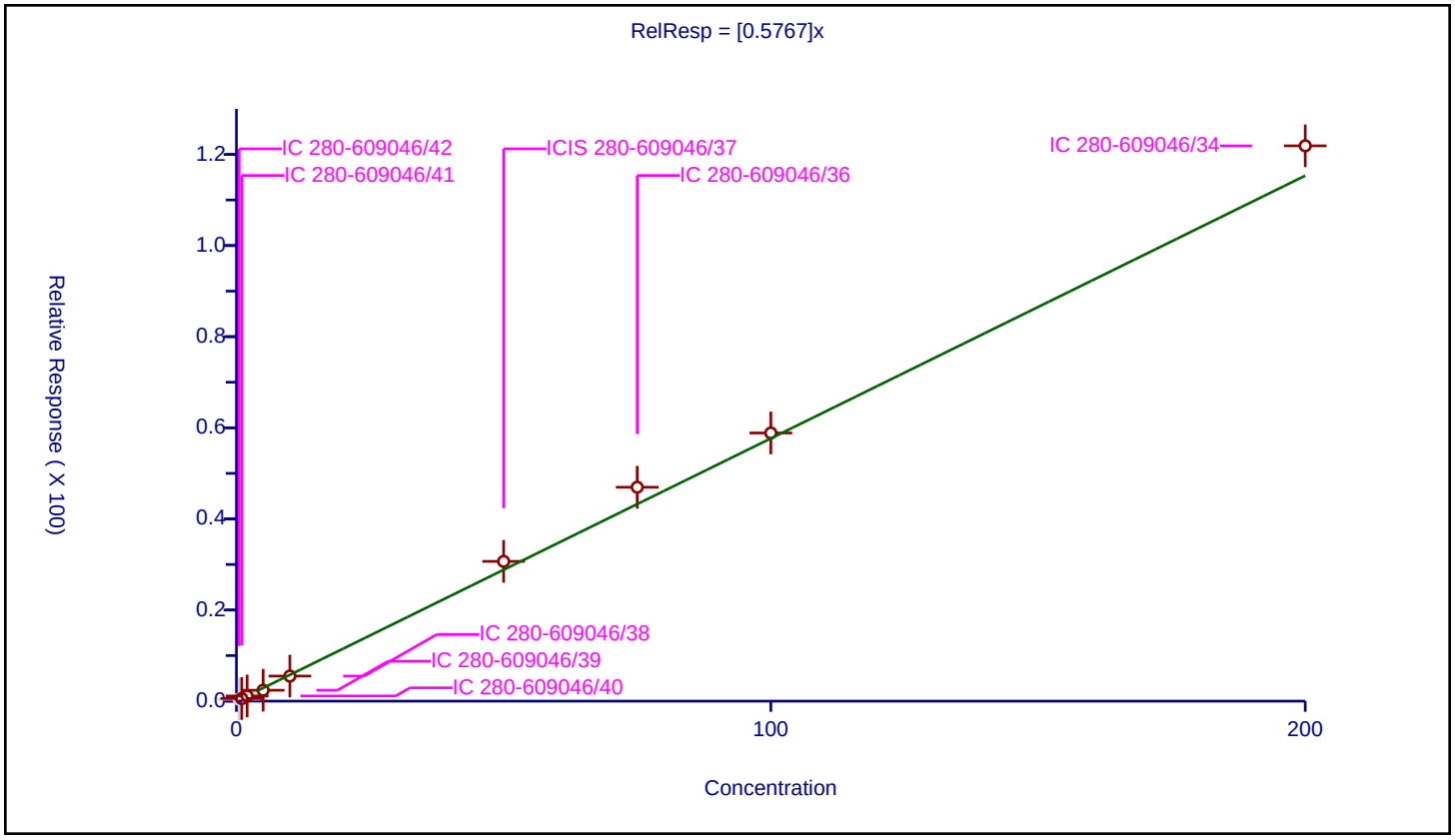
Curve Coefficients

Intercept:	0
Slope:	0.5767

Error Coefficients

Standard Error:	526000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.432198	50.0	427119.0	0.864396	N
2	IC 280-609046/41	1.0	0.578019	50.0	430436.0	0.578019	Y
3	IC 280-609046/40	2.0	1.137089	50.0	433915.0	0.568545	Y
4	IC 280-609046/39	5.0	2.394192	50.0	458568.0	0.478838	Y
5	IC 280-609046/38	10.0	5.505254	50.0	469942.0	0.550525	Y
6	ICIS 280-609046/37	50.0	30.676331	50.0	475448.0	0.613527	Y
7	IC 280-609046/36	75.0	46.953288	50.0	471295.0	0.626044	Y
8	IC 280-609046/35	100.0	58.865083	50.0	482150.0	0.588651	Y
9	IC 280-609046/34	200.0	121.892535	50.0	473698.0	0.609463	Y



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Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

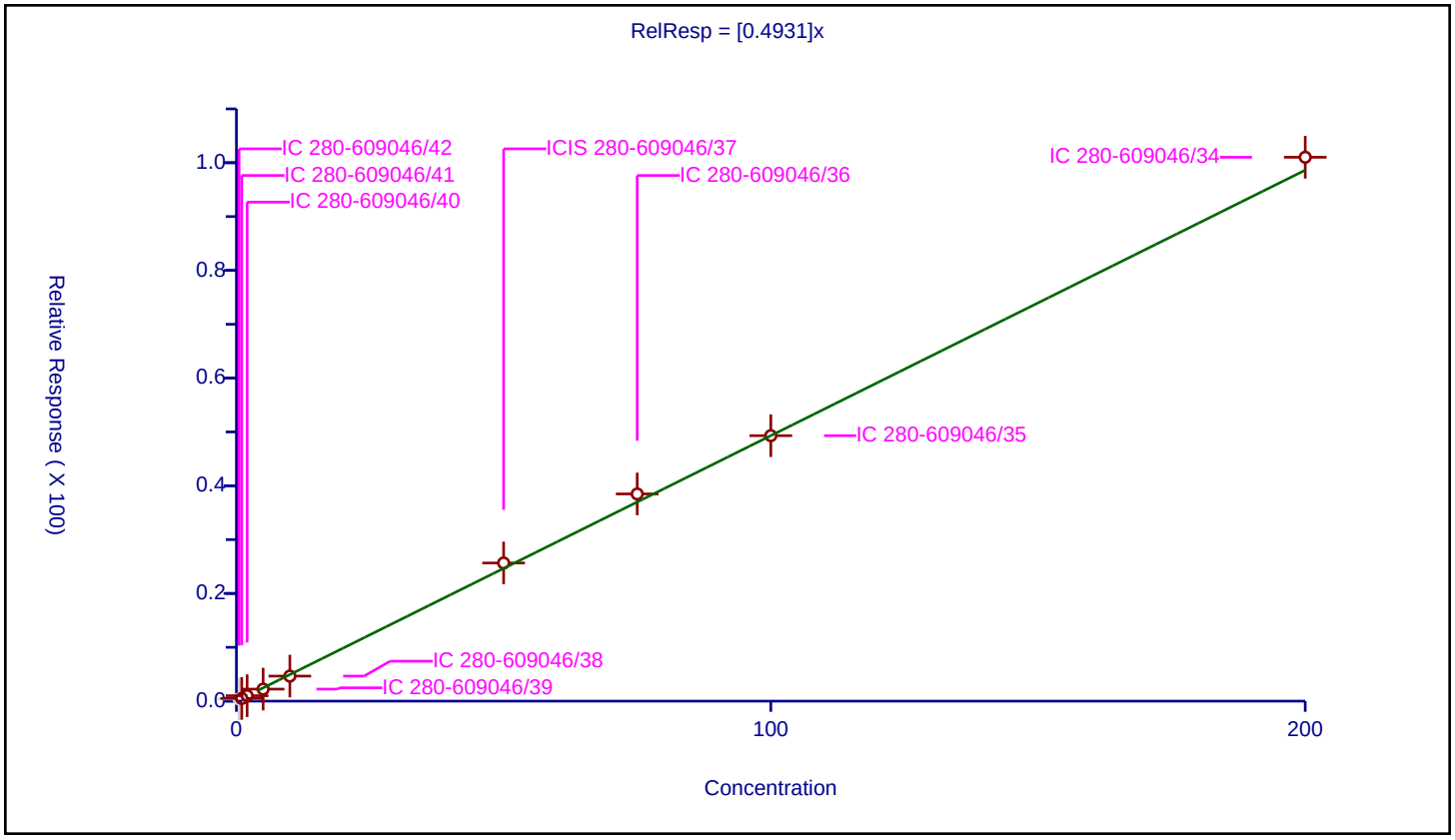
Curve Coefficients

Intercept:	0
Slope:	0.4931

Error Coefficients

Standard Error:	437000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.400825	50.0	427119.0	0.80165	N
2	IC 280-609046/41	1.0	0.503792	50.0	430436.0	0.503792	Y
3	IC 280-609046/40	2.0	1.008723	50.0	433915.0	0.504361	Y
4	IC 280-609046/39	5.0	2.234238	50.0	458568.0	0.446848	Y
5	IC 280-609046/38	10.0	4.65483	50.0	469942.0	0.465483	Y
6	ICIS 280-609046/37	50.0	25.654751	50.0	475448.0	0.513095	Y
7	IC 280-609046/36	75.0	38.483222	50.0	471295.0	0.51311	Y
8	IC 280-609046/35	100.0	49.30841	50.0	482150.0	0.493084	Y
9	IC 280-609046/34	200.0	101.017843	50.0	473698.0	0.505089	Y



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Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

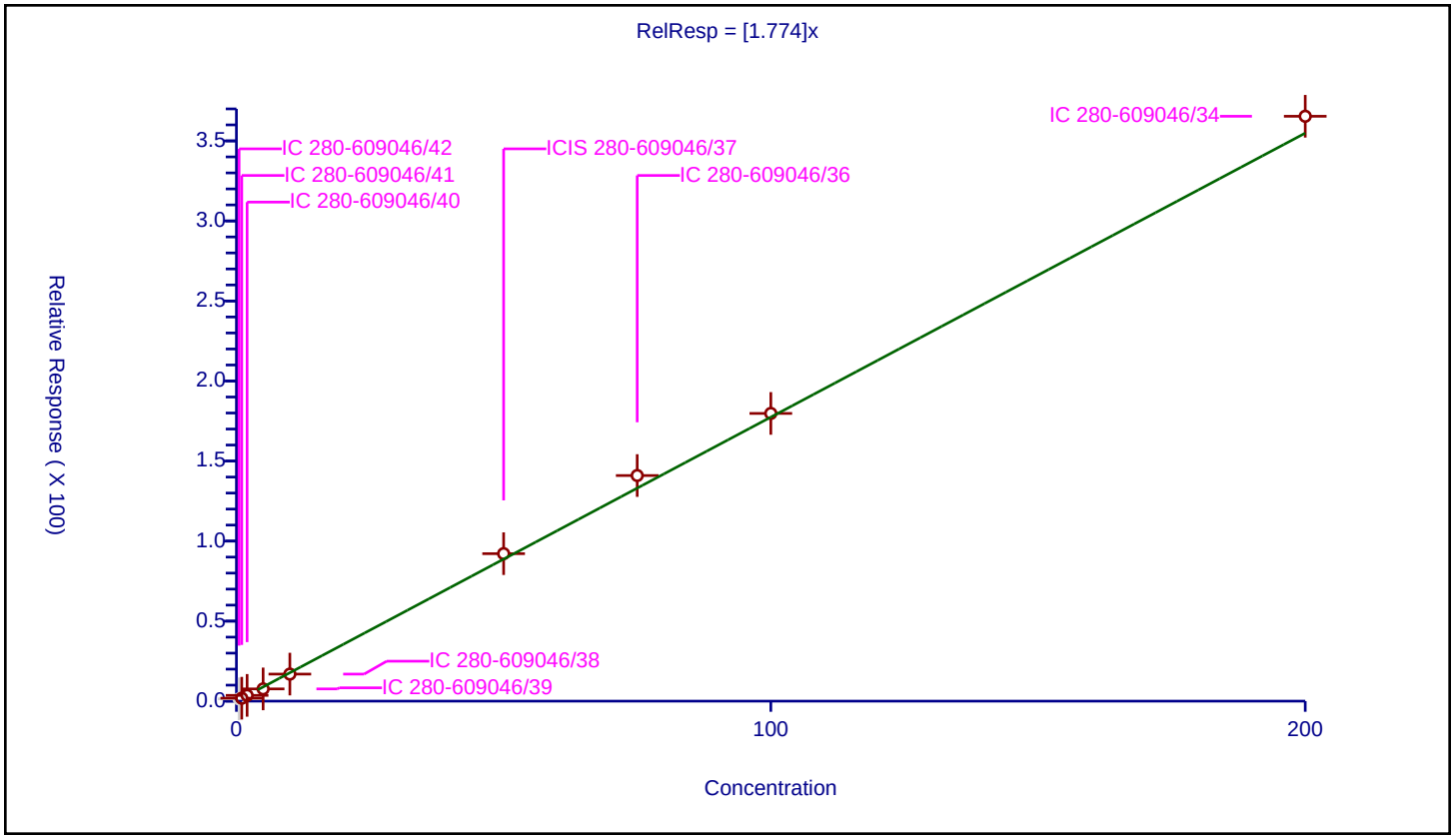
Curve Coefficients

Intercept:	0
Slope:	1.774

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.421969	50.0	427119.0	2.843938	N
2	IC 280-609046/41	1.0	1.830818	50.0	430436.0	1.830818	Y
3	IC 280-609046/40	2.0	3.595635	50.0	433915.0	1.797818	Y
4	IC 280-609046/39	5.0	7.647939	50.0	458568.0	1.529588	Y
5	IC 280-609046/38	10.0	16.896128	50.0	469942.0	1.689613	Y
6	ICIS 280-609046/37	50.0	92.135943	50.0	475448.0	1.842719	Y
7	IC 280-609046/36	75.0	140.944207	50.0	471295.0	1.879256	Y
8	IC 280-609046/35	100.0	179.750389	50.0	482150.0	1.797504	Y
9	IC 280-609046/34	200.0	365.392824	50.0	473698.0	1.826964	Y



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Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

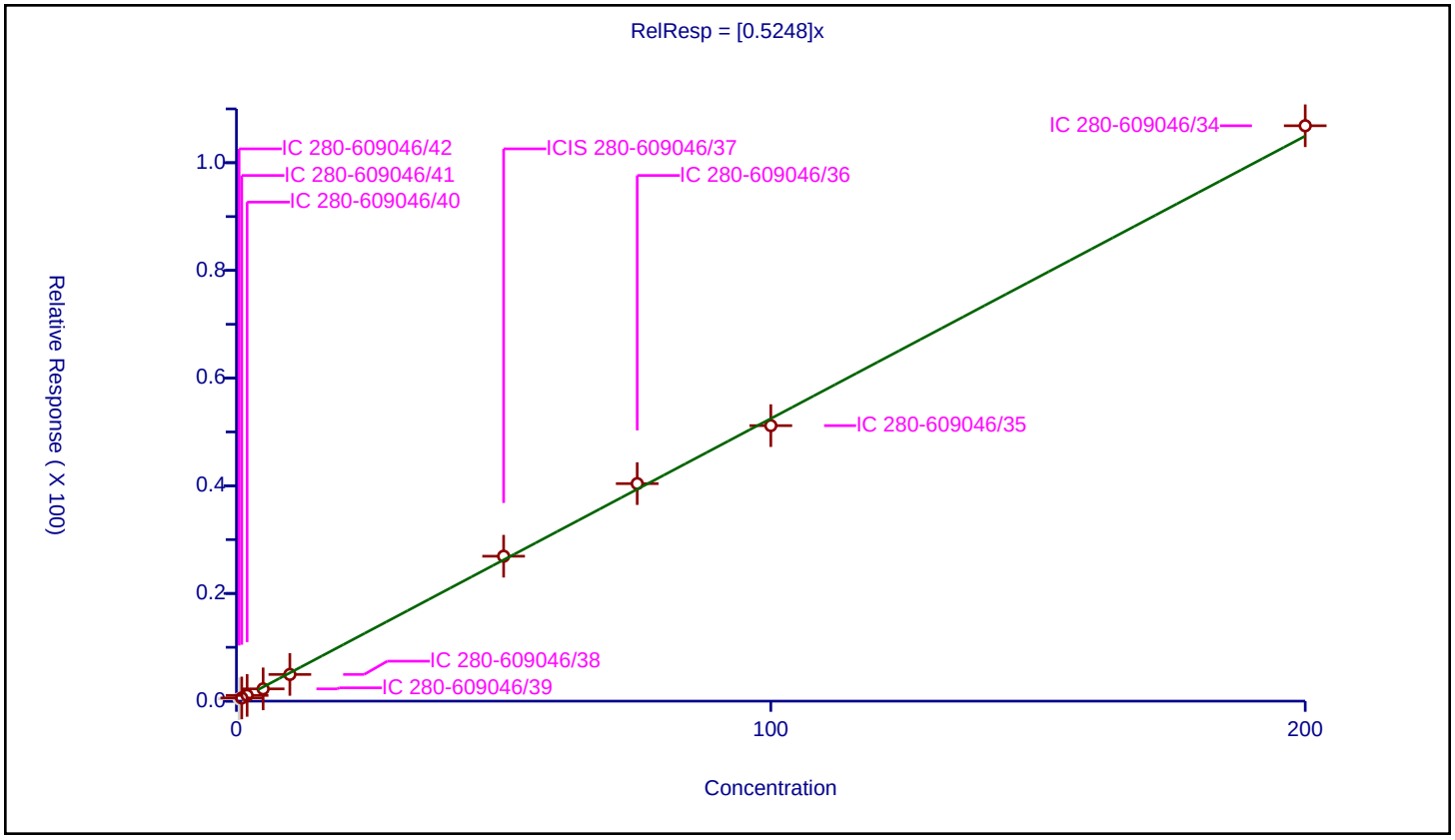
Curve Coefficients

Intercept:	0
Slope:	0.5248

Error Coefficients

Standard Error:	460000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.436295	50.0	427119.0	0.872591	N
2	IC 280-609046/41	1.0	0.59219	50.0	430436.0	0.59219	Y
3	IC 280-609046/40	2.0	1.063918	50.0	433915.0	0.531959	Y
4	IC 280-609046/39	5.0	2.276216	50.0	458568.0	0.455243	Y
5	IC 280-609046/38	10.0	4.957739	50.0	469942.0	0.495774	Y
6	ICIS 280-609046/37	50.0	26.918191	50.0	475448.0	0.538364	Y
7	IC 280-609046/36	75.0	40.403781	50.0	471295.0	0.538717	Y
8	IC 280-609046/35	100.0	51.17422	50.0	482150.0	0.511742	Y
9	IC 280-609046/34	200.0	106.866822	50.0	473698.0	0.534334	Y



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Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

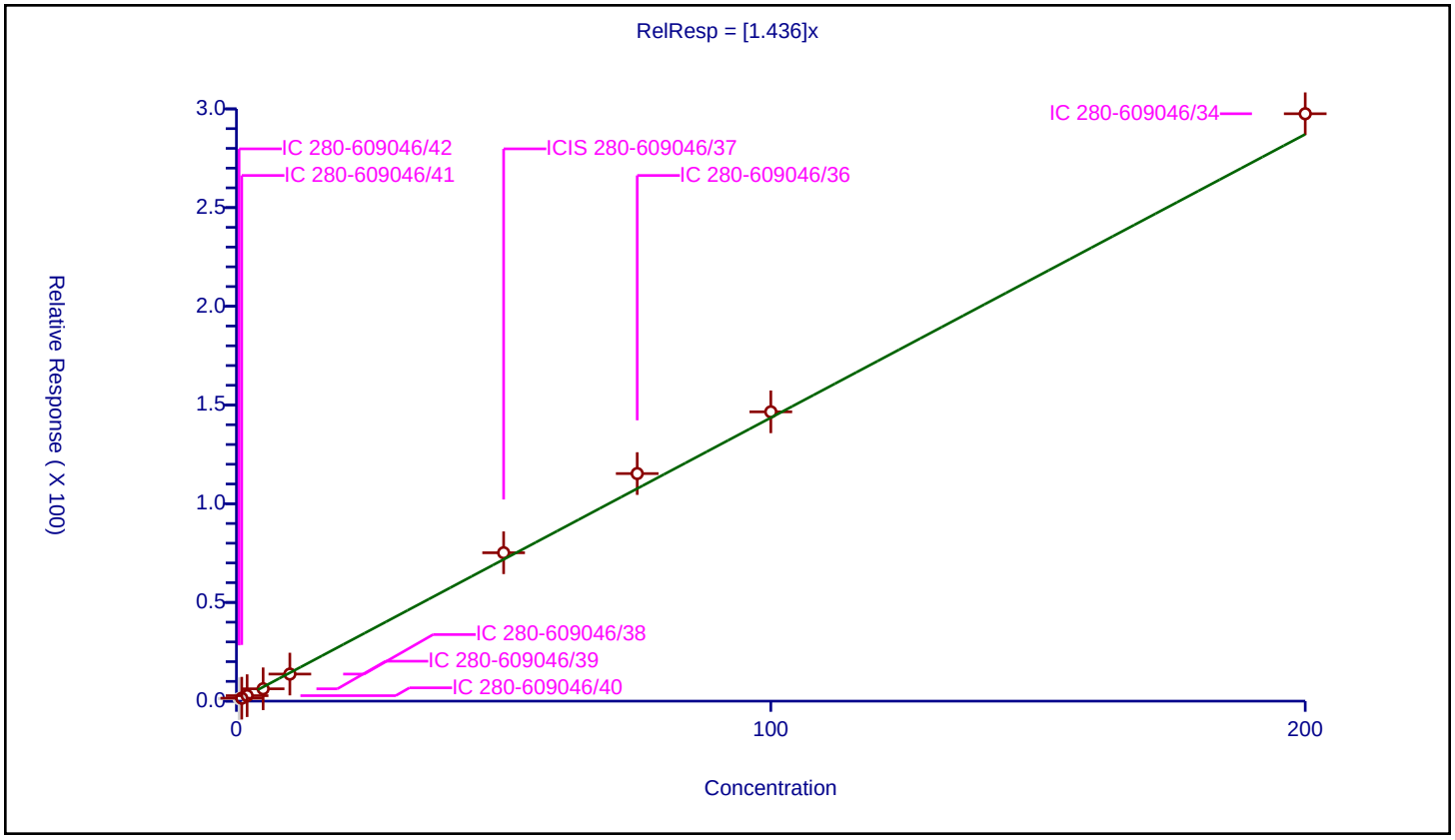
Curve Coefficients

Intercept:	0
Slope:	1.436

Error Coefficients

Standard Error:	1290000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.271777	50.0	427119.0	2.543553	N
2	IC 280-609046/41	1.0	1.487445	50.0	430436.0	1.487445	Y
3	IC 280-609046/40	2.0	2.765749	50.0	433915.0	1.382875	Y
4	IC 280-609046/39	5.0	6.251745	50.0	458568.0	1.250349	Y
5	IC 280-609046/38	10.0	13.711373	50.0	469942.0	1.371137	Y
6	ICIS 280-609046/37	50.0	75.164582	50.0	475448.0	1.503292	Y
7	IC 280-609046/36	75.0	115.282997	50.0	471295.0	1.537107	Y
8	IC 280-609046/35	100.0	146.548896	50.0	482150.0	1.465489	Y
9	IC 280-609046/34	200.0	297.544849	50.0	473698.0	1.487724	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

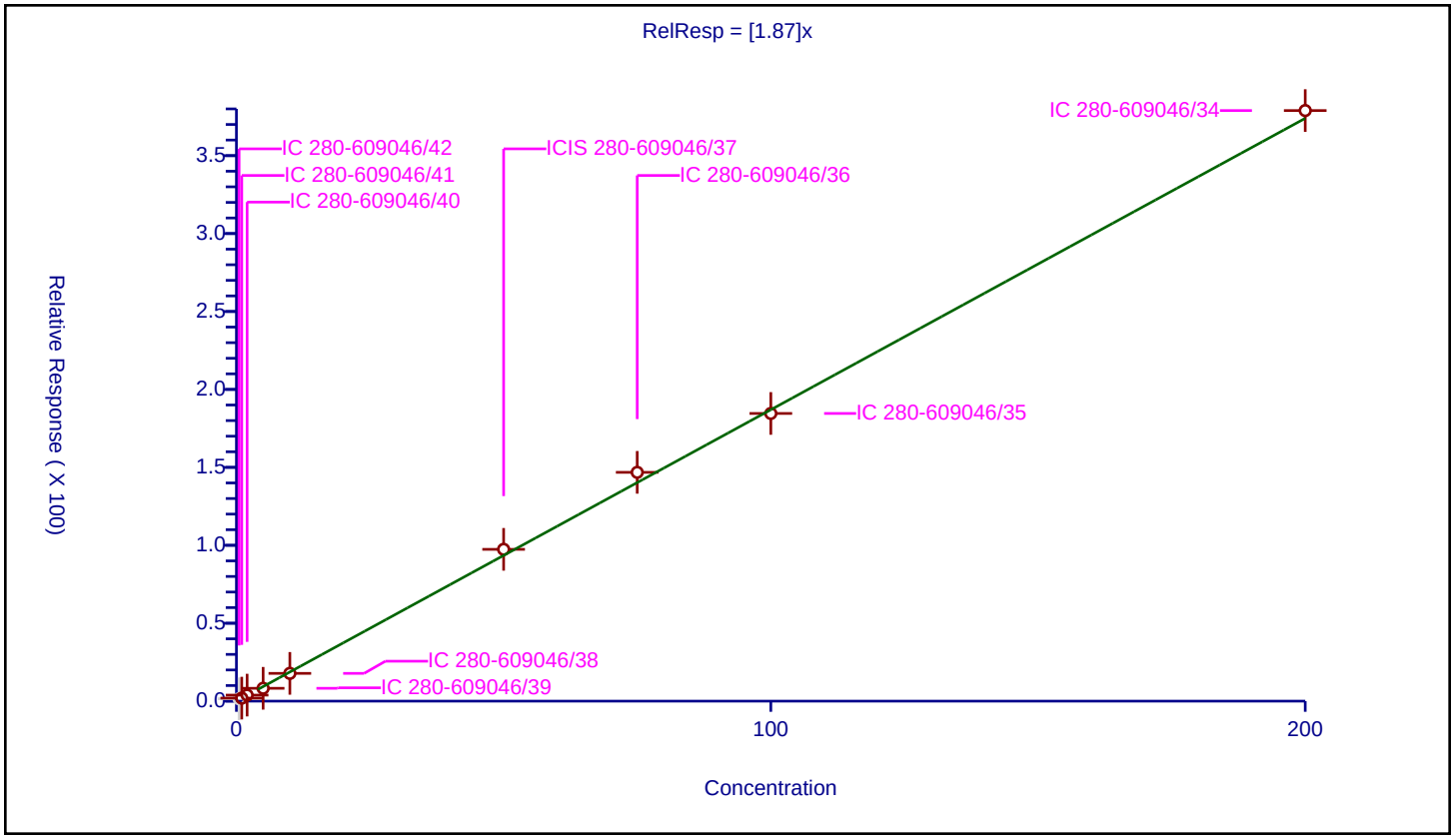
Curve Coefficients

Intercept:	0
Slope:	1.87

Error Coefficients

Standard Error:	1640000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.538213	50.0	427119.0	3.076426	N
2	IC 280-609046/41	1.0	1.945353	50.0	430436.0	1.945353	Y
3	IC 280-609046/40	2.0	3.869882	50.0	433915.0	1.934941	Y
4	IC 280-609046/39	5.0	8.247305	50.0	458568.0	1.649461	Y
5	IC 280-609046/38	10.0	17.821135	50.0	469942.0	1.782114	Y
6	ICIS 280-609046/37	50.0	97.403291	50.0	475448.0	1.948066	Y
7	IC 280-609046/36	75.0	146.799457	50.0	471295.0	1.957326	Y
8	IC 280-609046/35	100.0	184.593902	50.0	482150.0	1.845939	Y
9	IC 280-609046/34	200.0	378.924441	50.0	473698.0	1.894622	Y



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Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

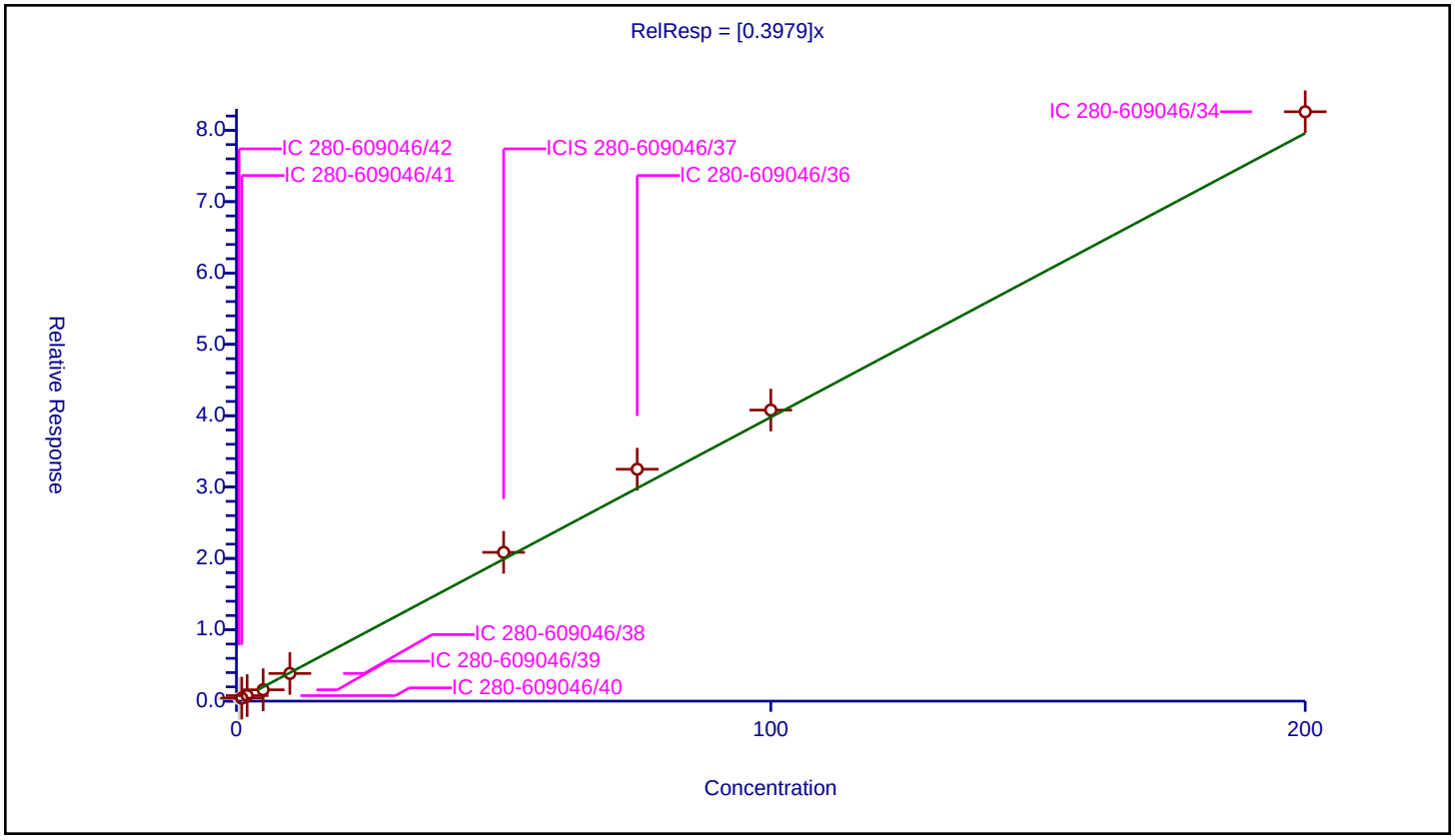
Curve Coefficients

Intercept:	0
Slope:	0.3979

Error Coefficients

Standard Error:	359000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.354	50.0	427119.0	0.707999	N
2	IC 280-609046/41	1.0	0.418529	50.0	430436.0	0.418529	Y
3	IC 280-609046/40	2.0	0.775843	50.0	433915.0	0.387922	Y
4	IC 280-609046/39	5.0	1.590277	50.0	458568.0	0.318055	Y
5	IC 280-609046/38	10.0	3.8775	50.0	469942.0	0.38775	Y
6	ICIS 280-609046/37	50.0	20.85391	50.0	475448.0	0.417078	Y
7	IC 280-609046/36	75.0	32.500663	50.0	471295.0	0.433342	Y
8	IC 280-609046/35	100.0	40.792077	50.0	482150.0	0.407921	Y
9	IC 280-609046/34	200.0	82.59904	50.0	473698.0	0.412995	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

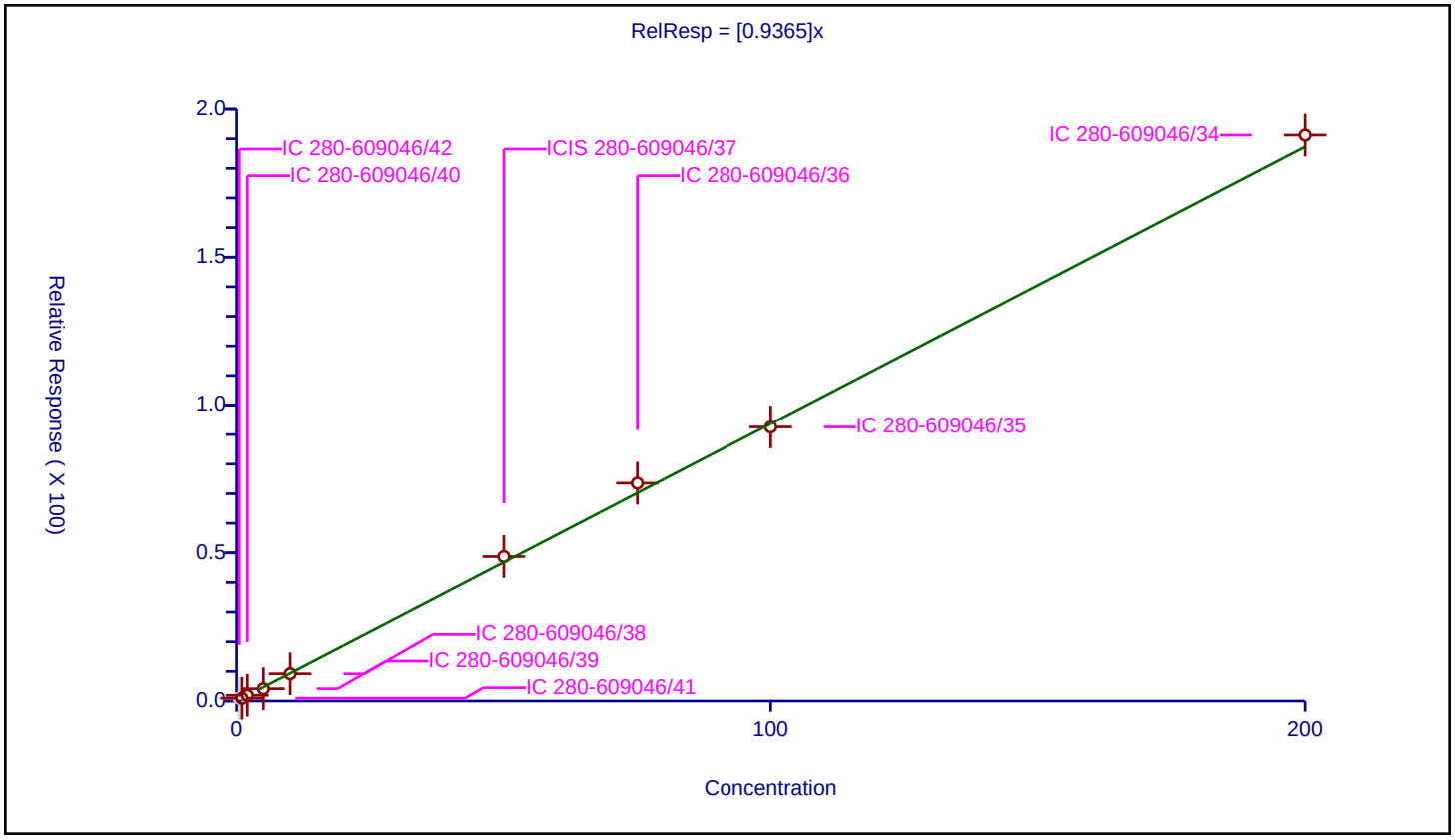
Curve Coefficients

Intercept:	0
Slope:	0.9365

Error Coefficients

Standard Error:	827000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.965539	50.0	427119.0	1.931078	N
2	IC 280-609046/41	1.0	0.935911	50.0	430436.0	0.935911	Y
3	IC 280-609046/40	2.0	1.92941	50.0	433915.0	0.964705	Y
4	IC 280-609046/39	5.0	4.162196	50.0	458568.0	0.832439	Y
5	IC 280-609046/38	10.0	9.216988	50.0	469942.0	0.921699	Y
6	ICIS 280-609046/37	50.0	48.745499	50.0	475448.0	0.97491	Y
7	IC 280-609046/36	75.0	73.562206	50.0	471295.0	0.980829	Y
8	IC 280-609046/35	100.0	92.562688	50.0	482150.0	0.925627	Y
9	IC 280-609046/34	200.0	191.245794	50.0	473698.0	0.956229	Y



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Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

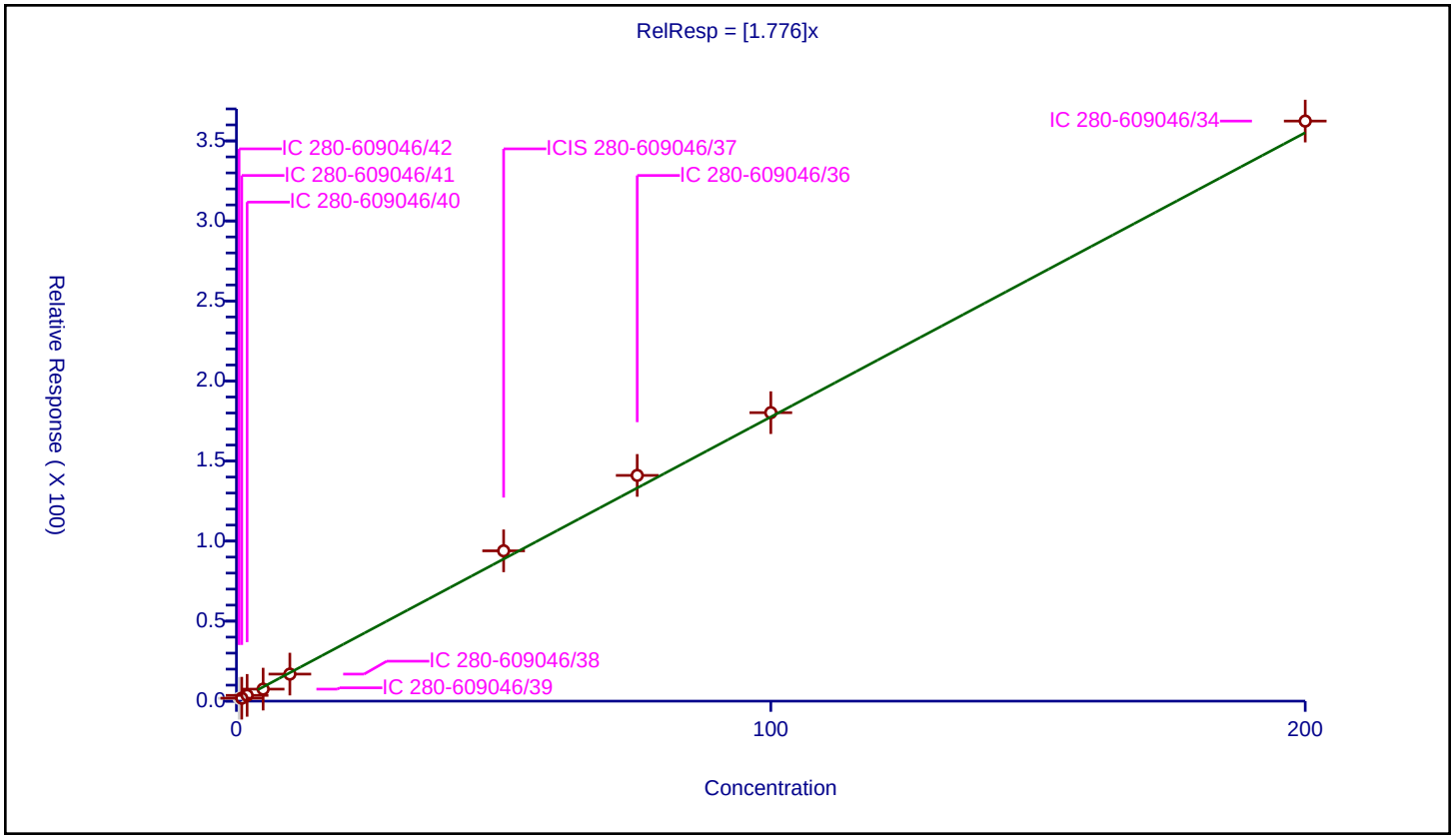
Curve Coefficients

Intercept:	0
Slope:	1.776

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.807693	50.0	427119.0	3.615386	N
2	IC 280-609046/41	1.0	1.843247	50.0	430436.0	1.843247	Y
3	IC 280-609046/40	2.0	3.595405	50.0	433915.0	1.797702	Y
4	IC 280-609046/39	5.0	7.516224	50.0	458568.0	1.503245	Y
5	IC 280-609046/38	10.0	16.890914	50.0	469942.0	1.689091	Y
6	ICIS 280-609046/37	50.0	93.901121	50.0	475448.0	1.878022	Y
7	IC 280-609046/36	75.0	141.022184	50.0	471295.0	1.880296	Y
8	IC 280-609046/35	100.0	180.232604	50.0	482150.0	1.802326	Y
9	IC 280-609046/34	200.0	362.391334	50.0	473698.0	1.811957	Y



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Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

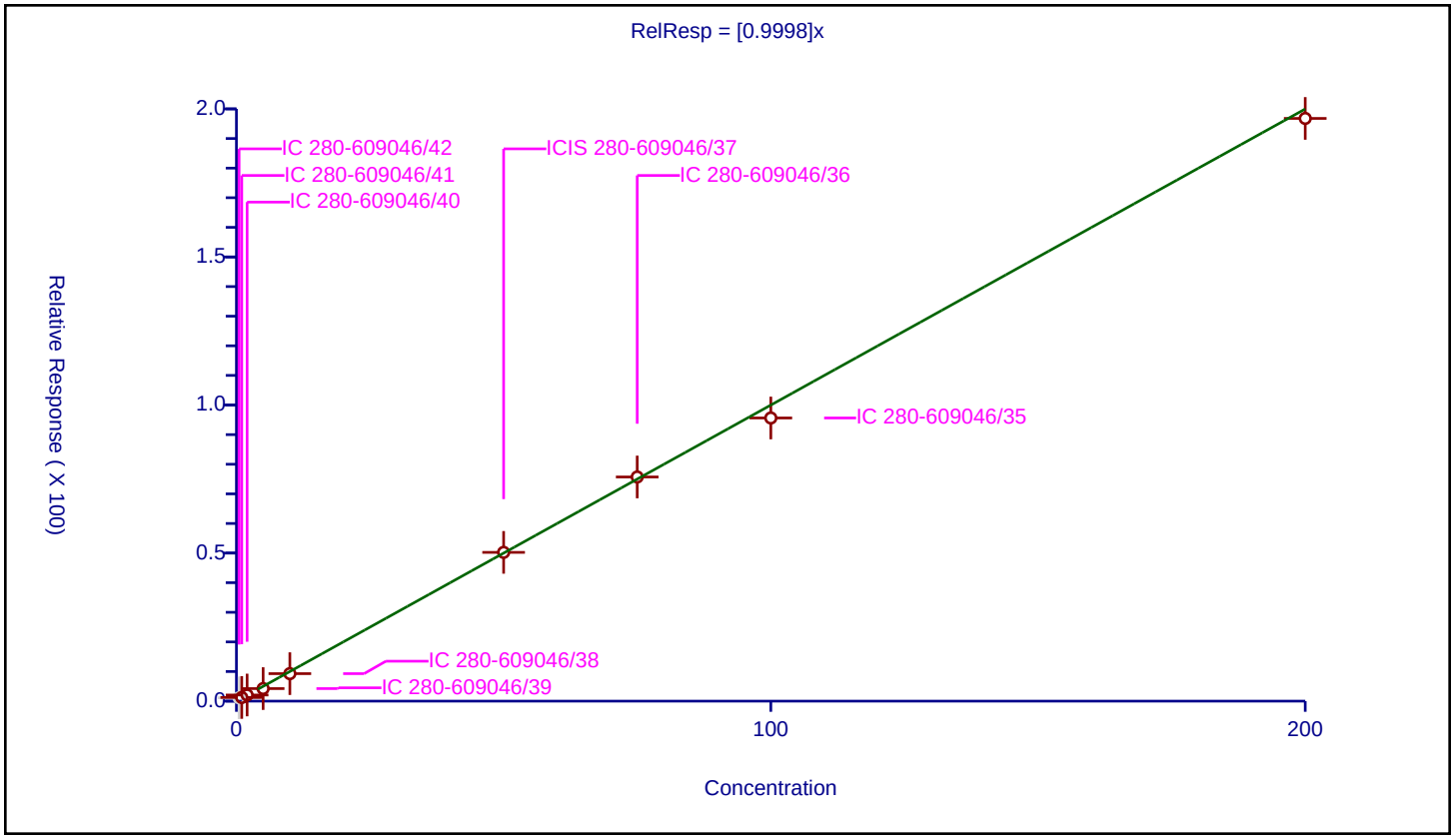
Curve Coefficients

Intercept:	0
Slope:	0.9998

Error Coefficients

Standard Error:	851000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.139261	50.0	427119.0	2.278522	N
2	IC 280-609046/41	1.0	1.232471	50.0	430436.0	1.232471	Y
3	IC 280-609046/40	2.0	2.07195	50.0	433915.0	1.035975	Y
4	IC 280-609046/39	5.0	4.237212	50.0	458568.0	0.847442	Y
5	IC 280-609046/38	10.0	9.284976	50.0	469942.0	0.928498	Y
6	ICIS 280-609046/37	50.0	50.239984	50.0	475448.0	1.0048	Y
7	IC 280-609046/36	75.0	75.697069	50.0	471295.0	1.009294	Y
8	IC 280-609046/35	100.0	95.62128	50.0	482150.0	0.956213	Y
9	IC 280-609046/34	200.0	196.779277	50.0	473698.0	0.983896	Y



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Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

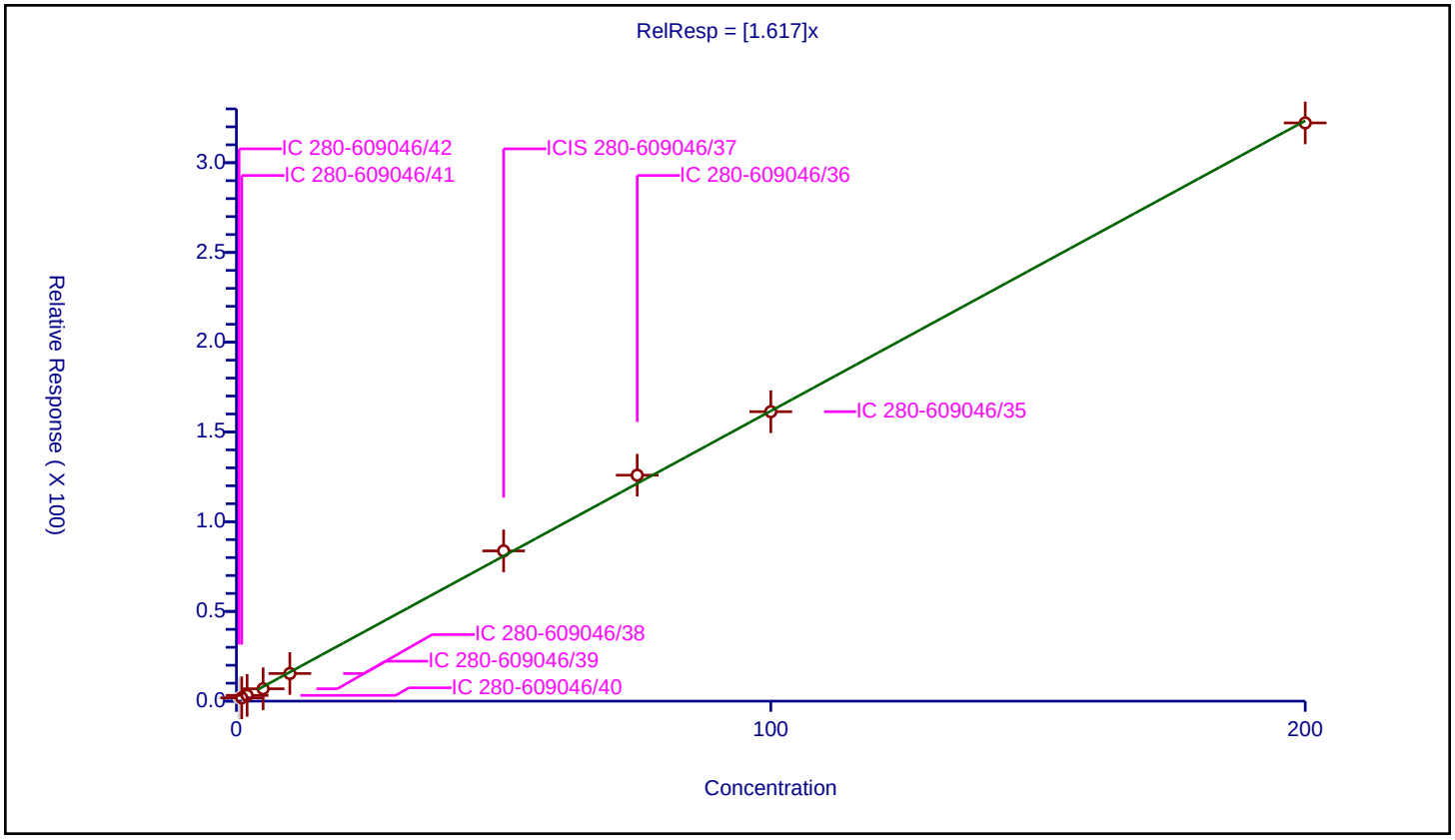
Curve Coefficients

Intercept:	0
Slope:	1.617

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.831808	50.0	427119.0	3.663616	N
2	IC 280-609046/41	1.0	1.837439	50.0	430436.0	1.837439	Y
3	IC 280-609046/40	2.0	3.203969	50.0	433915.0	1.601984	Y
4	IC 280-609046/39	5.0	6.898541	50.0	458568.0	1.379708	Y
5	IC 280-609046/38	10.0	15.391155	50.0	469942.0	1.539115	Y
6	ICIS 280-609046/37	50.0	83.720197	50.0	475448.0	1.674404	Y
7	IC 280-609046/36	75.0	125.895883	50.0	471295.0	1.678612	Y
8	IC 280-609046/35	100.0	161.273048	50.0	482150.0	1.61273	Y
9	IC 280-609046/34	200.0	322.176893	50.0	473698.0	1.610884	Y



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Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

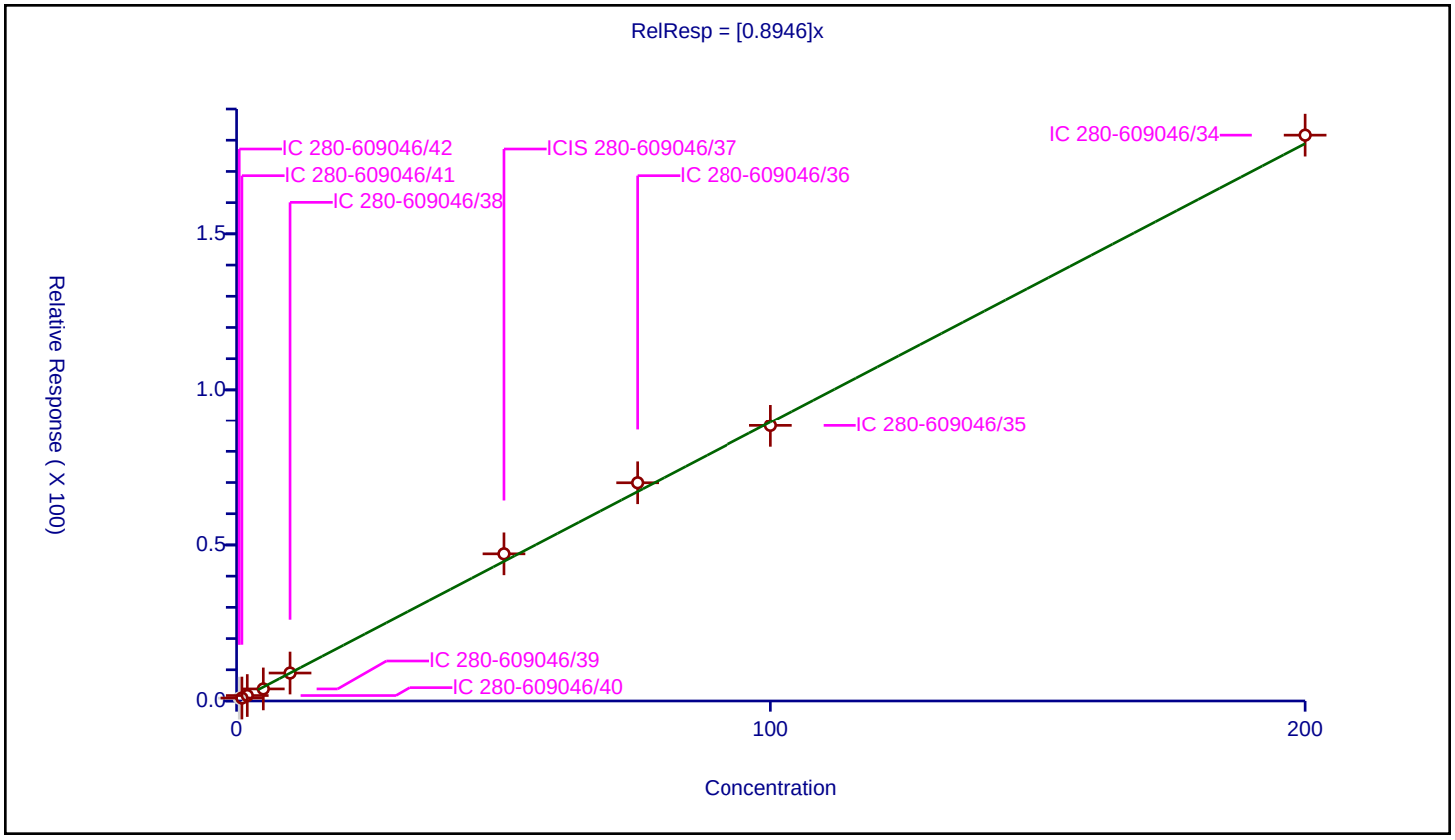
Curve Coefficients

Intercept:	0
Slope:	0.8946

Error Coefficients

Standard Error:	786000
Relative Standard Error:	6.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.912392	50.0	427119.0	1.824784	N
2	IC 280-609046/41	1.0	0.946714	50.0	430436.0	0.946714	Y
3	IC 280-609046/40	2.0	1.747808	50.0	433915.0	0.873904	Y
4	IC 280-609046/39	5.0	3.866166	50.0	458568.0	0.773233	Y
5	IC 280-609046/38	10.0	8.960467	50.0	469942.0	0.896047	Y
6	ICIS 280-609046/37	50.0	47.150793	50.0	475448.0	0.943016	Y
7	IC 280-609046/36	75.0	69.92266	50.0	471295.0	0.932302	Y
8	IC 280-609046/35	100.0	88.323551	50.0	482150.0	0.883236	Y
9	IC 280-609046/34	200.0	181.629857	50.0	473698.0	0.908149	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

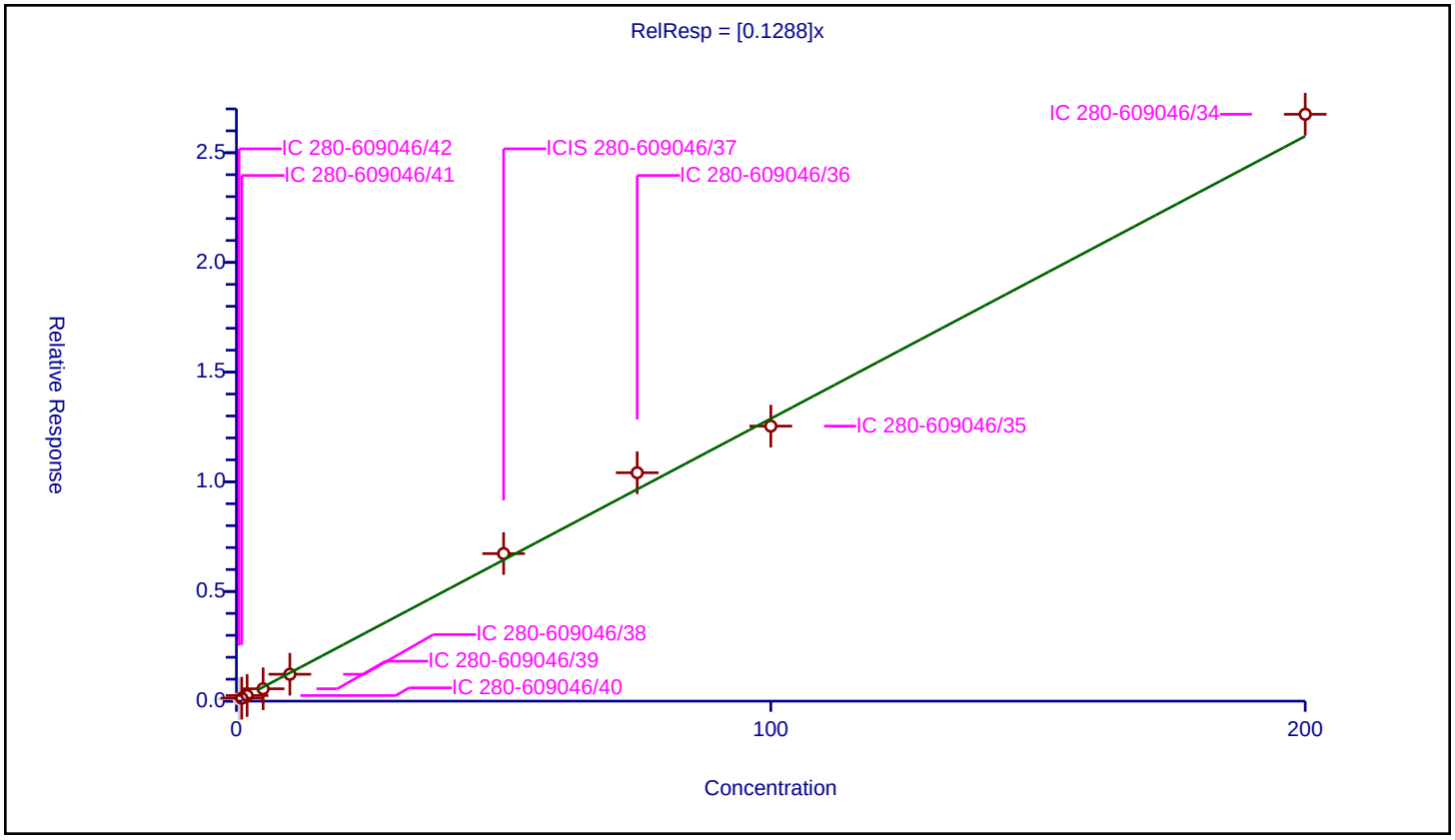
Curve Coefficients

Intercept:	0
Slope:	0.1288

Error Coefficients

Standard Error:	115000
Relative Standard Error:	6.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.104421	50.0	427119.0	0.208841	N
2	IC 280-609046/41	1.0	0.134631	50.0	430436.0	0.134631	Y
3	IC 280-609046/40	2.0	0.255465	50.0	433915.0	0.127732	Y
4	IC 280-609046/39	5.0	0.563929	50.0	458568.0	0.112786	Y
5	IC 280-609046/38	10.0	1.22579	50.0	469942.0	0.122579	Y
6	ICIS 280-609046/37	50.0	6.726603	50.0	475448.0	0.134532	Y
7	IC 280-609046/36	75.0	10.413541	50.0	471295.0	0.138847	Y
8	IC 280-609046/35	100.0	12.537903	50.0	482150.0	0.125379	Y
9	IC 280-609046/34	200.0	26.754599	50.0	473698.0	0.133773	Y



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Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

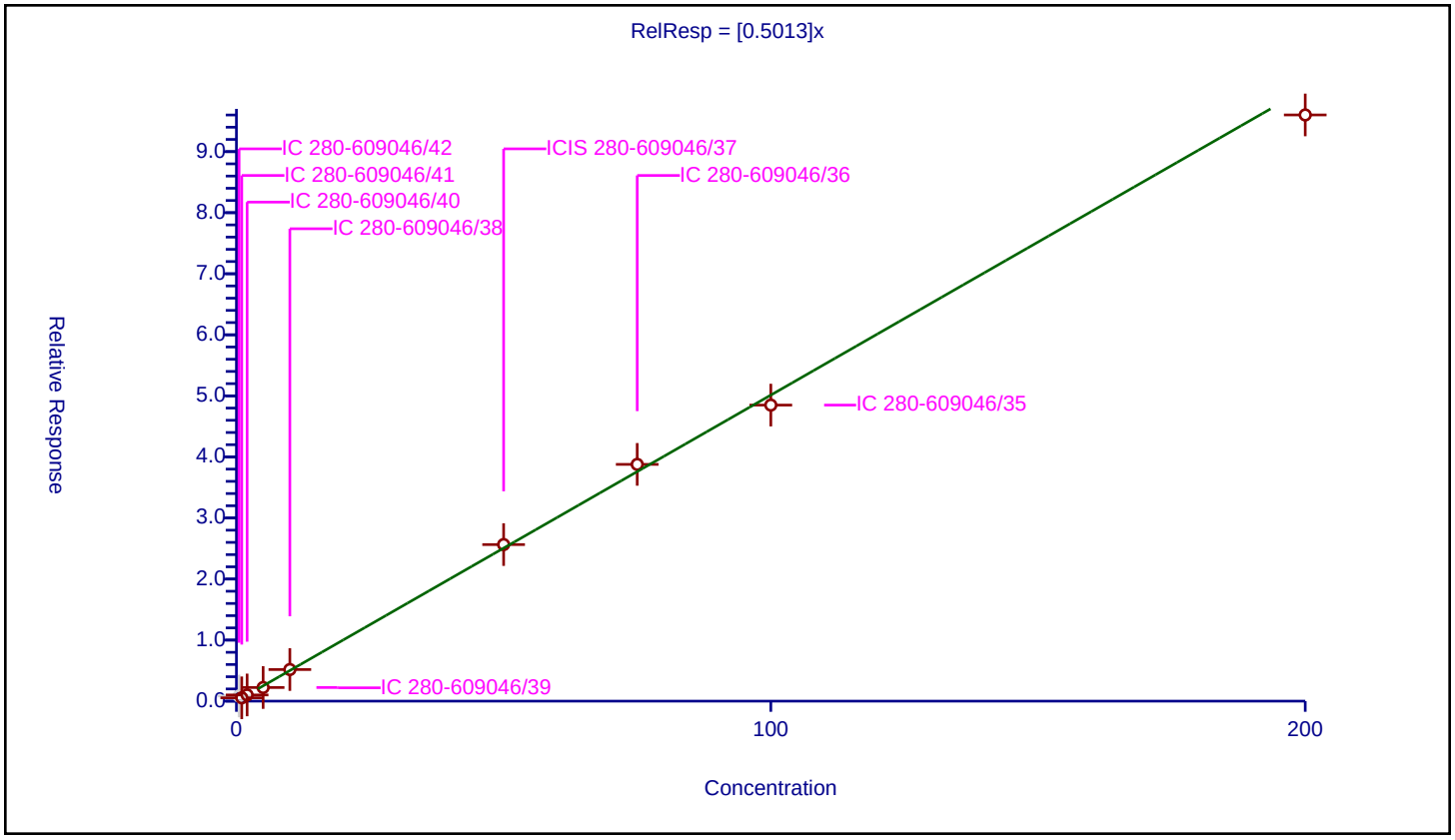
Curve Coefficients

Intercept:	0
Slope:	0.5013

Error Coefficients

Standard Error:	421000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.843442	50.0	427119.0	1.686884	N
2	IC 280-609046/41	1.0	0.545029	50.0	430436.0	0.545029	Y
3	IC 280-609046/40	2.0	1.01241	50.0	433915.0	0.506205	Y
4	IC 280-609046/39	5.0	2.233148	50.0	458568.0	0.44663	Y
5	IC 280-609046/38	10.0	5.174256	50.0	469942.0	0.517426	Y
6	ICIS 280-609046/37	50.0	25.644129	50.0	475448.0	0.512883	Y
7	IC 280-609046/36	75.0	38.778578	50.0	471295.0	0.517048	Y
8	IC 280-609046/35	100.0	48.488022	50.0	482150.0	0.48488	Y
9	IC 280-609046/34	200.0	96.008744	50.0	473698.0	0.480044	Y



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Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

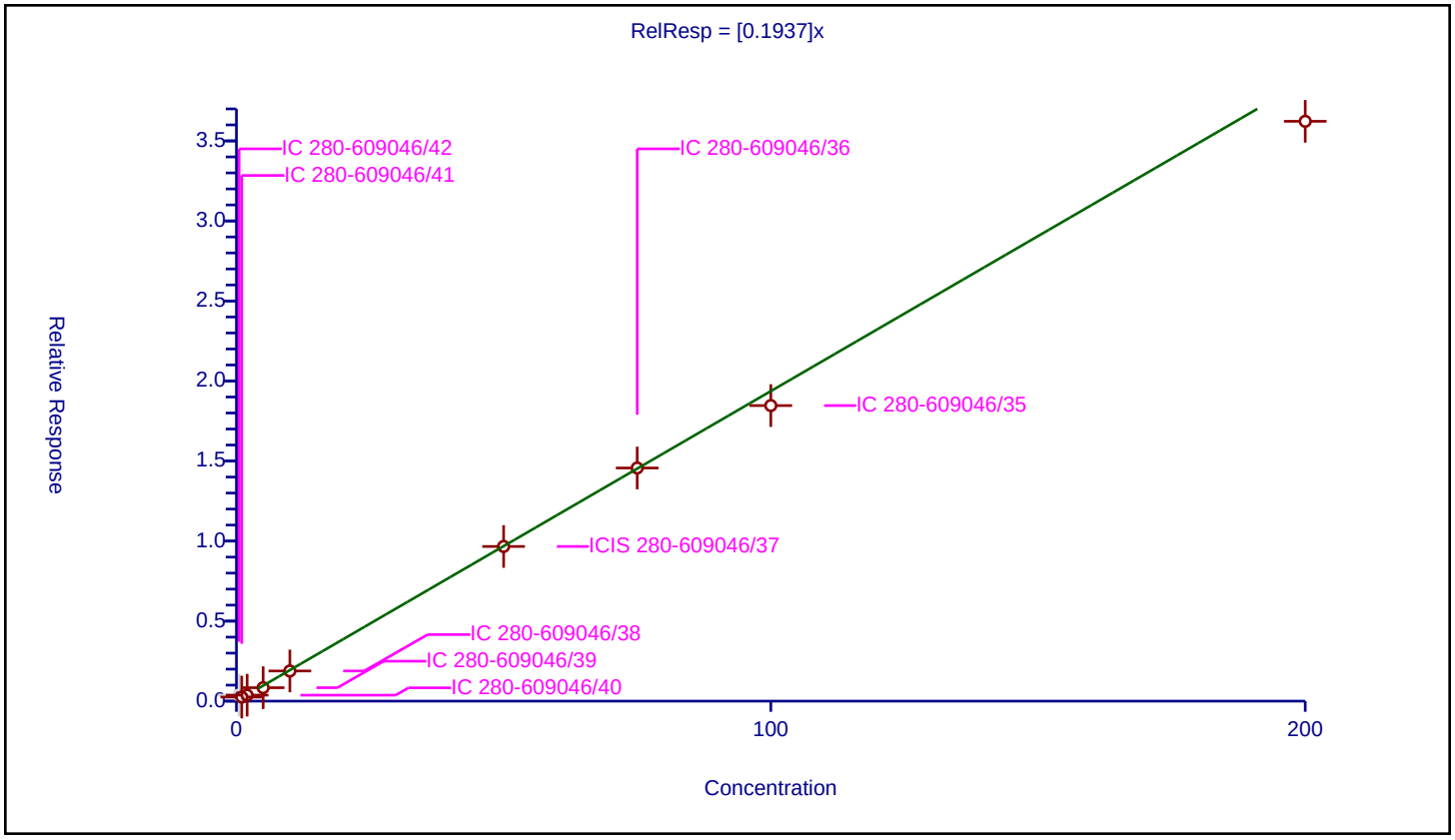
Curve Coefficients

Intercept:	0
Slope:	0.1937

Error Coefficients

Standard Error:	159000
Relative Standard Error:	13.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.380807	50.0	427119.0	0.761614	N
2	IC 280-609046/41	1.0	0.25358	50.0	430436.0	0.25358	Y
3	IC 280-609046/40	2.0	0.372884	50.0	433915.0	0.186442	Y
4	IC 280-609046/39	5.0	0.839025	50.0	458568.0	0.167805	Y
5	IC 280-609046/38	10.0	1.883743	50.0	469942.0	0.188374	Y
6	ICIS 280-609046/37	50.0	9.663412	50.0	475448.0	0.193268	Y
7	IC 280-609046/36	75.0	14.5654	50.0	471295.0	0.194205	Y
8	IC 280-609046/35	100.0	18.465312	50.0	482150.0	0.184653	Y
9	IC 280-609046/34	200.0	36.224662	50.0	473698.0	0.181123	Y



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Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

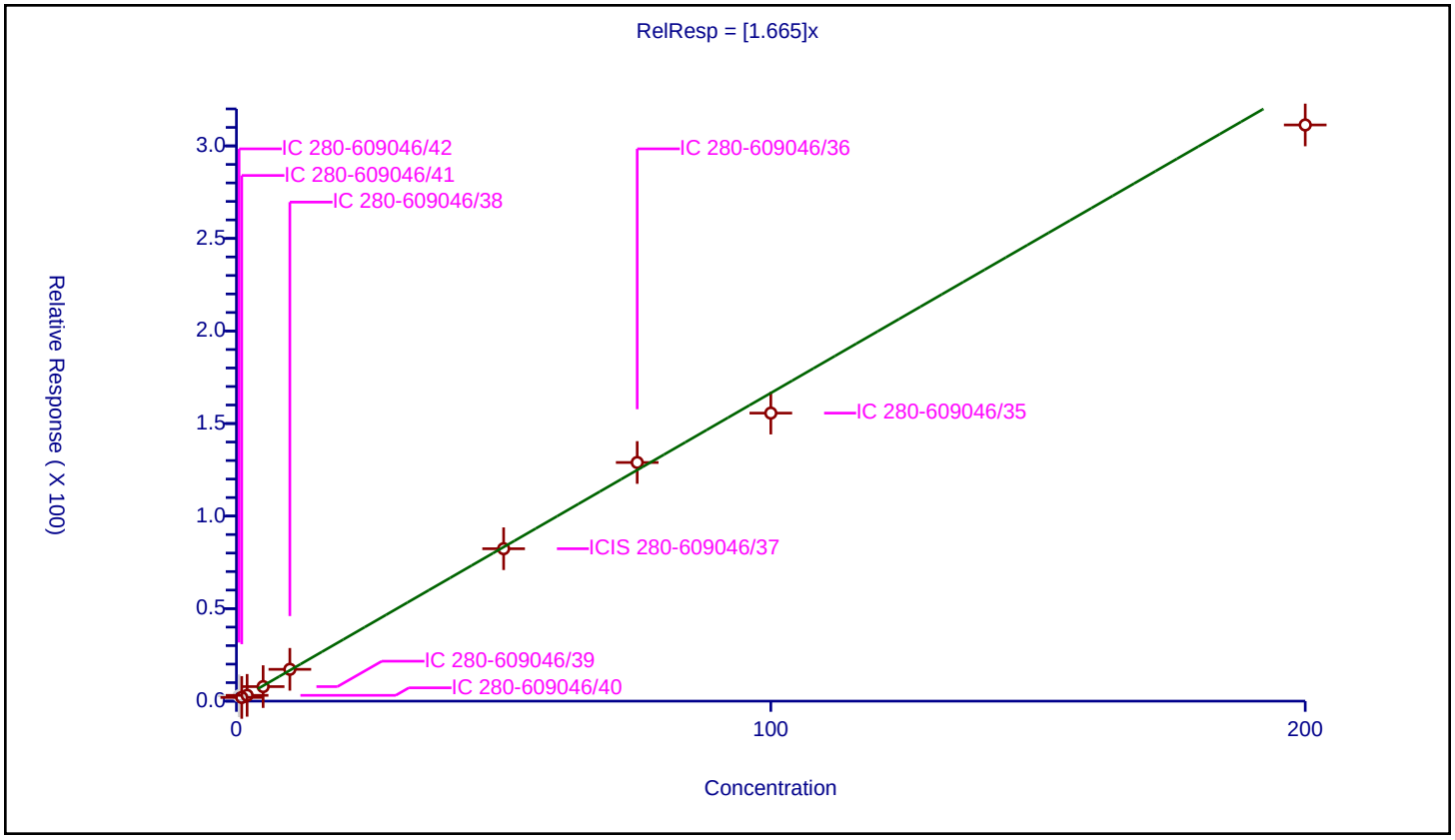
Curve Coefficients

Intercept:	0
Slope:	1.665

Error Coefficients

Standard Error:	1370000
Relative Standard Error:	8.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	2.883974	50.0	427119.0	5.767948	N
2	IC 280-609046/41	1.0	1.987984	50.0	430436.0	1.987984	Y
3	IC 280-609046/40	2.0	3.128608	50.0	433915.0	1.564304	Y
4	IC 280-609046/39	5.0	7.845074	50.0	458568.0	1.569015	Y
5	IC 280-609046/38	10.0	17.196803	50.0	469942.0	1.71968	Y
6	ICIS 280-609046/37	50.0	82.344652	50.0	475448.0	1.646893	Y
7	IC 280-609046/36	75.0	128.945565	50.0	471295.0	1.719274	Y
8	IC 280-609046/35	100.0	155.625739	50.0	482150.0	1.556257	Y
9	IC 280-609046/34	200.0	311.321559	50.0	473698.0	1.556608	Y



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Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

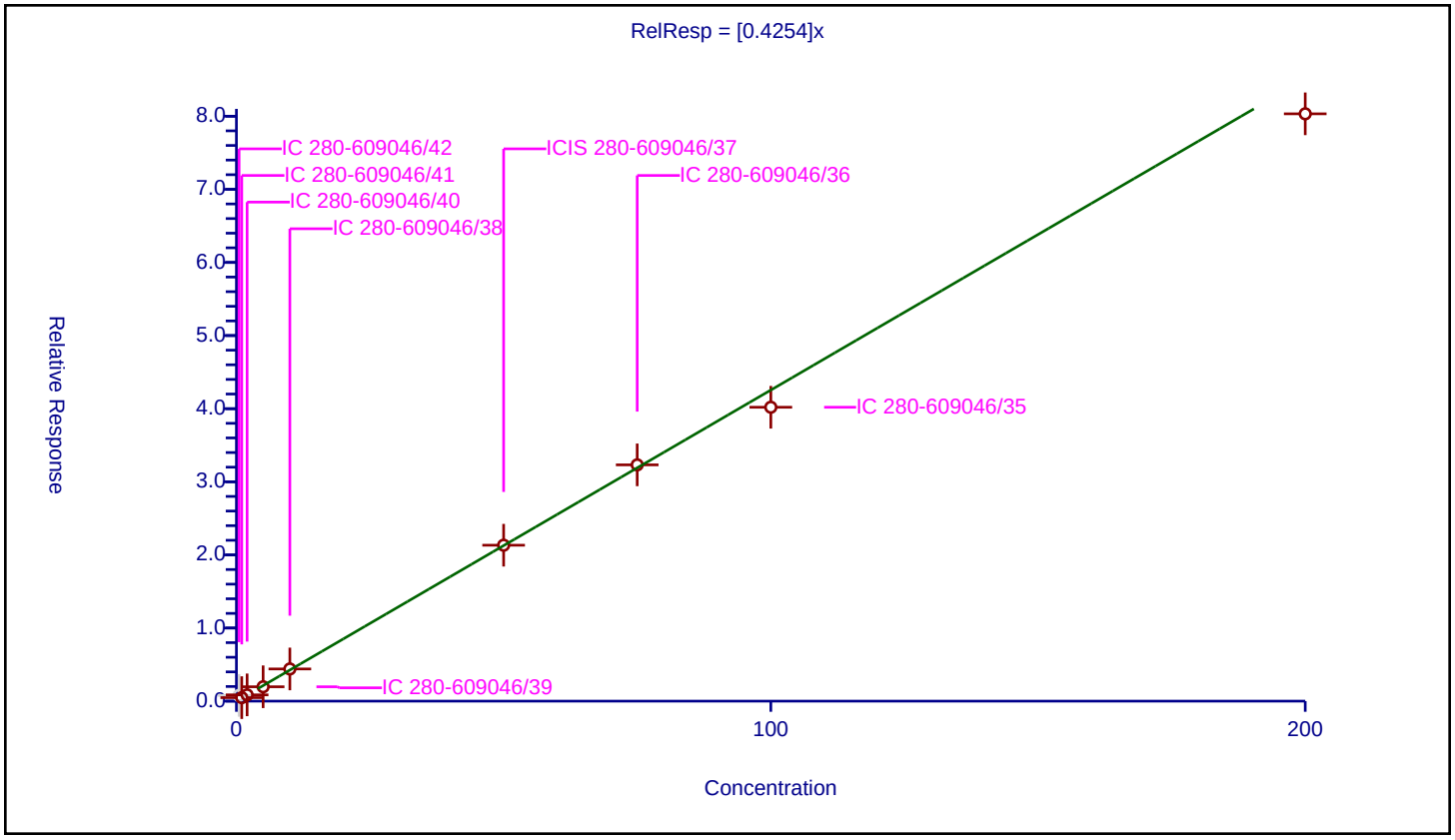
Curve Coefficients

Intercept:	0
Slope:	0.4254

Error Coefficients

Standard Error:	352000
Relative Standard Error:	6.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.783388	50.0	427119.0	1.566776	N
2	IC 280-609046/41	1.0	0.480559	50.0	430436.0	0.480559	Y
3	IC 280-609046/40	2.0	0.857196	50.0	433915.0	0.428598	Y
4	IC 280-609046/39	5.0	1.966121	50.0	458568.0	0.393224	Y
5	IC 280-609046/38	10.0	4.402033	50.0	469942.0	0.440203	Y
6	ICIS 280-609046/37	50.0	21.326622	50.0	475448.0	0.426532	Y
7	IC 280-609046/36	75.0	32.31405	50.0	471295.0	0.430854	Y
8	IC 280-609046/35	100.0	40.196101	50.0	482150.0	0.401961	Y
9	IC 280-609046/34	200.0	80.325651	50.0	473698.0	0.401628	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 Calibration End Date: 04/10/2023 17:06 Calibration ID: 79112

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-608141/11	P00472.D
Level 2	STD010 280-608141/12	P00473.D
Level 3	STD020 280-608141/13	P00474.D
Level 4	STD050 280-608141/14	P00475.D
Level 5	STD10 280-608141/15	P00476.D
Level 6	ICIS 280-608141/16	P00477.D
Level 7	STD75 280-608141/17	P00478.D
Level 8	STD100 280-608141/18	P00479.D
Level 9	STD200 280-608141/19	P00480.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2475 0.2195	0.1730 0.2452	0.2045 0.2583	0.2833 0.2430	0.2540	Ave		0.2365				13.8		15.0			
Chloromethane	+++++ 0.1780	0.1306 0.2037	0.1458 0.2318	0.1662 0.2081	0.1733	Lin1	-0.131	0.2100			0.1000				0.9940		0.9900
Vinyl chloride	0.2872 0.2430	0.2331 0.2667	0.2560 0.2887	0.3041 0.2646	0.2792	Ave		0.2692				8.5		30.0			
Bromomethane	0.1258 0.0443	0.0741 +++++	0.0655 0.0303	0.0624 0.0241	0.0780	Ave		0.0631				51.0	*	15.0			
Chloroethane	0.1810 0.1489	0.1566 0.1483	0.1589 0.1723	0.1813 0.1217	0.1731	Ave		0.1602				12.0		15.0			
Dichlorofluoromethane	0.3888 0.3428	0.3680 0.3659	0.4036 0.3946	0.4331 0.3545	0.3921	Ave		0.3826				7.2		15.0			
Trichlorofluoromethane	0.3249 0.2888	0.2965 0.3187	0.3219 0.3443	0.3669 0.3203	0.3290	Ave		0.3235				7.2		15.0			
Ethyl ether	0.1889 0.1804	0.1903 0.1848	0.1723 0.1858	0.1798 0.1792	0.1852	Ave		0.1830				3.1		15.0			
Acrolein	0.0480 0.0535	0.0484 0.0558	0.0502 0.0518	0.0537 0.0533	0.0548	Ave		0.0522				5.3		15.0			
1,1-Dichloroethene	0.2118 0.1849	0.1913 0.1894	0.2008 0.1876	0.1846 0.1825	0.1770	Ave		0.1900				5.5		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1415 0.1370	0.1249 0.1399	0.1393 0.1368	0.1330 0.1321	0.1280	Ave		0.1347				4.2		15.0			
Acetone	0.3049 0.1391	0.2225 0.1388	0.1848 0.1283	0.1546 0.1346	0.1522	Lin2	0.3397	0.1370							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 Calibration End Date: 04/10/2023 17:06 Calibration ID: 79112

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	+++++ 0.1489	0.1127 0.1554	0.0802 0.1935	0.1032 +++++	0.1070	Qua	0.0712	0.0842	0.0010597						0.9980		0.9900
Carbon disulfide	0.7890 0.5981	0.6611 0.6157	0.6371 0.6100	0.6187 0.5775	0.5938	Ave		0.6334				10.0		15.0			
Methyl acetate	0.2815 0.2921	0.3093 0.2982	0.2854 0.2798	0.2897 0.2917	0.3070	Ave		0.2927				3.6		15.0			
3-Chloro-1-propene	0.3619 0.2661	0.3738 0.2835	0.3372 0.2653	0.3123 0.2452	0.2924	Ave		0.3042				14.9		15.0			
Methylene Chloride	0.3857 0.2125	0.3158 0.2188	0.2618 0.2212	0.2312 0.2120	0.2198	Lin2	0.0882	0.2155							0.9990		0.9900
2-Methyl-2-propanol	0.0675 0.0722	0.0693 0.0721	0.0651 0.0600	0.0696 0.0657	0.0749	Ave		0.0685				6.6		15.0			
Acrylonitrile	0.1600 0.1579	0.1568 0.1589	0.1565 0.1476	0.1600 0.1437	0.1675	Ave		0.1566				4.5		15.0			
Methyl tert-butyl ether	0.7012 0.6614	0.6588 0.6770	0.6632 0.6723	0.6745 0.6516	0.6817	Ave		0.6713				2.2		15.0			
trans-1,2-Dichloroethene	0.2365 0.2050	0.2075 0.2101	0.2214 0.2112	0.2105 0.2019	0.1956	Ave		0.2111				5.6		15.0			
Hexane	1.3303 1.2201	1.0442 1.2709	1.1427 1.2306	1.1771 1.1862	1.1689	Ave		1.1968				6.8		15.0			
Vinyl acetate	0.5478 0.4887	0.4822 0.5048	0.4993 0.4336	0.5055 0.4233	0.5146	Ave		0.4889				8.0		15.0			
1,1-Dichloroethane	0.3727 0.3538	0.3527 0.3625	0.3745 0.3710	0.3775 0.3514	0.3750	Ave		0.3657			0.1000	2.9		15.0			
2-Butanone (MEK)	0.3525 0.2259	0.2701 0.2268	0.2479 0.2035	0.2358 0.2129	0.2397	Lin2	0.2557	0.2188							0.9970		0.9900
cis-1,2-Dichloroethene	0.2331 0.2264	0.2395 0.2336	0.2315 0.2325	0.2341 0.2253	0.2270	Ave		0.2315				2.0		15.0			
2,2-Dichloropropane	0.3866 0.3226	0.3340 0.3424	0.3419 0.3248	0.3314 0.3069	0.3208	Ave		0.3346				6.7		15.0			
sec-Butyl Alcohol	0.0498 0.0553	0.0497 0.0555	0.0488 0.0456	0.0520 0.0525	0.0568	Ave		0.0518				7.1		15.0			
Chlorobromomethane	0.1095 0.0943	0.1030 0.0941	0.1008 0.0902	0.0992 0.0936	0.0989	Ave		0.0982				6.0		15.0			
Tetrahydrofuran	0.1582 0.1441	0.1593 0.1451	0.1486 0.1315	0.1463 0.1431	0.1492	Ave		0.1473				5.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 Calibration End Date: 04/10/2023 17:06 Calibration ID: 79112

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chloroform	0.3874 0.3620	0.3772 0.3666	0.3625 0.3705	0.3597 0.3560	0.3632	Ave		0.3672				2.7		30.0			
1,1,1-Trichloroethane	0.3916 0.3179	0.2939 0.3236	0.3324 0.3252	0.3189 0.3121	0.3120	Ave		0.3253				8.3		15.0			
Cyclohexane	0.3871 0.3748	0.3386 0.3860	0.3771 0.3715	0.3619 0.3652	0.3571	Ave		0.3688				4.1		15.0			
1,1-Dichloropropene	0.3078 0.3030	0.2801 0.3140	0.3104 0.3089	0.2914 0.2989	0.2952	Ave		0.3011				3.6		15.0			
Carbon tetrachloride	0.2698 0.2689	0.2487 0.2721	0.2645 0.2694	0.2609 0.2628	0.2514	Ave		0.2632				3.2		15.0			
Isobutyl alcohol	0.0199 0.0209	0.0197 0.0208	0.0188 0.0174	0.0198 0.0200	0.0215	Ave		0.0199				6.2		15.0			
Benzene	0.9517 0.8656	0.8683 0.8867	0.8835 0.8713	0.8799 0.8356	0.8685	Ave		0.8790				3.5		15.0			
1,2-Dichloroethane	0.3547 0.2818	0.3256 0.2877	0.3033 0.2875	0.2927 0.2789	0.2942	Ave		0.3007				8.2		15.0			
n-Heptane	0.4808 0.2366	0.3646 0.2487	0.3267 0.2334	0.2545 0.2299	0.2418	Lin2	0.1250	0.2373							0.9970		0.9900
Trichloroethene	0.9907 0.9085	0.9373 0.9464	0.9500 0.9608	0.9325 0.9278	0.9029	Ave		0.9397				2.8		15.0			
2-Pentanone	0.3702 0.3406	0.3382 0.3423	0.3292 0.3035	0.3424 0.3172	0.3550	Ave		0.3376				5.8		15.0			
Methylcyclohexane	0.3037 0.2807	0.2735 0.2858	0.2741 0.2721	0.2651 0.2707	0.2600	Ave		0.2762				4.6		15.0			
1,2-Dichloropropane	0.2434 0.2283	0.2279 0.2330	0.2244 0.2344	0.2287 0.2280	0.2279	Ave		0.2307				2.4		30.0			
1,4-Dioxane	0.0074 0.0078	0.0067 0.0077	0.0070 0.0070	0.0074 0.0073	0.0080	Ave		0.0074				5.5		15.0			
Dibromomethane	0.1557 0.1338	0.1334 0.1340	0.1437 0.1366	0.1384 0.1165	0.1398	Ave		0.1369				7.5		15.0			
Dichlorobromomethane	0.2706 0.2790	0.2686 0.2844	0.2734 0.2856	0.2775 0.2809	0.2788	Ave		0.2776				2.1		15.0			
2-Chloroethyl vinyl ether	0.1986 0.1720	0.1799 0.1767	0.1738 0.1732	0.2004 0.1705	0.2019	Ave		0.1830				7.2		15.0			
cis-1,3-Dichloropropene	1.5941 1.5221	1.5402 1.5786	1.4969 1.5649	1.5833 1.5145	1.5567	Ave		1.5501				2.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 Calibration End Date: 04/10/2023 17:06 Calibration ID: 79112

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Methyl-2-pentanone (MIBK)	0.3508 0.3610	0.3542 0.3643	0.3537 0.3325	0.3685 0.3216	0.3824	Ave		0.3544				5.2		15.0			
Toluene	0.9688 0.9172	0.8980 0.9263	0.9399 0.9088	0.9043 0.8680	0.9125	Ave		0.9160				3.1		30.0			
trans-1,3-Dichloropropene	0.3519 0.3467	0.3472 0.3536	0.3405 0.3478	0.3456 0.3418	0.3488	Ave		0.3471				1.2		15.0			
Ethyl methacrylate	1.4500 1.4953	1.5104 1.5509	1.4726 1.5207	1.4952 1.5064	1.5586	Ave		1.5067				2.3		15.0			
1,1,2-Trichloroethane	0.2503 0.1955	0.1792 0.1998	0.2010 0.1988	0.1954 0.1957	0.2039	Ave		0.2022				9.6		15.0			
Tetrachloroethene	0.6652 0.6384	0.5968 0.6564	0.6200 0.6471	0.6258 0.6382	0.6168	Ave		0.6338				3.4		15.0			
1,3-Dichloropropane	1.5297 1.4718	1.4876 1.5070	1.5294 1.5073	1.5027 1.4707	1.5465	Ave		1.5059				1.7		15.0			
2-Hexanone	1.1213 1.2583	1.2079 1.2735	1.1997 1.1319	1.2698 1.1534	1.3300	Ave		1.2162				5.9		15.0			
Chlorodibromomethane	0.8778 0.8644	0.8148 0.8920	0.8585 0.8833	0.8602 0.8859	0.8788	Ave		0.8684				2.7		15.0			
Ethylene Dibromide	0.9651 0.8817	0.9159 0.9121	0.8846 0.8976	0.8929 0.8869	0.9219	Ave		0.9065				2.9		15.0			
1-Chlorohexane	2.4858 1.2796	1.7506 1.3067	1.5084 1.2617	1.3245 1.2397	1.2469	Lin2	0.4807	1.2324							0.9980		0.9900
Chlorobenzene	2.4577 2.3649	2.4758 2.4185	2.4563 2.4172	2.4875 2.3395	2.3784	Ave		2.4217			0.3000	2.1		15.0			
1,1,1,2-Tetrachloroethane	0.8254 0.8120	0.8010 0.8321	0.8155 0.8360	0.8111 0.8110	0.8057	Ave		0.8166				1.5		15.0			
Ethylbenzene	1.3821 1.3353	1.3720 1.3664	1.3525 1.3425	1.3445 1.3127	1.3226	Ave		1.3478				1.7		30.0			
m-Xylene & p-Xylene	1.5985 1.6235	1.6439 1.6702	1.6510 1.6302	1.6508 1.5975	1.5872	Ave		1.6281				1.8		15.0			
o-Xylene	1.6495 1.5701	1.5285 1.6206	1.5900 1.5866	1.5974 1.5464	1.5713	Ave		1.5845				2.3		15.0			
Styrene	2.6961 2.6285	2.6404 2.7049	2.6587 2.6306	2.6133 2.5798	2.6034	Ave		2.6395				1.6		15.0			
Bromoform	0.5789 0.5890	0.5905 0.6108	0.5481 0.6113	0.5788 0.6042	0.6064	Ave		0.5909			0.1000	3.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 Calibration End Date: 04/10/2023 17:06 Calibration ID: 79112

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Isopropylbenzene	2.6129 2.6090	2.5223 2.6982	2.6880 2.6209	2.6060 2.5219	2.6162	Ave		2.6106				2.3		15.0			
Cyclohexanone	0.1275 0.1404	0.1257 0.1430	0.1205 0.1205	0.1358 0.1280	0.1475	Ave		0.1321				7.5		15.0			
1,1,2,2-Tetrachloroethane	0.9081 0.9227	0.9163 0.9559	0.9145 0.9150	0.9372 0.9134	0.9781	Ave		0.9290			0.3000	2.5		15.0			
Bromobenzene	0.5880 0.6112	0.6015 0.6224	0.6113 0.6194	0.6253 0.6079	0.6145	Ave		0.6113				1.9		15.0			
trans-1,4-Dichloro-2-butene	0.4415 0.3147	0.3824 0.3282	0.3232 0.3090	0.3119 0.3154	0.3283	Ave		0.3394				13.0		15.0			
1,2,3-Trichloropropane	0.3487 0.2855	0.2903 0.2963	0.2983 0.2911	0.2892 0.2898	0.3059	Ave		0.2995				6.5		15.0			
N-Propylbenzene	0.6975 0.7101	0.7241 0.7377	0.7015 0.7189	0.7009 0.7092	0.7040	Ave		0.7116				1.8		15.0			
2-Chlorotoluene	0.6598 0.6041	0.6058 0.6264	0.6054 0.6125	0.6117 0.6038	0.6097	Ave		0.6155				2.9		15.0			
1,3,5-Trimethylbenzene	2.2433 2.1851	2.1534 2.2514	2.1548 2.1798	2.2278 2.0932	2.1871	Ave		2.1862				2.3		15.0			
4-Chlorotoluene	0.6840 0.6277	0.6369 0.6543	0.6353 0.6372	0.6232 0.6339	0.6320	Ave		0.6405				2.9		15.0			
tert-Butylbenzene	1.9056 1.7689	1.7804 1.8071	1.8638 1.7507	1.7813 1.6870	1.7510	Ave		1.7884				3.6		15.0			
1,2,4-Trimethylbenzene	2.4001 2.2367	2.2450 2.2828	2.2753 2.2082	2.2732 2.1549	2.2304	Ave		2.2563				3.0		15.0			
sec-Butylbenzene	0.5171 0.5113	0.5018 0.5371	0.5193 0.5064	0.5130 0.5062	0.5013	Ave		0.5126				2.2		15.0			
1,3-Dichlorobenzene	1.0905 1.0990	1.1081 1.1346	1.0849 1.1058	1.0996 1.0988	1.1303	Ave		1.1058				1.5		15.0			
4-Isopropyltoluene	2.2983 2.1731	2.1474 2.2186	2.1762 2.1168	2.1112 2.0634	2.1211	Ave		2.1585				3.2		15.0			
1,4-Dichlorobenzene	1.2053 1.1320	1.1811 1.1614	1.1693 1.1402	1.1405 1.1186	1.1465	Ave		1.1550				2.3		15.0			
n-Butylbenzene	2.0721 1.9437	1.9128 2.0113	1.9199 1.8993	1.9136 1.8962	1.9087	Ave		1.9420				3.1		15.0			
1,2-Dichlorobenzene	1.0620 1.0401	1.0477 1.0638	1.0652 1.0620	1.0702 1.0661	1.0720	Ave		1.0610				1.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 Calibration End Date: 04/10/2023 17:06 Calibration ID: 79112

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dibromo-3-Chloropropane	0.2291 0.2647	0.2504 0.2788	0.2445 0.2663	0.2585 0.2756	0.2731	Ave		0.2601				6.3		15.0			
1,2,4-Trichlorobenzene	0.6295 0.5745	0.5825 0.5995	0.5743 0.5872	0.5684 0.5751	0.5868	Ave		0.5864				3.2		15.0			
Hexachlorobutadiene	0.2246 0.2176	0.2231 0.2243	0.2271 0.2155	0.2148 0.2115	0.2231	Ave		0.2202				2.5		15.0			
Naphthalene	2.4402 2.2906	2.3577 2.3854	2.3618 2.2537	2.3697 2.2156	2.4547	Ave		2.3477				3.4		15.0			
1,2,3-Trichlorobenzene	0.5593 0.5138	0.5380 0.5304	0.5305 0.5080	0.5172 0.5016	0.5236	Ave		0.5247				3.3		15.0			
Dibromofluoromethane (Surr)	0.2495 0.2479	0.2465 0.2474	0.2488 0.2504	0.2502 0.2440	0.2478	Ave		0.2481				0.8		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2852 0.2821	0.2845 0.2821	0.2862 0.2868	0.2855 0.2829	0.2922	Ave		0.2853				1.1		15.0			
Toluene-d8 (Surr)	4.3264 4.2712	4.2735 4.3177	4.3101 4.2796	4.3857 4.3264	4.3041	Ave		4.3105				0.8		15.0			
4-Bromofluorobenzene (Surr)	1.0804 1.0816	1.0885 1.0961	1.0784 1.0989	1.0869 1.1054	1.0964	Ave		1.0903				0.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 | Calibration End Date: 04/10/2023 17:06 | Calibration ID: 79112

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-608141/11	P00472.D
Level 2	STD010 280-608141/12	P00473.D
Level 3	STD020 280-608141/13	P00474.D
Level 4	STD050 280-608141/14	P00475.D
Level 5	STD10 280-608141/15	P00476.D
Level 6	ICIS 280-608141/16	P00477.D
Level 7	STD75 280-608141/17	P00478.D
Level 8	STD100 280-608141/18	P00479.D
Level 9	STD200 280-608141/19	P00480.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	5154 468892	7346 775385	16929 1129286	59460 2121288	104940	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloromethane	FB	Lin1	+++++ 380213	5545 644339	12065 1013285	34880 1816239	71596	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Ave	5981 518982	9901 843629	21187 1262249	63810 2309387	115365	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Ave	2620 94536	3145 +++++	5424 132574	13088 210552	32217	0.500 50.0	1.00 +++++	2.00 100	5.00 200	10.0
Chloroethane	FB	Ave	3769 317929	6649 469132	13152 753248	38051 1062024	71534	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Ave	8097 732134	15627 1157152	33403 1725191	90899 3094467	162012	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Ave	6766 616797	12593 1007921	26643 1505278	77008 2796002	135922	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl ether	FB	Ave	3933 385396	8084 584579	14260 812403	37732 1564124	76519	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acrolein	FB	Ave	9871 1127747	20314 1741409	41065 2234452	111205 4594978	223650	4.94 494	9.88 741	19.8 988	49.4 1975	98.8
1,1-Dichloroethene	FB	Ave	4410 395002	8126 598919	16615 820098	38742 1592649	73138	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	2947 292551	5304 442532	11531 598033	27921 1153335	52871	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acetone	FB	Lin2	25396 1188060	37791 1756167	61169 2242777	129757 4698574	251615	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Iodomethane	FB	Qua	+++++ 318037	4787 491359	6638 846049	21667 +++++	44194	+++++ 50.0	1.00 75.0	2.00 100	5.00 +++++	10.0
Carbon disulfide	FB	Ave	16431 1277522	28075 1947500	52729 2666521	129833 5040647	245343	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 | Calibration End Date: 04/10/2023 17:06 | Calibration ID: 79112

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methyl acetate	FB	Ave	11724 1247828	26275 1886100	47237 2445997	121612 5091425	253687	1.00 100	2.00 150	4.00 200	10.0 400	20.0
3-Chloro-1-propene	FB	Ave	7537 568418	15877 896723	27906 1159871	65544 2139960	120829	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Methylene Chloride	FB	Lin2	8032 453865	13410 691885	21671 967033	48516 1850658	90812	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Methyl-2-propanol	FB	Ave	14051 1542668	29444 2279853	53876 2621790	146131 5738007	309510	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Acrylonitrile	FB	Ave	33327 3372086	66577 5026421	129550 6453914	335708 12546757	692183	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Methyl tert-butyl ether	FB	Ave	14603 1412629	27980 2141144	54887 2939075	141559 5687209	281667	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,2-Dichloroethene	FB	Ave	4925 437821	8811 664475	18327 923234	44177 1762483	80816	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexane	CBNZd5	Ave	6444 615461	10339 943027	22034 1256761	57077 2422586	113050	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl acetate	FB	Ave	22817 2087589	40959 3192999	82655 3790752	212165 7388768	425278	1.00 100	2.00 150	4.00 200	10.0 400	20.0
1,1-Dichloroethane	FB	Ave	7761 755665	14977 1146511	30992 1621657	79218 3067404	154945	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Butanone (MEK)	FB	Lin2	29364 1929594	45880 2869662	82065 3557774	197920 7432840	396224	2.00 200	4.00 300	8.00 400	20.0 800	40.0
cis-1,2-Dichloroethene	FB	Ave	4855 483556	10171 738970	19161 1016430	49128 1966459	93809	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2,2-Dichloropropane	FB	Ave	8052 688917	14183 1082809	28297 1419683	69552 2678838	132551	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butyl Alcohol	FB	Ave	24896 2837097	50682 4214640	96993 4783948	262137 11008068	563627	12.0 1200	24.0 1800	48.0 2400	120 4800	240
Chlorobromomethane	FB	Ave	2281 201431	4373 297612	8342 394423	20814 816712	40878	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Tetrahydrofuran	FB	Ave	6591 615535	13532 918161	24597 1149512	61414 2498283	123304	1.00 100	2.00 150	4.00 200	10.0 400	20.0
Chloroform	FB	Ave	8067 773177	16019 1159611	29999 1619431	75477 3107447	150063	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1-Trichloroethane	FB	Ave	8156 678912	12480 1023642	27512 1421696	66929 2723874	128907	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexane	FB	Ave	8062 800524	14379 1220750	31206 1624181	75947 3187873	147555	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloropropene	FB	Ave	6411 647120	11896 993131	25689 1350362	61144 2608699	121985	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 | Calibration End Date: 04/10/2023 17:06 | Calibration ID: 79112

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon tetrachloride	FB	Ave	5619 574281	10561 860640	21888 1177767	54752 2293812	103868	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isobutyl alcohol	FB	Ave	10376 1117872	20888 1641710	38995 1898371	103647 4359656	222339	12.5 1250	25.0 1875	50.0 2500	125 5000	250
Benzene	FB	Ave	19819 1848751	36875 2804549	73120 3809051	184651 7293952	358852	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloroethane	FB	Ave	7386 601828	13828 909894	25101 1256714	61417 2434553	121554	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Heptane	FB	Lin2	10012 505375	15483 786579	27036 1020508	53404 2006861	99912	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichloroethene	CBNZd5	Ave	4799 458294	9281 702241	18318 981247	45216 1894798	87325	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Pentanone	FB	Ave	24668 2327869	45958 3464858	87185 4245270	229943 8859570	469361	1.60 160	3.20 240	6.40 320	16.0 640	32.0
Methylcyclohexane	FB	Ave	6325 599570	11616 903906	22686 1189691	55627 2362832	107420	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloropropane	FB	Ave	5068 487562	9677 737033	18575 1024573	48005 1989891	94148	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dioxane	FB	Ave	3065 331830	5722 489213	11579 616102	30869 1273663	65766	10.0 1000	20.0 1500	40.0 2000	100 4000	200
Dibromomethane	FB	Ave	3242 285783	5667 423763	11895 596975	29046 1017313	57776	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorobromomethane	FB	Ave	5636 595812	11406 899551	22629 1248581	58236 2451768	115185	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Ave	4136 367348	7642 558950	14386 757004	42048 1488458	83420	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,3-Dichloropropene	CBNZd5	Ave	7722 767771	15250 1171338	28864 1598111	76778 3093029	150559	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	29222 3084215	60173 4609355	117109 5814559	309355 11228696	632078	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Toluene	FB	Ave	20176 1959040	38139 2929876	77790 3972850	189784 7576574	377045	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,3-Dichloropropene	FB	Ave	7329 740528	14746 1118470	28184 1520361	72518 2983295	144135	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl methacrylate	CBNZd5	Ave	7024 754254	14955 1150811	28395 1552991	72503 3076482	150739	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloroethane	FB	Ave	5213 417531	7611 631783	16637 868995	41007 1708548	84266	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 Calibration End Date: 04/10/2023 17:06 Calibration ID: 79112

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Tetrachloroethene	CBNZd5	Ave	3222	5909	11954	30347	59656	0.500	1.00	2.00	5.00	10.0
			322030	487082	660822	1303364		50.0	75.0	100	200	
1,3-Dichloropropane	CBNZd5	Ave	7410	14730	29490	72869	149569	0.500	1.00	2.00	5.00	10.0
			742425	1118178	1539310	3003657		50.0	75.0	100	200	
2-Hexanone	CBNZd5	Ave	21727	47839	92532	246300	514536	2.00	4.00	8.00	20.0	40.0
			2538928	3779770	4623817	9422729		200	300	400	800	
Chlorodibromomethane	CBNZd5	Ave	4252	8068	16554	41713	84996	0.500	1.00	2.00	5.00	10.0
			436012	661859	902070	1809329		50.0	75.0	100	200	
Ethylene Dibromide	CBNZd5	Ave	4675	9069	17056	43297	89166	0.500	1.00	2.00	5.00	10.0
			444736	676751	916698	1811318		50.0	75.0	100	200	
1-Chlorohexane	CBNZd5	Lin2	9633	13867	23268	51381	96474	0.400	0.800	1.60	4.00	8.00
			516381	775678	1030829	2025512		40.0	60.0	80.0	160	
Chlorobenzene	CBNZd5	Ave	11905	24514	47362	120621	230023	0.500	1.00	2.00	5.00	10.0
			1192932	1794578	2468507	4777926		50.0	75.0	100	200	
1,1,1,2-Tetrachloroethane	CBNZd5	Ave	3998	7931	15725	39332	77927	0.500	1.00	2.00	5.00	10.0
			409583	617435	853801	1656253		50.0	75.0	100	200	
Ethylbenzene	CBNZd5	Ave	6695	13585	26079	65194	127917	0.500	1.00	2.00	5.00	10.0
			673552	1013879	1370972	2680937		50.0	75.0	100	200	
m-Xylene & p-Xylene	CBNZd5	Ave	7743	16277	31835	80048	153504	0.500	1.00	2.00	5.00	10.0
			818958	1239275	1664853	3262525		50.0	75.0	100	200	
o-Xylene	CBNZd5	Ave	7990	15135	30658	77462	151968	0.500	1.00	2.00	5.00	10.0
			792003	1202506	1620262	3158320		50.0	75.0	100	200	
Styrene	CBNZd5	Ave	13060	26144	51265	126720	251788	0.500	1.00	2.00	5.00	10.0
			1325891	2007085	2686469	5268868		50.0	75.0	100	200	
Bromoform	CBNZd5	Ave	2804	5847	10569	28067	58652	0.500	1.00	2.00	5.00	10.0
			297097	453188	624312	1234007		50.0	75.0	100	200	
Isopropylbenzene	DCBd4	Ave	18696	36783	77105	188296	373967	0.500	1.00	2.00	5.00	10.0
			1975282	2987178	3928337	7536570		50.0	75.0	100	200	
Cyclohexanone	CBNZd5	Ave	18531	37337	69702	197543	428054	15.0	30.0	60.0	150	300

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 | Calibration End Date: 04/10/2023 17:06 | Calibration ID: 79112

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			2123967	3183508	3690406	7845509		1500	2250	3000	6000	
1,1,2,2-Tetrachloroethane	DCBd4	Ave	6498 698618	13363 1058280	26232 1371426	67719 2729501	139809	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromobenzene	DCBd4	Ave	4207 462761	8771 689029	17534 928303	45184 1816597	87832	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,4-Dichloro-2-butene	DCBd4	Ave	3159 238298	5577 363363	9270 463210	22538 942548	46927	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichloropropane	DCBd4	Ave	2495 216118	4234 328090	8557 436355	20896 866155	43723	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
N-Propylbenzene	DCBd4	Ave	4991 537638	10559 816661	20124 1077539	50644 2119339	100639	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chlorotoluene	DCBd4	Ave	4721 457400	8835 693485	17366 917982	44200 1804392	87155	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3,5-Trimethylbenzene	DCBd4	Ave	16051 1654384	31403 2492588	61811 3267104	160972 6255207	312624	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Chlorotoluene	DCBd4	Ave	4894 475244	9288 724331	18223 954986	45033 1894494	90345	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
tert-Butylbenzene	DCBd4	Ave	13635 1339227	25963 2000662	53464 2623932	128708 5041544	250292	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trimethylbenzene	DCBd4	Ave	17173 1693428	32739 2527263	65267 3309632	164253 6439819	318815	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butylbenzene	DCBd4	Ave	3700 387075	7317 594660	14897 759031	37064 1512696	71652	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichlorobenzene	DCBd4	Ave	7803 832080	16160 1256122	31121 1657461	79455 3283748	161575	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Isopropyltoluene	DCBd4	Ave	16445 1645287	31315 2456276	62424 3172730	152544 6166338	303193	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dichlorobenzene	DCBd4	Ave	8624 857080	17224 1285823	33543 1708997	82408 3342815	163890	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Butylbenzene	DCBd4	Ave	14826 1471635	27894 2226778	55074 2846768	138271 5666565	272833	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichlorobenzene	DCBd4	Ave	7599 787446	15278 1177787	30556 1591756	77330 3186061	153240	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromo-3-Chloropropane	DCBd4	Ave	1639 200400	3651 308628	7014 399161	18675 823506	39031	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trichlorobenzene	DCBd4	Ave	4504 434978	8495 663721	16474 880061	41067 1718554	83877	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexachlorobutadiene	DCBd4	Ave	1607 164733	3254 248376	6515 323028	15523 631952	31887	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Naphthalene	DCBd4	Ave	17460 1734275	34382 2640890	67750 3377954	171221 6621100	350876	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 13:03 Calibration End Date: 04/10/2023 17:06 Calibration ID: 79112

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trichlorobenzene	DCBd4	Ave	4002 389028	7846 587165	15217 761366	37374 1499005	74839	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	519663 529517	523472 521654	514800 547229	525017 532461	511983	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	594031 602615	604161 594785	592113 626803	599241 617397	603675	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	2095729 2154527	2115735 2135828	2077663 2185232	2126692 2208957	2081324	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	773034 818873	793702 808973	773340 823518	785362 825816	783598	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00472.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Apr-2023 13:03:30 ALS Bottle#: 2 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD005
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:06:57 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 10-Apr-2023 13:49:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2082534	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	484400	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	715522	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	519663	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	594031	50.0	50.0	
$ 6 Toluene-d8 (Surr)	98	6.011	6.012	-0.001	93	2095729	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	773034	50.0	49.5	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	5154	0.5000	0.5233	
11 Chloromethane	50	1.653	1.664	-0.011	94	4025	0.5000	1.08	
12 Vinyl chloride	62	1.727	1.727	0.000	98	5981	0.5000	0.5335	
14 Bromomethane	94	1.980	1.980	0.000	90	2620	0.5000	1.00	
15 Chloroethane	64	2.075	2.075	0.000	95	3769	0.5000	0.5648	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	96	8097	0.5000	0.5081	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	95	6766	0.5000	0.5022	
19 Ethyl ether	59	2.476	2.476	0.000	93	3933	0.5000	0.5161	
21 Acrolein	56	2.582	2.582	0.000	98	9871	4.94	4.54	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	72	2947	0.5000	0.5252	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	97	4410	0.5000	0.5573	
24 Acetone	43	2.687	2.677	0.010	99	25396	2.00	1.97	
26 Iodomethane	142	2.782	2.782	0.000	58	4501	0.5000	0.4351	
27 Carbon disulfide	76	2.835	2.835	0.000	100	16431	0.5000	0.6228	
29 Methyl acetate	43	2.909	2.898	0.011	97	11724	1.00	0.9616	
30 3-Chloro-1-propene	41	2.919	2.920	-0.001	76	7537	0.5000	0.5949	
31 Methylene Chloride	84	3.014	3.015	-0.001	92	8032	0.5000	0.4857	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	99	14051	5.00	4.93	
33 Acrylonitrile	53	3.173	3.173	0.000	99	33327	5.00	5.11	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	92	14603	0.5000	0.5223	
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	96	4925	0.5000	0.5602	
36 Hexane	57	3.405	3.394	0.011	83	6444	0.5000	0.5558	
38 Vinyl acetate	43	3.500	3.500	0.000	97	22817	1.00	1.12	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	95	7761	0.5000	0.5096	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	98	29364	2.00	2.05	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	4855	0.5000	0.5036	
48 2,2-Dichloropropane	77	3.933	3.933	0.000	89	8052	0.5000	0.5778	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	98	24896	12.0	11.5	
53 Chlorobromomethane	128	4.101	4.101	0.000	92	2281	0.5000	0.5578	
52 Tetrahydrofuran	42	4.101	4.101	0.000	89	6591	1.00	1.07	
54 Chloroform	83	4.154	4.154	0.000	93	8067	0.5000	0.5274	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	96	8156	0.5000	0.6020	
56 Cyclohexane	56	4.344	4.355	-0.011	86	8062	0.5000	0.5248	
57 1,1-Dichloropropene	75	4.407	4.408	-0.001	95	6411	0.5000	0.5112	
59 Carbon tetrachloride	117	4.407	4.408	-0.001	78	5619	0.5000	0.5126	
58 Isobutyl alcohol	41	4.429	4.429	0.000	97	10376	12.5	12.5	
60 Benzene	78	4.555	4.555	0.000	93	19819	0.5000	0.5413	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	96	7386	0.5000	0.5897	
66 n-Heptane	43	4.745	4.745	0.000	74	10012	0.5000	0.4860	
67 Trichloroethene	95	5.041	5.041	0.000	93	4799	0.5000	0.5272	
68 2-Pentanone	43	5.146	5.146	0.000	99	24668	1.60	1.75	
69 Methylcyclohexane	55	5.231	5.231	0.000	91	6325	0.5000	0.5498	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	91	5068	0.5000	0.5275	
72 1,4-Dioxane	88	5.294	5.294	0.000	29	3065	10.0	10.0	
73 Dibromomethane	93	5.315	5.315	0.000	86	3242	0.5000	0.5686	
74 Dichlorobromomethane	83	5.442	5.442	0.000	97	5636	0.5000	0.4874	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	87	4136	0.5000	0.5426	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	98	7722	0.5000	0.5142	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	29222	2.00	1.98	
79 Toluene	91	6.064	6.064	0.000	99	20176	0.5000	0.5288	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	90	7329	0.5000	0.5069	
81 Ethyl methacrylate	69	6.275	6.275	0.000	83	7024	0.5000	0.4812	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	90	5213	0.5000	0.6190	
83 Tetrachloroethene	164	6.507	6.508	-0.001	90	3222	0.5000	0.5247	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	89	7410	0.5000	0.5079	
85 2-Hexanone	43	6.592	6.581	0.011	94	21727	2.00	1.84	
86 Chlorodibromomethane	129	6.750	6.750	0.000	87	4252	0.5000	0.5054	
88 Ethylene Dibromide	107	6.866	6.866	0.000	96	4675	0.5000	0.5323	
89 1-Chlorohexane	91	7.267	7.267	0.000	45	9633	0.4000	0.4168	
90 Chlorobenzene	112	7.299	7.299	0.000	95	11905	0.5000	0.5074	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	92	3998	0.5000	0.5053	
92 Ethylbenzene	106	7.383	7.383	0.000	98	6695	0.5000	0.5127	
93 m-Xylene & p-Xylene	106	7.499	7.500	-0.001	0	7743	0.5000	0.4909	
94 o-Xylene	106	7.858	7.848	0.010	97	7990	0.5000	0.5205	
95 Styrene	104	7.869	7.869	0.000	94	13060	0.5000	0.5107	
96 Bromoform	173	8.048	8.048	0.000	92	2804	0.5000	0.4898	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	18696	0.5000	0.5004	
99 Cyclohexanone	55	8.280	8.280	0.000	90	18531	15.0	14.5	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	6498	0.5000	0.4888	
101 Bromobenzene	156	8.502	8.502	0.000	95	4207	0.5000	0.4809	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	84	3159	0.5000	0.6504	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	81	2495	0.5000	0.5822	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	4991	0.5000	0.4901	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	4721	0.5000	0.5360	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	16051	0.5000	0.5130	
107 4-Chlorotoluene	126	8.797	8.798	-0.001	96	4894	0.5000	0.5339	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	13635	0.5000	0.5328	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.000	97	17173	0.5000	0.5319	
110 sec-Butylbenzene	134	9.283	9.294	-0.011	94	3700	0.5000	0.5044	
111 1,3-Dichlorobenzene	146	9.410	9.410	0.000	94	7803	0.5000	0.4931	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	96	16445	0.5000	0.5324	
113 1,4-Dichlorobenzene	146	9.515	9.515	0.000	87	8624	0.5000	0.5218	
115 n-Butylbenzene	91	9.842	9.842	0.000	97	14826	0.5000	0.5335	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	94	7599	0.5000	0.5005	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	82	1639	0.5000	0.4404	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	91	4504	0.5000	0.5367	
120 Hexachlorobutadiene	225	11.605	11.605	0.000	84	1607	0.5000	0.5100	
121 Naphthalene	128	11.721	11.721	0.000	98	17460	0.5000	0.5197	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	94	4002	0.5000	0.5330	
S 139 1,2-Dichloroethene, Total (URS)	96				0		1.00	1.06	
S 144 1,2-Dichloroethene, Total	1				0		1.00	1.06	
S 145 1,3-Dichloropropene, Total	1				0		1.00	1.02	
S 146 Total BTEX	1				0			2.59	
S 143 Xylenes, Total (URS)	1				0		1.00	1.01	
S 140 Trihalomethanes, Total	1				0		2.00	2.01	
S 142 Xylenes, Total	106				0		1.00	1.01	

QC Flag Legend

Processing Flags

Reagents:

Cal Dil Std_00161	Amount Added:	5.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

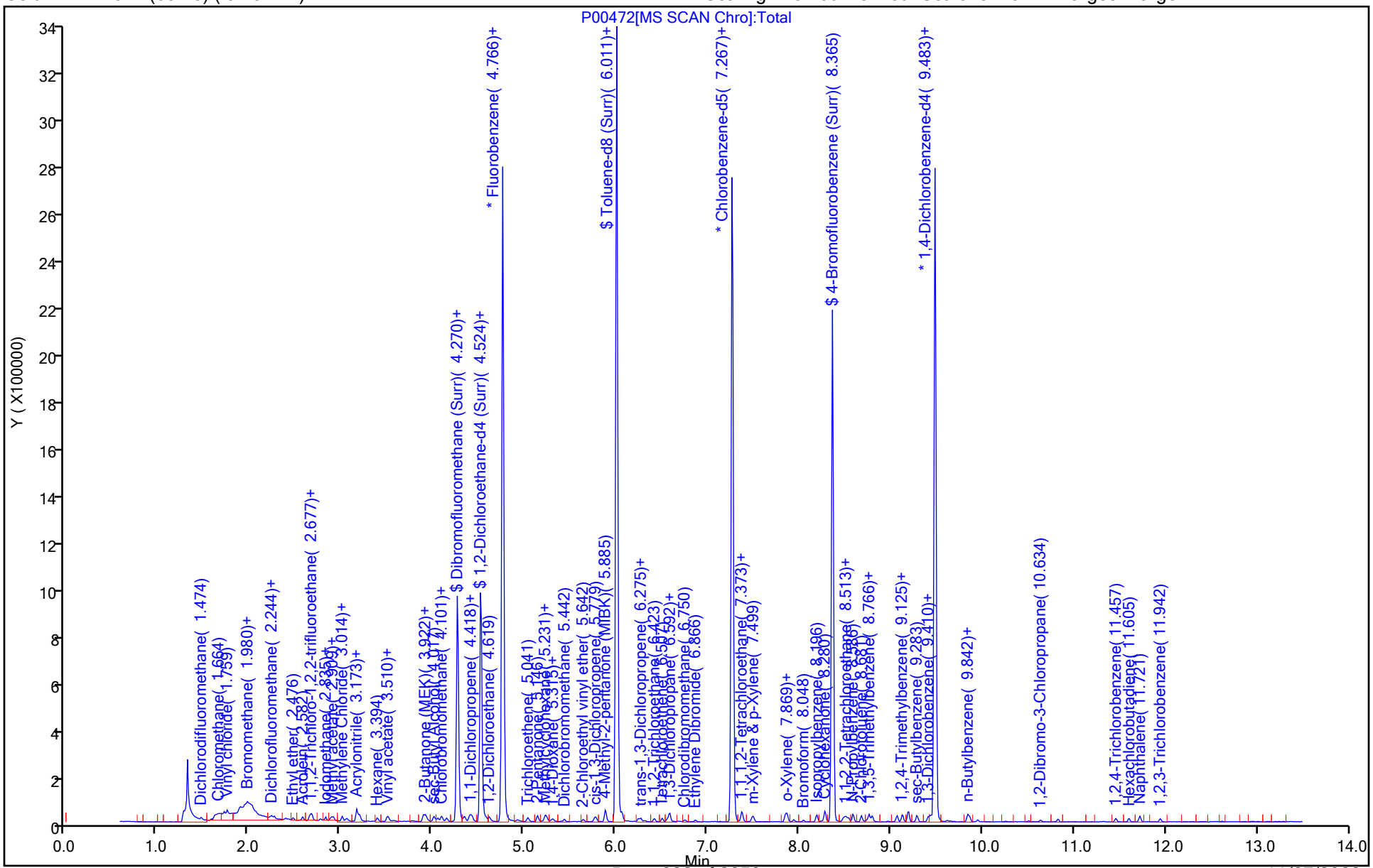
Report Date: 11-Apr-2023 18:06:58 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00472.D

Injection Date:	10-Apr-2023 13:03:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD005			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00473.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Apr-2023 13:26:30 ALS Bottle#: 3 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD010
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:06:59 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 10-Apr-2023 14:07:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2123474	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	495079	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	729147	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	523472	50.0	49.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.524	-0.001	0	604161	50.0	49.9	
$ 6 Toluene-d8 (Surr)	98	6.011	6.012	-0.001	93	2115735	50.0	49.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	793702	50.0	49.9	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	98	7346	1.00	0.7314	
11 Chloromethane	50	1.664	1.664	0.000	97	5545	1.00	1.25	
12 Vinyl chloride	62	1.727	1.727	0.000	96	9901	1.00	0.8661	
14 Bromomethane	94	1.991	1.980	0.011	70	3145	1.00	1.17	M
15 Chloroethane	64	2.075	2.075	0.000	99	6649	1.00	0.9771	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	95	15627	1.00	0.9617	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	97	12593	1.00	0.9166	
19 Ethyl ether	59	2.487	2.476	0.011	90	8084	1.00	1.04	
21 Acrolein	56	2.582	2.582	0.000	99	20314	9.88	9.17	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	73	5304	1.00	0.9270	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	98	8126	1.00	1.01	
24 Acetone	43	2.687	2.677	0.010	100	37791	4.00	4.02	
26 Iodomethane	142	2.782	2.782	0.000	98	4787	1.00	0.4897	
27 Carbon disulfide	76	2.835	2.835	0.000	99	28075	1.00	1.04	
29 Methyl acetate	43	2.909	2.898	0.011	100	26275	2.00	2.11	
30 3-Chloro-1-propene	41	2.919	2.920	-0.001	84	15877	1.00	1.23	
31 Methylene Chloride	84	3.014	3.015	-0.001	90	13410	1.00	1.06	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	29444	10.0	10.1	
33 Acrylonitrile	53	3.173	3.173	0.000	100	66577	10.0	10.0	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	94	27980	1.00	0.9814	
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	99	8811	1.00	0.9829	
36 Hexane	57	3.405	3.394	0.011	89	10339	1.00	0.8725	
38 Vinyl acetate	43	3.500	3.500	0.000	97	40959	2.00	1.97	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	96	14977	1.00	0.9644	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	99	45880	4.00	3.77	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	81	10171	1.00	1.03	
48 2,2-Dichloropropane	77	3.932	3.933	-0.001	88	14183	1.00	1.00	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	98	50682	24.0	23.0	
53 Chlorobromomethane	128	4.101	4.101	0.000	97	4373	1.00	1.05	
52 Tetrahydrofuran	42	4.101	4.101	0.000	91	13532	2.00	2.16	
54 Chloroform	83	4.154	4.154	0.000	93	16019	1.00	1.03	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	12480	1.00	0.9034	
56 Cyclohexane	56	4.355	4.355	0.000	88	14379	1.00	0.9180	
57 1,1-Dichloropropene	75	4.407	4.408	-0.001	96	11896	1.00	0.9304	
59 Carbon tetrachloride	117	4.407	4.408	-0.001	84	10561	1.00	0.9449	
58 Isobutyl alcohol	41	4.428	4.429	-0.001	95	20888	25.0	24.8	
60 Benzene	78	4.555	4.555	0.000	93	36875	1.00	0.9878	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	96	13828	1.00	1.08	
66 n-Heptane	43	4.745	4.745	0.000	86	15483	1.00	1.01	
67 Trichloroethene	95	5.041	5.041	0.000	95	9281	1.00	1.00	
68 2-Pentanone	43	5.146	5.146	0.000	98	45958	3.20	3.21	
69 Methylcyclohexane	55	5.231	5.231	-0.001	90	11616	1.00	0.99	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	9677	1.00	0.9879	
72 1,4-Dioxane	88	5.294	5.294	0.000	93	5722	20.0	18.3	
73 Dibromomethane	93	5.315	5.315	0.000	96	5667	1.00	0.9748	
74 Dichlorobromomethane	83	5.442	5.442	0.000	98	11406	1.00	0.9673	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	90	7642	1.00	0.9833	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	96	15250	1.00	0.99	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	60173	4.00	4.00	
79 Toluene	91	6.064	6.064	0.000	98	38139	1.00	0.9804	
80 trans-1,3-Dichloropropene	75	6.254	6.244	0.010	93	14746	1.00	1.00	
81 Ethyl methacrylate	69	6.275	6.275	0.000	88	14955	1.00	1.00	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	91	7611	1.00	0.8864	
83 Tetrachloroethene	164	6.507	6.508	-0.001	94	5909	1.00	0.9415	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	89	14730	1.00	0.9879	
85 2-Hexanone	43	6.581	6.581	0.000	94	47839	4.00	3.97	
86 Chlorodibromomethane	129	6.750	6.750	0.000	91	8068	1.00	0.9383	
88 Ethylene Dibromide	107	6.866	6.866	0.000	95	9069	1.00	1.01	
89 1-Chlorohexane	91	7.267	7.267	0.000	33	13867	0.8000	0.7463	
90 Chlorobenzene	112	7.299	7.299	0.000	94	24514	1.00	1.02	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	93	7931	1.00	0.9808	
92 Ethylbenzene	106	7.383	7.383	0.000	98	13585	1.00	1.02	
93 m-Xylene & p-Xylene	106	7.499	7.500	-0.001	0	16277	1.00	1.01	
94 o-Xylene	106	7.848	7.848	0.000	97	15135	1.00	0.9647	
95 Styrene	104	7.869	7.869	0.000	94	26144	1.00	1.00	
96 Bromoform	173	8.048	8.048	0.000	93	5847	1.00	1.00	
97 Isopropylbenzene	105	8.196	8.196	0.000	97	36783	1.00	0.9662	
99 Cyclohexanone	55	8.280	8.280	0.000	90	37337	30.0	28.5	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	13363	1.00	0.9863	
101 Bromobenzene	156	8.502	8.502	0.000	95	8771	1.00	0.9840	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	82	5577	1.00	1.13	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	83	4234	1.00	0.9695	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	10559	1.00	1.02	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	8835	1.00	0.9844	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	92	31403	1.00	0.9850	
107 4-Chlorotoluene	126	8.797	8.798	-0.001	97	9288	1.00	0.99	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	25963	1.00	1.00	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.000	97	32739	1.00	1.00	
110 sec-Butylbenzene	134	9.283	9.294	-0.011	94	7317	1.00	0.9788	
111 1,3-Dichlorobenzene	146	9.409	9.410	-0.001	95	16160	1.00	1.00	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	97	31315	1.00	0.99	
113 1,4-Dichlorobenzene	146	9.504	9.515	-0.011	88	17224	1.00	1.02	
115 n-Butylbenzene	91	9.842	9.842	0.000	97	27894	1.00	0.9850	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	95	15278	1.00	0.9874	
117 1,2-Dibromo-3-Chloropropane	157	10.644	10.634	0.010	81	3651	1.00	0.9626	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	93	8495	1.00	0.99	
120 Hexachlorobutadiene	225	11.604	11.605	-0.001	89	3254	1.00	1.01	
121 Naphthalene	128	11.721	11.721	0.000	97	34382	1.00	1.00	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	7846	1.00	1.03	
S 139 1,2-Dichloroethene, Total (URS)	96				0		2.00	2.02	
S 144 1,2-Dichloroethene, Total	1				0		2.00	2.02	
S 145 1,3-Dichloropropene, Total	1				0		2.00	1.99	
S 146 Total BTEX	1				0			4.96	
S 143 Xylenes, Total (URS)	1				0		2.00	1.97	
S 140 Trihalomethanes, Total	1				0		4.00	3.93	
S 142 Xylenes, Total	106				0		2.00	1.97	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

Cal Dil Std_00161	Amount Added:	10.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

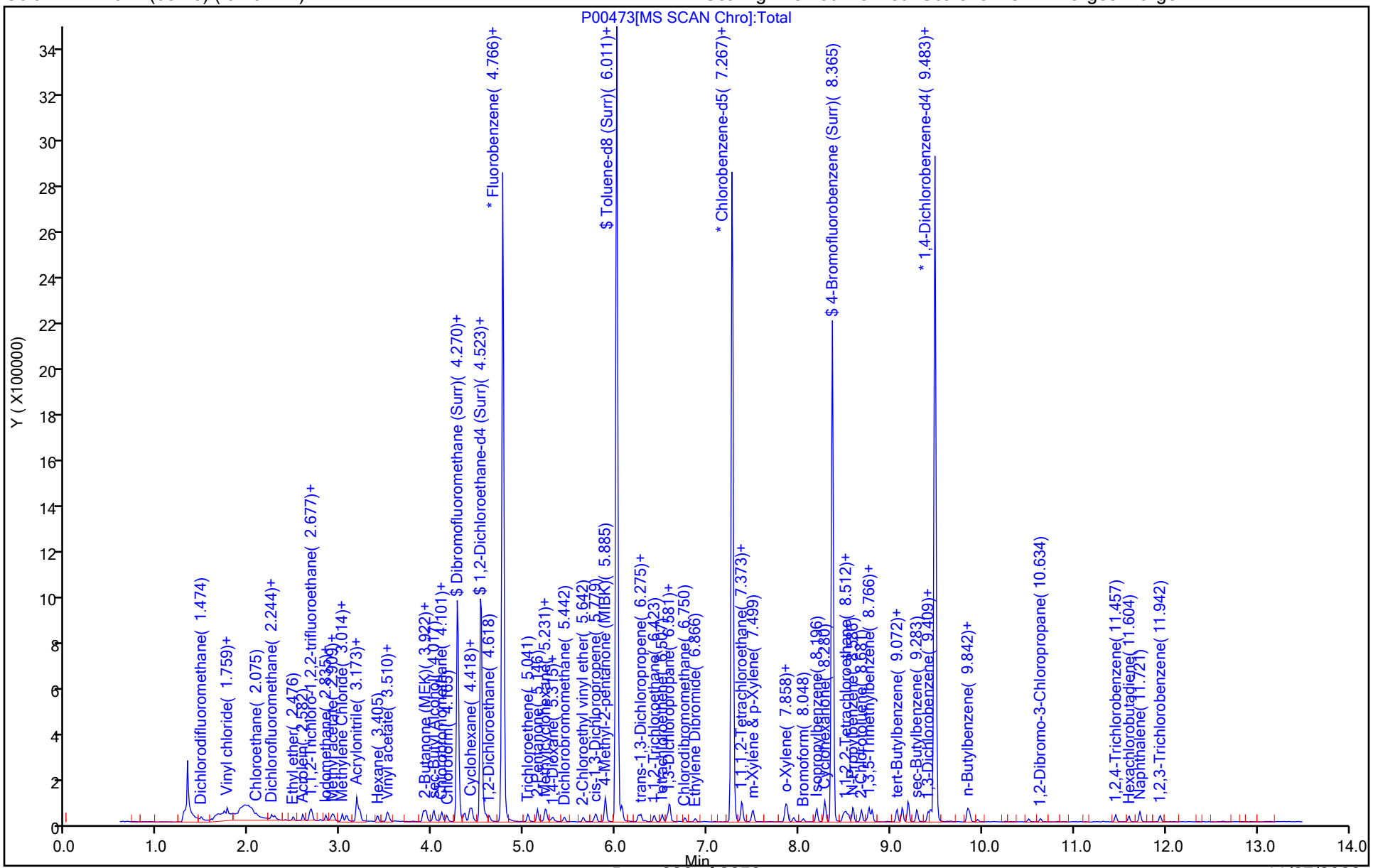
Report Date: 11-Apr-2023 18:07:00 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00473.D

Injection Date:	10-Apr-2023 13:26:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD010			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

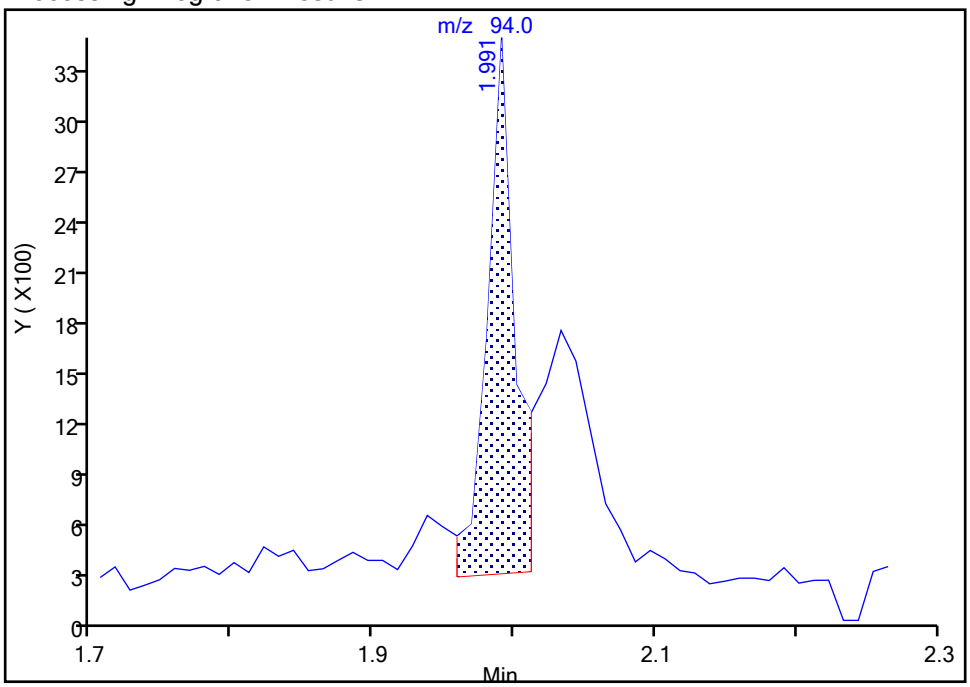
Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00473.D
Injection Date: 10-Apr-2023 13:26:30 Instrument ID: VMS_P
Lims ID: STD010
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 3 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Signal: 1

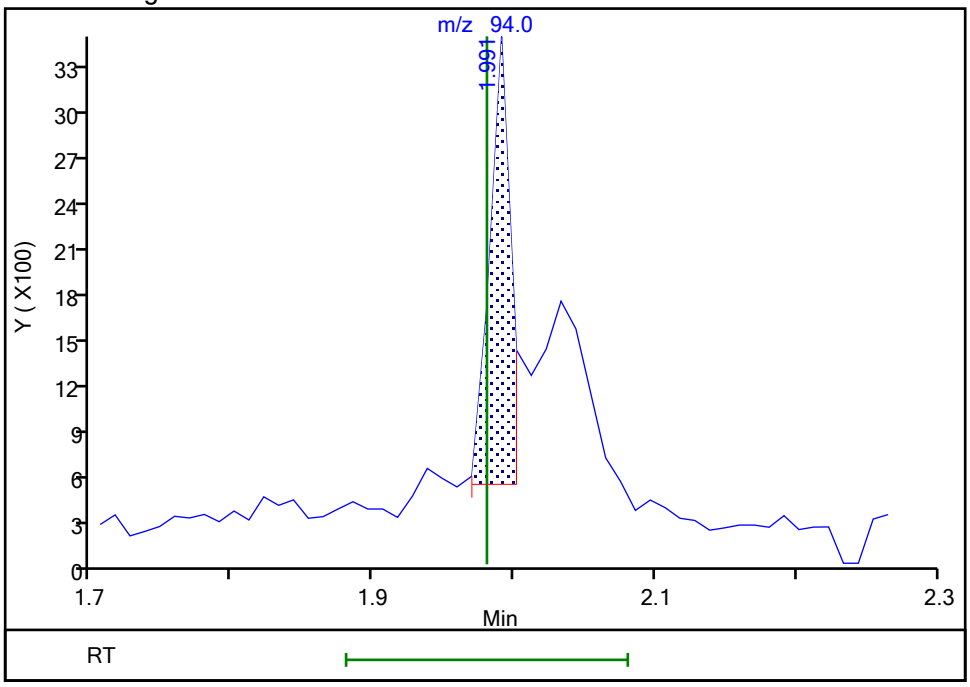
Processing Integration Results

RT: 1.99
Area: 4482
Amount: 1.453226
Amount Units: ug/l



Manual Integration Results

RT: 1.99
Area: 3145
Amount: 1.174406
Amount Units: ug/l



Reviewer: RWB2, 10-Apr-2023 18:25:25
Audit Action: Manually Integrated Audit Reason: Split Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00474.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Apr-2023 13:48:30 ALS Bottle#: 4 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD020
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:01 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 10-Apr-2023 15:15:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2069084	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.278	7.267	0.011	94	482047	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	717132	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	93	514800	50.0	50.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	592113	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.011	6.012	-0.001	93	2077663	50.0	50.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	773340	50.0	49.5	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	16929	2.00	1.73	
11 Chloromethane	50	1.664	1.664	0.000	98	12065	2.00	2.01	
12 Vinyl chloride	62	1.727	1.727	0.000	97	21187	2.00	1.90	
14 Bromomethane	94	1.991	1.980	0.011	85	5424	2.00	2.08	M
15 Chloroethane	64	2.075	2.075	0.000	99	13152	2.00	1.98	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	96	33403	2.00	2.11	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	98	26643	2.00	1.99	
19 Ethyl ether	59	2.476	2.476	0.000	91	14260	2.00	1.88	
21 Acrolein	56	2.582	2.582	0.000	100	41065	19.8	19.0	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	73	11531	2.00	2.07	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	98	16615	2.00	2.11	
24 Acetone	43	2.687	2.677	0.010	100	61169	8.00	8.31	
26 Iodomethane	142	2.782	2.782	0.000	97	6638	2.00	1.05	
27 Carbon disulfide	76	2.835	2.835	0.000	99	52729	2.00	2.01	
29 Methyl acetate	43	2.909	2.898	0.011	97	47237	4.00	3.90	
30 3-Chloro-1-propene	41	2.919	2.920	-0.001	92	27906	2.00	2.22	
31 Methylene Chloride	84	3.014	3.015	-0.001	92	21671	2.00	2.02	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	53876	20.0	19.0	
33 Acrylonitrile	53	3.173	3.173	0.000	100	129550	20.0	20.0	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	94	54887	2.00	1.98	
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	99	18327	2.00	2.10	
36 Hexane	57	3.405	3.394	0.011	91	22034	2.00	1.91	
38 Vinyl acetate	43	3.500	3.500	0.000	97	82655	4.00	4.09	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	96	30992	2.00	2.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	98	82065	8.00	7.90	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	19161	2.00	2.00	
48 2,2-Dichloropropane	77	3.933	3.933	0.000	87	28297	2.00	2.04	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	96993	48.0	45.2	
53 Chlorobromomethane	128	4.101	4.101	0.000	95	8342	2.00	2.05	
52 Tetrahydrofuran	42	4.101	4.101	0.000	85	24597	4.00	4.04	
54 Chloroform	83	4.154	4.154	0.000	92	29999	2.00	1.97	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	27512	2.00	2.04	
56 Cyclohexane	56	4.355	4.355	0.000	89	31206	2.00	2.04	
57 1,1-Dichloropropene	75	4.407	4.408	-0.001	97	25689	2.00	2.06	
59 Carbon tetrachloride	117	4.407	4.408	-0.001	93	21888	2.00	2.01	
58 Isobutyl alcohol	41	4.429	4.429	0.000	94	38995	50.0	47.4	
60 Benzene	78	4.555	4.555	0.000	95	73120	2.00	2.01	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	97	25101	2.00	2.02	
66 n-Heptane	43	4.745	4.745	0.000	90	27036	2.00	2.23	
67 Trichloroethene	95	5.041	5.041	0.000	97	18318	2.00	2.02	
68 2-Pentanone	43	5.146	5.146	0.000	98	87185	6.40	6.24	
69 Methylcyclohexane	55	5.231	5.231	0.000	92	22686	2.00	1.98	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	96	18575	2.00	1.95	
72 1,4-Dioxane	88	5.294	5.294	0.000	95	11579	40.0	38.0	
73 Dibromomethane	93	5.315	5.315	0.000	89	11895	2.00	2.10	
74 Dichlorobromomethane	83	5.442	5.442	0.000	98	22629	2.00	1.97	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	14386	2.00	1.90	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	97	28864	2.00	1.93	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	117109	8.00	7.99	
79 Toluene	91	6.064	6.064	0.000	98	77790	2.00	2.05	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	91	28184	2.00	1.96	
81 Ethyl methacrylate	69	6.275	6.275	0.000	90	28395	2.00	1.95	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	91	16637	2.00	1.99	
83 Tetrachloroethene	164	6.507	6.508	-0.001	93	11954	2.00	1.96	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	88	29490	2.00	2.03	
85 2-Hexanone	43	6.581	6.581	0.000	95	92532	8.00	7.89	
86 Chlorodibromomethane	129	6.761	6.750	0.011	89	16554	2.00	1.98	
88 Ethylene Dibromide	107	6.866	6.866	0.000	100	17056	2.00	1.95	
89 1-Chlorohexane	91	7.267	7.267	0.000	66	23268	1.60	1.57	
90 Chlorobenzene	112	7.299	7.299	0.000	96	47362	2.00	2.03	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	92	15725	2.00	2.00	
92 Ethylbenzene	106	7.383	7.383	0.000	99	26079	2.00	2.01	
93 m-Xylene & p-Xylene	106	7.499	7.500	-0.001	0	31835	2.00	2.03	
94 o-Xylene	106	7.848	7.848	0.000	98	30658	2.00	2.01	
95 Styrene	104	7.869	7.869	0.000	94	51265	2.00	2.01	
96 Bromoform	173	8.048	8.048	0.000	92	10569	2.00	1.86	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	77105	2.00	2.06	
99 Cyclohexanone	55	8.280	8.280	0.000	90	69702	60.0	54.7	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	26232	2.00	1.97	
101 Bromobenzene	156	8.502	8.502	0.000	94	17534	2.00	2.00	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	88	9270	2.00	1.90	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	80	8557	2.00	1.99	
104 N-Propylbenzene	120	8.597	8.586	0.011	99	20124	2.00	1.97	
105 2-Chlorotoluene	126	8.681	8.681	0.000	95	17366	2.00	1.97	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	61811	2.00	1.97	
107 4-Chlorotoluene	126	8.797	8.798	-0.001	98	18223	2.00	1.98	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	93	53464	2.00	2.08	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.000	97	65267	2.00	2.02	
110 sec-Butylbenzene	134	9.293	9.294	-0.001	94	14897	2.00	2.03	
111 1,3-Dichlorobenzene	146	9.410	9.410	0.000	96	31121	2.00	1.96	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	97	62424	2.00	2.02	
113 1,4-Dichlorobenzene	146	9.515	9.515	0.000	93	33543	2.00	2.02	
115 n-Butylbenzene	91	9.842	9.842	0.000	98	55074	2.00	1.98	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	97	30556	2.00	2.01	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	80	7014	2.00	1.88	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	16474	2.00	1.96	
120 Hexachlorobutadiene	225	11.605	11.605	-0.001	95	6515	2.00	2.06	
121 Naphthalene	128	11.721	11.721	0.000	97	67750	2.00	2.01	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	94	15217	2.00	2.02	
S 139 1,2-Dichloroethene, Total (URS)	96				0		4.00	4.10	
S 144 1,2-Dichloroethene, Total	1				0		4.00	4.10	
S 145 1,3-Dichloropropene, Total	1				0		4.00	3.89	
S 146 Total BTEX	1				0			10.1	
S 143 Xylenes, Total (URS)	1				0		4.00	4.04	
S 140 Trihalomethanes, Total	1				0		8.00	7.78	
S 142 Xylenes, Total	106				0		4.00	4.04	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

Cal Dil Std_00161	Amount Added: 20.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

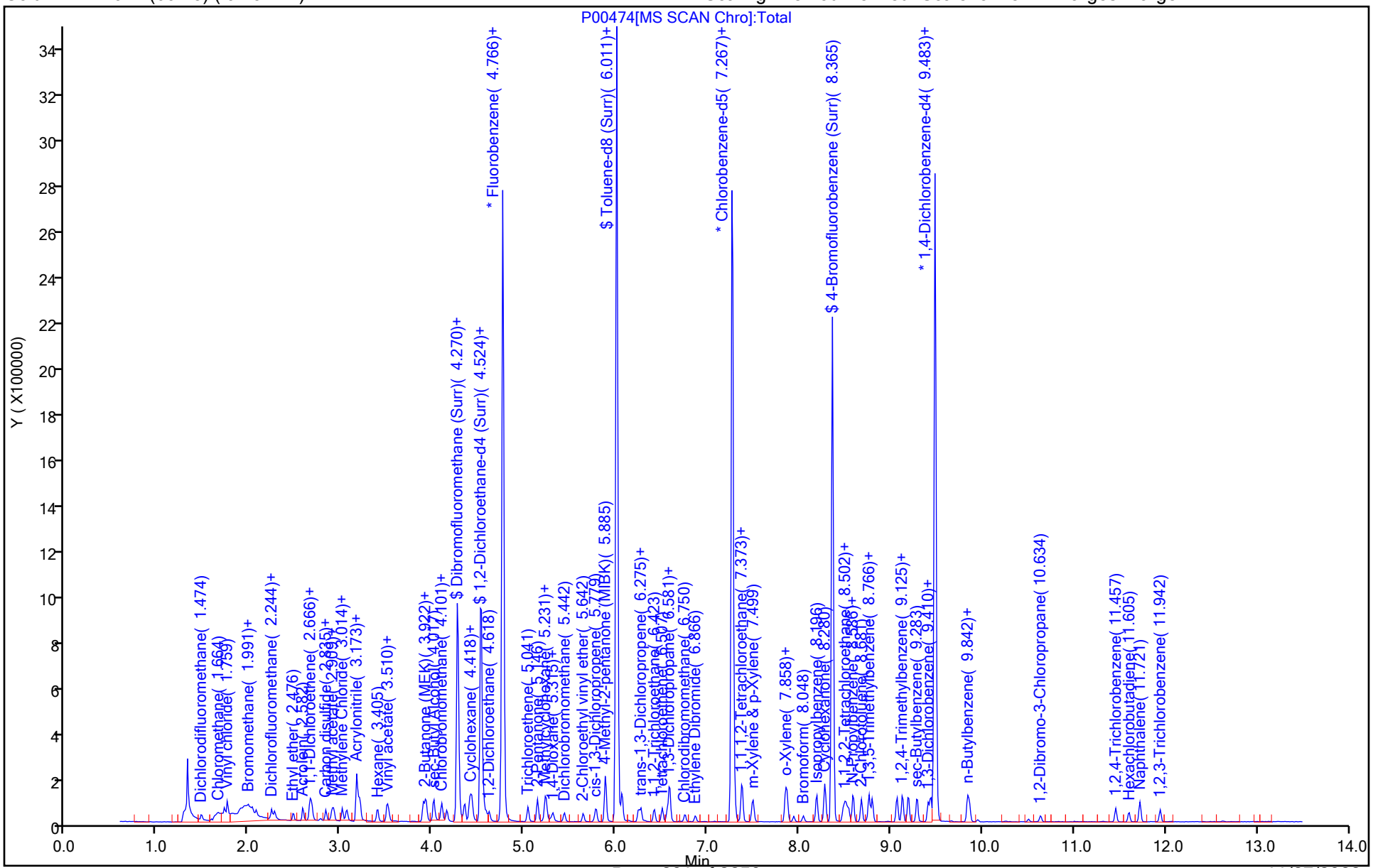
Report Date: 11-Apr-2023 18:07:02 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00474.D

Injection Date:	10-Apr-2023 13:48:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD020			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

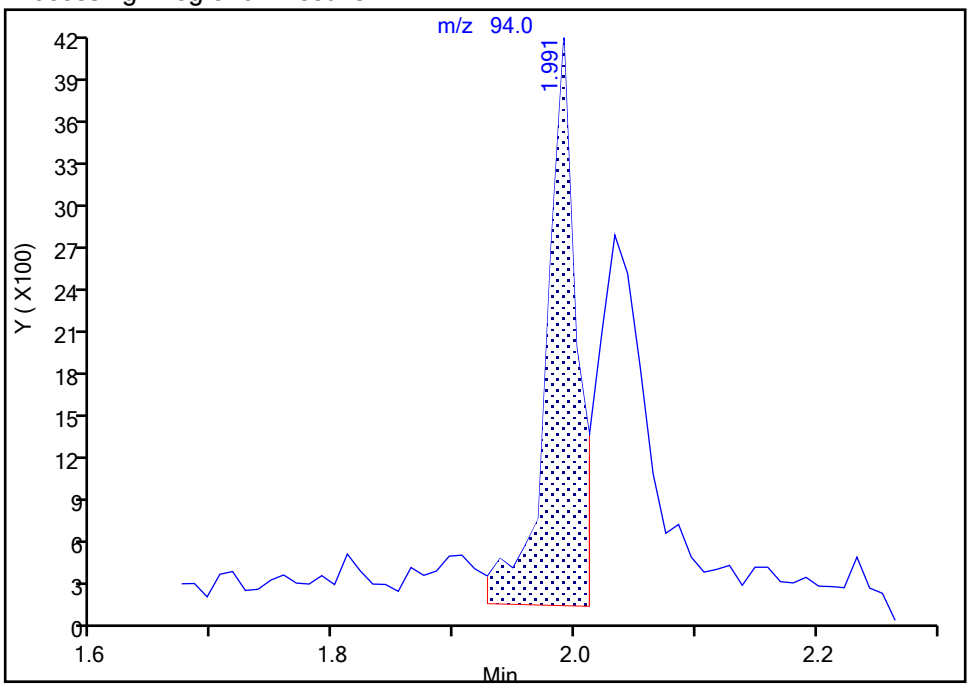
Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00474.D
Injection Date: 10-Apr-2023 13:48:30 Instrument ID: VMS_P
Lims ID: STD020
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 4 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Signal: 1

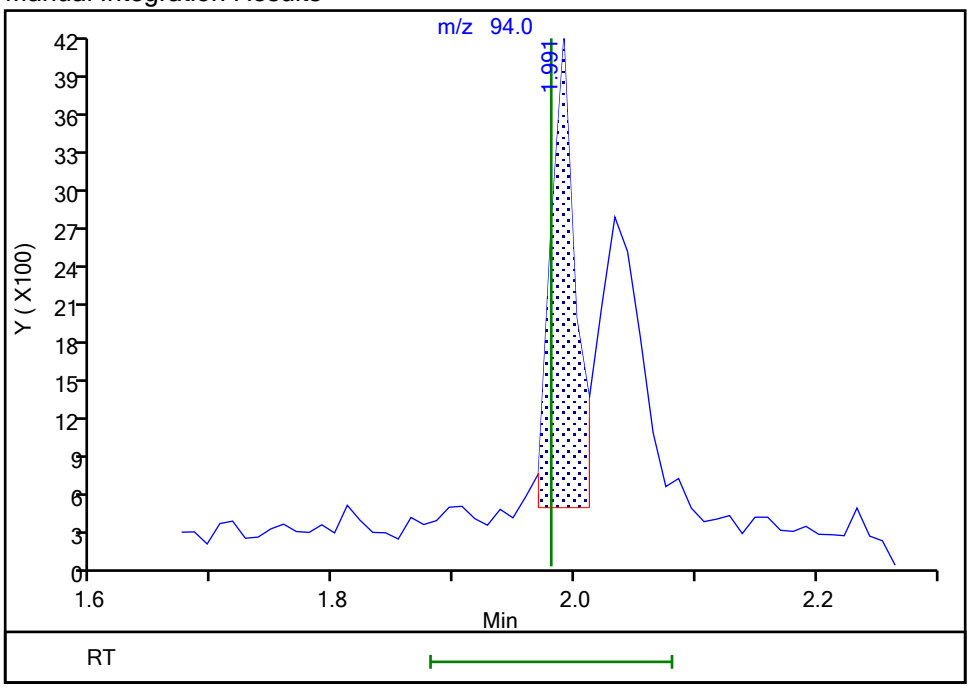
Processing Integration Results

RT: 1.99
Area: 7321
Amount: 2.331027
Amount Units: ug/l



Manual Integration Results

RT: 1.99
Area: 5424
Amount: 2.078673
Amount Units: ug/l



Reviewer: RWB2, 10-Apr-2023 18:24:45
Audit Action: Manually Integrated Audit Reason: Split Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00476.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Apr-2023 14:34:30 ALS Bottle#: 6 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:05 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 10-Apr-2023 15:48:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2065930	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	483573	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	714716	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	93	511983	50.0	50.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	603675	50.0	51.2	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	2081324	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	783598	50.0	50.3	
10 Dichlorodifluoromethane	85	1.484	1.484	0.000	99	104940	10.0	10.7	
11 Chloromethane	50	1.664	1.664	0.000	99	71596	10.0	8.88	
12 Vinyl chloride	62	1.727	1.727	0.000	98	115365	10.0	10.4	
14 Bromomethane	94	1.980	1.980	0.000	92	32217	10.0	12.4	M
15 Chloroethane	64	2.075	2.075	0.000	99	71534	10.0	10.8	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	162012	10.0	10.2	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	99	135922	10.0	10.2	
19 Ethyl ether	59	2.476	2.476	0.000	90	76519	10.0	10.1	
21 Acrolein	56	2.582	2.582	0.000	99	223650	98.8	103.8	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	72	52871	10.0	9.50	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	97	73138	10.0	9.32	
24 Acetone	43	2.687	2.687	0.000	100	251615	40.0	42.0	
26 Iodomethane	142	2.782	2.782	0.000	98	44194	10.0	10.5	
27 Carbon disulfide	76	2.835	2.835	0.000	99	245343	10.0	9.37	
29 Methyl acetate	43	2.909	2.909	0.000	97	253687	20.0	21.0	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	93	120829	10.0	9.61	
31 Methylene Chloride	84	3.014	3.014	0.000	91	90812	10.0	9.79	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	309510	100.0	109.4	
33 Acrylonitrile	53	3.173	3.173	0.000	99	692183	100.0	107.0	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	94	281667	10.0	10.2	
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	97	80816	10.0	9.27	
36 Hexane	57	3.394	3.394	0.000	89	113050	10.0	9.77	
38 Vinyl acetate	43	3.500	3.500	0.000	97	425278	20.0	21.1	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	96	154945	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	98	396224	40.0	42.7	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	93809	10.0	9.81	
48 2,2-Dichloropropane	77	3.932	3.932	0.000	87	132551	10.0	9.59	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	563627	240.0	263.3	
53 Chlorobromomethane	128	4.101	4.101	0.000	96	40878	10.0	10.1	
52 Tetrahydrofuran	42	4.101	4.101	0.000	86	123304	20.0	20.3	
54 Chloroform	83	4.154	4.154	0.000	93	150063	10.0	9.89	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	128907	10.0	9.59	
56 Cyclohexane	56	4.355	4.355	0.000	88	147555	10.0	9.68	
57 1,1-Dichloropropene	75	4.407	4.407	0.000	97	121985	10.0	9.81	
59 Carbon tetrachloride	117	4.407	4.407	0.000	95	103868	10.0	9.55	
58 Isobutyl alcohol	41	4.428	4.428	0.000	95	222339	250.0	270.9	
60 Benzene	78	4.555	4.555	0.000	95	358852	10.0	9.88	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	97	121554	10.0	9.78	
66 n-Heptane	43	4.745	4.745	0.000	90	99912	10.0	9.66	
67 Trichloroethene	95	5.041	5.041	0.000	98	87325	10.0	9.61	
68 2-Pentanone	43	5.146	5.146	0.000	98	469361	32.0	33.6	
69 Methylcyclohexane	55	5.230	5.230	0.000	92	107420	10.0	9.41	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	94148	10.0	9.88	
72 1,4-Dioxane	88	5.294	5.294	0.000	94	65766	200.0	216.2	
73 Dibromomethane	93	5.315	5.315	0.000	92	57776	10.0	10.2	
74 Dichlorobromomethane	83	5.442	5.442	0.000	99	115185	10.0	10.0	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	83420	10.0	11.0	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	96	150559	10.0	10.0	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	632078	40.0	43.2	
79 Toluene	91	6.064	6.064	0.000	98	377045	10.0	9.96	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	92	144135	10.0	10.0	
81 Ethyl methacrylate	69	6.275	6.275	0.000	87	150739	10.0	10.3	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	90	84266	10.0	10.1	
83 Tetrachloroethene	164	6.507	6.507	0.000	94	59656	10.0	9.73	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	96	149569	10.0	10.3	
85 2-Hexanone	43	6.581	6.581	0.000	94	514536	40.0	43.7	
86 Chlorodibromomethane	129	6.750	6.750	0.000	90	84996	10.0	10.1	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	89166	10.0	10.2	
89 1-Chlorohexane	91	7.267	7.267	0.000	93	96474	8.00	7.70	
90 Chlorobenzene	112	7.299	7.299	0.000	96	230023	10.0	9.82	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	94	77927	10.0	9.87	
92 Ethylbenzene	106	7.383	7.383	0.000	98	127917	10.0	9.81	
93 m-Xylene & p-Xylene	106	7.499	7.499	0.000	0	153504	10.0	9.75	
94 o-Xylene	106	7.858	7.858	0.000	97	151968	10.0	9.92	
95 Styrene	104	7.869	7.869	0.000	94	251788	10.0	9.86	
96 Bromoform	173	8.048	8.048	0.000	94	58652	10.0	10.3	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	373967	10.0	10.0	
99 Cyclohexanone	55	8.280	8.280	0.000	90	428054	300.0	335.0	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	139809	10.0	10.5	
101 Bromobenzene	156	8.502	8.502	0.000	96	87832	10.0	10.1	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	84	46927	10.0	9.67	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	81	43723	10.0	10.2	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	100639	10.0	9.89	
105 2-Chlorotoluene	126	8.681	8.681	0.000	95	87155	10.0	9.91	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	312624	10.0	10.0	
107 4-Chlorotoluene	126	8.797	8.797	0.000	98	90345	10.0	9.87	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	250292	10.0	9.79	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.000	97	318815	10.0	9.89	
110 sec-Butylbenzene	134	9.293	9.293	0.000	94	71652	10.0	9.78	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	96	161575	10.0	10.2	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	97	303193	10.0	9.83	
113 1,4-Dichlorobenzene	146	9.515	9.515	0.000	93	163890	10.0	9.93	
115 n-Butylbenzene	91	9.842	9.842	0.000	98	272833	10.0	9.83	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	153240	10.0	10.1	
117 1,2-Dibromo-3-Chloropropane	157	10.644	10.644	0.000	85	39031	10.0	10.5	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	83877	10.0	10.0	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	96	31887	10.0	10.1	
121 Naphthalene	128	11.721	11.721	0.000	97	350876	10.0	10.5	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	74839	10.0	9.98	
S 139 1,2-Dichloroethene, Total (URS)	96				0		20.0	19.1	
S 144 1,2-Dichloroethene, Total	1				0		20.0	19.1	
S 145 1,3-Dichloropropene, Total	1				0		20.0	20.1	
S 146 Total BTEX	1				0			49.3	
S 143 Xylenes, Total (URS)	1				0		20.0	19.7	
S 140 Trihalomethanes, Total	1				0		40.0	40.3	
S 142 Xylenes, Total	106				0		20.0	19.7	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMain B_00082	Amount Added:	5.00	Units: uL		
MV-Gas B_00132	Amount Added:	2.00	Units: uL		
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent	

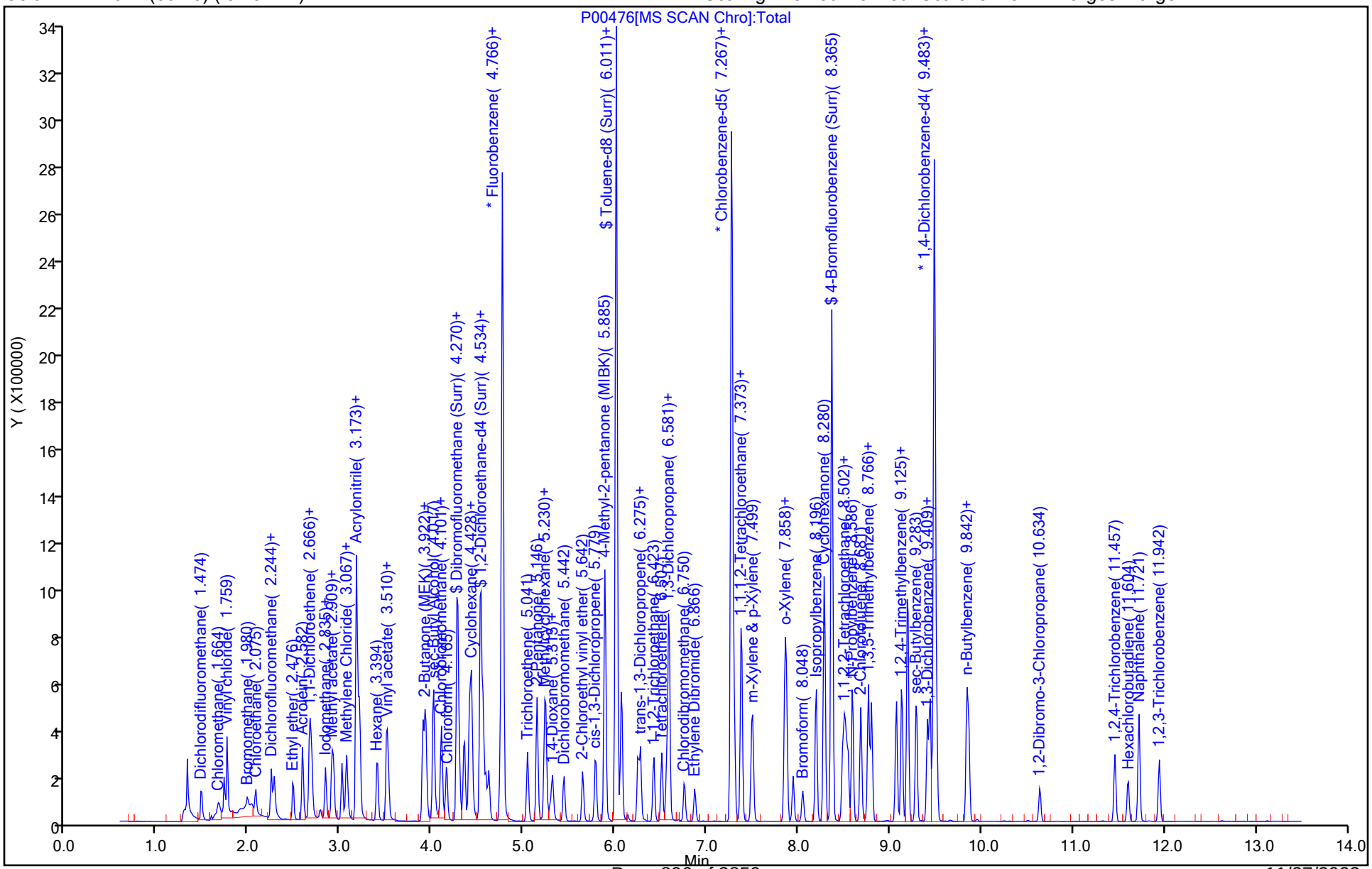
Report Date: 11-Apr-2023 18:07:06 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00476.D

Injection Date:	10-Apr-2023 14:34:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD10			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

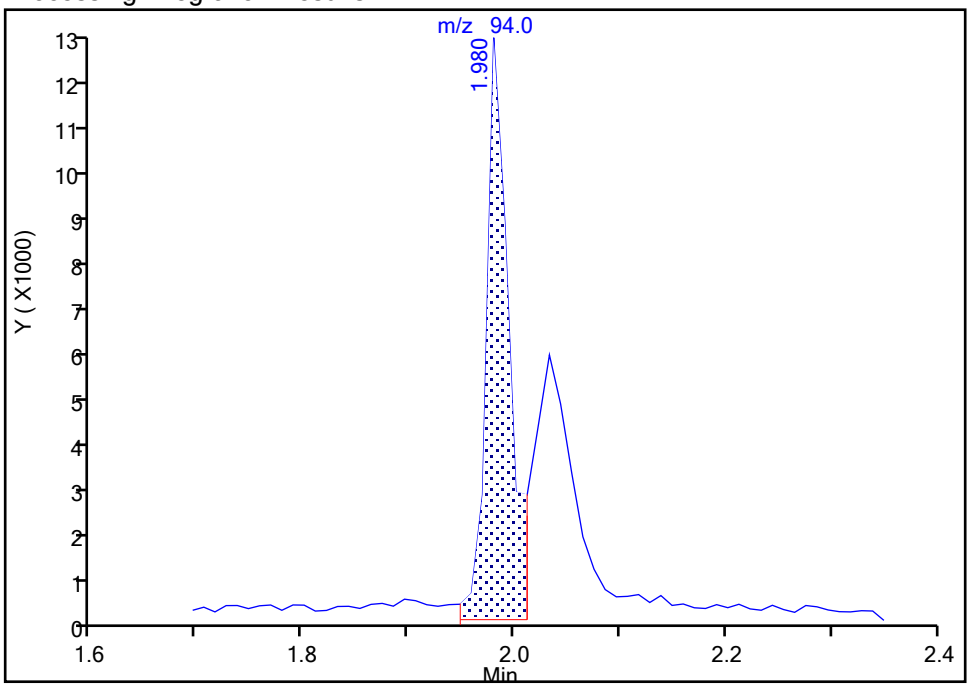
Data File:	\\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00476.D				
Injection Date:	10-Apr-2023 14:34:30	Instrument ID:	VMS_P		
Lims ID:	STD10				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

14 Bromomethane, CAS: 74-83-9

Signal: 1

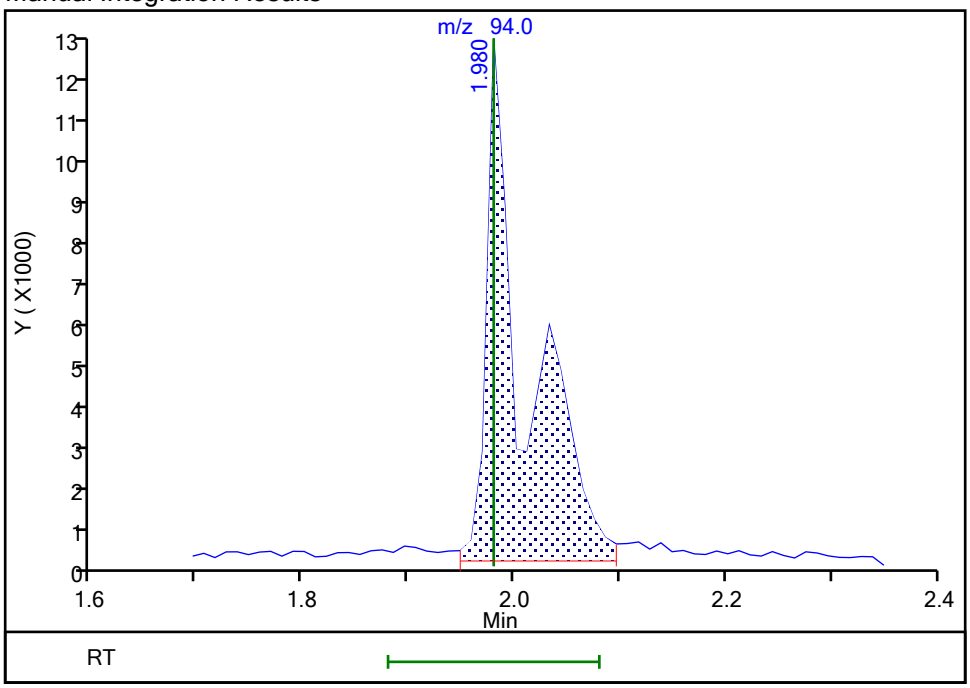
Processing Integration Results

RT: 1.98
Area: 19193
Amount: 7.662545
Amount Units: ug/l



Manual Integration Results

RT: 1.98
Area: 32217
Amount: 12.365571
Amount Units: ug/l



Reviewer: RWB2, 10-Apr-2023 18:19:31
Audit Action: Manually Integrated Audit Reason: Split Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00477.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 10-Apr-2023 14:57:30 ALS Bottle#: 7 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:08 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 10-Apr-2023 18:18:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2135807	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	504429	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	757112	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	93	529517	50.0	50.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	602615	50.0	49.4	
$ 6 Toluene-d8 (Surr)	98	6.012	6.012	0.000	84	2154527	50.0	49.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	818873	50.0	49.6	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	468892	50.0	46.4	
11 Chloromethane	50	1.664	1.664	0.000	99	380213	50.0	43.0	
12 Vinyl chloride	62	1.727	1.727	0.000	82	518982	50.0	45.1	
14 Bromomethane	94	1.980	1.980	0.000	92	94536	50.0	35.1	M
15 Chloroethane	64	2.075	2.075	0.000	100	317929	50.0	46.5	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	732134	50.0	44.8	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	99	616797	50.0	44.6	
19 Ethyl ether	59	2.476	2.476	0.000	90	385396	50.0	49.3	
21 Acrolein	56	2.582	2.582	0.000	100	1127747	493.8	506.1	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	95	292551	50.0	50.8	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	98	395002	50.0	48.7	
24 Acetone	43	2.677	2.677	0.000	99	1188060	200.0	200.6	
26 Iodomethane	142	2.782	2.782	0.000	99	318037	50.0	52.7	
27 Carbon disulfide	76	2.835	2.835	0.000	99	1277522	50.0	47.2	
29 Methyl acetate	43	2.898	2.898	0.000	98	1247828	100.0	99.8	
30 3-Chloro-1-propene	41	2.920	2.920	0.000	92	568418	50.0	43.7	
31 Methylene Chloride	84	3.015	3.015	0.000	54	453865	50.0	48.9	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	1542668	500.0	527.3	
33 Acrylonitrile	53	3.173	3.173	0.000	99	3372086	500.0	504.2	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	95	1412629	50.0	49.3	
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	98	437821	50.0	48.6	
36 Hexane	57	3.394	3.394	0.000	89	615461	50.0	51.0	
38 Vinyl acetate	43	3.500	3.500	0.000	98	2087589	100.0	100.0	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	96	755665	50.0	48.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	98	1929594	200.0	205.3	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	483556	50.0	48.9	
48 2,2-Dichloropropane	77	3.933	3.933	0.000	90	688917	50.0	48.2	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	2837097	1200.0	1282.0	
53 Chlorobromomethane	128	4.101	4.101	0.000	98	201431	50.0	48.0	
52 Tetrahydrofuran	42	4.101	4.101	0.000	86	615535	100.0	97.8	
54 Chloroform	83	4.154	4.154	0.000	93	773177	50.0	49.3	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	99	678912	50.0	48.9	
56 Cyclohexane	56	4.355	4.355	0.000	88	800524	50.0	50.8	
57 1,1-Dichloropropene	75	4.408	4.408	0.000	90	647120	50.0	50.3	
59 Carbon tetrachloride	117	4.408	4.408	0.000	96	574281	50.0	51.1	
58 Isobutyl alcohol	41	4.429	4.429	0.000	94	1117872	1250.0	1317.4	
60 Benzene	78	4.555	4.555	0.000	96	1848751	50.0	49.2	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	98	601828	50.0	46.9	
66 n-Heptane	43	4.745	4.745	0.000	90	505375	50.0	49.3	
67 Trichloroethene	95	5.041	5.041	0.000	98	458294	50.0	48.3	
68 2-Pentanone	43	5.146	5.146	0.000	98	2327869	160.0	161.4	
69 Methylcyclohexane	55	5.231	5.231	0.000	93	599570	50.0	50.8	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	487562	50.0	49.5	
72 1,4-Dioxane	88	5.294	5.294	0.000	92	331830	1000.0	1055.3	
73 Dibromomethane	93	5.315	5.315	0.000	93	285783	50.0	48.9	
74 Dichlorobromomethane	83	5.442	5.442	0.000	99	595812	50.0	50.2	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	367348	50.0	47.0	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	97	767771	50.0	49.1	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	3084215	200.0	203.8	
79 Toluene	91	6.064	6.064	0.000	98	1959040	50.0	50.1	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	92	740528	50.0	49.9	
81 Ethyl methacrylate	69	6.275	6.275	0.000	87	754254	50.0	49.6	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	91	417531	50.0	48.3	
83 Tetrachloroethene	164	6.508	6.508	0.000	93	322030	50.0	50.4	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	97	742425	50.0	48.9	
85 2-Hexanone	43	6.581	6.581	0.000	94	2538928	200.0	206.9	
86 Chlorodibromomethane	129	6.750	6.750	0.000	90	436012	50.0	49.8	
88 Ethylene Dibromide	107	6.866	6.866	0.000	99	444736	50.0	48.6	
89 1-Chlorohexane	91	7.267	7.267	0.000	96	516381	40.0	41.1	
90 Chlorobenzene	112	7.299	7.299	0.000	93	1192932	50.0	48.8	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	95	409583	50.0	49.7	
92 Ethylbenzene	106	7.383	7.383	0.000	98	673552	50.0	49.5	
93 m-Xylene & p-Xylene	106	7.500	7.500	0.000	0	818958	50.0	49.9	
94 o-Xylene	106	7.848	7.848	0.000	97	792003	50.0	49.5	
95 Styrene	104	7.869	7.869	0.000	94	1325891	50.0	49.8	
96 Bromoform	173	8.048	8.048	0.000	94	297097	50.0	49.8	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	1975282	50.0	50.0	
99 Cyclohexanone	55	8.280	8.280	0.000	91	2123967	1500.0	1593.7	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	93	698618	50.0	49.7	
101 Bromobenzene	156	8.502	8.502	0.000	95	462761	50.0	50.0	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	86	238298	50.0	46.4	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	81	216118	50.0	47.7	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	537638	50.0	49.9	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	457400	50.0	49.1	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	1654384	50.0	50.0	
107 4-Chlorotoluene	126	8.798	8.798	0.000	98	475244	50.0	49.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	1339227	50.0	49.5	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.000	98	1693428	50.0	49.6	
110 sec-Butylbenzene	134	9.294	9.294	0.000	94	387075	50.0	49.9	
111 1,3-Dichlorobenzene	146	9.410	9.410	0.000	95	832080	50.0	49.7	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	97	1645287	50.0	50.3	
113 1,4-Dichlorobenzene	146	9.515	9.515	0.000	94	857080	50.0	49.0	
115 n-Butylbenzene	91	9.842	9.842	0.000	98	1471635	50.0	50.0	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	787446	50.0	49.0	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	88	200400	50.0	50.9	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	434978	50.0	49.0	
120 Hexachlorobutadiene	225	11.605	11.605	0.000	97	164733	50.0	49.4	
121 Naphthalene	128	11.721	11.721	0.000	97	1734275	50.0	48.8	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	389028	50.0	49.0	
S 139 1,2-Dichloroethene, Total (URS)	96				0		100.0	97.5	
S 144 1,2-Dichloroethene, Total	1				0		100.0	97.5	
S 145 1,3-Dichloropropene, Total	1				0		100.0	99.0	
S 143 Xylenes, Total (URS)	1				0		100.0	99.4	
S 140 Trihalomethanes, Total	1				0		200.0	199.1	
S 142 Xylenes, Total	106				0		100.0	99.4	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMain B_00082	Amount Added:	25.00	Units: uL	
MV-Gas B_00132	Amount Added:	10.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

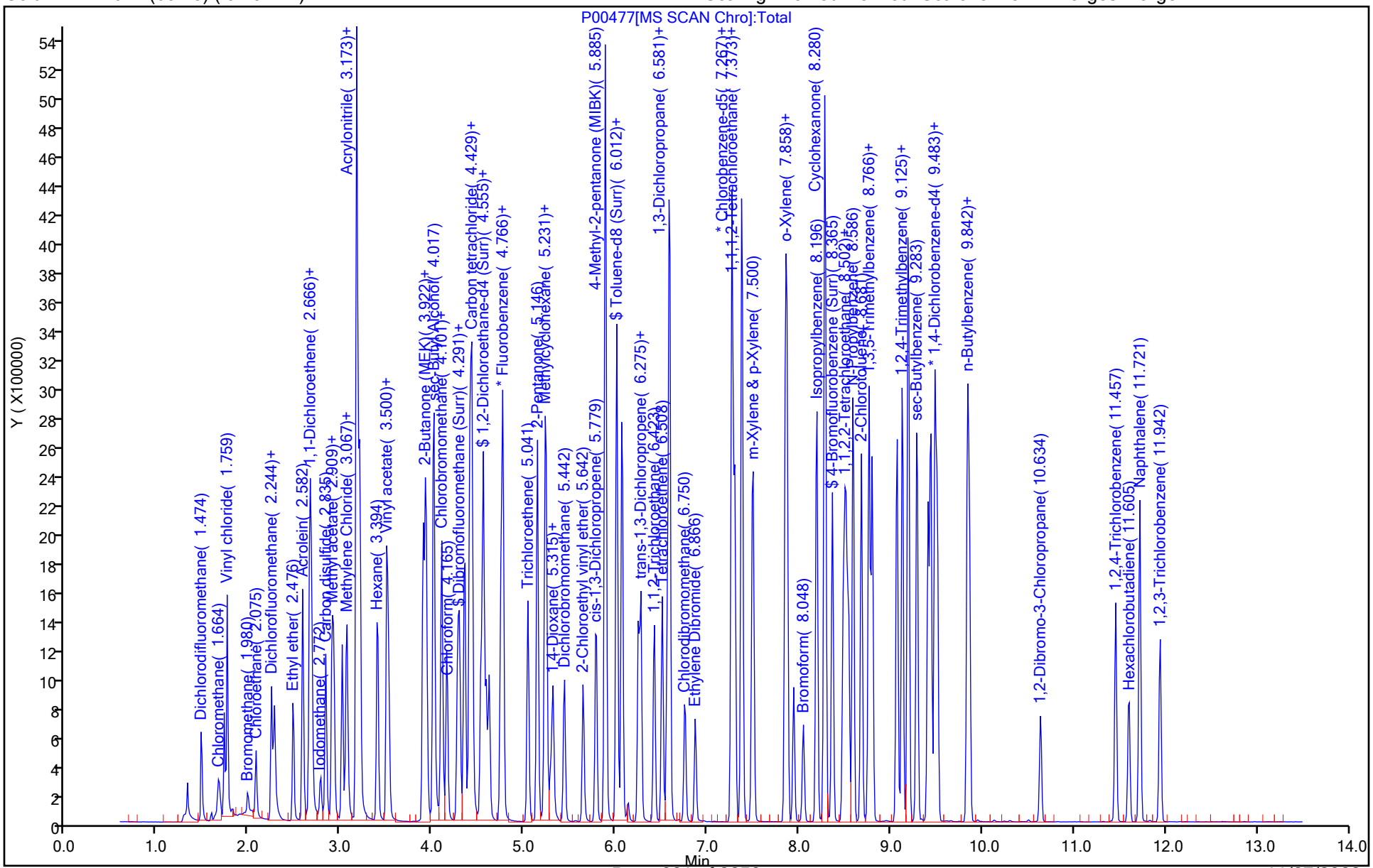
Report Date: 11-Apr-2023 18:07:08 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00477.D

Injection Date:	10-Apr-2023 14:57:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	ICIS			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

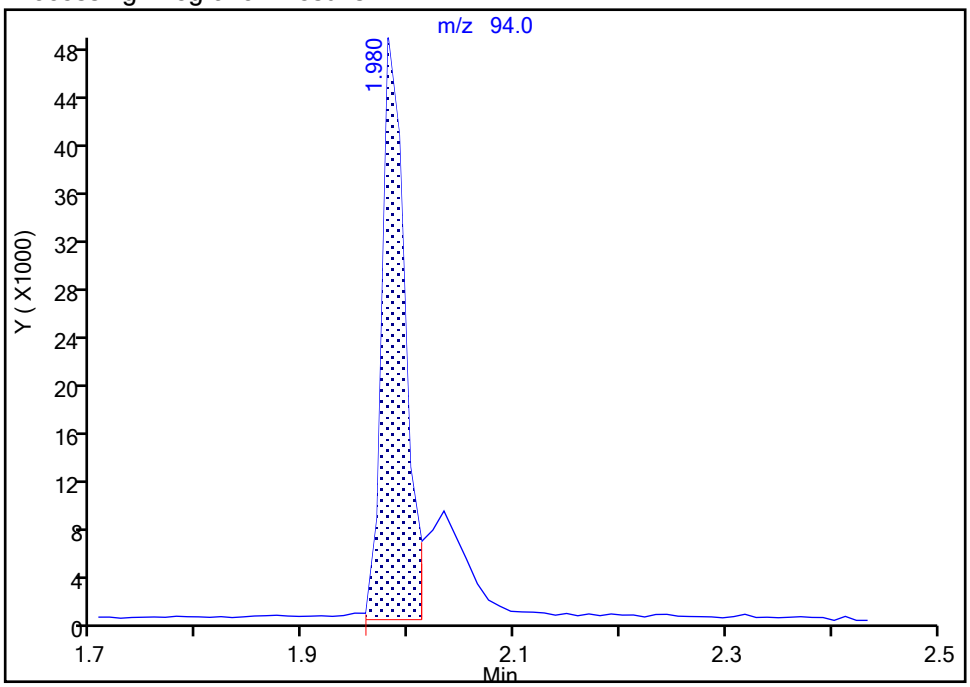
Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00477.D
Injection Date: 10-Apr-2023 14:57:30 Instrument ID: VMS_P
Lims ID: ICIS
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 7 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Signal: 1

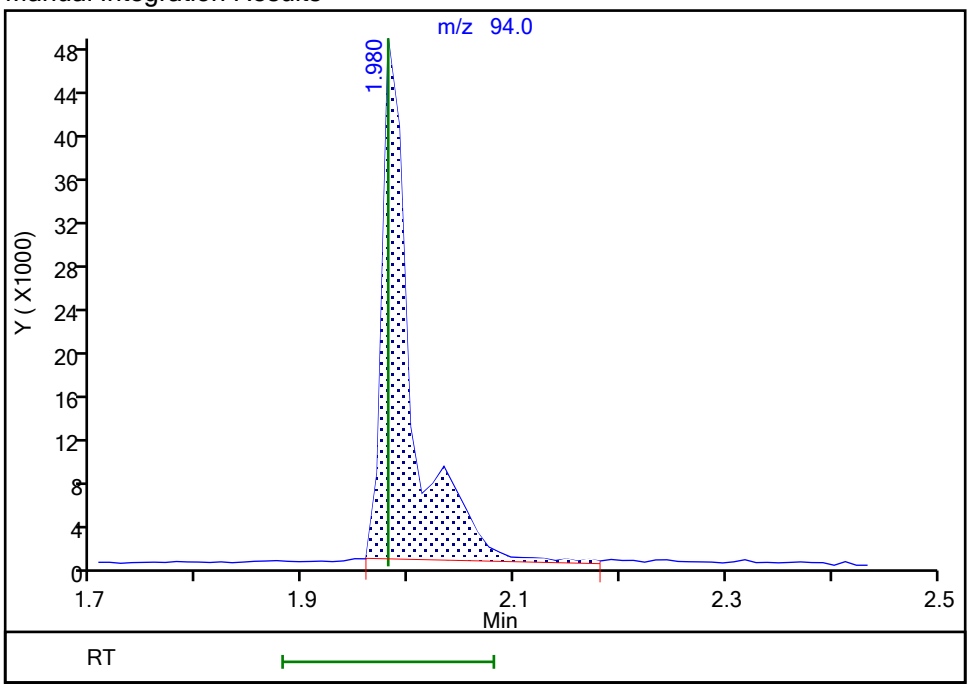
Processing Integration Results

RT: 1.98
Area: 74091
Amount: 29.301223
Amount Units: ug/l



Manual Integration Results

RT: 1.98
Area: 94536
Amount: 35.097801
Amount Units: ug/l



Reviewer: RWB2, 10-Apr-2023 18:26:57
Audit Action: Manually Integrated Audit Reason: Split Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00478.D
Lims ID: STD75
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 10-Apr-2023 15:20:30 ALS Bottle#: 8 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD75
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:10 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 10-Apr-2023 18:19:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	2108563	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.278	7.267	0.011	89	494673	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	738073	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	521654	50.0	49.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.534	4.524	0.010	0	594785	50.0	49.4	
$ 6 Toluene-d8 (Surr)	98	6.011	6.012	-0.001	93	2135828	50.0	50.1	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	808973	50.0	50.3	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	775385	75.0	77.7	
11 Chloromethane	50	1.664	1.664	0.000	99	644339	75.0	73.4	
12 Vinyl chloride	62	1.727	1.727	0.000	98	843629	75.0	74.3	
14 Bromomethane	94	1.980	1.980	0.000	89	74668	75.0	28.1	
15 Chloroethane	64	2.065	2.075	-0.010	100	469132	75.0	69.4	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	1157152	75.0	71.7	
17 Trichlorofluoromethane	101	2.265	2.276	-0.011	99	1007921	75.0	73.9	
19 Ethyl ether	59	2.476	2.476	0.000	90	584579	75.0	75.8	
21 Acrolein	56	2.582	2.582	0.000	100	1741409	740.6	791.7	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	72	442532	75.0	77.9	
22 1,1-Dichloroethene	96	2.656	2.666	-0.010	97	598919	75.0	74.8	
24 Acetone	43	2.687	2.677	0.010	99	1756167	300.0	301.5	
26 Iodomethane	142	2.782	2.782	0.000	99	491359	75.0	72.1	
27 Carbon disulfide	76	2.835	2.835	0.000	99	1947500	75.0	72.9	
29 Methyl acetate	43	2.909	2.898	0.011	97	1886100	150.0	152.8	
30 3-Chloro-1-propene	41	2.919	2.920	-0.001	92	896723	75.0	69.9	
31 Methylene Chloride	84	3.014	3.015	-0.001	89	691885	75.0	75.7	
32 2-Methyl-2-propanol	59	3.078	3.067	0.011	100	2279853	750.0	789.3	
33 Acrylonitrile	53	3.173	3.173	0.000	100	5026421	750.0	761.3	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	95	2141144	75.0	75.6	
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	98	664475	75.0	74.6	
36 Hexane	57	3.394	3.394	0.000	89	943027	75.0	79.6	
38 Vinyl acetate	43	3.500	3.500	0.000	97	3192999	150.0	154.9	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	96	1146511	75.0	74.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	98	2869662	300.0	309.9	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	738970	75.0	75.7	
48 2,2-Dichloropropane	77	3.933	3.933	0.000	90	1082809	75.0	76.7	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	4214640	1800.0	1929.1	
53 Chlorobromomethane	128	4.101	4.101	0.000	97	297612	75.0	71.9	
52 Tetrahydrofuran	42	4.101	4.101	0.000	86	918161	150.0	147.8	
54 Chloroform	83	4.154	4.154	0.000	93	1159611	75.0	74.9	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	1023642	75.0	74.6	
56 Cyclohexane	56	4.355	4.355	0.000	88	1220750	75.0	78.5	
57 1,1-Dichloropropene	75	4.407	4.408	-0.001	97	993131	75.0	78.2	
59 Carbon tetrachloride	117	4.407	4.408	-0.001	96	860640	75.0	77.6	
58 Isobutyl alcohol	41	4.439	4.429	0.010	94	1641710	1875.0	1959.8	
60 Benzene	78	4.555	4.555	0.000	96	2804549	75.0	75.7	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	98	909894	75.0	71.8	
66 n-Heptane	43	4.745	4.745	0.000	89	786579	75.0	78.1	
67 Trichloroethene	95	5.041	5.041	0.000	98	702241	75.0	75.5	
68 2-Pentanone	43	5.146	5.146	0.000	98	3464858	240.0	243.4	
69 Methylcyclohexane	55	5.231	5.231	0.000	93	903906	75.0	77.6	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	737033	75.0	75.8	
72 1,4-Dioxane	88	5.294	5.294	0.000	94	489213	1500.0	1576.0	
73 Dibromomethane	93	5.315	5.315	0.000	92	423763	75.0	73.4	
74 Dichlorobromomethane	83	5.442	5.442	0.000	99	899551	75.0	76.8	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	558950	75.0	72.4	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	97	1171338	75.0	76.4	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	4609355	300.0	308.4	
79 Toluene	91	6.064	6.064	0.000	98	2929876	75.0	75.8	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	94	1118470	75.0	76.4	
81 Ethyl methacrylate	69	6.275	6.275	0.000	87	1150811	75.0	77.2	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	91	631783	75.0	74.1	
83 Tetrachloroethene	164	6.507	6.508	-0.001	93	487082	75.0	77.7	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	89	1118178	75.0	75.1	
85 2-Hexanone	43	6.592	6.581	0.011	94	3779770	300.0	314.1	
86 Chlorodibromomethane	129	6.761	6.750	0.011	90	661859	75.0	77.0	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	676751	75.0	75.5	
89 1-Chlorohexane	91	7.267	7.267	0.000	97	775678	60.0	63.2	
90 Chlorobenzene	112	7.299	7.299	0.000	93	1794578	75.0	74.9	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	96	617435	75.0	76.4	
92 Ethylbenzene	106	7.383	7.383	0.000	98	1013879	75.0	76.0	
93 m-Xylene & p-Xylene	106	7.499	7.500	-0.001	0	1239275	75.0	76.9	
94 o-Xylene	106	7.858	7.848	0.010	97	1202506	75.0	76.7	
95 Styrene	104	7.869	7.869	0.000	94	2007085	75.0	76.9	
96 Bromoform	173	8.048	8.048	0.000	94	453188	75.0	77.5	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	2987178	75.0	77.5	
99 Cyclohexanone	55	8.280	8.280	0.000	91	3183508	2250.0	2435.9	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	1058280	75.0	77.2	
101 Bromobenzene	156	8.502	8.502	0.000	96	689029	75.0	76.4	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	87	363363	75.0	72.5	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	81	328090	75.0	74.2	
104 N-Propylbenzene	120	8.597	8.586	0.011	99	816661	75.0	77.8	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	693485	75.0	76.3	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	2492588	75.0	77.2	
107 4-Chlorotoluene	126	8.797	8.798	-0.001	98	724331	75.0	76.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	93	2000662	75.0	75.8	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.000	97	2527263	75.0	75.9	
110 sec-Butylbenzene	134	9.293	9.294	-0.001	94	594660	75.0	78.6	
111 1,3-Dichlorobenzene	146	9.409	9.410	-0.001	96	1256122	75.0	77.0	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	96	2456276	75.0	77.1	
113 1,4-Dichlorobenzene	146	9.515	9.515	0.000	94	1285823	75.0	75.4	
115 n-Butylbenzene	91	9.842	9.842	0.000	98	2226778	75.0	77.7	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	1177787	75.0	75.2	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	84	308628	75.0	80.4	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	663721	75.0	76.7	
120 Hexachlorobutadiene	225	11.604	11.605	-0.001	97	248376	75.0	76.4	
121 Naphthalene	128	11.721	11.721	0.000	97	2640890	75.0	76.2	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	587165	75.0	75.8	
S 139 1,2-Dichloroethene, Total (URS)	96				0		150.0	150.4	
S 144 1,2-Dichloroethene, Total	1				0		150.0	150.4	
S 145 1,3-Dichloropropene, Total	1				0		150.0	152.8	
S 146 Total BTEX	1				0			381.2	
S 143 Xylenes, Total (URS)	1				0		150.0	153.6	
S 140 Trihalomethanes, Total	1				0		300.0	306.3	
S 142 Xylenes, Total	106				0		150.0	153.6	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00082	Amount Added: 37.50	Units: uL	
MV-Gas B_00132	Amount Added: 15.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

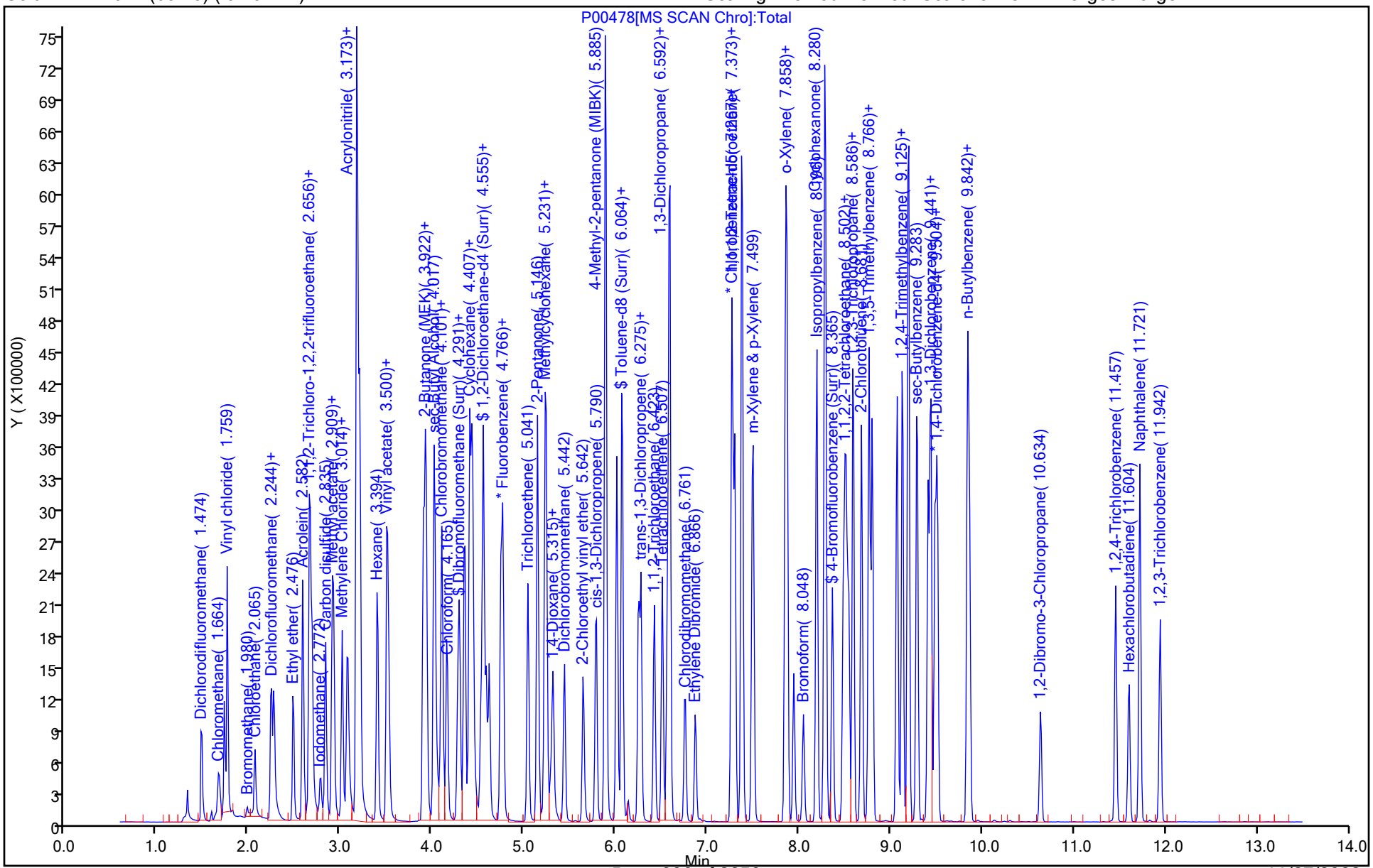
Report Date: 11-Apr-2023 18:07:10 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00478.D

Injection Date:	10-Apr-2023 15:20:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD75			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00479.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 10-Apr-2023 16:43:30 ALS Bottle#: 9 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:12 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 10-Apr-2023 18:18:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	2185733	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.278	7.267	0.011	87	510619	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	749411	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	93	547229	50.0	50.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.524	-0.001	0	626803	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.011	6.012	-0.001	93	2185232	50.0	49.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	823518	50.0	50.4	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	1129286	100.0	109.2	
11 Chloromethane	50	1.674	1.664	0.010	99	1013285	100.0	111.0	
12 Vinyl chloride	62	1.727	1.727	0.000	98	1262249	100.0	107.3	
14 Bromomethane	94	1.970	1.980	-0.010	90	132574	100.0	48.1	
15 Chloroethane	64	2.054	2.075	-0.021	100	753248	100.0	107.5	
16 Dichlorofluoromethane	67	2.234	2.244	-0.010	97	1725191	100.0	103.1	
17 Trichlorofluoromethane	101	2.265	2.276	-0.011	99	1505278	100.0	106.4	
19 Ethyl ether	59	2.476	2.476	0.000	89	812403	100.0	101.6	
21 Acrolein	56	2.582	2.582	0.000	100	2234452	987.5	979.9	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.656	2.666	-0.010	73	598033	100.0	101.5	
22 1,1-Dichloroethene	96	2.656	2.666	-0.010	97	820098	100.0	98.7	
24 Acetone	43	2.677	2.677	0.000	99	2242777	400.0	372.1	
26 Iodomethane	142	2.772	2.782	-0.010	99	846049	100.0	100.9	
27 Carbon disulfide	76	2.835	2.835	0.000	99	2666521	100.0	96.3	
29 Methyl acetate	43	2.898	2.898	0.000	97	2445997	200.0	191.1	
30 3-Chloro-1-propene	41	2.919	2.920	-0.001	94	1159871	100.0	87.2	
31 Methylene Chloride	84	3.014	3.015	-0.001	91	967033	100.0	102.2	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	2621790	1000.0	875.6	
33 Acrylonitrile	53	3.173	3.173	0.000	98	6453914	1000.0	943.0	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	95	2939075	100.0	100.2	
35 trans-1,2-Dichloroethene	96	3.204	3.215	-0.011	98	923234	100.0	100.1	
36 Hexane	57	3.394	3.394	0.000	89	1256761	100.0	102.8	
38 Vinyl acetate	43	3.500	3.500	0.000	97	3790752	200.0	177.4	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	96	1621657	100.0	101.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	98	3557774	400.0	370.8	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	1016430	100.0	100.5	
48 2,2-Dichloropropane	77	3.933	3.933	0.000	90	1419683	100.0	97.1	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	98	4783948	2400.0	2112.4	
53 Chlorobromomethane	128	4.101	4.101	0.000	97	394423	100.0	91.9	
52 Tetrahydrofuran	42	4.101	4.101	0.000	86	1149512	200.0	178.5	
54 Chloroform	83	4.154	4.154	0.000	93	1619431	100.0	100.9	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	99	1421696	100.0	100.0	
56 Cyclohexane	56	4.344	4.355	-0.011	88	1624181	100.0	100.7	
57 1,1-Dichloropropene	75	4.407	4.408	-0.001	97	1350362	100.0	102.6	
59 Carbon tetrachloride	117	4.407	4.408	-0.001	96	1177767	100.0	102.4	
58 Isobutyl alcohol	41	4.429	4.429	0.000	94	1898371	2500.0	2186.2	
60 Benzene	78	4.555	4.555	0.000	95	3809051	100.0	99.1	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	98	1256714	100.0	95.6	
66 n-Heptane	43	4.745	4.745	0.000	94	1020508	100.0	97.8	
67 Trichloroethene	95	5.041	5.041	0.000	98	981247	100.0	102.3	
68 2-Pentanone	43	5.146	5.146	0.000	98	4245270	320.0	287.6	
69 Methylcyclohexane	55	5.231	5.231	0.000	93	1189691	100.0	98.5	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	1024573	100.0	101.6	
72 1,4-Dioxane	88	5.294	5.294	0.000	94	616102	2000.0	1914.7	
73 Dibromomethane	93	5.315	5.315	0.000	92	596975	100.0	99.8	
74 Dichlorobromomethane	83	5.442	5.442	0.000	100	1248581	100.0	102.9	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	757004	100.0	94.6	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	97	1598111	100.0	101.0	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	5814559	400.0	375.4	
79 Toluene	91	6.064	6.064	0.000	98	3972850	100.0	99.2	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	93	1520361	100.0	100.2	
81 Ethyl methacrylate	69	6.275	6.275	0.000	88	1552991	100.0	100.9	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	91	868995	100.0	98.3	
83 Tetrachloroethene	164	6.507	6.508	-0.001	93	660822	100.0	102.1	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	89	1539310	100.0	100.1	
85 2-Hexanone	43	6.592	6.581	0.011	93	4623817	400.0	372.3	
86 Chlorodibromomethane	129	6.761	6.750	0.011	90	902070	100.0	101.7	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	916698	100.0	99.0	
89 1-Chlorohexane	91	7.267	7.267	0.000	97	1030829	80.0	81.5	
90 Chlorobenzene	112	7.299	7.299	0.000	93	2468507	100.0	99.8	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	96	853801	100.0	102.4	
92 Ethylbenzene	106	7.383	7.383	0.000	98	1370972	100.0	99.6	
93 m-Xylene & p-Xylene	106	7.499	7.500	-0.001	0	1664853	100.0	100.1	
94 o-Xylene	106	7.858	7.848	0.010	97	1620262	100.0	100.1	
95 Styrene	104	7.869	7.869	0.000	94	2686469	100.0	99.7	
96 Bromoform	173	8.048	8.048	0.000	94	624312	100.0	103.5	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	3928337	100.0	100.4	
99 Cyclohexanone	55	8.280	8.280	0.000	91	3690406	3000.0	2735.5	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	1371426	100.0	98.5	
101 Bromobenzene	156	8.502	8.502	0.000	96	928303	100.0	101.3	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	82	463210	100.0	91.1	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	81	436355	100.0	97.2	
104 N-Propylbenzene	120	8.597	8.586	0.011	99	1077539	100.0	101.0	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	917982	100.0	99.5	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	3267104	100.0	99.7	
107 4-Chlorotoluene	126	8.797	8.798	-0.001	98	954986	100.0	99.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	2623932	100.0	97.9	
109 1,2,4-Trimethylbenzene	105	9.135	9.125	0.010	97	3309632	100.0	97.9	
110 sec-Butylbenzene	134	9.293	9.294	-0.001	95	759031	100.0	98.8	
111 1,3-Dichlorobenzene	146	9.409	9.410	-0.001	96	1657461	100.0	100.0	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	96	3172730	100.0	98.1	
113 1,4-Dichlorobenzene	146	9.515	9.515	0.000	95	1708997	100.0	98.7	
115 n-Butylbenzene	91	9.842	9.842	0.000	98	2846768	100.0	97.8	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	1591756	100.0	100.1	
117 1,2-Dibromo-3-Chloropropane	157	10.644	10.634	0.010	88	399161	100.0	102.4	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	880061	100.0	100.1	
120 Hexachlorobutadiene	225	11.604	11.605	-0.001	96	323028	100.0	97.9	
121 Naphthalene	128	11.721	11.721	0.000	98	3377954	100.0	96.0	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	761366	100.0	96.8	
S 139 1,2-Dichloroethene, Total (URS)	96				0		200.0	200.5	
S 144 1,2-Dichloroethene, Total	1				0		200.0	200.5	
S 145 1,3-Dichloropropene, Total	1				0		200.0	201.1	
S 146 Total BTEX	1				0			498.2	
S 143 Xylenes, Total (URS)	1				0		200.0	200.3	
S 140 Trihalomethanes, Total	1				0		400.0	408.9	
S 142 Xylenes, Total	106				0		200.0	200.3	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00082	Amount Added: 50.00	Units: uL	
MV-Gas B_00132	Amount Added: 20.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

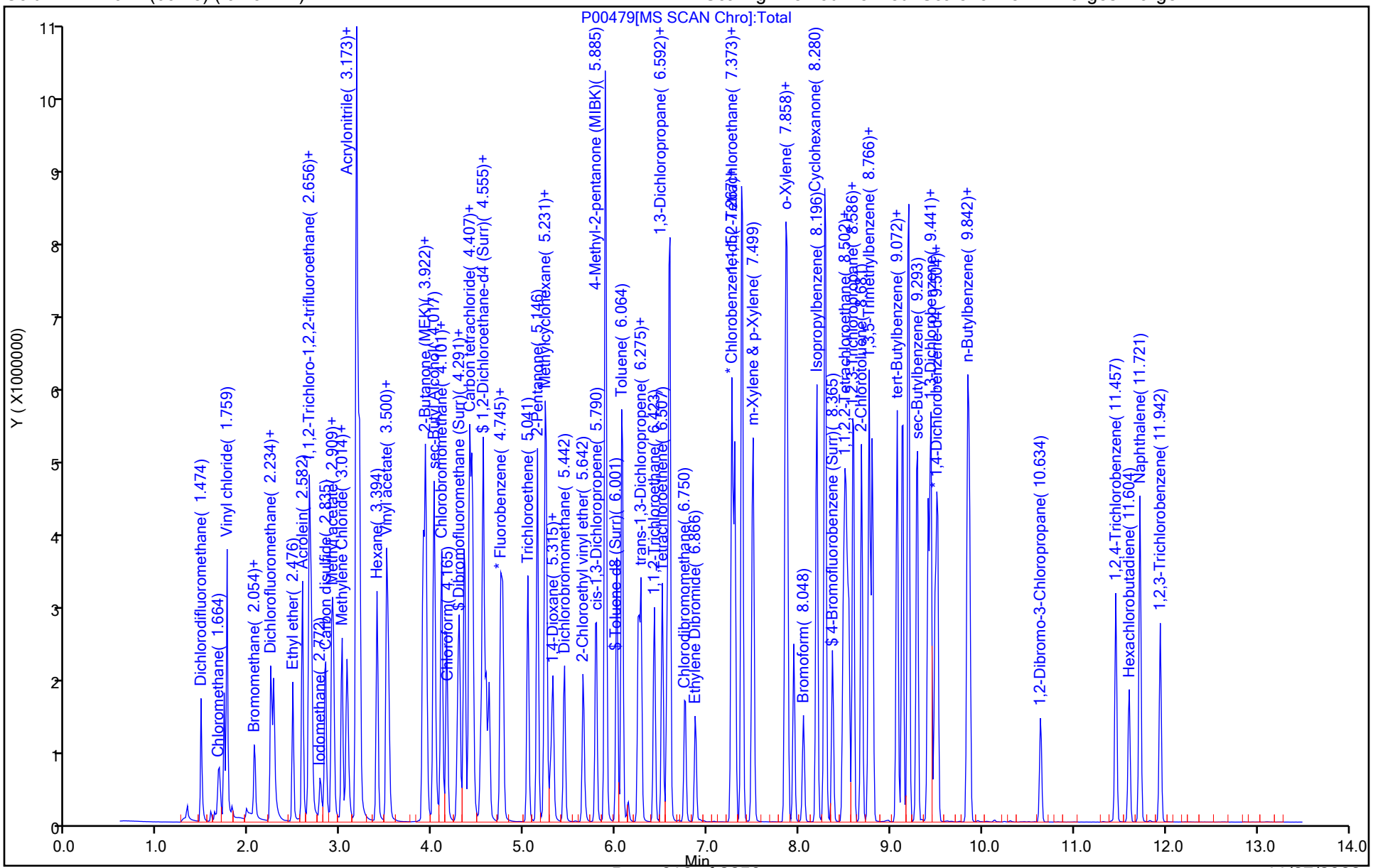
Report Date: 11-Apr-2023 18:07:12 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00479.D

Injection Date:	10-Apr-2023 16:43:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD100			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00480.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 10-Apr-2023 17:06:30 ALS Bottle#: 10 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:14 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 10-Apr-2023 18:20:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2182142	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	86	510581	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	95	747101	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	93	532461	50.0	49.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.524	-0.001	0	617397	50.0	49.6	
$ 6 Toluene-d8 (Surr)	98	6.011	6.012	-0.001	93	2208957	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	825816	50.0	50.7	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	100	2121288	200.0	205.5	
11 Chloromethane	50	1.664	1.664	0.000	99	1816239	200.0	198.8	
12 Vinyl chloride	62	1.727	1.727	0.000	98	2309387	200.0	196.6	
14 Bromomethane	94	1.970	1.980	-0.010	90	210552	200.0	76.5	M
15 Chloroethane	64	2.054	2.075	-0.021	99	1062024	200.0	151.9	
16 Dichlorofluoromethane	67	2.233	2.244	-0.011	97	3094467	200.0	185.3	
17 Trichlorofluoromethane	101	2.265	2.276	-0.011	99	2796002	200.0	198.0	
19 Ethyl ether	59	2.476	2.476	0.000	89	1564124	200.0	195.9	
21 Acrolein	56	2.582	2.582	0.000	100	4594978	1975.0	2018.5	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.656	2.666	-0.010	74	1153335	200.0	196.1	
22 1,1-Dichloroethene	96	2.656	2.666	-0.010	98	1592649	200.0	192.1	
24 Acetone	43	2.687	2.677	0.010	99	4698574	800.0	783.5	
26 Iodomethane	142	2.772	2.782	-0.010	99	1469487	200.0	142.7	
27 Carbon disulfide	76	2.824	2.835	-0.011	99	5040647	200.0	182.3	
29 Methyl acetate	43	2.898	2.898	0.000	97	5091425	400.0	398.5	
30 3-Chloro-1-propene	41	2.919	2.920	-0.001	93	2139960	200.0	161.2	
31 Methylene Chloride	84	3.014	3.015	-0.001	90	1850658	200.0	196.4	
32 2-Methyl-2-propanol	59	3.078	3.067	0.011	100	5738007	2000.0	1919.5	
33 Acrylonitrile	53	3.173	3.173	0.000	96	12546757	2000.0	1836.3	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	95	5687209	200.0	194.1	
35 trans-1,2-Dichloroethene	96	3.204	3.215	-0.011	98	1762483	200.0	191.3	
36 Hexane	57	3.394	3.394	0.000	89	2422586	200.0	198.2	
38 Vinyl acetate	43	3.500	3.500	0.000	97	7388768	400.0	346.3	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	96	3067404	200.0	192.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	98	7432840	800.0	777.3	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	1966459	200.0	194.7	
48 2,2-Dichloropropane	77	3.932	3.933	-0.001	91	2678838	200.0	183.5	
50 sec-Butyl Alcohol	45	4.027	4.017	0.010	98	11008068	4800.0	4868.6	
53 Chlorobromomethane	128	4.091	4.101	-0.010	97	816712	200.0	190.6	
52 Tetrahydrofuran	42	4.101	4.101	0.000	86	2498283	400.0	388.7	
54 Chloroform	83	4.154	4.154	0.000	93	3107447	200.0	193.9	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	2723874	200.0	191.9	
56 Cyclohexane	56	4.344	4.355	-0.011	88	3187873	200.0	198.1	
57 1,1-Dichloropropene	75	4.407	4.408	-0.001	97	2608699	200.0	198.5	
59 Carbon tetrachloride	117	4.407	4.408	-0.001	96	2293812	200.0	199.7	
58 Isobutyl alcohol	41	4.439	4.429	0.010	94	4359656	5000.0	5028.9	
60 Benzene	78	4.555	4.555	0.000	96	7293952	200.0	190.1	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	98	2434553	200.0	185.5	
66 n-Heptane	43	4.745	4.745	0.000	91	2006861	200.0	193.2	
67 Trichloroethene	95	5.041	5.041	0.000	98	1894798	200.0	197.5	
68 2-Pentanone	43	5.146	5.146	0.000	97	8859570	640.0	601.3	
69 Methylcyclohexane	55	5.230	5.231	-0.001	92	2362832	200.0	196.0	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	1989891	200.0	197.7	
72 1,4-Dioxane	88	5.294	5.294	0.000	96	1273663	4000.0	3964.7	
73 Dibromomethane	93	5.315	5.315	0.000	92	1017313	200.0	170.3	
74 Dichlorobromomethane	83	5.442	5.442	0.000	100	2451768	200.0	202.3	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	1488458	200.0	186.4	
77 cis-1,3-Dichloropropene	75	5.779	5.790	-0.011	98	3093029	200.0	195.4	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	91	11228696	800.0	726.1	
79 Toluene	91	6.064	6.064	0.000	99	7576574	200.0	189.5	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	94	2983295	200.0	196.9	
81 Ethyl methacrylate	69	6.275	6.275	0.000	86	3076482	200.0	200.0	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	91	1708548	200.0	193.6	
83 Tetrachloroethene	164	6.507	6.508	-0.001	93	1303364	200.0	201.4	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	88	3003657	200.0	195.3	
85 2-Hexanone	43	6.581	6.581	0.000	92	9422729	800.0	758.7	
86 Chlorodibromomethane	129	6.750	6.750	0.000	90	1809329	200.0	204.0	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	1811318	200.0	195.7	
89 1-Chlorohexane	91	7.267	7.267	0.000	97	2025512	160.0	160.6	
90 Chlorobenzene	112	7.299	7.299	0.000	93	4777926	200.0	193.2	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	96	1656253	200.0	198.6	
92 Ethylbenzene	106	7.373	7.383	-0.010	99	2680937	200.0	194.8	
93 m-Xylene & p-Xylene	106	7.499	7.500	-0.001	0	3262525	200.0	196.2	
94 o-Xylene	106	7.848	7.848	0.000	96	3158320	200.0	195.2	
95 Styrene	104	7.869	7.869	0.000	93	5268868	200.0	195.5	
96 Bromoform	173	8.048	8.048	0.000	94	1234007	200.0	204.5	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	7536570	200.0	193.2	
99 Cyclohexanone	55	8.280	8.280	0.000	90	7845509	6000.0	5816.0	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	2729501	200.0	196.6	
101 Bromobenzene	156	8.502	8.502	0.000	96	1816597	200.0	198.9	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	87	942548	200.0	185.9	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	81	866155	200.0	193.6	
104 N-Propylbenzene	120	8.586	8.586	0.000	98	2119339	200.0	199.3	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	1804392	200.0	196.2	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	6255207	200.0	191.5	
107 4-Chlorotoluene	126	8.797	8.798	-0.001	98	1894494	200.0	198.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	5041544	200.0	188.7	
109 1,2,4-Trimethylbenzene	105	9.124	9.125	-0.001	98	6439819	200.0	191.0	
110 sec-Butylbenzene	134	9.283	9.294	-0.011	95	1512696	200.0	197.5	
111 1,3-Dichlorobenzene	146	9.409	9.410	-0.001	96	3283748	200.0	198.7	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	96	6166338	200.0	191.2	
113 1,4-Dichlorobenzene	146	9.504	9.515	-0.011	91	3342815	200.0	193.7	
115 n-Butylbenzene	91	9.842	9.842	0.000	97	5666565	200.0	195.3	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	3186061	200.0	201.0	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	82	823506	200.0	211.9	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	1718554	200.0	196.1	
120 Hexachlorobutadiene	225	11.604	11.605	-0.001	97	631952	200.0	192.1	
121 Naphthalene	128	11.721	11.721	-0.001	98	6621100	200.0	188.7	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	1499005	200.0	191.2	
S 139 1,2-Dichloroethene, Total (URS)	96				0		400.0	386.0	
S 144 1,2-Dichloroethene, Total	1				0		400.0	386.0	
S 145 1,3-Dichloropropene, Total	1				0		400.0	392.3	
S 146 Total BTEX	1				0			965.9	
S 143 Xylenes, Total (URS)	1				0		400.0	391.4	
S 140 Trihalomethanes, Total	1				0		800.0	804.8	
S 142 Xylenes, Total	106				0		400.0	391.4	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMain B_00082	Amount Added: 100.00	Units: uL	
MV-Gas B_00132	Amount Added: 40.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

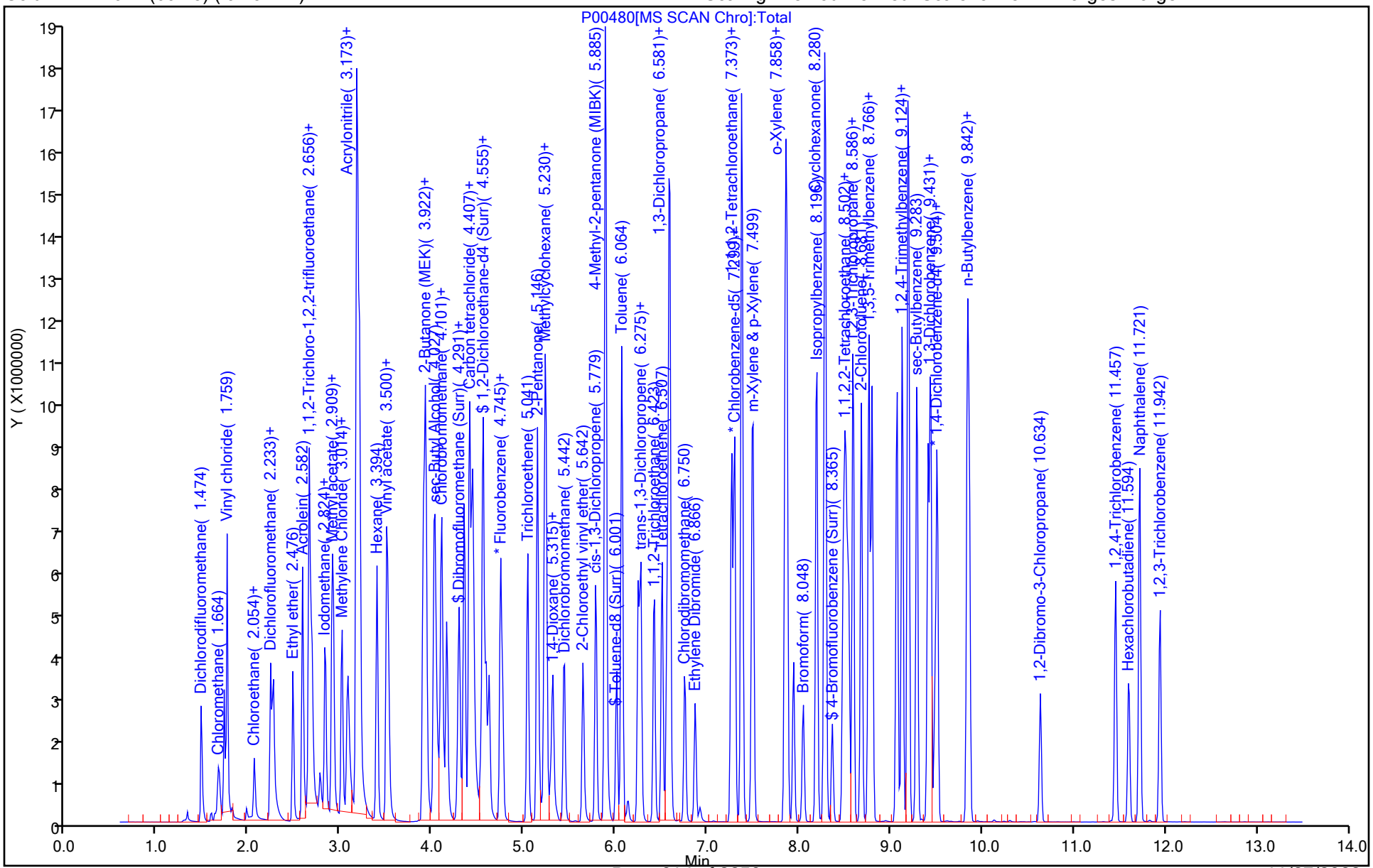
Report Date: 11-Apr-2023 18:07:15 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00480.D

Injection Date:	10-Apr-2023 17:06:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD200			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

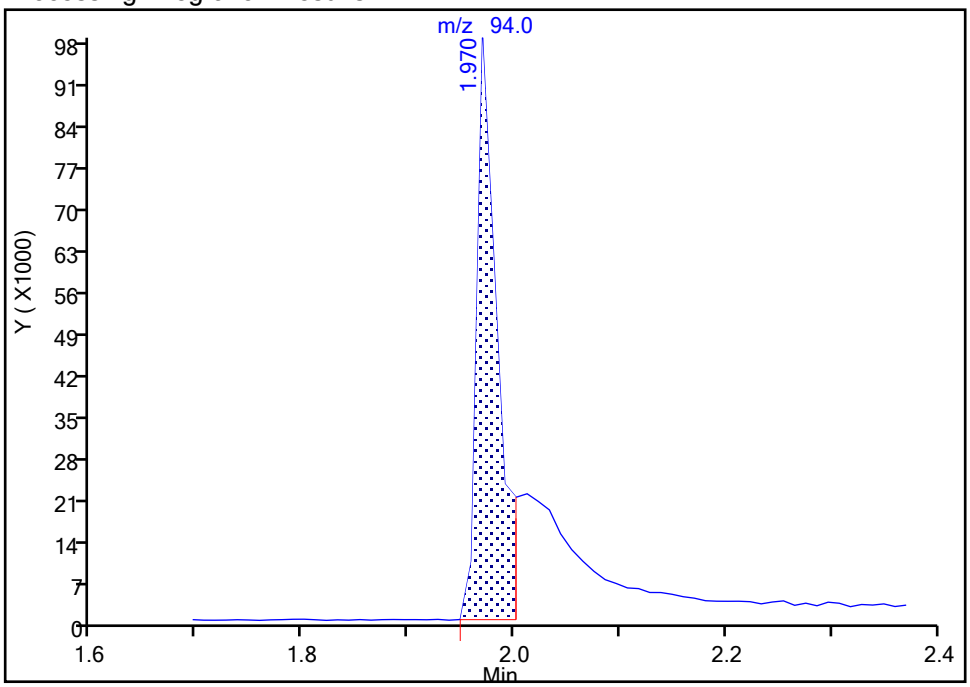
Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00480.D
Injection Date: 10-Apr-2023 17:06:30 Instrument ID: VMS_P
Lims ID: STD200
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 10 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Signal: 1

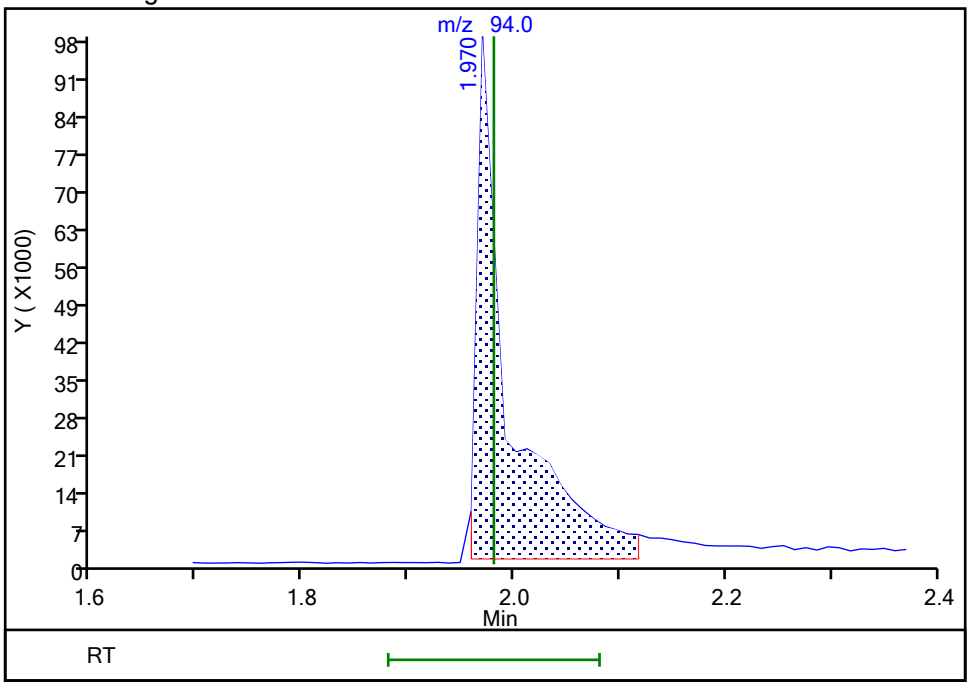
Processing Integration Results

RT: 1.97
Area: 135442
Amount: 48.397535
Amount Units: ug/l



Manual Integration Results

RT: 1.97
Area: 210552
Amount: 76.510503
Amount Units: ug/l



Reviewer: RWB2, 10-Apr-2023 18:23:57
Audit Action: Manually Integrated Audit Reason: Split Peak

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

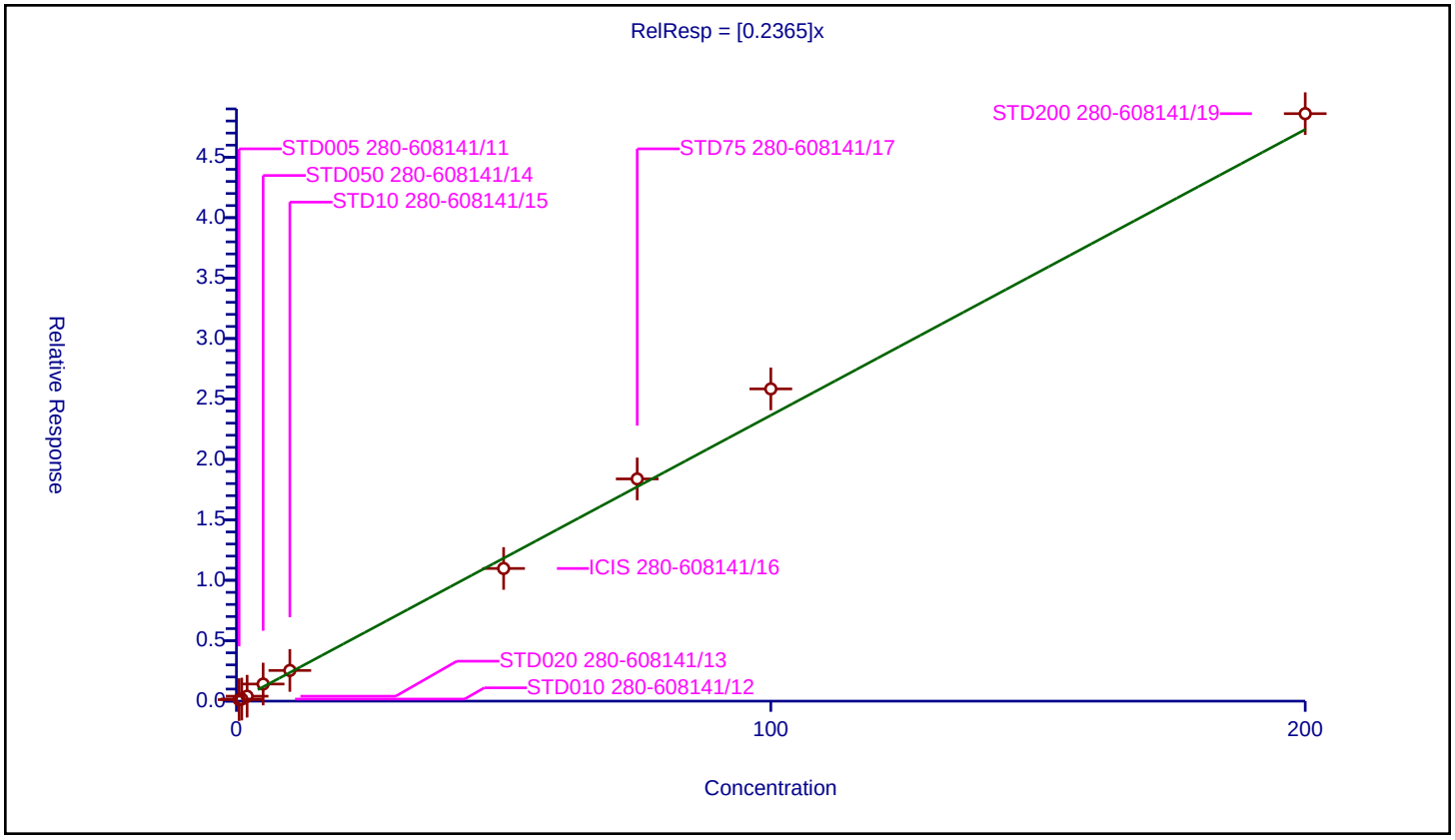
Curve Coefficients

Intercept:	0
Slope:	0.2365

Error Coefficients

Standard Error:	909000
Relative Standard Error:	13.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.123743	50.0	2082534.0	0.247487	Y
2	STD010 280-608141/12	1.0	0.172971	50.0	2123474.0	0.172971	Y
3	STD020 280-608141/13	2.0	0.409094	50.0	2069084.0	0.204547	Y
4	STD050 280-608141/14	5.0	1.416653	50.0	2098608.0	0.283331	Y
5	STD10 280-608141/15	10.0	2.539776	50.0	2065930.0	0.253978	Y
6	ICIS 280-608141/16	50.0	10.976928	50.0	2135807.0	0.219539	Y
7	STD75 280-608141/17	75.0	18.386574	50.0	2108563.0	0.245154	Y
8	STD100 280-608141/18	100.0	25.833119	50.0	2185733.0	0.258331	Y
9	STD200 280-608141/19	200.0	48.605636	50.0	2182142.0	0.243028	Y



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Calibration / Chloromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

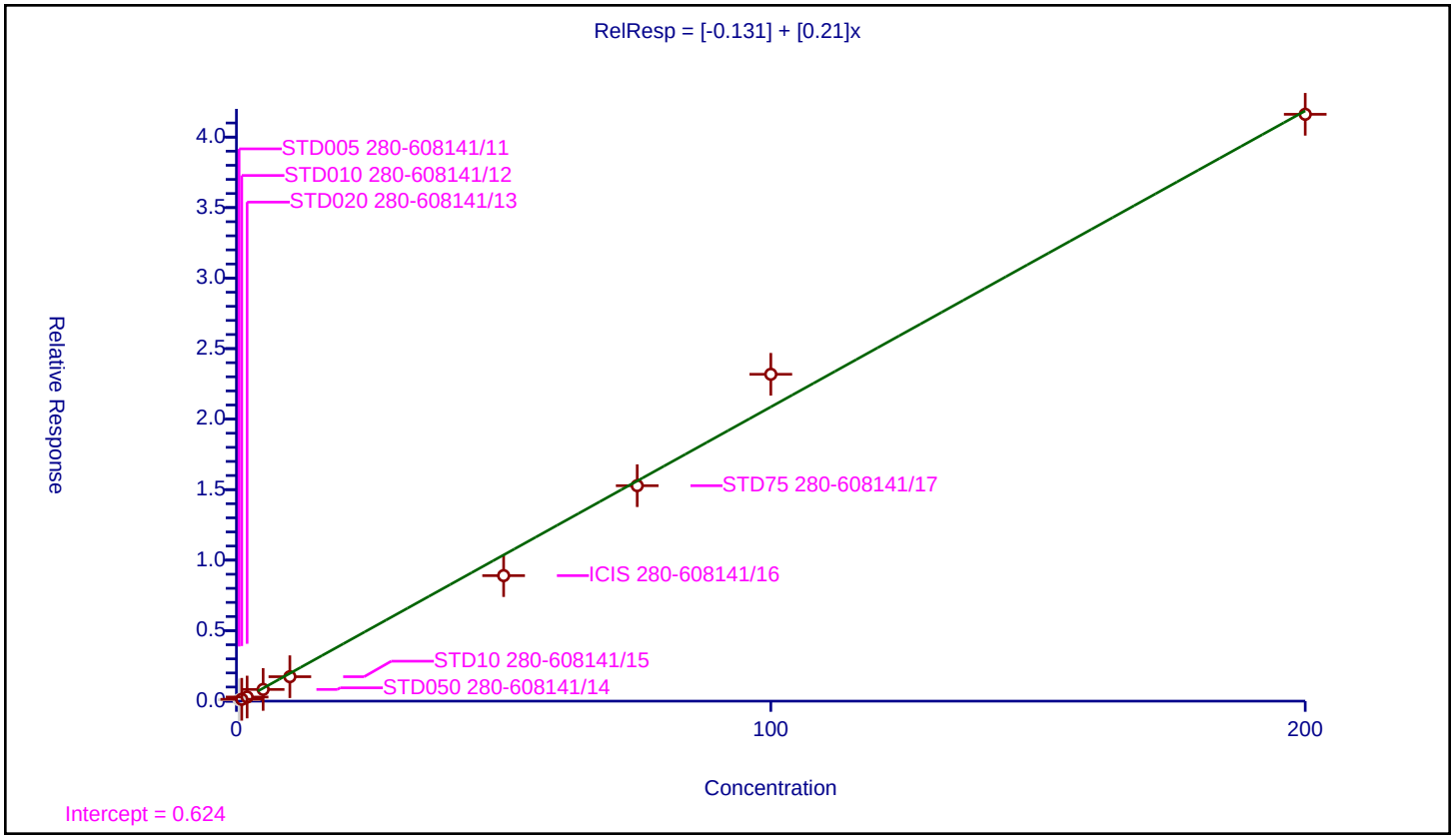
Curve Coefficients

Intercept:	-0.131
Slope:	0.21

Error Coefficients

Standard Error:	903000
Relative Standard Error:	13.7
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.096637	50.0	2082534.0	0.193274	N
2	STD010 280-608141/12	1.0	0.130564	50.0	2123474.0	0.130564	Y
3	STD020 280-608141/13	2.0	0.291554	50.0	2069084.0	0.145777	Y
4	STD050 280-608141/14	5.0	0.831027	50.0	2098608.0	0.166205	Y
5	STD10 280-608141/15	10.0	1.732779	50.0	2065930.0	0.173278	Y
6	ICIS 280-608141/16	50.0	8.900921	50.0	2135807.0	0.178018	Y
7	STD75 280-608141/17	75.0	15.279102	50.0	2108563.0	0.203721	Y
8	STD100 280-608141/18	100.0	23.179524	50.0	2185733.0	0.231795	Y
9	STD200 280-608141/19	200.0	41.615967	50.0	2182142.0	0.20808	Y



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Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

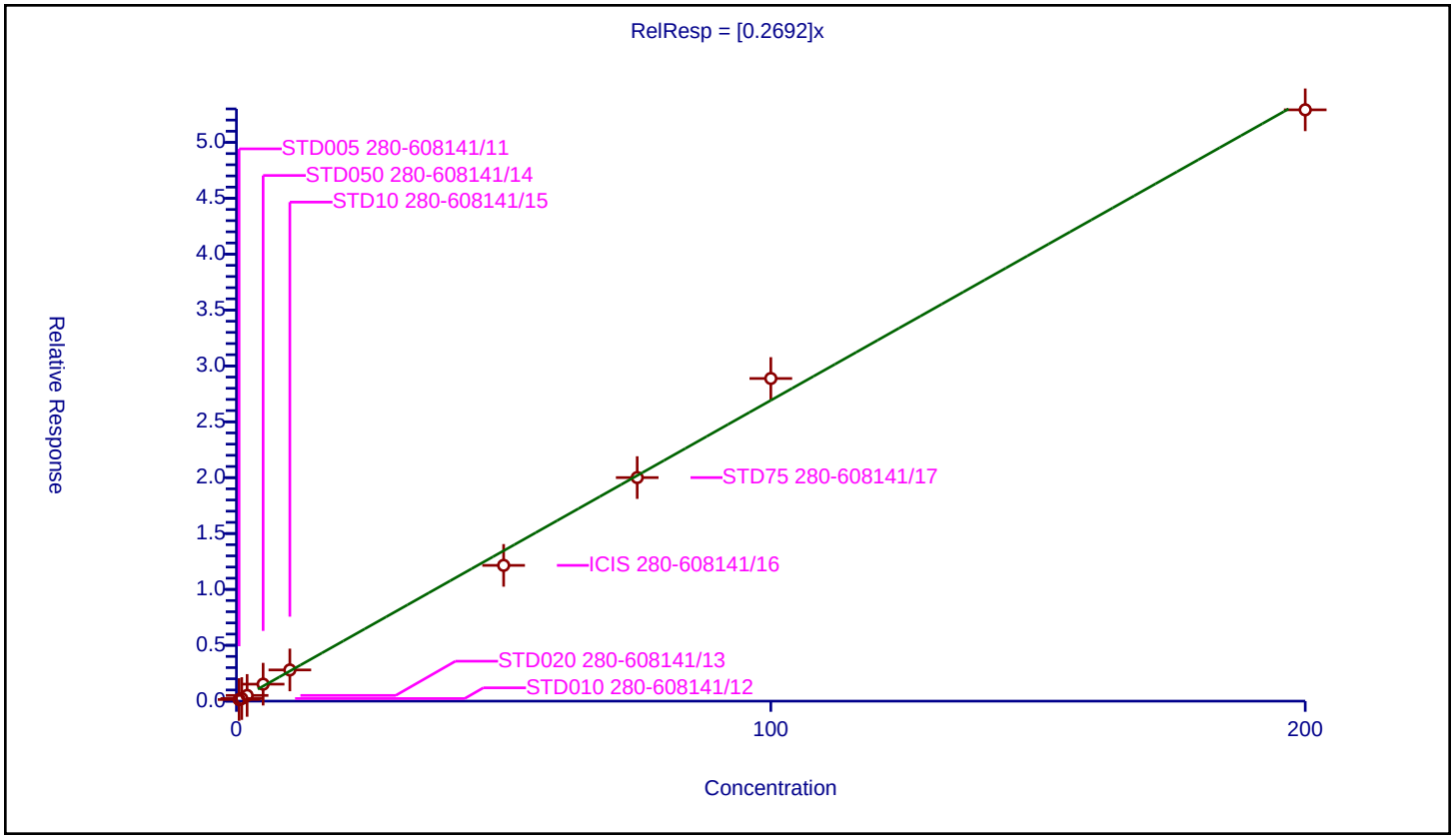
Curve Coefficients

Intercept:	0
Slope:	0.2692

Error Coefficients

Standard Error:	995000
Relative Standard Error:	8.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.143599	50.0	2082534.0	0.287198	Y
2	STD010 280-608141/12	1.0	0.233132	50.0	2123474.0	0.233132	Y
3	STD020 280-608141/13	2.0	0.51199	50.0	2069084.0	0.255995	Y
4	STD050 280-608141/14	5.0	1.520293	50.0	2098608.0	0.304059	Y
5	STD10 280-608141/15	10.0	2.792084	50.0	2065930.0	0.279208	Y
6	ICIS 280-608141/16	50.0	12.149553	50.0	2135807.0	0.242991	Y
7	STD75 280-608141/17	75.0	20.004833	50.0	2108563.0	0.266731	Y
8	STD100 280-608141/18	100.0	28.87473	50.0	2185733.0	0.288747	Y
9	STD200 280-608141/19	200.0	52.915599	50.0	2182142.0	0.264578	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

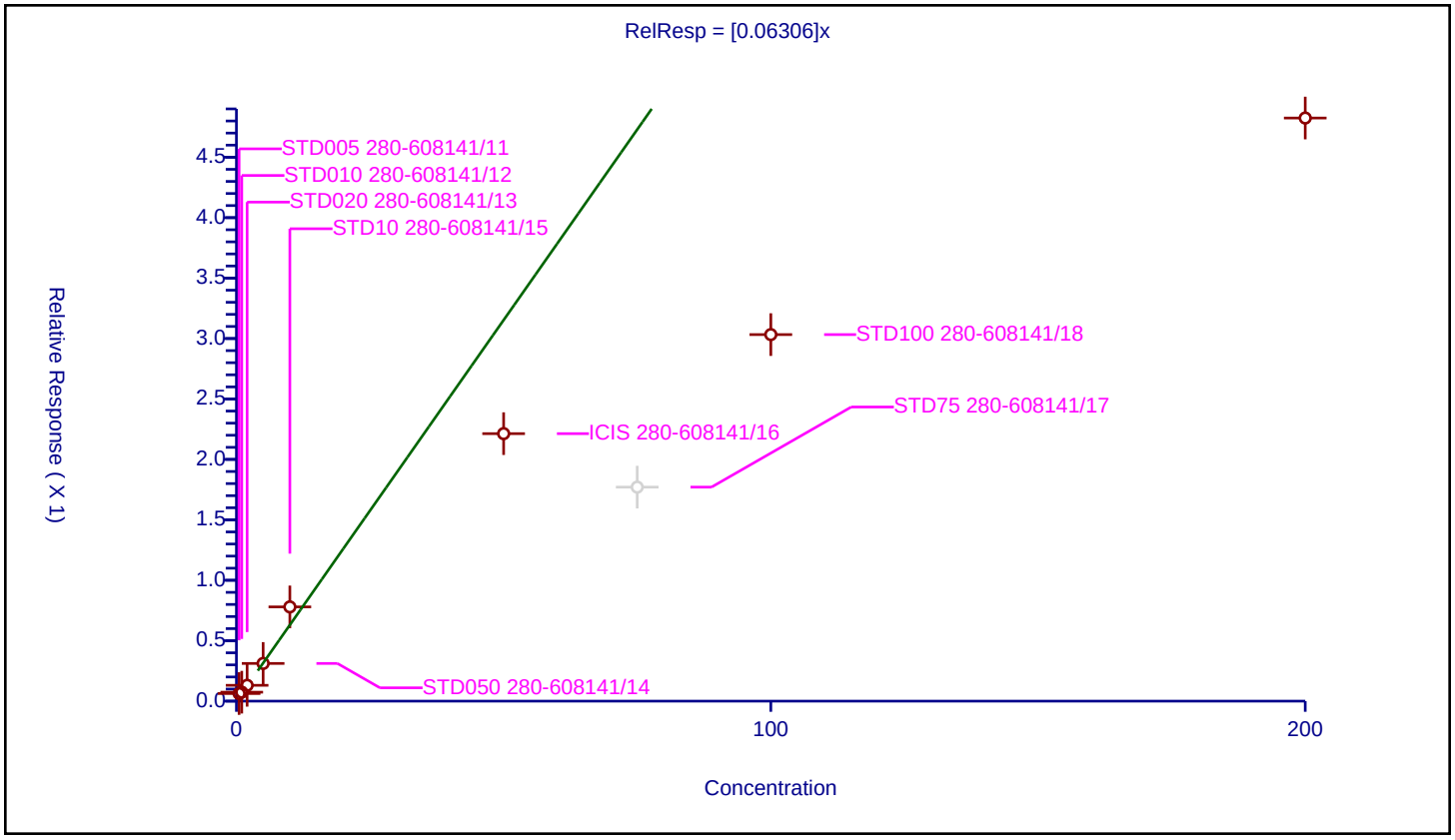
Curve Coefficients

Intercept:	0
Slope:	0.06306

Error Coefficients

Standard Error:	101000
Relative Standard Error:	51.0
Correlation Coefficient:	0.961
Coefficient of Determination (Adjusted):	0.387

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.062904	50.0	2082534.0	0.125808	Y
2	STD010 280-608141/12	1.0	0.074053	50.0	2123474.0	0.074053	Y
3	STD020 280-608141/13	2.0	0.131072	50.0	2069084.0	0.065536	Y
4	STD050 280-608141/14	5.0	0.311826	50.0	2098608.0	0.062365	Y
5	STD10 280-608141/15	10.0	0.779721	50.0	2065930.0	0.077972	Y
6	ICIS 280-608141/16	50.0	2.213121	50.0	2135807.0	0.044262	Y
7	STD75 280-608141/17	75.0	1.77059	50.0	2108563.0	0.023608	N
8	STD100 280-608141/18	100.0	3.032713	50.0	2185733.0	0.030327	Y
9	STD200 280-608141/19	200.0	4.824434	50.0	2182142.0	0.024122	Y



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Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

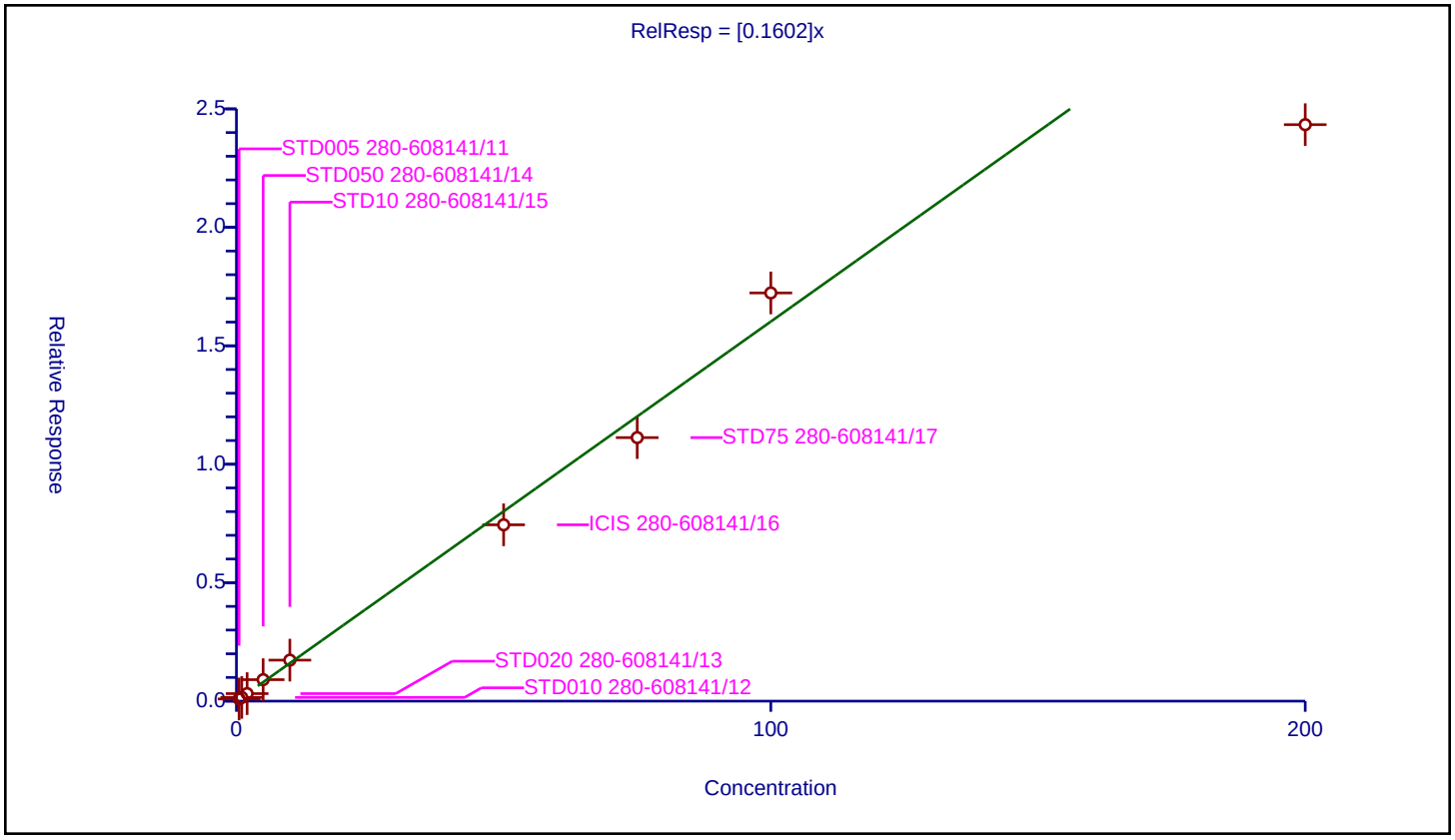
Curve Coefficients

Intercept:	0
Slope:	0.1602

Error Coefficients

Standard Error:	503000
Relative Standard Error:	12.0
Correlation Coefficient:	0.968
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.090491	50.0	2082534.0	0.180981	Y
2	STD010 280-608141/12	1.0	0.156559	50.0	2123474.0	0.156559	Y
3	STD020 280-608141/13	2.0	0.317822	50.0	2069084.0	0.158911	Y
4	STD050 280-608141/14	5.0	0.906577	50.0	2098608.0	0.181315	Y
5	STD10 280-608141/15	10.0	1.731278	50.0	2065930.0	0.173128	Y
6	ICIS 280-608141/16	50.0	7.442831	50.0	2135807.0	0.148857	Y
7	STD75 280-608141/17	75.0	11.124448	50.0	2108563.0	0.148326	Y
8	STD100 280-608141/18	100.0	17.231016	50.0	2185733.0	0.17231	Y
9	STD200 280-608141/19	200.0	24.334438	50.0	2182142.0	0.121672	Y



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Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

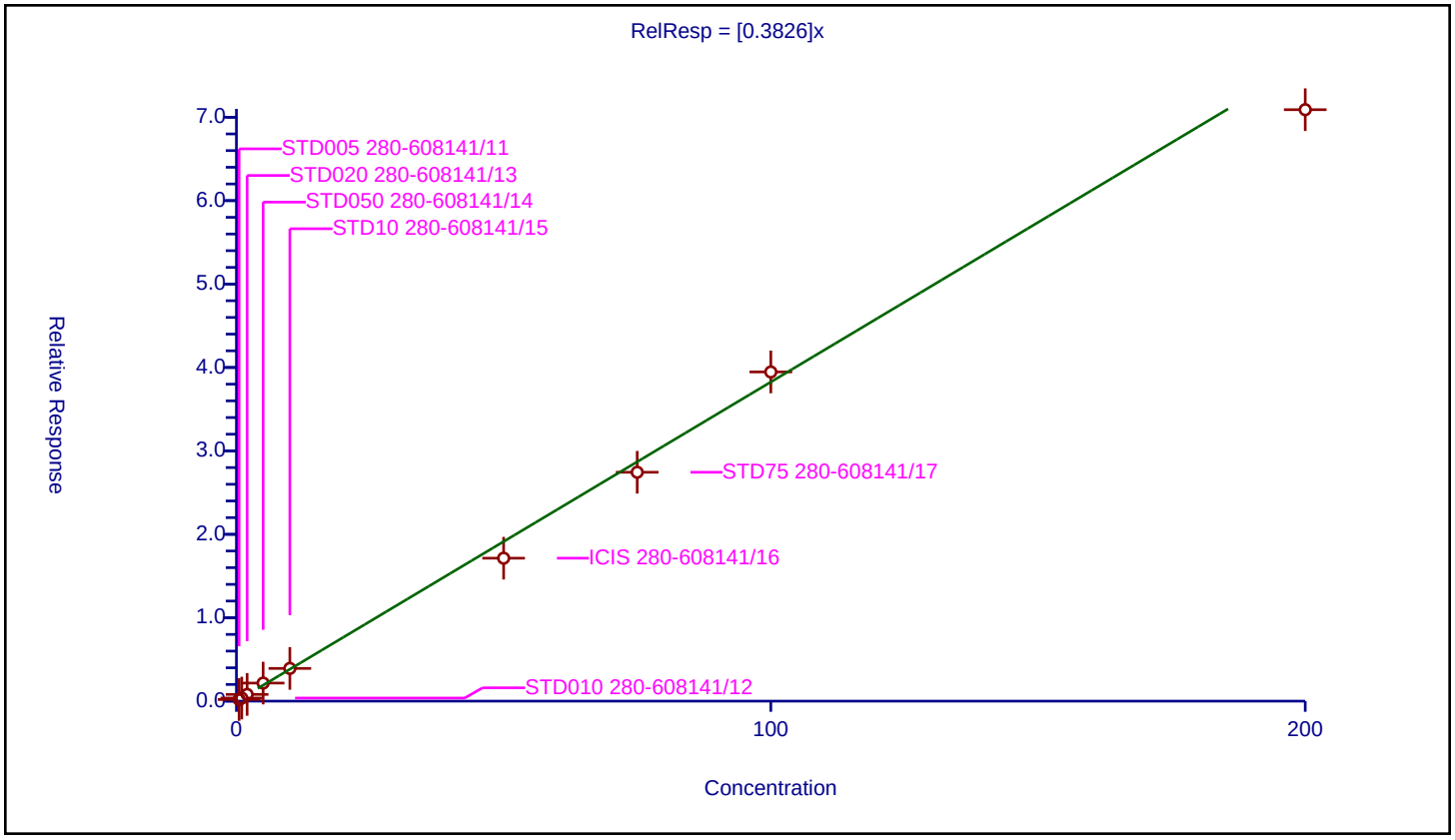
Curve Coefficients

Intercept:	0
Slope:	0.3826

Error Coefficients

Standard Error:	1340000
Relative Standard Error:	7.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.194403	50.0	2082534.0	0.388805	Y
2	STD010 280-608141/12	1.0	0.367958	50.0	2123474.0	0.367958	Y
3	STD020 280-608141/13	2.0	0.807193	50.0	2069084.0	0.403596	Y
4	STD050 280-608141/14	5.0	2.165697	50.0	2098608.0	0.433139	Y
5	STD10 280-608141/15	10.0	3.921043	50.0	2065930.0	0.392104	Y
6	ICIS 280-608141/16	50.0	17.139517	50.0	2135807.0	0.34279	Y
7	STD75 280-608141/17	75.0	27.439351	50.0	2108563.0	0.365858	Y
8	STD100 280-608141/18	100.0	39.464816	50.0	2185733.0	0.394648	Y
9	STD200 280-608141/19	200.0	70.904345	50.0	2182142.0	0.354522	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

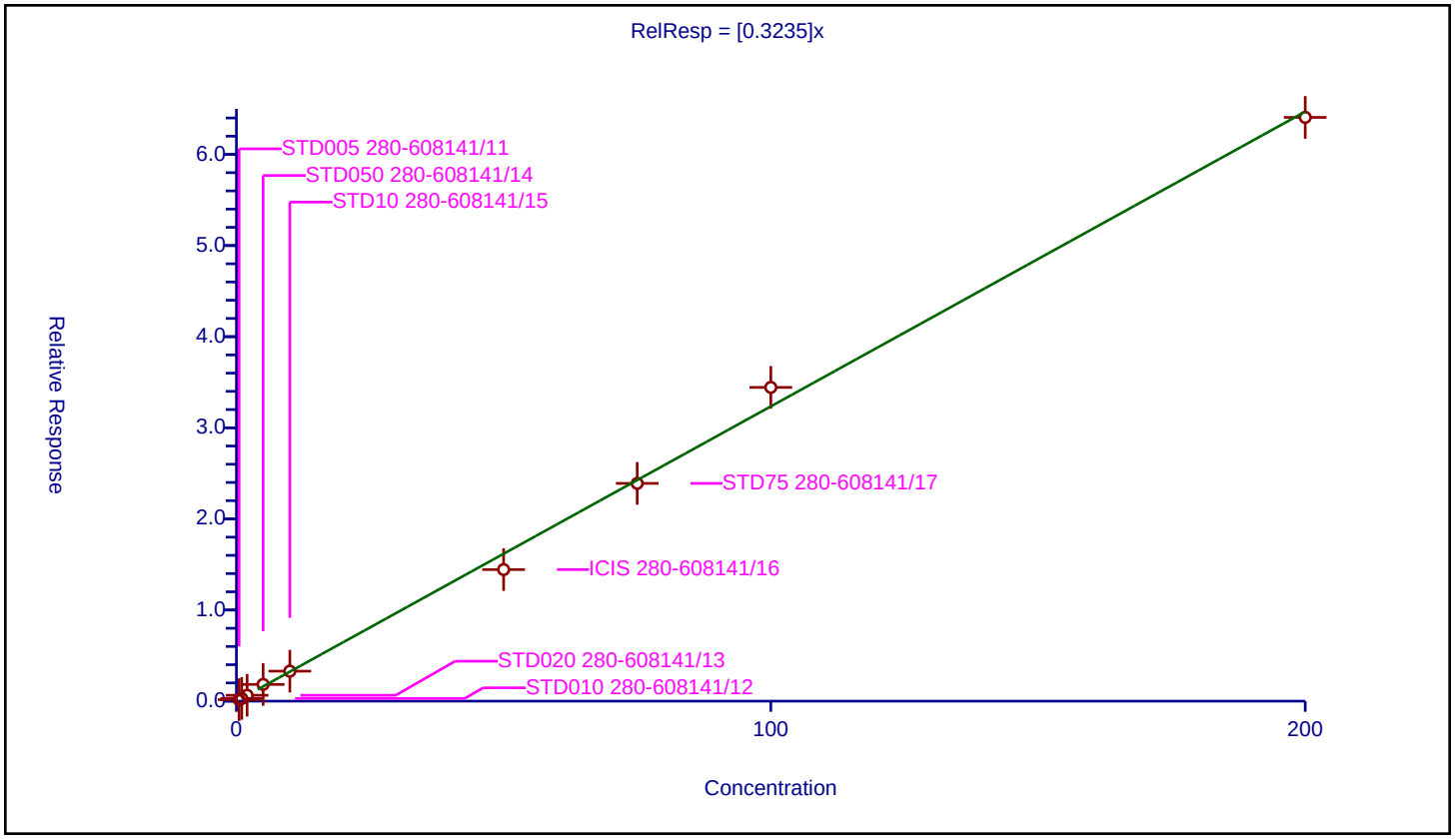
Curve Coefficients

Intercept:	0
Slope:	0.3235

Error Coefficients

Standard Error:	1200000
Relative Standard Error:	7.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.162446	50.0	2082534.0	0.324893	Y
2	STD010 280-608141/12	1.0	0.296519	50.0	2123474.0	0.296519	Y
3	STD020 280-608141/13	2.0	0.643836	50.0	2069084.0	0.321918	Y
4	STD050 280-608141/14	5.0	1.83474	50.0	2098608.0	0.366948	Y
5	STD10 280-608141/15	10.0	3.289608	50.0	2065930.0	0.328961	Y
6	ICIS 280-608141/16	50.0	14.439437	50.0	2135807.0	0.288789	Y
7	STD75 280-608141/17	75.0	23.900661	50.0	2108563.0	0.318675	Y
8	STD100 280-608141/18	100.0	34.434169	50.0	2185733.0	0.344342	Y
9	STD200 280-608141/19	200.0	64.065537	50.0	2182142.0	0.320328	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

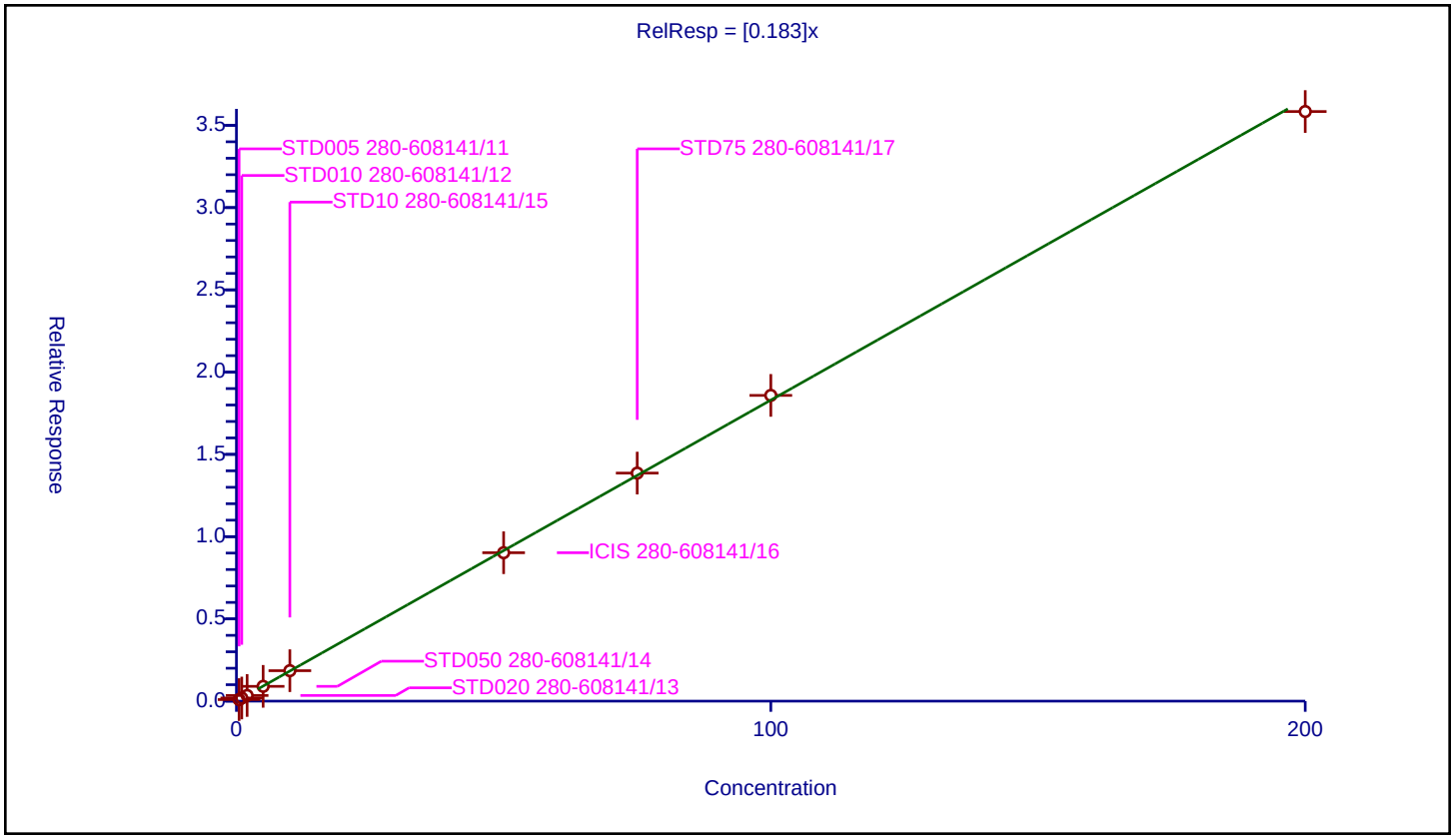
Curve Coefficients

Intercept:	0
Slope:	0.183

Error Coefficients

Standard Error:	671000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.094428	50.0	2082534.0	0.188856	Y
2	STD010 280-608141/12	1.0	0.190348	50.0	2123474.0	0.190348	Y
3	STD020 280-608141/13	2.0	0.344597	50.0	2069084.0	0.172298	Y
4	STD050 280-608141/14	5.0	0.898977	50.0	2098608.0	0.179795	Y
5	STD10 280-608141/15	10.0	1.851926	50.0	2065930.0	0.185193	Y
6	ICIS 280-608141/16	50.0	9.022257	50.0	2135807.0	0.180445	Y
7	STD75 280-608141/17	75.0	13.862024	50.0	2108563.0	0.184827	Y
8	STD100 280-608141/18	100.0	18.584223	50.0	2185733.0	0.185842	Y
9	STD200 280-608141/19	200.0	35.839189	50.0	2182142.0	0.179196	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

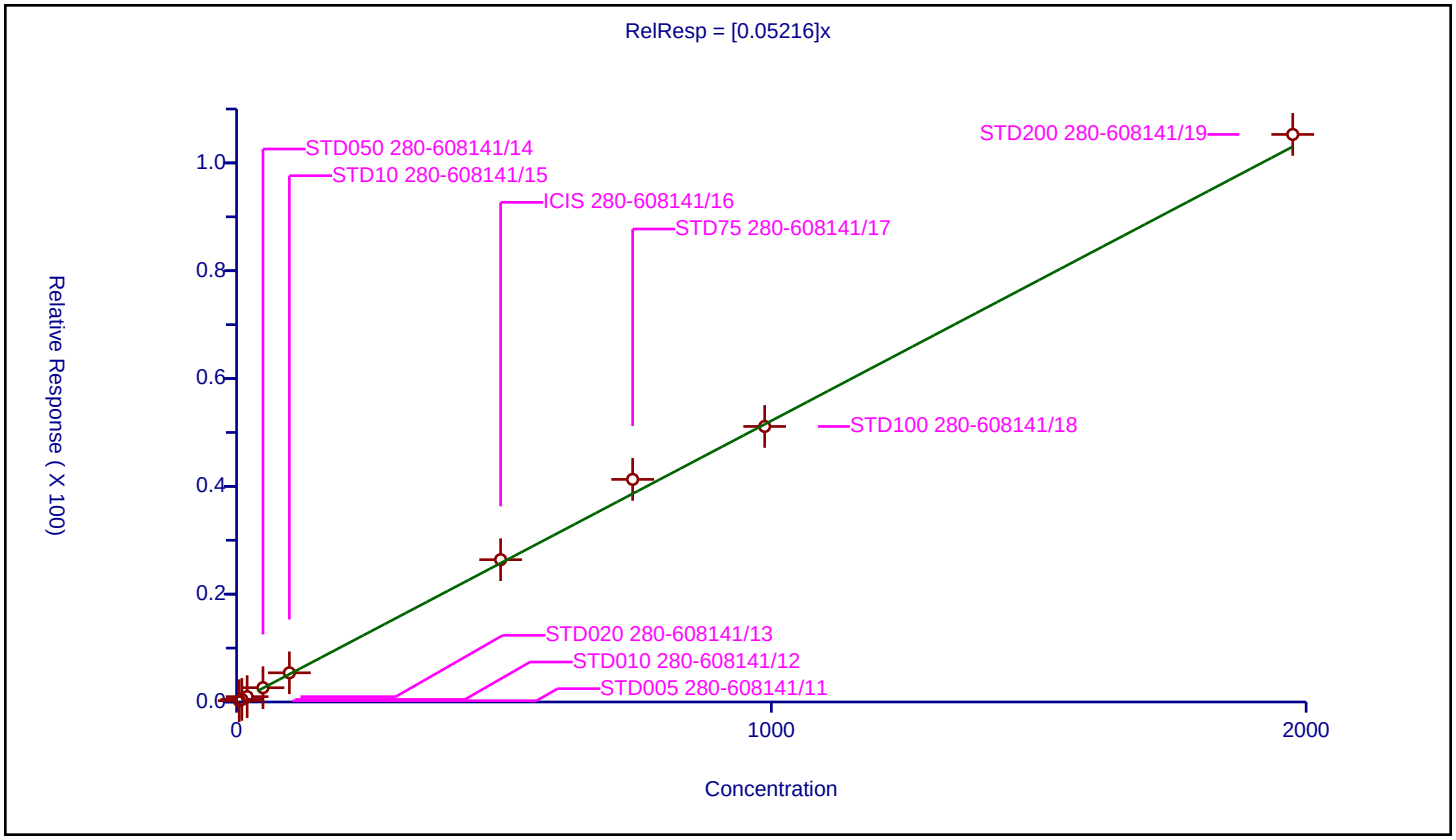
Curve Coefficients

Intercept:	0
Slope:	0.05216

Error Coefficients

Standard Error:	1950000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	4.9375	0.236995	50.0	2082534.0	0.047999	Y
2	STD010 280-608141/12	9.875	0.47832	50.0	2123474.0	0.048437	Y
3	STD020 280-608141/13	19.75	0.992347	50.0	2069084.0	0.050245	Y
4	STD050 280-608141/14	49.375	2.649494	50.0	2098608.0	0.053661	Y
5	STD10 280-608141/15	98.75	5.412817	50.0	2065930.0	0.054813	Y
6	ICIS 280-608141/16	493.75	26.400958	50.0	2135807.0	0.05347	Y
7	STD75 280-608141/17	740.625	41.293739	50.0	2108563.0	0.055755	Y
8	STD100 280-608141/18	987.5	51.114477	50.0	2185733.0	0.051761	Y
9	STD200 280-608141/19	1975.0	105.285953	50.0	2182142.0	0.053309	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

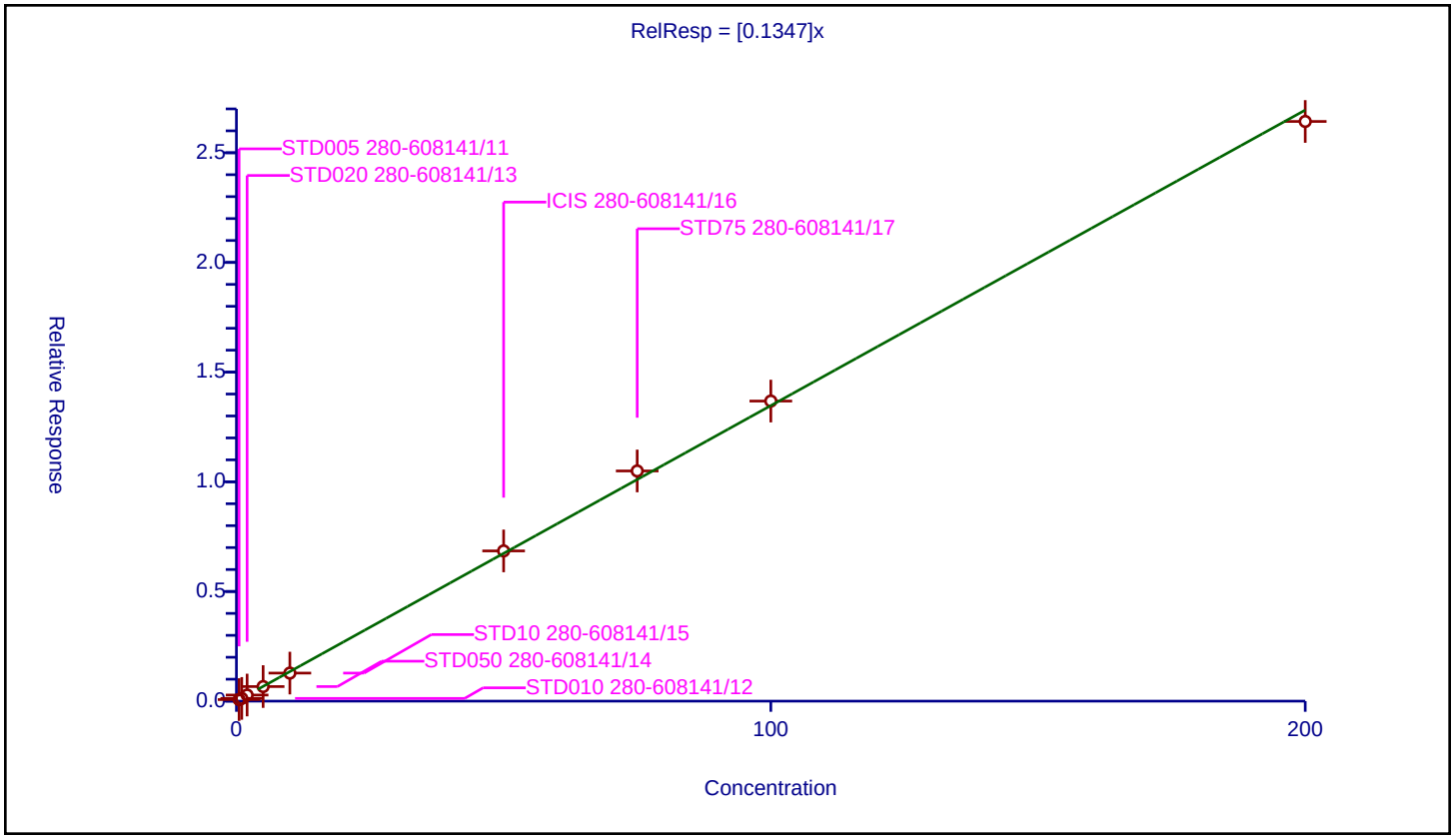
Curve Coefficients

Intercept:	0
Slope:	0.1347

Error Coefficients

Standard Error:	497000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.070755	50.0	2082534.0	0.14151	Y
2	STD010 280-608141/12	1.0	0.12489	50.0	2123474.0	0.12489	Y
3	STD020 280-608141/13	2.0	0.27865	50.0	2069084.0	0.139325	Y
4	STD050 280-608141/14	5.0	0.665227	50.0	2098608.0	0.133045	Y
5	STD10 280-608141/15	10.0	1.279593	50.0	2065930.0	0.127959	Y
6	ICIS 280-608141/16	50.0	6.848723	50.0	2135807.0	0.136974	Y
7	STD75 280-608141/17	75.0	10.493687	50.0	2108563.0	0.139916	Y
8	STD100 280-608141/18	100.0	13.680376	50.0	2185733.0	0.136804	Y
9	STD200 280-608141/19	200.0	26.426672	50.0	2182142.0	0.132133	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

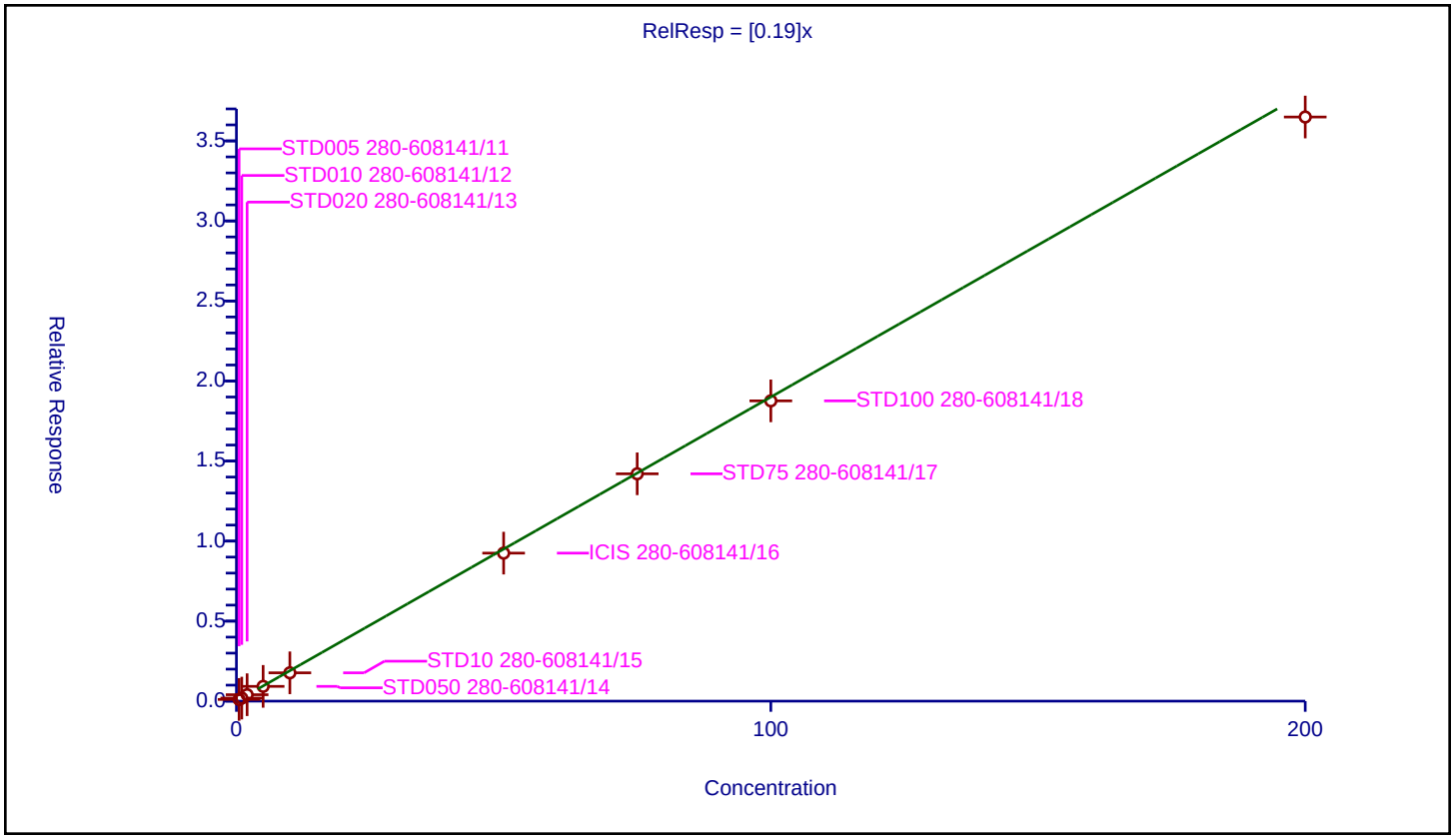
Curve Coefficients

Intercept:	0
Slope:	0.19

Error Coefficients

Standard Error:	683000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.105881	50.0	2082534.0	0.211761	Y
2	STD010 280-608141/12	1.0	0.191337	50.0	2123474.0	0.191337	Y
3	STD020 280-608141/13	2.0	0.401506	50.0	2069084.0	0.200753	Y
4	STD050 280-608141/14	5.0	0.92304	50.0	2098608.0	0.184608	Y
5	STD10 280-608141/15	10.0	1.770099	50.0	2065930.0	0.17701	Y
6	ICIS 280-608141/16	50.0	9.247137	50.0	2135807.0	0.184943	Y
7	STD75 280-608141/17	75.0	14.202066	50.0	2108563.0	0.189361	Y
8	STD100 280-608141/18	100.0	18.760251	50.0	2185733.0	0.187603	Y
9	STD200 280-608141/19	200.0	36.49279	50.0	2182142.0	0.182464	Y



Calibration / Acetone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

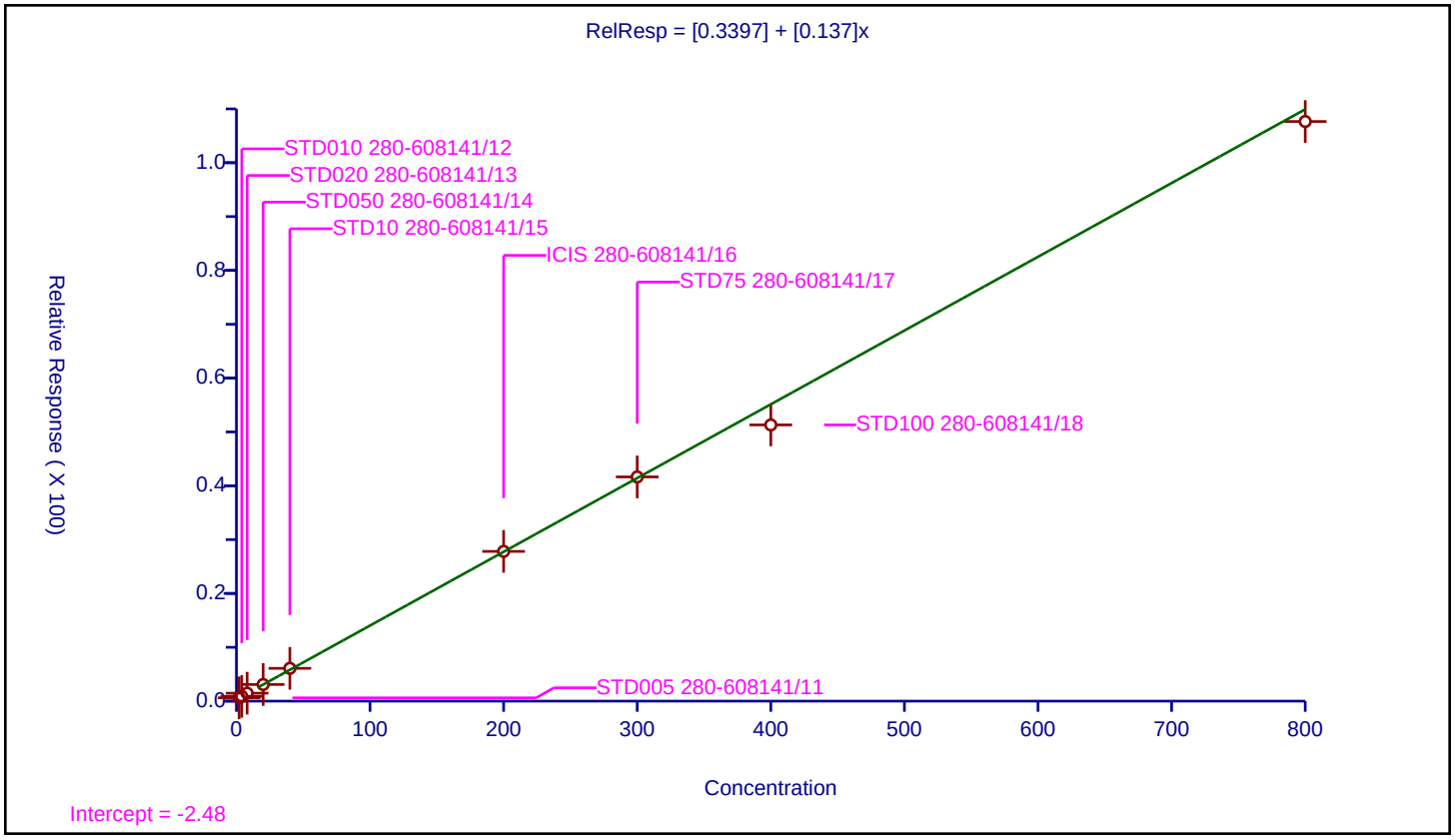
Curve Coefficients

Intercept:	0.3397
Slope:	0.137

Error Coefficients

Standard Error:	2130000
Relative Standard Error:	3.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	2.0	0.609738	50.0	2082534.0	0.304869	Y
2	STD010 280-608141/12	4.0	0.889839	50.0	2123474.0	0.22246	Y
3	STD020 280-608141/13	8.0	1.478166	50.0	2069084.0	0.184771	Y
4	STD050 280-608141/14	20.0	3.091502	50.0	2098608.0	0.154575	Y
5	STD10 280-608141/15	40.0	6.08963	50.0	2065930.0	0.152241	Y
6	ICIS 280-608141/16	200.0	27.812906	50.0	2135807.0	0.139065	Y
7	STD75 280-608141/17	300.0	41.643693	50.0	2108563.0	0.138812	Y
8	STD100 280-608141/18	400.0	51.304917	50.0	2185733.0	0.128262	Y
9	STD200 280-608141/19	800.0	107.659676	50.0	2182142.0	0.134575	Y



Calibration / Iodomethane

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

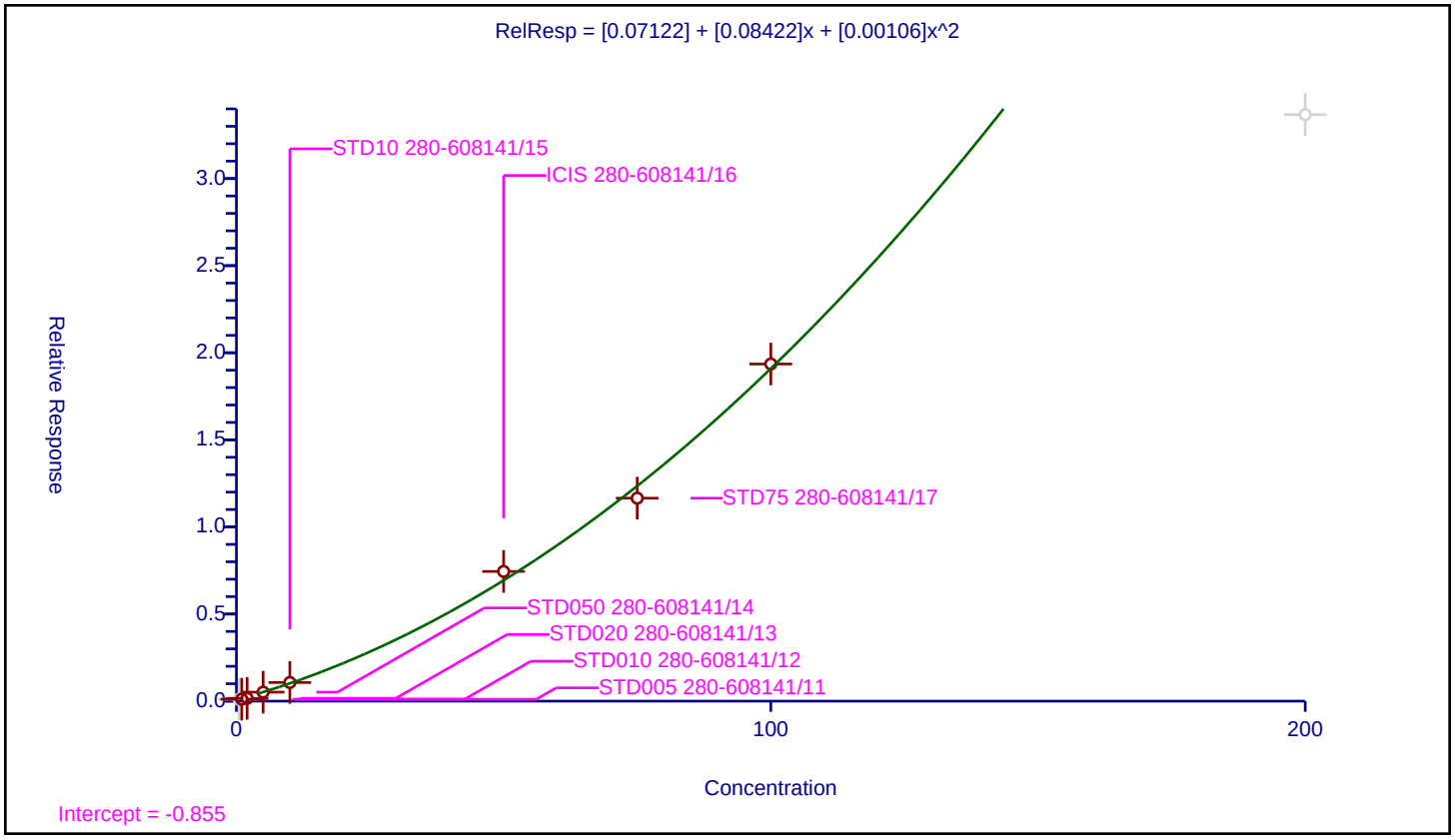
Curve Coefficients

Intercept:	0.07122
Slope:	0.08422
Second Order:	0.00106

Error Coefficients

Standard Error:	515000
Relative Standard Error:	35.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.108065	50.0	2082534.0	0.216131	N
2	STD010 280-608141/12	1.0	0.112716	50.0	2123474.0	0.112716	Y
3	STD020 280-608141/13	2.0	0.160409	50.0	2069084.0	0.080205	Y
4	STD050 280-608141/14	5.0	0.516223	50.0	2098608.0	0.103245	Y
5	STD10 280-608141/15	10.0	1.069591	50.0	2065930.0	0.106959	Y
6	ICIS 280-608141/16	50.0	7.445359	50.0	2135807.0	0.148907	Y
7	STD75 280-608141/17	75.0	11.651513	50.0	2108563.0	0.155354	Y
8	STD100 280-608141/18	100.0	19.353896	50.0	2185733.0	0.193539	Y
9	STD200 280-608141/19	200.0	33.670746	50.0	2182142.0	0.168354	N



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Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

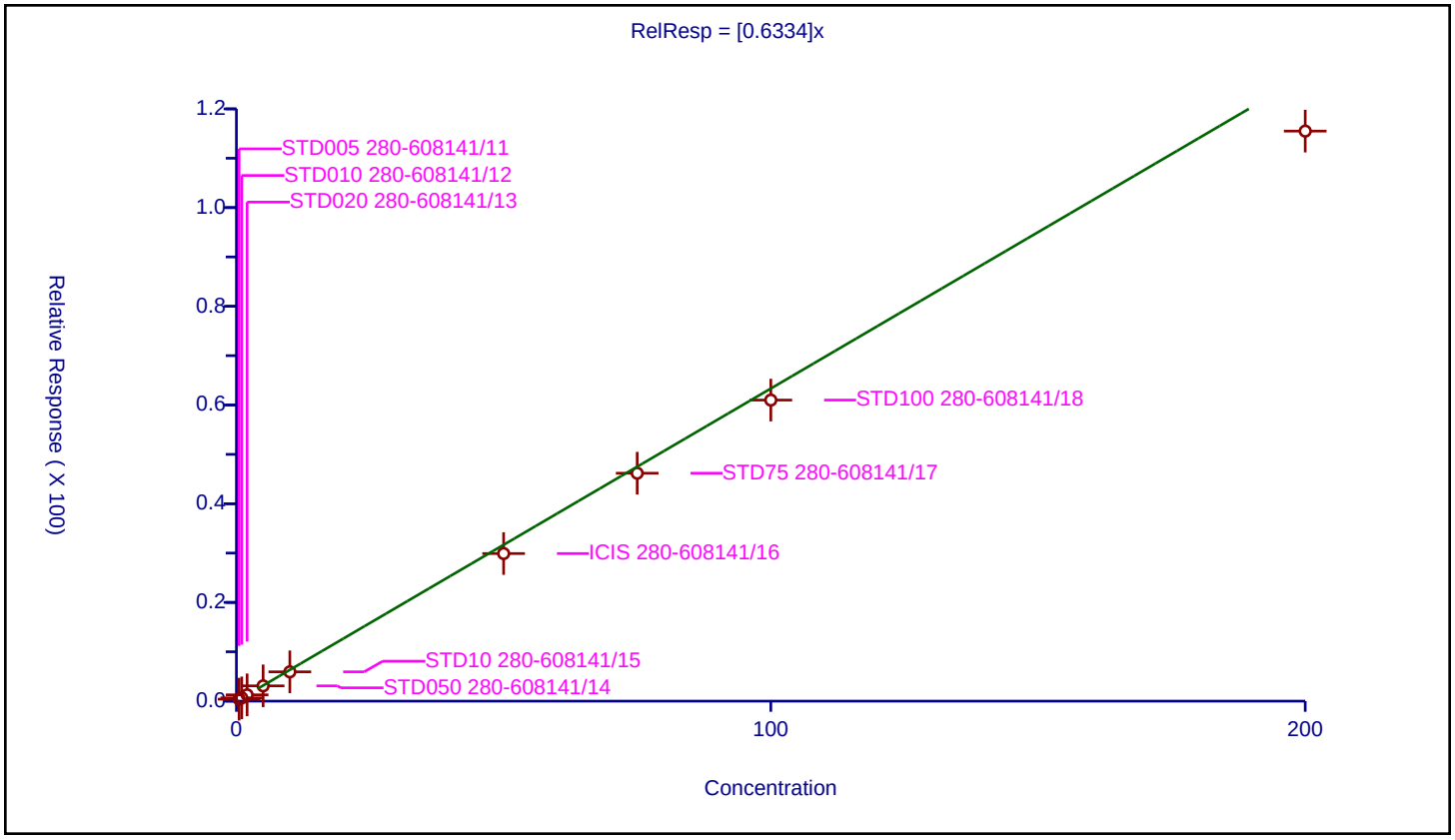
Curve Coefficients

Intercept:	0
Slope:	0.6334

Error Coefficients

Standard Error:	2180000
Relative Standard Error:	10.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.394495	50.0	2082534.0	0.788991	Y
2	STD010 280-608141/12	1.0	0.661063	50.0	2123474.0	0.661063	Y
3	STD020 280-608141/13	2.0	1.274211	50.0	2069084.0	0.637106	Y
4	STD050 280-608141/14	5.0	3.093312	50.0	2098608.0	0.618662	Y
5	STD10 280-608141/15	10.0	5.937834	50.0	2065930.0	0.593783	Y
6	ICIS 280-608141/16	50.0	29.907243	50.0	2135807.0	0.598145	Y
7	STD75 280-608141/17	75.0	46.18074	50.0	2108563.0	0.615743	Y
8	STD100 280-608141/18	100.0	60.998324	50.0	2185733.0	0.609983	Y
9	STD200 280-608141/19	200.0	115.497685	50.0	2182142.0	0.577488	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

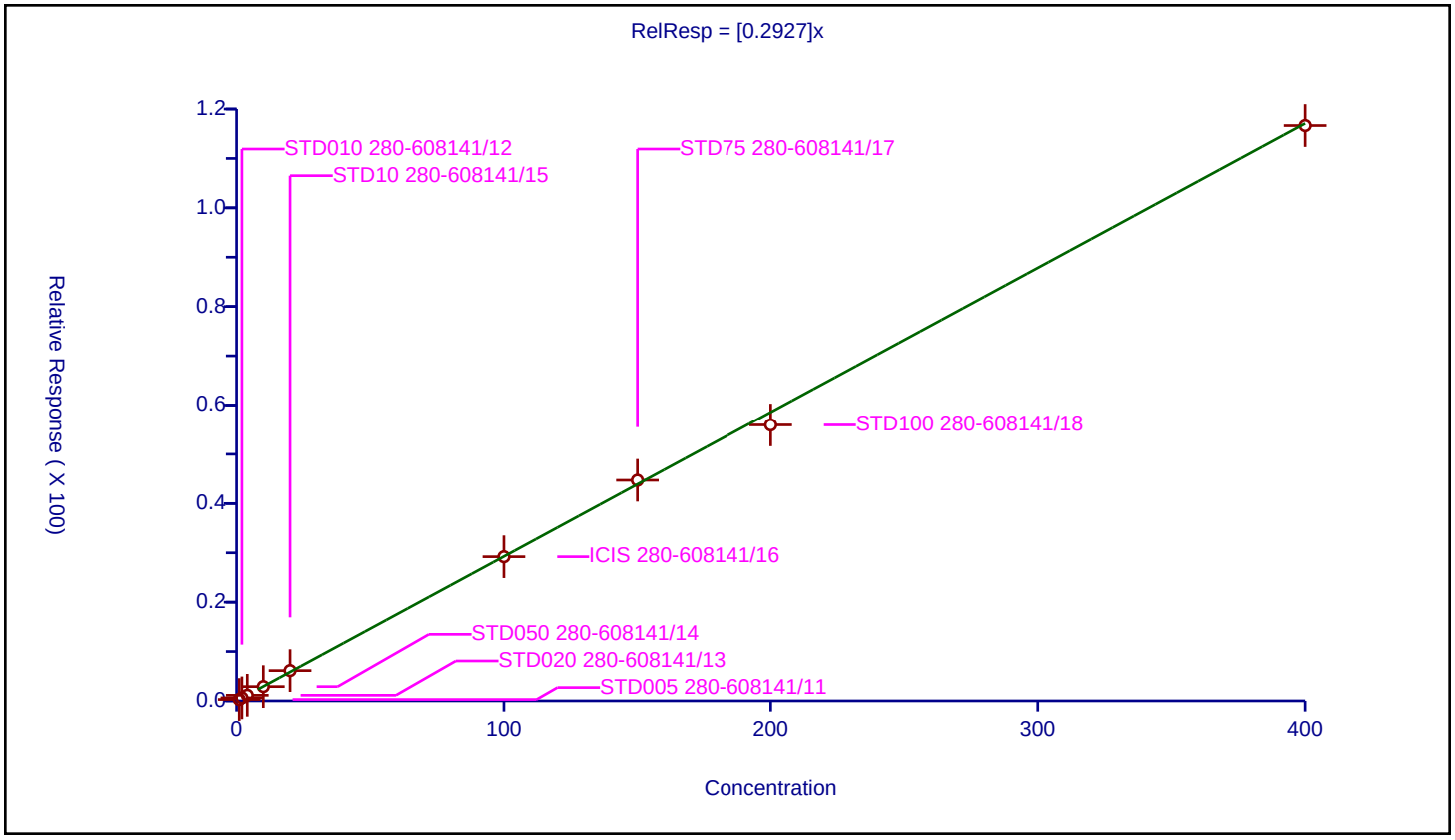
Curve Coefficients

Intercept:	0
Slope:	0.2927

Error Coefficients

Standard Error:	2150000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	1.0	0.281484	50.0	2082534.0	0.281484	Y
2	STD010 280-608141/12	2.0	0.61868	50.0	2123474.0	0.30934	Y
3	STD020 280-608141/13	4.0	1.141495	50.0	2069084.0	0.285374	Y
4	STD050 280-608141/14	10.0	2.897444	50.0	2098608.0	0.289744	Y
5	STD10 280-608141/15	20.0	6.139777	50.0	2065930.0	0.306989	Y
6	ICIS 280-608141/16	100.0	29.212096	50.0	2135807.0	0.292121	Y
7	STD75 280-608141/17	150.0	44.724772	50.0	2108563.0	0.298165	Y
8	STD100 280-608141/18	200.0	55.953701	50.0	2185733.0	0.279769	Y
9	STD200 280-608141/19	400.0	116.661175	50.0	2182142.0	0.291653	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

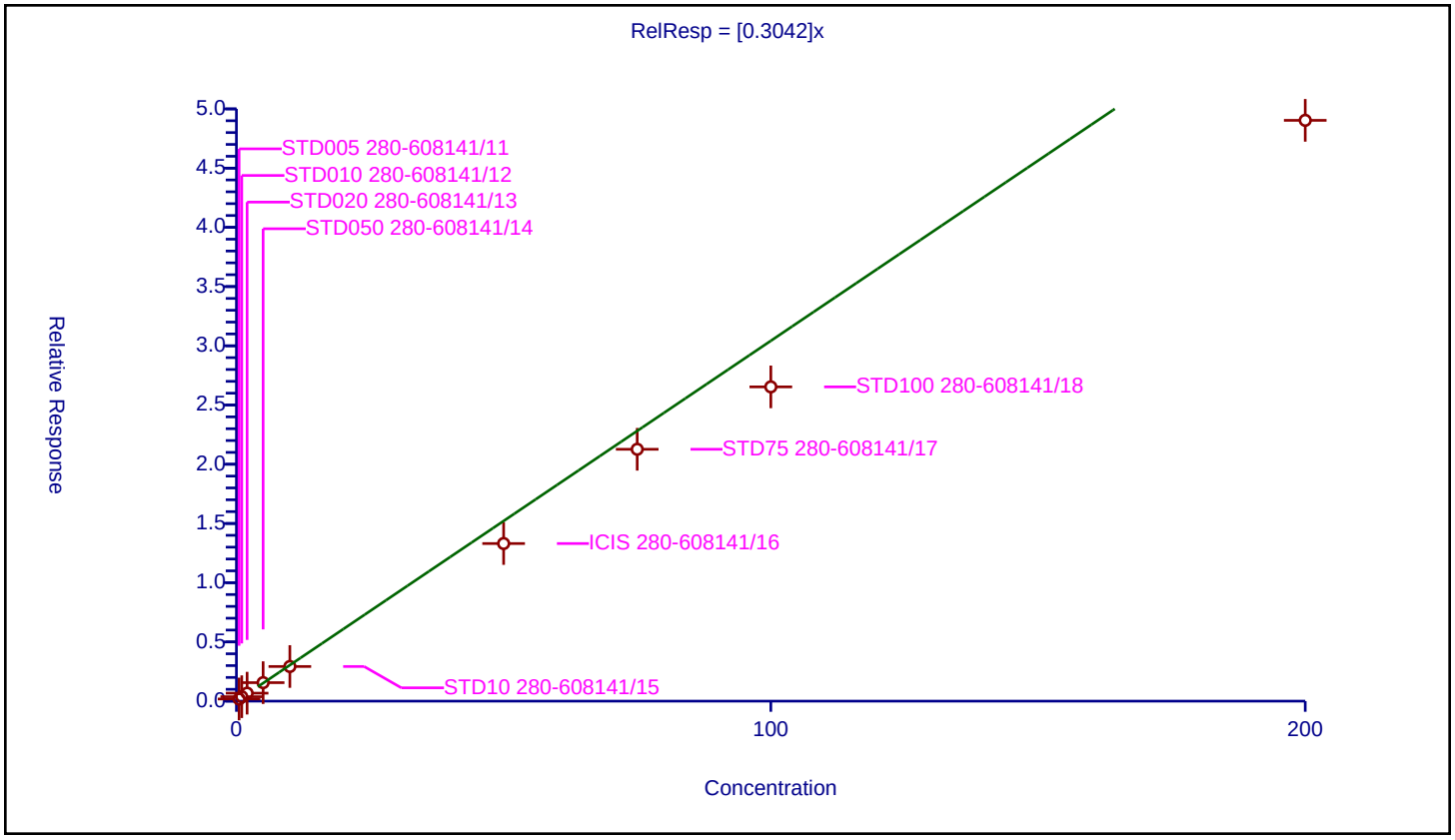
Curve Coefficients

Intercept:	0
Slope:	0.3042

Error Coefficients

Standard Error:	940000
Relative Standard Error:	14.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.967

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.180957	50.0	2082534.0	0.361915	Y
2	STD010 280-608141/12	1.0	0.373845	50.0	2123474.0	0.373845	Y
3	STD020 280-608141/13	2.0	0.674356	50.0	2069084.0	0.337178	Y
4	STD050 280-608141/14	5.0	1.561607	50.0	2098608.0	0.312321	Y
5	STD10 280-608141/15	10.0	2.924325	50.0	2065930.0	0.292432	Y
6	ICIS 280-608141/16	50.0	13.306867	50.0	2135807.0	0.266137	Y
7	STD75 280-608141/17	75.0	21.263842	50.0	2108563.0	0.283518	Y
8	STD100 280-608141/18	100.0	26.53277	50.0	2185733.0	0.265328	Y
9	STD200 280-608141/19	200.0	49.033473	50.0	2182142.0	0.245167	Y



Calibration / Methylene Chloride

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

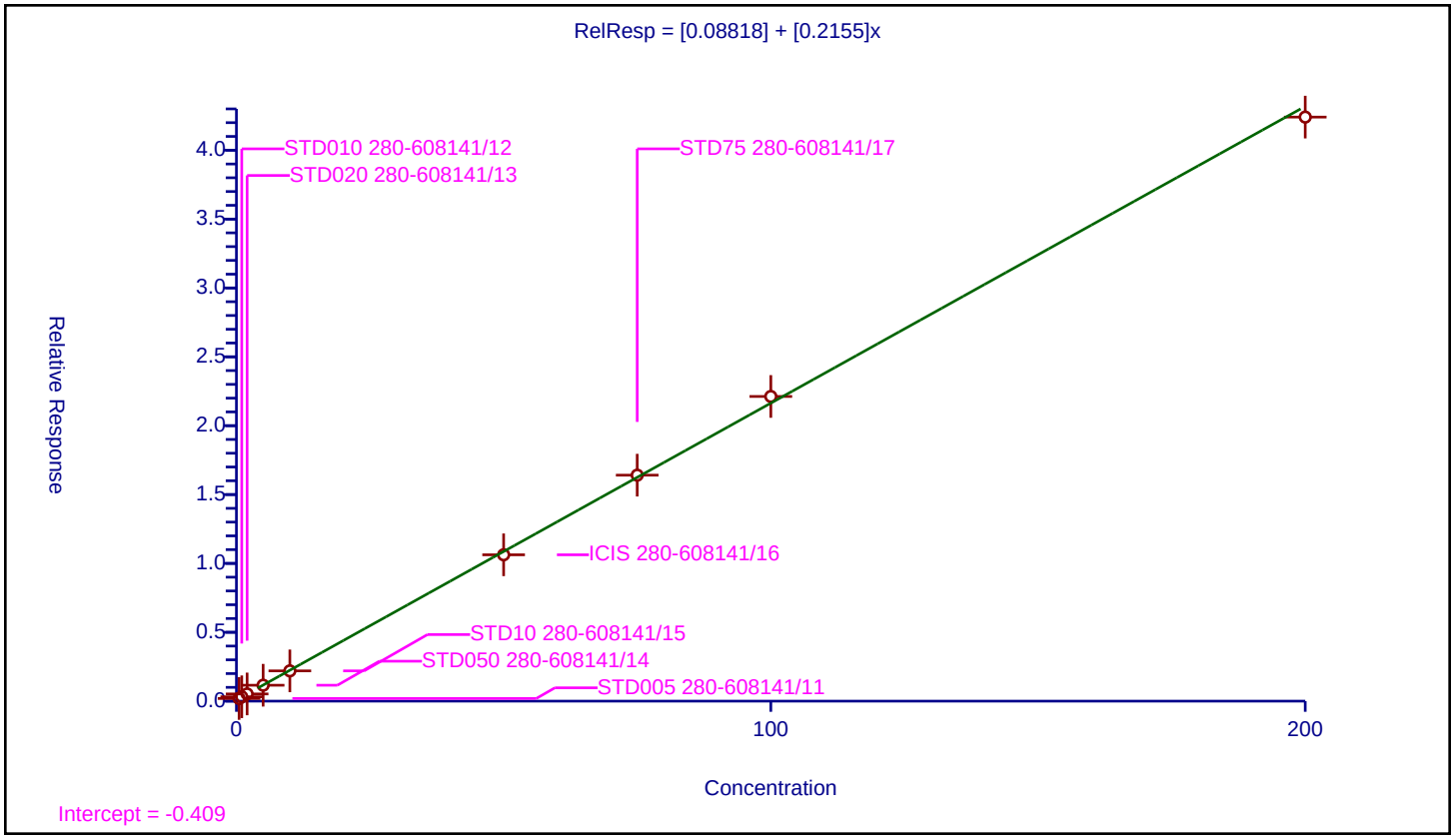
Curve Coefficients

Intercept:	0.08818
Slope:	0.2155

Error Coefficients

Standard Error:	850000
Relative Standard Error:	2.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.192842	50.0	2082534.0	0.385684	Y
2	STD010 280-608141/12	1.0	0.315756	50.0	2123474.0	0.315756	Y
3	STD020 280-608141/13	2.0	0.523686	50.0	2069084.0	0.261843	Y
4	STD050 280-608141/14	5.0	1.155909	50.0	2098608.0	0.231182	Y
5	STD10 280-608141/15	10.0	2.197848	50.0	2065930.0	0.219785	Y
6	ICIS 280-608141/16	50.0	10.625141	50.0	2135807.0	0.212503	Y
7	STD75 280-608141/17	75.0	16.406553	50.0	2108563.0	0.218754	Y
8	STD100 280-608141/18	100.0	22.121481	50.0	2185733.0	0.221215	Y
9	STD200 280-608141/19	200.0	42.404619	50.0	2182142.0	0.212023	Y



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Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

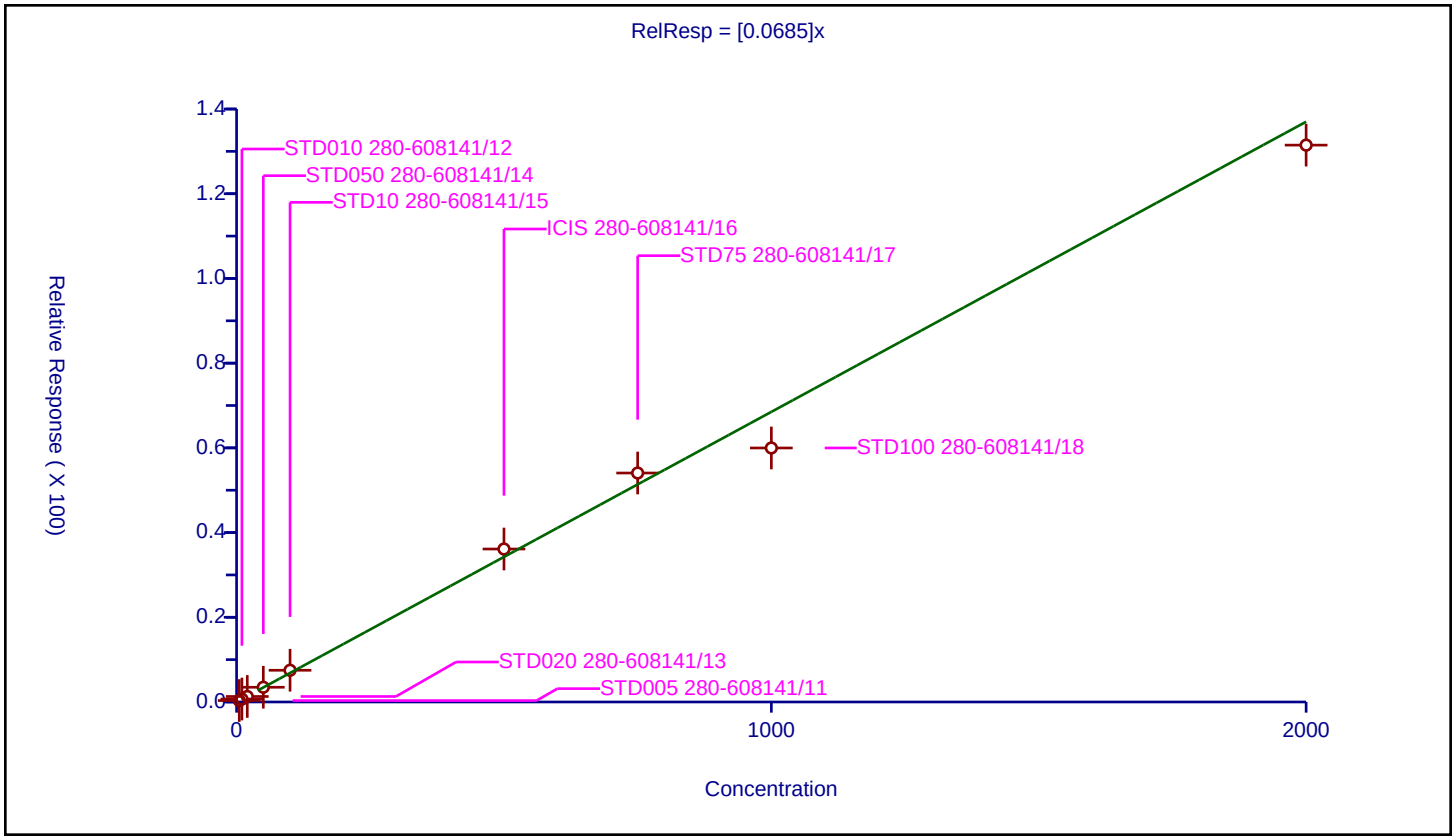
Curve Coefficients

Intercept:	0
Slope:	0.0685

Error Coefficients

Standard Error:	2440000
Relative Standard Error:	6.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	5.0	0.337353	50.0	2082534.0	0.067471	Y
2	STD010 280-608141/12	10.0	0.693298	50.0	2123474.0	0.06933	Y
3	STD020 280-608141/13	20.0	1.301929	50.0	2069084.0	0.065096	Y
4	STD050 280-608141/14	50.0	3.481617	50.0	2098608.0	0.069632	Y
5	STD10 280-608141/15	100.0	7.490815	50.0	2065930.0	0.074908	Y
6	ICIS 280-608141/16	500.0	36.114405	50.0	2135807.0	0.072229	Y
7	STD75 280-608141/17	750.0	54.061771	50.0	2108563.0	0.072082	Y
8	STD100 280-608141/18	1000.0	59.975075	50.0	2185733.0	0.059975	Y
9	STD200 280-608141/19	2000.0	131.47648	50.0	2182142.0	0.065738	Y



Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

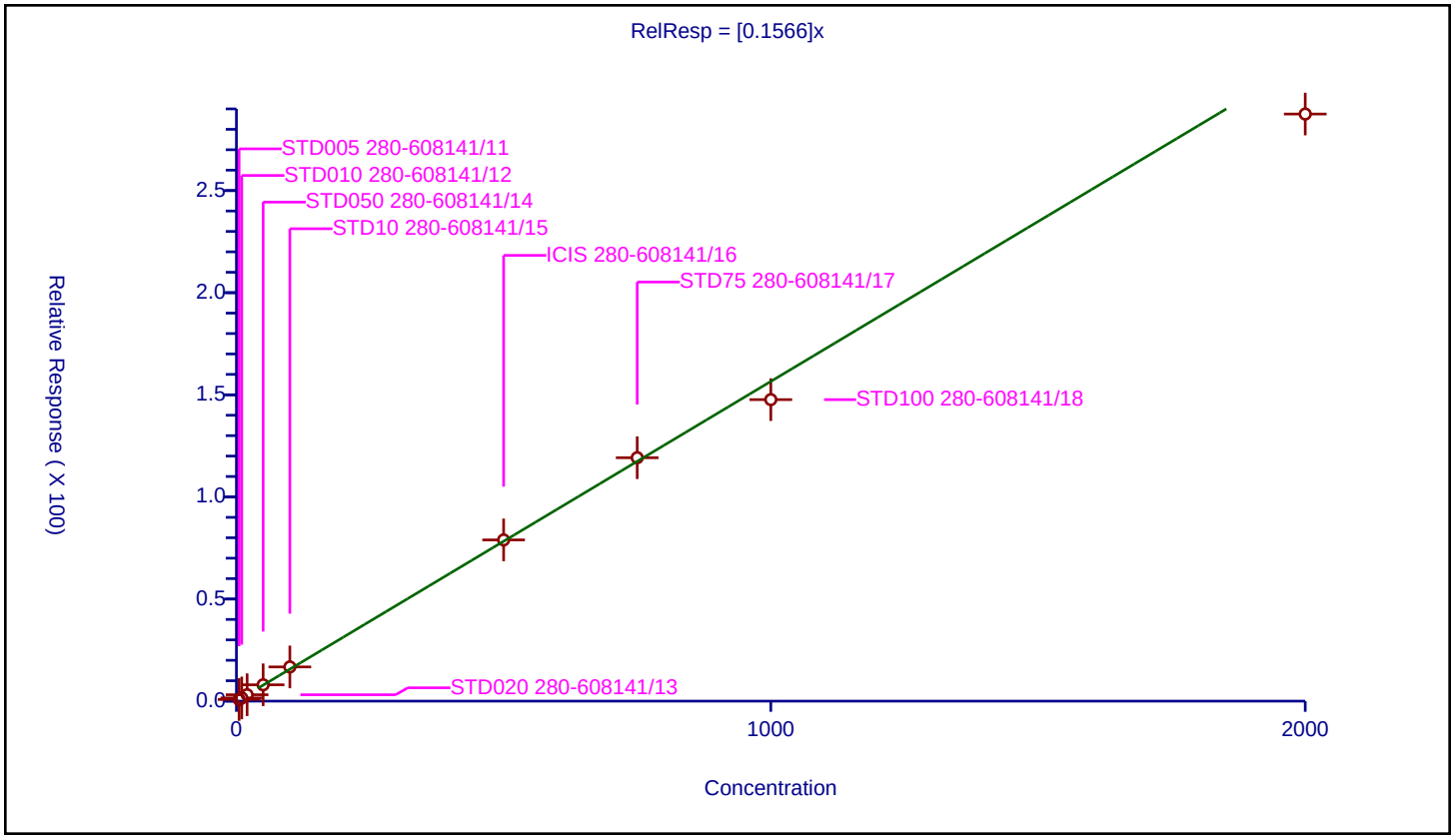
Curve Coefficients

Intercept:	0
Slope:	0.1566

Error Coefficients

Standard Error:	5430000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	5.0	0.800155	50.0	2082534.0	0.160031	Y
2	STD010 280-608141/12	10.0	1.567643	50.0	2123474.0	0.156764	Y
3	STD020 280-608141/13	20.0	3.130612	50.0	2069084.0	0.156531	Y
4	STD050 280-608141/14	50.0	7.998349	50.0	2098608.0	0.159967	Y
5	STD10 280-608141/15	100.0	16.752334	50.0	2065930.0	0.167523	Y
6	ICIS 280-608141/16	500.0	78.94173	50.0	2135807.0	0.157883	Y
7	STD75 280-608141/17	750.0	119.190676	50.0	2108563.0	0.158921	Y
8	STD100 280-608141/18	1000.0	147.637291	50.0	2185733.0	0.147637	Y
9	STD200 280-608141/19	2000.0	287.48718	50.0	2182142.0	0.143744	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

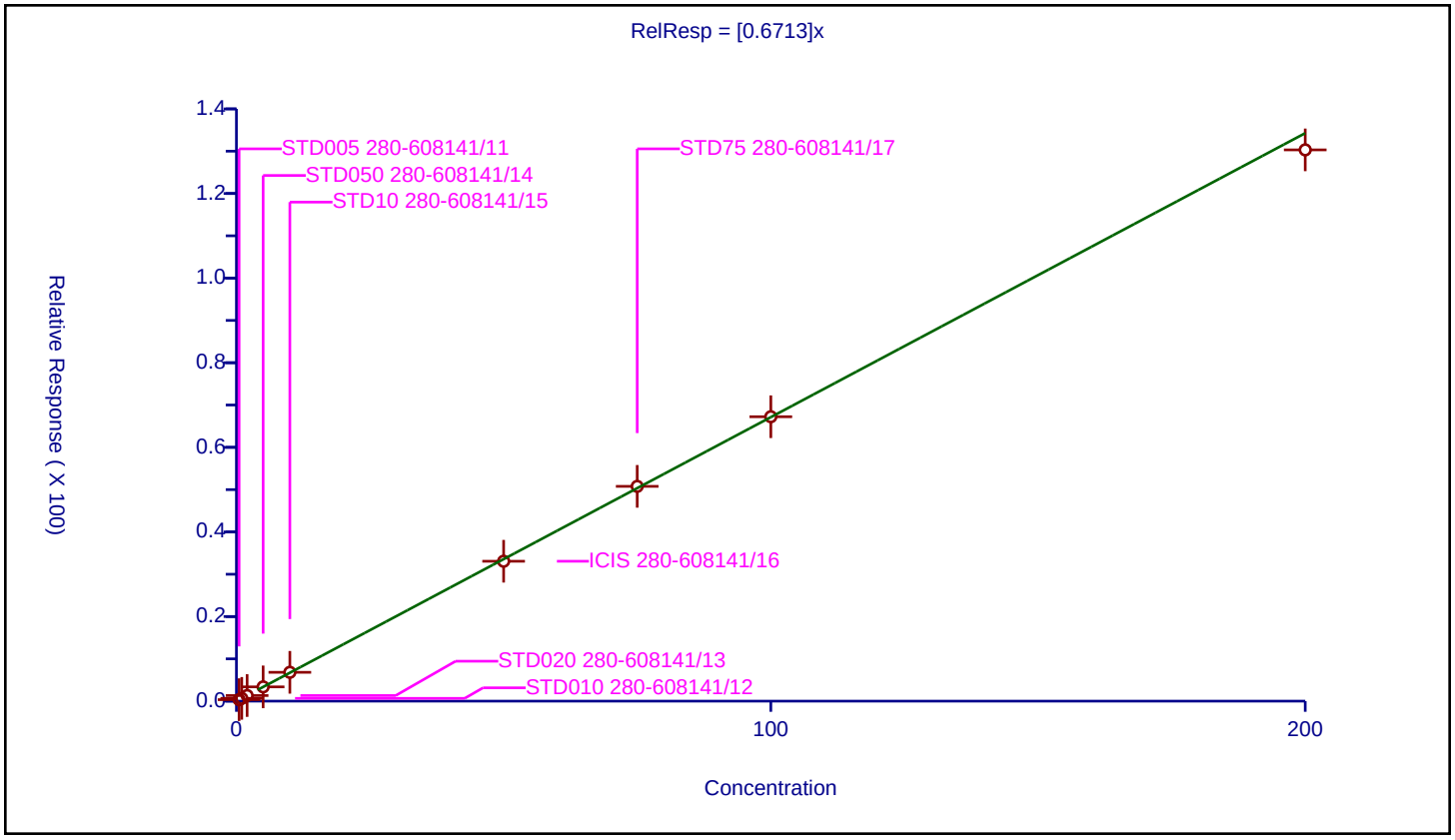
Curve Coefficients

Intercept:	0
Slope:	0.6713

Error Coefficients

Standard Error:	2440000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.350607	50.0	2082534.0	0.701213	Y
2	STD010 280-608141/12	1.0	0.658826	50.0	2123474.0	0.658826	Y
3	STD020 280-608141/13	2.0	1.32636	50.0	2069084.0	0.66318	Y
4	STD050 280-608141/14	5.0	3.372688	50.0	2098608.0	0.674538	Y
5	STD10 280-608141/15	10.0	6.816954	50.0	2065930.0	0.681695	Y
6	ICIS 280-608141/16	50.0	33.070146	50.0	2135807.0	0.661403	Y
7	STD75 280-608141/17	75.0	50.772588	50.0	2108563.0	0.676968	Y
8	STD100 280-608141/18	100.0	67.233166	50.0	2185733.0	0.672332	Y
9	STD200 280-608141/19	200.0	130.312532	50.0	2182142.0	0.651563	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

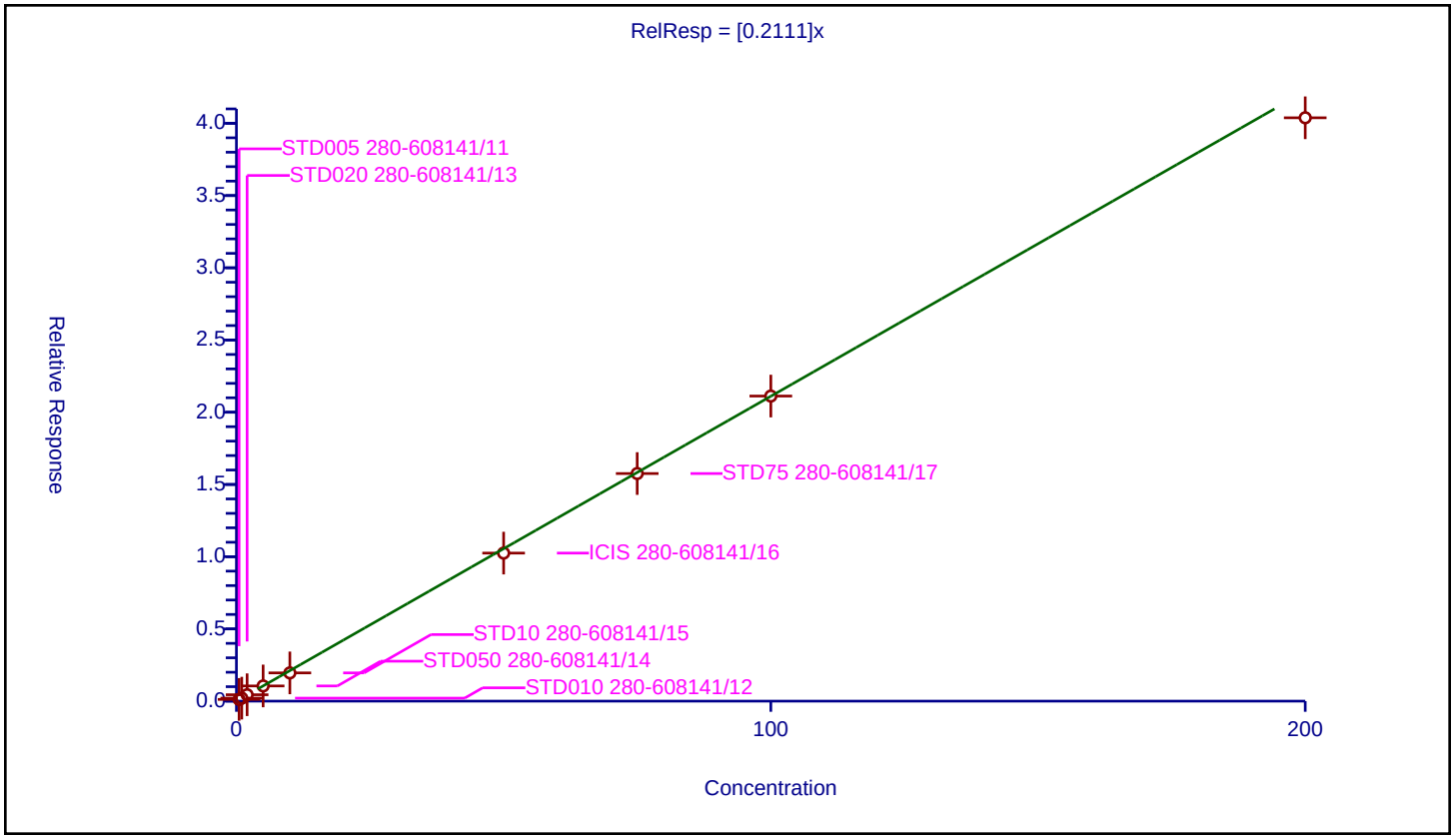
Curve Coefficients

Intercept:	0
Slope:	0.2111

Error Coefficients

Standard Error:	758000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.118245	50.0	2082534.0	0.236491	Y
2	STD010 280-608141/12	1.0	0.207467	50.0	2123474.0	0.207467	Y
3	STD020 280-608141/13	2.0	0.442877	50.0	2069084.0	0.221439	Y
4	STD050 280-608141/14	5.0	1.052531	50.0	2098608.0	0.210506	Y
5	STD10 280-608141/15	10.0	1.955923	50.0	2065930.0	0.195592	Y
6	ICIS 280-608141/16	50.0	10.249545	50.0	2135807.0	0.204991	Y
7	STD75 280-608141/17	75.0	15.756584	50.0	2108563.0	0.210088	Y
8	STD100 280-608141/18	100.0	21.119551	50.0	2185733.0	0.211196	Y
9	STD200 280-608141/19	200.0	40.384242	50.0	2182142.0	0.201921	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

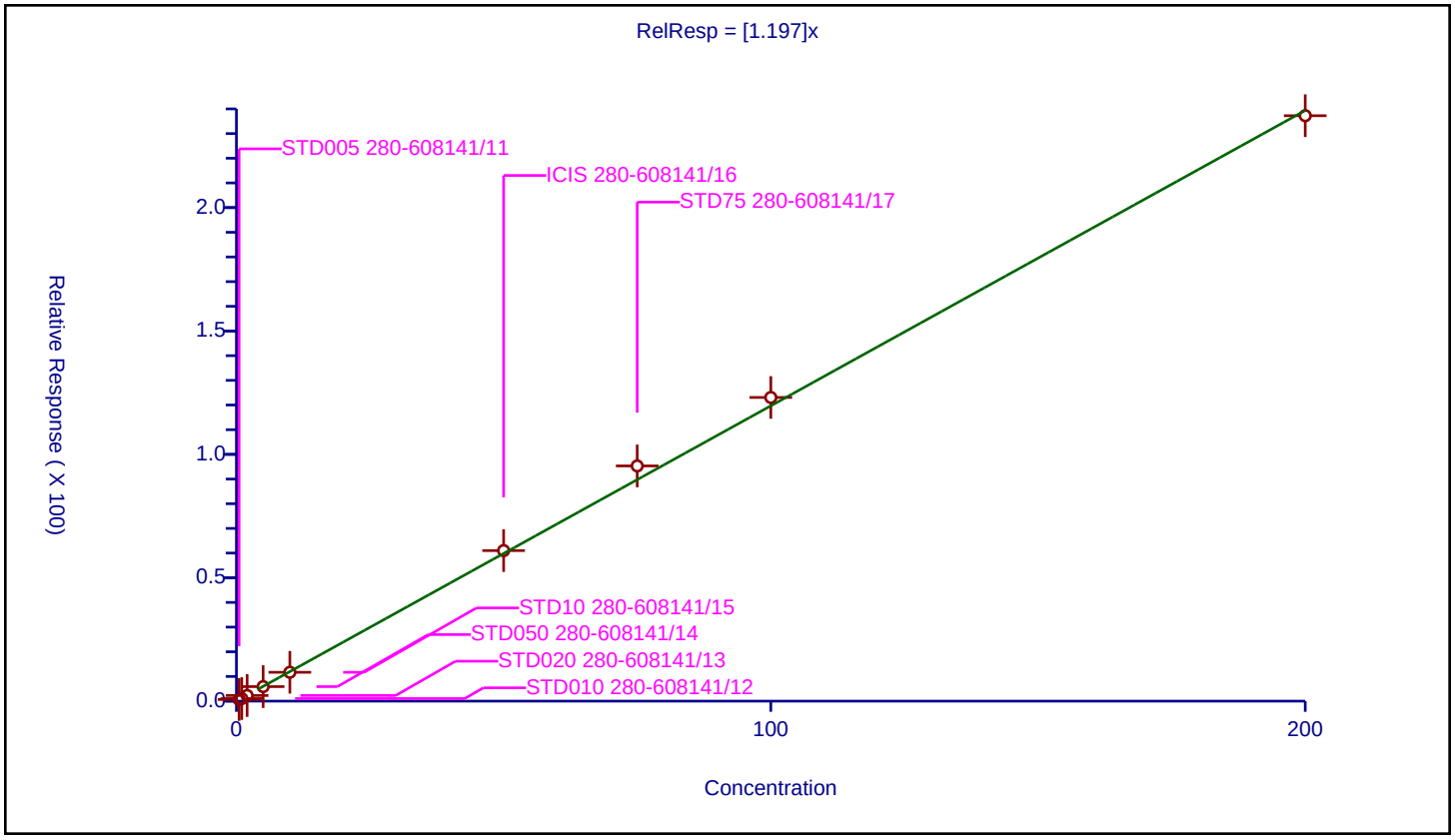
Curve Coefficients

Intercept:	0
Slope:	1.197

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.665153	50.0	484400.0	1.330306	Y
2	STD010 280-608141/12	1.0	1.044177	50.0	495079.0	1.044177	Y
3	STD020 280-608141/13	2.0	2.285462	50.0	482047.0	1.142731	Y
4	STD050 280-608141/14	5.0	5.885295	50.0	484912.0	1.177059	Y
5	STD10 280-608141/15	10.0	11.689031	50.0	483573.0	1.168903	Y
6	ICIS 280-608141/16	50.0	61.005711	50.0	504429.0	1.220114	Y
7	STD75 280-608141/17	75.0	95.31822	50.0	494673.0	1.27091	Y
8	STD100 280-608141/18	100.0	123.062499	50.0	510619.0	1.230625	Y
9	STD200 280-608141/19	200.0	237.238166	50.0	510581.0	1.186191	Y



Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

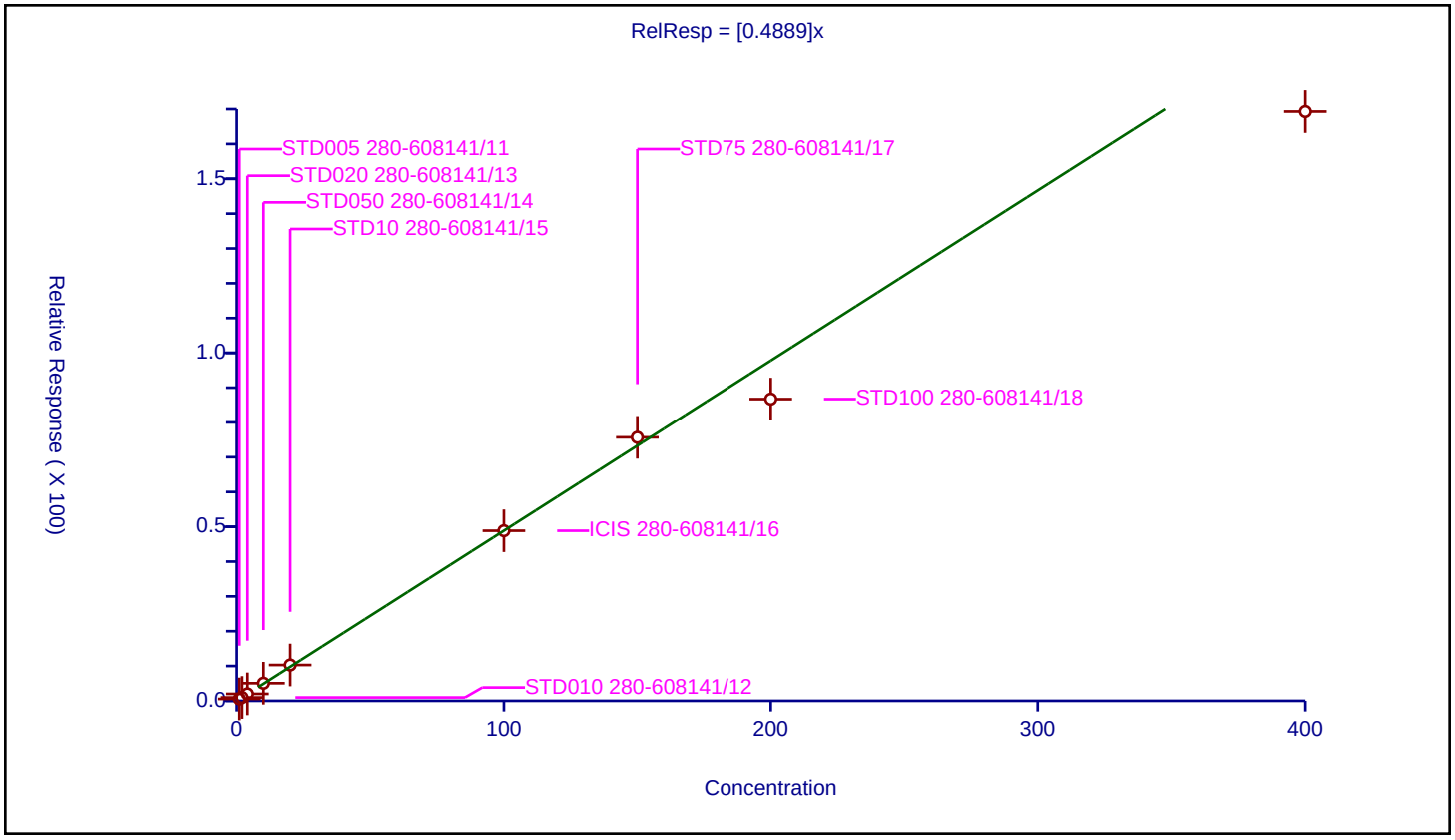
Curve Coefficients

Intercept:	0
Slope:	0.4889

Error Coefficients

Standard Error:	3240000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	1.0	0.547818	50.0	2082534.0	0.547818	Y
2	STD010 280-608141/12	2.0	0.964434	50.0	2123474.0	0.482217	Y
3	STD020 280-608141/13	4.0	1.997381	50.0	2069084.0	0.499345	Y
4	STD050 280-608141/14	10.0	5.054898	50.0	2098608.0	0.50549	Y
5	STD10 280-608141/15	20.0	10.292653	50.0	2065930.0	0.514633	Y
6	ICIS 280-608141/16	100.0	48.8712	50.0	2135807.0	0.488712	Y
7	STD75 280-608141/17	150.0	75.715049	50.0	2108563.0	0.504767	Y
8	STD100 280-608141/18	200.0	86.715807	50.0	2185733.0	0.433579	Y
9	STD200 280-608141/19	400.0	169.300806	50.0	2182142.0	0.423252	Y



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Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

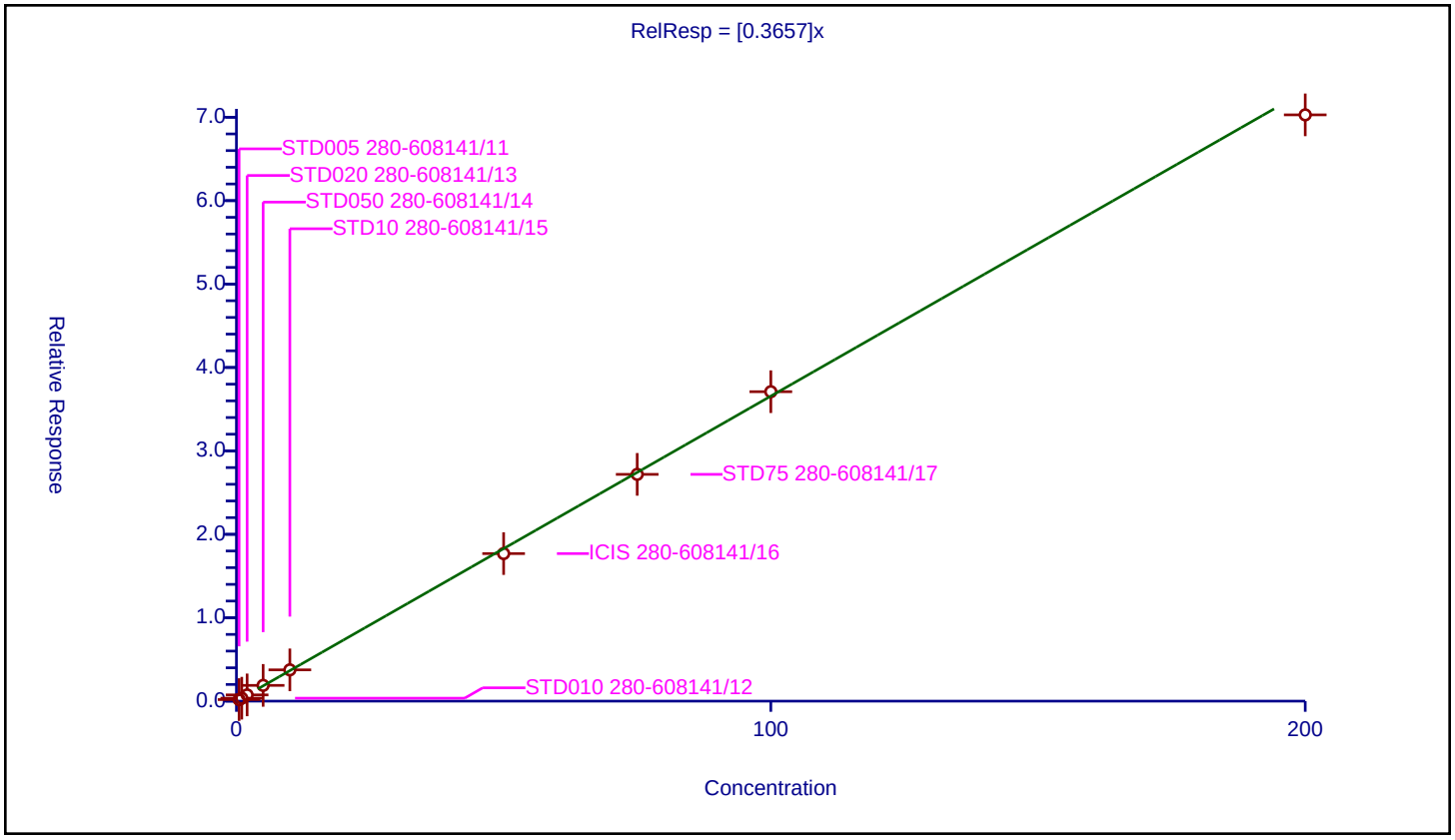
Curve Coefficients

Intercept:	0
Slope:	0.3657

Error Coefficients

Standard Error:	1320000
Relative Standard Error:	2.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.186335	50.0	2082534.0	0.372671	Y
2	STD010 280-608141/12	1.0	0.352653	50.0	2123474.0	0.352653	Y
3	STD020 280-608141/13	2.0	0.74893	50.0	2069084.0	0.374465	Y
4	STD050 280-608141/14	5.0	1.887394	50.0	2098608.0	0.377479	Y
5	STD10 280-608141/15	10.0	3.750006	50.0	2065930.0	0.375001	Y
6	ICIS 280-608141/16	50.0	17.690386	50.0	2135807.0	0.353808	Y
7	STD75 280-608141/17	75.0	27.187023	50.0	2108563.0	0.362494	Y
8	STD100 280-608141/18	100.0	37.096411	50.0	2185733.0	0.370964	Y
9	STD200 280-608141/19	200.0	70.284244	50.0	2182142.0	0.351421	Y



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Calibration / 2-Butanone (MEK)

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

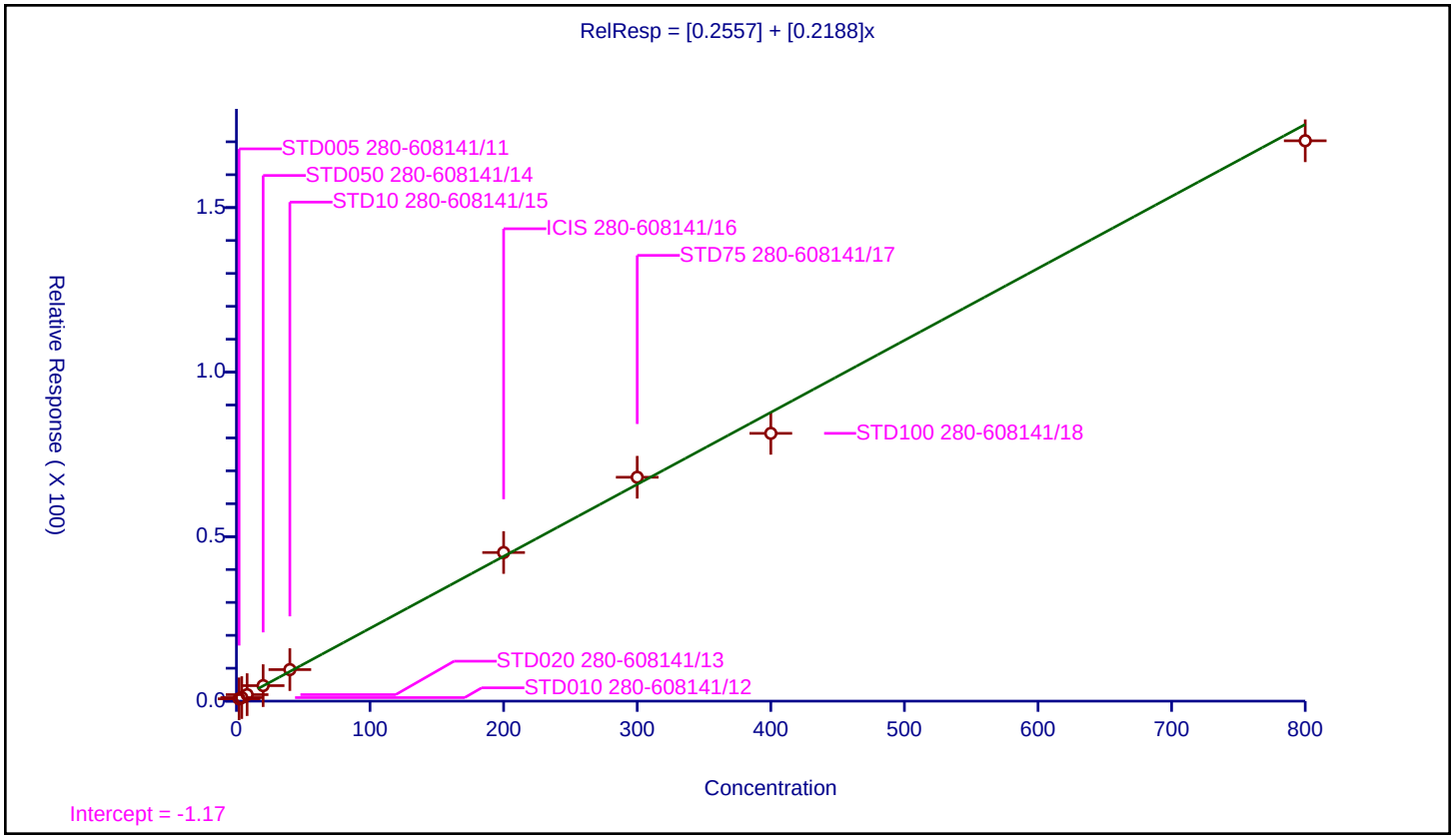
Curve Coefficients

Intercept:	0.2557
Slope:	0.2188

Error Coefficients

Standard Error:	3380000
Relative Standard Error:	4.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	2.0	0.705006	50.0	2082534.0	0.352503	Y
2	STD010 280-608141/12	4.0	1.080305	50.0	2123474.0	0.270076	Y
3	STD020 280-608141/13	8.0	1.983124	50.0	2069084.0	0.24789	Y
4	STD050 280-608141/14	20.0	4.715507	50.0	2098608.0	0.235775	Y
5	STD10 280-608141/15	40.0	9.589483	50.0	2065930.0	0.239737	Y
6	ICIS 280-608141/16	200.0	45.17248	50.0	2135807.0	0.225862	Y
7	STD75 280-608141/17	300.0	68.047813	50.0	2108563.0	0.226826	Y
8	STD100 280-608141/18	400.0	81.38629	50.0	2185733.0	0.203466	Y
9	STD200 280-608141/19	800.0	170.31064	50.0	2182142.0	0.212888	Y



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Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

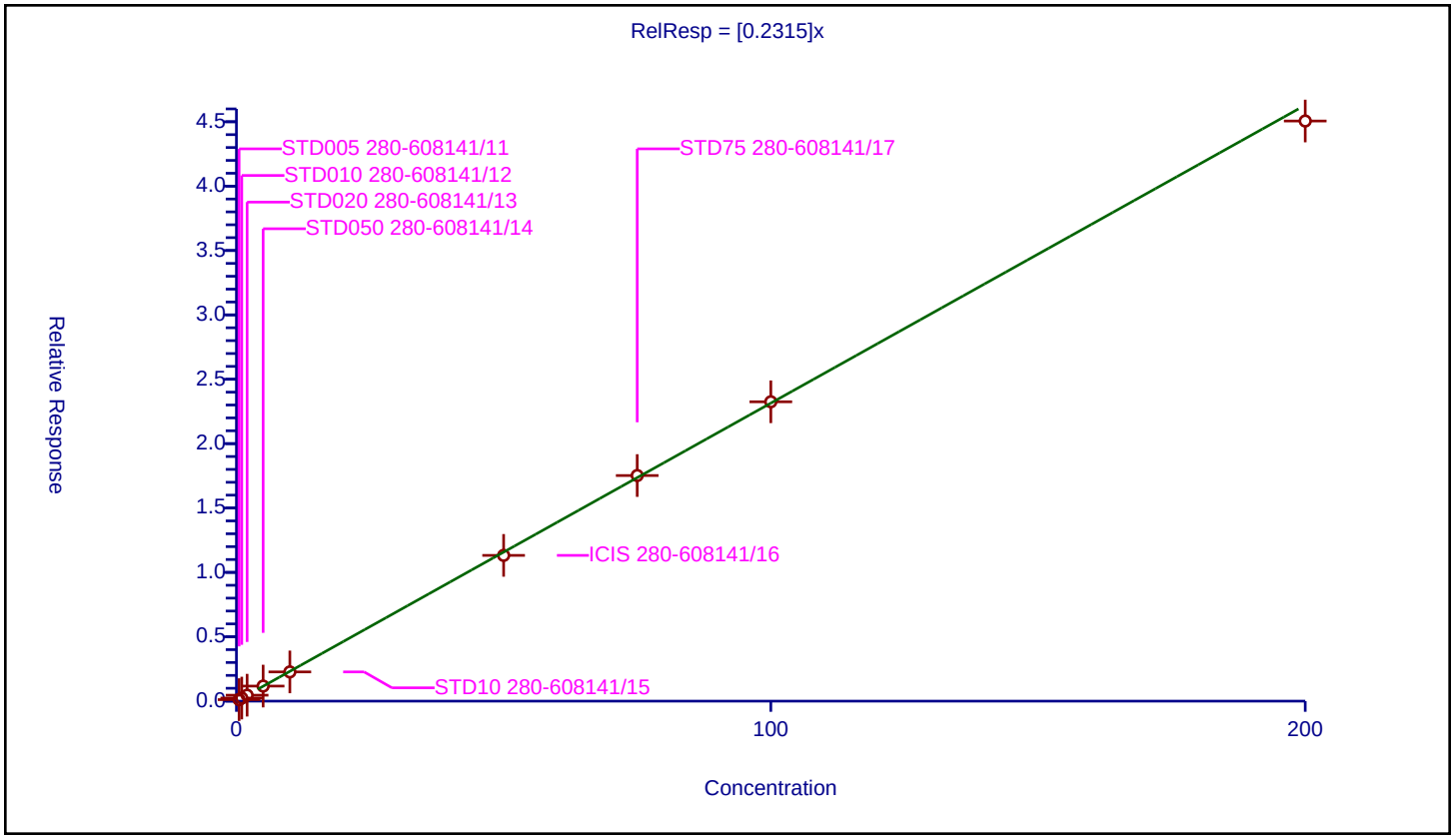
Curve Coefficients

Intercept:	0
Slope:	0.2315

Error Coefficients

Standard Error:	843000
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.116565	50.0	2082534.0	0.233129	Y
2	STD010 280-608141/12	1.0	0.23949	50.0	2123474.0	0.23949	Y
3	STD020 280-608141/13	2.0	0.463031	50.0	2069084.0	0.231515	Y
4	STD050 280-608141/14	5.0	1.17049	50.0	2098608.0	0.234098	Y
5	STD10 280-608141/15	10.0	2.270382	50.0	2065930.0	0.227038	Y
6	ICIS 280-608141/16	50.0	11.320218	50.0	2135807.0	0.226404	Y
7	STD75 280-608141/17	75.0	17.523071	50.0	2108563.0	0.233641	Y
8	STD100 280-608141/18	100.0	23.251468	50.0	2185733.0	0.232515	Y
9	STD200 280-608141/19	200.0	45.057998	50.0	2182142.0	0.22529	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

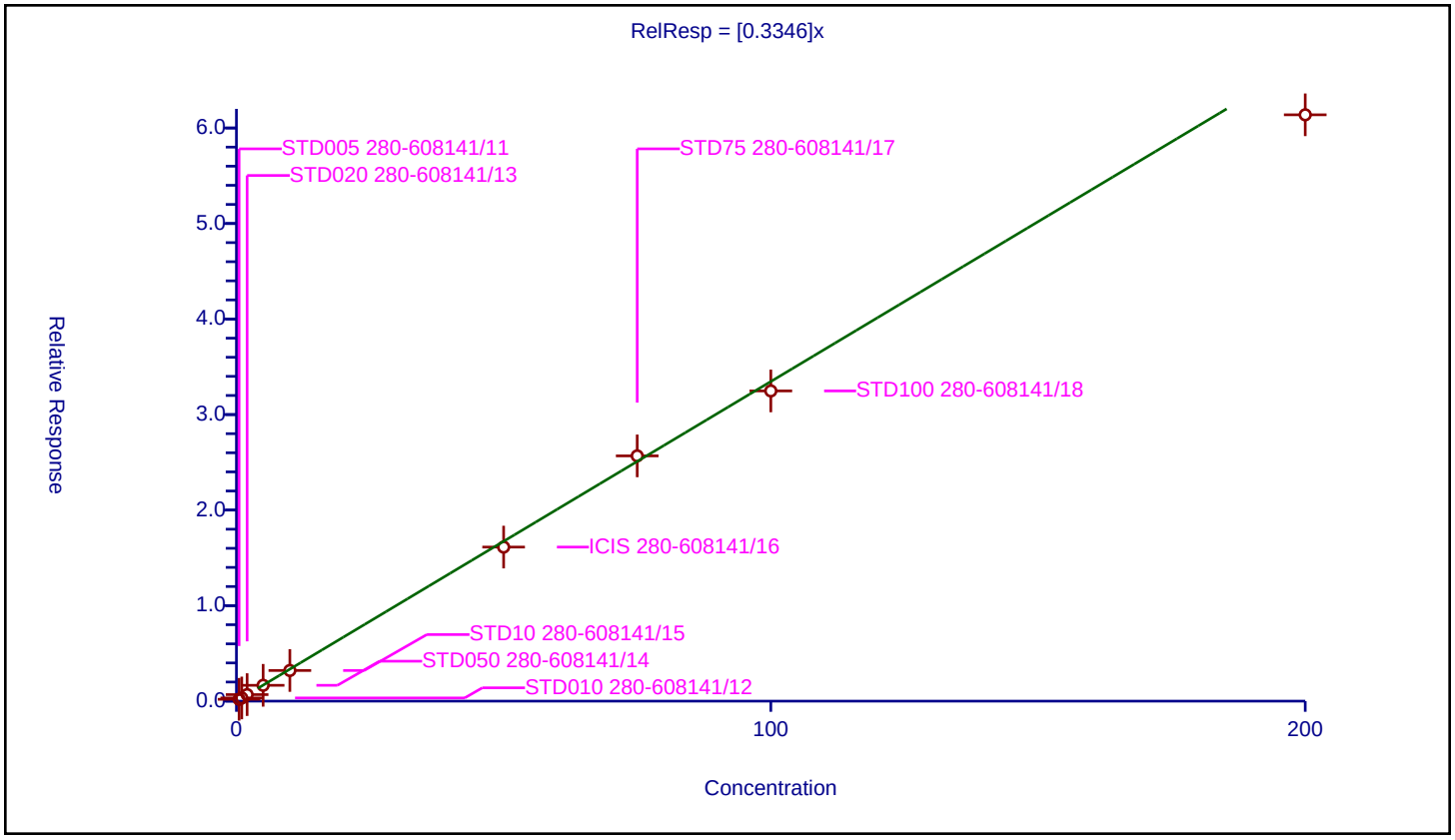
Curve Coefficients

Intercept:	0
Slope:	0.3346

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	6.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.193322	50.0	2082534.0	0.386644	Y
2	STD010 280-608141/12	1.0	0.333957	50.0	2123474.0	0.333957	Y
3	STD020 280-608141/13	2.0	0.683805	50.0	2069084.0	0.341903	Y
4	STD050 280-608141/14	5.0	1.657098	50.0	2098608.0	0.33142	Y
5	STD10 280-608141/15	10.0	3.208023	50.0	2065930.0	0.320802	Y
6	ICIS 280-608141/16	50.0	16.127792	50.0	2135807.0	0.322556	Y
7	STD75 280-608141/17	75.0	25.676468	50.0	2108563.0	0.342353	Y
8	STD100 280-608141/18	100.0	32.47613	50.0	2185733.0	0.324761	Y
9	STD200 280-608141/19	200.0	61.380928	50.0	2182142.0	0.306905	Y



Calibration / sec-Butyl Alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

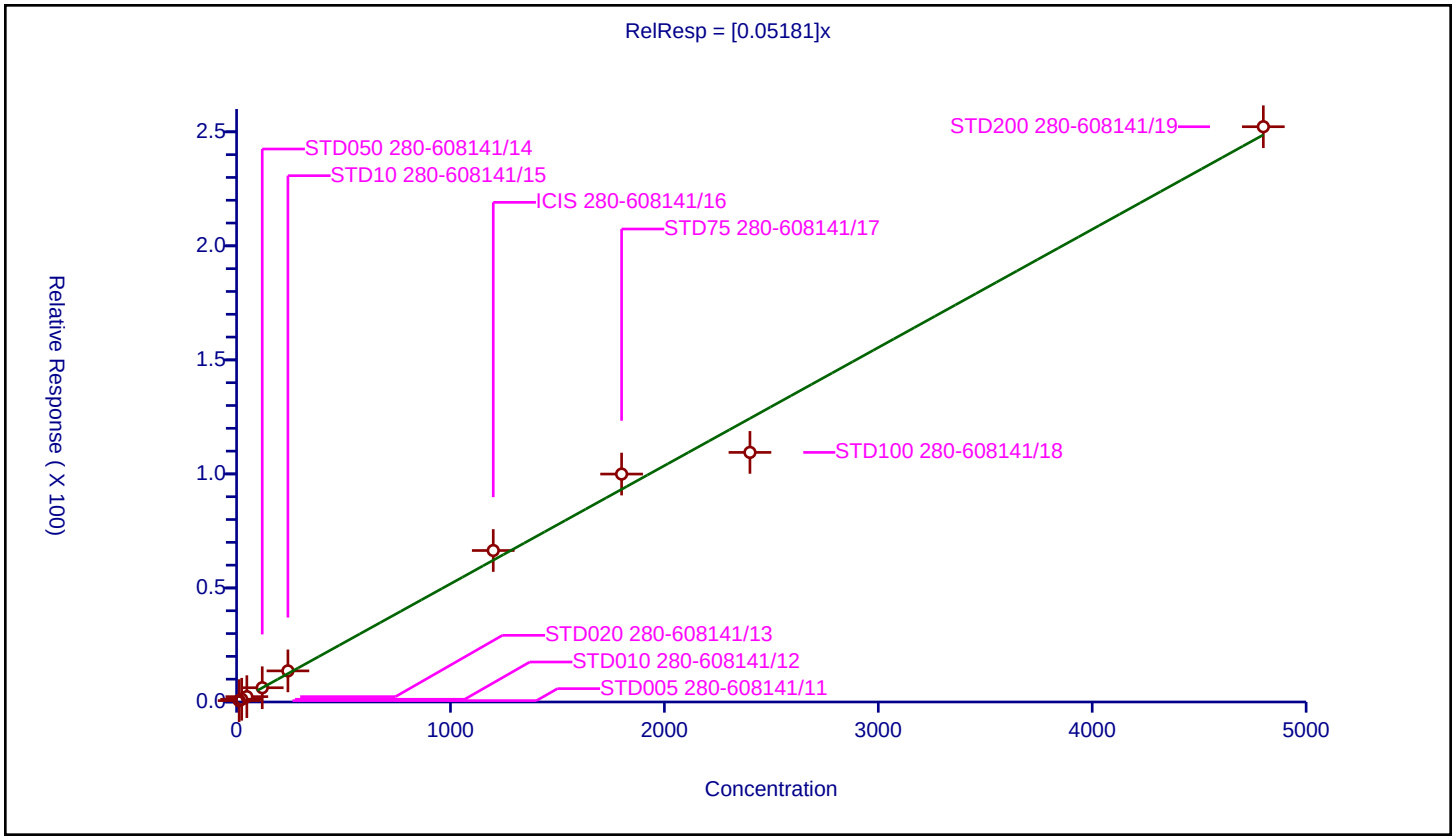
Curve Coefficients

Intercept:	0
Slope:	0.05181

Error Coefficients

Standard Error:	4610000
Relative Standard Error:	7.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	12.0	0.597733	50.0	2082534.0	0.049811	Y
2	STD010 280-608141/12	24.0	1.193375	50.0	2123474.0	0.049724	Y
3	STD020 280-608141/13	48.0	2.343863	50.0	2069084.0	0.04883	Y
4	STD050 280-608141/14	120.0	6.245497	50.0	2098608.0	0.052046	Y
5	STD10 280-608141/15	240.0	13.640999	50.0	2065930.0	0.056837	Y
6	ICIS 280-608141/16	1200.0	66.417448	50.0	2135807.0	0.055348	Y
7	STD75 280-608141/17	1800.0	99.94105	50.0	2108563.0	0.055523	Y
8	STD100 280-608141/18	2400.0	109.435782	50.0	2185733.0	0.045598	Y
9	STD200 280-608141/19	4800.0	252.23079	50.0	2182142.0	0.052548	Y



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Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

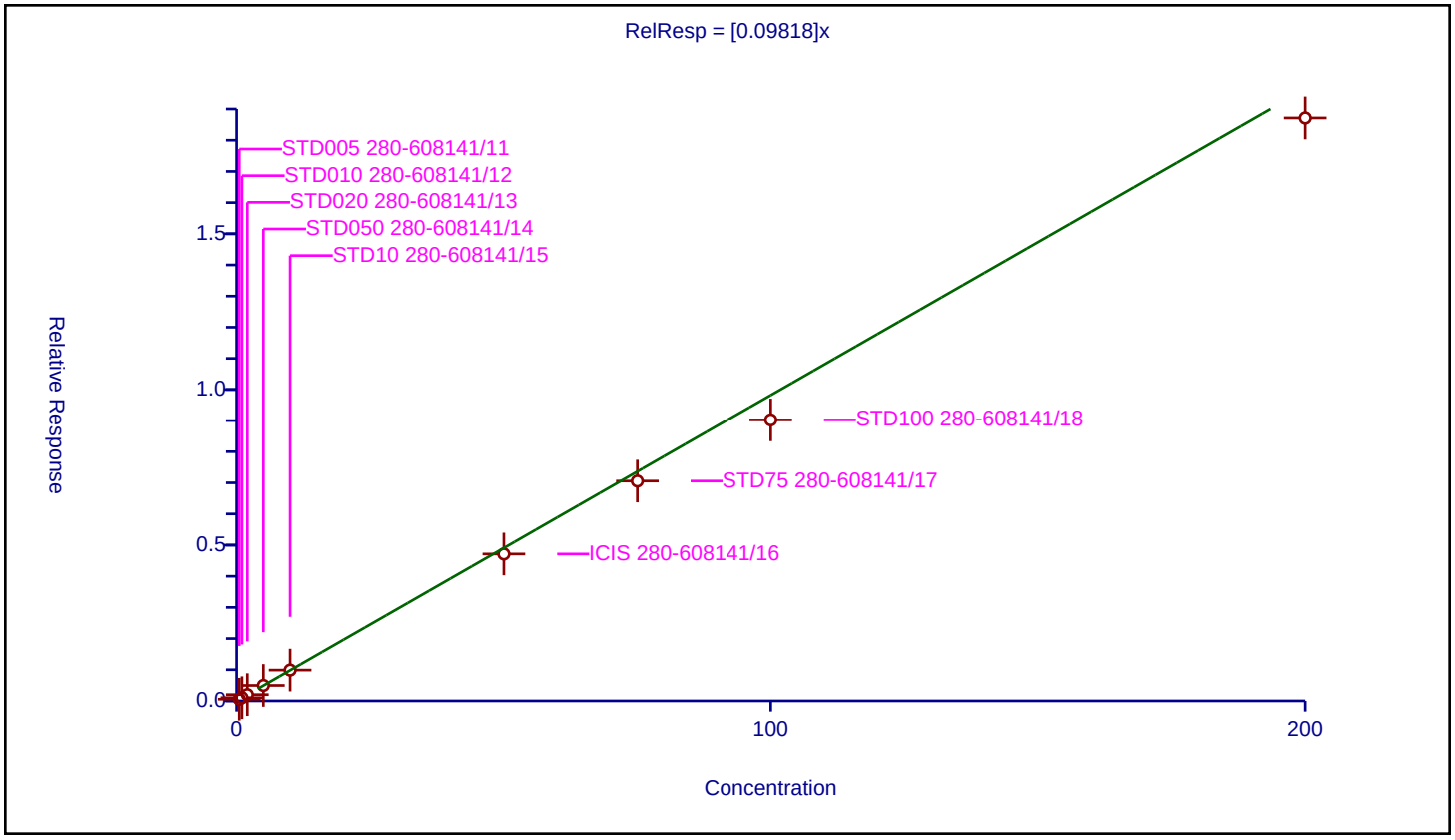
Curve Coefficients

Intercept:	0
Slope:	0.09818

Error Coefficients

Standard Error:	345000
Relative Standard Error:	6.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.054765	50.0	2082534.0	0.10953	Y
2	STD010 280-608141/12	1.0	0.102968	50.0	2123474.0	0.102968	Y
3	STD020 280-608141/13	2.0	0.201587	50.0	2069084.0	0.100793	Y
4	STD050 280-608141/14	5.0	0.4959	50.0	2098608.0	0.09918	Y
5	STD10 280-608141/15	10.0	0.989337	50.0	2065930.0	0.098934	Y
6	ICIS 280-608141/16	50.0	4.715571	50.0	2135807.0	0.094311	Y
7	STD75 280-608141/17	75.0	7.057223	50.0	2108563.0	0.094096	Y
8	STD100 280-608141/18	100.0	9.022671	50.0	2185733.0	0.090227	Y
9	STD200 280-608141/19	200.0	18.713539	50.0	2182142.0	0.093568	Y



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Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

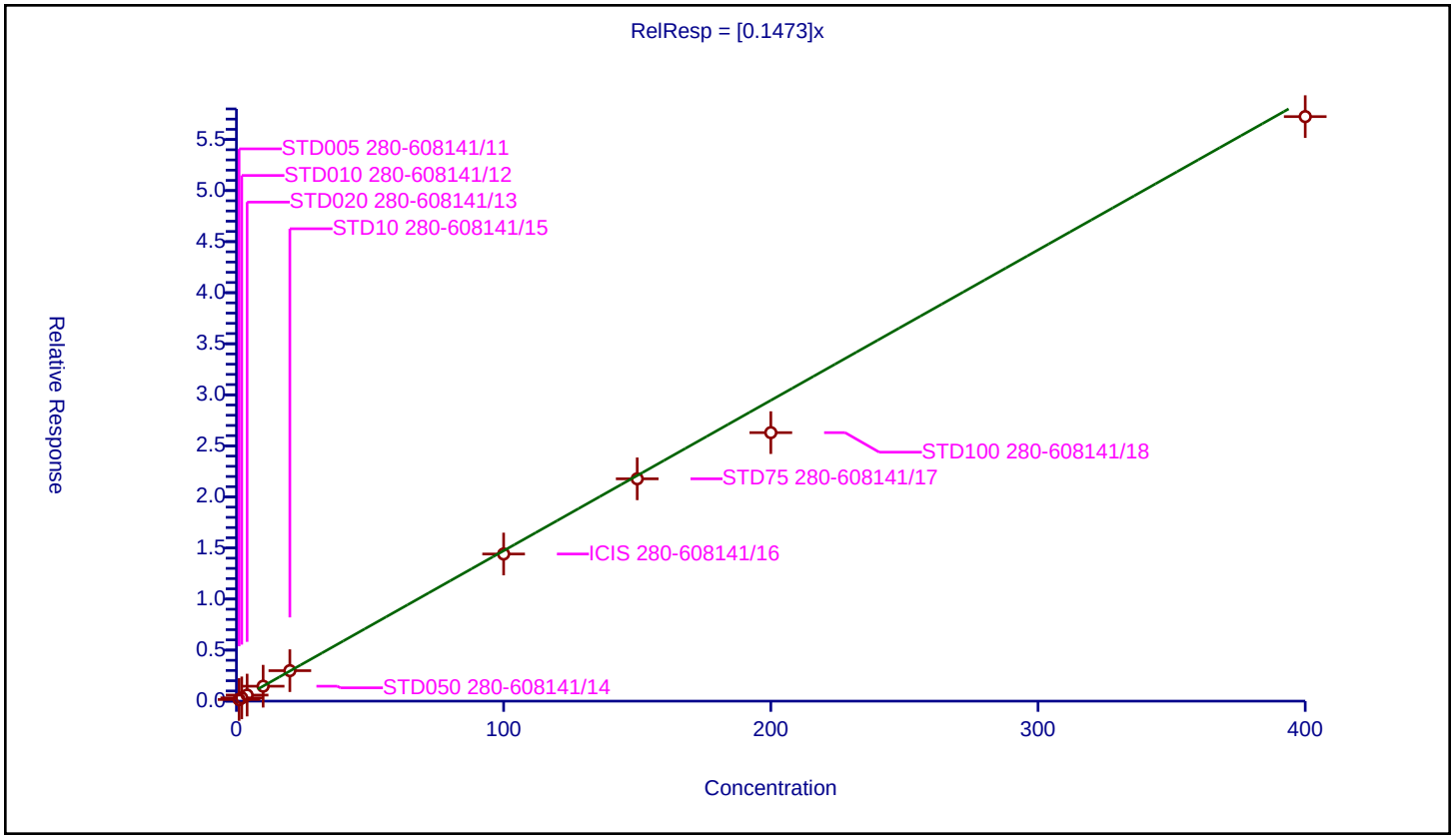
Curve Coefficients

Intercept:	0
Slope:	0.1473

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	1.0	0.158245	50.0	2082534.0	0.158245	Y
2	STD010 280-608141/12	2.0	0.318629	50.0	2123474.0	0.159314	Y
3	STD020 280-608141/13	4.0	0.594393	50.0	2069084.0	0.148598	Y
4	STD050 280-608141/14	10.0	1.463208	50.0	2098608.0	0.146321	Y
5	STD10 280-608141/15	20.0	2.984225	50.0	2065930.0	0.149211	Y
6	ICIS 280-608141/16	100.0	14.409893	50.0	2135807.0	0.144099	Y
7	STD75 280-608141/17	150.0	21.772197	50.0	2108563.0	0.145148	Y
8	STD100 280-608141/18	200.0	26.295801	50.0	2185733.0	0.131479	Y
9	STD200 280-608141/19	400.0	57.243823	50.0	2182142.0	0.14311	Y



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Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

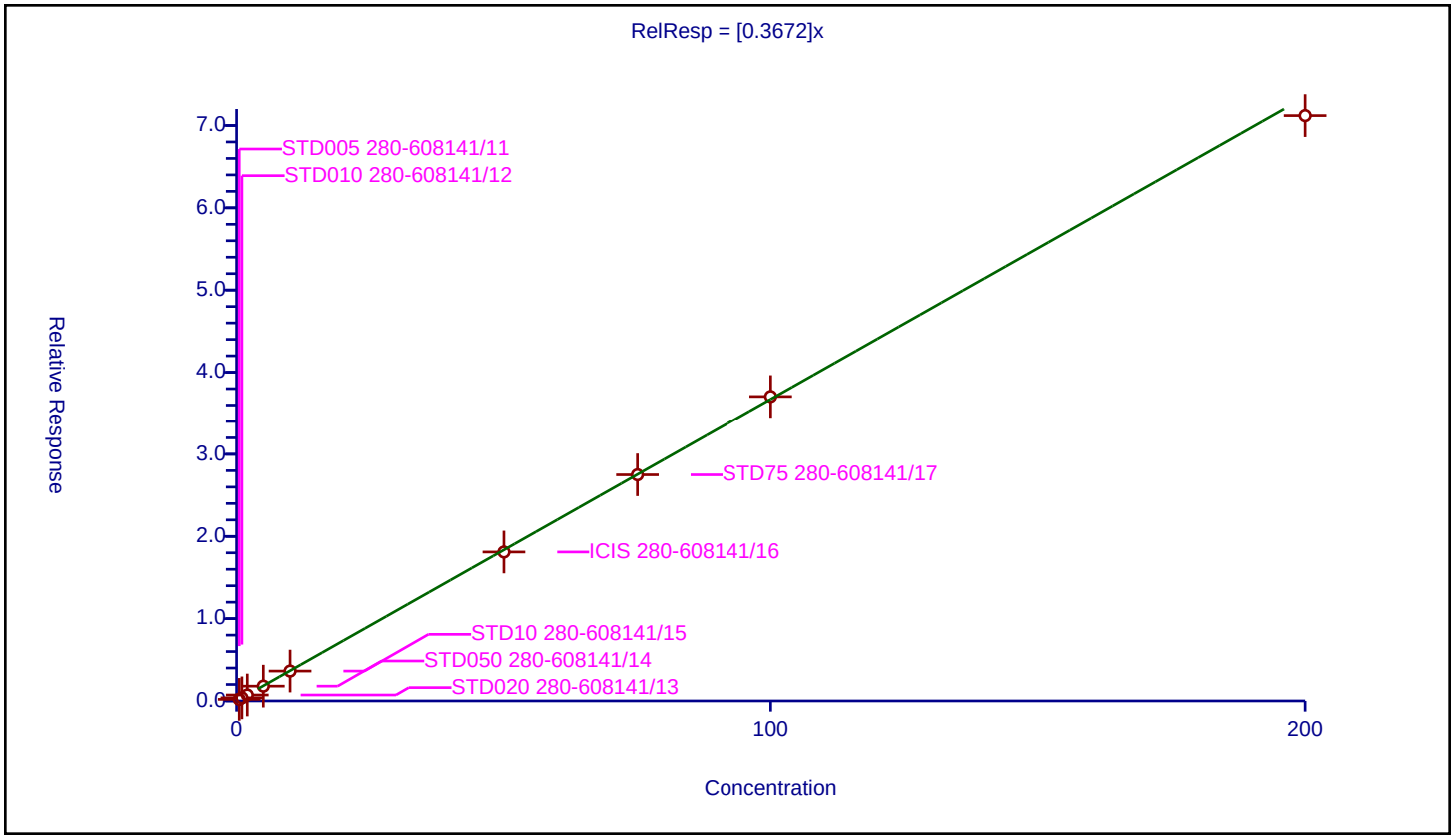
Curve Coefficients

Intercept:	0
Slope:	0.3672

Error Coefficients

Standard Error:	1330000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.193682	50.0	2082534.0	0.387365	Y
2	STD010 280-608141/12	1.0	0.377189	50.0	2123474.0	0.377189	Y
3	STD020 280-608141/13	2.0	0.724934	50.0	2069084.0	0.362467	Y
4	STD050 280-608141/14	5.0	1.798263	50.0	2098608.0	0.359653	Y
5	STD10 280-608141/15	10.0	3.631851	50.0	2065930.0	0.363185	Y
6	ICIS 280-608141/16	50.0	18.100348	50.0	2135807.0	0.362007	Y
7	STD75 280-608141/17	75.0	27.497661	50.0	2108563.0	0.366635	Y
8	STD100 280-608141/18	100.0	37.04549	50.0	2185733.0	0.370455	Y
9	STD200 280-608141/19	200.0	71.20176	50.0	2182142.0	0.356009	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

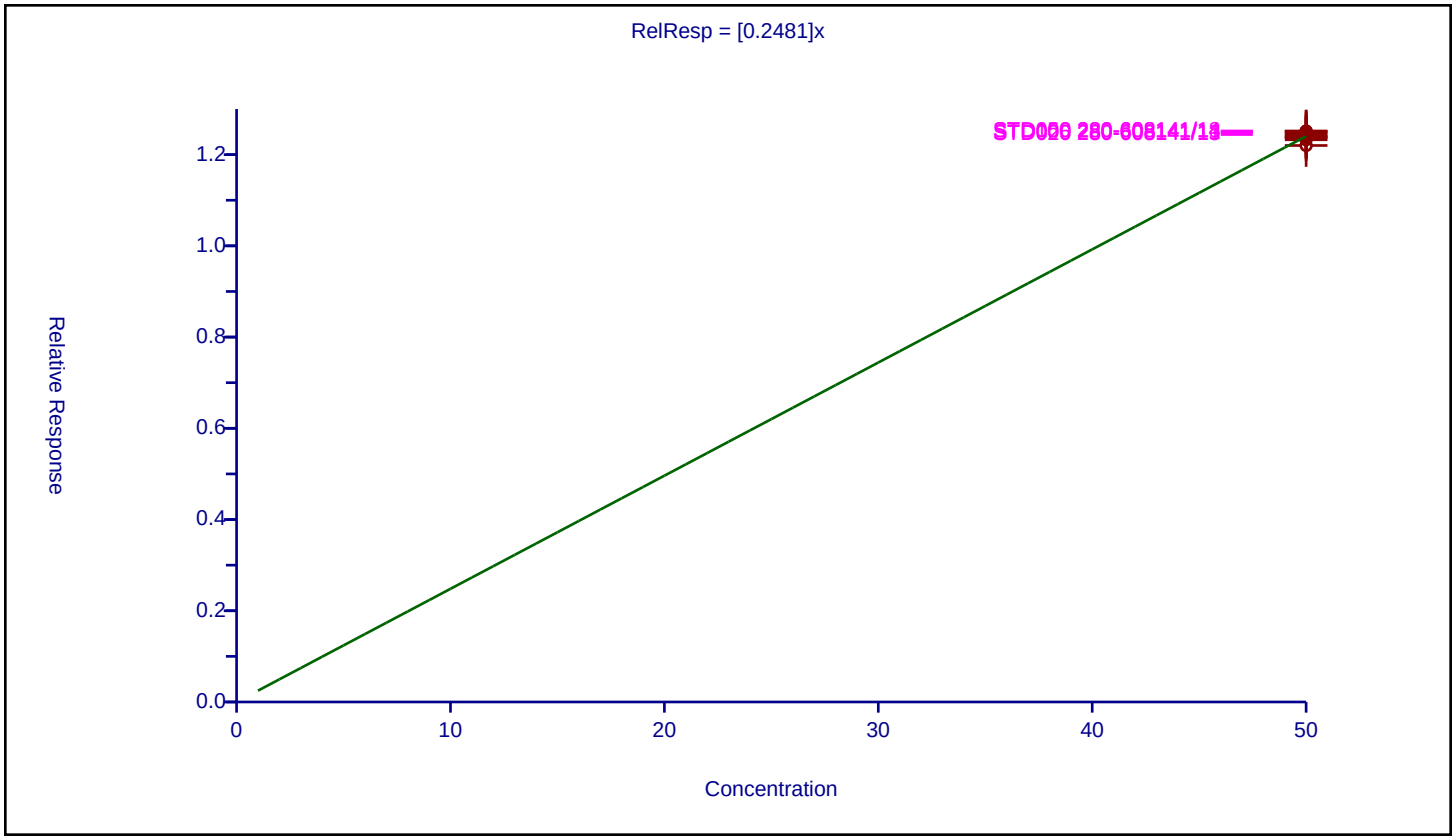
Curve Coefficients

Intercept:	0
Slope:	0.2481

Error Coefficients

Standard Error:	557000
Relative Standard Error:	0.8
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	50.0	12.476699	50.0	2082534.0	0.249534	Y
2	STD010 280-608141/12	50.0	12.32584	50.0	2123474.0	0.246517	Y
3	STD020 280-608141/13	50.0	12.440288	50.0	2069084.0	0.248806	Y
4	STD050 280-608141/14	50.0	12.508696	50.0	2098608.0	0.250174	Y
5	STD10 280-608141/15	50.0	12.391102	50.0	2065930.0	0.247822	Y
6	ICIS 280-608141/16	50.0	12.396181	50.0	2135807.0	0.247924	Y
7	STD75 280-608141/17	50.0	12.369894	50.0	2108563.0	0.247398	Y
8	STD100 280-608141/18	50.0	12.518203	50.0	2185733.0	0.250364	Y
9	STD200 280-608141/19	50.0	12.200421	50.0	2182142.0	0.244008	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

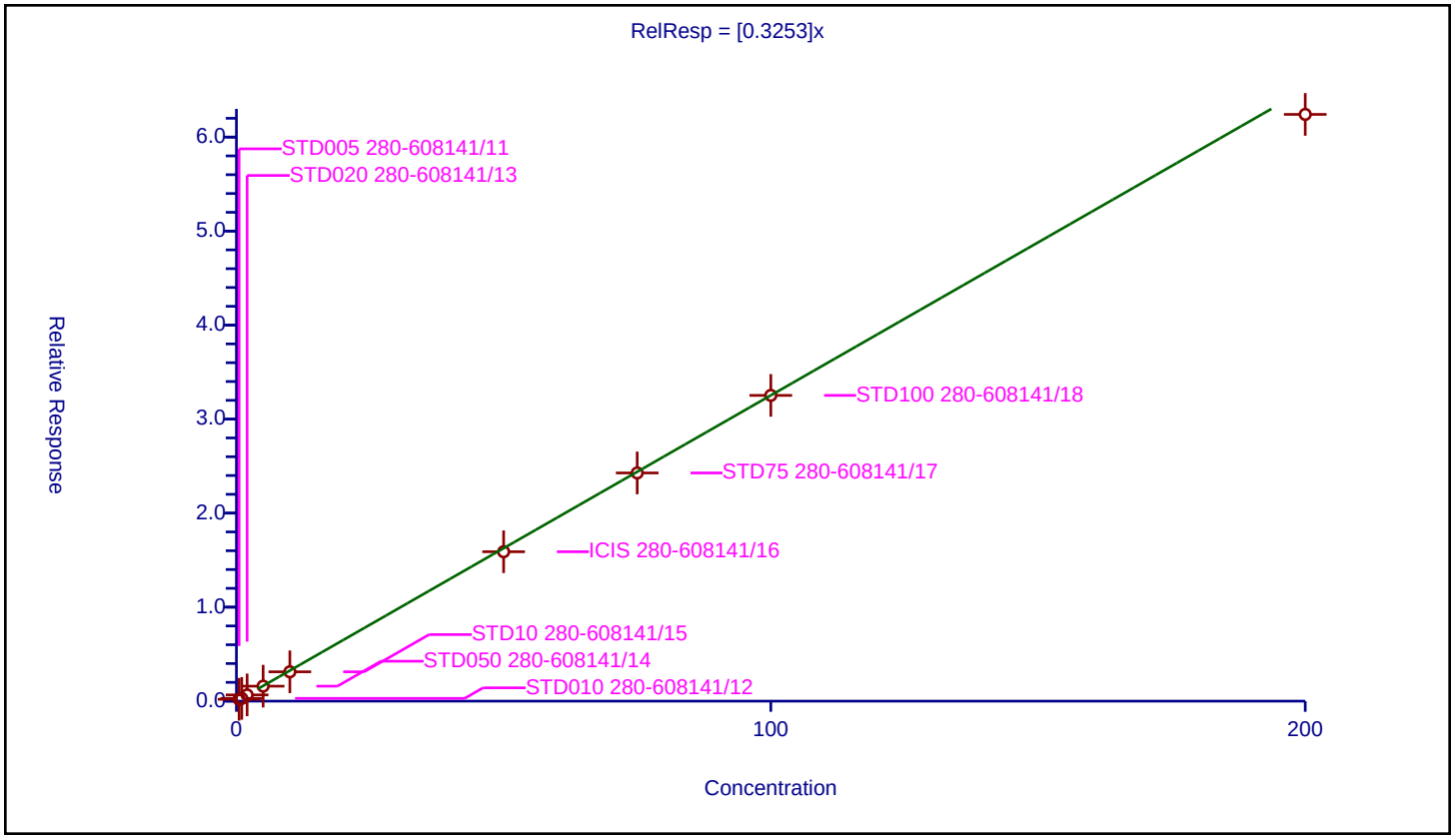
Curve Coefficients

Intercept:	0
Slope:	0.3253

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.195819	50.0	2082534.0	0.391638	Y
2	STD010 280-608141/12	1.0	0.293858	50.0	2123474.0	0.293858	Y
3	STD020 280-608141/13	2.0	0.664835	50.0	2069084.0	0.332418	Y
4	STD050 280-608141/14	5.0	1.594605	50.0	2098608.0	0.318921	Y
5	STD10 280-608141/15	10.0	3.11983	50.0	2065930.0	0.311983	Y
6	ICIS 280-608141/16	50.0	15.893571	50.0	2135807.0	0.317871	Y
7	STD75 280-608141/17	75.0	24.273451	50.0	2108563.0	0.323646	Y
8	STD100 280-608141/18	100.0	32.522179	50.0	2185733.0	0.325222	Y
9	STD200 280-608141/19	200.0	62.412849	50.0	2182142.0	0.312064	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

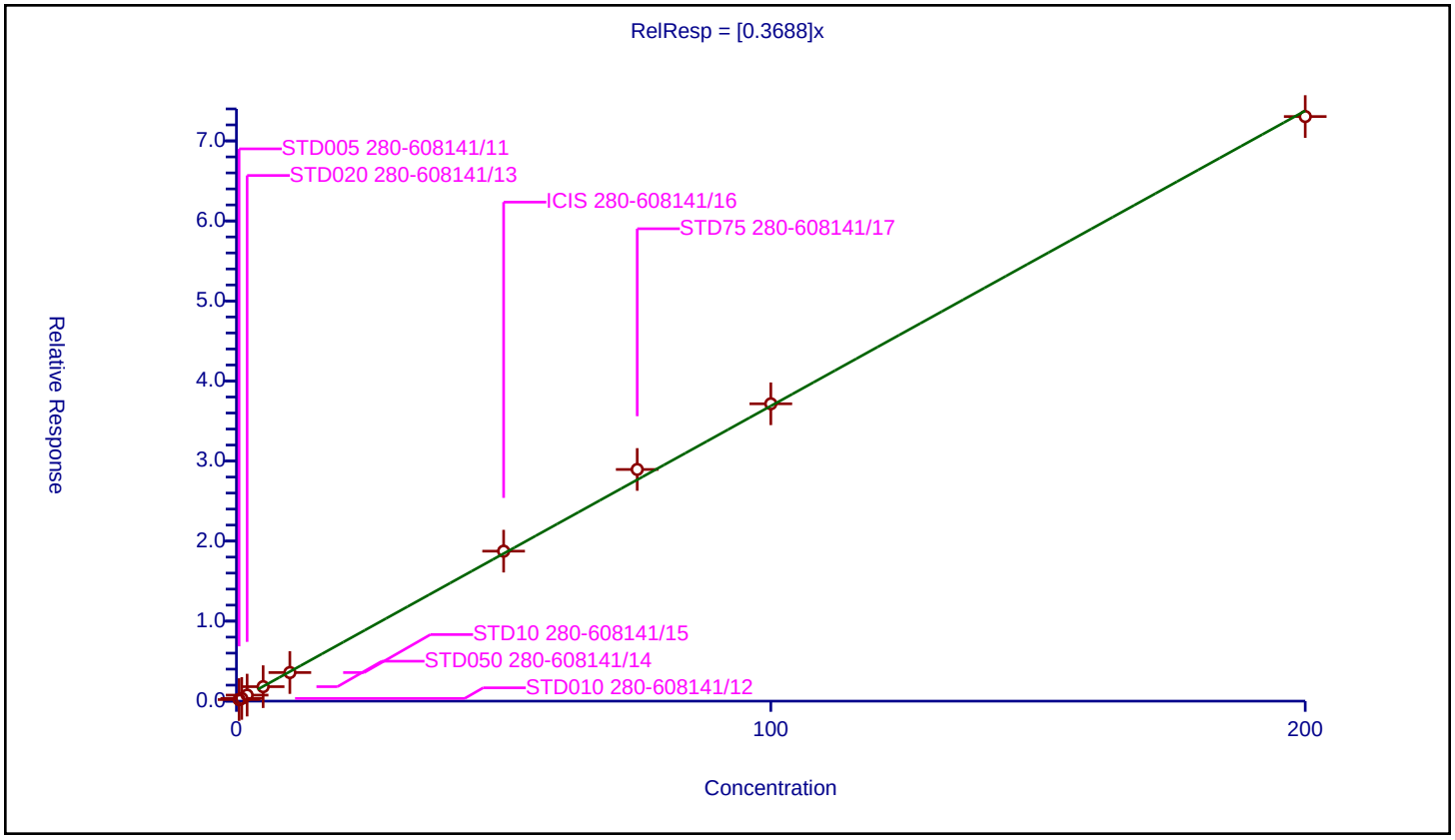
Curve Coefficients

Intercept:	0
Slope:	0.3688

Error Coefficients

Standard Error:	1370000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.193562	50.0	2082534.0	0.387125	Y
2	STD010 280-608141/12	1.0	0.338573	50.0	2123474.0	0.338573	Y
3	STD020 280-608141/13	2.0	0.754102	50.0	2069084.0	0.377051	Y
4	STD050 280-608141/14	5.0	1.809461	50.0	2098608.0	0.361892	Y
5	STD10 280-608141/15	10.0	3.571152	50.0	2065930.0	0.357115	Y
6	ICIS 280-608141/16	50.0	18.740551	50.0	2135807.0	0.374811	Y
7	STD75 280-608141/17	75.0	28.94744	50.0	2108563.0	0.385966	Y
8	STD100 280-608141/18	100.0	37.154149	50.0	2185733.0	0.371541	Y
9	STD200 280-608141/19	200.0	73.044582	50.0	2182142.0	0.365223	Y



Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

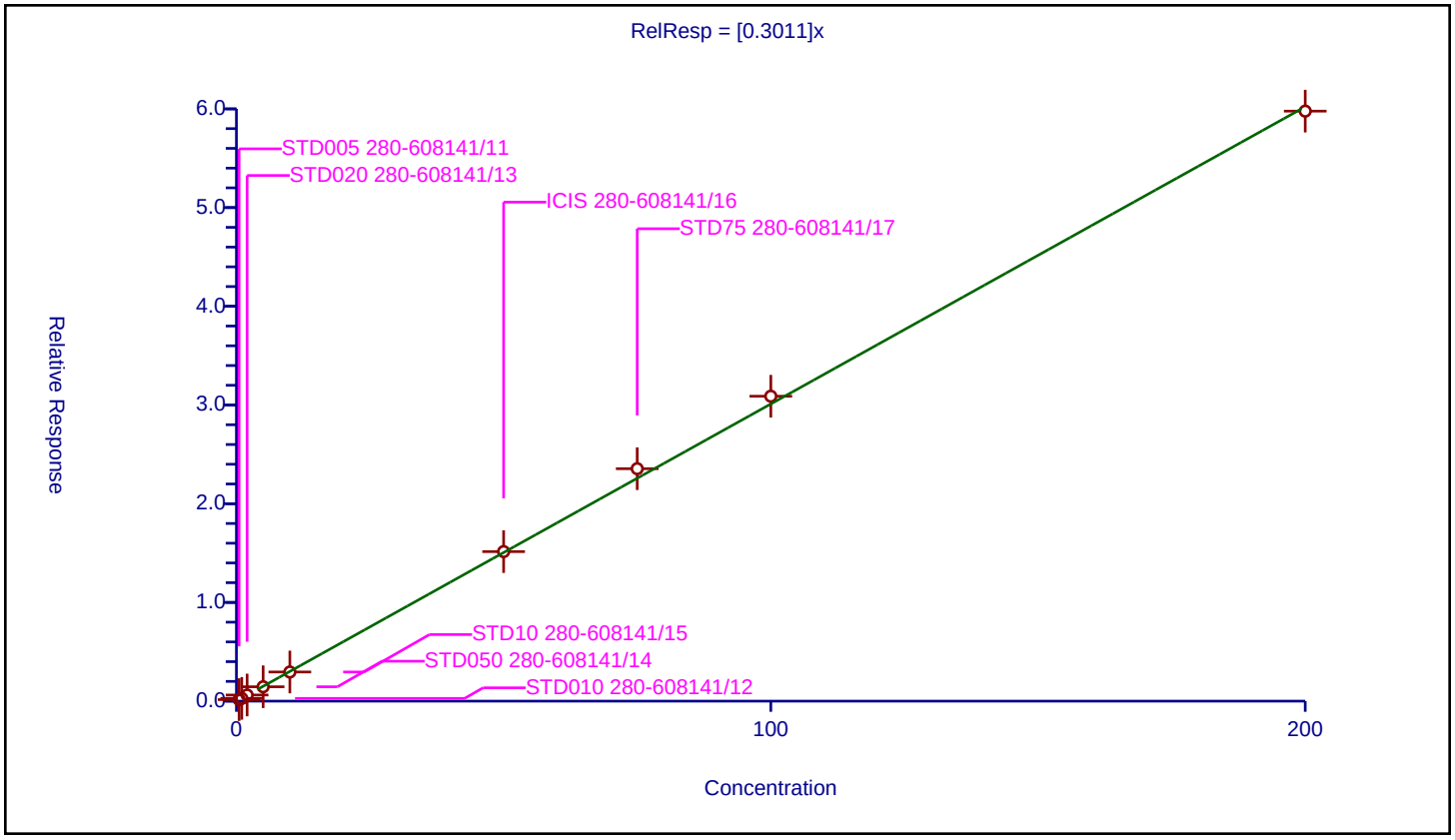
Curve Coefficients

Intercept:	0
Slope:	0.3011

Error Coefficients

Standard Error:	1120000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.153923	50.0	2082534.0	0.307846	Y
2	STD010 280-608141/12	1.0	0.280107	50.0	2123474.0	0.280107	Y
3	STD020 280-608141/13	2.0	0.620782	50.0	2069084.0	0.310391	Y
4	STD050 280-608141/14	5.0	1.456775	50.0	2098608.0	0.291355	Y
5	STD10 280-608141/15	10.0	2.952302	50.0	2065930.0	0.29523	Y
6	ICIS 280-608141/16	50.0	15.149309	50.0	2135807.0	0.302986	Y
7	STD75 280-608141/17	75.0	23.549948	50.0	2108563.0	0.313999	Y
8	STD100 280-608141/18	100.0	30.89037	50.0	2185733.0	0.308904	Y
9	STD200 280-608141/19	200.0	59.773814	50.0	2182142.0	0.298869	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

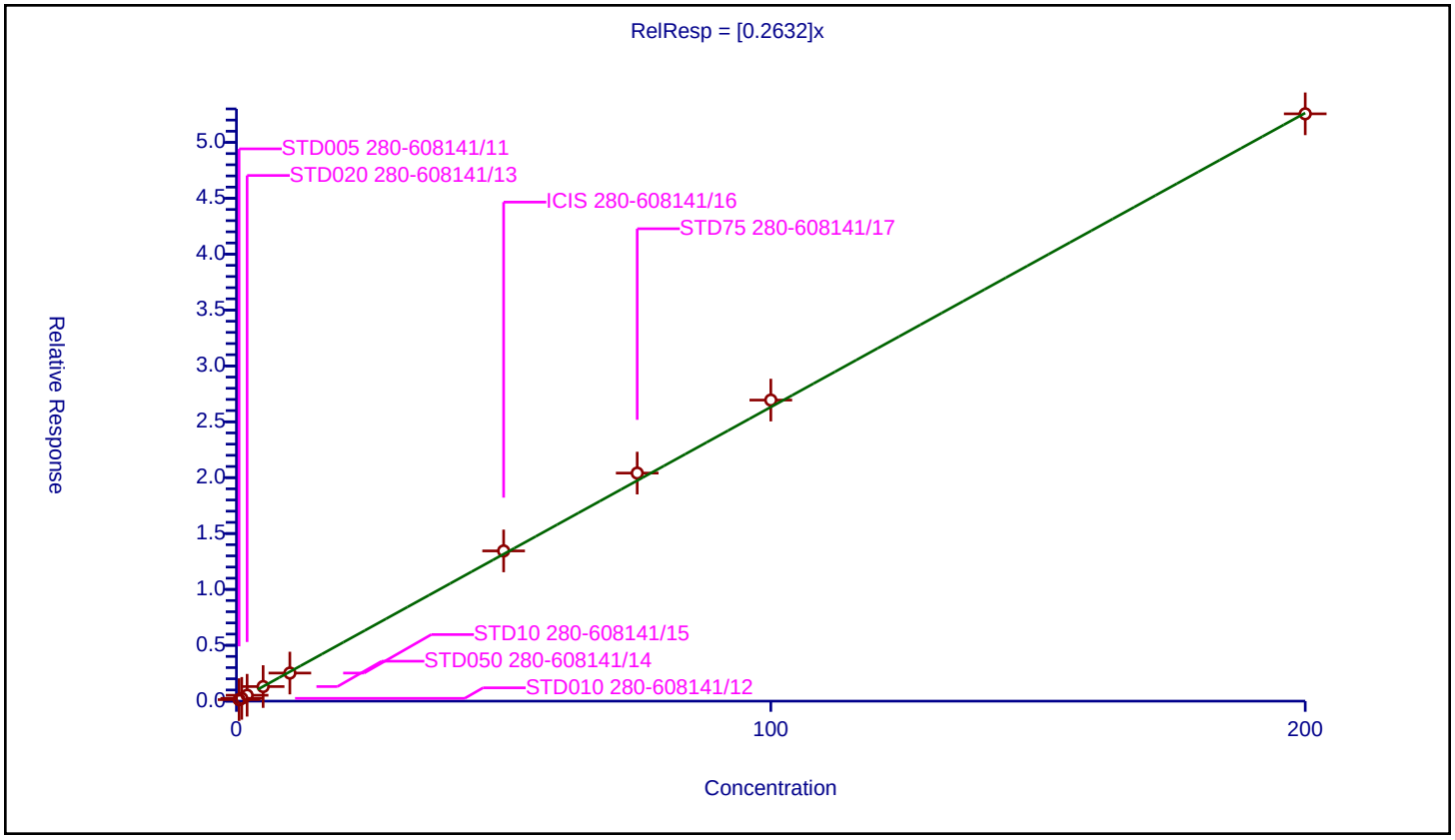
Curve Coefficients

Intercept:	0
Slope:	0.2632

Error Coefficients

Standard Error:	983000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.134908	50.0	2082534.0	0.269816	Y
2	STD010 280-608141/12	1.0	0.248673	50.0	2123474.0	0.248673	Y
3	STD020 280-608141/13	2.0	0.52893	50.0	2069084.0	0.264465	Y
4	STD050 280-608141/14	5.0	1.304484	50.0	2098608.0	0.260897	Y
5	STD10 280-608141/15	10.0	2.513832	50.0	2065930.0	0.251383	Y
6	ICIS 280-608141/16	50.0	13.444122	50.0	2135807.0	0.268882	Y
7	STD75 280-608141/17	75.0	20.408212	50.0	2108563.0	0.272109	Y
8	STD100 280-608141/18	100.0	26.942152	50.0	2185733.0	0.269422	Y
9	STD200 280-608141/19	200.0	52.558724	50.0	2182142.0	0.262794	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

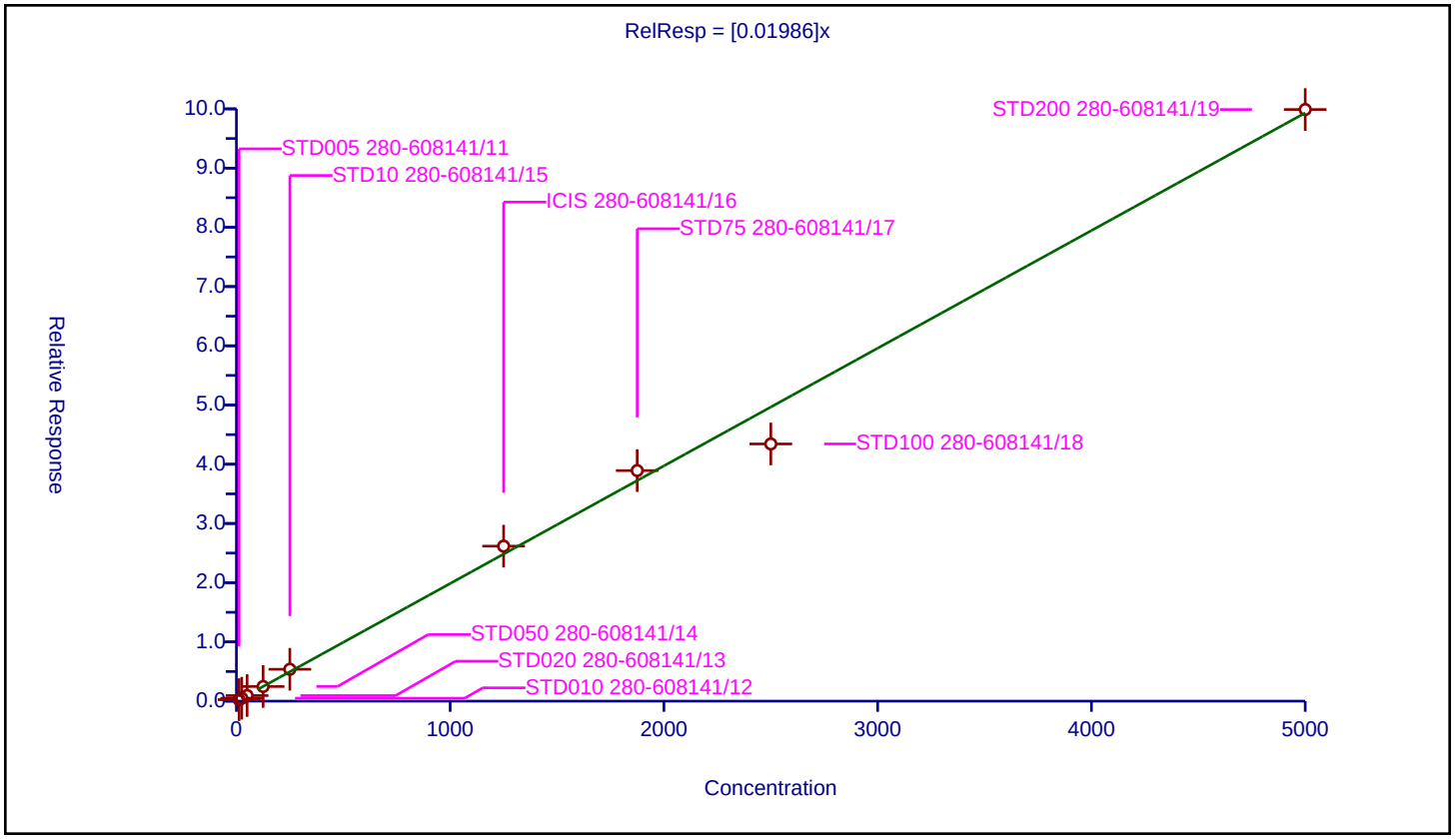
Curve Coefficients

Intercept:	0
Slope:	0.01986

Error Coefficients

Standard Error:	1820000
Relative Standard Error:	6.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	12.5	0.24912	50.0	2082534.0	0.01993	Y
2	STD010 280-608141/12	25.0	0.491836	50.0	2123474.0	0.019673	Y
3	STD020 280-608141/13	50.0	0.942325	50.0	2069084.0	0.018847	Y
4	STD050 280-608141/14	125.0	2.469423	50.0	2098608.0	0.019755	Y
5	STD10 280-608141/15	250.0	5.381087	50.0	2065930.0	0.021524	Y
6	ICIS 280-608141/16	1250.0	26.16978	50.0	2135807.0	0.020936	Y
7	STD75 280-608141/17	1875.0	38.929593	50.0	2108563.0	0.020762	Y
8	STD100 280-608141/18	2500.0	43.426416	50.0	2185733.0	0.017371	Y
9	STD200 280-608141/19	5000.0	99.893957	50.0	2182142.0	0.019979	Y



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Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

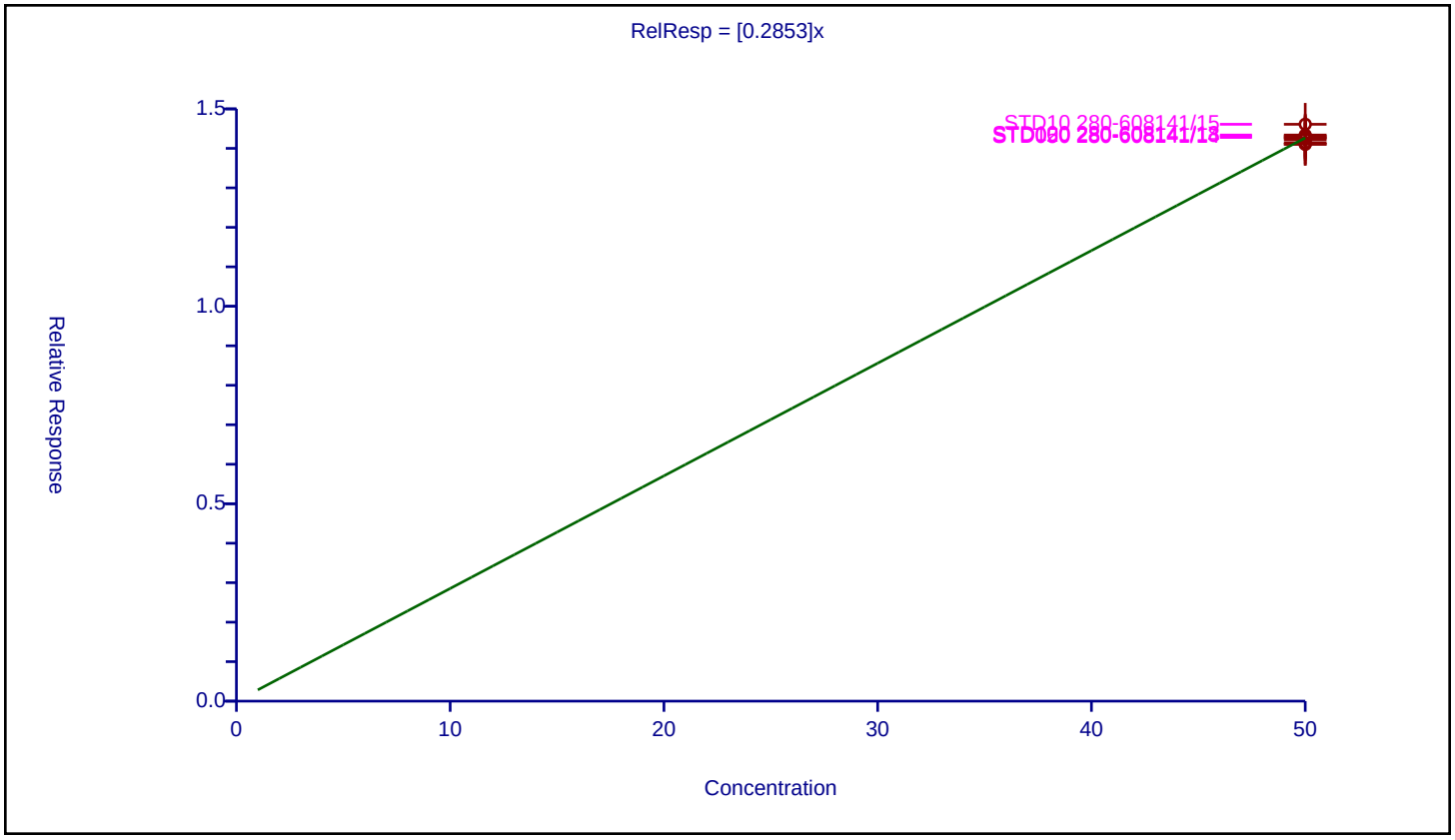
Curve Coefficients

Intercept:	0
Slope:	0.2853

Error Coefficients

Standard Error:	641000
Relative Standard Error:	1.1
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	50.0	14.262216	50.0	2082534.0	0.285244	Y
2	STD010 280-608141/12	50.0	14.225769	50.0	2123474.0	0.284515	Y
3	STD020 280-608141/13	50.0	14.308578	50.0	2069084.0	0.286172	Y
4	STD050 280-608141/14	50.0	14.277107	50.0	2098608.0	0.285542	Y
5	STD10 280-608141/15	50.0	14.610248	50.0	2065930.0	0.292205	Y
6	ICIS 280-608141/16	50.0	14.107431	50.0	2135807.0	0.282149	Y
7	STD75 280-608141/17	50.0	14.104037	50.0	2108563.0	0.282081	Y
8	STD100 280-608141/18	50.0	14.338508	50.0	2185733.0	0.28677	Y
9	STD200 280-608141/19	50.0	14.146582	50.0	2182142.0	0.282932	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

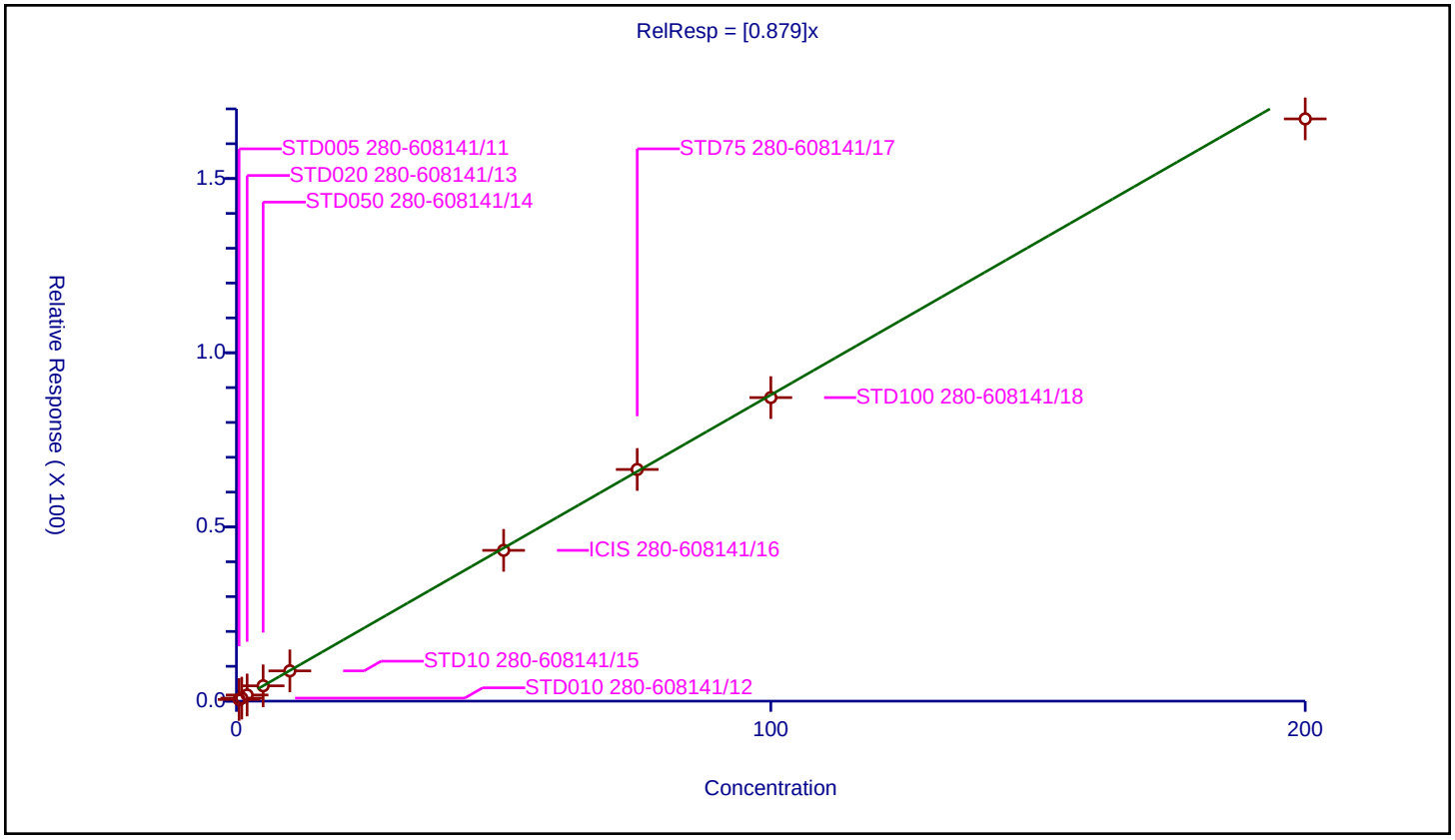
Curve Coefficients

Intercept:	0
Slope:	0.879

Error Coefficients

Standard Error:	3150000
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.475839	50.0	2082534.0	0.951677	Y
2	STD010 280-608141/12	1.0	0.868271	50.0	2123474.0	0.868271	Y
3	STD020 280-608141/13	2.0	1.766965	50.0	2069084.0	0.883483	Y
4	STD050 280-608141/14	5.0	4.399369	50.0	2098608.0	0.879874	Y
5	STD10 280-608141/15	10.0	8.684999	50.0	2065930.0	0.8685	Y
6	ICIS 280-608141/16	50.0	43.279917	50.0	2135807.0	0.865598	Y
7	STD75 280-608141/17	75.0	66.503799	50.0	2108563.0	0.886717	Y
8	STD100 280-608141/18	100.0	87.134408	50.0	2185733.0	0.871344	Y
9	STD200 280-608141/19	200.0	167.128262	50.0	2182142.0	0.835641	Y



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Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

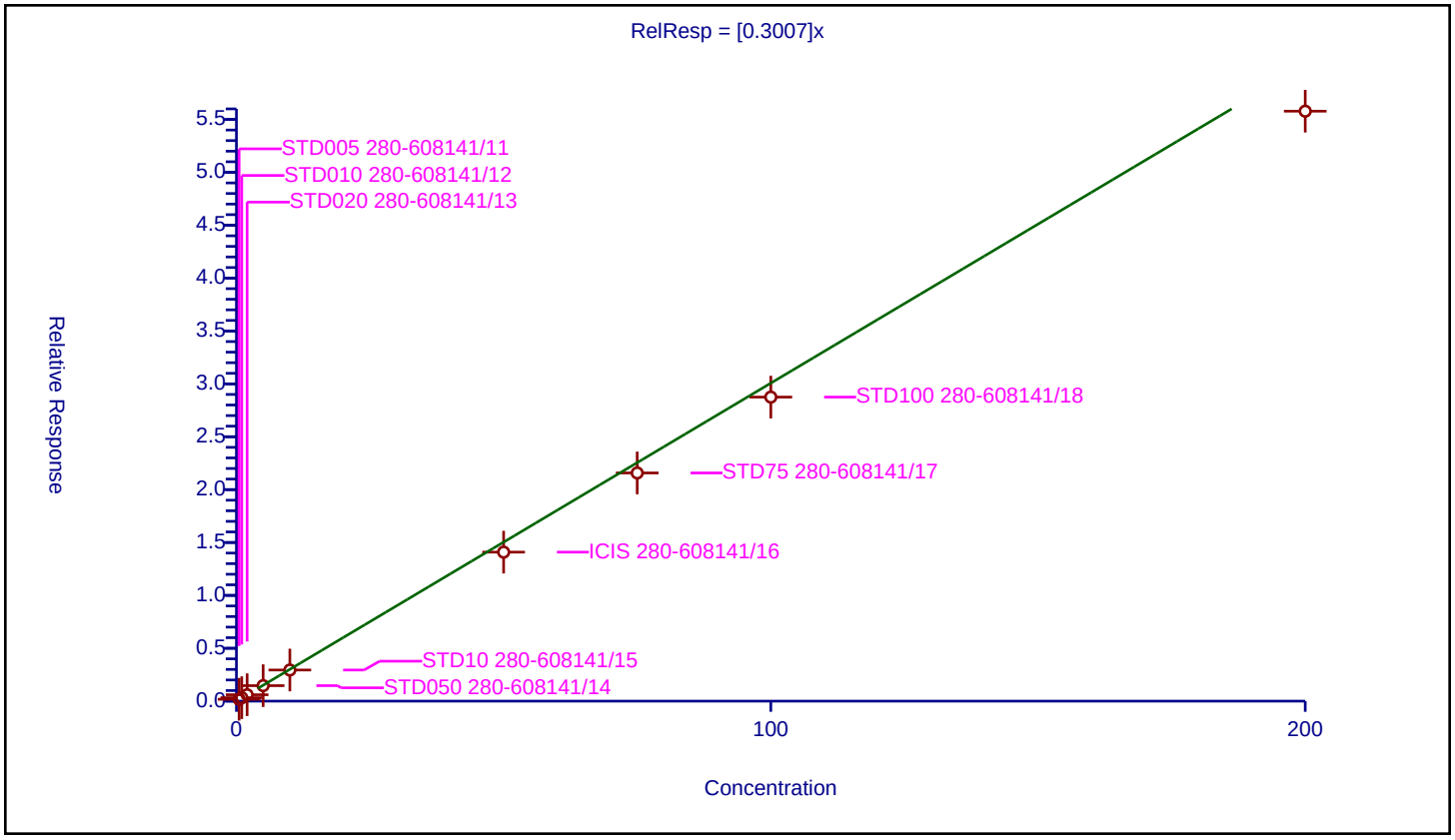
Curve Coefficients

Intercept:	0
Slope:	0.3007

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.177332	50.0	2082534.0	0.354664	Y
2	STD010 280-608141/12	1.0	0.325599	50.0	2123474.0	0.325599	Y
3	STD020 280-608141/13	2.0	0.606573	50.0	2069084.0	0.303286	Y
4	STD050 280-608141/14	5.0	1.463279	50.0	2098608.0	0.292656	Y
5	STD10 280-608141/15	10.0	2.941871	50.0	2065930.0	0.294187	Y
6	ICIS 280-608141/16	50.0	14.089007	50.0	2135807.0	0.28178	Y
7	STD75 280-608141/17	75.0	21.576163	50.0	2108563.0	0.287682	Y
8	STD100 280-608141/18	100.0	28.748113	50.0	2185733.0	0.287481	Y
9	STD200 280-608141/19	200.0	55.78356	50.0	2182142.0	0.278918	Y



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Calibration / n-Heptane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

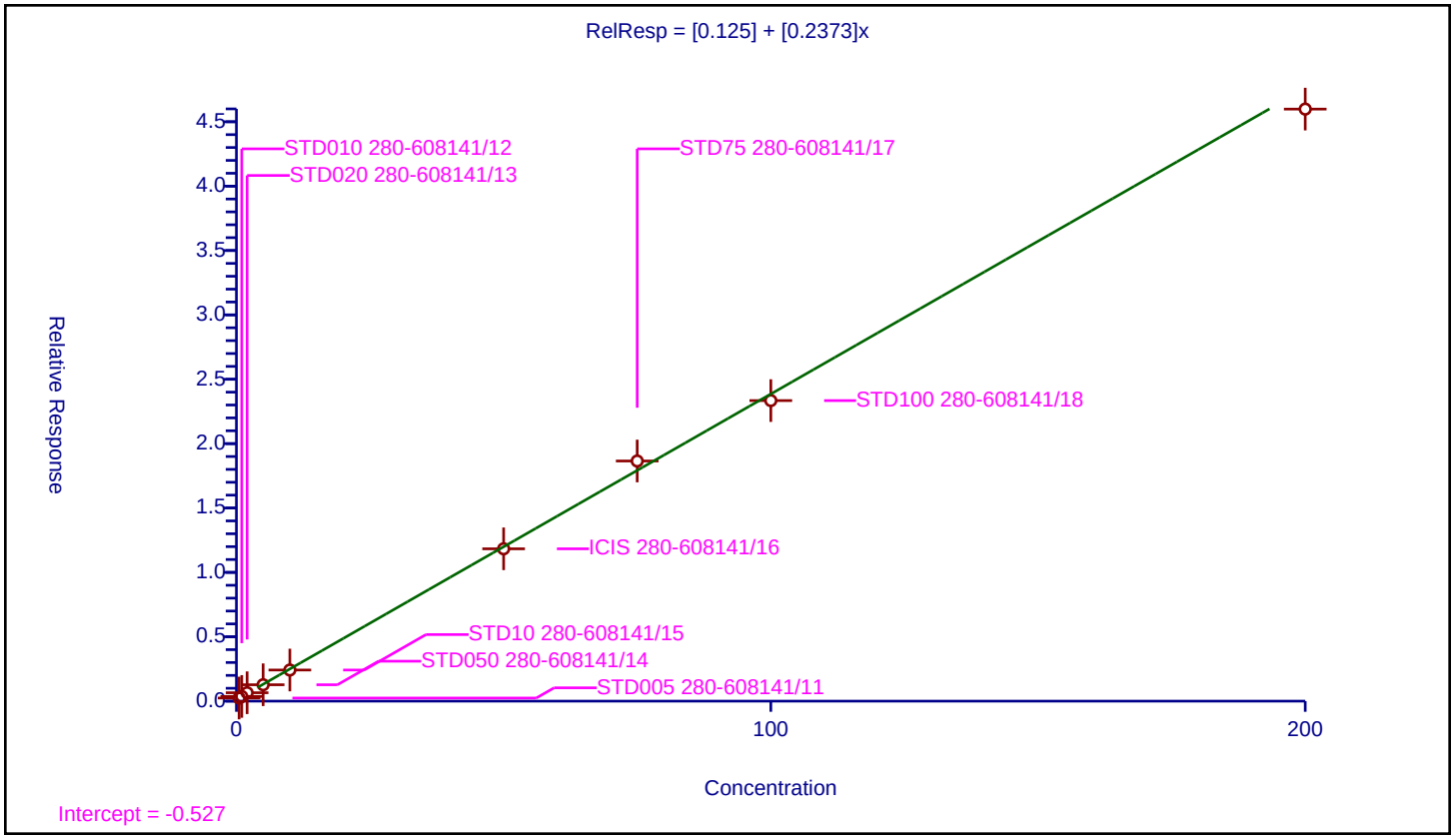
Curve Coefficients

Intercept:	0.125
Slope:	0.2373

Error Coefficients

Standard Error:	922000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.24038	50.0	2082534.0	0.48076	Y
2	STD010 280-608141/12	1.0	0.364568	50.0	2123474.0	0.364568	Y
3	STD020 280-608141/13	2.0	0.653333	50.0	2069084.0	0.326666	Y
4	STD050 280-608141/14	5.0	1.272367	50.0	2098608.0	0.254473	Y
5	STD10 280-608141/15	10.0	2.418088	50.0	2065930.0	0.241809	Y
6	ICIS 280-608141/16	50.0	11.831008	50.0	2135807.0	0.23662	Y
7	STD75 280-608141/17	75.0	18.652016	50.0	2108563.0	0.248694	Y
8	STD100 280-608141/18	100.0	23.344754	50.0	2185733.0	0.233448	Y
9	STD200 280-608141/19	200.0	45.98374	50.0	2182142.0	0.229919	Y



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Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

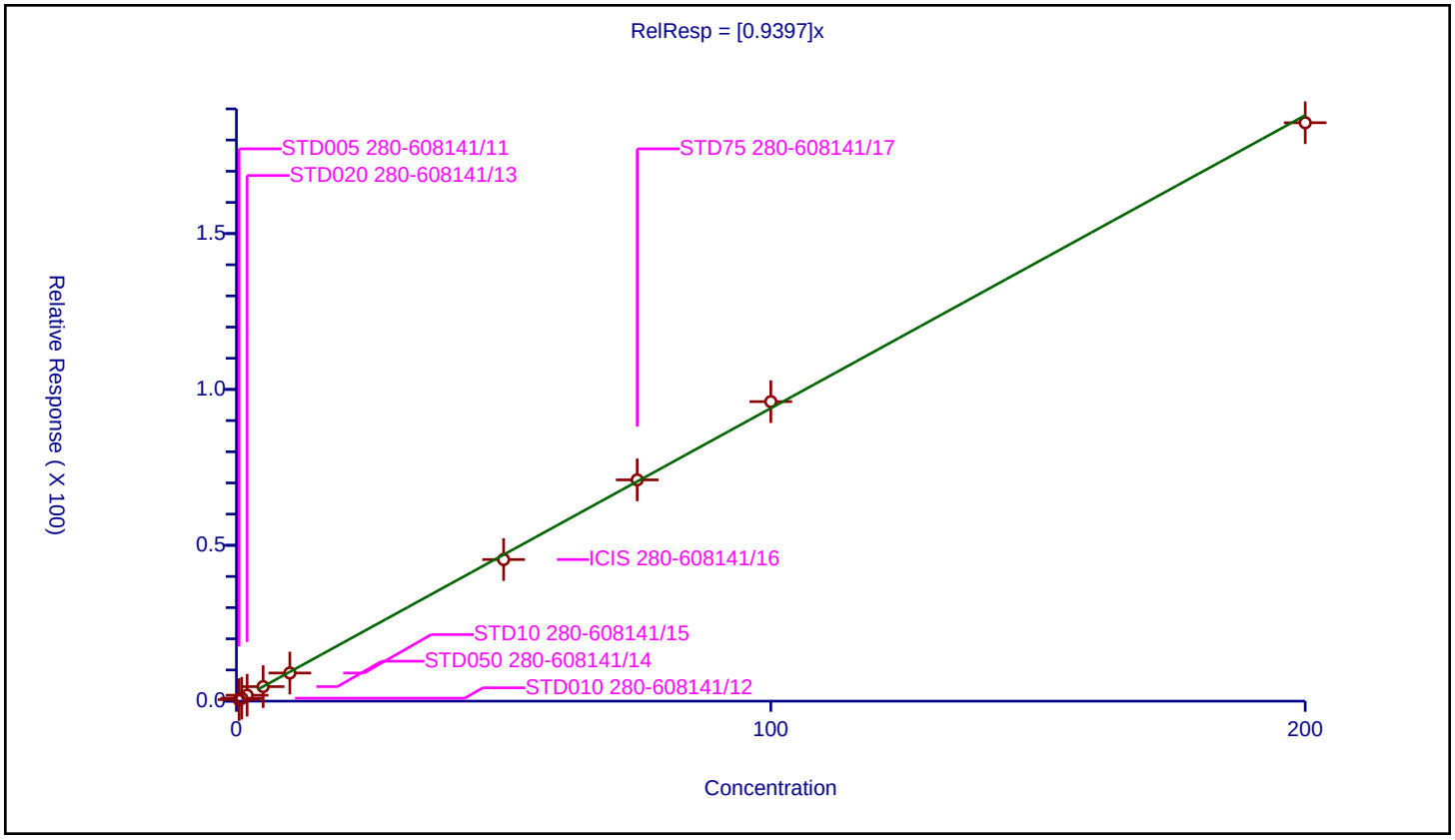
Curve Coefficients

Intercept:	0
Slope:	0.9397

Error Coefficients

Standard Error:	811000
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.495355	50.0	484400.0	0.99071	Y
2	STD010 280-608141/12	1.0	0.937325	50.0	495079.0	0.937325	Y
3	STD020 280-608141/13	2.0	1.900022	50.0	482047.0	0.950011	Y
4	STD050 280-608141/14	5.0	4.662289	50.0	484912.0	0.932458	Y
5	STD10 280-608141/15	10.0	9.029143	50.0	483573.0	0.902914	Y
6	ICIS 280-608141/16	50.0	45.427008	50.0	504429.0	0.90854	Y
7	STD75 280-608141/17	75.0	70.980324	50.0	494673.0	0.946404	Y
8	STD100 280-608141/18	100.0	96.084067	50.0	510619.0	0.960841	Y
9	STD200 280-608141/19	200.0	185.553125	50.0	510581.0	0.927766	Y



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Calibration / 2-Pentanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

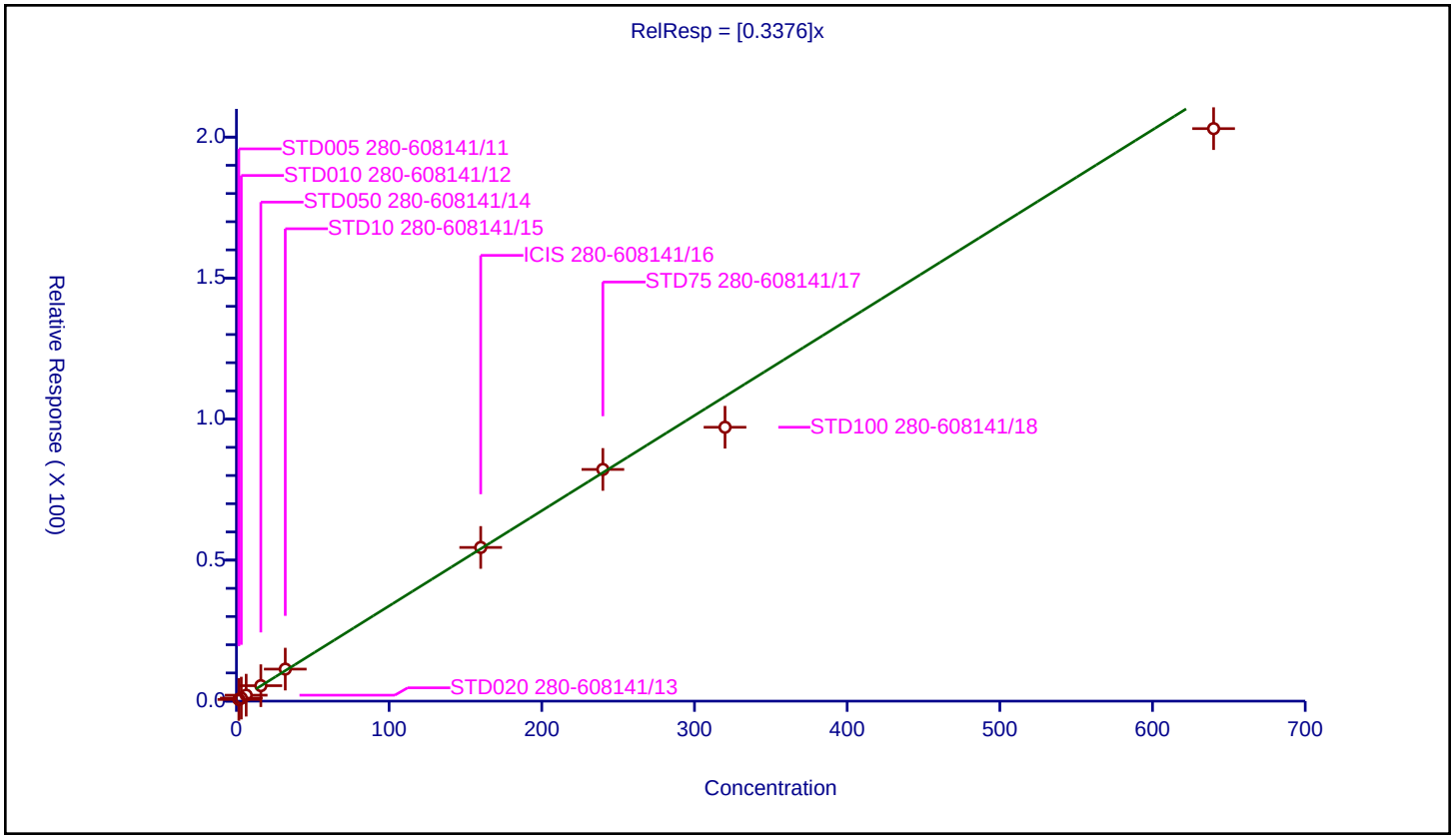
Curve Coefficients

Intercept:	0
Slope:	0.3376

Error Coefficients

Standard Error:	3780000
Relative Standard Error:	5.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	1.6	0.592259	50.0	2082534.0	0.370162	Y
2	STD010 280-608141/12	3.2	1.082142	50.0	2123474.0	0.338169	Y
3	STD020 280-608141/13	6.4	2.10685	50.0	2069084.0	0.329195	Y
4	STD050 280-608141/14	16.0	5.478465	50.0	2098608.0	0.342404	Y
5	STD10 280-608141/15	32.0	11.359557	50.0	2065930.0	0.354986	Y
6	ICIS 280-608141/16	160.0	54.49624	50.0	2135807.0	0.340601	Y
7	STD75 280-608141/17	240.0	82.161595	50.0	2108563.0	0.34234	Y
8	STD100 280-608141/18	320.0	97.113188	50.0	2185733.0	0.303479	Y
9	STD200 280-608141/19	640.0	203.001684	50.0	2182142.0	0.31719	Y



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Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

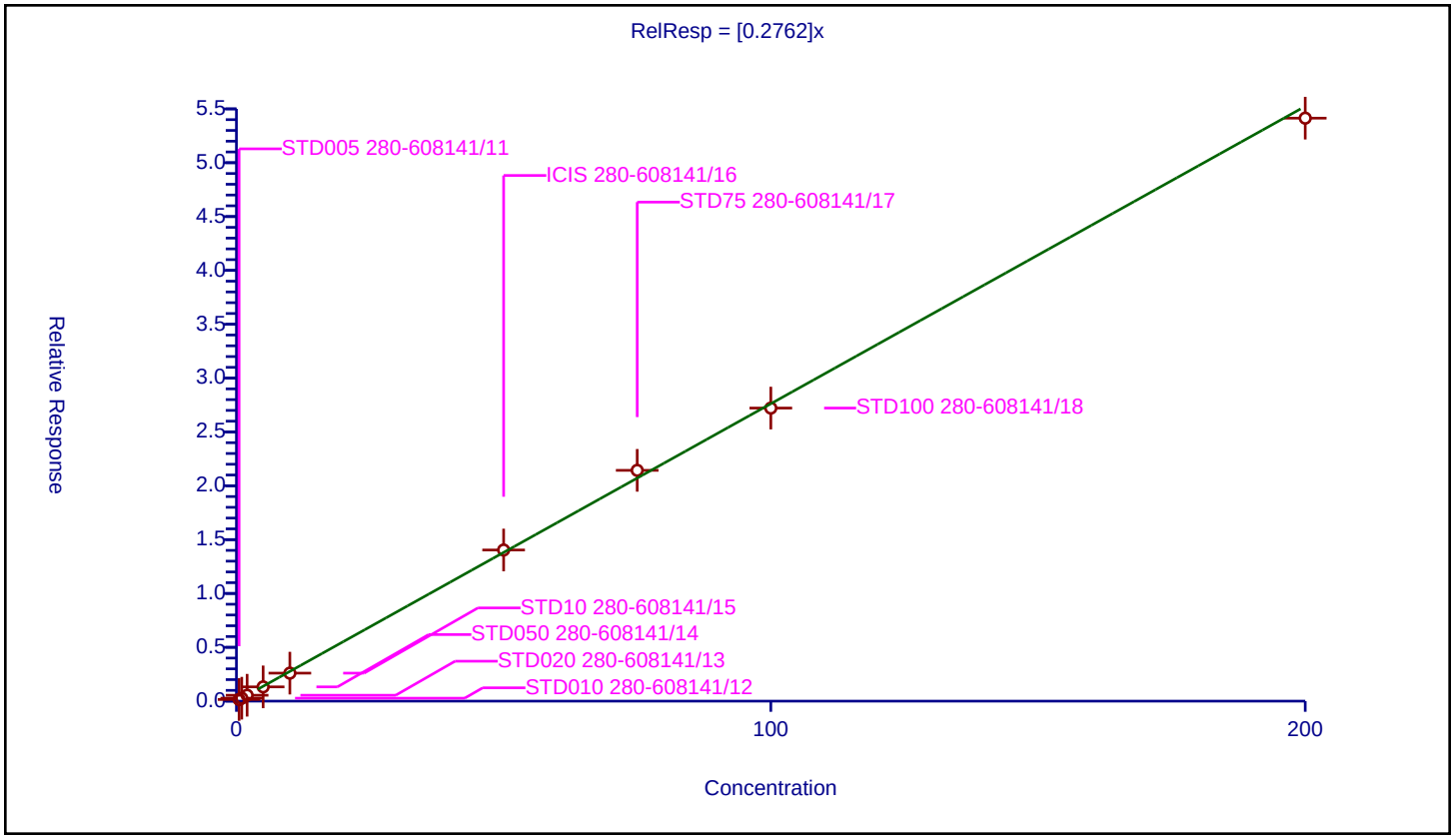
Curve Coefficients

Intercept:	0
Slope:	0.2762

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.151858	50.0	2082534.0	0.303717	Y
2	STD010 280-608141/12	1.0	0.273514	50.0	2123474.0	0.273514	Y
3	STD020 280-608141/13	2.0	0.548214	50.0	2069084.0	0.274107	Y
4	STD050 280-608141/14	5.0	1.325331	50.0	2098608.0	0.265066	Y
5	STD10 280-608141/15	10.0	2.599798	50.0	2065930.0	0.25998	Y
6	ICIS 280-608141/16	50.0	14.036147	50.0	2135807.0	0.280723	Y
7	STD75 280-608141/17	75.0	21.434171	50.0	2108563.0	0.285789	Y
8	STD100 280-608141/18	100.0	27.214921	50.0	2185733.0	0.272149	Y
9	STD200 280-608141/19	200.0	54.140198	50.0	2182142.0	0.270701	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

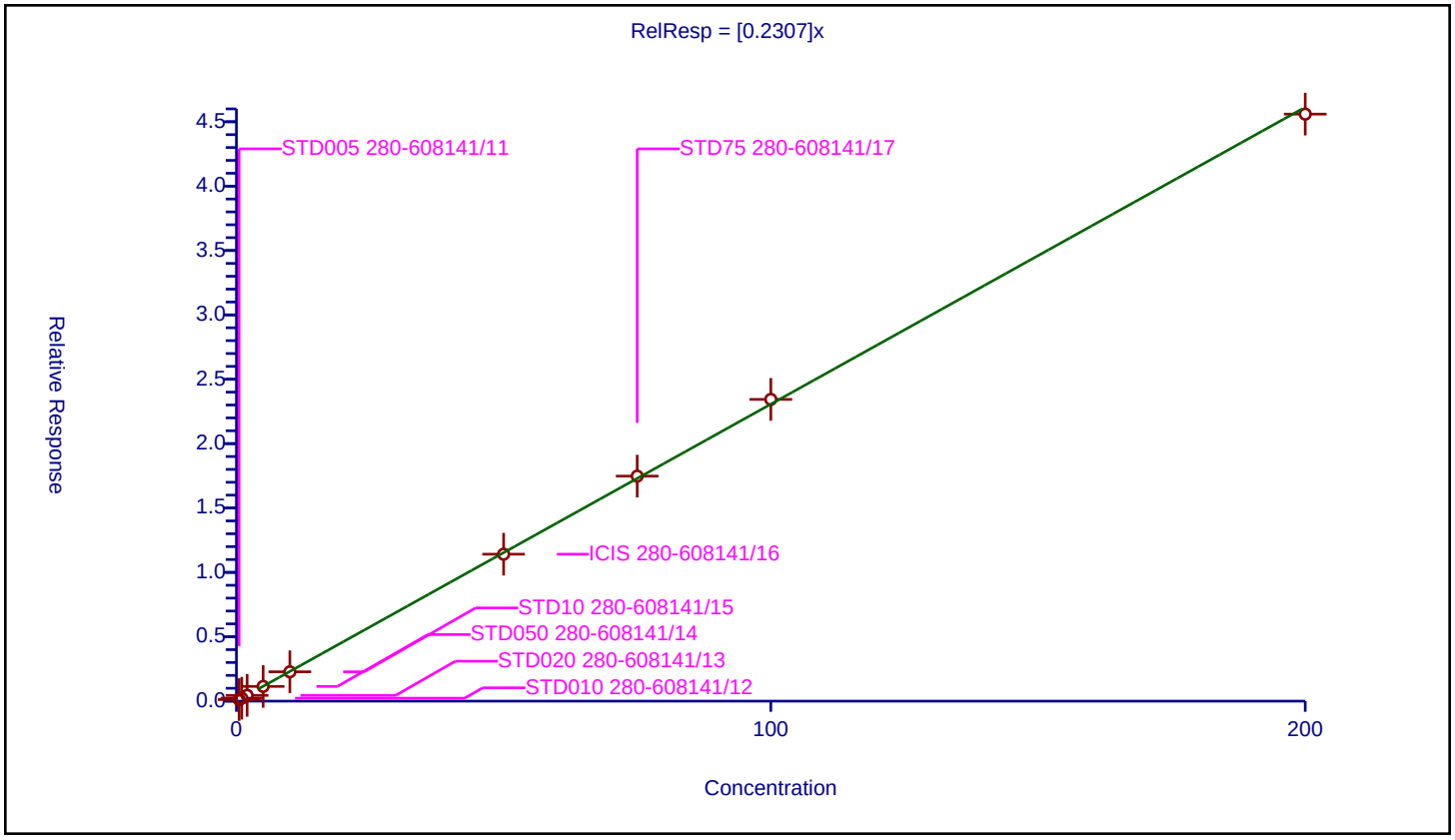
Curve Coefficients

Intercept:	0
Slope:	0.2307

Error Coefficients

Standard Error:	852000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.121679	50.0	2082534.0	0.243357	Y
2	STD010 280-608141/12	1.0	0.227858	50.0	2123474.0	0.227858	Y
3	STD020 280-608141/13	2.0	0.44887	50.0	2069084.0	0.224435	Y
4	STD050 280-608141/14	5.0	1.143734	50.0	2098608.0	0.228747	Y
5	STD10 280-608141/15	10.0	2.278586	50.0	2065930.0	0.227859	Y
6	ICIS 280-608141/16	50.0	11.413999	50.0	2135807.0	0.22828	Y
7	STD75 280-608141/17	75.0	17.47714	50.0	2108563.0	0.233029	Y
8	STD100 280-608141/18	100.0	23.437744	50.0	2185733.0	0.234377	Y
9	STD200 280-608141/19	200.0	45.594902	50.0	2182142.0	0.227975	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

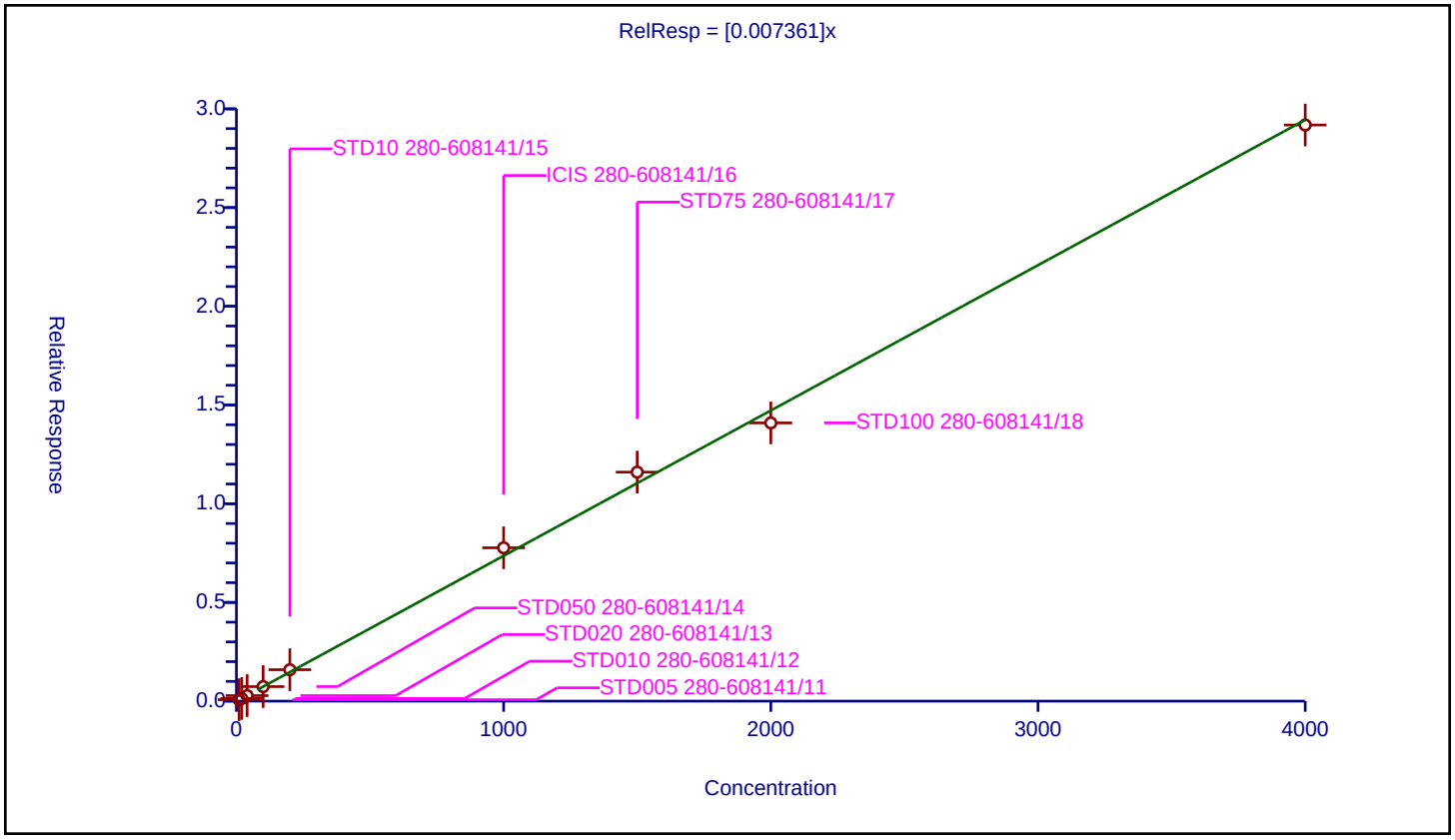
Curve Coefficients

Intercept:	0
Slope:	0.007361

Error Coefficients

Standard Error:	543000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	10.0	0.073588	50.0	2082534.0	0.007359	Y
2	STD010 280-608141/12	20.0	0.134732	50.0	2123474.0	0.006737	Y
3	STD020 280-608141/13	40.0	0.27981	50.0	2069084.0	0.006995	Y
4	STD050 280-608141/14	100.0	0.735464	50.0	2098608.0	0.007355	Y
5	STD10 280-608141/15	200.0	1.59168	50.0	2065930.0	0.007958	Y
6	ICIS 280-608141/16	1000.0	7.768258	50.0	2135807.0	0.007768	Y
7	STD75 280-608141/17	1500.0	11.600626	50.0	2108563.0	0.007734	Y
8	STD100 280-608141/18	2000.0	14.093716	50.0	2185733.0	0.007047	Y
9	STD200 280-608141/19	4000.0	29.183779	50.0	2182142.0	0.007296	Y



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Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

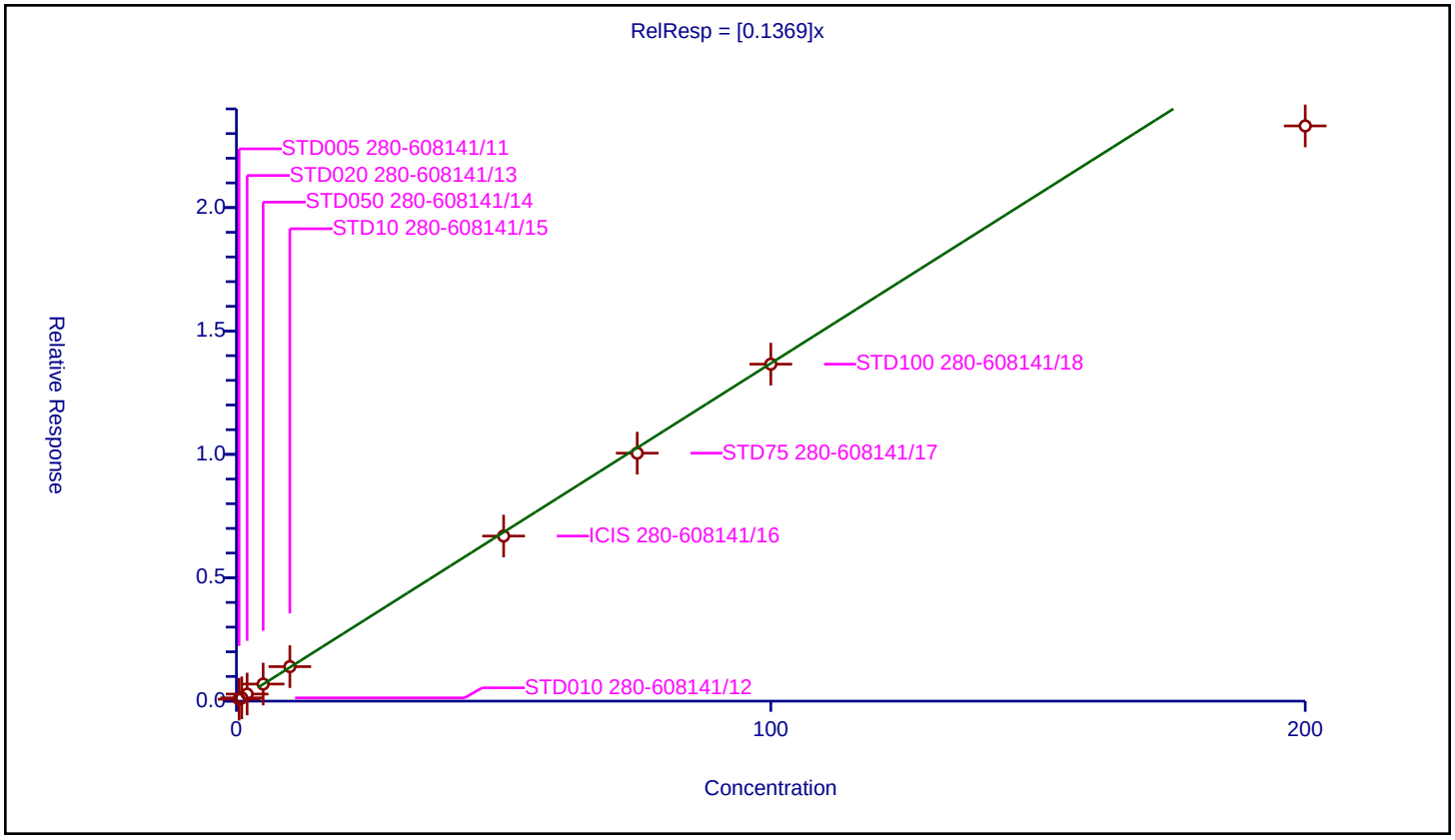
Curve Coefficients

Intercept:	0
Slope:	0.1369

Error Coefficients

Standard Error:	455000
Relative Standard Error:	7.5
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.077838	50.0	2082534.0	0.155676	Y
2	STD010 280-608141/12	1.0	0.133437	50.0	2123474.0	0.133437	Y
3	STD020 280-608141/13	2.0	0.287446	50.0	2069084.0	0.143723	Y
4	STD050 280-608141/14	5.0	0.69203	50.0	2098608.0	0.138406	Y
5	STD10 280-608141/15	10.0	1.398305	50.0	2065930.0	0.13983	Y
6	ICIS 280-608141/16	50.0	6.690281	50.0	2135807.0	0.133806	Y
7	STD75 280-608141/17	75.0	10.048621	50.0	2108563.0	0.133982	Y
8	STD100 280-608141/18	100.0	13.656174	50.0	2185733.0	0.136562	Y
9	STD200 280-608141/19	200.0	23.309963	50.0	2182142.0	0.11655	Y



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Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

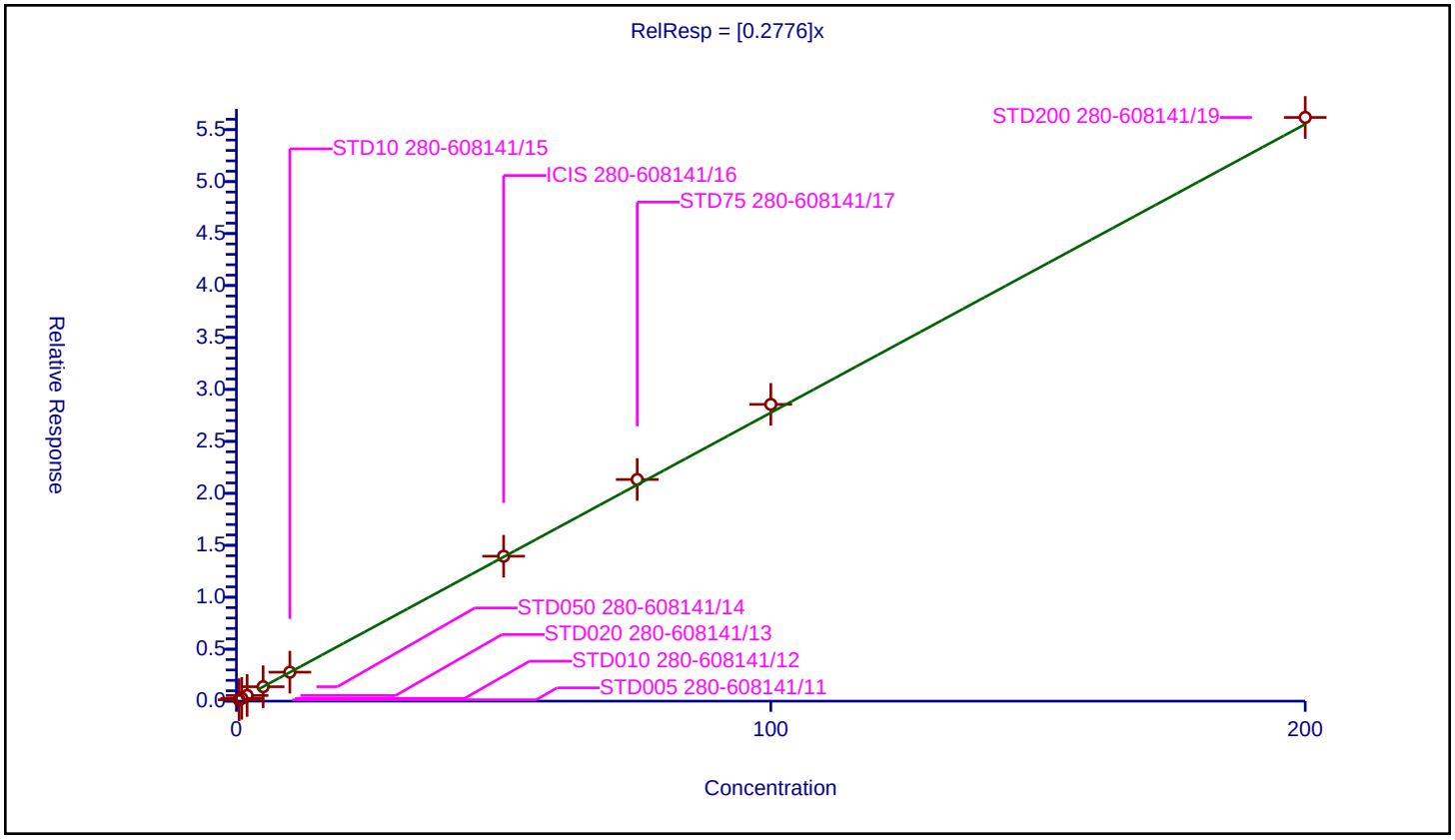
Curve Coefficients

Intercept:	0
Slope:	0.2776

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.135316	50.0	2082534.0	0.270632	Y
2	STD010 280-608141/12	1.0	0.268569	50.0	2123474.0	0.268569	Y
3	STD020 280-608141/13	2.0	0.546836	50.0	2069084.0	0.273418	Y
4	STD050 280-608141/14	5.0	1.387491	50.0	2098608.0	0.277498	Y
5	STD10 280-608141/15	10.0	2.787728	50.0	2065930.0	0.278773	Y
6	ICIS 280-608141/16	50.0	13.94817	50.0	2135807.0	0.278963	Y
7	STD75 280-608141/17	75.0	21.330902	50.0	2108563.0	0.284412	Y
8	STD100 280-608141/18	100.0	28.562066	50.0	2185733.0	0.285621	Y
9	STD200 280-608141/19	200.0	56.178012	50.0	2182142.0	0.28089	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

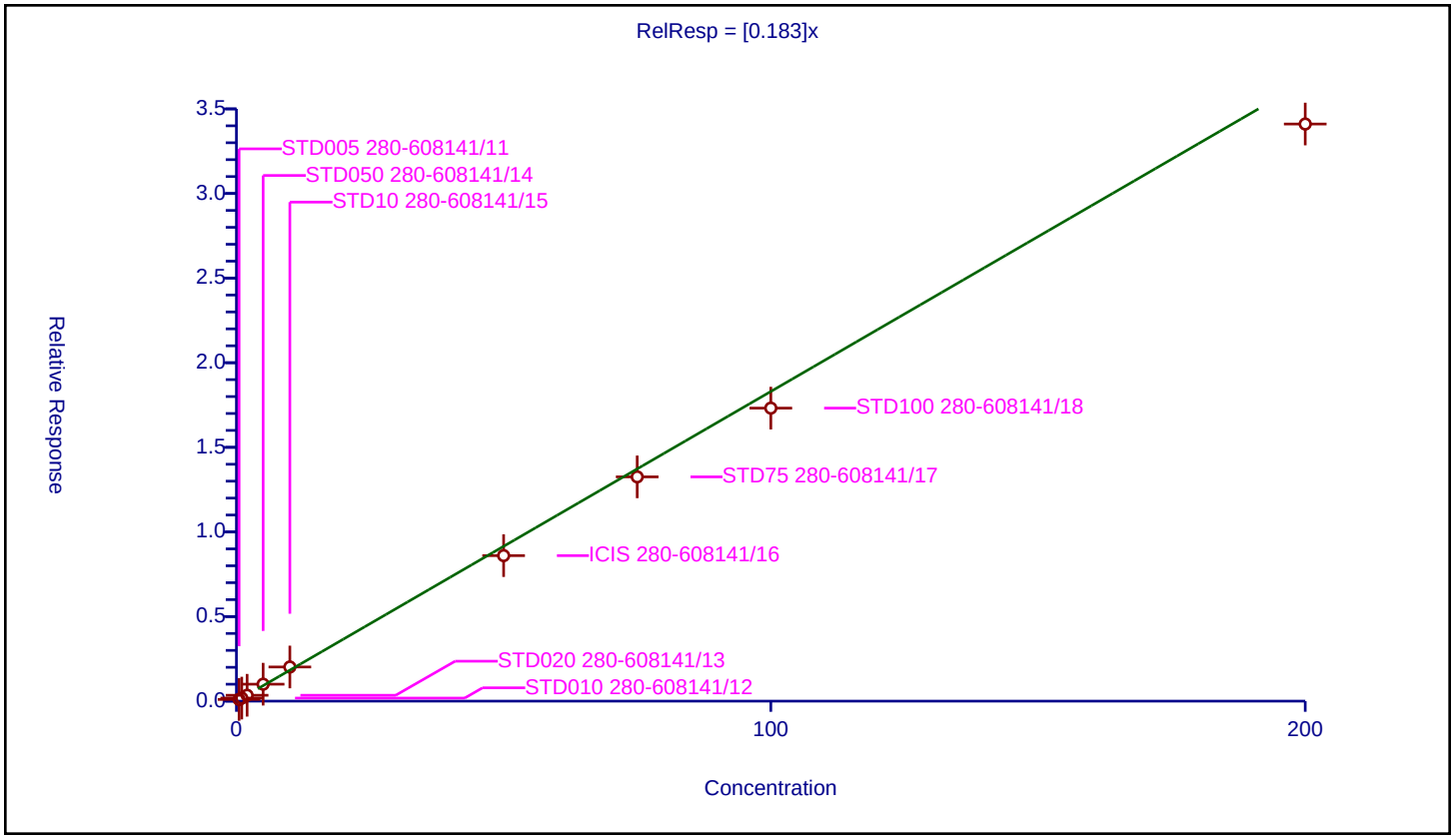
Curve Coefficients

Intercept:	0
Slope:	0.183

Error Coefficients

Standard Error:	637000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.099302	50.0	2082534.0	0.198604	Y
2	STD010 280-608141/12	1.0	0.179941	50.0	2123474.0	0.179941	Y
3	STD020 280-608141/13	2.0	0.347642	50.0	2069084.0	0.173821	Y
4	STD050 280-608141/14	5.0	1.001807	50.0	2098608.0	0.200361	Y
5	STD10 280-608141/15	10.0	2.018945	50.0	2065930.0	0.201895	Y
6	ICIS 280-608141/16	50.0	8.599747	50.0	2135807.0	0.171995	Y
7	STD75 280-608141/17	75.0	13.254287	50.0	2108563.0	0.176724	Y
8	STD100 280-608141/18	100.0	17.316937	50.0	2185733.0	0.173169	Y
9	STD200 280-608141/19	200.0	34.105434	50.0	2182142.0	0.170527	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

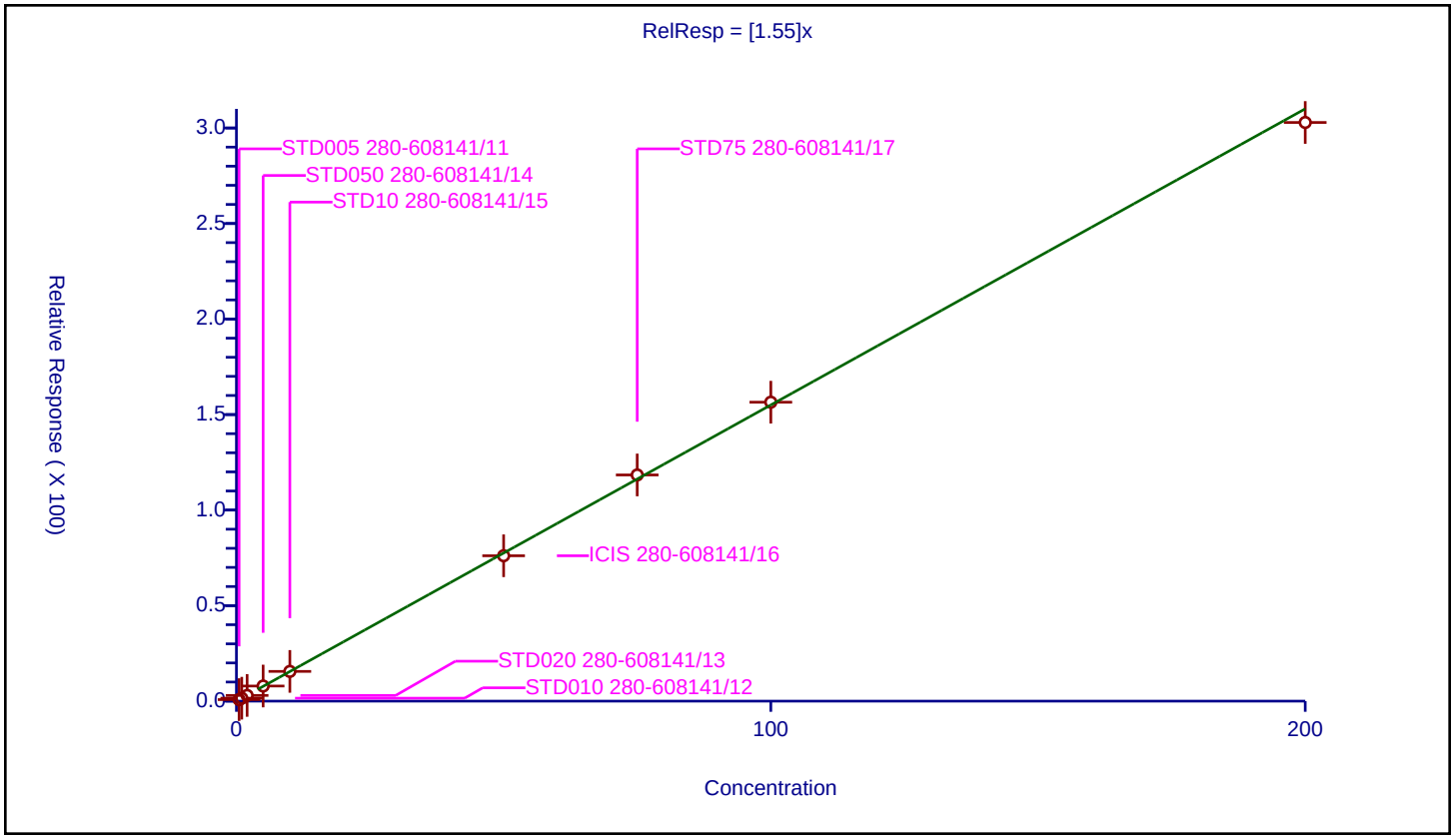
Curve Coefficients

Intercept:	0
Slope:	1.55

Error Coefficients

Standard Error:	1330000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.797069	50.0	484400.0	1.594137	Y
2	STD010 280-608141/12	1.0	1.540158	50.0	495079.0	1.540158	Y
3	STD020 280-608141/13	2.0	2.993899	50.0	482047.0	1.496949	Y
4	STD050 280-608141/14	5.0	7.916694	50.0	484912.0	1.583339	Y
5	STD10 280-608141/15	10.0	15.56735	50.0	483573.0	1.556735	Y
6	ICIS 280-608141/16	50.0	76.10298	50.0	504429.0	1.52206	Y
7	STD75 280-608141/17	75.0	118.395182	50.0	494673.0	1.578602	Y
8	STD100 280-608141/18	100.0	156.487616	50.0	510619.0	1.564876	Y
9	STD200 280-608141/19	200.0	302.893077	50.0	510581.0	1.514465	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

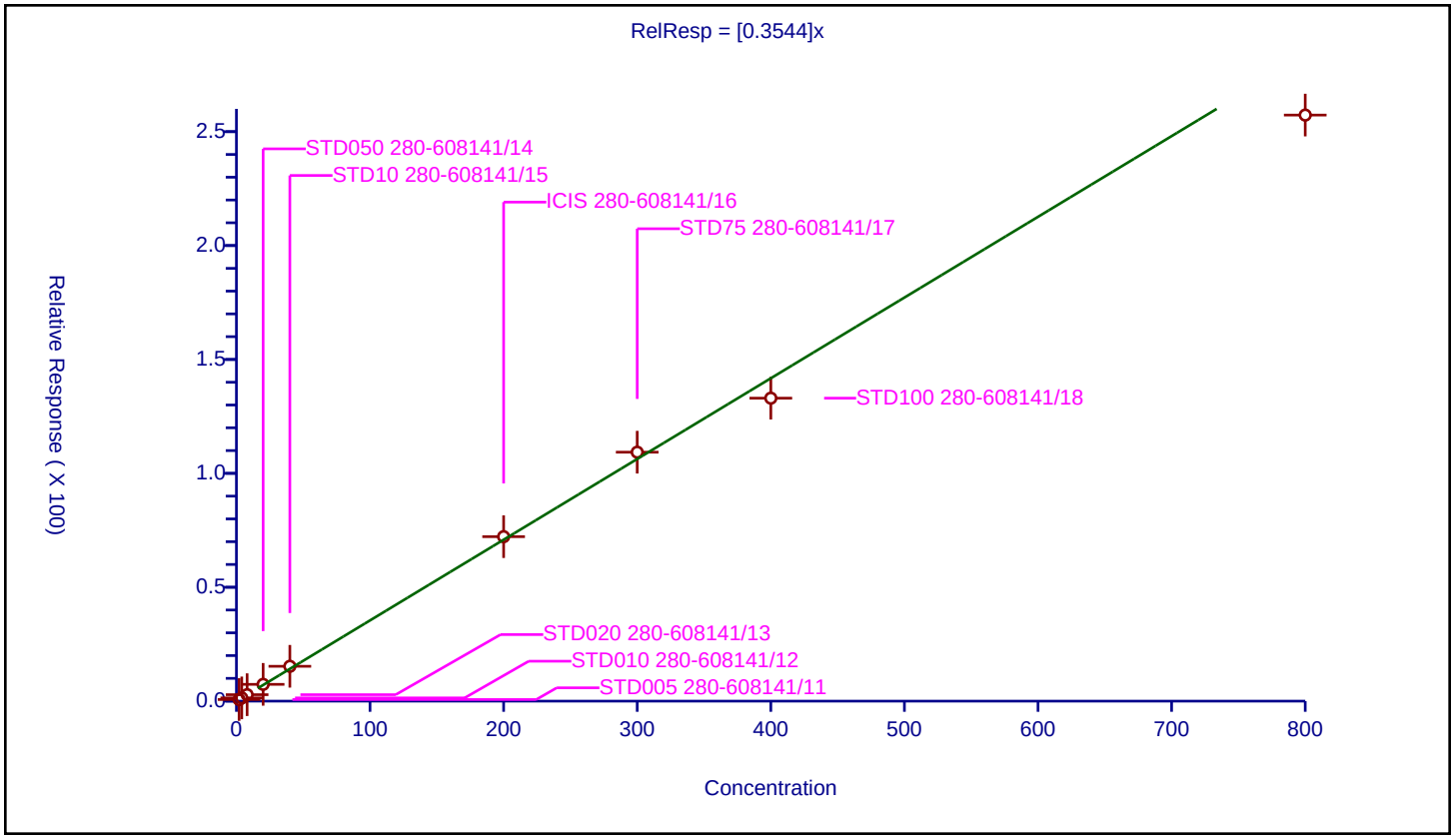
Curve Coefficients

Intercept:	0
Slope:	0.3544

Error Coefficients

Standard Error:	4890000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	2.0	0.701597	50.0	2082534.0	0.350799	Y
2	STD010 280-608141/12	4.0	1.416853	50.0	2123474.0	0.354213	Y
3	STD020 280-608141/13	8.0	2.829972	50.0	2069084.0	0.353747	Y
4	STD050 280-608141/14	20.0	7.370481	50.0	2098608.0	0.368524	Y
5	STD10 280-608141/15	40.0	15.297663	50.0	2065930.0	0.382442	Y
6	ICIS 280-608141/16	200.0	72.202568	50.0	2135807.0	0.361013	Y
7	STD75 280-608141/17	300.0	109.30086	50.0	2108563.0	0.364336	Y
8	STD100 280-608141/18	400.0	133.011649	50.0	2185733.0	0.332529	Y
9	STD200 280-608141/19	800.0	257.286098	50.0	2182142.0	0.321608	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

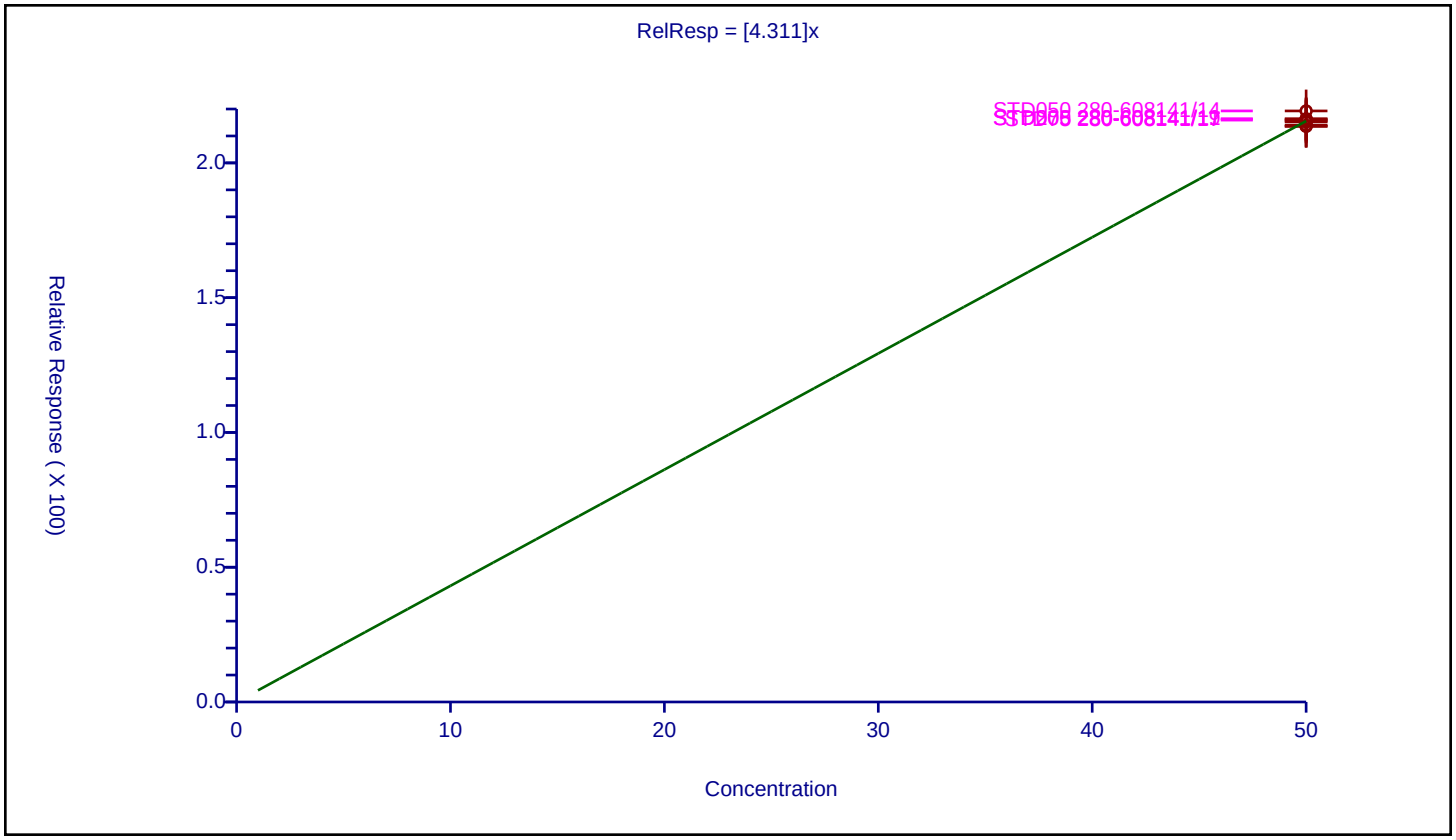
Curve Coefficients

Intercept:	0
Slope:	4.311

Error Coefficients

Standard Error:	2260000
Relative Standard Error:	0.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	50.0	216.322151	50.0	484400.0	4.326443	Y
2	STD010 280-608141/12	50.0	213.676504	50.0	495079.0	4.27353	Y
3	STD020 280-608141/13	50.0	215.504194	50.0	482047.0	4.310084	Y
4	STD050 280-608141/14	50.0	219.286386	50.0	484912.0	4.385728	Y
5	STD10 280-608141/15	50.0	215.202668	50.0	483573.0	4.304053	Y
6	ICIS 280-608141/16	50.0	213.560977	50.0	504429.0	4.27122	Y
7	STD75 280-608141/17	50.0	215.882816	50.0	494673.0	4.317656	Y
8	STD100 280-608141/18	50.0	213.97872	50.0	510619.0	4.279574	Y
9	STD200 280-608141/19	50.0	216.317979	50.0	510581.0	4.32636	Y



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Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

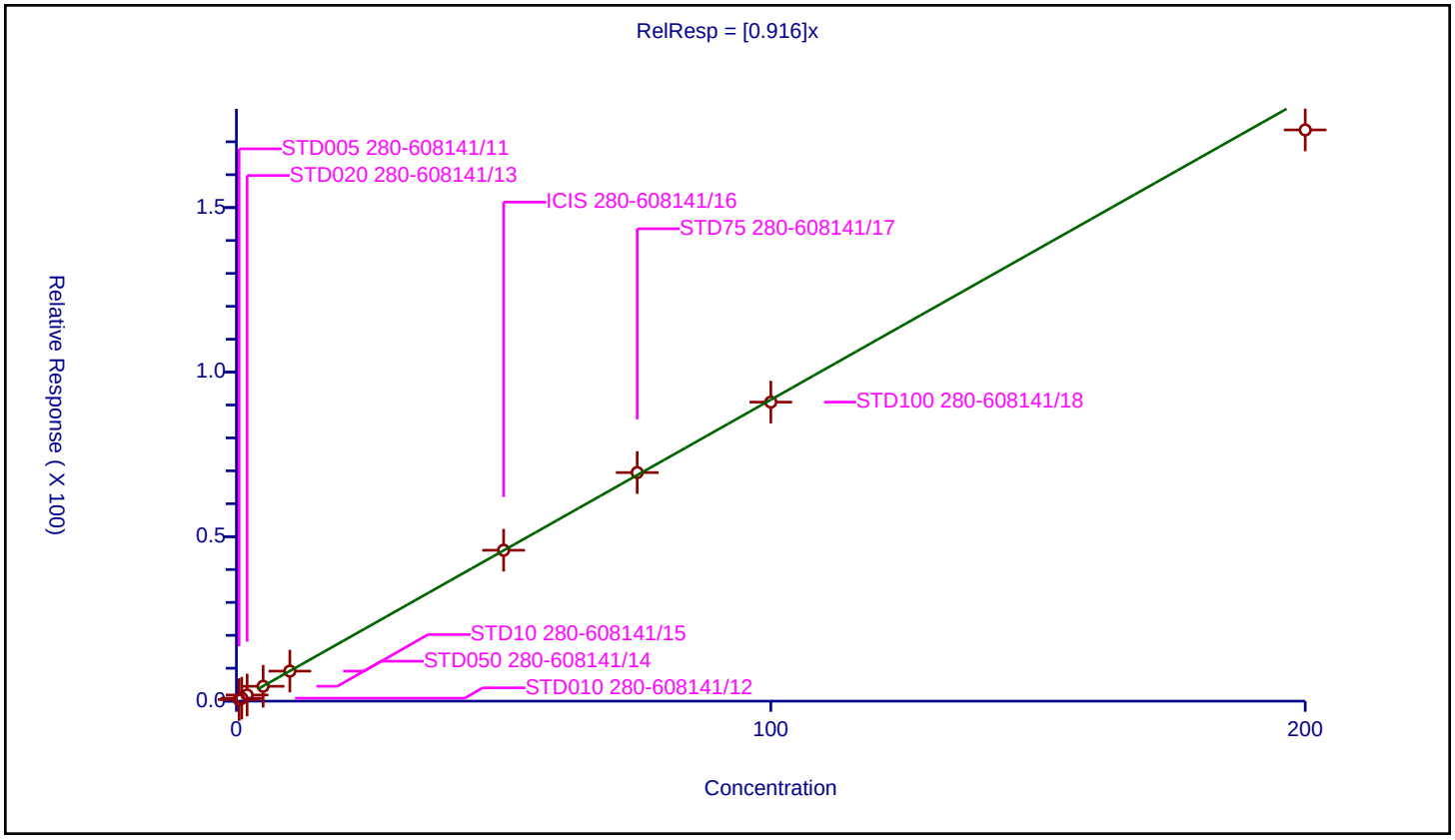
Curve Coefficients

Intercept:	0
Slope:	0.916

Error Coefficients

Standard Error:	3270000
Relative Standard Error:	3.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.48441	50.0	2082534.0	0.96882	Y
2	STD010 280-608141/12	1.0	0.898033	50.0	2123474.0	0.898033	Y
3	STD020 280-608141/13	2.0	1.879817	50.0	2069084.0	0.939909	Y
4	STD050 280-608141/14	5.0	4.521664	50.0	2098608.0	0.904333	Y
5	STD10 280-608141/15	10.0	9.125309	50.0	2065930.0	0.912531	Y
6	ICIS 280-608141/16	50.0	45.861822	50.0	2135807.0	0.917236	Y
7	STD75 280-608141/17	75.0	69.475657	50.0	2108563.0	0.926342	Y
8	STD100 280-608141/18	100.0	90.881411	50.0	2185733.0	0.908814	Y
9	STD200 280-608141/19	200.0	173.604055	50.0	2182142.0	0.86802	Y



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Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

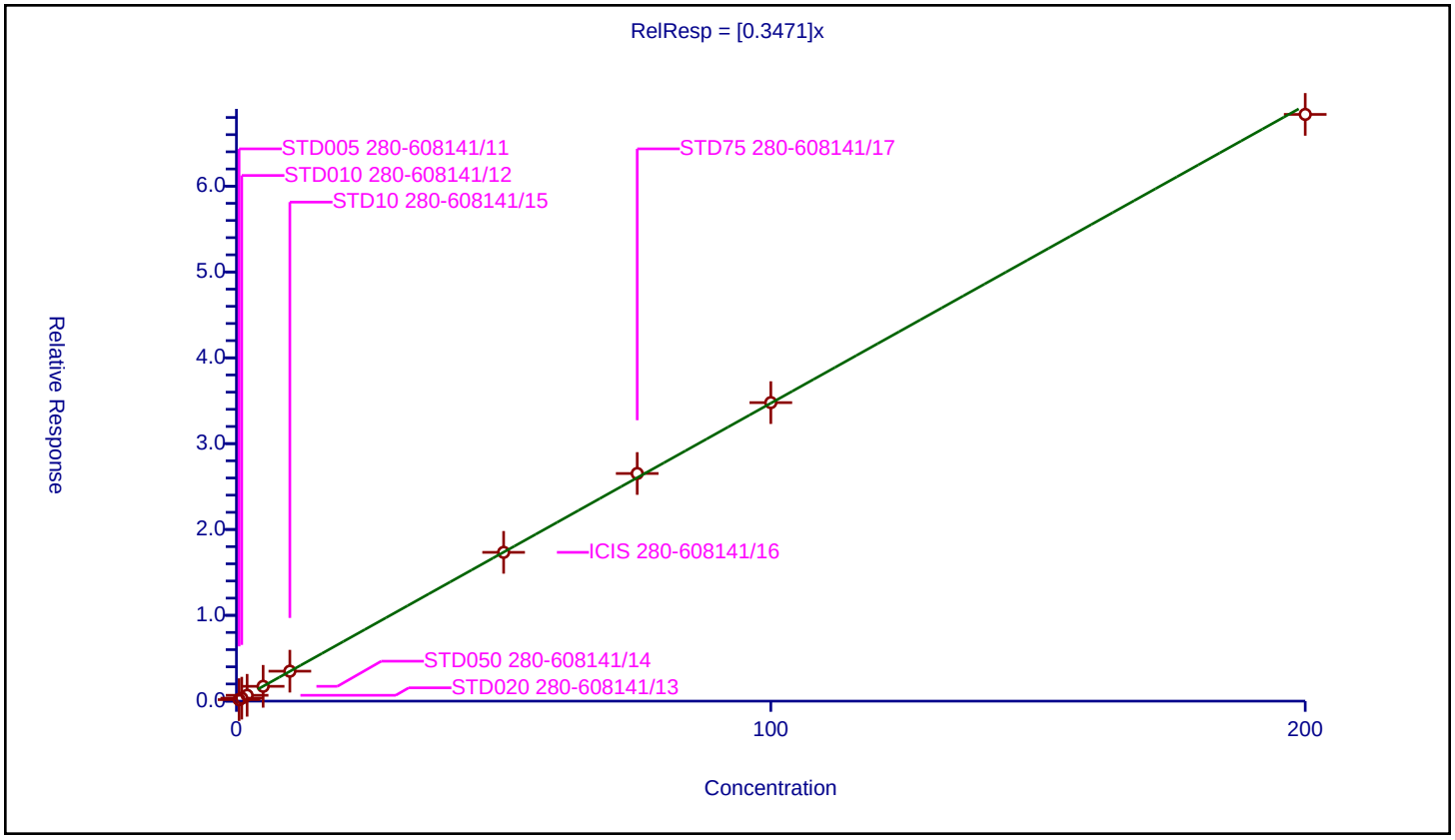
Curve Coefficients

Intercept:	0
Slope:	0.3471

Error Coefficients

Standard Error:	1280000
Relative Standard Error:	1.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.175964	50.0	2082534.0	0.351927	Y
2	STD010 280-608141/12	1.0	0.347214	50.0	2123474.0	0.347214	Y
3	STD020 280-608141/13	2.0	0.681074	50.0	2069084.0	0.340537	Y
4	STD050 280-608141/14	5.0	1.727764	50.0	2098608.0	0.345553	Y
5	STD10 280-608141/15	10.0	3.488381	50.0	2065930.0	0.348838	Y
6	ICIS 280-608141/16	50.0	17.336023	50.0	2135807.0	0.34672	Y
7	STD75 280-608141/17	75.0	26.522091	50.0	2108563.0	0.353628	Y
8	STD100 280-608141/18	100.0	34.779202	50.0	2185733.0	0.347792	Y
9	STD200 280-608141/19	200.0	68.357032	50.0	2182142.0	0.341785	Y



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Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

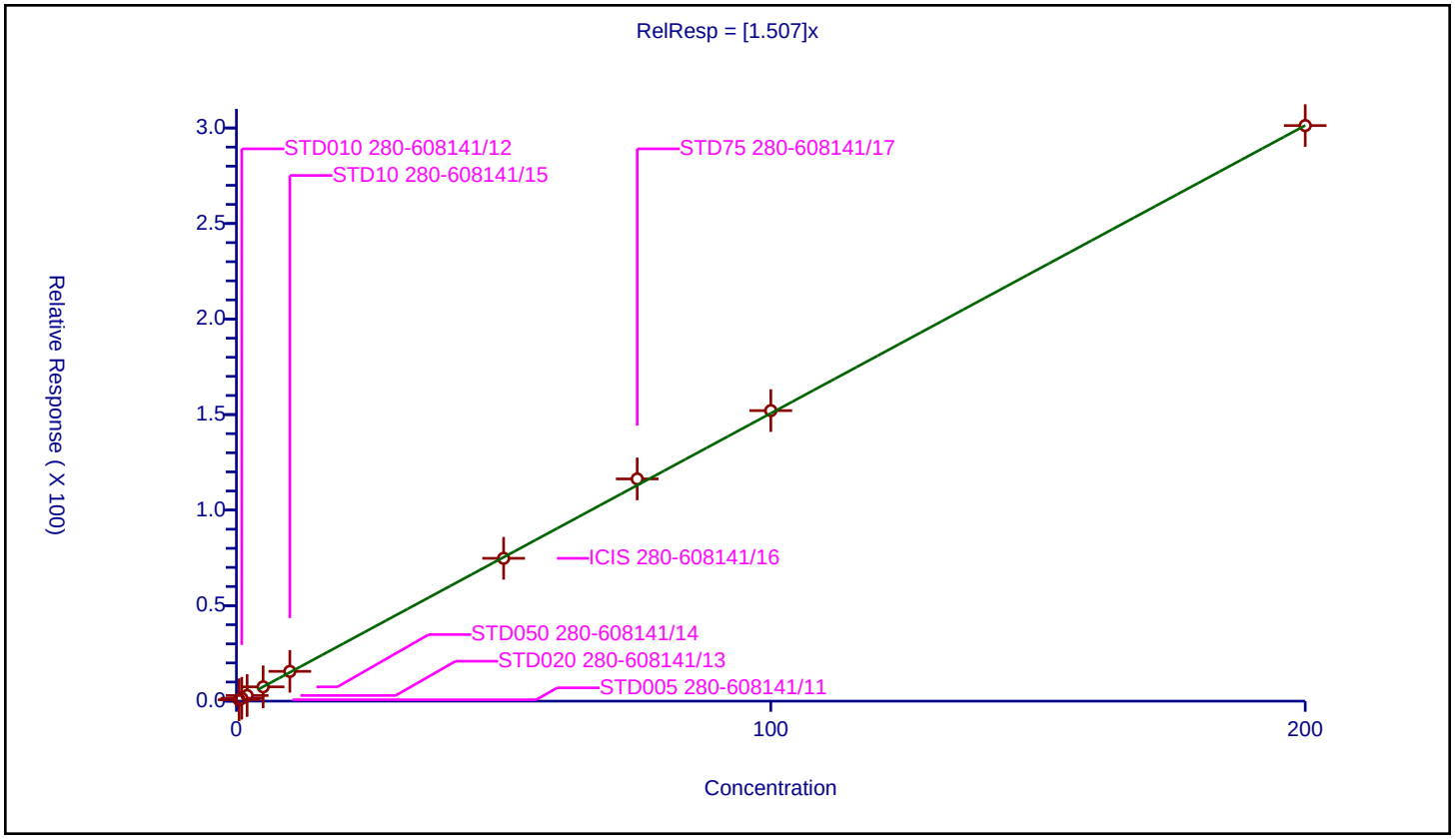
Curve Coefficients

Intercept:	0
Slope:	1.507

Error Coefficients

Standard Error:	1310000
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.725021	50.0	484400.0	1.450041	Y
2	STD010 280-608141/12	1.0	1.510365	50.0	495079.0	1.510365	Y
3	STD020 280-608141/13	2.0	2.945252	50.0	482047.0	1.472626	Y
4	STD050 280-608141/14	5.0	7.475893	50.0	484912.0	1.495179	Y
5	STD10 280-608141/15	10.0	15.585961	50.0	483573.0	1.558596	Y
6	ICIS 280-608141/16	50.0	74.763148	50.0	504429.0	1.495263	Y
7	STD75 280-608141/17	75.0	116.320377	50.0	494673.0	1.550938	Y
8	STD100 280-608141/18	100.0	152.069449	50.0	510619.0	1.520694	Y
9	STD200 280-608141/19	200.0	301.272668	50.0	510581.0	1.506363	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

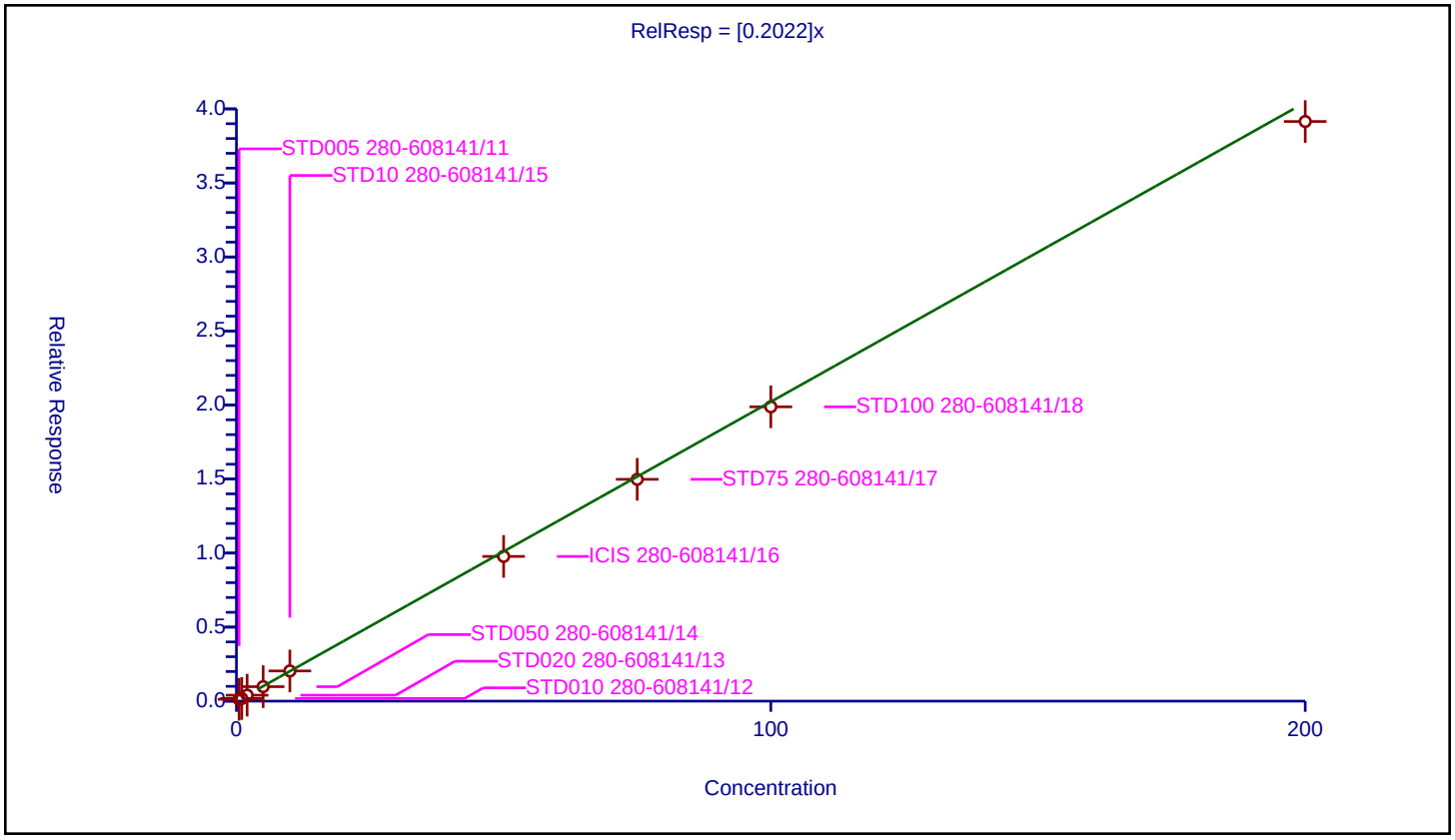
Curve Coefficients

Intercept:	0
Slope:	0.2022

Error Coefficients

Standard Error:	729000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.12516	50.0	2082534.0	0.25032	Y
2	STD010 280-608141/12	1.0	0.179211	50.0	2123474.0	0.179211	Y
3	STD020 280-608141/13	2.0	0.402038	50.0	2069084.0	0.201019	Y
4	STD050 280-608141/14	5.0	0.977005	50.0	2098608.0	0.195401	Y
5	STD10 280-608141/15	10.0	2.039421	50.0	2065930.0	0.203942	Y
6	ICIS 280-608141/16	50.0	9.774549	50.0	2135807.0	0.195491	Y
7	STD75 280-608141/17	75.0	14.981364	50.0	2108563.0	0.199752	Y
8	STD100 280-608141/18	100.0	19.8788	50.0	2185733.0	0.198788	Y
9	STD200 280-608141/19	200.0	39.148415	50.0	2182142.0	0.195742	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

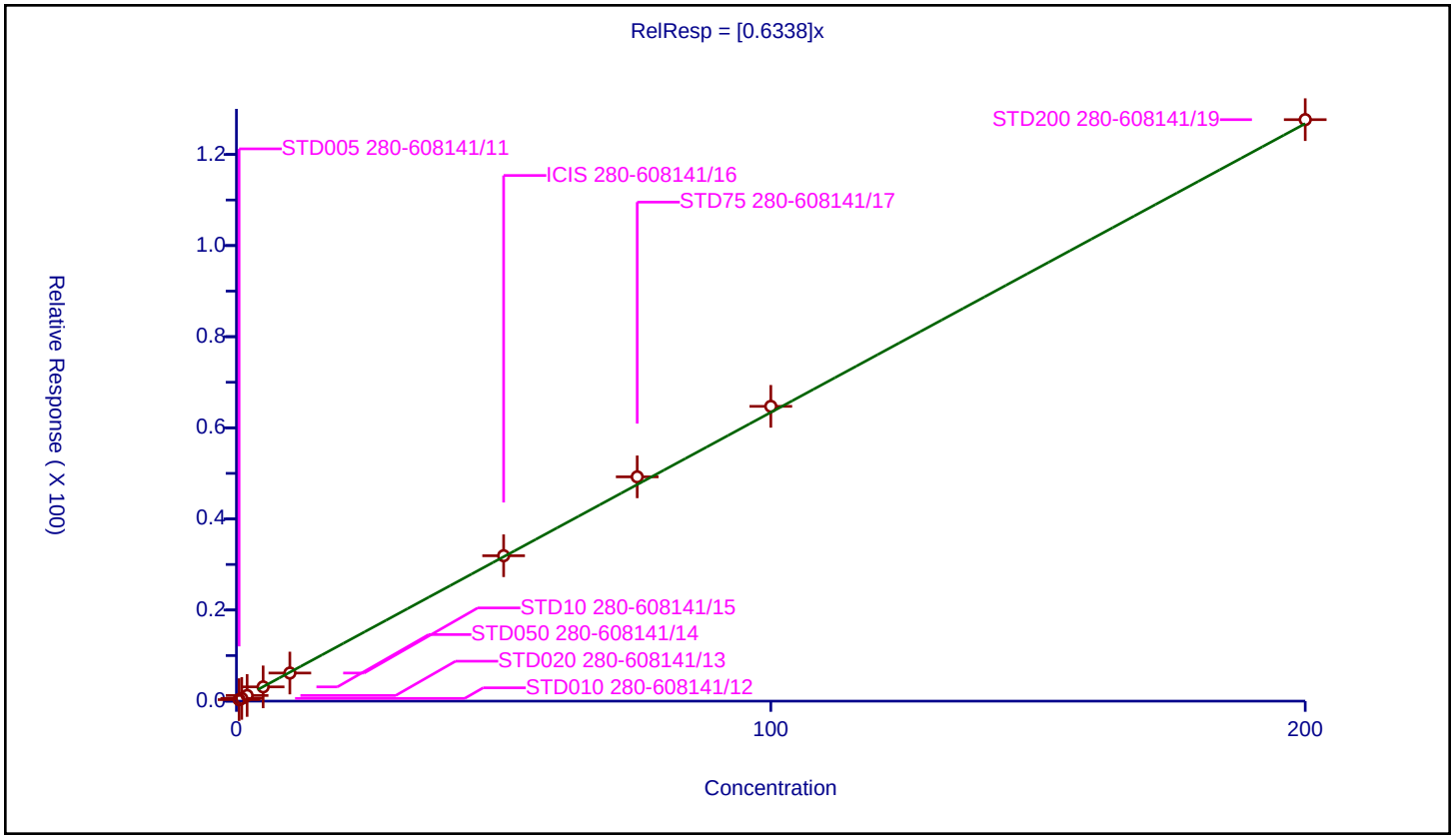
Curve Coefficients

Intercept:	0
Slope:	0.6338

Error Coefficients

Standard Error:	557000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.332576	50.0	484400.0	0.665153	Y
2	STD010 280-608141/12	1.0	0.596773	50.0	495079.0	0.596773	Y
3	STD020 280-608141/13	2.0	1.239921	50.0	482047.0	0.61996	Y
4	STD050 280-608141/14	5.0	3.129124	50.0	484912.0	0.625825	Y
5	STD10 280-608141/15	10.0	6.168252	50.0	483573.0	0.616825	Y
6	ICIS 280-608141/16	50.0	31.92025	50.0	504429.0	0.638405	Y
7	STD75 280-608141/17	75.0	49.232725	50.0	494673.0	0.656436	Y
8	STD100 280-608141/18	100.0	64.707933	50.0	510619.0	0.647079	Y
9	STD200 280-608141/19	200.0	127.63538	50.0	510581.0	0.638177	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

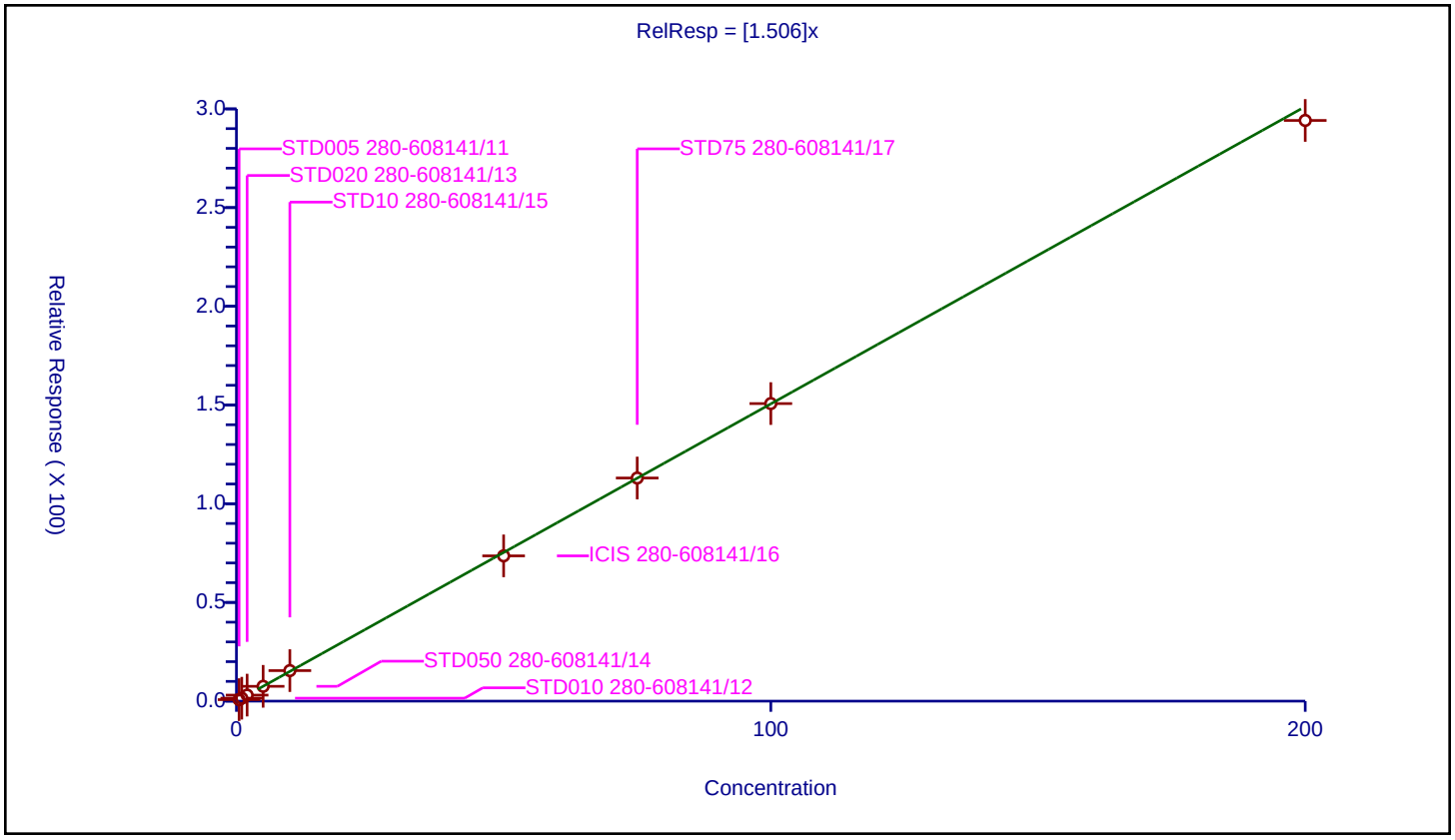
Curve Coefficients

Intercept:	0
Slope:	1.506

Error Coefficients

Standard Error:	1290000
Relative Standard Error:	1.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.764864	50.0	484400.0	1.529727	Y
2	STD010 280-608141/12	1.0	1.487641	50.0	495079.0	1.487641	Y
3	STD020 280-608141/13	2.0	3.05883	50.0	482047.0	1.529415	Y
4	STD050 280-608141/14	5.0	7.513631	50.0	484912.0	1.502726	Y
5	STD10 280-608141/15	10.0	15.464987	50.0	483573.0	1.546499	Y
6	ICIS 280-608141/16	50.0	73.590634	50.0	504429.0	1.471813	Y
7	STD75 280-608141/17	75.0	113.021936	50.0	494673.0	1.506959	Y
8	STD100 280-608141/18	100.0	150.7298	50.0	510619.0	1.507298	Y
9	STD200 280-608141/19	200.0	294.141086	50.0	510581.0	1.470705	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

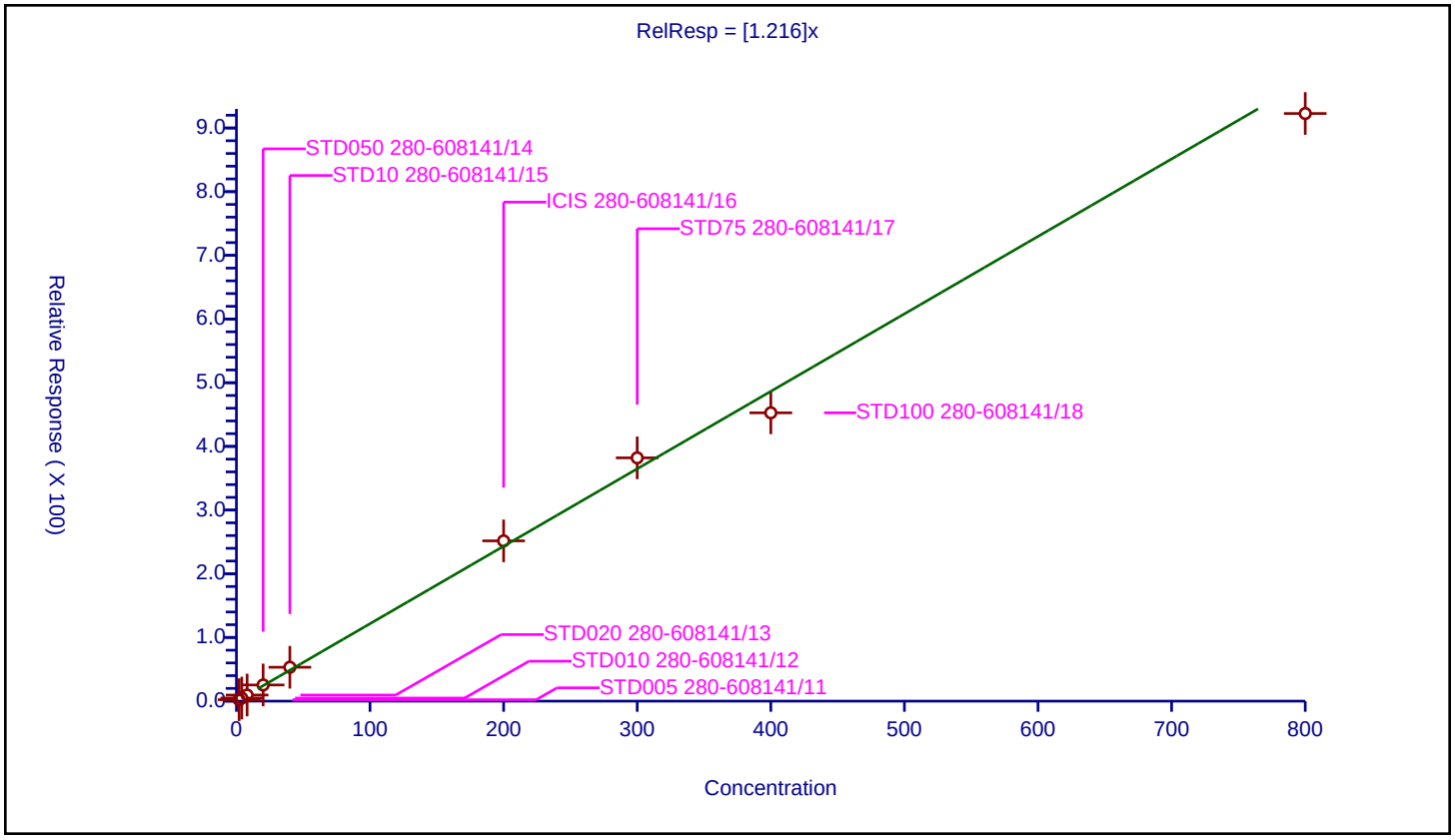
Curve Coefficients

Intercept:	0
Slope:	1.216

Error Coefficients

Standard Error:	4050000
Relative Standard Error:	5.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	2.0	2.242671	50.0	484400.0	1.121336	Y
2	STD010 280-608141/12	4.0	4.831451	50.0	495079.0	1.207863	Y
3	STD020 280-608141/13	8.0	9.597819	50.0	482047.0	1.199727	Y
4	STD050 280-608141/14	20.0	25.396361	50.0	484912.0	1.269818	Y
5	STD10 280-608141/15	40.0	53.201481	50.0	483573.0	1.330037	Y
6	ICIS 280-608141/16	200.0	251.663564	50.0	504429.0	1.258318	Y
7	STD75 280-608141/17	300.0	382.047332	50.0	494673.0	1.273491	Y
8	STD100 280-608141/18	400.0	452.765859	50.0	510619.0	1.131915	Y
9	STD200 280-608141/19	800.0	922.745754	50.0	510581.0	1.153432	Y



Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

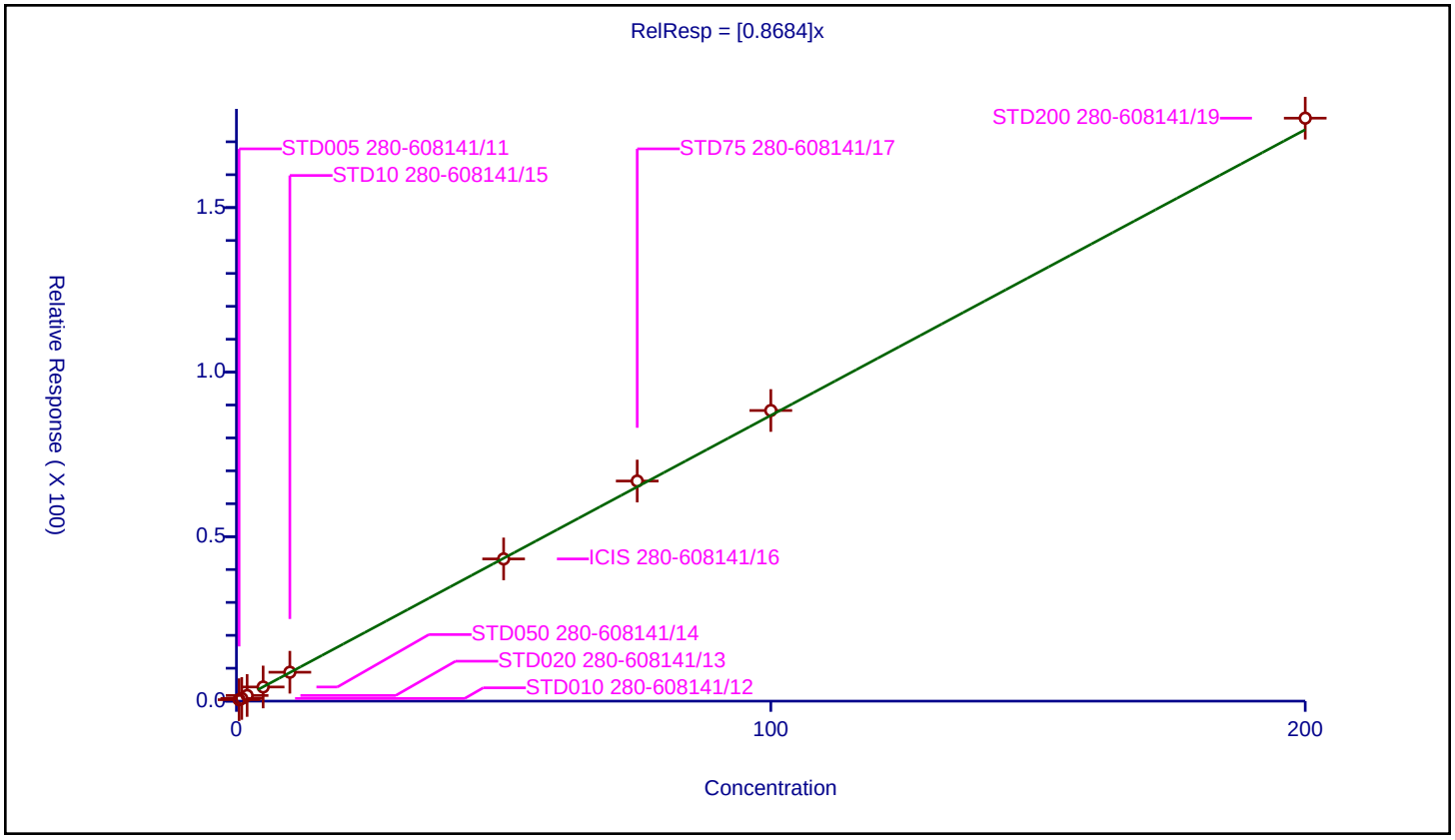
Curve Coefficients

Intercept:	0
Slope:	0.8684

Error Coefficients

Standard Error:	768000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.438893	50.0	484400.0	0.877787	Y
2	STD010 280-608141/12	1.0	0.814819	50.0	495079.0	0.814819	Y
3	STD020 280-608141/13	2.0	1.717052	50.0	482047.0	0.858526	Y
4	STD050 280-608141/14	5.0	4.30109	50.0	484912.0	0.860218	Y
5	STD10 280-608141/15	10.0	8.788332	50.0	483573.0	0.878833	Y
6	ICIS 280-608141/16	50.0	43.218372	50.0	504429.0	0.864367	Y
7	STD75 280-608141/17	75.0	66.898638	50.0	494673.0	0.891982	Y
8	STD100 280-608141/18	100.0	88.331026	50.0	510619.0	0.88331	Y
9	STD200 280-608141/19	200.0	177.183346	50.0	510581.0	0.885917	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

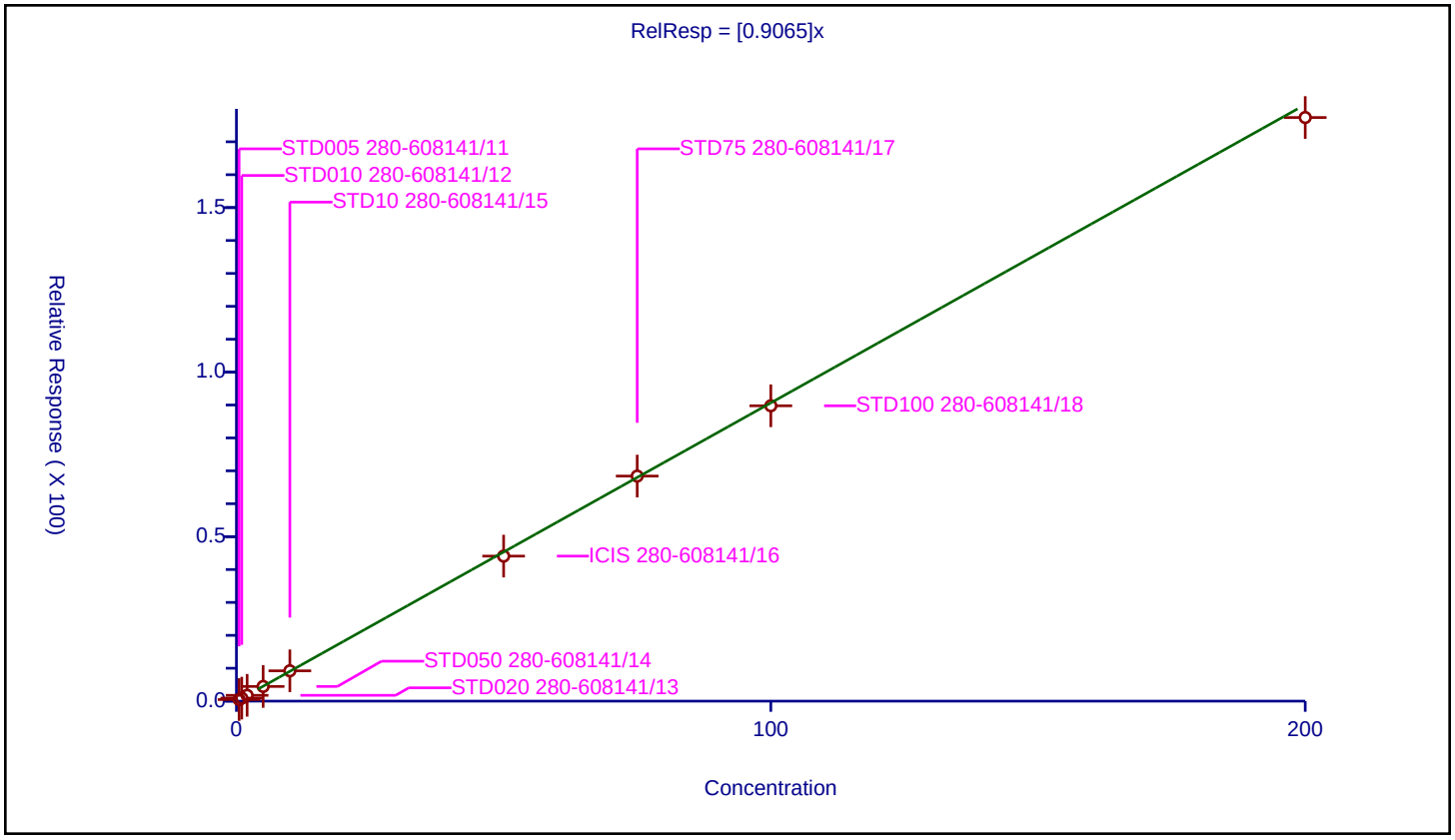
Curve Coefficients

Intercept:	0
Slope:	0.9065

Error Coefficients

Standard Error:	773000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.482556	50.0	484400.0	0.965111	Y
2	STD010 280-608141/12	1.0	0.915914	50.0	495079.0	0.915914	Y
3	STD020 280-608141/13	2.0	1.769122	50.0	482047.0	0.884561	Y
4	STD050 280-608141/14	5.0	4.464418	50.0	484912.0	0.892884	Y
5	STD10 280-608141/15	10.0	9.219497	50.0	483573.0	0.92195	Y
6	ICIS 280-608141/16	50.0	44.083112	50.0	504429.0	0.881662	Y
7	STD75 280-608141/17	75.0	68.403875	50.0	494673.0	0.912052	Y
8	STD100 280-608141/18	100.0	89.763405	50.0	510619.0	0.897634	Y
9	STD200 280-608141/19	200.0	177.378124	50.0	510581.0	0.886891	Y



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Calibration / 1-Chlorohexane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

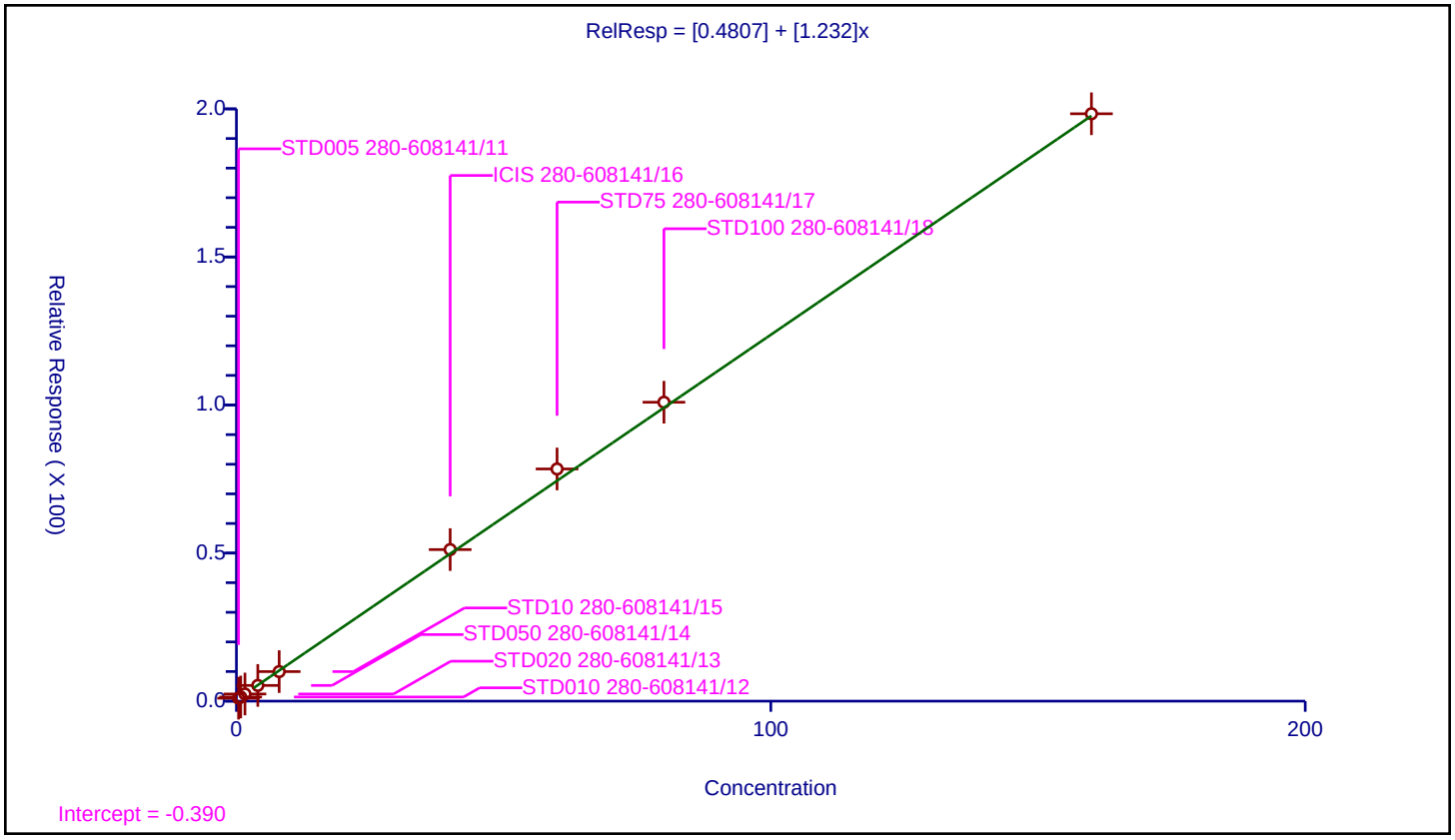
Curve Coefficients

Intercept:	0.4807
Slope:	1.232

Error Coefficients

Standard Error:	929000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.4	0.994323	50.0	484400.0	2.485807	Y
2	STD010 280-608141/12	0.8	1.400484	50.0	495079.0	1.750604	Y
3	STD020 280-608141/13	1.6	2.413458	50.0	482047.0	1.508411	Y
4	STD050 280-608141/14	4.0	5.297972	50.0	484912.0	1.324493	Y
5	STD10 280-608141/15	8.0	9.975123	50.0	483573.0	1.24689	Y
6	ICIS 280-608141/16	40.0	51.184706	50.0	504429.0	1.279618	Y
7	STD75 280-608141/17	60.0	78.403107	50.0	494673.0	1.306718	Y
8	STD100 280-608141/18	80.0	100.939154	50.0	510619.0	1.261739	Y
9	STD200 280-608141/19	160.0	198.35364	50.0	510581.0	1.23971	Y



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Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

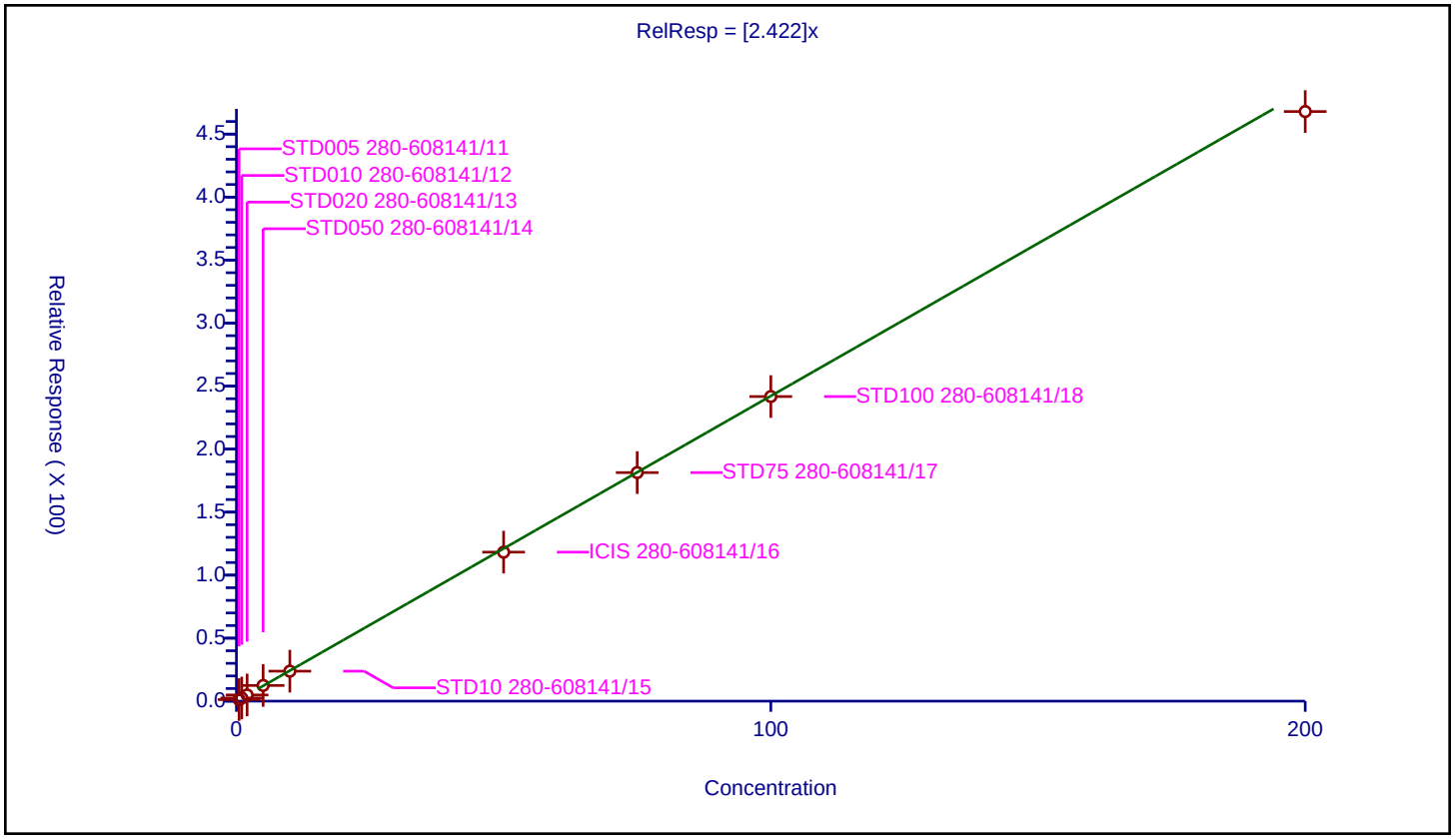
Curve Coefficients

Intercept:	0
Slope:	2.422

Error Coefficients

Standard Error:	2050000
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	1.22884	50.0	484400.0	2.45768	Y
2	STD010 280-608141/12	1.0	2.475766	50.0	495079.0	2.475766	Y
3	STD020 280-608141/13	2.0	4.912592	50.0	482047.0	2.456296	Y
4	STD050 280-608141/14	5.0	12.437411	50.0	484912.0	2.487482	Y
5	STD10 280-608141/15	10.0	23.783689	50.0	483573.0	2.378369	Y
6	ICIS 280-608141/16	50.0	118.245779	50.0	504429.0	2.364916	Y
7	STD75 280-608141/17	75.0	181.390333	50.0	494673.0	2.418538	Y
8	STD100 280-608141/18	100.0	241.717112	50.0	510619.0	2.417171	Y
9	STD200 280-608141/19	200.0	467.891089	50.0	510581.0	2.339455	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

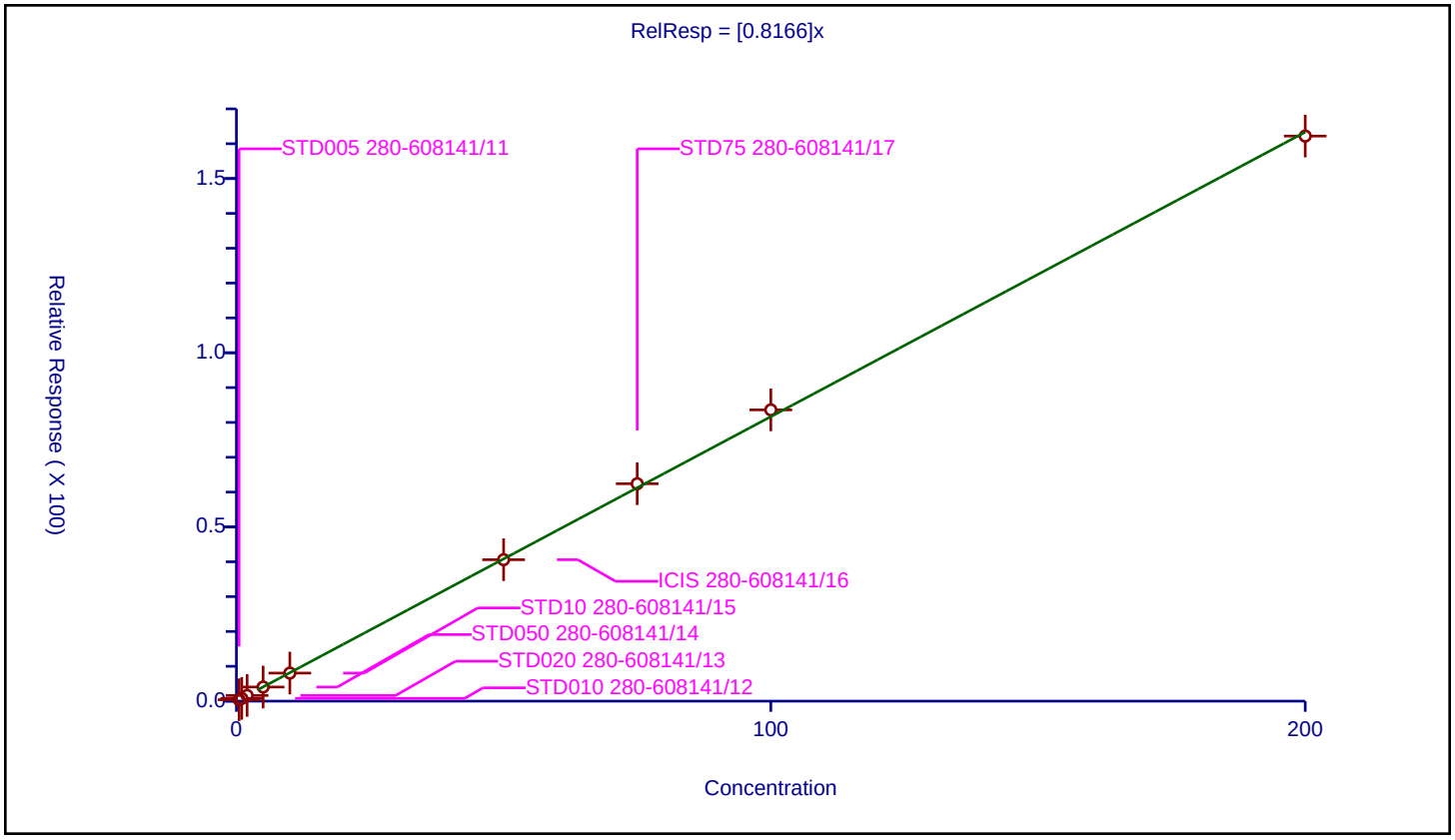
Curve Coefficients

Intercept:	0
Slope:	0.8166

Error Coefficients

Standard Error:	710000
Relative Standard Error:	1.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.412675	50.0	484400.0	0.825351	Y
2	STD010 280-608141/12	1.0	0.800983	50.0	495079.0	0.800983	Y
3	STD020 280-608141/13	2.0	1.631065	50.0	482047.0	0.815533	Y
4	STD050 280-608141/14	5.0	4.055581	50.0	484912.0	0.811116	Y
5	STD10 280-608141/15	10.0	8.057418	50.0	483573.0	0.805742	Y
6	ICIS 280-608141/16	50.0	40.598677	50.0	504429.0	0.811974	Y
7	STD75 280-608141/17	75.0	62.408399	50.0	494673.0	0.832112	Y
8	STD100 280-608141/18	100.0	83.604507	50.0	510619.0	0.836045	Y
9	STD200 280-608141/19	200.0	162.192972	50.0	510581.0	0.810965	Y



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Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

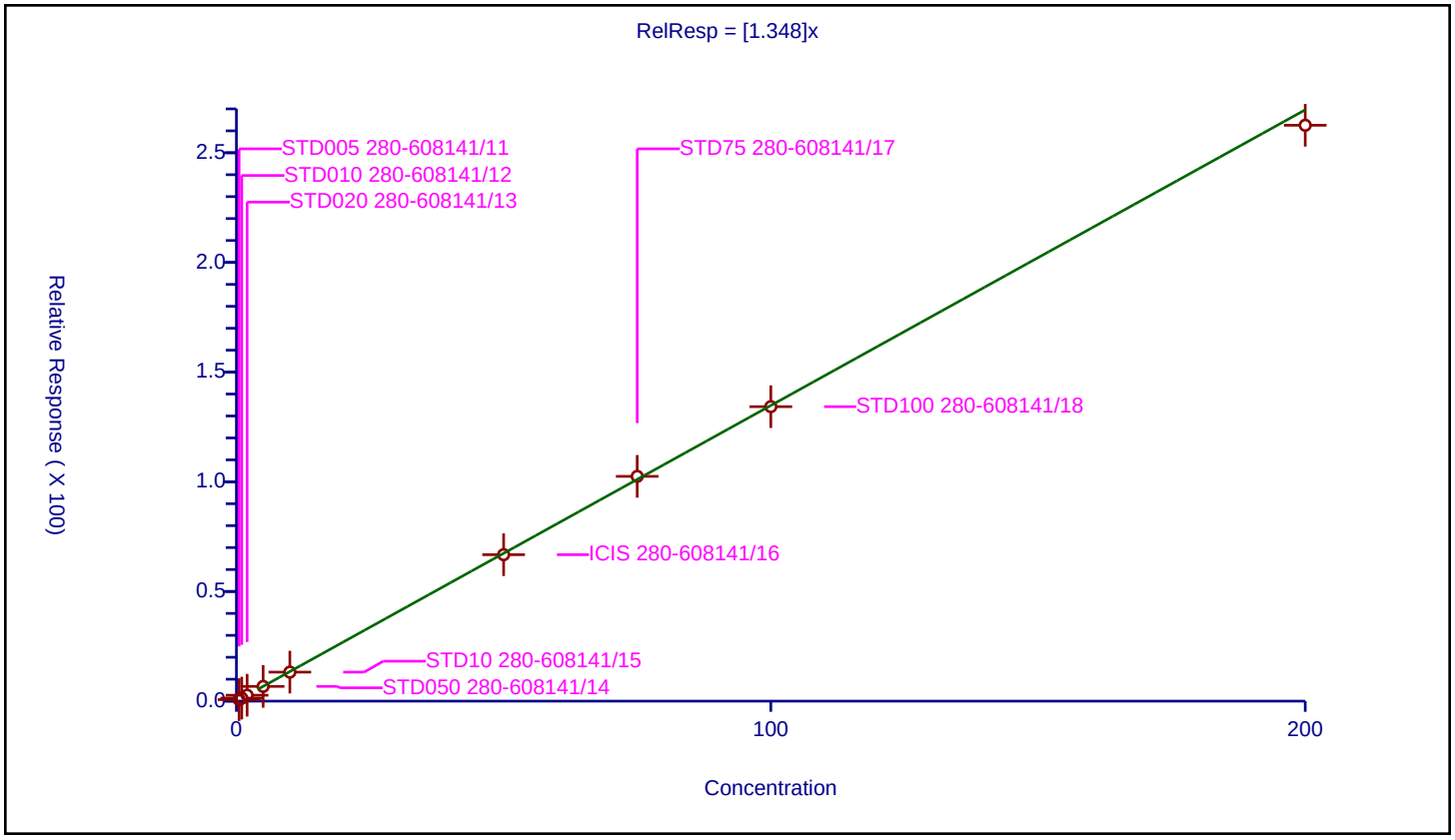
Curve Coefficients

Intercept:	0
Slope:	1.348

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	1.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.691061	50.0	484400.0	1.382122	Y
2	STD010 280-608141/12	1.0	1.372003	50.0	495079.0	1.372003	Y
3	STD020 280-608141/13	2.0	2.705027	50.0	482047.0	1.352513	Y
4	STD050 280-608141/14	5.0	6.722251	50.0	484912.0	1.34445	Y
5	STD10 280-608141/15	10.0	13.226235	50.0	483573.0	1.322623	Y
6	ICIS 280-608141/16	50.0	66.763806	50.0	504429.0	1.335276	Y
7	STD75 280-608141/17	75.0	102.479719	50.0	494673.0	1.366396	Y
8	STD100 280-608141/18	100.0	134.246082	50.0	510619.0	1.342461	Y
9	STD200 280-608141/19	200.0	262.537874	50.0	510581.0	1.312689	Y



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Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

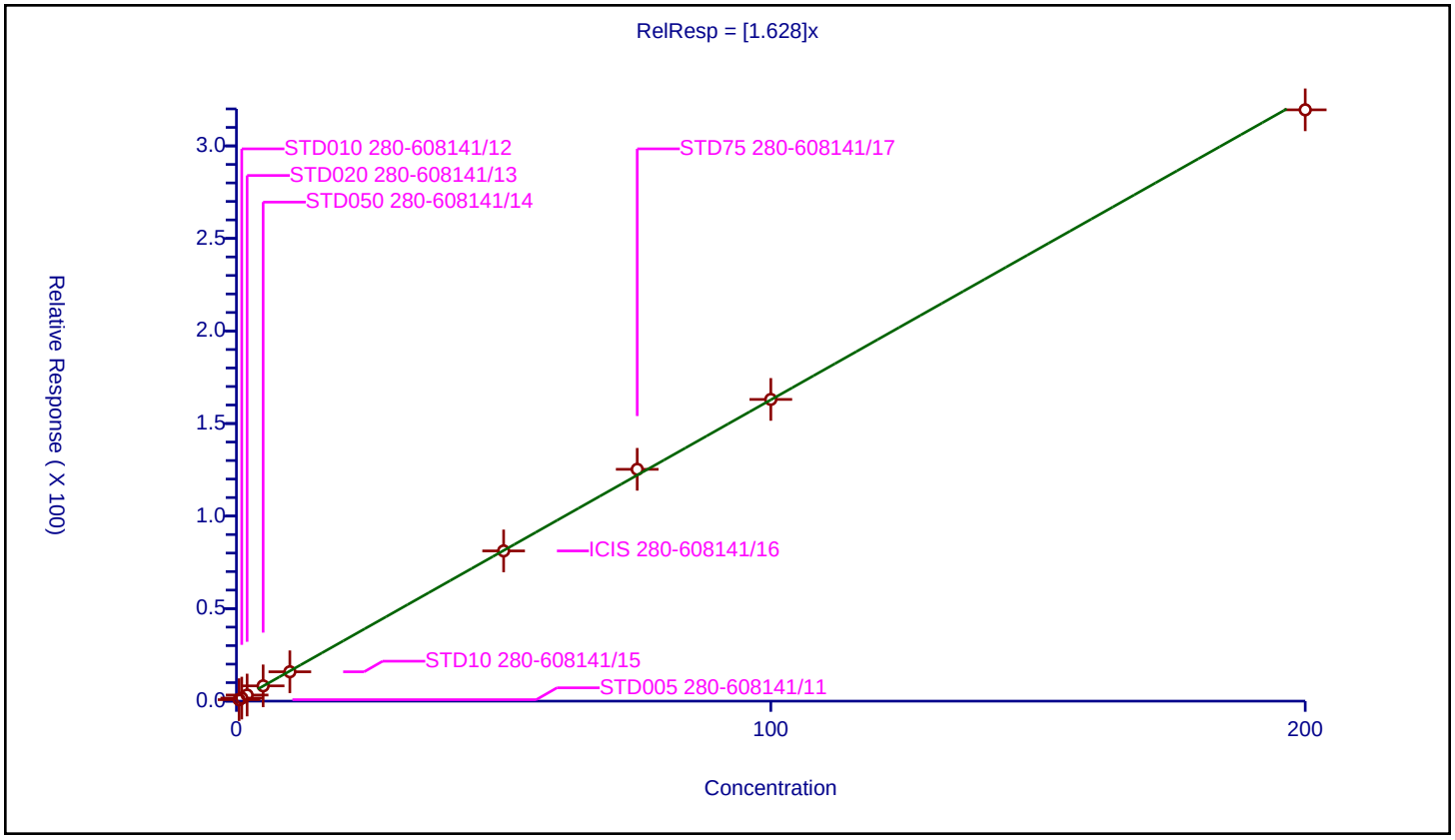
Curve Coefficients

Intercept:	0
Slope:	1.628

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	1.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.799236	50.0	484400.0	1.598472	Y
2	STD010 280-608141/12	1.0	1.643879	50.0	495079.0	1.643879	Y
3	STD020 280-608141/13	2.0	3.302064	50.0	482047.0	1.651032	Y
4	STD050 280-608141/14	5.0	8.253869	50.0	484912.0	1.650774	Y
5	STD10 280-608141/15	10.0	15.871854	50.0	483573.0	1.587185	Y
6	ICIS 280-608141/16	50.0	81.176736	50.0	504429.0	1.623535	Y
7	STD75 280-608141/17	75.0	125.262042	50.0	494673.0	1.670161	Y
8	STD100 280-608141/18	100.0	163.023017	50.0	510619.0	1.63023	Y
9	STD200 280-608141/19	200.0	319.491423	50.0	510581.0	1.597457	Y



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Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

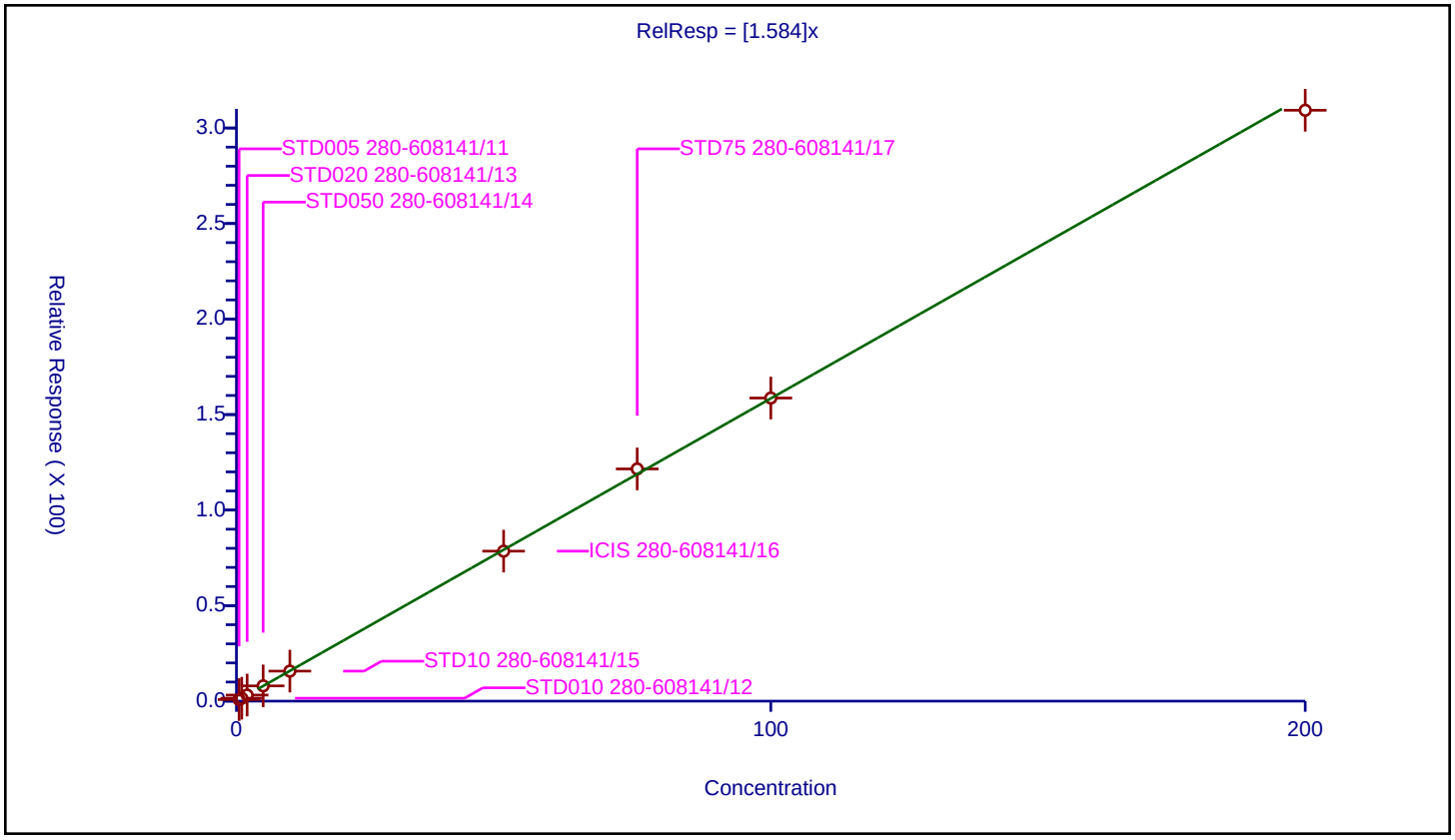
Curve Coefficients

Intercept:	0
Slope:	1.584

Error Coefficients

Standard Error:	1360000
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.824732	50.0	484400.0	1.649463	Y
2	STD010 280-608141/12	1.0	1.528544	50.0	495079.0	1.528544	Y
3	STD020 280-608141/13	2.0	3.17998	50.0	482047.0	1.58999	Y
4	STD050 280-608141/14	5.0	7.987222	50.0	484912.0	1.597444	Y
5	STD10 280-608141/15	10.0	15.713036	50.0	483573.0	1.571304	Y
6	ICIS 280-608141/16	50.0	78.504904	50.0	504429.0	1.570098	Y
7	STD75 280-608141/17	75.0	121.545546	50.0	494673.0	1.620607	Y
8	STD100 280-608141/18	100.0	158.65665	50.0	510619.0	1.586567	Y
9	STD200 280-608141/19	200.0	309.286871	50.0	510581.0	1.546434	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

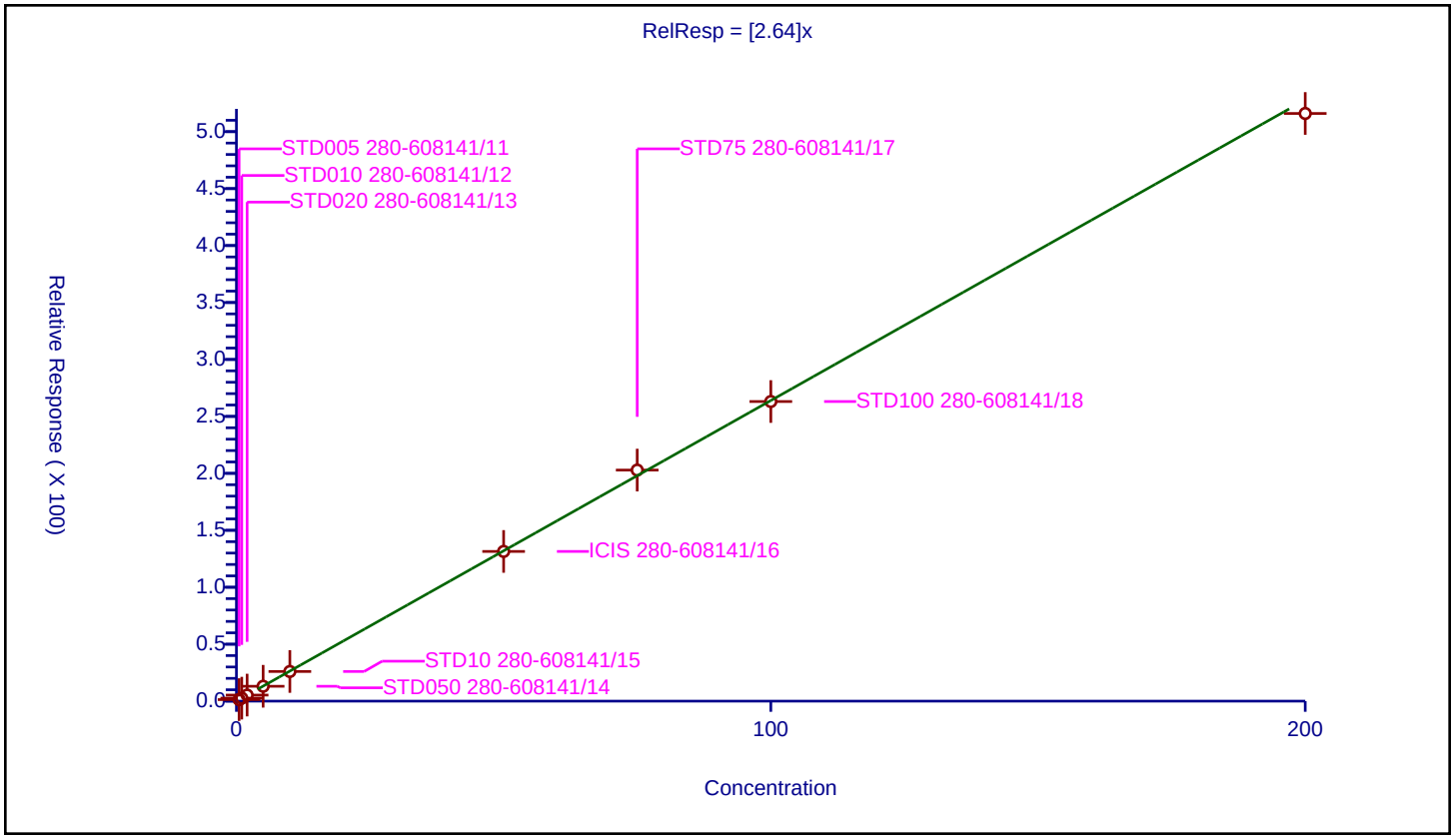
Curve Coefficients

Intercept:	0
Slope:	2.64

Error Coefficients

Standard Error:	2260000
Relative Standard Error:	1.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	1.348059	50.0	484400.0	2.696119	Y
2	STD010 280-608141/12	1.0	2.640387	50.0	495079.0	2.640387	Y
3	STD020 280-608141/13	2.0	5.317428	50.0	482047.0	2.658714	Y
4	STD050 280-608141/14	5.0	13.066288	50.0	484912.0	2.613258	Y
5	STD10 280-608141/15	10.0	26.034125	50.0	483573.0	2.603413	Y
6	ICIS 280-608141/16	50.0	131.424938	50.0	504429.0	2.628499	Y
7	STD75 280-608141/17	75.0	202.869876	50.0	494673.0	2.704932	Y
8	STD100 280-608141/18	100.0	263.060031	50.0	510619.0	2.6306	Y
9	STD200 280-608141/19	200.0	515.967888	50.0	510581.0	2.579839	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

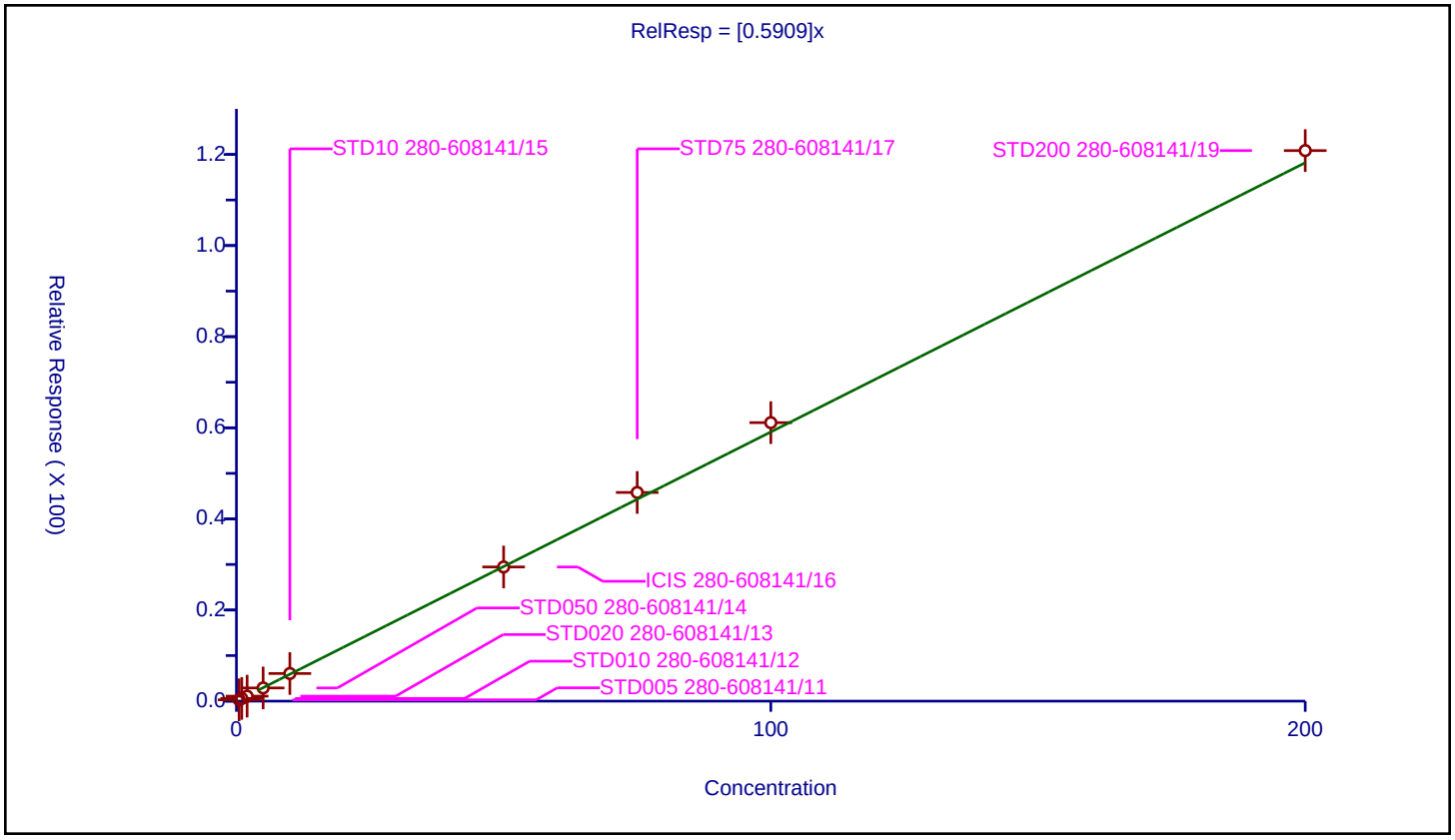
Curve Coefficients

Intercept:	0
Slope:	0.5909

Error Coefficients

Standard Error:	526000
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.28943	50.0	484400.0	0.57886	Y
2	STD010 280-608141/12	1.0	0.590512	50.0	495079.0	0.590512	Y
3	STD020 280-608141/13	2.0	1.096262	50.0	482047.0	0.548131	Y
4	STD050 280-608141/14	5.0	2.89403	50.0	484912.0	0.578806	Y
5	STD10 280-608141/15	10.0	6.064441	50.0	483573.0	0.606444	Y
6	ICIS 280-608141/16	50.0	29.448842	50.0	504429.0	0.588977	Y
7	STD75 280-608141/17	75.0	45.806826	50.0	494673.0	0.610758	Y
8	STD100 280-608141/18	100.0	61.13286	50.0	510619.0	0.611329	Y
9	STD200 280-608141/19	200.0	120.843412	50.0	510581.0	0.604217	Y



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Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

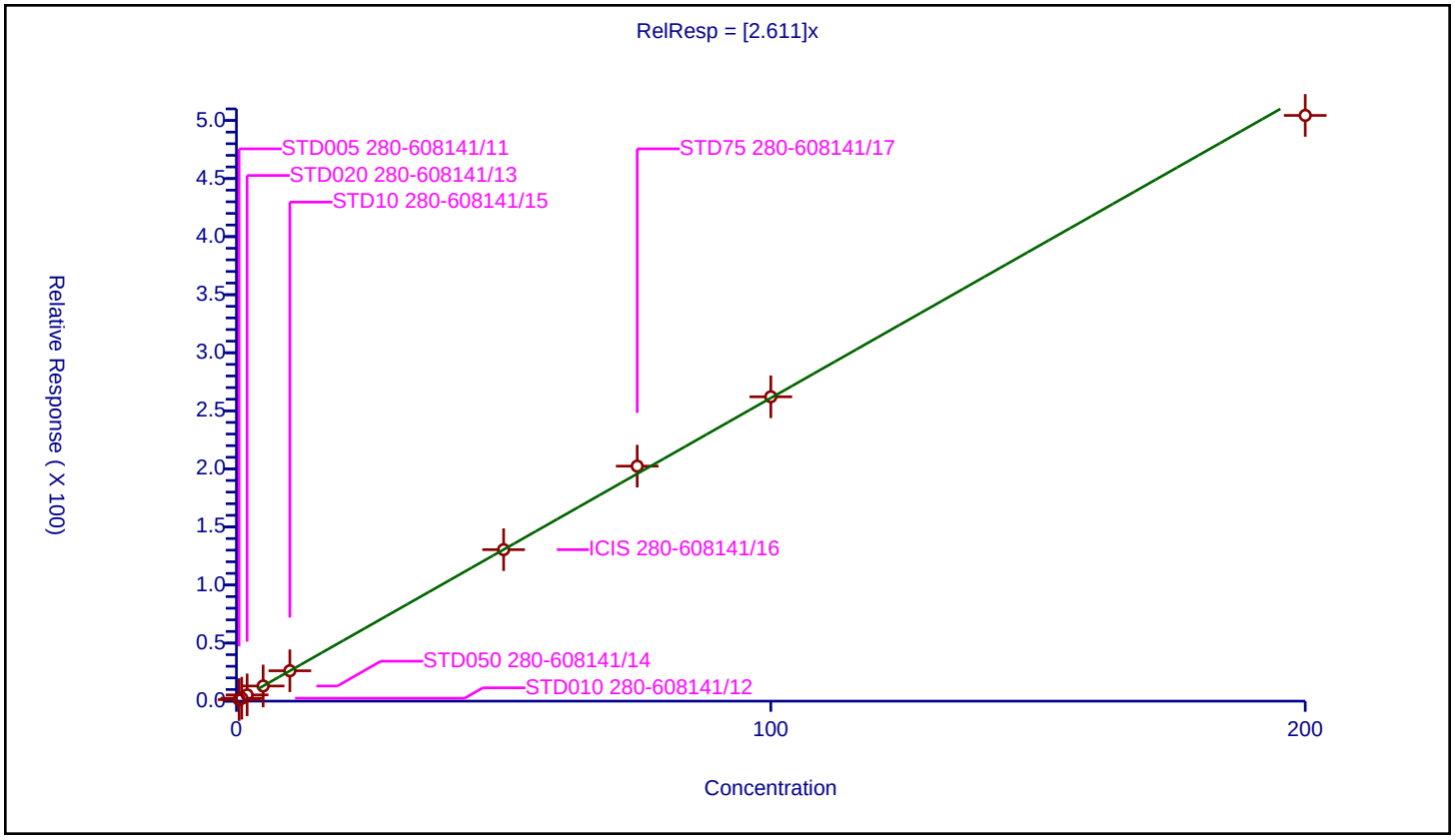
Curve Coefficients

Intercept:	0
Slope:	2.611

Error Coefficients

Standard Error:	3260000
Relative Standard Error:	2.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	1.306459	50.0	715522.0	2.612918	Y
2	STD010 280-608141/12	1.0	2.522331	50.0	729147.0	2.522331	Y
3	STD020 280-608141/13	2.0	5.375928	50.0	717132.0	2.687964	Y
4	STD050 280-608141/14	5.0	13.029909	50.0	722553.0	2.605982	Y
5	STD10 280-608141/15	10.0	26.16193	50.0	714716.0	2.616193	Y
6	ICIS 280-608141/16	50.0	130.448467	50.0	757112.0	2.608969	Y
7	STD75 280-608141/17	75.0	202.363316	50.0	738073.0	2.698178	Y
8	STD100 280-608141/18	100.0	262.094965	50.0	749411.0	2.62095	Y
9	STD200 280-608141/19	200.0	504.387626	50.0	747101.0	2.521938	Y



Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

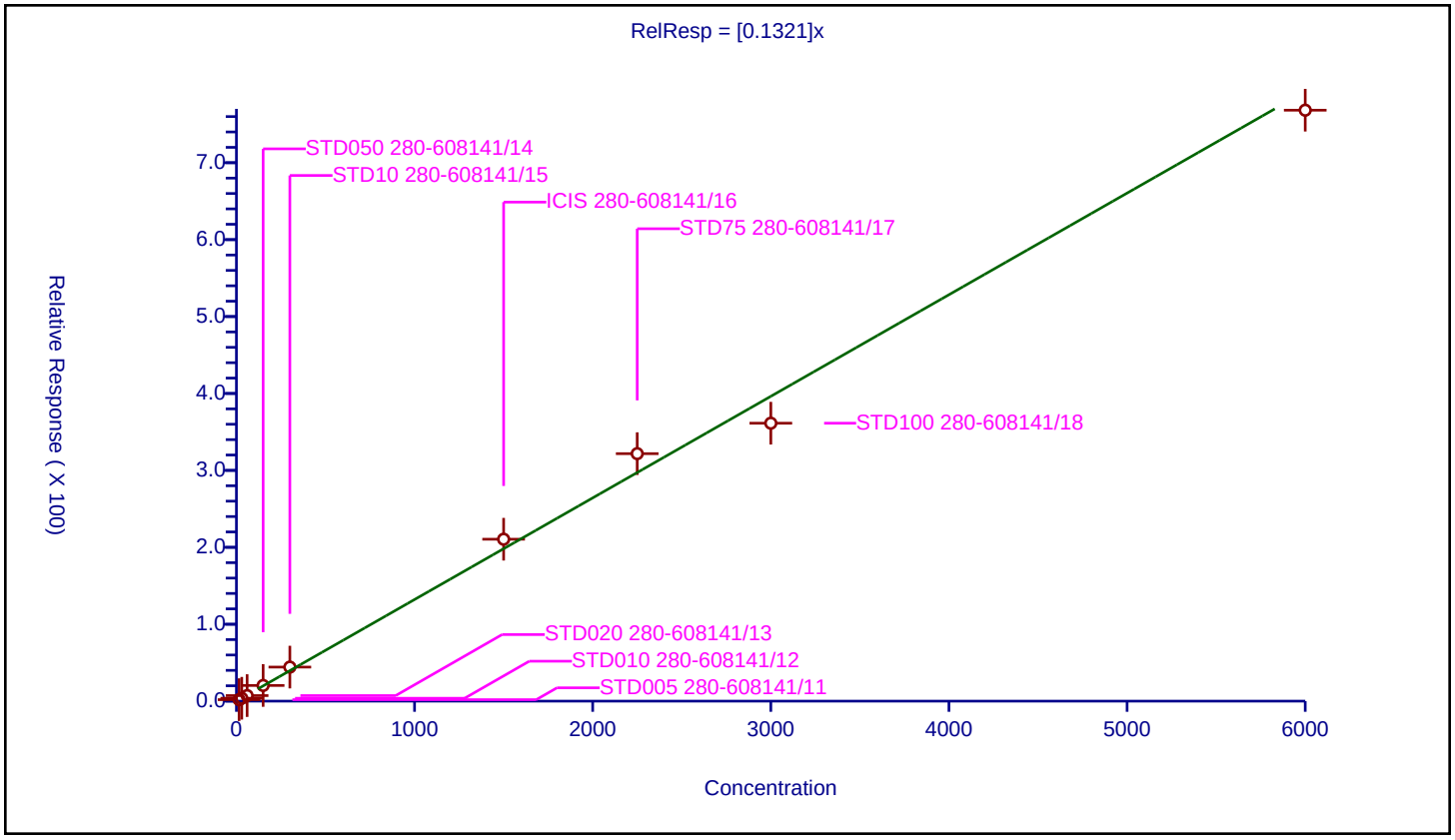
Curve Coefficients

Intercept:	0
Slope:	0.1321

Error Coefficients

Standard Error:	3350000
Relative Standard Error:	7.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	15.0	1.912779	50.0	484400.0	0.127519	Y
2	STD010 280-608141/12	30.0	3.770812	50.0	495079.0	0.125694	Y
3	STD020 280-608141/13	60.0	7.229793	50.0	482047.0	0.120497	Y
4	STD050 280-608141/14	150.0	20.368954	50.0	484912.0	0.135793	Y
5	STD10 280-608141/15	300.0	44.259502	50.0	483573.0	0.147532	Y
6	ICIS 280-608141/16	1500.0	210.531809	50.0	504429.0	0.140355	Y
7	STD75 280-608141/17	2250.0	321.779034	50.0	494673.0	0.143013	Y
8	STD100 280-608141/18	3000.0	361.365911	50.0	510619.0	0.120455	Y
9	STD200 280-608141/19	6000.0	768.292298	50.0	510581.0	0.128049	Y



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Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

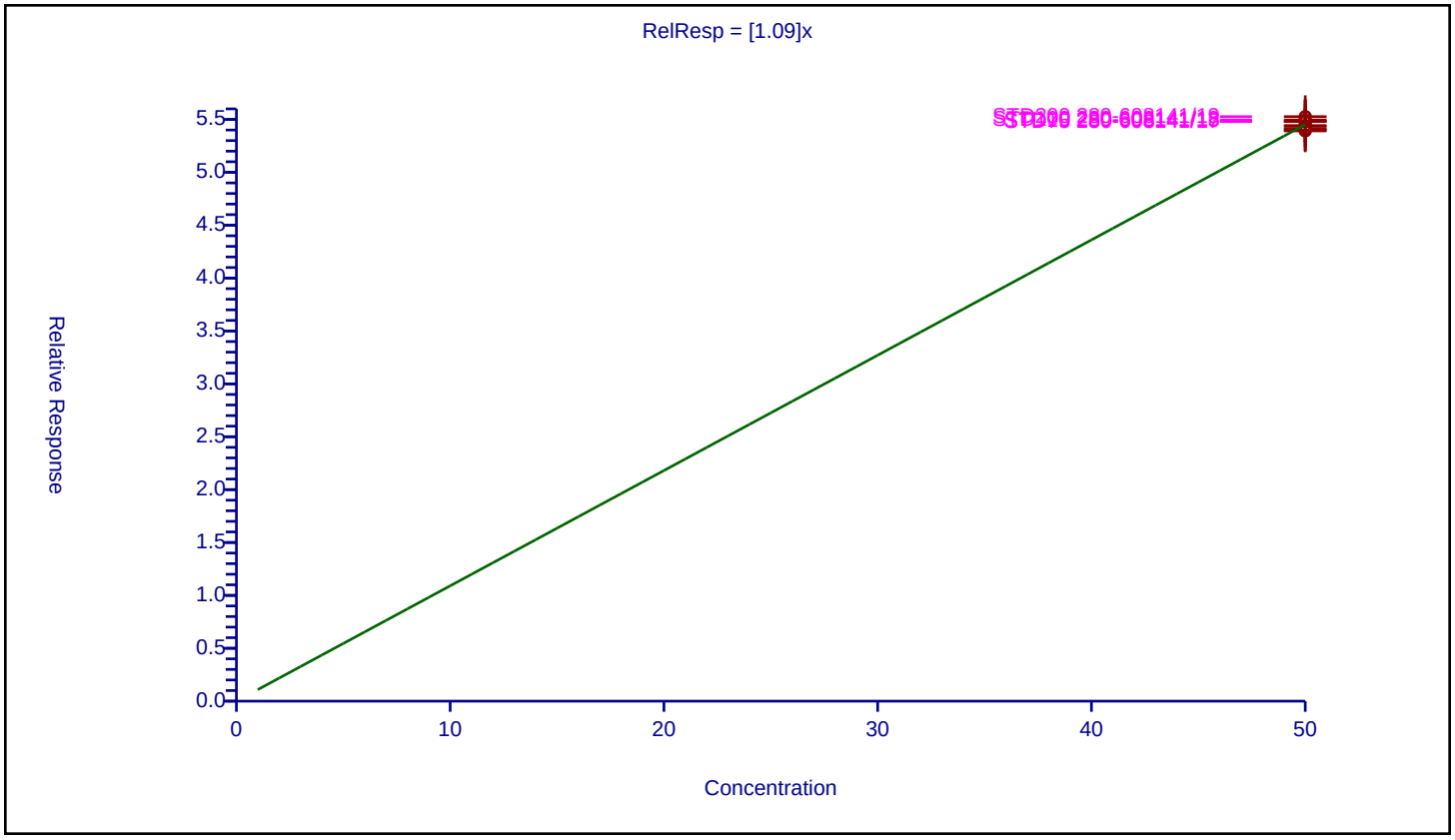
Curve Coefficients

Intercept:	0
Slope:	1.09

Error Coefficients

Standard Error:	847000
Relative Standard Error:	0.9
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	50.0	54.018884	50.0	715522.0	1.080378	Y
2	STD010 280-608141/12	50.0	54.426748	50.0	729147.0	1.088535	Y
3	STD020 280-608141/13	50.0	53.918944	50.0	717132.0	1.078379	Y
4	STD050 280-608141/14	50.0	54.346325	50.0	722553.0	1.086926	Y
5	STD10 280-608141/15	50.0	54.818837	50.0	714716.0	1.096377	Y
6	ICIS 280-608141/16	50.0	54.078723	50.0	757112.0	1.081574	Y
7	STD75 280-608141/17	50.0	54.803048	50.0	738073.0	1.096061	Y
8	STD100 280-608141/18	50.0	54.94435	50.0	749411.0	1.098887	Y
9	STD200 280-608141/19	50.0	55.268029	50.0	747101.0	1.105361	Y



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Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

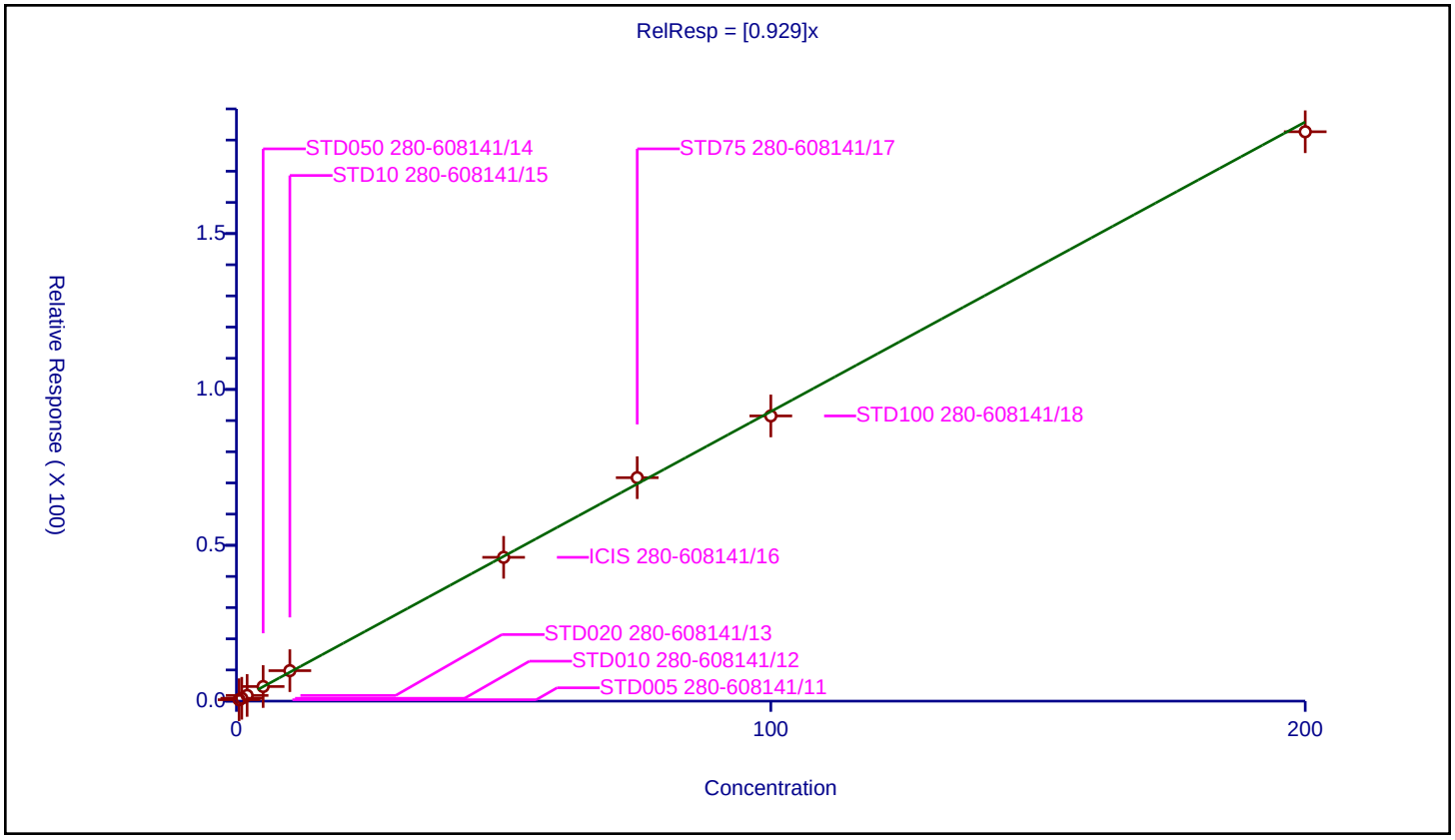
Curve Coefficients

Intercept:	0
Slope:	0.929

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.454074	50.0	715522.0	0.908148	Y
2	STD010 280-608141/12	1.0	0.916345	50.0	729147.0	0.916345	Y
3	STD020 280-608141/13	2.0	1.828952	50.0	717132.0	0.914476	Y
4	STD050 280-608141/14	5.0	4.686092	50.0	722553.0	0.937218	Y
5	STD10 280-608141/15	10.0	9.780738	50.0	714716.0	0.978074	Y
6	ICIS 280-608141/16	50.0	46.137031	50.0	757112.0	0.922741	Y
7	STD75 280-608141/17	75.0	71.692095	50.0	738073.0	0.955895	Y
8	STD100 280-608141/18	100.0	91.500258	50.0	749411.0	0.915003	Y
9	STD200 280-608141/19	200.0	182.672825	50.0	747101.0	0.913364	Y



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Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

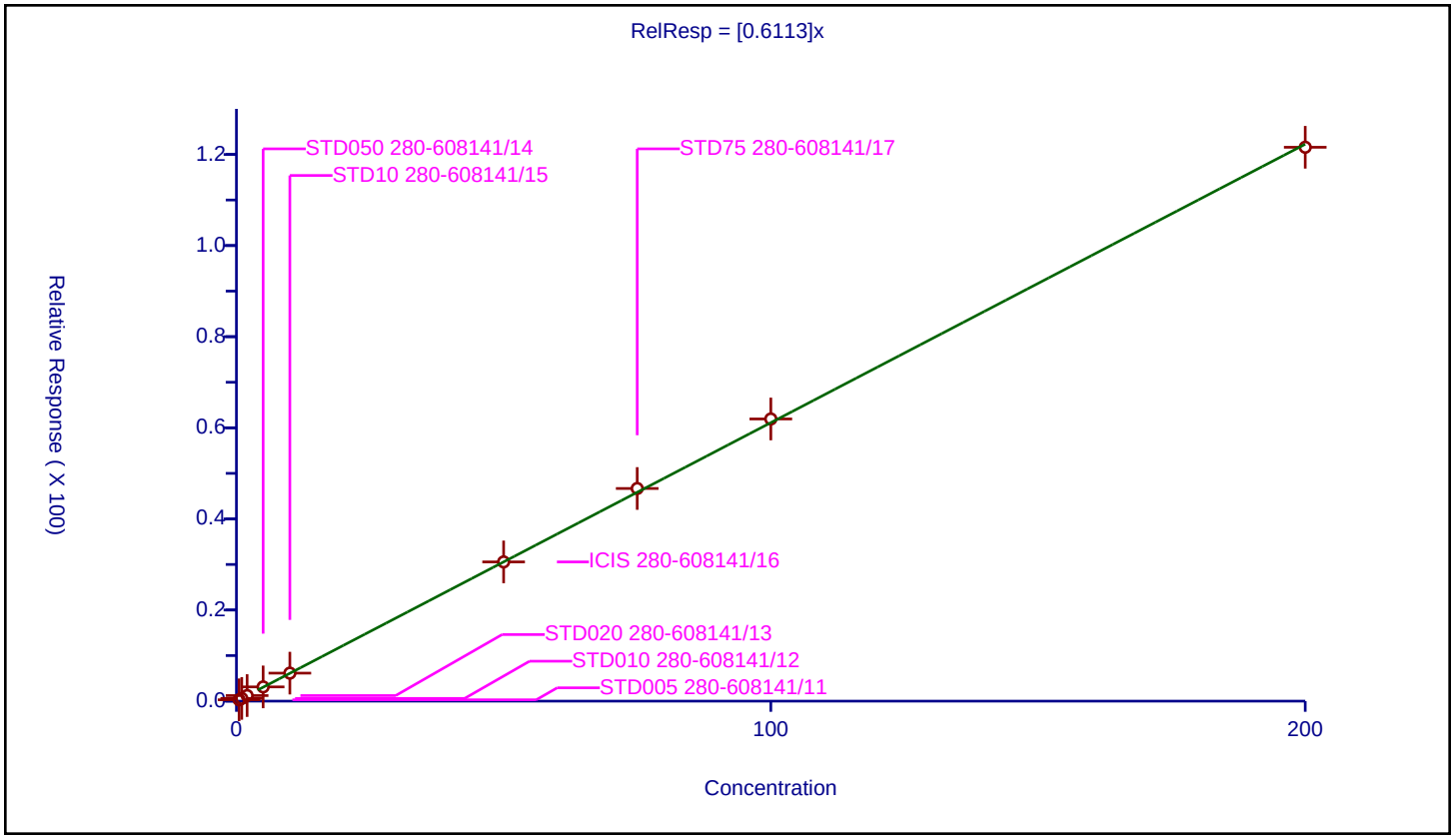
Curve Coefficients

Intercept:	0
Slope:	0.6113

Error Coefficients

Standard Error:	779000
Relative Standard Error:	1.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.293981	50.0	715522.0	0.587962	Y
2	STD010 280-608141/12	1.0	0.601456	50.0	729147.0	0.601456	Y
3	STD020 280-608141/13	2.0	1.222509	50.0	717132.0	0.611254	Y
4	STD050 280-608141/14	5.0	3.126691	50.0	722553.0	0.625338	Y
5	STD10 280-608141/15	10.0	6.144539	50.0	714716.0	0.614454	Y
6	ICIS 280-608141/16	50.0	30.560934	50.0	757112.0	0.611219	Y
7	STD75 280-608141/17	75.0	46.677564	50.0	738073.0	0.622368	Y
8	STD100 280-608141/18	100.0	61.935507	50.0	749411.0	0.619355	Y
9	STD200 280-608141/19	200.0	121.5764	50.0	747101.0	0.607882	Y



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Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

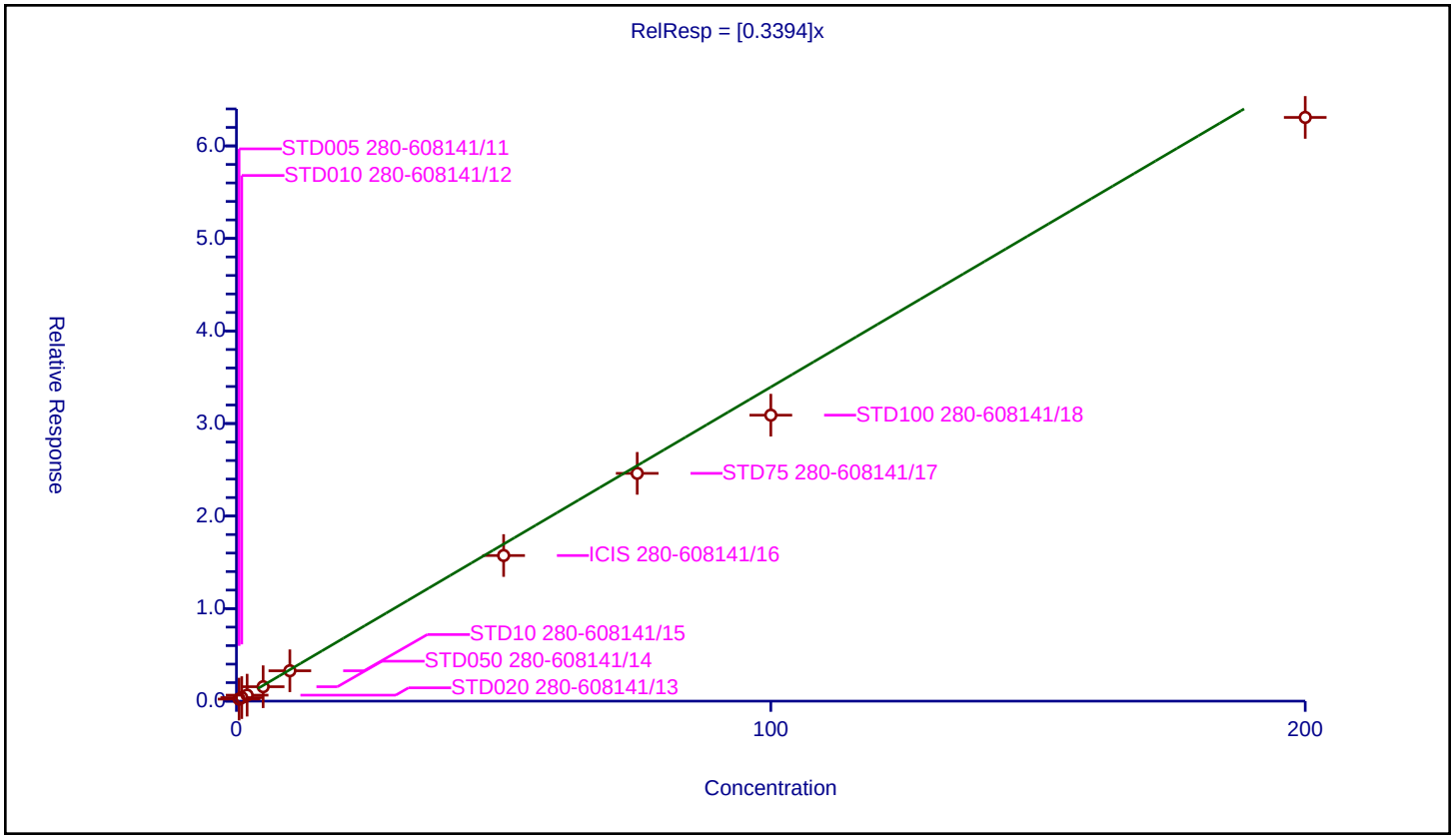
Curve Coefficients

Intercept:	0
Slope:	0.3394

Error Coefficients

Standard Error:	402000
Relative Standard Error:	13.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.220748	50.0	715522.0	0.441496	Y
2	STD010 280-608141/12	1.0	0.382433	50.0	729147.0	0.382433	Y
3	STD020 280-608141/13	2.0	0.646325	50.0	717132.0	0.323162	Y
4	STD050 280-608141/14	5.0	1.559609	50.0	722553.0	0.311922	Y
5	STD10 280-608141/15	10.0	3.282912	50.0	714716.0	0.328291	Y
6	ICIS 280-608141/16	50.0	15.737302	50.0	757112.0	0.314746	Y
7	STD75 280-608141/17	75.0	24.615655	50.0	738073.0	0.328209	Y
8	STD100 280-608141/18	100.0	30.904937	50.0	749411.0	0.309049	Y
9	STD200 280-608141/19	200.0	63.08036	50.0	747101.0	0.315402	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

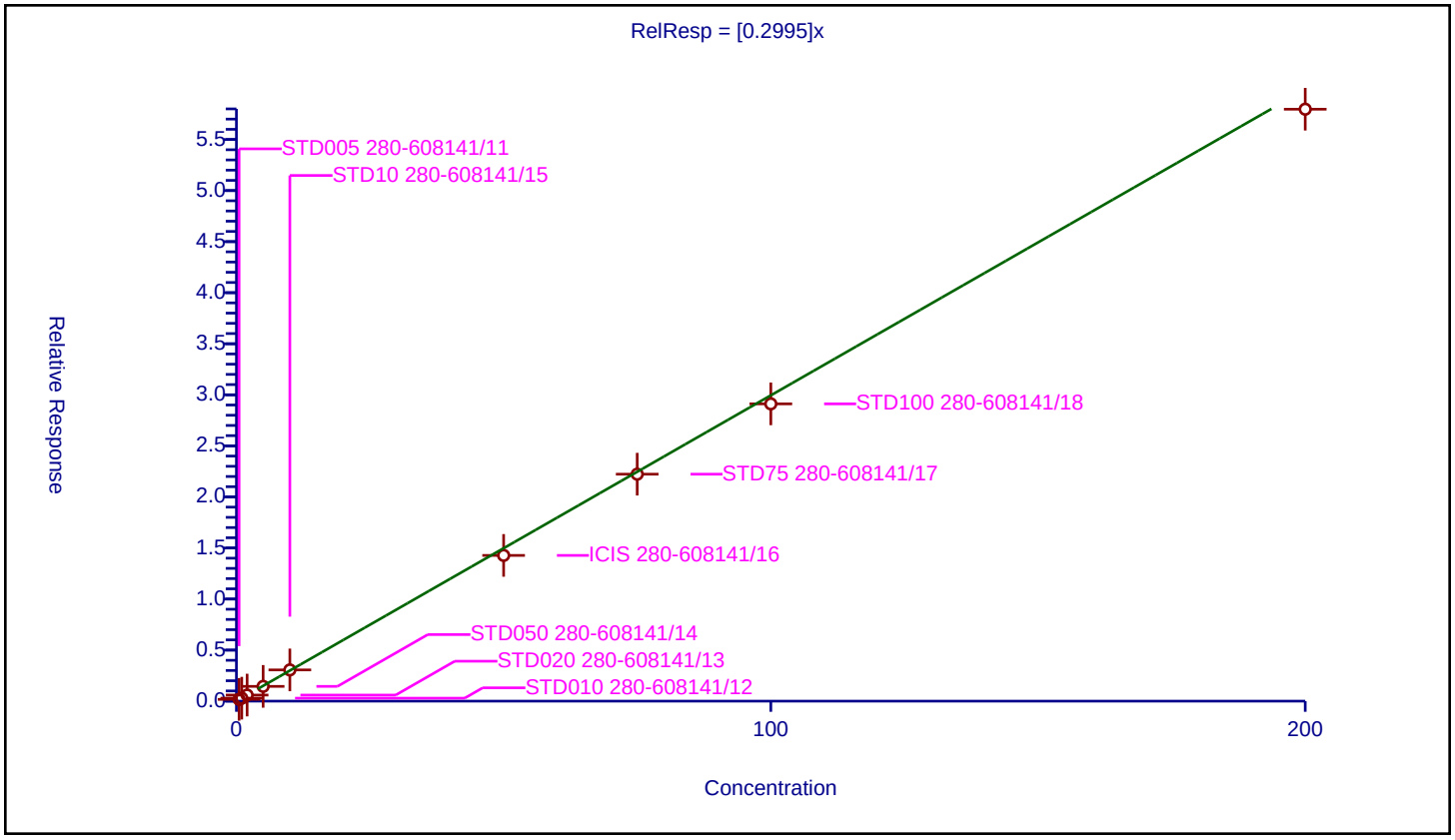
Curve Coefficients

Intercept:	0
Slope:	0.2995

Error Coefficients

Standard Error:	370000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.174348	50.0	715522.0	0.348696	Y
2	STD010 280-608141/12	1.0	0.290339	50.0	729147.0	0.290339	Y
3	STD020 280-608141/13	2.0	0.596613	50.0	717132.0	0.298306	Y
4	STD050 280-608141/14	5.0	1.445984	50.0	722553.0	0.289197	Y
5	STD10 280-608141/15	10.0	3.058767	50.0	714716.0	0.305877	Y
6	ICIS 280-608141/16	50.0	14.272525	50.0	757112.0	0.285451	Y
7	STD75 280-608141/17	75.0	22.226121	50.0	738073.0	0.296348	Y
8	STD100 280-608141/18	100.0	29.113197	50.0	749411.0	0.291132	Y
9	STD200 280-608141/19	200.0	57.967731	50.0	747101.0	0.289839	Y



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Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

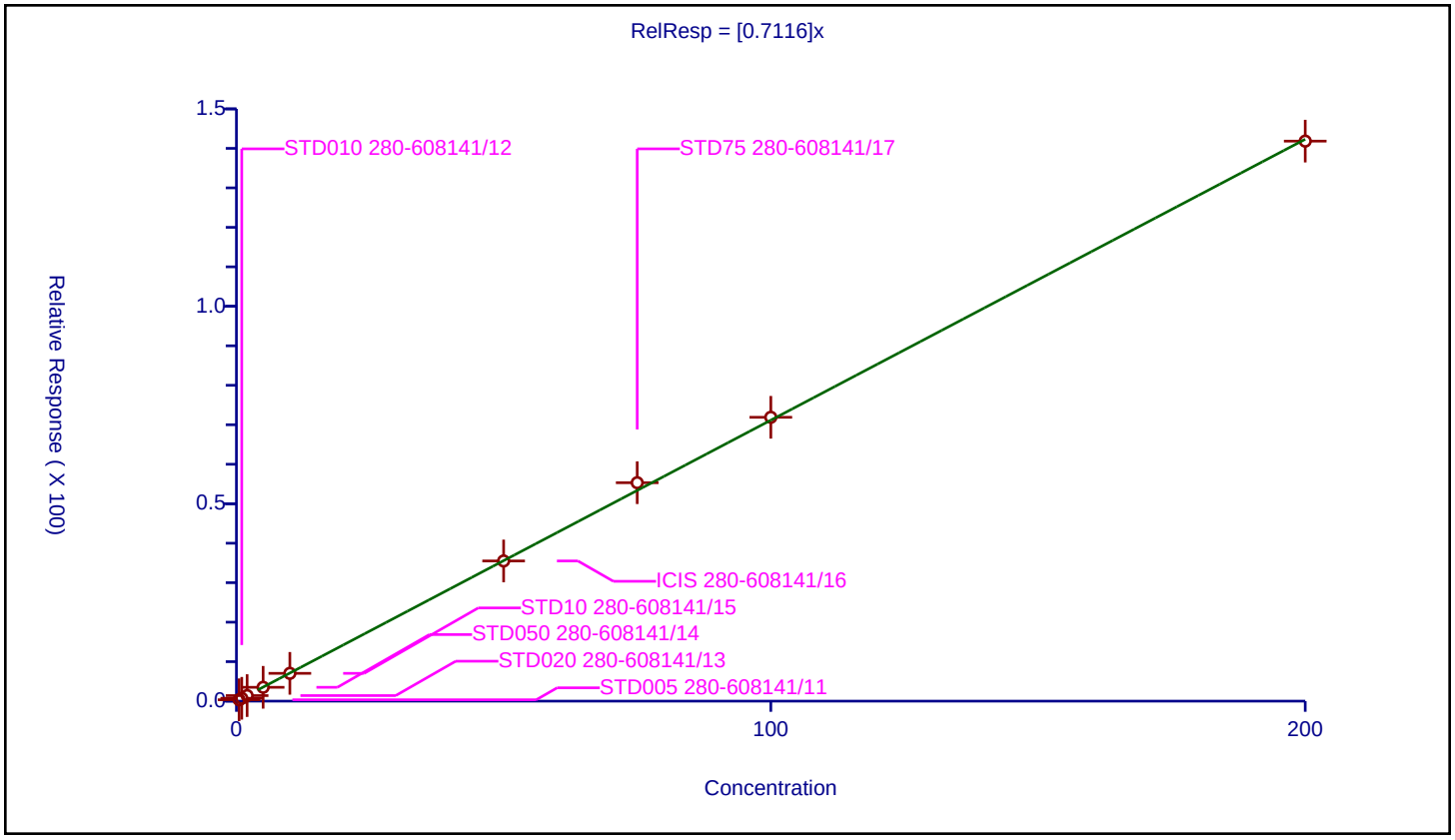
Curve Coefficients

Intercept:	0
Slope:	0.7116

Error Coefficients

Standard Error:	910000
Relative Standard Error:	1.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.348766	50.0	715522.0	0.697533	Y
2	STD010 280-608141/12	1.0	0.724065	50.0	729147.0	0.724065	Y
3	STD020 280-608141/13	2.0	1.403089	50.0	717132.0	0.701544	Y
4	STD050 280-608141/14	5.0	3.504518	50.0	722553.0	0.700904	Y
5	STD10 280-608141/15	10.0	7.040489	50.0	714716.0	0.704049	Y
6	ICIS 280-608141/16	50.0	35.505843	50.0	757112.0	0.710117	Y
7	STD75 280-608141/17	75.0	55.323864	50.0	738073.0	0.737652	Y
8	STD100 280-608141/18	100.0	71.892393	50.0	749411.0	0.718924	Y
9	STD200 280-608141/19	200.0	141.837516	50.0	747101.0	0.709188	Y



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Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

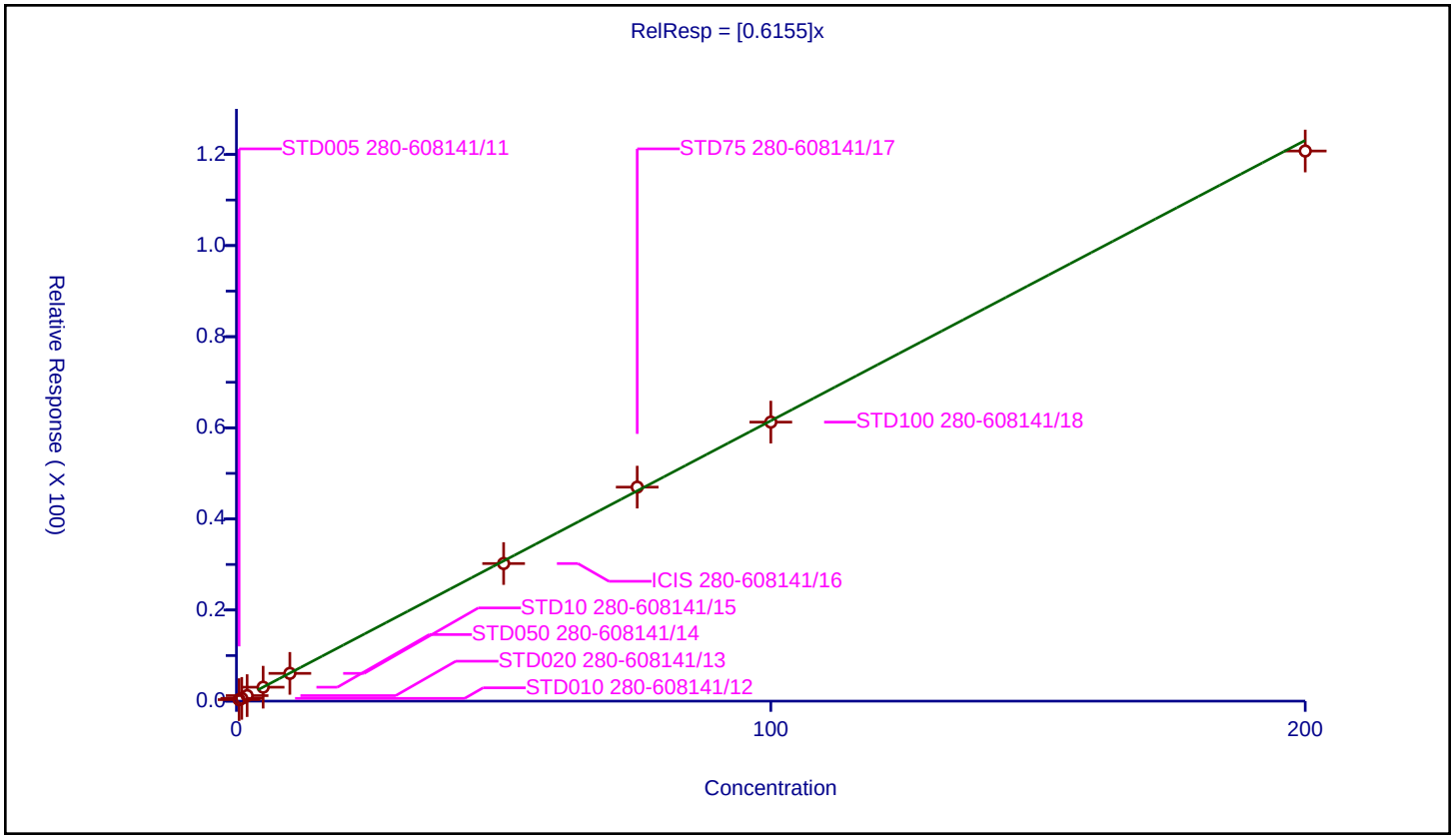
Curve Coefficients

Intercept:	0
Slope:	0.6155

Error Coefficients

Standard Error:	774000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.329899	50.0	715522.0	0.659798	Y
2	STD010 280-608141/12	1.0	0.605845	50.0	729147.0	0.605845	Y
3	STD020 280-608141/13	2.0	1.210795	50.0	717132.0	0.605398	Y
4	STD050 280-608141/14	5.0	3.058599	50.0	722553.0	0.61172	Y
5	STD10 280-608141/15	10.0	6.097177	50.0	714716.0	0.609718	Y
6	ICIS 280-608141/16	50.0	30.206891	50.0	757112.0	0.604138	Y
7	STD75 280-608141/17	75.0	46.979432	50.0	738073.0	0.626392	Y
8	STD100 280-608141/18	100.0	61.246899	50.0	749411.0	0.612469	Y
9	STD200 280-608141/19	200.0	120.759576	50.0	747101.0	0.603798	Y



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Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

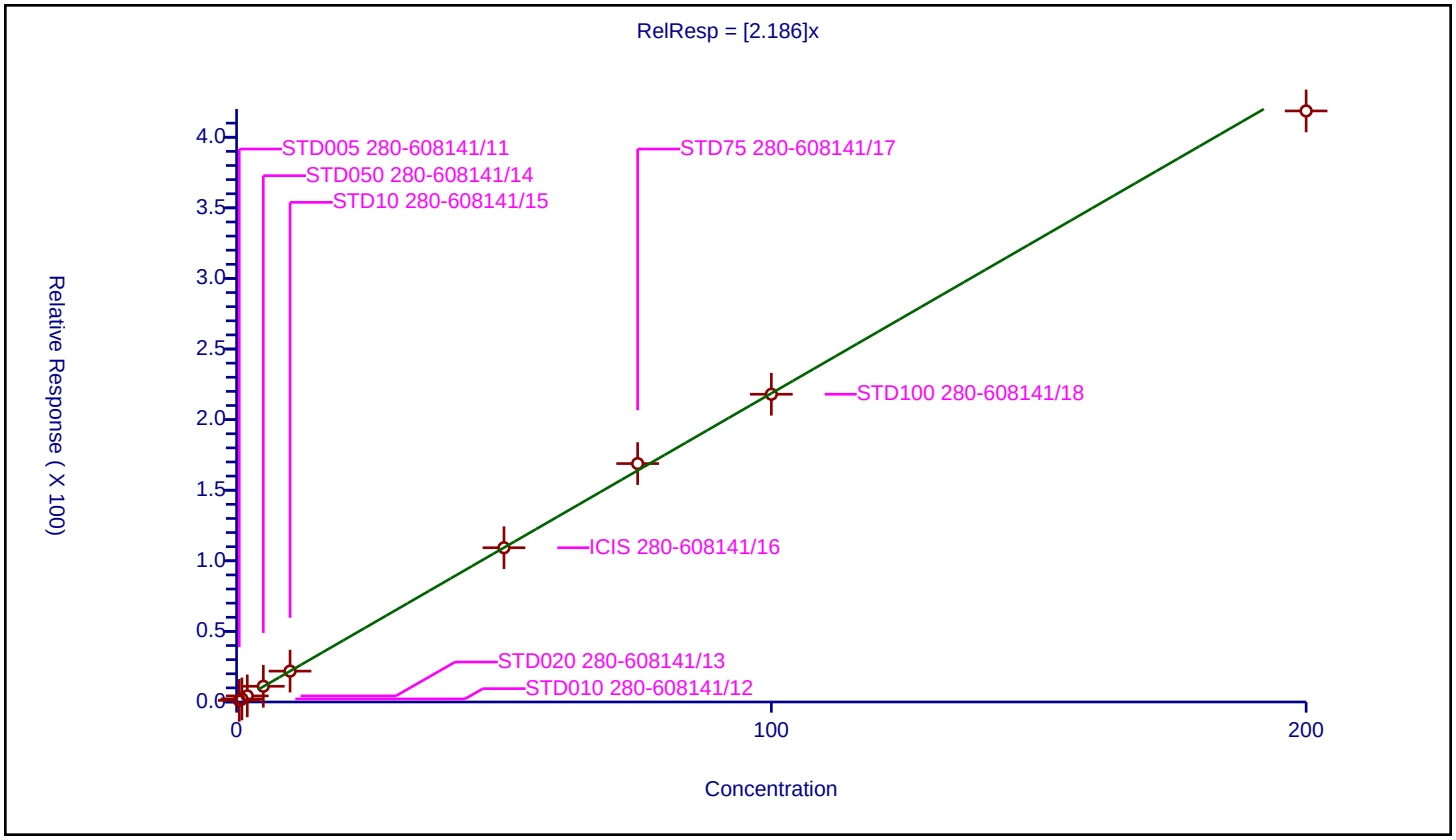
Curve Coefficients

Intercept:	0
Slope:	2.186

Error Coefficients

Standard Error:	2710000
Relative Standard Error:	2.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	1.121629	50.0	715522.0	2.243257	Y
2	STD010 280-608141/12	1.0	2.153407	50.0	729147.0	2.153407	Y
3	STD020 280-608141/13	2.0	4.309597	50.0	717132.0	2.154799	Y
4	STD050 280-608141/14	5.0	11.139114	50.0	722553.0	2.227823	Y
5	STD10 280-608141/15	10.0	21.870505	50.0	714716.0	2.187051	Y
6	ICIS 280-608141/16	50.0	109.256226	50.0	757112.0	2.185125	Y
7	STD75 280-608141/17	75.0	168.857823	50.0	738073.0	2.251438	Y
8	STD100 280-608141/18	100.0	217.978119	50.0	749411.0	2.179781	Y
9	STD200 280-608141/19	200.0	418.631952	50.0	747101.0	2.09316	Y



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Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

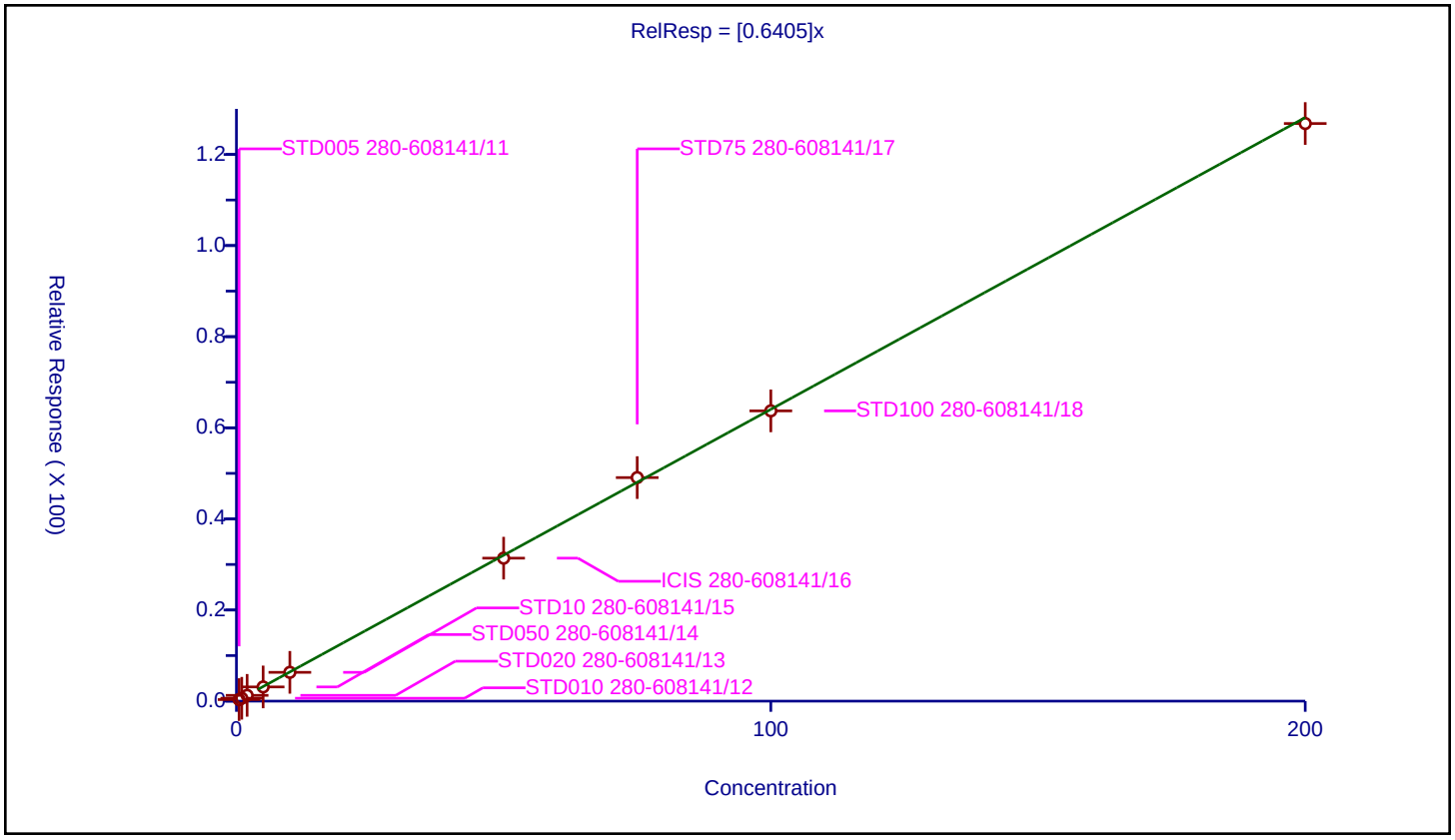
Curve Coefficients

Intercept:	0
Slope:	0.6405

Error Coefficients

Standard Error:	811000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.341988	50.0	715522.0	0.683976	Y
2	STD010 280-608141/12	1.0	0.636909	50.0	729147.0	0.636909	Y
3	STD020 280-608141/13	2.0	1.270547	50.0	717132.0	0.635274	Y
4	STD050 280-608141/14	5.0	3.116242	50.0	722553.0	0.623248	Y
5	STD10 280-608141/15	10.0	6.320343	50.0	714716.0	0.632034	Y
6	ICIS 280-608141/16	50.0	31.385317	50.0	757112.0	0.627706	Y
7	STD75 280-608141/17	75.0	49.069062	50.0	738073.0	0.654254	Y
8	STD100 280-608141/18	100.0	63.715771	50.0	749411.0	0.637158	Y
9	STD200 280-608141/19	200.0	126.789684	50.0	747101.0	0.633948	Y



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Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

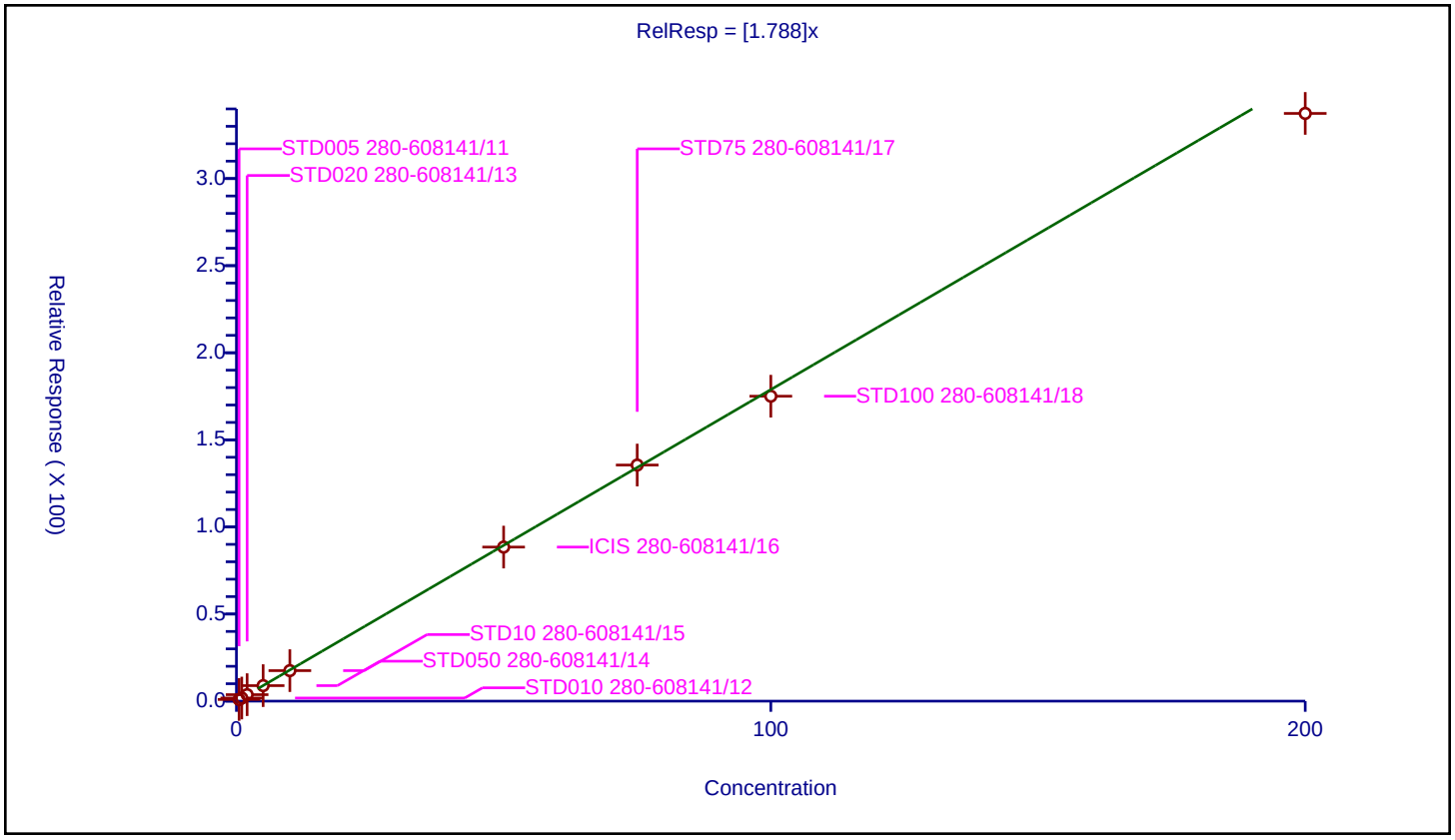
Curve Coefficients

Intercept:	0
Slope:	1.788

Error Coefficients

Standard Error:	2180000
Relative Standard Error:	3.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.952801	50.0	715522.0	1.905602	Y
2	STD010 280-608141/12	1.0	1.780368	50.0	729147.0	1.780368	Y
3	STD020 280-608141/13	2.0	3.727626	50.0	717132.0	1.863813	Y
4	STD050 280-608141/14	5.0	8.906475	50.0	722553.0	1.781295	Y
5	STD10 280-608141/15	10.0	17.509892	50.0	714716.0	1.750989	Y
6	ICIS 280-608141/16	50.0	88.443123	50.0	757112.0	1.768862	Y
7	STD75 280-608141/17	75.0	135.5328	50.0	738073.0	1.807104	Y
8	STD100 280-608141/18	100.0	175.066285	50.0	749411.0	1.750663	Y
9	STD200 280-608141/19	200.0	337.407124	50.0	747101.0	1.687036	Y



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Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

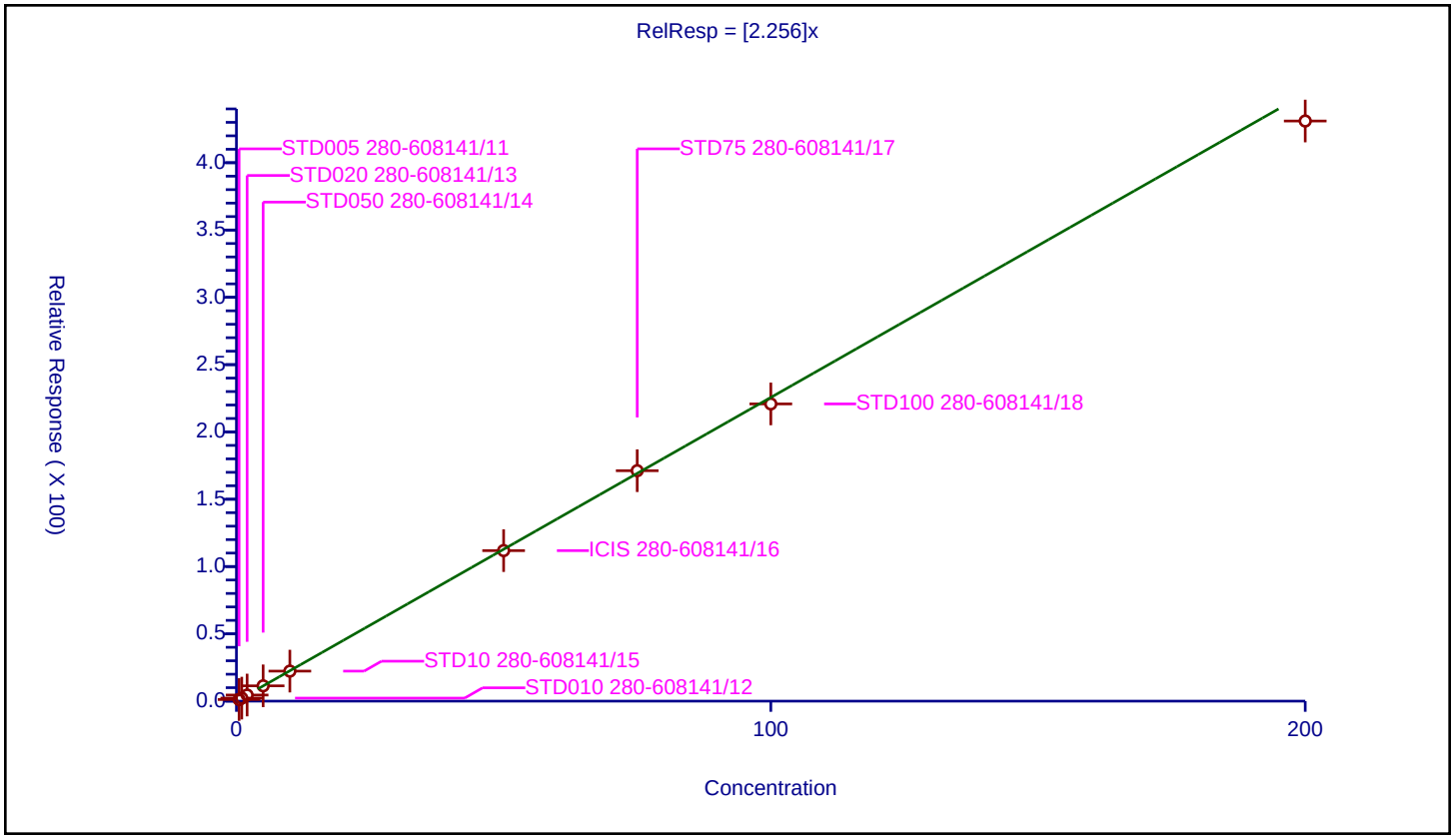
Curve Coefficients

Intercept:	0
Slope:	2.256

Error Coefficients

Standard Error:	2780000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	1.200033	50.0	715522.0	2.400066	Y
2	STD010 280-608141/12	1.0	2.245021	50.0	729147.0	2.245021	Y
3	STD020 280-608141/13	2.0	4.550557	50.0	717132.0	2.275278	Y
4	STD050 280-608141/14	5.0	11.366156	50.0	722553.0	2.273231	Y
5	STD10 280-608141/15	10.0	22.303614	50.0	714716.0	2.230361	Y
6	ICIS 280-608141/16	50.0	111.834709	50.0	757112.0	2.236694	Y
7	STD75 280-608141/17	75.0	171.206845	50.0	738073.0	2.282758	Y
8	STD100 280-608141/18	100.0	220.815547	50.0	749411.0	2.208155	Y
9	STD200 280-608141/19	200.0	430.987176	50.0	747101.0	2.154936	Y



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Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

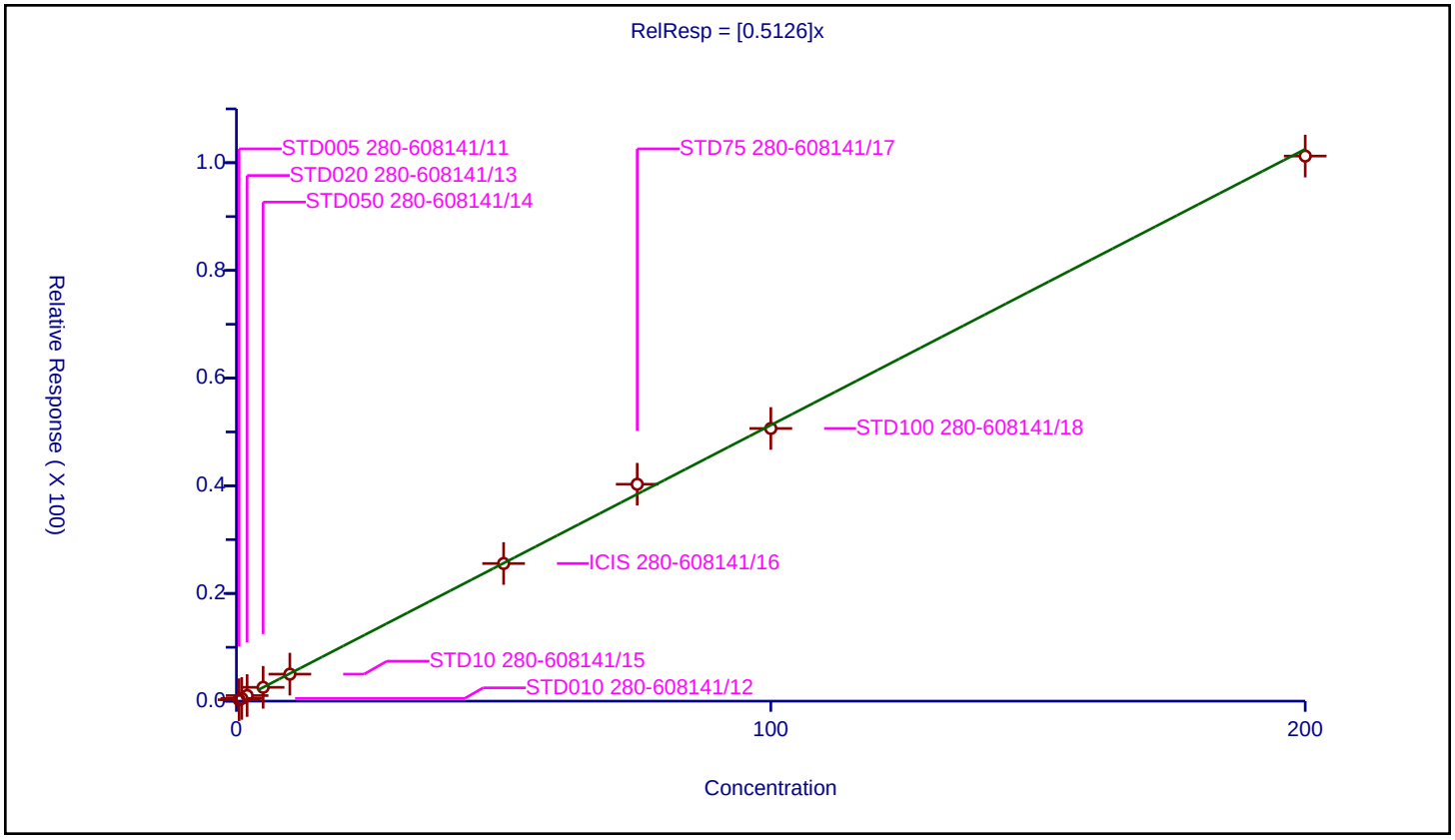
Curve Coefficients

Intercept:	0
Slope:	0.5126

Error Coefficients

Standard Error:	649000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.258552	50.0	715522.0	0.517105	Y
2	STD010 280-608141/12	1.0	0.501751	50.0	729147.0	0.501751	Y
3	STD020 280-608141/13	2.0	1.038651	50.0	717132.0	0.519326	Y
4	STD050 280-608141/14	5.0	2.564795	50.0	722553.0	0.512959	Y
5	STD10 280-608141/15	10.0	5.01262	50.0	714716.0	0.501262	Y
6	ICIS 280-608141/16	50.0	25.562598	50.0	757112.0	0.511252	Y
7	STD75 280-608141/17	75.0	40.284633	50.0	738073.0	0.537128	Y
8	STD100 280-608141/18	100.0	50.641837	50.0	749411.0	0.506418	Y
9	STD200 280-608141/19	200.0	101.237718	50.0	747101.0	0.506189	Y



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Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

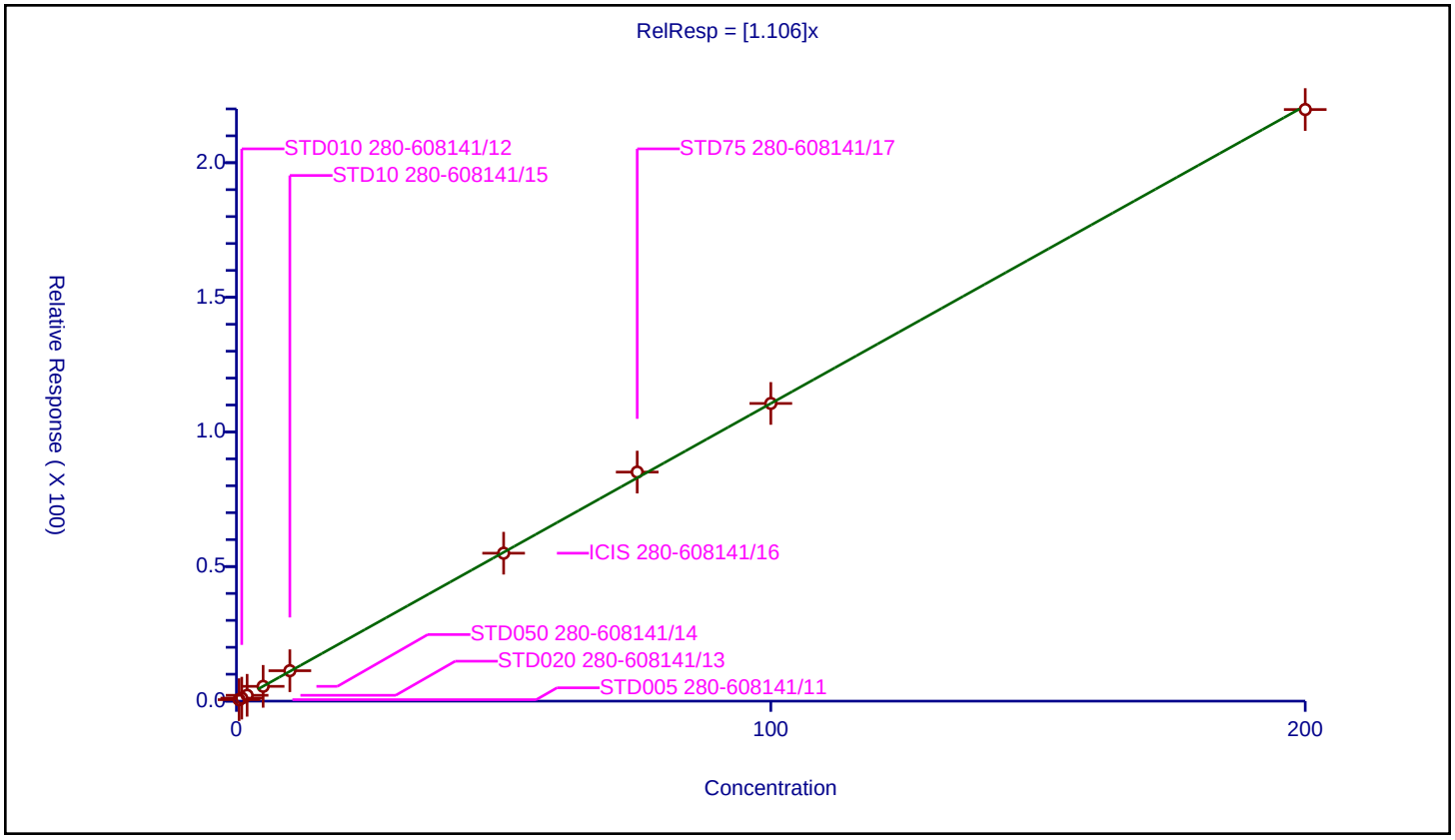
Curve Coefficients

Intercept:	0
Slope:	1.106

Error Coefficients

Standard Error:	1410000
Relative Standard Error:	1.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.545266	50.0	715522.0	1.090533	Y
2	STD010 280-608141/12	1.0	1.108144	50.0	729147.0	1.108144	Y
3	STD020 280-608141/13	2.0	2.169824	50.0	717132.0	1.084912	Y
4	STD050 280-608141/14	5.0	5.498213	50.0	722553.0	1.099643	Y
5	STD10 280-608141/15	10.0	11.303441	50.0	714716.0	1.130344	Y
6	ICIS 280-608141/16	50.0	54.950919	50.0	757112.0	1.099018	Y
7	STD75 280-608141/17	75.0	85.094699	50.0	738073.0	1.134596	Y
8	STD100 280-608141/18	100.0	110.584245	50.0	749411.0	1.105842	Y
9	STD200 280-608141/19	200.0	219.766002	50.0	747101.0	1.09883	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

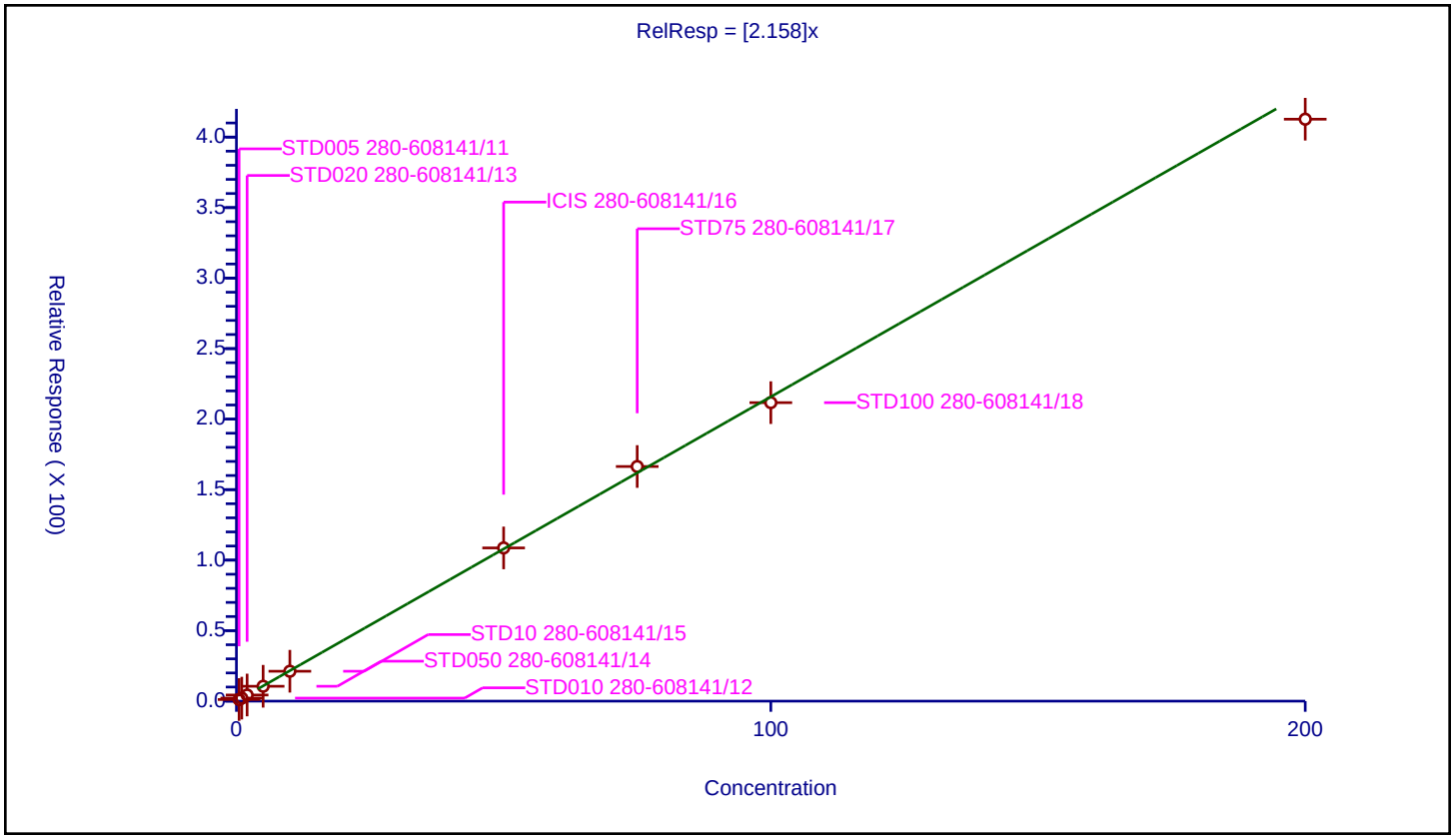
Curve Coefficients

Intercept:	0
Slope:	2.158

Error Coefficients

Standard Error:	2670000
Relative Standard Error:	3.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	1.149161	50.0	715522.0	2.298322	Y
2	STD010 280-608141/12	1.0	2.147372	50.0	729147.0	2.147372	Y
3	STD020 280-608141/13	2.0	4.352337	50.0	717132.0	2.176168	Y
4	STD050 280-608141/14	5.0	10.555904	50.0	722553.0	2.111181	Y
5	STD10 280-608141/15	10.0	21.210733	50.0	714716.0	2.121073	Y
6	ICIS 280-608141/16	50.0	108.655457	50.0	757112.0	2.173109	Y
7	STD75 280-608141/17	75.0	166.397904	50.0	738073.0	2.218639	Y
8	STD100 280-608141/18	100.0	211.681574	50.0	749411.0	2.116816	Y
9	STD200 280-608141/19	200.0	412.684363	50.0	747101.0	2.063422	Y



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Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

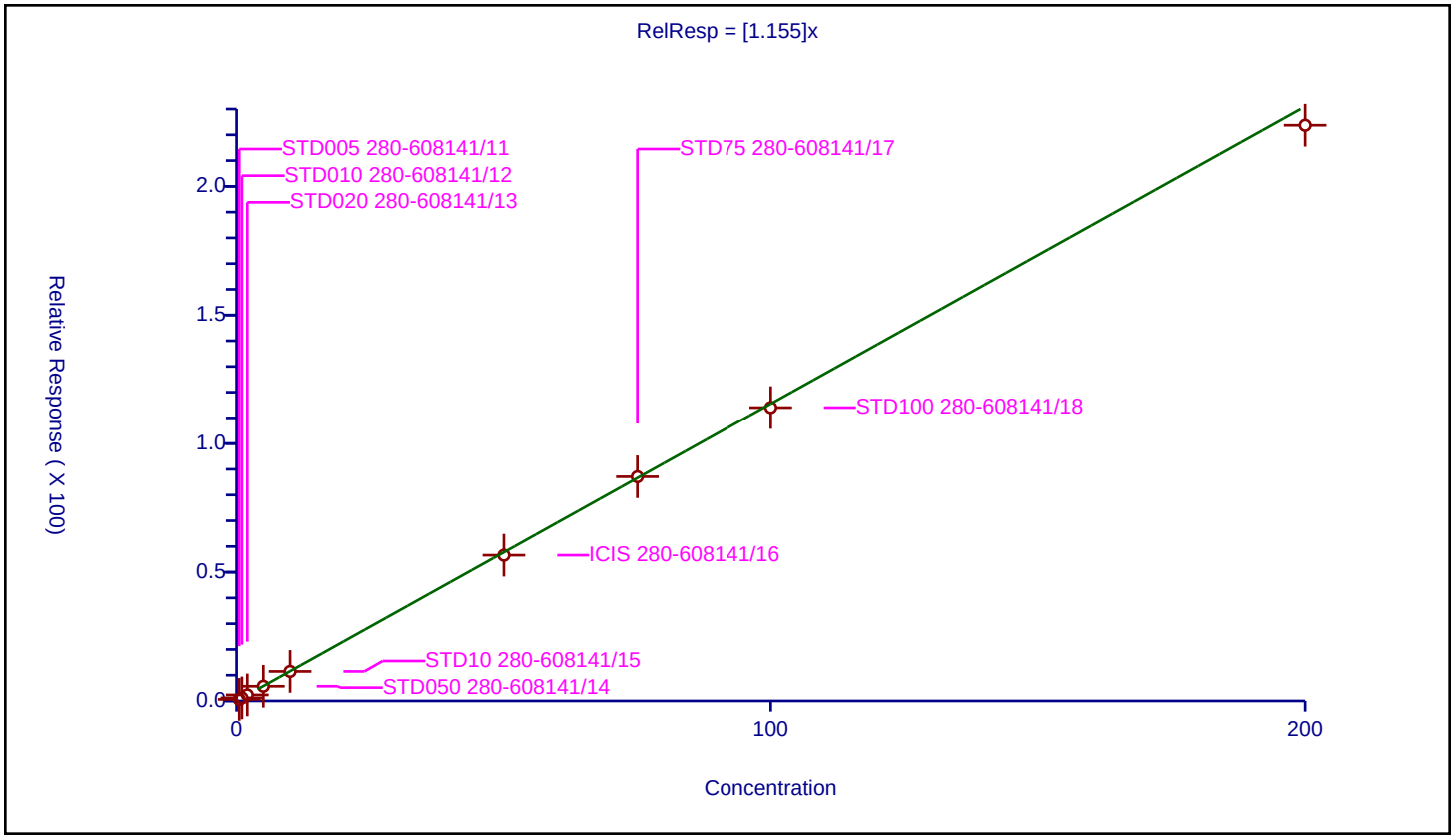
Curve Coefficients

Intercept:	0
Slope:	1.155

Error Coefficients

Standard Error:	1440000
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.602637	50.0	715522.0	1.205274	Y
2	STD010 280-608141/12	1.0	1.181106	50.0	729147.0	1.181106	Y
3	STD020 280-608141/13	2.0	2.338691	50.0	717132.0	1.169345	Y
4	STD050 280-608141/14	5.0	5.702557	50.0	722553.0	1.140511	Y
5	STD10 280-608141/15	10.0	11.465393	50.0	714716.0	1.146539	Y
6	ICIS 280-608141/16	50.0	56.601929	50.0	757112.0	1.132039	Y
7	STD75 280-608141/17	75.0	87.106763	50.0	738073.0	1.161424	Y
8	STD100 280-608141/18	100.0	114.022679	50.0	749411.0	1.140227	Y
9	STD200 280-608141/19	200.0	223.719082	50.0	747101.0	1.118595	Y



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Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

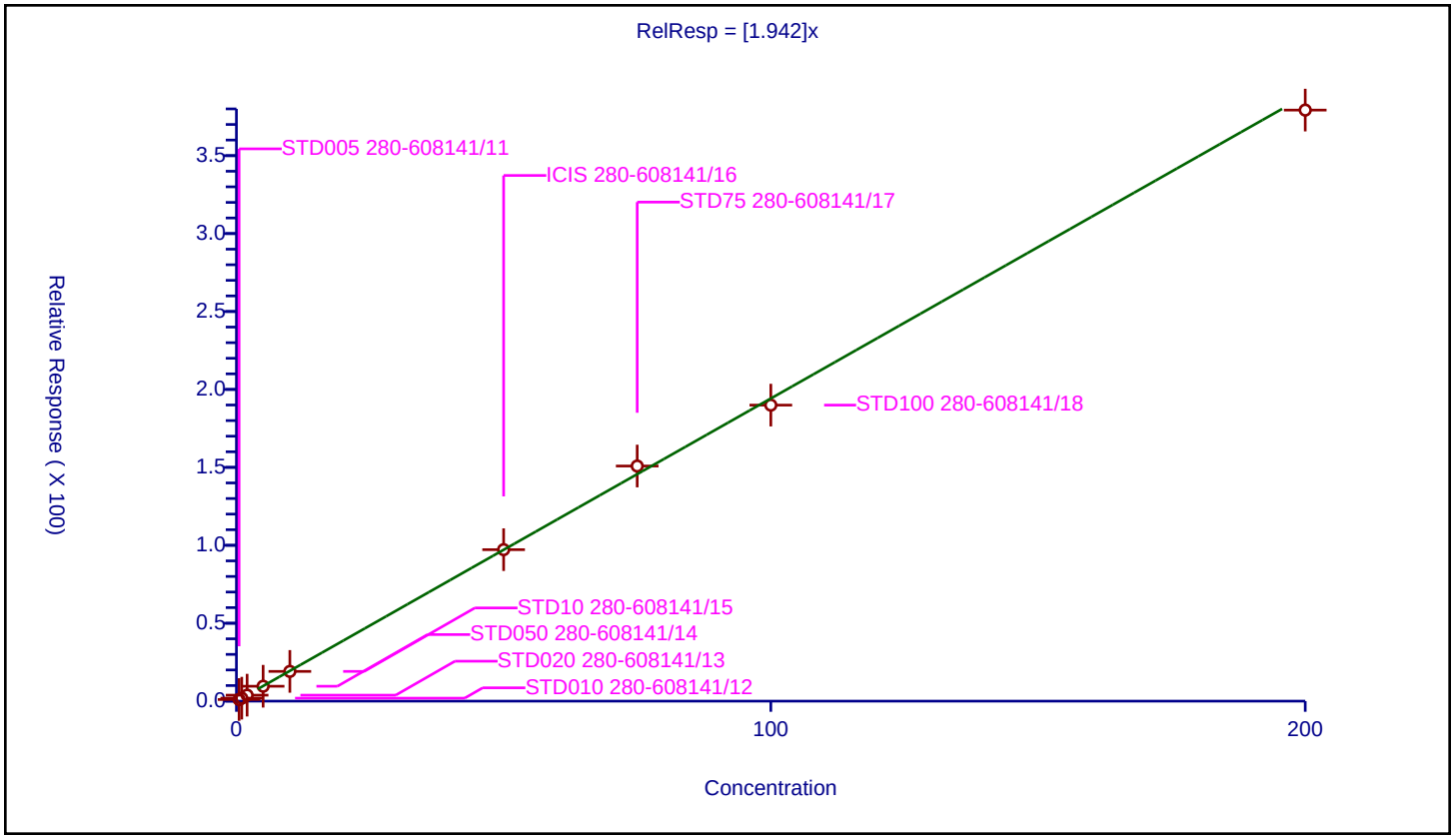
Curve Coefficients

Intercept:	0
Slope:	1.942

Error Coefficients

Standard Error:	2430000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	1.036027	50.0	715522.0	2.072054	Y
2	STD010 280-608141/12	1.0	1.912783	50.0	729147.0	1.912783	Y
3	STD020 280-608141/13	2.0	3.839879	50.0	717132.0	1.919939	Y
4	STD050 280-608141/14	5.0	9.568225	50.0	722553.0	1.913645	Y
5	STD10 280-608141/15	10.0	19.086812	50.0	714716.0	1.908681	Y
6	ICIS 280-608141/16	50.0	97.187404	50.0	757112.0	1.943748	Y
7	STD75 280-608141/17	75.0	150.850797	50.0	738073.0	2.011344	Y
8	STD100 280-608141/18	100.0	189.933695	50.0	749411.0	1.899337	Y
9	STD200 280-608141/19	200.0	379.236877	50.0	747101.0	1.896184	Y



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Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

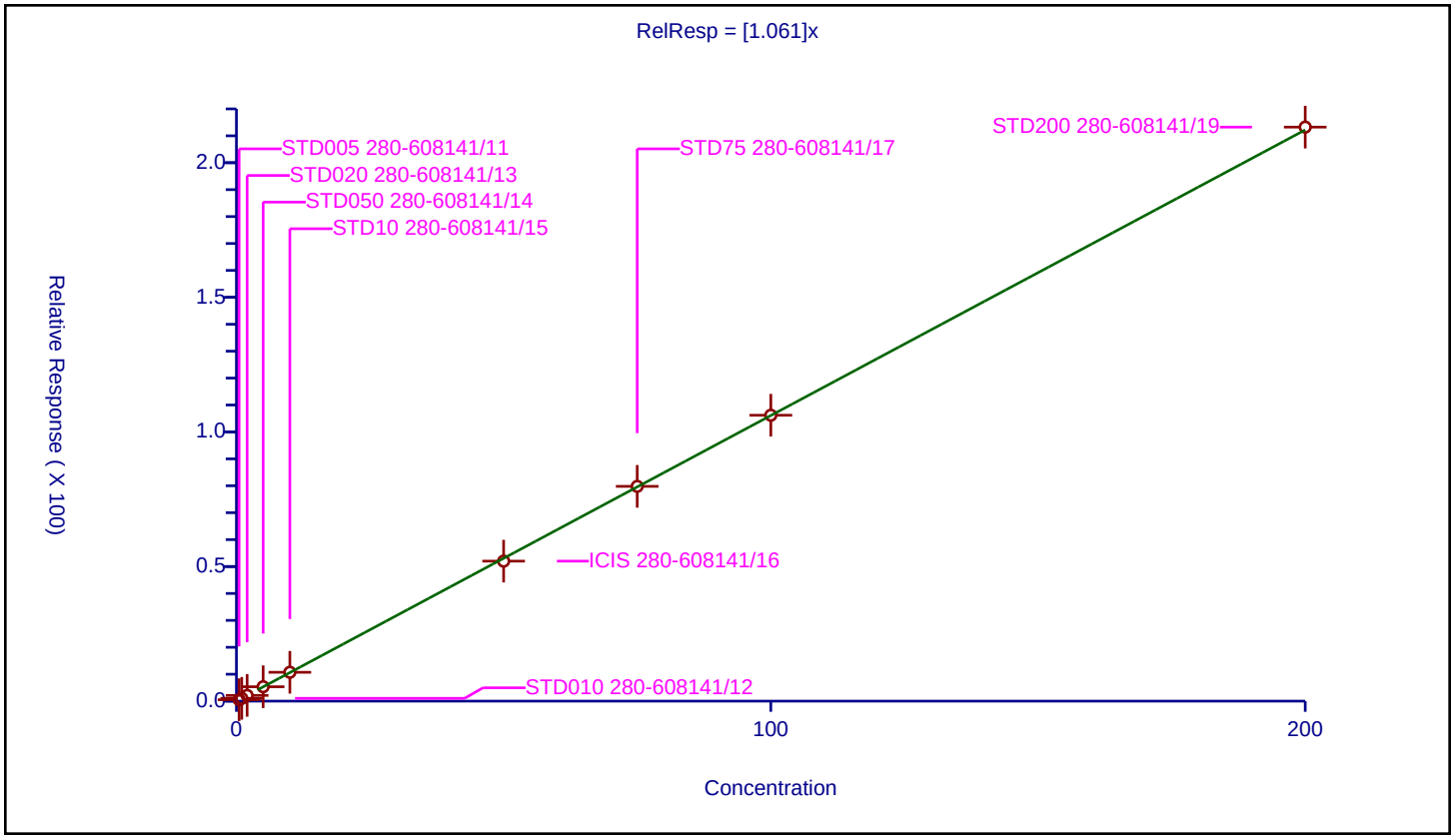
Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	1360000
Relative Standard Error:	1.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.531011	50.0	715522.0	1.062022	Y
2	STD010 280-608141/12	1.0	1.047663	50.0	729147.0	1.047663	Y
3	STD020 280-608141/13	2.0	2.130431	50.0	717132.0	1.065215	Y
4	STD050 280-608141/14	5.0	5.351165	50.0	722553.0	1.070233	Y
5	STD10 280-608141/15	10.0	10.720342	50.0	714716.0	1.072034	Y
6	ICIS 280-608141/16	50.0	52.00327	50.0	757112.0	1.040065	Y
7	STD75 280-608141/17	75.0	79.787975	50.0	738073.0	1.06384	Y
8	STD100 280-608141/18	100.0	106.200469	50.0	749411.0	1.062005	Y
9	STD200 280-608141/19	200.0	213.228265	50.0	747101.0	1.066141	Y



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Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

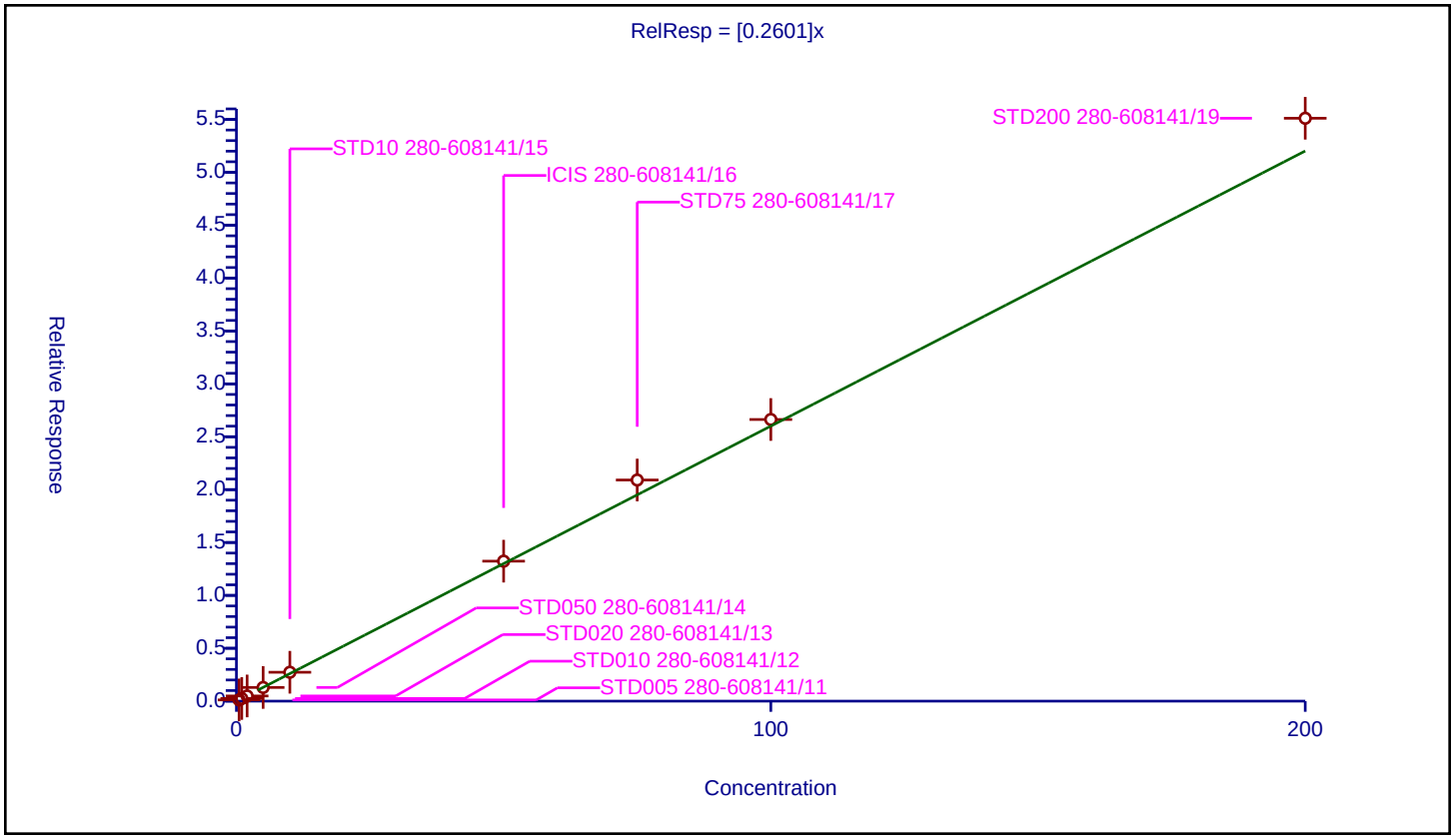
Curve Coefficients

Intercept:	0
Slope:	0.2601

Error Coefficients

Standard Error:	349000
Relative Standard Error:	6.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.114532	50.0	715522.0	0.229064	Y
2	STD010 280-608141/12	1.0	0.250361	50.0	729147.0	0.250361	Y
3	STD020 280-608141/13	2.0	0.489031	50.0	717132.0	0.244516	Y
4	STD050 280-608141/14	5.0	1.292293	50.0	722553.0	0.258459	Y
5	STD10 280-608141/15	10.0	2.730525	50.0	714716.0	0.273053	Y
6	ICIS 280-608141/16	50.0	13.234502	50.0	757112.0	0.26469	Y
7	STD75 280-608141/17	75.0	20.907688	50.0	738073.0	0.278769	Y
8	STD100 280-608141/18	100.0	26.631648	50.0	749411.0	0.266316	Y
9	STD200 280-608141/19	200.0	55.113432	50.0	747101.0	0.275567	Y



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Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

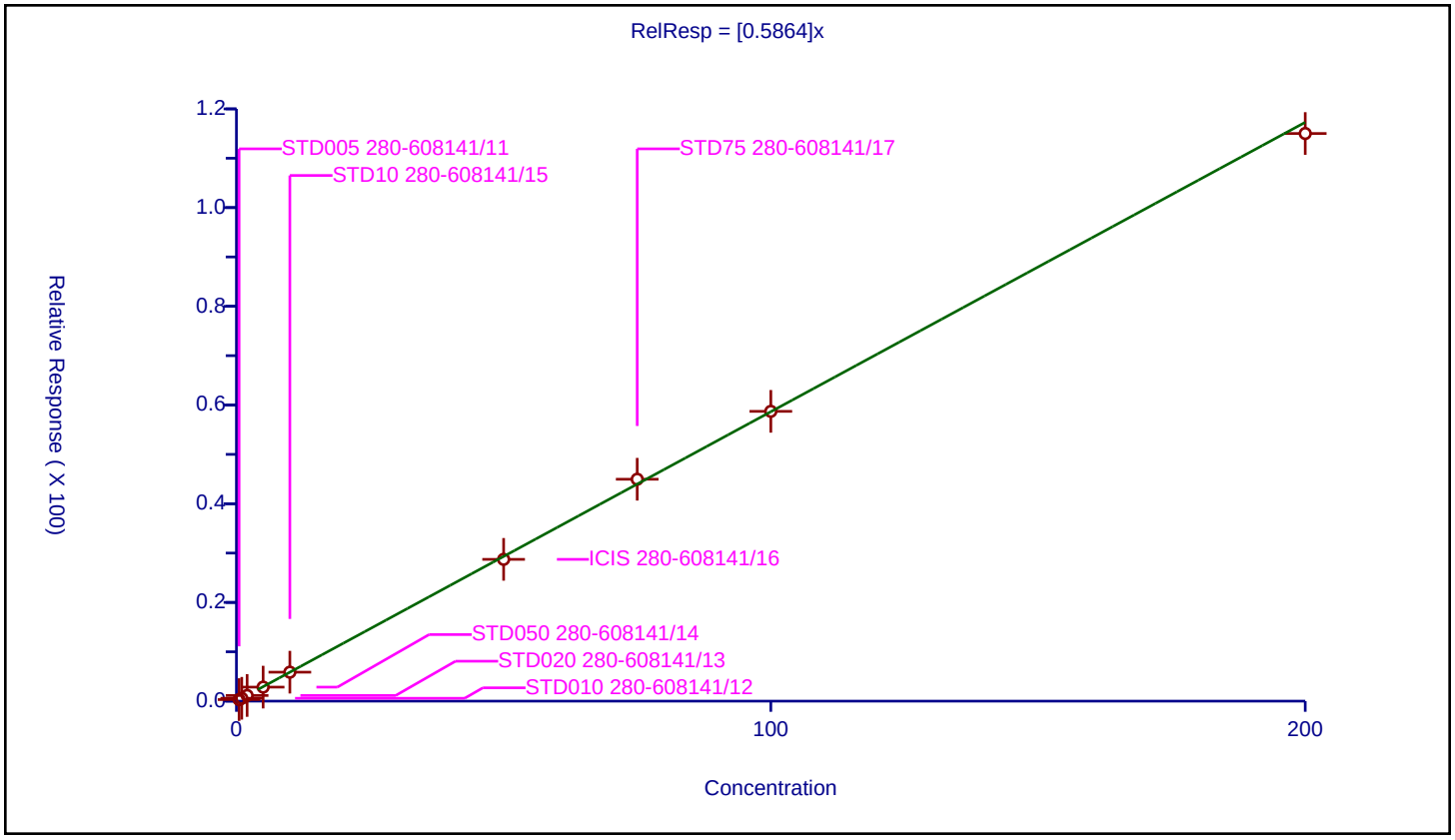
Curve Coefficients

Intercept:	0
Slope:	0.5864

Error Coefficients

Standard Error:	739000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.314735	50.0	715522.0	0.629471	Y
2	STD010 280-608141/12	1.0	0.58253	50.0	729147.0	0.58253	Y
3	STD020 280-608141/13	2.0	1.148603	50.0	717132.0	0.574302	Y
4	STD050 280-608141/14	5.0	2.841798	50.0	722553.0	0.56836	Y
5	STD10 280-608141/15	10.0	5.867855	50.0	714716.0	0.586786	Y
6	ICIS 280-608141/16	50.0	28.726133	50.0	757112.0	0.574523	Y
7	STD75 280-608141/17	75.0	44.9631	50.0	738073.0	0.599508	Y
8	STD100 280-608141/18	100.0	58.716846	50.0	749411.0	0.587168	Y
9	STD200 280-608141/19	200.0	115.014837	50.0	747101.0	0.575074	Y



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Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

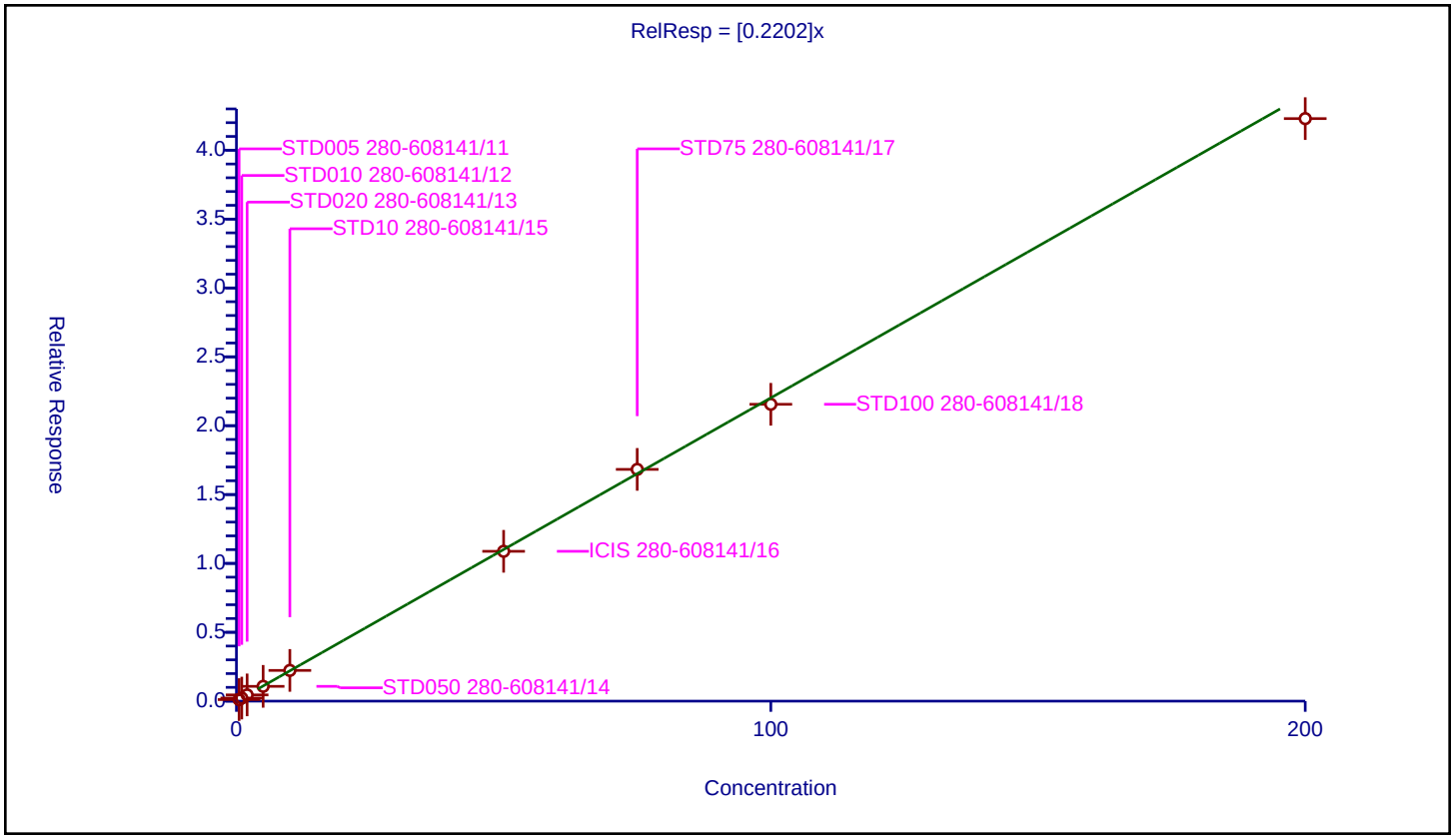
Curve Coefficients

Intercept:	0
Slope:	0.2202

Error Coefficients

Standard Error:	272000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.112296	50.0	715522.0	0.224591	Y
2	STD010 280-608141/12	1.0	0.223137	50.0	729147.0	0.223137	Y
3	STD020 280-608141/13	2.0	0.45424	50.0	717132.0	0.22712	Y
4	STD050 280-608141/14	5.0	1.074177	50.0	722553.0	0.214835	Y
5	STD10 280-608141/15	10.0	2.230746	50.0	714716.0	0.223075	Y
6	ICIS 280-608141/16	50.0	10.879038	50.0	757112.0	0.217581	Y
7	STD75 280-608141/17	75.0	16.825978	50.0	738073.0	0.224346	Y
8	STD100 280-608141/18	100.0	21.552126	50.0	749411.0	0.215521	Y
9	STD200 280-608141/19	200.0	42.293612	50.0	747101.0	0.211468	Y



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Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

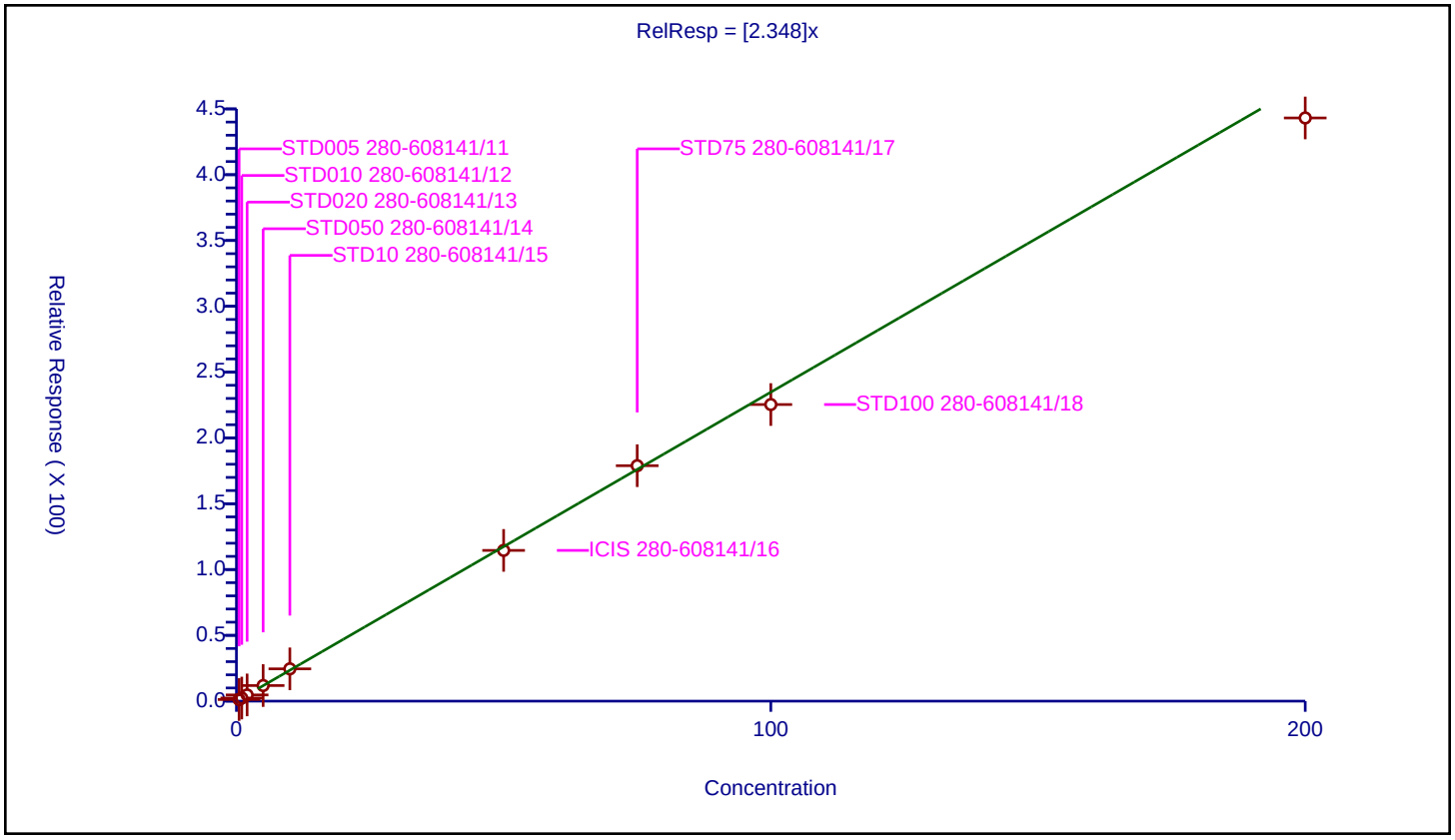
Curve Coefficients

Intercept:	0
Slope:	2.348

Error Coefficients

Standard Error:	2860000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	1.220088	50.0	715522.0	2.440177	Y
2	STD010 280-608141/12	1.0	2.357686	50.0	729147.0	2.357686	Y
3	STD020 280-608141/13	2.0	4.723677	50.0	717132.0	2.361839	Y
4	STD050 280-608141/14	5.0	11.848335	50.0	722553.0	2.369667	Y
5	STD10 280-608141/15	10.0	24.546533	50.0	714716.0	2.454653	Y
6	ICIS 280-608141/16	50.0	114.532262	50.0	757112.0	2.290645	Y
7	STD75 280-608141/17	75.0	178.90439	50.0	738073.0	2.385392	Y
8	STD100 280-608141/18	100.0	225.373927	50.0	749411.0	2.253739	Y
9	STD200 280-608141/19	200.0	443.119471	50.0	747101.0	2.215597	Y



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Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

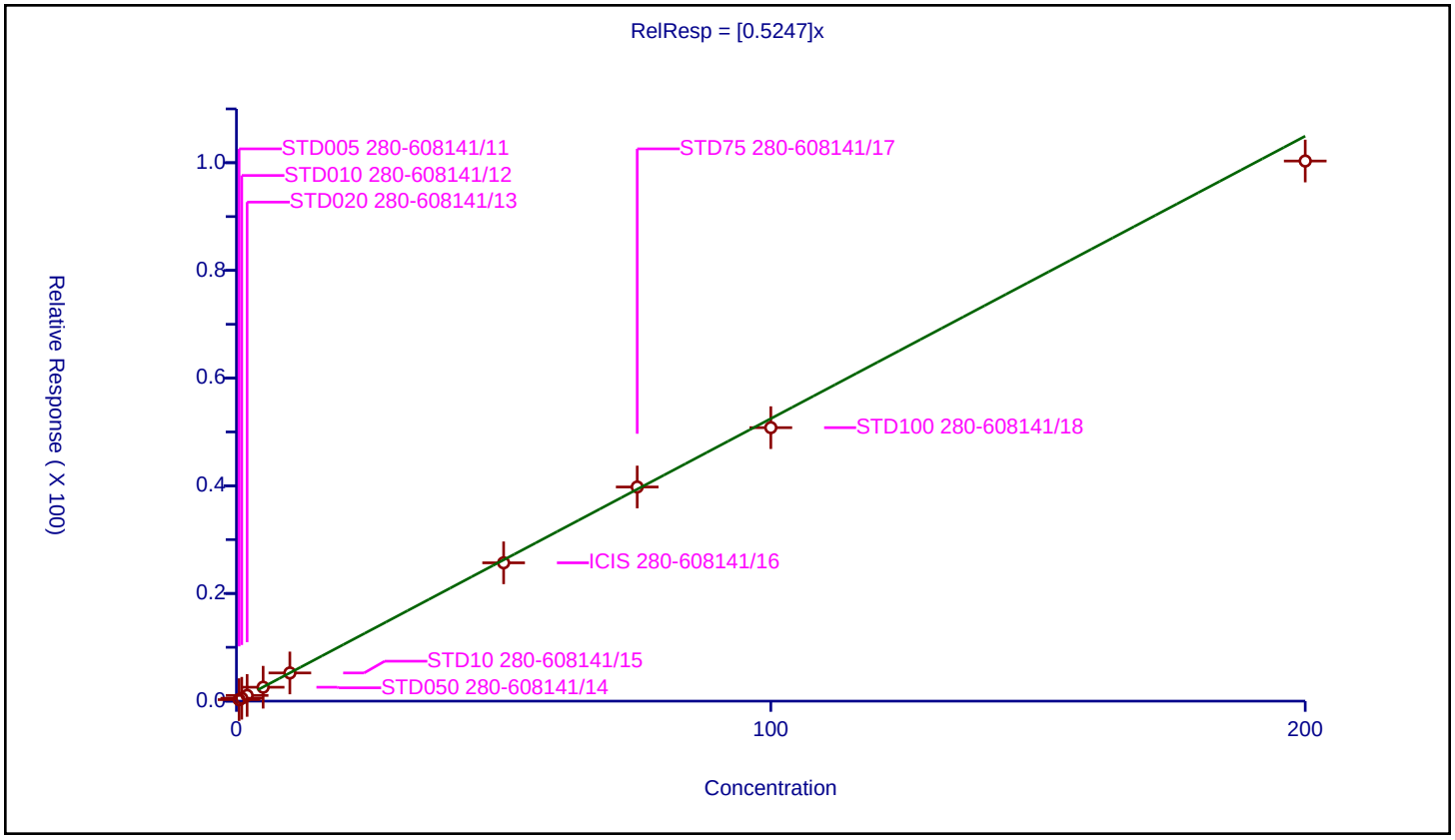
Curve Coefficients

Intercept:	0
Slope:	0.5247

Error Coefficients

Standard Error:	645000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608141/11	0.5	0.279656	50.0	715522.0	0.559312	Y
2	STD010 280-608141/12	1.0	0.538026	50.0	729147.0	0.538026	Y
3	STD020 280-608141/13	2.0	1.060962	50.0	717132.0	0.530481	Y
4	STD050 280-608141/14	5.0	2.586246	50.0	722553.0	0.517249	Y
5	STD10 280-608141/15	10.0	5.235576	50.0	714716.0	0.523558	Y
6	ICIS 280-608141/16	50.0	25.691575	50.0	757112.0	0.513832	Y
7	STD75 280-608141/17	75.0	39.776892	50.0	738073.0	0.530359	Y
8	STD100 280-608141/18	100.0	50.797626	50.0	749411.0	0.507976	Y
9	STD200 280-608141/19	200.0	100.321442	50.0	747101.0	0.501607	Y



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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 18:14 Calibration End Date: 04/10/2023 20:30 Calibration ID: 79113

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 280-608141/21	P00483.D
Level 2	STD02 280-608141/22	P00484.D
Level 3	STD05 280-608141/23	P00485.D
Level 4	STD10 280-608141/24	P00486.D
Level 5	STD50 280-608141/25	P00487.D
Level 6	STD100 280-608141/26	P00488.D
Level 7	STD200 280-608141/27	P00489.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol	0.0081 0.0064	+++++ 0.0073	0.0076	0.0076	0.0074	Ave		0.0074				7.5		15.0			
Isopropyl alcohol	0.0531 0.0364	+++++ 0.0407	0.0428	0.0431	0.0402	Lin2	0.1373	0.0397							0.9980		0.9900
Acetonitrile	0.1089 0.0598	+++++ 0.0661	0.0694	0.0694	0.0634	Lin2	0.4600	0.0626							0.9980		0.9900
Isopropyl ether	0.2278 0.1895	+++++ 0.2052	0.1962	0.1974	0.1921	Ave		0.2014				7.0		15.0			
Chloroprene	0.3902 0.3416	+++++ 0.3525	0.3451	0.3383	0.3398	Ave		0.3512				5.6		15.0			
Tert-butyl ethyl ether	0.8300 0.6760	+++++ 0.6974	0.7122	0.7115	0.6930	Ave		0.7200				7.7		15.0			
Ethyl acetate	0.6246 0.3335	+++++ 0.3462	0.3919	0.3746	0.3486	Lin2	0.5684	0.3400							1.0000		0.9900
Propionitrile	0.0923 0.0698	+++++ 0.0757	0.0777	0.0782	0.0751	Ave		0.0781				9.7		15.0			
Methacrylonitrile	0.2474 0.1812	+++++ 0.1633	0.2086	0.2089	0.1963	Ave		0.2010				14.3		15.0			
n-Butanol	0.0104 0.0086	+++++ 0.0088	0.0083	0.0082	0.0081	Ave		0.0087				10.0		15.0			
Tert-amyl methyl ether	0.8053 0.6763	+++++ 0.7034	0.6915	0.7009	0.6859	Ave		0.7105				6.7		15.0			
Methyl methacrylate	0.0994 0.0836	+++++ 0.0864	0.0841	0.0862	0.0848	Ave		0.0874				6.8		15.0			
2-Nitropropane	0.1333 0.1039	+++++ 0.1079	0.1082	0.1119	0.1078	Ave		0.1122				9.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 18:14 Calibration End Date: 04/10/2023 20:30 Calibration ID: 79113

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-1,4-Dichloro-2-butene	0.4302 0.3131	+++++ 0.3214	0.3048	0.3303	0.3101	Ave		0.3350				14.2		15.0			
1,2,3-Trimethylbenzene	2.7285 2.3072	+++++ 2.3246	2.3326	2.4148	2.2827	Ave		2.3984				7.0		15.0			
1,3,5-Trichlorobenzene	0.7906 0.6780	+++++ 0.7063	0.6662	0.7006	0.6608	Ave		0.7004				6.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 18:14 | Calibration End Date: 04/10/2023 20:30 | Calibration ID: 79113

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 280-608141/21	P00483.D
Level 2	STD02 280-608141/22	P00484.D
Level 3	STD05 280-608141/23	P00485.D
Level 4	STD10 280-608141/24	P00486.D
Level 5	STD50 280-608141/25	P00487.D
Level 6	STD100 280-608141/26	P00488.D
Level 7	STD200 280-608141/27	P00489.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethanol	FB	Ave	19896 1718665	+++++ 3708935	92911	184041	908516	60.0 6000	+++++ 12000	300	600	3000
Isopropyl alcohol	FB	Lin2	21627 1619288	+++++ 3427271	86804	174168	827230	10.0 1000	+++++ 2000	50.0	100	500
Acetonitrile	FB	Lin2	44312 2657933	+++++ 5573850	140698	280787	1303896	10.0 1000	+++++ 2000	50.0	100	500
Isopropyl ether	FB	Ave	9271 841890	+++++ 1729347	39774	79838	395230	1.00 100	+++++ 200	5.00	10.0	50.0
Chloroprene	FB	Ave	15879 1517948	+++++ 2971497	69957	136844	698907	1.00 100	+++++ 200	5.00	10.0	50.0
Tert-butyl ethyl ether	FB	Ave	33778 3003964	+++++ 5878894	144365	287834	1425548	1.00 100	+++++ 200	5.00	10.0	50.0
Ethyl acetate	FB	Lin2	50838 2963442	+++++ 5836379	158854	303117	1434207	2.00 200	+++++ 400	10.0	20.0	100
Propionitrile	FB	Ave	37556 3100256	+++++ 6378967	157577	316398	1544886	10.0 1000	+++++ 2000	50.0	100	500
Methacrylonitrile	FB	Ave	100698 8052475	+++++ 13763533	422842	845269	4037789	10.0 1000	+++++ 2000	50.0	100	500
n-Butanol	FB	Ave	10631 950918	+++++ 1845490	42134	83426	415733	25.0 2500	+++++ 5000	125	250	1250
Tert-amyl methyl ether	FB	Ave	32775 3005019	+++++ 5928647	140158	283564	1410940	1.00 100	+++++ 200	5.00	10.0	50.0
Methyl methacrylate	FB	Ave	8092 743129	+++++ 1456960	34108	69770	348809	2.00 200	+++++ 400	10.0	20.0	100
2-Nitropropane	FB	Ave	10853 923244	+++++ 1819029	43850	90563	443673	2.00 200	+++++ 400	10.0	20.0	100
cis-1,4-Dichloro-2-butene	DCBd4	Ave	12044 873429	+++++ 1814205	42098	87965	433032	2.00 200	+++++ 400	10.0	20.0	100
1,2,3-Trimethylbenzene	DCBd4	Ave	38192 3218247	+++++ 6561102	161078	321570	1593562	1.00 100	+++++ 200	5.00	10.0	50.0
1,3,5-Trichlorobenzene	DCBd4	Ave	11067	+++++	46005	93301	461293	1.00	+++++	5.00	10.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608141

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 | ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2023 18:14 | Calibration End Date: 04/10/2023 20:30 | Calibration ID: 79113

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			945738	1993631				100	200			

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00483.D
Lims ID: STD01
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Apr-2023 18:14:30 ALS Bottle#: 13 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub217

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:16 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 11-Apr-2023 16:50:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2034939	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	484240	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	699882	50.0	50.0	
18 Ethanol	45	2.402	2.402	0.000	98	19896	60.0	65.9	
25 Isopropyl alcohol	45	2.772	2.772	0.000	100	21627	10.0	9.93	
28 Acetonitrile	41	2.888	2.888	0.000	99	44312	10.0	10.0	
40 Isopropyl ether	87	3.521	3.521	0.000	95	9271	1.00	1.13	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	90	15879	1.00	1.11	
43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	98	33778	1.00	1.15	
46 Ethyl acetate	43	3.911	3.911	0.000	97	50838	2.00	2.00	
49 Propionitrile	54	3.943	3.943	0.000	100	37556	10.0	11.8	
51 Methacrylonitrile	41	4.059	4.059	0.000	89	100698	10.0	12.3	
63 n-Butanol	56	4.629	4.619	0.010	50	10631	25.0	29.9	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	89	32775	1.00	1.13	
71 Methyl methacrylate	100	5.252	5.252	0.000	91	8092	2.00	2.27	
75 2-Nitropropane	41	5.600	5.600	0.000	99	10853	2.00	2.38	
98 cis-1,4-Dichloro-2-butene	53	8.238	8.249	-0.011	0	12044	2.00	2.57	
114 1,2,3-Trimethylbenzene	105	9.525	9.526	-0.001	98	38192	1.00	1.14	
118 1,3,5-Trichlorobenzene	180	10.823	10.824	-0.001	96	11067	1.00	1.13	

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00062 Amount Added: 1.00 Units: uL

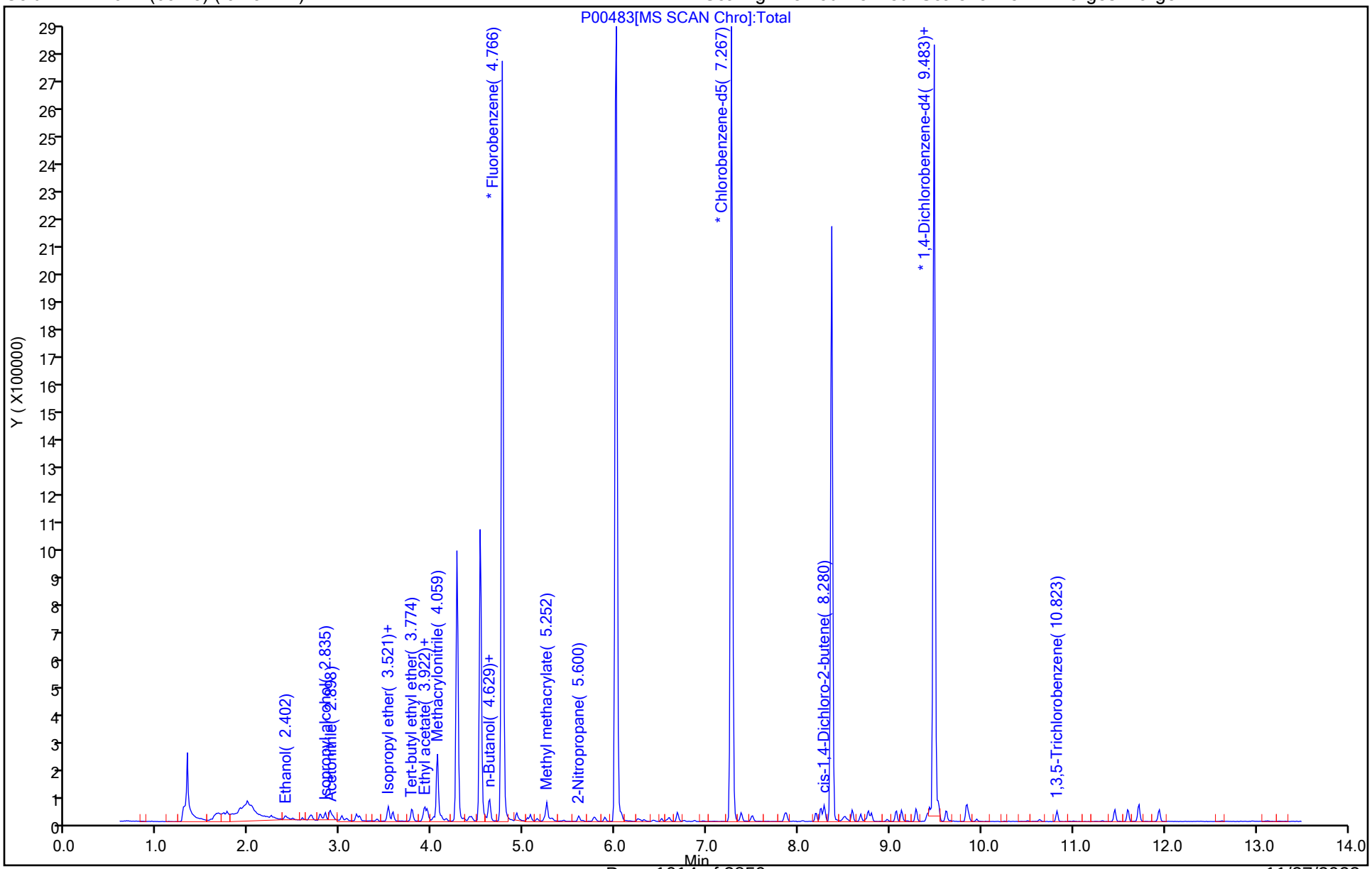
Report Date: 11-Apr-2023 18:07:16 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00483.D

Injection Date:	10-Apr-2023 18:14:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD01			Worklist Smp#:	21
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00484.D
Lims ID: STD02
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Apr-2023 18:37:30 ALS Bottle#: 14 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub217

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:17 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 11-Apr-2023 16:56:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2001363	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	467717	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.484	9.483	0.001	97	682065	50.0	50.0	
18 Ethanol	45	2.392	2.402	-0.010	99	35593	120.0	119.9	
25 Isopropyl alcohol	45	2.772	2.772	0.000	99	36943	20.0	19.8	
28 Acetonitrile	41	2.888	2.888	0.000	99	68910	20.0	20.2	
40 Isopropyl ether	87	3.521	3.521	0.000	95	17175	2.00	2.13	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	91	29433	2.00	2.09	
43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	59606	2.00	2.07	
46 Ethyl acetate	43	3.912	3.911	0.001	99	74327	4.00	3.79	
49 Propionitrile	54	3.943	3.943	0.000	99	65610	20.0	21.0	
51 Methacrylonitrile	41	4.059	4.059	0.000	90	176720	20.0	22.0	
63 n-Butanol	56	4.629	4.619	0.010	49	19735	50.0	56.4	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	91	60036	2.00	2.11	
71 Methyl methacrylate	100	5.252	5.252	0.000	89	14677	4.00	4.19	
75 2-Nitropropane	41	5.600	5.600	0.000	98	18565	4.00	4.13	
98 cis-1,4-Dichloro-2-butene	53	8.249	8.249	0.000	0	19005	4.00	4.16	
114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	99	69096	2.00	2.11	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	96	20031	2.00	2.10	

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00062 Amount Added: 2.00 Units: uL

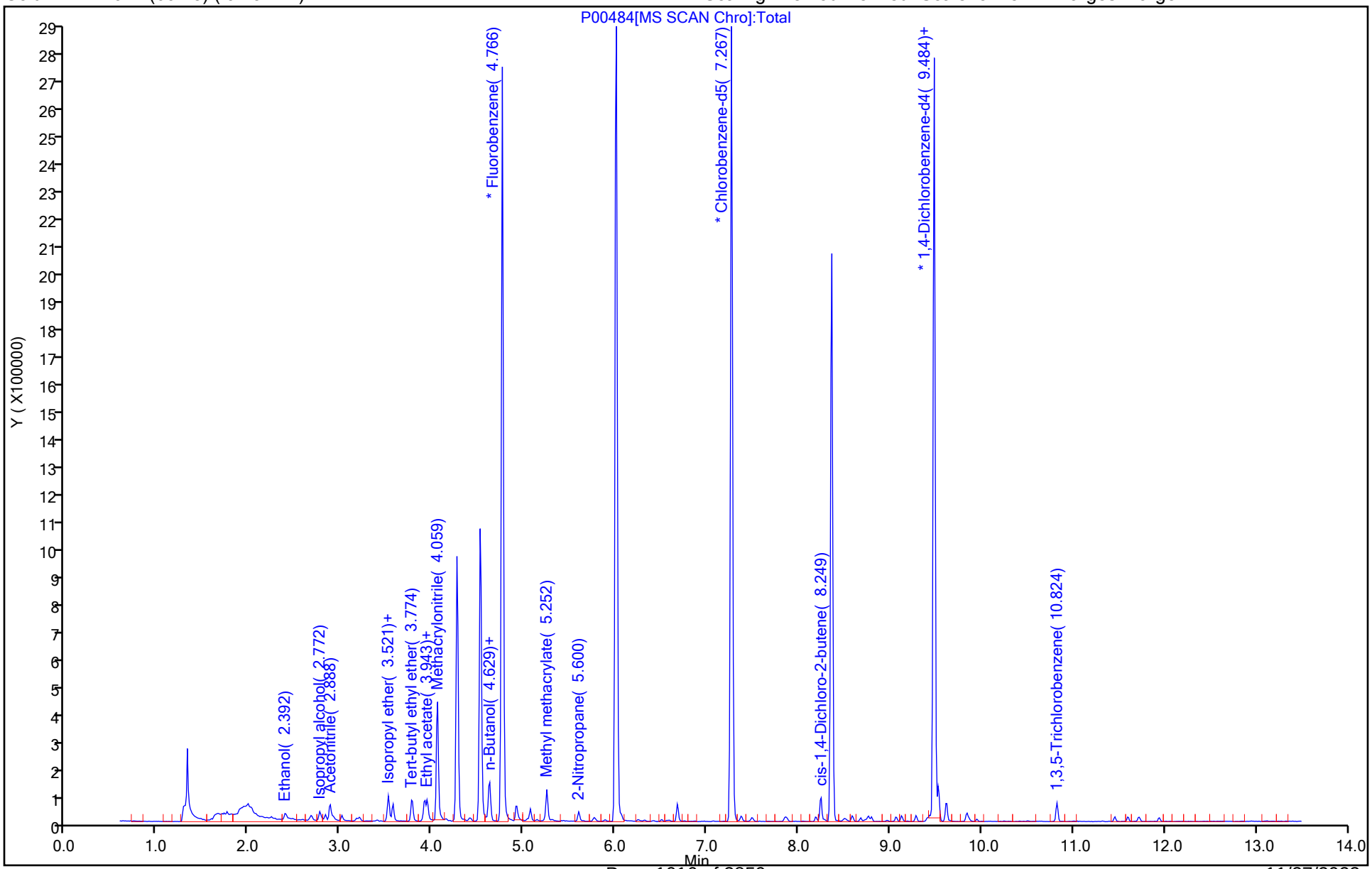
Report Date: 11-Apr-2023 18:07:18 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00484.D

Injection Date:	10-Apr-2023 18:37:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD02			Worklist Smp#:	22
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00485.D
Lims ID: STD05
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Apr-2023 18:59:30 ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub217

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:19 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 11-Apr-2023 14:28:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2026971	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	89	472416	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	690545	50.0	50.0	
18 Ethanol	45	2.392	2.402	-0.010	99	92911	300.0	308.9	
25 Isopropyl alcohol	45	2.772	2.772	0.000	99	86804	50.0	50.5	
28 Acetonitrile	41	2.877	2.888	-0.011	99	140698	50.0	48.1	
40 Isopropyl ether	87	3.521	3.521	0.000	94	39774	5.00	4.87	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	91	69957	5.00	4.91	
43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	144365	5.00	4.95	
46 Ethyl acetate	43	3.911	3.911	0.000	98	158854	10.0	9.85	
49 Propionitrile	54	3.943	3.943	0.000	100	157577	50.0	49.8	
51 Methacrylonitrile	41	4.059	4.059	0.000	90	422842	50.0	51.9	
63 n-Butanol	56	4.629	4.619	0.010	48	42134	125.0	119.0	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	91	140158	5.00	4.87	
71 Methyl methacrylate	100	5.252	5.252	0.000	91	34108	10.0	9.62	
75 2-Nitropropane	41	5.600	5.600	0.000	97	43850	10.0	9.64	
98 cis-1,4-Dichloro-2-butene	53	8.249	8.249	0.000	0	42098	10.0	9.10	
114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	98	161078	5.00	4.86	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	96	46005	5.00	4.76	

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00062 Amount Added: 5.00 Units: uL

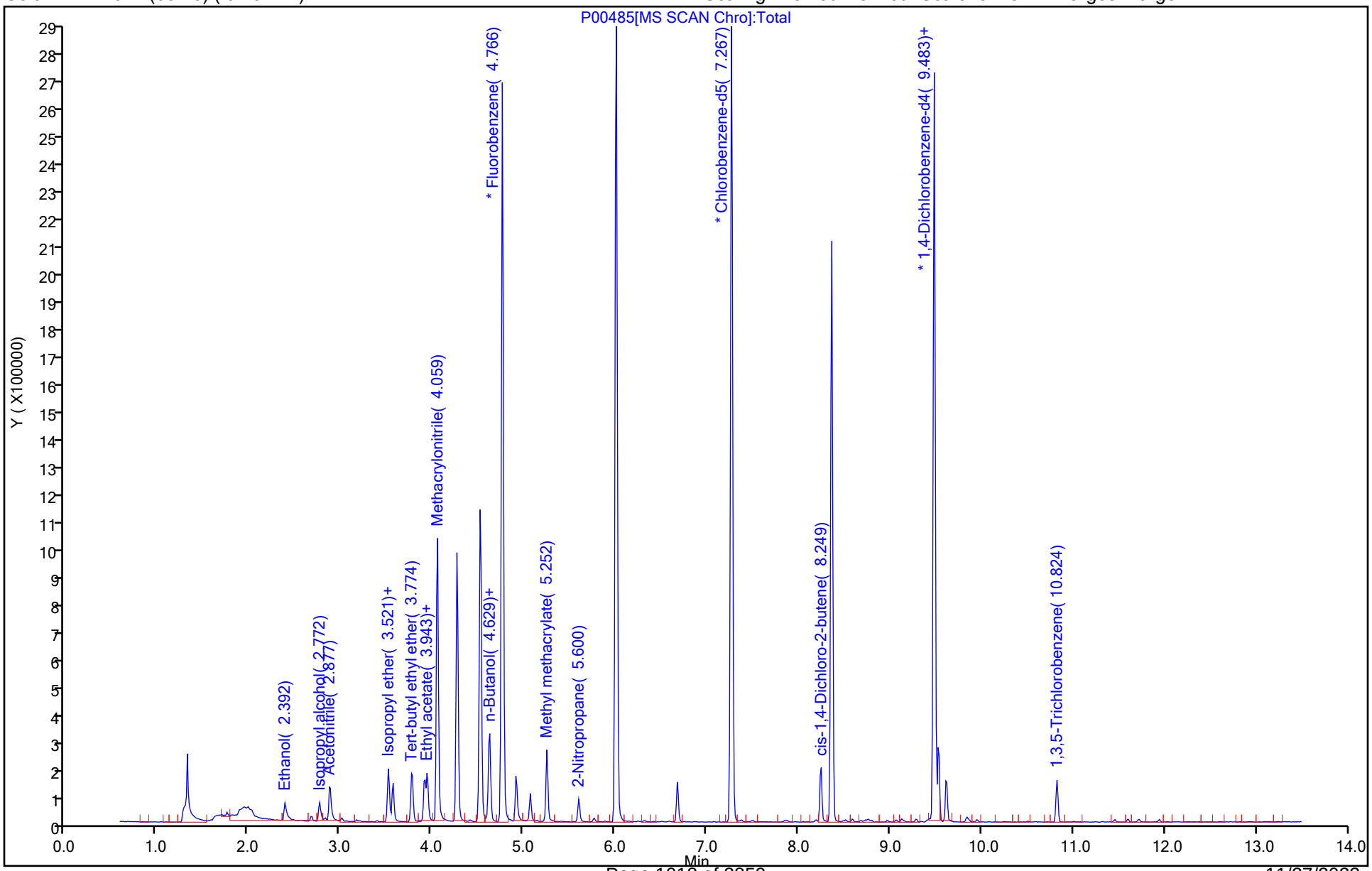
Report Date: 11-Apr-2023 18:07:19 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00485.D

Injection Date:	10-Apr-2023 18:59:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD05			Worklist Smp#:	23
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00486.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Apr-2023 19:22:30 ALS Bottle#: 16 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub217

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:20 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 11-Apr-2023 14:28:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	2022747	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	89	465703	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	665836	50.0	50.0	
18 Ethanol	45	2.392	2.402	-0.010	99	184041	600.0	613.2	
25 Isopropyl alcohol	45	2.772	2.772	0.000	99	174168	100.0	105.1	
28 Acetonitrile	41	2.877	2.888	-0.011	99	280787	100.0	103.5	
40 Isopropyl ether	87	3.521	3.521	0.000	94	79838	10.0	9.80	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	90	136844	10.0	9.63	
43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	287834	10.0	9.88	
46 Ethyl acetate	43	3.912	3.911	0.001	98	303117	20.0	20.4	
49 Propionitrile	54	3.943	3.943	0.000	99	316398	100.0	100.1	
51 Methacrylonitrile	41	4.059	4.059	0.000	90	845269	100.0	104.0	
63 n-Butanol	56	4.629	4.619	0.010	48	83426	250.0	236.1	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	91	283564	10.0	9.86	
71 Methyl methacrylate	100	5.252	5.252	0.000	90	69770	20.0	19.7	
75 2-Nitropropane	41	5.600	5.600	0.000	98	90563	20.0	20.0	
98 cis-1,4-Dichloro-2-butene	53	8.249	8.249	0.000	0	87965	20.0	19.7	
114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	98	321570	10.0	10.1	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	96	93301	10.0	10.0	

QC Flag Legend
Processing Flags

Reagents:
mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00062 Amount Added: 10.00 Units: uL

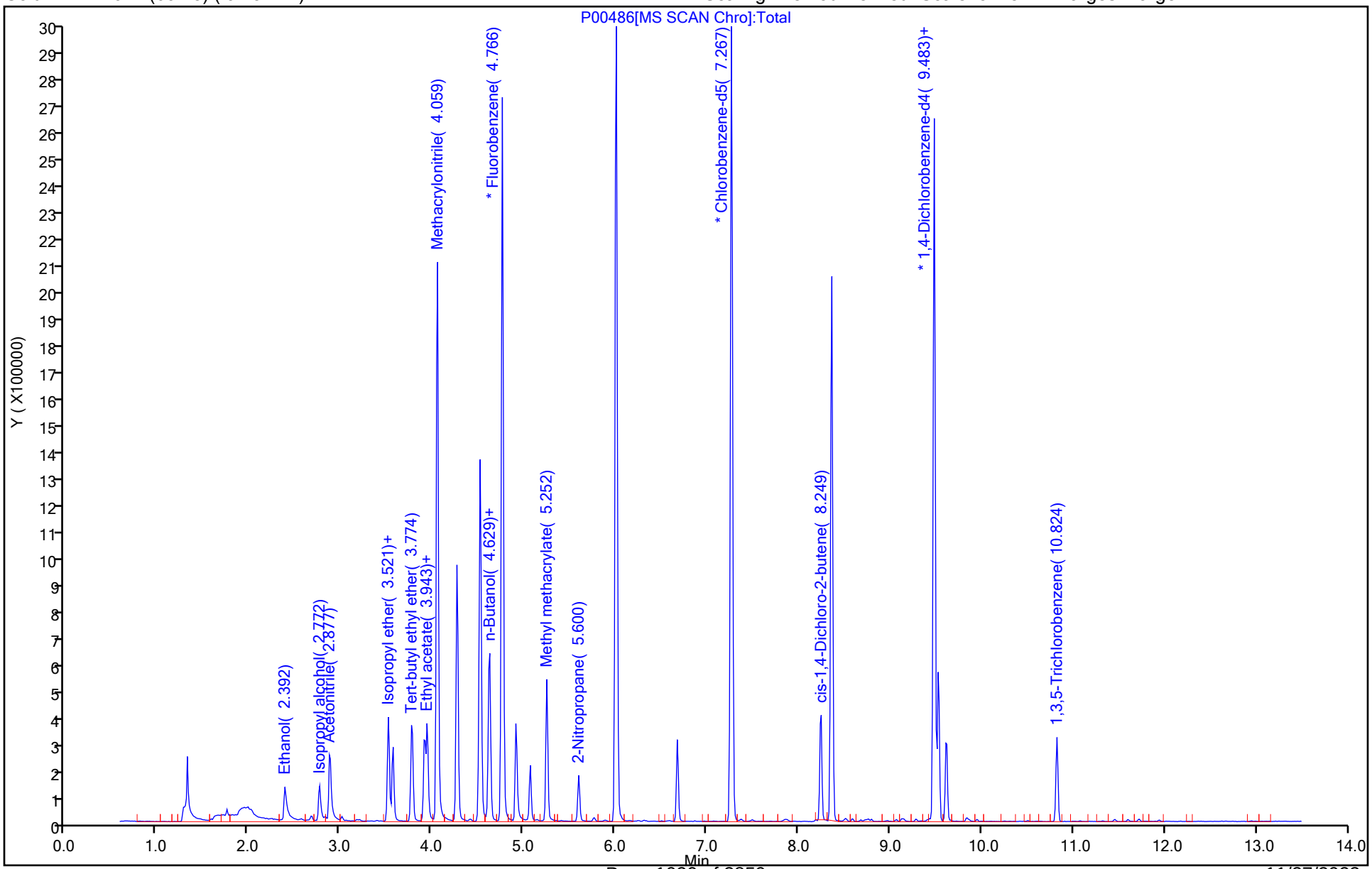
Report Date: 11-Apr-2023 18:07:21 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00486.D

Injection Date:	10-Apr-2023 19:22:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD10			Worklist Smp#:	24
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00487.D
Lims ID: STD50
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Apr-2023 19:45:30 ALS Bottle#: 17 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD50
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub217

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:22 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 11-Apr-2023 14:28:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2056944	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	89	477766	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	698107	50.0	50.0	
18 Ethanol	45	2.402	2.402	0.000	100	908516	3000.0	2976.9	
25 Isopropyl alcohol	45	2.772	2.772	0.000	99	827230	500.0	503.5	
28 Acetonitrile	41	2.888	2.888	0.000	99	1303896	500.0	498.9	
40 Isopropyl ether	87	3.521	3.521	0.000	94	395230	50.0	47.7	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	91	698907	50.0	48.4	
43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	1425548	50.0	48.1	
46 Ethyl acetate	43	3.911	3.911	0.000	98	1434207	100.0	100.9	
49 Propionitrile	54	3.943	3.943	0.000	99	1544886	500.0	480.6	
51 Methacrylonitrile	41	4.059	4.059	0.000	89	4037789	500.0	488.4	
63 n-Butanol	56	4.619	4.619	0.000	51	415733	1250.0	1156.8	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	92	1410940	50.0	48.3	
71 Methyl methacrylate	100	5.252	5.252	0.000	88	348809	100.0	97.0	
75 2-Nitropropane	41	5.600	5.600	0.000	98	443673	100.0	96.1	
98 cis-1,4-Dichloro-2-butene	53	8.249	8.249	0.000	0	433032	100.0	92.6	
114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	98	1593562	50.0	47.6	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	96	461293	50.0	47.2	

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00062 Amount Added: 50.00 Units: uL

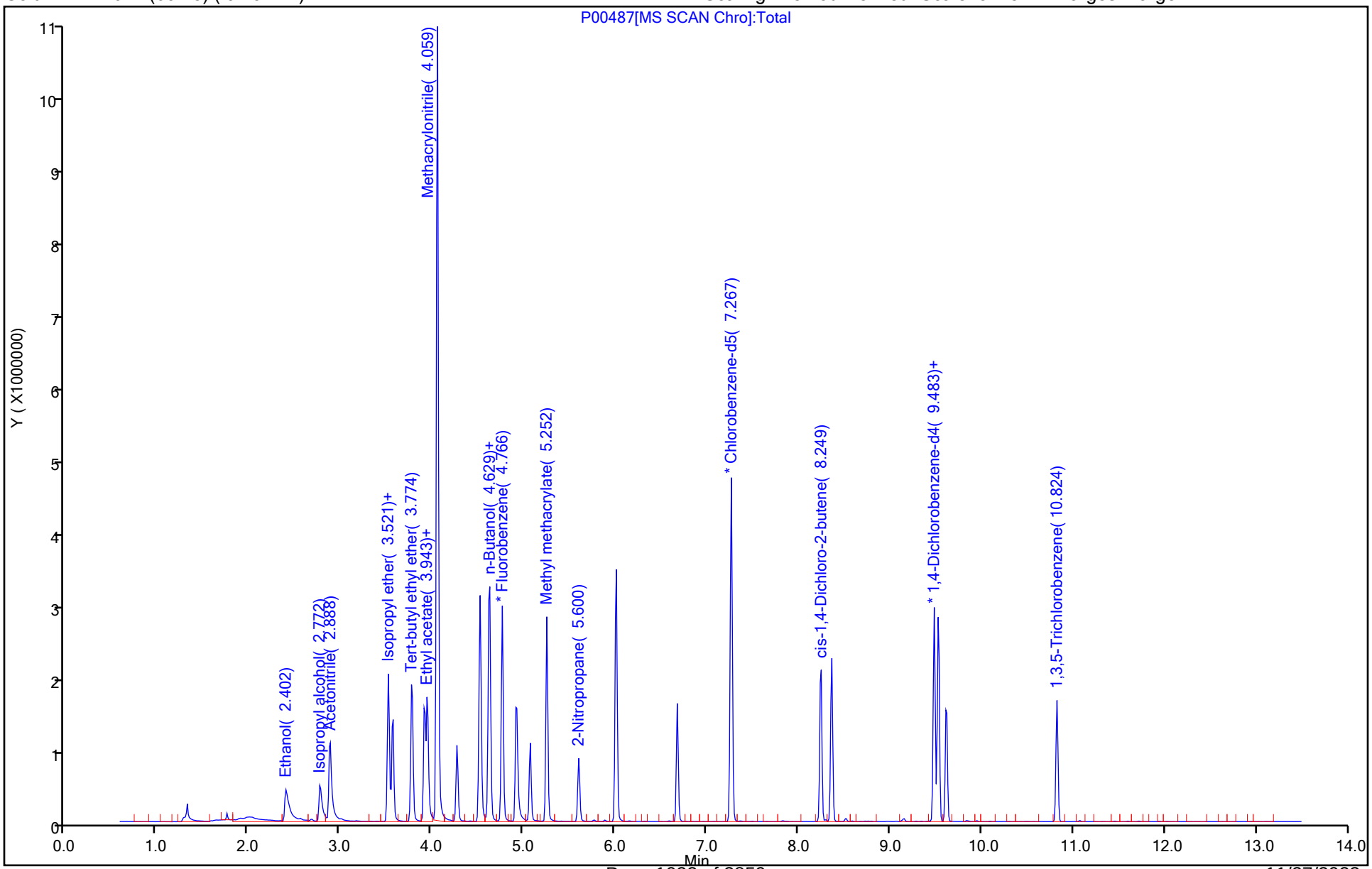
Report Date: 11-Apr-2023 18:07:22 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00487.D

Injection Date:	10-Apr-2023 19:45:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD50			Worklist Smp#:	25
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00488.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Apr-2023 20:07:30 ALS Bottle#: 18 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub217

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:24 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 11-Apr-2023 14:28:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2221732	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	506176	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	697428	50.0	50.0	
18 Ethanol	45	2.413	2.402	0.011	99	1718665	6000.0	5213.8	
25 Isopropyl alcohol	45	2.782	2.772	0.010	99	1619288	1000.0	915.2	
28 Acetonitrile	41	2.888	2.888	0.000	99	2657933	1000.0	948.1	
40 Isopropyl ether	87	3.521	3.521	0.000	93	841890	100.0	94.1	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	90	1517948	100.0	97.3	
43 Tert-butyl ethyl ether	59	3.785	3.774	0.011	97	3003964	100.0	93.9	
46 Ethyl acetate	43	3.922	3.911	0.011	98	2963442	200.0	194.5	
49 Propionitrile	54	3.954	3.943	0.011	99	3100256	1000.0	893.0	
51 Methacrylonitrile	41	4.059	4.059	0.000	88	8052475	1000.0	901.8	
63 n-Butanol	56	4.629	4.619	0.010	49	950918	2500.0	2449.8	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	90	3005019	100.0	95.2	
71 Methyl methacrylate	100	5.252	5.252	0.000	88	743129	200.0	191.3	
75 2-Nitropropane	41	5.600	5.600	0.000	97	923244	200.0	185.2	
98 cis-1,4-Dichloro-2-butene	53	8.249	8.249	0.000	0	873429	200.0	186.9	
114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	99	3218247	100.0	96.2	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	96	945738	100.0	96.8	

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00062 Amount Added: 100.00 Units: uL

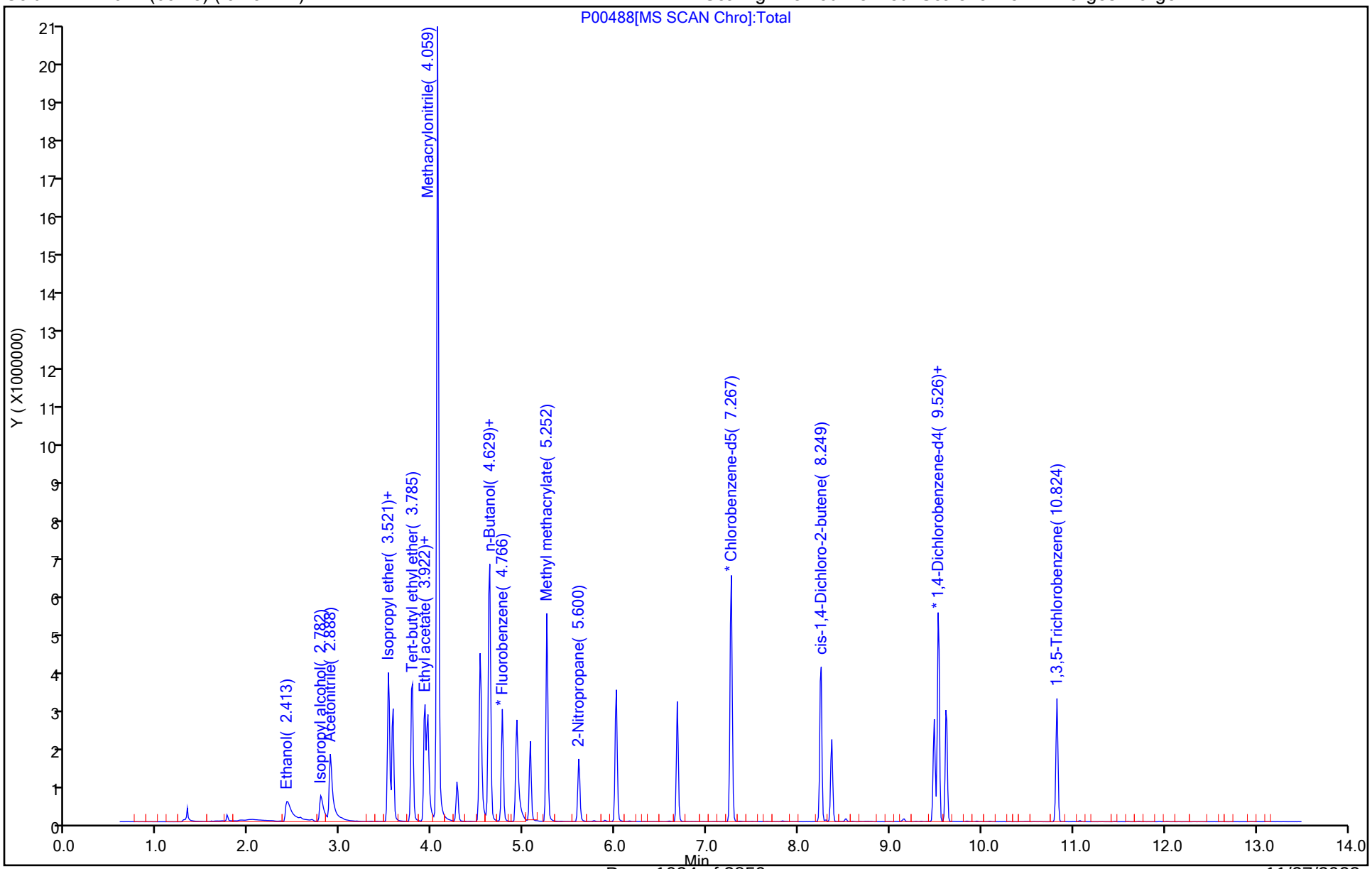
Report Date: 11-Apr-2023 18:07:24 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00488.D

Injection Date:	10-Apr-2023 20:07:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD100			Worklist Smp#:	26
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 10-Apr-2023 20:30:30 ALS Bottle#: 19 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub217

Method: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 18:07:25 Calib Date: 10-Apr-2023 20:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1652

First Level Reviewer: RWB2 Date: 11-Apr-2023 11:54:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2107289	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	89	495645	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	705628	50.0	50.0	
18 Ethanol	45	2.434	2.402	0.032	99	3708935	12000	11863	
25 Isopropyl alcohol	45	2.793	2.772	0.021	99	3427271	2000.0	2046.6	
28 Acetonitrile	41	2.888	2.888	0.000	99	5573850	2000.0	2105.2	
40 Isopropyl ether	87	3.521	3.521	0.000	93	1729347	200.0	203.8	
41 2-Chloro-1,3-butadiene	53	3.563	3.574	-0.011	90	2971497	200.0	200.7	
43 Tert-butyl ethyl ether	59	3.785	3.774	0.011	97	5878894	200.0	193.7	
46 Ethyl acetate	43	3.922	3.911	0.011	98	5836379	400.0	405.6	
49 Propionitrile	54	3.954	3.943	0.011	99	6378967	2000.0	1937.2	
51 Methacrylonitrile	41	4.059	4.059	0.000	90	13763533	2000.0	1625.0	
63 n-Butanol	56	4.619	4.619	0.000	50	1845490	5000.0	5012.6	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	91	5928647	200.0	198.0	
71 Methyl methacrylate	100	5.252	5.252	0.000	88	1456960	400.0	395.4	
75 2-Nitropropane	41	5.600	5.600	0.000	97	1819029	400.0	384.8	
98 cis-1,4-Dichloro-2-butene	53	8.249	8.249	0.000	0	1814205	400.0	383.8	
114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	99	6561102	200.0	193.8	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	96	1993631	200.0	201.7	

QC Flag Legend

Processing Flags

Reagents:

mv-Cent IS_00007 Amount Added: 5.00 Units: uL
MV-Supp B_00062 Amount Added: 200.00 Units: uL

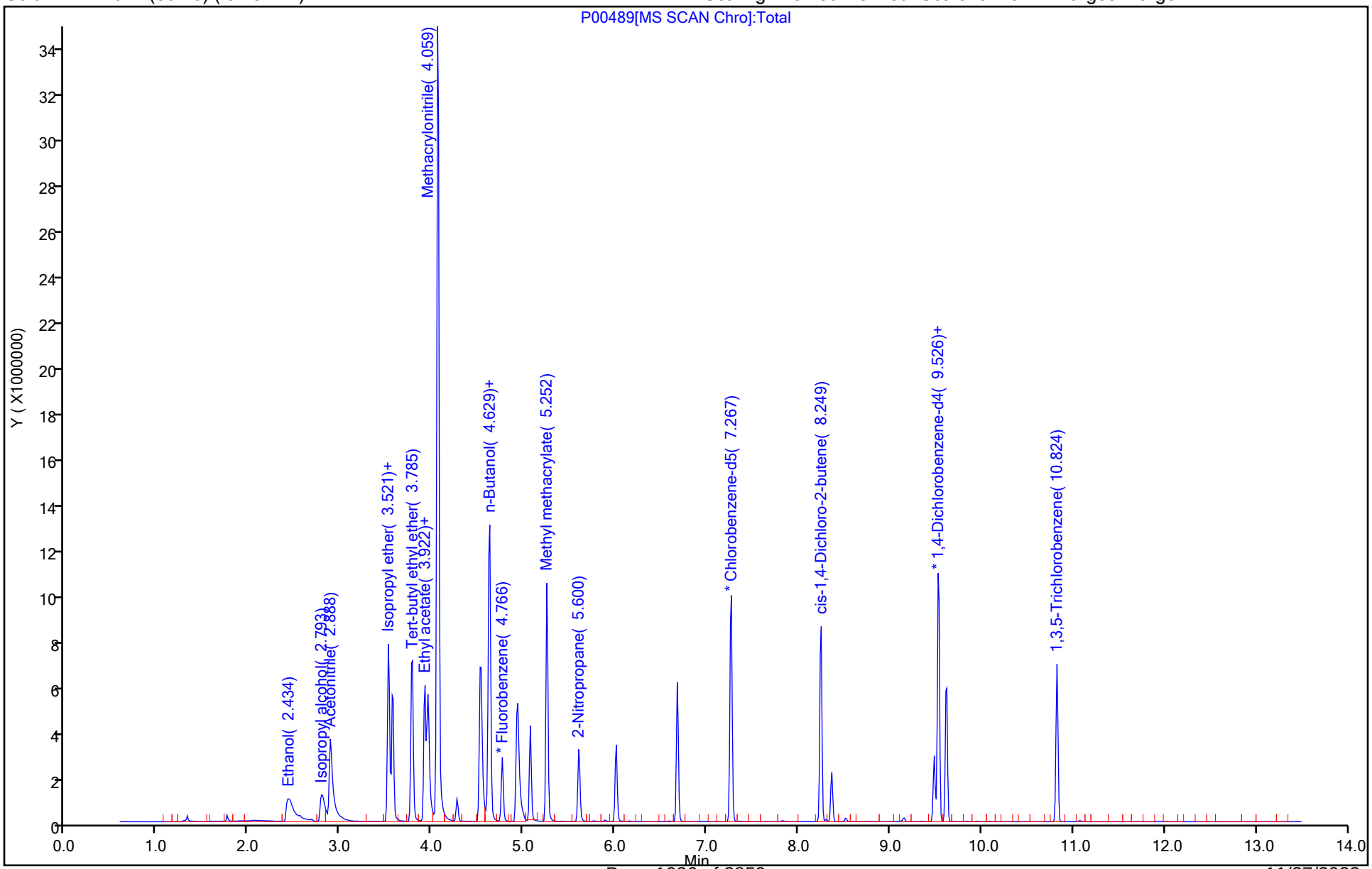
Report Date: 11-Apr-2023 18:07:26 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230410-120269.b\P00489.D

Injection Date:	10-Apr-2023 20:30:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD200			Worklist Smp#:	27
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Ethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

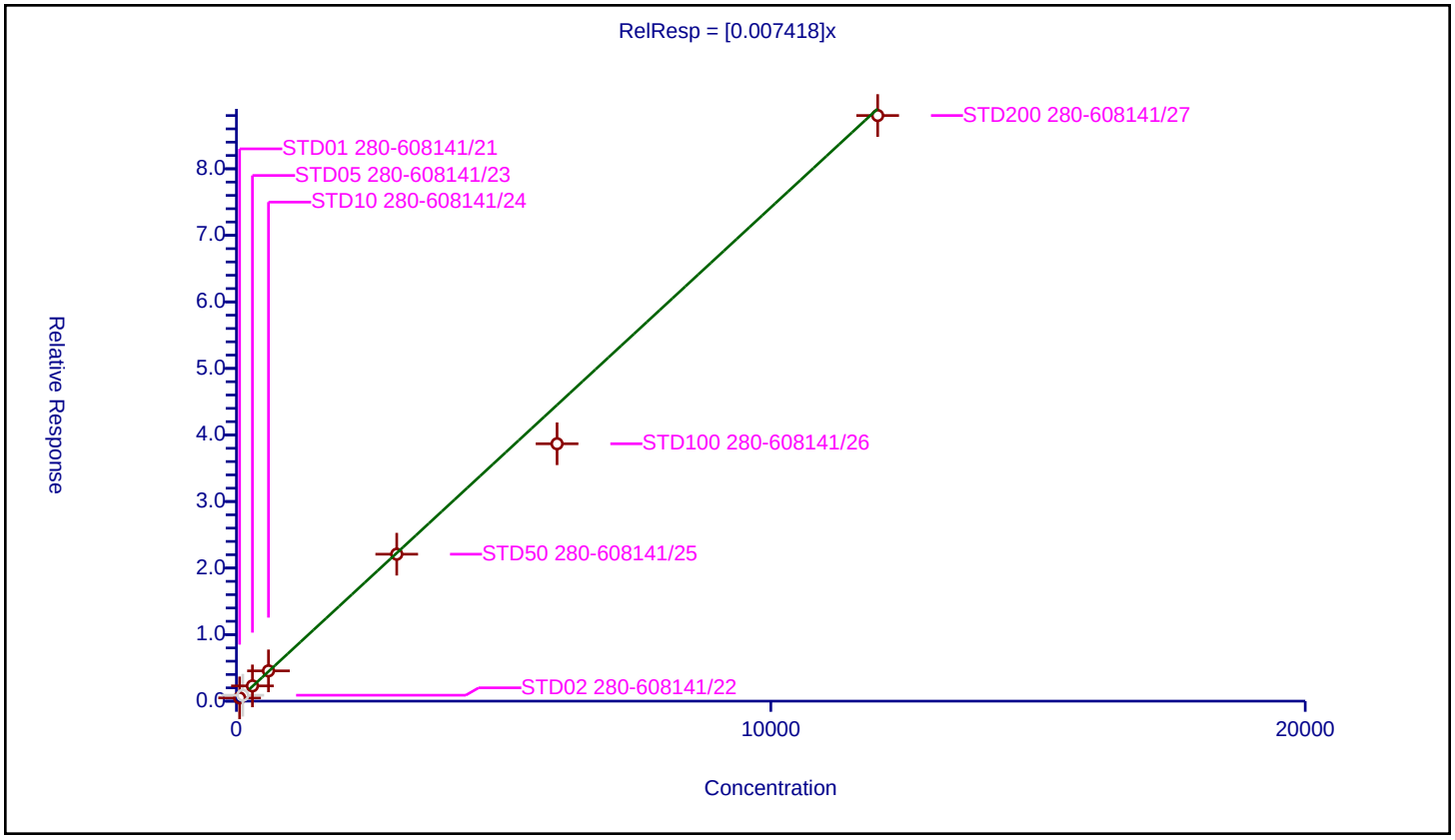
Curve Coefficients

Intercept:	0
Slope:	0.007418

Error Coefficients

Standard Error:	1870000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	60.0	0.48886	50.0	2034939.0	0.008148	Y
2	STD02 280-608141/22	120.0	0.889219	50.0	2001363.0	0.00741	N
3	STD05 280-608141/23	300.0	2.291868	50.0	2026971.0	0.00764	Y
4	STD10 280-608141/24	600.0	4.549284	50.0	2022747.0	0.007582	Y
5	STD50 280-608141/25	3000.0	22.084121	50.0	2056944.0	0.007361	Y
6	STD100 280-608141/26	6000.0	38.678495	50.0	2221732.0	0.006446	Y
7	STD200 280-608141/27	12000.0	88.002524	50.0	2107289.0	0.007334	Y



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Calibration / Isopropyl alcohol

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

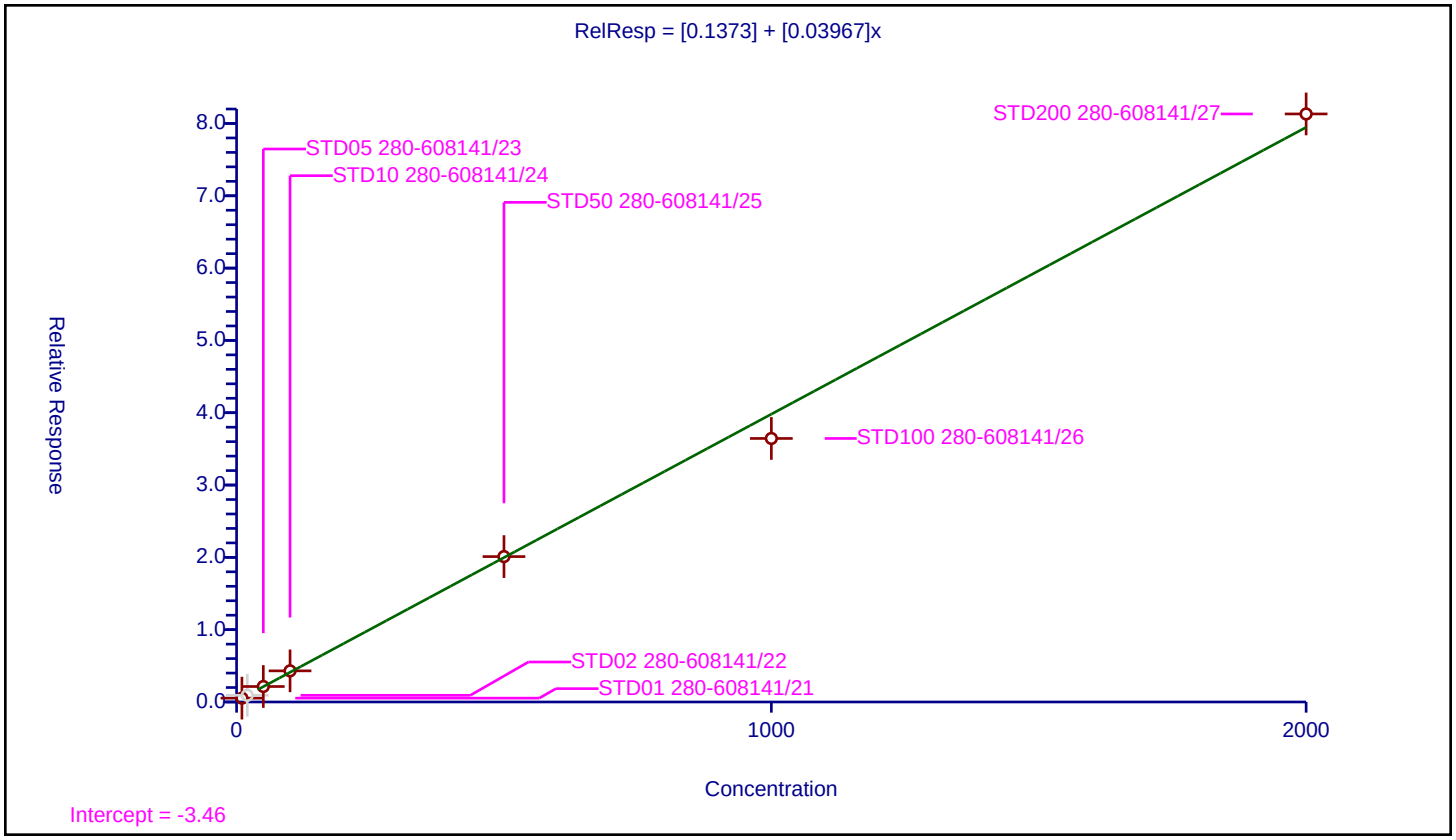
Curve Coefficients

Intercept:	0.1373
Slope:	0.03967

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	5.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	10.0	0.531392	50.0	2034939.0	0.053139	Y
2	STD02 280-608141/22	20.0	0.922946	50.0	2001363.0	0.046147	N
3	STD05 280-608141/23	50.0	2.141225	50.0	2026971.0	0.042824	Y
4	STD10 280-608141/24	100.0	4.305234	50.0	2022747.0	0.043052	Y
5	STD50 280-608141/25	500.0	20.108229	50.0	2056944.0	0.040216	Y
6	STD100 280-608141/26	1000.0	36.442019	50.0	2221732.0	0.036442	Y
7	STD200 280-608141/27	2000.0	81.319435	50.0	2107289.0	0.04066	Y



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Calibration / Acetonitrile

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

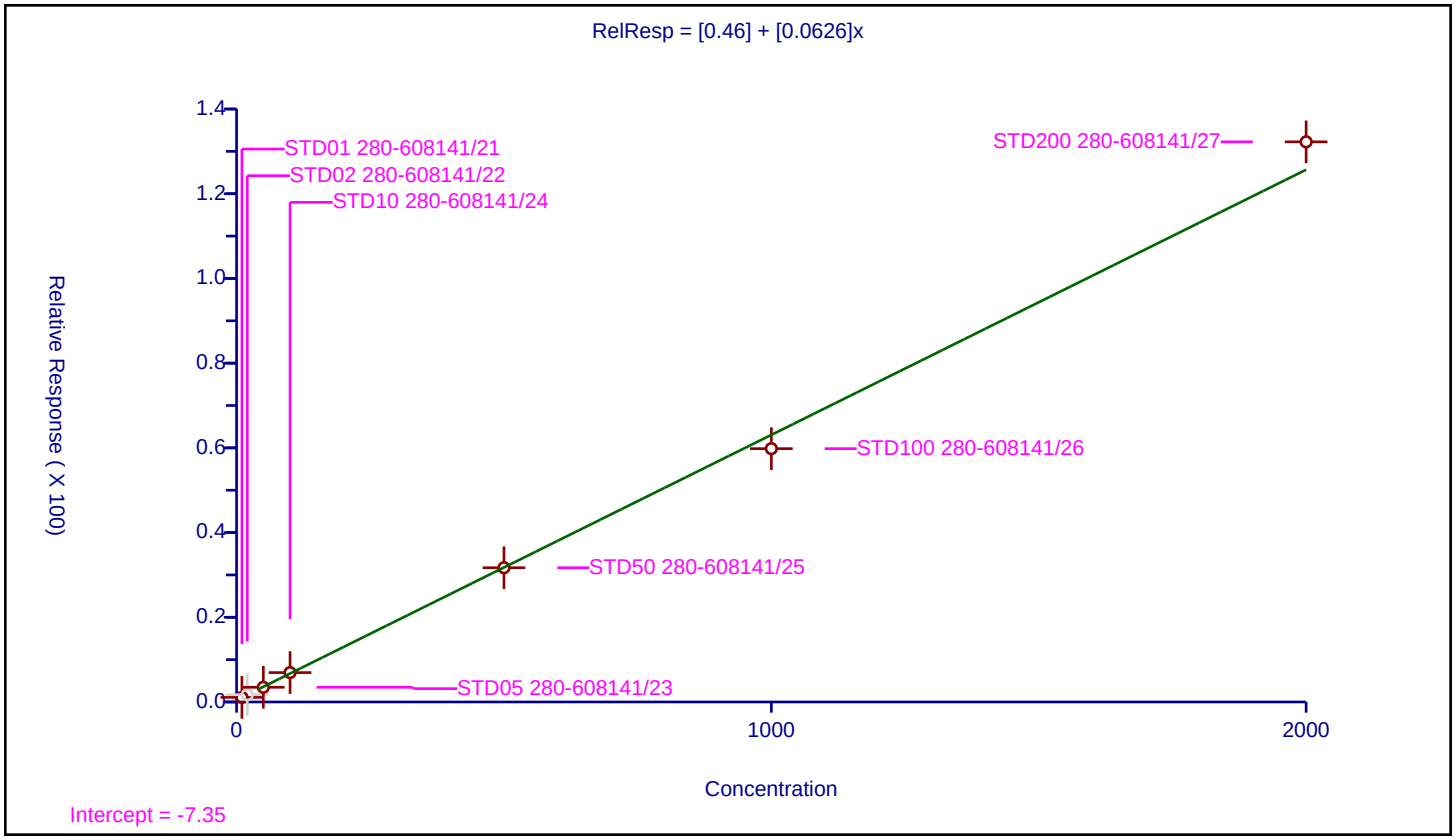
Curve Coefficients

Intercept:	0.46
Slope:	0.0626

Error Coefficients

Standard Error:	3160000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	10.0	1.08878	50.0	2034939.0	0.108878	Y
2	STD02 280-608141/22	20.0	1.721577	50.0	2001363.0	0.086079	N
3	STD05 280-608141/23	50.0	3.470647	50.0	2026971.0	0.069413	Y
4	STD10 280-608141/24	100.0	6.940735	50.0	2022747.0	0.069407	Y
5	STD50 280-608141/25	500.0	31.694981	50.0	2056944.0	0.06339	Y
6	STD100 280-608141/26	1000.0	59.816688	50.0	2221732.0	0.059817	Y
7	STD200 280-608141/27	2000.0	132.251675	50.0	2107289.0	0.066126	Y



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Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

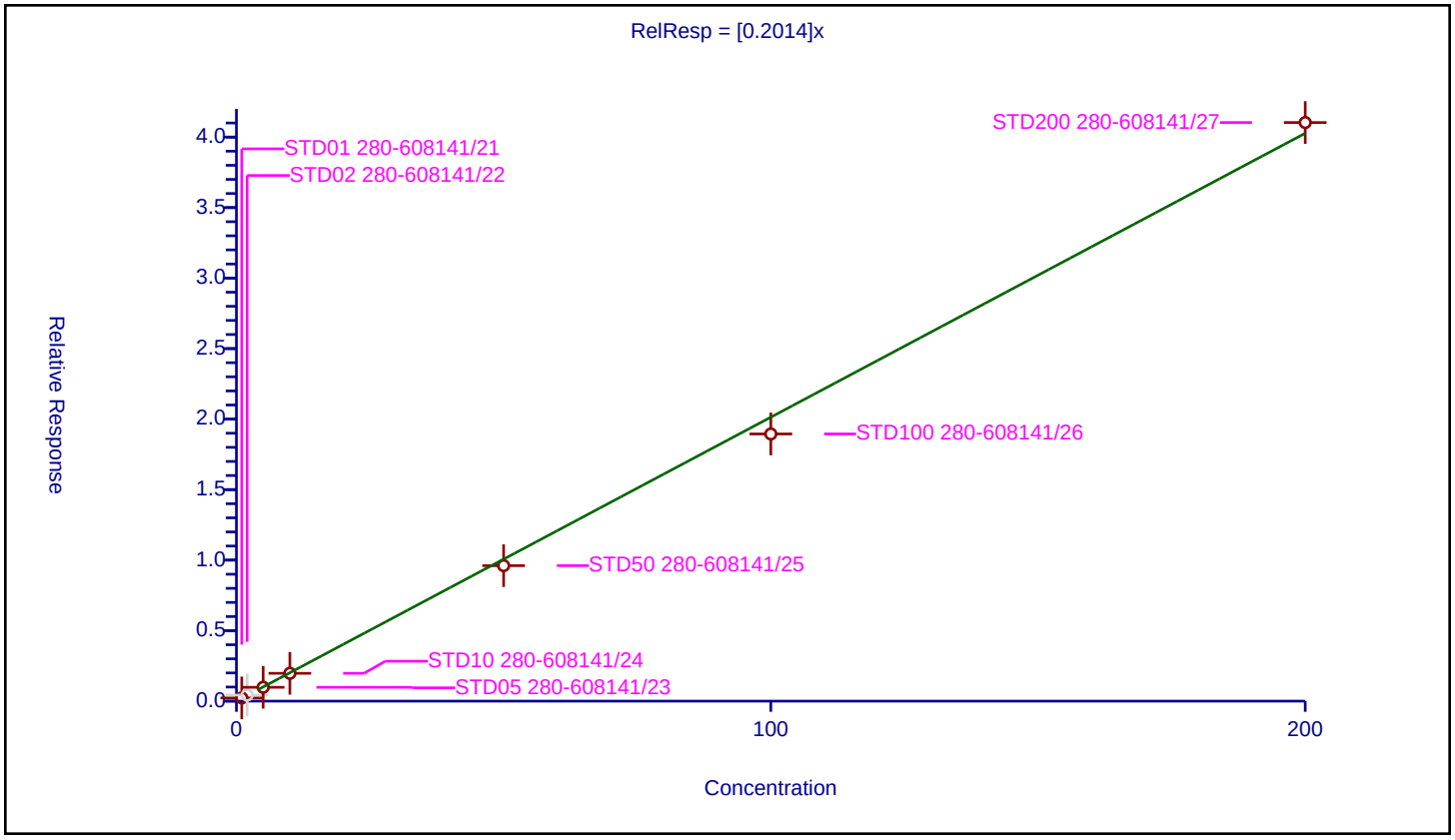
Curve Coefficients

Intercept:	0
Slope:	0.2014

Error Coefficients

Standard Error:	879000
Relative Standard Error:	7.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	1.0	0.227796	50.0	2034939.0	0.227796	Y
2	STD02 280-608141/22	2.0	0.429083	50.0	2001363.0	0.214541	N
3	STD05 280-608141/23	5.0	0.981119	50.0	2026971.0	0.196224	Y
4	STD10 280-608141/24	10.0	1.973504	50.0	2022747.0	0.19735	Y
5	STD50 280-608141/25	50.0	9.607213	50.0	2056944.0	0.192144	Y
6	STD100 280-608141/26	100.0	18.946705	50.0	2221732.0	0.189467	Y
7	STD200 280-608141/27	200.0	41.032507	50.0	2107289.0	0.205163	Y



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Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

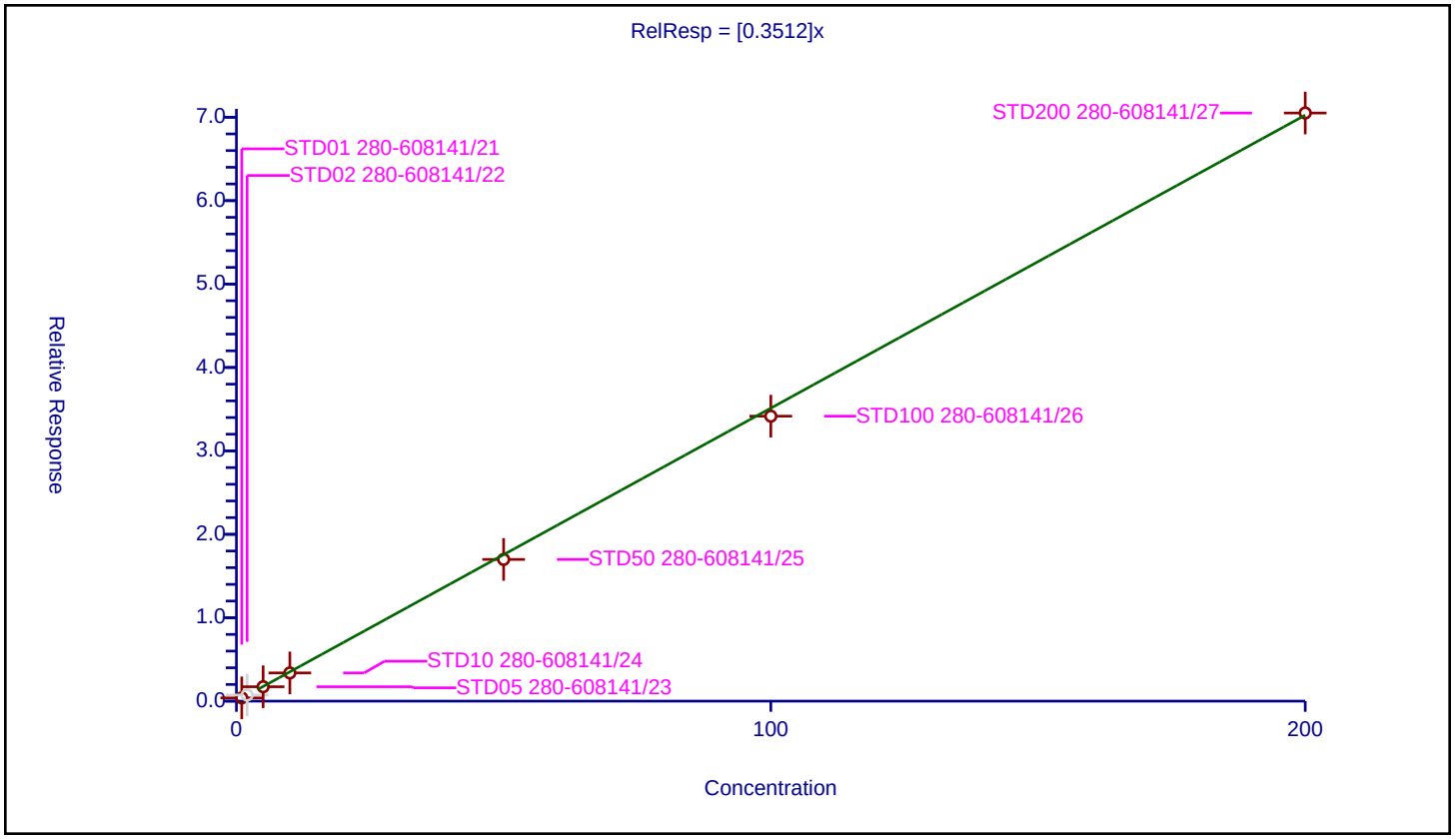
Curve Coefficients

Intercept:	0
Slope:	0.3512

Error Coefficients

Standard Error:	1530000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	1.0	0.390159	50.0	2034939.0	0.390159	Y
2	STD02 280-608141/22	2.0	0.735324	50.0	2001363.0	0.367662	N
3	STD05 280-608141/23	5.0	1.725654	50.0	2026971.0	0.345131	Y
4	STD10 280-608141/24	10.0	3.382628	50.0	2022747.0	0.338263	Y
5	STD50 280-608141/25	50.0	16.988965	50.0	2056944.0	0.339779	Y
6	STD100 280-608141/26	100.0	34.161366	50.0	2221732.0	0.341614	Y
7	STD200 280-608141/27	200.0	70.505208	50.0	2107289.0	0.352526	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

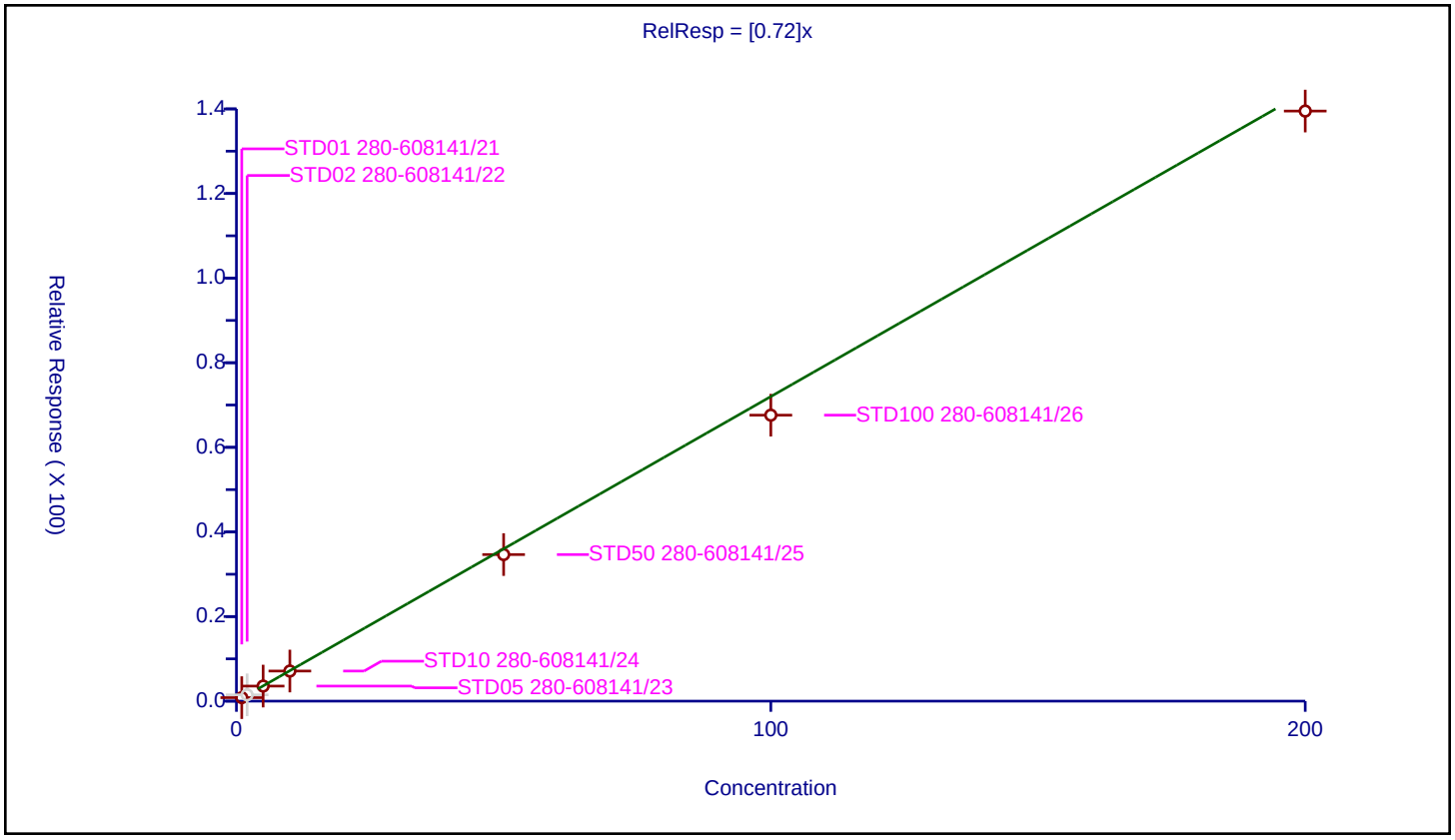
Curve Coefficients

Intercept:	0
Slope:	0.72

Error Coefficients

Standard Error:	3020000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	1.0	0.829951	50.0	2034939.0	0.829951	Y
2	STD02 280-608141/22	2.0	1.489135	50.0	2001363.0	0.744568	N
3	STD05 280-608141/23	5.0	3.561102	50.0	2026971.0	0.71222	Y
4	STD10 280-608141/24	10.0	7.114928	50.0	2022747.0	0.711493	Y
5	STD50 280-608141/25	50.0	34.652086	50.0	2056944.0	0.693042	Y
6	STD100 280-608141/26	100.0	67.604103	50.0	2221732.0	0.676041	Y
7	STD200 280-608141/27	200.0	139.489505	50.0	2107289.0	0.697448	Y



Calibration / Ethyl acetate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

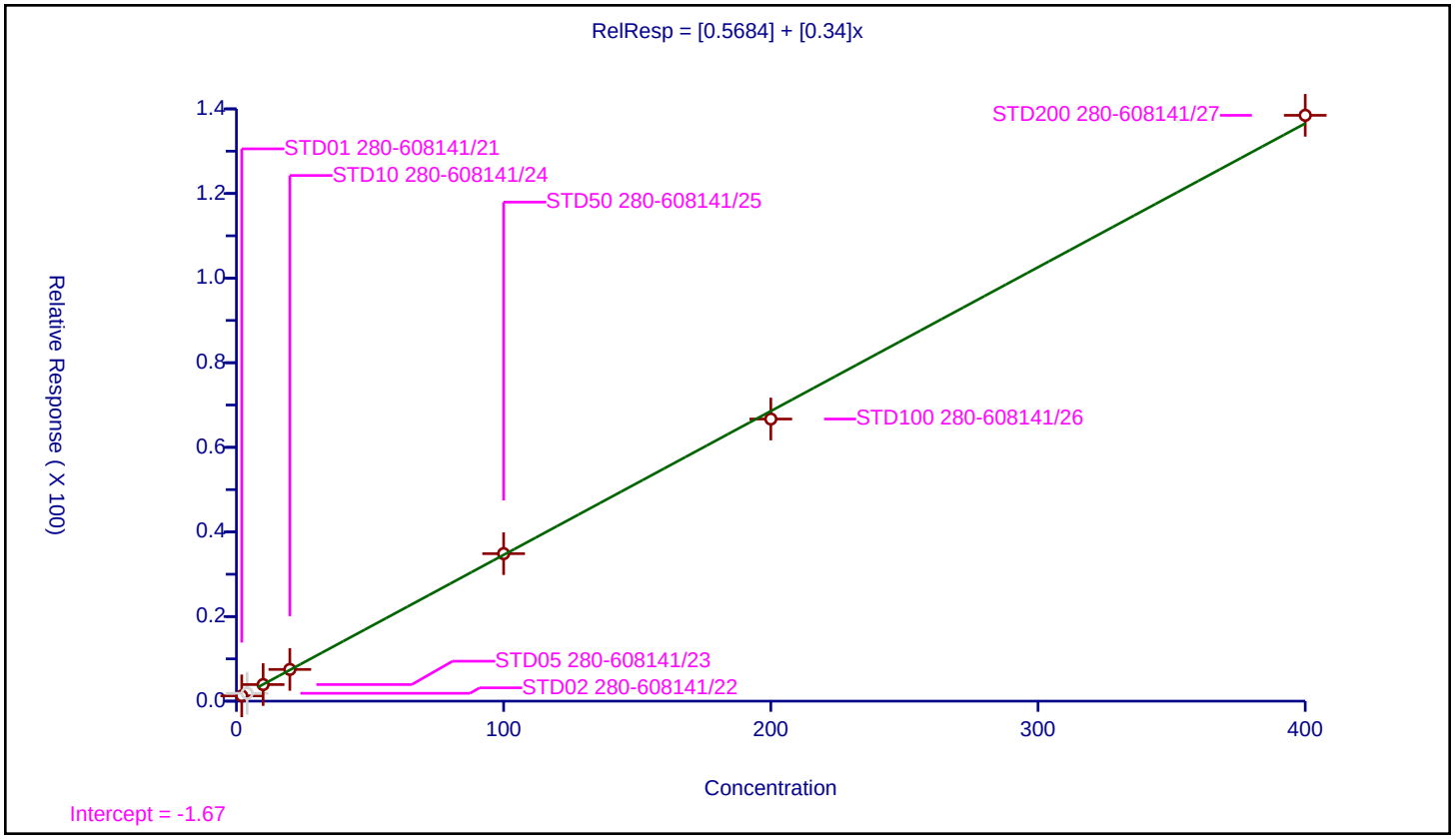
Curve Coefficients

Intercept:	0.5684
Slope:	0.34

Error Coefficients

Standard Error:	3350000
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	2.0	1.249128	50.0	2034939.0	0.624564	Y
2	STD02 280-608141/22	4.0	1.85691	50.0	2001363.0	0.464227	N
3	STD05 280-608141/23	10.0	3.918507	50.0	2026971.0	0.391851	Y
4	STD10 280-608141/24	20.0	7.492707	50.0	2022747.0	0.374635	Y
5	STD50 280-608141/25	100.0	34.862568	50.0	2056944.0	0.348626	Y
6	STD100 280-608141/26	200.0	66.692157	50.0	2221732.0	0.333461	Y
7	STD200 280-608141/27	400.0	138.480745	50.0	2107289.0	0.346202	Y



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Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

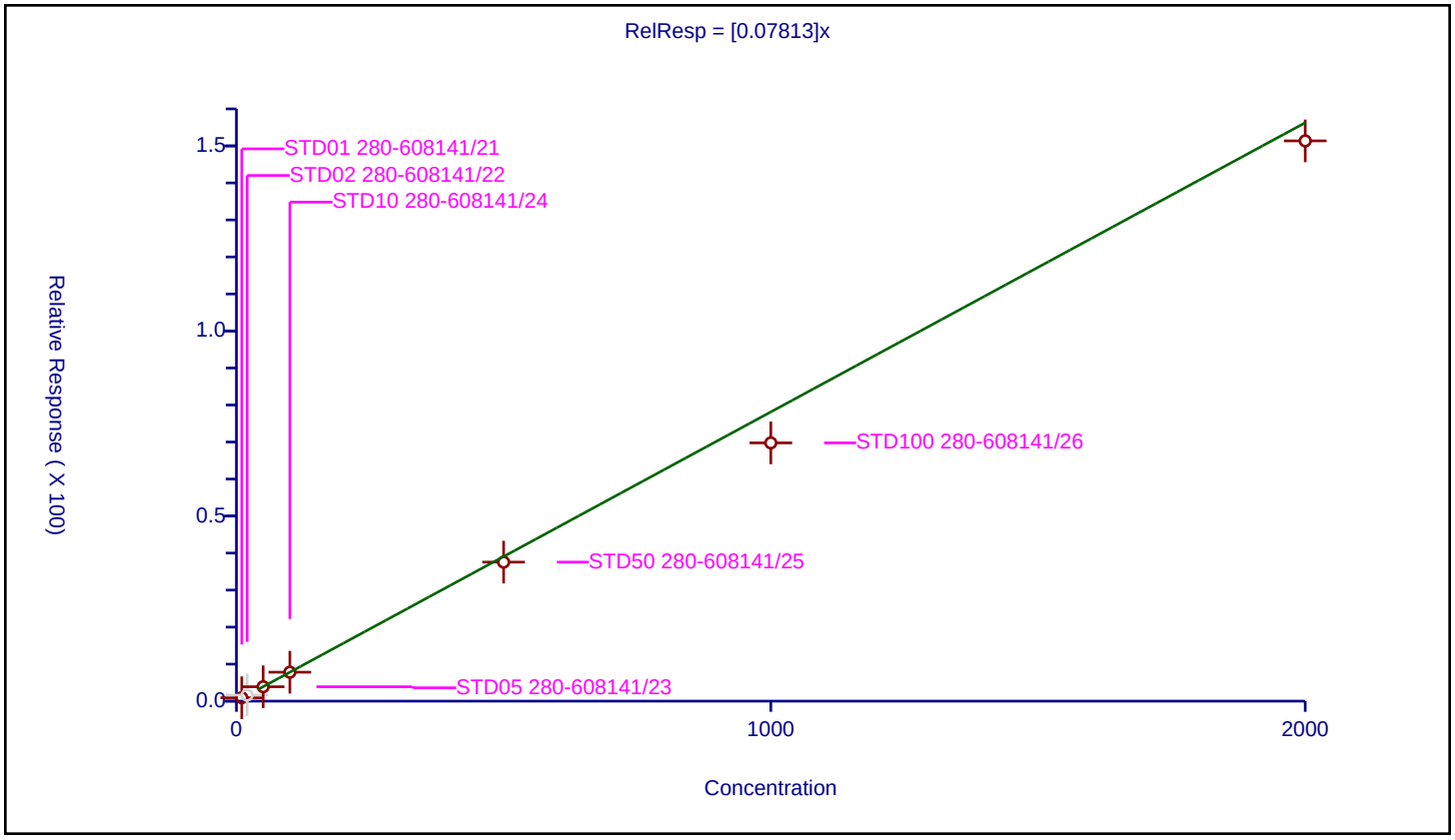
Curve Coefficients

Intercept:	0
Slope:	0.07813

Error Coefficients

Standard Error:	3250000
Relative Standard Error:	9.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	10.0	0.92278	50.0	2034939.0	0.092278	Y
2	STD02 280-608141/22	20.0	1.639133	50.0	2001363.0	0.081957	N
3	STD05 280-608141/23	50.0	3.887007	50.0	2026971.0	0.07774	Y
4	STD10 280-608141/24	100.0	7.820998	50.0	2022747.0	0.07821	Y
5	STD50 280-608141/25	500.0	37.552943	50.0	2056944.0	0.075106	Y
6	STD100 280-608141/26	1000.0	69.771152	50.0	2221732.0	0.069771	Y
7	STD200 280-608141/27	2000.0	151.354821	50.0	2107289.0	0.075677	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

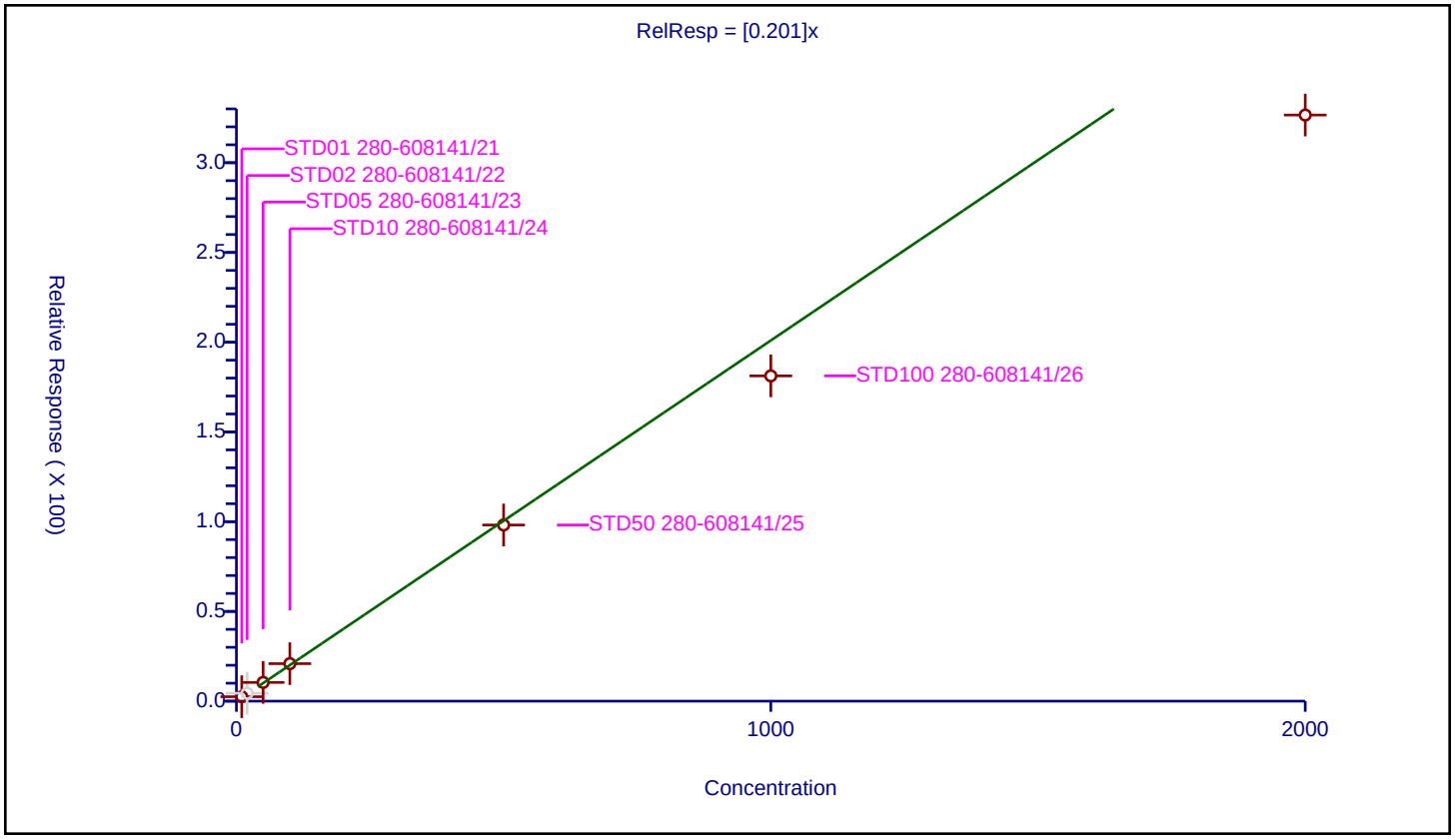
Curve Coefficients

Intercept:	0
Slope:	0.201

Error Coefficients

Standard Error:	7370000
Relative Standard Error:	14.3
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	10.0	2.474227	50.0	2034939.0	0.247423	Y
2	STD02 280-608141/22	20.0	4.414991	50.0	2001363.0	0.22075	N
3	STD05 280-608141/23	50.0	10.430391	50.0	2026971.0	0.208608	Y
4	STD10 280-608141/24	100.0	20.894086	50.0	2022747.0	0.208941	Y
5	STD50 280-608141/25	500.0	98.150193	50.0	2056944.0	0.1963	Y
6	STD100 280-608141/26	1000.0	181.220665	50.0	2221732.0	0.181221	Y
7	STD200 280-608141/27	2000.0	326.569659	50.0	2107289.0	0.163285	Y



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Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

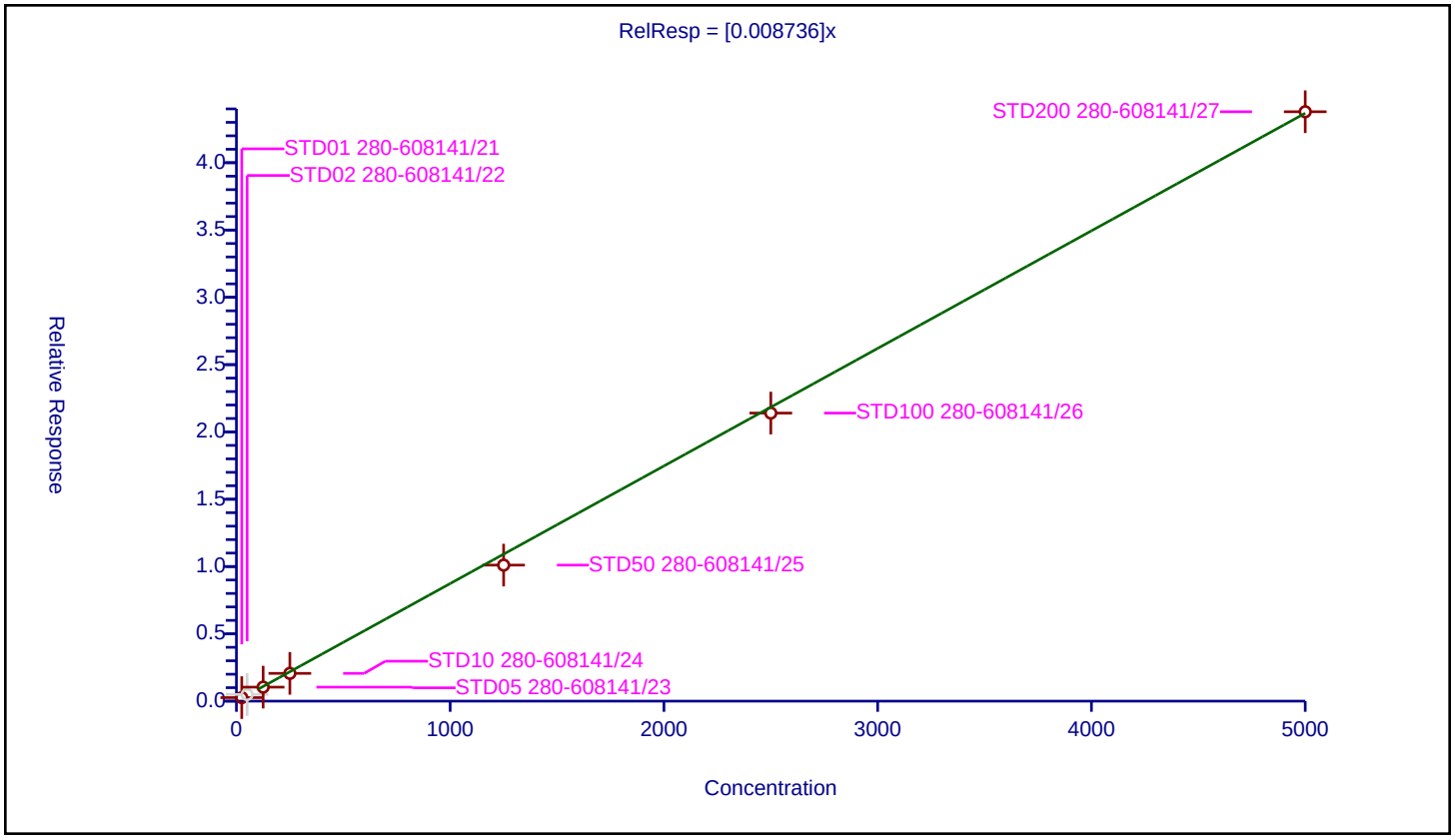
Curve Coefficients

Intercept:	0
Slope:	0.008736

Error Coefficients

Standard Error:	948000
Relative Standard Error:	10.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	25.0	0.261212	50.0	2034939.0	0.010448	Y
2	STD02 280-608141/22	50.0	0.493039	50.0	2001363.0	0.009861	N
3	STD05 280-608141/23	125.0	1.039334	50.0	2026971.0	0.008315	Y
4	STD10 280-608141/24	250.0	2.062196	50.0	2022747.0	0.008249	Y
5	STD50 280-608141/25	1250.0	10.105598	50.0	2056944.0	0.008084	Y
6	STD100 280-608141/26	2500.0	21.400376	50.0	2221732.0	0.00856	Y
7	STD200 280-608141/27	5000.0	43.788251	50.0	2107289.0	0.008758	Y



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Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

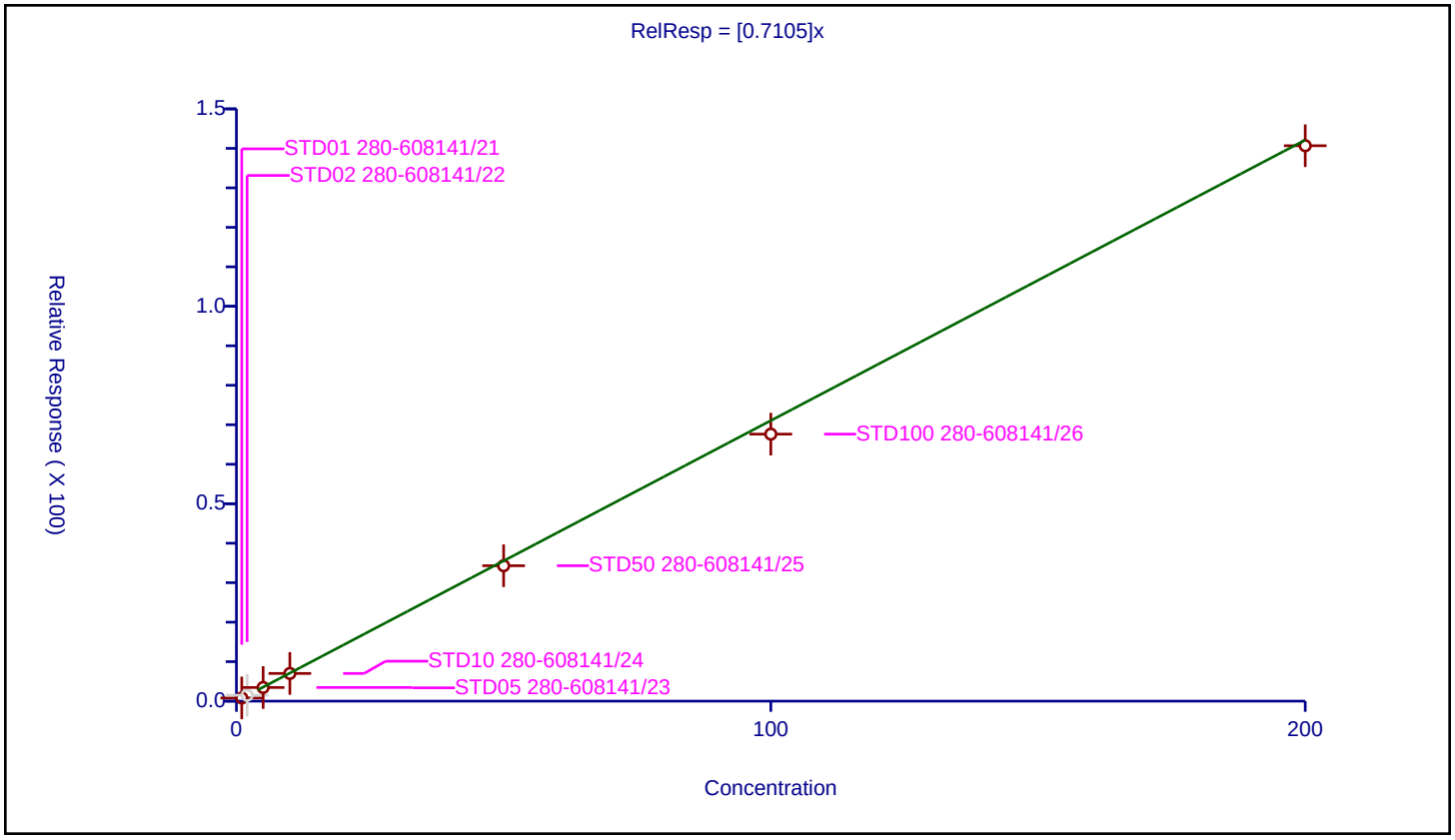
Curve Coefficients

Intercept:	0
Slope:	0.7105

Error Coefficients

Standard Error:	3040000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	1.0	0.805307	50.0	2034939.0	0.805307	Y
2	STD02 280-608141/22	2.0	1.499878	50.0	2001363.0	0.749939	N
3	STD05 280-608141/23	5.0	3.457326	50.0	2026971.0	0.691465	Y
4	STD10 280-608141/24	10.0	7.009379	50.0	2022747.0	0.700938	Y
5	STD50 280-608141/25	50.0	34.296996	50.0	2056944.0	0.68594	Y
6	STD100 280-608141/26	100.0	67.627846	50.0	2221732.0	0.676278	Y
7	STD200 280-608141/27	200.0	140.670003	50.0	2107289.0	0.70335	Y



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Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

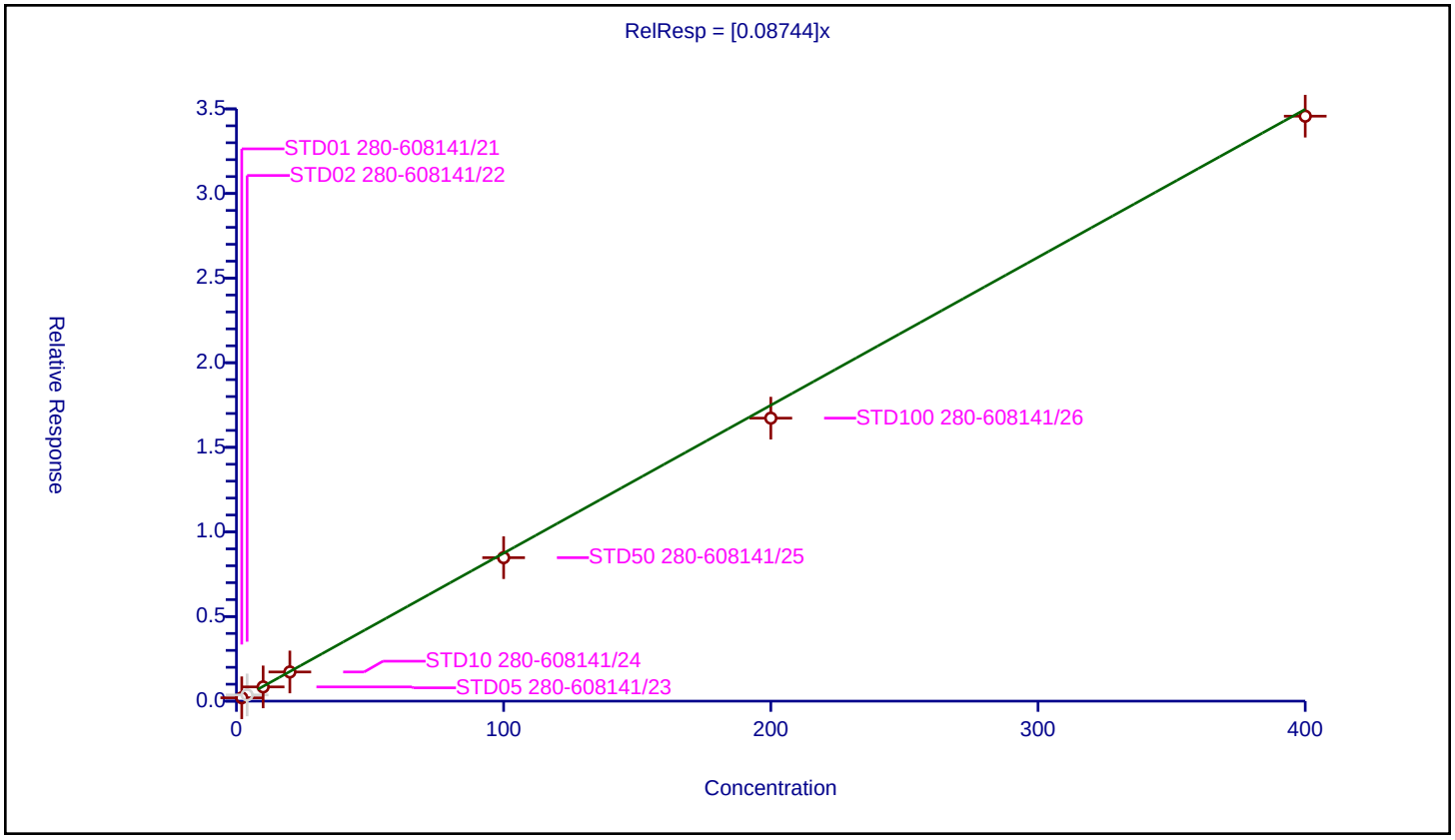
Curve Coefficients

Intercept:	0
Slope:	0.08744

Error Coefficients

Standard Error:	749000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	2.0	0.198827	50.0	2034939.0	0.099413	Y
2	STD02 280-608141/22	4.0	0.366675	50.0	2001363.0	0.091669	N
3	STD05 280-608141/23	10.0	0.841354	50.0	2026971.0	0.084135	Y
4	STD10 280-608141/24	20.0	1.724635	50.0	2022747.0	0.086232	Y
5	STD50 280-608141/25	100.0	8.478816	50.0	2056944.0	0.084788	Y
6	STD100 280-608141/26	200.0	16.724092	50.0	2221732.0	0.08362	Y
7	STD200 280-608141/27	400.0	34.569535	50.0	2107289.0	0.086424	Y



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Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

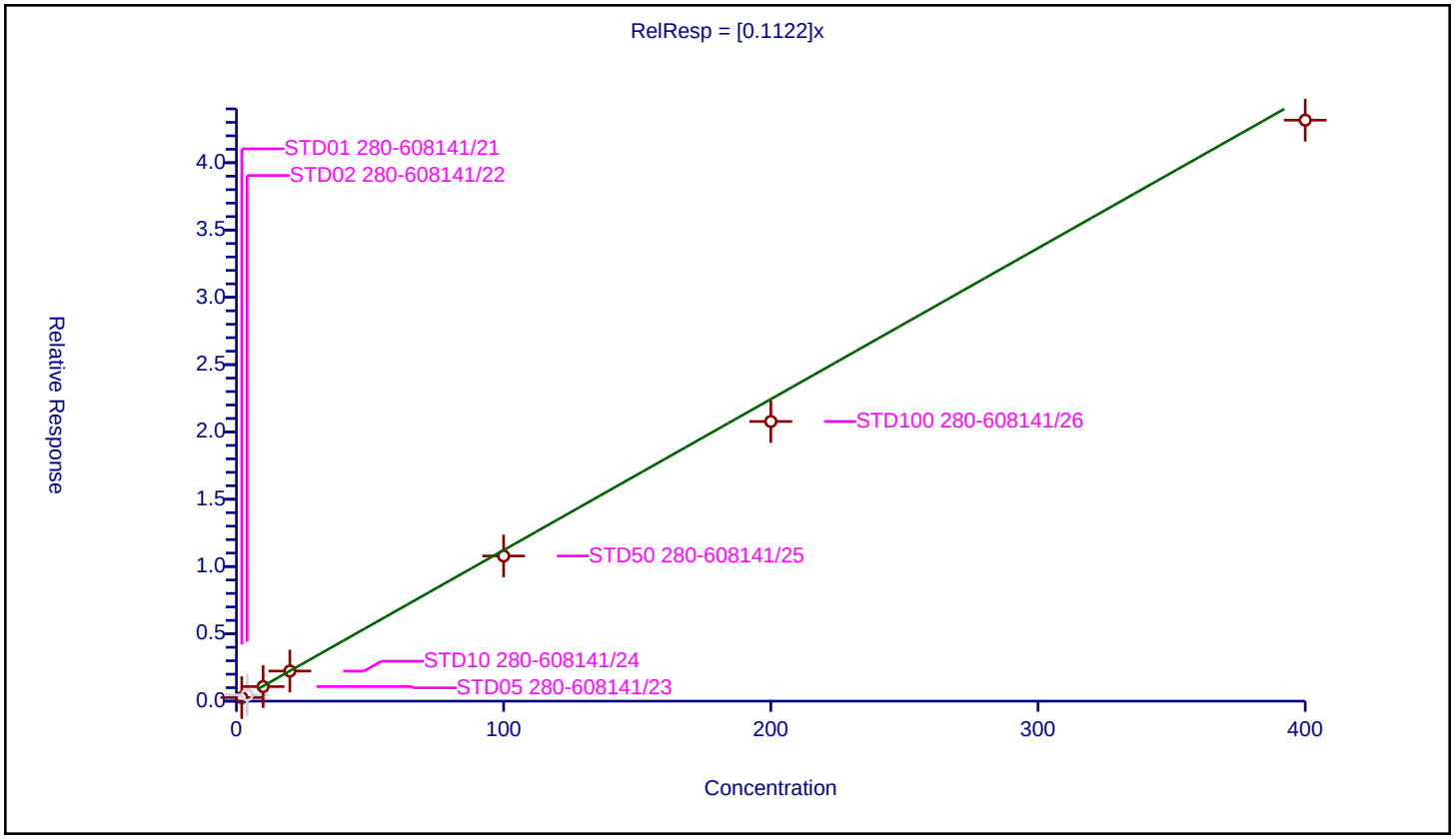
Curve Coefficients

Intercept:	0
Slope:	0.1122

Error Coefficients

Standard Error:	935000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	2.0	0.266666	50.0	2034939.0	0.133333	Y
2	STD02 280-608141/22	4.0	0.463809	50.0	2001363.0	0.115952	N
3	STD05 280-608141/23	10.0	1.081663	50.0	2026971.0	0.108166	Y
4	STD10 280-608141/24	20.0	2.238614	50.0	2022747.0	0.111931	Y
5	STD50 280-608141/25	100.0	10.784761	50.0	2056944.0	0.107848	Y
6	STD100 280-608141/26	200.0	20.777574	50.0	2221732.0	0.103888	Y
7	STD200 280-608141/27	400.0	43.160407	50.0	2107289.0	0.107901	Y



Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

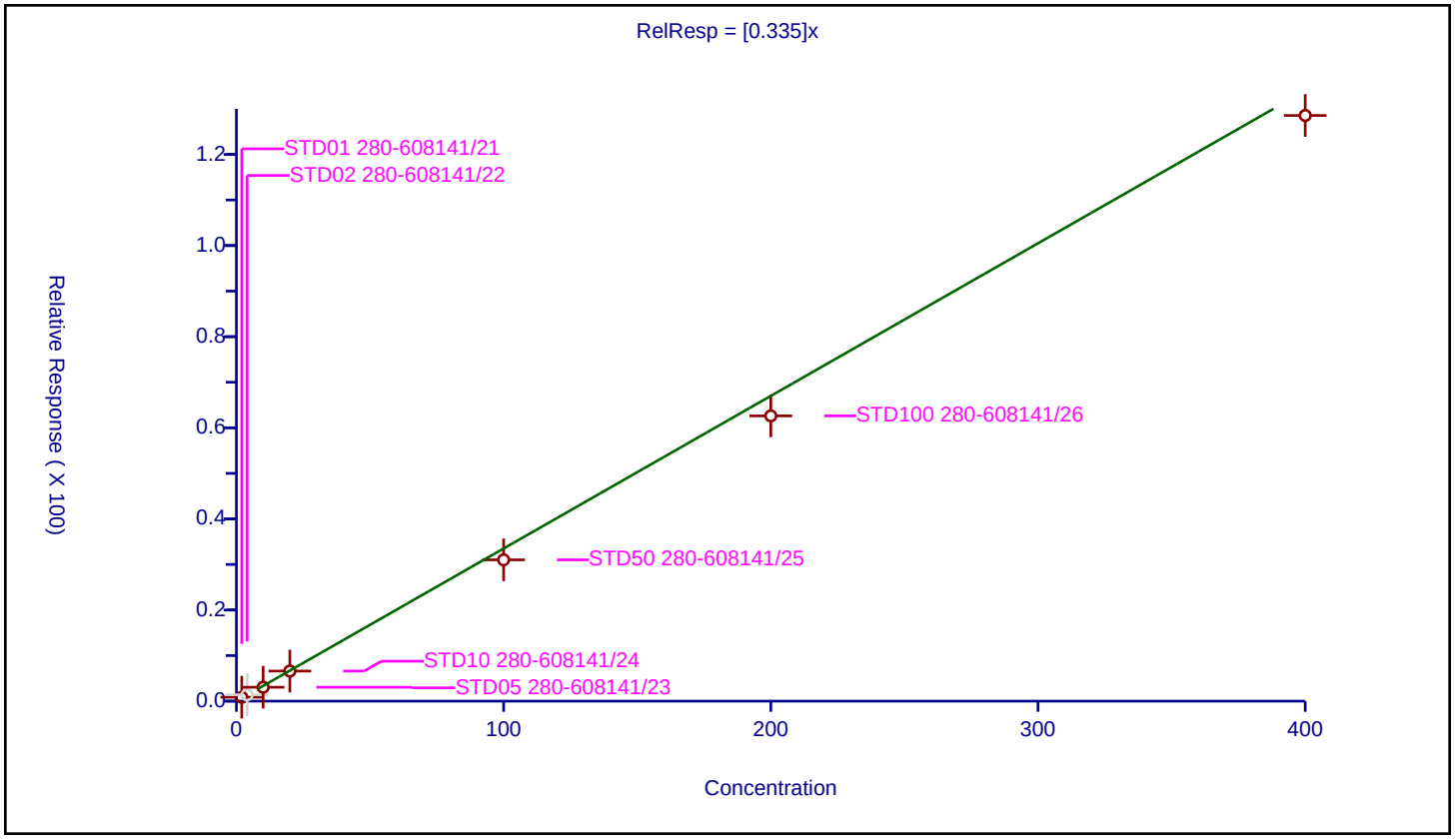
Curve Coefficients

Intercept:	0
Slope:	0.335

Error Coefficients

Standard Error:	922000
Relative Standard Error:	14.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	2.0	0.860431	50.0	699882.0	0.430215	Y
2	STD02 280-608141/22	4.0	1.393196	50.0	682065.0	0.348299	N
3	STD05 280-608141/23	10.0	3.048172	50.0	690545.0	0.304817	Y
4	STD10 280-608141/24	20.0	6.605606	50.0	665836.0	0.33028	Y
5	STD50 280-608141/25	100.0	31.01473	50.0	698107.0	0.310147	Y
6	STD100 280-608141/26	200.0	62.617862	50.0	697428.0	0.313089	Y
7	STD200 280-608141/27	400.0	128.552509	50.0	705628.0	0.321381	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

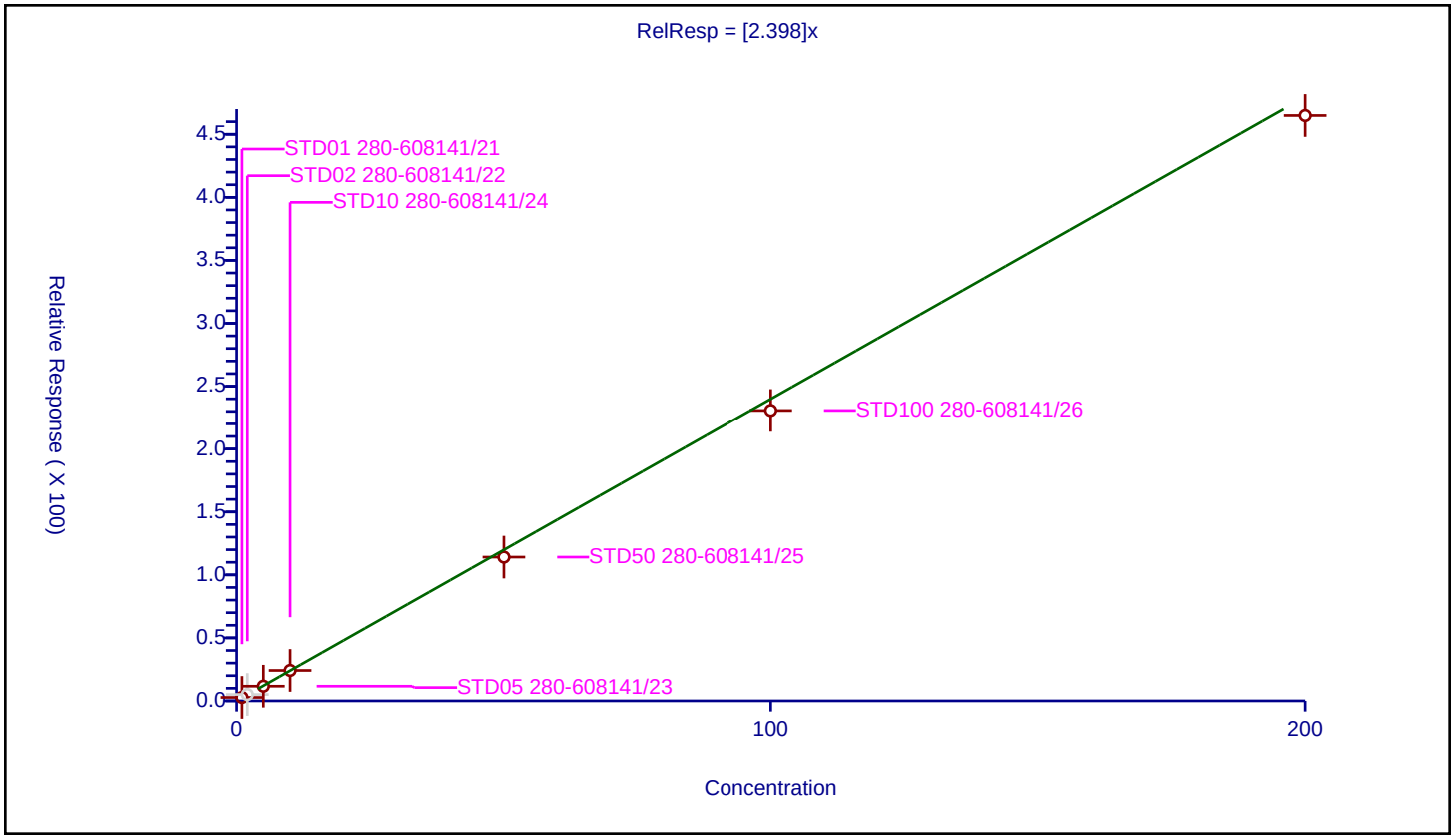
Curve Coefficients

Intercept:	0
Slope:	2.398

Error Coefficients

Standard Error:	3350000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	1.0	2.72846	50.0	699882.0	2.72846	Y
2	STD02 280-608141/22	2.0	5.065206	50.0	682065.0	2.532603	N
3	STD05 280-608141/23	5.0	11.663107	50.0	690545.0	2.332621	Y
4	STD10 280-608141/24	10.0	24.147838	50.0	665836.0	2.414784	Y
5	STD50 280-608141/25	50.0	114.134509	50.0	698107.0	2.28269	Y
6	STD100 280-608141/26	100.0	230.722526	50.0	697428.0	2.307225	Y
7	STD200 280-608141/27	200.0	464.912248	50.0	705628.0	2.324561	Y



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Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

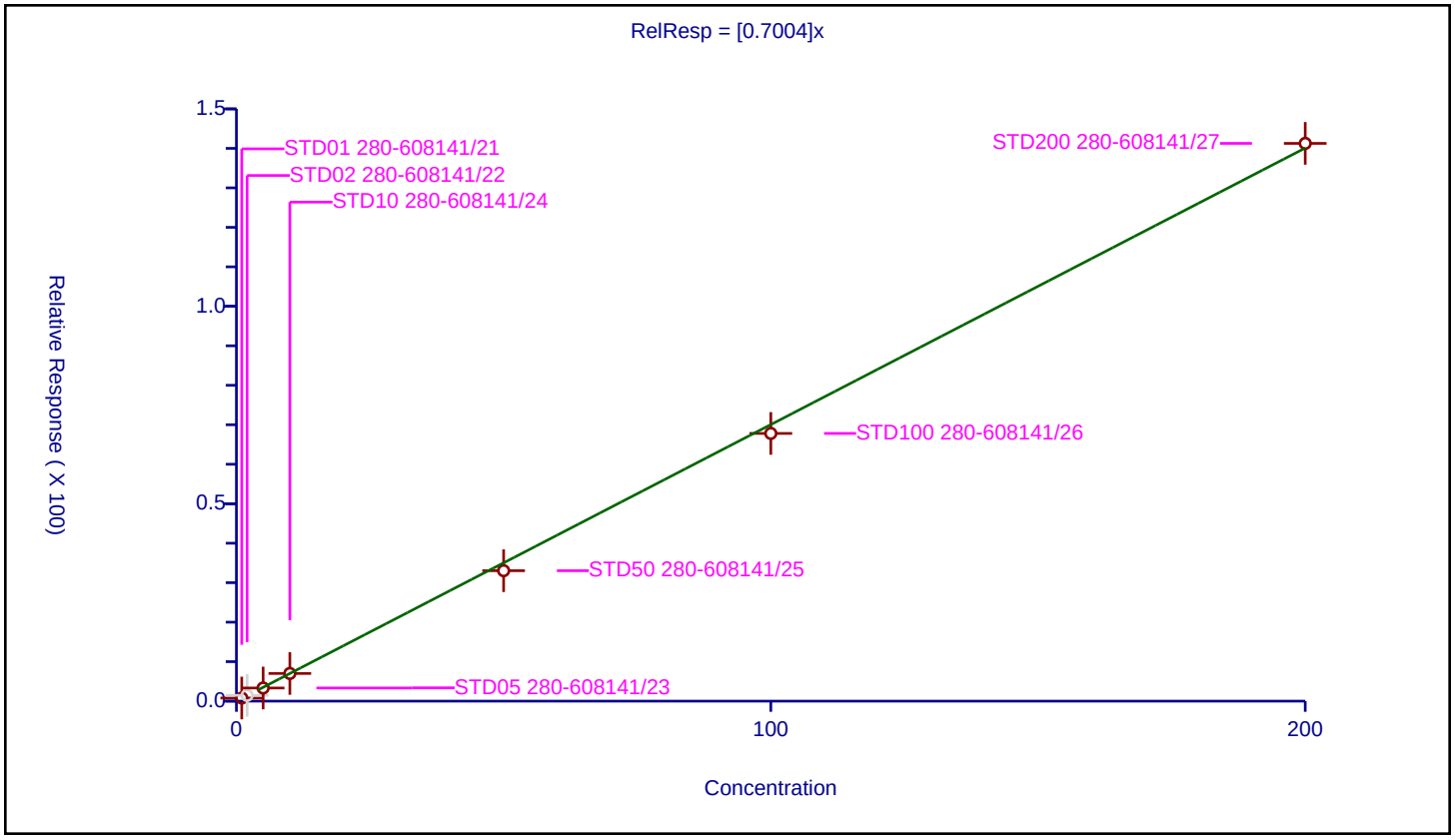
Curve Coefficients

Intercept:	0
Slope:	0.7004

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	6.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-608141/21	1.0	0.790633	50.0	699882.0	0.790633	Y
2	STD02 280-608141/22	2.0	1.468408	50.0	682065.0	0.734204	N
3	STD05 280-608141/23	5.0	3.331065	50.0	690545.0	0.666213	Y
4	STD10 280-608141/24	10.0	7.006305	50.0	665836.0	0.70063	Y
5	STD50 280-608141/25	50.0	33.038846	50.0	698107.0	0.660777	Y
6	STD100 280-608141/26	100.0	67.801838	50.0	697428.0	0.678018	Y
7	STD200 280-608141/27	200.0	141.266432	50.0	705628.0	0.706332	Y



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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 Calibration End Date: 04/11/2023 20:33 Calibration ID: 79167

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-608296/12	P00506.D
Level 2	STD010 280-608296/13	P00507.D
Level 3	STD020 280-608296/14	P00508.D
Level 4	STD050 280-608296/15	P00509.D
Level 5	STD10 280-608296/16	P00510.D
Level 6	ICIS 280-608296/17	P00511.D
Level 7	STD75 280-608296/18	P00512.D
Level 8	STD100 280-608296/19	P00513.D
Level 9	STD200 280-608296/20	P00514.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	+++++ 0.2118	0.1466 0.1774	0.1532 0.2053	0.2479 0.2112	0.2193	Lin1	-0.037	0.2051							0.9950		0.9900
Chloromethane	0.4220 0.2207	0.2268 0.2010	0.2156 0.2266	0.2618 0.2260	0.2277	Lin1	0.0630	0.2206			0.1000				0.9970		0.9900
Vinyl chloride	0.3493 0.2563	0.2300 0.2284	0.2296 0.2640	0.2998 0.2605	0.2622	Ave		0.2645				14.8		30.0			
Bromomethane	+++++ 0.0478	+++++ +++++	0.1456 0.0331	0.1276 0.0324	0.0703	Ave		0.0761				64.5	*	15.0			
Chloroethane	0.2797 0.1647	0.1749 0.1495	0.1614 0.1546	0.1983 0.1164	0.1645	Qua	-0.027	0.1818	-0.000325						0.9990		0.9900
Dichlorofluoromethane	0.5086 0.3609	0.3597 0.3296	0.3689 0.3719	0.4193 0.3683	0.3771	Ave		0.3849				13.5		15.0			
Trichlorofluoromethane	0.3292 0.2814	0.2318 0.2463	0.2494 0.2914	0.3169 0.2999	0.2839	Ave		0.2811				11.7		15.0			
Ethyl ether	0.1981 0.1775	0.1954 0.1782	0.1702 0.1826	0.1828 0.1786	0.1871	Ave		0.1834				4.9		15.0			
Acrolein	0.0535 0.0496	0.0474 0.0506	0.0464 0.0513	0.0518 0.0519	0.0510	Ave		0.0504				4.5		15.0			
1,1-Dichloroethene	0.1973 0.1873	0.1546 0.1770	0.1590 0.1927	0.1934 0.1899	0.1865	Ave		0.1820				8.5		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1418 0.1345	0.1002 0.1222	0.1158 0.1328	0.1390 0.1346	0.1277	Ave		0.1276				10.3		15.0			
Acetone	0.3074 0.1311	0.2261 0.1291	0.1655 0.1306	0.1547 0.1244	0.1408	Lin2	0.3604	0.1292							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 Calibration End Date: 04/11/2023 20:33 Calibration ID: 79167

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	0.2824 0.2779	0.2176 0.2728	0.2108 0.2888	0.2476 0.2796	0.2566	Ave		0.2593				11.1		15.0			
Carbon disulfide	+++++ 0.5982	0.6264 0.5645	0.5820 0.6218	0.6403 0.6004	0.6109	Ave		0.6056				4.1		15.0			
Methyl acetate	0.4834 0.2760	0.3851 0.2725	0.2892 0.2806	0.3160 0.2723	0.3044	Lin2	0.2036	0.2764							0.9950		0.9900
Allyl chloride	0.4433 0.2847	0.3209 0.2700	0.3086 0.2830	0.3224 0.2776	0.3103	Lin2	0.0724	0.2824							0.9940		0.9900
Methylene Chloride	0.3813 0.2176	0.2808 0.2139	0.2431 0.2228	0.2421 0.2172	0.2307	Lin2	0.0780	0.2166							0.9980		0.9900
2-Methyl-2-propanol	0.0672 0.0612	0.0631 0.0614	0.0631 0.0614	0.0655 0.0614	0.0639	Ave		0.0631				3.3		15.0			
Acrylonitrile	0.1655 0.1519	0.1457 0.1509	0.1477 0.1523	0.1600 0.1422	0.1583	Ave		0.1527				4.8		15.0			
Methyl tert-butyl ether	0.6991 0.6709	0.6236 0.6654	0.6475 0.6827	0.7049 0.6616	0.6817	Ave		0.6708				3.8		15.0			
trans-1,2-Dichloroethene	0.2466 0.2070	0.1825 0.2004	0.1889 0.2155	0.2163 0.2113	0.2064	Ave		0.2083				8.8		15.0			
Hexane	+++++ 1.2158	0.9591 1.0953	1.0413 1.1867	1.2526 1.2170	1.1571	Ave		1.1406				8.8		15.0			
Vinyl acetate	0.5330 0.4163	0.4734 0.4620	0.4251 0.4413	0.5037 0.4564	0.4479	Ave		0.4621				8.0		15.0			
1,1-Dichloroethane	0.3746 0.3795	0.3385 0.3636	0.3489 0.3826	0.3959 0.3704	0.3816	Ave		0.3706			0.1000	4.8		15.0			
2-Butanone (MEK)	0.3294 0.2085	0.2786 0.2070	0.2305 0.2088	0.2307 0.1981	0.2200	Lin2	0.2494	0.2080							0.9990		0.9900
cis-1,2-Dichloroethene	0.2592 0.2300	0.2265 0.2293	0.2127 0.2380	0.2406 0.2351	0.2296	Ave		0.2334				5.4		15.0			
2,2-Dichloropropane	0.3451 0.3299	0.2863 0.3094	0.2971 0.3303	0.3509 0.3189	0.3341	Ave		0.3225				6.7		15.0			
sec-Butyl Alcohol	0.0486 0.0465	0.0445 0.0465	0.0435 0.0467	0.0492 0.0449	0.0477	Ave		0.0465				4.1		15.0			
Chlorobromomethane	0.1202 0.1004	0.1008 0.0993	0.0958 0.1040	0.1050 0.1008	0.1024	Ave		0.1032				6.7		15.0			
Tetrahydrofuran	0.1754 0.1316	0.1456 0.1326	0.1348 0.1342	0.1393 0.1327	0.1340	Ave		0.1400				10.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 Calibration End Date: 04/11/2023 20:33 Calibration ID: 79167

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chloroform	0.4202 0.3740	0.3651 0.3641	0.3564 0.3796	0.3932 0.3596	0.3730	Ave		0.3761				5.3		30.0			
1,1,1-Trichloroethane	0.3294 0.3265	0.2918 0.3077	0.2806 0.3312	0.3386 0.3258	0.3223	Ave		0.3171				6.2		15.0			
Cyclohexane	0.4580 0.3740	0.3247 0.3420	0.3246 0.3673	0.3866 0.3726	0.3648	Ave		0.3683				10.9		15.0			
1,1-Dichloropropene	0.3021 0.3053	0.2618 0.2903	0.2653 0.3144	0.3131 0.3082	0.2987	Ave		0.2955				6.6		15.0			
Carbon tetrachloride	0.2603 0.2682	0.2199 0.2506	0.2319 0.2721	0.2741 0.2664	0.2614	Ave		0.2561				7.3		15.0			
Isobutyl alcohol	+++++ 0.0177	0.0196 0.0176	0.0177 0.0177	0.0188 0.0170	0.0179	Ave		0.0180				4.6		15.0			
Benzene	0.9278 0.8859	0.8171 0.8471	0.8157 0.8969	0.9250 0.8573	0.9028	Ave		0.8751				4.9		15.0			
1,2-Dichloroethane	+++++ 0.2874	0.3115 0.2850	0.2917 0.2917	0.3155 0.2859	0.3011	Ave		0.2962				4.0		15.0			
n-Heptane	+++++ 0.2375	0.4340 0.2165	0.3162 0.2363	0.2771 +++++	0.2409	Lin2	0.2034	0.2262							0.9970		0.9900
Trichloroethene	1.0577 0.9590	0.8113 0.9065	0.8818 0.9661	0.9977 0.9669	0.9430	Ave		0.9433				7.5		15.0			
2-Pentanone	0.3651 0.3151	0.3256 0.3103	0.3156 0.3130	0.3366 0.2972	0.3251	Ave		0.3226				6.0		15.0			
Methylcyclohexane	0.3413 0.2779	0.2171 0.2546	0.2369 0.2740	0.2825 0.2752	0.2701	Ave		0.2700				12.8		15.0			
1,2-Dichloropropane	0.2263 0.2310	0.2164 0.2267	0.2048 0.2345	0.2406 0.2301	0.2320	Ave		0.2269				4.7		30.0			
1,4-Dioxane	0.0077 0.0070	0.0072 0.0071	0.0064 0.0071	0.0074 0.0066	0.0074	Ave		0.0071				5.8		15.0			
Dibromomethane	+++++ 0.1368	0.1479 0.1370	0.1332 0.1406	0.1453 0.1342	0.1396	Ave		0.1393				3.7		15.0			
Dichlorobromomethane	0.3147 0.2794	0.2760 0.2779	0.2623 0.2886	0.2838 0.2828	0.2811	Ave		0.2830				4.9		15.0			
2-Chloroethyl vinyl ether	+++++ 0.1686	0.1763 0.1623	0.1729 0.1719	0.1886 0.1712	0.1753	Ave		0.1734				4.3		15.0			
cis-1,3-Dichloropropene	1.6179 1.5430	1.4237 1.5322	1.4265 1.5639	1.5758 1.5778	1.5638	Ave		1.5361				4.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 Calibration End Date: 04/11/2023 20:33 Calibration ID: 79167

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Methyl-2-pentanone (MIBK)	0.3446 0.3475	0.3437 0.3442	0.3364 0.3449	0.3718 0.3164	0.3652	Ave		0.3461				4.6		15.0			
Toluene	1.0161 0.9336	0.8980 0.9034	0.8594 0.9515	0.9647 0.8974	0.9419	Ave		0.9295				5.0		30.0			
trans-1,3-Dichloropropene	0.4051 0.3434	0.3172 0.3417	0.3077 0.3540	0.3528 0.3464	0.3474	Ave		0.3462				7.9		15.0			
Ethyl methacrylate	1.7102 1.5035	1.5407 1.5241	1.4334 1.5287	1.5334 1.5337	1.5403	Ave		1.5387				4.7		15.0			
1,1,2-Trichloroethane	0.1952 0.1994	0.2095 0.1970	0.1915 0.2027	0.2099 0.1962	0.2002	Ave		0.2002				3.1		15.0			
Tetrachloroethene	0.6657 0.6526	0.5775 0.6211	0.5865 0.6680	0.6748 0.6691	0.6416	Ave		0.6397				5.7		15.0			
1,3-Dichloropropane	1.5419 1.5130	1.4223 1.5048	1.3790 1.5106	1.5939 1.4965	1.5363	Ave		1.4998				4.3		15.0			
2-Hexanone	1.3449 1.1922	1.2410 1.1804	1.1622 1.1603	1.2700 1.1216	1.2440	Ave		1.2129				5.7		15.0			
Chlorodibromomethane	0.8537 0.8606	0.7623 0.8676	0.7430 0.8899	0.8703 0.8961	0.8323	Ave		0.8418				6.4		15.0			
1,2-Dibromoethane	0.9590 0.8954	0.8791 0.9115	0.8254 0.9099	0.9721 0.9119	0.9347	Ave		0.9110				4.8		15.0			
1-Chlorohexane	2.4846 1.3201	1.7308 1.2341	1.3593 1.3182	1.4548 1.3091	1.3073	Lin2	0.4560	1.2583							0.9930		0.9900
Chlorobenzene	2.6884 2.4345	2.3421 2.3758	2.2735 2.4637	2.6054 2.3953	2.4931	Ave		2.4524			0.3000	5.3		15.0			
1,1,1,2-Tetrachloroethane	0.8306 0.8309	0.7930 0.8144	0.7740 0.8345	0.8493 0.8282	0.8291	Ave		0.8205				2.8		15.0			
Ethylbenzene	1.4158 1.3965	1.2544 1.3430	1.2742 1.3846	1.4381 1.3623	1.3630	Ave		1.3591				4.5		30.0			
m-Xylene & p-Xylene	1.7942 1.6876	1.5818 1.6226	1.4980 1.6993	1.7354 1.6486	1.6657	Ave		1.6593				5.2		15.0			
o-Xylene	1.7805 1.6396	1.4531 1.5828	1.5016 1.6324	1.7374 1.5885	1.6532	Ave		1.6188				6.4		15.0			
Styrene	2.9247 2.7369	2.6439 2.6812	2.4436 2.7442	2.8203 2.6554	2.7480	Ave		2.7109				4.9		15.0			
Bromoform	+++++ 0.5667	0.4838 0.5870	0.4648 0.5955	0.5614 0.5929	0.5413	Ave		0.5492			0.1000	9.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 Calibration End Date: 04/11/2023 20:33 Calibration ID: 79167

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Isopropylbenzene	3.0420 2.7800	2.5273 2.6844	2.5498 2.8338	2.8893 2.8222	2.8177	Ave		2.7718				5.9		15.0			
Cyclohexanone	0.1209 0.1231	0.1181 0.1141	0.1208 0.1177	0.1275 0.0876	0.1273	Ave		0.1174				10.2		15.0			
1,1,2,2-Tetrachloroethane	1.0834 0.9339	0.9026 0.9469	0.9218 0.9636	0.9938 1.0200	0.9785	Ave		0.9716			0.3000	5.7		15.0			
Bromobenzene	0.7083 0.6328	0.6282 0.6243	0.5804 0.6479	0.6451 0.6589	0.6454	Ave		0.6412				5.3		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.3113	0.2653 0.3201	0.2647 0.3274	0.3151 0.3469	0.3007	Ave		0.3064				9.4		15.0			
1,2,3-Trichloropropane	0.3003 0.2929	0.3018 0.2936	0.2815 0.2998	0.3153 0.3106	0.2986	Ave		0.2994				3.3		15.0			
N-Propylbenzene	0.7977 0.7645	0.6672 0.7244	0.6898 0.7702	0.7714 0.7729	0.7468	Ave		0.7450				5.8		15.0			
2-Chlorotoluene	0.7221 0.6295	0.6234 0.6128	0.5959 0.6460	0.6580 0.6537	0.6269	Ave		0.6409				5.7		15.0			
1,3,5-Trimethylbenzene	2.5480 2.3002	2.1157 2.1918	2.0434 2.2920	2.3390 2.2701	2.2917	Ave		2.2658				6.3		15.0			
4-Chlorotoluene	0.7820 0.6603	0.6387 0.6488	0.6113 0.6664	0.6920 0.6757	0.6618	Ave		0.6708				7.1		15.0			
tert-Butylbenzene	2.0628 1.8616	1.7005 1.7582	1.6541 1.8299	1.9326 1.8129	1.8666	Ave		1.8310				6.7		15.0			
1,2,4-Trimethylbenzene	2.6516 2.3456	2.1922 2.2310	2.0812 2.3405	2.4107 2.3113	2.3023	Ave		2.3185				6.8		15.0			
sec-Butylbenzene	0.5818 0.5395	0.4977 0.5071	0.4910 0.5337	0.5421 0.5301	0.5290	Ave		0.5280				5.2		15.0			
1,3-Dichlorobenzene	1.4189 1.1463	1.1171 1.1181	1.0342 1.1574	1.1842 1.1515	1.1509	Ave		1.1643				9.0		15.0			
4-Isopropyltoluene	2.5874 2.2776	2.0393 2.1222	2.0612 2.2155	2.3057 2.1895	2.2335	Ave		2.2257				7.3		15.0			
1,4-Dichlorobenzene	1.4580 1.1699	1.1519 1.1460	1.1038 1.1894	1.2237 1.1798	1.1864	Ave		1.2010				8.5		15.0			
n-Butylbenzene	2.4636 2.0700	1.9397 1.9016	1.7910 2.0249	2.1051 2.0136	1.9977	Ave		2.0341				9.2		15.0			
1,2-Dichlorobenzene	1.2286 1.0823	1.0596 1.0777	1.0444 1.0986	1.1264 1.0820	1.0894	Ave		1.0988				4.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 Calibration End Date: 04/11/2023 20:33 Calibration ID: 79167

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dibromo-3-Chloropropane	0.2348 0.2559	0.2456 0.2568	0.2217 0.2598	0.2613 0.2563	0.2483	Ave		0.2490				5.3		15.0			
1,2,4-Trichlorobenzene	0.8186 0.5677	0.5955 0.5383	0.5221 0.5427	0.5920 0.5303	0.5811	Lin2	0.1192	0.5366							0.9920		0.9900
Hexachlorobutadiene	0.3486 0.2131	0.2070 0.1917	0.2088 0.1986	0.2408 0.2035	0.2301	Lin1	0.0595	0.2015							0.9980		0.9900
Naphthalene	3.1246 2.2948	2.4901 2.2738	2.2420 2.2840	2.4360 2.1286	2.3953	Ave		2.4077				12.0		15.0			
1,2,3-Trichlorobenzene	+++++ 0.4855	0.5299 0.4716	0.4685 0.4662	0.5374 0.4387	0.5180	Ave		0.4895				7.2		15.0			
Dibromofluoromethane (Surr)	0.2481 0.2436	0.2472 0.2446	0.2453 0.2428	0.2447 0.2339	0.2446	Ave		0.2438				1.7		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2886 0.2838	0.2907 0.2875	0.2876 0.2829	0.2902 0.2793	0.2904	Ave		0.2868				1.4		15.0			
Toluene-d8 (Surr)	4.3350 4.3025	4.3171 4.3112	4.2830 4.3130	4.3272 4.3768	4.3261	Ave		4.3213				0.6		15.0			
4-Bromofluorobenzene (Surr)	1.0990 1.1011	1.1048 1.1099	1.0827 1.1128	1.0861 1.1628	1.1077	Ave		1.1074				2.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 | Calibration End Date: 04/11/2023 20:33 | Calibration ID: 79167

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-608296/12	P00506.D
Level 2	STD010 280-608296/13	P00507.D
Level 3	STD020 280-608296/14	P00508.D
Level 4	STD050 280-608296/15	P00509.D
Level 5	STD10 280-608296/16	P00510.D
Level 6	ICIS 280-608296/17	P00511.D
Level 7	STD75 280-608296/18	P00512.D
Level 8	STD100 280-608296/19	P00513.D
Level 9	STD200 280-608296/20	P00514.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Lin1	+++++ 415621	5668 527994	11881 807448	46640 1701744	82946	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloromethane	FB	Lin1	8289 433200	8767 598378	16717 890918	49257 1820995	86127	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Ave	6862 503133	8888 679807	17802 1038028	56407 2099114	99156	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Ave	+++++ 93856	+++++ +++++	11289 130290	24012 261242	26583	+++++ 50.0	+++++ +++++	2.00 100	5.00 200	10.0
Chloroethane	FB	Qua	5495 323214	6759 444874	12514 607770	37309 937714	62204	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Ave	9991 708289	13901 980932	28608 1462506	78886 2967501	142589	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Ave	6466 552367	8959 733213	19342 1145977	59620 2416166	107351	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl ether	FB	Ave	3891 348302	7552 530545	13198 717979	34402 1439001	70761	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acrolein	FB	Ave	10374 961325	18078 1487916	35555 1993793	96332 4125785	190420	4.94 494	9.88 741	19.8 988	49.4 1975	98.8
1,1-Dichloroethene	FB	Ave	3875 367581	5976 526940	12328 757699	36394 1529966	70547	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	2786 264053	3872 363672	8980 522108	26147 1084453	48297	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acetone	FB	Lin2	24150 1029078	34958 1537395	51348 2055048	116391 4008014	213023	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Iodomethane	FB	Ave	5548 545364	8409 811952	16349 1135837	46577 2252684	97032	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Carbon disulfide	FB	Ave	+++++ 1174031	24213 1680092	45134 2445121	120474 4837768	231016	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 | Calibration End Date: 04/11/2023 20:33 | Calibration ID: 79167

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methyl acetate	FB	Lin2	18989 1083550	29771 1622424	44846 2206546	118902 4387828	230201	1.00 100	2.00 150	4.00 200	10.0 400	20.0
Allyl chloride	FB	Lin2	8707 558703	12402 803574	23930 1112830	60655 2236529	117361	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Methylene Chloride	FB	Lin2	7489 427052	10852 636583	18850 876176	45553 1750142	87244	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Methyl-2-propanol	FB	Ave	13199 1200944	24395 1828495	48936 2415909	123159 4946161	241505	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Acrylonitrile	FB	Ave	32512 2982092	56319 4491176	114539 5987851	301125 11460553	598828	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Methyl tert-butyl ether	FB	Ave	13732 1316799	24104 1980661	50211 2684873	132618 5331205	257785	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,2-Dichloroethene	FB	Ave	4843 406325	7053 596551	14645 847473	40697 1702371	78056	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexane	CBNZd5	Ave	+++++ 558286	8656 758321	18844 1100894	54450 2242059	102054	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl acetate	FB	Ave	20939 1634176	36592 2750279	65928 3470973	189559 7354406	338791	1.00 100	2.00 150	4.00 200	10.0 400	20.0
1,1-Dichloroethane	FB	Ave	7358 744878	13083 1082326	27057 1504426	74481 2984715	144296	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Butanone (MEK)	FB	Lin2	25883 1637173	43078 2464828	71510 3284855	173607 6384989	332799	2.00 200	4.00 300	8.00 400	20.0 800	40.0
cis-1,2-Dichloroethene	FB	Ave	5091 451475	8755 682542	16495 935885	45259 1894557	86824	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2,2-Dichloropropane	FB	Ave	6779 647504	11066 920978	23040 1298900	66026 2569853	126344	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butyl Alcohol	FB	Ave	22929 2190142	41294 3321526	80893 4406956	222283 8689933	432621	12.0 1200	24.0 1800	48.0 2400	120 4800	240
Chlorobromomethane	FB	Ave	2362 196974	3895 295521	7425 408917	19753 812579	38726	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Tetrahydrofuran	FB	Ave	6892 516702	11252 789169	20907 1055197	52408 2139148	101383	1.00 100	2.00 150	4.00 200	10.0 400	20.0
Chloroform	FB	Ave	8254 734036	14110 1083684	27635 1492702	73977 2897849	141058	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1-Trichloroethane	FB	Ave	6470 640865	11278 915758	21763 1302506	63711 2625534	121881	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexane	FB	Ave	8997 734016	12549 1018002	25170 1444485	72743 3001957	137948	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloropropene	FB	Ave	5935 599136	10118 864144	20574 1236381	58905 2483279	112949	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 | Calibration End Date: 04/11/2023 20:33 | Calibration ID: 79167

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon tetrachloride	FB	Ave	5113 526334	8498 745792	17985 1070000	51580 2146515	98838	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isobutyl alcohol	FB	Ave	+++++ 869340	18966 1306907	34238 1742614	88352 3428704	168855	+++++ 1250	25.0 1875	50.0 2500	125 5000	250
Benzene	FB	Ave	18224 1738748	31582 2521511	63250 3526949	174032 6907834	341420	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloroethane	FB	Ave	+++++ 564056	12038 848263	22622 1147107	59358 2303603	113885	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Heptane	FB	Lin2	+++++ 466213	16774 644481	24522 929165	52144 +++++	91116	+++++ 50.0	1.00 75.0	2.00 100	5.00 +++++	10.0
Trichloroethene	CBNZd5	Ave	4800 440377	7322 627624	15957 896261	43367 1781313	83166	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Pentanone	FB	Ave	22946 1979320	40270 2955897	78305 3938429	202644 7662484	393362	1.60 160	3.20 240	6.40 320	16.0 640	32.0
Methylcyclohexane	FB	Ave	6705 545382	8393 757881	18367 1077539	53147 2217669	102145	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloropropane	FB	Ave	4446 453373	8364 674799	15880 922254	45263 1854383	87751	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dioxane	FB	Ave	3025 274111	5575 421381	9880 555019	27856 1061088	55668	10.0 1000	20.0 1500	40.0 2000	100 4000	200
Dibromomethane	FB	Ave	+++++ 268496	5718 407742	10328 552968	27337 1081615	52798	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorobromomethane	FB	Ave	6182 548342	10666 827162	20343 1134840	53396 2278669	106303	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Ave	+++++ 330929	6816 483211	13411 675915	35494 1379464	66302	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,3-Dichloropropene	CBNZd5	Ave	7342 708543	12849 1060807	25815 1450869	68496 2906724	137918	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	27073 2728006	53138 4097496	104333 5424597	279793 10198054	552376	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Toluene	FB	Ave	19958 1832434	34707 2688978	66642 3741612	181502 7231296	356198	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,3-Dichloropropene	FB	Ave	7957 673999	12260 1017054	23859 1392139	66376 2791413	131385	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl methacrylate	CBNZd5	Ave	7761 690440	13905 1055230	25939 1418208	66655 2825553	135851	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloroethane	FB	Ave	3835 391470	8098 586348	14850 796917	39496 1580609	75701	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 | Calibration End Date: 04/11/2023 20:33 | Calibration ID: 79167

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Tetrachloroethene	CBNZd5	Ave	3021 299662	5212 430036	10614 619760	29333 1232611	56586	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichloropropane	CBNZd5	Ave	6997 694786	12836 1041838	24955 1401387	69285 2757027	135497	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Hexanone	CBNZd5	Ave	24412 2189913	44798 3268916	84123 4305602	220815 8264804	438858	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Chlorodibromomethane	CBNZd5	Ave	3874 395190	6880 600663	13446 825567	37832 1650807	73404	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromoethane	CBNZd5	Ave	4352 411163	7934 631107	14936 844158	42254 1680044	82433	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1-Chlorohexane	CBNZd5	Lin2	9020 484953	12496 683572	19679 978336	50591 1929352	92238	0.400 40.0	0.800 60.0	1.60 80.0	4.00 160	8.00
Chlorobenzene	CBNZd5	Ave	12200 1117937	21137 1644885	41142 2285655	113252 4412752	219881	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1,2-Tetrachloroethane	CBNZd5	Ave	3769 381548	7157 563875	14007 774163	36918 1525777	73127	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethylbenzene	CBNZd5	Ave	6425 641284	11321 929868	23059 1284529	62513 2509783	120210	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
m-Xylene & p-Xylene	CBNZd5	Ave	8142 774980	14276 1123434	27109 1576514	75434 3037161	146909	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
o-Xylene	CBNZd5	Ave	8080 752905	13114 1095893	27173 1514452	75521 2926427	145808	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Styrene	CBNZd5	Ave	13272 1256821	23861 1856335	44220 2545818	122593 4891877	242357	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromoform	CBNZd5	Ave	+++++ 260223	4366 406447	8411 552434	24402 1092360	47740	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isopropylbenzene	DCBd4	Ave	20220 1874263	32964 2722036	67473 3766076	186935 6921679	362699	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexanone	CBNZd5	Ave	16457	31971	65564	166243	336734	15.0	30.0	60.0	150	300

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 | Calibration End Date: 04/11/2023 20:33 | Calibration ID: 79167

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			1696036	2369006	3274494	4840225		1500	2250	3000	6000	
1,1,2,2-Tetrachloroethane	DCBd4	Ave	7201 629618	11773 960183	24392 1280606	64300 2501728	125953	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromobenzene	DCBd4	Ave	4708 426664	8193 633059	15359 861017	41734 1616047	83073	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,4-Dichloro-2-butene	DCBd4	Ave	+++++ 209884	3460 324576	7004 435151	20388 850738	38708	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichloropropane	DCBd4	Ave	1996 197443	3937 297675	7449 398369	20402 761852	38439	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
N-Propylbenzene	DCBd4	Ave	5302 515437	8702 734596	18254 1023534	49907 1895497	96129	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chlorotoluene	DCBd4	Ave	4800 424394	8131 621397	15769 858563	42574 1603249	80699	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3,5-Trimethylbenzene	DCBd4	Ave	16936 1550815	27595 2222553	54074 3046092	151332 5567665	294992	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Chlorotoluene	DCBd4	Ave	5198 445183	8330 657919	16177 885672	44774 1657147	85192	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
tert-Butylbenzene	DCBd4	Ave	13711 1255103	22180 1782864	43772 2431910	125038 4446372	240277	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trimethylbenzene	DCBd4	Ave	17625 1581431	28593 2262257	55074 3110454	155965 5668701	296359	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butylbenzene	DCBd4	Ave	3867 363749	6491 514208	12993 709332	35074 1300028	68092	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichlorobenzene	DCBd4	Ave	9431 772856	14570 1133835	27368 1538199	76617 2824285	148147	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Isopropyltoluene	DCBd4	Ave	17198 1535551	26598 2151941	54543 2944349	149172 5369853	287499	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dichlorobenzene	DCBd4	Ave	9691 788786	15024 1162119	29210 1580725	79169 2893676	152720	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Butylbenzene	DCBd4	Ave	16375 1395635	25300 1928251	47393 2691091	136196 4938445	257155	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichlorobenzene	DCBd4	Ave	8166 729688	13821 1092864	27637 1459972	72878 2653727	140237	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromo-3-Chloropropane	DCBd4	Ave	1561 172558	3203 260394	5868 345298	16906 628677	31963	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trichlorobenzene	DCBd4	Lin2	5441 382749	7767 545880	13815 721264	38301 1300594	74796	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexachlorobutadiene	DCBd4	Lin1	2317 143669	2700 194345	5526 263877	15578 499095	29620	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Naphthalene	DCBd4	Ave	20769 1547148	32478 2305660	59329 3035455	157603 5220644	308335	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608296

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2023 17:33 | Calibration End Date: 04/11/2023 20:33 | Calibration ID: 79167

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trichlorobenzene	DCBd4	Ave	+++++ 327355	6912 478189	12397 619636	34766 1075932	66672	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	487324 478062	477740 485345	475470 477406	460329 471101	462482	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	566795 556959	561815 570441	557602 556261	546030 562541	549102	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	1967180 1975722	1948073 1989937	1937679 2000617	1880947 2015779	1907717	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	730511 742336	720469 750311	716283 739448	702664 712991	712928	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00506.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 11-Apr-2023 17:33:30 ALS Bottle#: 4 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD005
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:56:39 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 11-Apr-2023 18:15:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1964271	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	453795	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	664684	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	487324	50.0	50.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	566795	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	1967180	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	82	730511	50.0	49.6	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	98	6059	0.5000	0.9309	
11 Chloromethane	50	1.664	1.664	0.000	99	8289	0.5000	0.6707	
12 Vinyl chloride	62	1.727	1.727	0.000	96	6862	0.5000	0.6605	
14 Bromomethane	94		1.980				ND	ND	U
15 Chloroethane	64	2.075	2.065	0.010	98	5495	0.5000	0.9183	
16 Dichlorofluoromethane	67	2.244	2.233	0.011	97	9991	0.5000	0.6607	
17 Trichlorofluoromethane	101	2.276	2.265	0.011	97	6466	0.5000	0.5855	
19 Ethyl ether	59	2.476	2.476	0.000	90	3891	0.5000	0.5401	
21 Acrolein	56	2.582	2.582	0.000	97	10374	4.94	5.24	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.656	0.010	74	2786	0.5000	0.5557	
22 1,1-Dichloroethene	96	2.666	2.656	0.010	96	3875	0.5000	0.5421	
24 Acetone	43	2.677	2.677	0.000	99	24150	2.00	1.97	
26 Iodomethane	142	2.782	2.772	0.010	98	5548	0.5000	0.5446	
27 Carbon disulfide	76	2.835	2.824	0.011	99	21086	0.5000	0.8864	
29 Methyl acetate	43	2.898	2.898	0.000	96	18989	1.00	1.01	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	75	8707	0.5000	0.5284	
31 Methylene Chloride	84	3.014	3.014	0.000	92	7489	0.5000	0.5201	
32 2-Methyl-2-propanol	59	3.057	3.067	-0.010	99	13199	5.00	5.32	
33 Acrylonitrile	53	3.173	3.173	0.000	99	32512	5.00	5.42	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	94	13732	0.5000	0.5211	
35 trans-1,2-Dichloroethene	96	3.215	3.204	0.011	95	4843	0.5000	0.5918	
36 Hexane	57	3.394	3.394	0.000	86	6882	0.5000	0.6648	
38 Vinyl acetate	43	3.500	3.500	0.000	97	20939	1.00	1.15	
39 1,1-Dichloroethane	63	3.521	3.510	0.011	95	7358	0.5000	0.5054	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.890	0.011	99	25883	2.00	1.97	
48 2,2-Dichloropropane	77	3.933	3.922	0.011	83	6779	0.5000	0.5351	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	81	5091	0.5000	0.5551	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	98	22929	12.0	12.6	
53 Chlorobromomethane	128	4.091	4.091	0.000	95	2362	0.5000	0.5827	
52 Tetrahydrofuran	42	4.101	4.101	0.000	89	6892	1.00	1.25	
54 Chloroform	83	4.154	4.154	0.000	92	8254	0.5000	0.5586	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	91	6470	0.5000	0.5194	
56 Cyclohexane	56	4.355	4.344	0.011	91	8997	0.5000	0.6218	
57 1,1-Dichloropropene	75	4.407	4.397	0.010	93	5935	0.5000	0.5113	
59 Carbon tetrachloride	117	4.407	4.407	0.000	86	5113	0.5000	0.5082	
58 Isobutyl alcohol	41	4.429	4.428	0.000	90	12124	12.5	17.2	
60 Benzene	78	4.555	4.555	0.000	92	18224	0.5000	0.5301	
61 1,2-Dichloroethane	62		4.576				ND	ND	
66 n-Heptane	43	4.745	4.745	0.000	86	18802	0.5000	1.22	
67 Trichloroethene	95	5.041	5.041	0.000	95	4800	0.5000	0.5606	
68 2-Pentanone	43	5.146	5.136	0.010	98	22946	1.60	1.81	
69 Methylcyclohexane	55	5.231	5.220	0.011	90	6705	0.5000	0.6322	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	93	4446	0.5000	0.4987	
72 1,4-Dioxane	88	5.294	5.294	0.000	28	3025	10.0	10.9	
73 Dibromomethane	93	5.304	5.304	0.000	92	3561	0.5000	0.6506	
74 Dichlorobromomethane	83	5.442	5.431	0.011	98	6182	0.5000	0.5561	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	88	4577	0.5000	0.6719	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	7342	0.5000	0.5266	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	96	27073	2.00	1.99	
79 Toluene	91	6.064	6.064	0.000	98	19958	0.5000	0.5465	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	95	7957	0.5000	0.5851	
81 Ethyl methacrylate	69	6.275	6.275	0.000	85	7761	0.5000	0.5557	
82 1,1,2-Trichloroethane	97	6.423	6.412	0.011	91	3835	0.5000	0.4877	
83 Tetrachloroethene	164	6.507	6.507	0.000	90	3021	0.5000	0.5204	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	89	6997	0.5000	0.5140	
85 2-Hexanone	43	6.581	6.581	0.000	95	24412	2.00	2.22	
86 Chlorodibromomethane	129	6.750	6.750	0.000	88	3874	0.5000	0.5071	
88 Ethylene Dibromide	107	6.866	6.866	0.000	99	4352	0.5000	0.5264	
89 1-Chlorohexane	91	7.267	7.257	0.010	33	9020	0.4000	0.4274	
90 Chlorobenzene	112	7.299	7.299	0.000	90	12200	0.5000	0.5481	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	82	3769	0.5000	0.5062	
92 Ethylbenzene	106	7.383	7.373	0.010	99	6425	0.5000	0.5209	
93 m-Xylene & p-Xylene	106	7.499	7.489	0.010	0	8142	0.5000	0.5407	
94 o-Xylene	106	7.858	7.848	0.010	97	8080	0.5000	0.5500	
95 Styrene	104	7.869	7.869	0.000	94	13272	0.5000	0.5394	
96 Bromoform	173		8.048				ND	ND	
97 Isopropylbenzene	105	8.196	8.185	0.011	96	20220	0.5000	0.5487	
99 Cyclohexanone	55	8.280	8.280	0.000	91	16457	15.0	15.4	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	93	7201	0.5000	0.5575	
101 Bromobenzene	156	8.512	8.502	0.010	96	4708	0.5000	0.5523	
102 trans-1,4-Dichloro-2-butene	53		8.512				ND	ND	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	79	1996	0.5000	0.5015	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	5302	0.5000	0.5354	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	4800	0.5000	0.5634	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	16936	0.5000	0.5623	
107 4-Chlorotoluene	126	8.797	8.797	0.000	97	5198	0.5000	0.5829	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	91	13711	0.5000	0.5633	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.001	97	17625	0.5000	0.5718	
110 sec-Butylbenzene	134	9.293	9.283	0.010	95	3867	0.5000	0.5509	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	96	9431	0.5000	0.6093	
112 4-Isopropyltoluene	119	9.441	9.431	0.010	95	17198	0.5000	0.5812	
113 1,4-Dichlorobenzene	146	9.504	9.504	0.000	85	9691	0.5000	0.6070	
115 n-Butylbenzene	91	9.842	9.832	0.010	97	16375	0.5000	0.6056	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	93	8166	0.5000	0.5591	
117 1,2-Dibromo-3-Chloropropane	157	10.644	10.634	0.010	73	1561	0.5000	0.4717	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	64	5441	0.5000	0.5406	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	88	2317	0.5000	0.5699	
121 Naphthalene	128	11.721	11.721	0.001	97	20769	0.5000	0.6489	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	92	4637	0.5000	0.7126	
S 139 1,2-Dichloroethene, Total (URS)	96				0		1.00	1.15	
S 144 1,2-Dichloroethene, Total	1				0		1.00	1.15	
S 145 1,3-Dichloropropene, Total	1				0		1.00	1.11	
S 146 Total BTEX	1				0			2.69	
S 143 Xylenes, Total (URS)	1				0		1.00	1.09	
S 140 Trihalomethanes, Total	1				0		2.00	1.62	
S 142 Xylenes, Total	106				0		1.00	1.09	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

Cal Dil Std_00161	Amount Added:	5.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

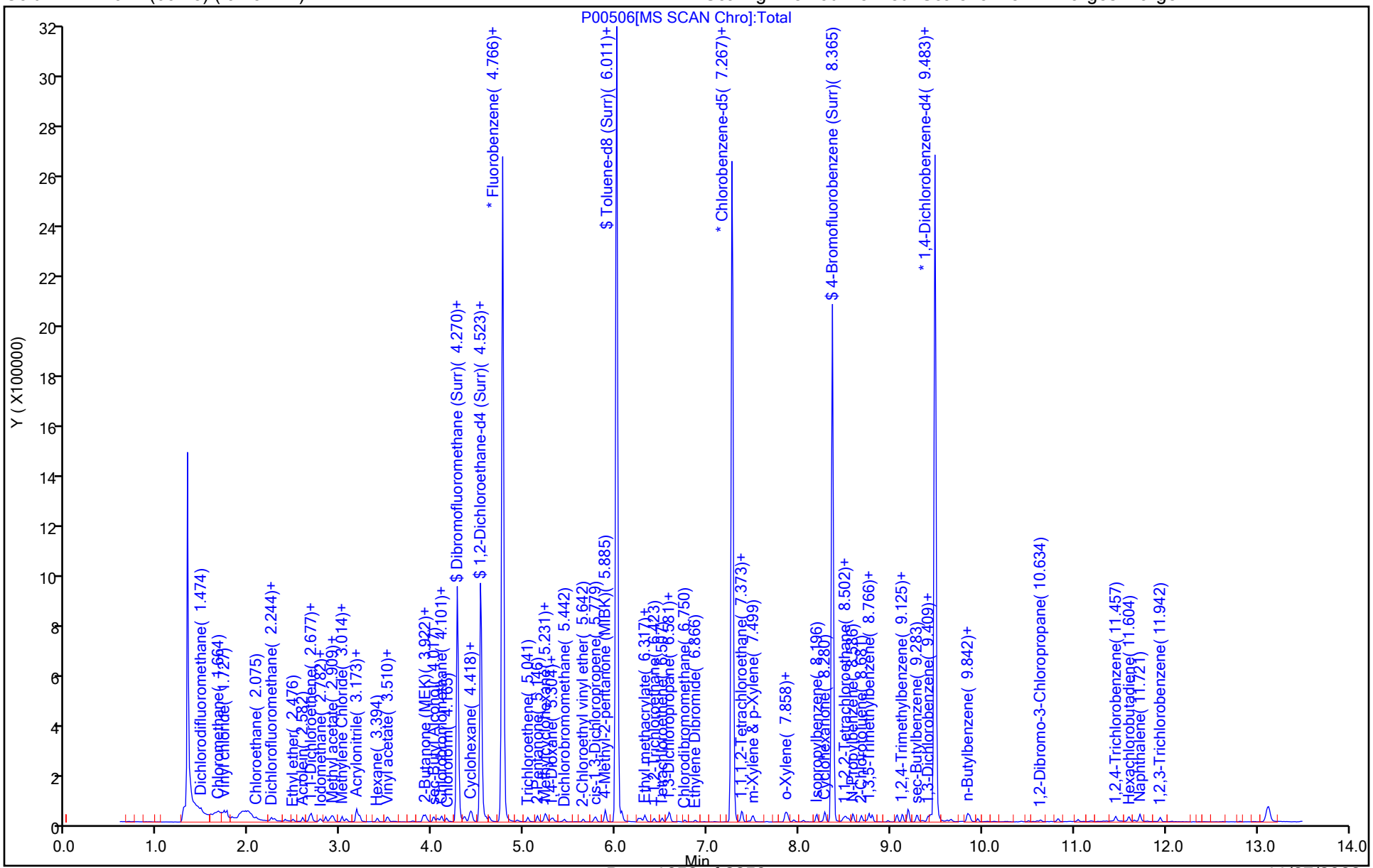
Report Date: 13-Apr-2023 15:56:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00506.D

Injection Date:	11-Apr-2023 17:33:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD005			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



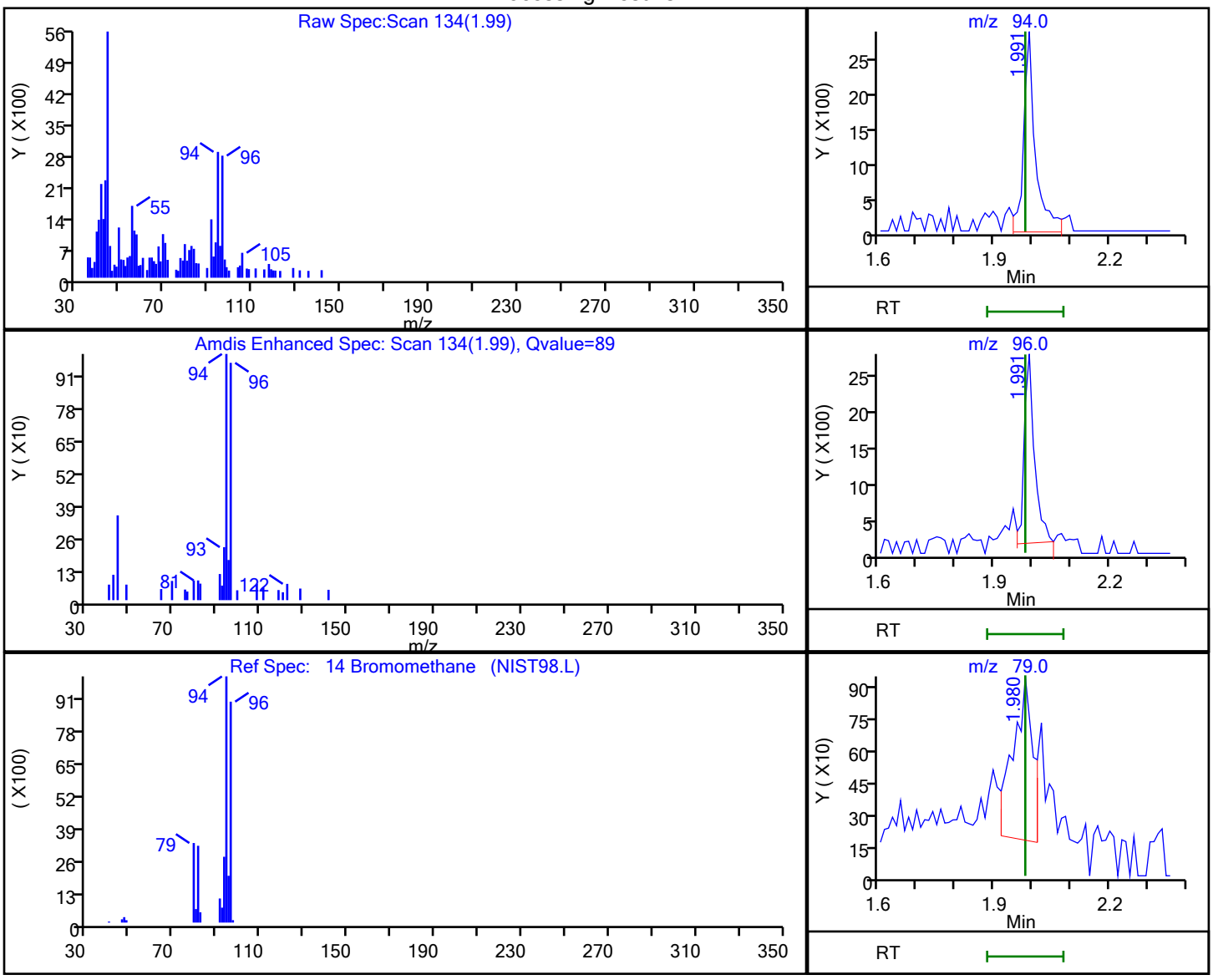
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00506.D
Injection Date: 11-Apr-2023 17:33:30 Instrument ID: VMS_P
Lims ID: STD005
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 4 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
1.99	94.00	6016	1.483220
1.99	96.00	4834	
1.98	79.00	2816	

Reviewer: RWB2, 11-Apr-2023 21:34:44
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00507.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 11-Apr-2023 17:56:30 ALS Bottle#: 5 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD010
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:57:47 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 11-Apr-2023 18:41:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1932557	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	451247	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	652151	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	477740	50.0	50.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.523	0.001	0	561815	50.0	50.7	
$ 6 Toluene-d8 (Surr)	98	6.012	6.011	0.001	93	1948073	50.0	50.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	720469	50.0	49.9	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	98	5668	1.00	0.8939	
11 Chloromethane	50	1.664	1.664	0.000	97	8767	1.00	0.7425	
12 Vinyl chloride	62	1.727	1.727	0.000	98	8888	1.00	0.8696	
14 Bromomethane	94	1.991	1.980	0.011	90	4828	1.00	1.64	M
15 Chloroethane	64	2.075	2.065	0.010	97	6759	1.00	1.11	
16 Dichlorofluoromethane	67	2.244	2.233	0.011	98	13901	1.00	0.9344	
17 Trichlorofluoromethane	101	2.276	2.265	0.011	97	8959	1.00	0.8245	
19 Ethyl ether	59	2.476	2.476	0.000	91	7552	1.00	1.07	
21 Acrolein	56	2.582	2.582	0.000	99	18078	9.88	9.28	
22 1,1-Dichloroethene	96	2.666	2.656	0.010	98	5976	1.00	0.8497	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.656	0.010	71	3872	1.00	0.7850	
24 Acetone	43	2.677	2.677	0.000	100	34958	4.00	4.21	
26 Iodomethane	142	2.772	2.772	0.000	100	8409	1.00	0.8389	
27 Carbon disulfide	76	2.835	2.824	0.011	98	24213	1.00	1.03	
29 Methyl acetate	43	2.898	2.898	0.000	97	29771	2.00	2.05	
30 3-Chloro-1-propene	41	2.920	2.919	0.001	89	12402	1.00	0.8797	
31 Methylene Chloride	84	3.015	3.014	0.001	89	10852	1.00	0.9363	
32 2-Methyl-2-propanol	59	3.057	3.067	-0.010	99	24395	10.0	10.0	
33 Acrylonitrile	53	3.173	3.173	0.000	99	56319	10.0	9.54	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	94	24104	1.00	0.9296	
35 trans-1,2-Dichloroethene	96	3.204	3.204	0.000	98	7053	1.00	0.8760	
36 Hexane	57	3.394	3.394	0.000	88	8656	1.00	0.8409	
38 Vinyl acetate	43	3.500	3.500	0.000	97	36592	2.00	2.05	
39 1,1-Dichloroethane	63	3.521	3.510	0.011	95	13083	1.00	0.9133	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.890	3.890	0.000	100	43078	4.00	4.16	
48 2,2-Dichloropropane	77	3.933	3.922	0.011	90	11066	1.00	0.8879	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	81	8755	1.00	0.9703	
50 sec-Butyl Alcohol	45	4.007	4.017	-0.011	98	41294	24.0	23.0	
53 Chlorobromomethane	128	4.091	4.091	0.000	97	3895	1.00	0.9767	
52 Tetrahydrofuran	42	4.101	4.101	0.000	90	11252	2.00	2.08	
54 Chloroform	83	4.154	4.154	0.000	93	14110	1.00	0.9706	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	97	11278	1.00	0.9202	
56 Cyclohexane	56	4.344	4.344	0.000	87	12549	1.00	0.8816	
57 1,1-Dichloropropene	75	4.408	4.397	0.011	96	10118	1.00	0.8860	
59 Carbon tetrachloride	117	4.408	4.407	0.001	91	8498	1.00	0.8585	
58 Isobutyl alcohol	41	4.429	4.428	0.001	95	18966	25.0	27.3	
60 Benzene	78	4.555	4.555	0.000	97	31582	1.00	0.9338	
61 1,2-Dichloroethane	62	4.587	4.576	0.011	98	12038	1.00	1.05	a
66 n-Heptane	43	4.745	4.745	0.000	90	16774	1.00	1.02	
67 Trichloroethene	95	5.041	5.041	0.000	97	7322	1.00	0.8600	
68 2-Pentanone	43	5.146	5.136	0.010	99	40270	3.20	3.23	
69 Methylcyclohexane	55	5.231	5.220	0.011	91	8393	1.00	0.8044	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	95	8364	1.00	0.9535	
72 1,4-Dioxane	88	5.283	5.294	-0.011	89	5575	20.0	20.4	
73 Dibromomethane	93	5.315	5.304	0.011	86	5718	1.00	1.06	
74 Dichlorobromomethane	83	5.431	5.431	0.000	99	10666	1.00	0.9753	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	6816	1.00	1.02	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	12849	1.00	0.9269	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	53138	4.00	3.97	
79 Toluene	91	6.064	6.064	0.000	98	34707	1.00	0.9660	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	93	12260	1.00	0.9163	
81 Ethyl methacrylate	69	6.275	6.275	0.000	87	13905	1.00	1.00	
82 1,1,2-Trichloroethane	97	6.423	6.412	0.011	89	8098	1.00	1.05	
83 Tetrachloroethene	164	6.508	6.507	0.001	93	5212	1.00	0.9028	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	87	12836	1.00	0.9483	
85 2-Hexanone	43	6.581	6.581	0.000	96	44798	4.00	4.09	
86 Chlorodibromomethane	129	6.750	6.750	0.000	91	6880	1.00	0.9056	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	7934	1.00	0.9650	
89 1-Chlorohexane	91	7.267	7.257	0.010	33	12496	0.8000	0.7380	
90 Chlorobenzene	112	7.299	7.299	0.000	94	21137	1.00	0.9550	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	89	7157	1.00	0.9666	
92 Ethylbenzene	106	7.373	7.373	0.000	99	11321	1.00	0.9230	
93 m-Xylene & p-Xylene	106	7.500	7.489	0.011	0	14276	1.00	0.9533	
94 o-Xylene	106	7.848	7.848	0.000	95	13114	1.00	0.8976	
95 Styrene	104	7.869	7.869	0.000	94	23861	1.00	0.9753	
96 Bromoform	173	8.048	8.048	0.000	71	4366	1.00	0.8809	
97 Isopropylbenzene	105	8.196	8.185	0.011	96	32964	1.00	0.9118	
99 Cyclohexanone	55	8.280	8.280	0.000	91	31971	30.0	30.2	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	11773	1.00	0.9290	
101 Bromobenzene	156	8.502	8.502	0.000	95	8193	1.00	0.9796	
102 trans-1,4-Dichloro-2-butene	53	8.513	8.512	0.001	71	3460	1.00	0.8657	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	81	3937	1.00	1.01	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	8702	1.00	0.8956	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	8131	1.00	0.9726	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	27595	1.00	0.9338	
107 4-Chlorotoluene	126	8.798	8.797	0.001	98	8330	1.00	0.9521	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	75	22180	1.00	0.9287	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.001	97	28593	1.00	0.9455	
110 sec-Butylbenzene	134	9.283	9.283	0.000	94	6491	1.00	0.9425	
111 1,3-Dichlorobenzene	146	9.410	9.409	0.001	97	14570	1.00	0.9594	
112 4-Isopropyltoluene	119	9.441	9.431	0.010	48	26598	1.00	0.9162	
113 1,4-Dichlorobenzene	146	9.505	9.504	0.001	92	15024	1.00	0.9591	
115 n-Butylbenzene	91	9.842	9.832	0.010	98	25300	1.00	0.9536	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	95	13821	1.00	0.9644	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	79	3203	1.00	0.9864	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	7767	1.00	0.8876	
120 Hexachlorobutadiene	225	11.605	11.604	0.001	55	2700	1.00	0.7323	
121 Naphthalene	128	11.721	11.721	0.001	98	32478	1.00	1.03	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	76	6912	1.00	1.08	
S 139 1,2-Dichloroethene, Total (URS)	96				0		2.00	1.85	
S 144 1,2-Dichloroethene, Total	1				0		2.00	1.85	
S 145 1,3-Dichloropropene, Total	1				0		2.00	1.84	
S 146 Total BTEX	1				0			4.67	
S 143 Xylenes, Total (URS)	1				0		2.00	1.85	
S 140 Trihalomethanes, Total	1				0		4.00	3.73	
S 142 Xylenes, Total	106				0		2.00	1.85	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

Cal Dil Std_00161	Amount Added:	10.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 13-Apr-2023 15:57:48 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00507.D

Injection Date: 11-Apr-2023 17:56:30 Instrument ID: VMS_P Operator ID: SEIFERTJ

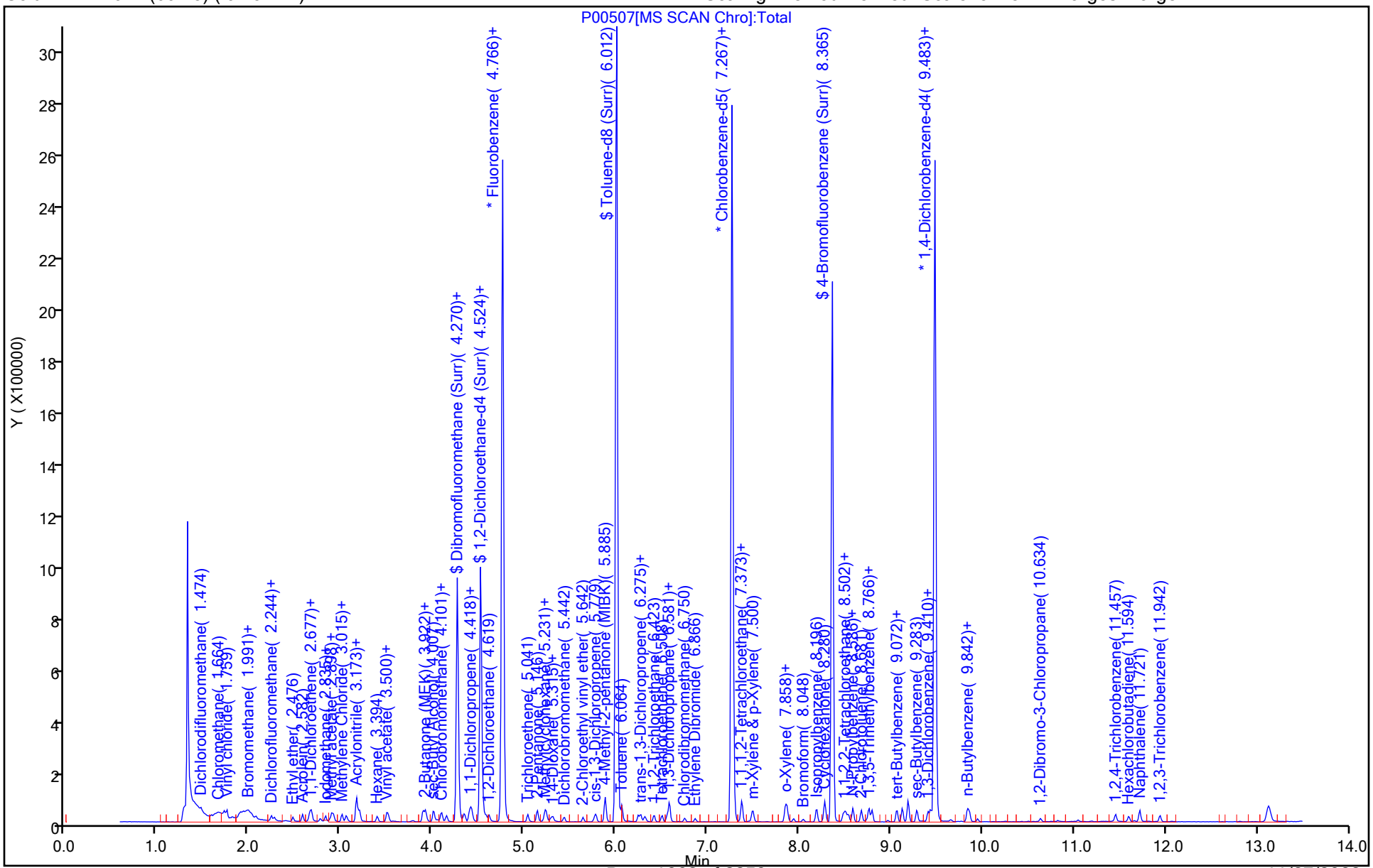
Lims ID: STD010 Worklist Smp#: 13

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 5

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

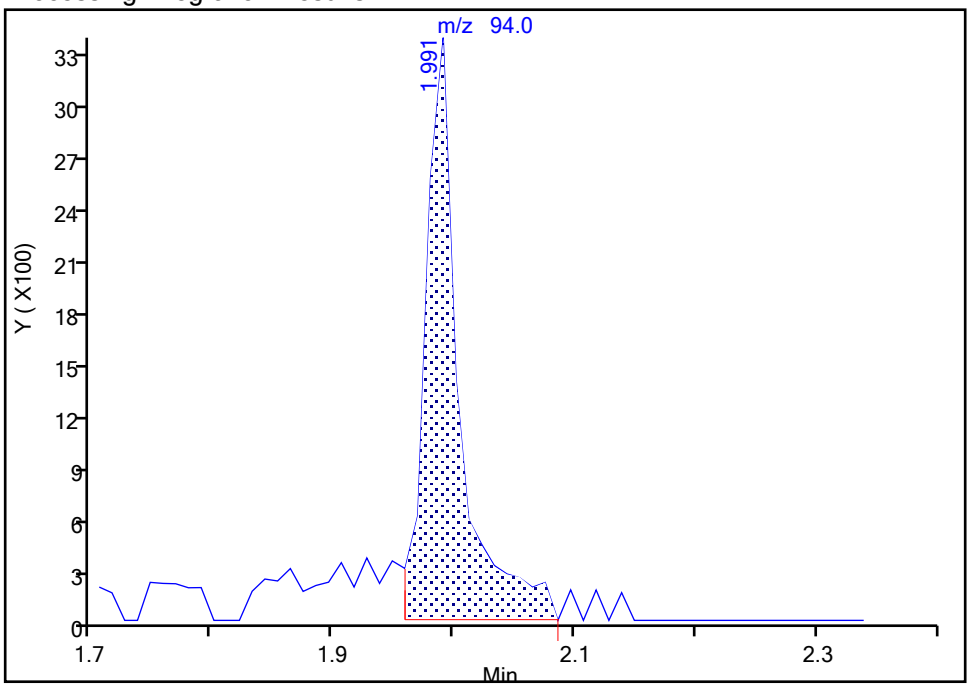
Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00507.D
Injection Date: 11-Apr-2023 17:56:30 Instrument ID: VMS_P
Lims ID: STD010
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 5 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Signal: 1

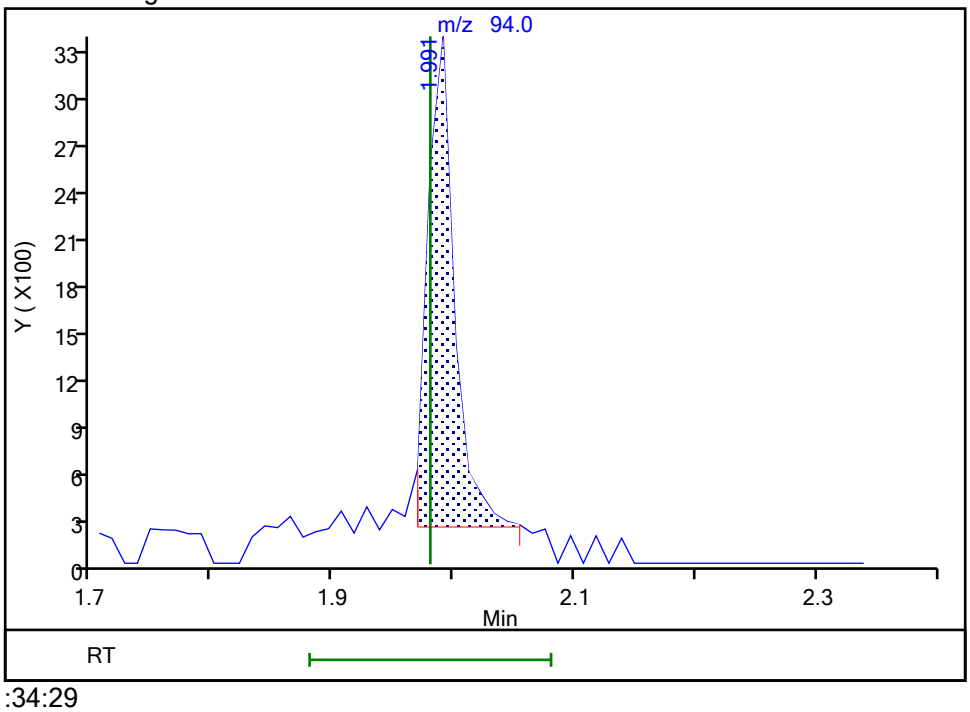
Processing Integration Results

RT: 1.99
Area: 6591
Amount: 1.517560
Amount Units: ug/l



Manual Integration Results

RT: 1.99
Area: 4828
Amount: 1.640459
Amount Units: ug/l



Reviewer: RWB2, 11-Apr-2023 21:34:29
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

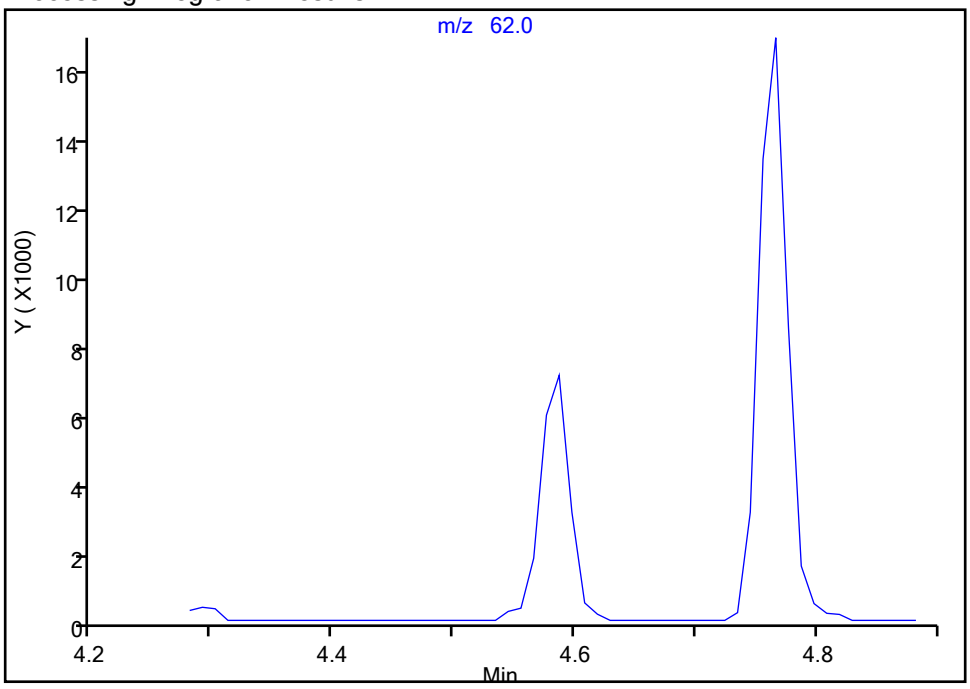
Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00507.D
Injection Date: 11-Apr-2023 17:56:30 Instrument ID: VMS_P
Lims ID: STD010
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 5 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

61 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

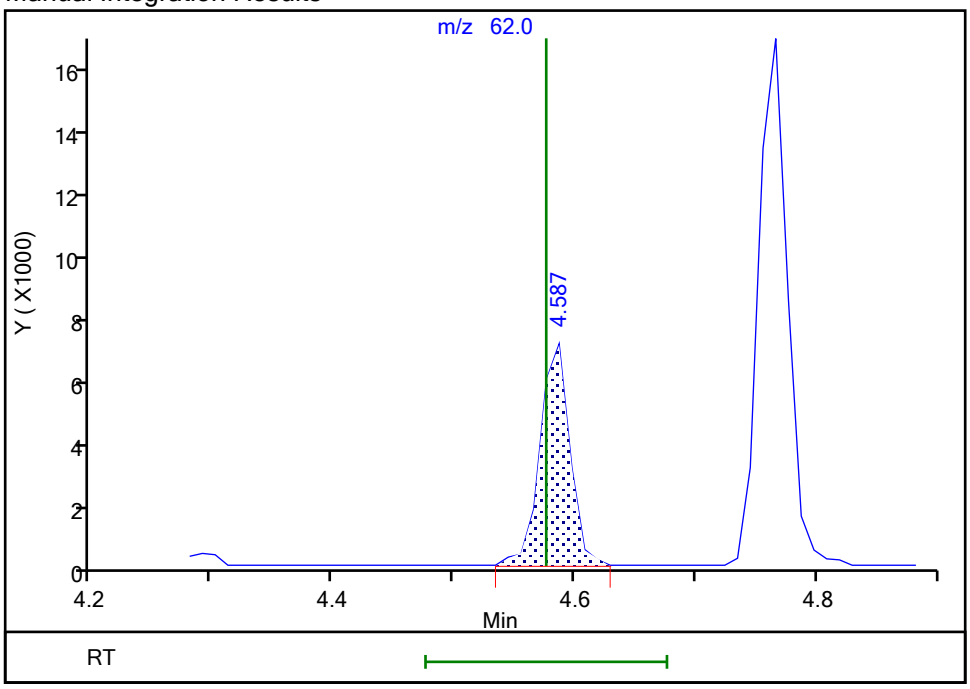
Not Detected
Expected RT: 4.58

Processing Integration Results



Manual Integration Results

RT: 4.59
Area: 12038
Amount: 1.051420
Amount Units: ug/l



Reviewer: RWB2, 13-Apr-2023 15:31:16
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00508.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 11-Apr-2023 18:18:30 ALS Bottle#: 6 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD020
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:56:41 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 11-Apr-2023 19:19:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1938628	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	452407	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	661558	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	475470	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.523	0.001	0	557602	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.012	6.011	0.001	93	1937679	50.0	49.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	84	716283	50.0	48.9	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	11881	2.00	1.67	
11 Chloromethane	50	1.664	1.664	0.000	99	16717	2.00	1.67	
12 Vinyl chloride	62	1.727	1.727	0.000	97	17802	2.00	1.74	
14 Bromomethane	94	1.991	1.980	0.011	93	11289	2.00	3.82	
15 Chloroethane	64	2.075	2.065	0.010	98	12514	2.00	1.93	
16 Dichlorofluoromethane	67	2.244	2.233	0.011	96	28608	2.00	1.92	
17 Trichlorofluoromethane	101	2.276	2.265	0.011	98	19342	2.00	1.77	
19 Ethyl ether	59	2.476	2.476	0.000	91	13198	2.00	1.86	
21 Acrolein	56	2.582	2.582	0.000	99	35555	19.8	18.2	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.656	0.010	71	8980	2.00	1.81	
22 1,1-Dichloroethene	96	2.666	2.656	0.010	97	12328	2.00	1.75	
24 Acetone	43	2.677	2.677	0.000	99	51348	8.00	7.46	
26 Iodomethane	142	2.782	2.772	0.010	99	16349	2.00	1.63	
27 Carbon disulfide	76	2.835	2.824	0.011	99	45134	2.00	1.92	
29 Methyl acetate	43	2.898	2.898	0.000	97	44846	4.00	3.45	
30 3-Chloro-1-propene	41	2.920	2.919	0.001	89	23930	2.00	1.93	
31 Methylene Chloride	84	3.015	3.014	0.001	90	18850	2.00	1.88	
32 2-Methyl-2-propanol	59	3.057	3.067	-0.010	100	48936	20.0	20.0	
33 Acrylonitrile	53	3.173	3.173	0.000	99	114539	20.0	19.3	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	94	50211	2.00	1.93	
35 trans-1,2-Dichloroethene	96	3.205	3.204	0.000	98	14645	2.00	1.81	
36 Hexane	57	3.394	3.394	0.000	90	18844	2.00	1.83	
38 Vinyl acetate	43	3.500	3.500	0.000	97	65928	4.00	3.68	
39 1,1-Dichloroethane	63	3.521	3.510	0.011	96	27057	2.00	1.88	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.890	0.011	99	71510	8.00	7.67	
48 2,2-Dichloropropane	77	3.933	3.922	0.011	89	23040	2.00	1.84	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	84	16495	2.00	1.82	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	80893	48.0	44.9	
53 Chlorobromomethane	128	4.091	4.091	0.000	96	7425	2.00	1.86	
52 Tetrahydrofuran	42	4.101	4.101	0.000	92	20907	4.00	3.85	
54 Chloroform	83	4.154	4.154	0.000	93	27635	2.00	1.89	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	21763	2.00	1.77	
56 Cyclohexane	56	4.344	4.344	0.000	89	25170	2.00	1.76	
57 1,1-Dichloropropene	75	4.408	4.397	0.011	95	20574	2.00	1.80	
59 Carbon tetrachloride	117	4.408	4.407	0.001	87	17985	2.00	1.81	
58 Isobutyl alcohol	41	4.429	4.428	0.001	95	34238	50.0	49.1	
60 Benzene	78	4.555	4.555	0.000	96	63250	2.00	1.86	
61 1,2-Dichloroethane	62	4.587	4.576	0.011	98	22622	2.00	1.97	
66 n-Heptane	43	4.745	4.745	0.000	92	24522	2.00	1.90	
67 Trichloroethene	95	5.041	5.041	0.000	97	15957	2.00	1.87	
68 2-Pentanone	43	5.146	5.136	0.010	98	78305	6.40	6.26	
69 Methylcyclohexane	55	5.231	5.220	0.011	91	18367	2.00	1.75	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	95	15880	2.00	1.80	
72 1,4-Dioxane	88	5.294	5.294	0.000	88	9880	40.0	36.0	
73 Dibromomethane	93	5.315	5.304	0.011	90	10328	2.00	1.91	
74 Dichlorobromomethane	83	5.442	5.431	0.011	99	20343	2.00	1.85	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	93	13411	2.00	1.99	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	25815	2.00	1.86	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	104333	8.00	7.78	
79 Toluene	91	6.064	6.064	0.000	98	66642	2.00	1.85	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	89	23859	2.00	1.78	
81 Ethyl methacrylate	69	6.275	6.275	0.000	88	25939	2.00	1.86	
82 1,1,2-Trichloroethane	97	6.423	6.412	0.011	91	14850	2.00	1.91	
83 Tetrachloroethene	164	6.508	6.507	0.001	94	10614	2.00	1.83	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	90	24955	2.00	1.84	
85 2-Hexanone	43	6.581	6.581	0.000	94	84123	8.00	7.67	
86 Chlorodibromomethane	129	6.750	6.750	0.000	92	13446	2.00	1.77	
88 Ethylene Dibromide	107	6.866	6.866	0.000	97	14936	2.00	1.81	
89 1-Chlorohexane	91	7.267	7.257	0.010	34	19679	1.60	1.37	
90 Chlorobenzene	112	7.299	7.299	0.000	96	41142	2.00	1.85	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	94	14007	2.00	1.89	
92 Ethylbenzene	106	7.373	7.373	0.000	99	23059	2.00	1.88	
93 m-Xylene & p-Xylene	106	7.500	7.489	0.011	0	27109	2.00	1.81	
94 o-Xylene	106	7.848	7.848	0.000	96	27173	2.00	1.86	
95 Styrene	104	7.869	7.869	0.000	94	44220	2.00	1.80	
96 Bromoform	173	8.048	8.048	0.000	91	8411	2.00	1.69	
97 Isopropylbenzene	105	8.196	8.185	0.011	96	67473	2.00	1.84	
99 Cyclohexanone	55	8.280	8.280	0.000	91	65564	60.0	61.7	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	24392	2.00	1.90	
101 Bromobenzene	156	8.502	8.502	0.000	96	15359	2.00	1.81	
102 trans-1,4-Dichloro-2-butene	53	8.513	8.512	0.001	83	7004	2.00	1.73	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	82	7449	2.00	1.88	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	18254	2.00	1.85	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	15769	2.00	1.86	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	54074	2.00	1.80	
107 4-Chlorotoluene	126	8.798	8.797	0.001	97	16177	2.00	1.82	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	93	43772	2.00	1.81	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.001	97	55074	2.00	1.80	
110 sec-Butylbenzene	134	9.283	9.283	0.000	94	12993	2.00	1.86	
111 1,3-Dichlorobenzene	146	9.410	9.409	0.001	96	27368	2.00	1.78	
112 4-Isopropyltoluene	119	9.431	9.431	0.000	97	54543	2.00	1.85	
113 1,4-Dichlorobenzene	146	9.505	9.504	0.001	94	29210	2.00	1.84	
115 n-Butylbenzene	91	9.832	9.832	0.000	97	47393	2.00	1.76	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	95	27637	2.00	1.90	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	79	5868	2.00	1.78	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	13815	2.00	1.72	
120 Hexachlorobutadiene	225	11.605	11.604	0.001	95	5526	2.00	1.78	
121 Naphthalene	128	11.721	11.721	0.001	97	59329	2.00	1.86	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	94	12397	2.00	1.91	
S 139 1,2-Dichloroethene, Total (URS)	96				0		4.00	3.64	
S 144 1,2-Dichloroethene, Total	1				0		4.00	3.64	
S 145 1,3-Dichloropropene, Total	1				0		4.00	3.63	
S 146 Total BTEX	1				0			9.25	
S 143 Xylenes, Total (URS)	1				0		4.00	3.66	
S 140 Trihalomethanes, Total	1				0		8.00	7.21	
S 142 Xylenes, Total	106				0		4.00	3.66	

QC Flag Legend

Processing Flags

Reagents:

Cal Dil Std_00161	Amount Added: 20.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 13-Apr-2023 15:56:41 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00508.D

Injection Date: 11-Apr-2023 18:18:30 Instrument ID: VMS_P Operator ID: SEIFERTJ

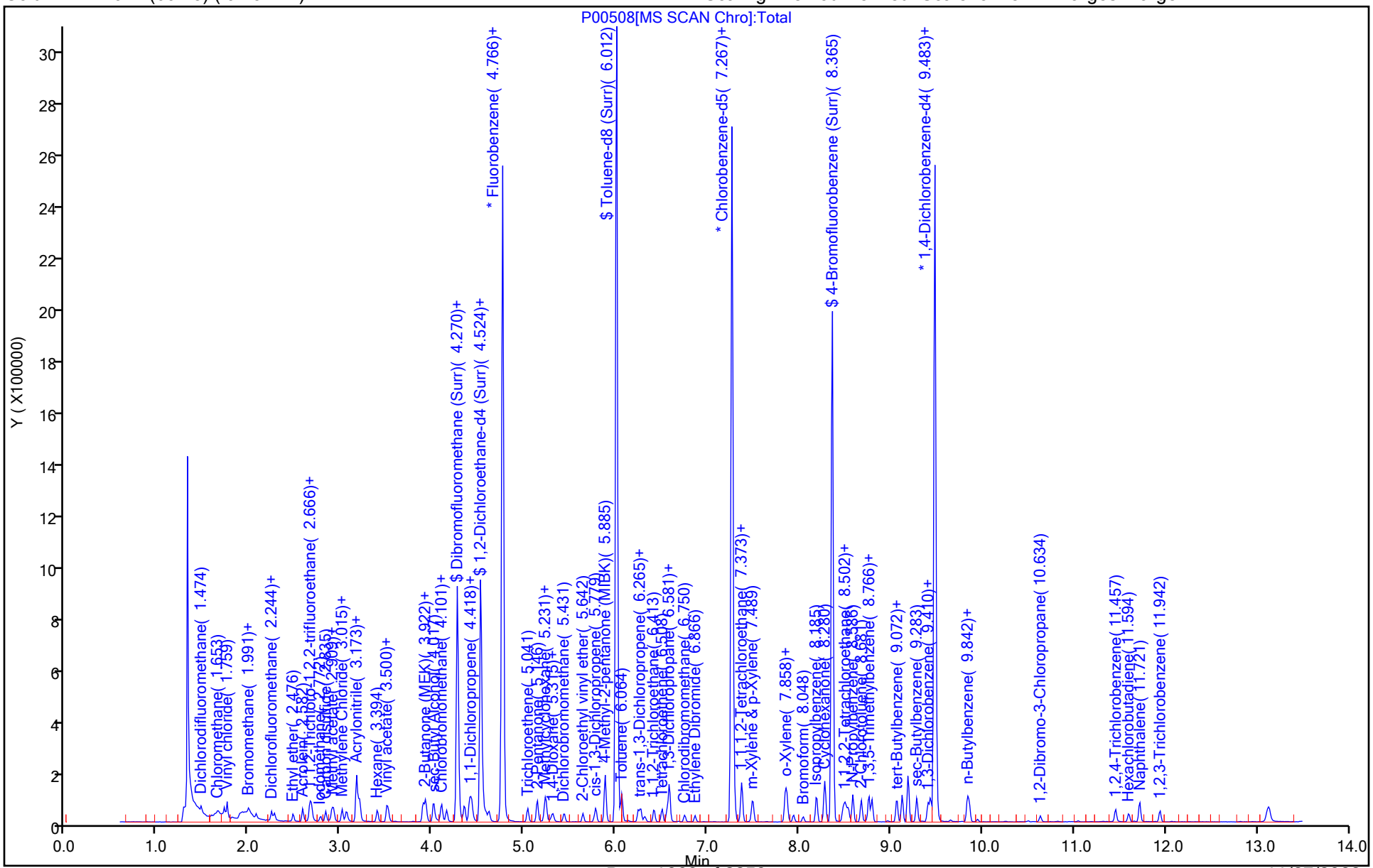
Lims ID: STD020 Worklist Smp#: 14

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 6

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00509.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 11-Apr-2023 18:41:30 ALS Bottle#: 7 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD050
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:56:43 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 11-Apr-2023 19:20:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1881479	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	97	434679	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	646982	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	460329	50.0	50.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	546030	50.0	50.6	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	1880947	50.0	50.1	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	84	702664	50.0	49.0	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	46640	5.00	6.22	
11 Chloromethane	50	1.664	1.664	0.000	98	49257	5.00	5.65	
12 Vinyl chloride	62	1.727	1.727	0.000	98	56407	5.00	5.67	
14 Bromomethane	94	1.980	1.980	0.000	94	24012	5.00	8.38	
15 Chloroethane	64	2.075	2.065	0.010	99	37309	5.00	5.66	
16 Dichlorofluoromethane	67	2.244	2.233	0.011	97	78886	5.00	5.45	
17 Trichlorofluoromethane	101	2.276	2.265	0.011	99	59620	5.00	5.64	
19 Ethyl ether	59	2.476	2.476	0.000	89	34402	5.00	4.99	
21 Acrolein	56	2.582	2.582	0.000	100	96332	49.4	50.8	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.656	0.010	71	26147	5.00	5.44	
22 1,1-Dichloroethene	96	2.656	2.656	0.000	98	36394	5.00	5.32	
24 Acetone	43	2.677	2.677	0.000	100	116391	20.0	21.1	
26 Iodomethane	142	2.772	2.772	0.000	100	46577	5.00	4.77	
27 Carbon disulfide	76	2.835	2.824	0.011	99	120474	5.00	5.29	
29 Methyl acetate	43	2.898	2.898	0.000	97	118902	10.0	10.7	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	92	60655	5.00	5.45	
31 Methylene Chloride	84	3.014	3.014	0.000	90	45553	5.00	5.23	
32 2-Methyl-2-propanol	59	3.057	3.067	-0.010	100	123159	50.0	51.8	
33 Acrylonitrile	53	3.173	3.173	0.000	99	301125	50.0	52.4	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	94	132618	5.00	5.25	
35 trans-1,2-Dichloroethene	96	3.204	3.204	0.000	98	40697	5.00	5.19	
36 Hexane	57	3.394	3.394	0.000	90	54450	5.00	5.49	
38 Vinyl acetate	43	3.500	3.500	0.000	97	189559	10.0	10.9	
39 1,1-Dichloroethane	63	3.521	3.510	0.011	96	74481	5.00	5.34	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.890	3.890	0.000	99	173607	20.0	21.0	
48 2,2-Dichloropropane	77	3.933	3.922	0.011	85	66026	5.00	5.44	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	82	45259	5.00	5.15	
50 sec-Butyl Alcohol	45	4.006	4.017	-0.011	99	222283	120.0	127.1	
53 Chlorobromomethane	128	4.091	4.091	0.000	98	19753	5.00	5.09	
52 Tetrahydrofuran	42	4.101	4.101	0.000	87	52408	10.0	9.95	
54 Chloroform	83	4.154	4.154	0.000	93	73977	5.00	5.23	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	99	63711	5.00	5.34	
56 Cyclohexane	56	4.344	4.344	0.000	88	72743	5.00	5.25	
57 1,1-Dichloropropene	75	4.397	4.397	0.000	97	58905	5.00	5.30	
59 Carbon tetrachloride	117	4.407	4.407	0.000	95	51580	5.00	5.35	
58 Isobutyl alcohol	41	4.429	4.428	0.000	94	88352	125.0	130.5	
60 Benzene	78	4.555	4.555	0.000	95	174032	5.00	5.29	
61 1,2-Dichloroethane	62	4.587	4.576	0.011	98	59358	5.00	5.33	
66 n-Heptane	43	4.745	4.745	0.000	90	52144	5.00	5.23	
67 Trichloroethene	95	5.041	5.041	0.000	98	43367	5.00	5.29	
68 2-Pentanone	43	5.146	5.136	0.010	98	202644	16.0	16.7	
69 Methylcyclohexane	55	5.220	5.220	0.000	93	53147	5.00	5.23	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	96	45263	5.00	5.30	
72 1,4-Dioxane	88	5.294	5.294	0.000	93	27856	100.0	104.5	
73 Dibromomethane	93	5.315	5.304	0.011	89	27337	5.00	5.21	
74 Dichlorobromomethane	83	5.431	5.431	0.000	99	53396	5.00	5.01	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	93	35494	5.00	5.44	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	68496	5.00	5.13	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	279793	20.0	21.5	
79 Toluene	91	6.064	6.064	0.000	98	181502	5.00	5.19	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	93	66376	5.00	5.10	
81 Ethyl methacrylate	69	6.275	6.275	0.000	89	66655	5.00	4.98	
82 1,1,2-Trichloroethane	97	6.412	6.412	0.000	91	39496	5.00	5.24	
83 Tetrachloroethene	164	6.507	6.507	0.000	93	29333	5.00	5.27	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	89	69285	5.00	5.31	
85 2-Hexanone	43	6.581	6.581	0.000	94	220815	20.0	20.9	
86 Chlorodibromomethane	129	6.750	6.750	0.000	90	37832	5.00	5.17	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	42254	5.00	5.34	
89 1-Chlorohexane	91	7.267	7.257	0.010	86	50591	4.00	4.26	
90 Chlorobenzene	112	7.299	7.299	0.000	94	113252	5.00	5.31	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	95	36918	5.00	5.18	
92 Ethylbenzene	106	7.373	7.373	0.000	99	62513	5.00	5.29	
93 m-Xylene & p-Xylene	106	7.499	7.489	0.010	0	75434	5.00	5.23	
94 o-Xylene	106	7.848	7.848	0.000	97	75521	5.00	5.37	
95 Styrene	104	7.869	7.869	0.000	94	122593	5.00	5.20	
96 Bromoform	173	8.048	8.048	0.000	94	24402	5.00	5.11	
97 Isopropylbenzene	105	8.185	8.185	0.000	96	186935	5.00	5.21	
99 Cyclohexanone	55	8.280	8.280	0.000	91	166243	150.0	162.8	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	64300	5.00	5.11	
101 Bromobenzene	156	8.502	8.502	0.000	95	41734	5.00	5.03	
102 trans-1,4-Dichloro-2-butene	53	8.512	8.512	0.000	83	20388	5.00	5.14	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	81	20402	5.00	5.27	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	49907	5.00	5.18	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	42574	5.00	5.13	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	95	151332	5.00	5.16	
107 4-Chlorotoluene	126	8.797	8.797	0.000	98	44774	5.00	5.16	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	93	125038	5.00	5.28	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.001	97	155965	5.00	5.20	
110 sec-Butylbenzene	134	9.283	9.283	0.000	95	35074	5.00	5.13	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	96	76617	5.00	5.09	
112 4-Isopropyltoluene	119	9.431	9.431	0.000	96	149172	5.00	5.18	
113 1,4-Dichlorobenzene	146	9.504	9.504	0.000	93	79169	5.00	5.09	
115 n-Butylbenzene	91	9.842	9.832	0.010	98	136196	5.00	5.17	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	72878	5.00	5.13	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	81	16906	5.00	5.25	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	38301	5.00	5.29	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	96	15578	5.00	5.68	
121 Naphthalene	128	11.721	11.721	0.001	97	157603	5.00	5.06	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	34766	5.00	5.49	
S 139 1,2-Dichloroethene, Total (URS)	96				0		10.0	10.3	
S 144 1,2-Dichloroethene, Total	1				0		10.0	10.3	
S 145 1,3-Dichloropropene, Total	1				0		10.0	10.2	
S 146 Total BTEX	1				0			26.4	
S 143 Xylenes, Total (URS)	1				0		10.0	10.6	
S 140 Trihalomethanes, Total	1				0		20.0	20.5	
S 142 Xylenes, Total	106				0		10.0	10.6	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00082	Amount Added:	2.50	Units: uL	
MV-Gas B_00132	Amount Added:	1.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

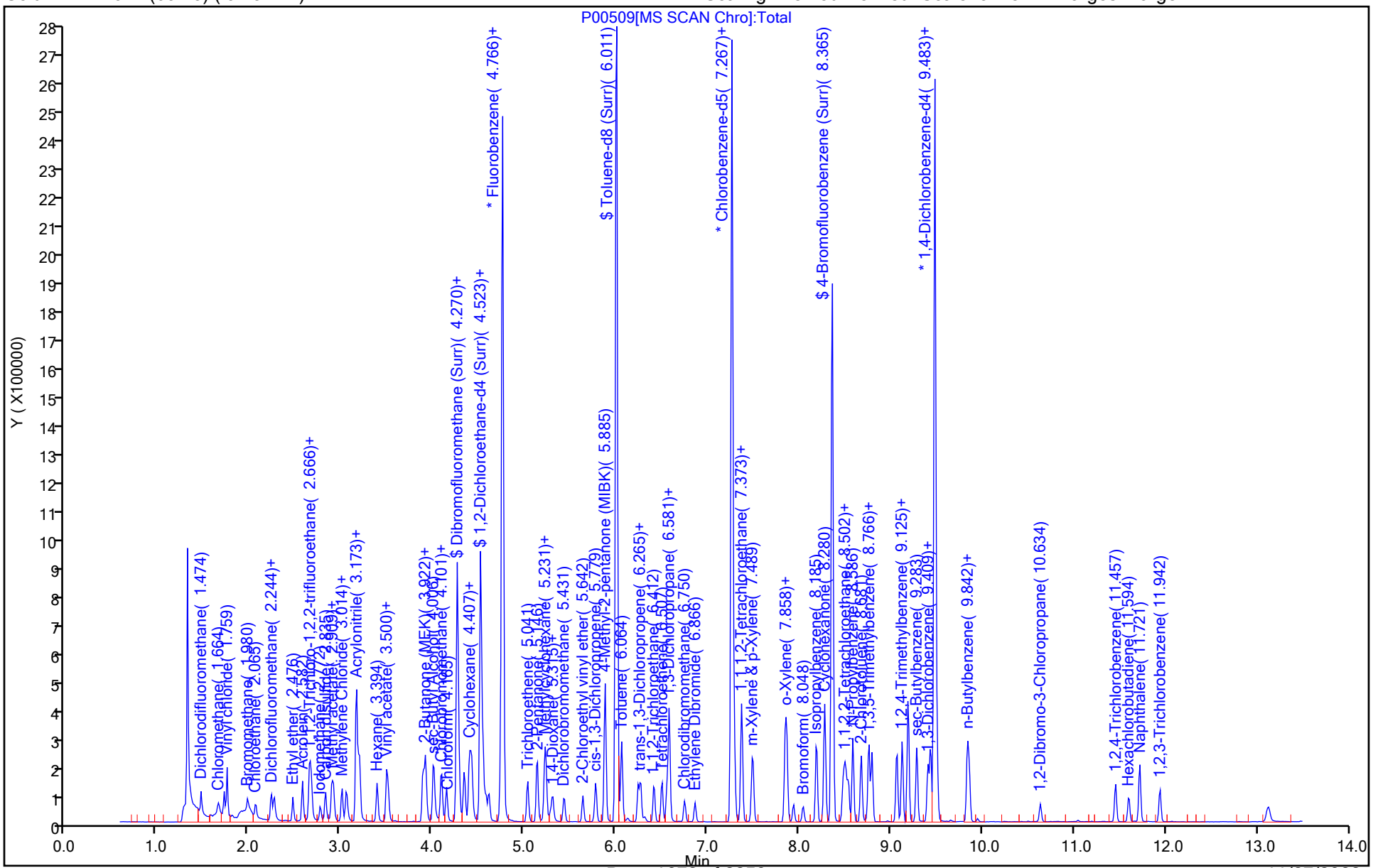
Report Date: 13-Apr-2023 15:56:43 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00509.D

Injection Date:	11-Apr-2023 18:41:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD050			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00510.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 11-Apr-2023 19:03:30 ALS Bottle#: 8 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:56:45 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 13-Apr-2023 15:32:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1890839	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	94	440976	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	643614	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	462482	50.0	50.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	549102	50.0	50.6	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	1907717	50.0	50.1	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	712928	50.0	50.0	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	82946	10.0	10.9	
11 Chloromethane	50	1.664	1.664	0.000	99	86127	10.0	10.0	
12 Vinyl chloride	62	1.727	1.727	0.000	97	99156	10.0	9.91	
14 Bromomethane	94	1.980	1.980	0.000	92	26583	10.0	9.23	
15 Chloroethane	64	2.065	2.065	0.000	100	62204	10.0	9.35	
16 Dichlorofluoromethane	67	2.234	2.234	0.000	97	142589	10.0	9.80	
17 Trichlorofluoromethane	101	2.265	2.265	0.000	98	107351	10.0	10.1	
19 Ethyl ether	59	2.476	2.476	0.000	89	70761	10.0	10.2	
21 Acrolein	56	2.582	2.582	0.000	99	190420	98.8	99.9	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.656	2.656	0.000	72	48297	10.0	10.0	
22 1,1-Dichloroethene	96	2.656	2.656	0.000	98	70547	10.0	10.3	
24 Acetone	43	2.677	2.677	0.000	100	213023	40.0	40.8	
26 Iodomethane	142	2.772	2.772	0.000	98	97032	10.0	9.89	
27 Carbon disulfide	76	2.835	2.835	0.000	99	231016	10.0	10.1	
29 Methyl acetate	43	2.898	2.898	0.000	97	230201	20.0	21.3	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	92	117361	10.0	10.7	
31 Methylene Chloride	84	3.014	3.014	0.000	90	87244	10.0	10.3	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	241505	100.0	101.2	
33 Acrylonitrile	53	3.173	3.173	0.000	99	598828	100.0	103.7	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	94	257785	10.0	10.2	
35 trans-1,2-Dichloroethene	96	3.204	3.204	0.000	97	78056	10.0	9.91	
36 Hexane	57	3.394	3.394	0.000	90	102054	10.0	10.1	
38 Vinyl acetate	43	3.500	3.500	0.000	97	338791	20.0	19.4	
39 1,1-Dichloroethane	63	3.510	3.510	0.000	96	144296	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.890	3.890	0.000	99	332799	40.0	41.1	
48 2,2-Dichloropropane	77	3.933	3.933	0.000	85	126344	10.0	10.4	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	82	86824	10.0	9.83	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	432621	240.0	246.2	
53 Chlorobromomethane	128	4.091	4.091	0.000	97	38726	10.0	9.92	
52 Tetrahydrofuran	42	4.101	4.101	0.000	86	101383	20.0	19.1	
54 Chloroform	83	4.154	4.154	0.000	93	141058	10.0	9.92	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	121881	10.0	10.2	
56 Cyclohexane	56	4.344	4.344	0.000	89	137948	10.0	9.90	
57 1,1-Dichloropropene	75	4.397	4.397	0.000	96	112949	10.0	10.1	
59 Carbon tetrachloride	117	4.407	4.407	0.000	95	98838	10.0	10.2	
58 Isobutyl alcohol	41	4.429	4.429	0.000	95	168855	250.0	248.1	
60 Benzene	78	4.555	4.555	0.000	95	341420	10.0	10.3	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	97	113885	10.0	10.2	
66 n-Heptane	43	4.745	4.745	0.000	88	91116	10.0	9.75	
67 Trichloroethene	95	5.041	5.041	0.000	98	83166	10.0	10.0	
68 2-Pentanone	43	5.146	5.146	0.000	98	393362	32.0	32.2	
69 Methylcyclohexane	55	5.231	5.231	0.000	92	102145	10.0	10.0	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	87751	10.0	10.2	
72 1,4-Dioxane	88	5.294	5.294	0.000	92	55668	200.0	207.8	
73 Dibromomethane	93	5.315	5.315	0.000	93	52798	10.0	10.0	
74 Dichlorobromomethane	83	5.431	5.431	0.000	99	106303	10.0	9.93	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	66302	10.0	10.1	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	137918	10.0	10.2	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	552376	40.0	42.2	
79 Toluene	91	6.064	6.064	0.000	98	356198	10.0	10.1	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	93	131385	10.0	10.0	
81 Ethyl methacrylate	69	6.275	6.275	0.000	86	135851	10.0	10.0	
82 1,1,2-Trichloroethane	97	6.412	6.412	0.000	91	75701	10.0	10.0	
83 Tetrachloroethene	164	6.507	6.507	0.000	94	56586	10.0	10.0	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	95	135497	10.0	10.2	
85 2-Hexanone	43	6.581	6.581	0.000	94	438858	40.0	41.0	
86 Chlorodibromomethane	129	6.750	6.750	0.000	90	73404	10.0	9.89	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	82433	10.0	10.3	
89 1-Chlorohexane	91	7.257	7.257	0.000	94	92238	8.00	7.95	
90 Chlorobenzene	112	7.299	7.299	0.000	93	219881	10.0	10.2	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	93	73127	10.0	10.1	
92 Ethylbenzene	106	7.373	7.373	0.000	99	120210	10.0	10.0	
93 m-Xylene & p-Xylene	106	7.489	7.489	0.000	0	146909	10.0	10.0	
94 o-Xylene	106	7.848	7.848	0.000	98	145808	10.0	10.2	
95 Styrene	104	7.869	7.869	0.000	95	242357	10.0	10.1	
96 Bromoform	173	8.048	8.048	0.000	94	47740	10.0	9.86	
97 Isopropylbenzene	105	8.185	8.185	0.000	96	362699	10.0	10.2	
99 Cyclohexanone	55	8.280	8.280	0.000	91	336734	300.0	325.1	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	93	125953	10.0	10.1	
101 Bromobenzene	156	8.502	8.502	0.000	96	83073	10.0	10.1	
102 trans-1,4-Dichloro-2-butene	53	8.512	8.512	0.000	87	38708	10.0	9.81	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	82	38439	10.0	9.97	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	96129	10.0	10.0	
105 2-Chlorotoluene	126	8.681	8.681	0.000	95	80699	10.0	9.78	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	294992	10.0	10.1	
107 4-Chlorotoluene	126	8.797	8.797	0.000	98	85192	10.0	9.87	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	240277	10.0	10.2	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.000	98	296359	10.0	9.93	
110 sec-Butylbenzene	134	9.283	9.283	0.000	95	68092	10.0	10.0	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	96	148147	10.0	9.88	
112 4-Isopropyltoluene	119	9.431	9.431	0.000	96	287499	10.0	10.0	
113 1,4-Dichlorobenzene	146	9.504	9.504	0.000	93	152720	10.0	9.88	
115 n-Butylbenzene	91	9.832	9.832	0.000	98	257155	10.0	9.82	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	140237	10.0	9.92	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	80	31963	10.0	9.97	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	74796	10.0	10.6	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	97	29620	10.0	11.1	
121 Naphthalene	128	11.721	11.721	0.000	97	308335	10.0	9.95	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	94	66672	10.0	10.6	
S 139 1,2-Dichloroethene, Total (URS)	96				0		20.0	19.7	
S 144 1,2-Dichloroethene, Total	1				0		20.0	19.7	
S 145 1,3-Dichloropropene, Total	1				0		20.0	20.2	
S 146 Total BTEX	1				0			50.7	
S 143 Xylenes, Total (URS)	1				0		20.0	20.3	
S 140 Trihalomethanes, Total	1				0		40.0	39.6	
S 142 Xylenes, Total	106				0		20.0	20.3	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00082	Amount Added:	5.00	Units: uL	
MV-Gas B_00132	Amount Added:	2.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 13-Apr-2023 15:56:46 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00510.D

Injection Date: 11-Apr-2023 19:03:30 Instrument ID: VMS_P Operator ID: SEIFERTJ

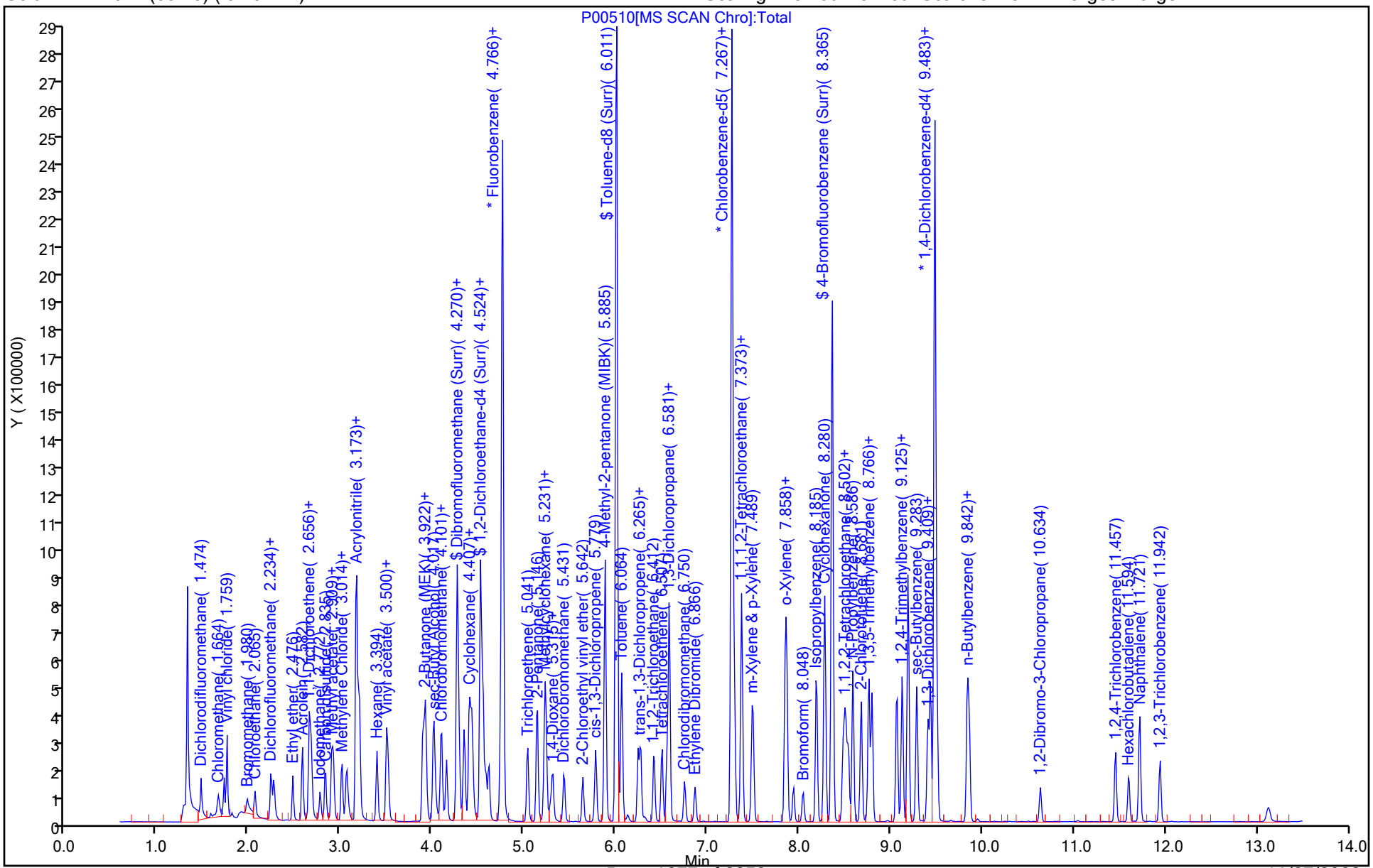
Lims ID: STD10 Worklist Smp#: 16

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 8

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00511.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 11-Apr-2023 19:26:30 ALS Bottle#: 9 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:56:47 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 11-Apr-2023 21:33:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1962770	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	90	459207	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	674207	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	478062	50.0	49.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	556959	50.0	49.5	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	1975722	50.0	49.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	742336	50.0	49.7	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	415621	50.0	51.8	
11 Chloromethane	50	1.664	1.664	0.000	99	433200	50.0	49.7	
12 Vinyl chloride	62	1.727	1.727	0.000	98	503133	50.0	48.5	
14 Bromomethane	94	1.980	1.980	0.000	91	93856	50.0	31.4	
15 Chloroethane	64	2.065	2.065	0.000	99	323214	50.0	49.9	
16 Dichlorofluoromethane	67	2.233	2.233	0.000	97	708289	50.0	46.9	
17 Trichlorofluoromethane	101	2.265	2.265	0.000	98	552367	50.0	50.1	
19 Ethyl ether	59	2.476	2.476	0.000	89	348302	50.0	48.4	
21 Acrolein	56	2.582	2.582	0.000	100	961325	493.8	486.0	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.656	2.656	0.000	72	264053	50.0	52.7	
22 1,1-Dichloroethene	96	2.656	2.656	0.000	97	367581	50.0	51.5	
24 Acetone	43	2.677	2.677	0.000	100	1029078	200.0	200.1	
26 Iodomethane	142	2.772	2.772	0.000	99	545364	50.0	53.6	
27 Carbon disulfide	76	2.824	2.824	0.000	99	1174031	50.0	49.4	
29 Methyl acetate	43	2.898	2.898	0.000	97	1083550	100.0	99.1	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	92	558703	50.0	50.1	
31 Methylene Chloride	84	3.014	3.014	0.000	91	427052	50.0	49.9	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	1200944	500.0	484.6	
33 Acrylonitrile	53	3.173	3.173	0.000	99	2982092	500.0	497.4	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	95	1316799	50.0	50.0	
35 trans-1,2-Dichloroethene	96	3.204	3.204	0.000	98	406325	50.0	49.7	
36 Hexane	57	3.394	3.394	0.000	89	558286	50.0	53.3	
38 Vinyl acetate	43	3.500	3.500	0.000	97	1634176	100.0	90.1	
39 1,1-Dichloroethane	63	3.510	3.510	0.000	96	744878	50.0	51.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.890	3.890	0.000	99	1637173	200.0	199.3	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	451475	50.0	49.3	
48 2,2-Dichloropropane	77	3.922	3.922	0.000	88	647504	50.0	51.2	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	2190142	1200.0	1200.9	
53 Chlorobromomethane	128	4.091	4.091	0.000	98	196974	50.0	48.6	
52 Tetrahydrofuran	42	4.101	4.101	0.000	86	516702	100.0	94.0	
54 Chloroform	83	4.154	4.154	0.000	93	734036	50.0	49.7	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	640865	50.0	51.5	
56 Cyclohexane	56	4.344	4.344	0.000	89	734016	50.0	50.8	
57 1,1-Dichloropropene	75	4.397	4.397	0.000	96	599136	50.0	51.7	
59 Carbon tetrachloride	117	4.407	4.407	0.000	97	526334	50.0	52.4	
58 Isobutyl alcohol	41	4.428	4.428	0.000	94	869340	1250.0	1230.7	
60 Benzene	78	4.555	4.555	0.000	96	1738748	50.0	50.6	
61 1,2-Dichloroethane	62	4.576	4.576	0.000	98	564056	50.0	48.5	
66 n-Heptane	43	4.745	4.745	0.000	90	466213	50.0	51.6	
67 Trichloroethene	95	5.041	5.041	0.000	98	440377	50.0	50.8	
68 2-Pentanone	43	5.136	5.136	0.000	99	1979320	160.0	156.3	
69 Methylcyclohexane	55	5.220	5.220	0.000	92	545382	50.0	51.5	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	453373	50.0	50.9	
72 1,4-Dioxane	88	5.294	5.294	0.000	93	274111	1000.0	985.8	
73 Dibromomethane	93	5.304	5.304	0.000	92	268496	50.0	49.1	
74 Dichlorobromomethane	83	5.431	5.431	0.000	99	548342	50.0	49.4	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	330929	50.0	48.6	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	708543	50.0	50.2	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	2728006	200.0	200.8	
79 Toluene	91	6.064	6.064	0.000	98	1832434	50.0	50.2	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	93	673999	50.0	49.6	
81 Ethyl methacrylate	69	6.275	6.275	0.000	85	690440	50.0	48.9	
82 1,1,2-Trichloroethane	97	6.412	6.412	0.000	91	391470	50.0	49.8	
83 Tetrachloroethene	164	6.507	6.507	0.000	94	299662	50.0	51.0	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	95	694786	50.0	50.4	
85 2-Hexanone	43	6.581	6.581	0.000	94	2189913	200.0	196.6	
86 Chlorodibromomethane	129	6.750	6.750	0.000	90	395190	50.0	51.1	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	411163	50.0	49.1	
89 1-Chlorohexane	91	7.257	7.257	0.000	97	484953	40.0	41.6	
90 Chlorobenzene	112	7.299	7.299	0.000	93	1117937	50.0	49.6	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	95	381548	50.0	50.6	
92 Ethylbenzene	106	7.373	7.373	0.000	98	641284	50.0	51.4	
93 m-Xylene & p-Xylene	106	7.489	7.489	0.000	0	774980	50.0	50.9	
94 o-Xylene	106	7.848	7.848	0.000	97	752905	50.0	50.6	
95 Styrene	104	7.869	7.869	0.000	94	1256821	50.0	50.5	
96 Bromoform	173	8.048	8.048	0.000	94	260223	50.0	51.6	
97 Isopropylbenzene	105	8.185	8.185	0.000	98	1874263	50.0	50.1	
99 Cyclohexanone	55	8.280	8.280	0.000	91	1696036	1500.0	1572.6	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	629618	50.0	48.1	
101 Bromobenzene	156	8.502	8.502	0.000	96	426664	50.0	49.3	
102 trans-1,4-Dichloro-2-butene	53	8.512	8.512	0.000	87	209884	50.0	50.8	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	80	197443	50.0	48.9	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	515437	50.0	51.3	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	424394	50.0	49.1	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	1550815	50.0	50.8	
107 4-Chlorotoluene	126	8.797	8.797	0.000	98	445183	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	1255103	50.0	50.8	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.000	98	1581431	50.0	50.6	
110 sec-Butylbenzene	134	9.283	9.283	0.000	95	363749	50.0	51.1	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	96	772856	50.0	49.2	
112 4-Isopropyltoluene	119	9.431	9.431	0.000	96	1535551	50.0	51.2	
113 1,4-Dichlorobenzene	146	9.504	9.504	0.000	93	788786	50.0	48.7	
115 n-Butylbenzene	91	9.832	9.832	0.000	98	1395635	50.0	50.9	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	97	729688	50.0	49.2	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	82	172558	50.0	51.4	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	382749	50.0	52.7	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	95	143669	50.0	52.6	
121 Naphthalene	128	11.721	11.721	0.000	97	1547148	50.0	47.7	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	94	327355	50.0	49.6	
S 139 1,2-Dichloroethene, Total (URS)	96				0		100.0	99.0	
S 144 1,2-Dichloroethene, Total	1				0		100.0	99.0	
S 145 1,3-Dichloropropene, Total	1				0		100.0	99.8	
S 143 Xylenes, Total (URS)	1				0		100.0	101.5	
S 140 Trihalomethanes, Total	1				0		200.0	201.8	
S 142 Xylenes, Total	106				0		100.0	101.5	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00082	Amount Added: 25.00	Units: uL	
MV-Gas B_00132	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

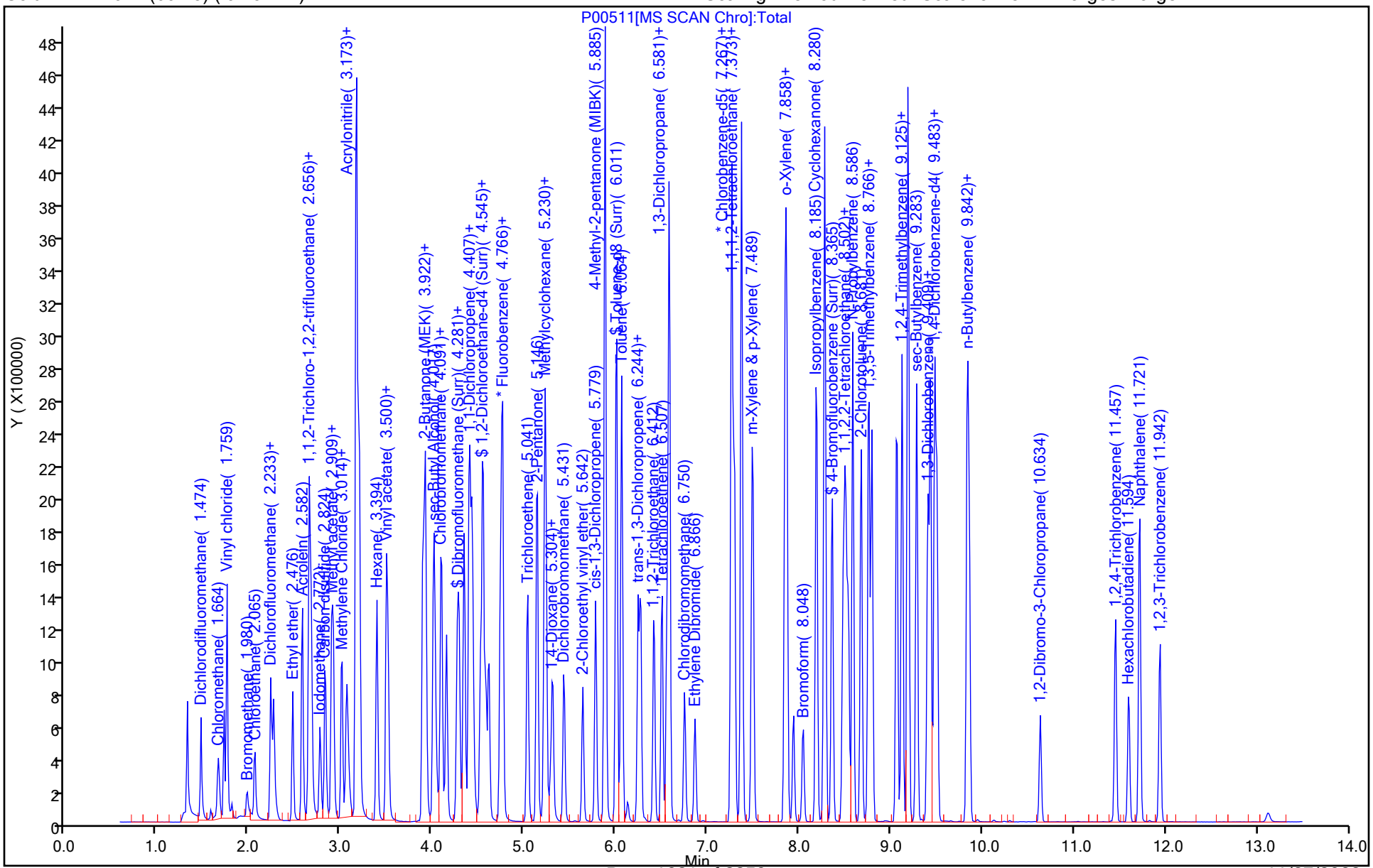
Report Date: 13-Apr-2023 15:56:48 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00511.D

Injection Date:	11-Apr-2023 19:26:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	ICIS			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00512.D
Lims ID: STD75
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 11-Apr-2023 19:48:30 ALS Bottle#: 10 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD75
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:56:50 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 13-Apr-2023 15:32:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1984313	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	461572	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	676022	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	485345	50.0	50.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.523	0.001	0	570441	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.012	6.011	0.001	93	1989937	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	84	750311	50.0	50.1	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	527994	75.0	65.1	
11 Chloromethane	50	1.664	1.664	0.000	99	598378	75.0	68.0	
12 Vinyl chloride	62	1.727	1.727	0.000	98	679807	75.0	64.8	
14 Bromomethane	94	1.980	1.980	0.000	91	151034	75.0	50.0	
15 Chloroethane	64	2.065	2.065	0.000	99	444874	75.0	70.8	
16 Dichlorofluoromethane	67	2.234	2.233	0.001	97	980932	75.0	64.2	
17 Trichlorofluoromethane	101	2.265	2.265	0.000	98	733213	75.0	65.7	
19 Ethyl ether	59	2.476	2.476	0.000	89	530545	75.0	72.9	
21 Acrolein	56	2.582	2.582	0.000	100	1487916	740.6	744.0	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.656	2.656	0.000	71	363672	75.0	71.8	
22 1,1-Dichloroethene	96	2.656	2.656	0.000	97	526940	75.0	73.0	
24 Acetone	43	2.677	2.677	0.000	99	1537395	300.0	297.0	
26 Iodomethane	142	2.772	2.772	0.000	99	811952	75.0	78.9	
27 Carbon disulfide	76	2.825	2.824	0.001	99	1680092	75.0	69.9	
29 Methyl acetate	43	2.898	2.898	0.000	97	1622424	150.0	147.2	
30 3-Chloro-1-propene	41	2.920	2.919	0.001	91	803574	75.0	71.4	
31 Methylene Chloride	84	3.015	3.014	0.001	91	636583	75.0	73.7	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	1828495	750.0	729.8	
33 Acrylonitrile	53	3.173	3.173	0.000	99	4491176	750.0	740.9	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	95	1980661	75.0	74.4	
35 trans-1,2-Dichloroethene	96	3.205	3.204	0.000	99	596551	75.0	72.2	
36 Hexane	57	3.394	3.394	0.000	89	758321	75.0	72.0	
38 Vinyl acetate	43	3.500	3.500	0.000	97	2750279	150.0	150.0	
39 1,1-Dichloroethane	63	3.511	3.510	0.001	96	1082326	75.0	73.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.890	3.890	0.000	99	2464828	300.0	297.4	
48 2,2-Dichloropropane	77	3.922	3.922	0.000	87	920978	75.0	72.0	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	682542	75.0	73.7	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	3321526	1800.0	1801.5	
53 Chlorobromomethane	128	4.091	4.091	0.000	97	295521	75.0	72.2	
52 Tetrahydrofuran	42	4.101	4.101	0.000	85	789169	150.0	142.0	
54 Chloroform	83	4.154	4.154	0.000	93	1083684	75.0	72.6	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	915758	75.0	72.8	
56 Cyclohexane	56	4.344	4.344	0.000	89	1018002	75.0	69.7	
57 1,1-Dichloropropene	75	4.397	4.397	0.000	97	864144	75.0	73.7	
59 Carbon tetrachloride	117	4.408	4.407	0.001	97	745792	75.0	73.4	
58 Isobutyl alcohol	41	4.429	4.428	0.001	95	1306907	1875.0	1830.0	
60 Benzene	78	4.555	4.555	0.000	94	2521511	75.0	72.6	
61 1,2-Dichloroethane	62	4.576	4.576	0.000	97	848263	75.0	72.2	
66 n-Heptane	43	4.745	4.745	0.000	90	644481	75.0	70.9	
67 Trichloroethene	95	5.041	5.041	0.000	98	627624	75.0	72.1	
68 2-Pentanone	43	5.146	5.136	0.010	98	2955897	240.0	230.9	
69 Methylcyclohexane	55	5.220	5.220	0.000	92	757881	75.0	70.7	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	674799	75.0	74.9	
72 1,4-Dioxane	88	5.294	5.294	0.000	93	421381	1500.0	1499.0	
73 Dibromomethane	93	5.305	5.304	0.001	92	407742	75.0	73.7	
74 Dichlorobromomethane	83	5.431	5.431	0.000	99	827162	75.0	73.7	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	483211	75.0	70.2	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	1060807	75.0	74.8	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	4097496	300.0	298.4	
79 Toluene	91	6.064	6.064	0.000	98	2688978	75.0	72.9	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	92	1017054	75.0	74.0	
81 Ethyl methacrylate	69	6.275	6.275	0.000	87	1055230	75.0	74.3	
82 1,1,2-Trichloroethane	97	6.413	6.412	0.001	91	586348	75.0	73.8	
83 Tetrachloroethene	164	6.508	6.507	0.001	93	430036	75.0	72.8	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	95	1041838	75.0	75.2	
85 2-Hexanone	43	6.581	6.581	0.000	94	3268916	300.0	291.9	
86 Chlorodibromomethane	129	6.750	6.750	0.000	90	600663	75.0	77.3	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	631107	75.0	75.0	
89 1-Chlorohexane	91	7.257	7.257	0.000	97	683572	60.0	58.5	
90 Chlorobenzene	112	7.299	7.299	0.000	93	1644885	75.0	72.7	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	95	563875	75.0	74.4	
92 Ethylbenzene	106	7.373	7.373	0.000	99	929868	75.0	74.1	
93 m-Xylene & p-Xylene	106	7.489	7.489	0.000	0	1123434	75.0	73.3	
94 o-Xylene	106	7.848	7.848	0.000	97	1095893	75.0	73.3	
95 Styrene	104	7.869	7.869	0.000	94	1856335	75.0	74.2	
96 Bromoform	173	8.048	8.048	0.000	94	406447	75.0	80.2	
97 Isopropylbenzene	105	8.196	8.185	0.011	96	2722036	75.0	72.6	
99 Cyclohexanone	55	8.280	8.280	0.000	91	2369006	2250.0	2185.3	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	960183	75.0	73.1	
101 Bromobenzene	156	8.502	8.502	0.000	96	633059	75.0	73.0	
102 trans-1,4-Dichloro-2-butene	53	8.513	8.512	0.001	85	324576	75.0	78.3	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	79	297675	75.0	73.5	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	734596	75.0	72.9	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	621397	75.0	71.7	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	2222553	75.0	72.6	
107 4-Chlorotoluene	126	8.798	8.797	0.001	98	657919	75.0	72.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	1782864	75.0	72.0	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.001	98	2262257	75.0	72.2	
110 sec-Butylbenzene	134	9.283	9.283	0.000	95	514208	75.0	72.0	
111 1,3-Dichlorobenzene	146	9.410	9.409	0.001	97	1133835	75.0	72.0	
112 4-Isopropyltoluene	119	9.431	9.431	0.000	96	2151941	75.0	71.5	
113 1,4-Dichlorobenzene	146	9.505	9.504	0.001	92	1162119	75.0	71.6	
115 n-Butylbenzene	91	9.832	9.832	0.000	98	1928251	75.0	70.1	
116 1,2-Dichlorobenzene	146	9.853	9.863	-0.010	96	1092864	75.0	73.6	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	82	260394	75.0	77.4	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	545880	75.0	75.0	
120 Hexachlorobutadiene	225	11.605	11.604	0.001	96	194345	75.0	71.1	
121 Naphthalene	128	11.721	11.721	0.001	98	2305660	75.0	70.8	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	478189	75.0	72.3	
S 139 1,2-Dichloroethene, Total (URS)	96				0		150.0	145.8	
S 144 1,2-Dichloroethene, Total	1				0		150.0	145.8	
S 145 1,3-Dichloropropene, Total	1				0		150.0	148.8	
S 146 Total BTEX	1				0			366.3	
S 143 Xylenes, Total (URS)	1				0		150.0	146.7	
S 140 Trihalomethanes, Total	1				0		300.0	303.7	
S 142 Xylenes, Total	106				0		150.0	146.7	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00082	Amount Added: 37.50	Units: uL	
MV-Gas B_00132	Amount Added: 15.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 13-Apr-2023 15:56:51 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00512.D

Injection Date: 11-Apr-2023 19:48:30 Instrument ID: VMS_P Operator ID: SEIFERTJ

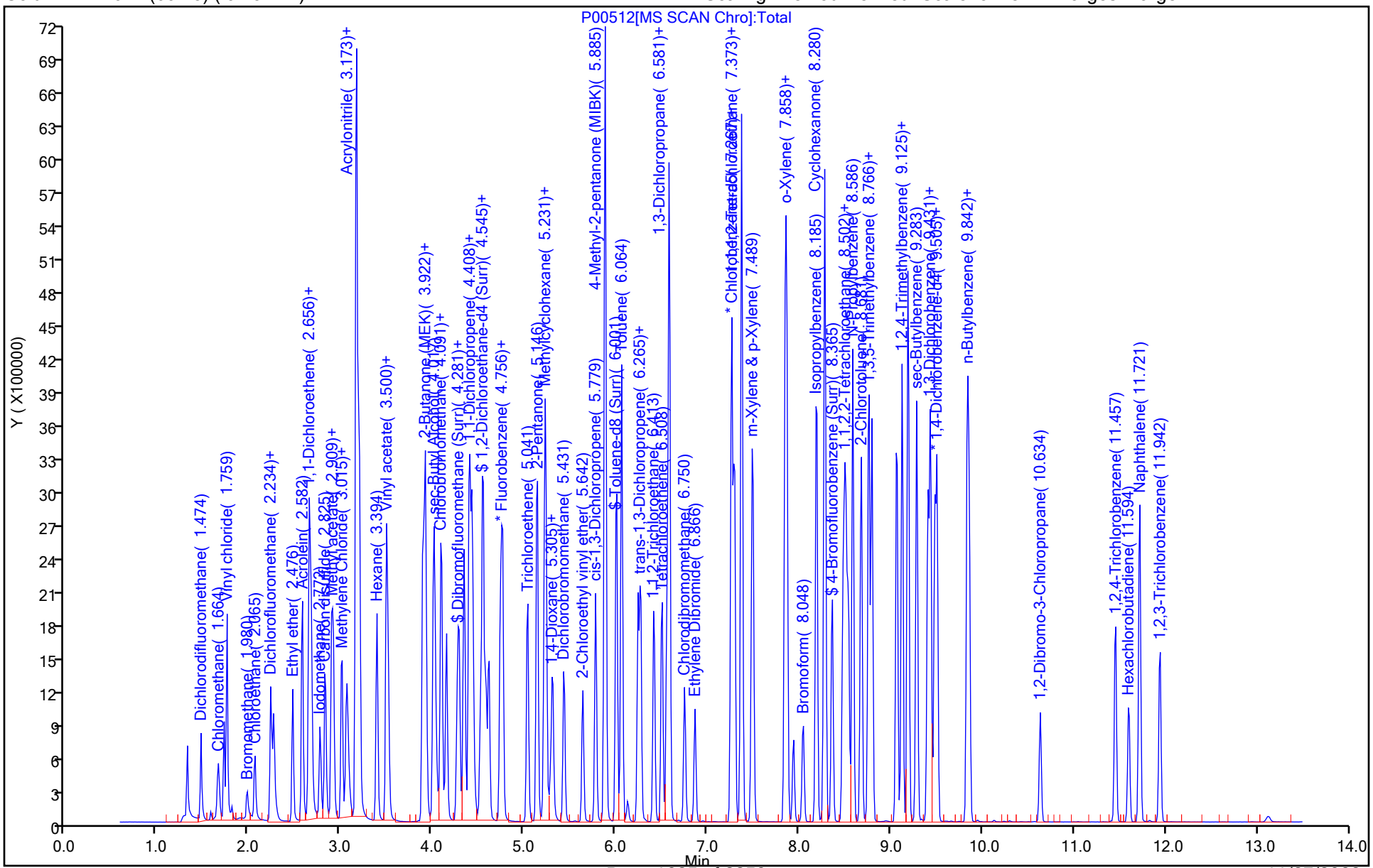
Lims ID: STD75 Worklist Smp#: 18

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 10

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00513.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 11-Apr-2023 20:11:30 ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:56:52 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 13-Apr-2023 15:33:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1966239	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	463860	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	664493	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	477406	50.0	49.8	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	556261	50.0	49.3	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	2000617	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	84	739448	50.0	50.2	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	807448	100.0	100.3	
11 Chloromethane	50	1.664	1.664	0.000	99	890918	100.0	102.4	
12 Vinyl chloride	62	1.727	1.727	0.000	98	1038028	100.0	99.8	
14 Bromomethane	94	1.970	1.980	-0.010	91	130290	100.0	43.5	
15 Chloroethane	64	2.054	2.065	-0.011	100	607770	100.0	104.8	
16 Dichlorofluoromethane	67	2.234	2.233	0.001	97	1462506	100.0	96.6	
17 Trichlorofluoromethane	101	2.265	2.265	0.000	99	1145977	100.0	103.7	
19 Ethyl ether	59	2.476	2.476	0.000	89	717979	100.0	99.6	
21 Acrolein	56	2.582	2.582	0.000	100	1993793	987.5	1006.1	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.656	2.656	0.000	71	522108	100.0	104.0	
22 1,1-Dichloroethene	96	2.656	2.656	0.000	98	757699	100.0	105.9	
24 Acetone	43	2.677	2.677	0.000	99	2055048	400.0	401.6	
26 Iodomethane	142	2.772	2.772	0.000	99	1135837	100.0	111.4	
27 Carbon disulfide	76	2.824	2.824	0.000	99	2445121	100.0	102.7	
29 Methyl acetate	43	2.898	2.898	0.000	97	2206546	200.0	202.3	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	92	1112830	100.0	99.9	
31 Methylene Chloride	84	3.014	3.014	0.000	90	876176	100.0	102.5	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	2415909	1000.0	973.1	
33 Acrylonitrile	53	3.173	3.173	0.000	98	5987851	1000.0	996.9	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	95	2684873	100.0	101.8	
35 trans-1,2-Dichloroethene	96	3.204	3.204	0.000	98	847473	100.0	103.5	
36 Hexane	57	3.394	3.394	0.000	89	1100894	100.0	104.0	
38 Vinyl acetate	43	3.500	3.500	0.000	97	3470973	200.0	191.0	
39 1,1-Dichloroethane	63	3.521	3.510	0.011	96	1504426	100.0	103.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.890	3.890	0.000	99	3284855	400.0	400.4	
48 2,2-Dichloropropane	77	3.922	3.922	0.000	84	1298900	100.0	102.4	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	935885	100.0	101.9	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	4406956	2400.0	2412.1	
53 Chlorobromomethane	128	4.091	4.091	0.000	96	408917	100.0	100.8	
52 Tetrahydrofuran	42	4.101	4.101	0.000	86	1055197	200.0	191.6	
54 Chloroform	83	4.154	4.154	0.000	93	1492702	100.0	100.9	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	99	1302506	100.0	104.4	
56 Cyclohexane	56	4.344	4.344	0.000	89	1444485	100.0	99.7	
57 1,1-Dichloropropene	75	4.397	4.397	0.000	97	1236381	100.0	106.4	
59 Carbon tetrachloride	117	4.407	4.407	0.000	96	1070000	100.0	106.2	
58 Isobutyl alcohol	41	4.439	4.428	0.011	94	1742614	2500.0	2462.6	
60 Benzene	78	4.555	4.555	0.000	95	3526949	100.0	102.5	
61 1,2-Dichloroethane	62	4.576	4.576	0.000	98	1147107	100.0	98.5	
66 n-Heptane	43	4.745	4.745	0.000	96	929165	100.0	103.5	
67 Trichloroethene	95	5.041	5.041	0.000	98	896261	100.0	102.4	
68 2-Pentanone	43	5.146	5.136	0.010	98	3938429	320.0	310.4	
69 Methylcyclohexane	55	5.220	5.220	0.000	92	1077539	100.0	101.5	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	922254	100.0	103.3	
72 1,4-Dioxane	88	5.294	5.294	0.000	94	555019	2000.0	1992.6	
73 Dibromomethane	93	5.304	5.304	0.000	93	552968	100.0	100.9	
74 Dichlorobromomethane	83	5.431	5.431	0.000	99	1134840	100.0	102.0	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	675915	100.0	99.1	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	1450869	100.0	101.8	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	5424597	400.0	398.6	
79 Toluene	91	6.064	6.064	0.000	98	3741612	100.0	102.4	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	93	1392139	100.0	102.3	
81 Ethyl methacrylate	69	6.275	6.275	0.000	85	1418208	100.0	99.4	
82 1,1,2-Trichloroethane	97	6.412	6.412	0.000	91	796917	100.0	101.2	
83 Tetrachloroethene	164	6.507	6.507	0.000	93	619760	100.0	104.4	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	97	1401387	100.0	100.7	
85 2-Hexanone	43	6.581	6.581	0.000	94	4305602	400.0	382.6	
86 Chlorodibromomethane	129	6.750	6.750	0.000	90	825567	100.0	105.7	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	844158	100.0	99.9	
89 1-Chlorohexane	91	7.257	7.257	0.000	97	978336	80.0	83.4	
90 Chlorobenzene	112	7.299	7.299	0.000	93	2285655	100.0	100.5	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	95	774163	100.0	101.7	
92 Ethylbenzene	106	7.373	7.373	0.000	99	1284529	100.0	101.9	
93 m-Xylene & p-Xylene	106	7.489	7.489	0.000	0	1576514	100.0	102.4	
94 o-Xylene	106	7.848	7.848	0.000	97	1514452	100.0	100.8	
95 Styrene	104	7.869	7.869	0.000	94	2545818	100.0	101.2	
96 Bromoform	173	8.048	8.048	0.000	94	552434	100.0	108.4	
97 Isopropylbenzene	105	8.196	8.185	0.011	96	3766076	100.0	102.2	
99 Cyclohexanone	55	8.280	8.280	0.000	91	3274494	3000.0	3005.7	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	1280606	100.0	99.2	
101 Bromobenzene	156	8.502	8.502	0.000	96	861017	100.0	101.0	
102 trans-1,4-Dichloro-2-butene	53	8.512	8.512	0.000	90	435151	100.0	106.9	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	79	398369	100.0	100.1	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	1023534	100.0	103.4	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	858563	100.0	100.8	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	3046092	100.0	101.2	
107 4-Chlorotoluene	126	8.797	8.797	0.000	98	885672	100.0	99.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	2431910	100.0	99.9	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.001	98	3110454	100.0	100.9	
110 sec-Butylbenzene	134	9.283	9.283	0.000	95	709332	100.0	101.1	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	96	1538199	100.0	99.4	
112 4-Isopropyltoluene	119	9.441	9.431	0.010	96	2944349	100.0	99.5	
113 1,4-Dichlorobenzene	146	9.504	9.504	0.000	92	1580725	100.0	99.0	
115 n-Butylbenzene	91	9.832	9.832	0.000	98	2691091	100.0	99.5	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	1459972	100.0	100.0	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	81	345298	100.0	104.4	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	721264	100.0	100.9	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	95	263877	100.0	98.3	
121 Naphthalene	128	11.721	11.721	0.001	97	3035455	100.0	94.9	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	619636	100.0	95.3	
S 139 1,2-Dichloroethene, Total (URS)	96				0		200.0	205.4	
S 144 1,2-Dichloroethene, Total	1				0		200.0	205.4	
S 145 1,3-Dichloropropene, Total	1				0		200.0	204.1	
S 146 Total BTEX	1				0			510.0	
S 143 Xylenes, Total (URS)	1				0		200.0	203.3	
S 140 Trihalomethanes, Total	1				0		400.0	417.1	
S 142 Xylenes, Total	106				0		200.0	203.3	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00082	Amount Added: 50.00	Units: uL	
MV-Gas B_00132	Amount Added: 20.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 13-Apr-2023 15:56:53 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00513.D

Injection Date: 11-Apr-2023 20:11:30 Instrument ID: VMS_P Operator ID: SEIFERTJ

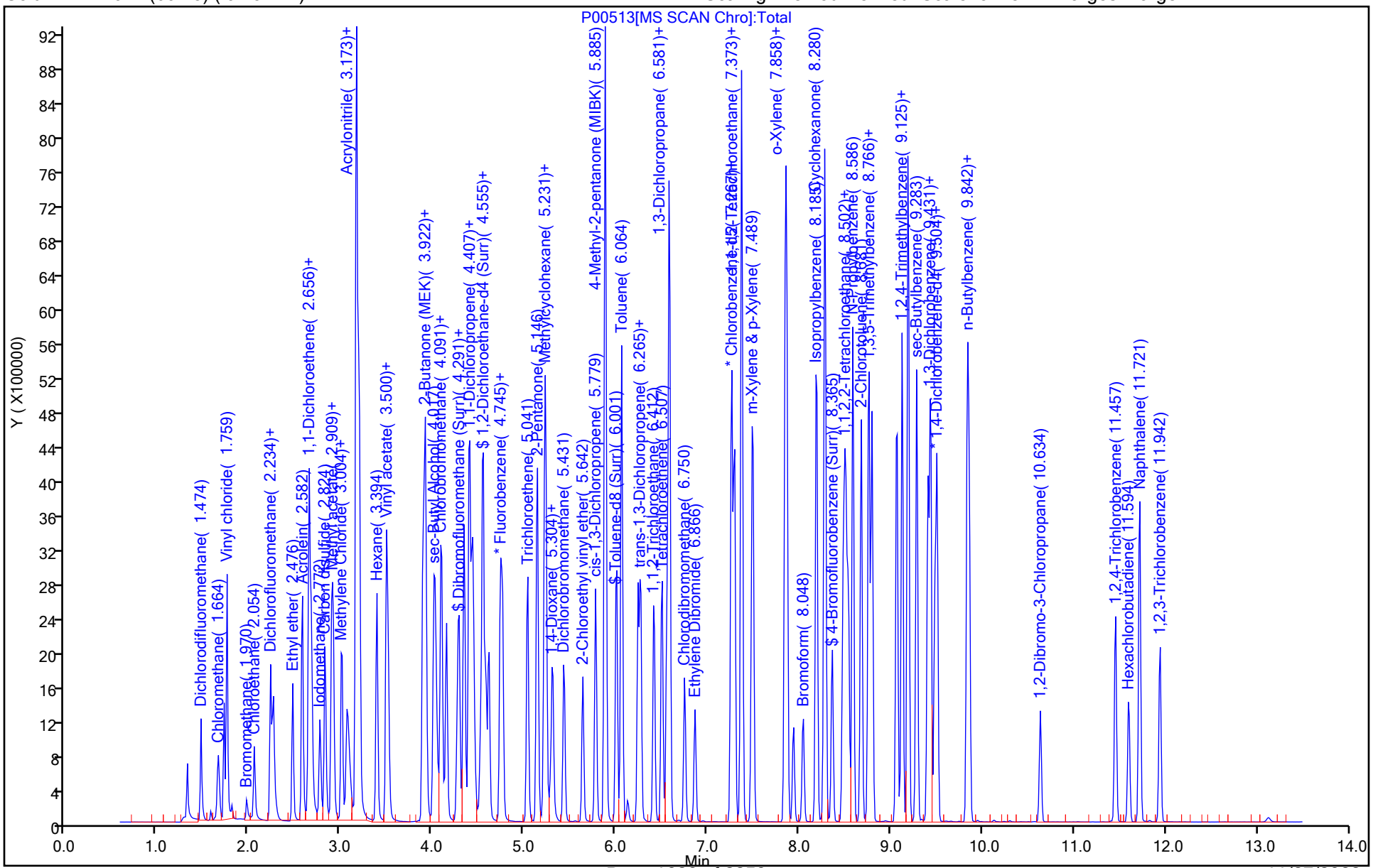
Lims ID: STD100 Worklist Smp#: 19

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 11

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 11-Apr-2023 20:33:30 ALS Bottle#: 12 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:56:55 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 12-Apr-2023 07:48:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2014445	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	87	460565	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	613150	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	471101	50.0	48.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	562541	50.0	48.7	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	2015779	50.0	50.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	712991	50.0	52.5	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	1701744	200.0	206.2	
11 Chloromethane	50	1.664	1.664	0.000	99	1820995	200.0	204.6	
12 Vinyl chloride	62	1.727	1.727	0.000	97	2099114	200.0	197.0	
14 Bromomethane	94	1.970	1.980	-0.010	90	261242	200.0	85.2	
15 Chloroethane	64	2.054	2.065	-0.011	100	937714	200.0	198.9	
16 Dichlorofluoromethane	67	2.233	2.233	0.000	97	2967501	200.0	191.4	
17 Trichlorofluoromethane	101	2.265	2.265	0.000	98	2416166	200.0	213.3	
19 Ethyl ether	59	2.476	2.476	0.000	89	1439001	200.0	194.8	
21 Acrolein	56	2.582	2.582	0.000	100	4125785	1975.0	2032.2	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.656	2.656	0.000	74	1084453	200.0	210.9	
22 1,1-Dichloroethene	96	2.656	2.656	0.000	98	1529966	200.0	208.7	
24 Acetone	43	2.677	2.677	0.000	99	4008014	800.0	767.1	
26 Iodomethane	142	2.772	2.772	0.000	99	2252684	200.0	215.6	
27 Carbon disulfide	76	2.824	2.824	0.000	99	4837768	200.0	198.3	
29 Methyl acetate	43	2.898	2.898	0.000	97	4387828	400.0	393.3	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	92	2236529	200.0	196.3	
31 Methylene Chloride	84	3.004	3.014	-0.010	91	1750142	200.0	200.2	
32 2-Methyl-2-propanol	59	3.078	3.067	0.011	100	4946161	2000.0	1944.7	
33 Acrylonitrile	53	3.173	3.173	0.000	98	11460553	2000.0	1862.4	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	96	5331205	200.0	197.3	
35 trans-1,2-Dichloroethene	96	3.204	3.204	0.000	98	1702371	200.0	202.8	
36 Hexane	57	3.394	3.394	0.000	90	2242059	200.0	213.4	
38 Vinyl acetate	43	3.500	3.500	0.000	97	7354406	400.0	395.0	
39 1,1-Dichloroethane	63	3.521	3.510	0.011	96	2984715	200.0	199.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.890	0.011	98	6384989	800.0	760.8	
48 2,2-Dichloropropane	77	3.922	3.922	0.000	87	2569853	200.0	197.8	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	82	1894557	200.0	201.4	
50 sec-Butyl Alcohol	45	4.027	4.017	0.010	98	8689933	4800.0	4642.6	
53 Chlorobromomethane	128	4.091	4.091	0.000	96	812579	200.0	195.5	
52 Tetrahydrofuran	42	4.101	4.101	0.000	86	2139148	400.0	379.2	
54 Chloroform	83	4.154	4.154	0.000	93	2897849	200.0	191.2	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	2625534	200.0	205.5	
56 Cyclohexane	56	4.344	4.344	0.000	89	3001957	200.0	202.3	
57 1,1-Dichloropropene	75	4.397	4.397	0.000	97	2483279	200.0	208.6	
59 Carbon tetrachloride	117	4.407	4.407	0.000	96	2146515	200.0	208.0	
58 Isobutyl alcohol	41	4.439	4.428	0.011	94	3428704	5000.0	4729.3	
60 Benzene	78	4.545	4.555	-0.011	96	6907834	200.0	195.9	
61 1,2-Dichloroethane	62	4.576	4.576	0.000	97	2303603	200.0	193.0	
66 n-Heptane	43	4.745	4.745	0.000	90	1889038	200.0	206.4	
67 Trichloroethene	95	5.040	5.041	-0.001	98	1781313	200.0	205.0	
68 2-Pentanone	43	5.146	5.136	0.010	98	7662484	640.0	589.5	
69 Methylcyclohexane	55	5.220	5.220	0.000	92	2217669	200.0	203.9	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	1854383	200.0	202.8	
72 1,4-Dioxane	88	5.304	5.294	0.010	93	1061088	4000.0	3718.3	
73 Dibromomethane	93	5.315	5.304	0.011	92	1081615	200.0	192.7	
74 Dichlorobromomethane	83	5.431	5.431	0.000	99	2278669	200.0	199.9	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	1379464	200.0	197.4	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	2906724	200.0	205.4	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	93	10198054	800.0	731.5	
79 Toluene	91	6.064	6.064	0.000	99	7231296	200.0	193.1	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	93	2791413	200.0	200.1	
81 Ethyl methacrylate	69	6.275	6.275	0.000	87	2825553	200.0	199.4	
82 1,1,2-Trichloroethane	97	6.423	6.412	0.011	91	1580609	200.0	196.0	
83 Tetrachloroethene	164	6.507	6.507	0.000	93	1232611	200.0	209.2	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	89	2757027	200.0	199.6	
85 2-Hexanone	43	6.592	6.581	0.011	92	8264804	800.0	739.7	
86 Chlorodibromomethane	129	6.750	6.750	0.000	90	1650807	200.0	212.9	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	1680044	200.0	200.2	
89 1-Chlorohexane	91	7.257	7.257	0.000	97	1929352	160.0	166.1	
90 Chlorobenzene	112	7.299	7.299	0.000	92	4412752	200.0	195.3	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	95	1525777	200.0	201.9	
92 Ethylbenzene	106	7.373	7.373	0.000	99	2509783	200.0	200.5	
93 m-Xylene & p-Xylene	106	7.489	7.489	0.000	0	3037161	200.0	198.7	
94 o-Xylene	106	7.848	7.848	0.000	97	2926427	200.0	196.3	
95 Styrene	104	7.869	7.869	0.000	93	4891877	200.0	195.9	
96 Bromoform	173	8.048	8.048	0.000	94	1092360	200.0	215.9	
97 Isopropylbenzene	105	8.196	8.185	0.011	97	6921679	200.0	203.6	
99 Cyclohexanone	55	8.280	8.280	0.000	91	4840225	6000.0	4474.6	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	2501728	200.0	210.0	
101 Bromobenzene	156	8.502	8.502	0.000	96	1616047	200.0	205.5	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.512	0.011	88	850738	200.0	226.4	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	82	761852	200.0	207.5	
104 N-Propylbenzene	120	8.586	8.586	0.000	98	1895497	200.0	207.5	
105 2-Chlorotoluene	126	8.681	8.681	0.000	95	1603249	200.0	204.0	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	5567665	200.0	200.4	
107 4-Chlorotoluene	126	8.797	8.797	0.000	98	1657147	200.0	201.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	4446372	200.0	198.0	
109 1,2,4-Trimethylbenzene	105	9.124	9.125	0.000	98	5668701	200.0	199.4	
110 sec-Butylbenzene	134	9.283	9.283	0.000	95	1300028	200.0	200.8	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	96	2824285	200.0	197.8	
112 4-Isopropyltoluene	119	9.441	9.431	0.010	96	5369853	200.0	196.7	
113 1,4-Dichlorobenzene	146	9.504	9.504	0.000	95	2893676	200.0	196.5	
115 n-Butylbenzene	91	9.832	9.832	0.000	98	4938445	200.0	198.0	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	98	2653727	200.0	196.9	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	82	628677	200.0	205.9	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	1300594	200.0	197.4	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	96	499095	200.0	201.7	
121 Naphthalene	128	11.720	11.721	0.000	98	5220644	200.0	176.8	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	1075932	200.0	179.3	
S 139 1,2-Dichloroethene, Total (URS)	96				0		400.0	404.3	
S 144 1,2-Dichloroethene, Total	1				0		400.0	404.3	
S 145 1,3-Dichloropropene, Total	1				0		400.0	405.6	
S 146 Total BTEX	1				0			984.5	
S 143 Xylenes, Total (URS)	1				0		400.0	395.0	
S 140 Trihalomethanes, Total	1				0		800.0	820.0	
S 142 Xylenes, Total	106				0		400.0	395.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00082	Amount Added: 100.00	Units: uL	
MV-Gas B_00132	Amount Added: 40.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

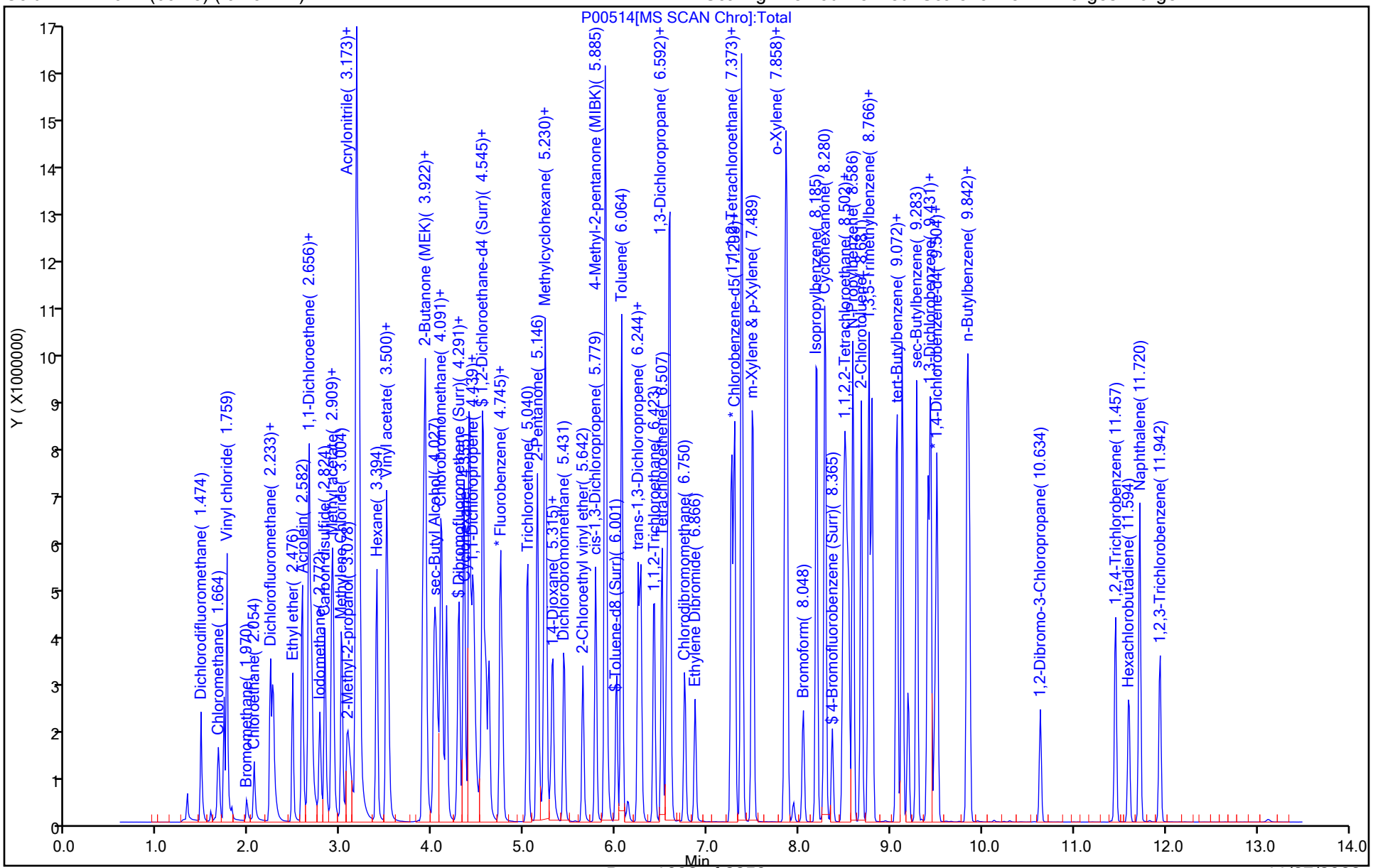
Report Date: 13-Apr-2023 15:56:55 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Injection Date:	11-Apr-2023 20:33:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD200			Worklist Smp#:	20
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Dichlorodifluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

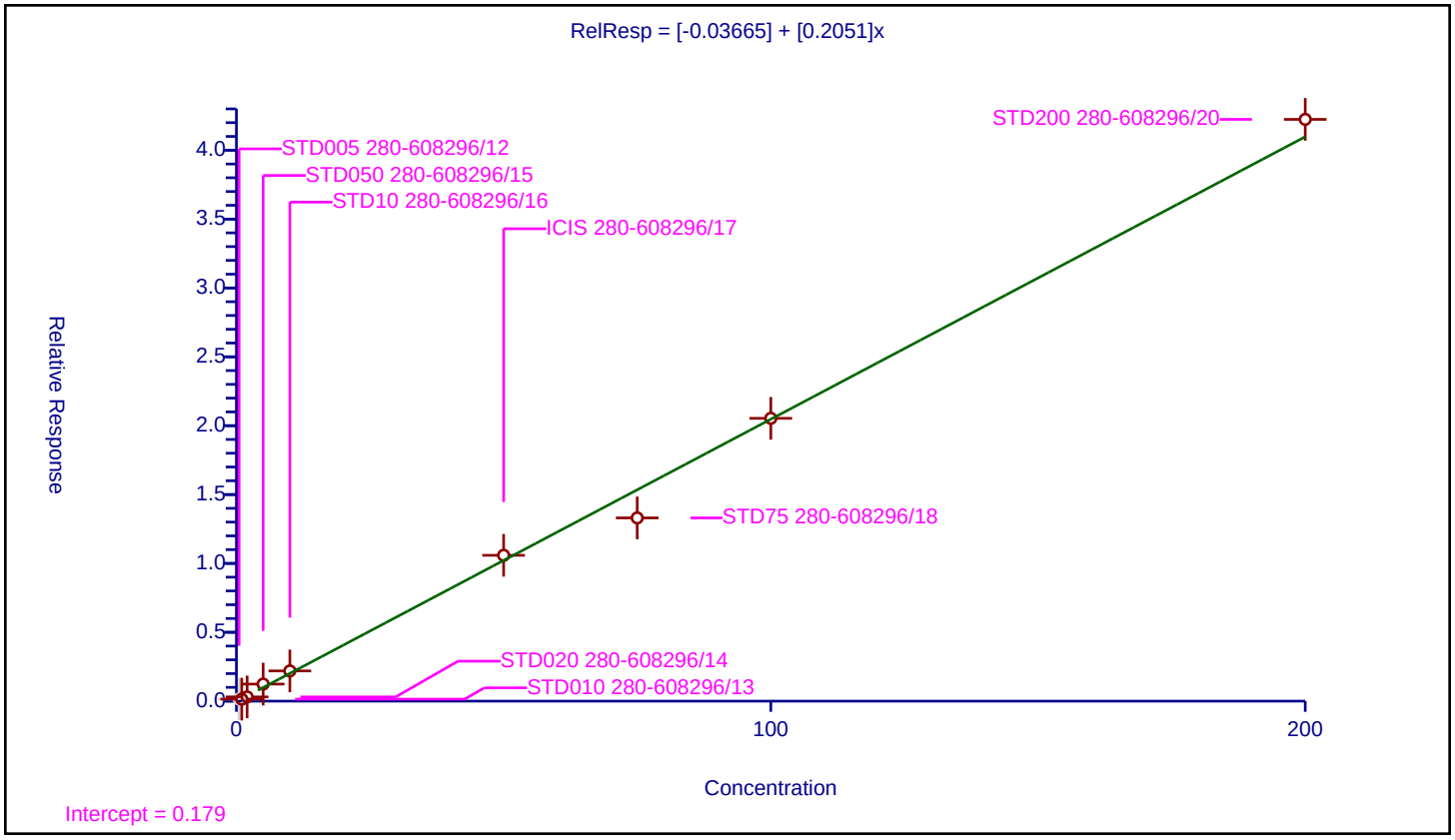
Curve Coefficients

Intercept:	-0.03665
Slope:	0.2051

Error Coefficients

Standard Error:	817000
Relative Standard Error:	14.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.15423	50.0	1964271.0	0.30846	N
2	STD010 280-608296/13	1.0	0.146645	50.0	1932557.0	0.146645	Y
3	STD020 280-608296/14	2.0	0.306428	50.0	1938628.0	0.153214	Y
4	STD050 280-608296/15	5.0	1.23945	50.0	1881479.0	0.24789	Y
5	STD10 280-608296/16	10.0	2.193365	50.0	1890839.0	0.219336	Y
6	ICIS 280-608296/17	50.0	10.587613	50.0	1962770.0	0.211752	Y
7	STD75 280-608296/18	75.0	13.304202	50.0	1984313.0	0.177389	Y
8	STD100 280-608296/19	100.0	20.532804	50.0	1966239.0	0.205328	Y
9	STD200 280-608296/20	200.0	42.238532	50.0	2014445.0	0.211193	Y



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Calibration / Chloromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

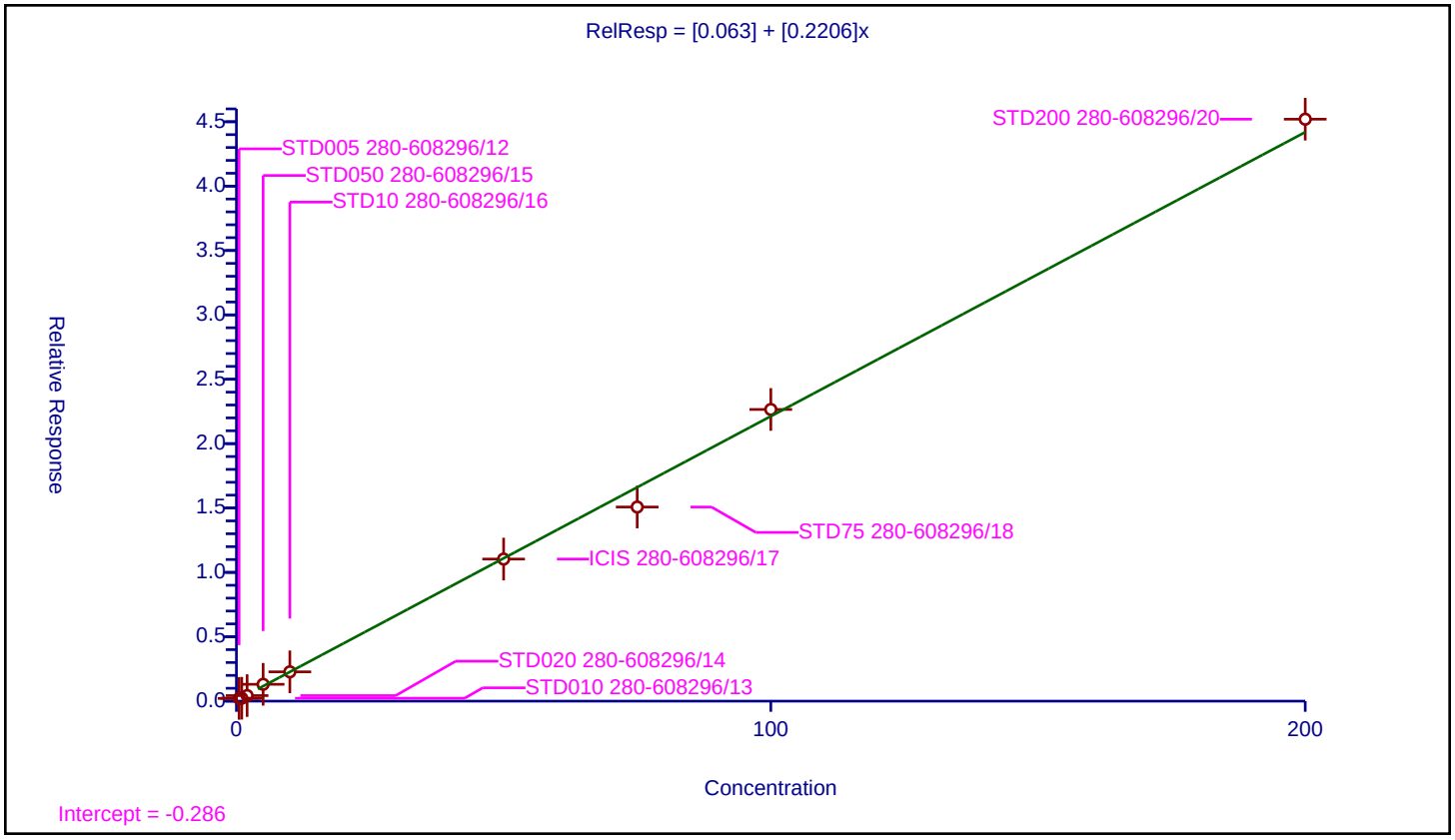
Curve Coefficients

Intercept:	0.063
Slope:	0.2206

Error Coefficients

Standard Error:	816000
Relative Standard Error:	18.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.210994	50.0	1964271.0	0.421989	Y
2	STD010 280-608296/13	1.0	0.226824	50.0	1932557.0	0.226824	Y
3	STD020 280-608296/14	2.0	0.431155	50.0	1938628.0	0.215578	Y
4	STD050 280-608296/15	5.0	1.308997	50.0	1881479.0	0.261799	Y
5	STD10 280-608296/16	10.0	2.277481	50.0	1890839.0	0.227748	Y
6	ICIS 280-608296/17	50.0	11.035424	50.0	1962770.0	0.220708	Y
7	STD75 280-608296/18	75.0	15.077712	50.0	1984313.0	0.201036	Y
8	STD100 280-608296/19	100.0	22.655384	50.0	1966239.0	0.226554	Y
9	STD200 280-608296/20	200.0	45.198429	50.0	2014445.0	0.225992	Y



Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

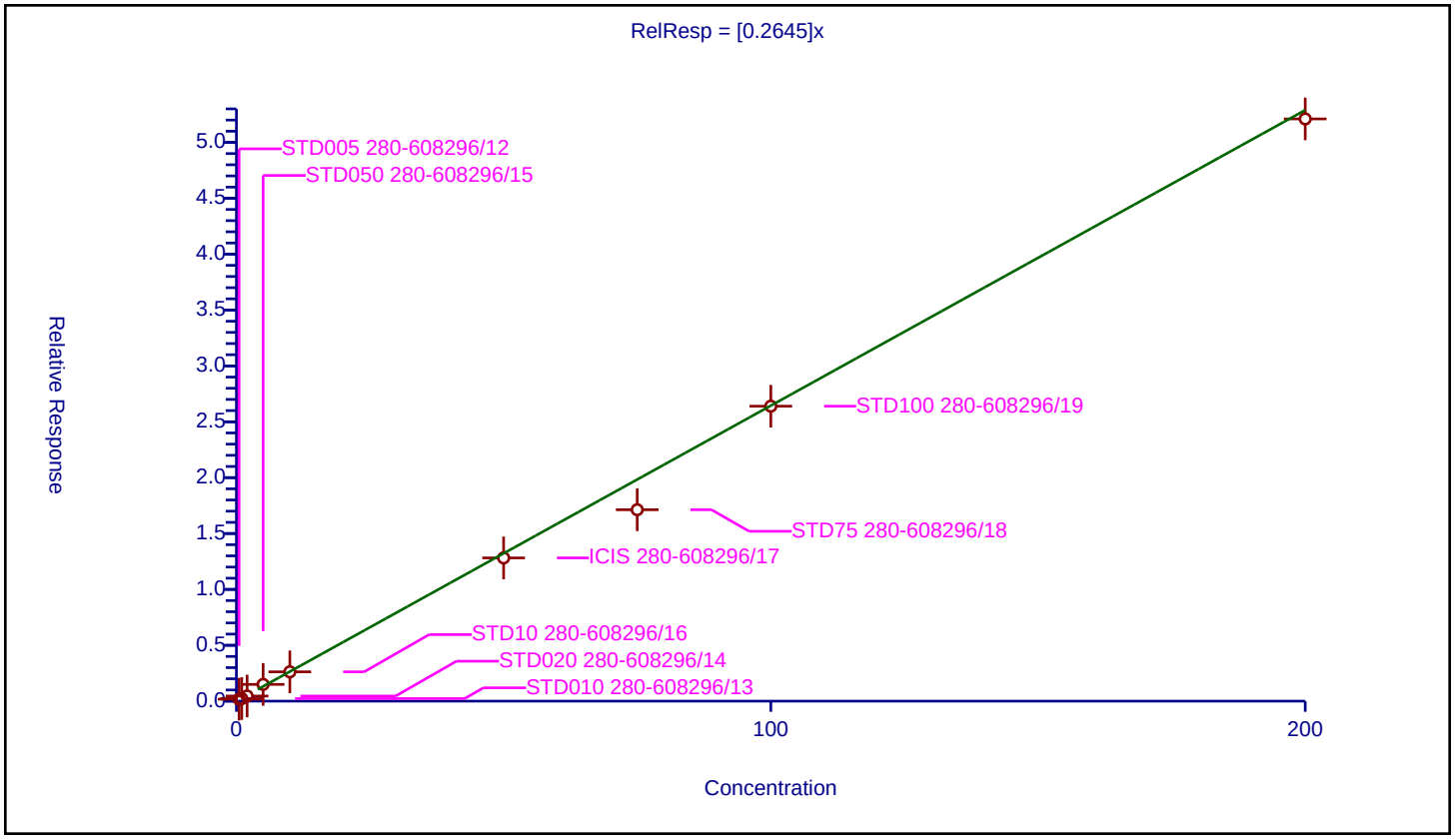
Curve Coefficients

Intercept:	0
Slope:	0.2645

Error Coefficients

Standard Error:	881000
Relative Standard Error:	14.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.969

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.17467	50.0	1964271.0	0.349341	Y
2	STD010 280-608296/13	1.0	0.229954	50.0	1932557.0	0.229954	Y
3	STD020 280-608296/14	2.0	0.459139	50.0	1938628.0	0.22957	Y
4	STD050 280-608296/15	5.0	1.499007	50.0	1881479.0	0.299801	Y
5	STD10 280-608296/16	10.0	2.622011	50.0	1890839.0	0.262201	Y
6	ICIS 280-608296/17	50.0	12.816912	50.0	1962770.0	0.256338	Y
7	STD75 280-608296/18	75.0	17.12953	50.0	1984313.0	0.228394	Y
8	STD100 280-608296/19	100.0	26.396282	50.0	1966239.0	0.263963	Y
9	STD200 280-608296/20	200.0	52.101547	50.0	2014445.0	0.260508	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

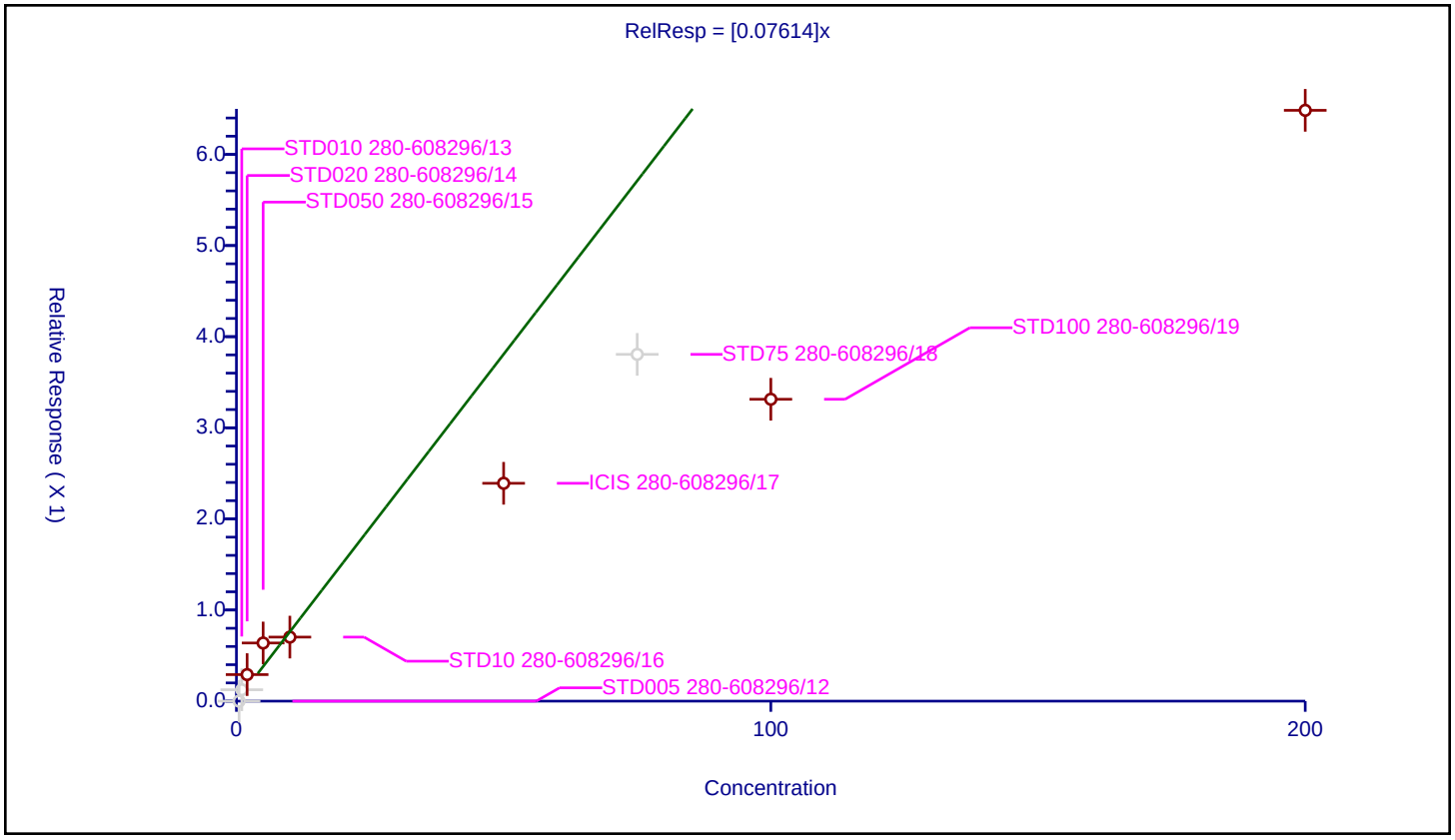
Curve Coefficients

Intercept:	0
Slope:	0.07614

Error Coefficients

Standard Error:	138000
Relative Standard Error:	64.5
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.0	50.0	1964271.0	0.0	N
2	STD010 280-608296/13	1.0	0.124912	50.0	1932557.0	0.124912	N
3	STD020 280-608296/14	2.0	0.29116	50.0	1938628.0	0.14558	Y
4	STD050 280-608296/15	5.0	0.638115	50.0	1881479.0	0.127623	Y
5	STD10 280-608296/16	10.0	0.702942	50.0	1890839.0	0.070294	Y
6	ICIS 280-608296/17	50.0	2.390907	50.0	1962770.0	0.047818	Y
7	STD75 280-608296/18	75.0	3.8057	50.0	1984313.0	0.050743	N
8	STD100 280-608296/19	100.0	3.313178	50.0	1966239.0	0.033132	Y
9	STD200 280-608296/20	200.0	6.484218	50.0	2014445.0	0.032421	Y



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Calibration / Chloroethane

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

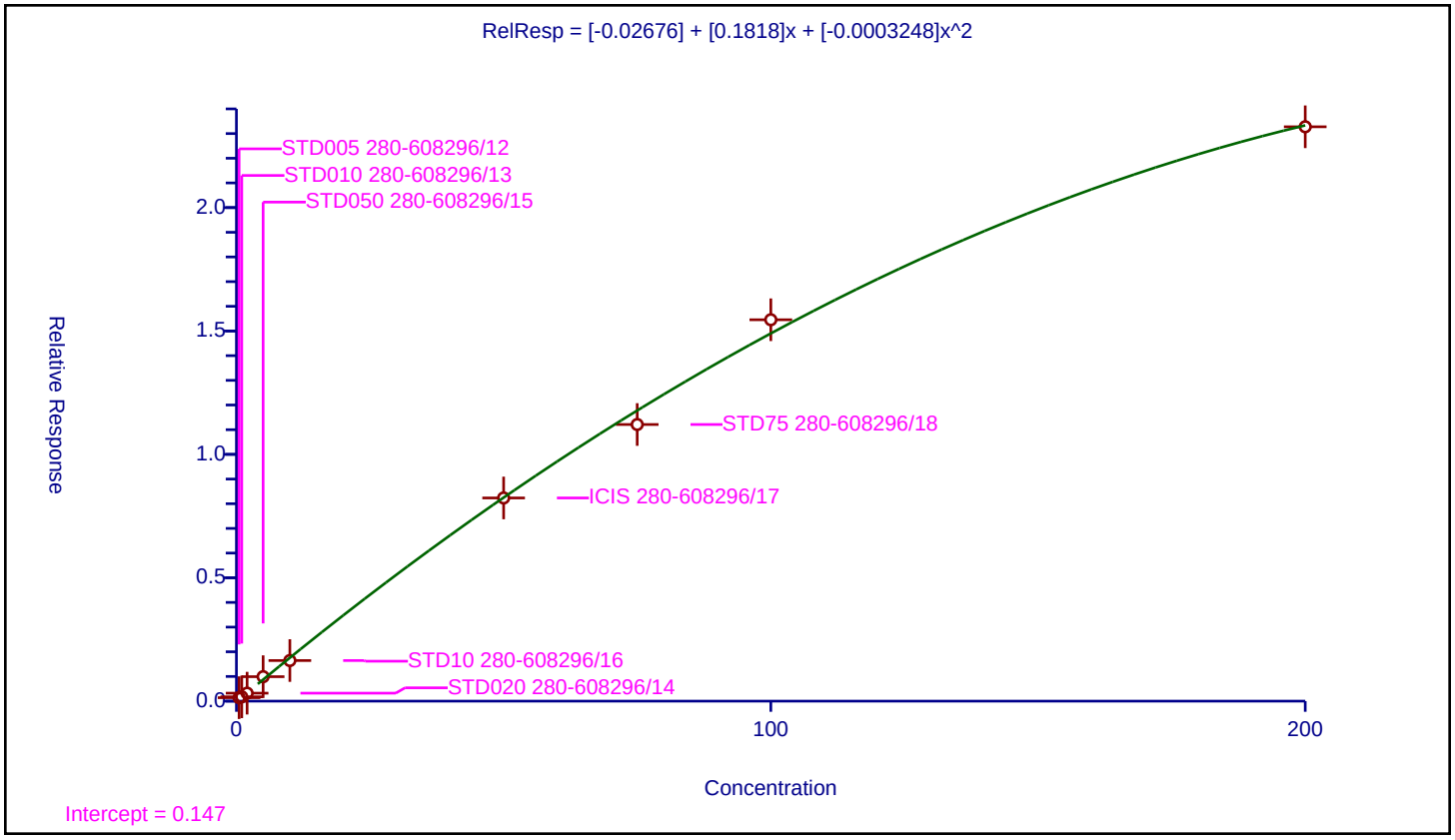
Curve Coefficients

Intercept:	-0.02676
Slope:	0.1818
Second Order:	-0.0003248

Error Coefficients

Standard Error:	509000
Relative Standard Error:	35.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.139874	50.0	1964271.0	0.279748	Y
2	STD010 280-608296/13	1.0	0.174872	50.0	1932557.0	0.174872	Y
3	STD020 280-608296/14	2.0	0.322754	50.0	1938628.0	0.161377	Y
4	STD050 280-608296/15	5.0	0.991481	50.0	1881479.0	0.198296	Y
5	STD10 280-608296/16	10.0	1.644878	50.0	1890839.0	0.164488	Y
6	ICIS 280-608296/17	50.0	8.233619	50.0	1962770.0	0.164672	Y
7	STD75 280-608296/18	75.0	11.209774	50.0	1984313.0	0.149464	Y
8	STD100 280-608296/19	100.0	15.45514	50.0	1966239.0	0.154551	Y
9	STD200 280-608296/20	200.0	23.274748	50.0	2014445.0	0.116374	Y



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Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

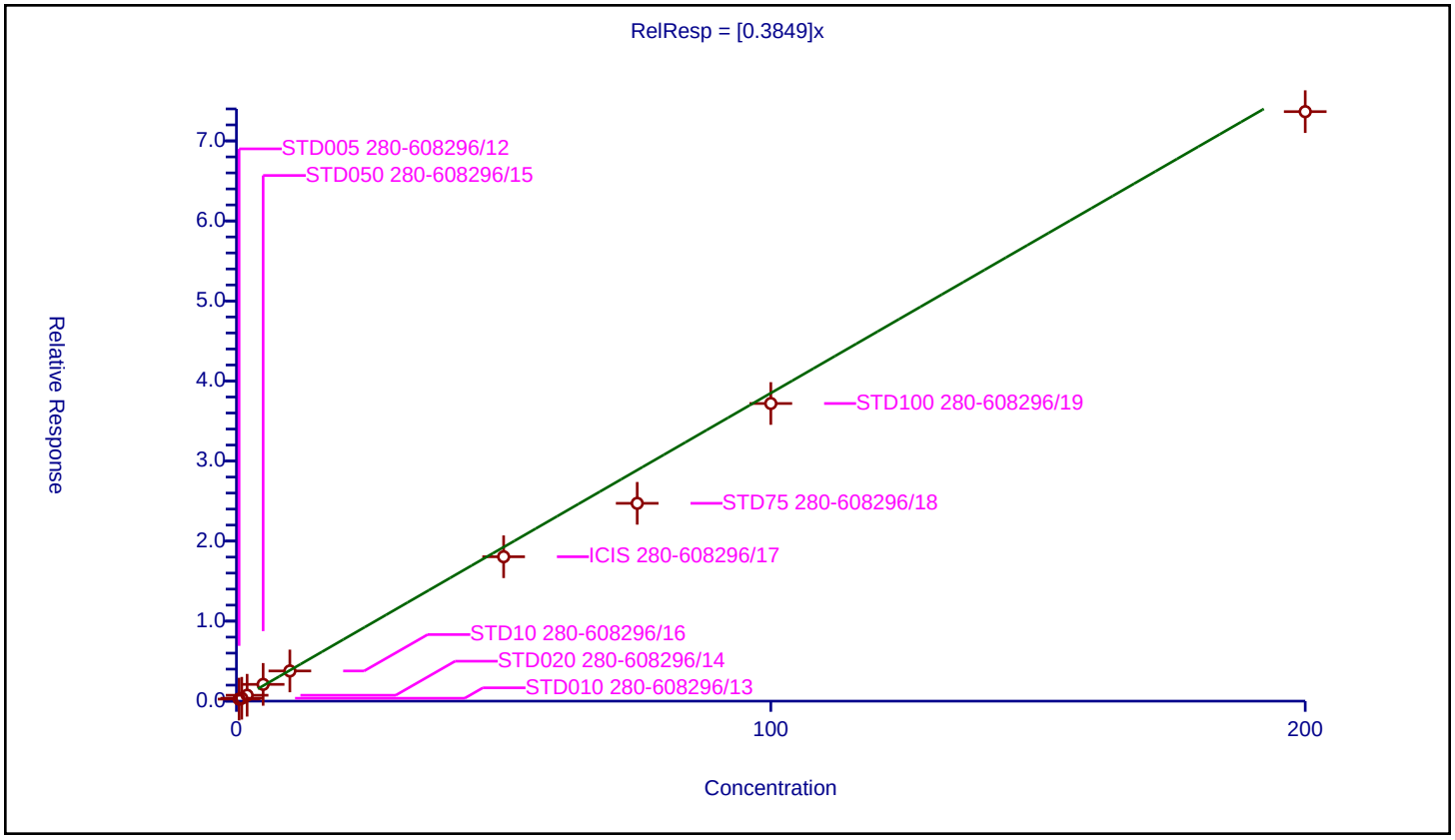
Curve Coefficients

Intercept:	0
Slope:	0.3849

Error Coefficients

Standard Error:	1250000
Relative Standard Error:	13.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.254318	50.0	1964271.0	0.508637	Y
2	STD010 280-608296/13	1.0	0.359653	50.0	1932557.0	0.359653	Y
3	STD020 280-608296/14	2.0	0.737841	50.0	1938628.0	0.368921	Y
4	STD050 280-608296/15	5.0	2.096383	50.0	1881479.0	0.419277	Y
5	STD10 280-608296/16	10.0	3.770522	50.0	1890839.0	0.377052	Y
6	ICIS 280-608296/17	50.0	18.043097	50.0	1962770.0	0.360862	Y
7	STD75 280-608296/18	75.0	24.717169	50.0	1984313.0	0.329562	Y
8	STD100 280-608296/19	100.0	37.190443	50.0	1966239.0	0.371904	Y
9	STD200 280-608296/20	200.0	73.655548	50.0	2014445.0	0.368278	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

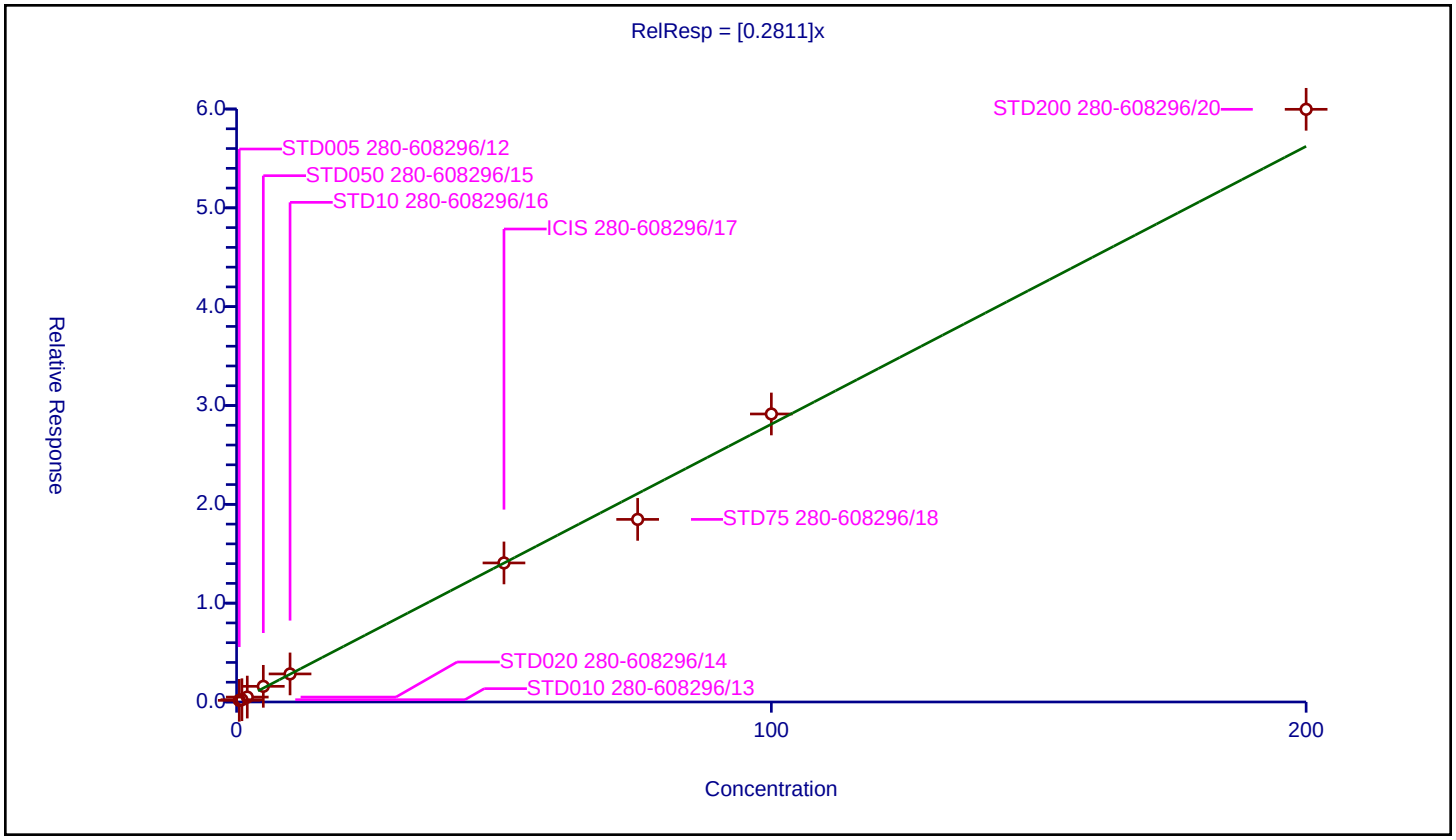
Curve Coefficients

Intercept:	0
Slope:	0.2811

Error Coefficients

Standard Error:	1000000
Relative Standard Error:	11.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.16459	50.0	1964271.0	0.329181	Y
2	STD010 280-608296/13	1.0	0.231791	50.0	1932557.0	0.231791	Y
3	STD020 280-608296/14	2.0	0.498858	50.0	1938628.0	0.249429	Y
4	STD050 280-608296/15	5.0	1.584392	50.0	1881479.0	0.316878	Y
5	STD10 280-608296/16	10.0	2.838713	50.0	1890839.0	0.283871	Y
6	ICIS 280-608296/17	50.0	14.071109	50.0	1962770.0	0.281422	Y
7	STD75 280-608296/18	75.0	18.475236	50.0	1984313.0	0.246336	Y
8	STD100 280-608296/19	100.0	29.141345	50.0	1966239.0	0.291413	Y
9	STD200 280-608296/20	200.0	59.971009	50.0	2014445.0	0.299855	Y



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Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

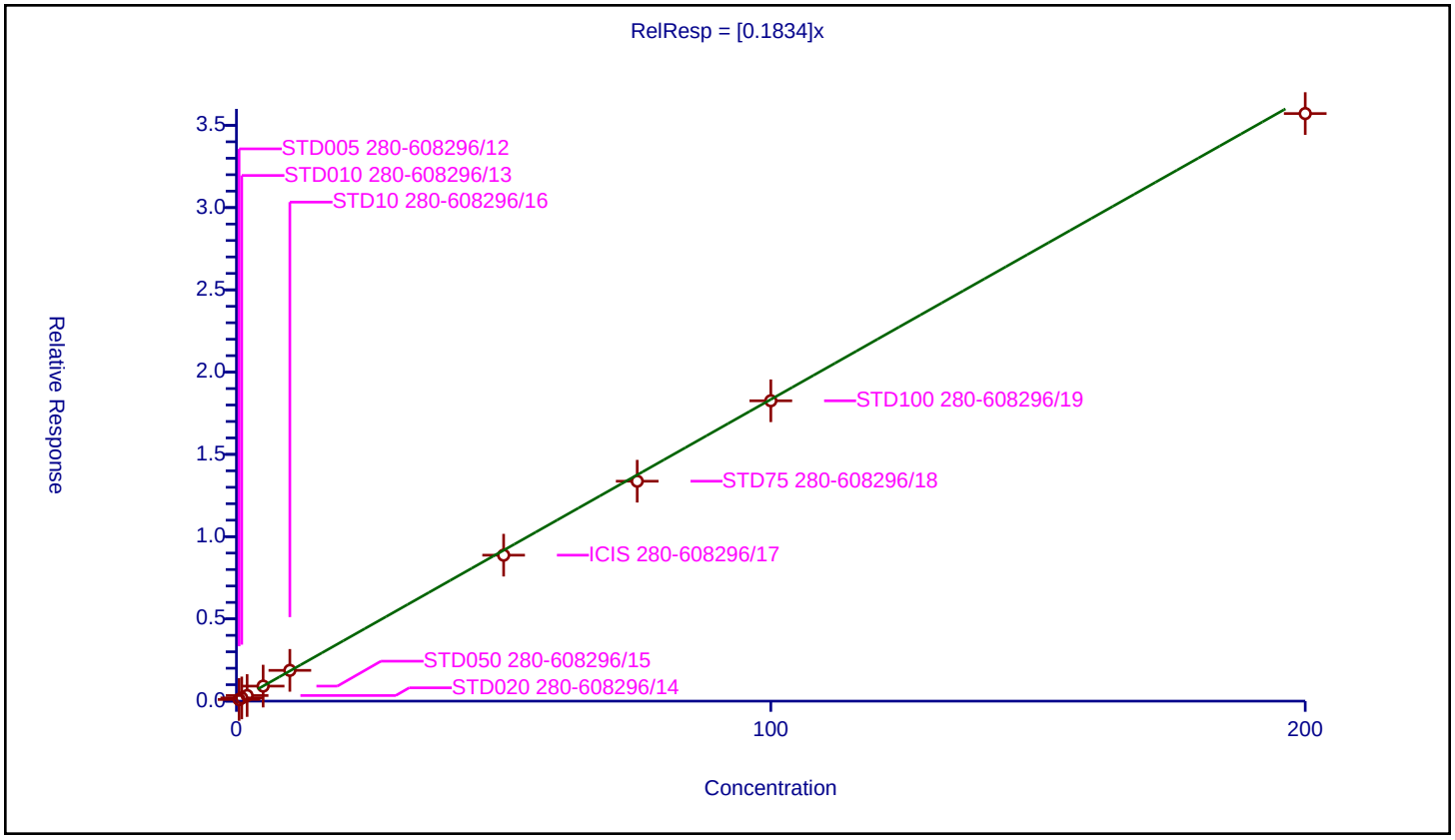
Curve Coefficients

Intercept:	0
Slope:	0.1834

Error Coefficients

Standard Error:	612000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.099044	50.0	1964271.0	0.198089	Y
2	STD010 280-608296/13	1.0	0.195389	50.0	1932557.0	0.195389	Y
3	STD020 280-608296/14	2.0	0.340395	50.0	1938628.0	0.170198	Y
4	STD050 280-608296/15	5.0	0.914228	50.0	1881479.0	0.182846	Y
5	STD10 280-608296/16	10.0	1.871153	50.0	1890839.0	0.187115	Y
6	ICIS 280-608296/17	50.0	8.872716	50.0	1962770.0	0.177454	Y
7	STD75 280-608296/18	75.0	13.368481	50.0	1984313.0	0.178246	Y
8	STD100 280-608296/19	100.0	18.257674	50.0	1966239.0	0.182577	Y
9	STD200 280-608296/20	200.0	35.717059	50.0	2014445.0	0.178585	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

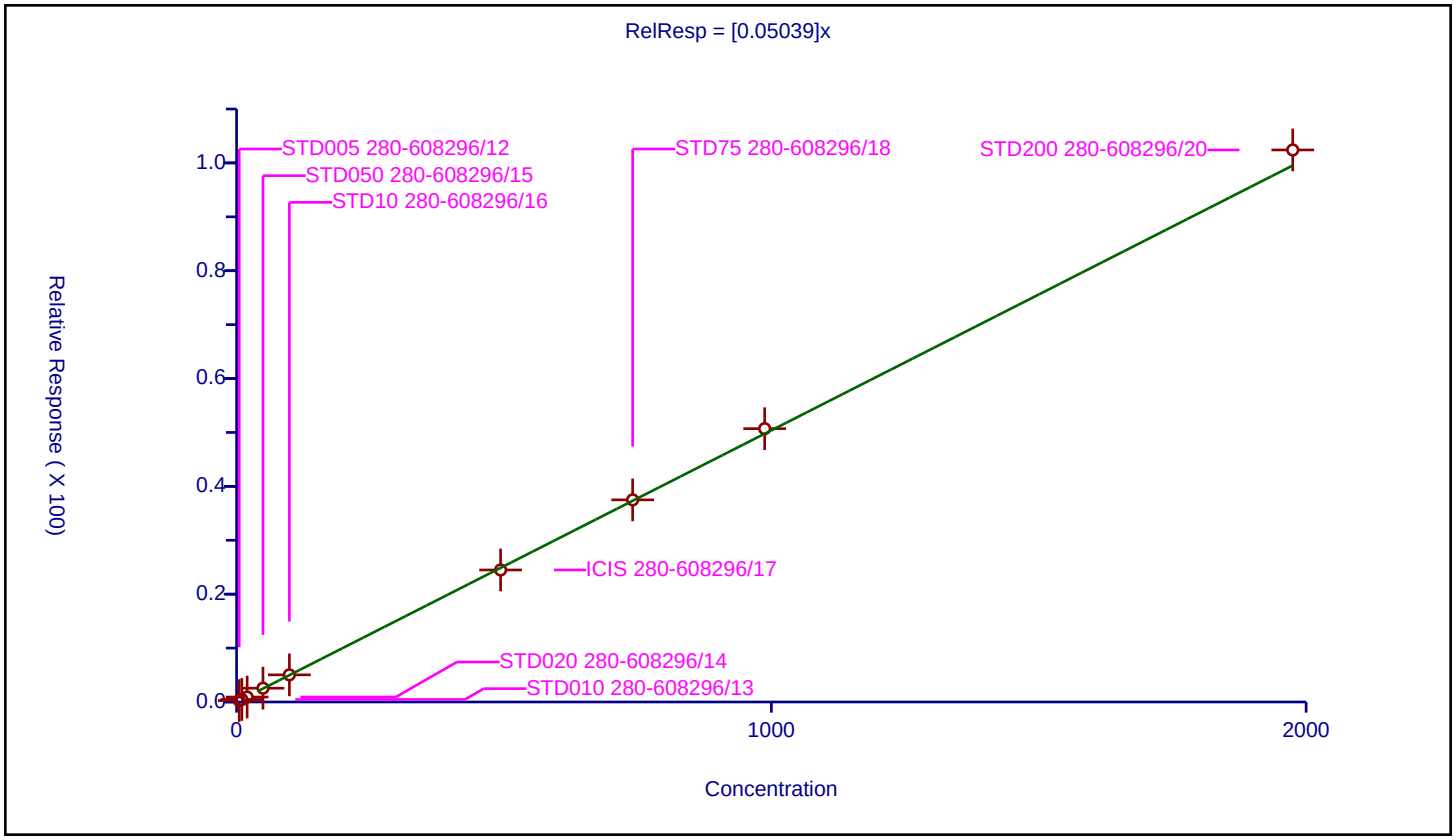
Curve Coefficients

Intercept:	0
Slope:	0.05039

Error Coefficients

Standard Error:	1740000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	4.9375	0.264067	50.0	1964271.0	0.053482	Y
2	STD010 280-608296/13	9.875	0.467722	50.0	1932557.0	0.047364	Y
3	STD020 280-608296/14	19.75	0.917015	50.0	1938628.0	0.046431	Y
4	STD050 280-608296/15	49.375	2.560007	50.0	1881479.0	0.051848	Y
5	STD10 280-608296/16	98.75	5.035331	50.0	1890839.0	0.050991	Y
6	ICIS 280-608296/17	493.75	24.488988	50.0	1962770.0	0.049598	Y
7	STD75 280-608296/18	740.625	37.491968	50.0	1984313.0	0.050622	Y
8	STD100 280-608296/19	987.5	50.700678	50.0	1966239.0	0.051342	Y
9	STD200 280-608296/20	1975.0	102.405005	50.0	2014445.0	0.051851	Y



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Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

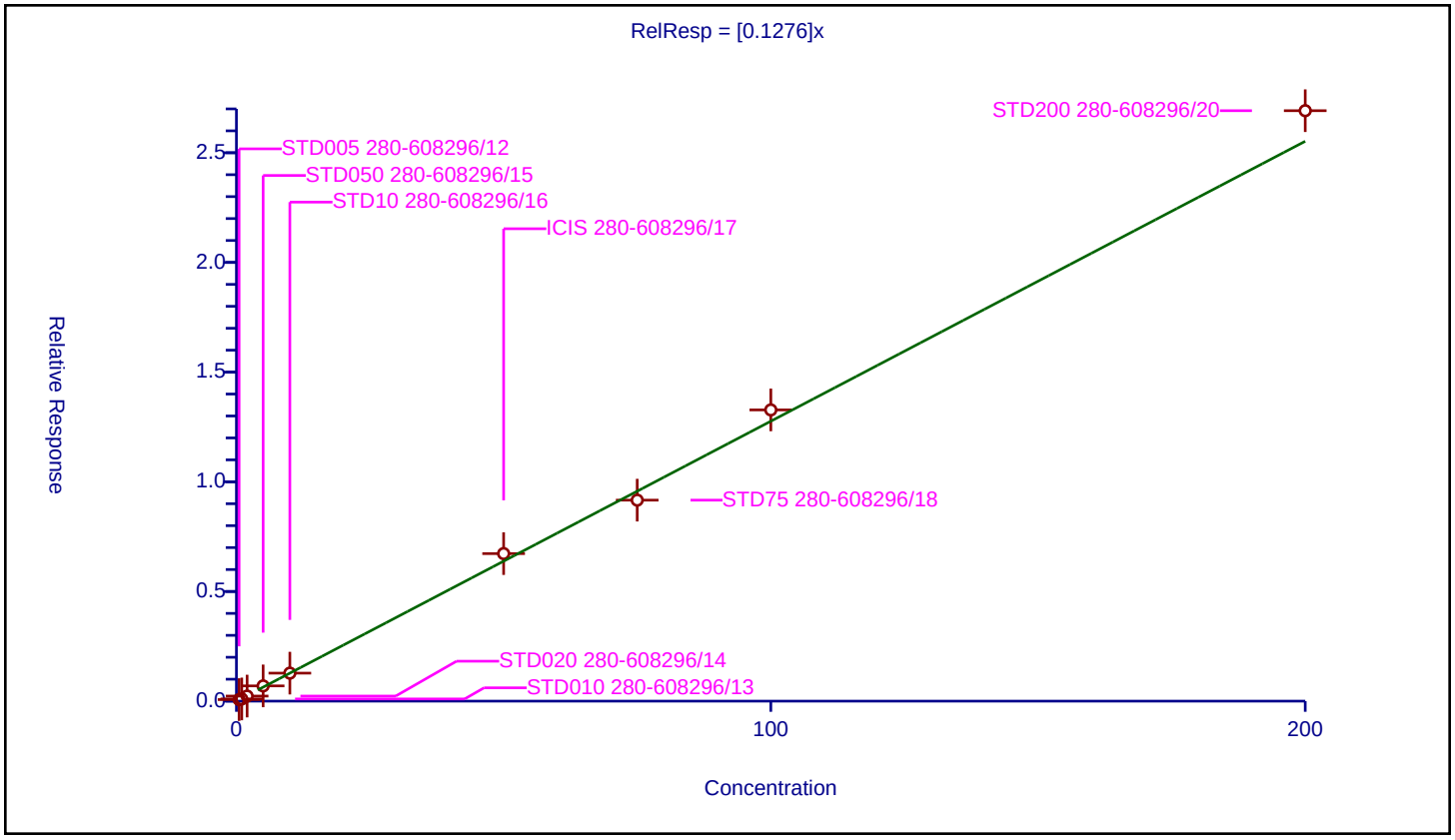
Curve Coefficients

Intercept:	0
Slope:	0.1276

Error Coefficients

Standard Error:	455000
Relative Standard Error:	10.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.070917	50.0	1964271.0	0.141834	Y
2	STD010 280-608296/13	1.0	0.100178	50.0	1932557.0	0.100178	Y
3	STD020 280-608296/14	2.0	0.231607	50.0	1938628.0	0.115804	Y
4	STD050 280-608296/15	5.0	0.694852	50.0	1881479.0	0.13897	Y
5	STD10 280-608296/16	10.0	1.277131	50.0	1890839.0	0.127713	Y
6	ICIS 280-608296/17	50.0	6.72654	50.0	1962770.0	0.134531	Y
7	STD75 280-608296/18	75.0	9.163675	50.0	1984313.0	0.122182	Y
8	STD100 280-608296/19	100.0	13.276819	50.0	1966239.0	0.132768	Y
9	STD200 280-608296/20	200.0	26.916918	50.0	2014445.0	0.134585	Y



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Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

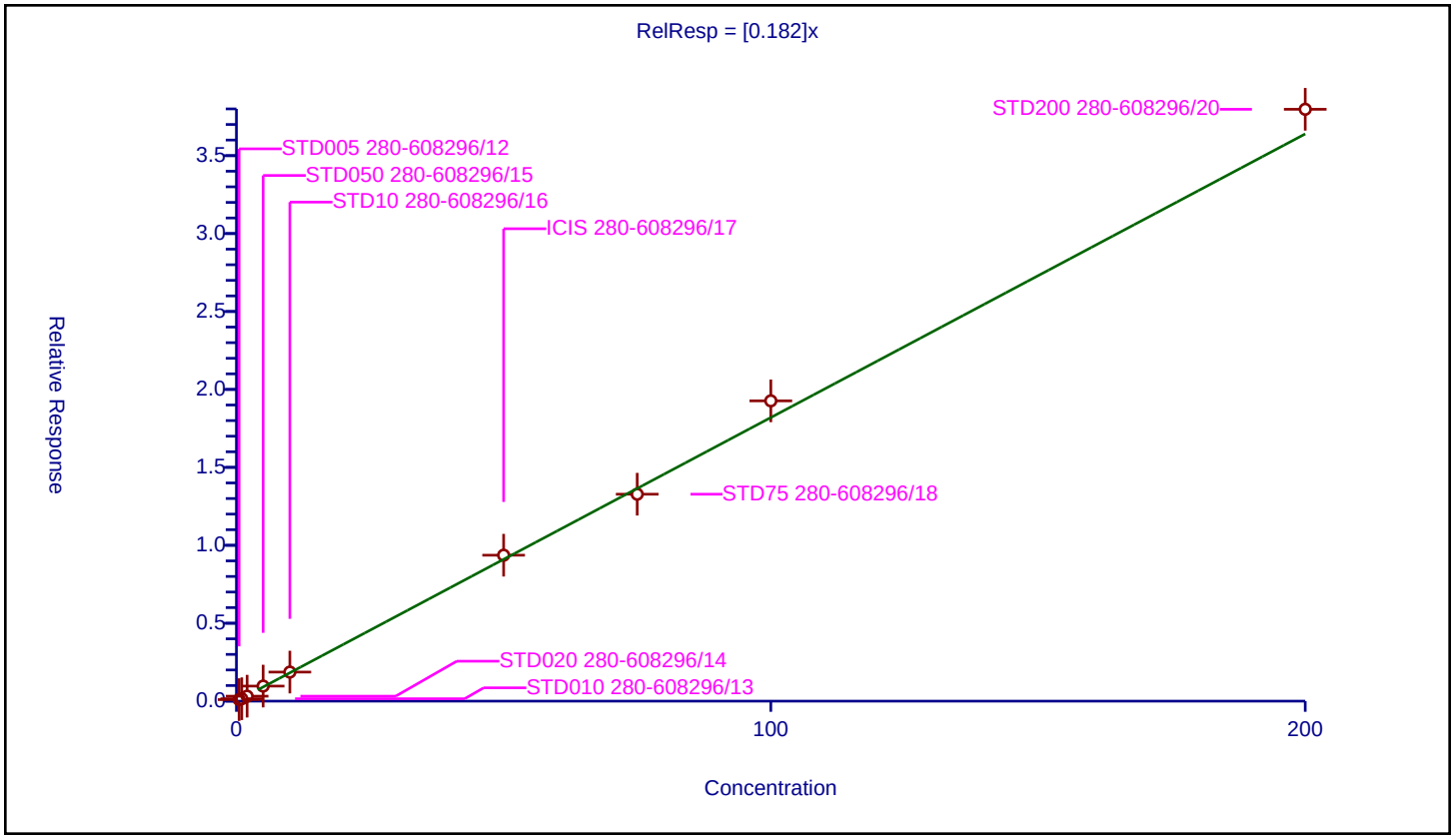
Curve Coefficients

Intercept:	0
Slope:	0.182

Error Coefficients

Standard Error:	646000
Relative Standard Error:	8.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.098637	50.0	1964271.0	0.197274	Y
2	STD010 280-608296/13	1.0	0.154614	50.0	1932557.0	0.154614	Y
3	STD020 280-608296/14	2.0	0.317957	50.0	1938628.0	0.158978	Y
4	STD050 280-608296/15	5.0	0.967165	50.0	1881479.0	0.193433	Y
5	STD10 280-608296/16	10.0	1.865495	50.0	1890839.0	0.186549	Y
6	ICIS 280-608296/17	50.0	9.363833	50.0	1962770.0	0.187277	Y
7	STD75 280-608296/18	75.0	13.277643	50.0	1984313.0	0.177035	Y
8	STD100 280-608296/19	100.0	19.267724	50.0	1966239.0	0.192677	Y
9	STD200 280-608296/20	200.0	37.974876	50.0	2014445.0	0.189874	Y



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Calibration / Acetone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

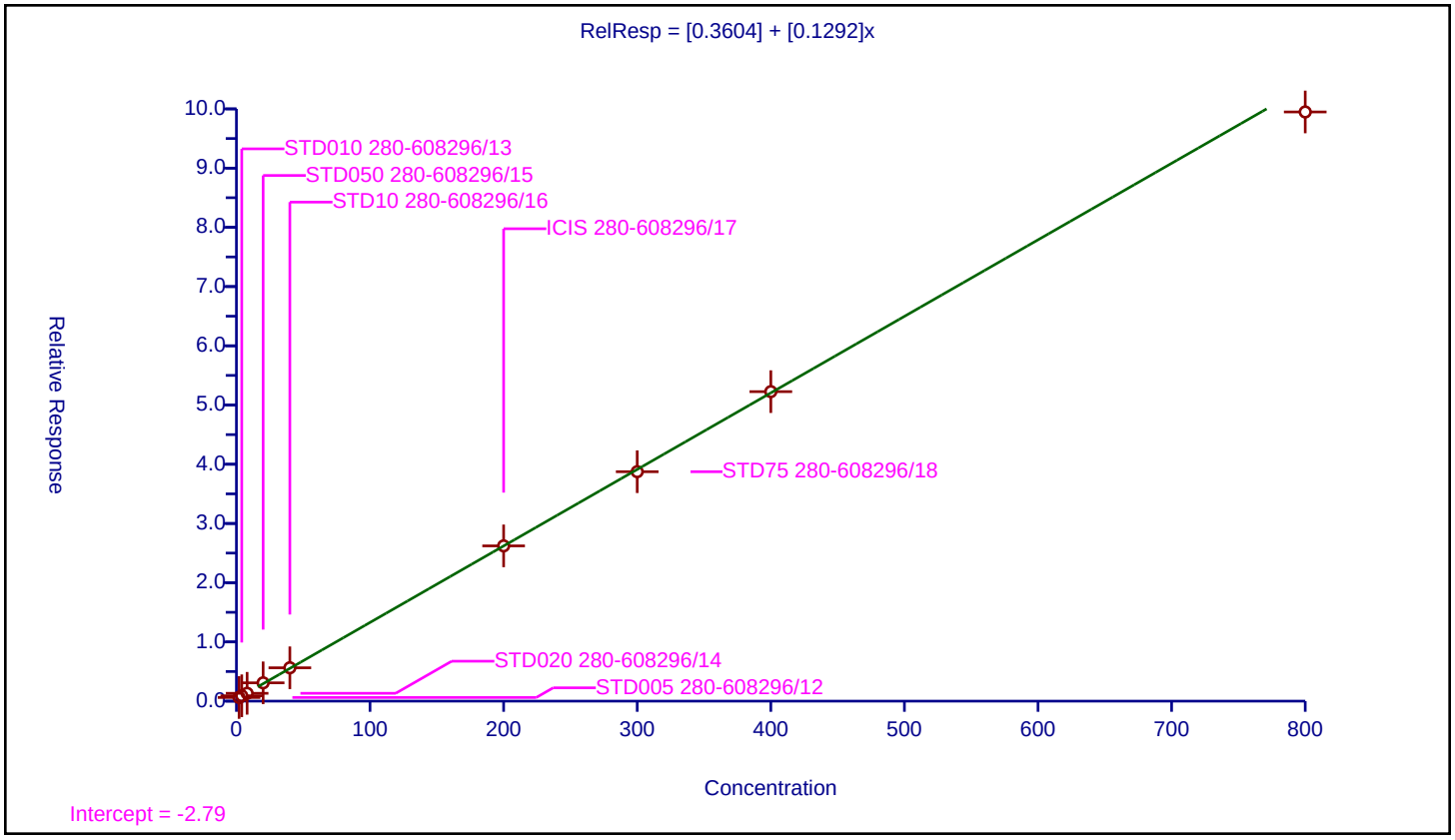
Curve Coefficients

Intercept:	0.3604
Slope:	0.1292

Error Coefficients

Standard Error:	1840000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	2.0	0.614732	50.0	1964271.0	0.307366	Y
2	STD010 280-608296/13	4.0	0.904449	50.0	1932557.0	0.226112	Y
3	STD020 280-608296/14	8.0	1.324339	50.0	1938628.0	0.165542	Y
4	STD050 280-608296/15	20.0	3.093072	50.0	1881479.0	0.154654	Y
5	STD10 280-608296/16	40.0	5.633029	50.0	1890839.0	0.140826	Y
6	ICIS 280-608296/17	200.0	26.214941	50.0	1962770.0	0.131075	Y
7	STD75 280-608296/18	300.0	38.738722	50.0	1984313.0	0.129129	Y
8	STD100 280-608296/19	400.0	52.258347	50.0	1966239.0	0.130646	Y
9	STD200 280-608296/20	800.0	99.481842	50.0	2014445.0	0.124352	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

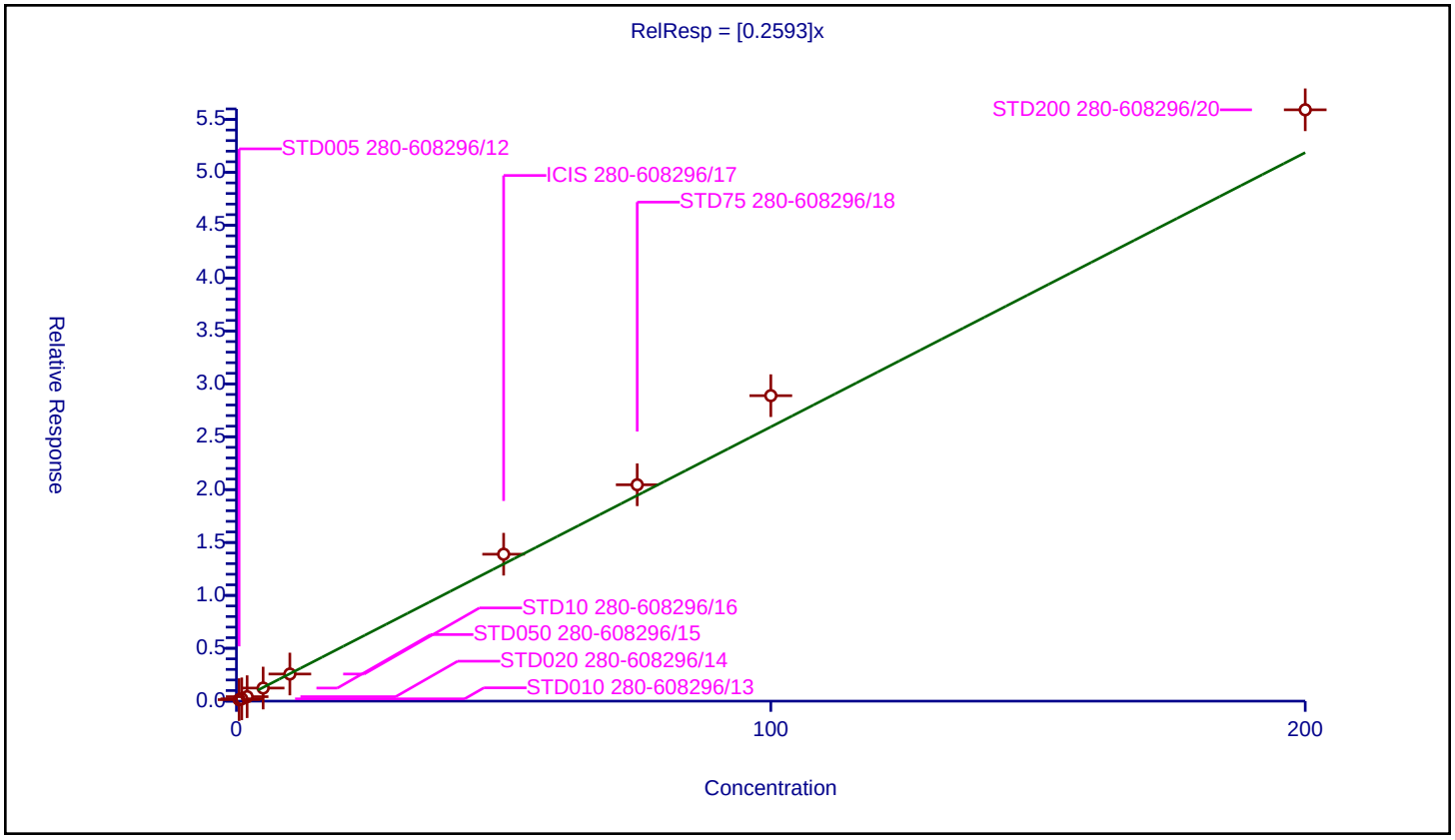
Curve Coefficients

Intercept:	0
Slope:	0.2593

Error Coefficients

Standard Error:	957000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.141223	50.0	1964271.0	0.282446	Y
2	STD010 280-608296/13	1.0	0.217562	50.0	1932557.0	0.217562	Y
3	STD020 280-608296/14	2.0	0.421664	50.0	1938628.0	0.210832	Y
4	STD050 280-608296/15	5.0	1.237776	50.0	1881479.0	0.247555	Y
5	STD10 280-608296/16	10.0	2.565845	50.0	1890839.0	0.256585	Y
6	ICIS 280-608296/17	50.0	13.892713	50.0	1962770.0	0.277854	Y
7	STD75 280-608296/18	75.0	20.459272	50.0	1984313.0	0.27279	Y
8	STD100 280-608296/19	100.0	28.883493	50.0	1966239.0	0.288835	Y
9	STD200 280-608296/20	200.0	55.913266	50.0	2014445.0	0.279566	Y



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Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

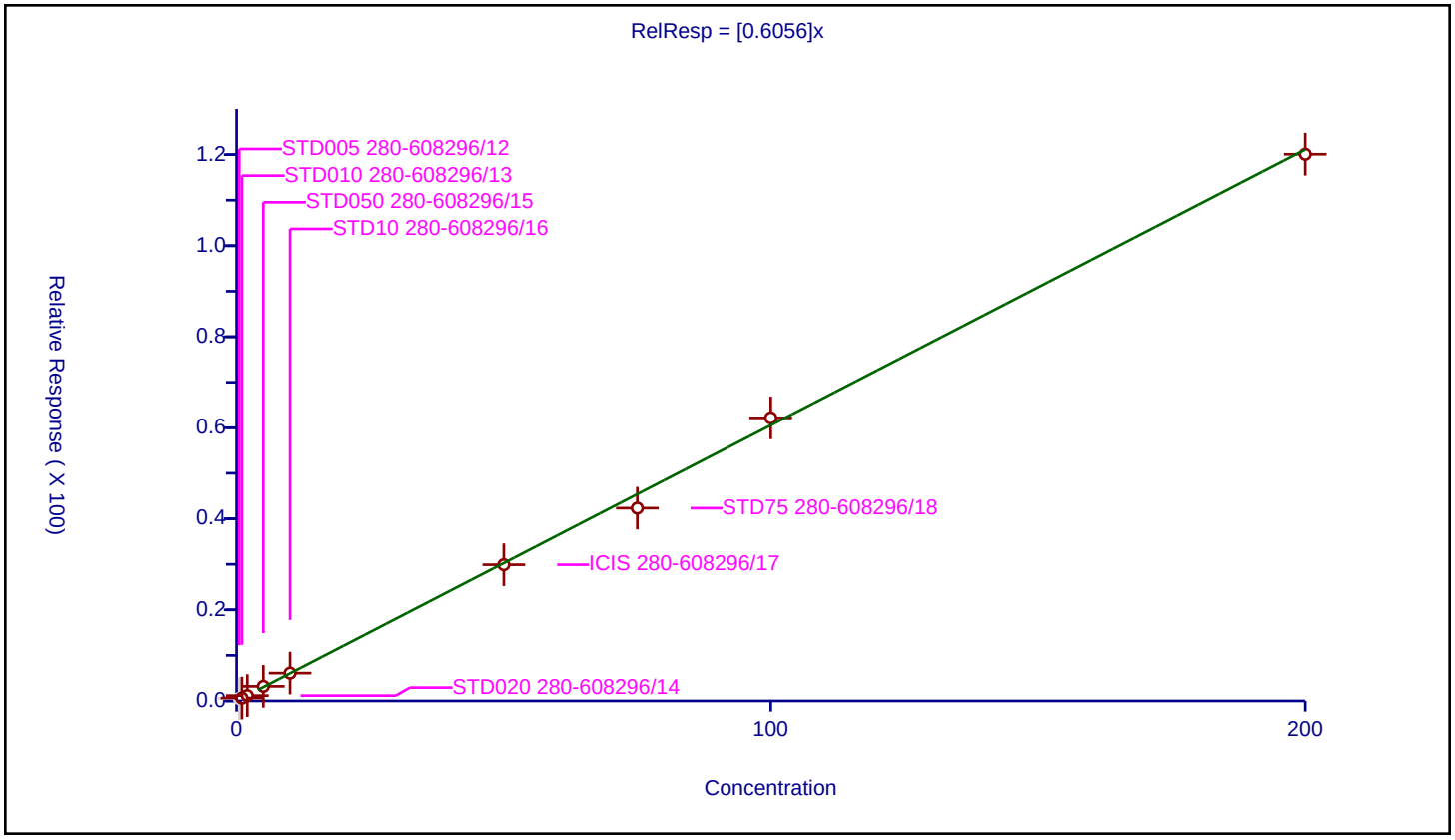
Curve Coefficients

Intercept:	0
Slope:	0.6056

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	4.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.536739	50.0	1964271.0	1.073477	N
2	STD010 280-608296/13	1.0	0.62645	50.0	1932557.0	0.62645	Y
3	STD020 280-608296/14	2.0	1.164071	50.0	1938628.0	0.582035	Y
4	STD050 280-608296/15	5.0	3.201577	50.0	1881479.0	0.640315	Y
5	STD10 280-608296/16	10.0	6.108823	50.0	1890839.0	0.610882	Y
6	ICIS 280-608296/17	50.0	29.907503	50.0	1962770.0	0.59815	Y
7	STD75 280-608296/18	75.0	42.334349	50.0	1984313.0	0.564458	Y
8	STD100 280-608296/19	100.0	62.177614	50.0	1966239.0	0.621776	Y
9	STD200 280-608296/20	200.0	120.076944	50.0	2014445.0	0.600385	Y



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Calibration / Methyl acetate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

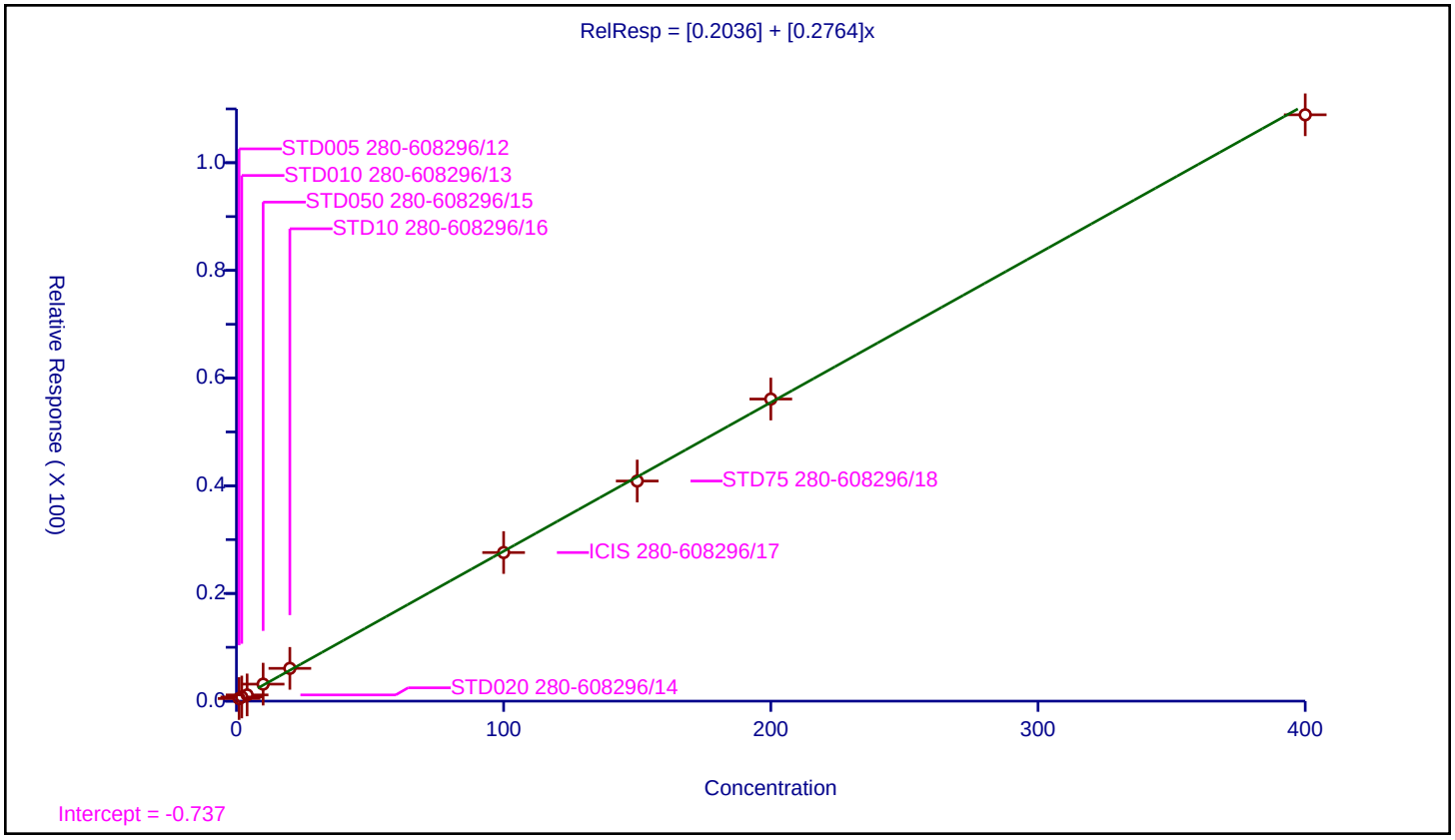
Curve Coefficients

Intercept:	0.2036
Slope:	0.2764

Error Coefficients

Standard Error:	2000000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	1.0	0.48336	50.0	1964271.0	0.48336	Y
2	STD010 280-608296/13	2.0	0.770249	50.0	1932557.0	0.385124	Y
3	STD020 280-608296/14	4.0	1.156643	50.0	1938628.0	0.289161	Y
4	STD050 280-608296/15	10.0	3.159801	50.0	1881479.0	0.31598	Y
5	STD10 280-608296/16	20.0	6.087271	50.0	1890839.0	0.304364	Y
6	ICIS 280-608296/17	100.0	27.602572	50.0	1962770.0	0.276026	Y
7	STD75 280-608296/18	150.0	40.881252	50.0	1984313.0	0.272542	Y
8	STD100 280-608296/19	200.0	56.110829	50.0	1966239.0	0.280554	Y
9	STD200 280-608296/20	400.0	108.909104	50.0	2014445.0	0.272273	Y



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Calibration / 3-Chloro-1-propene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

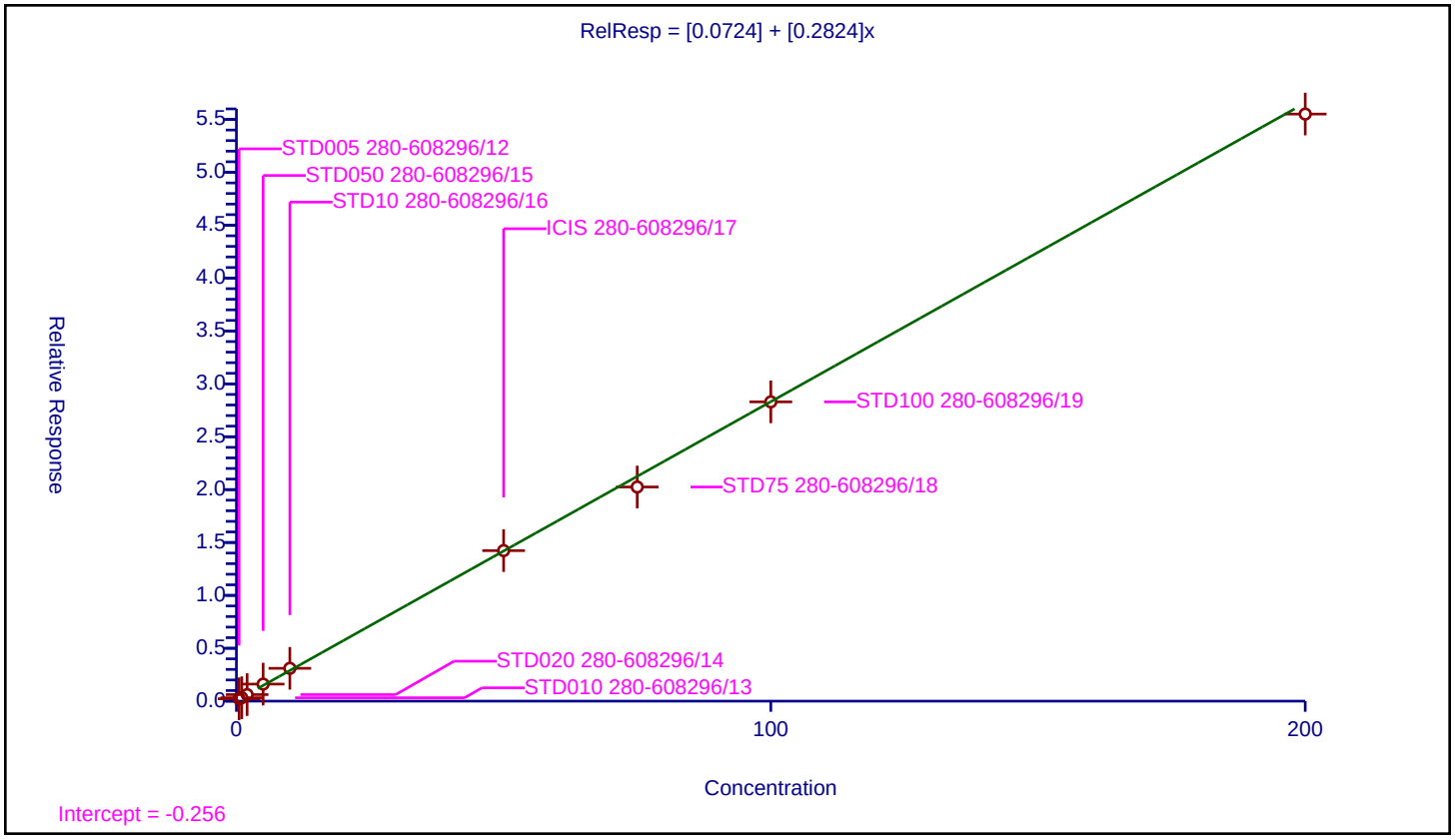
Curve Coefficients

Intercept:	0.0724
Slope:	0.2824

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.221634	50.0	1964271.0	0.443269	Y
2	STD010 280-608296/13	1.0	0.32087	50.0	1932557.0	0.32087	Y
3	STD020 280-608296/14	2.0	0.617189	50.0	1938628.0	0.308595	Y
4	STD050 280-608296/15	5.0	1.611897	50.0	1881479.0	0.322379	Y
5	STD10 280-608296/16	10.0	3.103411	50.0	1890839.0	0.310341	Y
6	ICIS 280-608296/17	50.0	14.232513	50.0	1962770.0	0.28465	Y
7	STD75 280-608296/18	75.0	20.248166	50.0	1984313.0	0.269976	Y
8	STD100 280-608296/19	100.0	28.298442	50.0	1966239.0	0.282984	Y
9	STD200 280-608296/20	200.0	55.512288	50.0	2014445.0	0.277561	Y



Calibration / Methylene Chloride

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

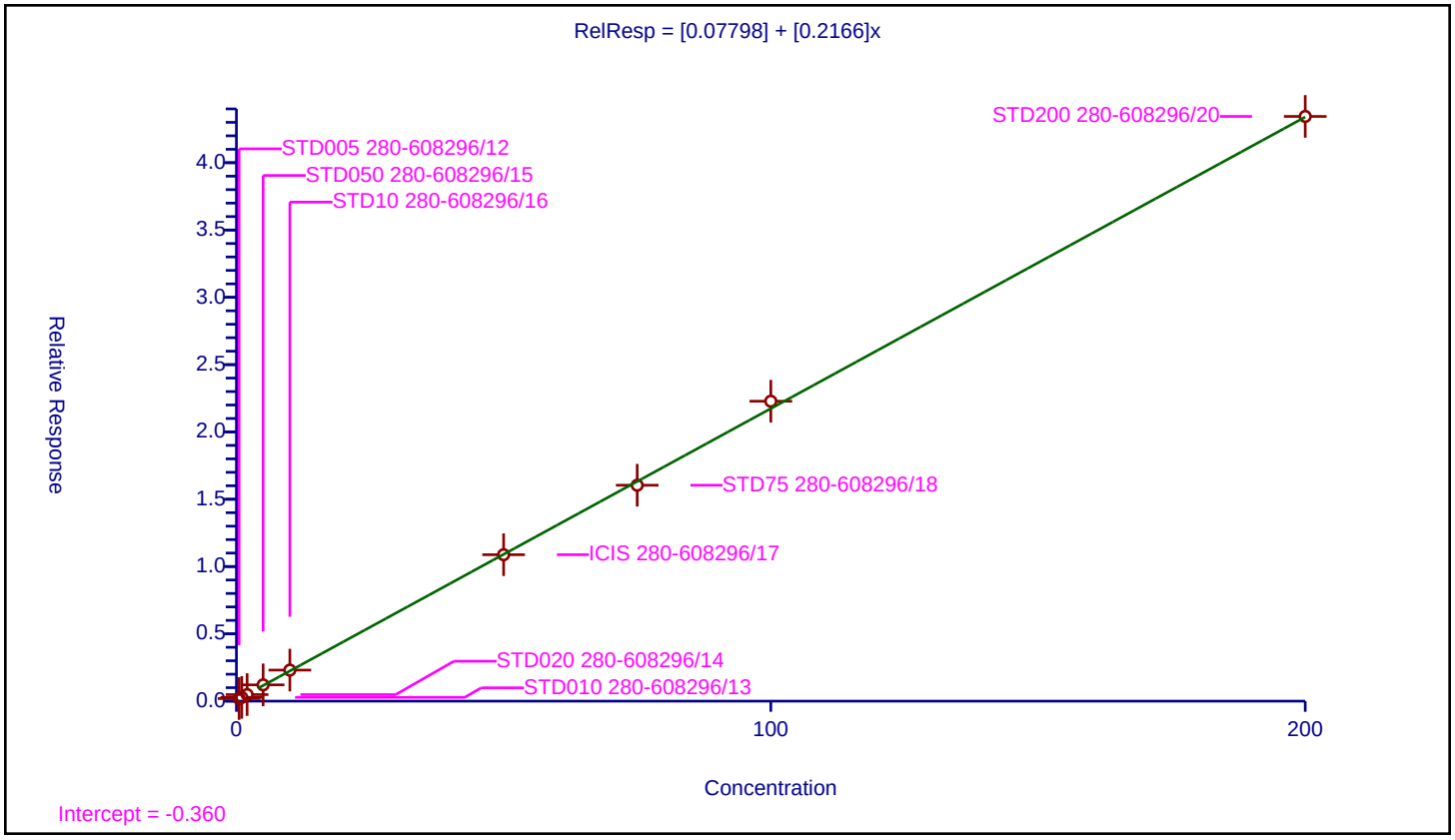
Curve Coefficients

Intercept:	0.07798
Slope:	0.2166

Error Coefficients

Standard Error:	795000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.190631	50.0	1964271.0	0.381261	Y
2	STD010 280-608296/13	1.0	0.280768	50.0	1932557.0	0.280768	Y
3	STD020 280-608296/14	2.0	0.486169	50.0	1938628.0	0.243084	Y
4	STD050 280-608296/15	5.0	1.210564	50.0	1881479.0	0.242113	Y
5	STD10 280-608296/16	10.0	2.307018	50.0	1890839.0	0.230702	Y
6	ICIS 280-608296/17	50.0	10.878809	50.0	1962770.0	0.217576	Y
7	STD75 280-608296/18	75.0	16.040388	50.0	1984313.0	0.213872	Y
8	STD100 280-608296/19	100.0	22.280506	50.0	1966239.0	0.222805	Y
9	STD200 280-608296/20	200.0	43.439806	50.0	2014445.0	0.217199	Y



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Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

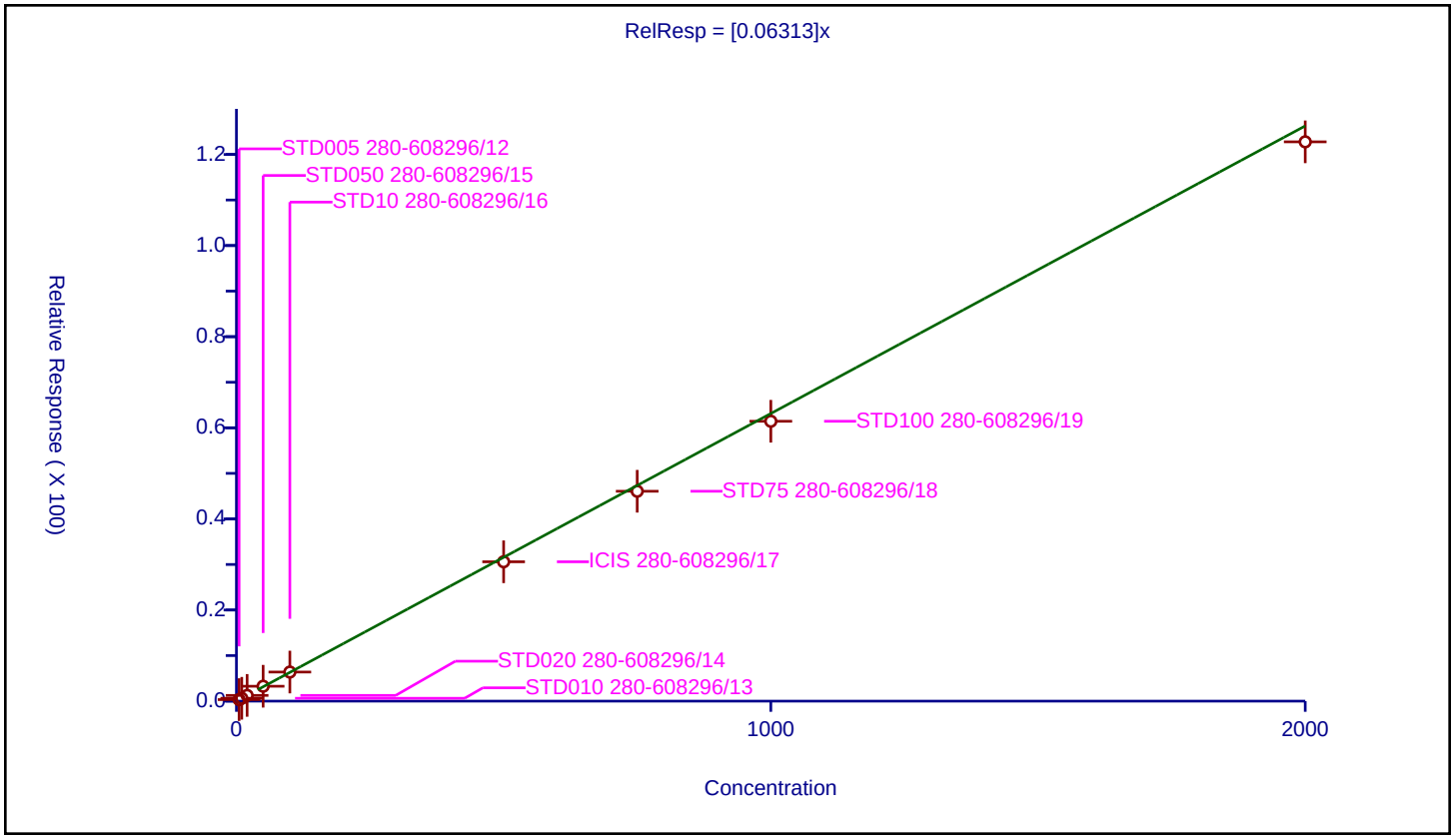
Curve Coefficients

Intercept:	0
Slope:	0.06313

Error Coefficients

Standard Error:	2100000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	5.0	0.335977	50.0	1964271.0	0.067195	Y
2	STD010 280-608296/13	10.0	0.631159	50.0	1932557.0	0.063116	Y
3	STD020 280-608296/14	20.0	1.26213	50.0	1938628.0	0.063106	Y
4	STD050 280-608296/15	50.0	3.27293	50.0	1881479.0	0.065459	Y
5	STD10 280-608296/16	100.0	6.386186	50.0	1890839.0	0.063862	Y
6	ICIS 280-608296/17	500.0	30.59309	50.0	1962770.0	0.061186	Y
7	STD75 280-608296/18	750.0	46.073754	50.0	1984313.0	0.061432	Y
8	STD100 280-608296/19	1000.0	61.434775	50.0	1966239.0	0.061435	Y
9	STD200 280-608296/20	2000.0	122.767338	50.0	2014445.0	0.061384	Y



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Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

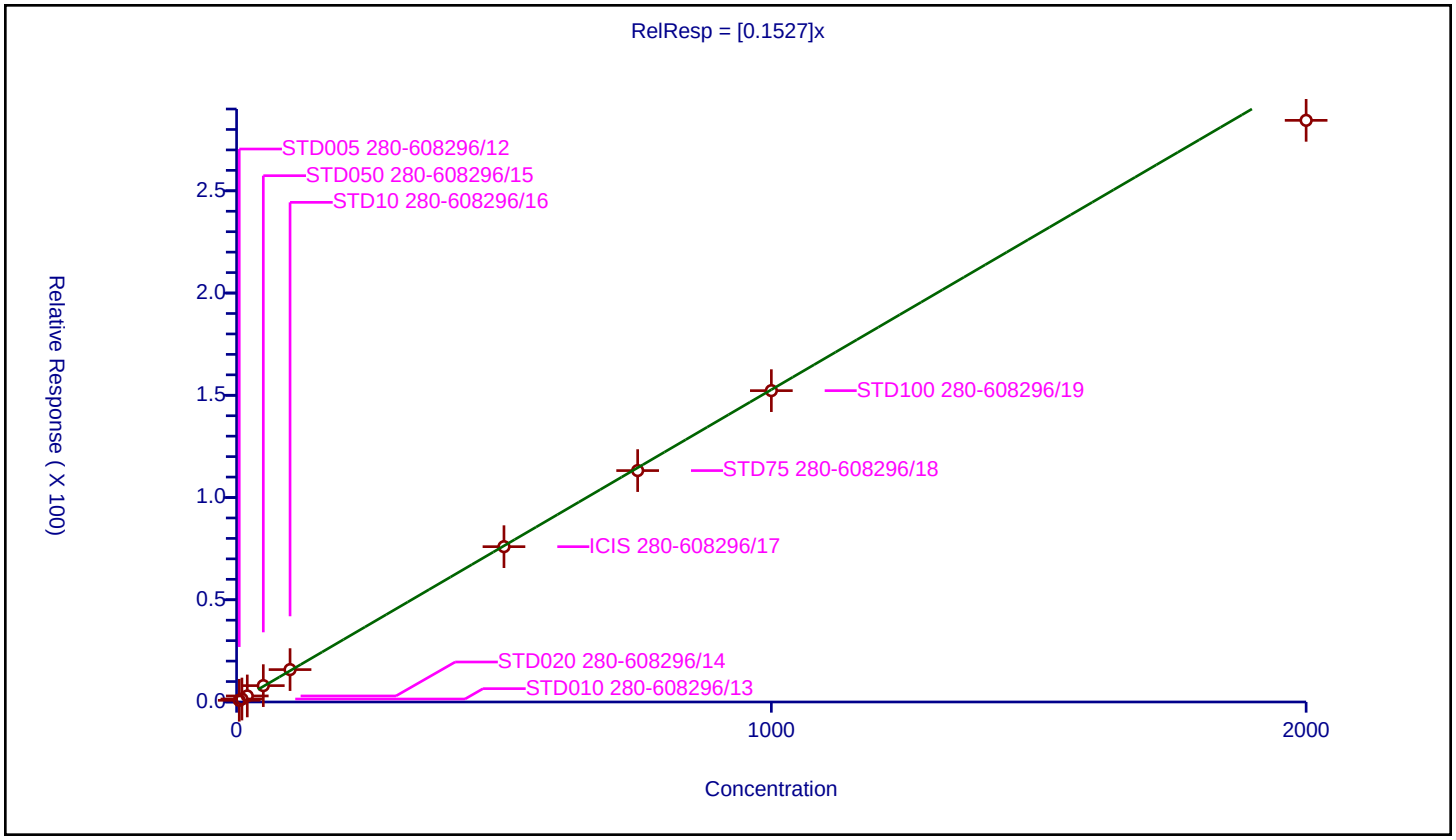
Curve Coefficients

Intercept:	0
Slope:	0.1527

Error Coefficients

Standard Error:	4960000
Relative Standard Error:	4.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	5.0	0.827584	50.0	1964271.0	0.165517	Y
2	STD010 280-608296/13	10.0	1.457111	50.0	1932557.0	0.145711	Y
3	STD020 280-608296/14	20.0	2.954125	50.0	1938628.0	0.147706	Y
4	STD050 280-608296/15	50.0	8.002348	50.0	1881479.0	0.160047	Y
5	STD10 280-608296/16	100.0	15.834981	50.0	1890839.0	0.15835	Y
6	ICIS 280-608296/17	500.0	75.966415	50.0	1962770.0	0.151933	Y
7	STD75 280-608296/18	750.0	113.167026	50.0	1984313.0	0.150889	Y
8	STD100 280-608296/19	1000.0	152.266612	50.0	1966239.0	0.152267	Y
9	STD200 280-608296/20	2000.0	284.459318	50.0	2014445.0	0.14223	Y



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Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

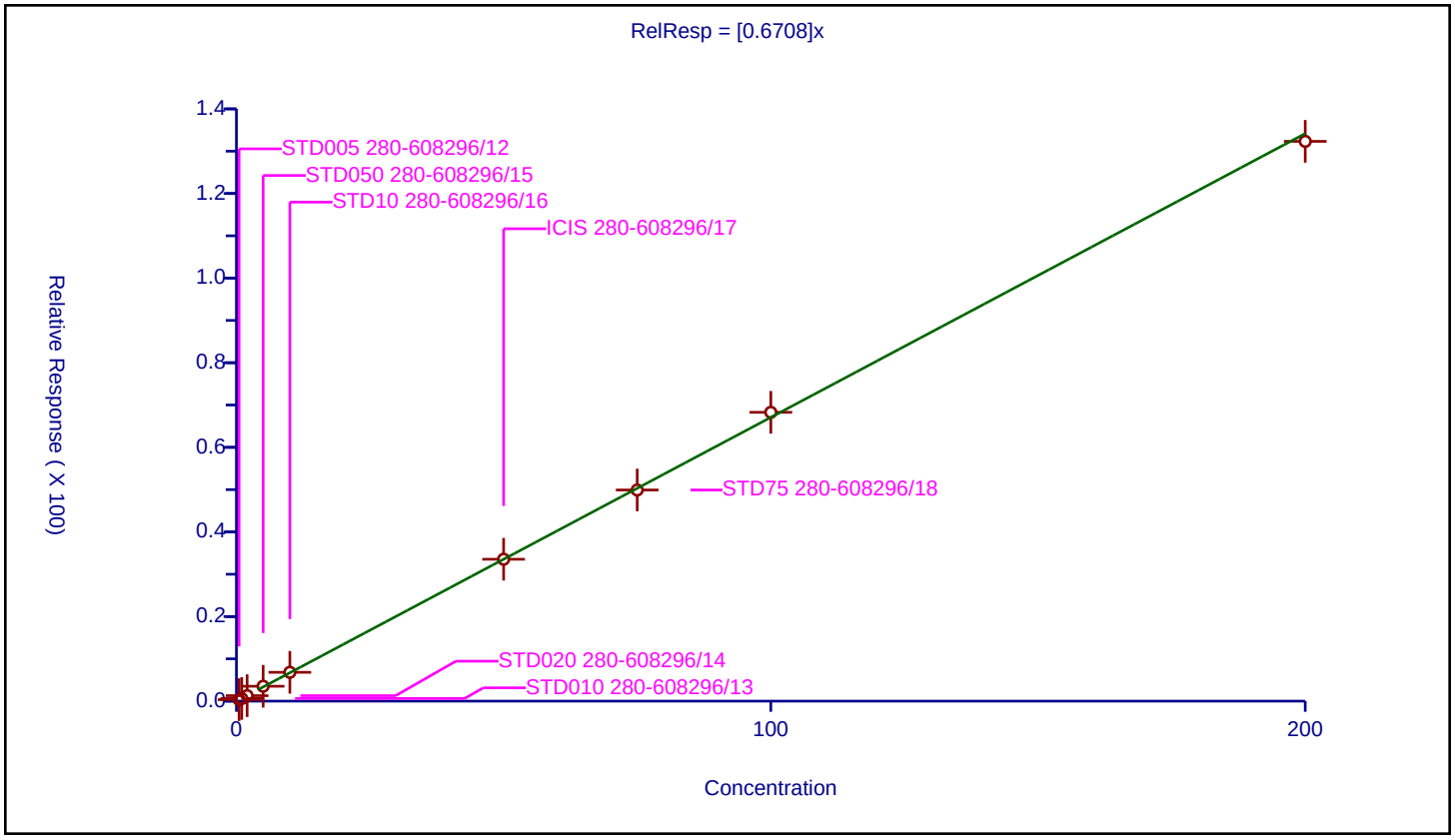
Curve Coefficients

Intercept:	0
Slope:	0.6708

Error Coefficients

Standard Error:	2270000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.349544	50.0	1964271.0	0.699089	Y
2	STD010 280-608296/13	1.0	0.62363	50.0	1932557.0	0.62363	Y
3	STD020 280-608296/14	2.0	1.295014	50.0	1938628.0	0.647507	Y
4	STD050 280-608296/15	5.0	3.524302	50.0	1881479.0	0.70486	Y
5	STD10 280-608296/16	10.0	6.816683	50.0	1890839.0	0.681668	Y
6	ICIS 280-608296/17	50.0	33.544404	50.0	1962770.0	0.670888	Y
7	STD75 280-608296/18	75.0	49.907978	50.0	1984313.0	0.66544	Y
8	STD100 280-608296/19	100.0	68.27433	50.0	1966239.0	0.682743	Y
9	STD200 280-608296/20	200.0	132.324412	50.0	2014445.0	0.661622	Y



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Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

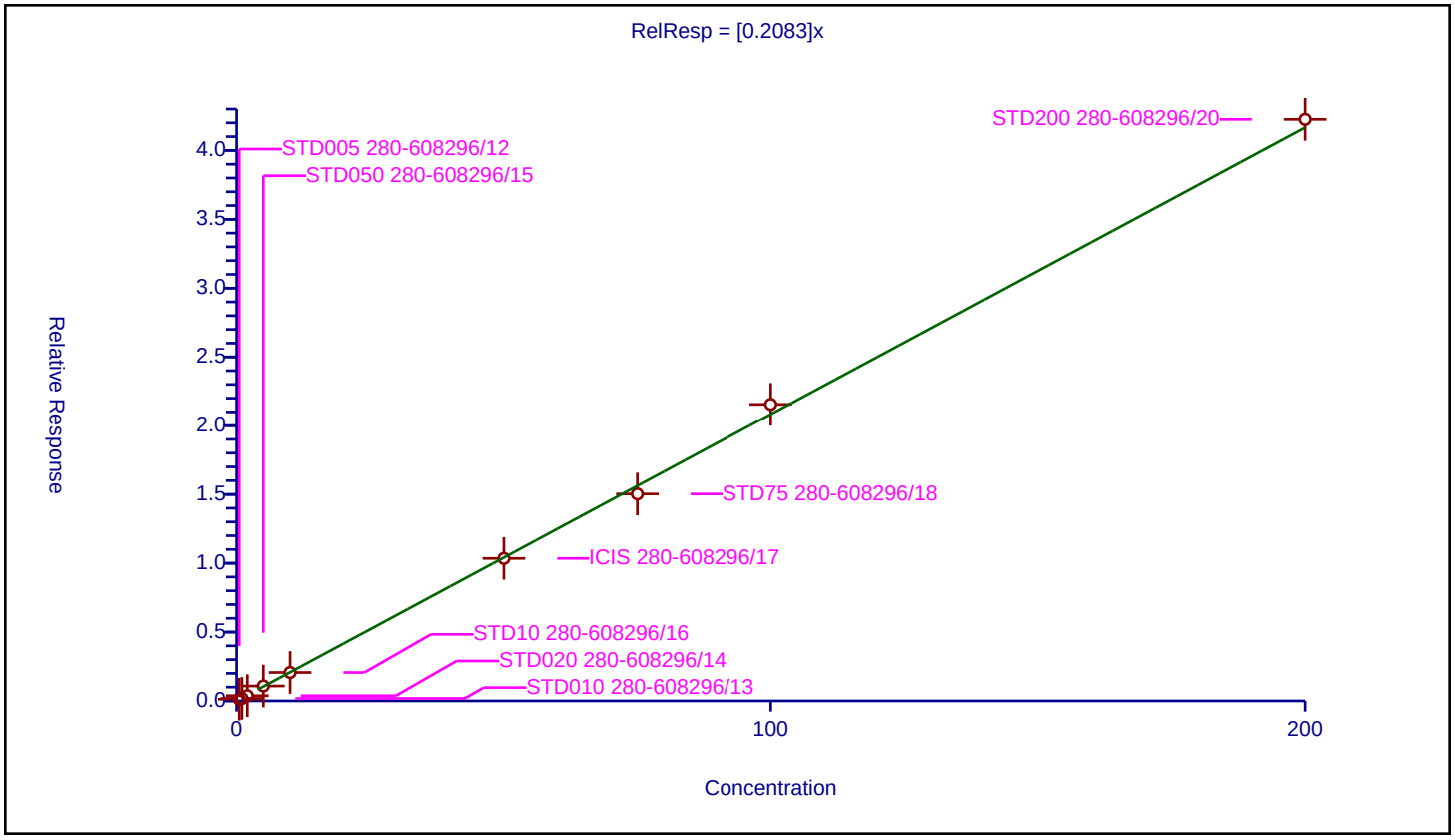
Curve Coefficients

Intercept:	0
Slope:	0.2083

Error Coefficients

Standard Error:	720000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.123277	50.0	1964271.0	0.246555	Y
2	STD010 280-608296/13	1.0	0.182478	50.0	1932557.0	0.182478	Y
3	STD020 280-608296/14	2.0	0.377716	50.0	1938628.0	0.188858	Y
4	STD050 280-608296/15	5.0	1.081516	50.0	1881479.0	0.216303	Y
5	STD10 280-608296/16	10.0	2.064057	50.0	1890839.0	0.206406	Y
6	ICIS 280-608296/17	50.0	10.350805	50.0	1962770.0	0.207016	Y
7	STD75 280-608296/18	75.0	15.031676	50.0	1984313.0	0.200422	Y
8	STD100 280-608296/19	100.0	21.55061	50.0	1966239.0	0.215506	Y
9	STD200 280-608296/20	200.0	42.254095	50.0	2014445.0	0.21127	Y



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Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

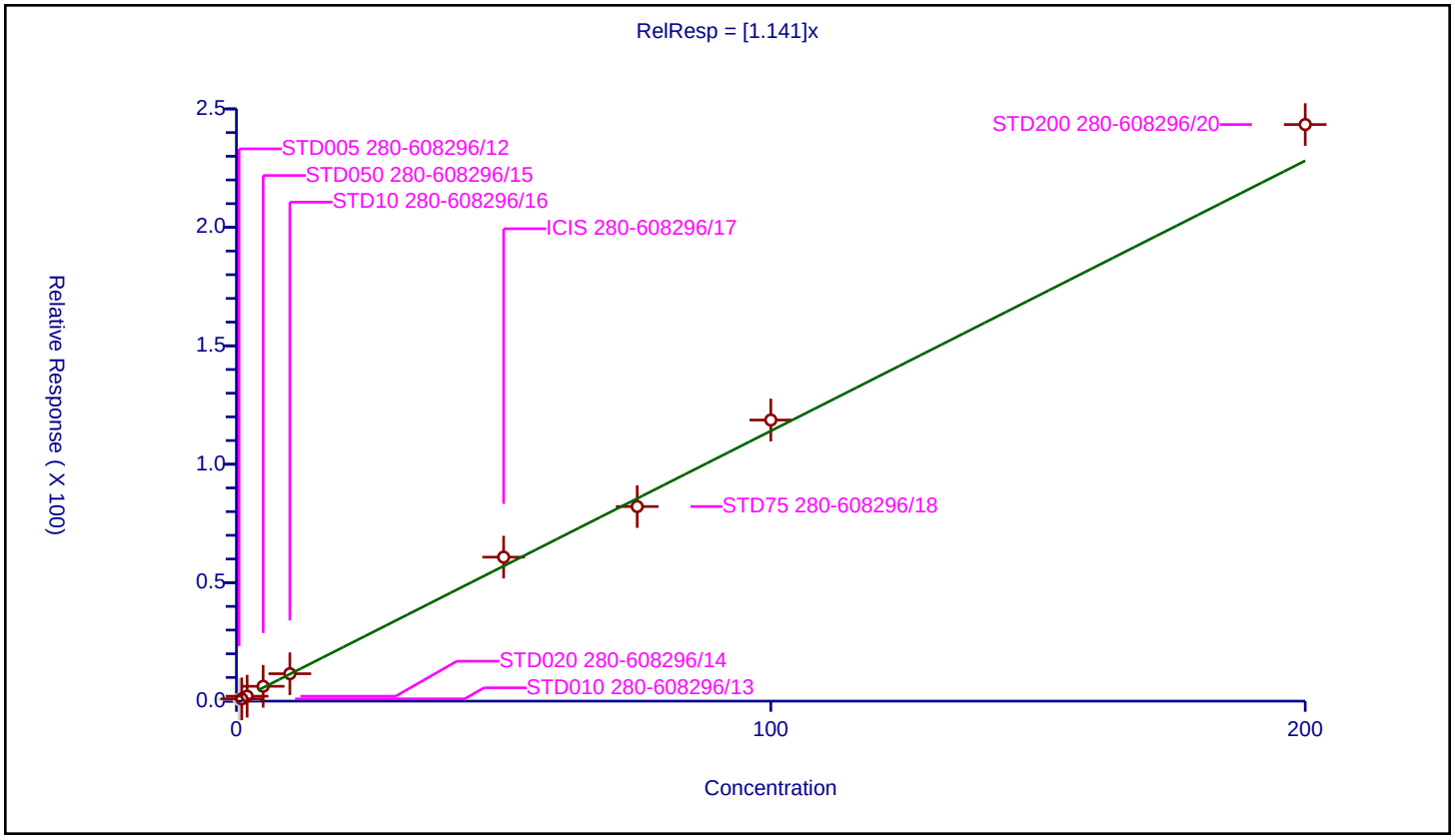
Curve Coefficients

Intercept:	0
Slope:	1.141

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.758272	50.0	453795.0	1.516544	N
2	STD010 280-608296/13	1.0	0.95912	50.0	451247.0	0.95912	Y
3	STD020 280-608296/14	2.0	2.082638	50.0	452407.0	1.041319	Y
4	STD050 280-608296/15	5.0	6.263243	50.0	434679.0	1.252649	Y
5	STD10 280-608296/16	10.0	11.571378	50.0	440976.0	1.157138	Y
6	ICIS 280-608296/17	50.0	60.788054	50.0	459207.0	1.215761	Y
7	STD75 280-608296/18	75.0	82.145472	50.0	461572.0	1.095273	Y
8	STD100 280-608296/19	100.0	118.666624	50.0	463860.0	1.186666	Y
9	STD200 280-608296/20	200.0	243.403103	50.0	460565.0	1.217016	Y



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Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

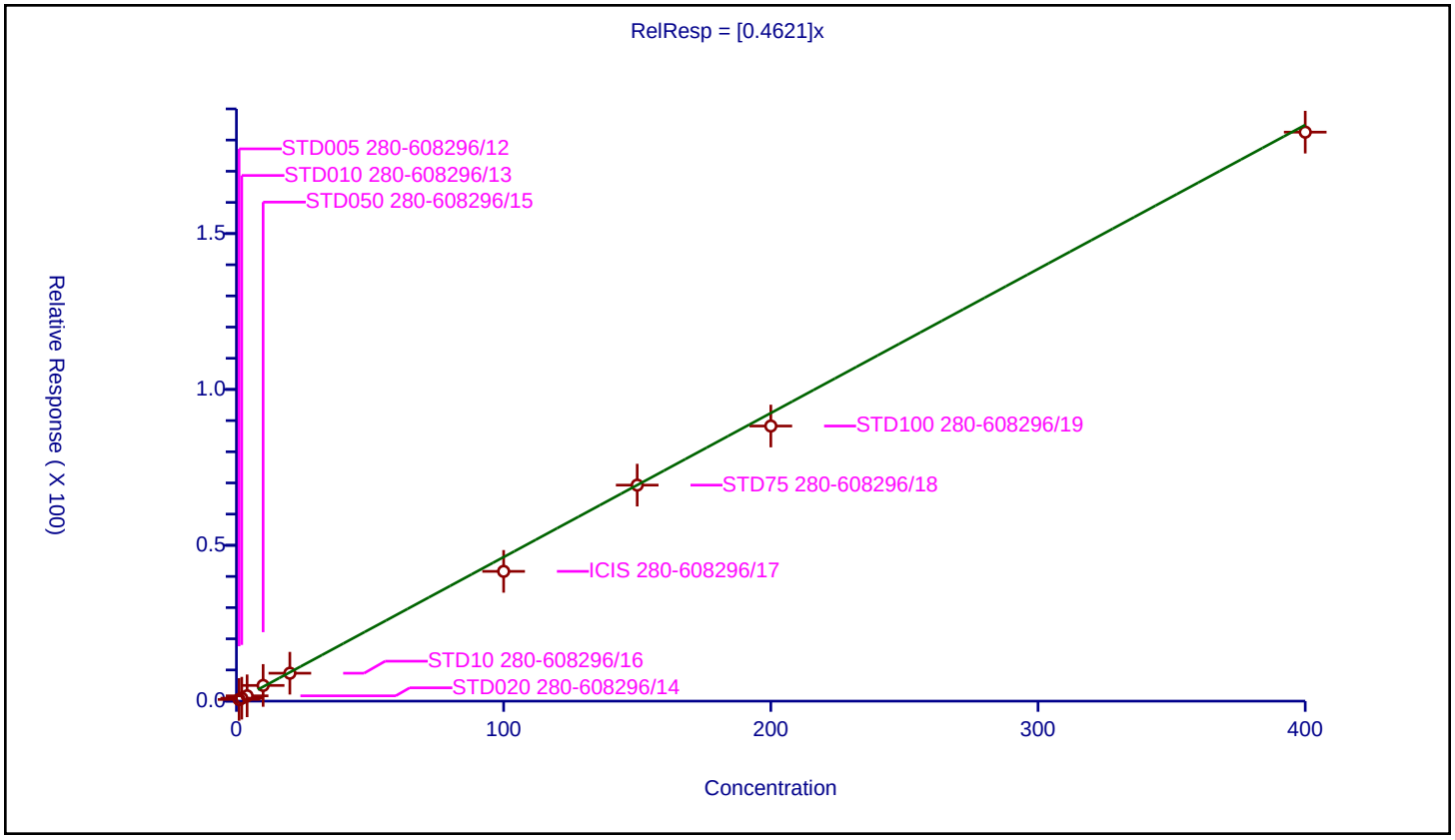
Curve Coefficients

Intercept:	0
Slope:	0.4621

Error Coefficients

Standard Error:	3090000
Relative Standard Error:	8.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	1.0	0.532997	50.0	1964271.0	0.532997	Y
2	STD010 280-608296/13	2.0	0.946725	50.0	1932557.0	0.473362	Y
3	STD020 280-608296/14	4.0	1.700378	50.0	1938628.0	0.425094	Y
4	STD050 280-608296/15	10.0	5.0375	50.0	1881479.0	0.50375	Y
5	STD10 280-608296/16	20.0	8.958748	50.0	1890839.0	0.447937	Y
6	ICIS 280-608296/17	100.0	41.62933	50.0	1962770.0	0.416293	Y
7	STD75 280-608296/18	150.0	69.300534	50.0	1984313.0	0.462004	Y
8	STD100 280-608296/19	200.0	88.26427	50.0	1966239.0	0.441321	Y
9	STD200 280-608296/20	400.0	182.541742	50.0	2014445.0	0.456354	Y



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Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

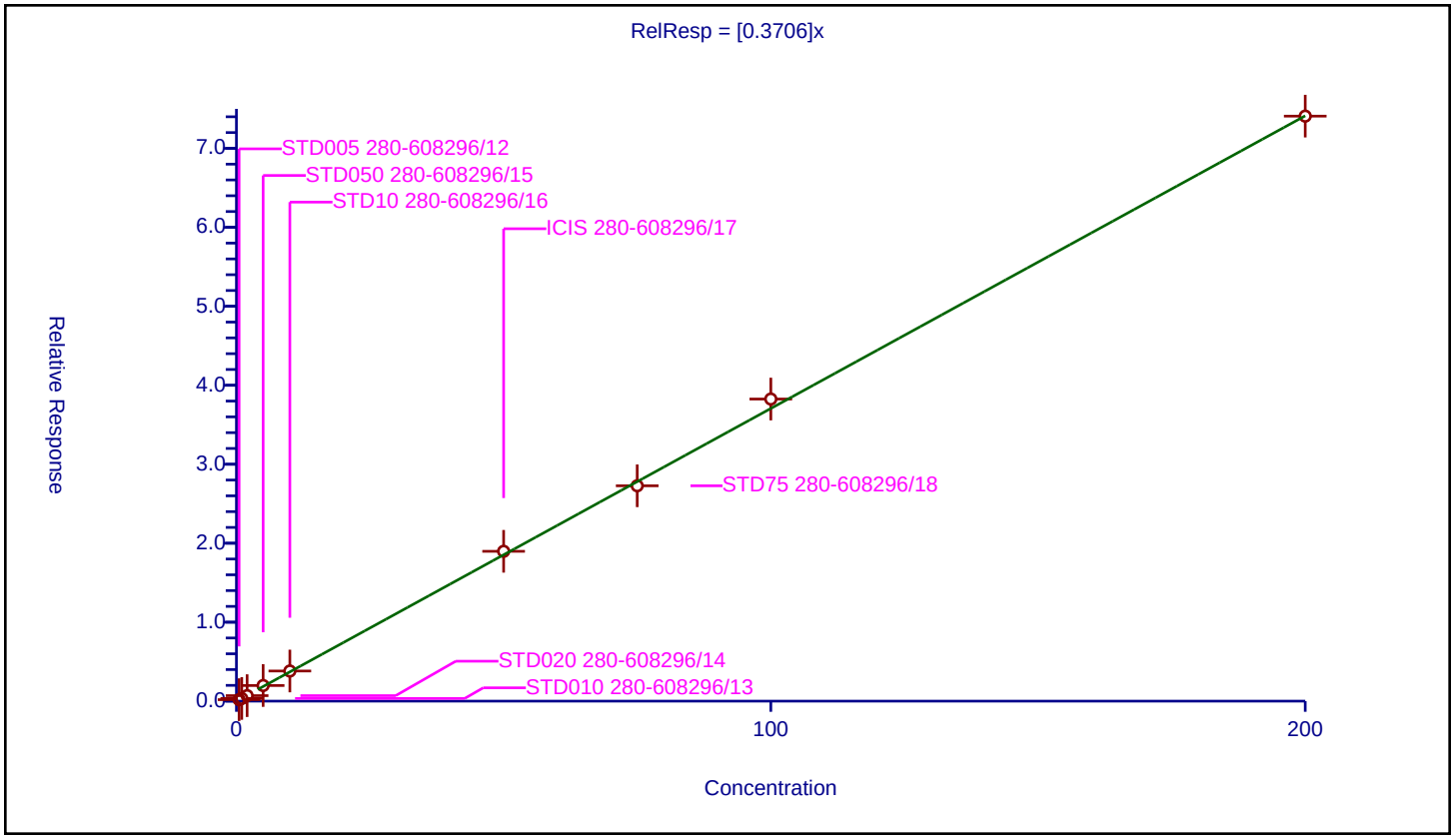
Curve Coefficients

Intercept:	0
Slope:	0.3706

Error Coefficients

Standard Error:	1270000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.187296	50.0	1964271.0	0.374592	Y
2	STD010 280-608296/13	1.0	0.338489	50.0	1932557.0	0.338489	Y
3	STD020 280-608296/14	2.0	0.697839	50.0	1938628.0	0.348919	Y
4	STD050 280-608296/15	5.0	1.979321	50.0	1881479.0	0.395864	Y
5	STD10 280-608296/16	10.0	3.815661	50.0	1890839.0	0.381566	Y
6	ICIS 280-608296/17	50.0	18.975173	50.0	1962770.0	0.379503	Y
7	STD75 280-608296/18	75.0	27.272058	50.0	1984313.0	0.363627	Y
8	STD100 280-608296/19	100.0	38.256438	50.0	1966239.0	0.382564	Y
9	STD200 280-608296/20	200.0	74.082812	50.0	2014445.0	0.370414	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

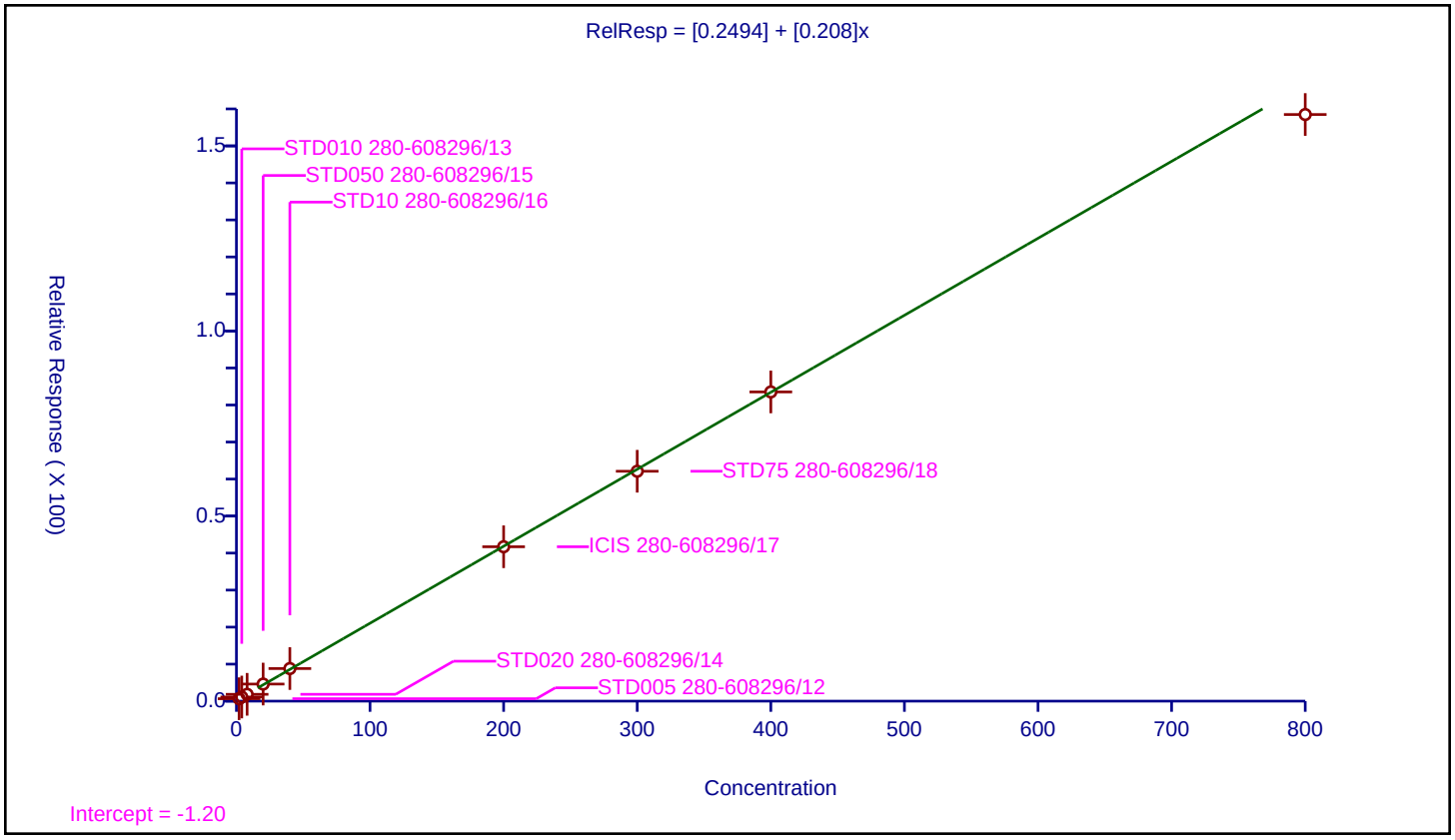
Curve Coefficients

Intercept:	0.2494
Slope:	0.208

Error Coefficients

Standard Error:	2940000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	2.0	0.658845	50.0	1964271.0	0.329422	Y
2	STD010 280-608296/13	4.0	1.114534	50.0	1932557.0	0.278633	Y
3	STD020 280-608296/14	8.0	1.844346	50.0	1938628.0	0.230543	Y
4	STD050 280-608296/15	20.0	4.613578	50.0	1881479.0	0.230679	Y
5	STD10 280-608296/16	40.0	8.8003	50.0	1890839.0	0.220007	Y
6	ICIS 280-608296/17	200.0	41.705676	50.0	1962770.0	0.208528	Y
7	STD75 280-608296/18	300.0	62.107843	50.0	1984313.0	0.207026	Y
8	STD100 280-608296/19	400.0	83.531427	50.0	1966239.0	0.208829	Y
9	STD200 280-608296/20	800.0	158.480102	50.0	2014445.0	0.1981	Y



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Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

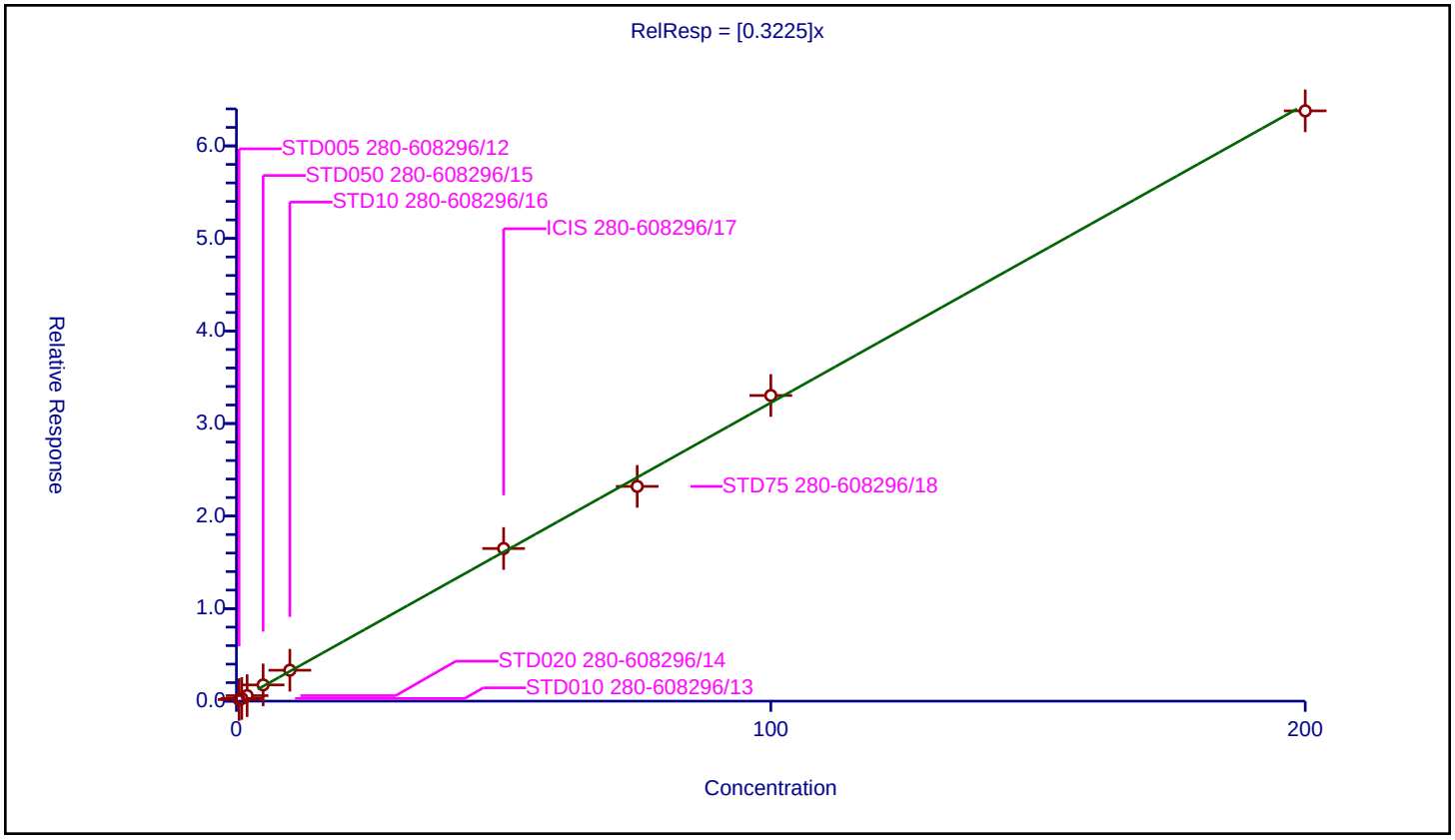
Curve Coefficients

Intercept:	0
Slope:	0.3225

Error Coefficients

Standard Error:	1090000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.172558	50.0	1964271.0	0.345115	Y
2	STD010 280-608296/13	1.0	0.286305	50.0	1932557.0	0.286305	Y
3	STD020 280-608296/14	2.0	0.594235	50.0	1938628.0	0.297117	Y
4	STD050 280-608296/15	5.0	1.75463	50.0	1881479.0	0.350926	Y
5	STD10 280-608296/16	10.0	3.340951	50.0	1890839.0	0.334095	Y
6	ICIS 280-608296/17	50.0	16.494648	50.0	1962770.0	0.329893	Y
7	STD75 280-608296/18	75.0	23.20647	50.0	1984313.0	0.30942	Y
8	STD100 280-608296/19	100.0	33.030064	50.0	1966239.0	0.330301	Y
9	STD200 280-608296/20	200.0	63.785633	50.0	2014445.0	0.318928	Y



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Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

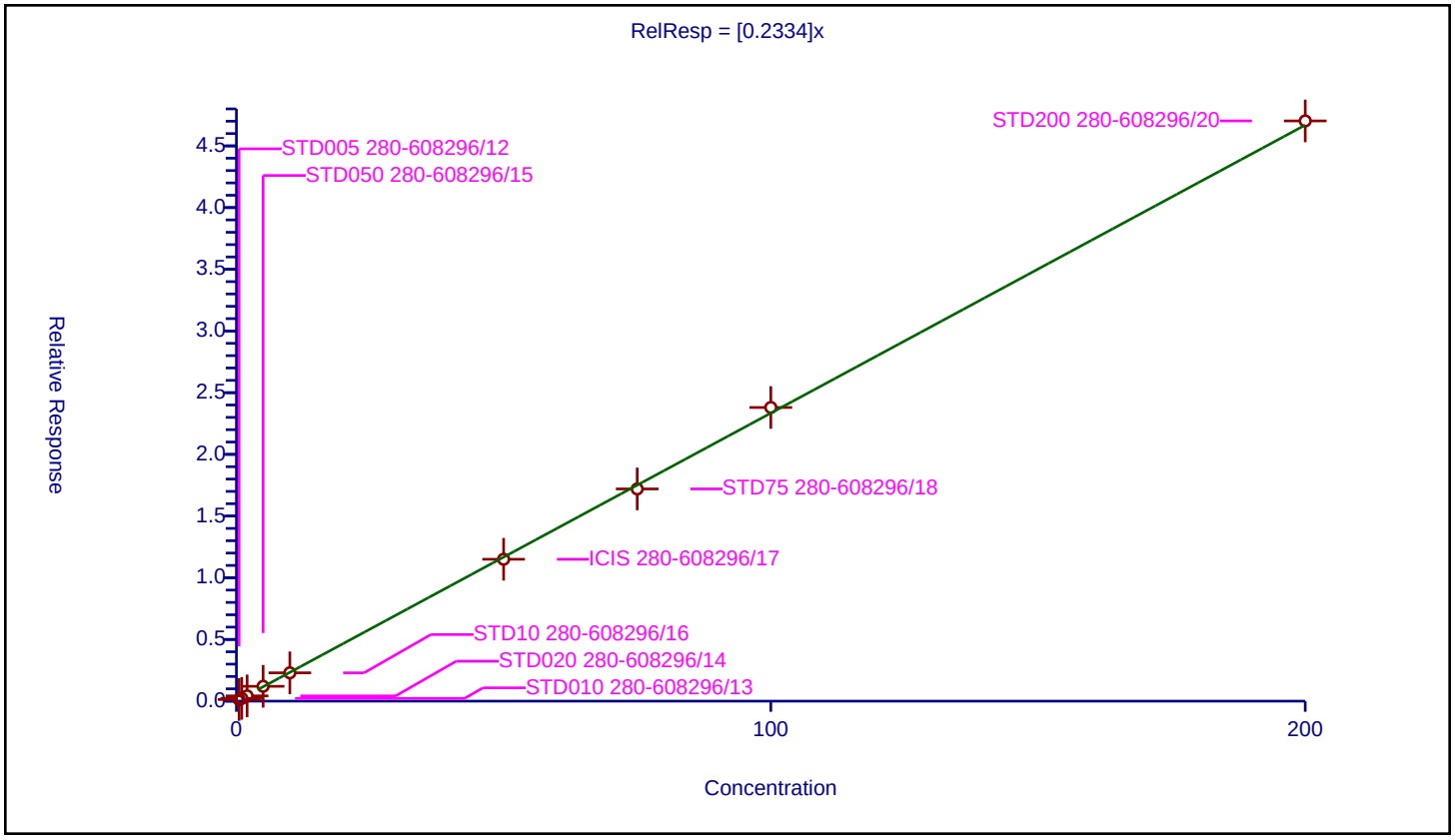
Curve Coefficients

Intercept:	0
Slope:	0.2334

Error Coefficients

Standard Error:	802000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.12959	50.0	1964271.0	0.25918	Y
2	STD010 280-608296/13	1.0	0.226513	50.0	1932557.0	0.226513	Y
3	STD020 280-608296/14	2.0	0.42543	50.0	1938628.0	0.212715	Y
4	STD050 280-608296/15	5.0	1.202751	50.0	1881479.0	0.24055	Y
5	STD10 280-608296/16	10.0	2.295912	50.0	1890839.0	0.229591	Y
6	ICIS 280-608296/17	50.0	11.500965	50.0	1962770.0	0.230019	Y
7	STD75 280-608296/18	75.0	17.198446	50.0	1984313.0	0.229313	Y
8	STD100 280-608296/19	100.0	23.798862	50.0	1966239.0	0.237989	Y
9	STD200 280-608296/20	200.0	47.024292	50.0	2014445.0	0.235121	Y



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Calibration / sec-Butyl Alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

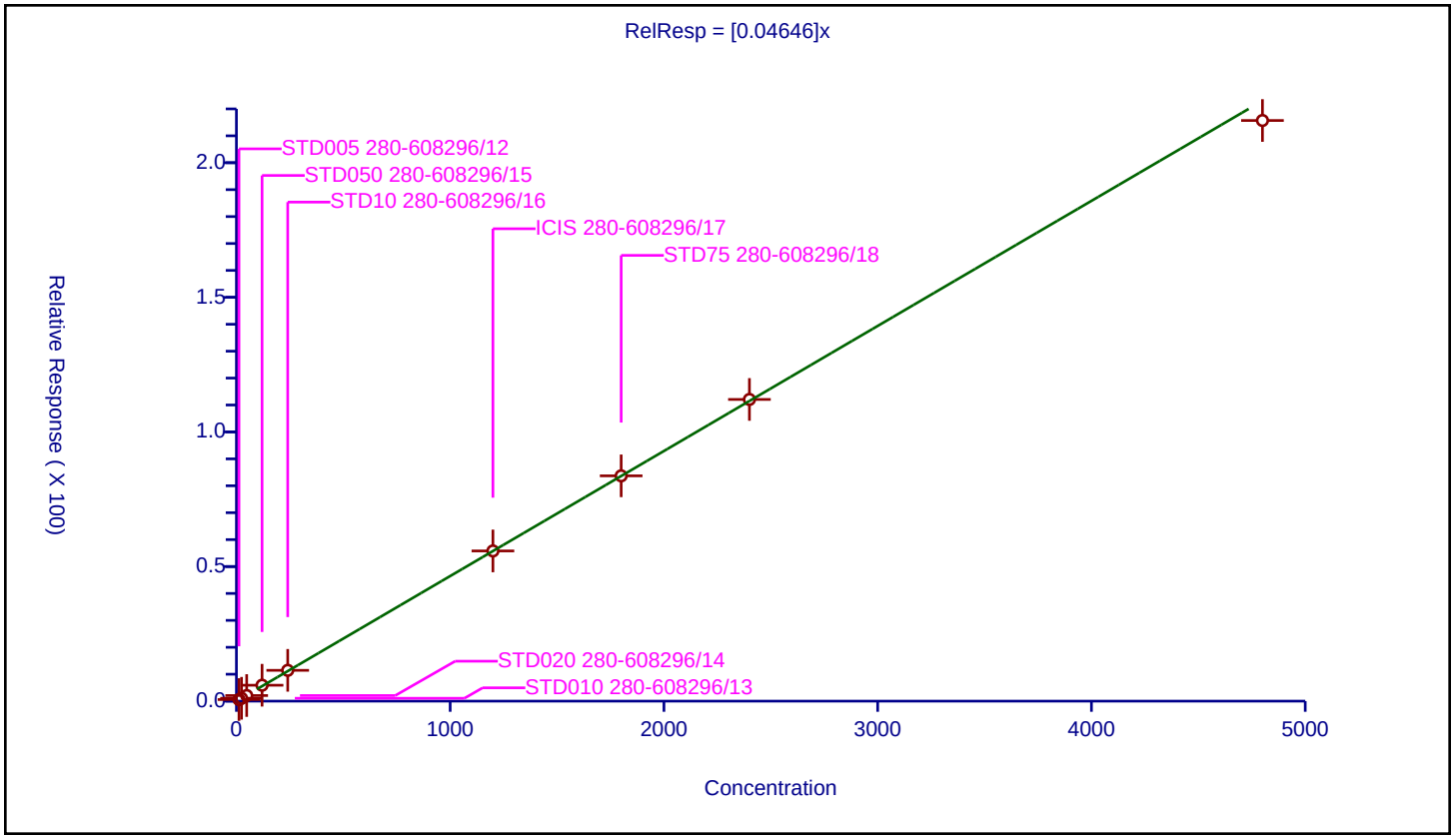
Curve Coefficients

Intercept:	0
Slope:	0.04646

Error Coefficients

Standard Error:	3730000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	12.0	0.583652	50.0	1964271.0	0.048638	Y
2	STD010 280-608296/13	24.0	1.068377	50.0	1932557.0	0.044516	Y
3	STD020 280-608296/14	48.0	2.086347	50.0	1938628.0	0.043466	Y
4	STD050 280-608296/15	120.0	5.907135	50.0	1881479.0	0.049226	Y
5	STD10 280-608296/16	240.0	11.439922	50.0	1890839.0	0.047666	Y
6	ICIS 280-608296/17	1200.0	55.79212	50.0	1962770.0	0.046493	Y
7	STD75 280-608296/18	1800.0	83.694609	50.0	1984313.0	0.046497	Y
8	STD100 280-608296/19	2400.0	112.065624	50.0	1966239.0	0.046694	Y
9	STD200 280-608296/20	4800.0	215.6905	50.0	2014445.0	0.044936	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

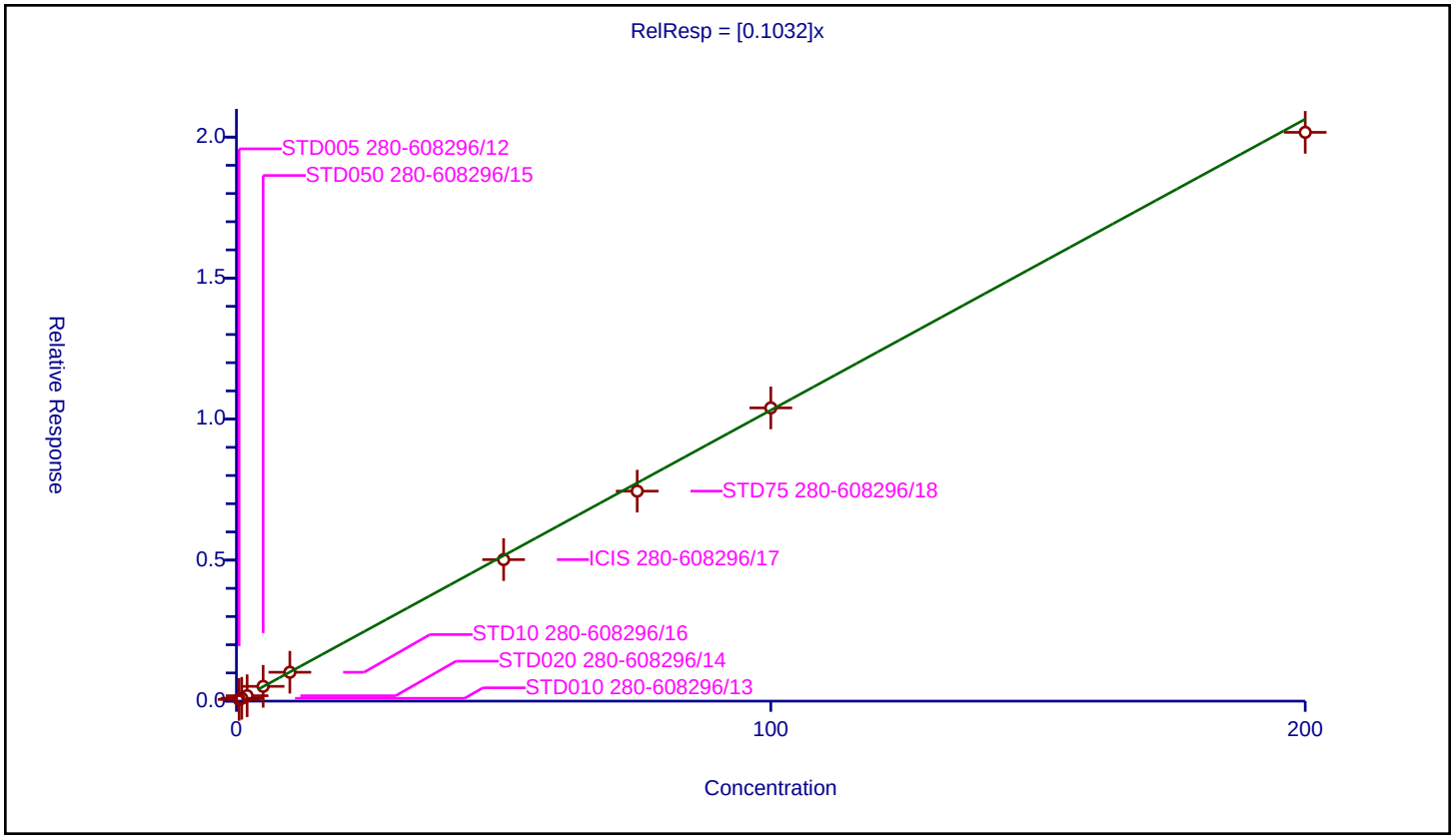
Curve Coefficients

Intercept:	0
Slope:	0.1032

Error Coefficients

Standard Error:	346000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.060124	50.0	1964271.0	0.120248	Y
2	STD010 280-608296/13	1.0	0.100773	50.0	1932557.0	0.100773	Y
3	STD020 280-608296/14	2.0	0.191501	50.0	1938628.0	0.095751	Y
4	STD050 280-608296/15	5.0	0.524933	50.0	1881479.0	0.104987	Y
5	STD10 280-608296/16	10.0	1.024043	50.0	1890839.0	0.102404	Y
6	ICIS 280-608296/17	50.0	5.017756	50.0	1962770.0	0.100355	Y
7	STD75 280-608296/18	75.0	7.446431	50.0	1984313.0	0.099286	Y
8	STD100 280-608296/19	100.0	10.398456	50.0	1966239.0	0.103985	Y
9	STD200 280-608296/20	200.0	20.168806	50.0	2014445.0	0.100844	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

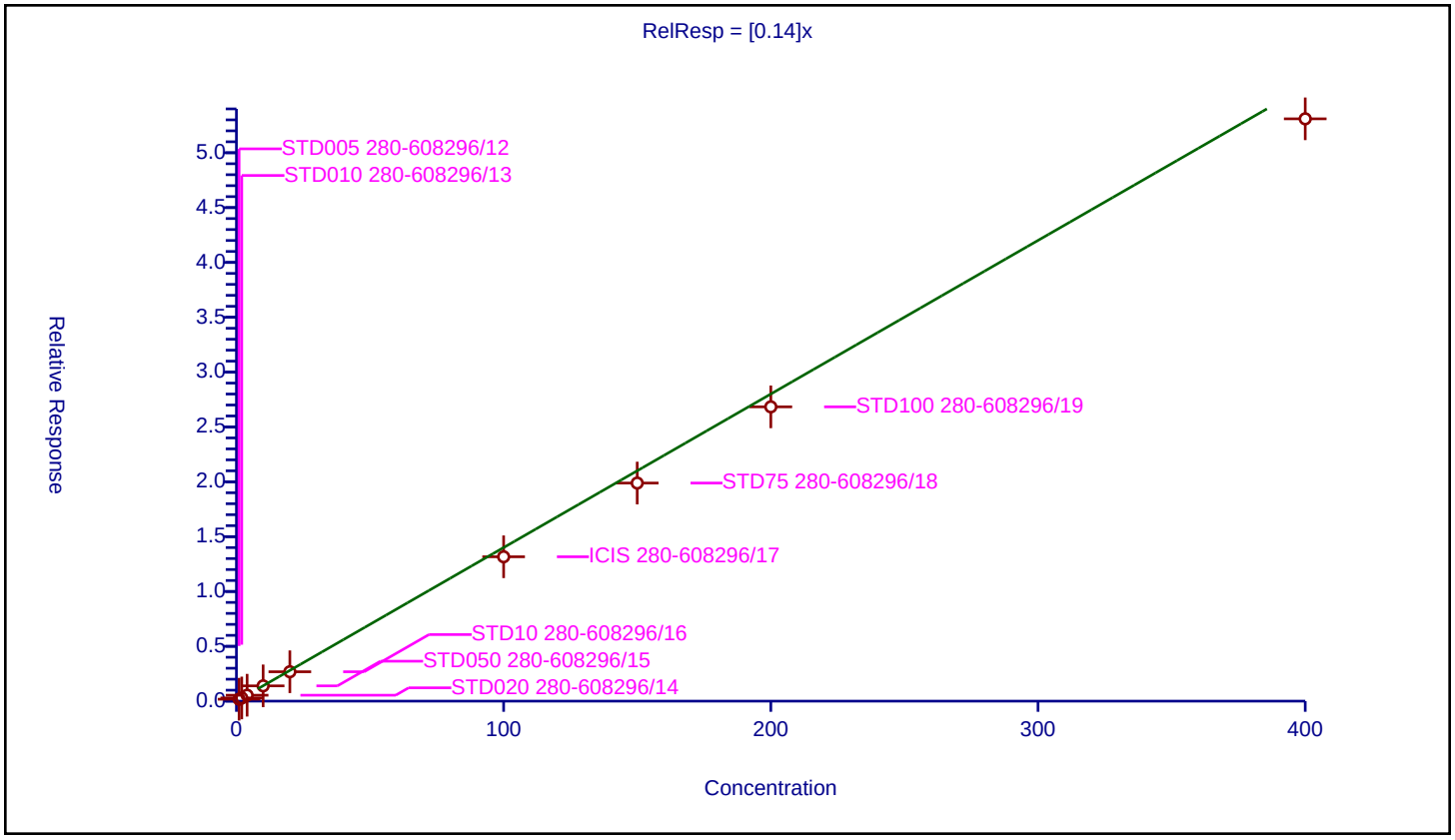
Curve Coefficients

Intercept:	0
Slope:	0.14

Error Coefficients

Standard Error:	908000
Relative Standard Error:	10.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	1.0	0.175434	50.0	1964271.0	0.175434	Y
2	STD010 280-608296/13	2.0	0.291117	50.0	1932557.0	0.145558	Y
3	STD020 280-608296/14	4.0	0.539222	50.0	1938628.0	0.134805	Y
4	STD050 280-608296/15	10.0	1.392734	50.0	1881479.0	0.139273	Y
5	STD10 280-608296/16	20.0	2.6809	50.0	1890839.0	0.134045	Y
6	ICIS 280-608296/17	100.0	13.162571	50.0	1962770.0	0.131626	Y
7	STD75 280-608296/18	150.0	19.885195	50.0	1984313.0	0.132568	Y
8	STD100 280-608296/19	200.0	26.832877	50.0	1966239.0	0.134164	Y
9	STD200 280-608296/20	400.0	53.09522	50.0	2014445.0	0.132738	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

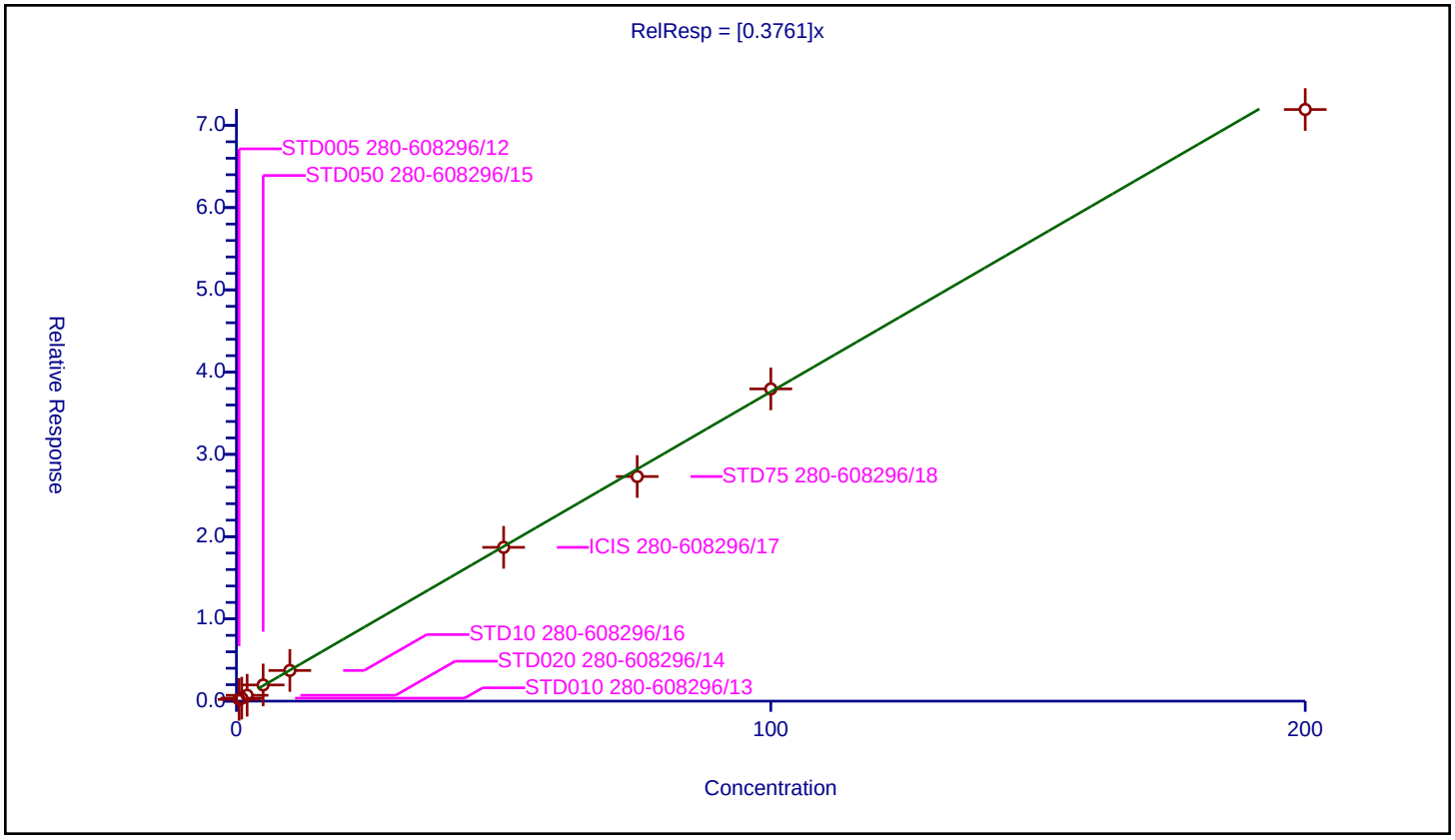
Curve Coefficients

Intercept:	0
Slope:	0.3761

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.210103	50.0	1964271.0	0.420207	Y
2	STD010 280-608296/13	1.0	0.36506	50.0	1932557.0	0.36506	Y
3	STD020 280-608296/14	2.0	0.712746	50.0	1938628.0	0.356373	Y
4	STD050 280-608296/15	5.0	1.965927	50.0	1881479.0	0.393185	Y
5	STD10 280-608296/16	10.0	3.730037	50.0	1890839.0	0.373004	Y
6	ICIS 280-608296/17	50.0	18.698982	50.0	1962770.0	0.37398	Y
7	STD75 280-608296/18	75.0	27.306277	50.0	1984313.0	0.364084	Y
8	STD100 280-608296/19	100.0	37.958305	50.0	1966239.0	0.379583	Y
9	STD200 280-608296/20	200.0	71.926734	50.0	2014445.0	0.359634	Y



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Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

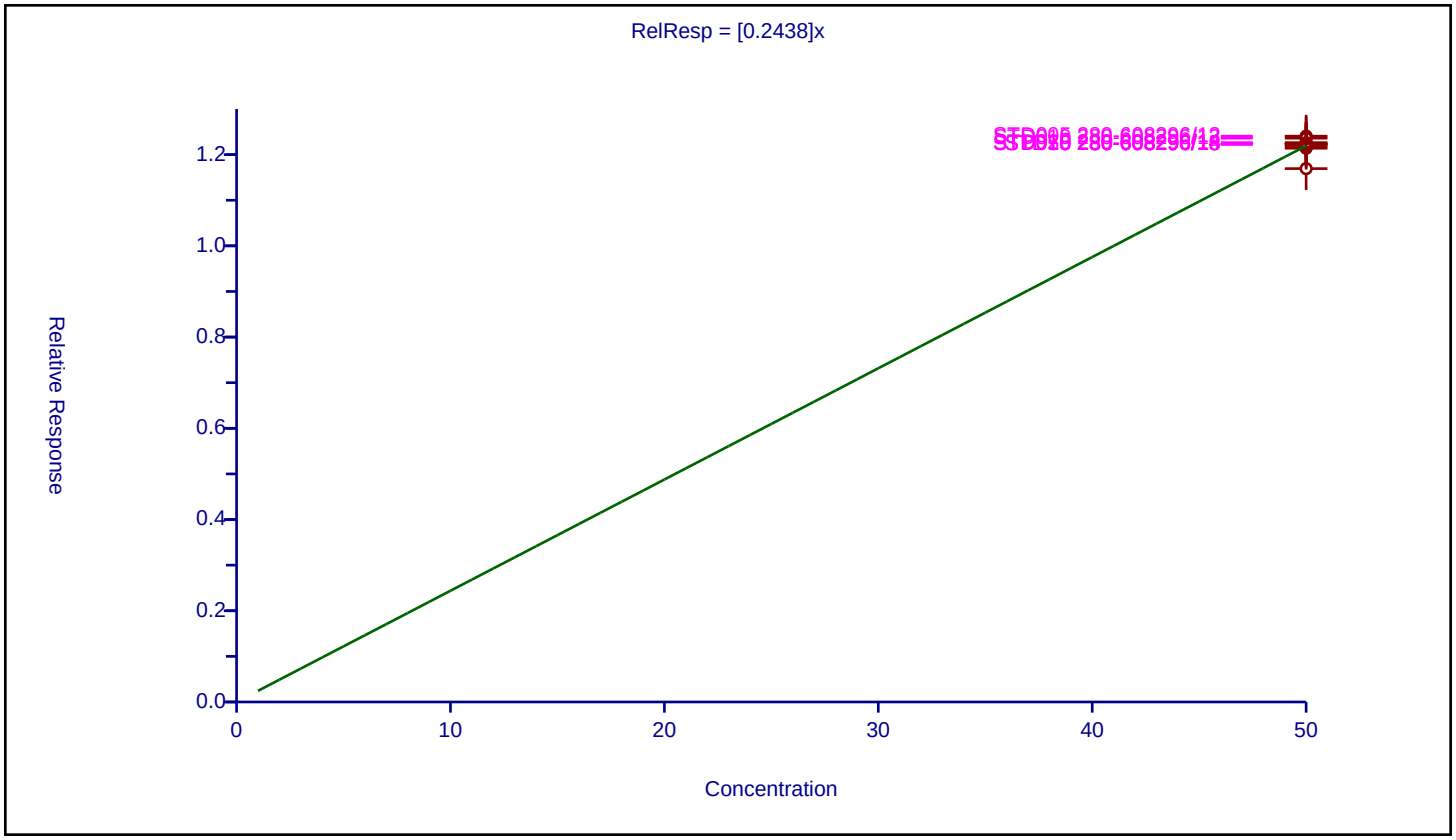
Curve Coefficients

Intercept:	0
Slope:	0.2438

Error Coefficients

Standard Error:	504000
Relative Standard Error:	1.7
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	50.0	12.404704	50.0	1964271.0	0.248094	Y
2	STD010 280-608296/13	50.0	12.360308	50.0	1932557.0	0.247206	Y
3	STD020 280-608296/14	50.0	12.263054	50.0	1938628.0	0.245261	Y
4	STD050 280-608296/15	50.0	12.233169	50.0	1881479.0	0.244663	Y
5	STD10 280-608296/16	50.0	12.229545	50.0	1890839.0	0.244591	Y
6	ICIS 280-608296/17	50.0	12.178248	50.0	1962770.0	0.243565	Y
7	STD75 280-608296/18	50.0	12.229547	50.0	1984313.0	0.244591	Y
8	STD100 280-608296/19	50.0	12.140081	50.0	1966239.0	0.242802	Y
9	STD200 280-608296/20	50.0	11.693072	50.0	2014445.0	0.233861	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

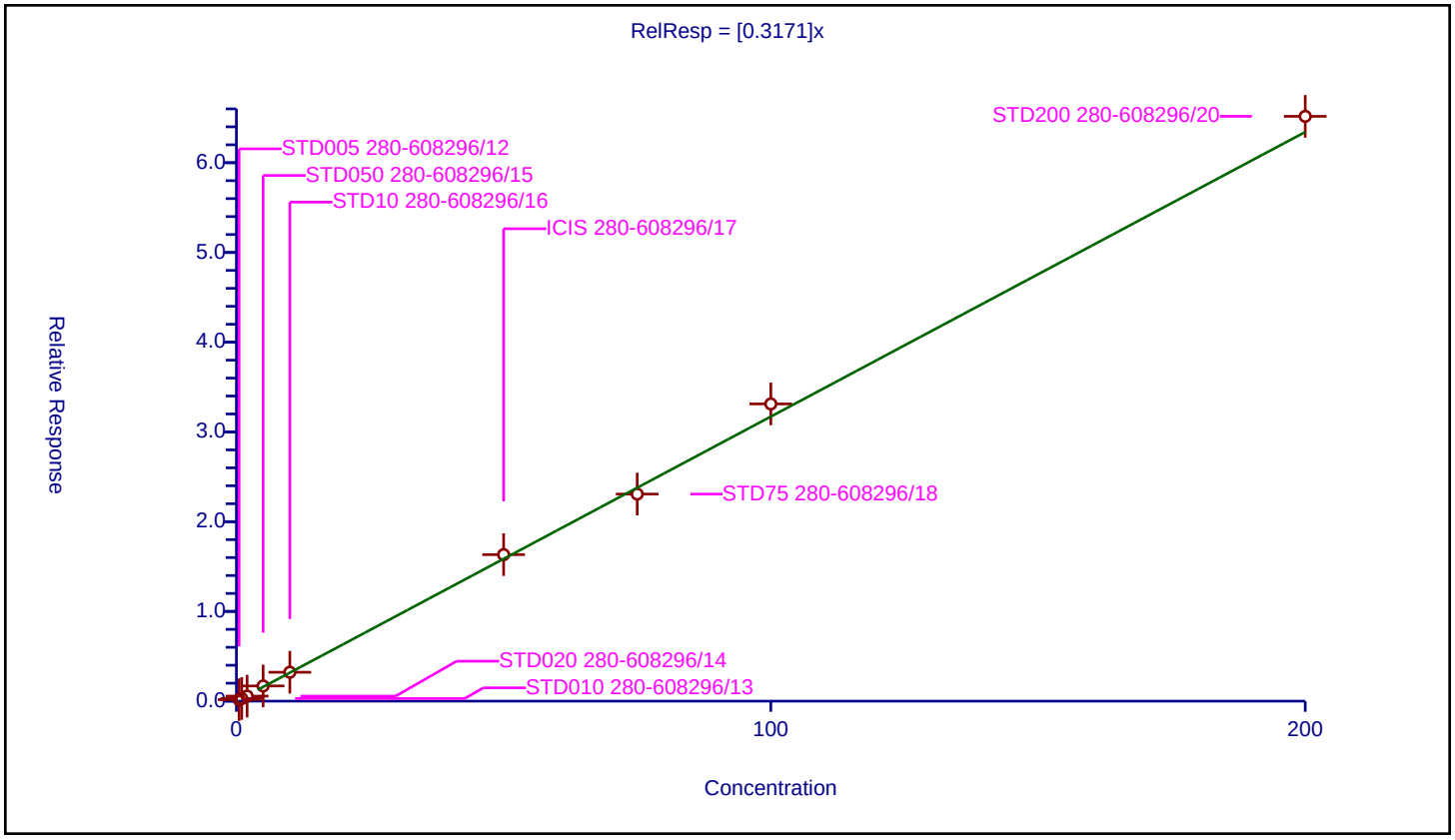
Curve Coefficients

Intercept:	0
Slope:	0.3171

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	6.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.164692	50.0	1964271.0	0.329384	Y
2	STD010 280-608296/13	1.0	0.29179	50.0	1932557.0	0.29179	Y
3	STD020 280-608296/14	2.0	0.561299	50.0	1938628.0	0.28065	Y
4	STD050 280-608296/15	5.0	1.69311	50.0	1881479.0	0.338622	Y
5	STD10 280-608296/16	10.0	3.222934	50.0	1890839.0	0.322293	Y
6	ICIS 280-608296/17	50.0	16.325525	50.0	1962770.0	0.32651	Y
7	STD75 280-608296/18	75.0	23.074938	50.0	1984313.0	0.307666	Y
8	STD100 280-608296/19	100.0	33.121762	50.0	1966239.0	0.331218	Y
9	STD200 280-608296/20	200.0	65.167676	50.0	2014445.0	0.325838	Y



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Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

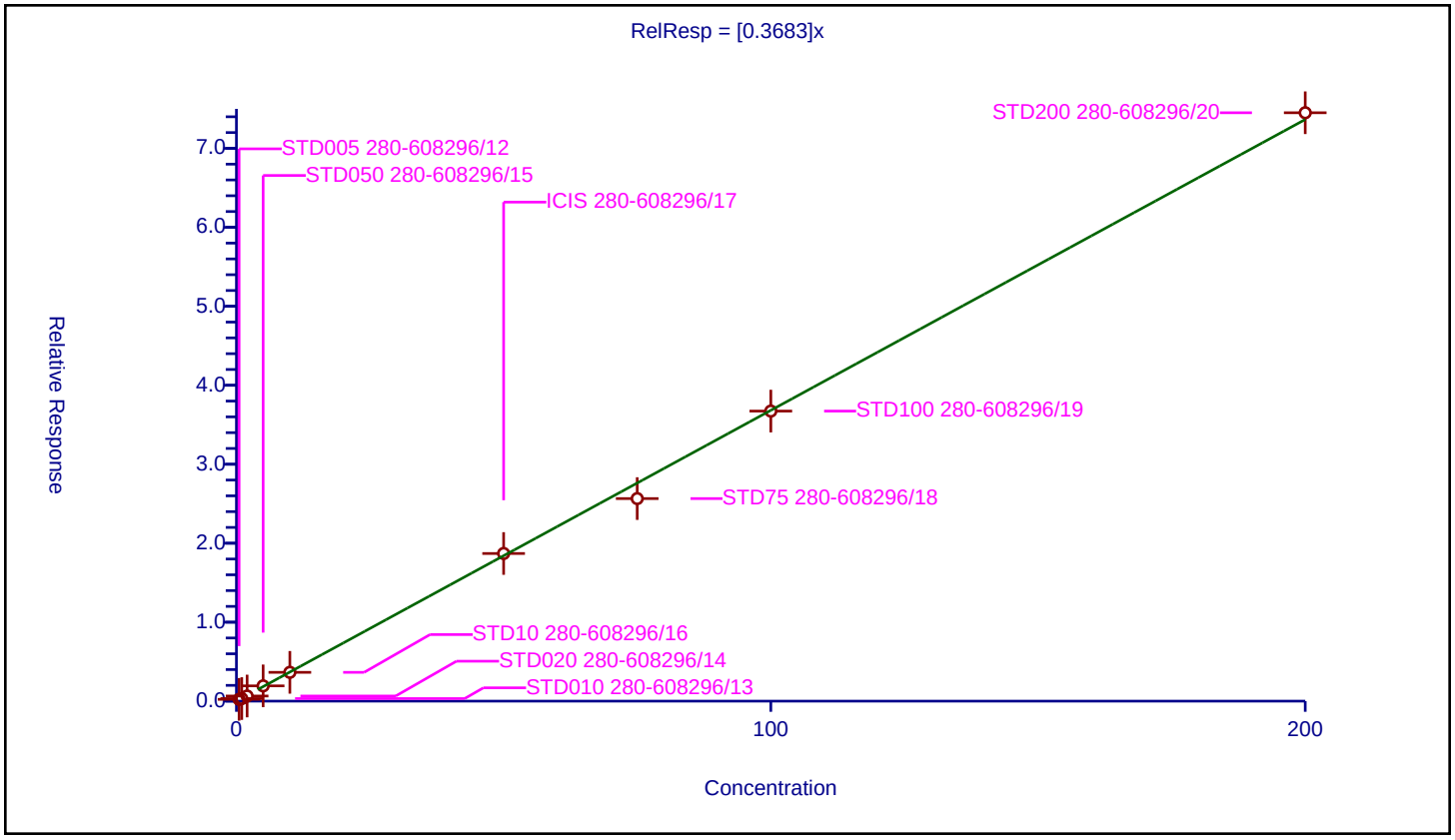
Curve Coefficients

Intercept:	0
Slope:	0.3683

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	10.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.229016	50.0	1964271.0	0.458033	Y
2	STD010 280-608296/13	1.0	0.324673	50.0	1932557.0	0.324673	Y
3	STD020 280-608296/14	2.0	0.64917	50.0	1938628.0	0.324585	Y
4	STD050 280-608296/15	5.0	1.933133	50.0	1881479.0	0.386627	Y
5	STD10 280-608296/16	10.0	3.647799	50.0	1890839.0	0.36478	Y
6	ICIS 280-608296/17	50.0	18.698472	50.0	1962770.0	0.373969	Y
7	STD75 280-608296/18	75.0	25.651246	50.0	1984313.0	0.342017	Y
8	STD100 280-608296/19	100.0	36.732183	50.0	1966239.0	0.367322	Y
9	STD200 280-608296/20	200.0	74.510771	50.0	2014445.0	0.372554	Y



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Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

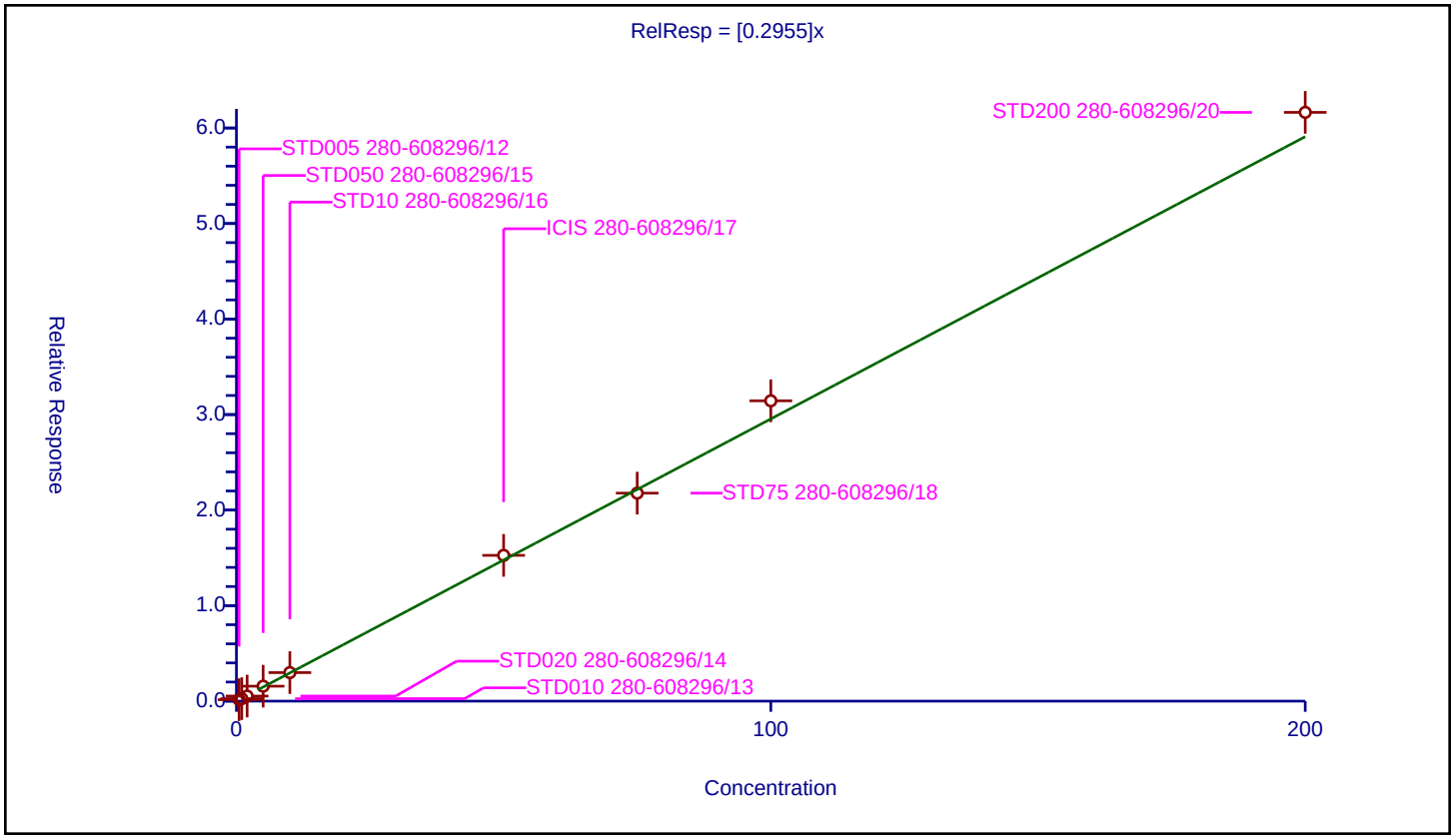
Curve Coefficients

Intercept:	0
Slope:	0.2955

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	6.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.151074	50.0	1964271.0	0.302148	Y
2	STD010 280-608296/13	1.0	0.261778	50.0	1932557.0	0.261778	Y
3	STD020 280-608296/14	2.0	0.530633	50.0	1938628.0	0.265317	Y
4	STD050 280-608296/15	5.0	1.565391	50.0	1881479.0	0.313078	Y
5	STD10 280-608296/16	10.0	2.986743	50.0	1890839.0	0.298674	Y
6	ICIS 280-608296/17	50.0	15.262512	50.0	1962770.0	0.30525	Y
7	STD75 280-608296/18	75.0	21.774387	50.0	1984313.0	0.290325	Y
8	STD100 280-608296/19	100.0	31.440252	50.0	1966239.0	0.314403	Y
9	STD200 280-608296/20	200.0	61.636803	50.0	2014445.0	0.308184	Y



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Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

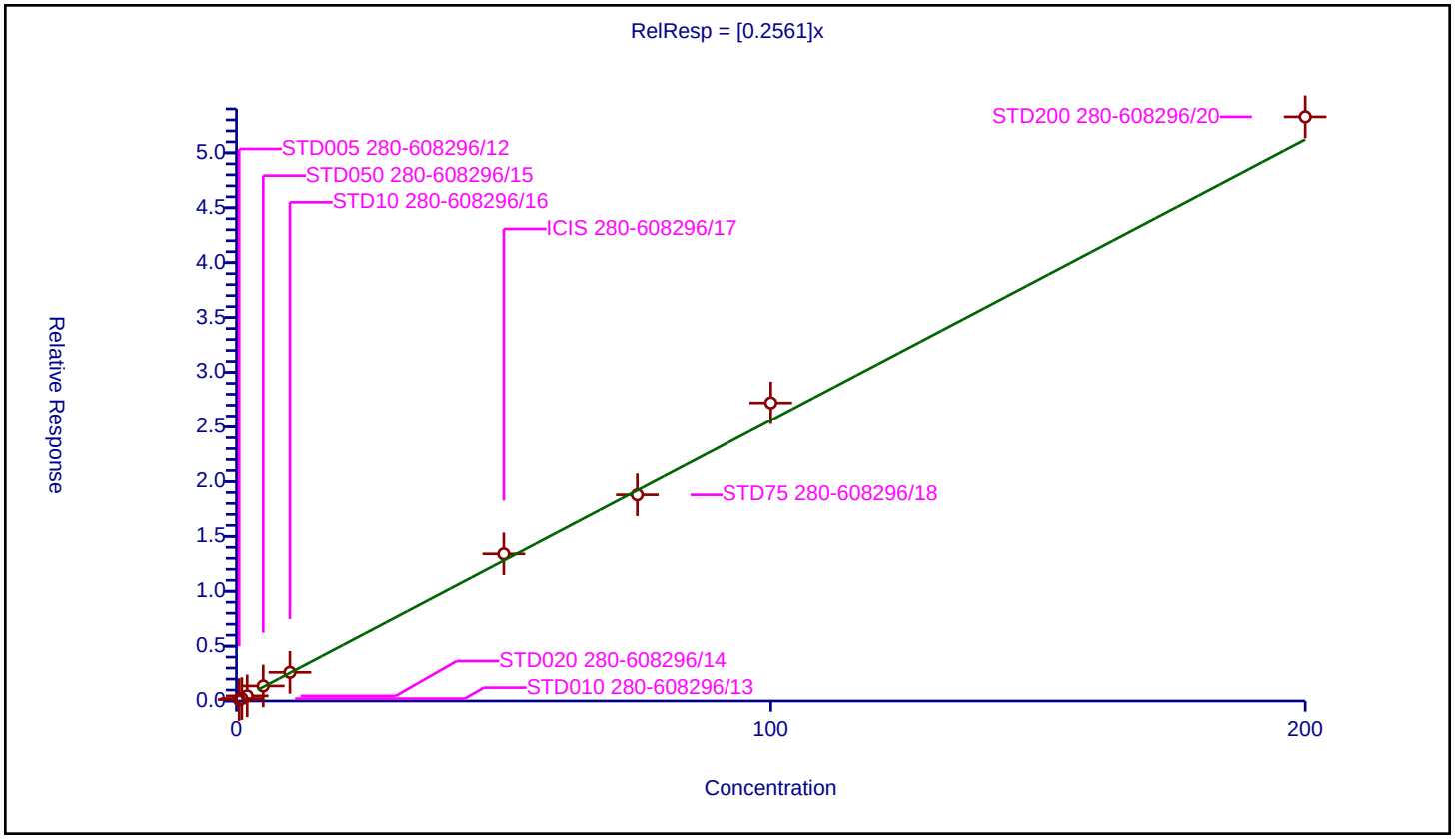
Curve Coefficients

Intercept:	0
Slope:	0.2561

Error Coefficients

Standard Error:	908000
Relative Standard Error:	7.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.13015	50.0	1964271.0	0.2603	Y
2	STD010 280-608296/13	1.0	0.219864	50.0	1932557.0	0.219864	Y
3	STD020 280-608296/14	2.0	0.463859	50.0	1938628.0	0.231929	Y
4	STD050 280-608296/15	5.0	1.37073	50.0	1881479.0	0.274146	Y
5	STD10 280-608296/16	10.0	2.613602	50.0	1890839.0	0.26136	Y
6	ICIS 280-608296/17	50.0	13.407939	50.0	1962770.0	0.268159	Y
7	STD75 280-608296/18	75.0	18.792197	50.0	1984313.0	0.250563	Y
8	STD100 280-608296/19	100.0	27.209307	50.0	1966239.0	0.272093	Y
9	STD200 280-608296/20	200.0	53.278074	50.0	2014445.0	0.26639	Y



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Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

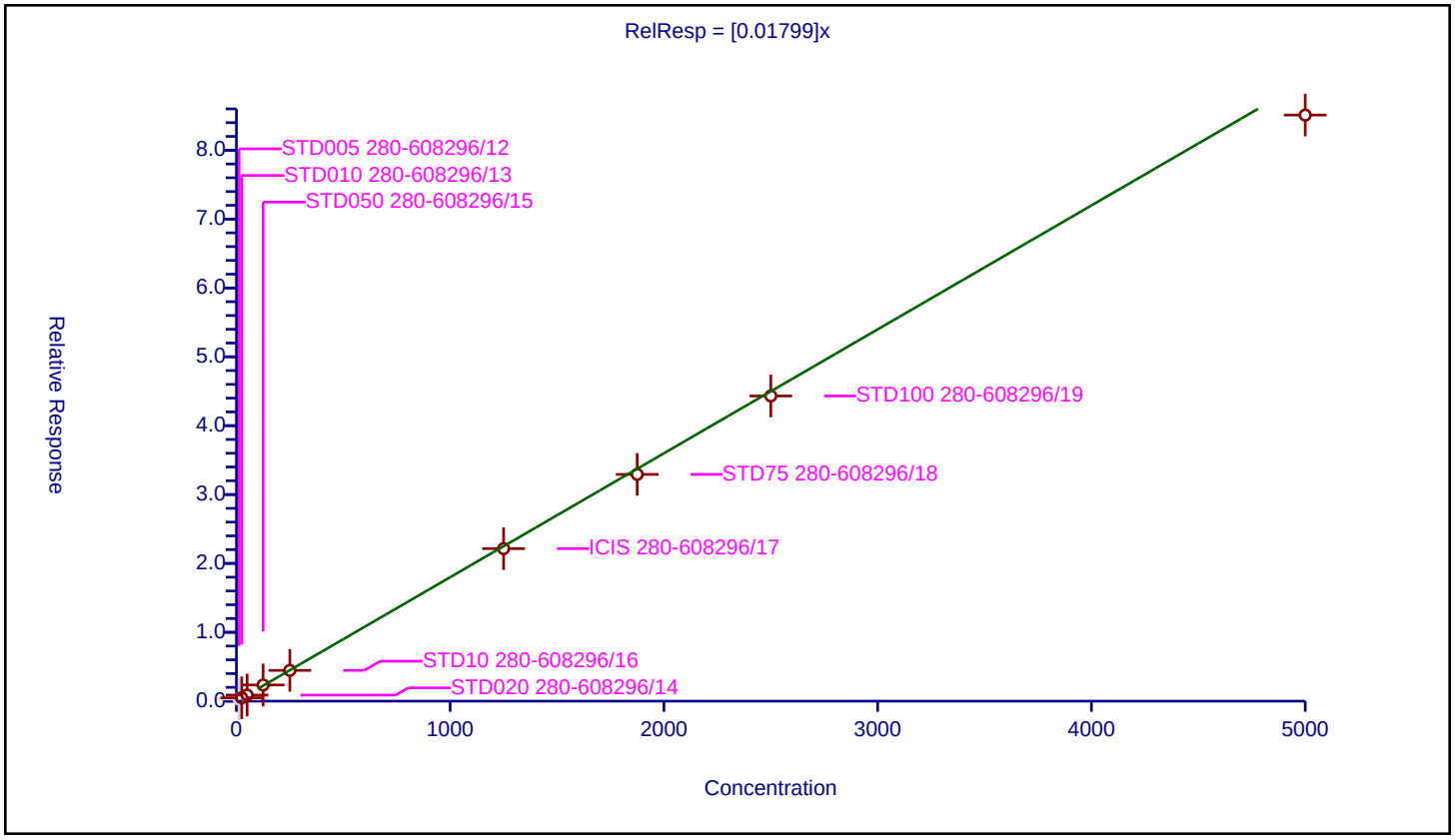
Curve Coefficients

Intercept:	0
Slope:	0.01799

Error Coefficients

Standard Error:	1570000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	12.5	0.308613	50.0	1964271.0	0.024689	N
2	STD010 280-608296/13	25.0	0.490697	50.0	1932557.0	0.019628	Y
3	STD020 280-608296/14	50.0	0.883047	50.0	1938628.0	0.017661	Y
4	STD050 280-608296/15	125.0	2.34794	50.0	1881479.0	0.018784	Y
5	STD10 280-608296/16	250.0	4.465081	50.0	1890839.0	0.01786	Y
6	ICIS 280-608296/17	1250.0	22.145743	50.0	1962770.0	0.017717	Y
7	STD75 280-608296/18	1875.0	32.930969	50.0	1984313.0	0.017563	Y
8	STD100 280-608296/19	2500.0	44.313382	50.0	1966239.0	0.017725	Y
9	STD200 280-608296/20	5000.0	85.102944	50.0	2014445.0	0.017021	Y



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Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

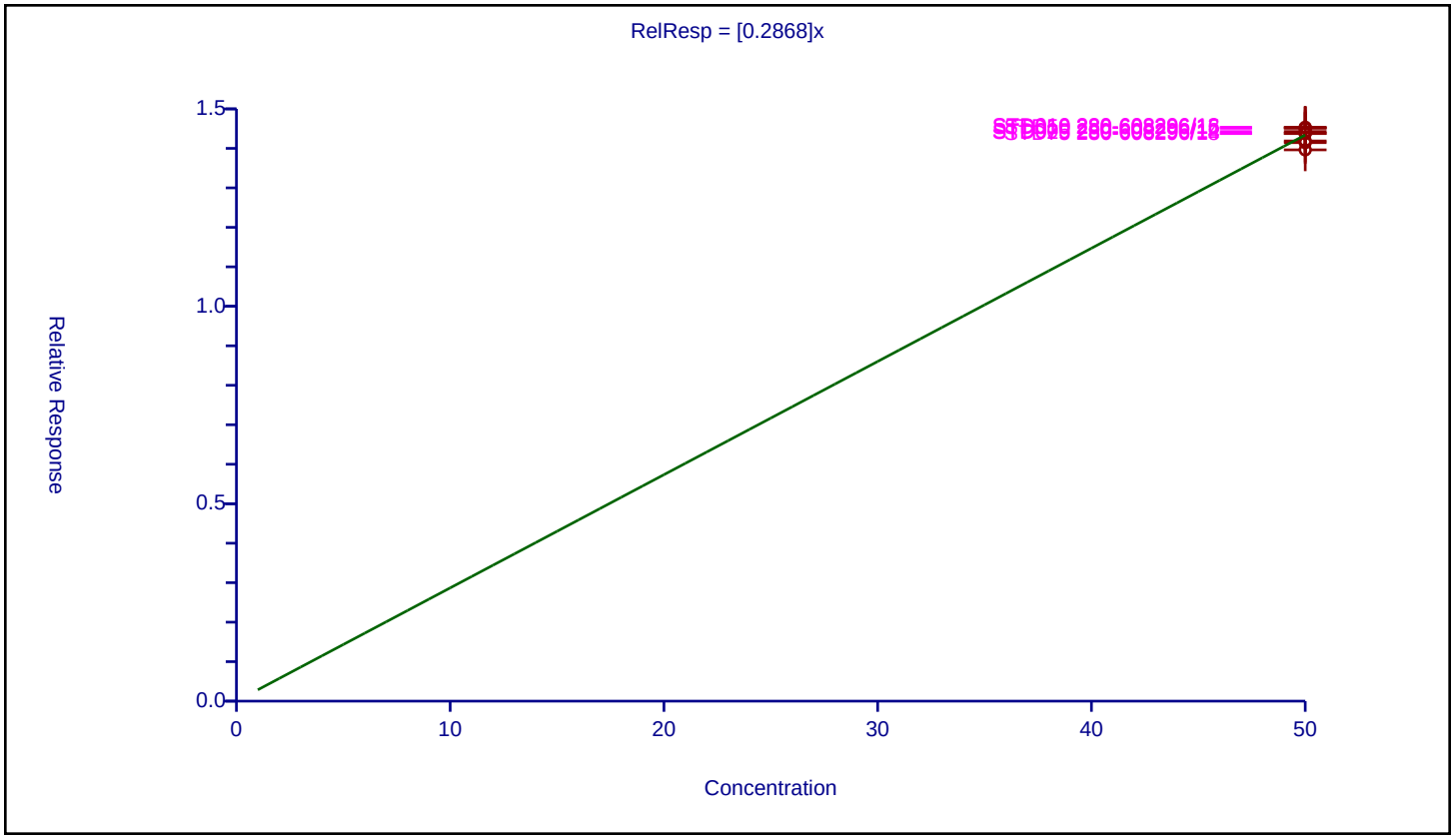
Curve Coefficients

Intercept:	0
Slope:	0.2868

Error Coefficients

Standard Error:	593000
Relative Standard Error:	1.4
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	50.0	14.427617	50.0	1964271.0	0.288552	Y
2	STD010 280-608296/13	50.0	14.535535	50.0	1932557.0	0.290711	Y
3	STD020 280-608296/14	50.0	14.381356	50.0	1938628.0	0.287627	Y
4	STD050 280-608296/15	50.0	14.510659	50.0	1881479.0	0.290213	Y
5	STD10 280-608296/16	50.0	14.520062	50.0	1890839.0	0.290401	Y
6	ICIS 280-608296/17	50.0	14.188086	50.0	1962770.0	0.283762	Y
7	STD75 280-608296/18	50.0	14.373766	50.0	1984313.0	0.287475	Y
8	STD100 280-608296/19	50.0	14.145305	50.0	1966239.0	0.282906	Y
9	STD200 280-608296/20	50.0	13.96268	50.0	2014445.0	0.279254	Y



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Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

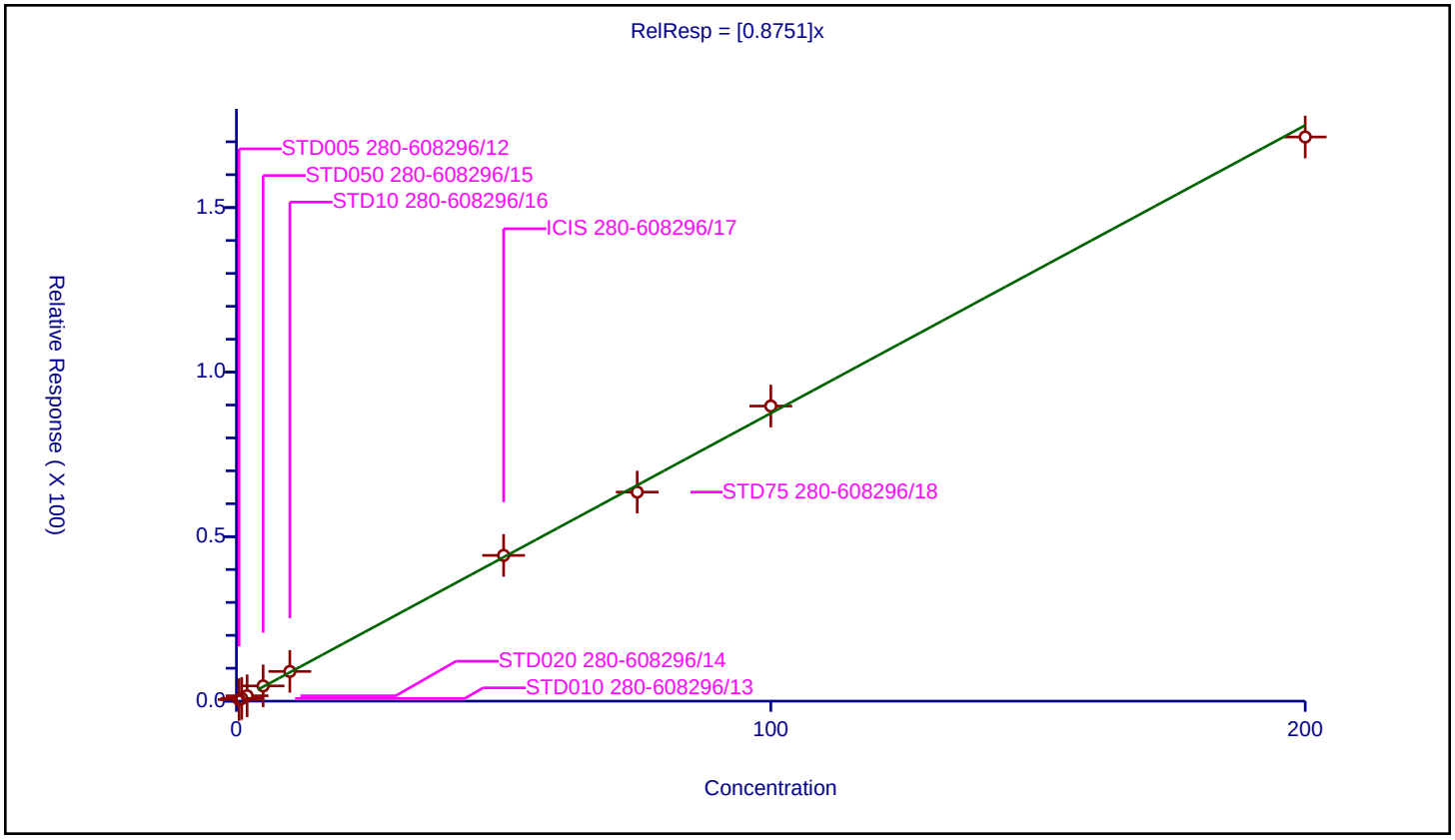
Curve Coefficients

Intercept:	0
Slope:	0.8751

Error Coefficients

Standard Error:	2950000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.463887	50.0	1964271.0	0.927774	Y
2	STD010 280-608296/13	1.0	0.817104	50.0	1932557.0	0.817104	Y
3	STD020 280-608296/14	2.0	1.631308	50.0	1938628.0	0.815654	Y
4	STD050 280-608296/15	5.0	4.624872	50.0	1881479.0	0.924974	Y
5	STD10 280-608296/16	10.0	9.028267	50.0	1890839.0	0.902827	Y
6	ICIS 280-608296/17	50.0	44.293218	50.0	1962770.0	0.885864	Y
7	STD75 280-608296/18	75.0	63.536121	50.0	1984313.0	0.847148	Y
8	STD100 280-608296/19	100.0	89.687698	50.0	1966239.0	0.896877	Y
9	STD200 280-608296/20	200.0	171.457498	50.0	2014445.0	0.857287	Y



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Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

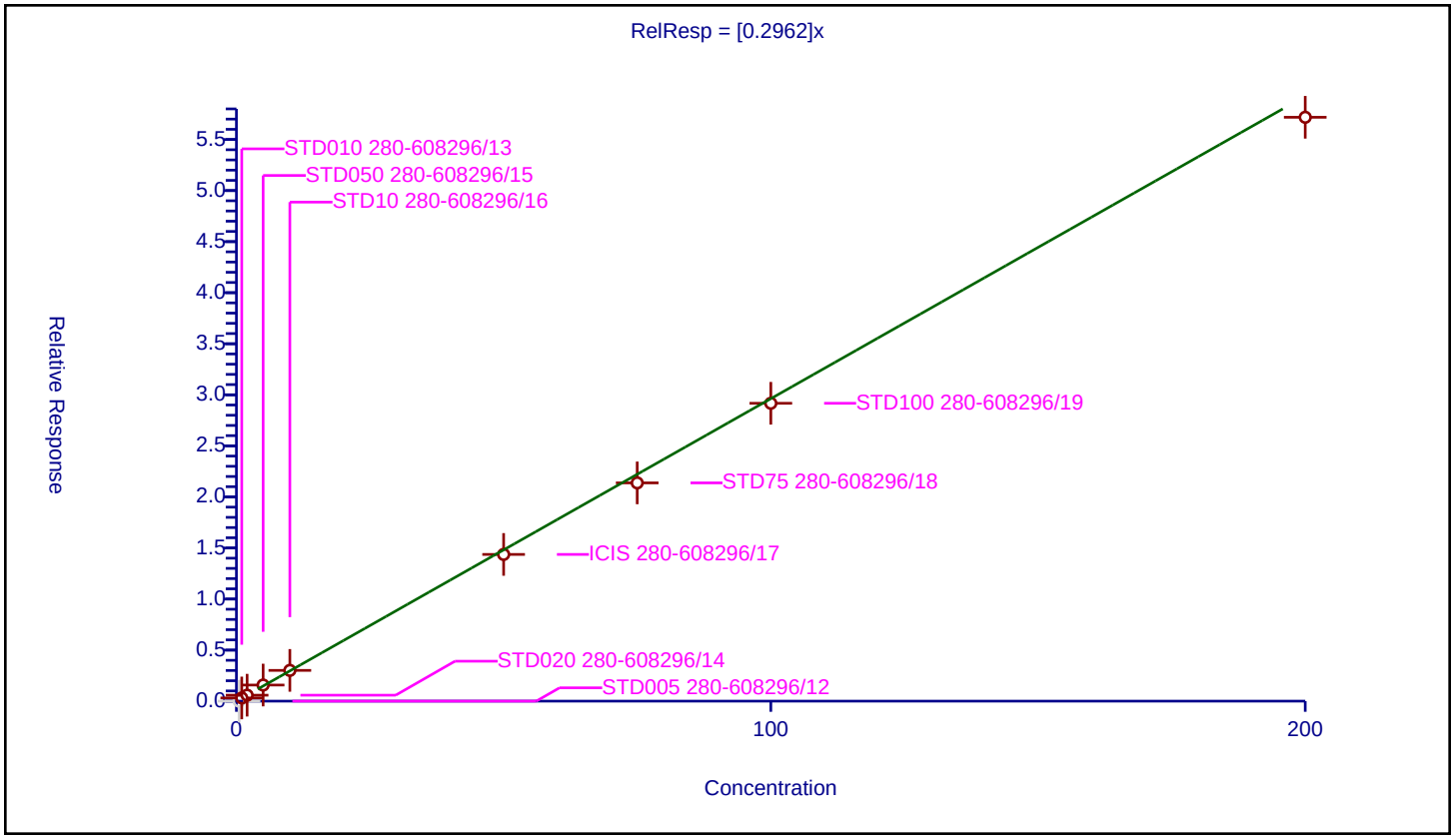
Curve Coefficients

Intercept:	0
Slope:	0.2962

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.0	50.0	1964271.0	0.0	N
2	STD010 280-608296/13	1.0	0.311453	50.0	1932557.0	0.311453	Y
3	STD020 280-608296/14	2.0	0.583454	50.0	1938628.0	0.291727	Y
4	STD050 280-608296/15	5.0	1.577429	50.0	1881479.0	0.315486	Y
5	STD10 280-608296/16	10.0	3.011494	50.0	1890839.0	0.301149	Y
6	ICIS 280-608296/17	50.0	14.368877	50.0	1962770.0	0.287378	Y
7	STD75 280-608296/18	75.0	21.374224	50.0	1984313.0	0.28499	Y
8	STD100 280-608296/19	100.0	29.170081	50.0	1966239.0	0.291701	Y
9	STD200 280-608296/20	200.0	57.177113	50.0	2014445.0	0.285886	Y



Calibration / n-Heptane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

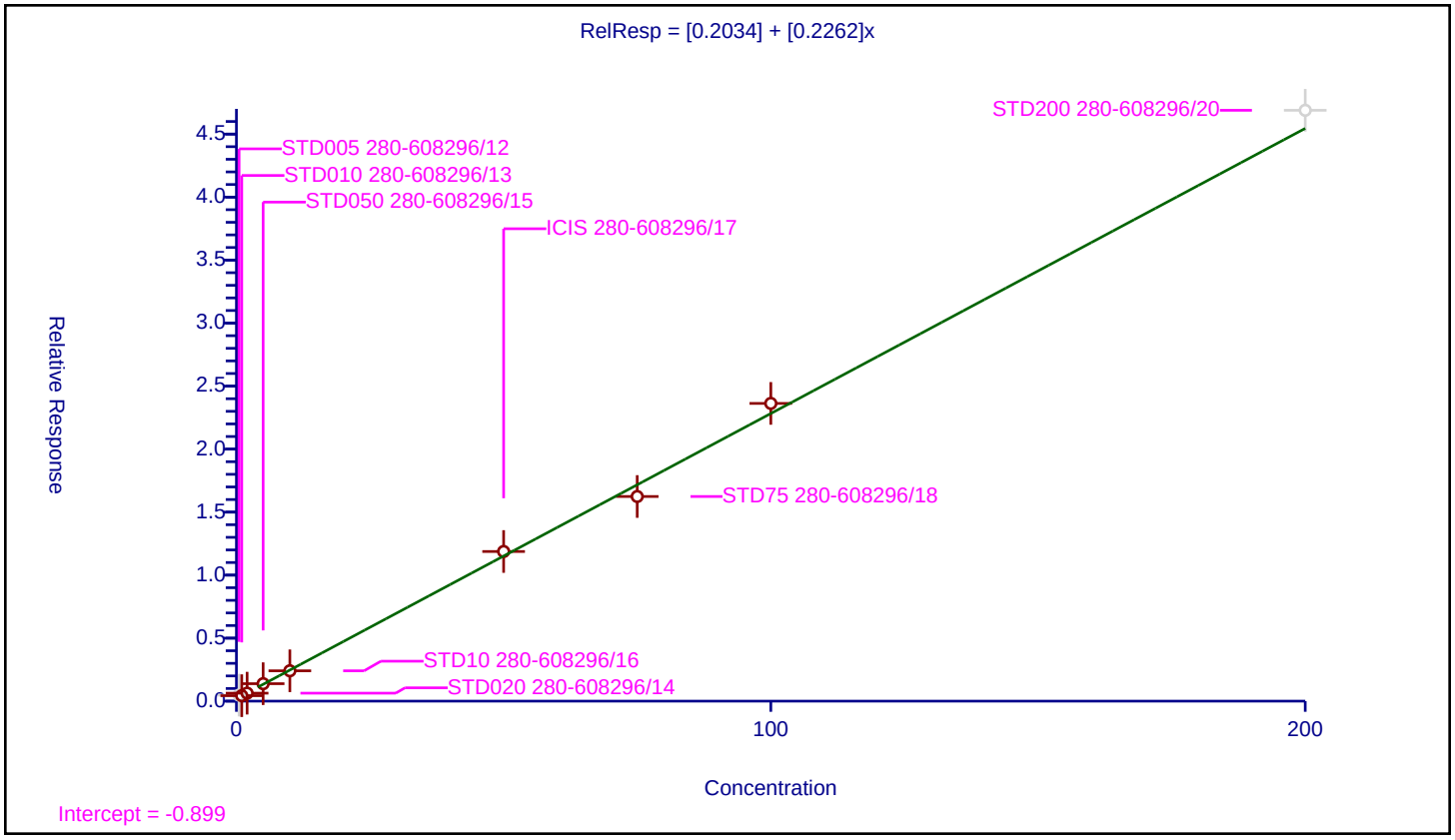
Curve Coefficients

Intercept:	0.2034
Slope:	0.2262

Error Coefficients

Standard Error:	549000
Relative Standard Error:	4.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.4786	50.0	1964271.0	0.9572	N
2	STD010 280-608296/13	1.0	0.433985	50.0	1932557.0	0.433985	Y
3	STD020 280-608296/14	2.0	0.632458	50.0	1938628.0	0.316229	Y
4	STD050 280-608296/15	5.0	1.385718	50.0	1881479.0	0.277144	Y
5	STD10 280-608296/16	10.0	2.409407	50.0	1890839.0	0.240941	Y
6	ICIS 280-608296/17	50.0	11.876404	50.0	1962770.0	0.237528	Y
7	STD75 280-608296/18	75.0	16.239399	50.0	1984313.0	0.216525	Y
8	STD100 280-608296/19	100.0	23.627977	50.0	1966239.0	0.23628	Y
9	STD200 280-608296/20	200.0	46.887306	50.0	2014445.0	0.234437	N



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Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

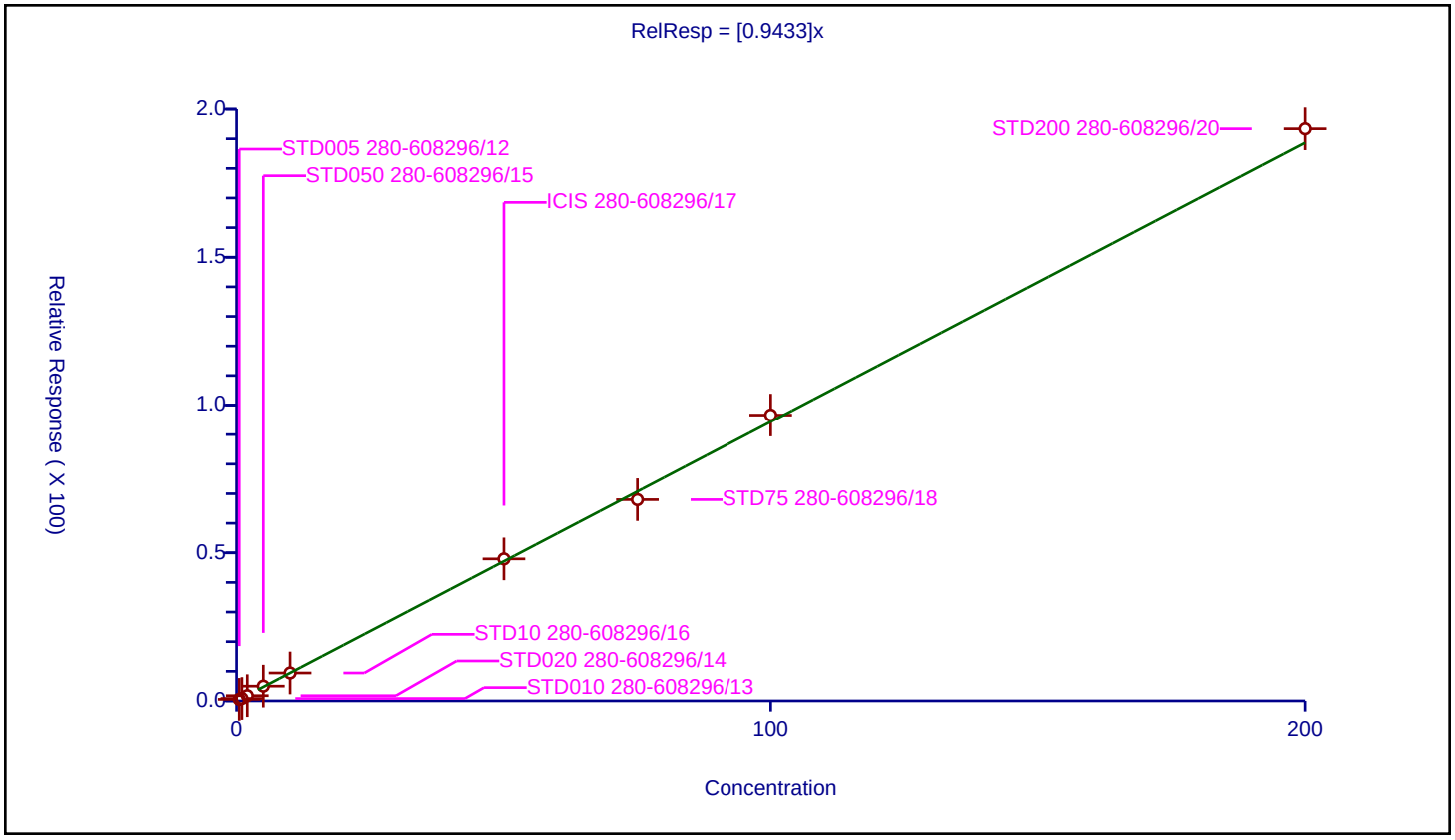
Curve Coefficients

Intercept:	0
Slope:	0.9433

Error Coefficients

Standard Error:	756000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.528873	50.0	453795.0	1.057746	Y
2	STD010 280-608296/13	1.0	0.811307	50.0	451247.0	0.811307	Y
3	STD020 280-608296/14	2.0	1.763567	50.0	452407.0	0.881783	Y
4	STD050 280-608296/15	5.0	4.988394	50.0	434679.0	0.997679	Y
5	STD10 280-608296/16	10.0	9.429765	50.0	440976.0	0.942976	Y
6	ICIS 280-608296/17	50.0	47.949726	50.0	459207.0	0.958995	Y
7	STD75 280-608296/18	75.0	67.98766	50.0	461572.0	0.906502	Y
8	STD100 280-608296/19	100.0	96.608998	50.0	463860.0	0.96609	Y
9	STD200 280-608296/20	200.0	193.383453	50.0	460565.0	0.966917	Y



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Calibration / 2-Pentanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

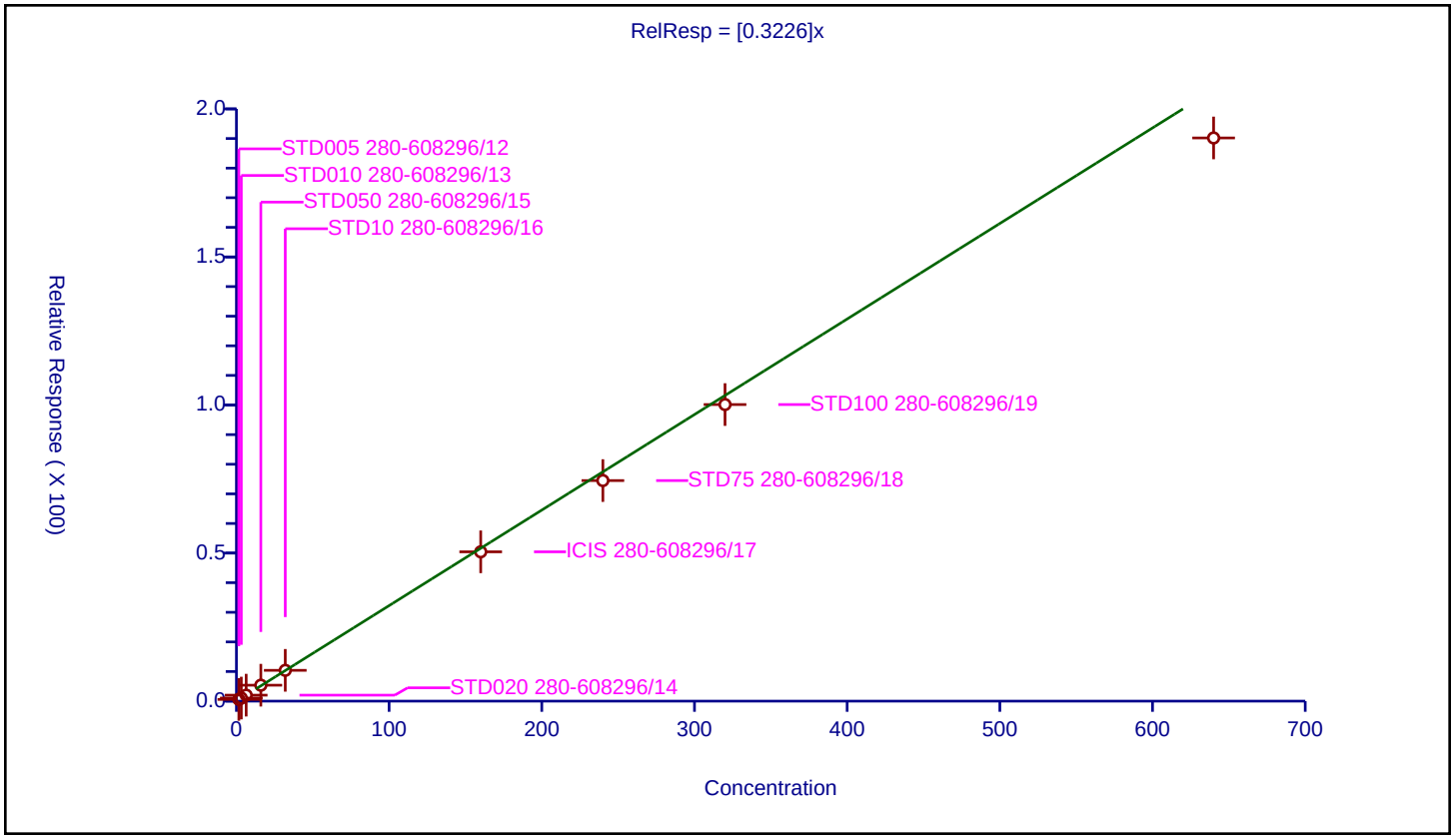
Curve Coefficients

Intercept:	0
Slope:	0.3226

Error Coefficients

Standard Error:	3300000
Relative Standard Error:	6.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	1.6	0.584084	50.0	1964271.0	0.365053	Y
2	STD010 280-608296/13	3.2	1.041884	50.0	1932557.0	0.325589	Y
3	STD020 280-608296/14	6.4	2.019598	50.0	1938628.0	0.315562	Y
4	STD050 280-608296/15	16.0	5.385232	50.0	1881479.0	0.336577	Y
5	STD10 280-608296/16	32.0	10.401785	50.0	1890839.0	0.325056	Y
6	ICIS 280-608296/17	160.0	50.421598	50.0	1962770.0	0.315135	Y
7	STD75 280-608296/18	240.0	74.481622	50.0	1984313.0	0.31034	Y
8	STD100 280-608296/19	320.0	100.15133	50.0	1966239.0	0.312973	Y
9	STD200 280-608296/20	640.0	190.188464	50.0	2014445.0	0.297169	Y



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Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

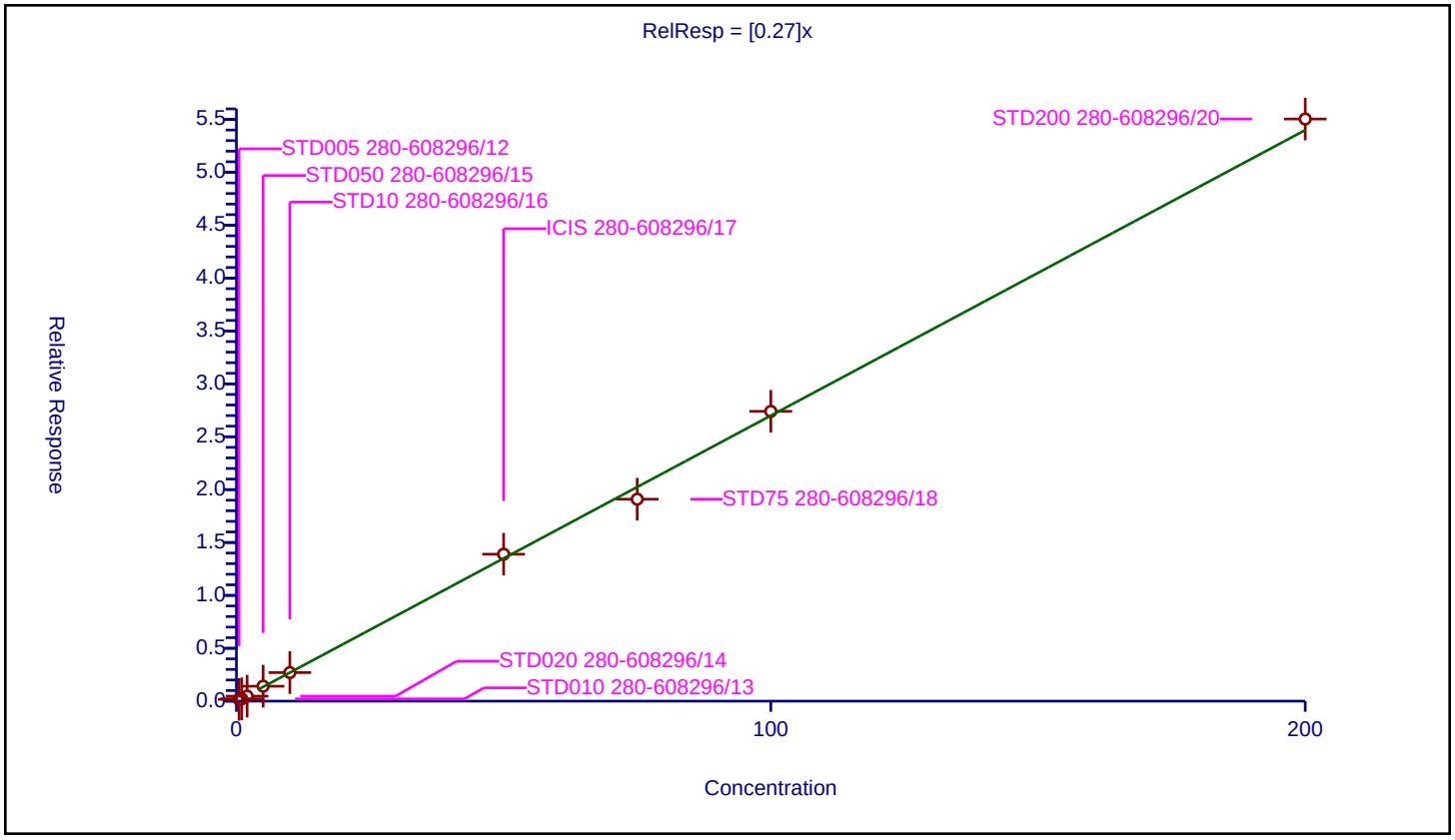
Curve Coefficients

Intercept:	0
Slope:	0.27

Error Coefficients

Standard Error:	933000
Relative Standard Error:	12.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.170674	50.0	1964271.0	0.341348	Y
2	STD010 280-608296/13	1.0	0.217148	50.0	1932557.0	0.217148	Y
3	STD020 280-608296/14	2.0	0.473711	50.0	1938628.0	0.236856	Y
4	STD050 280-608296/15	5.0	1.412373	50.0	1881479.0	0.282475	Y
5	STD10 280-608296/16	10.0	2.70105	50.0	1890839.0	0.270105	Y
6	ICIS 280-608296/17	50.0	13.893171	50.0	1962770.0	0.277863	Y
7	STD75 280-608296/18	75.0	19.096811	50.0	1984313.0	0.254624	Y
8	STD100 280-608296/19	100.0	27.401018	50.0	1966239.0	0.27401	Y
9	STD200 280-608296/20	200.0	55.044168	50.0	2014445.0	0.275221	Y



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Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

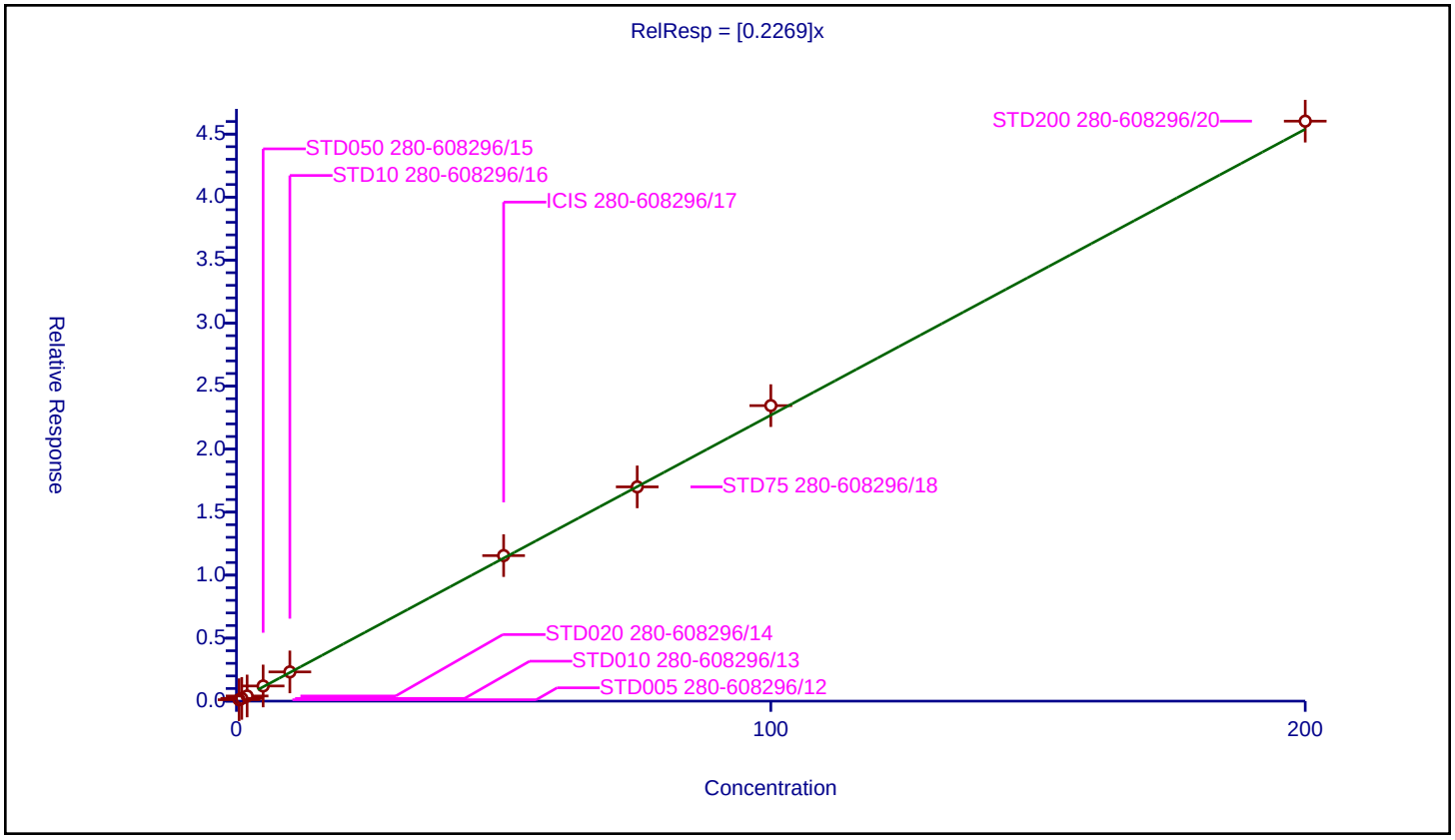
Curve Coefficients

Intercept:	0
Slope:	0.2269

Error Coefficients

Standard Error:	787000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.113172	50.0	1964271.0	0.226344	Y
2	STD010 280-608296/13	1.0	0.216397	50.0	1932557.0	0.216397	Y
3	STD020 280-608296/14	2.0	0.409568	50.0	1938628.0	0.204784	Y
4	STD050 280-608296/15	5.0	1.202857	50.0	1881479.0	0.240571	Y
5	STD10 280-608296/16	10.0	2.320425	50.0	1890839.0	0.232042	Y
6	ICIS 280-608296/17	50.0	11.549316	50.0	1962770.0	0.230986	Y
7	STD75 280-608296/18	75.0	17.003341	50.0	1984313.0	0.226711	Y
8	STD100 280-608296/19	100.0	23.452235	50.0	1966239.0	0.234522	Y
9	STD200 280-608296/20	200.0	46.027144	50.0	2014445.0	0.230136	Y



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Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

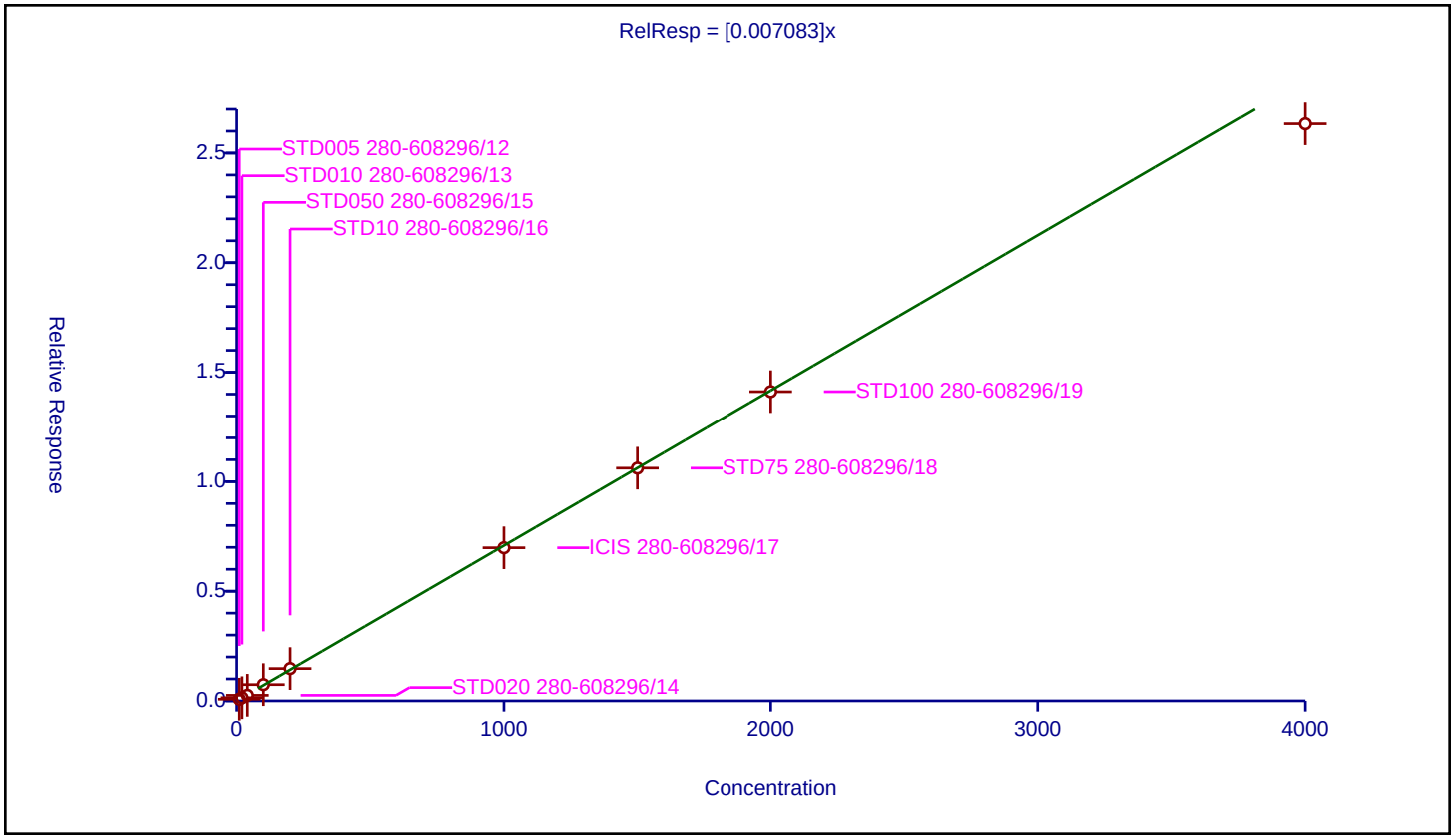
Curve Coefficients

Intercept:	0
Slope:	0.007083

Error Coefficients

Standard Error:	460000
Relative Standard Error:	5.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	10.0	0.077001	50.0	1964271.0	0.0077	Y
2	STD010 280-608296/13	20.0	0.144239	50.0	1932557.0	0.007212	Y
3	STD020 280-608296/14	40.0	0.254819	50.0	1938628.0	0.00637	Y
4	STD050 280-608296/15	100.0	0.740269	50.0	1881479.0	0.007403	Y
5	STD10 280-608296/16	200.0	1.472045	50.0	1890839.0	0.00736	Y
6	ICIS 280-608296/17	1000.0	6.982759	50.0	1962770.0	0.006983	Y
7	STD75 280-608296/18	1500.0	10.617806	50.0	1984313.0	0.007079	Y
8	STD100 280-608296/19	2000.0	14.113722	50.0	1966239.0	0.007057	Y
9	STD200 280-608296/20	4000.0	26.336981	50.0	2014445.0	0.006584	Y



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Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

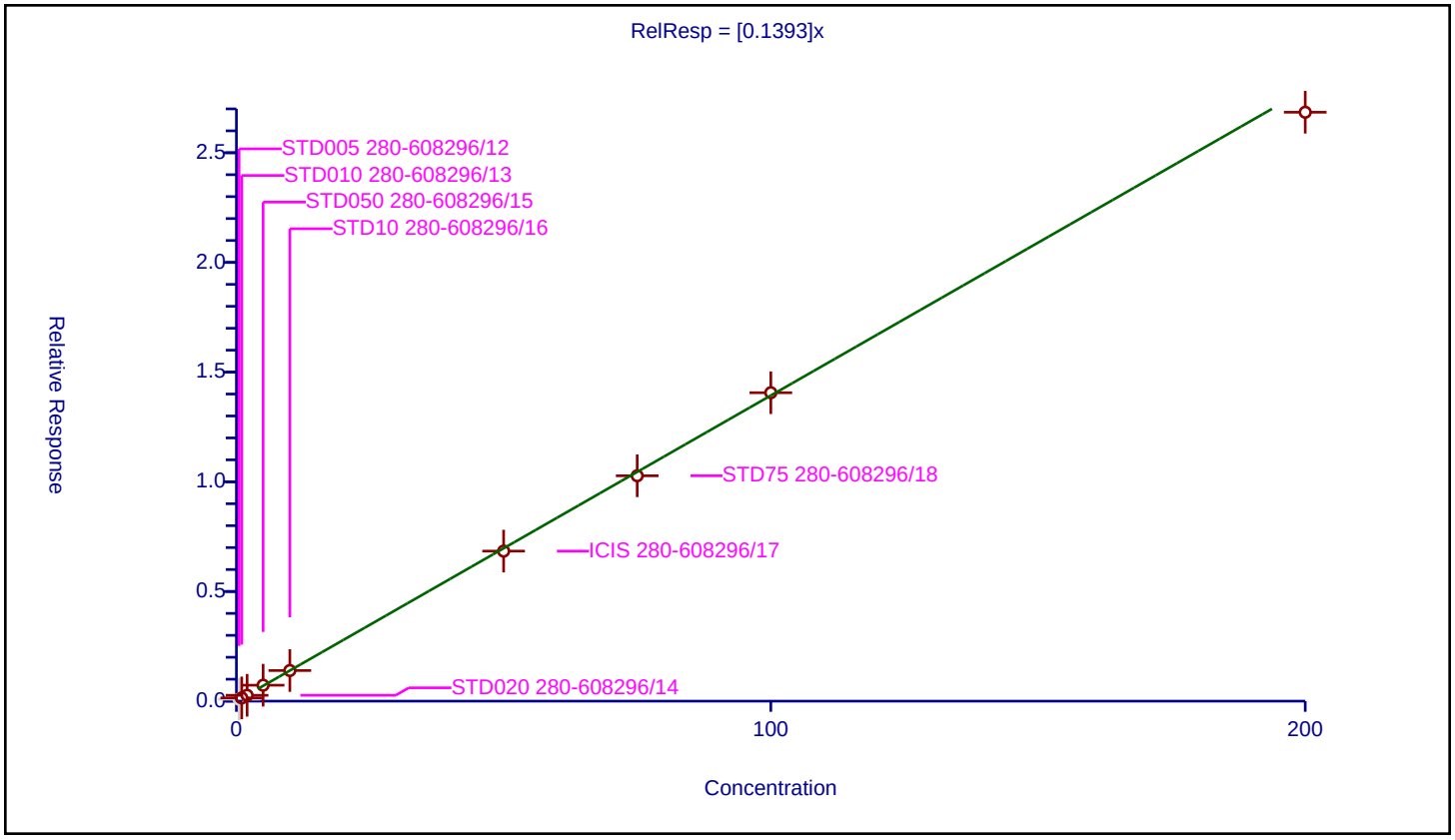
Curve Coefficients

Intercept:	0
Slope:	0.1393

Error Coefficients

Standard Error:	495000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.090644	50.0	1964271.0	0.181289	N
2	STD010 280-608296/13	1.0	0.147939	50.0	1932557.0	0.147939	Y
3	STD020 280-608296/14	2.0	0.266374	50.0	1938628.0	0.133187	Y
4	STD050 280-608296/15	5.0	0.726476	50.0	1881479.0	0.145295	Y
5	STD10 280-608296/16	10.0	1.396153	50.0	1890839.0	0.139615	Y
6	ICIS 280-608296/17	50.0	6.839721	50.0	1962770.0	0.136794	Y
7	STD75 280-608296/18	75.0	10.274135	50.0	1984313.0	0.136988	Y
8	STD100 280-608296/19	100.0	14.061566	50.0	1966239.0	0.140616	Y
9	STD200 280-608296/20	200.0	26.846476	50.0	2014445.0	0.134232	Y



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Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

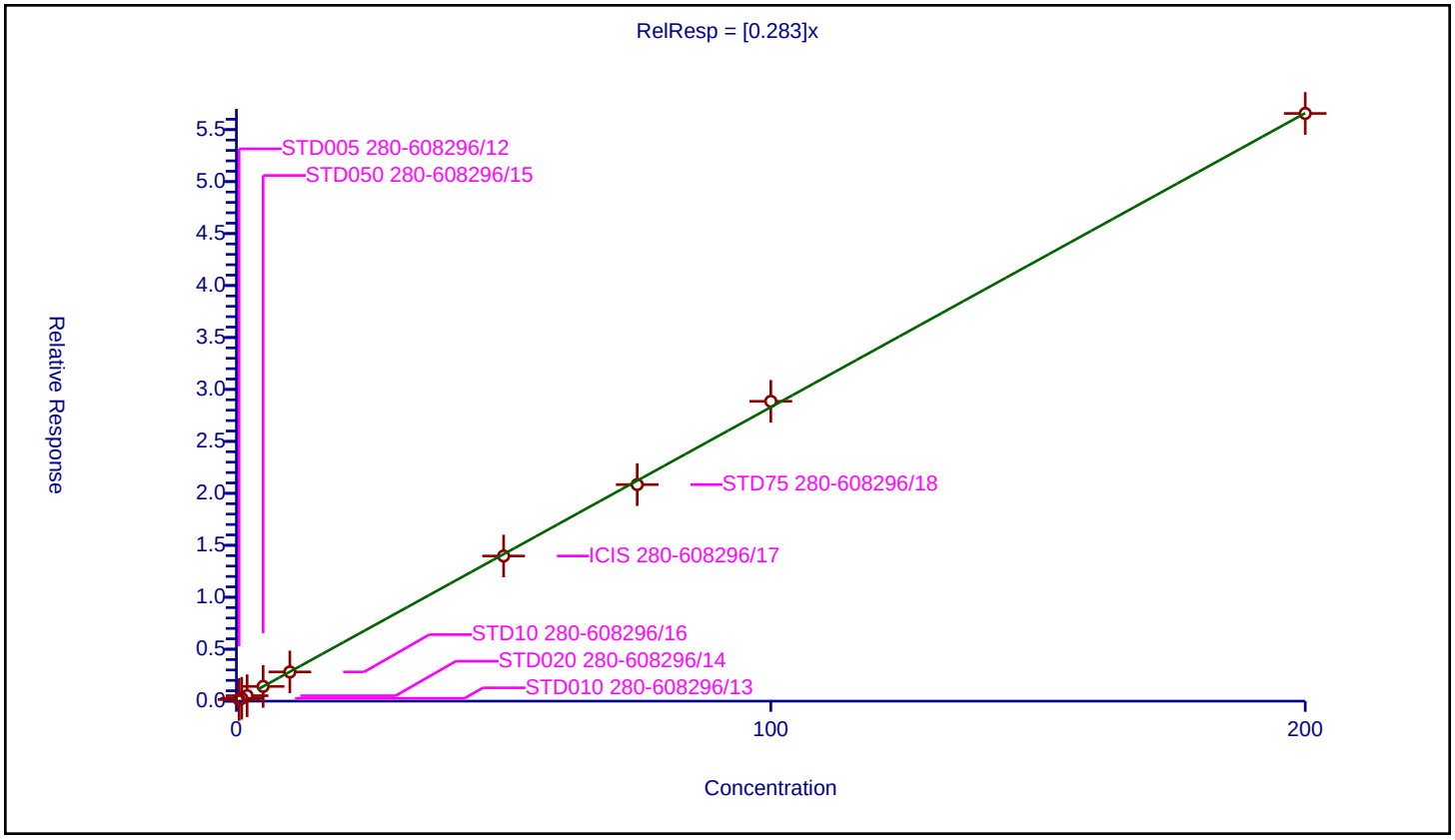
Curve Coefficients

Intercept:	0
Slope:	0.283

Error Coefficients

Standard Error:	967000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.157361	50.0	1964271.0	0.314722	Y
2	STD010 280-608296/13	1.0	0.275956	50.0	1932557.0	0.275956	Y
3	STD020 280-608296/14	2.0	0.524675	50.0	1938628.0	0.262338	Y
4	STD050 280-608296/15	5.0	1.41899	50.0	1881479.0	0.283798	Y
5	STD10 280-608296/16	10.0	2.811001	50.0	1890839.0	0.2811	Y
6	ICIS 280-608296/17	50.0	13.968575	50.0	1962770.0	0.279372	Y
7	STD75 280-608296/18	75.0	20.842528	50.0	1984313.0	0.2779	Y
8	STD100 280-608296/19	100.0	28.85814	50.0	1966239.0	0.288581	Y
9	STD200 280-608296/20	200.0	56.558233	50.0	2014445.0	0.282791	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

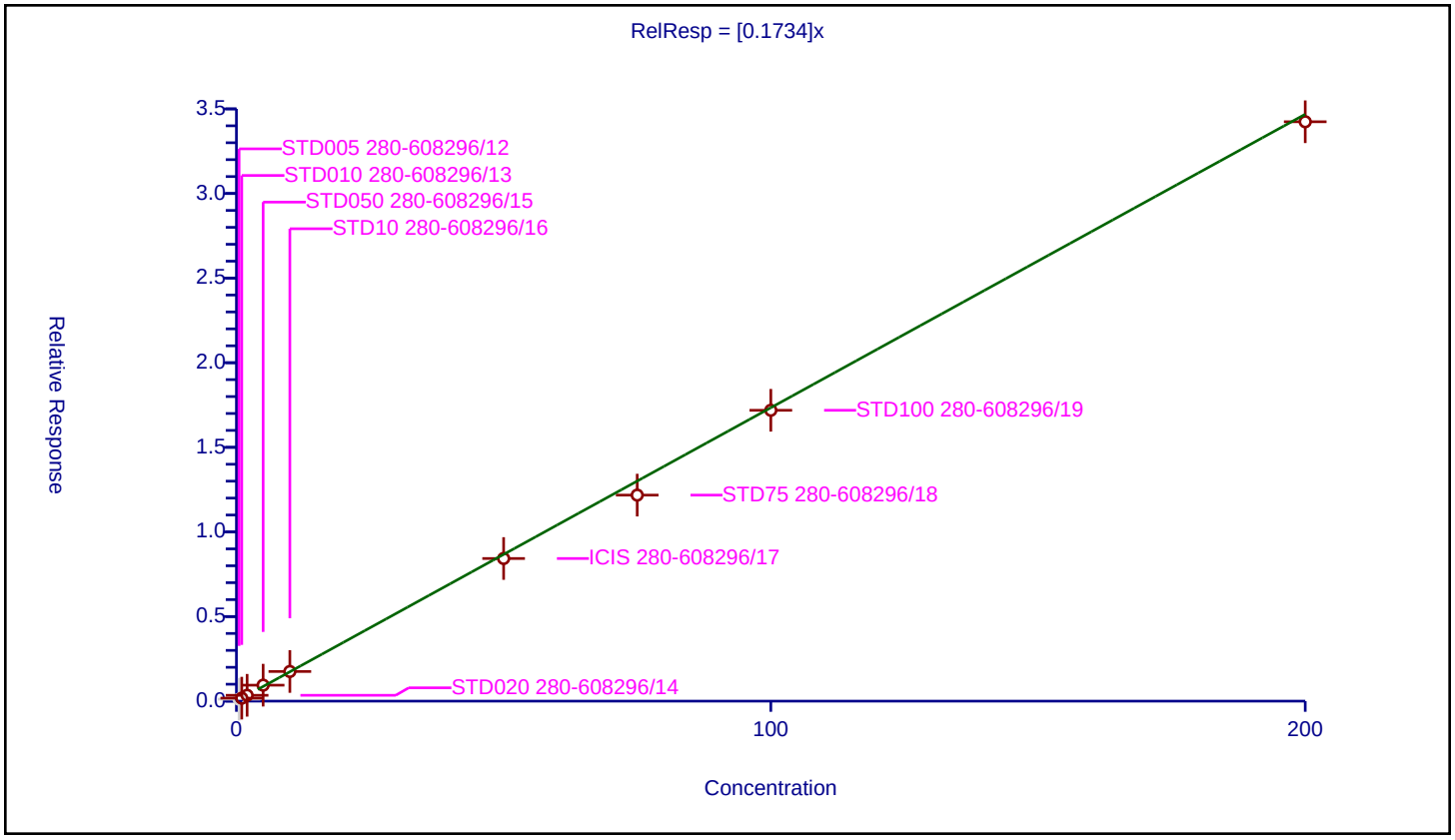
Curve Coefficients

Intercept:	0
Slope:	0.1734

Error Coefficients

Standard Error:	622000
Relative Standard Error:	4.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.116506	50.0	1964271.0	0.233013	N
2	STD010 280-608296/13	1.0	0.176347	50.0	1932557.0	0.176347	Y
3	STD020 280-608296/14	2.0	0.345889	50.0	1938628.0	0.172944	Y
4	STD050 280-608296/15	5.0	0.943247	50.0	1881479.0	0.188649	Y
5	STD10 280-608296/16	10.0	1.753243	50.0	1890839.0	0.175324	Y
6	ICIS 280-608296/17	50.0	8.430152	50.0	1962770.0	0.168603	Y
7	STD75 280-608296/18	75.0	12.175776	50.0	1984313.0	0.162344	Y
8	STD100 280-608296/19	100.0	17.188017	50.0	1966239.0	0.17188	Y
9	STD200 280-608296/20	200.0	34.239307	50.0	2014445.0	0.171197	Y



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Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

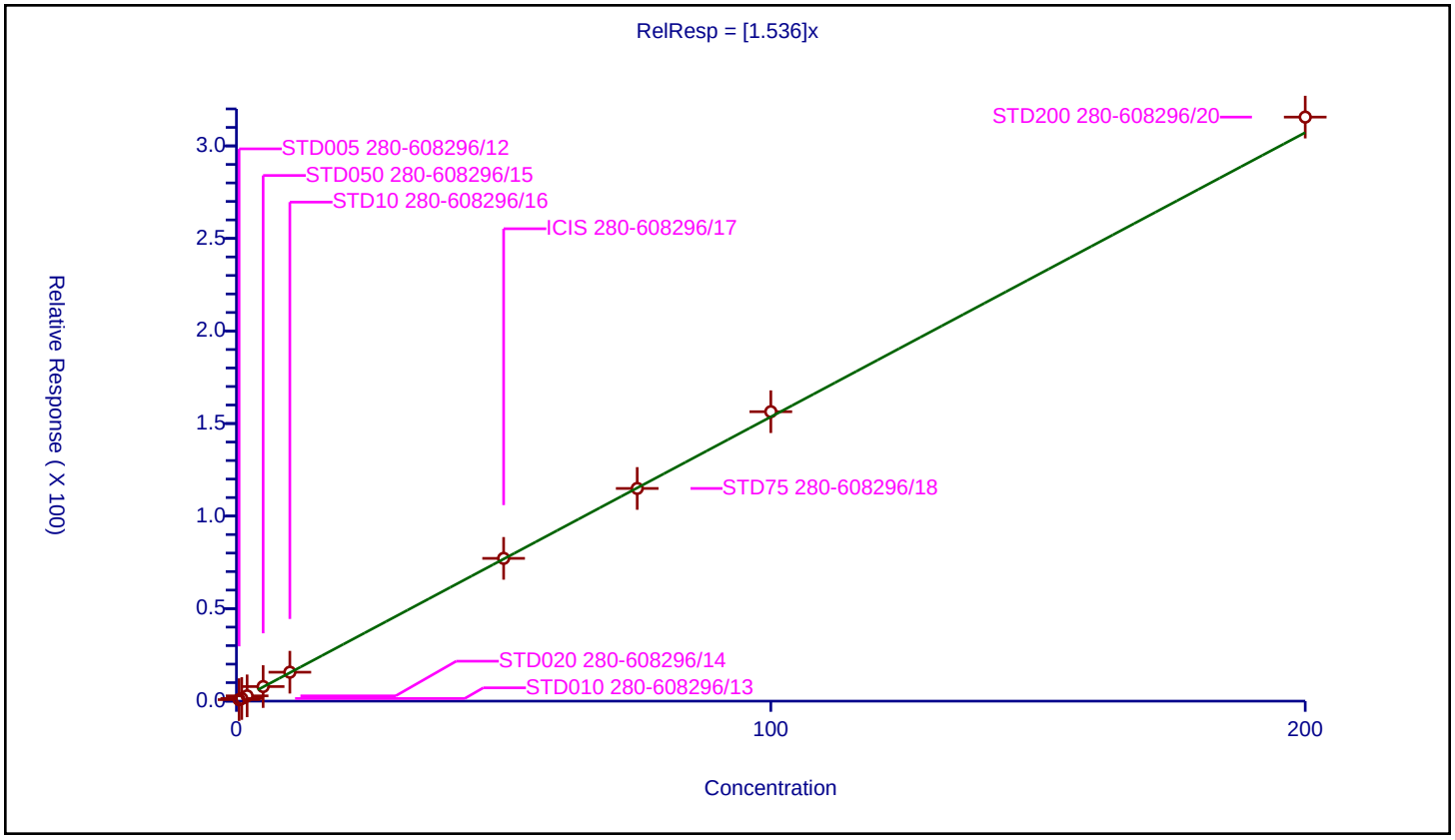
Curve Coefficients

Intercept:	0
Slope:	1.536

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.808956	50.0	453795.0	1.617911	Y
2	STD010 280-608296/13	1.0	1.423721	50.0	451247.0	1.423721	Y
3	STD020 280-608296/14	2.0	2.853073	50.0	452407.0	1.426536	Y
4	STD050 280-608296/15	5.0	7.878918	50.0	434679.0	1.575784	Y
5	STD10 280-608296/16	10.0	15.637812	50.0	440976.0	1.563781	Y
6	ICIS 280-608296/17	50.0	77.148541	50.0	459207.0	1.542971	Y
7	STD75 280-608296/18	75.0	114.912408	50.0	461572.0	1.532165	Y
8	STD100 280-608296/19	100.0	156.390829	50.0	463860.0	1.563908	Y
9	STD200 280-608296/20	200.0	315.56067	50.0	460565.0	1.577803	Y



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Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

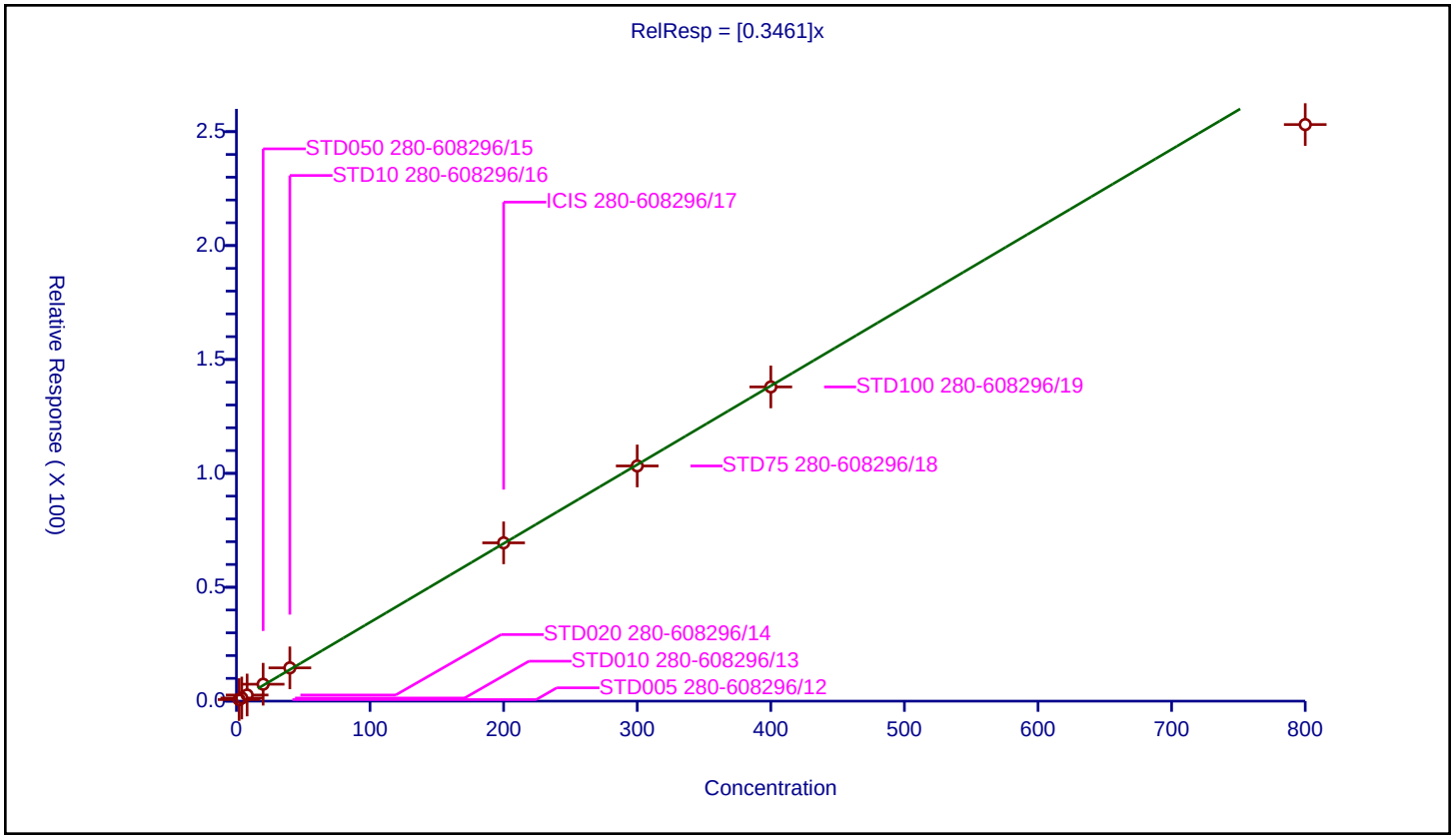
Curve Coefficients

Intercept:	0
Slope:	0.3461

Error Coefficients

Standard Error:	4440000
Relative Standard Error:	4.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	2.0	0.689136	50.0	1964271.0	0.344568	Y
2	STD010 280-608296/13	4.0	1.374811	50.0	1932557.0	0.343703	Y
3	STD020 280-608296/14	8.0	2.690898	50.0	1938628.0	0.336362	Y
4	STD050 280-608296/15	20.0	7.435454	50.0	1881479.0	0.371773	Y
5	STD10 280-608296/16	40.0	14.606638	50.0	1890839.0	0.365166	Y
6	ICIS 280-608296/17	200.0	69.493777	50.0	1962770.0	0.347469	Y
7	STD75 280-608296/18	300.0	103.24722	50.0	1984313.0	0.344157	Y
8	STD100 280-608296/19	400.0	137.94348	50.0	1966239.0	0.344859	Y
9	STD200 280-608296/20	800.0	253.123168	50.0	2014445.0	0.316404	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

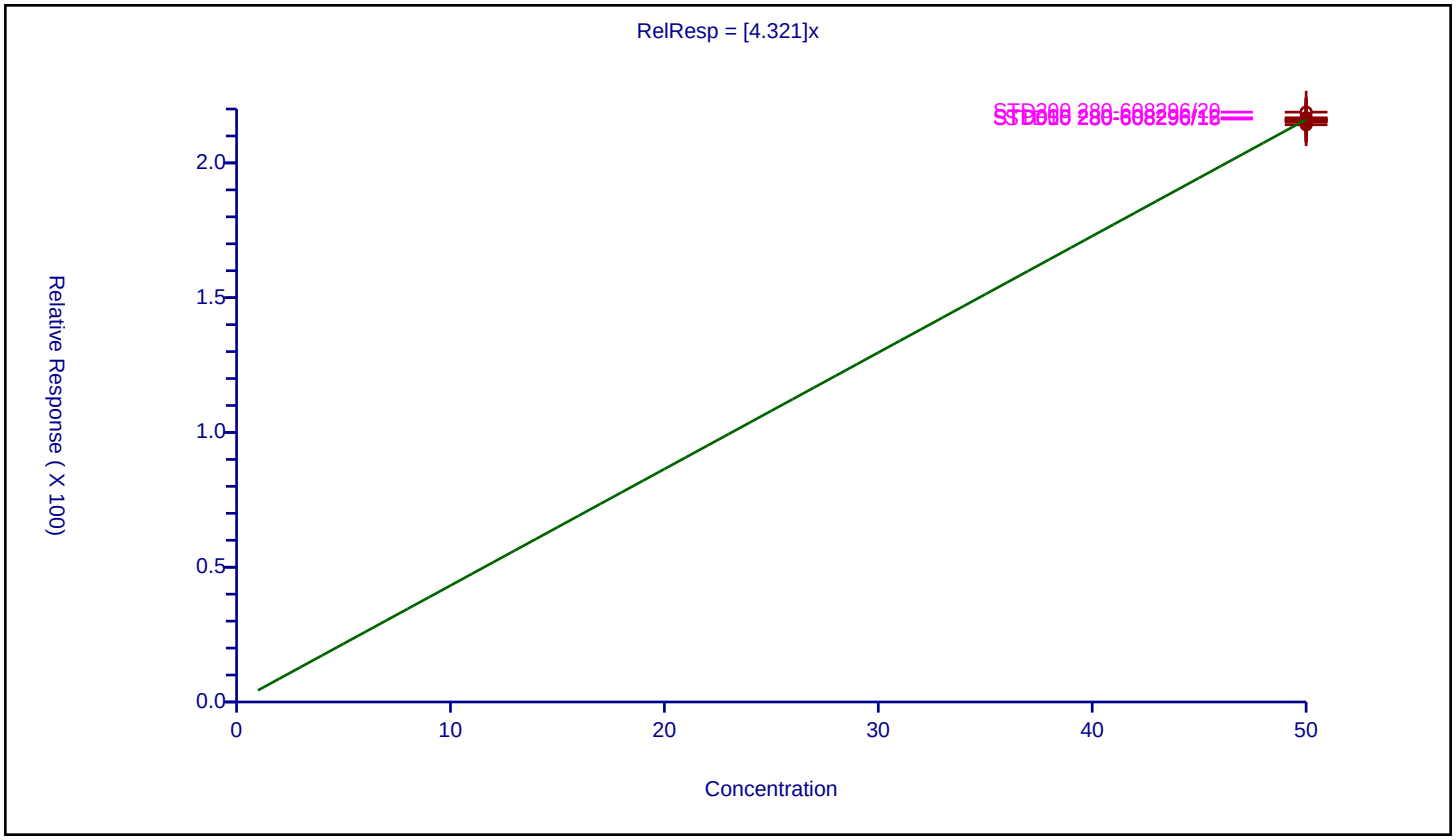
Curve Coefficients

Intercept:	0
Slope:	4.321

Error Coefficients

Standard Error:	2080000
Relative Standard Error:	0.6
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	50.0	216.74765	50.0	453795.0	4.334953	Y
2	STD010 280-608296/13	50.0	215.854399	50.0	451247.0	4.317088	Y
3	STD020 280-608296/14	50.0	214.15219	50.0	452407.0	4.283044	Y
4	STD050 280-608296/15	50.0	216.360464	50.0	434679.0	4.327209	Y
5	STD10 280-608296/16	50.0	216.306216	50.0	440976.0	4.326124	Y
6	ICIS 280-608296/17	50.0	215.123245	50.0	459207.0	4.302465	Y
7	STD75 280-608296/18	50.0	215.560844	50.0	461572.0	4.311217	Y
8	STD100 280-608296/19	50.0	215.648795	50.0	463860.0	4.312976	Y
9	STD200 280-608296/20	50.0	218.837623	50.0	460565.0	4.376752	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

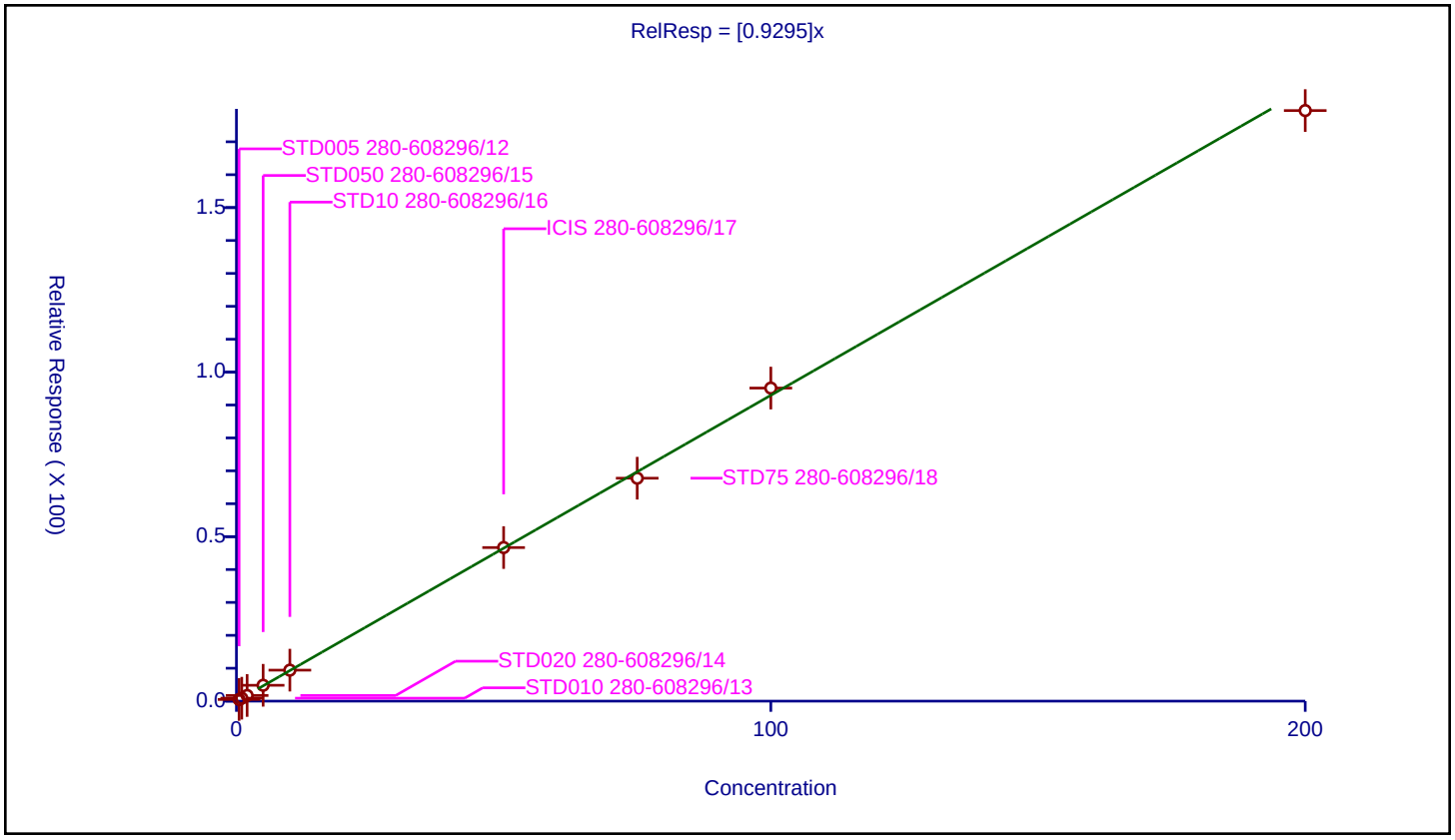
Curve Coefficients

Intercept:	0
Slope:	0.9295

Error Coefficients

Standard Error:	3100000
Relative Standard Error:	5.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.508026	50.0	1964271.0	1.016051	Y
2	STD010 280-608296/13	1.0	0.897955	50.0	1932557.0	0.897955	Y
3	STD020 280-608296/14	2.0	1.718793	50.0	1938628.0	0.859396	Y
4	STD050 280-608296/15	5.0	4.823386	50.0	1881479.0	0.964677	Y
5	STD10 280-608296/16	10.0	9.419046	50.0	1890839.0	0.941905	Y
6	ICIS 280-608296/17	50.0	46.679794	50.0	1962770.0	0.933596	Y
7	STD75 280-608296/18	75.0	67.755893	50.0	1984313.0	0.903412	Y
8	STD100 280-608296/19	100.0	95.146419	50.0	1966239.0	0.951464	Y
9	STD200 280-608296/20	200.0	179.486062	50.0	2014445.0	0.89743	Y



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Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

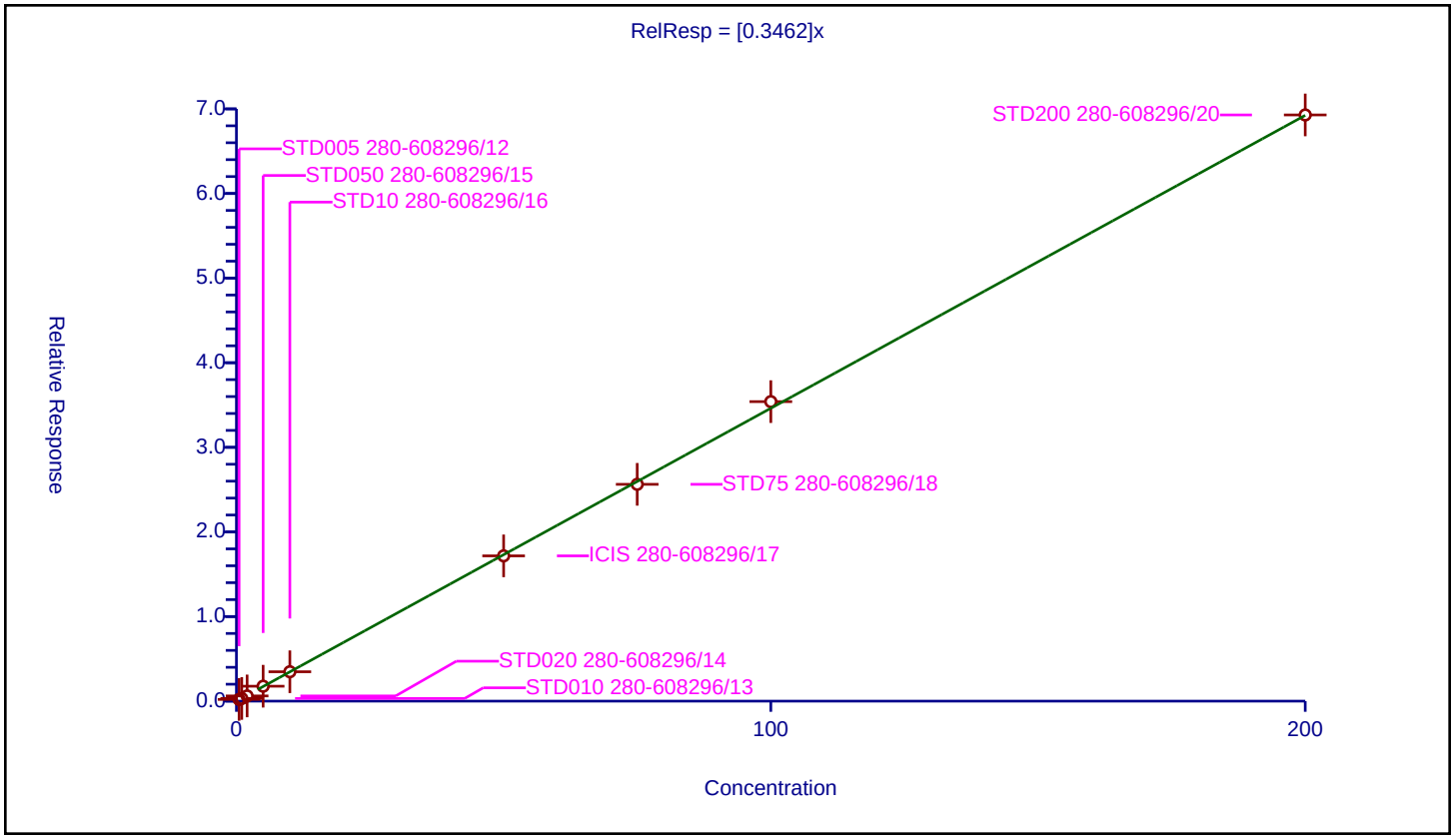
Curve Coefficients

Intercept:	0
Slope:	0.3462

Error Coefficients

Standard Error:	1190000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.202543	50.0	1964271.0	0.405087	Y
2	STD010 280-608296/13	1.0	0.317196	50.0	1932557.0	0.317196	Y
3	STD020 280-608296/14	2.0	0.615358	50.0	1938628.0	0.307679	Y
4	STD050 280-608296/15	5.0	1.763931	50.0	1881479.0	0.352786	Y
5	STD10 280-608296/16	10.0	3.474251	50.0	1890839.0	0.347425	Y
6	ICIS 280-608296/17	50.0	17.169587	50.0	1962770.0	0.343392	Y
7	STD75 280-608296/18	75.0	25.627358	50.0	1984313.0	0.341698	Y
8	STD100 280-608296/19	100.0	35.401063	50.0	1966239.0	0.354011	Y
9	STD200 280-608296/20	200.0	69.284915	50.0	2014445.0	0.346425	Y



Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

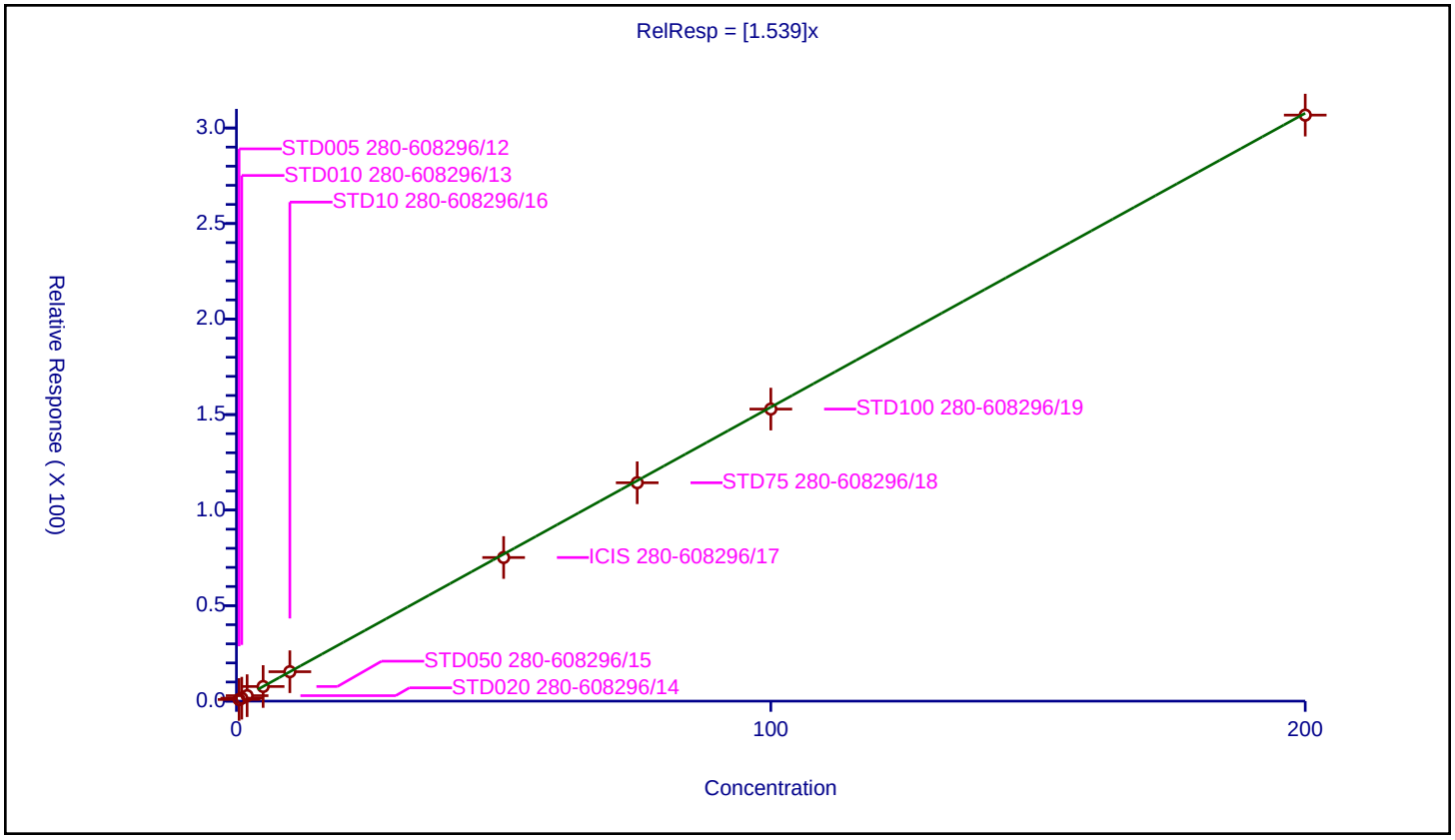
Curve Coefficients

Intercept:	0
Slope:	1.539

Error Coefficients

Standard Error:	1200000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.855122	50.0	453795.0	1.710244	Y
2	STD010 280-608296/13	1.0	1.54073	50.0	451247.0	1.54073	Y
3	STD020 280-608296/14	2.0	2.866777	50.0	452407.0	1.433389	Y
4	STD050 280-608296/15	5.0	7.667152	50.0	434679.0	1.53343	Y
5	STD10 280-608296/16	10.0	15.403446	50.0	440976.0	1.540345	Y
6	ICIS 280-608296/17	50.0	75.177425	50.0	459207.0	1.503549	Y
7	STD75 280-608296/18	75.0	114.308277	50.0	461572.0	1.52411	Y
8	STD100 280-608296/19	100.0	152.870263	50.0	463860.0	1.528703	Y
9	STD200 280-608296/20	200.0	306.748559	50.0	460565.0	1.533743	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

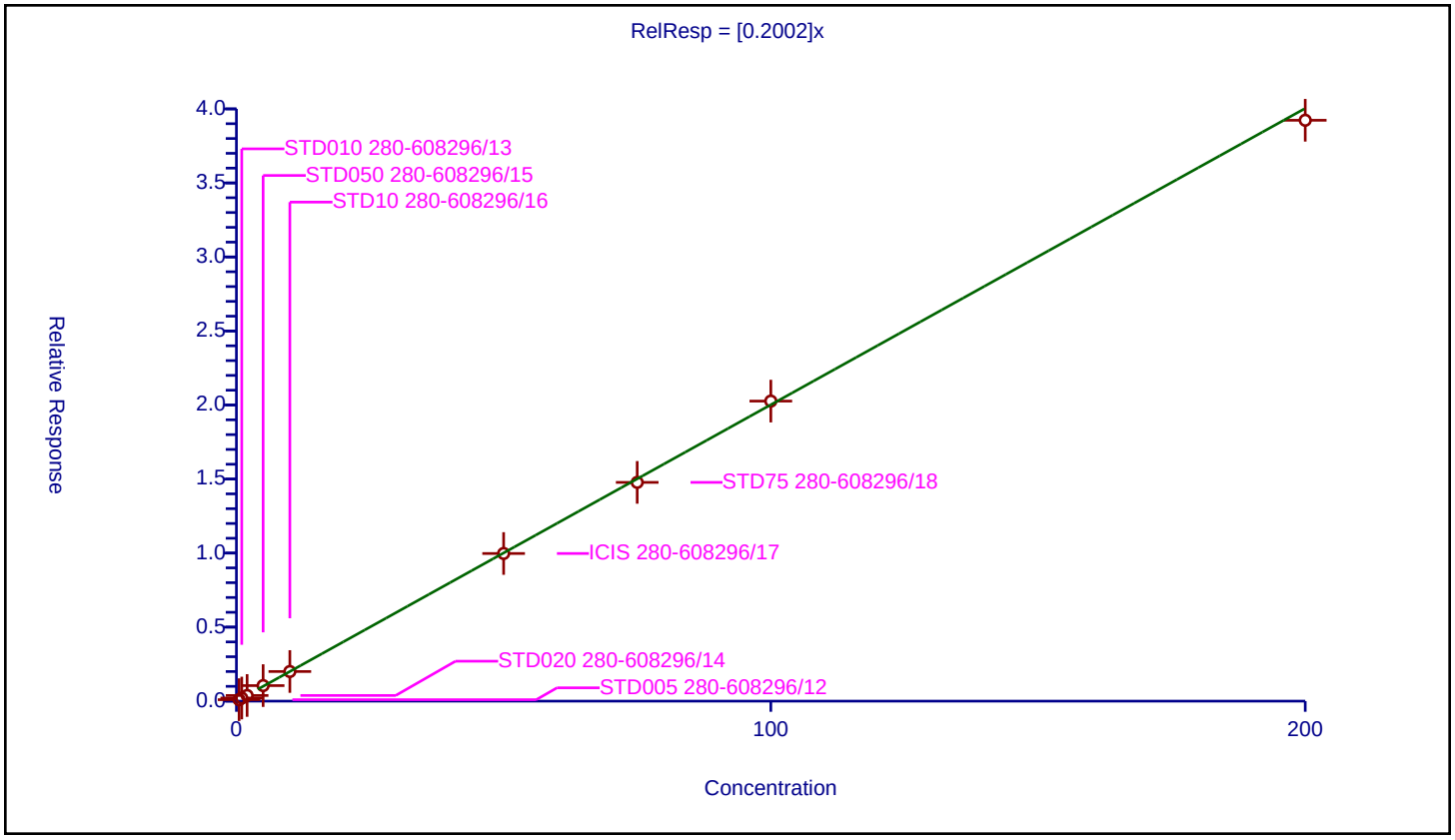
Curve Coefficients

Intercept:	0
Slope:	0.2002

Error Coefficients

Standard Error:	674000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.097619	50.0	1964271.0	0.195238	Y
2	STD010 280-608296/13	1.0	0.209515	50.0	1932557.0	0.209515	Y
3	STD020 280-608296/14	2.0	0.383003	50.0	1938628.0	0.191501	Y
4	STD050 280-608296/15	5.0	1.0496	50.0	1881479.0	0.20992	Y
5	STD10 280-608296/16	10.0	2.001783	50.0	1890839.0	0.200178	Y
6	ICIS 280-608296/17	50.0	9.972386	50.0	1962770.0	0.199448	Y
7	STD75 280-608296/18	75.0	14.774584	50.0	1984313.0	0.196994	Y
8	STD100 280-608296/19	100.0	20.265008	50.0	1966239.0	0.20265	Y
9	STD200 280-608296/20	200.0	39.231873	50.0	2014445.0	0.196159	Y



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Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

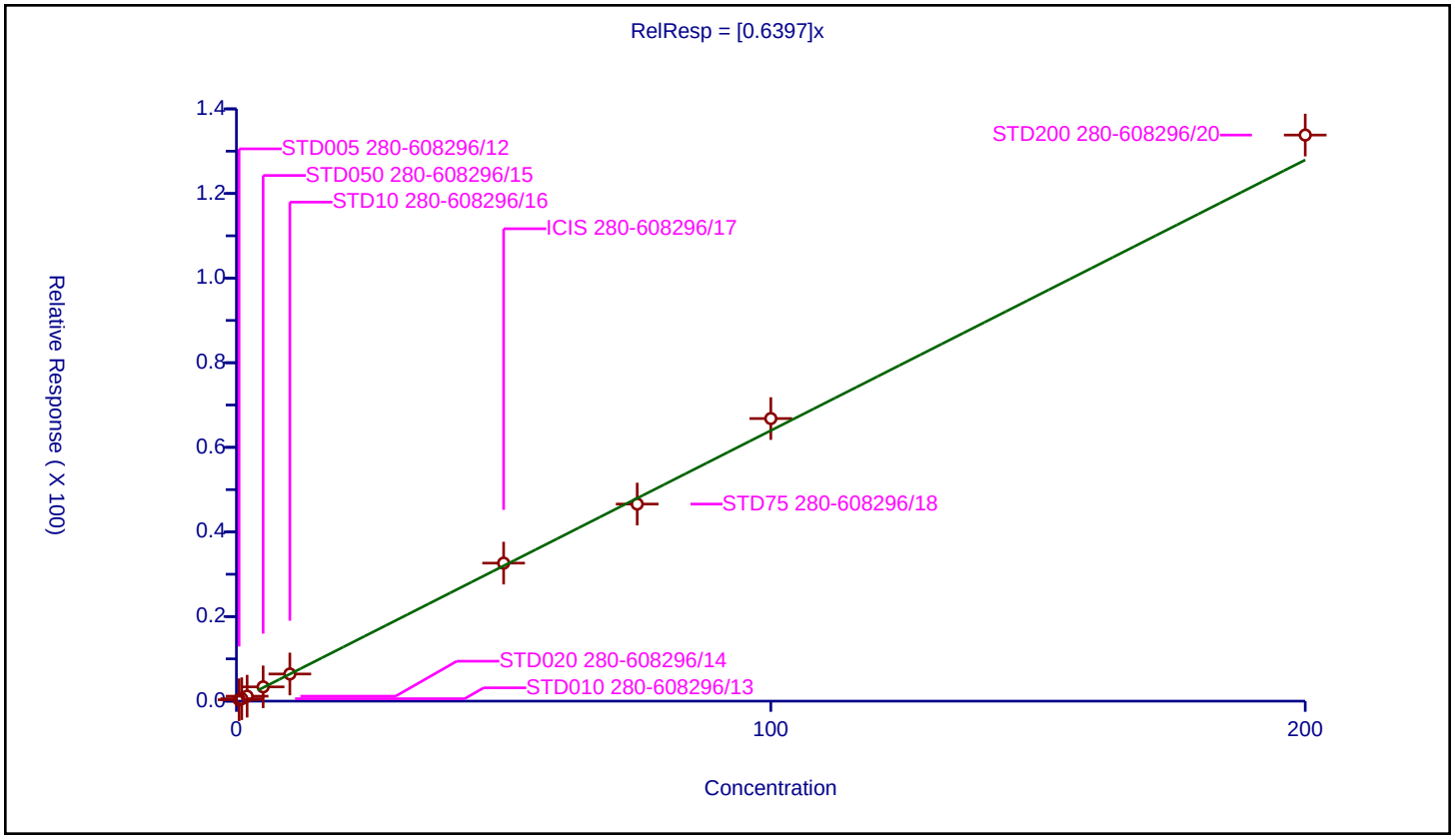
Curve Coefficients

Intercept:	0
Slope:	0.6397

Error Coefficients

Standard Error:	522000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.33286	50.0	453795.0	0.665719	Y
2	STD010 280-608296/13	1.0	0.577511	50.0	451247.0	0.577511	Y
3	STD020 280-608296/14	2.0	1.173059	50.0	452407.0	0.586529	Y
4	STD050 280-608296/15	5.0	3.374099	50.0	434679.0	0.67482	Y
5	STD10 280-608296/16	10.0	6.415995	50.0	440976.0	0.6416	Y
6	ICIS 280-608296/17	50.0	32.628205	50.0	459207.0	0.652564	Y
7	STD75 280-608296/18	75.0	46.583848	50.0	461572.0	0.621118	Y
8	STD100 280-608296/19	100.0	66.804639	50.0	463860.0	0.668046	Y
9	STD200 280-608296/20	200.0	133.815097	50.0	460565.0	0.669075	Y



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Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

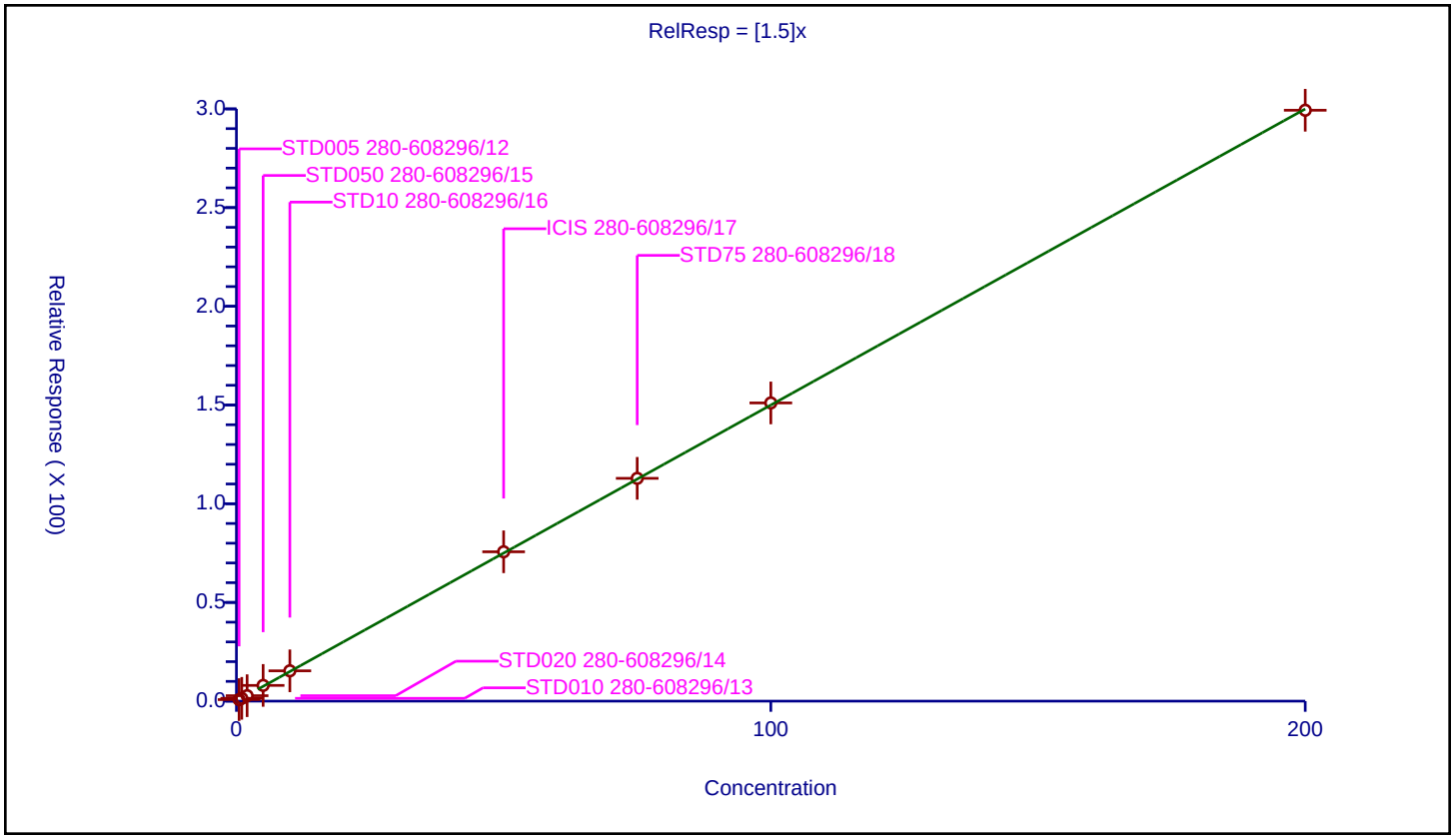
Curve Coefficients

Intercept:	0
Slope:	1.5

Error Coefficients

Standard Error:	1180000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.770943	50.0	453795.0	1.541886	Y
2	STD010 280-608296/13	1.0	1.422281	50.0	451247.0	1.422281	Y
3	STD020 280-608296/14	2.0	2.758025	50.0	452407.0	1.379013	Y
4	STD050 280-608296/15	5.0	7.969674	50.0	434679.0	1.593935	Y
5	STD10 280-608296/16	10.0	15.363308	50.0	440976.0	1.536331	Y
6	ICIS 280-608296/17	50.0	75.650633	50.0	459207.0	1.513013	Y
7	STD75 280-608296/18	75.0	112.857582	50.0	461572.0	1.504768	Y
8	STD100 280-608296/19	100.0	151.057108	50.0	463860.0	1.510571	Y
9	STD200 280-608296/20	200.0	299.309218	50.0	460565.0	1.496546	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

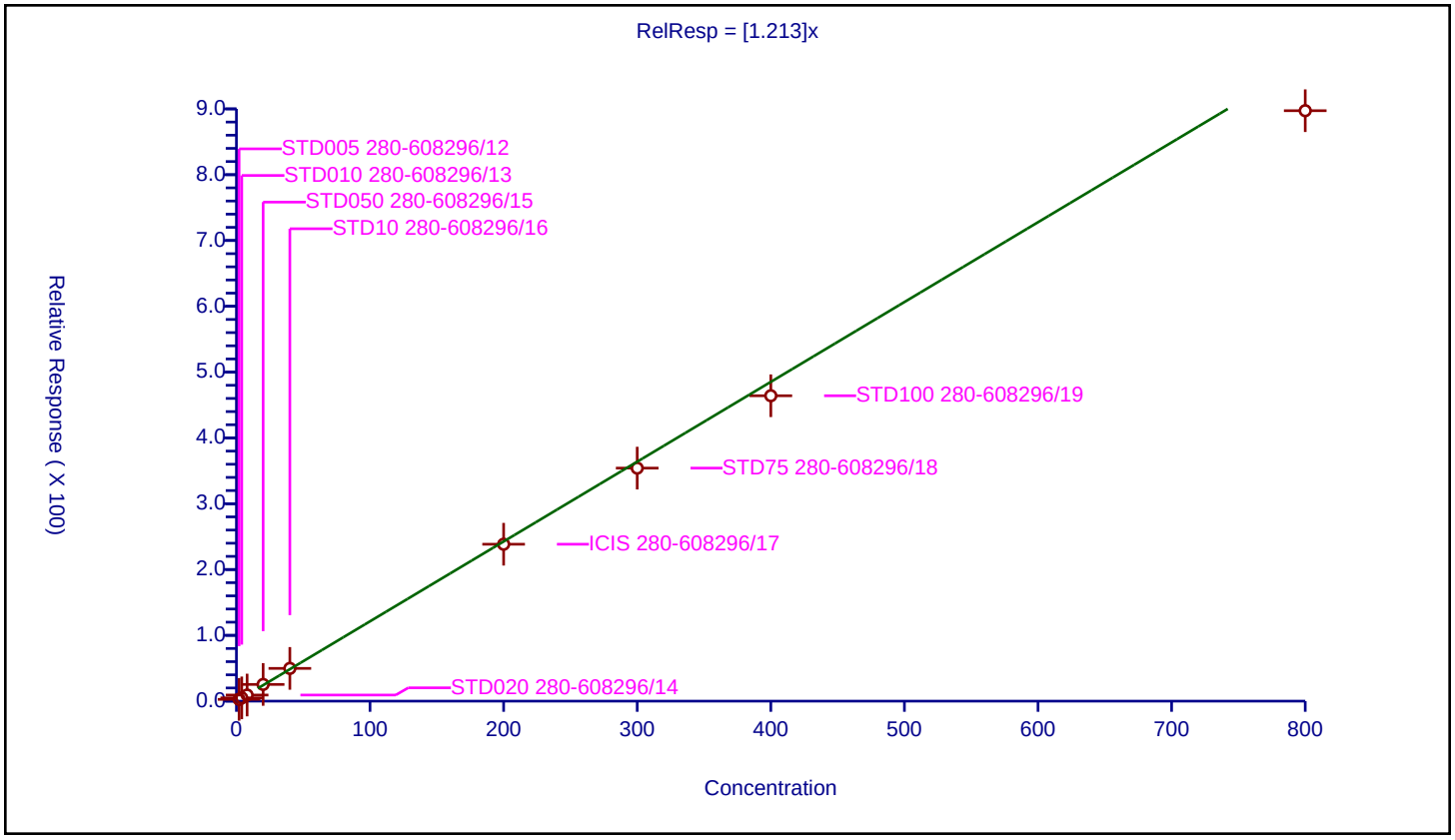
Curve Coefficients

Intercept:	0
Slope:	1.213

Error Coefficients

Standard Error:	3580000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	2.0	2.689761	50.0	453795.0	1.34488	Y
2	STD010 280-608296/13	4.0	4.9638	50.0	451247.0	1.24095	Y
3	STD020 280-608296/14	8.0	9.29727	50.0	452407.0	1.162159	Y
4	STD050 280-608296/15	20.0	25.399778	50.0	434679.0	1.269989	Y
5	STD10 280-608296/16	40.0	49.759851	50.0	440976.0	1.243996	Y
6	ICIS 280-608296/17	200.0	238.44508	50.0	459207.0	1.192225	Y
7	STD75 280-608296/18	300.0	354.106835	50.0	461572.0	1.180356	Y
8	STD100 280-608296/19	400.0	464.105765	50.0	463860.0	1.160264	Y
9	STD200 280-608296/20	800.0	897.246208	50.0	460565.0	1.121558	Y



Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

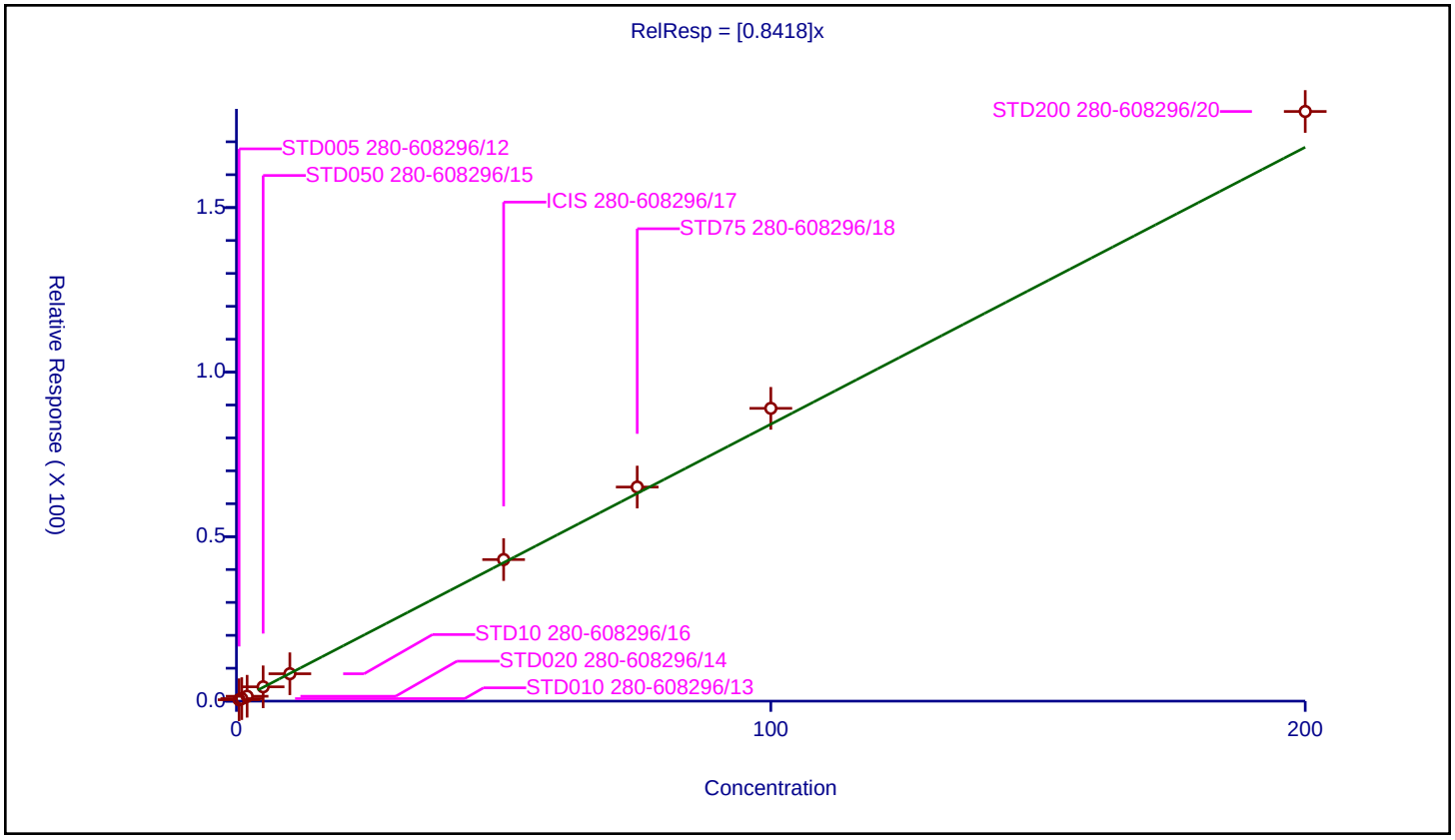
Curve Coefficients

Intercept:	0
Slope:	0.8418

Error Coefficients

Standard Error:	701000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.426845	50.0	453795.0	0.853689	Y
2	STD010 280-608296/13	1.0	0.762332	50.0	451247.0	0.762332	Y
3	STD020 280-608296/14	2.0	1.486051	50.0	452407.0	0.743026	Y
4	STD050 280-608296/15	5.0	4.351717	50.0	434679.0	0.870343	Y
5	STD10 280-608296/16	10.0	8.322902	50.0	440976.0	0.83229	Y
6	ICIS 280-608296/17	50.0	43.029614	50.0	459207.0	0.860592	Y
7	STD75 280-608296/18	75.0	65.067097	50.0	461572.0	0.867561	Y
8	STD100 280-608296/19	100.0	88.988811	50.0	463860.0	0.889888	Y
9	STD200 280-608296/20	200.0	179.21542	50.0	460565.0	0.896077	Y



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Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

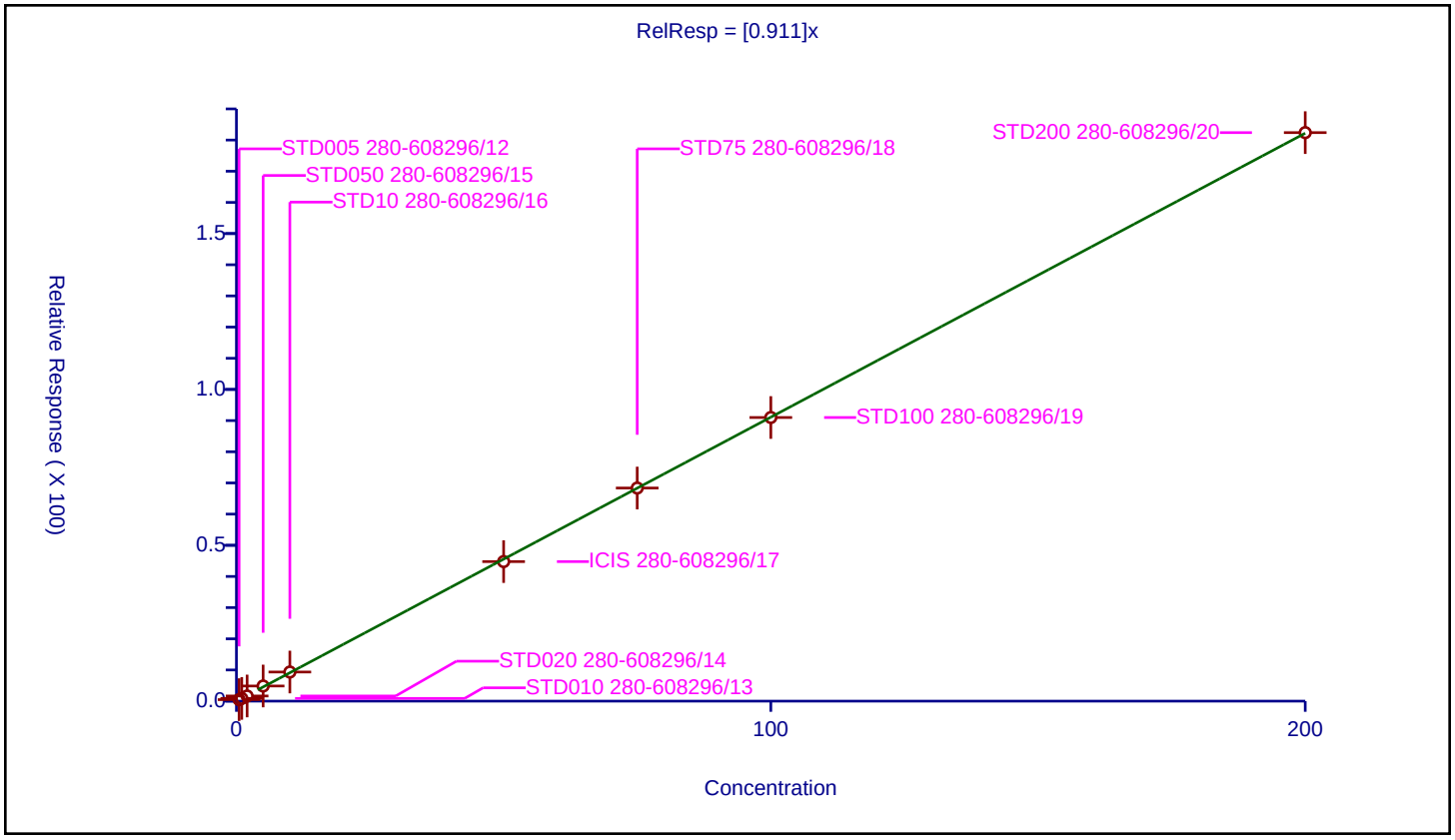
Curve Coefficients

Intercept:	0
Slope:	0.911

Error Coefficients

Standard Error:	717000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.479512	50.0	453795.0	0.959023	Y
2	STD010 280-608296/13	1.0	0.879119	50.0	451247.0	0.879119	Y
3	STD020 280-608296/14	2.0	1.650726	50.0	452407.0	0.825363	Y
4	STD050 280-608296/15	5.0	4.860368	50.0	434679.0	0.972074	Y
5	STD10 280-608296/16	10.0	9.346654	50.0	440976.0	0.934665	Y
6	ICIS 280-608296/17	50.0	44.768808	50.0	459207.0	0.895376	Y
7	STD75 280-608296/18	75.0	68.364957	50.0	461572.0	0.911533	Y
8	STD100 280-608296/19	100.0	90.992756	50.0	463860.0	0.909928	Y
9	STD200 280-608296/20	200.0	182.389456	50.0	460565.0	0.911947	Y



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Calibration / 1-Chlorohexane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

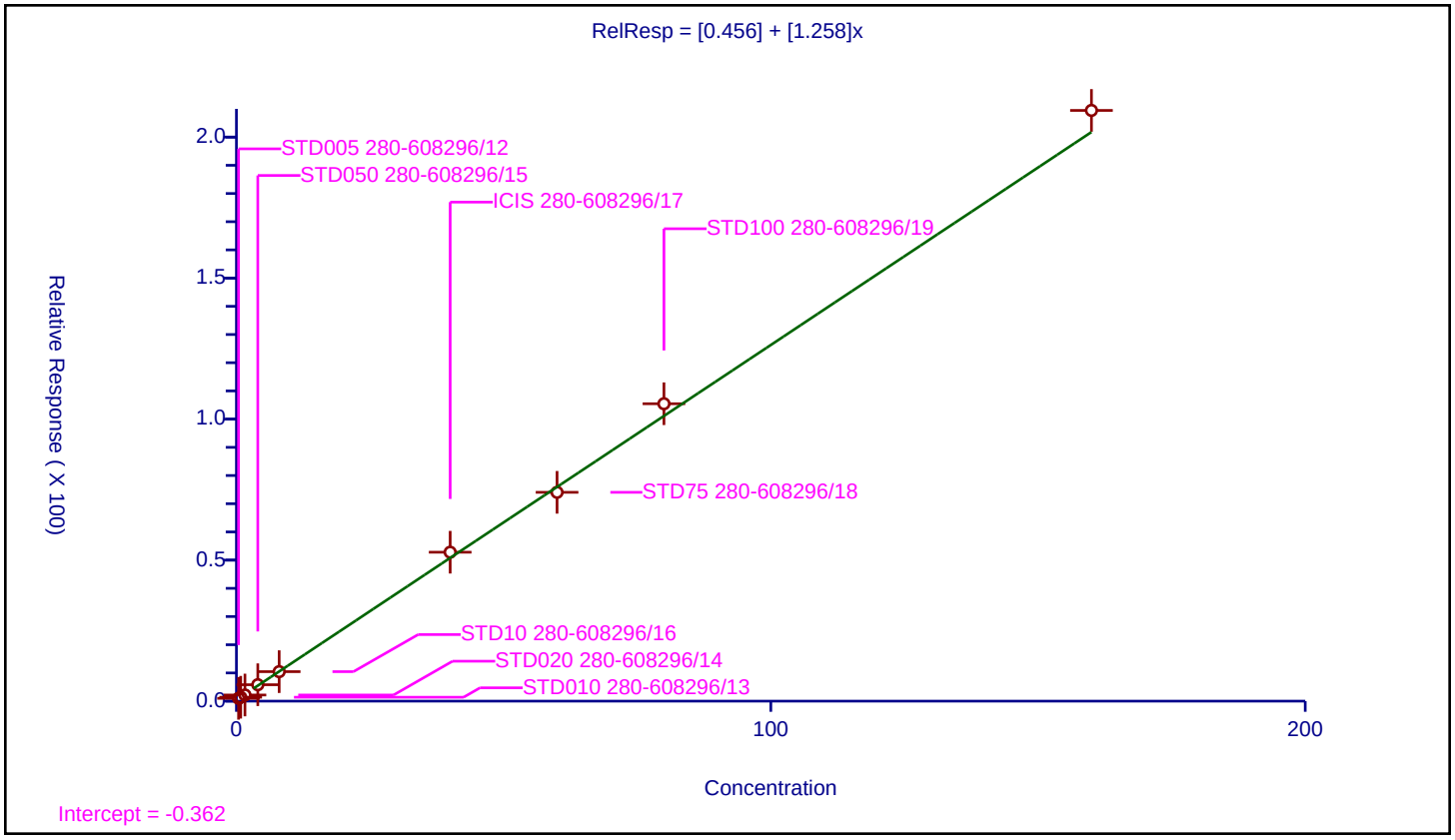
Curve Coefficients

Intercept:	0.456
Slope:	1.258

Error Coefficients

Standard Error:	878000
Relative Standard Error:	7.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.4	0.993841	50.0	453795.0	2.484602	Y
2	STD010 280-608296/13	0.8	1.384608	50.0	451247.0	1.730759	Y
3	STD020 280-608296/14	1.6	2.174922	50.0	452407.0	1.359326	Y
4	STD050 280-608296/15	4.0	5.819352	50.0	434679.0	1.454838	Y
5	STD10 280-608296/16	8.0	10.458392	50.0	440976.0	1.307299	Y
6	ICIS 280-608296/17	40.0	52.803311	50.0	459207.0	1.320083	Y
7	STD75 280-608296/18	60.0	74.048252	50.0	461572.0	1.234138	Y
8	STD100 280-608296/19	80.0	105.455957	50.0	463860.0	1.318199	Y
9	STD200 280-608296/20	160.0	209.454909	50.0	460565.0	1.309093	Y



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Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

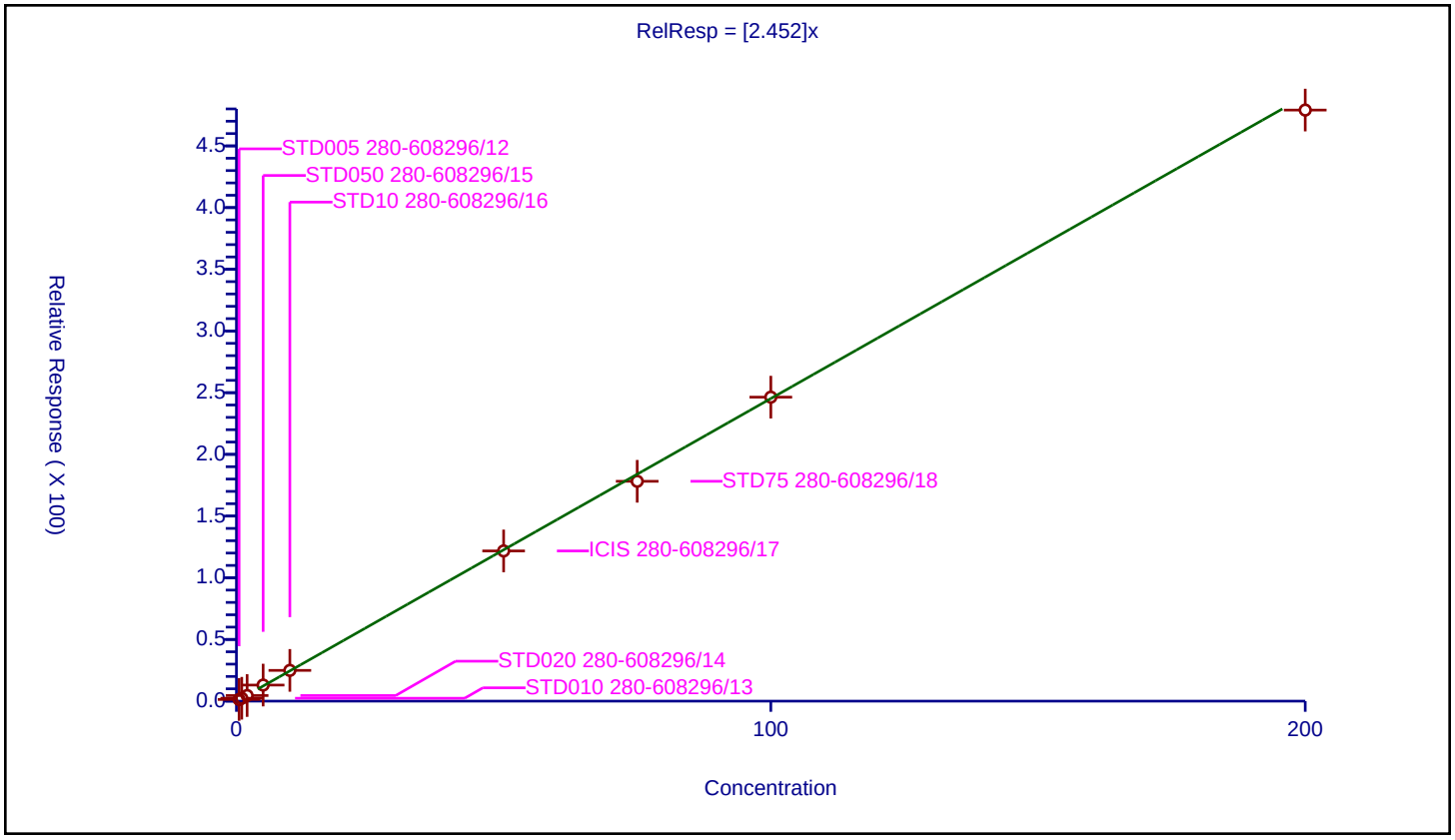
Curve Coefficients

Intercept:	0
Slope:	2.452

Error Coefficients

Standard Error:	1890000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	1.344219	50.0	453795.0	2.688439	Y
2	STD010 280-608296/13	1.0	2.342065	50.0	451247.0	2.342065	Y
3	STD020 280-608296/14	2.0	4.547012	50.0	452407.0	2.273506	Y
4	STD050 280-608296/15	5.0	13.027084	50.0	434679.0	2.605417	Y
5	STD10 280-608296/16	10.0	24.931175	50.0	440976.0	2.493118	Y
6	ICIS 280-608296/17	50.0	121.724734	50.0	459207.0	2.434495	Y
7	STD75 280-608296/18	75.0	178.182927	50.0	461572.0	2.375772	Y
8	STD100 280-608296/19	100.0	246.373367	50.0	463860.0	2.463734	Y
9	STD200 280-608296/20	200.0	479.058548	50.0	460565.0	2.395293	Y



Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

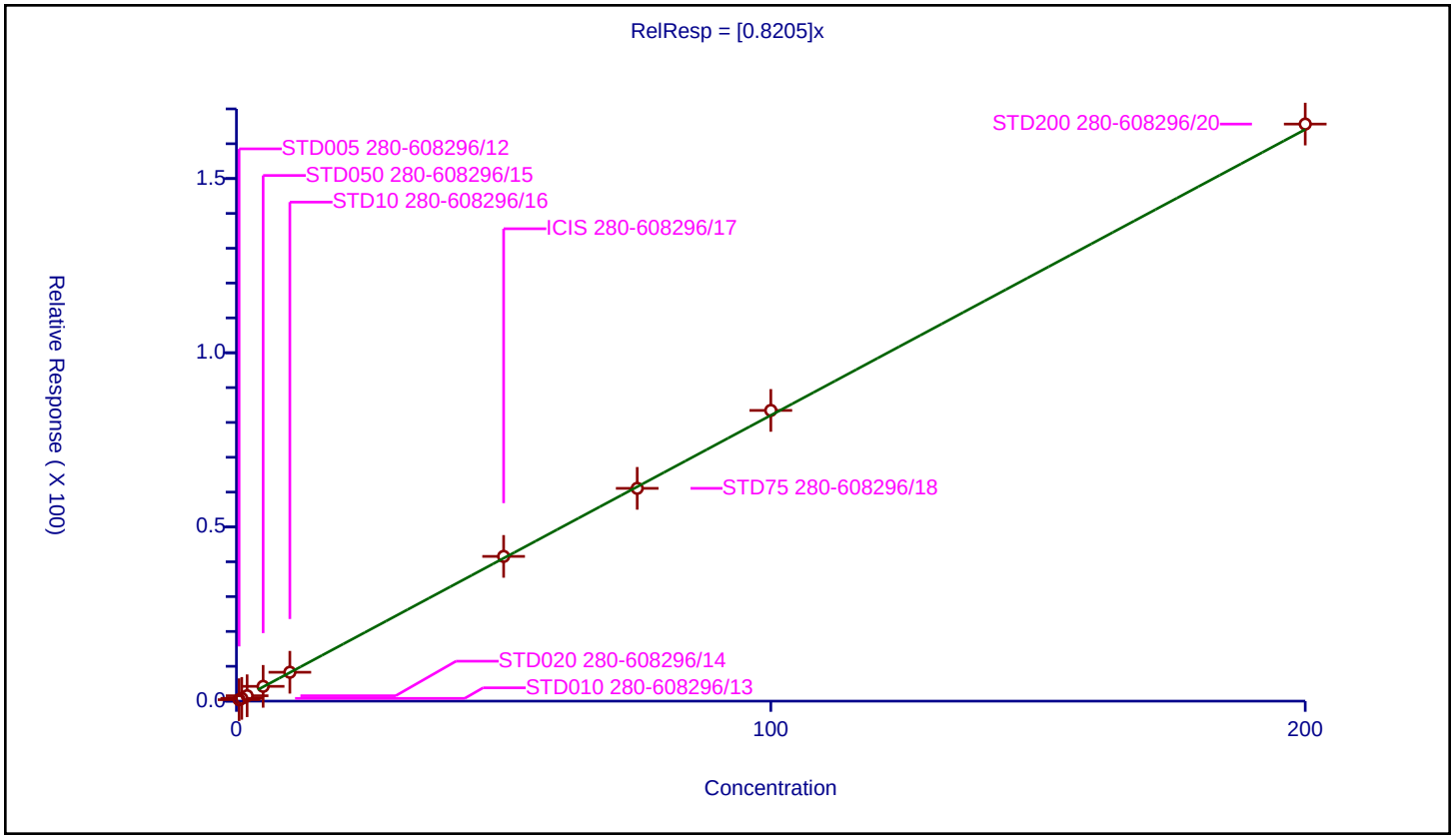
Curve Coefficients

Intercept:	0
Slope:	0.8205

Error Coefficients

Standard Error:	652000
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.415276	50.0	453795.0	0.830551	Y
2	STD010 280-608296/13	1.0	0.793025	50.0	451247.0	0.793025	Y
3	STD020 280-608296/14	2.0	1.548053	50.0	452407.0	0.774026	Y
4	STD050 280-608296/15	5.0	4.246582	50.0	434679.0	0.849316	Y
5	STD10 280-608296/16	10.0	8.291494	50.0	440976.0	0.829149	Y
6	ICIS 280-608296/17	50.0	41.544227	50.0	459207.0	0.830885	Y
7	STD75 280-608296/18	75.0	61.08202	50.0	461572.0	0.814427	Y
8	STD100 280-608296/19	100.0	83.447915	50.0	463860.0	0.834479	Y
9	STD200 280-608296/20	200.0	165.641875	50.0	460565.0	0.828209	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

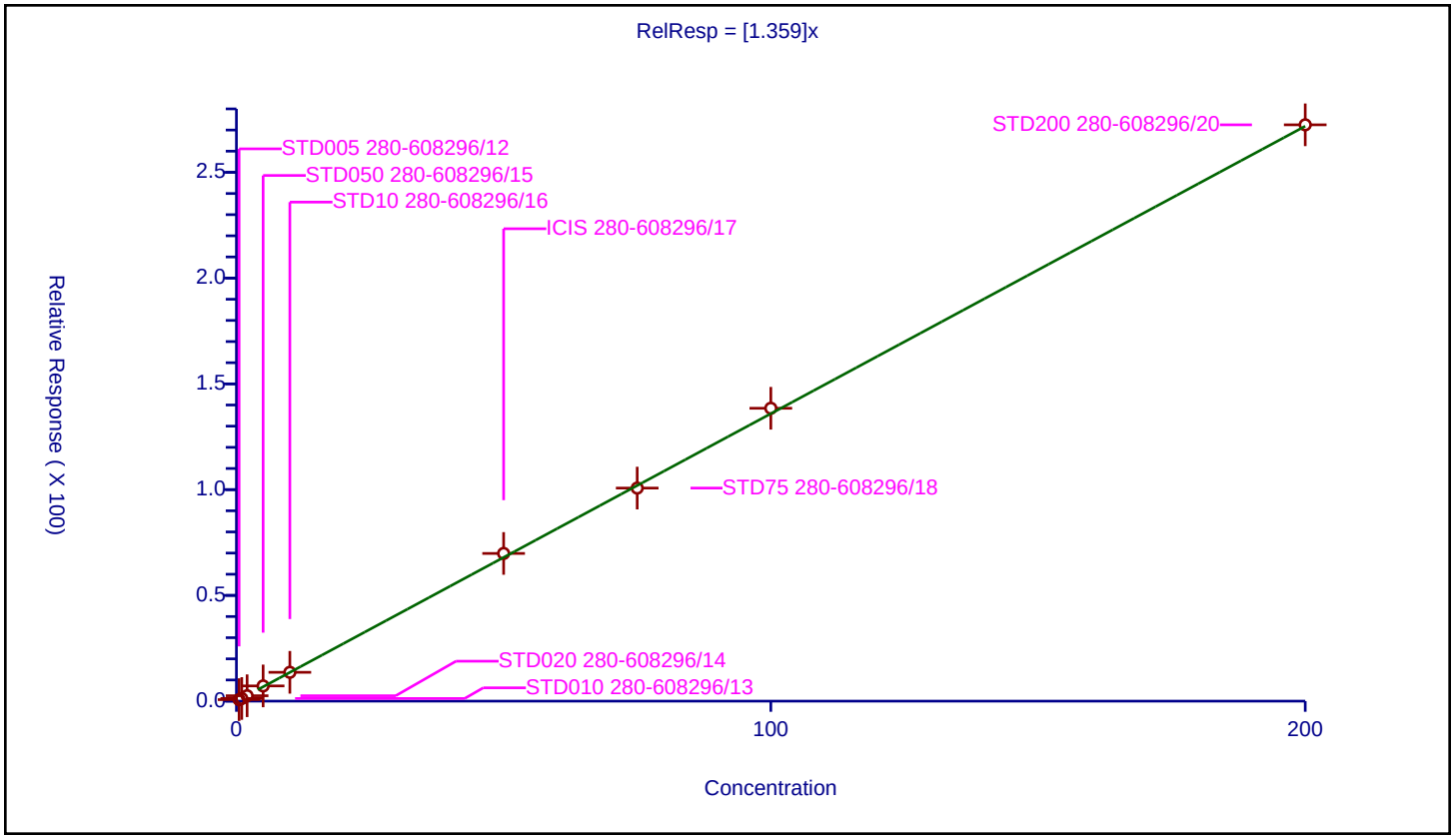
Curve Coefficients

Intercept:	0
Slope:	1.359

Error Coefficients

Standard Error:	1070000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.707919	50.0	453795.0	1.415838	Y
2	STD010 280-608296/13	1.0	1.254413	50.0	451247.0	1.254413	Y
3	STD020 280-608296/14	2.0	2.54848	50.0	452407.0	1.27424	Y
4	STD050 280-608296/15	5.0	7.190709	50.0	434679.0	1.438142	Y
5	STD10 280-608296/16	10.0	13.629993	50.0	440976.0	1.362999	Y
6	ICIS 280-608296/17	50.0	69.825155	50.0	459207.0	1.396503	Y
7	STD75 280-608296/18	75.0	100.72838	50.0	461572.0	1.343045	Y
8	STD100 280-608296/19	100.0	138.46085	50.0	463860.0	1.384609	Y
9	STD200 280-608296/20	200.0	272.467838	50.0	460565.0	1.362339	Y



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Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

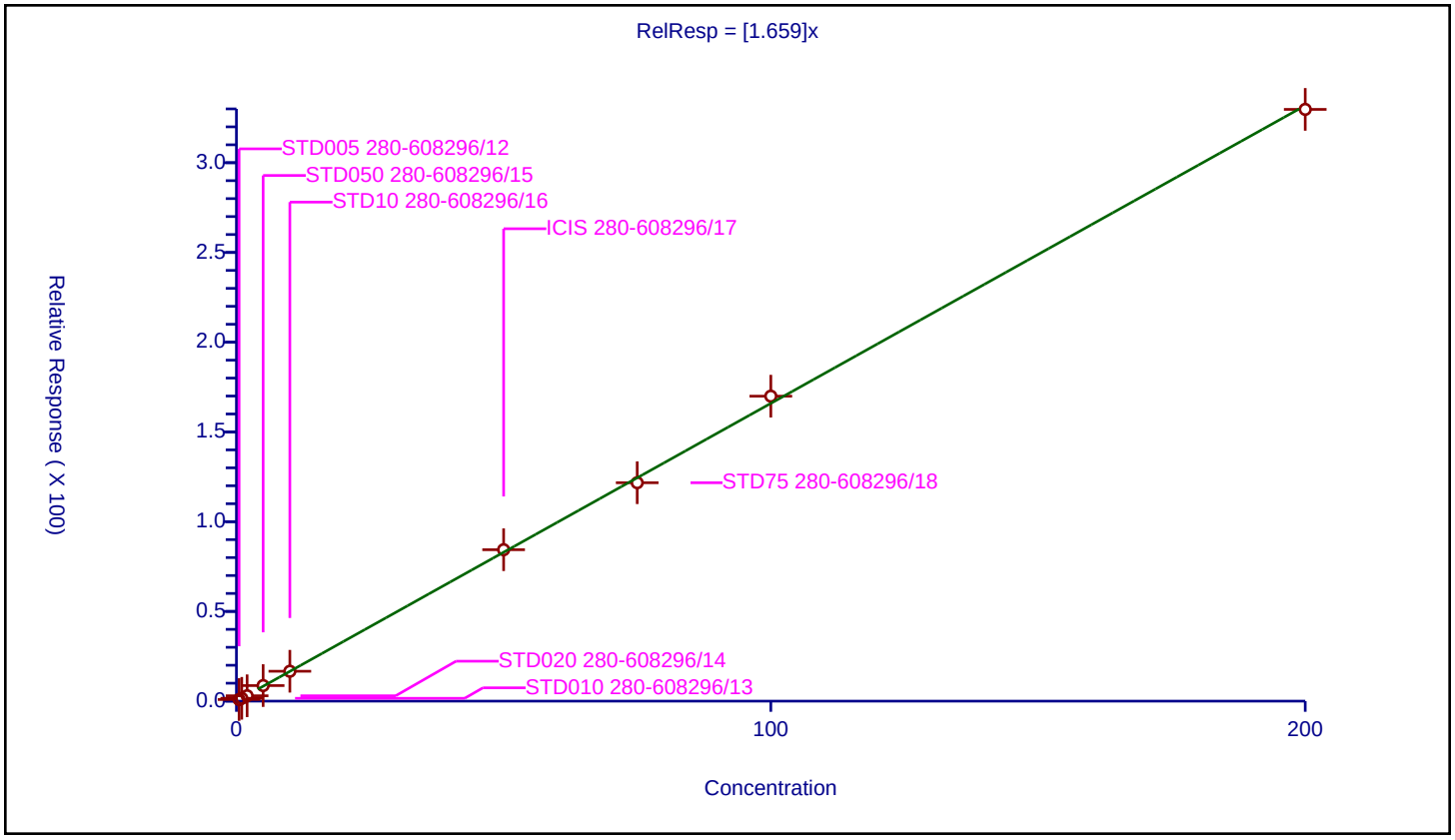
Curve Coefficients

Intercept:	0
Slope:	1.659

Error Coefficients

Standard Error:	1300000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.897101	50.0	453795.0	1.794202	Y
2	STD010 280-608296/13	1.0	1.581839	50.0	451247.0	1.581839	Y
3	STD020 280-608296/14	2.0	2.996085	50.0	452407.0	1.498043	Y
4	STD050 280-608296/15	5.0	8.676978	50.0	434679.0	1.735396	Y
5	STD10 280-608296/16	10.0	16.657256	50.0	440976.0	1.665726	Y
6	ICIS 280-608296/17	50.0	84.382424	50.0	459207.0	1.687648	Y
7	STD75 280-608296/18	75.0	121.696507	50.0	461572.0	1.62262	Y
8	STD100 280-608296/19	100.0	169.934247	50.0	463860.0	1.699342	Y
9	STD200 280-608296/20	200.0	329.721212	50.0	460565.0	1.648606	Y



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Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

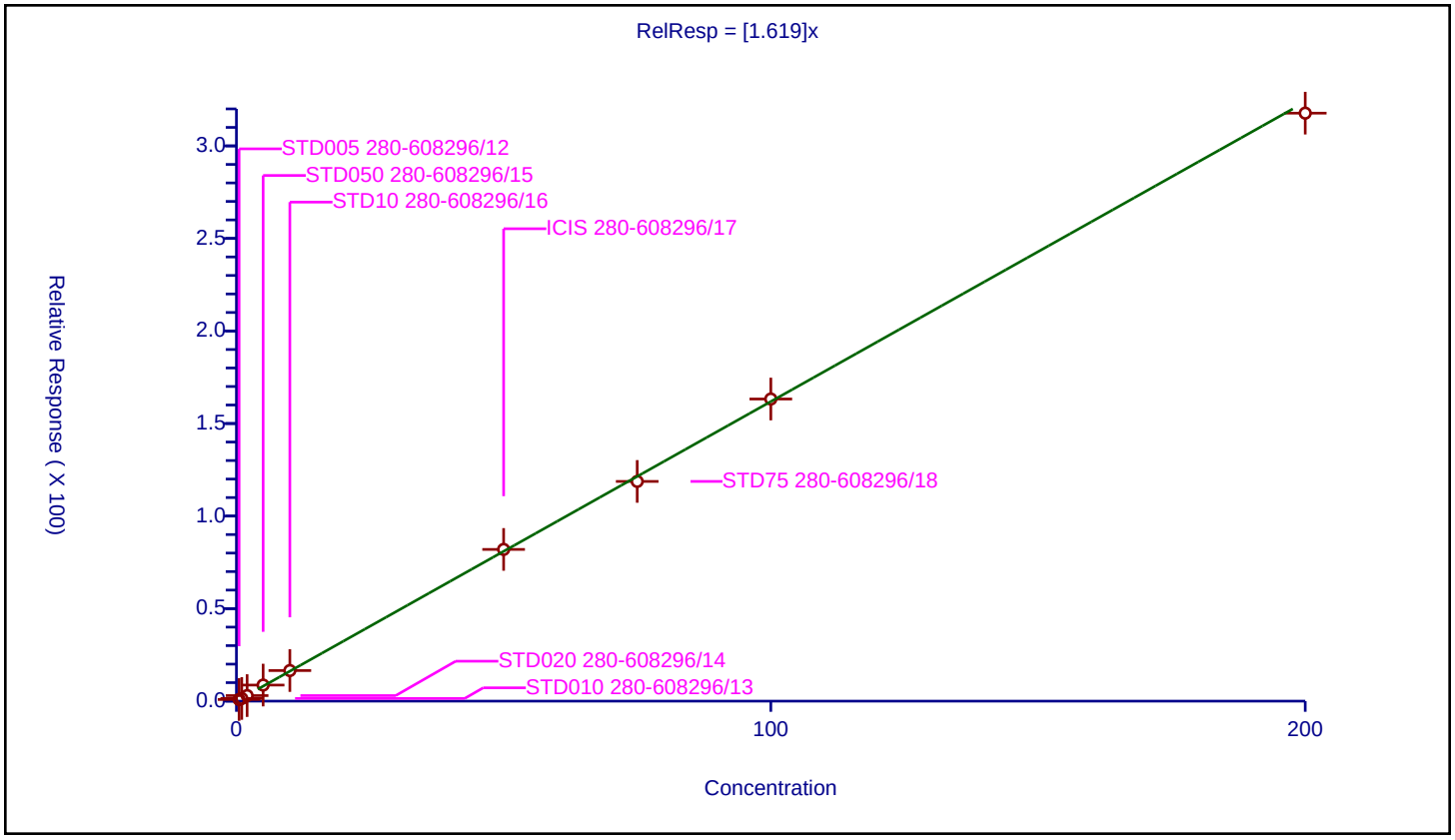
Curve Coefficients

Intercept:	0
Slope:	1.619

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.89027	50.0	453795.0	1.78054	Y
2	STD010 280-608296/13	1.0	1.453084	50.0	451247.0	1.453084	Y
3	STD020 280-608296/14	2.0	3.003159	50.0	452407.0	1.501579	Y
4	STD050 280-608296/15	5.0	8.686985	50.0	434679.0	1.737397	Y
5	STD10 280-608296/16	10.0	16.532419	50.0	440976.0	1.653242	Y
6	ICIS 280-608296/17	50.0	81.978824	50.0	459207.0	1.639576	Y
7	STD75 280-608296/18	75.0	118.713115	50.0	461572.0	1.582842	Y
8	STD100 280-608296/19	100.0	163.244513	50.0	463860.0	1.632445	Y
9	STD200 280-608296/20	200.0	317.699673	50.0	460565.0	1.588498	Y



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Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

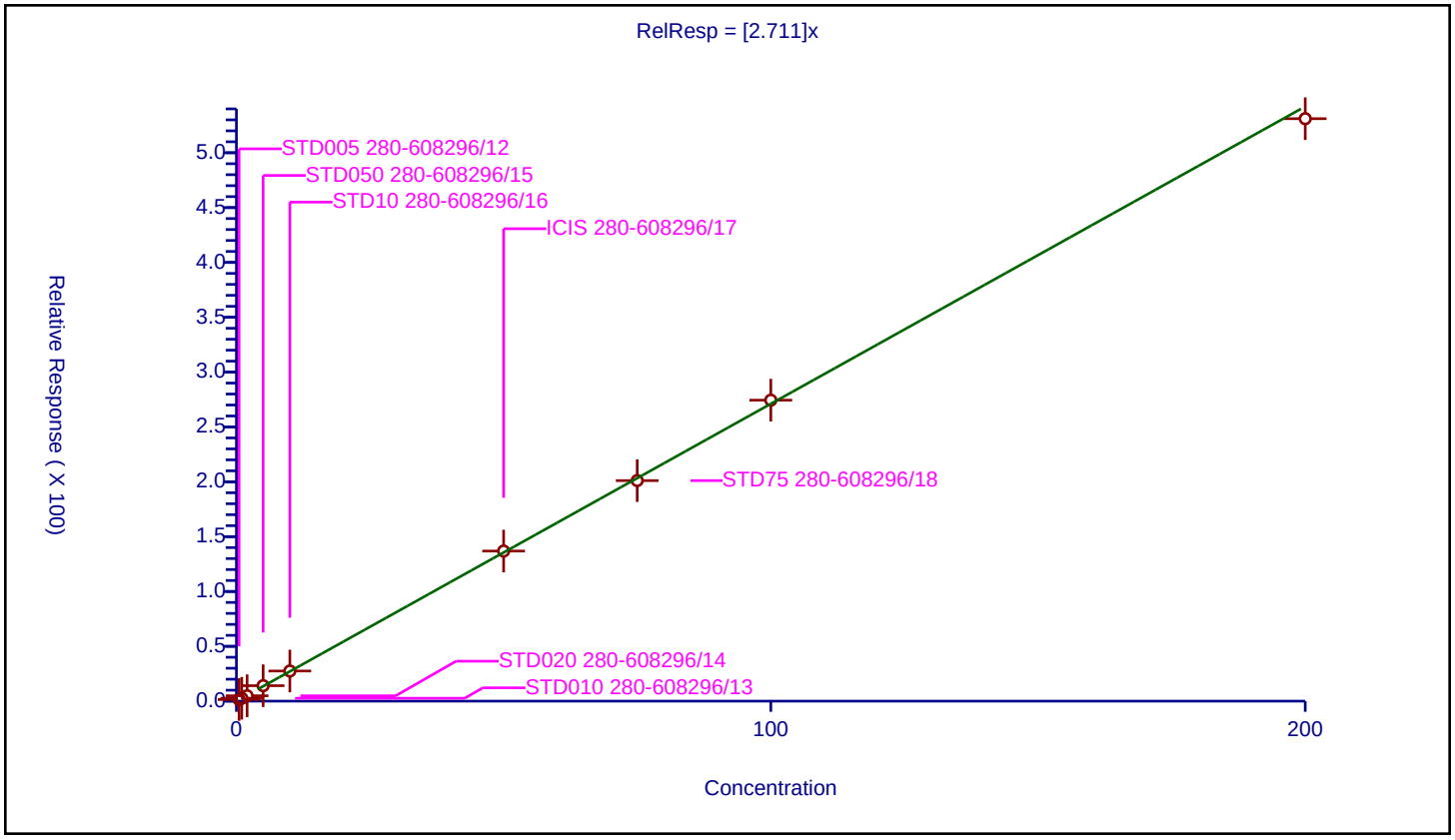
Curve Coefficients

Intercept:	0
Slope:	2.711

Error Coefficients

Standard Error:	2110000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	1.462334	50.0	453795.0	2.924669	Y
2	STD010 280-608296/13	1.0	2.643896	50.0	451247.0	2.643896	Y
3	STD020 280-608296/14	2.0	4.887192	50.0	452407.0	2.443596	Y
4	STD050 280-608296/15	5.0	14.101555	50.0	434679.0	2.820311	Y
5	STD10 280-608296/16	10.0	27.479613	50.0	440976.0	2.747961	Y
6	ICIS 280-608296/17	50.0	136.84689	50.0	459207.0	2.736938	Y
7	STD75 280-608296/18	75.0	201.088346	50.0	461572.0	2.681178	Y
8	STD100 280-608296/19	100.0	274.416634	50.0	463860.0	2.744166	Y
9	STD200 280-608296/20	200.0	531.073464	50.0	460565.0	2.655367	Y



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Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

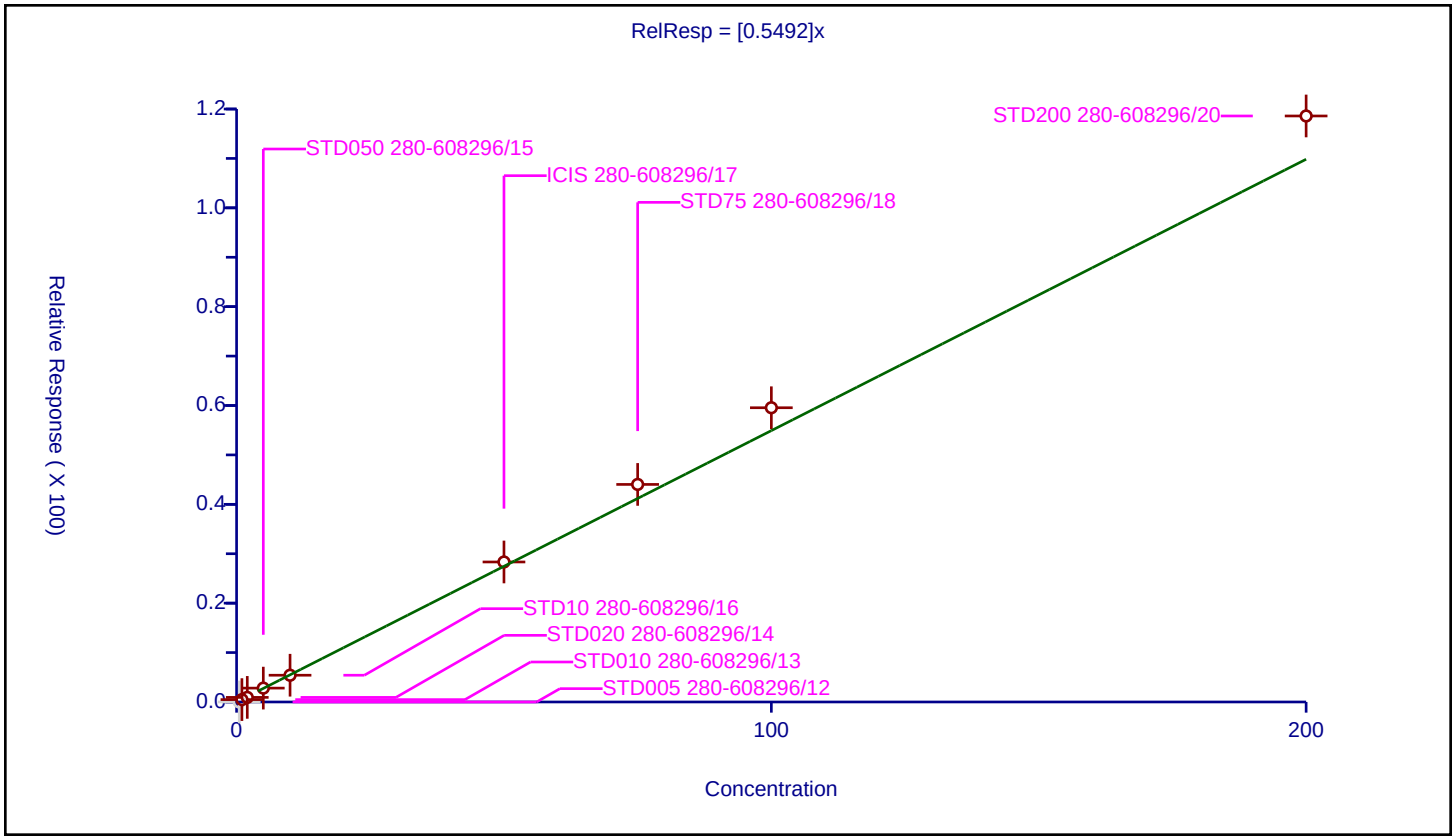
Curve Coefficients

Intercept:	0
Slope:	0.5492

Error Coefficients

Standard Error:	498000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.0	50.0	453795.0	0.0	N
2	STD010 280-608296/13	1.0	0.483771	50.0	451247.0	0.483771	Y
3	STD020 280-608296/14	2.0	0.929583	50.0	452407.0	0.464792	Y
4	STD050 280-608296/15	5.0	2.806899	50.0	434679.0	0.56138	Y
5	STD10 280-608296/16	10.0	5.412993	50.0	440976.0	0.541299	Y
6	ICIS 280-608296/17	50.0	28.333954	50.0	459207.0	0.566679	Y
7	STD75 280-608296/18	75.0	44.028559	50.0	461572.0	0.587047	Y
8	STD100 280-608296/19	100.0	59.547493	50.0	463860.0	0.595475	Y
9	STD200 280-608296/20	200.0	118.589124	50.0	460565.0	0.592946	Y



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Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

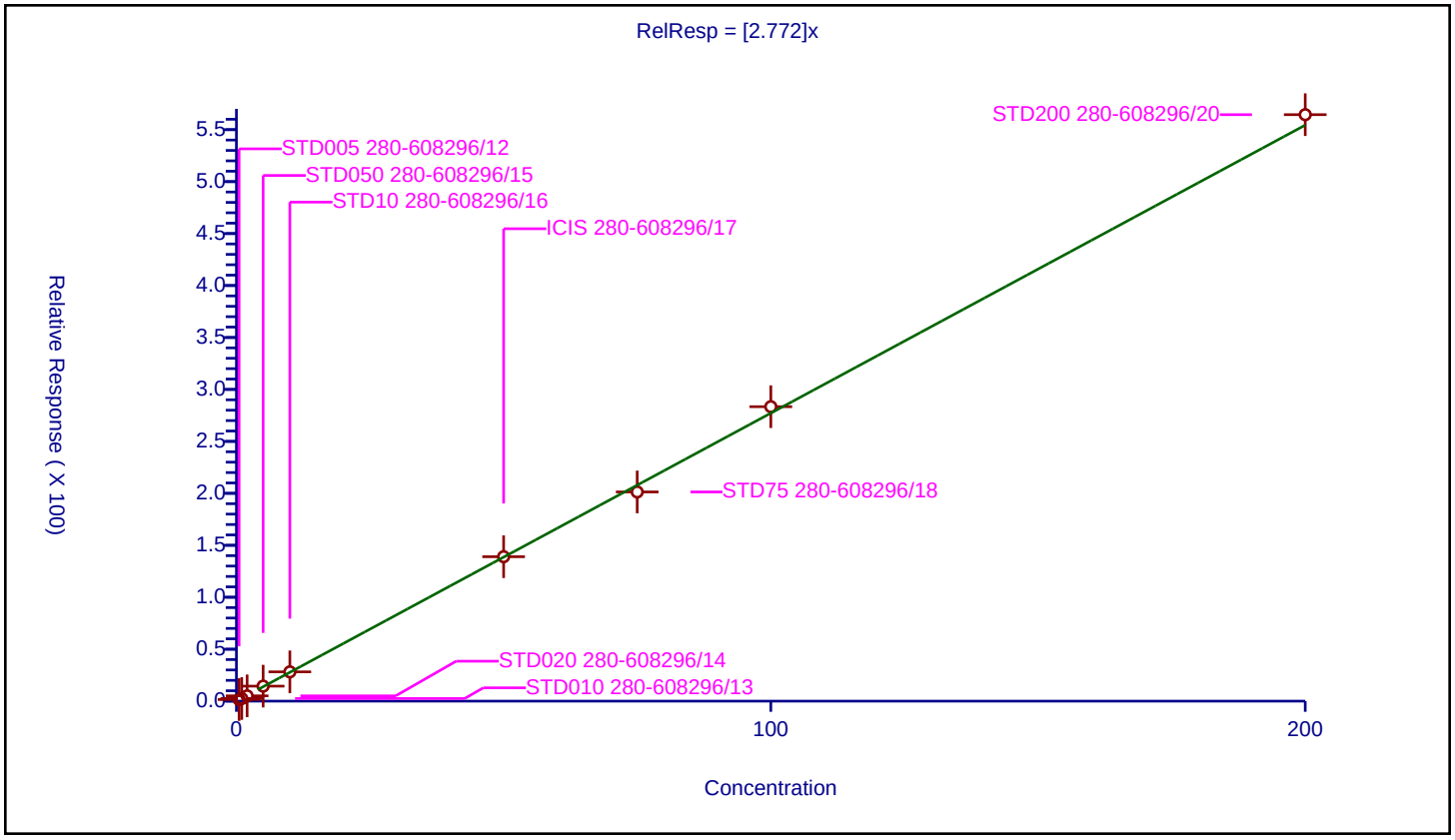
Curve Coefficients

Intercept:	0
Slope:	2.772

Error Coefficients

Standard Error:	3020000
Relative Standard Error:	5.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	1.521024	50.0	664684.0	3.042047	Y
2	STD010 280-608296/13	1.0	2.527329	50.0	652151.0	2.527329	Y
3	STD020 280-608296/14	2.0	5.099553	50.0	661558.0	2.549776	Y
4	STD050 280-608296/15	5.0	14.446692	50.0	646982.0	2.889338	Y
5	STD10 280-608296/16	10.0	28.176749	50.0	643614.0	2.817675	Y
6	ICIS 280-608296/17	50.0	138.997593	50.0	674207.0	2.779952	Y
7	STD75 280-608296/18	75.0	201.327472	50.0	676022.0	2.684366	Y
8	STD100 280-608296/19	100.0	283.379659	50.0	664493.0	2.833797	Y
9	STD200 280-608296/20	200.0	564.436027	50.0	613150.0	2.82218	Y



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Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

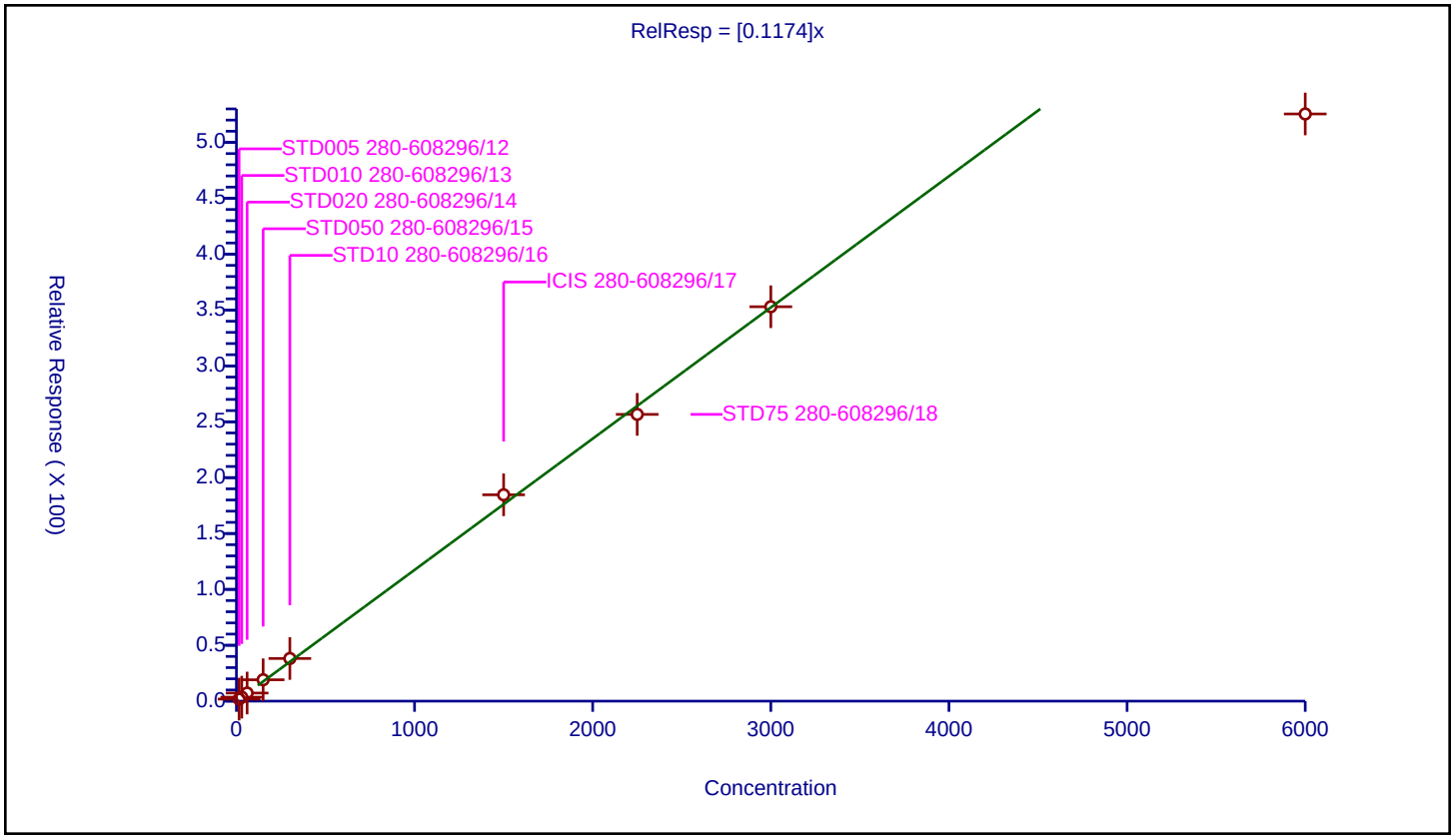
Curve Coefficients

Intercept:	0
Slope:	0.1174

Error Coefficients

Standard Error:	2310000
Relative Standard Error:	10.2
Correlation Coefficient:	0.970
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	15.0	1.813264	50.0	453795.0	0.120884	Y
2	STD010 280-608296/13	30.0	3.542517	50.0	451247.0	0.118084	Y
3	STD020 280-608296/14	60.0	7.24613	50.0	452407.0	0.120769	Y
4	STD050 280-608296/15	150.0	19.122502	50.0	434679.0	0.127483	Y
5	STD10 280-608296/16	300.0	38.180536	50.0	440976.0	0.127268	Y
6	ICIS 280-608296/17	1500.0	184.670094	50.0	459207.0	0.123113	Y
7	STD75 280-608296/18	2250.0	256.623669	50.0	461572.0	0.114055	Y
8	STD100 280-608296/19	3000.0	352.961454	50.0	463860.0	0.117654	Y
9	STD200 280-608296/20	6000.0	525.466004	50.0	460565.0	0.087578	Y



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Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

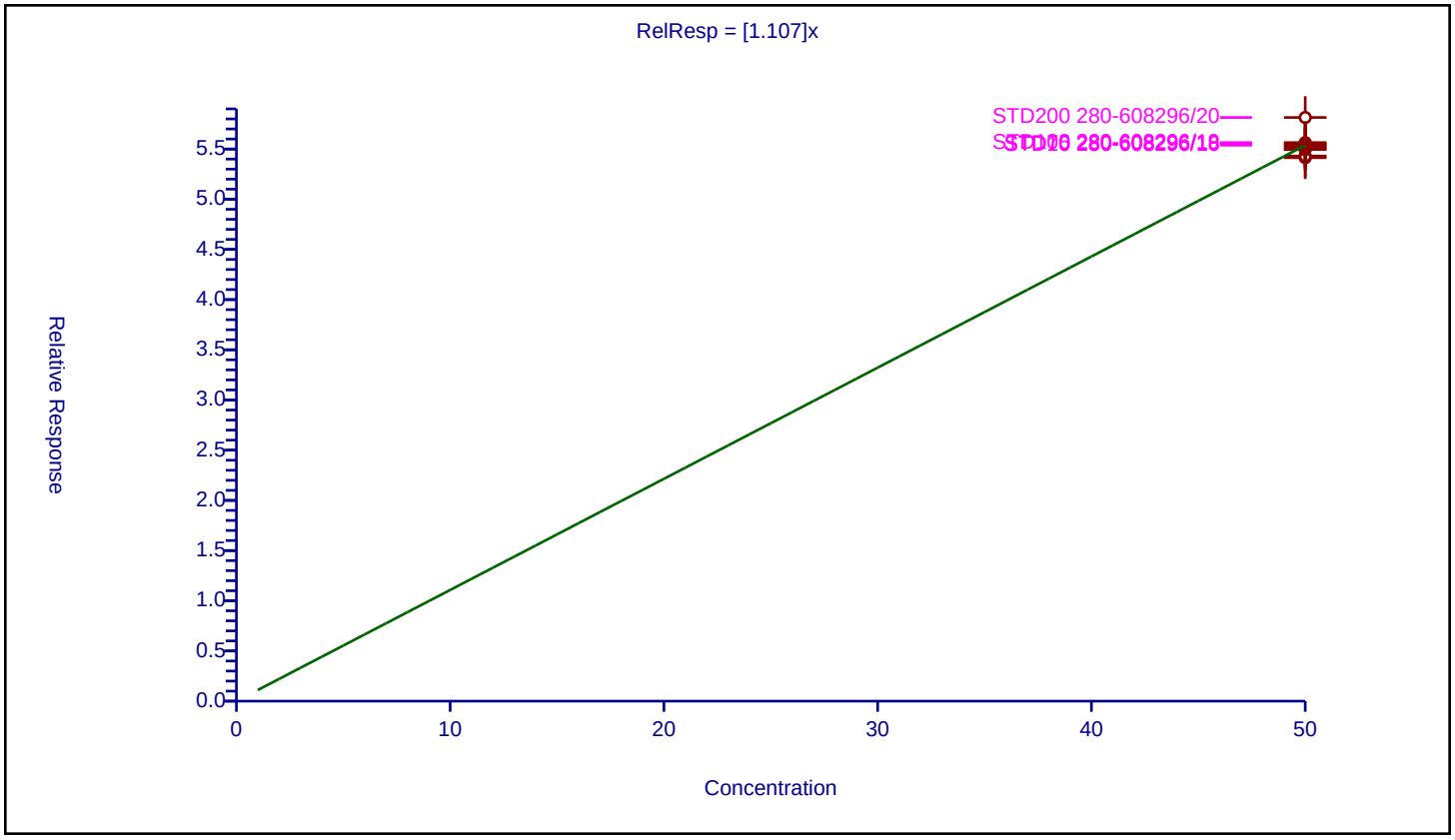
Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	769000
Relative Standard Error:	2.1
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0.000000000000000222

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	50.0	54.951752	50.0	664684.0	1.099035	Y
2	STD010 280-608296/13	50.0	55.237897	50.0	652151.0	1.104758	Y
3	STD020 280-608296/14	50.0	54.13607	50.0	661558.0	1.082721	Y
4	STD050 280-608296/15	50.0	54.303211	50.0	646982.0	1.086064	Y
5	STD10 280-608296/16	50.0	55.384749	50.0	643614.0	1.107695	Y
6	ICIS 280-608296/17	50.0	55.052528	50.0	674207.0	1.101051	Y
7	STD75 280-608296/18	50.0	55.49457	50.0	676022.0	1.109891	Y
8	STD100 280-608296/19	50.0	55.640014	50.0	664493.0	1.1128	Y
9	STD200 280-608296/20	50.0	58.141646	50.0	613150.0	1.162833	Y



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Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

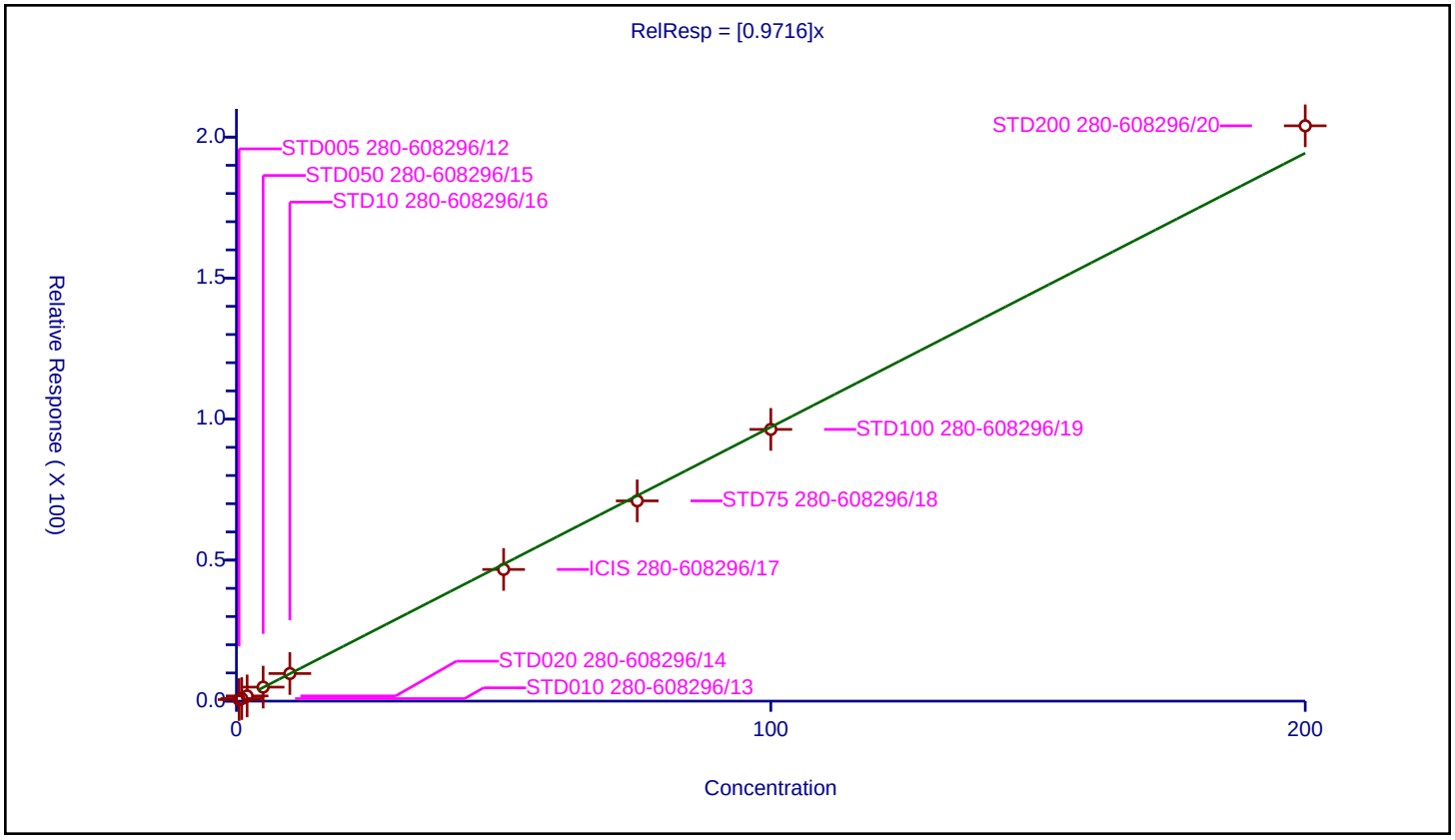
Curve Coefficients

Intercept:	0
Slope:	0.9716

Error Coefficients

Standard Error:	1070000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.541686	50.0	664684.0	1.083372	Y
2	STD010 280-608296/13	1.0	0.902628	50.0	652151.0	0.902628	Y
3	STD020 280-608296/14	2.0	1.843527	50.0	661558.0	0.921763	Y
4	STD050 280-608296/15	5.0	4.969226	50.0	646982.0	0.993845	Y
5	STD10 280-608296/16	10.0	9.784824	50.0	643614.0	0.978482	Y
6	ICIS 280-608296/17	50.0	46.693226	50.0	674207.0	0.933865	Y
7	STD75 280-608296/18	75.0	71.017141	50.0	676022.0	0.946895	Y
8	STD100 280-608296/19	100.0	96.359631	50.0	664493.0	0.963596	Y
9	STD200 280-608296/20	200.0	204.006198	50.0	613150.0	1.020031	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

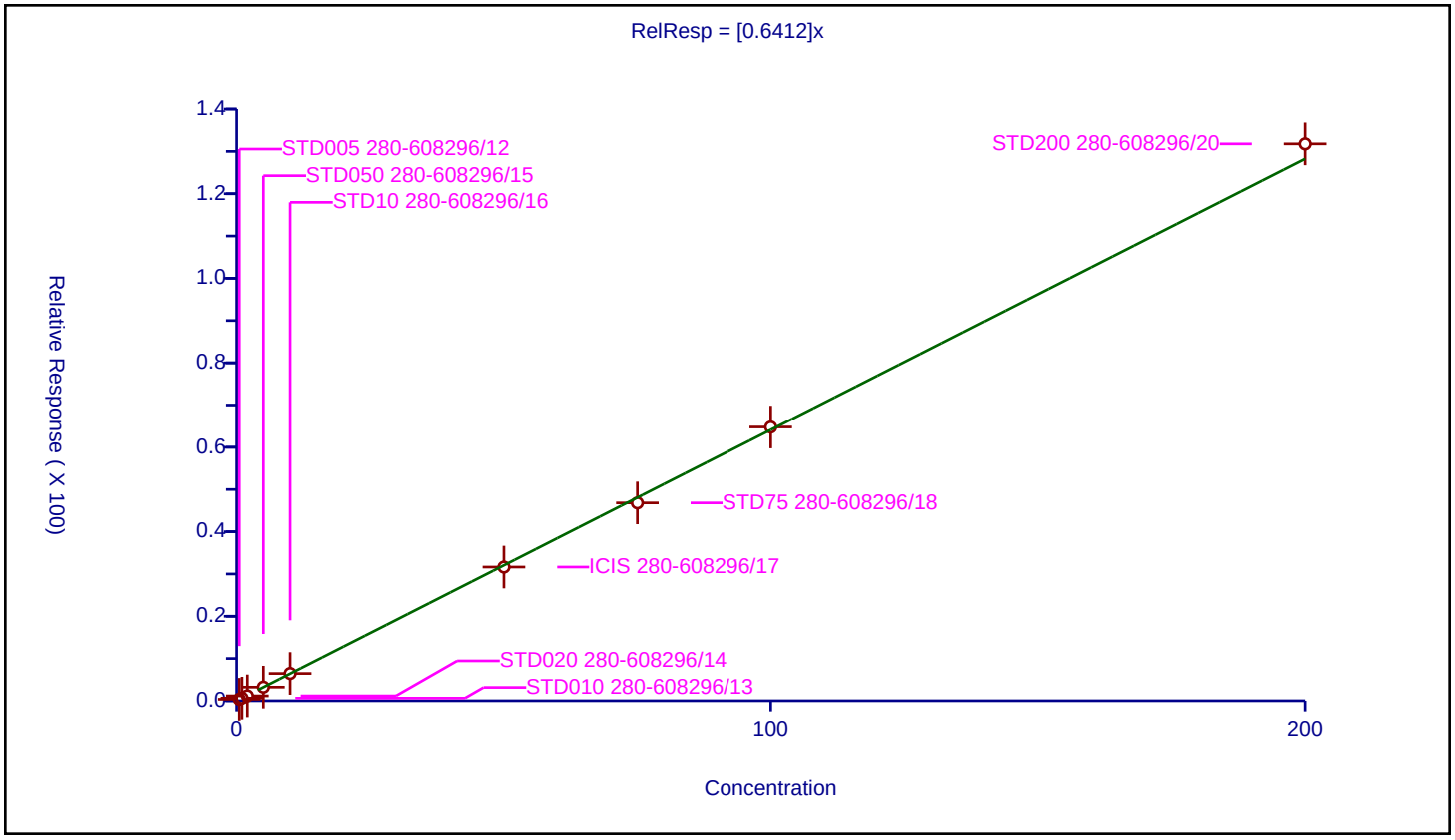
Curve Coefficients

Intercept:	0
Slope:	0.6412

Error Coefficients

Standard Error:	702000
Relative Standard Error:	5.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.354153	50.0	664684.0	0.708307	Y
2	STD010 280-608296/13	1.0	0.628152	50.0	652151.0	0.628152	Y
3	STD020 280-608296/14	2.0	1.16082	50.0	661558.0	0.58041	Y
4	STD050 280-608296/15	5.0	3.225283	50.0	646982.0	0.645057	Y
5	STD10 280-608296/16	10.0	6.453635	50.0	643614.0	0.645364	Y
6	ICIS 280-608296/17	50.0	31.641914	50.0	674207.0	0.632838	Y
7	STD75 280-608296/18	75.0	46.822367	50.0	676022.0	0.624298	Y
8	STD100 280-608296/19	100.0	64.787515	50.0	664493.0	0.647875	Y
9	STD200 280-608296/20	200.0	131.782353	50.0	613150.0	0.658912	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

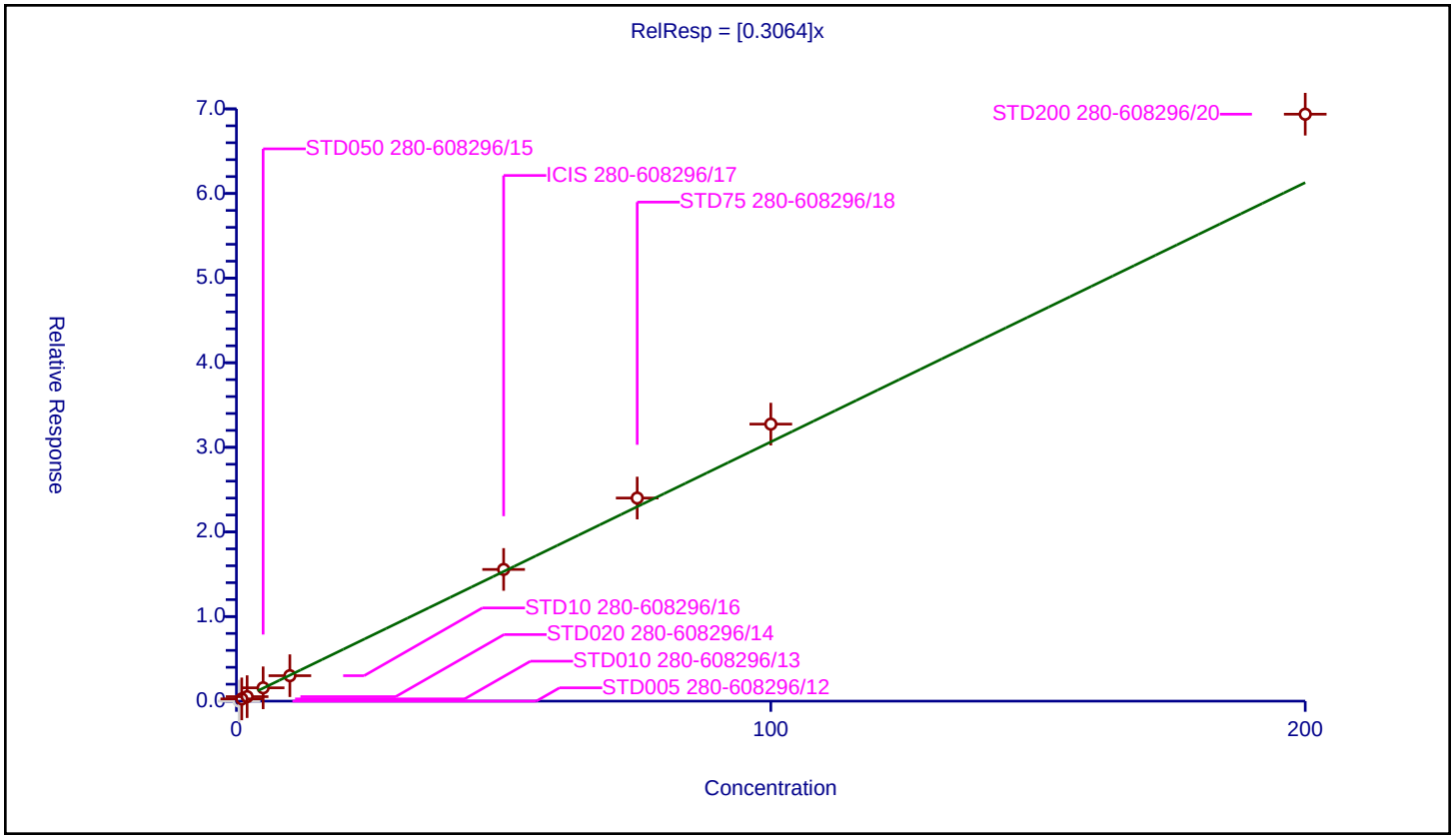
Curve Coefficients

Intercept:	0
Slope:	0.3064

Error Coefficients

Standard Error:	390000
Relative Standard Error:	9.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.0	50.0	664684.0	0.0	N
2	STD010 280-608296/13	1.0	0.265276	50.0	652151.0	0.265276	Y
3	STD020 280-608296/14	2.0	0.529356	50.0	661558.0	0.264678	Y
4	STD050 280-608296/15	5.0	1.575623	50.0	646982.0	0.315125	Y
5	STD10 280-608296/16	10.0	3.007082	50.0	643614.0	0.300708	Y
6	ICIS 280-608296/17	50.0	15.565249	50.0	674207.0	0.311305	Y
7	STD75 280-608296/18	75.0	24.006319	50.0	676022.0	0.320084	Y
8	STD100 280-608296/19	100.0	32.743084	50.0	664493.0	0.327431	Y
9	STD200 280-608296/20	200.0	69.374378	50.0	613150.0	0.346872	Y



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Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

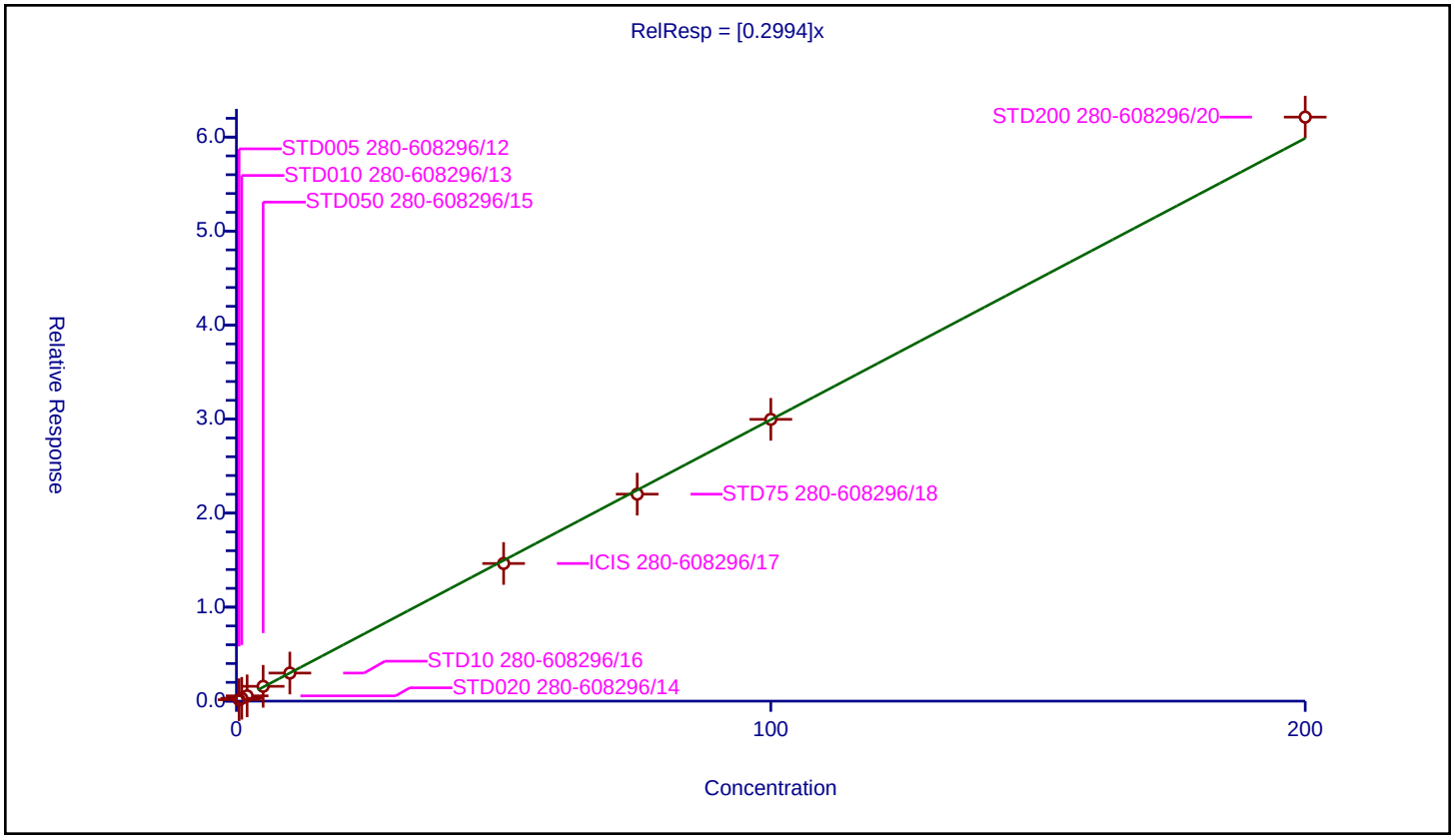
Curve Coefficients

Intercept:	0
Slope:	0.2994

Error Coefficients

Standard Error:	329000
Relative Standard Error:	3.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.150147	50.0	664684.0	0.300293	Y
2	STD010 280-608296/13	1.0	0.301847	50.0	652151.0	0.301847	Y
3	STD020 280-608296/14	2.0	0.562989	50.0	661558.0	0.281495	Y
4	STD050 280-608296/15	5.0	1.576705	50.0	646982.0	0.315341	Y
5	STD10 280-608296/16	10.0	2.986184	50.0	643614.0	0.298618	Y
6	ICIS 280-608296/17	50.0	14.64261	50.0	674207.0	0.292852	Y
7	STD75 280-608296/18	75.0	22.016665	50.0	676022.0	0.293556	Y
8	STD100 280-608296/19	100.0	29.97541	50.0	664493.0	0.299754	Y
9	STD200 280-608296/20	200.0	62.12607	50.0	613150.0	0.31063	Y



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Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

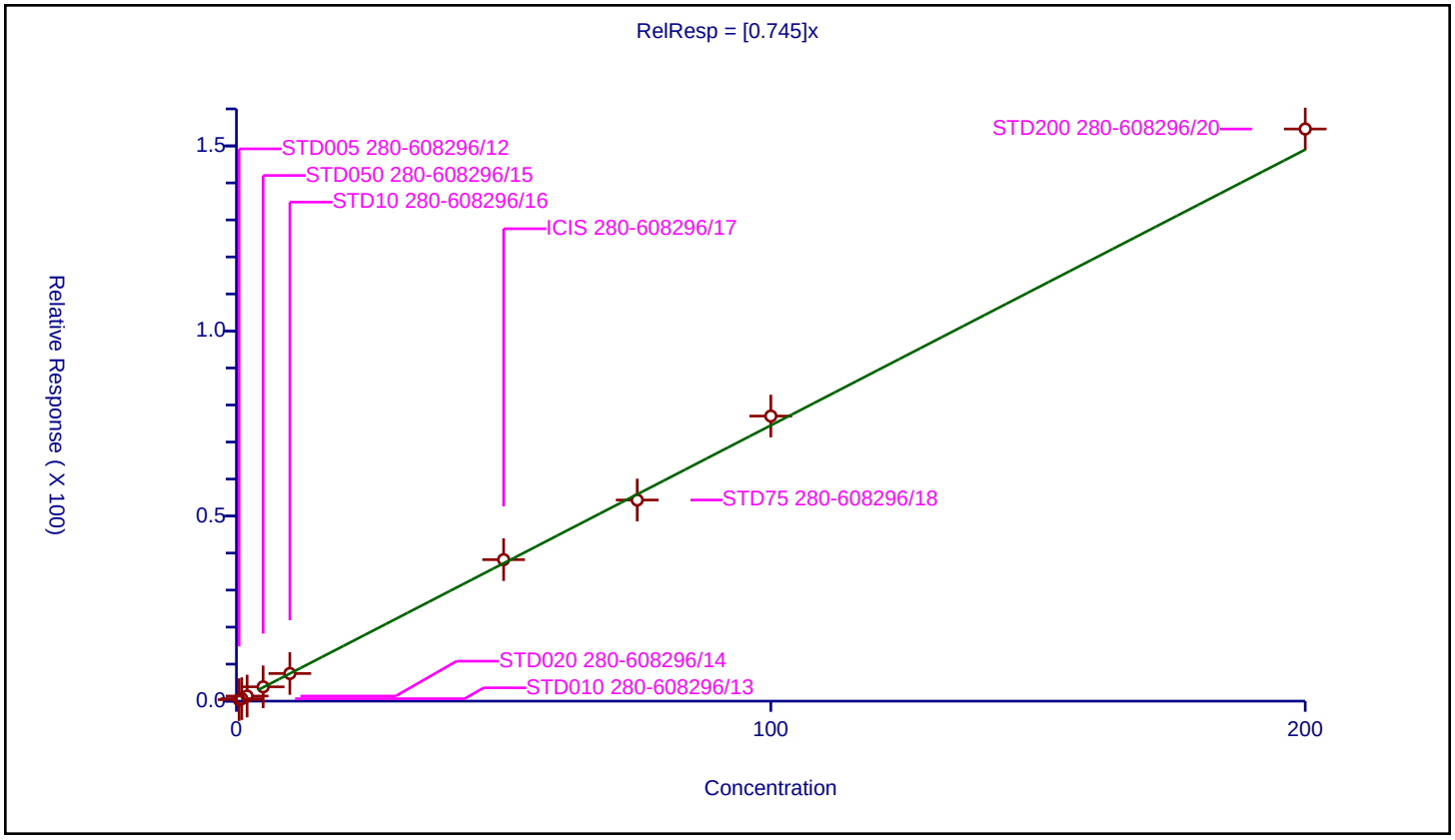
Curve Coefficients

Intercept:	0
Slope:	0.745

Error Coefficients

Standard Error:	826000
Relative Standard Error:	5.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.398836	50.0	664684.0	0.797672	Y
2	STD010 280-608296/13	1.0	0.667177	50.0	652151.0	0.667177	Y
3	STD020 280-608296/14	2.0	1.379622	50.0	661558.0	0.689811	Y
4	STD050 280-608296/15	5.0	3.856908	50.0	646982.0	0.771382	Y
5	STD10 280-608296/16	10.0	7.467908	50.0	643614.0	0.746791	Y
6	ICIS 280-608296/17	50.0	38.225426	50.0	674207.0	0.764509	Y
7	STD75 280-608296/18	75.0	54.332255	50.0	676022.0	0.72443	Y
8	STD100 280-608296/19	100.0	77.016161	50.0	664493.0	0.770162	Y
9	STD200 280-608296/20	200.0	154.570415	50.0	613150.0	0.772852	Y



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Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

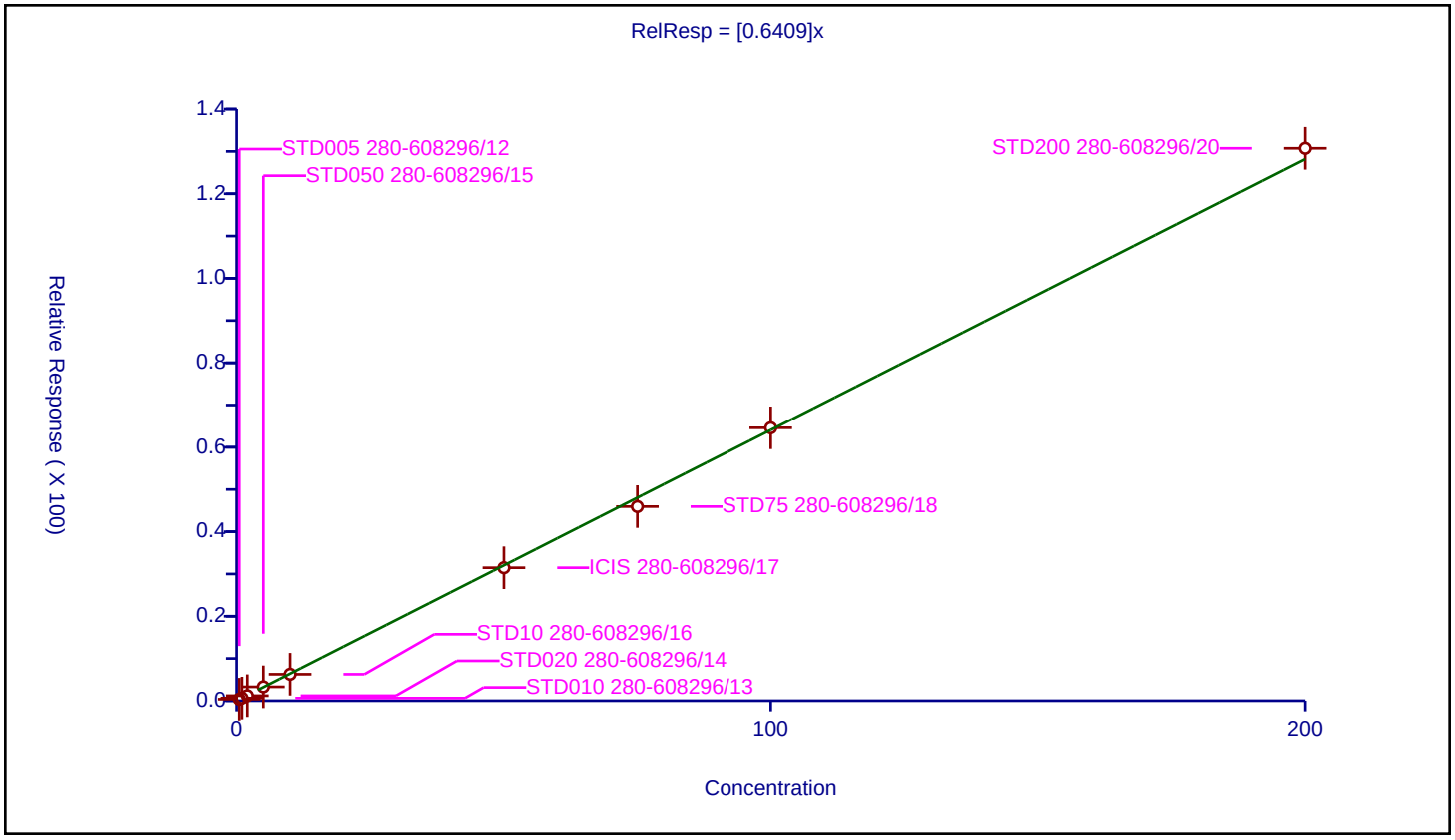
Curve Coefficients

Intercept:	0
Slope:	0.6409

Error Coefficients

Standard Error:	697000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.361074	50.0	664684.0	0.722148	Y
2	STD010 280-608296/13	1.0	0.623399	50.0	652151.0	0.623399	Y
3	STD020 280-608296/14	2.0	1.191808	50.0	661558.0	0.595904	Y
4	STD050 280-608296/15	5.0	3.2902	50.0	646982.0	0.65804	Y
5	STD10 280-608296/16	10.0	6.269208	50.0	643614.0	0.626921	Y
6	ICIS 280-608296/17	50.0	31.473568	50.0	674207.0	0.629471	Y
7	STD75 280-608296/18	75.0	45.959821	50.0	676022.0	0.612798	Y
8	STD100 280-608296/19	100.0	64.602863	50.0	664493.0	0.646029	Y
9	STD200 280-608296/20	200.0	130.738726	50.0	613150.0	0.653694	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

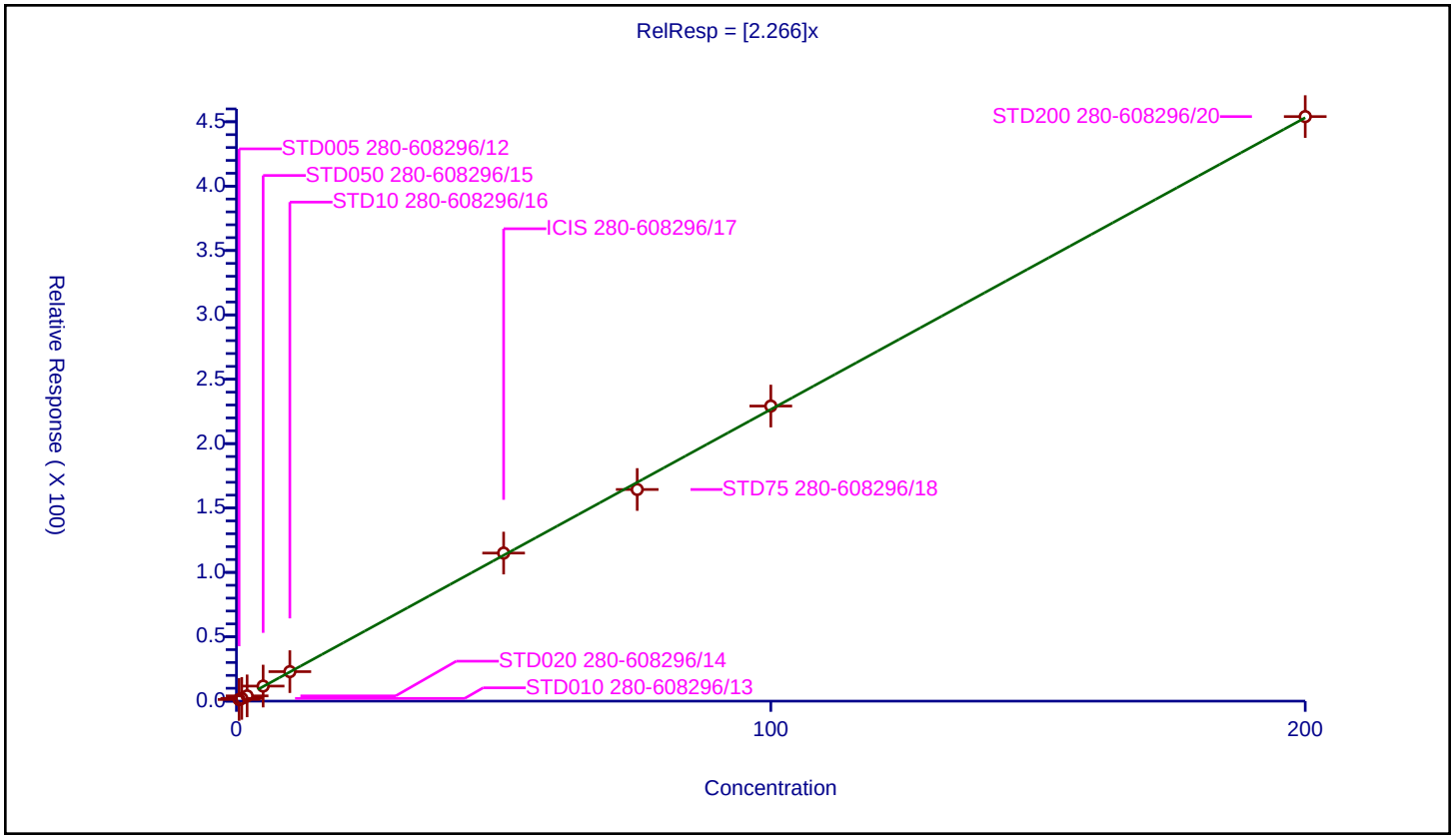
Curve Coefficients

Intercept:	0
Slope:	2.266

Error Coefficients

Standard Error:	2440000
Relative Standard Error:	6.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	1.273989	50.0	664684.0	2.547978	Y
2	STD010 280-608296/13	1.0	2.115691	50.0	652151.0	2.115691	Y
3	STD020 280-608296/14	2.0	4.086868	50.0	661558.0	2.043434	Y
4	STD050 280-608296/15	5.0	11.695225	50.0	646982.0	2.339045	Y
5	STD10 280-608296/16	10.0	22.916841	50.0	643614.0	2.291684	Y
6	ICIS 280-608296/17	50.0	115.010301	50.0	674207.0	2.300206	Y
7	STD75 280-608296/18	75.0	164.384665	50.0	676022.0	2.191796	Y
8	STD100 280-608296/19	100.0	229.20422	50.0	664493.0	2.292042	Y
9	STD200 280-608296/20	200.0	454.021447	50.0	613150.0	2.270107	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

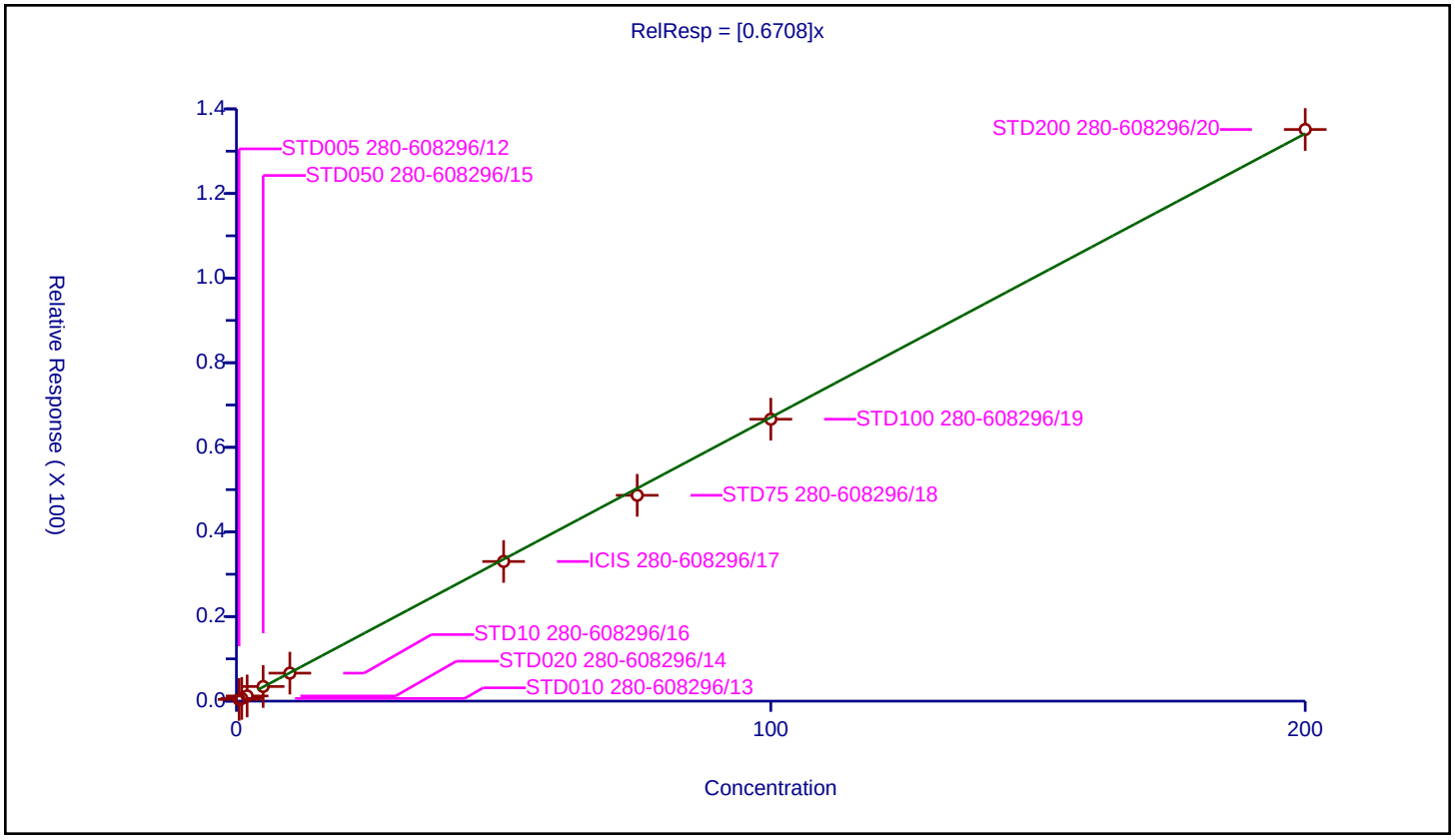
Curve Coefficients

Intercept:	0
Slope:	0.6708

Error Coefficients

Standard Error:	722000
Relative Standard Error:	7.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.391013	50.0	664684.0	0.782026	Y
2	STD010 280-608296/13	1.0	0.638656	50.0	652151.0	0.638656	Y
3	STD020 280-608296/14	2.0	1.222644	50.0	661558.0	0.611322	Y
4	STD050 280-608296/15	5.0	3.46022	50.0	646982.0	0.692044	Y
5	STD10 280-608296/16	10.0	6.618253	50.0	643614.0	0.661825	Y
6	ICIS 280-608296/17	50.0	33.015305	50.0	674207.0	0.660306	Y
7	STD75 280-608296/18	75.0	48.661064	50.0	676022.0	0.648814	Y
8	STD100 280-608296/19	100.0	66.642688	50.0	664493.0	0.666427	Y
9	STD200 280-608296/20	200.0	135.133899	50.0	613150.0	0.675669	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

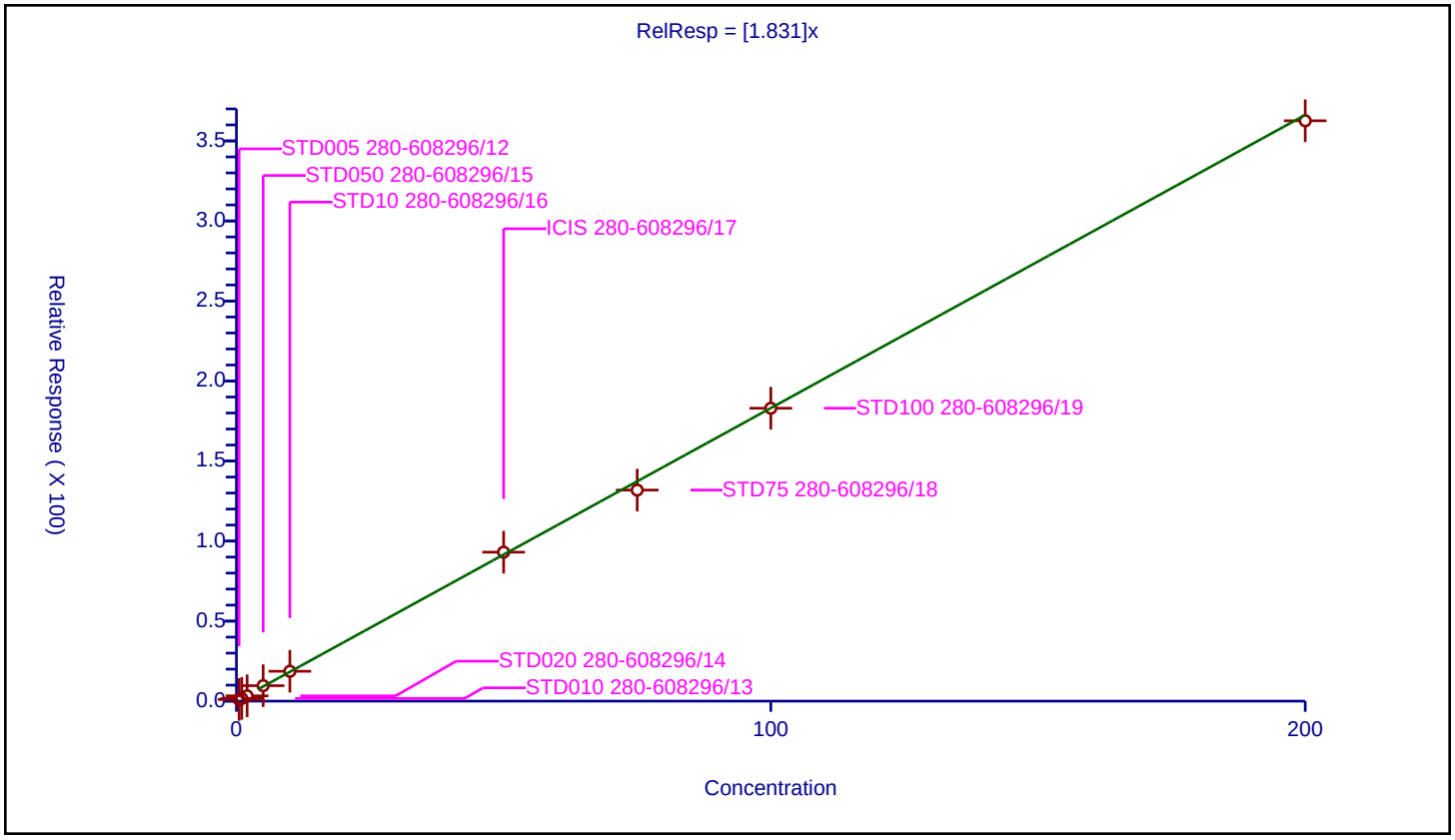
Curve Coefficients

Intercept:	0
Slope:	1.831

Error Coefficients

Standard Error:	1950000
Relative Standard Error:	6.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	1.031392	50.0	664684.0	2.062785	Y
2	STD010 280-608296/13	1.0	1.700526	50.0	652151.0	1.700526	Y
3	STD020 280-608296/14	2.0	3.308251	50.0	661558.0	1.654126	Y
4	STD050 280-608296/15	5.0	9.663175	50.0	646982.0	1.932635	Y
5	STD10 280-608296/16	10.0	18.666235	50.0	643614.0	1.866623	Y
6	ICIS 280-608296/17	50.0	93.079944	50.0	674207.0	1.861599	Y
7	STD75 280-608296/18	75.0	131.864348	50.0	676022.0	1.758191	Y
8	STD100 280-608296/19	100.0	182.989889	50.0	664493.0	1.829899	Y
9	STD200 280-608296/20	200.0	362.584359	50.0	613150.0	1.812922	Y



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Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

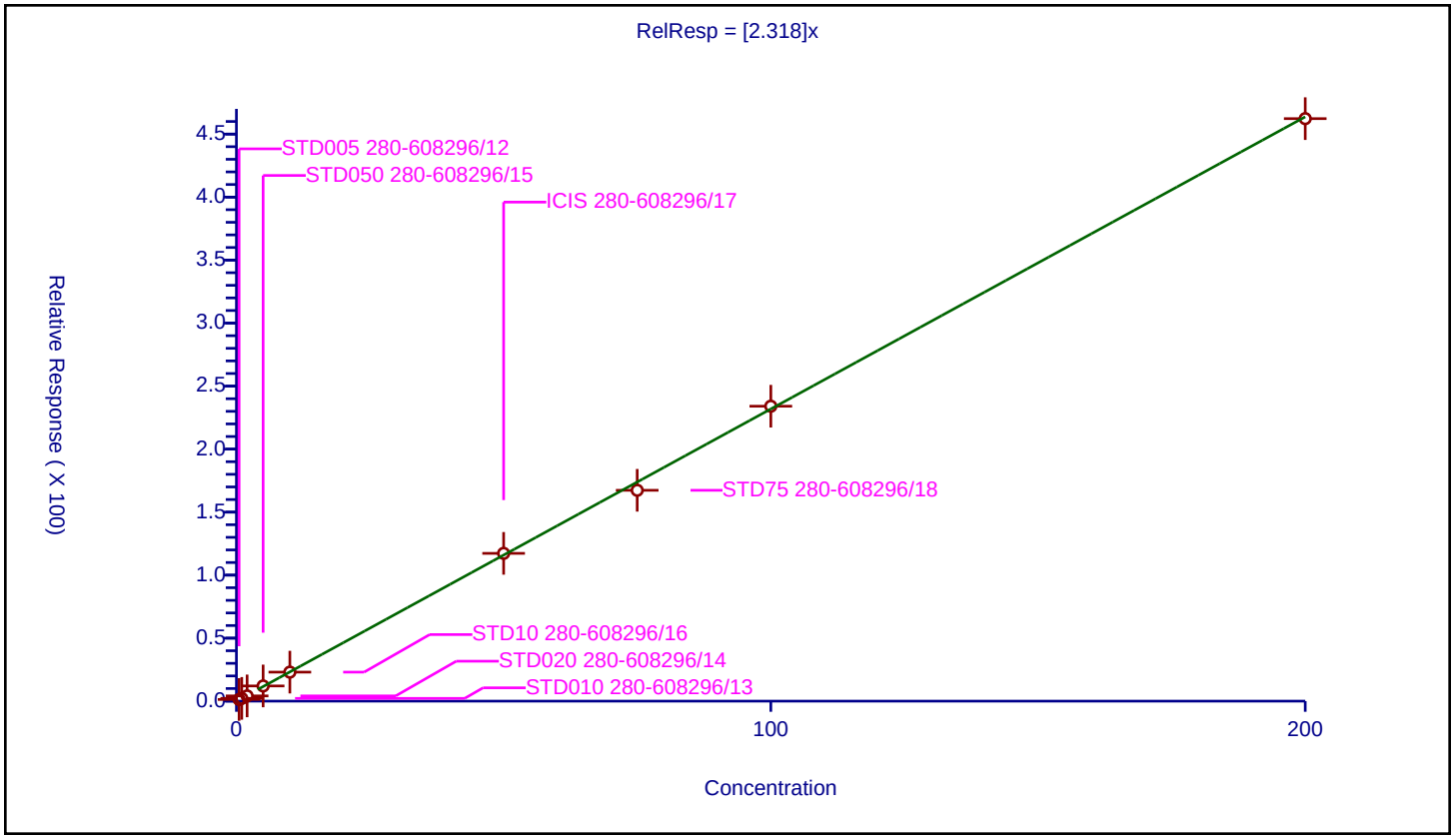
Curve Coefficients

Intercept:	0
Slope:	2.318

Error Coefficients

Standard Error:	2490000
Relative Standard Error:	6.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	1.325818	50.0	664684.0	2.651636	Y
2	STD010 280-608296/13	1.0	2.192207	50.0	652151.0	2.192207	Y
3	STD020 280-608296/14	2.0	4.162447	50.0	661558.0	2.081223	Y
4	STD050 280-608296/15	5.0	12.053272	50.0	646982.0	2.410654	Y
5	STD10 280-608296/16	10.0	23.023039	50.0	643614.0	2.302304	Y
6	ICIS 280-608296/17	50.0	117.28082	50.0	674207.0	2.345616	Y
7	STD75 280-608296/18	75.0	167.321256	50.0	676022.0	2.23095	Y
8	STD100 280-608296/19	100.0	234.047161	50.0	664493.0	2.340472	Y
9	STD200 280-608296/20	200.0	462.26054	50.0	613150.0	2.311303	Y



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Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

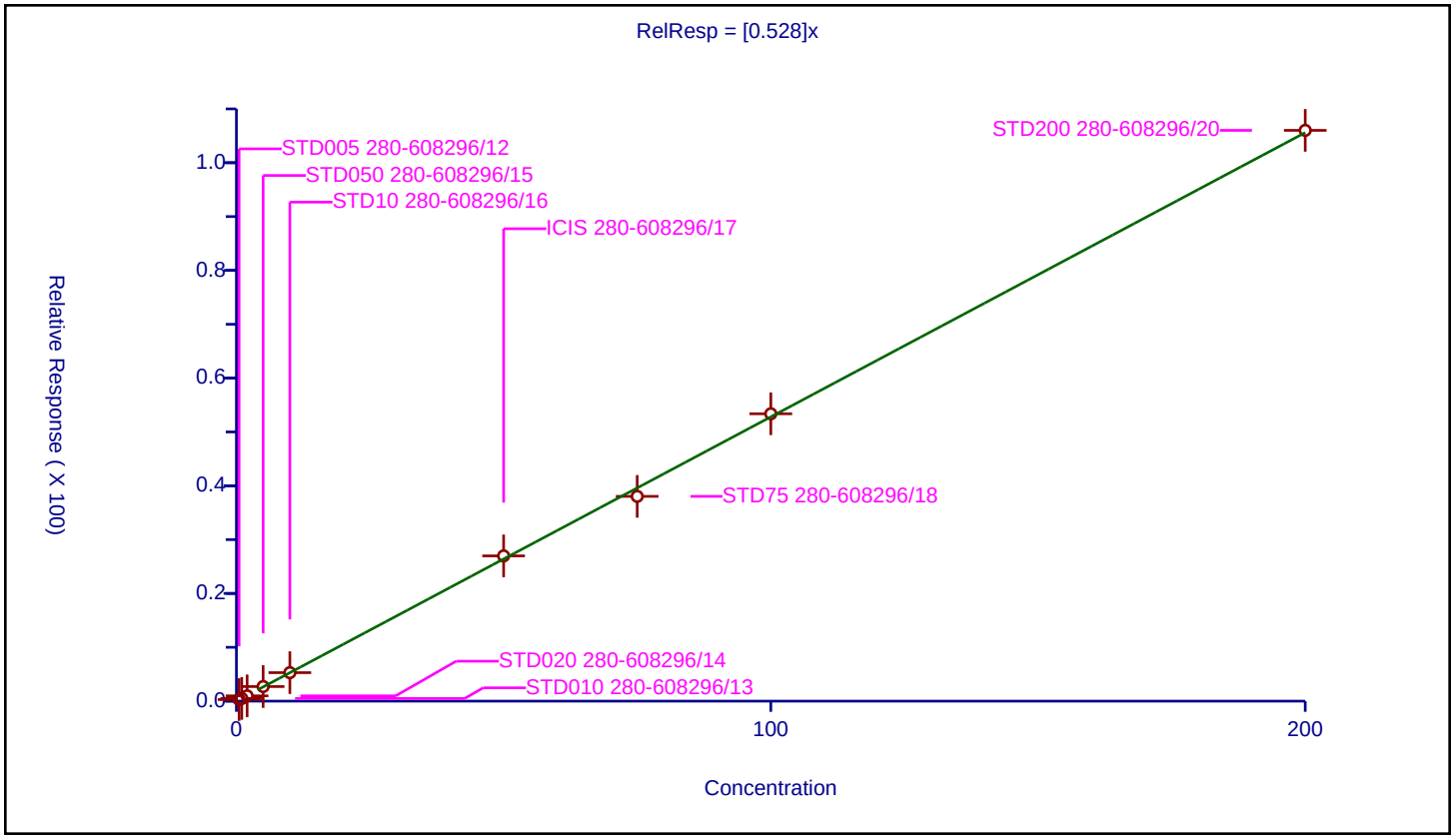
Curve Coefficients

Intercept:	0
Slope:	0.528

Error Coefficients

Standard Error:	570000
Relative Standard Error:	5.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.29089	50.0	664684.0	0.58178	Y
2	STD010 280-608296/13	1.0	0.497661	50.0	652151.0	0.497661	Y
3	STD020 280-608296/14	2.0	0.982	50.0	661558.0	0.491	Y
4	STD050 280-608296/15	5.0	2.710585	50.0	646982.0	0.542117	Y
5	STD10 280-608296/16	10.0	5.289817	50.0	643614.0	0.528982	Y
6	ICIS 280-608296/17	50.0	26.976062	50.0	674207.0	0.539521	Y
7	STD75 280-608296/18	75.0	38.031898	50.0	676022.0	0.507092	Y
8	STD100 280-608296/19	100.0	53.373926	50.0	664493.0	0.533739	Y
9	STD200 280-608296/20	200.0	106.012232	50.0	613150.0	0.530061	Y



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Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

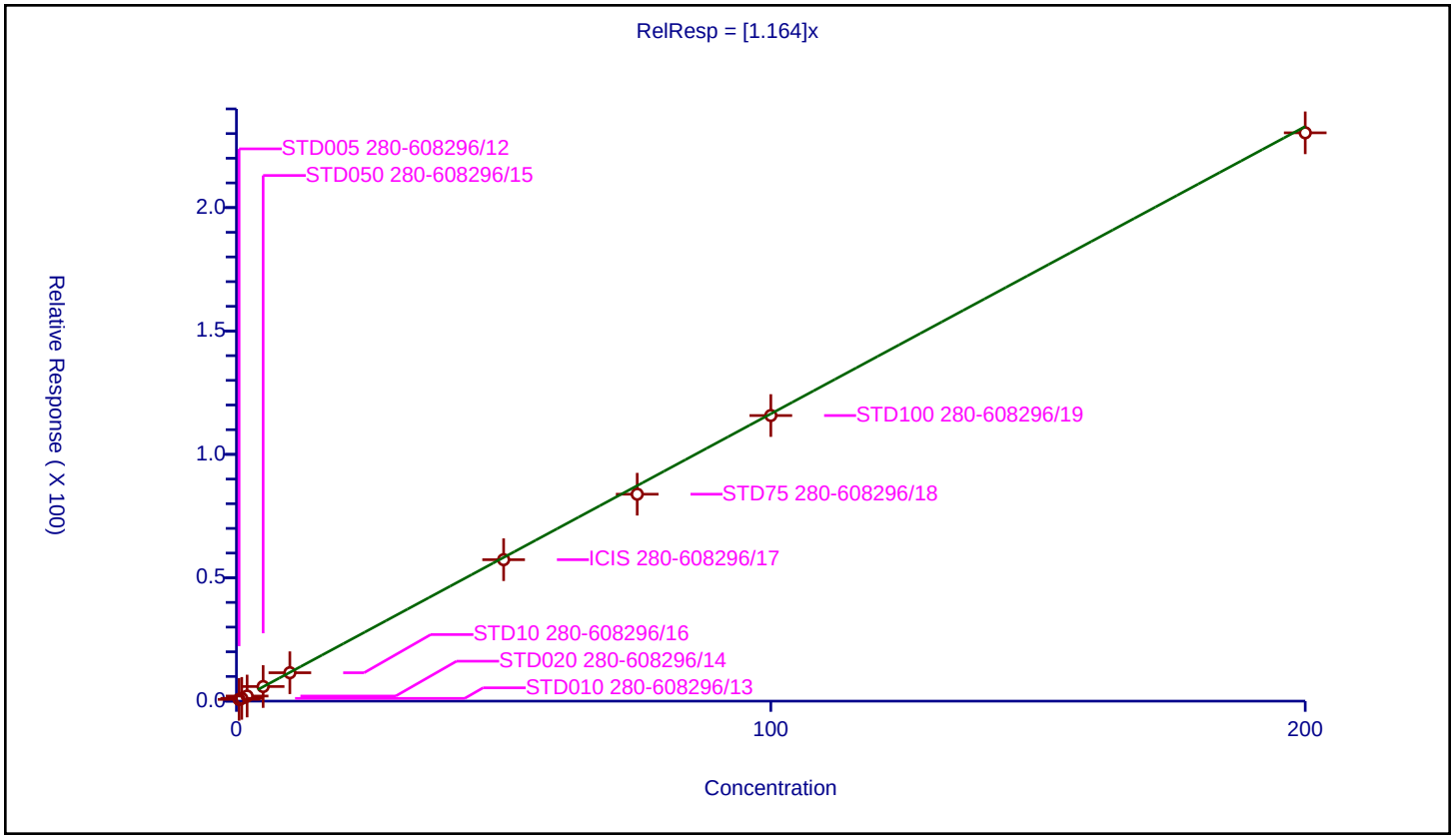
Curve Coefficients

Intercept:	0
Slope:	1.164

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	9.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.709435	50.0	664684.0	1.41887	Y
2	STD010 280-608296/13	1.0	1.117073	50.0	652151.0	1.117073	Y
3	STD020 280-608296/14	2.0	2.068451	50.0	661558.0	1.034225	Y
4	STD050 280-608296/15	5.0	5.921108	50.0	646982.0	1.184222	Y
5	STD10 280-608296/16	10.0	11.508995	50.0	643614.0	1.150899	Y
6	ICIS 280-608296/17	50.0	57.315928	50.0	674207.0	1.146319	Y
7	STD75 280-608296/18	75.0	83.860806	50.0	676022.0	1.118144	Y
8	STD100 280-608296/19	100.0	115.742303	50.0	664493.0	1.157423	Y
9	STD200 280-608296/20	200.0	230.309468	50.0	613150.0	1.151547	Y



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Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

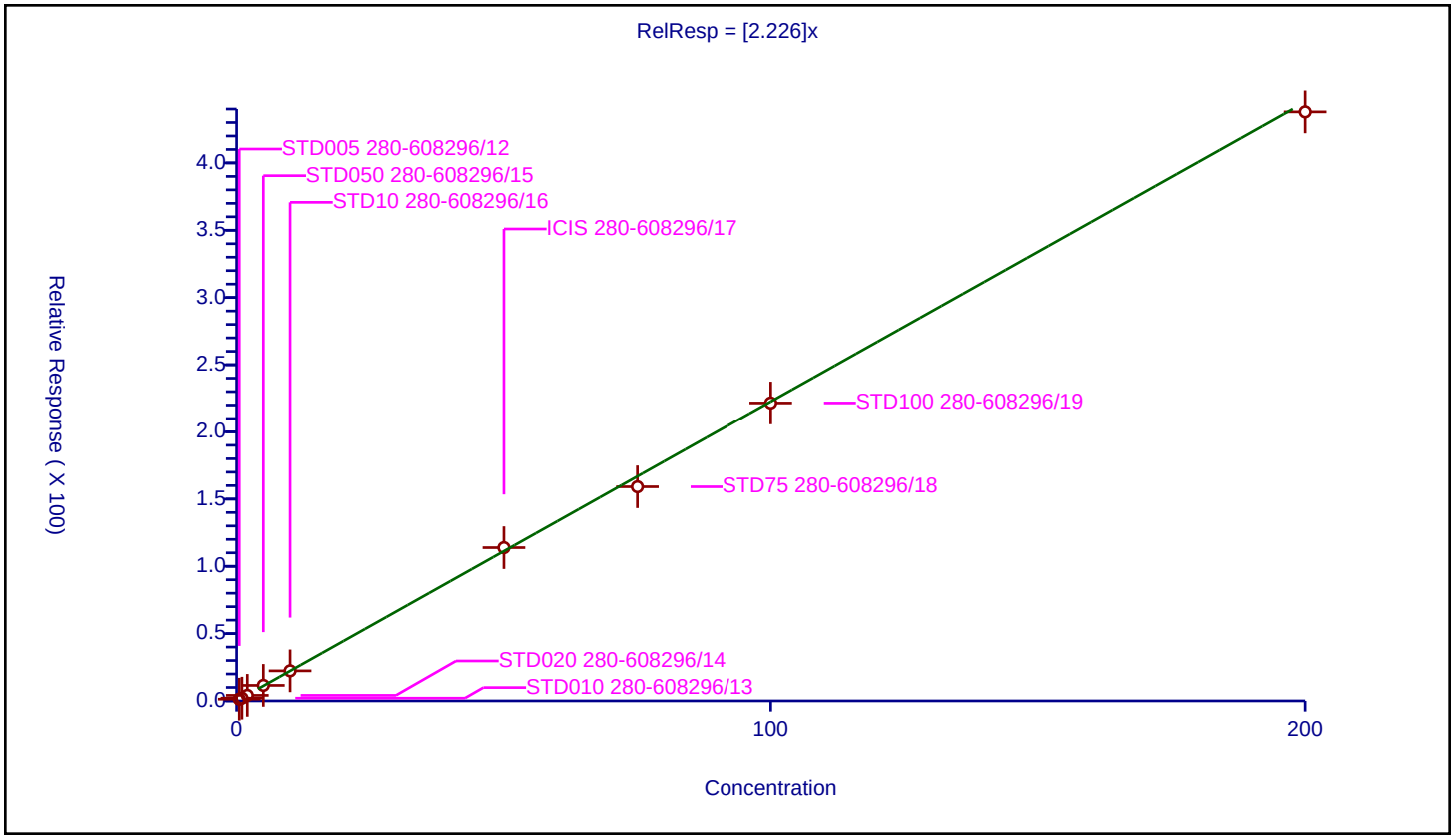
Curve Coefficients

Intercept:	0
Slope:	2.226

Error Coefficients

Standard Error:	2360000
Relative Standard Error:	7.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	1.293697	50.0	664684.0	2.587395	Y
2	STD010 280-608296/13	1.0	2.039252	50.0	652151.0	2.039252	Y
3	STD020 280-608296/14	2.0	4.122314	50.0	661558.0	2.061157	Y
4	STD050 280-608296/15	5.0	11.528296	50.0	646982.0	2.305659	Y
5	STD10 280-608296/16	10.0	22.334738	50.0	643614.0	2.233474	Y
6	ICIS 280-608296/17	50.0	113.878304	50.0	674207.0	2.277566	Y
7	STD75 280-608296/18	75.0	159.162054	50.0	676022.0	2.122161	Y
8	STD100 280-608296/19	100.0	221.548534	50.0	664493.0	2.215485	Y
9	STD200 280-608296/20	200.0	437.890647	50.0	613150.0	2.189453	Y



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Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

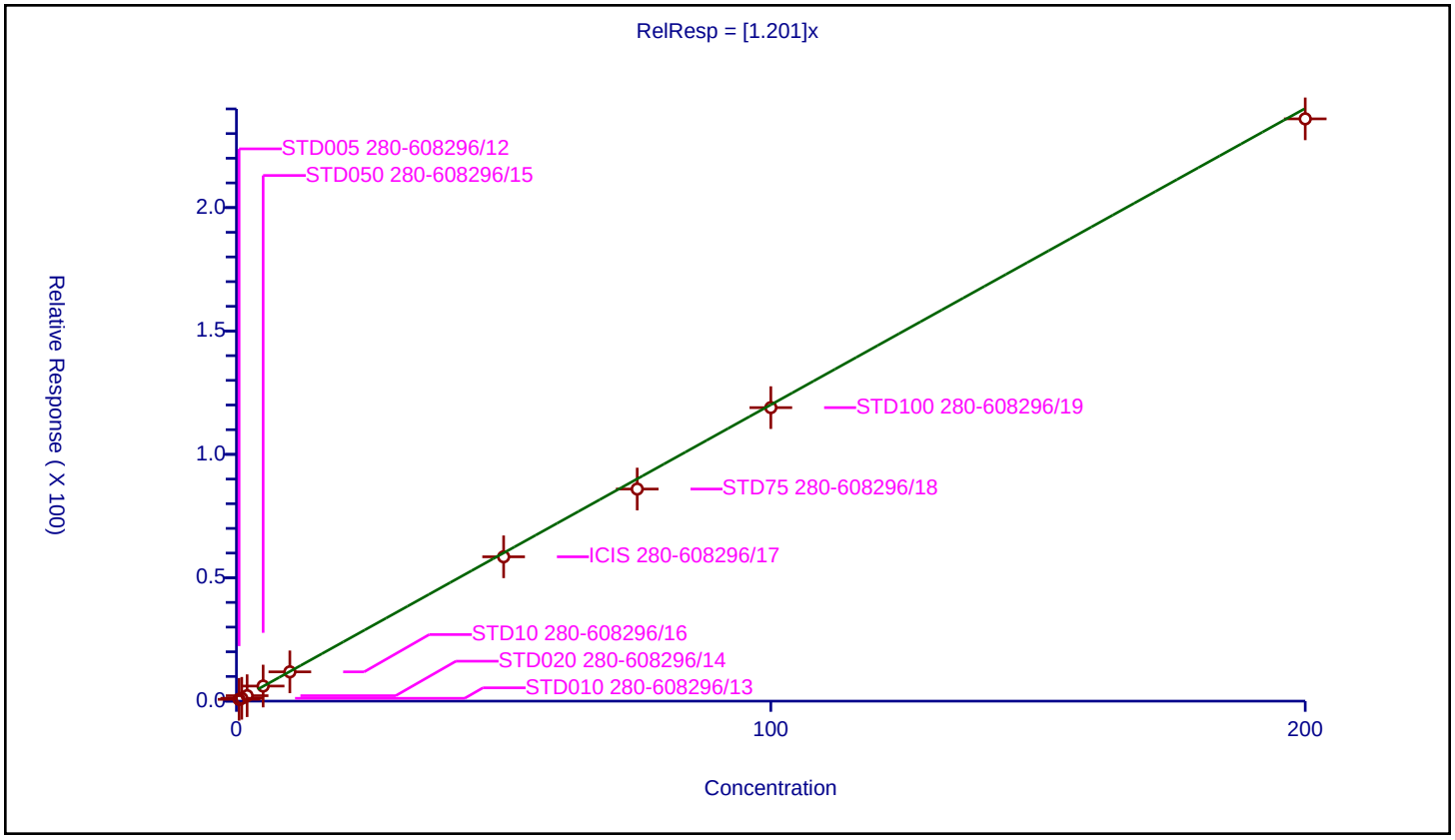
Curve Coefficients

Intercept:	0
Slope:	1.201

Error Coefficients

Standard Error:	1270000
Relative Standard Error:	8.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.728993	50.0	664684.0	1.457986	Y
2	STD010 280-608296/13	1.0	1.15188	50.0	652151.0	1.15188	Y
3	STD020 280-608296/14	2.0	2.207667	50.0	661558.0	1.103834	Y
4	STD050 280-608296/15	5.0	6.118331	50.0	646982.0	1.223666	Y
5	STD10 280-608296/16	10.0	11.864254	50.0	643614.0	1.186425	Y
6	ICIS 280-608296/17	50.0	58.497316	50.0	674207.0	1.169946	Y
7	STD75 280-608296/18	75.0	85.95275	50.0	676022.0	1.146037	Y
8	STD100 280-608296/19	100.0	118.942186	50.0	664493.0	1.189422	Y
9	STD200 280-608296/20	200.0	235.968034	50.0	613150.0	1.17984	Y



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Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

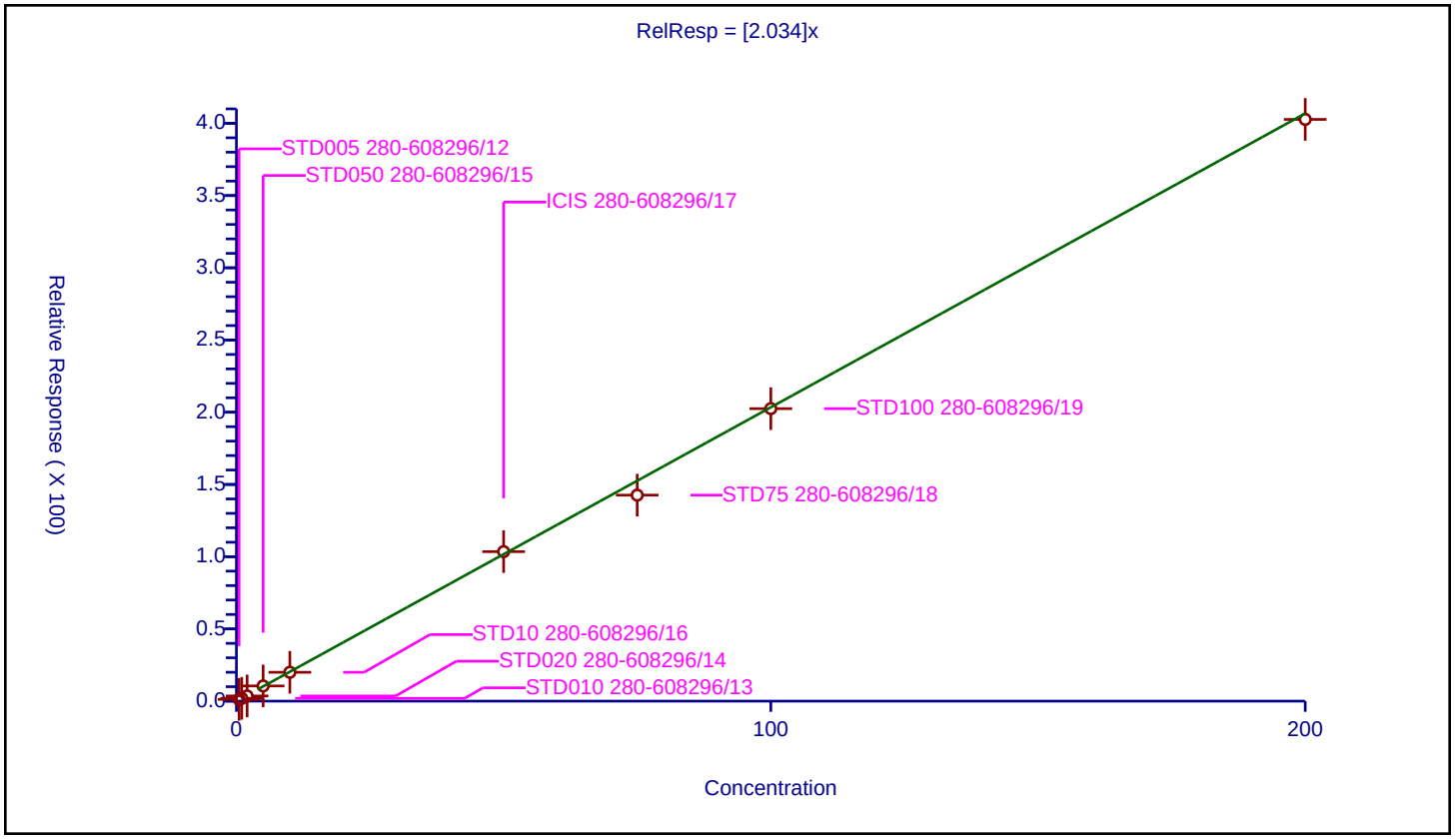
Curve Coefficients

Intercept:	0
Slope:	2.034

Error Coefficients

Standard Error:	2160000
Relative Standard Error:	9.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	1.231788	50.0	664684.0	2.463577	Y
2	STD010 280-608296/13	1.0	1.939735	50.0	652151.0	1.939735	Y
3	STD020 280-608296/14	2.0	3.581923	50.0	661558.0	1.790962	Y
4	STD050 280-608296/15	5.0	10.525486	50.0	646982.0	2.105097	Y
5	STD10 280-608296/16	10.0	19.977424	50.0	643614.0	1.997742	Y
6	ICIS 280-608296/17	50.0	103.501966	50.0	674207.0	2.070039	Y
7	STD75 280-608296/18	75.0	142.617474	50.0	676022.0	1.901566	Y
8	STD100 280-608296/19	100.0	202.49205	50.0	664493.0	2.024921	Y
9	STD200 280-608296/20	200.0	402.711001	50.0	613150.0	2.013555	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

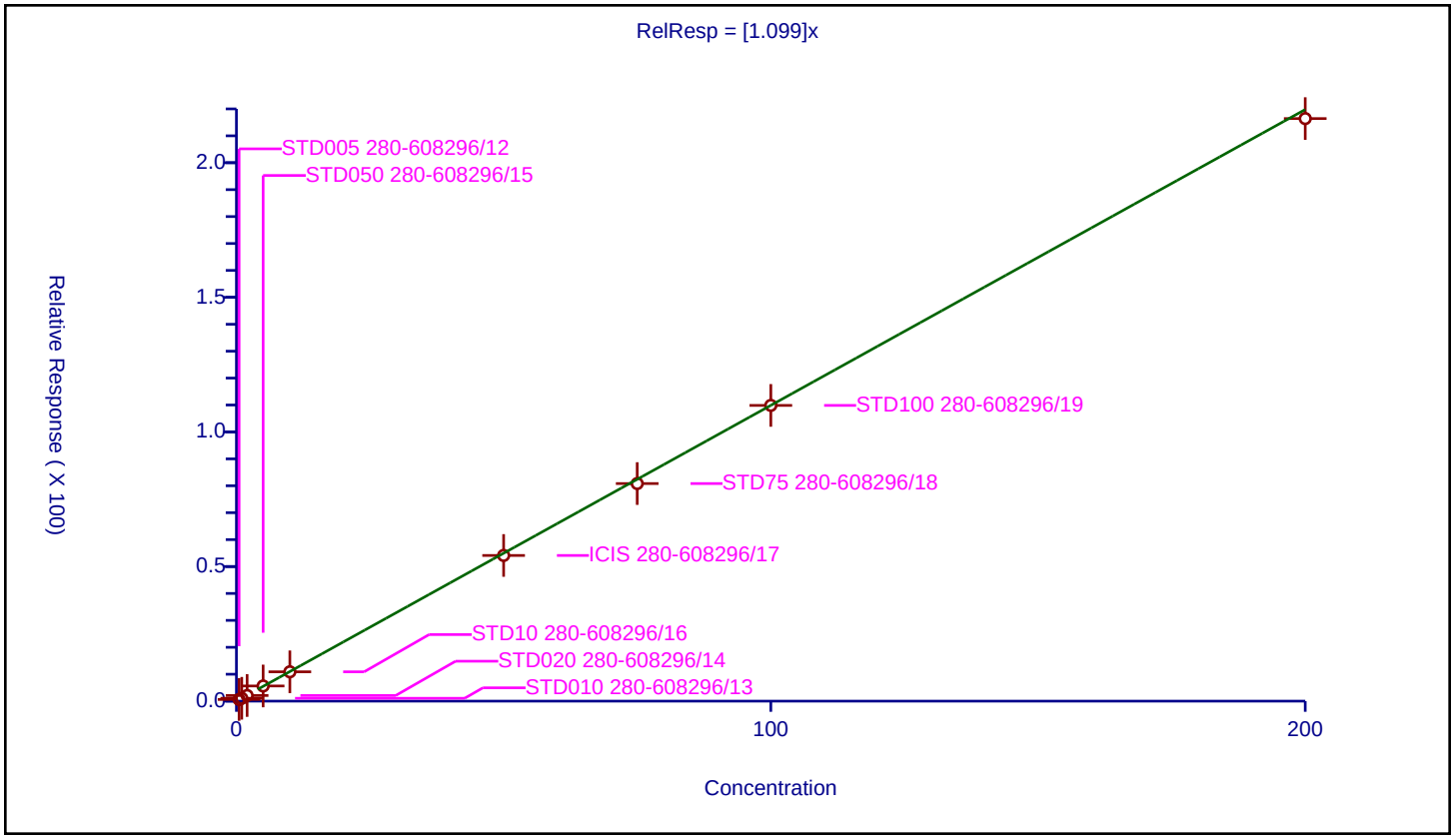
Curve Coefficients

Intercept:	0
Slope:	1.099

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	4.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.614277	50.0	664684.0	1.228554	Y
2	STD010 280-608296/13	1.0	1.059647	50.0	652151.0	1.059647	Y
3	STD020 280-608296/14	2.0	2.088781	50.0	661558.0	1.044391	Y
4	STD050 280-608296/15	5.0	5.632151	50.0	646982.0	1.12643	Y
5	STD10 280-608296/16	10.0	10.894496	50.0	643614.0	1.08945	Y
6	ICIS 280-608296/17	50.0	54.114538	50.0	674207.0	1.082291	Y
7	STD75 280-608296/18	75.0	80.830506	50.0	676022.0	1.07774	Y
8	STD100 280-608296/19	100.0	109.856086	50.0	664493.0	1.098561	Y
9	STD200 280-608296/20	200.0	216.401125	50.0	613150.0	1.082006	Y



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Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

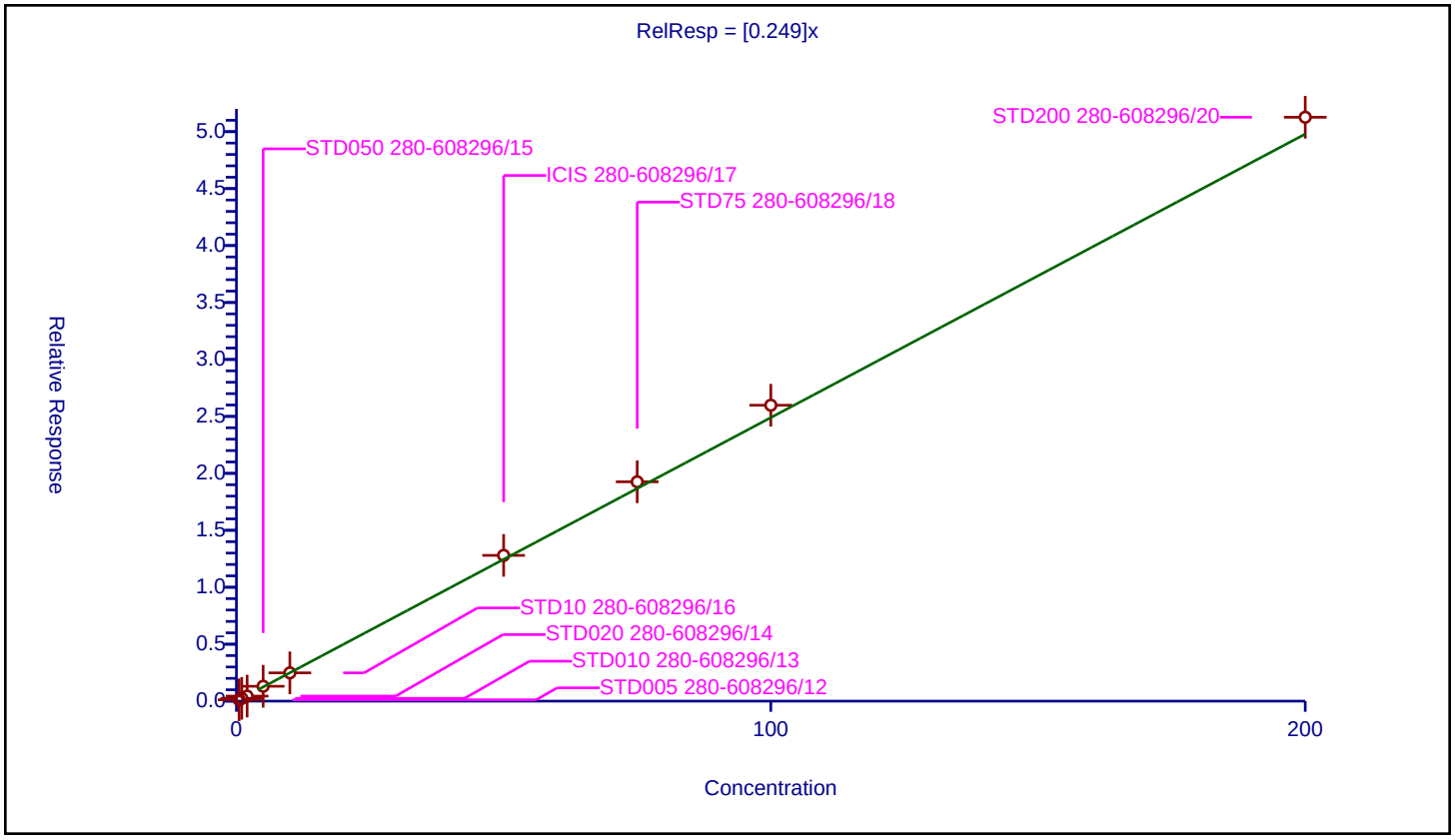
Curve Coefficients

Intercept:	0
Slope:	0.249

Error Coefficients

Standard Error:	277000
Relative Standard Error:	5.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.117424	50.0	664684.0	0.234848	Y
2	STD010 280-608296/13	1.0	0.245572	50.0	652151.0	0.245572	Y
3	STD020 280-608296/14	2.0	0.443499	50.0	661558.0	0.221749	Y
4	STD050 280-608296/15	5.0	1.306528	50.0	646982.0	0.261306	Y
5	STD10 280-608296/16	10.0	2.483088	50.0	643614.0	0.248309	Y
6	ICIS 280-608296/17	50.0	12.797108	50.0	674207.0	0.255942	Y
7	STD75 280-608296/18	75.0	19.259284	50.0	676022.0	0.25679	Y
8	STD100 280-608296/19	100.0	25.982065	50.0	664493.0	0.259821	Y
9	STD200 280-608296/20	200.0	51.266167	50.0	613150.0	0.256331	Y



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Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

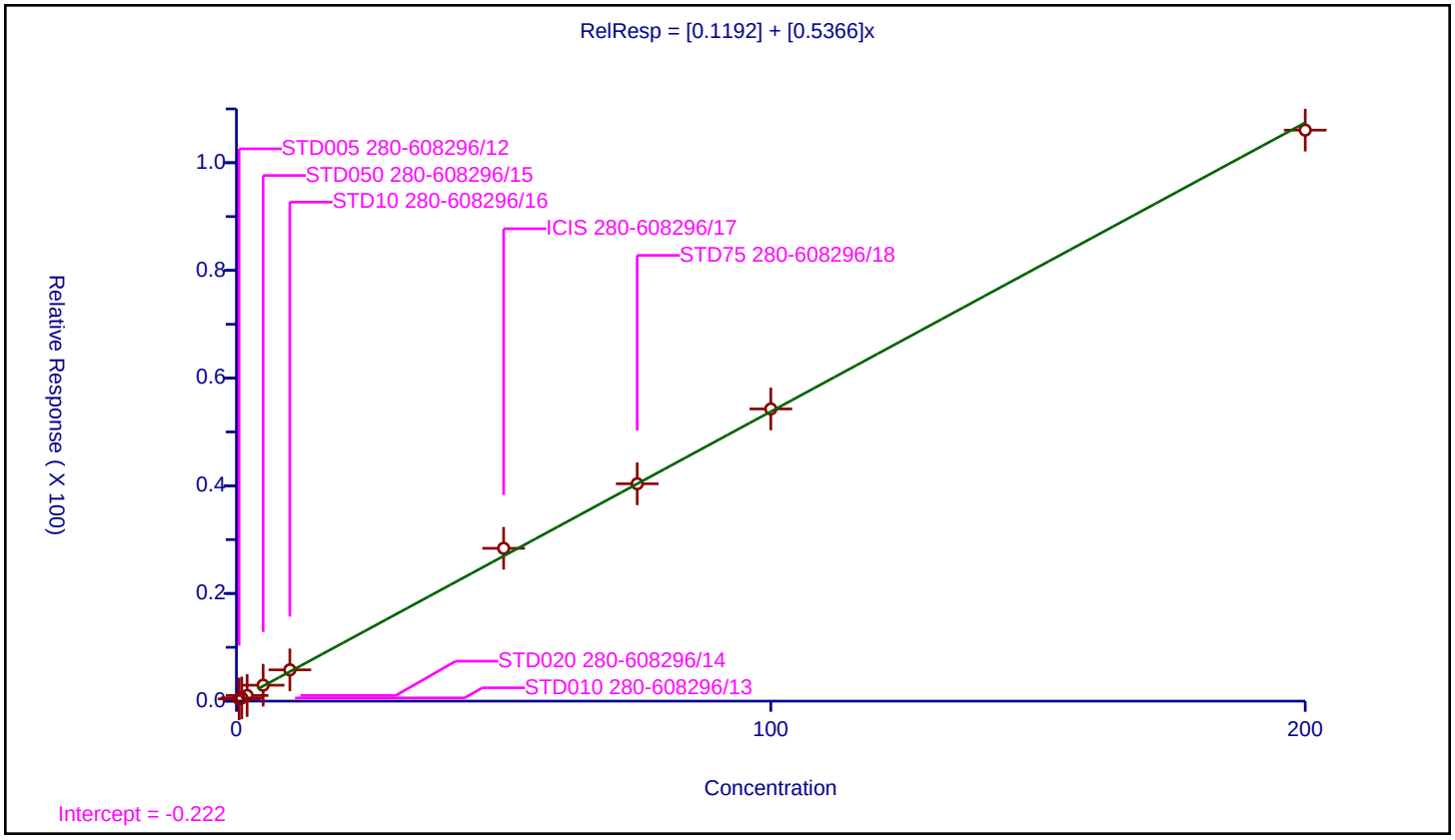
Curve Coefficients

Intercept:	0.1192
Slope:	0.5366

Error Coefficients

Standard Error:	617000
Relative Standard Error:	8.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.409292	50.0	664684.0	0.818584	Y
2	STD010 280-608296/13	1.0	0.595491	50.0	652151.0	0.595491	Y
3	STD020 280-608296/14	2.0	1.044126	50.0	661558.0	0.522063	Y
4	STD050 280-608296/15	5.0	2.959974	50.0	646982.0	0.591995	Y
5	STD10 280-608296/16	10.0	5.810626	50.0	643614.0	0.581063	Y
6	ICIS 280-608296/17	50.0	28.385125	50.0	674207.0	0.567703	Y
7	STD75 280-608296/18	75.0	40.374426	50.0	676022.0	0.538326	Y
8	STD100 280-608296/19	100.0	54.271753	50.0	664493.0	0.542718	Y
9	STD200 280-608296/20	200.0	106.058387	50.0	613150.0	0.530292	Y



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Calibration / Hexachlorobutadiene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

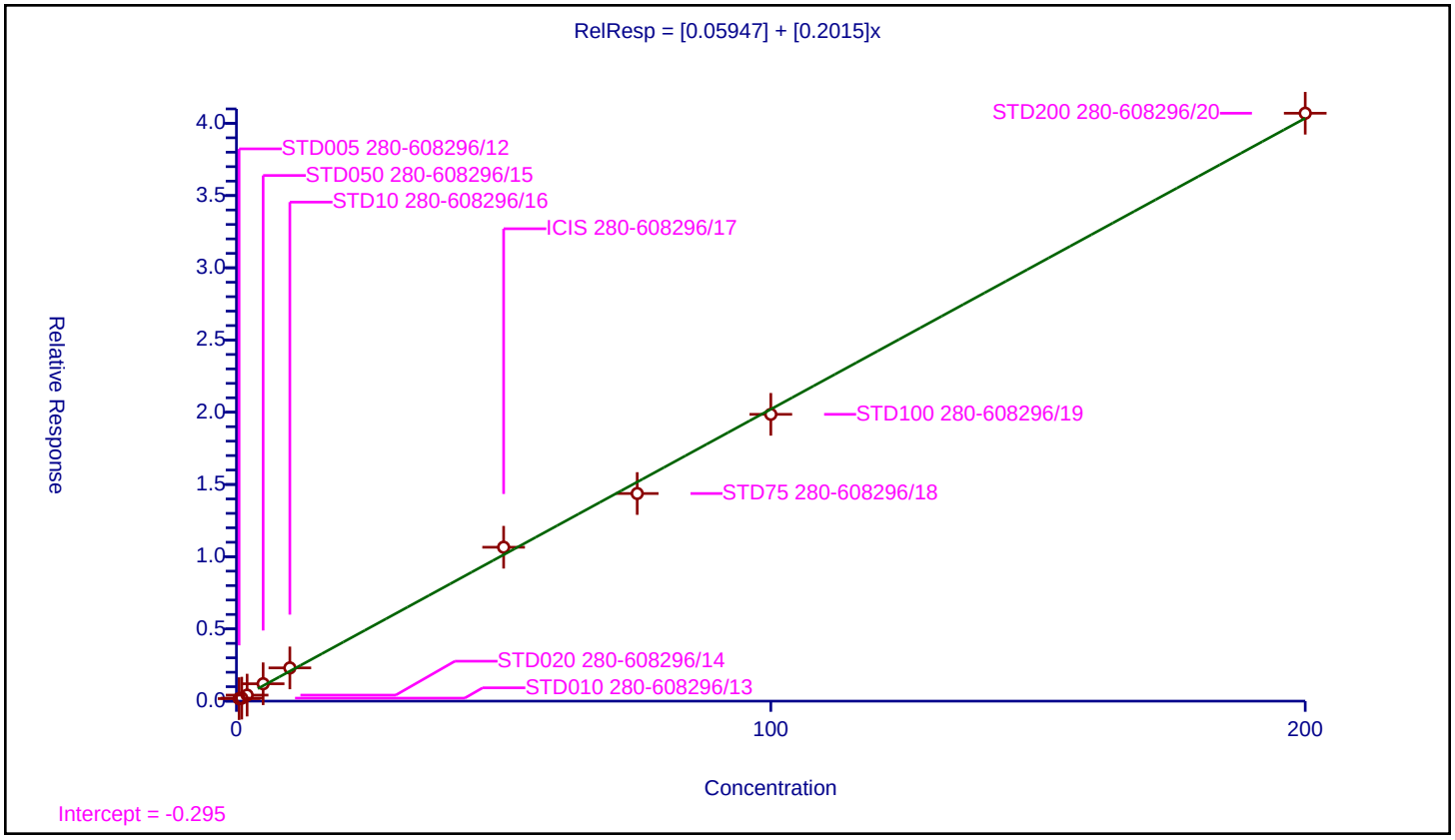
Curve Coefficients

Intercept:	0.05947
Slope:	0.2015

Error Coefficients

Standard Error:	232000
Relative Standard Error:	14.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.174293	50.0	664684.0	0.348587	Y
2	STD010 280-608296/13	1.0	0.207007	50.0	652151.0	0.207007	Y
3	STD020 280-608296/14	2.0	0.41765	50.0	661558.0	0.208825	Y
4	STD050 280-608296/15	5.0	1.203897	50.0	646982.0	0.240779	Y
5	STD10 280-608296/16	10.0	2.301069	50.0	643614.0	0.230107	Y
6	ICIS 280-608296/17	50.0	10.654665	50.0	674207.0	0.213093	Y
7	STD75 280-608296/18	75.0	14.374162	50.0	676022.0	0.191655	Y
8	STD100 280-608296/19	100.0	19.855514	50.0	664493.0	0.198555	Y
9	STD200 280-608296/20	200.0	40.699258	50.0	613150.0	0.203496	Y



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Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

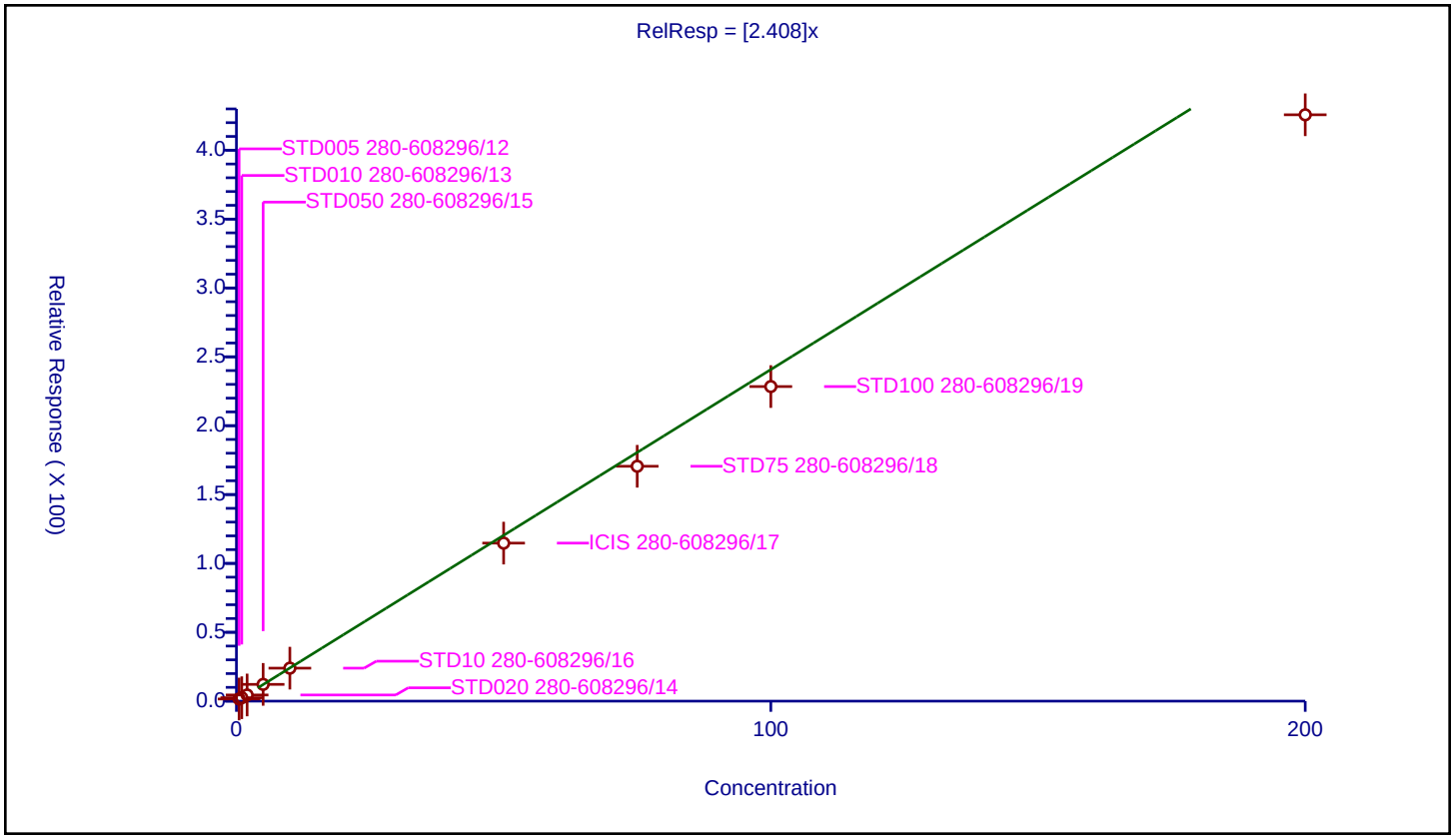
Curve Coefficients

Intercept:	0
Slope:	2.408

Error Coefficients

Standard Error:	2350000
Relative Standard Error:	12.0
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	1.562321	50.0	664684.0	3.124643	Y
2	STD010 280-608296/13	1.0	2.490067	50.0	652151.0	2.490067	Y
3	STD020 280-608296/14	2.0	4.484036	50.0	661558.0	2.242018	Y
4	STD050 280-608296/15	5.0	12.17986	50.0	646982.0	2.435972	Y
5	STD10 280-608296/16	10.0	23.95341	50.0	643614.0	2.395341	Y
6	ICIS 280-608296/17	50.0	114.738352	50.0	674207.0	2.294767	Y
7	STD75 280-608296/18	75.0	170.531432	50.0	676022.0	2.273752	Y
8	STD100 280-608296/19	100.0	228.403836	50.0	664493.0	2.284038	Y
9	STD200 280-608296/20	200.0	425.723232	50.0	613150.0	2.128616	Y



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Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

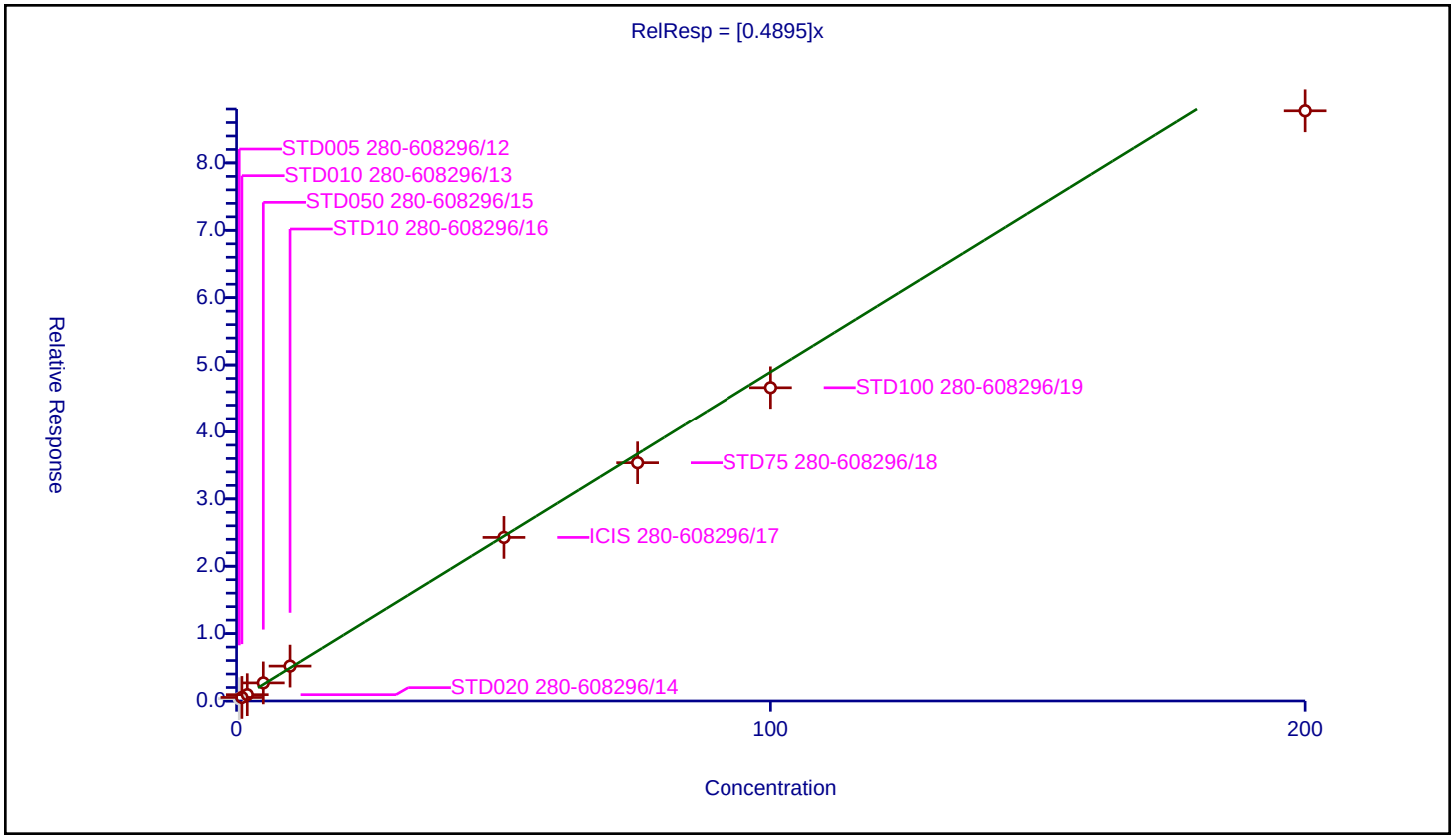
Curve Coefficients

Intercept:	0
Slope:	0.4895

Error Coefficients

Standard Error:	519000
Relative Standard Error:	7.2
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608296/12	0.5	0.348812	50.0	664684.0	0.697625	N
2	STD010 280-608296/13	1.0	0.529939	50.0	652151.0	0.529939	Y
3	STD020 280-608296/14	2.0	0.936955	50.0	661558.0	0.468477	Y
4	STD050 280-608296/15	5.0	2.686783	50.0	646982.0	0.537357	Y
5	STD10 280-608296/16	10.0	5.179502	50.0	643614.0	0.51795	Y
6	ICIS 280-608296/17	50.0	24.27704	50.0	674207.0	0.485541	Y
7	STD75 280-608296/18	75.0	35.367858	50.0	676022.0	0.471571	Y
8	STD100 280-608296/19	100.0	46.62472	50.0	664493.0	0.466247	Y
9	STD200 280-608296/20	200.0	87.738074	50.0	613150.0	0.43869	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 608364

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/12/2023 11:05 Calibration End Date: 04/12/2023 14:51 Calibration ID: 79197

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-608364/12	P00521.D
Level 2	STD010 280-608364/13	P00526.D
Level 3	STD020 280-608364/14	P00527.D
Level 4	STD050 280-608364/15	P00524.D
Level 5	STD10 280-608364/16	P00525.D
Level 6	ICIS 280-608364/17	P00528.D
Level 7	STD75 280-608364/18	P00529.D
Level 8	STD100 280-608364/19	P00530.D
Level 9	STD200 280-608364/20	P00531.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3470 0.2102	0.2328 0.1828	0.2061 0.1882	0.2601 0.2257	0.2508	Lin1	0.0601	0.2080							0.9900		0.9900
Chloromethane	0.4759 0.2242	0.3715 0.2035	0.3143 0.2140	0.2592 0.2372	0.2427	Lin2	0.1313	0.2263			0.1000				0.9940		0.9900
Vinyl chloride	+++++ 0.2622	0.3653 0.2291	0.3338 0.2395	0.3078 0.2754	0.2960	Lin2	0.1166	0.2617							0.9910		0.9900
Bromomethane	+++++ 0.1330	+++++ 0.1056	0.2211 0.1207	0.1555 +++++	0.1620	Lin1	0.2403	0.1159							0.9900		0.9900
Chloroethane	0.2601 0.1660	0.2611 0.1530	0.2141 0.1589	0.1860 0.1823	0.1847	Lin1	0.0627	0.1694							0.9940		0.9900
Dichlorofluoromethane	0.6205 0.3741	0.5058 0.3378	0.4833 0.3495	0.4299 0.3951	0.4141	Lin2	0.1262	0.3805							0.9930		0.9900
Trichlorofluoromethane	0.4644 0.3070	0.3787 0.2647	0.3595 0.2760	0.3711 0.3302	0.3485	Lin1	0.0955	0.3036							0.9910		0.9900
2-Chloroethyl vinyl ether	0.2939 0.1783	0.1898 0.1645	0.1744 0.1726	0.2194 0.1829	0.1970	Lin1	0.0471	0.1768							0.9980		0.9900
Dibromofluoromethane (Surr)	0.2497 0.2454	0.2463 0.2464	0.2487 0.2454	0.2456 0.2461	0.2472	Ave		0.2468				0.6		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2923 0.2920	0.2878 0.2857	0.2957 0.2917	0.2881 0.2906	0.2909	Ave		0.2905				1.0		15.0			
Toluene-d8 (Surr)	4.2711 4.2905	4.2896 4.3397	4.2513 4.2366	4.2610 4.2840	4.2967	Ave		4.2801				0.7		15.0			
4-Bromofluorobenzene (Surr)	1.0986 1.0888	1.1007 1.0782	1.0801 1.0888	1.0837 1.1053	1.0798	Ave		1.0893				0.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608364

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/12/2023 11:05 | Calibration End Date: 04/12/2023 14:51 | Calibration ID: 79197

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-608364/12	P00521.D
Level 2	STD010 280-608364/13	P00526.D
Level 3	STD020 280-608364/14	P00527.D
Level 4	STD050 280-608364/15	P00524.D
Level 5	STD10 280-608364/16	P00525.D
Level 6	ICIS 280-608364/17	P00528.D
Level 7	STD75 280-608364/18	P00529.D
Level 8	STD100 280-608364/19	P00530.D
Level 9	STD200 280-608364/20	P00531.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Lin1	6889 384543	8553 490803	15389 675210	49060 1606027	93426	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloromethane	FB	Lin2	9449 410199	13651 546331	23465 767656	48890 1687671	90393	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Lin2	+++++ 479782	13422 615223	24925 859411	58060 1959367	110255	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Lin1	+++++ 243300	+++++ 283486	16506 433191	29334 +++++	60334	+++++ 50.0	+++++ 75.0	2.00 100	5.00 +++++	10.0
Chloroethane	FB	Lin1	5164 303762	9593 410724	15985 570009	35083 1296936	68819	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Lin2	12320 684439	18585 906935	36086 1254075	81081 2811276	154264	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Lin1	9221 561664	13916 710725	26845 990289	69991 2349622	129821	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Lin1	5836 326315	6974 441666	13025 619178	41390 1301657	73383	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	495807 448906	452455 441103	464290 440143	463315 437719	460455	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	580299 534345	528689 511462	551985 523319	543360 516865	541713	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	2006468 1845826	1856425 1804357	1888652 1815541	1899823 1809949	1878345	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	735170 674114	680228 649309	693287 674358	699290 667481	686262	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 608364

SDG No.:

Instrument ID: VMS_P | GC Column: DB-624 (60 | ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/12/2023 11:05 | Calibration End Date: 04/12/2023 14:51 | Calibration ID: 79197

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00521.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Apr-2023 11:05:30 ALS Bottle#: 4 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD005
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub182

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:03 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 13-Apr-2023 15:52:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1985374	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.278	7.267	0.011	88	469775	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	669169	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	495807	50.0	50.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.524	-0.001	0	580299	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	2006468	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	82	735170	50.0	50.4	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	6889	0.5000	0.5451	
11 Chloromethane	50	1.664	1.664	0.000	97	9449	0.5000	0.4712	
12 Vinyl chloride	62	1.727	1.727	0.000	96	8827	0.5000	0.4038	
14 Bromomethane	94	1.991	1.980	0.011	96	10585	0.5000	0.2266	
15 Chloroethane	64	2.075	2.075	0.000	98	5164	0.5000	0.3977	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	12320	0.5000	0.4837	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	97	9221	0.5000	0.4503	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	5836	0.5000	0.5645	

QC Flag Legend
Processing Flags

Reagents:

Cal Dil Std_00165	Amount Added:	5.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

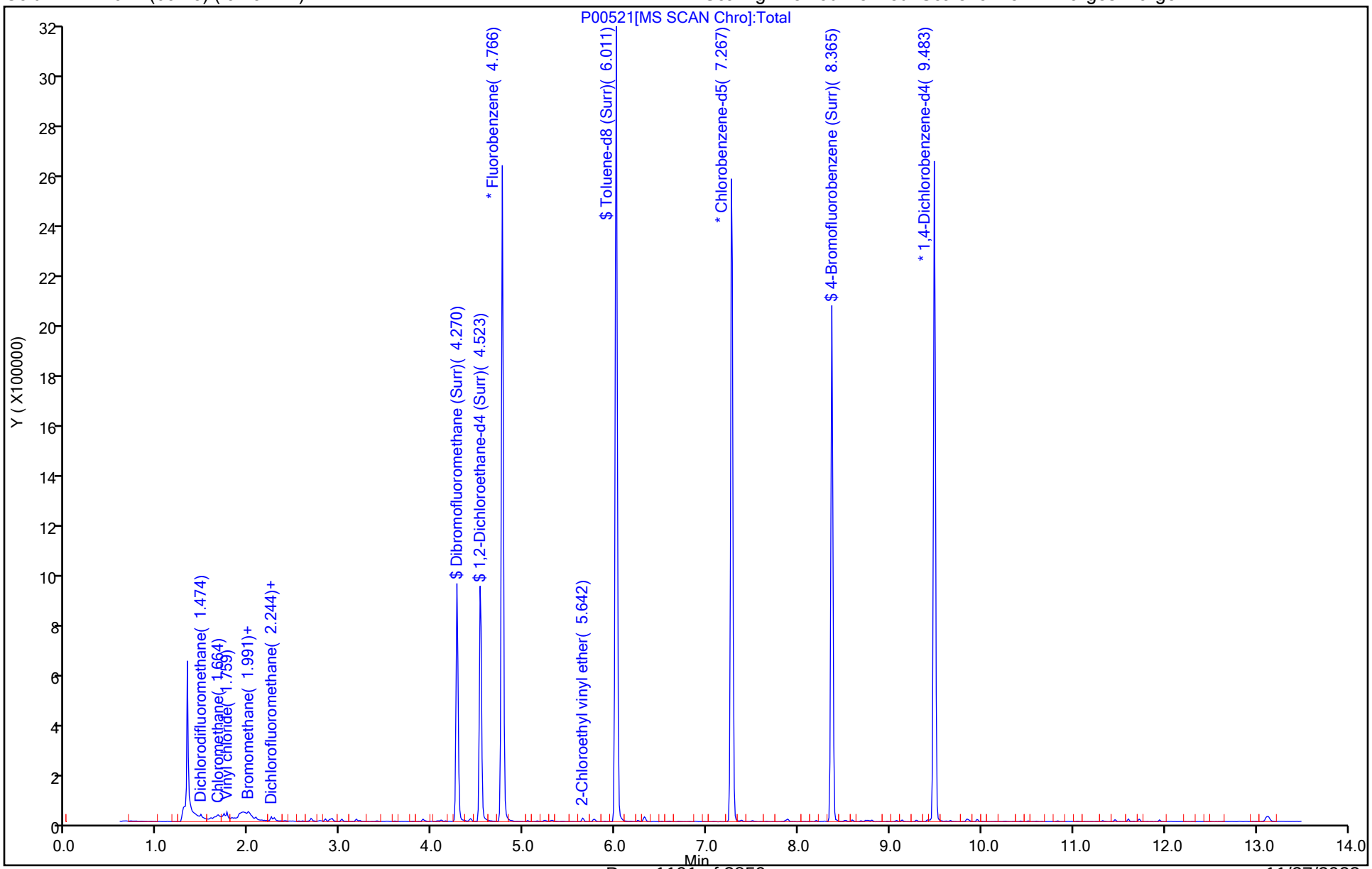
Report Date: 13-Apr-2023 15:58:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00521.D

Injection Date:	12-Apr-2023 11:05:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	STD005			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00526.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Apr-2023 12:58:30 ALS Bottle#: 9 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD010
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub182

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:05 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 13-Apr-2023 15:52:16

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	4.766	4.766	0.000	99	1837276	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	432776	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.484	9.483	0.001	97	617995	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	452455	50.0	49.9	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	528689	50.0	49.5	
$	6 Toluene-d8 (Surr)	98	6.012	6.011	0.001	93	1856425	50.0	50.1	
$	7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	680228	50.0	50.5	
	10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	8553	1.00	0.8300	
	11 Chloromethane	50	1.653	1.664	-0.011	99	13651	1.00	1.06	
	12 Vinyl chloride	62	1.727	1.727	0.000	98	13422	1.00	0.9501	
	14 Bromomethane	94	1.991	1.980	0.011	94	9254	1.00	0.0995	
	15 Chloroethane	64	2.075	2.075	0.000	99	9593	1.00	1.17	
	16 Dichlorofluoromethane	67	2.244	2.244	0.000	96	18585	1.00	1.00	
	17 Trichlorofluoromethane	101	2.276	2.276	0.000	98	13916	1.00	0.9327	
	76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	6974	1.00	0.8067	

QC Flag Legend
Processing Flags

Reagents:

Cal Dil Std_00165	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

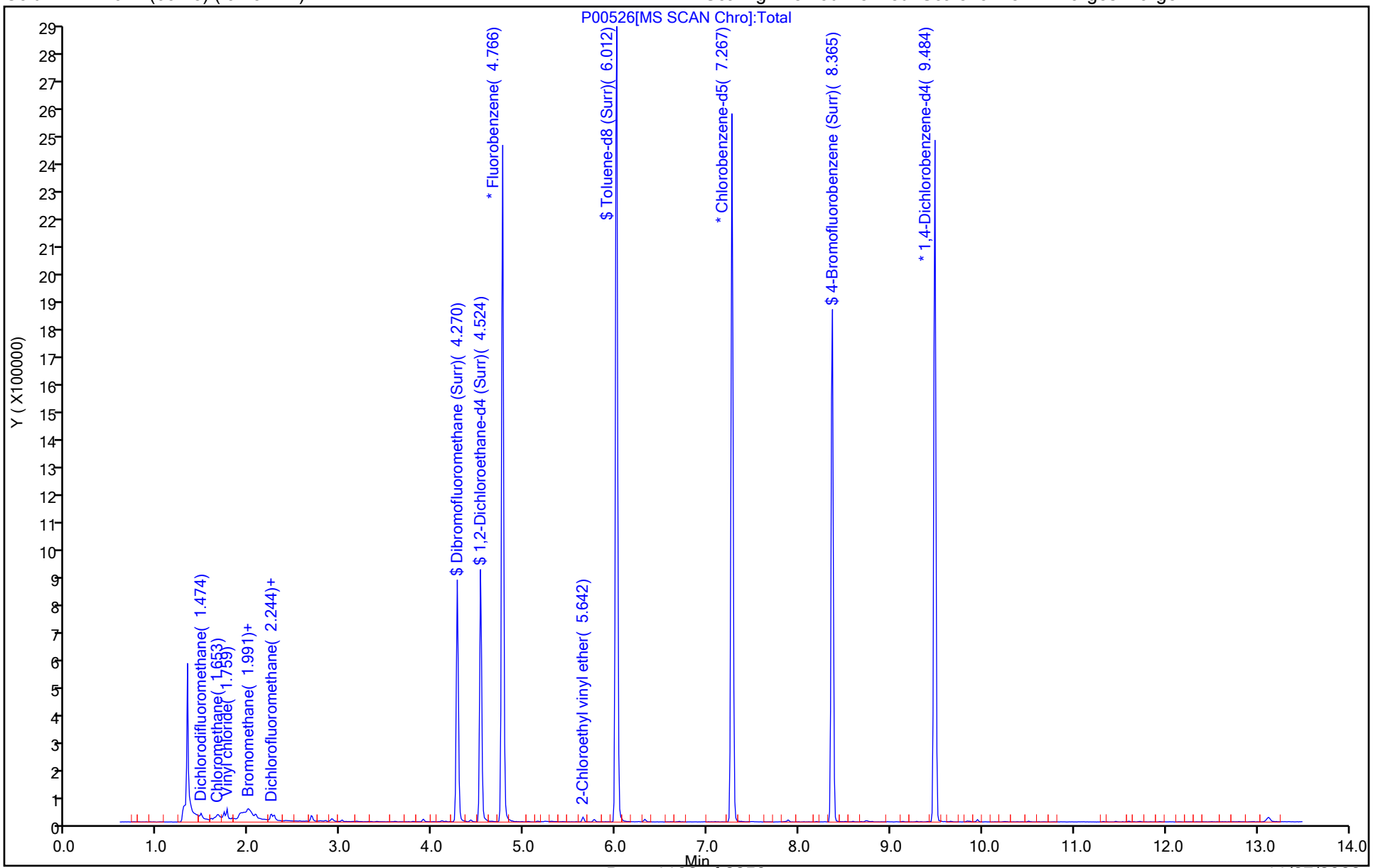
Report Date: 13-Apr-2023 15:58:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00526.D

Injection Date:	12-Apr-2023 12:58:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	STD010			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00527.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Apr-2023 13:21:30 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD020
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub182

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:06 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 13-Apr-2023 15:52:24

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	4.766	4.766	0.000	98	1866651	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	444257	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	641869	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	464290	50.0	50.4	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	551985	50.0	50.9	
$	6 Toluene-d8 (Surr)	98	6.012	6.011	0.001	93	1888652	50.0	49.7	
$	7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	693287	50.0	49.6	
	10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	15389	2.00	1.69	
	11 Chloromethane	50	1.664	1.664	0.000	99	23465	2.00	2.20	
	12 Vinyl chloride	62	1.727	1.727	0.000	98	24925	2.00	2.11	
	14 Bromomethane	94	1.980	1.980	0.000	93	16506	2.00	1.74	
	15 Chloroethane	64	2.075	2.075	0.000	99	15985	2.00	2.16	
	16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	36086	2.00	2.21	
	17 Trichlorofluoromethane	101	2.276	2.276	0.000	96	26845	2.00	2.05	
	76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	13025	2.00	1.71	

QC Flag Legend
Processing Flags

Reagents:
Cal Dil Std_00165 Amount Added: 20.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

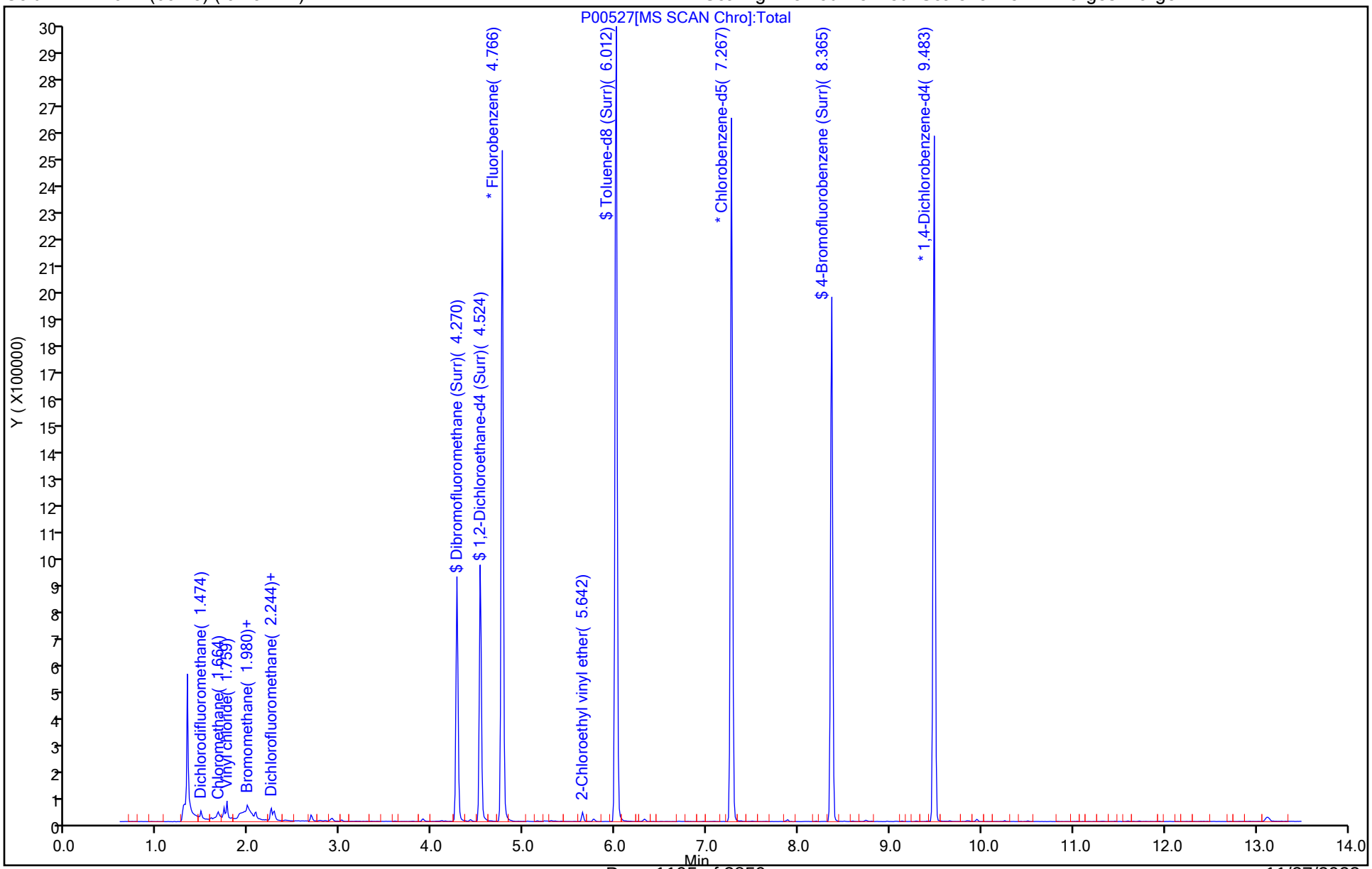
Report Date: 13-Apr-2023 15:58:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00527.D

Injection Date:	12-Apr-2023 13:21:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	STD020			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00524.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Apr-2023 12:13:30 ALS Bottle#: 7 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD050
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub182

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:08 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 12-Apr-2023 12:36:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1886233	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	445858	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	645302	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	463315	50.0	49.8	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	543360	50.0	49.6	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	1899823	50.0	49.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	84	699290	50.0	49.7	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	49060	5.00	5.96	
11 Chloromethane	50	1.664	1.664	0.000	99	48890	5.00	5.15	
12 Vinyl chloride	62	1.727	1.727	0.000	98	58060	5.00	5.44	
14 Bromomethane	94	1.991	1.980	0.011	91	29334	5.00	4.64	
15 Chloroethane	64	2.075	2.075	0.000	100	35083	5.00	5.12	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	81081	5.00	5.32	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	99	69991	5.00	5.80	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	41390	5.00	5.94	

QC Flag Legend
Processing Flags

Reagents:

MV-Gas B_00132	Amount Added:	1.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 13-Apr-2023 15:58:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00524.D

Injection Date: 12-Apr-2023 12:13:30 Instrument ID: VMS_P Operator ID: COULTERD

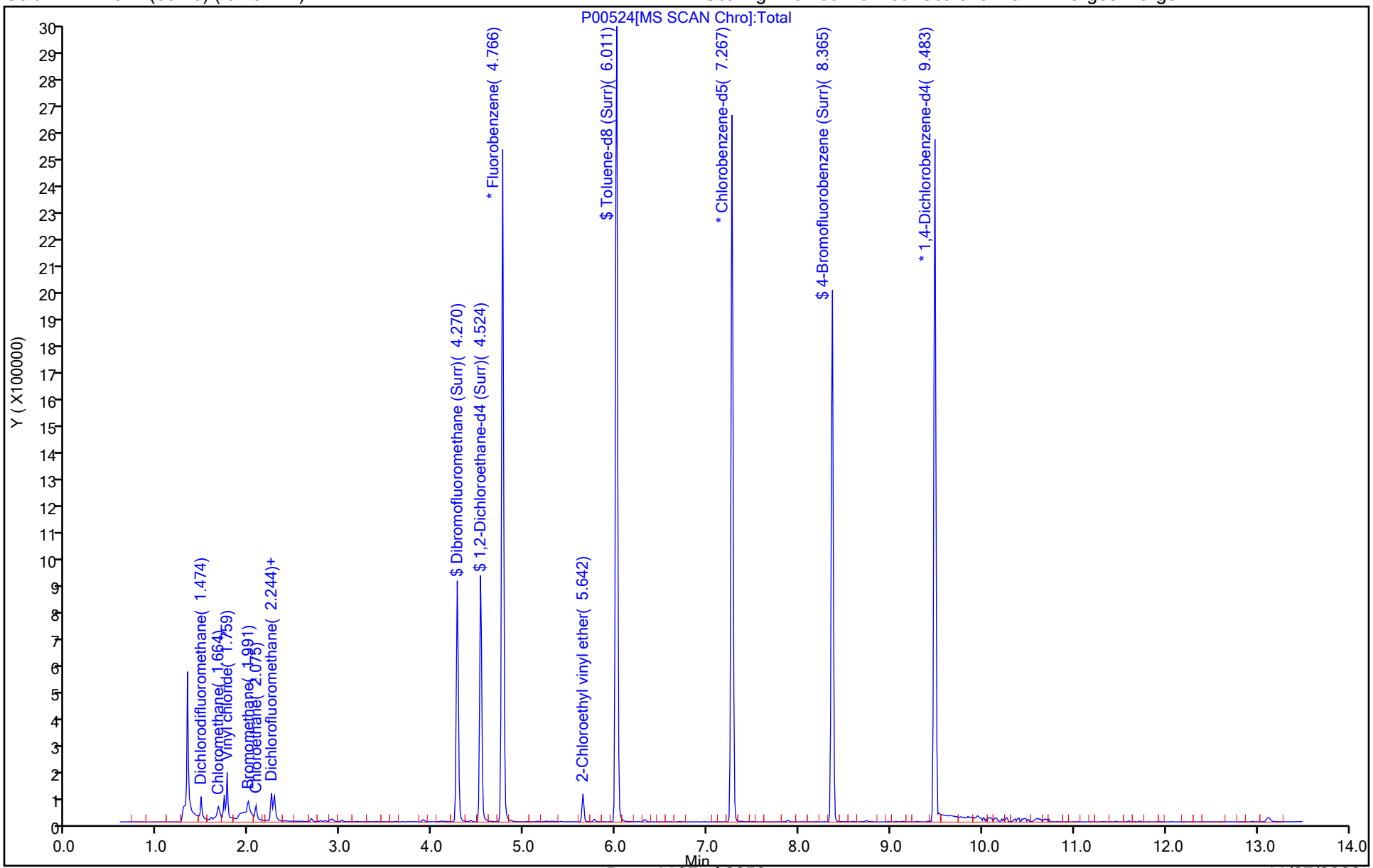
Lims ID: STD050 Worklist Smp#: 15

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 7

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00525.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 12-Apr-2023 12:36:30 ALS Bottle#: 8 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub182

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:09 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 12-Apr-2023 13:19:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1862499	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	437158	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	635522	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	460455	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	541713	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	1878345	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	686262	50.0	49.6	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	93426	10.0	11.8	
11 Chloromethane	50	1.664	1.664	0.000	99	90393	10.0	10.1	
12 Vinyl chloride	62	1.727	1.727	0.000	97	110255	10.0	10.9	
14 Bromomethane	94	1.991	1.991	0.000	91	60334	10.0	11.9	
15 Chloroethane	64	2.075	2.075	0.000	100	68819	10.0	10.5	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	154264	10.0	10.6	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	99	129821	10.0	11.2	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	73383	10.0	10.9	

QC Flag Legend
Processing Flags

Reagents:

MV-Gas B_00132	Amount Added:	2.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

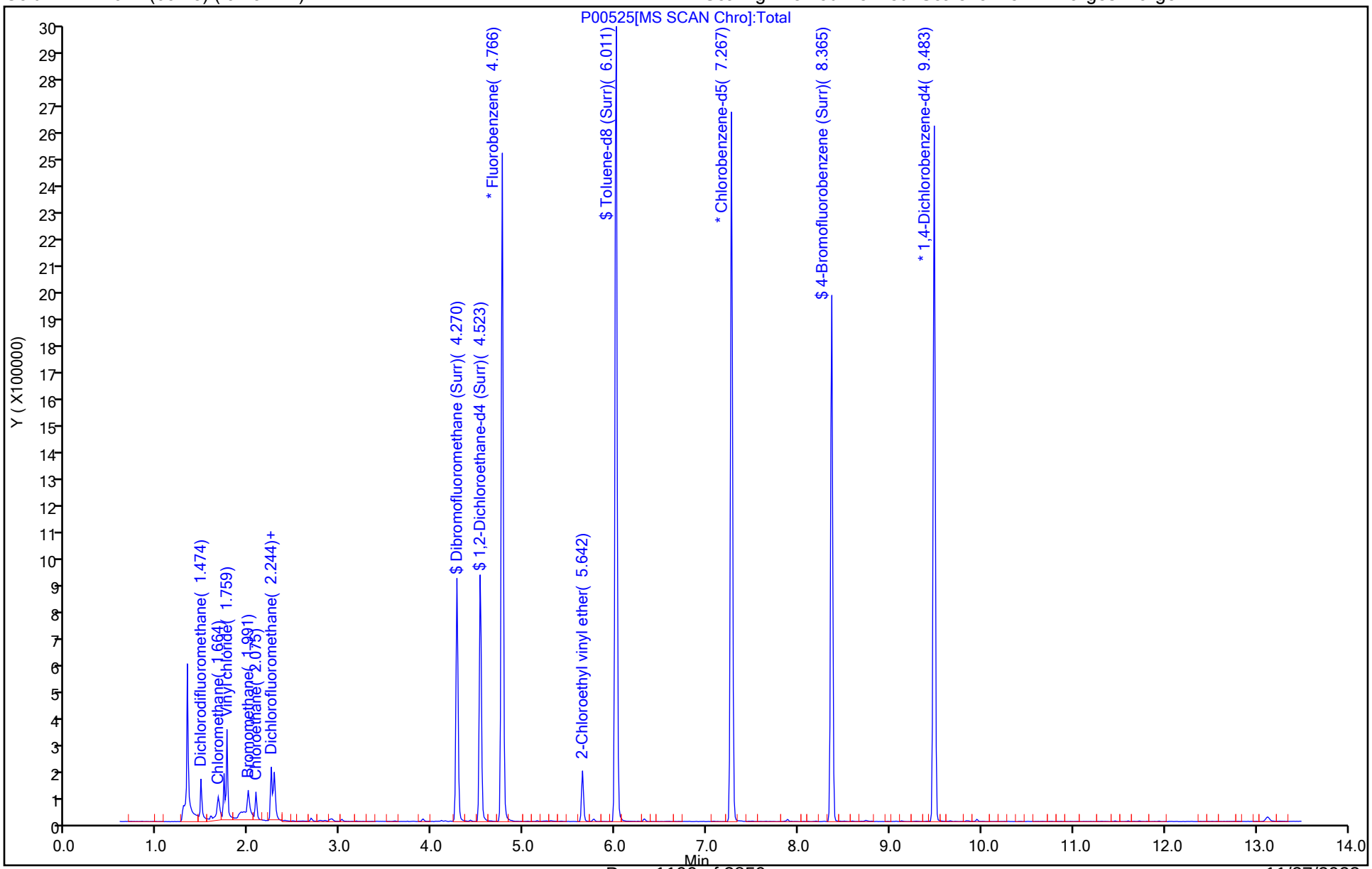
Report Date: 13-Apr-2023 15:58:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00525.D

Injection Date:	12-Apr-2023 12:36:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	STD10			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00528.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 12-Apr-2023 13:43:30 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub182

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:10 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 12-Apr-2023 15:33:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1829654	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	430210	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.484	9.484	0.000	97	619154	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	448906	50.0	49.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	534345	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.012	6.012	0.000	93	1845826	50.0	50.1	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	84	674114	50.0	50.0	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	384543	50.0	50.2	
11 Chloromethane	50	1.664	1.664	0.000	99	410199	50.0	48.9	
12 Vinyl chloride	62	1.727	1.727	0.000	98	479782	50.0	49.7	
14 Bromomethane	94	1.980	1.980	0.000	91	243300	50.0	55.3	
15 Chloroethane	64	2.075	2.075	0.000	100	303762	50.0	48.6	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	684439	50.0	48.8	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	99	561664	50.0	50.2	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	326315	50.0	50.2	

QC Flag Legend
Processing Flags

Reagents:
MV-Gas B_00132 Amount Added: 10.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 13-Apr-2023 15:58:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00528.D

Injection Date: 12-Apr-2023 13:43:30 Instrument ID: VMS_P Operator ID: COULTERD

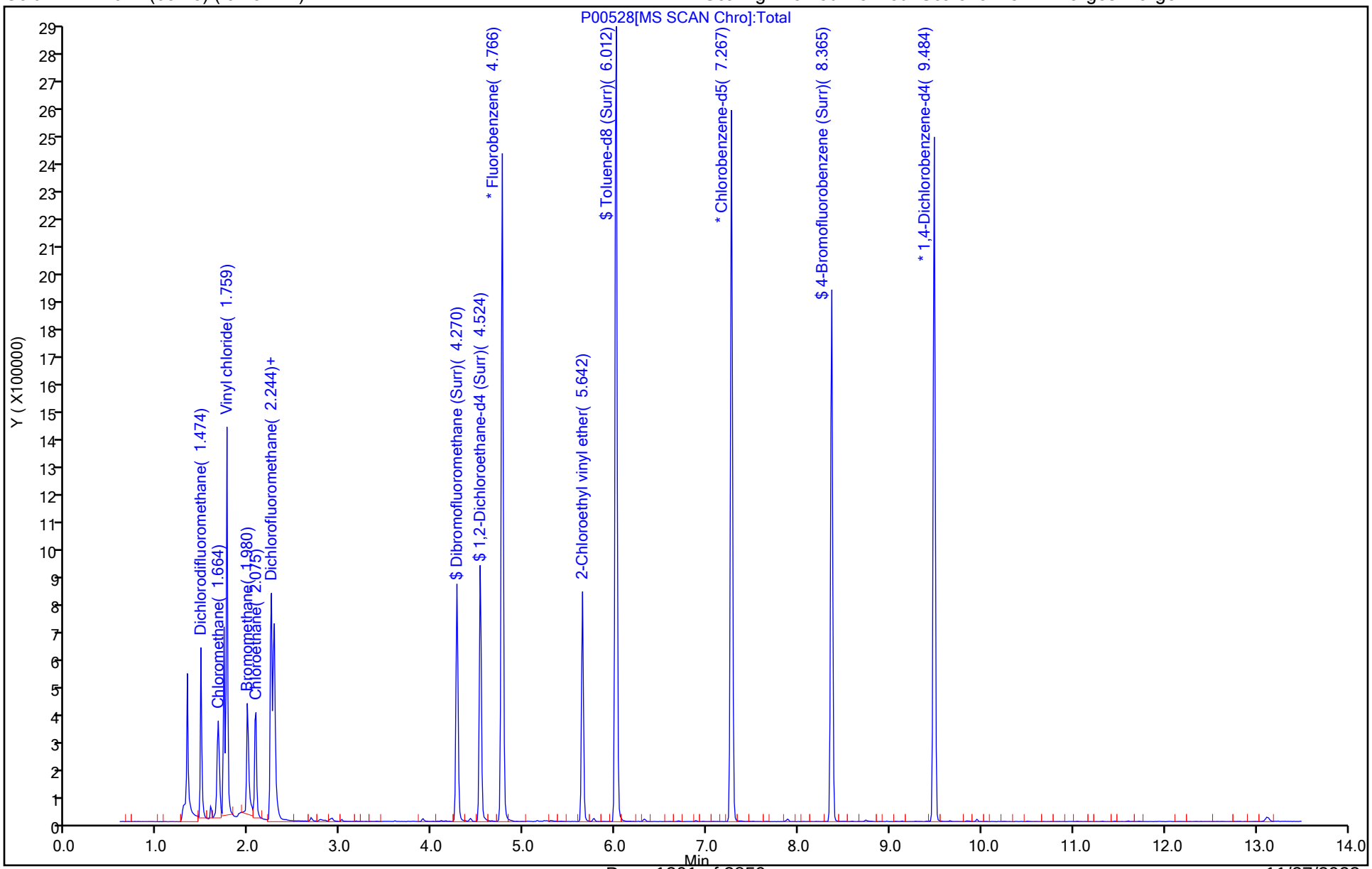
Lims ID: ICIS Worklist Smp#: 17

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 11

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00529.D
Lims ID: STD75
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 12-Apr-2023 14:06:30 ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD75
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub182

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:12 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 13-Apr-2023 10:10:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1790019	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	415779	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.484	-0.001	97	602197	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	441103	50.0	49.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	511462	50.0	49.2	
$ 6 Toluene-d8 (Surr)	98	6.011	6.012	-0.001	93	1804357	50.0	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	649309	50.0	49.5	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	490803	75.0	65.6	
11 Chloromethane	50	1.664	1.664	0.000	99	546331	75.0	66.8	
12 Vinyl chloride	62	1.727	1.727	0.000	97	615223	75.0	65.2	
14 Bromomethane	94	1.980	1.980	0.000	91	283486	75.0	66.3	
15 Chloroethane	64	2.065	2.075	-0.010	100	410724	75.0	67.3	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	906935	75.0	66.3	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	99	710725	75.0	65.1	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	441666	75.0	69.5	

QC Flag Legend
Processing Flags

Reagents:
MV-Gas B_00132 Amount Added: 15.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

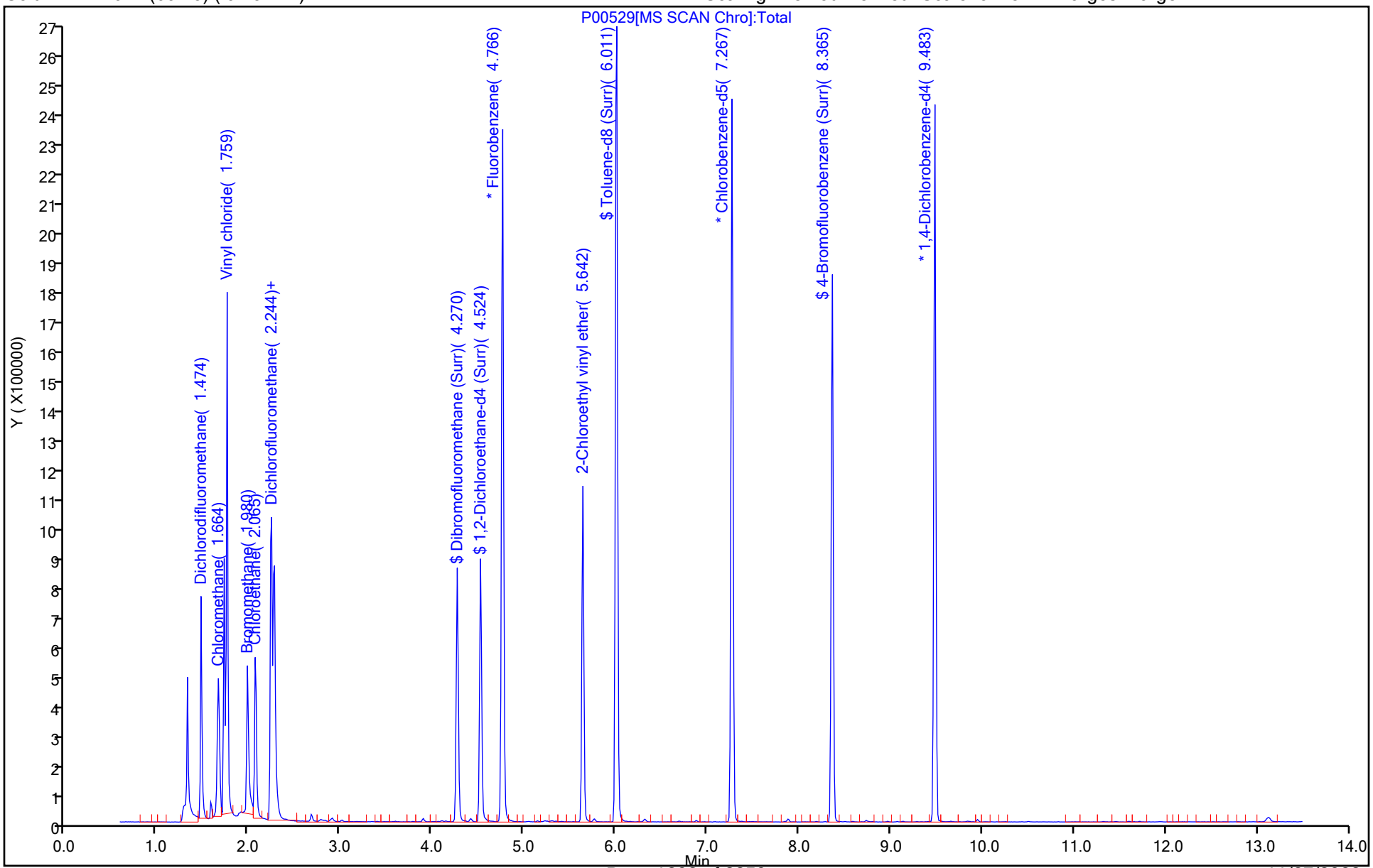
Report Date: 13-Apr-2023 15:58:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00529.D

Injection Date:	12-Apr-2023 14:06:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	STD75			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00530.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 12-Apr-2023 14:28:30 ALS Bottle#: 13 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub182

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:13 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 13-Apr-2023 10:10:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1793869	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	428537	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.484	-0.001	97	619336	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	440143	50.0	49.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.524	-0.001	0	523319	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.011	6.012	-0.001	93	1815541	50.0	49.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	674358	50.0	50.0	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	675210	100.0	90.2	
11 Chloromethane	50	1.664	1.664	0.000	99	767656	100.0	94.0	
12 Vinyl chloride	62	1.727	1.727	0.000	98	859411	100.0	91.1	
14 Bromomethane	94	1.980	1.980	0.000	91	433191	100.0	102.1	
15 Chloroethane	64	2.065	2.075	-0.010	100	570009	100.0	93.4	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	1254075	100.0	91.5	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	98	990289	100.0	90.6	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	619178	100.0	97.3	

QC Flag Legend
Processing Flags

Reagents:

MV-Gas B_00132 Amount Added: 20.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

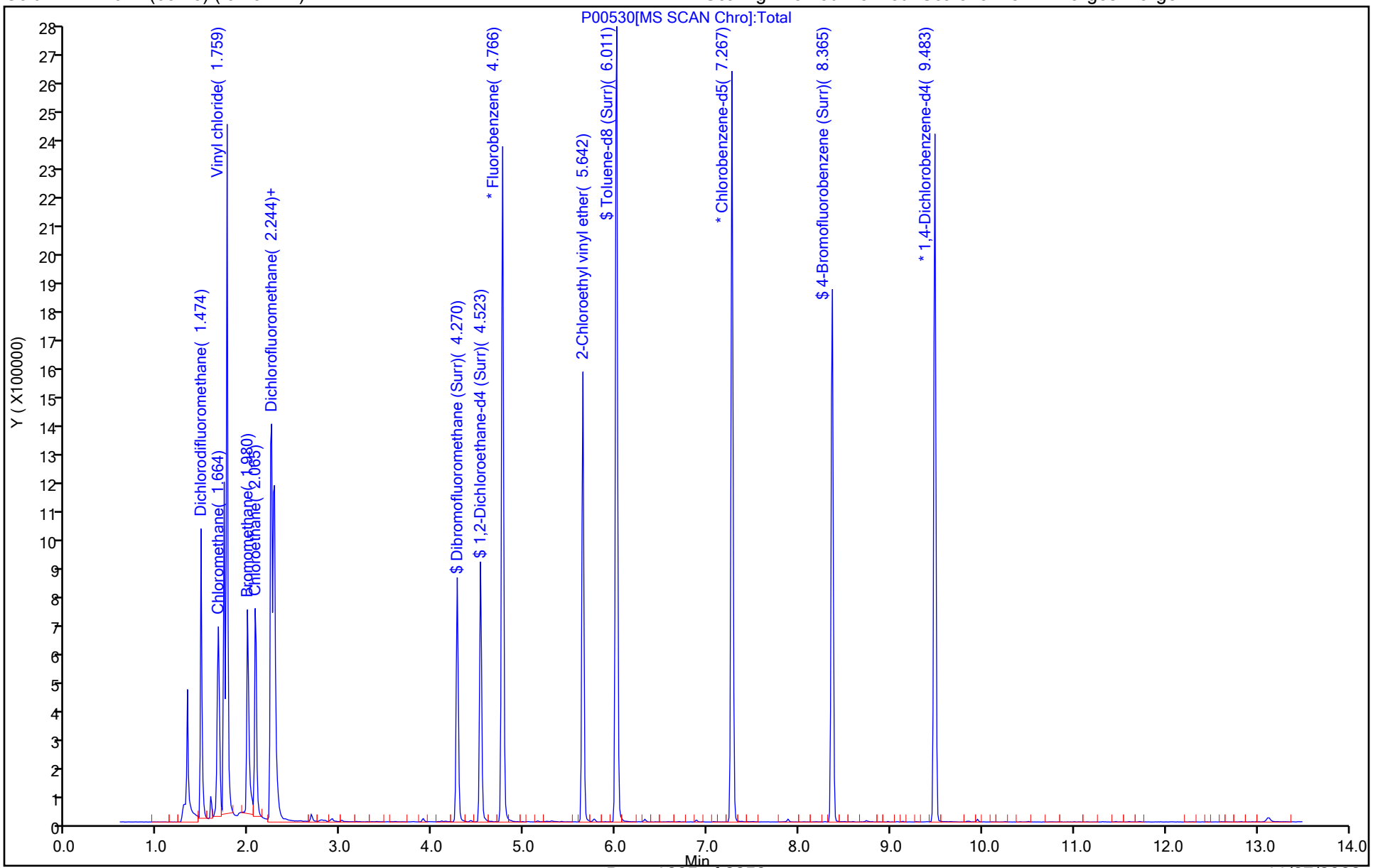
Report Date: 13-Apr-2023 15:58:13 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00530.D

Injection Date:	12-Apr-2023 14:28:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	STD100			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 12-Apr-2023 14:51:30 ALS Bottle#: 14 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub182

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:14 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

First Level Reviewer: RWB2 Date: 12-Apr-2023 15:34:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1778821	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	422488	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.484	9.484	0.000	97	603889	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	437719	50.0	49.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	516865	50.0	50.0	
$ 6 Toluene-d8 (Surr)	98	6.012	6.012	0.000	93	1809949	50.0	50.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	84	667481	50.0	50.7	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	100	1606027	200.0	216.7	
11 Chloromethane	50	1.653	1.664	-0.011	99	1687671	200.0	209.0	
12 Vinyl chloride	62	1.727	1.727	0.000	98	1959367	200.0	210.0	
14 Bromomethane	94	1.980	1.980	0.000	91	667923	200.0	160.0	
15 Chloroethane	64	2.065	2.075	-0.010	100	1296936	200.0	214.8	
16 Dichlorofluoromethane	67	2.234	2.244	-0.010	97	2811276	200.0	207.4	
17 Trichlorofluoromethane	101	2.265	2.276	-0.011	99	2349622	200.0	217.2	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	92	1301657	200.0	206.6	

QC Flag Legend
Processing Flags

Reagents:

MV-Gas B_00132	Amount Added: 40.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

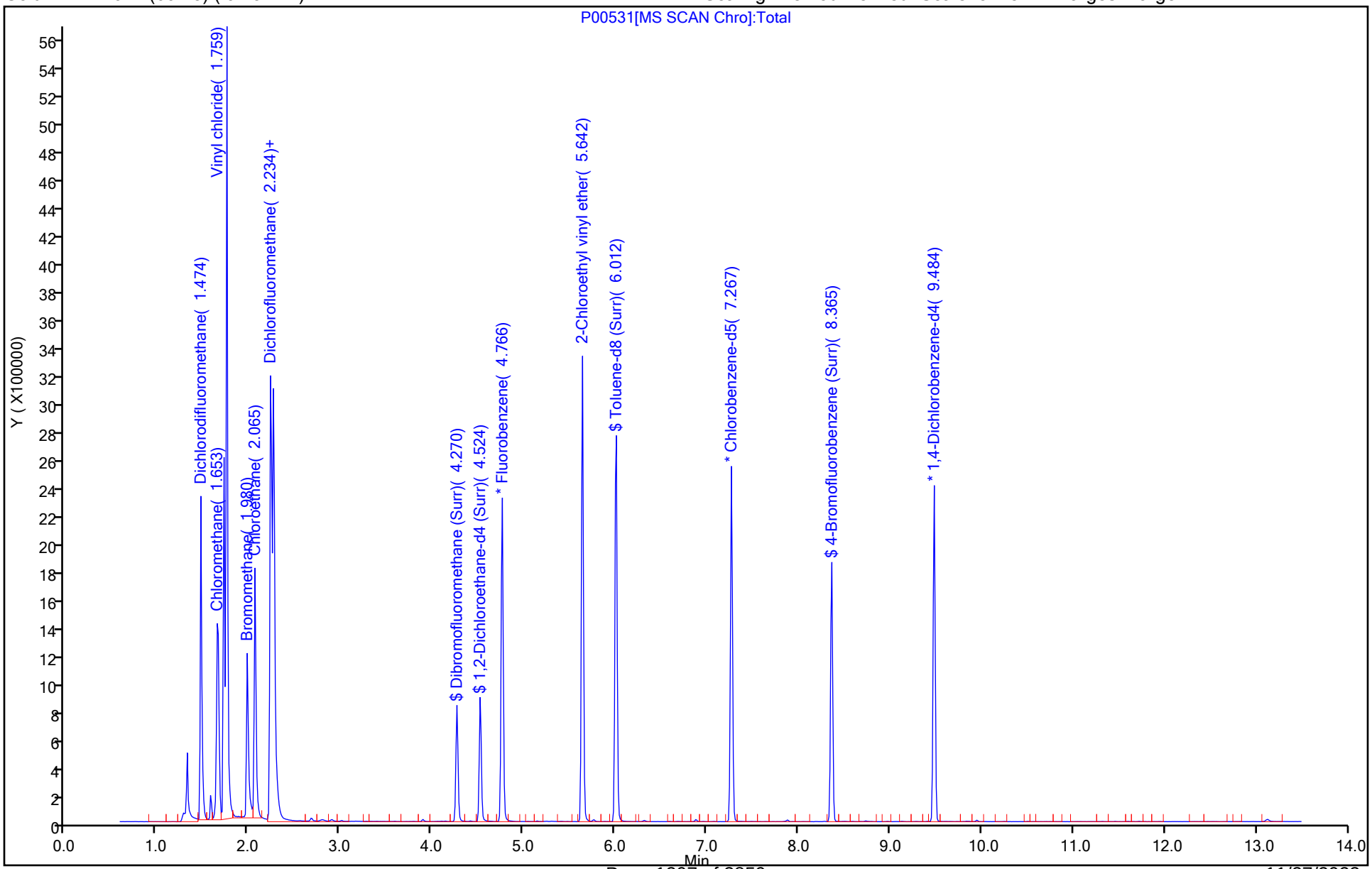
Report Date: 13-Apr-2023 15:58:15 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Injection Date:	12-Apr-2023 14:51:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	STD200			Worklist Smp#:	20
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Dichlorodifluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

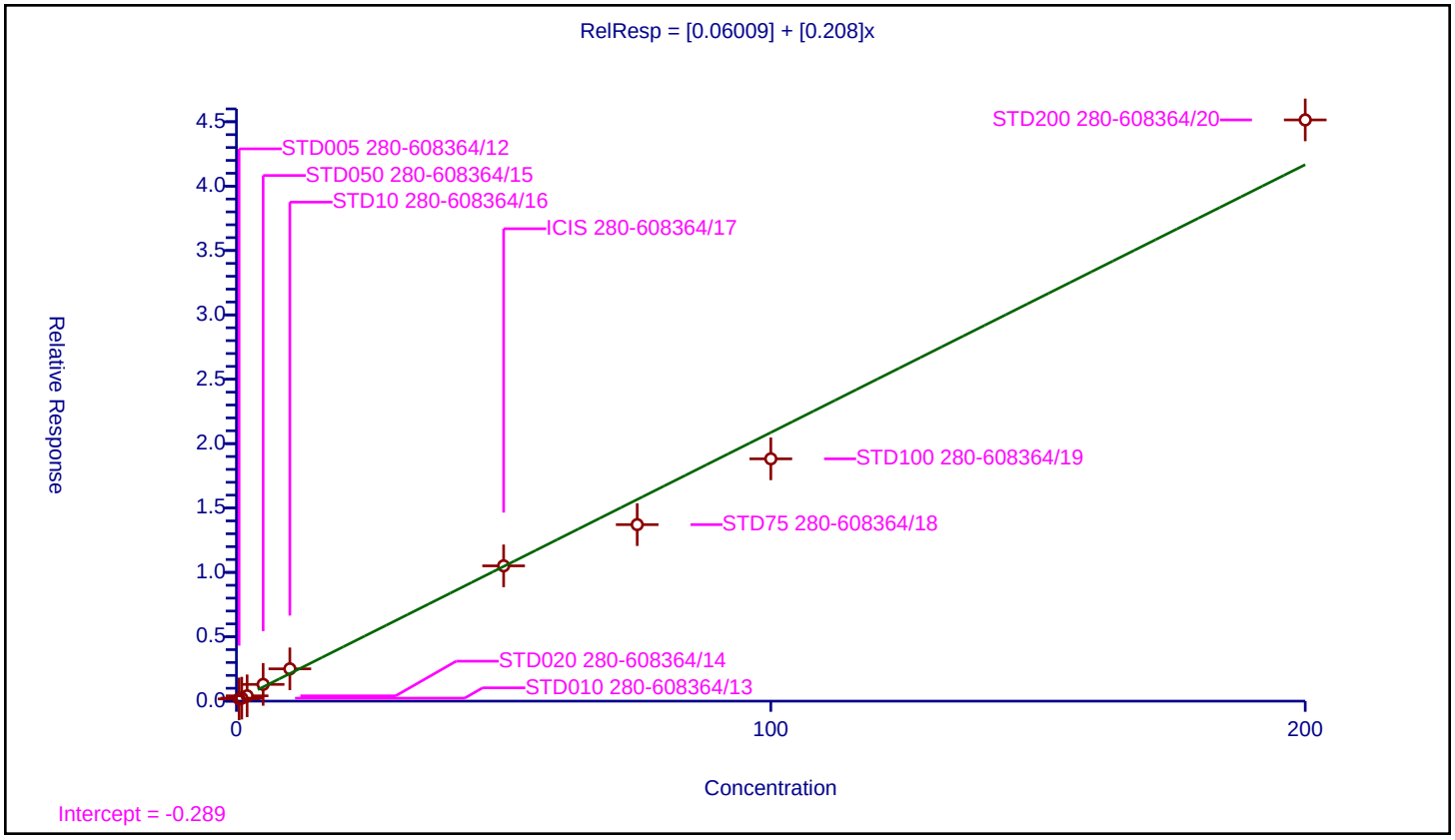
Curve Coefficients

Intercept:	0.06009
Slope:	0.208

Error Coefficients

Standard Error:	701000
Relative Standard Error:	15.2
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	0.5	0.173494	50.0	1985374.0	0.346988	Y
2	STD010 280-608364/13	1.0	0.232763	50.0	1837276.0	0.232763	Y
3	STD020 280-608364/14	2.0	0.412209	50.0	1866651.0	0.206104	Y
4	STD050 280-608364/15	5.0	1.300476	50.0	1886233.0	0.260095	Y
5	STD10 280-608364/16	10.0	2.508082	50.0	1862499.0	0.250808	Y
6	ICIS 280-608364/17	50.0	10.508626	50.0	1829654.0	0.210173	Y
7	STD75 280-608364/18	75.0	13.709435	50.0	1790019.0	0.182792	Y
8	STD100 280-608364/19	100.0	18.819936	50.0	1793869.0	0.188199	Y
9	STD200 280-608364/20	200.0	45.143019	50.0	1778821.0	0.225715	Y



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Calibration / Chloromethane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

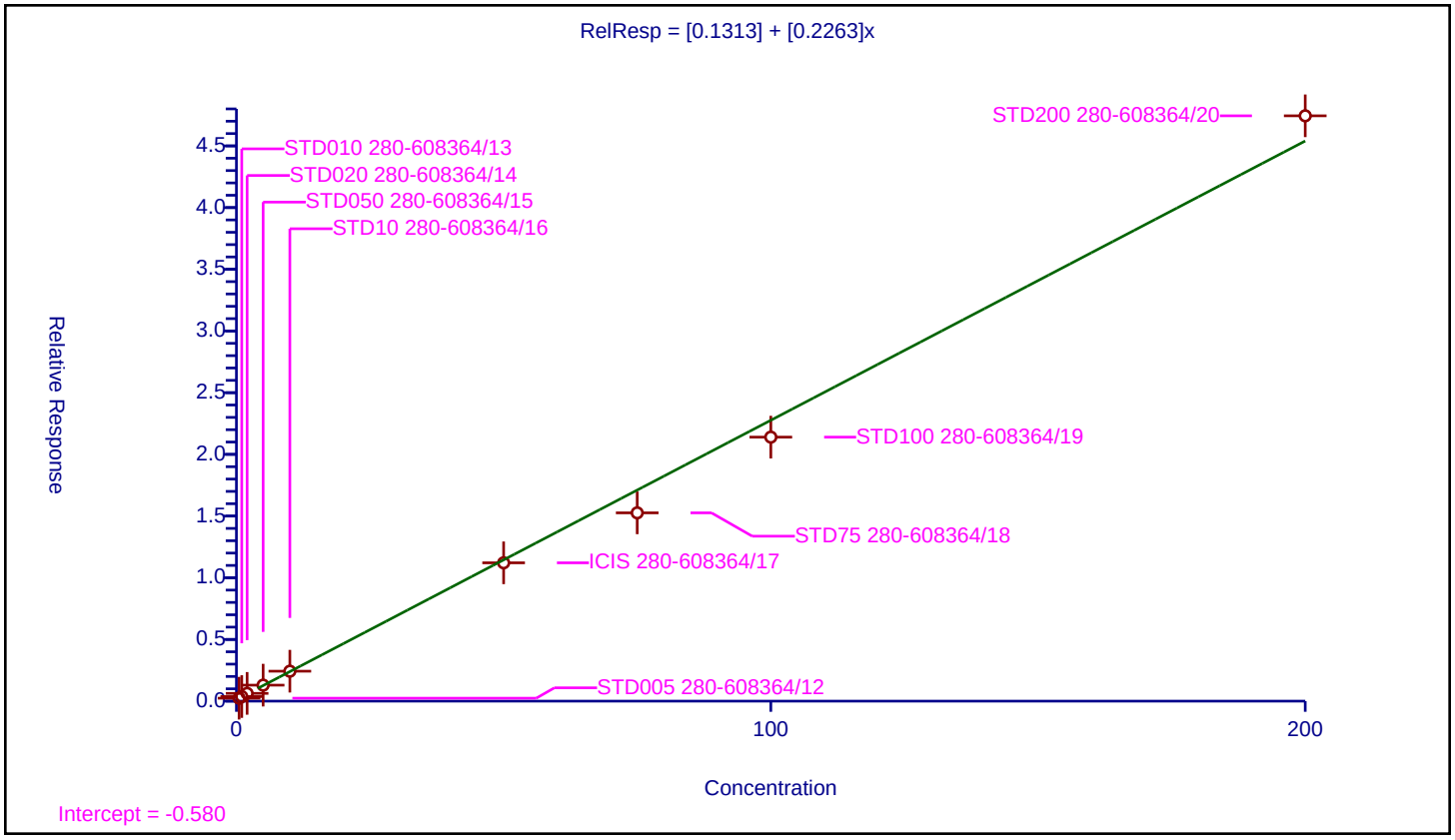
Curve Coefficients

Intercept:	0.1313
Slope:	0.2263

Error Coefficients

Standard Error:	748000
Relative Standard Error:	7.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	0.5	0.237965	50.0	1985374.0	0.47593	Y
2	STD010 280-608364/13	1.0	0.371501	50.0	1837276.0	0.371501	Y
3	STD020 280-608364/14	2.0	0.628532	50.0	1866651.0	0.314266	Y
4	STD050 280-608364/15	5.0	1.295969	50.0	1886233.0	0.259194	Y
5	STD10 280-608364/16	10.0	2.426659	50.0	1862499.0	0.242666	Y
6	ICIS 280-608364/17	50.0	11.209742	50.0	1829654.0	0.224195	Y
7	STD75 280-608364/18	75.0	15.26048	50.0	1790019.0	0.203473	Y
8	STD100 280-608364/19	100.0	21.396657	50.0	1793869.0	0.213967	Y
9	STD200 280-608364/20	200.0	47.43791	50.0	1778821.0	0.23719	Y



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Calibration / Vinyl chloride

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

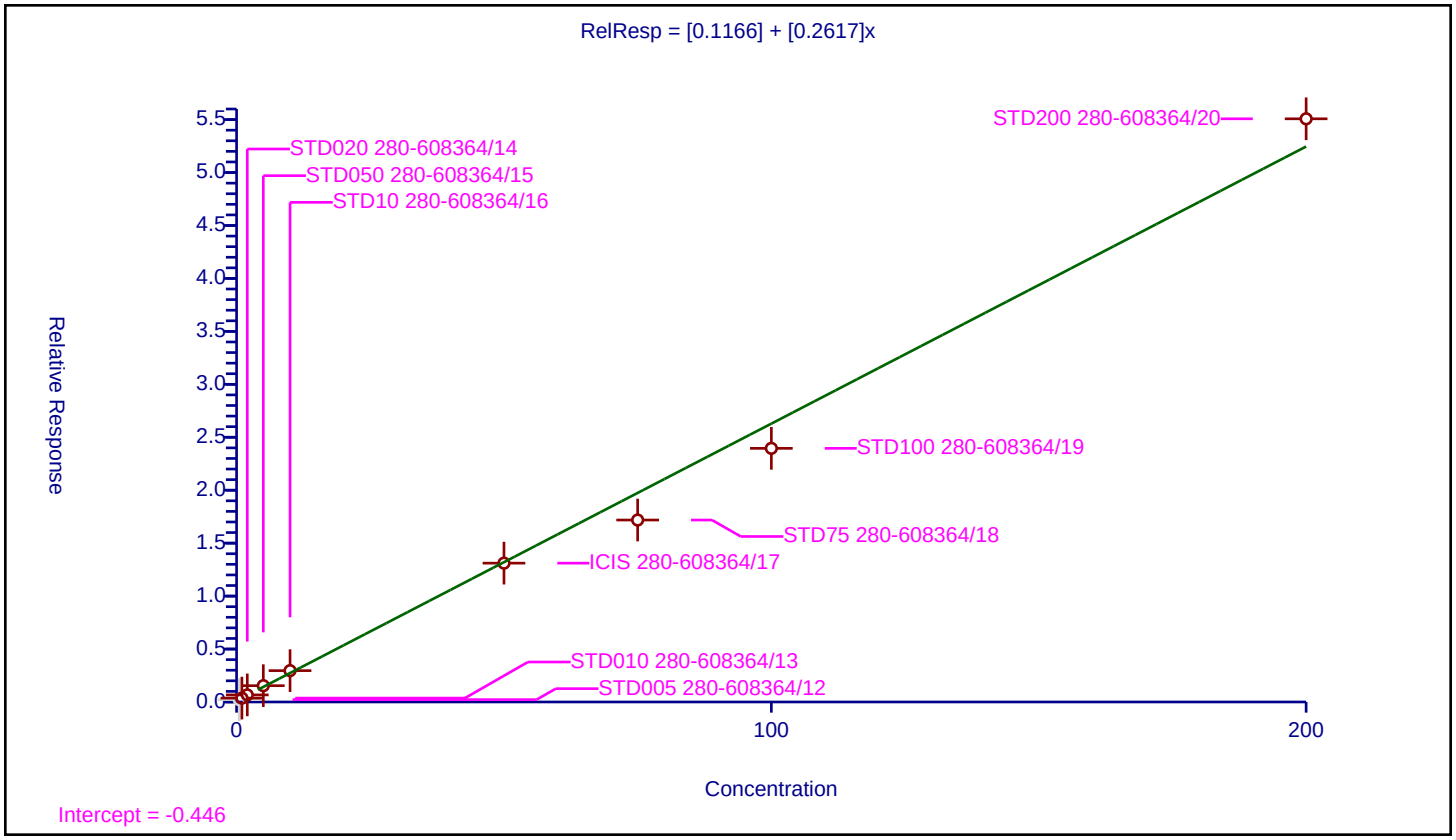
Curve Coefficients

Intercept:	0.1166
Slope:	0.2617

Error Coefficients

Standard Error:	931000
Relative Standard Error:	8.9
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	0.5	0.222301	50.0	1985374.0	0.444601	N
2	STD010 280-608364/13	1.0	0.365269	50.0	1837276.0	0.365269	Y
3	STD020 280-608364/14	2.0	0.66764	50.0	1866651.0	0.33382	Y
4	STD050 280-608364/15	5.0	1.539046	50.0	1886233.0	0.307809	Y
5	STD10 280-608364/16	10.0	2.959867	50.0	1862499.0	0.295987	Y
6	ICIS 280-608364/17	50.0	13.111277	50.0	1829654.0	0.262226	Y
7	STD75 280-608364/18	75.0	17.184818	50.0	1790019.0	0.229131	Y
8	STD100 280-608364/19	100.0	23.954118	50.0	1793869.0	0.239541	Y
9	STD200 280-608364/20	200.0	55.074878	50.0	1778821.0	0.275374	Y



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Calibration / Bromomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

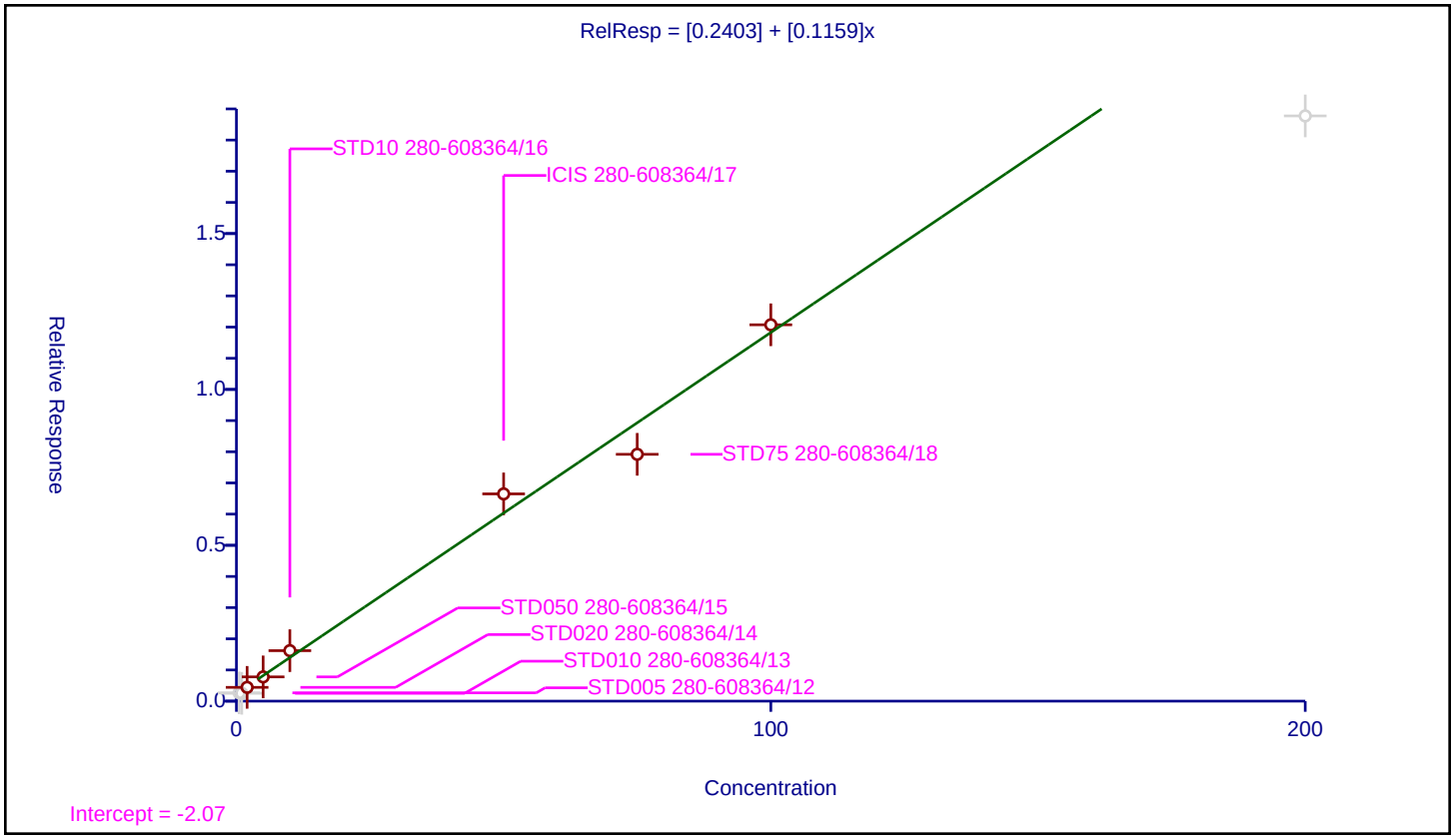
Curve Coefficients

Intercept:	0.2403
Slope:	0.1159

Error Coefficients

Standard Error:	288000
Relative Standard Error:	14.5
Correlation Coefficient:	0.985
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	0.5	0.266574	50.0	1985374.0	0.533149	N
2	STD010 280-608364/13	1.0	0.25184	50.0	1837276.0	0.25184	N
3	STD020 280-608364/14	2.0	0.442129	50.0	1866651.0	0.221064	Y
4	STD050 280-608364/15	5.0	0.777582	50.0	1886233.0	0.155516	Y
5	STD10 280-608364/16	10.0	1.619706	50.0	1862499.0	0.161971	Y
6	ICIS 280-608364/17	50.0	6.648798	50.0	1829654.0	0.132976	Y
7	STD75 280-608364/18	75.0	7.918519	50.0	1790019.0	0.10558	Y
8	STD100 280-608364/19	100.0	12.074209	50.0	1793869.0	0.120742	Y
9	STD200 280-608364/20	200.0	18.774317	50.0	1778821.0	0.093872	N



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Calibration / Chloroethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

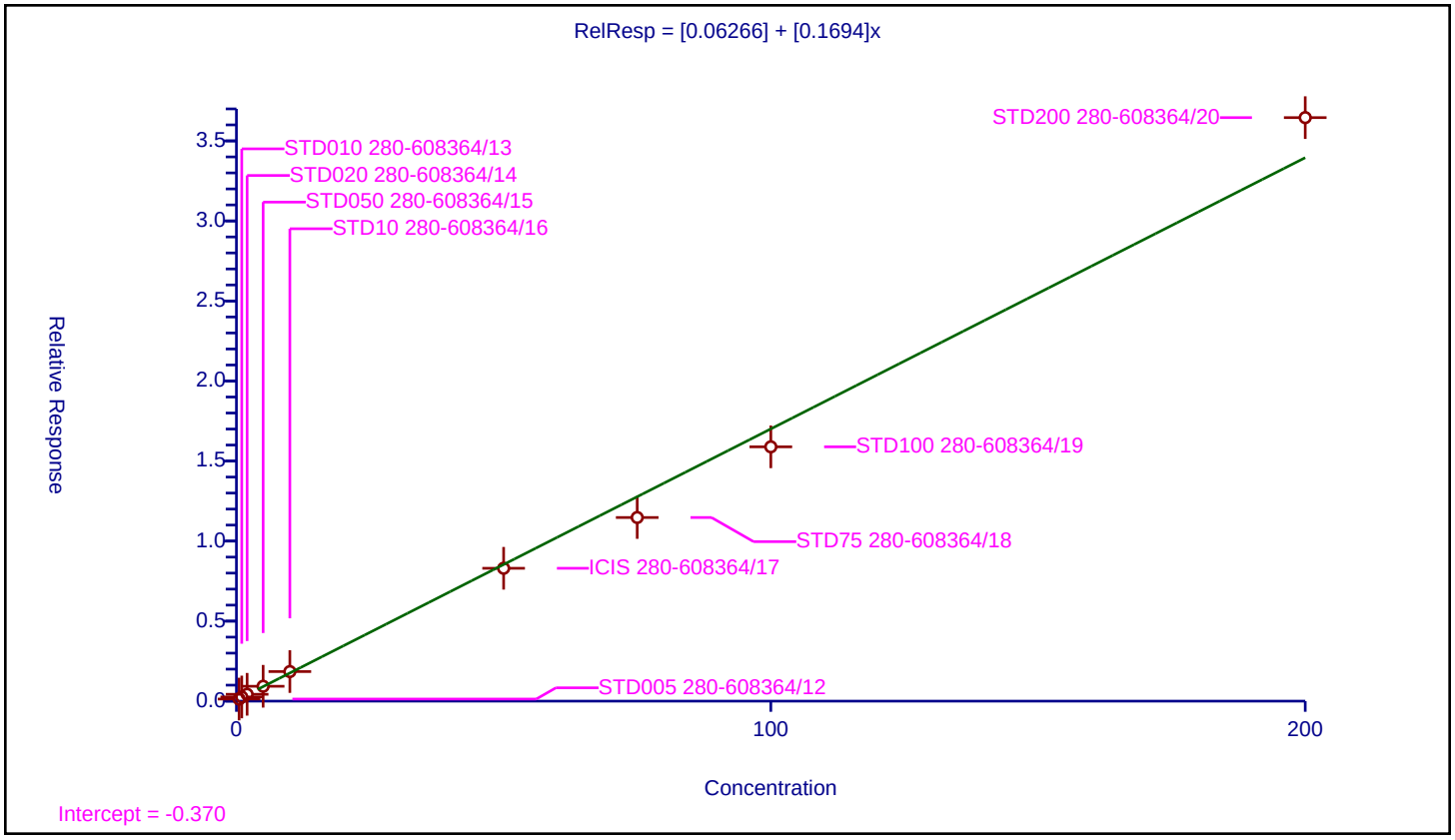
Curve Coefficients

Intercept:	0.06266
Slope:	0.1694

Error Coefficients

Standard Error:	570000
Relative Standard Error:	12.1
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	0.5	0.130051	50.0	1985374.0	0.260102	Y
2	STD010 280-608364/13	1.0	0.261066	50.0	1837276.0	0.261066	Y
3	STD020 280-608364/14	2.0	0.428173	50.0	1866651.0	0.214087	Y
4	STD050 280-608364/15	5.0	0.929975	50.0	1886233.0	0.185995	Y
5	STD10 280-608364/16	10.0	1.847491	50.0	1862499.0	0.184749	Y
6	ICIS 280-608364/17	50.0	8.301078	50.0	1829654.0	0.166022	Y
7	STD75 280-608364/18	75.0	11.472616	50.0	1790019.0	0.152968	Y
8	STD100 280-608364/19	100.0	15.887699	50.0	1793869.0	0.158877	Y
9	STD200 280-608364/20	200.0	36.454933	50.0	1778821.0	0.182275	Y



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Calibration / Dichlorofluoromethane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

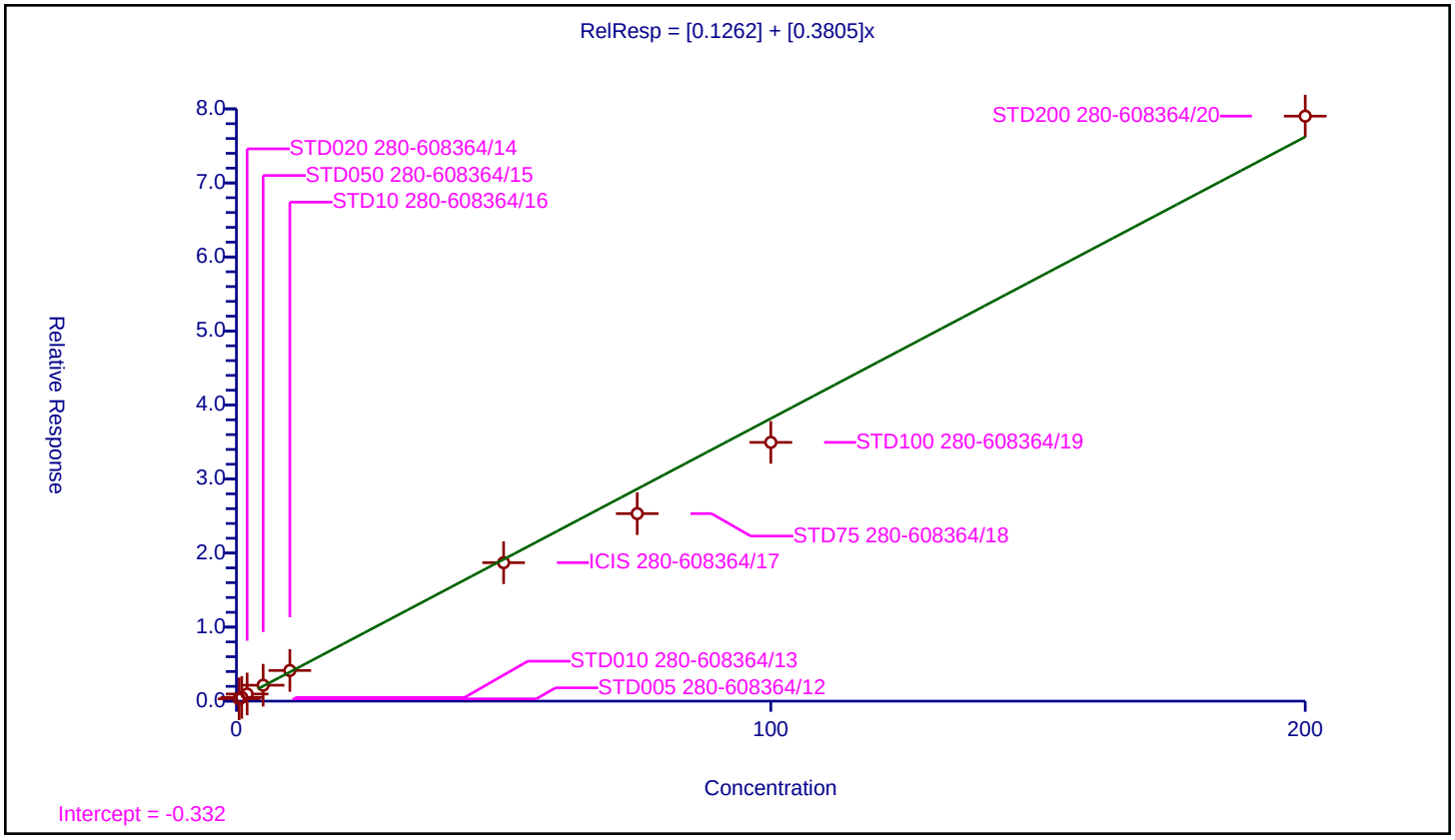
Curve Coefficients

Intercept:	0.1262
Slope:	0.3805

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	7.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	0.5	0.310269	50.0	1985374.0	0.620538	Y
2	STD010 280-608364/13	1.0	0.505776	50.0	1837276.0	0.505776	Y
3	STD020 280-608364/14	2.0	0.966597	50.0	1866651.0	0.483299	Y
4	STD050 280-608364/15	5.0	2.149284	50.0	1886233.0	0.429857	Y
5	STD10 280-608364/16	10.0	4.141318	50.0	1862499.0	0.414132	Y
6	ICIS 280-608364/17	50.0	18.704056	50.0	1829654.0	0.374081	Y
7	STD75 280-608364/18	75.0	25.333111	50.0	1790019.0	0.337775	Y
8	STD100 280-608364/19	100.0	34.954475	50.0	1793869.0	0.349545	Y
9	STD200 280-608364/20	200.0	79.020767	50.0	1778821.0	0.395104	Y



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Calibration / Trichlorofluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

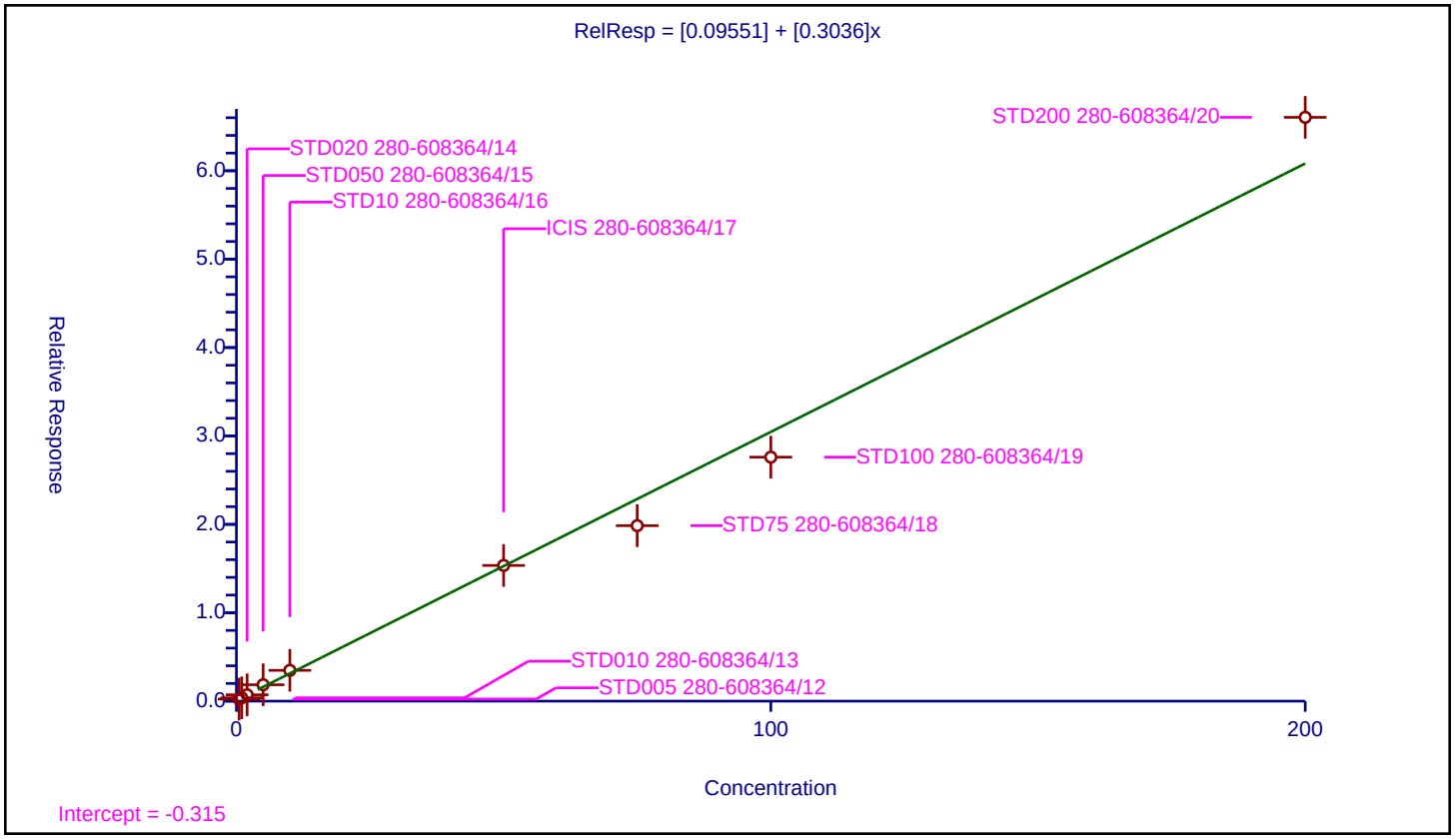
Curve Coefficients

Intercept:	0.09551
Slope:	0.3036

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	11.2
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	0.5	0.232223	50.0	1985374.0	0.464446	Y
2	STD010 280-608364/13	1.0	0.378713	50.0	1837276.0	0.378713	Y
3	STD020 280-608364/14	2.0	0.719069	50.0	1866651.0	0.359534	Y
4	STD050 280-608364/15	5.0	1.855312	50.0	1886233.0	0.371062	Y
5	STD10 280-608364/16	10.0	3.485129	50.0	1862499.0	0.348513	Y
6	ICIS 280-608364/17	50.0	15.348913	50.0	1829654.0	0.306978	Y
7	STD75 280-608364/18	75.0	19.852443	50.0	1790019.0	0.264699	Y
8	STD100 280-608364/19	100.0	27.602043	50.0	1793869.0	0.27602	Y
9	STD200 280-608364/20	200.0	66.044363	50.0	1778821.0	0.330222	Y



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Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

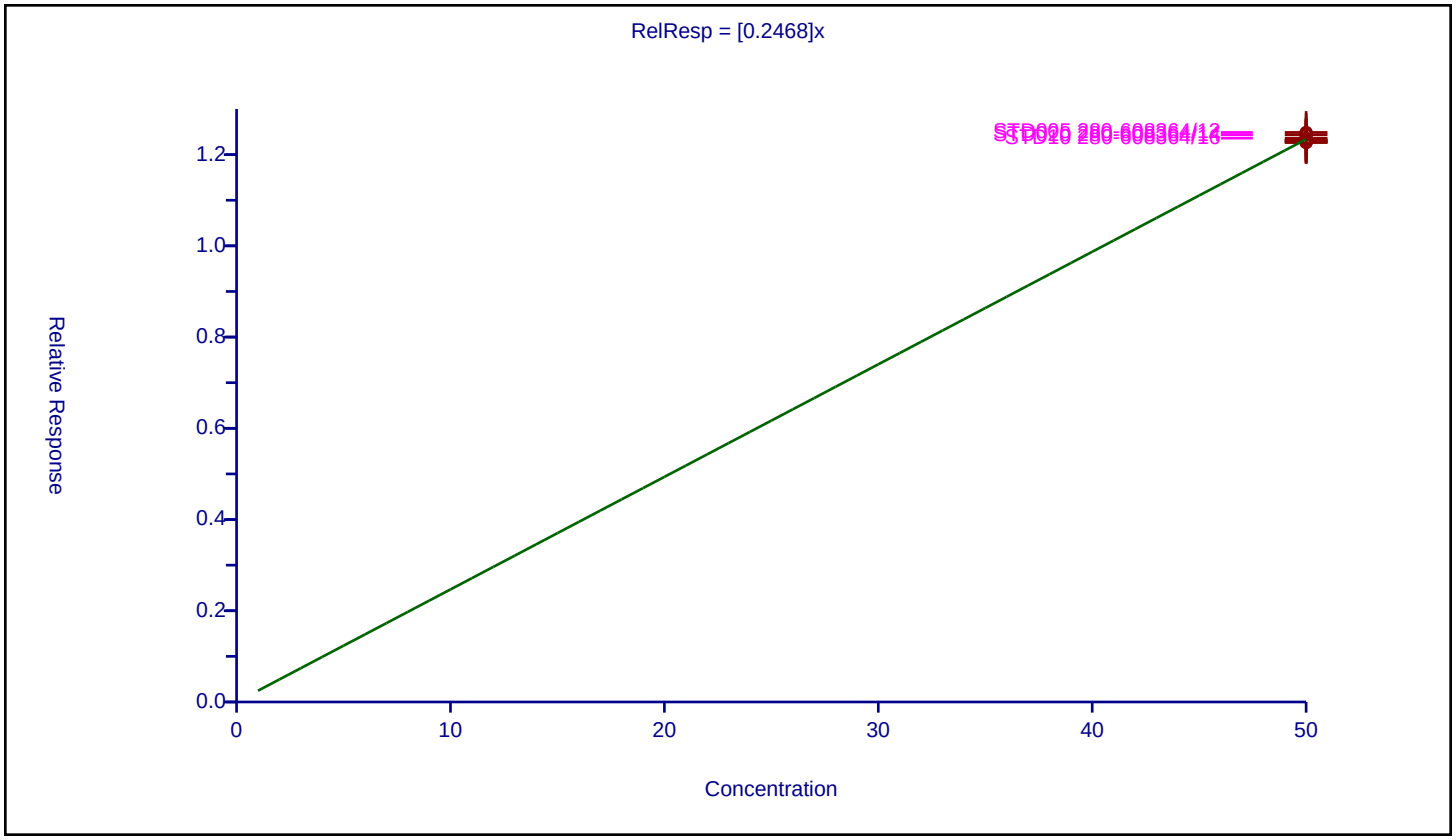
Curve Coefficients

Intercept:	0
Slope:	0.2468

Error Coefficients

Standard Error:	484000
Relative Standard Error:	0.6
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	50.0	12.486489	50.0	1985374.0	0.24973	Y
2	STD010 280-608364/13	50.0	12.313202	50.0	1837276.0	0.246264	Y
3	STD020 280-608364/14	50.0	12.436444	50.0	1866651.0	0.248729	Y
4	STD050 280-608364/15	50.0	12.281489	50.0	1886233.0	0.24563	Y
5	STD10 280-608364/16	50.0	12.361215	50.0	1862499.0	0.247224	Y
6	ICIS 280-608364/17	50.0	12.267511	50.0	1829654.0	0.24535	Y
7	STD75 280-608364/18	50.0	12.321182	50.0	1790019.0	0.246424	Y
8	STD100 280-608364/19	50.0	12.267981	50.0	1793869.0	0.24536	Y
9	STD200 280-608364/20	50.0	12.303627	50.0	1778821.0	0.246073	Y



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Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

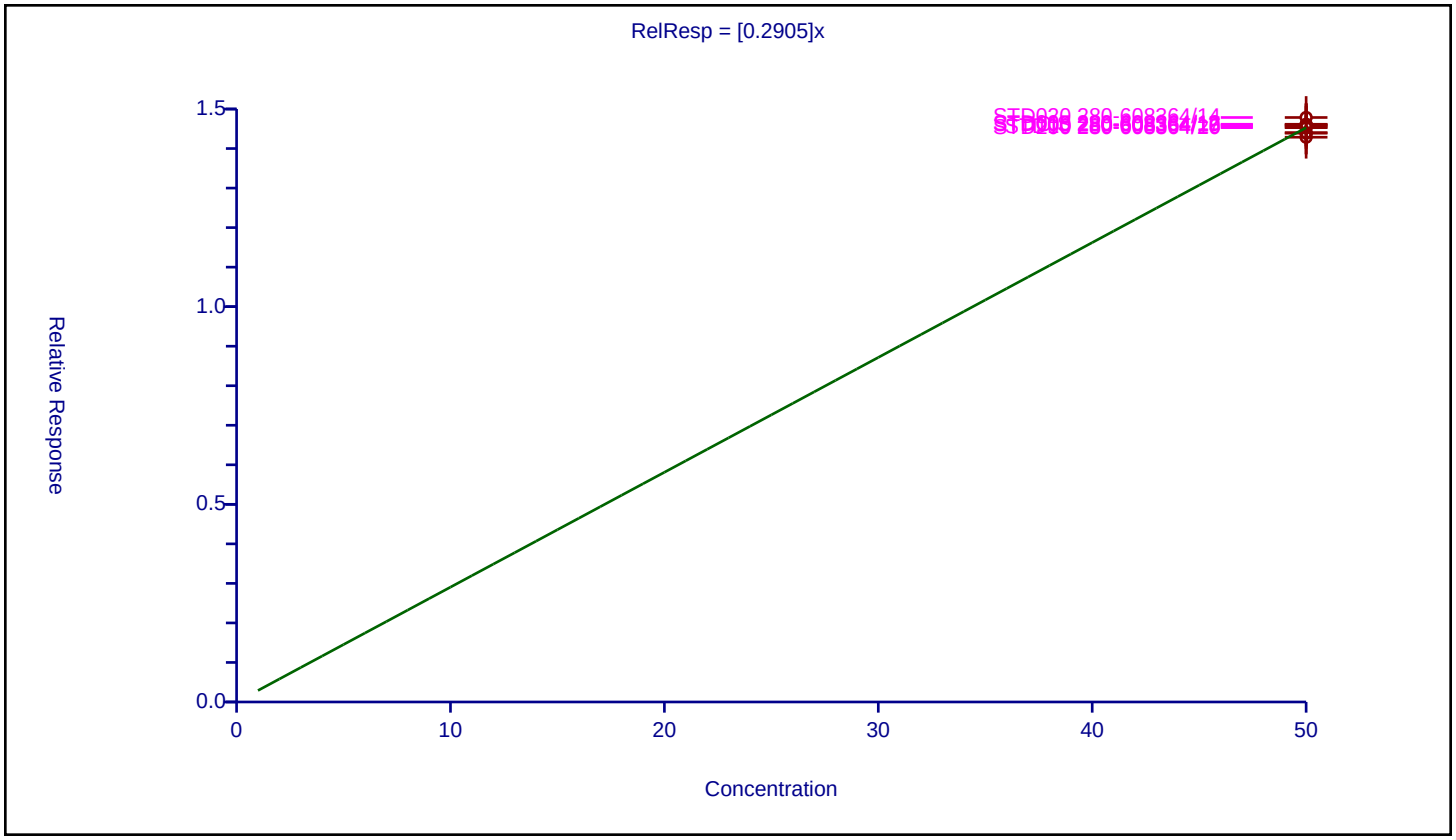
Curve Coefficients

Intercept:	0
Slope:	0.2905

Error Coefficients

Standard Error:	570000
Relative Standard Error:	1.0
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	50.0	14.61435	50.0	1985374.0	0.292287	Y
2	STD010 280-608364/13	50.0	14.387849	50.0	1837276.0	0.287757	Y
3	STD020 280-608364/14	50.0	14.785437	50.0	1866651.0	0.295709	Y
4	STD050 280-608364/15	50.0	14.403311	50.0	1886233.0	0.288066	Y
5	STD10 280-608364/16	50.0	14.542639	50.0	1862499.0	0.290853	Y
6	ICIS 280-608364/17	50.0	14.602351	50.0	1829654.0	0.292047	Y
7	STD75 280-608364/18	50.0	14.286496	50.0	1790019.0	0.28573	Y
8	STD100 280-608364/19	50.0	14.586322	50.0	1793869.0	0.291726	Y
9	STD200 280-608364/20	50.0	14.528303	50.0	1778821.0	0.290566	Y



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Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

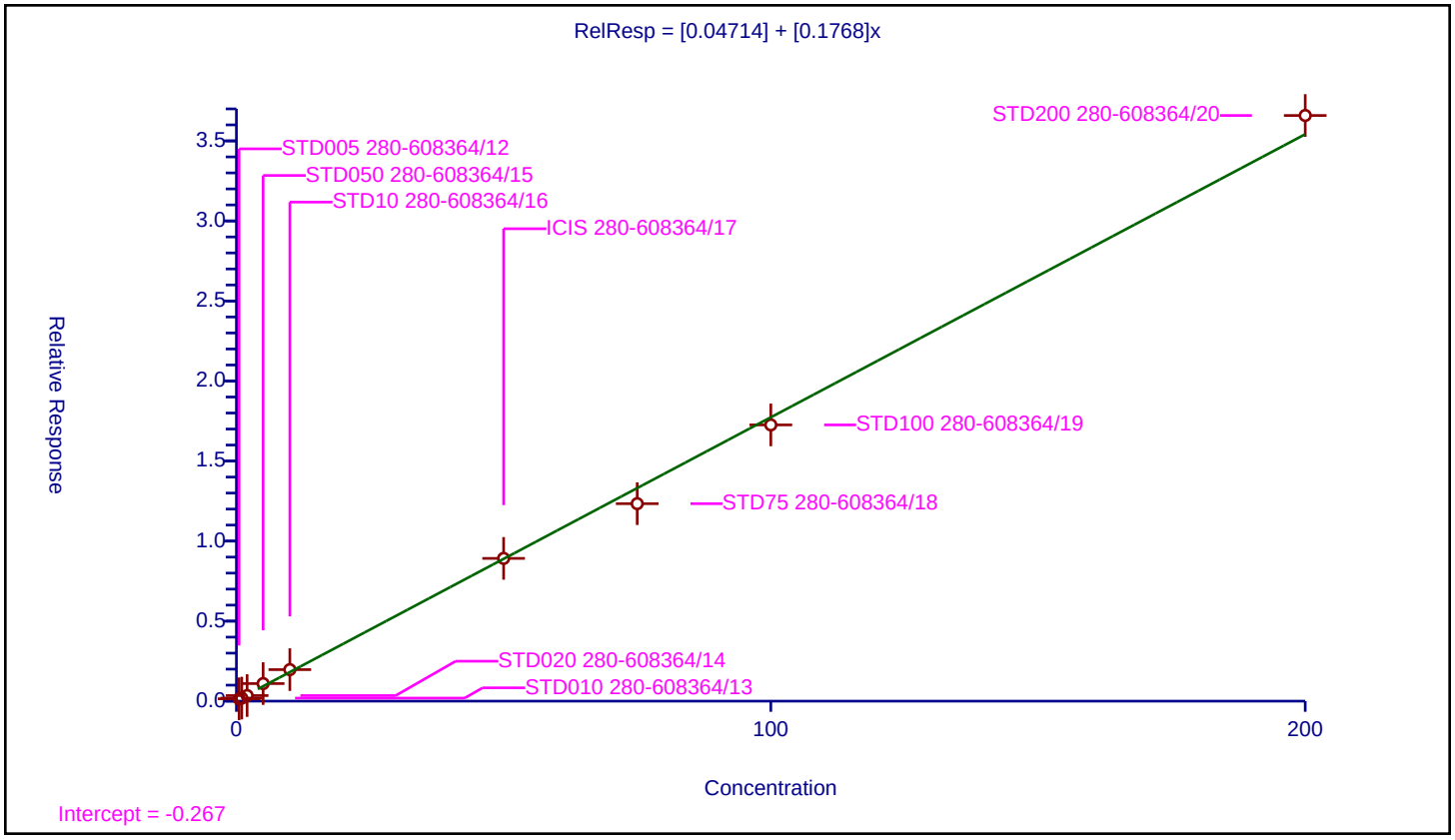
Curve Coefficients

Intercept:	0.04714
Slope:	0.1768

Error Coefficients

Standard Error:	584000
Relative Standard Error:	13.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	0.5	0.146975	50.0	1985374.0	0.29395	Y
2	STD010 280-608364/13	1.0	0.189792	50.0	1837276.0	0.189792	Y
3	STD020 280-608364/14	2.0	0.348887	50.0	1866651.0	0.174443	Y
4	STD050 280-608364/15	5.0	1.09716	50.0	1886233.0	0.219432	Y
5	STD10 280-608364/16	10.0	1.970014	50.0	1862499.0	0.197001	Y
6	ICIS 280-608364/17	50.0	8.917396	50.0	1829654.0	0.178348	Y
7	STD75 280-608364/18	75.0	12.336908	50.0	1790019.0	0.164492	Y
8	STD100 280-608364/19	100.0	17.258172	50.0	1793869.0	0.172582	Y
9	STD200 280-608364/20	200.0	36.587633	50.0	1778821.0	0.182938	Y



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Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

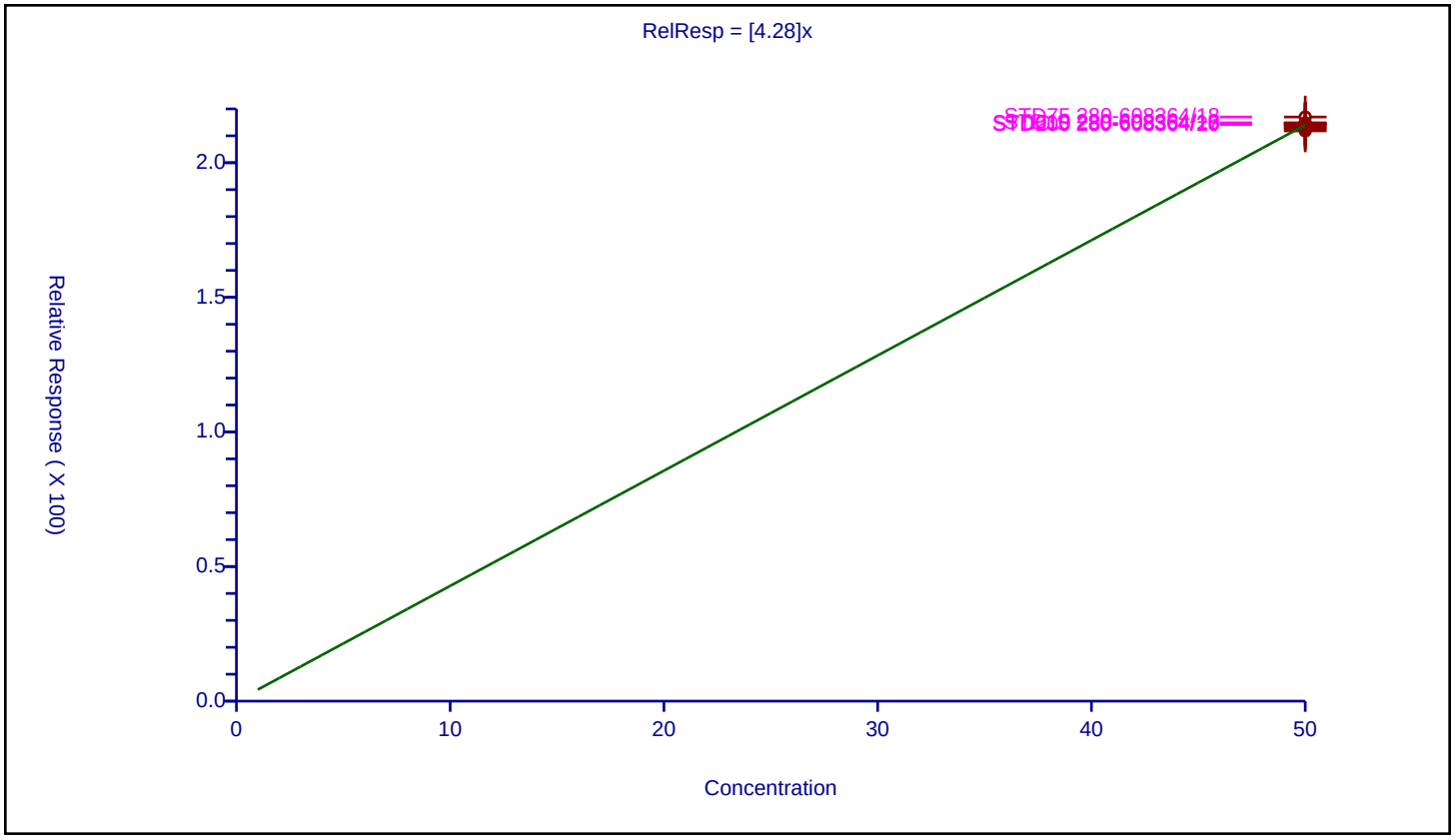
Curve Coefficients

Intercept:	0
Slope:	4.28

Error Coefficients

Standard Error:	1980000
Relative Standard Error:	0.7
Correlation Coefficient:	0.000000000000000000
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	50.0	213.556277	50.0	469775.0	4.271126	Y
2	STD010 280-608364/13	50.0	214.478737	50.0	432776.0	4.289575	Y
3	STD020 280-608364/14	50.0	212.562998	50.0	444257.0	4.25126	Y
4	STD050 280-608364/15	50.0	213.052474	50.0	445858.0	4.261049	Y
5	STD10 280-608364/16	50.0	214.83594	50.0	437158.0	4.296719	Y
6	ICIS 280-608364/17	50.0	214.526162	50.0	430210.0	4.290523	Y
7	STD75 280-608364/18	50.0	216.985105	50.0	415779.0	4.339702	Y
8	STD100 280-608364/19	50.0	211.830134	50.0	428537.0	4.236603	Y
9	STD200 280-608364/20	50.0	214.201232	50.0	422488.0	4.284025	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

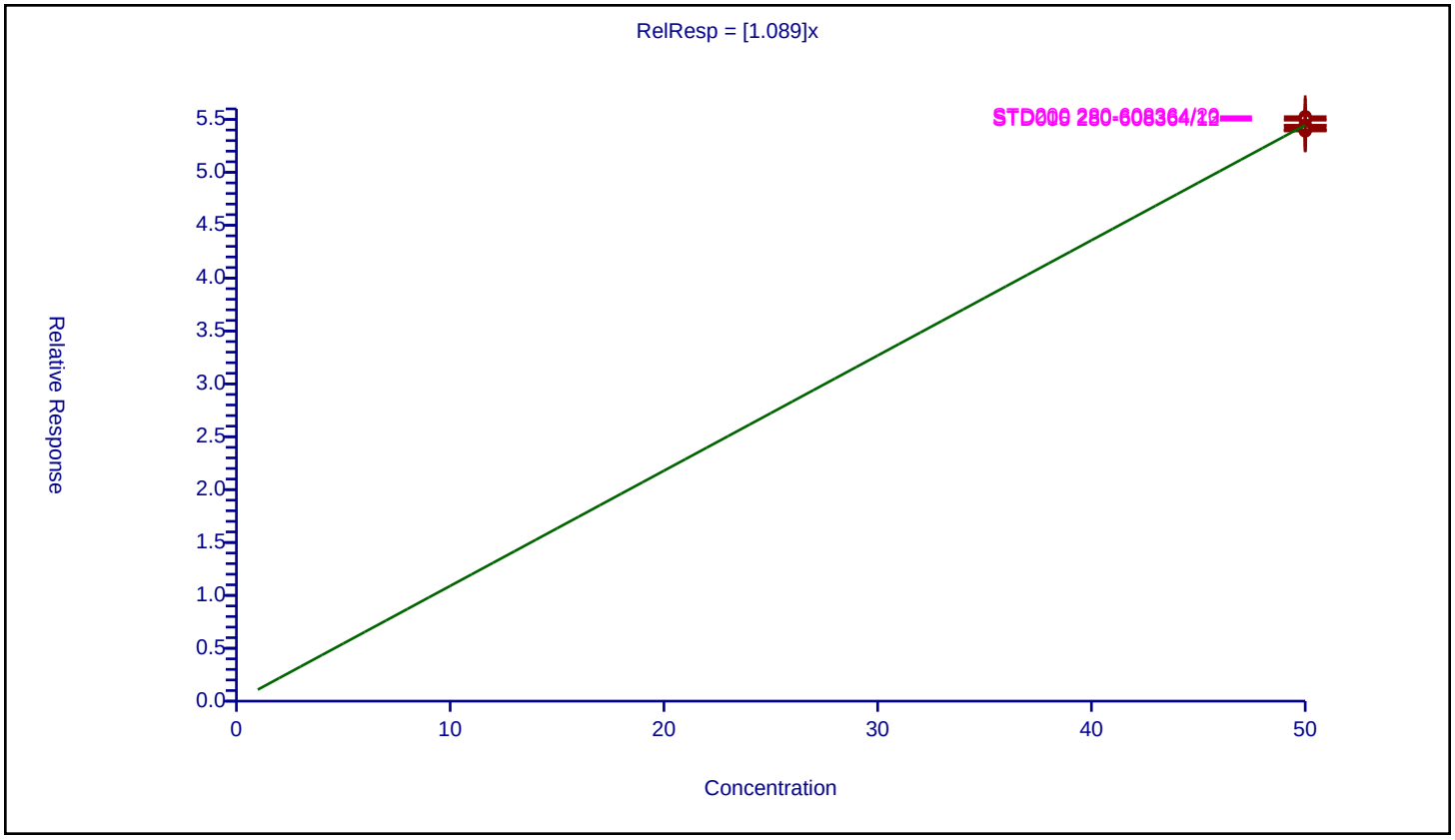
Curve Coefficients

Intercept:	0
Slope:	1.089

Error Coefficients

Standard Error:	726000
Relative Standard Error:	0.9
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-608364/12	50.0	54.931564	50.0	669169.0	1.098631	Y
2	STD010 280-608364/13	50.0	55.035073	50.0	617995.0	1.100701	Y
3	STD020 280-608364/14	50.0	54.005334	50.0	641869.0	1.080107	Y
4	STD050 280-608364/15	50.0	54.183158	50.0	645302.0	1.083663	Y
5	STD10 280-608364/16	50.0	53.991994	50.0	635522.0	1.07984	Y
6	ICIS 280-608364/17	50.0	54.438314	50.0	619154.0	1.088766	Y
7	STD75 280-608364/18	50.0	53.911677	50.0	602197.0	1.078234	Y
8	STD100 280-608364/19	50.0	54.442015	50.0	619336.0	1.08884	Y
9	STD200 280-608364/20	50.0	55.265206	50.0	603889.0	1.105304	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 Calibration End Date: 10/22/2022 14:18 Calibration ID: 72173

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-590907/13	X43662.D
Level 2	STD010 280-590907/14	X43664.D
Level 3	STD020 280-590907/15	X43665.D
Level 4	STD050 280-590907/16	X43666.D
Level 5	STD10 280-590907/17	X43667.D
Level 6	ICIS 280-590907/18	X43663.D
Level 7	STD75 280-590907/19	X43668.D
Level 8	STD100 280-590907/20	X43669.D
Level 9	STD200 280-590907/21	X43670.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2359 0.2437	+++++ 0.2281	0.1901 0.2222	0.2559 0.2376	0.1737	Ave		0.2234				12.5		15.0			
Chloromethane	0.2543 0.2120	+++++ 0.2086	0.2250 0.2072	0.2322 0.2153	0.1902	Ave		0.2181			0.1000	8.8		15.0			
Vinyl chloride	0.2129 0.2139	+++++ 0.2046	0.2009 0.2020	0.2272 0.2124	0.1668	Ave		0.2051				8.6		30.0			
Bromomethane	+++++ 0.0877	+++++ 0.1033	0.1335 0.1055	0.1409 0.1071	0.1024	Lin1	0.0683	0.1032							0.9950		0.9900
Chloroethane	0.1760 0.1384	+++++ 0.1337	0.1262 0.1320	0.1503 0.1337	0.1142	Ave		0.1380				13.3		15.0			
Dichlorofluoromethane	0.4031 0.3674	+++++ 0.3533	0.3644 0.3500	0.3844 0.3574	0.3228	Ave		0.3629				6.6		15.0			
Trichlorofluoromethane	0.3488 0.3184	+++++ 0.2981	0.3123 0.2940	0.3352 0.3217	0.2374	Ave		0.3082				11.0		15.0			
Ethyl ether	0.1992 0.1657	+++++ 0.1711	0.1555 0.1692	0.1635 0.1653	0.1651	Ave		0.1693				7.6		15.0			
Acrolein	0.0167 0.0118	+++++ 0.0115	0.0108 0.0124	0.0122 0.0121	0.0114	Ave		0.0123				14.8		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1233 0.1563	+++++ 0.1514	0.1463 0.1279	0.1479 0.1514	0.1200	Ave		0.1406				10.2		15.0			
1,1-Dichloroethene	0.1636 0.1920	+++++ 0.1892	0.1626 0.1645	0.1929 0.1899	0.1597	Ave		0.1768				8.6		30.0			
Acetone	+++++ 0.0578	+++++ 0.0582	0.0714 0.0594	0.0612 0.0577	0.0571	Ave		0.0604				8.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 Calibration End Date: 10/22/2022 14:18 Calibration ID: 72173

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	0.0980 0.2468	+++++ 0.2683	0.1395 0.2450	0.1644 0.2602	0.1710	Lin1	-0.159	0.2556							0.9960		0.9900
Carbon disulfide	0.6224 0.5948	+++++ 0.5770	0.5579 0.5084	0.5806 0.5709	0.5024	Ave		0.5643				7.3		15.0			
Methyl acetate	0.1939 0.1343	+++++ 0.1372	0.1282 0.1418	0.1409 0.1356	0.1292	Ave		0.1427				14.9		15.0			
3-Chloro-1-propene	0.3623 0.3160	+++++ 0.3096	0.3023 0.2842	0.3003 0.2958	0.2800	Ave		0.3063				8.4		15.0			
Methylene Chloride	0.4302 0.2226	+++++ 0.2228	0.2662 0.2125	0.2488 0.2175	0.2241	Lin2	0.1060	0.2179							0.9990		0.9900
2-Methyl-2-propanol	0.0285 0.0237	+++++ 0.0222	0.0207 0.0251	0.0209 0.0248	0.0205	Ave		0.0233				11.9		15.0			
Acrylonitrile	0.0835 0.0748	+++++ 0.0733	0.0690 0.0767	0.0743 0.0733	0.0710	Ave		0.0745				5.8		15.0			
Methyl tert-butyl ether	0.6773 0.6400	+++++ 0.6567	0.6193 0.6505	0.6484 0.6302	0.6275	Ave		0.6437				2.9		15.0			
trans-1,2-Dichloroethene	0.2114 0.2150	+++++ 0.2155	0.2183 0.1949	0.2110 0.2123	0.1900	Ave		0.2085				4.9		15.0			
Hexane	1.0561 1.3127	+++++ 1.2301	1.1305 1.0355	1.1271 1.2086	0.9549	Ave		1.1319				10.3		15.0			
Vinyl acetate	0.5058 0.4355	+++++ 0.4394	0.4012 0.4426	0.4226 0.4263	0.4111	Ave		0.4356				7.3		15.0			
1,1-Dichloroethane	0.4218 0.4025	+++++ 0.3988	0.3858 0.3666	0.3915 0.3923	0.3668	Ave		0.3908			0.1000	4.7		15.0			
2-Butanone (MEK)	0.0994 0.0885	+++++ 0.0868	0.0771 0.0930	0.0838 0.0891	0.0835	Ave		0.0877				7.6		15.0			
cis-1,2-Dichloroethene	0.2087 0.2458	+++++ 0.2469	0.2472 0.2319	0.2508 0.2424	0.2305	Ave		0.2380				5.9		15.0			
2,2-Dichloropropane	0.3987 0.3911	+++++ 0.3877	0.3712 0.3432	0.3858 0.3806	0.3283	Ave		0.3733				6.6		15.0			
sec-Butyl Alcohol	+++++ 0.0170	+++++ 0.0158	0.0142 0.0178	0.0146 0.0174	0.0141	Lin1	-0.274	0.0172							0.9980		0.9900
Chlorobromomethane	0.1226 0.1109	+++++ 0.1104	0.1128 0.1046	0.1128 0.1027	0.1148	Ave		0.1115				5.5		15.0			
Tetrahydrofuran	0.0622 0.0586	+++++ 0.0569	0.0584 0.0614	0.0586 0.0594	0.0556	Ave		0.0589				3.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 Calibration End Date: 10/22/2022 14:18 Calibration ID: 72173

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chloroform	0.3773 0.4035	+++++ 0.4091	0.3922 0.3831	0.4064 0.3999	0.3790	Ave		0.3938				3.2		30.0			
1,1,1-Trichloroethane	0.3069 0.3653	+++++ 0.3663	0.3596 0.3242	0.3586 0.3626	0.3163	Ave		0.3450				7.2		15.0			
Cyclohexane	0.3378 0.3756	+++++ 0.3578	0.3606 0.3026	0.3500 0.3642	0.2858	Ave		0.3418				9.3		15.0			
1,1-Dichloropropene	0.2591 0.3242	+++++ 0.3233	0.2975 0.2828	0.3062 0.3225	0.2684	Ave		0.2980				8.6		15.0			
Carbon tetrachloride	0.2865 0.3061	+++++ 0.3073	0.3149 0.2697	0.3114 0.3071	0.2573	Ave		0.2950				7.3		15.0			
Isobutyl alcohol	0.0090 0.0073	+++++ 0.0067	0.0062 0.0077	0.0069 0.0075	0.0057	Ave		0.0071				14.4		15.0			
Benzene	0.9325 0.9125	+++++ 0.9122	0.8892 0.8421	0.9132 0.8841	0.8249	Ave		0.8889				4.2		15.0			
1,2-Dichloroethane	0.3686 0.3194	+++++ 0.3272	0.3346 0.3194	0.3270 0.3191	0.3184	Ave		0.3292				5.1		15.0			
n-Heptane	0.2788 0.2370	+++++ 0.2299	0.2121 0.1993	0.2115 0.2299	0.1882	Ave		0.2233				12.5		15.0			
Trichloroethene	1.0369 1.0501	+++++ 1.0285	0.9446 0.9362	0.9832 1.0042	0.9072	Ave		0.9864				5.3		15.0			
2-Pentanone	0.1163 0.1430	+++++ 0.1391	0.1278 0.1491	0.1284 0.1447	0.1280	Ave		0.1346				8.3		15.0			
Methylcyclohexane	0.2592 0.2877	+++++ 0.2784	0.2803 0.2401	0.2652 0.2874	0.2132	Ave		0.2639				9.9		15.0			
1,2-Dichloropropane	0.2363 0.2285	+++++ 0.2291	0.2039 0.2207	0.2333 0.2269	0.2149	Ave		0.2242				4.7		30.0			
1,4-Dioxane	0.0025 0.0031	+++++ 0.0028	0.0030 0.0032	0.0029 0.0031	0.0027	Ave		0.0029				8.1		15.0			
Dibromomethane	0.1435 0.1367	+++++ 0.1400	0.1376 0.1391	0.1417 0.1377	0.1368	Ave		0.1391				1.8		15.0			
Dichlorobromomethane	0.3179 0.3186	+++++ 0.3229	0.3283 0.3141	0.3276 0.3186	0.3049	Ave		0.3191				2.4		15.0			
2-Chloroethyl vinyl ether	0.1697 0.1392	+++++ 0.1385	0.1329 0.1463	0.1541 0.1406	0.1380	Ave		0.1449				8.2		15.0			
cis-1,3-Dichloropropene	1.7725 1.7290	+++++ 1.7418	1.6482 1.6677	1.6664 1.6661	1.6295	Ave		1.6901				3.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 Calibration End Date: 10/22/2022 14:18 Calibration ID: 72173

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Methyl-2-pentanone (MIBK)	0.1840 0.1870	+++++ 0.1836	0.1699 0.1934	0.1798 0.1872	0.1719	Ave		0.1821				4.4		15.0			
Toluene	0.9694 1.0120	+++++ 1.0075	0.9735 0.9338	0.9945 0.9804	0.9159	Ave		0.9734				3.5		30.0			
trans-1,3-Dichloropropene	0.3651 0.3678	+++++ 0.3739	0.3494 0.3706	0.3564 0.3729	0.3489	Ave		0.3631				2.8		15.0			
Ethyl methacrylate	1.1673 1.2660	+++++ 1.2600	1.0515 1.2789	1.2013 1.2245	1.2084	Ave		1.2072				6.1		15.0			
1,1,2-Trichloroethane	0.1930 0.1961	+++++ 0.1971	0.1907 0.1989	0.1822 0.1973	0.1977	Ave		0.1941				2.9		15.0			
Tetrachloroethene	0.6689 0.7798	+++++ 0.7753	0.7490 0.6801	0.7394 0.7491	0.6675	Ave		0.7262				6.5		15.0			
1,3-Dichloropropane	1.5828 1.5245	+++++ 1.5410	1.4623 1.5152	1.5000 1.4697	1.4775	Ave		1.5091				2.7		15.0			
2-Hexanone	0.5092 0.5739	+++++ 0.5557	0.5130 0.5856	0.5468 0.5536	0.5206	Ave		0.5448				5.2		15.0			
Chlorodibromomethane	1.0899 0.9868	+++++ 0.9931	0.9141 0.9820	0.9923 0.9810	0.9529	Ave		0.9865				5.0		15.0			
Ethylene Dibromide	0.9243 0.8931	+++++ 0.9050	0.8963 0.8952	0.8992 0.8684	0.8581	Ave		0.8925				2.3		15.0			
1-Chlorohexane	2.0684 1.3900	+++++ 1.3630	1.5081 1.1980	1.3748 1.3420	1.1855	Lin2	0.3115	1.2901							0.9960		0.9900
Chlorobenzene	2.9870 2.7252	+++++ 2.7203	2.7435 2.5422	2.7541 2.5858	2.5613	Ave		2.7024			0.3000	5.3		15.0			
1,1,1,2-Tetrachloroethane	0.9523 0.9525	+++++ 0.9582	0.9687 0.9183	0.9661 0.9216	0.9214	Ave		0.9449				2.2		15.0			
Ethylbenzene	1.4712 1.5453	+++++ 1.5301	1.3958 1.3933	1.5162 1.4664	1.3833	Ave		1.4627				4.5		30.0			
m-Xylene & p-Xylene	1.8697 1.9300	+++++ 1.8911	1.8792 1.7386	1.8781 1.8060	1.6885	Ave		1.8352				4.5		15.0			
o-Xylene	1.6101 1.8596	+++++ 1.8555	1.8138 1.7312	1.8661 1.7715	1.7514	Ave		1.7824				4.9		15.0			
Styrene	2.9147 3.1834	+++++ 3.1548	2.9560 2.9755	3.0906 2.9816	2.9707	Ave		3.0284				3.3		15.0			
Bromoform	0.5833 0.6433	+++++ 0.6522	0.5533 0.6552	0.6212 0.6386	0.5989	Ave		0.6182			0.1000	5.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 Calibration End Date: 10/22/2022 14:18 Calibration ID: 72173

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Isopropylbenzene	2.6509 3.0429	+++++ 2.9962	2.8337 2.6615	2.9791 2.8670	2.5597	Ave		2.8239				6.4		15.0			
Cyclohexanone	0.0400 0.0407	+++++ 0.0356	0.0350 0.0406	0.0344 0.0370	0.0360	Ave		0.0374				7.0		15.0			
1,1,2,2-Tetrachloroethane	0.7808 0.7215	+++++ 0.7200	0.6590 0.7271	0.7065 0.7038	0.6866	Ave		0.7132			0.3000	4.9		15.0			
Bromobenzene	0.7074 0.6993	+++++ 0.7016	0.6563 0.6579	0.6944 0.6726	0.6517	Ave		0.6802				3.4		15.0			
trans-1,4-Dichloro-2-butene	0.2136 0.2382	+++++ 0.2351	0.2194 0.2433	0.2242 0.2432	0.2038	Ave		0.2276				6.4		15.0			
1,2,3-Trichloropropane	+++++ 0.2253	+++++ 0.2176	0.2373 0.2231	0.2131 0.2198	0.2118	Ave		0.2211				3.9		15.0			
N-Propylbenzene	0.7773 0.8417	+++++ 0.8378	0.8068 0.7422	0.8341 0.8053	0.7064	Ave		0.7939				6.2		15.0			
2-Chlorotoluene	0.6208 0.7032	+++++ 0.6996	0.6930 0.6418	0.7258 0.6781	0.6311	Ave		0.6742				5.7		15.0			
1,3,5-Trimethylbenzene	2.3472 2.6420	+++++ 2.6431	2.5577 2.3691	2.5727 2.4738	2.3301	Ave		2.4920				5.2		15.0			
4-Chlorotoluene	0.7001 0.7220	+++++ 0.7285	0.7227 0.6730	0.7050 0.7043	0.6500	Ave		0.7007				3.8		15.0			
tert-Butylbenzene	1.9177 2.1709	+++++ 2.1491	2.0870 1.9117	2.0883 2.0383	1.8603	Ave		2.0279				5.8		15.0			
1,2,4-Trimethylbenzene	2.8405 2.7475	+++++ 2.7056	2.5476 2.4931	2.6957 2.5393	2.4579	Ave		2.6284				5.2		15.0			
sec-Butylbenzene	0.5677 0.6286	+++++ 0.6123	0.5762 0.5512	0.5953 0.5949	0.5282	Ave		0.5818				5.6		15.0			
1,3-Dichlorobenzene	1.2253 1.3677	+++++ 1.3610	1.2479 1.2648	1.3350 1.2794	1.2573	Ave		1.2923				4.2		15.0			
4-Isopropyltoluene	2.3019 2.6812	+++++ 2.6701	2.5500 2.3775	2.5820 2.4913	2.3176	Ave		2.4964				6.0		15.0			
1,4-Dichlorobenzene	1.4721 1.3632	+++++ 1.3669	1.3802 1.2931	1.3264 1.2905	1.2770	Ave		1.3462				4.8		15.0			
n-Butylbenzene	2.0020 2.4275	+++++ 2.3972	2.2571 2.1355	2.2552 2.2537	2.0203	Ave		2.2185				7.1		15.0			
1,2-Dichlorobenzene	1.1542 1.2627	+++++ 1.2809	1.1952 1.2094	1.2793 1.2025	1.1960	Ave		1.2225				3.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 Calibration End Date: 10/22/2022 14:18 Calibration ID: 72173

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dibromo-3-Chloropropane	+++++ 0.1591	+++++ 0.1553	0.1560 0.1685	0.1590 0.1595	0.1521	Ave		0.1585				3.2		15.0			
1,2,4-Trichlorobenzene	0.6070 0.7229	+++++ 0.7269	0.7271 0.7124	0.7001 0.6930	0.6741	Ave		0.6954				5.8		15.0			
Hexachlorobutadiene	0.0925 0.2898	+++++ 0.2840	0.2503 0.2585	0.2808 0.2588	0.2491	Lin2	-0.090	0.2774							0.9960		0.9900
Naphthalene	1.6030 1.9498	+++++ 1.9037	2.3078 2.0321	2.0365 1.8941	1.8998	Ave		1.9534				10.1		15.0			
1,2,3-Trichlorobenzene	0.5072 0.5861	+++++ 0.5923	0.6606 0.6008	0.6011 0.5793	0.5460	Ave		0.5842				7.6		15.0			
Dibromofluoromethane (Surr)	0.2361 0.2318	+++++ 0.2361	0.2394 0.2365	0.2351 0.2382	0.2364	Ave		0.2362				1.0		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2914 0.2757	+++++ 0.2843	0.2882 0.2894	0.2866 0.2902	0.2891	Ave		0.2868				1.7		15.0			
Toluene-d8 (Surr)	4.2000 4.2463	+++++ 4.2010	4.1785 4.1757	4.1863 4.1196	4.1631	Ave		4.1838				0.9		15.0			
4-Bromofluorobenzene (Surr)	1.0002 1.0150	+++++ 1.0151	0.9950 1.0104	1.0097 1.0079	0.9900	Ave		1.0054				0.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 | Calibration End Date: 10/22/2022 14:18 | Calibration ID: 72173

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-590907/13	X43662.D
Level 2	STD010 280-590907/14	X43664.D
Level 3	STD020 280-590907/15	X43665.D
Level 4	STD050 280-590907/16	X43666.D
Level 5	STD10 280-590907/17	X43667.D
Level 6	ICIS 280-590907/18	X43663.D
Level 7	STD75 280-590907/19	X43668.D
Level 8	STD100 280-590907/20	X43669.D
Level 9	STD200 280-590907/21	X43670.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	3149 327543	+++++ 452938	9730 594262	32850 1297647	45528	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Chloromethane	FB	Ave	3394 284890	+++++ 414249	11514 554315	29802 1175589	49860	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Ave	2842 287446	+++++ 406303	10282 540222	29168 1159565	43713	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Lin1	+++++ 117888	+++++ 205032	6832 282328	18088 584699	26832	+++++ 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Chloroethane	FB	Ave	2349 185953	+++++ 265407	6457 353209	19293 729805	29927	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Ave	5381 493762	+++++ 701515	18649 936150	49341 1951675	84611	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Ave	4656 427834	+++++ 591811	15981 786296	43032 1756645	62226	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Ethyl ether	FB	Ave	2659 222614	+++++ 339813	7955 452555	20984 902768	43279	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Acrolein	FB	Ave	2198 155930	+++++ 226132	5439 328523	15425 651706	29387	4.94 494	+++++ 741	19.8 988	49.4 1975	98.8
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	1646 210021	+++++ 300583	7484 342142	18991 826474	31461	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,1-Dichloroethene	FB	Ave	2184 258010	+++++ 375561	8318 440109	24755 1037153	41872	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Acetone	FB	Ave	+++++ 310891	+++++ 462126	14614 635569	31437 1260608	59892	+++++ 200	+++++ 300	8.00 400	20.0 800	40.0
Iodomethane	FB	Lin1	1308 331608	+++++ 532695	7136 655306	21099 1420575	44830	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Carbon disulfide	FB	Ave	8309 799301	+++++ 1145691	28550 1359963	74527 3117563	131702	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 | Calibration End Date: 10/22/2022 14:18 | Calibration ID: 72173

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methyl acetate	FB	Ave	5178 361084	+++++ 545016	13122 758549	36166 1480607	67752	1.00 100	+++++ 150	4.00 200	10.0 400	20.0
3-Chloro-1-propene	FB	Ave	4836 424642	+++++ 614634	15470 760069	38548 1615159	73390	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Methylene Chloride	FB	Lin2	5743 299173	+++++ 442431	13623 568294	31943 1187492	58739	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
2-Methyl-2-propanol	FB	Ave	3798 317875	+++++ 440262	10602 672491	26887 1352529	53816	5.00 500	+++++ 750	20.0 1000	50.0 2000	100
Acrylonitrile	FB	Ave	11146 1005804	+++++ 1455944	35304 2051147	95316 4001531	186159	5.00 500	+++++ 750	20.0 1000	50.0 2000	100
Methyl tert-butyl ether	FB	Ave	9041 859988	+++++ 1303806	31689 1739939	83227 3441010	164496	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
trans-1,2-Dichloroethene	FB	Ave	2822 288912	+++++ 427820	11171 521265	27080 1159149	49816	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Hexane	CBNZd5	Ave	3246 402552	+++++ 564195	13259 644639	33194 1567173	57207	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Vinyl acetate	FB	Ave	13505 1170432	+++++ 1744901	41062 2367963	108496 4655961	215506	1.00 100	+++++ 150	4.00 200	10.0 400	20.0
1,1-Dichloroethane	FB	Ave	5630 540826	+++++ 791891	19741 980517	50260 2142141	96149	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
2-Butanone (MEK)	FB	Ave	5309 475831	+++++ 689506	15783 994679	43020 1946964	87553	2.00 200	+++++ 300	8.00 400	20.0 800	40.0
cis-1,2-Dichloroethene	FB	Ave	2786 330270	+++++ 490204	12648 620209	32192 1323328	60419	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
2,2-Dichloropropane	FB	Ave	5322 525572	+++++ 769749	18997 918075	49526 2078208	86054	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
sec-Butyl Alcohol	FB	Lin1	+++++ 549406	+++++ 753236	17446 1144800	44874 2276709	88946	+++++ 1200	+++++ 1800	48.0 2400	120 4800	240
Chlorobromomethane	FB	Ave	1636 149033	+++++ 219259	5773 279742	14483 560671	30099	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Tetrahydrofuran	FB	Ave	1660 157544	+++++ 225905	5972 328280	15055 648746	29155	1.00 100	+++++ 150	4.00 200	10.0 400	20.0
Chloroform	FB	Ave	5036 542298	+++++ 812320	20069 1024688	52167 2183627	99354	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,1,1-Trichloroethane	FB	Ave	4097 490873	+++++ 727268	18402 867316	46037 1980185	82919	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Cyclohexane	FB	Ave	4509 504763	+++++ 710424	18450 809531	44921 1988845	74913	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,1-Dichloropropene	FB	Ave	3459 435703	+++++ 641999	15221 756390	39309 1760836	70363	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 | Calibration End Date: 10/22/2022 14:18 | Calibration ID: 72173

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon tetrachloride	FB	Ave	3825 411383	+++++ 610127	16116 721291	39973 1676922	67451	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Isobutyl alcohol	FB	Ave	3010 246665	+++++ 333099	7875 512778	22229 1022732	37096	12.5 1250	+++++ 1875	50.0 2500	125 5000	250
Benzene	FB	Ave	12448 1226181	+++++ 1811187	45503 2252610	117220 4827698	216244	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,2-Dichloroethane	FB	Ave	4921 429248	+++++ 649751	17120 854482	41976 1742530	83451	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
n-Heptane	FB	Ave	3722 318545	+++++ 456556	10853 533048	27155 1255273	49323	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Trichloroethene	CBNZd5	Ave	3187 322028	+++++ 471719	11078 582827	28955 1302212	54352	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
2-Pentanone	FB	Ave	4967 615014	+++++ 884082	20933 1275939	52752 2529081	107375	1.60 160	+++++ 240	6.40 320	16.0 640	32.0
Methylcyclohexane	FB	Ave	3460 386649	+++++ 552839	14341 642275	34040 1569092	55891	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,2-Dichloropropane	FB	Ave	3154 307064	+++++ 454879	10434 590282	29944 1239102	56325	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,4-Dioxane	FB	Ave	655 82479	+++++ 111391	3026 171240	7570 334132	14286	10.0 1000	+++++ 1500	40.0 2000	100 4000	200
Dibromomethane	FB	Ave	1915 183723	+++++ 278055	7042 372034	18189 751984	35856	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Dichlorobromomethane	FB	Ave	4243 428110	+++++ 641184	16800 840200	42048 1739598	79912	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Ave	2265 187017	+++++ 274943	6801 391264	19779 767775	36170	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
cis-1,3-Dichloropropene	CBNZd5	Ave	5448 530222	+++++ 798866	19330 1038158	49076 2160489	97623	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	9823 1005373	+++++ 1457952	34771 2068960	92320 4088777	180211	2.00 200	+++++ 300	8.00 400	20.0 800	40.0
Toluene	FB	Ave	12941 1359890	+++++ 2000351	49814 2497844	127657 5353463	240074	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
trans-1,3-Dichloropropene	FB	Ave	4874 494203	+++++ 742440	17879 991365	45749 2036089	91451	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Ethyl methacrylate	CBNZd5	Ave	3588 388233	+++++ 577884	12332 796156	35378 1587892	72396	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloroethane	FB	Ave	2576 263570	+++++ 391254	9758 532097	23387 1077513	51829	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 | Calibration End Date: 10/22/2022 14:18 | Calibration ID: 72173

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Tetrachloroethene	CBNZd5	Ave	2056 239150	+++++ 355597	8784 423400	21776 971403	39991	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,3-Dichloropropane	CBNZd5	Ave	4865 467509	+++++ 706770	17150 943238	44175 1905730	88515	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
2-Hexanone	CBNZd5	Ave	6260 703938	+++++ 1019444	24065 1458278	64416 2871464	124762	2.00 200	+++++ 300	8.00 400	20.0 800	40.0
Chlorodibromomethane	CBNZd5	Ave	3350 302604	+++++ 455466	10721 611330	29222 1272030	57089	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Ethylene Dibromide	CBNZd5	Ave	2841 273883	+++++ 415075	10512 557308	26482 1126034	51411	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1-Chlorohexane	CBNZd5	Lin2	5086 341004	+++++ 500110	14150 596610	32390 1392117	56819	0.400 40.0	+++++ 60.0	1.60 80.0	4.00 160	8.00
Chlorobenzene	CBNZd5	Ave	9181 835728	+++++ 1247664	32176 1582592	81107 3353014	153450	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,1,1,2-Tetrachloroethane	CBNZd5	Ave	2927 292087	+++++ 439494	11361 571688	28450 1195088	55202	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Ethylbenzene	CBNZd5	Ave	4522 473901	+++++ 701771	16370 867337	44652 1901563	82875	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
m-Xylene & p-Xylene	CBNZd5	Ave	5747 591868	+++++ 867333	22040 1082337	55309 2341896	101158	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
o-Xylene	CBNZd5	Ave	4949 570287	+++++ 851036	21272 1077688	54957 2297172	104926	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Styrene	CBNZd5	Ave	8959 976231	+++++ 1446911	34668 1852350	91017 3866305	177979	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Bromoform	CBNZd5	Ave	1793 197264	+++++ 299136	6489 407884	18293 828132	35879	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Isopropylbenzene	DCBd4	Ave	13041 1468399	+++++ 2158341	53638 2635313	140156 5792346	249901	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Cyclohexanone	CBNZd5	Ave	3690	+++++	12299	30391	64738	15.0	+++++	60.0	150	300

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 | Calibration End Date: 10/22/2022 14:18 | Calibration ID: 72173

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			374284	490116	759033	1439379		1500	2250	3000	6000	
1,1,2,2-Tetrachloroethane	DCBd4	Ave	3841 348183	+++++ 518669	12475 719990	33236 1421954	67032	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Bromobenzene	DCBd4	Ave	3480 337457	+++++ 505442	12423 651470	32667 1358808	63624	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
trans-1,4-Dichloro-2-butene	DCBd4	Ave	1051 114970	+++++ 169380	4153 240926	10550 491327	19897	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichloropropane	DCBd4	Ave	+++++ 108709	+++++ 156718	4492 220919	10027 444060	20682	+++++ 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
N-Propylbenzene	DCBd4	Ave	3824 406180	+++++ 603493	15271 734913	39240 1626941	68969	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
2-Chlorotoluene	DCBd4	Ave	3054 339355	+++++ 503980	13118 635499	34148 1369999	61614	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,3,5-Trimethylbenzene	DCBd4	Ave	11547 1274955	+++++ 1903986	48415 2345793	121037 4997834	227481	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
4-Chlorotoluene	DCBd4	Ave	3444 348425	+++++ 524758	13680 666385	33166 1422841	63456	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
tert-Butylbenzene	DCBd4	Ave	9434 1047600	+++++ 1548127	39505 1892866	98245 4118083	181616	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,2,4-Trimethylbenzene	DCBd4	Ave	13974 1325846	+++++ 1949027	48223 2468561	126824 5130241	239957	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
sec-Butylbenzene	DCBd4	Ave	2793 303319	+++++ 441109	10907 545761	28008 1201966	51569	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,3-Dichlorobenzene	DCBd4	Ave	6028 659986	+++++ 980435	23621 1252404	62806 2584782	122746	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
4-Isopropyltoluene	DCBd4	Ave	11324 1293839	+++++ 1923431	48269 2354088	121472 5033318	226266	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,4-Dichlorobenzene	DCBd4	Ave	7242 657813	+++++ 984663	26125 1280397	62404 2607167	124667	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
n-Butylbenzene	DCBd4	Ave	9849 1171415	+++++ 1726850	42724 2114456	106096 4553167	197241	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,2-Dichlorobenzene	DCBd4	Ave	5678 609349	+++++ 922697	22623 1197508	60188 2429356	116760	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,2-Dibromo-3-Chloropropane	DCBd4	Ave	+++++ 76799	+++++ 111865	2953 166807	7480 322327	14848	+++++ 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
1,2,4-Trichlorobenzene	DCBd4	Ave	2986 348869	+++++ 523644	13764 705352	32935 1400041	65815	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Hexachlorobutadiene	DCBd4	Lin2	455 139840	+++++ 204592	4737 255985	13212 522826	24315	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Naphthalene	DCBd4	Ave	7886 940916	+++++ 1371384	43685 2012147	95811 3826665	185477	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 11:33 | Calibration End Date: 10/22/2022 14:18 | Calibration ID: 72173

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trichlorobenzene	DCBd4	Ave	2495 282844	+++++ 426649	12504 594892	28280 1170329	53303	0.500 50.0	+++++ 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	315183 311439	+++++ 312524	306223 316253	301779 325227	309832	50.0 50.0	+++++ 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	388967 370500	+++++ 376265	368638 387057	367877 396116	378855	50.0 50.0	+++++ 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	1290952 1302181	+++++ 1284512	1225166 1299752	1232863 1335501	1247068	50.0 50.0	+++++ 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	492031 489792	+++++ 487475	470839 500214	475045 509067	483270	50.0 50.0	+++++ 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43662.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Oct-2022 11:33:30 ALS Bottle#: 1 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD005
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:16:37 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 22-Oct-2022 12:26:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1334887	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	307369	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	491951	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.556	4.563	-0.007	92	315183	50.0	50.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	388967	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1290952	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	84	492031	50.0	49.7	
10 Dichlorodifluoromethane	85	1.695	1.696	-0.001	98	3149	0.5000	0.5279	
11 Chloromethane	50	1.860	1.867	-0.007	93	3394	0.5000	0.5829	
12 Vinyl chloride	62	1.967	1.967	0.000	96	2842	0.5000	0.5191	
14 Bromomethane	94	2.253	2.239	0.014	82	1472	0.5000	-0.1274	
15 Chloroethane	64	2.339	2.332	0.007	96	2349	0.5000	0.6374	
16 Dichlorofluoromethane	67	2.503	2.504	-0.001	96	5381	0.5000	0.5555	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	90	4656	0.5000	0.5658	
19 Ethyl ether	59	2.747	2.747	0.000	87	2659	0.5000	0.5882	
21 Acrolein	56	2.854	2.854	0.000	64	2198	4.94	6.67	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.933	-0.001	69	1646	0.5000	0.4386	
23 1,1-Dichloroethene	96	2.932	2.940	-0.008	96	2184	0.5000	0.4627	
24 Acetone	43	2.954	2.954	0.000	100	8971	2.00	5.56	
26 Iodomethane	142	3.054	3.061	-0.007	98	1308	0.5000	0.8125	a
27 Carbon disulfide	76	3.118	3.118	0.000	95	8309	0.5000	0.5515	
29 Methyl acetate	43	3.176	3.183	-0.007	97	5178	1.00	1.36	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	86	4836	0.5000	0.5914	
31 Methylene Chloride	84	3.297	3.297	0.000	91	5743	0.5000	0.5009	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	95	3798	5.00	6.11	
33 Acrylonitrile	53	3.454	3.455	-0.001	99	11146	5.00	5.60	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	96	9041	0.5000	0.5261	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	95	2822	0.5000	0.5069	
37 Hexane	57	3.683	3.683	0.000	90	3246	0.5000	0.4665	
39 Vinyl acetate	43	3.783	3.783	0.000	97	13505	1.00	1.16	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	5630	0.5000	0.5397	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	5309	2.00	2.27	
47 cis-1,2-Dichloroethene	96	4.205	4.212	-0.007	79	2786	0.5000	0.4385	
48 2,2-Dichloropropane	77	4.219	4.227	-0.008	76	5322	0.5000	0.5340	a
50 sec-Butyl Alcohol	45	4.298	4.291	0.007	96	4958	12.0	26.7	
52 Chlorobromomethane	128	4.384	4.384	0.000	86	1636	0.5000	0.5498	
53 Tetrahydrofuran	42	4.398	4.398	0.000	67	1660	1.00	1.06	
54 Chloroform	83	4.448	4.448	0.000	93	5036	0.5000	0.4790	
55 1,1,1-Trichloroethane	97	4.584	4.591	-0.007	94	4097	0.5000	0.4448	
56 Cyclohexane	56	4.648	4.649	-0.001	92	4509	0.5000	0.4941	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	87	3459	0.5000	0.4348	
59 Carbon tetrachloride	117	4.699	4.706	-0.007	90	3825	0.5000	0.4856	
60 Isobutyl alcohol	41	4.706	4.706	0.000	71	3010	12.5	15.8	
62 Benzene	78	4.849	4.849	0.000	90	12448	0.5000	0.5246	
63 1,2-Dichloroethane	62	4.884	4.877	0.007	95	4921	0.5000	0.5599	
65 n-Heptane	43	5.035	5.035	0.000	83	3722	0.5000	0.6242	a
67 Trichloroethene	95	5.335	5.335	0.000	95	3187	0.5000	0.5256	
68 2-Pentanone	43	5.442	5.435	0.007	97	4967	1.60	1.38	
69 Methylcyclohexane	55	5.528	5.528	0.000	85	3460	0.5000	0.4910	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	90	3154	0.5000	0.5269	
72 1,4-Dioxane	88	5.585	5.578	0.007	29	655	10.0	8.45	Ma
73 Dibromomethane	93	5.614	5.607	0.007	86	1915	0.5000	0.5155	
74 Dichlorobromomethane	83	5.735	5.735	0.000	95	4243	0.5000	0.4981	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	82	2265	0.5000	0.5855	
77 cis-1,3-Dichloropropene	75	6.071	6.079	-0.008	95	5448	0.5000	0.5244	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	93	9823	2.00	2.02	
79 Toluene	91	6.365	6.365	0.000	97	12941	0.5000	0.4980	a
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	4874	0.5000	0.5028	
81 Ethyl methacrylate	69	6.565	6.558	0.007	81	3588	0.5000	0.4835	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	88	2576	0.5000	0.4970	
83 Tetrachloroethene	164	6.808	6.808	0.000	92	2056	0.5000	0.4606	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	4865	0.5000	0.5244	
85 2-Hexanone	43	6.879	6.880	-0.001	93	6260	2.00	1.87	
87 Chlorodibromomethane	129	7.051	7.051	0.000	87	3350	0.5000	0.5524	
88 Ethylene Dibromide	107	7.173	7.173	0.000	94	2841	0.5000	0.5178	
89 1-Chlorohexane	91	7.573	7.559	0.014	33	5086	0.4000	0.3999	
90 Chlorobenzene	112	7.594	7.602	-0.008	92	9181	0.5000	0.5526	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	43	2927	0.5000	0.5039	
92 Ethylbenzene	106	7.673	7.673	0.000	97	4522	0.5000	0.5029	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	5747	0.5000	0.5094	
94 o-Xylene	106	8.152	8.152	0.000	97	4949	0.5000	0.4517	
95 Styrene	104	8.166	8.167	-0.001	95	8959	0.5000	0.4812	
96 Bromoform	173	8.345	8.352	-0.007	88	1793	0.5000	0.4718	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	13041	0.5000	0.4694	
99 Cyclohexanone	55	8.588	8.588	0.000	92	3690	15.0	16.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	3841	0.5000	0.5474	
101 Bromobenzene	156	8.810	8.810	0.000	94	3480	0.5000	0.5200	
102 trans-1,4-Dichloro-2-butene	53	8.824	8.817	0.007	54	1051	0.5000	0.4693	
103 1,2,3-Trichloropropane	110	8.846	8.839	0.007	81	1544	0.5000	0.7096	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	3824	0.5000	0.4895	
105 2-Chlorotoluene	126	8.989	8.989	0.000	95	3054	0.5000	0.4604	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	11547	0.5000	0.4710	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	3444	0.5000	0.4996	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	91	9434	0.5000	0.4728	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	13974	0.5000	0.5404	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	2793	0.5000	0.4879	
112 1,3-Dichlorobenzene	146	9.711	9.718	-0.007	95	6028	0.5000	0.4741	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	96	11324	0.5000	0.4610	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	86	7242	0.5000	0.5468	
116 n-Butylbenzene	91	10.140	10.140	0.000	96	9849	0.5000	0.4512	
117 1,2-Dichlorobenzene	146	10.168	10.169	-0.001	96	5678	0.5000	0.4721	
118 1,2-Dibromo-3-Chloropropane	157	10.962	10.948	0.014	4	810	0.5000	0.5194	
120 1,2,4-Trichlorobenzene	180	11.777	11.770	0.007	91	2986	0.5000	0.4364	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	27	455	0.5000	0.4898	M
122 Naphthalene	128	12.042	12.035	0.007	96	7886	0.5000	0.4103	
123 1,2,3-Trichlorobenzene	180	12.263	12.256	0.007	92	2495	0.5000	0.4341	
S 135 1,2-Dichloroethene, Total (URS)	96				0		1.00	0.9453	
S 137 Total BTEX	1				0			2.49	
S 140 Trihalomethanes, Total	1				0		2.00	2.00	
S 141 1,2-Dichloroethene, Total	1				0		1.00	0.9453	
S 139 Xylenes, Total (URS)	1				0		1.00	0.9611	
S 136 1,3-Dichloropropene, Total	1				0		1.00	1.03	
S 138 Xylenes, Total	106				0		1.00	0.9611	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

Cal Dil Std_00104	Amount Added:	5.00	Units: uL	
mv-IS_SS_00049	Amount Added:	5.00	Units: uL	Run Reagent

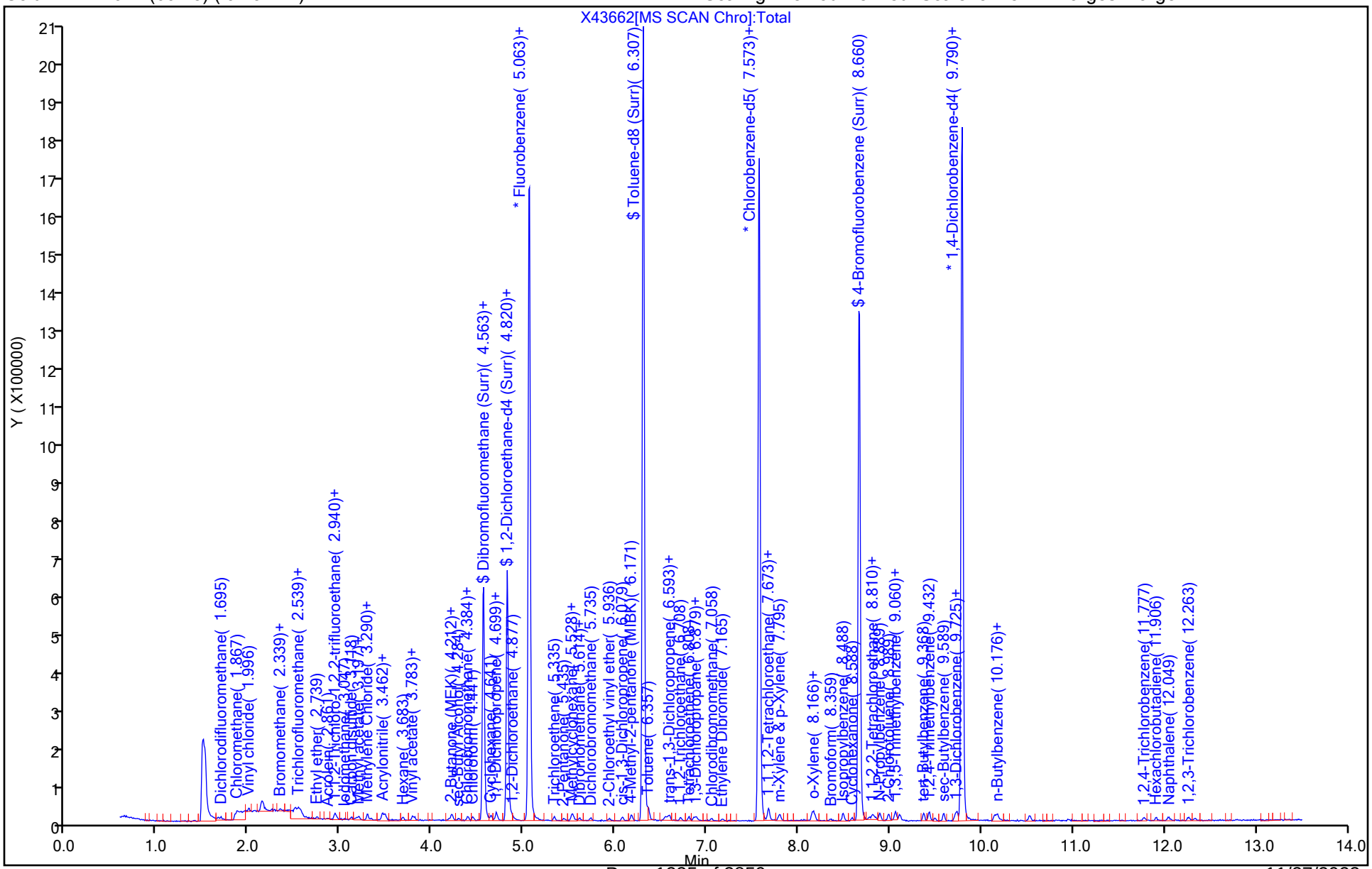
Report Date: 24-Oct-2022 14:16:38 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43662.D

Injection Date:	22-Oct-2022 11:33:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD005			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

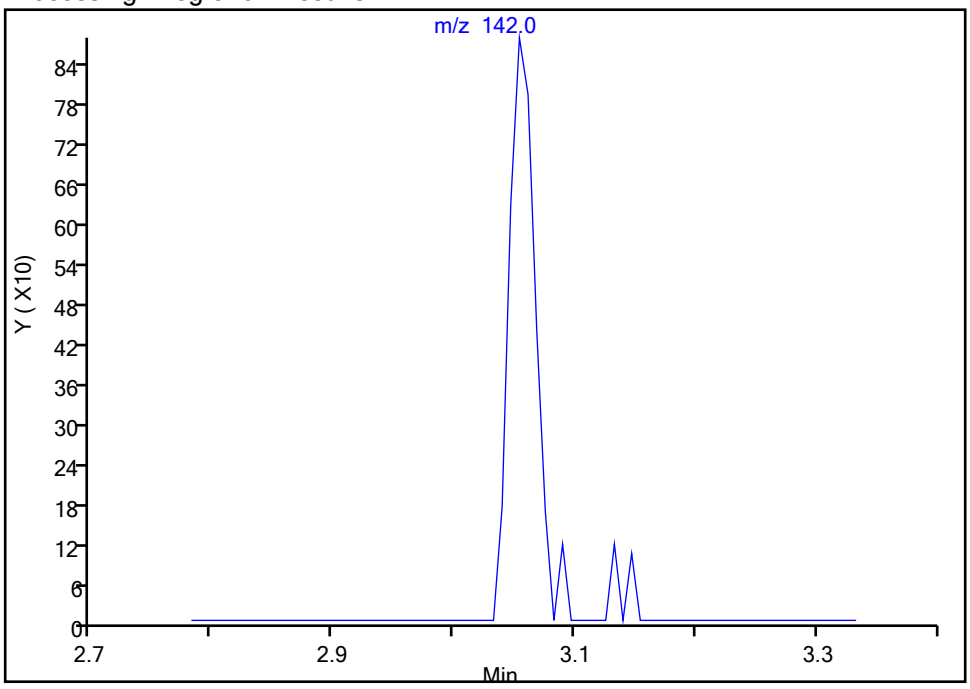
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43662.D
Injection Date: 22-Oct-2022 11:33:30 Instrument ID: VMS_X4
Lims ID: STD005
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 1 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

26 Iodomethane, CAS: 74-88-4

Signal: 1

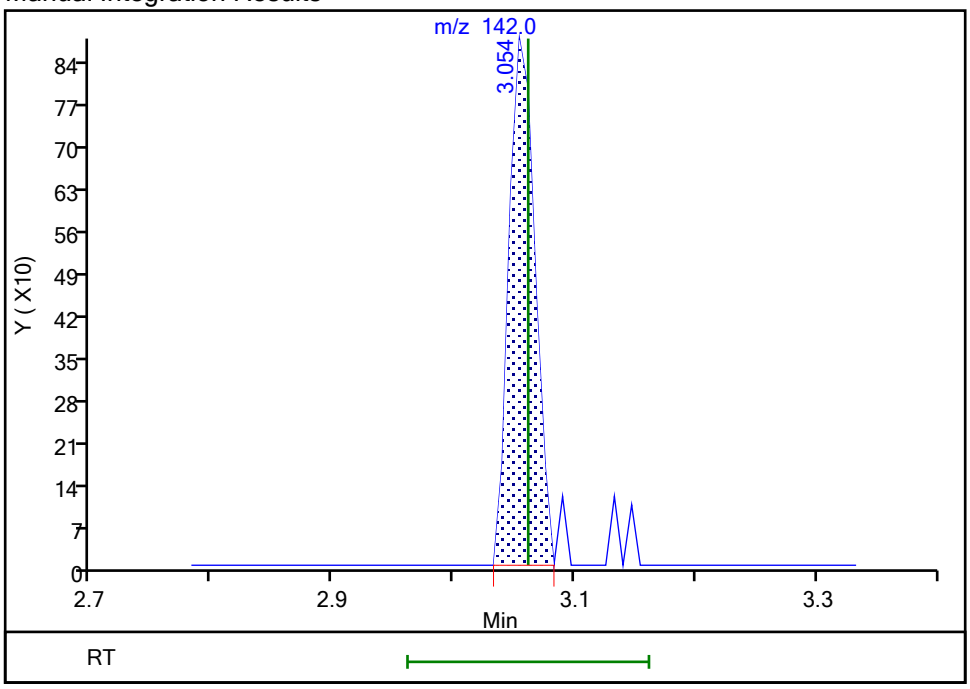
Not Detected
Expected RT: 3.06

Processing Integration Results



Manual Integration Results

RT: 3.05
Area: 1308
Amount: 0.812522
Amount Units: ug/l



Reviewer: RWB2, 24-Oct-2022 10:37:09
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

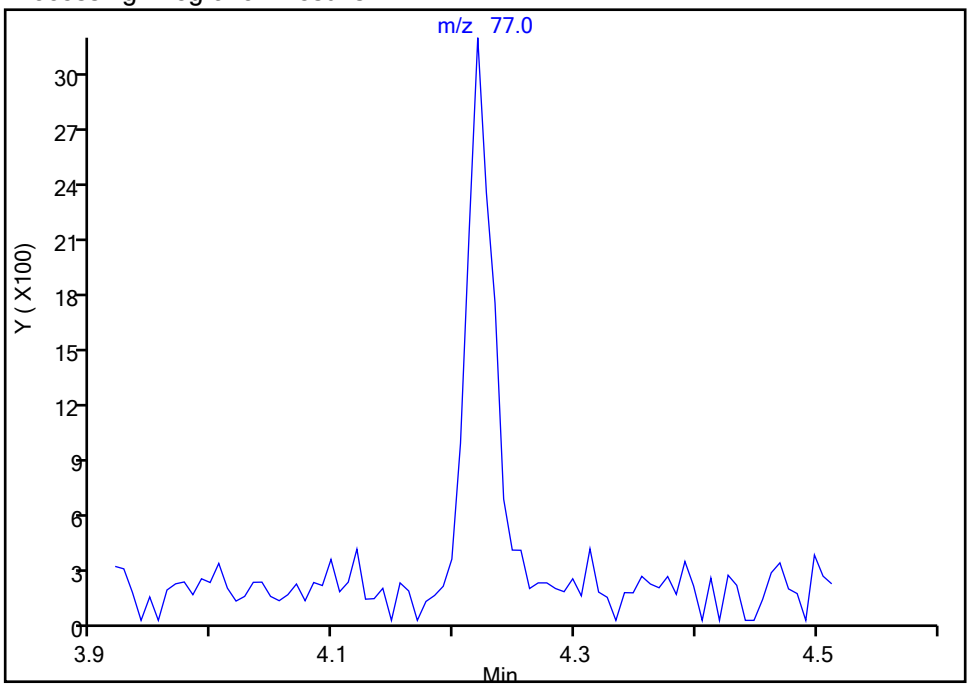
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43662.D				
Injection Date:	22-Oct-2022 11:33:30	Instrument ID:	VMS_X4		
Lims ID:	STD005				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	1	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

48 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

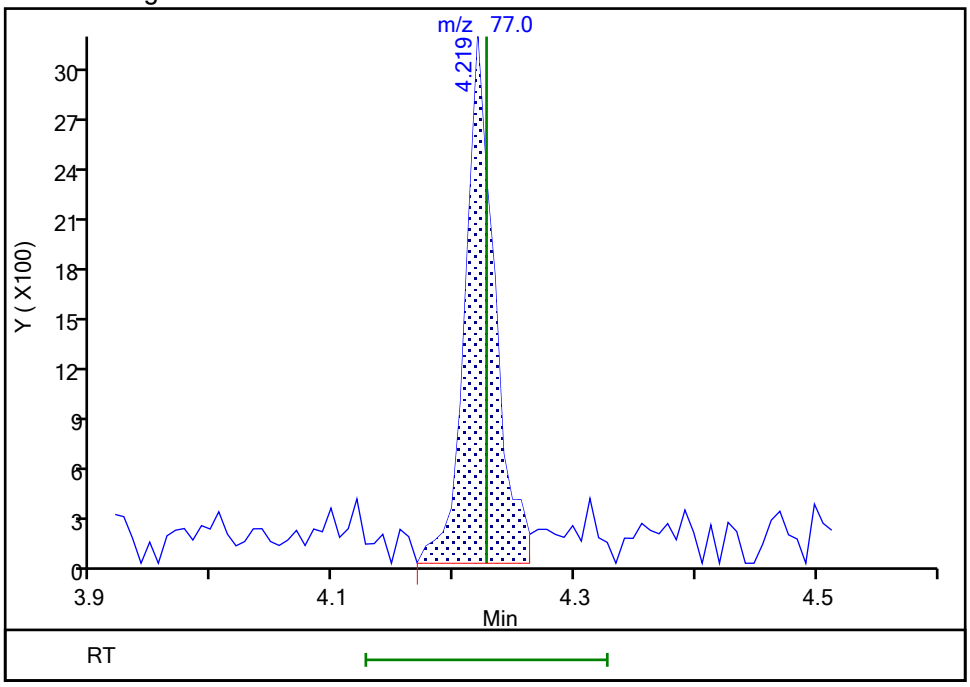
Not Detected
Expected RT: 4.23

Processing Integration Results



Manual Integration Results

RT: 4.22
Area: 5322
Amount: 0.533958
Amount Units: ug/l



Reviewer: RWB2, 24-Oct-2022 10:37:17
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

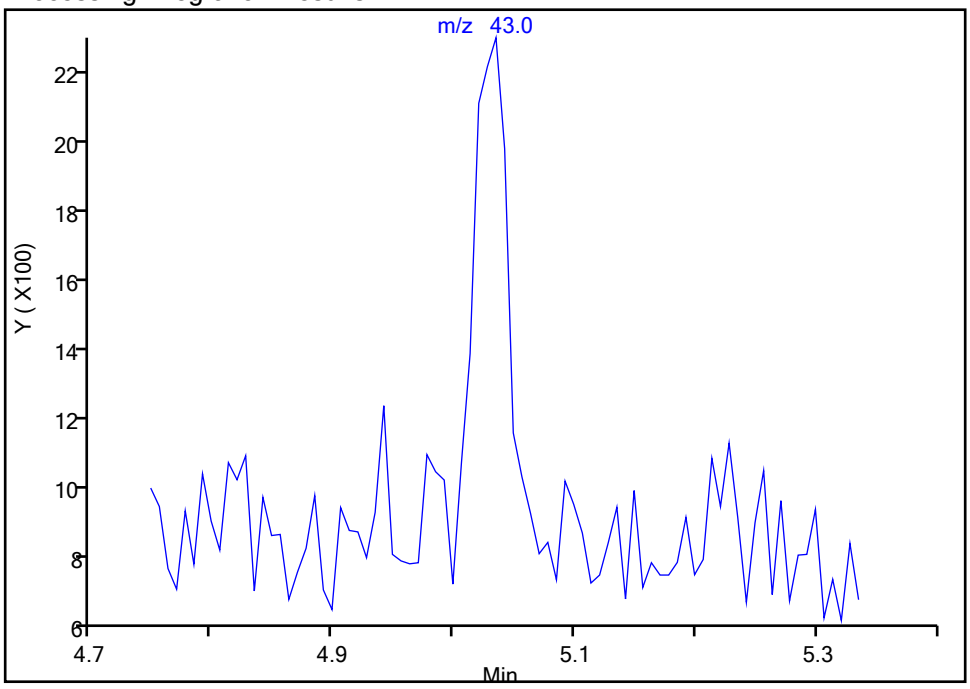
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43662.D
Injection Date: 22-Oct-2022 11:33:30 Instrument ID: VMS_X4
Lims ID: STD005
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 1 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

65 n-Heptane, CAS: 142-82-5

Signal: 1

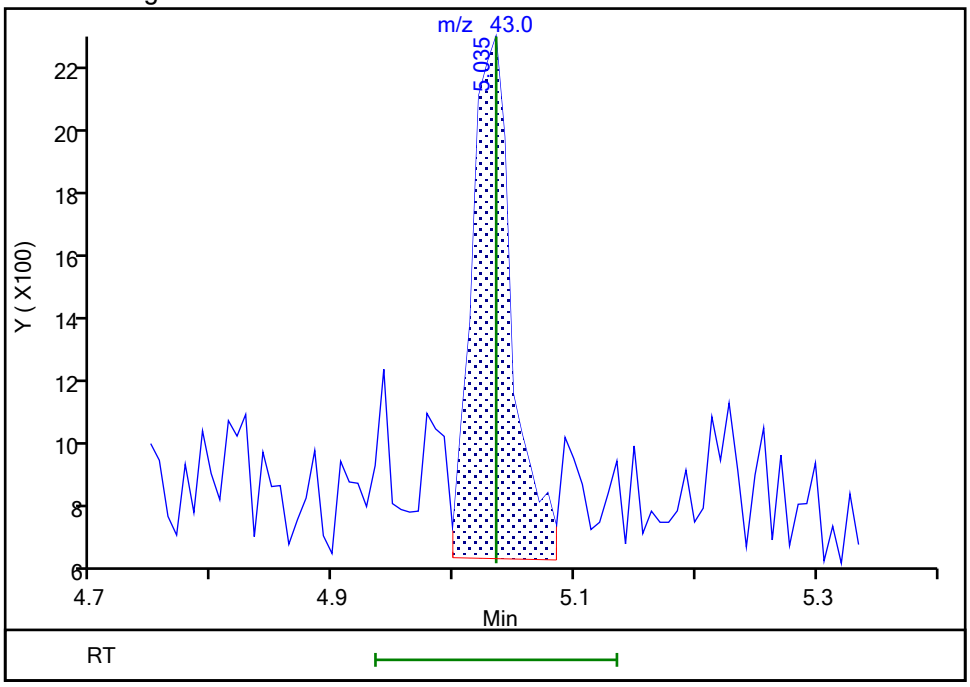
Not Detected
Expected RT: 5.03

Processing Integration Results



Manual Integration Results

RT: 5.03
Area: 3722
Amount: 0.624196
Amount Units: ug/l



Reviewer: RWB2, 24-Oct-2022 10:37:23
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

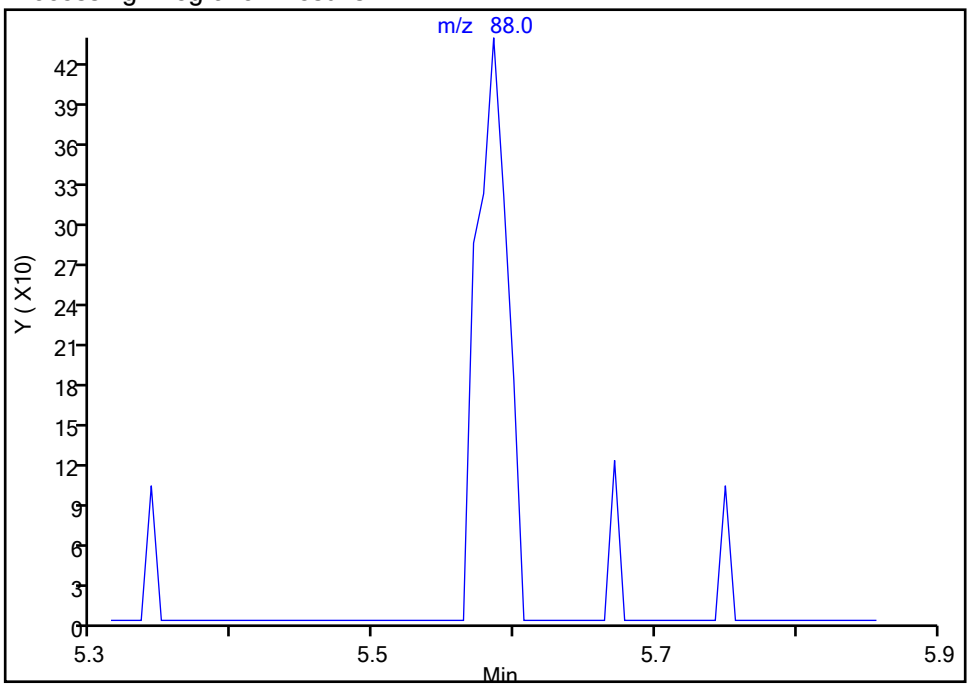
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43662.D				
Injection Date:	22-Oct-2022 11:33:30	Instrument ID:	VMS_X4		
Lims ID:	STD005				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	1	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

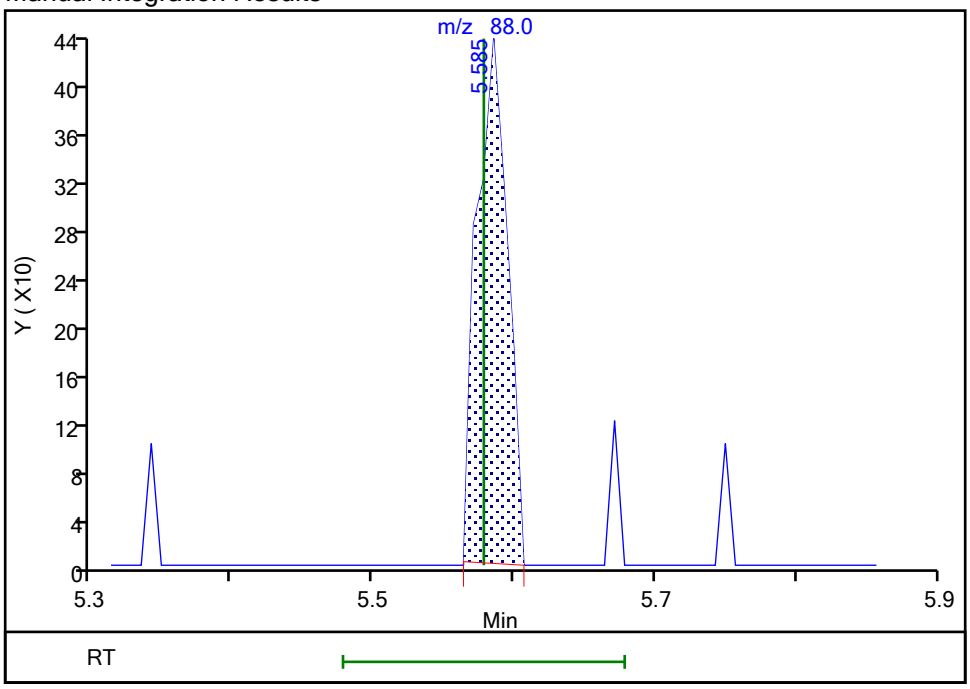
Not Detected
Expected RT: 5.58

Processing Integration Results



Manual Integration Results

RT: 5.59
Area: 655
Amount: 8.453351
Amount Units: ug/l



Reviewer: RWB2, 24-Oct-2022 10:37:37
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

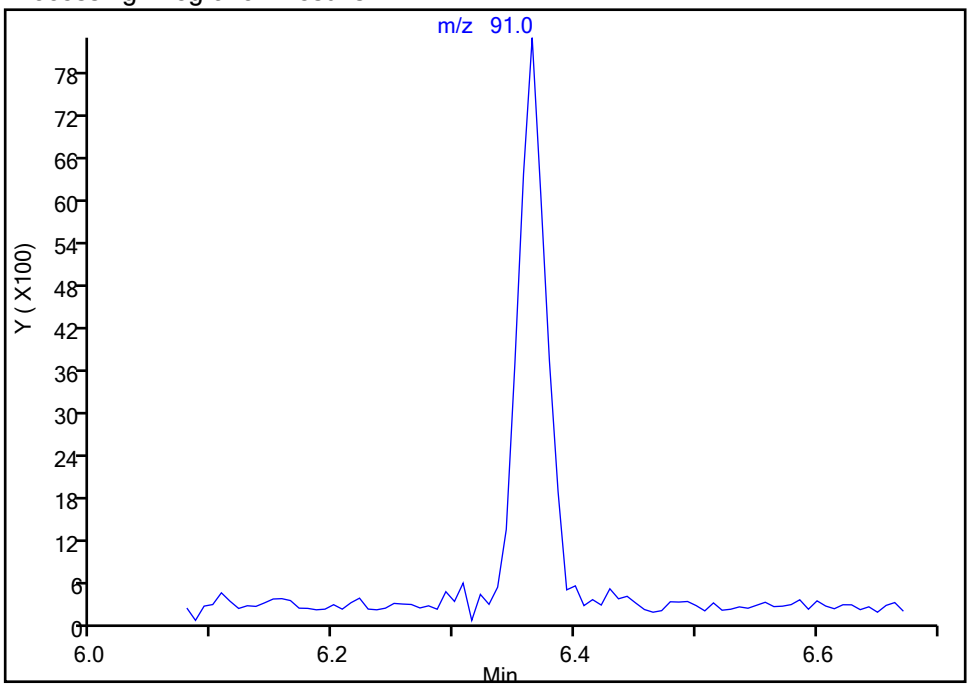
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43662.D
Injection Date: 22-Oct-2022 11:33:30 Instrument ID: VMS_X4
Lims ID: STD005
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 1 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

79 Toluene, CAS: 108-88-3

Signal: 1

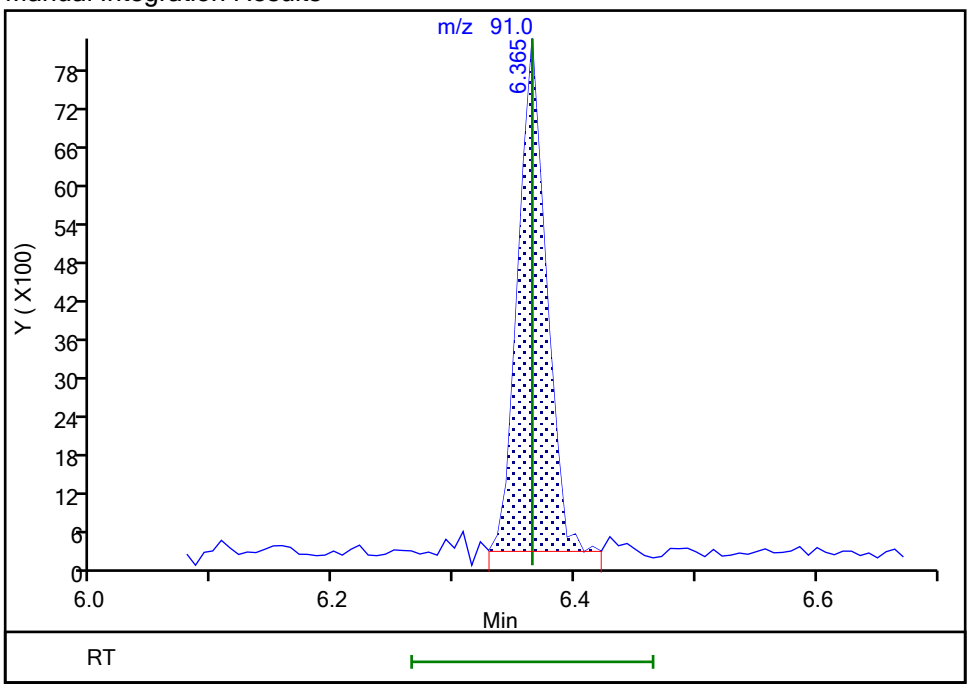
Not Detected
Expected RT: 6.36

Processing Integration Results



Manual Integration Results

RT: 6.36
Area: 12941
Amount: 0.497986
Amount Units: ug/l



Reviewer: RWB2, 24-Oct-2022 10:37:43
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

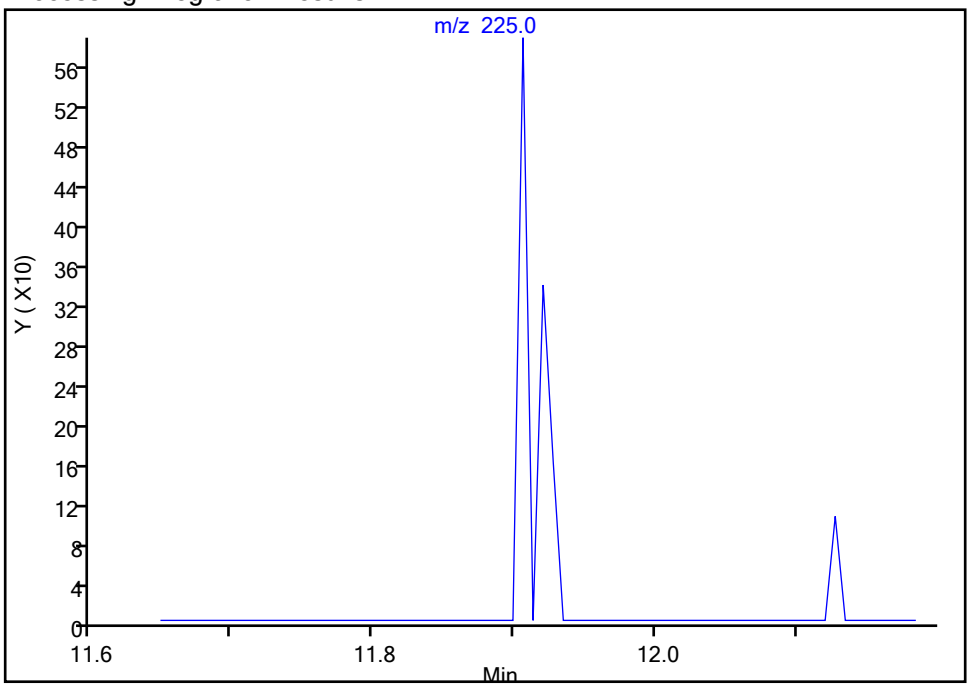
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43662.D				
Injection Date:	22-Oct-2022 11:33:30	Instrument ID:	VMS_X4		
Lims ID:	STD005				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	1	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

121 Hexachlorobutadiene, CAS: 87-68-3

Signal: 1

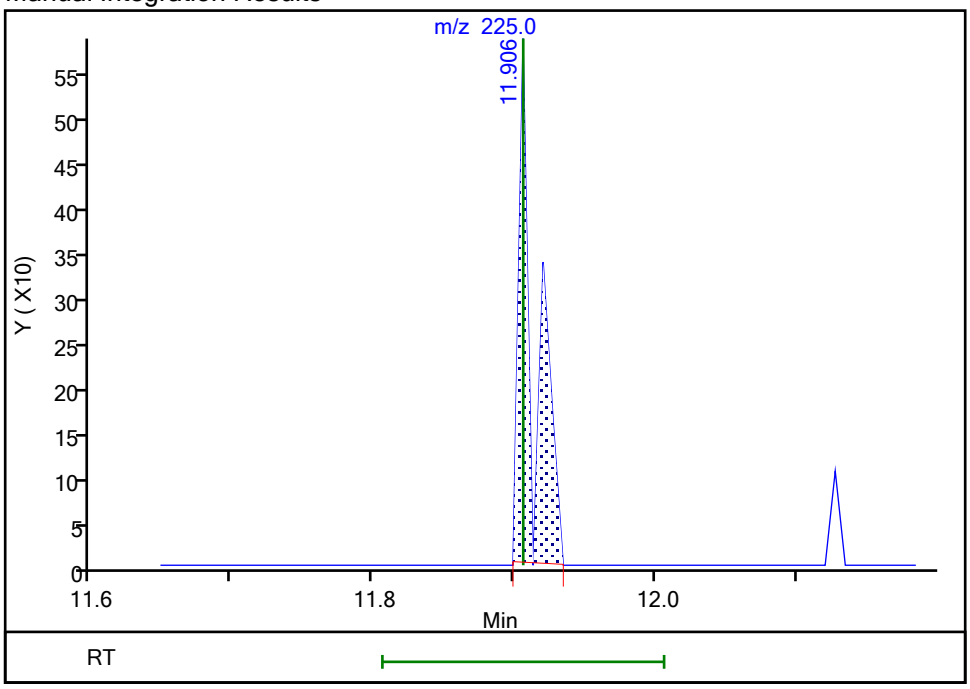
Not Detected
Expected RT: 11.91

Processing Integration Results



Manual Integration Results

RT: 11.91
Area: 455
Amount: 0.489813
Amount Units: ug/l



Reviewer: RWB2, 24-Oct-2022 10:38:00
Audit Action: Manually Integrated Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43664.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Oct-2022 12:14:30 ALS Bottle#: 3 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD010
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:16:42 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 22-Oct-2022 13:30:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1278151	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	298631	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	472824	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	305705	50.0	50.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	367709	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1230292	50.0	49.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	85	469367	50.0	49.4	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	4830	1.00	0.8457	
11 Chloromethane	50	1.867	1.867	0.000	96	6382	1.00	1.14	
12 Vinyl chloride	62	1.967	1.967	0.000	96	5847	1.00	1.12	
14 Bromomethane	94	2.246	2.239	0.007	82	3121	1.00	0.5213	
15 Chloroethane	64	2.339	2.332	0.007	96	3790	1.00	1.07	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	95	10834	1.00	1.17	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	8863	1.00	1.12	
19 Ethyl ether	59	2.747	2.747	0.000	87	4303	1.00	0.99	
21 Acrolein	56	2.854	2.854	0.000	98	3048	9.88	9.66	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	73	4151	1.00	1.16	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	97	5027	1.00	1.11	
24 Acetone	43	2.954	2.954	0.000	99	9504	4.00	6.15	
26 Iodomethane	142	3.061	3.061	0.000	95	4041	1.00	1.24	
27 Carbon disulfide	76	3.118	3.118	0.000	99	17050	1.00	1.18	
29 Methyl acetate	43	3.183	3.183	0.000	97	8399	2.00	2.30	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	91	8172	1.00	1.04	
31 Methylene Chloride	84	3.297	3.297	0.000	92	9012	1.00	1.13	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	7231	10.0	12.1	
33 Acrylonitrile	53	3.455	3.455	0.000	96	21329	10.0	11.2	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	97	16650	1.00	1.01	
35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	97	6152	1.00	1.15	
37 Hexane	57	3.683	3.683	0.000	90	7490	1.00	1.11	
39 Vinyl acetate	43	3.783	3.783	0.000	98	21948	2.00	1.97	
40 1,1-Dichloroethane	63	3.812	3.805	0.007	96	10986	1.00	1.10	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	97	8544	4.00	3.81	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	84	7163	1.00	1.18	
48 2,2-Dichloropropane	77	4.220	4.227	-0.007	80	9817	1.00	1.03	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	12637	24.0	44.6	
52 Chlorobromomethane	128	4.384	4.384	0.000	97	3245	1.00	1.14	
53 Tetrahydrofuran	42	4.398	4.398	0.000	75	3725	2.00	2.47	
54 Chloroform	83	4.448	4.448	0.000	93	11275	1.00	1.12	
55 1,1,1-Trichloroethane	97	4.584	4.591	-0.007	43	9794	1.00	1.11	
56 Cyclohexane	56	4.641	4.649	-0.008	89	9729	1.00	1.11	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	84	7799	1.00	1.02	
59 Carbon tetrachloride	117	4.706	4.706	0.000	91	8245	1.00	1.09	
60 Isobutyl alcohol	41	4.706	4.706	0.000	80	6918	25.0	38.0	
62 Benzene	78	4.849	4.849	0.000	94	23595	1.00	1.04	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	95	9958	1.00	1.18	
65 n-Heptane	43	5.035	5.035	0.000	86	6724	1.00	1.18	a
67 Trichloroethene	95	5.335	5.335	0.000	97	6664	1.00	1.13	
68 2-Pentanone	43	5.435	5.435	0.000	98	11373	3.20	3.31	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	7993	1.00	1.18	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	89	6412	1.00	1.12	
72 1,4-Dioxane	88	5.578	5.578	0.000	88	2524	20.0	34.0	
73 Dibromomethane	93	5.614	5.607	0.007	95	4120	1.00	1.16	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	98	8710	1.00	1.07	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	94	4149	1.00	1.12	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	10305	1.00	1.02	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	96	21321	4.00	4.58	
79 Toluene	91	6.365	6.365	0.000	97	26433	1.00	1.06	
80 trans-1,3-Dichloropropene	75	6.543	6.536	0.007	94	9347	1.00	1.01	
81 Ethyl methacrylate	69	6.565	6.558	0.007	88	7757	1.00	1.08	
82 1,1,2-Trichloroethane	97	6.708	6.715	-0.007	91	5415	1.00	1.09	
83 Tetrachloroethene	164	6.801	6.808	-0.007	95	4757	1.00	1.10	
84 1,3-Dichloropropane	76	6.865	6.858	0.007	91	9717	1.00	1.08	
85 2-Hexanone	43	6.880	6.880	0.000	95	15810	4.00	4.86	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	6239	1.00	1.06	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	5780	1.00	1.08	
89 1-Chlorohexane	91	7.559	7.559	0.000	33	9257	0.8000	0.9600	
90 Chlorobenzene	112	7.602	7.602	0.000	94	17346	1.00	1.07	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	43	6098	1.00	1.08	
92 Ethylbenzene	106	7.680	7.673	0.007	98	9940	1.00	1.14	
93 m-Xylene & p-Xylene	106	7.788	7.795	-0.007	0	12596	1.00	1.15	
94 o-Xylene	106	8.152	8.152	0.000	97	11765	1.00	1.11	
95 Styrene	104	8.174	8.167	0.007	92	19487	1.00	1.08	
96 Bromoform	173	8.352	8.352	0.000	93	4224	1.00	1.14	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	29808	1.00	1.12	
99 Cyclohexanone	55	8.588	8.588	0.000	91	12038	30.0	53.9	
100 1,1,2,2-Tetrachloroethane	83	8.781	8.774	0.007	95	8209	1.00	1.22	
101 Bromobenzene	156	8.810	8.810	0.000	97	7714	1.00	1.20	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	63	3100	1.00	1.44	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	83	2761	1.00	1.32	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	9013	1.00	1.20	
105 2-Chlorotoluene	126	8.982	8.989	-0.007	96	8149	1.00	1.28	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	27418	1.00	1.16	
107 4-Chlorotoluene	126	9.103	9.103	0.000	98	7521	1.00	1.14	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	91	22148	1.00	1.15	
110 1,2,4-Trimethylbenzene	105	9.432	9.425	0.007	97	27902	1.00	1.12	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	7191	1.00	1.31	
112 1,3-Dichlorobenzene	146	9.718	9.718	0.000	95	14027	1.00	1.15	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	29618	1.00	1.25	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	92	16673	1.00	1.31	
116 n-Butylbenzene	91	10.140	10.140	0.000	99	26252	1.00	1.25	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	93	15239	1.00	1.32	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.948	-0.007	79	3530	1.00	2.36	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	95	14481	1.00	2.20	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	90	4659	1.00	2.10	
122 Naphthalene	128	12.035	12.035	0.000	98	74096	1.00	4.01	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	17117	1.00	3.10	
S 135 1,2-Dichloroethene, Total (URS)	96				0		2.00	2.33	
S 137 Total BTEX	1				0			5.49	
S 140 Trihalomethanes, Total	1				0		4.00	4.39	
S 141 1,2-Dichloroethene, Total	1				0		2.00	2.33	
S 139 Xylenes, Total (URS)	1				0		2.00	2.25	
S 136 1,3-Dichloropropene, Total	1				0		2.00	2.03	
S 138 Xylenes, Total	106				0		2.00	2.25	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

Cal Dil Std_00104	Amount Added:	10.00	Units: uL	
mv-IS_SS_00049	Amount Added:	5.00	Units: uL	Run Reagent

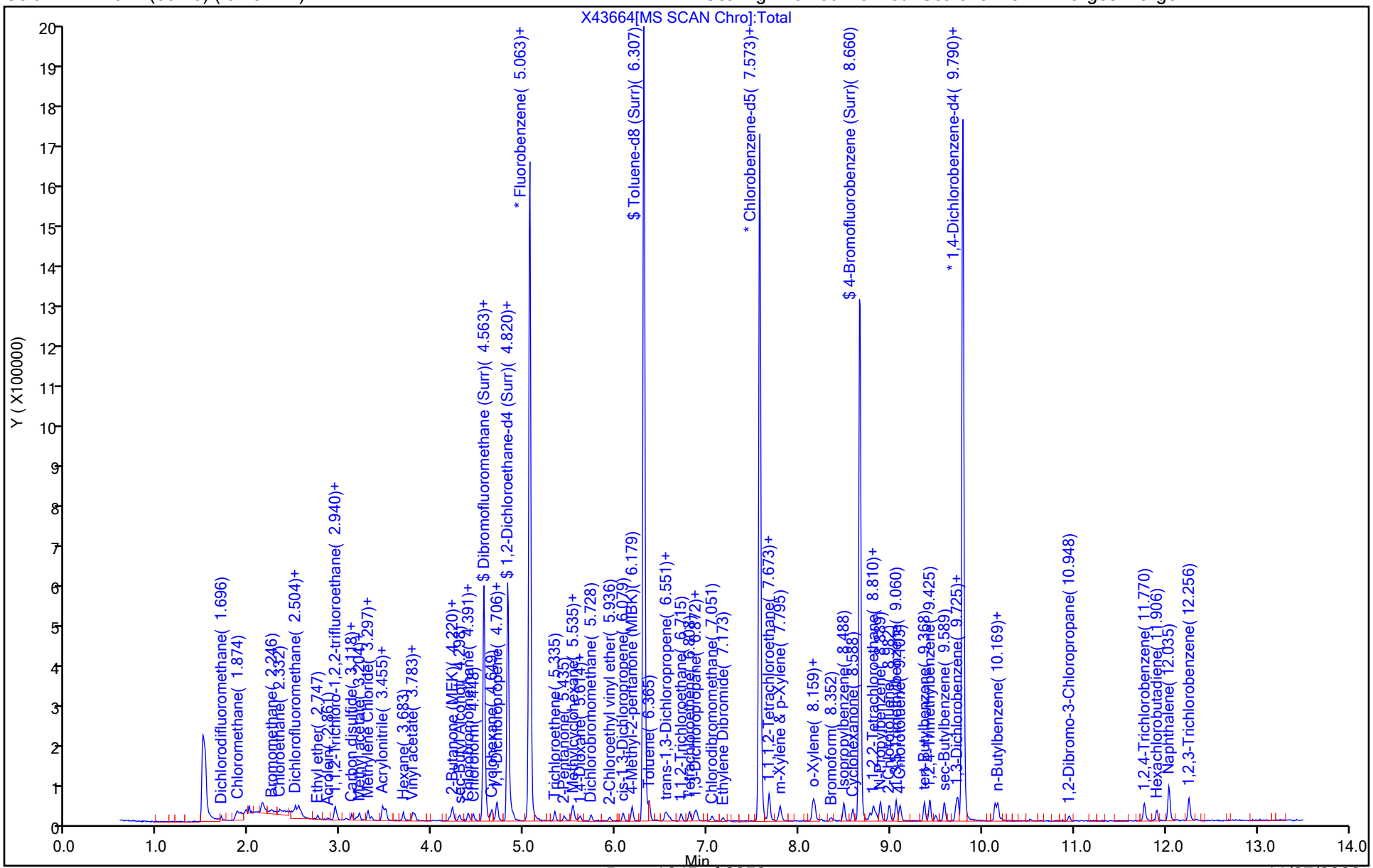
Report Date: 24-Oct-2022 14:16:43 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43664.D

Injection Date:	22-Oct-2022 12:14:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD010			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

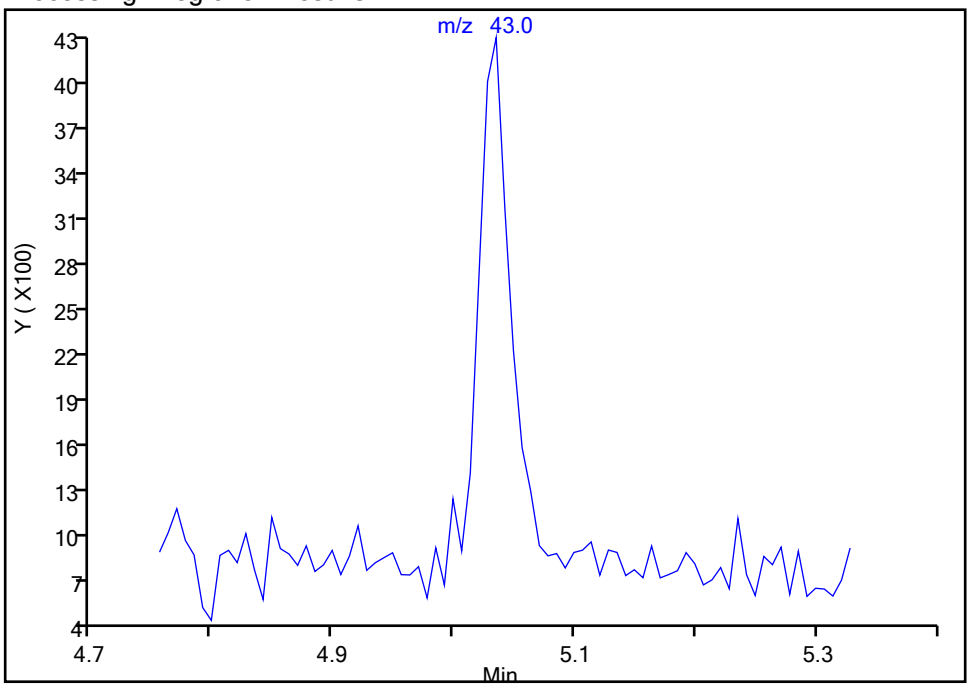
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43664.D				
Injection Date:	22-Oct-2022 12:14:30	Instrument ID:	VMS_X4		
Lims ID:	STD010				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	3	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

65 n-Heptane, CAS: 142-82-5

Signal: 1

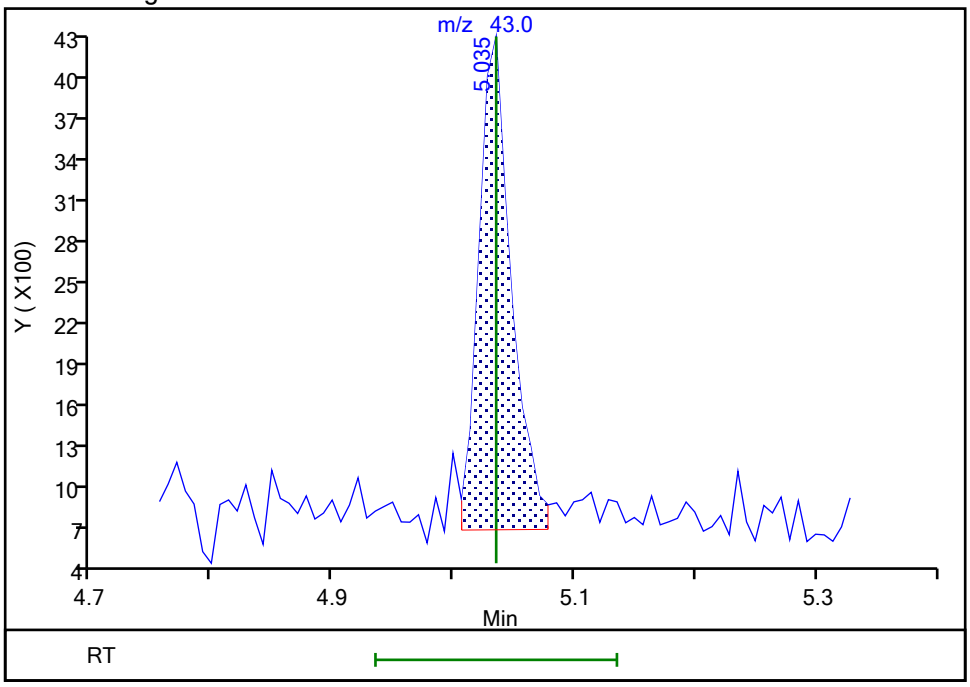
Not Detected
Expected RT: 5.03

Processing Integration Results



Manual Integration Results

RT: 5.03
Area: 6724
Amount: 1.177699
Amount Units: ug/l



Reviewer: RWB2, 22-Oct-2022 13:30:15
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43665.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Oct-2022 12:35:30 ALS Bottle#: 4 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD020
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:16:46 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 22-Oct-2022 13:31:05

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	98	1279290	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	293204	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	473223	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	306223	50.0	50.7	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	368638	50.0	50.2	
$	6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1225166	50.0	49.9	
$	7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	85	470839	50.0	49.5	
	10 Dichlorodifluoromethane	85	1.696	1.696	0.000	98	9730	2.00	1.70	
	11 Chloromethane	50	1.867	1.867	0.000	99	11514	2.00	2.06	
	12 Vinyl chloride	62	1.967	1.967	0.000	98	10282	2.00	1.96	
	14 Bromomethane	94	2.246	2.239	0.007	92	6832	2.00	1.93	
	15 Chloroethane	64	2.339	2.332	0.007	98	6457	2.00	1.83	
	16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	18649	2.00	2.01	
	17 Trichlorofluoromethane	101	2.539	2.539	0.000	96	15981	2.00	2.03	
	19 Ethyl ether	59	2.747	2.747	0.000	92	7955	2.00	1.84	
	21 Acrolein	56	2.861	2.854	0.007	97	5439	19.8	17.2	
	22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	75	7484	2.00	2.08	
	23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	8318	2.00	1.84	
	24 Acetone	43	2.954	2.954	0.000	100	14614	8.00	9.45	
	26 Iodomethane	142	3.061	3.061	0.000	96	7136	2.00	1.71	
	27 Carbon disulfide	76	3.119	3.118	0.001	99	28550	2.00	1.98	
	29 Methyl acetate	43	3.176	3.183	-0.007	98	13122	4.00	3.60	
	30 3-Chloro-1-propene	41	3.204	3.204	0.000	87	15470	2.00	1.97	
	31 Methylene Chloride	84	3.297	3.297	0.000	91	13623	2.00	1.96	
	32 2-Methyl-2-propanol	59	3.340	3.333	0.007	97	10602	20.0	17.8	
	33 Acrylonitrile	53	3.455	3.455	0.000	99	35304	20.0	18.5	
	34 Methyl tert-butyl ether	73	3.476	3.476	0.000	97	31689	2.00	1.92	
	35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	96	11171	2.00	2.09	
	37 Hexane	57	3.683	3.683	0.000	91	13259	2.00	2.00	
	39 Vinyl acetate	43	3.784	3.783	0.001	97	41062	4.00	3.68	
	40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	19741	2.00	1.97	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	97	15783	8.00	7.04	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	83	12648	2.00	2.08	
48 2,2-Dichloropropane	77	4.220	4.227	-0.007	86	18997	2.00	1.99	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	17446	48.0	55.5	
52 Chlorobromomethane	128	4.391	4.384	0.007	95	5773	2.00	2.02	
53 Tetrahydrofuran	42	4.398	4.398	0.000	79	5972	4.00	3.96	
54 Chloroform	83	4.441	4.448	-0.007	93	20069	2.00	1.99	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	96	18402	2.00	2.08	
56 Cyclohexane	56	4.649	4.649	0.000	90	18450	2.00	2.11	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	89	15221	2.00	2.00	
59 Carbon tetrachloride	117	4.706	4.706	0.000	91	16116	2.00	2.13	
60 Isobutyl alcohol	41	4.706	4.706	0.000	73	7875	50.0	43.2	
62 Benzene	78	4.849	4.849	0.000	95	45503	2.00	2.00	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	97	17120	2.00	2.03	
65 n-Heptane	43	5.035	5.035	0.000	86	10853	2.00	1.90	
67 Trichloroethene	95	5.335	5.335	0.000	96	11078	2.00	1.92	
68 2-Pentanone	43	5.435	5.435	0.000	98	20933	6.40	6.08	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	14341	2.00	2.12	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	83	10434	2.00	1.82	
72 1,4-Dioxane	88	5.585	5.578	0.007	85	3026	40.0	40.8	
73 Dibromomethane	93	5.614	5.607	0.007	94	7042	2.00	1.98	
74 Dichlorobromomethane	83	5.736	5.735	0.001	97	16800	2.00	2.06	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	92	6801	2.00	1.83	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	19330	2.00	1.95	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	96	34771	8.00	7.46	
79 Toluene	91	6.365	6.365	0.000	98	49814	2.00	2.00	
80 trans-1,3-Dichloropropene	75	6.544	6.536	0.008	94	17879	2.00	1.92	
81 Ethyl methacrylate	69	6.558	6.558	0.000	86	12332	2.00	1.74	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	9758	2.00	1.96	
83 Tetrachloroethene	164	6.801	6.808	-0.007	93	8784	2.00	2.06	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	93	17150	2.00	1.94	
85 2-Hexanone	43	6.880	6.880	0.000	96	24065	8.00	7.53	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	10721	2.00	1.85	
88 Ethylene Dibromide	107	7.173	7.173	0.000	96	10512	2.00	2.01	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	14150	1.60	1.63	
90 Chlorobenzene	112	7.602	7.602	0.000	97	32176	2.00	2.03	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	94	11361	2.00	2.05	
92 Ethylbenzene	106	7.673	7.673	0.000	99	16370	2.00	1.91	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	22040	2.00	2.05	
94 o-Xylene	106	8.152	8.152	0.000	97	21272	2.00	2.04	
95 Styrene	104	8.167	8.167	0.000	93	34668	2.00	1.95	
96 Bromoform	173	8.353	8.352	0.000	91	6489	2.00	1.79	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	53638	2.00	2.01	
99 Cyclohexanone	55	8.588	8.588	0.000	92	12299	60.0	56.1	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	12475	2.00	1.85	
101 Bromobenzene	156	8.810	8.810	0.000	96	12423	2.00	1.93	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.817	-0.007	65	4153	2.00	1.93	
103 1,2,3-Trichloropropane	110	8.846	8.839	0.007	83	4492	2.00	2.15	
104 N-Propylbenzene	120	8.889	8.889	0.000	98	15271	2.00	2.03	
105 2-Chlorotoluene	126	8.989	8.989	0.000	96	13118	2.00	2.06	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	48415	2.00	2.05	
107 4-Chlorotoluene	126	9.103	9.103	0.000	98	13680	2.00	2.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	39505	2.00	2.06	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	48223	2.00	1.94	
111 sec-Butylbenzene	134	9.590	9.589	0.001	95	10907	2.00	1.98	
112 1,3-Dichlorobenzene	146	9.718	9.718	0.000	97	23621	2.00	1.93	
113 4-Isopropyltoluene	119	9.733	9.732	0.000	97	48269	2.00	2.04	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	26125	2.00	2.05	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	42724	2.00	2.03	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	94	22623	2.00	1.96	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	81	2953	2.00	1.97	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	93	13764	2.00	2.09	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	92	4737	2.00	2.13	
122 Naphthalene	128	12.042	12.035	0.007	98	43685	2.00	2.36	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	92	12504	2.00	2.26	
S 135 1,2-Dichloroethene, Total (URS)	96				0		4.00	4.17	
S 137 Total BTEX	1				0			10.0	
S 140 Trihalomethanes, Total	1				0		8.00	7.69	
S 141 1,2-Dichloroethene, Total	1				0		4.00	4.17	
S 139 Xylenes, Total (URS)	1				0		4.00	4.08	
S 136 1,3-Dichloropropene, Total	1				0		4.00	3.87	
S 138 Xylenes, Total	106				0		4.00	4.08	

QC Flag Legend

Processing Flags

Reagents:

Cal Dil Std_00104	Amount Added: 20.00	Units: uL	
mv-IS_SS_00049	Amount Added: 5.00	Units: uL	Run Reagent

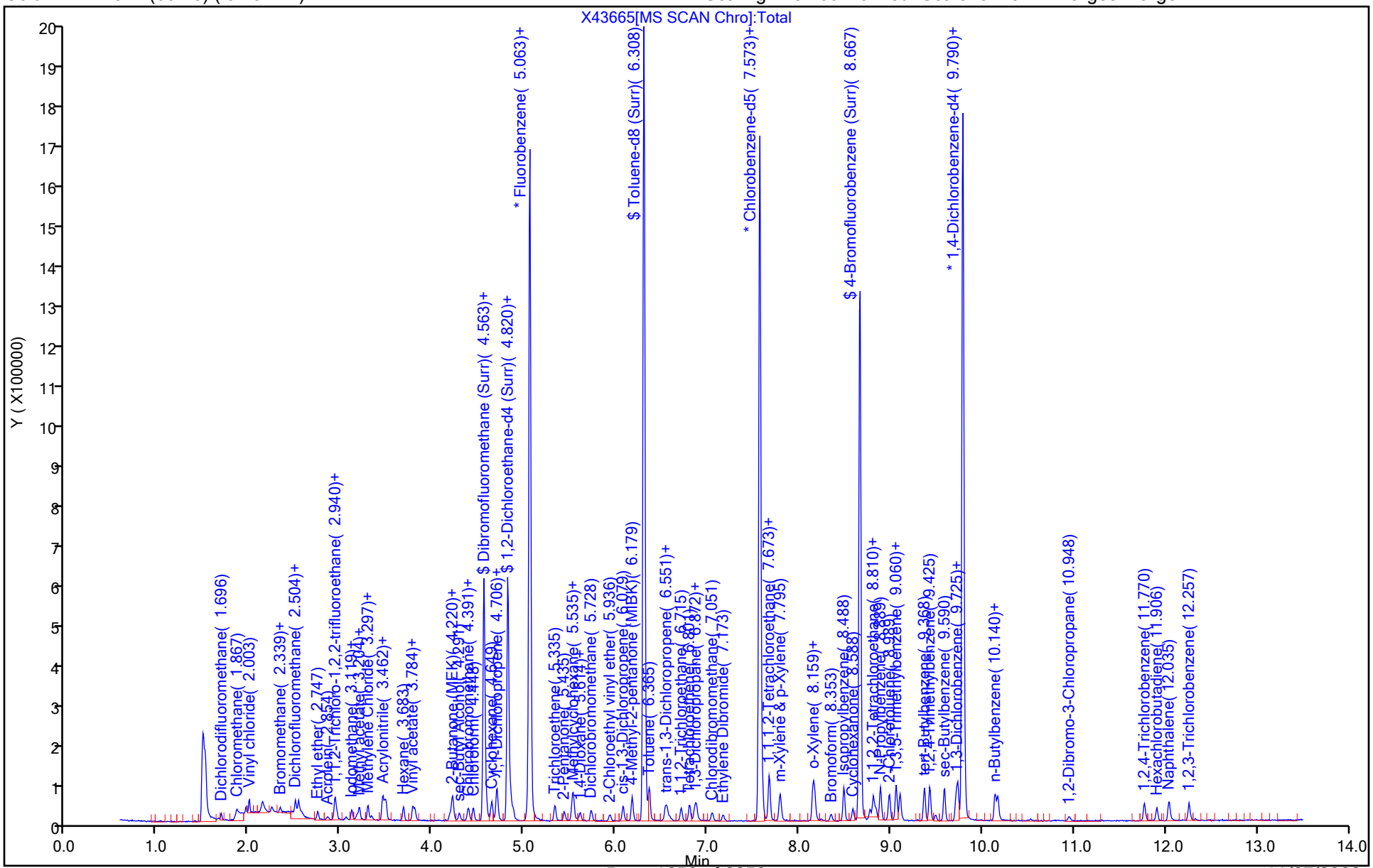
Report Date: 24-Oct-2022 14:16:47 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43665.D

Injection Date:	22-Oct-2022 12:35:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD020			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43666.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Oct-2022 12:55:30 ALS Bottle#: 5 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD050
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:16:50 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 22-Oct-2022 13:32:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1283629	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	294496	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	470460	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	301779	50.0	49.8	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	367877	50.0	50.0	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1232863	50.0	50.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	84	475045	50.0	50.2	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	100	32850	5.00	5.73	
11 Chloromethane	50	1.867	1.867	0.000	98	29802	5.00	5.32	
12 Vinyl chloride	62	1.967	1.967	0.000	97	29168	5.00	5.54	
14 Bromomethane	94	2.246	2.239	0.007	93	18088	5.00	6.16	
15 Chloroethane	64	2.339	2.332	0.007	99	19293	5.00	5.44	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	49341	5.00	5.30	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	43032	5.00	5.44	
19 Ethyl ether	59	2.747	2.747	0.000	89	20984	5.00	4.83	
21 Acrolein	56	2.854	2.854	0.000	99	15425	49.4	48.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	93	18991	5.00	5.26	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	24755	5.00	5.45	
24 Acetone	43	2.954	2.954	0.000	100	31437	20.0	20.3	
26 Iodomethane	142	3.061	3.061	0.000	99	21099	5.00	3.84	
27 Carbon disulfide	76	3.119	3.118	0.001	99	74527	5.00	5.14	
29 Methyl acetate	43	3.183	3.183	0.000	98	36166	10.0	9.88	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	38548	5.00	4.90	
31 Methylene Chloride	84	3.297	3.297	0.000	91	31943	5.00	5.22	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	26887	50.0	45.0	
33 Acrylonitrile	53	3.455	3.455	0.000	98	95316	50.0	49.8	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	95	83227	5.00	5.04	
35 trans-1,2-Dichloroethene	96	3.498	3.490	0.008	99	27080	5.00	5.06	
37 Hexane	57	3.683	3.683	0.000	94	33194	5.00	4.98	
39 Vinyl acetate	43	3.784	3.783	0.001	97	108496	10.0	9.70	
40 1,1-Dichloroethane	63	3.812	3.805	0.007	96	50260	5.00	5.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	99	43020	20.0	19.1	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	83	32192	5.00	5.27	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	89	49526	5.00	5.17	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	44874	120.0	117.3	
52 Chlorobromomethane	128	4.391	4.384	0.007	96	14483	5.00	5.06	
53 Tetrahydrofuran	42	4.398	4.398	0.000	85	15055	10.0	9.96	
54 Chloroform	83	4.441	4.448	-0.007	95	52167	5.00	5.16	
55 1,1,1-Trichloroethane	97	4.592	4.591	0.001	98	46037	5.00	5.20	
56 Cyclohexane	56	4.649	4.649	0.000	89	44921	5.00	5.12	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	96	39309	5.00	5.14	
59 Carbon tetrachloride	117	4.706	4.706	0.000	93	39973	5.00	5.28	
60 Isobutyl alcohol	41	4.706	4.706	0.000	80	22229	125.0	121.6	
62 Benzene	78	4.849	4.849	0.000	97	117220	5.00	5.14	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	97	41976	5.00	4.97	
65 n-Heptane	43	5.035	5.035	0.000	90	27155	5.00	4.74	
67 Trichloroethene	95	5.335	5.335	0.000	97	28955	5.00	4.98	
68 2-Pentanone	43	5.435	5.435	0.000	98	52752	16.0	15.3	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	34040	5.00	5.02	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	92	29944	5.00	5.20	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	7570	100.0	101.6	
73 Dibromomethane	93	5.607	5.607	0.000	91	18189	5.00	5.09	
74 Dichlorobromomethane	83	5.736	5.735	0.001	98	42048	5.00	5.13	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	91	19779	5.00	5.32	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	49076	5.00	4.93	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	96	92320	20.0	19.7	
79 Toluene	91	6.365	6.365	0.000	97	127657	5.00	5.11	
80 trans-1,3-Dichloropropene	75	6.544	6.536	0.008	95	45749	5.00	4.91	
81 Ethyl methacrylate	69	6.565	6.558	0.007	88	35378	5.00	4.98	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	93	23387	5.00	4.69	
83 Tetrachloroethene	164	6.801	6.808	-0.007	93	21776	5.00	5.09	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	44175	5.00	4.97	
85 2-Hexanone	43	6.880	6.880	0.000	94	64416	20.0	20.1	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	29222	5.00	5.03	
88 Ethylene Dibromide	107	7.173	7.173	0.000	100	26482	5.00	5.04	
89 1-Chlorohexane	91	7.559	7.559	0.000	96	32390	4.00	4.02	
90 Chlorobenzene	112	7.602	7.602	0.000	93	81107	5.00	5.10	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	94	28450	5.00	5.11	
92 Ethylbenzene	106	7.673	7.673	0.000	99	44652	5.00	5.18	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	55309	5.00	5.12	
94 o-Xylene	106	8.152	8.152	0.000	96	54957	5.00	5.23	
95 Styrene	104	8.167	8.167	0.000	94	91017	5.00	5.10	
96 Bromoform	173	8.345	8.352	-0.007	93	18293	5.00	5.02	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	140156	5.00	5.27	
99 Cyclohexanone	55	8.588	8.588	0.000	93	30391	150.0	137.9	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	33236	5.00	4.95	
101 Bromobenzene	156	8.810	8.810	0.000	96	32667	5.00	5.10	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	62	10550	5.00	4.93	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	10027	5.00	4.82	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	39240	5.00	5.25	
105 2-Chlorotoluene	126	8.989	8.989	0.000	96	34148	5.00	5.38	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	121037	5.00	5.16	
107 4-Chlorotoluene	126	9.103	9.103	0.000	98	33166	5.00	5.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	98245	5.00	5.15	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	126824	5.00	5.13	
111 sec-Butylbenzene	134	9.590	9.589	0.001	94	28008	5.00	5.12	
112 1,3-Dichlorobenzene	146	9.711	9.718	-0.007	96	62806	5.00	5.17	
113 4-Isopropyltoluene	119	9.733	9.732	0.001	96	121472	5.00	5.17	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	92	62404	5.00	4.93	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	106096	5.00	5.08	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	96	60188	5.00	5.23	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	79	7480	5.00	5.02	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	32935	5.00	5.03	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	92	13212	5.00	5.39	
122 Naphthalene	128	12.035	12.035	0.000	97	95811	5.00	5.21	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	96	28280	5.00	5.15	
S 135 1,2-Dichloroethene, Total (URS)	96				0		10.0	10.3	
S 137 Total BTEX	1				0			25.8	
S 140 Trihalomethanes, Total	1				0		20.0	20.3	
S 141 1,2-Dichloroethene, Total	1				0		10.0	10.3	
S 139 Xylenes, Total (URS)	1				0		10.0	10.4	
S 136 1,3-Dichloropropene, Total	1				0		10.0	9.84	
S 138 Xylenes, Total	106				0		10.0	10.4	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00078	Amount Added:	2.50	Units: uL	
MV-Gas A_00136	Amount Added:	1.00	Units: uL	
Acrolein_A_00015	Amount Added:	2.50	Units: uL	
mv-IS_SS_00049	Amount Added:	5.00	Units: uL	Run Reagent

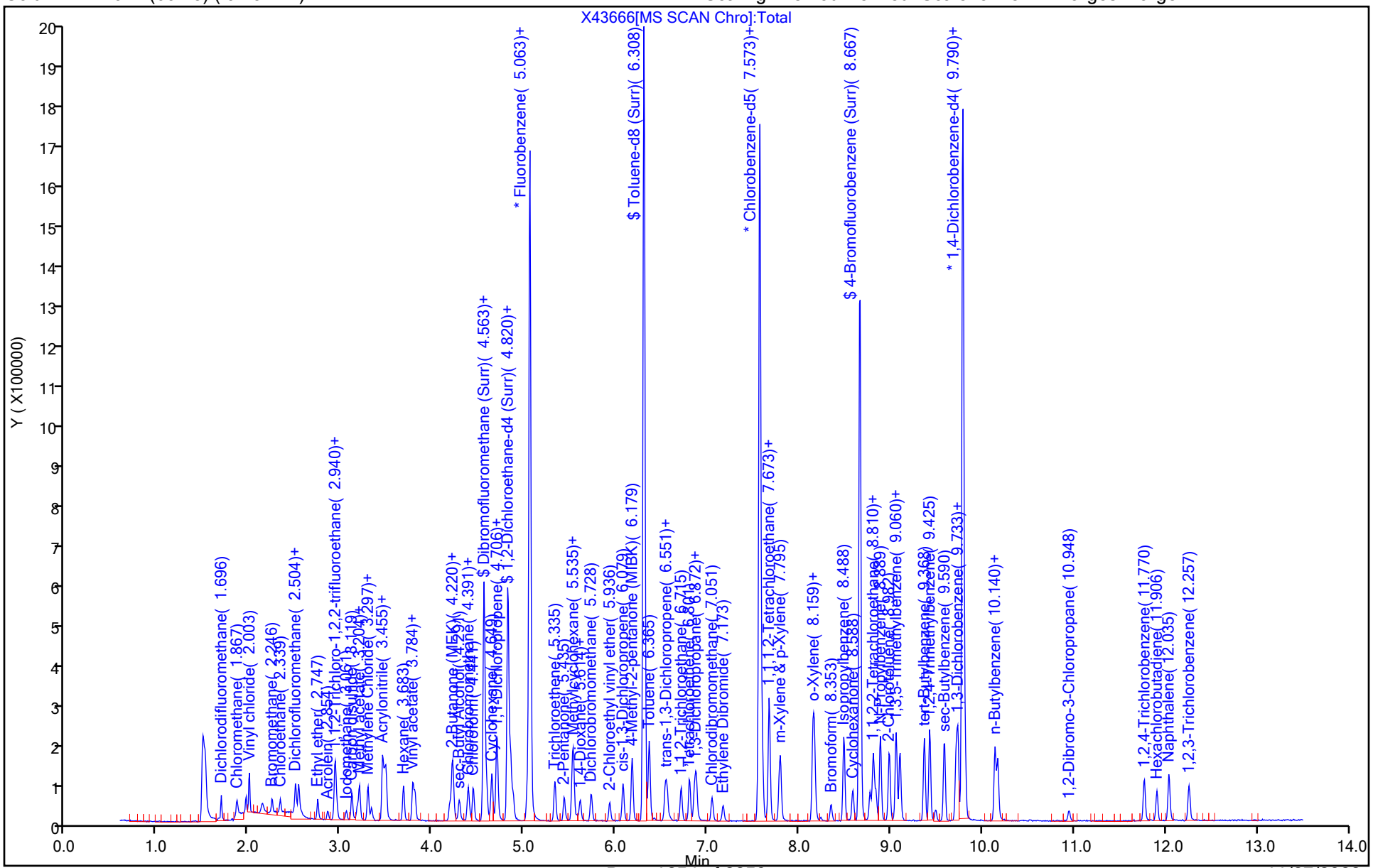
Report Date: 24-Oct-2022 14:16:51 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43666.D

Injection Date:	22-Oct-2022 12:55:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD050			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43667.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 22-Oct-2022 13:16:30 ALS Bottle#: 6 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:16:55 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 22-Oct-2022 14:25:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1310662	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	299553	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	488138	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	309832	50.0	50.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	378855	50.0	50.4	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1247068	50.0	49.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	84	483270	50.0	49.2	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	98	45528	10.0	7.77	
11 Chloromethane	50	1.867	1.867	0.000	99	49860	10.0	8.72	
12 Vinyl chloride	62	1.967	1.967	0.000	98	43713	10.0	8.13	
14 Bromomethane	94	2.239	2.239	0.000	93	26832	10.0	9.26	
15 Chloroethane	64	2.332	2.332	0.000	100	29927	10.0	8.27	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	84611	10.0	8.90	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	62226	10.0	7.70	
19 Ethyl ether	59	2.747	2.747	0.000	89	43279	10.0	9.75	
21 Acrolein	56	2.854	2.854	0.000	99	29387	98.8	90.8	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	31461	10.0	8.54	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	41872	10.0	9.04	
24 Acetone	43	2.954	2.954	0.000	100	59892	40.0	37.8	
26 Iodomethane	142	3.061	3.061	0.000	98	44830	10.0	7.31	
27 Carbon disulfide	76	3.118	3.118	0.000	100	131702	10.0	8.90	
29 Methyl acetate	43	3.183	3.183	0.000	97	67752	20.0	18.1	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	89	73390	10.0	9.14	
31 Methylene Chloride	84	3.297	3.297	0.000	89	58739	10.0	9.80	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	53816	100.0	88.1	
33 Acrylonitrile	53	3.455	3.455	0.000	99	186159	100.0	95.3	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	95	164496	10.0	9.75	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	49816	10.0	9.11	
37 Hexane	57	3.683	3.683	0.000	92	57207	10.0	8.44	
39 Vinyl acetate	43	3.783	3.783	0.000	98	215506	20.0	18.9	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	96149	10.0	9.39	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	87553	40.0	38.1	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	60419	10.0	9.68	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	86054	10.0	8.79	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	88946	240.0	212.8	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	30099	10.0	10.3	
53 Tetrahydrofuran	42	4.398	4.398	0.000	82	29155	20.0	18.9	
54 Chloroform	83	4.448	4.448	0.000	94	99354	10.0	9.62	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	97	82919	10.0	9.17	
56 Cyclohexane	56	4.649	4.649	0.000	89	74913	10.0	8.36	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	70363	10.0	9.01	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	67451	10.0	8.72	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	37096	250.0	198.7	
62 Benzene	78	4.849	4.849	0.000	98	216244	10.0	9.28	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	83451	10.0	9.67	
65 n-Heptane	43	5.035	5.035	0.000	88	49323	10.0	8.42	
67 Trichloroethene	95	5.335	5.335	0.000	98	54352	10.0	9.20	
68 2-Pentanone	43	5.435	5.435	0.000	98	107375	32.0	30.4	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	55891	10.0	8.08	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	93	56325	10.0	9.58	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	14286	200.0	187.8	
73 Dibromomethane	93	5.607	5.607	0.000	93	35856	10.0	9.83	
74 Dichlorobromomethane	83	5.735	5.735	0.000	99	79912	10.0	9.55	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	92	36170	10.0	9.52	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	97623	10.0	9.64	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	96	180211	40.0	37.8	
79 Toluene	91	6.365	6.365	0.000	98	240074	10.0	9.41	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	95	91451	10.0	9.61	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	72396	10.0	10.0	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	92	51829	10.0	10.2	
83 Tetrachloroethene	164	6.808	6.808	0.000	94	39991	10.0	9.19	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	88515	10.0	9.79	
85 2-Hexanone	43	6.880	6.880	0.000	95	124762	40.0	38.2	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	57089	10.0	9.66	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	51411	10.0	9.62	
89 1-Chlorohexane	91	7.559	7.559	0.000	96	56819	8.00	7.11	
90 Chlorobenzene	112	7.602	7.602	0.000	95	153450	10.0	9.48	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	93	55202	10.0	9.75	
92 Ethylbenzene	106	7.673	7.673	0.000	98	82875	10.0	9.46	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	101158	10.0	9.20	
94 o-Xylene	106	8.152	8.152	0.000	97	104926	10.0	9.83	
95 Styrene	104	8.167	8.167	0.000	94	177979	10.0	9.81	
96 Bromoform	173	8.352	8.352	0.000	93	35879	10.0	9.69	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	249901	10.0	9.06	
99 Cyclohexanone	55	8.588	8.588	0.000	92	64738	300.0	288.8	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	67032	10.0	9.63	
101 Bromobenzene	156	8.810	8.810	0.000	97	63624	10.0	9.58	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	76	19897	10.0	8.95	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	20682	10.0	9.58	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	68969	10.0	8.90	
105 2-Chlorotoluene	126	8.989	8.989	0.000	96	61614	10.0	9.36	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	227481	10.0	9.35	
107 4-Chlorotoluene	126	9.103	9.103	0.000	99	63456	10.0	9.28	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	181616	10.0	9.17	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	239957	10.0	9.35	
111 sec-Butylbenzene	134	9.589	9.589	0.000	95	51569	10.0	9.08	
112 1,3-Dichlorobenzene	146	9.718	9.718	0.000	97	122746	10.0	9.73	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	226266	10.0	9.28	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	96	124667	10.0	9.49	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	197241	10.0	9.11	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	96	116760	10.0	9.78	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	84	14848	10.0	9.60	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	65815	10.0	9.69	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	93	24315	10.0	9.30	
122 Naphthalene	128	12.035	12.035	0.000	98	185477	10.0	9.73	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	94	53303	10.0	9.35	
S 135 1,2-Dichloroethene, Total (URS)	96				0		20.0	18.8	
S 137 Total BTEX	1				0			47.2	
S 140 Trihalomethanes, Total	1				0		40.0	38.5	
S 141 1,2-Dichloroethene, Total	1				0		20.0	18.8	
S 139 Xylenes, Total (URS)	1				0		20.0	19.0	
S 136 1,3-Dichloropropene, Total	1				0		20.0	19.2	
S 138 Xylenes, Total	106				0		20.0	19.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00078	Amount Added:	5.00	Units: uL	
MV-Gas A_00136	Amount Added:	2.00	Units: uL	
Acrolein_A_00015	Amount Added:	5.00	Units: uL	
mv-IS_SS_00049	Amount Added:	5.00	Units: uL	Run Reagent

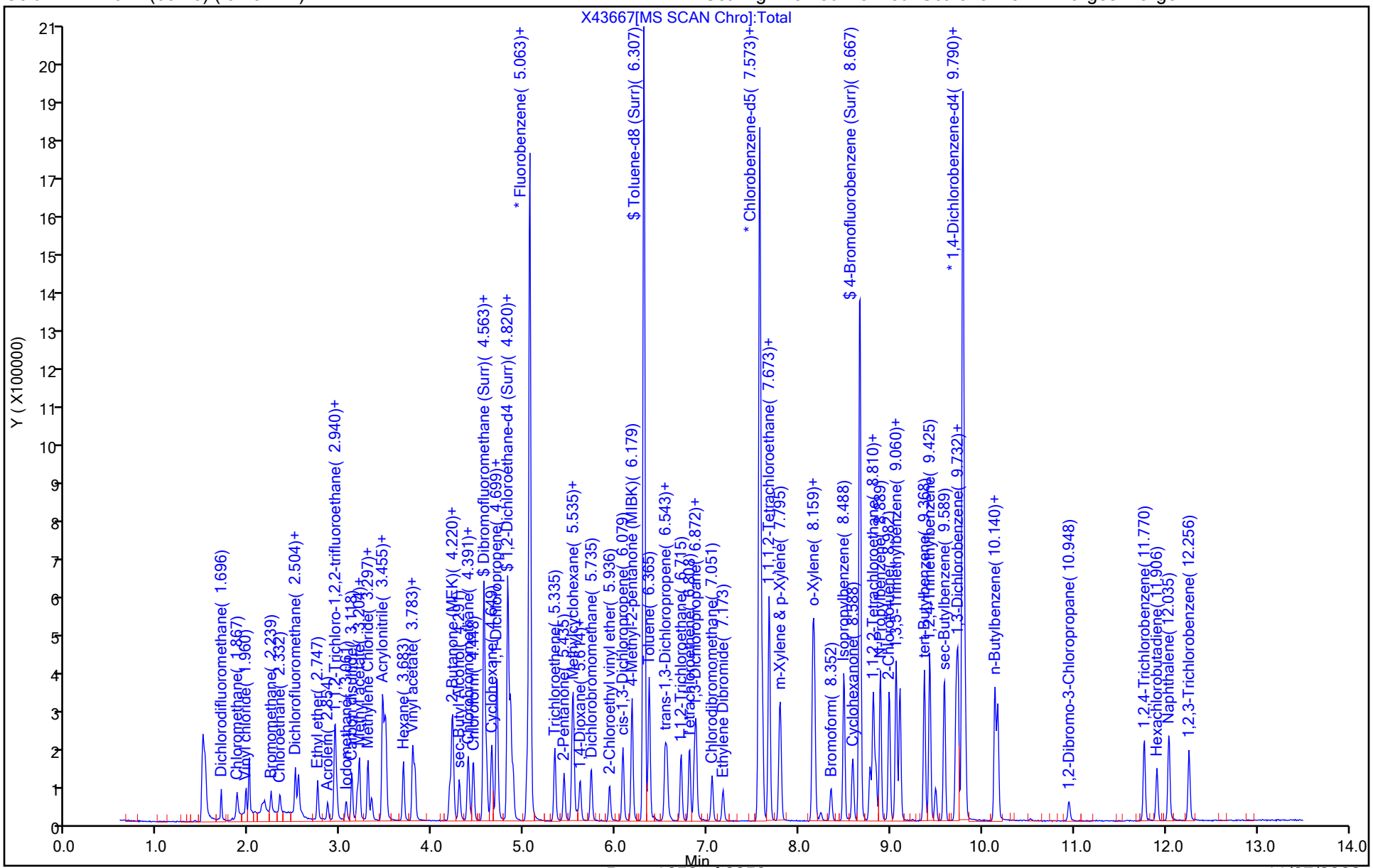
Report Date: 24-Oct-2022 14:16:56 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43667.D

Injection Date:	22-Oct-2022 13:16:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD10			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43663.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 22-Oct-2022 11:54:30 ALS Bottle#: 2 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:16:59 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 24-Oct-2022 14:14:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1343824	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	306665	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	482565	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	311439	50.0	49.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	370500	50.0	48.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1302181	50.0	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	85	489792	50.0	50.5	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	327543	50.0	54.5	
11 Chloromethane	50	1.867	1.867	0.000	99	284890	50.0	48.6	
12 Vinyl chloride	62	1.967	1.967	0.000	98	287446	50.0	52.1	
14 Bromomethane	94	2.239	2.239	0.000	91	117888	50.0	41.8	
15 Chloroethane	64	2.339	2.339	0.000	100	185953	50.0	50.1	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	493762	50.0	50.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	99	427834	50.0	51.6	
19 Ethyl ether	59	2.747	2.747	0.000	90	222614	50.0	48.9	
21 Acrolein	56	2.854	2.854	0.000	99	155930	493.8	469.9	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	96	210021	50.0	55.6	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	258010	50.0	54.3	
24 Acetone	43	2.954	2.954	0.000	100	310891	200.0	191.5	
26 Iodomethane	142	3.054	3.054	0.000	99	331608	50.0	48.9	
27 Carbon disulfide	76	3.118	3.118	0.000	99	799301	50.0	52.7	
29 Methyl acetate	43	3.176	3.176	0.000	97	361084	100.0	94.2	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	424642	50.0	51.6	
31 Methylene Chloride	84	3.297	3.297	0.000	91	299173	50.0	50.6	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	317875	500.0	507.6	
33 Acrylonitrile	53	3.455	3.455	0.000	98	1005804	500.0	502.4	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	95	859988	50.0	49.7	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	288912	50.0	51.5	
37 Hexane	57	3.683	3.683	0.000	91	402552	50.0	58.0	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1170432	100.0	100.0	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	540826	50.0	51.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	475831	200.0	202.0	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	83	330270	50.0	51.6	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	88	525572	50.0	52.4	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	549406	1200.0	1202.0	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	149033	50.0	49.8	
53 Tetrahydrofuran	42	4.398	4.398	0.000	85	157544	100.0	99.6	
54 Chloroform	83	4.441	4.441	0.000	94	542298	50.0	51.2	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	99	490873	50.0	52.9	
56 Cyclohexane	56	4.649	4.649	0.000	89	504763	50.0	54.9	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	435703	50.0	54.4	
59 Carbon tetrachloride	117	4.706	4.706	0.000	93	411383	50.0	51.9	
60 Isobutyl alcohol	41	4.706	4.706	0.000	89	246665	1250.0	1288.7	
62 Benzene	78	4.849	4.849	0.000	96	1226181	50.0	51.3	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	429248	50.0	48.5	
65 n-Heptane	43	5.035	5.035	0.000	90	318545	50.0	53.1	
67 Trichloroethene	95	5.335	5.335	0.000	97	322028	50.0	53.2	
68 2-Pentanone	43	5.435	5.435	0.000	98	615014	160.0	170.1	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	386649	50.0	54.5	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	94	307064	50.0	51.0	
72 1,4-Dioxane	88	5.578	5.578	0.000	95	82479	1000.0	1057.4	
73 Dibromomethane	93	5.607	5.607	0.000	95	183723	50.0	49.1	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	428110	50.0	49.9	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	93	187017	50.0	48.0	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	530222	50.0	51.1	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1005373	200.0	205.4	
79 Toluene	91	6.365	6.365	0.000	98	1359890	50.0	52.0	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	494203	50.0	50.6	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	388233	50.0	52.4	
82 1,1,2-Trichloroethane	97	6.708	6.708	0.000	92	263570	50.0	50.5	
83 Tetrachloroethene	164	6.801	6.801	0.000	94	239150	50.0	53.7	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	97	467509	50.0	50.5	
85 2-Hexanone	43	6.872	6.872	0.000	95	703938	200.0	210.7	
87 Chlorodibromomethane	129	7.051	7.051	0.000	94	302604	50.0	50.0	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	273883	50.0	50.0	
89 1-Chlorohexane	91	7.552	7.552	0.000	98	341004	40.0	42.9	
90 Chlorobenzene	112	7.602	7.602	0.000	93	835728	50.0	50.4	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.666	0.000	95	292087	50.0	50.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	473901	50.0	52.8	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	591868	50.0	52.6	
94 o-Xylene	106	8.152	8.152	0.000	97	570287	50.0	52.2	
95 Styrene	104	8.167	8.167	0.000	94	976231	50.0	52.6	
96 Bromoform	173	8.345	8.345	0.000	92	197264	50.0	52.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	1468399	50.0	53.9	
99 Cyclohexanone	55	8.581	8.581	0.000	92	374284	1500.0	1630.9	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	348183	50.0	50.6	
101 Bromobenzene	156	8.810	8.810	0.000	98	337457	50.0	51.4	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	79	114970	50.0	52.3	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	87	108709	50.0	50.9	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	406180	50.0	53.0	
105 2-Chlorotoluene	126	8.982	8.982	0.000	95	339355	50.0	52.2	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	93	1274955	50.0	53.0	
107 4-Chlorotoluene	126	9.103	9.103	0.000	99	348425	50.0	51.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1047600	50.0	53.5	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	1325846	50.0	52.3	
111 sec-Butylbenzene	134	9.582	9.582	0.000	95	303319	50.0	54.0	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	96	659986	50.0	52.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	96	1293839	50.0	53.7	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	657813	50.0	50.6	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1171415	50.0	54.7	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	96	609349	50.0	51.6	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	83	76799	50.0	50.2	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	348869	50.0	52.0	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	96	139840	50.0	52.6	
122 Naphthalene	128	12.035	12.035	0.000	97	940916	50.0	49.9	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	282844	50.0	50.2	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	103.2	
S 140 Trihalomethanes, Total	1				0		200.0	203.2	
S 141 1,2-Dichloroethene, Total	1				0		100.0	103.2	
S 139 Xylenes, Total (URS)	1				0		100.0	104.8	
S 136 1,3-Dichloropropene, Total	1				0		100.0	101.8	
S 138 Xylenes, Total	106				0		100.0	104.8	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00078	Amount Added: 25.00	Units: uL	
MV-Gas A_00136	Amount Added: 10.00	Units: uL	
Acrolein_A_00015	Amount Added: 25.00	Units: uL	
mv-IS_SS_00049	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 24-Oct-2022 14:17:00 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43663.D

Injection Date: 22-Oct-2022 11:54:30 Instrument ID: VMS_X4 Operator ID: SEIFERTJ

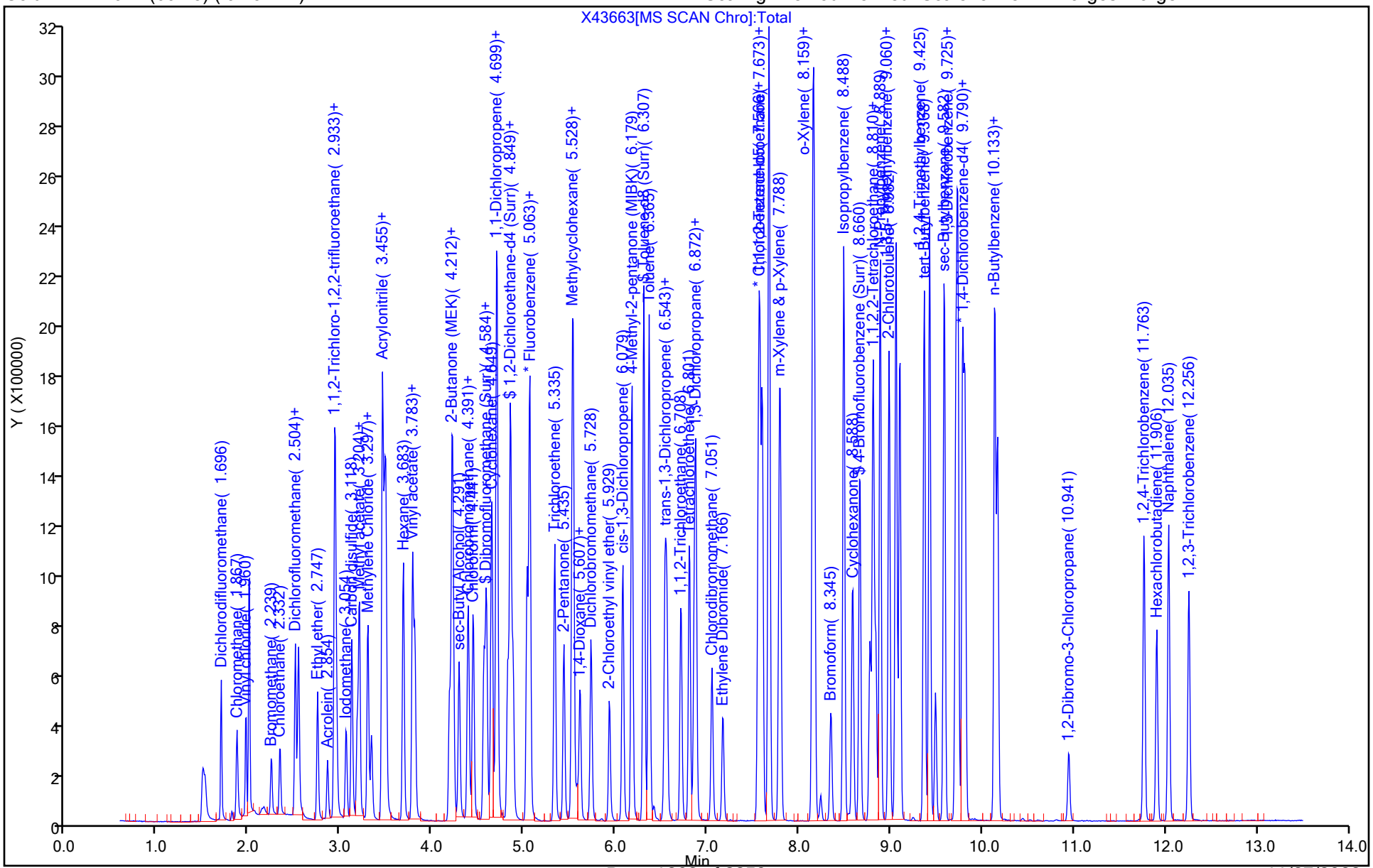
Lims ID: ICIS Worklist Smp#: 18

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43668.D
Lims ID: STD75
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 22-Oct-2022 13:36:30 ALS Bottle#: 7 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD75
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:17:03 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 22-Oct-2022 14:26:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1323675	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	305763	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	480245	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	312524	50.0	50.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	376265	50.0	49.5	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1284512	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	85	487475	50.0	50.5	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	452938	75.0	76.6	
11 Chloromethane	50	1.867	1.867	0.000	99	414249	75.0	71.7	
12 Vinyl chloride	62	1.967	1.967	0.000	98	406303	75.0	74.8	
14 Bromomethane	94	2.239	2.239	0.000	92	205032	75.0	74.4	
15 Chloroethane	64	2.332	2.339	-0.007	100	265407	75.0	72.6	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	701515	75.0	73.0	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	99	591811	75.0	72.5	
19 Ethyl ether	59	2.747	2.747	0.000	90	339813	75.0	75.8	
21 Acrolein	56	2.854	2.854	0.000	99	226132	740.6	691.9	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	96	300583	75.0	80.8	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	375561	75.0	80.2	
24 Acetone	43	2.954	2.954	0.000	99	462126	300.0	289.0	
26 Iodomethane	142	3.061	3.054	0.007	99	532695	75.0	79.3	
27 Carbon disulfide	76	3.119	3.118	0.001	99	1145691	75.0	76.7	
29 Methyl acetate	43	3.183	3.176	0.007	97	545016	150.0	144.3	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	614634	75.0	75.8	
31 Methylene Chloride	84	3.297	3.297	0.000	90	442431	75.0	76.2	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	99	440262	750.0	713.8	
33 Acrylonitrile	53	3.455	3.455	0.000	98	1455944	750.0	738.3	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	95	1303806	75.0	76.5	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	427820	75.0	77.5	
37 Hexane	57	3.683	3.683	0.000	91	564195	75.0	81.5	
39 Vinyl acetate	43	3.784	3.783	0.001	97	1744901	150.0	151.3	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	791891	75.0	76.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	689506	300.0	297.1	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	83	490204	75.0	77.8	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	88	769749	75.0	77.9	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	753236	1800.0	1666.8	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	219259	75.0	74.3	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	225905	150.0	144.9	
54 Chloroform	83	4.441	4.441	0.000	94	812320	75.0	77.9	
55 1,1,1-Trichloroethane	97	4.592	4.584	0.008	98	727268	75.0	79.6	
56 Cyclohexane	56	4.649	4.649	0.000	89	710424	75.0	78.5	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	641999	75.0	81.4	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	610127	75.0	78.1	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	333099	1875.0	1766.7	
62 Benzene	78	4.849	4.849	0.000	97	1811187	75.0	77.0	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	98	649751	75.0	74.5	
65 n-Heptane	43	5.035	5.035	0.000	89	456556	75.0	77.2	
67 Trichloroethene	95	5.335	5.335	0.000	98	471719	75.0	78.2	
68 2-Pentanone	43	5.435	5.435	0.000	98	884082	240.0	248.2	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	552839	75.0	79.1	
70 1,2-Dichloropropane	63	5.543	5.535	0.007	94	454879	75.0	76.6	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	111391	1500.0	1449.8	
73 Dibromomethane	93	5.607	5.607	0.000	94	278055	75.0	75.5	
74 Dichlorobromomethane	83	5.736	5.728	0.008	99	641184	75.0	75.9	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	93	274943	75.0	71.7	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	798866	75.0	77.3	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1457952	300.0	302.4	
79 Toluene	91	6.365	6.365	0.000	98	2000351	75.0	77.6	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	742440	75.0	77.2	
81 Ethyl methacrylate	69	6.558	6.558	0.000	86	577884	75.0	78.3	
82 1,1,2-Trichloroethane	97	6.715	6.708	0.007	92	391254	75.0	76.1	
83 Tetrachloroethene	164	6.808	6.801	0.007	94	355597	75.0	80.1	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	96	706770	75.0	76.6	
85 2-Hexanone	43	6.872	6.872	0.000	95	1019444	300.0	306.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	455466	75.0	75.5	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	415075	75.0	76.1	
89 1-Chlorohexane	91	7.559	7.552	0.007	96	500110	60.0	63.1	
90 Chlorobenzene	112	7.602	7.602	0.000	93	1247664	75.0	75.5	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.666	0.007	94	439494	75.0	76.1	
92 Ethylbenzene	106	7.673	7.673	0.000	99	701771	75.0	78.5	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	867333	75.0	77.3	
94 o-Xylene	106	8.152	8.152	0.000	97	851036	75.0	78.1	
95 Styrene	104	8.167	8.167	0.000	94	1446911	75.0	78.1	
96 Bromoform	173	8.345	8.345	0.000	92	299136	75.0	79.1	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	2158341	75.0	79.6	
99 Cyclohexanone	55	8.589	8.581	0.007	92	490116	2250.0	2142.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	518669	75.0	75.7	
101 Bromobenzene	156	8.810	8.810	0.000	97	505442	75.0	77.4	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	78	169380	75.0	77.5	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	87	156718	75.0	73.8	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	603493	75.0	79.1	
105 2-Chlorotoluene	126	8.982	8.982	0.000	95	503980	75.0	77.8	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1903986	75.0	79.5	
107 4-Chlorotoluene	126	9.103	9.103	0.000	99	524758	75.0	78.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	1548127	75.0	79.5	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	1949027	75.0	77.2	
111 sec-Butylbenzene	134	9.590	9.582	0.008	95	441109	75.0	78.9	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	96	980435	75.0	79.0	
113 4-Isopropyltoluene	119	9.733	9.732	0.001	96	1923431	75.0	80.2	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	984663	75.0	76.2	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1726850	75.0	81.0	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	96	922697	75.0	78.6	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	83	111865	75.0	73.5	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	523644	75.0	78.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	204592	75.0	77.1	
122 Naphthalene	128	12.035	12.035	0.000	97	1371384	75.0	73.1	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	96	426649	75.0	76.0	
S 135 1,2-Dichloroethene, Total (URS)	96				0		150.0	155.3	
S 137 Total BTEX	1				0			388.4	
S 140 Trihalomethanes, Total	1				0		300.0	308.4	
S 141 1,2-Dichloroethene, Total	1				0		150.0	155.3	
S 139 Xylenes, Total (URS)	1				0		150.0	155.4	
S 136 1,3-Dichloropropene, Total	1				0		150.0	154.5	
S 138 Xylenes, Total	106				0		150.0	155.4	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00078	Amount Added:	37.50	Units: uL	
MV-Gas A_00136	Amount Added:	15.00	Units: uL	
Acrolein_A_00015	Amount Added:	37.50	Units: uL	
mv-IS_SS_00049	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 24-Oct-2022 14:17:04 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43668.D

Injection Date: 22-Oct-2022 13:36:30 Instrument ID: VMS_X4 Operator ID: SEIFERTJ

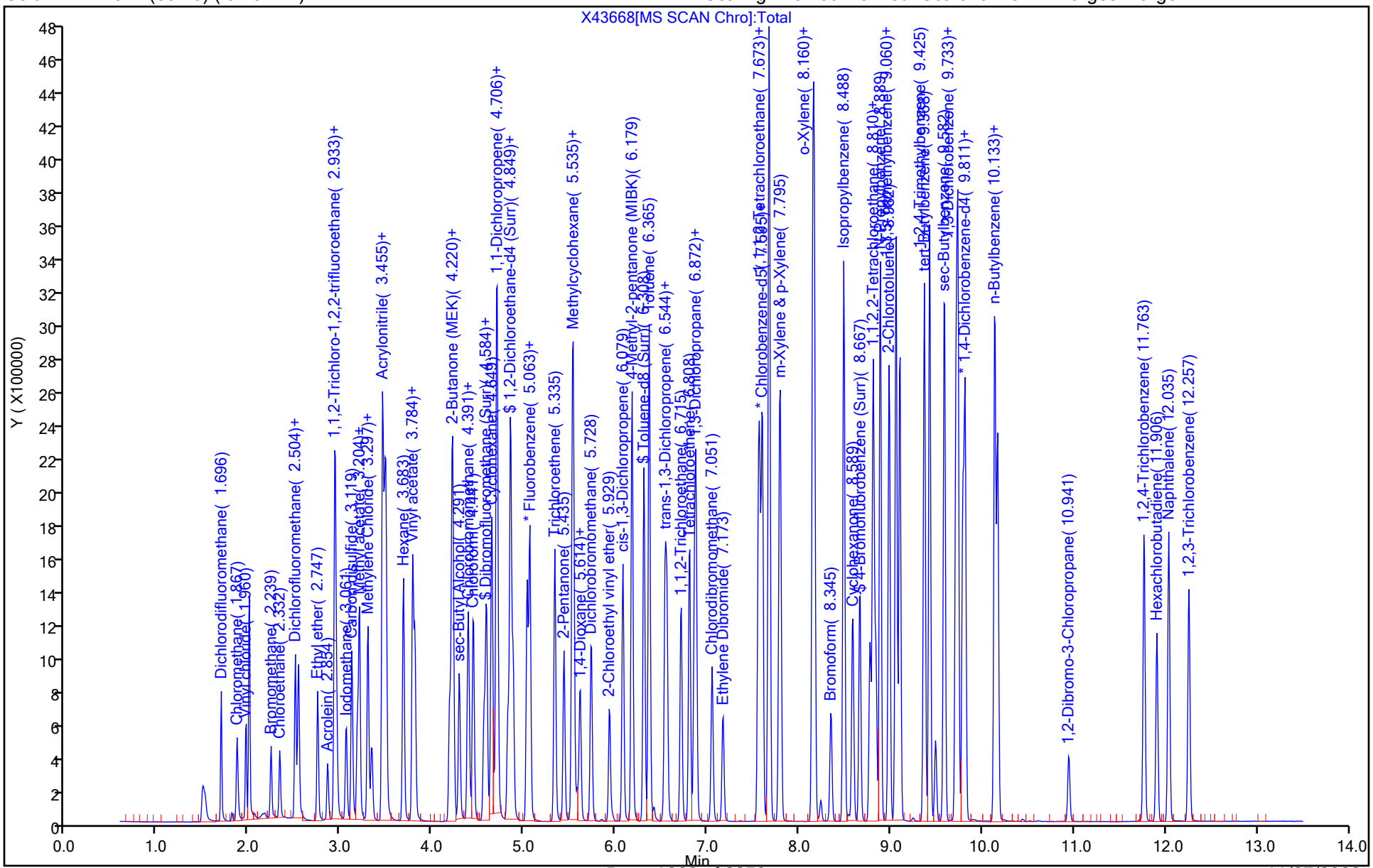
Lims ID: STD75 Worklist Smp#: 19

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 7

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43669.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 22-Oct-2022 13:57:30 ALS Bottle#: 8 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:17:08 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 22-Oct-2022 14:30:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1337439	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	311262	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	495081	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	316253	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	387057	50.0	50.4	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1299752	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	85	500214	50.0	50.2	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	594262	100.0	99.4	
11 Chloromethane	50	1.867	1.867	0.000	99	554315	100.0	95.0	
12 Vinyl chloride	62	1.960	1.967	-0.007	98	540222	100.0	98.5	
14 Bromomethane	94	2.232	2.239	-0.007	92	282328	100.0	101.6	
15 Chloroethane	64	2.332	2.339	-0.007	100	353209	100.0	95.7	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	936150	100.0	96.5	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	786296	100.0	95.4	
19 Ethyl ether	59	2.747	2.747	0.000	90	452555	100.0	99.9	
21 Acrolein	56	2.854	2.854	0.000	99	328523	987.5	994.8	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	96	342142	100.0	91.0	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	98	440109	100.0	93.1	
24 Acetone	43	2.954	2.954	0.000	100	635569	400.0	393.3	
26 Iodomethane	142	3.054	3.054	0.000	99	655306	100.0	96.5	
27 Carbon disulfide	76	3.119	3.118	0.001	99	1359963	100.0	90.1	
29 Methyl acetate	43	3.176	3.176	0.000	97	758549	200.0	198.8	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	760069	100.0	92.8	
31 Methylene Chloride	84	3.297	3.297	0.000	91	568294	100.0	97.0	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	100	672491	1000.0	1079.1	
33 Acrylonitrile	53	3.455	3.455	0.000	98	2051147	1000.0	1029.5	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	95	1739939	100.0	101.0	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	521265	100.0	93.4	
37 Hexane	57	3.683	3.683	0.000	92	644639	100.0	91.5	
39 Vinyl acetate	43	3.783	3.783	0.000	97	2367963	200.0	203.2	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	980517	100.0	93.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	994679	400.0	424.2	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.000	83	620209	100.0	97.4	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	88	918075	100.0	91.9	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	1144800	2400.0	2499.2	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	279742	100.0	93.8	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	328280	200.0	208.4	
54 Chloroform	83	4.441	4.441	0.000	94	1024688	100.0	97.3	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	98	867316	100.0	94.0	
56 Cyclohexane	56	4.649	4.649	0.000	89	809531	100.0	88.5	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	756390	100.0	94.9	
59 Carbon tetrachloride	117	4.706	4.706	0.000	93	721291	100.0	91.4	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	512778	2500.0	2691.7	
62 Benzene	78	4.849	4.849	0.000	96	2252610	100.0	94.7	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	854482	100.0	97.0	
65 n-Heptane	43	5.035	5.035	0.000	89	533048	100.0	89.2	
67 Trichloroethene	95	5.335	5.335	0.000	98	582827	100.0	94.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	1275939	320.0	354.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	642275	100.0	91.0	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	94	590282	100.0	98.4	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	171240	2000.0	2205.8	
73 Dibromomethane	93	5.607	5.607	0.000	95	372034	100.0	100.0	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	840200	100.0	98.4	
76 2-Chloroethyl vinyl ether	63	5.936	5.929	0.007	92	391264	100.0	100.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	1038158	100.0	98.7	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	2068960	400.0	424.8	
79 Toluene	91	6.365	6.365	0.000	98	2497844	100.0	95.9	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	98	991365	100.0	102.1	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	796156	100.0	105.9	
82 1,1,2-Trichloroethane	97	6.715	6.708	0.007	92	532097	100.0	102.5	
83 Tetrachloroethene	164	6.808	6.801	0.007	94	423400	100.0	93.7	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	97	943238	100.0	100.4	
85 2-Hexanone	43	6.872	6.872	0.000	95	1458278	400.0	430.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	611330	100.0	99.5	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	557308	100.0	100.3	
89 1-Chlorohexane	91	7.559	7.552	0.007	95	596610	80.0	74.0	
90 Chlorobenzene	112	7.602	7.602	0.000	93	1582592	100.0	94.1	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.666	0.007	94	571688	100.0	97.2	
92 Ethylbenzene	106	7.673	7.673	0.000	99	867337	100.0	95.3	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	1082337	100.0	94.7	
94 o-Xylene	106	8.152	8.152	0.000	97	1077688	100.0	97.1	
95 Styrene	104	8.167	8.167	0.000	94	1852350	100.0	98.3	
96 Bromoform	173	8.352	8.345	0.007	92	407884	100.0	106.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	2635313	100.0	94.2	
99 Cyclohexanone	55	8.588	8.581	0.007	92	759033	3000.0	3258.6	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	719990	100.0	102.0	
101 Bromobenzene	156	8.810	8.810	0.000	98	651470	100.0	96.7	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	77	240926	100.0	106.9	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	86	220919	100.0	100.9	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	734913	100.0	93.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	95	635499	100.0	95.2	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	2345793	100.0	95.1	
107 4-Chlorotoluene	126	9.103	9.103	0.000	98	666385	100.0	96.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	1892866	100.0	94.3	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	2468561	100.0	94.9	
111 sec-Butylbenzene	134	9.589	9.582	0.007	95	545761	100.0	94.7	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	96	1252404	100.0	97.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	96	2354088	100.0	95.2	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	1280397	100.0	96.1	
116 n-Butylbenzene	91	10.140	10.133	0.007	98	2114456	100.0	96.3	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	96	1197508	100.0	98.9	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.948	-0.007	83	166807	100.0	106.3	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	705352	100.0	102.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	93	255985	100.0	93.5	
122 Naphthalene	128	12.035	12.035	0.000	98	2012147	100.0	104.0	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	95	594892	100.0	102.8	
S 135 1,2-Dichloroethene, Total (URS)	96				0		200.0	190.9	
S 137 Total BTEX	1				0			477.8	
S 140 Trihalomethanes, Total	1				0		400.0	401.2	
S 141 1,2-Dichloroethene, Total	1				0		200.0	190.9	
S 139 Xylenes, Total (URS)	1				0		200.0	191.9	
S 136 1,3-Dichloropropene, Total	1				0		200.0	200.7	
S 138 Xylenes, Total	106				0		200.0	191.9	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00078	Amount Added:	50.00	Units: uL	
MV-Gas A_00136	Amount Added:	20.00	Units: uL	
Acrolein_A_00015	Amount Added:	50.00	Units: uL	
mv-IS_SS_00049	Amount Added:	5.00	Units: uL	Run Reagent

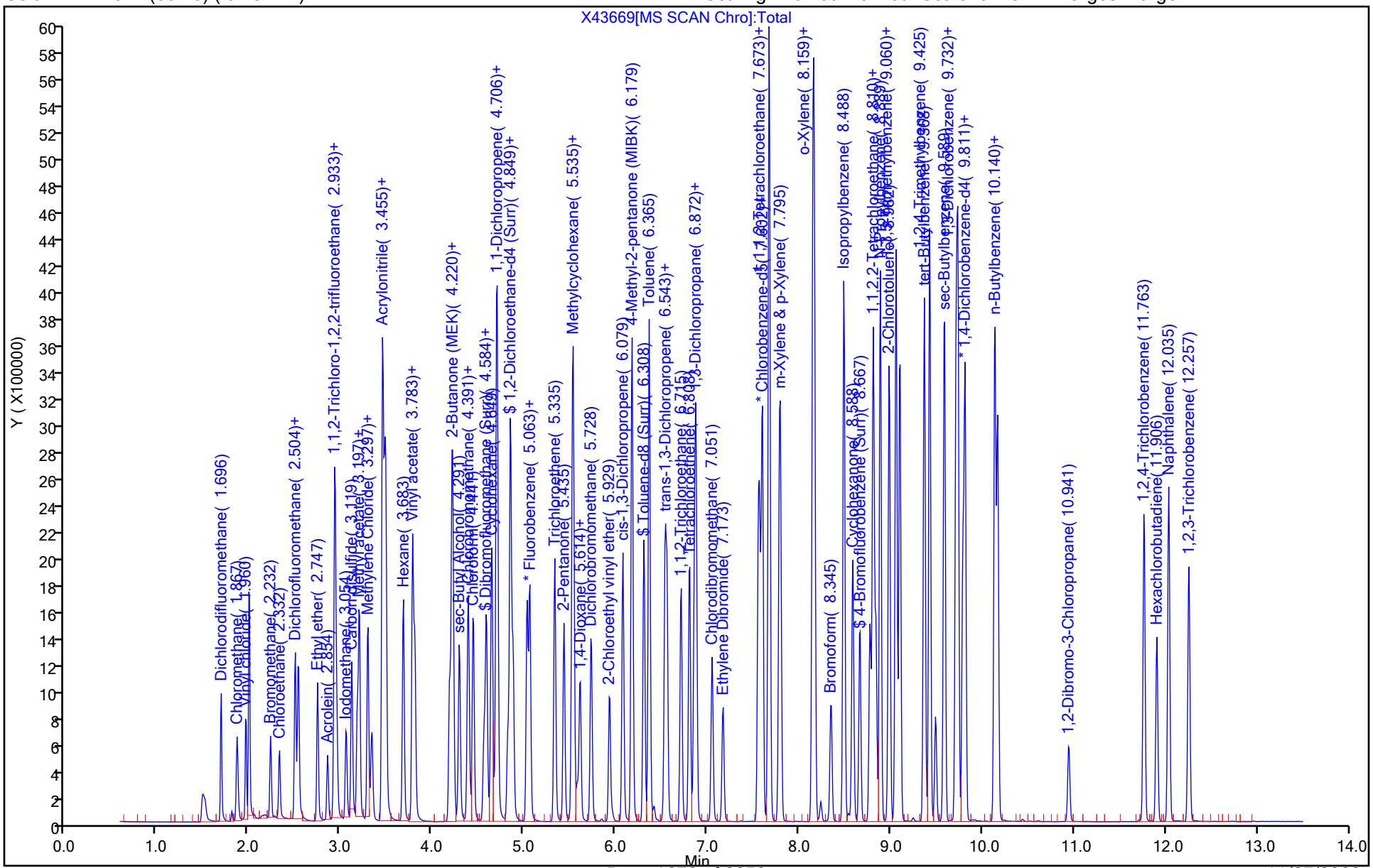
Report Date: 24-Oct-2022 14:17:08 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43669.D

Injection Date:	22-Oct-2022 13:57:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD100			Worklist Smp#:	20
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43670.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 22-Oct-2022 14:18:30 ALS Bottle#: 9 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:17:12 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 22-Oct-2022 15:31:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1365088	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	324180	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	505084	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	325227	50.0	50.4	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	396116	50.0	50.6	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1335501	50.0	49.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	86	509067	50.0	50.1	
10 Dichlorodifluoromethane	85	1.688	1.696	-0.008	99	1297647	200.0	212.7	
11 Chloromethane	50	1.867	1.867	0.000	99	1175589	200.0	197.4	
12 Vinyl chloride	62	1.960	1.967	-0.007	98	1159565	200.0	207.1	
14 Bromomethane	94	2.225	2.239	-0.014	92	584699	200.0	206.8	
15 Chloroethane	64	2.318	2.339	-0.021	100	729805	200.0	193.6	
16 Dichlorofluoromethane	67	2.496	2.504	-0.008	97	1951675	200.0	197.0	
17 Trichlorofluoromethane	101	2.532	2.539	-0.007	98	1756645	200.0	208.7	
19 Ethyl ether	59	2.747	2.747	0.000	90	902768	200.0	195.3	
21 Acrolein	56	2.854	2.854	0.000	99	651706	1975.0	1933.5	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	96	826474	200.0	215.4	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	99	1037153	200.0	214.9	
24 Acetone	43	2.954	2.954	0.000	100	1260608	800.0	764.3	
26 Iodomethane	142	3.054	3.054	0.000	100	1420575	200.0	204.2	
27 Carbon disulfide	76	3.119	3.118	0.000	99	3117563	200.0	202.3	
29 Methyl acetate	43	3.176	3.176	0.000	97	1480607	400.0	380.2	
30 3-Chloro-1-propene	41	3.197	3.204	-0.007	89	1615159	200.0	193.1	
31 Methylene Chloride	84	3.290	3.297	-0.007	91	1187492	200.0	199.2	
32 2-Methyl-2-propanol	59	3.347	3.333	0.014	99	1352529	2000.0	2126.3	
33 Acrylonitrile	53	3.455	3.455	0.000	97	4001531	2000.0	1967.7	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	95	3441010	200.0	195.8	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	1159149	200.0	203.6	
37 Hexane	57	3.683	3.683	0.000	92	1567173	200.0	213.5	
39 Vinyl acetate	43	3.783	3.783	0.000	97	4655961	400.0	391.5	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	2142141	200.0	200.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	1946964	800.0	813.5	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	83	1323328	200.0	203.7	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	88	2078208	200.0	203.9	
50 sec-Butyl Alcohol	45	4.298	4.291	0.007	99	2276709	4800.0	4854.5	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	560671	200.0	184.3	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	648746	400.0	403.6	
54 Chloroform	83	4.441	4.441	0.000	94	2183627	200.0	203.1	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	1980185	200.0	210.2	
56 Cyclohexane	56	4.649	4.649	0.000	89	1988845	200.0	213.1	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	96	1760836	200.0	216.4	
59 Carbon tetrachloride	117	4.706	4.706	0.000	97	1676922	200.0	208.2	
60 Isobutyl alcohol	41	4.713	4.706	0.007	93	1022732	5000.0	5259.8	
62 Benzene	78	4.849	4.849	0.000	97	4827698	200.0	198.9	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	1742530	200.0	193.9	
65 n-Heptane	43	5.035	5.035	0.000	90	1255273	200.0	205.9	
67 Trichloroethene	95	5.335	5.335	0.000	98	1302212	200.0	203.6	
68 2-Pentanone	43	5.435	5.435	0.000	98	2529081	640.0	688.4	
69 Methylcyclohexane	55	5.528	5.528	0.000	92	1569092	200.0	217.8	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	93	1239102	200.0	202.4	
72 1,4-Dioxane	88	5.585	5.578	0.007	91	334132	4000.0	4216.9	
73 Dibromomethane	93	5.607	5.607	0.000	94	751984	200.0	198.0	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	1739598	200.0	199.7	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	92	767775	200.0	194.1	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	2160489	200.0	197.2	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	4088777	800.0	822.5	
79 Toluene	91	6.365	6.365	0.000	98	5353463	200.0	201.5	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	98	2036089	200.0	205.4	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	1587892	200.0	202.9	
82 1,1,2-Trichloroethane	97	6.715	6.708	0.007	92	1077513	200.0	203.3	
83 Tetrachloroethene	164	6.808	6.801	0.007	93	971403	200.0	206.3	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	97	1905730	200.0	194.8	
85 2-Hexanone	43	6.880	6.872	0.008	95	2871464	800.0	812.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	1272030	200.0	198.9	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	1126034	200.0	194.6	
89 1-Chlorohexane	91	7.559	7.552	0.007	96	1392117	160.0	166.2	
90 Chlorobenzene	112	7.602	7.602	0.000	92	3353014	200.0	191.4	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.666	0.007	95	1195088	200.0	195.1	
92 Ethylbenzene	106	7.673	7.673	0.000	99	1901563	200.0	200.5	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	2341896	200.0	196.8	
94 o-Xylene	106	8.152	8.152	0.000	97	2297172	200.0	198.8	
95 Styrene	104	8.167	8.167	0.000	93	3866305	200.0	196.9	
96 Bromoform	173	8.345	8.345	0.000	92	828132	200.0	206.6	
97 Isopropylbenzene	105	8.488	8.488	0.000	97	5792346	200.0	203.1	
99 Cyclohexanone	55	8.588	8.581	0.007	92	1439379	6000.0	5933.2	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	1421954	200.0	197.4	
101 Bromobenzene	156	8.810	8.810	0.000	98	1358808	200.0	197.8	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	85	491327	200.0	213.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	444060	200.0	198.8	
104 N-Propylbenzene	120	8.889	8.889	0.000	98	1626941	200.0	202.9	
105 2-Chlorotoluene	126	8.989	8.982	0.007	95	1369999	200.0	201.2	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	4997834	200.0	198.5	
107 4-Chlorotoluene	126	9.103	9.103	0.000	98	1422841	200.0	201.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	4118083	200.0	201.0	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	5130241	200.0	193.2	
111 sec-Butylbenzene	134	9.589	9.582	0.007	95	1201966	200.0	204.5	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	97	2584782	200.0	198.0	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	96	5033318	200.0	199.6	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	2607167	200.0	191.7	
116 n-Butylbenzene	91	10.140	10.133	0.007	98	4553167	200.0	203.2	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	95	2429356	200.0	196.7	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	83	322327	200.0	201.3	
120 1,2,4-Trichlorobenzene	180	11.770	11.763	0.007	94	1400041	200.0	199.3	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	96	522826	200.0	186.9	
122 Naphthalene	128	12.035	12.035	0.000	98	3826665	200.0	193.9	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.000	95	1170329	200.0	198.3	
S 135 1,2-Dichloroethene, Total (URS)	96				0		400.0	407.2	
S 137 Total BTEX	1				0			996.5	
S 140 Trihalomethanes, Total	1				0		800.0	808.2	
S 141 1,2-Dichloroethene, Total	1				0		400.0	407.2	
S 139 Xylenes, Total (URS)	1				0		400.0	395.6	
S 136 1,3-Dichloropropene, Total	1				0		400.0	402.5	
S 138 Xylenes, Total	106				0		400.0	395.6	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00078	Amount Added: 100.00	Units: uL	
MV-Gas A_00136	Amount Added: 40.00	Units: uL	
Acrolein_A_00015	Amount Added: 100.00	Units: uL	
mv-IS_SS_00049	Amount Added: 5.00	Units: uL	Run Reagent

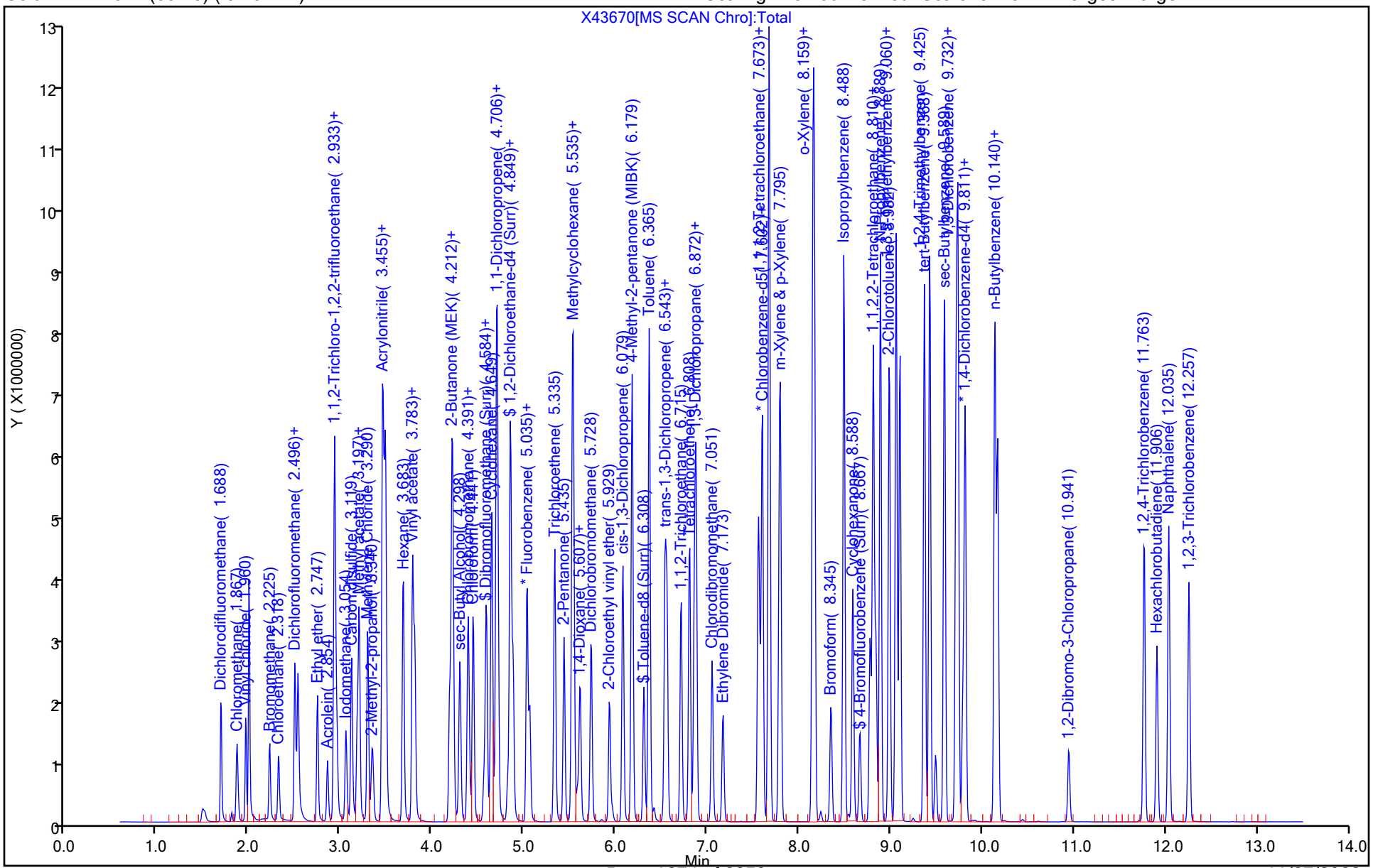
Report Date: 24-Oct-2022 14:17:13 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43670.D

Injection Date:	22-Oct-2022 14:18:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD200			Worklist Smp#:	21
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

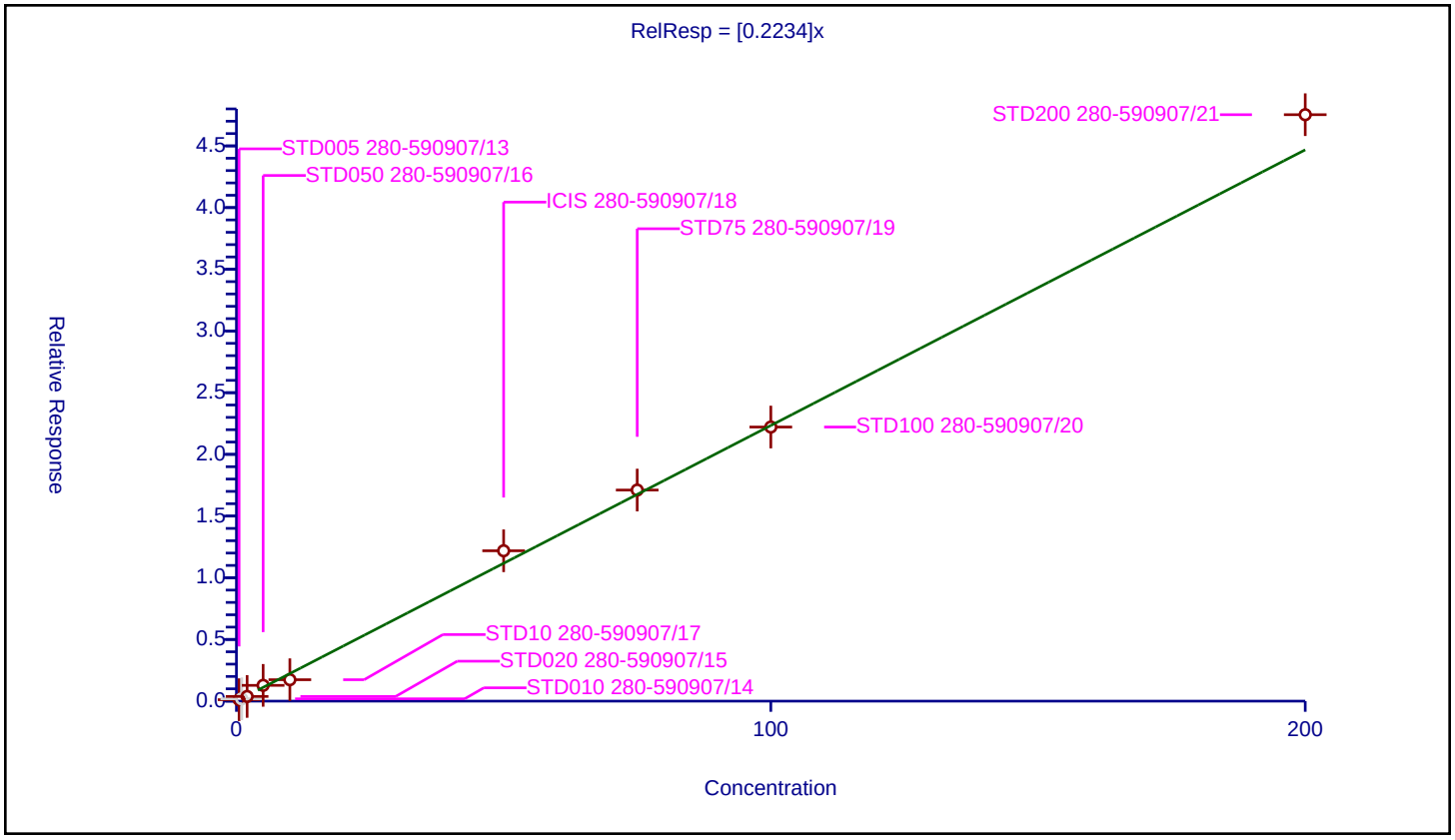
Curve Coefficients

Intercept:	0
Slope:	0.2234

Error Coefficients

Standard Error:	580000
Relative Standard Error:	12.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.11795	50.0	1334887.0	0.2359	Y
2	STD010 280-590907/14	1.0	0.188945	50.0	1278151.0	0.188945	N
3	STD020 280-590907/15	2.0	0.380289	50.0	1279290.0	0.190145	Y
4	STD050 280-590907/16	5.0	1.279575	50.0	1283629.0	0.255915	Y
5	STD10 280-590907/17	10.0	1.736832	50.0	1310662.0	0.173683	Y
6	ICIS 280-590907/18	50.0	12.186975	50.0	1343824.0	0.24374	Y
7	STD75 280-590907/19	75.0	17.109109	50.0	1323675.0	0.228121	Y
8	STD100 280-590907/20	100.0	22.216415	50.0	1337439.0	0.222164	Y
9	STD200 280-590907/21	200.0	47.529793	50.0	1365088.0	0.237649	Y



11/27/2023
7:27 PM

Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

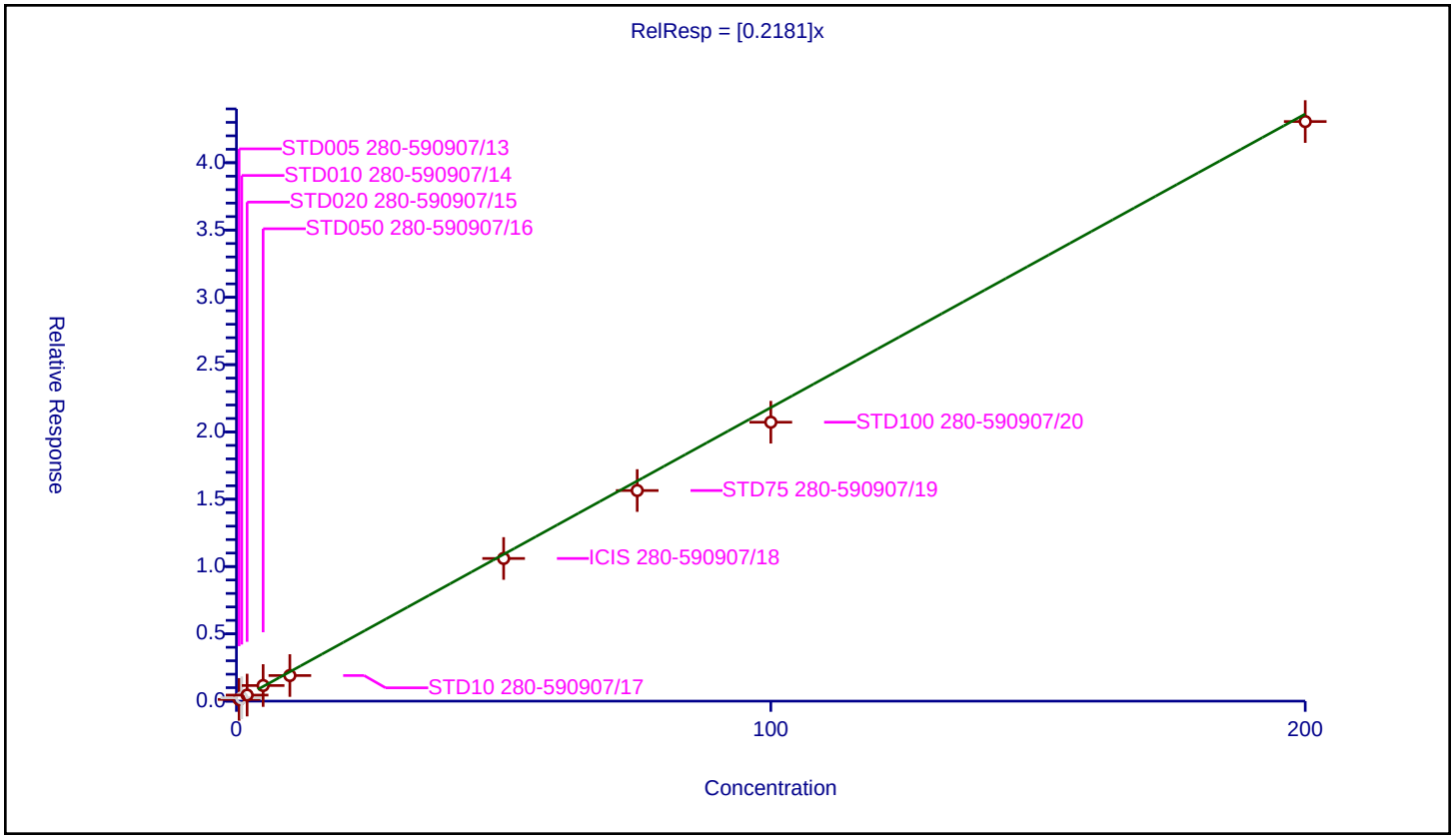
Curve Coefficients

Intercept:	0
Slope:	0.2181

Error Coefficients

Standard Error:	527000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.127127	50.0	1334887.0	0.254254	Y
2	STD010 280-590907/14	1.0	0.249658	50.0	1278151.0	0.249658	N
3	STD020 280-590907/15	2.0	0.450015	50.0	1279290.0	0.225008	Y
4	STD050 280-590907/16	5.0	1.160849	50.0	1283629.0	0.23217	Y
5	STD10 280-590907/17	10.0	1.902092	50.0	1310662.0	0.190209	Y
6	ICIS 280-590907/18	50.0	10.599974	50.0	1343824.0	0.211999	Y
7	STD75 280-590907/19	75.0	15.647685	50.0	1323675.0	0.208636	Y
8	STD100 280-590907/20	100.0	20.723001	50.0	1337439.0	0.20723	Y
9	STD200 280-590907/21	200.0	43.059092	50.0	1365088.0	0.215295	Y



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Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

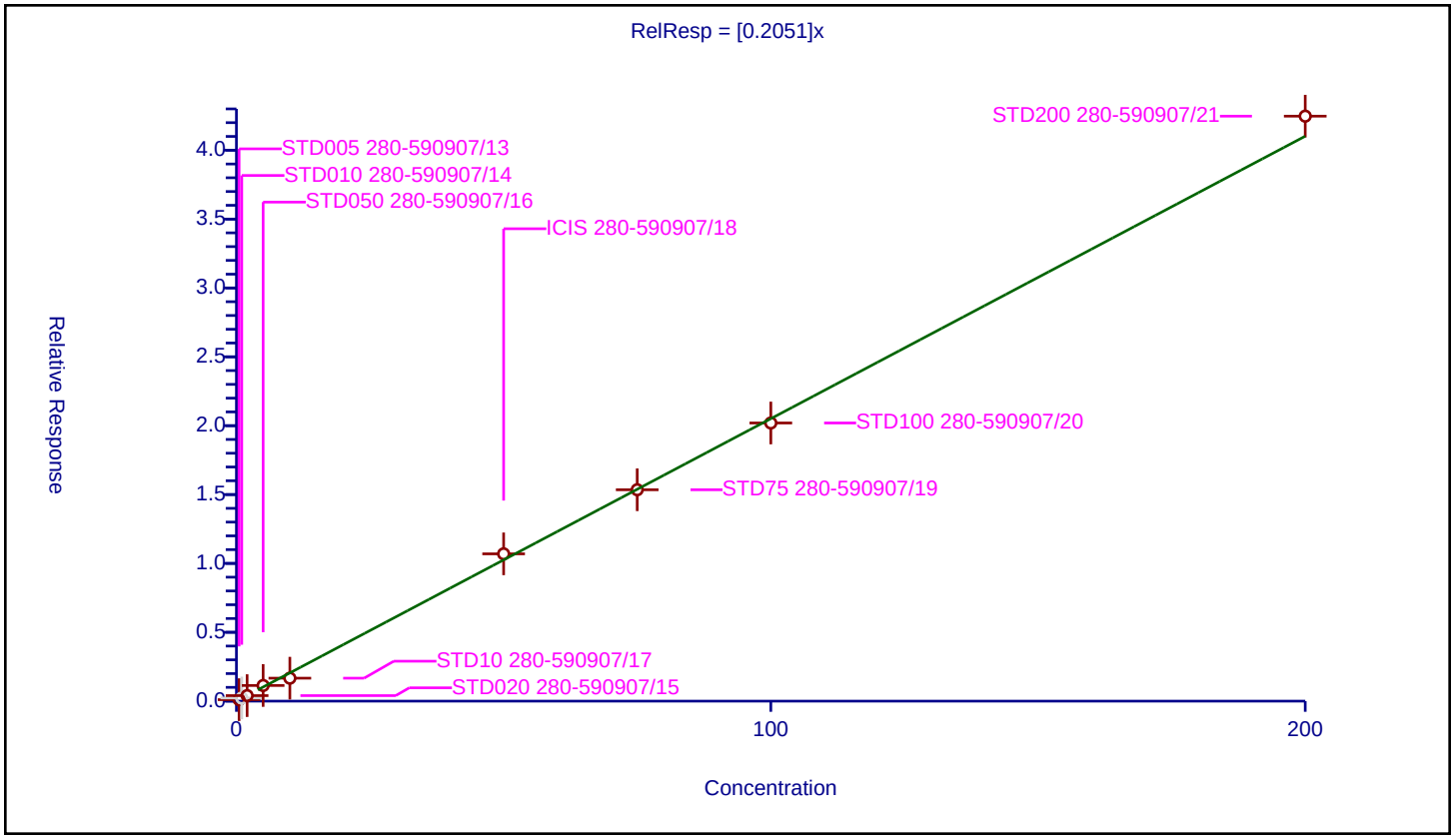
Curve Coefficients

Intercept:	0
Slope:	0.2051

Error Coefficients

Standard Error:	519000
Relative Standard Error:	8.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.106451	50.0	1334887.0	0.212902	Y
2	STD010 280-590907/14	1.0	0.228729	50.0	1278151.0	0.228729	N
3	STD020 280-590907/15	2.0	0.401864	50.0	1279290.0	0.200932	Y
4	STD050 280-590907/16	5.0	1.136154	50.0	1283629.0	0.227231	Y
5	STD10 280-590907/17	10.0	1.667592	50.0	1310662.0	0.166759	Y
6	ICIS 280-590907/18	50.0	10.695076	50.0	1343824.0	0.213902	Y
7	STD75 280-590907/19	75.0	15.347536	50.0	1323675.0	0.204634	Y
8	STD100 280-590907/20	100.0	20.196136	50.0	1337439.0	0.201961	Y
9	STD200 280-590907/21	200.0	42.47217	50.0	1365088.0	0.212361	Y



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Calibration / Bromomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

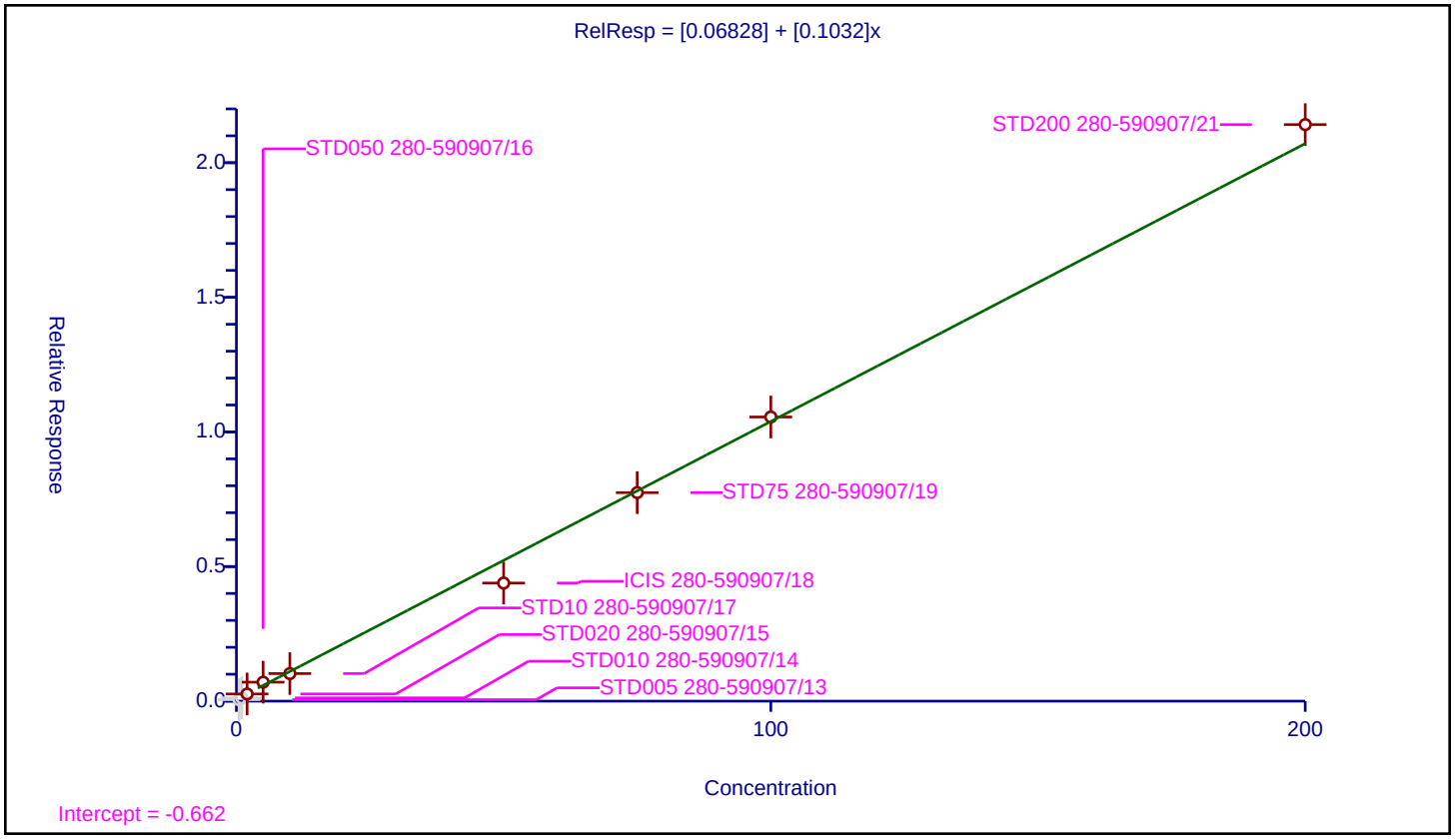
Curve Coefficients

Intercept:	0.06828
Slope:	0.1032

Error Coefficients

Standard Error:	309000
Relative Standard Error:	13.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.055136	50.0	1334887.0	0.110272	N
2	STD010 280-590907/14	1.0	0.12209	50.0	1278151.0	0.12209	N
3	STD020 280-590907/15	2.0	0.267023	50.0	1279290.0	0.133512	Y
4	STD050 280-590907/16	5.0	0.704565	50.0	1283629.0	0.140913	Y
5	STD10 280-590907/17	10.0	1.023605	50.0	1310662.0	0.10236	Y
6	ICIS 280-590907/18	50.0	4.386289	50.0	1343824.0	0.087726	Y
7	STD75 280-590907/19	75.0	7.744801	50.0	1323675.0	0.103264	Y
8	STD100 280-590907/20	100.0	10.554799	50.0	1337439.0	0.105548	Y
9	STD200 280-590907/21	200.0	21.416165	50.0	1365088.0	0.107081	Y



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Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

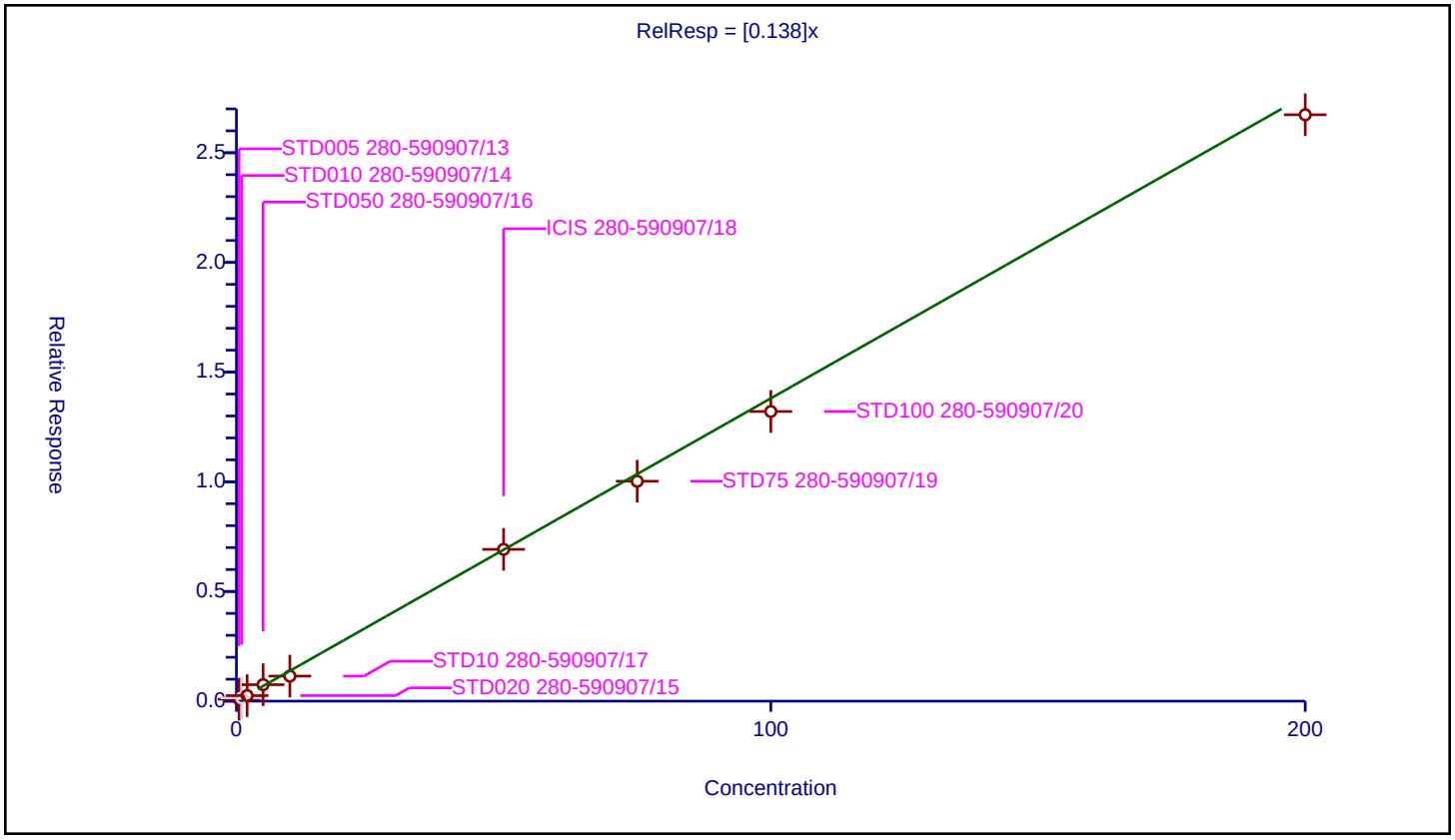
Curve Coefficients

Intercept:	0
Slope:	0.138

Error Coefficients

Standard Error:	330000
Relative Standard Error:	13.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.087985	50.0	1334887.0	0.17597	Y
2	STD010 280-590907/14	1.0	0.148261	50.0	1278151.0	0.148261	N
3	STD020 280-590907/15	2.0	0.252367	50.0	1279290.0	0.126183	Y
4	STD050 280-590907/16	5.0	0.751502	50.0	1283629.0	0.1503	Y
5	STD10 280-590907/17	10.0	1.141675	50.0	1310662.0	0.114167	Y
6	ICIS 280-590907/18	50.0	6.9188	50.0	1343824.0	0.138376	Y
7	STD75 280-590907/19	75.0	10.025384	50.0	1323675.0	0.133672	Y
8	STD100 280-590907/20	100.0	13.204677	50.0	1337439.0	0.132047	Y
9	STD200 280-590907/21	200.0	26.731061	50.0	1365088.0	0.133655	Y



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Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

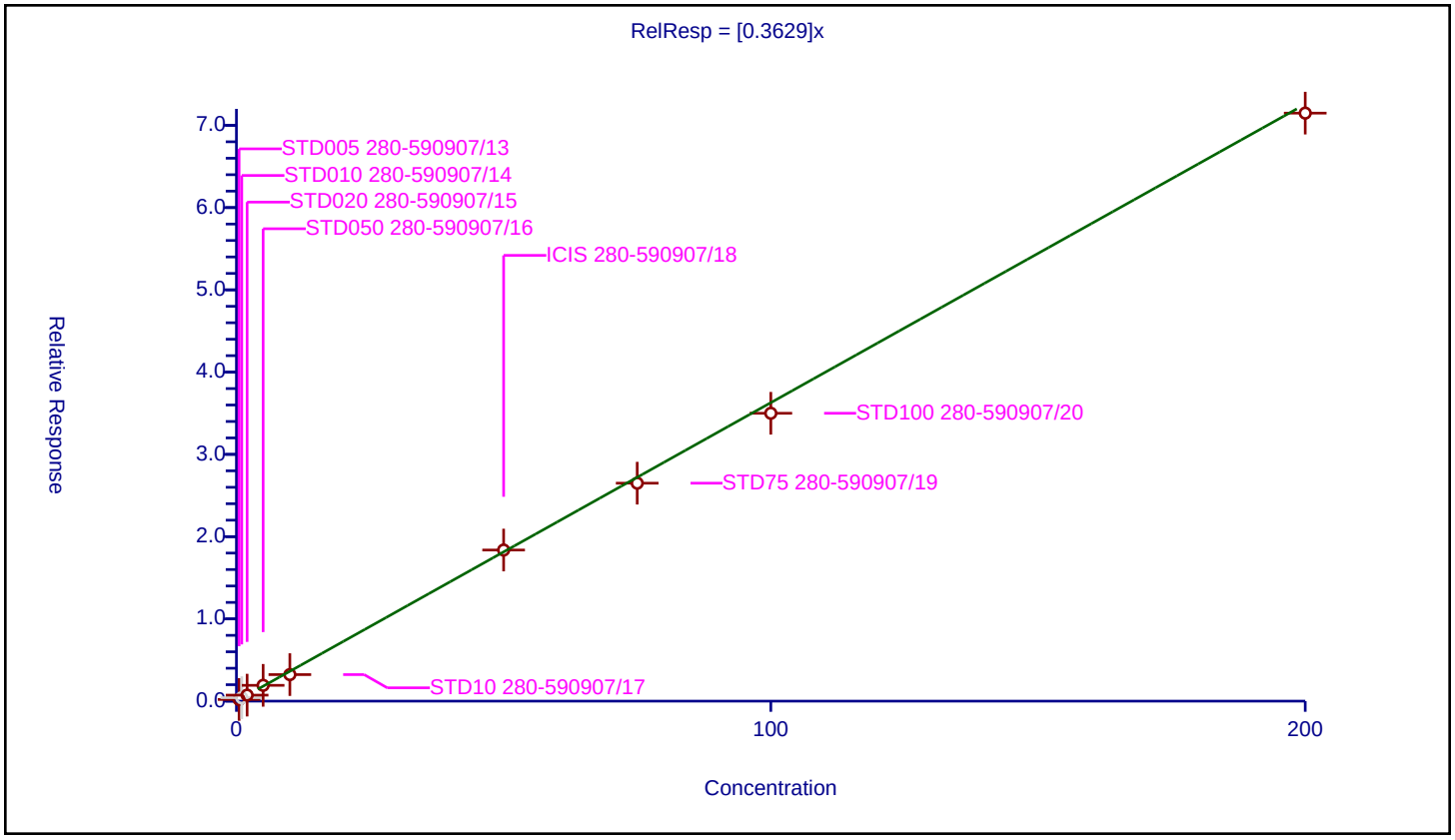
Curve Coefficients

Intercept:	0
Slope:	0.3629

Error Coefficients

Standard Error:	881000
Relative Standard Error:	6.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.201553	50.0	1334887.0	0.403105	Y
2	STD010 280-590907/14	1.0	0.423815	50.0	1278151.0	0.423815	N
3	STD020 280-590907/15	2.0	0.728881	50.0	1279290.0	0.36444	Y
4	STD050 280-590907/16	5.0	1.921934	50.0	1283629.0	0.384387	Y
5	STD10 280-590907/17	10.0	3.227796	50.0	1310662.0	0.32278	Y
6	ICIS 280-590907/18	50.0	18.371528	50.0	1343824.0	0.367431	Y
7	STD75 280-590907/19	75.0	26.498763	50.0	1323675.0	0.353317	Y
8	STD100 280-590907/20	100.0	34.997858	50.0	1337439.0	0.349979	Y
9	STD200 280-590907/21	200.0	71.485318	50.0	1365088.0	0.357427	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

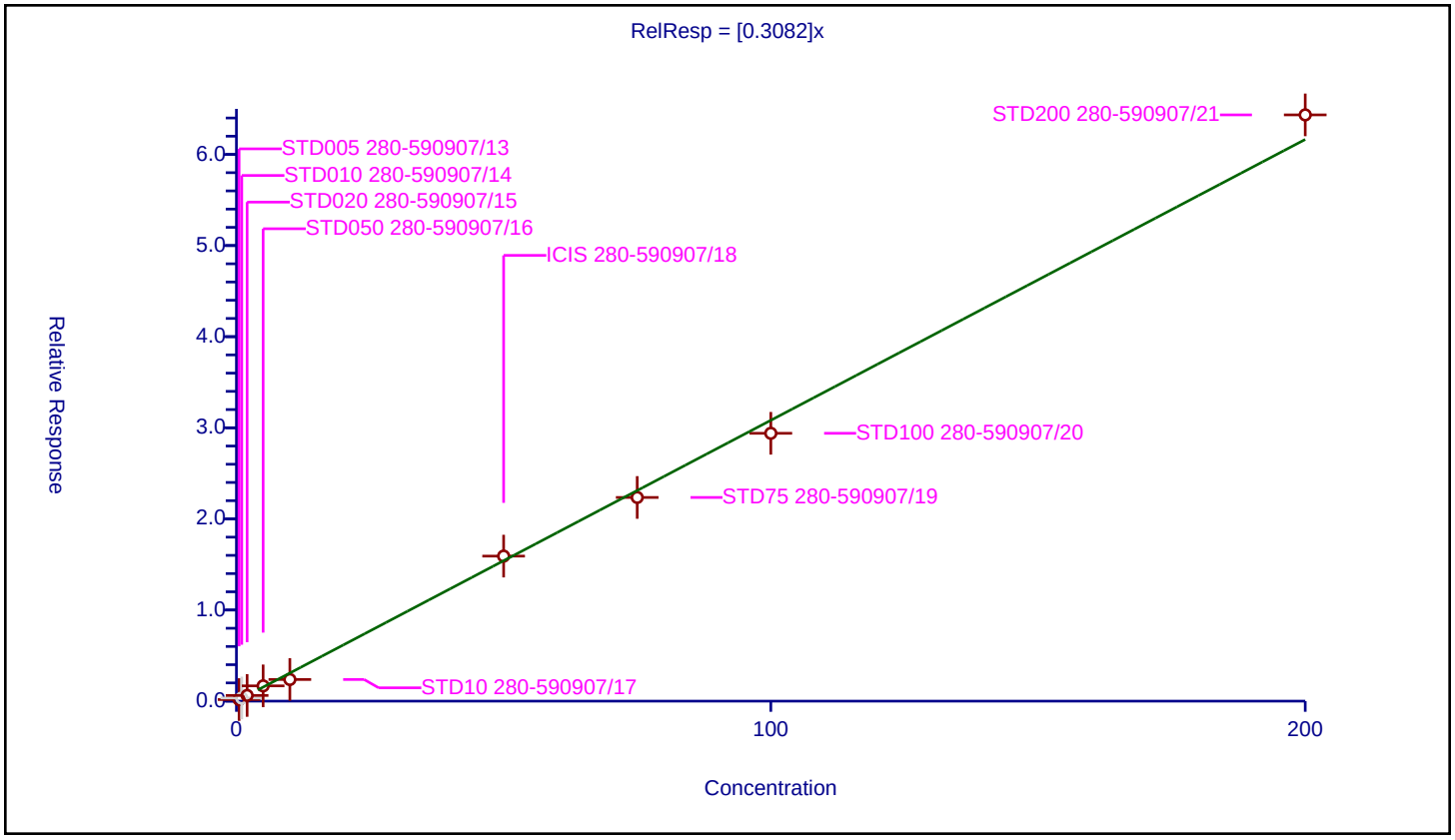
Curve Coefficients

Intercept:	0
Slope:	0.3082

Error Coefficients

Standard Error:	779000
Relative Standard Error:	11.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.174397	50.0	1334887.0	0.348794	Y
2	STD010 280-590907/14	1.0	0.346712	50.0	1278151.0	0.346712	N
3	STD020 280-590907/15	2.0	0.624604	50.0	1279290.0	0.312302	Y
4	STD050 280-590907/16	5.0	1.676185	50.0	1283629.0	0.335237	Y
5	STD10 280-590907/17	10.0	2.373839	50.0	1310662.0	0.237384	Y
6	ICIS 280-590907/18	50.0	15.918528	50.0	1343824.0	0.318371	Y
7	STD75 280-590907/19	75.0	22.354845	50.0	1323675.0	0.298065	Y
8	STD100 280-590907/20	100.0	29.395584	50.0	1337439.0	0.293956	Y
9	STD200 280-590907/21	200.0	64.341823	50.0	1365088.0	0.321709	Y



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Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

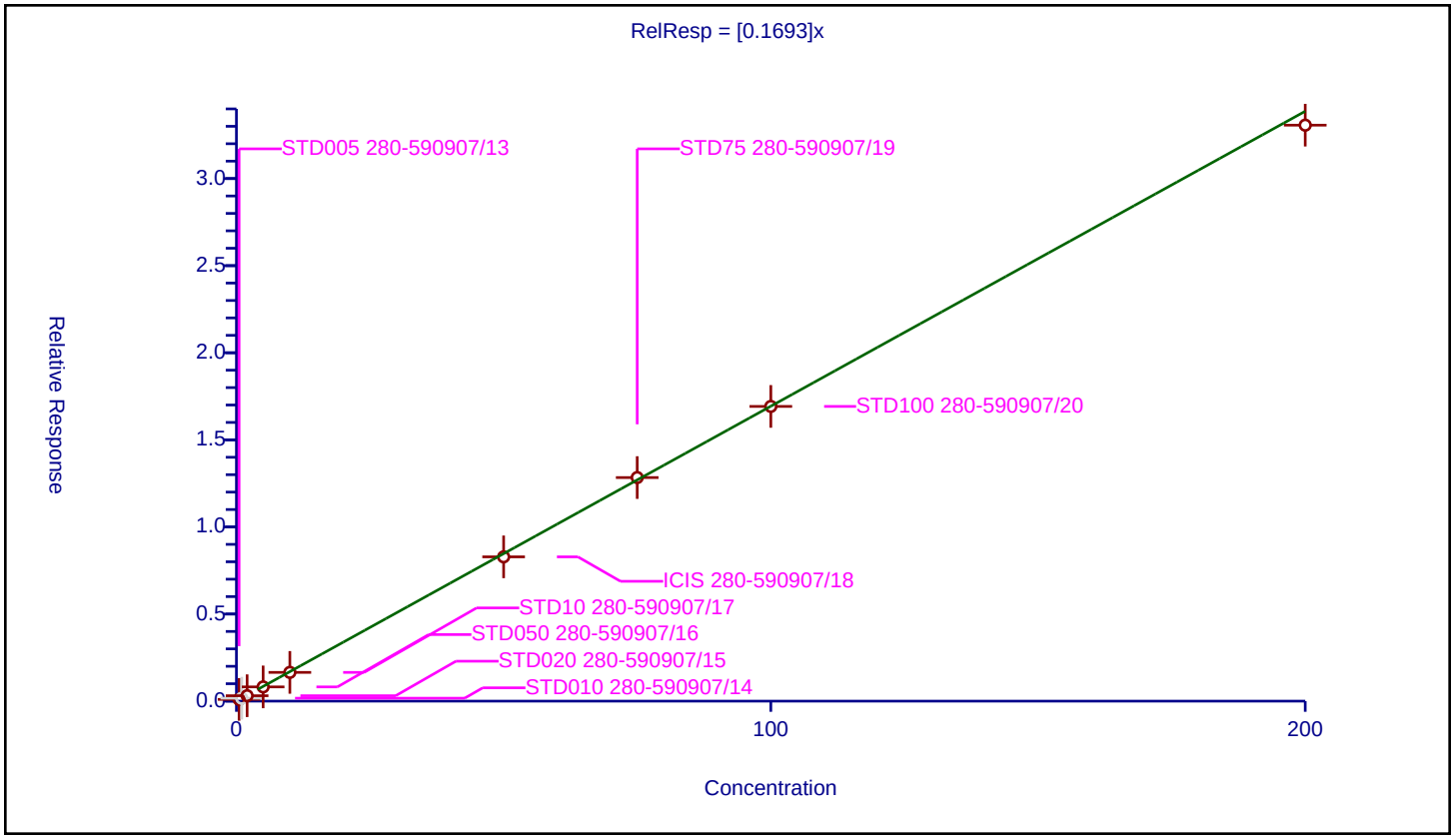
Curve Coefficients

Intercept:	0
Slope:	0.1693

Error Coefficients

Standard Error:	412000
Relative Standard Error:	7.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.099596	50.0	1334887.0	0.199193	Y
2	STD010 280-590907/14	1.0	0.168329	50.0	1278151.0	0.168329	N
3	STD020 280-590907/15	2.0	0.310915	50.0	1279290.0	0.155457	Y
4	STD050 280-590907/16	5.0	0.81737	50.0	1283629.0	0.163474	Y
5	STD10 280-590907/17	10.0	1.651036	50.0	1310662.0	0.165104	Y
6	ICIS 280-590907/18	50.0	8.282855	50.0	1343824.0	0.165657	Y
7	STD75 280-590907/19	75.0	12.835968	50.0	1323675.0	0.171146	Y
8	STD100 280-590907/20	100.0	16.918716	50.0	1337439.0	0.169187	Y
9	STD200 280-590907/21	200.0	33.066293	50.0	1365088.0	0.165331	Y



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Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

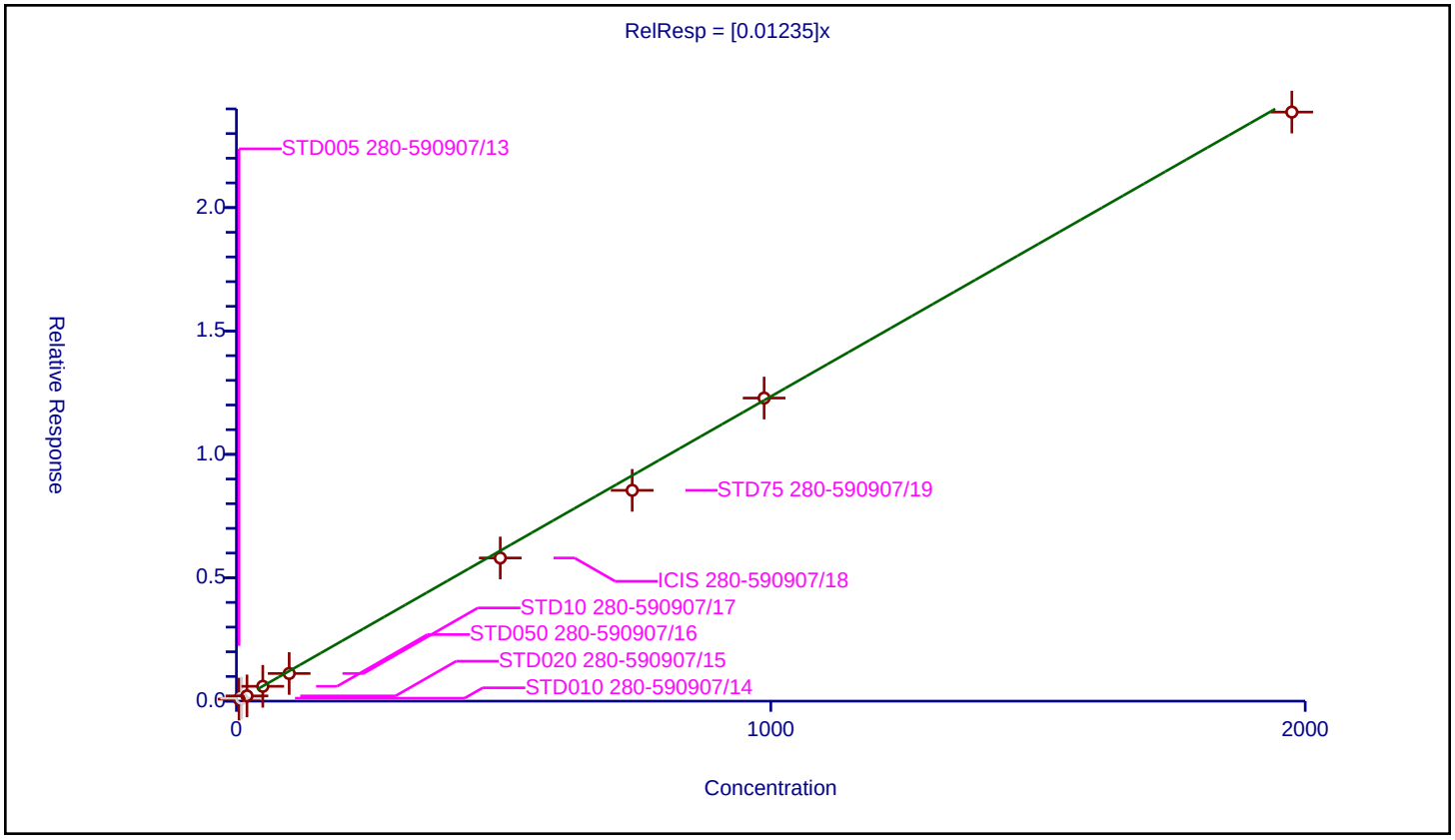
Curve Coefficients

Intercept:	0
Slope:	0.01235

Error Coefficients

Standard Error:	295000
Relative Standard Error:	14.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	4.9375	0.082329	50.0	1334887.0	0.016674	Y
2	STD010 280-590907/14	9.875	0.119235	50.0	1278151.0	0.012074	N
3	STD020 280-590907/15	19.75	0.212579	50.0	1279290.0	0.010763	Y
4	STD050 280-590907/16	49.375	0.600836	50.0	1283629.0	0.012169	Y
5	STD10 280-590907/17	98.75	1.121075	50.0	1310662.0	0.011353	Y
6	ICIS 280-590907/18	493.75	5.801727	50.0	1343824.0	0.01175	Y
7	STD75 280-590907/19	740.625	8.541825	50.0	1323675.0	0.011533	Y
8	STD100 280-590907/20	987.5	12.281794	50.0	1337439.0	0.012437	Y
9	STD200 280-590907/21	1975.0	23.870476	50.0	1365088.0	0.012086	Y



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Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

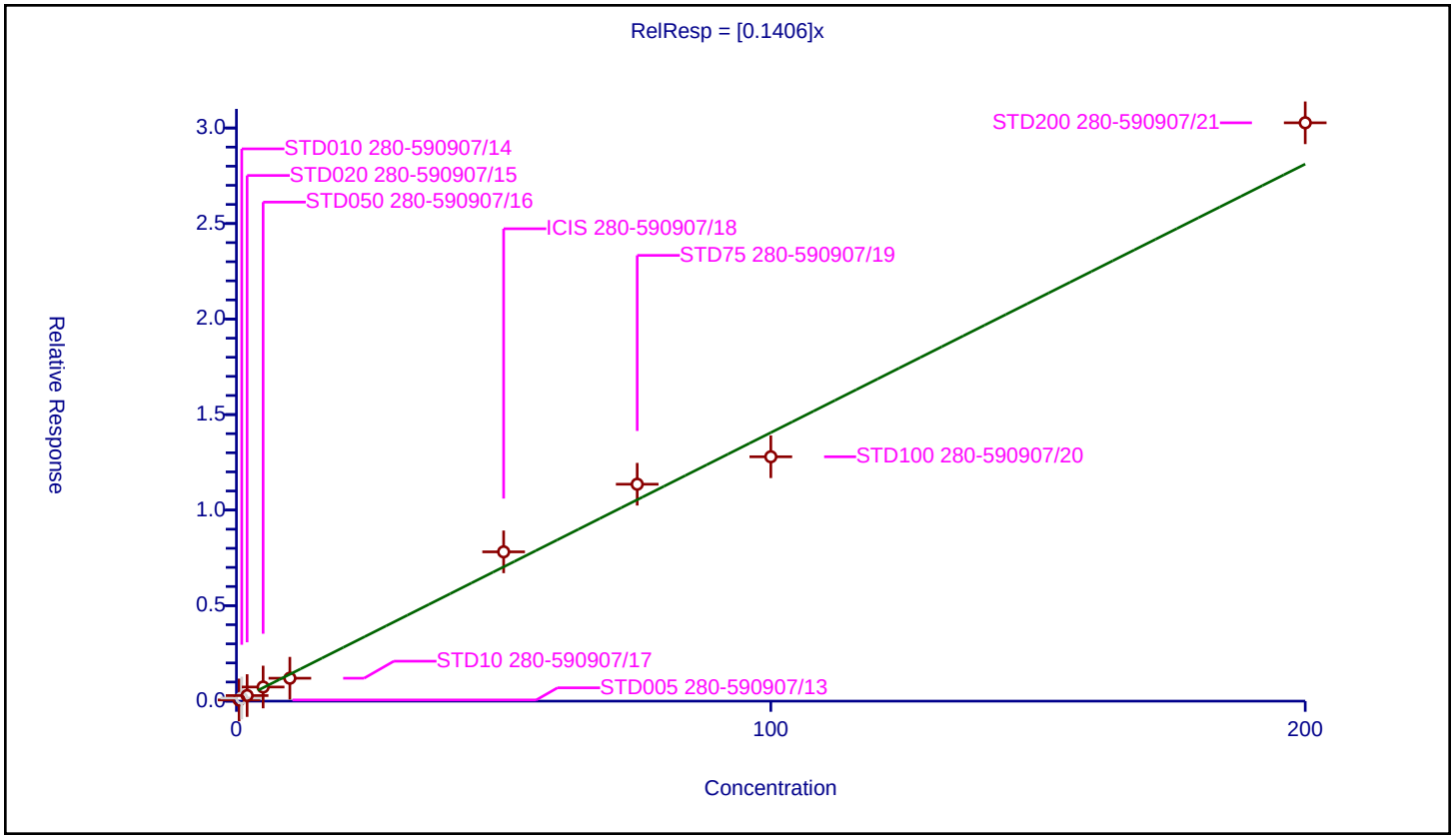
Curve Coefficients

Intercept:	0
Slope:	0.1406

Error Coefficients

Standard Error:	366000
Relative Standard Error:	10.2
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.061653	50.0	1334887.0	0.123306	Y
2	STD010 280-590907/14	1.0	0.162383	50.0	1278151.0	0.162383	N
3	STD020 280-590907/15	2.0	0.292506	50.0	1279290.0	0.146253	Y
4	STD050 280-590907/16	5.0	0.739739	50.0	1283629.0	0.147948	Y
5	STD10 280-590907/17	10.0	1.200195	50.0	1310662.0	0.12002	Y
6	ICIS 280-590907/18	50.0	7.814305	50.0	1343824.0	0.156286	Y
7	STD75 280-590907/19	75.0	11.354109	50.0	1323675.0	0.151388	Y
8	STD100 280-590907/20	100.0	12.790939	50.0	1337439.0	0.127909	Y
9	STD200 280-590907/21	200.0	30.271821	50.0	1365088.0	0.151359	Y



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Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

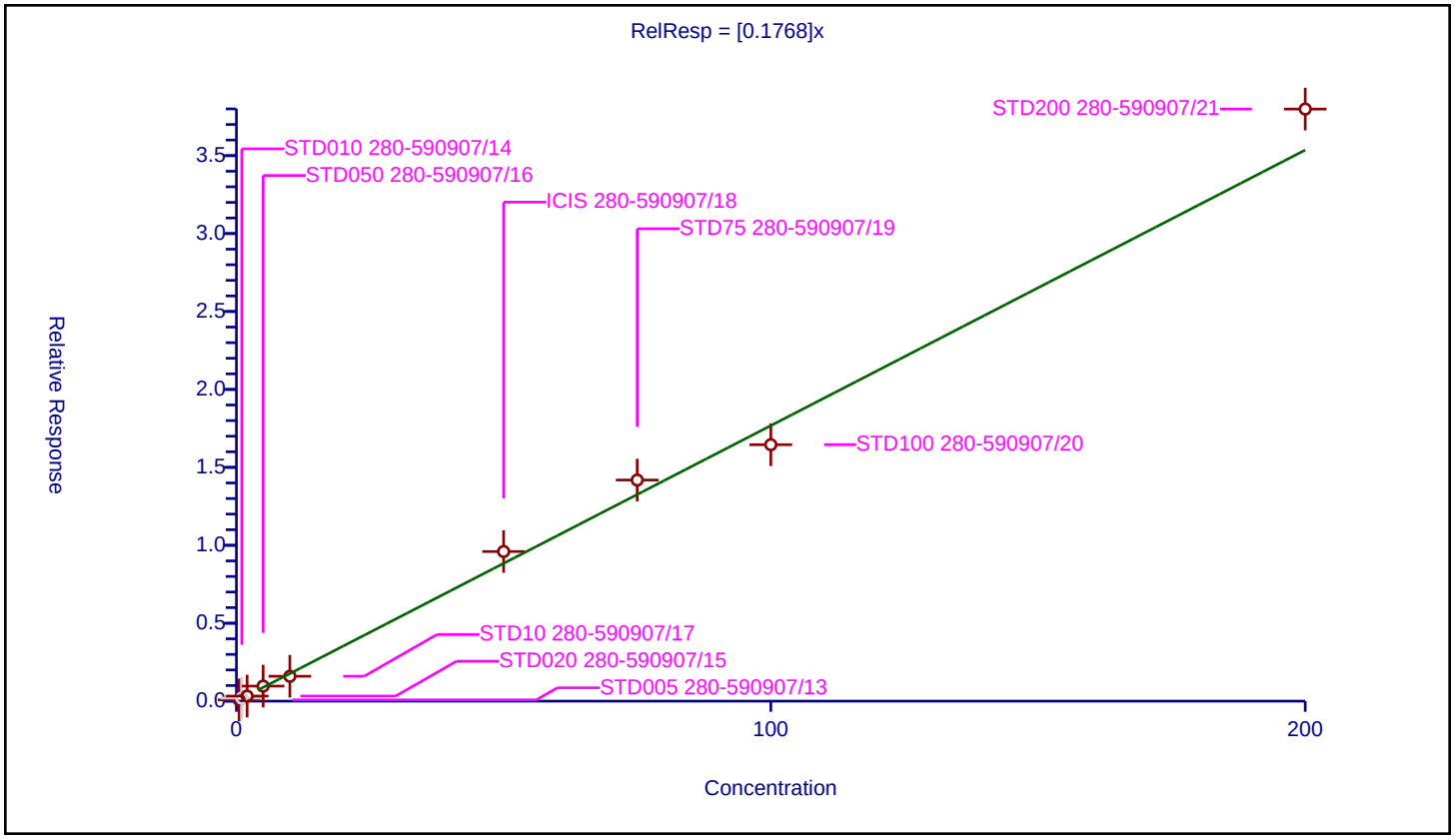
Curve Coefficients

Intercept:	0
Slope:	0.1768

Error Coefficients

Standard Error:	460000
Relative Standard Error:	8.6
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.081805	50.0	1334887.0	0.163609	Y
2	STD010 280-590907/14	1.0	0.196651	50.0	1278151.0	0.196651	N
3	STD020 280-590907/15	2.0	0.325102	50.0	1279290.0	0.162551	Y
4	STD050 280-590907/16	5.0	0.964258	50.0	1283629.0	0.192852	Y
5	STD10 280-590907/17	10.0	1.597361	50.0	1310662.0	0.159736	Y
6	ICIS 280-590907/18	50.0	9.599843	50.0	1343824.0	0.191997	Y
7	STD75 280-590907/19	75.0	14.1863	50.0	1323675.0	0.189151	Y
8	STD100 280-590907/20	100.0	16.453423	50.0	1337439.0	0.164534	Y
9	STD200 280-590907/21	200.0	37.988503	50.0	1365088.0	0.189943	Y



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Calibration / Acetone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

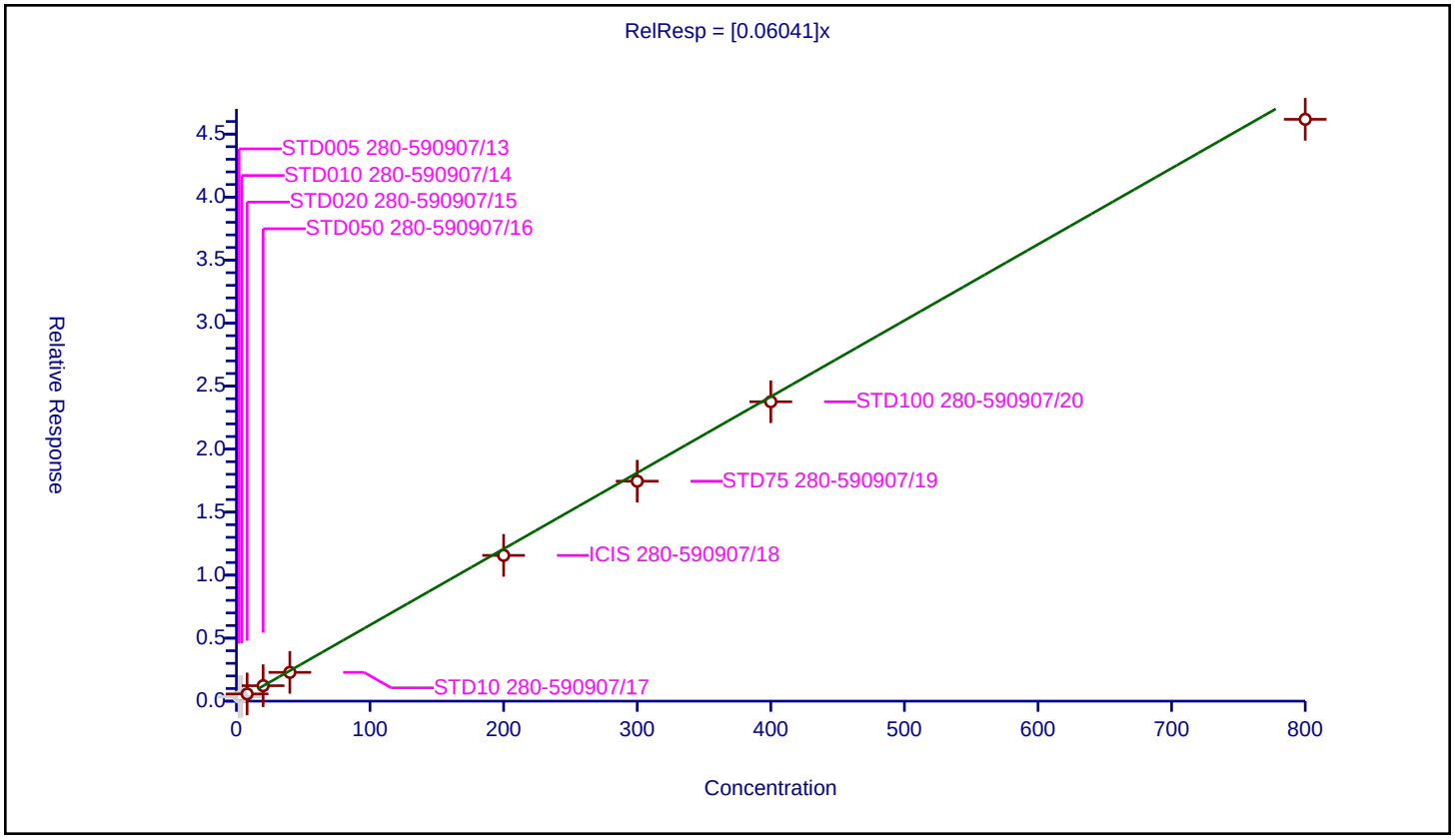
Curve Coefficients

Intercept:	0
Slope:	0.06041

Error Coefficients

Standard Error:	620000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	2.0	0.336021	50.0	1334887.0	0.16801	N
2	STD010 280-590907/14	4.0	0.371787	50.0	1278151.0	0.092947	N
3	STD020 280-590907/15	8.0	0.571176	50.0	1279290.0	0.071397	Y
4	STD050 280-590907/16	20.0	1.224536	50.0	1283629.0	0.061227	Y
5	STD10 280-590907/17	40.0	2.2848	50.0	1310662.0	0.05712	Y
6	ICIS 280-590907/18	200.0	11.5674	50.0	1343824.0	0.057837	Y
7	STD75 280-590907/19	300.0	17.456173	50.0	1323675.0	0.058187	Y
8	STD100 280-590907/20	400.0	23.760672	50.0	1337439.0	0.059402	Y
9	STD200 280-590907/21	800.0	46.17314	50.0	1365088.0	0.057716	Y



Calibration / Iodomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

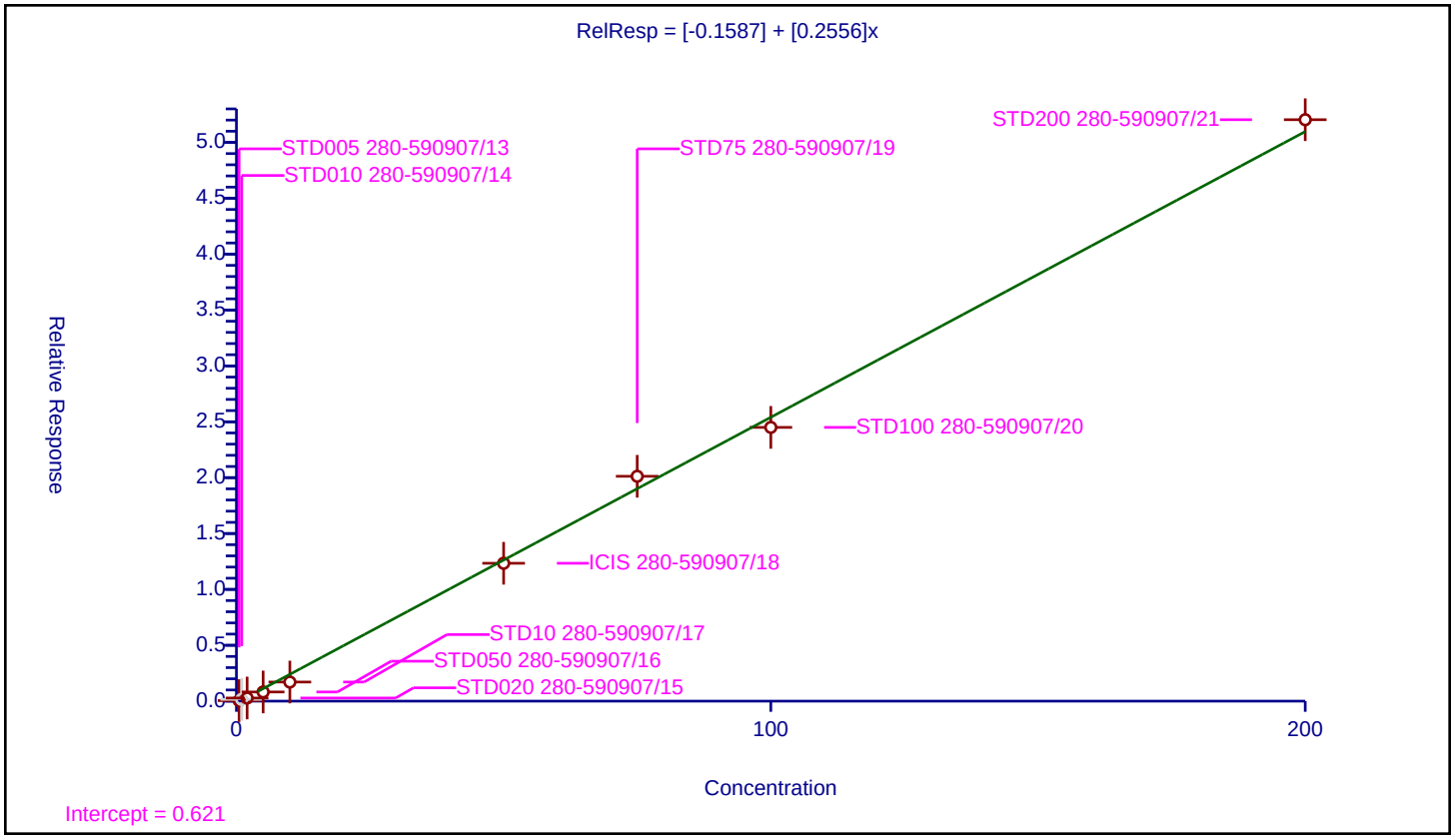
Curve Coefficients

Intercept:	-0.1587
Slope:	0.2556

Error Coefficients

Standard Error:	688000
Relative Standard Error:	30.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.048993	50.0	1334887.0	0.097986	Y
2	STD010 280-590907/14	1.0	0.15808	50.0	1278151.0	0.15808	N
3	STD020 280-590907/15	2.0	0.278905	50.0	1279290.0	0.139452	Y
4	STD050 280-590907/16	5.0	0.82185	50.0	1283629.0	0.16437	Y
5	STD10 280-590907/17	10.0	1.710204	50.0	1310662.0	0.17102	Y
6	ICIS 280-590907/18	50.0	12.338223	50.0	1343824.0	0.246764	Y
7	STD75 280-590907/19	75.0	20.12182	50.0	1323675.0	0.268291	Y
8	STD100 280-590907/20	100.0	24.498538	50.0	1337439.0	0.244985	Y
9	STD200 280-590907/21	200.0	52.03236	50.0	1365088.0	0.260162	Y



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Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

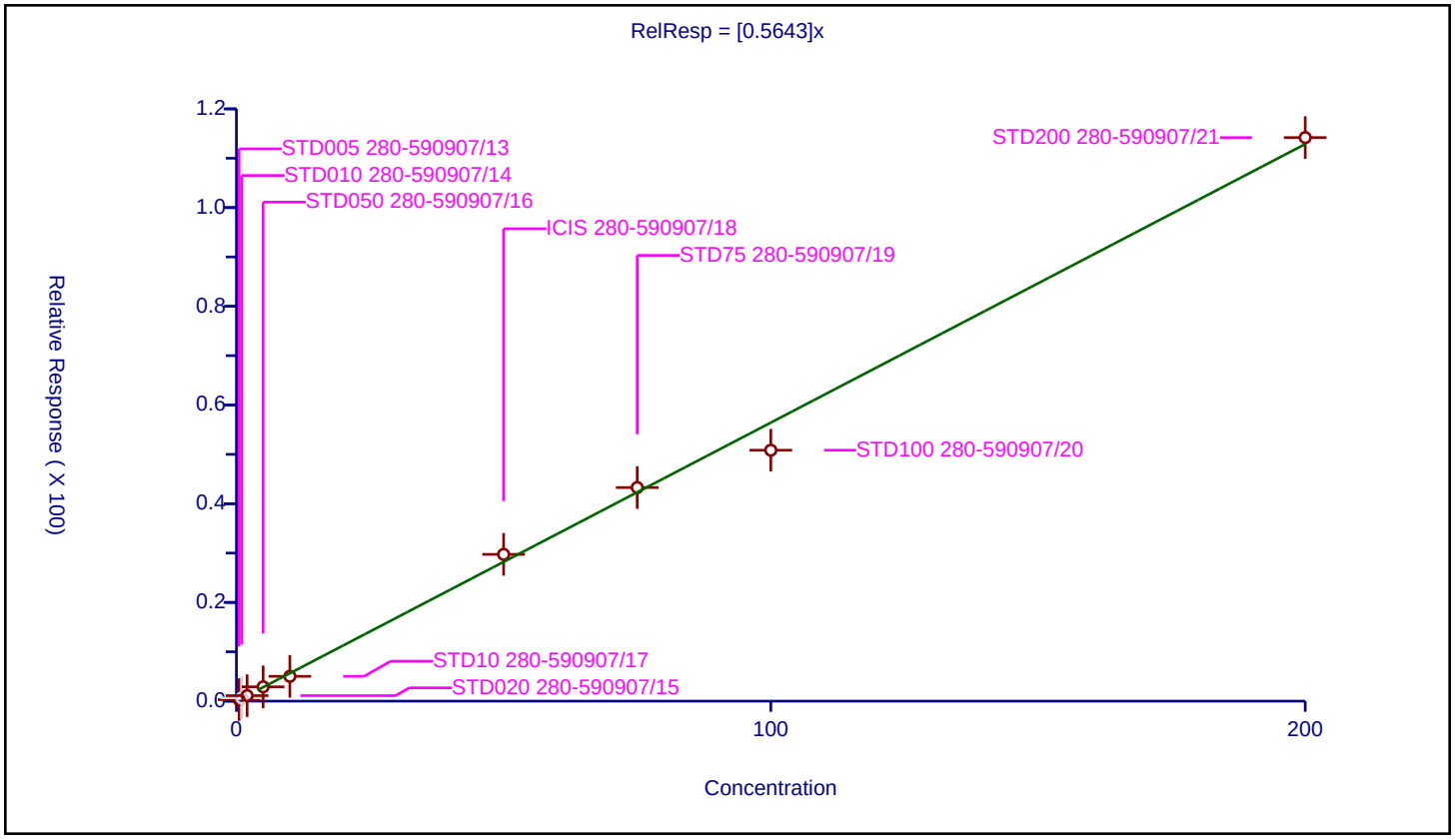
Curve Coefficients

Intercept:	0
Slope:	0.5643

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	7.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.311225	50.0	1334887.0	0.62245	Y
2	STD010 280-590907/14	1.0	0.666979	50.0	1278151.0	0.666979	N
3	STD020 280-590907/15	2.0	1.115853	50.0	1279290.0	0.557927	Y
4	STD050 280-590907/16	5.0	2.902981	50.0	1283629.0	0.580596	Y
5	STD10 280-590907/17	10.0	5.024255	50.0	1310662.0	0.502425	Y
6	ICIS 280-590907/18	50.0	29.739795	50.0	1343824.0	0.594796	Y
7	STD75 280-590907/19	75.0	43.2769	50.0	1323675.0	0.577025	Y
8	STD100 280-590907/20	100.0	50.842057	50.0	1337439.0	0.508421	Y
9	STD200 280-590907/21	200.0	114.189085	50.0	1365088.0	0.570945	Y



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Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

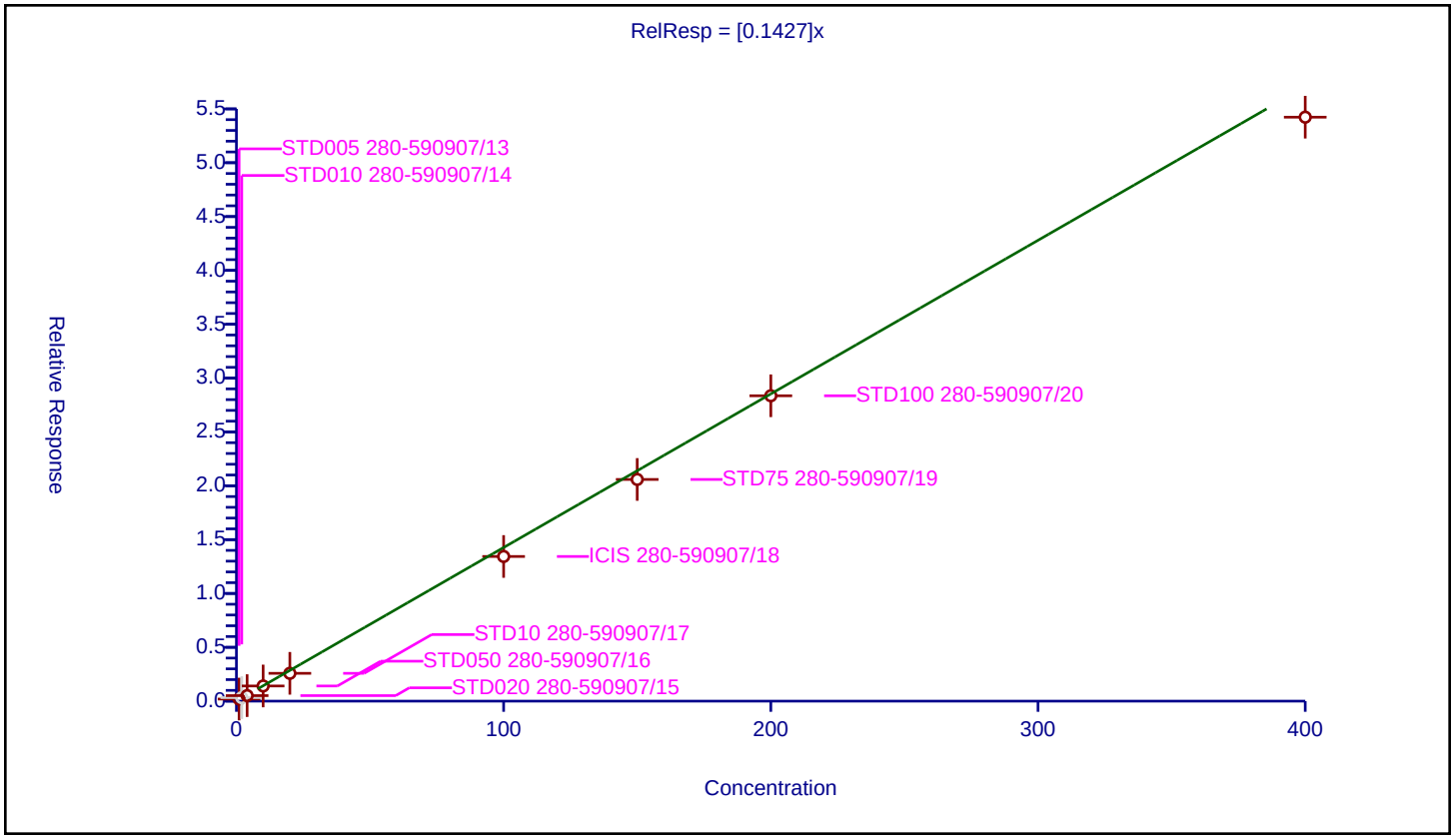
Curve Coefficients

Intercept:	0
Slope:	0.1427

Error Coefficients

Standard Error:	676000
Relative Standard Error:	14.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	1.0	0.193949	50.0	1334887.0	0.193949	Y
2	STD010 280-590907/14	2.0	0.328561	50.0	1278151.0	0.16428	N
3	STD020 280-590907/15	4.0	0.512863	50.0	1279290.0	0.128216	Y
4	STD050 280-590907/16	10.0	1.40874	50.0	1283629.0	0.140874	Y
5	STD10 280-590907/17	20.0	2.584648	50.0	1310662.0	0.129232	Y
6	ICIS 280-590907/18	100.0	13.434944	50.0	1343824.0	0.134349	Y
7	STD75 280-590907/19	150.0	20.587229	50.0	1323675.0	0.137248	Y
8	STD100 280-590907/20	200.0	28.358265	50.0	1337439.0	0.141791	Y
9	STD200 280-590907/21	400.0	54.231192	50.0	1365088.0	0.135578	Y



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Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

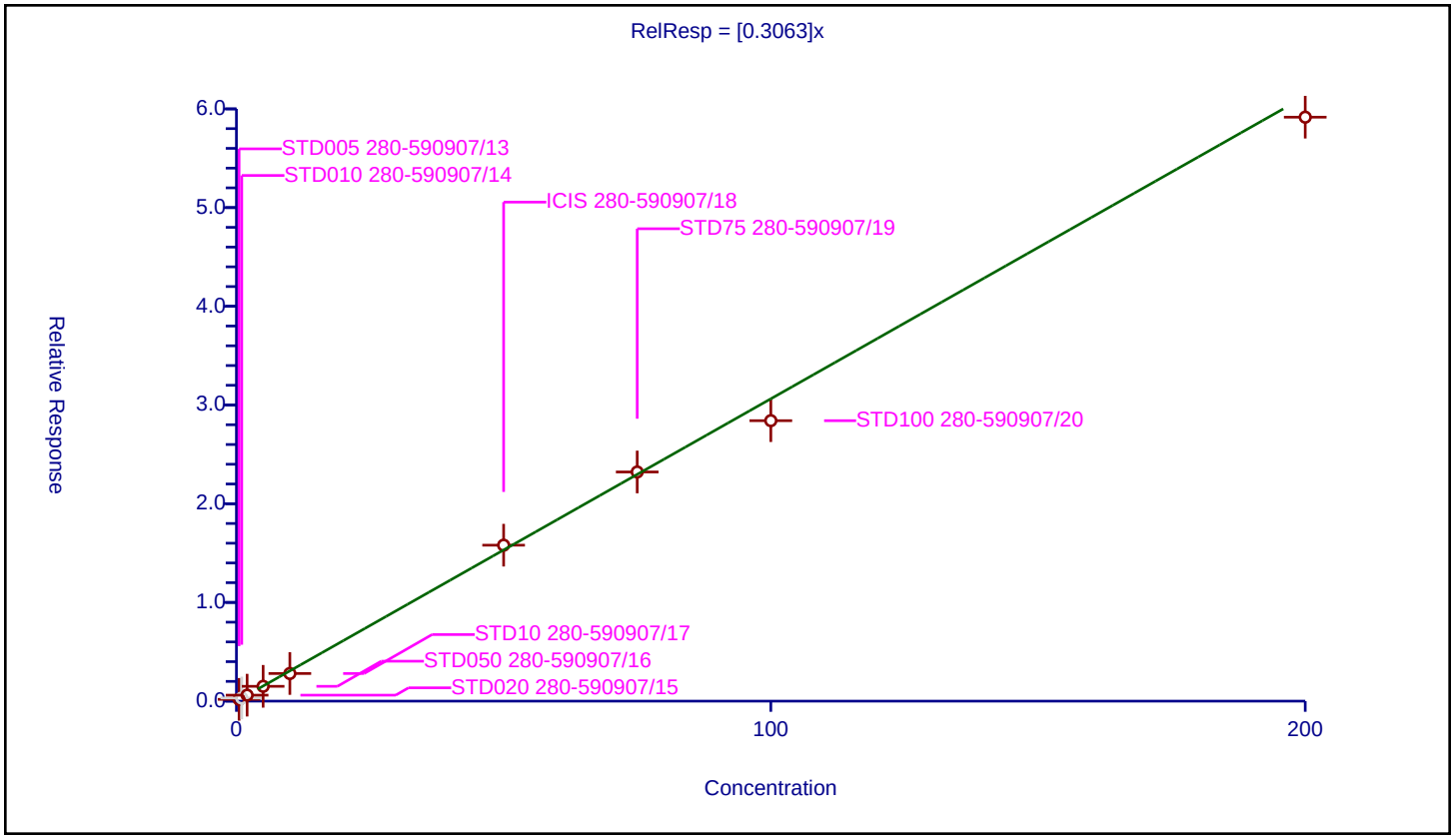
Curve Coefficients

Intercept:	0
Slope:	0.3063

Error Coefficients

Standard Error:	732000
Relative Standard Error:	8.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.181139	50.0	1334887.0	0.362278	Y
2	STD010 280-590907/14	1.0	0.319681	50.0	1278151.0	0.319681	N
3	STD020 280-590907/15	2.0	0.604632	50.0	1279290.0	0.302316	Y
4	STD050 280-590907/16	5.0	1.501524	50.0	1283629.0	0.300305	Y
5	STD10 280-590907/17	10.0	2.79973	50.0	1310662.0	0.279973	Y
6	ICIS 280-590907/18	50.0	15.799762	50.0	1343824.0	0.315995	Y
7	STD75 280-590907/19	75.0	23.216953	50.0	1323675.0	0.309559	Y
8	STD100 280-590907/20	100.0	28.41509	50.0	1337439.0	0.284151	Y
9	STD200 280-590907/21	200.0	59.159519	50.0	1365088.0	0.295798	Y



Calibration / Methylene Chloride

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

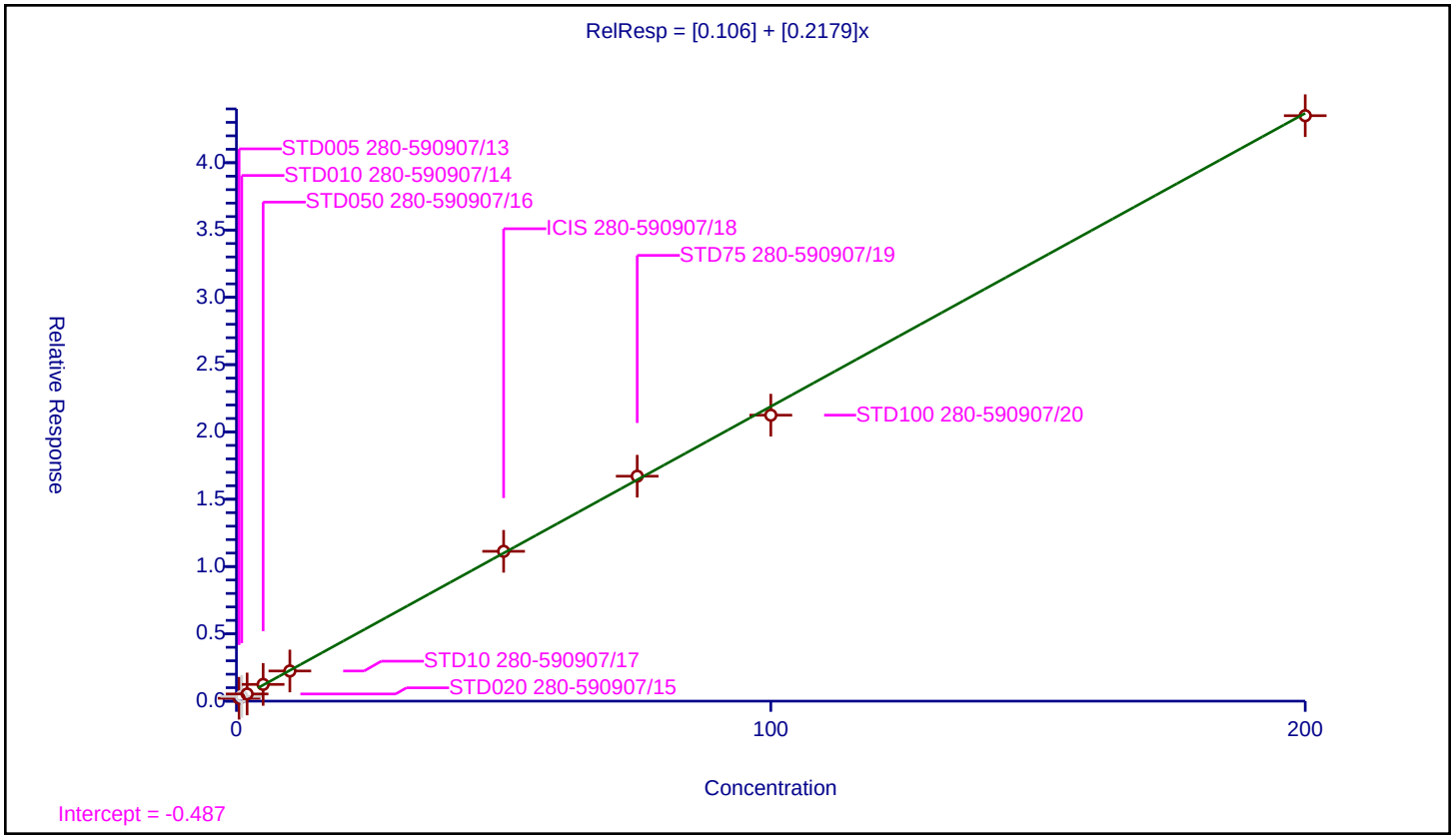
Curve Coefficients

Intercept:	0.106
Slope:	0.2179

Error Coefficients

Standard Error:	581000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.215112	50.0	1334887.0	0.430224	Y
2	STD010 280-590907/14	1.0	0.352541	50.0	1278151.0	0.352541	N
3	STD020 280-590907/15	2.0	0.532444	50.0	1279290.0	0.266222	Y
4	STD050 280-590907/16	5.0	1.244246	50.0	1283629.0	0.248849	Y
5	STD10 280-590907/17	10.0	2.240814	50.0	1310662.0	0.224081	Y
6	ICIS 280-590907/18	50.0	11.131406	50.0	1343824.0	0.222628	Y
7	STD75 280-590907/19	75.0	16.712222	50.0	1323675.0	0.22283	Y
8	STD100 280-590907/20	100.0	21.245604	50.0	1337439.0	0.212456	Y
9	STD200 280-590907/21	200.0	43.495071	50.0	1365088.0	0.217475	Y



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Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

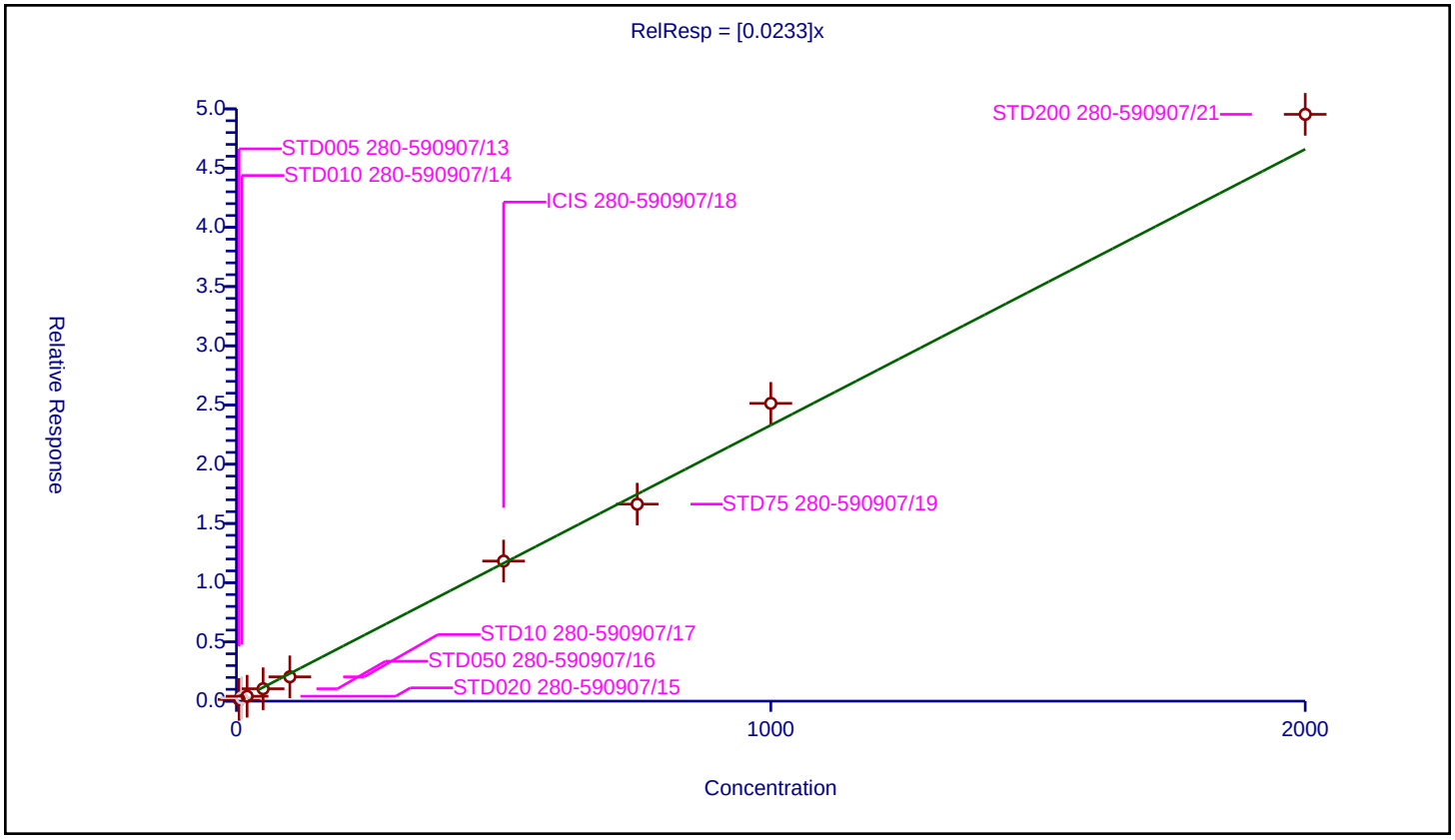
Curve Coefficients

Intercept:	0
Slope:	0.0233

Error Coefficients

Standard Error:	607000
Relative Standard Error:	11.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	5.0	0.142259	50.0	1334887.0	0.028452	Y
2	STD010 280-590907/14	10.0	0.28287	50.0	1278151.0	0.028287	N
3	STD020 280-590907/15	20.0	0.41437	50.0	1279290.0	0.020719	Y
4	STD050 280-590907/16	50.0	1.047304	50.0	1283629.0	0.020946	Y
5	STD10 280-590907/17	100.0	2.053008	50.0	1310662.0	0.02053	Y
6	ICIS 280-590907/18	500.0	11.827256	50.0	1343824.0	0.023655	Y
7	STD75 280-590907/19	750.0	16.630291	50.0	1323675.0	0.022174	Y
8	STD100 280-590907/20	1000.0	25.140997	50.0	1337439.0	0.025141	Y
9	STD200 280-590907/21	2000.0	49.539993	50.0	1365088.0	0.02477	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

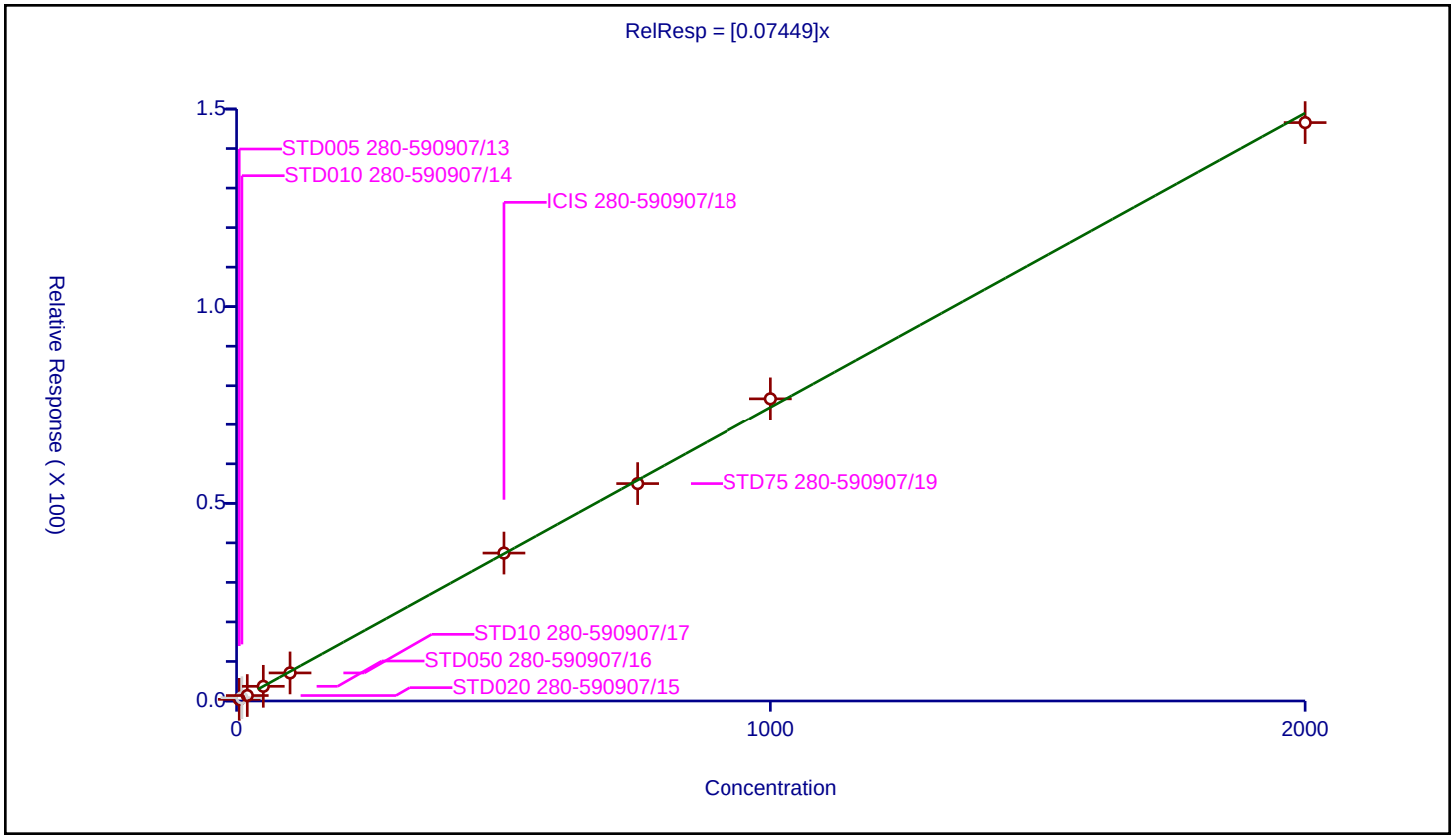
Curve Coefficients

Intercept:	0
Slope:	0.07449

Error Coefficients

Standard Error:	1830000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	5.0	0.417489	50.0	1334887.0	0.083498	Y
2	STD010 280-590907/14	10.0	0.834369	50.0	1278151.0	0.083437	N
3	STD020 280-590907/15	20.0	1.379828	50.0	1279290.0	0.068991	Y
4	STD050 280-590907/16	50.0	3.712755	50.0	1283629.0	0.074255	Y
5	STD10 280-590907/17	100.0	7.101717	50.0	1310662.0	0.071017	Y
6	ICIS 280-590907/18	500.0	37.423204	50.0	1343824.0	0.074846	Y
7	STD75 280-590907/19	750.0	54.996279	50.0	1323675.0	0.073328	Y
8	STD100 280-590907/20	1000.0	76.68189	50.0	1337439.0	0.076682	Y
9	STD200 280-590907/21	2000.0	146.566778	50.0	1365088.0	0.073283	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

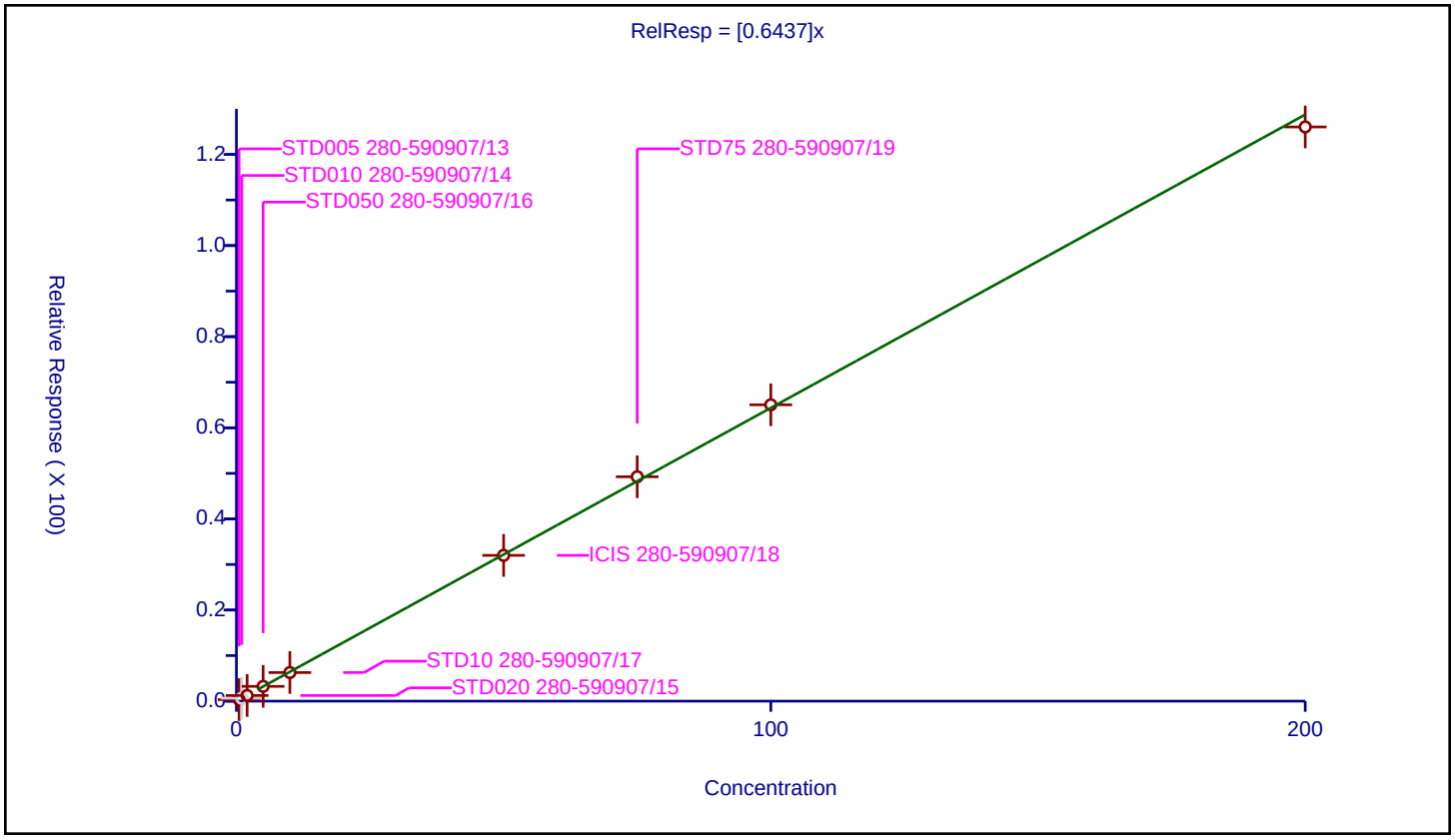
Curve Coefficients

Intercept:	0
Slope:	0.6437

Error Coefficients

Standard Error:	1570000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.338643	50.0	1334887.0	0.677286	Y
2	STD010 280-590907/14	1.0	0.651331	50.0	1278151.0	0.651331	N
3	STD020 280-590907/15	2.0	1.238539	50.0	1279290.0	0.619269	Y
4	STD050 280-590907/16	5.0	3.241863	50.0	1283629.0	0.648373	Y
5	STD10 280-590907/17	10.0	6.275302	50.0	1310662.0	0.62753	Y
6	ICIS 280-590907/18	50.0	31.997791	50.0	1343824.0	0.639956	Y
7	STD75 280-590907/19	75.0	49.249476	50.0	1323675.0	0.65666	Y
8	STD100 280-590907/20	100.0	65.047415	50.0	1337439.0	0.650474	Y
9	STD200 280-590907/21	200.0	126.036197	50.0	1365088.0	0.630181	Y



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Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

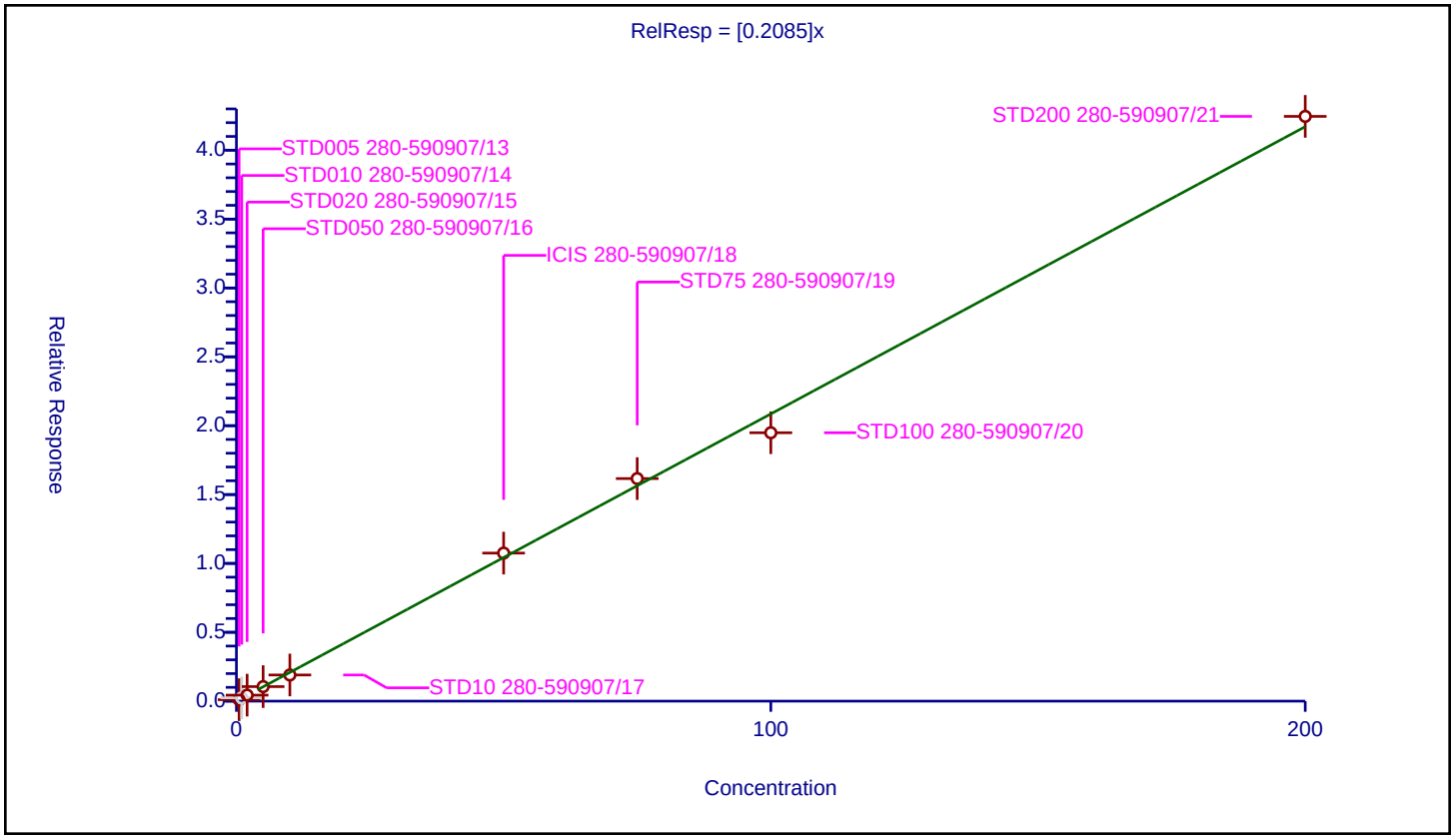
Curve Coefficients

Intercept:	0
Slope:	0.2085

Error Coefficients

Standard Error:	519000
Relative Standard Error:	4.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.105702	50.0	1334887.0	0.211404	Y
2	STD010 280-590907/14	1.0	0.24066	50.0	1278151.0	0.24066	N
3	STD020 280-590907/15	2.0	0.436609	50.0	1279290.0	0.218305	Y
4	STD050 280-590907/16	5.0	1.054822	50.0	1283629.0	0.210964	Y
5	STD10 280-590907/17	10.0	1.900414	50.0	1310662.0	0.190041	Y
6	ICIS 280-590907/18	50.0	10.749622	50.0	1343824.0	0.214992	Y
7	STD75 280-590907/19	75.0	16.160311	50.0	1323675.0	0.215471	Y
8	STD100 280-590907/20	100.0	19.487431	50.0	1337439.0	0.194874	Y
9	STD200 280-590907/21	200.0	42.456933	50.0	1365088.0	0.212285	Y



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Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

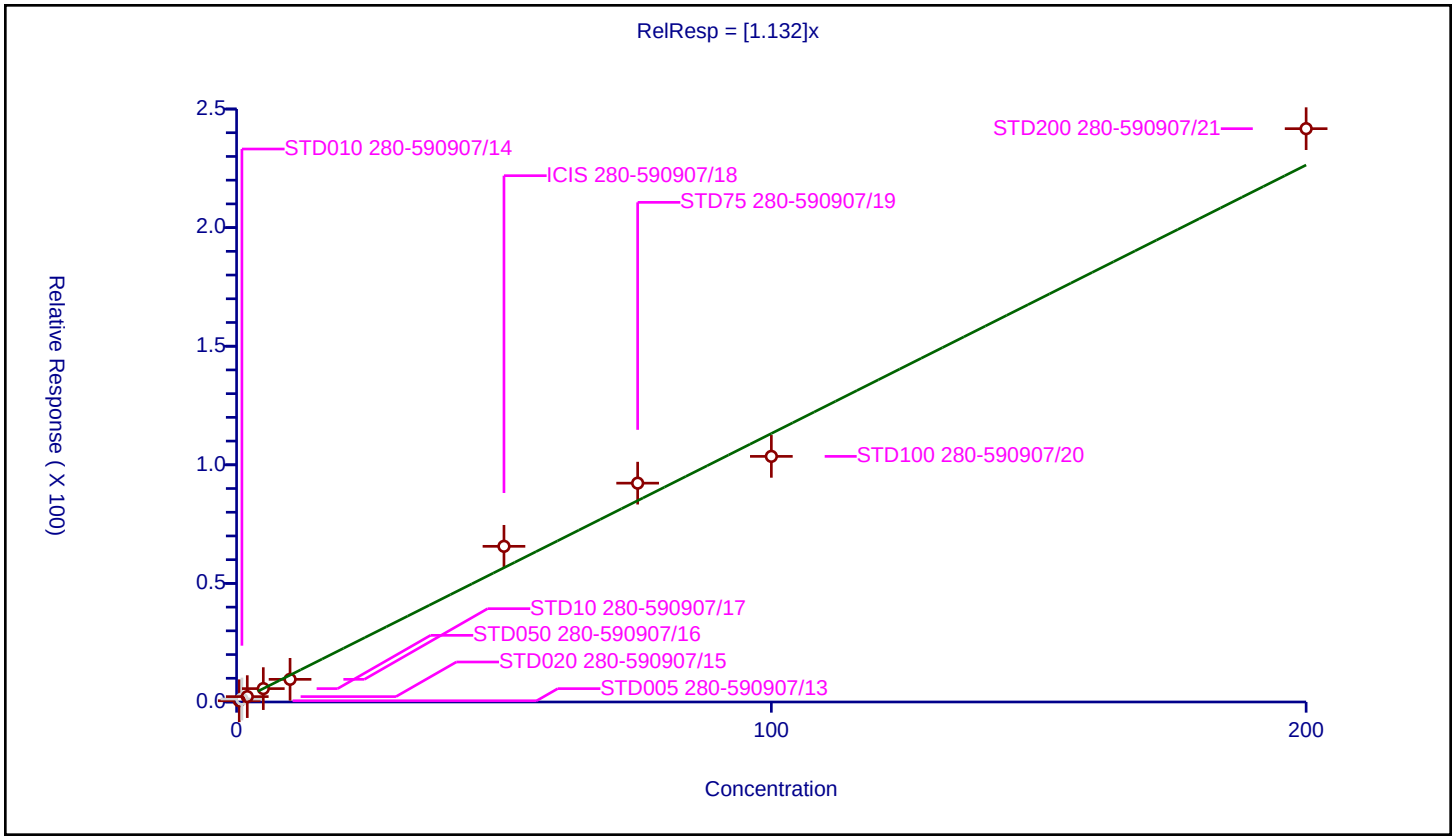
Curve Coefficients

Intercept:	0
Slope:	1.132

Error Coefficients

Standard Error:	692000
Relative Standard Error:	10.3
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.52803	50.0	307369.0	1.05606	Y
2	STD010 280-590907/14	1.0	1.254056	50.0	298631.0	1.254056	N
3	STD020 280-590907/15	2.0	2.261054	50.0	293204.0	1.130527	Y
4	STD050 280-590907/16	5.0	5.63573	50.0	294496.0	1.127146	Y
5	STD10 280-590907/17	10.0	9.548728	50.0	299553.0	0.954873	Y
6	ICIS 280-590907/18	50.0	65.633835	50.0	306665.0	1.312677	Y
7	STD75 280-590907/19	75.0	92.260182	50.0	305763.0	1.230136	Y
8	STD100 280-590907/20	100.0	103.552473	50.0	311262.0	1.035525	Y
9	STD200 280-590907/21	200.0	241.7134	50.0	324180.0	1.208567	Y



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Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

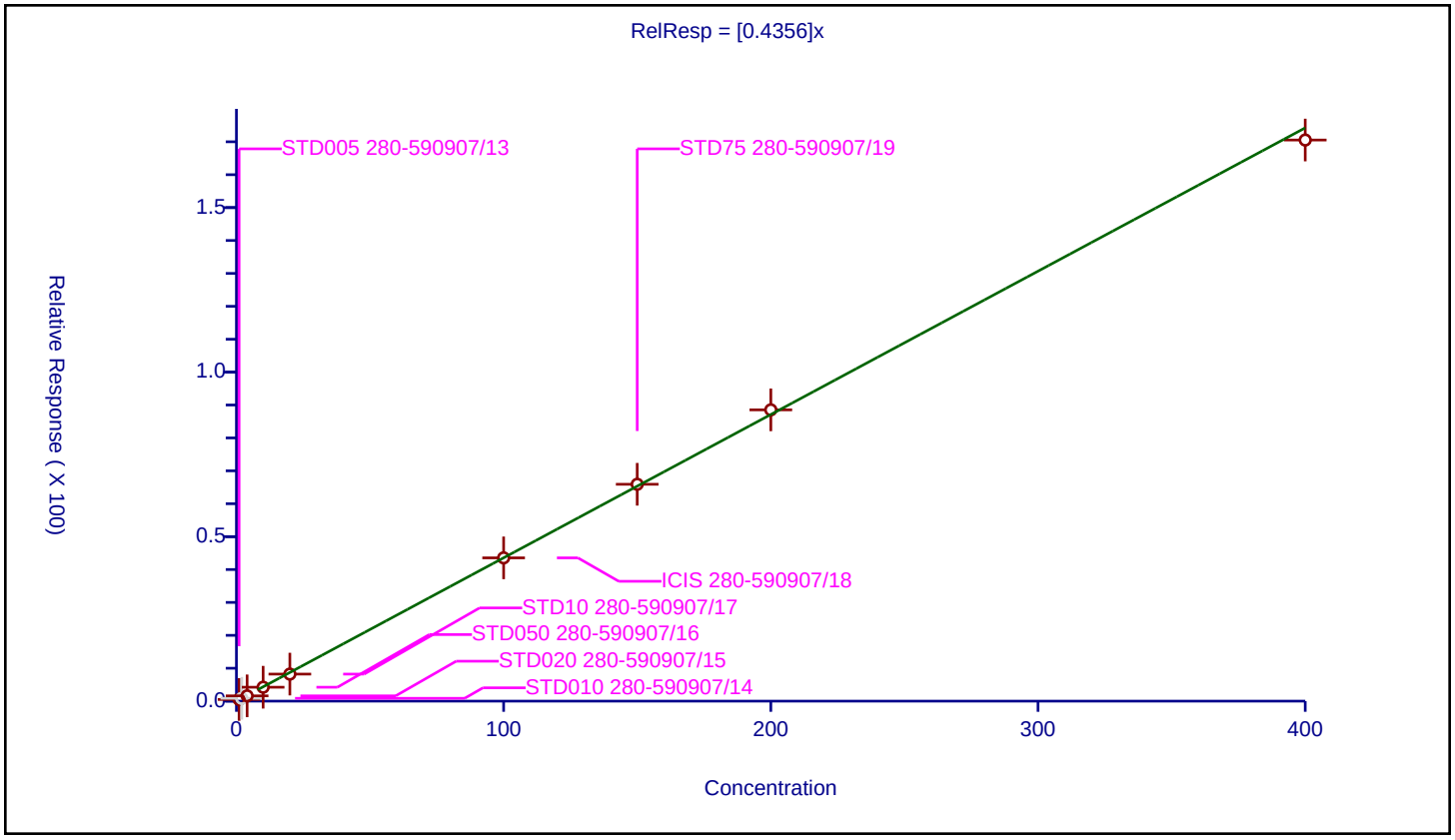
Curve Coefficients

Intercept:	0
Slope:	0.4356

Error Coefficients

Standard Error:	2130000
Relative Standard Error:	7.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	1.0	0.505848	50.0	1334887.0	0.505848	Y
2	STD010 280-590907/14	2.0	0.858584	50.0	1278151.0	0.429292	N
3	STD020 280-590907/15	4.0	1.604875	50.0	1279290.0	0.401219	Y
4	STD050 280-590907/16	10.0	4.226143	50.0	1283629.0	0.422614	Y
5	STD10 280-590907/17	20.0	8.221265	50.0	1310662.0	0.411063	Y
6	ICIS 280-590907/18	100.0	43.54856	50.0	1343824.0	0.435486	Y
7	STD75 280-590907/19	150.0	65.911232	50.0	1323675.0	0.439408	Y
8	STD100 280-590907/20	200.0	88.526019	50.0	1337439.0	0.44263	Y
9	STD200 280-590907/21	400.0	170.537028	50.0	1365088.0	0.426343	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

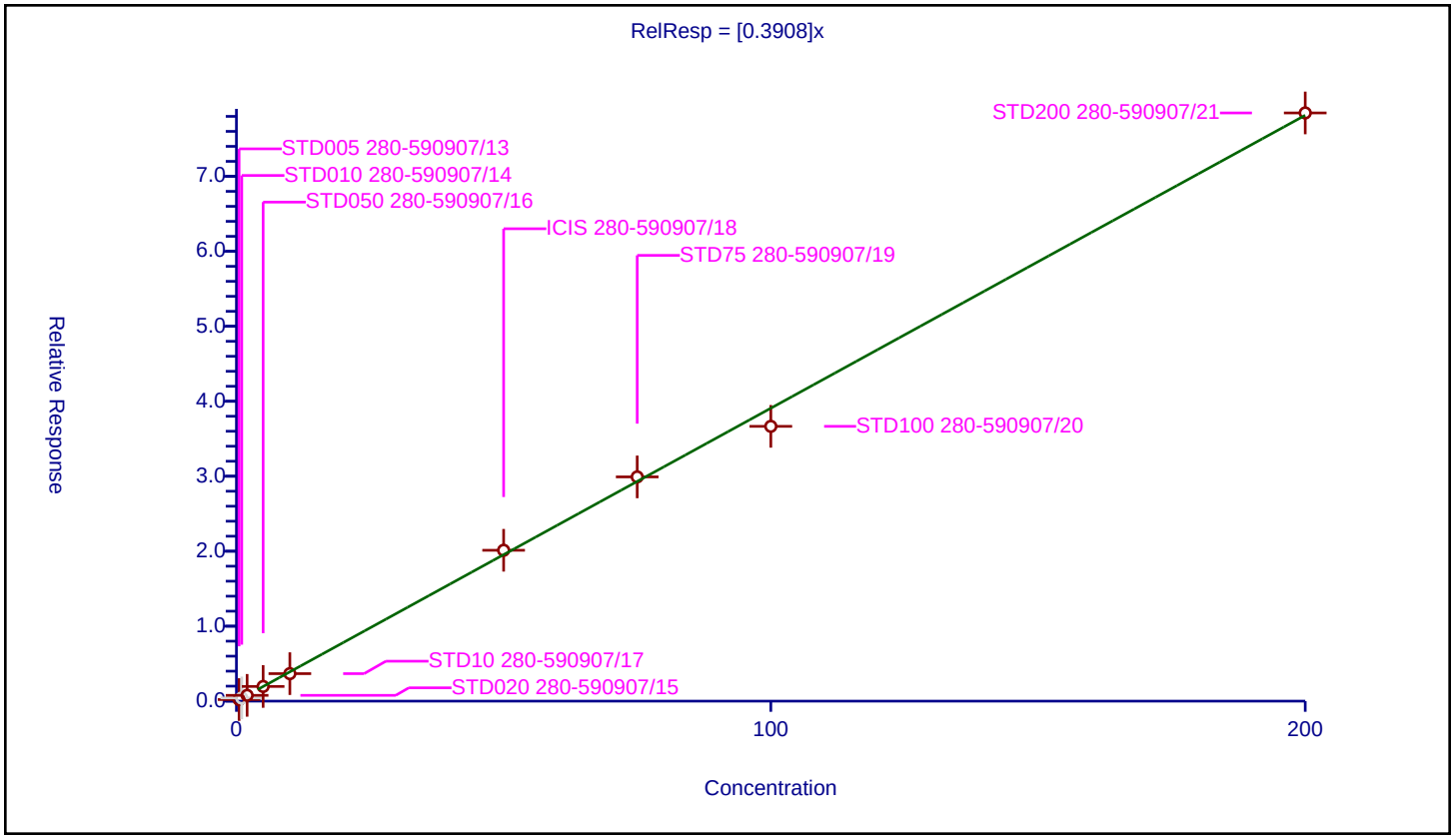
Curve Coefficients

Intercept:	0
Slope:	0.3908

Error Coefficients

Standard Error:	962000
Relative Standard Error:	4.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.210879	50.0	1334887.0	0.421759	Y
2	STD010 280-590907/14	1.0	0.429761	50.0	1278151.0	0.429761	N
3	STD020 280-590907/15	2.0	0.771561	50.0	1279290.0	0.38578	Y
4	STD050 280-590907/16	5.0	1.957731	50.0	1283629.0	0.391546	Y
5	STD10 280-590907/17	10.0	3.667956	50.0	1310662.0	0.366796	Y
6	ICIS 280-590907/18	50.0	20.12265	50.0	1343824.0	0.402453	Y
7	STD75 280-590907/19	75.0	29.912592	50.0	1323675.0	0.398835	Y
8	STD100 280-590907/20	100.0	36.656513	50.0	1337439.0	0.366565	Y
9	STD200 280-590907/21	200.0	78.461645	50.0	1365088.0	0.392308	Y



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Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

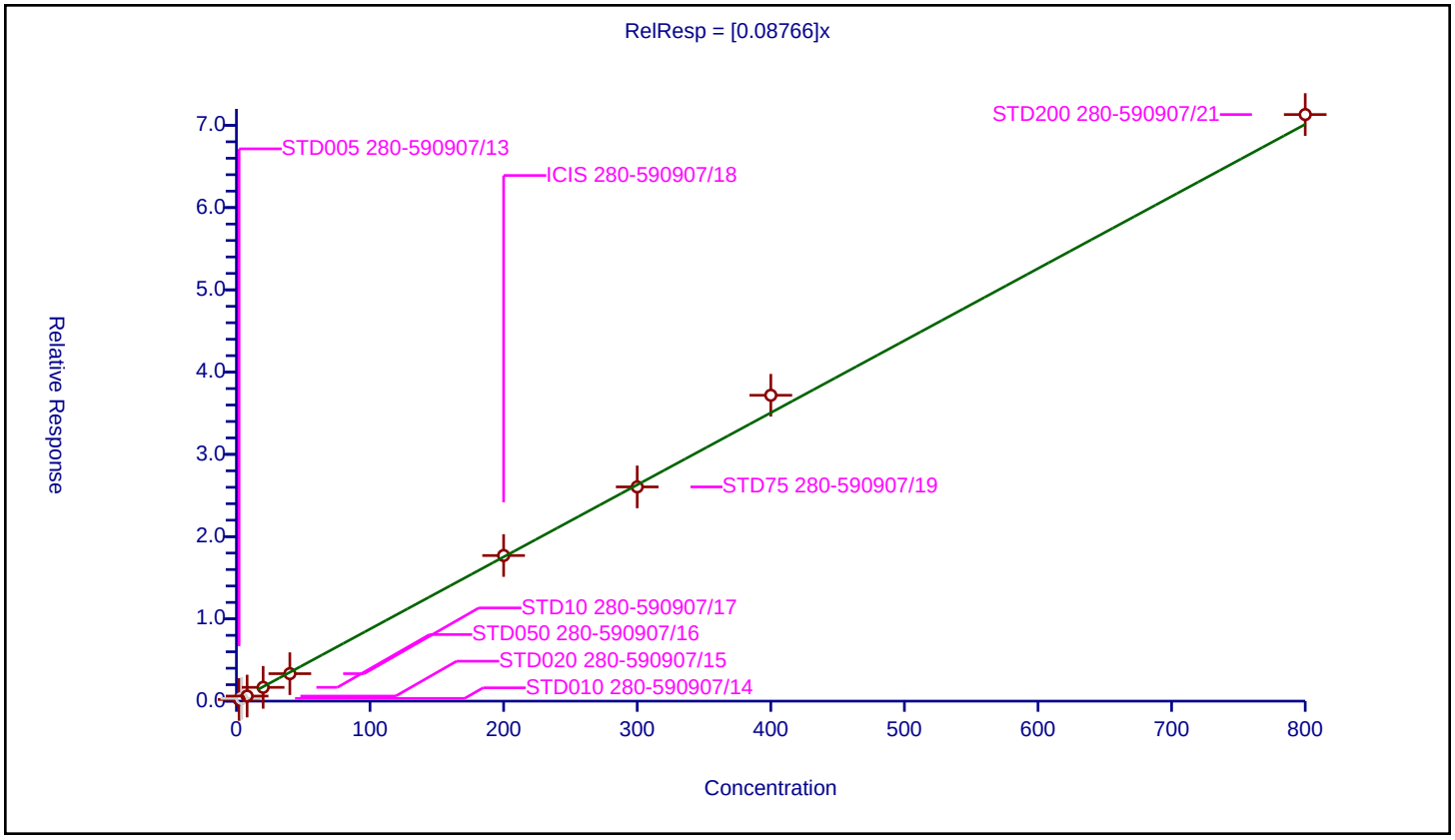
Curve Coefficients

Intercept:	0
Slope:	0.08766

Error Coefficients

Standard Error:	886000
Relative Standard Error:	7.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	2.0	0.198856	50.0	1334887.0	0.099428	Y
2	STD010 280-590907/14	4.0	0.334233	50.0	1278151.0	0.083558	N
3	STD020 280-590907/15	8.0	0.616866	50.0	1279290.0	0.077108	Y
4	STD050 280-590907/16	20.0	1.675718	50.0	1283629.0	0.083786	Y
5	STD10 280-590907/17	40.0	3.34003	50.0	1310662.0	0.083501	Y
6	ICIS 280-590907/18	200.0	17.704365	50.0	1343824.0	0.088522	Y
7	STD75 280-590907/19	300.0	26.045139	50.0	1323675.0	0.086817	Y
8	STD100 280-590907/20	400.0	37.185958	50.0	1337439.0	0.092965	Y
9	STD200 280-590907/21	800.0	71.312765	50.0	1365088.0	0.089141	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

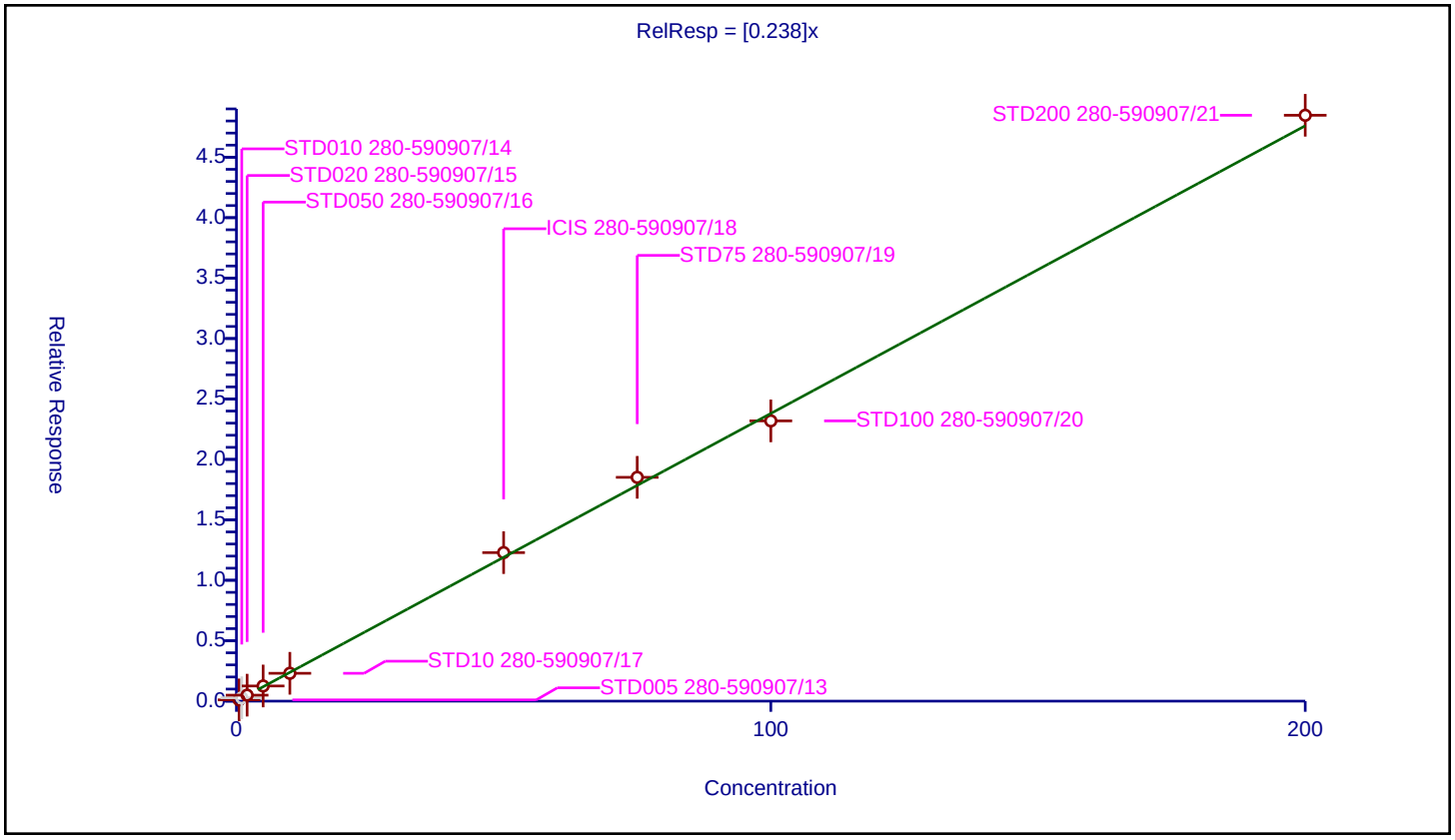
Curve Coefficients

Intercept:	0
Slope:	0.238

Error Coefficients

Standard Error:	596000
Relative Standard Error:	5.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.104353	50.0	1334887.0	0.208707	Y
2	STD010 280-590907/14	1.0	0.280209	50.0	1278151.0	0.280209	N
3	STD020 280-590907/15	2.0	0.494337	50.0	1279290.0	0.247168	Y
4	STD050 280-590907/16	5.0	1.253945	50.0	1283629.0	0.250789	Y
5	STD10 280-590907/17	10.0	2.304904	50.0	1310662.0	0.23049	Y
6	ICIS 280-590907/18	50.0	12.28844	50.0	1343824.0	0.245769	Y
7	STD75 280-590907/19	75.0	18.516781	50.0	1323675.0	0.24689	Y
8	STD100 280-590907/20	100.0	23.186441	50.0	1337439.0	0.231864	Y
9	STD200 280-590907/21	200.0	48.470428	50.0	1365088.0	0.242352	Y



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Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

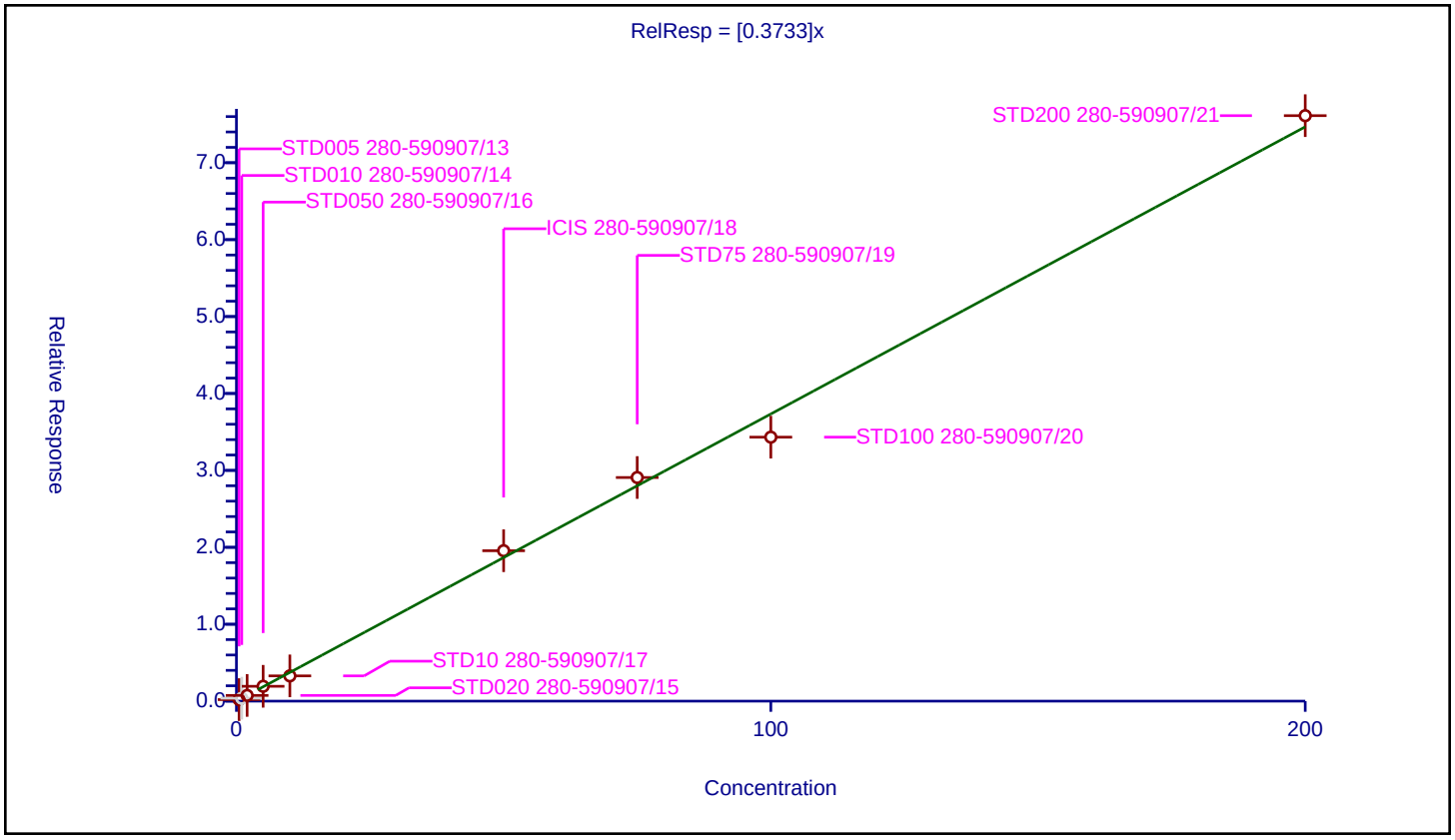
Curve Coefficients

Intercept:	0
Slope:	0.3733

Error Coefficients

Standard Error:	929000
Relative Standard Error:	6.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.199343	50.0	1334887.0	0.398685	Y
2	STD010 280-590907/14	1.0	0.384031	50.0	1278151.0	0.384031	N
3	STD020 280-590907/15	2.0	0.742482	50.0	1279290.0	0.371241	Y
4	STD050 280-590907/16	5.0	1.92914	50.0	1283629.0	0.385828	Y
5	STD10 280-590907/17	10.0	3.282845	50.0	1310662.0	0.328284	Y
6	ICIS 280-590907/18	50.0	19.555091	50.0	1343824.0	0.391102	Y
7	STD75 280-590907/19	75.0	29.076208	50.0	1323675.0	0.387683	Y
8	STD100 280-590907/20	100.0	34.322126	50.0	1337439.0	0.343221	Y
9	STD200 280-590907/21	200.0	76.119928	50.0	1365088.0	0.3806	Y



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Calibration / sec-Butyl Alcohol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

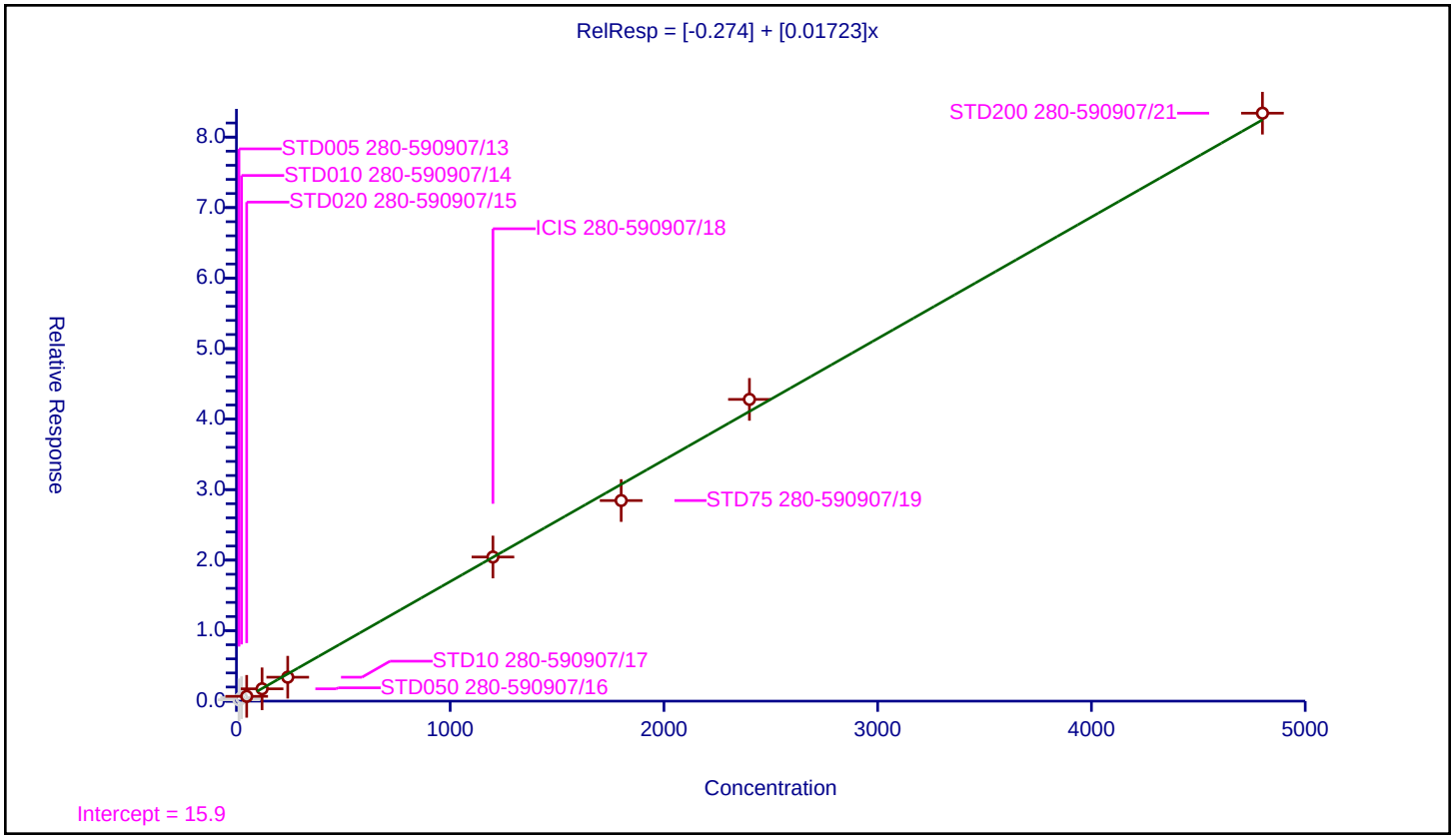
Curve Coefficients

Intercept:	-0.274
Slope:	0.01723

Error Coefficients

Standard Error:	1210000
Relative Standard Error:	9.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	12.0	0.185709	50.0	1334887.0	0.015476	N
2	STD010 280-590907/14	24.0	0.494347	50.0	1278151.0	0.020598	N
3	STD020 280-590907/15	48.0	0.681863	50.0	1279290.0	0.014205	Y
4	STD050 280-590907/16	120.0	1.747935	50.0	1283629.0	0.014566	Y
5	STD10 280-590907/17	240.0	3.393171	50.0	1310662.0	0.014138	Y
6	ICIS 280-590907/18	1200.0	20.441888	50.0	1343824.0	0.017035	Y
7	STD75 280-590907/19	1800.0	28.452452	50.0	1323675.0	0.015807	Y
8	STD100 280-590907/20	2400.0	42.798214	50.0	1337439.0	0.017833	Y
9	STD200 280-590907/21	4800.0	83.390558	50.0	1365088.0	0.017373	Y



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Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

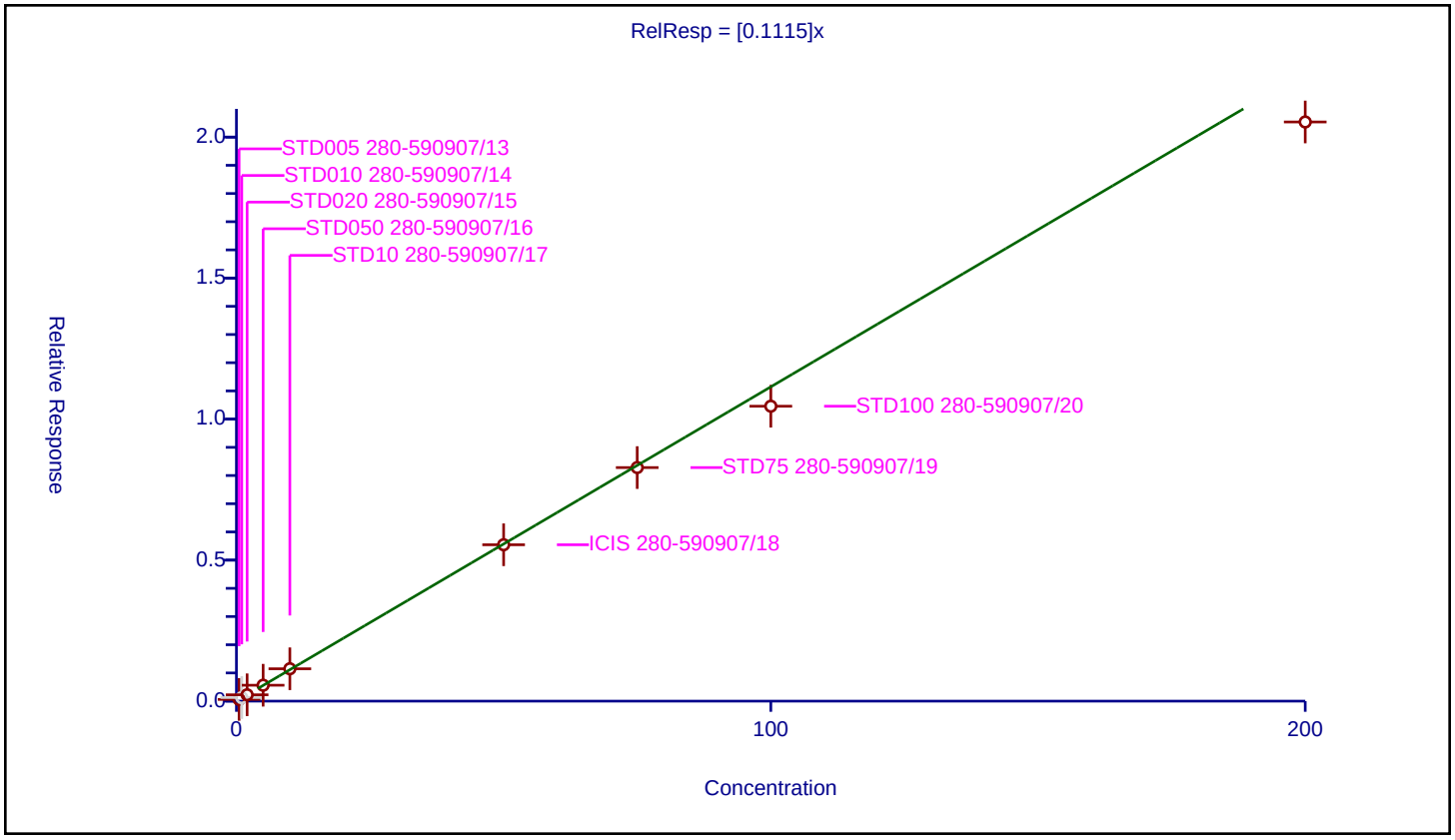
Curve Coefficients

Intercept:	0
Slope:	0.1115

Error Coefficients

Standard Error:	257000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.061279	50.0	1334887.0	0.122557	Y
2	STD010 280-590907/14	1.0	0.126941	50.0	1278151.0	0.126941	N
3	STD020 280-590907/15	2.0	0.225633	50.0	1279290.0	0.112816	Y
4	STD050 280-590907/16	5.0	0.564143	50.0	1283629.0	0.112829	Y
5	STD10 280-590907/17	10.0	1.148237	50.0	1310662.0	0.114824	Y
6	ICIS 280-590907/18	50.0	5.545109	50.0	1343824.0	0.110902	Y
7	STD75 280-590907/19	75.0	8.282207	50.0	1323675.0	0.110429	Y
8	STD100 280-590907/20	100.0	10.458122	50.0	1337439.0	0.104581	Y
9	STD200 280-590907/21	200.0	20.536075	50.0	1365088.0	0.10268	Y



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Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

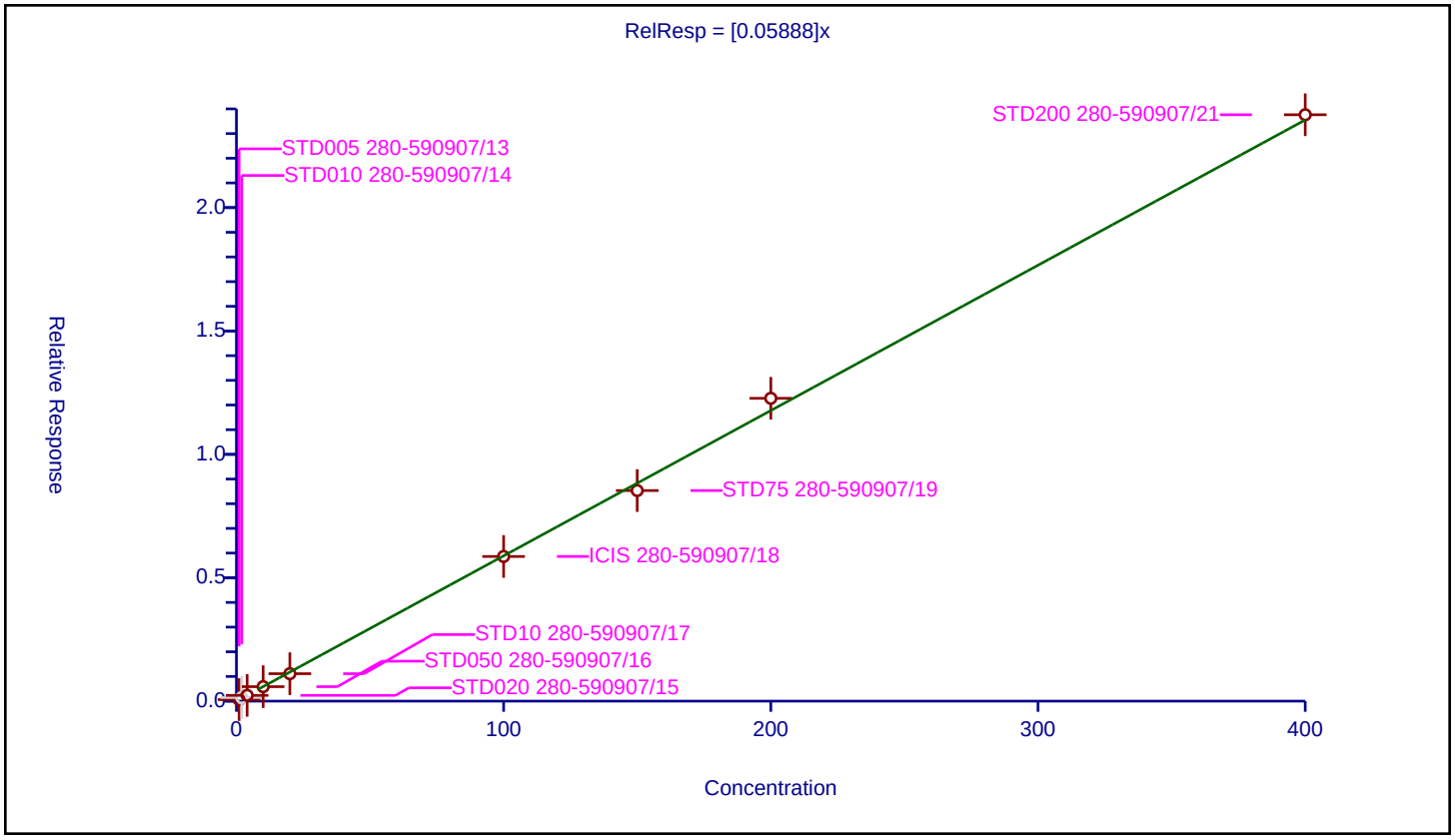
Curve Coefficients

Intercept:	0
Slope:	0.05888

Error Coefficients

Standard Error:	294000
Relative Standard Error:	3.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	1.0	0.062178	50.0	1334887.0	0.062178	Y
2	STD010 280-590907/14	2.0	0.145718	50.0	1278151.0	0.072859	N
3	STD020 280-590907/15	4.0	0.233411	50.0	1279290.0	0.058353	Y
4	STD050 280-590907/16	10.0	0.586423	50.0	1283629.0	0.058642	Y
5	STD10 280-590907/17	20.0	1.112224	50.0	1310662.0	0.055611	Y
6	ICIS 280-590907/18	100.0	5.86178	50.0	1343824.0	0.058618	Y
7	STD75 280-590907/19	150.0	8.53325	50.0	1323675.0	0.056888	Y
8	STD100 280-590907/20	200.0	12.272709	50.0	1337439.0	0.061364	Y
9	STD200 280-590907/21	400.0	23.762058	50.0	1365088.0	0.059405	Y



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Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

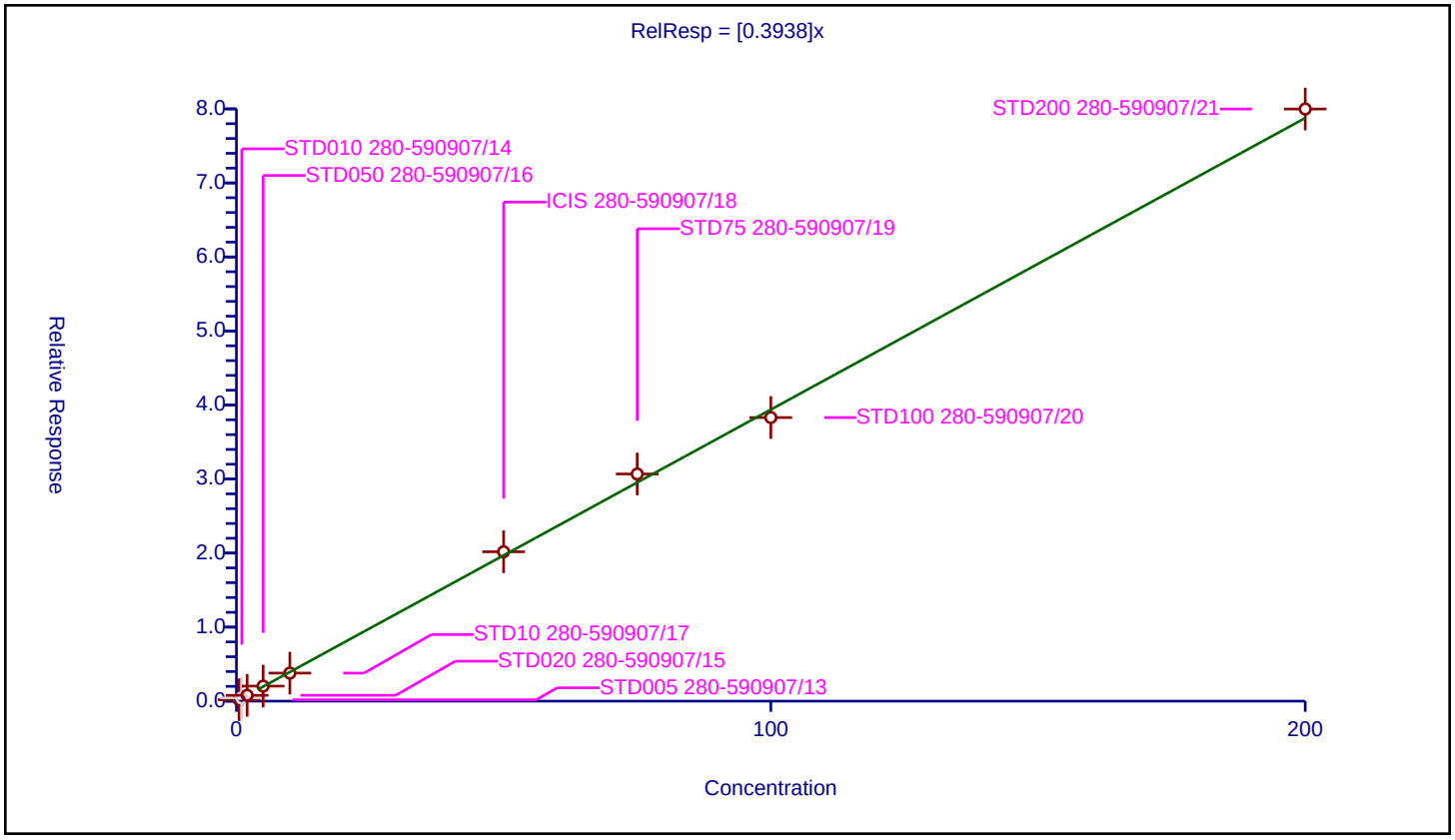
Curve Coefficients

Intercept:	0
Slope:	0.3938

Error Coefficients

Standard Error:	985000
Relative Standard Error:	3.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.18863	50.0	1334887.0	0.37726	Y
2	STD010 280-590907/14	1.0	0.441067	50.0	1278151.0	0.441067	N
3	STD020 280-590907/15	2.0	0.78438	50.0	1279290.0	0.39219	Y
4	STD050 280-590907/16	5.0	2.032012	50.0	1283629.0	0.406402	Y
5	STD10 280-590907/17	10.0	3.790222	50.0	1310662.0	0.379022	Y
6	ICIS 280-590907/18	50.0	20.177419	50.0	1343824.0	0.403548	Y
7	STD75 280-590907/19	75.0	30.684269	50.0	1323675.0	0.409124	Y
8	STD100 280-590907/20	100.0	38.307841	50.0	1337439.0	0.383078	Y
9	STD200 280-590907/21	200.0	79.981181	50.0	1365088.0	0.399906	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

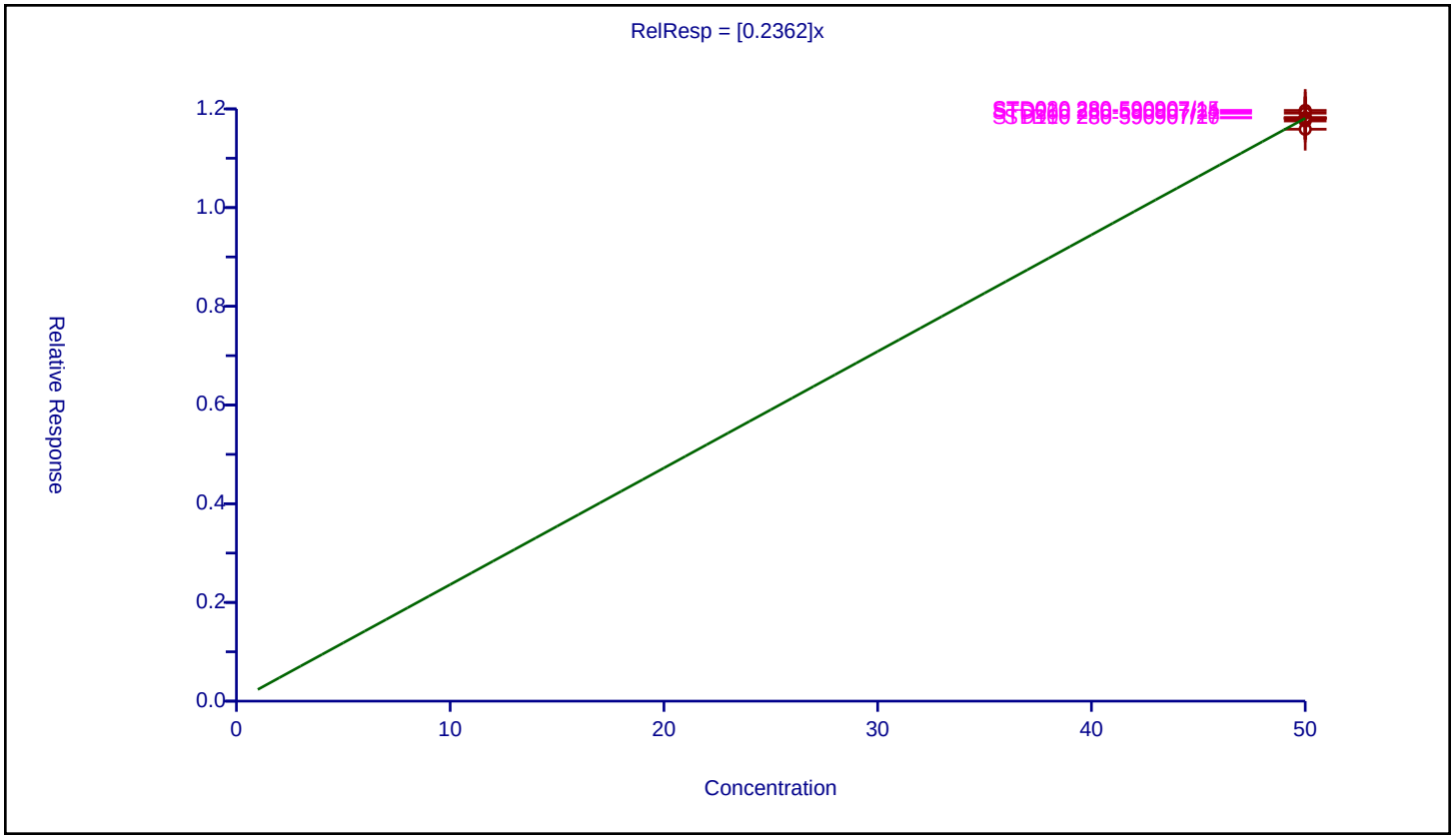
Curve Coefficients

Intercept:	0
Slope:	0.2362

Error Coefficients

Standard Error:	334000
Relative Standard Error:	1.0
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	50.0	11.805606	50.0	1334887.0	0.236112	Y
2	STD010 280-590907/14	50.0	11.958877	50.0	1278151.0	0.239178	N
3	STD020 280-590907/15	50.0	11.968475	50.0	1279290.0	0.239369	Y
4	STD050 280-590907/16	50.0	11.754915	50.0	1283629.0	0.235098	Y
5	STD10 280-590907/17	50.0	11.819676	50.0	1310662.0	0.236394	Y
6	ICIS 280-590907/18	50.0	11.58779	50.0	1343824.0	0.231756	Y
7	STD75 280-590907/19	50.0	11.805164	50.0	1323675.0	0.236103	Y
8	STD100 280-590907/20	50.0	11.823081	50.0	1337439.0	0.236462	Y
9	STD200 280-590907/21	50.0	11.912309	50.0	1365088.0	0.238246	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

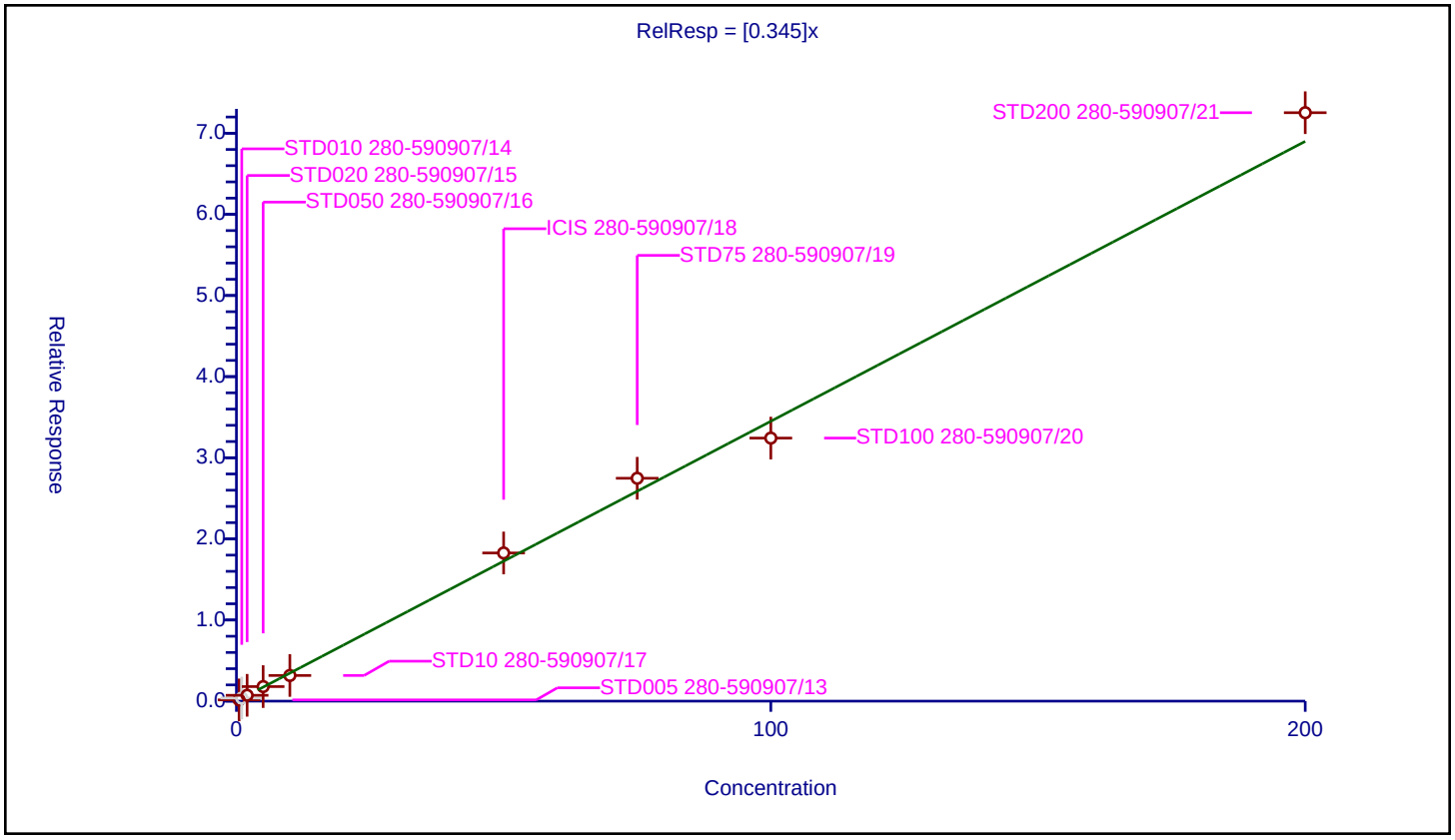
Curve Coefficients

Intercept:	0
Slope:	0.345

Error Coefficients

Standard Error:	883000
Relative Standard Error:	7.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.153459	50.0	1334887.0	0.306917	Y
2	STD010 280-590907/14	1.0	0.383132	50.0	1278151.0	0.383132	N
3	STD020 280-590907/15	2.0	0.719227	50.0	1279290.0	0.359614	Y
4	STD050 280-590907/16	5.0	1.793236	50.0	1283629.0	0.358647	Y
5	STD10 280-590907/17	10.0	3.163249	50.0	1310662.0	0.316325	Y
6	ICIS 280-590907/18	50.0	18.264036	50.0	1343824.0	0.365281	Y
7	STD75 280-590907/19	75.0	27.471547	50.0	1323675.0	0.366287	Y
8	STD100 280-590907/20	100.0	32.424507	50.0	1337439.0	0.324245	Y
9	STD200 280-590907/21	200.0	72.529573	50.0	1365088.0	0.362648	Y



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Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

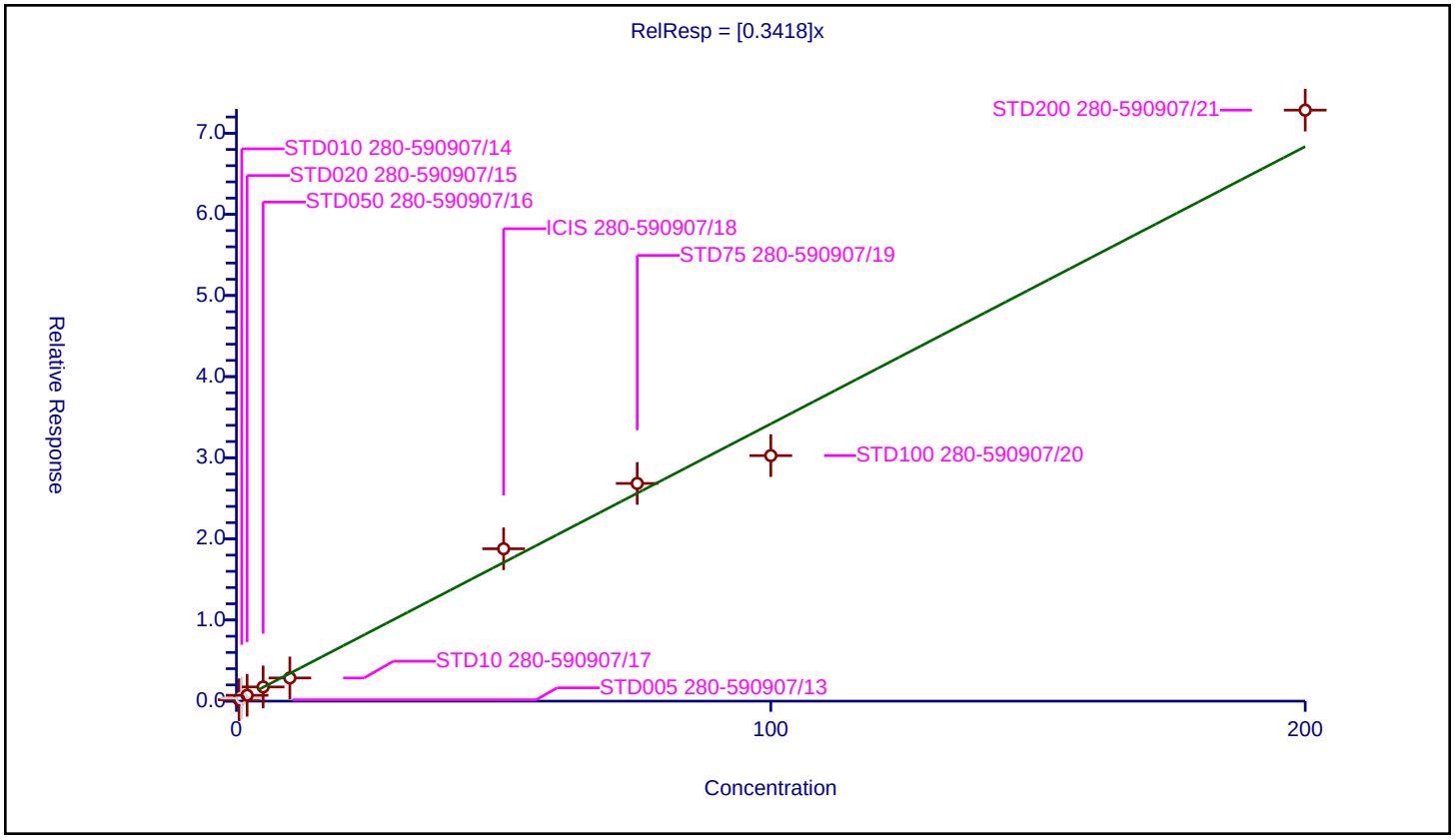
Curve Coefficients

Intercept:	0
Slope:	0.3418

Error Coefficients

Standard Error:	877000
Relative Standard Error:	9.3
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.168891	50.0	1334887.0	0.337781	Y
2	STD010 280-590907/14	1.0	0.380589	50.0	1278151.0	0.380589	N
3	STD020 280-590907/15	2.0	0.721103	50.0	1279290.0	0.360552	Y
4	STD050 280-590907/16	5.0	1.749766	50.0	1283629.0	0.349953	Y
5	STD10 280-590907/17	10.0	2.857831	50.0	1310662.0	0.285783	Y
6	ICIS 280-590907/18	50.0	18.780845	50.0	1343824.0	0.375617	Y
7	STD75 280-590907/19	75.0	26.835288	50.0	1323675.0	0.357804	Y
8	STD100 280-590907/20	100.0	30.264221	50.0	1337439.0	0.302642	Y
9	STD200 280-590907/21	200.0	72.846769	50.0	1365088.0	0.364234	Y



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Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

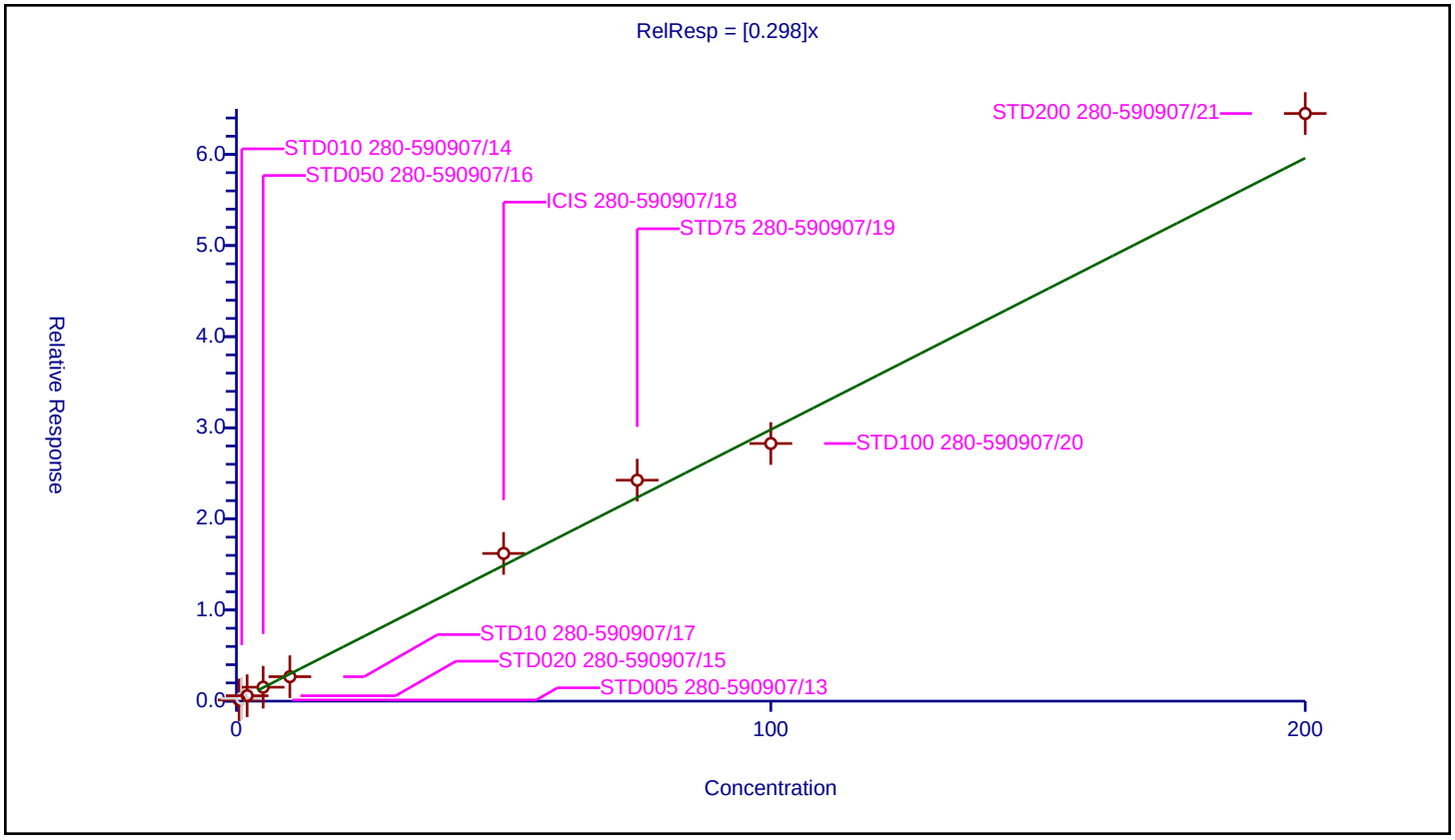
Curve Coefficients

Intercept:	0
Slope:	0.298

Error Coefficients

Standard Error:	782000
Relative Standard Error:	8.6
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.129562	50.0	1334887.0	0.259123	Y
2	STD010 280-590907/14	1.0	0.305089	50.0	1278151.0	0.305089	N
3	STD020 280-590907/15	2.0	0.5949	50.0	1279290.0	0.29745	Y
4	STD050 280-590907/16	5.0	1.531167	50.0	1283629.0	0.306233	Y
5	STD10 280-590907/17	10.0	2.684254	50.0	1310662.0	0.268425	Y
6	ICIS 280-590907/18	50.0	16.211312	50.0	1343824.0	0.324226	Y
7	STD75 280-590907/19	75.0	24.250628	50.0	1323675.0	0.323342	Y
8	STD100 280-590907/20	100.0	28.277551	50.0	1337439.0	0.282776	Y
9	STD200 280-590907/21	200.0	64.495329	50.0	1365088.0	0.322477	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

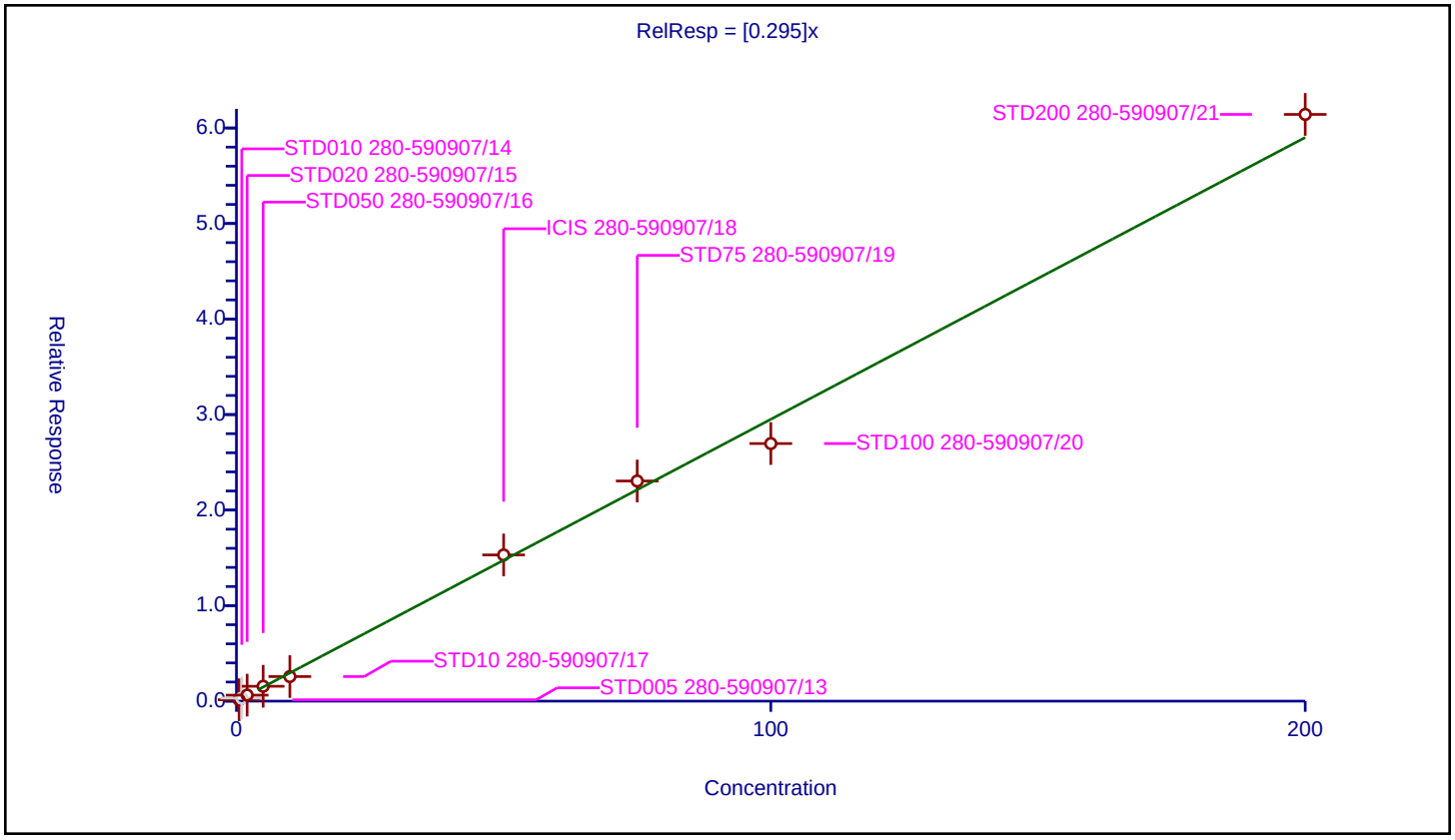
Curve Coefficients

Intercept:	0
Slope:	0.295

Error Coefficients

Standard Error:	744000
Relative Standard Error:	7.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.143271	50.0	1334887.0	0.286541	Y
2	STD010 280-590907/14	1.0	0.322536	50.0	1278151.0	0.322536	N
3	STD020 280-590907/15	2.0	0.629881	50.0	1279290.0	0.31494	Y
4	STD050 280-590907/16	5.0	1.557031	50.0	1283629.0	0.311406	Y
5	STD10 280-590907/17	10.0	2.573165	50.0	1310662.0	0.257317	Y
6	ICIS 280-590907/18	50.0	15.306431	50.0	1343824.0	0.306129	Y
7	STD75 280-590907/19	75.0	23.046707	50.0	1323675.0	0.307289	Y
8	STD100 280-590907/20	100.0	26.965379	50.0	1337439.0	0.269654	Y
9	STD200 280-590907/21	200.0	61.421754	50.0	1365088.0	0.307109	Y



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Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

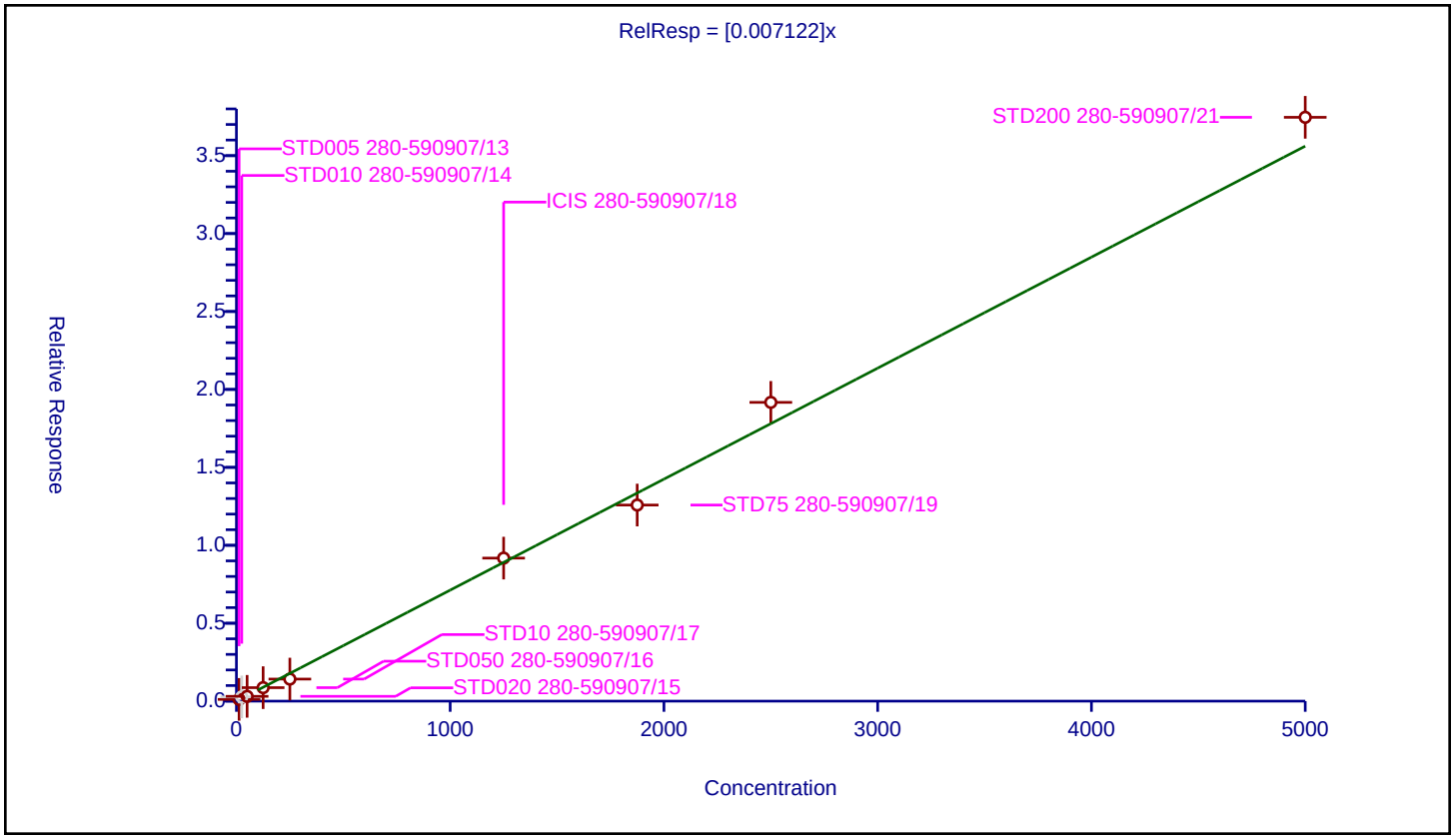
Curve Coefficients

Intercept:	0
Slope:	0.007122

Error Coefficients

Standard Error:	460000
Relative Standard Error:	14.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	12.5	0.112744	50.0	1334887.0	0.009019	Y
2	STD010 280-590907/14	25.0	0.270625	50.0	1278151.0	0.010825	N
3	STD020 280-590907/15	50.0	0.307788	50.0	1279290.0	0.006156	Y
4	STD050 280-590907/16	125.0	0.865865	50.0	1283629.0	0.006927	Y
5	STD10 280-590907/17	250.0	1.415163	50.0	1310662.0	0.005661	Y
6	ICIS 280-590907/18	1250.0	9.177727	50.0	1343824.0	0.007342	Y
7	STD75 280-590907/19	1875.0	12.582356	50.0	1323675.0	0.006711	Y
8	STD100 280-590907/20	2500.0	19.170145	50.0	1337439.0	0.007668	Y
9	STD200 280-590907/21	5000.0	37.460296	50.0	1365088.0	0.007492	Y



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Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

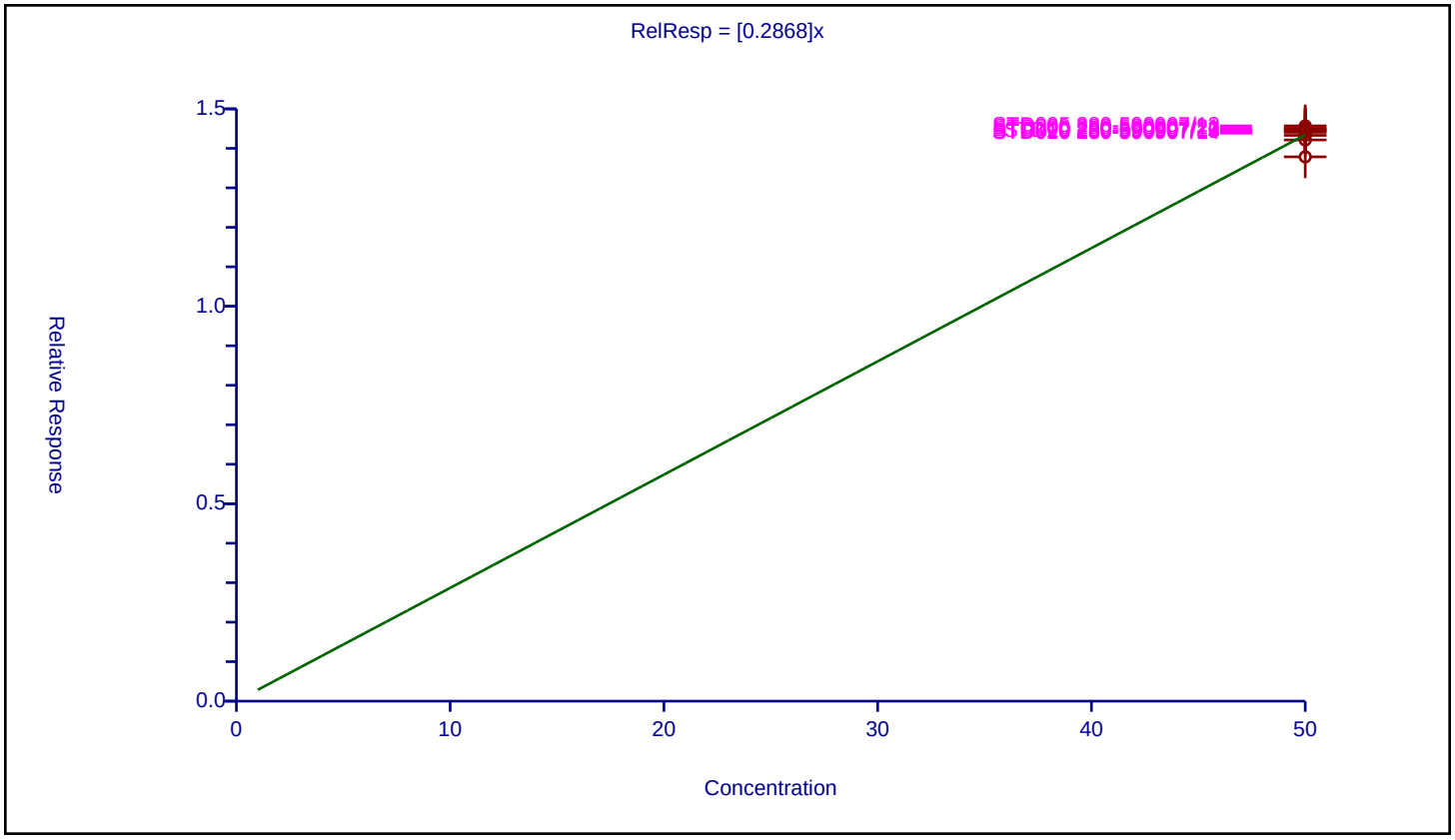
Curve Coefficients

Intercept:	0
Slope:	0.2868

Error Coefficients

Standard Error:	406000
Relative Standard Error:	1.7
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	50.0	14.569286	50.0	1334887.0	0.291386	Y
2	STD010 280-590907/14	50.0	14.384412	50.0	1278151.0	0.287688	N
3	STD020 280-590907/15	50.0	14.407914	50.0	1279290.0	0.288158	Y
4	STD050 280-590907/16	50.0	14.329569	50.0	1283629.0	0.286591	Y
5	STD10 280-590907/17	50.0	14.452811	50.0	1310662.0	0.289056	Y
6	ICIS 280-590907/18	50.0	13.785287	50.0	1343824.0	0.275706	Y
7	STD75 280-590907/19	50.0	14.212892	50.0	1323675.0	0.284258	Y
8	STD100 280-590907/20	50.0	14.470081	50.0	1337439.0	0.289402	Y
9	STD200 280-590907/21	50.0	14.508808	50.0	1365088.0	0.290176	Y



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Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

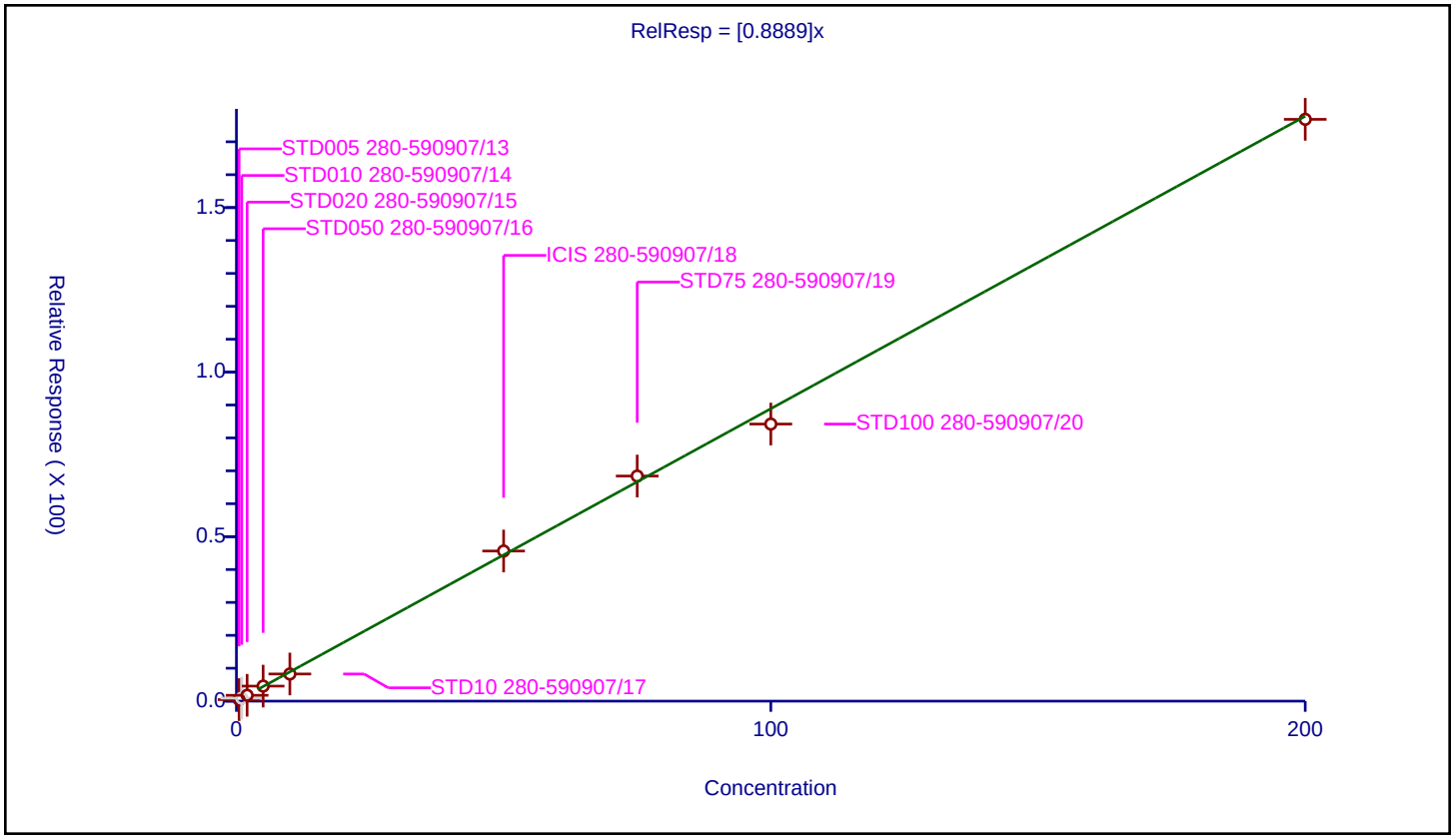
Curve Coefficients

Intercept:	0
Slope:	0.8889

Error Coefficients

Standard Error:	2180000
Relative Standard Error:	4.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.466257	50.0	1334887.0	0.932513	Y
2	STD010 280-590907/14	1.0	0.923013	50.0	1278151.0	0.923013	N
3	STD020 280-590907/15	2.0	1.778447	50.0	1279290.0	0.889224	Y
4	STD050 280-590907/16	5.0	4.565961	50.0	1283629.0	0.913192	Y
5	STD10 280-590907/17	10.0	8.249419	50.0	1310662.0	0.824942	Y
6	ICIS 280-590907/18	50.0	45.622827	50.0	1343824.0	0.912457	Y
7	STD75 280-590907/19	75.0	68.415094	50.0	1323675.0	0.912201	Y
8	STD100 280-590907/20	100.0	84.21356	50.0	1337439.0	0.842136	Y
9	STD200 280-590907/21	200.0	176.827355	50.0	1365088.0	0.884137	Y



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Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

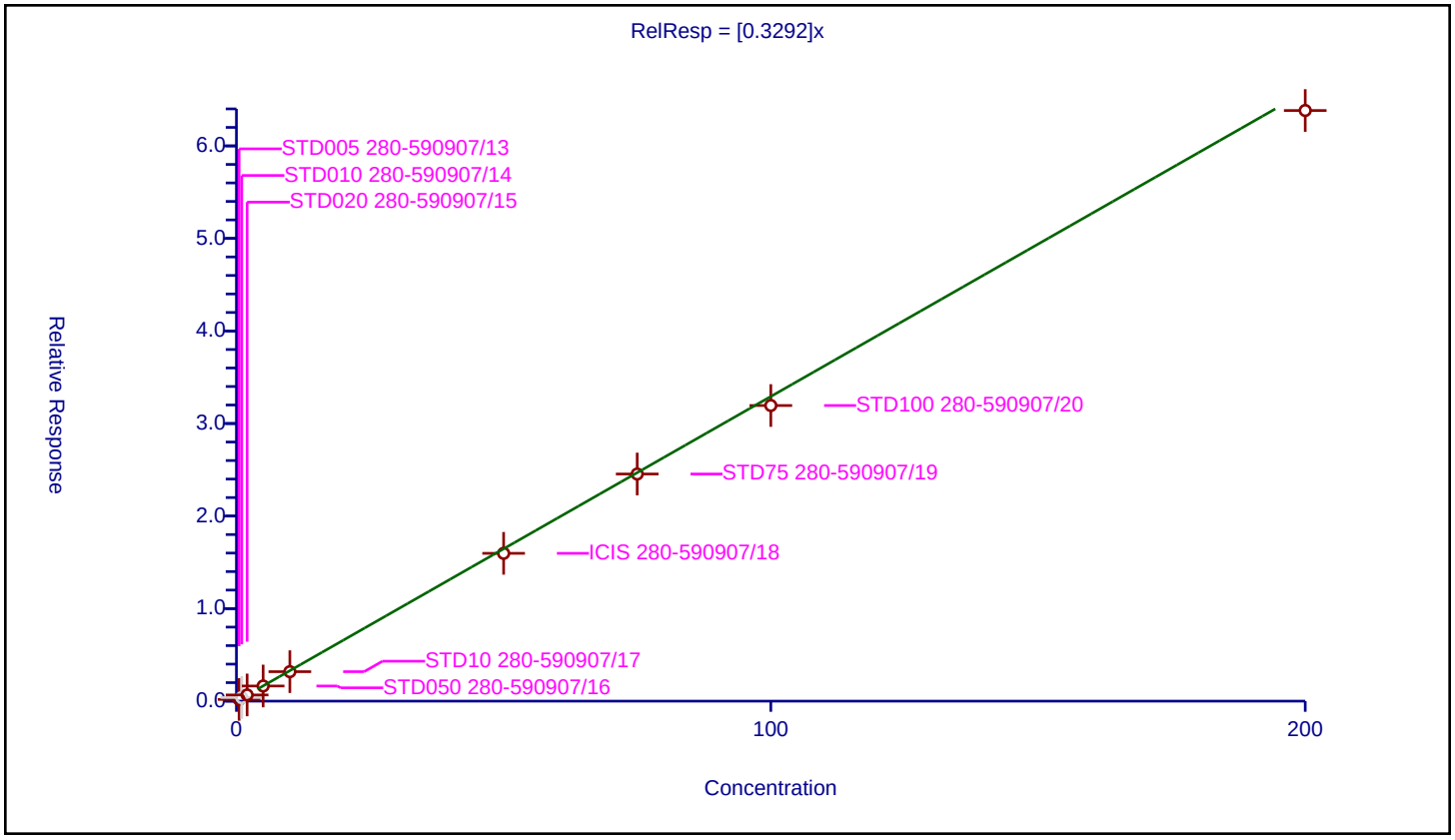
Curve Coefficients

Intercept:	0
Slope:	0.3292

Error Coefficients

Standard Error:	791000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.184323	50.0	1334887.0	0.368645	Y
2	STD010 280-590907/14	1.0	0.389547	50.0	1278151.0	0.389547	N
3	STD020 280-590907/15	2.0	0.669121	50.0	1279290.0	0.334561	Y
4	STD050 280-590907/16	5.0	1.635052	50.0	1283629.0	0.32701	Y
5	STD10 280-590907/17	10.0	3.183544	50.0	1310662.0	0.318354	Y
6	ICIS 280-590907/18	50.0	15.971139	50.0	1343824.0	0.319423	Y
7	STD75 280-590907/19	75.0	24.543449	50.0	1323675.0	0.327246	Y
8	STD100 280-590907/20	100.0	31.944709	50.0	1337439.0	0.319447	Y
9	STD200 280-590907/21	200.0	63.824823	50.0	1365088.0	0.319124	Y



Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

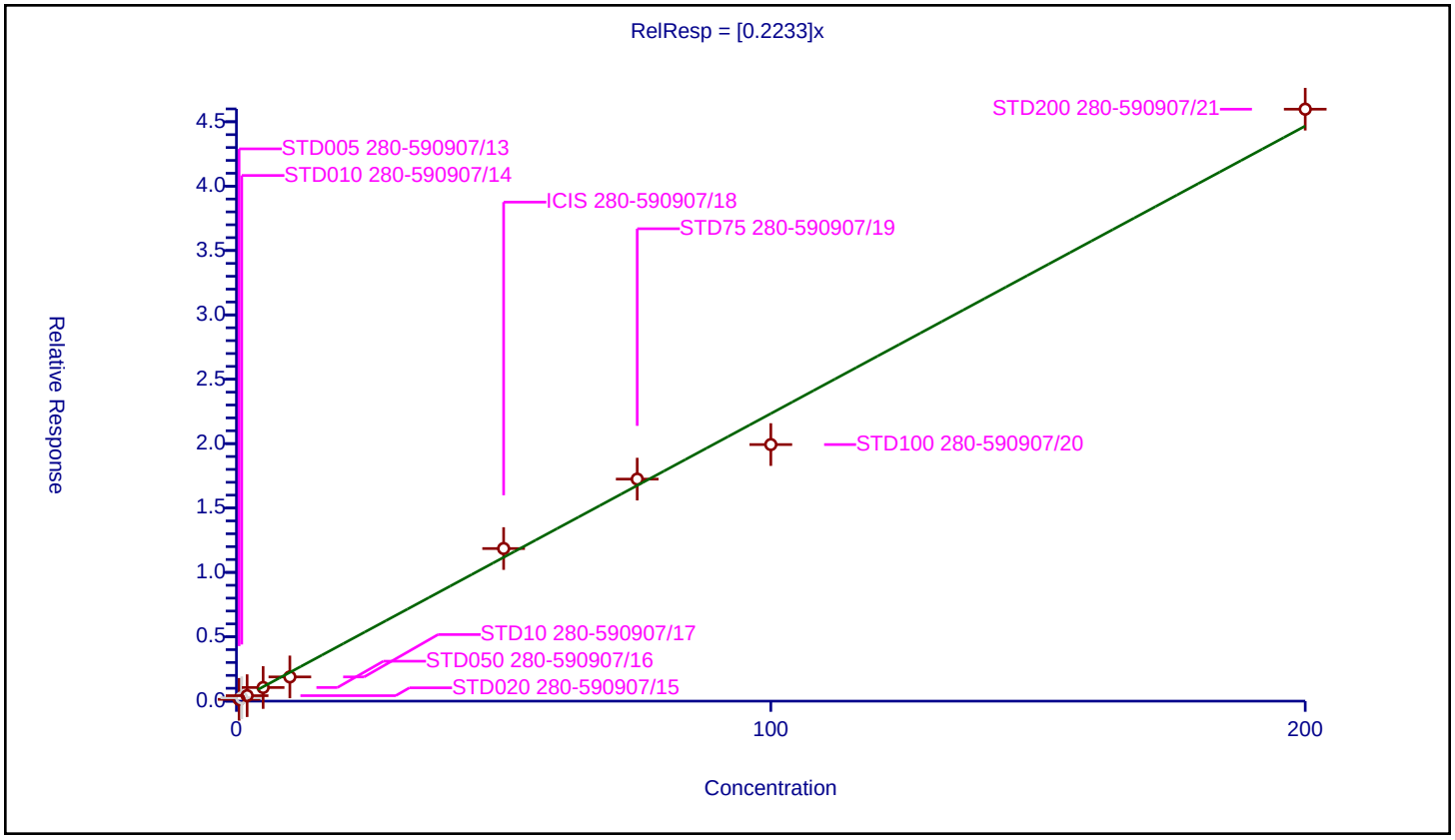
Curve Coefficients

Intercept:	0
Slope:	0.2233

Error Coefficients

Standard Error:	557000
Relative Standard Error:	12.5
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.139413	50.0	1334887.0	0.278825	Y
2	STD010 280-590907/14	1.0	0.263036	50.0	1278151.0	0.263036	N
3	STD020 280-590907/15	2.0	0.424181	50.0	1279290.0	0.21209	Y
4	STD050 280-590907/16	5.0	1.057743	50.0	1283629.0	0.211549	Y
5	STD10 280-590907/17	10.0	1.881606	50.0	1310662.0	0.188161	Y
6	ICIS 280-590907/18	50.0	11.852185	50.0	1343824.0	0.237044	Y
7	STD75 280-590907/19	75.0	17.245774	50.0	1323675.0	0.229944	Y
8	STD100 280-590907/20	100.0	19.927937	50.0	1337439.0	0.199279	Y
9	STD200 280-590907/21	200.0	45.977732	50.0	1365088.0	0.229889	Y



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Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

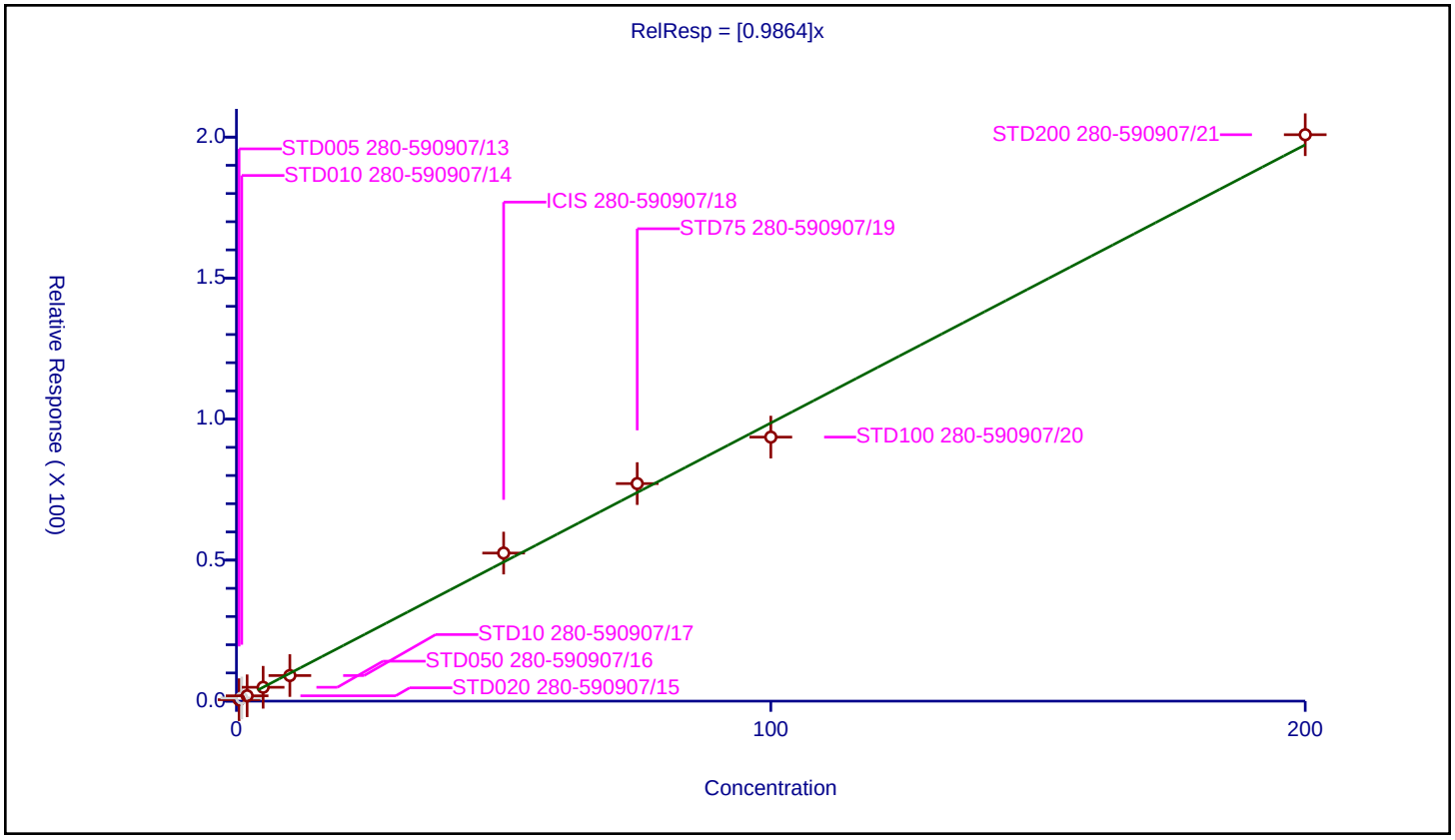
Curve Coefficients

Intercept:	0
Slope:	0.9864

Error Coefficients

Standard Error:	581000
Relative Standard Error:	5.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.518432	50.0	307369.0	1.036864	Y
2	STD010 280-590907/14	1.0	1.115758	50.0	298631.0	1.115758	N
3	STD020 280-590907/15	2.0	1.889128	50.0	293204.0	0.944564	Y
4	STD050 280-590907/16	5.0	4.916026	50.0	294496.0	0.983205	Y
5	STD10 280-590907/17	10.0	9.072184	50.0	299553.0	0.907218	Y
6	ICIS 280-590907/18	50.0	52.504851	50.0	306665.0	1.050097	Y
7	STD75 280-590907/19	75.0	77.138012	50.0	305763.0	1.028507	Y
8	STD100 280-590907/20	100.0	93.623218	50.0	311262.0	0.936232	Y
9	STD200 280-590907/21	200.0	200.84706	50.0	324180.0	1.004235	Y



Calibration / 2-Pentanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

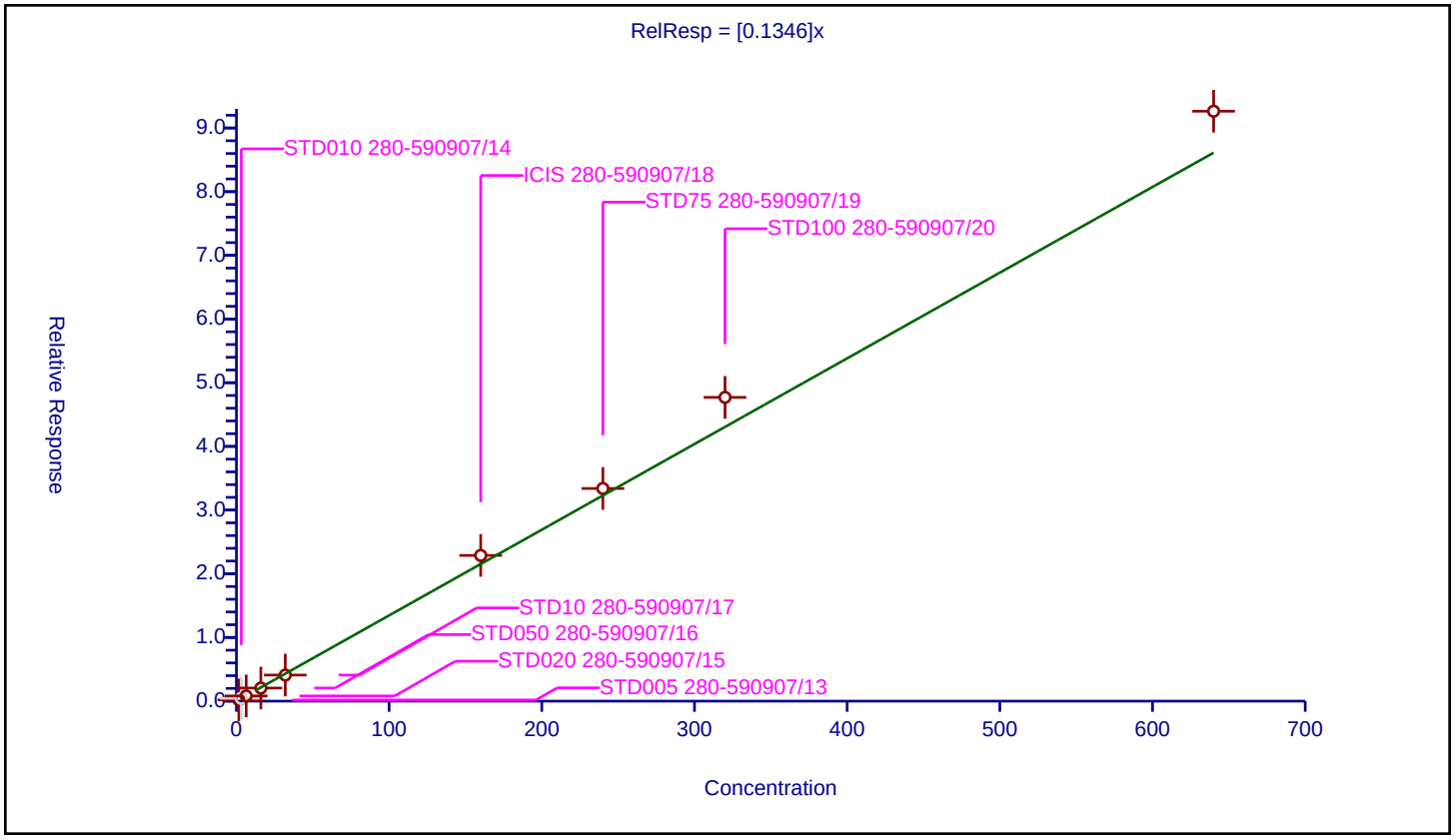
Curve Coefficients

Intercept:	0
Slope:	0.1346

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	8.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	1.6	0.186046	50.0	1334887.0	0.116279	Y
2	STD010 280-590907/14	3.2	0.4449	50.0	1278151.0	0.139031	N
3	STD020 280-590907/15	6.4	0.818149	50.0	1279290.0	0.127836	Y
4	STD050 280-590907/16	16.0	2.054799	50.0	1283629.0	0.128425	Y
5	STD10 280-590907/17	32.0	4.096212	50.0	1310662.0	0.128007	Y
6	ICIS 280-590907/18	160.0	22.882982	50.0	1343824.0	0.143019	Y
7	STD75 280-590907/19	240.0	33.39498	50.0	1323675.0	0.139146	Y
8	STD100 280-590907/20	320.0	47.70083	50.0	1337439.0	0.149065	Y
9	STD200 280-590907/21	640.0	92.634358	50.0	1365088.0	0.144741	Y



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Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

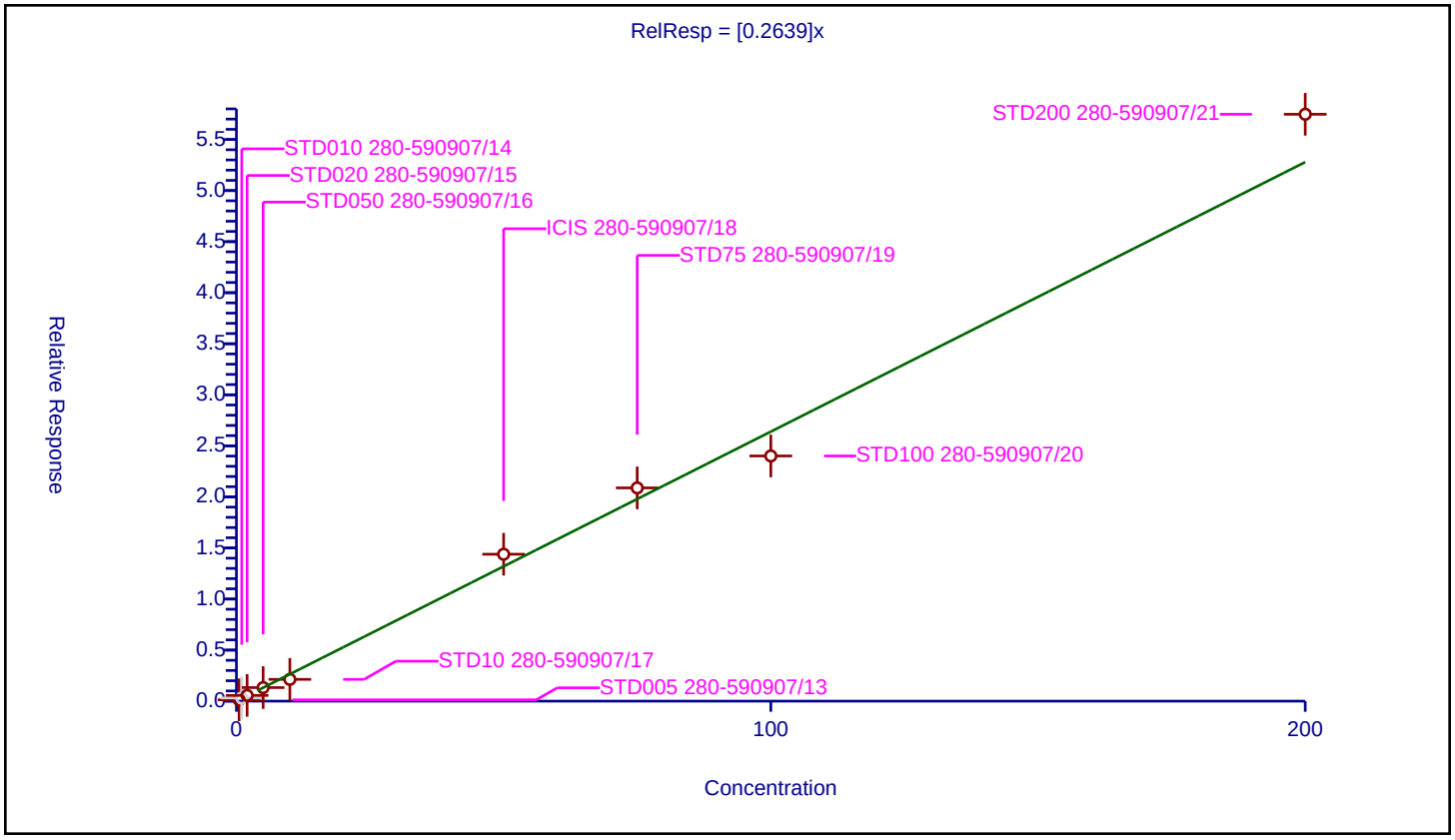
Curve Coefficients

Intercept:	0
Slope:	0.2639

Error Coefficients

Standard Error:	690000
Relative Standard Error:	9.9
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.129599	50.0	1334887.0	0.259198	Y
2	STD010 280-590907/14	1.0	0.312678	50.0	1278151.0	0.312678	N
3	STD020 280-590907/15	2.0	0.560506	50.0	1279290.0	0.280253	Y
4	STD050 280-590907/16	5.0	1.325928	50.0	1283629.0	0.265186	Y
5	STD10 280-590907/17	10.0	2.132167	50.0	1310662.0	0.213217	Y
6	ICIS 280-590907/18	50.0	14.386147	50.0	1343824.0	0.287723	Y
7	STD75 280-590907/19	75.0	20.882732	50.0	1323675.0	0.278436	Y
8	STD100 280-590907/20	100.0	24.011375	50.0	1337439.0	0.240114	Y
9	STD200 280-590907/21	200.0	57.472192	50.0	1365088.0	0.287361	Y



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Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

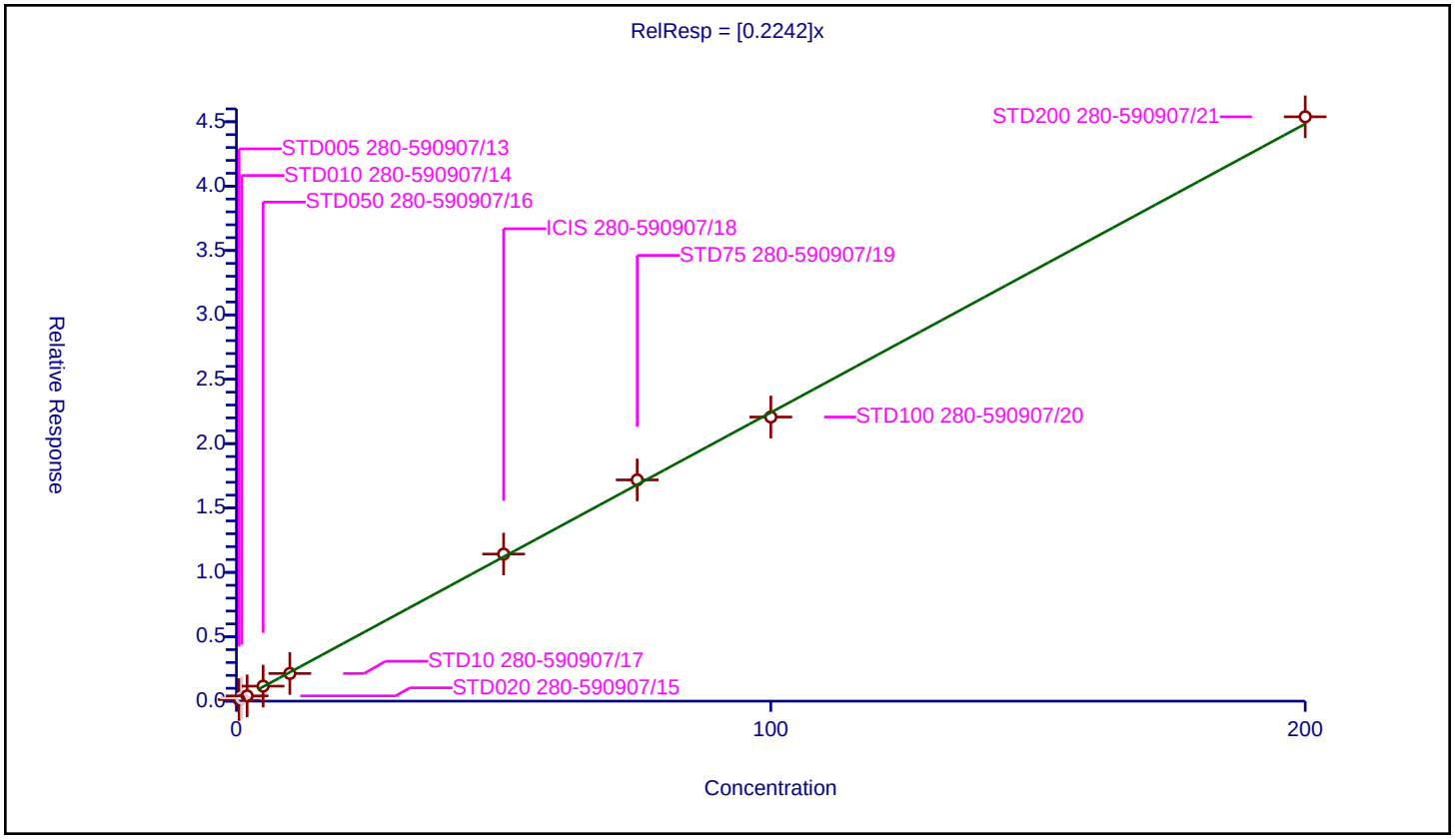
Curve Coefficients

Intercept:	0
Slope:	0.2242

Error Coefficients

Standard Error:	559000
Relative Standard Error:	4.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.118137	50.0	1334887.0	0.236275	Y
2	STD010 280-590907/14	1.0	0.250831	50.0	1278151.0	0.250831	N
3	STD020 280-590907/15	2.0	0.407804	50.0	1279290.0	0.203902	Y
4	STD050 280-590907/16	5.0	1.166381	50.0	1283629.0	0.233276	Y
5	STD10 280-590907/17	10.0	2.148723	50.0	1310662.0	0.214872	Y
6	ICIS 280-590907/18	50.0	11.425008	50.0	1343824.0	0.2285	Y
7	STD75 280-590907/19	75.0	17.182428	50.0	1323675.0	0.229099	Y
8	STD100 280-590907/20	100.0	22.067623	50.0	1337439.0	0.220676	Y
9	STD200 280-590907/21	200.0	45.385426	50.0	1365088.0	0.226927	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

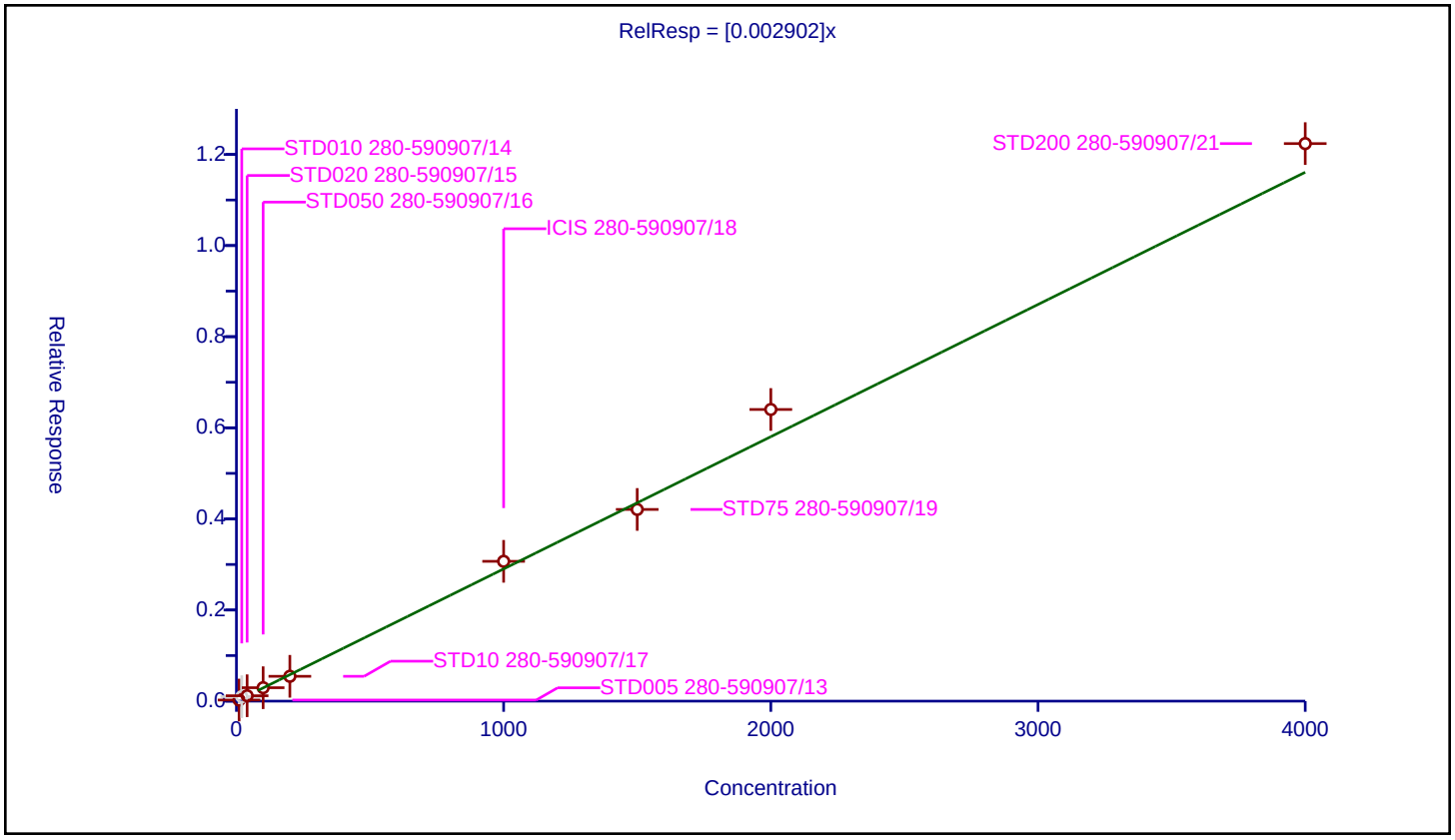
Curve Coefficients

Intercept:	0
Slope:	0.002902

Error Coefficients

Standard Error:	151000
Relative Standard Error:	8.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	10.0	0.024534	50.0	1334887.0	0.002453	Y
2	STD010 280-590907/14	20.0	0.098736	50.0	1278151.0	0.004937	N
3	STD020 280-590907/15	40.0	0.118269	50.0	1279290.0	0.002957	Y
4	STD050 280-590907/16	100.0	0.294867	50.0	1283629.0	0.002949	Y
5	STD10 280-590907/17	200.0	0.544992	50.0	1310662.0	0.002725	Y
6	ICIS 280-590907/18	1000.0	3.068817	50.0	1343824.0	0.003069	Y
7	STD75 280-590907/19	1500.0	4.207642	50.0	1323675.0	0.002805	Y
8	STD100 280-590907/20	2000.0	6.401787	50.0	1337439.0	0.003201	Y
9	STD200 280-590907/21	4000.0	12.238478	50.0	1365088.0	0.00306	Y



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Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

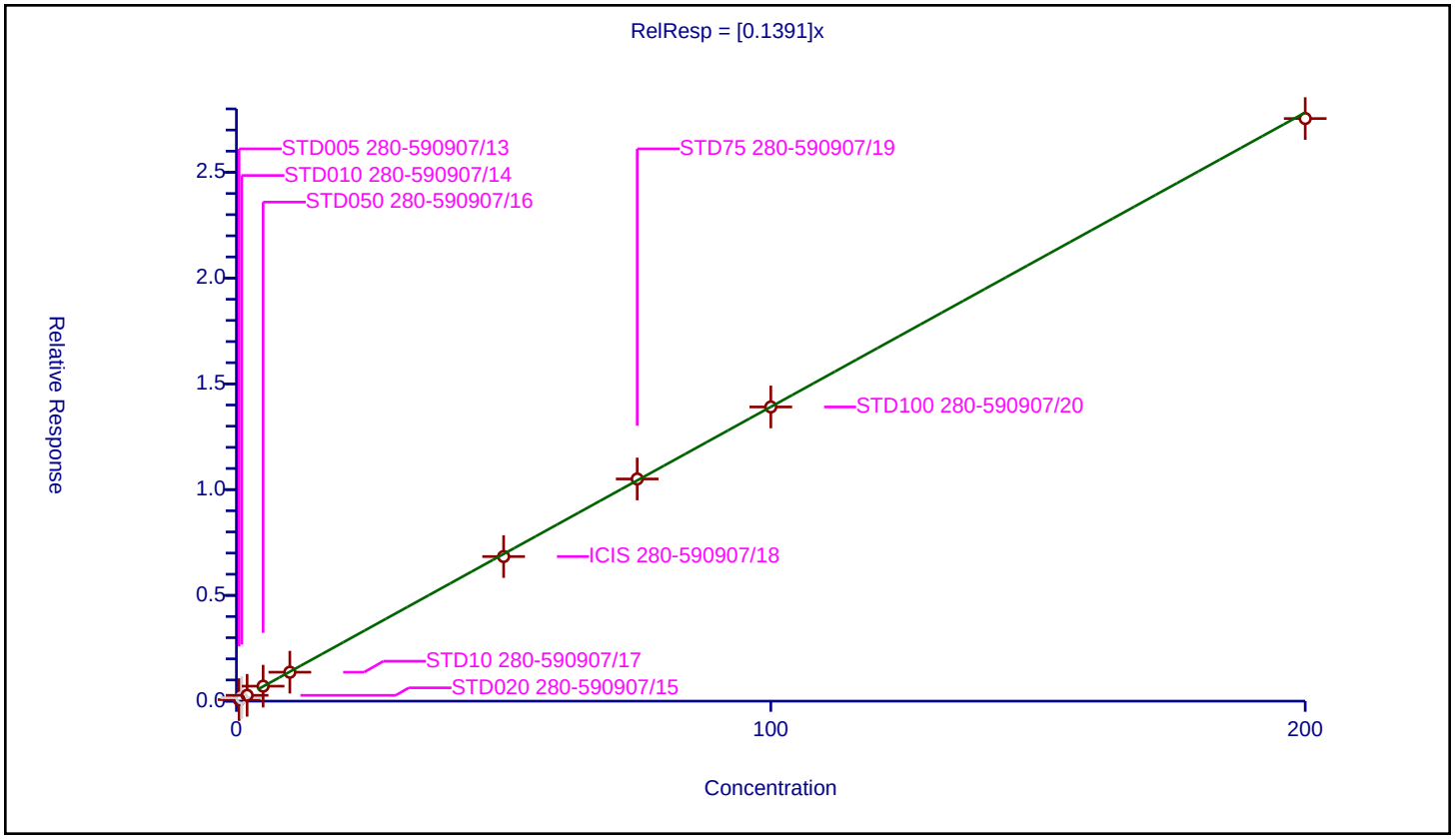
Curve Coefficients

Intercept:	0
Slope:	0.1391

Error Coefficients

Standard Error:	342000
Relative Standard Error:	1.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.071729	50.0	1334887.0	0.143458	Y
2	STD010 280-590907/14	1.0	0.16117	50.0	1278151.0	0.16117	N
3	STD020 280-590907/15	2.0	0.275231	50.0	1279290.0	0.137615	Y
4	STD050 280-590907/16	5.0	0.708499	50.0	1283629.0	0.1417	Y
5	STD10 280-590907/17	10.0	1.367858	50.0	1310662.0	0.136786	Y
6	ICIS 280-590907/18	50.0	6.835828	50.0	1343824.0	0.136717	Y
7	STD75 280-590907/19	75.0	10.503145	50.0	1323675.0	0.140042	Y
8	STD100 280-590907/20	100.0	13.908447	50.0	1337439.0	0.139084	Y
9	STD200 280-590907/21	200.0	27.543426	50.0	1365088.0	0.137717	Y



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Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

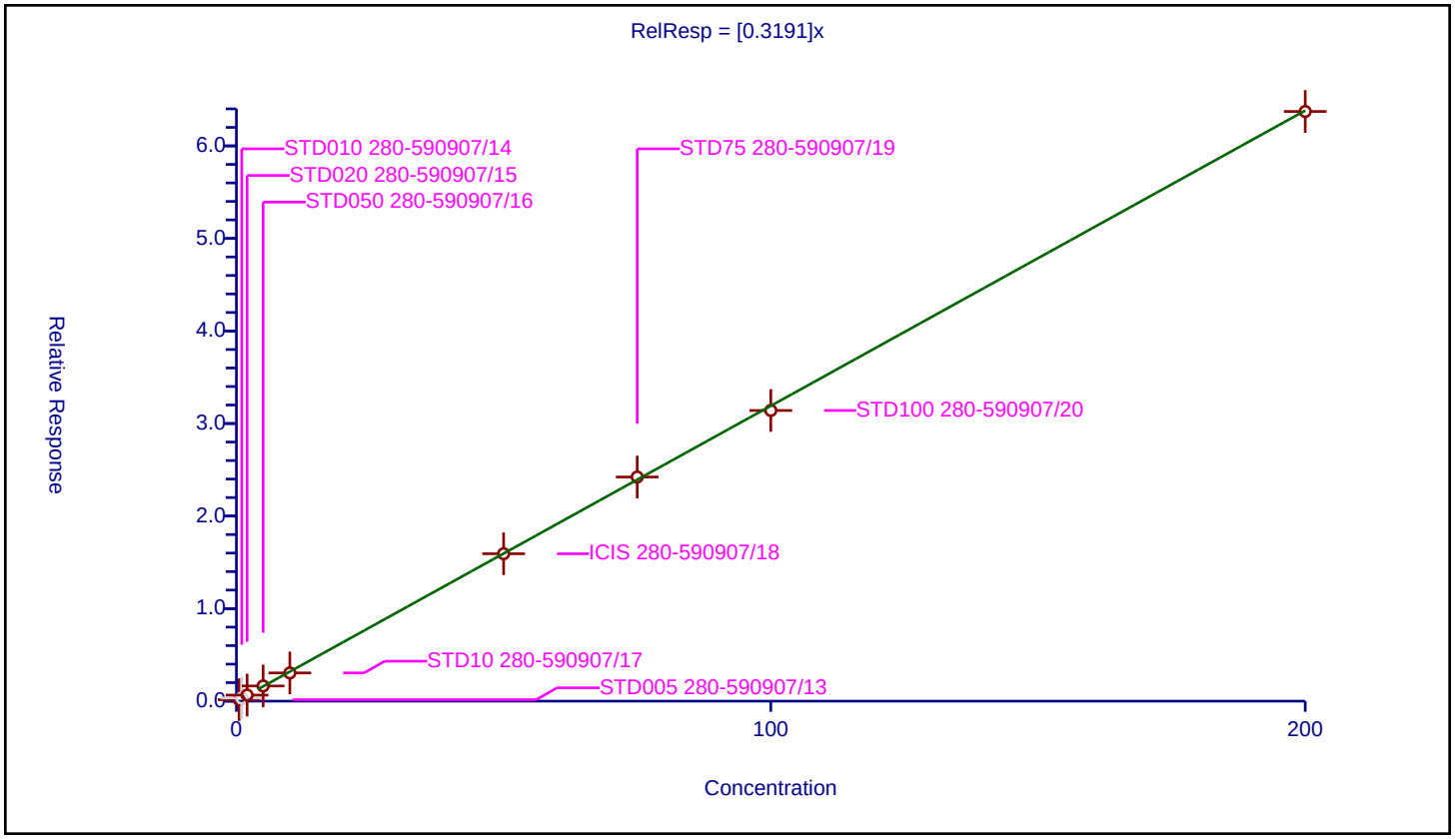
Curve Coefficients

Intercept:	0
Slope:	0.3191

Error Coefficients

Standard Error:	787000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.158927	50.0	1334887.0	0.317855	Y
2	STD010 280-590907/14	1.0	0.340727	50.0	1278151.0	0.340727	N
3	STD020 280-590907/15	2.0	0.656614	50.0	1279290.0	0.328307	Y
4	STD050 280-590907/16	5.0	1.637856	50.0	1283629.0	0.327571	Y
5	STD10 280-590907/17	10.0	3.048536	50.0	1310662.0	0.304854	Y
6	ICIS 280-590907/18	50.0	15.928797	50.0	1343824.0	0.318576	Y
7	STD75 280-590907/19	75.0	24.219842	50.0	1323675.0	0.322931	Y
8	STD100 280-590907/20	100.0	31.410778	50.0	1337439.0	0.314108	Y
9	STD200 280-590907/21	200.0	63.717431	50.0	1365088.0	0.318587	Y



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Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

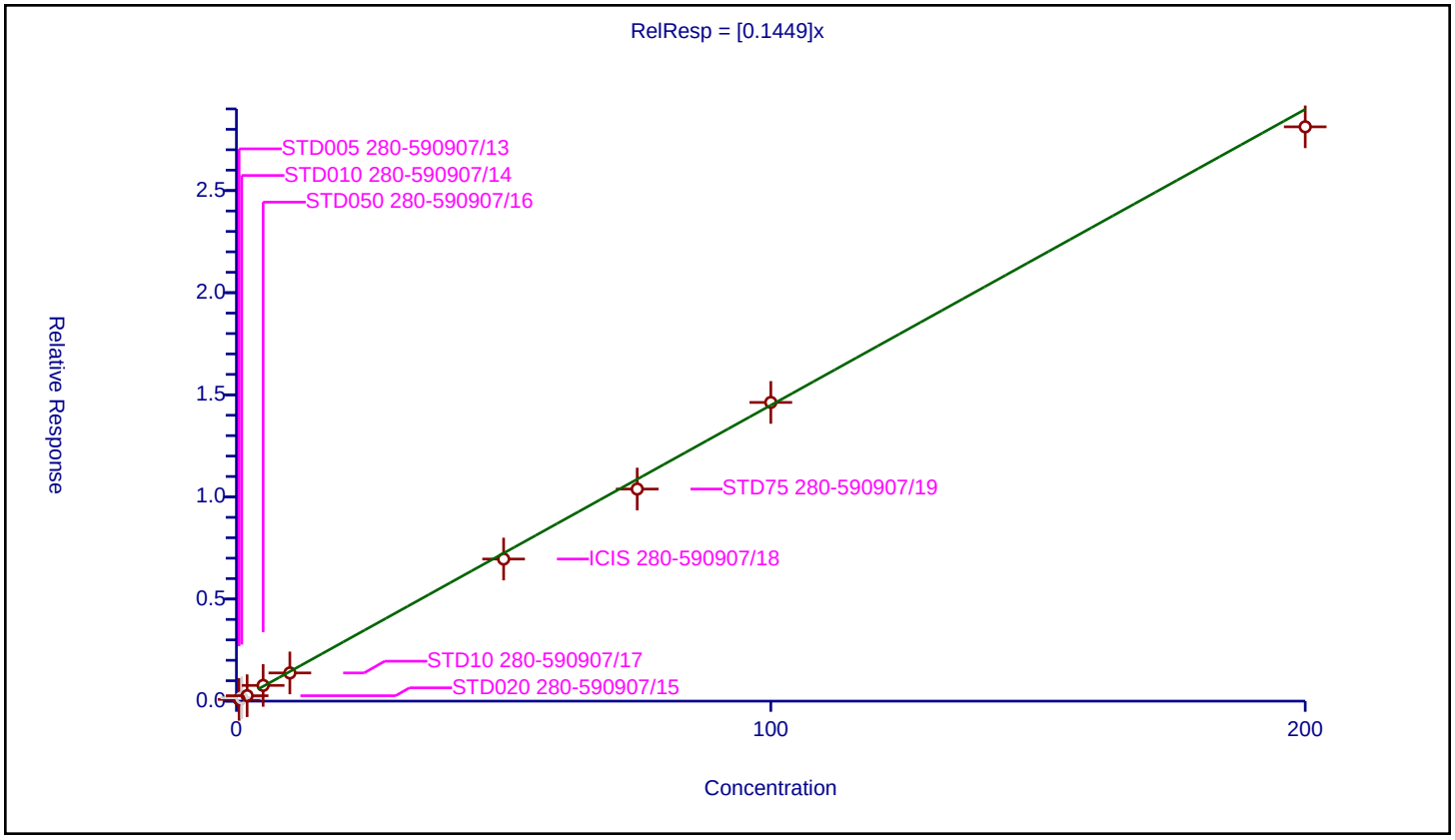
Curve Coefficients

Intercept:	0
Slope:	0.1449

Error Coefficients

Standard Error:	349000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.084839	50.0	1334887.0	0.169677	Y
2	STD010 280-590907/14	1.0	0.162305	50.0	1278151.0	0.162305	N
3	STD020 280-590907/15	2.0	0.265812	50.0	1279290.0	0.132906	Y
4	STD050 280-590907/16	5.0	0.770433	50.0	1283629.0	0.154087	Y
5	STD10 280-590907/17	10.0	1.379837	50.0	1310662.0	0.137984	Y
6	ICIS 280-590907/18	50.0	6.958389	50.0	1343824.0	0.139168	Y
7	STD75 280-590907/19	75.0	10.385593	50.0	1323675.0	0.138475	Y
8	STD100 280-590907/20	100.0	14.627359	50.0	1337439.0	0.146274	Y
9	STD200 280-590907/21	200.0	28.121813	50.0	1365088.0	0.140609	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

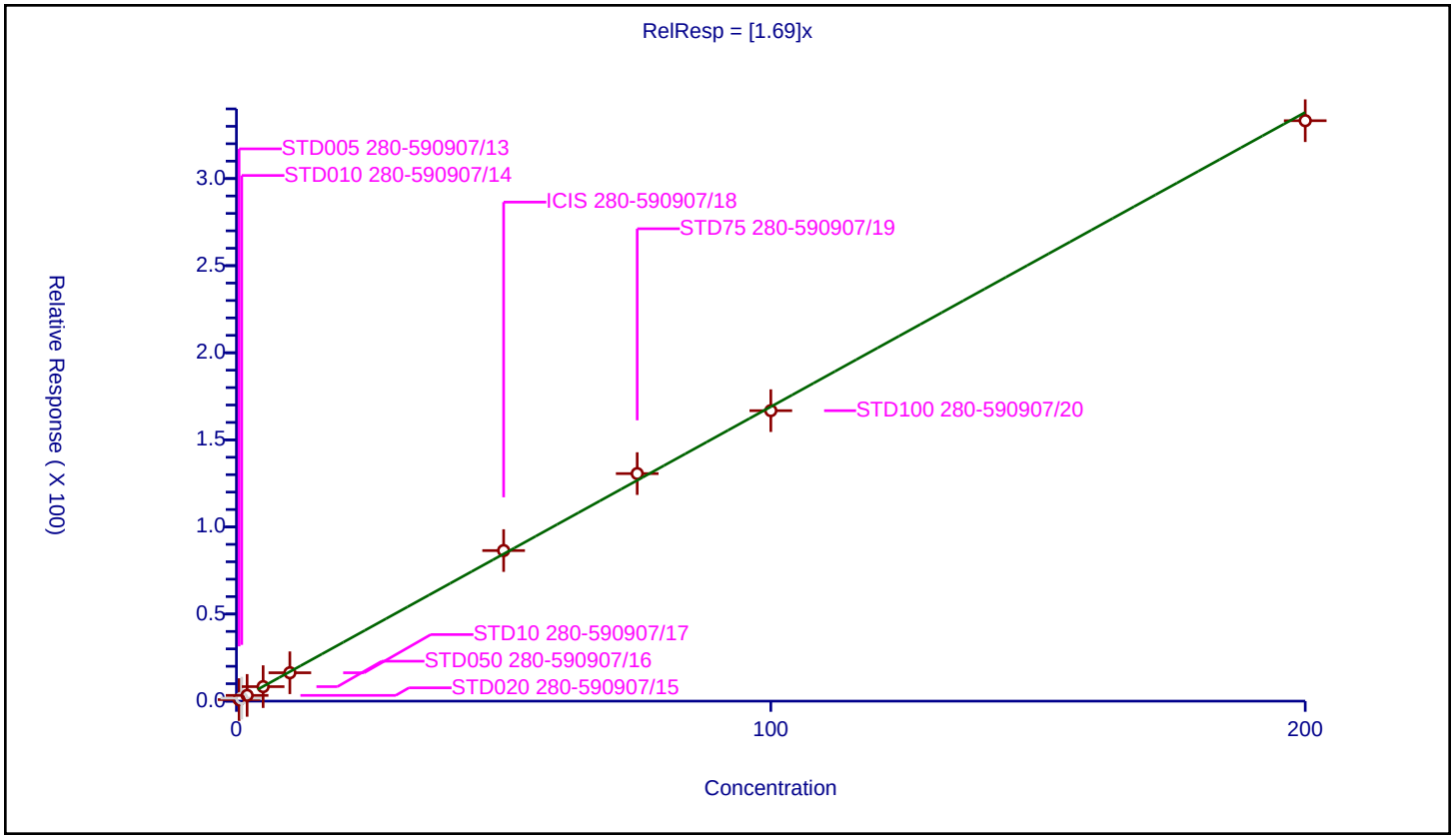
Curve Coefficients

Intercept:	0
Slope:	1.69

Error Coefficients

Standard Error:	977000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.886231	50.0	307369.0	1.772462	Y
2	STD010 280-590907/14	1.0	1.725373	50.0	298631.0	1.725373	N
3	STD020 280-590907/15	2.0	3.29634	50.0	293204.0	1.64817	Y
4	STD050 280-590907/16	5.0	8.332201	50.0	294496.0	1.66644	Y
5	STD10 280-590907/17	10.0	16.294779	50.0	299553.0	1.629478	Y
6	ICIS 280-590907/18	50.0	86.449709	50.0	306665.0	1.728994	Y
7	STD75 280-590907/19	75.0	130.634838	50.0	305763.0	1.741798	Y
8	STD100 280-590907/20	100.0	166.76594	50.0	311262.0	1.667659	Y
9	STD200 280-590907/21	200.0	333.223672	50.0	324180.0	1.666118	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

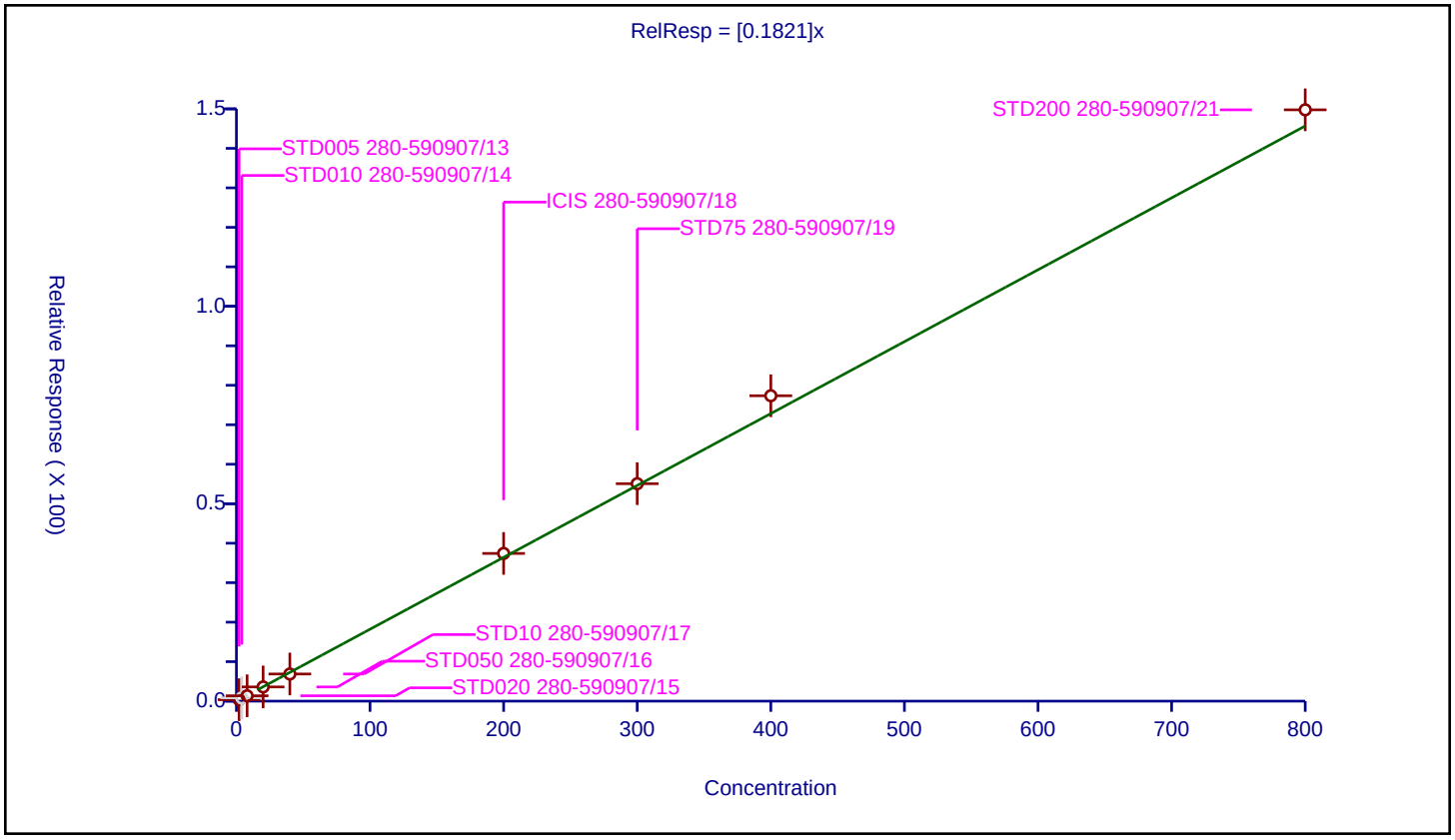
Curve Coefficients

Intercept:	0
Slope:	0.1821

Error Coefficients

Standard Error:	1860000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	2.0	0.367934	50.0	1334887.0	0.183967	Y
2	STD010 280-590907/14	4.0	0.834056	50.0	1278151.0	0.208514	N
3	STD020 280-590907/15	8.0	1.358996	50.0	1279290.0	0.169875	Y
4	STD050 280-590907/16	20.0	3.596055	50.0	1283629.0	0.179803	Y
5	STD10 280-590907/17	40.0	6.874808	50.0	1310662.0	0.17187	Y
6	ICIS 280-590907/18	200.0	37.407168	50.0	1343824.0	0.187036	Y
7	STD75 280-590907/19	300.0	55.072129	50.0	1323675.0	0.183574	Y
8	STD100 280-590907/20	400.0	77.347827	50.0	1337439.0	0.19337	Y
9	STD200 280-590907/21	800.0	149.762396	50.0	1365088.0	0.187203	Y



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Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

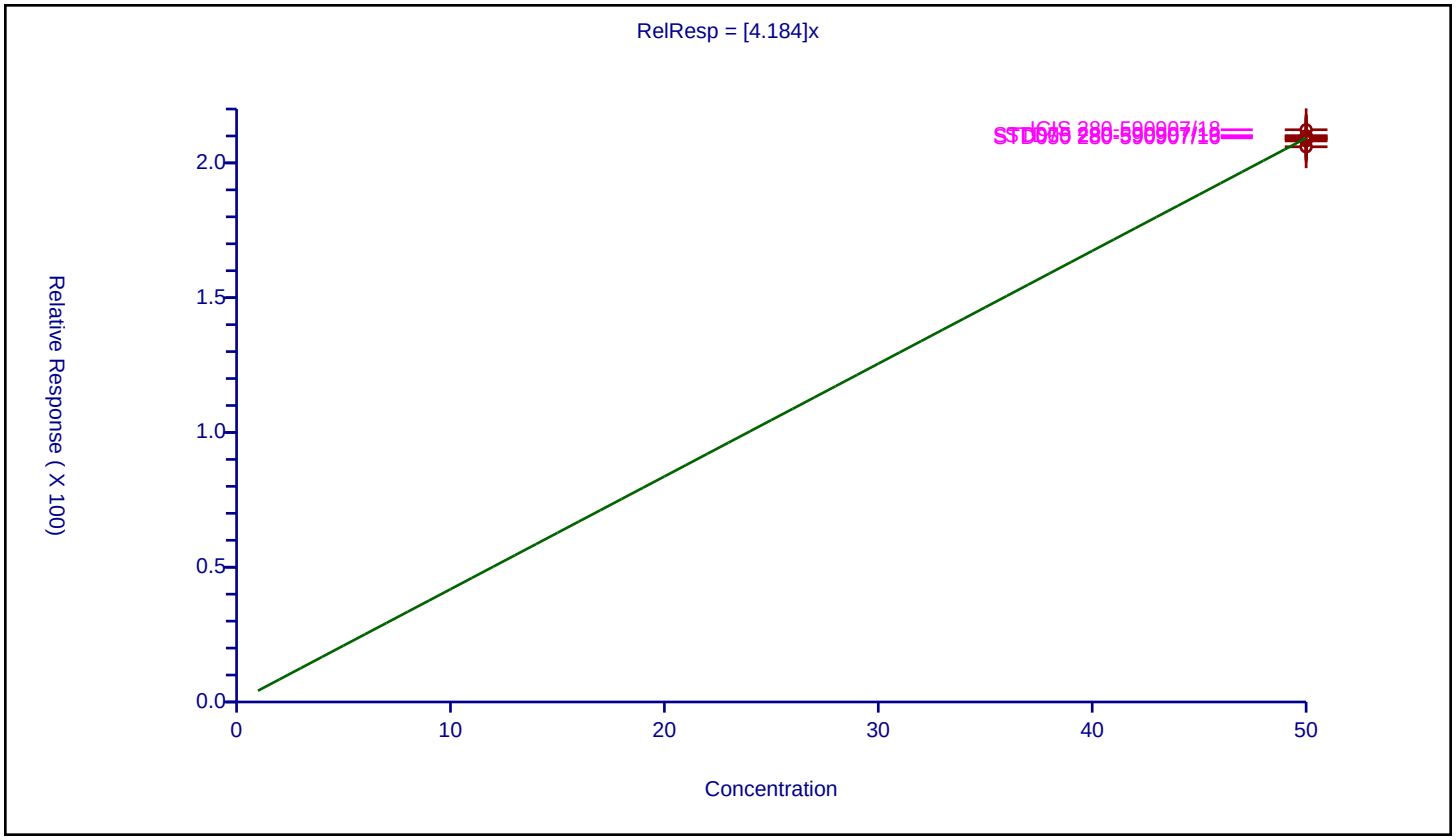
Curve Coefficients

Intercept:	0
Slope:	4.184

Error Coefficients

Standard Error:	1370000
Relative Standard Error:	0.9
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	50.0	210.000358	50.0	307369.0	4.200007	Y
2	STD010 280-590907/14	50.0	205.988662	50.0	298631.0	4.119773	N
3	STD020 280-590907/15	50.0	208.927232	50.0	293204.0	4.178545	Y
4	STD050 280-590907/16	50.0	209.317444	50.0	294496.0	4.186349	Y
5	STD10 280-590907/17	50.0	208.154817	50.0	299553.0	4.163096	Y
6	ICIS 280-590907/18	50.0	212.313273	50.0	306665.0	4.246265	Y
7	STD75 280-590907/19	50.0	210.050268	50.0	305763.0	4.201005	Y
8	STD100 280-590907/20	50.0	208.787452	50.0	311262.0	4.175749	Y
9	STD200 280-590907/21	50.0	205.981399	50.0	324180.0	4.119628	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

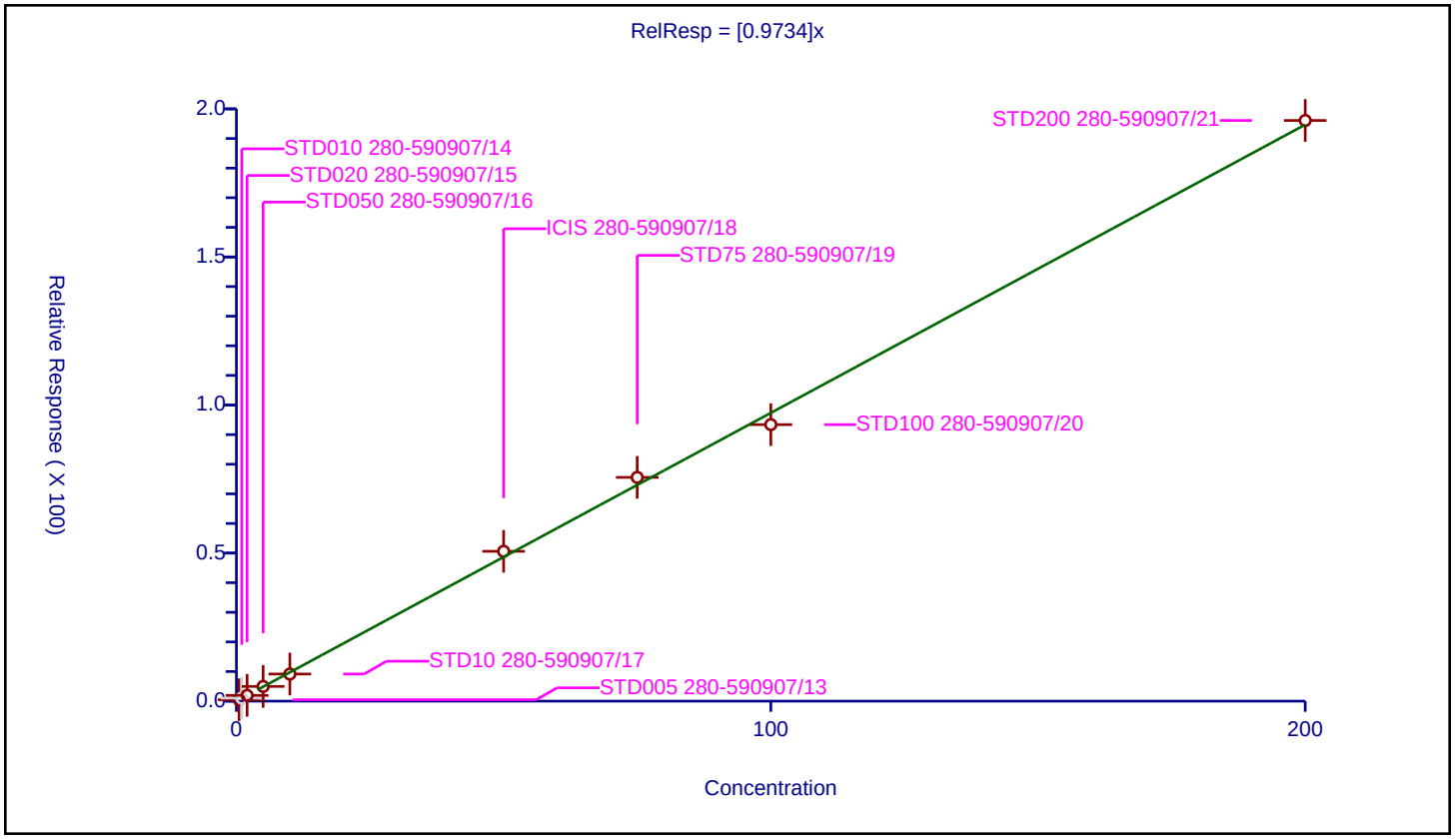
Curve Coefficients

Intercept:	0
Slope:	0.9734

Error Coefficients

Standard Error:	2410000
Relative Standard Error:	3.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.484723	50.0	1334887.0	0.969445	Y
2	STD010 280-590907/14	1.0	1.034033	50.0	1278151.0	1.034033	N
3	STD020 280-590907/15	2.0	1.946939	50.0	1279290.0	0.97347	Y
4	STD050 280-590907/16	5.0	4.972504	50.0	1283629.0	0.994501	Y
5	STD10 280-590907/17	10.0	9.158502	50.0	1310662.0	0.91585	Y
6	ICIS 280-590907/18	50.0	50.597772	50.0	1343824.0	1.011955	Y
7	STD75 280-590907/19	75.0	75.560504	50.0	1323675.0	1.007473	Y
8	STD100 280-590907/20	100.0	93.381605	50.0	1337439.0	0.933816	Y
9	STD200 280-590907/21	200.0	196.084904	50.0	1365088.0	0.980425	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

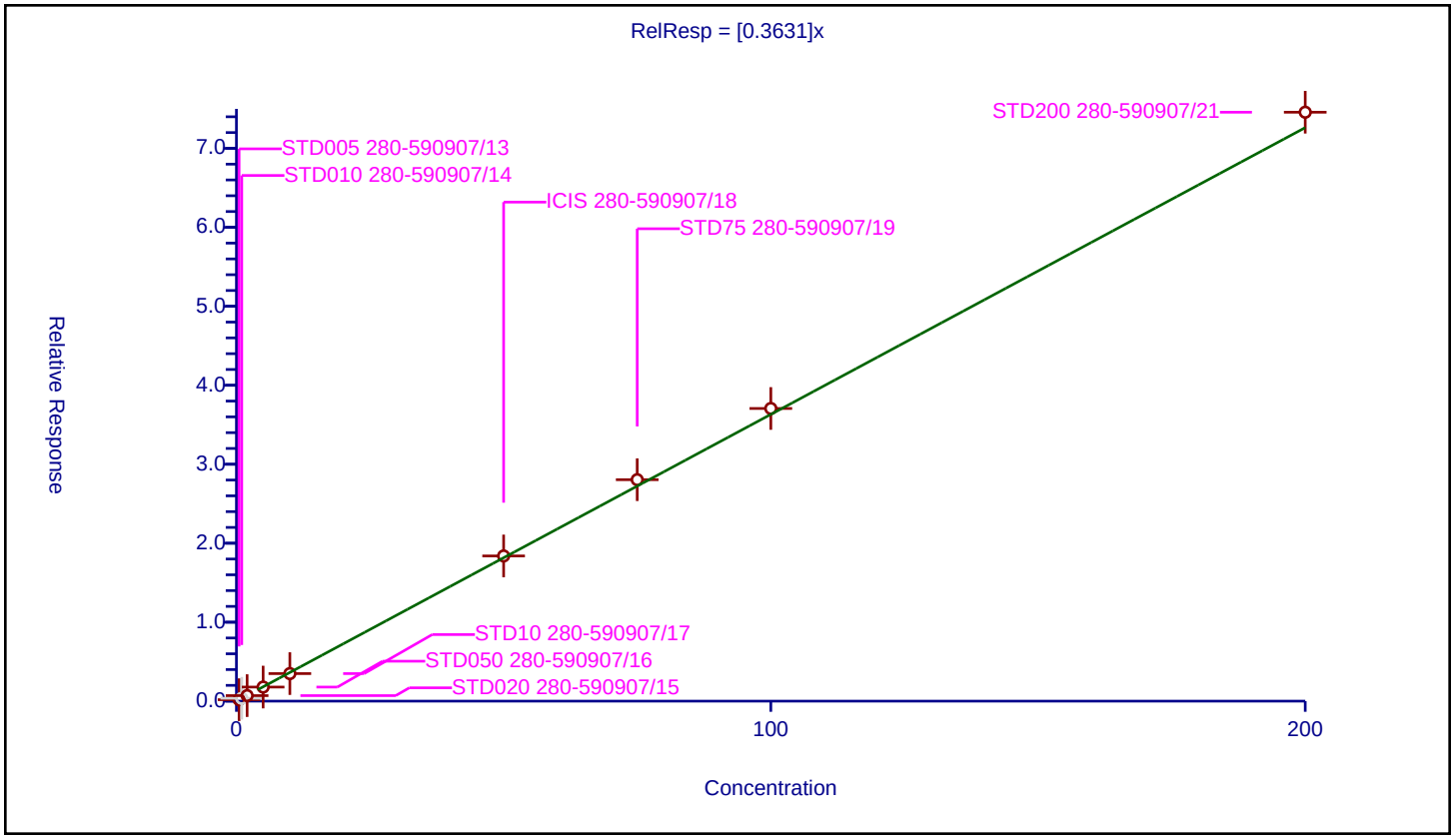
Curve Coefficients

Intercept:	0
Slope:	0.3631

Error Coefficients

Standard Error:	921000
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.182562	50.0	1334887.0	0.365125	Y
2	STD010 280-590907/14	1.0	0.365645	50.0	1278151.0	0.365645	N
3	STD020 280-590907/15	2.0	0.698786	50.0	1279290.0	0.349393	Y
4	STD050 280-590907/16	5.0	1.782018	50.0	1283629.0	0.356404	Y
5	STD10 280-590907/17	10.0	3.488733	50.0	1310662.0	0.348873	Y
6	ICIS 280-590907/18	50.0	18.387936	50.0	1343824.0	0.367759	Y
7	STD75 280-590907/19	75.0	28.044648	50.0	1323675.0	0.373929	Y
8	STD100 280-590907/20	100.0	37.062064	50.0	1337439.0	0.370621	Y
9	STD200 280-590907/21	200.0	74.577207	50.0	1365088.0	0.372886	Y



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Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

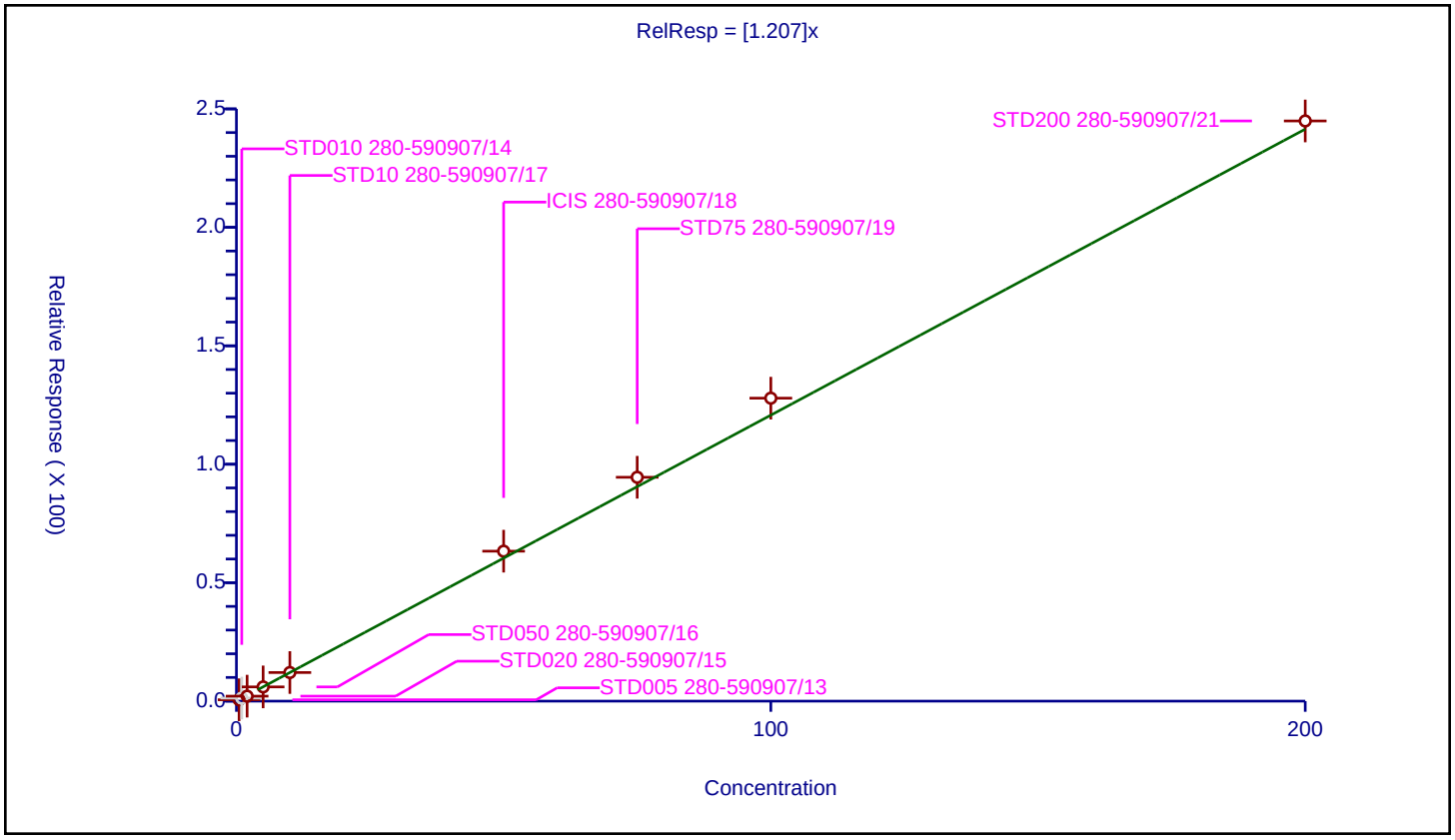
Curve Coefficients

Intercept:	0
Slope:	1.207

Error Coefficients

Standard Error:	722000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.583663	50.0	307369.0	1.167327	Y
2	STD010 280-590907/14	1.0	1.29876	50.0	298631.0	1.29876	N
3	STD020 280-590907/15	2.0	2.102973	50.0	293204.0	1.051486	Y
4	STD050 280-590907/16	5.0	6.006533	50.0	294496.0	1.201307	Y
5	STD10 280-590907/17	10.0	12.084005	50.0	299553.0	1.208401	Y
6	ICIS 280-590907/18	50.0	63.299203	50.0	306665.0	1.265984	Y
7	STD75 280-590907/19	75.0	94.49868	50.0	305763.0	1.259982	Y
8	STD100 280-590907/20	100.0	127.891615	50.0	311262.0	1.278916	Y
9	STD200 280-590907/21	200.0	244.909001	50.0	324180.0	1.224545	Y



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Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

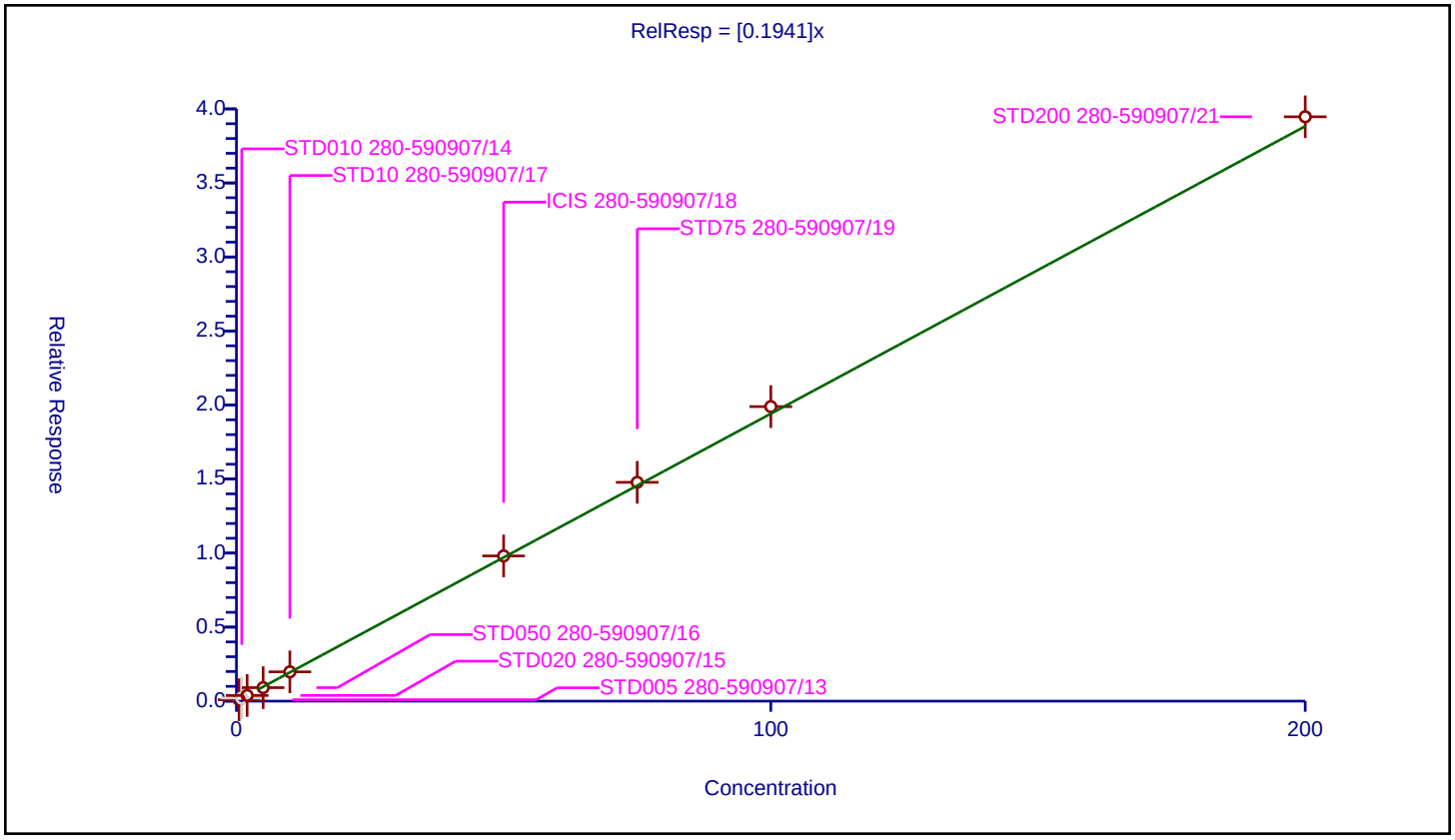
Curve Coefficients

Intercept:	0
Slope:	0.1941

Error Coefficients

Standard Error:	488000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.096488	50.0	1334887.0	0.192975	Y
2	STD010 280-590907/14	1.0	0.211829	50.0	1278151.0	0.211829	N
3	STD020 280-590907/15	2.0	0.381383	50.0	1279290.0	0.190692	Y
4	STD050 280-590907/16	5.0	0.910972	50.0	1283629.0	0.182194	Y
5	STD10 280-590907/17	10.0	1.977207	50.0	1310662.0	0.197721	Y
6	ICIS 280-590907/18	50.0	9.806716	50.0	1343824.0	0.196134	Y
7	STD75 280-590907/19	75.0	14.779081	50.0	1323675.0	0.197054	Y
8	STD100 280-590907/20	100.0	19.892384	50.0	1337439.0	0.198924	Y
9	STD200 280-590907/21	200.0	39.466796	50.0	1365088.0	0.197334	Y



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Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

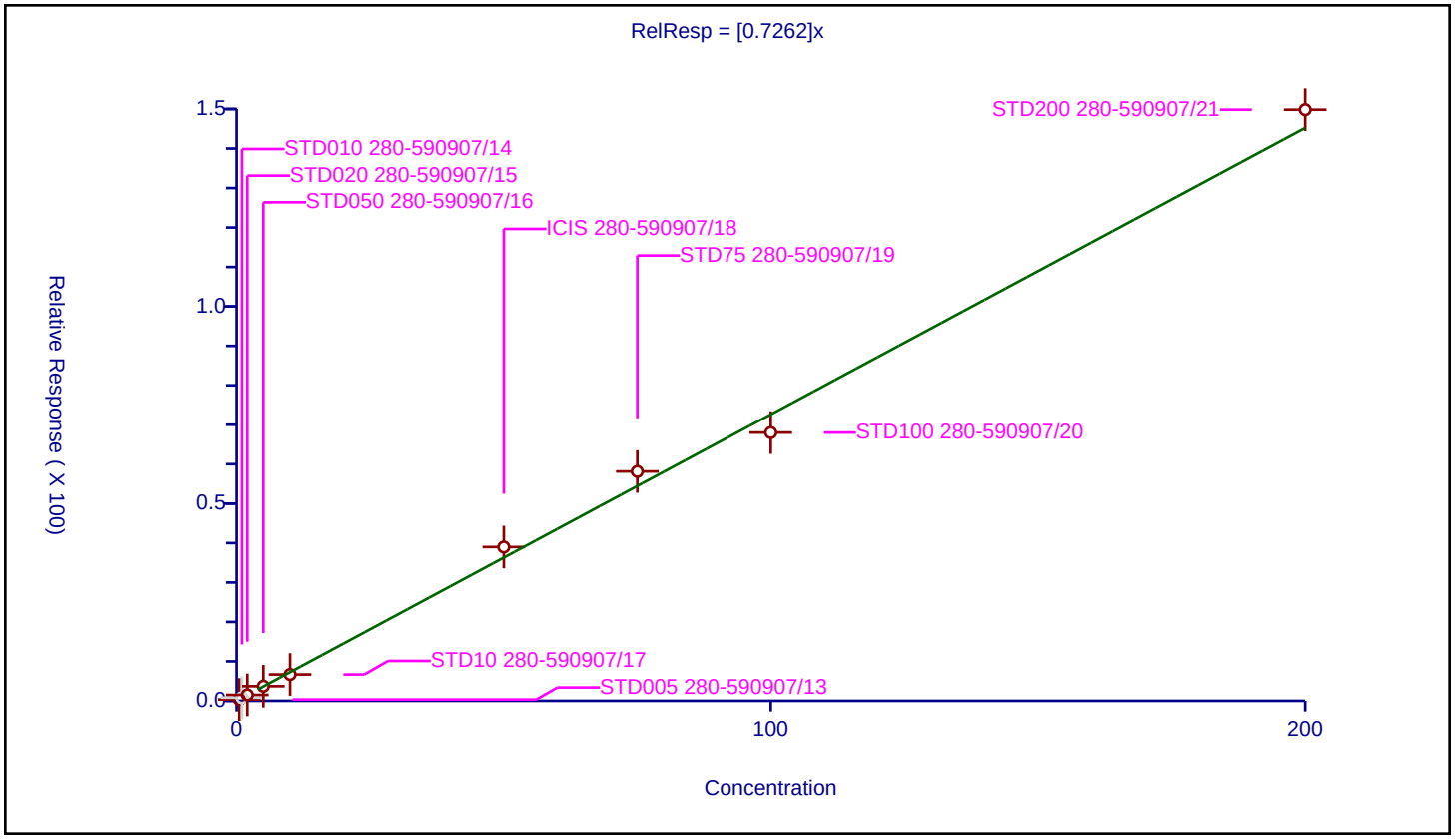
Curve Coefficients

Intercept:	0
Slope:	0.7262

Error Coefficients

Standard Error:	432000
Relative Standard Error:	6.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.334451	50.0	307369.0	0.668903	Y
2	STD010 280-590907/14	1.0	0.796468	50.0	298631.0	0.796468	N
3	STD020 280-590907/15	2.0	1.497933	50.0	293204.0	0.748967	Y
4	STD050 280-590907/16	5.0	3.697164	50.0	294496.0	0.739433	Y
5	STD10 280-590907/17	10.0	6.675113	50.0	299553.0	0.667511	Y
6	ICIS 280-590907/18	50.0	38.99206	50.0	306665.0	0.779841	Y
7	STD75 280-590907/19	75.0	58.149122	50.0	305763.0	0.775322	Y
8	STD100 280-590907/20	100.0	68.013442	50.0	311262.0	0.680134	Y
9	STD200 280-590907/21	200.0	149.824634	50.0	324180.0	0.749123	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

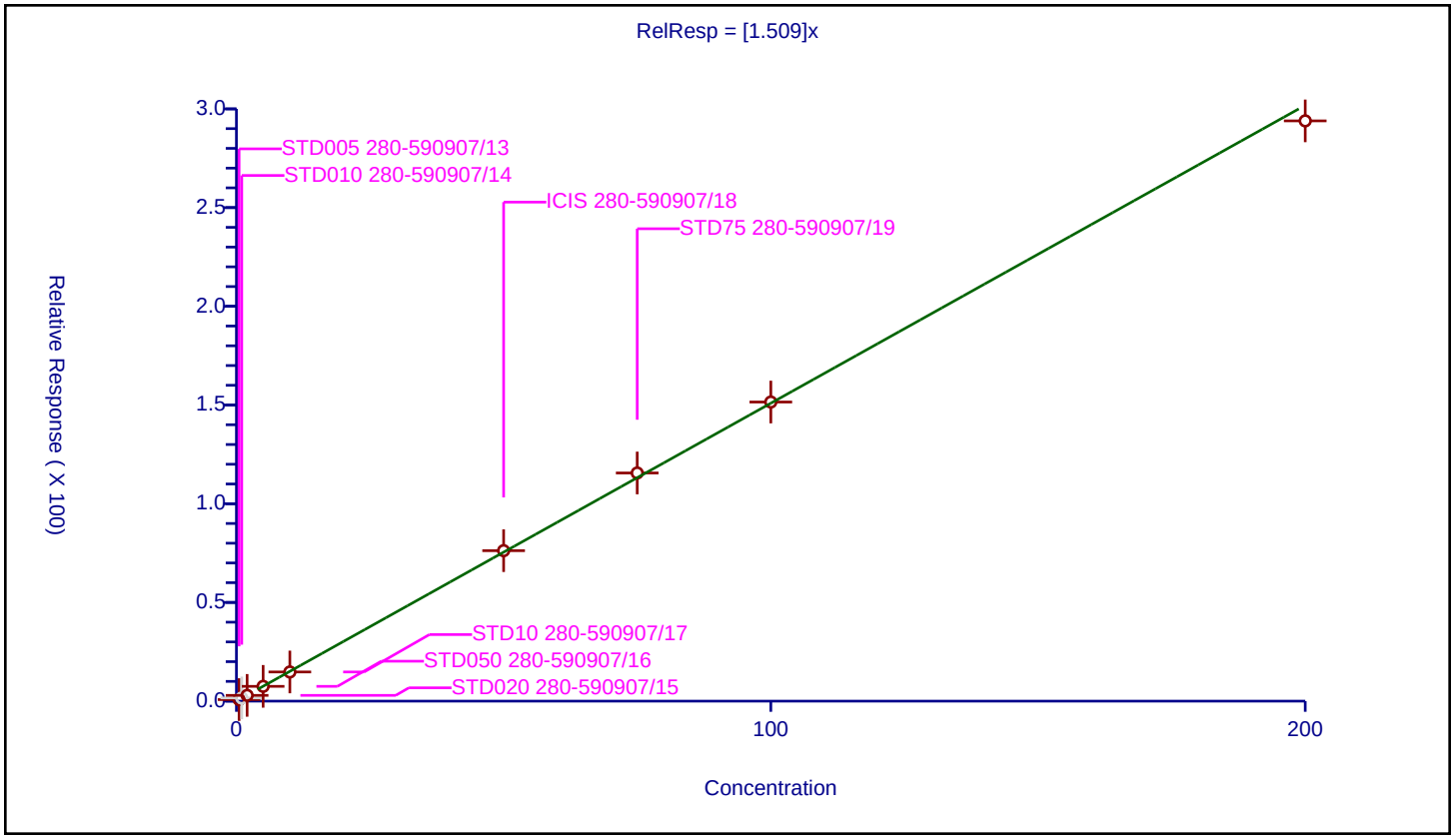
Curve Coefficients

Intercept:	0
Slope:	1.509

Error Coefficients

Standard Error:	866000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.791394	50.0	307369.0	1.582788	Y
2	STD010 280-590907/14	1.0	1.626924	50.0	298631.0	1.626924	N
3	STD020 280-590907/15	2.0	2.924585	50.0	293204.0	1.462292	Y
4	STD050 280-590907/16	5.0	7.500102	50.0	294496.0	1.50002	Y
5	STD10 280-590907/17	10.0	14.774514	50.0	299553.0	1.477451	Y
6	ICIS 280-590907/18	50.0	76.224708	50.0	306665.0	1.524494	Y
7	STD75 280-590907/19	75.0	115.574808	50.0	305763.0	1.540997	Y
8	STD100 280-590907/20	100.0	151.518335	50.0	311262.0	1.515183	Y
9	STD200 280-590907/21	200.0	293.930841	50.0	324180.0	1.469654	Y



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Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

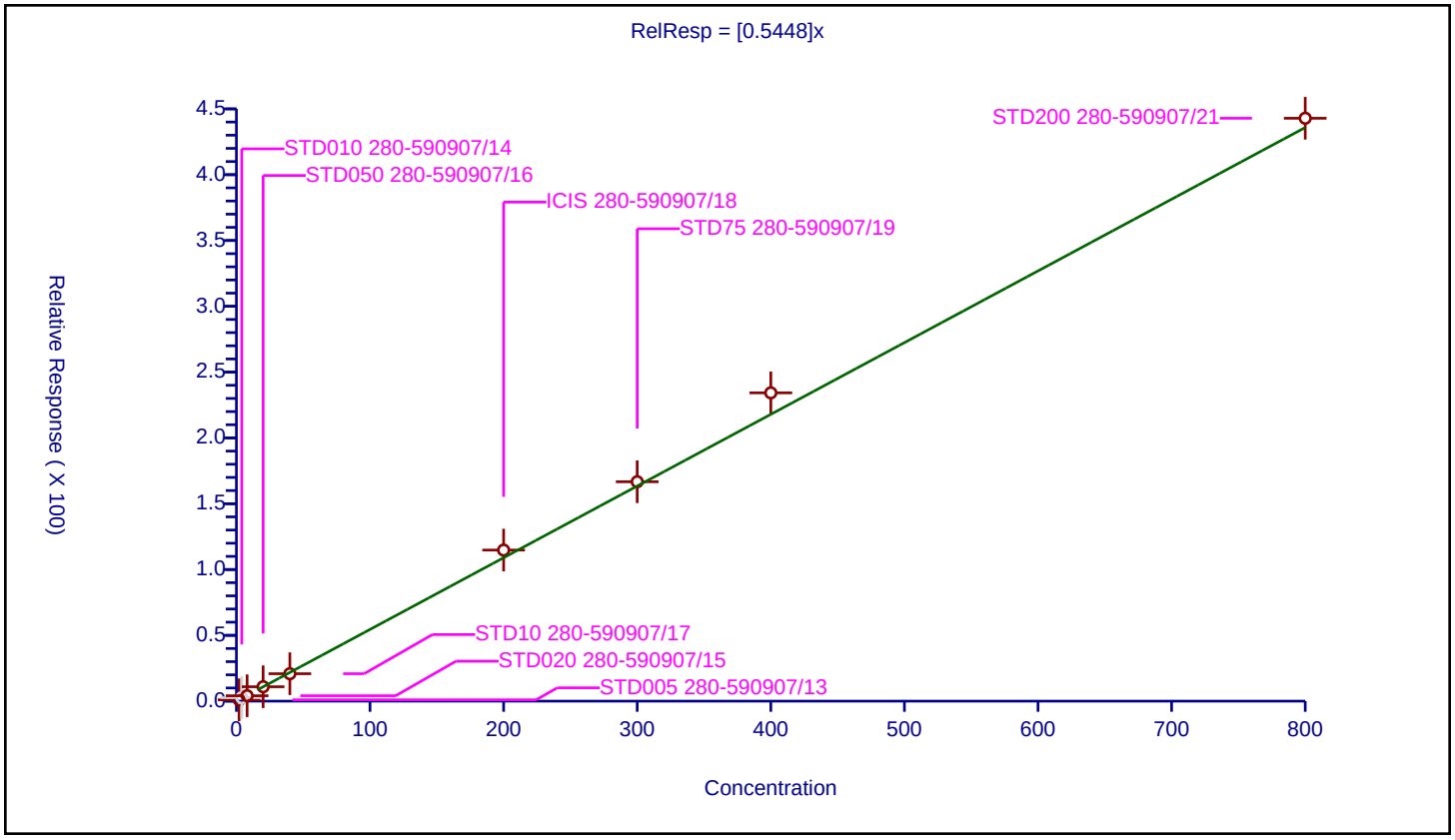
Curve Coefficients

Intercept:	0
Slope:	0.5448

Error Coefficients

Standard Error:	1310000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	2.0	1.01832	50.0	307369.0	0.50916	Y
2	STD010 280-590907/14	4.0	2.64708	50.0	298631.0	0.66177	N
3	STD020 280-590907/15	8.0	4.103798	50.0	293204.0	0.512975	Y
4	STD050 280-590907/16	20.0	10.936651	50.0	294496.0	0.546833	Y
5	STD10 280-590907/17	40.0	20.824695	50.0	299553.0	0.520617	Y
6	ICIS 280-590907/18	200.0	114.773124	50.0	306665.0	0.573866	Y
7	STD75 280-590907/19	300.0	166.704932	50.0	305763.0	0.555683	Y
8	STD100 280-590907/20	400.0	234.252495	50.0	311262.0	0.585631	Y
9	STD200 280-590907/21	800.0	442.881115	50.0	324180.0	0.553601	Y



Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

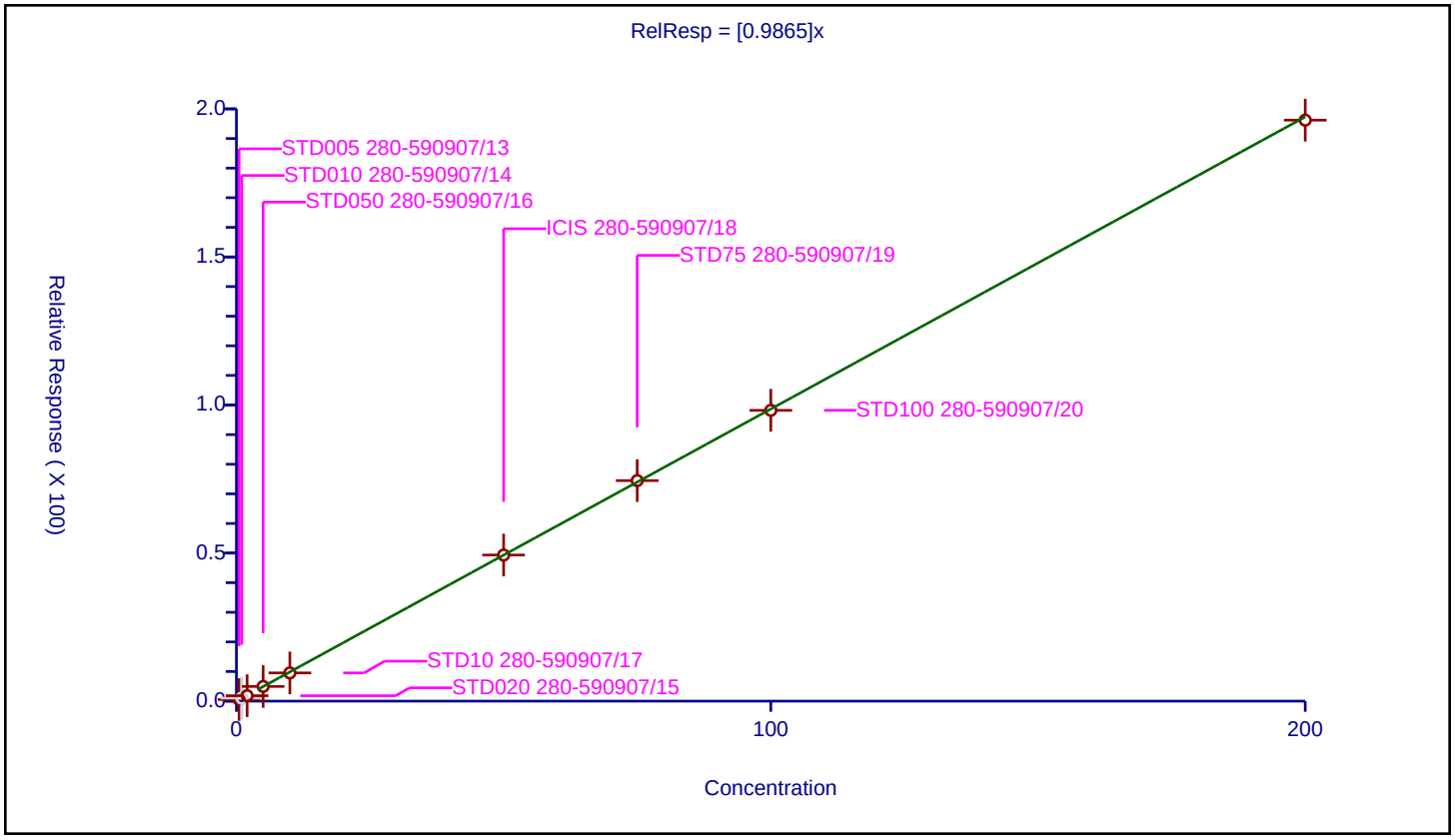
Curve Coefficients

Intercept:	0
Slope:	0.9865

Error Coefficients

Standard Error:	573000
Relative Standard Error:	5.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.544948	50.0	307369.0	1.089895	Y
2	STD010 280-590907/14	1.0	1.0446	50.0	298631.0	1.0446	N
3	STD020 280-590907/15	2.0	1.828249	50.0	293204.0	0.914125	Y
4	STD050 280-590907/16	5.0	4.961358	50.0	294496.0	0.992272	Y
5	STD10 280-590907/17	10.0	9.529032	50.0	299553.0	0.952903	Y
6	ICIS 280-590907/18	50.0	49.337877	50.0	306665.0	0.986758	Y
7	STD75 280-590907/19	75.0	74.480235	50.0	305763.0	0.99307	Y
8	STD100 280-590907/20	100.0	98.201836	50.0	311262.0	0.982018	Y
9	STD200 280-590907/21	200.0	196.19193	50.0	324180.0	0.98096	Y



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Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

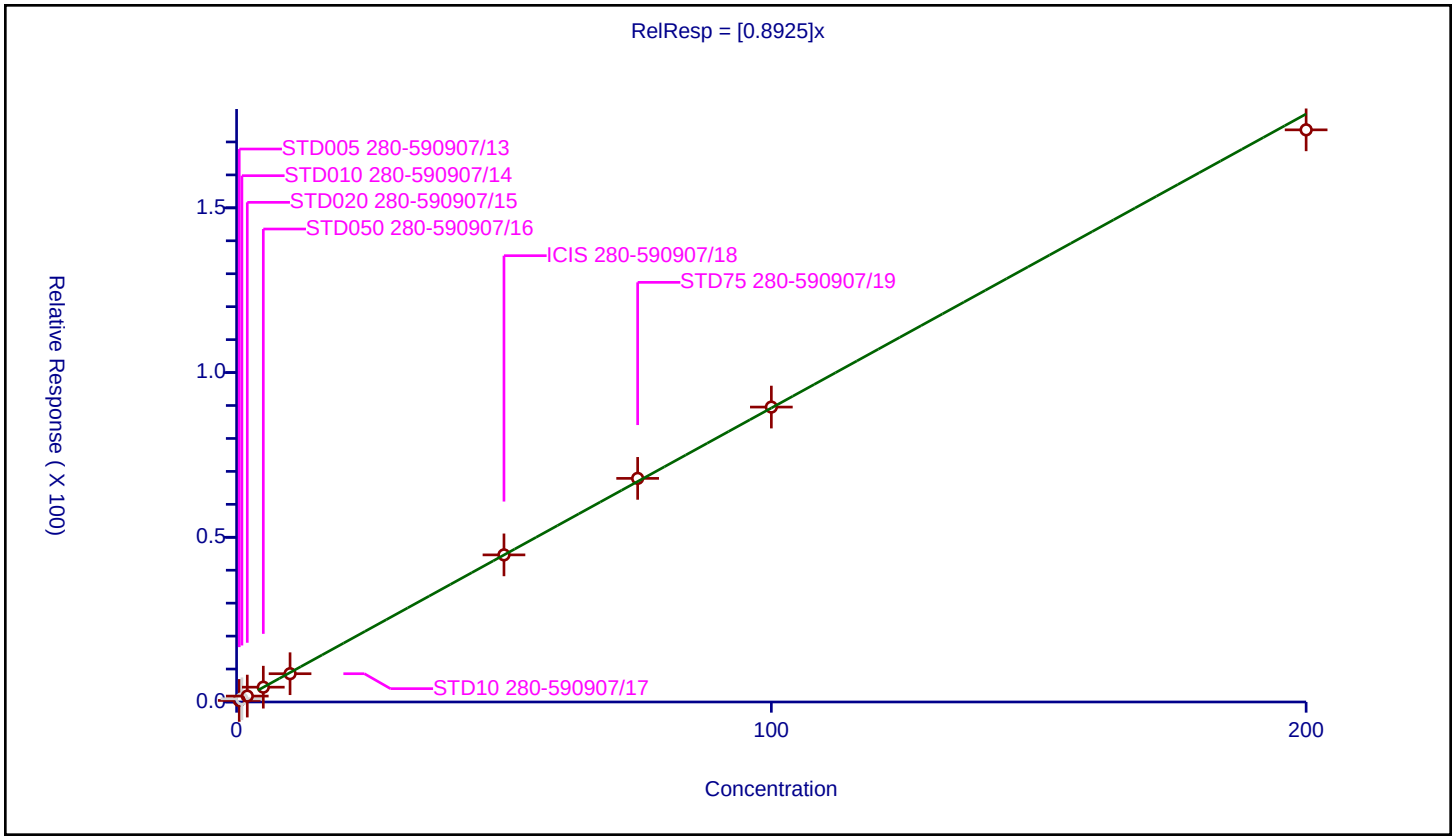
Curve Coefficients

Intercept:	0
Slope:	0.8925

Error Coefficients

Standard Error:	511000
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.462148	50.0	307369.0	0.924296	Y
2	STD010 280-590907/14	1.0	0.967749	50.0	298631.0	0.967749	N
3	STD020 280-590907/15	2.0	1.792609	50.0	293204.0	0.896304	Y
4	STD050 280-590907/16	5.0	4.496156	50.0	294496.0	0.899231	Y
5	STD10 280-590907/17	10.0	8.581286	50.0	299553.0	0.858129	Y
6	ICIS 280-590907/18	50.0	44.65508	50.0	306665.0	0.893102	Y
7	STD75 280-590907/19	75.0	67.875282	50.0	305763.0	0.905004	Y
8	STD100 280-590907/20	100.0	89.523938	50.0	311262.0	0.895239	Y
9	STD200 280-590907/21	200.0	173.674193	50.0	324180.0	0.868371	Y



Calibration / 1-Chlorohexane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

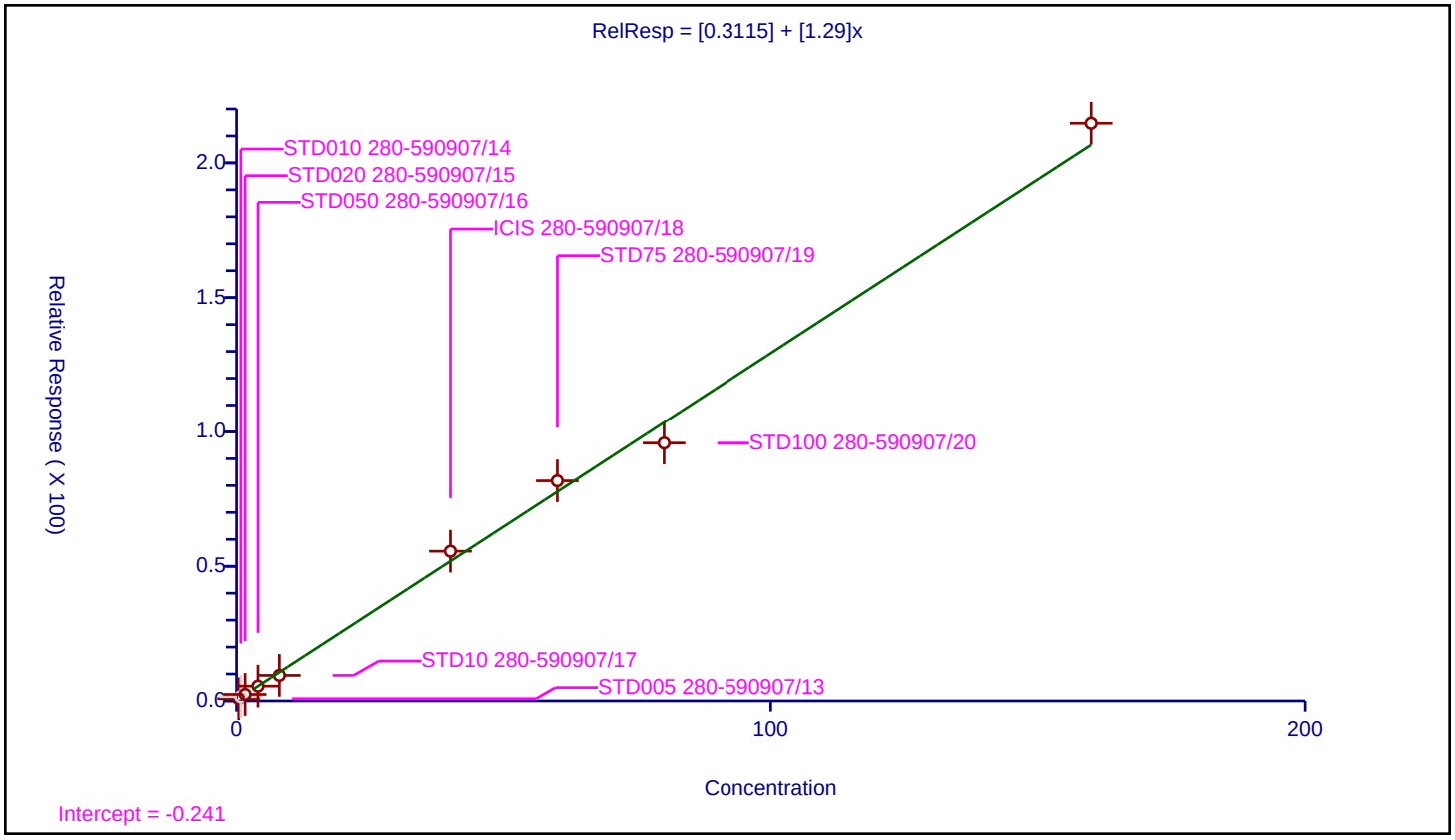
Curve Coefficients

Intercept:	0.3115
Slope:	1.29

Error Coefficients

Standard Error:	666000
Relative Standard Error:	6.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.4	0.827344	50.0	307369.0	2.068361	Y
2	STD010 280-590907/14	0.8	1.549906	50.0	298631.0	1.937383	N
3	STD020 280-590907/15	1.6	2.412996	50.0	293204.0	1.508122	Y
4	STD050 280-590907/16	4.0	5.499226	50.0	294496.0	1.374806	Y
5	STD10 280-590907/17	8.0	9.483964	50.0	299553.0	1.185496	Y
6	ICIS 280-590907/18	40.0	55.59878	50.0	306665.0	1.38997	Y
7	STD75 280-590907/19	60.0	81.78066	50.0	305763.0	1.363011	Y
8	STD100 280-590907/20	80.0	95.837269	50.0	311262.0	1.197966	Y
9	STD200 280-590907/21	160.0	214.713585	50.0	324180.0	1.34196	Y



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Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

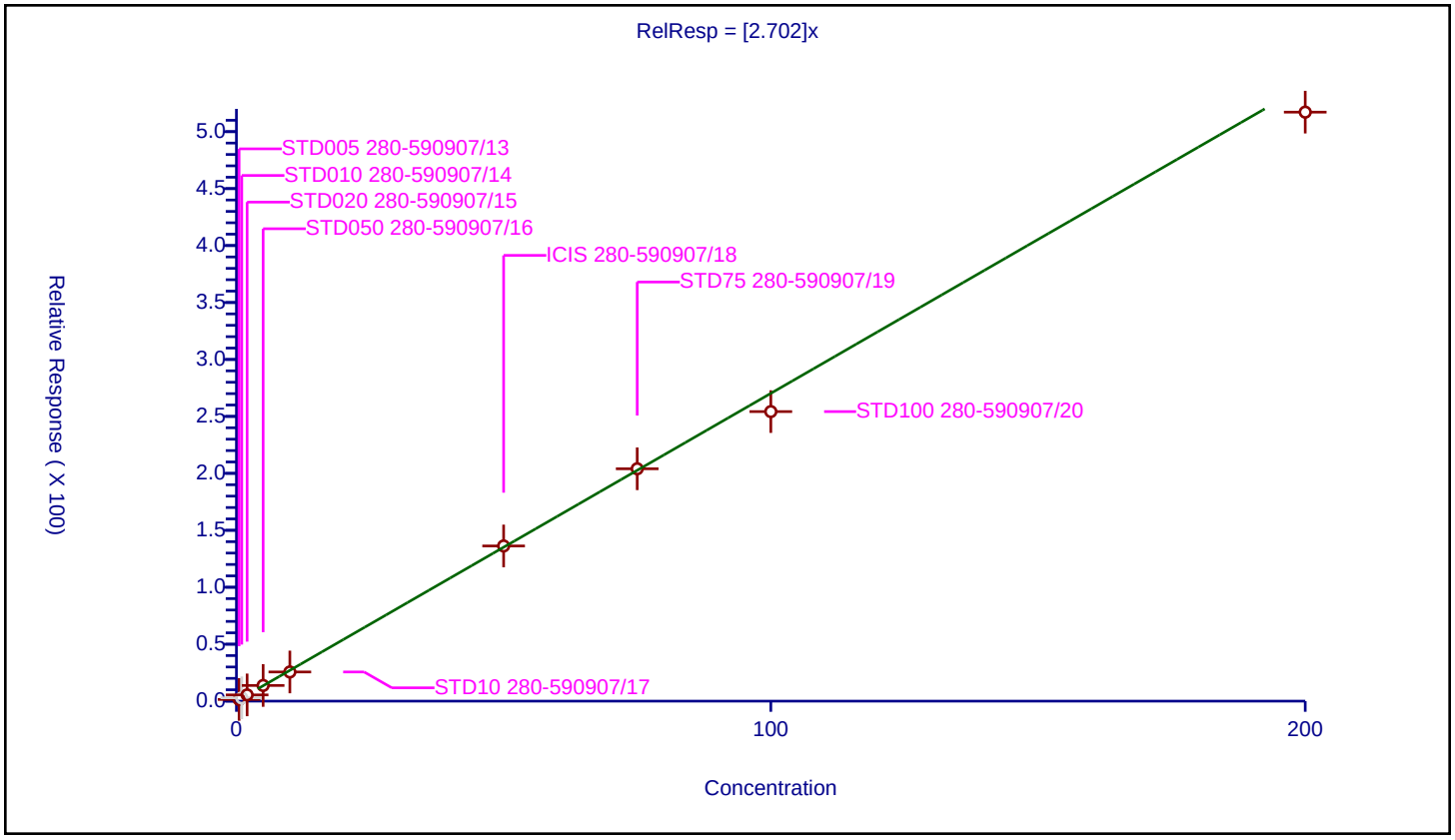
Curve Coefficients

Intercept:	0
Slope:	2.702

Error Coefficients

Standard Error:	1510000
Relative Standard Error:	5.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	1.493482	50.0	307369.0	2.986964	Y
2	STD010 280-590907/14	1.0	2.904253	50.0	298631.0	2.904253	N
3	STD020 280-590907/15	2.0	5.486965	50.0	293204.0	2.743482	Y
4	STD050 280-590907/16	5.0	13.770476	50.0	294496.0	2.754095	Y
5	STD10 280-590907/17	10.0	25.613164	50.0	299553.0	2.561316	Y
6	ICIS 280-590907/18	50.0	136.260741	50.0	306665.0	2.725215	Y
7	STD75 280-590907/19	75.0	204.024686	50.0	305763.0	2.720329	Y
8	STD100 280-590907/20	100.0	254.221845	50.0	311262.0	2.542218	Y
9	STD200 280-590907/21	200.0	517.153125	50.0	324180.0	2.585766	Y



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Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

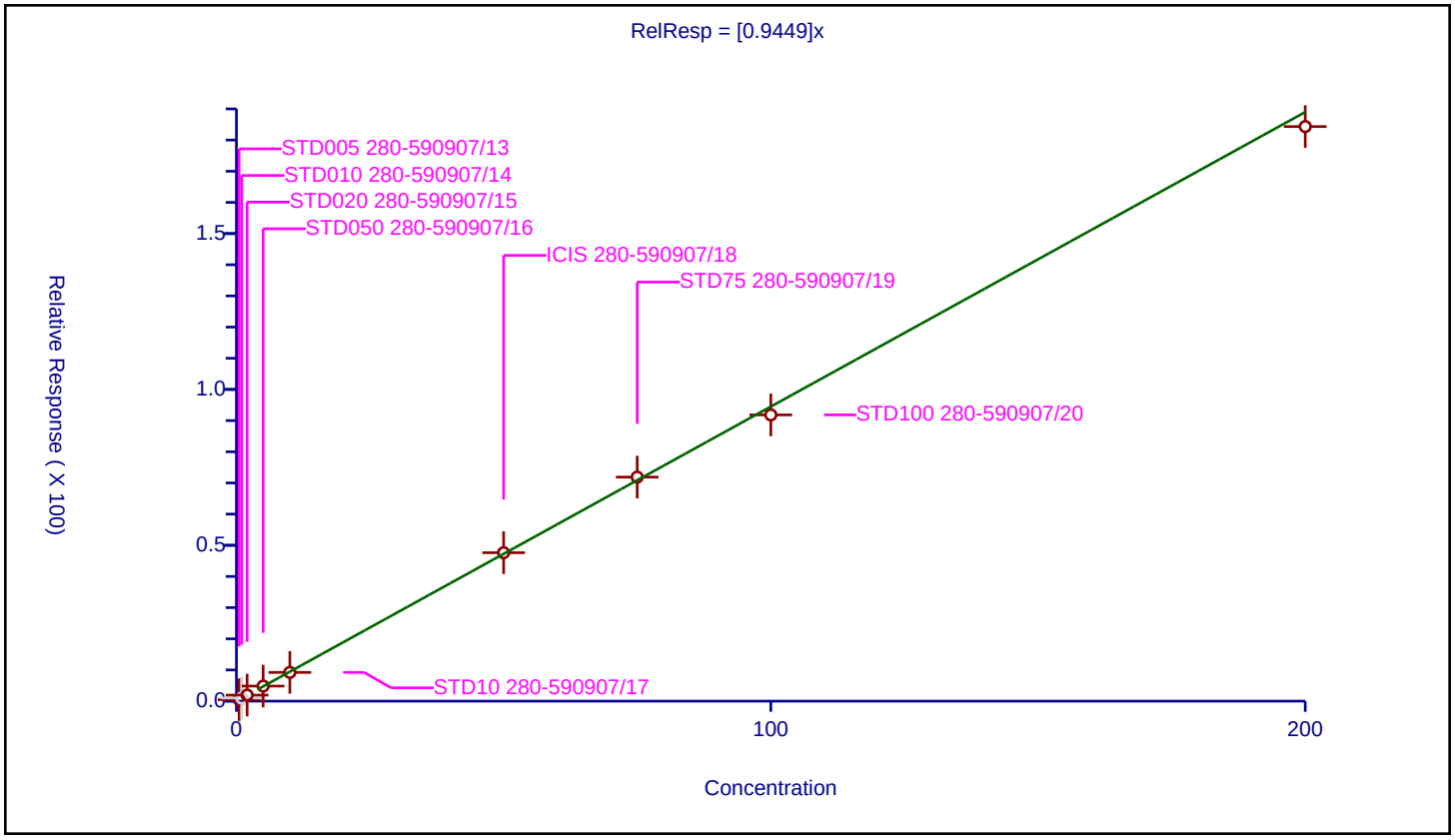
Curve Coefficients

Intercept:	0
Slope:	0.9449

Error Coefficients

Standard Error:	539000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.476138	50.0	307369.0	0.952276	Y
2	STD010 280-590907/14	1.0	1.020992	50.0	298631.0	1.020992	N
3	STD020 280-590907/15	2.0	1.937388	50.0	293204.0	0.968694	Y
4	STD050 280-590907/16	5.0	4.830286	50.0	294496.0	0.966057	Y
5	STD10 280-590907/17	10.0	9.214062	50.0	299553.0	0.921406	Y
6	ICIS 280-590907/18	50.0	47.623139	50.0	306665.0	0.952463	Y
7	STD75 280-590907/19	75.0	71.868408	50.0	305763.0	0.958245	Y
8	STD100 280-590907/20	100.0	91.833889	50.0	311262.0	0.918339	Y
9	STD200 280-590907/21	200.0	184.324758	50.0	324180.0	0.921624	Y



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Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

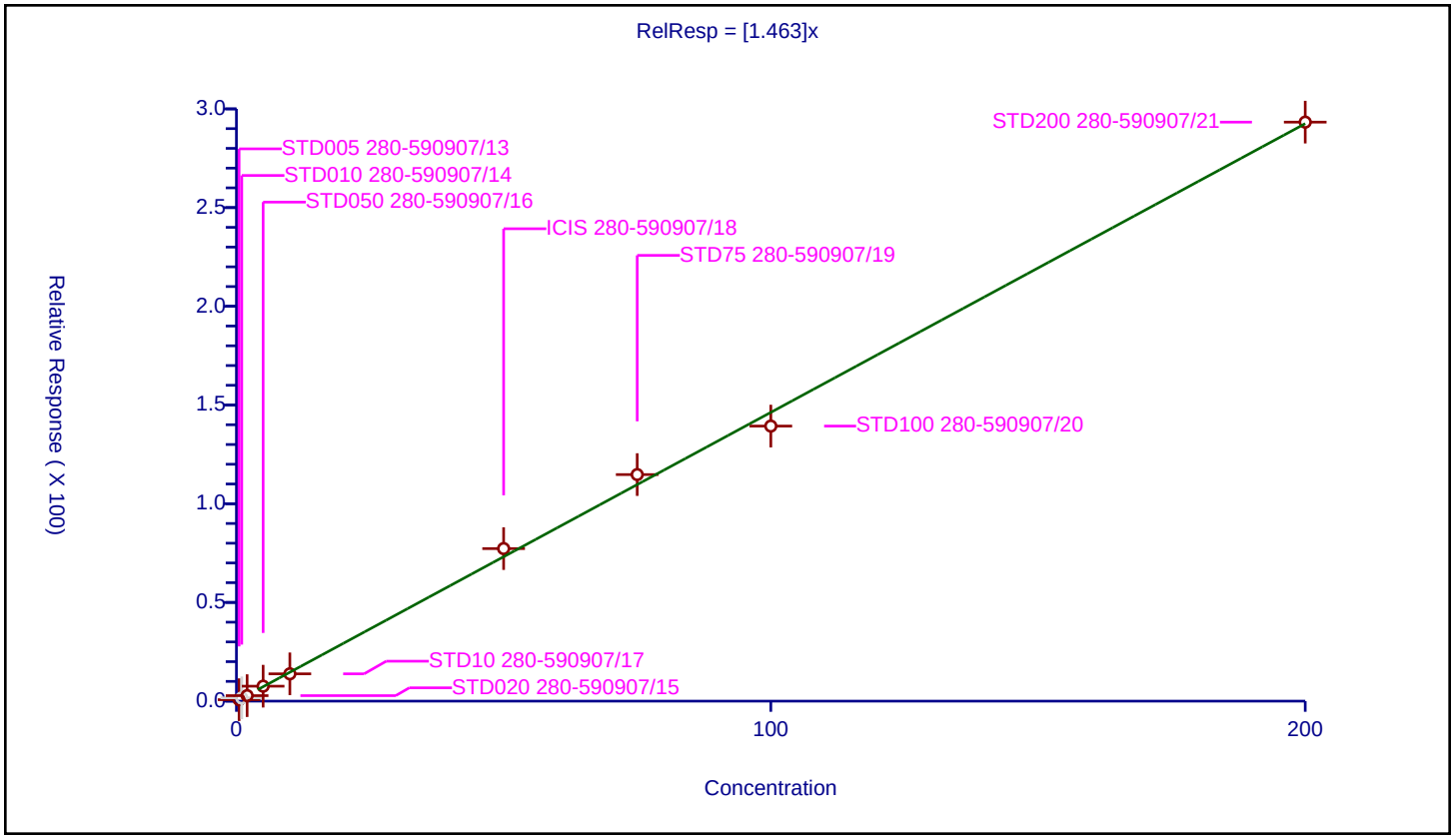
Curve Coefficients

Intercept:	0
Slope:	1.463

Error Coefficients

Standard Error:	853000
Relative Standard Error:	4.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.735598	50.0	307369.0	1.471196	Y
2	STD010 280-590907/14	1.0	1.664261	50.0	298631.0	1.664261	N
3	STD020 280-590907/15	2.0	2.791572	50.0	293204.0	1.395786	Y
4	STD050 280-590907/16	5.0	7.581088	50.0	294496.0	1.516218	Y
5	STD10 280-590907/17	10.0	13.833111	50.0	299553.0	1.383311	Y
6	ICIS 280-590907/18	50.0	77.266887	50.0	306665.0	1.545338	Y
7	STD75 280-590907/19	75.0	114.757345	50.0	305763.0	1.530098	Y
8	STD100 280-590907/20	100.0	139.325873	50.0	311262.0	1.393259	Y
9	STD200 280-590907/21	200.0	293.288142	50.0	324180.0	1.466441	Y



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Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

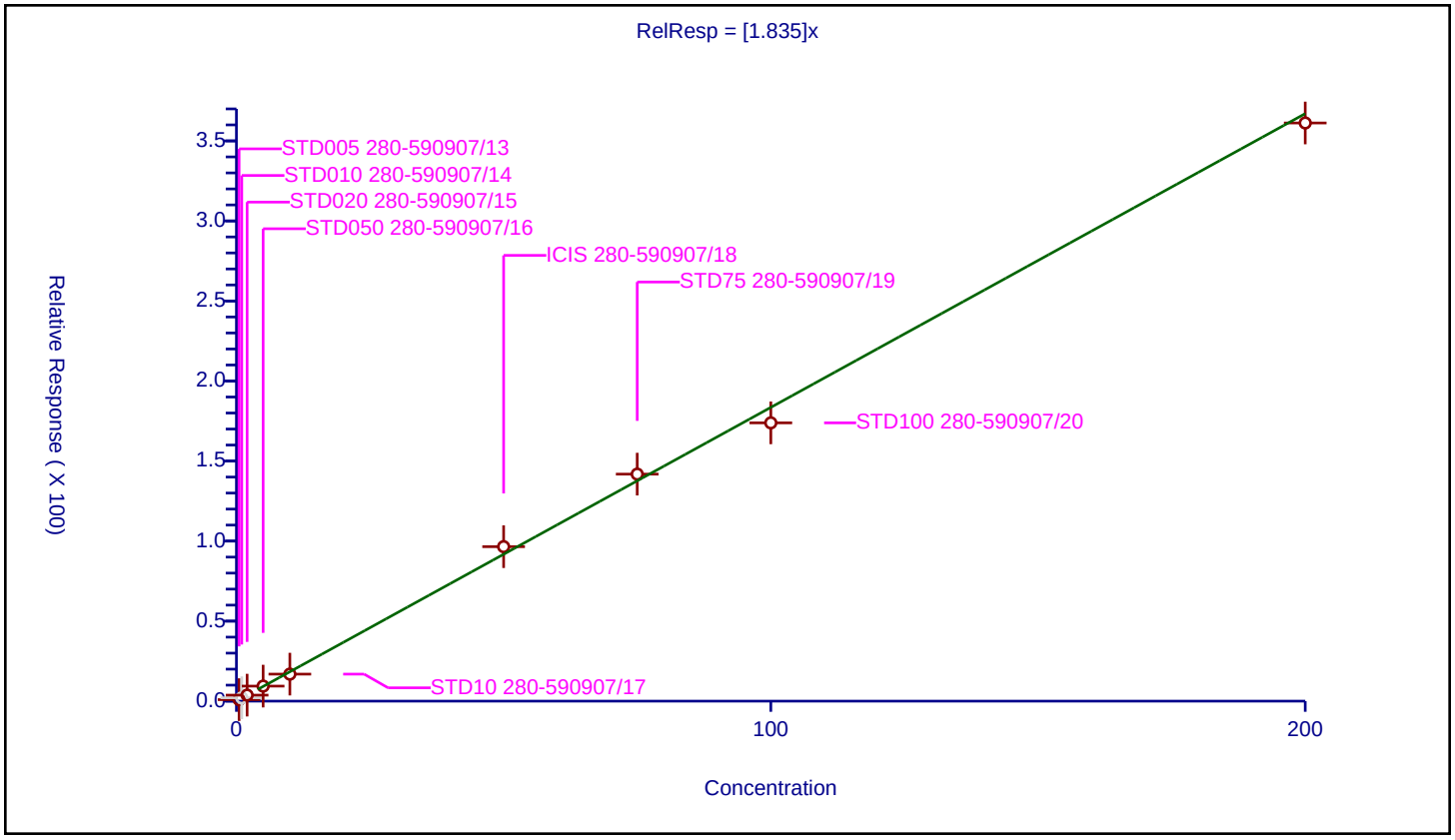
Curve Coefficients

Intercept:	0
Slope:	1.835

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.93487	50.0	307369.0	1.86974	Y
2	STD010 280-590907/14	1.0	2.108957	50.0	298631.0	2.108957	N
3	STD020 280-590907/15	2.0	3.758475	50.0	293204.0	1.879238	Y
4	STD050 280-590907/16	5.0	9.39045	50.0	294496.0	1.87809	Y
5	STD10 280-590907/17	10.0	16.884825	50.0	299553.0	1.688483	Y
6	ICIS 280-590907/18	50.0	96.500742	50.0	306665.0	1.930015	Y
7	STD75 280-590907/19	75.0	141.830928	50.0	305763.0	1.891079	Y
8	STD100 280-590907/20	100.0	173.862694	50.0	311262.0	1.738627	Y
9	STD200 280-590907/21	200.0	361.203035	50.0	324180.0	1.806015	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

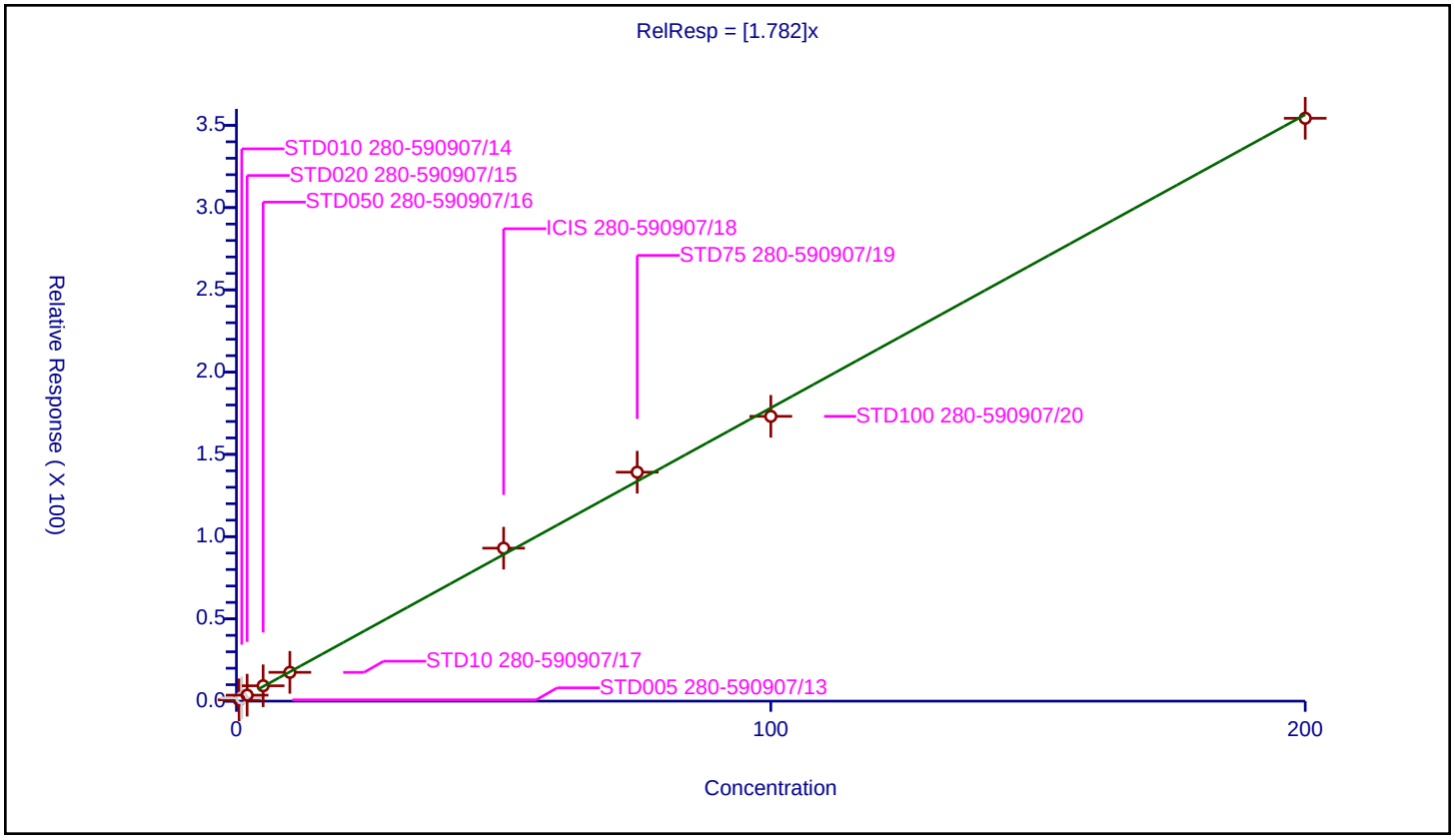
Curve Coefficients

Intercept:	0
Slope:	1.782

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	4.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.805058	50.0	307369.0	1.610117	Y
2	STD010 280-590907/14	1.0	1.969822	50.0	298631.0	1.969822	N
3	STD020 280-590907/15	2.0	3.627508	50.0	293204.0	1.813754	Y
4	STD050 280-590907/16	5.0	9.330687	50.0	294496.0	1.866137	Y
5	STD10 280-590907/17	10.0	17.513762	50.0	299553.0	1.751376	Y
6	ICIS 280-590907/18	50.0	92.982081	50.0	306665.0	1.859642	Y
7	STD75 280-590907/19	75.0	139.165955	50.0	305763.0	1.855546	Y
8	STD100 280-590907/20	100.0	173.115896	50.0	311262.0	1.731159	Y
9	STD200 280-590907/21	200.0	354.305016	50.0	324180.0	1.771525	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

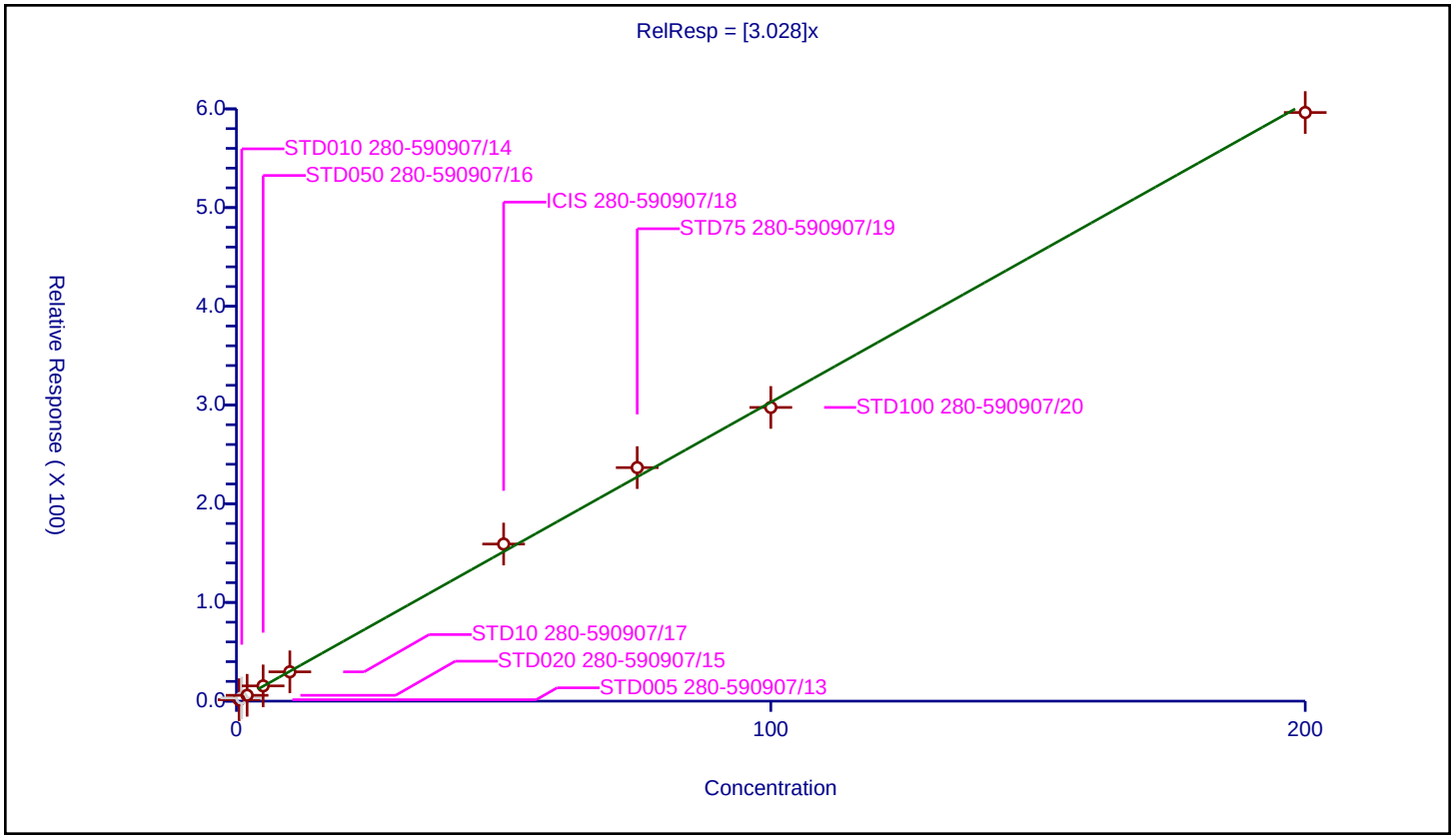
Curve Coefficients

Intercept:	0
Slope:	3.028

Error Coefficients

Standard Error:	1750000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	1.457369	50.0	307369.0	2.914738	Y
2	STD010 280-590907/14	1.0	3.262722	50.0	298631.0	3.262722	N
3	STD020 280-590907/15	2.0	5.911925	50.0	293204.0	2.955962	Y
4	STD050 280-590907/16	5.0	15.453011	50.0	294496.0	3.090602	Y
5	STD10 280-590907/17	10.0	29.707431	50.0	299553.0	2.970743	Y
6	ICIS 280-590907/18	50.0	159.168963	50.0	306665.0	3.183379	Y
7	STD75 280-590907/19	75.0	236.60662	50.0	305763.0	3.154755	Y
8	STD100 280-590907/20	100.0	297.554793	50.0	311262.0	2.975548	Y
9	STD200 280-590907/21	200.0	596.320717	50.0	324180.0	2.981604	Y



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Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

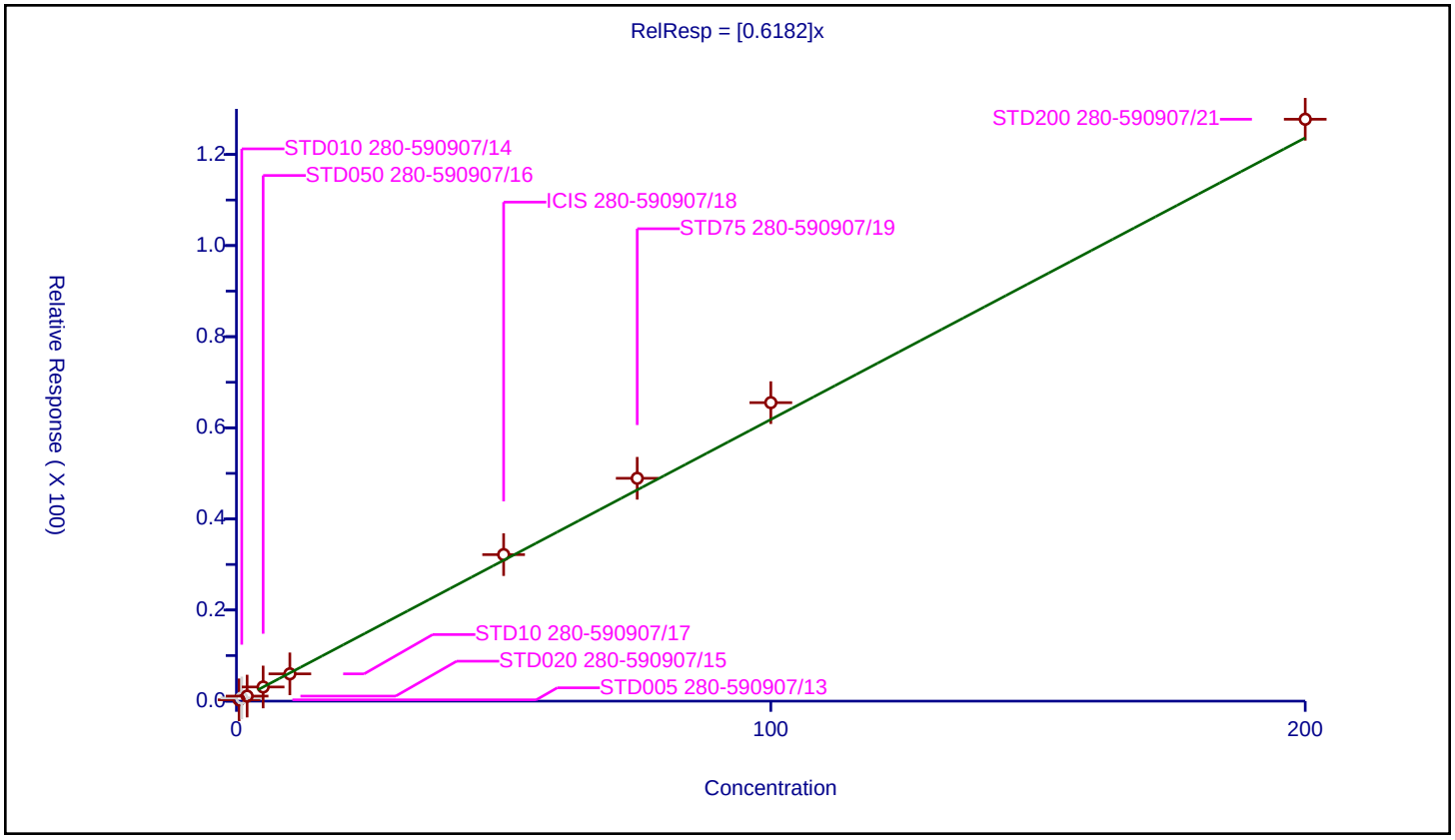
Curve Coefficients

Intercept:	0
Slope:	0.6182

Error Coefficients

Standard Error:	375000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.291669	50.0	307369.0	0.583338	Y
2	STD010 280-590907/14	1.0	0.707227	50.0	298631.0	0.707227	N
3	STD020 280-590907/15	2.0	1.106567	50.0	293204.0	0.553284	Y
4	STD050 280-590907/16	5.0	3.105815	50.0	294496.0	0.621163	Y
5	STD10 280-590907/17	10.0	5.988757	50.0	299553.0	0.598876	Y
6	ICIS 280-590907/18	50.0	32.162783	50.0	306665.0	0.643256	Y
7	STD75 280-590907/19	75.0	48.916318	50.0	305763.0	0.652218	Y
8	STD100 280-590907/20	100.0	65.521008	50.0	311262.0	0.65521	Y
9	STD200 280-590907/21	200.0	127.727189	50.0	324180.0	0.638636	Y



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Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

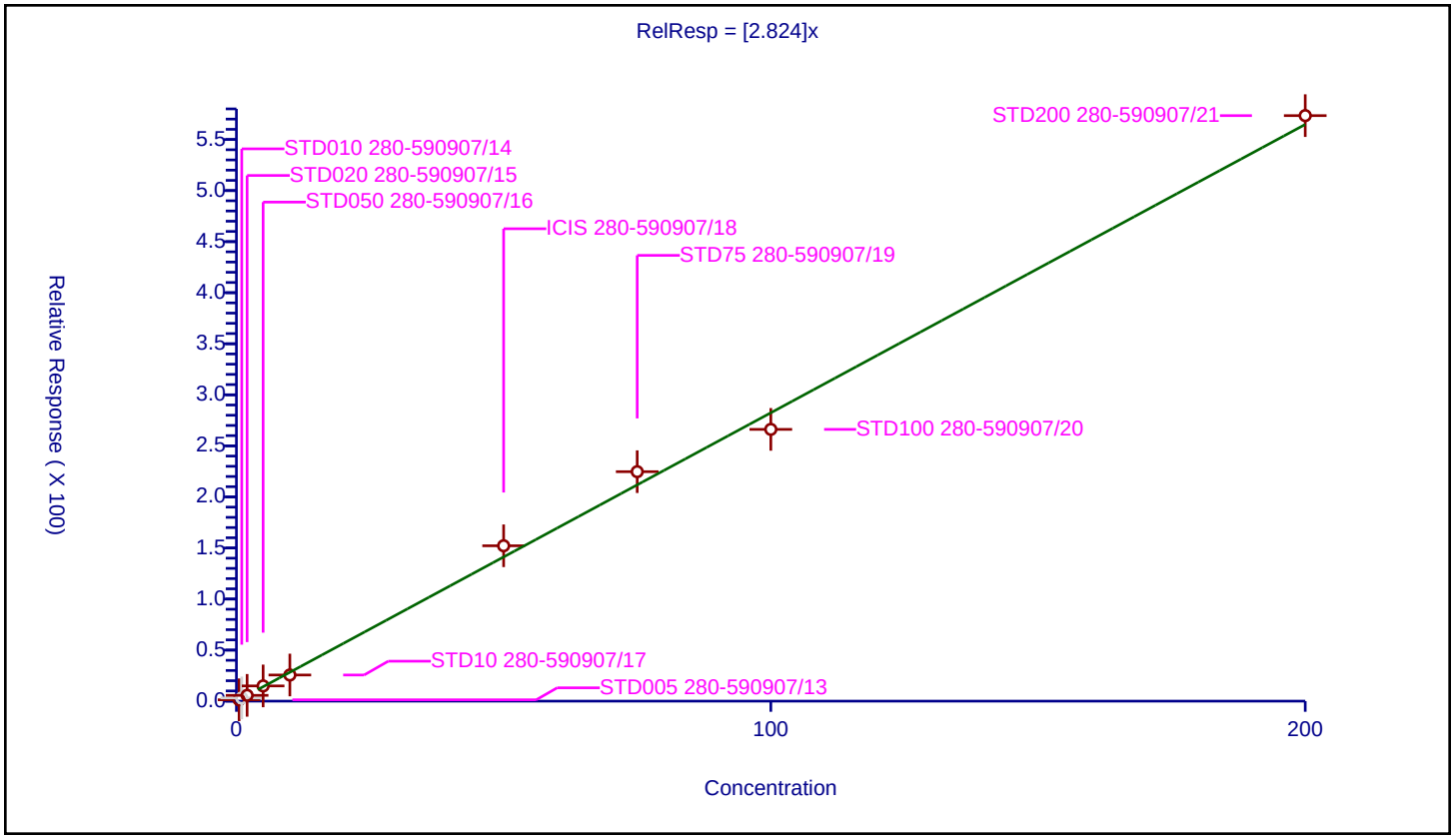
Curve Coefficients

Intercept:	0
Slope:	2.824

Error Coefficients

Standard Error:	2600000
Relative Standard Error:	6.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	1.325437	50.0	491951.0	2.650874	Y
2	STD010 280-590907/14	1.0	3.152124	50.0	472824.0	3.152124	N
3	STD020 280-590907/15	2.0	5.667307	50.0	473223.0	2.833653	Y
4	STD050 280-590907/16	5.0	14.895634	50.0	470460.0	2.979127	Y
5	STD10 280-590907/17	10.0	25.597372	50.0	488138.0	2.559737	Y
6	ICIS 280-590907/18	50.0	152.145203	50.0	482565.0	3.042904	Y
7	STD75 280-590907/19	75.0	224.71249	50.0	480245.0	2.996167	Y
8	STD100 280-590907/20	100.0	266.149681	50.0	495081.0	2.661497	Y
9	STD200 280-590907/21	200.0	573.404226	50.0	505084.0	2.867021	Y



Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

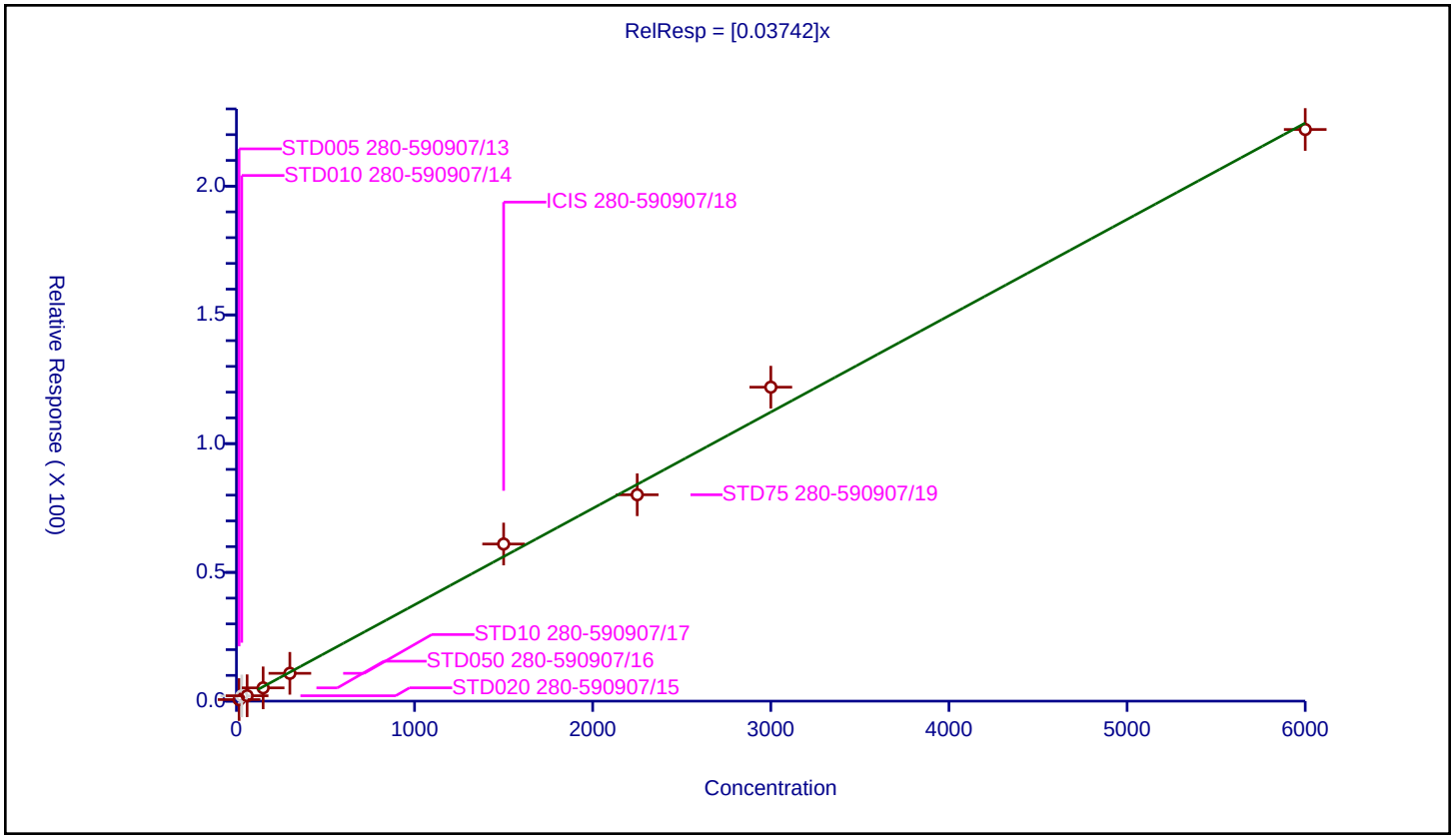
Curve Coefficients

Intercept:	0
Slope:	0.03742

Error Coefficients

Standard Error:	658000
Relative Standard Error:	7.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	15.0	0.600256	50.0	307369.0	0.040017	Y
2	STD010 280-590907/14	30.0	2.015531	50.0	298631.0	0.067184	N
3	STD020 280-590907/15	60.0	2.097345	50.0	293204.0	0.034956	Y
4	STD050 280-590907/16	150.0	5.159832	50.0	294496.0	0.034399	Y
5	STD10 280-590907/17	300.0	10.805767	50.0	299553.0	0.036019	Y
6	ICIS 280-590907/18	1500.0	61.024897	50.0	306665.0	0.040683	Y
7	STD75 280-590907/19	2250.0	80.146388	50.0	305763.0	0.035621	Y
8	STD100 280-590907/20	3000.0	121.928311	50.0	311262.0	0.040643	Y
9	STD200 280-590907/21	6000.0	222.003054	50.0	324180.0	0.037001	Y



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Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

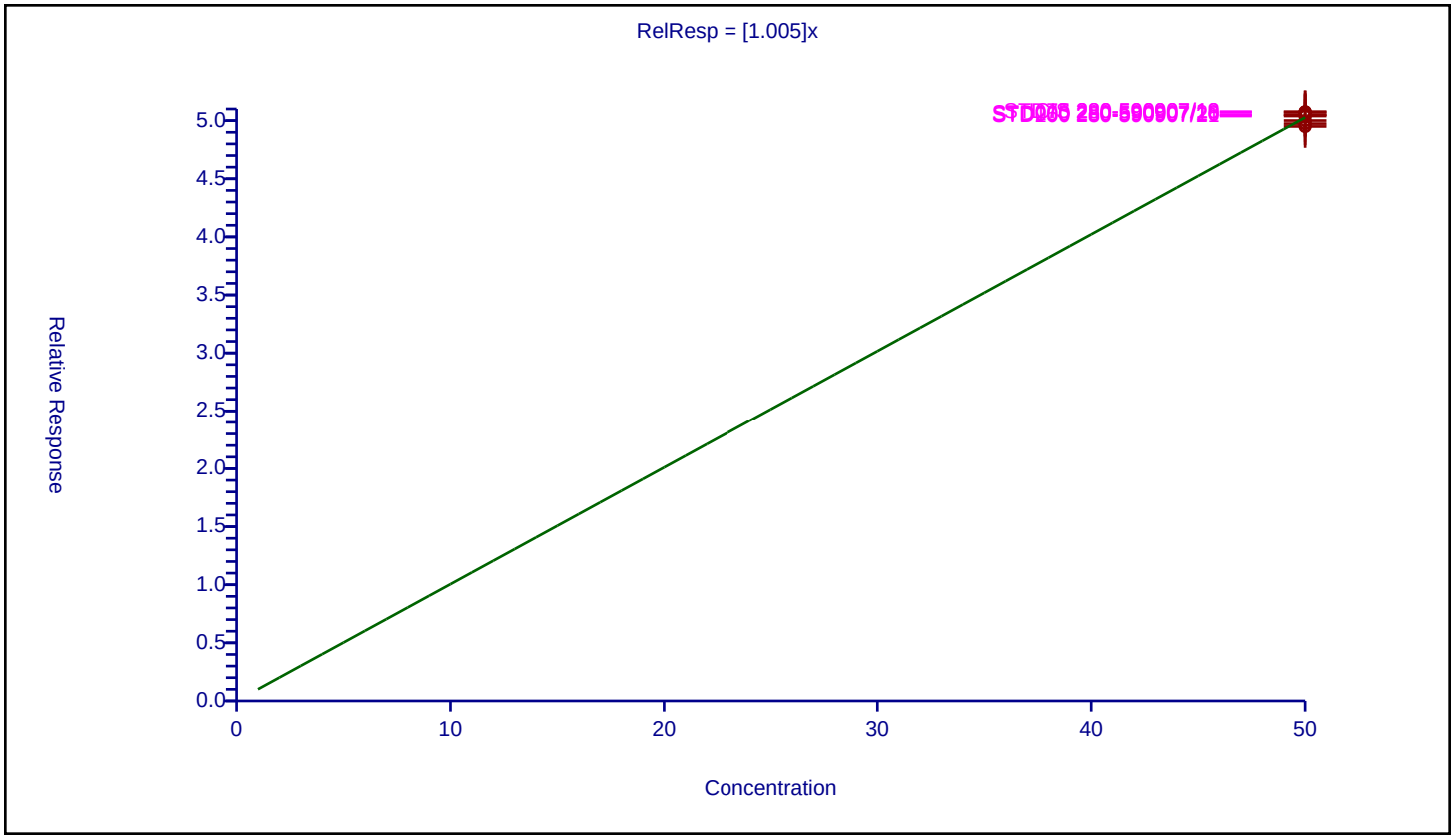
Curve Coefficients

Intercept:	0
Slope:	1.005

Error Coefficients

Standard Error:	522000
Relative Standard Error:	0.9
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	50.0	50.008131	50.0	491951.0	1.000163	Y
2	STD010 280-590907/14	50.0	49.634431	50.0	472824.0	0.992689	N
3	STD020 280-590907/15	50.0	49.74811	50.0	473223.0	0.994962	Y
4	STD050 280-590907/16	50.0	50.487289	50.0	470460.0	1.009746	Y
5	STD10 280-590907/17	50.0	49.501371	50.0	488138.0	0.990027	Y
6	ICIS 280-590907/18	50.0	50.748811	50.0	482565.0	1.014976	Y
7	STD75 280-590907/19	50.0	50.752741	50.0	480245.0	1.015055	Y
8	STD100 280-590907/20	50.0	50.5184	50.0	495081.0	1.010368	Y
9	STD200 280-590907/21	50.0	50.394291	50.0	505084.0	1.007886	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

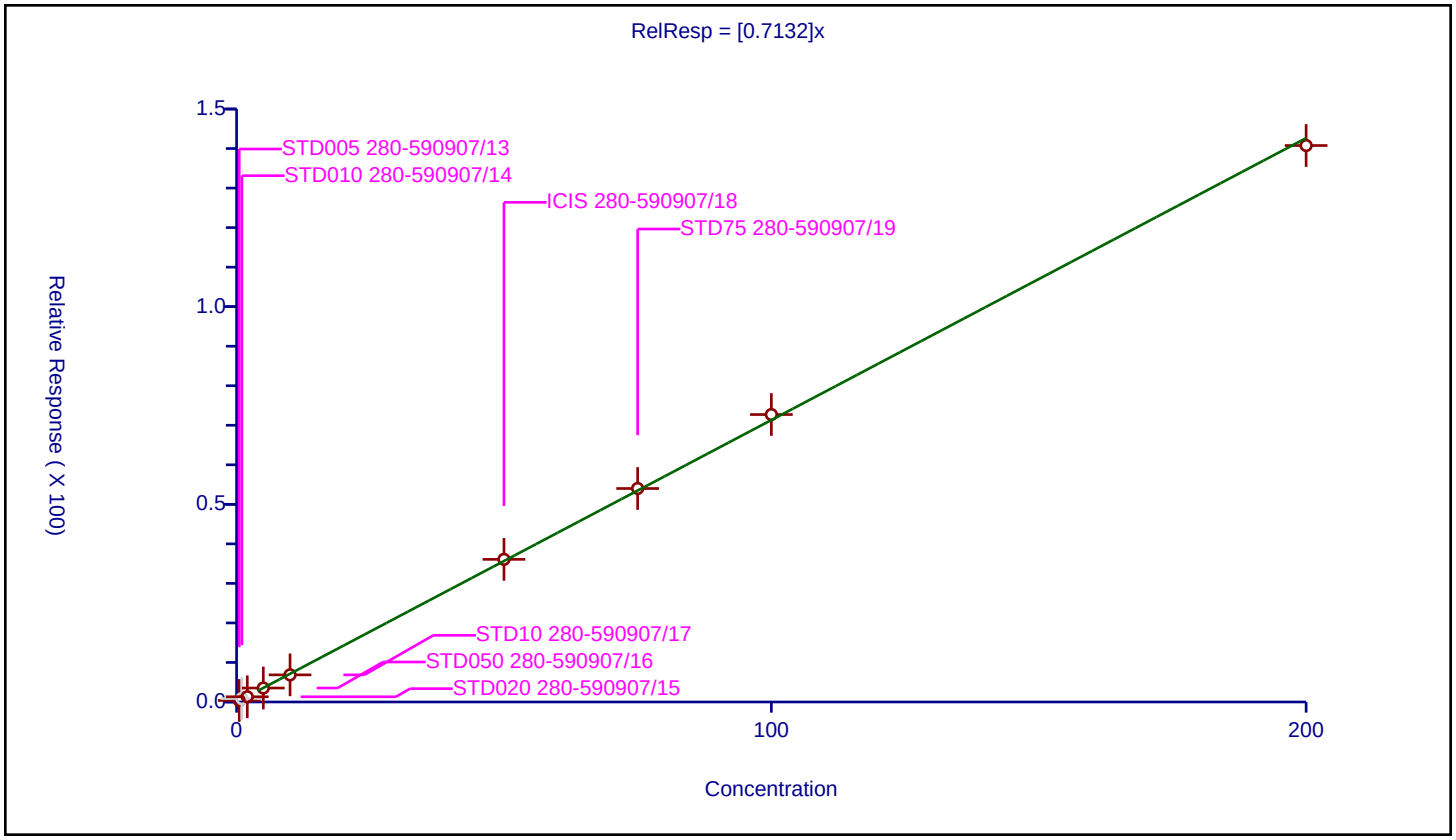
Curve Coefficients

Intercept:	0
Slope:	0.7132

Error Coefficients

Standard Error:	648000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.390384	50.0	491951.0	0.780769	Y
2	STD010 280-590907/14	1.0	0.868082	50.0	472824.0	0.868082	N
3	STD020 280-590907/15	2.0	1.318089	50.0	473223.0	0.659044	Y
4	STD050 280-590907/16	5.0	3.532288	50.0	470460.0	0.706458	Y
5	STD10 280-590907/17	10.0	6.866091	50.0	488138.0	0.686609	Y
6	ICIS 280-590907/18	50.0	36.07628	50.0	482565.0	0.721526	Y
7	STD75 280-590907/19	75.0	54.000458	50.0	480245.0	0.720006	Y
8	STD100 280-590907/20	100.0	72.714364	50.0	495081.0	0.727144	Y
9	STD200 280-590907/21	200.0	140.764111	50.0	505084.0	0.703821	Y



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Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

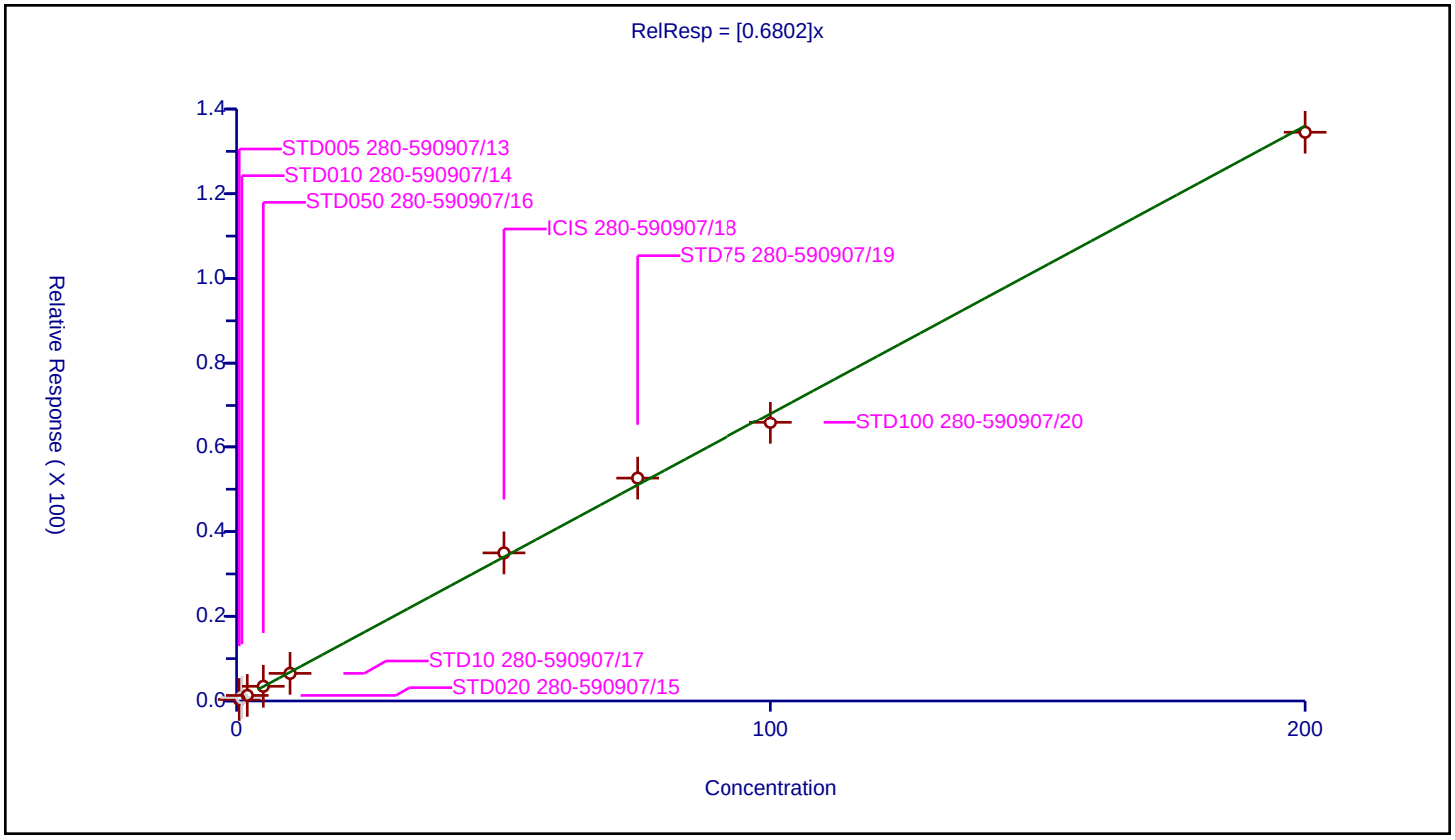
Curve Coefficients

Intercept:	0
Slope:	0.6802

Error Coefficients

Standard Error:	615000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.353694	50.0	491951.0	0.707388	Y
2	STD010 280-590907/14	1.0	0.815737	50.0	472824.0	0.815737	N
3	STD020 280-590907/15	2.0	1.312595	50.0	473223.0	0.656297	Y
4	STD050 280-590907/16	5.0	3.471815	50.0	470460.0	0.694363	Y
5	STD10 280-590907/17	10.0	6.51701	50.0	488138.0	0.651701	Y
6	ICIS 280-590907/18	50.0	34.964927	50.0	482565.0	0.699299	Y
7	STD75 280-590907/19	75.0	52.623348	50.0	480245.0	0.701645	Y
8	STD100 280-590907/20	100.0	65.794284	50.0	495081.0	0.657943	Y
9	STD200 280-590907/21	200.0	134.513071	50.0	505084.0	0.672565	Y



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Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

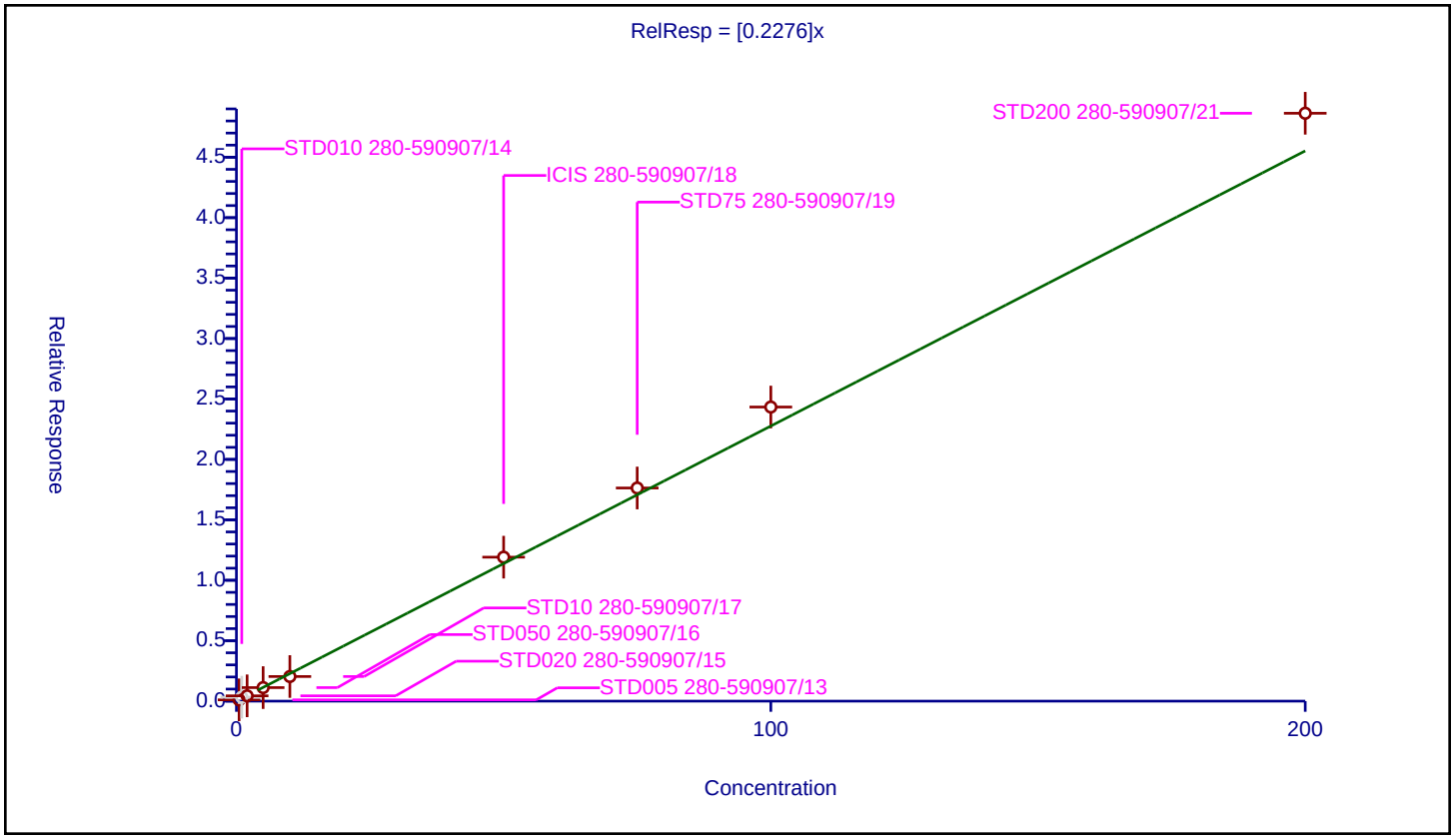
Curve Coefficients

Intercept:	0
Slope:	0.2276

Error Coefficients

Standard Error:	221000
Relative Standard Error:	6.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.10682	50.0	491951.0	0.213639	Y
2	STD010 280-590907/14	1.0	0.327818	50.0	472824.0	0.327818	N
3	STD020 280-590907/15	2.0	0.438799	50.0	473223.0	0.2194	Y
4	STD050 280-590907/16	5.0	1.121243	50.0	470460.0	0.224249	Y
5	STD10 280-590907/17	10.0	2.038051	50.0	488138.0	0.203805	Y
6	ICIS 280-590907/18	50.0	11.912385	50.0	482565.0	0.238248	Y
7	STD75 280-590907/19	75.0	17.634749	50.0	480245.0	0.23513	Y
8	STD100 280-590907/20	100.0	24.331978	50.0	495081.0	0.24332	Y
9	STD200 280-590907/21	200.0	48.638147	50.0	505084.0	0.243191	Y



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Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

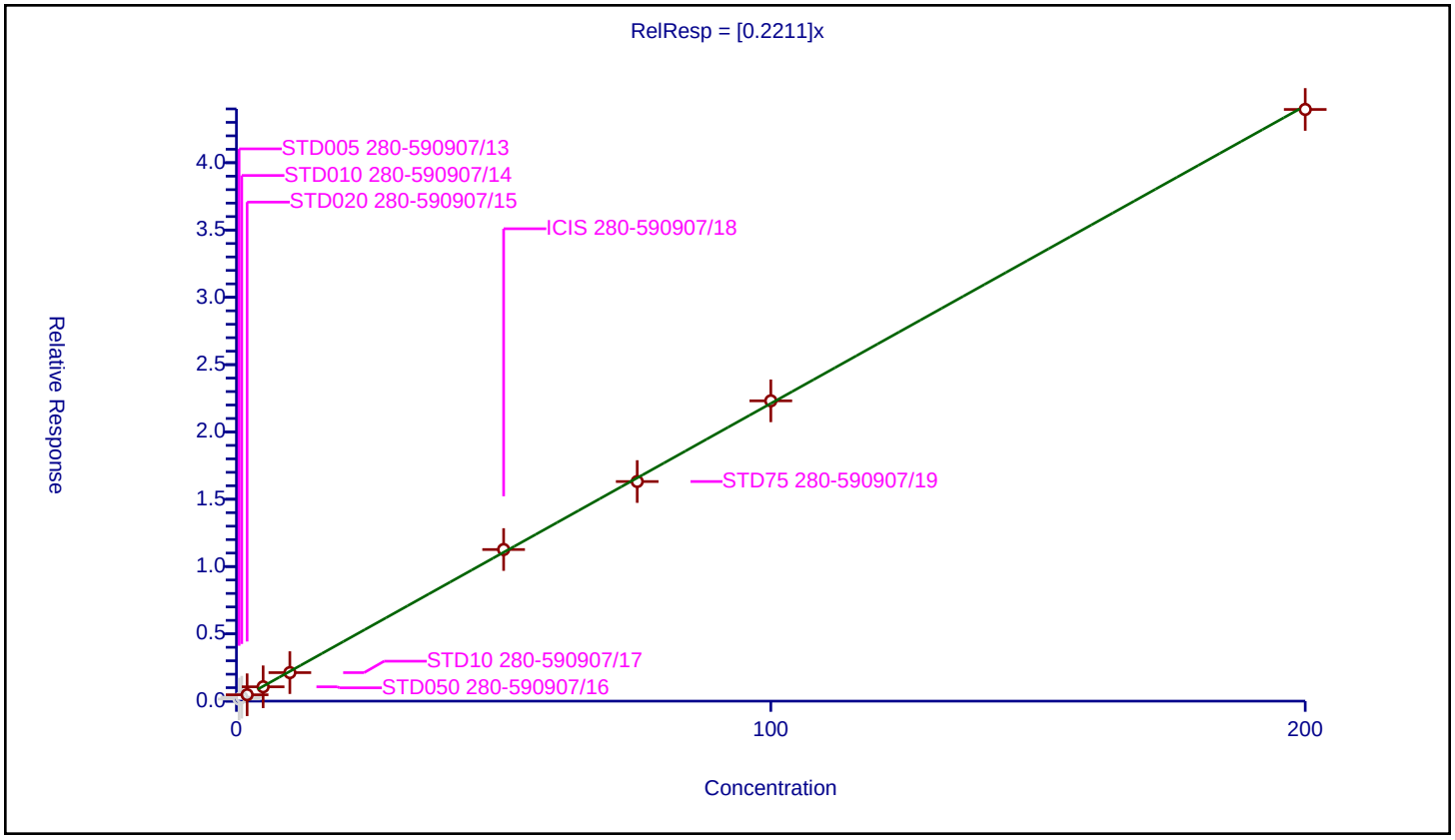
Curve Coefficients

Intercept:	0
Slope:	0.2211

Error Coefficients

Standard Error:	217000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.156926	50.0	491951.0	0.313852	N
2	STD010 280-590907/14	1.0	0.291969	50.0	472824.0	0.291969	N
3	STD020 280-590907/15	2.0	0.474618	50.0	473223.0	0.237309	Y
4	STD050 280-590907/16	5.0	1.065659	50.0	470460.0	0.213132	Y
5	STD10 280-590907/17	10.0	2.118458	50.0	488138.0	0.211846	Y
6	ICIS 280-590907/18	50.0	11.263664	50.0	482565.0	0.225273	Y
7	STD75 280-590907/19	75.0	16.316463	50.0	480245.0	0.217553	Y
8	STD100 280-590907/20	100.0	22.3114	50.0	495081.0	0.223114	Y
9	STD200 280-590907/21	200.0	43.959025	50.0	505084.0	0.219795	Y



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Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

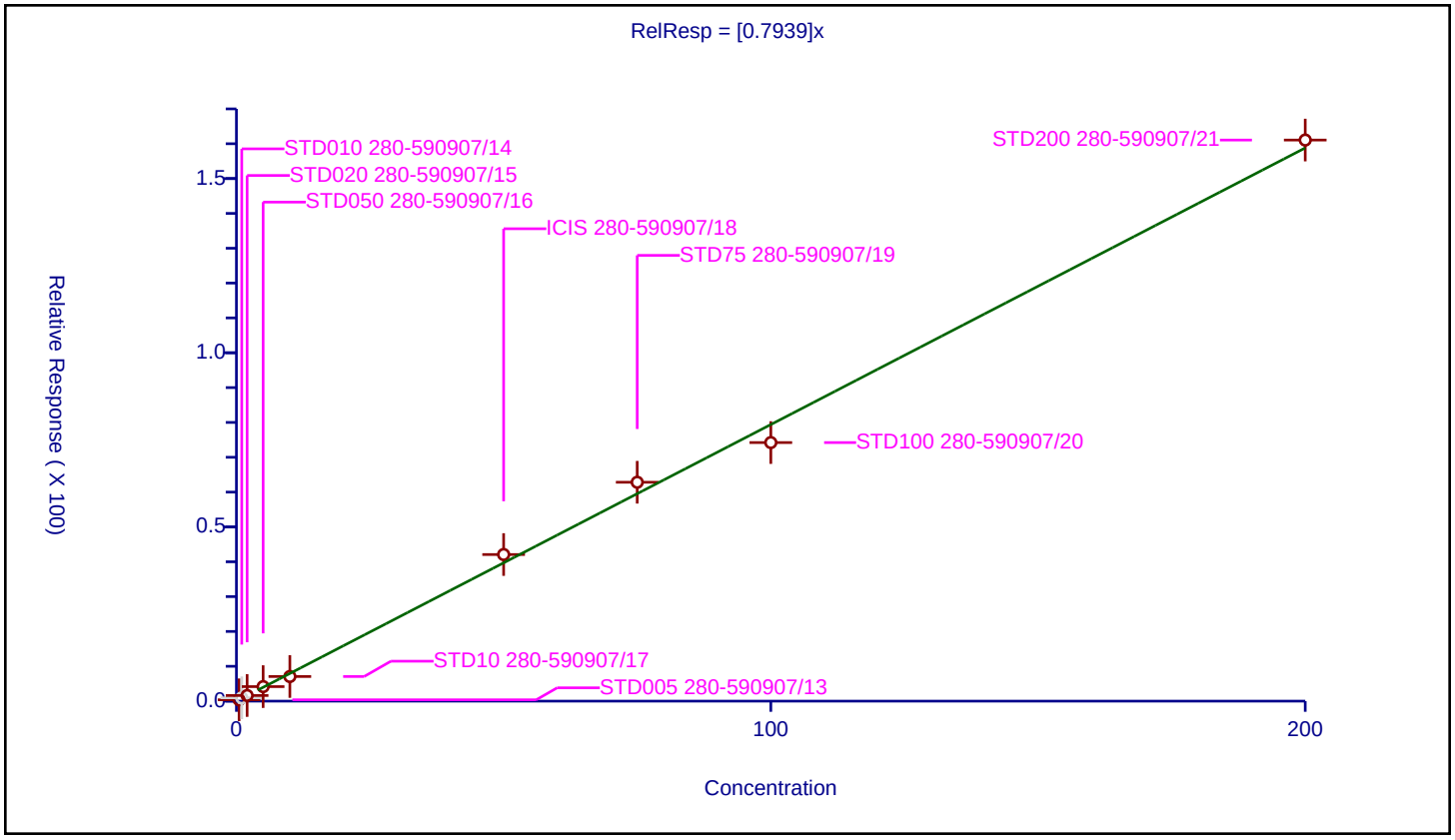
Curve Coefficients

Intercept:	0
Slope:	0.7939

Error Coefficients

Standard Error:	729000
Relative Standard Error:	6.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.388657	50.0	491951.0	0.777313	Y
2	STD010 280-590907/14	1.0	0.953103	50.0	472824.0	0.953103	N
3	STD020 280-590907/15	2.0	1.61351	50.0	473223.0	0.806755	Y
4	STD050 280-590907/16	5.0	4.170386	50.0	470460.0	0.834077	Y
5	STD10 280-590907/17	10.0	7.064498	50.0	488138.0	0.70645	Y
6	ICIS 280-590907/18	50.0	42.085522	50.0	482565.0	0.84171	Y
7	STD75 280-590907/19	75.0	62.831784	50.0	480245.0	0.837757	Y
8	STD100 280-590907/20	100.0	74.221491	50.0	495081.0	0.742215	Y
9	STD200 280-590907/21	200.0	161.056478	50.0	505084.0	0.805282	Y



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Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

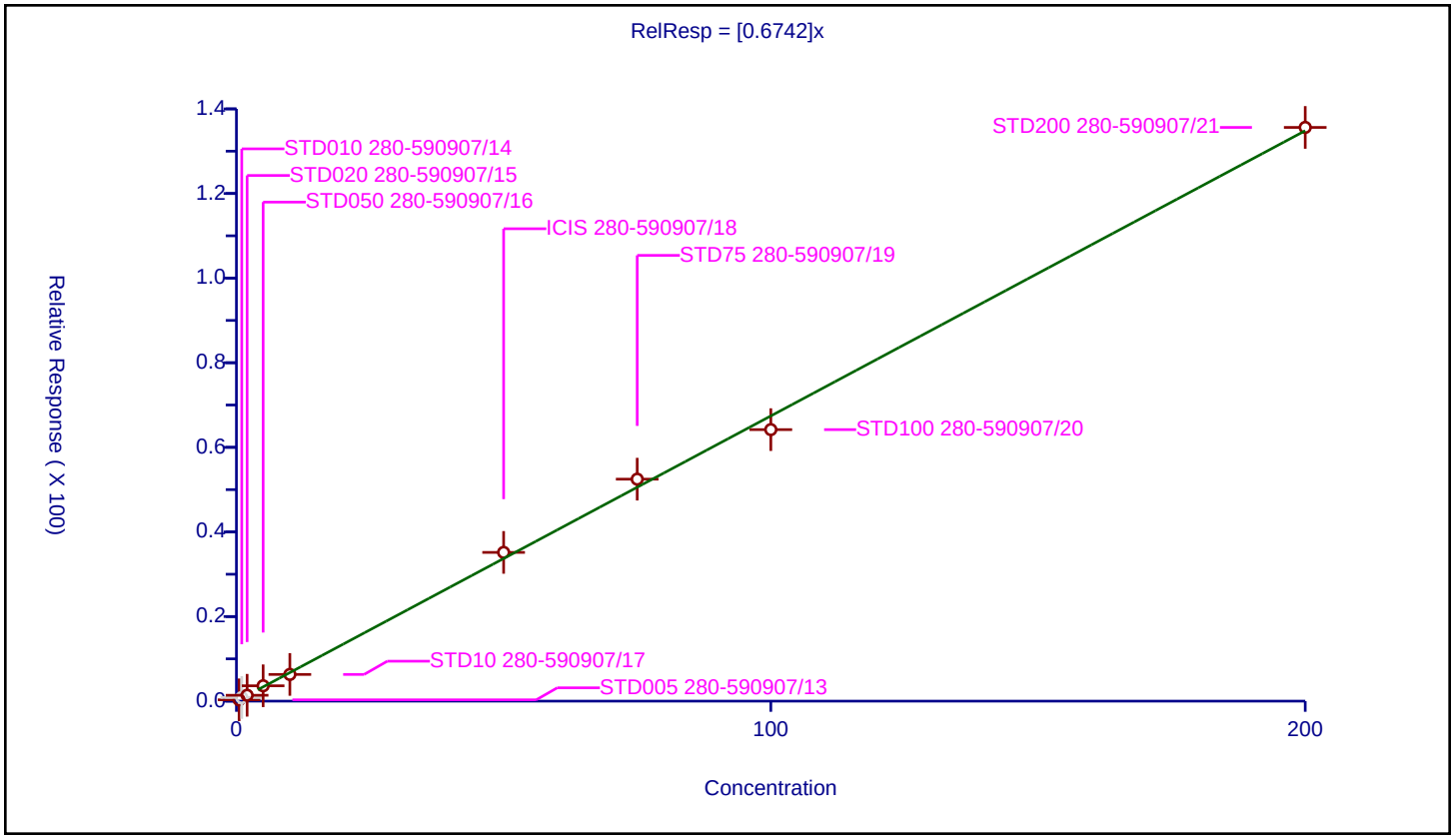
Curve Coefficients

Intercept:	0
Slope:	0.6742

Error Coefficients

Standard Error:	616000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.310397	50.0	491951.0	0.620794	Y
2	STD010 280-590907/14	1.0	0.861737	50.0	472824.0	0.861737	N
3	STD020 280-590907/15	2.0	1.386027	50.0	473223.0	0.693014	Y
4	STD050 280-590907/16	5.0	3.629214	50.0	470460.0	0.725843	Y
5	STD10 280-590907/17	10.0	6.311125	50.0	488138.0	0.631113	Y
6	ICIS 280-590907/18	50.0	35.161584	50.0	482565.0	0.703232	Y
7	STD75 280-590907/19	75.0	52.471135	50.0	480245.0	0.699615	Y
8	STD100 280-590907/20	100.0	64.181316	50.0	495081.0	0.641813	Y
9	STD200 280-590907/21	200.0	135.620907	50.0	505084.0	0.678105	Y



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Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

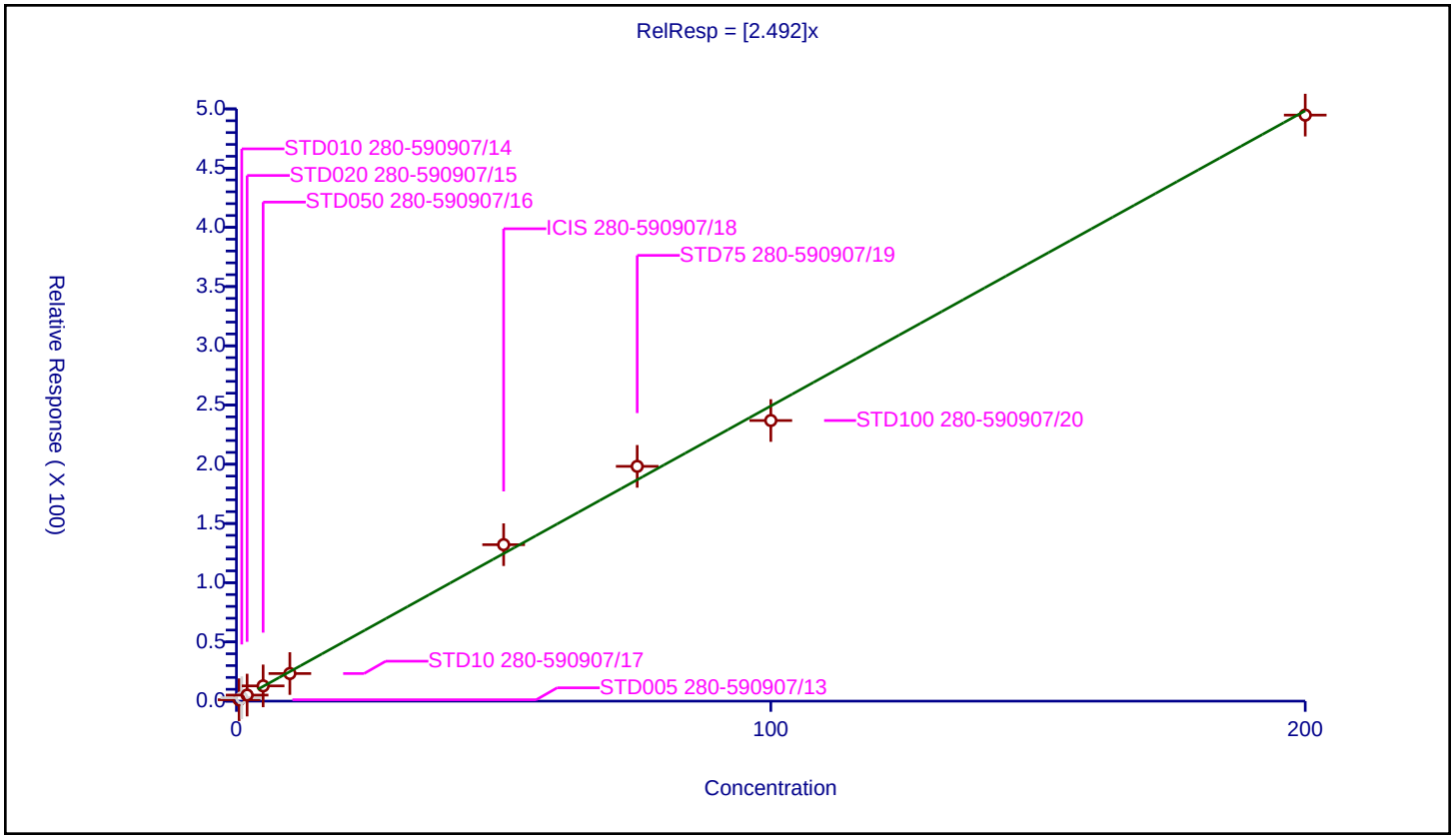
Curve Coefficients

Intercept:	0
Slope:	2.492

Error Coefficients

Standard Error:	2260000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	1.173592	50.0	491951.0	2.347185	Y
2	STD010 280-590907/14	1.0	2.899388	50.0	472824.0	2.899388	N
3	STD020 280-590907/15	2.0	5.115453	50.0	473223.0	2.557726	Y
4	STD050 280-590907/16	5.0	12.863687	50.0	470460.0	2.572737	Y
5	STD10 280-590907/17	10.0	23.30089	50.0	488138.0	2.330089	Y
6	ICIS 280-590907/18	50.0	132.101893	50.0	482565.0	2.642038	Y
7	STD75 280-590907/19	75.0	198.230695	50.0	480245.0	2.643076	Y
8	STD100 280-590907/20	100.0	236.910021	50.0	495081.0	2.3691	Y
9	STD200 280-590907/21	200.0	494.752754	50.0	505084.0	2.473764	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

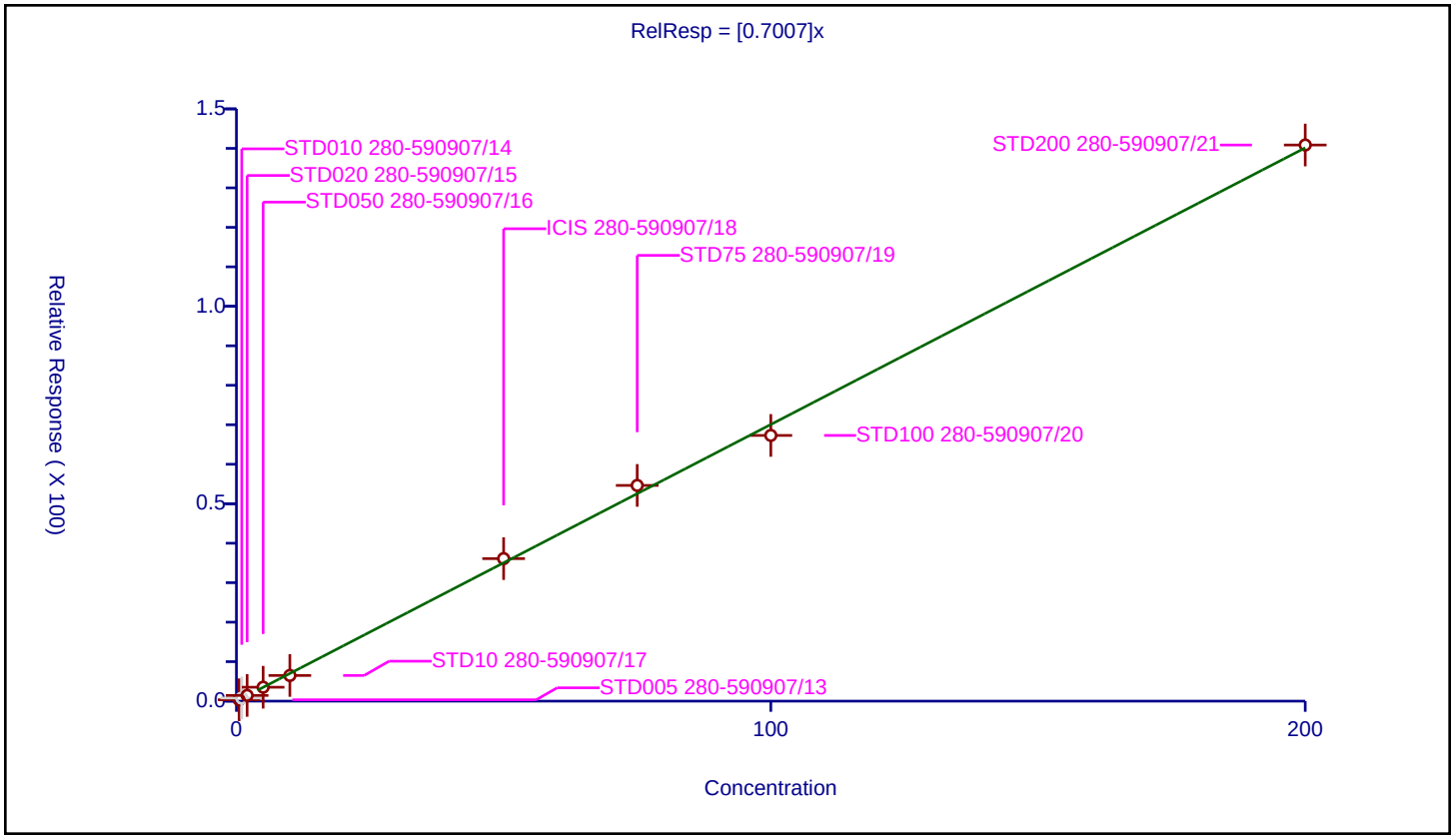
Curve Coefficients

Intercept:	0
Slope:	0.7007

Error Coefficients

Standard Error:	640000
Relative Standard Error:	3.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.350035	50.0	491951.0	0.70007	Y
2	STD010 280-590907/14	1.0	0.795328	50.0	472824.0	0.795328	N
3	STD020 280-590907/15	2.0	1.445407	50.0	473223.0	0.722704	Y
4	STD050 280-590907/16	5.0	3.524848	50.0	470460.0	0.70497	Y
5	STD10 280-590907/17	10.0	6.499801	50.0	488138.0	0.64998	Y
6	ICIS 280-590907/18	50.0	36.101354	50.0	482565.0	0.722027	Y
7	STD75 280-590907/19	75.0	54.634405	50.0	480245.0	0.728459	Y
8	STD100 280-590907/20	100.0	67.300603	50.0	495081.0	0.673006	Y
9	STD200 280-590907/21	200.0	140.851918	50.0	505084.0	0.70426	Y



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Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

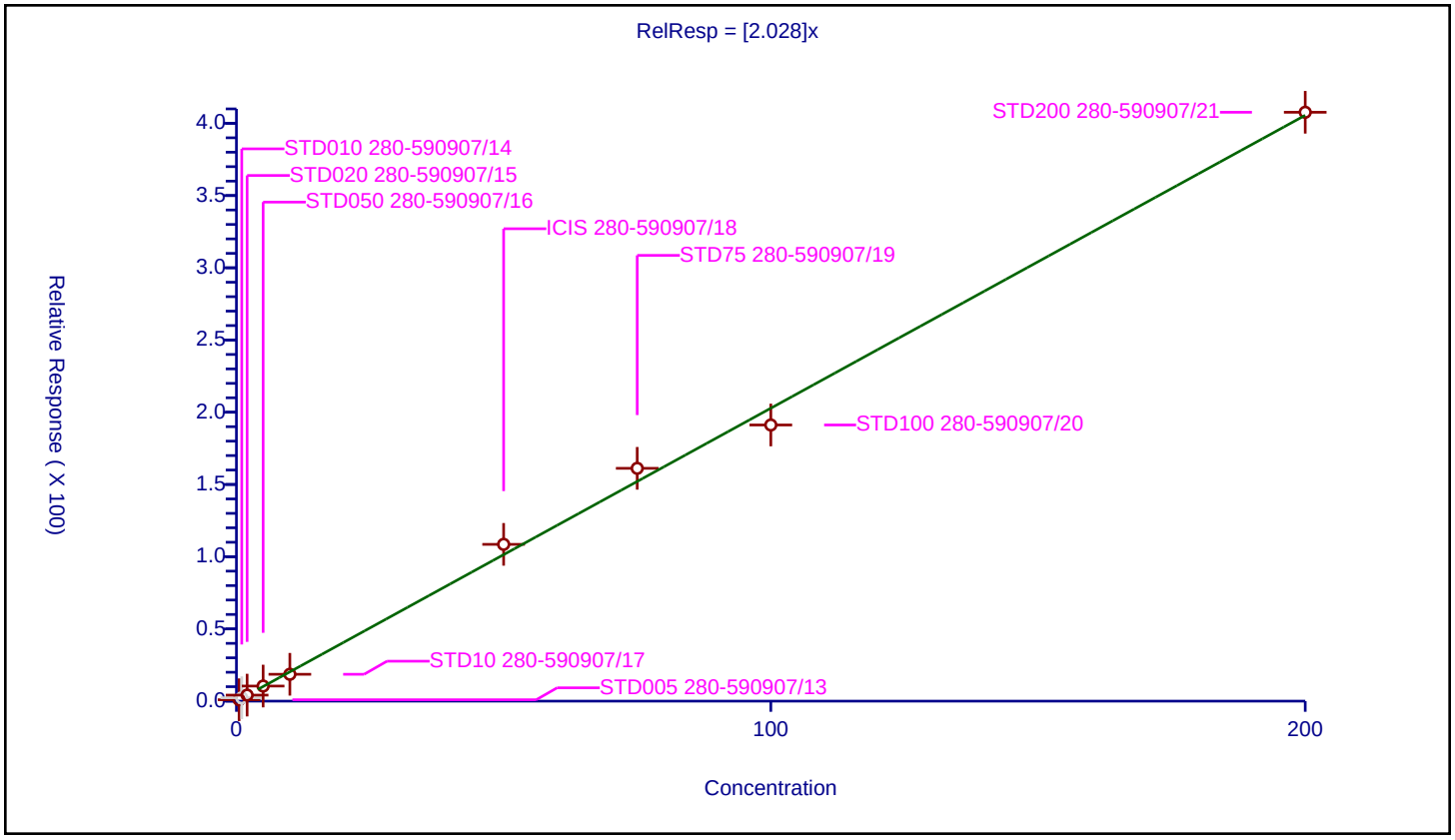
Curve Coefficients

Intercept:	0
Slope:	2.028

Error Coefficients

Standard Error:	1850000
Relative Standard Error:	5.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.958835	50.0	491951.0	1.917671	Y
2	STD010 280-590907/14	1.0	2.342098	50.0	472824.0	2.342098	N
3	STD020 280-590907/15	2.0	4.174036	50.0	473223.0	2.087018	Y
4	STD050 280-590907/16	5.0	10.441377	50.0	470460.0	2.088275	Y
5	STD10 280-590907/17	10.0	18.602936	50.0	488138.0	1.860294	Y
6	ICIS 280-590907/18	50.0	108.544963	50.0	482565.0	2.170899	Y
7	STD75 280-590907/19	75.0	161.18096	50.0	480245.0	2.149079	Y
8	STD100 280-590907/20	100.0	191.167304	50.0	495081.0	1.911673	Y
9	STD200 280-590907/21	200.0	407.663181	50.0	505084.0	2.038316	Y



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Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

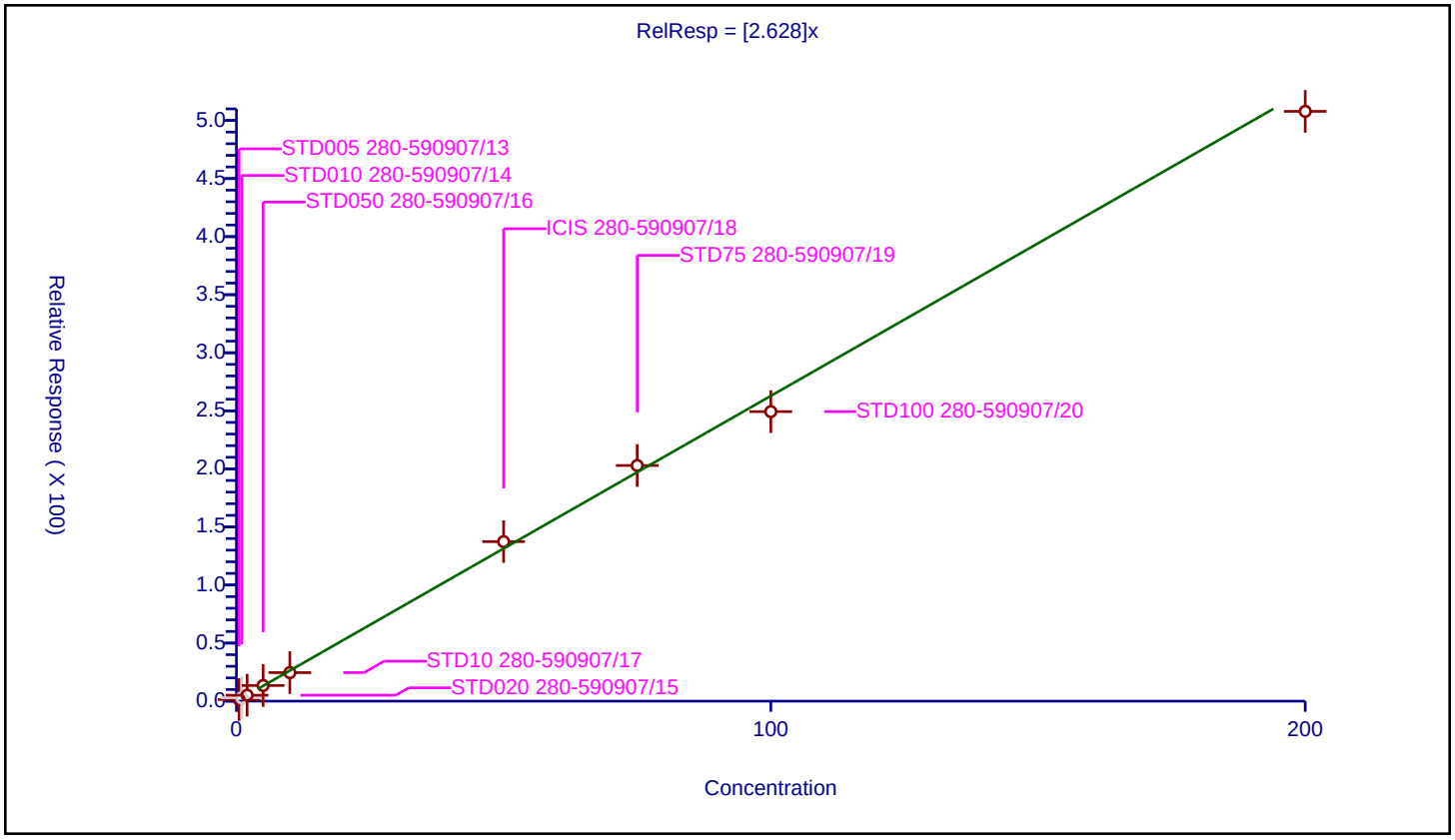
Curve Coefficients

Intercept:	0
Slope:	2.628

Error Coefficients

Standard Error:	2330000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	1.420263	50.0	491951.0	2.840527	Y
2	STD010 280-590907/14	1.0	2.950569	50.0	472824.0	2.950569	N
3	STD020 280-590907/15	2.0	5.095167	50.0	473223.0	2.547583	Y
4	STD050 280-590907/16	5.0	13.478723	50.0	470460.0	2.695745	Y
5	STD10 280-590907/17	10.0	24.578808	50.0	488138.0	2.457881	Y
6	ICIS 280-590907/18	50.0	137.374861	50.0	482565.0	2.747497	Y
7	STD75 280-590907/19	75.0	202.920072	50.0	480245.0	2.705601	Y
8	STD100 280-590907/20	100.0	249.3088	50.0	495081.0	2.493088	Y
9	STD200 280-590907/21	200.0	507.860178	50.0	505084.0	2.539301	Y



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Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

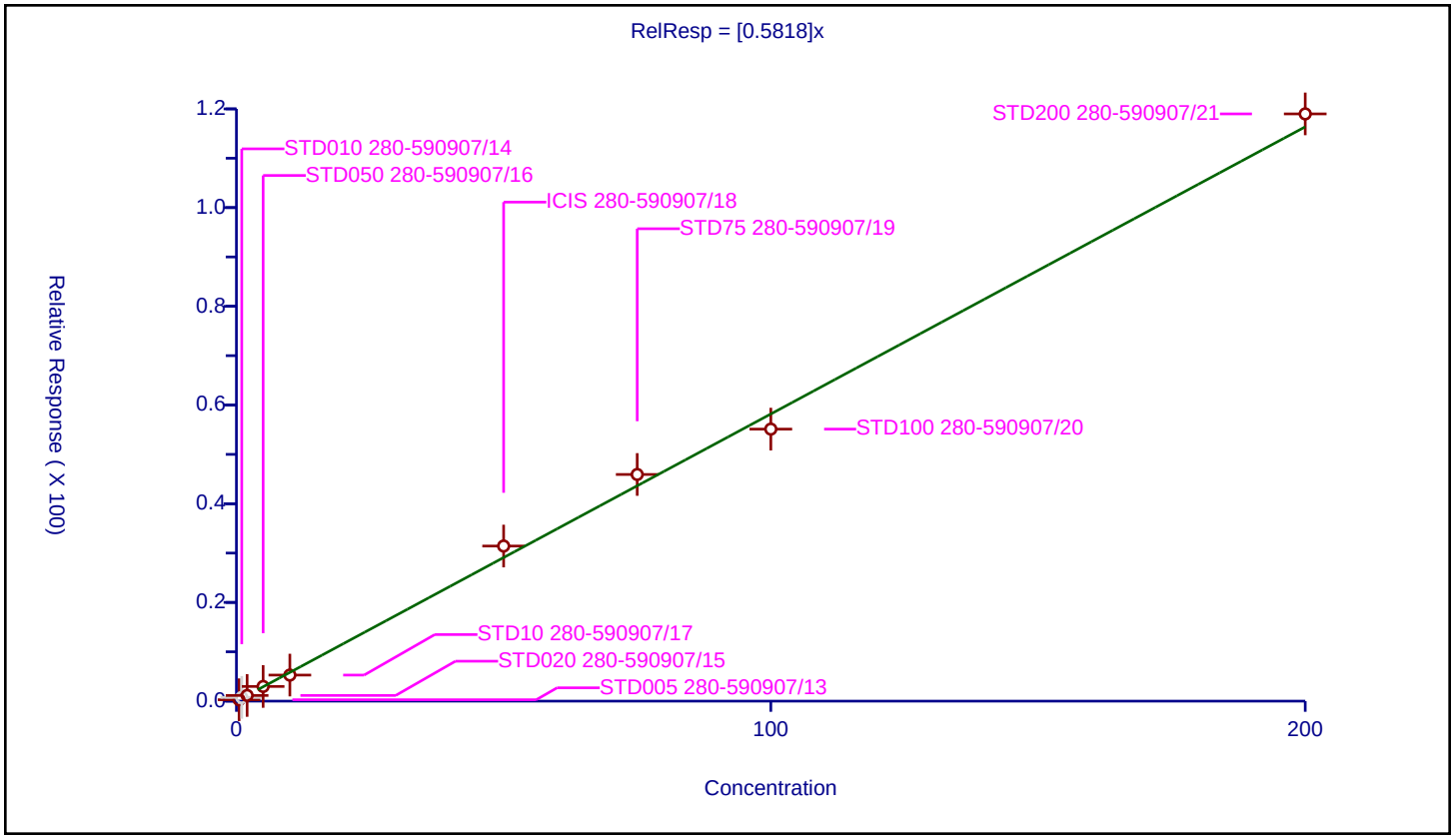
Curve Coefficients

Intercept:	0
Slope:	0.5818

Error Coefficients

Standard Error:	539000
Relative Standard Error:	5.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.28387	50.0	491951.0	0.567739	Y
2	STD010 280-590907/14	1.0	0.760431	50.0	472824.0	0.760431	N
3	STD020 280-590907/15	2.0	1.152417	50.0	473223.0	0.576208	Y
4	STD050 280-590907/16	5.0	2.976661	50.0	470460.0	0.595332	Y
5	STD10 280-590907/17	10.0	5.282215	50.0	488138.0	0.528222	Y
6	ICIS 280-590907/18	50.0	31.427787	50.0	482565.0	0.628556	Y
7	STD75 280-590907/19	75.0	45.925413	50.0	480245.0	0.612339	Y
8	STD100 280-590907/20	100.0	55.118354	50.0	495081.0	0.551184	Y
9	STD200 280-590907/21	200.0	118.986743	50.0	505084.0	0.594934	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

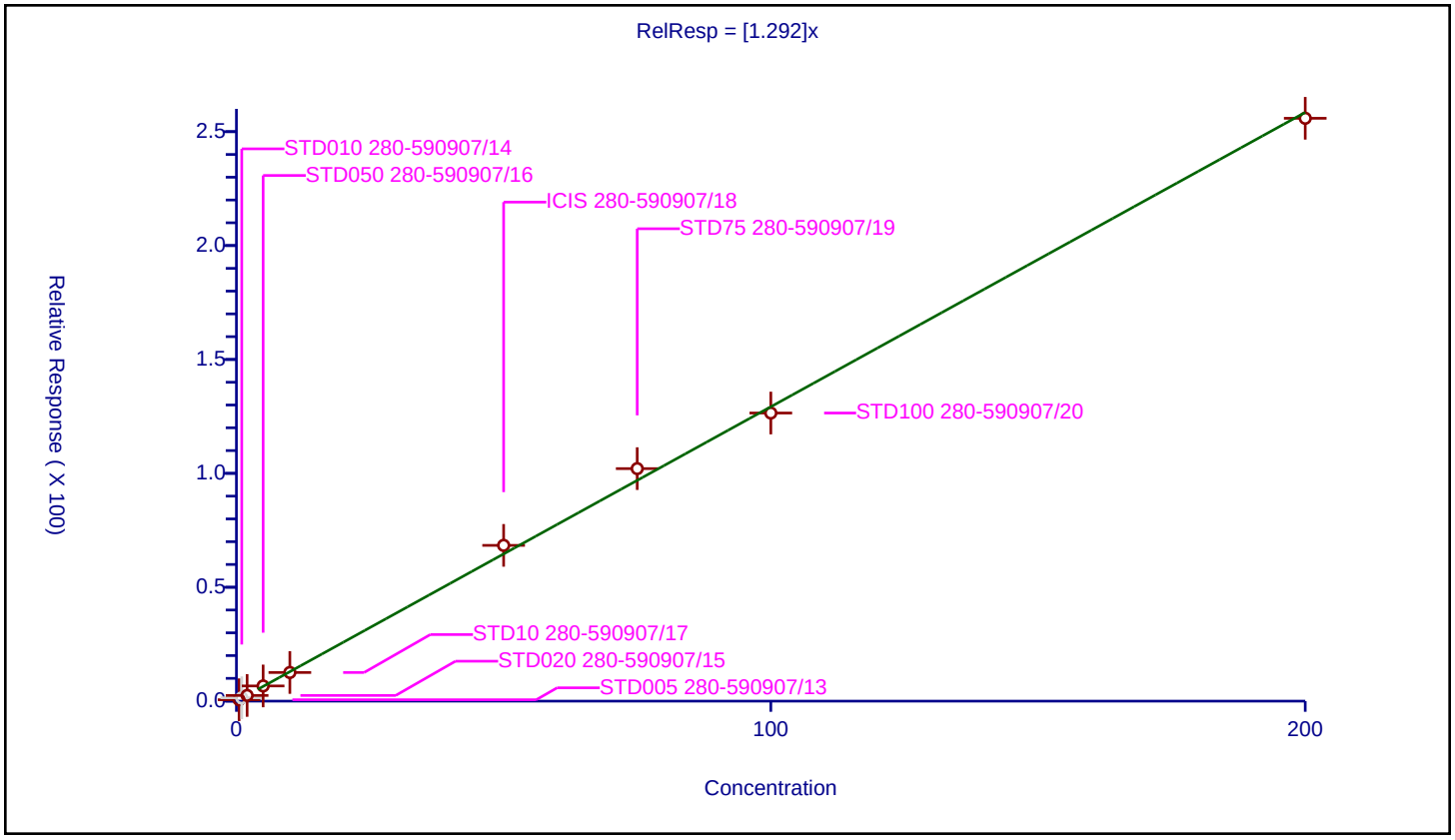
Curve Coefficients

Intercept:	0
Slope:	1.292

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.612663	50.0	491951.0	1.225325	Y
2	STD010 280-590907/14	1.0	1.483321	50.0	472824.0	1.483321	N
3	STD020 280-590907/15	2.0	2.495758	50.0	473223.0	1.247879	Y
4	STD050 280-590907/16	5.0	6.674956	50.0	470460.0	1.334991	Y
5	STD10 280-590907/17	10.0	12.572879	50.0	488138.0	1.257288	Y
6	ICIS 280-590907/18	50.0	68.383119	50.0	482565.0	1.367662	Y
7	STD75 280-590907/19	75.0	102.076544	50.0	480245.0	1.361021	Y
8	STD100 280-590907/20	100.0	126.484757	50.0	495081.0	1.264848	Y
9	STD200 280-590907/21	200.0	255.876448	50.0	505084.0	1.279382	Y



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Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

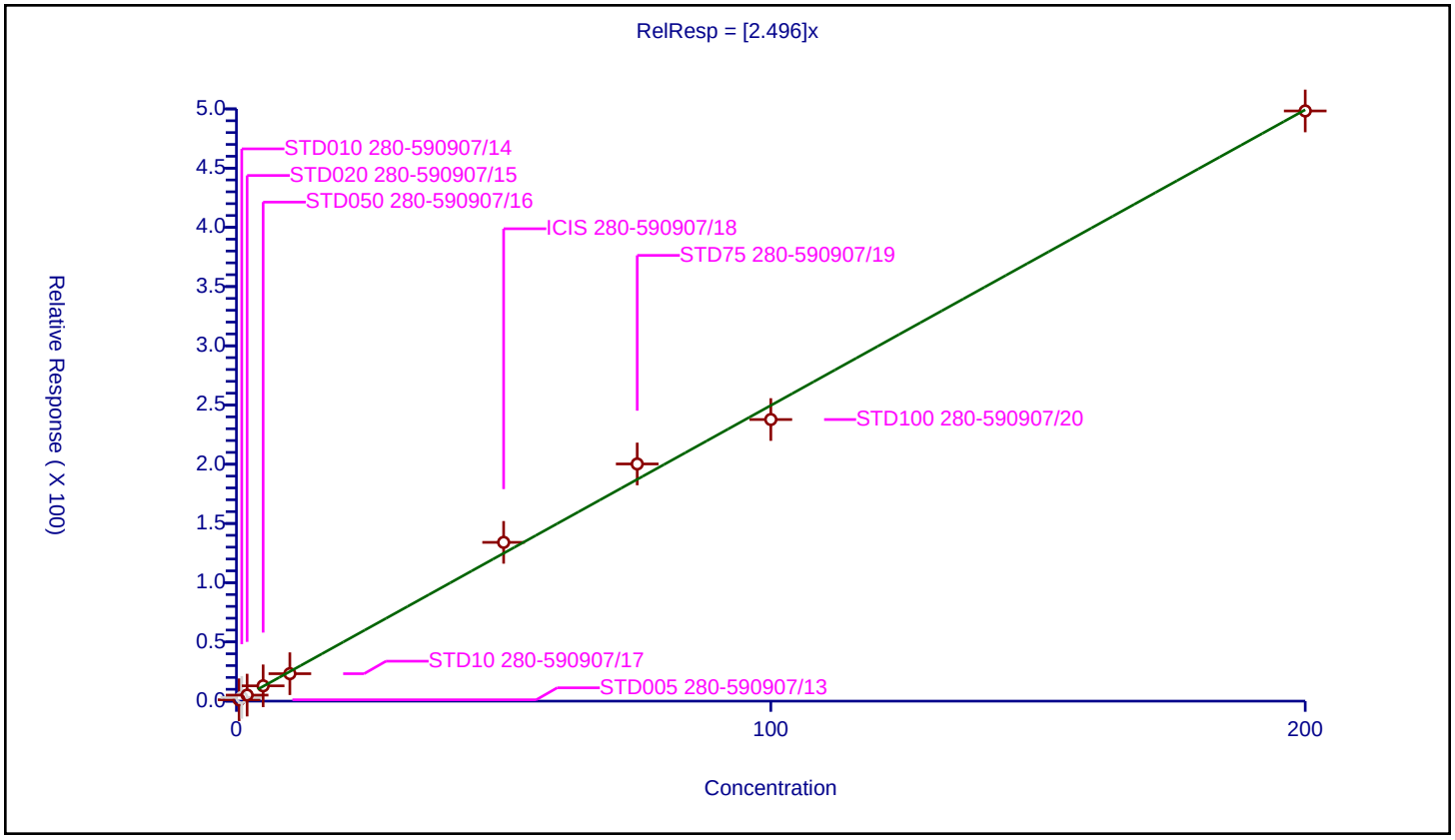
Curve Coefficients

Intercept:	0
Slope:	2.496

Error Coefficients

Standard Error:	2280000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	1.150928	50.0	491951.0	2.301855	Y
2	STD010 280-590907/14	1.0	3.132032	50.0	472824.0	3.132032	N
3	STD020 280-590907/15	2.0	5.100027	50.0	473223.0	2.550013	Y
4	STD050 280-590907/16	5.0	12.909918	50.0	470460.0	2.581984	Y
5	STD10 280-590907/17	10.0	23.176438	50.0	488138.0	2.317644	Y
6	ICIS 280-590907/18	50.0	134.058521	50.0	482565.0	2.68117	Y
7	STD75 280-590907/19	75.0	200.255182	50.0	480245.0	2.670069	Y
8	STD100 280-590907/20	100.0	237.747762	50.0	495081.0	2.377478	Y
9	STD200 280-590907/21	200.0	498.265437	50.0	505084.0	2.491327	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

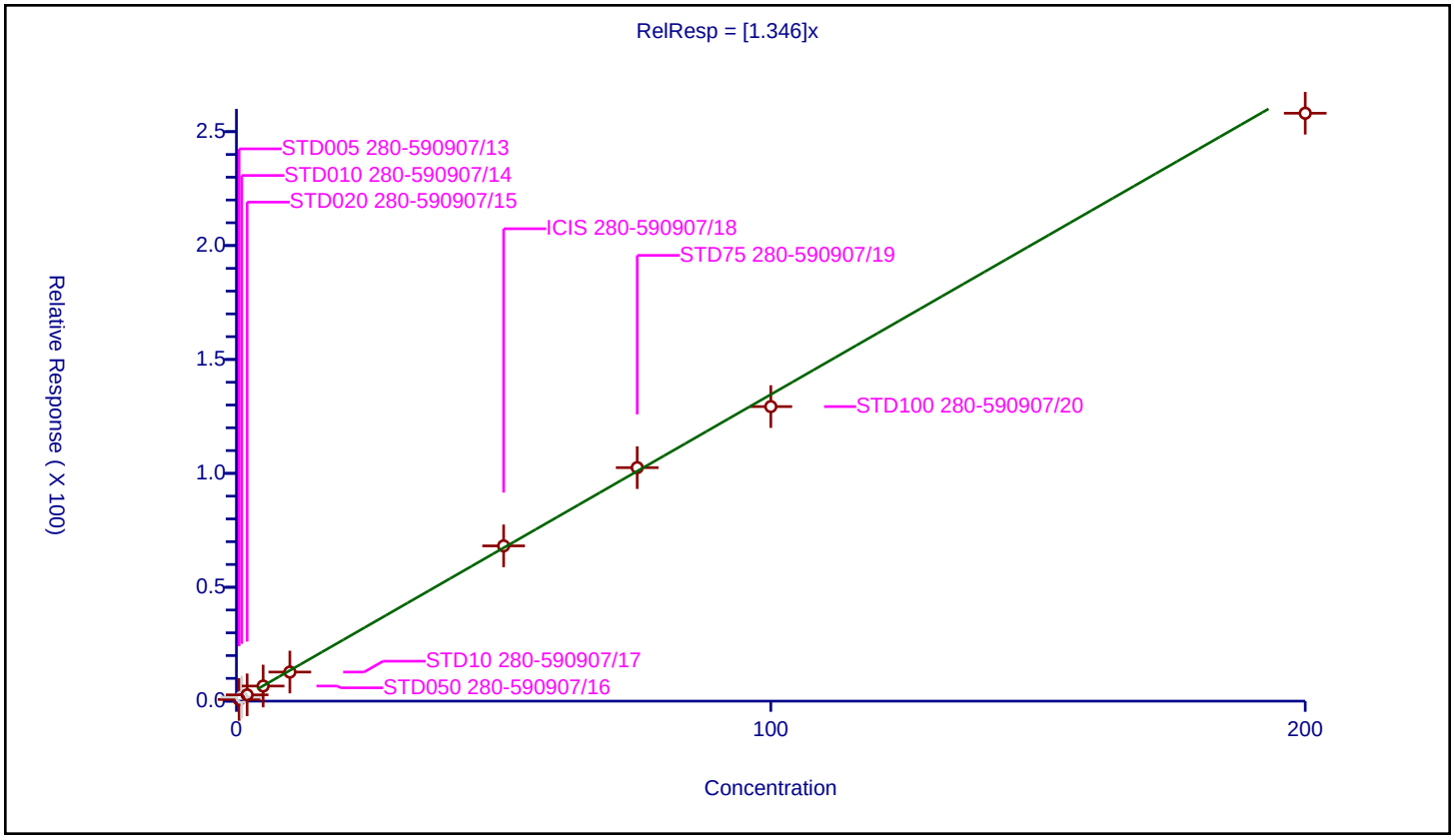
Curve Coefficients

Intercept:	0
Slope:	1.346

Error Coefficients

Standard Error:	1190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.736049	50.0	491951.0	1.472098	Y
2	STD010 280-590907/14	1.0	1.76313	50.0	472824.0	1.76313	N
3	STD020 280-590907/15	2.0	2.760327	50.0	473223.0	1.380163	Y
4	STD050 280-590907/16	5.0	6.632232	50.0	470460.0	1.326446	Y
5	STD10 280-590907/17	10.0	12.769647	50.0	488138.0	1.276965	Y
6	ICIS 280-590907/18	50.0	68.157968	50.0	482565.0	1.363159	Y
7	STD75 280-590907/19	75.0	102.516736	50.0	480245.0	1.36689	Y
8	STD100 280-590907/20	100.0	129.31187	50.0	495081.0	1.293119	Y
9	STD200 280-590907/21	200.0	258.092416	50.0	505084.0	1.290462	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

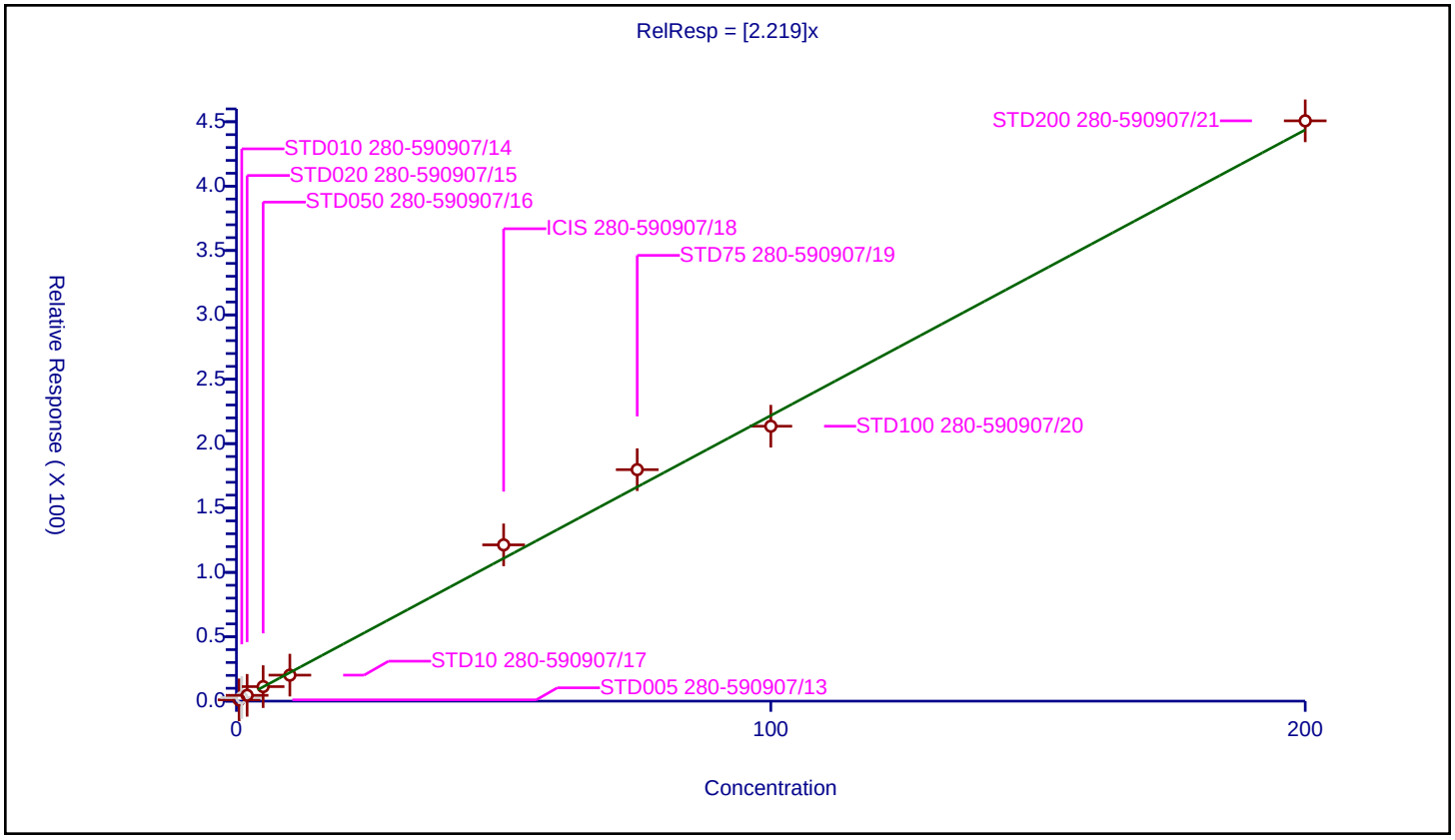
Curve Coefficients

Intercept:	0
Slope:	2.219

Error Coefficients

Standard Error:	2060000
Relative Standard Error:	7.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	1.001014	50.0	491951.0	2.002029	Y
2	STD010 280-590907/14	1.0	2.776086	50.0	472824.0	2.776086	N
3	STD020 280-590907/15	2.0	4.514151	50.0	473223.0	2.257075	Y
4	STD050 280-590907/16	5.0	11.275773	50.0	470460.0	2.255155	Y
5	STD10 280-590907/17	10.0	20.203406	50.0	488138.0	2.020341	Y
6	ICIS 280-590907/18	50.0	121.373805	50.0	482565.0	2.427476	Y
7	STD75 280-590907/19	75.0	179.788441	50.0	480245.0	2.397179	Y
8	STD100 280-590907/20	100.0	213.54647	50.0	495081.0	2.135465	Y
9	STD200 280-590907/21	200.0	450.73364	50.0	505084.0	2.253668	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

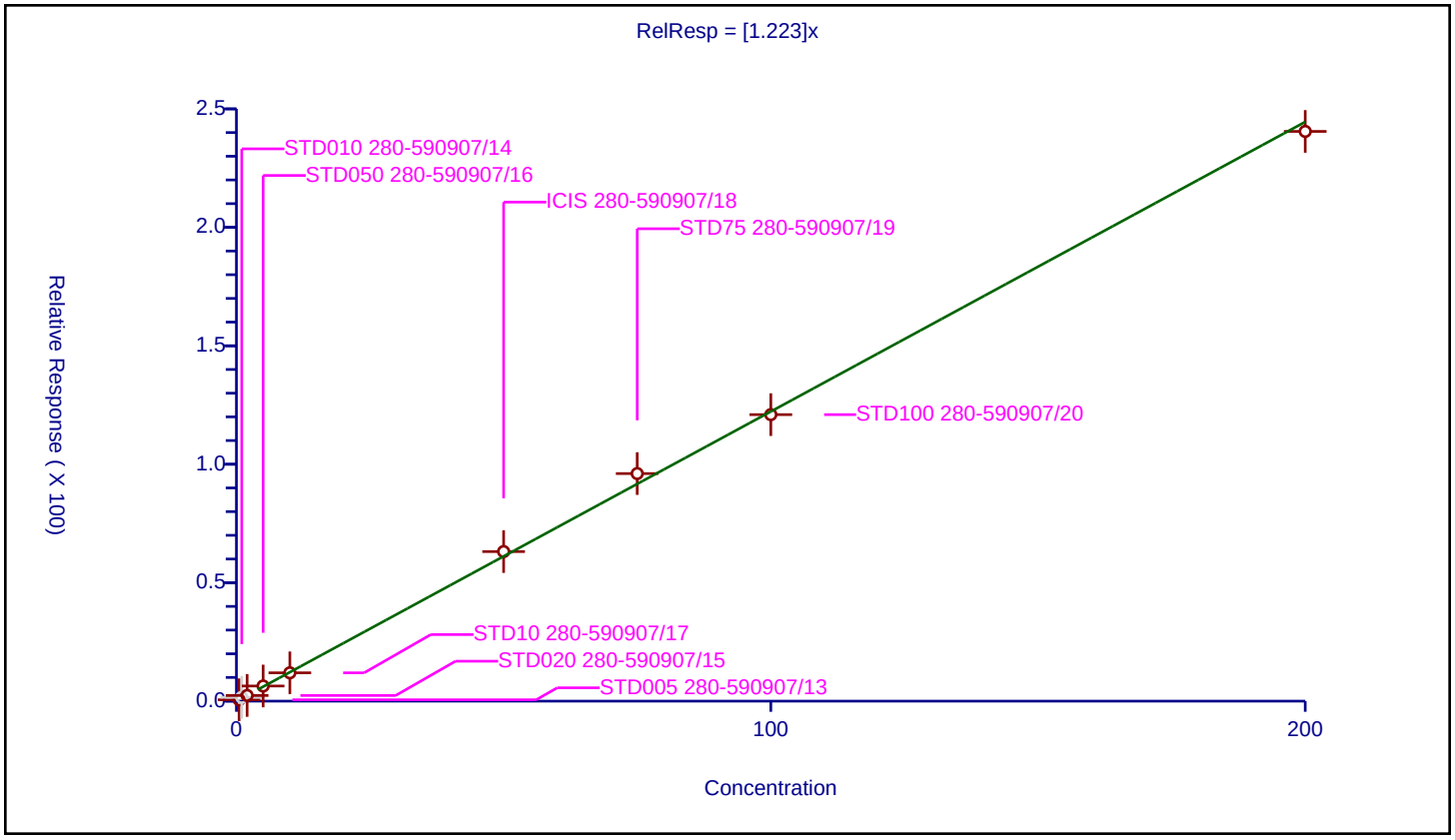
Curve Coefficients

Intercept:	0
Slope:	1.223

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.57709	50.0	491951.0	1.15418	Y
2	STD010 280-590907/14	1.0	1.611488	50.0	472824.0	1.611488	N
3	STD020 280-590907/15	2.0	2.390311	50.0	473223.0	1.195155	Y
4	STD050 280-590907/16	5.0	6.396718	50.0	470460.0	1.279344	Y
5	STD10 280-590907/17	10.0	11.959733	50.0	488138.0	1.195973	Y
6	ICIS 280-590907/18	50.0	63.136469	50.0	482565.0	1.262729	Y
7	STD75 280-590907/19	75.0	96.065238	50.0	480245.0	1.28087	Y
8	STD100 280-590907/20	100.0	120.940614	50.0	495081.0	1.209406	Y
9	STD200 280-590907/21	200.0	240.490295	50.0	505084.0	1.202451	Y



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Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

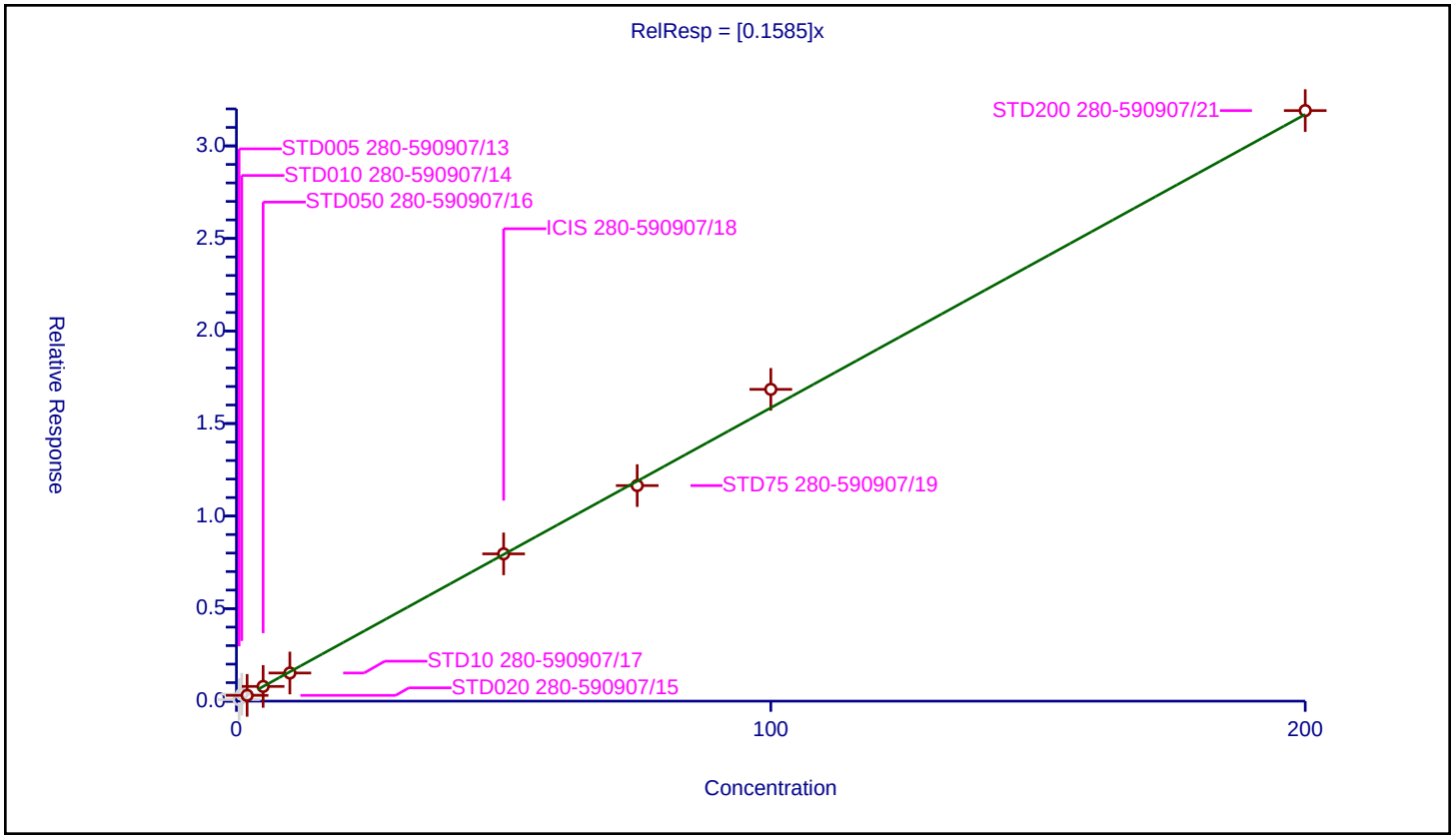
Curve Coefficients

Intercept:	0
Slope:	0.1585

Error Coefficients

Standard Error:	158000
Relative Standard Error:	3.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.082325	50.0	491951.0	0.164651	N
2	STD010 280-590907/14	1.0	0.373289	50.0	472824.0	0.373289	N
3	STD020 280-590907/15	2.0	0.312009	50.0	473223.0	0.156005	Y
4	STD050 280-590907/16	5.0	0.794967	50.0	470460.0	0.158993	Y
5	STD10 280-590907/17	10.0	1.520881	50.0	488138.0	0.152088	Y
6	ICIS 280-590907/18	50.0	7.957374	50.0	482565.0	0.159147	Y
7	STD75 280-590907/19	75.0	11.64666	50.0	480245.0	0.155289	Y
8	STD100 280-590907/20	100.0	16.846435	50.0	495081.0	0.168464	Y
9	STD200 280-590907/21	200.0	31.908257	50.0	505084.0	0.159541	Y



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Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

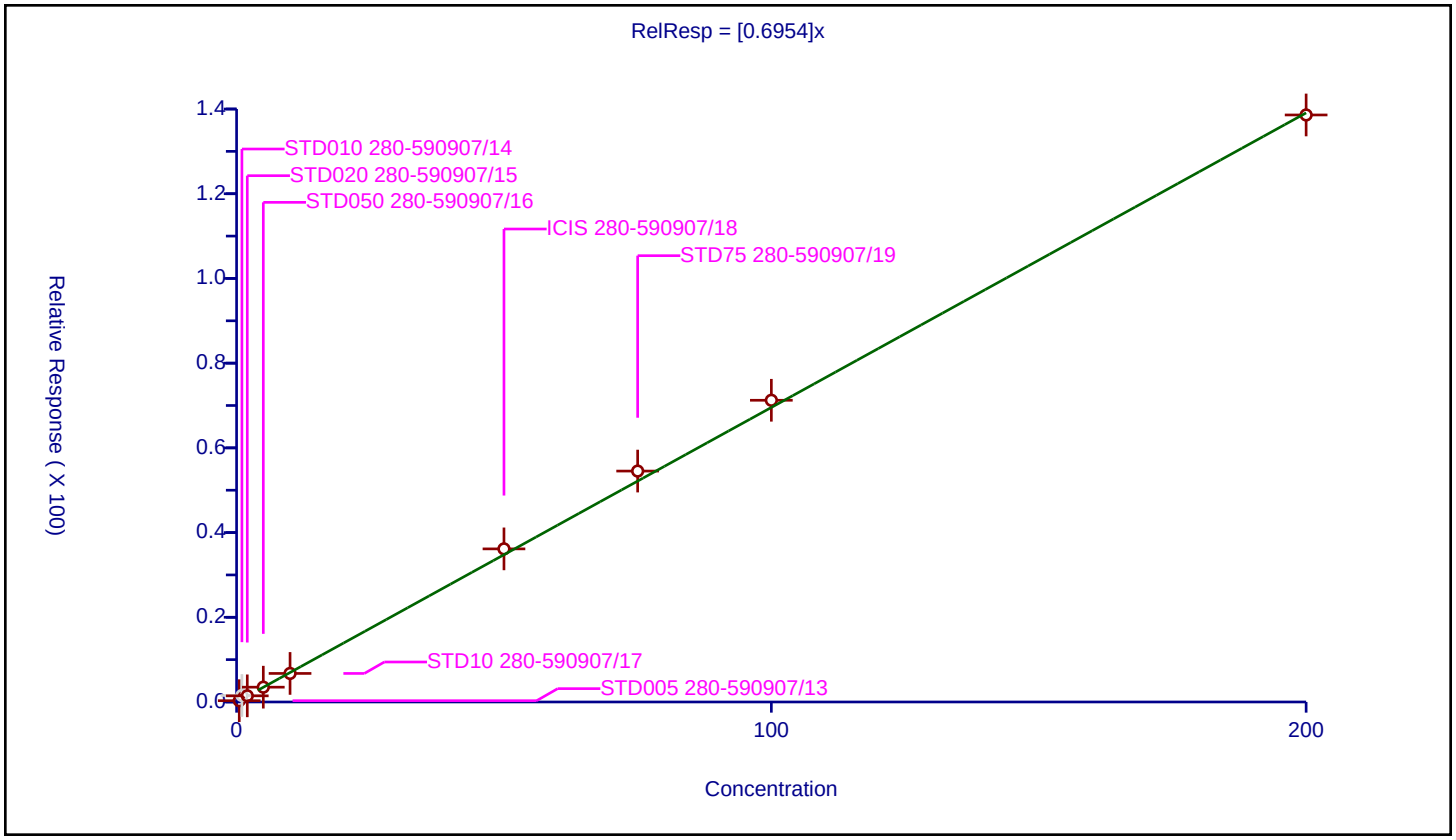
Curve Coefficients

Intercept:	0
Slope:	0.6954

Error Coefficients

Standard Error:	639000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.303486	50.0	491951.0	0.606971	Y
2	STD010 280-590907/14	1.0	1.531331	50.0	472824.0	1.531331	N
3	STD020 280-590907/15	2.0	1.454283	50.0	473223.0	0.727141	Y
4	STD050 280-590907/16	5.0	3.500298	50.0	470460.0	0.70006	Y
5	STD10 280-590907/17	10.0	6.741434	50.0	488138.0	0.674143	Y
6	ICIS 280-590907/18	50.0	36.147358	50.0	482565.0	0.722947	Y
7	STD75 280-590907/19	75.0	54.518423	50.0	480245.0	0.726912	Y
8	STD100 280-590907/20	100.0	71.23602	50.0	495081.0	0.71236	Y
9	STD200 280-590907/21	200.0	138.594867	50.0	505084.0	0.692974	Y



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Calibration / Hexachlorobutadiene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

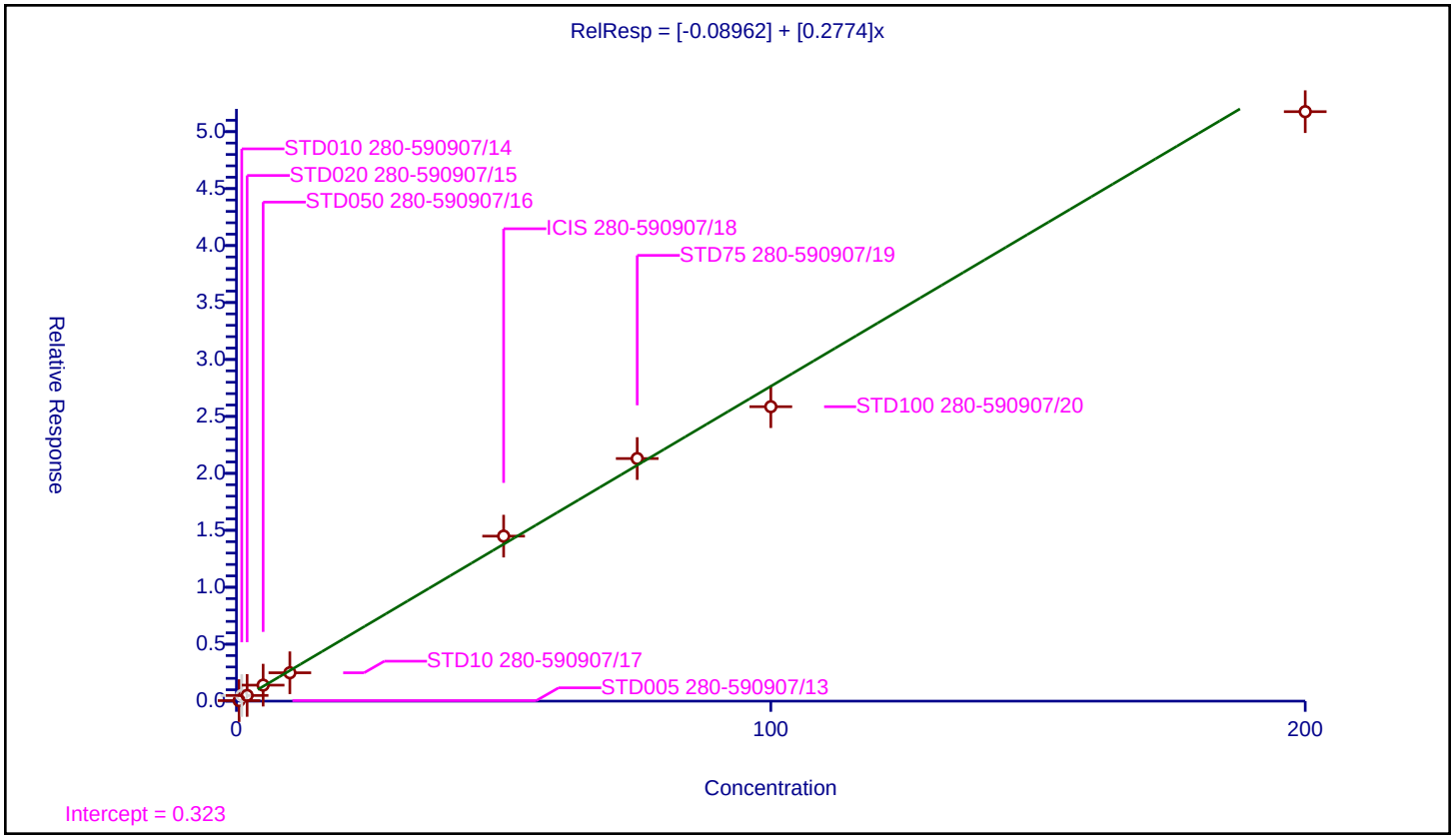
Curve Coefficients

Intercept:	-0.08962
Slope:	0.2774

Error Coefficients

Standard Error:	259000
Relative Standard Error:	6.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.046244	50.0	491951.0	0.092489	Y
2	STD010 280-590907/14	1.0	0.492678	50.0	472824.0	0.492678	N
3	STD020 280-590907/15	2.0	0.500504	50.0	473223.0	0.250252	Y
4	STD050 280-590907/16	5.0	1.404158	50.0	470460.0	0.280832	Y
5	STD10 280-590907/17	10.0	2.490587	50.0	488138.0	0.249059	Y
6	ICIS 280-590907/18	50.0	14.48924	50.0	482565.0	0.289785	Y
7	STD75 280-590907/19	75.0	21.300794	50.0	480245.0	0.284011	Y
8	STD100 280-590907/20	100.0	25.85284	50.0	495081.0	0.258528	Y
9	STD200 280-590907/21	200.0	51.756342	50.0	505084.0	0.258782	Y



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Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

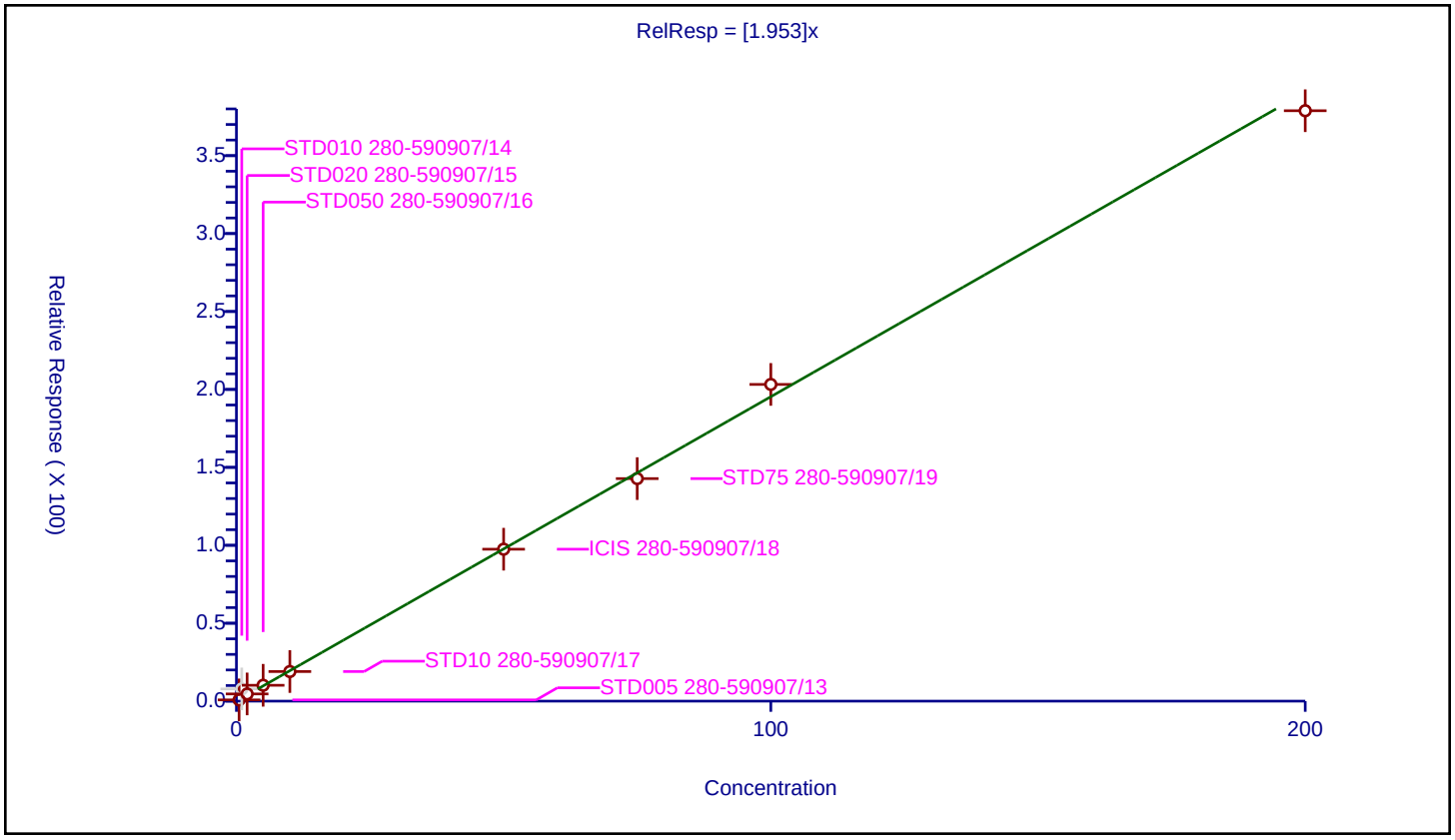
Curve Coefficients

Intercept:	0
Slope:	1.953

Error Coefficients

Standard Error:	1750000
Relative Standard Error:	10.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.801503	50.0	491951.0	1.603005	Y
2	STD010 280-590907/14	1.0	7.835474	50.0	472824.0	7.835474	N
3	STD020 280-590907/15	2.0	4.615689	50.0	473223.0	2.307844	Y
4	STD050 280-590907/16	5.0	10.182694	50.0	470460.0	2.036539	Y
5	STD10 280-590907/17	10.0	18.998418	50.0	488138.0	1.899842	Y
6	ICIS 280-590907/18	50.0	97.491115	50.0	482565.0	1.949822	Y
7	STD75 280-590907/19	75.0	142.779623	50.0	480245.0	1.903728	Y
8	STD100 280-590907/20	100.0	203.213919	50.0	495081.0	2.032139	Y
9	STD200 280-590907/21	200.0	378.814712	50.0	505084.0	1.894074	Y



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Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

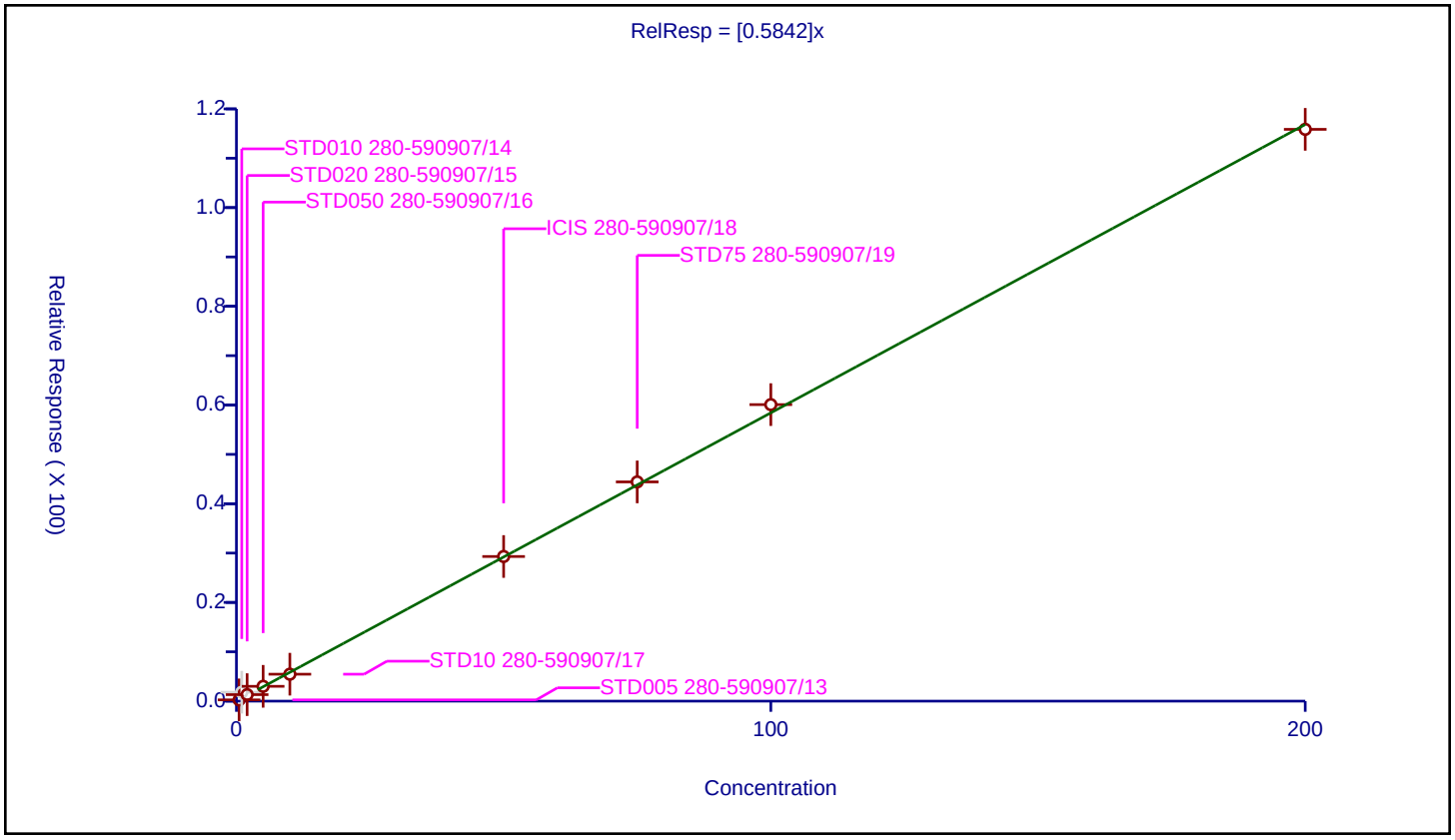
Curve Coefficients

Intercept:	0
Slope:	0.5842

Error Coefficients

Standard Error:	533000
Relative Standard Error:	7.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD005 280-590907/13	0.5	0.253582	50.0	491951.0	0.507164	Y
2	STD010 280-590907/14	1.0	1.810082	50.0	472824.0	1.810082	N
3	STD020 280-590907/15	2.0	1.321153	50.0	473223.0	0.660577	Y
4	STD050 280-590907/16	5.0	3.005569	50.0	470460.0	0.601114	Y
5	STD10 280-590907/17	10.0	5.459829	50.0	488138.0	0.545983	Y
6	ICIS 280-590907/18	50.0	29.306311	50.0	482565.0	0.586126	Y
7	STD75 280-590907/19	75.0	44.419931	50.0	480245.0	0.592266	Y
8	STD100 280-590907/20	100.0	60.08027	50.0	495081.0	0.600803	Y
9	STD200 280-590907/21	200.0	115.854888	50.0	505084.0	0.579274	Y



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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 Calibration End Date: 10/22/2022 17:23 Calibration ID: 72174

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-590907/23	X43673.D
Level 2	STD020 280-590907/24	X43674.D
Level 3	STD050 280-590907/25	X43675.D
Level 4	STD10 280-590907/26	X43676.D
Level 5	STD50 280-590907/27	X43677.D
Level 6	STD100 280-590907/28	X43678.D
Level 7	STD200 280-590907/29	X43679.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol	0.0032 0.0026	0.0026 0.0023	0.0029	0.0025	0.0025	Ave		0.0026				10.6		15.0			
Isopropyl alcohol	0.0178 0.0147	0.0171 0.0142	0.0159	0.0150	0.0139	Ave		0.0155				9.6		15.0			
Acetonitrile	0.0357 0.0260	0.0313 0.0247	0.0279	0.0254	0.0246	Ave		0.0279				14.8		15.0			
Isopropyl ether	0.1986 0.1823	0.1972 0.1737	0.1904	0.1822	0.1823	Ave		0.1867				4.9		15.0			
Chloroprene	0.3174 0.3430	0.2769 0.3217	0.3500	0.3482	0.3347	Ave		0.3274				7.8		15.0			
Tert-butyl ethyl ether	0.6896 0.6362	0.6424 0.6075	0.6570	0.6470	0.6461	Ave		0.6465				3.8		15.0			
Ethyl acetate	0.2311 0.1772	0.2104 0.1690	0.1935	0.1861	0.1868	Ave		0.1934				10.9		15.0			
Propionitrile	0.0348 0.0301	0.0312 0.0288	0.0318	0.0306	0.0301	Ave		0.0311				6.1		15.0			
Methacrylonitrile	0.1385 0.1142	0.1269 0.1079	0.1219	0.1219	0.1200	Ave		0.1216				7.9		15.0			
Tert-amyl methyl ether	0.6631 0.6037	0.6257 0.5760	0.6386	0.6432	0.6205	Ave		0.6244				4.5		15.0			
n-Butanol	0.0046 0.0071	0.0060 0.0066	0.0060	0.0060	0.0067	Ave		0.0061				13.1		15.0			
Methyl methacrylate	0.0714 0.0640	0.0656 0.0612	0.0657	0.0665	0.0678	Ave		0.0660				4.8		15.0			
2-Nitropropane	0.0833 0.0644	0.0730 0.0637	0.0698	0.0672	0.0684	Ave		0.0700				9.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 Calibration End Date: 10/22/2022 17:23 Calibration ID: 72174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-1,4-Dichloro-2-butene	0.2016 0.1913	0.1918 0.2163	0.1942	0.1866	0.1968	Ave		0.1969				5.0		15.0			
1,2,3-Trimethylbenzene	2.8314 2.6571	2.6423 2.5044	2.8365	2.7578	2.7500	Ave		2.7114				4.4		15.0			
1,3,5-Trichlorobenzene	0.8958 0.8497	0.7739 0.8025	0.8734	0.8509	0.8566	Ave		0.8433				4.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 | Calibration End Date: 10/22/2022 17:23 | Calibration ID: 72174

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-590907/23	X43673.D
Level 2	STD020 280-590907/24	X43674.D
Level 3	STD050 280-590907/25	X43675.D
Level 4	STD10 280-590907/26	X43676.D
Level 5	STD50 280-590907/27	X43677.D
Level 6	STD100 280-590907/28	X43678.D
Level 7	STD200 280-590907/29	X43679.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethanol	FB	Ave	4673 399032	7779 718910	21619	37444	193816	60.0 6000	120 12000	300	600	3000
Isopropyl alcohol	FB	Ave	4391 372304	8539 733137	19965	37978	179278	10.0 1000	20.0 2000	50.0	100	500
Acetonitrile	FB	Ave	8803 660703	15619 1273959	34977	64393	317384	10.0 1000	20.0 2000	50.0	100	500
Isopropyl ether	FB	Ave	4904 463376	9855 894974	23877	46219	235392	1.00 100	2.00 200	5.00	10.0	50.0
Chloroprene	FB	Ave	7835 871601	13838 1657553	43897	88324	432283	1.00 100	2.00 200	5.00	10.0	50.0
Tert-butyl ethyl ether	FB	Ave	17025 1616686	32102 3130196	82404	164107	834301	1.00 100	2.00 200	5.00	10.0	50.0
Ethyl acetate	FB	Ave	11412 900674	21024 1742173	48531	94394	482374	2.00 200	4.00 400	10.0	20.0	100
Propionitrile	FB	Ave	8599 764517	15584 1484489	39918	77594	389290	10.0 1000	20.0 2000	50.0	100	500
Methacrylonitrile	FB	Ave	34182 2902366	63429 5559833	152942	309281	1549638	10.0 1000	20.0 2000	50.0	100	500
Tert-amyl methyl ether	FB	Ave	16370 1534136	31268 2968159	80101	163148	801237	1.00 100	2.00 200	5.00	10.0	50.0
n-Butanol	FB	Ave	2828 450075	7446 848596	18679	38349	215752	25.0 2500	50.0 5000	125	250	1250
Methyl methacrylate	FB	Ave	3527 325472	6557 630700	16474	33734	175199	2.00 200	4.00 400	10.0	20.0	100
2-Nitropropane	FB	Ave	4115 327521	7296 656258	17515	34115	176598	2.00 200	4.00 400	10.0	20.0	100
cis-1,4-Dichloro-2-butene	DCBd4	Ave	3716 384763	7080 889057	18102	35175	186298	2.00 200	4.00 400	10.0	20.0	100
1,2,3-Trimethylbenzene	DCBd4	Ave	26094 2672462	48769 5146842	132233	259975	1301729	1.00 100	2.00 200	5.00	10.0	50.0
1,3,5-Trichlorobenzene	DCBd4	Ave	8256	14284	40714	80216	405455	1.00	2.00	5.00	10.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 Calibration End Date: 10/22/2022 17:23 Calibration ID: 72174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			854593	1649274				100	200			

Curve Type Legend:
Ave = Average ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43673.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Oct-2022 15:19:30 ALS Bottle#: 12 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:03 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1234372	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	284993	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	460800	50.0	50.0	
13 Ethylene oxide	43	2.146	2.210	-0.064	81	2305	100.0	0	
18 Ethanol	45	2.647	2.654	-0.007	94	4673	60.0	71.5	
20 Propene oxide	58	2.682	2.661	0.021	9	109	100.0	0	
25 Isopropyl alcohol	45	3.033	3.040	-0.007	97	4391	10.0	11.5	
28 Acetonitrile	41	3.161	3.161	0.000	100	8803	10.0	12.8	
41 Isopropyl ether	87	3.812	3.805	0.007	96	4904	1.00	1.06	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	7835	1.00	0.9693	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	96	17025	1.00	1.07	
46 Ethyl acetate	43	4.205	4.198	0.007	97	11412	2.00	2.39	
49 Propionitrile	54	4.234	4.234	0.000	98	8599	10.0	11.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	91	34182	10.0	11.4	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	92	16370	1.00	1.06	
66 n-Butanol	56	5.206	5.199	0.007	88	2828	25.0	18.7	
71 Methyl methacrylate	100	5.542	5.542	0.000	92	3527	2.00	2.16	
75 2-Nitropropane	41	5.900	5.900	0.000	96	4115	2.00	2.38	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	85	1528	2.00	2.56	a
98 cis-1,4-Dichloro-2-butene	53	8.545	8.538	0.007	0	3716	2.00	2.05	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	-0.001	98	26094	1.00	1.04	
119 1,3,5-Trichlorobenzene	180	11.141	11.134	0.007	94	8256	1.00	1.06	
166 Ethyl acrylate	55		0.000				ND	ND	
165 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	1.00	Units: uL
MV-Supp A_00073	Amount Added:	1.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

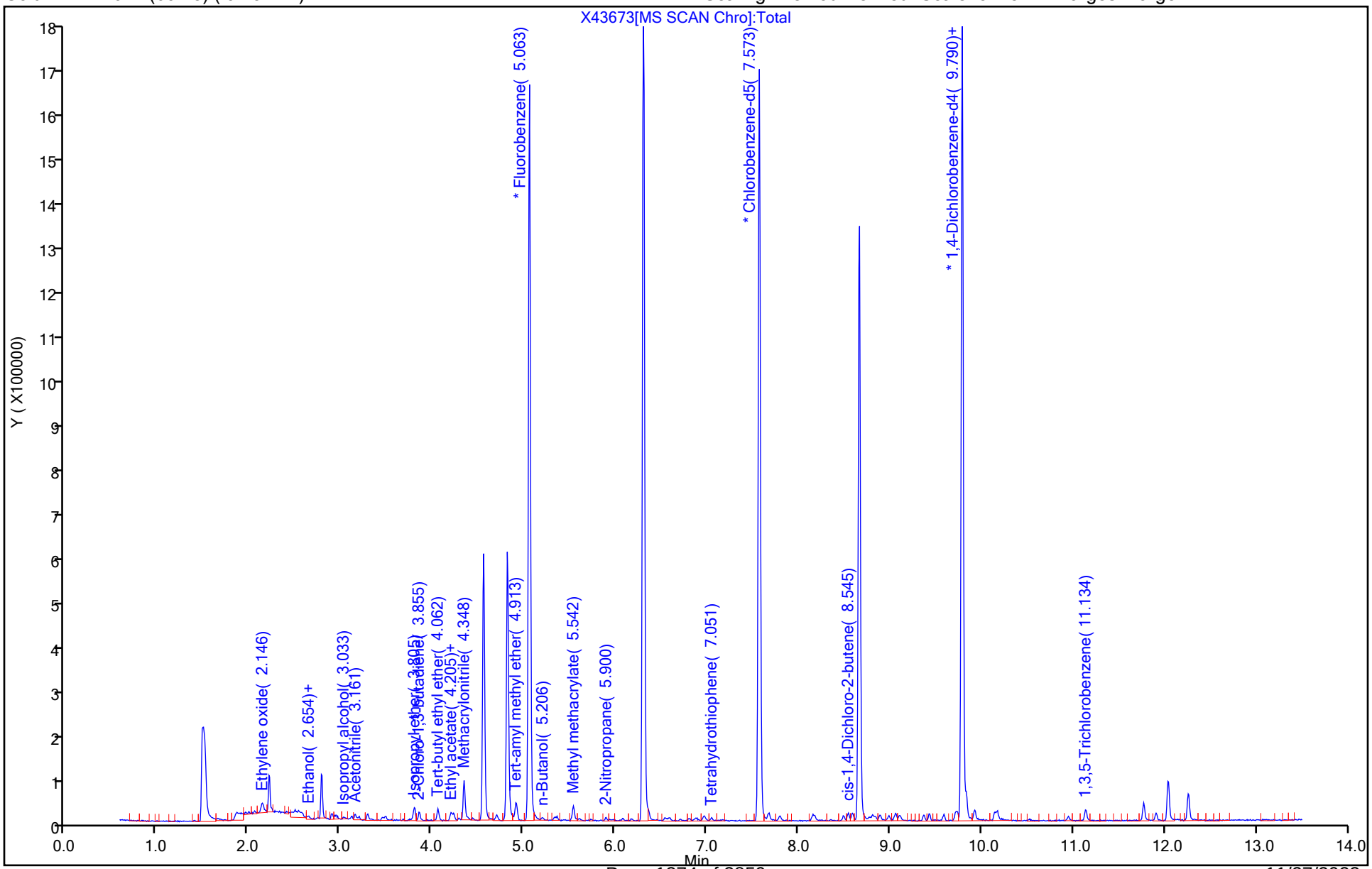
Report Date: 23-Oct-2022 12:17:03 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43673.D

Injection Date:	22-Oct-2022 15:19:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD010			Worklist Smp#:	23
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

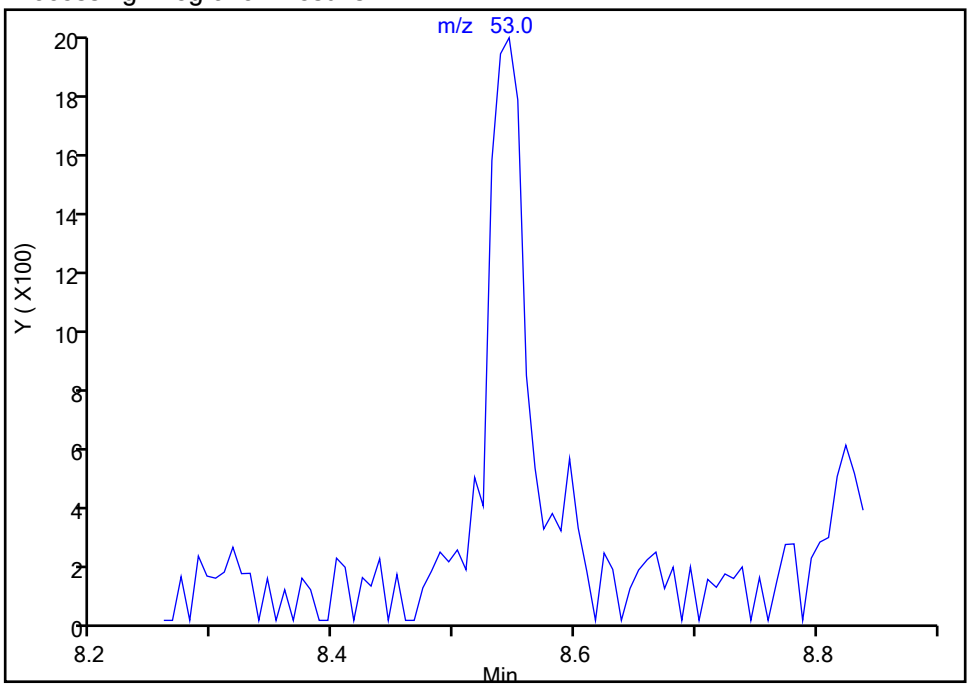
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43673.D
Injection Date: 22-Oct-2022 15:19:30 Instrument ID: VMS_X4
Lims ID: STD010
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 12 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

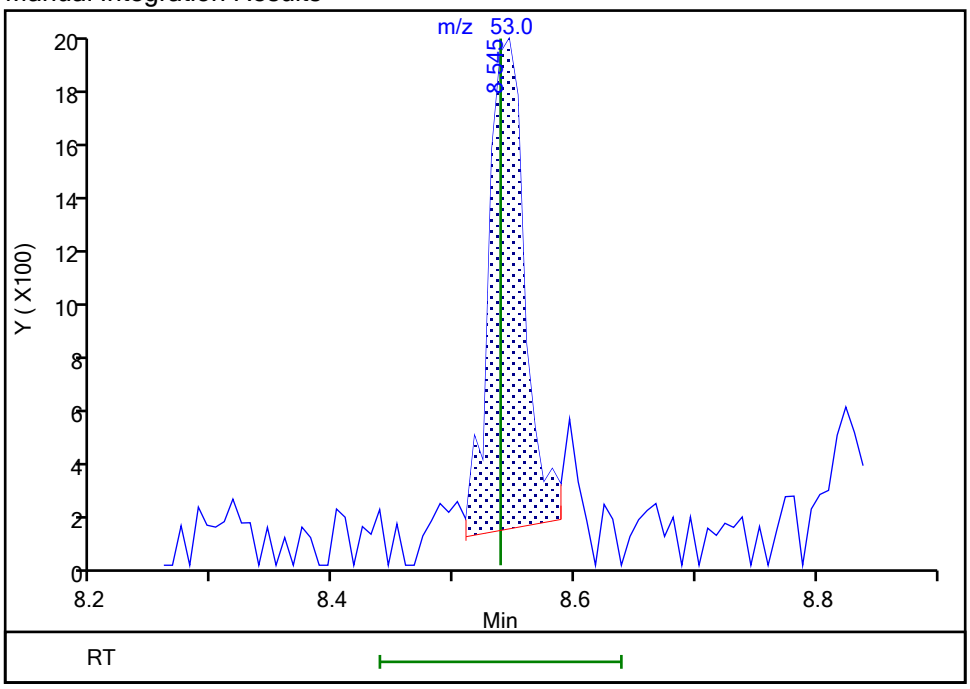
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 3716
Amount: 2.047520
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:26
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43674.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Oct-2022 15:40:30 ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:04 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1249318	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	287204	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	461417	50.0	50.0	
13 Ethylene oxide	43	2.139	2.210	-0.071	77	2101	200.0	0	
18 Ethanol	45	2.647	2.654	-0.007	99	7779	120.0	117.6	
20 Propene oxide	58	2.654	2.661	-0.007	23	163	200.0	0	
25 Isopropyl alcohol	45	3.033	3.040	-0.007	96	8539	20.0	22.0	
28 Acetonitrile	41	3.161	3.161	0.000	99	15619	20.0	22.4	
41 Isopropyl ether	87	3.805	3.805	0.000	92	9855	2.00	2.11	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	13838	2.00	1.69	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	96	32102	2.00	1.99	
46 Ethyl acetate	43	4.205	4.198	0.007	99	21024	4.00	4.35	
49 Propionitrile	54	4.234	4.234	0.000	98	15584	20.0	20.1	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	63429	20.0	20.9	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	92	31268	2.00	2.00	
66 n-Butanol	56	5.199	5.199	0.000	89	7446	50.0	48.6	
71 Methyl methacrylate	100	5.542	5.542	0.000	87	6557	4.00	3.97	
75 2-Nitropropane	41	5.900	5.900	0.000	98	7296	4.00	4.17	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	81	2459	4.00	4.09	a
98 cis-1,4-Dichloro-2-butene	53	8.546	8.538	0.008	0	7080	4.00	3.90	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	48769	2.00	1.95	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	95	14284	2.00	1.84	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	2.00	Units: uL
MV-Supp A_00073	Amount Added:	2.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

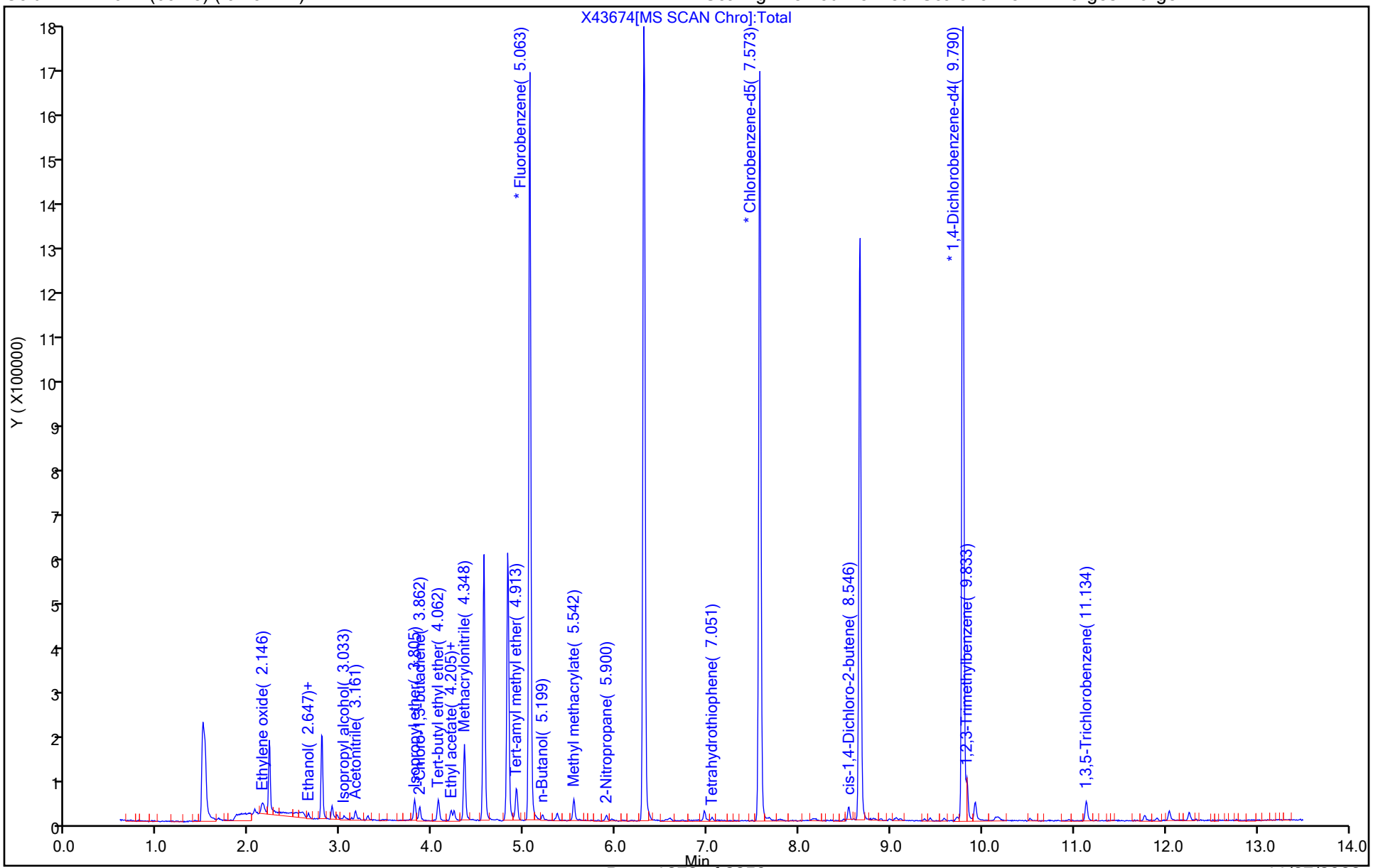
Report Date: 23-Oct-2022 12:17:04 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43674.D

Injection Date:	22-Oct-2022 15:40:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD020			Worklist Smp#:	24
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

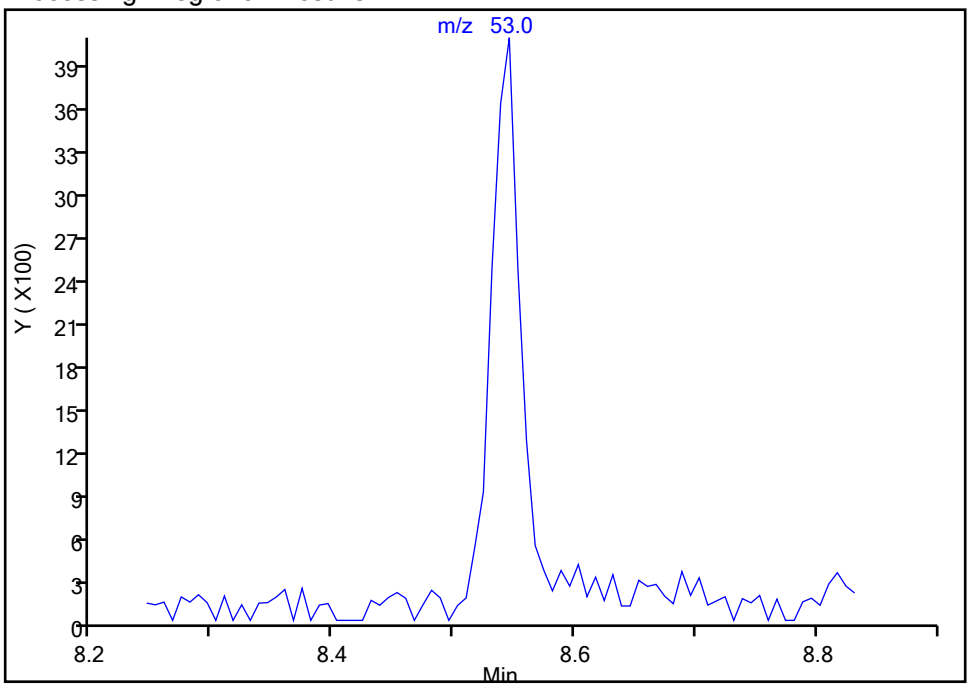
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43674.D
Injection Date: 22-Oct-2022 15:40:30 Instrument ID: VMS_X4
Lims ID: STD020
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

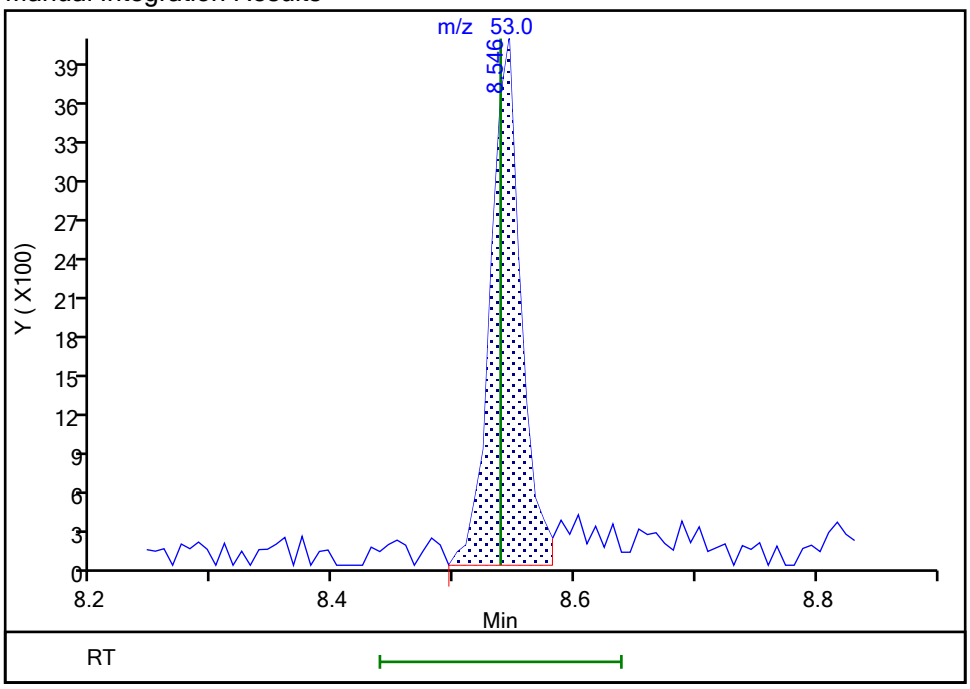
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 7080
Amount: 3.895870
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43675.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Oct-2022 16:01:30 ALS Bottle#: 14 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:05 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1254313	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	292644	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	466180	50.0	50.0	
13 Ethylene oxide	43	2.210	2.210	0.000	99	87282	500.0	0	
18 Ethanol	45	2.654	2.654	0.000	99	21619	300.0	325.6	
20 Propene oxide	58	2.654	2.661	-0.007	15	46	500.0	0	
25 Isopropyl alcohol	45	3.040	3.040	0.000	98	19965	50.0	51.3	
28 Acetonitrile	41	3.161	3.161	0.000	100	34977	50.0	49.9	
41 Isopropyl ether	87	3.805	3.805	0.000	93	23877	5.00	5.10	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	92	43897	5.00	5.34	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	82404	5.00	5.08	
46 Ethyl acetate	43	4.198	4.198	0.000	99	48531	10.0	10.0	
49 Propionitrile	54	4.234	4.234	0.000	99	39918	50.0	51.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	89	152942	50.0	50.1	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	90	80101	5.00	5.11	
66 n-Butanol	56	5.199	5.199	0.000	87	18679	125.0	121.5	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	16474	10.0	9.94	
75 2-Nitropropane	41	5.900	5.900	0.000	98	17515	10.0	9.98	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	89	6254	10.0	10.2	a
98 cis-1,4-Dichloro-2-butene	53	8.545	8.538	0.007	0	18102	10.0	9.86	a
115 1,2,3-Trimethylbenzene	105	9.832	9.833	-0.001	99	132233	5.00	5.23	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	95	40714	5.00	5.18	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	5.00	Units: uL
MV-Supp A_00073	Amount Added:	5.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

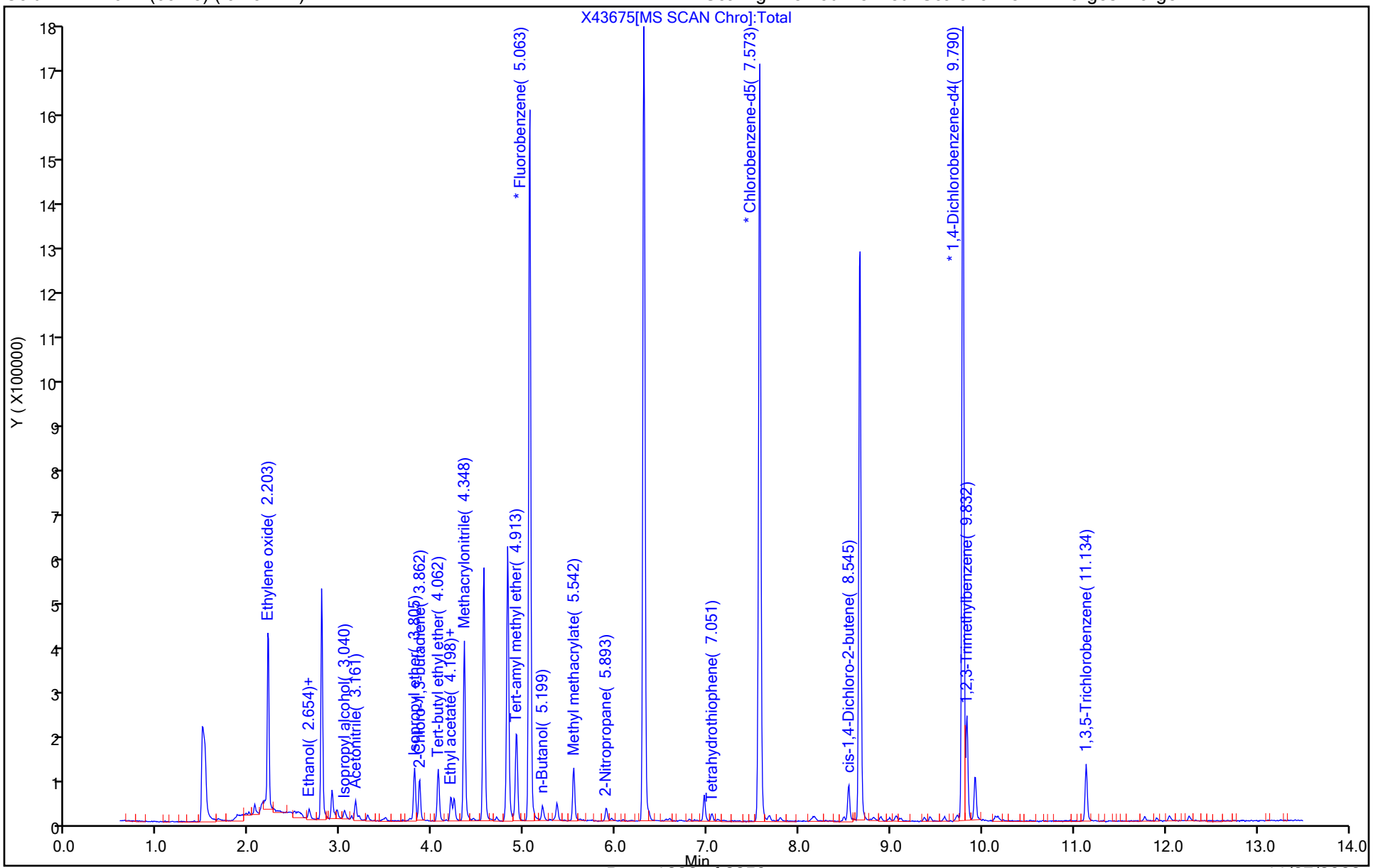
Report Date: 23-Oct-2022 12:17:05 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43675.D

Injection Date:	22-Oct-2022 16:01:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD050			Worklist Smp#:	25
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver

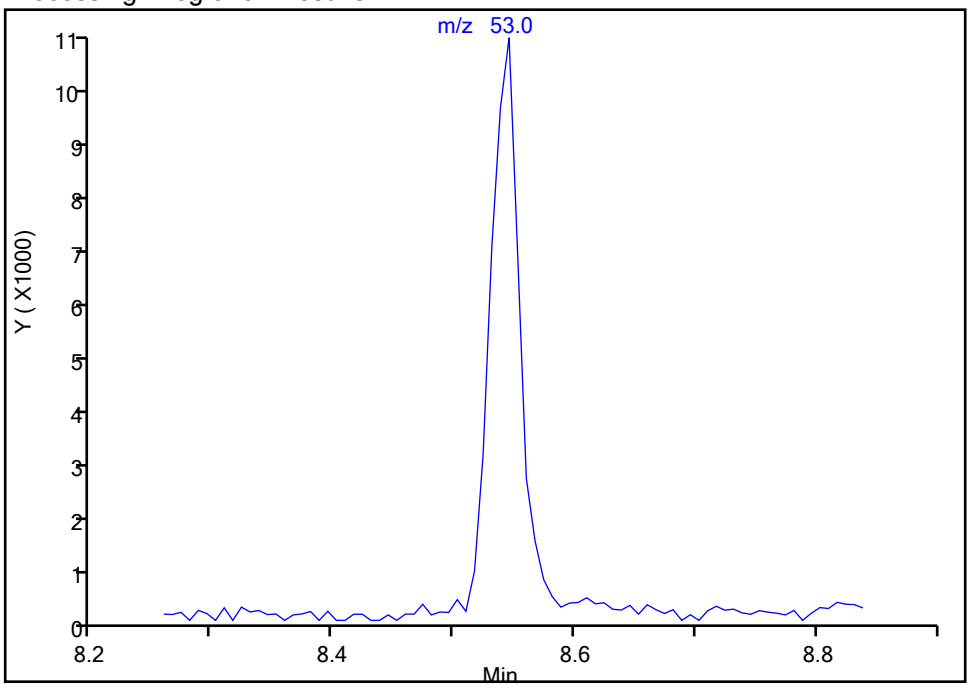
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43675.D
Injection Date: 22-Oct-2022 16:01:30 Instrument ID: VMS_X4
Lims ID: STD050
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 14 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

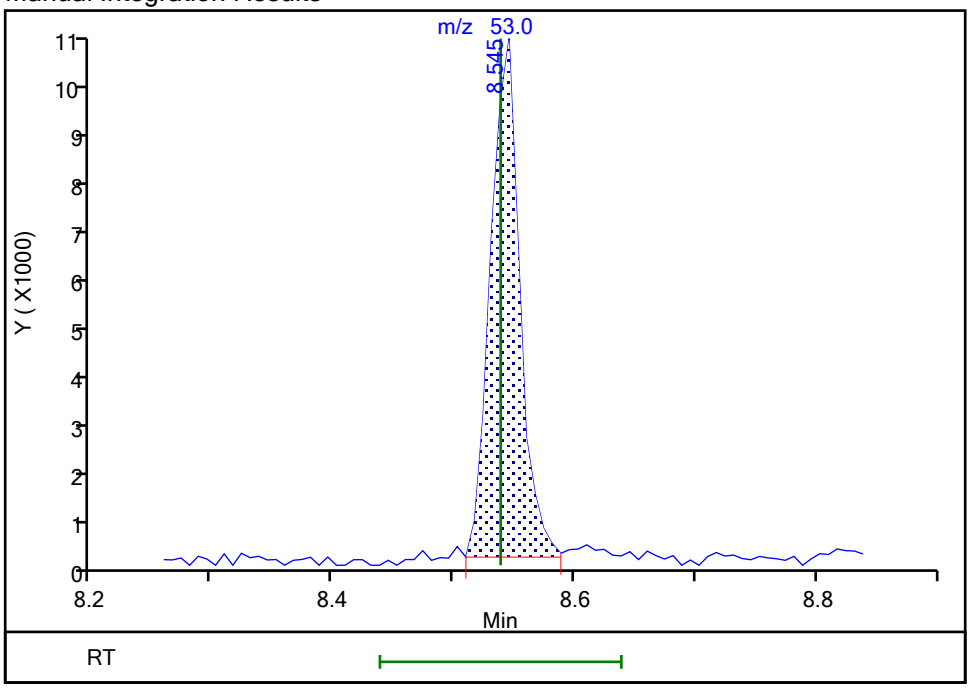
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 18102
Amount: 9.859111
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:38
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43676.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Oct-2022 16:21:30 ALS Bottle#: 15 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:07 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1268265	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	294502	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	471349	50.0	50.0	
13 Ethylene oxide	43	2.146	2.210	-0.064	76	5283	1000.0	0	
18 Ethanol	45	2.646	2.654	-0.008	100	37444	600.0	557.8	
20 Propene oxide	58	2.725	2.661	0.064	8	60	1000.0	0	
25 Isopropyl alcohol	45	3.040	3.040	0.000	98	37978	100.0	96.6	
28 Acetonitrile	41	3.161	3.161	0.000	100	64393	100.0	90.9	
41 Isopropyl ether	87	3.805	3.805	0.000	92	46219	10.0	9.76	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	88324	10.0	10.6	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	164107	10.0	10.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	94394	20.0	19.2	
49 Propionitrile	54	4.234	4.234	0.000	99	77594	100.0	98.5	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	309281	100.0	100.3	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	90	163148	10.0	10.3	
66 n-Butanol	56	5.199	5.199	0.000	88	38349	250.0	246.7	
71 Methyl methacrylate	100	5.542	5.542	0.000	88	33734	20.0	20.1	
75 2-Nitropropane	41	5.893	5.900	-0.007	98	34115	20.0	19.2	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	92	11047	20.0	17.9	a
98 cis-1,4-Dichloro-2-butene	53	8.545	8.538	0.007	0	35175	20.0	18.9	a
115 1,2,3-Trimethylbenzene	105	9.832	9.833	-0.001	99	259975	10.0	10.2	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	80216	10.0	10.1	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	10.00	Units: uL
MV-Supp A_00073	Amount Added:	10.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

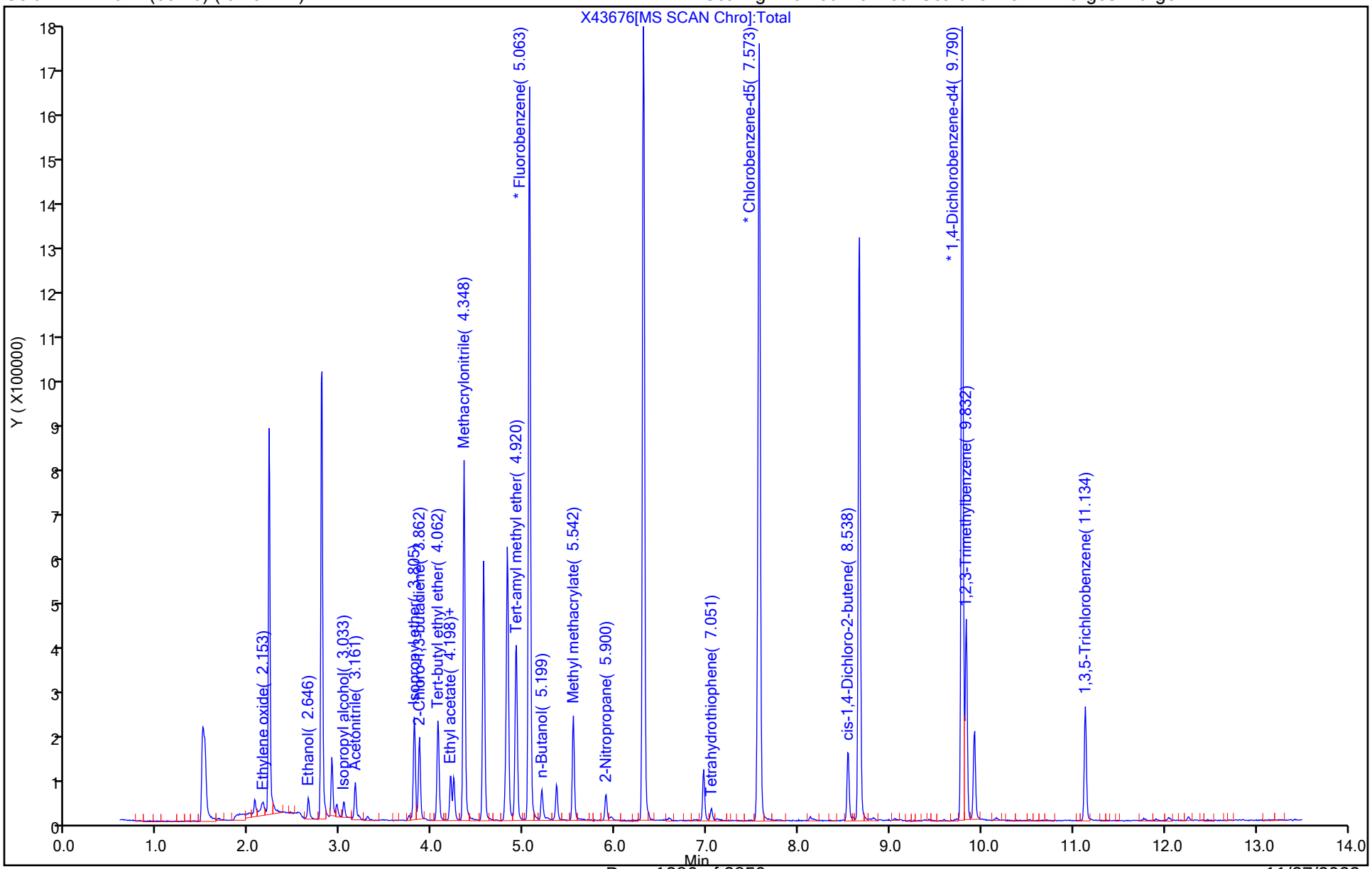
Report Date: 23-Oct-2022 12:17:07 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43676.D

Injection Date:	22-Oct-2022 16:21:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD10			Worklist Smp#:	26
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

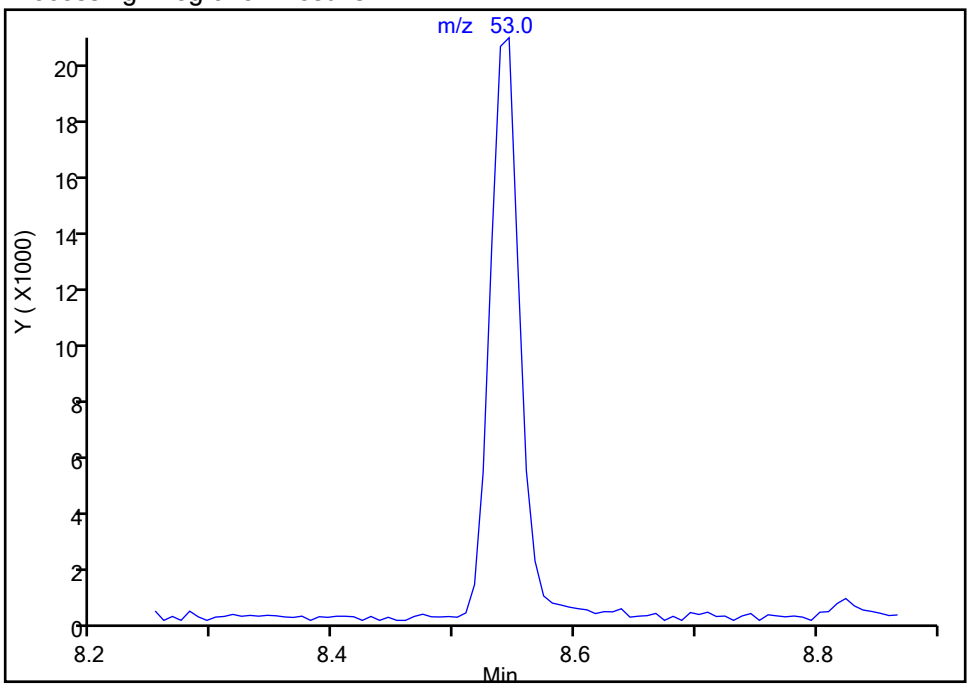
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43676.D				
Injection Date:	22-Oct-2022 16:21:30	Instrument ID:	VMS_X4		
Lims ID:	STD10				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	15	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

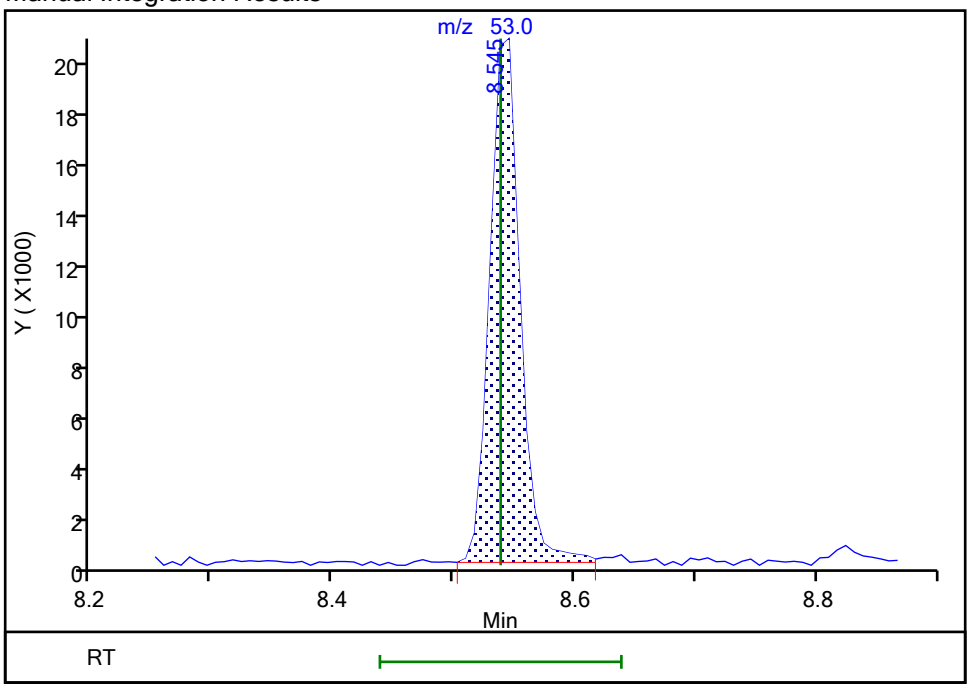
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 35175
Amount: 18.947693
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:42
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43677.D
Lims ID: STD50
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 22-Oct-2022 16:42:30 ALS Bottle#: 16 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD50
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:08 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1291361	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	293360	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	473350	50.0	50.0	
13 Ethylene oxide	43	2.210	2.210	0.000	100	1025949	5000.0	0	
18 Ethanol	45	2.654	2.654	0.000	100	193816	3000.0	2835.5	
20 Propene oxide	58	2.661	2.661	0.000	19	46	5000.0	0	
25 Isopropyl alcohol	45	3.040	3.040	0.000	98	179278	500.0	447.7	
28 Acetonitrile	41	3.161	3.161	0.000	100	317384	500.0	440.0	
41 Isopropyl ether	87	3.805	3.805	0.000	92	235392	50.0	48.8	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	432283	50.0	51.1	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	834301	50.0	50.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	482374	100.0	96.6	
49 Propionitrile	54	4.234	4.234	0.000	99	389290	500.0	485.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	1549638	500.0	493.3	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	801237	50.0	49.7	
66 n-Butanol	56	5.199	5.199	0.000	87	215752	1250.0	1363.0	
71 Methyl methacrylate	100	5.542	5.542	0.000	88	175199	100.0	102.7	
75 2-Nitropropane	41	5.900	5.900	0.000	98	176598	100.0	97.7	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	91	56224	100.0	91.6	a
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	186298	100.0	99.9	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	1301729	50.0	50.7	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	405455	50.0	50.8	
166 Ethyl acrylate	55		0.000				ND	ND	
165 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added: 50.00	Units: uL
MV-Supp A_00073	Amount Added: 50.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

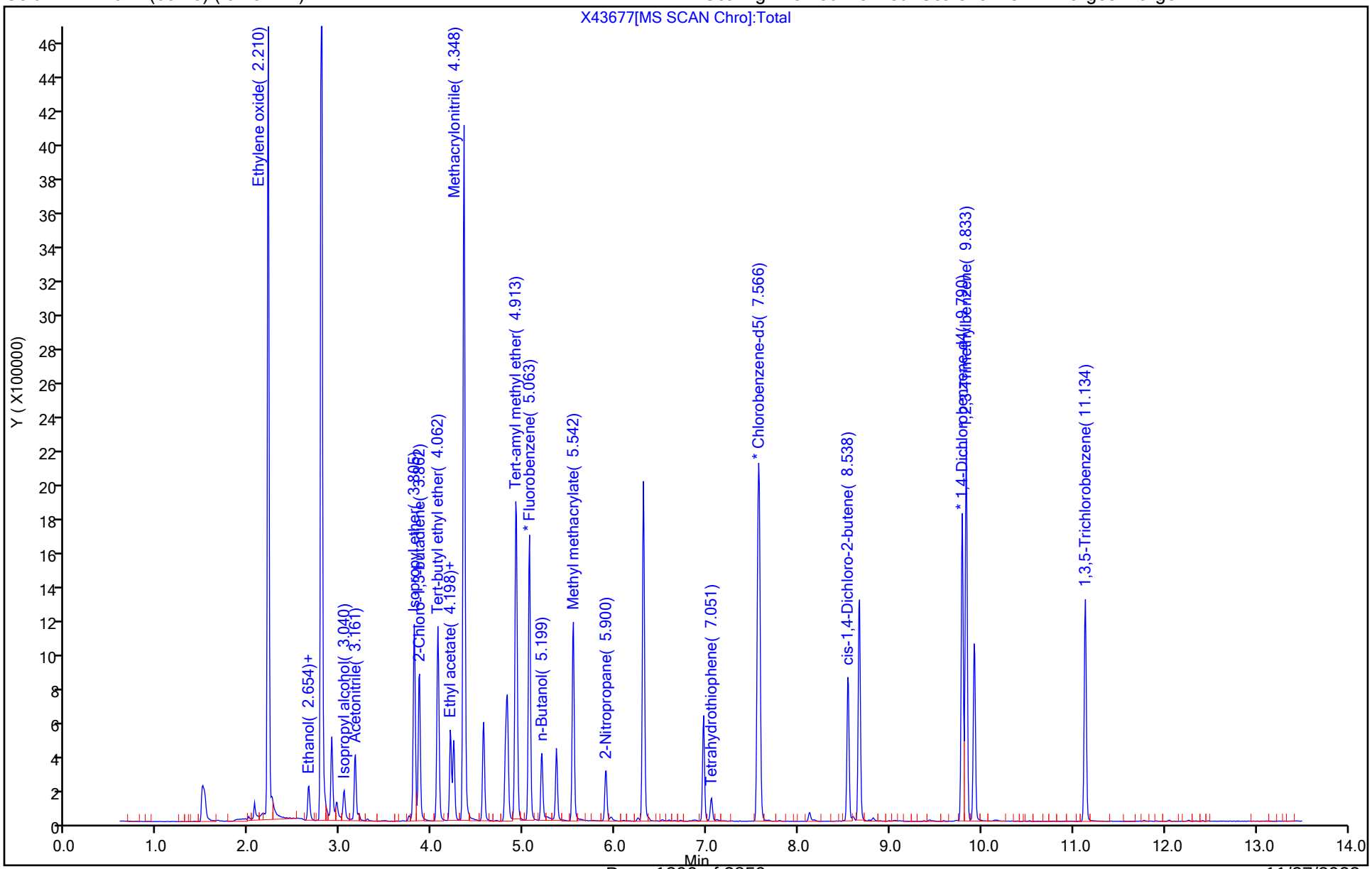
Report Date: 23-Oct-2022 12:17:08 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43677.D

Injection Date:	22-Oct-2022 16:42:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD50			Worklist Smp#:	27
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

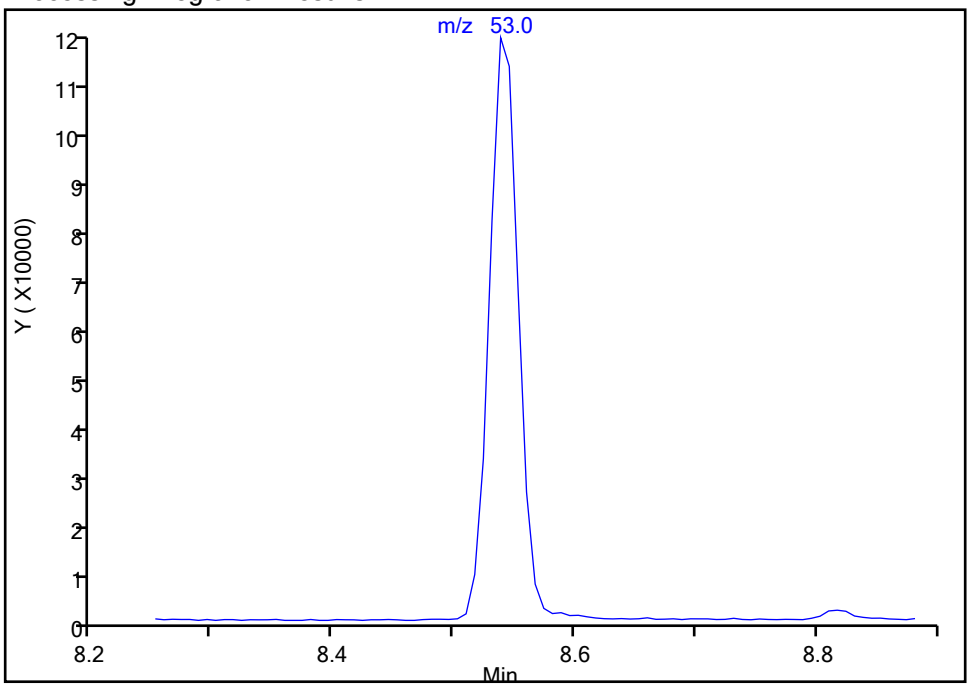
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43677.D
Injection Date: 22-Oct-2022 16:42:30 Instrument ID: VMS_X4
Lims ID: STD50
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 16 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

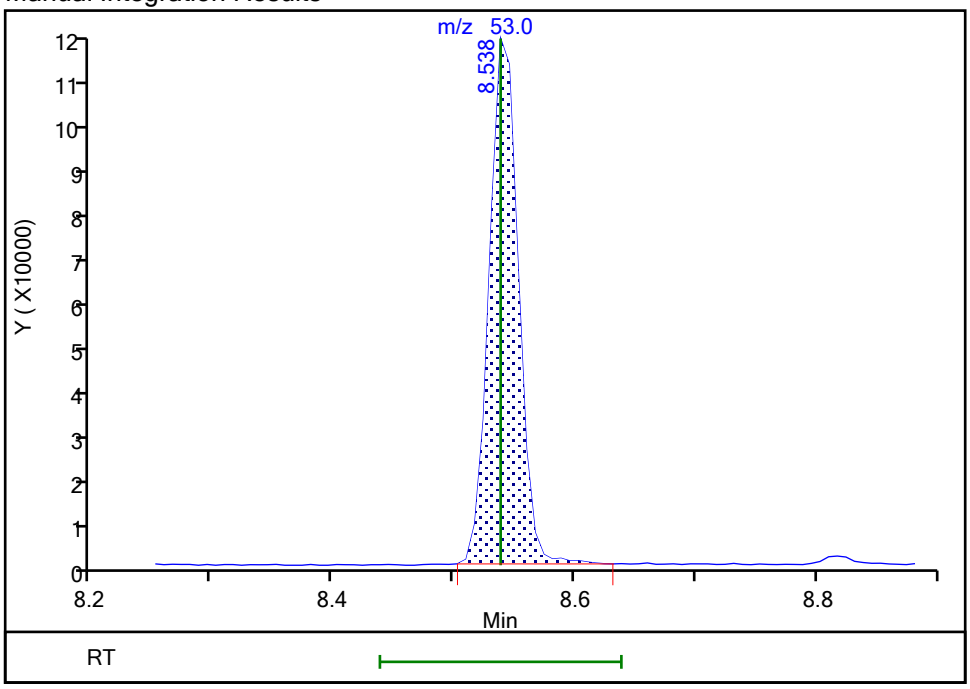
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.54
Area: 186298
Amount: 99.928790
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:46
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43678.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 22-Oct-2022 17:02:30 ALS Bottle#: 17 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:09 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.063	-0.007	98	1270651	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	295681	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	502900	50.0	50.0	
13 Ethylene oxide	43	2.225	2.210	0.015	97	22695	10000	0	
18 Ethanol	45	2.697	2.654	0.043	100	399032	6000.0	5933.0	
20 Propene oxide	58	2.625	2.661	-0.036	14	360	10000	0	
25 Isopropyl alcohol	45	3.076	3.040	0.036	99	372304	1000.0	945.0	
28 Acetonitrile	41	3.162	3.161	0.001	100	660703	1000.0	931.0	
41 Isopropyl ether	87	3.805	3.805	0.000	92	463376	100.0	97.7	
42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	93	871601	100.0	104.8	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	1616686	100.0	98.4	
46 Ethyl acetate	43	4.198	4.198	0.000	99	900674	200.0	183.2	
49 Propionitrile	54	4.241	4.234	0.007	99	764517	1000.0	968.3	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	2902366	1000.0	939.0	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	89	1534136	100.0	96.7	
66 n-Butanol	56	5.214	5.199	0.015	87	450075	2500.0	2889.8	
71 Methyl methacrylate	100	5.543	5.542	0.001	88	325472	200.0	193.9	
75 2-Nitropropane	41	5.893	5.900	-0.007	98	327521	200.0	184.1	
86 Tetrahydrothiophene	60	7.044	7.051	-0.007	91	108454	200.0	175.3	a
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	384763	200.0	194.3	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	2672462	100.0	98.0	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	854593	100.0	100.8	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added: 100.00	Units: uL
MV-Supp A_00073	Amount Added: 100.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

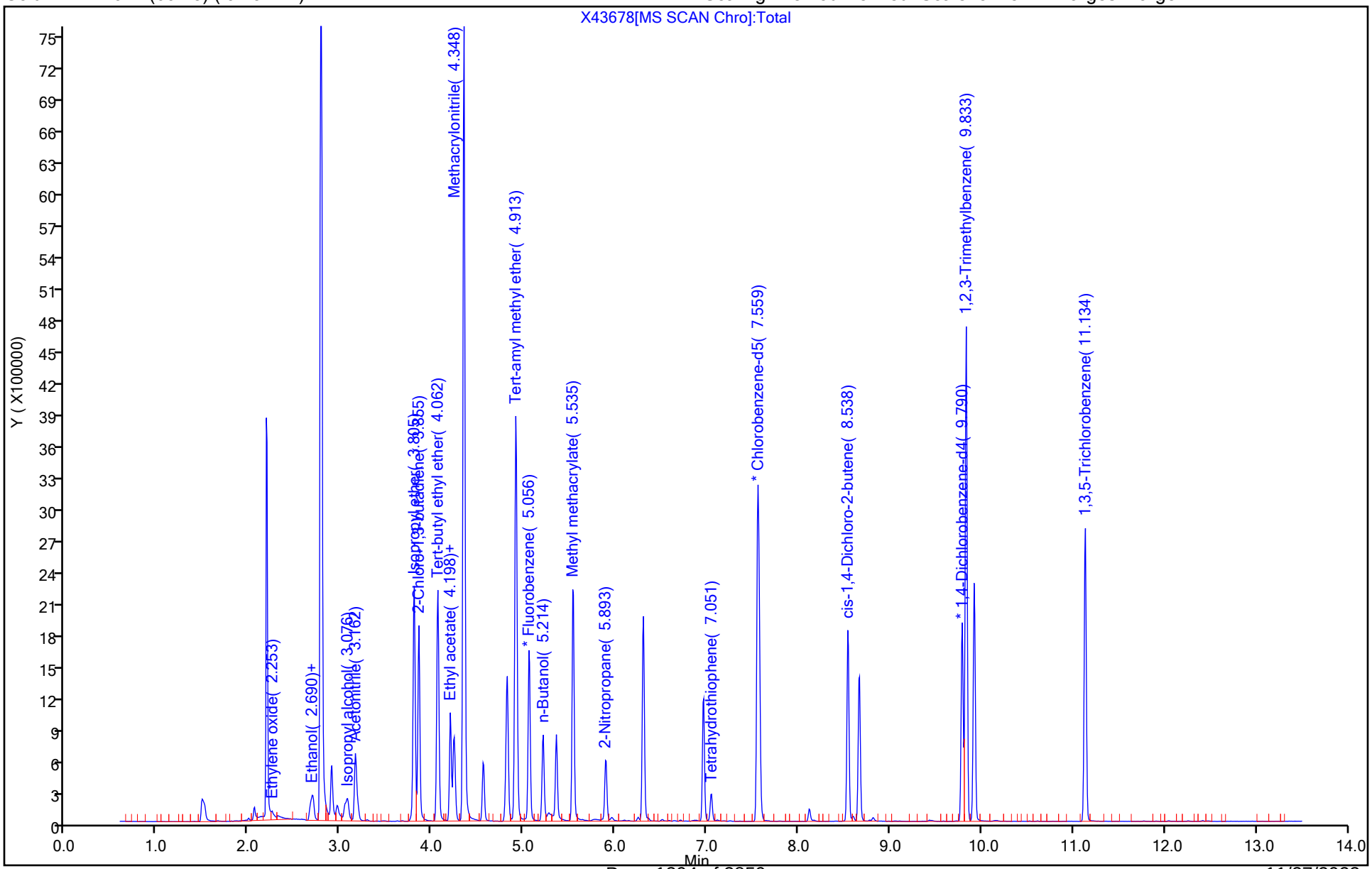
Report Date: 23-Oct-2022 12:17:09 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43678.D

Injection Date:	22-Oct-2022 17:02:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD100			Worklist Smp#:	28
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

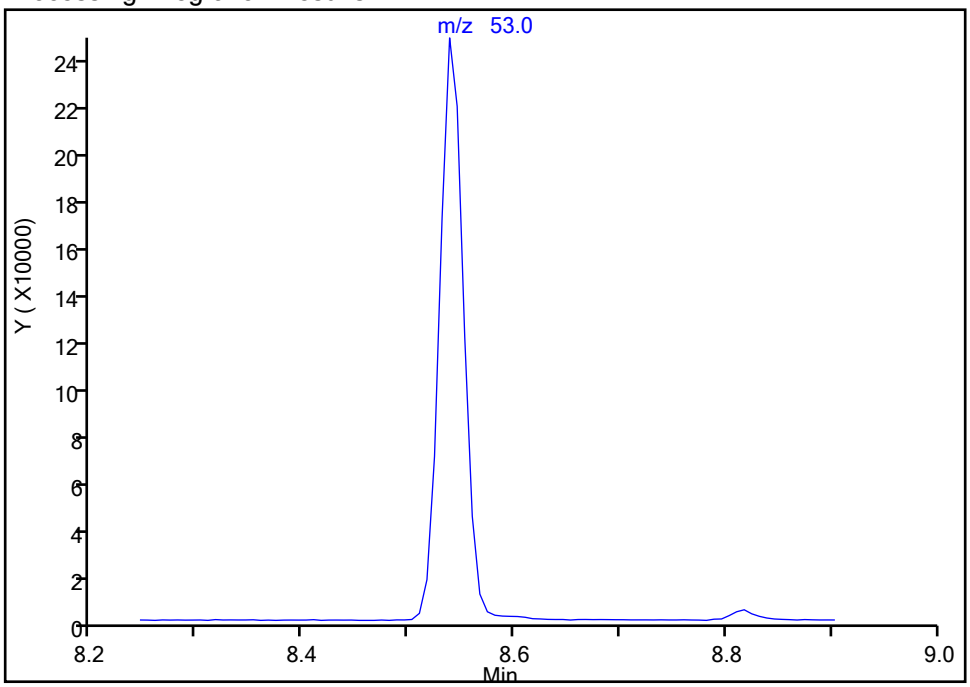
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43678.D
Injection Date: 22-Oct-2022 17:02:30 Instrument ID: VMS_X4
Lims ID: STD100
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 17 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

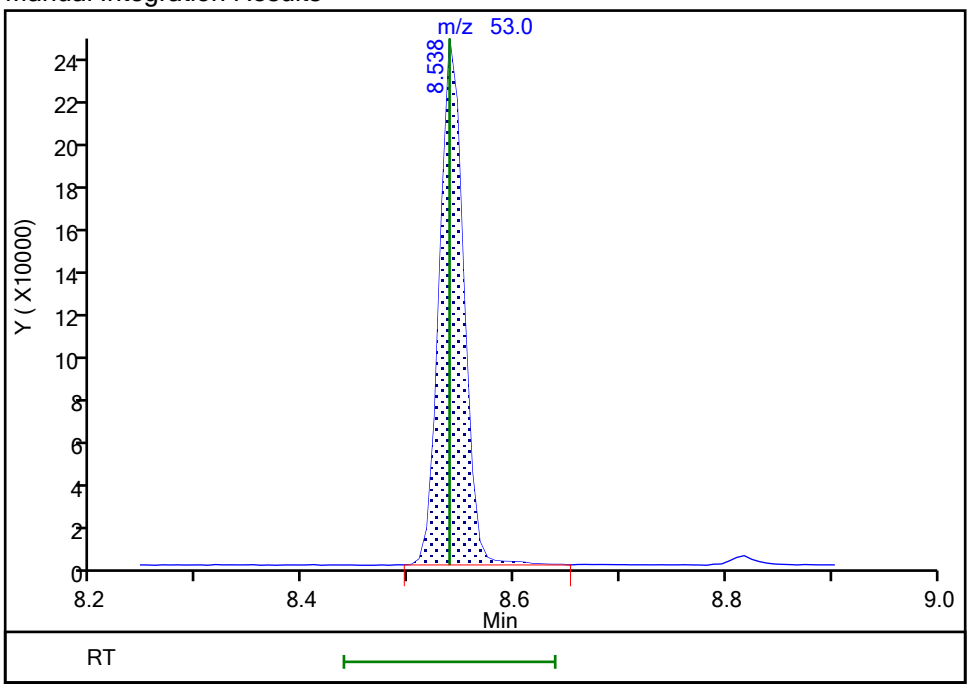
Not Detected
Expected RT: 8.54

Processing Integration Results



RT: 8.54
Area: 384763
Amount: 194.2569
Amount Units: ug/l

Manual Integration Results



Reviewer: V1QB, 23-Oct-2022 12:11:50
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 22-Oct-2022 17:23:30 ALS Bottle#: 18 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:10 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.063	-0.007	98	1288234	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	305072	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	513774	50.0	50.0	
13 Ethylene oxide	43	2.225	2.210	0.015	98	17599	20000	0	
18 Ethanol	45	2.711	2.654	0.057	100	718910	12000	10543	
20 Propene oxide	58	2.704	2.661	0.043	22	215	20000	0	
25 Isopropyl alcohol	45	3.090	3.040	0.050	99	733137	2000.0	1835.4	
28 Acetonitrile	41	3.162	3.161	0.001	99	1273959	2000.0	1770.6	
41 Isopropyl ether	87	3.805	3.805	0.000	92	894974	200.0	186.1	
42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	93	1657553	200.0	196.5	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	3130196	200.0	187.9	
46 Ethyl acetate	43	4.198	4.198	0.000	99	1742173	400.0	349.6	
49 Propionitrile	54	4.241	4.234	0.007	99	1484489	2000.0	1854.6	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	5559833	2000.0	1774.3	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	89	2968159	200.0	184.5	
66 n-Butanol	56	5.221	5.199	0.022	86	848596	5000.0	5374.1	
71 Methyl methacrylate	100	5.543	5.542	0.001	88	630700	400.0	370.7	
75 2-Nitropropane	41	5.893	5.900	-0.007	98	656258	400.0	363.9	
86 Tetrahydrothiophene	60	7.044	7.051	-0.007	91	251334	400.0	393.8	a
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	889057	400.0	439.4	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	5146842	200.0	184.7	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	1649274	200.0	190.3	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added: 200.00	Units: uL
MV-Supp A_00073	Amount Added: 200.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

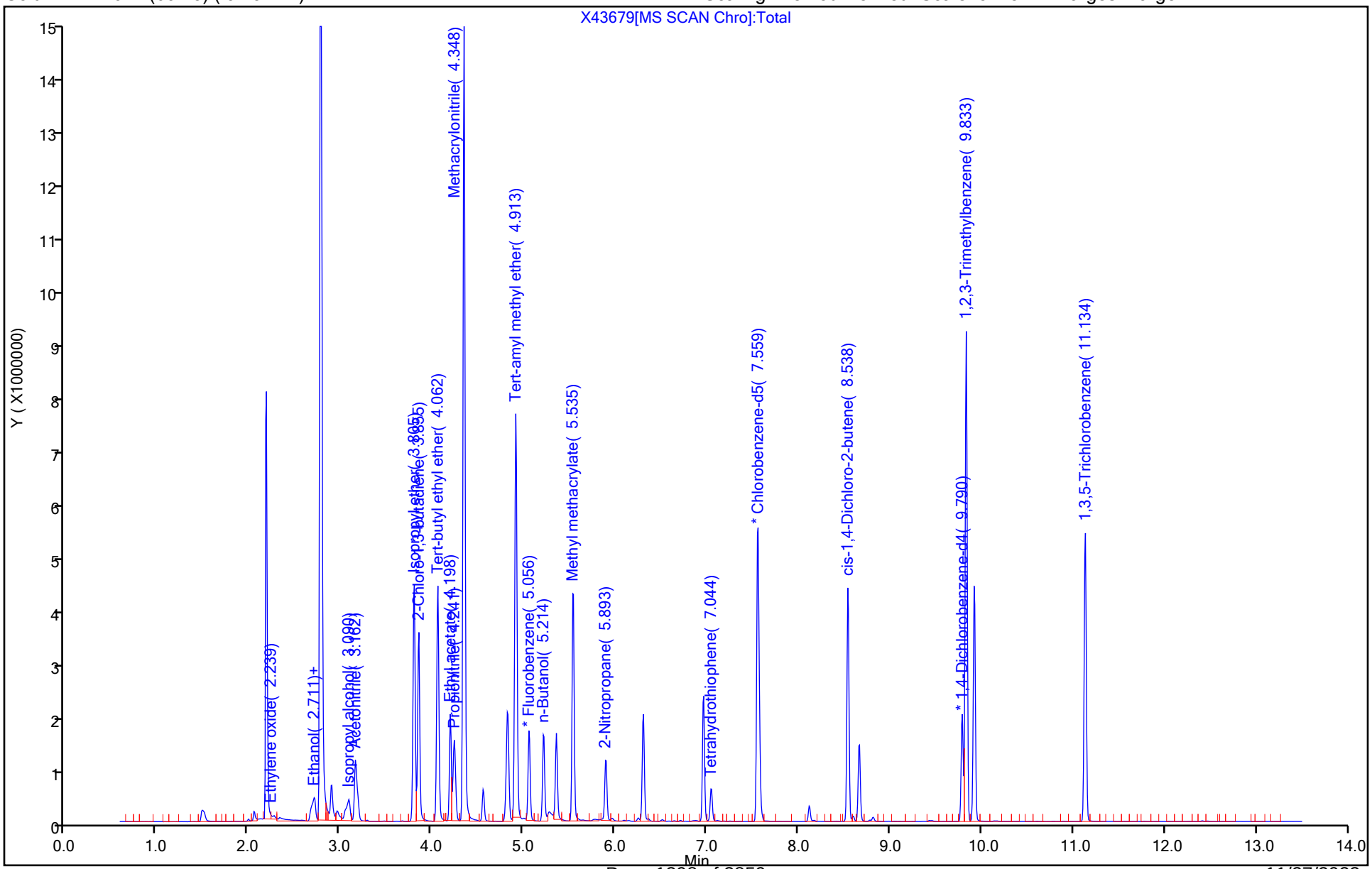
Report Date: 23-Oct-2022 12:17:11 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Injection Date:	22-Oct-2022 17:23:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD200			Worklist Smp#:	29
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

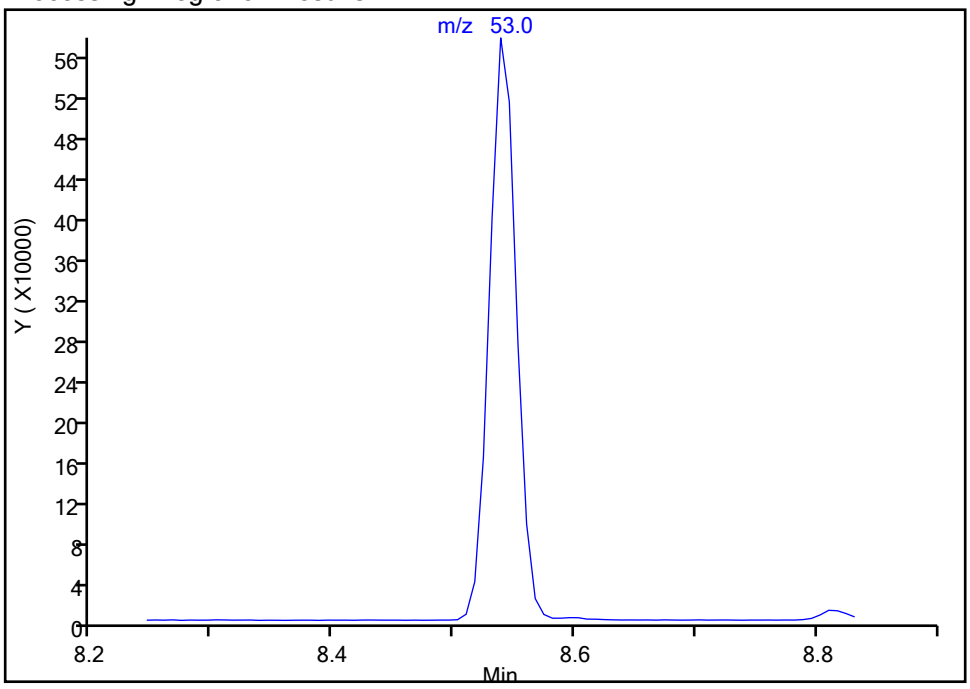
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D
Injection Date: 22-Oct-2022 17:23:30 Instrument ID: VMS_X4
Lims ID: STD200
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 18 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

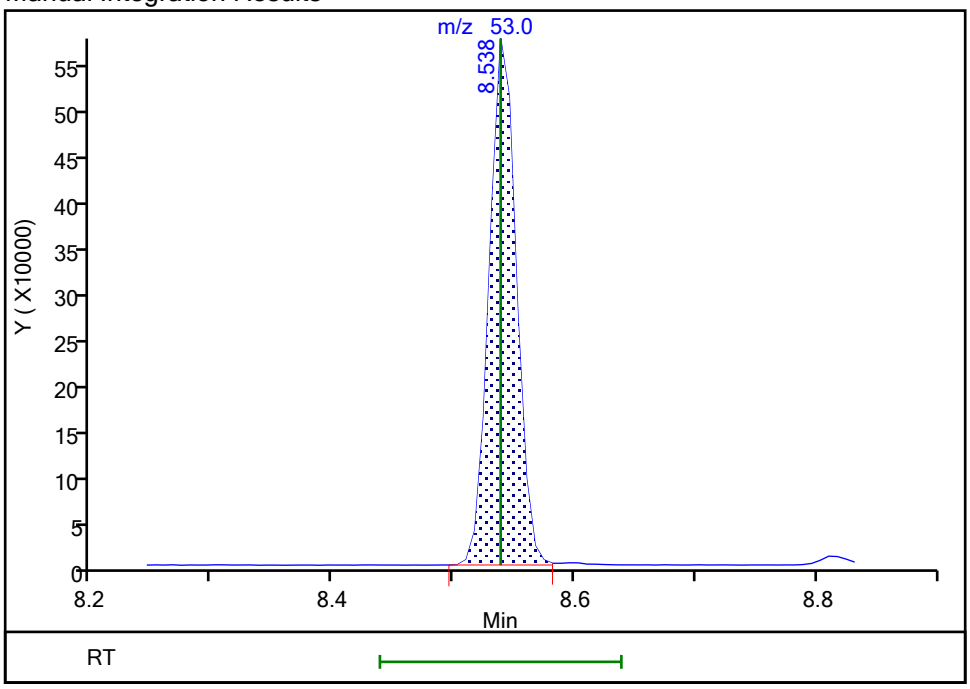
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.54
Area: 889057
Amount: 439.3618
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Calibration / Ethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

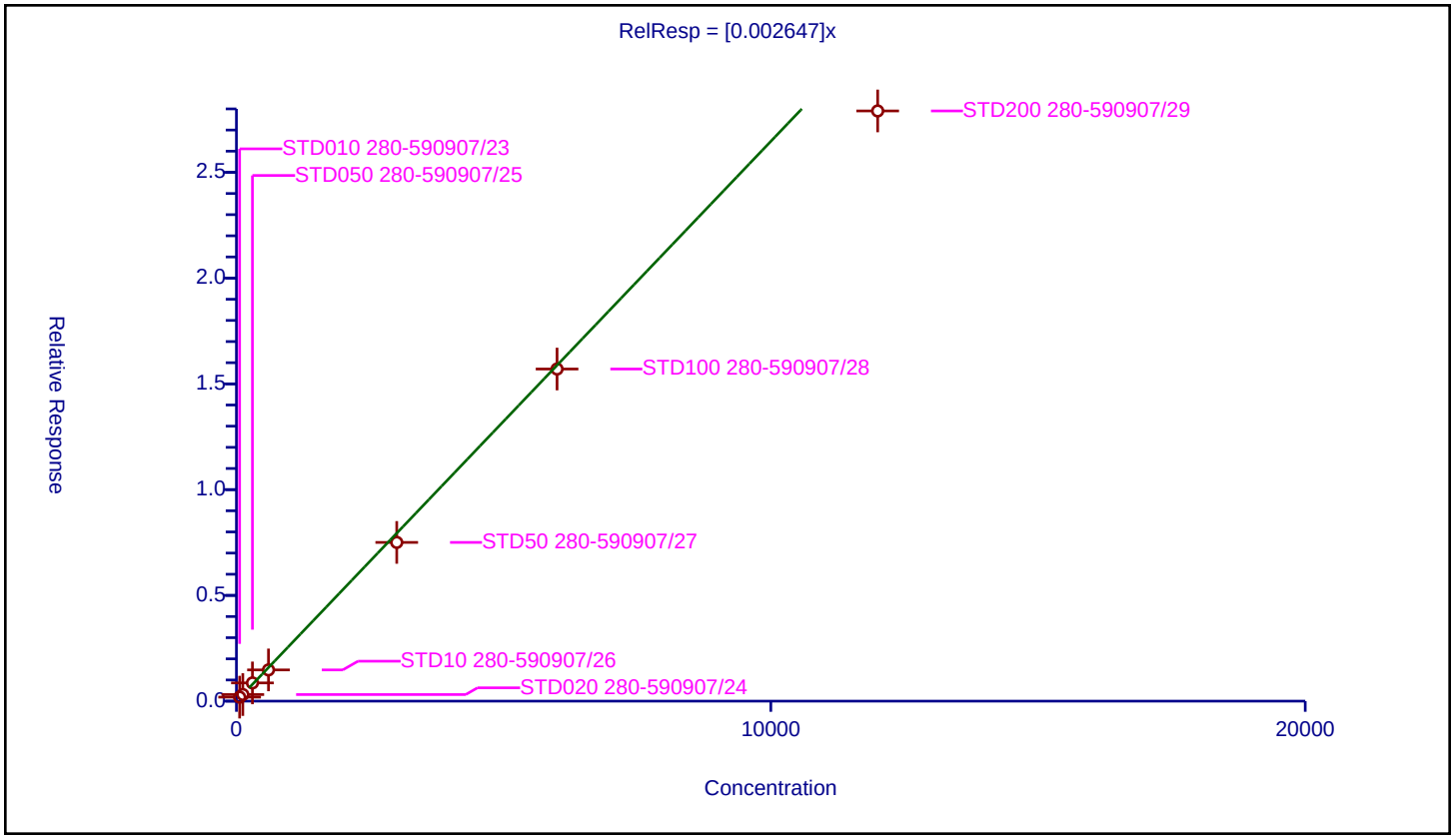
Curve Coefficients

Intercept:	0
Slope:	0.002647

Error Coefficients

Standard Error:	345000
Relative Standard Error:	10.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	60.0	0.189287	50.0	1234372.0	0.003155	Y
2	STD020 280-590907/24	120.0	0.31133	50.0	1249318.0	0.002594	Y
3	STD050 280-590907/25	300.0	0.861786	50.0	1254313.0	0.002873	Y
4	STD10 280-590907/26	600.0	1.47619	50.0	1268265.0	0.00246	Y
5	STD50 280-590907/27	3000.0	7.504331	50.0	1291361.0	0.002501	Y
6	STD100 280-590907/28	6000.0	15.701873	50.0	1270651.0	0.002617	Y
7	STD200 280-590907/29	12000.0	27.902928	50.0	1288234.0	0.002325	Y



Calibration / Isopropyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

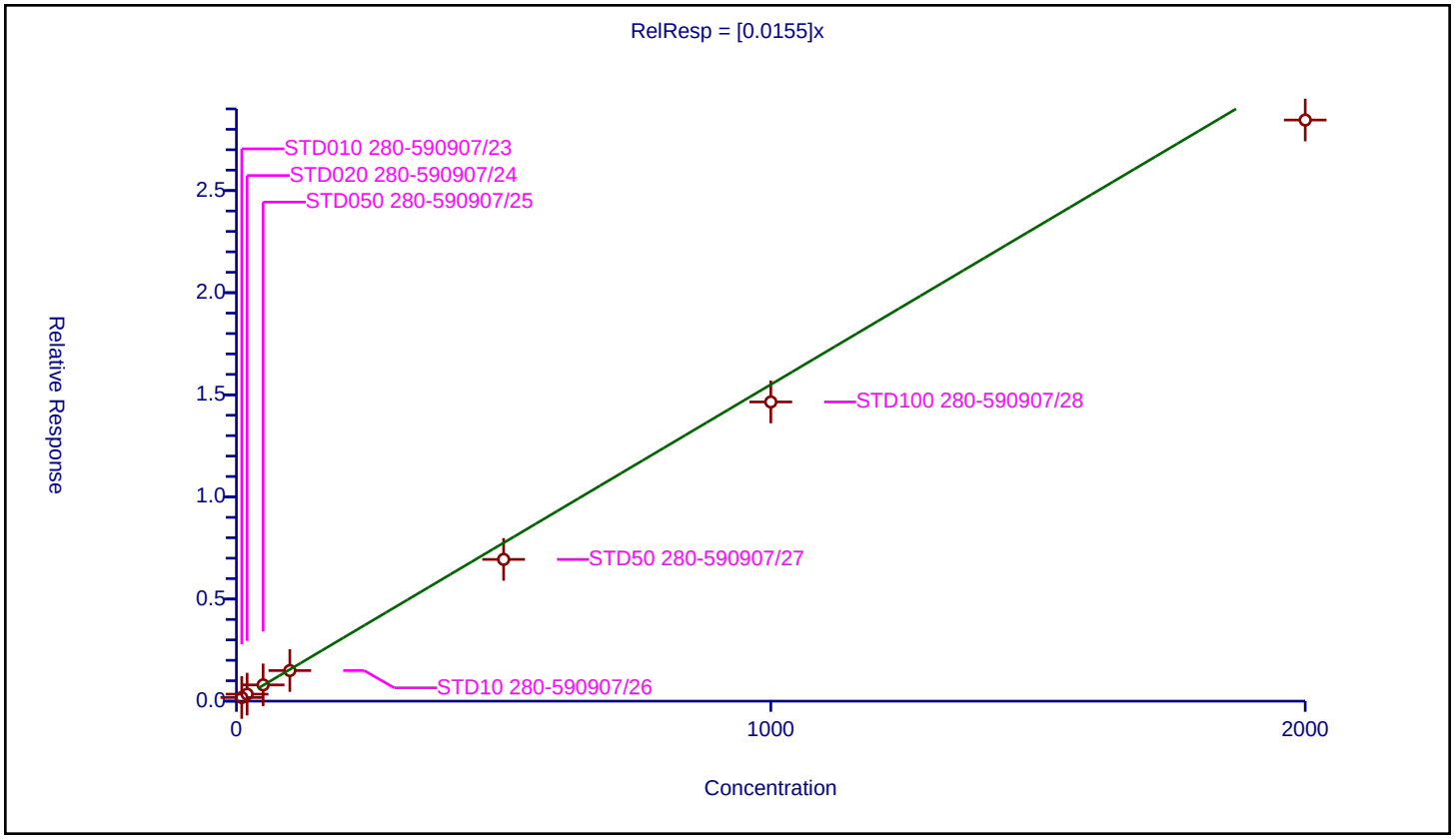
Curve Coefficients

Intercept:	0
Slope:	0.0155

Error Coefficients

Standard Error:	344000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	0.177864	50.0	1234372.0	0.017786	Y
2	STD020 280-590907/24	20.0	0.341746	50.0	1249318.0	0.017087	Y
3	STD050 280-590907/25	50.0	0.795854	50.0	1254313.0	0.015917	Y
4	STD10 280-590907/26	100.0	1.497242	50.0	1268265.0	0.014972	Y
5	STD50 280-590907/27	500.0	6.941436	50.0	1291361.0	0.013883	Y
6	STD100 280-590907/28	1000.0	14.650128	50.0	1270651.0	0.01465	Y
7	STD200 280-590907/29	2000.0	28.455118	50.0	1288234.0	0.014228	Y



Calibration / Acetonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

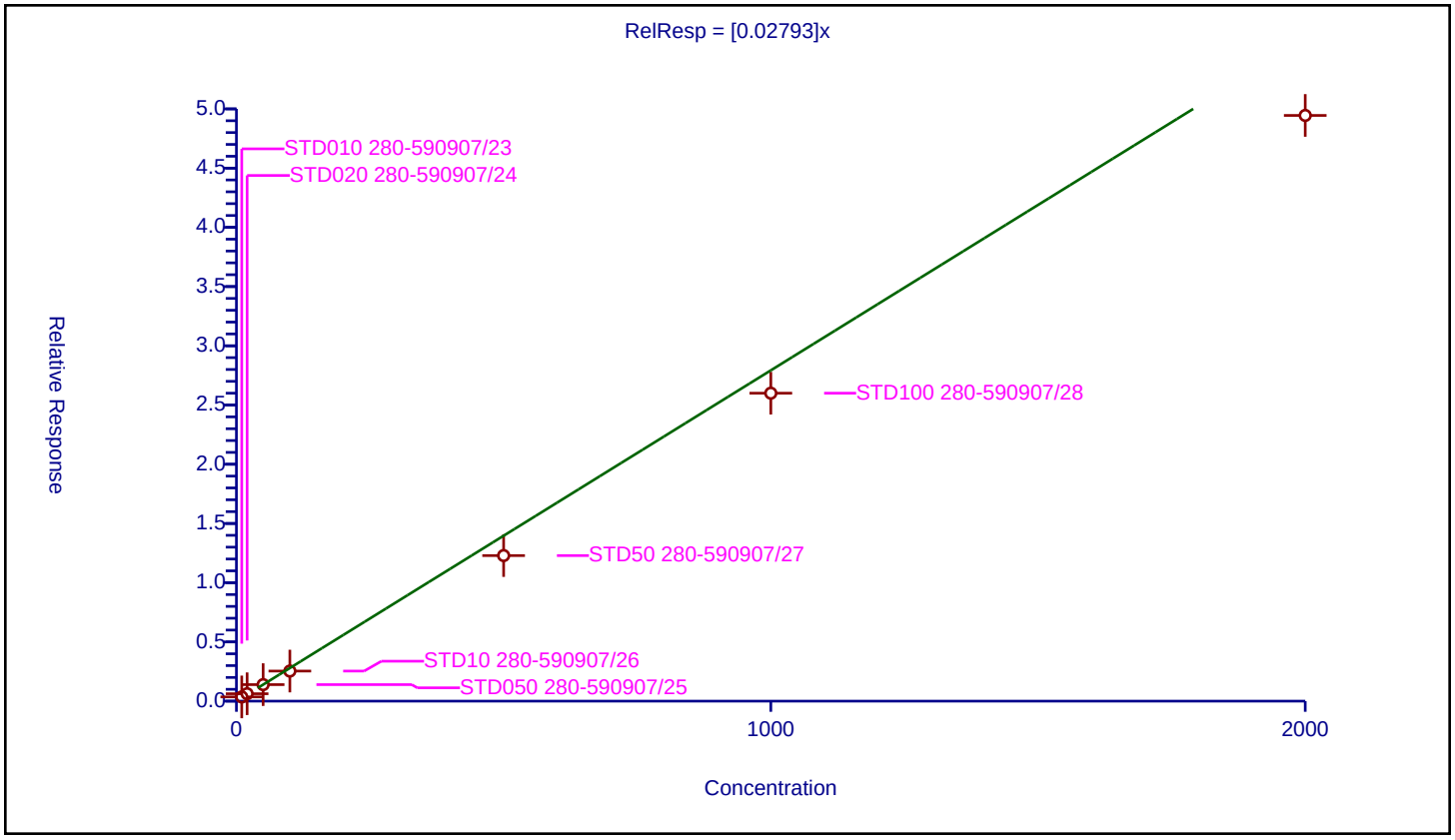
Curve Coefficients

Intercept:	0
Slope:	0.02793

Error Coefficients

Standard Error:	601000
Relative Standard Error:	14.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.963

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	0.356578	50.0	1234372.0	0.035658	Y
2	STD020 280-590907/24	20.0	0.625101	50.0	1249318.0	0.031255	Y
3	STD050 280-590907/25	50.0	1.394269	50.0	1254313.0	0.027885	Y
4	STD10 280-590907/26	100.0	2.538626	50.0	1268265.0	0.025386	Y
5	STD50 280-590907/27	500.0	12.28874	50.0	1291361.0	0.024577	Y
6	STD100 280-590907/28	1000.0	25.998602	50.0	1270651.0	0.025999	Y
7	STD200 280-590907/29	2000.0	49.445947	50.0	1288234.0	0.024723	Y



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Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

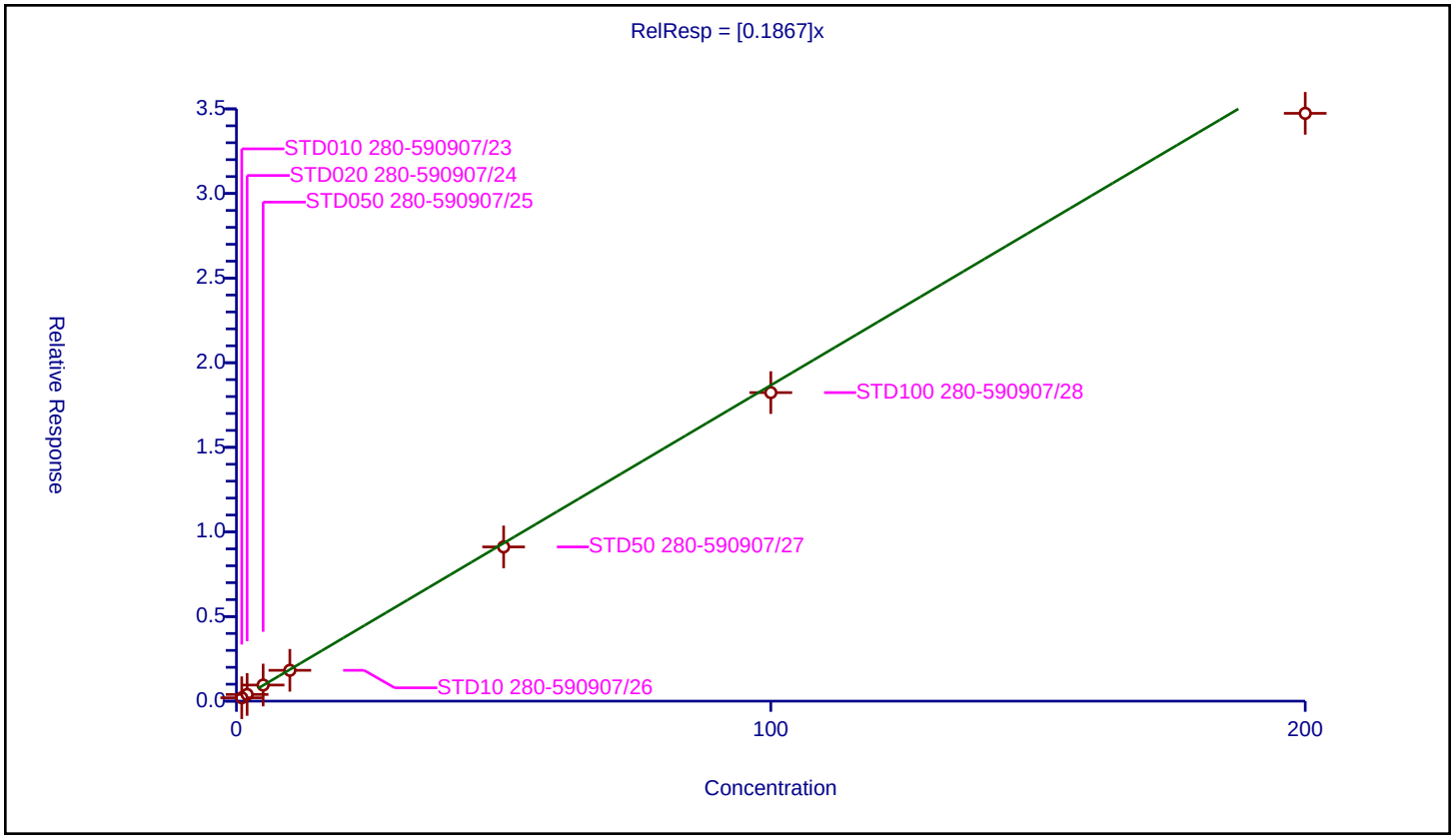
Curve Coefficients

Intercept:	0
Slope:	0.1867

Error Coefficients

Standard Error:	423000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.198644	50.0	1234372.0	0.198644	Y
2	STD020 280-590907/24	2.0	0.394415	50.0	1249318.0	0.197208	Y
3	STD050 280-590907/25	5.0	0.951796	50.0	1254313.0	0.190359	Y
4	STD10 280-590907/26	10.0	1.822135	50.0	1268265.0	0.182213	Y
5	STD50 280-590907/27	50.0	9.114105	50.0	1291361.0	0.182282	Y
6	STD100 280-590907/28	100.0	18.233803	50.0	1270651.0	0.182338	Y
7	STD200 280-590907/29	200.0	34.736469	50.0	1288234.0	0.173682	Y



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Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

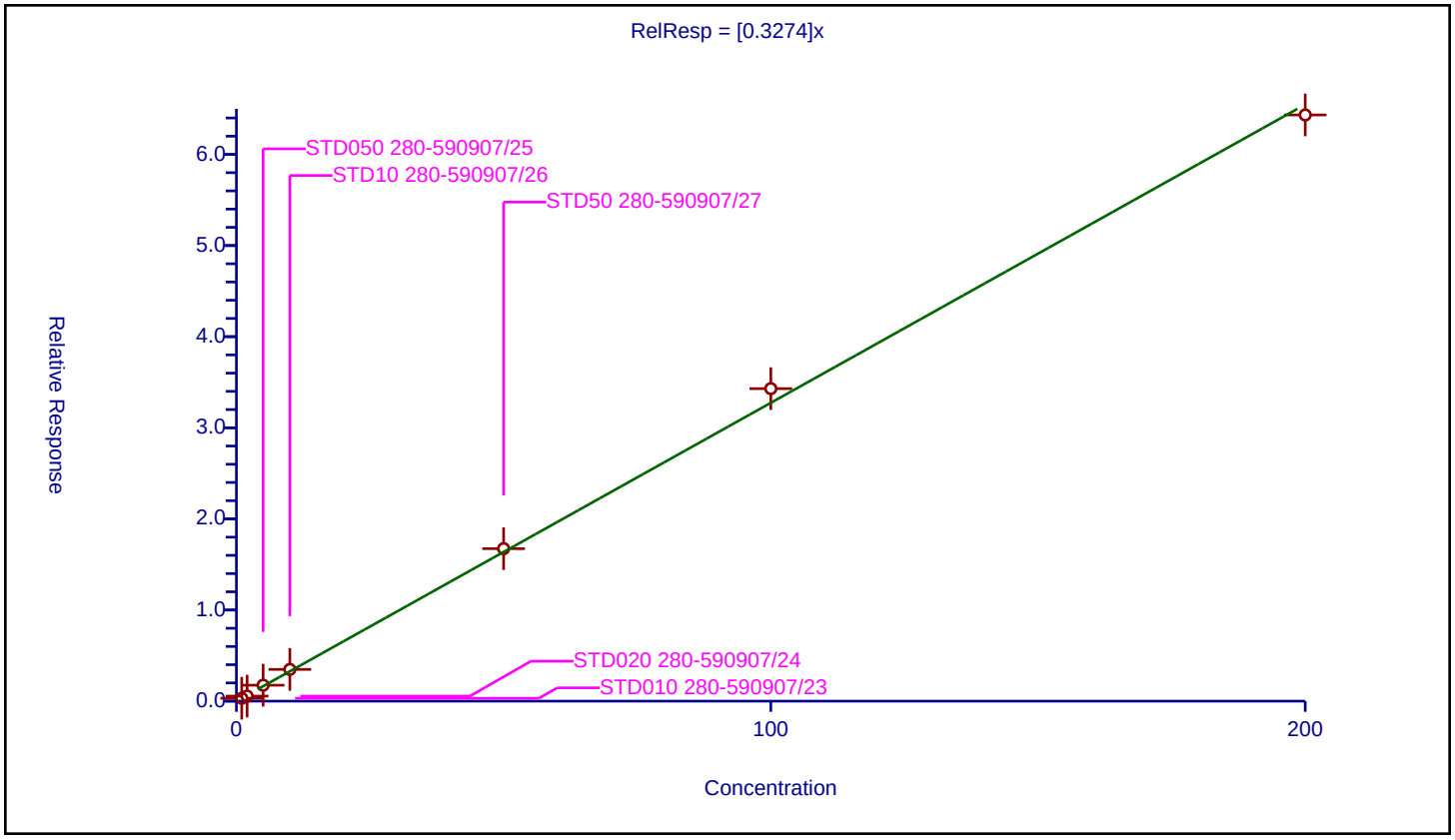
Curve Coefficients

Intercept:	0
Slope:	0.3274

Error Coefficients

Standard Error:	786000
Relative Standard Error:	7.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.317368	50.0	1234372.0	0.317368	Y
2	STD020 280-590907/24	2.0	0.553822	50.0	1249318.0	0.276911	Y
3	STD050 280-590907/25	5.0	1.749842	50.0	1254313.0	0.349968	Y
4	STD10 280-590907/26	10.0	3.48208	50.0	1268265.0	0.348208	Y
5	STD50 280-590907/27	50.0	16.737496	50.0	1291361.0	0.33475	Y
6	STD100 280-590907/28	100.0	34.297419	50.0	1270651.0	0.342974	Y
7	STD200 280-590907/29	200.0	64.334313	50.0	1288234.0	0.321672	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

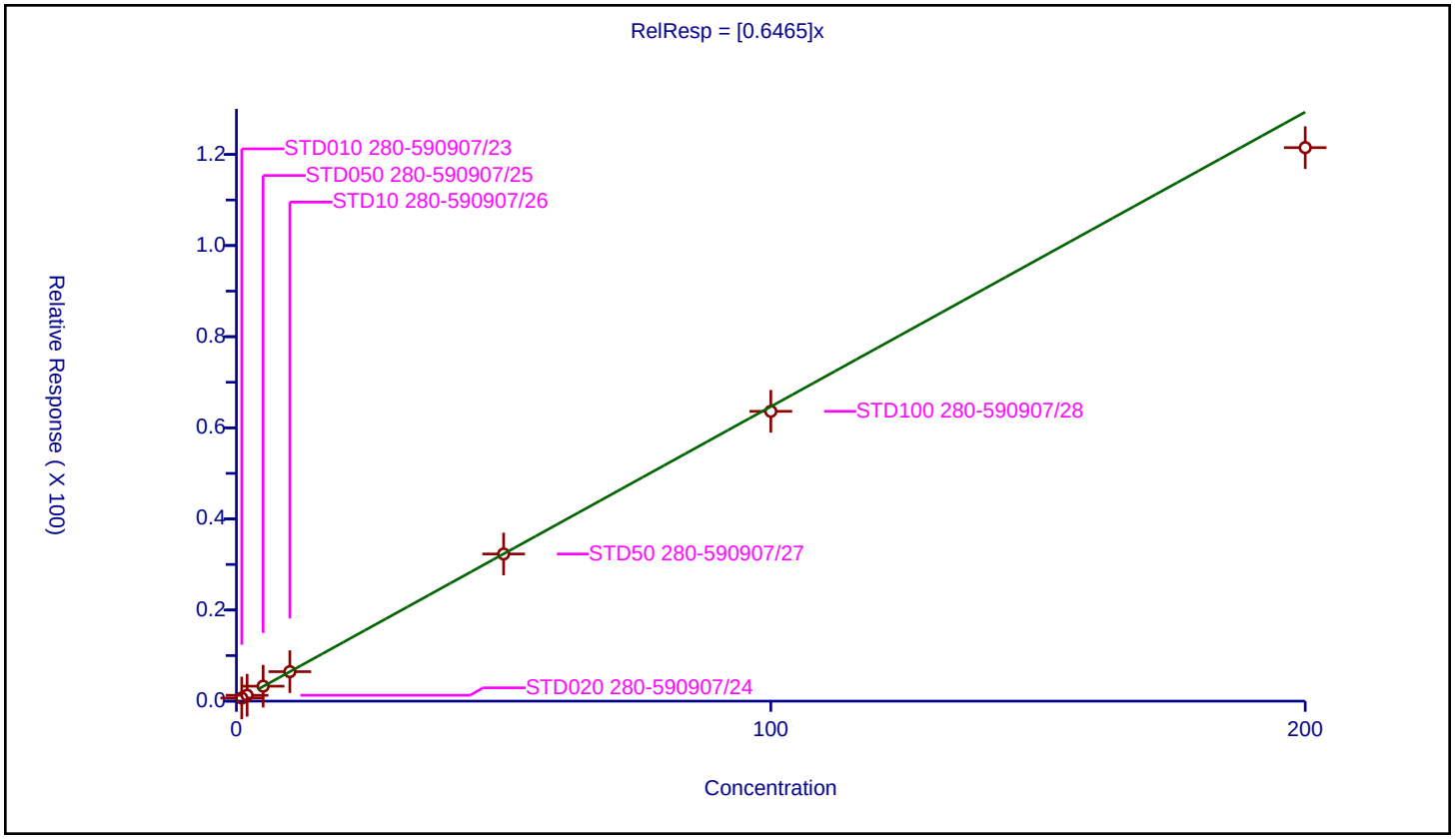
Curve Coefficients

Intercept:	0
Slope:	0.6465

Error Coefficients

Standard Error:	1480000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.689622	50.0	1234372.0	0.689622	Y
2	STD020 280-590907/24	2.0	1.284781	50.0	1249318.0	0.64239	Y
3	STD050 280-590907/25	5.0	3.284826	50.0	1254313.0	0.656965	Y
4	STD10 280-590907/26	10.0	6.469744	50.0	1268265.0	0.646974	Y
5	STD50 280-590907/27	50.0	32.303167	50.0	1291361.0	0.646063	Y
6	STD100 280-590907/28	100.0	63.616445	50.0	1270651.0	0.636164	Y
7	STD200 280-590907/29	200.0	121.491748	50.0	1288234.0	0.607459	Y



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Calibration / Ethyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

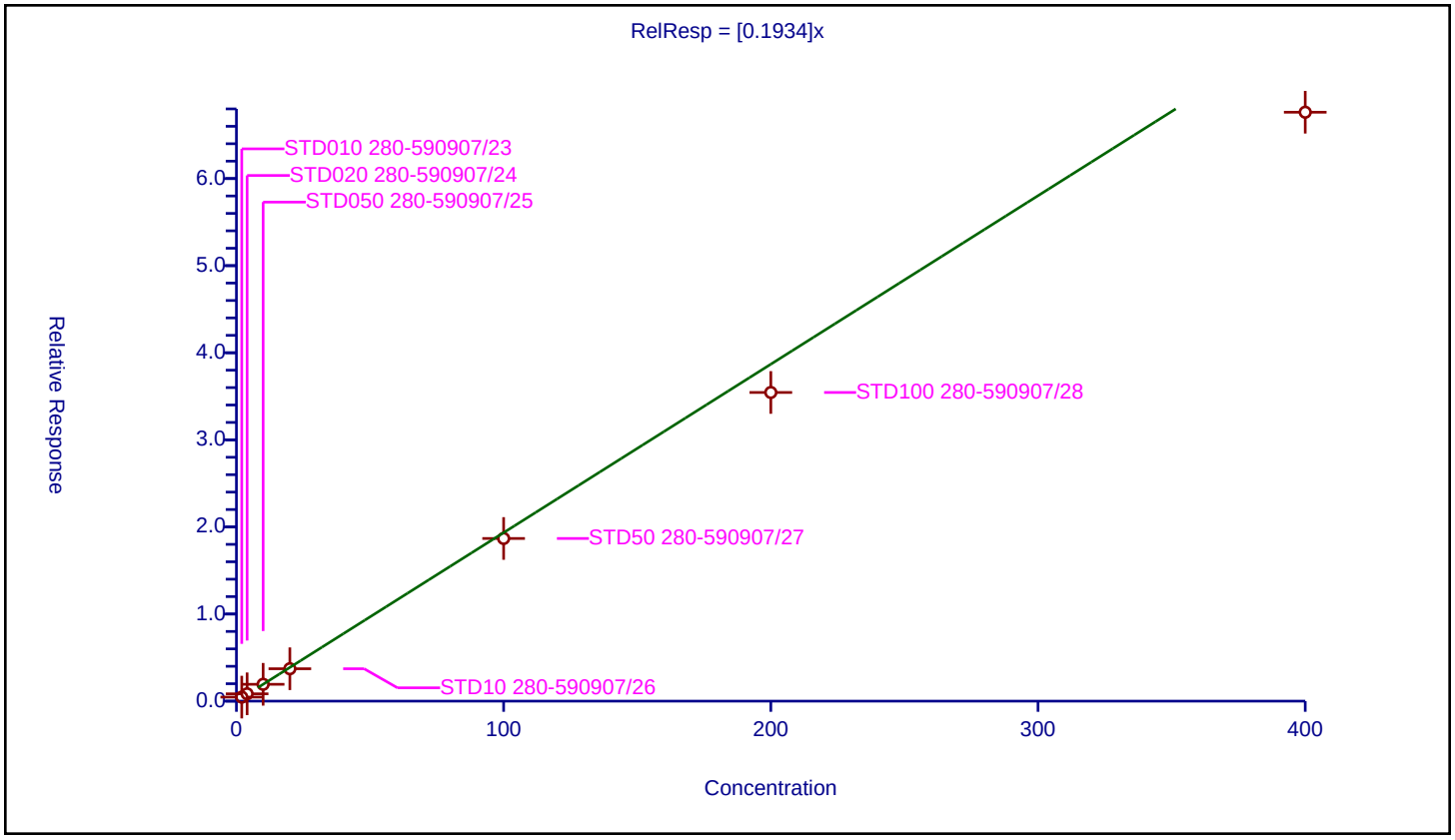
Curve Coefficients

Intercept:	0
Slope:	0.1934

Error Coefficients

Standard Error:	826000
Relative Standard Error:	10.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.462259	50.0	1234372.0	0.23113	Y
2	STD020 280-590907/24	4.0	0.841419	50.0	1249318.0	0.210355	Y
3	STD050 280-590907/25	10.0	1.934565	50.0	1254313.0	0.193456	Y
4	STD10 280-590907/26	20.0	3.721383	50.0	1268265.0	0.186069	Y
5	STD50 280-590907/27	100.0	18.676962	50.0	1291361.0	0.18677	Y
6	STD100 280-590907/28	200.0	35.441439	50.0	1270651.0	0.177207	Y
7	STD200 280-590907/29	400.0	67.618655	50.0	1288234.0	0.169047	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

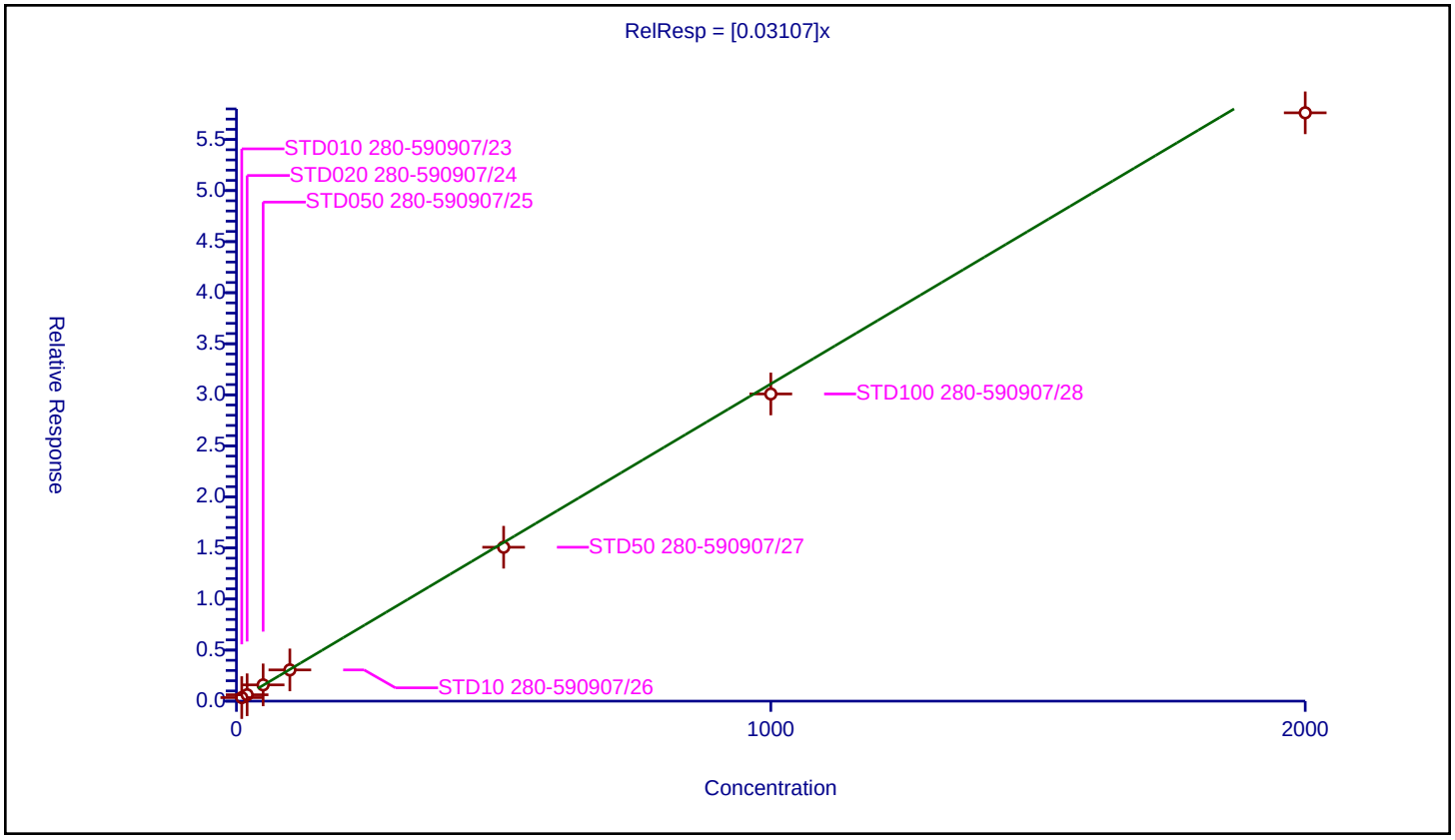
Curve Coefficients

Intercept:	0
Slope:	0.03107

Error Coefficients

Standard Error:	701000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	0.348315	50.0	1234372.0	0.034831	Y
2	STD020 280-590907/24	20.0	0.6237	50.0	1249318.0	0.031185	Y
3	STD050 280-590907/25	50.0	1.59123	50.0	1254313.0	0.031825	Y
4	STD10 280-590907/26	100.0	3.059061	50.0	1268265.0	0.030591	Y
5	STD50 280-590907/27	500.0	15.072857	50.0	1291361.0	0.030146	Y
6	STD100 280-590907/28	1000.0	30.083674	50.0	1270651.0	0.030084	Y
7	STD200 280-590907/29	2000.0	57.617211	50.0	1288234.0	0.028809	Y



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Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

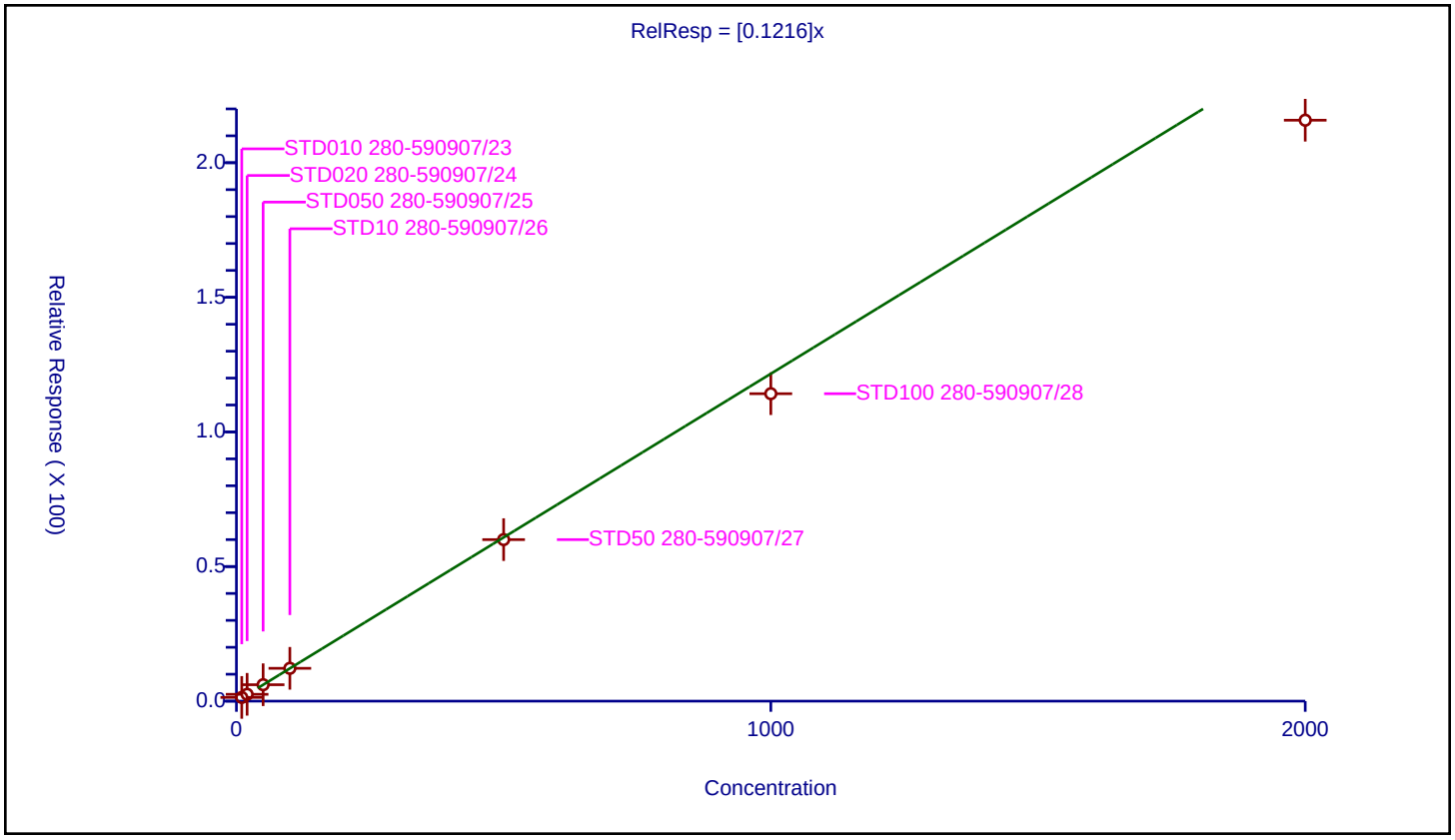
Curve Coefficients

Intercept:	0
Slope:	0.1216

Error Coefficients

Standard Error:	2640000
Relative Standard Error:	7.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	1.384591	50.0	1234372.0	0.138459	Y
2	STD020 280-590907/24	20.0	2.538545	50.0	1249318.0	0.126927	Y
3	STD050 280-590907/25	50.0	6.096644	50.0	1254313.0	0.121933	Y
4	STD10 280-590907/26	100.0	12.193075	50.0	1268265.0	0.121931	Y
5	STD50 280-590907/27	500.0	60.000186	50.0	1291361.0	0.12	Y
6	STD100 280-590907/28	1000.0	114.207835	50.0	1270651.0	0.114208	Y
7	STD200 280-590907/29	2000.0	215.792822	50.0	1288234.0	0.107896	Y



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Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

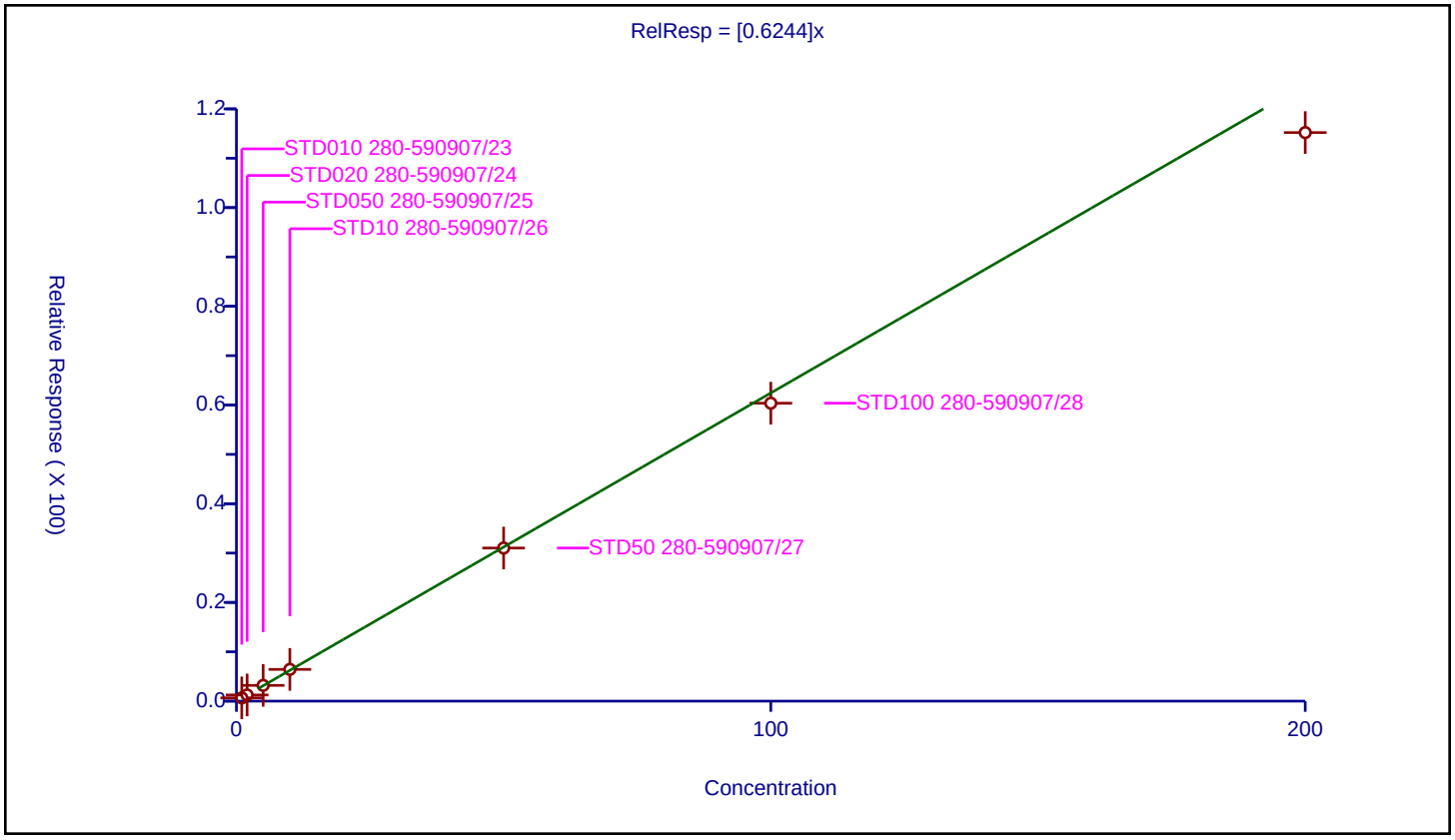
Curve Coefficients

Intercept:	0
Slope:	0.6244

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.66309	50.0	1234372.0	0.66309	Y
2	STD020 280-590907/24	2.0	1.251403	50.0	1249318.0	0.625701	Y
3	STD050 280-590907/25	5.0	3.193023	50.0	1254313.0	0.638605	Y
4	STD10 280-590907/26	10.0	6.431937	50.0	1268265.0	0.643194	Y
5	STD50 280-590907/27	50.0	31.022967	50.0	1291361.0	0.620459	Y
6	STD100 280-590907/28	100.0	60.368111	50.0	1270651.0	0.603681	Y
7	STD200 280-590907/29	200.0	115.202634	50.0	1288234.0	0.576013	Y



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Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

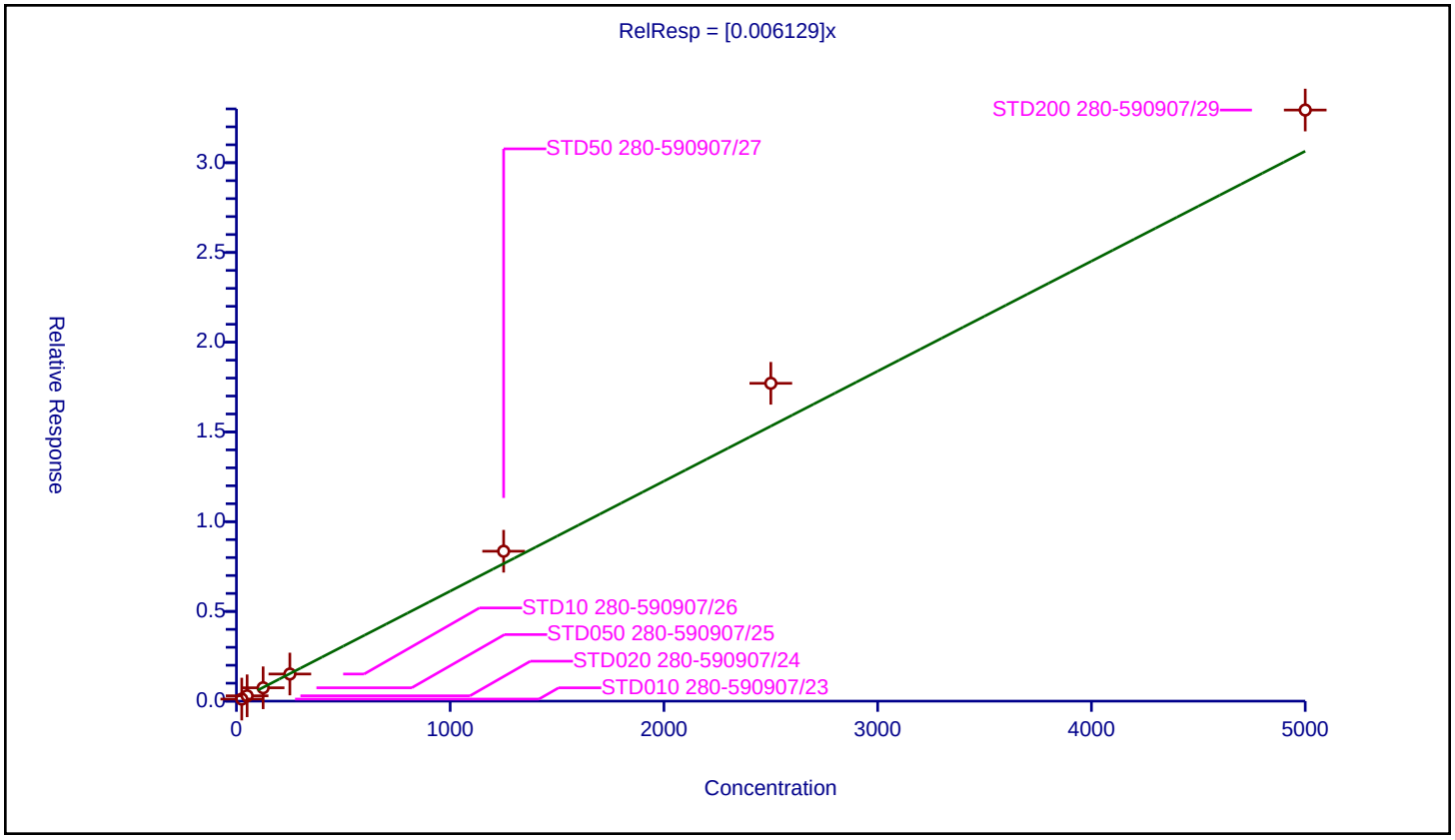
Curve Coefficients

Intercept:	0
Slope:	0.006129

Error Coefficients

Standard Error:	402000
Relative Standard Error:	13.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	25.0	0.114552	50.0	1234372.0	0.004582	Y
2	STD020 280-590907/24	50.0	0.298003	50.0	1249318.0	0.00596	Y
3	STD050 280-590907/25	125.0	0.744591	50.0	1254313.0	0.005957	Y
4	STD10 280-590907/26	250.0	1.511869	50.0	1268265.0	0.006047	Y
5	STD50 280-590907/27	1250.0	8.353667	50.0	1291361.0	0.006683	Y
6	STD100 280-590907/28	2500.0	17.71041	50.0	1270651.0	0.007084	Y
7	STD200 280-590907/29	5000.0	32.936408	50.0	1288234.0	0.006587	Y



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Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

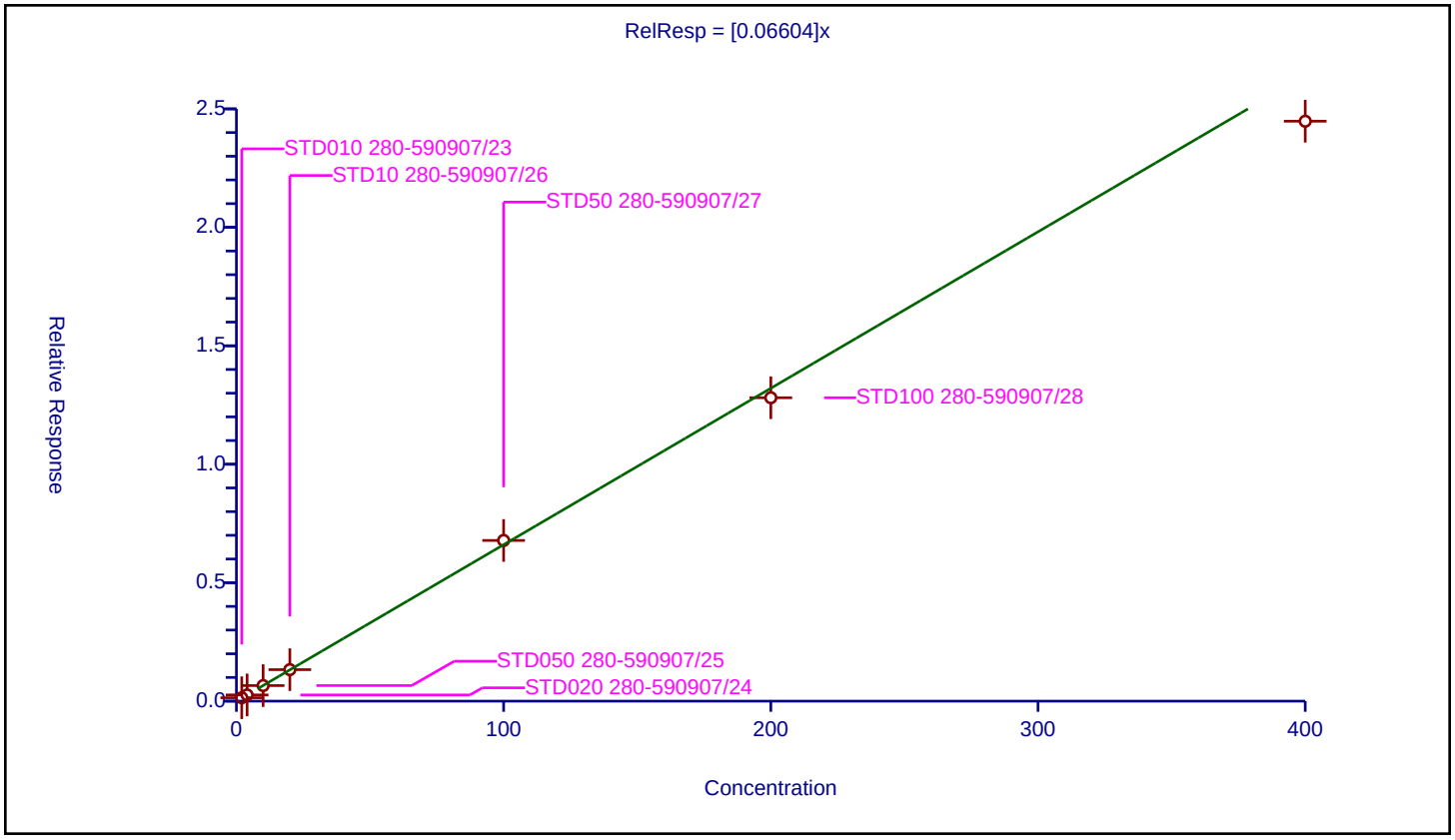
Curve Coefficients

Intercept:	0
Slope:	0.06604

Error Coefficients

Standard Error:	299000
Relative Standard Error:	4.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.142866	50.0	1234372.0	0.071433	Y
2	STD020 280-590907/24	4.0	0.262423	50.0	1249318.0	0.065606	Y
3	STD050 280-590907/25	10.0	0.656694	50.0	1254313.0	0.065669	Y
4	STD10 280-590907/26	20.0	1.329927	50.0	1268265.0	0.066496	Y
5	STD50 280-590907/27	100.0	6.783502	50.0	1291361.0	0.067835	Y
6	STD100 280-590907/28	200.0	12.807293	50.0	1270651.0	0.064036	Y
7	STD200 280-590907/29	400.0	24.479248	50.0	1288234.0	0.061198	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

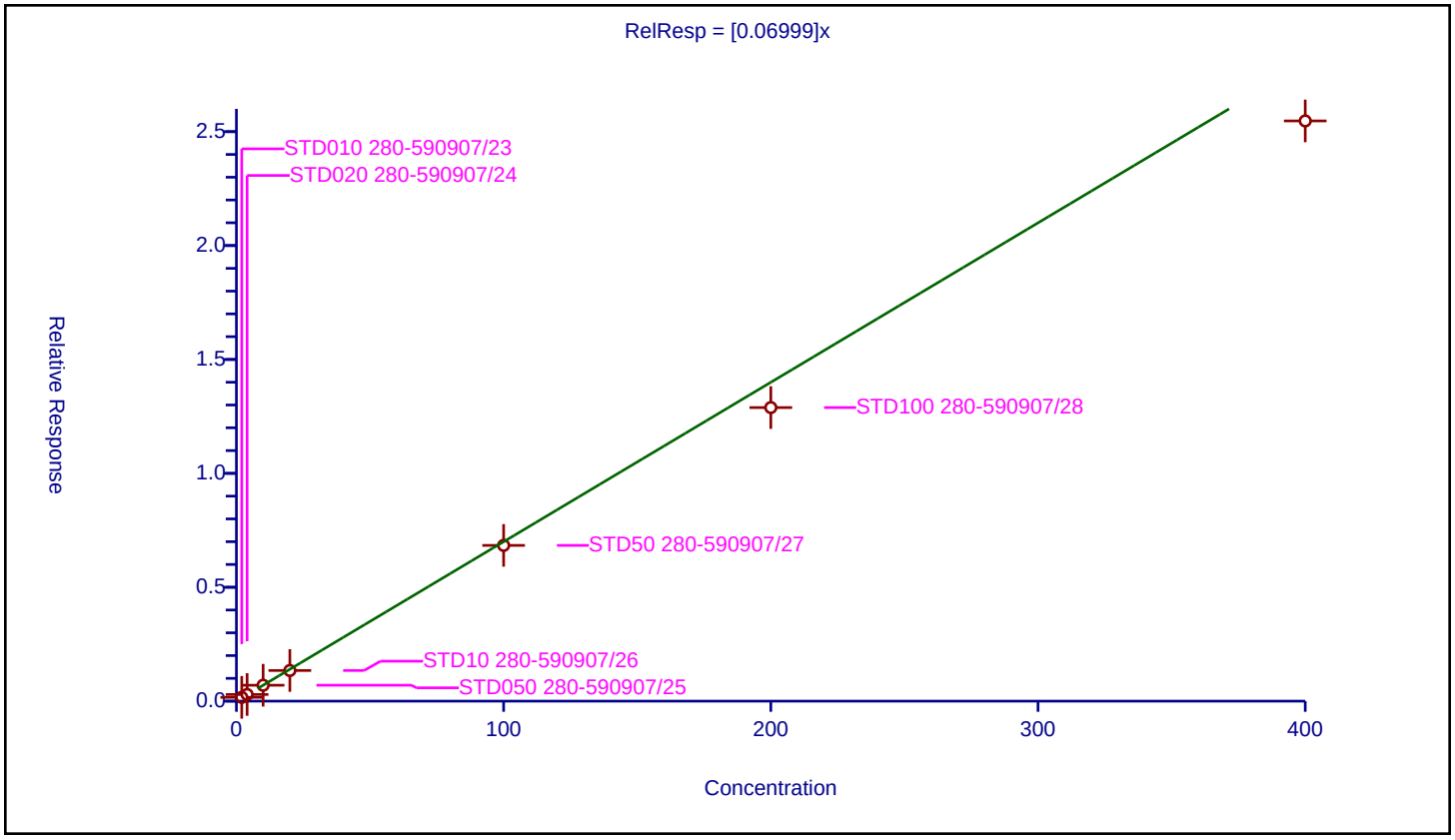
Curve Coefficients

Intercept:	0
Slope:	0.06999

Error Coefficients

Standard Error:	308000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.166684	50.0	1234372.0	0.083342	Y
2	STD020 280-590907/24	4.0	0.291999	50.0	1249318.0	0.073	Y
3	STD050 280-590907/25	10.0	0.698191	50.0	1254313.0	0.069819	Y
4	STD10 280-590907/26	20.0	1.344948	50.0	1268265.0	0.067247	Y
5	STD50 280-590907/27	100.0	6.83767	50.0	1291361.0	0.068377	Y
6	STD100 280-590907/28	200.0	12.887921	50.0	1270651.0	0.06444	Y
7	STD200 280-590907/29	400.0	25.471227	50.0	1288234.0	0.063678	Y



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Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

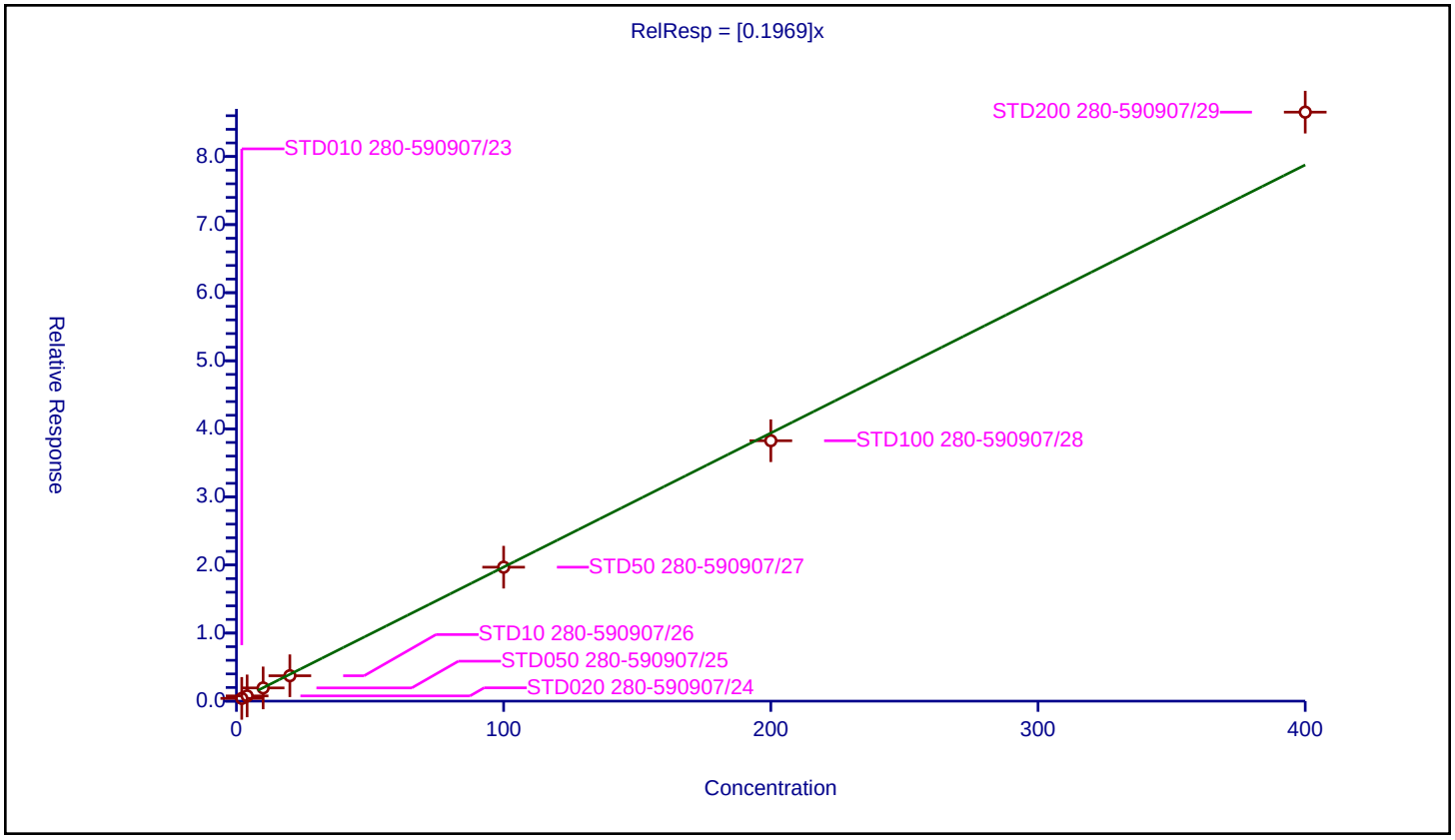
Curve Coefficients

Intercept:	0
Slope:	0.1969

Error Coefficients

Standard Error:	403000
Relative Standard Error:	5.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.403212	50.0	460800.0	0.201606	Y
2	STD020 280-590907/24	4.0	0.767202	50.0	461417.0	0.1918	Y
3	STD050 280-590907/25	10.0	1.941525	50.0	466180.0	0.194152	Y
4	STD10 280-590907/26	20.0	3.731312	50.0	471349.0	0.186566	Y
5	STD50 280-590907/27	100.0	19.678673	50.0	473350.0	0.196787	Y
6	STD100 280-590907/28	200.0	38.254424	50.0	502900.0	0.191272	Y
7	STD200 280-590907/29	400.0	86.522187	50.0	513774.0	0.216305	Y



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Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

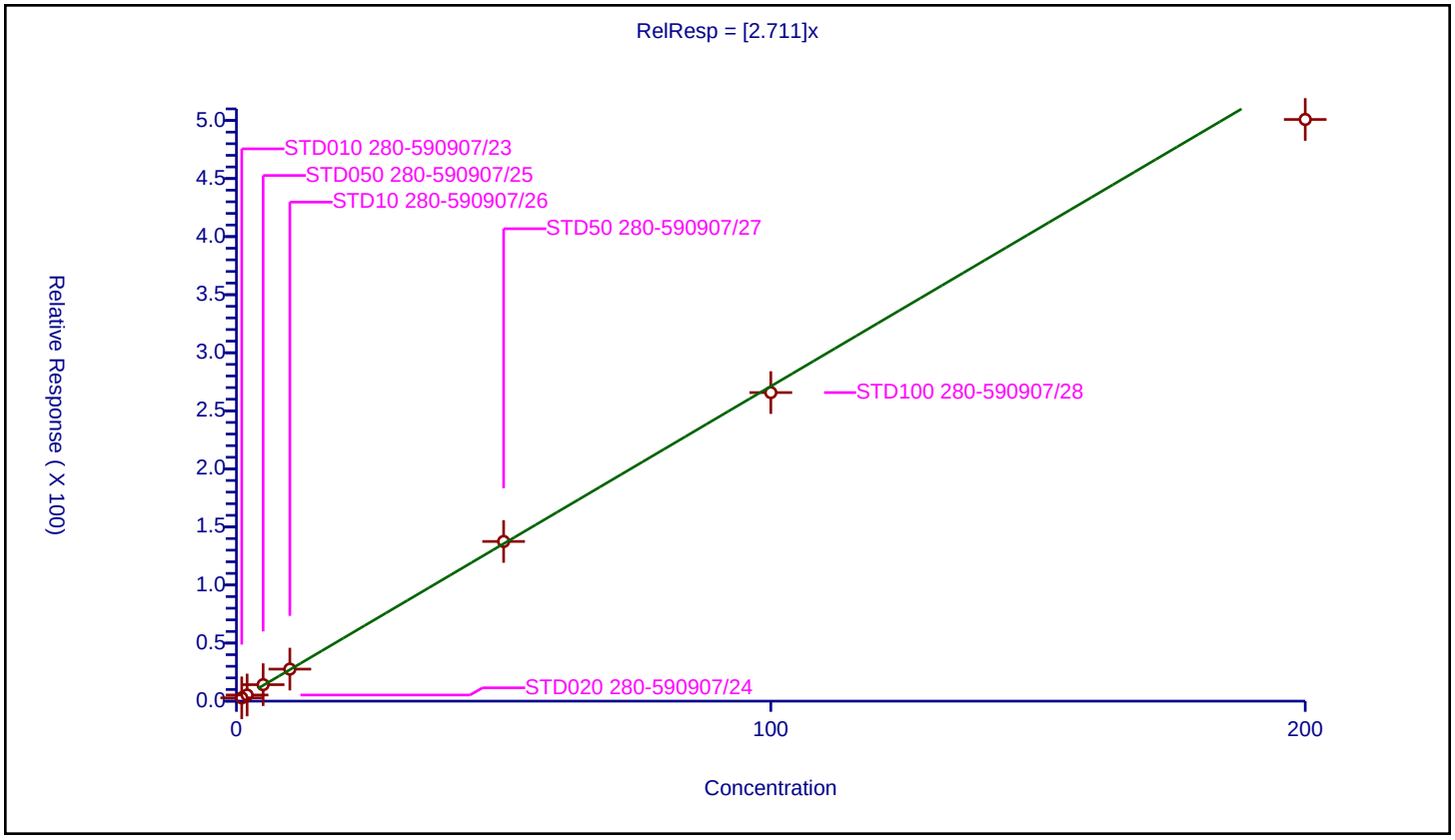
Curve Coefficients

Intercept:	0
Slope:	2.711

Error Coefficients

Standard Error:	2430000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	2.83138	50.0	460800.0	2.83138	Y
2	STD020 280-590907/24	2.0	5.284699	50.0	461417.0	2.64235	Y
3	STD050 280-590907/25	5.0	14.182612	50.0	466180.0	2.836522	Y
4	STD10 280-590907/26	10.0	27.577761	50.0	471349.0	2.757776	Y
5	STD50 280-590907/27	50.0	137.501743	50.0	473350.0	2.750035	Y
6	STD100 280-590907/28	100.0	265.70511	50.0	502900.0	2.657051	Y
7	STD200 280-590907/29	200.0	500.885798	50.0	513774.0	2.504429	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

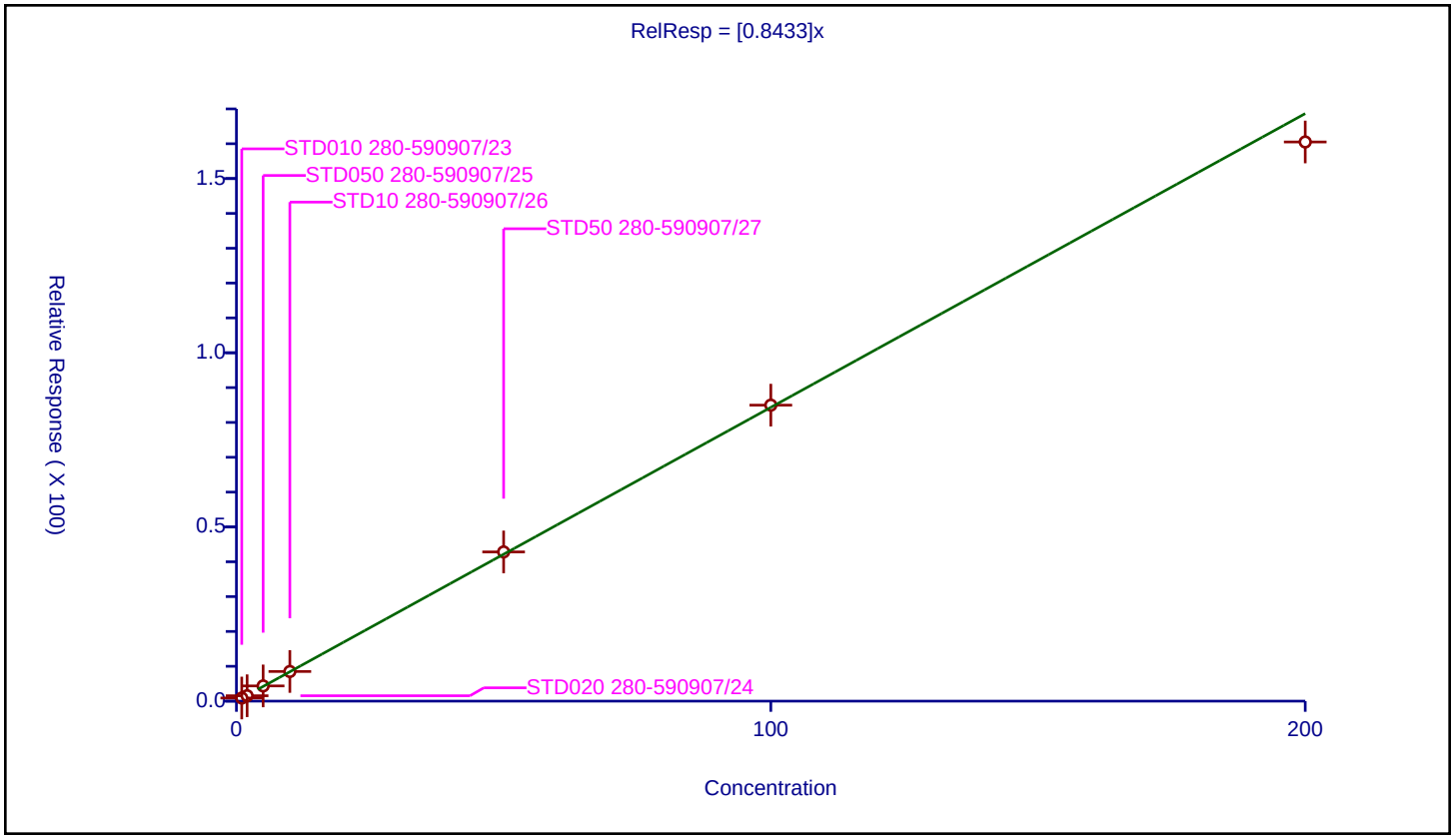
Curve Coefficients

Intercept:	0
Slope:	0.8433

Error Coefficients

Standard Error:	777000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.895833	50.0	460800.0	0.895833	Y
2	STD020 280-590907/24	2.0	1.547841	50.0	461417.0	0.77392	Y
3	STD050 280-590907/25	5.0	4.366768	50.0	466180.0	0.873354	Y
4	STD10 280-590907/26	10.0	8.509194	50.0	471349.0	0.850919	Y
5	STD50 280-590907/27	50.0	42.828245	50.0	473350.0	0.856565	Y
6	STD100 280-590907/28	100.0	84.966494	50.0	502900.0	0.849665	Y
7	STD200 280-590907/29	200.0	160.505787	50.0	513774.0	0.802529	Y



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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-607881/19	X502127.D
Level 2	STD 280-607881/18	X502128.D
Level 3	STD 280-607881/16	X502129.D
Level 4	STD 280-607881/17	X502130.D
Level 5	STD 280-607881/15	X502131.D
Level 6	ICIS 280-607881/14	X502132.D
Level 7	STD 280-607881/13	X502133.D
Level 8	STD 280-607881/12	X502134.D
Level 9	STD 280-607881/11	X502135.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2400 0.2364	0.2098 0.2058	0.1634 0.2408	0.2219 0.2369	0.2196	Ave		0.2194				11.3		15.0			
Chloromethane	0.2540 0.2229	0.2083 0.2053	0.1870 0.2246	0.2270 0.2248	0.2523	Ave		0.2229			0.1000	9.6		15.0			
Vinyl chloride	0.2171 0.2257	0.1938 0.2038	0.1790 0.2325	0.2288 0.2345	0.2095	Lin1	-0.032	0.2275							0.9970		0.9900
Bromomethane	0.1457 0.1080	0.1036 0.1142	0.1252 0.1311	0.1238 0.1276	0.1112	Ave		0.1211				10.9		15.0			
Chloroethane	0.1419 0.1566	0.1689 0.1409	0.1225 0.1560	0.1601 0.1574	0.1631	Ave		0.1519				9.4		15.0			
Dichlorofluoromethane	0.3887 0.3839	0.3567 0.3619	0.3564 0.3896	0.3844 0.3944	0.3965	Ave		0.3792				4.3		15.0			
Trichlorofluoromethane	0.3016 0.3031	0.2964 0.2751	0.2601 0.3142	0.2807 0.3141	0.2877	Ave		0.2925				6.2		15.0			
Ethyl ether	0.1994 0.1624	0.1353 0.1550	0.1727 0.1670	0.1735 0.1736	0.1795	Ave		0.1687				10.4		15.0			
Acrolein	0.0295 0.0268	0.0253 0.0264	0.0226 0.0276	0.0291 0.0287	0.0288	Ave		0.0272				8.2		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 0.1506	0.1121 0.1260	0.1192 0.1471	0.1365 0.1451	0.1684	Ave		0.1381				13.4		15.0			
1,1-Dichloroethene	0.2232 0.1942	0.2036 0.1672	0.1662 0.1889	0.1826 0.1932	0.2095	Ave		0.1921				9.7		30.0			
Acetone	+++++ 0.0531	0.1188 0.0519	0.0879 0.0531	0.0676 0.0564	0.0630	Lin2	0.2638	0.0537							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	+++++ 0.2428	0.0859 0.2403	0.0968 0.2700	0.1599 0.2878	0.1934	Lin1	-0.322	0.2716							0.9940		0.9900
Carbon disulfide	0.8237 0.6000	0.6206 0.5382	0.5271 0.5995	0.6043 0.6074	0.6809	Ave		0.6224				14.1		15.0			
Methyl acetate	0.1302 0.1269	0.1033 0.1241	0.1127 0.1304	0.1374 0.1383	0.1329	Ave		0.1262				9.1		15.0			
Allyl chloride	0.2680 0.2564	0.2417 0.2437	0.2100 0.2549	0.2795 0.2501	0.2914	Ave		0.2551				9.2		15.0			
Methylene Chloride	+++++ 0.2222	0.3098 0.2089	0.2479 0.2237	0.2676 0.2300	0.2627	Ave		0.2466				13.3		15.0			
2-Methyl-2-propanol	0.0172 0.0169	0.0125 0.0179	0.0116 0.0193	0.0186 0.0212	0.0183	Lin1	-0.061	0.0197							0.9930		0.9900
Acrylonitrile	0.0749 0.0709	0.0637 0.0698	0.0620 0.0724	0.0761 0.0768	0.0785	Ave		0.0717				8.0		15.0			
Methyl tert-butyl ether	0.6217 0.5978	0.5246 0.5854	0.5009 0.6259	0.6675 0.6471	0.6688	Ave		0.6044				9.8		15.0			
trans-1,2-Dichloroethene	0.2063 0.2224	0.2129 0.1986	0.1799 0.2189	0.2201 0.2255	0.2350	Ave		0.2133				7.7		15.0			
Hexane	1.3406 1.2250	1.1213 1.0415	0.9109 1.1799	1.0412 1.1848	1.2672	Ave		1.1458				11.5		15.0			
Vinyl acetate	0.3457 0.3436	0.3007 0.3349	0.2645 0.3731	0.3450 0.3639	0.3707	Ave		0.3380				10.4		15.0			
1,1-Dichloroethane	0.4000 0.3925	0.3422 0.3691	0.3371 0.3992	0.4167 0.4123	0.4320	Ave		0.3890			0.1000	8.5		15.0			
2-Butanone (MEK)	+++++ 0.0801	0.0714 0.0809	0.0775 0.0829	0.0849 0.0873	0.0923	Ave		0.0821				7.7		15.0			
cis-1,2-Dichloroethene	0.2877 0.2443	0.2431 0.2300	0.2255 0.2519	0.2853 0.2568	0.2743	Ave		0.2554				8.9		15.0			
2,2-Dichloropropane	0.3305 0.3077	0.2598 0.2797	0.2642 0.3150	0.2845 0.3248	0.3249	Ave		0.2990				9.2		15.0			
sec-Butyl Alcohol	0.0097 0.0127	0.0088 0.0138	0.0082 0.0143	0.0130 0.0160	0.0124	Lin1	-0.152	0.0148							0.9930		0.9900
Chlorobromomethane	0.1164 0.1130	0.1164 0.1102	0.1114 0.1157	0.1293 0.1148	0.1320	Ave		0.1177				6.5		15.0			
Tetrahydrofuran	0.0649 0.0547	0.0496 0.0526	0.0480 0.0545	0.0567 0.0588	0.0613	Ave		0.0557				9.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chloroform	0.4289 0.3881	0.3823 0.3610	0.3395 0.3947	0.4332 0.4017	0.4331	Ave		0.3958				8.3		30.0			
1,1,1-Trichloroethane	0.3593 0.3270	0.3070 0.2903	0.2797 0.3271	0.3183 0.3336	0.3437	Ave		0.3206				7.9		15.0			
Cyclohexane	0.3472 0.3437	0.3205 0.2995	0.2697 0.3438	0.3274 0.3390	0.3862	Ave		0.3308				9.9		15.0			
1,1-Dichloropropene	0.3469 0.3153	0.3309 0.2822	0.2618 0.3193	0.3068 0.3236	0.3412	Ave		0.3142				8.7		15.0			
Carbon tetrachloride	0.2503 0.2773	0.2555 0.2456	0.2042 0.2806	0.2534 0.2853	0.2834	Ave		0.2595				10.0		15.0			
Isobutyl alcohol	0.0037 0.0056	0.0035 0.0058	0.0030 0.0060	0.0060 0.0067	0.0053	Lin1	-0.071	0.0063							0.9940		0.9900
Benzene	1.0614 0.9194	0.8520 0.8467	0.8152 0.9164	1.0143 0.9263	1.0083	Ave		0.9289				9.1		15.0			
1,2-Dichloroethane	+++++ 0.2931	0.2484 0.2849	0.2810 0.2993	0.3198 0.3047	0.3245	Ave		0.2944				8.2		15.0			
n-Heptane	+++++ 0.2007	0.1848 0.1831	0.1786 0.2027	0.1808 0.1979	0.2137	Ave		0.1928				6.6		15.0			
Trichloroethene	0.9482 0.9884	0.8928 0.8886	0.8011 0.9962	1.0224 1.0287	1.0411	Ave		0.9564				8.4		15.0			
2-Pentanone	+++++ 0.1284	0.0852 0.1285	0.0989 0.1325	0.1232 0.1396	0.1350	Lin2	-0.166	0.1334							0.9980		0.9900
Methylcyclohexane	0.2797 0.2528	0.2195 0.2243	0.2030 0.2535	0.2310 0.2509	0.2650	Ave		0.2422				10.1		15.0			
1,2-Dichloropropane	0.2960 0.2289	0.1845 0.2202	0.2089 0.2377	0.2522 0.2468	0.2508	Ave		0.2362				13.3		30.0			
1,4-Dioxane	+++++ 0.0028	0.0026 0.0030	0.0028 0.0030	0.0032 0.0030	0.0035	Ave		0.0030				9.8		15.0			
Dibromomethane	0.1530 0.1358	0.1395 0.1337	0.1230 0.1413	0.1401 0.1446	0.1569	Ave		0.1409				7.2		15.0			
Dichlorobromomethane	0.3298 0.2923	0.2574 0.2836	0.2529 0.3072	0.3185 0.3106	0.3243	Ave		0.2974				9.4		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0749	0.0860 0.0710	0.1086 0.0783	0.1053 0.0728	0.1185	Lin1	0.0651	0.0744							0.9900		0.9900
cis-1,3-Dichloropropene	1.4117 1.5795	1.2425 1.5208	1.3778 1.6454	1.5331 1.7171	1.6820	Ave		1.5233				10.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Methyl-2-pentanone (MIBK)	0.1454 0.1657	0.1212 0.1686	0.1235 0.1714	0.1641 0.1790	0.1842	Ave		0.1581				14.5		15.0			
Toluene	1.0661 0.9997	0.9758 0.9219	0.8750 0.9956	1.0755 1.0007	1.0956	Ave		1.0007				7.2		30.0			
trans-1,3-Dichloropropene	0.2907 0.3187	0.2574 0.3134	0.2396 0.3408	0.3121 0.3575	0.3319	Ave		0.3069				12.5		15.0			
Ethyl methacrylate	0.9701 1.1405	0.9124 1.1208	0.8475 1.1774	1.1664 1.2527	1.2438	Ave		1.0924				13.4		15.0			
1,1,2-Trichloroethane	0.2006 0.1942	0.1784 0.1897	0.1919 0.1991	0.2178 0.2016	0.2267	Ave		0.2000				7.3		15.0			
Tetrachloroethene	0.8562 0.7557	0.6039 0.6601	0.6675 0.7365	0.7038 0.7487	0.8008	Ave		0.7259				10.6		15.0			
1,3-Dichloropropane	1.5878 1.5228	1.4523 1.4632	1.3230 1.5350	1.5940 1.5966	1.7173	Ave		1.5324				7.3		15.0			
2-Hexanone	+++++ 0.5049	0.3825 0.4958	0.3703 0.5140	0.4663 0.5443	0.5530	Ave		0.4789				14.4		15.0			
Chlorodibromomethane	0.9064 0.9385	0.8593 0.8841	0.7457 0.9640	0.9631 1.0039	1.0535	Ave		0.9243				9.7		15.0			
1,2-Dibromoethane	0.8954 0.8694	0.7676 0.8468	0.7784 0.8905	0.9326 0.9199	0.9781	Ave		0.8754				7.9		15.0			
1-Chlorohexane	+++++ 1.3402	1.7170 1.1706	1.2481 1.3002	1.2677 1.3189	1.4650	Ave		1.3535				12.5		15.0			
Chlorobenzene	3.1050 2.7824	2.4890 2.5403	2.5301 2.7684	2.9586 2.7890	3.1063	Ave		2.7855			0.3000	8.5		15.0			
1,1,1,2-Tetrachloroethane	0.8652 0.9018	0.8481 0.8604	0.6725 0.9342	0.9610 0.9731	1.0421	Ave		0.8954				11.7		15.0			
Ethylbenzene	1.8784 1.5384	1.4104 1.3577	1.3823 1.5016	1.5351 1.5580	1.6375	Ave		1.5332				10.3		30.0			
m-Xylene & p-Xylene	1.9878 1.8724	1.7192 1.6721	1.6824 1.8200	1.8799 1.8385	2.0707	Ave		1.8381				7.3		15.0			
o-Xylene	1.9940 1.8244	1.7776 1.6899	1.7061 1.8053	1.9731 1.8633	2.1494	Ave		1.8648				8.0		15.0			
Styrene	2.8118 3.0976	2.5487 2.8469	2.4820 3.0545	3.1245 3.1233	3.5752	Ave		2.9627				11.3		15.0			
Bromoform	0.5330 0.5638	0.5015 0.5688	0.4391 0.5921	0.5691 0.6311	0.6295	Ave		0.5587			0.1000	10.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Isopropylbenzene	2.8936 2.9182	2.7601 2.5824	2.4989 2.8659	2.8273 2.8974	3.3009	Ave		2.8383				8.0		15.0			
Cyclohexanone	0.0334 0.0401	0.0267 0.0404	0.0305 0.0418	0.0468 0.0443	0.0453	Lin1	-0.276	0.0427							0.9980		0.9900
1,1,2,2-Tetrachloroethane	0.6301 0.7085	0.6248 0.6871	0.6626 0.7226	0.7903 0.7516	0.8670	Ave		0.7161			0.3000	10.9		15.0			
Bromobenzene	0.7766 0.7077	0.6263 0.6577	0.6563 0.7080	0.7647 0.7221	0.8149	Ave		0.7149				8.7		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1822	0.1263 0.1835	0.1287 0.1940	0.1519 0.2125	0.1894	Lin2	-0.077	0.1888							0.9900		0.9900
1,2,3-Trichloropropane	0.2499 0.2155	0.2004 0.2066	0.1906 0.2155	0.2179 0.2217	0.2381	Ave		0.2173				8.3		15.0			
N-Propylbenzene	0.6759 0.8318	0.7555 0.7400	0.6784 0.8152	0.8276 0.8332	0.9397	Ave		0.7886				10.7		15.0			
2-Chlorotoluene	0.6489 0.7072	0.6256 0.6538	0.6306 0.7058	0.7889 0.7279	0.8105	Ave		0.6999				9.6		15.0			
1,3,5-Trimethylbenzene	2.4596 2.4282	2.4243 2.2064	2.0402 2.3845	2.4665 2.4215	2.7111	Ave		2.3936				7.7		15.0			
4-Chlorotoluene	0.7915 0.7318	0.6133 0.6916	0.6247 0.7450	0.7554 0.7566	0.8437	Ave		0.7282				10.2		15.0			
tert-Butylbenzene	2.0916 2.0393	1.9174 1.8308	1.7605 1.9996	2.0336 2.0130	2.3148	Ave		2.0001				8.0		15.0			
1,2,4-Trimethylbenzene	2.5467 2.5377	2.2047 2.3227	2.1669 2.5199	2.5783 2.5345	2.8738	Ave		2.4761				8.7		15.0			
sec-Butylbenzene	0.6749 0.6094	0.5621 0.5379	0.5279 0.5978	0.5998 0.5993	0.6832	Ave		0.5991				9.0		15.0			
1,3-Dichlorobenzene	1.4200 1.3305	1.1613 1.2337	1.0806 1.3224	1.3945 1.3544	1.5820	Ave		1.3199				11.2		15.0			
4-Isopropyltoluene	2.6229 2.5483	2.2922 2.2999	2.1048 2.4915	2.4527 2.4962	2.9289	Ave		2.4708				9.4		15.0			
1,4-Dichlorobenzene	1.4352 1.3411	1.4443 1.2583	1.3203 1.3446	1.5037 1.3687	1.6038	Ave		1.4022				7.5		15.0			
n-Butylbenzene	2.1326 2.2934	1.8212 2.0756	1.7970 2.2244	2.1769 2.2368	2.5001	Ave		2.1398				10.4		15.0			
1,2-Dichlorobenzene	1.3335 1.2382	1.2170 1.1866	1.1044 1.2523	1.3639 1.2572	1.4825	Ave		1.2706				8.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dibromo-3-Chloropropane	0.0697 0.1376	0.0878 0.1390	0.0699 0.1413	0.1473 0.1508	0.1432	Lin1	-0.058	0.1455							0.9980		0.9900
1,2,4-Trichlorobenzene	+++++ 0.6449	0.5083 0.6322	0.5417 0.6705	0.7012 0.6625	0.7563	Ave		0.6397				12.6		15.0			
Hexachlorobutadiene	+++++ 0.2390	0.1972 0.2215	0.2168 0.2412	0.2393 0.2321	0.2783	Ave		0.2332				10.1		15.0			
Naphthalene	1.4705 1.6489	1.2750 1.6963	1.3620 1.7576	1.7489 1.7291	1.9996	Ave		1.6320				13.8		15.0			
1,2,3-Trichlorobenzene	0.4869 0.4768	0.3653 0.4926	0.4280 0.5076	0.5113 0.4977	0.5791	Ave		0.4828				12.2		15.0			
Dibromofluoromethane (Surr)	0.2382 0.2381	0.2408 0.2421	0.2412 0.2419	0.2381 0.2420	0.2421	Ave		0.2405				0.8		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2484 0.2416	0.2535 0.2553	0.2564 0.2532	0.2542 0.2544	0.2564	Ave		0.2526				1.9		15.0			
Toluene-d8 (Surr)	4.2464 4.3013	4.2733 4.2275	4.2546 4.2538	4.2016 4.2763	4.2990	Ave		4.2593				0.8		15.0			
4-Bromofluorobenzene (Surr)	0.8784 0.8996	0.9003 0.8995	0.8888 0.9133	0.8857 0.9033	0.8728	Ave		0.8935				1.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-607881/19	X502127.D
Level 2	STD 280-607881/18	X502128.D
Level 3	STD 280-607881/16	X502129.D
Level 4	STD 280-607881/17	X502130.D
Level 5	STD 280-607881/15	X502131.D
Level 6	ICIS 280-607881/14	X502132.D
Level 7	STD 280-607881/13	X502133.D
Level 8	STD 280-607881/12	X502134.D
Level 9	STD 280-607881/11	X502135.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	3233 338892	5544 455235	8877 719193	29690 1487302	60240	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloromethane	FB	Ave	3421 319506	5505 454103	10159 670892	30373 1411421	69201	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Lin1	2925 323546	5121 450884	9723 694430	30616 1472583	57453	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Ave	1963 154866	2737 252611	6801 391432	16566 800852	30485	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloroethane	FB	Ave	1911 224545	4463 311792	6653 465962	21424 988102	44742	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Ave	5236 550286	9428 800461	19362 1163656	51426 2476231	108746	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Ave	4063 434484	7834 608496	14131 938320	37549 1971931	78899	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl ether	FB	Ave	2686 232745	3577 342946	9381 498848	23215 1090208	49231	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acrolein	FB	Ave	3927 379722	6604 577559	12124 814984	38447 1778974	77990	4.94 494	9.88 741	19.8 988	49.4 1975	98.8
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	+++++ 215857	2962 278730	6474 439333	18269 910907	46180	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloroethene	FB	Ave	3007 278445	5380 369837	9029 564261	24433 1212739	57452	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acetone	FB	Lin2	+++++ 304604	12556 458920	19107 634088	36169 1417706	69108	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Iodomethane	FB	Lin1	+++++ 348041	2269 531498	5258 806371	21390 1807115	53045	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Carbon disulfide	FB	Ave	11096 860085	16403 1190511	28640 1790422	80848 3813466	186751	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methyl acetate	FB	Ave	3507 363705	5462 549127	12245 778916	36777 1736405	72912	1.00 100	2.00 150	4.00 200	10.0 400	20.0
Allyl chloride	FB	Ave	3610 367558	6388 539065	11410 761288	37396 1570415	79909	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Methylene Chloride	FB	Ave	+++++ 318574	8188 462061	13471 668279	35804 1444297	72041	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Methyl-2-propanol	FB	Lin1	2320 242268	3291 395522	6328 575215	24877 1330547	50092	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Acrylonitrile	FB	Ave	10085 1016179	16828 1544048	33673 2161584	101841 4821060	215343	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Methyl tert-butyl ether	FB	Ave	8375 856915	13865 1294920	27213 1869281	89301 4062888	183431	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,2-Dichloroethene	FB	Ave	2779 318807	5628 439291	9776 653913	29443 1416053	64462	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexane	CBNZd5	Ave	4165 401685	6800 539664	11365 826083	32583 1712945	80887	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl acetate	FB	Ave	9312 985044	15894 1481686	28743 2229008	92305 4569454	203312	1.00 100	2.00 150	4.00 200	10.0 400	20.0
1,1-Dichloroethane	FB	Ave	5388 562644	9045 816491	18317 1192336	55748 2588608	118483	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Butanone (MEK)	FB	Ave	+++++ 459249	7552 715496	16837 989943	45431 2191938	101248	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
cis-1,2-Dichloroethene	FB	Ave	3876 350256	6426 508687	12253 752429	38166 1612272	75236	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2,2-Dichloropropane	FB	Ave	4452 441048	6866 618660	14356 940919	38064 2039483	89114	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butyl Alcohol	FB	Lin1	3124 438034	5594 733439	10662 1022793	41713 2406100	81863	12.0 1200	24.0 1800	48.0 2400	120 4800	240
Chlorobromomethane	FB	Ave	1568 161935	3076 243851	6050 345635	17299 720959	36209	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Tetrahydrofuran	FB	Ave	1748 156862	2622 232688	5217 325621	15172 738419	33630	1.00 100	2.00 150	4.00 200	10.0 400	20.0
Chloroform	FB	Ave	5777 556331	10105 798668	18443 1178968	57954 2521900	118770	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1-Trichloroethane	FB	Ave	4840 468729	8113 642071	15195 976837	42581 2094298	94276	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexane	FB	Ave	4677 492743	8471 662501	14652 1026924	43802 2128312	105926	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloropropene	FB	Ave	4673 451920	8745 624293	14223 953615	41052 2031898	93579	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon tetrachloride	FB	Ave	3372 397512	6754 543267	11093 838075	33909 1791238	77728	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isobutyl alcohol	FB	Lin1	1239 202099	2296 322140	4131 449774	19923 1059317	36138	12.5 1250	25.0 1875	50.0 2500	125 5000	250
Benzene	FB	Ave	14297 1317866	22519 1872929	44293 2737137	135707 5815711	276546	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloroethane	FB	Ave	+++++ 420189	6564 630156	15265 894032	42781 1912823	88985	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Heptane	FB	Ave	+++++ 287678	4883 405076	9701 605305	24184 1242834	58608	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichloroethene	CBNZd 5	Ave	2946 324099	5414 460433	9994 697477	31994 1487283	66453	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Pentanone	FB	Lin2	+++++ 588946	7204 909963	17190 1266287	52743 2805362	118471	+++++ 160	3.20 240	6.40 320	16.0 640	32.0
Methylcyclohexane	FB	Ave	3768 362438	5802 496273	11028 757279	30908 1575514	72674	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloropropane	FB	Ave	3987 328128	4877 487163	11347 709804	33738 1549684	68795	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dioxane	FB	Ave	+++++ 80232	1363 131133	3045 180232	8564 378292	19458	+++++ 1000	20.0 1500	40.0 2000	100 4000	200
Dibromomethane	FB	Ave	2061 194598	3688 295852	6682 422071	18747 907837	43029	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorobromomethane	FB	Ave	4442 419022	6802 627304	13742 917466	42619 1950032	88953	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Lin1	+++++ 107303	2272 157070	5903 233733	14093 457301	32500	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,3-Dichloropropene	CBNZd 5	Ave	4386 517953	7535 788014	17190 1151983	47976 2482593	107368	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	7832 949935	12812 1491522	26840 2047359	87812 4496701	202042	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Toluene	FB	Ave	14361 1433071	25789 2039321	47540 2973481	143890 6283173	300489	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,3-Dichloropropene	FB	Ave	3916 456797	6802 693272	13015 1017829	41755 2244726	91033	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl methacrylate	CBNZd 5	Ave	3014 373973	5533 580727	10574 824314	36500 1811167	79396	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloroethane	FB	Ave	2702 278363	4715 419600	10425 594722	29134 1265996	62169	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Tetrachloroethene	CBNZd5	Ave	2660 247796	3662 342034	8328 515640	22024 1082502	51118	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichloropropane	CBNZd5	Ave	4933 499334	8807 758142	16506 1074648	49882 2308352	109621	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Hexanone	CBNZd5	Ave	+++++ 662278	9279 1027635	18479 1439383	58368 3147857	141186	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Chlorodibromomethane	CBNZd5	Ave	2816 307759	5211 458113	9303 674905	30139 1451433	67246	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromoethane	CBNZd5	Ave	2782 285071	4655 438788	9711 623452	29186 1329989	62436	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1-Chlorohexane	CBNZd5	Ave	+++++ 351579	8330 485226	12457 728215	31737 1525490	74809	+++++ 40.0	0.800 60.0	1.60 80.0	4.00 160	8.00
Chlorobenzene	CBNZd5	Ave	9647 912393	15094 1316251	31566 1938193	92586 4032300	198280	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1,2-Tetrachloroethane	CBNZd5	Ave	2688 295726	5143 445800	8390 654047	30072 1406924	66518	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethylbenzene	CBNZd5	Ave	5836 504466	8553 703490	17245 1051276	48039 2252454	104522	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
m-Xylene & p-Xylene	CBNZd5	Ave	6176 613970	10426 866391	20990 1274199	58830 2658033	132180	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
o-Xylene	CBNZd5	Ave	6195 598233	10780 875612	21285 1263921	61746 2693943	137199	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Styrene	CBNZd5	Ave	8736 1015747	15456 1475117	30966 2138500	97777 4515616	228213	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromoform	CBNZd5	Ave	1656 184865	3041 294736	5478 414564	17809 912378	40184	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isopropylbenzene	DCBd4	Ave	14024 1487164	26320 2070408	48399 3086487	137693 6405703	333813	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexanone	CBNZd5	Lin1	3115	4862	11401	43891	86743	15.0	30.0	60.0	150	300

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175122-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			394415	628647	877871	1922235		1500	2250	3000	6000	
1,1,2,2-Tetrachloroethane	DCBd4	Ave	3054 361050	5958 550837	12834 778211	38489 1661698	87682	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromobenzene	DCBd4	Ave	3764 360643	5972 527328	12712 762506	37243 1596570	82410	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,4-Dichloro-2-butene	DCBd4	Lin2	+++++ 92835	1204 147092	2492 208918	7396 469794	19149	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichloropropane	DCBd4	Ave	1211 109805	1911 165636	3692 232101	10613 490084	24074	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
N-Propylbenzene	DCBd4	Ave	3276 423898	7204 593298	13139 877894	40306 1842046	95031	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chlorotoluene	DCBd4	Ave	3145 360383	5966 524154	12213 760094	38420 1609270	81968	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3,5-Trimethylbenzene	DCBd4	Ave	11921 1237465	23118 1768967	39515 2568017	120120 5353526	274169	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Chlorotoluene	DCBd4	Ave	3836 372917	5848 554452	12100 802364	36788 1672759	85320	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
tert-Butylbenzene	DCBd4	Ave	10137 1039264	18284 1467821	34097 2153460	99040 4450424	234094	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trimethylbenzene	DCBd4	Ave	12343 1293267	21024 1862150	41968 2713812	125567 5603513	290623	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butylbenzene	DCBd4	Ave	3271 310567	5360 431247	10225 643793	29211 1324888	69093	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichlorobenzene	DCBd4	Ave	6882 678055	11074 989115	20930 1424143	67914 2994458	159983	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Isopropyltoluene	DCBd4	Ave	12712 1298661	21858 1843862	40766 2683227	119450 5518835	296199	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dichlorobenzene	DCBd4	Ave	6956 683454	13773 1008782	25571 1448050	73232 3025964	162189	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Butylbenzene	DCBd4	Ave	10336 1168748	17367 1664058	34804 2395612	106017 4945270	252833	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichlorobenzene	DCBd4	Ave	6463 630995	11605 951304	21390 1348625	66425 2779439	149928	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromo-3-Chloropropane	DCBd4	Lin1	338 70118	837 111417	1353 152194	7174 333356	14481	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trichlorobenzene	DCBd4	Ave	+++++ 328647	4847 506863	10492 722079	34150 1464797	76481	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexachlorobutadiene	DCBd4	Ave	+++++ 121800	1880 177563	4199 259806	11656 513207	28148	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Naphthalene	DCBd4	Ave	7127 840312	12158 1359974	26379 1892905	85174 3822819	202222	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-175122-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624Sil ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trichlorobenzene	DCBd4	Ave	2360 243010	3483 394915	8290 546626	24900 1100436	58565	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	320846 341310	318271 357034	327624 361321	318595 379808	331984	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	334584 346313	334967 376482	348242 378106	340158 399359	351639	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	1319319 1410445	1295729 1460315	1327001 1489072	1314839 1545654	1372074	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	425745 458461	429272 480762	430376 491788	431339 499290	441338	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 07-Apr-2023 05:58:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 200
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:36 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:46:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1569677	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	361445	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	552718	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	379808	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	399359	50.0	50.4	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1545654	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	88	499290	50.0	50.5	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	1487302	200.0	215.9	
11 Chloromethane	50	1.867	1.867	0.000	99	1411421	200.0	201.7	
12 Vinyl chloride	62	1.960	1.967	-0.007	98	1472583	200.0	206.3	
14 Bromomethane	94	2.232	2.246	-0.014	91	800852	200.0	210.6	
15 Chloroethane	64	2.332	2.339	-0.007	100	988102	200.0	207.2	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	97	2476231	200.0	208.0	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	1971931	200.0	214.7	
19 Ethyl ether	59	2.747	2.747	0.000	88	1090208	200.0	205.8	
21 Acrolein	56	2.854	2.854	0.000	100	1778974	1975.0	2082.4	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.932	0.001	96	910907	200.0	210.1	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	98	1212739	200.0	201.1	
24 Acetone	43	2.954	2.954	0.000	100	1417706	800.0	835.5	
26 Iodomethane	142	3.054	3.061	-0.007	99	1807115	200.0	213.1	
27 Carbon disulfide	76	3.119	3.118	0.001	99	3813466	200.0	195.2	
29 Methyl acetate	43	3.176	3.176	0.000	97	1736405	400.0	438.1	
30 3-Chloro-1-propene	41	3.197	3.204	-0.007	87	1570415	200.0	196.1	
31 Methylene Chloride	84	3.290	3.297	-0.007	89	1444297	200.0	186.5	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	100	1330547	2000.0	2157.4	
33 Acrylonitrile	53	3.455	3.454	0.001	97	4821060	2000.0	2142.8	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	4062888	200.0	214.1	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	1416053	200.0	211.5	
37 Hexane	57	3.683	3.683	0.000	90	1712945	200.0	206.8	
39 Vinyl acetate	43	3.784	3.783	0.001	97	4569454	400.0	430.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	2588608	200.0	212.0	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	2191938	800.0	849.9	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	82	1612272	200.0	201.0	
48 2,2-Dichloropropane	77	4.220	4.227	-0.007	89	2039483	200.0	217.3	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	2406100	4800.0	5184.4	
52 Chlorobromomethane	128	4.384	4.391	-0.007	94	720959	200.0	195.1	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	738419	400.0	422.4	
54 Chloroform	83	4.441	4.448	-0.007	93	2521900	200.0	202.9	
55 1,1,1-Trichloroethane	97	4.584	4.591	-0.007	99	2094298	200.0	208.1	
56 Cyclohexane	56	4.649	4.649	0.000	88	2128312	200.0	205.0	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	2031898	200.0	206.0	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	1059317	5000.0	5374.3	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	1791238	200.0	219.9	
62 Benzene	78	4.849	4.849	0.000	96	5815711	200.0	199.4	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	1912823	200.0	206.9	
65 n-Heptane	43	5.028	5.035	-0.007	89	1242834	200.0	205.4	
67 Trichloroethene	95	5.335	5.335	0.000	98	1487283	200.0	215.1	
68 2-Pentanone	43	5.435	5.435	0.000	98	2805362	640.0	671.1	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	1575514	200.0	207.2	
70 1,2-Dichloropropane	63	5.535	5.542	-0.007	97	1549684	200.0	209.0	
72 1,4-Dioxane	88	5.578	5.578	0.000	92	378292	4000.0	4030.0	
73 Dibromomethane	93	5.607	5.607	0.000	94	907837	200.0	205.3	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	1950032	200.0	208.9	
76 2-Chloroethyl vinyl ether	63	5.929	5.936	-0.007	90	457301	200.0	194.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	2482593	200.0	225.4	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	4496701	800.0	906.0	
79 Toluene	91	6.365	6.365	0.000	98	6283173	200.0	200.0	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	2244726	200.0	233.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	1811167	200.0	229.4	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	1265996	200.0	201.6	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	1082502	200.0	206.3	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	95	2308352	200.0	208.4	
85 2-Hexanone	43	6.872	6.879	-0.007	94	3147857	800.0	909.3	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	1451433	200.0	217.2	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	1329989	200.0	210.2	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	1525490	160.0	155.9	
90 Chlorobenzene	112	7.602	7.602	0.000	95	4032300	200.0	200.3	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	96	1406924	200.0	217.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	2252454	200.0	203.2	
93 m-Xylene & p-Xylene	106	7.788	7.795	-0.007	0	2658033	200.0	200.0	
94 o-Xylene	106	8.152	8.152	0.000	96	2693943	200.0	199.8	
95 Styrene	104	8.167	8.166	0.001	94	4515616	200.0	210.8	
96 Bromoform	173	8.345	8.345	0.000	94	912378	200.0	225.9	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	6405703	200.0	204.2	
99 Cyclohexanone	55	8.588	8.588	0.000	91	1922235	6000.0	6228.1	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	1661698	200.0	209.9	
101 Bromobenzene	156	8.810	8.810	0.000	97	1596570	200.0	202.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	79	469794	200.0	225.5	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	490084	200.0	204.0	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	1842046	200.0	211.3	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	1609270	200.0	208.0	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	5353526	200.0	202.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	1672759	200.0	207.8	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	4450424	200.0	201.3	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	5603513	200.0	204.7	
111 sec-Butylbenzene	134	9.589	9.582	0.007	94	1324888	200.0	200.0	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	2994458	200.0	205.2	
113 4-Isopropyltoluene	119	9.733	9.732	0.000	97	5518835	200.0	202.1	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	3025964	200.0	195.2	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	4945270	200.0	209.1	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	2779439	200.0	197.9	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.948	-0.007	87	333356	200.0	207.6	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	1464797	200.0	207.1	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	513207	200.0	199.1	
122 Naphthalene	128	12.035	12.035	0.000	97	3822819	200.0	211.9	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	94	1100436	200.0	206.2	
S 135 1,2-Dichloroethene, Total (URS)	96				0		400.0	412.5	
S 139 Xylenes, Total (URS)	1				0		400.0	399.9	
S 136 1,3-Dichloropropene, Total	1				0		400.0	458.4	
S 138 Xylenes, Total	106				0		400.0	399.9	
S 137 Total BTEX	1				0			1002.5	
S 140 Trihalomethanes, Total	1				0		800.0	855.0	
S 141 1,2-Dichloroethene, Total	1				0		400.0	412.5	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00086	Amount Added: 100.00	Units: uL	
MV-Gas A_00150	Amount Added: 40.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

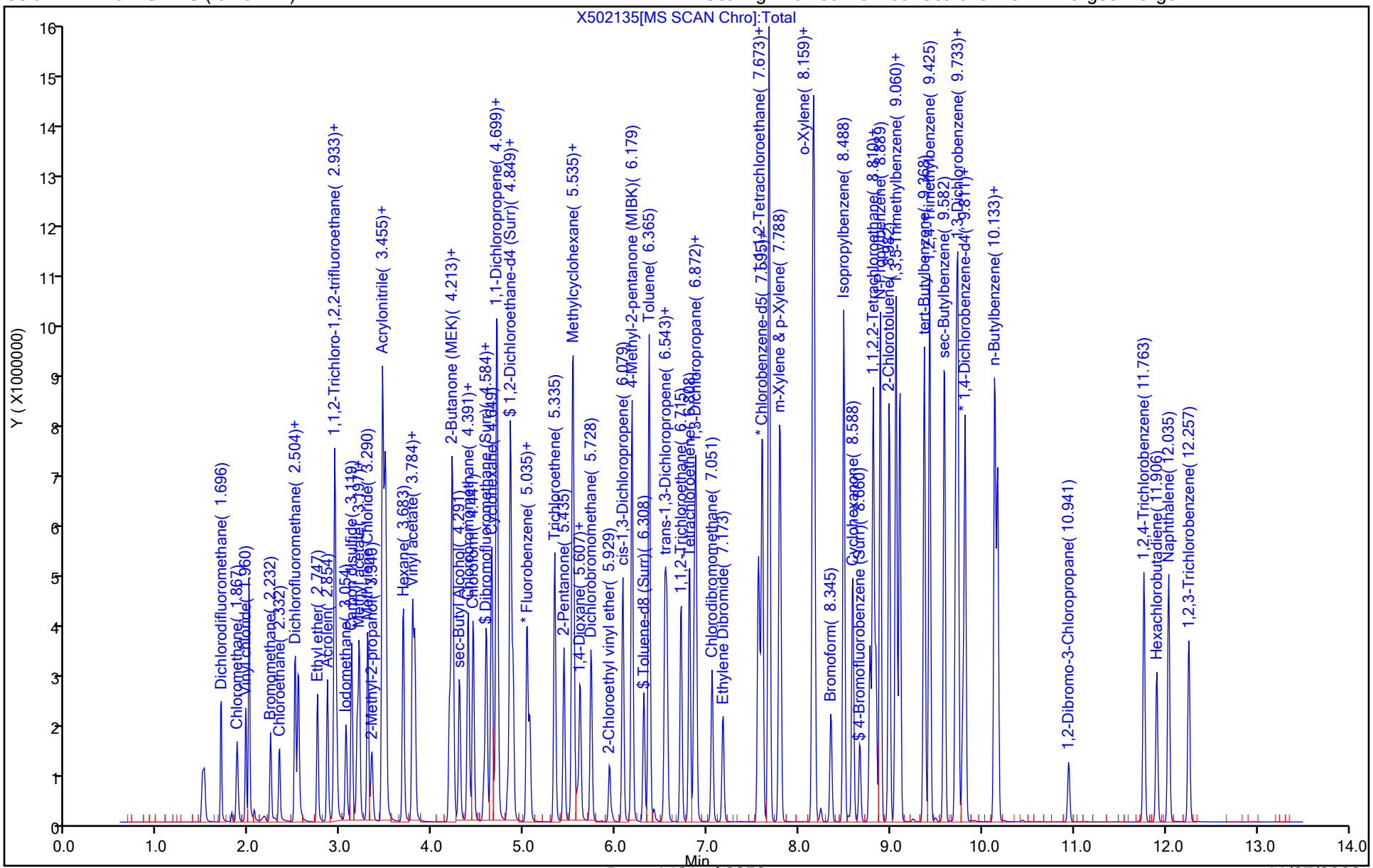
Report Date: 10-Apr-2023 11:26:37 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Injection Date:	07-Apr-2023 05:58:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502134.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 07-Apr-2023 05:38:30 ALS Bottle#: 9 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 100
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:39 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:26:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1493380	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	350056	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	538480	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	361321	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	378106	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1489072	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	88	491788	50.0	51.1	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	100	719193	100.0	109.8	
11 Chloromethane	50	1.867	1.867	0.000	98	670892	100.0	100.8	
12 Vinyl chloride	62	1.967	1.967	0.000	98	694430	100.0	102.3	
14 Bromomethane	94	2.239	2.246	-0.007	91	391432	100.0	108.2	
15 Chloroethane	64	2.332	2.339	-0.007	100	465962	100.0	102.7	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	97	1163656	100.0	102.8	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	99	938320	100.0	107.4	
19 Ethyl ether	59	2.747	2.747	0.000	89	498848	100.0	99.0	
21 Acrolein	56	2.854	2.854	0.000	99	814984	987.5	1002.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.932	0.001	96	439333	100.0	106.5	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	564261	100.0	98.4	
24 Acetone	43	2.954	2.954	0.000	100	634088	400.0	390.2	
26 Iodomethane	142	3.061	3.061	0.000	98	806371	100.0	100.6	
27 Carbon disulfide	76	3.118	3.118	0.000	99	1790422	100.0	96.3	
29 Methyl acetate	43	3.176	3.176	0.000	97	778916	200.0	206.6	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	87	761288	100.0	99.9	
31 Methylene Chloride	84	3.297	3.297	0.000	89	668279	100.0	90.7	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	575215	1000.0	982.0	
33 Acrylonitrile	53	3.455	3.454	0.001	98	2161584	1000.0	1009.8	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	1869281	100.0	103.5	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	653913	100.0	102.6	
37 Hexane	57	3.683	3.683	0.000	90	826083	100.0	103.0	
39 Vinyl acetate	43	3.783	3.783	0.000	97	2229008	200.0	220.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	1192336	100.0	102.6	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	989943	400.0	403.5	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	752429	100.0	98.6	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	89	940919	100.0	105.4	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	1022793	2400.0	2322.1	
52 Chlorobromomethane	128	4.384	4.391	-0.007	94	345635	100.0	98.3	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	325621	200.0	195.8	
54 Chloroform	83	4.441	4.448	-0.007	93	1178968	100.0	99.7	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	976837	100.0	102.0	
56 Cyclohexane	56	4.649	4.649	0.000	87	1026924	100.0	103.9	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	953615	100.0	101.6	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	449774	2500.0	2404.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	838075	100.0	108.1	
62 Benzene	78	4.849	4.849	0.000	96	2737137	100.0	98.7	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	894032	100.0	101.7	
65 n-Heptane	43	5.035	5.035	0.000	87	605305	100.0	105.1	
67 Trichloroethene	95	5.335	5.335	0.000	98	697477	100.0	104.2	
68 2-Pentanone	43	5.435	5.435	0.000	98	1266287	320.0	319.1	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	757279	100.0	104.7	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	96	709804	100.0	100.6	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	180232	2000.0	2018.1	
73 Dibromomethane	93	5.607	5.607	0.000	94	422071	100.0	100.3	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	917466	100.0	103.3	
76 2-Chloroethyl vinyl ether	63	5.929	5.936	-0.007	91	233733	100.0	104.3	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	1151983	100.0	108.0	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	2047359	400.0	433.6	
79 Toluene	91	6.365	6.365	0.000	98	2973481	100.0	99.5	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	1017829	100.0	111.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	824314	100.0	107.8	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	594722	100.0	99.6	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	515640	100.0	101.5	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	1074648	100.0	100.2	
85 2-Hexanone	43	6.872	6.879	-0.007	94	1439383	400.0	429.3	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	674905	100.0	104.3	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	623452	100.0	101.7	
89 1-Chlorohexane	91	7.552	7.559	-0.007	95	728215	80.0	76.9	
90 Chlorobenzene	112	7.602	7.602	0.000	96	1938193	100.0	99.4	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	46	654047	100.0	104.3	
92 Ethylbenzene	106	7.673	7.673	0.000	98	1051276	100.0	97.9	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	1274199	100.0	99.0	
94 o-Xylene	106	8.152	8.152	0.000	96	1263921	100.0	96.8	
95 Styrene	104	8.167	8.166	0.001	94	2138500	100.0	103.1	
96 Bromoform	173	8.345	8.345	0.000	95	414564	100.0	106.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	3086487	100.0	101.0	
99 Cyclohexanone	55	8.588	8.588	0.000	91	877871	3000.0	2940.3	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	778211	100.0	100.9	
101 Bromobenzene	156	8.810	8.810	0.000	97	762506	100.0	99.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	79	208918	100.0	103.2	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	232101	100.0	99.2	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	877894	100.0	103.4	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	760094	100.0	100.8	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	2568017	100.0	99.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	802364	100.0	102.3	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	2153460	100.0	100.0	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	2713812	100.0	101.8	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	643793	100.0	99.8	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	1424143	100.0	100.2	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	2683227	100.0	100.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	1448050	100.0	95.9	
116 n-Butylbenzene	91	10.140	10.133	0.007	98	2395612	100.0	104.0	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	1348625	100.0	98.6	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	85	152194	100.0	97.5	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	722079	100.0	104.8	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	259806	100.0	103.5	
122 Naphthalene	128	12.035	12.035	0.000	97	1892905	100.0	107.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	546626	100.0	105.1	
S 135 1,2-Dichloroethene, Total (URS)	96				0		200.0	201.3	
S 139 Xylenes, Total (URS)	1				0		200.0	195.8	
S 136 1,3-Dichloropropene, Total	1				0		200.0	219.1	
S 138 Xylenes, Total	106				0		200.0	195.8	
S 137 Total BTEX	1				0			491.9	
S 140 Trihalomethanes, Total	1				0		400.0	413.3	
S 141 1,2-Dichloroethene, Total	1				0		200.0	201.3	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00150	Amount Added:	20.00	Units: uL	
MV-MegaMainA_00086	Amount Added:	50.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

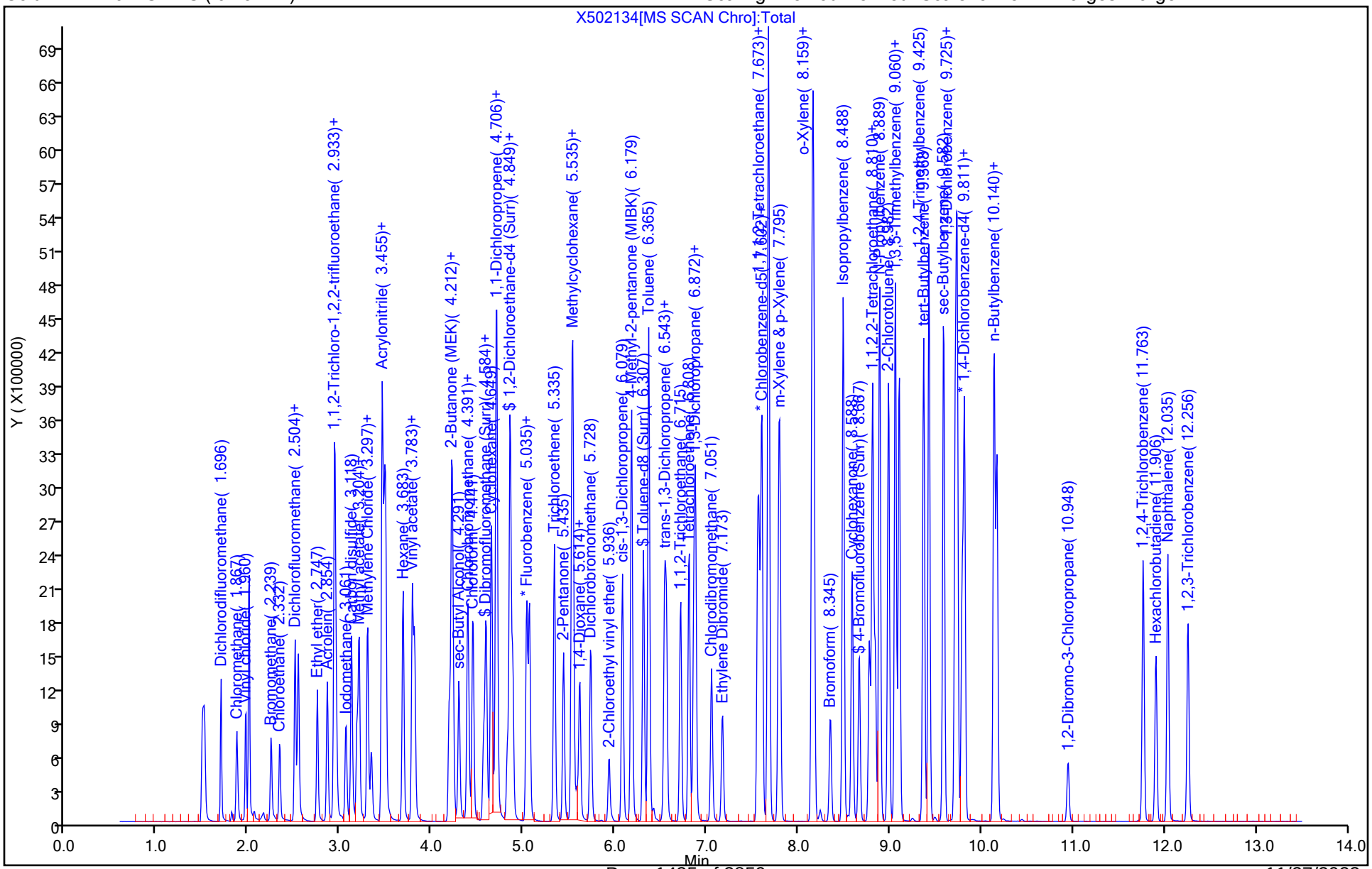
Report Date: 10-Apr-2023 11:26:40 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502134.D

Injection Date:	07-Apr-2023 05:38:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502133.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 07-Apr-2023 05:17:30 ALS Bottle#: 8 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 75
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:46 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:25:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1474746	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	345430	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	534485	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	357034	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	376482	50.0	50.5	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1460315	50.0	49.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	88	480762	50.0	50.3	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	455235	75.0	70.3	
11 Chloromethane	50	1.867	1.867	0.000	99	454103	75.0	69.1	
12 Vinyl chloride	62	1.967	1.967	0.000	98	450884	75.0	67.3	
14 Bromomethane	94	2.246	2.246	0.000	91	252611	75.0	70.7	
15 Chloroethane	64	2.339	2.339	0.000	100	311792	75.0	69.6	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	97	800461	75.0	71.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	608496	75.0	70.5	
19 Ethyl ether	59	2.747	2.747	0.000	89	342946	75.0	68.9	
21 Acrolein	56	2.854	2.854	0.000	99	577559	740.6	719.6	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.932	0.001	96	278730	75.0	68.4	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	369837	75.0	65.3	
24 Acetone	43	2.954	2.954	0.000	100	458920	300.0	284.7	
26 Iodomethane	142	3.061	3.061	0.000	98	531498	75.0	67.5	
27 Carbon disulfide	76	3.118	3.118	0.000	99	1190511	75.0	64.8	
29 Methyl acetate	43	3.183	3.176	0.007	97	549127	150.0	147.5	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	86	539065	75.0	71.7	
31 Methylene Chloride	84	3.297	3.297	0.000	90	462061	75.0	63.5	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	395522	750.0	684.7	
33 Acrylonitrile	53	3.454	3.454	0.000	98	1544048	750.0	730.5	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	1294920	75.0	72.6	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	439291	75.0	69.8	
37 Hexane	57	3.683	3.683	0.000	90	539664	75.0	68.2	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1481686	150.0	148.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	816491	75.0	71.2	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	715496	300.0	295.3	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	508687	75.0	67.5	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	618660	75.0	70.1	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	733439	1800.0	1689.0	
52 Chlorobromomethane	128	4.391	4.391	0.000	93	243851	75.0	70.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	232688	150.0	141.7	
54 Chloroform	83	4.441	4.448	-0.007	93	798668	75.0	68.4	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	98	642071	75.0	67.9	
56 Cyclohexane	56	4.649	4.649	0.000	87	662501	75.0	67.9	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	624293	75.0	67.4	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	322140	1875.0	1747.2	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	543267	75.0	71.0	
62 Benzene	78	4.849	4.849	0.000	96	1872929	75.0	68.4	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	630156	75.0	72.6	
65 n-Heptane	43	5.035	5.035	0.000	88	405076	75.0	71.2	
67 Trichloroethene	95	5.335	5.335	0.000	98	460433	75.0	69.7	
68 2-Pentanone	43	5.435	5.435	0.000	98	909963	240.0	232.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	496273	75.0	69.5	
70 1,2-Dichloropropane	63	5.535	5.542	-0.007	96	487163	75.0	69.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	131133	1500.0	1486.9	
73 Dibromomethane	93	5.614	5.607	0.007	96	295852	75.0	71.2	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	627304	75.0	71.5	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	90	157070	75.0	70.7	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	788014	75.0	74.9	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1491522	300.0	319.8	
79 Toluene	91	6.365	6.365	0.000	98	2039321	75.0	69.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	693272	75.0	76.6	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	580727	75.0	76.9	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	419600	75.0	71.1	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	342034	75.0	68.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	758142	75.0	71.6	
85 2-Hexanone	43	6.879	6.879	0.000	94	1027635	300.0	310.6	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	458113	75.0	71.7	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	438788	75.0	72.6	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	485226	60.0	51.9	
90 Chlorobenzene	112	7.602	7.602	0.000	95	1316251	75.0	68.4	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	445800	75.0	72.1	
92 Ethylbenzene	106	7.673	7.673	0.000	98	703490	75.0	66.4	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	866391	75.0	68.2	
94 o-Xylene	106	8.152	8.152	0.000	96	875612	75.0	68.0	
95 Styrene	104	8.167	8.166	0.000	94	1475117	75.0	72.1	
96 Bromoform	173	8.345	8.345	0.000	94	294736	75.0	76.4	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	2070408	75.0	68.2	
99 Cyclohexanone	55	8.588	8.588	0.000	91	628647	2250.0	2135.5	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	550837	75.0	72.0	
101 Bromobenzene	156	8.810	8.810	0.000	97	527328	75.0	69.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	80	147092	75.0	73.3	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	165636	75.0	71.3	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	593298	75.0	70.4	
105 2-Chlorotoluene	126	8.982	8.982	0.000	96	524154	75.0	70.1	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1768967	75.0	69.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	554452	75.0	71.2	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1467821	75.0	68.7	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1862150	75.0	70.4	
111 sec-Butylbenzene	134	9.589	9.582	0.007	94	431247	75.0	67.3	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	989115	75.0	70.1	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1843862	75.0	69.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	1008782	75.0	67.3	
116 n-Butylbenzene	91	10.140	10.133	0.007	98	1664058	75.0	72.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	951304	75.0	70.0	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	86	111417	75.0	72.0	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	506863	75.0	74.1	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	177563	75.0	71.2	
122 Naphthalene	128	12.035	12.035	0.000	97	1359974	75.0	78.0	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	394915	75.0	76.5	
S 135 1,2-Dichloroethene, Total (URS)	96				0		150.0	137.3	
S 139 Xylenes, Total (URS)	1				0		150.0	136.2	
S 136 1,3-Dichloropropene, Total	1				0		150.0	151.5	
S 138 Xylenes, Total	106				0		150.0	136.2	
S 137 Total BTEX	1				0			340.1	
S 140 Trihalomethanes, Total	1				0		300.0	288.0	
S 141 1,2-Dichloroethene, Total	1				0		150.0	137.3	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00086	Amount Added:	37.50	Units: uL	
MV-Gas A_00150	Amount Added:	15.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

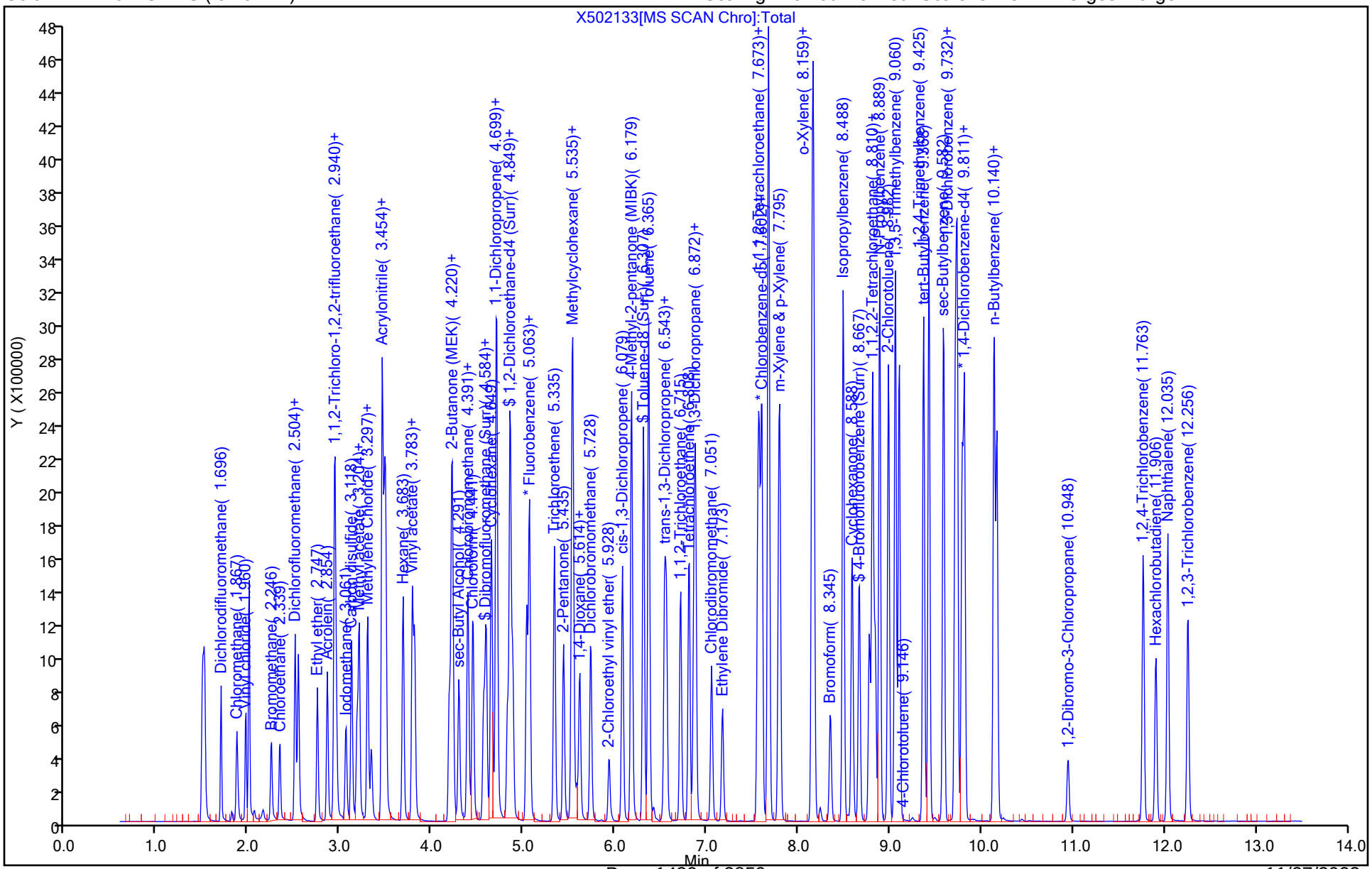
Report Date: 10-Apr-2023 11:26:47 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502133.D

Injection Date:	07-Apr-2023 05:17:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502132.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 07-Apr-2023 04:56:30 ALS Bottle#: 7 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icis
Misc. Info.: 50
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:53 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:25:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1433467	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	327912	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	509618	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	341310	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	346313	50.0	47.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1410445	50.0	50.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	87	458461	50.0	50.3	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	338892	50.0	53.9	
11 Chloromethane	50	1.867	1.867	0.000	99	319506	50.0	50.0	
12 Vinyl chloride	62	1.967	1.967	0.000	98	323546	50.0	49.7	
14 Bromomethane	94	2.246	2.246	0.000	91	154866	50.0	44.6	
15 Chloroethane	64	2.339	2.339	0.000	99	224545	50.0	51.5	
16 Dichlorofluoromethane	67	2.503	2.503	0.000	97	550286	50.0	50.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	434484	50.0	51.8	
19 Ethyl ether	59	2.747	2.747	0.000	87	232745	50.0	48.1	
21 Acrolein	56	2.854	2.854	0.000	100	379722	493.8	486.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.932	0.000	96	215857	50.0	54.5	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	278445	50.0	50.6	
24 Acetone	43	2.954	2.954	0.000	100	304604	200.0	192.8	
26 Iodomethane	142	3.061	3.061	0.000	98	348041	50.0	45.9	
27 Carbon disulfide	76	3.118	3.118	0.000	99	860085	50.0	48.2	
29 Methyl acetate	43	3.176	3.176	0.000	96	363705	100.0	100.5	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	85	367558	50.0	50.3	
31 Methylene Chloride	84	3.297	3.297	0.000	90	318574	50.0	45.1	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	242268	500.0	432.6	
33 Acrylonitrile	53	3.454	3.454	0.000	97	1016179	500.0	494.6	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	856915	50.0	49.5	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	97	318807	50.0	52.1	
37 Hexane	57	3.683	3.683	0.000	90	401685	50.0	53.5	
39 Vinyl acetate	43	3.783	3.783	0.000	97	985044	100.0	101.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	562644	50.0	50.4	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	459249	200.0	195.0	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	350256	50.0	47.8	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	88	441048	50.0	51.4	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	438034	1200.0	1041.7	
52 Chlorobromomethane	128	4.391	4.391	0.000	93	161935	50.0	48.0	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	156862	100.0	98.3	
54 Chloroform	83	4.448	4.448	0.000	93	556331	50.0	49.0	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	468729	50.0	51.0	
56 Cyclohexane	56	4.649	4.649	0.000	88	492743	50.0	52.0	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	451920	50.0	50.2	
60 Isobutyl alcohol	41	4.706	4.706	0.000	92	202099	1250.0	1131.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	397512	50.0	53.4	
62 Benzene	78	4.849	4.849	0.000	96	1317866	50.0	49.5	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	420189	50.0	49.8	
65 n-Heptane	43	5.035	5.035	0.000	88	287678	50.0	52.1	
67 Trichloroethene	95	5.335	5.335	0.000	98	324099	50.0	51.7	
68 2-Pentanone	43	5.435	5.435	0.000	98	588946	160.0	155.2	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	362438	50.0	52.2	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	95	328128	50.0	48.5	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	80232	1000.0	935.9	
73 Dibromomethane	93	5.607	5.607	0.000	94	194598	50.0	48.2	
74 Dichlorobromomethane	83	5.735	5.735	0.000	99	419022	50.0	49.1	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	91	107303	50.0	49.4	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	517953	50.0	51.8	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	949935	200.0	209.6	
79 Toluene	91	6.365	6.365	0.000	98	1433071	50.0	50.0	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	456797	50.0	51.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	373973	50.0	52.2	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	278363	50.0	48.5	
83 Tetrachloroethene	164	6.808	6.808	0.000	96	247796	50.0	52.1	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	499334	50.0	49.7	
85 2-Hexanone	43	6.879	6.879	0.000	94	662278	200.0	210.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	307759	50.0	50.8	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	285071	50.0	49.7	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	351579	40.0	39.6	
90 Chlorobenzene	112	7.602	7.602	0.000	96	912393	50.0	49.9	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	96	295726	50.0	50.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	504466	50.0	50.2	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	613970	50.0	50.9	
94 o-Xylene	106	8.152	8.152	0.000	96	598233	50.0	48.9	
95 Styrene	104	8.166	8.166	0.000	94	1015747	50.0	52.3	
96 Bromoform	173	8.345	8.345	0.000	94	184865	50.0	50.5	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1487164	50.0	51.4	
99 Cyclohexanone	55	8.588	8.588	0.000	91	394415	1500.0	1413.6	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	361050	50.0	49.5	
101 Bromobenzene	156	8.810	8.810	0.000	96	360643	50.0	49.5	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	84	92835	50.0	48.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	87	109805	50.0	49.6	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	423898	50.0	52.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	96	360383	50.0	50.5	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1237465	50.0	50.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	372917	50.0	50.2	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1039264	50.0	51.0	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	1293267	50.0	51.2	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	310567	50.0	50.9	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	678055	50.0	50.4	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1298661	50.0	51.6	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	683454	50.0	47.8	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1168748	50.0	53.6	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	630995	50.0	48.7	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	86	70118	50.0	47.7	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	328647	50.0	50.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	96	121800	50.0	51.2	
122 Naphthalene	128	12.035	12.035	0.000	97	840312	50.0	50.5	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	243010	50.0	49.4	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	100.0	
S 139 Xylenes, Total (URS)	1				0		100.0	99.8	
S 136 1,3-Dichloropropene, Total	1				0		100.0	103.8	
S 138 Xylenes, Total	106				0		100.0	99.8	
S 140 Trihalomethanes, Total	1				0		200.0	199.4	
S 141 1,2-Dichloroethene, Total	1				0		100.0	100.0	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00150	Amount Added: 10.00	Units: uL	
MV-MegaMainA_00086	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

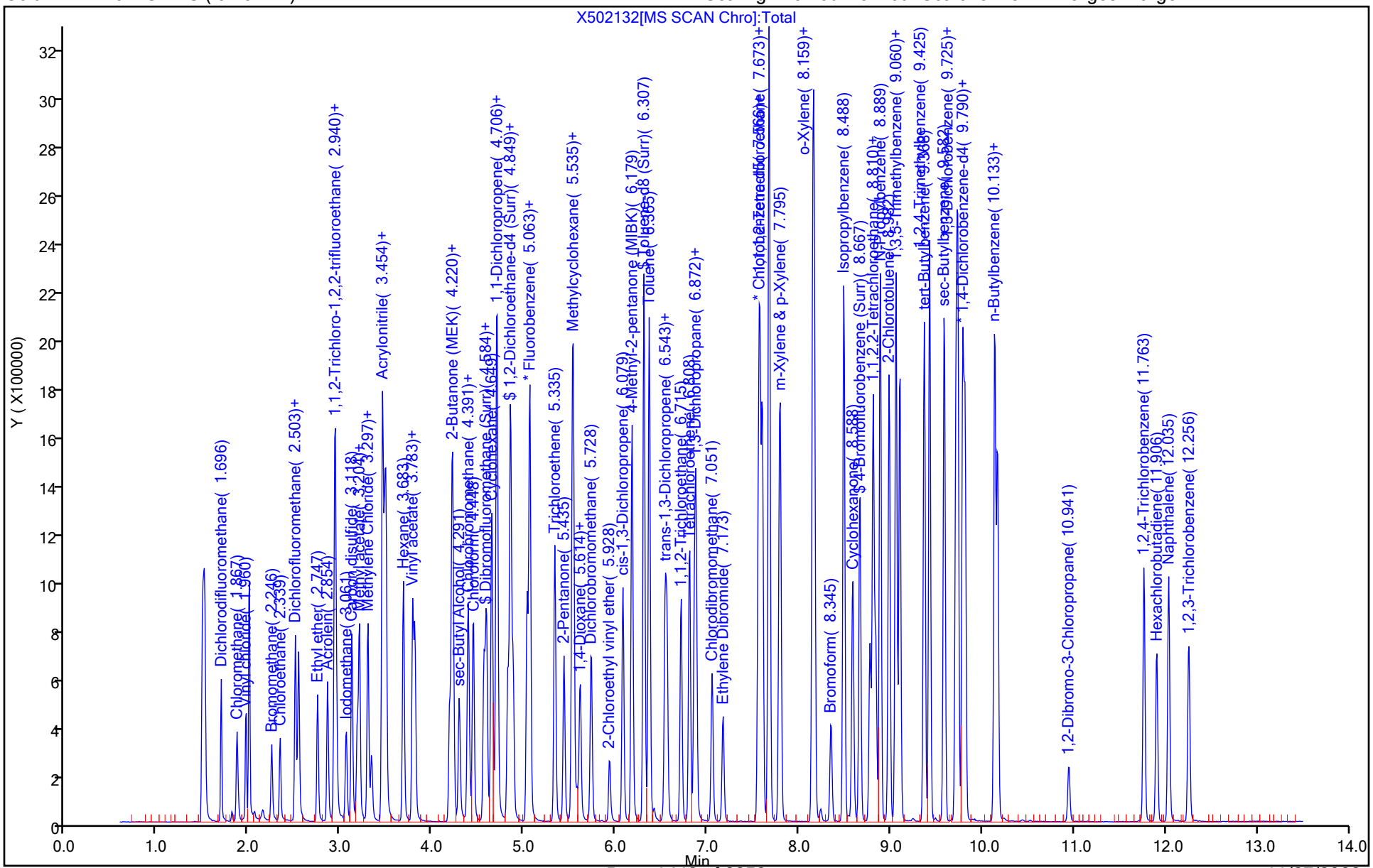
Report Date: 10-Apr-2023 11:26:54 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502132.D

Injection Date:	07-Apr-2023 04:56:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	ICIS			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502131.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 07-Apr-2023 04:36:30 ALS Bottle#: 6 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 10
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:56 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:24:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1371311	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	319160	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	505647	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	331984	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	351639	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1372074	50.0	50.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	441338	50.0	48.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	60240	10.0	10.0	
11 Chloromethane	50	1.860	1.860	0.000	99	69201	10.0	11.3	
12 Vinyl chloride	62	1.960	1.960	0.000	98	57453	10.0	9.35	
14 Bromomethane	94	2.246	2.246	0.000	91	30485	10.0	9.18	
15 Chloroethane	64	2.339	2.339	0.000	99	44742	10.0	10.7	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	108746	10.0	10.5	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	78899	10.0	9.83	
19 Ethyl ether	59	2.747	2.747	0.000	89	49231	10.0	10.6	
21 Acrolein	56	2.854	2.854	0.000	99	77990	98.8	104.5	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	46180	10.0	12.2	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	97	57452	10.0	10.9	
24 Acetone	43	2.954	2.954	0.000	100	69108	40.0	42.0	
26 Iodomethane	142	3.054	3.054	0.000	99	53045	10.0	8.31	
27 Carbon disulfide	76	3.118	3.118	0.000	99	186751	10.0	10.9	
29 Methyl acetate	43	3.176	3.176	0.000	96	72912	20.0	21.1	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	79909	10.0	11.4	
31 Methylene Chloride	84	3.297	3.297	0.000	89	72041	10.0	10.7	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	50092	100.0	96.0	
33 Acrylonitrile	53	3.455	3.455	0.000	98	215343	100.0	109.6	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	183431	10.0	11.1	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	96	64462	10.0	11.0	
37 Hexane	57	3.683	3.683	0.000	91	80887	10.0	11.1	
39 Vinyl acetate	43	3.783	3.783	0.000	97	203312	20.0	21.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	118483	10.0	11.1	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	101248	40.0	44.9	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	81	75236	10.0	10.7	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	93	89114	10.0	10.9	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	97	81863	240.0	211.8	
52 Chlorobromomethane	128	4.384	4.384	0.000	93	36209	10.0	11.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	33630	20.0	22.0	
54 Chloroform	83	4.448	4.448	0.000	93	118770	10.0	10.9	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	94276	10.0	10.7	
56 Cyclohexane	56	4.649	4.649	0.000	87	105926	10.0	11.7	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	93579	10.0	10.9	
60 Isobutyl alcohol	41	4.706	4.706	0.000	77	36138	250.0	220.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	77728	10.0	10.9	
62 Benzene	78	4.849	4.849	0.000	97	276546	10.0	10.9	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	88985	10.0	11.0	
65 n-Heptane	43	5.035	5.035	0.000	83	58608	10.0	11.1	
67 Trichloroethene	95	5.335	5.335	0.000	96	66453	10.0	10.9	
68 2-Pentanone	43	5.435	5.435	0.000	97	118471	32.0	33.6	
69 Methylcyclohexane	55	5.528	5.528	0.000	88	72674	10.0	10.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	96	68795	10.0	10.6	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	19458	200.0	237.3	
73 Dibromomethane	93	5.614	5.614	0.000	91	43029	10.0	11.1	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	88953	10.0	10.9	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	90	32500	10.0	15.1	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	107368	10.0	11.0	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	202042	40.0	46.6	
79 Toluene	91	6.365	6.365	0.000	98	300489	10.0	10.9	
80 trans-1,3-Dichloropropene	75	6.543	6.543	0.000	95	91033	10.0	10.8	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	79396	10.0	11.4	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	92	62169	10.0	11.3	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	51118	10.0	11.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	109621	10.0	11.2	
85 2-Hexanone	43	6.880	6.880	0.000	93	141186	40.0	46.2	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	67246	10.0	11.4	
88 Ethylene Dibromide	107	7.173	7.173	0.000	100	62436	10.0	11.2	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	74809	8.00	8.66	
90 Chlorobenzene	112	7.602	7.602	0.000	97	198280	10.0	11.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	93	66518	10.0	11.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	104522	10.0	10.7	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	132180	10.0	11.3	
94 o-Xylene	106	8.152	8.152	0.000	95	137199	10.0	11.5	
95 Styrene	104	8.167	8.167	0.000	94	228213	10.0	12.1	
96 Bromoform	173	8.352	8.352	0.000	91	40184	10.0	11.3	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	333813	10.0	11.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	86743	300.0	324.4	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	87682	10.0	12.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	82410	10.0	11.4	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	60	19149	10.0	10.4	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	24074	10.0	11.0	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	95031	10.0	11.9	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	81968	10.0	11.6	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	274169	10.0	11.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	85320	10.0	11.6	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	234094	10.0	11.6	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	290623	10.0	11.6	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	69093	10.0	11.4	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	159983	10.0	12.0	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	296199	10.0	11.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	162189	10.0	11.4	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	252833	10.0	11.7	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	149928	10.0	11.7	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	85	14481	10.0	10.2	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	90	76481	10.0	11.8	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	96	28148	10.0	11.9	
122 Naphthalene	128	12.035	12.035	0.000	96	202222	10.0	12.3	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	94	58565	10.0	12.0	
S 135 1,2-Dichloroethene, Total (URS)	96				0		20.0	21.8	
S 139 Xylenes, Total (URS)	1				0		20.0	22.8	
S 136 1,3-Dichloropropene, Total	1				0		20.0	21.9	
S 138 Xylenes, Total	106				0		20.0	22.8	
S 137 Total BTEX	1				0			55.3	
S 140 Trihalomethanes, Total	1				0		40.0	44.5	
S 141 1,2-Dichloroethene, Total	1				0		20.0	21.8	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00086	Amount Added:	5.00	Units: uL	
MV-Gas A_00150	Amount Added:	2.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

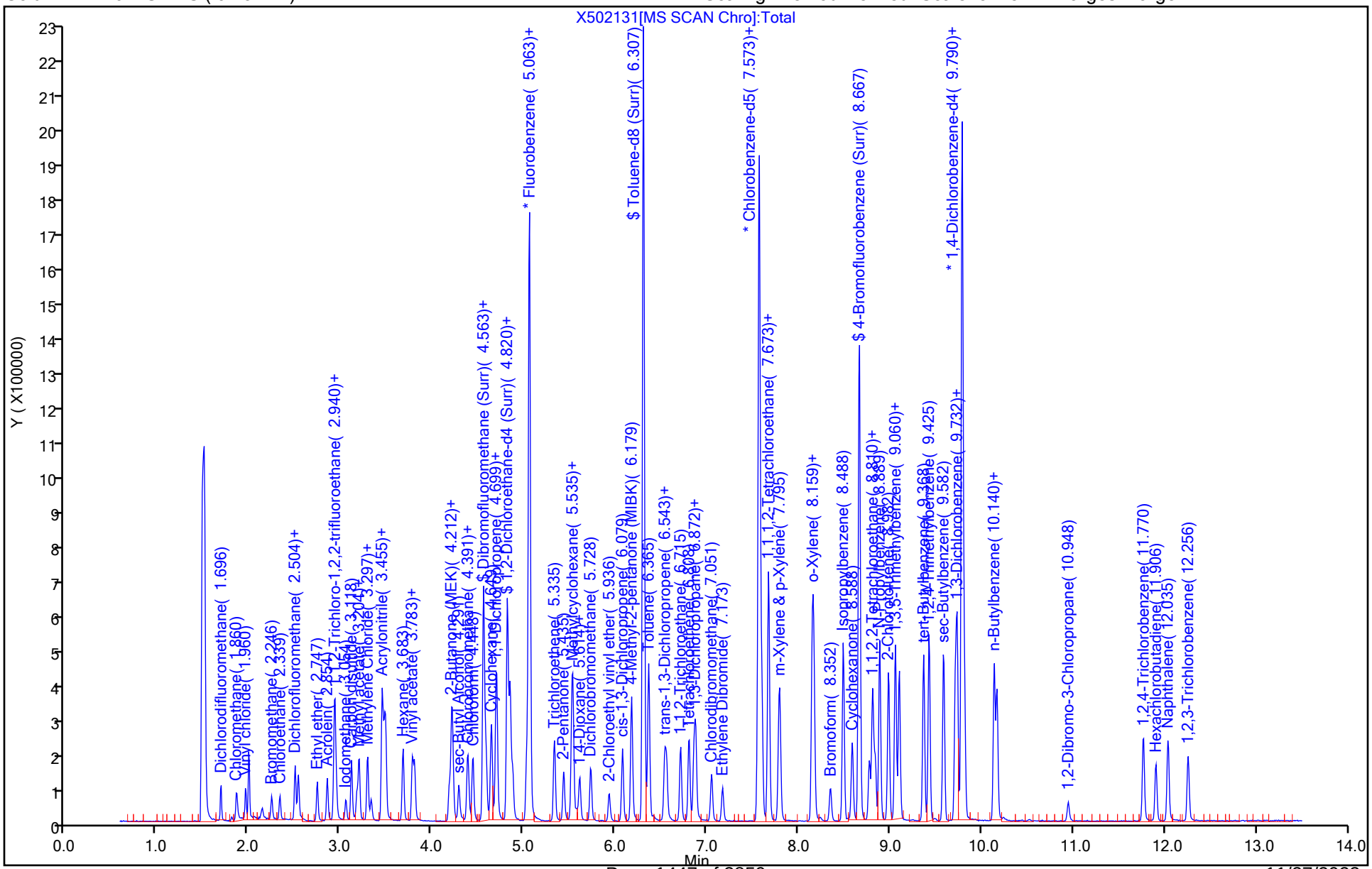
Report Date: 10-Apr-2023 11:26:57 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502131.D

Injection Date:	07-Apr-2023 04:36:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502129.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 07-Apr-2023 03:55:30 ALS Bottle#: 4 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:00 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:17:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1358265	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	311900	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	484201	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	327624	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	348242	50.0	50.7	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1327001	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	95	430376	50.0	49.7	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	8877	2.00	1.49	
11 Chloromethane	50	1.867	1.860	0.007	99	10159	2.00	1.68	
12 Vinyl chloride	62	1.960	1.960	0.000	97	9723	2.00	1.71	
14 Bromomethane	94	2.246	2.246	0.000	88	6801	2.00	2.07	
15 Chloroethane	64	2.339	2.339	0.000	99	6653	2.00	1.61	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	19362	2.00	1.88	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	97	14131	2.00	1.78	
19 Ethyl ether	59	2.747	2.747	0.000	87	9381	2.00	2.05	
21 Acrolein	56	2.854	2.854	0.000	99	12124	19.8	16.4	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	88	6474	2.00	1.73	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	97	9029	2.00	1.73	
24 Acetone	43	2.954	2.954	0.000	98	19107	8.00	8.18	
26 Iodomethane	142	3.061	3.054	0.007	96	5258	2.00	1.90	
27 Carbon disulfide	76	3.119	3.118	0.001	99	28640	2.00	1.69	
29 Methyl acetate	43	3.176	3.176	0.000	97	12245	4.00	3.57	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	11410	2.00	1.65	
31 Methylene Chloride	84	3.297	3.297	0.000	91	13471	2.00	2.01	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	97	6328	20.0	15.0	
33 Acrylonitrile	53	3.455	3.455	0.000	96	33673	20.0	17.3	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	95	27213	2.00	1.66	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	9776	2.00	1.69	
37 Hexane	57	3.683	3.683	0.000	88	11365	2.00	1.59	
39 Vinyl acetate	43	3.784	3.783	0.001	97	28743	4.00	3.13	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	98	18317	2.00	1.73	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	98	16837	8.00	7.54	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	84	12253	2.00	1.77	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	74	14356	2.00	1.77	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	96	10662	48.0	36.8	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	6050	2.00	1.89	
53 Tetrahydrofuran	42	4.398	4.398	0.000	88	5217	4.00	3.45	
54 Chloroform	83	4.441	4.448	-0.007	93	18443	2.00	1.72	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	99	15195	2.00	1.74	
56 Cyclohexane	56	4.642	4.649	-0.007	86	14652	2.00	1.63	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	92	14223	2.00	1.67	
60 Isobutyl alcohol	41	4.713	4.706	0.007	74	4131	50.0	35.5	
59 Carbon tetrachloride	117	4.706	4.706	0.000	82	11093	2.00	1.57	
62 Benzene	78	4.849	4.849	0.000	93	44293	2.00	1.76	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	97	15265	2.00	1.91	
65 n-Heptane	43	5.028	5.035	-0.007	83	9701	2.00	1.85	
67 Trichloroethene	95	5.342	5.335	0.007	97	9994	2.00	1.68	
68 2-Pentanone	43	5.442	5.435	0.007	98	17190	6.40	5.99	
69 Methylcyclohexane	55	5.528	5.528	0.000	88	11028	2.00	1.68	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	92	11347	2.00	1.77	
72 1,4-Dioxane	88	5.593	5.578	0.015	76	3045	40.0	37.5	
73 Dibromomethane	93	5.614	5.614	0.000	93	6682	2.00	1.75	
74 Dichlorobromomethane	83	5.736	5.728	0.008	99	13742	2.00	1.70	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	82	5903	2.00	2.05	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	17190	2.00	1.81	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	26840	8.00	6.25	
79 Toluene	91	6.365	6.365	0.000	98	47540	2.00	1.75	
80 trans-1,3-Dichloropropene	75	6.544	6.543	0.001	93	13015	2.00	1.56	
81 Ethyl methacrylate	69	6.565	6.558	0.007	86	10574	2.00	1.55	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	86	10425	2.00	1.92	
83 Tetrachloroethene	164	6.808	6.808	0.000	91	8328	2.00	1.84	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	93	16506	2.00	1.73	
85 2-Hexanone	43	6.887	6.880	0.007	96	18479	8.00	6.19	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	9303	2.00	1.61	
88 Ethylene Dibromide	107	7.173	7.173	0.000	97	9711	2.00	1.78	
89 1-Chlorohexane	91	7.566	7.559	0.007	94	12457	1.60	1.48	
90 Chlorobenzene	112	7.602	7.602	0.000	97	31566	2.00	1.82	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	92	8390	2.00	1.50	
92 Ethylbenzene	106	7.680	7.673	0.007	98	17245	2.00	1.80	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	20990	2.00	1.83	
94 o-Xylene	106	8.152	8.152	0.000	96	21285	2.00	1.83	
95 Styrene	104	8.174	8.167	0.007	94	30966	2.00	1.68	
96 Bromoform	173	8.353	8.352	0.001	90	5478	2.00	1.57	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	48399	2.00	1.76	
99 Cyclohexanone	55	8.596	8.588	0.008	90	11401	60.0	49.2	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	12834	2.00	1.85	
101 Bromobenzene	156	8.810	8.810	0.000	94	12712	2.00	1.84	
102 trans-1,4-Dichloro-2-butene	53	8.824	8.817	0.007	61	2492	2.00	1.77	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	3692	2.00	1.75	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	13139	2.00	1.72	
105 2-Chlorotoluene	126	8.982	8.982	0.000	95	12213	2.00	1.80	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	39515	2.00	1.70	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	12100	2.00	1.72	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	91	34097	2.00	1.76	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	41968	2.00	1.75	
111 sec-Butylbenzene	134	9.590	9.582	0.008	93	10225	2.00	1.76	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	20930	2.00	1.64	
113 4-Isopropyltoluene	119	9.733	9.732	0.001	96	40766	2.00	1.70	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	25571	2.00	1.88	
116 n-Butylbenzene	91	10.140	10.140	0.000	96	34804	2.00	1.68	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	96	21390	2.00	1.74	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	43	1353	2.00	1.36	
120 1,2,4-Trichlorobenzene	180	11.778	11.770	0.008	93	10492	2.00	1.69	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	4199	2.00	1.86	
122 Naphthalene	128	12.042	12.035	0.007	97	26379	2.00	1.67	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	95	8290	2.00	1.77	
S 135 1,2-Dichloroethene, Total (URS)	96				0		4.00	3.45	
S 139 Xylenes, Total (URS)	1				0		4.00	3.66	
S 136 1,3-Dichloropropene, Total	1				0		4.00	3.37	
S 138 Xylenes, Total	106				0		4.00	3.66	
S 137 Total BTEX	1				0			8.97	
S 140 Trihalomethanes, Total	1				0		8.00	6.60	
S 141 1,2-Dichloroethene, Total	1				0		4.00	3.45	

QC Flag Legend

Processing Flags

Reagents:

Cal Dil Std_00162	Amount Added: 20.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

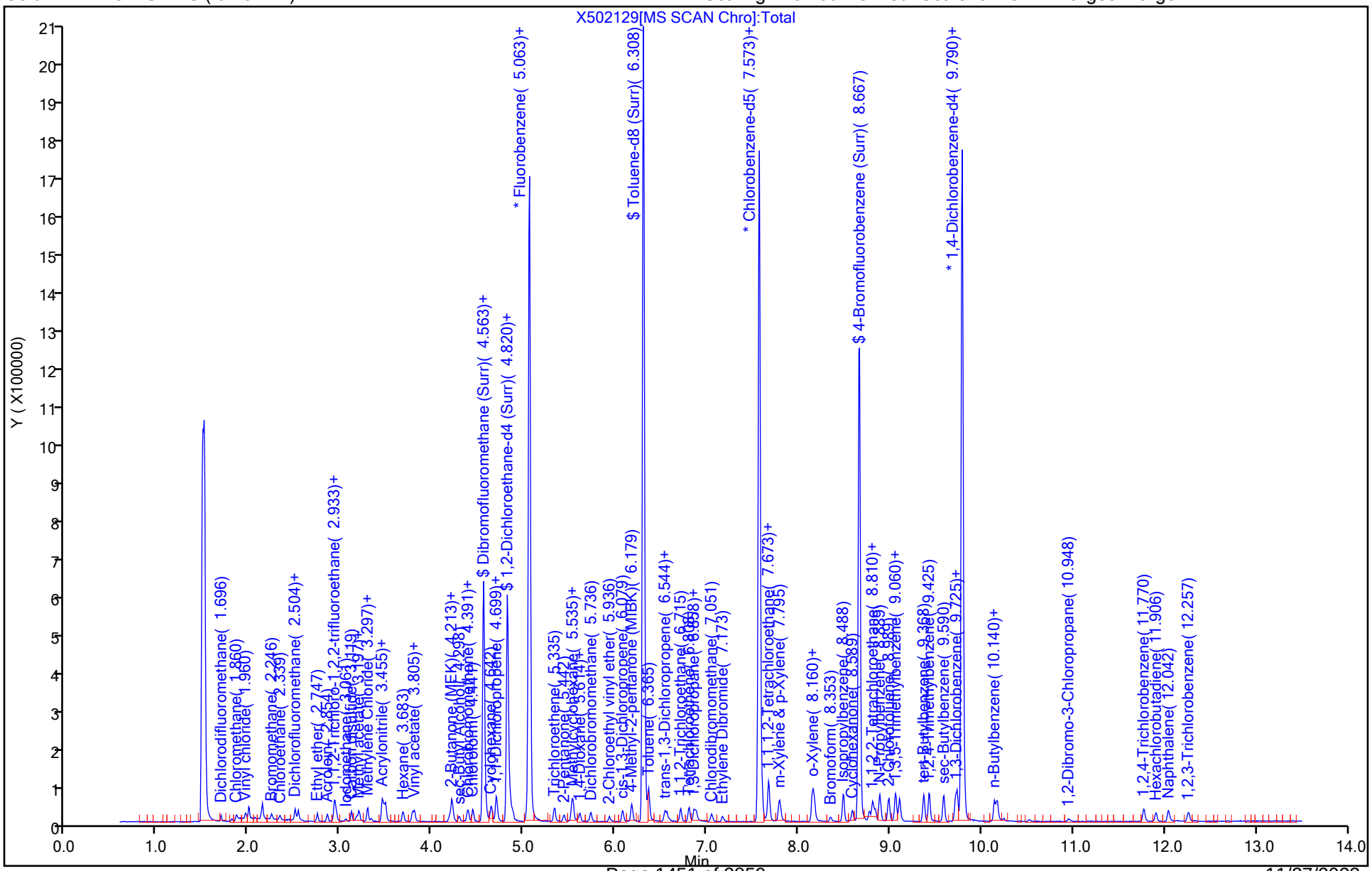
Report Date: 10-Apr-2023 11:27:01 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502129.D

Injection Date:	07-Apr-2023 03:55:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502130.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 07-Apr-2023 04:15:30 ALS Bottle#: 5 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:17:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1337910	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	312939	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	487009	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	318595	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	340158	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1314839	50.0	49.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	431339	50.0	49.6	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	29690	5.00	5.06	
11 Chloromethane	50	1.867	1.860	0.007	99	30373	5.00	5.09	
12 Vinyl chloride	62	1.960	1.960	0.000	97	30616	5.00	5.17	
14 Bromomethane	94	2.246	2.246	0.000	90	16566	5.00	5.11	
15 Chloroethane	64	2.339	2.339	0.000	98	21424	5.00	5.27	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	51426	5.00	5.07	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	97	37549	5.00	4.80	
19 Ethyl ether	59	2.747	2.747	0.000	88	23215	5.00	5.14	
21 Acrolein	56	2.854	2.854	0.000	99	38447	49.4	52.8	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	86	18269	5.00	4.94	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	98	24433	5.00	4.75	
24 Acetone	43	2.954	2.954	0.000	99	36169	20.0	20.2	
26 Iodomethane	142	3.061	3.054	0.007	99	21390	5.00	4.13	
27 Carbon disulfide	76	3.119	3.118	0.001	100	80848	5.00	4.85	
29 Methyl acetate	43	3.183	3.176	0.007	97	36777	10.0	10.9	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	90	37396	5.00	5.48	
31 Methylene Chloride	84	3.297	3.297	0.000	86	35804	5.00	5.43	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	24877	50.0	50.4	
33 Acrylonitrile	53	3.455	3.455	0.000	97	101841	50.0	53.1	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	89301	5.00	5.52	
35 trans-1,2-Dichloroethene	96	3.498	3.490	0.008	98	29443	5.00	5.16	
37 Hexane	57	3.683	3.683	0.000	91	32583	5.00	4.54	
39 Vinyl acetate	43	3.784	3.783	0.001	97	92305	10.0	10.2	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	97	55748	5.00	5.36	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	98	45431	20.0	20.7	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	80	38166	5.00	5.58	
48 2,2-Dichloropropane	77	4.227	4.220	0.007	89	38064	5.00	4.76	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	95	41713	120.0	115.5	
52 Chlorobromomethane	128	4.384	4.384	0.000	92	17299	5.00	5.49	
53 Tetrahydrofuran	42	4.398	4.398	0.000	86	15172	10.0	10.2	
54 Chloroform	83	4.441	4.448	-0.007	95	57954	5.00	5.47	
55 1,1,1-Trichloroethane	97	4.592	4.584	0.008	98	42581	5.00	4.96	
56 Cyclohexane	56	4.649	4.649	0.000	89	43802	5.00	4.95	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	95	41052	5.00	4.88	
60 Isobutyl alcohol	41	4.706	4.706	0.000	75	19923	125.0	129.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	92	33909	5.00	4.88	
62 Benzene	78	4.849	4.849	0.000	97	135707	5.00	5.46	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	98	42781	5.00	5.43	
65 n-Heptane	43	5.035	5.035	0.000	86	24184	5.00	4.69	
67 Trichloroethene	95	5.335	5.335	0.000	99	31994	5.00	5.35	
68 2-Pentanone	43	5.435	5.435	0.000	98	52743	16.0	16.0	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	30908	5.00	4.77	
70 1,2-Dichloropropane	63	5.543	5.535	0.007	95	33738	5.00	5.34	
72 1,4-Dioxane	88	5.578	5.578	0.000	92	8564	100.0	107.0	
73 Dibromomethane	93	5.614	5.614	0.000	95	18747	5.00	4.97	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	42619	5.00	5.36	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	93	14093	5.00	6.21	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	94	47976	5.00	5.03	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	87812	20.0	20.8	
79 Toluene	91	6.365	6.365	0.000	97	143890	5.00	5.37	
80 trans-1,3-Dichloropropene	75	6.544	6.543	0.001	96	41755	5.00	5.08	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	36500	5.00	5.34	
82 1,1,2-Trichloroethane	97	6.708	6.715	-0.007	92	29134	5.00	5.44	
83 Tetrachloroethene	164	6.801	6.808	-0.007	93	22024	5.00	4.85	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	49882	5.00	5.20	
85 2-Hexanone	43	6.880	6.880	0.000	94	58368	20.0	19.5	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	30139	5.00	5.21	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	29186	5.00	5.33	
89 1-Chlorohexane	91	7.559	7.559	0.000	95	31737	4.00	3.75	
90 Chlorobenzene	112	7.602	7.602	0.000	95	92586	5.00	5.31	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	91	30072	5.00	5.37	
92 Ethylbenzene	106	7.673	7.673	0.000	98	48039	5.00	5.01	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	58830	5.00	5.11	
94 o-Xylene	106	8.152	8.152	0.000	95	61746	5.00	5.29	
95 Styrene	104	8.167	8.167	0.000	94	97777	5.00	5.27	
96 Bromoform	173	8.353	8.352	0.001	94	17809	5.00	5.09	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	137693	5.00	4.98	
99 Cyclohexanone	55	8.589	8.588	0.000	90	43891	150.0	170.5	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	38489	5.00	5.52	
101 Bromobenzene	156	8.810	8.810	0.000	95	37243	5.00	5.35	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.817	-0.007	61	7396	5.00	4.43	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	10613	5.00	5.01	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	40306	5.00	5.25	
105 2-Chlorotoluene	126	8.989	8.982	0.007	97	38420	5.00	5.64	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	96	120120	5.00	5.15	
107 4-Chlorotoluene	126	9.103	9.103	0.000	98	36788	5.00	5.19	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	99040	5.00	5.08	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	125567	5.00	5.21	
111 sec-Butylbenzene	134	9.590	9.582	0.008	94	29211	5.00	5.01	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	67914	5.00	5.28	
113 4-Isopropyltoluene	119	9.733	9.732	0.001	97	119450	5.00	4.96	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	73232	5.00	5.36	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	106017	5.00	5.09	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	66425	5.00	5.37	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	84	7174	5.00	5.46	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	91	34150	5.00	5.48	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	11656	5.00	5.13	
122 Naphthalene	128	12.035	12.035	0.000	97	85174	5.00	5.36	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	95	24900	5.00	5.29	
S 135 1,2-Dichloroethene, Total (URS)	96				0		10.0	10.7	
S 139 Xylenes, Total (URS)	1				0		10.0	10.4	
S 136 1,3-Dichloropropene, Total	1				0		10.0	10.1	
S 138 Xylenes, Total	106				0		10.0	10.4	
S 137 Total BTEX	1				0			26.2	
S 140 Trihalomethanes, Total	1				0		20.0	21.1	
S 141 1,2-Dichloroethene, Total	1				0		10.0	10.7	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00150	Amount Added:	1.00	Units: uL	
MV-MegaMainA_00086	Amount Added:	2.50	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

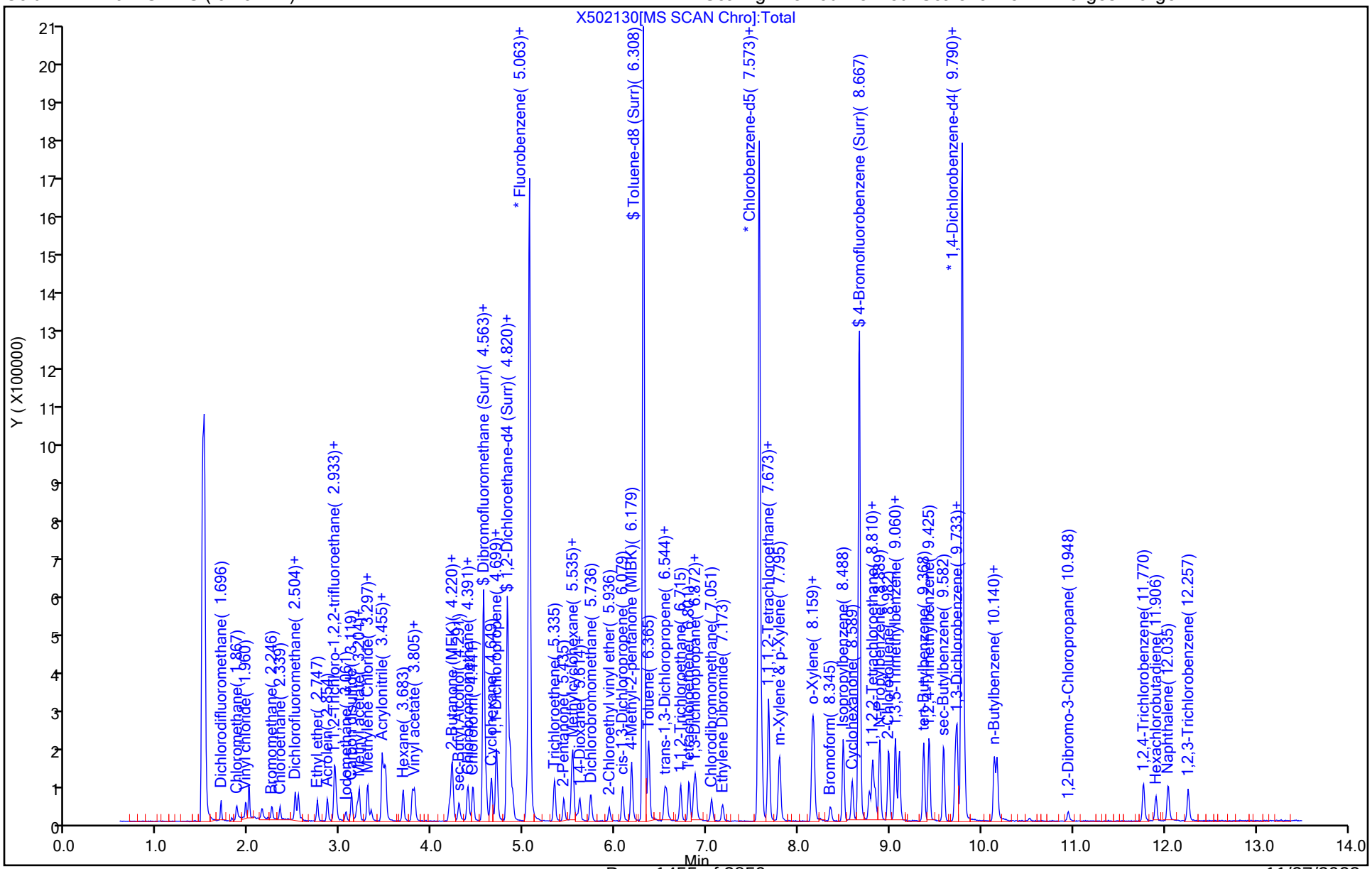
Report Date: 10-Apr-2023 11:27:04 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502130.D

Injection Date:	07-Apr-2023 04:15:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502128.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 07-Apr-2023 03:34:30 ALS Bottle#: 3 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:15:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1321475	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	303218	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	476794	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	318271	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	334967	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1295729	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	429272	50.0	50.4	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	5544	1.00	0.9561	
11 Chloromethane	50	1.867	1.860	0.007	97	5505	1.00	0.9344	
12 Vinyl chloride	62	1.967	1.960	0.007	97	5121	1.00	0.99	
14 Bromomethane	94	2.246	2.246	0.000	89	2737	1.00	0.8549	
15 Chloroethane	64	2.332	2.339	-0.007	95	4463	1.00	1.11	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	95	9428	1.00	0.9408	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	95	7834	1.00	1.01	
19 Ethyl ether	59	2.747	2.747	0.000	83	3577	1.00	0.8022	
21 Acrolein	56	2.854	2.854	0.000	95	6604	9.88	9.18	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.940	2.933	0.007	71	2962	1.00	0.8114	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	95	5380	1.00	1.06	
24 Acetone	43	2.954	2.954	0.000	99	12556	4.00	3.93	
26 Iodomethane	142	3.054	3.054	0.000	94	2269	1.00	1.50	
27 Carbon disulfide	76	3.118	3.118	0.000	99	16403	1.00	1.00	
29 Methyl acetate	43	3.183	3.176	0.007	97	5462	2.00	1.64	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	82	6388	1.00	0.9476	
31 Methylene Chloride	84	3.297	3.297	0.000	86	8188	1.00	1.26	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	99	3291	10.0	9.45	
33 Acrylonitrile	53	3.454	3.455	-0.001	98	16828	10.0	8.88	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	13865	1.00	0.8680	
35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	93	5628	1.00	1.00	
37 Hexane	57	3.676	3.683	-0.007	85	6800	1.00	0.9786	
39 Vinyl acetate	43	3.783	3.783	0.000	96	15894	2.00	1.78	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	9045	1.00	0.8797	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	100	7552	4.00	3.48	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	85	6426	1.00	0.9518	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	72	6866	1.00	0.8688	
50 sec-Butyl Alcohol	45	4.298	4.291	0.007	95	5594	24.0	24.6	
52 Chlorobromomethane	128	4.384	4.384	0.000	87	3076	1.00	0.9889	
53 Tetrahydrofuran	42	4.405	4.398	0.007	80	2622	2.00	1.78	
54 Chloroform	83	4.448	4.448	0.000	93	10105	1.00	0.9659	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	95	8113	1.00	0.9573	
56 Cyclohexane	56	4.641	4.649	-0.008	90	8471	1.00	0.9690	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	90	8745	1.00	1.05	
60 Isobutyl alcohol	41	4.713	4.706	0.007	67	2296	25.0	25.1	
59 Carbon tetrachloride	117	4.699	4.706	-0.007	89	6754	1.00	0.9847	
62 Benzene	78	4.856	4.849	0.007	92	22519	1.00	0.9173	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	96	6564	1.00	0.8435	
65 n-Heptane	43	5.035	5.035	0.000	77	4883	1.00	0.9584	
67 Trichloroethene	95	5.335	5.335	0.000	96	5414	1.00	0.9335	
68 2-Pentanone	43	5.442	5.435	0.007	97	7204	3.20	3.29	
69 Methylcyclohexane	55	5.528	5.528	0.000	87	5802	1.00	0.9064	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	79	4877	1.00	0.7812	
72 1,4-Dioxane	88	5.592	5.578	0.014	72	1363	20.0	17.2	a
73 Dibromomethane	93	5.614	5.614	0.000	89	3688	1.00	0.99	
74 Dichlorobromomethane	83	5.735	5.728	0.007	98	6802	1.00	0.8654	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	85	2272	1.00	0.2808	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	93	7535	1.00	0.8156	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	12812	4.00	3.07	
79 Toluene	91	6.365	6.365	0.000	97	25789	1.00	0.9751	
80 trans-1,3-Dichloropropene	75	6.551	6.543	0.008	94	6802	1.00	0.8386	
81 Ethyl methacrylate	69	6.565	6.558	0.007	90	5533	1.00	0.8352	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	4715	1.00	0.8920	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	3662	1.00	0.8319	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	89	8807	1.00	0.9477	
85 2-Hexanone	43	6.879	6.880	-0.001	92	9279	4.00	3.20	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	5211	1.00	0.9297	
88 Ethylene Dibromide	107	7.180	7.173	0.007	97	4655	1.00	0.8768	
89 1-Chlorohexane	91	7.566	7.559	0.007	33	8330	0.8000	1.01	
90 Chlorobenzene	112	7.602	7.602	0.000	96	15094	1.00	0.8936	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.673	-0.007	86	5143	1.00	0.9472	
92 Ethylbenzene	106	7.673	7.673	0.000	98	8553	1.00	0.9199	
93 m-Xylene & p-Xylene	106	7.809	7.795	0.014	0	10426	1.00	0.9353	
94 o-Xylene	106	8.152	8.152	0.000	97	10780	1.00	0.9532	
95 Styrene	104	8.174	8.167	0.007	93	15456	1.00	0.8602	
96 Bromoform	173	8.345	8.352	-0.007	94	3041	1.00	0.8976	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	26320	1.00	0.9725	
99 Cyclohexanone	55	8.596	8.588	0.008	88	4862	30.0	25.2	
100 1,1,2,2-Tetrachloroethane	83	8.781	8.774	0.007	93	5958	1.00	0.8725	
101 Bromobenzene	156	8.817	8.810	0.007	92	5972	1.00	0.8760	
102 trans-1,4-Dichloro-2-butene	53	8.831	8.817	0.014	43	1204	1.00	1.08	
103 1,2,3-Trichloropropane	110	8.831	8.839	-0.008	79	1911	1.00	0.9220	
104 N-Propylbenzene	120	8.896	8.889	0.007	98	7204	1.00	0.9580	
105 2-Chlorotoluene	126	8.996	8.982	0.014	95	5966	1.00	0.8939	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	23118	1.00	1.01	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	5848	1.00	0.8422	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	90	18284	1.00	0.9587	
110 1,2,4-Trimethylbenzene	105	9.432	9.425	0.007	97	21024	1.00	0.8904	
111 sec-Butylbenzene	134	9.589	9.582	0.007	93	5360	1.00	0.9382	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	96	11074	1.00	0.8798	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	96	21858	1.00	0.9277	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	13773	1.00	1.03	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	17367	1.00	0.8511	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	96	11605	1.00	0.9578	
118 1,2-Dibromo-3-Chloropropane	157	10.955	10.948	0.007	15	837	1.00	1.00	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	90	4847	1.00	0.7946	
121 Hexachlorobutadiene	225	11.913	11.906	0.007	85	1880	1.00	0.8455	
122 Naphthalene	128	12.042	12.035	0.007	97	12158	1.00	0.7812	
123 1,2,3-Trichlorobenzene	180	12.264	12.256	0.008	93	3483	1.00	0.7565	
S 135 1,2-Dichloroethene, Total (URS)	96				0		2.00	1.95	
S 139 Xylenes, Total (URS)	1				0		2.00	1.89	
S 136 1,3-Dichloropropene, Total	1				0		2.00	1.65	
S 138 Xylenes, Total	106				0		2.00	1.89	
S 137 Total BTEX	1				0			4.70	
S 140 Trihalomethanes, Total	1				0		4.00	3.66	
S 141 1,2-Dichloroethene, Total	1				0		2.00	1.95	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

Cal Dil Std_00162	Amount Added:	10.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

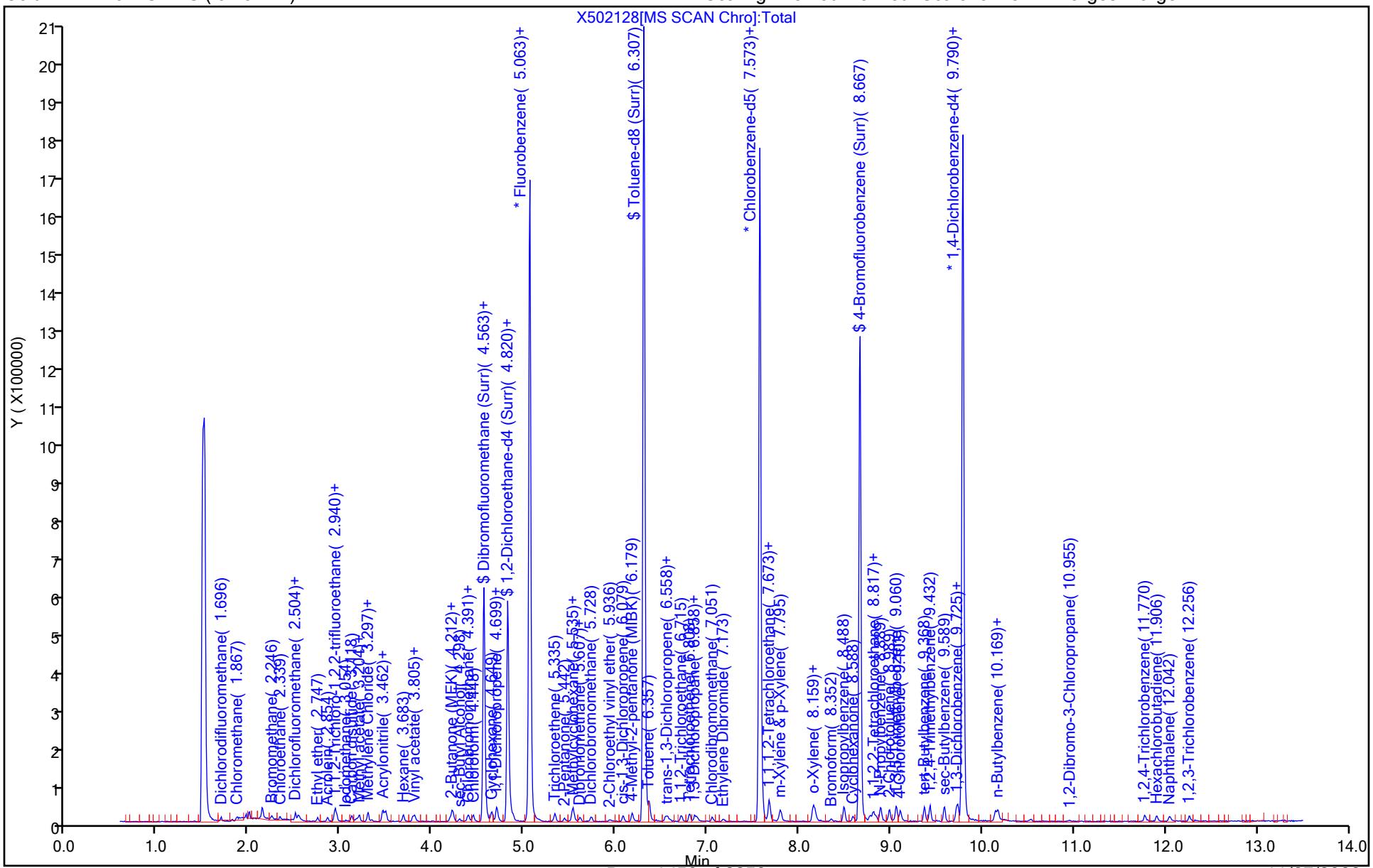
Report Date: 10-Apr-2023 11:27:07 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502128.D

Injection Date:	07-Apr-2023 03:34:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

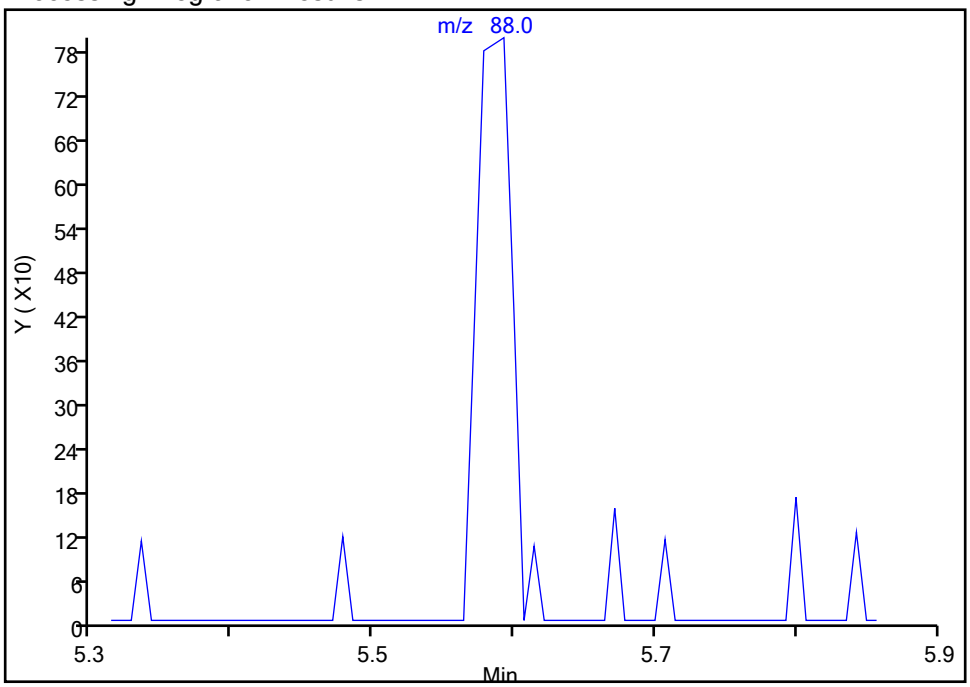
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502128.D
Injection Date: 07-Apr-2023 03:34:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 3 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

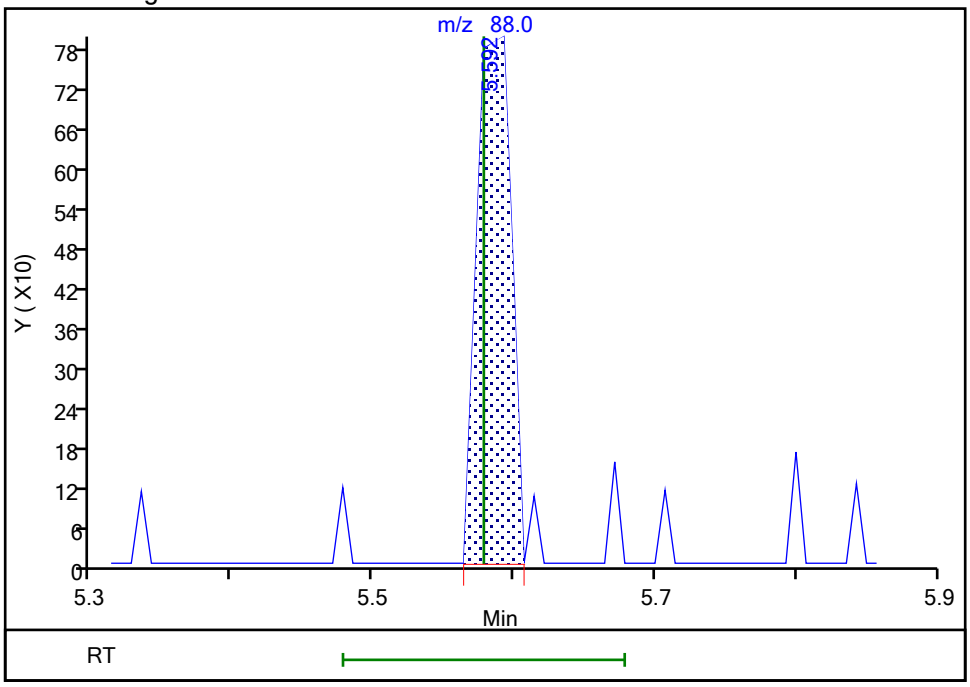
Not Detected
Expected RT: 5.58

Processing Integration Results



Manual Integration Results

RT: 5.59
Area: 1363
Amount: 17.247249
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:15:45
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 07-Apr-2023 03:14:30 ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: .5
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:10 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:13:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1347020	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	310688	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	484663	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	320846	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	334584	50.0	49.2	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1319319	50.0	49.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	87	425745	50.0	49.2	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	3233	0.5000	0.5470	
11 Chloromethane	50	1.860	1.860	0.000	97	3421	0.5000	0.5697	
12 Vinyl chloride	62	1.967	1.960	0.007	96	2925	0.5000	0.6178	
14 Bromomethane	94	2.246	2.246	0.000	90	1963	0.5000	0.6015	
15 Chloroethane	64	2.332	2.339	-0.007	77	1911	0.5000	0.4669	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	95	5236	0.5000	0.5126	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	94	4063	0.5000	0.5155	
19 Ethyl ether	59	2.747	2.747	0.000	89	2686	0.5000	0.5909	
21 Acrolein	56	2.854	2.854	0.000	95	3927	4.94	5.36	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	71	2615	0.5000	0.7028	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	97	3007	0.5000	0.5811	
24 Acetone	43	2.954	2.954	0.000	97	10634	2.00	2.44	
26 Iodomethane	142	3.061	3.054	0.007	72	1377	0.5000	1.38	a
27 Carbon disulfide	76	3.119	3.118	0.001	98	11096	0.5000	0.6617	
29 Methyl acetate	43	3.176	3.176	0.000	88	3507	1.00	1.03	
30 3-Chloro-1-propene	41	3.197	3.204	-0.007	87	3610	0.5000	0.5253	
31 Methylene Chloride	84	3.290	3.297	-0.007	86	6039	0.5000	0.9089	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	93	2320	5.00	7.50	
33 Acrylonitrile	53	3.455	3.455	0.000	96	10085	5.00	5.22	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	92	8375	0.5000	0.5143	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	94	2779	0.5000	0.4836	
37 Hexane	57	3.683	3.683	0.000	89	4165	0.5000	0.5850	
39 Vinyl acetate	43	3.784	3.783	0.001	97	9312	1.00	1.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	93	5388	0.5000	0.5141	
45 2-Butanone (MEK)	43	4.191	4.184	0.007	97	6157	2.00	2.78	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	84	3876	0.5000	0.5632	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	63	4452	0.5000	0.5527	
50 sec-Butyl Alcohol	45	4.298	4.291	0.007	95	3124	12.0	18.1	
52 Chlorobromomethane	128	4.391	4.384	0.007	90	1568	0.5000	0.4945	
53 Tetrahydrofuran	42	4.391	4.398	-0.007	67	1748	1.00	1.17	
54 Chloroform	83	4.441	4.448	-0.007	95	5777	0.5000	0.5417	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	93	4840	0.5000	0.5603	
56 Cyclohexane	56	4.656	4.649	0.007	80	4677	0.5000	0.5248	
57 1,1-Dichloropropene	75	4.706	4.699	0.007	93	4673	0.5000	0.5520	
60 Isobutyl alcohol	41	4.713	4.706	0.007	58	1239	12.5	18.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	76	3372	0.5000	0.4823	
62 Benzene	78	4.849	4.849	0.000	93	14297	0.5000	0.5713	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	92	5952	0.5000	0.7503	
65 n-Heptane	43	5.028	5.035	-0.007	78	3879	0.5000	0.7469	
67 Trichloroethene	95	5.335	5.335	0.000	95	2946	0.5000	0.4957	
68 2-Pentanone	43	5.450	5.435	0.015	97	4444	1.60	2.48	
69 Methylcyclohexane	55	5.528	5.528	0.000	87	3768	0.5000	0.5775	
70 1,2-Dichloropropane	63	5.543	5.535	0.008	93	3987	0.5000	0.6265	
72 1,4-Dioxane	88		5.578				ND	ND	
73 Dibromomethane	93	5.607	5.614	-0.007	90	2061	0.5000	0.5430	
74 Dichlorobromomethane	83	5.736	5.728	0.008	98	4442	0.5000	0.5544	
76 2-Chloroethyl vinyl ether	63	5.943	5.936	0.007	31	765	0.5000	-0.4931	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	91	4386	0.5000	0.4634	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	92	7832	2.00	1.84	
79 Toluene	91	6.365	6.365	0.000	97	14361	0.5000	0.5327	a
80 trans-1,3-Dichloropropene	75	6.544	6.543	0.001	94	3916	0.5000	0.4736	a
81 Ethyl methacrylate	69	6.565	6.558	0.007	63	3014	0.5000	0.4440	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	88	2702	0.5000	0.5015	
83 Tetrachloroethene	164	6.808	6.808	0.000	86	2660	0.5000	0.5897	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	4933	0.5000	0.5181	
85 2-Hexanone	43	6.887	6.880	0.007	87	4483	2.00	1.51	
87 Chlorodibromomethane	129	7.058	7.051	0.007	93	2816	0.5000	0.4903	
88 Ethylene Dibromide	107	7.173	7.173	0.000	94	2782	0.5000	0.5114	
89 1-Chlorohexane	91	7.559	7.559	0.000	33	5343	0.4000	0.6353	
90 Chlorobenzene	112	7.602	7.602	0.000	83	9647	0.5000	0.5574	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	41	2688	0.5000	0.4831	
92 Ethylbenzene	106	7.680	7.673	0.007	97	5836	0.5000	0.6126	
93 m-Xylene & p-Xylene	106	7.802	7.795	0.007	0	6176	0.5000	0.5407	
94 o-Xylene	106	8.152	8.152	0.000	96	6195	0.5000	0.5346	
95 Styrene	104	8.174	8.167	0.007	94	8736	0.5000	0.4745	
96 Bromoform	173	8.353	8.352	0.001	85	1656	0.5000	0.4770	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	14024	0.5000	0.5097	
99 Cyclohexanone	55	8.596	8.588	0.008	74	3115	15.0	18.2	
100 1,1,2,2-Tetrachloroethane	83	8.782	8.774	0.008	90	3054	0.5000	0.4400	
101 Bromobenzene	156	8.810	8.810	0.000	93	3764	0.5000	0.5431	
102 trans-1,4-Dichloro-2-butene	53		8.817				ND	ND	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	62	1211	0.5000	0.5748	
104 N-Propylbenzene	120	8.896	8.889	0.007	98	3276	0.5000	0.4286	
105 2-Chlorotoluene	126	8.989	8.982	0.007	93	3145	0.5000	0.4636	
106 1,3,5-Trimethylbenzene	105	9.068	9.060	0.008	91	11921	0.5000	0.5138	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.110	9.103	0.007	95	3836	0.5000	0.5435	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	10137	0.5000	0.5229	
110 1,2,4-Trimethylbenzene	105	9.432	9.425	0.007	97	12343	0.5000	0.5143	
111 sec-Butylbenzene	134	9.590	9.582	0.008	93	3271	0.5000	0.5632	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	95	6882	0.5000	0.5379	
113 4-Isopropyltoluene	119	9.740	9.732	0.008	96	12712	0.5000	0.5308	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	77	6956	0.5000	0.5118	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	10336	0.5000	0.4983	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	94	6463	0.5000	0.5247	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	1	338	0.5000	0.6382	
120 1,2,4-Trichlorobenzene	180	11.778	11.770	0.008	91	2093	0.5000	0.3375	
121 Hexachlorobutadiene	225	11.913	11.906	0.007	85	1540	0.5000	0.6813	
122 Naphthalene	128	12.049	12.035	0.014	94	7127	0.5000	0.4505	
123 1,2,3-Trichlorobenzene	180	12.271	12.256	0.015	86	2360	0.5000	0.5043	
S 135 1,2-Dichloroethene, Total (URS)	96				0		1.00	1.05	
S 139 Xylenes, Total (URS)	1				0		1.00	1.08	
S 136 1,3-Dichloropropene, Total	1				0		1.00	0.9370	
S 138 Xylenes, Total	106				0		1.00	1.08	
S 137 Total BTEX	1				0			2.79	
S 140 Trihalomethanes, Total	1				0		2.00	2.06	
S 141 1,2-Dichloroethene, Total	1				0		1.00	1.05	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

Cal Dil Std_00162	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

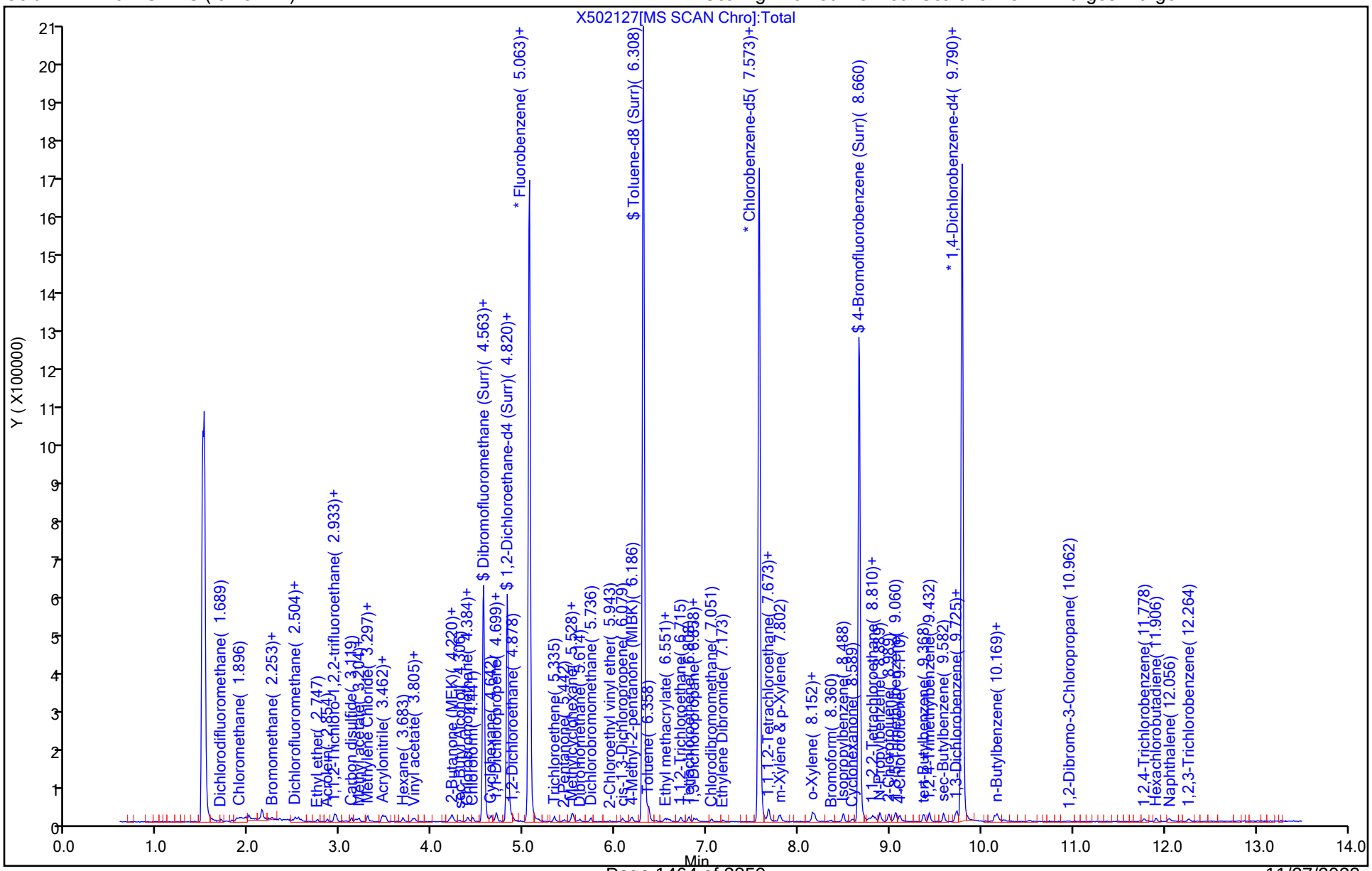
Report Date: 10-Apr-2023 11:27:11 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D

Injection Date:	07-Apr-2023 03:14:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

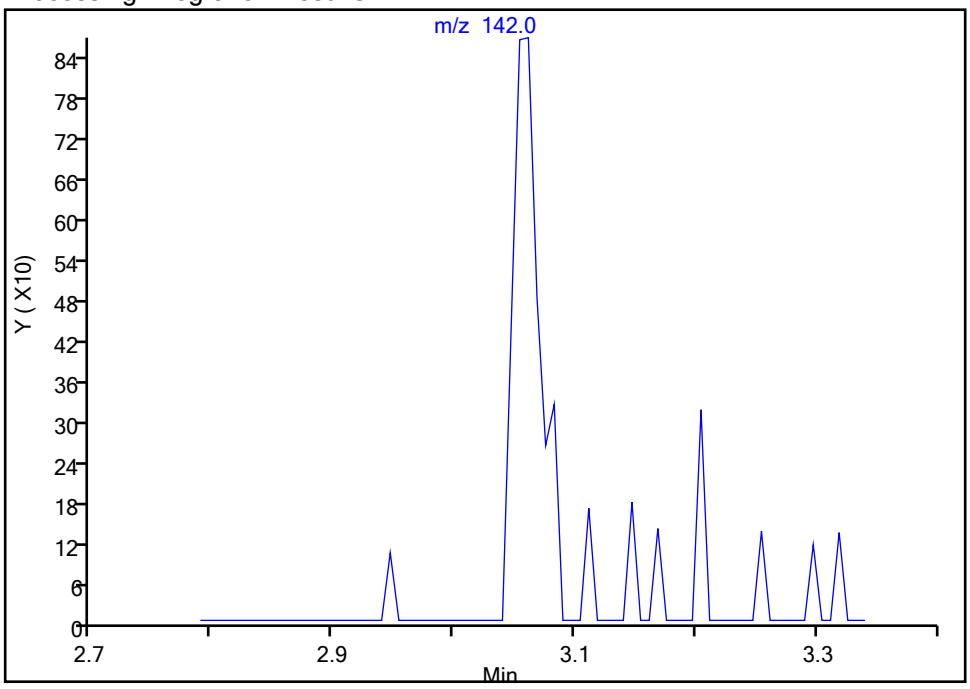
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Injection Date: 07-Apr-2023 03:14:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

26 Iodomethane, CAS: 74-88-4

Signal: 1

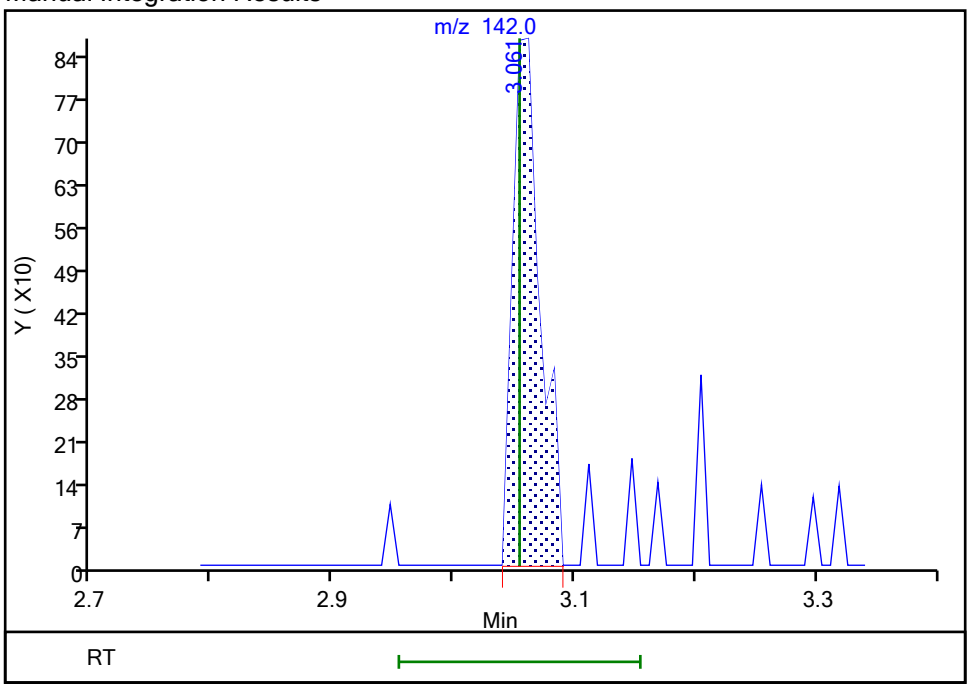
Not Detected
Expected RT: 3.05

Processing Integration Results



Manual Integration Results

RT: 3.06
Area: 1377
Amount: 1.375342
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:13:14
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

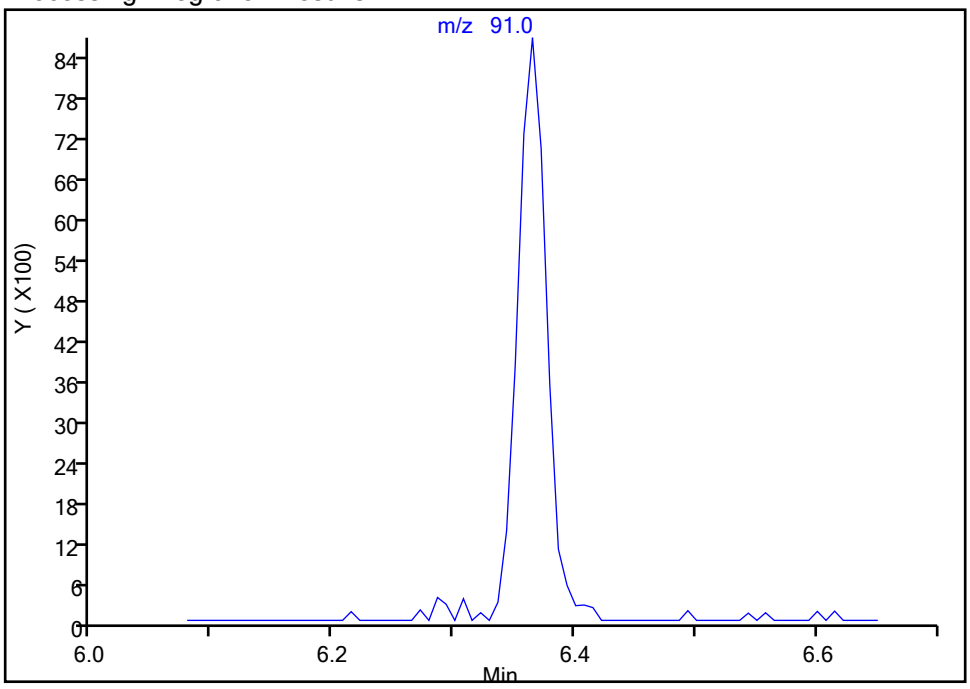
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Injection Date: 07-Apr-2023 03:14:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

79 Toluene, CAS: 108-88-3

Signal: 1

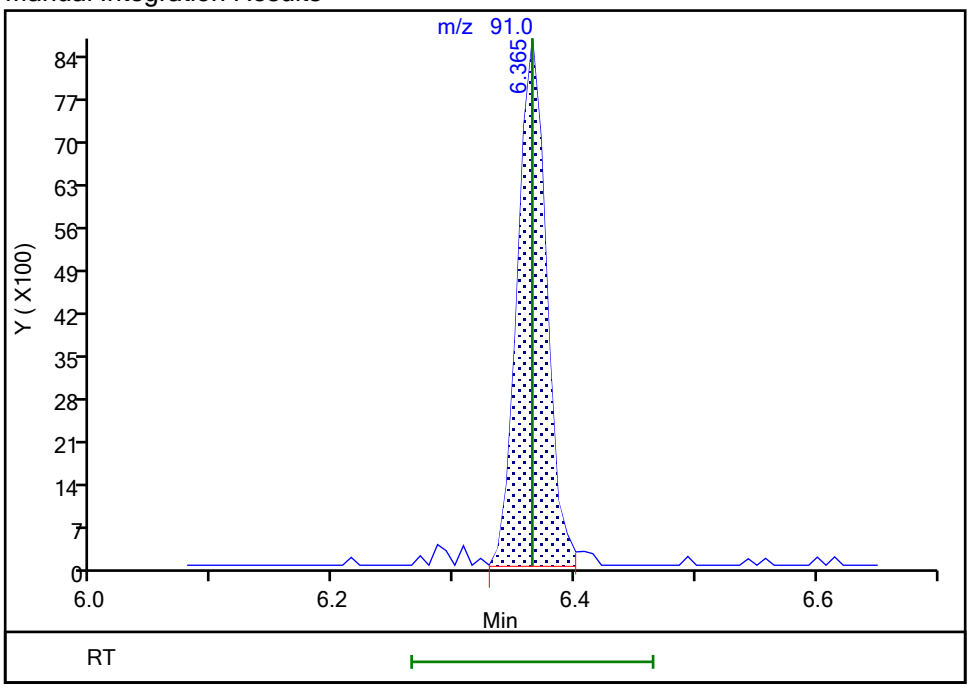
Not Detected
Expected RT: 6.36

Processing Integration Results



Manual Integration Results

RT: 6.36
Area: 14361
Amount: 0.532717
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:14:20
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

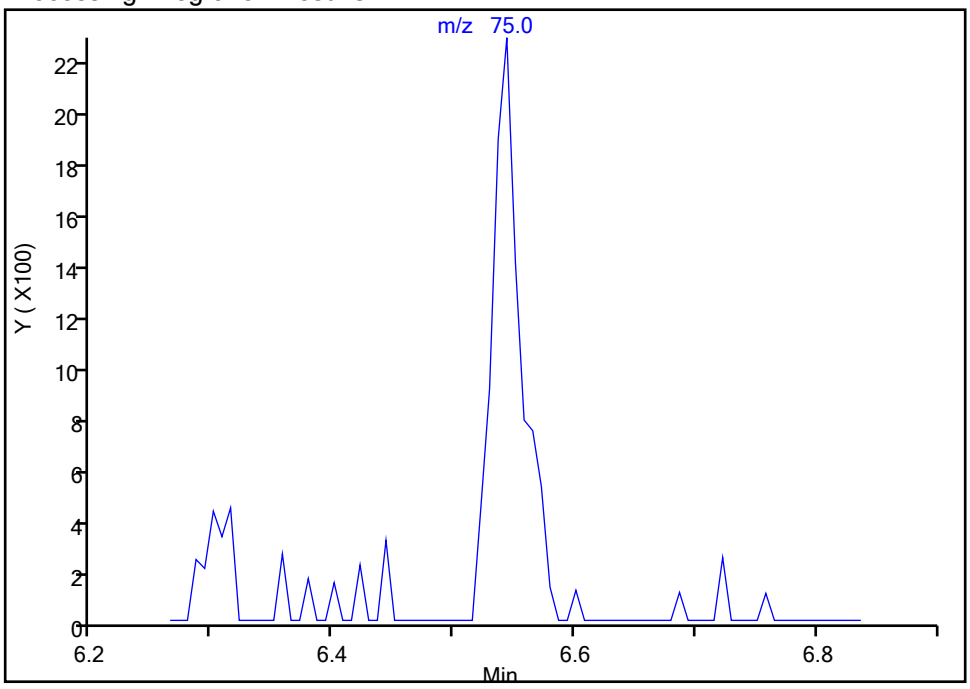
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Injection Date: 07-Apr-2023 03:14:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

80 trans-1,3-Dichloropropene, CAS: 10061-02-6

Signal: 1

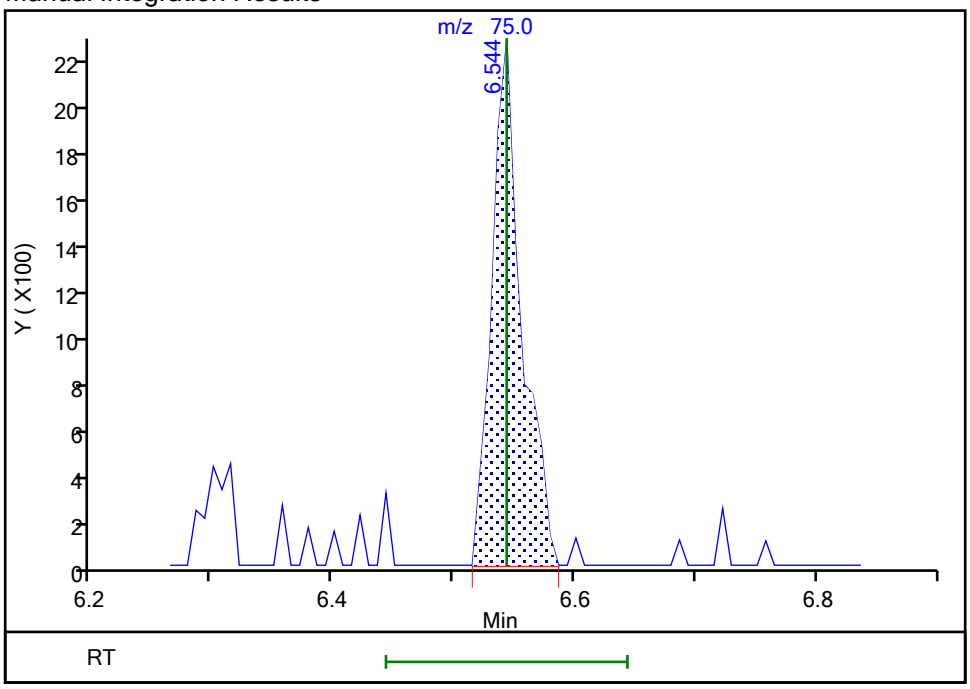
Not Detected
Expected RT: 6.54

Processing Integration Results



Manual Integration Results

RT: 6.54
Area: 3916
Amount: 0.473650
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:14:41
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

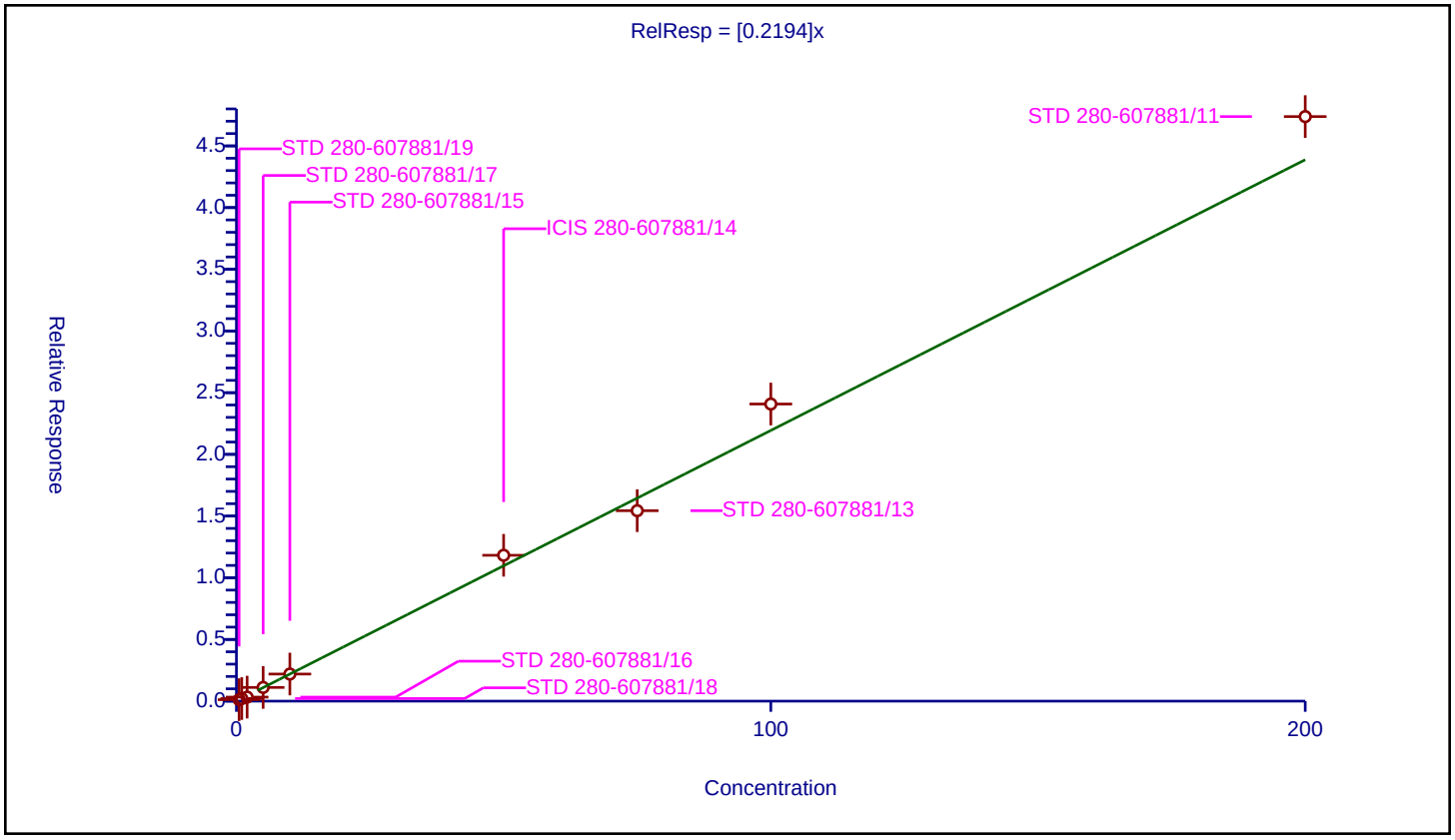
Curve Coefficients

Intercept:	0
Slope:	0.2194

Error Coefficients

Standard Error:	618000
Relative Standard Error:	11.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.120006	50.0	1347020.0	0.240011	Y
2	STD 280-607881/18	1.0	0.209766	50.0	1321475.0	0.209766	Y
3	STD 280-607881/16	2.0	0.326777	50.0	1358265.0	0.163389	Y
4	STD 280-607881/17	5.0	1.109566	50.0	1337910.0	0.221913	Y
5	STD 280-607881/15	10.0	2.196438	50.0	1371311.0	0.219644	Y
6	ICIS 280-607881/14	50.0	11.820712	50.0	1433467.0	0.236414	Y
7	STD 280-607881/13	75.0	15.434353	50.0	1474746.0	0.205791	Y
8	STD 280-607881/12	100.0	24.07937	50.0	1493380.0	0.240794	Y
9	STD 280-607881/11	200.0	47.376053	50.0	1569677.0	0.23688	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

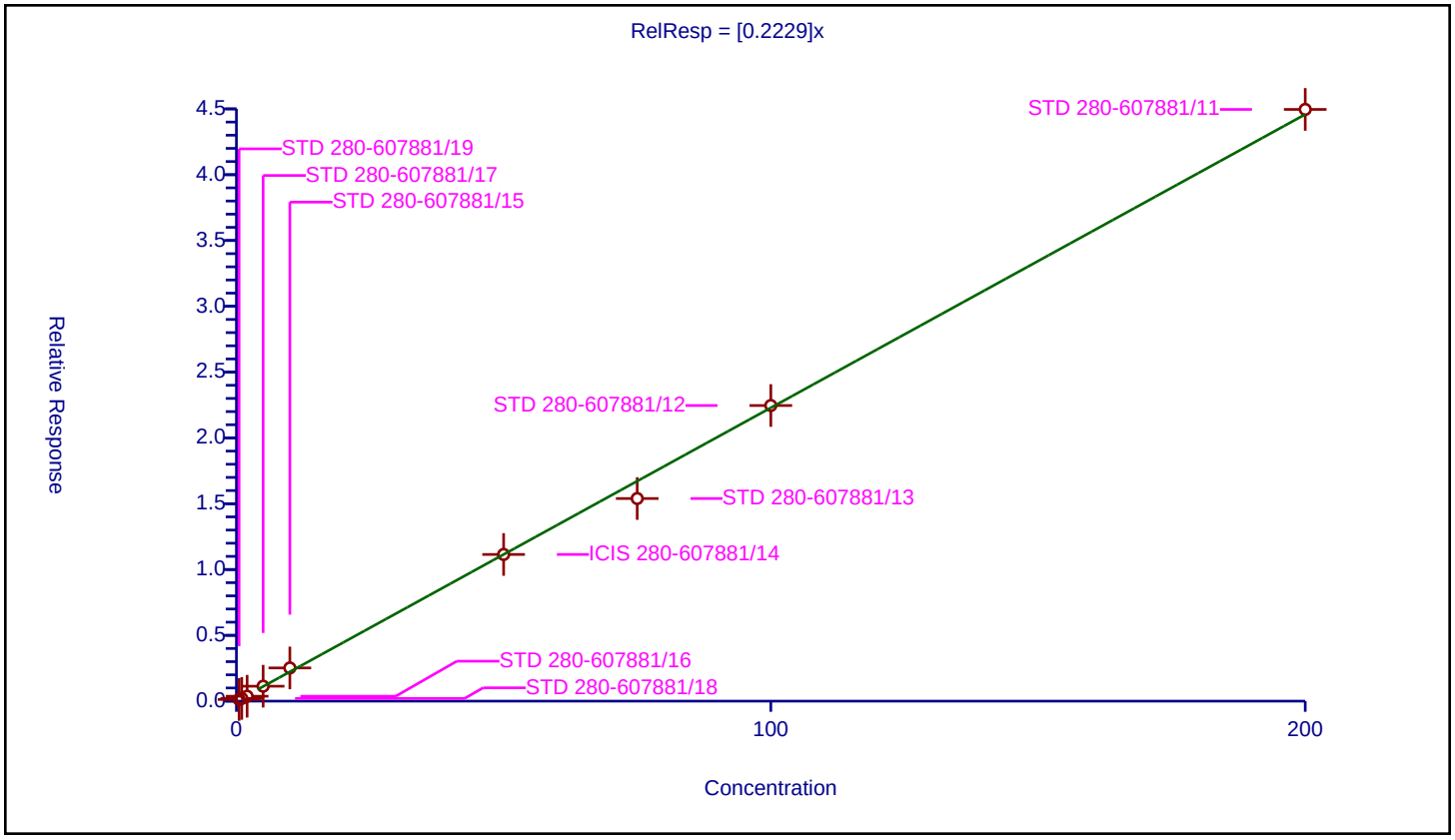
Curve Coefficients

Intercept:	0
Slope:	0.2229

Error Coefficients

Standard Error:	587000
Relative Standard Error:	9.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.126984	50.0	1347020.0	0.253968	Y
2	STD 280-607881/18	1.0	0.20829	50.0	1321475.0	0.20829	Y
3	STD 280-607881/16	2.0	0.37397	50.0	1358265.0	0.186985	Y
4	STD 280-607881/17	5.0	1.135091	50.0	1337910.0	0.227018	Y
5	STD 280-607881/15	10.0	2.523169	50.0	1371311.0	0.252317	Y
6	ICIS 280-607881/14	50.0	11.144519	50.0	1433467.0	0.22289	Y
7	STD 280-607881/13	75.0	15.395973	50.0	1474746.0	0.20528	Y
8	STD 280-607881/12	100.0	22.4622	50.0	1493380.0	0.224622	Y
9	STD 280-607881/11	200.0	44.958963	50.0	1569677.0	0.224795	Y



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Calibration / Vinyl chloride

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

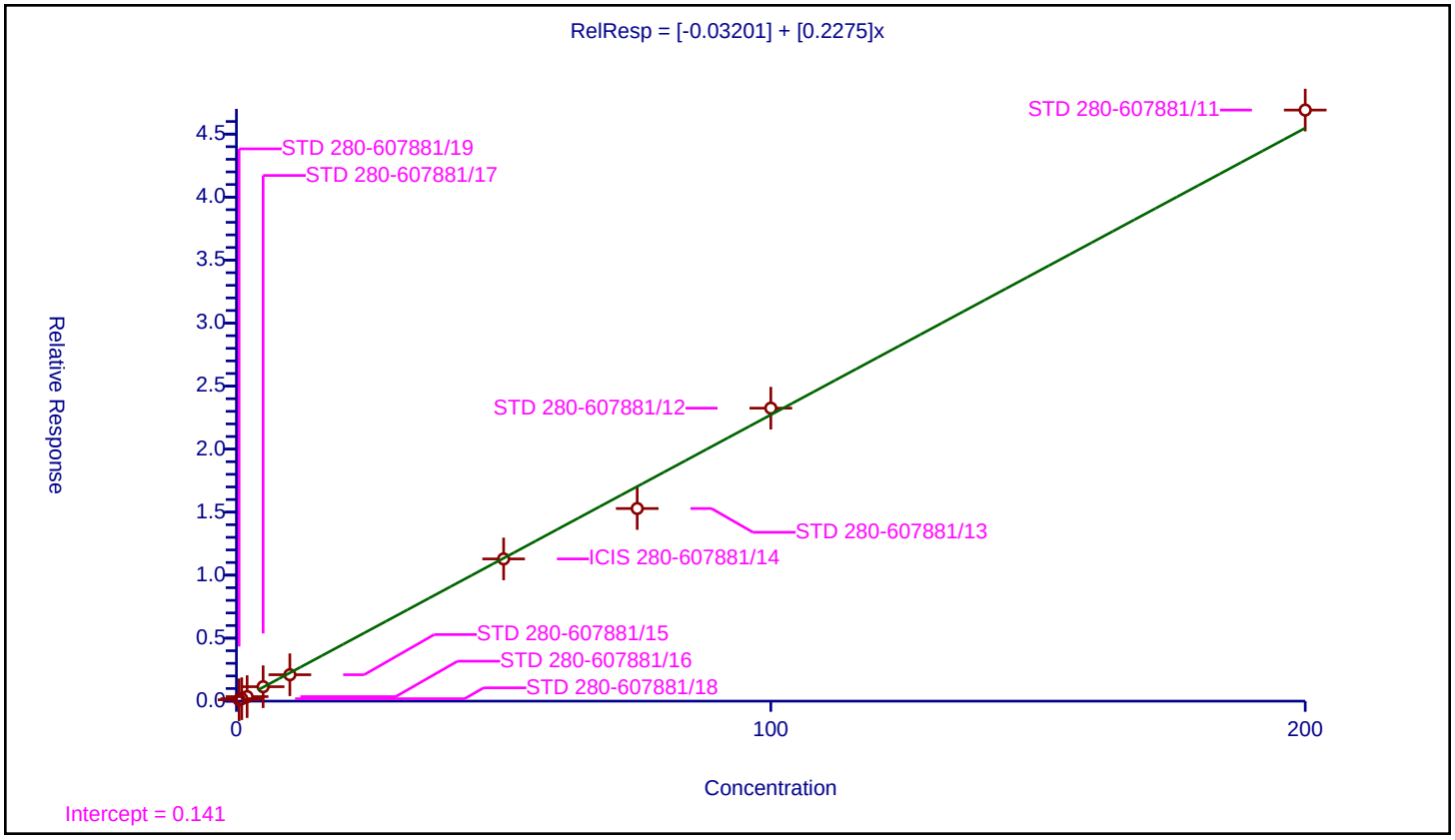
Curve Coefficients

Intercept:	-0.03201
Slope:	0.2275

Error Coefficients

Standard Error:	651000
Relative Standard Error:	11.6
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.108573	50.0	1347020.0	0.217146	Y
2	STD 280-607881/18	1.0	0.193761	50.0	1321475.0	0.193761	Y
3	STD 280-607881/16	2.0	0.35792	50.0	1358265.0	0.17896	Y
4	STD 280-607881/17	5.0	1.144173	50.0	1337910.0	0.228835	Y
5	STD 280-607881/15	10.0	2.09482	50.0	1371311.0	0.209482	Y
6	ICIS 280-607881/14	50.0	11.285436	50.0	1433467.0	0.225709	Y
7	STD 280-607881/13	75.0	15.286836	50.0	1474746.0	0.203824	Y
8	STD 280-607881/12	100.0	23.250278	50.0	1493380.0	0.232503	Y
9	STD 280-607881/11	200.0	46.907198	50.0	1569677.0	0.234536	Y



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Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

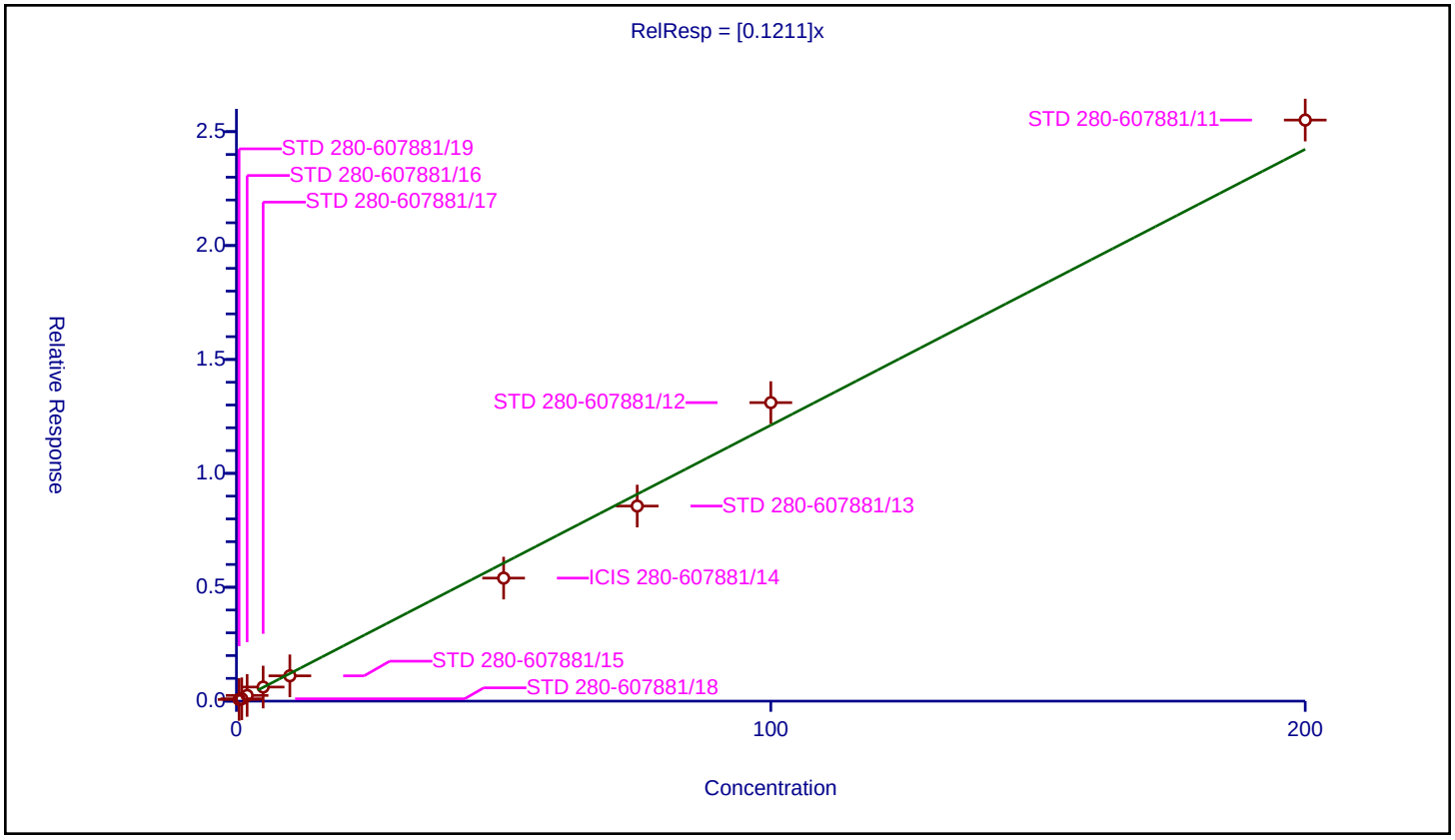
Curve Coefficients

Intercept:	0
Slope:	0.1211

Error Coefficients

Standard Error:	332000
Relative Standard Error:	10.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.072865	50.0	1347020.0	0.145729	Y
2	STD 280-607881/18	1.0	0.103559	50.0	1321475.0	0.103559	Y
3	STD 280-607881/16	2.0	0.250356	50.0	1358265.0	0.125178	Y
4	STD 280-607881/17	5.0	0.6191	50.0	1337910.0	0.12382	Y
5	STD 280-607881/15	10.0	1.111528	50.0	1371311.0	0.111153	Y
6	ICIS 280-607881/14	50.0	5.401799	50.0	1433467.0	0.108036	Y
7	STD 280-607881/13	75.0	8.56456	50.0	1474746.0	0.114194	Y
8	STD 280-607881/12	100.0	13.105573	50.0	1493380.0	0.131056	Y
9	STD 280-607881/11	200.0	25.510089	50.0	1569677.0	0.12755	Y



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Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

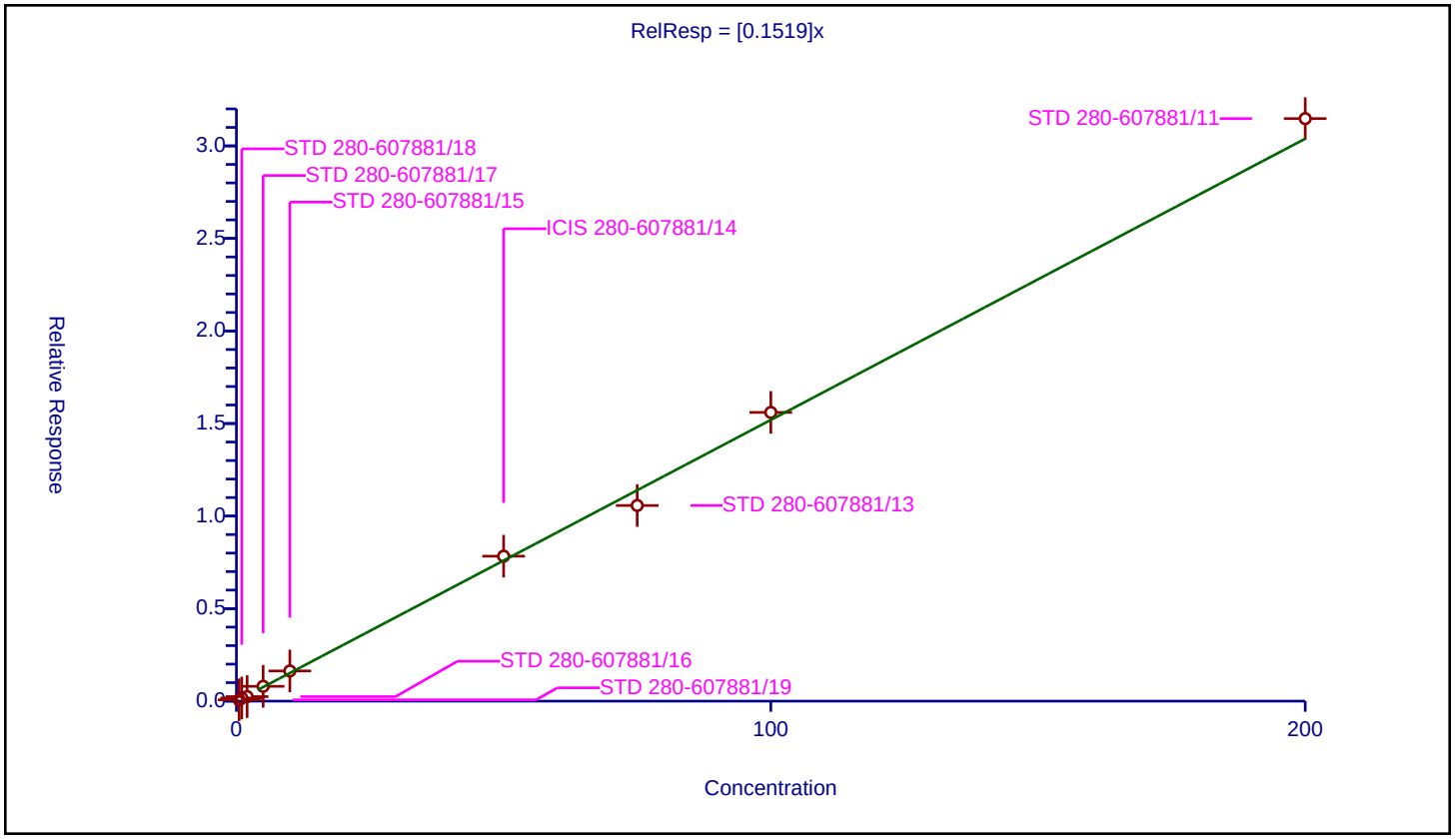
Curve Coefficients

Intercept:	0
Slope:	0.1519

Error Coefficients

Standard Error:	410000
Relative Standard Error:	9.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.070934	50.0	1347020.0	0.141869	Y
2	STD 280-607881/18	1.0	0.168864	50.0	1321475.0	0.168864	Y
3	STD 280-607881/16	2.0	0.244908	50.0	1358265.0	0.122454	Y
4	STD 280-607881/17	5.0	0.800652	50.0	1337910.0	0.16013	Y
5	STD 280-607881/15	10.0	1.631359	50.0	1371311.0	0.163136	Y
6	ICIS 280-607881/14	50.0	7.832235	50.0	1433467.0	0.156645	Y
7	STD 280-607881/13	75.0	10.571041	50.0	1474746.0	0.140947	Y
8	STD 280-607881/12	100.0	15.600919	50.0	1493380.0	0.156009	Y
9	STD 280-607881/11	200.0	31.474692	50.0	1569677.0	0.157373	Y



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Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

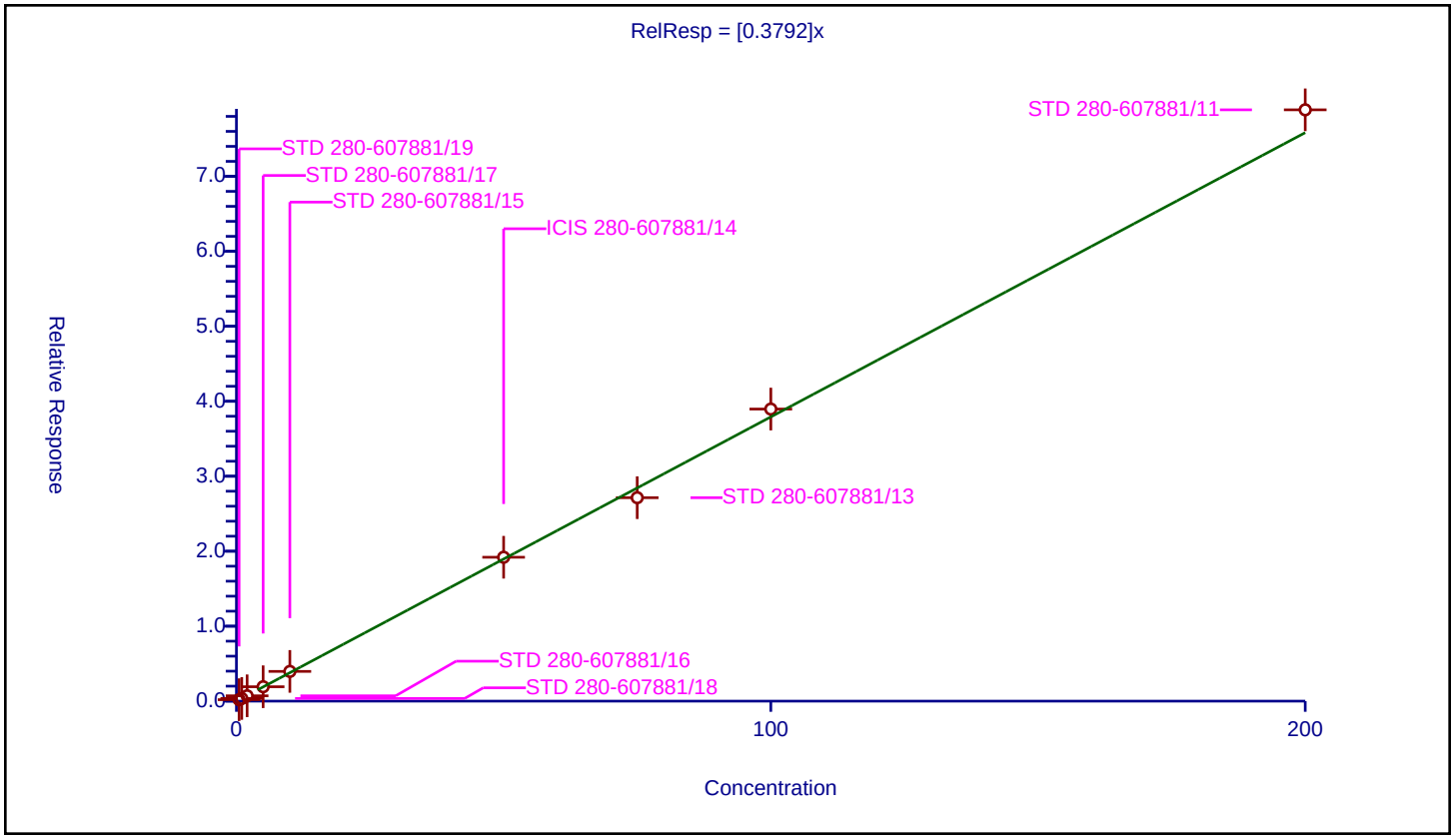
Curve Coefficients

Intercept:	0
Slope:	0.3792

Error Coefficients

Standard Error:	1030000
Relative Standard Error:	4.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.194355	50.0	1347020.0	0.38871	Y
2	STD 280-607881/18	1.0	0.356723	50.0	1321475.0	0.356723	Y
3	STD 280-607881/16	2.0	0.712748	50.0	1358265.0	0.356374	Y
4	STD 280-607881/17	5.0	1.921878	50.0	1337910.0	0.384376	Y
5	STD 280-607881/15	10.0	3.965038	50.0	1371311.0	0.396504	Y
6	ICIS 280-607881/14	50.0	19.194233	50.0	1433467.0	0.383885	Y
7	STD 280-607881/13	75.0	27.138945	50.0	1474746.0	0.361853	Y
8	STD 280-607881/12	100.0	38.960479	50.0	1493380.0	0.389605	Y
9	STD 280-607881/11	200.0	78.877087	50.0	1569677.0	0.394385	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

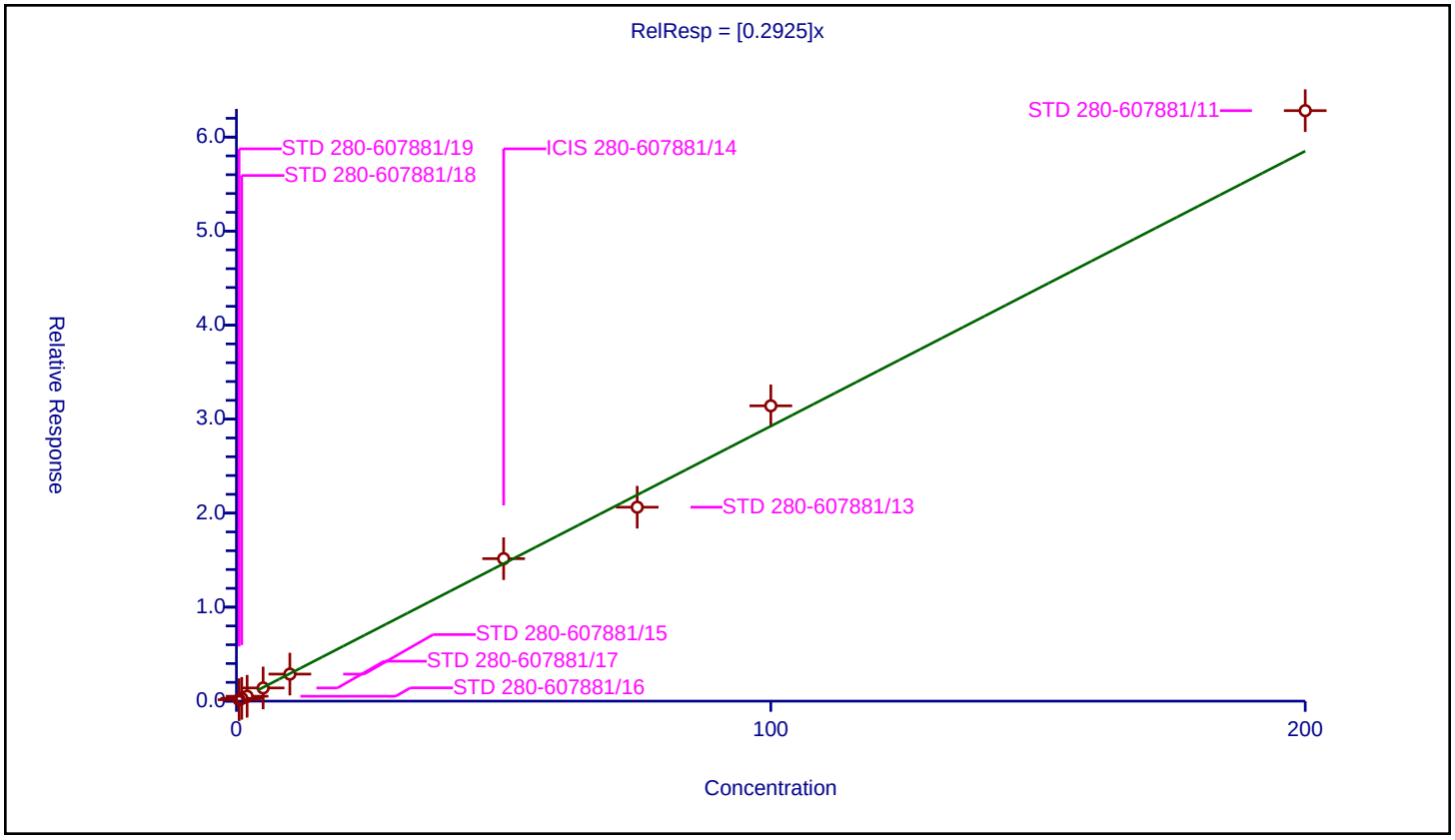
Curve Coefficients

Intercept:	0
Slope:	0.2925

Error Coefficients

Standard Error:	817000
Relative Standard Error:	6.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.150814	50.0	1347020.0	0.301629	Y
2	STD 280-607881/18	1.0	0.296411	50.0	1321475.0	0.296411	Y
3	STD 280-607881/16	2.0	0.520186	50.0	1358265.0	0.260093	Y
4	STD 280-607881/17	5.0	1.403271	50.0	1337910.0	0.280654	Y
5	STD 280-607881/15	10.0	2.876773	50.0	1371311.0	0.287677	Y
6	ICIS 280-607881/14	50.0	15.155005	50.0	1433467.0	0.3031	Y
7	STD 280-607881/13	75.0	20.630536	50.0	1474746.0	0.275074	Y
8	STD 280-607881/12	100.0	31.415983	50.0	1493380.0	0.31416	Y
9	STD 280-607881/11	200.0	62.813273	50.0	1569677.0	0.314066	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

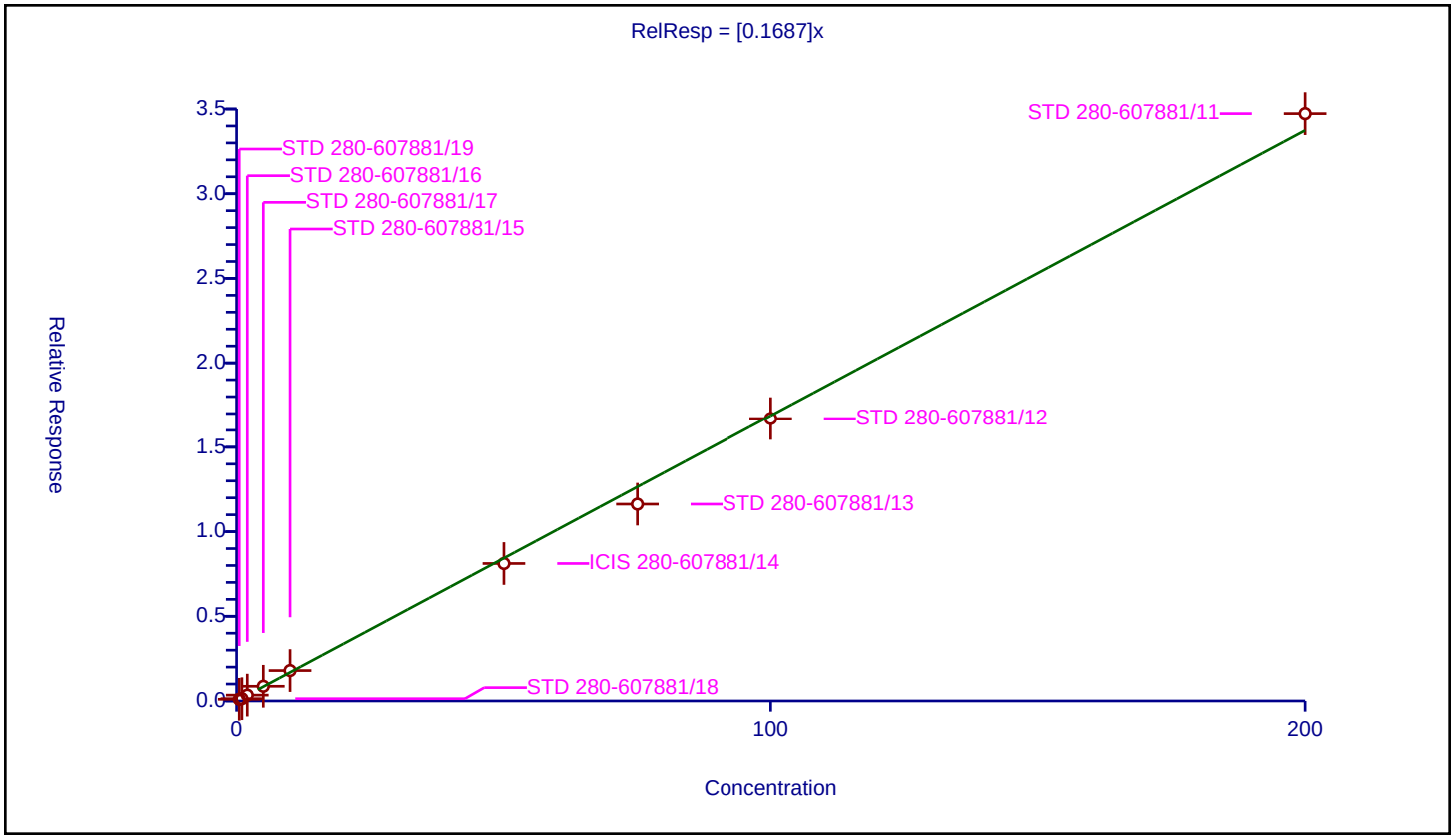
Curve Coefficients

Intercept:	0
Slope:	0.1687

Error Coefficients

Standard Error:	449000
Relative Standard Error:	10.4
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.099702	50.0	1347020.0	0.199403	Y
2	STD 280-607881/18	1.0	0.135341	50.0	1321475.0	0.135341	Y
3	STD 280-607881/16	2.0	0.34533	50.0	1358265.0	0.172665	Y
4	STD 280-607881/17	5.0	0.867585	50.0	1337910.0	0.173517	Y
5	STD 280-607881/15	10.0	1.795034	50.0	1371311.0	0.179503	Y
6	ICIS 280-607881/14	50.0	8.118255	50.0	1433467.0	0.162365	Y
7	STD 280-607881/13	75.0	11.62729	50.0	1474746.0	0.155031	Y
8	STD 280-607881/12	100.0	16.701978	50.0	1493380.0	0.16702	Y
9	STD 280-607881/11	200.0	34.727145	50.0	1569677.0	0.173636	Y



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Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

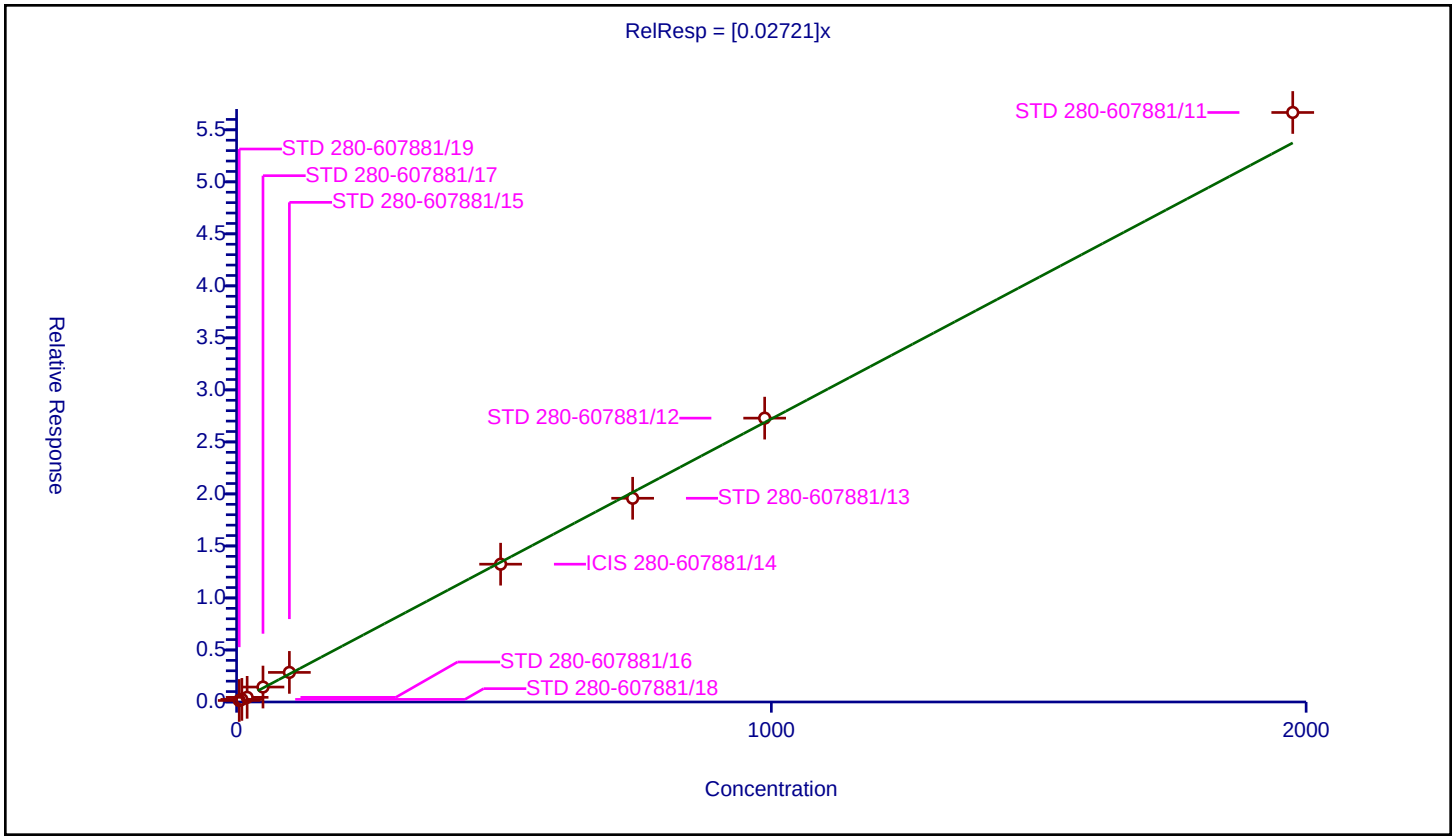
Curve Coefficients

Intercept:	0
Slope:	0.02721

Error Coefficients

Standard Error:	734000
Relative Standard Error:	8.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	4.9375	0.145766	50.0	1347020.0	0.029522	Y
2	STD 280-607881/18	9.875	0.249872	50.0	1321475.0	0.025304	Y
3	STD 280-607881/16	19.75	0.446305	50.0	1358265.0	0.022598	Y
4	STD 280-607881/17	49.375	1.436831	50.0	1337910.0	0.0291	Y
5	STD 280-607881/15	98.75	2.843629	50.0	1371311.0	0.028796	Y
6	ICIS 280-607881/14	493.75	13.244881	50.0	1433467.0	0.026825	Y
7	STD 280-607881/13	740.625	19.581643	50.0	1474746.0	0.026439	Y
8	STD 280-607881/12	987.5	27.286558	50.0	1493380.0	0.027632	Y
9	STD 280-607881/11	1975.0	56.666881	50.0	1569677.0	0.028692	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

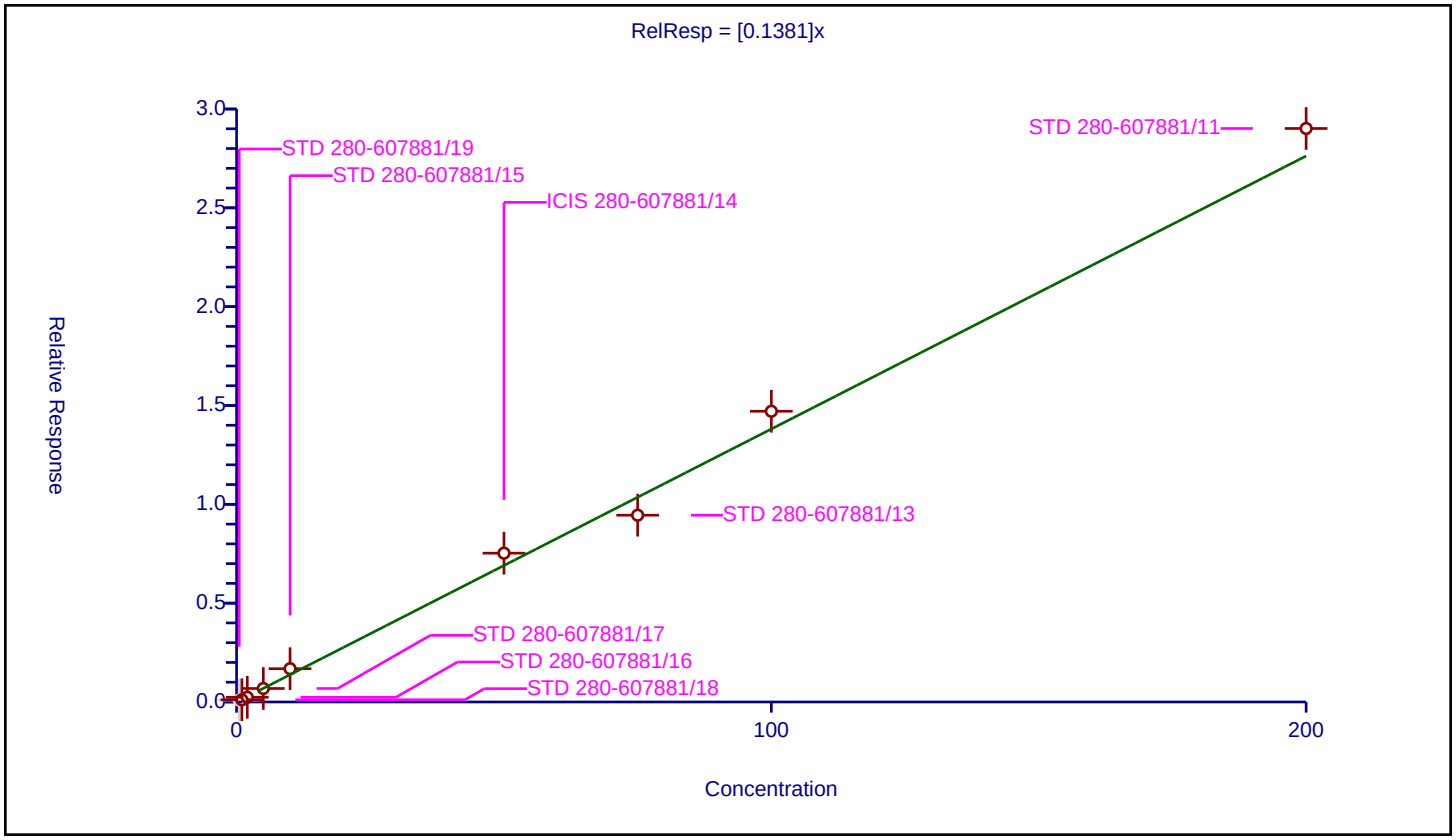
Curve Coefficients

Intercept:	0
Slope:	0.1381

Error Coefficients

Standard Error:	405000
Relative Standard Error:	13.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.097066	50.0	1347020.0	0.194132	N
2	STD 280-607881/18	1.0	0.112072	50.0	1321475.0	0.112072	Y
3	STD 280-607881/16	2.0	0.238319	50.0	1358265.0	0.119159	Y
4	STD 280-607881/17	5.0	0.682744	50.0	1337910.0	0.136549	Y
5	STD 280-607881/15	10.0	1.68379	50.0	1371311.0	0.168379	Y
6	ICIS 280-607881/14	50.0	7.529193	50.0	1433467.0	0.150584	Y
7	STD 280-607881/13	75.0	9.450102	50.0	1474746.0	0.126001	Y
8	STD 280-607881/12	100.0	14.709351	50.0	1493380.0	0.147094	Y
9	STD 280-607881/11	200.0	29.015747	50.0	1569677.0	0.145079	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

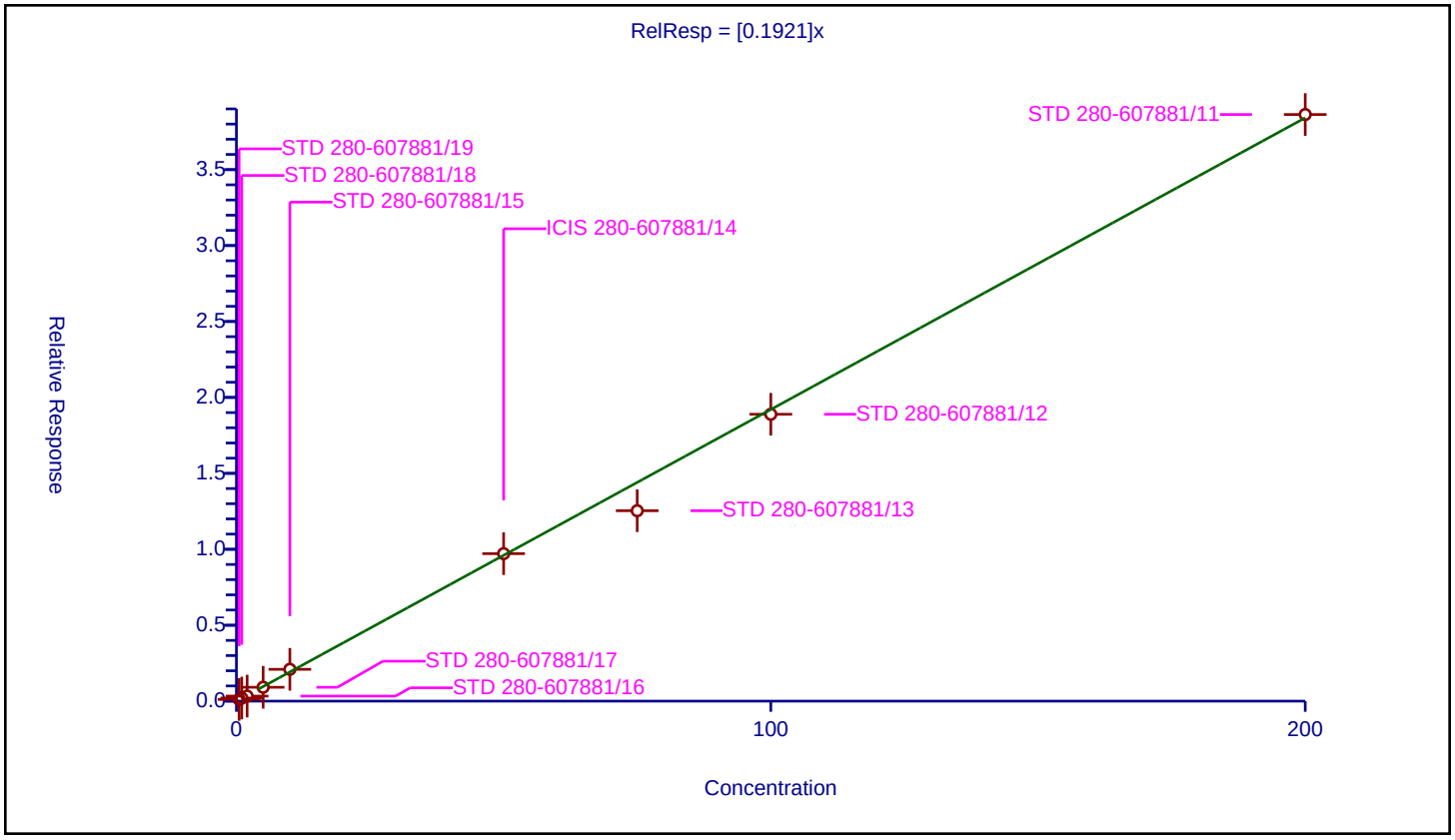
Curve Coefficients

Intercept:	0
Slope:	0.1921

Error Coefficients

Standard Error:	501000
Relative Standard Error:	9.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.111617	50.0	1347020.0	0.223234	Y
2	STD 280-607881/18	1.0	0.20356	50.0	1321475.0	0.20356	Y
3	STD 280-607881/16	2.0	0.332373	50.0	1358265.0	0.166186	Y
4	STD 280-607881/17	5.0	0.913103	50.0	1337910.0	0.182621	Y
5	STD 280-607881/15	10.0	2.094784	50.0	1371311.0	0.209478	Y
6	ICIS 280-607881/14	50.0	9.712292	50.0	1433467.0	0.194246	Y
7	STD 280-607881/13	75.0	12.539007	50.0	1474746.0	0.167187	Y
8	STD 280-607881/12	100.0	18.892077	50.0	1493380.0	0.188921	Y
9	STD 280-607881/11	200.0	38.630209	50.0	1569677.0	0.193151	Y



Calibration / Acetone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

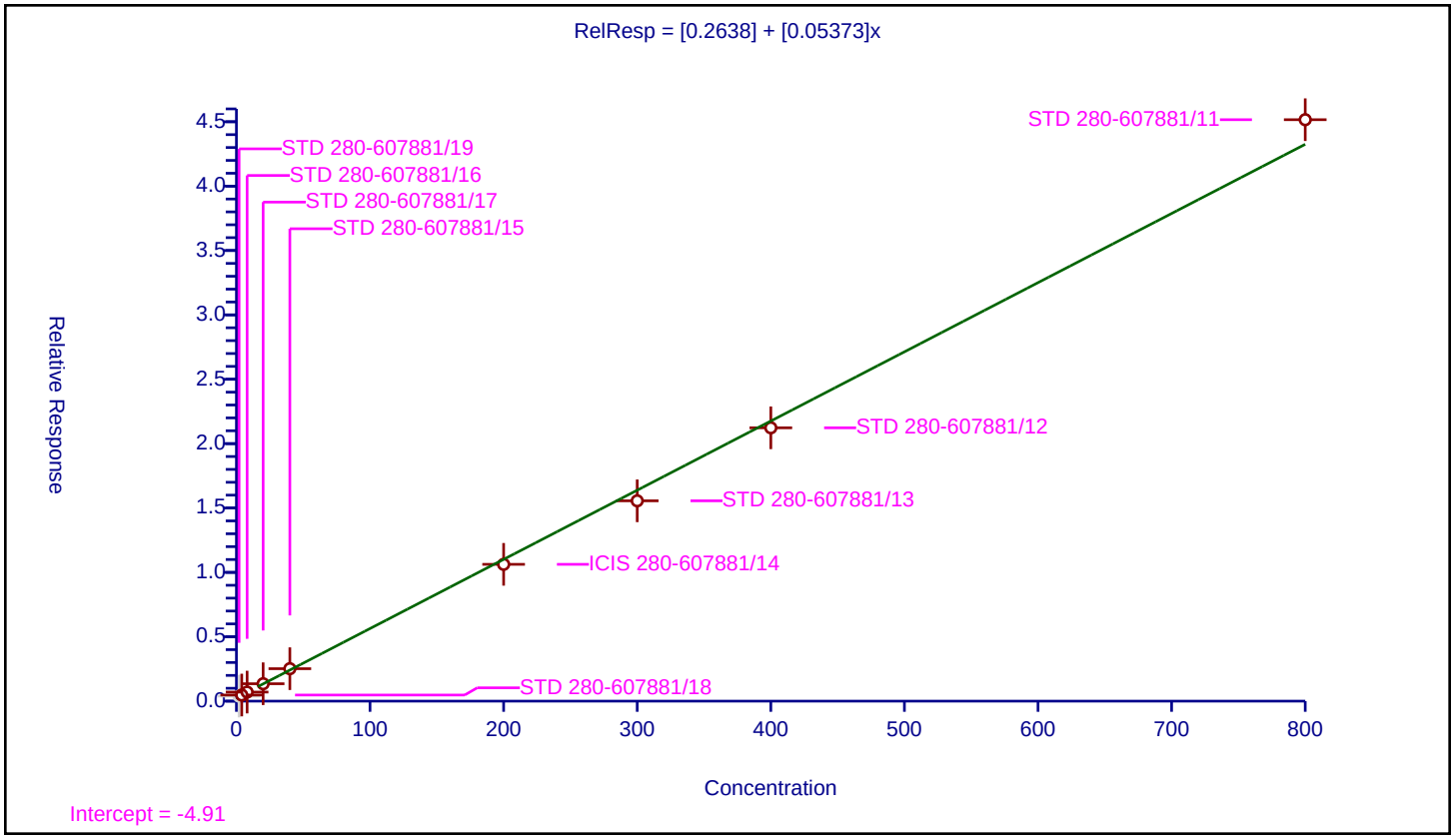
Curve Coefficients

Intercept:	0.2638
Slope:	0.05373

Error Coefficients

Standard Error:	674000
Relative Standard Error:	4.1
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.394723	50.0	1347020.0	0.197362	N
2	STD 280-607881/18	4.0	0.475075	50.0	1321475.0	0.118769	Y
3	STD 280-607881/16	8.0	0.703361	50.0	1358265.0	0.08792	Y
4	STD 280-607881/17	20.0	1.351698	50.0	1337910.0	0.067585	Y
5	STD 280-607881/15	40.0	2.519779	50.0	1371311.0	0.062994	Y
6	ICIS 280-607881/14	200.0	10.62473	50.0	1433467.0	0.053124	Y
7	STD 280-607881/13	300.0	15.55929	50.0	1474746.0	0.051864	Y
8	STD 280-607881/12	400.0	21.229962	50.0	1493380.0	0.053075	Y
9	STD 280-607881/11	800.0	45.159163	50.0	1569677.0	0.056449	Y



Calibration / Iodomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

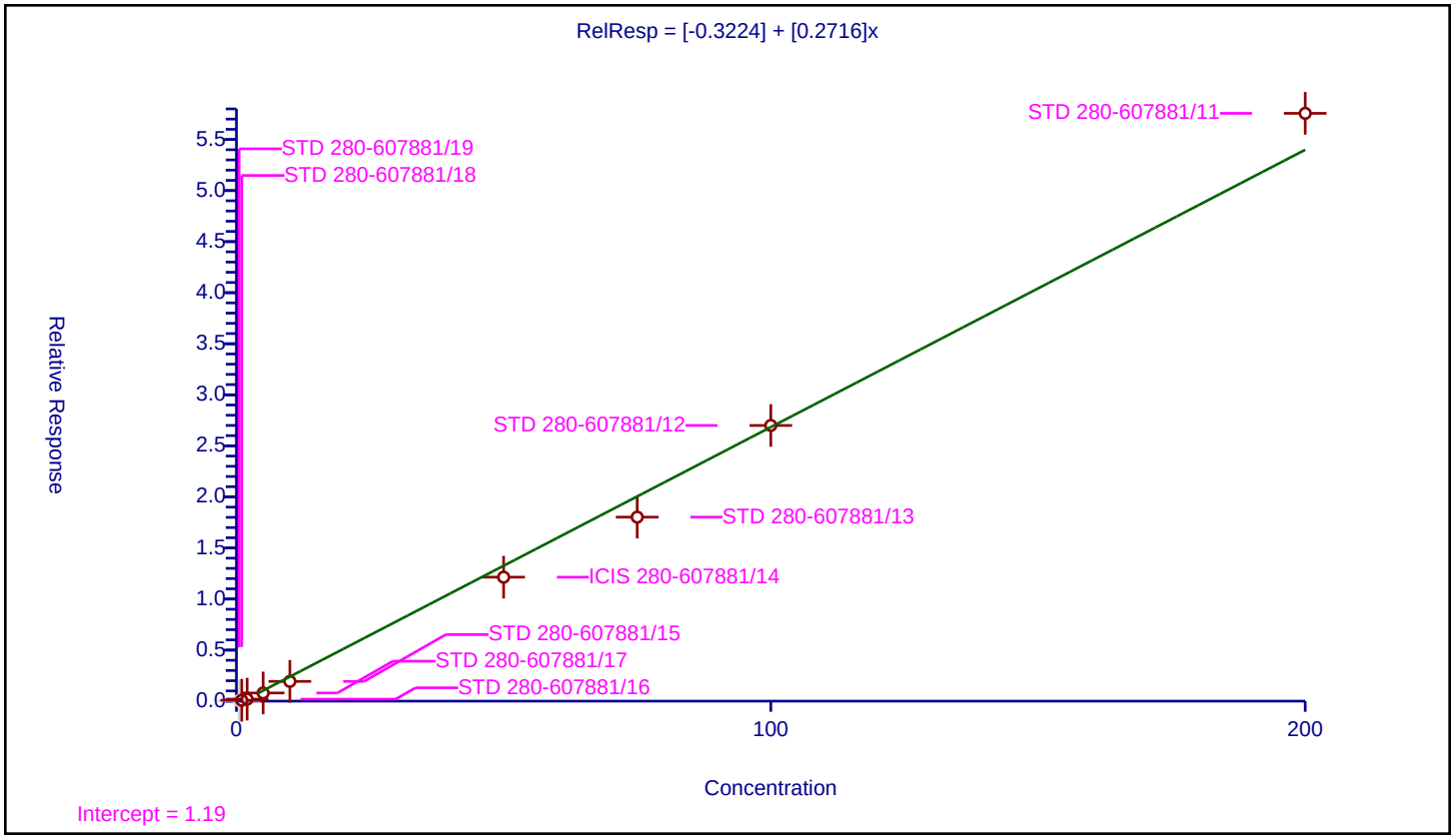
Curve Coefficients

Intercept:	-0.3224
Slope:	0.2716

Error Coefficients

Standard Error:	849000
Relative Standard Error:	23.7
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.051113	50.0	1347020.0	0.102226	N
2	STD 280-607881/18	1.0	0.085851	50.0	1321475.0	0.085851	Y
3	STD 280-607881/16	2.0	0.193556	50.0	1358265.0	0.096778	Y
4	STD 280-607881/17	5.0	0.799381	50.0	1337910.0	0.159876	Y
5	STD 280-607881/15	10.0	1.934098	50.0	1371311.0	0.19341	Y
6	ICIS 280-607881/14	50.0	12.139833	50.0	1433467.0	0.242797	Y
7	STD 280-607881/13	75.0	18.019984	50.0	1474746.0	0.240266	Y
8	STD 280-607881/12	100.0	26.998185	50.0	1493380.0	0.269982	Y
9	STD 280-607881/11	200.0	57.563276	50.0	1569677.0	0.287816	Y



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Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

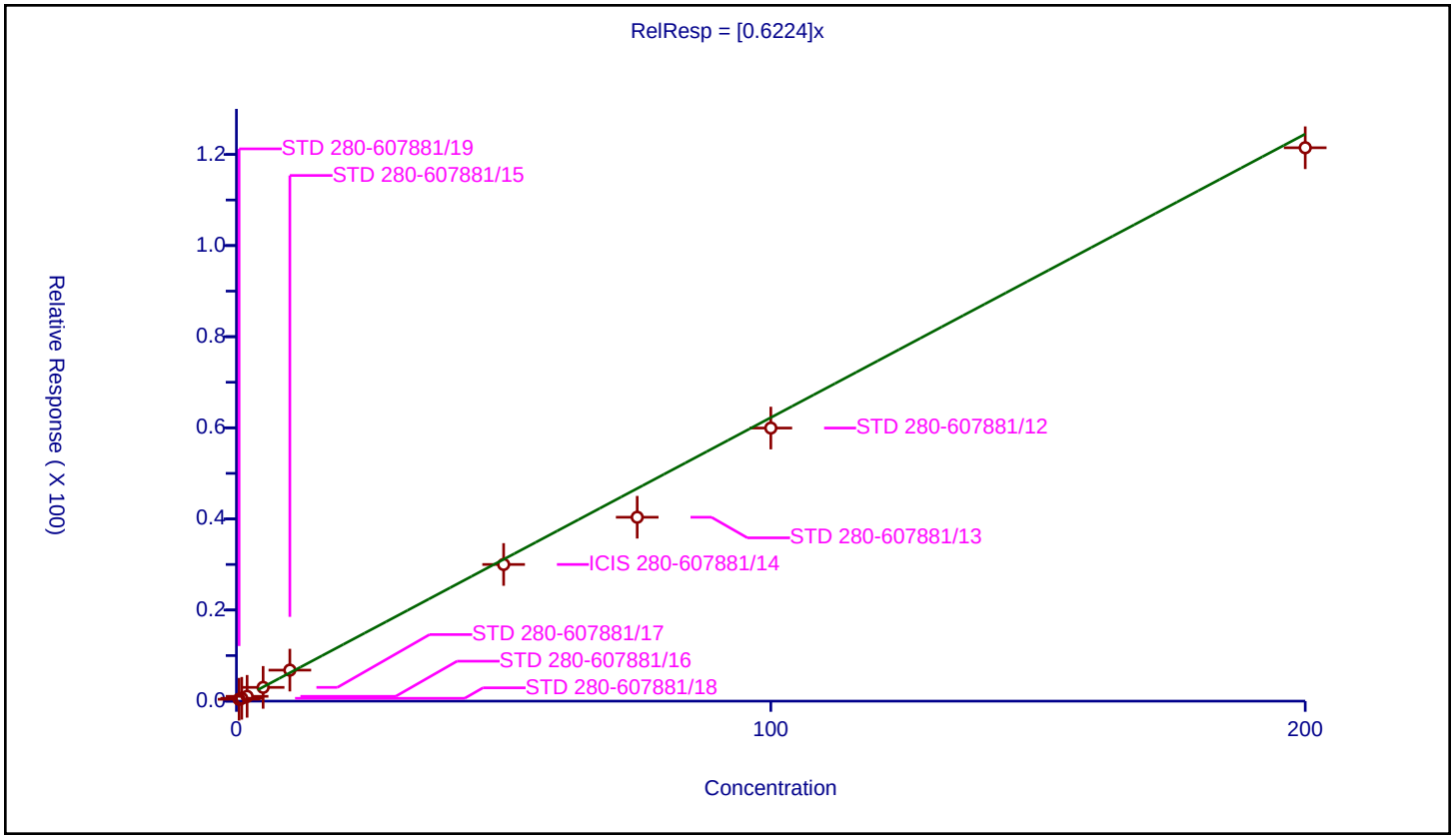
Curve Coefficients

Intercept:	0
Slope:	0.6224

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	14.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.411872	50.0	1347020.0	0.823744	Y
2	STD 280-607881/18	1.0	0.620632	50.0	1321475.0	0.620632	Y
3	STD 280-607881/16	2.0	1.054286	50.0	1358265.0	0.527143	Y
4	STD 280-607881/17	5.0	3.021429	50.0	1337910.0	0.604286	Y
5	STD 280-607881/15	10.0	6.809214	50.0	1371311.0	0.680921	Y
6	ICIS 280-607881/14	50.0	30.000167	50.0	1433467.0	0.600003	Y
7	STD 280-607881/13	75.0	40.363256	50.0	1474746.0	0.538177	Y
8	STD 280-607881/12	100.0	59.945292	50.0	1493380.0	0.599453	Y
9	STD 280-607881/11	200.0	121.472953	50.0	1569677.0	0.607365	Y



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Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

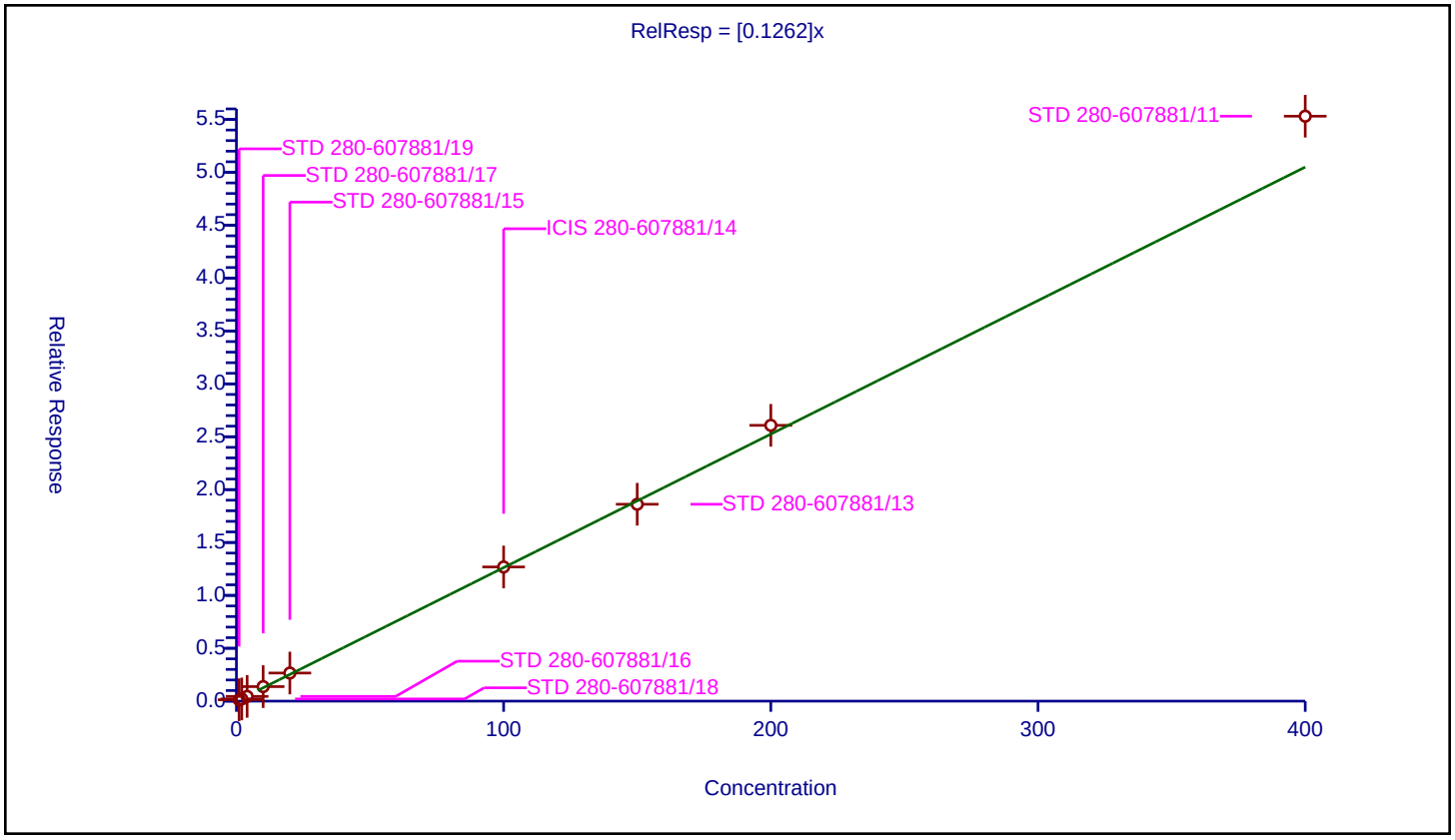
Curve Coefficients

Intercept:	0
Slope:	0.1262

Error Coefficients

Standard Error:	713000
Relative Standard Error:	9.1
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.0	0.130176	50.0	1347020.0	0.130176	Y
2	STD 280-607881/18	2.0	0.206663	50.0	1321475.0	0.103332	Y
3	STD 280-607881/16	4.0	0.450759	50.0	1358265.0	0.11269	Y
4	STD 280-607881/17	10.0	1.37442	50.0	1337910.0	0.137442	Y
5	STD 280-607881/15	20.0	2.658478	50.0	1371311.0	0.132924	Y
6	ICIS 280-607881/14	100.0	12.686201	50.0	1433467.0	0.126862	Y
7	STD 280-607881/13	150.0	18.617681	50.0	1474746.0	0.124118	Y
8	STD 280-607881/12	200.0	26.078962	50.0	1493380.0	0.130395	Y
9	STD 280-607881/11	400.0	55.310902	50.0	1569677.0	0.138277	Y



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Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

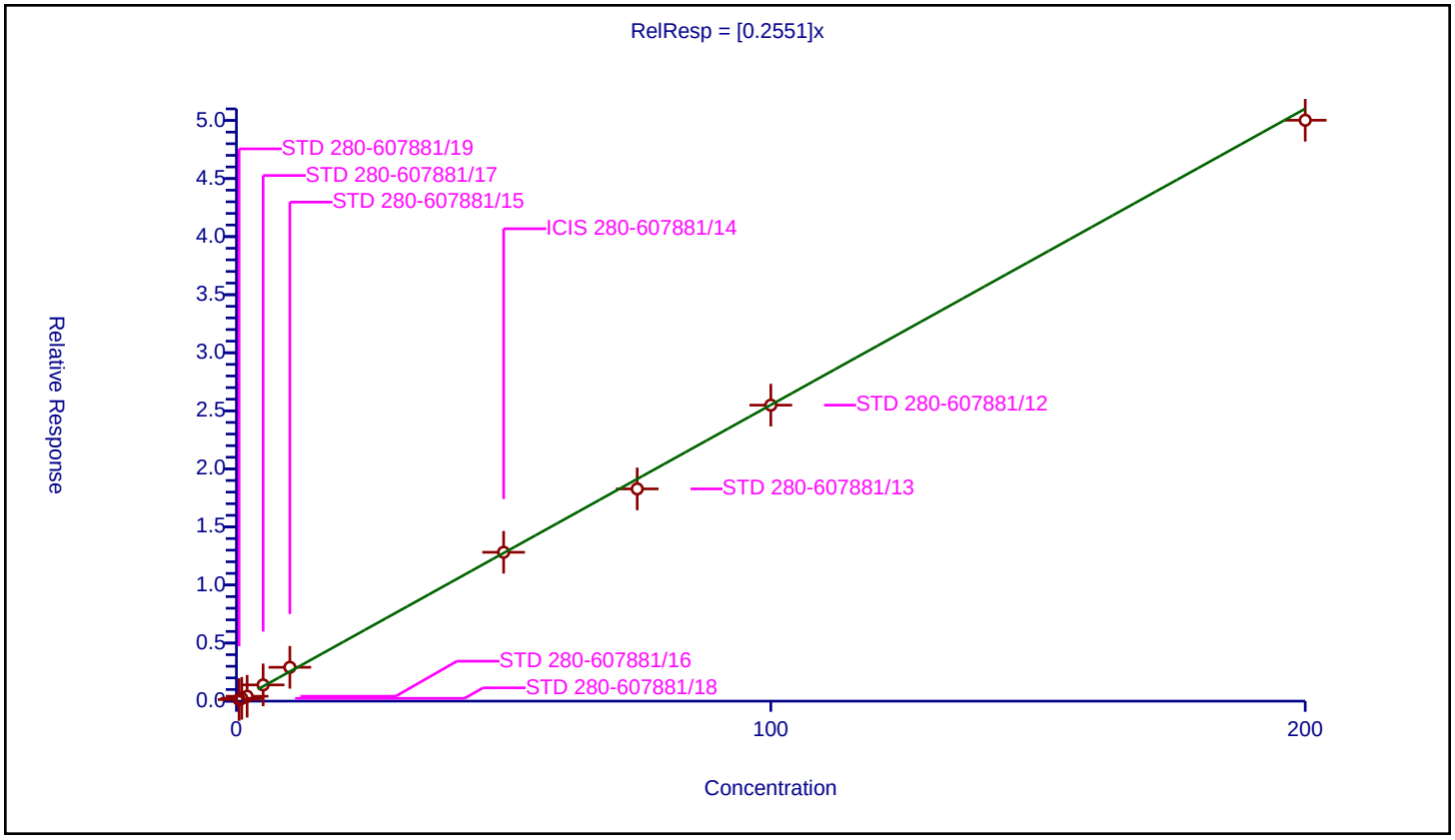
Curve Coefficients

Intercept:	0
Slope:	0.2551

Error Coefficients

Standard Error:	659000
Relative Standard Error:	9.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.133999	50.0	1347020.0	0.267999	Y
2	STD 280-607881/18	1.0	0.2417	50.0	1321475.0	0.2417	Y
3	STD 280-607881/16	2.0	0.420021	50.0	1358265.0	0.210011	Y
4	STD 280-607881/17	5.0	1.397553	50.0	1337910.0	0.279511	Y
5	STD 280-607881/15	10.0	2.913599	50.0	1371311.0	0.29136	Y
6	ICIS 280-607881/14	50.0	12.820595	50.0	1433467.0	0.256412	Y
7	STD 280-607881/13	75.0	18.276537	50.0	1474746.0	0.243687	Y
8	STD 280-607881/12	100.0	25.488757	50.0	1493380.0	0.254888	Y
9	STD 280-607881/11	200.0	50.023508	50.0	1569677.0	0.250118	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

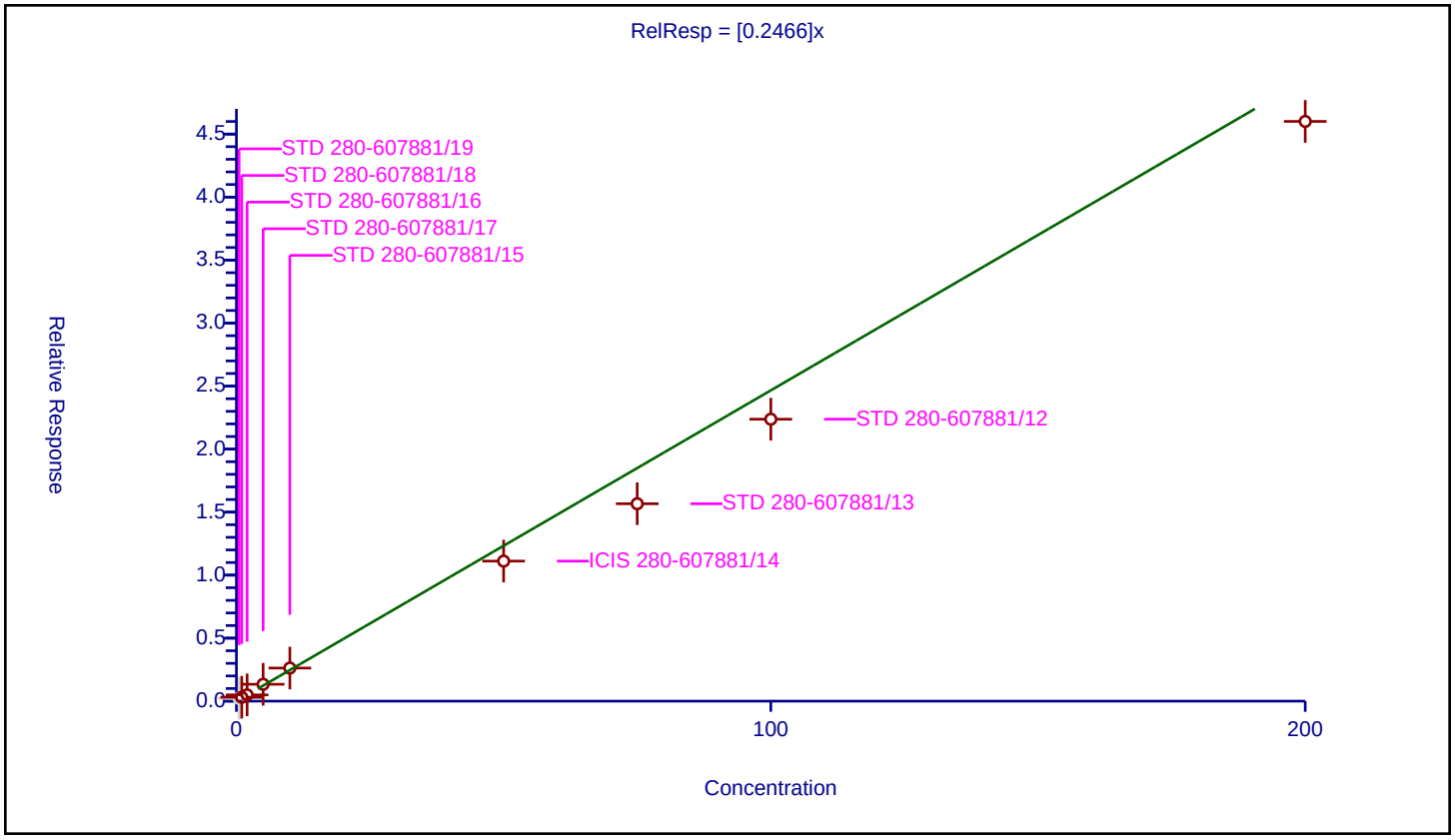
Curve Coefficients

Intercept:	0
Slope:	0.2466

Error Coefficients

Standard Error:	639000
Relative Standard Error:	13.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.224161	50.0	1347020.0	0.448323	N
2	STD 280-607881/18	1.0	0.309805	50.0	1321475.0	0.309805	Y
3	STD 280-607881/16	2.0	0.49589	50.0	1358265.0	0.247945	Y
4	STD 280-607881/17	5.0	1.338057	50.0	1337910.0	0.267611	Y
5	STD 280-607881/15	10.0	2.62672	50.0	1371311.0	0.262672	Y
6	ICIS 280-607881/14	50.0	11.11201	50.0	1433467.0	0.22224	Y
7	STD 280-607881/13	75.0	15.665782	50.0	1474746.0	0.208877	Y
8	STD 280-607881/12	100.0	22.374714	50.0	1493380.0	0.223747	Y
9	STD 280-607881/11	200.0	46.006185	50.0	1569677.0	0.230031	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

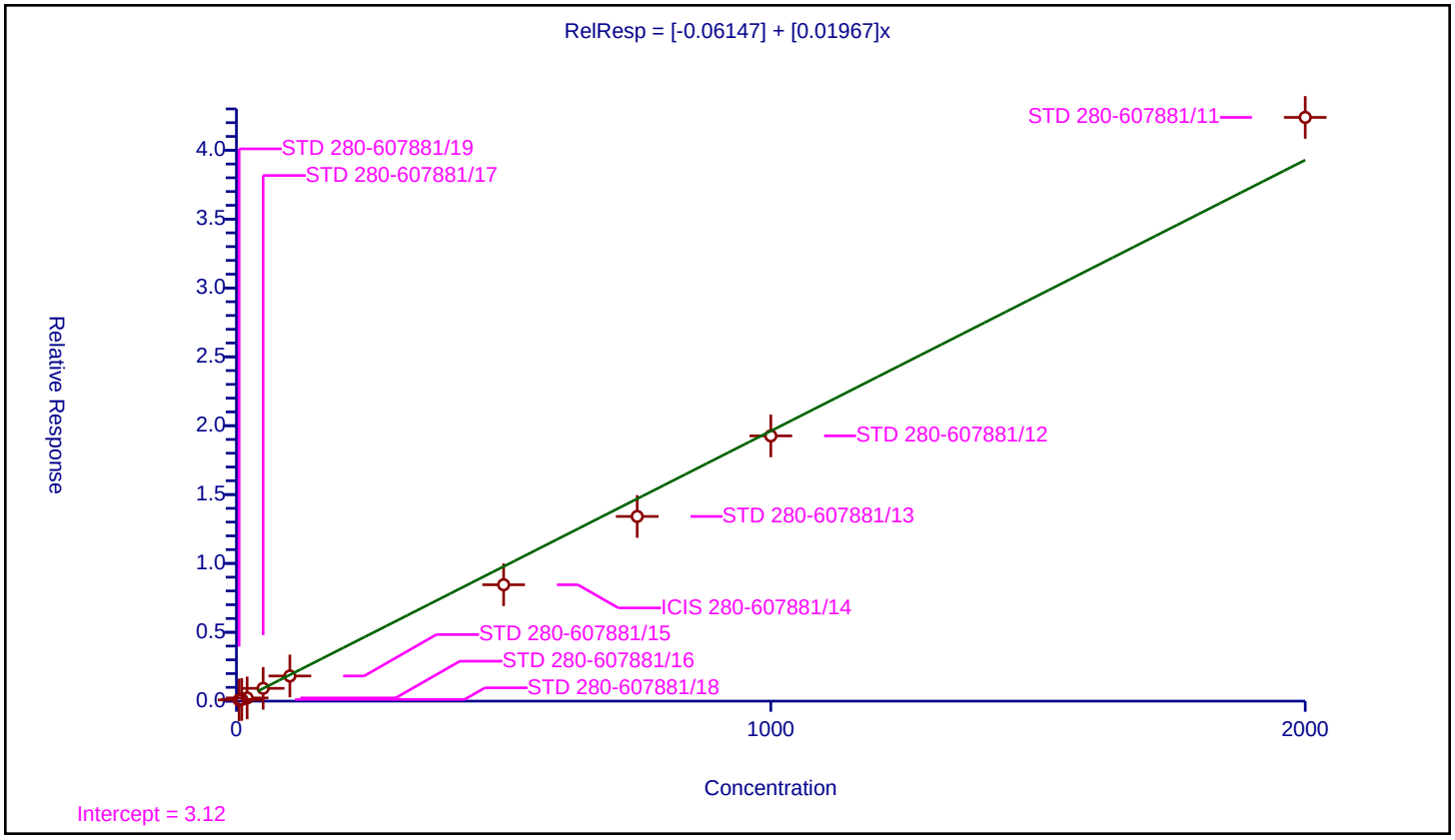
Curve Coefficients

Intercept:	-0.06147
Slope:	0.01967

Error Coefficients

Standard Error:	576000
Relative Standard Error:	22.4
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	5.0	0.086116	50.0	1347020.0	0.017223	Y
2	STD 280-607881/18	10.0	0.12452	50.0	1321475.0	0.012452	Y
3	STD 280-607881/16	20.0	0.232944	50.0	1358265.0	0.011647	Y
4	STD 280-607881/17	50.0	0.929696	50.0	1337910.0	0.018594	Y
5	STD 280-607881/15	100.0	1.826427	50.0	1371311.0	0.018264	Y
6	ICIS 280-607881/14	500.0	8.450421	50.0	1433467.0	0.016901	Y
7	STD 280-607881/13	750.0	13.409835	50.0	1474746.0	0.01788	Y
8	STD 280-607881/12	1000.0	19.258829	50.0	1493380.0	0.019259	Y
9	STD 280-607881/11	2000.0	42.382828	50.0	1569677.0	0.021191	Y



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Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

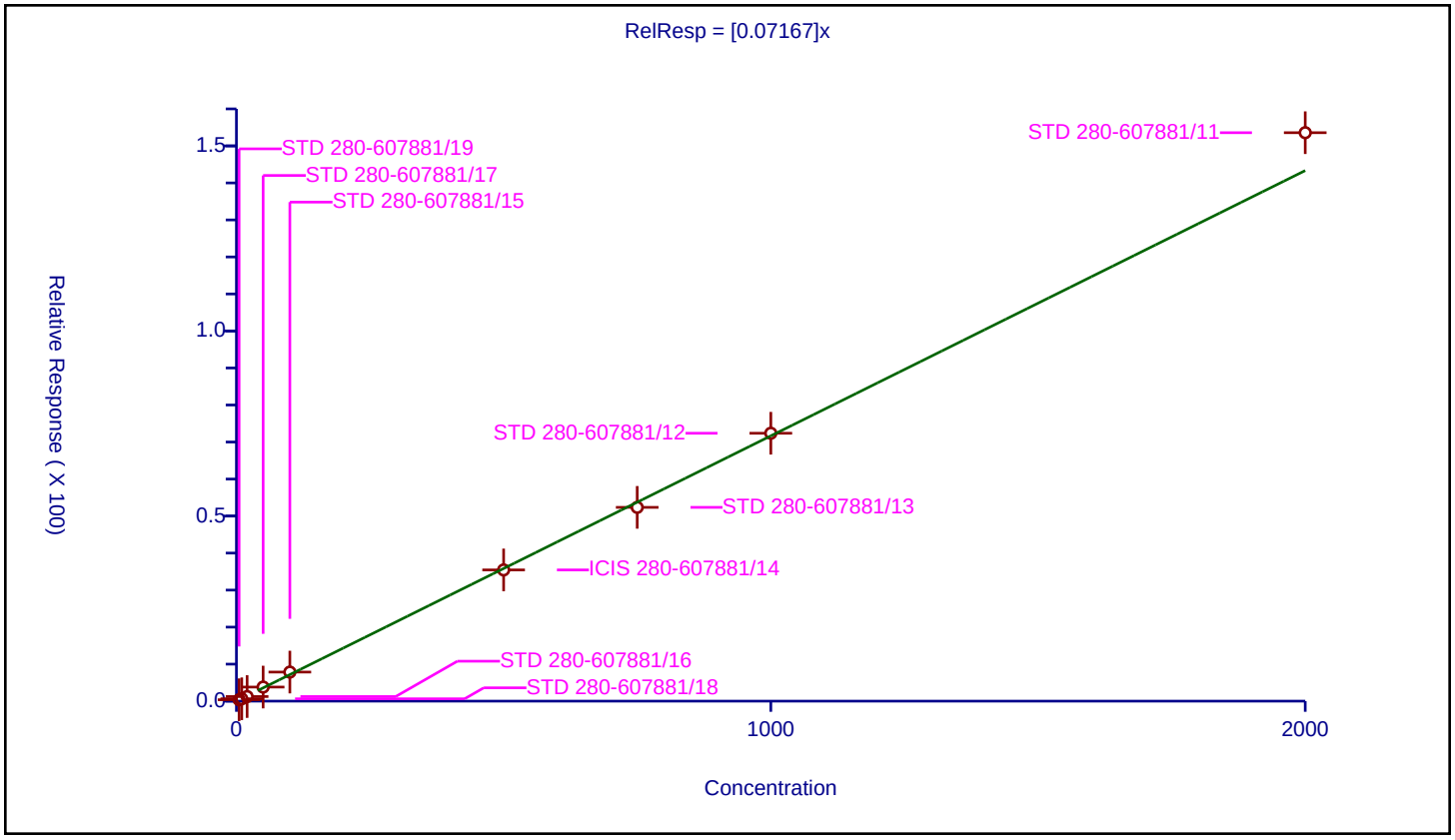
Curve Coefficients

Intercept:	0
Slope:	0.07167

Error Coefficients

Standard Error:	1980000
Relative Standard Error:	8.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	5.0	0.374345	50.0	1347020.0	0.074869	Y
2	STD 280-607881/18	10.0	0.636713	50.0	1321475.0	0.063671	Y
3	STD 280-607881/16	20.0	1.239559	50.0	1358265.0	0.061978	Y
4	STD 280-607881/17	50.0	3.805973	50.0	1337910.0	0.076119	Y
5	STD 280-607881/15	100.0	7.85172	50.0	1371311.0	0.078517	Y
6	ICIS 280-607881/14	500.0	35.444799	50.0	1433467.0	0.07089	Y
7	STD 280-607881/13	750.0	52.349625	50.0	1474746.0	0.069799	Y
8	STD 280-607881/12	1000.0	72.372203	50.0	1493380.0	0.072372	Y
9	STD 280-607881/11	2000.0	153.568537	50.0	1569677.0	0.076784	Y



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Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

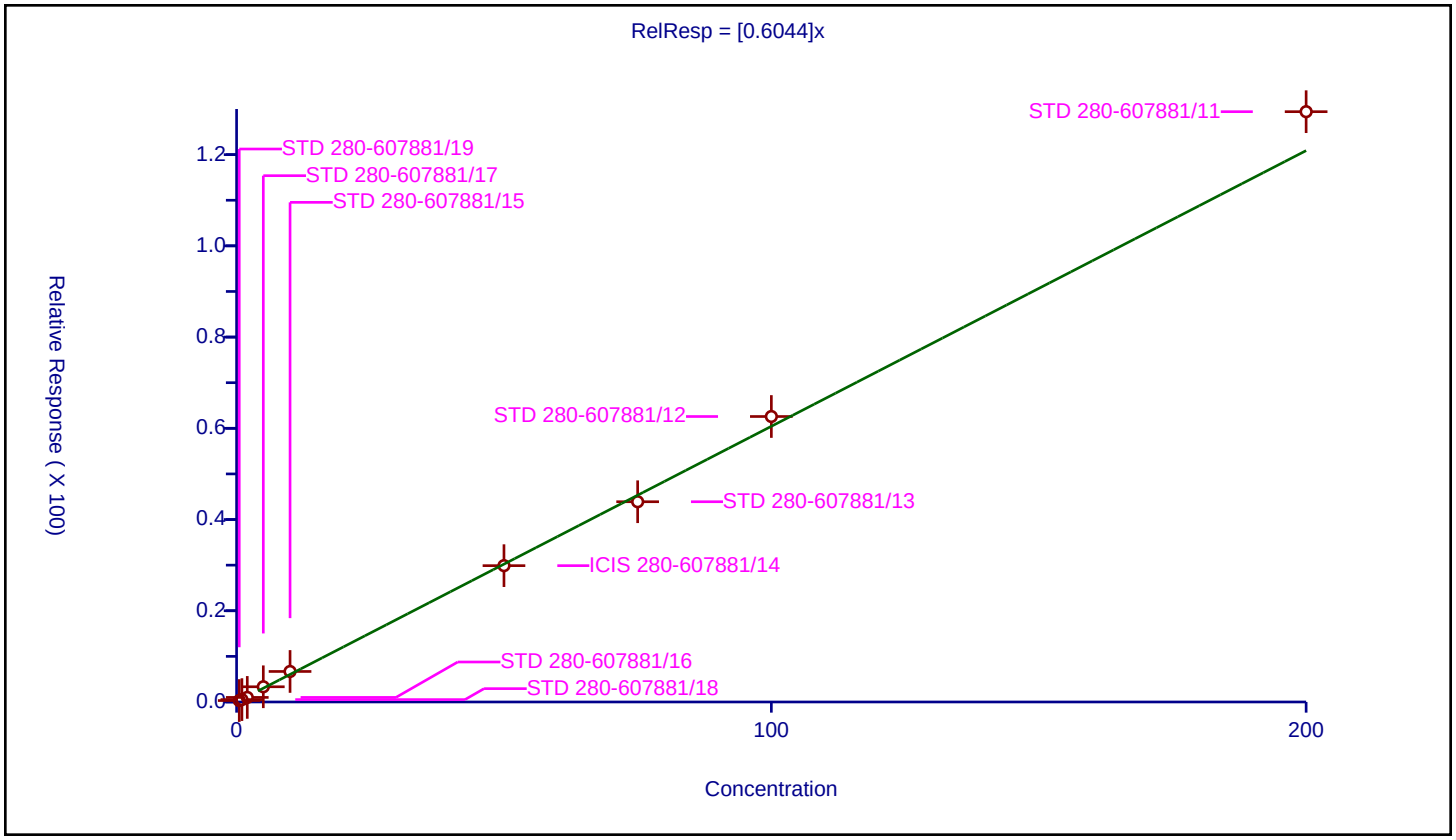
Curve Coefficients

Intercept:	0
Slope:	0.6044

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	9.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.310871	50.0	1347020.0	0.621743	Y
2	STD 280-607881/18	1.0	0.524603	50.0	1321475.0	0.524603	Y
3	STD 280-607881/16	2.0	1.001756	50.0	1358265.0	0.500878	Y
4	STD 280-607881/17	5.0	3.337332	50.0	1337910.0	0.667466	Y
5	STD 280-607881/15	10.0	6.688162	50.0	1371311.0	0.668816	Y
6	ICIS 280-607881/14	50.0	29.889596	50.0	1433467.0	0.597792	Y
7	STD 280-607881/13	75.0	43.903153	50.0	1474746.0	0.585375	Y
8	STD 280-607881/12	100.0	62.585578	50.0	1493380.0	0.625856	Y
9	STD 280-607881/11	200.0	129.417963	50.0	1569677.0	0.64709	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

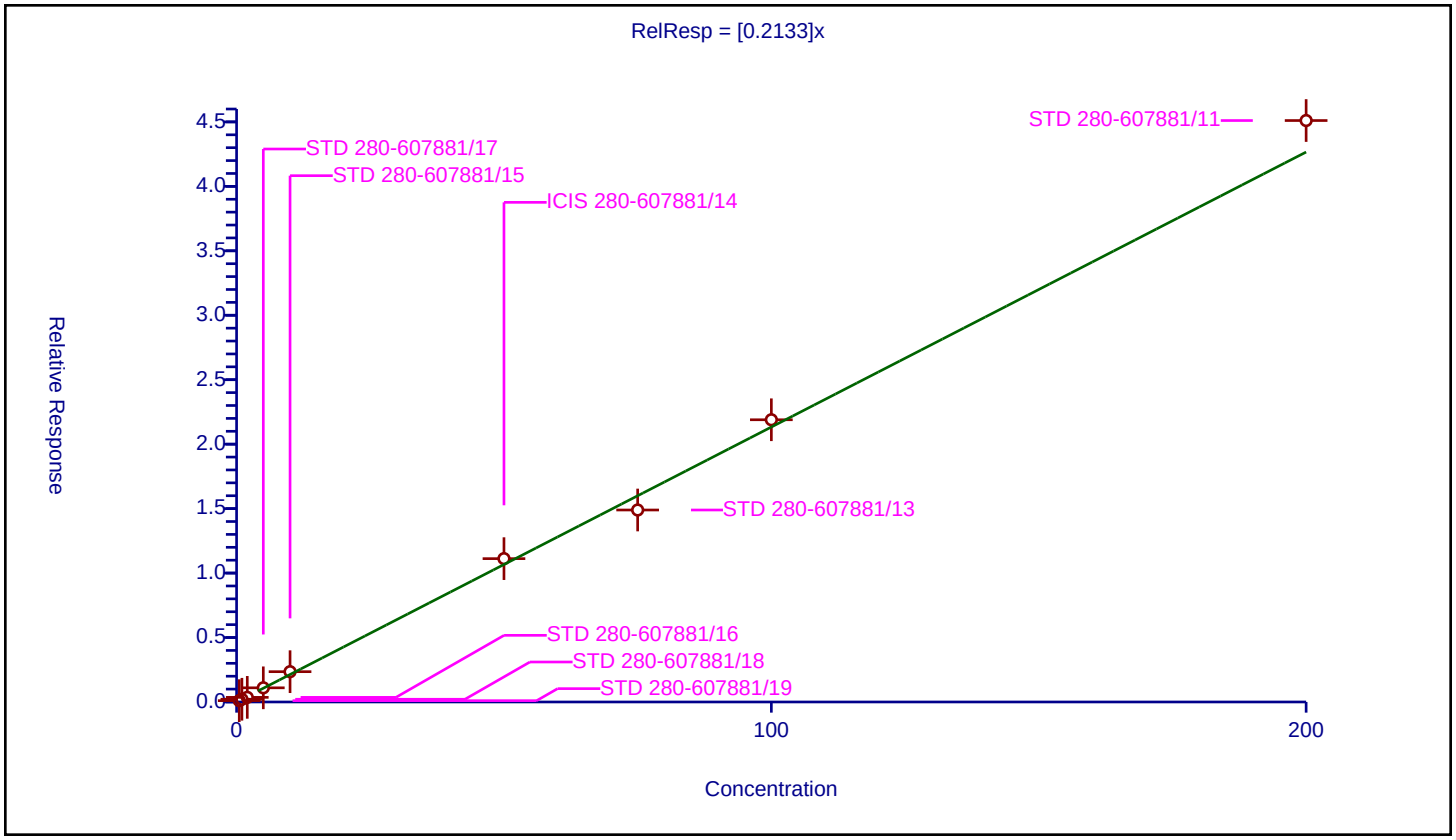
Curve Coefficients

Intercept:	0
Slope:	0.2133

Error Coefficients

Standard Error:	584000
Relative Standard Error:	7.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.103154	50.0	1347020.0	0.206307	Y
2	STD 280-607881/18	1.0	0.212944	50.0	1321475.0	0.212944	Y
3	STD 280-607881/16	2.0	0.359871	50.0	1358265.0	0.179935	Y
4	STD 280-607881/17	5.0	1.100336	50.0	1337910.0	0.220067	Y
5	STD 280-607881/15	10.0	2.350379	50.0	1371311.0	0.235038	Y
6	ICIS 280-607881/14	50.0	11.120137	50.0	1433467.0	0.222403	Y
7	STD 280-607881/13	75.0	14.893785	50.0	1474746.0	0.198584	Y
8	STD 280-607881/12	100.0	21.893724	50.0	1493380.0	0.218937	Y
9	STD 280-607881/11	200.0	45.106509	50.0	1569677.0	0.225533	Y



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Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

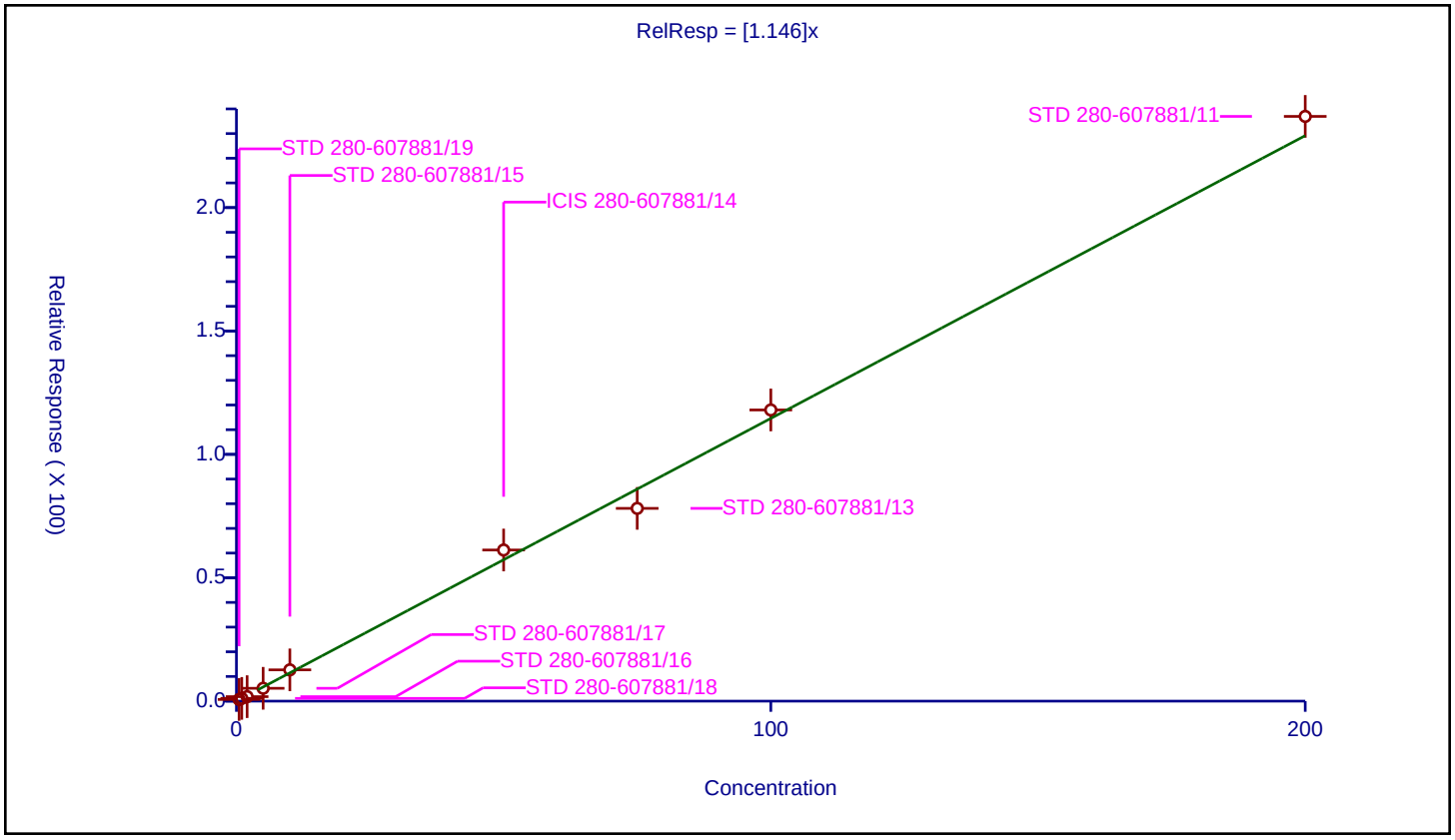
Curve Coefficients

Intercept:	0
Slope:	1.146

Error Coefficients

Standard Error:	714000
Relative Standard Error:	11.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.670287	50.0	310688.0	1.340573	Y
2	STD 280-607881/18	1.0	1.121305	50.0	303218.0	1.121305	Y
3	STD 280-607881/16	2.0	1.821898	50.0	311900.0	0.910949	Y
4	STD 280-607881/17	5.0	5.205967	50.0	312939.0	1.041193	Y
5	STD 280-607881/15	10.0	12.671857	50.0	319160.0	1.267186	Y
6	ICIS 280-607881/14	50.0	61.248902	50.0	327912.0	1.224978	Y
7	STD 280-607881/13	75.0	78.114813	50.0	345430.0	1.041531	Y
8	STD 280-607881/12	100.0	117.992978	50.0	350056.0	1.17993	Y
9	STD 280-607881/11	200.0	236.957905	50.0	361445.0	1.18479	Y



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Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

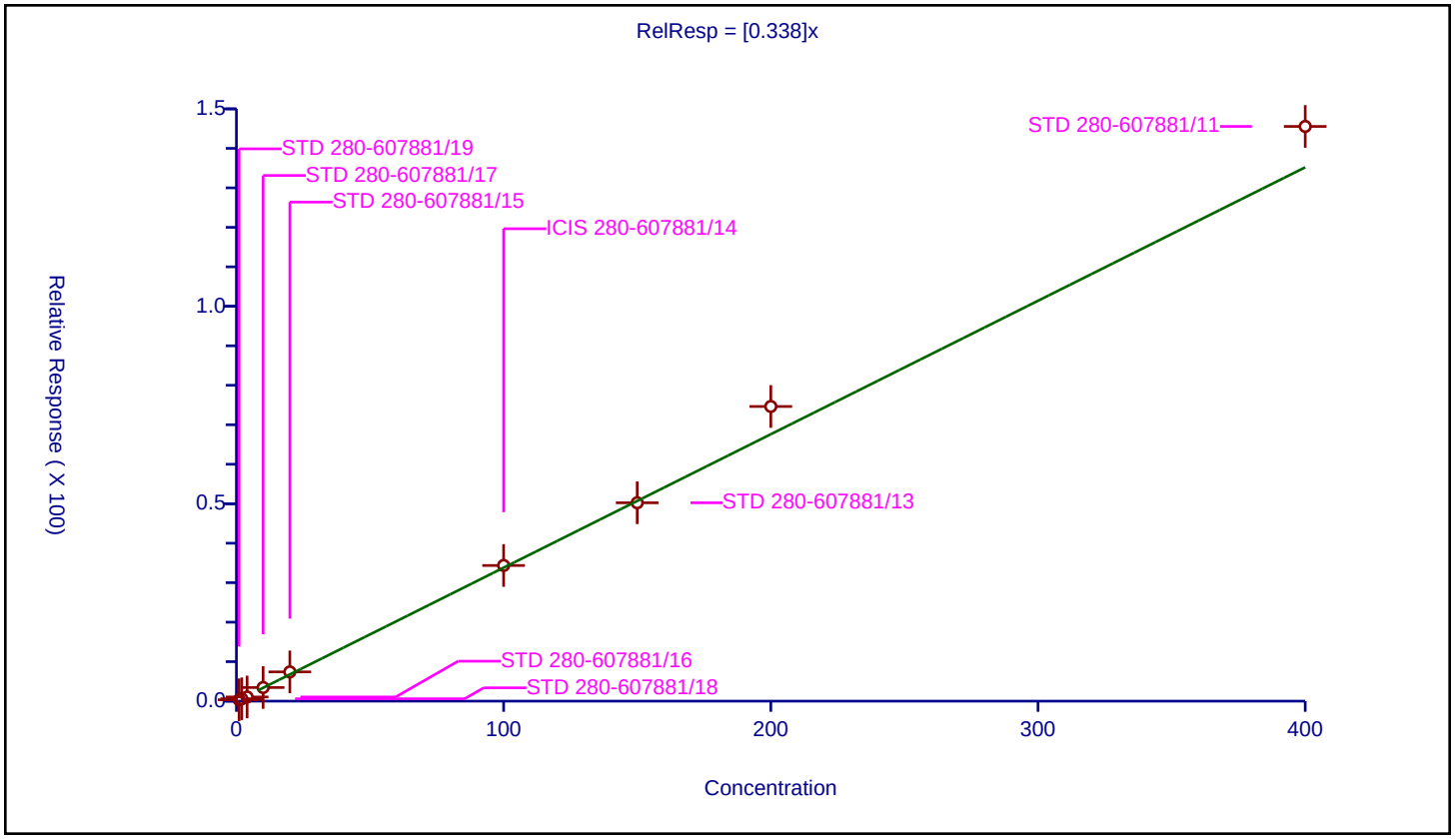
Curve Coefficients

Intercept:	0
Slope:	0.338

Error Coefficients

Standard Error:	1910000
Relative Standard Error:	10.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.0	0.345652	50.0	1347020.0	0.345652	Y
2	STD 280-607881/18	2.0	0.601373	50.0	1321475.0	0.300687	Y
3	STD 280-607881/16	4.0	1.058078	50.0	1358265.0	0.264519	Y
4	STD 280-607881/17	10.0	3.449597	50.0	1337910.0	0.34496	Y
5	STD 280-607881/15	20.0	7.413052	50.0	1371311.0	0.370653	Y
6	ICIS 280-607881/14	100.0	34.358796	50.0	1433467.0	0.343588	Y
7	STD 280-607881/13	150.0	50.235295	50.0	1474746.0	0.334902	Y
8	STD 280-607881/12	200.0	74.629632	50.0	1493380.0	0.373148	Y
9	STD 280-607881/11	400.0	145.553958	50.0	1569677.0	0.363885	Y



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Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

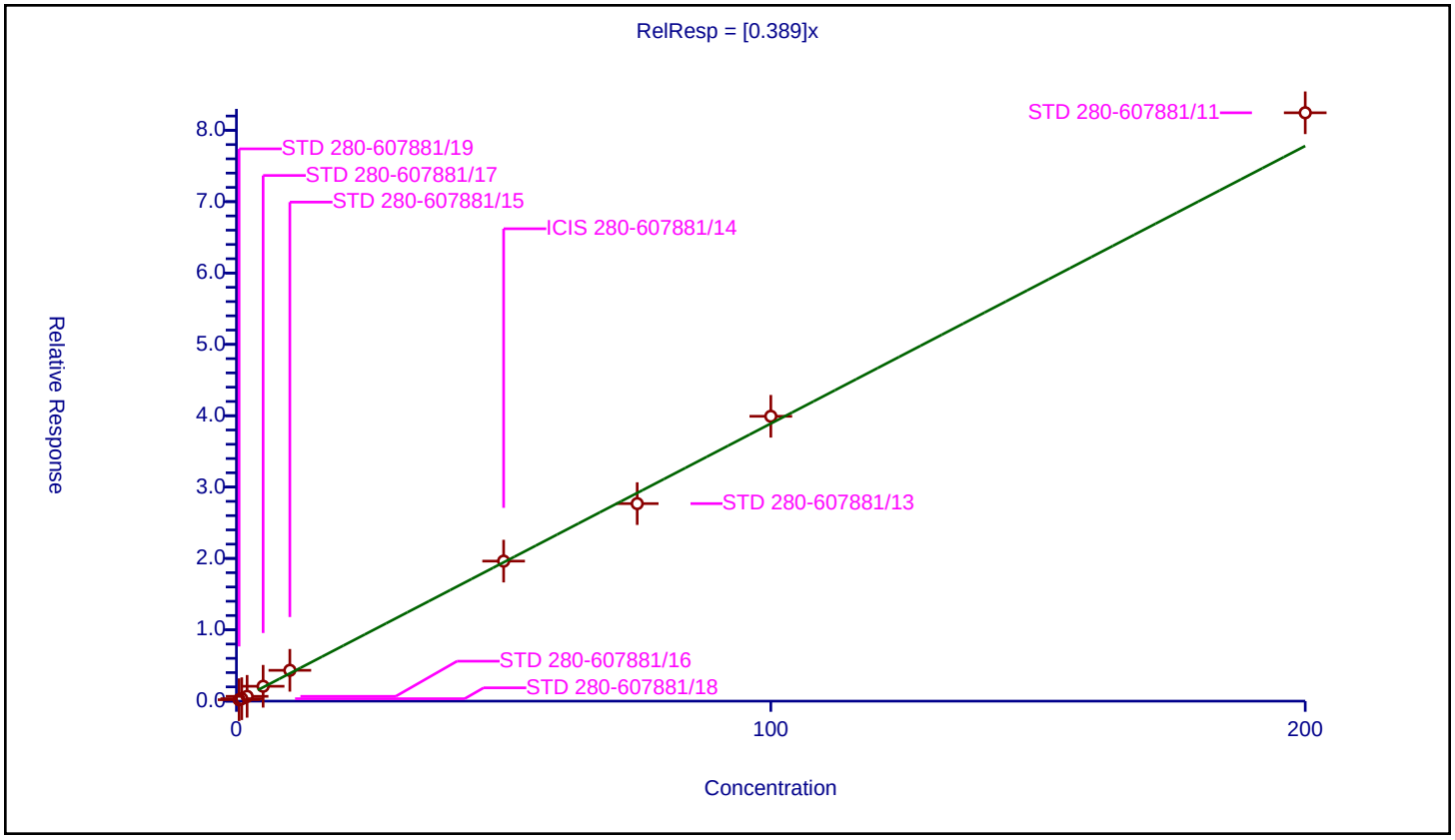
Curve Coefficients

Intercept:	0
Slope:	0.389

Error Coefficients

Standard Error:	1070000
Relative Standard Error:	8.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.199997	50.0	1347020.0	0.399994	Y
2	STD 280-607881/18	1.0	0.342231	50.0	1321475.0	0.342231	Y
3	STD 280-607881/16	2.0	0.674279	50.0	1358265.0	0.33714	Y
4	STD 280-607881/17	5.0	2.083399	50.0	1337910.0	0.41668	Y
5	STD 280-607881/15	10.0	4.320063	50.0	1371311.0	0.432006	Y
6	ICIS 280-607881/14	50.0	19.625286	50.0	1433467.0	0.392506	Y
7	STD 280-607881/13	75.0	27.682428	50.0	1474746.0	0.369099	Y
8	STD 280-607881/12	100.0	39.920717	50.0	1493380.0	0.399207	Y
9	STD 280-607881/11	200.0	82.456709	50.0	1569677.0	0.412284	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

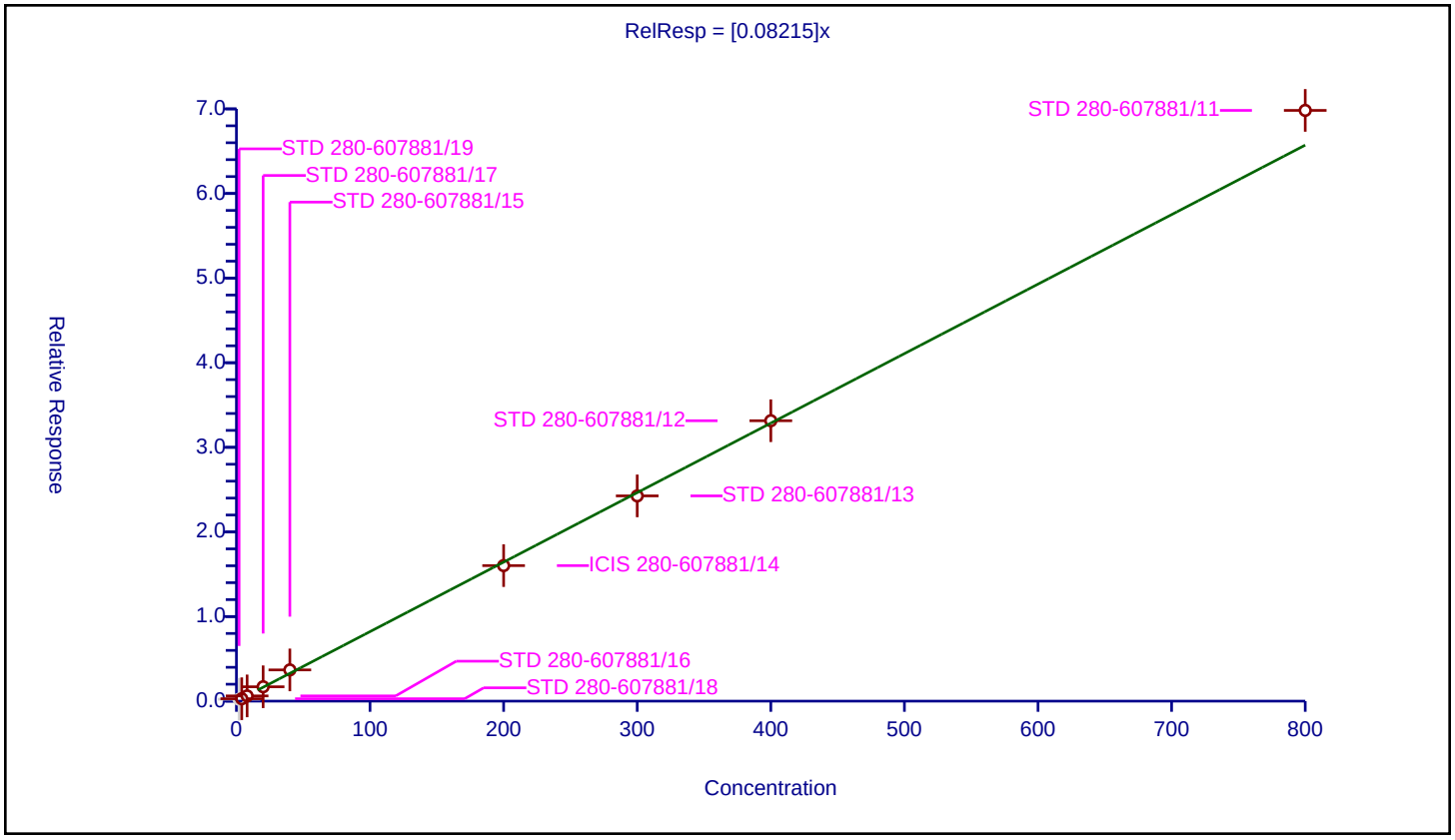
Curve Coefficients

Intercept:	0
Slope:	0.08215

Error Coefficients

Standard Error:	965000
Relative Standard Error:	7.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.228542	50.0	1347020.0	0.114271	N
2	STD 280-607881/18	4.0	0.285741	50.0	1321475.0	0.071435	Y
3	STD 280-607881/16	8.0	0.619798	50.0	1358265.0	0.077475	Y
4	STD 280-607881/17	20.0	1.697835	50.0	1337910.0	0.084892	Y
5	STD 280-607881/15	40.0	3.69165	50.0	1371311.0	0.092291	Y
6	ICIS 280-607881/14	200.0	16.01882	50.0	1433467.0	0.080094	Y
7	STD 280-607881/13	300.0	24.258279	50.0	1474746.0	0.080861	Y
8	STD 280-607881/12	400.0	33.144377	50.0	1493380.0	0.082861	Y
9	STD 280-607881/11	800.0	69.821307	50.0	1569677.0	0.087277	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

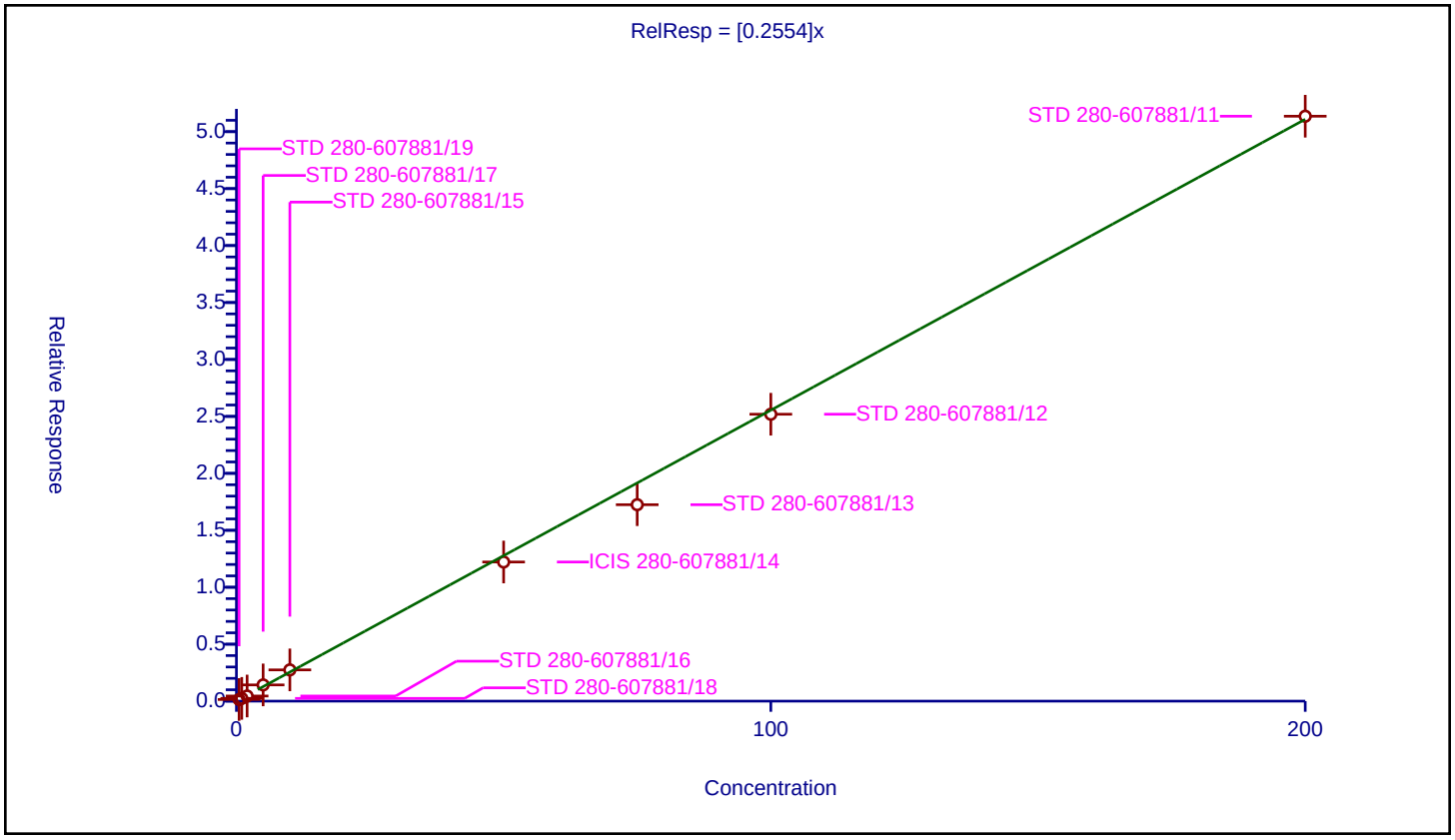
Curve Coefficients

Intercept:	0
Slope:	0.2554

Error Coefficients

Standard Error:	667000
Relative Standard Error:	8.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.143873	50.0	1347020.0	0.287746	Y
2	STD 280-607881/18	1.0	0.243137	50.0	1321475.0	0.243137	Y
3	STD 280-607881/16	2.0	0.451053	50.0	1358265.0	0.225527	Y
4	STD 280-607881/17	5.0	1.426329	50.0	1337910.0	0.285266	Y
5	STD 280-607881/15	10.0	2.743214	50.0	1371311.0	0.274321	Y
6	ICIS 280-607881/14	50.0	12.217093	50.0	1433467.0	0.244342	Y
7	STD 280-607881/13	75.0	17.246597	50.0	1474746.0	0.229955	Y
8	STD 280-607881/12	100.0	25.192148	50.0	1493380.0	0.251921	Y
9	STD 280-607881/11	200.0	51.356808	50.0	1569677.0	0.256784	Y



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Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

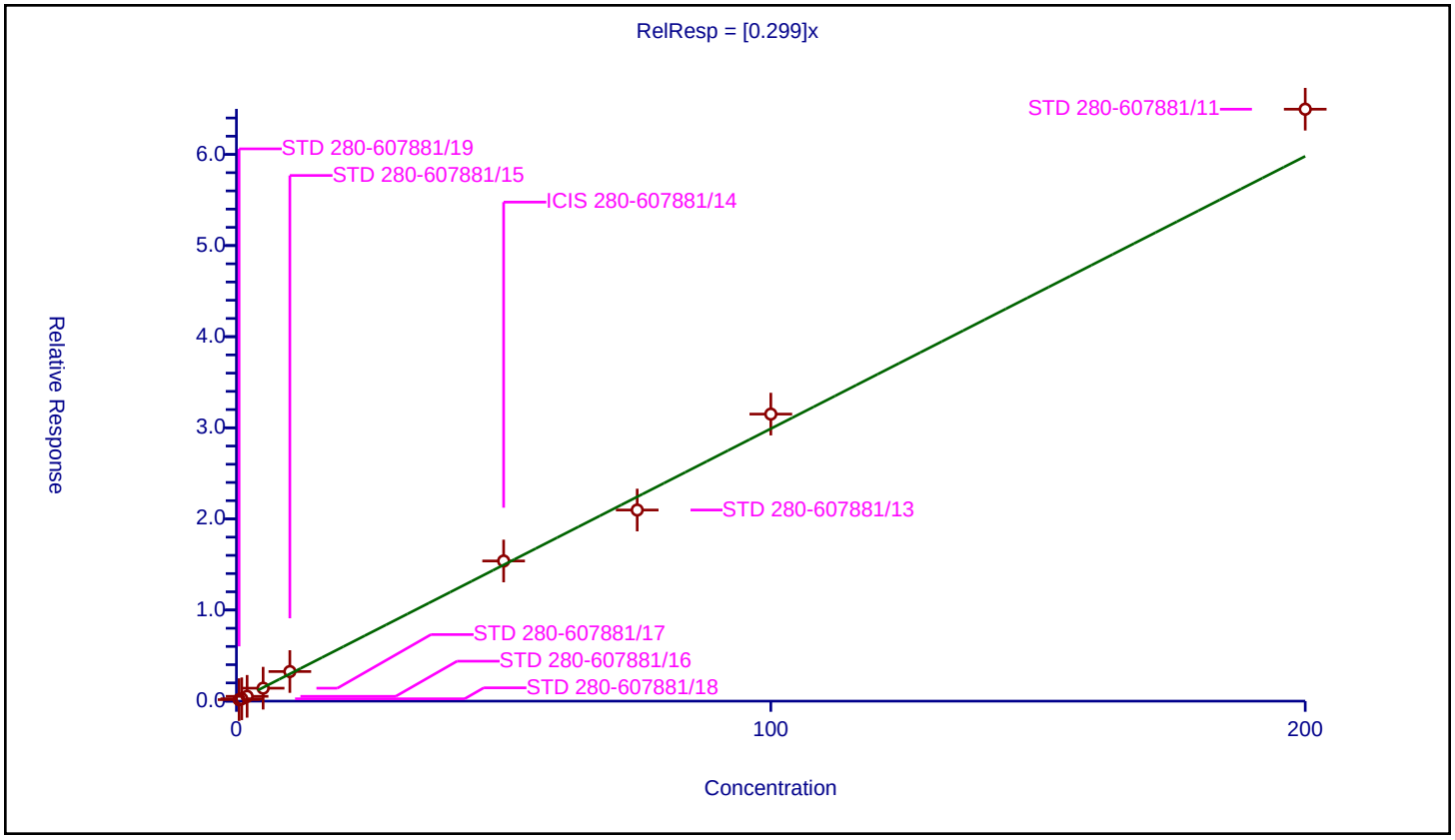
Curve Coefficients

Intercept:	0
Slope:	0.299

Error Coefficients

Standard Error:	839000
Relative Standard Error:	9.2
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.165254	50.0	1347020.0	0.330507	Y
2	STD 280-607881/18	1.0	0.259785	50.0	1321475.0	0.259785	Y
3	STD 280-607881/16	2.0	0.528468	50.0	1358265.0	0.264234	Y
4	STD 280-607881/17	5.0	1.422517	50.0	1337910.0	0.284503	Y
5	STD 280-607881/15	10.0	3.249226	50.0	1371311.0	0.324923	Y
6	ICIS 280-607881/14	50.0	15.383961	50.0	1433467.0	0.307679	Y
7	STD 280-607881/13	75.0	20.975137	50.0	1474746.0	0.279668	Y
8	STD 280-607881/12	100.0	31.503	50.0	1493380.0	0.31503	Y
9	STD 280-607881/11	200.0	64.965053	50.0	1569677.0	0.324825	Y



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Calibration / sec-Butyl Alcohol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

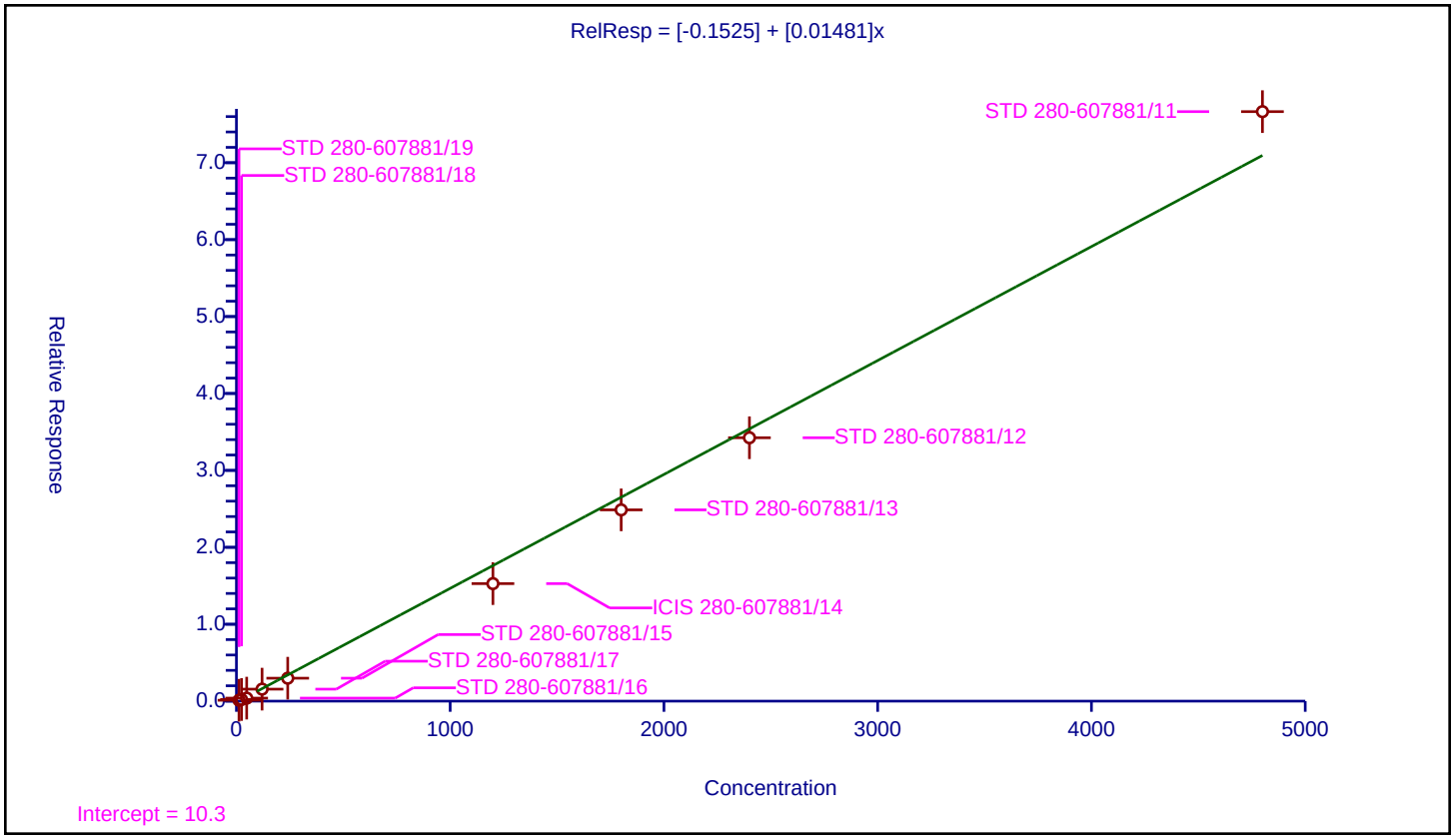
Curve Coefficients

Intercept:	-0.1525
Slope:	0.01481

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	22.7
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	12.0	0.11596	50.0	1347020.0	0.009663	Y
2	STD 280-607881/18	24.0	0.211657	50.0	1321475.0	0.008819	Y
3	STD 280-607881/16	48.0	0.392486	50.0	1358265.0	0.008177	Y
4	STD 280-607881/17	120.0	1.558887	50.0	1337910.0	0.012991	Y
5	STD 280-607881/15	240.0	2.984844	50.0	1371311.0	0.012437	Y
6	ICIS 280-607881/14	1200.0	15.278831	50.0	1433467.0	0.012732	Y
7	STD 280-607881/13	1800.0	24.866621	50.0	1474746.0	0.013815	Y
8	STD 280-607881/12	2400.0	34.244231	50.0	1493380.0	0.014268	Y
9	STD 280-607881/11	4800.0	76.643157	50.0	1569677.0	0.015967	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

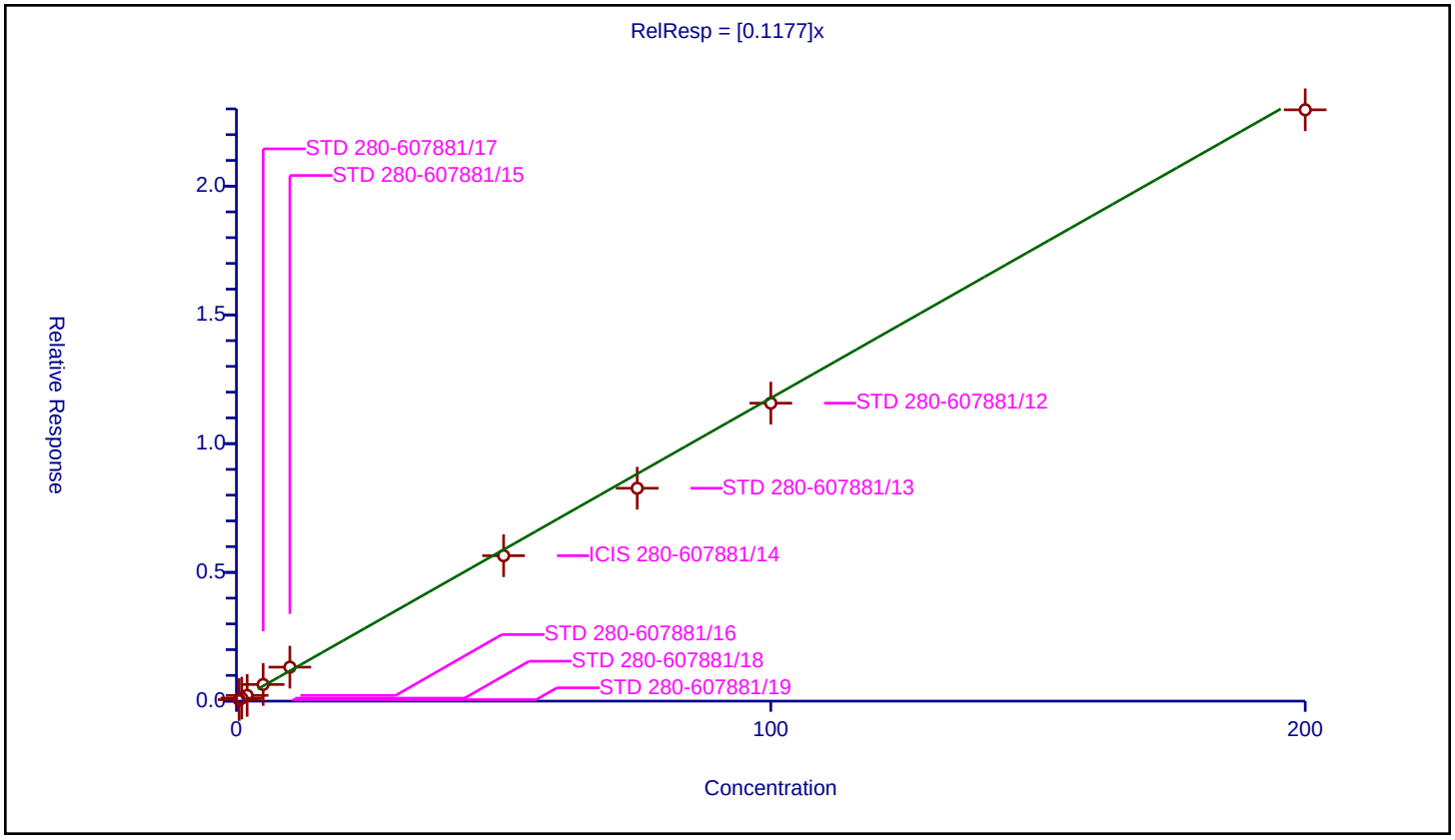
Curve Coefficients

Intercept:	0
Slope:	0.1177

Error Coefficients

Standard Error:	301000
Relative Standard Error:	6.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.058203	50.0	1347020.0	0.116405	Y
2	STD 280-607881/18	1.0	0.116385	50.0	1321475.0	0.116385	Y
3	STD 280-607881/16	2.0	0.222711	50.0	1358265.0	0.111355	Y
4	STD 280-607881/17	5.0	0.646493	50.0	1337910.0	0.129299	Y
5	STD 280-607881/15	10.0	1.320233	50.0	1371311.0	0.132023	Y
6	ICIS 280-607881/14	50.0	5.648369	50.0	1433467.0	0.112967	Y
7	STD 280-607881/13	75.0	8.267559	50.0	1474746.0	0.110234	Y
8	STD 280-607881/12	100.0	11.572239	50.0	1493380.0	0.115722	Y
9	STD 280-607881/11	200.0	22.965202	50.0	1569677.0	0.114826	Y



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Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

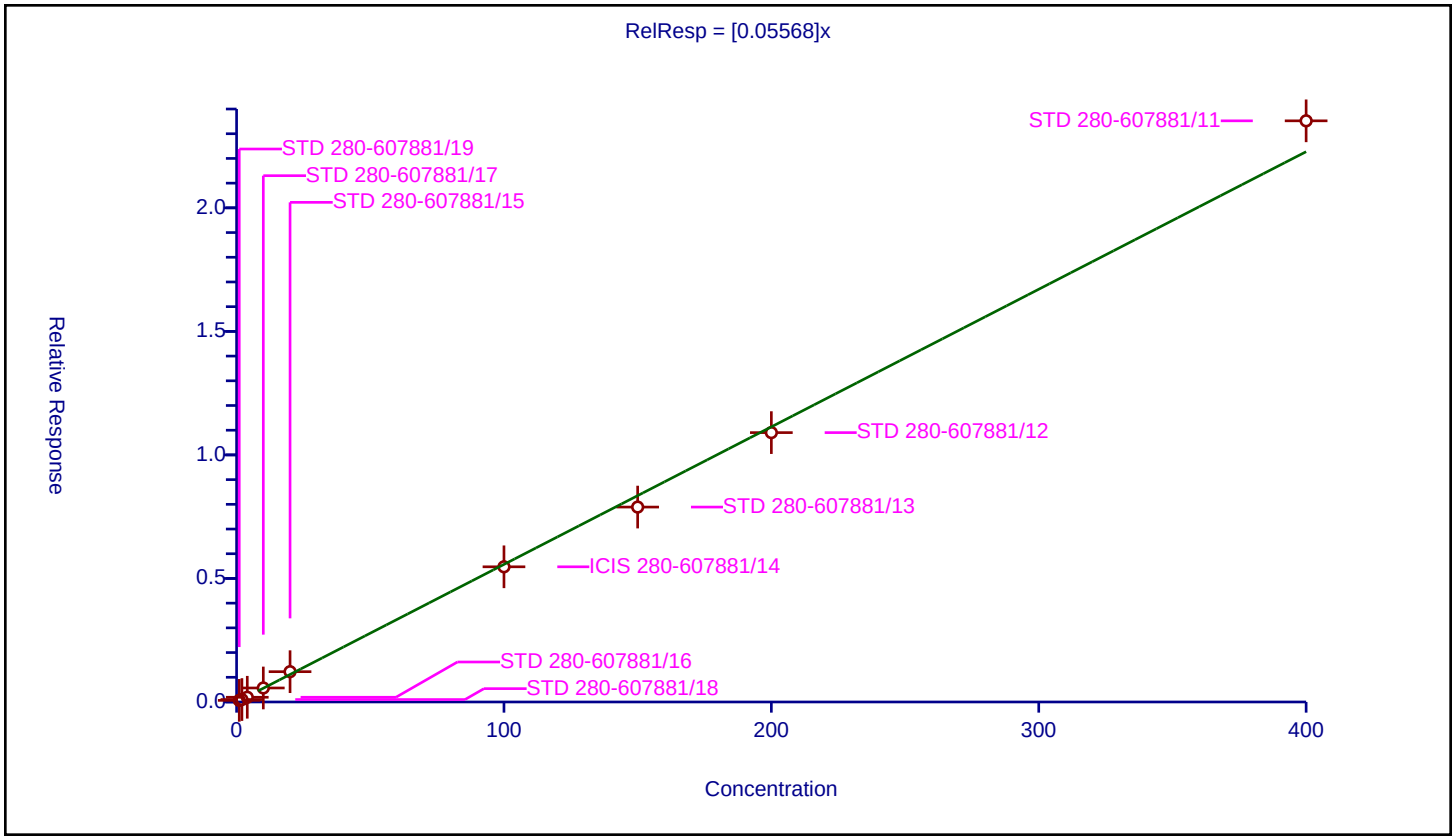
Curve Coefficients

Intercept:	0
Slope:	0.05568

Error Coefficients

Standard Error:	302000
Relative Standard Error:	9.7
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.0	0.064884	50.0	1347020.0	0.064884	Y
2	STD 280-607881/18	2.0	0.099207	50.0	1321475.0	0.049604	Y
3	STD 280-607881/16	4.0	0.192046	50.0	1358265.0	0.048012	Y
4	STD 280-607881/17	10.0	0.567004	50.0	1337910.0	0.0567	Y
5	STD 280-607881/15	20.0	1.226199	50.0	1371311.0	0.06131	Y
6	ICIS 280-607881/14	100.0	5.47142	50.0	1433467.0	0.054714	Y
7	STD 280-607881/13	150.0	7.889087	50.0	1474746.0	0.052594	Y
8	STD 280-607881/12	200.0	10.902148	50.0	1493380.0	0.054511	Y
9	STD 280-607881/11	400.0	23.521368	50.0	1569677.0	0.058803	Y



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Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

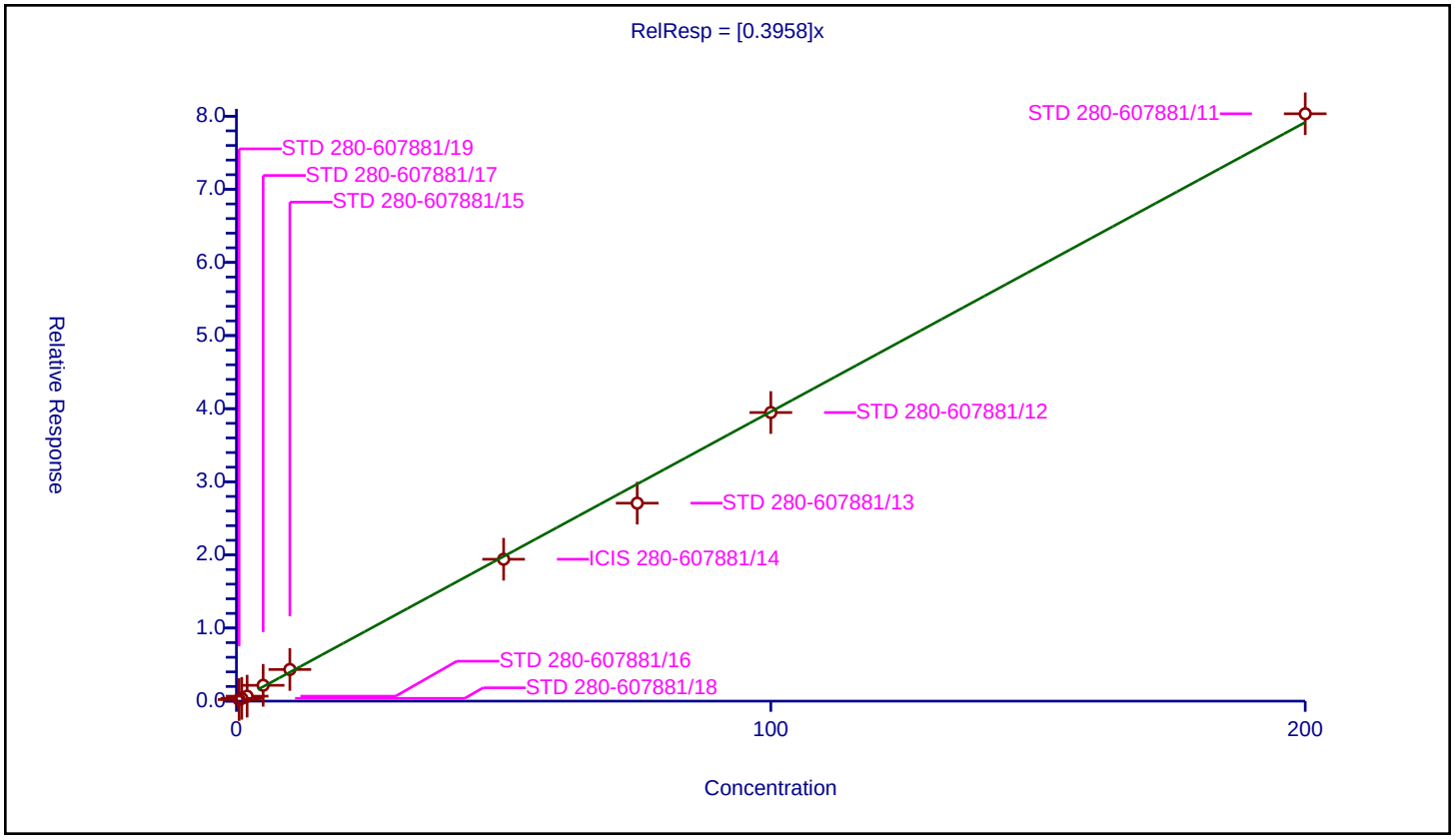
Curve Coefficients

Intercept:	0
Slope:	0.3958

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	8.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.214436	50.0	1347020.0	0.428873	Y
2	STD 280-607881/18	1.0	0.382338	50.0	1321475.0	0.382338	Y
3	STD 280-607881/16	2.0	0.678918	50.0	1358265.0	0.339459	Y
4	STD 280-607881/17	5.0	2.165841	50.0	1337910.0	0.433168	Y
5	STD 280-607881/15	10.0	4.330528	50.0	1371311.0	0.433053	Y
6	ICIS 280-607881/14	50.0	19.405086	50.0	1433467.0	0.388102	Y
7	STD 280-607881/13	75.0	27.078154	50.0	1474746.0	0.361042	Y
8	STD 280-607881/12	100.0	39.473141	50.0	1493380.0	0.394731	Y
9	STD 280-607881/11	200.0	80.331813	50.0	1569677.0	0.401659	Y



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Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

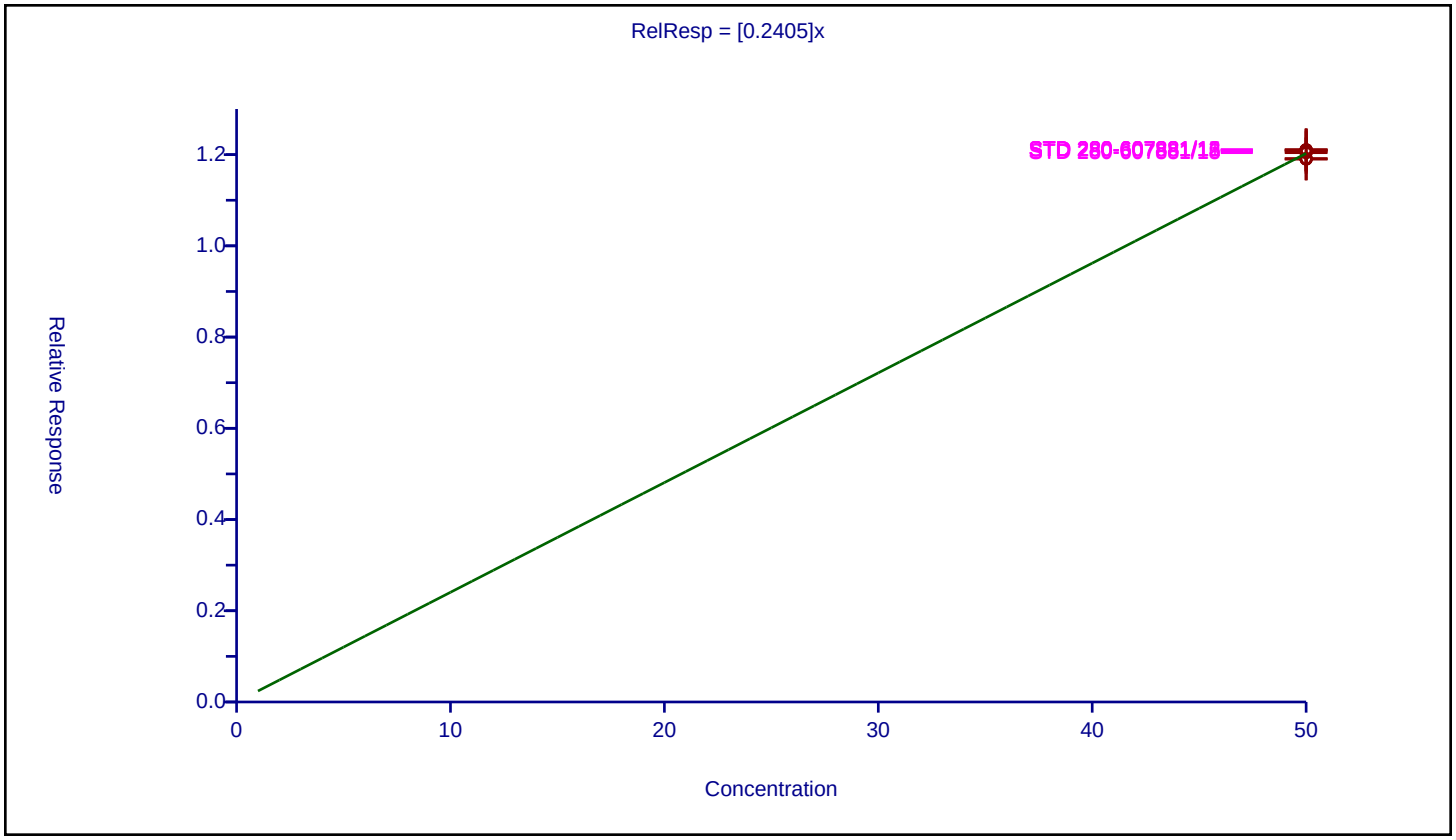
Curve Coefficients

Intercept:	0
Slope:	0.2405

Error Coefficients

Standard Error:	361000
Relative Standard Error:	0.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	12.098285	50.0	1569677.0	0.241966	Y
2	STD 280-607881/12	50.0	12.097423	50.0	1493380.0	0.241948	Y
3	STD 280-607881/13	50.0	12.104932	50.0	1474746.0	0.242099	Y
4	ICIS 280-607881/14	50.0	11.905053	50.0	1433467.0	0.238101	Y
5	STD 280-607881/15	50.0	12.104621	50.0	1371311.0	0.242092	Y
6	STD 280-607881/16	50.0	12.060386	50.0	1358265.0	0.241208	Y
7	STD 280-607881/17	50.0	11.906444	50.0	1337910.0	0.238129	Y
8	STD 280-607881/18	50.0	12.042263	50.0	1321475.0	0.240845	Y
9	STD 280-607881/19	50.0	11.909474	50.0	1347020.0	0.238189	Y



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Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

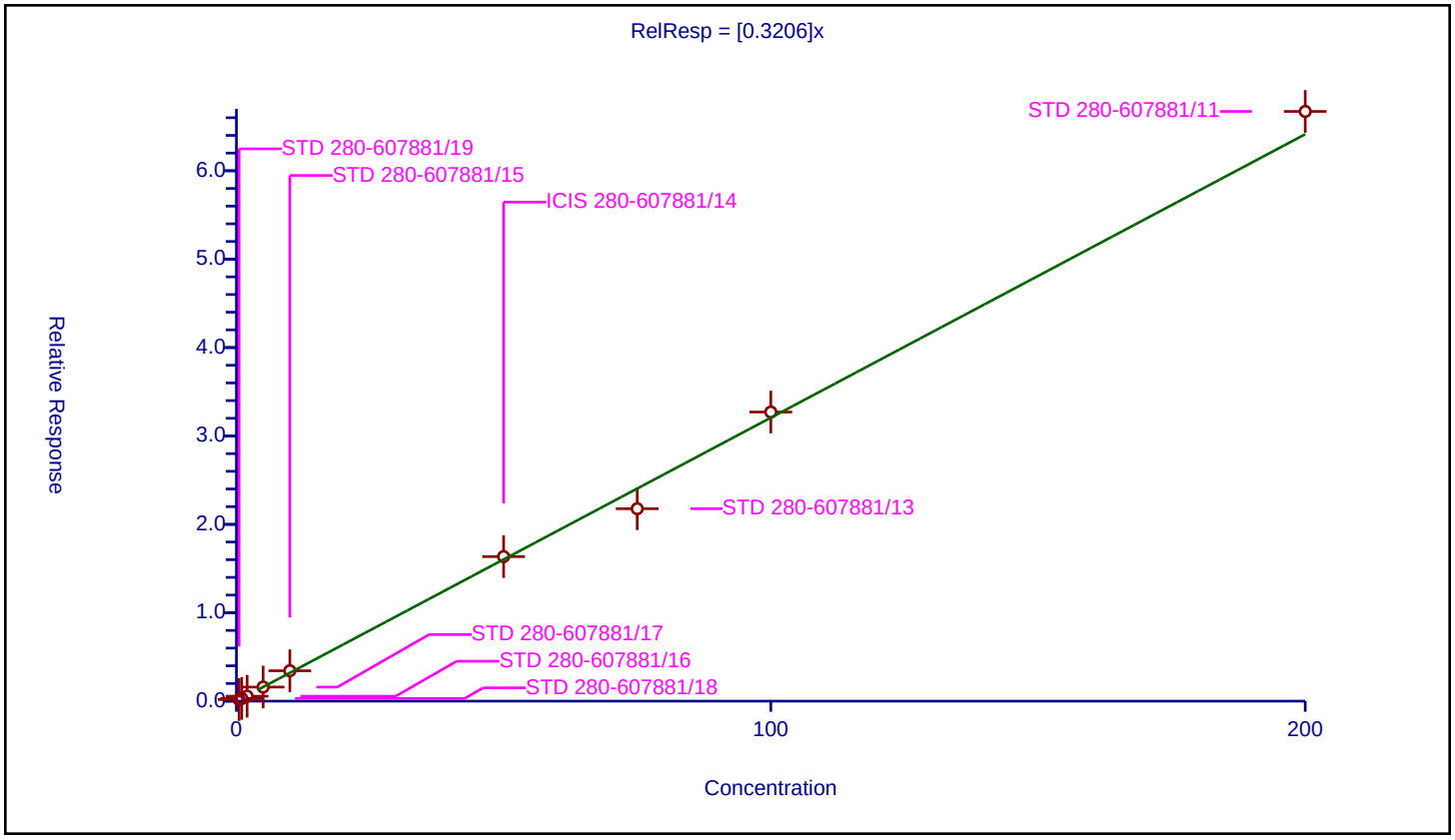
Curve Coefficients

Intercept:	0
Slope:	0.3206

Error Coefficients

Standard Error:	865000
Relative Standard Error:	7.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.179656	50.0	1347020.0	0.359312	Y
2	STD 280-607881/18	1.0	0.306968	50.0	1321475.0	0.306968	Y
3	STD 280-607881/16	2.0	0.559353	50.0	1358265.0	0.279677	Y
4	STD 280-607881/17	5.0	1.591325	50.0	1337910.0	0.318265	Y
5	STD 280-607881/15	10.0	3.437441	50.0	1371311.0	0.343744	Y
6	ICIS 280-607881/14	50.0	16.349487	50.0	1433467.0	0.32699	Y
7	STD 280-607881/13	75.0	21.768867	50.0	1474746.0	0.290252	Y
8	STD 280-607881/12	100.0	32.705574	50.0	1493380.0	0.327056	Y
9	STD 280-607881/11	200.0	66.711113	50.0	1569677.0	0.333556	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

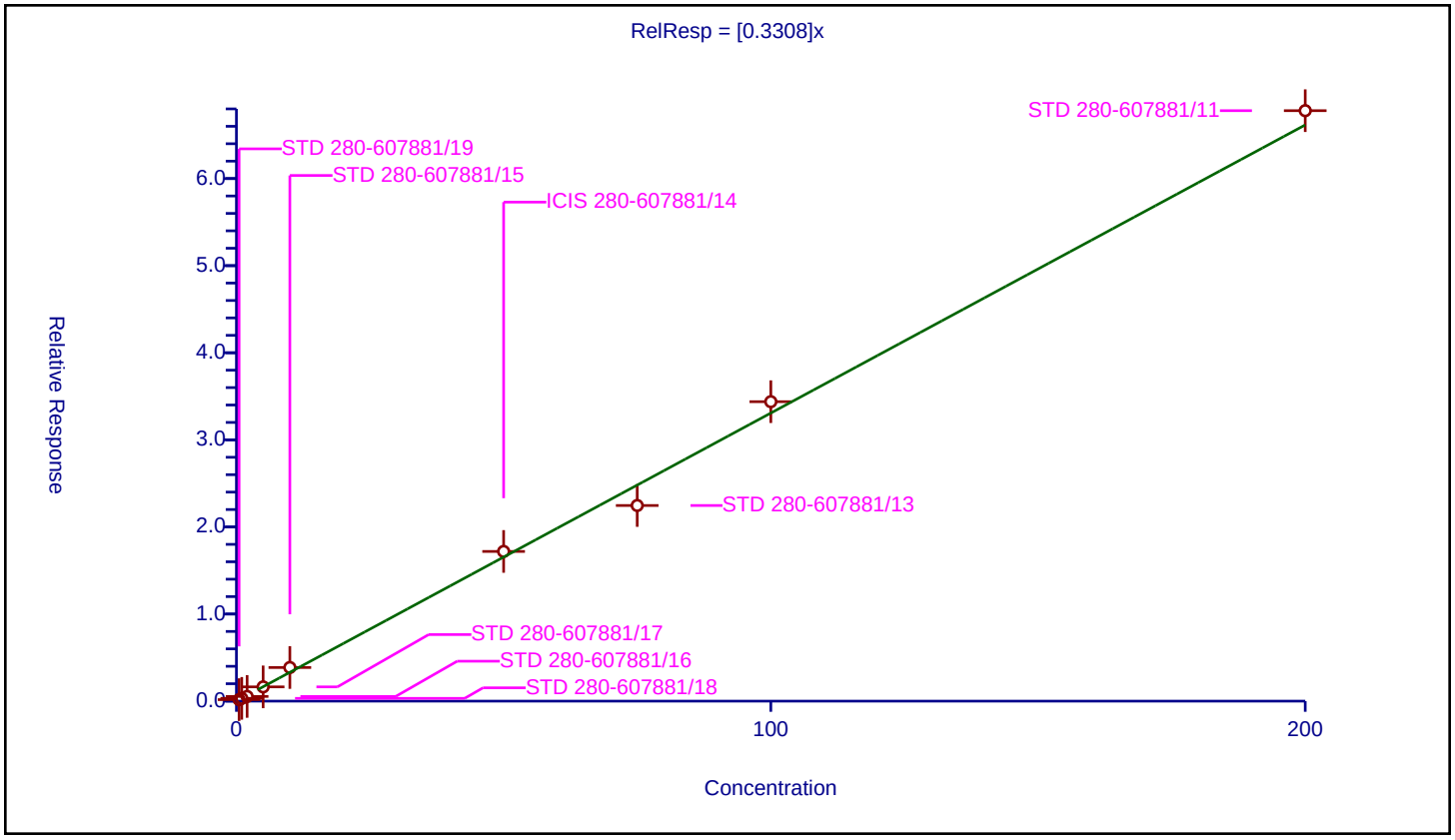
Curve Coefficients

Intercept:	0
Slope:	0.3308

Error Coefficients

Standard Error:	886000
Relative Standard Error:	9.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.173605	50.0	1347020.0	0.347211	Y
2	STD 280-607881/18	1.0	0.320513	50.0	1321475.0	0.320513	Y
3	STD 280-607881/16	2.0	0.539365	50.0	1358265.0	0.269682	Y
4	STD 280-607881/17	5.0	1.636956	50.0	1337910.0	0.327391	Y
5	STD 280-607881/15	10.0	3.862217	50.0	1371311.0	0.386222	Y
6	ICIS 280-607881/14	50.0	17.187107	50.0	1433467.0	0.343742	Y
7	STD 280-607881/13	75.0	22.461529	50.0	1474746.0	0.299487	Y
8	STD 280-607881/12	100.0	34.382542	50.0	1493380.0	0.343825	Y
9	STD 280-607881/11	200.0	67.794584	50.0	1569677.0	0.338973	Y



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Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

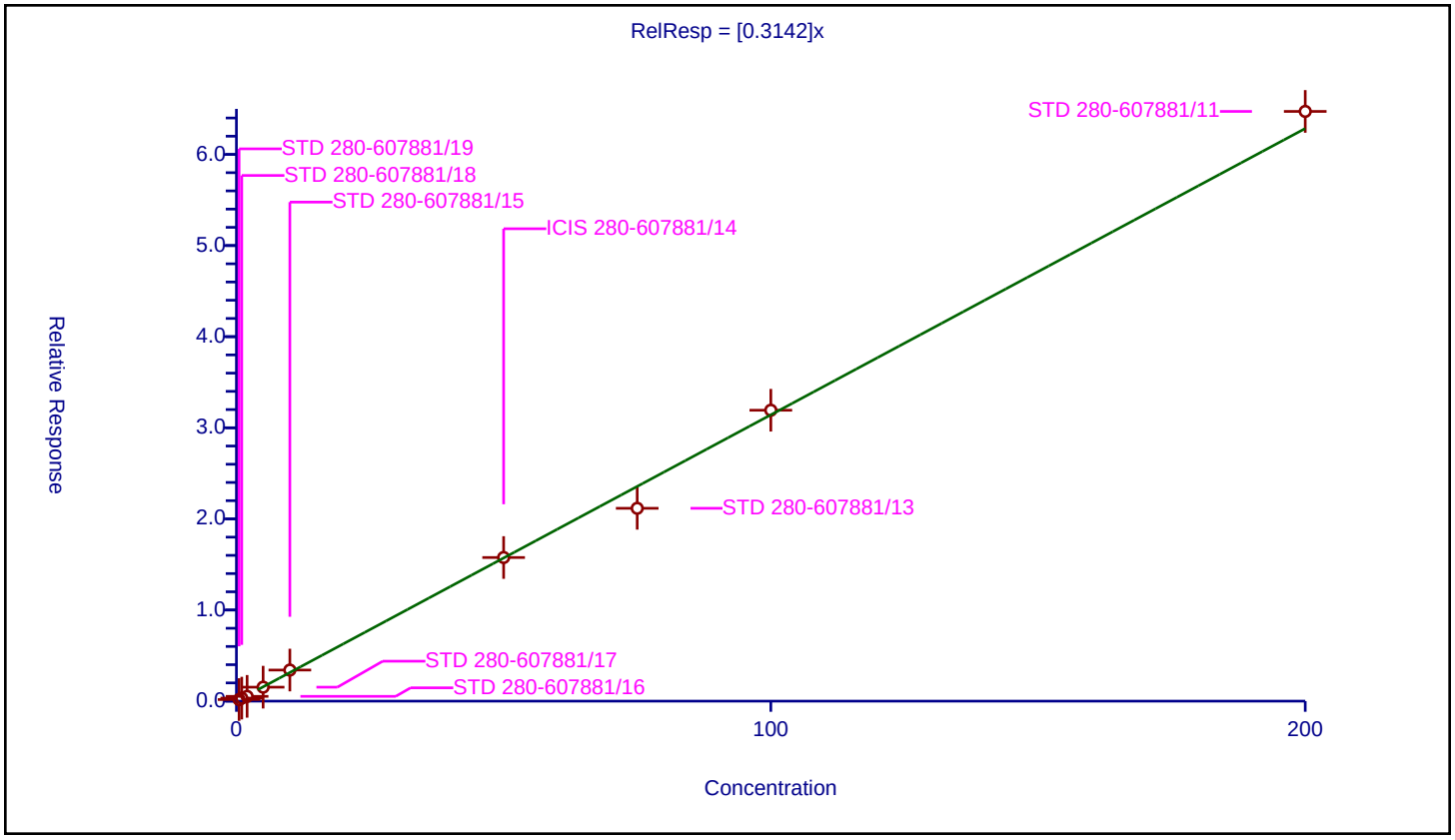
Curve Coefficients

Intercept:	0
Slope:	0.3142

Error Coefficients

Standard Error:	840000
Relative Standard Error:	8.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.173457	50.0	1347020.0	0.346914	Y
2	STD 280-607881/18	1.0	0.33088	50.0	1321475.0	0.33088	Y
3	STD 280-607881/16	2.0	0.523572	50.0	1358265.0	0.261786	Y
4	STD 280-607881/17	5.0	1.534184	50.0	1337910.0	0.306837	Y
5	STD 280-607881/15	10.0	3.412027	50.0	1371311.0	0.341203	Y
6	ICIS 280-607881/14	50.0	15.763181	50.0	1433467.0	0.315264	Y
7	STD 280-607881/13	75.0	21.166119	50.0	1474746.0	0.282215	Y
8	STD 280-607881/12	100.0	31.928076	50.0	1493380.0	0.319281	Y
9	STD 280-607881/11	200.0	64.723443	50.0	1569677.0	0.323617	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

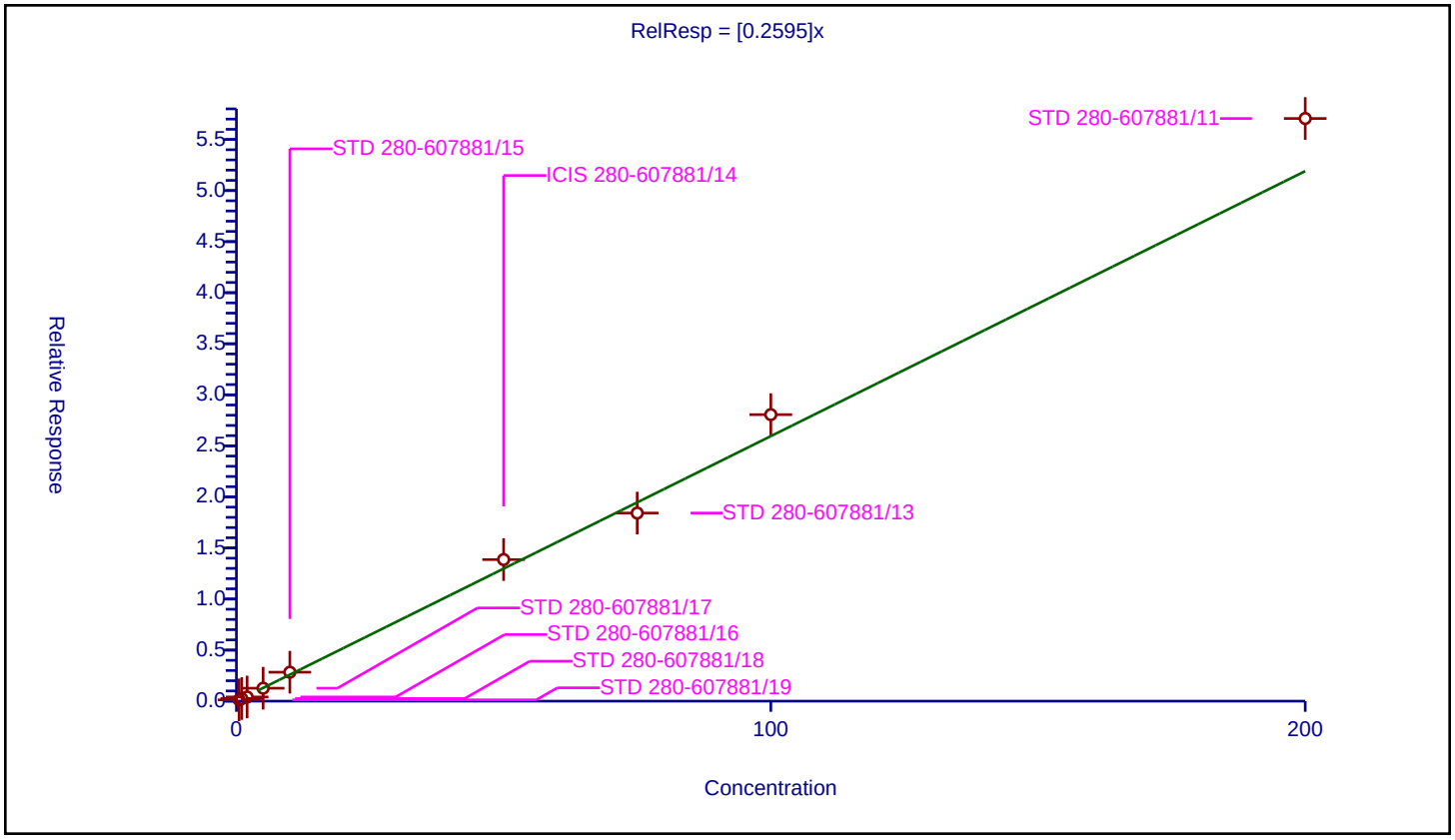
Curve Coefficients

Intercept:	0
Slope:	0.2595

Error Coefficients

Standard Error:	739000
Relative Standard Error:	10.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.125165	50.0	1347020.0	0.25033	Y
2	STD 280-607881/18	1.0	0.255548	50.0	1321475.0	0.255548	Y
3	STD 280-607881/16	2.0	0.408352	50.0	1358265.0	0.204176	Y
4	STD 280-607881/17	5.0	1.267238	50.0	1337910.0	0.253448	Y
5	STD 280-607881/15	10.0	2.834076	50.0	1371311.0	0.283408	Y
6	ICIS 280-607881/14	50.0	13.865405	50.0	1433467.0	0.277308	Y
7	STD 280-607881/13	75.0	18.419002	50.0	1474746.0	0.245587	Y
8	STD 280-607881/12	100.0	28.05967	50.0	1493380.0	0.280597	Y
9	STD 280-607881/11	200.0	57.057535	50.0	1569677.0	0.285288	Y



Calibration / Isobutyl alcohol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

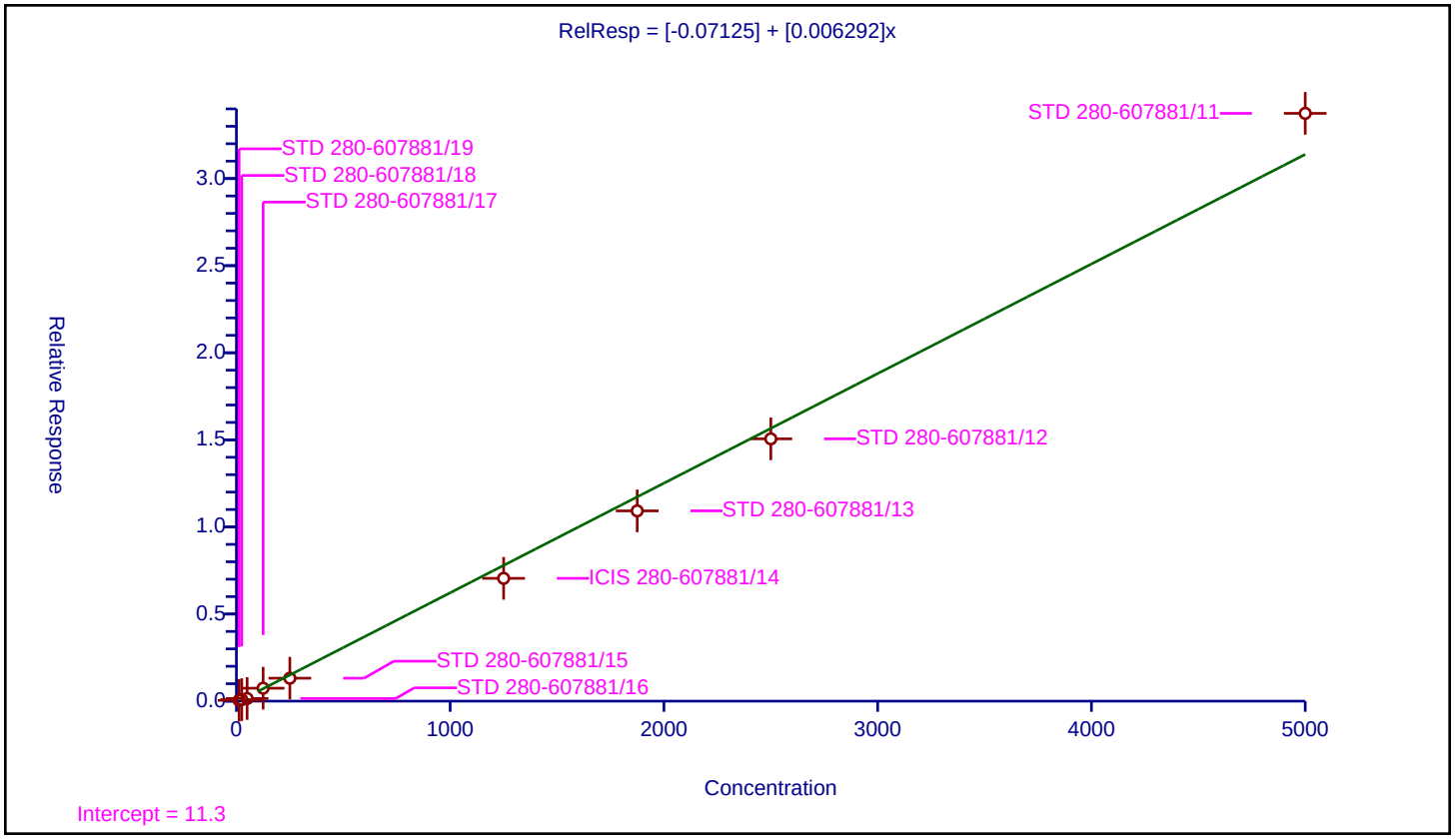
Curve Coefficients

Intercept:	-0.07125
Slope:	0.006292

Error Coefficients

Standard Error:	458000
Relative Standard Error:	22.7
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	12.5	0.04599	50.0	1347020.0	0.003679	Y
2	STD 280-607881/18	25.0	0.086873	50.0	1321475.0	0.003475	Y
3	STD 280-607881/16	50.0	0.152069	50.0	1358265.0	0.003041	Y
4	STD 280-607881/17	125.0	0.744557	50.0	1337910.0	0.005956	Y
5	STD 280-607881/15	250.0	1.317644	50.0	1371311.0	0.005271	Y
6	ICIS 280-607881/14	1250.0	7.049308	50.0	1433467.0	0.005639	Y
7	STD 280-607881/13	1875.0	10.921881	50.0	1474746.0	0.005825	Y
8	STD 280-607881/12	2500.0	15.058927	50.0	1493380.0	0.006024	Y
9	STD 280-607881/11	5000.0	33.743152	50.0	1569677.0	0.006749	Y



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Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

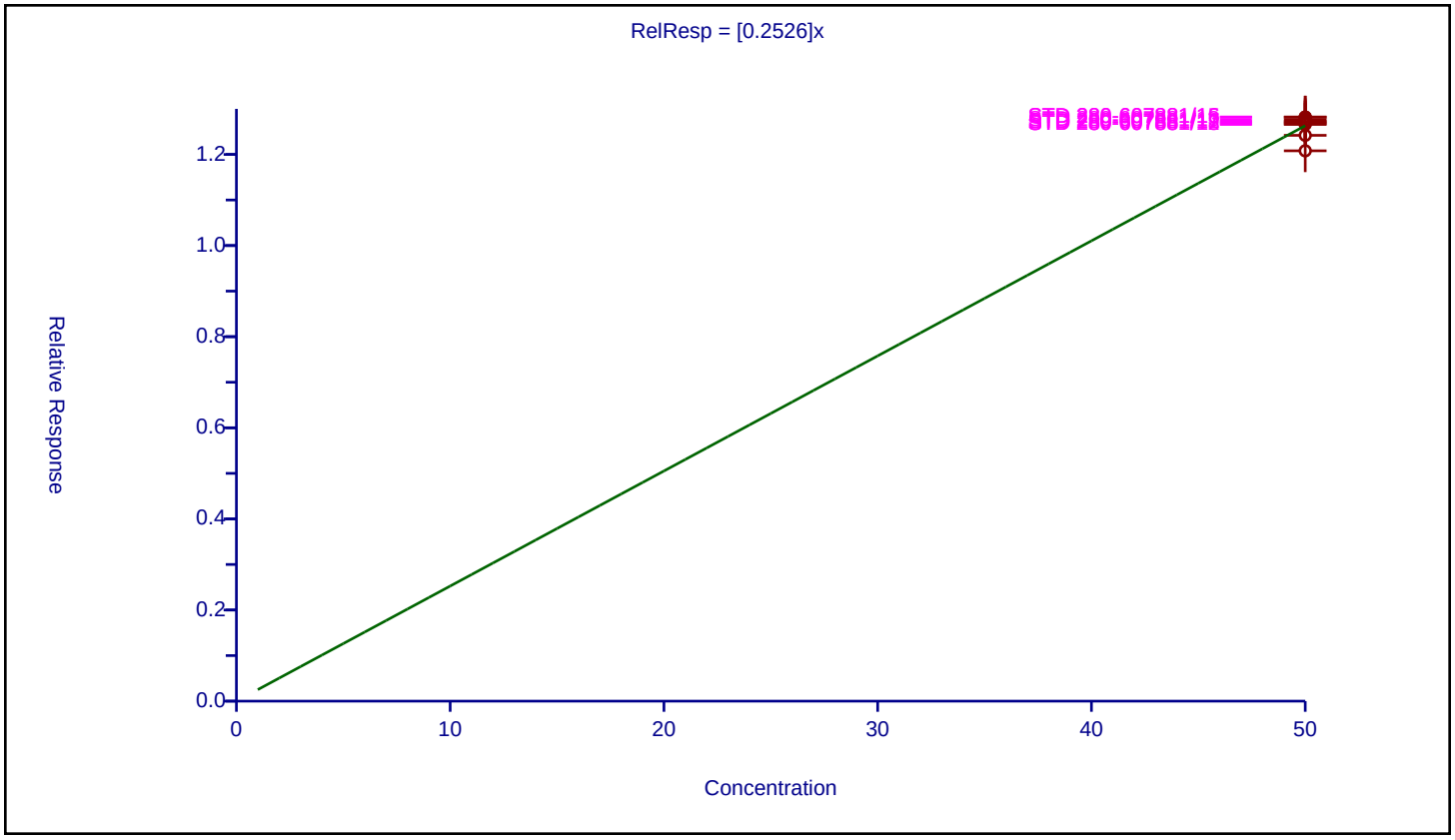
Curve Coefficients

Intercept:	0
Slope:	0.2526

Error Coefficients

Standard Error:	379000
Relative Standard Error:	1.9
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	12.721057	50.0	1569677.0	0.254421	Y
2	STD 280-607881/12	50.0	12.659404	50.0	1493380.0	0.253188	Y
3	STD 280-607881/13	50.0	12.7643	50.0	1474746.0	0.255286	Y
4	ICIS 280-607881/14	50.0	12.07956	50.0	1433467.0	0.241591	Y
5	STD 280-607881/15	50.0	12.821271	50.0	1371311.0	0.256425	Y
6	STD 280-607881/16	50.0	12.819369	50.0	1358265.0	0.256387	Y
7	STD 280-607881/17	50.0	12.71229	50.0	1337910.0	0.254246	Y
8	STD 280-607881/18	50.0	12.673982	50.0	1321475.0	0.25348	Y
9	STD 280-607881/19	50.0	12.419415	50.0	1347020.0	0.248388	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

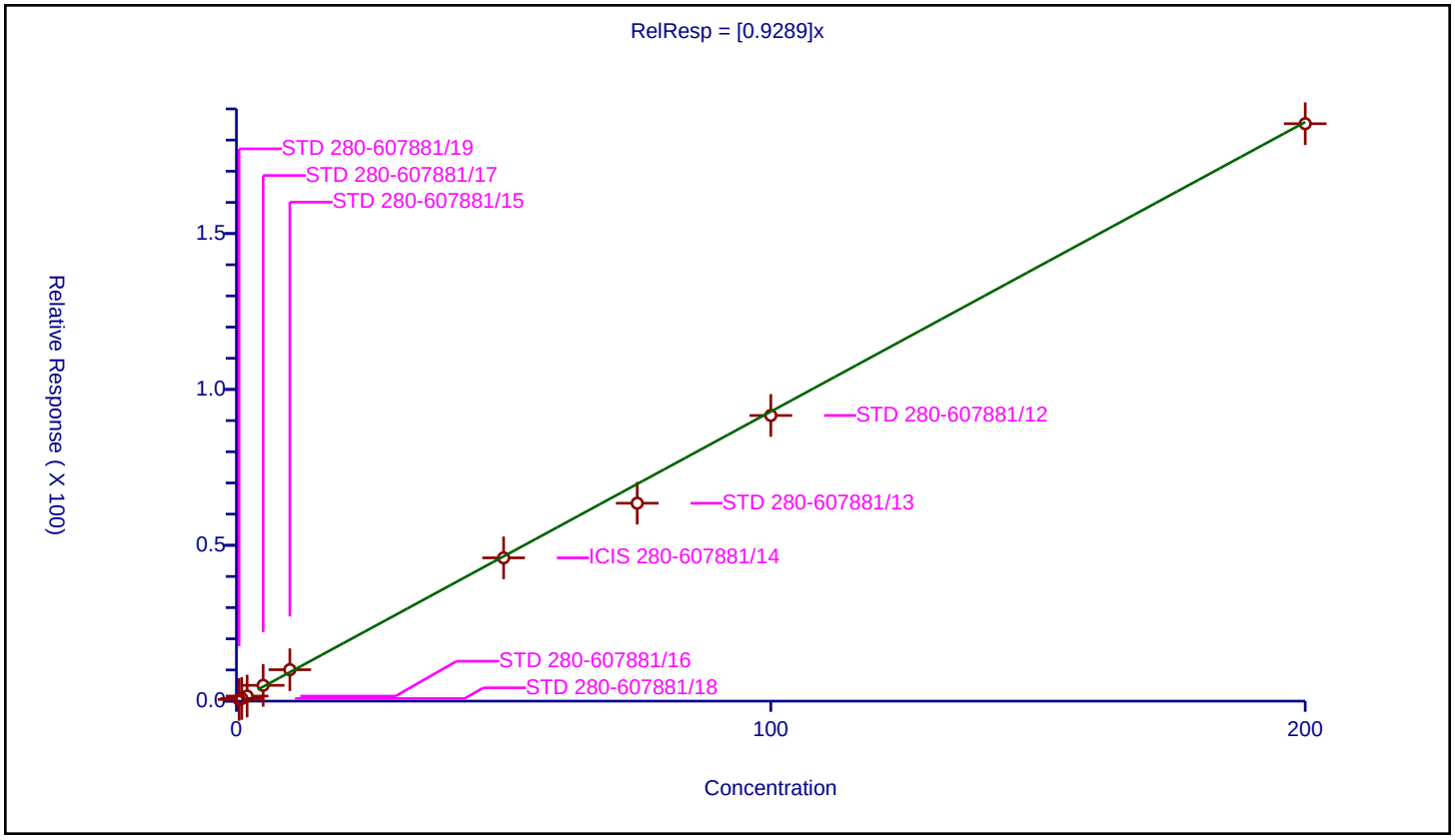
Curve Coefficients

Intercept:	0
Slope:	0.9289

Error Coefficients

Standard Error:	2410000
Relative Standard Error:	9.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.53069	50.0	1347020.0	1.06138	Y
2	STD 280-607881/18	1.0	0.85204	50.0	1321475.0	0.85204	Y
3	STD 280-607881/16	2.0	1.630499	50.0	1358265.0	0.81525	Y
4	STD 280-607881/17	5.0	5.071604	50.0	1337910.0	1.014321	Y
5	STD 280-607881/15	10.0	10.083271	50.0	1371311.0	1.008327	Y
6	ICIS 280-607881/14	50.0	45.967783	50.0	1433467.0	0.919356	Y
7	STD 280-607881/13	75.0	63.500054	50.0	1474746.0	0.846667	Y
8	STD 280-607881/12	100.0	91.642348	50.0	1493380.0	0.916423	Y
9	STD 280-607881/11	200.0	185.251838	50.0	1569677.0	0.926259	Y



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Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

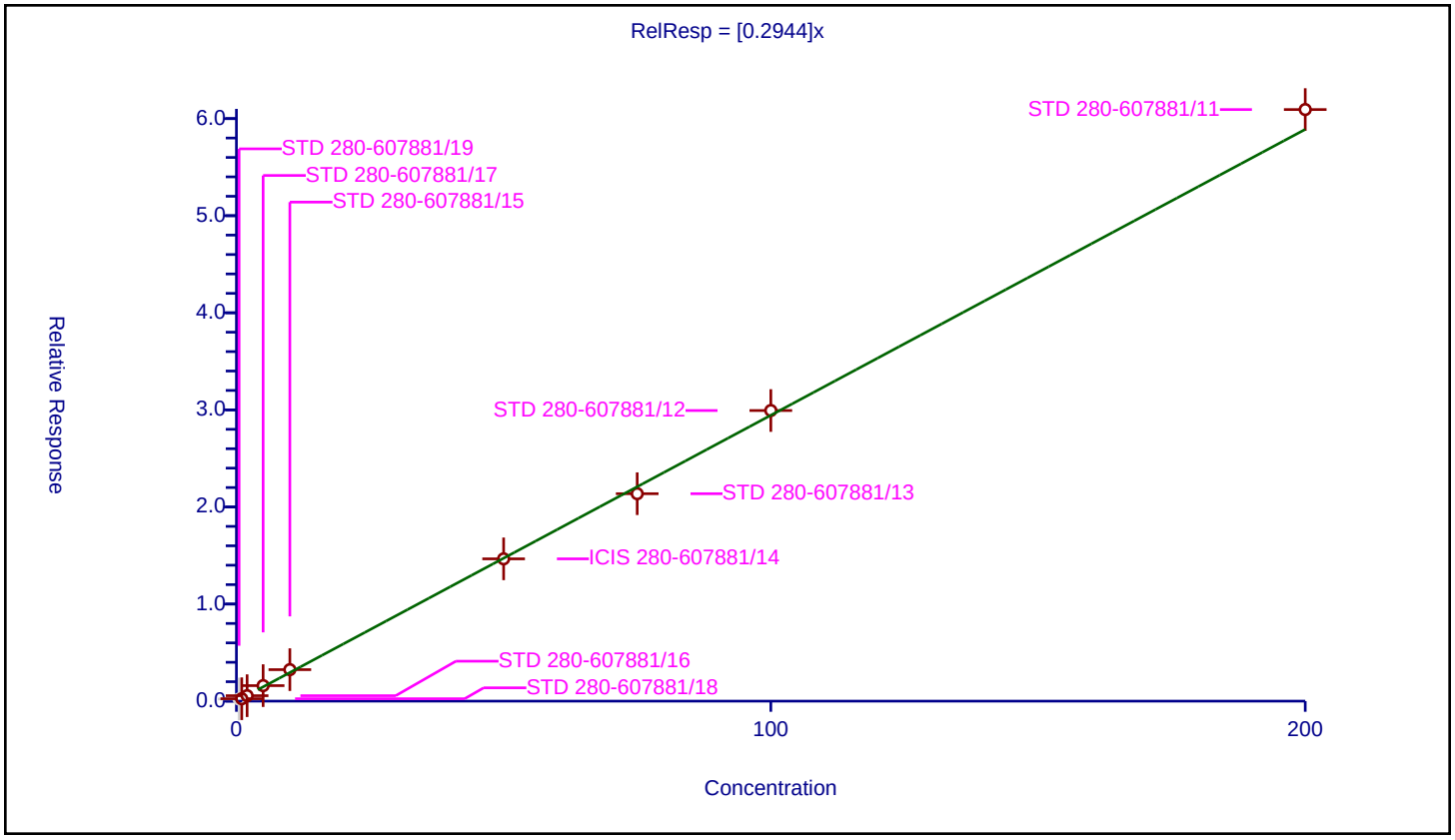
Curve Coefficients

Intercept:	0
Slope:	0.2944

Error Coefficients

Standard Error:	849000
Relative Standard Error:	8.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.220932	50.0	1347020.0	0.441864	N
2	STD 280-607881/18	1.0	0.248359	50.0	1321475.0	0.248359	Y
3	STD 280-607881/16	2.0	0.56193	50.0	1358265.0	0.280965	Y
4	STD 280-607881/17	5.0	1.5988	50.0	1337910.0	0.31976	Y
5	STD 280-607881/15	10.0	3.244523	50.0	1371311.0	0.324452	Y
6	ICIS 280-607881/14	50.0	14.656389	50.0	1433467.0	0.293128	Y
7	STD 280-607881/13	75.0	21.364899	50.0	1474746.0	0.284865	Y
8	STD 280-607881/12	100.0	29.933172	50.0	1493380.0	0.299332	Y
9	STD 280-607881/11	200.0	60.930465	50.0	1569677.0	0.304652	Y



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Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

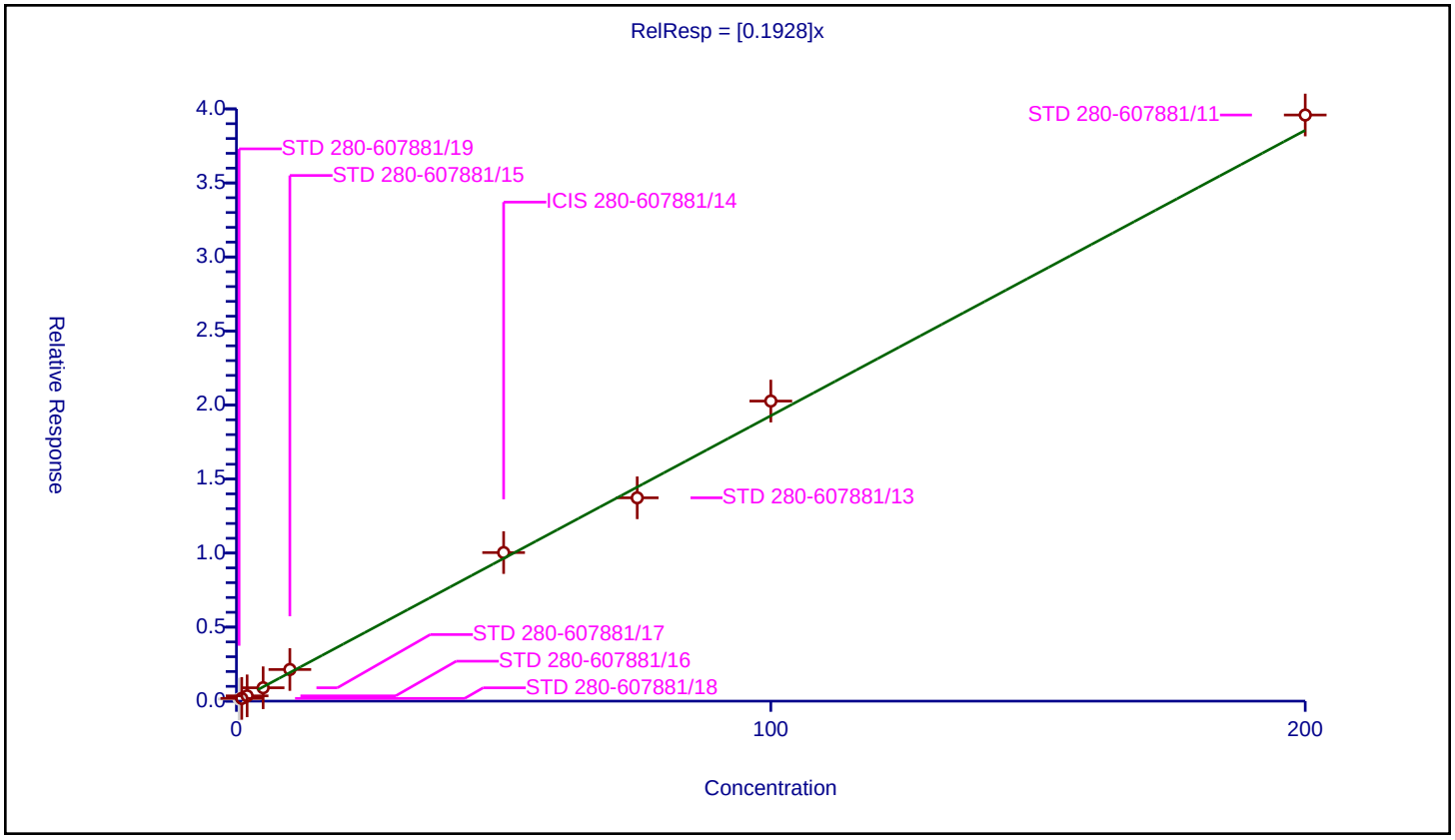
Curve Coefficients

Intercept:	0
Slope:	0.1928

Error Coefficients

Standard Error:	556000
Relative Standard Error:	6.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.143984	50.0	1347020.0	0.287969	N
2	STD 280-607881/18	1.0	0.184756	50.0	1321475.0	0.184756	Y
3	STD 280-607881/16	2.0	0.35711	50.0	1358265.0	0.178555	Y
4	STD 280-607881/17	5.0	0.903798	50.0	1337910.0	0.18076	Y
5	STD 280-607881/15	10.0	2.136933	50.0	1371311.0	0.213693	Y
6	ICIS 280-607881/14	50.0	10.034343	50.0	1433467.0	0.200687	Y
7	STD 280-607881/13	75.0	13.733755	50.0	1474746.0	0.183117	Y
8	STD 280-607881/12	100.0	20.266275	50.0	1493380.0	0.202663	Y
9	STD 280-607881/11	200.0	39.588845	50.0	1569677.0	0.197944	Y



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Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

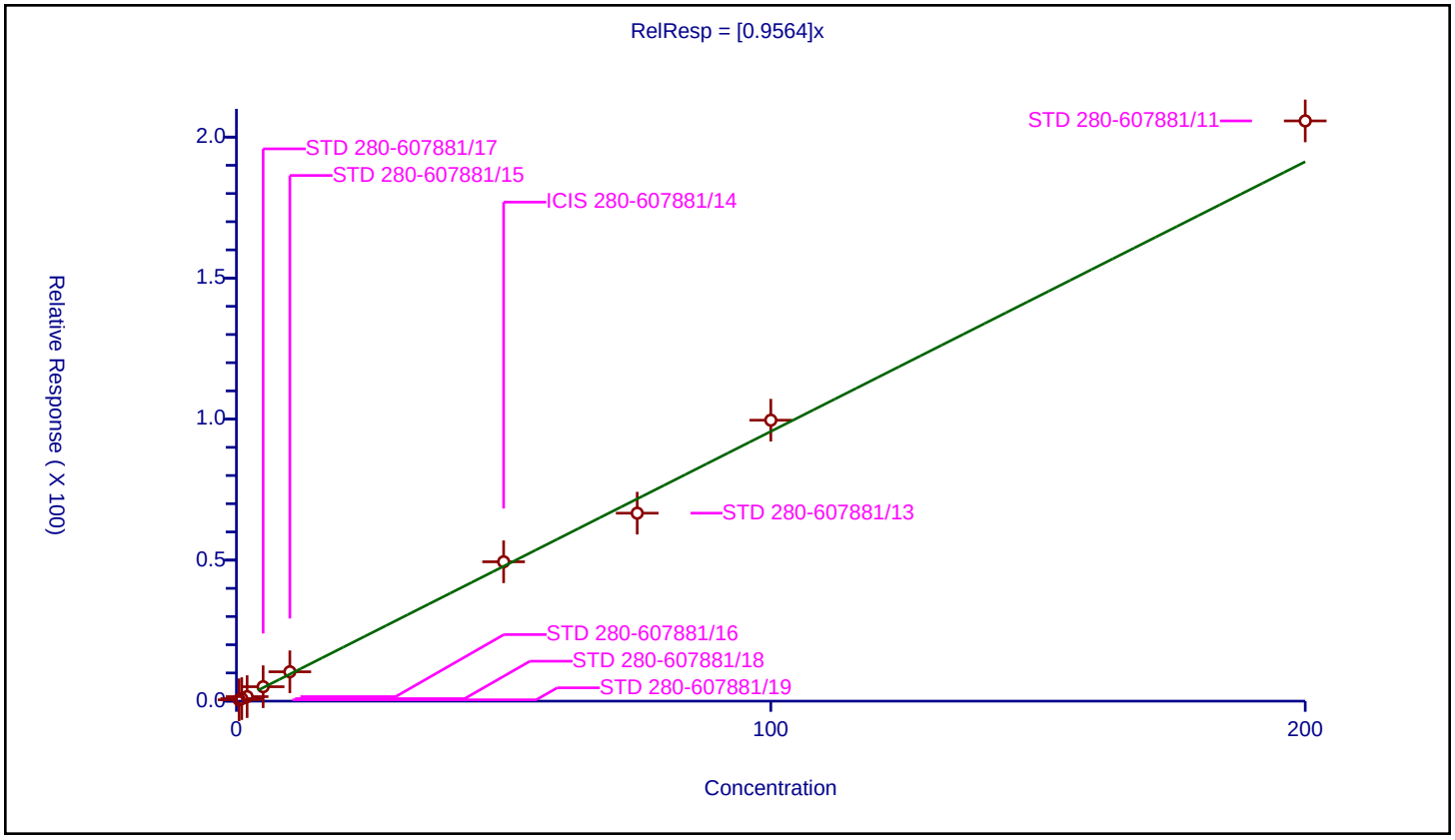
Curve Coefficients

Intercept:	0
Slope:	0.9564

Error Coefficients

Standard Error:	614000
Relative Standard Error:	8.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.474109	50.0	310688.0	0.948218	Y
2	STD 280-607881/18	1.0	0.892757	50.0	303218.0	0.892757	Y
3	STD 280-607881/16	2.0	1.602116	50.0	311900.0	0.801058	Y
4	STD 280-607881/17	5.0	5.111859	50.0	312939.0	1.022372	Y
5	STD 280-607881/15	10.0	10.410609	50.0	319160.0	1.041061	Y
6	ICIS 280-607881/14	50.0	49.418594	50.0	327912.0	0.988372	Y
7	STD 280-607881/13	75.0	66.646354	50.0	345430.0	0.888618	Y
8	STD 280-607881/12	100.0	99.623632	50.0	350056.0	0.996236	Y
9	STD 280-607881/11	200.0	205.741261	50.0	361445.0	1.028706	Y



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Calibration / 2-Pentanone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

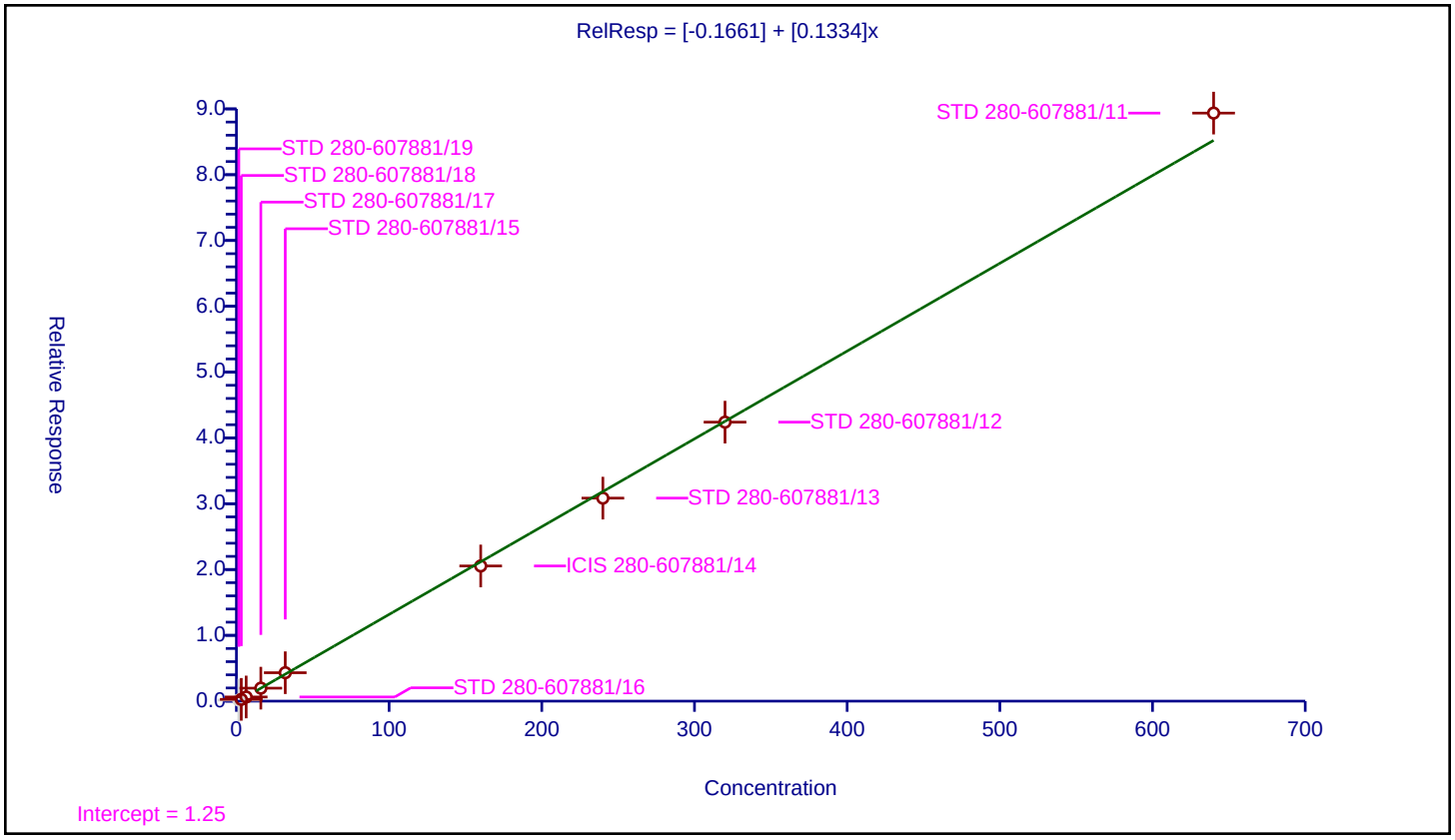
Curve Coefficients

Intercept:	-0.1661
Slope:	0.1334

Error Coefficients

Standard Error:	1330000
Relative Standard Error:	4.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.6	0.164957	50.0	1347020.0	0.103098	N
2	STD 280-607881/18	3.2	0.272574	50.0	1321475.0	0.085179	Y
3	STD 280-607881/16	6.4	0.632793	50.0	1358265.0	0.098874	Y
4	STD 280-607881/17	16.0	1.971097	50.0	1337910.0	0.123194	Y
5	STD 280-607881/15	32.0	4.319626	50.0	1371311.0	0.134988	Y
6	ICIS 280-607881/14	160.0	20.542712	50.0	1433467.0	0.128392	Y
7	STD 280-607881/13	240.0	30.851516	50.0	1474746.0	0.128548	Y
8	STD 280-607881/12	320.0	42.396677	50.0	1493380.0	0.13249	Y
9	STD 280-607881/11	640.0	89.361123	50.0	1569677.0	0.139627	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

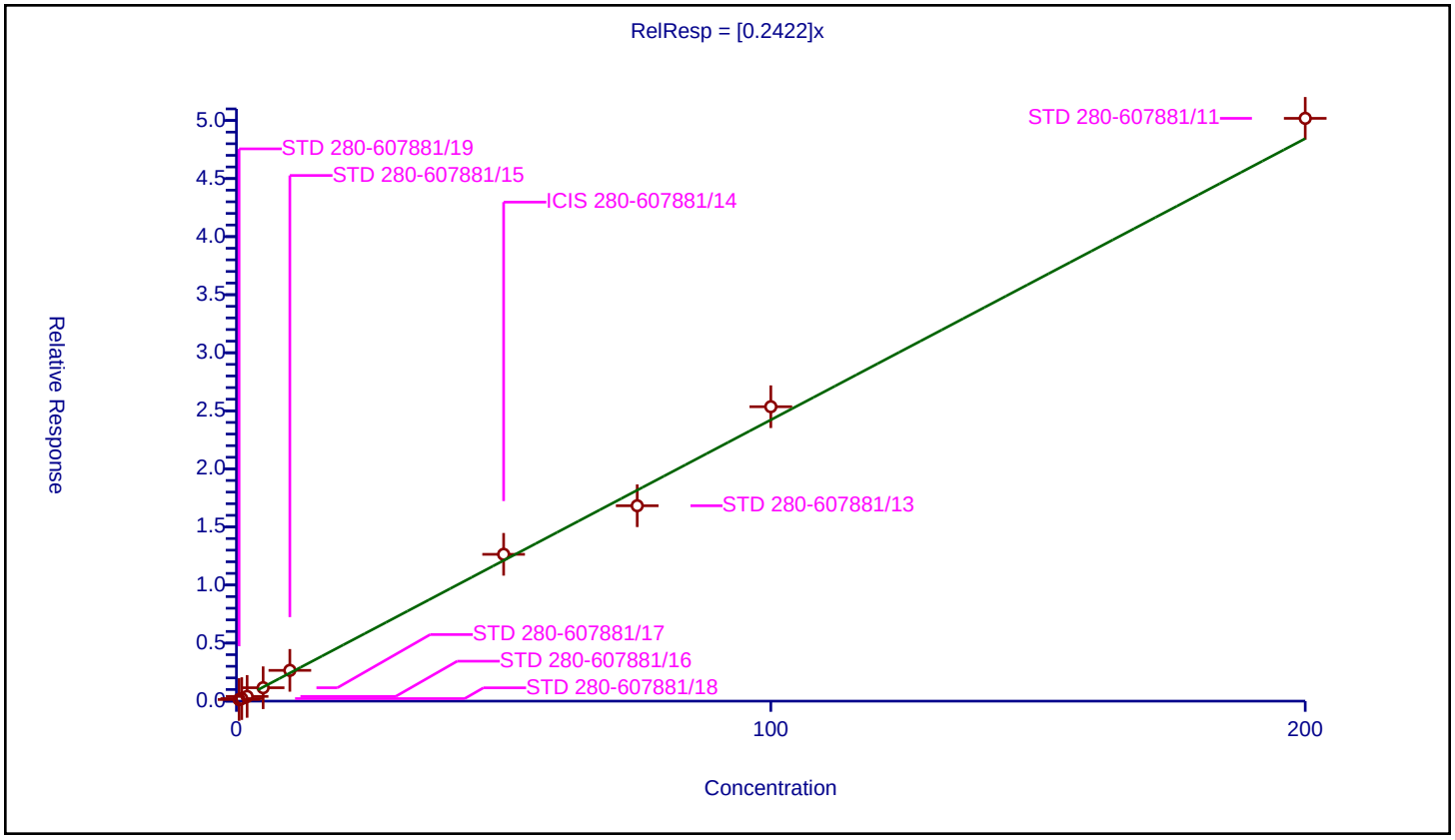
Curve Coefficients

Intercept:	0
Slope:	0.2422

Error Coefficients

Standard Error:	656000
Relative Standard Error:	10.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.139864	50.0	1347020.0	0.279729	Y
2	STD 280-607881/18	1.0	0.219527	50.0	1321475.0	0.219527	Y
3	STD 280-607881/16	2.0	0.405959	50.0	1358265.0	0.20298	Y
4	STD 280-607881/17	5.0	1.155085	50.0	1337910.0	0.231017	Y
5	STD 280-607881/15	10.0	2.6498	50.0	1371311.0	0.26498	Y
6	ICIS 280-607881/14	50.0	12.642007	50.0	1433467.0	0.25284	Y
7	STD 280-607881/13	75.0	16.825711	50.0	1474746.0	0.224343	Y
8	STD 280-607881/12	100.0	25.354531	50.0	1493380.0	0.253545	Y
9	STD 280-607881/11	200.0	50.18593	50.0	1569677.0	0.25093	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

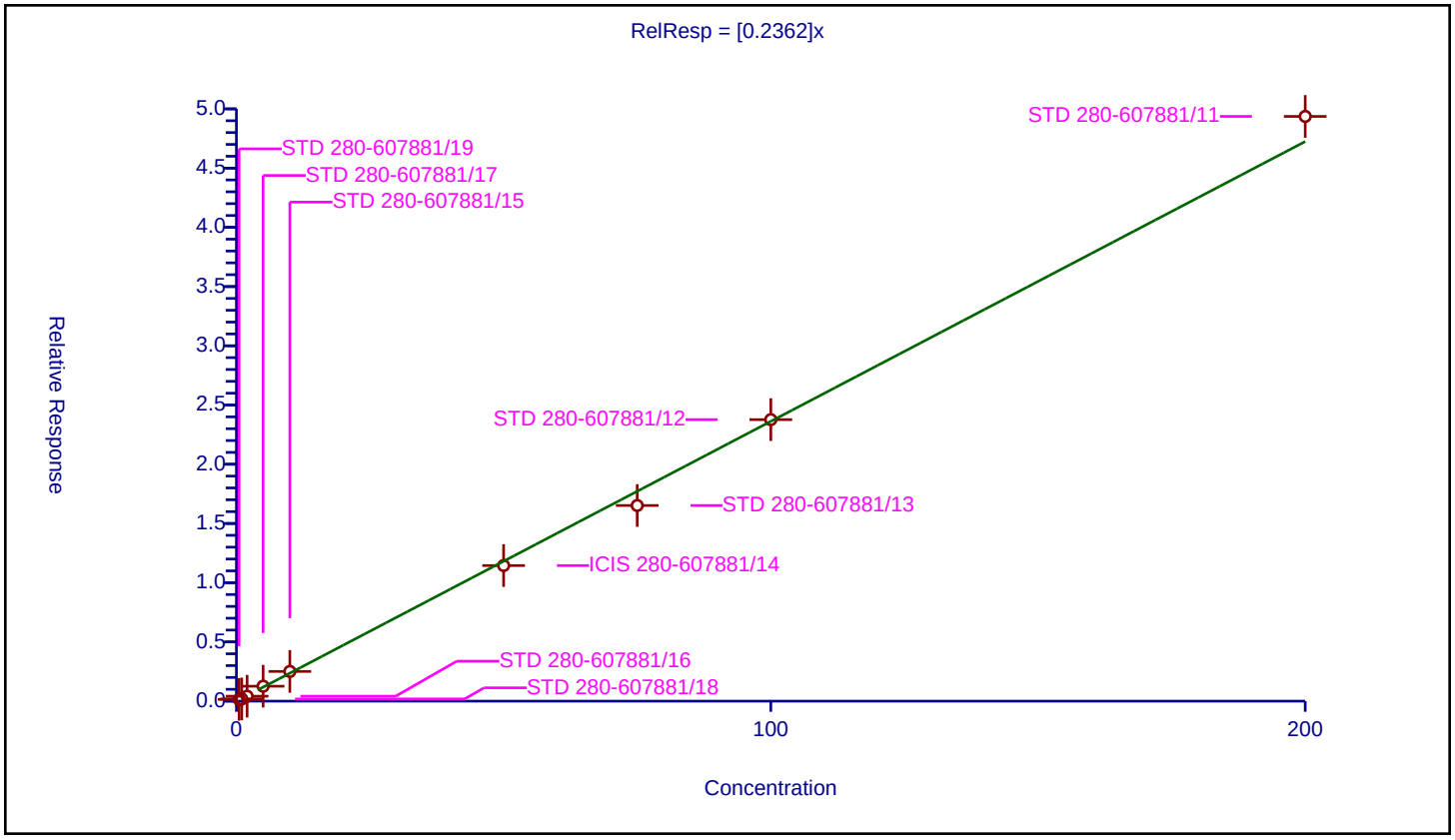
Curve Coefficients

Intercept:	0
Slope:	0.2362

Error Coefficients

Standard Error:	638000
Relative Standard Error:	13.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.147993	50.0	1347020.0	0.295987	Y
2	STD 280-607881/18	1.0	0.184529	50.0	1321475.0	0.184529	Y
3	STD 280-607881/16	2.0	0.417702	50.0	1358265.0	0.208851	Y
4	STD 280-607881/17	5.0	1.260847	50.0	1337910.0	0.252169	Y
5	STD 280-607881/15	10.0	2.508366	50.0	1371311.0	0.250837	Y
6	ICIS 280-607881/14	50.0	11.445258	50.0	1433467.0	0.228905	Y
7	STD 280-607881/13	75.0	16.516844	50.0	1474746.0	0.220225	Y
8	STD 280-607881/12	100.0	23.765016	50.0	1493380.0	0.23765	Y
9	STD 280-607881/11	200.0	49.363149	50.0	1569677.0	0.246816	Y



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Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

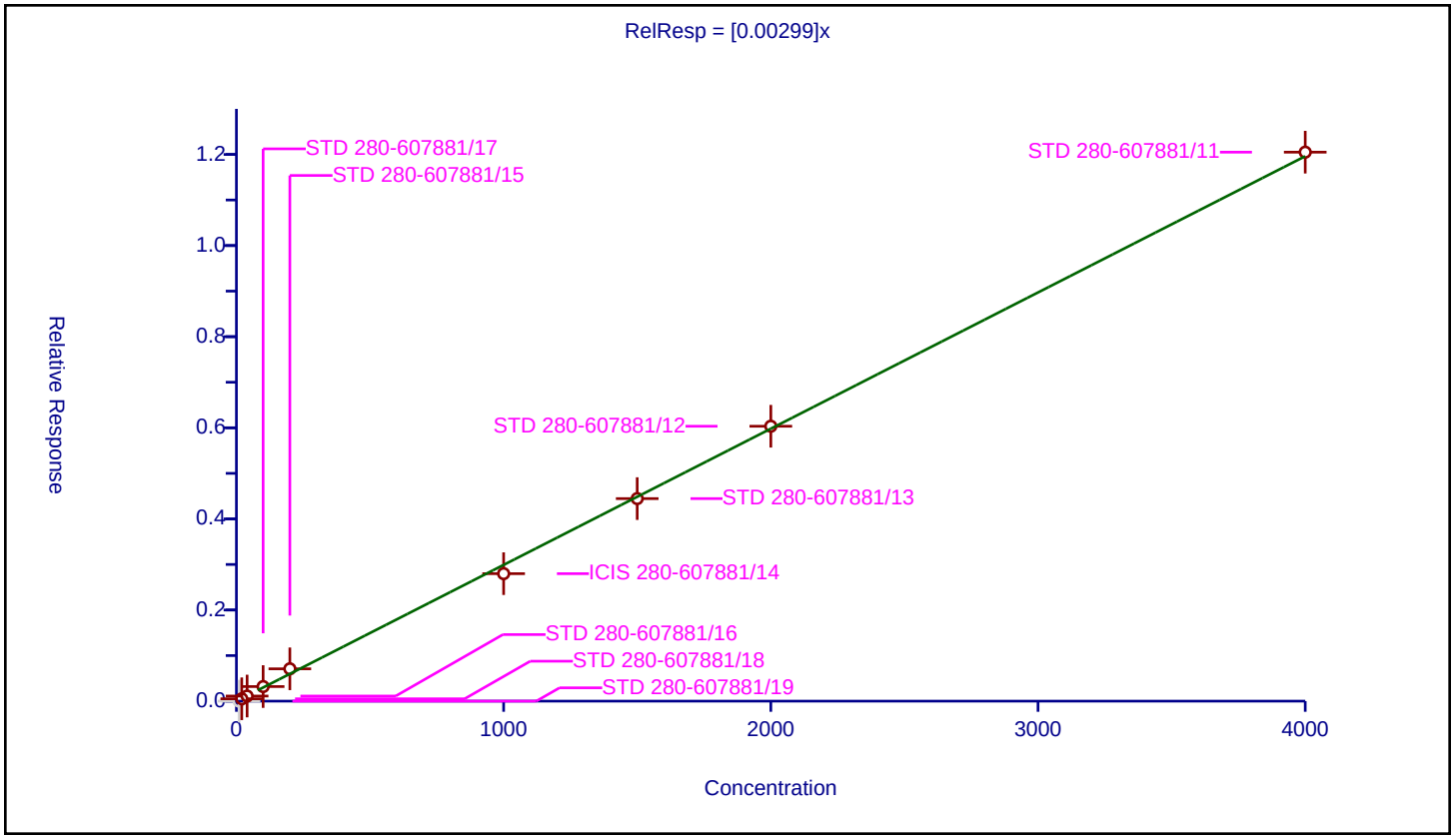
Curve Coefficients

Intercept:	0
Slope:	0.00299

Error Coefficients

Standard Error:	169000
Relative Standard Error:	9.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	10.0	0.0	50.0	1347020.0	0.0	N
2	STD 280-607881/18	20.0	0.051571	50.0	1321475.0	0.002579	Y
3	STD 280-607881/16	40.0	0.112092	50.0	1358265.0	0.002802	Y
4	STD 280-607881/17	100.0	0.320051	50.0	1337910.0	0.003201	Y
5	STD 280-607881/15	200.0	0.709467	50.0	1371311.0	0.003547	Y
6	ICIS 280-607881/14	1000.0	2.79853	50.0	1433467.0	0.002799	Y
7	STD 280-607881/13	1500.0	4.445952	50.0	1474746.0	0.002964	Y
8	STD 280-607881/12	2000.0	6.034365	50.0	1493380.0	0.003017	Y
9	STD 280-607881/11	4000.0	12.049995	50.0	1569677.0	0.003012	Y



Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

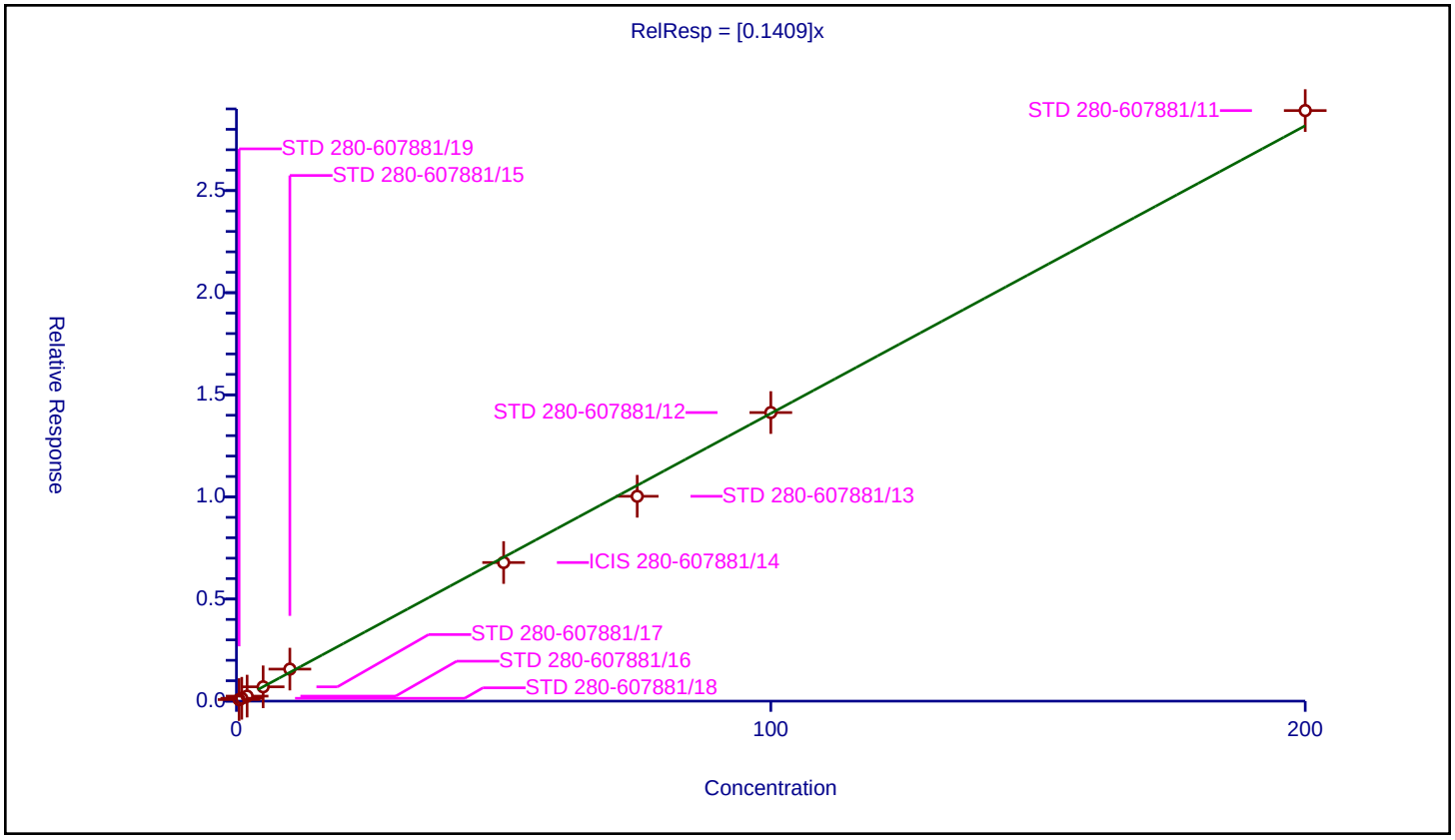
Curve Coefficients

Intercept:	0
Slope:	0.1409

Error Coefficients

Standard Error:	376000
Relative Standard Error:	7.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.076502	50.0	1347020.0	0.153004	Y
2	STD 280-607881/18	1.0	0.139541	50.0	1321475.0	0.139541	Y
3	STD 280-607881/16	2.0	0.245976	50.0	1358265.0	0.122988	Y
4	STD 280-607881/17	5.0	0.700608	50.0	1337910.0	0.140122	Y
5	STD 280-607881/15	10.0	1.5689	50.0	1371311.0	0.15689	Y
6	ICIS 280-607881/14	50.0	6.787669	50.0	1433467.0	0.135753	Y
7	STD 280-607881/13	75.0	10.030609	50.0	1474746.0	0.133741	Y
8	STD 280-607881/12	100.0	14.1314	50.0	1493380.0	0.141314	Y
9	STD 280-607881/11	200.0	28.917956	50.0	1569677.0	0.14459	Y



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Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

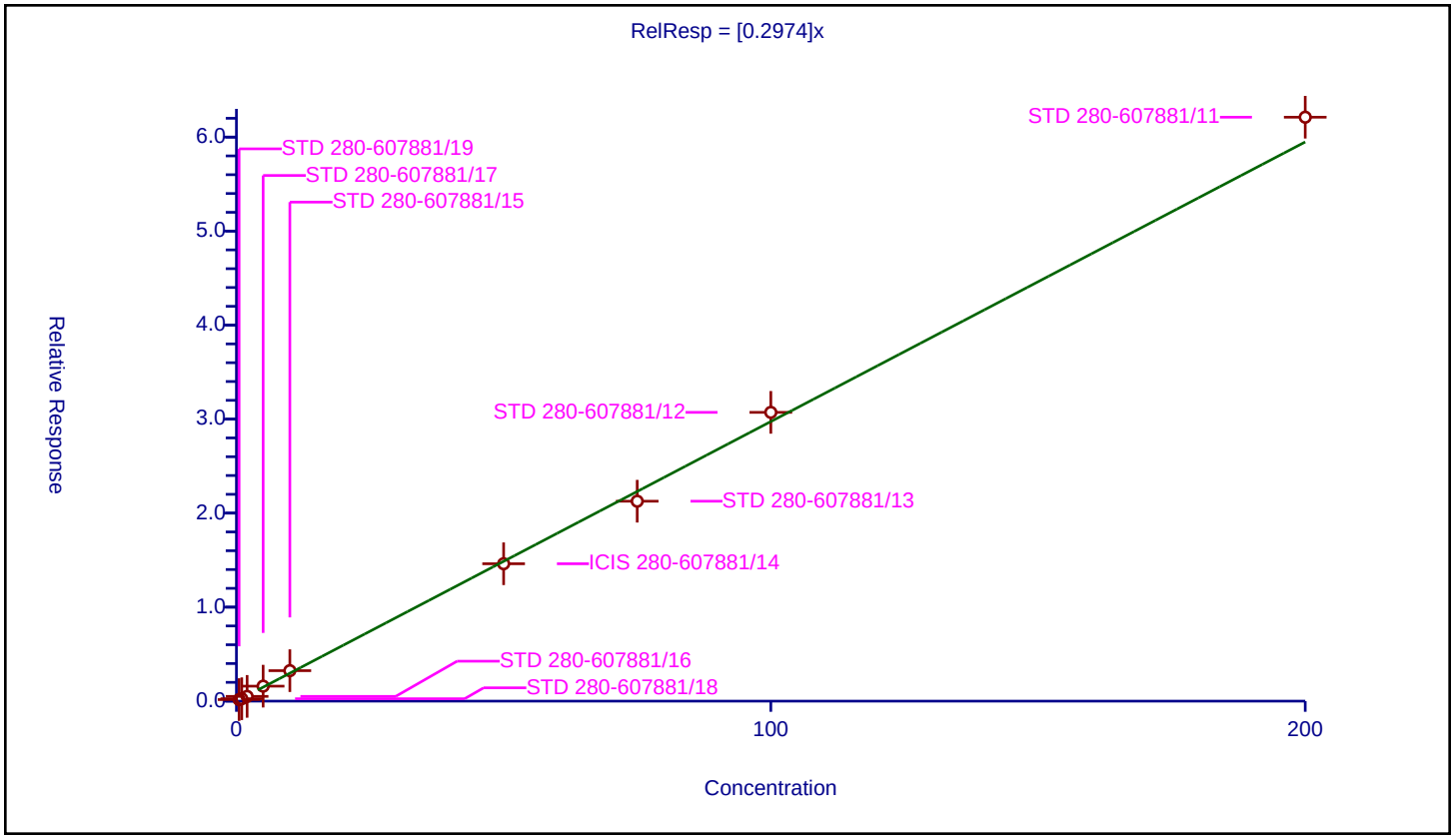
Curve Coefficients

Intercept:	0
Slope:	0.2974

Error Coefficients

Standard Error:	808000
Relative Standard Error:	9.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.164882	50.0	1347020.0	0.329765	Y
2	STD 280-607881/18	1.0	0.257364	50.0	1321475.0	0.257364	Y
3	STD 280-607881/16	2.0	0.505866	50.0	1358265.0	0.252933	Y
4	STD 280-607881/17	5.0	1.592745	50.0	1337910.0	0.318549	Y
5	STD 280-607881/15	10.0	3.243356	50.0	1371311.0	0.324336	Y
6	ICIS 280-607881/14	50.0	14.615684	50.0	1433467.0	0.292314	Y
7	STD 280-607881/13	75.0	21.268205	50.0	1474746.0	0.283576	Y
8	STD 280-607881/12	100.0	30.717768	50.0	1493380.0	0.307178	Y
9	STD 280-607881/11	200.0	62.115709	50.0	1569677.0	0.310579	Y



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Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

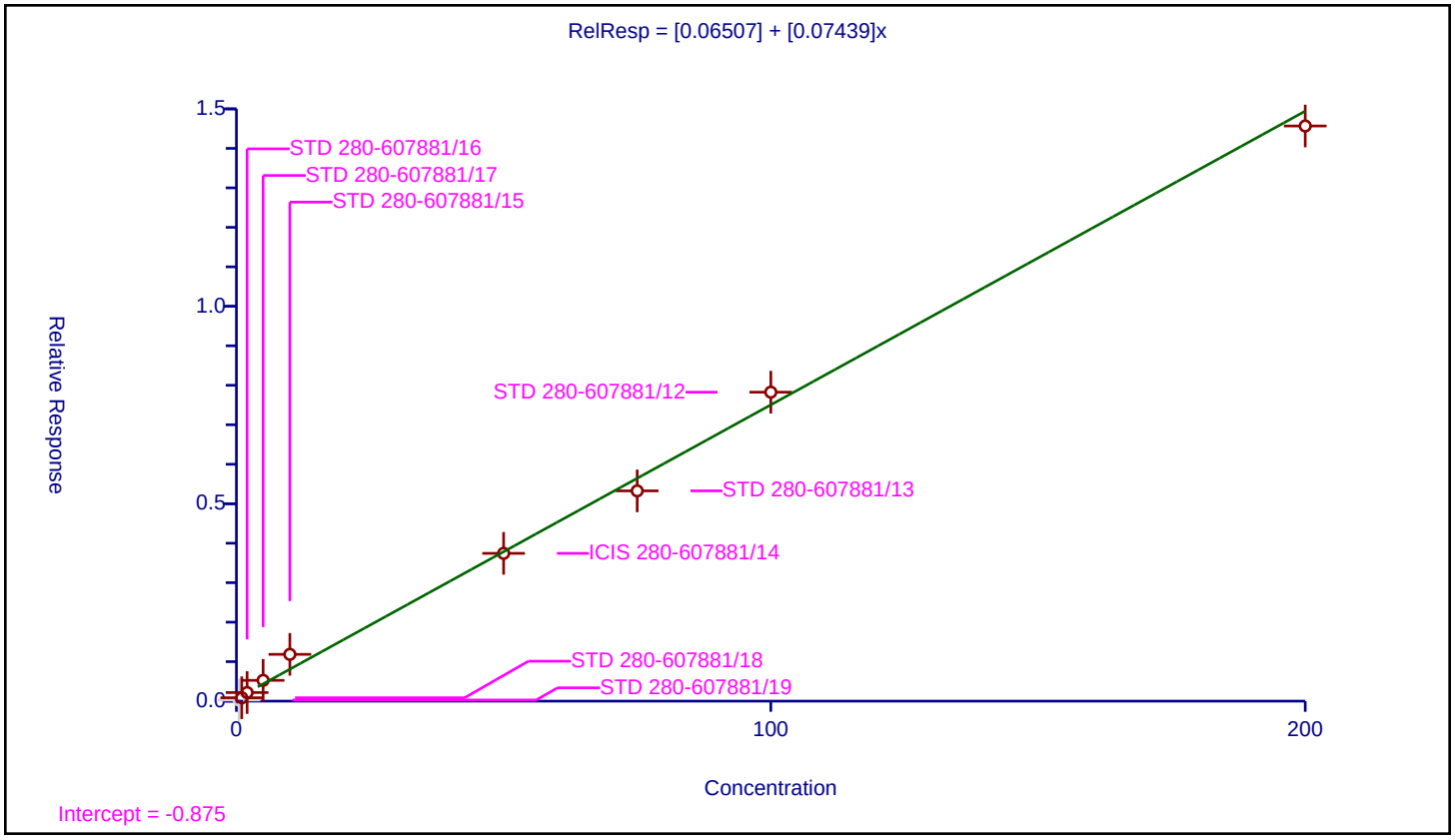
Curve Coefficients

Intercept:	0.06507
Slope:	0.07439

Error Coefficients

Standard Error:	224000
Relative Standard Error:	37.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.028396	50.0	1347020.0	0.056792	N
2	STD 280-607881/18	1.0	0.085965	50.0	1321475.0	0.085965	Y
3	STD 280-607881/16	2.0	0.217299	50.0	1358265.0	0.10865	Y
4	STD 280-607881/17	5.0	0.52668	50.0	1337910.0	0.105336	Y
5	STD 280-607881/15	10.0	1.184997	50.0	1371311.0	0.1185	Y
6	ICIS 280-607881/14	50.0	3.742779	50.0	1433467.0	0.074856	Y
7	STD 280-607881/13	75.0	5.325324	50.0	1474746.0	0.071004	Y
8	STD 280-607881/12	100.0	7.825637	50.0	1493380.0	0.078256	Y
9	STD 280-607881/11	200.0	14.566723	50.0	1569677.0	0.072834	Y



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Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

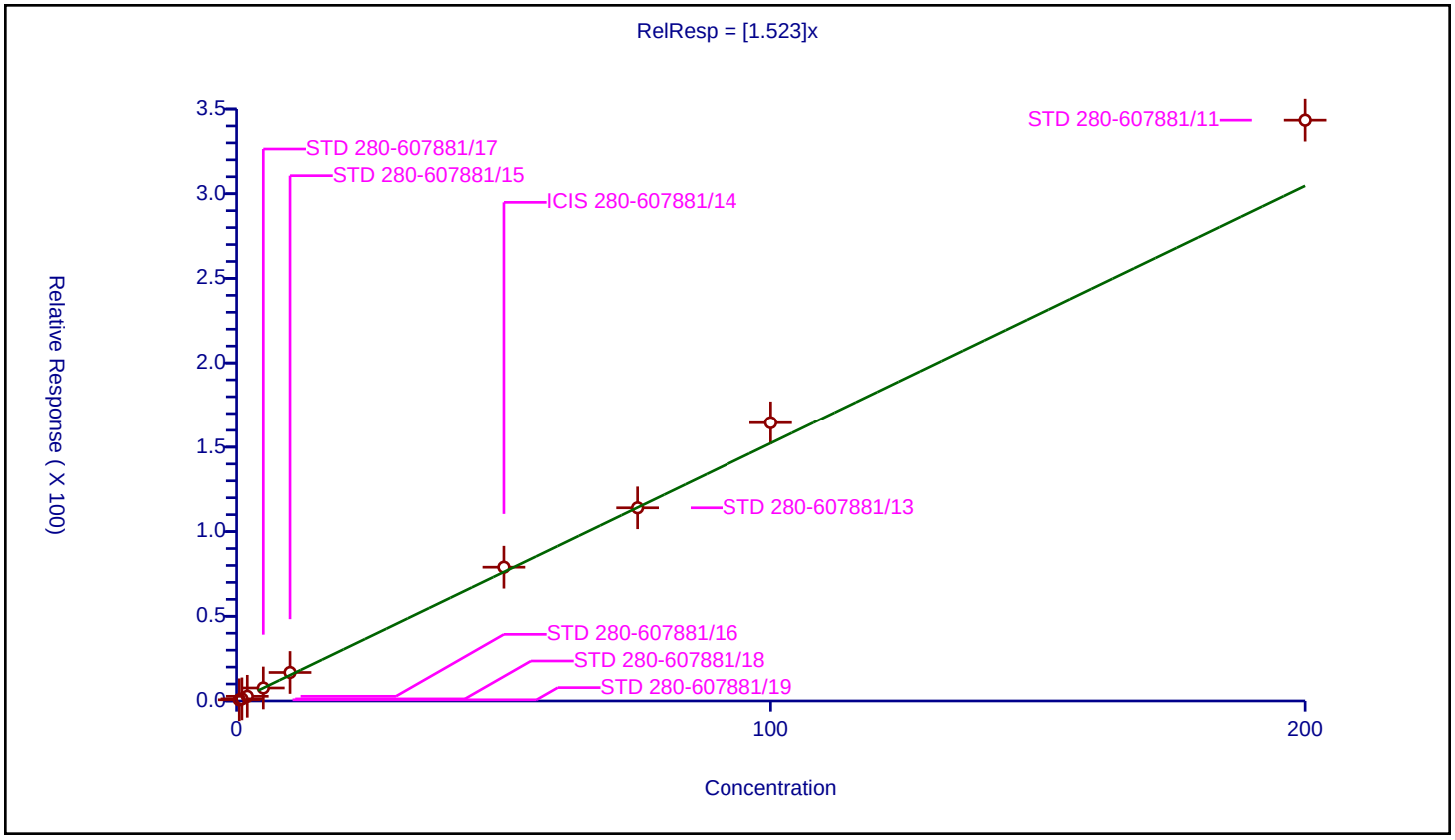
Curve Coefficients

Intercept:	0
Slope:	1.523

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	10.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.705853	50.0	310688.0	1.411706	Y
2	STD 280-607881/18	1.0	1.242505	50.0	303218.0	1.242505	Y
3	STD 280-607881/16	2.0	2.755691	50.0	311900.0	1.377845	Y
4	STD 280-607881/17	5.0	7.665392	50.0	312939.0	1.533078	Y
5	STD 280-607881/15	10.0	16.820404	50.0	319160.0	1.68204	Y
6	ICIS 280-607881/14	50.0	78.977439	50.0	327912.0	1.579549	Y
7	STD 280-607881/13	75.0	114.062762	50.0	345430.0	1.520837	Y
8	STD 280-607881/12	100.0	164.542673	50.0	350056.0	1.645427	Y
9	STD 280-607881/11	200.0	343.426109	50.0	361445.0	1.717131	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

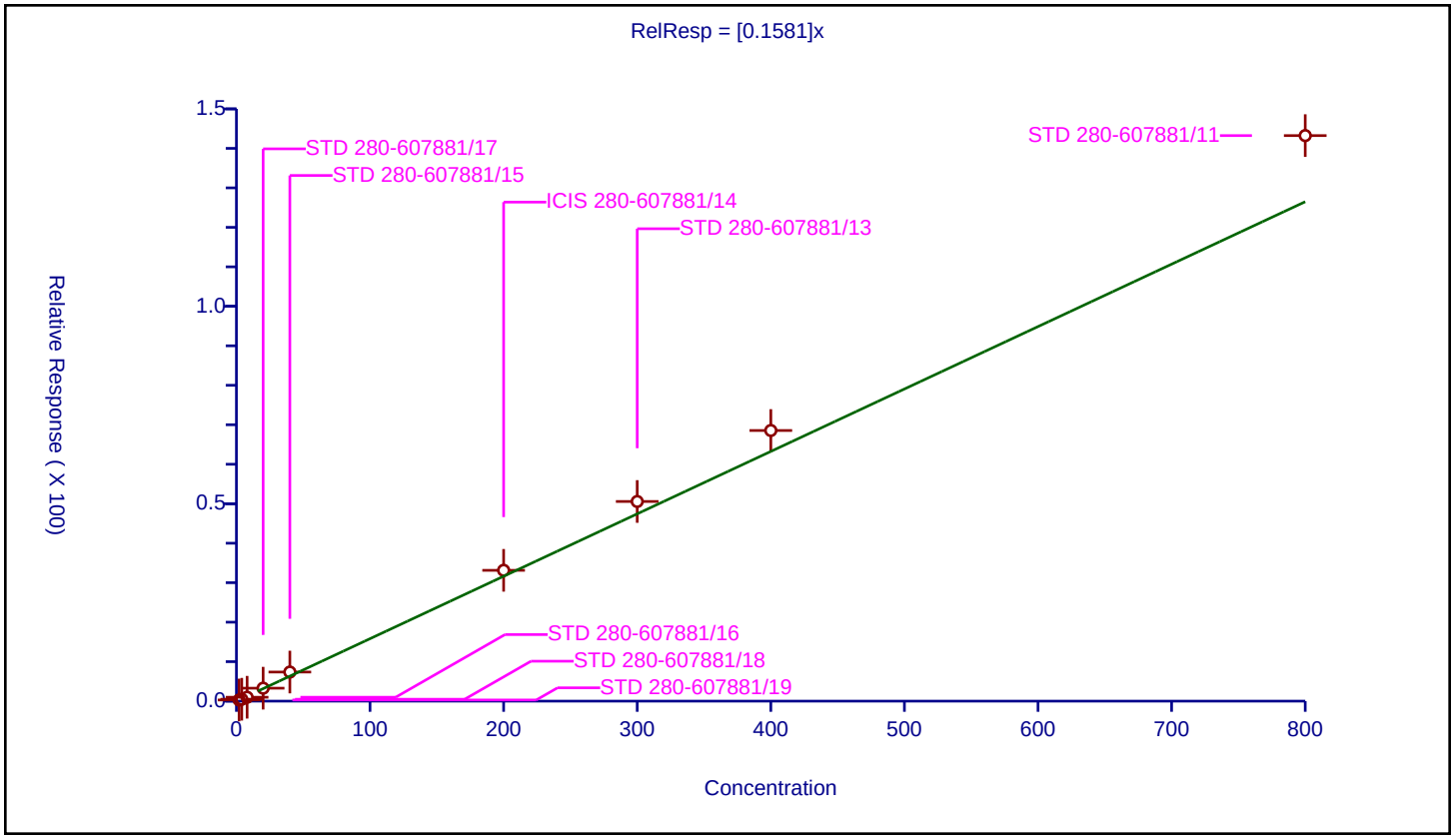
Curve Coefficients

Intercept:	0
Slope:	0.1581

Error Coefficients

Standard Error:	1860000
Relative Standard Error:	14.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.290716	50.0	1347020.0	0.145358	Y
2	STD 280-607881/18	4.0	0.484761	50.0	1321475.0	0.12119	Y
3	STD 280-607881/16	8.0	0.988025	50.0	1358265.0	0.123503	Y
4	STD 280-607881/17	20.0	3.281686	50.0	1337910.0	0.164084	Y
5	STD 280-607881/15	40.0	7.366746	50.0	1371311.0	0.184169	Y
6	ICIS 280-607881/14	200.0	33.134177	50.0	1433467.0	0.165671	Y
7	STD 280-607881/13	300.0	50.568776	50.0	1474746.0	0.168563	Y
8	STD 280-607881/12	400.0	68.547824	50.0	1493380.0	0.17137	Y
9	STD 280-607881/11	800.0	143.236507	50.0	1569677.0	0.179046	Y



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Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

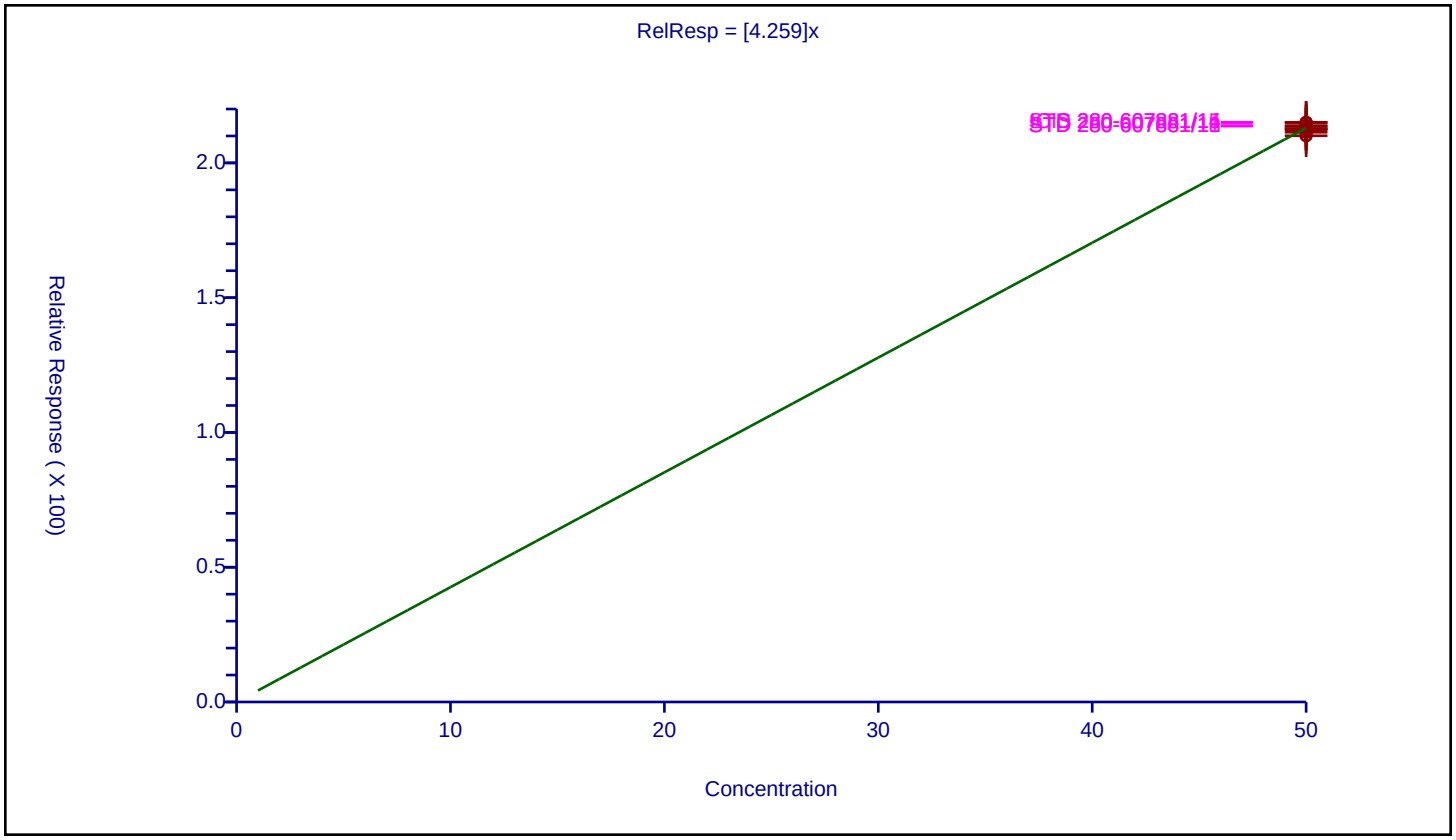
Curve Coefficients

Intercept:	0
Slope:	4.259

Error Coefficients

Standard Error:	1480000
Relative Standard Error:	0.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	213.815933	50.0	361445.0	4.276319	Y
2	STD 280-607881/12	50.0	212.690541	50.0	350056.0	4.253811	Y
3	STD 280-607881/13	50.0	211.3764	50.0	345430.0	4.227528	Y
4	ICIS 280-607881/14	50.0	215.06456	50.0	327912.0	4.301291	Y
5	STD 280-607881/15	50.0	214.950808	50.0	319160.0	4.299016	Y
6	STD 280-607881/16	50.0	212.728599	50.0	311900.0	4.254572	Y
7	STD 280-607881/17	50.0	210.079121	50.0	312939.0	4.201582	Y
8	STD 280-607881/18	50.0	213.662942	50.0	303218.0	4.273259	Y
9	STD 280-607881/19	50.0	212.322169	50.0	310688.0	4.246443	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

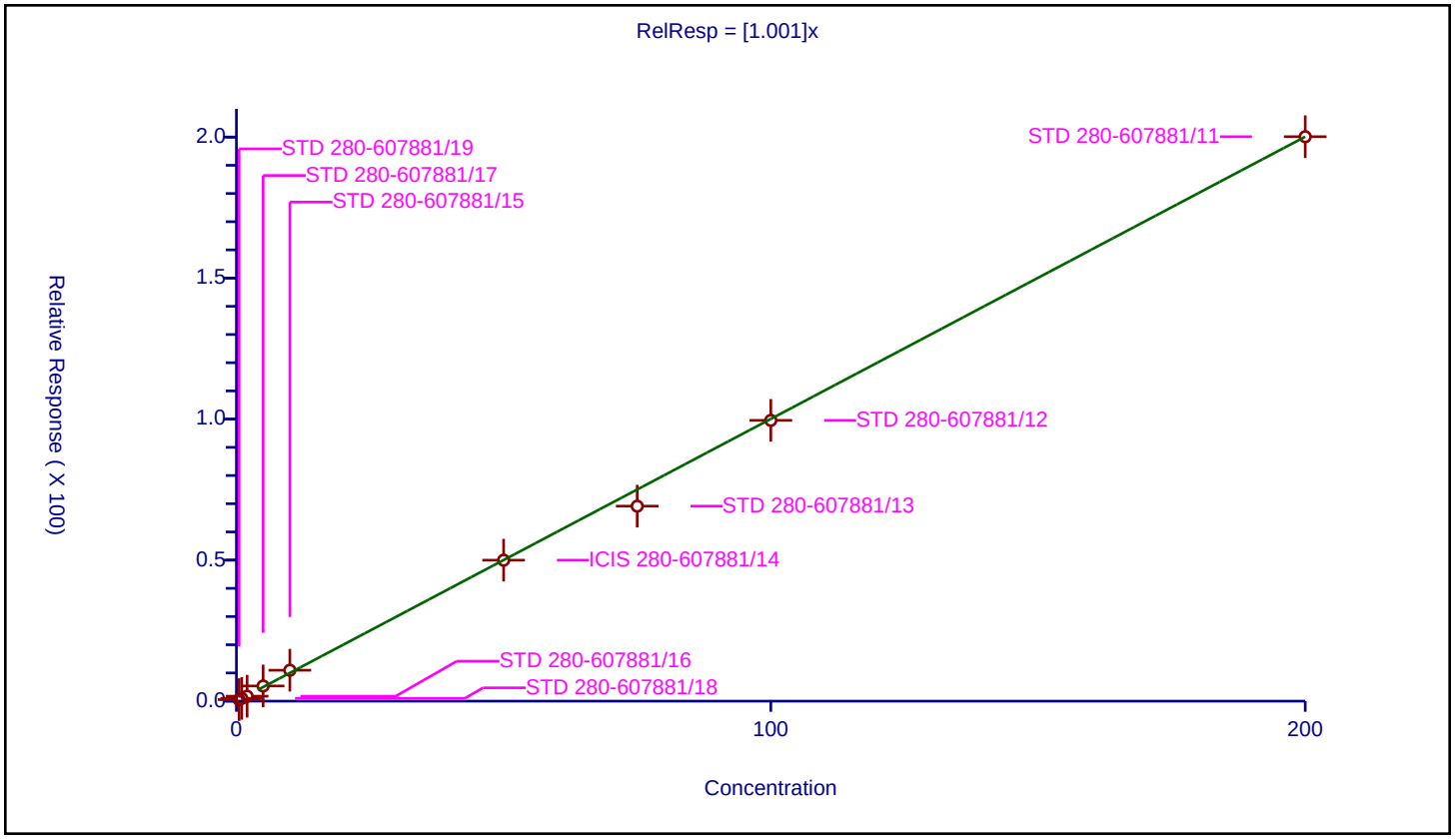
Curve Coefficients

Intercept:	0
Slope:	1.001

Error Coefficients

Standard Error:	2610000
Relative Standard Error:	7.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.533066	50.0	1347020.0	1.066131	Y
2	STD 280-607881/18	1.0	0.975766	50.0	1321475.0	0.975766	Y
3	STD 280-607881/16	2.0	1.750027	50.0	1358265.0	0.875013	Y
4	STD 280-607881/17	5.0	5.377417	50.0	1337910.0	1.075483	Y
5	STD 280-607881/15	10.0	10.956267	50.0	1371311.0	1.095627	Y
6	ICIS 280-607881/14	50.0	49.986187	50.0	1433467.0	0.999724	Y
7	STD 280-607881/13	75.0	69.141432	50.0	1474746.0	0.921886	Y
8	STD 280-607881/12	100.0	99.555405	50.0	1493380.0	0.995554	Y
9	STD 280-607881/11	200.0	200.142227	50.0	1569677.0	1.000711	Y



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Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

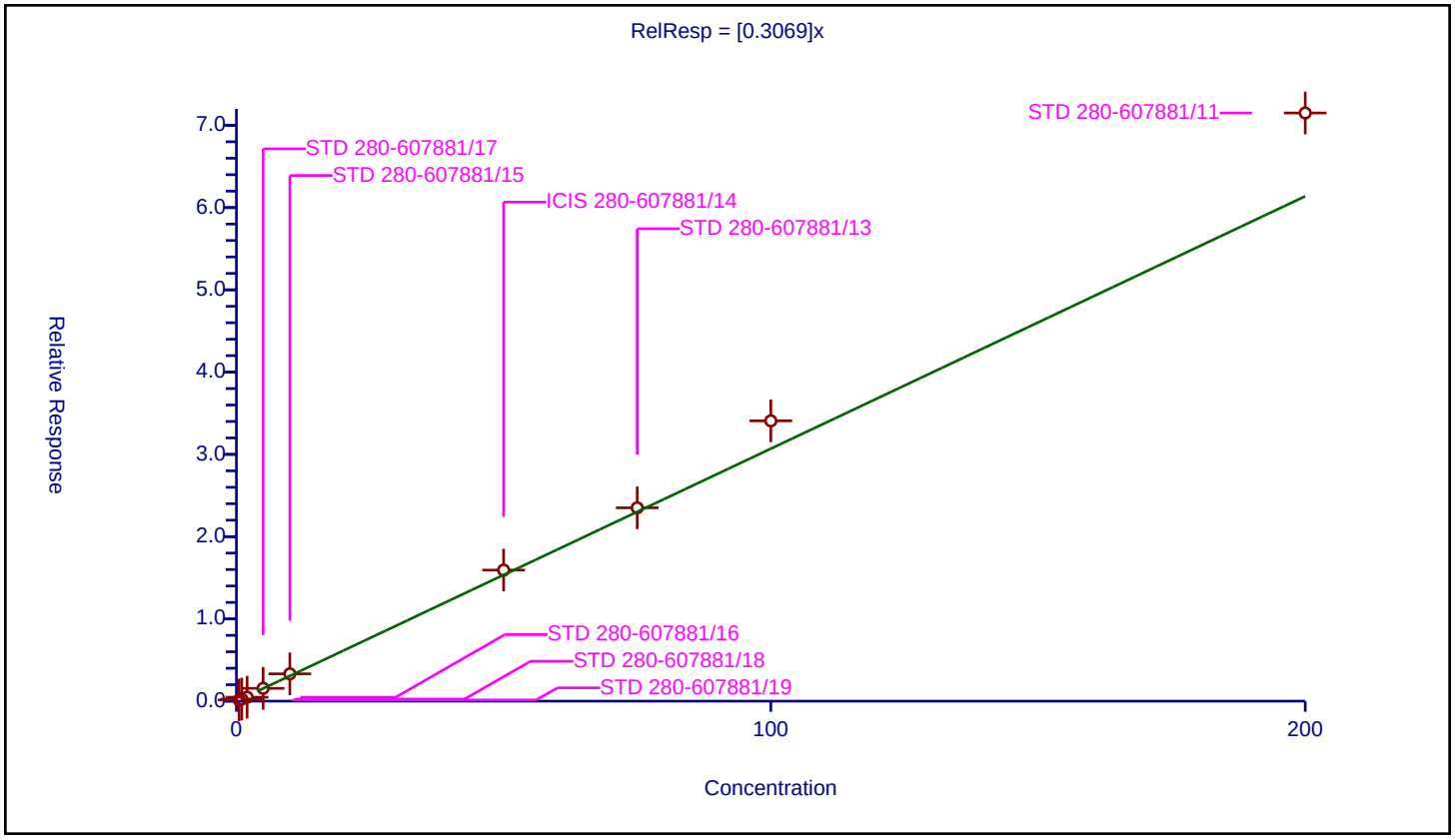
Curve Coefficients

Intercept:	0
Slope:	0.3069

Error Coefficients

Standard Error:	920000
Relative Standard Error:	12.5
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.145358	50.0	1347020.0	0.290716	Y
2	STD 280-607881/18	1.0	0.257364	50.0	1321475.0	0.257364	Y
3	STD 280-607881/16	2.0	0.479104	50.0	1358265.0	0.239552	Y
4	STD 280-607881/17	5.0	1.560456	50.0	1337910.0	0.312091	Y
5	STD 280-607881/15	10.0	3.319196	50.0	1371311.0	0.33192	Y
6	ICIS 280-607881/14	50.0	15.933293	50.0	1433467.0	0.318666	Y
7	STD 280-607881/13	75.0	23.504793	50.0	1474746.0	0.313397	Y
8	STD 280-607881/12	100.0	34.078031	50.0	1493380.0	0.34078	Y
9	STD 280-607881/11	200.0	71.5028	50.0	1569677.0	0.357514	Y



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Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

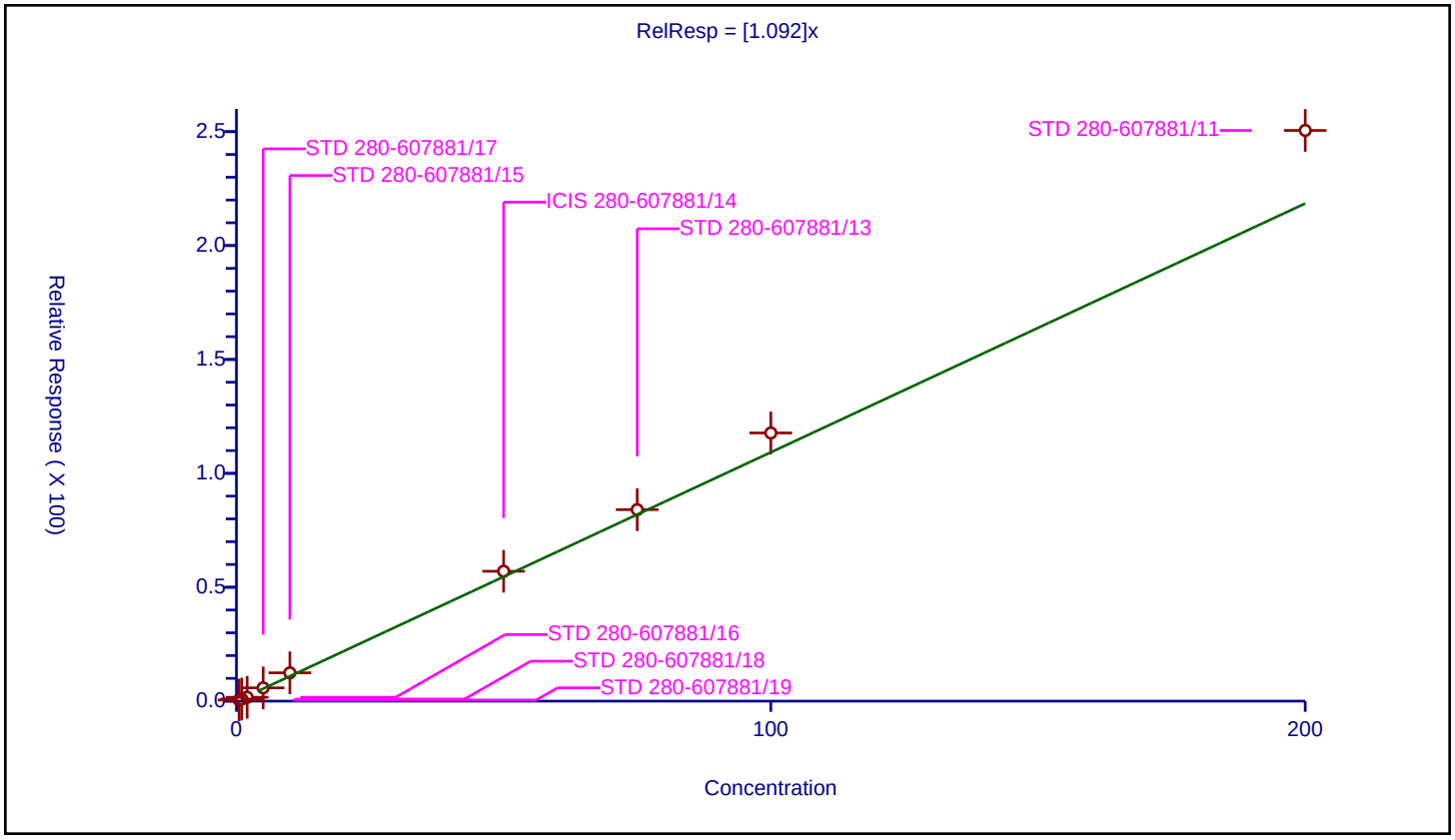
Curve Coefficients

Intercept:	0
Slope:	1.092

Error Coefficients

Standard Error:	745000
Relative Standard Error:	13.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.485053	50.0	310688.0	0.970105	Y
2	STD 280-607881/18	1.0	0.91238	50.0	303218.0	0.91238	Y
3	STD 280-607881/16	2.0	1.695095	50.0	311900.0	0.847547	Y
4	STD 280-607881/17	5.0	5.831807	50.0	312939.0	1.166361	Y
5	STD 280-607881/15	10.0	12.438275	50.0	319160.0	1.243828	Y
6	ICIS 280-607881/14	50.0	57.023378	50.0	327912.0	1.140468	Y
7	STD 280-607881/13	75.0	84.058565	50.0	345430.0	1.120781	Y
8	STD 280-607881/12	100.0	117.740304	50.0	350056.0	1.177403	Y
9	STD 280-607881/11	200.0	250.545311	50.0	361445.0	1.252727	Y



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Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

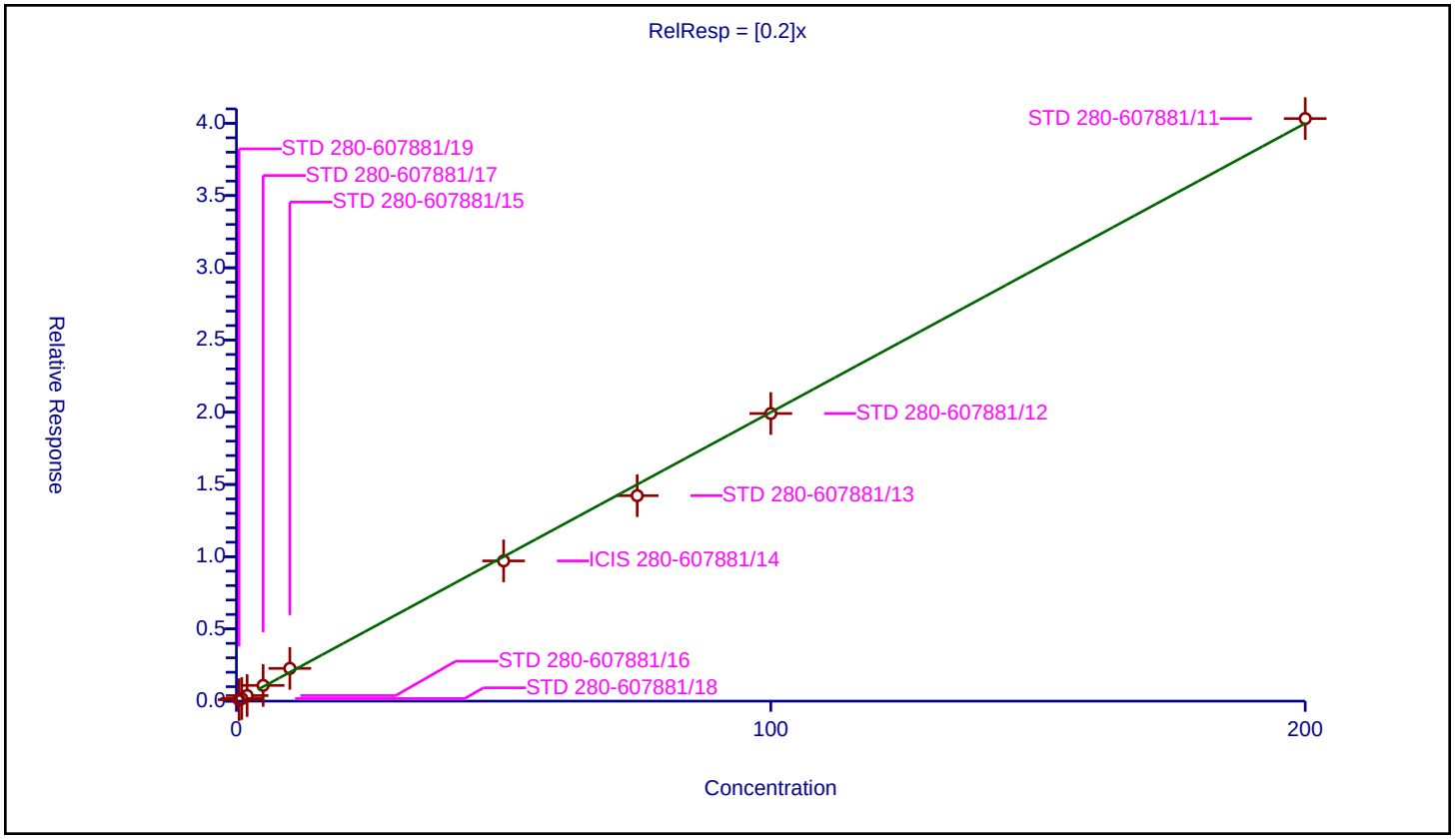
Curve Coefficients

Intercept:	0
Slope:	0.2

Error Coefficients

Standard Error:	526000
Relative Standard Error:	7.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.100295	50.0	1347020.0	0.200591	Y
2	STD 280-607881/18	1.0	0.178399	50.0	1321475.0	0.178399	Y
3	STD 280-607881/16	2.0	0.383762	50.0	1358265.0	0.191881	Y
4	STD 280-607881/17	5.0	1.088788	50.0	1337910.0	0.217758	Y
5	STD 280-607881/15	10.0	2.266772	50.0	1371311.0	0.226677	Y
6	ICIS 280-607881/14	50.0	9.709432	50.0	1433467.0	0.194189	Y
7	STD 280-607881/13	75.0	14.226179	50.0	1474746.0	0.189682	Y
8	STD 280-607881/12	100.0	19.911945	50.0	1493380.0	0.199119	Y
9	STD 280-607881/11	200.0	40.32664	50.0	1569677.0	0.201633	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

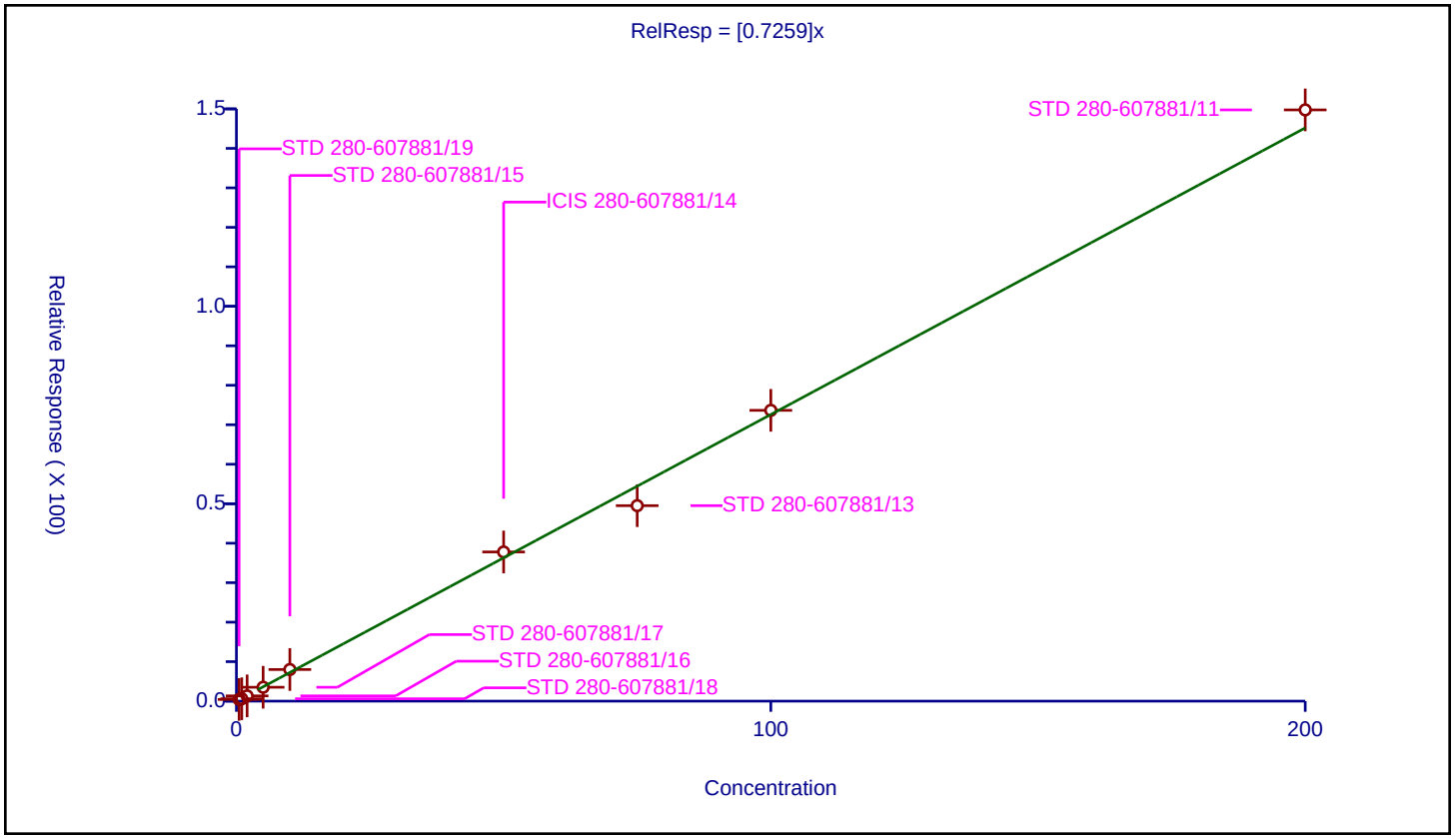
Curve Coefficients

Intercept:	0
Slope:	0.7259

Error Coefficients

Standard Error:	450000
Relative Standard Error:	10.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.428082	50.0	310688.0	0.856164	Y
2	STD 280-607881/18	1.0	0.603856	50.0	303218.0	0.603856	Y
3	STD 280-607881/16	2.0	1.335043	50.0	311900.0	0.667522	Y
4	STD 280-607881/17	5.0	3.518897	50.0	312939.0	0.703779	Y
5	STD 280-607881/15	10.0	8.008209	50.0	319160.0	0.800821	Y
6	ICIS 280-607881/14	50.0	37.783918	50.0	327912.0	0.755678	Y
7	STD 280-607881/13	75.0	49.508439	50.0	345430.0	0.660113	Y
8	STD 280-607881/12	100.0	73.651073	50.0	350056.0	0.736511	Y
9	STD 280-607881/11	200.0	149.746434	50.0	361445.0	0.748732	Y



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Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

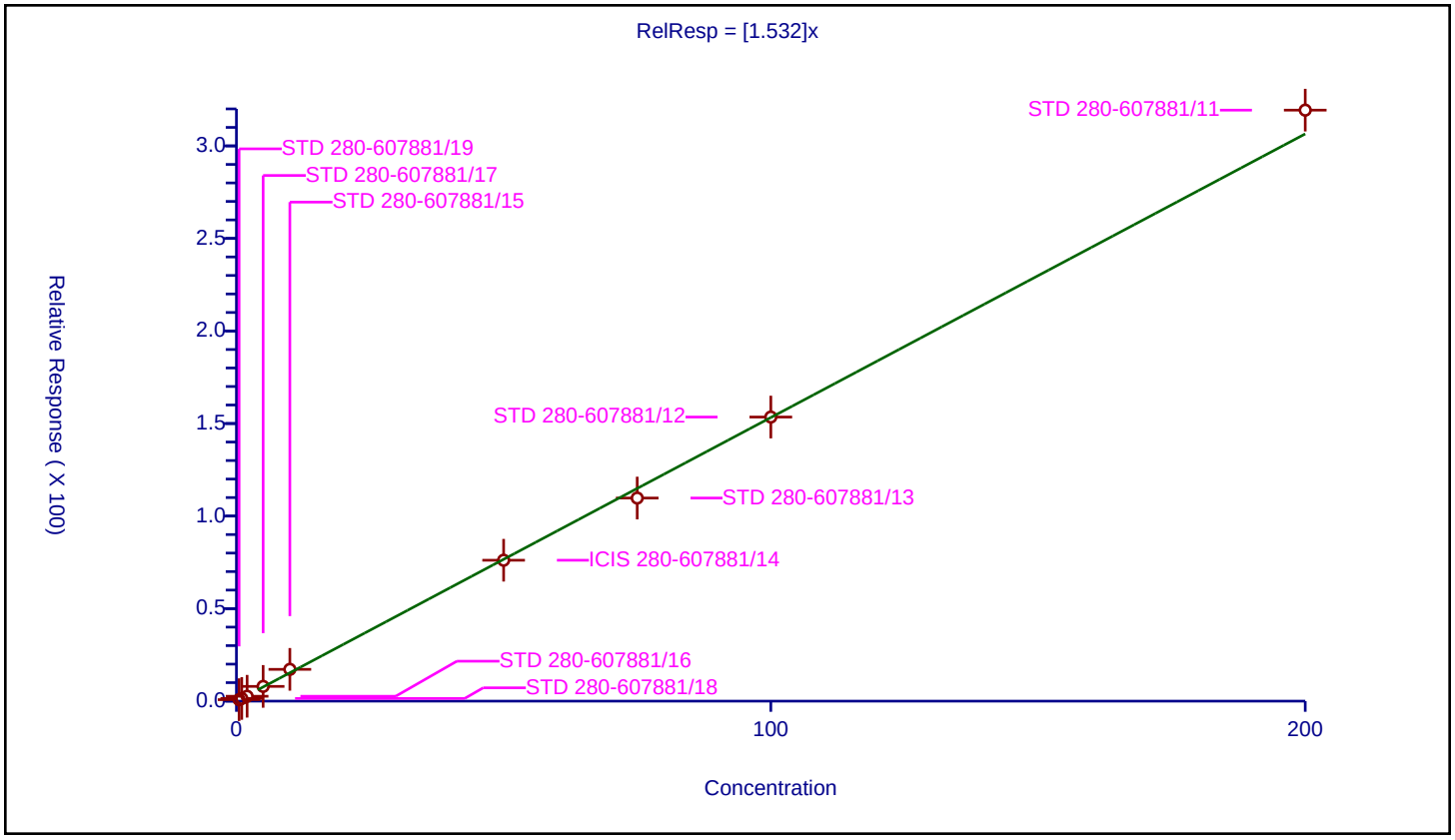
Curve Coefficients

Intercept:	0
Slope:	1.532

Error Coefficients

Standard Error:	957000
Relative Standard Error:	7.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.793883	50.0	310688.0	1.587767	Y
2	STD 280-607881/18	1.0	1.452255	50.0	303218.0	1.452255	Y
3	STD 280-607881/16	2.0	2.64604	50.0	311900.0	1.32302	Y
4	STD 280-607881/17	5.0	7.969924	50.0	312939.0	1.593985	Y
5	STD 280-607881/15	10.0	17.173361	50.0	319160.0	1.717336	Y
6	ICIS 280-607881/14	50.0	76.138415	50.0	327912.0	1.522768	Y
7	STD 280-607881/13	75.0	109.738876	50.0	345430.0	1.463185	Y
8	STD 280-607881/12	100.0	153.496583	50.0	350056.0	1.534966	Y
9	STD 280-607881/11	200.0	319.322719	50.0	361445.0	1.596614	Y



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Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

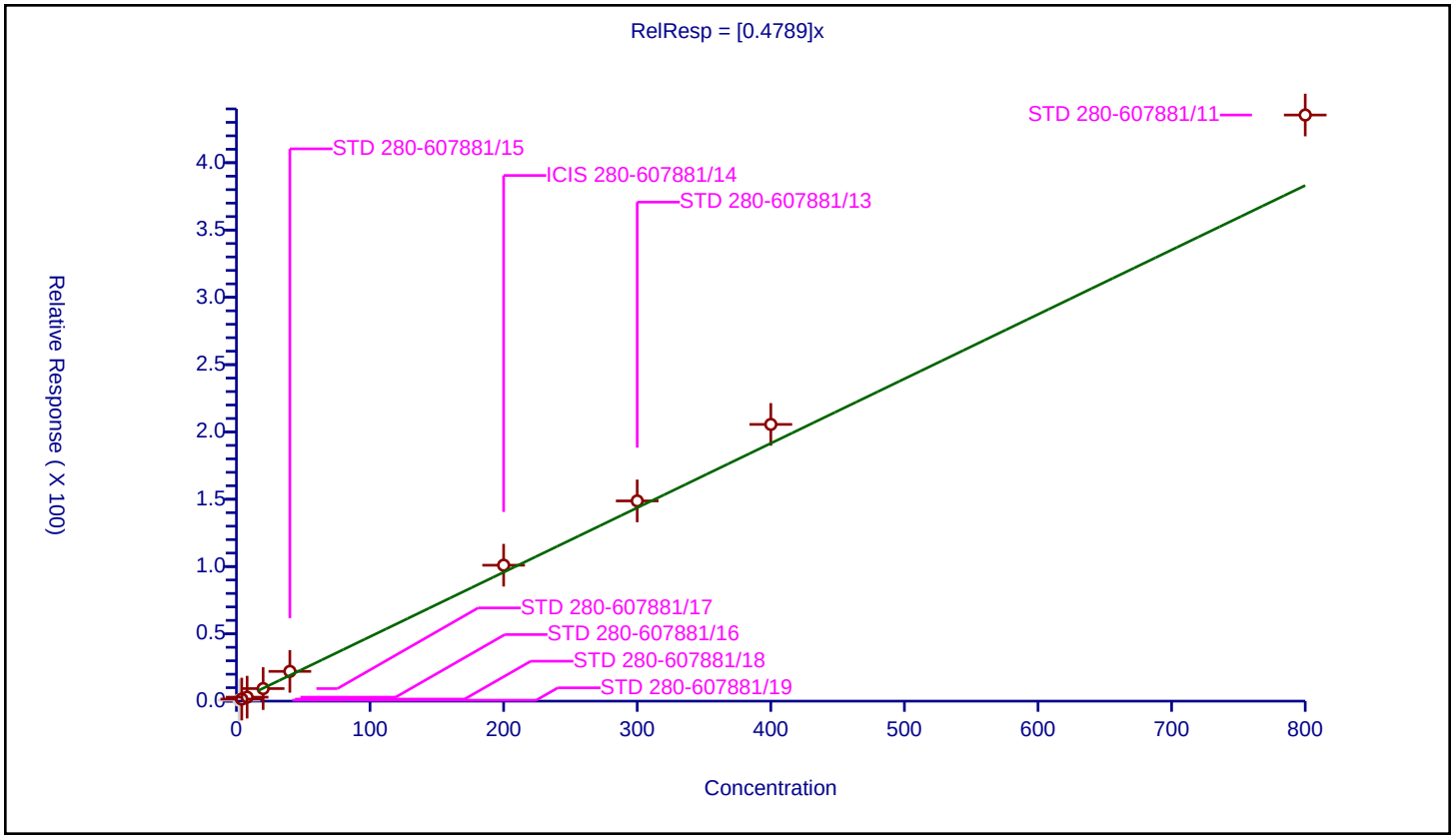
Curve Coefficients

Intercept:	0
Slope:	0.4789

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	14.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.721463	50.0	310688.0	0.360732	N
2	STD 280-607881/18	4.0	1.530087	50.0	303218.0	0.382522	Y
3	STD 280-607881/16	8.0	2.962328	50.0	311900.0	0.370291	Y
4	STD 280-607881/17	20.0	9.325779	50.0	312939.0	0.466289	Y
5	STD 280-607881/15	40.0	22.118373	50.0	319160.0	0.552959	Y
6	ICIS 280-607881/14	200.0	100.984105	50.0	327912.0	0.504921	Y
7	STD 280-607881/13	300.0	148.747214	50.0	345430.0	0.495824	Y
8	STD 280-607881/12	400.0	205.593248	50.0	350056.0	0.513983	Y
9	STD 280-607881/11	800.0	435.454495	50.0	361445.0	0.544318	Y



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Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

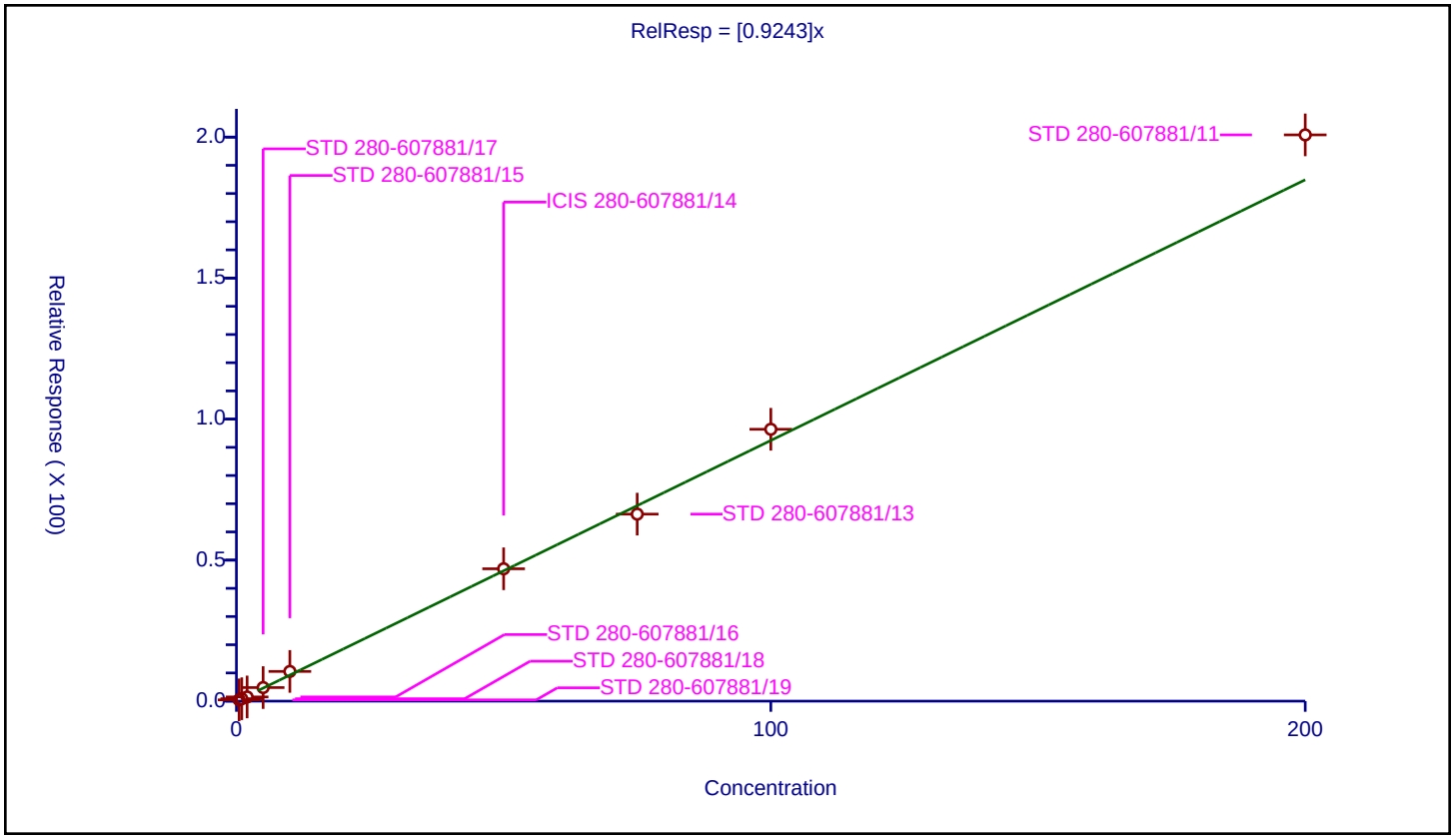
Curve Coefficients

Intercept:	0
Slope:	0.9243

Error Coefficients

Standard Error:	599000
Relative Standard Error:	9.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.453188	50.0	310688.0	0.906376	Y
2	STD 280-607881/18	1.0	0.859283	50.0	303218.0	0.859283	Y
3	STD 280-607881/16	2.0	1.491343	50.0	311900.0	0.745672	Y
4	STD 280-607881/17	5.0	4.815475	50.0	312939.0	0.963095	Y
5	STD 280-607881/15	10.0	10.534841	50.0	319160.0	1.053484	Y
6	ICIS 280-607881/14	50.0	46.927072	50.0	327912.0	0.938541	Y
7	STD 280-607881/13	75.0	66.31054	50.0	345430.0	0.884141	Y
8	STD 280-607881/12	100.0	96.399576	50.0	350056.0	0.963996	Y
9	STD 280-607881/11	200.0	200.782	50.0	361445.0	1.00391	Y



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Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

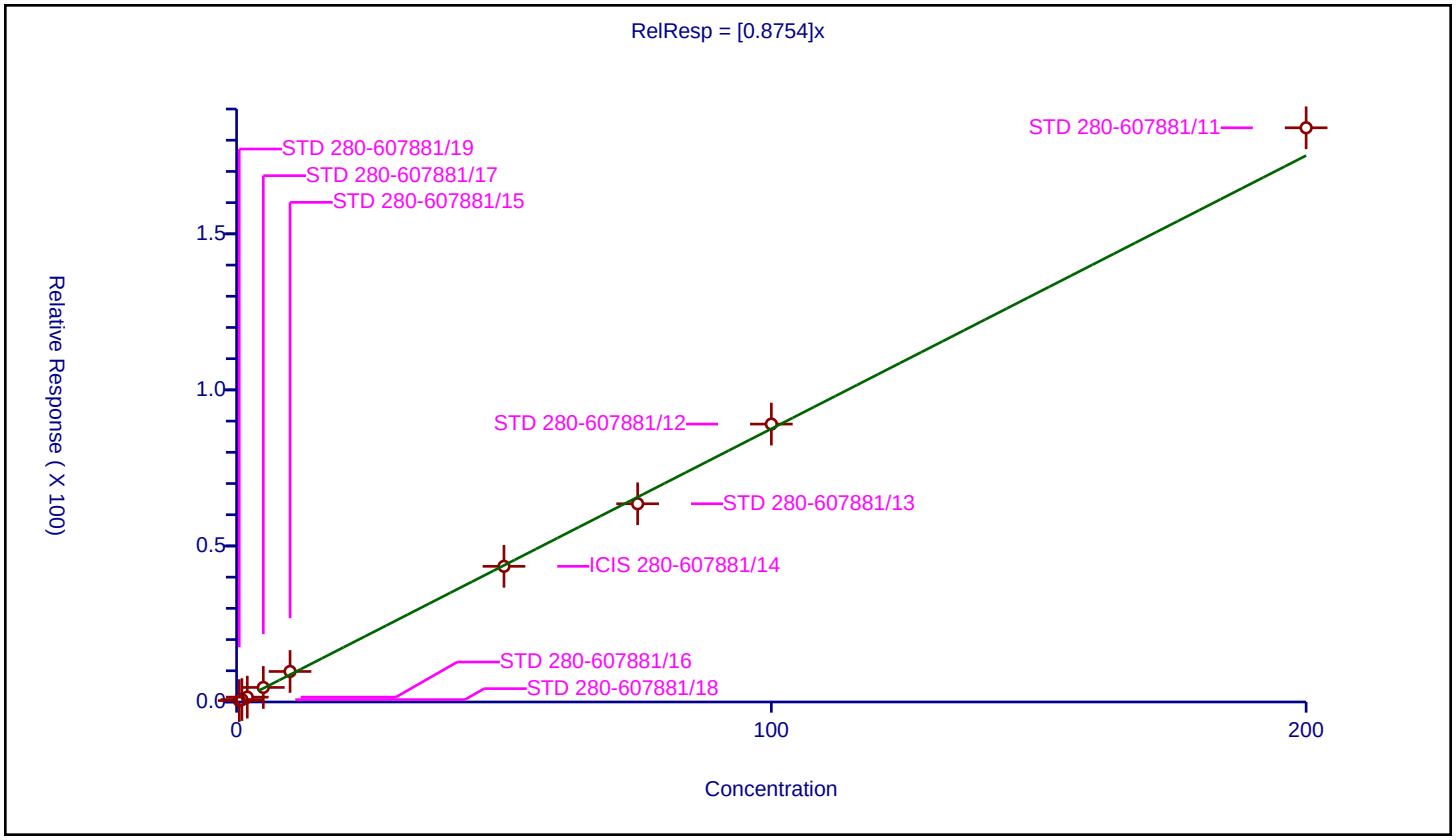
Curve Coefficients

Intercept:	0
Slope:	0.8754

Error Coefficients

Standard Error:	552000
Relative Standard Error:	7.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.447716	50.0	310688.0	0.895432	Y
2	STD 280-607881/18	1.0	0.7676	50.0	303218.0	0.7676	Y
3	STD 280-607881/16	2.0	1.556749	50.0	311900.0	0.778374	Y
4	STD 280-607881/17	5.0	4.663209	50.0	312939.0	0.932642	Y
5	STD 280-607881/15	10.0	9.781301	50.0	319160.0	0.97813	Y
6	ICIS 280-607881/14	50.0	43.467607	50.0	327912.0	0.869352	Y
7	STD 280-607881/13	75.0	63.513302	50.0	345430.0	0.846844	Y
8	STD 280-607881/12	100.0	89.050323	50.0	350056.0	0.890503	Y
9	STD 280-607881/11	200.0	183.98221	50.0	361445.0	0.919911	Y



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Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

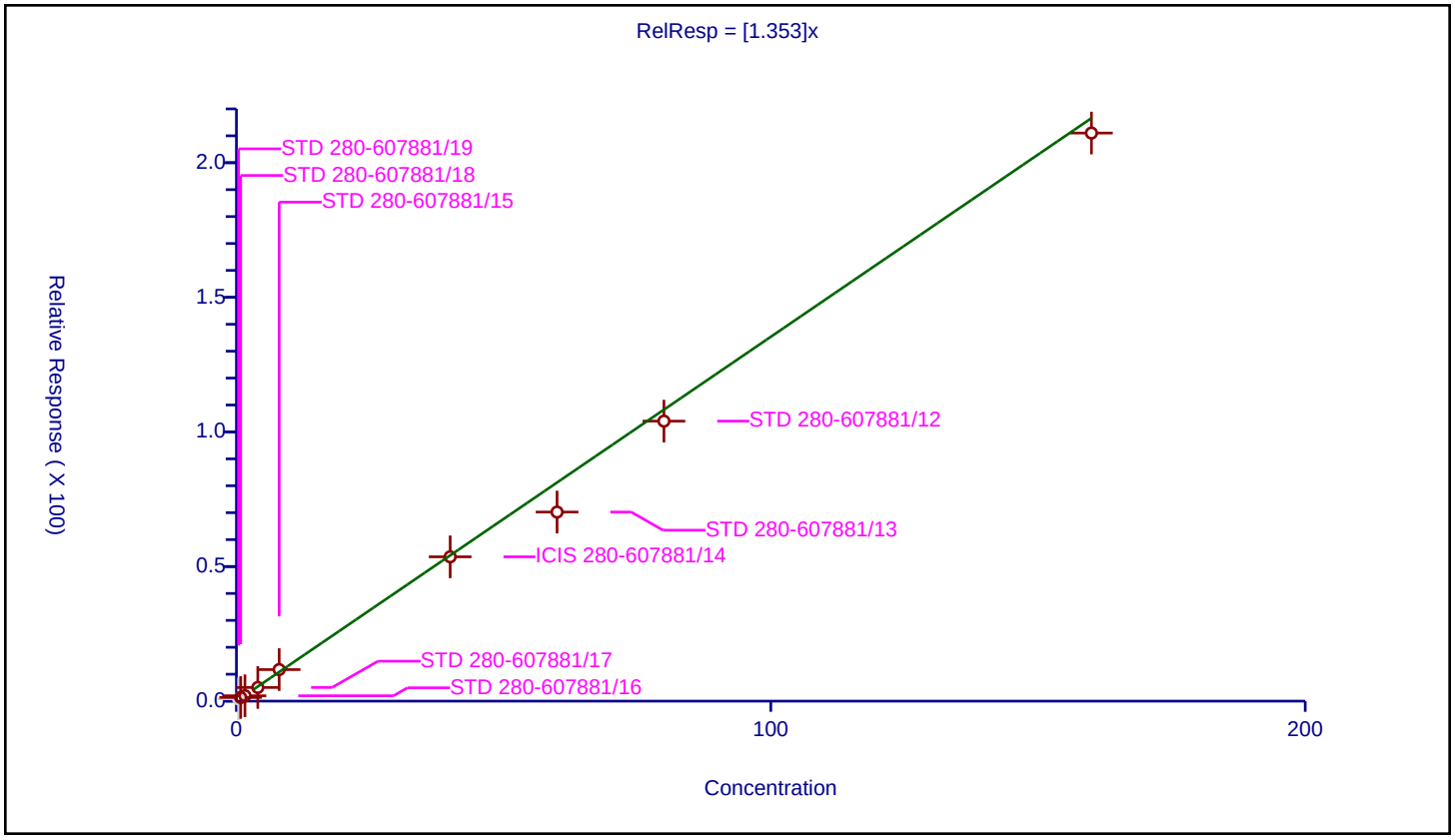
Curve Coefficients

Intercept:	0
Slope:	1.353

Error Coefficients

Standard Error:	678000
Relative Standard Error:	12.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.4	0.859866	50.0	310688.0	2.149665	N
2	STD 280-607881/18	0.8	1.373599	50.0	303218.0	1.716999	Y
3	STD 280-607881/16	1.6	1.996954	50.0	311900.0	1.248096	Y
4	STD 280-607881/17	4.0	5.070797	50.0	312939.0	1.267699	Y
5	STD 280-607881/15	8.0	11.71967	50.0	319160.0	1.464959	Y
6	ICIS 280-607881/14	40.0	53.608743	50.0	327912.0	1.340219	Y
7	STD 280-607881/13	60.0	70.235069	50.0	345430.0	1.170584	Y
8	STD 280-607881/12	80.0	104.014072	50.0	350056.0	1.300176	Y
9	STD 280-607881/11	160.0	211.026574	50.0	361445.0	1.318916	Y



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Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

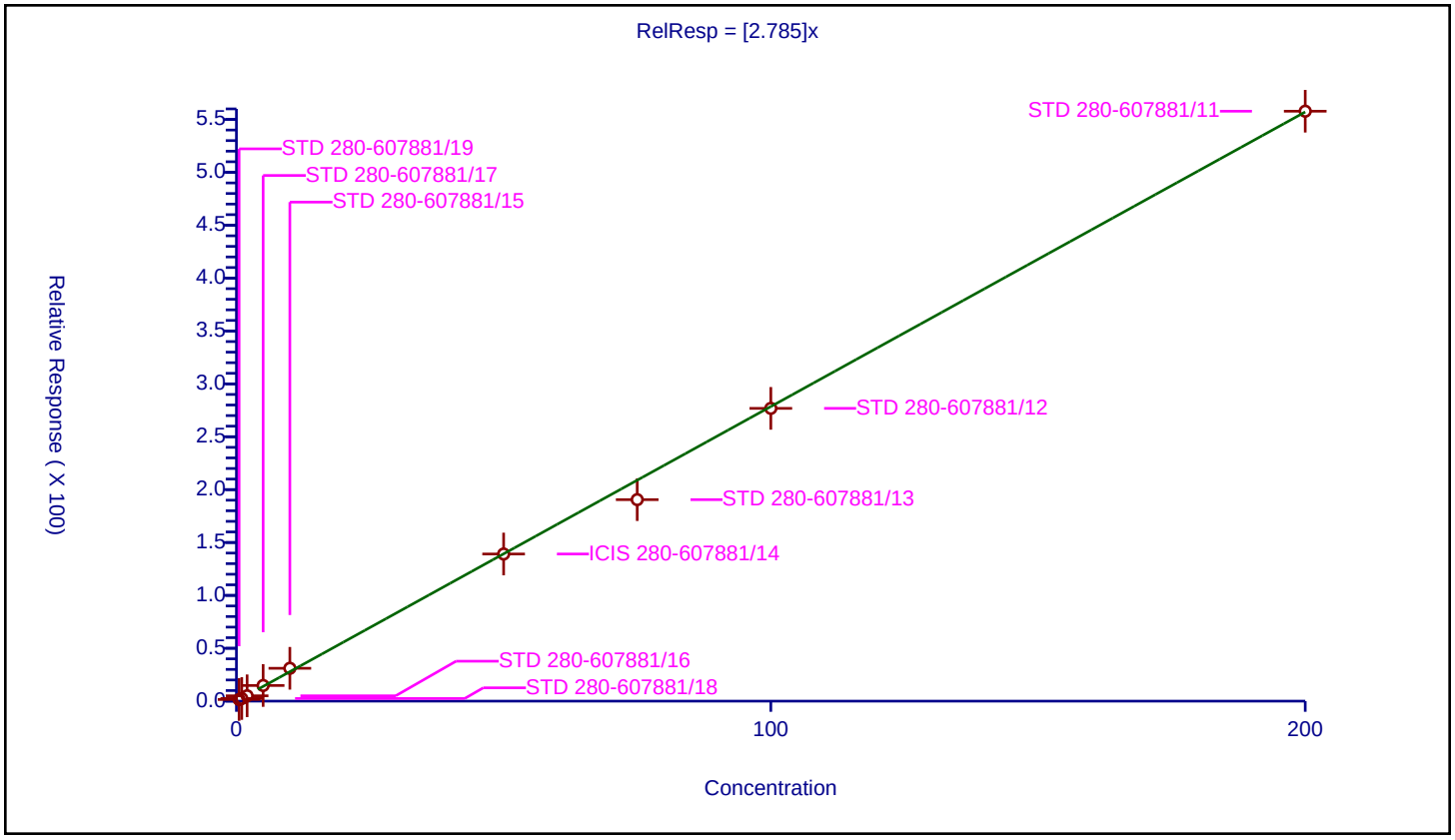
Curve Coefficients

Intercept:	0
Slope:	2.785

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	8.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.552522	50.0	310688.0	3.105044	Y
2	STD 280-607881/18	1.0	2.488968	50.0	303218.0	2.488968	Y
3	STD 280-607881/16	2.0	5.060276	50.0	311900.0	2.530138	Y
4	STD 280-607881/17	5.0	14.792979	50.0	312939.0	2.958596	Y
5	STD 280-607881/15	10.0	31.06279	50.0	319160.0	3.106279	Y
6	ICIS 280-607881/14	50.0	139.121624	50.0	327912.0	2.782432	Y
7	STD 280-607881/13	75.0	190.52355	50.0	345430.0	2.540314	Y
8	STD 280-607881/12	100.0	276.84042	50.0	350056.0	2.768404	Y
9	STD 280-607881/11	200.0	557.802709	50.0	361445.0	2.789014	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

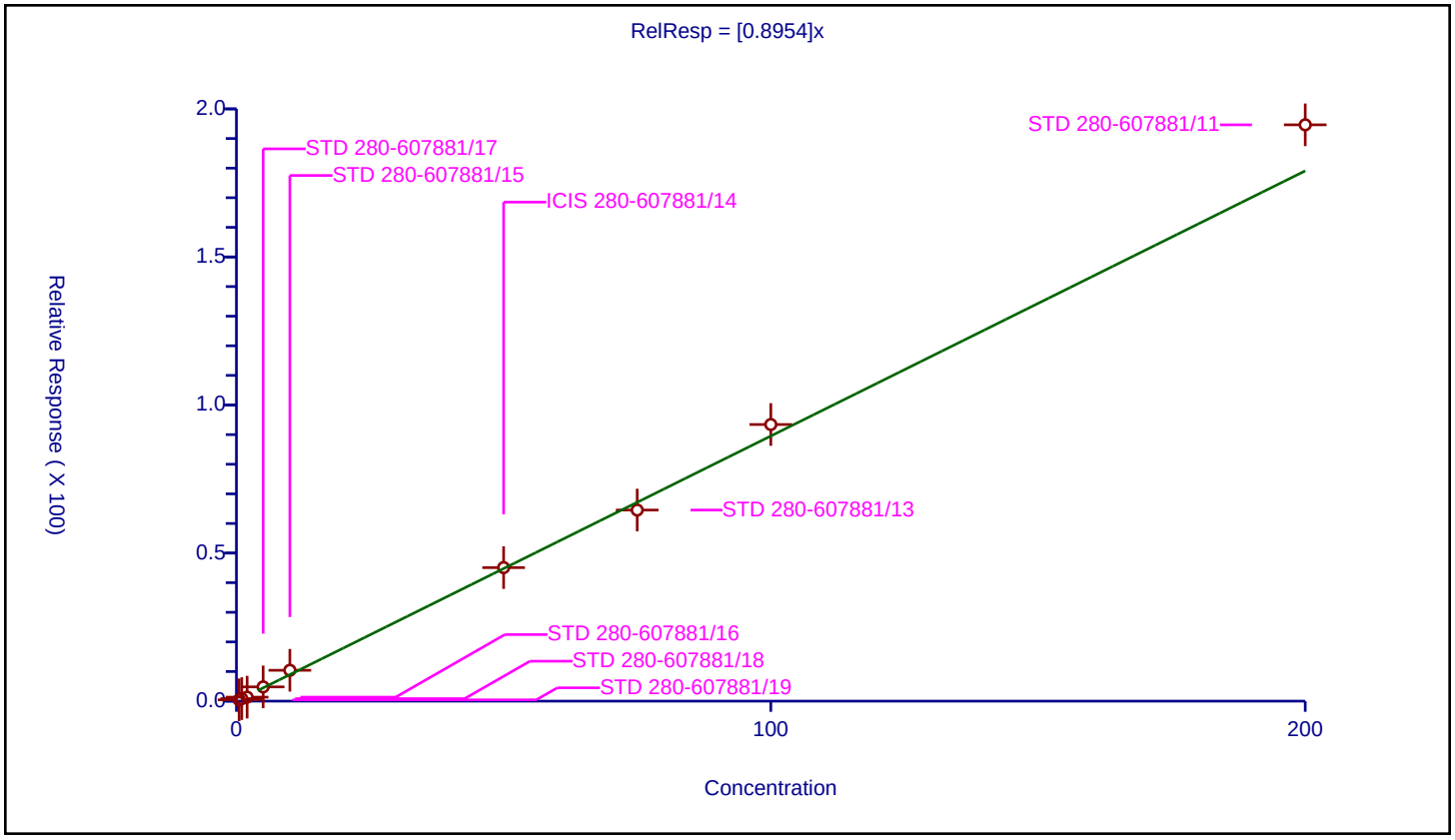
Curve Coefficients

Intercept:	0
Slope:	0.8954

Error Coefficients

Standard Error:	581000
Relative Standard Error:	11.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.432588	50.0	310688.0	0.865177	Y
2	STD 280-607881/18	1.0	0.84807	50.0	303218.0	0.84807	Y
3	STD 280-607881/16	2.0	1.344982	50.0	311900.0	0.672491	Y
4	STD 280-607881/17	5.0	4.80477	50.0	312939.0	0.960954	Y
5	STD 280-607881/15	10.0	10.420792	50.0	319160.0	1.042079	Y
6	ICIS 280-607881/14	50.0	45.092281	50.0	327912.0	0.901846	Y
7	STD 280-607881/13	75.0	64.528269	50.0	345430.0	0.860377	Y
8	STD 280-607881/12	100.0	93.420338	50.0	350056.0	0.934203	Y
9	STD 280-607881/11	200.0	194.624908	50.0	361445.0	0.973125	Y



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Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

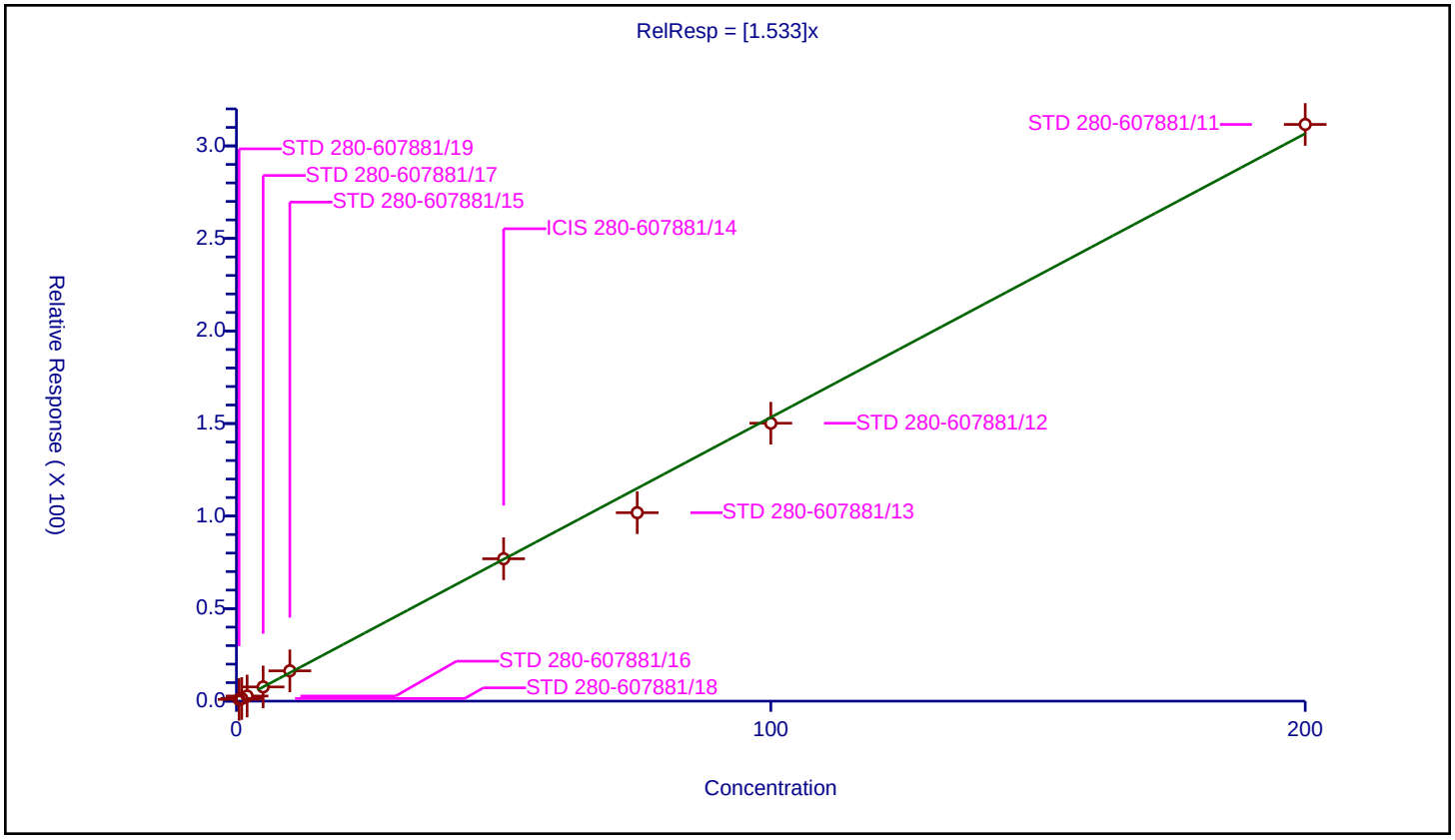
Curve Coefficients

Intercept:	0
Slope:	1.533

Error Coefficients

Standard Error:	931000
Relative Standard Error:	10.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.939206	50.0	310688.0	1.878412	Y
2	STD 280-607881/18	1.0	1.410371	50.0	303218.0	1.410371	Y
3	STD 280-607881/16	2.0	2.764508	50.0	311900.0	1.382254	Y
4	STD 280-607881/17	5.0	7.675458	50.0	312939.0	1.535092	Y
5	STD 280-607881/15	10.0	16.374546	50.0	319160.0	1.637455	Y
6	ICIS 280-607881/14	50.0	76.920942	50.0	327912.0	1.538419	Y
7	STD 280-607881/13	75.0	101.828156	50.0	345430.0	1.357709	Y
8	STD 280-607881/12	100.0	150.15826	50.0	350056.0	1.501583	Y
9	STD 280-607881/11	200.0	311.590145	50.0	361445.0	1.557951	Y



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Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

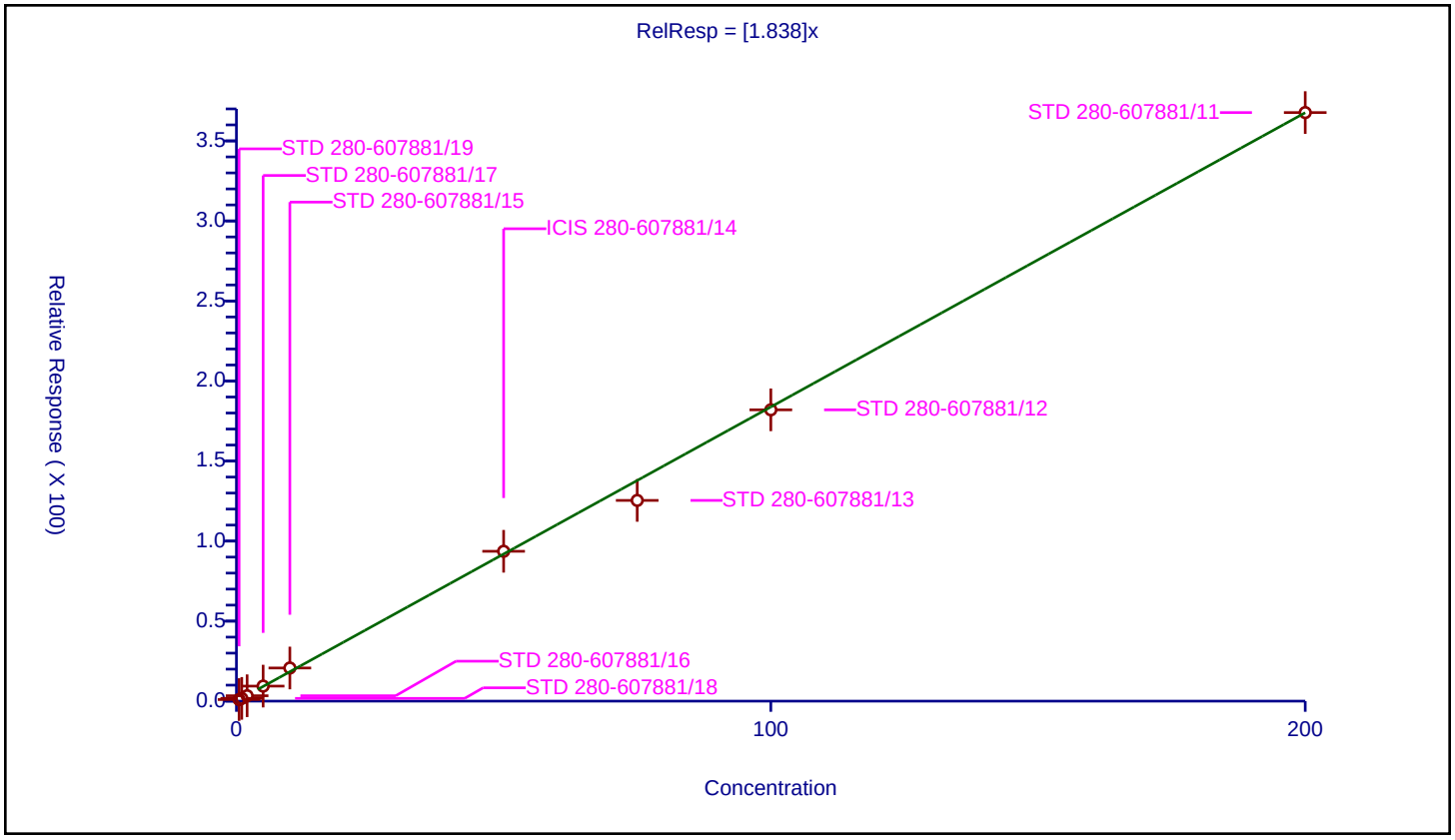
Curve Coefficients

Intercept:	0
Slope:	1.838

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	7.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.993923	50.0	310688.0	1.987846	Y
2	STD 280-607881/18	1.0	1.719225	50.0	303218.0	1.719225	Y
3	STD 280-607881/16	2.0	3.364861	50.0	311900.0	1.68243	Y
4	STD 280-607881/17	5.0	9.399595	50.0	312939.0	1.879919	Y
5	STD 280-607881/15	10.0	20.707482	50.0	319160.0	2.070748	Y
6	ICIS 280-607881/14	50.0	93.618105	50.0	327912.0	1.872362	Y
7	STD 280-607881/13	75.0	125.407608	50.0	345430.0	1.672101	Y
8	STD 280-607881/12	100.0	181.999309	50.0	350056.0	1.819993	Y
9	STD 280-607881/11	200.0	367.695362	50.0	361445.0	1.838477	Y



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Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

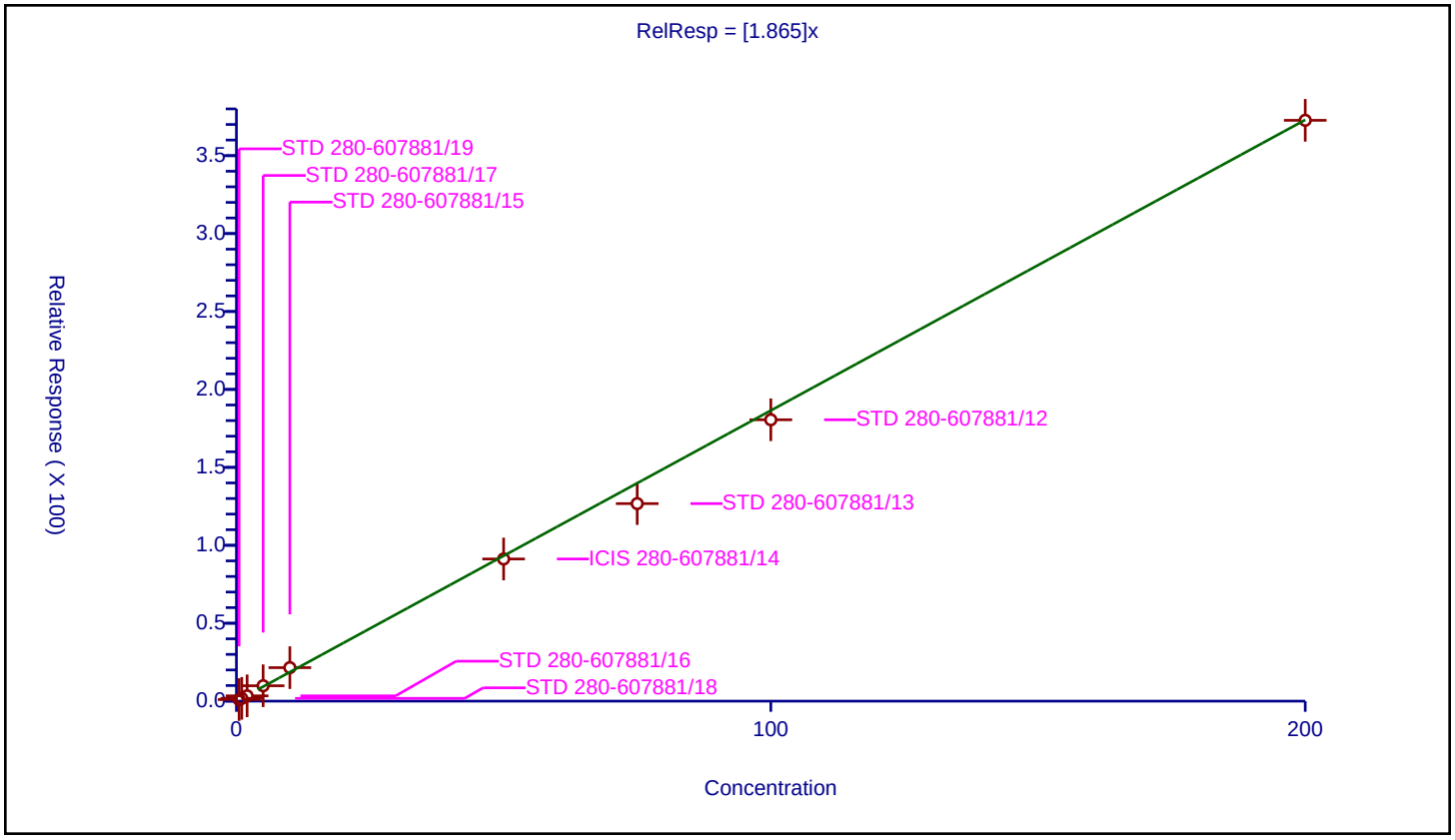
Curve Coefficients

Intercept:	0
Slope:	1.865

Error Coefficients

Standard Error:	1120000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.996981	50.0	310688.0	1.993962	Y
2	STD 280-607881/18	1.0	1.777599	50.0	303218.0	1.777599	Y
3	STD 280-607881/16	2.0	3.412151	50.0	311900.0	1.706076	Y
4	STD 280-607881/17	5.0	9.865501	50.0	312939.0	1.9731	Y
5	STD 280-607881/15	10.0	21.493765	50.0	319160.0	2.149376	Y
6	ICIS 280-607881/14	50.0	91.218528	50.0	327912.0	1.824371	Y
7	STD 280-607881/13	75.0	126.742321	50.0	345430.0	1.689898	Y
8	STD 280-607881/12	100.0	180.531258	50.0	350056.0	1.805313	Y
9	STD 280-607881/11	200.0	372.662922	50.0	361445.0	1.863315	Y



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Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

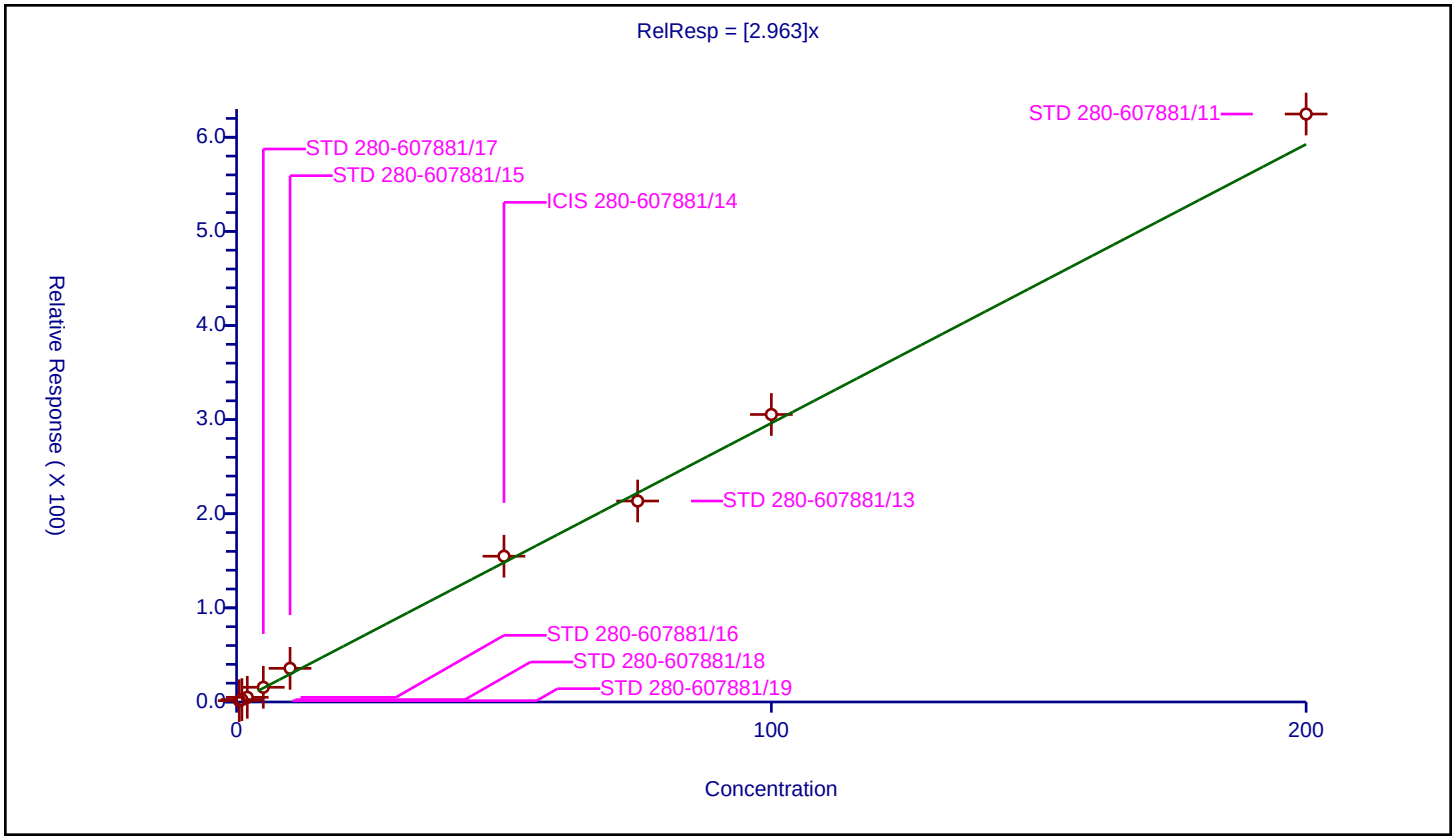
Curve Coefficients

Intercept:	0
Slope:	2.963

Error Coefficients

Standard Error:	1880000
Relative Standard Error:	11.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.405912	50.0	310688.0	2.811824	Y
2	STD 280-607881/18	1.0	2.548661	50.0	303218.0	2.548661	Y
3	STD 280-607881/16	2.0	4.964091	50.0	311900.0	2.482046	Y
4	STD 280-607881/17	5.0	15.622374	50.0	312939.0	3.124475	Y
5	STD 280-607881/15	10.0	35.752131	50.0	319160.0	3.575213	Y
6	ICIS 280-607881/14	50.0	154.881035	50.0	327912.0	3.097621	Y
7	STD 280-607881/13	75.0	213.518947	50.0	345430.0	2.846919	Y
8	STD 280-607881/12	100.0	305.451128	50.0	350056.0	3.054511	Y
9	STD 280-607881/11	200.0	624.661567	50.0	361445.0	3.123308	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

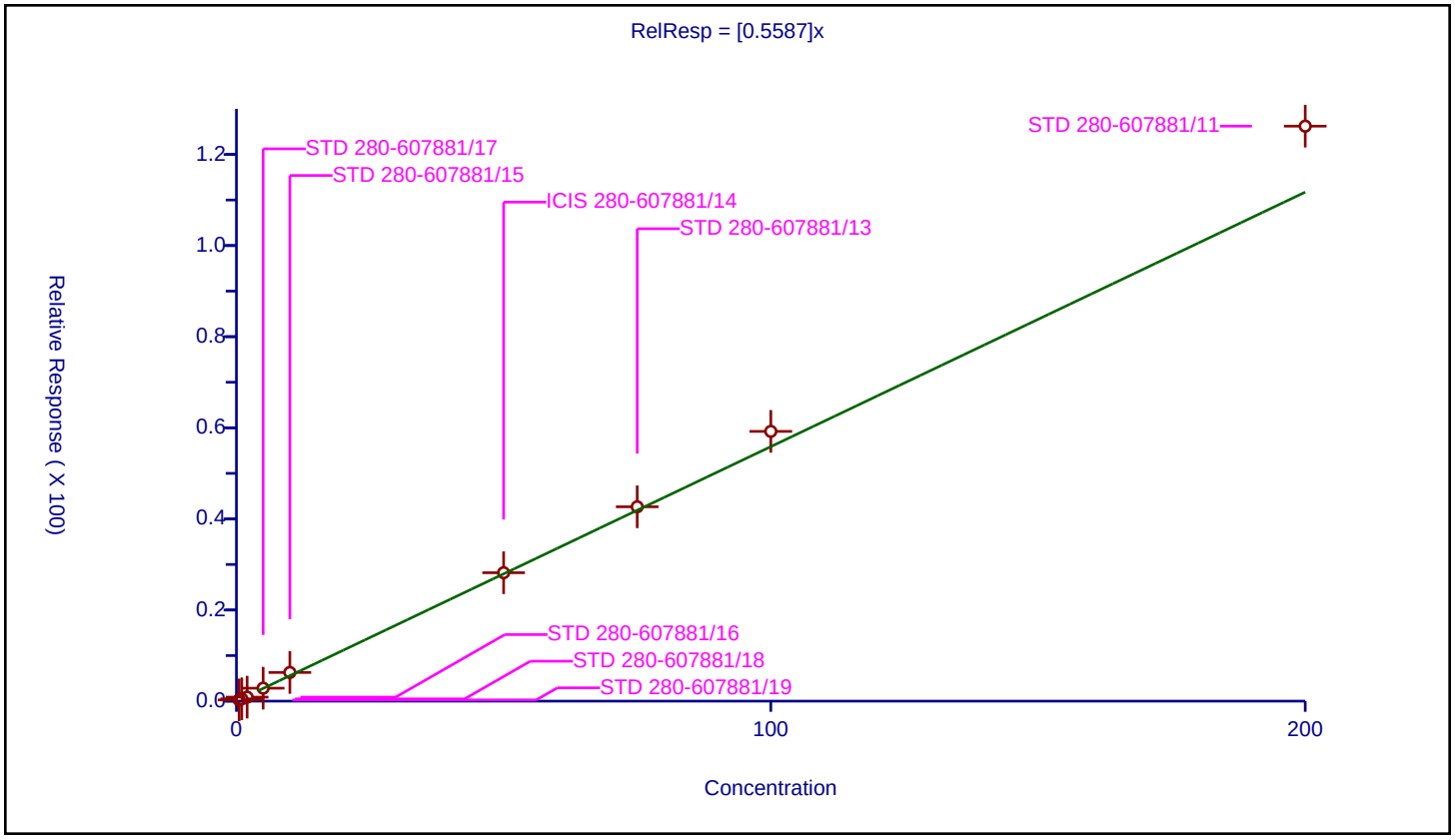
Curve Coefficients

Intercept:	0
Slope:	0.5587

Error Coefficients

Standard Error:	375000
Relative Standard Error:	10.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.266505	50.0	310688.0	0.533011	Y
2	STD 280-607881/18	1.0	0.501454	50.0	303218.0	0.501454	Y
3	STD 280-607881/16	2.0	0.878166	50.0	311900.0	0.439083	Y
4	STD 280-607881/17	5.0	2.845443	50.0	312939.0	0.569089	Y
5	STD 280-607881/15	10.0	6.295275	50.0	319160.0	0.629528	Y
6	ICIS 280-607881/14	50.0	28.188203	50.0	327912.0	0.563764	Y
7	STD 280-607881/13	75.0	42.662189	50.0	345430.0	0.568829	Y
8	STD 280-607881/12	100.0	59.213954	50.0	350056.0	0.59214	Y
9	STD 280-607881/11	200.0	126.212563	50.0	361445.0	0.631063	Y



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Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

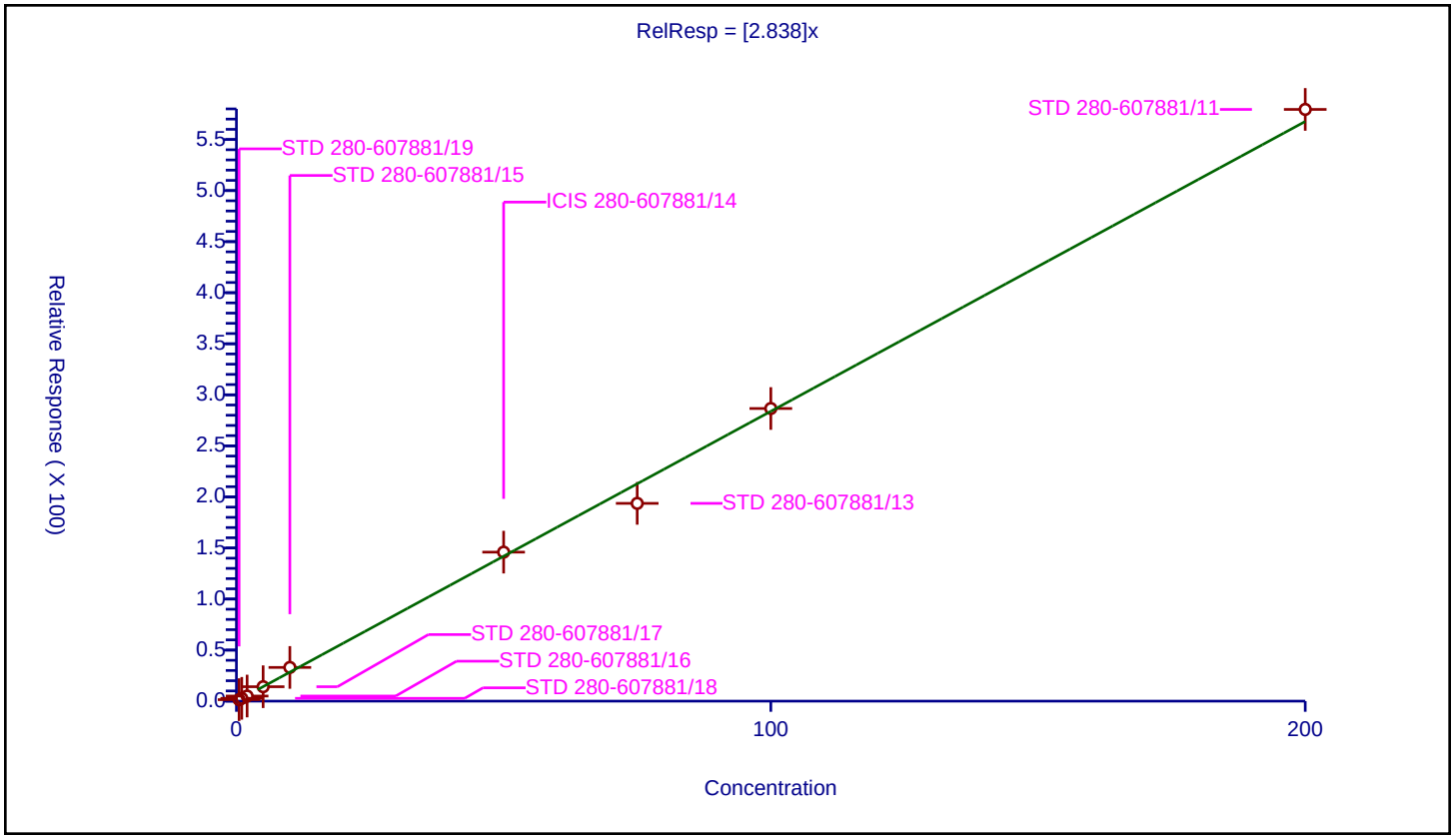
Curve Coefficients

Intercept:	0
Slope:	2.838

Error Coefficients

Standard Error:	2670000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.446778	50.0	484663.0	2.893557	Y
2	STD 280-607881/18	1.0	2.760102	50.0	476794.0	2.760102	Y
3	STD 280-607881/16	2.0	4.997821	50.0	484201.0	2.498911	Y
4	STD 280-607881/17	5.0	14.136597	50.0	487009.0	2.827319	Y
5	STD 280-607881/15	10.0	33.008502	50.0	505647.0	3.30085	Y
6	ICIS 280-607881/14	50.0	145.909681	50.0	509618.0	2.918194	Y
7	STD 280-607881/13	75.0	193.682517	50.0	534485.0	2.582434	Y
8	STD 280-607881/12	100.0	286.592538	50.0	538480.0	2.865925	Y
9	STD 280-607881/11	200.0	579.472986	50.0	552718.0	2.897365	Y



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Calibration / Cyclohexanone

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

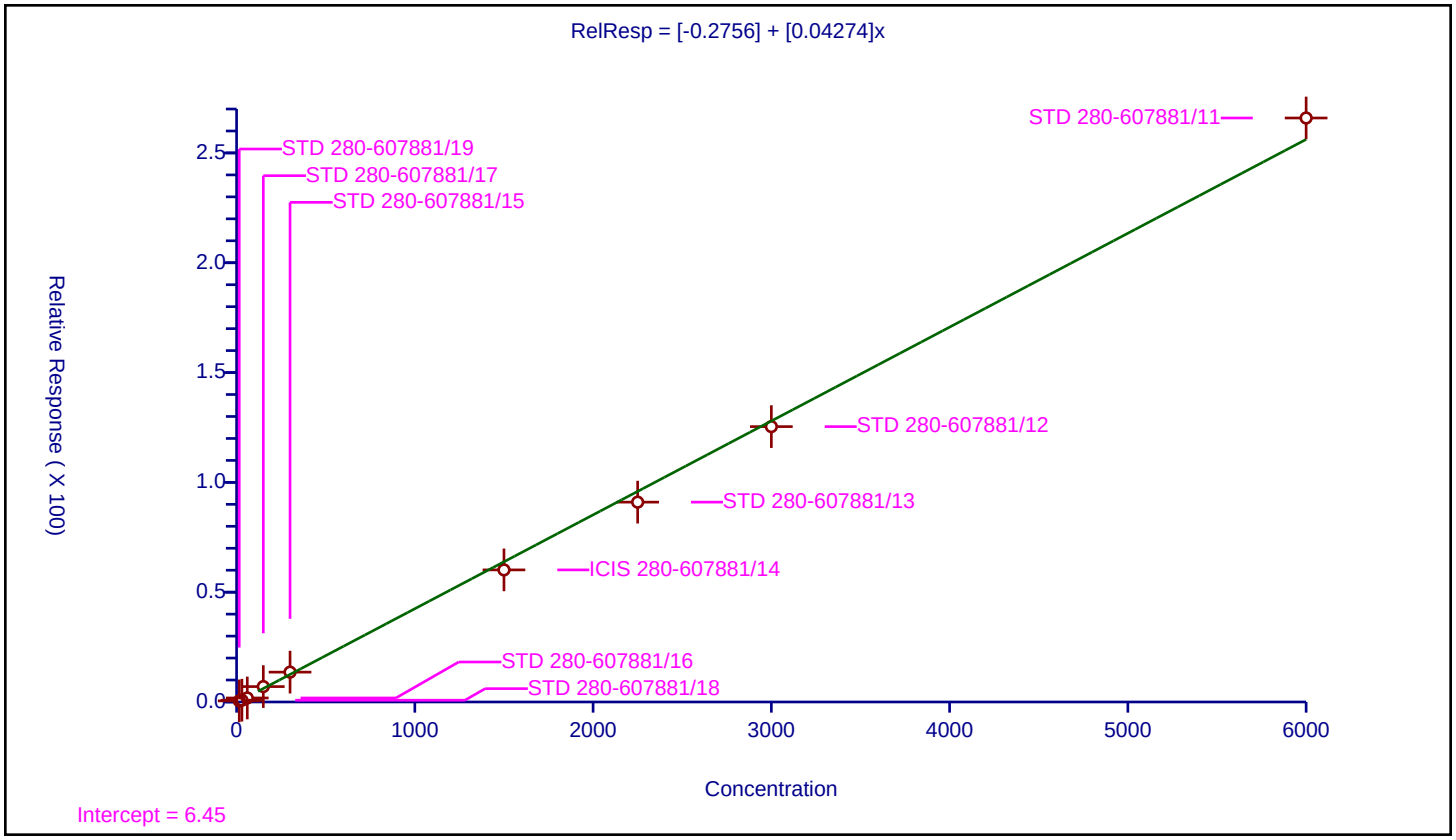
Curve Coefficients

Intercept:	-0.2756
Slope:	0.04274

Error Coefficients

Standard Error:	847000
Relative Standard Error:	13.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	15.0	0.501307	50.0	310688.0	0.03342	Y
2	STD 280-607881/18	30.0	0.801733	50.0	303218.0	0.026724	Y
3	STD 280-607881/16	60.0	1.827669	50.0	311900.0	0.030461	Y
4	STD 280-607881/17	150.0	7.012709	50.0	312939.0	0.046751	Y
5	STD 280-607881/15	300.0	13.589266	50.0	319160.0	0.045298	Y
6	ICIS 280-607881/14	1500.0	60.140373	50.0	327912.0	0.040094	Y
7	STD 280-607881/13	2250.0	90.994847	50.0	345430.0	0.040442	Y
8	STD 280-607881/12	3000.0	125.39008	50.0	350056.0	0.041797	Y
9	STD 280-607881/11	6000.0	265.909751	50.0	361445.0	0.044318	Y



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Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

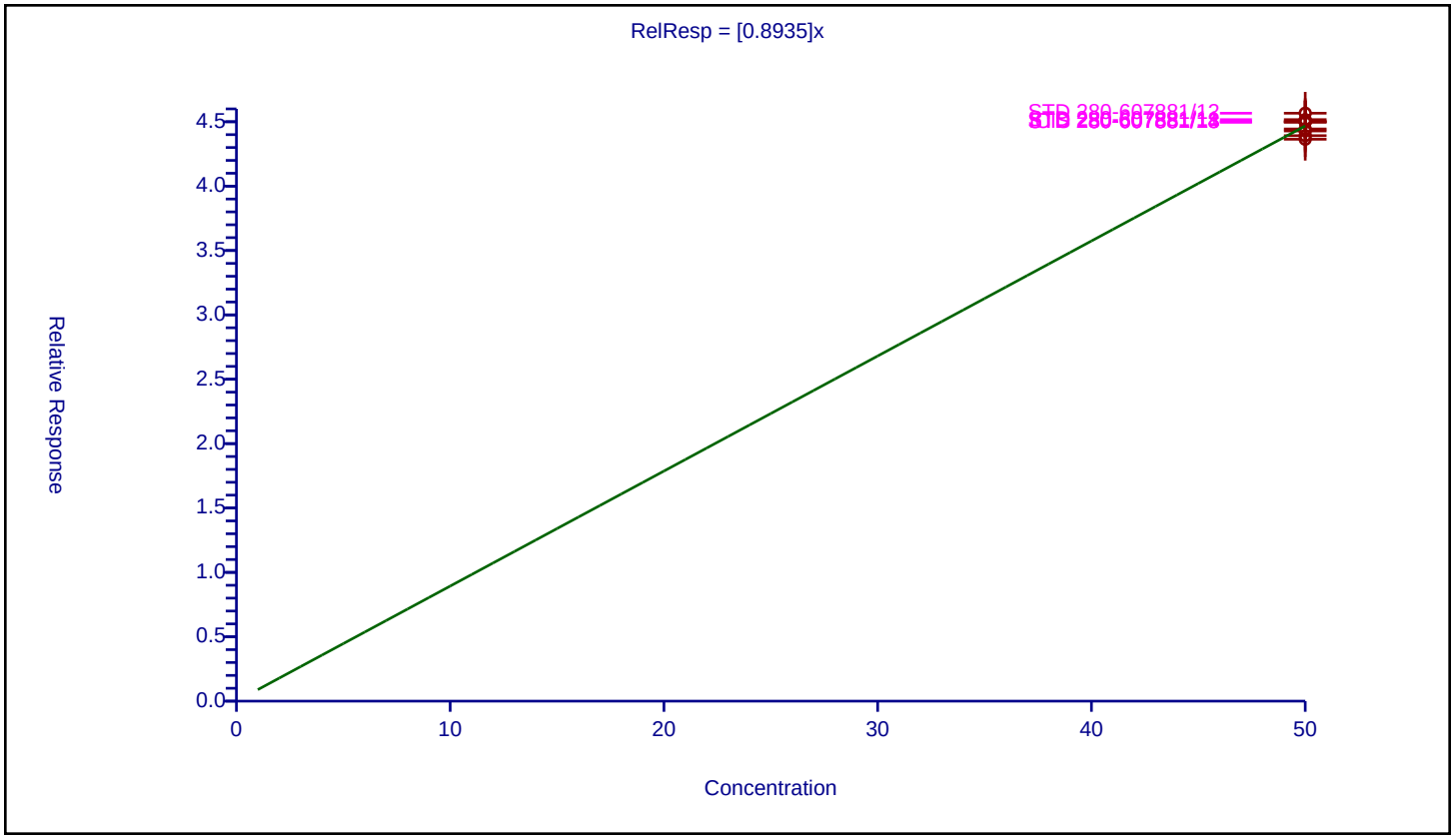
Curve Coefficients

Intercept:	0
Slope:	0.8935

Error Coefficients

Standard Error:	483000
Relative Standard Error:	1.5
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	45.166794	50.0	552718.0	0.903336	Y
2	STD 280-607881/12	50.0	45.664463	50.0	538480.0	0.913289	Y
3	STD 280-607881/13	50.0	44.974321	50.0	534485.0	0.899486	Y
4	ICIS 280-607881/14	50.0	44.980848	50.0	509618.0	0.899617	Y
5	STD 280-607881/15	50.0	43.640919	50.0	505647.0	0.872818	Y
6	STD 280-607881/16	50.0	44.441874	50.0	484201.0	0.888837	Y
7	STD 280-607881/17	50.0	44.2845	50.0	487009.0	0.88569	Y
8	STD 280-607881/18	50.0	45.016506	50.0	476794.0	0.90033	Y
9	STD 280-607881/19	50.0	43.921756	50.0	484663.0	0.878435	Y



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Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

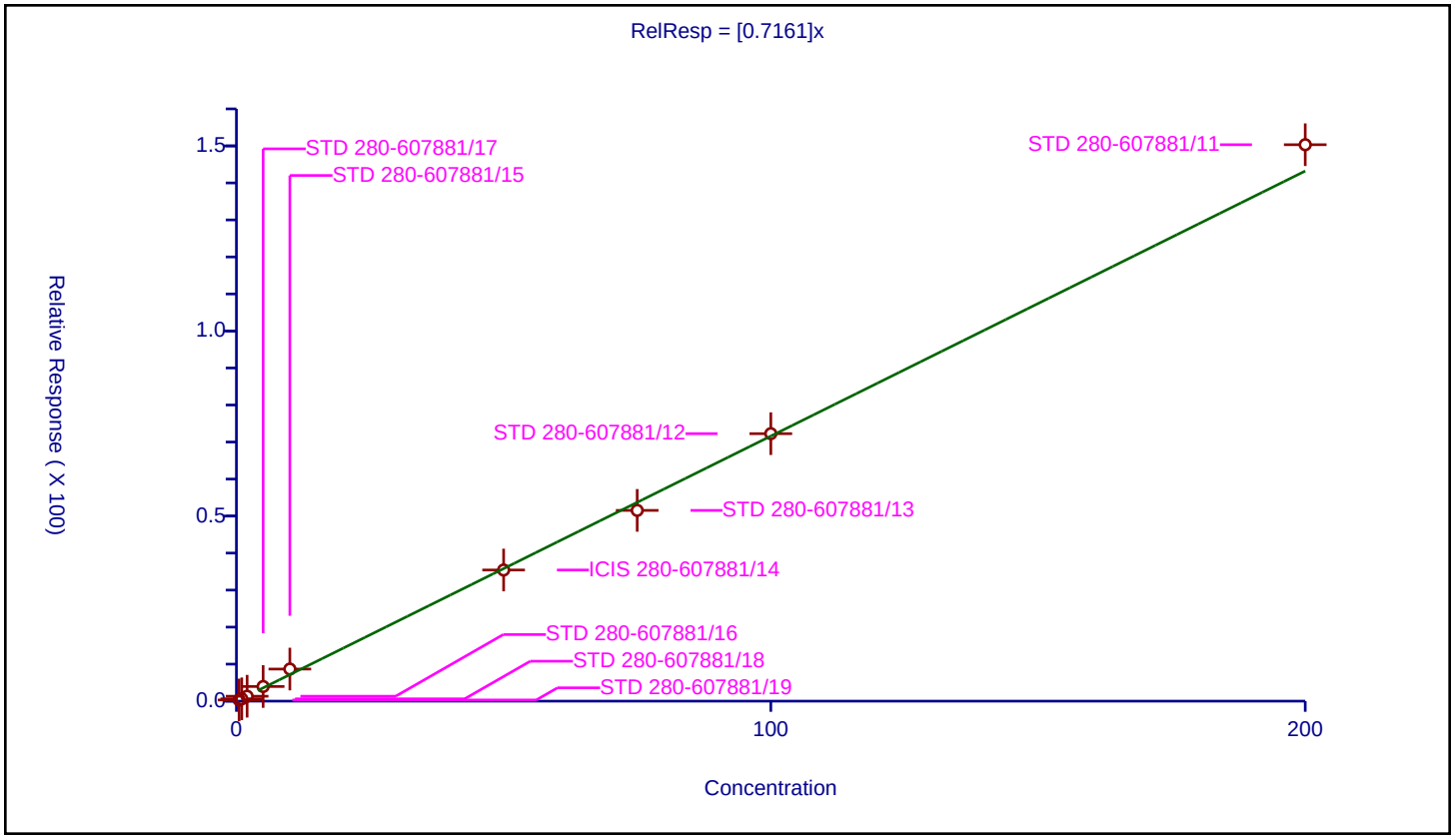
Curve Coefficients

Intercept:	0
Slope:	0.7161

Error Coefficients

Standard Error:	690000
Relative Standard Error:	10.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.315064	50.0	484663.0	0.630129	Y
2	STD 280-607881/18	1.0	0.624798	50.0	476794.0	0.624798	Y
3	STD 280-607881/16	2.0	1.325276	50.0	484201.0	0.662638	Y
4	STD 280-607881/17	5.0	3.95157	50.0	487009.0	0.790314	Y
5	STD 280-607881/15	10.0	8.670278	50.0	505647.0	0.867028	Y
6	ICIS 280-607881/14	50.0	35.423592	50.0	509618.0	0.708472	Y
7	STD 280-607881/13	75.0	51.529697	50.0	534485.0	0.687063	Y
8	STD 280-607881/12	100.0	72.259973	50.0	538480.0	0.7226	Y
9	STD 280-607881/11	200.0	150.320597	50.0	552718.0	0.751603	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

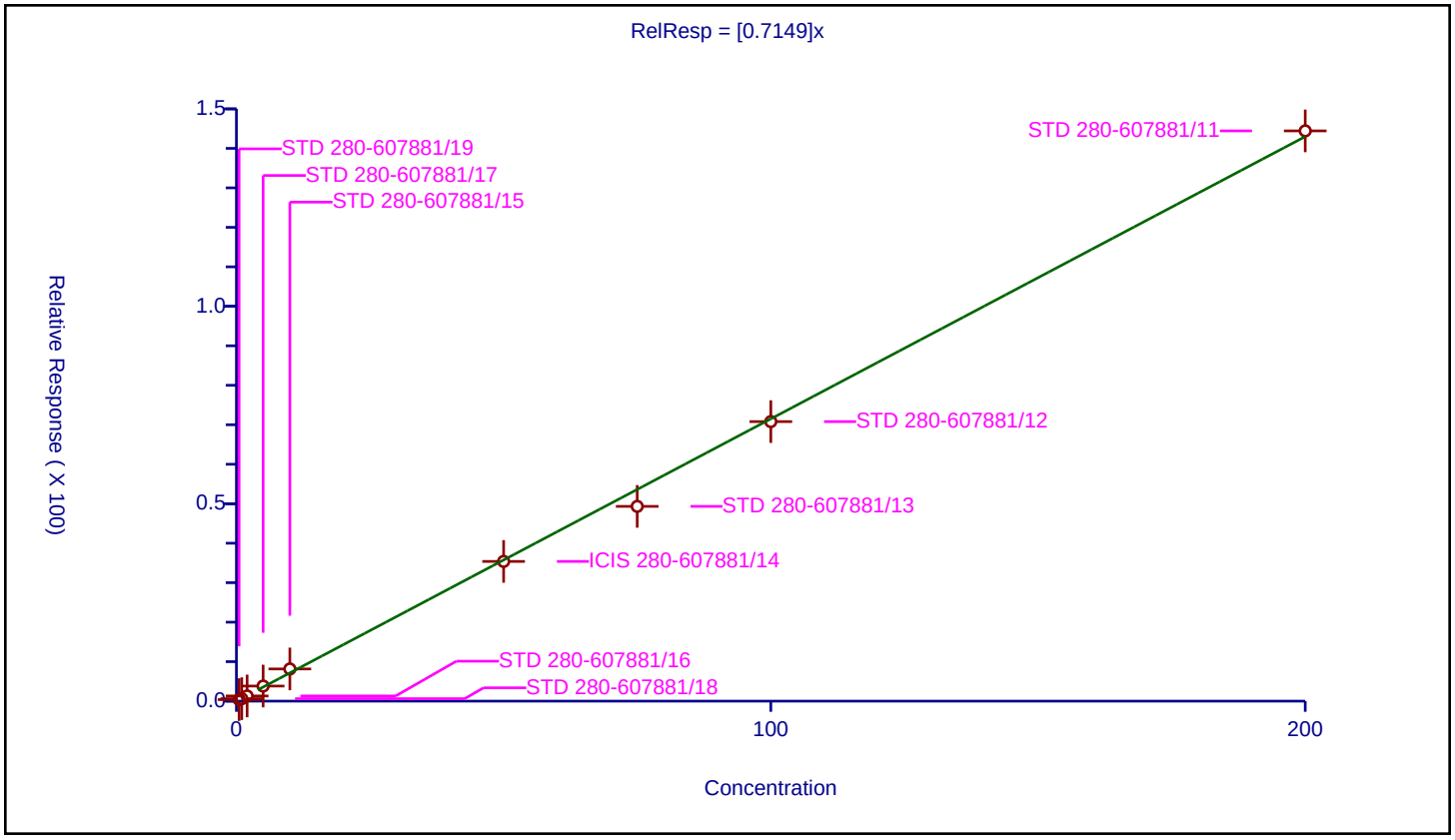
Curve Coefficients

Intercept:	0
Slope:	0.7149

Error Coefficients

Standard Error:	666000
Relative Standard Error:	8.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.388311	50.0	484663.0	0.776622	Y
2	STD 280-607881/18	1.0	0.626266	50.0	476794.0	0.626266	Y
3	STD 280-607881/16	2.0	1.312678	50.0	484201.0	0.656339	Y
4	STD 280-607881/17	5.0	3.823646	50.0	487009.0	0.764729	Y
5	STD 280-607881/15	10.0	8.148966	50.0	505647.0	0.814897	Y
6	ICIS 280-607881/14	50.0	35.38366	50.0	509618.0	0.707673	Y
7	STD 280-607881/13	75.0	49.330477	50.0	534485.0	0.65774	Y
8	STD 280-607881/12	100.0	70.801701	50.0	538480.0	0.708017	Y
9	STD 280-607881/11	200.0	144.428985	50.0	552718.0	0.722145	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

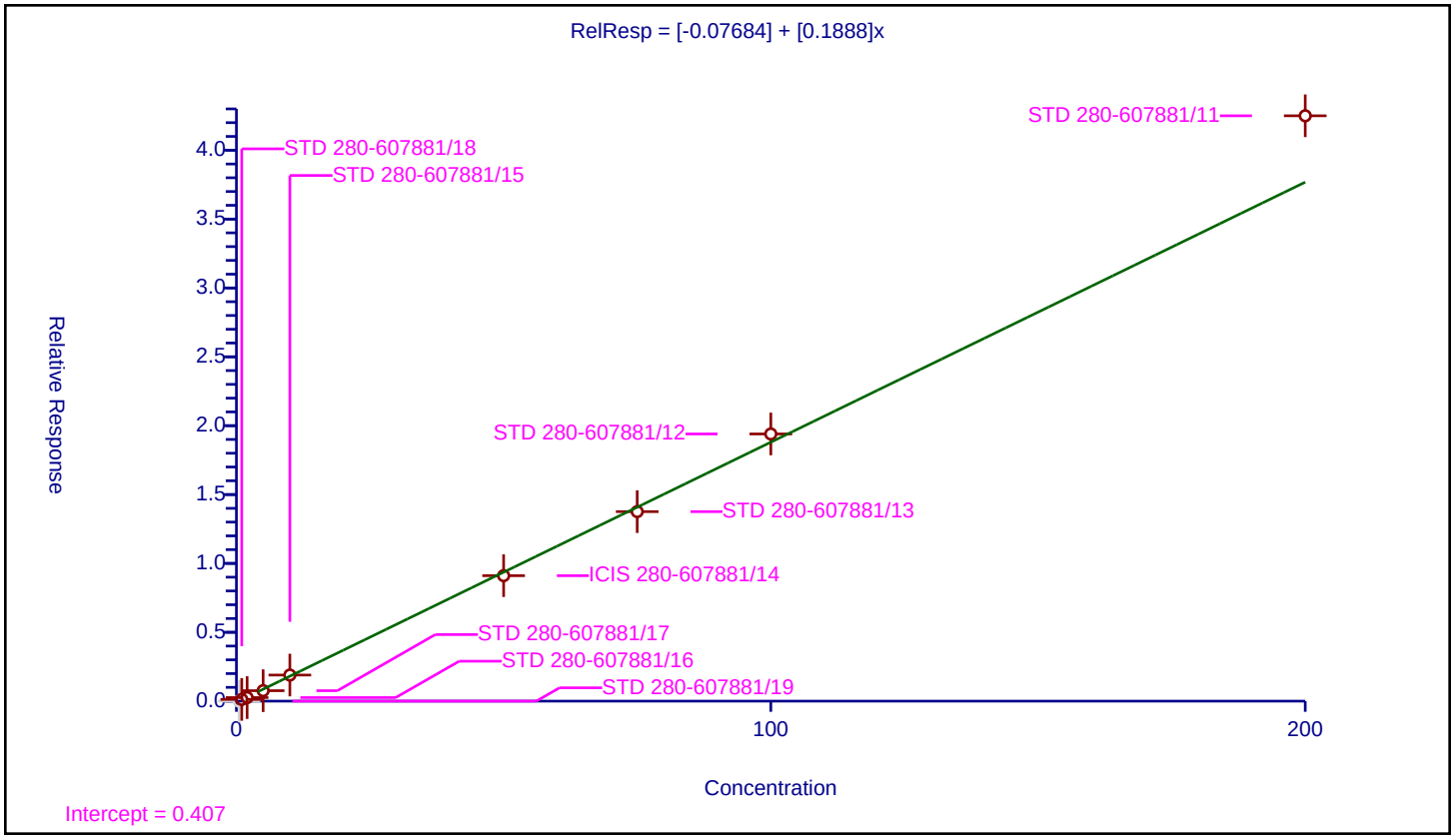
Curve Coefficients

Intercept:	-0.07684
Slope:	0.1888

Error Coefficients

Standard Error:	222000
Relative Standard Error:	9.3
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.0	50.0	484663.0	0.0	N
2	STD 280-607881/18	1.0	0.12626	50.0	476794.0	0.12626	Y
3	STD 280-607881/16	2.0	0.257331	50.0	484201.0	0.128666	Y
4	STD 280-607881/17	5.0	0.759329	50.0	487009.0	0.151866	Y
5	STD 280-607881/15	10.0	1.893515	50.0	505647.0	0.189351	Y
6	ICIS 280-607881/14	50.0	9.108293	50.0	509618.0	0.182166	Y
7	STD 280-607881/13	75.0	13.760162	50.0	534485.0	0.183469	Y
8	STD 280-607881/12	100.0	19.398863	50.0	538480.0	0.193989	Y
9	STD 280-607881/11	200.0	42.498525	50.0	552718.0	0.212493	Y



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Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

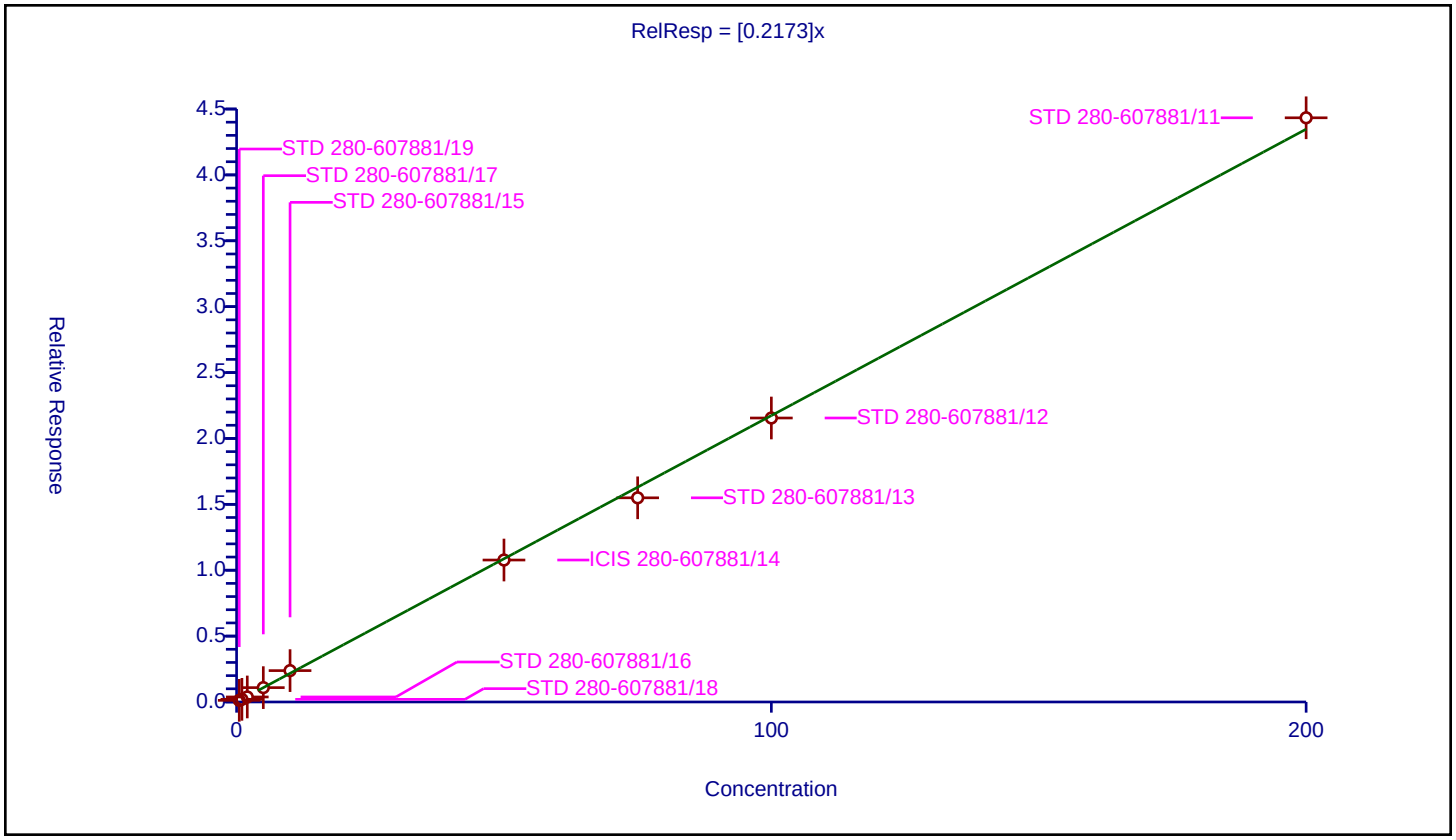
Curve Coefficients

Intercept:	0
Slope:	0.2173

Error Coefficients

Standard Error:	204000
Relative Standard Error:	8.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.124932	50.0	484663.0	0.249864	Y
2	STD 280-607881/18	1.0	0.200401	50.0	476794.0	0.200401	Y
3	STD 280-607881/16	2.0	0.381247	50.0	484201.0	0.190623	Y
4	STD 280-607881/17	5.0	1.08961	50.0	487009.0	0.217922	Y
5	STD 280-607881/15	10.0	2.380514	50.0	505647.0	0.238051	Y
6	ICIS 280-607881/14	50.0	10.773265	50.0	509618.0	0.215465	Y
7	STD 280-607881/13	75.0	15.494916	50.0	534485.0	0.206599	Y
8	STD 280-607881/12	100.0	21.551497	50.0	538480.0	0.215515	Y
9	STD 280-607881/11	200.0	44.334	50.0	552718.0	0.22167	Y



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Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

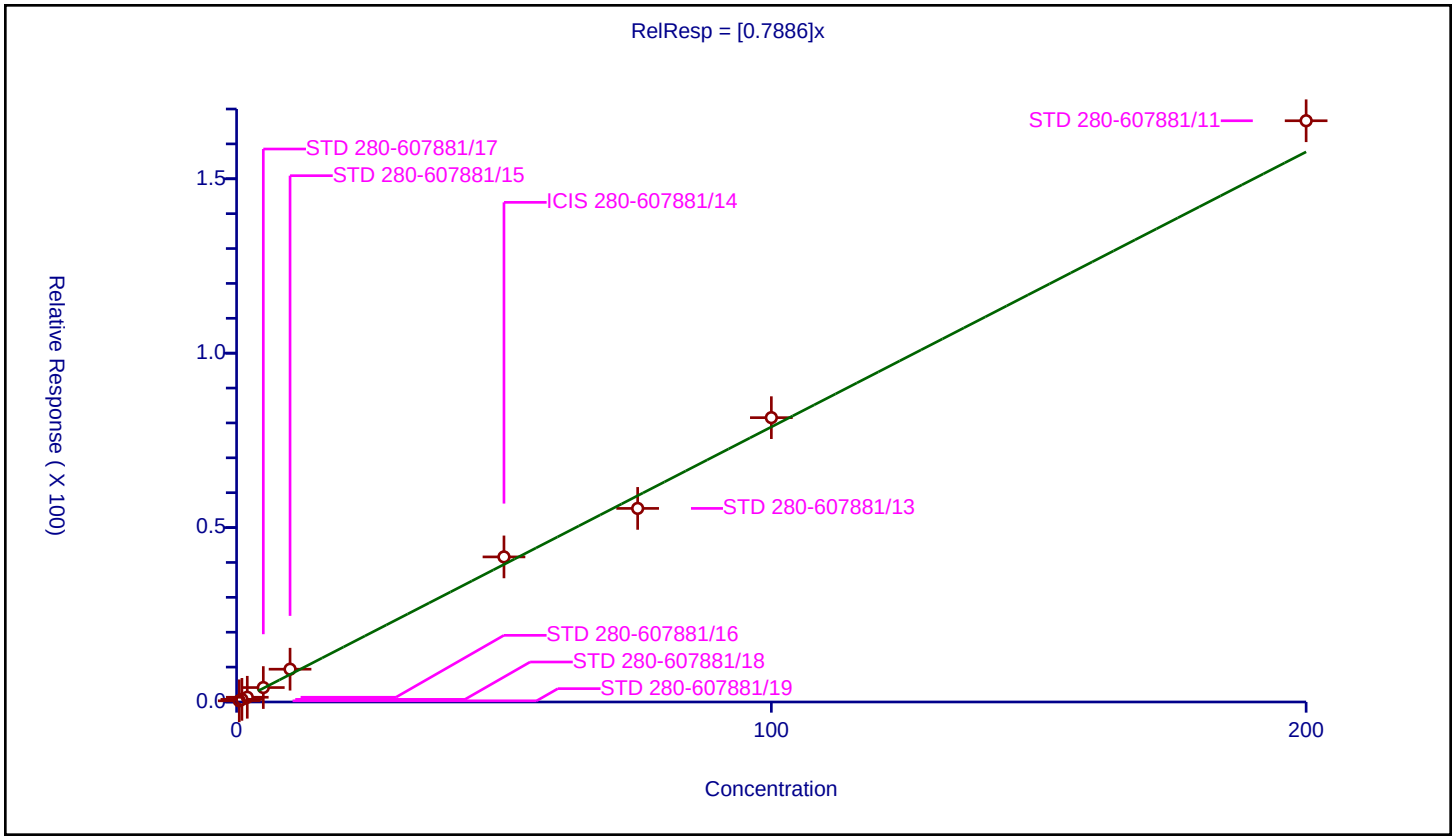
Curve Coefficients

Intercept:	0
Slope:	0.7886

Error Coefficients

Standard Error:	767000
Relative Standard Error:	10.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.337967	50.0	484663.0	0.675934	Y
2	STD 280-607881/18	1.0	0.755463	50.0	476794.0	0.755463	Y
3	STD 280-607881/16	2.0	1.356771	50.0	484201.0	0.678386	Y
4	STD 280-607881/17	5.0	4.138117	50.0	487009.0	0.827623	Y
5	STD 280-607881/15	10.0	9.396971	50.0	505647.0	0.939697	Y
6	ICIS 280-607881/14	50.0	41.589779	50.0	509618.0	0.831796	Y
7	STD 280-607881/13	75.0	55.501838	50.0	534485.0	0.740025	Y
8	STD 280-607881/12	100.0	81.515934	50.0	538480.0	0.815159	Y
9	STD 280-607881/11	200.0	166.635246	50.0	552718.0	0.833176	Y



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Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

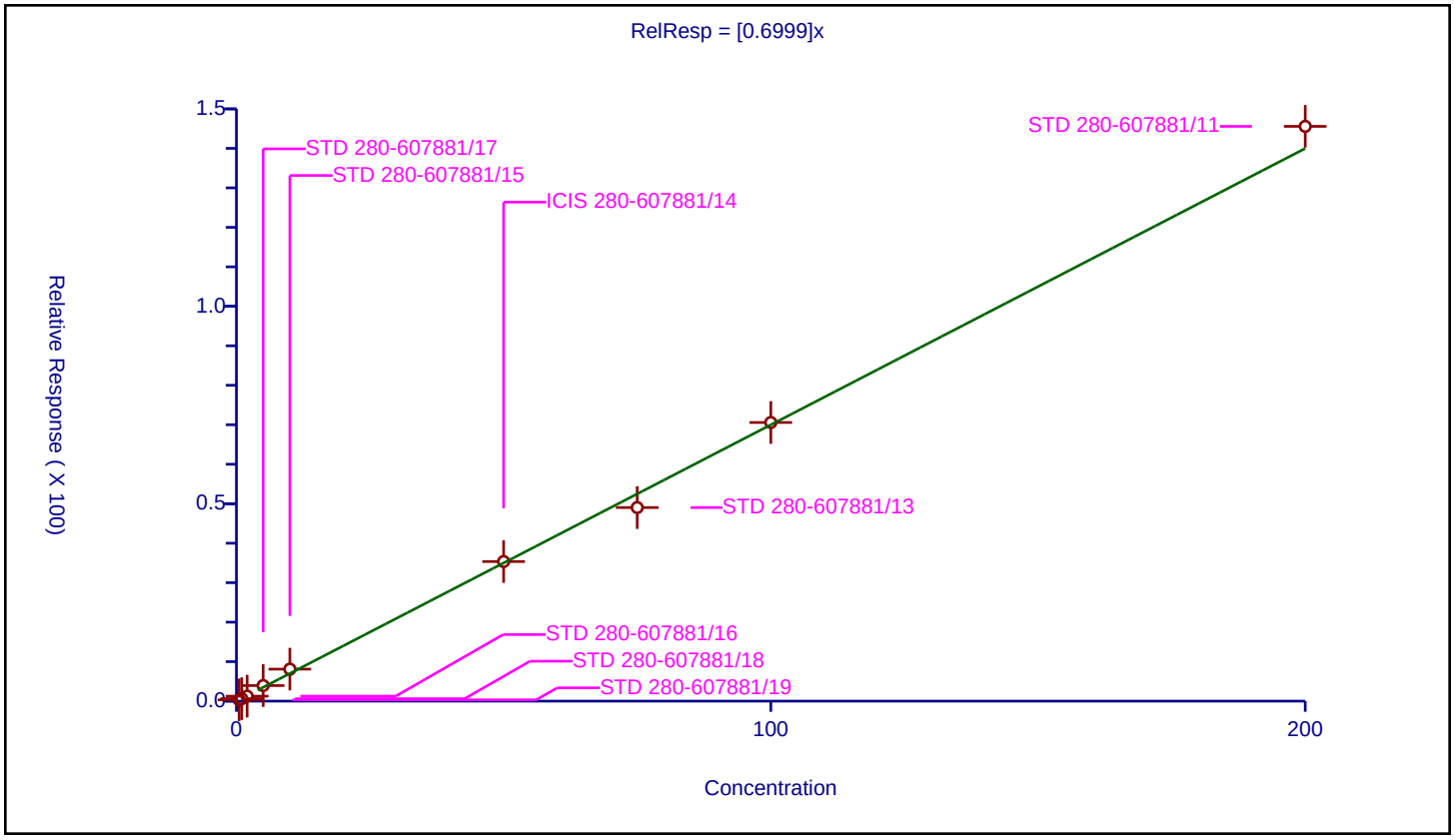
Curve Coefficients

Intercept:	0
Slope:	0.6999

Error Coefficients

Standard Error:	669000
Relative Standard Error:	9.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.324452	50.0	484663.0	0.648904	Y
2	STD 280-607881/18	1.0	0.625637	50.0	476794.0	0.625637	Y
3	STD 280-607881/16	2.0	1.26115	50.0	484201.0	0.630575	Y
4	STD 280-607881/17	5.0	3.944486	50.0	487009.0	0.788897	Y
5	STD 280-607881/15	10.0	8.105259	50.0	505647.0	0.810526	Y
6	ICIS 280-607881/14	50.0	35.358151	50.0	509618.0	0.707163	Y
7	STD 280-607881/13	75.0	49.033556	50.0	534485.0	0.653781	Y
8	STD 280-607881/12	100.0	70.577737	50.0	538480.0	0.705777	Y
9	STD 280-607881/11	200.0	145.577853	50.0	552718.0	0.727889	Y



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Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

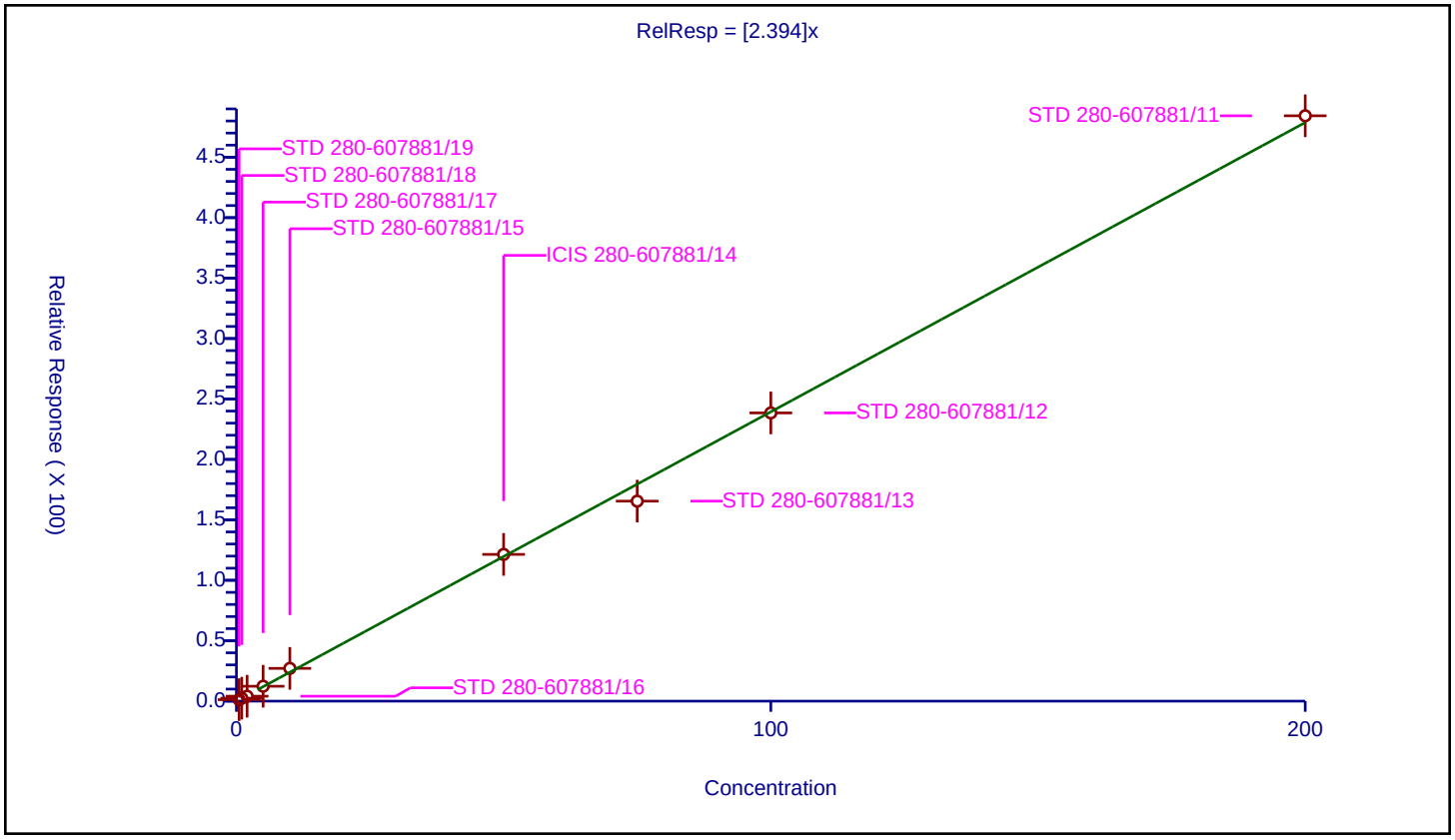
Curve Coefficients

Intercept:	0
Slope:	2.394

Error Coefficients

Standard Error:	2240000
Relative Standard Error:	7.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.229824	50.0	484663.0	2.459647	Y
2	STD 280-607881/18	1.0	2.424317	50.0	476794.0	2.424317	Y
3	STD 280-607881/16	2.0	4.080434	50.0	484201.0	2.040217	Y
4	STD 280-607881/17	5.0	12.332421	50.0	487009.0	2.466484	Y
5	STD 280-607881/15	10.0	27.110712	50.0	505647.0	2.711071	Y
6	ICIS 280-607881/14	50.0	121.411037	50.0	509618.0	2.428221	Y
7	STD 280-607881/13	75.0	165.483316	50.0	534485.0	2.206444	Y
8	STD 280-607881/12	100.0	238.450546	50.0	538480.0	2.384505	Y
9	STD 280-607881/11	200.0	484.290904	50.0	552718.0	2.421455	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

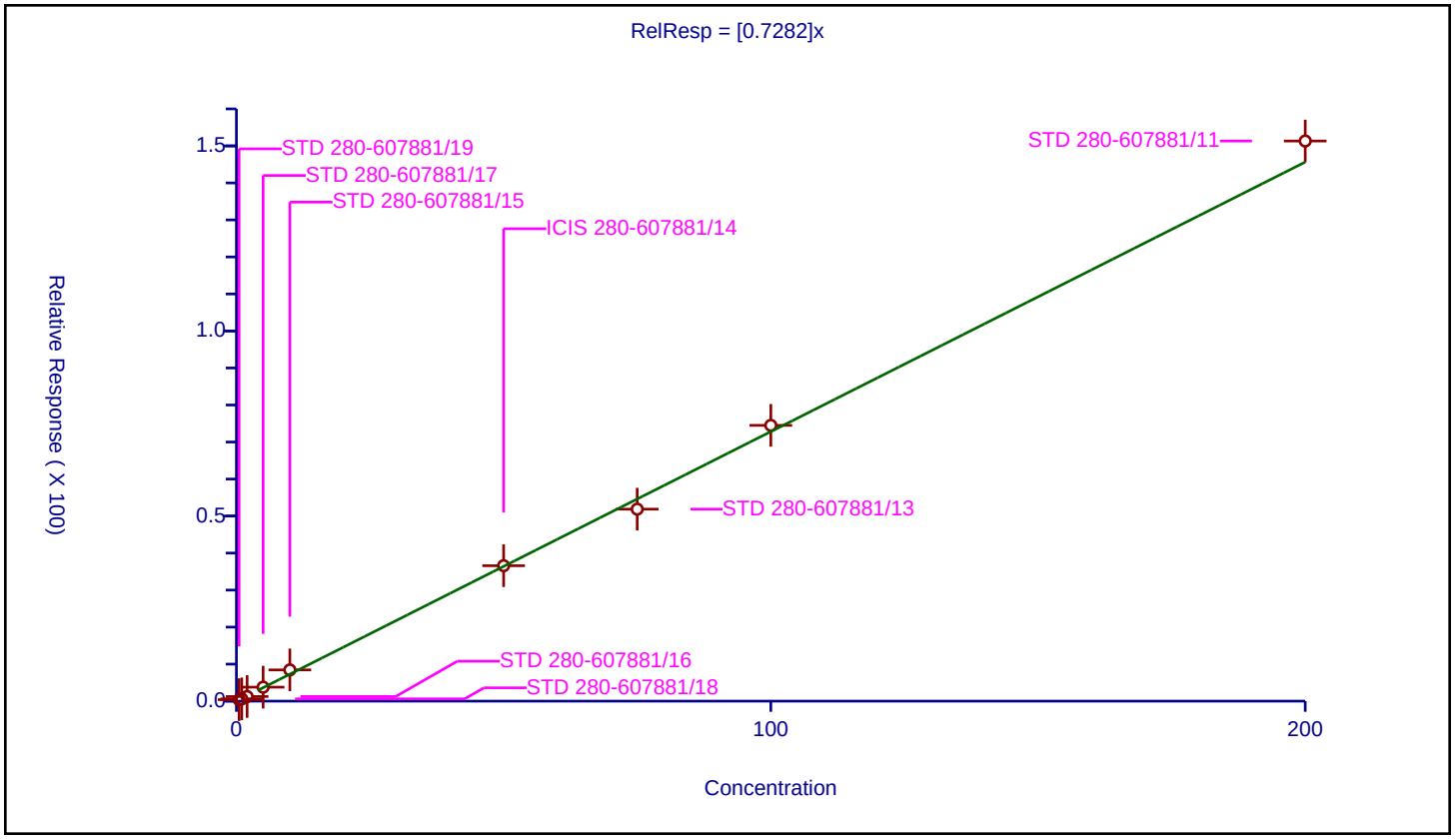
Curve Coefficients

Intercept:	0
Slope:	0.7282

Error Coefficients

Standard Error:	698000
Relative Standard Error:	10.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.395739	50.0	484663.0	0.791478	Y
2	STD 280-607881/18	1.0	0.613263	50.0	476794.0	0.613263	Y
3	STD 280-607881/16	2.0	1.249481	50.0	484201.0	0.624741	Y
4	STD 280-607881/17	5.0	3.776932	50.0	487009.0	0.755386	Y
5	STD 280-607881/15	10.0	8.436716	50.0	505647.0	0.843672	Y
6	ICIS 280-607881/14	50.0	36.587895	50.0	509618.0	0.731758	Y
7	STD 280-607881/13	75.0	51.867873	50.0	534485.0	0.691572	Y
8	STD 280-607881/12	100.0	74.502674	50.0	538480.0	0.745027	Y
9	STD 280-607881/11	200.0	151.321198	50.0	552718.0	0.756606	Y



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Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

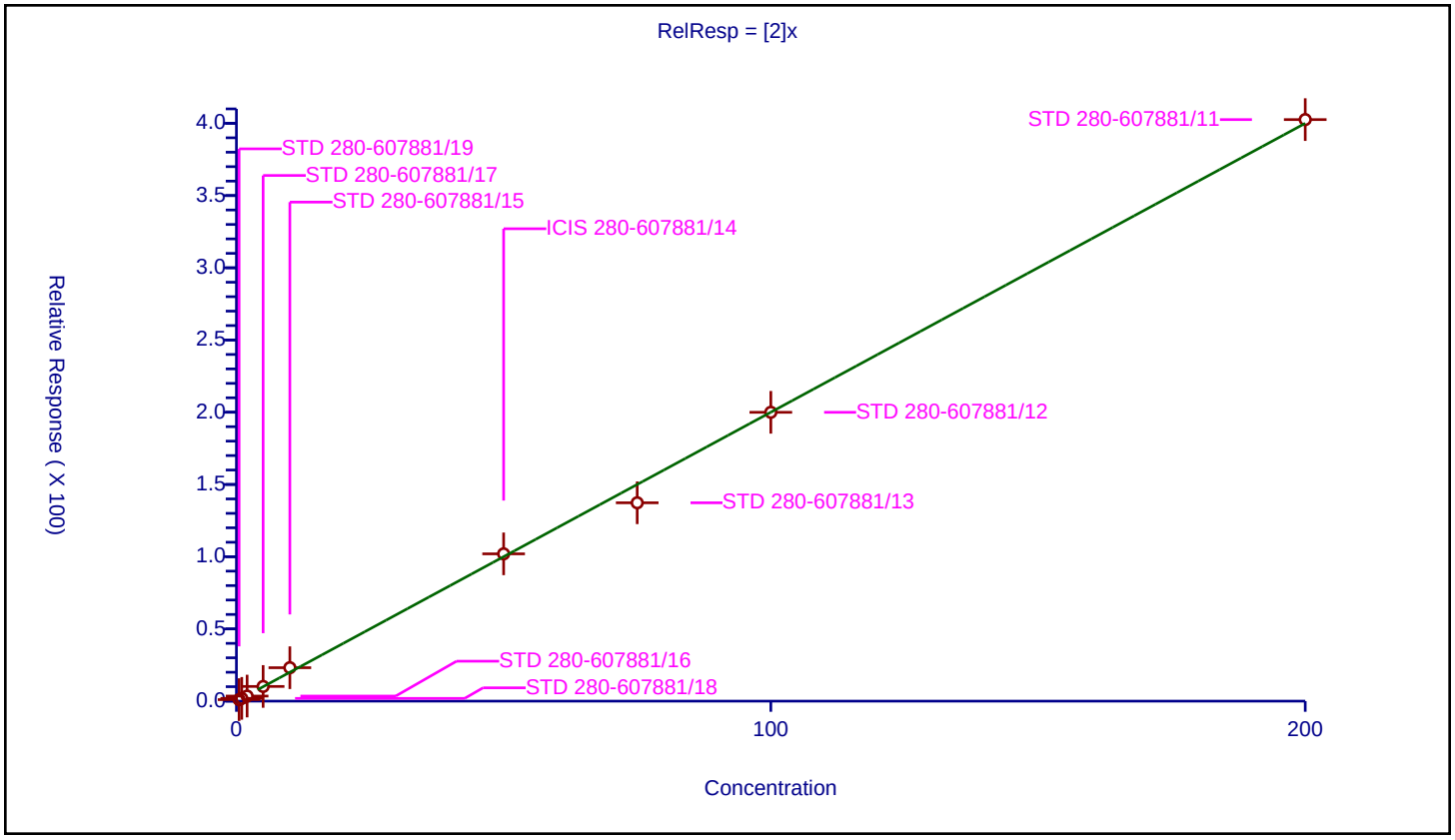
Curve Coefficients

Intercept:	0
Slope:	2

Error Coefficients

Standard Error:	1860000
Relative Standard Error:	8.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.045778	50.0	484663.0	2.091556	Y
2	STD 280-607881/18	1.0	1.91739	50.0	476794.0	1.91739	Y
3	STD 280-607881/16	2.0	3.520955	50.0	484201.0	1.760478	Y
4	STD 280-607881/17	5.0	10.16819	50.0	487009.0	2.033638	Y
5	STD 280-607881/15	10.0	23.147967	50.0	505647.0	2.314797	Y
6	ICIS 280-607881/14	50.0	101.965001	50.0	509618.0	2.0393	Y
7	STD 280-607881/13	75.0	137.311711	50.0	534485.0	1.830823	Y
8	STD 280-607881/12	100.0	199.957287	50.0	538480.0	1.999573	Y
9	STD 280-607881/11	200.0	402.594451	50.0	552718.0	2.012972	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

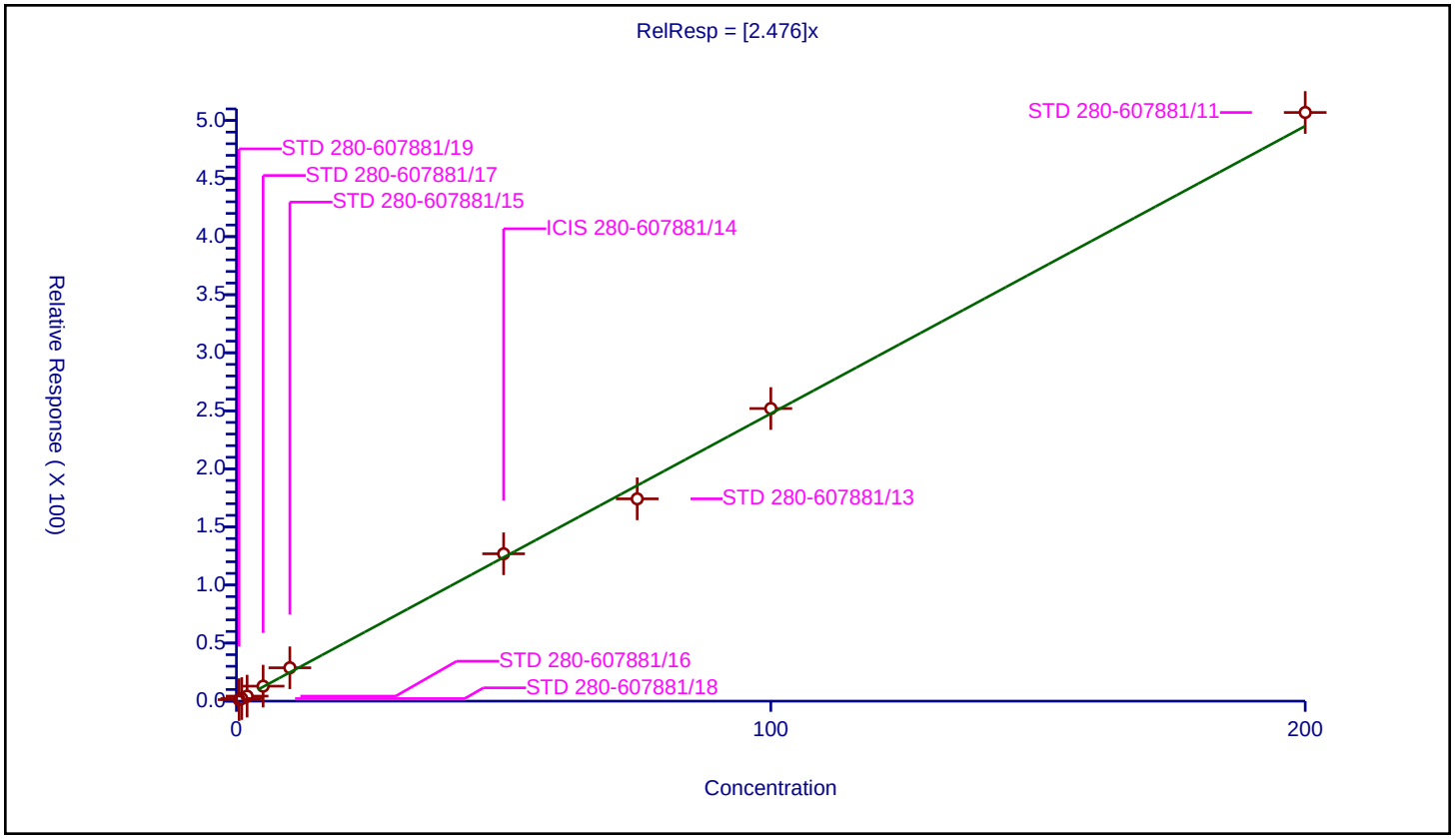
Curve Coefficients

Intercept:	0
Slope:	2.476

Error Coefficients

Standard Error:	2350000
Relative Standard Error:	8.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.273359	50.0	484663.0	2.546718	Y
2	STD 280-607881/18	1.0	2.204726	50.0	476794.0	2.204726	Y
3	STD 280-607881/16	2.0	4.333737	50.0	484201.0	2.166869	Y
4	STD 280-607881/17	5.0	12.891651	50.0	487009.0	2.57833	Y
5	STD 280-607881/15	10.0	28.737736	50.0	505647.0	2.873774	Y
6	ICIS 280-607881/14	50.0	126.885922	50.0	509618.0	2.537718	Y
7	STD 280-607881/13	75.0	174.200399	50.0	534485.0	2.322672	Y
8	STD 280-607881/12	100.0	251.988189	50.0	538480.0	2.519882	Y
9	STD 280-607881/11	200.0	506.905239	50.0	552718.0	2.534526	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

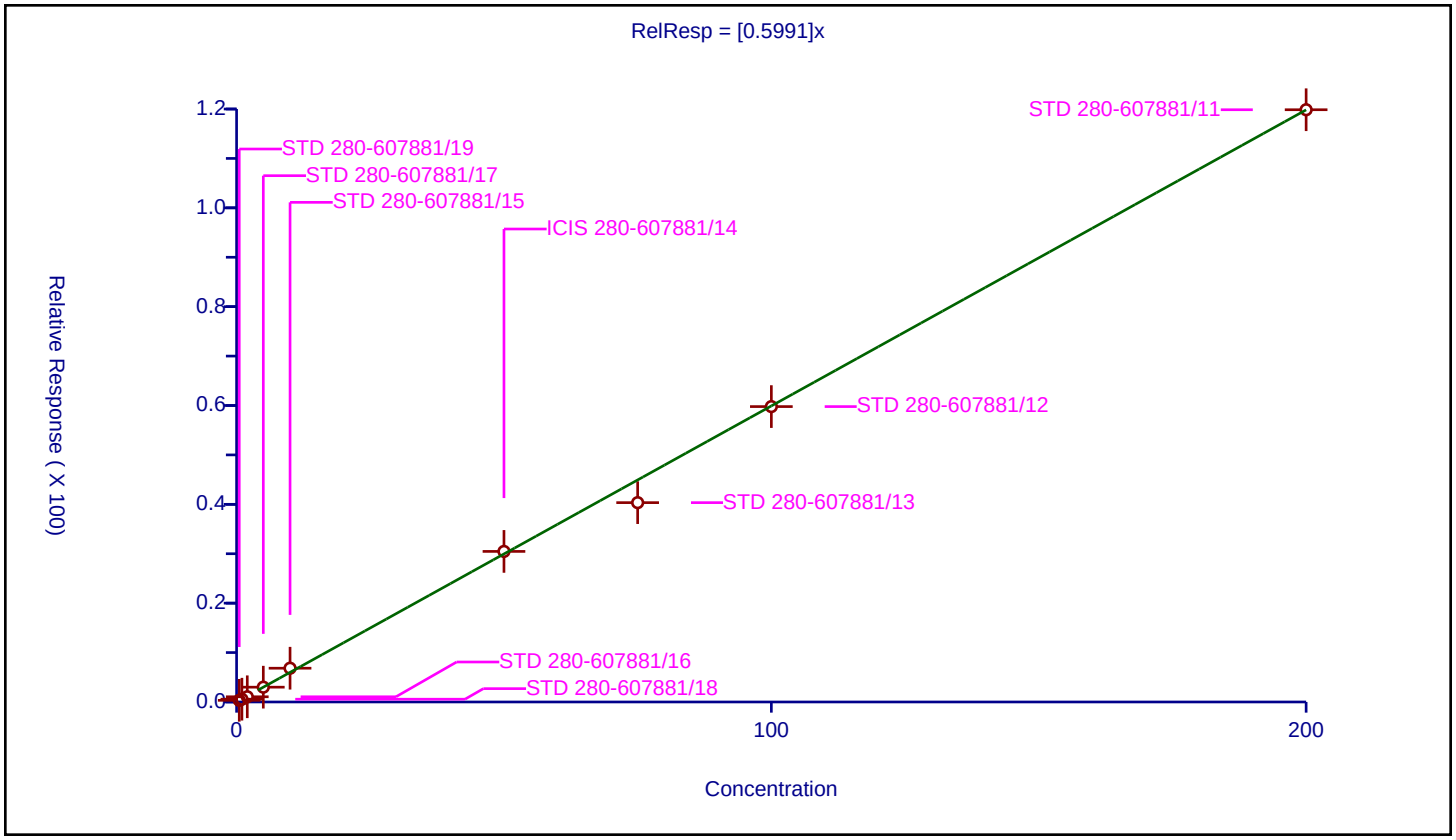
Curve Coefficients

Intercept:	0
Slope:	0.5991

Error Coefficients

Standard Error:	554000
Relative Standard Error:	9.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.337451	50.0	484663.0	0.674902	Y
2	STD 280-607881/18	1.0	0.562088	50.0	476794.0	0.562088	Y
3	STD 280-607881/16	2.0	1.055863	50.0	484201.0	0.527932	Y
4	STD 280-607881/17	5.0	2.999021	50.0	487009.0	0.599804	Y
5	STD 280-607881/15	10.0	6.832138	50.0	505647.0	0.683214	Y
6	ICIS 280-607881/14	50.0	30.470568	50.0	509618.0	0.609411	Y
7	STD 280-607881/13	75.0	40.342292	50.0	534485.0	0.537897	Y
8	STD 280-607881/12	100.0	59.778729	50.0	538480.0	0.597787	Y
9	STD 280-607881/11	200.0	119.852076	50.0	552718.0	0.59926	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

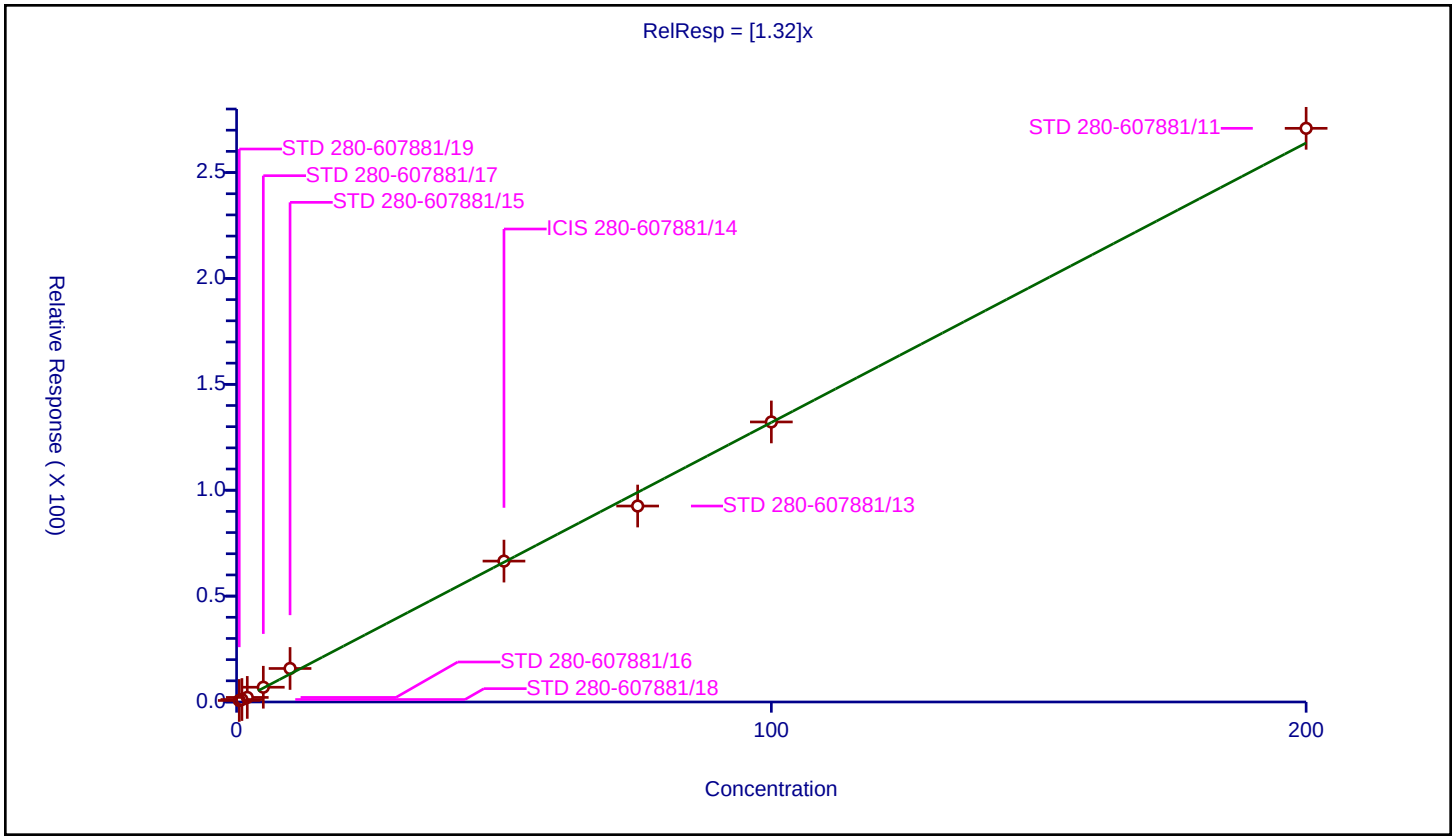
Curve Coefficients

Intercept:	0
Slope:	1.32

Error Coefficients

Standard Error:	1250000
Relative Standard Error:	11.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.709978	50.0	484663.0	1.419956	Y
2	STD 280-607881/18	1.0	1.161298	50.0	476794.0	1.161298	Y
3	STD 280-607881/16	2.0	2.161293	50.0	484201.0	1.080646	Y
4	STD 280-607881/17	5.0	6.972561	50.0	487009.0	1.394512	Y
5	STD 280-607881/15	10.0	15.819633	50.0	505647.0	1.581963	Y
6	ICIS 280-607881/14	50.0	66.52581	50.0	509618.0	1.330516	Y
7	STD 280-607881/13	75.0	92.529725	50.0	534485.0	1.23373	Y
8	STD 280-607881/12	100.0	132.237316	50.0	538480.0	1.322373	Y
9	STD 280-607881/11	200.0	270.884791	50.0	552718.0	1.354424	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

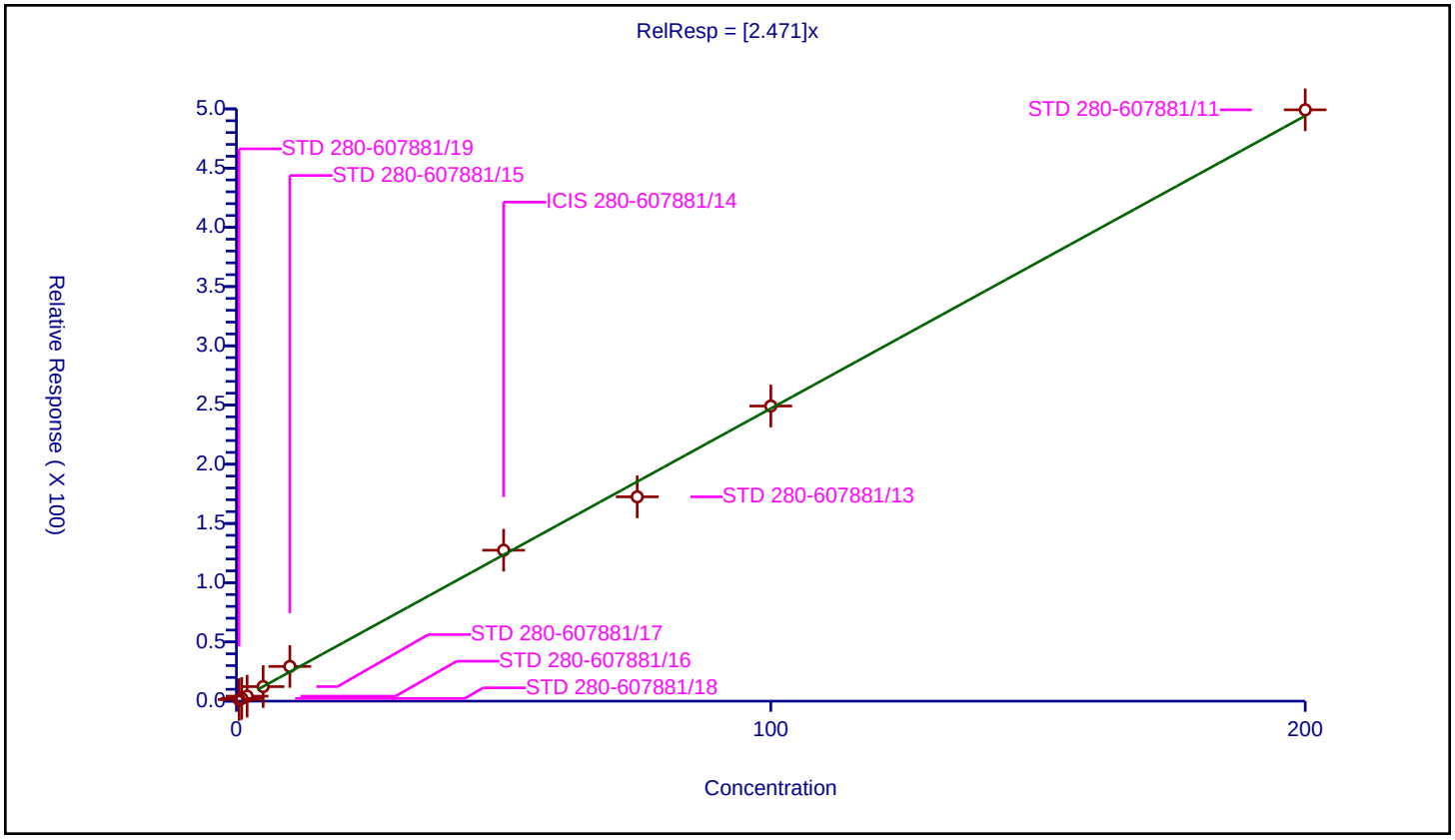
Curve Coefficients

Intercept:	0
Slope:	2.471

Error Coefficients

Standard Error:	2310000
Relative Standard Error:	9.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.311427	50.0	484663.0	2.622853	Y
2	STD 280-607881/18	1.0	2.292185	50.0	476794.0	2.292185	Y
3	STD 280-607881/16	2.0	4.209615	50.0	484201.0	2.104808	Y
4	STD 280-607881/17	5.0	12.263634	50.0	487009.0	2.452727	Y
5	STD 280-607881/15	10.0	29.289109	50.0	505647.0	2.928911	Y
6	ICIS 280-607881/14	50.0	127.415142	50.0	509618.0	2.548303	Y
7	STD 280-607881/13	75.0	172.489593	50.0	534485.0	2.299861	Y
8	STD 280-607881/12	100.0	249.148251	50.0	538480.0	2.491483	Y
9	STD 280-607881/11	200.0	499.245094	50.0	552718.0	2.496225	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

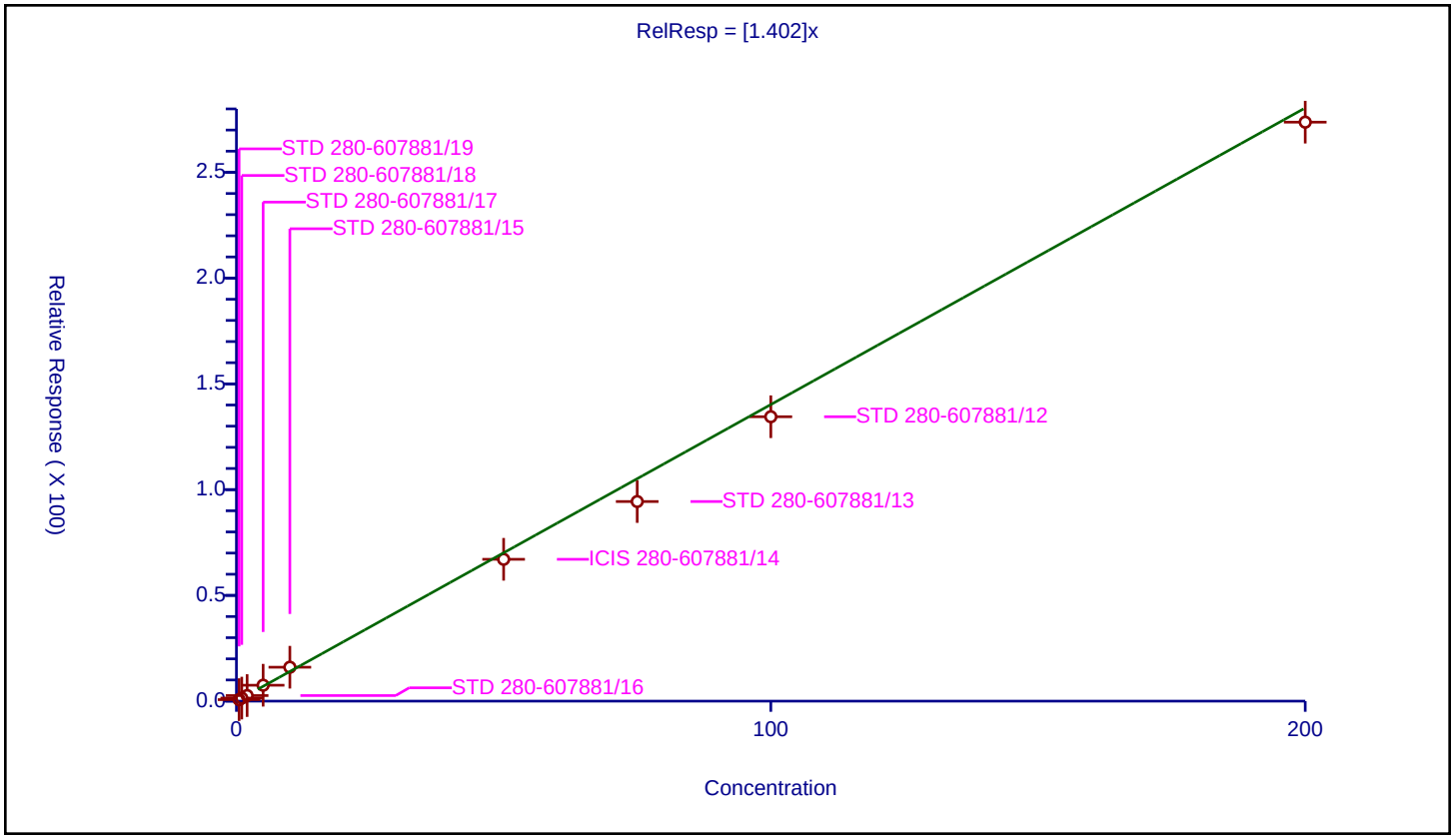
Curve Coefficients

Intercept:	0
Slope:	1.402

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	7.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.717612	50.0	484663.0	1.435224	Y
2	STD 280-607881/18	1.0	1.444334	50.0	476794.0	1.444334	Y
3	STD 280-607881/16	2.0	2.640536	50.0	484201.0	1.320268	Y
4	STD 280-607881/17	5.0	7.518547	50.0	487009.0	1.503709	Y
5	STD 280-607881/15	10.0	16.037769	50.0	505647.0	1.603777	Y
6	ICIS 280-607881/14	50.0	67.05552	50.0	509618.0	1.34111	Y
7	STD 280-607881/13	75.0	94.369533	50.0	534485.0	1.25826	Y
8	STD 280-607881/12	100.0	134.457176	50.0	538480.0	1.344572	Y
9	STD 280-607881/11	200.0	273.734888	50.0	552718.0	1.368674	Y



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Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

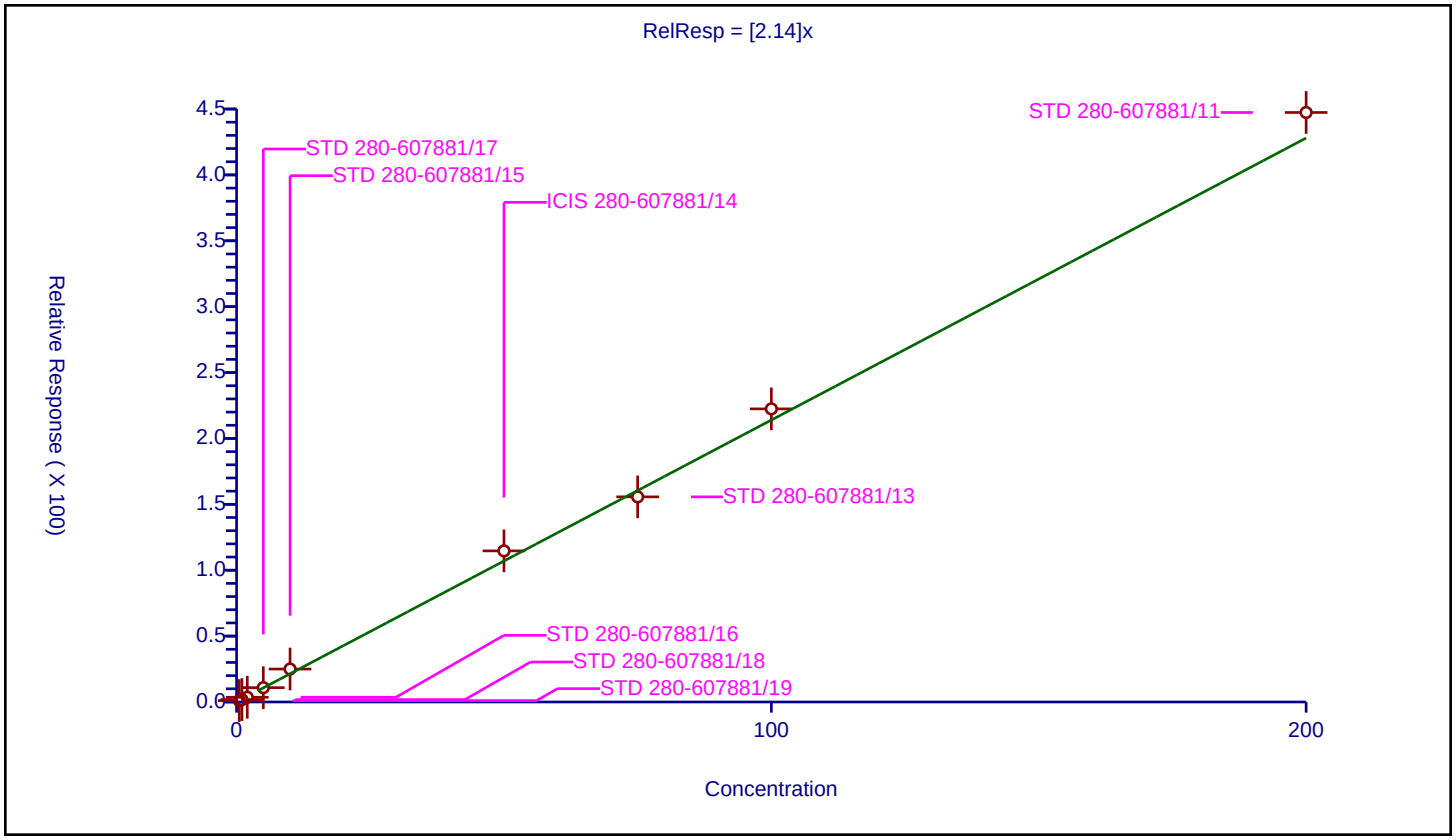
Curve Coefficients

Intercept:	0
Slope:	2.14

Error Coefficients

Standard Error:	2070000
Relative Standard Error:	10.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.066308	50.0	484663.0	2.132616	Y
2	STD 280-607881/18	1.0	1.821227	50.0	476794.0	1.821227	Y
3	STD 280-607881/16	2.0	3.593962	50.0	484201.0	1.796981	Y
4	STD 280-607881/17	5.0	10.884501	50.0	487009.0	2.1769	Y
5	STD 280-607881/15	10.0	25.000939	50.0	505647.0	2.500094	Y
6	ICIS 280-607881/14	50.0	114.669027	50.0	509618.0	2.293381	Y
7	STD 280-607881/13	75.0	155.669289	50.0	534485.0	2.075591	Y
8	STD 280-607881/12	100.0	222.442059	50.0	538480.0	2.224421	Y
9	STD 280-607881/11	200.0	447.359232	50.0	552718.0	2.236796	Y



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Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

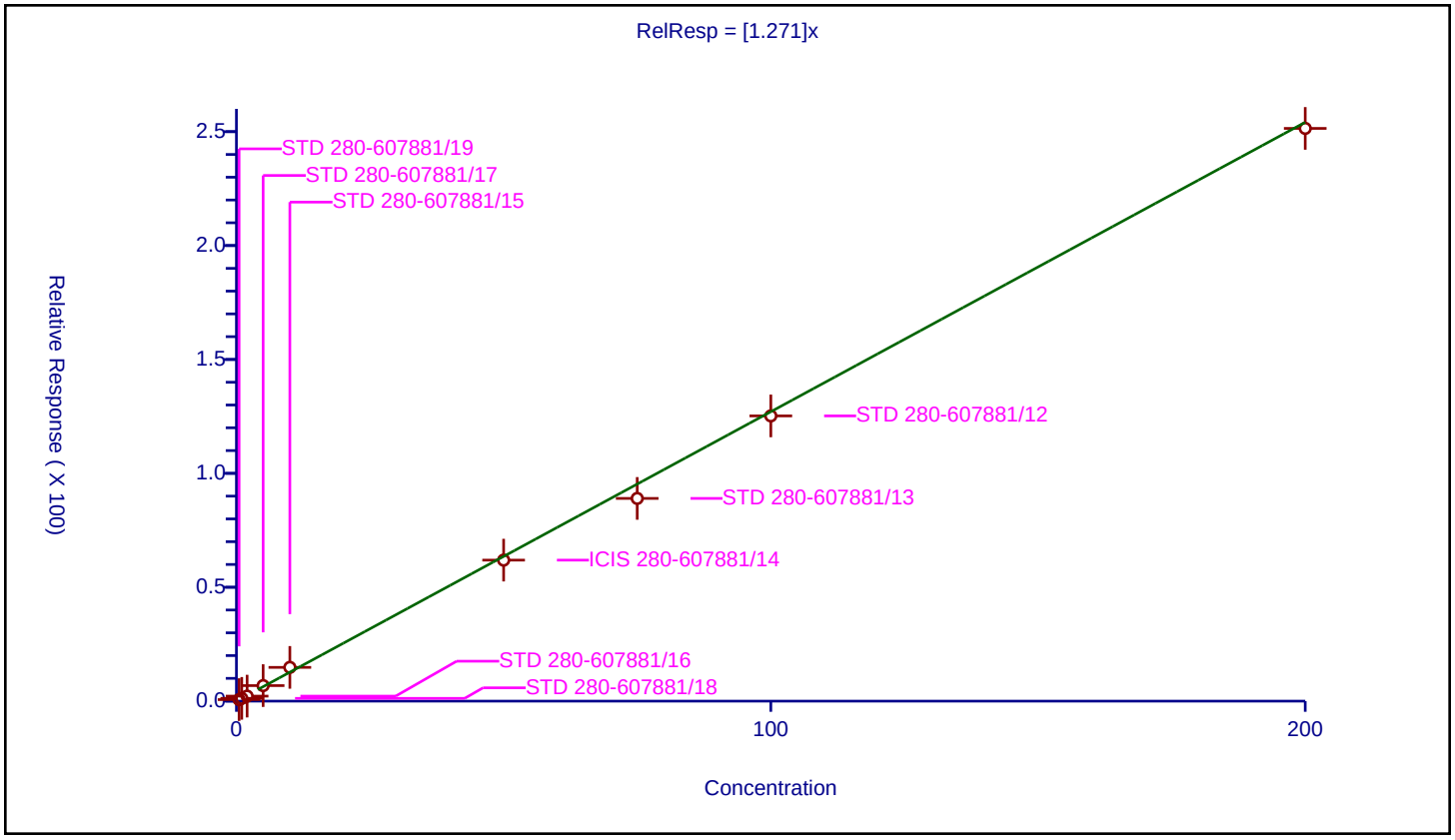
Curve Coefficients

Intercept:	0
Slope:	1.271

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	8.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.666752	50.0	484663.0	1.333504	Y
2	STD 280-607881/18	1.0	1.216983	50.0	476794.0	1.216983	Y
3	STD 280-607881/16	2.0	2.208793	50.0	484201.0	1.104397	Y
4	STD 280-607881/17	5.0	6.819689	50.0	487009.0	1.363938	Y
5	STD 280-607881/15	10.0	14.825362	50.0	505647.0	1.482536	Y
6	ICIS 280-607881/14	50.0	61.908626	50.0	509618.0	1.238173	Y
7	STD 280-607881/13	75.0	88.992582	50.0	534485.0	1.186568	Y
8	STD 280-607881/12	100.0	125.225171	50.0	538480.0	1.252252	Y
9	STD 280-607881/11	200.0	251.433733	50.0	552718.0	1.257169	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

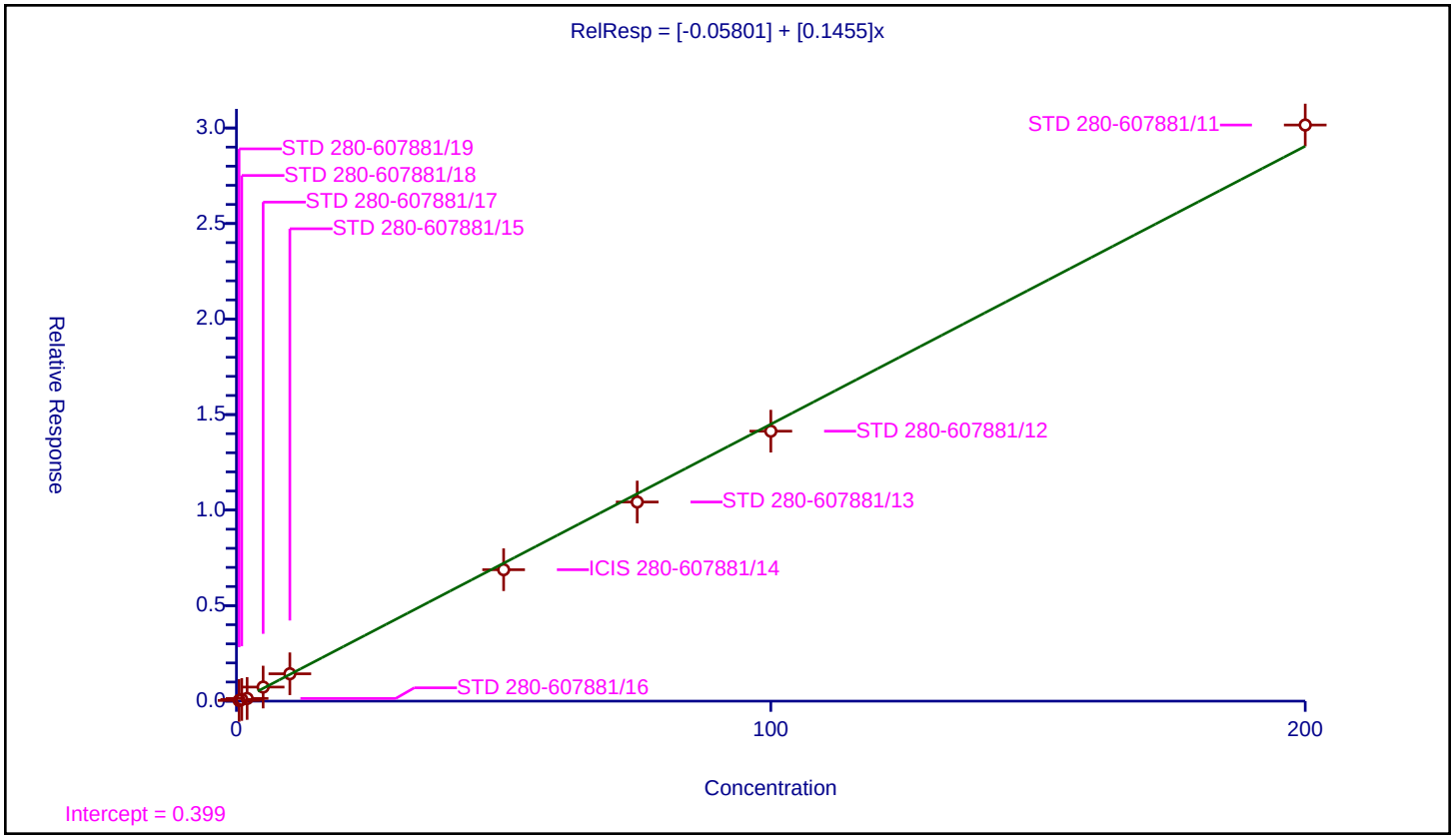
Curve Coefficients

Intercept:	-0.05801
Slope:	0.1455

Error Coefficients

Standard Error:	147000
Relative Standard Error:	16.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.03487	50.0	484663.0	0.069739	Y
2	STD 280-607881/18	1.0	0.087774	50.0	476794.0	0.087774	Y
3	STD 280-607881/16	2.0	0.139715	50.0	484201.0	0.069857	Y
4	STD 280-607881/17	5.0	0.736537	50.0	487009.0	0.147307	Y
5	STD 280-607881/15	10.0	1.431928	50.0	505647.0	0.143193	Y
6	ICIS 280-607881/14	50.0	6.879467	50.0	509618.0	0.137589	Y
7	STD 280-607881/13	75.0	10.422837	50.0	534485.0	0.138971	Y
8	STD 280-607881/12	100.0	14.131815	50.0	538480.0	0.141318	Y
9	STD 280-607881/11	200.0	30.156065	50.0	552718.0	0.15078	Y



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Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

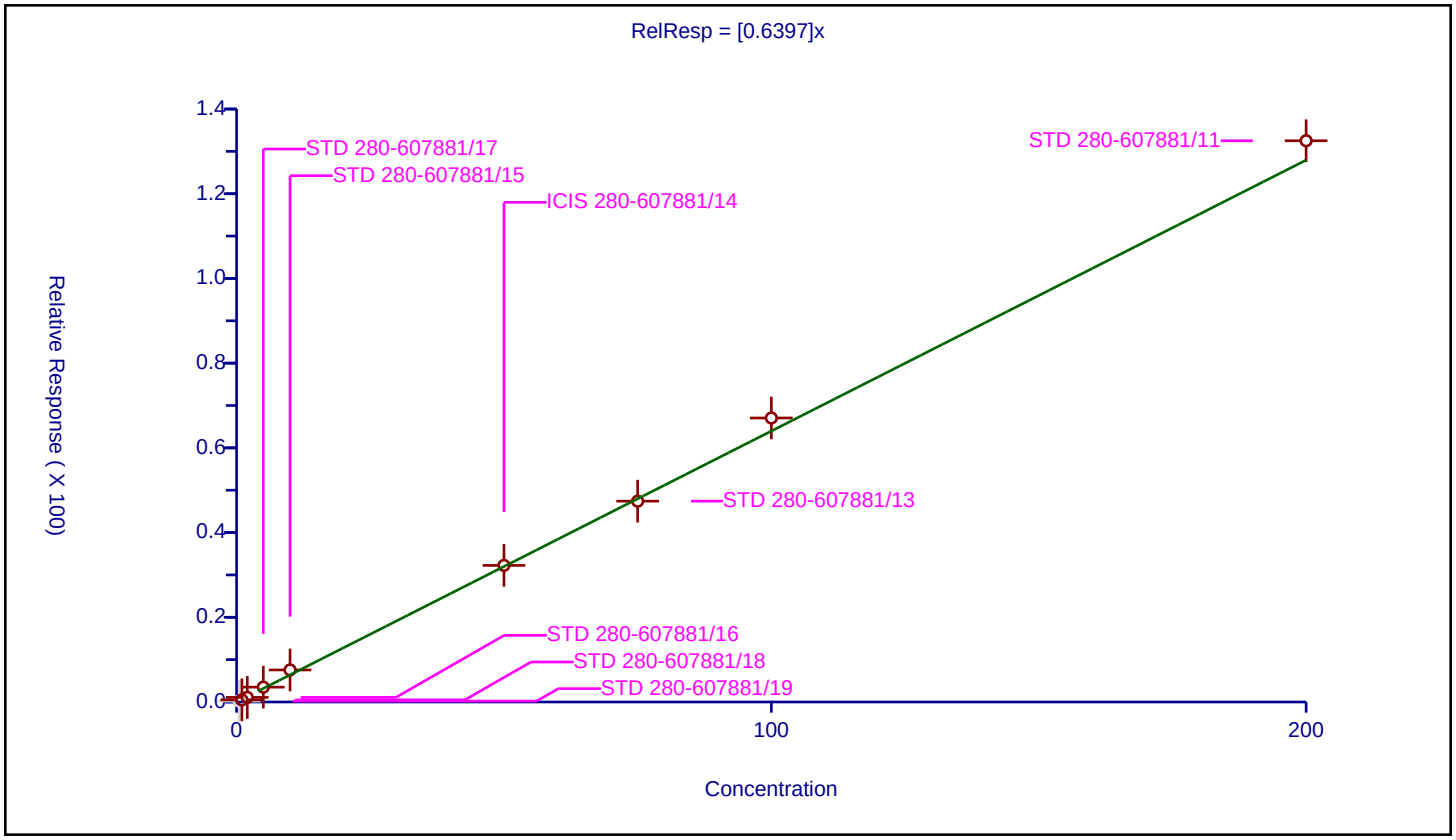
Curve Coefficients

Intercept:	0
Slope:	0.6397

Error Coefficients

Standard Error:	659000
Relative Standard Error:	12.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.215923	50.0	484663.0	0.431846	N
2	STD 280-607881/18	1.0	0.508291	50.0	476794.0	0.508291	Y
3	STD 280-607881/16	2.0	1.083434	50.0	484201.0	0.541717	Y
4	STD 280-607881/17	5.0	3.506095	50.0	487009.0	0.701219	Y
5	STD 280-607881/15	10.0	7.562687	50.0	505647.0	0.756269	Y
6	ICIS 280-607881/14	50.0	32.244446	50.0	509618.0	0.644889	Y
7	STD 280-607881/13	75.0	47.416017	50.0	534485.0	0.632214	Y
8	STD 280-607881/12	100.0	67.047894	50.0	538480.0	0.670479	Y
9	STD 280-607881/11	200.0	132.508531	50.0	552718.0	0.662543	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

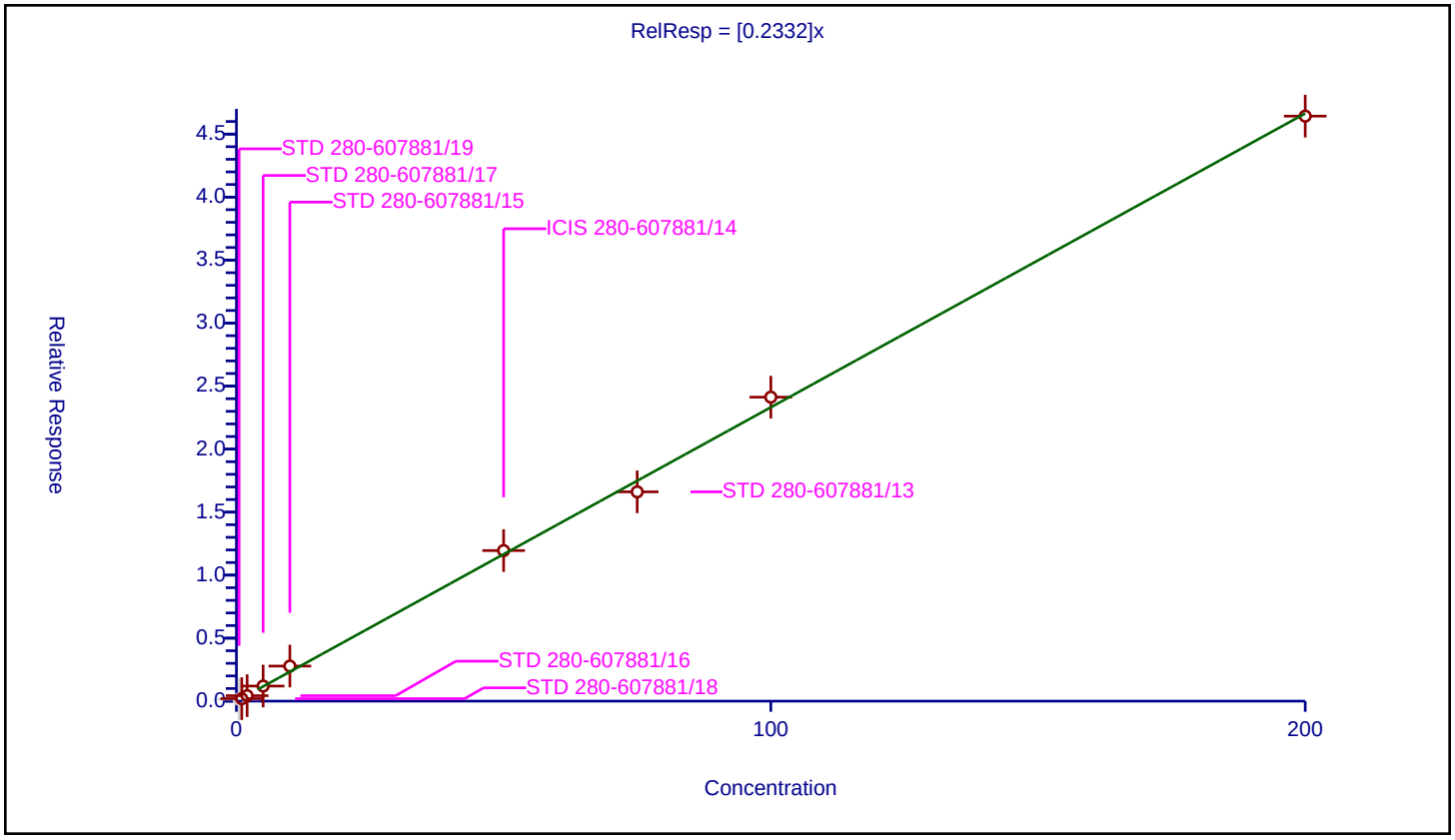
Curve Coefficients

Intercept:	0
Slope:	0.2332

Error Coefficients

Standard Error:	232000
Relative Standard Error:	10.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.158873	50.0	484663.0	0.317747	N
2	STD 280-607881/18	1.0	0.19715	50.0	476794.0	0.19715	Y
3	STD 280-607881/16	2.0	0.433601	50.0	484201.0	0.2168	Y
4	STD 280-607881/17	5.0	1.196692	50.0	487009.0	0.239338	Y
5	STD 280-607881/15	10.0	2.783365	50.0	505647.0	0.278336	Y
6	ICIS 280-607881/14	50.0	11.950127	50.0	509618.0	0.239003	Y
7	STD 280-607881/13	75.0	16.610663	50.0	534485.0	0.221476	Y
8	STD 280-607881/12	100.0	24.124016	50.0	538480.0	0.24124	Y
9	STD 280-607881/11	200.0	46.425754	50.0	552718.0	0.232129	Y



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Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

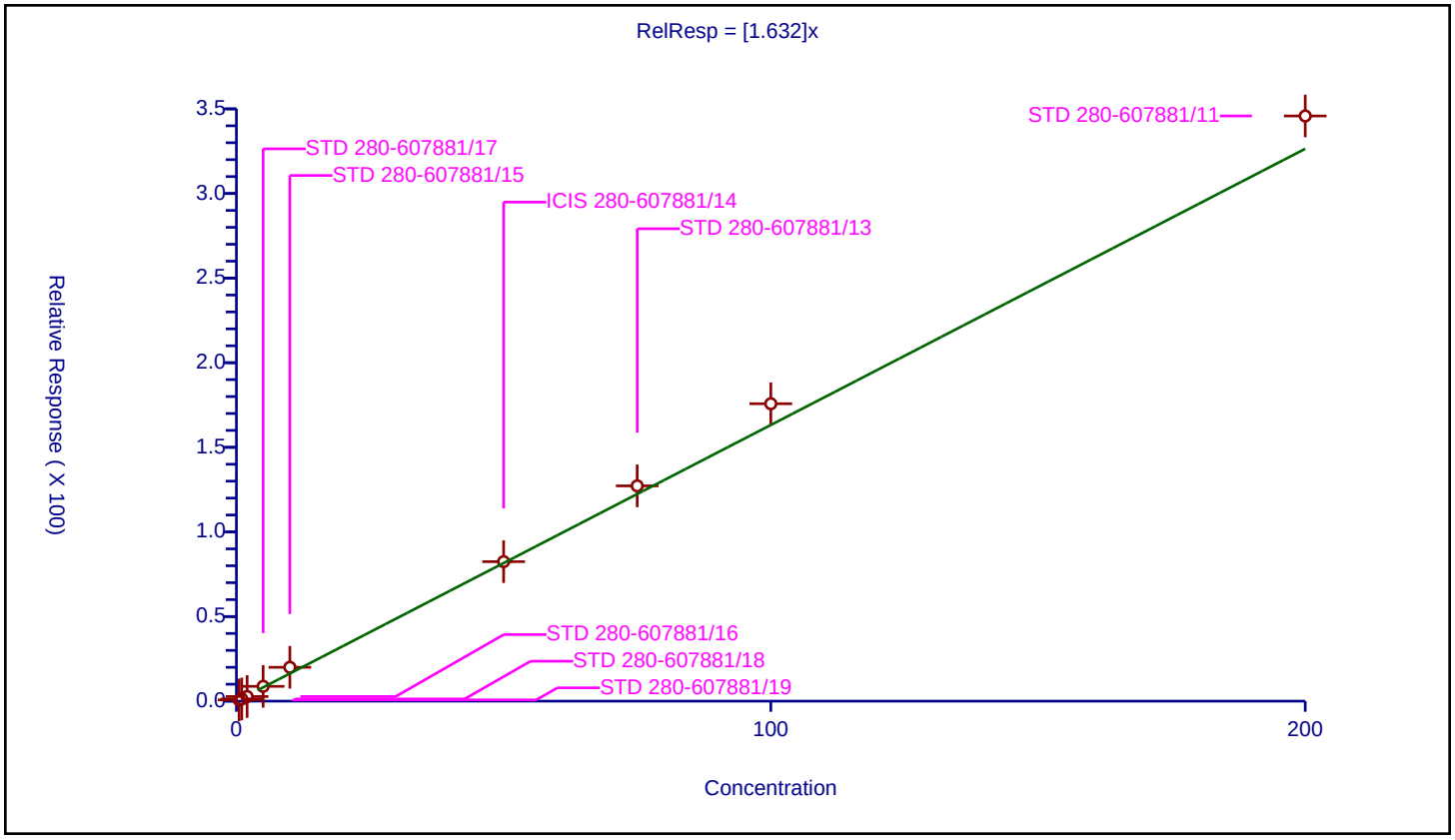
Curve Coefficients

Intercept:	0
Slope:	1.632

Error Coefficients

Standard Error:	1610000
Relative Standard Error:	13.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.735253	50.0	484663.0	1.470506	Y
2	STD 280-607881/18	1.0	1.274974	50.0	476794.0	1.274974	Y
3	STD 280-607881/16	2.0	2.723972	50.0	484201.0	1.361986	Y
4	STD 280-607881/17	5.0	8.744602	50.0	487009.0	1.74892	Y
5	STD 280-607881/15	10.0	19.996361	50.0	505647.0	1.999636	Y
6	ICIS 280-607881/14	50.0	82.445283	50.0	509618.0	1.648906	Y
7	STD 280-607881/13	75.0	127.222841	50.0	534485.0	1.696305	Y
8	STD 280-607881/12	100.0	175.763724	50.0	538480.0	1.757637	Y
9	STD 280-607881/11	200.0	345.82002	50.0	552718.0	1.7291	Y



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Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

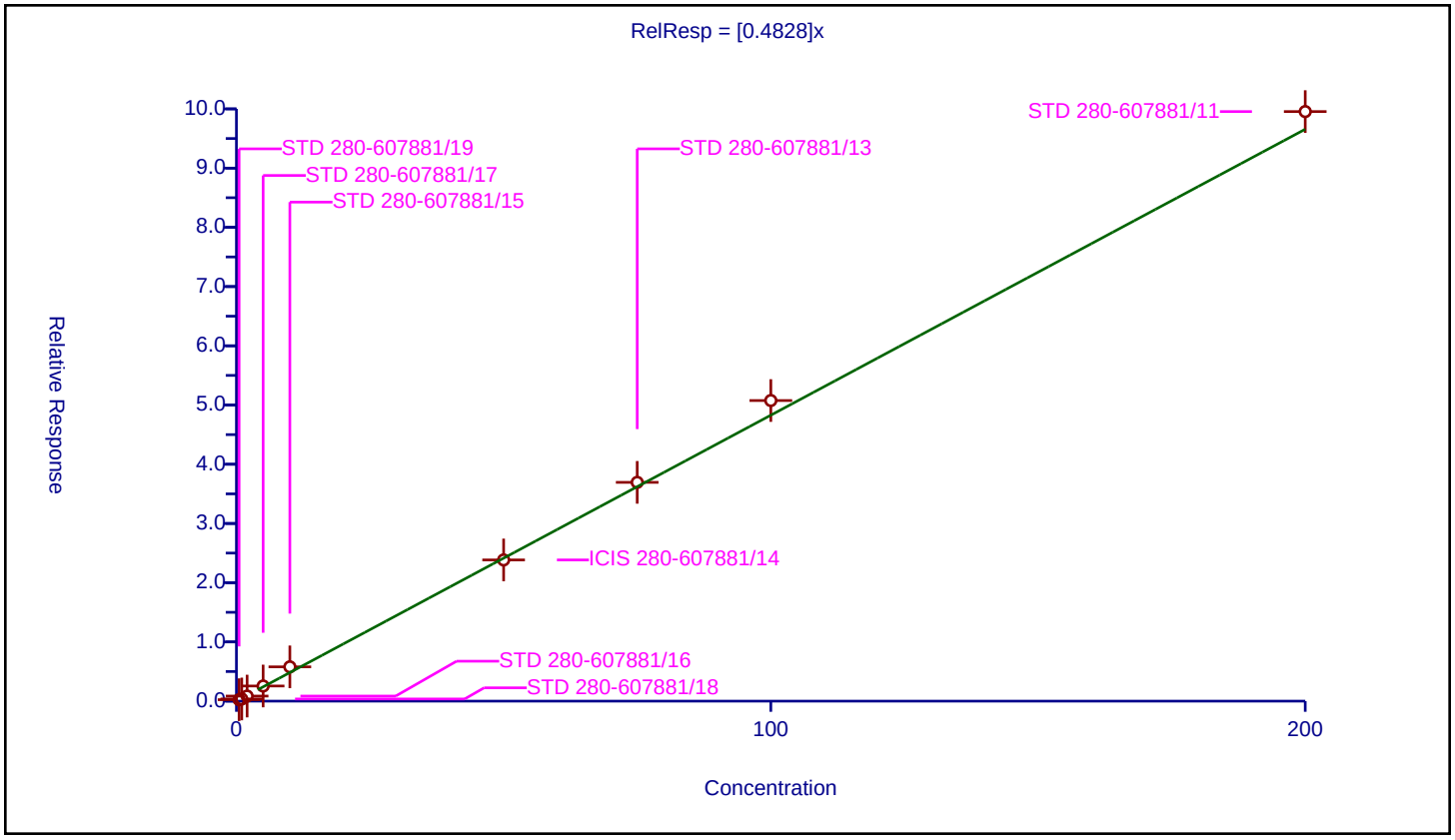
Curve Coefficients

Intercept:	0
Slope:	0.4828

Error Coefficients

Standard Error:	465000
Relative Standard Error:	12.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.243468	50.0	484663.0	0.486936	Y
2	STD 280-607881/18	1.0	0.365252	50.0	476794.0	0.365252	Y
3	STD 280-607881/16	2.0	0.856049	50.0	484201.0	0.428025	Y
4	STD 280-607881/17	5.0	2.556421	50.0	487009.0	0.511284	Y
5	STD 280-607881/15	10.0	5.791095	50.0	505647.0	0.57911	Y
6	ICIS 280-607881/14	50.0	23.842368	50.0	509618.0	0.476847	Y
7	STD 280-607881/13	75.0	36.943506	50.0	534485.0	0.49258	Y
8	STD 280-607881/12	100.0	50.756388	50.0	538480.0	0.507564	Y
9	STD 280-607881/11	200.0	99.54769	50.0	552718.0	0.497738	Y



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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-597846/20 Calibration Date: 12/28/2022 14:55

Instrument ID: VMS_MS1 Calib Start Date: 12/28/2022 11:59

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 12/28/2022 14:33

Lab File ID: MS1_4158.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0035	0.0035*	0.0100	2600	3000	0.7	30.0
Isopropyl alcohol	Ave	0.0168	0.0162	0.0100	400	500	-3.6	30.0
Acetonitrile	Ave	0.0400	0.0366	0.0100	457	500	-8.5	30.0
Isopropyl ether	Ave	0.1639	0.1646	0.0100	45.3	50.0	0.5	30.0
Chloroprene	Ave	0.3120	0.3279	0.0100	46.6	50.0	5.1	30.0
Tert-butyl ethyl ether	Ave	0.6150	0.6359	0.0100	46.2	50.0	3.4	30.0
Ethyl acetate	Lin2		0.2418	0.0100	84.6	100	-15.4	30.0
Propionitrile	Ave	0.0404	0.0382	0.0100	427	500	-5.4	30.0
Methacrylonitrile	Ave	0.1568	0.1519	0.0100	438	500	-3.1	30.0
Tert-amyl methyl ether	Ave	0.5682	0.5700	0.0100	44.6	50.0	0.3	30.0
n-Butanol	Ave	0.0060	0.0063*	0.0100	1120	1250	5.0	30.0
Methyl methacrylate	Ave	0.0634	0.0616	0.0100	86.3	100	-3.0	30.0
2-Nitropropane	Lin1		0.0505	0.0100	81.9	100	-18.1	30.0
cis-1,4-Dichloro-2-butene	Ave	0.1861	0.2011	0.0100	96.2	100	8.1	30.0
1,2,3-Trimethylbenzene	Ave	2.095	2.073	0.0100	42.3	50.0	-1.1	30.0
1,3,5-Trichlorobenzene	Ave	0.6831	0.6990	0.0100	43.0	50.0	2.3	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4158.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 28-Dec-2022 14:55:30 ALS Bottle#: 9 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 10:55:31 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:13:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1766372	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	407804	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	657299	50.0	50.0	
19 Ethanol	45	3.071	3.071	0.000	100	375159	3000.0	2600.6	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	286797	500.0	399.8	
29 Acetonitrile	41	3.727	3.727	0.000	99	646834	500.0	457.4	
41 Isopropyl ether	87	4.551	4.551	0.000	92	290744	50.0	45.3	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	579264	50.0	46.6	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	1123212	50.0	46.2	
47 Ethyl acetate	43	5.040	5.040	0.000	100	854050	100.0	84.6	
50 Propionitrile	54	5.082	5.082	0.000	99	674554	500.0	426.8	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	2683113	500.0	438.0	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	88	1006841	50.0	44.6	
67 n-Butanol	56	6.227	6.227	0.000	93	279470	1250.0	1115.0	
72 Methyl methacrylate	100	6.590	6.590	0.000	91	217482	100.0	86.3	
76 2-Nitropropane	41	6.995	6.995	0.000	94	178307	100.0	81.9	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	264381	100.0	96.2	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	1362382	50.0	42.3	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	96	459449	50.0	43.0	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00057 Amount Added: 50.00 Units: uL
mv-Cent IS_00007 Amount Added: 5.00 Units: uL

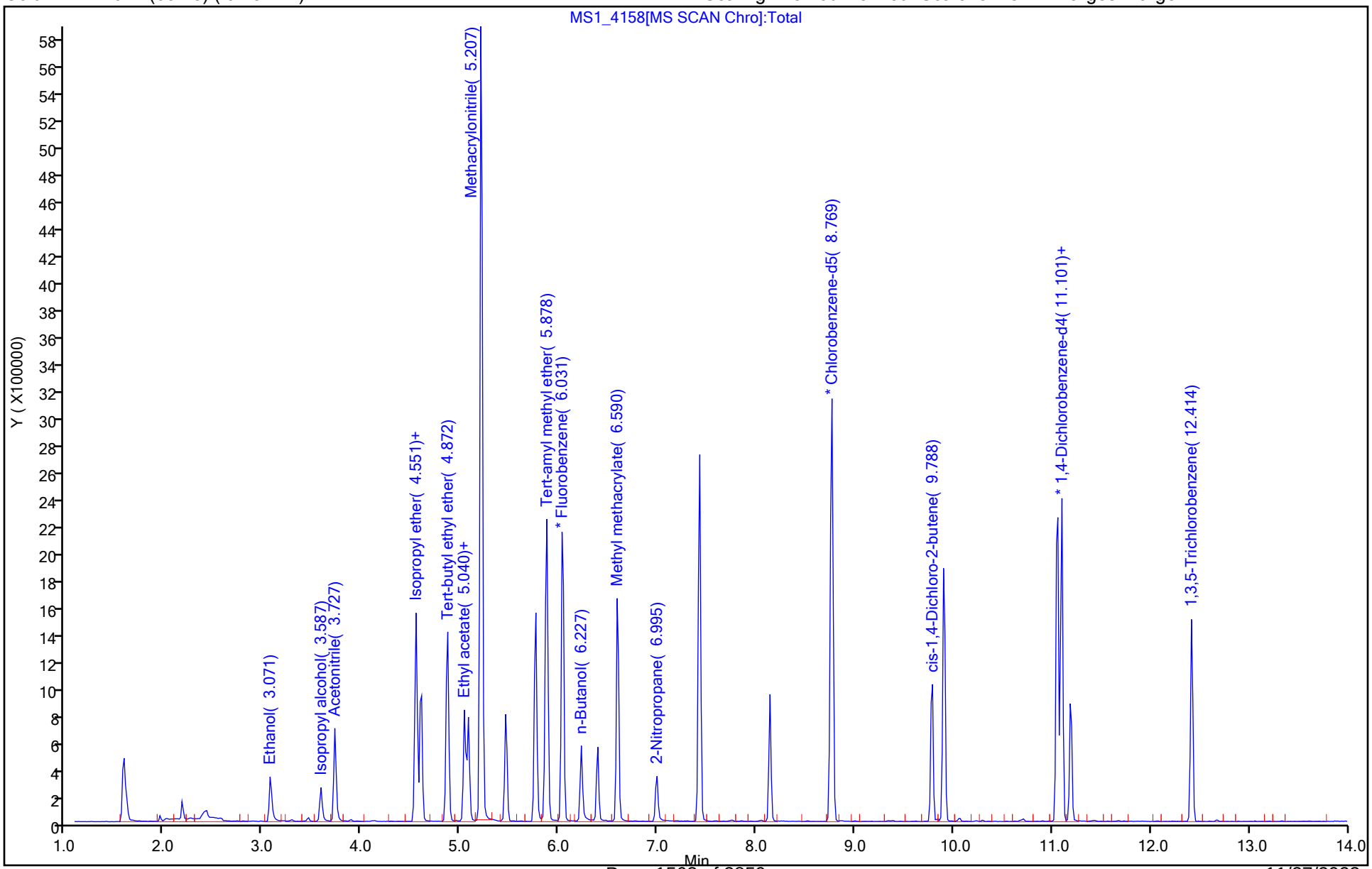
Report Date: 29-Dec-2022 10:55:59 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4158.D

Injection Date:	28-Dec-2022 14:55:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	ICV			Worklist Smp#:	20
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-609046/43 Calibration Date: 04/18/2023 19:19

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8198.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.2006	0.1000	41.8	50.0	-16.5	30.0
Chloromethane	Ave	0.2309	0.2529	0.1000	54.8	50.0	9.5	30.0
Vinyl chloride	Lin1		0.2308	0.0100	48.5	50.0	-3.1	30.0
Bromomethane	Lin1		0.1322	0.0100	52.7	50.0	5.3	30.0
Chloroethane	Lin1		0.1396	0.0100	47.6	50.0	-4.7	30.0
Dichlorofluoromethane	Lin1		0.3250	0.0100	48.7	50.0	-2.6	30.0
Trichlorofluoromethane	Lin1		0.2560	0.0100	45.6	50.0	-8.8	30.0
Ethyl ether	Ave	0.1774	0.1596	0.0100	45.0	50.0	-10.0	30.0
Acrolein	Ave	0.0271	0.0235	0.0010	428	494	-13.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1133	0.1037	0.0500	45.7	50.0	-8.5	30.0
1,1-Dichloroethene	Ave	0.1550	0.1390	0.0600	44.8	50.0	-10.3	30.0
Acetone	Lin1		0.0736	0.0100	170	200	-14.9	30.0
Iodomethane	Ave	0.2071	0.1975	0.0100	47.7	50.0	-4.6	30.0
Carbon disulfide	Ave	0.5567	0.4802	0.1000	43.1	50.0	-13.7	30.0
Methyl acetate	Ave	0.1963	0.1775	0.0100	90.4	100	-9.6	30.0
Allyl chloride	Lin2		0.3252	0.0100	45.4	50.0	-9.2	30.0
Methylene Chloride	Ave	0.1929	0.1670	0.0100	43.3	50.0	-13.5	30.0
2-Methyl-2-propanol	Ave	0.0283	0.0259	0.0010	457	500	-8.7	30.0
Acrylonitrile	Ave	0.0914	0.0845	0.0100	462	500	-7.6	30.0
Methyl tert-butyl ether	Ave	0.5999	0.5594	0.1000	46.6	50.0	-6.7	30.0
trans-1,2-Dichloroethene	Ave	0.1798	0.1563	0.1000	43.4	50.0	-13.1	30.0
Hexane	Ave	1.082	0.9836	0.0100	45.4	50.0	-9.1	30.0
Vinyl acetate	Ave	0.4685	0.4305	0.0100	91.9	100	-8.1	30.0
1,1-Dichloroethane	Ave	0.3570	0.3188	0.1000	44.7	50.0	-10.7	30.0
2-Butanone (MEK)	Ave	0.1340	0.1144	0.0100	171	200	-14.6	30.0
2,2-Dichloropropane	Ave	0.3031	0.2656	0.0100	43.8	50.0	-12.4	30.0
cis-1,2-Dichloroethene	Ave	0.1936	0.1750	0.1000	45.2	50.0	-9.6	30.0
sec-Butyl Alcohol	Ave	0.0238	0.0220	0.0100	1110	1200	-7.3	30.0
Chlorobromomethane	Ave	0.0885	0.0796	0.0500	45.0	50.0	-10.1	30.0
Tetrahydrofuran	Ave	0.0841	0.0763	0.0010	90.7	100	-9.3	30.0
Chloroform	Ave	0.3253	0.2965	0.2000	45.6	50.0	-8.8	30.0
1,1,1-Trichloroethane	Ave	0.2706	0.2528	0.0500	46.7	50.0	-6.6	30.0
Cyclohexane	Ave	0.3491	0.3149	0.0100	45.1	50.0	-9.8	30.0
1,1-Dichloropropene	Ave	0.2649	0.2386	0.0100	45.0	50.0	-10.0	30.0
Carbon tetrachloride	Ave	0.2286	0.2031	0.1000	44.4	50.0	-11.2	30.0
Isobutyl alcohol	Ave	0.0100	0.0091	0.0010	1150	1250	-8.2	30.0
Benzene	Ave	0.7728	0.7068	0.2000	45.7	50.0	-8.5	30.0
1,2-Dichloroethane	Ave	0.3017	0.2618	0.0700	43.4	50.0	-13.2	30.0
n-Heptane	Ave	0.2404	0.2073		43.1	50.0	-13.8	
Trichloroethene	Ave	0.8031	0.7051	0.2000	43.9	50.0	-12.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-609046/43 Calibration Date: 04/18/2023 19:19

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8198.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Ave	0.2043	0.1874	0.0010	147	160	-8.3	30.0
Methylcyclohexane	Ave	0.2531	0.2261	0.0500	44.7	50.0	-10.7	30.0
1,2-Dichloropropane	Ave	0.2130	0.1885	0.1000	44.3	50.0	-11.5	30.0
1,4-Dioxane	Ave	0.0034	0.0029	0.0010	834	1000	-16.6	30.0
Dibromomethane	Ave	0.1167	0.1056	0.0100	45.2	50.0	-9.5	30.0
Dichlorobromomethane	Ave	0.2543	0.2300	0.2000	45.2	50.0	-9.5	30.0
2-Chloroethyl vinyl ether	Lin1		0.1340	0.0100	44.1	50.0	-11.7	30.0
cis-1,3-Dichloropropene	Ave	1.433	1.273	0.2000	44.4	50.0	-11.1	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2558	0.2346	0.0300	183	200	-8.3	30.0
Toluene	Ave	0.7996	0.7269	0.3000	45.5	50.0	-9.1	30.0
trans-1,3-Dichloropropene	Ave	0.3155	0.2859	0.2000	45.3	50.0	-9.4	30.0
Ethyl methacrylate	Ave	1.217	1.082	0.0100	44.4	50.0	-11.1	30.0
1,1,2-Trichloroethane	Ave	0.1674	0.1561	0.1000	46.6	50.0	-6.8	30.0
Tetrachloroethene	Ave	0.5506	0.5109	0.1000	46.4	50.0	-7.2	30.0
1,3-Dichloropropane	Ave	1.338	1.248	0.0100	46.7	50.0	-6.7	30.0
2-Hexanone	Ave	0.7895	0.7235	0.0100	183	200	-8.4	30.0
Chlorodibromomethane	Ave	0.7351	0.6614	0.1000	45.0	50.0	-10.0	30.0
1,2-Dibromoethane	Ave	0.7391	0.6747	0.1000	45.6	50.0	-8.7	30.0
1-Chlorohexane	Lin2		0.9475	0.0100	37.0	40.0	-7.4	30.0
Chlorobenzene	Ave	2.086	1.928	0.3000	46.2	50.0	-7.6	30.0
1,1,1,2-Tetrachloroethane	Ave	0.7155	0.6561	0.0100	45.8	50.0	-8.3	30.0
Ethylbenzene	Ave	1.189	1.074	0.3000	45.1	50.0	-9.7	30.0
m-Xylene & p-Xylene	Ave	1.452	1.312	0.1000	45.2	50.0	-9.6	30.0
o-Xylene	Ave	1.450	1.300	0.2000	44.8	50.0	-10.3	30.0
Styrene	Ave	2.432	2.225	0.2000	45.8	50.0	-8.5	30.0
Bromoform	Ave	0.4582	0.4093	0.1000	44.7	50.0	-10.7	30.0
Isopropylbenzene	Ave	2.134	1.932	0.3000	45.3	50.0	-9.5	30.0
Cyclohexanone	Ave	0.0503	0.0458	0.0010	1370	1500	-9.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6353	0.5942	0.3000	46.8	50.0	-6.5	30.0
Bromobenzene	Ave	0.5004	0.4486	0.0100	44.8	50.0	-10.4	30.0
trans-1,4-Dichloro-2-butene	Lin1		0.1542	0.0100	41.3	50.0	-17.4	30.0
1,2,3-Trichloropropane	Ave	0.1941	0.1720	0.0100	44.3	50.0	-11.4	30.0
N-Propylbenzene	Ave	0.5767	0.5163	0.0100	44.8	50.0	-10.5	30.0
2-Chlorotoluene	Ave	0.4931	0.4382	0.0100	44.4	50.0	-11.1	30.0
1,3,5-Trimethylbenzene	Ave	1.774	1.615	0.0100	45.5	50.0	-9.0	30.0
4-Chlorotoluene	Ave	0.5248	0.4635	0.0100	44.2	50.0	-11.7	30.0
tert-Butylbenzene	Ave	1.436	1.303	0.0100	45.4	50.0	-9.2	30.0
1,2,4-Trimethylbenzene	Ave	1.870	1.671	0.3000	44.7	50.0	-10.6	30.0
sec-Butylbenzene	Ave	0.3979	0.3602	0.0100	45.3	50.0	-9.5	30.0
1,3-Dichlorobenzene	Ave	0.9365	0.8561	0.5000	45.7	50.0	-8.6	30.0
4-Isopropyltoluene	Ave	1.776	1.617	0.0100	45.5	50.0	-8.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-609046/43 Calibration Date: 04/18/2023 19:19

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8198.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.000	0.8776	0.5000	43.9	50.0	-12.2	30.0
n-Butylbenzene	Ave	1.617	1.404	0.0100	43.4	50.0	-13.2	30.0
1,2-Dichlorobenzene	Ave	0.8946	0.8263	0.5000	46.2	50.0	-7.6	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1288	0.1096	0.0100	42.6	50.0	-14.9	30.0
1,2,4-Trichlorobenzene	Ave	0.5013	0.4363	0.2000	43.5	50.0	-13.0	30.0
Hexachlorobutadiene	Ave	0.1937	0.1646	0.0100	42.5	50.0	-15.0	30.0
Naphthalene	Ave	1.665	1.416	0.0100	42.5	50.0	-14.9	30.0
1,2,3-Trichlorobenzene	Ave	0.4254	0.3649	0.3000	42.9	50.0	-14.2	30.0
Dibromofluoromethane (Surr)	Ave	0.2380	0.2382	0.0100	50.0	50.0	0.0	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3225	0.3233	0.0100	50.1	50.0	0.3	30.0
Toluene-d8 (Surr)	Ave	4.291	4.367	0.0100	50.9	50.0	1.8	30.0
4-Bromofluorobenzene (Surr)	Ave	0.9822	0.9716	0.0100	49.5	50.0	-1.1	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8198.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 18-Apr-2023 19:19:30 ALS Bottle#: 16 Worklist Smp#: 43
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 08:23:10 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 19-Apr-2023 06:58:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1180704	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	275927	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	454451	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	281211	50.0	50.0	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	381753	50.0	50.1	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1205067	50.0	50.9	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	441559	50.0	49.5	
11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	236804	50.0	41.8	
12 Chloromethane	50	2.009	2.009	0.000	99	298607	50.0	54.8	
13 Vinyl chloride	62	2.135	2.135	0.000	98	272560	50.0	48.5	
15 Bromomethane	94	2.498	2.498	0.000	92	156111	50.0	52.7	
16 Chloroethane	64	2.624	2.623	0.001	99	164881	50.0	47.6	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	383715	50.0	48.7	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	302292	50.0	45.6	
20 Ethyl ether	59	3.182	3.182	0.000	94	188472	50.0	45.0	
22 Acrolein	56	3.322	3.322	0.000	99	273875	493.8	428.4	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	164062	50.0	44.8	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	94	122424	50.0	45.7	
25 Acetone	43	3.448	3.447	0.001	98	347446	200.0	170.2	
26 Iodomethane	142	3.559	3.559	0.000	100	233215	50.0	47.7	
28 Carbon disulfide	76	3.629	3.629	0.000	100	566991	50.0	43.1	
30 Methyl acetate	43	3.755	3.755	0.000	98	419122	100.0	90.4	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	383974	50.0	45.4	
32 Methylene Chloride	84	3.895	3.894	0.001	97	197145	50.0	43.3	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	305297	500.0	456.7	
34 Acrylonitrile	53	4.104	4.104	0.000	98	998000	500.0	462.2	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	660538	50.0	46.6	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	184487	50.0	43.4	
37 Hexane	57	4.383	4.383	0.000	96	271395	50.0	45.4	
39 Vinyl acetate	43	4.523	4.523	0.000	97	1016576	100.0	91.9	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	376413	50.0	44.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	100	540259	200.0	170.7	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	313617	50.0	43.8	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	206640	50.0	45.2	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	624644	1200.0	1112.0	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	94010	50.0	45.0	
54 Tetrahydrofuran	42	5.249	5.249	0.000	88	180242	100.0	90.7	
55 Chloroform	83	5.319	5.319	0.000	96	350093	50.0	45.6	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	298444	50.0	46.7	
57 Cyclohexane	56	5.543	5.542	0.001	95	371768	50.0	45.1	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	281677	50.0	45.0	
59 Carbon tetrachloride	117	5.612	5.612	0.000	84	239766	50.0	44.4	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	269880	1250.0	1147.7	
63 Benzene	78	5.780	5.794	-0.014	99	834511	50.0	45.7	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	309128	50.0	43.4	
66 n-Heptane	43	6.003	6.003	0.000	97	244750	50.0	43.1	
68 Trichloroethene	95	6.353	6.352	0.001	97	194563	50.0	43.9	
69 2-Pentanone	43	6.478	6.478	0.000	98	708162	160.0	146.8	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	266964	50.0	44.7	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	92	222580	50.0	44.3	
73 1,4-Dioxane	88	6.632	6.632	0.000	98	67721	1000.0	833.5	
74 Dibromomethane	93	6.660	6.660	0.000	95	124691	50.0	45.2	
75 Dichlorobromomethane	83	6.800	6.799	0.001	98	271602	50.0	45.2	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	158245	50.0	44.1	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	91	351306	50.0	44.4	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	1107813	200.0	183.4	
82 Toluene	91	7.484	7.484	0.000	97	858203	50.0	45.5	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	337600	50.0	45.3	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	298532	50.0	44.4	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	184274	50.0	46.6	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	140983	50.0	46.4	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	97	344421	50.0	46.7	
91 2-Hexanone	43	8.043	8.042	0.001	97	798568	200.0	183.3	
95 Chlorodibromomethane	129	8.224	8.224	0.000	91	182491	50.0	45.0	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	186171	50.0	45.6	
98 1-Chlorohexane	91	8.755	8.755	0.000	91	209146	40.0	37.0	
99 Chlorobenzene	112	8.797	8.797	0.000	91	532048	50.0	46.2	
100 1,1,1,2-Tetrachloroethane	131	8.881	8.880	0.000	94	181025	50.0	45.8	
101 Ethylbenzene	106	8.881	8.880	0.000	99	296218	50.0	45.1	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	361977	50.0	45.2	
103 o-Xylene	106	9.369	9.369	0.000	97	358839	50.0	44.8	
104 Styrene	104	9.397	9.397	0.000	96	613957	50.0	45.8	
106 Bromoform	173	9.579	9.579	0.000	94	112939	50.0	44.7	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	877968	50.0	45.3	
109 Cyclohexanone	55	9.830	9.830	0.000	96	379277	1500.0	1365.5	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	270057	50.0	46.8	
111 Bromobenzene	156	10.054	10.053	0.001	98	203844	50.0	44.8	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	91	70062	50.0	41.3	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	78170	50.0	44.3	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	234611	50.0	44.8	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	199148	50.0	44.4	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	733751	50.0	45.5	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	210619	50.0	44.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	592232	50.0	45.4	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	759344	50.0	44.7	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	163683	50.0	45.3	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	389077	50.0	45.7	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	734991	50.0	45.5	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	92	398832	50.0	43.9	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	638122	50.0	43.4	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	375504	50.0	46.2	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	76	49829	50.0	42.6	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	94	198288	50.0	43.5	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	74791	50.0	42.5	
132 Naphthalene	128	13.336	13.336	0.000	98	643638	50.0	42.5	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	93	165823	50.0	42.9	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	88.7	
S 151 Trihalomethanes, Total	1				0		200.0	180.5	
S 150 1,2-Dichloroethene, Total	1				0		100.0	88.7	
S 156 1,3-Dichloropropene, Total	1				0		100.0	89.7	
S 155 Xylenes, Total	106				0		100.0	90.0	
S 153 Xylenes, Total (URS)	1				0		100.0	90.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00133	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

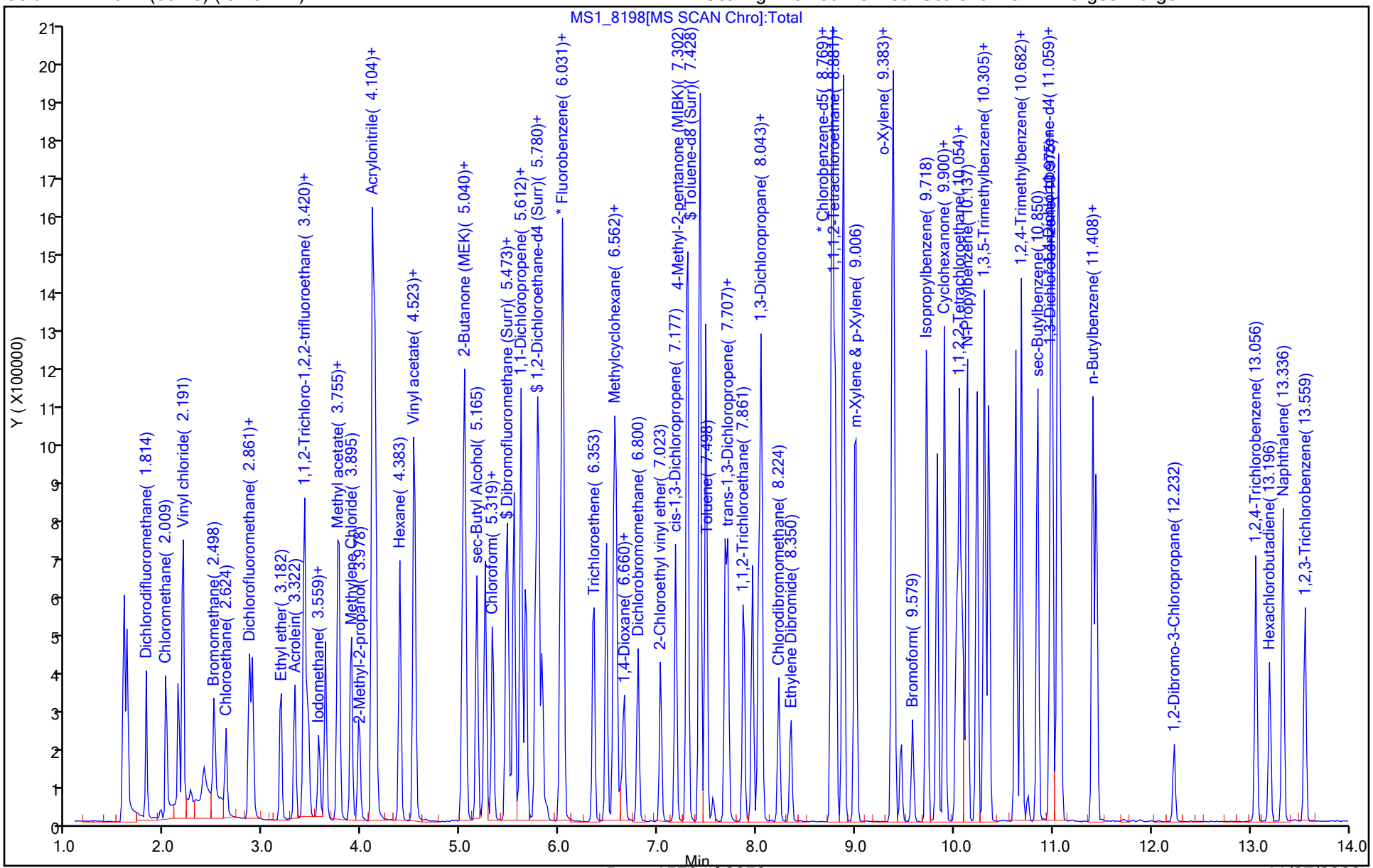
Report Date: 19-Apr-2023 08:23:16 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8198.D

Injection Date:	18-Apr-2023 19:19:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	icv			Worklist Smp#:	43
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609561/3 Calibration Date: 04/21/2023 07:37

Instrument ID: VMS_MS1 Calib Start Date: 12/28/2022 11:59

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 12/28/2022 14:33

Lab File ID: MS1_8307.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0035	0.0034*	0.0100	1460	1500	-2.4	20.0
Isopropyl alcohol	Ave	0.0168	0.0167	0.0100	249	250	-0.5	20.0
Acetonitrile	Ave	0.0400	0.0379	0.0100	236	250	-5.4	20.0
Isopropyl ether	Ave	0.1639	0.1583	0.0100	24.2	25.0	-3.4	20.0
Chloroprene	Ave	0.3120	0.3639	0.0100	29.2	25.0	16.6	20.0
Tert-butyl ethyl ether	Ave	0.6150	0.6535	0.0100	26.6	25.0	6.2	20.0
Ethyl acetate	Lin2		0.2267	0.0100	46.3	50.0	-7.4	20.0
Propionitrile	Ave	0.0404	0.0364	0.0100	225	250	-9.9	20.0
Methacrylonitrile	Ave	0.1568	0.1532	0.0100	244	250	-2.3	20.0
Tert-amyl methyl ether	Ave	0.5682	0.5841	0.0100	25.7	25.0	2.8	20.0
n-Butanol	Ave	0.0060	0.0064*	0.0100	664	625	6.2	20.0
Methyl methacrylate	Ave	0.0634	0.0513	0.0100	40.4	50.0	-19.2	20.0
2-Nitropropane	Lin1		0.0741	0.0100	68.6	50.0	37.2*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1861	0.1572	0.0100	42.2	50.0	-15.5	20.0
1,2,3-Trimethylbenzene	Ave	2.095	1.798	0.0100	21.4	25.0	-14.2	20.0
1,3,5-Trichlorobenzene	Ave	0.6831	0.4887	0.0100	17.9	25.0	-28.5*	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8307.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 21-Apr-2023 07:37:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: s
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub197

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:14 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: LP8K Date: 21-Apr-2023 08:18:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	97	1004527	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	239490	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	376743	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	91	262578	50.0	54.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	373713	50.0	57.7	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1081734	50.0	52.6	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	79	392659	50.0	53.1	
19 Ethanol	45	3.070	3.070	0.000	99	103305	1500.0	1463.4	
27 Isopropyl alcohol	45	3.573	3.573	0.000	98	84121	250.0	248.7	
29 Acetonitrile	41	3.727	3.727	0.000	100	190172	250.0	236.4	
41 Isopropyl ether	87	4.551	4.551	0.000	93	79519	25.0	24.2	
42 2-Chloro-1,3-butadiene	53	4.593	4.593	0.000	95	182765	25.0	29.2	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	328205	25.0	26.6	
47 Ethyl acetate	43	5.040	5.040	0.000	100	227772	50.0	46.3	
50 Propionitrile	54	5.081	5.081	0.000	98	182670	250.0	225.1	
52 Methacrylonitrile	41	5.207	5.207	0.000	96	769578	250.0	244.3	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	87	293349	25.0	25.7	
67 n-Butanol	56	6.227	6.227	0.000	95	80344	625.0	663.8	
72 Methyl methacrylate	100	6.590	6.590	0.000	93	51514	50.0	40.4	
76 2-Nitropropane	41	6.995	6.995	0.000	99	74440	50.0	68.6	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	59227	50.0	42.2	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	338616	25.0	21.4	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	92050	25.0	17.9	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added: 25.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

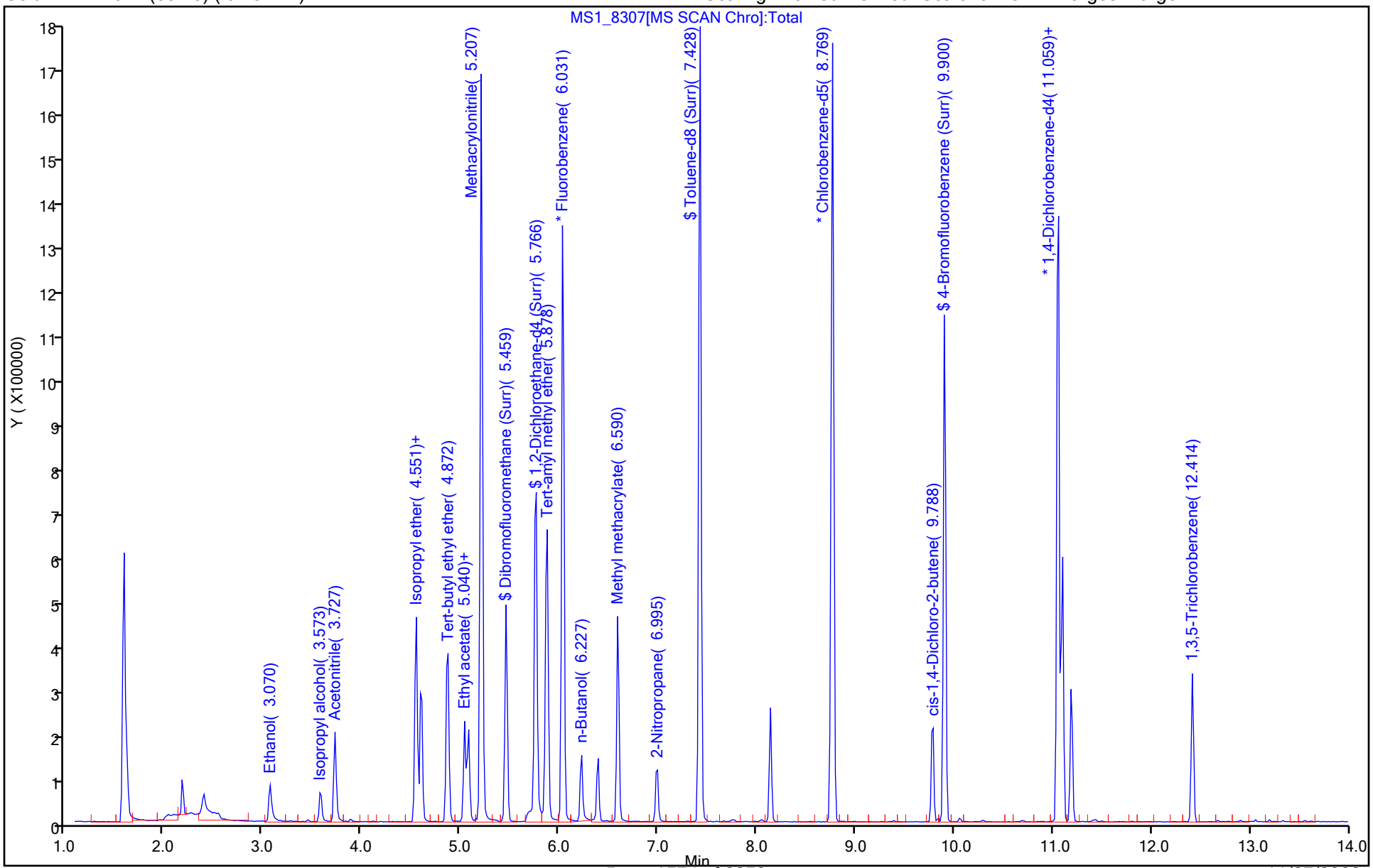
Report Date: 22-Apr-2023 00:29:15 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8307.D

Injection Date:	21-Apr-2023 07:37:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609561/3 Calibration Date: 04/21/2023 07:37

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8307.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2380	0.2614	0.0100	54.9	50.0	9.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3225	0.3720	0.0100	57.7	50.0	15.4	20.0
Toluene-d8 (Surr)	Ave	4.291	4.517	0.0100	52.6	50.0	5.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.9822	1.042	0.0100	53.1	50.0	6.1	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8307.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 21-Apr-2023 07:37:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: s
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub197

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:14 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: LP8K Date: 21-Apr-2023 08:18:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	97	1004527	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	239490	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	376743	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	91	262578	50.0	54.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	373713	50.0	57.7	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1081734	50.0	52.6	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	79	392659	50.0	53.1	
19 Ethanol	45	3.070	3.070	0.000	99	103305	1500.0	1463.4	
27 Isopropyl alcohol	45	3.573	3.573	0.000	98	84121	250.0	248.7	
29 Acetonitrile	41	3.727	3.727	0.000	100	190172	250.0	236.4	
41 Isopropyl ether	87	4.551	4.551	0.000	93	79519	25.0	24.2	
42 2-Chloro-1,3-butadiene	53	4.593	4.593	0.000	95	182765	25.0	29.2	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	328205	25.0	26.6	
47 Ethyl acetate	43	5.040	5.040	0.000	100	227772	50.0	46.3	
50 Propionitrile	54	5.081	5.081	0.000	98	182670	250.0	225.1	
52 Methacrylonitrile	41	5.207	5.207	0.000	96	769578	250.0	244.3	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	87	293349	25.0	25.7	
67 n-Butanol	56	6.227	6.227	0.000	95	80344	625.0	663.8	
72 Methyl methacrylate	100	6.590	6.590	0.000	93	51514	50.0	40.4	
76 2-Nitropropane	41	6.995	6.995	0.000	99	74440	50.0	68.6	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	59227	50.0	42.2	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	338616	25.0	21.4	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	92050	25.0	17.9	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added: 25.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

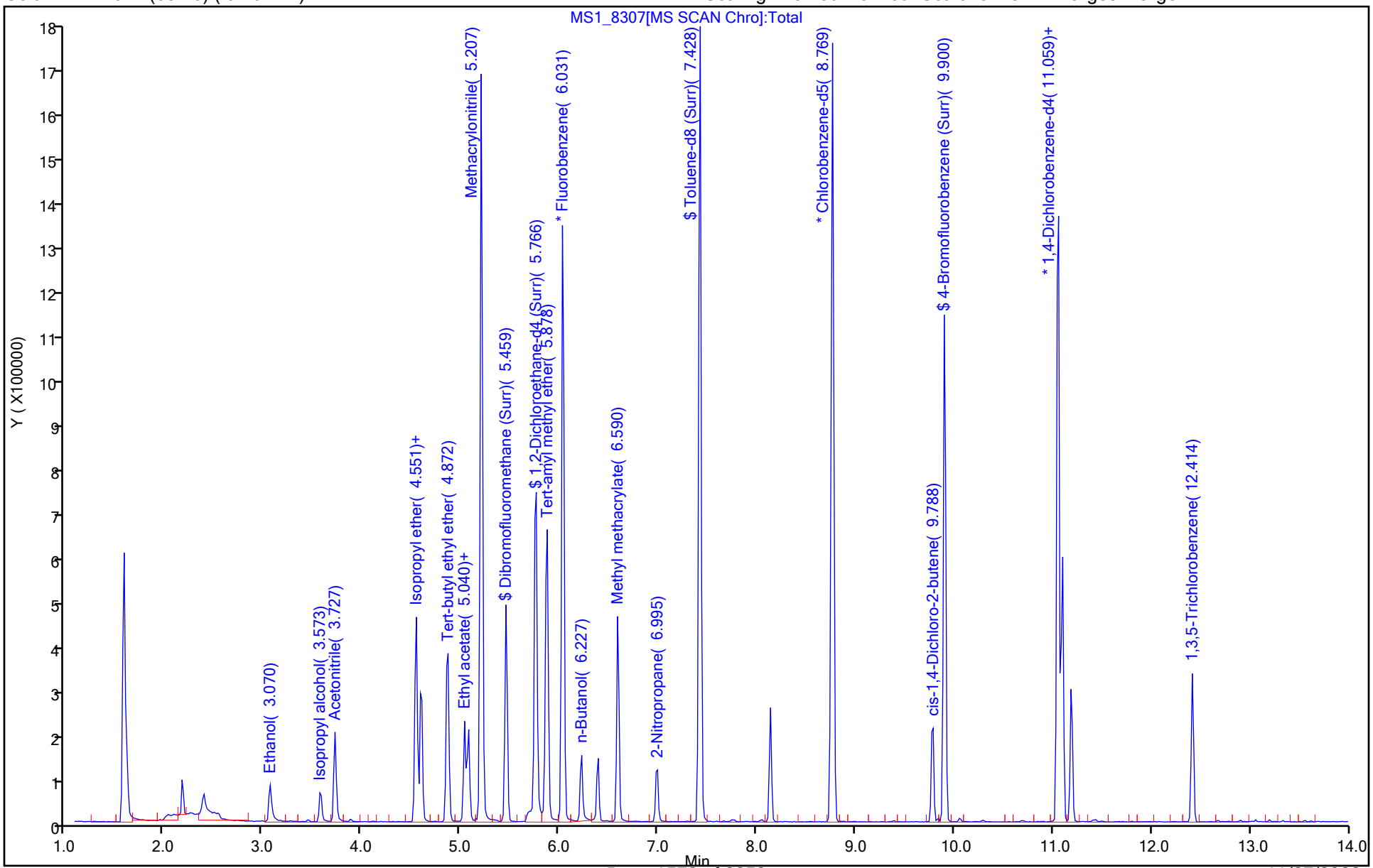
Report Date: 22-Apr-2023 00:29:15 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8307.D

Injection Date:	21-Apr-2023 07:37:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609561/2 Calibration Date: 04/21/2023 07:58

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8308.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.2192	0.1000	45.5	50.0	-9.0	20.0
Chloromethane	Ave	0.2309	0.2461	0.1000	53.3	50.0	6.6	20.0
Vinyl chloride	Lin1		0.2491	0.0100	52.3	50.0	4.5	20.0
Bromomethane	Lin1		0.1328	0.0100	52.9	50.0	5.8	20.0
Chloroethane	Lin1		0.1473	0.0100	50.3	50.0	0.5	20.0
Dichlorofluoromethane	Lin1		0.3515	0.0100	52.7	50.0	5.3	20.0
Trichlorofluoromethane	Lin1		0.2783	0.0100	49.4	50.0	-1.1	20.0
Ethyl ether	Ave	0.1774	0.1727	0.0100	48.7	50.0	-2.6	20.0
Acrolein	Ave	0.0271	0.0280	0.0010	511	494	3.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1133	0.1021	0.0500	45.0	50.0	-9.9	20.0
1,1-Dichloroethene	Ave	0.1550	0.1410	0.0600	45.5	50.0	-9.0	20.0
Acetone	Lin1		0.0822	0.0100	190	200	-4.8	20.0
Iodomethane	Ave	0.2071	0.1936	0.0100	46.7	50.0	-6.5	20.0
Carbon disulfide	Ave	0.5567	0.4903	0.1000	44.0	50.0	-11.9	20.0
Methyl acetate	Ave	0.1963	0.1952	0.0100	99.5	100	-0.5	20.0
Allyl chloride	Lin2		0.3553	0.0100	49.6	50.0	-0.7	20.0
Methylene Chloride	Ave	0.1929	0.1811	0.0100	46.9	50.0	-6.1	20.0
2-Methyl-2-propanol	Ave	0.0283	0.0290	0.0010	512	500	2.3	20.0
Acrylonitrile	Ave	0.0914	0.0938	0.0100	513	500	2.6	20.0
Methyl tert-butyl ether	Ave	0.5999	0.6154	0.1000	51.3	50.0	2.6	20.0
trans-1,2-Dichloroethene	Ave	0.1798	0.1701	0.1000	47.3	50.0	-5.4	20.0
Hexane	Ave	1.082	0.9690	0.0100	44.8	50.0	-10.5	20.0
Vinyl acetate	Ave	0.4685	0.5236	0.0100	112	100	11.8	20.0
1,1-Dichloroethane	Ave	0.3570	0.3578	0.1000	50.1	50.0	0.2	20.0
2-Butanone (MEK)	Ave	0.1340	0.1295	0.0100	193	200	-3.4	20.0
2,2-Dichloropropane	Ave	0.3031	0.3007	0.0100	49.6	50.0	-0.8	20.0
cis-1,2-Dichloroethene	Ave	0.1936	0.1931	0.1000	49.9	50.0	-0.3	20.0
sec-Butyl Alcohol	Ave	0.0238	0.0247	0.0100	1250	1200	4.0	20.0
Chlorobromomethane	Ave	0.0885	0.0849	0.0500	47.9	50.0	-4.1	20.0
Tetrahydrofuran	Ave	0.0841	0.0871	0.0010	103	100	3.5	20.0
Chloroform	Ave	0.3253	0.3280	0.2000	50.4	50.0	0.8	20.0
1,1,1-Trichloroethane	Ave	0.2706	0.2786	0.0500	51.5	50.0	3.0	20.0
Cyclohexane	Ave	0.3491	0.3374	0.0100	48.3	50.0	-3.3	20.0
1,1-Dichloropropene	Ave	0.2649	0.2702	0.0100	51.0	50.0	2.0	20.0
Carbon tetrachloride	Ave	0.2286	0.2187	0.1000	47.8	50.0	-4.3	20.0
Isobutyl alcohol	Ave	0.0100	0.0103	0.0010	1290	1250	3.3	20.0
Benzene	Ave	0.7728	0.7792	0.2000	50.4	50.0	0.8	20.0
1,2-Dichloroethane	Ave	0.3017	0.2961	0.0700	49.1	50.0	-1.8	20.0
n-Heptane	Ave	0.2404	0.2146		44.6	50.0	-10.7	
Trichloroethene	Ave	0.8031	0.7801	0.2000	48.6	50.0	-2.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609561/2 | Calibration Date: 04/21/2023 07:58

Instrument ID: VMS_MS1 | Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8308.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Ave	0.2043	0.2099	0.0010	164	160	2.7	20.0
Methylcyclohexane	Ave	0.2531	0.2460	0.0500	48.6	50.0	-2.8	20.0
1,2-Dichloropropane	Ave	0.2130	0.2093	0.1000	49.1	50.0	-1.7	20.0
1,4-Dioxane	Ave	0.0034	0.0031	0.0010	913	1000	-8.7	20.0
Dibromomethane	Ave	0.1167	0.1110	0.0100	47.5	50.0	-4.9	20.0
Dichlorobromomethane	Ave	0.2543	0.2511	0.2000	49.4	50.0	-1.3	20.0
2-Chloroethyl vinyl ether	Lin1		0.1463	0.0100	48.2	50.0	-3.7	20.0
cis-1,3-Dichloropropene	Ave	1.433	1.372	0.2000	47.9	50.0	-4.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2558	0.2646	0.0300	207	200	3.4	20.0
Toluene	Ave	0.7996	0.8114	0.3000	50.7	50.0	1.5	20.0
trans-1,3-Dichloropropene	Ave	0.3155	0.3076	0.2000	48.7	50.0	-2.5	20.0
Ethyl methacrylate	Ave	1.217	1.178	0.0100	48.4	50.0	-3.2	20.0
1,1,2-Trichloroethane	Ave	0.1674	0.1649	0.1000	49.2	50.0	-1.5	20.0
Tetrachloroethene	Ave	0.5506	0.5314	0.1000	48.3	50.0	-3.5	20.0
1,3-Dichloropropane	Ave	1.338	1.329	0.0100	49.7	50.0	-0.7	20.0
2-Hexanone	Ave	0.7895	0.7894	0.0100	200	200	-0.0	20.0
Chlorodibromomethane	Ave	0.7351	0.6702	0.1000	45.6	50.0	-8.8	20.0
1,2-Dibromoethane	Ave	0.7391	0.7086	0.1000	47.9	50.0	-4.1	20.0
1-Chlorohexane	Lin2		1.008	0.0100	39.4	40.0	-1.5	20.0
Chlorobenzene	Ave	2.086	2.030	0.3000	48.7	50.0	-2.7	20.0
1,1,1,2-Tetrachloroethane	Ave	0.7155	0.6691	0.0100	46.8	50.0	-6.5	20.0
Ethylbenzene	Ave	1.189	1.138	0.3000	47.8	50.0	-4.3	20.0
m-Xylene & p-Xylene	Ave	1.452	1.403	0.1000	48.3	50.0	-3.4	20.0
o-Xylene	Ave	1.450	1.406	0.2000	48.5	50.0	-3.1	20.0
Styrene	Ave	2.432	2.368	0.2000	48.7	50.0	-2.6	20.0
Bromoform	Ave	0.4582	0.4067	0.1000	44.4	50.0	-11.2	20.0
Isopropylbenzene	Ave	2.134	2.168	0.3000	50.8	50.0	1.6	20.0
Cyclohexanone	Ave	0.0503	0.0521	0.0010	1550	1500	3.5	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6353	0.6278	0.3000	49.4	50.0	-1.2	20.0
Bromobenzene	Ave	0.5004	0.4895	0.0100	48.9	50.0	-2.2	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.1794	0.0100	48.0	50.0	-4.0	20.0
1,2,3-Trichloropropane	Ave	0.1941	0.1862	0.0100	48.0	50.0	-4.1	20.0
N-Propylbenzene	Ave	0.5767	0.5800	0.0100	50.3	50.0	0.6	20.0
2-Chlorotoluene	Ave	0.4931	0.4835	0.0100	49.0	50.0	-1.9	20.0
1,3,5-Trimethylbenzene	Ave	1.774	1.784	0.0100	50.3	50.0	0.6	20.0
4-Chlorotoluene	Ave	0.5248	0.5093	0.0100	48.5	50.0	-3.0	20.0
tert-Butylbenzene	Ave	1.436	1.448	0.0100	50.4	50.0	0.8	20.0
1,2,4-Trimethylbenzene	Ave	1.870	1.851	0.3000	49.5	50.0	-1.0	20.0
sec-Butylbenzene	Ave	0.3979	0.3896	0.0100	49.0	50.0	-2.1	20.0
1,3-Dichlorobenzene	Ave	0.9365	0.9200	0.5000	49.1	50.0	-1.8	20.0
4-Isopropyltoluene	Ave	1.776	1.760	0.0100	49.6	50.0	-0.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609561/2 Calibration Date: 04/21/2023 07:58

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8308.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.000	0.9543	0.5000	47.7	50.0	-4.6	20.0
n-Butylbenzene	Ave	1.617	1.593	0.0100	49.3	50.0	-1.5	20.0
1,2-Dichlorobenzene	Ave	0.8946	0.8690	0.5000	48.6	50.0	-2.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1288	0.1113	0.0100	43.2	50.0	-13.5	20.0
1,2,4-Trichlorobenzene	Ave	0.5013	0.4634	0.2000	46.2	50.0	-7.6	20.0
Hexachlorobutadiene	Ave	0.1937	0.1697	0.0100	43.8	50.0	-12.4	20.0
Naphthalene	Ave	1.665	1.488	0.0100	44.7	50.0	-10.6	20.0
1,2,3-Trichlorobenzene	Ave	0.4254	0.3855	0.3000	45.3	50.0	-9.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2380	0.2535	0.0100	53.3	50.0	6.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3225	0.3688	0.0100	57.2	50.0	14.4	20.0
Toluene-d8 (Surr)	Ave	4.291	4.553	0.0100	53.0	50.0	6.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.9822	1.024	0.0100	52.1	50.0	4.2	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8308.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 21-Apr-2023 07:58:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: m
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:16 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: LP8K Date: 21-Apr-2023 08:36:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1009627	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	242470	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	386005	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	255988	50.0	53.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	372381	50.0	57.2	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1103875	50.0	53.0	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	395202	50.0	52.1	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	221328	50.0	45.5	
12 Chloromethane	50	2.009	2.009	0.000	99	248468	50.0	53.3	
13 Vinyl chloride	62	2.135	2.135	0.000	98	251471	50.0	52.3	
15 Bromomethane	94	2.498	2.498	0.000	91	134087	50.0	52.9	
16 Chloroethane	64	2.623	2.623	0.000	99	148764	50.0	50.3	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	98	354921	50.0	52.7	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	280950	50.0	49.4	
20 Ethyl ether	59	3.182	3.182	0.000	93	174354	50.0	48.7	
22 Acrolein	56	3.322	3.322	0.000	99	279377	493.8	511.1	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	94	142380	50.0	45.5	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	94	103046	50.0	45.0	
25 Acetone	43	3.448	3.448	0.000	98	332010	200.0	190.5	
26 Iodomethane	142	3.559	3.559	0.000	100	195491	50.0	46.7	
28 Carbon disulfide	76	3.629	3.629	0.000	100	495070	50.0	44.0	
30 Methyl acetate	43	3.755	3.755	0.000	98	394162	100.0	99.5	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	86	358680	50.0	49.6	
32 Methylene Chloride	84	3.894	3.894	0.000	99	182858	50.0	46.9	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	292430	500.0	511.6	
34 Acrylonitrile	53	4.104	4.104	0.000	97	947449	500.0	513.1	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	621346	50.0	51.3	
36 trans-1,2-Dichloroethene	96	4.132	4.132	0.000	94	171692	50.0	47.3	
37 Hexane	57	4.383	4.383	0.000	96	234942	50.0	44.8	
39 Vinyl acetate	43	4.523	4.523	0.000	97	1057240	100.0	111.8	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	361218	50.0	50.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	522907	200.0	193.2	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	90	303621	50.0	49.6	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	87	194916	50.0	49.9	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	599324	1200.0	1247.7	
53 Chlorobromomethane	128	5.249	5.249	0.000	93	85683	50.0	47.9	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	175822	100.0	103.5	
55 Chloroform	83	5.319	5.319	0.000	96	331134	50.0	50.4	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	281245	50.0	51.5	
57 Cyclohexane	56	5.542	5.542	0.000	96	340687	50.0	48.3	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	272752	50.0	51.0	
59 Carbon tetrachloride	117	5.612	5.612	0.000	81	220815	50.0	47.8	
60 Isobutyl alcohol	41	5.654	5.654	0.000	93	259611	1250.0	1291.1	
63 Benzene	78	5.780	5.780	0.000	99	786689	50.0	50.4	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	298943	50.0	49.1	
66 n-Heptane	43	6.003	6.003	0.000	96	216703	50.0	44.6	
68 Trichloroethene	95	6.339	6.339	0.000	95	189159	50.0	48.6	
69 2-Pentanone	43	6.478	6.478	0.000	98	678243	160.0	164.4	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	248366	50.0	48.6	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	90	211299	50.0	49.1	
73 1,4-Dioxane	88	6.632	6.632	0.000	98	63408	1000.0	912.7	
74 Dibromomethane	93	6.660	6.660	0.000	92	112039	50.0	47.5	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	253479	50.0	49.4	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	94	147718	50.0	48.2	
78 cis-1,3-Dichloropropene	75	7.176	7.176	0.000	90	332782	50.0	47.9	
79 4-Methyl-2-pentanone (MIBK)	43	7.288	7.288	0.000	99	1068640	200.0	206.9	
82 Toluene	91	7.484	7.484	0.000	97	819253	50.0	50.7	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	310547	50.0	48.7	
85 Ethyl methacrylate	69	7.707	7.707	0.000	92	285739	50.0	48.4	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	94	166520	50.0	49.2	
89 Tetrachloroethene	164	7.959	7.959	0.000	92	128849	50.0	48.3	
90 1,3-Dichloropropane	76	8.014	8.014	0.000	98	322229	50.0	49.7	
91 2-Hexanone	43	8.042	8.042	0.000	98	765614	200.0	200.0	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	162504	50.0	45.6	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	171815	50.0	47.9	
98 1-Chlorohexane	91	8.755	8.755	0.000	89	195524	40.0	39.4	
99 Chlorobenzene	112	8.797	8.797	0.000	91	492286	50.0	48.7	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	43	162245	50.0	46.8	
101 Ethylbenzene	106	8.880	8.880	0.000	99	275856	50.0	47.8	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	340188	50.0	48.3	
103 o-Xylene	106	9.369	9.369	0.000	98	340858	50.0	48.5	
104 Styrene	104	9.383	9.383	0.000	95	574191	50.0	48.7	
106 Bromoform	173	9.579	9.579	0.000	92	98603	50.0	44.4	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	836927	50.0	50.8	
109 Cyclohexanone	55	9.830	9.830	0.000	96	378948	1500.0	1552.6	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	95	242329	50.0	49.4	
111 Bromobenzene	156	10.054	10.054	0.000	97	188941	50.0	48.9	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.054	0.000	75	69232	50.0	48.0	
113 1,2,3-Trichloropropane	110	10.081	10.081	0.000	88	71871	50.0	48.0	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	223878	50.0	50.3	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	186646	50.0	49.0	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	688688	50.0	50.3	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	196593	50.0	48.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	558765	50.0	50.4	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	714366	50.0	49.5	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	150398	50.0	49.0	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	355134	50.0	49.1	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	679538	50.0	49.6	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	368358	50.0	47.7	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	615032	50.0	49.3	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	94	335454	50.0	48.6	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	75	42980	50.0	43.2	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	178864	50.0	46.2	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	96	65496	50.0	43.8	
132 Naphthalene	128	13.336	13.336	0.000	98	574271	50.0	44.7	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	148808	50.0	45.3	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	97.2	
S 151 Trihalomethanes, Total	1				0		200.0	189.8	
S 150 1,2-Dichloroethene, Total	1				0		100.0	97.2	
S 156 1,3-Dichloropropene, Total	1				0		100.0	96.6	
S 155 Xylenes, Total	106				0		100.0	96.8	
S 153 Xylenes, Total (URS)	1				0		100.0	96.8	
S 152 Total BTEX	1				0			245.8	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00151	Amount Added: 10.00	Units: uL	
MV-MegaMainA_00087	Amount Added: 25.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 22-Apr-2023 00:29:17 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8308.D

Injection Date: 21-Apr-2023 07:58:30 Instrument ID: VMS_MS1 Operator ID: wickhamt/bustillose

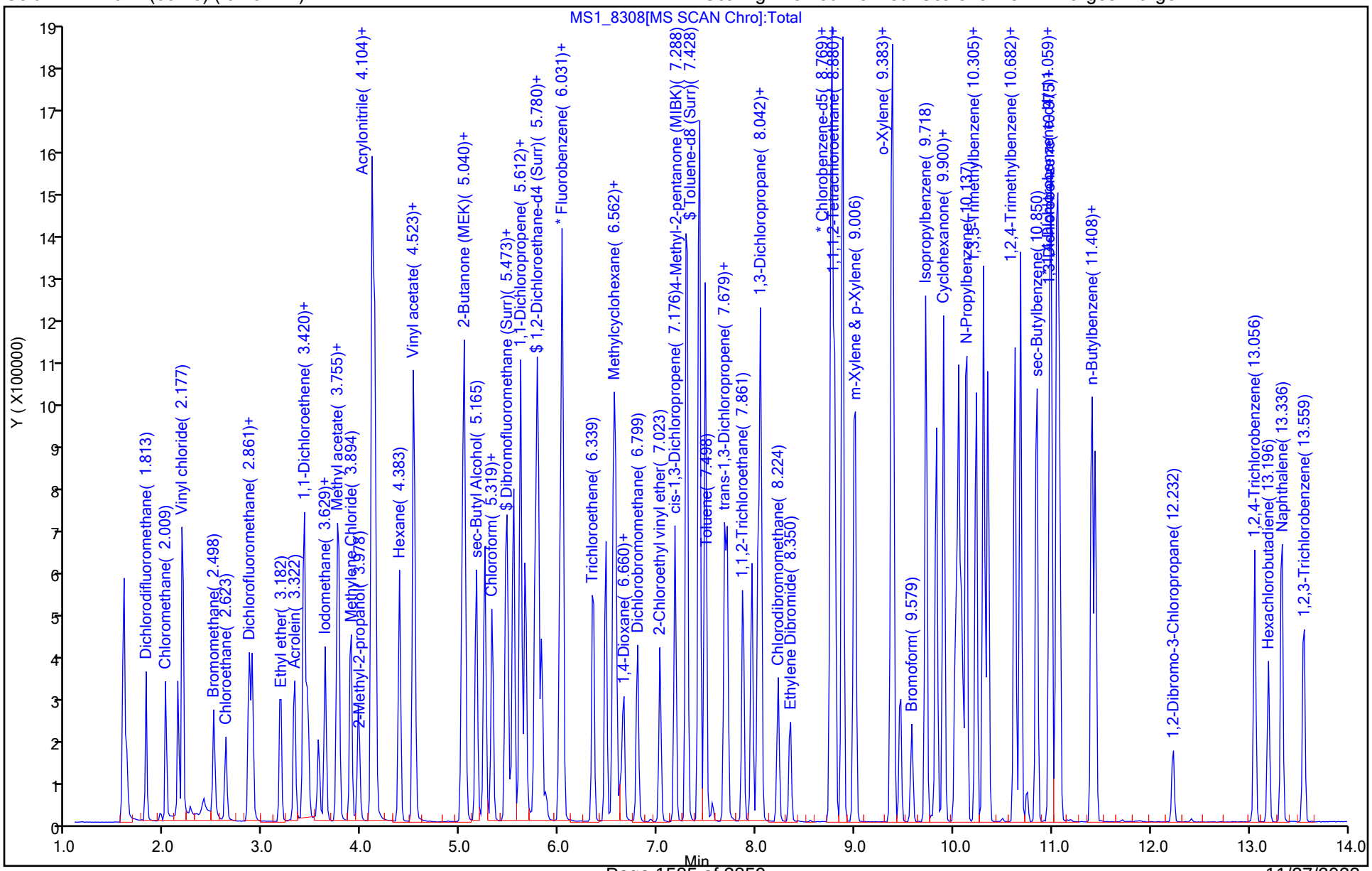
Lims ID: CCV Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCVC 280-609561/53 | Calibration Date: 04/21/2023 17:33

Instrument ID: VMS_MS1 | Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8333.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.2148	0.1000	44.6	50.0	-10.8	50.0
Chloromethane	Ave	0.2309	0.2340	0.1000	50.7	50.0	1.3	50.0
Vinyl chloride	Lin1		0.2343	0.0100	49.2	50.0	-1.6	50.0
Bromomethane	Lin1		0.0889	0.0100	35.3	50.0	-29.5	50.0
Chloroethane	Lin1		0.1359	0.0100	46.4	50.0	-7.2	50.0
Dichlorofluoromethane	Lin1		0.3339	0.0100	50.0	50.0	0.0	50.0
Trichlorofluoromethane	Lin1		0.2672	0.0100	47.5	50.0	-5.0	50.0
Ethyl ether	Ave	0.1774	0.1699	0.0100	47.9	50.0	-4.2	50.0
Acrolein	Ave	0.0271	0.0249	0.0010	455	494	-7.9	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1133	0.0989	0.0500	43.7	50.0	-12.7	50.0
1,1-Dichloroethene	Ave	0.1550	0.1416	0.0600	45.7	50.0	-8.6	50.0
Acetone	Lin1		0.0751	0.0100	174	200	-13.1	50.0
Iodomethane	Ave	0.2071	0.1517	0.0100	36.6	50.0	-26.8	50.0
Carbon disulfide	Ave	0.5567	0.4670	0.1000	41.9	50.0	-16.1	50.0
Methyl acetate	Ave	0.1963	0.1834	0.0100	93.5	100	-6.5	50.0
Allyl chloride	Lin2		0.3351	0.0100	46.8	50.0	-6.4	50.0
Methylene Chloride	Ave	0.1929	0.1806	0.0100	46.8	50.0	-6.4	50.0
2-Methyl-2-propanol	Ave	0.0283	0.0262	0.0010	463	500	-7.4	50.0
Acrylonitrile	Ave	0.0914	0.0877	0.0100	480	500	-4.1	50.0
Methyl tert-butyl ether	Ave	0.5999	0.5912	0.1000	49.3	50.0	-1.5	50.0
trans-1,2-Dichloroethene	Ave	0.1798	0.1657	0.1000	46.1	50.0	-7.8	50.0
Hexane	Ave	1.082	0.8788	0.0100	40.6	50.0	-18.8	50.0
Vinyl acetate	Ave	0.4685	0.4633	0.0100	98.9	100	-1.1	50.0
1,1-Dichloroethane	Ave	0.3570	0.3524	0.1000	49.4	50.0	-1.3	50.0
2-Butanone (MEK)	Ave	0.1340	0.1219	0.0100	182	200	-9.1	50.0
2,2-Dichloropropane	Ave	0.3031	0.2530	0.0100	41.7	50.0	-16.5	50.0
cis-1,2-Dichloroethene	Ave	0.1936	0.1905	0.1000	49.2	50.0	-1.6	50.0
sec-Butyl Alcohol	Ave	0.0238	0.0222	0.0100	1120	1200	-6.7	50.0
Chlorobromomethane	Ave	0.0885	0.0821	0.0500	46.4	50.0	-7.2	50.0
Tetrahydrofuran	Ave	0.0841	0.0817	0.0010	97.2	100	-2.8	50.0
Chloroform	Ave	0.3253	0.3225	0.2000	49.6	50.0	-0.8	50.0
1,1,1-Trichloroethane	Ave	0.2706	0.2727	0.0500	50.4	50.0	0.8	50.0
Cyclohexane	Ave	0.3491	0.3364	0.0100	48.2	50.0	-3.6	50.0
1,1-Dichloropropene	Ave	0.2649	0.2669	0.0100	50.4	50.0	0.7	50.0
Carbon tetrachloride	Ave	0.2286	0.2148	0.1000	47.0	50.0	-6.1	50.0
Isobutyl alcohol	Ave	0.0100	0.0097	0.0010	1210	1250	-3.1	50.0
Benzene	Ave	0.7728	0.7665	0.2000	49.6	50.0	-0.8	50.0
1,2-Dichloroethane	Ave	0.3017	0.2891	0.0700	47.9	50.0	-4.2	50.0
n-Heptane	Ave	0.2404	0.1910		39.7	50.0	-20.5	
Trichloroethene	Ave	0.8031	0.8237	0.2000	51.3	50.0	2.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCVC 280-609561/53 | Calibration Date: 04/21/2023 17:33

Instrument ID: VMS_MS1 | Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8333.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Ave	0.2043	0.1959	0.0010	153	160	-4.1	50.0
Methylcyclohexane	Ave	0.2531	0.2401	0.0500	47.4	50.0	-5.1	50.0
1,2-Dichloropropane	Ave	0.2130	0.2092	0.1000	49.1	50.0	-1.8	50.0
1,4-Dioxane	Ave	0.0034	0.0028	0.0010	823	1000	-17.7	50.0
Dibromomethane	Ave	0.1167	0.1131	0.0100	48.4	50.0	-3.1	50.0
Dichlorobromomethane	Ave	0.2543	0.2418	0.2000	47.6	50.0	-4.9	50.0
2-Chloroethyl vinyl ether	Lin1		0.1357	0.0100	44.7	50.0	-10.6	50.0
cis-1,3-Dichloropropene	Ave	1.433	1.289	0.2000	45.0	50.0	-10.0	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2558	0.2511	0.0300	196	200	-1.9	50.0
Toluene	Ave	0.7996	0.7961	0.3000	49.8	50.0	-0.4	50.0
trans-1,3-Dichloropropene	Ave	0.3155	0.2822	0.2000	44.7	50.0	-10.6	50.0
Ethyl methacrylate	Ave	1.217	1.123	0.0100	46.1	50.0	-7.7	50.0
1,1,2-Trichloroethane	Ave	0.1674	0.1649	0.1000	49.3	50.0	-1.5	50.0
Tetrachloroethene	Ave	0.5506	0.5312	0.1000	48.2	50.0	-3.5	50.0
1,3-Dichloropropane	Ave	1.338	1.294	0.0100	48.4	50.0	-3.3	50.0
2-Hexanone	Ave	0.7895	0.7375	0.0100	187	200	-6.6	50.0
Chlorodibromomethane	Ave	0.7351	0.6202	0.1000	42.2	50.0	-15.6	50.0
1,2-Dibromoethane	Ave	0.7391	0.6948	0.1000	47.0	50.0	-6.0	50.0
1-Chlorohexane	Lin2		0.9774	0.0100	38.2	40.0	-4.5	50.0
Chlorobenzene	Ave	2.086	1.977	0.3000	47.4	50.0	-5.2	50.0
1,1,1,2-Tetrachloroethane	Ave	0.7155	0.6362	0.0100	44.5	50.0	-11.1	50.0
Ethylbenzene	Ave	1.189	1.102	0.3000	46.4	50.0	-7.3	50.0
m-Xylene & p-Xylene	Ave	1.452	1.370	0.1000	47.2	50.0	-5.6	50.0
o-Xylene	Ave	1.450	1.351	0.2000	46.6	50.0	-6.8	50.0
Styrene	Ave	2.432	2.309	0.2000	47.5	50.0	-5.1	50.0
Bromoform	Ave	0.4582	0.3638	0.1000	39.7	50.0	-20.6	50.0
Isopropylbenzene	Ave	2.134	2.112	0.3000	49.5	50.0	-1.0	50.0
Cyclohexanone	Ave	0.0503	0.0445	0.0010	1330	1500	-11.6	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6353	0.6018	0.3000	47.4	50.0	-5.3	50.0
Bromobenzene	Ave	0.5004	0.4733	0.0100	47.3	50.0	-5.4	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1478	0.0100	39.6	50.0	-20.8	50.0
1,2,3-Trichloropropane	Ave	0.1941	0.1819	0.0100	46.8	50.0	-6.3	50.0
N-Propylbenzene	Ave	0.5767	0.5577	0.0100	48.3	50.0	-3.3	50.0
2-Chlorotoluene	Ave	0.4931	0.4659	0.0100	47.2	50.0	-5.5	50.0
1,3,5-Trimethylbenzene	Ave	1.774	1.762	0.0100	49.7	50.0	-0.7	50.0
4-Chlorotoluene	Ave	0.5248	0.4927	0.0100	46.9	50.0	-6.1	50.0
tert-Butylbenzene	Ave	1.436	1.402	0.0100	48.8	50.0	-2.4	50.0
1,2,4-Trimethylbenzene	Ave	1.870	1.837	0.3000	49.1	50.0	-1.8	50.0
sec-Butylbenzene	Ave	0.3979	0.3906	0.0100	49.1	50.0	-1.9	50.0
1,3-Dichlorobenzene	Ave	0.9365	0.9058	0.5000	48.4	50.0	-3.3	50.0
4-Isopropyltoluene	Ave	1.776	1.721	0.0100	48.4	50.0	-3.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCVC 280-609561/53 Calibration Date: 04/21/2023 17:33

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8333.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.000	0.9271	0.5000	46.4	50.0	-7.3	50.0
n-Butylbenzene	Ave	1.617	1.539	0.0100	47.6	50.0	-4.8	50.0
1,2-Dichlorobenzene	Ave	0.8946	0.8609	0.5000	48.1	50.0	-3.8	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1288	0.0998	0.0100	38.7	50.0	-22.5	50.0
1,2,4-Trichlorobenzene	Ave	0.5013	0.4502	0.2000	44.9	50.0	-10.2	50.0
Hexachlorobutadiene	Ave	0.1937	0.1603	0.0100	41.4	50.0	-17.3	50.0
Naphthalene	Ave	1.665	1.421	0.0100	42.7	50.0	-14.7	50.0
1,2,3-Trichlorobenzene	Ave	0.4254	0.3667	0.3000	43.1	50.0	-13.8	50.0
Dibromofluoromethane (Surr)	Ave	0.2380	0.2541	0.0100	53.4	50.0	6.8	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3225	0.3723	0.0100	57.7	50.0	15.4	50.0
Toluene-d8 (Surr)	Ave	4.291	4.568	0.0100	53.2	50.0	6.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.9822	1.016	0.0100	51.7	50.0	3.4	50.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8333.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 21-Apr-2023 17:33:30 ALS Bottle#: 27 Worklist Smp#: 53
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120611-053
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 01:25:59 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: V8PV Date: 22-Apr-2023 00:48:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1017316	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	244518	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	390023	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	258536	50.0	53.4	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	378698	50.0	57.7	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1117000	50.0	53.2	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	396169	50.0	51.7	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	218553	50.0	44.6	
12 Chloromethane	50	2.009	2.009	0.000	99	238004	50.0	50.7	
13 Vinyl chloride	62	2.135	2.135	0.000	98	238330	50.0	49.2	
15 Bromomethane	94	2.498	2.498	0.000	92	90424	50.0	35.3	
16 Chloroethane	64	2.623	2.623	0.000	98	138281	50.0	46.4	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	98	339632	50.0	50.0	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	271808	50.0	47.5	
20 Ethyl ether	59	3.182	3.182	0.000	94	172850	50.0	47.9	
22 Acrolein	56	3.322	3.322	0.000	98	250578	493.8	454.9	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	94	144081	50.0	45.7	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	96	100662	50.0	43.7	
25 Acetone	43	3.447	3.448	-0.001	98	305619	200.0	173.8	
26 Iodomethane	142	3.559	3.559	0.000	100	154292	50.0	36.6	
28 Carbon disulfide	76	3.629	3.629	0.000	100	475058	50.0	41.9	
30 Methyl acetate	43	3.755	3.755	0.000	99	373192	100.0	93.5	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	86	340883	50.0	46.8	
32 Methylene Chloride	84	3.894	3.894	0.000	98	183767	50.0	46.8	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	266709	500.0	463.0	
34 Acrylonitrile	53	4.104	4.104	0.000	97	892507	500.0	479.7	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	601408	50.0	49.3	
36 trans-1,2-Dichloroethene	96	4.132	4.132	0.000	93	168609	50.0	46.1	
37 Hexane	57	4.383	4.383	0.000	95	214894	50.0	40.6	
39 Vinyl acetate	43	4.523	4.523	0.000	97	942566	100.0	98.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	358486	50.0	49.4	
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	495985	200.0	181.9	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	257360	50.0	41.7	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	87	193829	50.0	49.2	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	541894	1200.0	1119.6	
53 Chlorobromomethane	128	5.249	5.249	0.000	93	83556	50.0	46.4	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	166300	100.0	97.2	
55 Chloroform	83	5.319	5.319	0.000	96	328130	50.0	49.6	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	277463	50.0	50.4	
57 Cyclohexane	56	5.542	5.542	0.000	96	342238	50.0	48.2	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	90	271471	50.0	50.4	
59 Carbon tetrachloride	117	5.612	5.612	0.000	81	218510	50.0	47.0	
60 Isobutyl alcohol	41	5.654	5.654	0.000	93	245477	1250.0	1211.6	
63 Benzene	78	5.780	5.780	0.000	98	779760	50.0	49.6	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	294083	50.0	47.9	
66 n-Heptane	43	6.003	6.003	0.000	96	194358	50.0	39.7	
68 Trichloroethene	95	6.339	6.339	0.000	96	201398	50.0	51.3	
69 2-Pentanone	43	6.478	6.478	0.000	98	637698	160.0	153.4	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	244274	50.0	47.4	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	90	212824	50.0	49.1	
73 1,4-Dioxane	88	6.632	6.632	0.000	98	57598	1000.0	822.8	
74 Dibromomethane	93	6.660	6.660	0.000	91	115039	50.0	48.4	
75 Dichlorobromomethane	83	6.799	6.799	0.000	97	246012	50.0	47.6	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	138081	50.0	44.7	
78 cis-1,3-Dichloropropene	75	7.176	7.176	0.000	89	315220	50.0	45.0	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.288	0.014	99	1021685	200.0	196.3	
82 Toluene	91	7.484	7.484	0.000	97	809874	50.0	49.8	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	287123	50.0	44.7	
85 Ethyl methacrylate	69	7.707	7.707	0.000	94	274617	50.0	46.1	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	167801	50.0	49.3	
89 Tetrachloroethene	164	7.959	7.959	0.000	93	129884	50.0	48.2	
90 1,3-Dichloropropane	76	8.014	8.014	0.000	97	316351	50.0	48.4	
91 2-Hexanone	43	8.042	8.042	0.000	98	721305	200.0	186.8	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	151651	50.0	42.2	
96 Ethylene Dibromide	107	8.350	8.350	0.000	97	169902	50.0	47.0	
98 1-Chlorohexane	91	8.755	8.755	0.000	90	191187	40.0	38.2	
99 Chlorobenzene	112	8.797	8.797	0.000	90	483321	50.0	47.4	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	43	155566	50.0	44.5	
101 Ethylbenzene	106	8.880	8.880	0.000	99	269516	50.0	46.4	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	334975	50.0	47.2	
103 o-Xylene	106	9.369	9.369	0.000	99	330374	50.0	46.6	
104 Styrene	104	9.383	9.383	0.000	95	564471	50.0	47.5	
106 Bromoform	173	9.579	9.579	0.000	92	88960	50.0	39.7	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	823701	50.0	49.5	
109 Cyclohexanone	55	9.830	9.830	0.000	95	326416	1500.0	1326.2	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	95	234733	50.0	47.4	
111 Bromobenzene	156	10.054	10.054	0.000	97	184612	50.0	47.3	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.054	0.000	79	57658	50.0	39.6	
113 1,2,3-Trichloropropane	110	10.081	10.081	0.000	89	70932	50.0	46.8	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	217502	50.0	48.3	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	181702	50.0	47.2	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	687364	50.0	49.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	192151	50.0	46.9	
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	546740	50.0	48.8	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	716353	50.0	49.1	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	152334	50.0	49.1	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	353276	50.0	48.4	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	671100	50.0	48.4	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	361571	50.0	46.4	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	600240	50.0	47.6	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	94	335771	50.0	48.1	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	72	38906	50.0	38.7	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	92	175576	50.0	44.9	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	95	62509	50.0	41.4	
132 Naphthalene	128	13.336	13.336	0.000	98	554061	50.0	42.7	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	93	143016	50.0	43.1	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	95.3	
S 151 Trihalomethanes, Total	1				0		200.0	179.0	
S 150 1,2-Dichloroethene, Total	1				0		100.0	95.3	
S 156 1,3-Dichloropropene, Total	1				0		100.0	89.7	
S 155 Xylenes, Total	106				0		100.0	93.8	
S 153 Xylenes, Total (URS)	1				0		100.0	93.8	
S 152 Total BTEX	1				0			239.5	

Reagents:

MV-MegaMainA_00087	Amount Added: 25.00	Units: uL	
MV-Gas A_00151	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

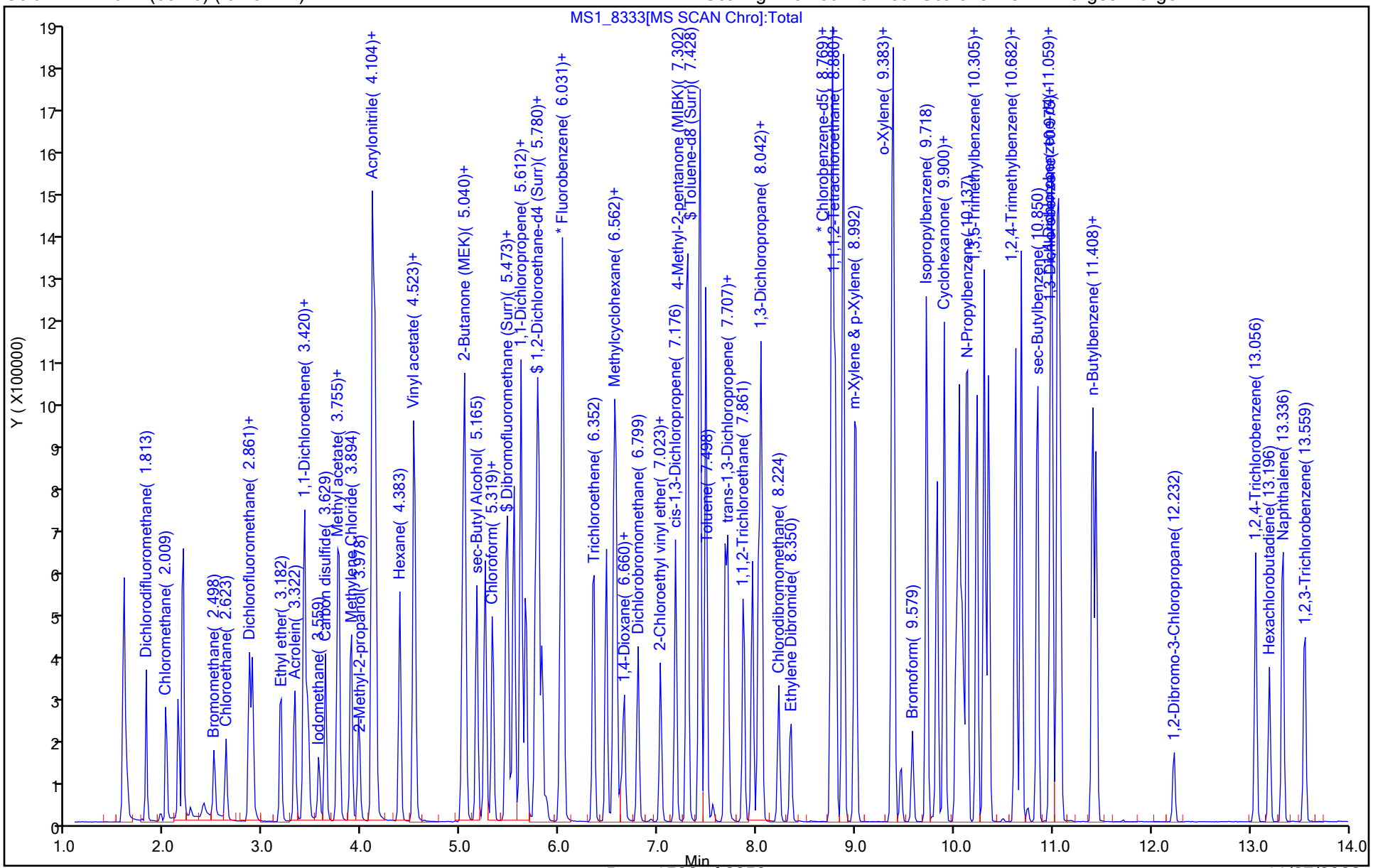
Report Date: 22-Apr-2023 01:25:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8333.D

Injection Date:	21-Apr-2023 17:33:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ccvc			Worklist Smp#:	53
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCVC 280-609561/54 | Calibration Date: 04/21/2023 19:11

Instrument ID: VMS_MS1 | Calib Start Date: 12/28/2022 11:59

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 12/28/2022 14:33

Lab File ID: MS1_8337.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0035	0.0038*	0.0100	1610	1500	7.4	50.0
Isopropyl alcohol	Ave	0.0168	0.0185	0.0100	274	250	9.8	50.0
Acetonitrile	Ave	0.0400	0.0401	0.0100	251	250	0.3	50.0
Isopropyl ether	Ave	0.1639	0.1562	0.0100	23.8	25.0	-4.7	50.0
Chloroprene	Ave	0.3120	0.3170	0.0100	25.4	25.0	1.6	50.0
Tert-butyl ethyl ether	Ave	0.6150	0.6540	0.0100	26.6	25.0	6.3	50.0
Ethyl acetate	Lin2		0.2414	0.0100	49.3	50.0	-1.4	50.0
Propionitrile	Ave	0.0404	0.0387	0.0100	240	250	-4.1	50.0
Methacrylonitrile	Ave	0.1568	0.1615	0.0100	257	250	3.0	50.0
Tert-amyl methyl ether	Ave	0.5682	0.5935	0.0100	26.1	25.0	4.4	50.0
n-Butanol	Ave	0.0060	0.0073*	0.0100	759	625	21.5	50.0
Methyl methacrylate	Ave	0.0634	0.0552	0.0100	43.5	50.0	-13.1	50.0
2-Nitropropane	Lin1		0.0719	0.0100	66.6	50.0	33.1	50.0
cis-1,4-Dichloro-2-butene	Ave	0.1861	0.1310	0.0100	35.2	50.0	-29.6	50.0
1,2,3-Trimethylbenzene	Ave	2.095	1.740	0.0100	20.8	25.0	-17.0	50.0
1,3,5-Trichlorobenzene	Ave	0.6831	0.4668	0.0100	17.1	25.0	-31.7	50.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8337.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 21-Apr-2023 19:11:30 ALS Bottle#: 2 Worklist Smp#: 54
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120611-054
Operator ID: bj Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub197

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 01:25:57 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	988615	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	231871	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	374269	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	250368	50.0	53.2	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	365535	50.0	57.3	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1074675	50.0	54.0	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	80	384752	50.0	52.3	
19 Ethanol	45	3.070	3.070	0.000	99	111917	1500.0	1610.9	
27 Isopropyl alcohol	45	3.587	3.573	0.014	98	91387	250.0	274.5	
29 Acetonitrile	41	3.727	3.727	0.000	99	198415	250.0	250.7	
41 Isopropyl ether	87	4.551	4.551	0.000	94	77191	25.0	23.8	
42 2-Chloro-1,3-butadiene	53	4.593	4.593	0.000	95	156671	25.0	25.4	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	323256	25.0	26.6	
47 Ethyl acetate	43	5.040	5.040	0.000	100	238665	50.0	49.3	
50 Propionitrile	54	5.082	5.081	0.001	99	191530	250.0	239.9	
52 Methacrylonitrile	41	5.207	5.207	0.000	96	798176	250.0	257.5	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	94	293351	25.0	26.1	
67 n-Butanol	56	6.227	6.227	0.000	93	90444	625.0	759.3	
72 Methyl methacrylate	100	6.590	6.590	0.000	92	54524	50.0	43.5	
76 2-Nitropropane	41	6.981	6.995	-0.014	98	71087	50.0	66.6	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	49041	50.0	35.2	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	325575	25.0	20.8	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	87361	25.0	17.1	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added:	25.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

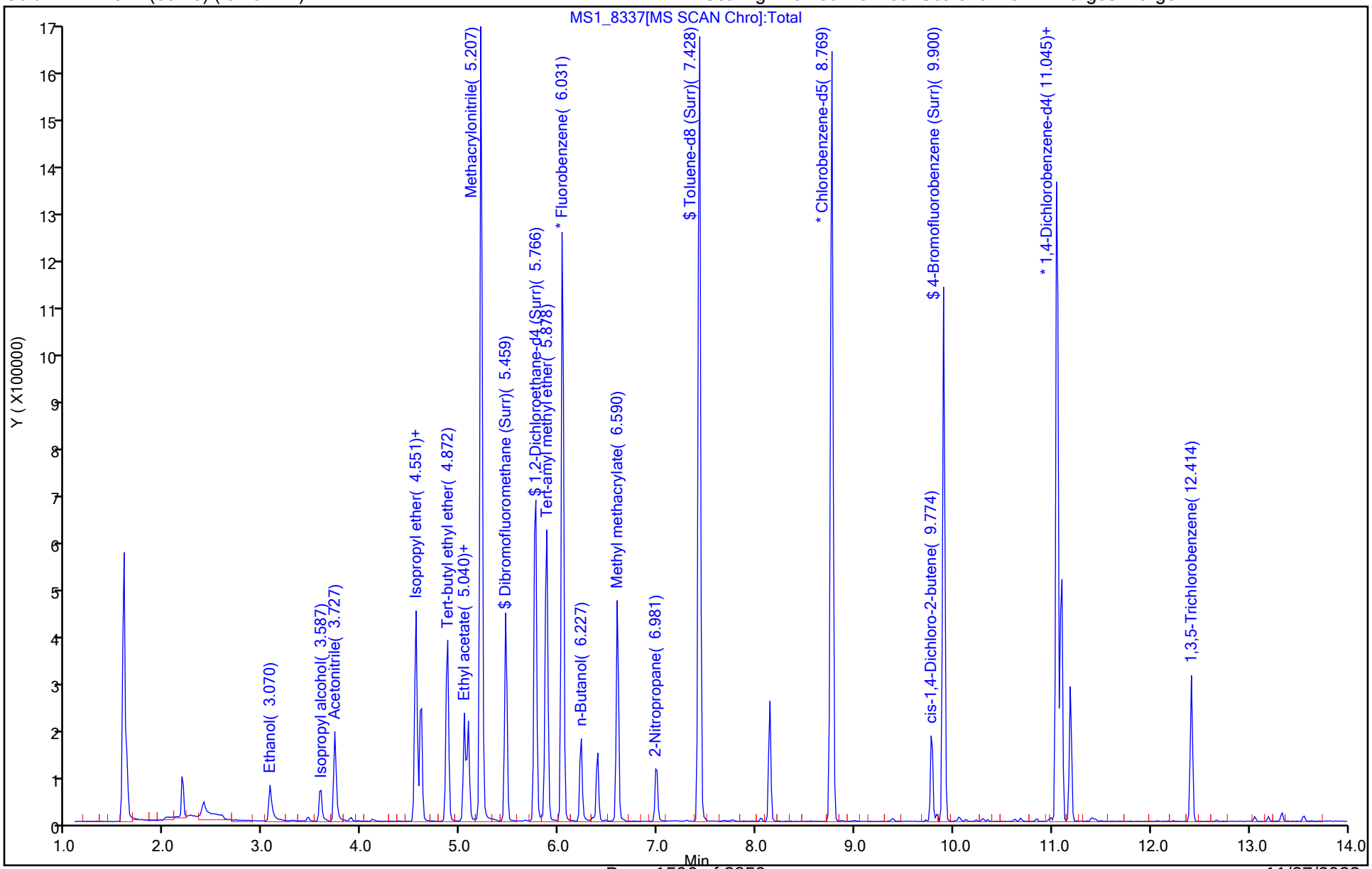
Report Date: 22-Apr-2023 01:25:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8337.D

Injection Date:	21-Apr-2023 19:11:30	Instrument ID:	VMS_MS1	Operator ID:	bj
Lims ID:	ccvc			Worklist Smp#:	54
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCVC 280-609561/54 Calibration Date: 04/21/2023 19:11

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8337.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2380	0.2533	0.0100	53.2	50.0	6.4	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3225	0.3697	0.0100	57.3	50.0	14.7	50.0
Toluene-d8 (Surr)	Ave	4.291	4.635	0.0100	54.0	50.0	8.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.9822	1.028	0.0100	52.3	50.0	4.7	50.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8337.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 21-Apr-2023 19:11:30 ALS Bottle#: 2 Worklist Smp#: 54
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120611-054
Operator ID: bj Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub197

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 01:25:57 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	988615	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	231871	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	374269	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	250368	50.0	53.2	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	365535	50.0	57.3	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1074675	50.0	54.0	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	80	384752	50.0	52.3	
19 Ethanol	45	3.070	3.070	0.000	99	111917	1500.0	1610.9	
27 Isopropyl alcohol	45	3.587	3.573	0.014	98	91387	250.0	274.5	
29 Acetonitrile	41	3.727	3.727	0.000	99	198415	250.0	250.7	
41 Isopropyl ether	87	4.551	4.551	0.000	94	77191	25.0	23.8	
42 2-Chloro-1,3-butadiene	53	4.593	4.593	0.000	95	156671	25.0	25.4	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	323256	25.0	26.6	
47 Ethyl acetate	43	5.040	5.040	0.000	100	238665	50.0	49.3	
50 Propionitrile	54	5.082	5.081	0.001	99	191530	250.0	239.9	
52 Methacrylonitrile	41	5.207	5.207	0.000	96	798176	250.0	257.5	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	94	293351	25.0	26.1	
67 n-Butanol	56	6.227	6.227	0.000	93	90444	625.0	759.3	
72 Methyl methacrylate	100	6.590	6.590	0.000	92	54524	50.0	43.5	
76 2-Nitropropane	41	6.981	6.995	-0.014	98	71087	50.0	66.6	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	49041	50.0	35.2	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	325575	25.0	20.8	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	87361	25.0	17.1	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added: 25.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

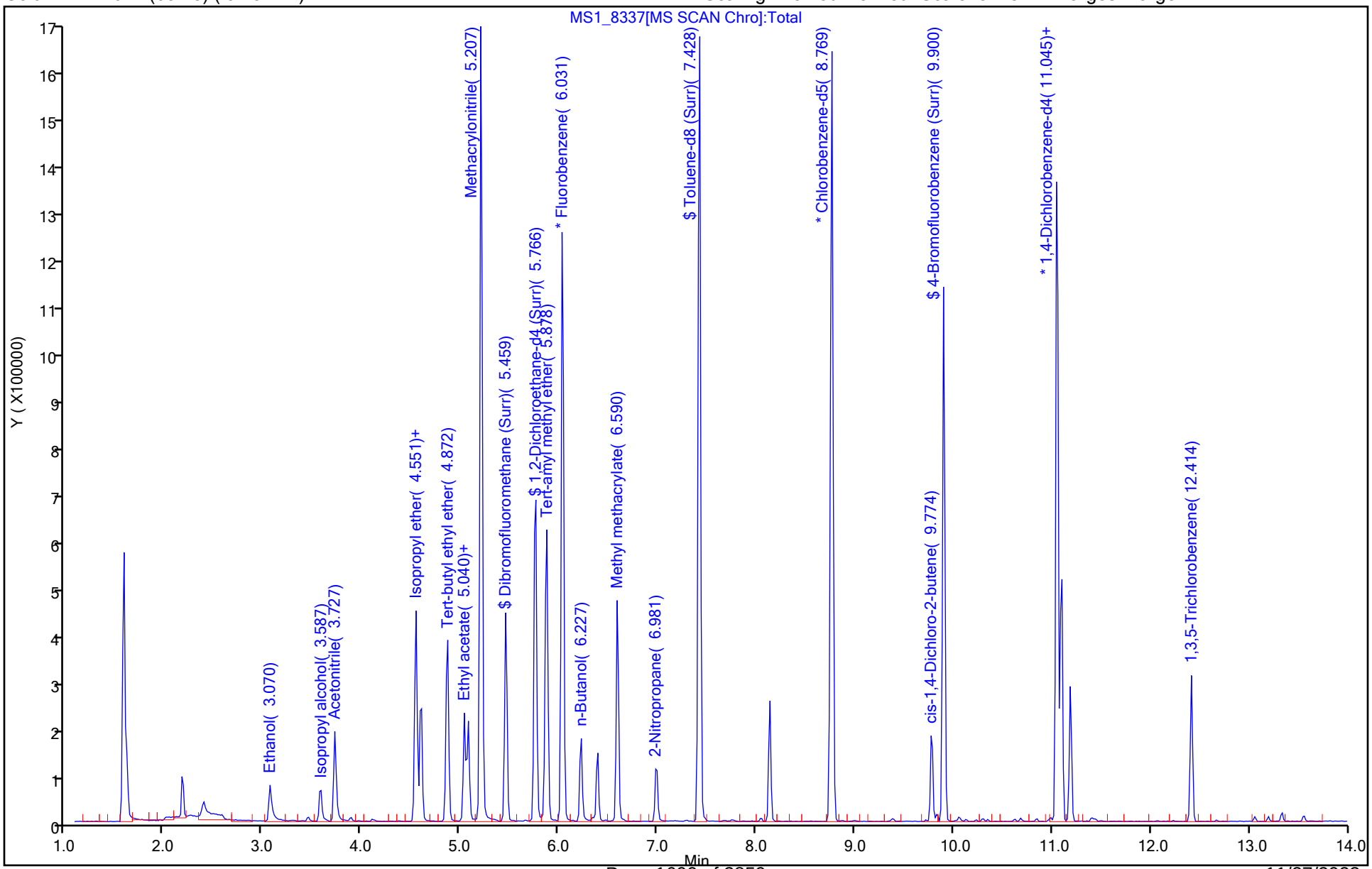
Report Date: 22-Apr-2023 01:25:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8337.D

Injection Date:	21-Apr-2023 19:11:30	Instrument ID:	VMS_MS1	Operator ID:	bj
Lims ID:	ccvc			Worklist Smp#:	54
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-608296/11 Calibration Date: 04/11/2023 16:17

Instrument ID: VMS_P Calib Start Date: 04/10/2023 13:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/10/2023 17:06

Lab File ID: P00503.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2481	0.2505	0.0100	51.4	50.0	1.0	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2853	0.2859	0.0100	49.8	50.0	0.2	30.0
Toluene-d8 (Surr)	Ave	4.311	4.346	0.0100	50.3	50.0	0.8	30.0
4-Bromofluorobenzene (Surr)	Ave	1.090	1.114	0.0100	50.3	50.0	2.1	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00503.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 11-Apr-2023 16:17:30 ALS Bottle#: 1 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Apr-2023 13:50:00 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: RWB2 Date: 11-Apr-2023 16:47:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	2215812	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.278	7.267	0.011	88	508727	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	724978	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	555165	50.0	51.4	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.523	0.001	0	633502	50.0	49.8	
$ 6 Toluene-d8 (Surr)	98	6.012	6.011	0.001	93	2210945	50.0	50.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	807327	50.0	50.3	
18 Ethanol	45	2.392	2.402	-0.010	99	854559	3000.0	2599.4	
25 Isopropyl alcohol	45	2.772	2.772	0.000	99	732043	500.0	413.0	
28 Acetonitrile	41	2.877	2.888	-0.011	99	1317134	500.0	467.4	
40 Isopropyl ether	87	3.521	3.521	0.000	94	419165	50.0	47.0	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	90	733374	50.0	47.1	
43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	1495250	50.0	46.9	
46 Ethyl acetate	43	3.912	3.911	0.001	98	1406641	100.0	91.7	
49 Propionitrile	54	3.943	3.943	0.000	99	1523337	500.0	440.0	
51 Methacrylonitrile	41	4.059	4.059	0.000	89	3974910	500.0	446.3	
63 n-Butanol	56	4.629	4.619	0.010	49	473440	1250.0	1222.9	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	90	1451443	50.0	46.1	
71 Methyl methacrylate	100	5.252	5.252	0.000	89	342223	100.0	88.3	
75 2-Nitropropane	41	5.600	5.600	0.000	97	432430	100.0	87.0	
98 cis-1,4-Dichloro-2-butene	53	8.249	8.249	0.000	0	423553	100.0	87.2	
114 1,2,3-Trimethylbenzene	105	9.536	9.526	0.010	99	1635596	50.0	47.0	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	96	475911	50.0	46.9	

QC Flag Legend
Processing Flags

Reagents:

MV-Supp A_00080	Amount Added: 50.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

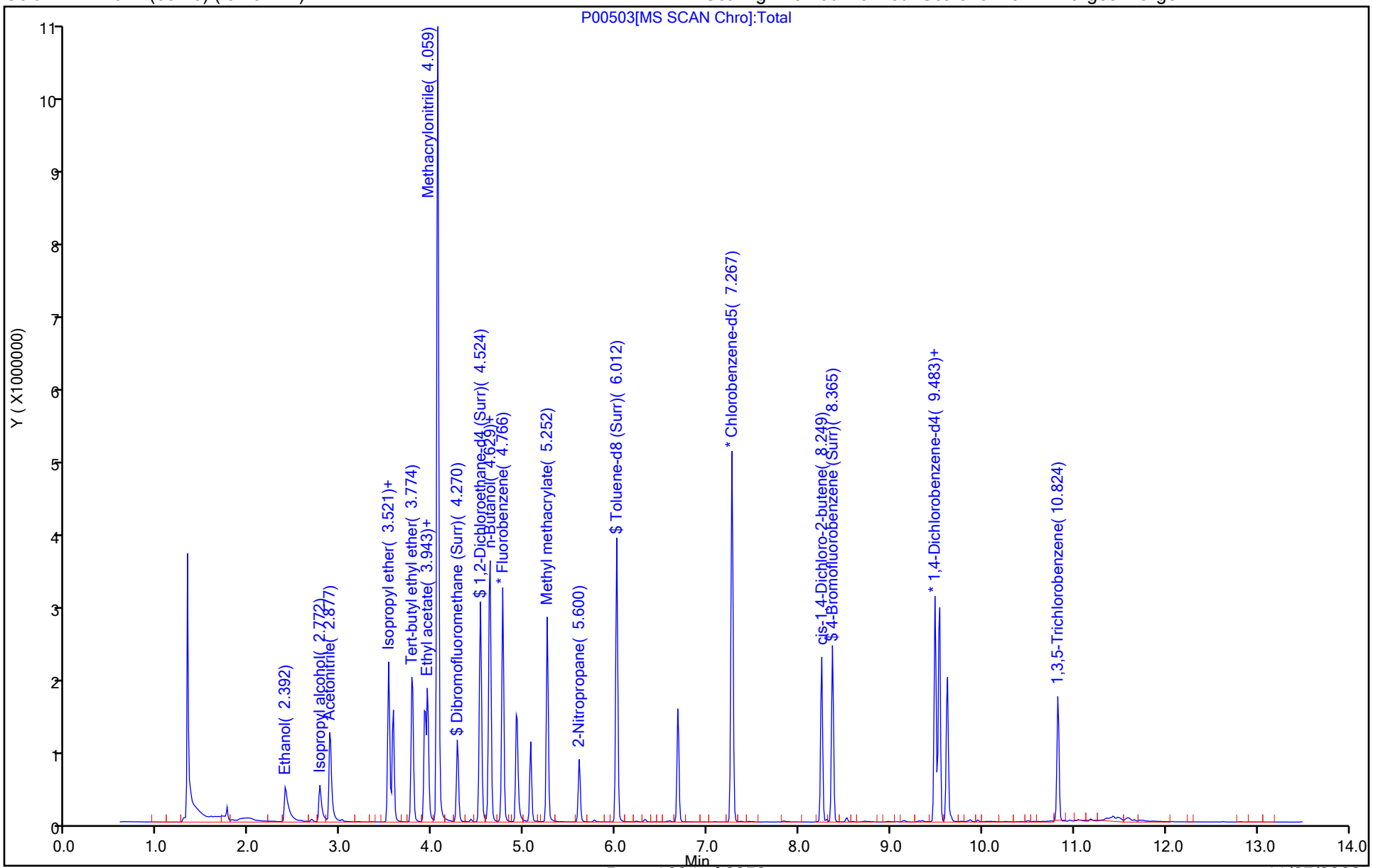
Report Date: 12-Apr-2023 13:50:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00503.D

Injection Date:	11-Apr-2023 16:17:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	ICV			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-608296/11 Calibration Date: 04/11/2023 16:17

Instrument ID: VMS_P Calib Start Date: 04/10/2023 18:14

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/10/2023 20:30

Lab File ID: P00503.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0074	0.0064*	0.0100	2600	3000	-13.4	30.0
Isopropyl alcohol	Lin2		0.0330	0.0100	413	500	-17.4	30.0
Acetonitrile	Lin2		0.0594	0.0100	467	500	-6.5	30.0
Isopropyl ether	Ave	0.2014	0.1892	0.0100	47.0	50.0	-6.1	30.0
Chloroprene	Ave	0.3512	0.3310	0.0100	47.1	50.0	-5.8	30.0
Tert-butyl ethyl ether	Ave	0.7200	0.6748	0.0100	46.9	50.0	-6.3	30.0
Ethyl acetate	Lin2		0.3174	0.0100	91.7	100	-8.3	30.0
Propionitrile	Ave	0.0781	0.0687	0.0100	440	500	-12.0	30.0
Methacrylonitrile	Ave	0.2010	0.1794	0.0100	446	500	-10.7	30.0
n-Butanol	Ave	0.0087	0.0085*	0.0100	1220	1250	-2.2	30.0
Tert-amyl methyl ether	Ave	0.7105	0.6550	0.0100	46.1	50.0	-7.8	30.0
Methyl methacrylate	Ave	0.0874	0.0772	0.0100	88.3	100	-11.7	30.0
2-Nitropropane	Ave	0.1122	0.0976	0.0100	87.0	100	-13.0	30.0
cis-1,4-Dichloro-2-butene	Ave	0.3350	0.2921	0.0100	87.2	100	-12.8	30.0
1,2,3-Trimethylbenzene	Ave	2.398	2.256	0.0100	47.0	50.0	-5.9	30.0
1,3,5-Trichlorobenzene	Ave	0.7004	0.6564	0.0100	46.9	50.0	-6.3	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00503.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 11-Apr-2023 16:17:30 ALS Bottle#: 1 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Apr-2023 13:50:00 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: RWB2 Date: 11-Apr-2023 16:47:33

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	4.766	4.766	0.000	98	2215812	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.278	7.267	0.011	88	508727	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	97	724978	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	555165	50.0	51.4	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.523	0.001	0	633502	50.0	49.8	
$	6 Toluene-d8 (Surr)	98	6.012	6.011	0.001	93	2210945	50.0	50.3	
$	7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	807327	50.0	50.3	
	18 Ethanol	45	2.392	2.402	-0.010	99	854559	3000.0	2599.4	
	25 Isopropyl alcohol	45	2.772	2.772	0.000	99	732043	500.0	413.0	
	28 Acetonitrile	41	2.877	2.888	-0.011	99	1317134	500.0	467.4	
	40 Isopropyl ether	87	3.521	3.521	0.000	94	419165	50.0	47.0	
	41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	90	733374	50.0	47.1	
	43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	1495250	50.0	46.9	
	46 Ethyl acetate	43	3.912	3.911	0.001	98	1406641	100.0	91.7	
	49 Propionitrile	54	3.943	3.943	0.000	99	1523337	500.0	440.0	
	51 Methacrylonitrile	41	4.059	4.059	0.000	89	3974910	500.0	446.3	
	63 n-Butanol	56	4.629	4.619	0.010	49	473440	1250.0	1222.9	
	62 Tert-amyl methyl ether	73	4.629	4.629	0.000	90	1451443	50.0	46.1	
	71 Methyl methacrylate	100	5.252	5.252	0.000	89	342223	100.0	88.3	
	75 2-Nitropropane	41	5.600	5.600	0.000	97	432430	100.0	87.0	
	98 cis-1,4-Dichloro-2-butene	53	8.249	8.249	0.000	0	423553	100.0	87.2	
	114 1,2,3-Trimethylbenzene	105	9.536	9.526	0.010	99	1635596	50.0	47.0	
	118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	96	475911	50.0	46.9	

QC Flag Legend
Processing Flags

Reagents:

MV-Supp A_00080	Amount Added: 50.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

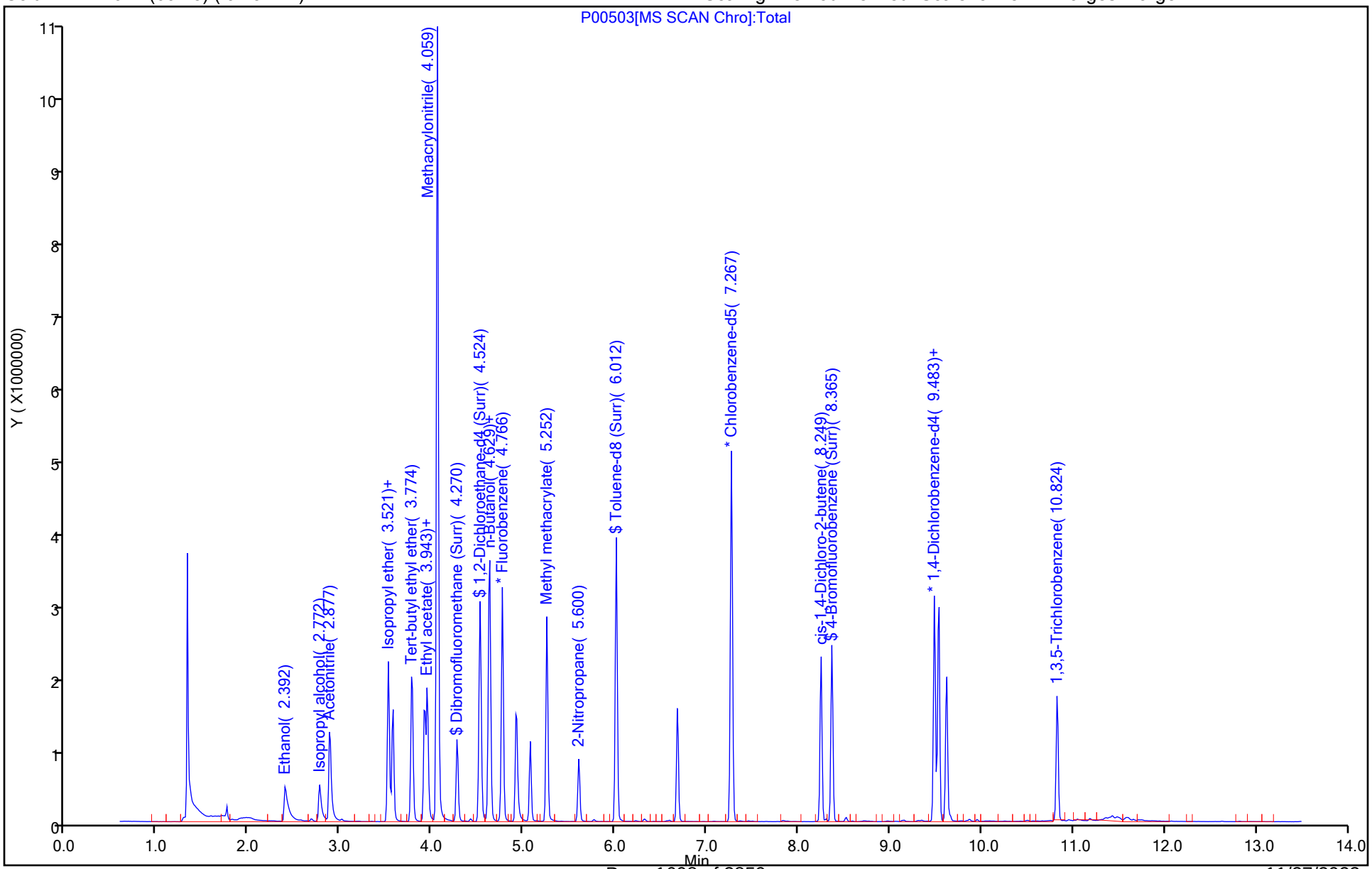
Report Date: 12-Apr-2023 13:50:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00503.D

Injection Date:	11-Apr-2023 16:17:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	ICV			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-608296/21 | Calibration Date: 04/11/2023 21:18

Instrument ID: VMS_P | Calib Start Date: 04/11/2023 17:33

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/11/2023 20:33

Lab File ID: P00516.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.1834	0.1780	0.0100	48.5	50.0	-3.0	30.0
Acrolein	Ave	0.0504	0.0537	0.0010	526	494	6.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1276	0.1297	0.0500	50.8	50.0	1.6	30.0
1,1-Dichloroethene	Ave	0.1820	0.1792	0.0600	49.2	50.0	-1.5	30.0
Acetone	Lin2		0.1245	0.0100	190	200	-5.0	30.0
Iodomethane	Ave	0.2593	0.2588	0.0100	49.9	50.0	-0.2	30.0
Carbon disulfide	Ave	0.6056	0.6030	0.1000	49.8	50.0	-0.4	30.0
Methyl acetate	Lin2		0.2696	0.0100	96.8	100	-3.2	30.0
Allyl chloride	Lin2		0.2780	0.0100	49.0	50.0	-2.1	30.0
Methylene Chloride	Lin2		0.2178	0.0100	49.9	50.0	-0.2	30.0
2-Methyl-2-propanol	Ave	0.0631	0.0597	0.0010	472	500	-5.5	30.0
Acrylonitrile	Ave	0.1527	0.1494	0.0100	489	500	-2.2	30.0
Methyl tert-butyl ether	Ave	0.6708	0.6712	0.1000	50.0	50.0	0.0	30.0
trans-1,2-Dichloroethene	Ave	0.2083	0.2049	0.1000	49.2	50.0	-1.6	30.0
Hexane	Ave	1.141	1.182	0.0100	51.8	50.0	3.6	30.0
Vinyl acetate	Ave	0.4621	0.4831	0.0100	105	100	4.5	30.0
1,1-Dichloroethane	Ave	0.3706	0.3801	0.1000	51.3	50.0	2.5	30.0
2-Butanone (MEK)	Lin2		0.1944	0.0100	186	200	-7.1	30.0
2,2-Dichloropropane	Ave	0.3225	0.3059	0.0100	47.4	50.0	-5.1	30.0
cis-1,2-Dichloroethene	Ave	0.2334	0.2300	0.1000	49.3	50.0	-1.5	30.0
sec-Butyl Alcohol	Ave	0.0465	0.0446	0.0100	1150	1200	-3.9	30.0
Chlorobromomethane	Ave	0.1032	0.1014	0.0500	49.1	50.0	-1.7	30.0
Tetrahydrofuran	Ave	0.1400	0.1285	0.0010	91.8	100	-8.2	30.0
Chloroform	Ave	0.3761	0.3662	0.2000	48.7	50.0	-2.6	30.0
1,1,1-Trichloroethane	Ave	0.3171	0.3095	0.0500	48.8	50.0	-2.4	30.0
Cyclohexane	Ave	0.3683	0.3496	0.0100	47.5	50.0	-5.1	30.0
1,1-Dichloropropene	Ave	0.2955	0.2950	0.0100	49.9	50.0	-0.2	30.0
Carbon tetrachloride	Ave	0.2561	0.2577	0.1000	50.3	50.0	0.6	30.0
Isobutyl alcohol	Ave	0.0180	0.0173	0.0010	1200	1250	-4.1	30.0
Benzene	Ave	0.8751	0.8607	0.2000	49.2	50.0	-1.6	30.0
1,2-Dichloroethane	Ave	0.2962	0.2889	0.0700	48.8	50.0	-2.5	30.0
n-Heptane	Lin2		0.2199		47.7	50.0	-4.6	
Trichloroethene	Ave	0.9433	0.9099	0.2000	48.2	50.0	-3.5	30.0
2-Pentanone	Ave	0.3226	0.3016	0.0010	150	160	-6.5	30.0
Methylcyclohexane	Ave	0.2700	0.2596	0.0500	48.1	50.0	-3.8	30.0
1,2-Dichloropropane	Ave	0.2269	0.2270	0.1000	50.0	50.0	0.0	30.0
1,4-Dioxane	Ave	0.0071	0.0068	0.0010	965	1000	-3.5	30.0
Dibromomethane	Ave	0.1393	0.1346	0.0100	48.3	50.0	-3.4	30.0
Dichlorobromomethane	Ave	0.2830	0.2790	0.2000	49.3	50.0	-1.4	30.0
cis-1,3-Dichloropropene	Ave	1.536	1.576	0.2000	51.3	50.0	2.6	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-608296/21 | Calibration Date: 04/11/2023 21:18

Instrument ID: VMS_P | Calib Start Date: 04/11/2023 17:33

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/11/2023 20:33

Lab File ID: P00516.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Methyl-2-pentanone (MIBK)	Ave	0.3461	0.3328	0.0300	192	200	-3.8	30.0
Toluene	Ave	0.9295	0.9240	0.3000	49.7	50.0	-0.6	30.0
trans-1,3-Dichloropropene	Ave	0.3462	0.3408	0.2000	49.2	50.0	-1.6	30.0
Ethyl methacrylate	Ave	1.539	1.535	0.0100	49.9	50.0	-0.2	30.0
1,1,2-Trichloroethane	Ave	0.2002	0.1960	0.1000	49.0	50.0	-2.1	30.0
Tetrachloroethene	Ave	0.6397	0.6205	0.1000	48.5	50.0	-3.0	30.0
1,3-Dichloropropane	Ave	1.500	1.509	0.0100	50.3	50.0	0.6	30.0
2-Hexanone	Ave	1.213	1.139	0.0100	188	200	-6.1	30.0
Chlorodibromomethane	Ave	0.8418	0.8804	0.1000	52.3	50.0	4.6	30.0
1,2-Dibromoethane	Ave	0.9110	0.9077	0.1000	49.8	50.0	-0.4	30.0
1-Chlorohexane	Lin2		1.210	0.0100	38.1	40.0	-4.7	30.0
Chlorobenzene	Ave	2.452	2.374	0.3000	48.4	50.0	-3.2	30.0
1,1,1,2-Tetrachloroethane	Ave	0.8205	0.8190	0.0100	49.9	50.0	-0.2	30.0
Ethylbenzene	Ave	1.359	1.354	0.3000	49.8	50.0	-0.4	30.0
m-Xylene & p-Xylene	Ave	1.659	1.650	0.1000	49.7	50.0	-0.6	30.0
o-Xylene	Ave	1.619	1.628	0.2000	50.3	50.0	0.6	30.0
Styrene	Ave	2.711	2.750	0.2000	50.7	50.0	1.4	30.0
Bromoform	Ave	0.5492	0.5994	0.1000	54.6	50.0	9.1	30.0
Isopropylbenzene	Ave	2.772	2.659	0.3000	48.0	50.0	-4.1	30.0
Cyclohexanone	Ave	0.1174	0.0916	0.0010	1170	1500	-22.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9716	0.9383	0.3000	48.3	50.0	-3.4	30.0
Bromobenzene	Ave	0.6412	0.6314	0.0100	49.2	50.0	-1.5	30.0
trans-1,4-Dichloro-2-butene	Ave	0.3064	0.3051	0.0100	49.8	50.0	-0.4	30.0
1,2,3-Trichloropropane	Ave	0.2994	0.2951	0.0100	49.3	50.0	-1.4	30.0
N-Propylbenzene	Ave	0.7450	0.7209	0.0100	48.4	50.0	-3.2	30.0
2-Chlorotoluene	Ave	0.6409	0.6081	0.0100	47.4	50.0	-5.1	30.0
1,3,5-Trimethylbenzene	Ave	2.266	2.210	0.0100	48.8	50.0	-2.5	30.0
4-Chlorotoluene	Ave	0.6708	0.6458	0.0100	48.1	50.0	-3.7	30.0
tert-Butylbenzene	Ave	1.831	1.784	0.0100	48.7	50.0	-2.6	30.0
1,2,4-Trimethylbenzene	Ave	2.318	2.271	0.3000	49.0	50.0	-2.0	30.0
sec-Butylbenzene	Ave	0.5280	0.5086	0.0100	48.2	50.0	-3.7	30.0
1,3-Dichlorobenzene	Ave	1.164	1.105	0.5000	47.5	50.0	-5.1	30.0
4-Isopropyltoluene	Ave	2.226	2.154	0.0100	48.4	50.0	-3.2	30.0
1,4-Dichlorobenzene	Ave	1.201	1.143	0.5000	47.6	50.0	-4.8	30.0
n-Butylbenzene	Ave	2.034	1.967	0.0100	48.4	50.0	-3.3	30.0
1,2-Dichlorobenzene	Ave	1.099	1.082	0.5000	49.2	50.0	-1.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2490	0.2600	0.0100	52.2	50.0	4.5	30.0
1,2,4-Trichlorobenzene	Lin2		0.5608	0.2000	52.0	50.0	4.1	30.0
Hexachlorobutadiene	Lin1		0.2055	0.0100	50.7	50.0	1.4	30.0
Naphthalene	Ave	2.408	2.305	0.0100	47.9	50.0	-4.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4895	0.4833	0.3000	49.4	50.0	-1.3	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-608296/21 Calibration Date: 04/11/2023 21:18

Instrument ID: VMS_P Calib Start Date: 04/11/2023 17:33

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/11/2023 20:33

Lab File ID: P00516.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2438	0.2471	0.0100	50.7	50.0	1.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2868	0.2887	0.0100	50.3	50.0	0.7	30.0
Toluene-d8 (Surr)	Ave	4.321	4.333	0.0100	50.1	50.0	0.3	30.0
4-Bromofluorobenzene (Surr)	Ave	1.107	1.092	0.0100	49.3	50.0	-1.4	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00516.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 11-Apr-2023 21:18:30 ALS Bottle#: 14 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:57:47 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1643

First Level Reviewer: RWB2 Date: 12-Apr-2023 07:39:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1982790	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	461637	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	682335	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	489991	50.0	50.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.523	0.001	0	572399	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.012	6.011	0.001	93	2000215	50.0	50.1	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	745425	50.0	49.3	
19 Ethyl ether	59	2.476	2.476	0.000	89	352892	50.0	48.5	
21 Acrolein	56	2.582	2.582	0.000	99	1051629	493.8	526.3	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.656	2.656	0.000	73	257177	50.0	50.8	
22 1,1-Dichloroethene	96	2.656	2.656	0.000	98	355262	50.0	49.2	
24 Acetone	43	2.677	2.677	0.000	99	987817	200.0	190.0	
26 Iodomethane	142	2.772	2.772	0.000	99	513198	50.0	49.9	
27 Carbon disulfide	76	2.835	2.824	0.011	99	1195685	50.0	49.8	
29 Methyl acetate	43	2.898	2.898	0.000	97	1069247	100.0	96.8	
30 3-Chloro-1-propene	41	2.920	2.919	0.001	92	551264	50.0	49.0	
31 Methylene Chloride	84	3.015	3.014	0.000	91	431893	50.0	49.9	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	1182853	500.0	472.5	
33 Acrylonitrile	53	3.173	3.173	0.000	99	2962062	500.0	489.0	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	96	1330823	50.0	50.0	
35 trans-1,2-Dichloroethene	96	3.204	3.204	0.000	99	406245	50.0	49.2	
36 Hexane	57	3.394	3.394	0.000	89	545433	50.0	51.8	
38 Vinyl acetate	43	3.500	3.500	0.000	97	1915839	100.0	104.5	
39 1,1-Dichloroethane	63	3.510	3.510	0.000	96	753578	50.0	51.3	
44 2-Butanone (MEK)	43	3.890	3.890	0.000	99	1542055	200.0	185.8	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	83	456021	50.0	49.3	
48 2,2-Dichloropropane	77	3.922	3.922	0.000	88	606490	50.0	47.4	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	99	2124462	1200.0	1153.1	
53 Chlorobromomethane	128	4.091	4.091	0.000	97	201040	50.0	49.1	
52 Tetrahydrofuran	42	4.101	4.101	0.000	85	509629	100.0	91.8	
54 Chloroform	83	4.154	4.154	0.000	93	726122	50.0	48.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	99	613685	50.0	48.8	
56 Cyclohexane	56	4.344	4.344	0.000	89	693154	50.0	47.5	
57 1,1-Dichloropropene	75	4.397	4.397	0.000	97	584949	50.0	49.9	
59 Carbon tetrachloride	117	4.407	4.407	0.000	97	511037	50.0	50.3	
58 Isobutyl alcohol	41	4.429	4.428	0.001	94	855093	1250.0	1198.3	
60 Benzene	78	4.555	4.555	0.000	96	1706585	50.0	49.2	
61 1,2-Dichloroethane	62	4.576	4.576	0.000	98	572749	50.0	48.8	
66 n-Heptane	43	4.745	4.745	0.000	89	436049	50.0	47.7	
67 Trichloroethene	95	5.041	5.041	0.000	98	420052	50.0	48.2	
68 2-Pentanone	43	5.136	5.136	0.000	99	1913911	160.0	149.6	
69 Methylcyclohexane	55	5.220	5.220	0.000	92	514767	50.0	48.1	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	97	450135	50.0	50.0	
72 1,4-Dioxane	88	5.294	5.294	0.000	93	270961	1000.0	964.7	
73 Dibromomethane	93	5.304	5.304	0.000	93	266916	50.0	48.3	
74 Dichlorobromomethane	83	5.431	5.431	0.000	99	553284	50.0	49.3	
77 cis-1,3-Dichloropropene	75	5.779	5.779	0.000	96	727646	50.0	51.3	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	95	2639359	200.0	192.3	
79 Toluene	91	6.064	6.064	0.000	98	1832064	50.0	49.7	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	93	675660	50.0	49.2	
81 Ethyl methacrylate	69	6.275	6.275	0.000	87	708796	50.0	49.9	
82 1,1,2-Trichloroethane	97	6.413	6.412	0.001	91	388589	50.0	49.0	
83 Tetrachloroethene	164	6.508	6.507	0.001	93	286435	50.0	48.5	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	96	696684	50.0	50.3	
85 2-Hexanone	43	6.581	6.581	0.000	94	2103684	200.0	187.9	
86 Chlorodibromomethane	129	6.750	6.750	0.000	91	406417	50.0	52.3	
88 Ethylene Dibromide	107	6.866	6.866	0.000	99	419043	50.0	49.8	
89 1-Chlorohexane	91	7.257	7.257	0.000	97	446885	40.0	38.1	
90 Chlorobenzene	112	7.299	7.299	0.000	93	1095949	50.0	48.4	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	95	378084	50.0	49.9	
92 Ethylbenzene	106	7.373	7.373	0.000	98	624883	50.0	49.8	
93 m-Xylene & p-Xylene	106	7.499	7.489	0.010	0	761655	50.0	49.7	
94 o-Xylene	106	7.848	7.848	0.000	97	751713	50.0	50.3	
95 Styrene	104	7.869	7.869	0.000	94	1269545	50.0	50.7	
96 Bromoform	173	8.048	8.048	0.000	94	276705	50.0	54.6	
97 Isopropylbenzene	105	8.185	8.185	0.000	96	1814313	50.0	48.0	
99 Cyclohexanone	55	8.280	8.280	0.000	91	1268884	1500.0	1170.3	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	640268	50.0	48.3	
101 Bromobenzene	156	8.502	8.502	0.000	96	430835	50.0	49.2	
102 trans-1,4-Dichloro-2-butene	53	8.513	8.512	0.001	87	208188	50.0	49.8	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	80	201379	50.0	49.3	
104 N-Propylbenzene	120	8.586	8.586	0.000	99	491876	50.0	48.4	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	414952	50.0	47.4	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	1507683	50.0	48.8	
107 4-Chlorotoluene	126	8.797	8.797	0.000	98	440649	50.0	48.1	
108 tert-Butylbenzene	119	9.072	9.072	0.000	92	1217403	50.0	48.7	
109 1,2,4-Trimethylbenzene	105	9.125	9.125	0.001	98	1549616	50.0	49.0	
110 sec-Butylbenzene	134	9.283	9.283	0.000	95	347021	50.0	48.2	
111 1,3-Dichlorobenzene	146	9.410	9.409	0.001	96	754053	50.0	47.5	
112 4-Isopropyltoluene	119	9.431	9.431	0.000	96	1469832	50.0	48.4	
113 1,4-Dichlorobenzene	146	9.505	9.504	0.001	93	780039	50.0	47.6	
115 n-Butylbenzene	91	9.832	9.832	0.000	98	1342424	50.0	48.4	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	97	738292	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.634	0.000	82	177438	50.0	52.2	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	382663	50.0	52.0	
120 Hexachlorobutadiene	225	11.605	11.604	0.001	96	140251	50.0	50.7	
121 Naphthalene	128	11.721	11.721	0.001	97	1572628	50.0	47.9	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	329757	50.0	49.4	
S 139 1,2-Dichloroethene, Total (URS)	96				0		100.0	98.4	
S 144 1,2-Dichloroethene, Total	1				0		100.0	98.4	
S 145 1,3-Dichloropropene, Total	1				0		100.0	100.5	
S 143 Xylenes, Total (URS)	1				0		100.0	100.0	
S 140 Trihalomethanes, Total	1				0		200.0	204.9	
S 142 Xylenes, Total	106				0		100.0	100.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added: 25.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

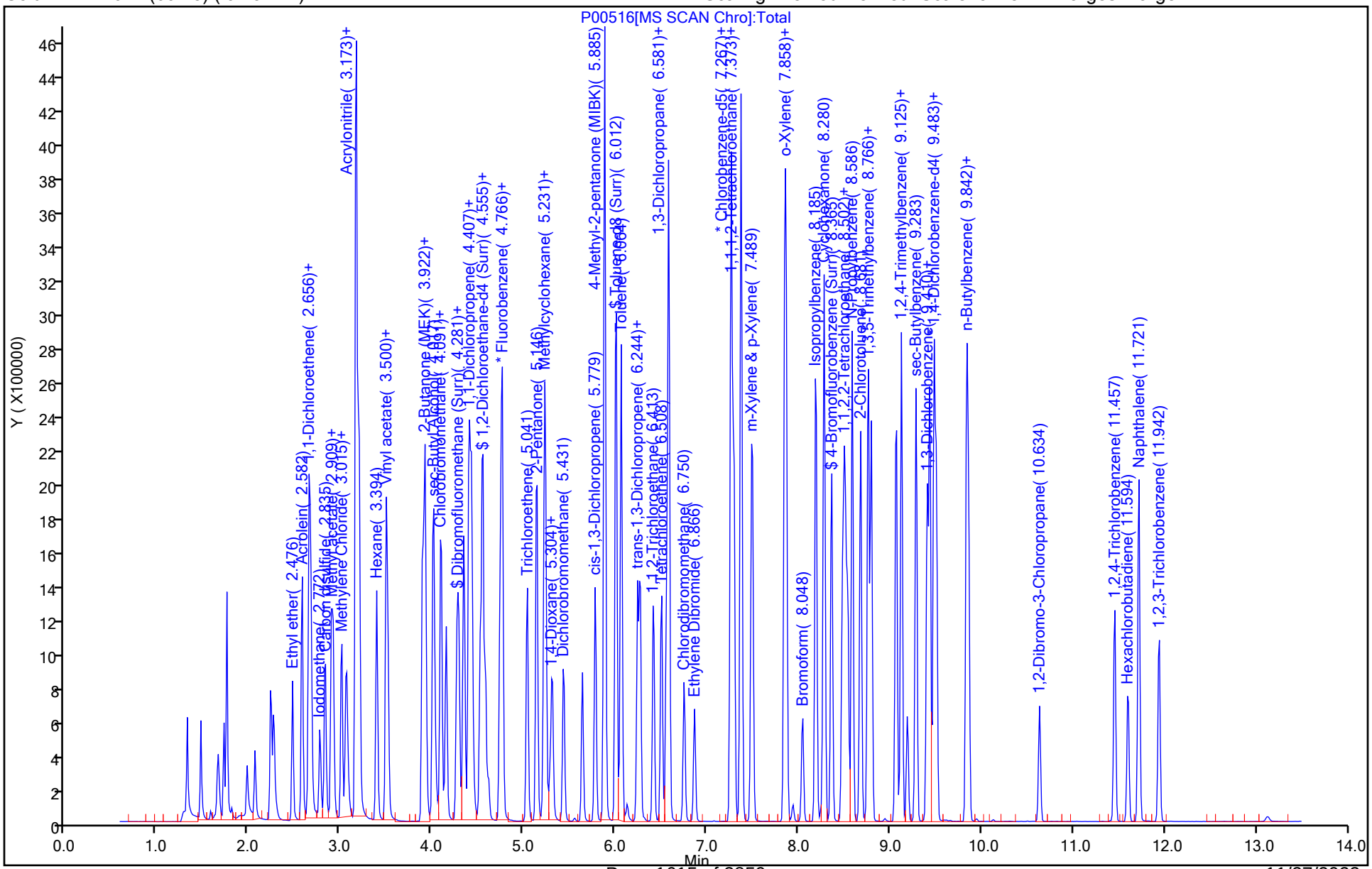
Report Date: 14-Apr-2023 14:58:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00516.D

Injection Date:	11-Apr-2023 21:18:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	ICV			Worklist Smp#:	21
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-608364/21 Calibration Date: 04/12/2023 15:45

Instrument ID: VMS_P Calib Start Date: 04/12/2023 11:05

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/12/2023 14:51

Lab File ID: P00533.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.2139	0.1000	51.1	50.0	2.2	30.0
Chloromethane	Lin2		0.2440	0.1000	53.3	50.0	6.6	30.0
Vinyl chloride	Lin2		0.2424	0.0100	45.9	50.0	-8.3	30.0
Bromomethane	Lin1		0.0969	0.0100	39.8	50.0	-20.5	30.0
Chloroethane	Lin1		0.1646	0.0100	48.2	50.0	-3.6	30.0
Dichlorofluoromethane	Lin2		0.3886	0.0100	50.7	50.0	1.5	30.0
Trichlorofluoromethane	Lin1		0.3017	0.0100	49.4	50.0	-1.3	30.0
2-Chloroethyl vinyl ether	Lin1		0.1839	0.0100	51.7	50.0	3.5	30.0
Dibromofluoromethane (Surr)	Ave	0.2468	0.2470	0.0100	50.0	50.0	0.0	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2905	0.2911	0.0100	50.1	50.0	0.2	30.0
Toluene-d8 (Surr)	Ave	4.280	4.332	0.0100	50.6	50.0	1.2	30.0
4-Bromofluorobenzene (Surr)	Ave	1.089	1.071	0.0100	49.2	50.0	-1.7	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00533.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Apr-2023 15:45:30 ALS Bottle#: 16 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: COULTERD Instrument ID: VMS_P
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 15:58:14 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: RWB2 Date: 16-Apr-2023 11:38:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1788407	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	418526	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.484	-0.001	97	612227	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	441712	50.0	50.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	520694	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.012	6.012	0.000	93	1812876	50.0	50.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	655720	50.0	49.2	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	382457	50.0	51.1	
11 Chloromethane	50	1.664	1.664	0.000	99	436309	50.0	53.3	
12 Vinyl chloride	62	1.727	1.727	0.000	98	433519	50.0	45.9	
14 Bromomethane	94	1.980	1.980	0.000	91	173368	50.0	39.8	
15 Chloroethane	64	2.065	2.075	-0.010	100	294413	50.0	48.2	
16 Dichlorofluoromethane	67	2.234	2.244	-0.010	97	695017	50.0	50.7	
17 Trichlorofluoromethane	101	2.265	2.276	-0.011	99	539591	50.0	49.4	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	328877	50.0	51.7	

QC Flag Legend
Processing Flags

Reagents:
MV-Gas A_00150 Amount Added: 10.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

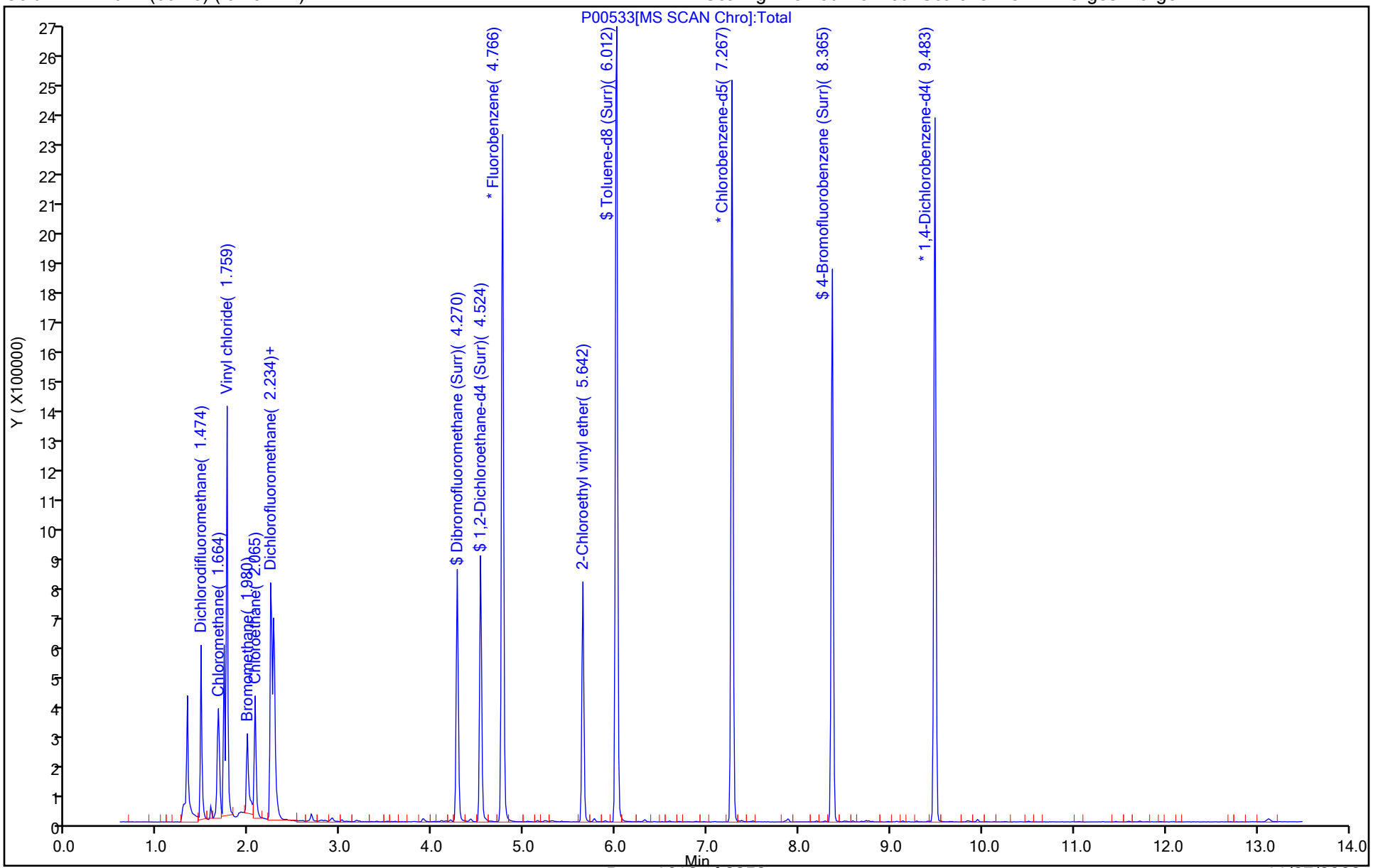
Report Date: 16-Apr-2023 11:38:22 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00533.D

Injection Date:	12-Apr-2023 15:45:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	ICV			Worklist Smp#:	21
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610123/2 | Calibration Date: 04/26/2023 08:20

Instrument ID: VMS_P | Calib Start Date: 04/11/2023 17:33

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/11/2023 20:33

Lab File ID: P01127.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.1834	0.1655	0.0100	45.1	50.0	-9.7	20.0
Acrolein	Ave	0.0504	0.0375	0.0010	368	494	-25.6*	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1276	0.1332	0.0500	52.2	50.0	4.4	20.0
1,1-Dichloroethene	Ave	0.1820	0.1777	0.0600	48.8	50.0	-2.3	20.0
Acetone	Lin2		0.1125	0.0100	171	200	-14.3	20.0
Iodomethane	Ave	0.2593	0.1716	0.0100	33.1	50.0	-33.8*	20.0
Carbon disulfide	Ave	0.6056	0.5482	0.1000	45.3	50.0	-9.5	20.0
Methyl acetate	Lin2		0.2352	0.0100	84.4	100	-15.6	20.0
Allyl chloride	Lin2		0.2282	0.0100	40.1	50.0	-19.7	20.0
Methylene Chloride	Lin2		0.2097	0.0100	48.1	50.0	-3.9	20.0
2-Methyl-2-propanol	Ave	0.0631	0.0454	0.0010	360	500	-28.0*	20.0
Acrylonitrile	Ave	0.1527	0.1371	0.0100	449	500	-10.3	20.0
Methyl tert-butyl ether	Ave	0.6708	0.6588	0.1000	49.1	50.0	-1.8	20.0
trans-1,2-Dichloroethene	Ave	0.2083	0.2020	0.1000	48.5	50.0	-3.0	20.0
Hexane	Ave	1.141	1.007	0.0100	44.1	50.0	-11.7	20.0
Vinyl acetate	Ave	0.4621	0.4211	0.0100	91.1	100	-8.9	20.0
1,1-Dichloroethane	Ave	0.3706	0.3646	0.1000	49.2	50.0	-1.6	20.0
2-Butanone (MEK)	Lin2		0.1738	0.0100	166	200	-17.0	20.0
cis-1,2-Dichloroethene	Ave	0.2334	0.2304	0.1000	49.3	50.0	-1.3	20.0
2,2-Dichloropropane	Ave	0.3225	0.3040	0.0100	47.1	50.0	-5.7	20.0
sec-Butyl Alcohol	Ave	0.0465	0.0339	0.0100	876	1200	-27.0*	20.0
Chlorobromomethane	Ave	0.1032	0.1020	0.0500	49.4	50.0	-1.2	20.0
Tetrahydrofuran	Ave	0.1400	0.1104	0.0010	78.9	100	-21.1*	20.0
Chloroform	Ave	0.3761	0.3654	0.2000	48.6	50.0	-2.9	20.0
1,1,1-Trichloroethane	Ave	0.3171	0.3065	0.0500	48.3	50.0	-3.4	20.0
Cyclohexane	Ave	0.3683	0.3254	0.0100	44.2	50.0	-11.6	20.0
1,1-Dichloropropene	Ave	0.2955	0.2915	0.0100	49.3	50.0	-1.3	20.0
Carbon tetrachloride	Ave	0.2561	0.2461	0.1000	48.0	50.0	-3.9	20.0
Isobutyl alcohol	Ave	0.0180	0.0136	0.0010	942	1250	-24.6*	20.0
Benzene	Ave	0.8751	0.8550	0.2000	48.9	50.0	-2.3	20.0
1,2-Dichloroethane	Ave	0.2962	0.2845	0.0700	48.0	50.0	-3.9	20.0
n-Heptane	Lin2		0.2020		43.7	50.0	-12.5	
Trichloroethene	Ave	0.9433	0.8584	0.2000	45.5	50.0	-9.0	20.0
2-Pentanone	Ave	0.3226	0.2669	0.0010	132	160	-17.3	20.0
Methylcyclohexane	Ave	0.2700	0.2432	0.0500	45.0	50.0	-9.9	20.0
1,2-Dichloropropane	Ave	0.2269	0.2187	0.1000	48.2	50.0	-3.6	20.0
1,4-Dioxane	Ave	0.0071	0.0066	0.0010	930	1000	-7.0	20.0
Dibromomethane	Ave	0.1393	0.1408	0.0100	50.5	50.0	1.0	20.0
Dichlorobromomethane	Ave	0.2830	0.2779	0.2000	49.1	50.0	-1.8	20.0
cis-1,3-Dichloropropene	Ave	1.536	1.369	0.2000	44.6	50.0	-10.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610123/2 | Calibration Date: 04/26/2023 08:20

Instrument ID: VMS_P | Calib Start Date: 04/11/2023 17:33

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/11/2023 20:33

Lab File ID: P01127.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Methyl-2-pentanone (MIBK)	Ave	0.3461	0.3036	0.0300	175	200	-12.3	20.0
Toluene	Ave	0.9295	0.9295	0.3000	50.0	50.0	0.0	20.0
trans-1,3-Dichloropropene	Ave	0.3462	0.3249	0.2000	46.9	50.0	-6.1	20.0
Ethyl methacrylate	Ave	1.539	1.333	0.0100	43.3	50.0	-13.4	20.0
1,1,2-Trichloroethane	Ave	0.2002	0.2057	0.1000	51.4	50.0	2.8	20.0
Tetrachloroethene	Ave	0.6397	0.6211	0.1000	48.6	50.0	-2.9	20.0
1,3-Dichloropropane	Ave	1.500	1.433	0.0100	47.8	50.0	-4.5	20.0
2-Hexanone	Ave	1.213	0.9774	0.0100	161	200	-19.4	20.0
Chlorodibromomethane	Ave	0.8418	0.8303	0.1000	49.3	50.0	-1.4	20.0
1,2-Dibromoethane	Ave	0.9110	0.8819	0.1000	48.4	50.0	-3.2	20.0
1-Chlorohexane	Lin2		1.189	0.0100	37.4	40.0	-6.4	20.0
Chlorobenzene	Ave	2.452	2.369	0.3000	48.3	50.0	-3.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8205	0.7752	0.0100	47.2	50.0	-5.5	20.0
Ethylbenzene	Ave	1.359	1.314	0.3000	48.3	50.0	-3.3	20.0
m-Xylene & p-Xylene	Ave	1.659	1.585	0.1000	47.8	50.0	-4.5	20.0
o-Xylene	Ave	1.619	1.540	0.2000	47.6	50.0	-4.9	20.0
Styrene	Ave	2.711	2.611	0.2000	48.2	50.0	-3.7	20.0
Bromoform	Ave	0.5492	0.5351	0.1000	48.7	50.0	-2.6	20.0
Isopropylbenzene	Ave	2.772	2.532	0.3000	45.7	50.0	-8.6	20.0
Cyclohexanone	Ave	0.1174	0.1023	0.0010	1310	1500	-12.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9716	0.8801	0.3000	45.3	50.0	-9.4	20.0
Bromobenzene	Ave	0.6412	0.6054	0.0100	47.2	50.0	-5.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.3064	0.2283	0.0100	37.2	50.0	-25.5*	20.0
1,2,3-Trichloropropane	Ave	0.2994	0.2771	0.0100	46.3	50.0	-7.4	20.0
N-Propylbenzene	Ave	0.7450	0.7001	0.0100	47.0	50.0	-6.0	20.0
2-Chlorotoluene	Ave	0.6409	0.5909	0.0100	46.1	50.0	-7.8	20.0
1,3,5-Trimethylbenzene	Ave	2.266	2.109	0.0100	46.5	50.0	-6.9	20.0
4-Chlorotoluene	Ave	0.6708	0.6145	0.0100	45.8	50.0	-8.4	20.0
tert-Butylbenzene	Ave	1.831	1.695	0.0100	46.3	50.0	-7.4	20.0
1,2,4-Trimethylbenzene	Ave	2.318	2.146	0.3000	46.3	50.0	-7.4	20.0
sec-Butylbenzene	Ave	0.5280	0.4969	0.0100	47.1	50.0	-5.9	20.0
1,3-Dichlorobenzene	Ave	1.164	1.105	0.5000	47.5	50.0	-5.1	20.0
4-Isopropyltoluene	Ave	2.226	2.097	0.0100	47.1	50.0	-5.8	20.0
1,4-Dichlorobenzene	Ave	1.201	1.129	0.5000	47.0	50.0	-6.0	20.0
n-Butylbenzene	Ave	2.034	1.922	0.0100	47.2	50.0	-5.5	20.0
1,2-Dichlorobenzene	Ave	1.099	1.068	0.5000	48.6	50.0	-2.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.2490	0.2176	0.0100	43.7	50.0	-12.6	20.0
1,2,4-Trichlorobenzene	Lin2		0.5266	0.2000	48.8	50.0	-2.3	20.0
Hexachlorobutadiene	Lin1		0.1979	0.0100	48.8	50.0	-2.3	20.0
Naphthalene	Ave	2.408	1.961	0.0100	40.7	50.0	-18.6	20.0
1,2,3-Trichlorobenzene	Ave	0.4895	0.4123	0.3000	42.1	50.0	-15.8	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01127.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 08:20:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:45 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

First Level Reviewer: NNS5 Date: 26-Apr-2023 09:57:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1625149	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.278	7.278	0.000	84	404191	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	89	616884	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	56	437709	50.0	54.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	486466	50.0	51.5	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	83	1769917	50.0	51.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	637673	50.0	47.4	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	87	262576	50.0	38.5	
11 Chloromethane	50	1.664	1.664	0.000	88	300237	50.0	40.2	
12 Vinyl chloride	62	1.727	1.727	0.000	82	364431	50.0	42.4	
14 Bromomethane	94	1.980	1.980	0.000	90	197712	50.0	50.4	
15 Chloroethane	64	2.075	2.075	0.000	86	226794	50.0	40.8	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	83	504464	50.0	40.5	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	84	442631	50.0	44.5	
19 Ethyl ether	59	2.476	2.476	0.000	87	269031	50.0	45.1	
21 Acrolein	56	2.582	2.582	0.000	95	601964	493.8	367.5	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	67	216435	50.0	52.2	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	88	288809	50.0	48.8	
24 Acetone	43	2.677	2.677	0.000	95	731275	200.0	171.3	
26 Iodomethane	142	2.782	2.782	0.000	98	278843	50.0	33.1	
27 Carbon disulfide	76	2.835	2.835	0.000	98	890942	50.0	45.3	
29 Methyl acetate	43	2.898	2.898	0.000	97	764600	100.0	84.4	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	87	370830	50.0	40.1	
31 Methylene Chloride	84	3.014	3.014	0.000	82	340871	50.0	48.1	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	78	738380	500.0	359.8	
33 Acrylonitrile	53	3.173	3.173	0.000	98	2227402	500.0	448.7	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	88	1070705	50.0	49.1	
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	92	328271	50.0	48.5	
36 Hexane	57	3.394	3.394	0.000	69	407012	50.0	44.1	
38 Vinyl acetate	43	3.500	3.500	0.000	97	1368617	100.0	91.1	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	85	592610	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	97	1129753	200.0	165.9	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	70	374382	50.0	49.3	
48 2,2-Dichloropropane	77	3.932	3.932	0.000	82	494095	50.0	47.1	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	98	1323349	1200.0	876.4	
53 Chlorobromomethane	128	4.101	4.101	0.000	73	165750	50.0	49.4	
52 Tetrahydrofuran	42	4.101	4.101	0.000	81	358902	100.0	78.9	
54 Chloroform	83	4.154	4.154	0.000	67	593815	50.0	48.6	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	52	498027	50.0	48.3	
56 Cyclohexane	56	4.355	4.355	0.000	71	528826	50.0	44.2	
59 Carbon tetrachloride	117	4.407	4.407	0.000	60	399870	50.0	48.0	
57 1,1-Dichloropropene	75	4.407	4.407	0.000	87	473715	50.0	49.3	
58 Isobutyl alcohol	41	4.428	4.428	0.000	94	551079	1250.0	942.2	
60 Benzene	78	4.555	4.555	0.000	95	1389468	50.0	48.9	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	87	462433	50.0	48.0	
66 n-Heptane	43	4.745	4.745	0.000	85	328217	50.0	43.7	
67 Trichloroethene	95	5.040	5.040	0.000	92	346940	50.0	45.5	
68 2-Pentanone	43	5.146	5.146	0.000	97	1388201	160.0	132.4	
69 Methylcyclohexane	55	5.230	5.230	0.000	86	395276	50.0	45.0	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	88	355499	50.0	48.2	
72 1,4-Dioxane	88	5.294	5.294	0.000	77	214181	1000.0	930.3	
73 Dibromomethane	93	5.315	5.315	0.000	88	228762	50.0	50.5	
74 Dichlorobromomethane	83	5.442	5.442	0.000	91	451562	50.0	49.1	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	90	245344	50.0	42.4	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	86	553499	50.0	44.6	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	94	1973766	200.0	175.5	
79 Toluene	91	6.064	6.064	0.000	89	1510612	50.0	50.0	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	90	528014	50.0	46.9	
81 Ethyl methacrylate	69	6.275	6.275	0.000	85	538788	50.0	43.3	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	84	334270	50.0	51.4	
83 Tetrachloroethene	164	6.507	6.507	0.000	88	251052	50.0	48.6	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	87	579231	50.0	47.8	
85 2-Hexanone	43	6.592	6.592	0.000	92	1580181	200.0	161.2	
86 Chlorodibromomethane	129	6.761	6.761	0.000	84	335596	50.0	49.3	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	356464	50.0	48.4	
89 1-Chlorohexane	91	7.267	7.267	0.000	55	384599	40.0	37.4	
90 Chlorobenzene	112	7.299	7.299	0.000	93	957359	50.0	48.3	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	41	313309	50.0	47.2	
92 Ethylbenzene	106	7.383	7.383	0.000	97	530965	50.0	48.3	
93 m-Xylene & p-Xylene	106	7.499	7.499	0.000	0	640795	50.0	47.8	
94 o-Xylene	106	7.858	7.858	0.000	92	622406	50.0	47.6	
95 Styrene	104	7.869	7.869	0.000	93	1055309	50.0	48.2	
96 Bromoform	173	8.048	8.048	0.000	92	216276	50.0	48.7	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	1562149	50.0	45.7	
99 Cyclohexanone	55	8.280	8.280	0.000	88	1240739	1500.0	1307.0	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	75	542897	50.0	45.3	
101 Bromobenzene	156	8.502	8.502	0.000	96	373473	50.0	47.2	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	72	140814	50.0	37.2	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	49	170932	50.0	46.3	
104 N-Propylbenzene	120	8.597	8.597	0.000	88	431863	50.0	47.0	
105 2-Chlorotoluene	126	8.681	8.681	0.000	95	364543	50.0	46.1	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	92	1300883	50.0	46.5	
107 4-Chlorotoluene	126	8.797	8.797	0.000	96	379102	50.0	45.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	88	1045723	50.0	46.3	
109 1,2,4-Trimethylbenzene	105	9.135	9.135	0.000	71	1324066	50.0	46.3	
110 sec-Butylbenzene	134	9.293	9.293	0.000	93	306539	50.0	47.1	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	95	681909	50.0	47.5	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	77	1293856	50.0	47.1	
113 1,4-Dichlorobenzene	146	9.515	9.515	0.000	94	696471	50.0	47.0	
115 n-Butylbenzene	91	9.842	9.842	0.000	95	1185772	50.0	47.2	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	658675	50.0	48.6	
117 1,2-Dibromo-3-Chloropropane	157	10.644	10.644	0.000	90	134204	50.0	43.7	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	93	324862	50.0	48.8	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	95	122111	50.0	48.8	
121 Naphthalene	128	11.720	11.720	0.000	97	1209678	50.0	40.7	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	92	254343	50.0	42.1	
S 139 1,2-Dichloroethene, Total (URS)	96				0		100.0	97.8	
S 144 1,2-Dichloroethene, Total	1				0		100.0	97.8	
S 145 1,3-Dichloropropene, Total	1				0		100.0	91.5	
S 143 Xylenes, Total (URS)	1				0		100.0	95.3	
S 140 Trihalomethanes, Total	1				0		200.0	195.7	
S 142 Xylenes, Total	106				0		100.0	95.3	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00133	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

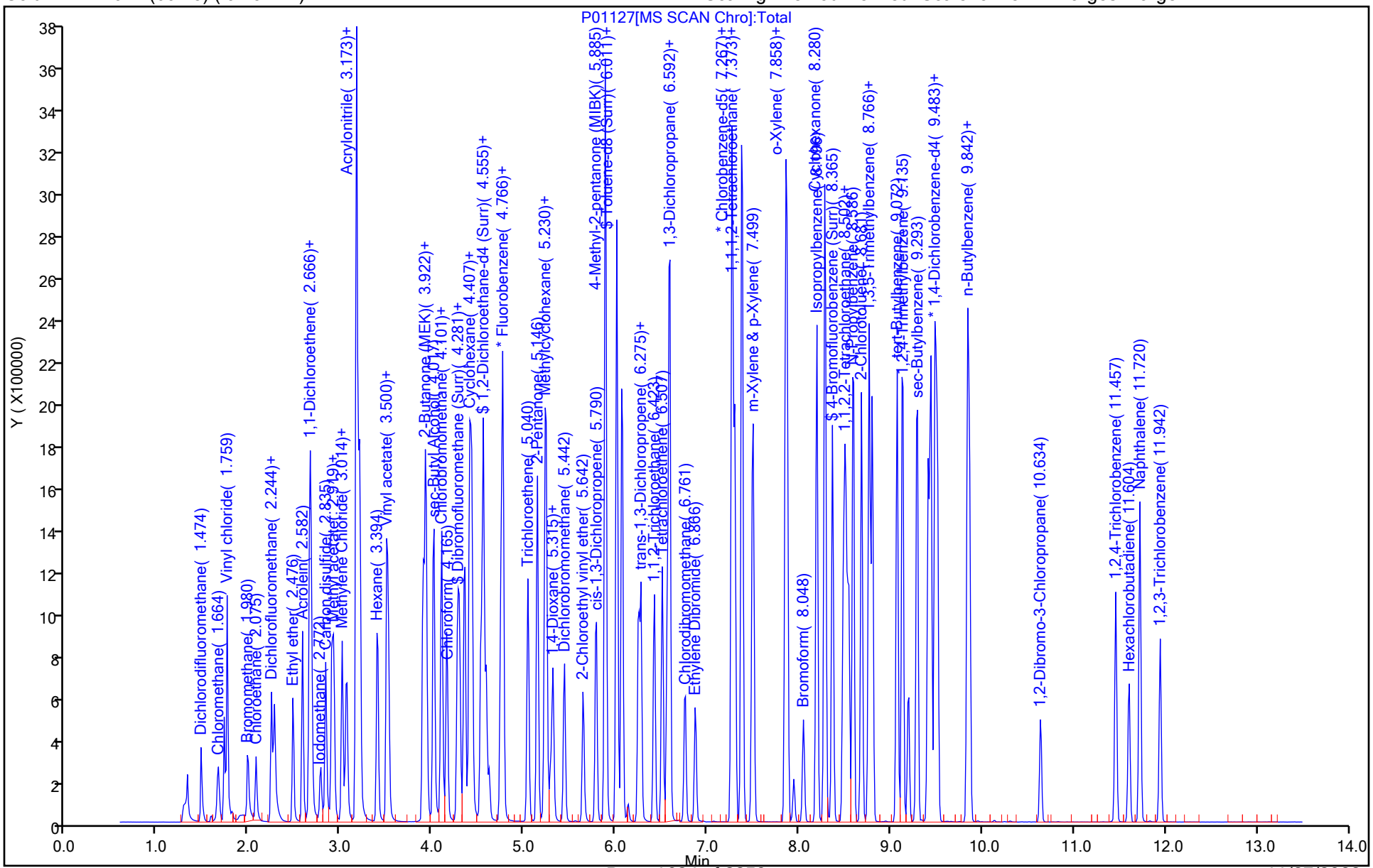
Report Date: 27-Apr-2023 12:42:46 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01127.D

Injection Date:	26-Apr-2023 08:20:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610123/2 Calibration Date: 04/26/2023 08:20

Instrument ID: VMS_P Calib Start Date: 04/12/2023 11:05

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/12/2023 14:51

Lab File ID: P01127.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.1616	0.1000	38.5	50.0	-22.9*	20.0
Chloromethane	Lin2		0.1847	0.1000	40.2	50.0	-19.5	20.0
Vinyl chloride	Lin2		0.2242	0.0100	42.4	50.0	-15.2	20.0
Bromomethane	Lin1		0.1217	0.0100	50.4	50.0	0.9	20.0
Chloroethane	Lin1		0.1396	0.0100	40.8	50.0	-18.4	20.0
Dichlorofluoromethane	Lin2		0.3104	0.0100	40.5	50.0	-19.1	20.0
Trichlorofluoromethane	Lin1		0.2724	0.0100	44.5	50.0	-10.9	20.0
2-Chloroethyl vinyl ether	Lin1		0.1510	0.0100	42.4	50.0	-15.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2468	0.2693	0.0100	54.6	50.0	9.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2905	0.2993	0.0100	51.5	50.0	3.0	20.0
Toluene-d8 (Surr)	Ave	4.280	4.379	0.0100	51.2	50.0	2.3	20.0
4-Bromofluorobenzene (Surr)	Ave	1.089	1.034	0.0100	47.4	50.0	-5.1	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01127.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 08:20:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub175

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:45 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

First Level Reviewer: NNS5 Date: 26-Apr-2023 09:57:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1625149	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.278	7.278	0.000	84	404191	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	89	616884	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	56	437709	50.0	54.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	486466	50.0	51.5	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	83	1769917	50.0	51.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	637673	50.0	47.4	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	87	262576	50.0	38.5	
11 Chloromethane	50	1.664	1.664	0.000	88	300237	50.0	40.2	
12 Vinyl chloride	62	1.727	1.727	0.000	82	364431	50.0	42.4	
14 Bromomethane	94	1.980	1.980	0.000	90	197712	50.0	50.4	
15 Chloroethane	64	2.075	2.075	0.000	86	226794	50.0	40.8	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	83	504464	50.0	40.5	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	84	442631	50.0	44.5	
19 Ethyl ether	59	2.476	2.476	0.000	87	269031	50.0	45.1	
21 Acrolein	56	2.582	2.582	0.000	95	601964	493.8	367.5	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	67	216435	50.0	52.2	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	88	288809	50.0	48.8	
24 Acetone	43	2.677	2.677	0.000	95	731275	200.0	171.3	
26 Iodomethane	142	2.782	2.782	0.000	98	278843	50.0	33.1	
27 Carbon disulfide	76	2.835	2.835	0.000	98	890942	50.0	45.3	
29 Methyl acetate	43	2.898	2.898	0.000	97	764600	100.0	84.4	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	87	370830	50.0	40.1	
31 Methylene Chloride	84	3.014	3.014	0.000	82	340871	50.0	48.1	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	78	738380	500.0	359.8	
33 Acrylonitrile	53	3.173	3.173	0.000	98	2227402	500.0	448.7	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	88	1070705	50.0	49.1	
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	92	328271	50.0	48.5	
36 Hexane	57	3.394	3.394	0.000	69	407012	50.0	44.1	
38 Vinyl acetate	43	3.500	3.500	0.000	97	1368617	100.0	91.1	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	85	592610	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2-Butanone (MEK)	43	3.901	3.901	0.000	97	1129753	200.0	165.9	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	70	374382	50.0	49.3	
48 2,2-Dichloropropane	77	3.932	3.932	0.000	82	494095	50.0	47.1	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	98	1323349	1200.0	876.4	
53 Chlorobromomethane	128	4.101	4.101	0.000	73	165750	50.0	49.4	
52 Tetrahydrofuran	42	4.101	4.101	0.000	81	358902	100.0	78.9	
54 Chloroform	83	4.154	4.154	0.000	67	593815	50.0	48.6	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	52	498027	50.0	48.3	
56 Cyclohexane	56	4.355	4.355	0.000	71	528826	50.0	44.2	
59 Carbon tetrachloride	117	4.407	4.407	0.000	60	399870	50.0	48.0	
57 1,1-Dichloropropene	75	4.407	4.407	0.000	87	473715	50.0	49.3	
58 Isobutyl alcohol	41	4.428	4.428	0.000	94	551079	1250.0	942.2	
60 Benzene	78	4.555	4.555	0.000	95	1389468	50.0	48.9	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	87	462433	50.0	48.0	
66 n-Heptane	43	4.745	4.745	0.000	85	328217	50.0	43.7	
67 Trichloroethene	95	5.040	5.040	0.000	92	346940	50.0	45.5	
68 2-Pentanone	43	5.146	5.146	0.000	97	1388201	160.0	132.4	
69 Methylcyclohexane	55	5.230	5.230	0.000	86	395276	50.0	45.0	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	88	355499	50.0	48.2	
72 1,4-Dioxane	88	5.294	5.294	0.000	77	214181	1000.0	930.3	
73 Dibromomethane	93	5.315	5.315	0.000	88	228762	50.0	50.5	
74 Dichlorobromomethane	83	5.442	5.442	0.000	91	451562	50.0	49.1	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	90	245344	50.0	42.4	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	86	553499	50.0	44.6	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	94	1973766	200.0	175.5	
79 Toluene	91	6.064	6.064	0.000	89	1510612	50.0	50.0	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	90	528014	50.0	46.9	
81 Ethyl methacrylate	69	6.275	6.275	0.000	85	538788	50.0	43.3	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	84	334270	50.0	51.4	
83 Tetrachloroethene	164	6.507	6.507	0.000	88	251052	50.0	48.6	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	87	579231	50.0	47.8	
85 2-Hexanone	43	6.592	6.592	0.000	92	1580181	200.0	161.2	
86 Chlorodibromomethane	129	6.761	6.761	0.000	84	335596	50.0	49.3	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	356464	50.0	48.4	
89 1-Chlorohexane	91	7.267	7.267	0.000	55	384599	40.0	37.4	
90 Chlorobenzene	112	7.299	7.299	0.000	93	957359	50.0	48.3	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	41	313309	50.0	47.2	
92 Ethylbenzene	106	7.383	7.383	0.000	97	530965	50.0	48.3	
93 m-Xylene & p-Xylene	106	7.499	7.499	0.000	0	640795	50.0	47.8	
94 o-Xylene	106	7.858	7.858	0.000	92	622406	50.0	47.6	
95 Styrene	104	7.869	7.869	0.000	93	1055309	50.0	48.2	
96 Bromoform	173	8.048	8.048	0.000	92	216276	50.0	48.7	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	1562149	50.0	45.7	
99 Cyclohexanone	55	8.280	8.280	0.000	88	1240739	1500.0	1307.0	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	75	542897	50.0	45.3	
101 Bromobenzene	156	8.502	8.502	0.000	96	373473	50.0	47.2	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	72	140814	50.0	37.2	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	49	170932	50.0	46.3	
104 N-Propylbenzene	120	8.597	8.597	0.000	88	431863	50.0	47.0	
105 2-Chlorotoluene	126	8.681	8.681	0.000	95	364543	50.0	46.1	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	92	1300883	50.0	46.5	
107 4-Chlorotoluene	126	8.797	8.797	0.000	96	379102	50.0	45.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.072	9.072	0.000	88	1045723	50.0	46.3	
109 1,2,4-Trimethylbenzene	105	9.135	9.135	0.000	71	1324066	50.0	46.3	
110 sec-Butylbenzene	134	9.293	9.293	0.000	93	306539	50.0	47.1	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	95	681909	50.0	47.5	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	77	1293856	50.0	47.1	
113 1,4-Dichlorobenzene	146	9.515	9.515	0.000	94	696471	50.0	47.0	
115 n-Butylbenzene	91	9.842	9.842	0.000	95	1185772	50.0	47.2	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	658675	50.0	48.6	
117 1,2-Dibromo-3-Chloropropane	157	10.644	10.644	0.000	90	134204	50.0	43.7	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	93	324862	50.0	48.8	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	95	122111	50.0	48.8	
121 Naphthalene	128	11.720	11.720	0.000	97	1209678	50.0	40.7	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	92	254343	50.0	42.1	
S 139 1,2-Dichloroethene, Total (URS)	96				0		100.0	97.8	
S 144 1,2-Dichloroethene, Total	1				0		100.0	97.8	
S 145 1,3-Dichloropropene, Total	1				0		100.0	91.5	
S 143 Xylenes, Total (URS)	1				0		100.0	95.3	
S 140 Trihalomethanes, Total	1				0		200.0	195.7	
S 142 Xylenes, Total	106				0		100.0	95.3	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00133	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

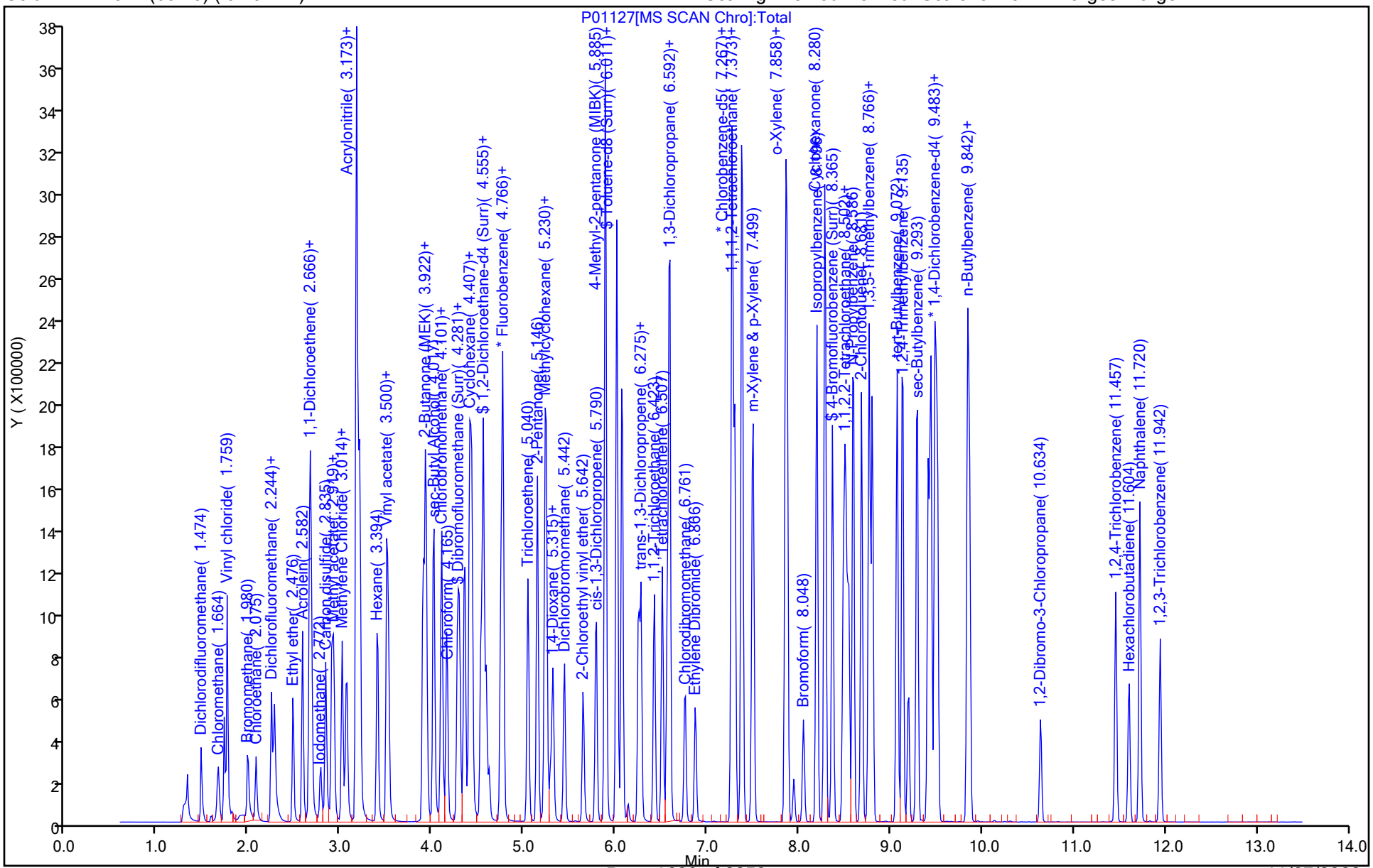
Report Date: 27-Apr-2023 12:42:46 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01127.D

Injection Date:	26-Apr-2023 08:20:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610123/3 Calibration Date: 04/26/2023 08:42

Instrument ID: VMS_P Calib Start Date: 04/10/2023 18:14

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/10/2023 20:30

Lab File ID: P01128.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0074	0.0065*	0.0100	1320	1500	-12.0	20.0
Isopropyl alcohol	Lin2		0.0343	0.0100	213	250	-15.0	20.0
Acetonitrile	Lin2		0.0587	0.0100	227	250	-9.1	20.0
Isopropyl ether	Ave	0.2014	0.1891	0.0100	23.5	25.0	-6.1	20.0
Chloroprene	Ave	0.3512	0.3073	0.0100	21.9	25.0	-12.5	20.0
Tert-butyl ethyl ether	Ave	0.7200	0.6423	0.0100	22.3	25.0	-10.8	20.0
Ethyl acetate	Lin2		0.3147	0.0100	44.6	50.0	-10.8	20.0
Propionitrile	Ave	0.0781	0.0714	0.0100	228	250	-8.6	20.0
Methacrylonitrile	Ave	0.2010	0.1890	0.0100	235	250	-5.9	20.0
n-Butanol	Ave	0.0087	0.0079*	0.0100	568	625	-9.0	20.0
Tert-amyl methyl ether	Ave	0.7105	0.6680	0.0100	23.5	25.0	-6.0	20.0
Methyl methacrylate	Ave	0.0874	0.0876	0.0100	50.1	50.0	0.1	20.0
2-Nitropropane	Ave	0.1122	0.0661	0.0100	29.4	50.0	-41.1*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.3350	0.2505	0.0100	37.4	50.0	-25.2*	20.0
1,2,3-Trimethylbenzene	Ave	2.398	2.348	0.0100	24.5	25.0	-2.1	20.0
1,3,5-Trichlorobenzene	Ave	0.7004	0.6839	0.0100	24.4	25.0	-2.4	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01128.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 08:42:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub214

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:50 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1602033	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	402142	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	585754	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	431835	50.0	54.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	493988	50.0	53.1	
$ 6 Toluene-d8 (Surr)	98	6.012	6.012	0.000	93	1723522	50.0	50.1	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	86	608853	50.0	47.7	
18 Ethanol	45	2.392	2.392	0.000	100	313676	1500.0	1319.7	
25 Isopropyl alcohol	45	2.772	2.772	0.000	98	274572	250.0	212.6	
28 Acetonitrile	41	2.877	2.877	0.000	99	470502	250.0	227.2	
40 Isopropyl ether	87	3.521	3.521	0.000	92	151468	25.0	23.5	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	91	246124	25.0	21.9	
43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	514531	25.0	22.3	
46 Ethyl acetate	43	3.912	3.912	0.000	98	504111	50.0	44.6	
49 Propionitrile	54	3.943	3.943	0.000	99	571822	250.0	228.4	
51 Methacrylonitrile	41	4.059	4.059	0.000	88	1513969	250.0	235.1	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	91	535104	25.0	23.5	
63 n-Butanol	56	4.629	4.629	0.000	48	159121	625.0	568.5	
71 Methyl methacrylate	100	5.252	5.252	0.000	85	140268	50.0	50.1	
75 2-Nitropropane	41	5.600	5.600	0.000	99	105822	50.0	29.4	
98 cis-1,4-Dichloro-2-butene	53	8.238	8.238	0.000	0	146737	50.0	37.4	
114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	99	687652	25.0	24.5	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	97	200308	25.0	24.4	

Reagents:

MV-Supp A_00080 Amount Added: 25.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

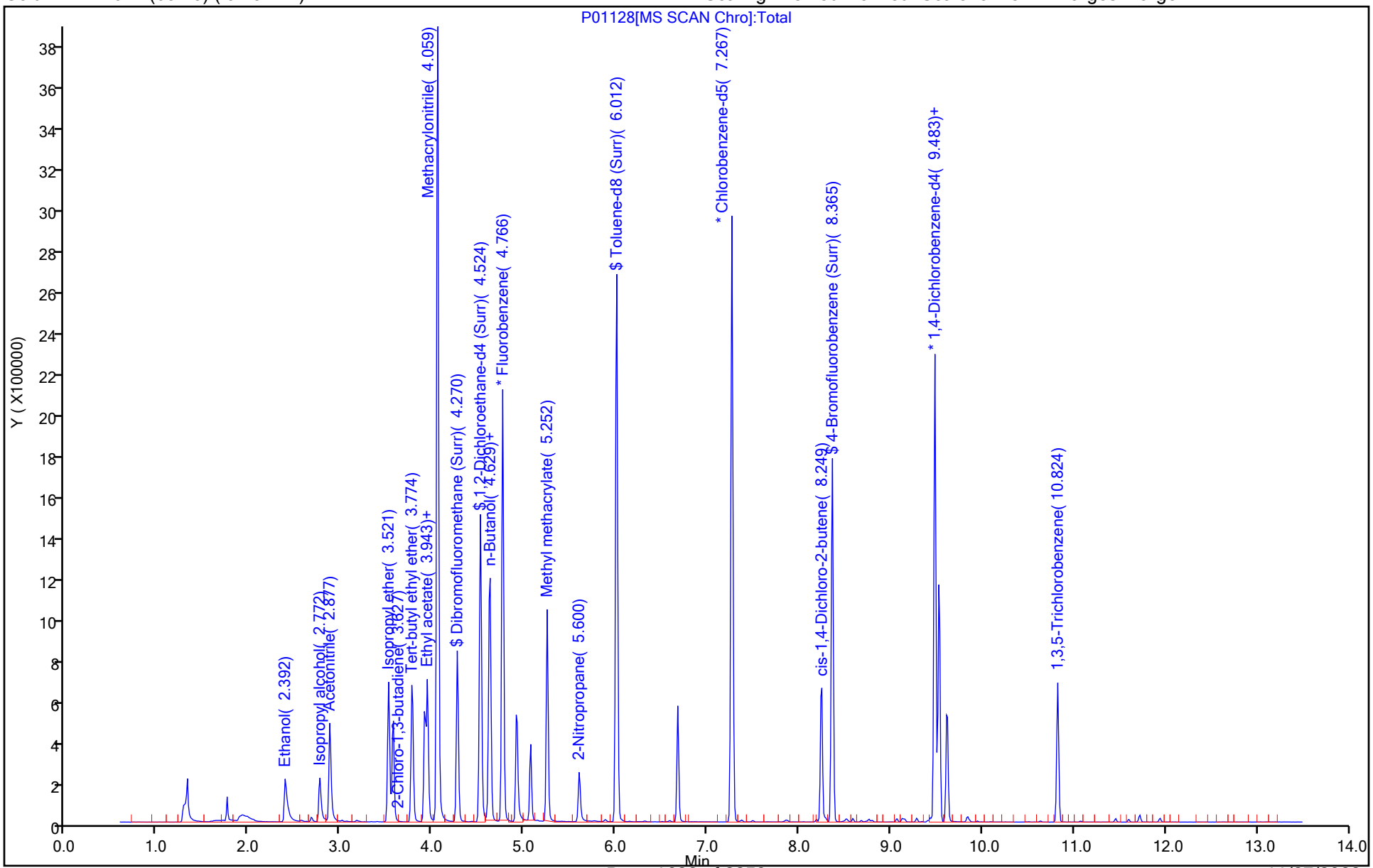
Report Date: 27-Apr-2023 12:42:50 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01128.D

Injection Date:	26-Apr-2023 08:42:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610123/3 Calibration Date: 04/26/2023 08:42

Instrument ID: VMS_P Calib Start Date: 04/12/2023 11:05

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/12/2023 14:51

Lab File ID: P01128.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2468	0.2696	0.0100	54.6	50.0	9.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2905	0.3084	0.0100	53.1	50.0	6.1	20.0
Toluene-d8 (Surr)	Ave	4.280	4.286	0.0100	50.1	50.0	0.1	20.0
4-Bromofluorobenzene (Surr)	Ave	1.089	1.039	0.0100	47.7	50.0	-4.6	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01128.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 08:42:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: COULTERD Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub214

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:50 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	4.766	4.766	0.000	99	1602033	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	402142	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	585754	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	431835	50.0	54.6	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	493988	50.0	53.1	
$	6 Toluene-d8 (Surr)	98	6.012	6.012	0.000	93	1723522	50.0	50.1	
$	7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	86	608853	50.0	47.7	
	18 Ethanol	45	2.392	2.392	0.000	100	313676	1500.0	1319.7	
	25 Isopropyl alcohol	45	2.772	2.772	0.000	98	274572	250.0	212.6	
	28 Acetonitrile	41	2.877	2.877	0.000	99	470502	250.0	227.2	
	40 Isopropyl ether	87	3.521	3.521	0.000	92	151468	25.0	23.5	
	41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	91	246124	25.0	21.9	
	43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	514531	25.0	22.3	
	46 Ethyl acetate	43	3.912	3.912	0.000	98	504111	50.0	44.6	
	49 Propionitrile	54	3.943	3.943	0.000	99	571822	250.0	228.4	
	51 Methacrylonitrile	41	4.059	4.059	0.000	88	1513969	250.0	235.1	
	62 Tert-amyl methyl ether	73	4.629	4.629	0.000	91	535104	25.0	23.5	
	63 n-Butanol	56	4.629	4.629	0.000	48	159121	625.0	568.5	
	71 Methyl methacrylate	100	5.252	5.252	0.000	85	140268	50.0	50.1	
	75 2-Nitropropane	41	5.600	5.600	0.000	99	105822	50.0	29.4	
	98 cis-1,4-Dichloro-2-butene	53	8.238	8.238	0.000	0	146737	50.0	37.4	
	114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	99	687652	25.0	24.5	
	118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	97	200308	25.0	24.4	

Reagents:

MV-Supp A_00080 Amount Added: 25.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

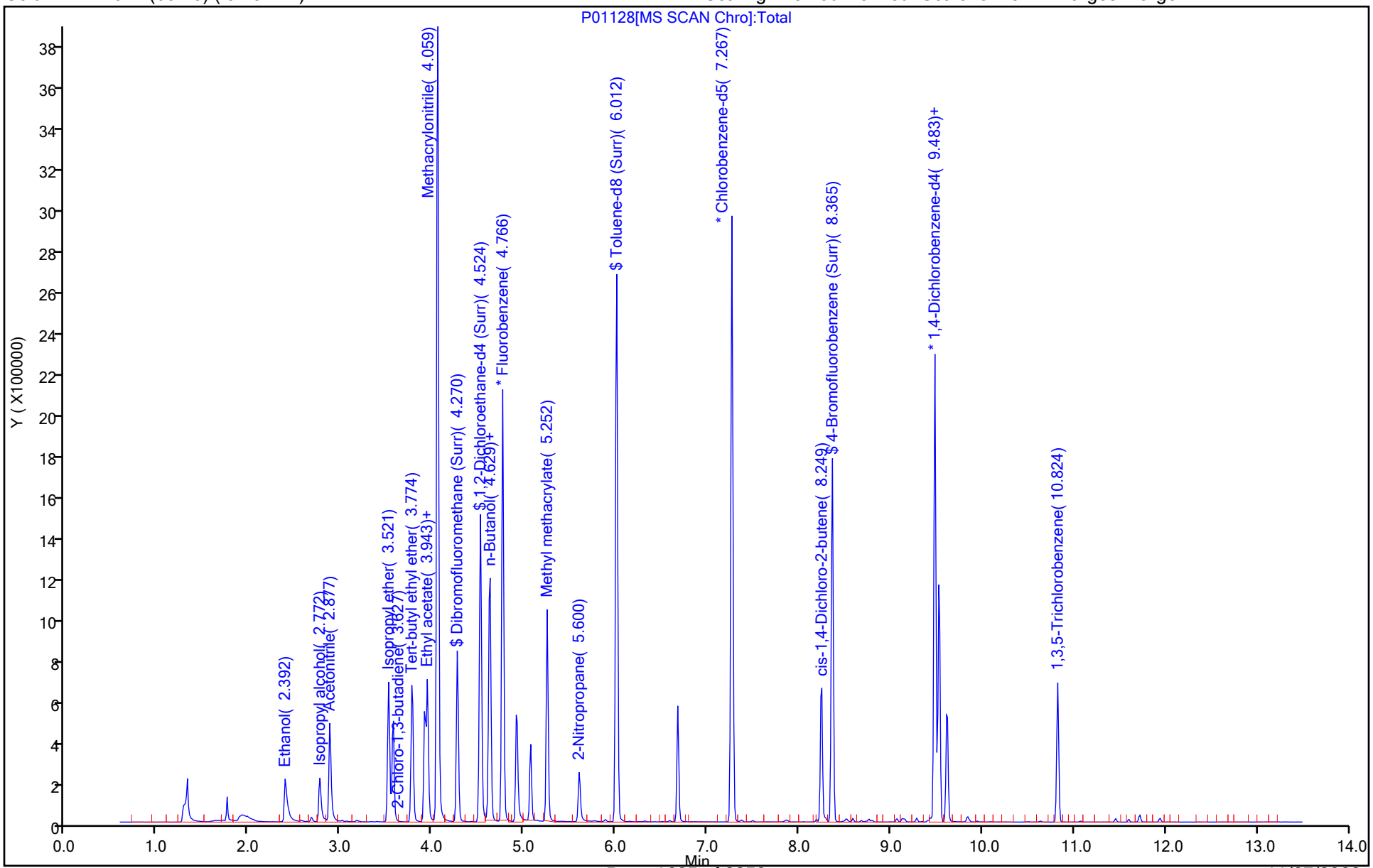
Report Date: 27-Apr-2023 12:42:50 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01128.D

Injection Date:	26-Apr-2023 08:42:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-590907/22 Calibration Date: 10/22/2022 14:59

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 11:33

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/22/2022 14:18

Lab File ID: X43672.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2234	0.2403	0.1000	53.8	50.0	7.6	30.0
Chloromethane	Ave	0.2181	0.2264	0.1000	51.9	50.0	3.8	30.0
Vinyl chloride	Ave	0.2051	0.2458	0.0100	59.9	50.0	19.9	30.0
Bromomethane	Lin1		0.1274	0.0100	61.1	50.0	22.1	30.0
Chloroethane	Ave	0.1380	0.1405	0.0100	50.9	50.0	1.8	30.0
Dichlorofluoromethane	Ave	0.3629	0.3664	0.0100	50.5	50.0	1.0	30.0
Trichlorofluoromethane	Ave	0.3082	0.3406	0.0100	55.3	50.0	10.5	30.0
Ethyl ether	Ave	0.1693	0.1705	0.0100	50.4	50.0	0.7	30.0
Acrolein	Ave	0.0123	0.0126	0.0010	255	250	1.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1406	0.1553	0.0500	55.2	50.0	10.5	30.0
1,1-Dichloroethene	Ave	0.1768	0.1945	0.0600	55.0	50.0	10.0	30.0
Acetone	Ave	0.0604	0.0609	0.0100	202	200	0.8	30.0
Iodomethane	Lin1		0.2053	0.0100	40.8	50.0	-18.4	30.0
Carbon disulfide	Ave	0.5643	0.6149	0.1000	54.5	50.0	9.0	30.0
Methyl acetate	Ave	0.1427	0.1463	0.0100	103	100	2.6	30.0
3-Chloro-1-propene	Ave	0.3063	0.3137	0.0100	51.2	50.0	2.4	30.0
Methylene Chloride	Lin2		0.2268	0.0100	51.6	50.0	3.2	30.0
2-Methyl-2-propanol	Ave	0.0233	0.0260	0.0010	557	500	11.5	30.0
Acrylonitrile	Ave	0.0745	0.0792	0.0100	531	500	6.3	30.0
Methyl tert-butyl ether	Ave	0.6437	0.6661	0.1000	51.7	50.0	3.5	30.0
trans-1,2-Dichloroethene	Ave	0.2085	0.2156	0.1000	51.7	50.0	3.4	30.0
Hexane	Ave	1.132	1.282	0.0100	56.6	50.0	13.2	30.0
Vinyl acetate	Ave	0.4356	0.4540	0.0100	104	100	4.2	30.0
1,1-Dichloroethane	Ave	0.3908	0.3893	0.1000	49.8	50.0	-0.4	30.0
2-Butanone (MEK)	Ave	0.0877	0.0955	0.0100	218	200	8.9	30.0
cis-1,2-Dichloroethene	Ave	0.2380	0.2483	0.1000	52.2	50.0	4.3	30.0
2,2-Dichloropropane	Ave	0.3733	0.3860	0.0100	51.7	50.0	3.4	30.0
sec-Butyl Alcohol	Lin1		0.0191	0.0100	1350	1200	12.1	30.0
Chlorobromomethane	Ave	0.1115	0.1105	0.0500	49.6	50.0	-0.9	30.0
Tetrahydrofuran	Ave	0.0589	0.0633	0.0010	107	100	7.5	30.0
Chloroform	Ave	0.3938	0.4049	0.2000	51.4	50.0	2.8	30.0
1,1,1-Trichloroethane	Ave	0.3450	0.3688	0.0500	53.5	50.0	6.9	30.0
Cyclohexane	Ave	0.3418	0.3659	0.0100	53.5	50.0	7.1	30.0
1,1-Dichloropropene	Ave	0.2980	0.3224	0.0100	54.1	50.0	8.2	30.0
Carbon tetrachloride	Ave	0.2950	0.3028	0.1000	51.3	50.0	2.6	30.0
Isobutyl alcohol	Ave	0.0071	0.0078	0.0010	1380	1250	10.2	30.0
Benzene	Ave	0.8889	0.9164	0.2000	51.6	50.0	3.1	30.0
1,2-Dichloroethane	Ave	0.3292	0.3300	0.0700	50.1	50.0	0.2	30.0
n-Heptane	Ave	0.2233	0.2453		54.9	50.0	9.8	
Trichloroethene	Ave	0.9864	1.036	0.2000	52.5	50.0	5.0	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-590907/22 | Calibration Date: 10/22/2022 14:59

Instrument ID: VMS_X4 | Calib Start Date: 10/22/2022 11:33

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 10/22/2022 14:18

Lab File ID: X43672.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Ave	0.1346	0.1585	0.0010	189	160	17.8	30.0
Methylcyclohexane	Ave	0.2639	0.2840	0.0500	53.8	50.0	7.6	30.0
1,2-Dichloropropane	Ave	0.2242	0.2314	0.1000	51.6	50.0	3.2	30.0
1,4-Dioxane	Ave	0.0029	0.0034	0.0010	1160	1000	15.6	30.0
Dibromomethane	Ave	0.1391	0.1432	0.0100	51.4	50.0	2.9	30.0
Dichlorobromomethane	Ave	0.3191	0.3224	0.2000	50.5	50.0	1.0	30.0
2-Chloroethyl vinyl ether	Ave	0.1449	0.1548	0.0100	53.4	50.0	6.8	30.0
cis-1,3-Dichloropropene	Ave	1.690	1.694	0.2000	50.1	50.0	0.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1821	0.2005	0.0300	220	200	10.1	30.0
Toluene	Ave	0.9734	1.005	0.3000	51.6	50.0	3.3	30.0
trans-1,3-Dichloropropene	Ave	0.3631	0.3793	0.2000	52.2	50.0	4.4	30.0
Ethyl methacrylate	Ave	1.207	1.320	0.0100	54.7	50.0	9.3	30.0
1,1,2-Trichloroethane	Ave	0.1941	0.2047	0.1000	52.7	50.0	5.5	30.0
Tetrachloroethene	Ave	0.7262	0.7783	0.1000	53.6	50.0	7.2	30.0
1,3-Dichloropropane	Ave	1.509	1.573	0.0100	52.1	50.0	4.2	30.0
2-Hexanone	Ave	0.5448	0.6218	0.0100	228	200	14.1	30.0
Chlorodibromomethane	Ave	0.9865	1.009	0.1000	51.1	50.0	2.3	30.0
Ethylene Dibromide	Ave	0.8925	0.9202	0.1000	51.6	50.0	3.1	30.0
1-Chlorohexane	Lin2		1.409	0.0100	43.5	40.0	8.7	30.0
Chlorobenzene	Ave	2.702	2.733	0.3000	50.6	50.0	1.1	30.0
1,1,1,2-Tetrachloroethane	Ave	0.9449	0.9753	0.0100	51.6	50.0	3.2	30.0
Ethylbenzene	Ave	1.463	1.526	0.3000	52.2	50.0	4.3	30.0
m-Xylene & p-Xylene	Ave	1.835	1.904	0.1000	51.9	50.0	3.8	30.0
o-Xylene	Ave	1.782	1.858	0.2000	52.1	50.0	4.3	30.0
Styrene	Ave	3.028	3.144	0.2000	51.9	50.0	3.8	30.0
Bromoform	Ave	0.6182	0.6513	0.1000	52.7	50.0	5.4	30.0
Isopropylbenzene	Ave	2.824	2.921	0.3000	51.7	50.0	3.5	30.0
Cyclohexanone	Ave	0.0374	0.0460	0.0010	1840	1500	23.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7132	0.7565	0.3000	53.0	50.0	6.1	30.0
Bromobenzene	Ave	0.6802	0.6880	0.0100	50.6	50.0	1.2	30.0
trans-1,4-Dichloro-2-butene	Ave	0.2276	0.2547	0.0100	56.0	50.0	11.9	30.0
1,2,3-Trichloropropane	Ave	0.2211	0.2294	0.0100	51.9	50.0	3.8	30.0
N-Propylbenzene	Ave	0.7939	0.8069	0.0100	50.8	50.0	1.6	30.0
2-Chlorotoluene	Ave	0.6742	0.6785	0.0100	50.3	50.0	0.6	30.0
1,3,5-Trimethylbenzene	Ave	2.492	2.561	0.0100	51.4	50.0	2.8	30.0
4-Chlorotoluene	Ave	0.7007	0.7201	0.0100	51.4	50.0	2.8	30.0
tert-Butylbenzene	Ave	2.028	2.072	0.0100	51.1	50.0	2.2	30.0
1,2,4-Trimethylbenzene	Ave	2.628	2.644	0.3000	50.3	50.0	0.6	30.0
sec-Butylbenzene	Ave	0.5818	0.6173	0.0100	53.0	50.0	6.1	30.0
1,3-Dichlorobenzene	Ave	1.292	1.336	0.5000	51.7	50.0	3.4	30.0
4-Isopropyltoluene	Ave	2.496	2.641	0.0100	52.9	50.0	5.8	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-590907/22 Calibration Date: 10/22/2022 14:59

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 11:33

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/22/2022 14:18

Lab File ID: X43672.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.346	1.372	0.5000	51.0	50.0	1.9	30.0
n-Butylbenzene	Ave	2.219	2.346	0.0100	52.9	50.0	5.7	30.0
1,2-Dichlorobenzene	Ave	1.223	1.273	0.5000	52.1	50.0	4.1	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1585	0.1672	0.0100	52.8	50.0	5.5	30.0
1,2,4-Trichlorobenzene	Ave	0.6954	0.7310	0.2000	52.6	50.0	5.1	30.0
Hexachlorobutadiene	Lin2		0.2975	0.0100	54.0	50.0	7.9	30.0
Naphthalene	Ave	1.953	2.093	0.0100	53.6	50.0	7.2	30.0
1,2,3-Trichlorobenzene	Ave	0.5842	0.6107	0.3000	52.3	50.0	4.5	30.0
Dibromofluoromethane (Surr)	Ave	0.2362	0.2358	0.0100	49.9	50.0	-0.2	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2868	0.2872	0.0100	50.1	50.0	0.1	30.0
Toluene-d8 (Surr)	Ave	4.184	4.215	0.0100	50.4	50.0	0.7	30.0
4-Bromofluorobenzene (Surr)	Ave	1.005	0.9887	0.0100	49.2	50.0	-1.7	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43672.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 22-Oct-2022 14:59:30 ALS Bottle#: 11 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:15:02 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 22-Oct-2022 15:29:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1291679	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	296668	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	481127	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	304595	50.0	49.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	370968	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1250422	50.0	50.4	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	85	475692	50.0	49.2	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	310452	50.0	53.8	
11 Chloromethane	50	1.867	1.867	0.000	99	292476	50.0	51.9	
12 Vinyl chloride	62	1.960	1.967	-0.007	98	317547	50.0	59.9	
14 Bromomethane	94	2.232	2.239	-0.007	92	164545	50.0	61.1	
15 Chloroethane	64	2.332	2.332	0.000	100	181512	50.0	50.9	
16 Dichlorofluoromethane	67	2.503	2.504	-0.001	97	473222	50.0	50.5	
17 Trichlorofluoromethane	101	2.532	2.539	-0.007	98	440006	50.0	55.3	
19 Ethyl ether	59	2.747	2.747	0.000	90	220270	50.0	50.4	
21 Acrolein	56	2.854	2.854	0.000	98	81220	250.0	254.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	-0.001	96	200565	50.0	55.2	
23 1,1-Dichloroethene	96	2.933	2.940	-0.008	98	251232	50.0	55.0	
24 Acetone	43	2.954	2.954	0.000	100	314512	200.0	201.5	
26 Iodomethane	142	3.054	3.061	-0.007	100	265200	50.0	40.8	
27 Carbon disulfide	76	3.118	3.118	0.000	99	794250	50.0	54.5	
29 Methyl acetate	43	3.176	3.183	-0.007	97	378055	100.0	102.6	
30 3-Chloro-1-propene	41	3.197	3.204	-0.007	88	405231	50.0	51.2	
31 Methylene Chloride	84	3.297	3.297	0.000	90	293010	50.0	51.6	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	335428	500.0	557.3	
33 Acrylonitrile	53	3.454	3.455	-0.001	98	1022467	500.0	531.3	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	860412	50.0	51.7	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	278515	50.0	51.7	
37 Hexane	57	3.683	3.683	0.000	92	380208	50.0	56.6	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1172940	100.0	104.2	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	97	502894	50.0	49.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	493386	200.0	217.9	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	83	320774	50.0	52.2	
48 2,2-Dichloropropane	77	4.220	4.227	-0.007	88	498588	50.0	51.7	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	591926	1200.0	1345.4	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	142706	50.0	49.6	
53 Tetrahydrofuran	42	4.398	4.398	0.000	85	163481	100.0	107.5	
54 Chloroform	83	4.441	4.448	-0.007	94	523000	50.0	51.4	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	476386	50.0	53.5	
56 Cyclohexane	56	4.649	4.649	0.000	89	472620	50.0	53.5	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	416468	50.0	54.1	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	391107	50.0	51.3	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	253414	1250.0	1377.4	
62 Benzene	78	4.849	4.849	0.000	96	1183704	50.0	51.6	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	426293	50.0	50.1	
65 n-Heptane	43	5.035	5.035	0.000	90	316838	50.0	54.9	
67 Trichloroethene	95	5.335	5.335	0.000	98	307352	50.0	52.5	
68 2-Pentanone	43	5.435	5.435	0.000	98	655284	160.0	188.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	366849	50.0	53.8	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	93	298882	50.0	51.6	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	86689	1000.0	1156.2	
73 Dibromomethane	93	5.614	5.607	0.007	94	184924	50.0	51.4	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	416394	50.0	50.5	
76 2-Chloroethyl vinyl ether	63	5.928	5.936	-0.008	92	199932	50.0	53.4	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	502696	50.0	50.1	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1036031	200.0	220.2	
79 Toluene	91	6.365	6.365	0.000	98	1298187	50.0	51.6	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	98	489894	50.0	52.2	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	391526	50.0	54.7	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	92	264462	50.0	52.7	
83 Tetrachloroethene	164	6.808	6.808	0.000	94	230894	50.0	53.6	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	96	466576	50.0	52.1	
85 2-Hexanone	43	6.879	6.880	-0.001	94	737858	200.0	228.3	
87 Chlorodibromomethane	129	7.051	7.051	0.000	93	299275	50.0	51.1	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	272991	50.0	51.6	
89 1-Chlorohexane	91	7.559	7.559	0.000	97	334519	40.0	43.5	
90 Chlorobenzene	112	7.602	7.602	0.000	98	810898	50.0	50.6	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	94	289342	50.0	51.6	
92 Ethylbenzene	106	7.673	7.673	0.000	99	452615	50.0	52.2	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	564883	50.0	51.9	
94 o-Xylene	106	8.152	8.152	0.000	97	551296	50.0	52.1	
95 Styrene	104	8.166	8.167	-0.001	94	932714	50.0	51.9	
96 Bromoform	173	8.352	8.352	0.000	92	193229	50.0	52.7	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	1405577	50.0	51.7	
99 Cyclohexanone	55	8.588	8.588	0.000	92	409547	1500.0	1844.7	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	363978	50.0	53.0	
101 Bromobenzene	156	8.810	8.810	0.000	97	331023	50.0	50.6	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.817	-0.007	79	122550	50.0	56.0	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	110390	50.0	51.9	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	388236	50.0	50.8	
105 2-Chlorotoluene	126	8.982	8.989	-0.007	95	326429	50.0	50.3	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1232246	50.0	51.4	
107 4-Chlorotoluene	126	9.103	9.103	0.000	98	346461	50.0	51.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	997012	50.0	51.1	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	1272255	50.0	50.3	
111 sec-Butylbenzene	134	9.589	9.589	0.000	95	296996	50.0	53.0	
112 1,3-Dichlorobenzene	146	9.711	9.718	-0.007	97	642961	50.0	51.7	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1270604	50.0	52.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	660121	50.0	51.0	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	1128615	50.0	52.9	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	96	612399	50.0	52.1	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	84	80459	50.0	52.8	
120 1,2,4-Trichlorobenzene	180	11.763	11.770	-0.007	94	351680	50.0	52.6	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	143145	50.0	54.0	
122 Naphthalene	128	12.035	12.035	0.000	97	1007085	50.0	53.6	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	293834	50.0	52.3	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	103.9	
S 140 Trihalomethanes, Total	1				0		200.0	205.7	
S 141 1,2-Dichloroethene, Total	1				0		100.0	103.9	
S 139 Xylenes, Total (URS)	1				0		100.0	104.0	
S 136 1,3-Dichloropropene, Total	1				0		100.0	102.4	
S 138 Xylenes, Total	106				0		100.0	104.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00076	Amount Added: 25.00	Units: uL	
MV-Gas B_00120	Amount Added: 10.00	Units: uL	
mv-IS_SS_00049	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 24-Oct-2022 14:15:59 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43672.D

Injection Date: 22-Oct-2022 14:59:30 Instrument ID: VMS_X4 Operator ID: SEIFERTJ

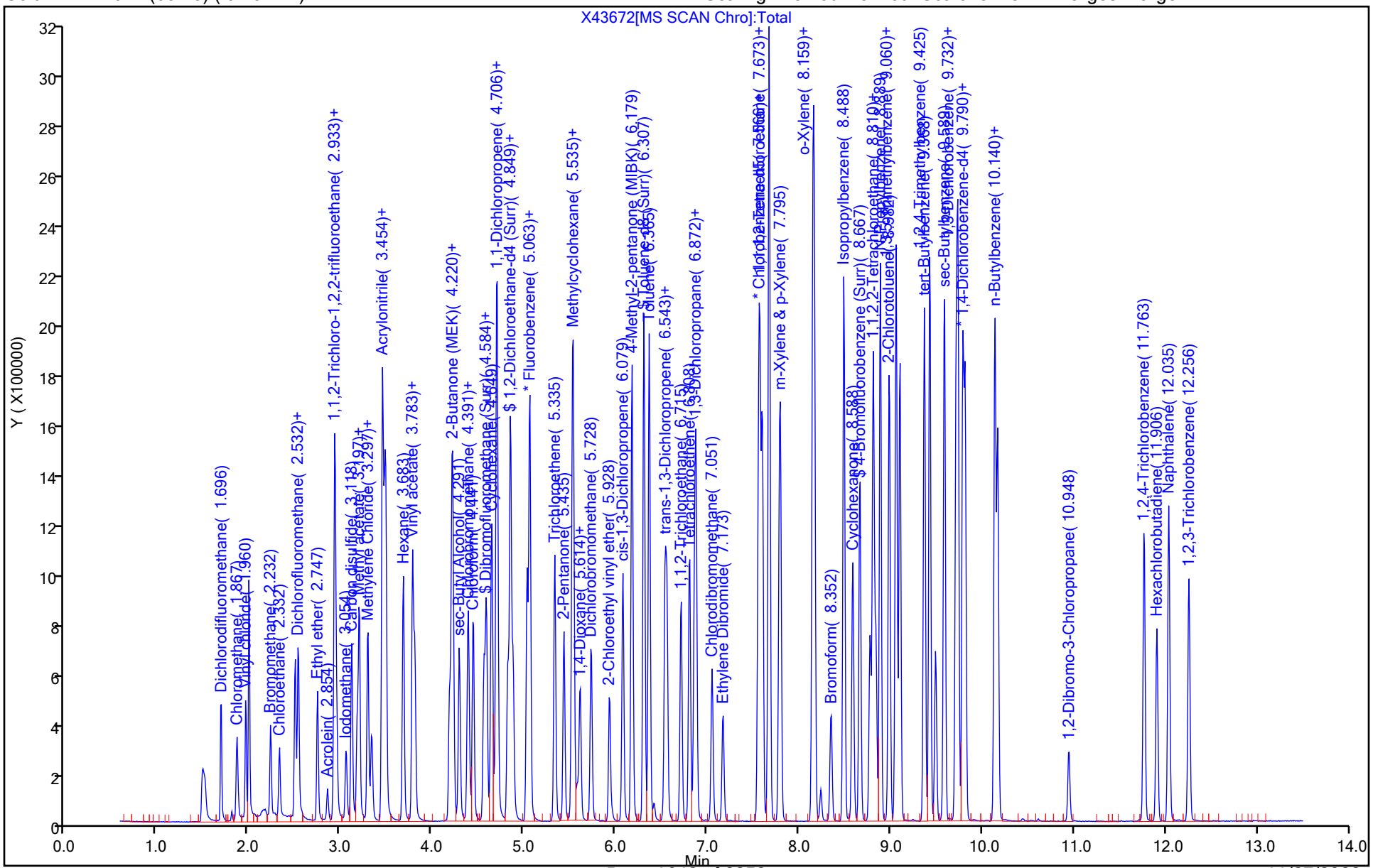
Lims ID: ICV Worklist Smp#: 22

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 11

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-590924/12 Calibration Date: 10/23/2022 15:09

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 11:33

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/22/2022 14:18

Lab File ID: X43688.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2362	0.2336	0.0100	49.5	50.0	-1.1	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2868	0.2818	0.0100	49.1	50.0	-1.8	30.0
Toluene-d8 (Surr)	Ave	4.184	4.095	0.0100	48.9	50.0	-2.1	30.0
4-Bromofluorobenzene (Surr)	Ave	1.005	0.9826	0.0100	48.9	50.0	-2.3	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221023-115403.b\X43688.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-Oct-2022 15:09:30 ALS Bottle#: 6 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV S
Misc. Info.: 280-0115403-012
Operator ID: PEPPINGA Instrument ID: VMS_X4
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_X4\20221023-115403.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:46:11 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 24-Oct-2022 14:46:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1280423	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	297930	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	480016	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	299161	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	360847	50.0	49.1	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1220083	50.0	48.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	85	471664	50.0	48.9	
13 Ethylene oxide	43		2.210				2500.0	ND	7
18 Ethanol	45	2.647	2.654	-0.007	100	86469	1500.0	1275.8	
20 Propene oxide	58		2.661				2500.0	ND	7
25 Isopropyl alcohol	45	3.033	3.040	-0.007	99	82806	250.0	208.6	
28 Acetonitrile	41	3.162	3.161	0.001	99	159797	250.0	223.4	
41 Isopropyl ether	87	3.805	3.805	0.000	92	131271	25.0	27.5	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	92	228848	25.0	27.3	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	455203	25.0	27.5	
46 Ethyl acetate	43	4.198	4.198	0.000	99	235012	50.0	47.4	
49 Propionitrile	54	4.234	4.234	0.000	99	195887	250.0	246.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	751233	250.0	241.2	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	89	423093	25.0	26.5	
66 n-Butanol	56	5.199	5.199	0.000	86	89370	625.0	569.4	
71 Methyl methacrylate	100	5.543	5.542	0.001	88	83844	50.0	49.6	
75 2-Nitropropane	41	5.900	5.900	0.000	97	81546	50.0	45.5	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	91	33133	50.0	53.2	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	84127	50.0	44.5	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	665799	25.0	25.6	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	206597	25.0	25.5	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

7 - Failed Limit of Detection

Reagents:

MV-Supp B_00054	Amount Added:	25.00	Units: uL	
MV-ETOH_CUS B_00003	Amount Added:	25.00	Units: uL	
mv-IS_SS_00049	Amount Added:	5.00	Units: uL	Run Reagent

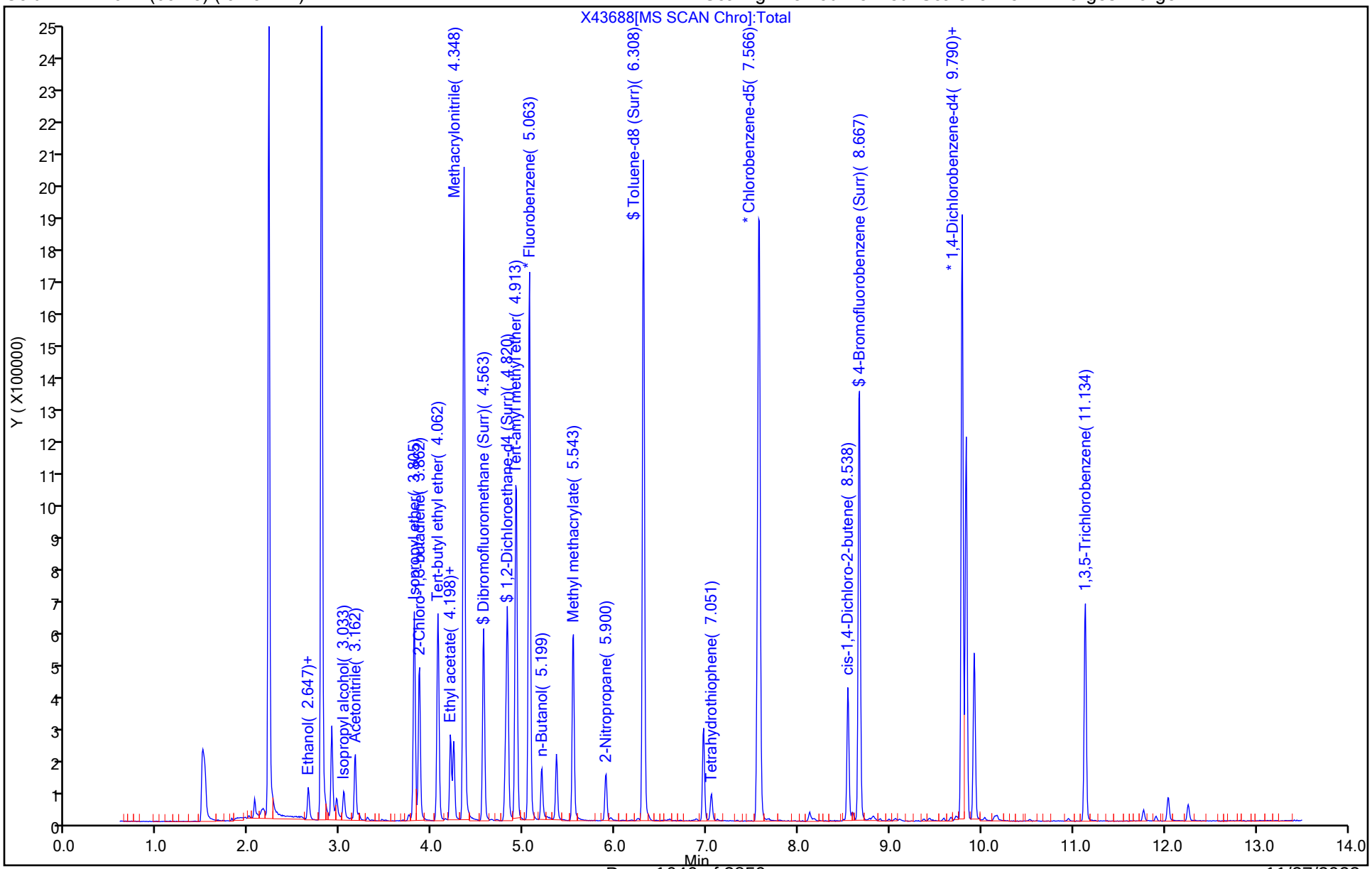
Report Date: 24-Oct-2022 14:47:05 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221023-115403.b\X43688.D

Injection Date:	23-Oct-2022 15:09:30	Instrument ID:	VMS_X4	Operator ID:	PEPPINGA
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-590924/12 Calibration Date: 10/23/2022 15:09

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 15:19

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/22/2022 17:23

Lab File ID: X43688.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0023*	0.0100	1280	1500	-14.9	30.0
Isopropyl alcohol	Ave	0.0155	0.0129	0.0100	209	250	-16.6	30.0
Acetonitrile	Ave	0.0279	0.0250	0.0100	223	250	-10.6	30.0
Isopropyl ether	Ave	0.1867	0.2050	0.0100	27.5	25.0	9.8	30.0
Chloroprene	Ave	0.3274	0.3575	0.0100	27.3	25.0	9.2	30.0
Tert-butyl ethyl ether	Ave	0.6465	0.7110	0.0100	27.5	25.0	10.0	30.0
Ethyl acetate	Ave	0.1934	0.1835	0.0100	47.4	50.0	-5.1	30.0
Propionitrile	Ave	0.0311	0.0306	0.0100	246	250	-1.5	30.0
Methacrylonitrile	Ave	0.1216	0.1173	0.0100	241	250	-3.5	30.0
Tert-amyl methyl ether	Ave	0.6244	0.6609	0.0100	26.5	25.0	5.8	30.0
n-Butanol	Ave	0.0061	0.0056*	0.0100	569	625	-8.9	30.0
Methyl methacrylate	Ave	0.0660	0.0655	0.0100	49.6	50.0	-0.8	30.0
2-Nitropropane	Ave	0.0700	0.0637	0.0100	45.5	50.0	-9.0	30.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1753	0.0100	44.5	50.0	-11.0	30.0
1,2,3-Trimethylbenzene	Ave	2.711	2.774	0.0100	25.6	25.0	2.3	30.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.8608	0.0100	25.5	25.0	2.1	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221023-115403.b\X43688.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-Oct-2022 15:09:30 ALS Bottle#: 6 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV S
Misc. Info.: 280-0115403-012
Operator ID: PEPPINGA Instrument ID: VMS_X4
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_X4\20221023-115403.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2022 14:46:11 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1674

First Level Reviewer: RWB2 Date: 24-Oct-2022 14:46:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1280423	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	297930	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	480016	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	299161	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	360847	50.0	49.1	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1220083	50.0	48.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	85	471664	50.0	48.9	
13 Ethylene oxide	43		2.210				2500.0	ND	7
18 Ethanol	45	2.647	2.654	-0.007	100	86469	1500.0	1275.8	
20 Propene oxide	58		2.661				2500.0	ND	7
25 Isopropyl alcohol	45	3.033	3.040	-0.007	99	82806	250.0	208.6	
28 Acetonitrile	41	3.162	3.161	0.001	99	159797	250.0	223.4	
41 Isopropyl ether	87	3.805	3.805	0.000	92	131271	25.0	27.5	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	92	228848	25.0	27.3	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	455203	25.0	27.5	
46 Ethyl acetate	43	4.198	4.198	0.000	99	235012	50.0	47.4	
49 Propionitrile	54	4.234	4.234	0.000	99	195887	250.0	246.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	751233	250.0	241.2	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	89	423093	25.0	26.5	
66 n-Butanol	56	5.199	5.199	0.000	86	89370	625.0	569.4	
71 Methyl methacrylate	100	5.543	5.542	0.001	88	83844	50.0	49.6	
75 2-Nitropropane	41	5.900	5.900	0.000	97	81546	50.0	45.5	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	91	33133	50.0	53.2	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	84127	50.0	44.5	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	665799	25.0	25.6	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	206597	25.0	25.5	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

7 - Failed Limit of Detection

Reagents:

MV-Supp B_00054	Amount Added:	25.00	Units: uL	
MV-ETOH_CUS B_00003	Amount Added:	25.00	Units: uL	
mv-IS_SS_00049	Amount Added:	5.00	Units: uL	Run Reagent

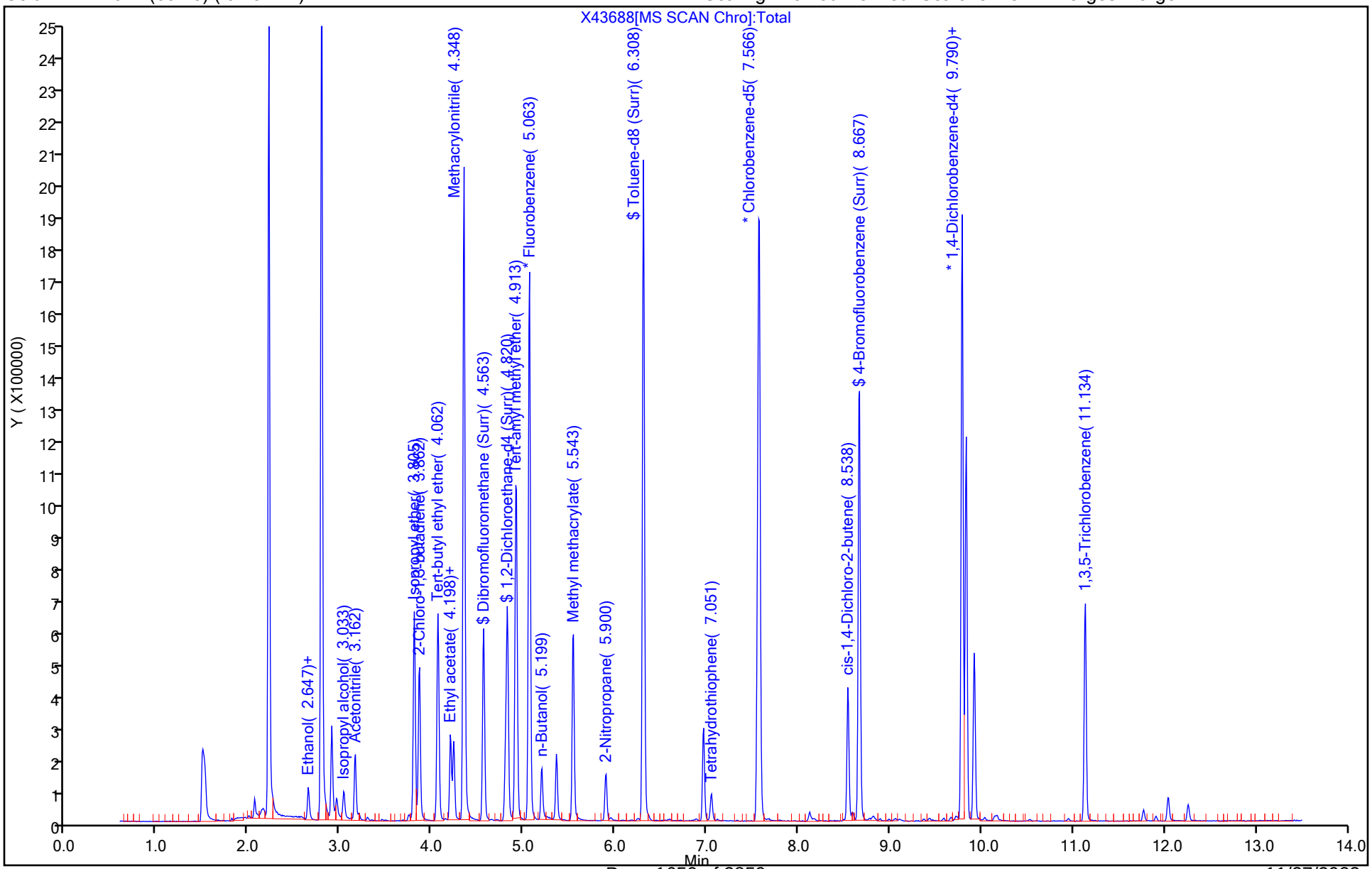
Report Date: 24-Oct-2022 14:47:05 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221023-115403.b\X43688.D

Injection Date:	23-Oct-2022 15:09:30	Instrument ID:	VMS_X4	Operator ID:	PEPPINGA
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-608203/8 | Calibration Date: 04/11/2023 00:52

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502177.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.2375	0.1000	54.1	50.0	8.3	30.0
Chloromethane	Ave	0.2229	0.2221	0.1000	49.8	50.0	-0.4	30.0
Vinyl chloride	Lin1		0.2611	0.0100	57.5	50.0	15.0	30.0
Bromomethane	Ave	0.1211	0.1410	0.0100	58.2	50.0	16.4	30.0
Chloroethane	Ave	0.1519	0.1722	0.0100	56.7	50.0	13.3	30.0
Dichlorofluoromethane	Ave	0.3792	0.3949	0.0100	52.1	50.0	4.2	30.0
Trichlorofluoromethane	Ave	0.2925	0.3340	0.0100	57.1	50.0	14.2	30.0
Ethyl ether	Ave	0.1687	0.1643	0.0100	48.7	50.0	-2.6	30.0
Acrolein	Ave	0.0272	0.0254	0.0010	461	494	-6.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1554	0.0500	56.3	50.0	12.5	30.0
1,1-Dichloroethene	Ave	0.1921	0.2016	0.0600	52.5	50.0	4.9	30.0
Acetone	Lin2		0.0555	0.0100	202	200	0.8	30.0
Iodomethane	Lin1		0.2511	0.0100	47.4	50.0	-5.2	30.0
Carbon disulfide	Ave	0.6224	0.6163	0.1000	49.5	50.0	-1.0	30.0
Methyl acetate	Ave	0.1262	0.1266	0.0100	100	100	0.3	30.0
Allyl chloride	Ave	0.2551	0.2679	0.0100	52.5	50.0	5.0	30.0
Methylene Chloride	Ave	0.2466	0.2343	0.0100	47.5	50.0	-5.0	30.0
2-Methyl-2-propanol	Lin1		0.0175	0.0010	449	500	-10.2	30.0
Acrylonitrile	Ave	0.0717	0.0707	0.0100	493	500	-1.4	30.0
Methyl tert-butyl ether	Ave	0.6044	0.6254	0.1000	51.7	50.0	3.5	30.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2260	0.1000	53.0	50.0	6.0	30.0
Hexane	Ave	1.146	1.080	0.0100	47.1	50.0	-5.8	30.0
Vinyl acetate	Ave	0.3380	0.3735	0.0100	111	100	10.5	30.0
1,1-Dichloroethane	Ave	0.3890	0.4001	0.1000	51.4	50.0	2.8	30.0
2-Butanone (MEK)	Ave	0.0821	0.0835	0.0100	203	200	1.6	30.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2592	0.1000	50.7	50.0	1.5	30.0
2,2-Dichloropropane	Ave	0.2990	0.3173	0.0100	53.1	50.0	6.1	30.0
sec-Butyl Alcohol	Lin1		0.0130	0.0100	1060	1200	-11.6	30.0
Chlorobromomethane	Ave	0.1177	0.1223	0.0500	51.9	50.0	3.9	30.0
Tetrahydrofuran	Ave	0.0557	0.0530	0.0010	95.2	100	-4.8	30.0
Chloroform	Ave	0.3958	0.4101	0.2000	51.8	50.0	3.6	30.0
1,1,1-Trichloroethane	Ave	0.3206	0.3525	0.0500	55.0	50.0	9.9	30.0
Cyclohexane	Ave	0.3308	0.3483	0.0100	52.6	50.0	5.3	30.0
1,1-Dichloropropene	Ave	0.3142	0.3361	0.0100	53.5	50.0	7.0	30.0
Carbon tetrachloride	Ave	0.2595	0.2956	0.1000	56.9	50.0	13.9	30.0
Isobutyl alcohol	Lin1		0.0057	0.0010	1150	1250	-8.2	30.0
Benzene	Ave	0.9289	0.9492	0.2000	51.1	50.0	2.2	30.0
1,2-Dichloroethane	Ave	0.2944	0.3077	0.0700	52.3	50.0	4.5	30.0
n-Heptane	Ave	0.1928	0.1961		50.9	50.0	1.8	
Trichloroethene	Ave	0.9564	0.9925	0.2000	51.9	50.0	3.8	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-608203/8 | Calibration Date: 04/11/2023 00:52

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502177.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1294	0.0010	156	160	-2.2	30.0
Methylcyclohexane	Ave	0.2422	0.2579	0.0500	53.2	50.0	6.5	30.0
1,2-Dichloropropane	Ave	0.2362	0.2402	0.1000	50.8	50.0	1.7	30.0
1,4-Dioxane	Ave	0.0030	0.0029	0.0010	982	1000	-1.8	30.0
Dibromomethane	Ave	0.1409	0.1469	0.0100	52.1	50.0	4.2	30.0
Dichlorobromomethane	Ave	0.2974	0.3127	0.2000	52.6	50.0	5.1	30.0
2-Chloroethyl vinyl ether	Lin1		0.1144	0.0100	76.0	50.0	52.1*	30.0
cis-1,3-Dichloropropene	Ave	1.523	1.541	0.2000	50.6	50.0	1.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1734	0.0300	219	200	9.7	30.0
Toluene	Ave	1.001	1.045	0.3000	52.2	50.0	4.5	30.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3367	0.2000	54.9	50.0	9.7	30.0
Ethyl methacrylate	Ave	1.092	1.109	0.0100	50.7	50.0	1.5	30.0
1,1,2-Trichloroethane	Ave	0.2000	0.2084	0.1000	52.1	50.0	4.2	30.0
Tetrachloroethene	Ave	0.7259	0.7668	0.1000	52.8	50.0	5.6	30.0
1,3-Dichloropropane	Ave	1.532	1.496	0.0100	48.8	50.0	-2.3	30.0
2-Hexanone	Ave	0.4789	0.4980	0.0100	208	200	4.0	30.0
Chlorodibromomethane	Ave	0.9243	0.9266	0.1000	50.1	50.0	0.2	30.0
1,2-Dibromoethane	Ave	0.8754	0.8924	0.1000	51.0	50.0	1.9	30.0
1-Chlorohexane	Ave	1.353	1.377	0.0100	40.7	40.0	1.8	30.0
Chlorobenzene	Ave	2.785	2.788	0.3000	50.0	50.0	0.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.9412	0.0100	52.6	50.0	5.1	30.0
Ethylbenzene	Ave	1.533	1.552	0.3000	50.6	50.0	1.2	30.0
m-Xylene & p-Xylene	Ave	1.838	1.885	0.1000	51.3	50.0	2.5	30.0
o-Xylene	Ave	1.865	1.840	0.2000	49.3	50.0	-1.3	30.0
Styrene	Ave	2.963	3.052	0.2000	51.5	50.0	3.0	30.0
Bromoform	Ave	0.5587	0.5565	0.1000	49.8	50.0	-0.4	30.0
Isopropylbenzene	Ave	2.838	2.984	0.3000	52.6	50.0	5.1	30.0
Cyclohexanone	Lin1		0.0419	0.0010	1480	1500	-1.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.7188	0.3000	50.2	50.0	0.4	30.0
Bromobenzene	Ave	0.7149	0.7091	0.0100	49.6	50.0	-0.8	30.0
trans-1,4-Dichloro-2-butene	Lin2		0.1898	0.0100	50.7	50.0	1.4	30.0
1,2,3-Trichloropropane	Ave	0.2173	0.2178	0.0100	50.1	50.0	0.2	30.0
N-Propylbenzene	Ave	0.7886	0.8463	0.0100	53.7	50.0	7.3	30.0
2-Chlorotoluene	Ave	0.6999	0.7331	0.0100	52.4	50.0	4.7	30.0
1,3,5-Trimethylbenzene	Ave	2.394	2.490	0.0100	52.0	50.0	4.0	30.0
4-Chlorotoluene	Ave	0.7282	0.7663	0.0100	52.6	50.0	5.2	30.0
tert-Butylbenzene	Ave	2.000	2.078	0.0100	51.9	50.0	3.9	30.0
1,2,4-Trimethylbenzene	Ave	2.476	2.571	0.3000	51.9	50.0	3.8	30.0
sec-Butylbenzene	Ave	0.5991	0.6151	0.0100	51.3	50.0	2.7	30.0
1,3-Dichlorobenzene	Ave	1.320	1.354	0.5000	51.3	50.0	2.6	30.0
4-Isopropyltoluene	Ave	2.471	2.618	0.0100	53.0	50.0	6.0	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICV 280-608203/8 Calibration Date: 04/11/2023 00:52

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502177.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.387	0.5000	49.5	50.0	-1.1	30.0
n-Butylbenzene	Ave	2.140	2.289	0.0100	53.5	50.0	7.0	30.0
1,2-Dichlorobenzene	Ave	1.271	1.286	0.5000	50.6	50.0	1.2	30.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1223	0.0100	42.4	50.0	-15.1	30.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.6514	0.2000	50.9	50.0	1.8	30.0
Hexachlorobutadiene	Ave	0.2332	0.2497	0.0100	53.5	50.0	7.1	30.0
Naphthalene	Ave	1.632	1.570	0.0100	48.1	50.0	-3.8	30.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.4865	0.3000	50.4	50.0	0.8	30.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2409	0.0100	50.1	50.0	0.2	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2532	0.0100	50.1	50.0	0.2	30.0
Toluene-d8 (Surr)	Ave	4.259	4.114	0.0100	48.3	50.0	-3.4	30.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.8864	0.0100	49.6	50.0	-0.8	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502177.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 11-Apr-2023 00:52:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: COULTERD Instrument ID: VMS_X4
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 07:35:16 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: BX8N Date: 11-Apr-2023 07:35:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1472574	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	356963	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	549141	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	354816	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	372903	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1468680	50.0	48.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	486743	50.0	49.6	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	100	349805	50.0	54.1	
11 Chloromethane	50	1.867	1.867	0.000	99	327043	50.0	49.8	
12 Vinyl chloride	62	1.967	1.967	0.000	98	384458	50.0	57.5	
14 Bromomethane	94	2.246	2.246	0.000	91	207640	50.0	58.2	
15 Chloroethane	64	2.339	2.339	0.000	99	253510	50.0	56.7	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	581591	50.0	52.1	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	491826	50.0	57.1	
19 Ethyl ether	59	2.747	2.747	0.000	87	241978	50.0	48.7	
21 Acrolein	56	2.854	2.854	0.000	99	369503	493.8	461.1	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	96	228889	50.0	56.3	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	296821	50.0	52.5	
24 Acetone	43	2.954	2.954	0.000	100	326659	200.0	201.5	
26 Iodomethane	142	3.061	3.061	0.000	99	369742	50.0	47.4	
27 Carbon disulfide	76	3.118	3.119	0.000	99	907562	50.0	49.5	
29 Methyl acetate	43	3.176	3.176	0.000	96	372821	100.0	100.3	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	84	394556	50.0	52.5	
31 Methylene Chloride	84	3.297	3.297	0.000	88	344980	50.0	47.5	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	258260	500.0	448.8	
33 Acrylonitrile	53	3.455	3.455	0.000	97	1040968	500.0	493.2	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	920911	50.0	51.7	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	332829	50.0	53.0	
37 Hexane	57	3.683	3.683	0.000	89	385479	50.0	47.1	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1100062	100.0	110.5	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	589139	50.0	51.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	491662	200.0	203.2	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	81	381622	50.0	50.7	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	467208	50.0	53.1	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	458399	1200.0	1061.0	
52 Chlorobromomethane	128	4.384	4.391	-0.007	91	180047	50.0	51.9	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	156118	100.0	95.2	
54 Chloroform	83	4.448	4.448	0.000	93	603959	50.0	51.8	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	519048	50.0	55.0	
56 Cyclohexane	56	4.649	4.649	0.000	87	512833	50.0	52.6	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	494884	50.0	53.5	
60 Isobutyl alcohol	41	4.706	4.706	0.000	87	210637	1250.0	1148.0	
59 Carbon tetrachloride	117	4.706	4.706	0.000	93	435260	50.0	56.9	
62 Benzene	78	4.849	4.849	0.000	96	1397730	50.0	51.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	453127	50.0	52.3	
65 n-Heptane	43	5.035	5.035	0.000	87	288841	50.0	50.9	
67 Trichloroethene	95	5.335	5.335	0.000	98	354303	50.0	51.9	
68 2-Pentanone	43	5.435	5.435	0.000	97	609936	160.0	156.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	379764	50.0	53.2	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	95	353755	50.0	50.8	
72 1,4-Dioxane	88	5.578	5.578	0.000	89	86501	1000.0	982.3	
73 Dibromomethane	93	5.607	5.614	-0.007	94	216268	50.0	52.1	
74 Dichlorobromomethane	83	5.735	5.735	0.000	100	460419	50.0	52.6	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	91	168486	50.0	76.0	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	550239	50.0	50.6	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	1021236	200.0	219.3	
79 Toluene	91	6.365	6.365	0.000	98	1539573	50.0	52.2	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	495828	50.0	54.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	395737	50.0	50.7	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	306947	50.0	52.1	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	273720	50.0	52.8	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	534171	50.0	48.8	
85 2-Hexanone	43	6.880	6.880	0.000	97	711085	200.0	208.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	330746	50.0	50.1	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	318564	50.0	51.0	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	393346	40.0	40.7	
90 Chlorobenzene	112	7.602	7.602	0.000	96	995087	50.0	50.0	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	94	335958	50.0	52.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	554111	50.0	50.6	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	672846	50.0	51.3	
94 o-Xylene	106	8.152	8.152	0.000	96	656959	50.0	49.3	
95 Styrene	104	8.167	8.167	0.000	94	1089528	50.0	51.5	
96 Bromoform	173	8.352	8.352	0.000	94	198643	50.0	49.8	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	1638770	50.0	52.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	448738	1500.0	1477.1	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	394709	50.0	50.2	
101 Bromobenzene	156	8.810	8.810	0.000	96	389410	50.0	49.6	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	74	104235	50.0	50.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	119578	50.0	50.1	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	464747	50.0	53.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	402556	50.0	52.4	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	1367329	50.0	52.0	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	420792	50.0	52.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1140927	50.0	51.9	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	1411577	50.0	51.9	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	337760	50.0	51.3	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	743380	50.0	51.3	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1437685	50.0	53.0	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	761683	50.0	49.5	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	1257063	50.0	53.5	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	706003	50.0	50.6	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	84	67177	50.0	42.4	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	357702	50.0	50.9	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	137140	50.0	53.5	
122 Naphthalene	128	12.035	12.035	0.000	97	862181	50.0	48.1	
123 1,2,3-Trichlorobenzene	180	12.256	12.257	0.000	95	267144	50.0	50.4	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	103.7	
S 139 Xylenes, Total (URS)	1				0		100.0	100.6	
S 136 1,3-Dichloropropene, Total	1				0		100.0	105.5	
S 138 Xylenes, Total	106				0		100.0	100.6	
S 140 Trihalomethanes, Total	1				0		200.0	204.3	
S 141 1,2-Dichloroethene, Total	1				0		100.0	103.7	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas B_00131	Amount Added: 10.00	Units: uL	
MV-MegaMain B_00082	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

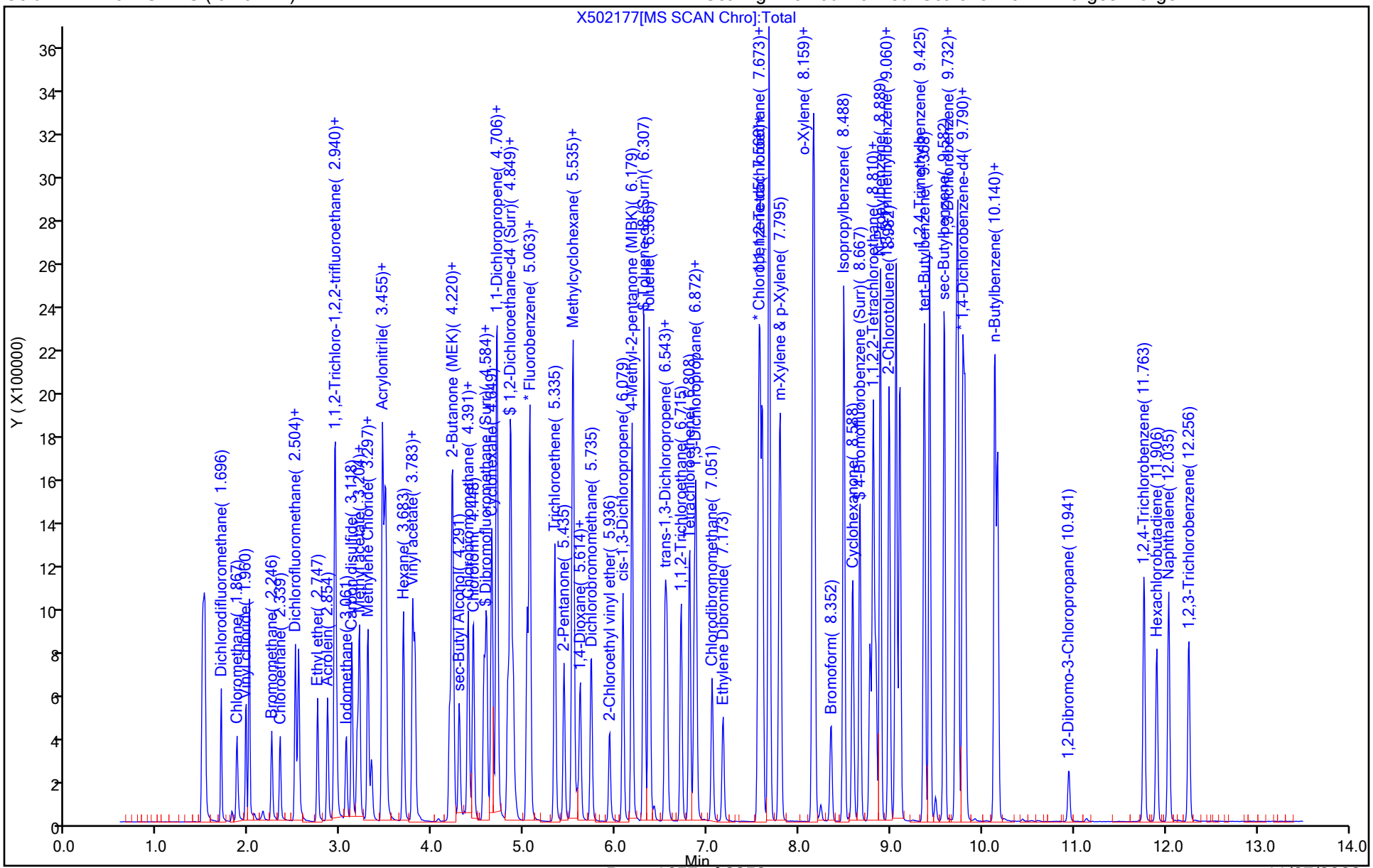
Report Date: 11-Apr-2023 07:36:07 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502177.D

Injection Date:	11-Apr-2023 00:52:30	Instrument ID:	VMS_X4	Operator ID:	COULTERD
Lims ID:	ICV			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609932/2 | Calibration Date: 04/24/2023 18:48

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502750.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.2597	0.1000	59.2	50.0	18.4	20.0
Chloromethane	Ave	0.2229	0.2392	0.1000	53.7	50.0	7.3	20.0
Vinyl chloride	Lin1		0.3093	0.0100	68.1	50.0	36.2*	20.0
Bromomethane	Ave	0.1211	0.0990	0.0100	40.8	50.0	-18.3	20.0
Chloroethane	Ave	0.1519	0.1943	0.0100	64.0	50.0	27.9*	20.0
Dichlorofluoromethane	Ave	0.3792	0.4269	0.0100	56.3	50.0	12.6	20.0
Trichlorofluoromethane	Ave	0.2925	0.3577	0.0100	61.1	50.0	22.3*	20.0
Ethyl ether	Ave	0.1687	0.1807	0.0100	53.6	50.0	7.1	20.0
Acrolein	Ave	0.0272	0.0249	0.0010	452	494	-8.4	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1575	0.0500	57.0	50.0	14.0	20.0
1,1-Dichloroethene	Ave	0.1921	0.1988	0.0600	51.7	50.0	3.5	20.0
Acetone	Lin2		0.0526	0.0100	191	200	-4.7	20.0
Iodomethane	Lin1		0.2360	0.0100	44.6	50.0	-10.7	20.0
Carbon disulfide	Ave	0.6224	0.6654	0.1000	53.5	50.0	6.9	20.0
Methyl acetate	Ave	0.1262	0.1372	0.0100	109	100	8.7	20.0
Allyl chloride	Ave	0.2551	0.3203	0.0100	62.8	50.0	25.6*	20.0
Methylene Chloride	Ave	0.2466	0.2368	0.0100	48.0	50.0	-4.0	20.0
2-Methyl-2-propanol	Lin1		0.0169	0.0010	432	500	-13.6	20.0
Acrylonitrile	Ave	0.0717	0.0780	0.0100	544	500	8.8	20.0
Methyl tert-butyl ether	Ave	0.6044	0.6114	0.1000	50.6	50.0	1.2	20.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2309	0.1000	54.1	50.0	8.2	20.0
Hexane	Ave	1.146	1.318	0.0100	57.5	50.0	15.0	20.0
Vinyl acetate	Ave	0.3380	0.4051	0.0100	120	100	19.9	20.0
1,1-Dichloroethane	Ave	0.3890	0.4236	0.1000	54.5	50.0	8.9	20.0
2-Butanone (MEK)	Ave	0.0821	0.0874	0.0100	213	200	6.4	20.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2607	0.1000	51.0	50.0	2.0	20.0
2,2-Dichloropropane	Ave	0.2990	0.3264	0.0100	54.6	50.0	9.1	20.0
sec-Butyl Alcohol	Lin1		0.0138	0.0100	1130	1200	-6.0	20.0
Chlorobromomethane	Ave	0.1177	0.1184	0.0500	50.3	50.0	0.6	20.0
Tetrahydrofuran	Ave	0.0557	0.0593	0.0010	107	100	6.5	20.0
Chloroform	Ave	0.3958	0.3970	0.2000	50.1	50.0	0.3	20.0
1,1,1-Trichloroethane	Ave	0.3206	0.3296	0.0500	51.4	50.0	2.8	20.0
Cyclohexane	Ave	0.3308	0.4058	0.0100	61.3	50.0	22.7*	20.0
1,1-Dichloropropene	Ave	0.3142	0.3302	0.0100	52.5	50.0	5.1	20.0
Carbon tetrachloride	Ave	0.2595	0.2782	0.1000	53.6	50.0	7.2	20.0
Isobutyl alcohol	Lin1		0.0056	0.0010	1130	1250	-9.3	20.0
Benzene	Ave	0.9289	0.9867	0.2000	53.1	50.0	6.2	20.0
1,2-Dichloroethane	Ave	0.2944	0.2874	0.0700	48.8	50.0	-2.4	20.0
n-Heptane	Ave	0.1928	0.2426		62.9	50.0	25.8	
Trichloroethene	Ave	0.9564	0.9843	0.2000	51.5	50.0	2.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609932/2 Calibration Date: 04/24/2023 18:48

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502750.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1357	0.0010	164	160	2.5	20.0
Methylcyclohexane	Ave	0.2422	0.2900	0.0500	59.9	50.0	19.7	20.0
1,2-Dichloropropane	Ave	0.2362	0.2554	0.1000	54.1	50.0	8.1	20.0
1,4-Dioxane	Ave	0.0030	0.0029	0.0010	954	1000	-4.6	20.0
Dibromomethane	Ave	0.1409	0.1352	0.0100	48.0	50.0	-4.0	20.0
Dichlorobromomethane	Ave	0.2974	0.2971	0.2000	50.0	50.0	-0.0	20.0
2-Chloroethyl vinyl ether	Lin1		0.1478	0.0100	98.5	50.0	97.0*	20.0
cis-1,3-Dichloropropene	Ave	1.523	1.595	0.2000	52.4	50.0	4.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1775	0.0300	225	200	12.3	20.0
Toluene	Ave	1.001	1.043	0.3000	52.1	50.0	4.3	20.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3313	0.2000	54.0	50.0	8.0	20.0
Ethyl methacrylate	Ave	1.092	1.127	0.0100	51.6	50.0	3.2	20.0
1,1,2-Trichloroethane	Ave	0.2000	0.2006	0.1000	50.1	50.0	0.3	20.0
Tetrachloroethene	Ave	0.7259	0.7840	0.1000	54.0	50.0	8.0	20.0
1,3-Dichloropropane	Ave	1.532	1.517	0.0100	49.5	50.0	-1.0	20.0
2-Hexanone	Ave	0.4789	0.5026	0.0100	210	200	4.9	20.0
Chlorodibromomethane	Ave	0.9243	0.8767	0.1000	47.4	50.0	-5.1	20.0
1,2-Dibromoethane	Ave	0.8754	0.8351	0.1000	47.7	50.0	-4.6	20.0
1-Chlorohexane	Ave	1.353	1.379	0.0100	40.8	40.0	1.9	20.0
Chlorobenzene	Ave	2.785	2.724	0.3000	48.9	50.0	-2.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.8770	0.0100	49.0	50.0	-2.1	20.0
Ethylbenzene	Ave	1.533	1.483	0.3000	48.4	50.0	-3.3	20.0
m-Xylene & p-Xylene	Ave	1.838	1.869	0.1000	50.8	50.0	1.7	20.0
o-Xylene	Ave	1.865	1.839	0.2000	49.3	50.0	-1.4	20.0
Styrene	Ave	2.963	3.022	0.2000	51.0	50.0	2.0	20.0
Bromoform	Ave	0.5587	0.5326	0.1000	47.7	50.0	-4.7	20.0
Isopropylbenzene	Ave	2.838	2.817	0.3000	49.6	50.0	-0.8	20.0
Cyclohexanone	Lin1		0.0376	0.0010	1320	1500	-11.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.6462	0.3000	45.1	50.0	-9.8	20.0
Bromobenzene	Ave	0.7149	0.6834	0.0100	47.8	50.0	-4.4	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1594	0.0100	42.6	50.0	-14.7	20.0
1,2,3-Trichloropropane	Ave	0.2173	0.1880	0.0100	43.3	50.0	-13.5	20.0
N-Propylbenzene	Ave	0.7886	0.8035	0.0100	50.9	50.0	1.9	20.0
2-Chlorotoluene	Ave	0.6999	0.6836	0.0100	48.8	50.0	-2.3	20.0
1,3,5-Trimethylbenzene	Ave	2.394	2.346	0.0100	49.0	50.0	-2.0	20.0
4-Chlorotoluene	Ave	0.7282	0.7074	0.0100	48.6	50.0	-2.9	20.0
tert-Butylbenzene	Ave	2.000	1.970	0.0100	49.2	50.0	-1.5	20.0
1,2,4-Trimethylbenzene	Ave	2.476	2.471	0.3000	49.9	50.0	-0.2	20.0
sec-Butylbenzene	Ave	0.5991	0.5963	0.0100	49.8	50.0	-0.5	20.0
1,3-Dichlorobenzene	Ave	1.320	1.265	0.5000	47.9	50.0	-4.2	20.0
4-Isopropyltoluene	Ave	2.471	2.467	0.0100	49.9	50.0	-0.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609932/2 Calibration Date: 04/24/2023 18:48

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502750.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.284	0.5000	45.8	50.0	-8.4	20.0
n-Butylbenzene	Ave	2.140	2.197	0.0100	51.3	50.0	2.7	20.0
1,2-Dichlorobenzene	Ave	1.271	1.188	0.5000	46.8	50.0	-6.5	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1131	0.0100	39.3	50.0	-21.5*	20.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.6353	0.2000	49.7	50.0	-0.7	20.0
Hexachlorobutadiene	Ave	0.2332	0.2502	0.0100	53.7	50.0	7.3	20.0
Naphthalene	Ave	1.632	1.427	0.0100	43.7	50.0	-12.6	20.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.4487	0.3000	46.5	50.0	-7.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2480	0.0100	51.5	50.0	3.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2535	0.0100	50.2	50.0	0.3	20.0
Toluene-d8 (Surr)	Ave	4.259	4.274	0.0100	50.2	50.0	0.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.8843	0.0100	49.5	50.0	-1.0	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502750.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Apr-2023 18:48:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1463413	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	353452	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	560008	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	362866	50.0	51.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	370928	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1510607	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	495188	50.0	49.5	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	380047	50.0	59.2	
11 Chloromethane	50	1.867	1.867	0.000	99	350094	50.0	53.7	
12 Vinyl chloride	62	1.967	1.967	0.000	98	452648	50.0	68.1	
14 Bromomethane	94	2.246	2.246	0.000	90	144822	50.0	40.8	
15 Chloroethane	64	2.339	2.339	0.000	99	284414	50.0	64.0	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	624742	50.0	56.3	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	523413	50.0	61.1	
19 Ethyl ether	59	2.747	2.747	0.000	89	264482	50.0	53.6	
21 Acrolein	56	2.854	2.854	0.000	99	360363	493.8	452.5	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	230452	50.0	57.0	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	290890	50.0	51.7	
24 Acetone	43	2.954	2.954	0.000	100	307619	200.0	190.7	
26 Iodomethane	142	3.054	3.054	0.000	98	345371	50.0	44.6	
27 Carbon disulfide	76	3.118	3.118	0.000	98	973811	50.0	53.5	
29 Methyl acetate	43	3.176	3.176	0.000	97	401488	100.0	108.7	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	468668	50.0	62.8	
31 Methylene Chloride	84	3.297	3.297	0.000	91	346526	50.0	48.0	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	246817	500.0	431.8	
33 Acrylonitrile	53	3.455	3.455	0.000	99	1141505	500.0	544.2	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	894663	50.0	50.6	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	337851	50.0	54.1	
37 Hexane	57	3.683	3.683	0.000	89	465931	50.0	57.5	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1185731	100.0	119.9	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	619971	50.0	54.5	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	511833	200.0	212.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	381447	50.0	51.0	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	86	477624	50.0	54.6	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	484520	1200.0	1127.9	
52 Chlorobromomethane	128	4.384	4.384	0.000	97	173322	50.0	50.3	
53 Tetrahydrofuran	42	4.391	4.391	0.000	88	173592	100.0	106.5	
54 Chloroform	83	4.441	4.441	0.000	93	580982	50.0	50.1	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	99	482377	50.0	51.4	
56 Cyclohexane	56	4.649	4.649	0.000	88	593915	50.0	61.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	99	483232	50.0	52.5	
60 Isobutyl alcohol	41	4.706	4.706	0.000	92	206694	1250.0	1133.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	407141	50.0	53.6	
62 Benzene	78	4.849	4.849	0.000	95	1443961	50.0	53.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	420549	50.0	48.8	
65 n-Heptane	43	5.028	5.028	0.000	91	354968	50.0	62.9	
67 Trichloroethene	95	5.335	5.335	0.000	99	347916	50.0	51.5	
68 2-Pentanone	43	5.435	5.435	0.000	99	635523	160.0	164.0	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	424346	50.0	59.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	98	373818	50.0	54.1	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	83485	1000.0	953.9	
73 Dibromomethane	93	5.607	5.607	0.000	97	197897	50.0	48.0	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	434831	50.0	50.0	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	216347	50.0	98.5	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	97	563882	50.0	52.4	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1039137	200.0	224.6	
79 Toluene	91	6.365	6.365	0.000	98	1526884	50.0	52.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	91	484824	50.0	54.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	398472	50.0	51.6	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	293530	50.0	50.1	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	277102	50.0	54.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	536227	50.0	49.5	
85 2-Hexanone	43	6.872	6.872	0.000	95	710512	200.0	209.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	91	309879	50.0	47.4	
88 Ethylene Dibromide	107	7.166	7.166	0.000	98	295159	50.0	47.7	
89 1-Chlorohexane	91	7.552	7.552	0.000	96	390042	40.0	40.8	
90 Chlorobenzene	112	7.595	7.595	0.000	95	962841	50.0	48.9	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.666	0.000	96	309971	50.0	49.0	
92 Ethylbenzene	106	7.673	7.673	0.000	98	524068	50.0	48.4	
93 m-Xylene & p-Xylene	106	7.788	7.788	0.000	0	660648	50.0	50.8	
94 o-Xylene	106	8.152	8.152	0.000	95	649886	50.0	49.3	
95 Styrene	104	8.167	8.167	0.000	95	1067989	50.0	51.0	
96 Bromoform	173	8.345	8.345	0.000	96	188235	50.0	47.7	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1577400	50.0	49.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	398165	1500.0	1324.3	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	361902	50.0	45.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	382712	50.0	47.8	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	80	89277	50.0	42.6	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	83	105306	50.0	43.3	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	449972	50.0	50.9	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	382812	50.0	48.8	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1313988	50.0	49.0	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	396139	50.0	48.6	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1103049	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1383726	50.0	49.9	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	333933	50.0	49.8	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	708319	50.0	47.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1381584	50.0	49.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	719234	50.0	45.8	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1230613	50.0	51.3	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	665529	50.0	46.8	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	88	63330	50.0	39.3	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	355759	50.0	49.7	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	140126	50.0	53.7	
122 Naphthalene	128	12.035	12.035	0.000	97	799006	50.0	43.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	251296	50.0	46.5	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	105.1	
S 139 Xylenes, Total (URS)	1				0		100.0	100.1	
S 136 1,3-Dichloropropene, Total	1				0		100.0	106.3	
S 138 Xylenes, Total	106				0		100.0	100.1	
S 140 Trihalomethanes, Total	1				0		200.0	195.2	
S 141 1,2-Dichloroethene, Total	1				0		100.0	105.1	

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00132	Amount Added: 10.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

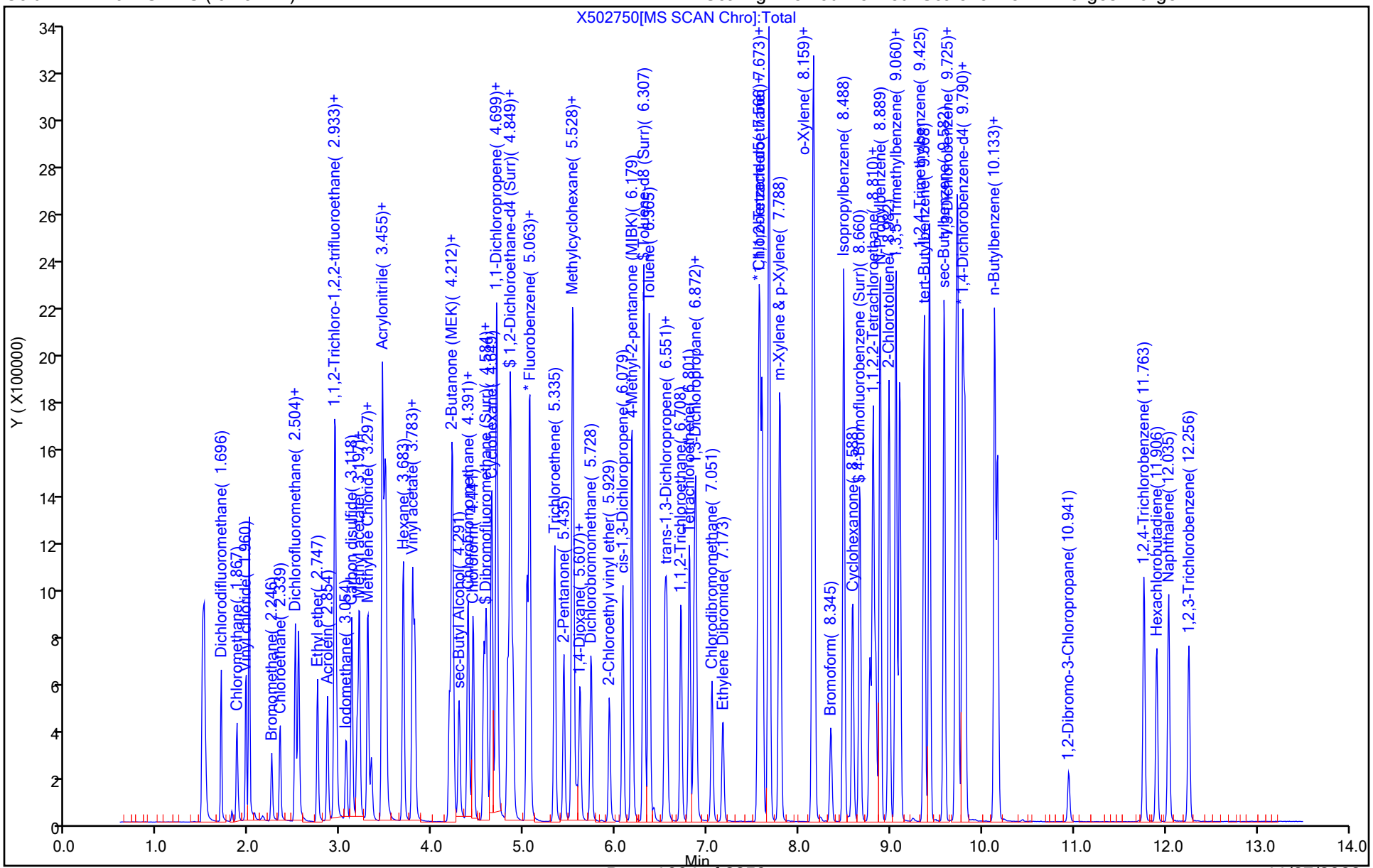
Report Date: 25-Apr-2023 04:09:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502750.D

Injection Date:	24-Apr-2023 18:48:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609932/3 Calibration Date: 04/24/2023 19:08

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 15:19

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 10/22/2022 17:23

Lab File ID: X502751.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0023*	0.0100	1300	1500	-13.6	20.0
Isopropyl alcohol	Ave	0.0155	0.0100	0.0100	162	250	-35.3*	20.0
Acetonitrile	Ave	0.0279	0.0262	0.0100	234	250	-6.2	20.0
Isopropyl ether	Ave	0.1867	0.1931	0.0100	25.9	25.0	3.4	20.0
Chloroprene	Ave	0.3274	0.3323	0.0100	25.4	25.0	1.5	20.0
Tert-butyl ethyl ether	Ave	0.6465	0.6467	0.0100	25.0	25.0	0.0	20.0
Ethyl acetate	Ave	0.1934	0.1659	0.0100	42.9	50.0	-14.2	20.0
Propionitrile	Ave	0.0311	0.0306	0.0100	246	250	-1.5	20.0
Methacrylonitrile	Ave	0.1216	0.1135	0.0100	233	250	-6.6	20.0
Tert-amyl methyl ether	Ave	0.6244	0.6017	0.0100	24.1	25.0	-3.6	20.0
n-Butanol	Ave	0.0061	0.0044*	0.0100	449	625	-28.2*	20.0
Methyl methacrylate	Ave	0.0660	0.0513	0.0100	38.9	50.0	-22.3*	20.0
2-Nitropropane	Ave	0.0700	0.0342	0.0100	24.4	50.0	-51.1*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1528	0.0100	38.8	50.0	-22.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.711	2.374	0.0100	21.9	25.0	-12.5	20.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.7538	0.0100	22.3	25.0	-10.6	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502751.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Apr-2023 19:08:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1417408	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	339994	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	535901	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	349770	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	363967	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1476755	50.0	51.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	488319	50.0	51.0	
18 Ethanol	45	2.646	2.646	0.000	100	97227	1500.0	1295.9	
25 Isopropyl alcohol	45	3.033	3.033	0.000	98	71036	250.0	161.6	
28 Acetonitrile	41	3.161	3.161	0.000	100	185585	250.0	234.4	
41 Isopropyl ether	87	3.805	3.805	0.000	95	136832	25.0	25.9	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	235503	25.0	25.4	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	458314	25.0	25.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	235175	50.0	42.9	
49 Propionitrile	54	4.234	4.234	0.000	99	216813	250.0	246.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	804721	250.0	233.4	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	426417	25.0	24.1	
66 n-Butanol	56	5.199	5.199	0.000	86	77987	625.0	448.9	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	72770	50.0	38.9	
75 2-Nitropropane	41	5.893	5.893	0.000	97	48468	50.0	24.4	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	81872	50.0	38.8	
115 1,2,3-Trimethylbenzene	105	9.832	9.832	0.000	97	635983	25.0	21.9	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	201994	25.0	22.3	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 25-Apr-2023 04:09:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502751.D

Injection Date: 24-Apr-2023 19:08:30 Instrument ID: VMS_X4 Operator ID: bj

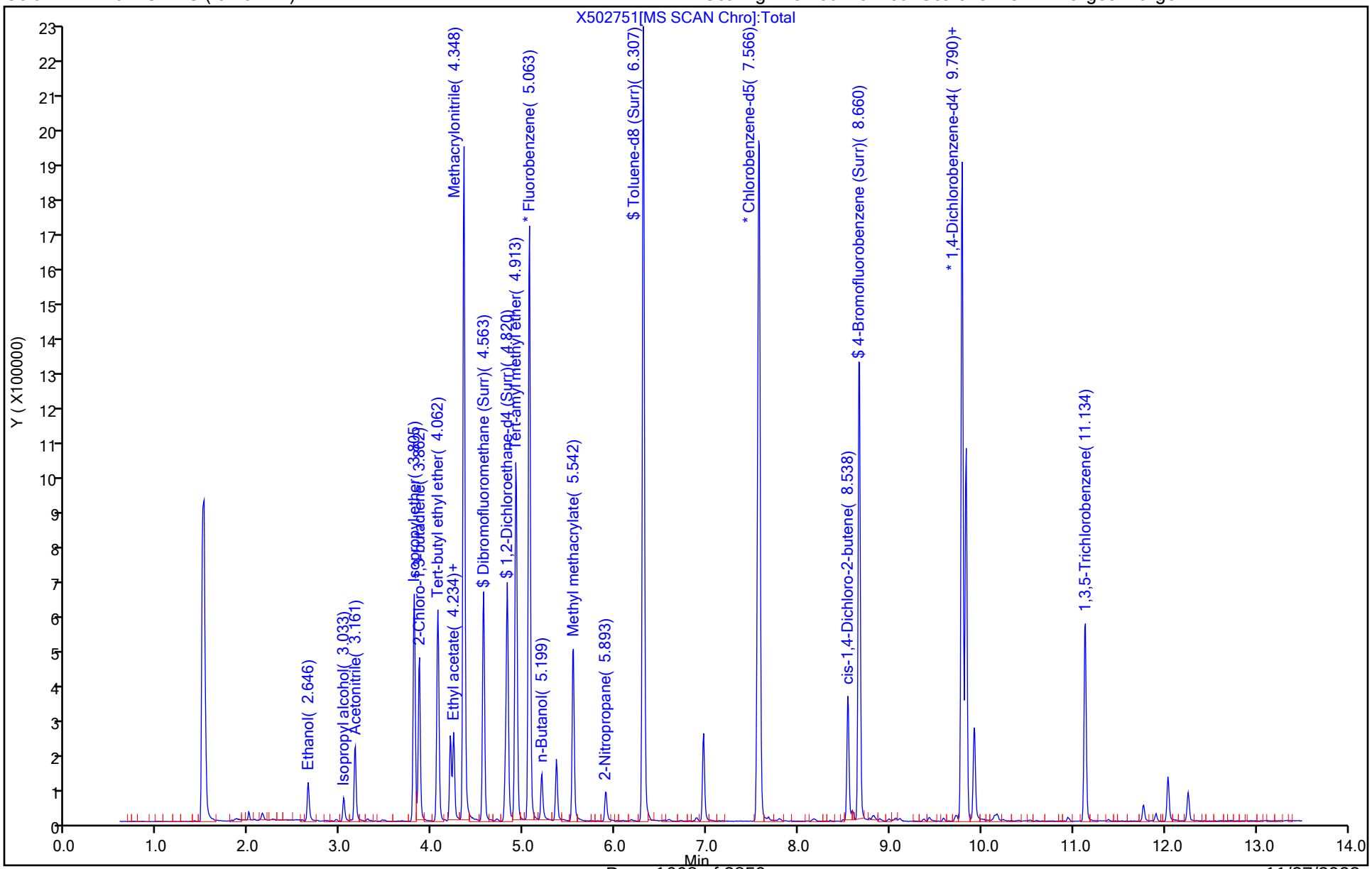
Lims ID: CCV Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-609932/3 Calibration Date: 04/24/2023 19:08

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502751.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2405	0.2468	0.0100	51.3	50.0	2.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2568	0.0100	50.8	50.0	1.7	20.0
Toluene-d8 (Surr)	Ave	4.259	4.343	0.0100	51.0	50.0	2.0	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9112	0.0100	51.0	50.0	2.0	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502751.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Apr-2023 19:08:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	1417408	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	339994	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	535901	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	349770	50.0	51.3	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	363967	50.0	50.8	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1476755	50.0	51.0	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	488319	50.0	51.0	
	18 Ethanol	45	2.646	2.646	0.000	100	97227	1500.0	1295.9	
	25 Isopropyl alcohol	45	3.033	3.033	0.000	98	71036	250.0	161.6	
	28 Acetonitrile	41	3.161	3.161	0.000	100	185585	250.0	234.4	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	136832	25.0	25.9	
	42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	235503	25.0	25.4	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	458314	25.0	25.0	
	46 Ethyl acetate	43	4.198	4.198	0.000	99	235175	50.0	42.9	
	49 Propionitrile	54	4.234	4.234	0.000	99	216813	250.0	246.2	
	51 Methacrylonitrile	41	4.348	4.348	0.000	90	804721	250.0	233.4	
	64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	426417	25.0	24.1	
	66 n-Butanol	56	5.199	5.199	0.000	86	77987	625.0	448.9	
	71 Methyl methacrylate	100	5.542	5.542	0.000	90	72770	50.0	38.9	
	75 2-Nitropropane	41	5.893	5.893	0.000	97	48468	50.0	24.4	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	81872	50.0	38.8	
	115 1,2,3-Trimethylbenzene	105	9.832	9.832	0.000	97	635983	25.0	21.9	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	201994	25.0	22.3	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

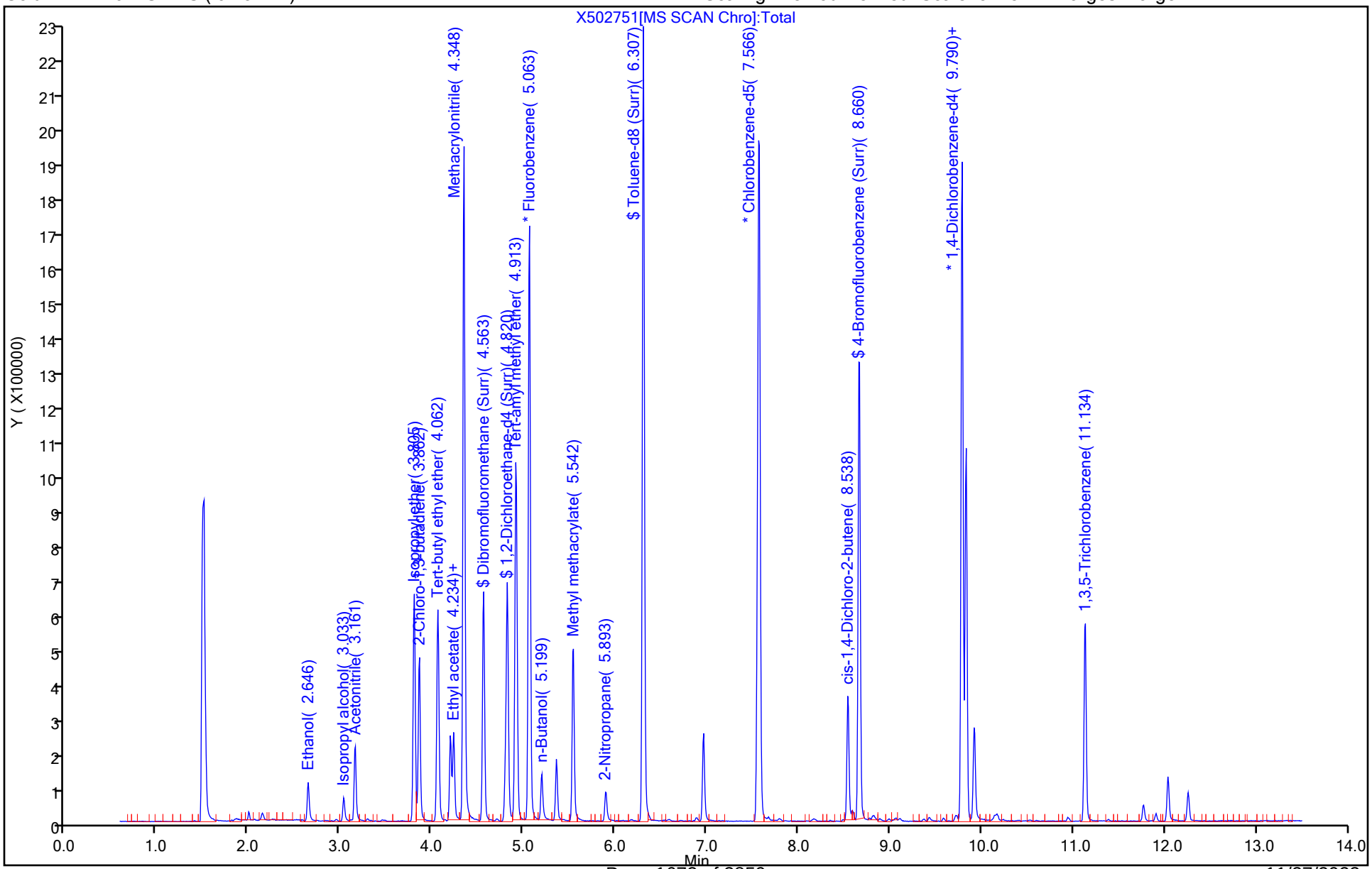
Report Date: 25-Apr-2023 04:09:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502751.D

Injection Date:	24-Apr-2023 19:08:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610121/3 Calibration Date: 04/26/2023 09:51

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 15:19

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 10/22/2022 17:23

Lab File ID: X502846.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0024*	0.0100	1380	1500	-8.3	20.0
Isopropyl alcohol	Ave	0.0155	0.0116	0.0100	187	250	-25.2*	20.0
Acetonitrile	Ave	0.0279	0.0284	0.0100	254	250	1.6	20.0
Isopropyl ether	Ave	0.1867	0.2035	0.0100	27.3	25.0	9.0	20.0
Chloroprene	Ave	0.3274	0.3405	0.0100	26.0	25.0	4.0	20.0
Tert-butyl ethyl ether	Ave	0.6465	0.6688	0.0100	25.9	25.0	3.4	20.0
Ethyl acetate	Ave	0.1934	0.1788	0.0100	46.2	50.0	-7.5	20.0
Propionitrile	Ave	0.0311	0.0309	0.0100	248	250	-0.6	20.0
Methacrylonitrile	Ave	0.1216	0.1183	0.0100	243	250	-2.7	20.0
Tert-amyl methyl ether	Ave	0.6244	0.6267	0.0100	25.1	25.0	0.4	20.0
n-Butanol	Ave	0.0061	0.0049*	0.0100	500	625	-20.0	20.0
Methyl methacrylate	Ave	0.0660	0.0568	0.0100	43.0	50.0	-14.0	20.0
2-Nitropropane	Ave	0.0700	0.0349	0.0100	25.0	50.0	-50.1*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1587	0.0100	40.3	50.0	-19.4	20.0
1,2,3-Trimethylbenzene	Ave	2.711	2.492	0.0100	23.0	25.0	-8.1	20.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.7864	0.0100	23.3	25.0	-6.7	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 09:51:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:17:06

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2035170	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	505460	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	795445	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518213	50.0	52.9	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	507773	50.0	49.4	
$	6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2148658	50.0	49.9	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	711206	50.0	50.0	
	18 Ethanol	45	2.654	2.654	0.000	100	148229	1500.0	1376.0	
	25 Isopropyl alcohol	45	3.033	3.033	0.000	99	117927	250.0	186.9	
	28 Acetonitrile	41	3.161	3.161	0.000	99	288783	250.0	254.1	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	207116	25.0	27.3	
	42 2-Chloro-1,3-butadiene	53	3.855	3.855	0.000	88	346526	25.0	26.0	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	680555	25.0	25.9	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	363952	50.0	46.2	
	49 Propionitrile	54	4.234	4.234	0.000	99	314088	250.0	248.4	
	51 Methacrylonitrile	41	4.348	4.348	0.000	88	1203797	250.0	243.2	
	64 Tert-amyl methyl ether	73	4.913	4.913	0.000	92	637713	25.0	25.1	
	66 n-Butanol	56	5.199	5.199	0.000	86	124737	625.0	500.0	
	71 Methyl methacrylate	100	5.543	5.543	0.000	88	115629	50.0	43.0	
	75 2-Nitropropane	41	5.893	5.893	0.000	98	71079	50.0	25.0	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	126262	50.0	40.3	
	115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	990988	25.0	23.0	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	312775	25.0	23.3	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

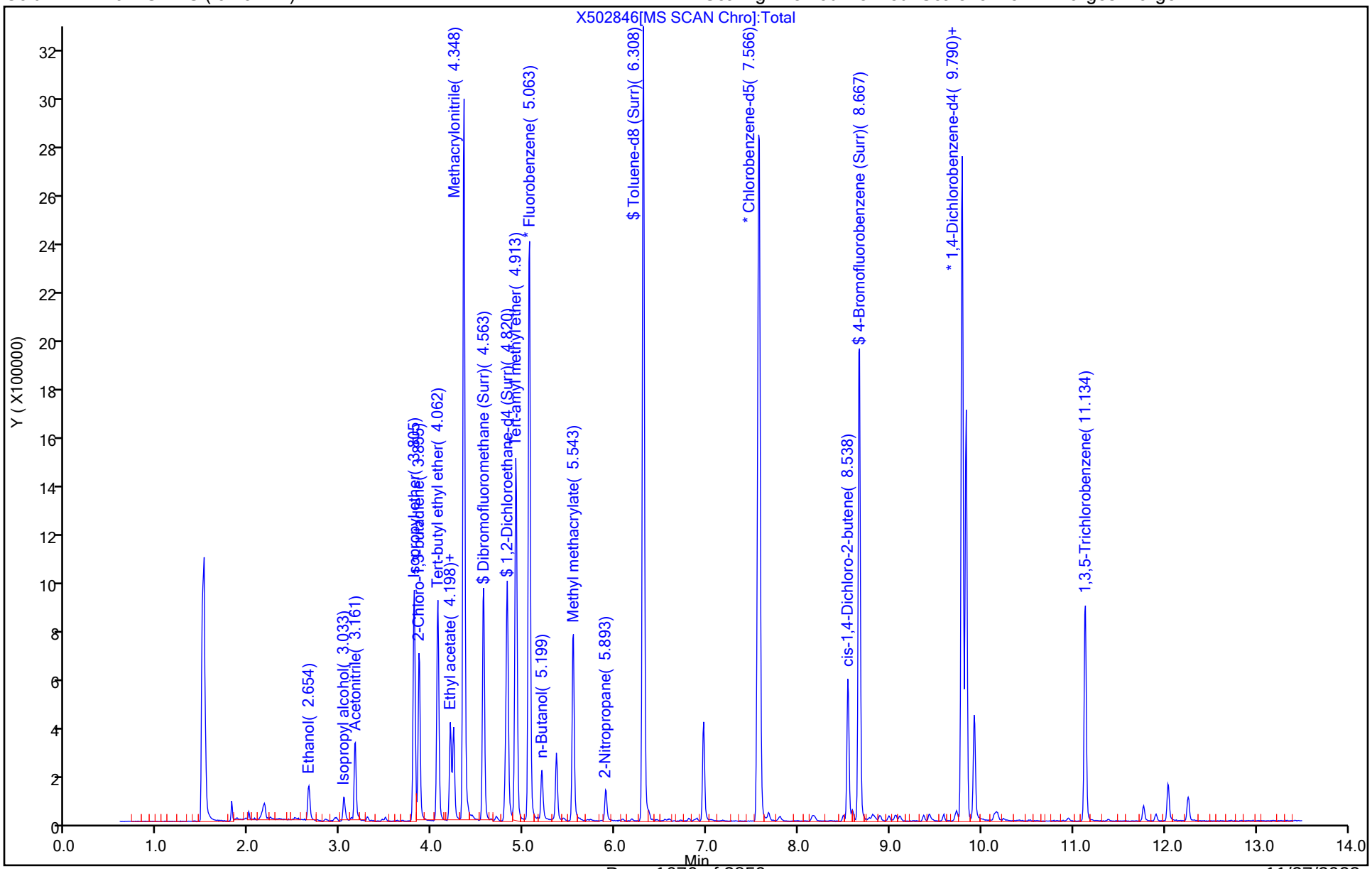
Report Date: 26-Apr-2023 11:04:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846.D

Injection Date:	26-Apr-2023 09:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610121/3 Calibration Date: 04/26/2023 09:51

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502846.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2405	0.2546	0.0100	52.9	50.0	5.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2495	0.0100	49.4	50.0	-1.2	20.0
Toluene-d8 (Surr)	Ave	4.259	4.251	0.0100	49.9	50.0	-0.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.8941	0.0100	50.0	50.0	0.0	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 09:51:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:17:06

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2035170	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	505460	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	795445	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518213	50.0	52.9	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	507773	50.0	49.4	
$	6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2148658	50.0	49.9	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	711206	50.0	50.0	
	18 Ethanol	45	2.654	2.654	0.000	100	148229	1500.0	1376.0	
	25 Isopropyl alcohol	45	3.033	3.033	0.000	99	117927	250.0	186.9	
	28 Acetonitrile	41	3.161	3.161	0.000	99	288783	250.0	254.1	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	207116	25.0	27.3	
	42 2-Chloro-1,3-butadiene	53	3.855	3.855	0.000	88	346526	25.0	26.0	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	680555	25.0	25.9	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	363952	50.0	46.2	
	49 Propionitrile	54	4.234	4.234	0.000	99	314088	250.0	248.4	
	51 Methacrylonitrile	41	4.348	4.348	0.000	88	1203797	250.0	243.2	
	64 Tert-amyl methyl ether	73	4.913	4.913	0.000	92	637713	25.0	25.1	
	66 n-Butanol	56	5.199	5.199	0.000	86	124737	625.0	500.0	
	71 Methyl methacrylate	100	5.543	5.543	0.000	88	115629	50.0	43.0	
	75 2-Nitropropane	41	5.893	5.893	0.000	98	71079	50.0	25.0	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	126262	50.0	40.3	
	115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	990988	25.0	23.0	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	312775	25.0	23.3	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

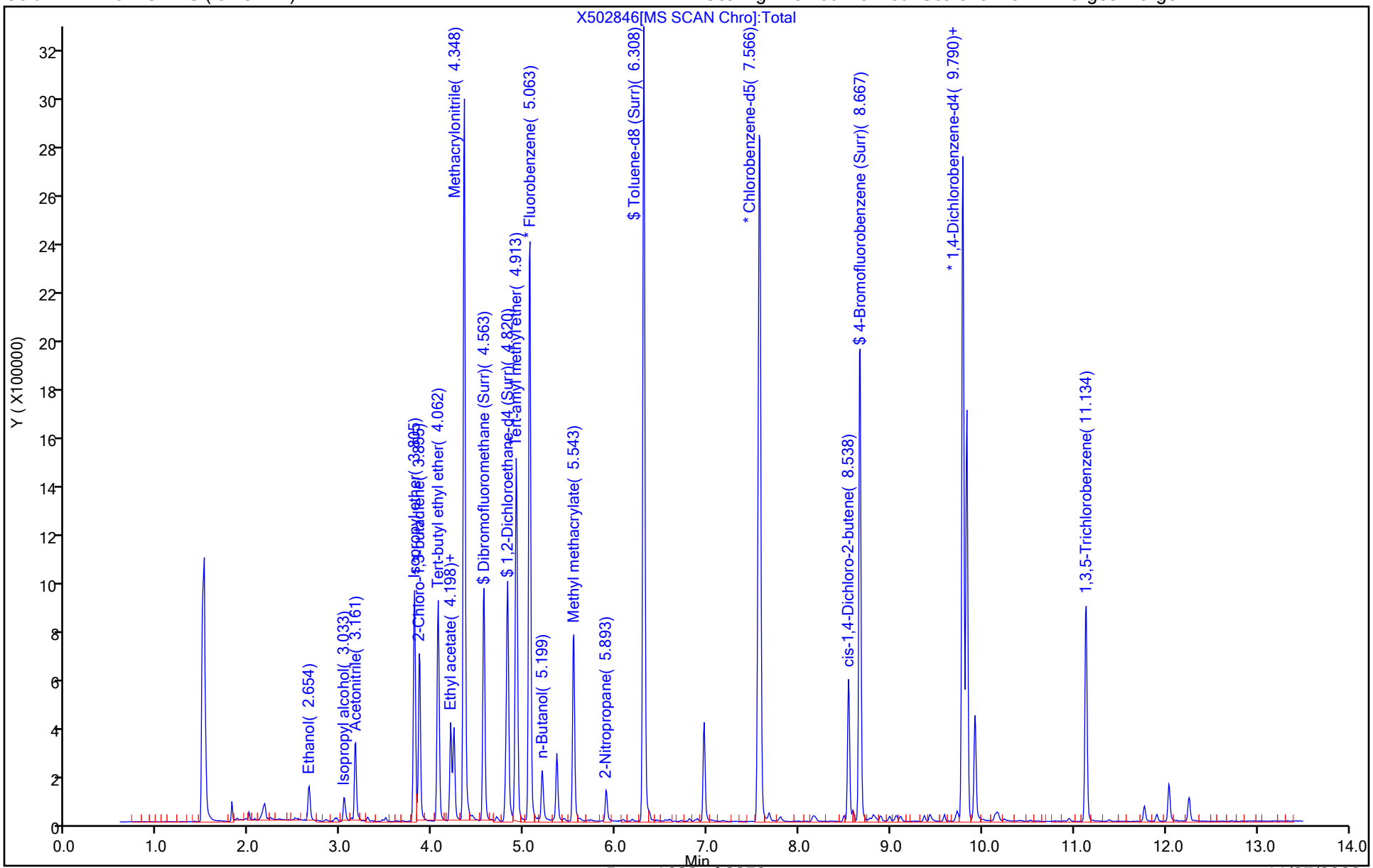
Report Date: 26-Apr-2023 11:04:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846.D

Injection Date:	26-Apr-2023 09:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610121/2 | Calibration Date: 04/26/2023 10:19

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502847.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.1552	0.1000	17.7	25.0	-29.2*	20.0
Chloromethane	Ave	0.2229	0.2053	0.1000	23.0	25.0	-7.9	20.0
Vinyl chloride	Lin1		0.2495	0.0100	27.5	25.0	10.2	20.0
Bromomethane	Ave	0.1211	0.1073	0.0100	22.2	25.0	-11.4	20.0
Chloroethane	Ave	0.1519	0.1619	0.0100	26.6	25.0	6.6	20.0
Dichlorofluoromethane	Ave	0.3792	0.3575	0.0100	23.6	25.0	-5.7	20.0
Trichlorofluoromethane	Ave	0.2925	0.2451	0.0100	20.9	25.0	-16.2	20.0
Ethyl ether	Ave	0.1687	0.1874	0.0100	27.8	25.0	11.1	20.0
Acrolein	Ave	0.0272	0.0269	0.0010	244	247	-1.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1235	0.0500	22.4	25.0	-10.6	20.0
1,1-Dichloroethene	Ave	0.1921	0.2036	0.0600	26.5	25.0	6.0	20.0
Acetone	Lin2		0.0566	0.0100	100	100	0.5	20.0
Iodomethane	Lin1		0.1923	0.0100	18.9	25.0	-24.4*	20.0
Carbon disulfide	Ave	0.6224	0.6851	0.1000	27.5	25.0	10.1	20.0
Methyl acetate	Ave	0.1262	0.1470	0.0100	58.2	50.0	16.4	20.0
Allyl chloride	Ave	0.2551	0.3283	0.0100	32.2	25.0	28.7*	20.0
Methylene Chloride	Ave	0.2466	0.2524	0.0100	25.6	25.0	2.3	20.0
2-Methyl-2-propanol	Lin1		0.0194	0.0010	250	250	-0.2	20.0
Acrylonitrile	Ave	0.0717	0.0858	0.0100	299	250	19.8	20.0
Methyl tert-butyl ether	Ave	0.6044	0.6436	0.1000	26.6	25.0	6.5	20.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2388	0.1000	28.0	25.0	12.0	20.0
Hexane	Ave	1.146	0.9813	0.0100	21.4	25.0	-14.4	20.0
Vinyl acetate	Ave	0.3380	0.3940	0.0100	58.3	50.0	16.6	20.0
1,1-Dichloroethane	Ave	0.3890	0.4458	0.1000	28.6	25.0	14.6	20.0
2-Butanone (MEK)	Ave	0.0821	0.0939	0.0100	114	100	14.4	20.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2748	0.1000	26.9	25.0	7.6	20.0
2,2-Dichloropropane	Ave	0.2990	0.3220	0.0100	26.9	25.0	7.7	20.0
sec-Butyl Alcohol	Lin1		0.0149	0.0100	613	600	2.2	20.0
Chlorobromomethane	Ave	0.1177	0.1234	0.0500	26.2	25.0	4.8	20.0
Tetrahydrofuran	Ave	0.0557	0.0627	0.0010	56.3	50.0	12.7	20.0
Chloroform	Ave	0.3958	0.4203	0.2000	26.5	25.0	6.2	20.0
1,1,1-Trichloroethane	Ave	0.3206	0.3294	0.0500	25.7	25.0	2.7	20.0
Cyclohexane	Ave	0.3308	0.3352	0.0100	25.3	25.0	1.3	20.0
1,1-Dichloropropene	Ave	0.3142	0.3319	0.0100	26.4	25.0	5.6	20.0
Carbon tetrachloride	Ave	0.2595	0.2633	0.1000	25.4	25.0	1.5	20.0
Isobutyl alcohol	Lin1		0.0053	0.0010	538	625	-14.0	20.0
Benzene	Ave	0.9289	1.021	0.2000	27.5	25.0	9.9	20.0
1,2-Dichloroethane	Ave	0.2944	0.2874	0.0700	24.4	25.0	-2.4	20.0
n-Heptane	Ave	0.1928	0.1884		24.4	25.0	-2.3	
Trichloroethene	Ave	0.9564	0.9925	0.2000	25.9	25.0	3.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610121/2 Calibration Date: 04/26/2023 10:19

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502847.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1368	0.0010	83.3	80.0	4.1	20.0
Methylcyclohexane	Ave	0.2422	0.2222	0.0500	22.9	25.0	-8.3	20.0
1,2-Dichloropropane	Ave	0.2362	0.2634	0.1000	27.9	25.0	11.5	20.0
1,4-Dioxane	Ave	0.0030	0.0032	0.0010	527	500	5.5	20.0
Dibromomethane	Ave	0.1409	0.1472	0.0100	26.1	25.0	4.5	20.0
Dichlorobromomethane	Ave	0.2974	0.3053	0.2000	25.7	25.0	2.6	20.0
2-Chloroethyl vinyl ether	Lin1		0.1271	0.0100	41.9	25.0	67.4*	20.0
cis-1,3-Dichloropropene	Ave	1.523	1.628	0.2000	26.7	25.0	6.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1843	0.0300	117	100	16.6	20.0
Toluene	Ave	1.001	1.079	0.3000	26.9	25.0	7.8	20.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3373	0.2000	27.5	25.0	9.9	20.0
Ethyl methacrylate	Ave	1.092	1.232	0.0100	28.2	25.0	12.8	20.0
1,1,2-Trichloroethane	Ave	0.2000	0.2138	0.1000	26.7	25.0	6.9	20.0
Tetrachloroethene	Ave	0.7259	0.7307	0.1000	25.2	25.0	0.7	20.0
1,3-Dichloropropane	Ave	1.532	1.579	0.0100	25.8	25.0	3.0	20.0
2-Hexanone	Ave	0.4789	0.5268	0.0100	110	100	10.0	20.0
Chlorodibromomethane	Ave	0.9243	0.9056	0.1000	24.5	25.0	-2.0	20.0
1,2-Dibromoethane	Ave	0.8754	0.8719	0.1000	24.9	25.0	-0.4	20.0
1-Chlorohexane	Ave	1.353	1.336	0.0100	19.7	20.0	-1.3	20.0
Chlorobenzene	Ave	2.785	2.813	0.3000	25.2	25.0	1.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.8737	0.0100	24.4	25.0	-2.4	20.0
Ethylbenzene	Ave	1.533	1.568	0.3000	25.6	25.0	2.3	20.0
m-Xylene & p-Xylene	Ave	1.838	1.949	0.1000	26.5	25.0	6.0	20.0
o-Xylene	Ave	1.865	1.936	0.2000	26.0	25.0	3.8	20.0
Styrene	Ave	2.963	3.166	0.2000	26.7	25.0	6.9	20.0
Bromoform	Ave	0.5587	0.5638	0.1000	25.2	25.0	0.9	20.0
Isopropylbenzene	Ave	2.838	2.884	0.3000	25.4	25.0	1.6	20.0
Cyclohexanone	Lin1		0.0495	0.0010	876	750	16.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.7000	0.3000	24.4	25.0	-2.2	20.0
Bromobenzene	Ave	0.7149	0.7091	0.0100	24.8	25.0	-0.8	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1668	0.0100	22.5	25.0	-10.0	20.0
1,2,3-Trichloropropane	Ave	0.2173	0.2031	0.0100	23.4	25.0	-6.6	20.0
N-Propylbenzene	Ave	0.7886	0.8373	0.0100	26.5	25.0	6.2	20.0
2-Chlorotoluene	Ave	0.6999	0.7139	0.0100	25.5	25.0	2.0	20.0
1,3,5-Trimethylbenzene	Ave	2.394	2.430	0.0100	25.4	25.0	1.5	20.0
4-Chlorotoluene	Ave	0.7282	0.7532	0.0100	25.9	25.0	3.4	20.0
tert-Butylbenzene	Ave	2.000	2.010	0.0100	25.1	25.0	0.5	20.0
1,2,4-Trimethylbenzene	Ave	2.476	2.527	0.3000	25.5	25.0	2.1	20.0
sec-Butylbenzene	Ave	0.5991	0.5904	0.0100	24.6	25.0	-1.5	20.0
1,3-Dichlorobenzene	Ave	1.320	1.337	0.5000	25.3	25.0	1.3	20.0
4-Isopropyltoluene	Ave	2.471	2.543	0.0100	25.7	25.0	2.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610121/2 | Calibration Date: 04/26/2023 10:19

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502847.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.357	0.5000	24.2	25.0	-3.2	20.0
n-Butylbenzene	Ave	2.140	2.207	0.0100	25.8	25.0	3.1	20.0
1,2-Dichlorobenzene	Ave	1.271	1.260	0.5000	24.8	25.0	-0.8	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1308	0.0100	22.9	25.0	-8.5	20.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.6478	0.2000	25.3	25.0	1.3	20.0
Hexachlorobutadiene	Ave	0.2332	0.2435	0.0100	26.1	25.0	4.4	20.0
Naphthalene	Ave	1.632	1.571	0.0100	24.1	25.0	-3.7	20.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.4833	0.3000	25.0	25.0	0.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2512	0.0100	52.2	50.0	4.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2461	0.0100	48.7	50.0	-2.6	20.0
Toluene-d8 (Surr)	Ave	4.259	4.313	0.0100	50.6	50.0	1.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9086	0.0100	50.8	50.0	1.7	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502847.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 10:19:30 ALS Bottle#: 3 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:01 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:44:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2064544	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	504405	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	799833	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518622	50.0	52.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	508168	50.0	48.7	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2175562	50.0	50.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	90	726751	50.0	50.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	98	160251	25.0	17.7	
11 Chloromethane	50	1.867	1.867	0.000	99	211940	25.0	23.0	
12 Vinyl chloride	62	1.960	1.960	0.000	97	257527	25.0	27.5	
14 Bromomethane	94	2.239	2.239	0.000	90	110813	25.0	22.2	
15 Chloroethane	64	2.332	2.332	0.000	99	167146	25.0	26.6	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	368994	25.0	23.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	252967	25.0	20.9	
19 Ethyl ether	59	2.747	2.747	0.000	89	193482	25.0	27.8	
21 Acrolein	56	2.854	2.854	0.000	98	273823	246.9	243.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	94	127530	25.0	22.4	
23 1,1-Dichloroethene	96	2.933	2.933	0.000	97	210157	25.0	26.5	
24 Acetone	43	2.954	2.954	0.000	98	233790	100.0	100.5	
26 Iodomethane	142	3.054	3.054	0.000	98	198535	25.0	18.9	
27 Carbon disulfide	76	3.119	3.119	0.000	98	707220	25.0	27.5	
29 Methyl acetate	43	3.176	3.176	0.000	96	303445	50.0	58.2	
30 3-Chloro-1-propene	41	3.197	3.197	0.000	93	338883	25.0	32.2	
31 Methylene Chloride	84	3.297	3.297	0.000	89	260505	25.0	25.6	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	200237	250.0	249.6	
33 Acrylonitrile	53	3.455	3.455	0.000	99	885921	250.0	299.4	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	92	664390	25.0	26.6	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	100	246544	25.0	28.0	
37 Hexane	57	3.683	3.683	0.000	88	247487	25.0	21.4	
39 Vinyl acetate	43	3.784	3.784	0.000	96	813503	50.0	58.3	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	460148	25.0	28.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	387907	100.0	114.4	
47 cis-1,2-Dichloroethene	96	4.213	4.213	0.000	81	283630	25.0	26.9	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	85	332397	25.0	26.9	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	368927	600.0	613.5	
52 Chlorobromomethane	128	4.384	4.384	0.000	98	127348	25.0	26.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	86	129512	50.0	56.3	
54 Chloroform	83	4.441	4.441	0.000	92	433861	25.0	26.5	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	340016	25.0	25.7	
56 Cyclohexane	56	4.649	4.649	0.000	87	345989	25.0	25.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	342640	25.0	26.4	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	136733	625.0	537.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	271844	25.0	25.4	
62 Benzene	78	4.849	4.849	0.000	95	1053859	25.0	27.5	
63 1,2-Dichloroethane	62	4.878	4.878	0.000	97	296701	25.0	24.4	
65 n-Heptane	43	5.035	5.035	0.000	89	194507	25.0	24.4	
67 Trichloroethene	95	5.335	5.335	0.000	99	250320	25.0	25.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	451835	80.0	83.3	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	229366	25.0	22.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	97	271905	25.0	27.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	94	65099	500.0	527.3	
73 Dibromomethane	93	5.607	5.607	0.000	96	151912	25.0	26.1	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	315102	25.0	25.7	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	131240	25.0	41.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	410463	25.0	26.7	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	761100	100.0	116.6	
79 Toluene	91	6.365	6.365	0.000	98	1113418	25.0	26.9	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	348188	25.0	27.5	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	310693	25.0	28.2	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	220679	25.0	26.7	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	184278	25.0	25.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	87	398218	25.0	25.8	
85 2-Hexanone	43	6.872	6.872	0.000	93	531399	100.0	110.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	228393	25.0	24.5	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	219893	25.0	24.9	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	269568	20.0	19.7	
90 Chlorobenzene	112	7.602	7.602	0.000	96	709470	25.0	25.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	220347	25.0	24.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	395495	25.0	25.6	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	491574	25.0	26.5	
94 o-Xylene	106	8.152	8.152	0.000	96	488359	25.0	26.0	
95 Styrene	104	8.167	8.167	0.000	94	798517	25.0	26.7	
96 Bromoform	173	8.353	8.353	0.000	96	142182	25.0	25.2	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1153171	25.0	25.4	
99 Cyclohexanone	55	8.589	8.589	0.000	88	374895	750.0	876.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	279953	25.0	24.4	
101 Bromobenzene	156	8.810	8.810	0.000	95	283598	25.0	24.8	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	70	66703	25.0	22.5	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	81217	25.0	23.4	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	334843	25.0	26.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	285481	25.0	25.5	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	971615	25.0	25.4	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	301230	25.0	25.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	803789	25.0	25.1	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1010569	25.0	25.5	
111 sec-Butylbenzene	134	9.590	9.590	0.000	94	236118	25.0	24.6	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	534768	25.0	25.3	
113 4-Isopropyltoluene	119	9.733	9.733	0.000	97	1017060	25.0	25.7	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	542632	25.0	24.2	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	882556	25.0	25.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	504066	25.0	24.8	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	89	52321	25.0	22.9	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	259074	25.0	25.3	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	97383	25.0	26.1	
122 Naphthalene	128	12.035	12.035	0.000	97	628270	25.0	24.1	
123 1,2,3-Trichlorobenzene	180	12.257	12.257	0.000	95	193272	25.0	25.0	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	54.9	
S 139 Xylenes, Total (URS)	1				0		50.0	52.5	
S 136 1,3-Dichloropropene, Total	1				0		50.0	54.2	
S 138 Xylenes, Total	106				0		50.0	52.5	
S 140 Trihalomethanes, Total	1				0		100.0	101.9	
S 141 1,2-Dichloroethene, Total	1				0		50.0	54.9	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

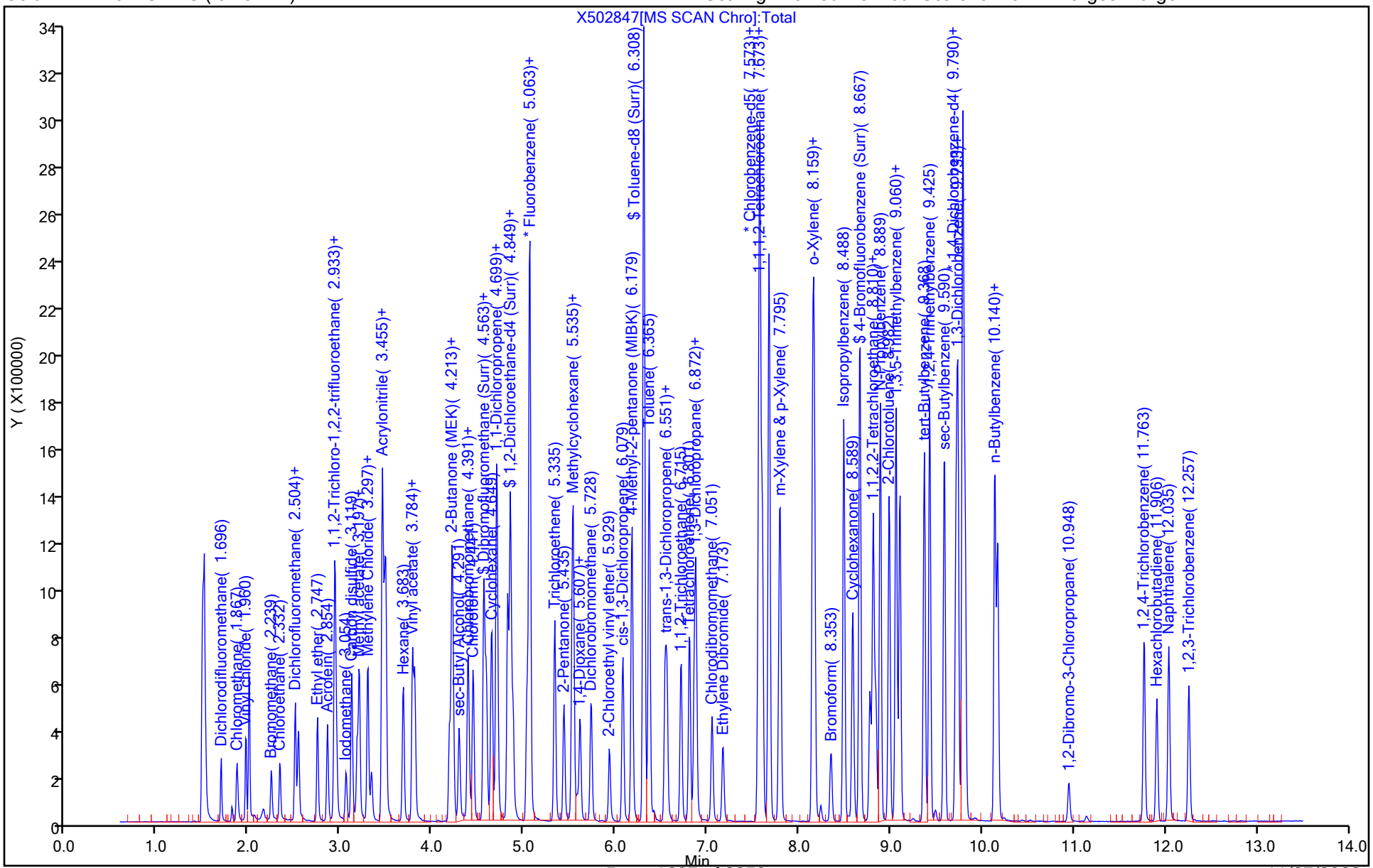
Report Date: 26-Apr-2023 11:04:02 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502847.D

Injection Date:	26-Apr-2023 10:19:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610347/2 Calibration Date: 04/27/2023 11:12

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502910.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.1574	0.1000	17.9	25.0	-28.3*	20.0
Chloromethane	Ave	0.2229	0.2204	0.1000	24.7	25.0	-1.1	20.0
Vinyl chloride	Lin1		0.2419	0.0100	26.7	25.0	6.9	20.0
Bromomethane	Ave	0.1211	0.1244	0.0100	25.7	25.0	2.6	20.0
Chloroethane	Ave	0.1519	0.1672	0.0100	27.5	25.0	10.1	20.0
Dichlorofluoromethane	Ave	0.3792	0.3450	0.0100	22.7	25.0	-9.0	20.0
Trichlorofluoromethane	Ave	0.2925	0.2529	0.0100	21.6	25.0	-13.6	20.0
Ethyl ether	Ave	0.1687	0.1871	0.0100	27.7	25.0	10.9	20.0
Acrolein	Ave	0.0272	0.0262	0.0010	238	247	-3.6	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1383	0.0500	25.0	25.0	0.1	20.0
1,1-Dichloroethene	Ave	0.1921	0.2042	0.0600	26.6	25.0	6.3	20.0
Acetone	Lin2		0.0555	0.0100	98.5	100	-1.5	20.0
Iodomethane	Lin1		0.2047	0.0100	20.0	25.0	-19.9	20.0
Carbon disulfide	Ave	0.6224	0.6889	0.1000	27.7	25.0	10.7	20.0
Methyl acetate	Ave	0.1262	0.1538	0.0100	60.9	50.0	21.8*	20.0
Allyl chloride	Ave	0.2551	0.3279	0.0100	32.1	25.0	28.5*	20.0
Methylene Chloride	Ave	0.2466	0.2567	0.0100	26.0	25.0	4.1	20.0
2-Methyl-2-propanol	Lin1		0.0206	0.0010	265	250	5.9	20.0
Acrylonitrile	Ave	0.0717	0.0868	0.0100	303	250	21.1*	20.0
Methyl tert-butyl ether	Ave	0.6044	0.6414	0.1000	26.5	25.0	6.1	20.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2416	0.1000	28.3	25.0	13.2	20.0
Hexane	Ave	1.146	1.112	0.0100	24.3	25.0	-3.0	20.0
Vinyl acetate	Ave	0.3380	0.4106	0.0100	60.7	50.0	21.5*	20.0
1,1-Dichloroethane	Ave	0.3890	0.4346	0.1000	27.9	25.0	11.7	20.0
2-Butanone (MEK)	Ave	0.0821	0.0966	0.0100	118	100	17.6	20.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2694	0.1000	26.4	25.0	5.5	20.0
2,2-Dichloropropane	Ave	0.2990	0.3197	0.0100	26.7	25.0	6.9	20.0
sec-Butyl Alcohol	Lin1		0.0167	0.0100	689	600	14.8	20.0
Chlorobromomethane	Ave	0.1177	0.1267	0.0500	26.9	25.0	7.6	20.0
Tetrahydrofuran	Ave	0.0557	0.0673	0.0010	60.4	50.0	20.8*	20.0
Chloroform	Ave	0.3958	0.4036	0.2000	25.5	25.0	2.0	20.0
1,1,1-Trichloroethane	Ave	0.3206	0.3238	0.0500	25.2	25.0	1.0	20.0
Cyclohexane	Ave	0.3308	0.3614	0.0100	27.3	25.0	9.3	20.0
1,1-Dichloropropene	Ave	0.3142	0.3230	0.0100	25.7	25.0	2.8	20.0
Carbon tetrachloride	Ave	0.2595	0.2634	0.1000	25.4	25.0	1.5	20.0
Isobutyl alcohol	Lin1		0.0064	0.0010	651	625	4.1	20.0
Benzene	Ave	0.9289	1.043	0.2000	28.1	25.0	12.3	20.0
1,2-Dichloroethane	Ave	0.2944	0.2810	0.0700	23.9	25.0	-4.6	20.0
n-Heptane	Ave	0.1928	0.2177		28.2	25.0	12.9	
Trichloroethene	Ave	0.9564	1.031	0.2000	26.9	25.0	7.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610347/2 | Calibration Date: 04/27/2023 11:12

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502910.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1507	0.0010	91.6	80.0	14.5	20.0
Methylcyclohexane	Ave	0.2422	0.2430	0.0500	25.1	25.0	0.3	20.0
1,2-Dichloropropane	Ave	0.2362	0.2617	0.1000	27.7	25.0	10.8	20.0
1,4-Dioxane	Ave	0.0030	0.0033	0.0010	556	500	11.2	20.0
Dibromomethane	Ave	0.1409	0.1436	0.0100	25.5	25.0	1.9	20.0
Dichlorobromomethane	Ave	0.2974	0.3045	0.2000	25.6	25.0	2.4	20.0
2-Chloroethyl vinyl ether	Lin1		0.1213	0.0100	39.9	25.0	59.6*	20.0
cis-1,3-Dichloropropene	Ave	1.523	1.634	0.2000	26.8	25.0	7.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1934	0.0300	122	100	22.3*	20.0
Toluene	Ave	1.001	1.091	0.3000	27.3	25.0	9.1	20.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3492	0.2000	28.4	25.0	13.8	20.0
Ethyl methacrylate	Ave	1.092	1.269	0.0100	29.0	25.0	16.2	20.0
1,1,2-Trichloroethane	Ave	0.2000	0.2213	0.1000	27.7	25.0	10.7	20.0
Tetrachloroethene	Ave	0.7259	0.7885	0.1000	27.2	25.0	8.6	20.0
1,3-Dichloropropane	Ave	1.532	1.642	0.0100	26.8	25.0	7.2	20.0
2-Hexanone	Ave	0.4789	0.5587	0.0100	117	100	16.7	20.0
Chlorodibromomethane	Ave	0.9243	0.9309	0.1000	25.2	25.0	0.7	20.0
1,2-Dibromoethane	Ave	0.8754	0.9112	0.1000	26.0	25.0	4.1	20.0
1-Chlorohexane	Ave	1.353	1.428	0.0100	21.1	20.0	5.5	20.0
Chlorobenzene	Ave	2.785	2.953	0.3000	26.5	25.0	6.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.9528	0.0100	26.6	25.0	6.4	20.0
Ethylbenzene	Ave	1.533	1.615	0.3000	26.3	25.0	5.3	20.0
m-Xylene & p-Xylene	Ave	1.838	1.974	0.1000	26.8	25.0	7.4	20.0
o-Xylene	Ave	1.865	1.932	0.2000	25.9	25.0	3.6	20.0
Styrene	Ave	2.963	3.204	0.2000	27.0	25.0	8.1	20.0
Bromoform	Ave	0.5587	0.5817	0.1000	26.0	25.0	4.1	20.0
Isopropylbenzene	Ave	2.838	2.984	0.3000	26.3	25.0	5.1	20.0
Cyclohexanone	Lin1		0.0580	0.0010	1030	750	36.7*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.8053	0.3000	28.1	25.0	12.5	20.0
Bromobenzene	Ave	0.7149	0.7525	0.0100	26.3	25.0	5.2	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1838	0.0100	24.7	25.0	-1.0	20.0
1,2,3-Trichloropropane	Ave	0.2173	0.2190	0.0100	25.2	25.0	0.8	20.0
N-Propylbenzene	Ave	0.7886	0.8669	0.0100	27.5	25.0	9.9	20.0
2-Chlorotoluene	Ave	0.6999	0.7348	0.0100	26.2	25.0	5.0	20.0
1,3,5-Trimethylbenzene	Ave	2.394	2.551	0.0100	26.6	25.0	6.6	20.0
4-Chlorotoluene	Ave	0.7282	0.7874	0.0100	27.0	25.0	8.1	20.0
tert-Butylbenzene	Ave	2.000	2.089	0.0100	26.1	25.0	4.5	20.0
1,2,4-Trimethylbenzene	Ave	2.476	2.628	0.3000	26.5	25.0	6.1	20.0
sec-Butylbenzene	Ave	0.5991	0.6244	0.0100	26.1	25.0	4.2	20.0
1,3-Dichlorobenzene	Ave	1.320	1.390	0.5000	26.3	25.0	5.3	20.0
4-Isopropyltoluene	Ave	2.471	2.651	0.0100	26.8	25.0	7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610347/2 Calibration Date: 04/27/2023 11:12

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502910.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.442	0.5000	25.7	25.0	2.8	20.0
n-Butylbenzene	Ave	2.140	2.348	0.0100	27.4	25.0	9.7	20.0
1,2-Dichlorobenzene	Ave	1.271	1.336	0.5000	26.3	25.0	5.1	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1342	0.0100	23.4	25.0	-6.2	20.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.7383	0.2000	28.9	25.0	15.4	20.0
Hexachlorobutadiene	Ave	0.2332	0.2814	0.0100	30.2	25.0	20.7*	20.0
Naphthalene	Ave	1.632	1.952	0.0100	29.9	25.0	19.6	20.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.6111	0.3000	31.6	25.0	26.6*	20.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2458	0.0100	51.1	50.0	2.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2367	0.0100	46.9	50.0	-6.3	20.0
Toluene-d8 (Surr)	Ave	4.259	4.341	0.0100	51.0	50.0	1.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9099	0.0100	50.9	50.0	1.8	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502910.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 11:12:30 ALS Bottle#: 4 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:13:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2075744	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	498852	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	782929	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	510246	50.0	51.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	491370	50.0	46.9	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2165513	50.0	51.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	712384	50.0	50.9	
10 Dichlorodifluoromethane	85	1.695	1.695	0.000	99	163334	25.0	17.9	
11 Chloromethane	50	1.867	1.867	0.000	99	228796	25.0	24.7	
12 Vinyl chloride	62	1.960	1.960	0.000	98	251101	25.0	26.7	
14 Bromomethane	94	2.246	2.246	0.000	90	129061	25.0	25.7	
15 Chloroethane	64	2.339	2.339	0.000	99	173572	25.0	27.5	
16 Dichlorofluoromethane	67	2.503	2.503	0.000	97	358050	25.0	22.7	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	262426	25.0	21.6	
19 Ethyl ether	59	2.747	2.747	0.000	88	194217	25.0	27.7	
21 Acrolein	56	2.854	2.854	0.000	99	268897	246.9	238.0	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.932	0.000	94	143495	25.0	25.0	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	211927	25.0	26.6	
24 Acetone	43	2.954	2.954	0.000	99	230572	100.0	98.5	
26 Iodomethane	142	3.054	3.054	0.000	99	212470	25.0	20.0	
27 Carbon disulfide	76	3.118	3.118	0.000	98	715021	25.0	27.7	
29 Methyl acetate	43	3.183	3.183	0.000	97	319280	50.0	60.9	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	340282	25.0	32.1	
31 Methylene Chloride	84	3.297	3.297	0.000	89	266407	25.0	26.0	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	213644	250.0	264.7	
33 Acrylonitrile	53	3.454	3.454	0.000	99	900911	250.0	302.8	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	665726	25.0	26.5	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	250701	25.0	28.3	
37 Hexane	57	3.683	3.683	0.000	89	277302	25.0	24.3	
39 Vinyl acetate	43	3.783	3.783	0.000	97	852234	50.0	60.7	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	451091	25.0	27.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	400913	100.0	117.6	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	80	279614	25.0	26.4	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	86	331830	25.0	26.7	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	417159	600.0	688.6	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	131447	25.0	26.9	
53 Tetrahydrofuran	42	4.398	4.398	0.000	87	139656	50.0	60.4	
54 Chloroform	83	4.441	4.441	0.000	93	418879	25.0	25.5	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	336079	25.0	25.2	
56 Cyclohexane	56	4.648	4.648	0.000	86	375128	25.0	27.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	335247	25.0	25.7	
60 Isobutyl alcohol	41	4.706	4.706	0.000	97	166976	625.0	650.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	273405	25.0	25.4	
62 Benzene	78	4.849	4.849	0.000	94	1082545	25.0	28.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	291629	25.0	23.9	
65 n-Heptane	43	5.035	5.035	0.000	88	225963	25.0	28.2	
67 Trichloroethene	95	5.335	5.335	0.000	98	257097	25.0	26.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	500452	80.0	91.6	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	252227	25.0	25.1	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	97	271590	25.0	27.7	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	69013	500.0	556.0	
73 Dibromomethane	93	5.614	5.614	0.000	96	149015	25.0	25.5	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	316050	25.0	25.6	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	88	125945	25.0	39.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	407461	25.0	26.8	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	93	802839	100.0	122.3	
79 Toluene	91	6.365	6.365	0.000	98	1132572	25.0	27.3	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	362408	25.0	28.4	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	316517	25.0	29.0	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	229681	25.0	27.7	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	196675	25.0	27.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	91	409613	25.0	26.8	
85 2-Hexanone	43	6.872	6.872	0.000	93	557461	100.0	116.7	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	232179	25.0	25.2	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	227268	25.0	26.0	
89 1-Chlorohexane	91	7.559	7.559	0.000	92	284848	20.0	21.1	
90 Chlorobenzene	112	7.602	7.602	0.000	96	736579	25.0	26.5	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	237658	25.0	26.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	402699	25.0	26.3	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	492316	25.0	26.8	
94 o-Xylene	106	8.152	8.152	0.000	95	481974	25.0	25.9	
95 Styrene	104	8.166	8.166	0.000	95	799043	25.0	27.0	
96 Bromoform	173	8.345	8.345	0.000	96	145079	25.0	26.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1168056	25.0	26.3	
99 Cyclohexanone	55	8.588	8.588	0.000	89	434326	750.0	1025.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	315261	25.0	28.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	294565	25.0	26.3	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	75	71938	25.0	24.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	82	85723	25.0	25.2	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	339348	25.0	27.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	287640	25.0	26.2	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	998455	25.0	26.6	
107 4-Chlorotoluene	126	9.103	9.103	0.000	96	308247	25.0	27.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	817928	25.0	26.1	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1028843	25.0	26.5	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	244445	25.0	26.1	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	543942	25.0	26.3	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1037887	25.0	26.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	564532	25.0	25.7	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	919303	25.0	27.4	
117 1,2-Dichlorobenzene	146	10.168	10.168	0.000	98	522970	25.0	26.3	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	87	52521	25.0	23.4	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	289025	25.0	28.9	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	110154	25.0	30.2	
122 Naphthalene	128	12.035	12.035	0.000	97	764333	25.0	29.9	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	96	239241	25.0	31.6	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	54.7	
S 139 Xylenes, Total (URS)	1				0		50.0	52.8	
S 136 1,3-Dichloropropene, Total	1				0		50.0	55.3	
S 138 Xylenes, Total	106				0		50.0	52.8	
S 140 Trihalomethanes, Total	1				0		100.0	102.3	
S 141 1,2-Dichloroethene, Total	1				0		50.0	54.7	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

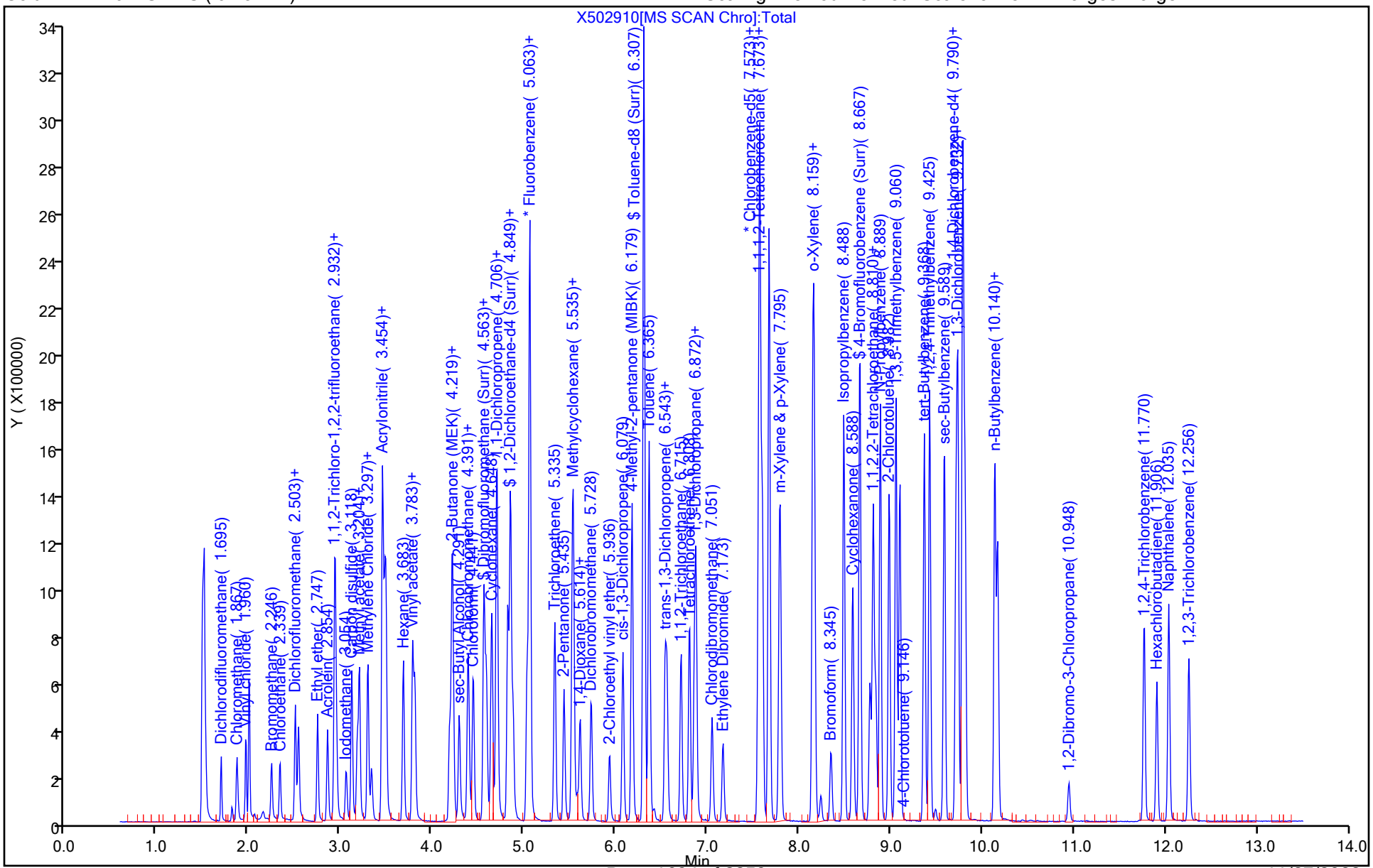
Report Date: 27-Apr-2023 12:40:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502910.D

Injection Date:	27-Apr-2023 11:12:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610347/3 Calibration Date: 04/27/2023 11:36

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 15:19

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 10/22/2022 17:23

Lab File ID: X502911.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0028*	0.0100	1610	1500	7.0	20.0
Isopropyl alcohol	Ave	0.0155	0.0142	0.0100	230	250	-8.2	20.0
Acetonitrile	Ave	0.0279	0.0335	0.0100	300	250	19.8	20.0
Isopropyl ether	Ave	0.1867	0.2236	0.0100	30.0	25.0	19.8	20.0
Chloroprene	Ave	0.3274	0.3693	0.0100	28.2	25.0	12.8	20.0
Tert-butyl ethyl ether	Ave	0.6465	0.7475	0.0100	28.9	25.0	15.6	20.0
Ethyl acetate	Ave	0.1934	0.2106	0.0100	54.4	50.0	8.9	20.0
Propionitrile	Ave	0.0311	0.0379	0.0100	305	250	22.1*	20.0
Methacrylonitrile	Ave	0.1216	0.1391	0.0100	286	250	14.4	20.0
Tert-amyl methyl ether	Ave	0.6244	0.7184	0.0100	28.8	25.0	15.1	20.0
n-Butanol	Ave	0.0061	0.0063*	0.0100	644	625	3.0	20.0
Methyl methacrylate	Ave	0.0660	0.0708	0.0100	53.6	50.0	7.2	20.0
2-Nitropropane	Ave	0.0700	0.0406	0.0100	29.0	50.0	-42.0*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1881	0.0100	47.8	50.0	-4.5	20.0
1,2,3-Trimethylbenzene	Ave	2.711	2.755	0.0100	25.4	25.0	1.6	20.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.8783	0.0100	26.0	25.0	4.2	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502911.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 11:36:30 ALS Bottle#: 5 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:14:14

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2059516	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	497540	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	790650	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	499980	50.0	50.5	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	492603	50.0	47.3	
$	6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2149937	50.0	50.7	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	714000	50.0	50.5	
	18 Ethanol	45	2.647	2.647	0.000	99	175008	1500.0	1605.4	
	25 Isopropyl alcohol	45	3.040	3.040	0.000	99	146574	250.0	229.5	
	28 Acetonitrile	41	3.161	3.161	0.000	98	344647	250.0	299.6	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	230296	25.0	30.0	
	42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	380277	25.0	28.2	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	769768	25.0	28.9	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	433749	50.0	54.4	
	49 Propionitrile	54	4.234	4.234	0.000	99	390737	250.0	305.3	
	51 Methacrylonitrile	41	4.348	4.348	0.000	88	1432481	250.0	285.9	
	64 Tert-amyl methyl ether	73	4.920	4.920	0.000	92	739780	25.0	28.8	
	66 n-Butanol	56	5.199	5.199	0.000	84	162457	625.0	643.5	
	71 Methyl methacrylate	100	5.542	5.542	0.000	89	145808	50.0	53.6	
	75 2-Nitropropane	41	5.900	5.900	0.000	95	83659	50.0	29.0	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	148716	50.0	47.8	
	115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	1088923	25.0	25.4	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	347222	25.0	26.0	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

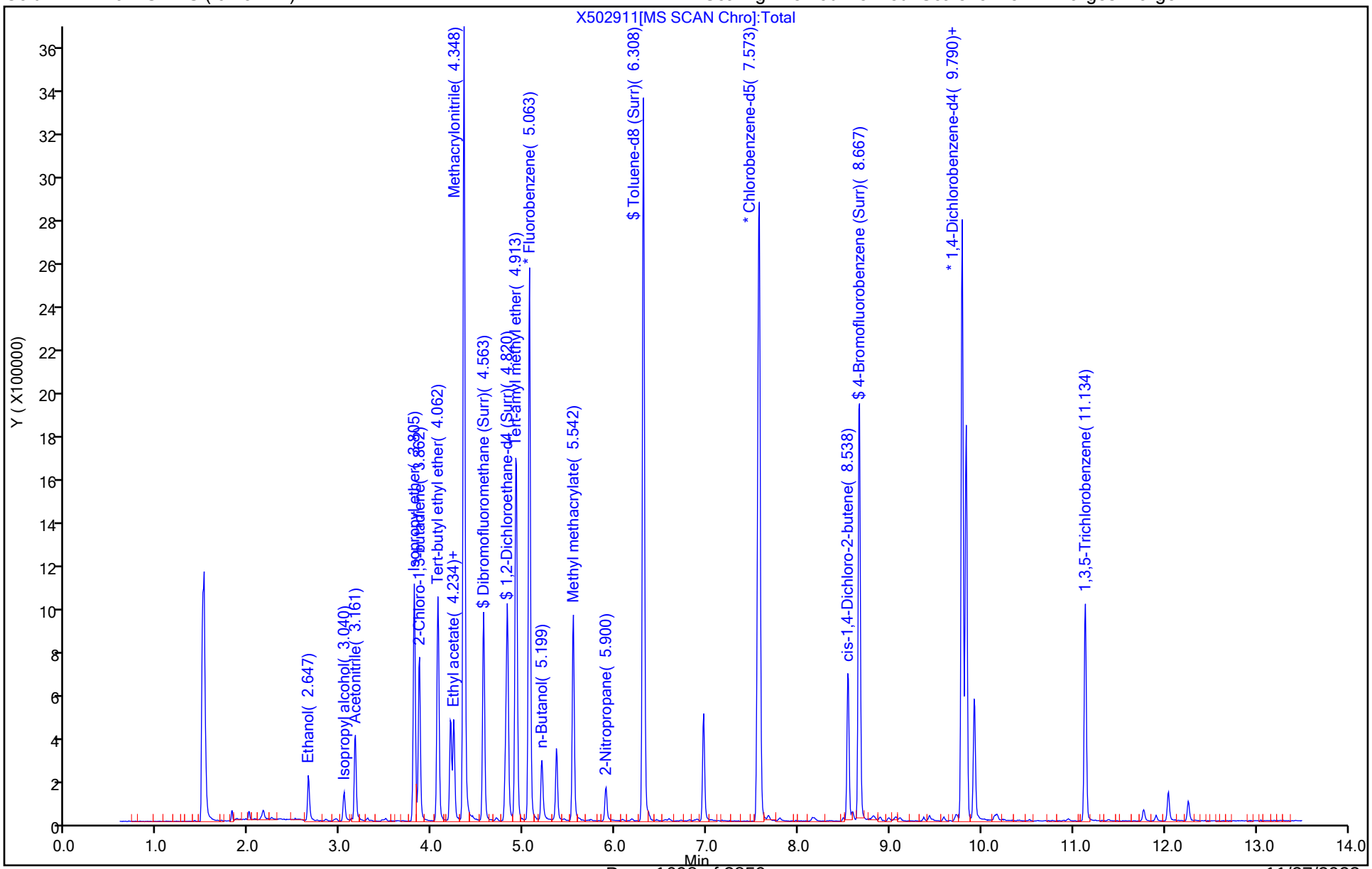
Report Date: 27-Apr-2023 12:40:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502911.D

Injection Date:	27-Apr-2023 11:36:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610347/3 Calibration Date: 04/27/2023 11:36

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502911.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2405	0.2428	0.0100	50.5	50.0	0.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2392	0.0100	47.3	50.0	-5.3	20.0
Toluene-d8 (Surr)	Ave	4.259	4.321	0.0100	50.7	50.0	1.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9031	0.0100	50.5	50.0	1.1	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502911.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 11:36:30 ALS Bottle#: 5 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:14:14

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2059516	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	497540	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	790650	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	499980	50.0	50.5	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	492603	50.0	47.3	
$	6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2149937	50.0	50.7	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	714000	50.0	50.5	
	18 Ethanol	45	2.647	2.647	0.000	99	175008	1500.0	1605.4	
	25 Isopropyl alcohol	45	3.040	3.040	0.000	99	146574	250.0	229.5	
	28 Acetonitrile	41	3.161	3.161	0.000	98	344647	250.0	299.6	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	230296	25.0	30.0	
	42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	380277	25.0	28.2	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	769768	25.0	28.9	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	433749	50.0	54.4	
	49 Propionitrile	54	4.234	4.234	0.000	99	390737	250.0	305.3	
	51 Methacrylonitrile	41	4.348	4.348	0.000	88	1432481	250.0	285.9	
	64 Tert-amyl methyl ether	73	4.920	4.920	0.000	92	739780	25.0	28.8	
	66 n-Butanol	56	5.199	5.199	0.000	84	162457	625.0	643.5	
	71 Methyl methacrylate	100	5.542	5.542	0.000	89	145808	50.0	53.6	
	75 2-Nitropropane	41	5.900	5.900	0.000	95	83659	50.0	29.0	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	148716	50.0	47.8	
	115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	1088923	25.0	25.4	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	347222	25.0	26.0	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

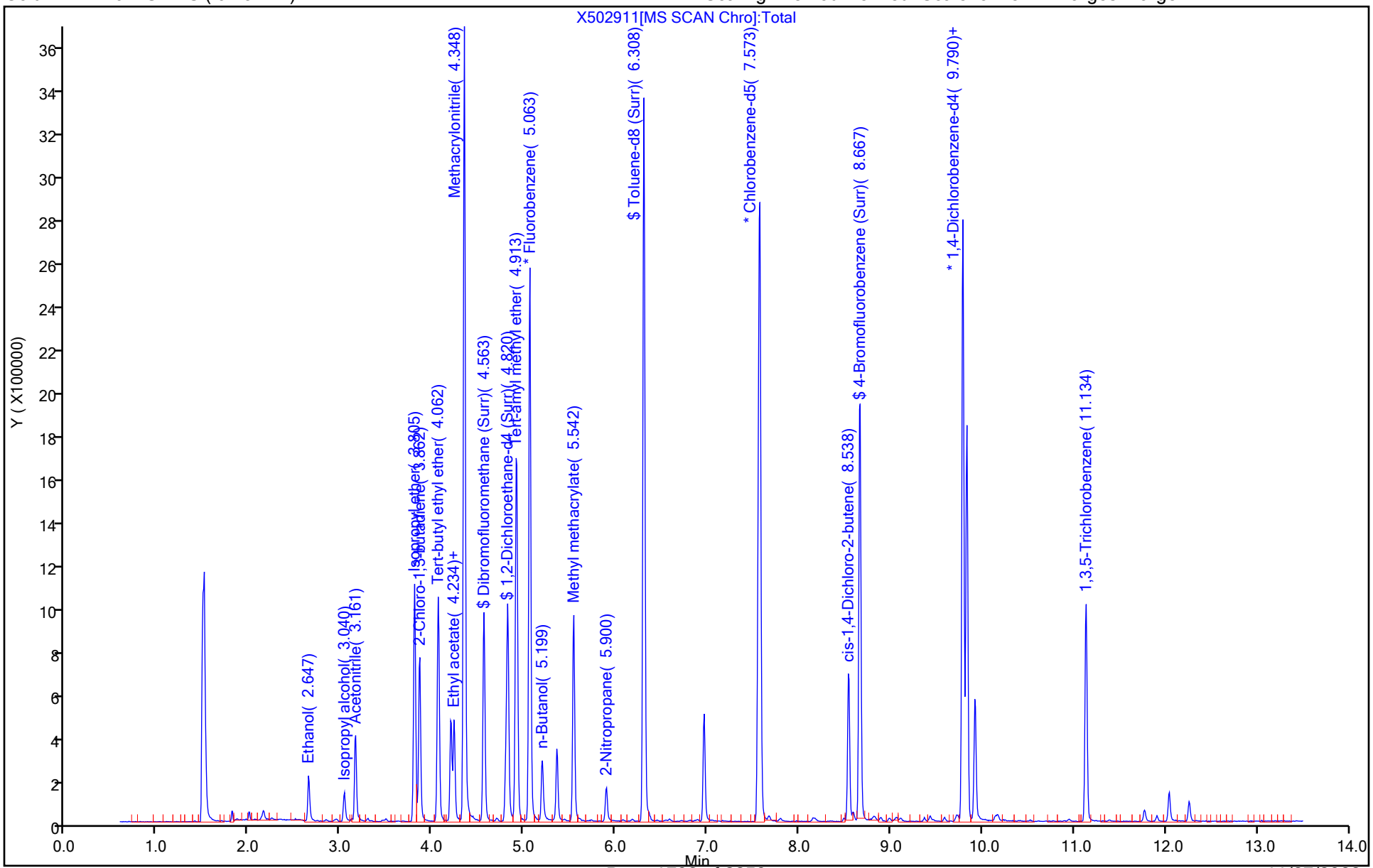
Report Date: 27-Apr-2023 12:40:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502911.D

Injection Date:	27-Apr-2023 11:36:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610485/2 | Calibration Date: 04/27/2023 21:28

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502939.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.2555	0.1000	58.2	50.0	16.4	20.0
Chloromethane	Ave	0.2229	0.2389	0.1000	53.6	50.0	7.2	20.0
Vinyl chloride	Lin1		0.2965	0.0100	65.3	50.0	30.6*	20.0
Bromomethane	Ave	0.1211	0.1389	0.0100	57.3	50.0	14.7	20.0
Chloroethane	Ave	0.1519	0.1840	0.0100	60.5	50.0	21.1*	20.0
Dichlorofluoromethane	Ave	0.3792	0.3899	0.0100	51.4	50.0	2.8	20.0
Trichlorofluoromethane	Ave	0.2925	0.3298	0.0100	56.4	50.0	12.7	20.0
Ethyl ether	Ave	0.1687	0.1735	0.0100	51.4	50.0	2.8	20.0
Acrolein	Ave	0.0272	0.0236	0.0010	428	494	-13.4	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1556	0.0500	56.3	50.0	12.7	20.0
1,1-Dichloroethene	Ave	0.1921	0.2069	0.0600	53.9	50.0	7.7	20.0
Acetone	Lin2		0.0457	0.0100	165	200	-17.4	20.0
Iodomethane	Lin1		0.2546	0.0100	48.1	50.0	-3.9	20.0
Carbon disulfide	Ave	0.6224	0.6657	0.1000	53.5	50.0	7.0	20.0
Methyl acetate	Ave	0.1262	0.1221	0.0100	96.7	100	-3.3	20.0
Allyl chloride	Ave	0.2551	0.3129	0.0100	61.3	50.0	22.7*	20.0
Methylene Chloride	Ave	0.2466	0.2401	0.0100	48.7	50.0	-2.7	20.0
2-Methyl-2-propanol	Lin1		0.0148	0.0010	380	500	-24.1*	20.0
Acrylonitrile	Ave	0.0717	0.0739	0.0100	515	500	3.1	20.0
Methyl tert-butyl ether	Ave	0.6044	0.5714	0.1000	47.3	50.0	-5.5	20.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2314	0.1000	54.2	50.0	8.5	20.0
Hexane	Ave	1.146	1.323	0.0100	57.7	50.0	15.4	20.0
Vinyl acetate	Ave	0.3380	0.3763	0.0100	111	100	11.3	20.0
1,1-Dichloroethane	Ave	0.3890	0.4129	0.1000	53.1	50.0	6.1	20.0
2-Butanone (MEK)	Ave	0.0821	0.0780	0.0100	190	200	-5.0	20.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2601	0.1000	50.9	50.0	1.8	20.0
2,2-Dichloropropane	Ave	0.2990	0.3215	0.0100	53.8	50.0	7.5	20.0
sec-Butyl Alcohol	Lin1		0.0122	0.0100	998	1200	-16.8	20.0
Chlorobromomethane	Ave	0.1177	0.1196	0.0500	50.8	50.0	1.6	20.0
Tetrahydrofuran	Ave	0.0557	0.0530	0.0010	95.1	100	-4.9	20.0
Chloroform	Ave	0.3958	0.3952	0.2000	49.9	50.0	-0.1	20.0
1,1,1-Trichloroethane	Ave	0.3206	0.3182	0.0500	49.6	50.0	-0.8	20.0
Cyclohexane	Ave	0.3308	0.3922	0.0100	59.3	50.0	18.6	20.0
1,1-Dichloropropene	Ave	0.3142	0.3291	0.0100	52.4	50.0	4.7	20.0
Carbon tetrachloride	Ave	0.2595	0.2682	0.1000	51.7	50.0	3.4	20.0
Isobutyl alcohol	Lin1		0.0048	0.0010	972	1250	-22.3*	20.0
Benzene	Ave	0.9289	0.9852	0.2000	53.0	50.0	6.1	20.0
1,2-Dichloroethane	Ave	0.2944	0.2650	0.0700	45.0	50.0	-10.0	20.0
n-Heptane	Ave	0.1928	0.2414		62.6	50.0	25.2	
Trichloroethene	Ave	0.9564	1.007	0.2000	52.7	50.0	5.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610485/2 Calibration Date: 04/27/2023 21:28

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502939.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1205	0.0010	146	160	-8.9	20.0
Methylcyclohexane	Ave	0.2422	0.2813	0.0500	58.1	50.0	16.1	20.0
1,2-Dichloropropane	Ave	0.2362	0.2515	0.1000	53.2	50.0	6.5	20.0
1,4-Dioxane	Ave	0.0030	0.0026	0.0010	880	1000	-12.0	20.0
Dibromomethane	Ave	0.1409	0.1340	0.0100	47.6	50.0	-4.9	20.0
Dichlorobromomethane	Ave	0.2974	0.2954	0.2000	49.7	50.0	-0.7	20.0
2-Chloroethyl vinyl ether	Lin1		0.1179	0.0100	78.4	50.0	56.8*	20.0
cis-1,3-Dichloropropene	Ave	1.523	1.632	0.2000	53.6	50.0	7.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1583	0.0300	200	200	0.0	20.0
Toluene	Ave	1.001	1.049	0.3000	52.4	50.0	4.8	20.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3258	0.2000	53.1	50.0	6.2	20.0
Ethyl methacrylate	Ave	1.092	1.116	0.0100	51.1	50.0	2.1	20.0
1,1,2-Trichloroethane	Ave	0.2000	0.1989	0.1000	49.7	50.0	-0.5	20.0
Tetrachloroethene	Ave	0.7259	0.7554	0.1000	52.0	50.0	4.1	20.0
1,3-Dichloropropane	Ave	1.532	1.523	0.0100	49.7	50.0	-0.6	20.0
2-Hexanone	Ave	0.4789	0.4457	0.0100	186	200	-6.9	20.0
Chlorodibromomethane	Ave	0.9243	0.8837	0.1000	47.8	50.0	-4.4	20.0
1,2-Dibromoethane	Ave	0.8754	0.8468	0.1000	48.4	50.0	-3.3	20.0
1-Chlorohexane	Ave	1.353	1.416	0.0100	41.8	40.0	4.6	20.0
Chlorobenzene	Ave	2.785	2.782	0.3000	49.9	50.0	-0.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.8804	0.0100	49.2	50.0	-1.7	20.0
Ethylbenzene	Ave	1.533	1.541	0.3000	50.2	50.0	0.5	20.0
m-Xylene & p-Xylene	Ave	1.838	1.890	0.1000	51.4	50.0	2.8	20.0
o-Xylene	Ave	1.865	1.872	0.2000	50.2	50.0	0.4	20.0
Styrene	Ave	2.963	3.099	0.2000	52.3	50.0	4.6	20.0
Bromoform	Ave	0.5587	0.5326	0.1000	47.7	50.0	-4.7	20.0
Isopropylbenzene	Ave	2.838	2.814	0.3000	49.6	50.0	-0.8	20.0
Cyclohexanone	Lin1		0.0388	0.0010	1370	1500	-8.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.6530	0.3000	45.6	50.0	-8.8	20.0
Bromobenzene	Ave	0.7149	0.6843	0.0100	47.9	50.0	-4.3	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1529	0.0100	40.9	50.0	-18.2	20.0
1,2,3-Trichloropropane	Ave	0.2173	0.1839	0.0100	42.3	50.0	-15.4	20.0
N-Propylbenzene	Ave	0.7886	0.8285	0.0100	52.5	50.0	5.1	20.0
2-Chlorotoluene	Ave	0.6999	0.6940	0.0100	49.6	50.0	-0.8	20.0
1,3,5-Trimethylbenzene	Ave	2.394	2.336	0.0100	48.8	50.0	-2.4	20.0
4-Chlorotoluene	Ave	0.7282	0.7222	0.0100	49.6	50.0	-0.8	20.0
tert-Butylbenzene	Ave	2.000	1.951	0.0100	48.8	50.0	-2.5	20.0
1,2,4-Trimethylbenzene	Ave	2.476	2.413	0.3000	48.7	50.0	-2.5	20.0
sec-Butylbenzene	Ave	0.5991	0.5925	0.0100	49.4	50.0	-1.1	20.0
1,3-Dichlorobenzene	Ave	1.320	1.264	0.5000	47.9	50.0	-4.3	20.0
4-Isopropyltoluene	Ave	2.471	2.445	0.0100	49.5	50.0	-1.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610485/2 Calibration Date: 04/27/2023 21:28

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502939.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.304	0.5000	46.5	50.0	-7.0	20.0
n-Butylbenzene	Ave	2.140	2.214	0.0100	51.7	50.0	3.5	20.0
1,2-Dichlorobenzene	Ave	1.271	1.189	0.5000	46.8	50.0	-6.5	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1111	0.0100	38.6	50.0	-22.9*	20.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.6000	0.2000	46.9	50.0	-6.2	20.0
Hexachlorobutadiene	Ave	0.2332	0.2434	0.0100	52.2	50.0	4.4	20.0
Naphthalene	Ave	1.632	1.317	0.0100	40.3	50.0	-19.3	20.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.4146	0.3000	42.9	50.0	-14.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2466	0.0100	51.3	50.0	2.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2343	0.0100	46.4	50.0	-7.3	20.0
Toluene-d8 (Surr)	Ave	4.259	4.378	0.0100	51.4	50.0	2.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.8901	0.0100	49.8	50.0	-0.4	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502939.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 21:28:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:39 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.056	0.000	99	2106634	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.566	7.566	0.000	84	502022	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	95	809058	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.556	4.556	0.000	94	519481	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	493498	50.0	46.4	
$ 6 Toluene-d8 (Surr)	98	6.300	6.300	0.000	92	2197981	50.0	51.4	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	720177	50.0	49.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	538147	50.0	58.2	
11 Chloromethane	50	1.860	1.860	0.000	98	503235	50.0	53.6	
12 Vinyl chloride	62	1.960	1.960	0.000	97	624631	50.0	65.3	
14 Bromomethane	94	2.246	2.246	0.000	89	292599	50.0	57.3	
15 Chloroethane	64	2.332	2.332	0.000	99	387599	50.0	60.5	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	96	821321	50.0	51.4	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	694839	50.0	56.4	
19 Ethyl ether	59	2.739	2.739	0.000	89	365425	50.0	51.4	
21 Acrolein	56	2.854	2.854	0.000	100	490474	493.8	427.8	
23 1,1-Dichloroethene	96	2.933	2.933	0.000	97	435921	50.0	53.9	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	94	327876	50.0	56.3	
24 Acetone	43	2.947	2.947	0.000	98	385073	200.0	165.2	
26 Iodomethane	142	3.054	3.054	0.000	98	536368	50.0	48.1	
27 Carbon disulfide	76	3.118	3.118	0.000	98	1402401	50.0	53.5	
29 Methyl acetate	43	3.176	3.176	0.000	97	514314	100.0	96.7	
30 3-Chloro-1-propene	41	3.197	3.197	0.000	93	659084	50.0	61.3	
31 Methylene Chloride	84	3.290	3.290	0.000	89	505749	50.0	48.7	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	312086	500.0	379.6	
33 Acrylonitrile	53	3.447	3.447	0.000	100	1556425	500.0	515.5	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	1203813	50.0	47.3	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	487416	50.0	54.2	
37 Hexane	57	3.676	3.676	0.000	88	663953	50.0	57.7	
39 Vinyl acetate	43	3.776	3.776	0.000	96	1585428	100.0	111.3	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	869887	50.0	53.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	657463	200.0	190.0	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	81	547998	50.0	50.9	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	85	677325	50.0	53.8	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	616608	1200.0	998.3	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	251948	50.0	50.8	
53 Tetrahydrofuran	42	4.391	4.391	0.000	86	223187	100.0	95.1	
54 Chloroform	83	4.441	4.441	0.000	92	832641	50.0	49.9	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	670275	50.0	49.6	
56 Cyclohexane	56	4.641	4.641	0.000	87	826327	50.0	59.3	
57 1,1-Dichloropropene	75	4.692	4.692	0.000	98	693280	50.0	52.4	
60 Isobutyl alcohol	41	4.699	4.699	0.000	90	254540	1250.0	971.5	
59 Carbon tetrachloride	117	4.699	4.699	0.000	94	565072	50.0	51.7	
62 Benzene	78	4.849	4.849	0.000	94	2075433	50.0	53.0	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	558286	50.0	45.0	
65 n-Heptane	43	5.028	5.028	0.000	88	508485	50.0	62.6	
67 Trichloroethene	95	5.328	5.328	0.000	98	505676	50.0	52.7	
68 2-Pentanone	43	5.428	5.428	0.000	98	812418	160.0	145.8	
69 Methylcyclohexane	55	5.521	5.521	0.000	90	592585	50.0	58.1	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	96	529896	50.0	53.2	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	110828	1000.0	879.7	
73 Dibromomethane	93	5.607	5.607	0.000	97	282391	50.0	47.6	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	622312	50.0	49.7	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	248389	50.0	78.4	
77 cis-1,3-Dichloropropene	75	6.072	6.072	0.000	98	819514	50.0	53.6	
78 4-Methyl-2-pentanone (MIBK)	43	6.172	6.172	0.000	94	1333524	200.0	200.2	
79 Toluene	91	6.365	6.365	0.000	98	2209827	50.0	52.4	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	686346	50.0	53.1	
81 Ethyl methacrylate	69	6.558	6.558	0.000	86	560106	50.0	51.1	
82 1,1,2-Trichloroethane	97	6.708	6.708	0.000	90	419000	50.0	49.7	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	379245	50.0	52.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	87	764459	50.0	49.7	
85 2-Hexanone	43	6.872	6.872	0.000	94	894949	200.0	186.1	
87 Chlorodibromomethane	129	7.051	7.051	0.000	91	443616	50.0	47.8	
88 Ethylene Dibromide	107	7.165	7.165	0.000	98	425116	50.0	48.4	
89 1-Chlorohexane	91	7.552	7.552	0.000	93	568540	40.0	41.8	
90 Chlorobenzene	112	7.595	7.595	0.000	96	1396446	50.0	49.9	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.666	0.000	97	441972	50.0	49.2	
92 Ethylbenzene	106	7.673	7.673	0.000	97	773447	50.0	50.2	
93 m-Xylene & p-Xylene	106	7.788	7.788	0.000	0	948885	50.0	51.4	
94 o-Xylene	106	8.145	8.145	0.000	95	939963	50.0	50.2	
95 Styrene	104	8.167	8.167	0.000	95	1555720	50.0	52.3	
96 Bromoform	173	8.345	8.345	0.000	96	267373	50.0	47.7	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	2277007	50.0	49.6	
99 Cyclohexanone	55	8.581	8.581	0.000	89	584485	1500.0	1368.5	
100 1,1,2,2-Tetrachloroethane	83	8.767	8.767	0.000	93	528337	50.0	45.6	
101 Bromobenzene	156	8.803	8.803	0.000	94	553619	50.0	47.9	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	73	123667	50.0	40.9	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	83	148752	50.0	42.3	
104 N-Propylbenzene	120	8.882	8.882	0.000	99	670298	50.0	52.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	561480	50.0	49.6	
106 1,3,5-Trimethylbenzene	105	9.053	9.053	0.000	95	1890336	50.0	48.8	
107 4-Chlorotoluene	126	9.096	9.096	0.000	97	584300	50.0	49.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	1578090	50.0	48.8	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1952636	50.0	48.7	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	479344	50.0	49.4	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	1022334	50.0	47.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1978324	50.0	49.5	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	1054747	50.0	46.5	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1790939	50.0	51.7	
117 1,2-Dichlorobenzene	146	10.161	10.161	0.000	98	961593	50.0	46.8	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.941	0.000	90	89866	50.0	38.6	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	485437	50.0	46.9	
121 Hexachlorobutadiene	225	11.899	11.899	0.000	98	196896	50.0	52.2	
122 Naphthalene	128	12.035	12.035	0.000	97	1065292	50.0	40.3	
123 1,2,3-Trichlorobenzene	180	12.249	12.249	0.000	96	335398	50.0	42.9	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	105.2	
S 139 Xylenes, Total (URS)	1				0		100.0	101.6	
S 136 1,3-Dichloropropene, Total	1				0		100.0	106.7	
S 138 Xylenes, Total	106				0		100.0	101.6	
S 140 Trihalomethanes, Total	1				0		200.0	195.1	
S 141 1,2-Dichloroethene, Total	1				0		100.0	105.2	

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00133	Amount Added: 10.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 28-Apr-2023 02:56:40 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502939.D

Injection Date: 27-Apr-2023 21:28:30 Instrument ID: VMS_X4 Operator ID: bj

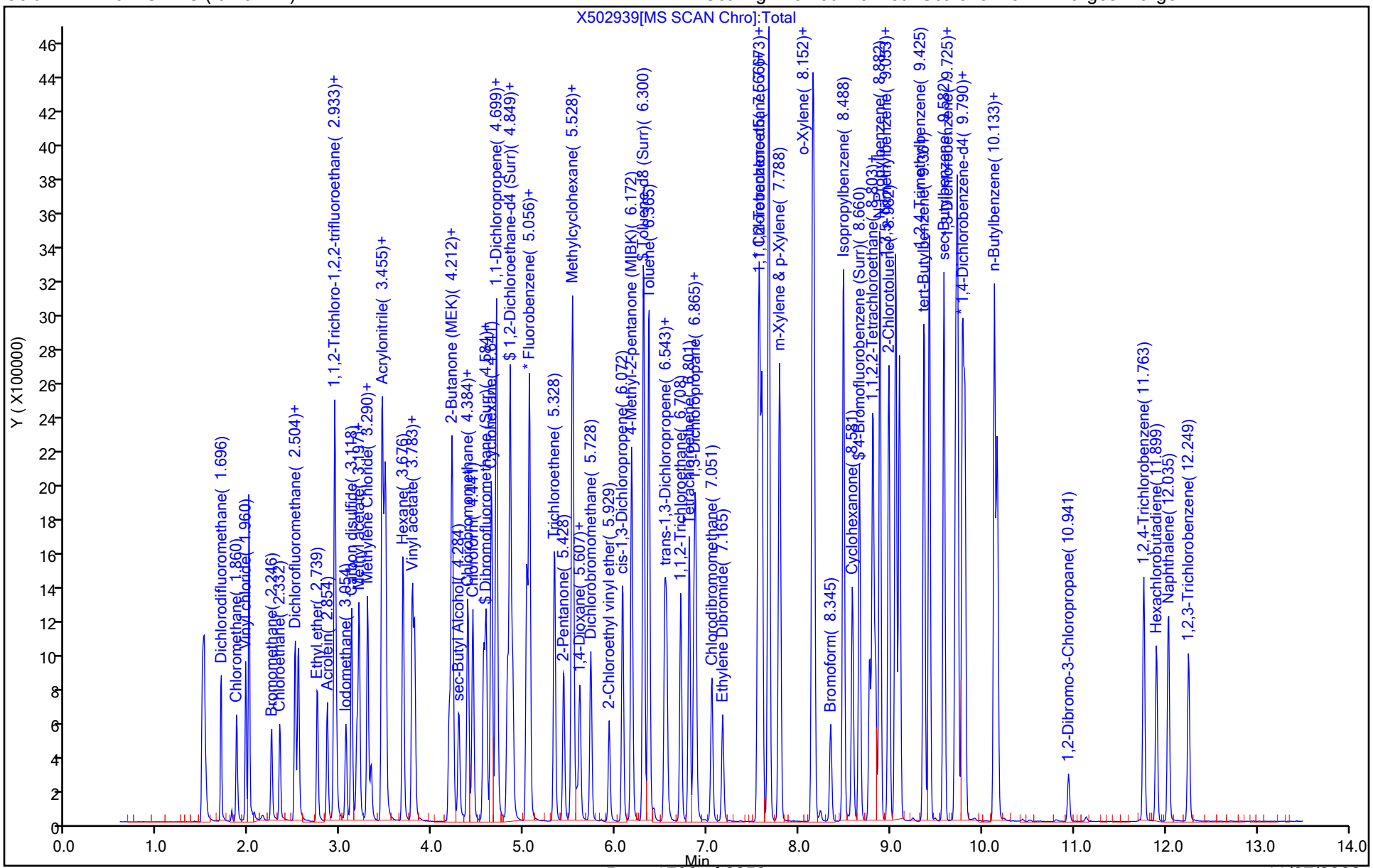
Lims ID: CCV Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 1

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610485/3 Calibration Date: 04/27/2023 21:48

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 15:19

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 10/22/2022 17:23

Lab File ID: X502940.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0019*	0.0100	1100	1500	-26.8*	20.0
Isopropyl alcohol	Ave	0.0155	0.0088*	0.0100	142	250	-43.4*	20.0
Acetonitrile	Ave	0.0279	0.0237	0.0100	212	250	-15.2	20.0
Isopropyl ether	Ave	0.1867	0.1868	0.0100	25.0	25.0	0.0	20.0
Chloroprene	Ave	0.3274	0.3230	0.0100	24.7	25.0	-1.4	20.0
Tert-butyl ethyl ether	Ave	0.6465	0.6117	0.0100	23.7	25.0	-5.4	20.0
Ethyl acetate	Ave	0.1934	0.1422	0.0100	36.7	50.0	-26.5*	20.0
Propionitrile	Ave	0.0311	0.0277	0.0100	223	250	-10.7	20.0
Methacrylonitrile	Ave	0.1216	0.0992	0.0100	204	250	-18.5	20.0
Tert-amyl methyl ether	Ave	0.6244	0.5639	0.0100	22.6	25.0	-9.7	20.0
n-Butanol	Ave	0.0061	0.0036*	0.0100	363	625	-42.0*	20.0
Methyl methacrylate	Ave	0.0660	0.0489	0.0100	37.0	50.0	-26.0*	20.0
2-Nitropropane	Ave	0.0700	0.0270	0.0100	19.3	50.0	-61.4*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1389	0.0100	35.3	50.0	-29.5*	20.0
1,2,3-Trimethylbenzene	Ave	2.711	2.421	0.0100	22.3	25.0	-10.7	20.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.7616	0.0100	22.6	25.0	-9.7	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502940.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 21:48:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:42 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.056	0.000	99	2005972	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	481290	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	95	751797	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.556	4.556	0.000	94	490492	50.0	50.8	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	462225	50.0	45.6	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2077745	50.0	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	673766	50.0	50.1	
18 Ethanol	45	2.647	2.647	0.000	99	116579	1500.0	1098.0	
25 Isopropyl alcohol	45	3.033	3.033	0.000	99	88024	250.0	141.5	
28 Acetonitrile	41	3.154	3.154	0.000	99	237650	250.0	212.1	
41 Isopropyl ether	87	3.805	3.805	0.000	94	187345	25.0	25.0	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	323941	25.0	24.7	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	613479	25.0	23.7	
46 Ethyl acetate	43	4.198	4.198	0.000	98	285171	50.0	36.7	
49 Propionitrile	54	4.234	4.234	0.000	100	278171	250.0	223.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	994612	250.0	203.8	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	88	565581	25.0	22.6	
66 n-Butanol	56	5.192	5.192	0.000	82	89141	625.0	362.5	
71 Methyl methacrylate	100	5.535	5.535	0.000	90	98026	50.0	37.0	
75 2-Nitropropane	41	5.900	5.900	0.000	97	54192	50.0	19.3	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	104391	50.0	35.3	
115 1,2,3-Trimethylbenzene	105	9.825	9.825	0.000	98	910116	25.0	22.3	
119 1,3,5-Trichlorobenzene	180	11.127	11.127	0.000	97	286271	25.0	22.6	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

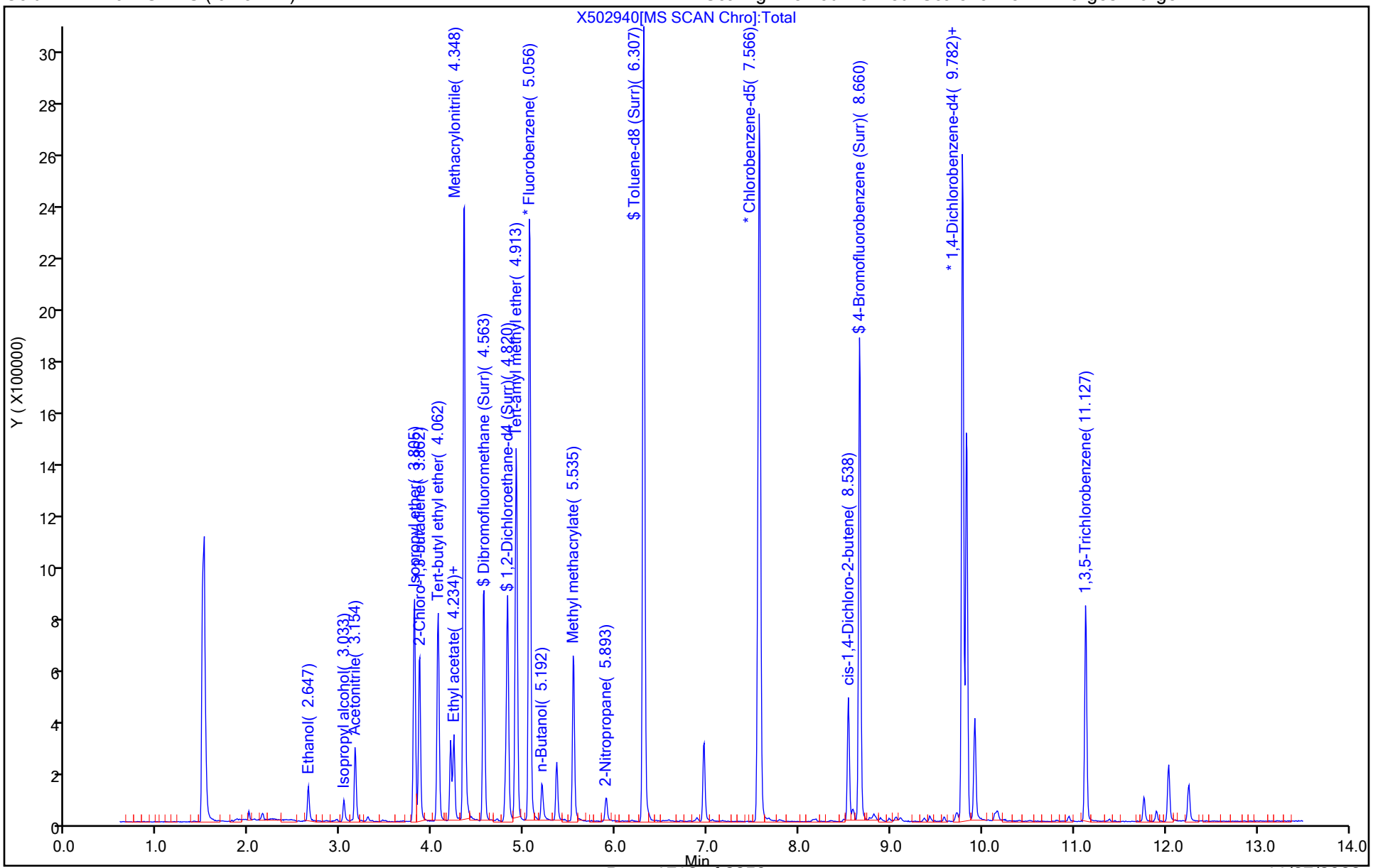
Report Date: 28-Apr-2023 02:56:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502940.D

Injection Date:	27-Apr-2023 21:48:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: CCV 280-610485/3 Calibration Date: 04/27/2023 21:48

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502940.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2405	0.2445	0.0100	50.8	50.0	1.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2304	0.0100	45.6	50.0	-8.8	20.0
Toluene-d8 (Surr)	Ave	4.259	4.317	0.0100	50.7	50.0	1.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.8962	0.0100	50.1	50.0	0.3	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502940.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 21:48:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:42 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.056	0.000	99	2005972	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	481290	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	95	751797	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.556	4.556	0.000	94	490492	50.0	50.8	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	462225	50.0	45.6	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2077745	50.0	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	673766	50.0	50.1	
18 Ethanol	45	2.647	2.647	0.000	99	116579	1500.0	1098.0	
25 Isopropyl alcohol	45	3.033	3.033	0.000	99	88024	250.0	141.5	
28 Acetonitrile	41	3.154	3.154	0.000	99	237650	250.0	212.1	
41 Isopropyl ether	87	3.805	3.805	0.000	94	187345	25.0	25.0	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	323941	25.0	24.7	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	613479	25.0	23.7	
46 Ethyl acetate	43	4.198	4.198	0.000	98	285171	50.0	36.7	
49 Propionitrile	54	4.234	4.234	0.000	100	278171	250.0	223.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	994612	250.0	203.8	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	88	565581	25.0	22.6	
66 n-Butanol	56	5.192	5.192	0.000	82	89141	625.0	362.5	
71 Methyl methacrylate	100	5.535	5.535	0.000	90	98026	50.0	37.0	
75 2-Nitropropane	41	5.900	5.900	0.000	97	54192	50.0	19.3	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	104391	50.0	35.3	
115 1,2,3-Trimethylbenzene	105	9.825	9.825	0.000	98	910116	25.0	22.3	
119 1,3,5-Trichlorobenzene	180	11.127	11.127	0.000	97	286271	25.0	22.6	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

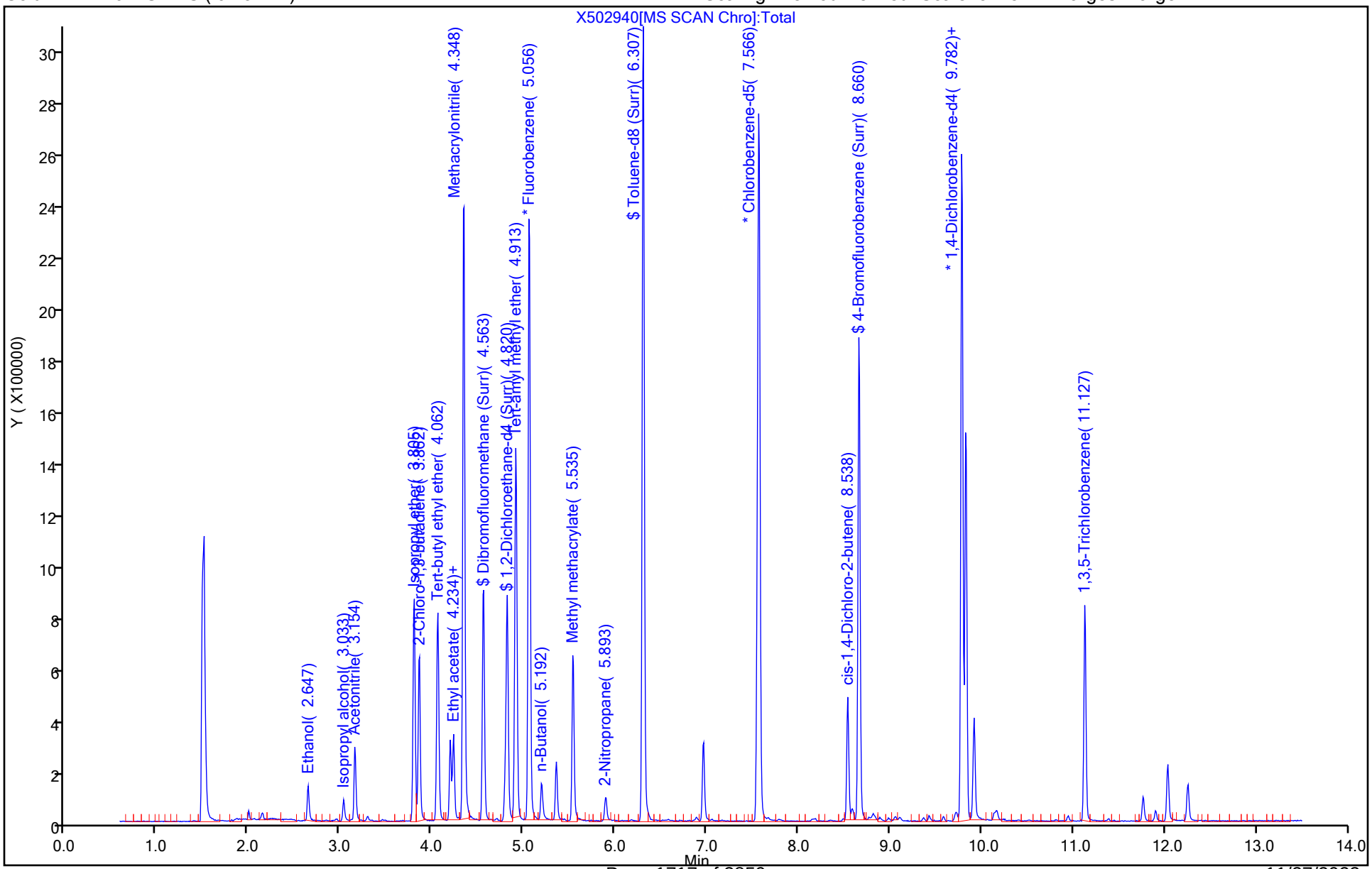
Report Date: 28-Apr-2023 02:56:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502940.D

Injection Date:	27-Apr-2023 21:48:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 28-Dec-2022 07:14:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: SUNLEEC Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:01:03 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 28-Dec-2022 07:47:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	3.733	3.733	0.000	0	591602	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

mv-Cent BFB_00004 Amount Added: 5.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins Denver

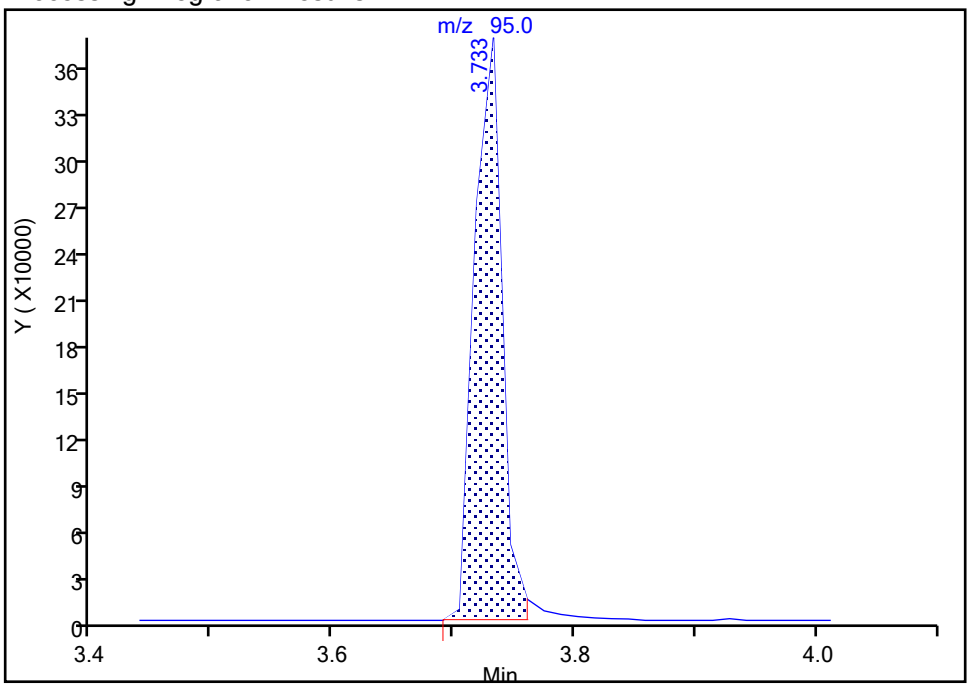
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D
Injection Date: 28-Dec-2022 07:14:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: SUNLEEC ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

$ 10 BFB, CAS: 460-00-4

Signal: 1

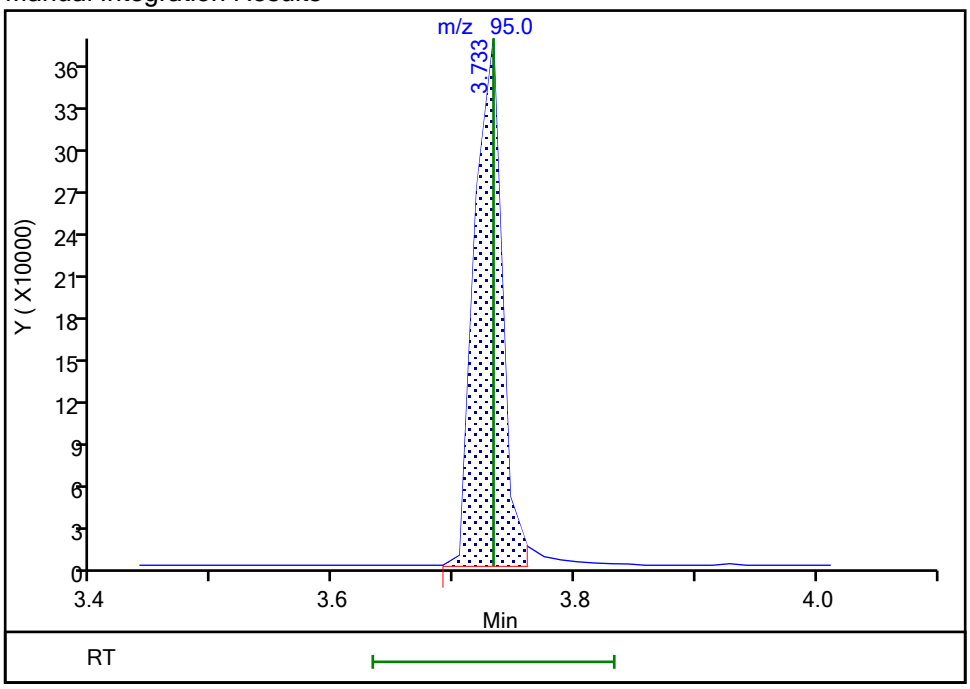
Processing Integration Results

RT: 3.73
Area: 591602
Amount: 0
Amount Units: ug/l



Manual Integration Results

RT: 3.73
Area: 591602
Amount: 0
Amount Units: ug/l



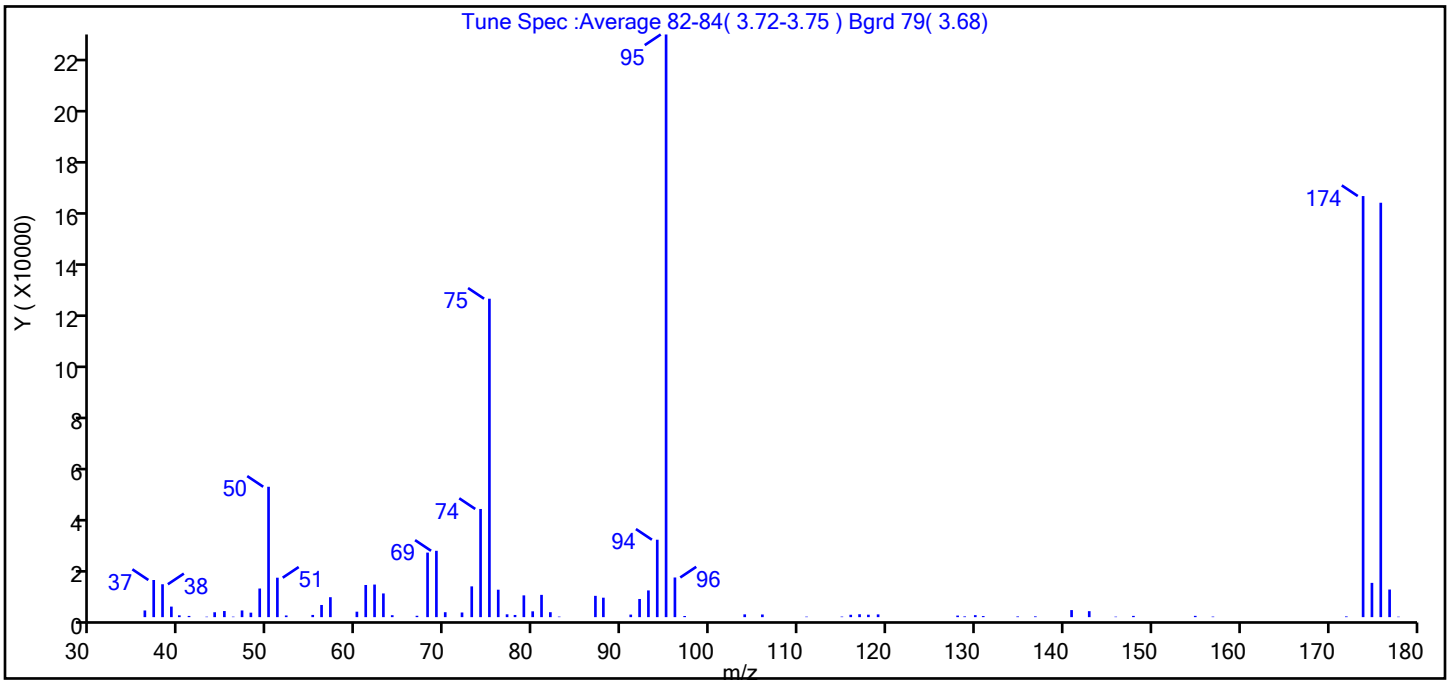
Reviewer: LW7N, 28-Dec-2022 07:47:45
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D
Injection Date: 28-Dec-2022 07:14:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: SUNLEEC ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.4
75	30 to 60% of m/z 95	54.6
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	72.3
175	5 to 9% of m/z 174	5.9 (8.1)
176	Greater than 95% but less than 101% of m/z 174	71.1 (98.4)
177	5 to 9% of m/z 176	4.7 (6.7)

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D\AQ_VMS1_8260.rslt\spectra.c
Injection Date: 28-Dec-2022 07:14:30
Spectrum: Tune Spec :Average 82-84(3.72-3.75) Bgrd 79(3.68)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 75

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2620	60.00	2145	82.00	1939	128.00	615
37.00	14563	61.00	12609	83.00	209	129.00	292
38.00	12897	62.00	12778	87.00	8354	130.00	778
39.00	4133	63.00	9297	88.00	7630	131.00	419
40.00	711	64.00	761	91.00	996	135.00	278
41.00	479	67.00	537	92.00	7123	137.00	306
43.00	177	68.00	25312	93.00	10478	141.00	2768
44.00	1917	69.00	26016	94.00	30360	143.00	2348
45.00	2397	70.00	1934	95.00	228480	146.00	191
46.00	191	72.00	1826	96.00	15549	148.00	490
47.00	2624	73.00	12068	97.00	450	155.00	504
48.00	1759	74.00	42416	104.00	1093	157.00	218
49.00	11222	75.00	124864	106.00	1044	172.00	287
50.00	51128	76.00	10759	111.00	196	174.00	165120
51.00	15466	77.00	1104	115.00	217	175.00	13436
52.00	655	78.00	855	116.00	931	176.00	162496
55.00	869	79.00	8539	117.00	1131	177.00	10831
56.00	4771	80.00	2280	118.00	960	178.00	174
57.00	7824	81.00	8734	119.00	1079		

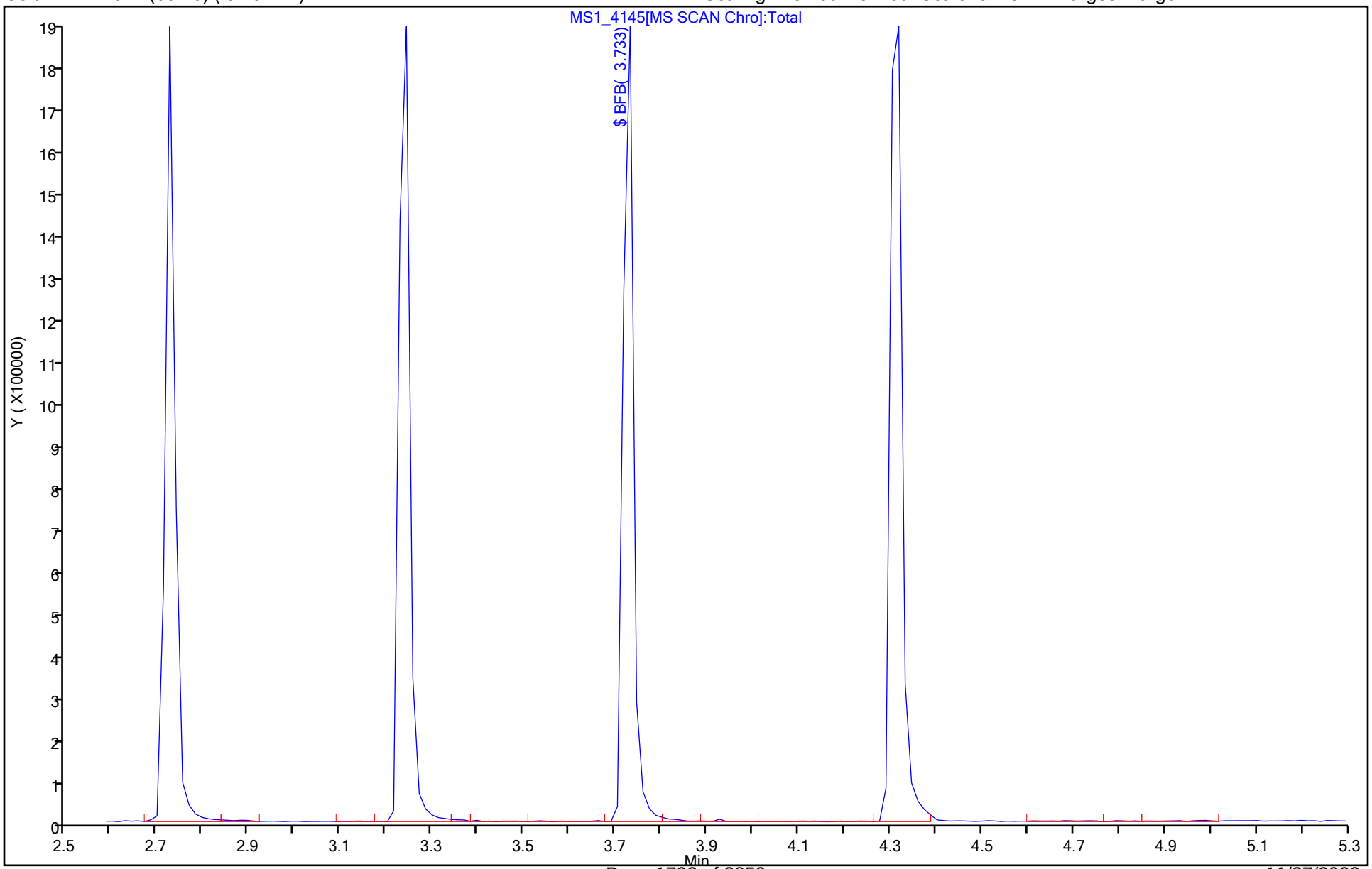
Report Date: 29-Dec-2022 11:01:03 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D

Injection Date:	28-Dec-2022 07:14:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8181.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 18-Apr-2023 09:29:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 08:23:10 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 18-Apr-2023 09:39:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	3.733	3.733	0.000	0	401720	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

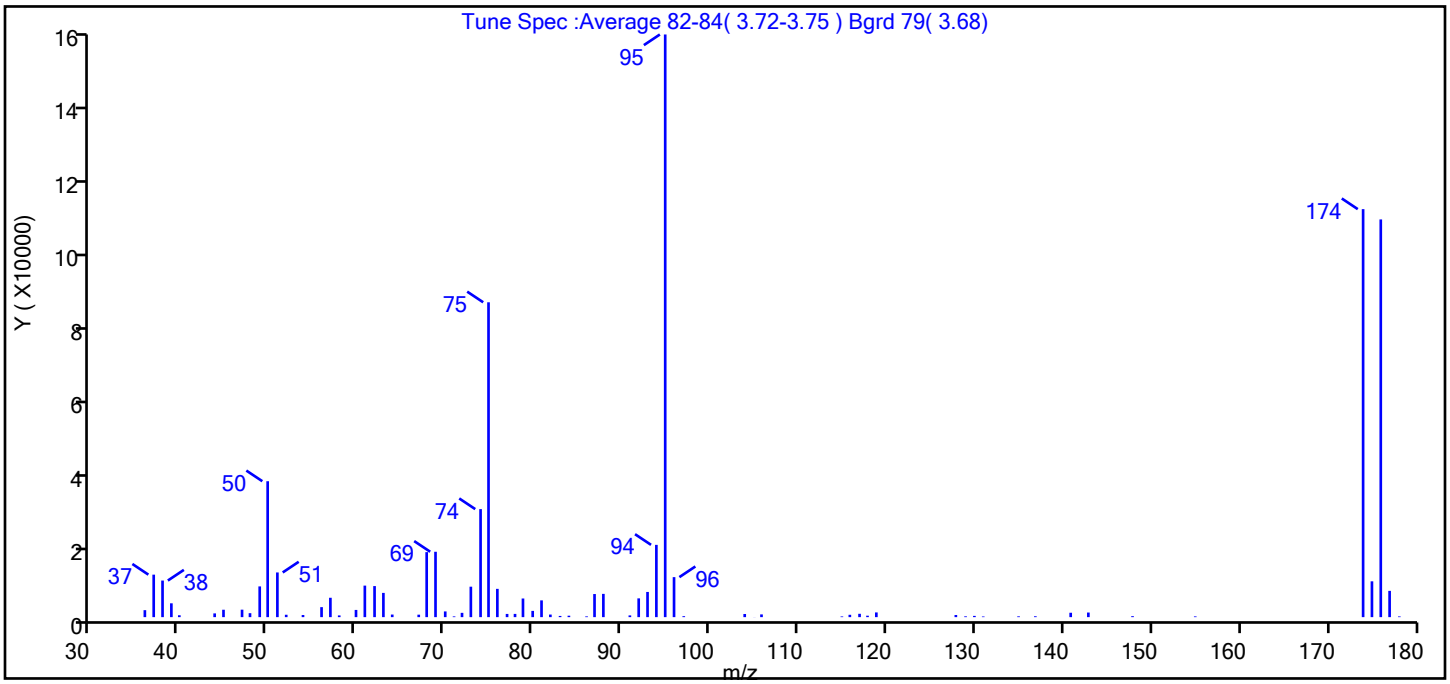
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8181.D
Injection Date: 18-Apr-2023 09:29:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	23.3
75	30 to 60% of m/z 95	54.0
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	70.0
175	5 to 9% of m/z 174	6.1 (8.8)
176	Greater than 95% but less than 101% of m/z 174	68.3 (97.5)
177	5 to 9% of m/z 176	4.5 (6.6)

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8181.D\AQ_VMS1_8260.rslt\spectra.c
Injection Date: 18-Apr-2023 09:29:30
Spectrum: Tune Spec :Average 82-84(3.72-3.75) Bgrd 79(3.68)
Base Peak: 94.90
Minimum % Base Peak: 0
Number of Points: 73

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1828	62.00	8136	83.00	315	119.00	1235
37.00	11129	63.00	6350	84.00	378	128.00	556
38.00	9583	64.00	680	86.00	200	129.00	212
39.00	3622	67.00	646	87.00	6051	130.00	329
40.00	494	68.00	17024	88.00	6094	131.00	171
44.00	982	69.00	17120	91.00	454	135.00	206
45.00	1940	70.00	1497	92.00	4916	137.00	229
47.00	1957	71.00	193	93.00	6597	141.00	1149
48.00	1038	72.00	1127	94.00	18928	143.00	1207
49.00	8048	73.00	7975	95.00	152576	148.00	253
50.00	35592	74.00	28288	96.00	10477	155.00	193
51.00	11703	75.00	82448	97.00	247	174.00	106840
52.00	625	76.00	7407	104.00	825	175.00	9382
54.00	556	77.00	842	105.00	22	176.00	104144
56.00	2618	78.00	850	106.00	719	177.00	6881
57.00	5074	79.00	4882	115.00	183	178.00	185
58.00	452	80.00	1638	116.00	617		
60.00	1888	81.00	4392	117.00	877		
61.00	8256	82.00	678	118.00	378		

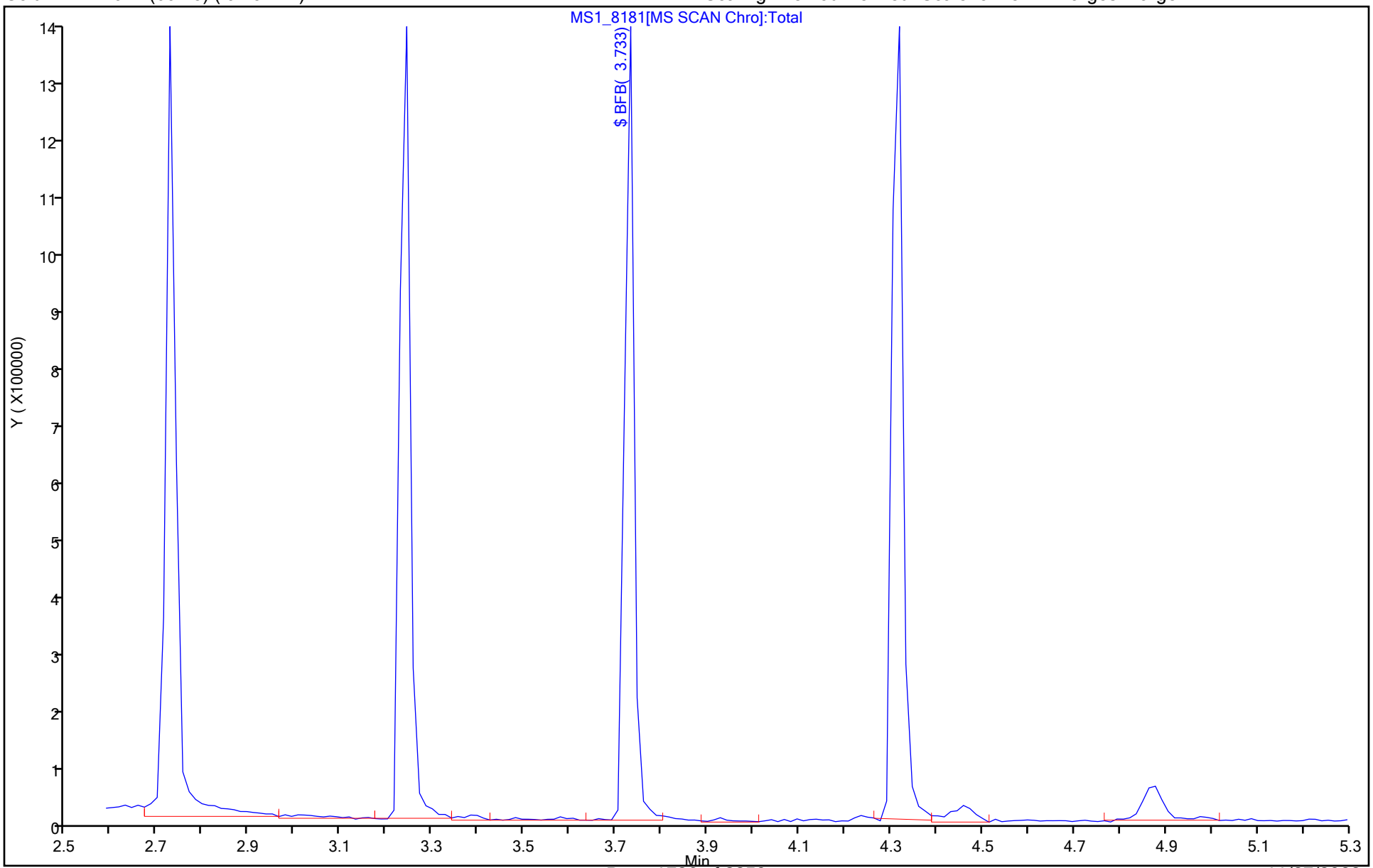
Report Date: 19-Apr-2023 08:23:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8181.D

Injection Date:	18-Apr-2023 09:29:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8306.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 21-Apr-2023 07:11:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:19 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	3.732	3.732	0.000	0	354187	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

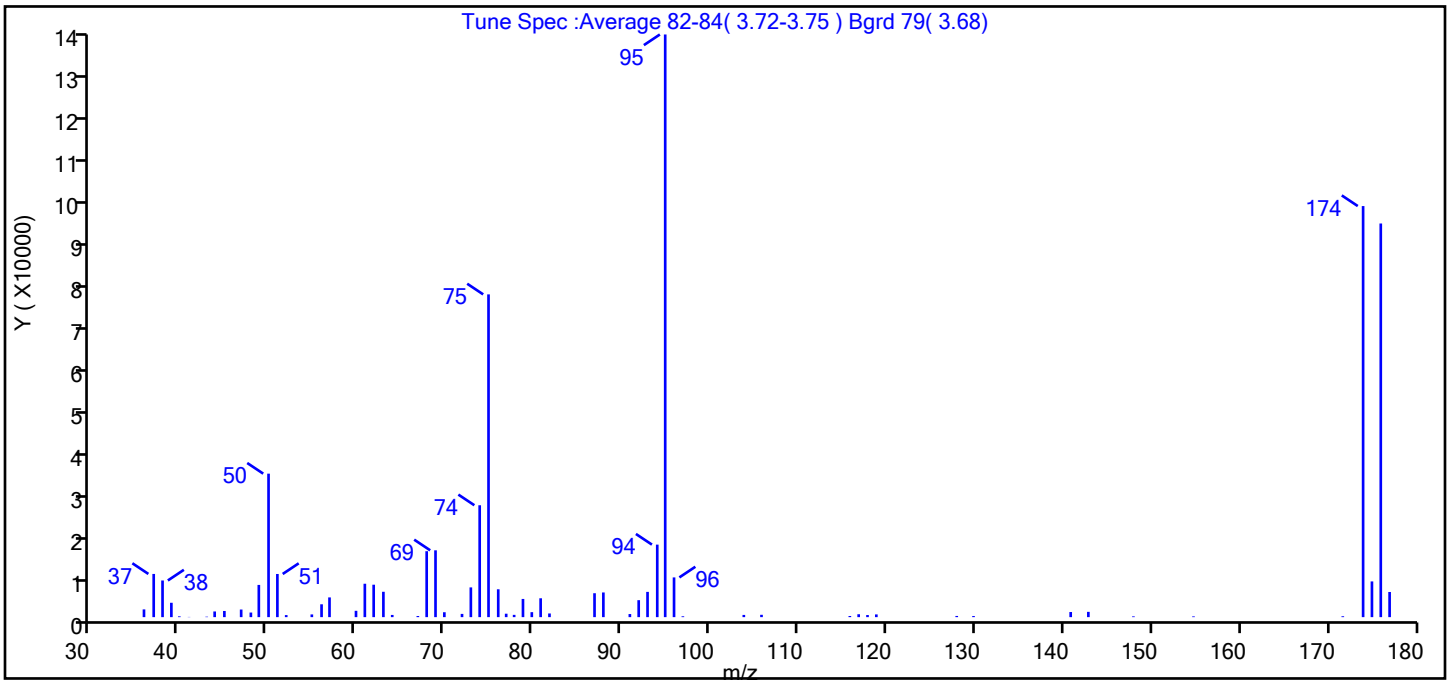
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8306.D
Injection Date: 21-Apr-2023 07:11:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	24.6
75	30 to 60% of m/z 95	55.4
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	70.6
175	5 to 9% of m/z 174	6.1 (8.7)
176	Greater than 95% but less than 101% of m/z 174	67.6 (95.8)
177	5 to 9% of m/z 176	4.3 (6.4)

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8306.D\AQ_VMS1_8260.rslt\spectra.c
Injection Date: 21-Apr-2023 07:11:30
Spectrum: Tune Spec :Average 82-84(3.72-3.75) Bgrd 79(3.68)
Base Peak: 94.90
Minimum % Base Peak: 0
Number of Points: 64

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1793	56.00	2975	77.00	796	106.00	544
37.00	10000	57.00	4568	78.00	530	116.00	264
38.00	8485	60.00	1464	79.00	4212	117.00	671
39.00	3326	61.00	7731	80.00	1153	118.00	489
40.00	182	62.00	7507	81.00	4367	119.00	633
41.00	48	63.00	5871	82.00	850	128.00	275
43.00	106	64.00	510	87.00	5535	130.00	250
44.00	1314	67.00	260	88.00	5711	141.00	1185
45.00	1427	68.00	15262	91.00	718	143.00	1226
47.00	1762	69.00	15465	92.00	3926	148.00	176
48.00	1064	70.00	1137	93.00	5846	155.00	170
49.00	7458	72.00	751	94.00	16784	172.00	204
50.00	33208	73.00	6884	95.00	134848	174.00	95136
51.00	9989	74.00	25896	96.00	9196	175.00	8268
52.00	473	75.00	74696	97.00	194	176.00	91104
55.00	630	76.00	6448	104.00	514	177.00	5821

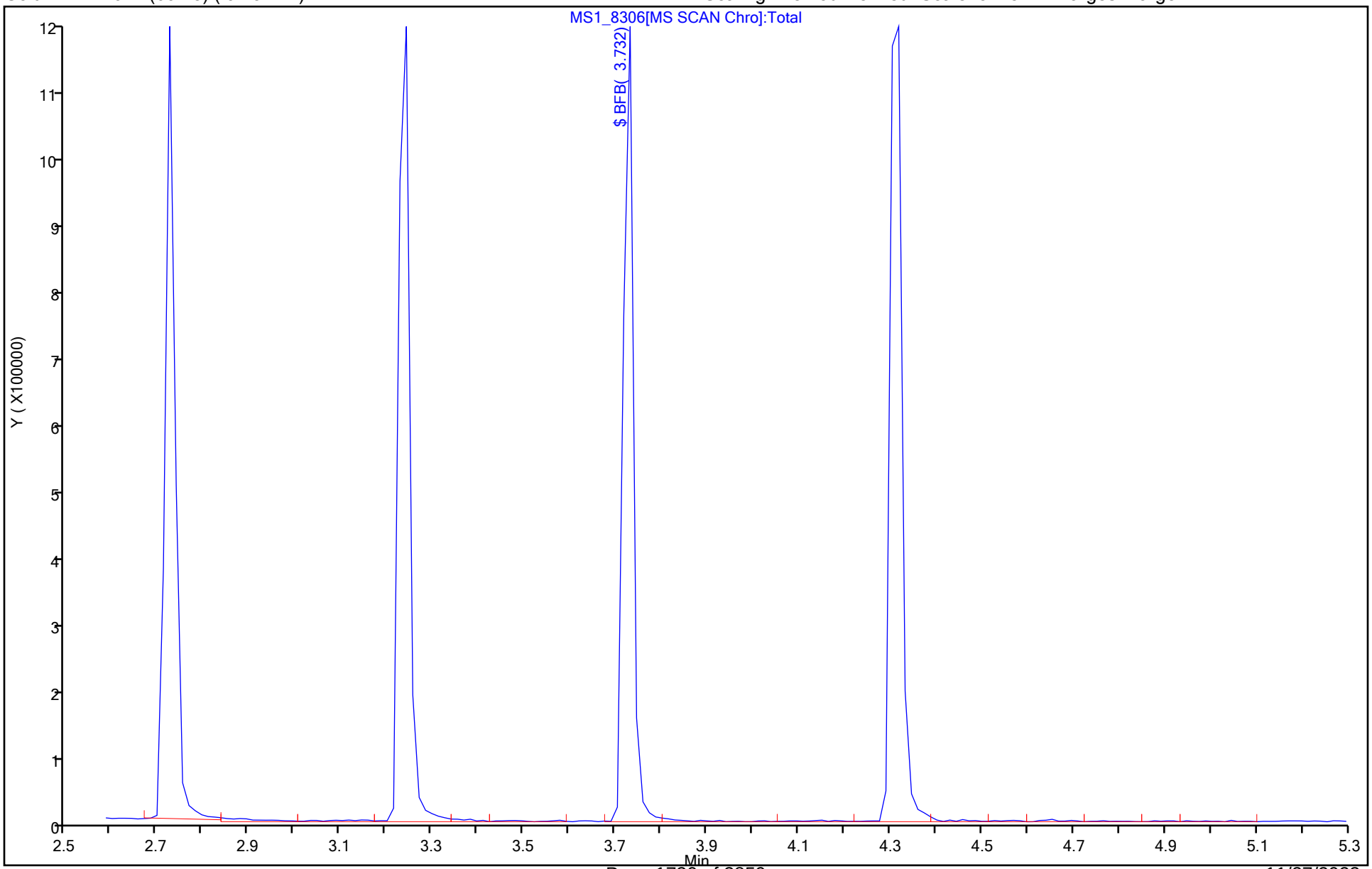
Report Date: 22-Apr-2023 00:29:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8306.D

Injection Date:	21-Apr-2023 07:11:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00502.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 11-Apr-2023 15:41:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: SEIFERTJ Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Apr-2023 13:50:00 Calib Date: 11-Apr-2023 20:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00514.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1602

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.307	3.307	0.000	78	320772	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

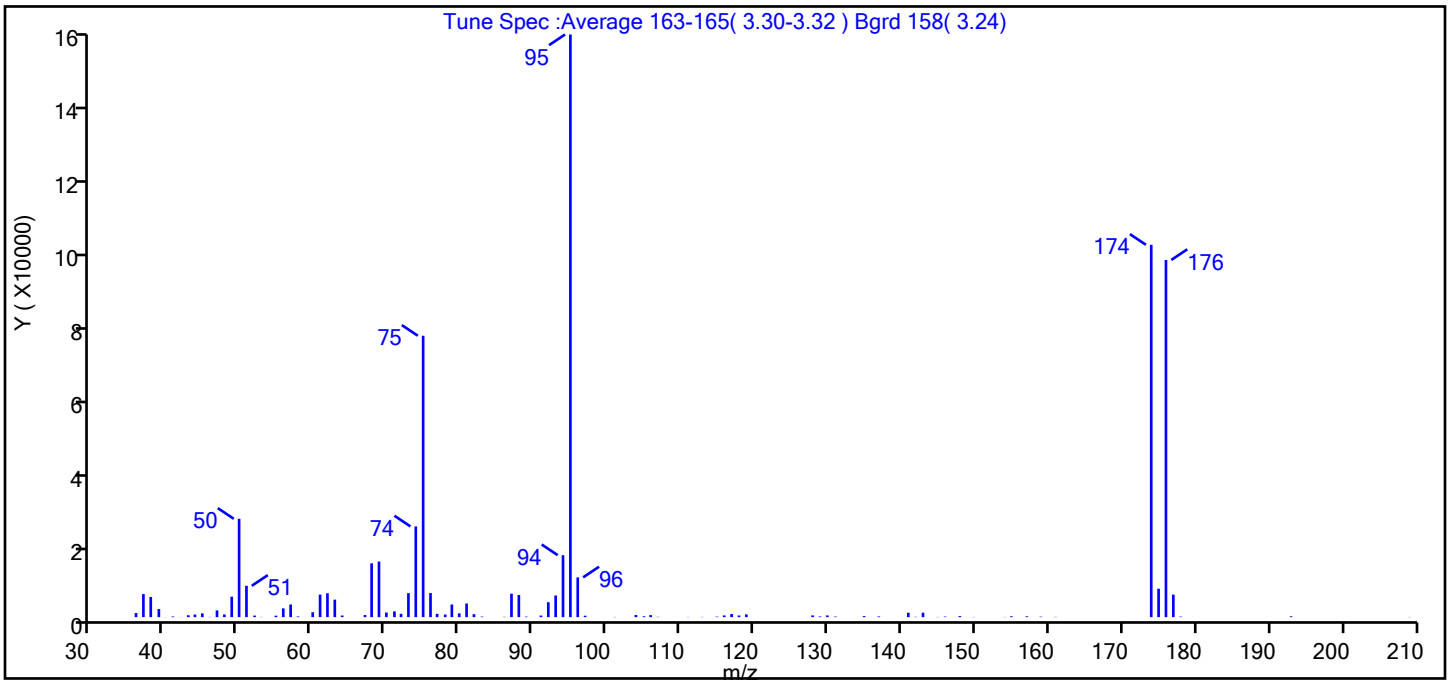
mv-Cent BFB_00005 Amount Added: 2.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00502.D
Injection Date: 11-Apr-2023 15:41:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.9
75	30 to 60% of m/z 95	48.3
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	63.9
175	5 to 9% of m/z 174	4.9 (7.6)
176	Greater than 95% but less than 101% of m/z 174	61.3 (95.9)
177	5 to 9% of m/z 176	3.9 (6.3)

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00502.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 11-Apr-2023 15:41:30
Spectrum: Tune Spec :Average 163-165(3.30-3.32) Bgrd 158(3.24)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1087	61.00	6050	88.00	5943	130.00	453
37.00	6185	62.00	6410	89.00	155	131.00	160
38.00	5407	63.00	4698	91.00	424	135.00	280
39.00	2189	64.00	437	92.00	4002	137.00	192
40.00	33	67.00	569	93.00	5813	141.00	1182
41.00	184	68.00	14450	94.00	16632	142.00	92
42.00	23	69.00	14923	95.00	156352	143.00	1194
43.00	512	70.00	1243	96.00	10672	145.00	58
44.00	702	71.00	1548	97.00	385	146.00	154
45.00	1010	72.00	895	101.00	55	148.00	280
46.00	56	73.00	6435	104.00	574	150.00	52
47.00	1812	74.00	24344	105.00	230	154.00	51
48.00	713	75.00	75512	106.00	544	155.00	237
49.00	5490	76.00	6474	107.00	78	157.00	221
50.00	26392	77.00	896	111.00	53	159.00	127
51.00	8414	78.00	691	113.00	64	161.00	67
52.00	417	79.00	3395	115.00	142	174.00	99920
53.00	55	80.00	1018	116.00	457	175.00	7624
55.00	396	81.00	3661	117.00	837	176.00	95848
56.00	2350	82.00	793	118.00	452	177.00	6050
57.00	3398	83.00	150	119.00	729	178.00	144
58.00	186	86.00	84	128.00	466	193.00	229
60.00	1312	87.00	6296	129.00	187	209.00	50

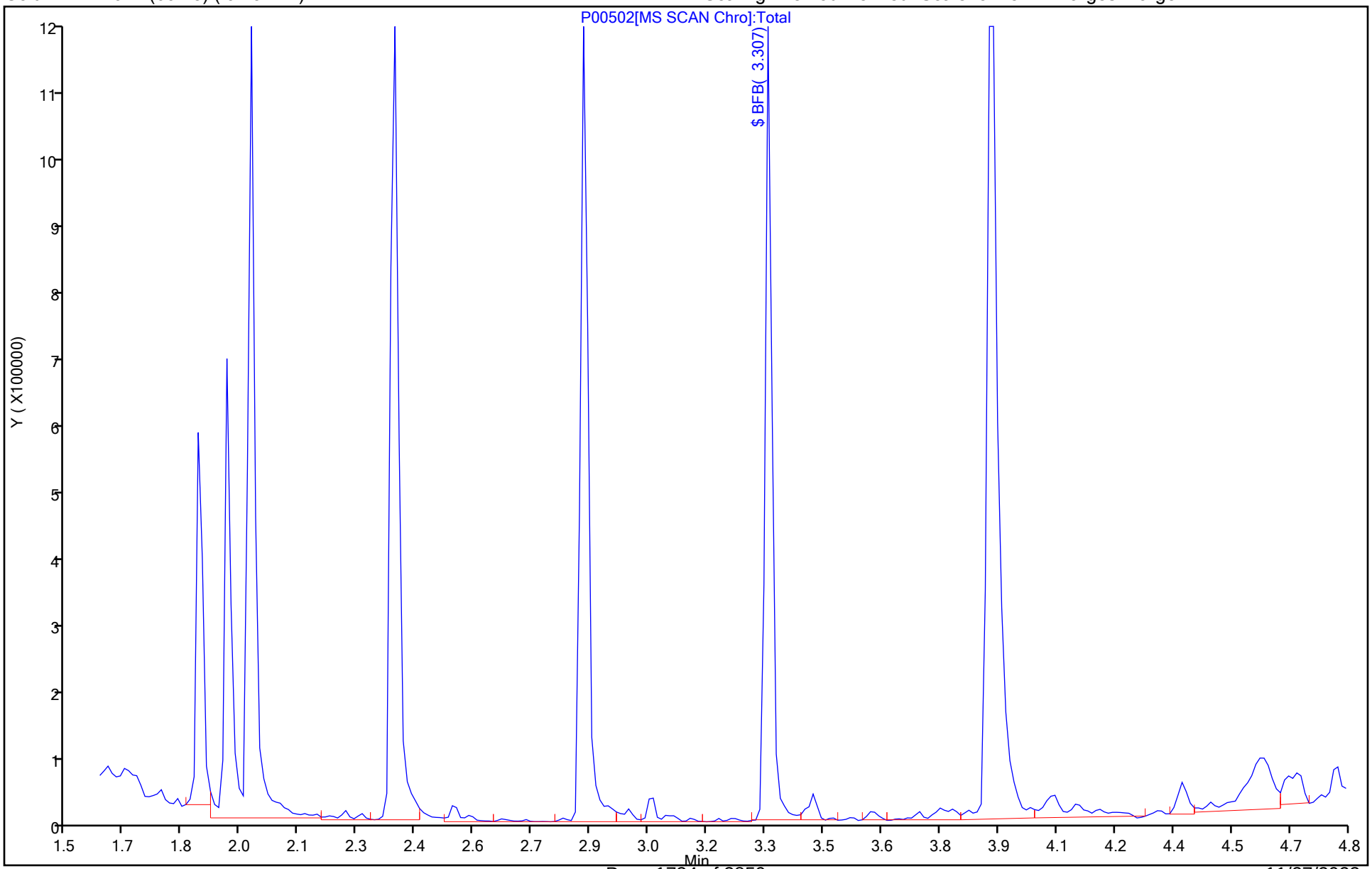
Report Date: 12-Apr-2023 13:50:00 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b\P00502.D

Injection Date:	11-Apr-2023 15:41:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00517.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 12-Apr-2023 08:16:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Apr-2023 11:06:15 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1678

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.308	3.308	0.000	77	320839	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

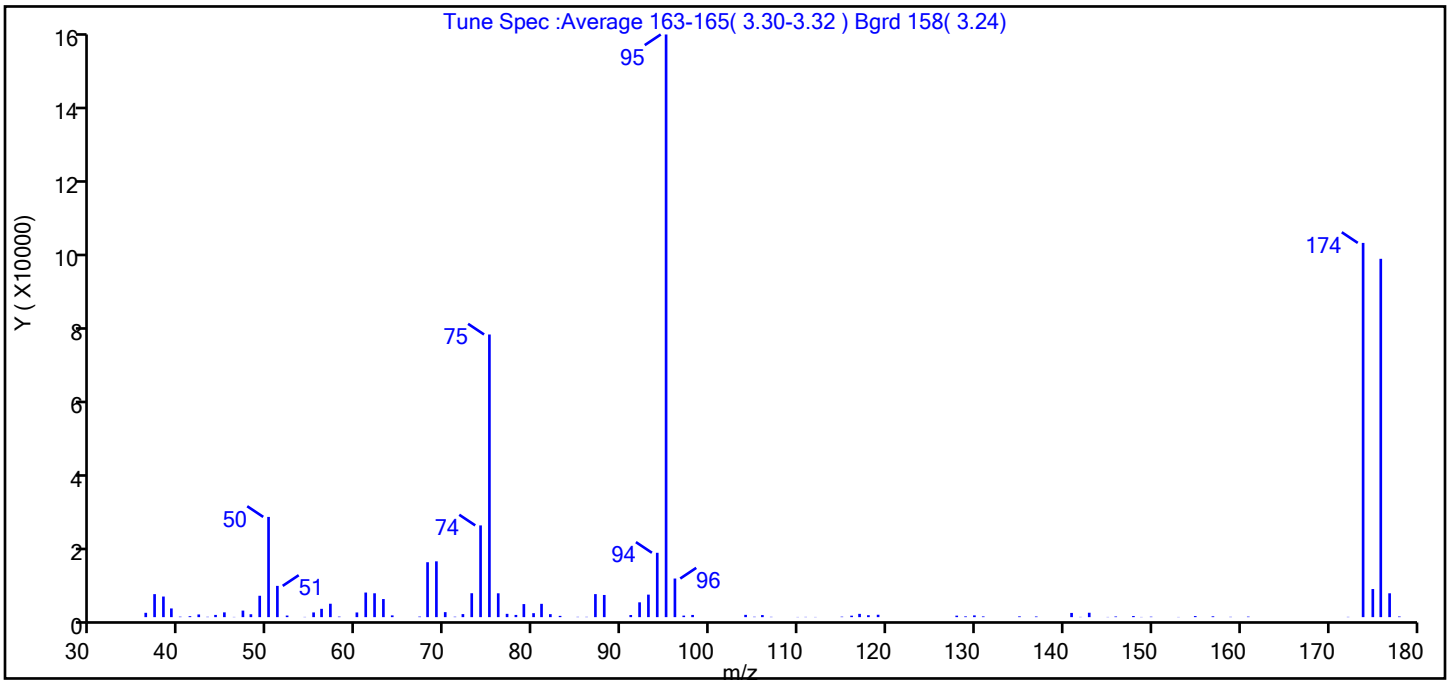
mv-Cent BFB_00005 Amount Added: 2.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00517.D
Injection Date: 12-Apr-2023 08:16:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: COULTERD ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.2
75	30 to 60% of m/z 95	48.5
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	64.2
175	5 to 9% of m/z 174	4.8 (7.5)
176	Greater than 95% but less than 101% of m/z 174	61.5 (95.7)
177	5 to 9% of m/z 176	4.1 (6.7)

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00517.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 12-Apr-2023 08:16:30
Spectrum: Tune Spec :Average 163-165(3.30-3.32) Bgrd 158(3.24)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 93

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1148	62.00	6309	91.00	563	135.00	203
37.00	6086	63.00	4786	92.00	3919	137.00	174
38.00	5450	64.00	462	93.00	5955	141.00	1115
39.00	2302	67.00	144	94.00	17024	142.00	63
40.00	118	68.00	14526	95.00	154112	143.00	1163
41.00	251	69.00	14763	96.00	10212	145.00	53
42.00	709	70.00	1322	97.00	406	146.00	174
43.00	89	71.00	111	98.00	582	148.00	288
44.00	590	72.00	808	104.00	604	149.00	52
45.00	1264	73.00	6326	105.00	103	150.00	120
46.00	58	74.00	24264	106.00	549	153.00	50
47.00	1733	75.00	74760	107.00	79	155.00	284
48.00	762	76.00	6307	110.00	52	157.00	219
49.00	5655	77.00	877	111.00	68	159.00	83
50.00	26512	78.00	585	112.00	52	161.00	139
51.00	8270	79.00	3454	115.00	126	172.00	70
52.00	420	80.00	1048	116.00	389	174.00	98984
54.00	61	81.00	3522	117.00	866	175.00	7437
55.00	1247	82.00	788	118.00	512	176.00	94776
56.00	2200	83.00	337	119.00	634	177.00	6309
57.00	3548	85.00	79	128.00	394	178.00	166
58.00	135	86.00	79	129.00	201		
60.00	1239	87.00	6092	130.00	464		
61.00	6505	88.00	5865	131.00	189		

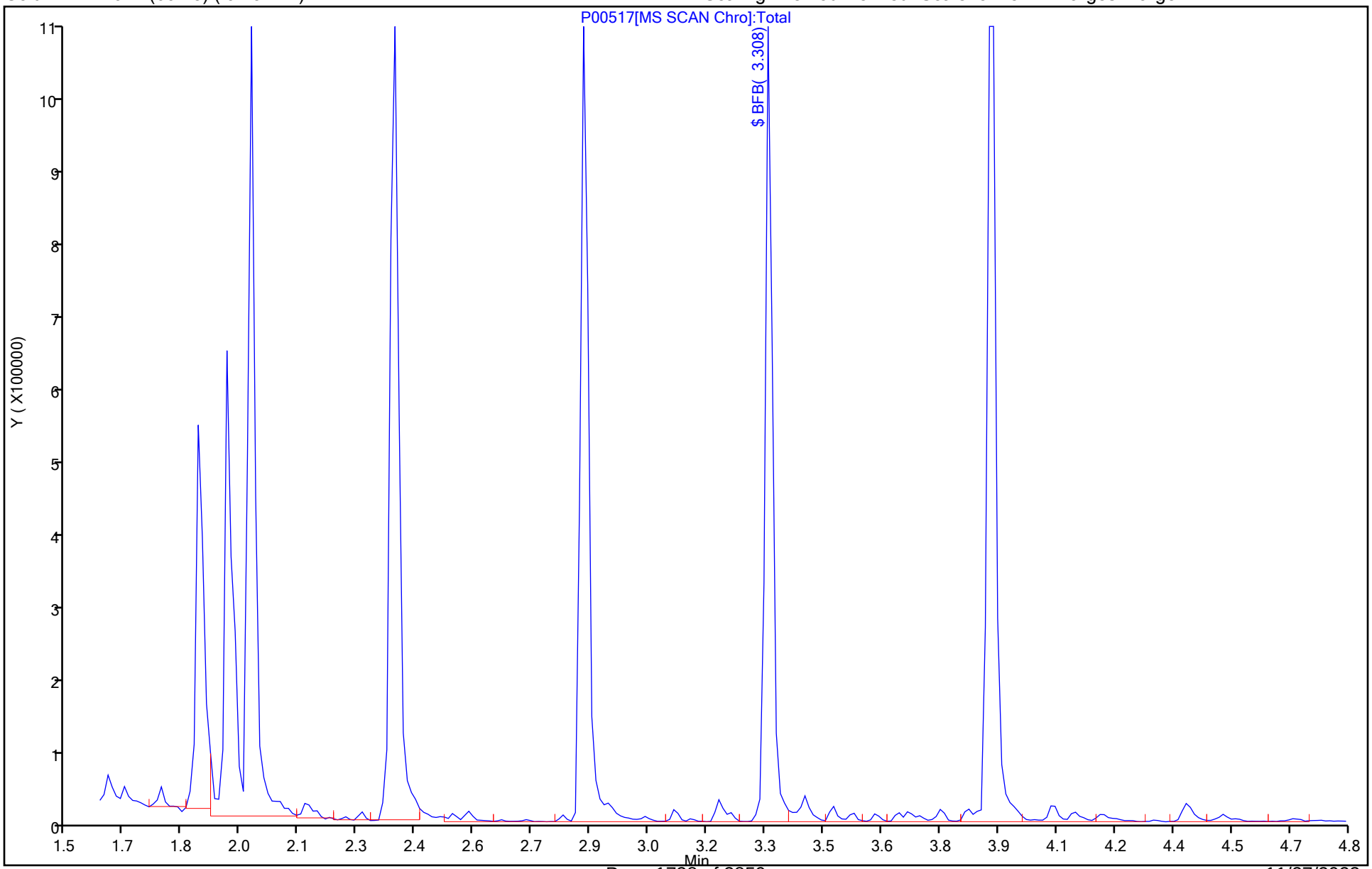
Report Date: 13-Apr-2023 11:06:16 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00517.D

Injection Date:	12-Apr-2023 08:16:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01127P.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	26-Apr-2023 08:20:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	COULTERD	Instrument ID:	VMS_P		
Method:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	27-Apr-2023 12:50:54	Calib Date:	12-Apr-2023 14:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1641				
First Level Reviewer: V8PV		Date:	27-Apr-2023 03:02:01		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	8.365	8.365	0.000	81	638162	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

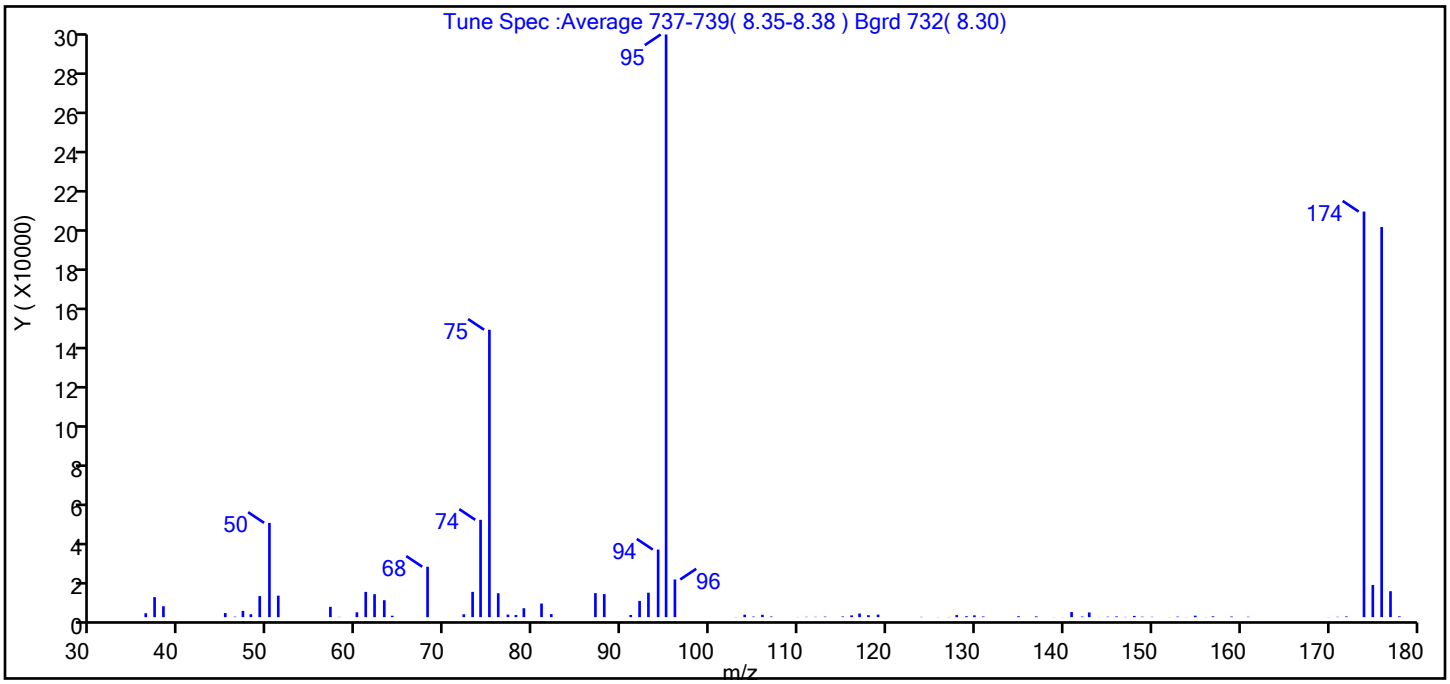
mv-Cent BFB_00005 Amount Added: 2.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01127P.D
Injection Date: 26-Apr-2023 08:20:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: COULTERD ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.2
75	30 to 60% of m/z 95	49.3
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	69.6
175	5 to 9% of m/z 174	5.5 (7.9)
176	Greater than 95% but less than 101% of m/z 174	67.0 (96.2)
177	5 to 9% of m/z 176	4.5 (6.7)

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01127P.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 26-Apr-2023 08:20:30
Spectrum: Tune Spec :Average 737-739(8.35-8.38) Bgrd 732(8.30)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 87

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2010	76.00	12312	113.00	279	146.00	377
37.00	10305	77.00	1319	115.00	349	147.00	130
38.00	5624	78.00	1089	116.00	910	148.00	644
45.00	2114	79.00	4594	117.00	1883	149.00	234
46.00	251	81.00	7013	118.00	1009	150.00	166
47.00	3221	82.00	1562	119.00	1297	152.00	69
48.00	1513	87.00	12353	124.00	145	153.00	262
49.00	10860	88.00	11872	126.00	66	154.00	65
50.00	48520	91.00	1128	127.00	93	155.00	752
51.00	11056	92.00	8364	128.00	1054	156.00	63
57.00	5314	93.00	12575	129.00	480	157.00	421
58.00	140	94.00	34768	130.00	927	159.00	307
60.00	2503	95.00	299840	131.00	342	161.00	207
61.00	12995	96.00	19384	135.00	457	170.00	58
62.00	11809	103.00	81	137.00	413	171.00	170
63.00	8716	104.00	1248	139.00	55	172.00	364
64.00	723	105.00	291	140.00	61	174.00	208704
68.00	25944	106.00	1217	141.00	2612	175.00	16560
72.00	1467	107.00	326	142.00	314	176.00	200768
73.00	13006	110.00	59	143.00	2420	177.00	13352
74.00	50088	111.00	168	144.00	58	178.00	411
75.00	147904	112.00	155	145.00	212		

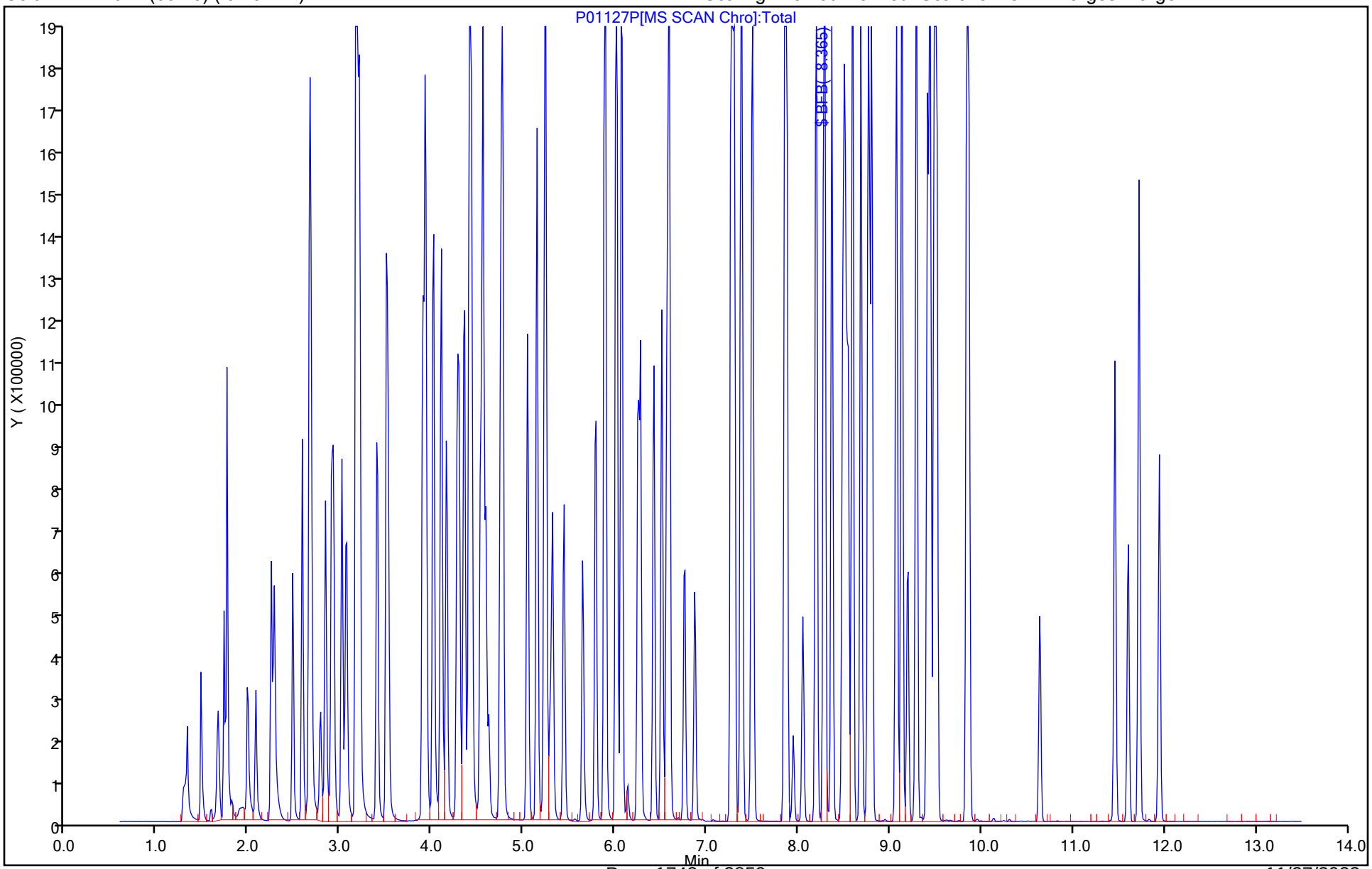
Report Date: 27-Apr-2023 12:50:55 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01127P.D

Injection Date:	26-Apr-2023 08:20:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	22-Oct-2022 11:07:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	2.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	24-Oct-2022 11:52:40	Calib Date:	22-Oct-2022 17:23:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1674				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.547	3.547	0.000	85	446769	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

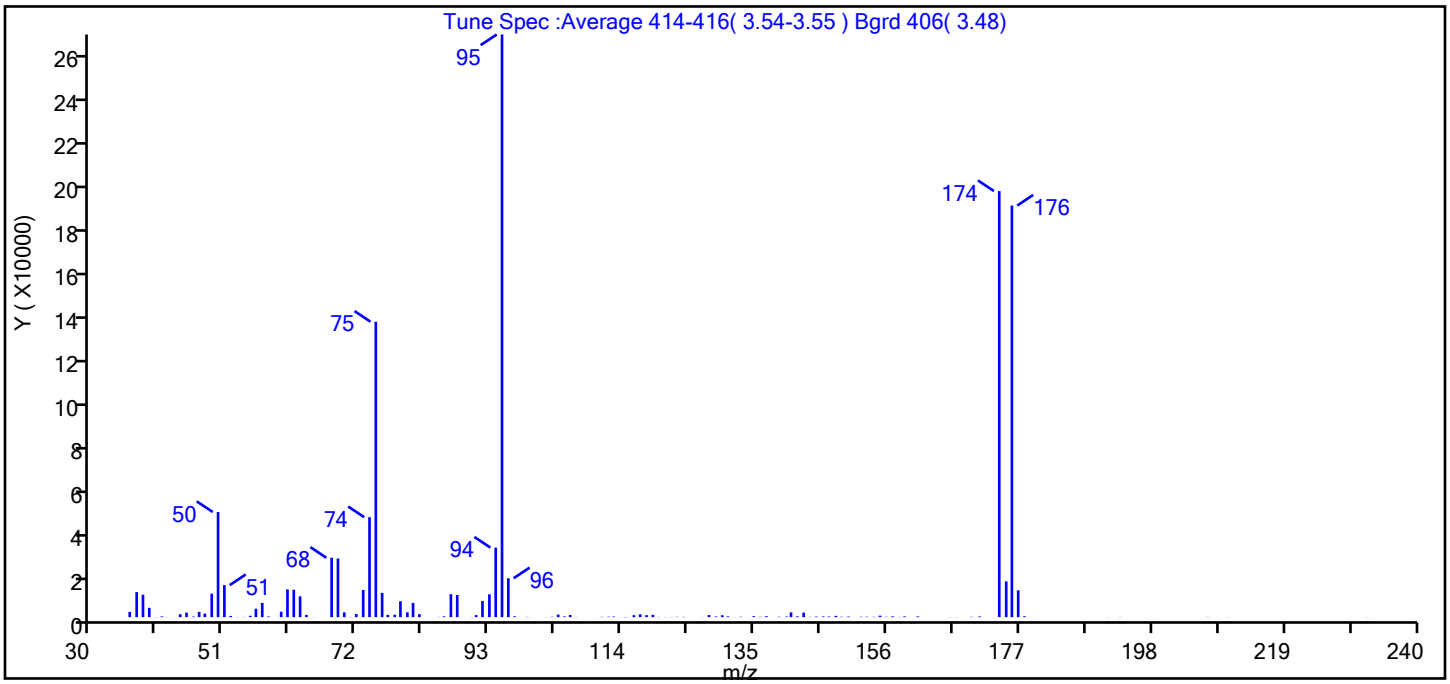
mv-Cent BFB_00004 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D
Injection Date: 22-Oct-2022 11:07:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.0
75	30 to 60% of m/z 95	50.7
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	73.1
175	5 to 9% of m/z 174	6.1 (8.4)
176	Greater than 95% but less than 101% of m/z 174	70.6 (96.6)
177	5 to 9% of m/z 176	4.6 (6.5)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 22-Oct-2022 11:07:30
Spectrum: Tune Spec :Average 414-416(3.54-3.55) Bgrd 406(3.48)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2338	71.00	85	110.00	9	145.00	253
37.00	11173	72.00	1409	111.00	137	146.00	303
38.00	10014	73.00	12114	112.00	193	147.00	279
39.00	4149	74.00	44616	113.00	265	148.00	578
40.00	63	75.00	131840	114.00	64	149.00	166
41.00	336	76.00	10814	115.00	76	150.00	283
42.00	68	77.00	986	116.00	866	152.00	184
44.00	1301	78.00	1056	117.00	1248	153.00	188
45.00	2033	79.00	7105	118.00	904	154.00	142
46.00	259	80.00	2140	119.00	1020	155.00	677
47.00	2358	81.00	6374	120.00	89	156.00	139
48.00	1581	82.00	1331	121.00	78	157.00	357
49.00	10484	84.00	9	122.00	74	158.00	89
50.00	46912	85.00	96	123.00	142	159.00	337
51.00	14286	86.00	353	124.00	142	161.00	342
52.00	543	87.00	10254	127.00	43	166.00	46
53.00	79	88.00	9886	128.00	931	167.00	65
54.00	85	90.00	65	129.00	310	169.00	136
55.00	612	91.00	908	130.00	843	170.00	34
56.00	3738	92.00	7210	131.00	347	171.00	323
57.00	6328	93.00	10187	132.00	35	174.00	190144
58.00	286	94.00	31024	133.00	162	175.00	15946
60.00	2421	95.00	260032	134.00	13	176.00	183680
61.00	12385	96.00	17360	135.00	439	177.00	11982
62.00	12211	97.00	377	136.00	148	178.00	401
63.00	9272	99.00	115	137.00	424	179.00	39
64.00	1004	102.00	39	139.00	187	191.00	40
65.00	52	103.00	154	140.00	264	193.00	80
66.00	14	104.00	1131	141.00	2128	207.00	89
68.00	26504	105.00	328	142.00	354	210.00	45
69.00	26168	106.00	963	143.00	2015	232.00	51
70.00	2145	107.00	82	144.00	127		

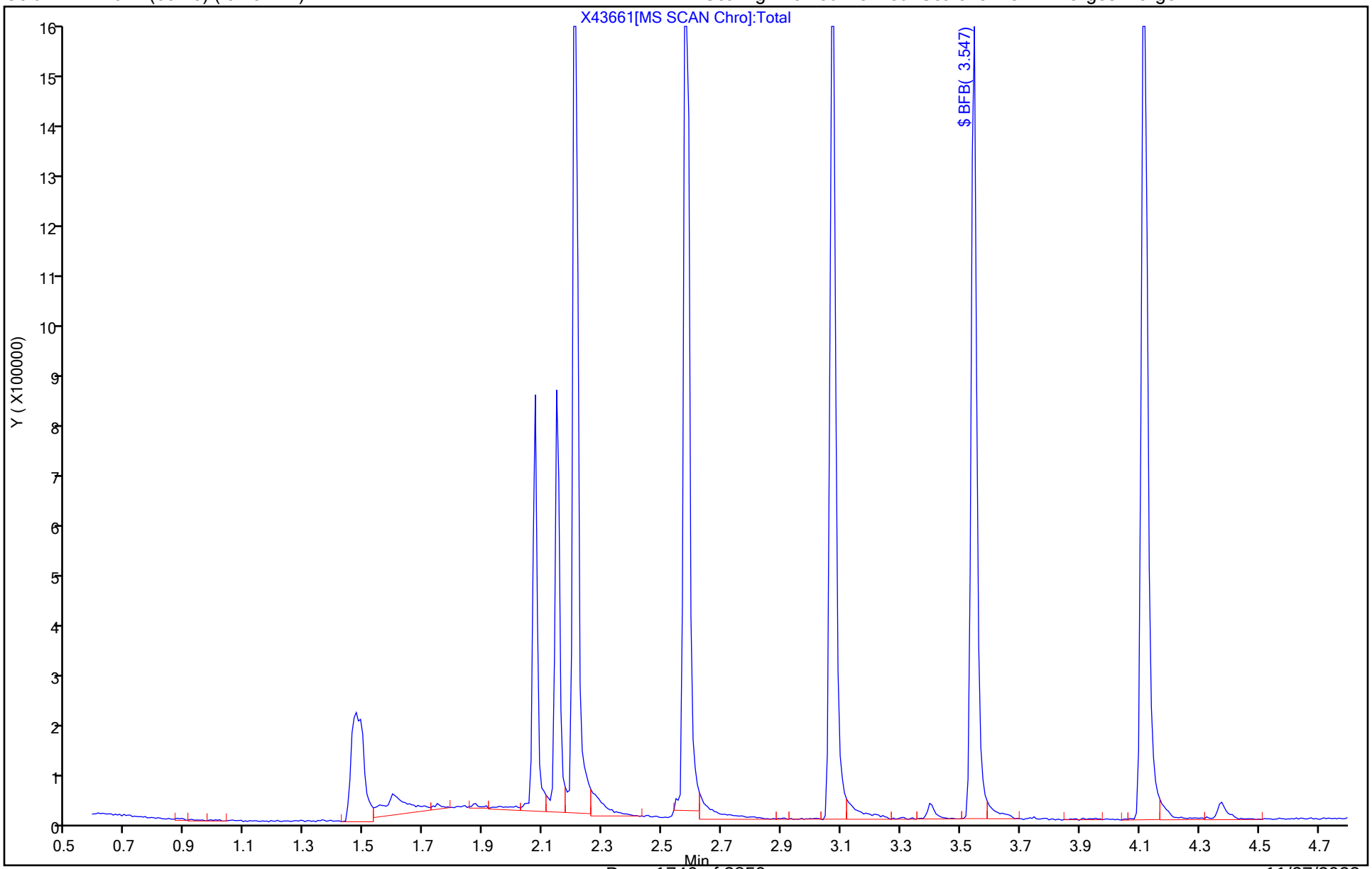
Report Date: 24-Oct-2022 11:52:40 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D

Injection Date:	22-Oct-2022 11:07:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 07-Apr-2023 02:33:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:30:21 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.549	3.549	0.000	88	436891	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

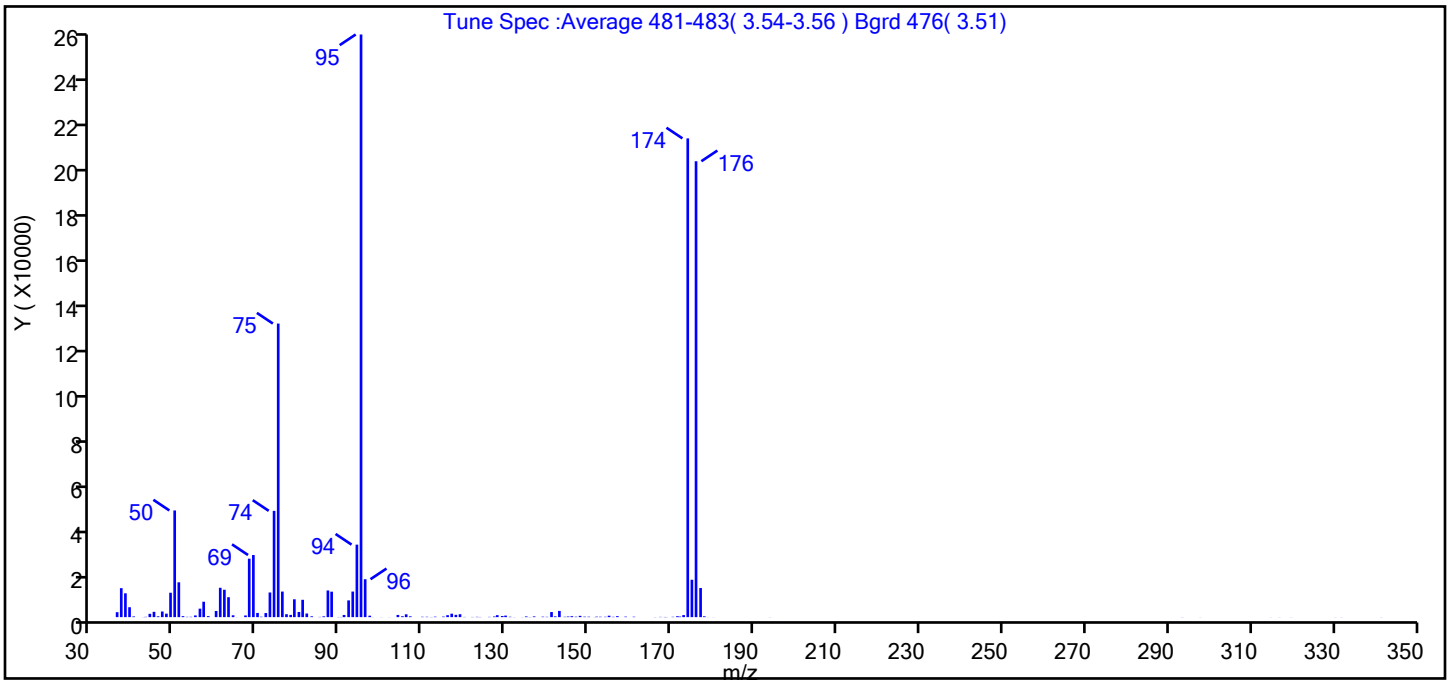
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D
Injection Date: 07-Apr-2023 02:33:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: bj ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.3
75	30 to 60% of m/z 95	50.4
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.4 (0.4)
174	50 to 120% of m/z 95	82.2
175	5 to 9% of m/z 174	6.4 (7.8)
176	Greater than 95% but less than 101% of m/z 174	78.2 (95.2)
177	5 to 9% of m/z 176	5.0 (6.4)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 07-Apr-2023 02:33:30
Spectrum: Tune Spec :Average 481-483(3.54-3.56) Bgrd 476(3.51)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 135

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2183	73.00	10844	112.00	71	151.00	42
37.00	12751	74.00	46752	113.00	209	152.00	212
38.00	10483	75.00	129120	115.00	250	153.00	179
39.00	4364	76.00	11248	116.00	864	154.00	164
40.00	303	77.00	1290	117.00	1527	155.00	634
42.00	35	78.00	990	118.00	1010	156.00	144
43.00	135	79.00	7856	119.00	1286	157.00	426
44.00	1461	80.00	2280	120.00	96	159.00	224
45.00	2340	81.00	7630	122.00	88	161.00	187
46.00	349	82.00	1600	123.00	135	166.00	60
47.00	2484	83.00	355	124.00	78	167.00	112
48.00	1534	85.00	99	126.00	114	168.00	85
49.00	10734	86.00	349	127.00	281	169.00	54
50.00	46920	87.00	11739	128.00	868	170.00	152
51.00	15321	88.00	11195	129.00	489	171.00	397
52.00	439	90.00	73	130.00	677	172.00	234
53.00	138	90.00	80	131.00	175	173.00	897
54.00	148	91.00	957	132.00	45	174.00	210560
55.00	749	92.00	7370	134.00	38	175.00	16448
56.00	3730	93.00	11252	135.00	310	176.00	200512
57.00	6780	94.00	31888	136.00	61	177.00	12803
58.00	445	95.00	256256	137.00	321	178.00	356
60.00	2713	96.00	16680	139.00	204	179.00	36
61.00	12912	97.00	632	140.00	143	180.00	34
62.00	12049	98.00	37	141.00	2240	194.00	35
63.00	8765	100.00	35	142.00	333	293.00	48
64.00	817	102.00	35	143.00	2734	298.00	34
65.00	35	103.00	4	144.00	160	315.00	36
67.00	739	104.00	972	145.00	276	317.00	38
68.00	25712	105.00	392	146.00	414	320.00	36
69.00	27320	106.00	1245	147.00	191	330.00	37
70.00	1848	107.00	349	148.00	572	332.00	38
71.00	183	110.00	166	149.00	207	341.00	39

Report Date: 10-Apr-2023 11:30:21 Chrom Revision: 2.3 16-Mar-2023 15:40:40
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 07-Apr-2023 02:33:30
Spectrum: Tune Spec :Average 481-483(3.54-3.56) Bgrd 476(3.51)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 135

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	1801	111.00	165	150.00	198		

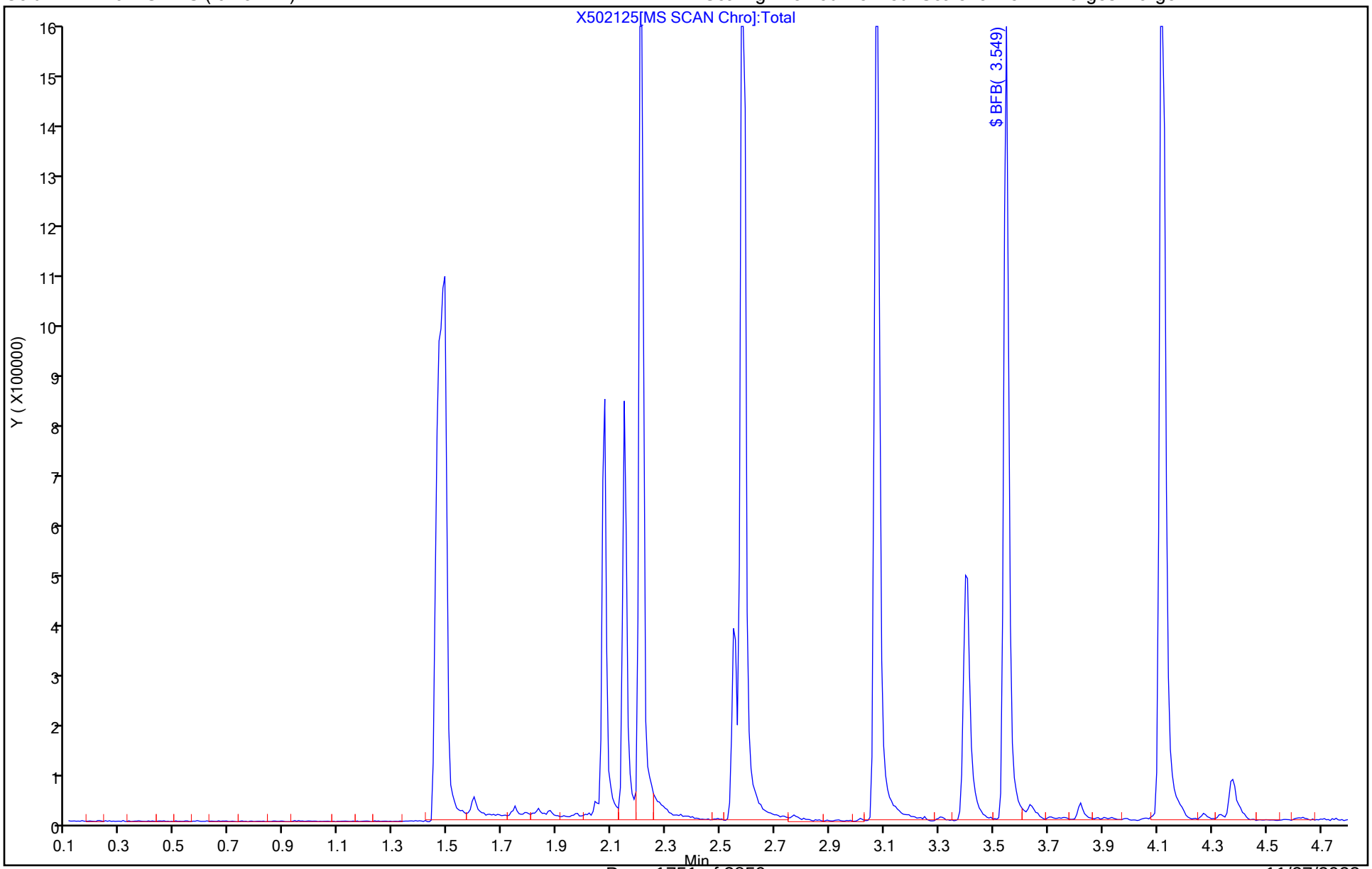
Report Date: 10-Apr-2023 11:30:21 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D

Injection Date:	07-Apr-2023 02:33:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 10-Apr-2023 21:51:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: COULTERD Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 01:28:25 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1663

First Level Reviewer: NNS5 Date: 10-Apr-2023 22:47:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.547	3.547	0.000	0	468110	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

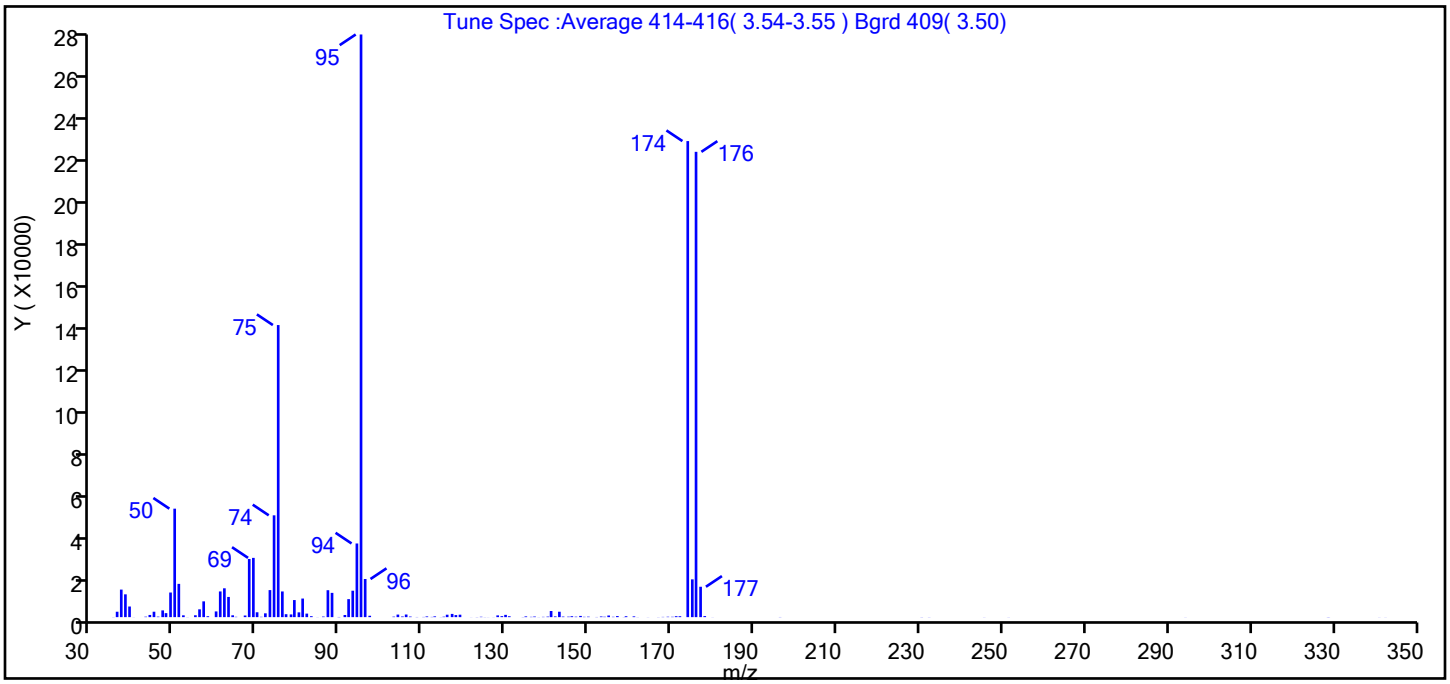
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D
Injection Date: 10-Apr-2023 21:51:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: COULTERD ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.6
75	30 to 60% of m/z 95	50.1
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	81.7
175	5 to 9% of m/z 174	6.5 (7.9)
176	Greater than 95% but less than 101% of m/z 174	79.9 (97.7)
177	5 to 9% of m/z 176	5.2 (6.5)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 10-Apr-2023 21:51:30
Spectrum: Tune Spec :Average 414-416(3.54-3.55) Bgrd 409(3.50)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	54	73.00	12727	114.00	45	153.00	311
36.00	2548	74.00	47920	115.00	215	154.00	191
37.00	12967	75.00	137472	116.00	1145	155.00	768
38.00	10736	76.00	12090	117.00	1522	156.00	163
39.00	5007	77.00	1388	118.00	972	157.00	505
40.00	37	78.00	1277	119.00	1153	158.00	50
42.00	3	79.00	8037	122.00	33	159.00	427
43.00	216	80.00	2250	123.00	61	161.00	363
44.00	1028	81.00	8754	124.00	177	162.00	45
45.00	2555	82.00	1664	125.00	49	164.00	38
46.00	242	83.00	440	126.00	37	167.00	50
47.00	3179	84.00	39	127.00	35	168.00	113
48.00	1892	86.00	272	128.00	822	169.00	192
49.00	11590	87.00	12679	129.00	462	170.00	168
50.00	51056	88.00	11424	130.00	1076	171.00	445
51.00	15660	90.00	78	131.00	416	172.00	430
52.00	853	90.00	40	134.00	65	174.00	224064
53.00	46	91.00	1008	135.00	352	175.00	17784
55.00	887	92.00	8481	136.00	141	176.00	219008
56.00	3683	93.00	12443	137.00	284	177.00	14304
57.00	7433	94.00	34672	138.00	45	178.00	490
58.00	427	95.00	274240	139.00	141	180.00	37
60.00	2694	96.00	17952	140.00	251	196.00	73
61.00	12097	97.00	652	141.00	2888	230.00	62
62.00	13575	103.00	236	142.00	342	232.00	52
63.00	9507	104.00	1207	143.00	2546	246.00	39
64.00	865	105.00	310	144.00	262	251.00	35
65.00	154	106.00	1238	145.00	228	294.00	38
67.00	768	107.00	274	146.00	431	328.00	47
68.00	27376	108.00	76	147.00	216	329.00	45
69.00	27896	110.00	95	148.00	577	341.00	38
70.00	2292	111.00	342	149.00	147	342.00	34
71.00	152	112.00	108	150.00	228		

Report Date: 11-Apr-2023 01:28:25 Chrom Revision: 2.3 16-Mar-2023 15:40:40
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 10-Apr-2023 21:51:30
Spectrum: Tune Spec :Average 414-416(3.54-3.55) Bgrd 409(3.50)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	1795	113.00	368	152.00	79		

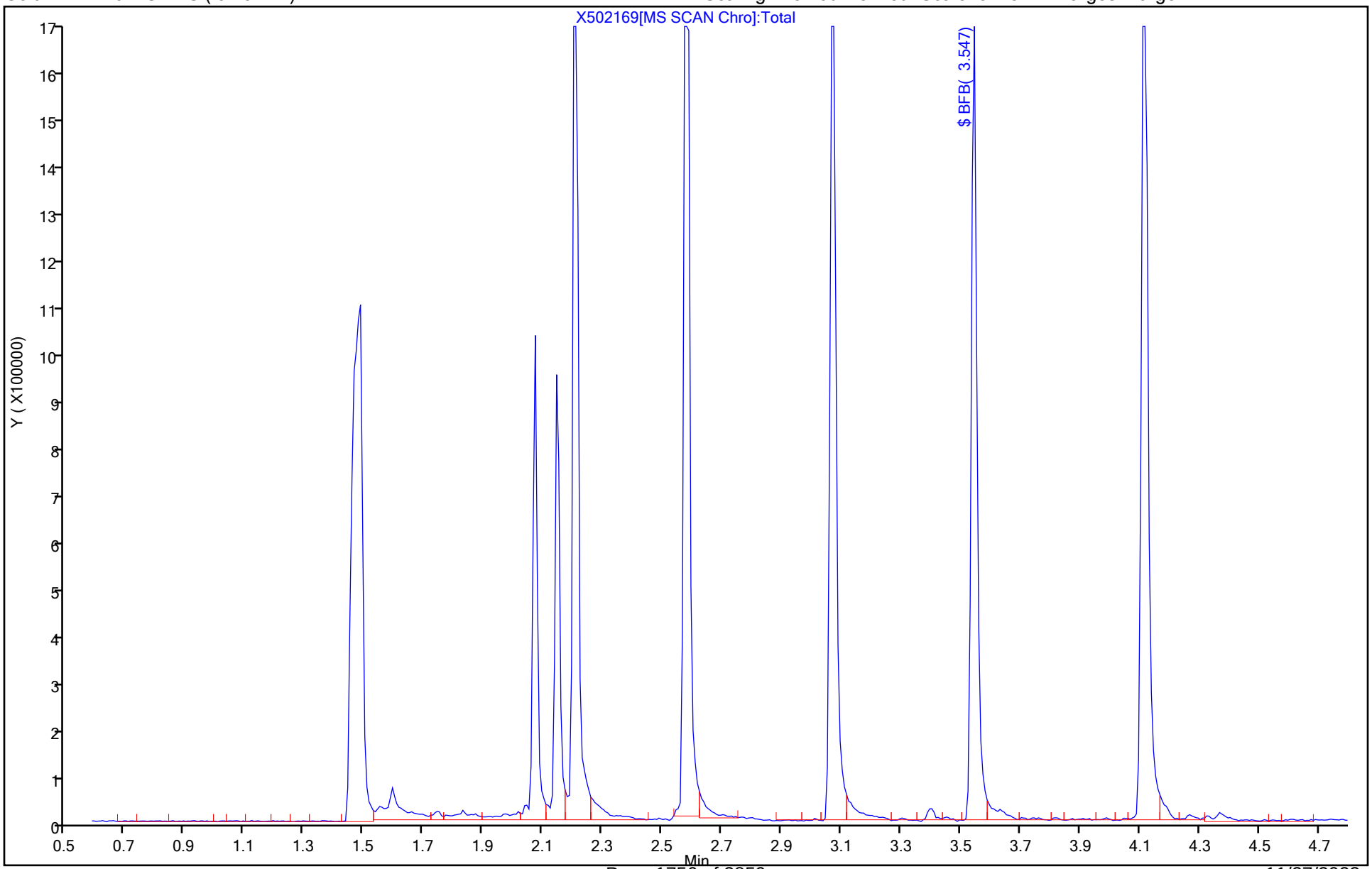
Report Date: 11-Apr-2023 01:28:25 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D

Injection Date:	10-Apr-2023 21:51:30	Instrument ID:	VMS_X4	Operator ID:	COULTERD
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 24-Apr-2023 18:27:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:04 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	8.660	8.660	0.000	86	552208	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

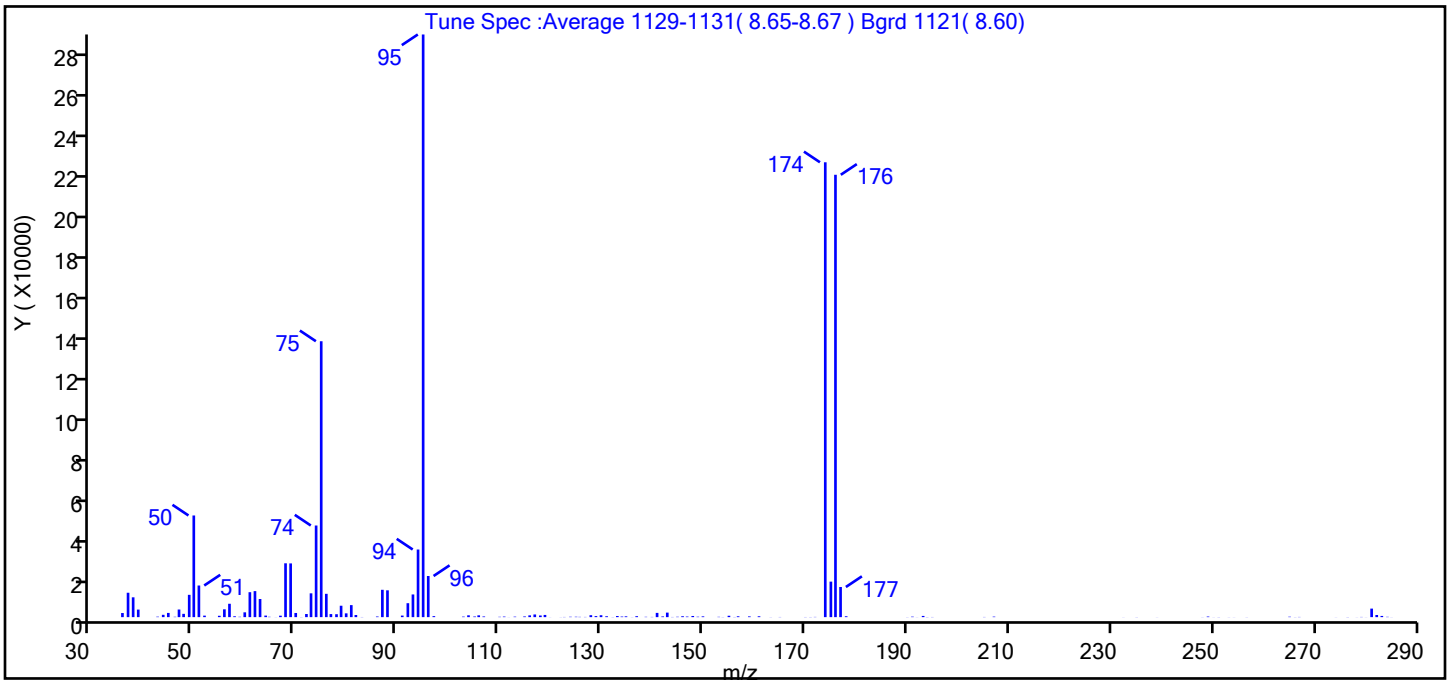
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D
Injection Date: 24-Apr-2023 18:27:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: bj ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.4
75	30 to 60% of m/z 95	47.4
96	5 to 9% of m/z 95	7.1
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	78.1
175	5 to 9% of m/z 174	6.1 (7.8)
176	Greater than 95% but less than 101% of m/z 174	75.9 (97.3)
177	5 to 9% of m/z 176	5.2 (6.8)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 24-Apr-2023 18:27:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 144

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2025	77.00	1511	126.00	136	174.00	223680
37.00	11995	78.00	1446	127.00	101	175.00	17464
38.00	9749	79.00	5613	128.00	951	176.00	217536
39.00	3711	80.00	1866	129.00	517	177.00	14826
43.00	231	81.00	5913	130.00	941	178.00	430
44.00	1151	82.00	1045	131.00	438	190.00	52
45.00	2076	83.00	76	132.00	61	191.00	240
46.00	175	86.00	317	133.00	550	192.00	38
47.00	3751	87.00	13446	134.00	289	193.00	595
48.00	1623	88.00	13190	135.00	397	194.00	70
49.00	10971	91.00	770	136.00	43	195.00	82
50.00	49992	92.00	6861	137.00	475	205.00	91
51.00	15557	93.00	11160	139.00	164	207.00	257
52.00	745	94.00	33256	140.00	105	232.00	34
55.00	670	95.00	286528	141.00	2092	235.00	55
56.00	3856	96.00	20232	142.00	343	239.00	33
57.00	6580	97.00	495	143.00	2226	248.00	44
58.00	428	103.00	260	144.00	88	249.00	294
59.00	176	104.00	901	145.00	187	250.00	36
60.00	2368	105.00	312	146.00	439	251.00	61
61.00	12268	106.00	886	147.00	290	253.00	42
62.00	12798	107.00	334	148.00	567	254.00	34
63.00	8920	110.00	166	149.00	210	257.00	45
64.00	765	111.00	274	150.00	373	265.00	213
65.00	173	112.00	33	153.00	157	266.00	50
66.00	39	113.00	242	154.00	58	267.00	101
67.00	711	115.00	343	155.00	679	274.00	36
68.00	26480	116.00	871	156.00	78	276.00	67
69.00	26424	117.00	1314	157.00	423	278.00	33
70.00	2046	118.00	810	159.00	366	279.00	100
71.00	61	119.00	1083	161.00	423	280.00	33
72.00	1541	120.00	36	163.00	49	281.00	4201
73.00	11713	122.00	42	165.00	84	282.00	1056

Report Date: 25-Apr-2023 04:09:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 24-Apr-2023 18:27:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 144

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	45064	123.00	92	170.00	76	283.00	597
75.00	135680	124.00	190	171.00	74	284.00	158
76.00	11469	125.00	197	172.00	113	285.00	38

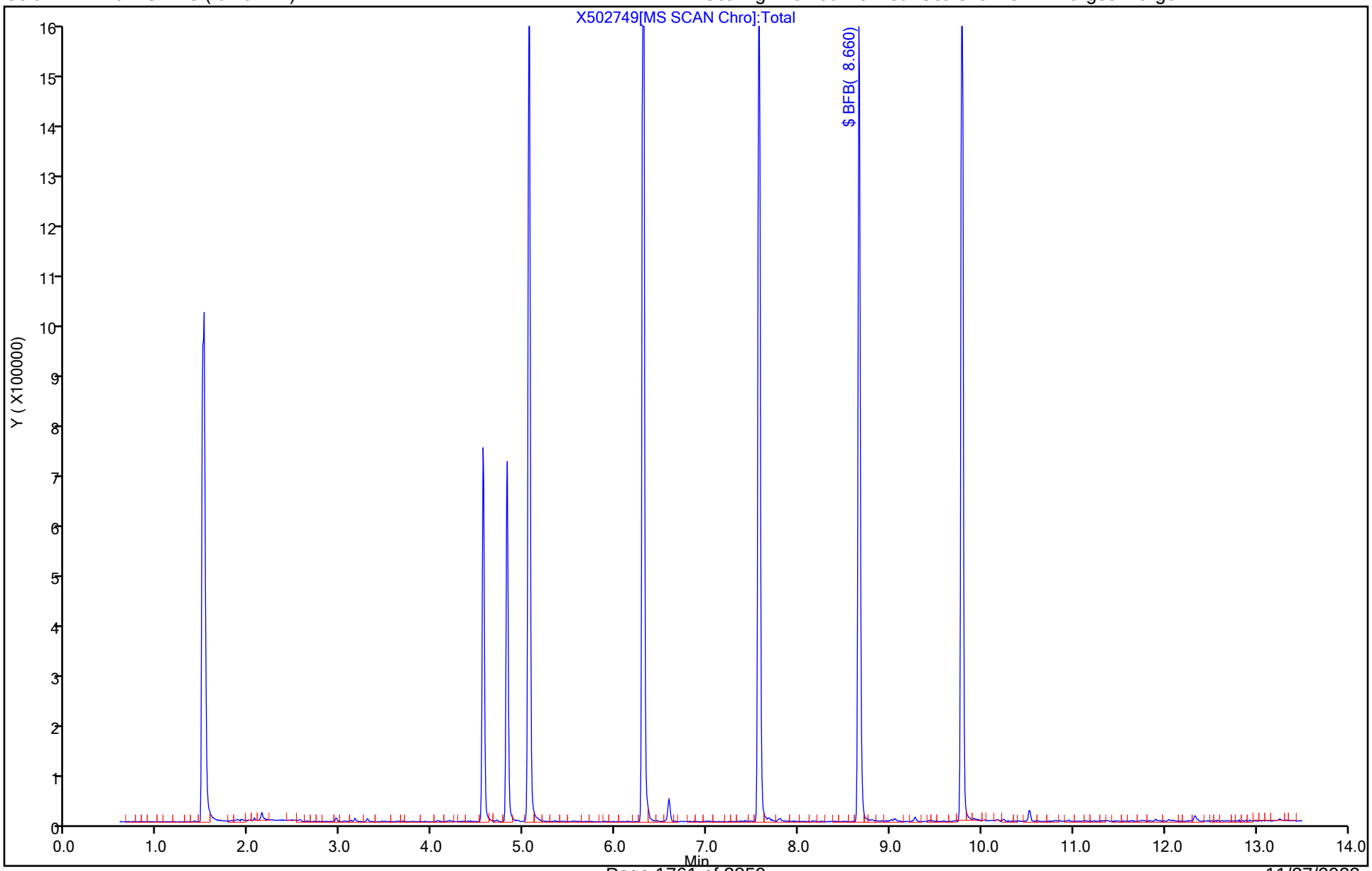
Report Date: 25-Apr-2023 04:09:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502749.D

Injection Date:	24-Apr-2023 18:27:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	26-Apr-2023 09:51:30	ALS Bottle#:	2	Worklist Smp#:	1
Injection Vol:	2.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	26-Apr-2023 11:24:03	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1609				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	8.660	8.660	0.000	86	707095	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

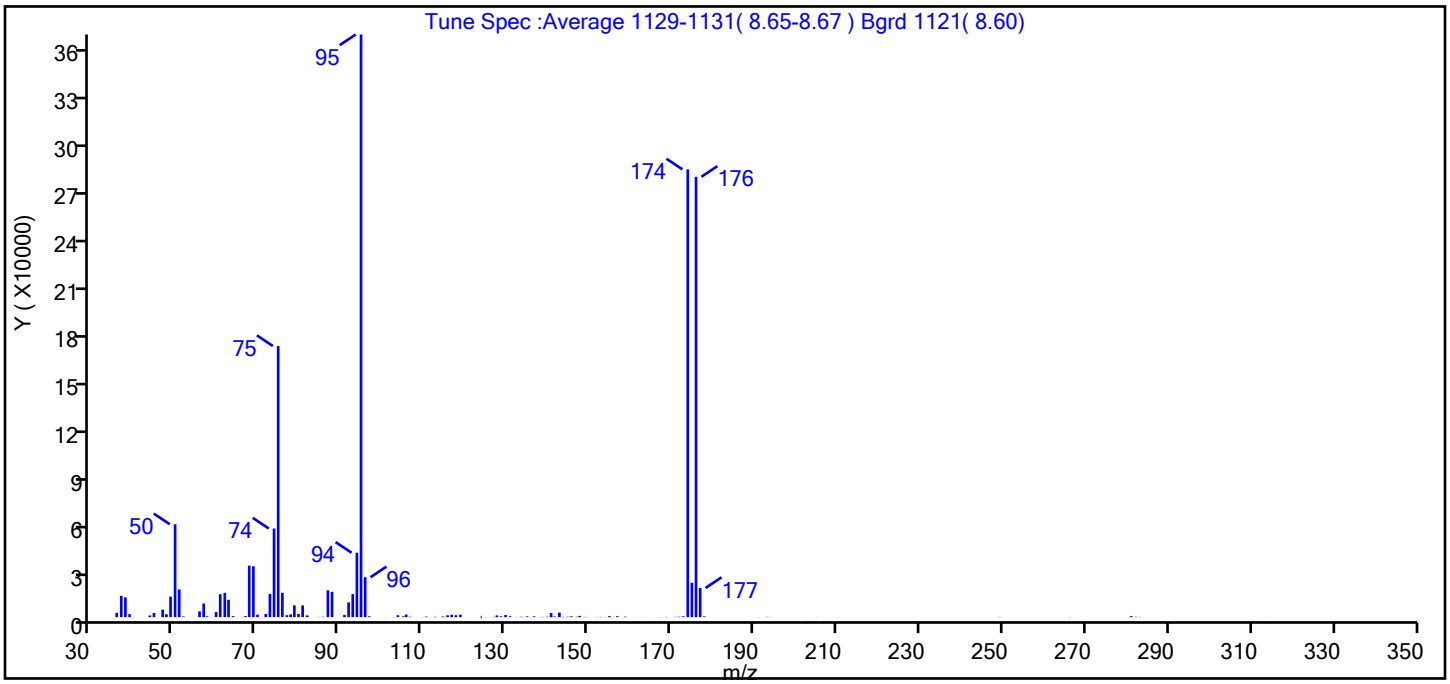
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D
Injection Date: 26-Apr-2023 09:51:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: MED ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.9
75	30 to 60% of m/z 95	46.5
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.1 (0.2)
174	50 to 120% of m/z 95	76.8
175	5 to 9% of m/z 174	5.9 (7.7)
176	Greater than 95% but less than 101% of m/z 174	75.6 (98.3)
177	5 to 9% of m/z 176	5.0 (6.6)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 26-Apr-2023 09:51:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2667	81.00	7372	128.00	1071	170.00	39
37.00	13349	82.00	1089	129.00	523	171.00	168
38.00	12404	85.00	131	130.00	1308	172.00	285
39.00	1857	86.00	230	131.00	559	173.00	496
40.00	101	87.00	16864	132.00	108	174.00	281472
44.00	1038	88.00	15892	134.00	220	175.00	21632
45.00	2583	91.00	1364	134.00	148	176.00	276800
47.00	4739	92.00	9262	135.00	481	177.00	18328
48.00	1850	93.00	14475	136.00	88	178.00	475
49.00	12894	94.00	40480	137.00	499	185.00	39
50.00	58384	95.00	366272	138.00	123	191.00	80
51.00	17392	96.00	25088	139.00	181	193.00	189
52.00	430	97.00	533	140.00	275	194.00	57
56.00	3603	100.00	35	141.00	2631	202.00	55
57.00	8580	101.00	63	142.00	415	205.00	73
58.00	524	103.00	103	143.00	2845	207.00	44
59.00	36	104.00	1201	144.00	194	210.00	54
60.00	3178	105.00	500	145.00	251	218.00	36
61.00	14404	106.00	1618	146.00	519	220.00	34
62.00	15258	107.00	292	147.00	219	234.00	37
63.00	10897	110.00	87	148.00	803	236.00	35
64.00	650	111.00	372	149.00	153	247.00	38
65.00	33	112.00	55	150.00	107	249.00	134
66.00	94	113.00	240	152.00	108	250.00	39
67.00	651	115.00	73	153.00	198	266.00	106
68.00	32368	115.00	396	154.00	112	280.00	86
69.00	32000	116.00	1163	155.00	680	281.00	640
70.00	1559	117.00	1486	156.00	117	282.00	211
72.00	2005	118.00	1224	157.00	587	283.00	164
73.00	14624	119.00	1510	159.00	87	284.00	53
74.00	55712	120.00	74	159.00	307	297.00	44
75.00	170432	122.00	36	161.00	14	312.00	37
76.00	15309	123.00	35	162.00	35	314.00	44

Report Date: 26-Apr-2023 11:24:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 26-Apr-2023 09:51:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	1226	124.00	1	163.00	49	315.00	33
78.00	1752	125.00	34	167.00	100	320.00	37
79.00	7398	126.00	41	168.00	42	323.00	36
80.00	1988	127.00	127	169.00	139	348.00	48

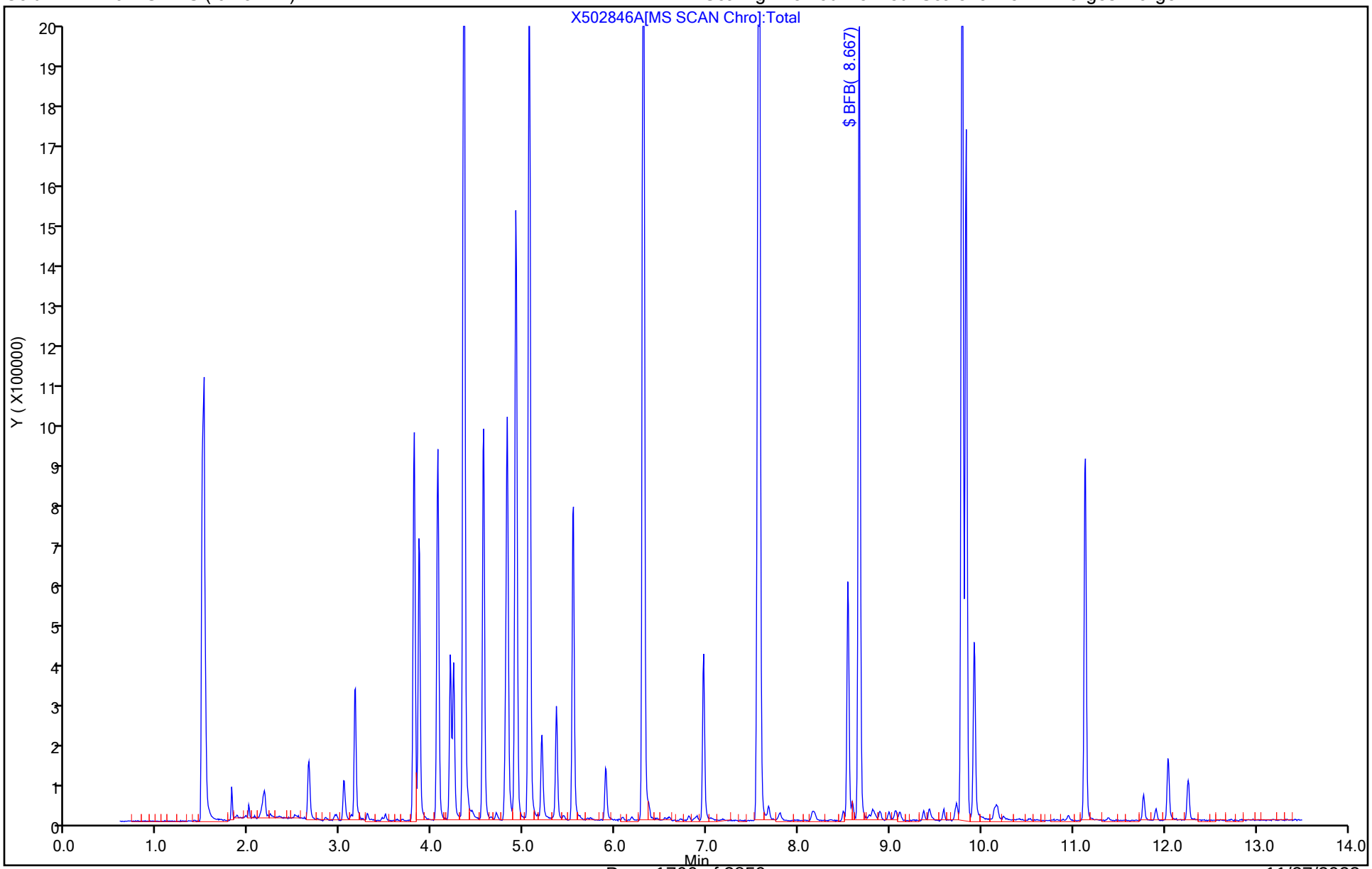
Report Date: 26-Apr-2023 11:24:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D

Injection Date:	26-Apr-2023 09:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 27-Apr-2023 10:51:30 ALS Bottle#: 3 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:02 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:13:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	8.660	8.660	0.000	86	719336	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

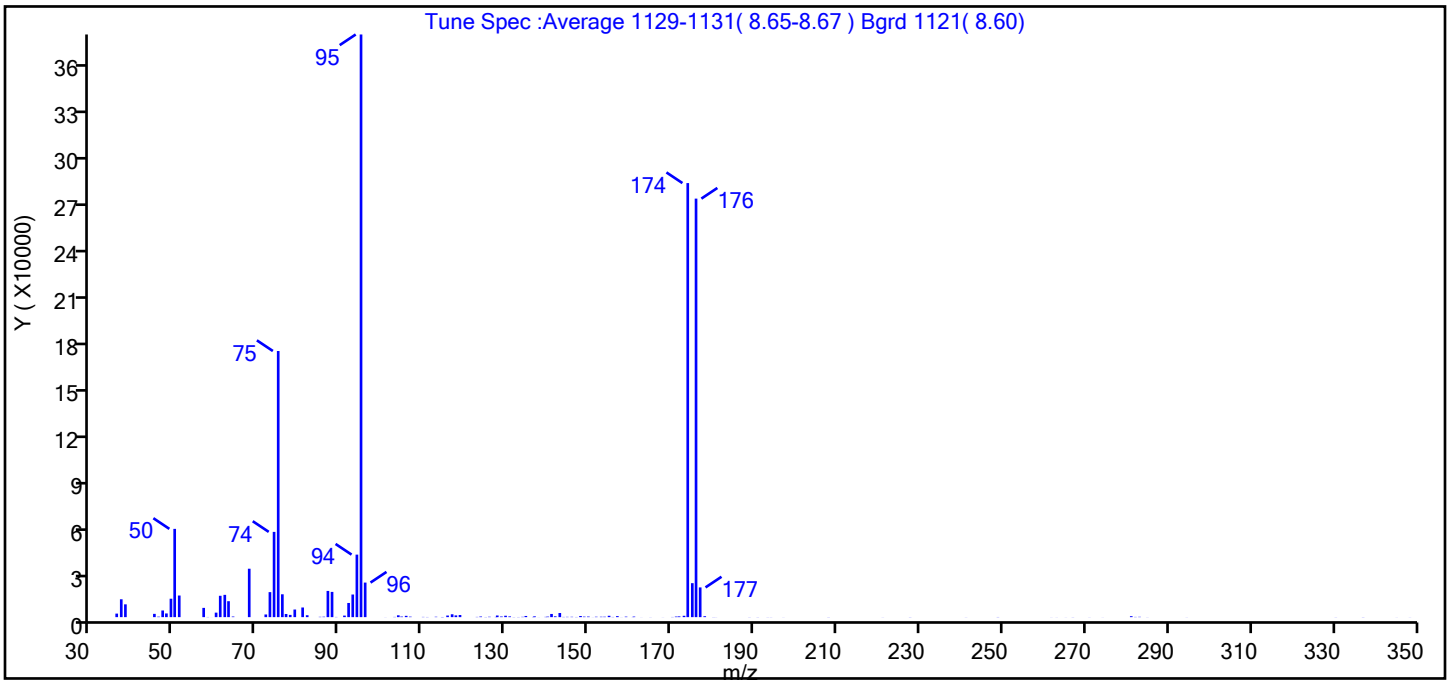
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D
Injection Date: 27-Apr-2023 10:51:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: MED ALS Bottle#: 3 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.1
75	30 to 60% of m/z 95	45.7
96	5 to 9% of m/z 95	5.9
173	Less than 2% of m/z 174	0.2 (0.3)
174	50 to 120% of m/z 95	74.5
175	5 to 9% of m/z 174	5.8 (7.8)
176	Greater than 95% but less than 101% of m/z 174	71.8 (96.4)
177	5 to 9% of m/z 176	5.1 (7.1)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 27-Apr-2023 10:51:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2274	91.00	998	137.00	137	175.00	21832
37.00	11481	92.00	9107	137.00	510	176.00	268928
38.00	8229	93.00	14543	138.00	37	177.00	19104
45.00	2109	94.00	40176	140.00	175	178.00	586
46.00	309	95.00	374400	140.00	335	180.00	66
47.00	4283	96.00	22208	141.00	2046	181.00	46
48.00	2378	101.00	41	142.00	528	189.00	65
49.00	11847	103.00	145	143.00	2663	191.00	65
50.00	56720	104.00	1177	144.00	132	193.00	56
51.00	13895	105.00	376	145.00	193	194.00	53
57.00	5953	106.00	840	146.00	221	197.00	39
58.00	109	107.00	317	147.00	104	208.00	75
59.00	23	110.00	149	148.00	736	221.00	45
60.00	2896	111.00	107	149.00	324	228.00	76
61.00	13723	113.00	256	150.00	374	241.00	50
62.00	14321	115.00	98	151.00	39	249.00	102
63.00	10245	115.00	73	152.00	262	262.00	39
64.00	392	116.00	1029	153.00	262	263.00	38
68.00	31112	117.00	1845	154.00	277	265.00	36
72.00	1719	118.00	1123	155.00	878	267.00	65
73.00	16072	119.00	1370	156.00	123	271.00	48
74.00	54784	123.00	147	157.00	655	274.00	37
75.00	171008	124.00	405	158.00	40	281.00	605
76.00	14688	125.00	100	159.00	327	282.00	142
77.00	2028	126.00	253	161.00	41	283.00	208
78.00	1439	128.00	150	161.00	366	285.00	48
79.00	4895	128.00	1054	163.00	34	294.00	44
81.00	6201	129.00	409	165.00	54	330.00	58
82.00	1222	130.00	901	168.00	40	337.00	77
85.00	202	131.00	478	170.00	114	345.00	37
86.00	278	132.00	83	171.00	368	348.00	44
87.00	16840	133.00	100	172.00	484		
88.00	16223	134.00	199	173.00	864		

Report Date: 27-Apr-2023 12:40:02 Chrom Revision: 2.3 29-Mar-2023 18:39:10
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 27-Apr-2023 10:51:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	125	135.00	753	174.00	278912		

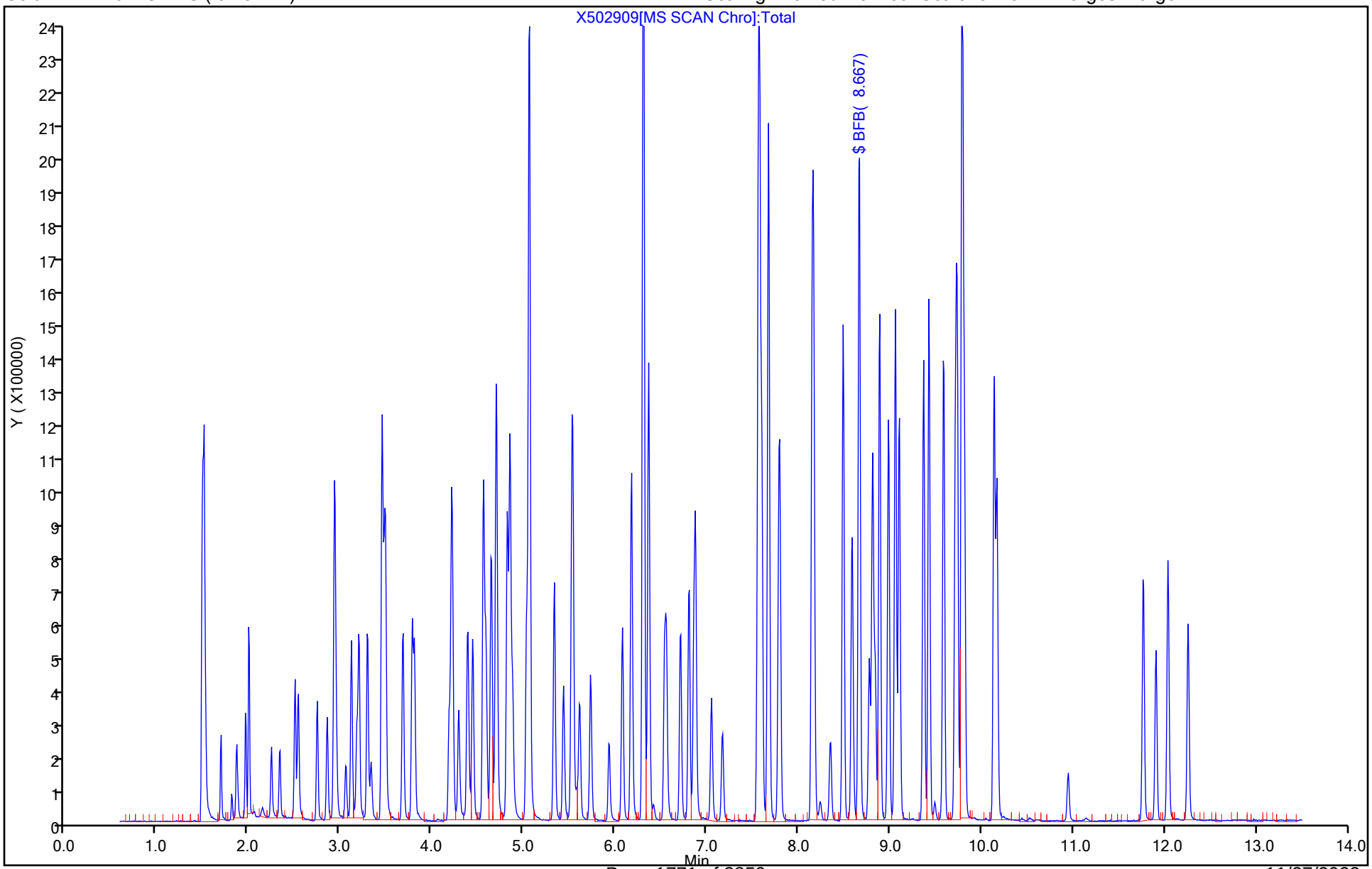
Report Date: 27-Apr-2023 12:40:02 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D

Injection Date:	27-Apr-2023 10:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502939b.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 27-Apr-2023 21:28:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: ccv
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 06:38:16 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1638

First Level Reviewer: V8PV Date: 28-Apr-2023 02:54:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	8.660	8.660	0.000	89	719191	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

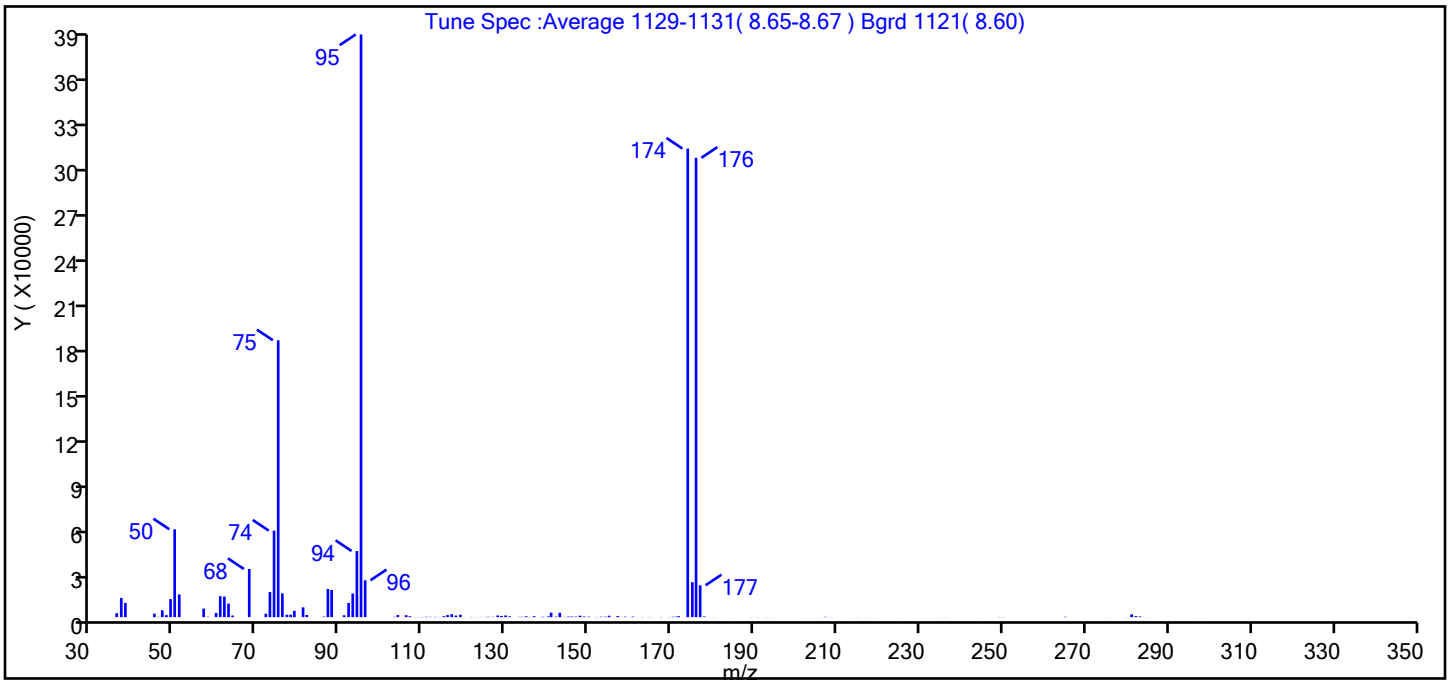
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502939b.D
Injection Date: 27-Apr-2023 21:28:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: bj ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.1
75	30 to 60% of m/z 95	47.5
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	80.4
175	5 to 9% of m/z 174	6.0 (7.5)
176	Greater than 95% but less than 101% of m/z 174	78.8 (98.0)
177	5 to 9% of m/z 176	5.5 (6.9)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502939b.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 27-Apr-2023 21:28:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 146

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2607	96.00	24592	142.00	335	189.00	75
37.00	12838	103.00	213	143.00	2938	190.00	52
38.00	9494	104.00	1396	144.00	138	191.00	45
45.00	2296	106.00	1301	145.00	378	193.00	81
46.00	195	107.00	624	146.00	405	194.00	50
47.00	4623	109.00	96	147.00	346	195.00	34
48.00	1357	110.00	121	148.00	960	203.00	55
49.00	12035	111.00	230	149.00	448	206.00	52
50.00	58560	112.00	209	150.00	326	207.00	211
51.00	15154	113.00	180	152.00	122	208.00	52
57.00	5678	114.00	102	153.00	290	209.00	54
58.00	265	115.00	650	154.00	301	214.00	37
59.00	57	116.00	1399	155.00	948	215.00	44
60.00	2794	117.00	1932	156.00	43	217.00	33
61.00	13988	118.00	1047	157.00	744	218.00	41
62.00	13759	119.00	1593	158.00	33	219.00	38
63.00	9050	120.00	24	159.00	307	225.00	38
64.00	1069	122.00	71	160.00	103	231.00	34
68.00	32104	122.00	78	161.00	328	234.00	43
72.00	2228	123.00	96	162.00	53	235.00	53
73.00	16712	124.00	115	163.00	114	236.00	56
74.00	57696	125.00	142	164.00	36	245.00	33
75.00	184640	126.00	245	165.00	109	249.00	136
76.00	15828	127.00	187	168.00	115	250.00	116
77.00	1636	128.00	1119	169.00	114	265.00	235
78.00	1661	129.00	802	170.00	283	270.00	39
79.00	4246	130.00	1130	171.00	311	276.00	46
81.00	6537	131.00	521	172.00	645	280.00	73
82.00	1469	133.00	215	174.00	312448	281.00	1887
86.00	346	134.00	224	175.00	23304	282.00	710
87.00	18776	135.00	593	176.00	306304	283.00	475
88.00	18136	136.00	109	177.00	21224	284.00	59
91.00	1273	137.00	656	178.00	440	285.00	44

Report Date: 28-Apr-2023 06:38:16 Chrom Revision: 2.3 29-Mar-2023 18:39:10
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502939b.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 27-Apr-2023 21:28:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 146

m/z	Y	m/z	Y	m/z	Y	m/z	Y
92.00	9448	138.00	36	179.00	41	298.00	45
93.00	15753	139.00	244	180.00	52	348.00	60
94.00	44104	140.00	467	181.00	38		
95.00	388544	141.00	2965	184.00	39		

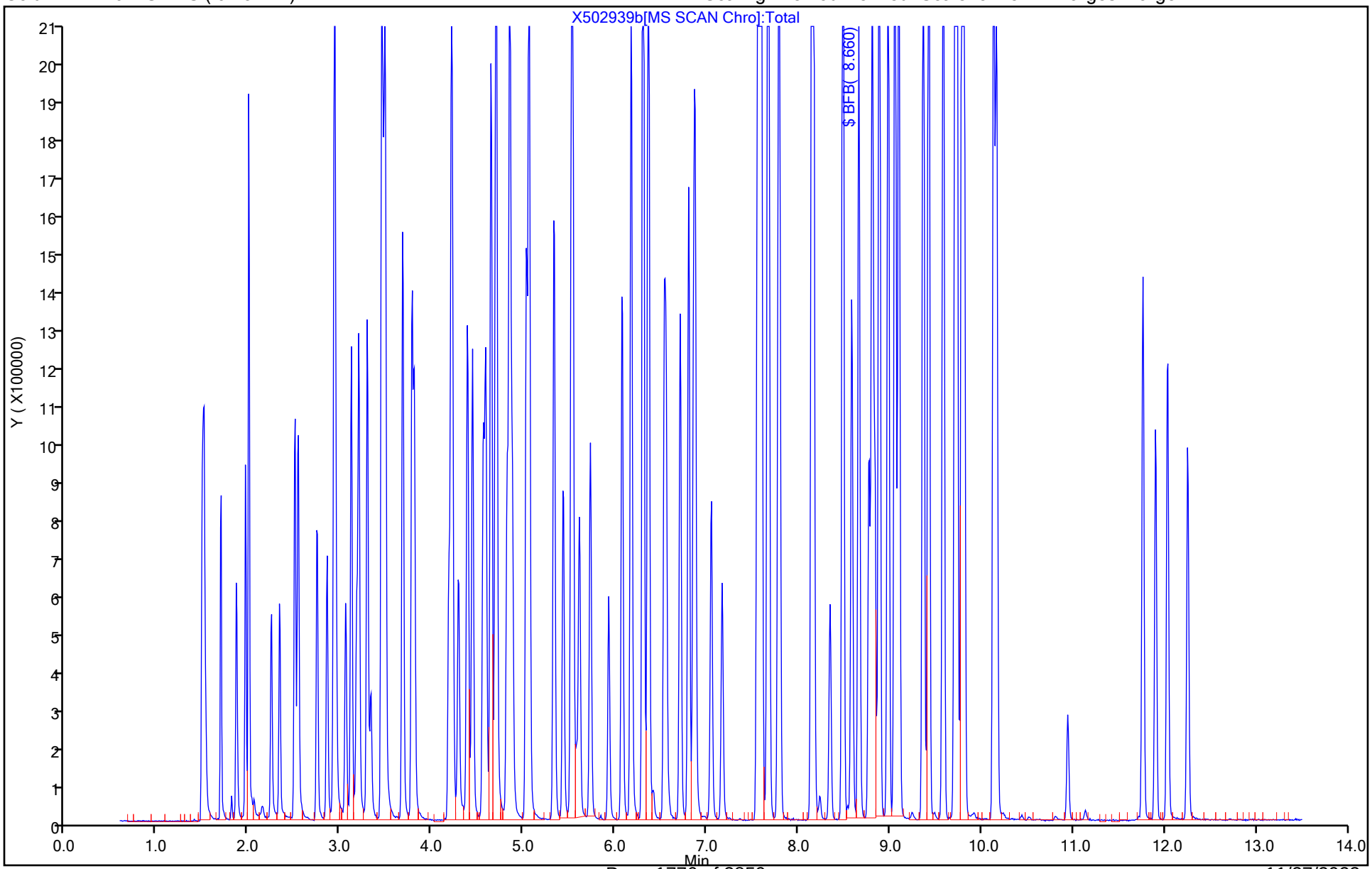
Report Date: 28-Apr-2023 06:38:16 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502939b.D

Injection Date:	27-Apr-2023 21:28:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609561/7

Matrix: Water | Lab File ID: MS1_8312.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 09:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609561/7

Matrix: Water | Lab File ID: MS1_8312.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 09:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609561/7

Matrix: Water | Lab File ID: MS1_8312.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 09:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	107		77-120
2037-26-5	Toluene-d8 (Surr)	107		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8312.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 21-Apr-2023 09:22:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:46 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: AF7X Date: 21-Apr-2023 10:55:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	97	1001538	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	238104	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.045	11.059	-0.014	98	383454	50.0	50.0	
* 4 Fluorobenzene (IS)	96		0.000					ND	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	254941	50.0	53.5	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	363882	50.0	56.3	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1088305	50.0	53.3	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	389200	50.0	51.7	
$ 9 Trifluorotoluene (Surr)	1		3.543					ND	
$ 10 BFB	95		3.732					ND	
11 Dichlorodifluoromethane	85		1.813					ND	
12 Chloromethane	50		2.009					ND	
13 Vinyl chloride	62		2.135					ND	
14 Ethylene oxide	43		2.260					ND	7
15 Bromomethane	94		2.498					ND	
16 Chloroethane	64		2.623					ND	
17 Dichlorofluoromethane	67		2.861					ND	
18 Trichlorofluoromethane	101		2.889					ND	
19 Ethanol	45		3.070					ND	
20 Ethyl ether	59		3.182					ND	
21 Propene oxide	58		3.238					ND	
22 Acrolein	56		3.322					ND	U
23 1,1-Dichloroethene	96		3.420					ND	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.420					ND	
25 Acetone	43	3.461	3.448	0.013	97	4006		0.4080	
26 Iodomethane	142		3.559					ND	
27 Isopropyl alcohol	45		3.573					ND	U
28 Carbon disulfide	76		3.629					ND	U
29 Acetonitrile	41	3.727	3.727	0.000	97	4412		5.50	
30 Methyl acetate	43		3.755					ND	
31 3-Chloro-1-propene	41		3.769					ND	7
32 Methylene Chloride	84		3.894					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 2-Methyl-2-propanol	59		3.964					ND	
34 Acrylonitrile	53		4.104					ND	
35 Methyl tert-butyl ether	73		4.132					ND	
36 trans-1,2-Dichloroethene	96		4.132					ND	
38 Chlorotrifluoroethene	116		4.248					ND	
37 Hexane	57		4.383					ND	
43 1,2-Dichloro-1,1,2,2-tetrafluoro	85		4.472					ND	
39 Vinyl acetate	43		4.523					ND	
40 1,1-Dichloroethane	63		4.537					ND	
41 Isopropyl ether	87		4.551					ND	
42 2-Chloro-1,3-butadiene	53		4.593					ND	
45 2-Chloro-1,1,1-Trifluoroethane	118		4.737					ND	
44 Tert-butyl ethyl ether	59		4.872					ND	
46 2-Butanone (MEK)	43		5.012					ND	
47 Ethyl acetate	43		5.040					ND	7
49 2,2-Dichloropropane	77		5.040					ND	
48 cis-1,2-Dichloroethene	96		5.040					ND	
50 Propionitrile	54		5.081					ND	
51 sec-Butyl Alcohol	45		5.165					ND	
52 Methacrylonitrile	41		5.207					ND	
53 Chlorobromomethane	128		5.249					ND	
54 Tetrahydrofuran	42		5.249					ND	
55 Chloroform	83		5.319					ND	
56 1,1,1-Trichloroethane	97		5.473					ND	
61 1,2-Dichloro-1,1,2-trifluoroetha	117		5.505					ND	
62 1,1,1-Trifluoro-2,2-dichloroetha	83		5.533					ND	
57 Cyclohexane	56		5.542					ND	
58 1,1-Dichloropropene	75		5.612					ND	
59 Carbon tetrachloride	117		5.612					ND	
60 Isobutyl alcohol	41		5.654					ND	
63 Benzene	78		5.780					ND	
64 1,2-Dichloroethane	62		5.822					ND	
65 Tert-amyl methyl ether	73		5.878					ND	
66 n-Heptane	43		6.003					ND	U
67 n-Butanol	56		6.227					ND	
68 Trichloroethene	95		6.339					ND	
69 2-Pentanone	43		6.478					ND	
70 Methylcyclohexane	55		6.548					ND	
71 1,2-Dichloropropane	63		6.576					ND	
72 Methyl methacrylate	100		6.590					ND	
73 1,4-Dioxane	88		6.632					ND	
74 Dibromomethane	93		6.660					ND	
75 Dichlorobromomethane	83		6.799					ND	
76 2-Nitropropane	41		6.995					ND	U
77 2-Chloroethyl vinyl ether	63		7.023					ND	
78 cis-1,3-Dichloropropene	75		7.176					ND	
80 2,2-Dimethylpentane	57		7.278					ND	
79 4-Methyl-2-pentanone (MIBK)	43		7.288					ND	
81 2,4-Dimethylpentane	43		7.292					ND	
82 Toluene	91		7.484					ND	
83 2,2,3-Trimethylbutane	57		7.502					ND	
84 trans-1,3-Dichloropropene	75		7.679					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
86 3,3-Dimethylpentane	43		7.682					ND	
85 Ethyl methacrylate	69		7.707					ND	
88 2-Methylhexane	43		7.810					ND	
87 1,1,2-Trichloroethane	97		7.861					ND	
92 3-Methylhexane	43		7.903					ND	
93 2,3-Dimethylpentane	56		7.949					ND	
89 Tetrachloroethene	164		7.959					ND	
90 1,3-Dichloropropane	76		8.014					ND	
91 2-Hexanone	43		8.042					ND	
97 3-Ethylpentane	43		8.214					ND	
95 Chlorodibromomethane	129		8.224					ND	
94 Tetrahydrothiophene	60		8.224					ND	
96 Ethylene Dibromide	107		8.350					ND	
98 1-Chlorohexane	91		8.755					ND	U
99 Chlorobenzene	112		8.797					ND	
100 1,1,1,2-Tetrachloroethane	131		8.880					ND	
101 Ethylbenzene	106		8.880					ND	
102 m-Xylene & p-Xylene	106		9.006					ND	
103 o-Xylene	106		9.369					ND	
104 Styrene	104		9.383					ND	
105 Dimethyl disulfide	94		9.388					ND	
106 Bromoform	173		9.579					ND	
107 Isopropylbenzene	105		9.718					ND	
108 cis-1,4-Dichloro-2-butene	53		9.774					ND	
109 Cyclohexanone	55		9.830					ND	U
110 1,1,2,2-Tetrachloroethane	83		10.026					ND	
111 Bromobenzene	156		10.054					ND	
112 trans-1,4-Dichloro-2-butene	53		10.054					ND	
113 1,2,3-Trichloropropane	110		10.081					ND	
114 N-Propylbenzene	120		10.137					ND	
115 2-Chlorotoluene	126		10.235					ND	
116 1,3,5-Trimethylbenzene	105		10.305					ND	
117 4-Chlorotoluene	126		10.347					ND	
118 tert-Butylbenzene	119		10.626					ND	
119 1,2,4-Trimethylbenzene	105		10.682					ND	
120 sec-Butylbenzene	134		10.850					ND	
121 1,3-Dichlorobenzene	146		10.975					ND	
122 4-Isopropyltoluene	119		10.989					ND	
123 1,4-Dichlorobenzene	146		11.073					ND	
124 1,2,3-Trimethylbenzene	105		11.101					ND	
126 Pentachloroethane	167		11.283					ND	
125 n-Butylbenzene	91		11.408					ND	
127 1,2-Dichlorobenzene	146		11.436					ND	
128 1,2-Dibromo-3-Chloropropane	157		12.232					ND	
129 1,3,5-Trichlorobenzene	180		12.414					ND	
130 1,2,4-Trichlorobenzene	180		13.056					ND	
131 Hexachlorobutadiene	225		13.196					ND	
132 Naphthalene	128		13.336					ND	
133 n-Nonyl Aldehyde	57		13.340					ND	
134 1,2,3-Trichlorobenzene	180		13.559					ND	
135 Pentachloroethane TIC	1		0.000					ND	
141 4-Chlorobenzotrifluoride	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,4-Dibromobenzene	1		0.000				ND		
148 1-Bromo-2-chloroethane	1		0.000				ND		
146 t-Amyl alcohol	1		0.000				ND		
139 1,3-Dibromobenzene	1		0.000				ND		
137 1,2-dichloro-4-(trifluoromethyl)	1		0.000				ND		
143 Benzene, 1-bromo-3-fluoro-	1		0.000				ND		
140 4-Bromofluorobenzene	95		0.000				ND		
136 1-Chloro-1-fluoroethane TIC	1		0.000				ND		
142 Benzene, 1-bromo-4-ethyl-	1		0.000				ND		
145 Ethyl acrylate	55		0.000				ND		
147 n-Nonane TIC	1		0.000				ND		
144 1-Chlorohexane TIC	1		0.000				ND		
S 149 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 151 Trihalomethanes, Total	1		0.000				ND		7
S 150 1,2-Dichloroethene, Total	1		0.000				ND		7
S 156 1,3-Dichloropropene, Total	1		0.000				ND		7
S 155 Xylenes, Total	106		0.000				ND		7
S 154 TAH	1				0			0	
S 153 Xylenes, Total (URS)	1		0.000				ND		7
S 152 Total BTEX	1		0.000				ND		7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

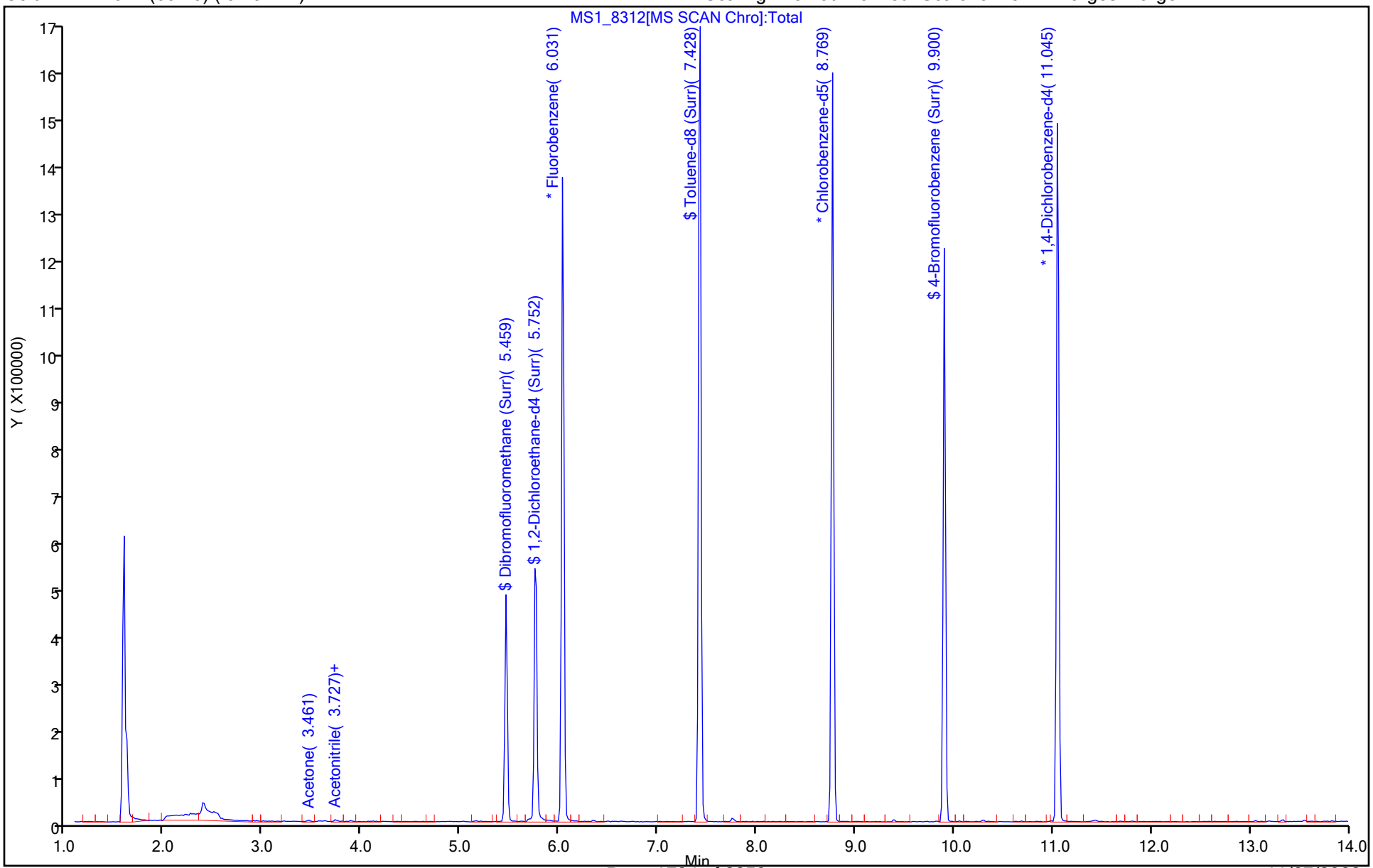
Report Date: 22-Apr-2023 00:29:48 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8312.D

Injection Date:	21-Apr-2023 09:22:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8312.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 21-Apr-2023 09:22:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:46 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: AF7X Date: 21-Apr-2023 10:55:29

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	53.5	106.97
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	56.3	112.66
$ 7 Toluene-d8 (Surr)	50.0	53.3	106.51
$ 8 4-Bromofluorobenzene (Surr)	50.0	51.7	103.34

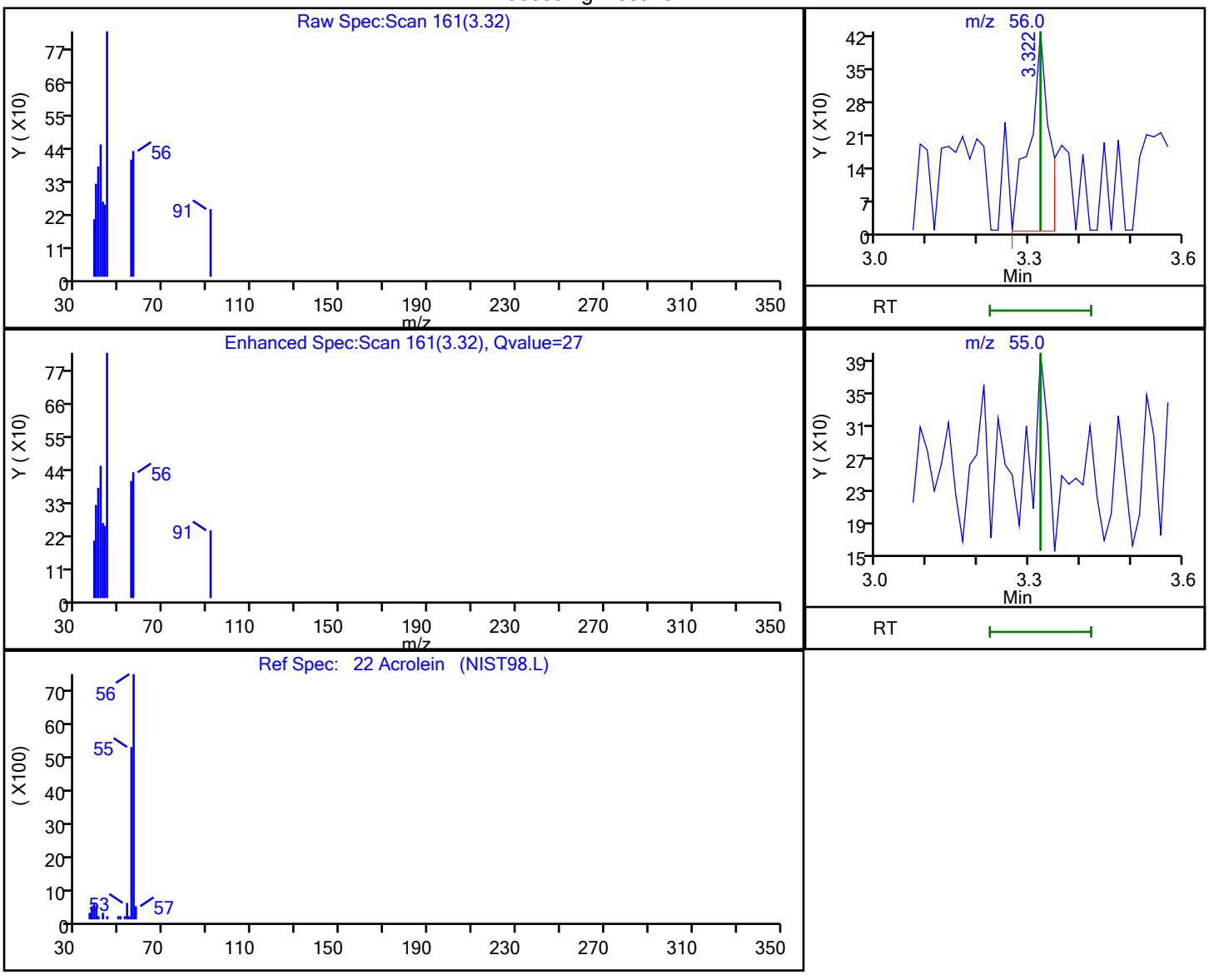
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8312.D
Injection Date: 21-Apr-2023 09:22:30 Instrument ID: VMS_MS1
Lims ID: MB
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

22 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
3.32	56.00	1098	2.024803
3.32	55.00	0	

Reviewer: AF7X, 21-Apr-2023 10:54:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

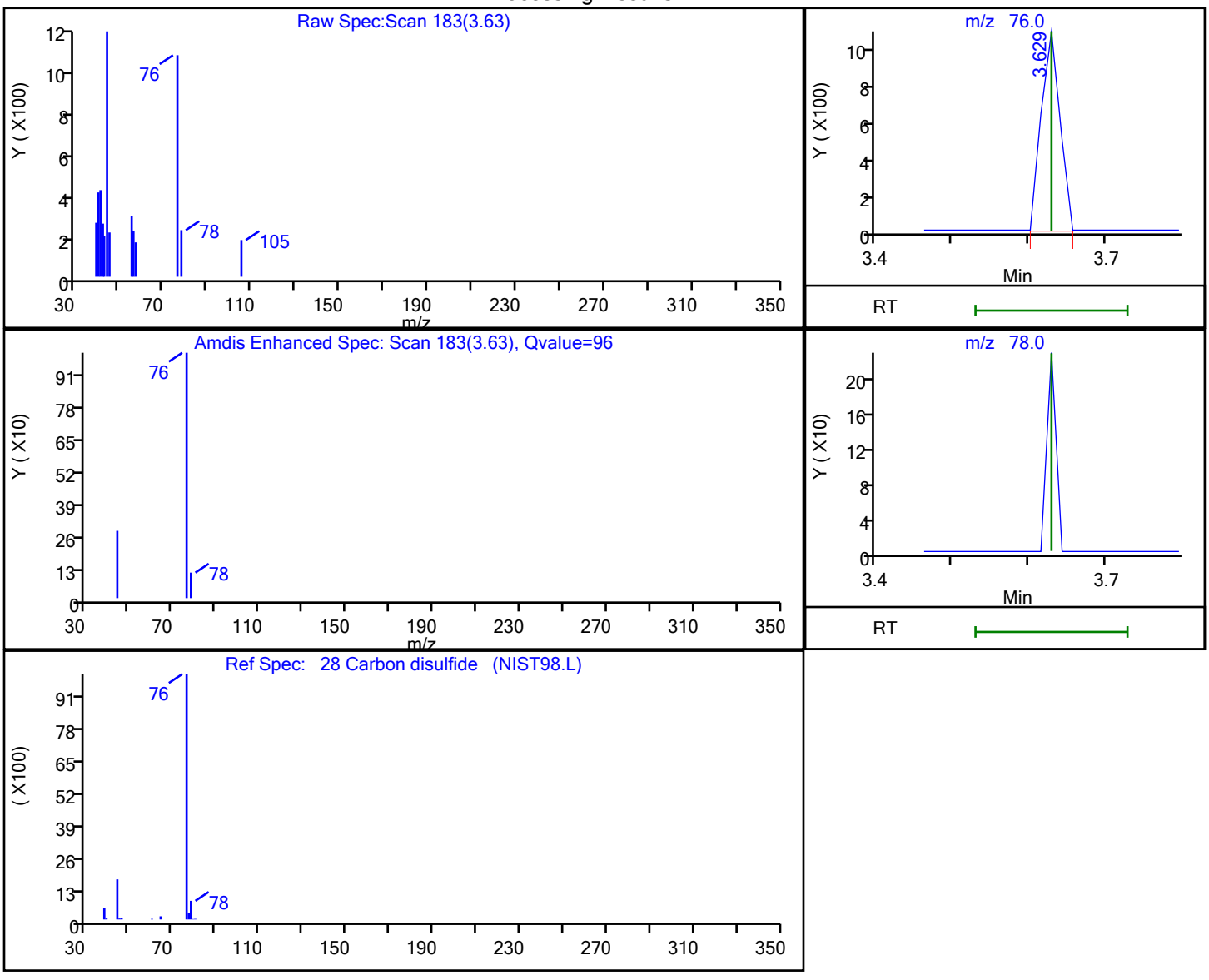
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8312.D
Injection Date: 21-Apr-2023 09:22:30 Instrument ID: VMS_MS1
Lims ID: MB
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

28 Carbon disulfide, CAS: 75-15-0

Processing Results



RT	Mass	Response	Amount
3.63	76.00	1796	0.161062
3.63	78.00	0	

Reviewer: AF7X, 21-Apr-2023 10:55:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609932/7

Matrix: Water | Lab File ID: X502755.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 20:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609932/7

Matrix: Water | Lab File ID: X502755.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 20:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-609932/7

Matrix: Water | Lab File ID: X502755.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 20:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 24-Apr-2023 20:30:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

First Level Reviewer: V8PV Date: 24-Apr-2023 21:32:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942					ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1401368	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	334291	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	536387	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	349113	50.0	51.8	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	350171	50.0	49.5	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1450143	50.0	50.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	89	486766	50.0	50.8	
$ 8 Trifluorotoluene (Surr)	1		0.000					ND	
$ 9 BFB	95	8.667	8.660	0.007	89	486766		NR	
10 Dichlorodifluoromethane	85		1.696					ND	7
11 Chloromethane	50		1.867					ND	
12 Vinyl chloride	62		1.967					ND	
13 Ethylene oxide	43		2.225					ND	7
14 Bromomethane	94		2.246					ND	U
15 Chloroethane	64		2.339					ND	
16 Dichlorofluoromethane	67		2.504					ND	
20 Propene oxide	58		2.504					ND	7
17 Trichlorofluoromethane	101		2.539					ND	
18 Ethanol	45		2.646					ND	
19 Ethyl ether	59		2.747					ND	
21 Acrolein	56		2.854					ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933					ND	
23 1,1-Dichloroethene	96		2.940					ND	
24 Acetone	43		2.954					ND	7
25 Isopropyl alcohol	45		3.033					ND	
26 Iodomethane	142		3.054					ND	
27 Carbon disulfide	76		3.118					ND	7
28 Acetonitrile	41		3.161					ND	U
29 Methyl acetate	43		3.176					ND	
30 3-Chloro-1-propene	41		3.204					ND	
31 Methylene Chloride	84		3.297					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333					ND	
33 Acrylonitrile	53		3.455					ND	
34 Methyl tert-butyl ether	73		3.476					ND	
35 trans-1,2-Dichloroethene	96		3.490					ND	
36 Chlorotrifluoroethene	116		3.526					ND	
37 Hexane	57		3.683					ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733					ND	
39 Vinyl acetate	43		3.783					ND	
41 Isopropyl ether	87		3.805					ND	
40 1,1-Dichloroethane	63		3.805					ND	
42 2-Chloro-1,3-butadiene	53		3.862					ND	
43 2-Chloro-1,1,1-Trifluoroethane	118		3.948					ND	
44 Tert-butyl ethyl ether	59		4.062					ND	
45 2-Butanone (MEK)	43		4.184					ND	
46 Ethyl acetate	43		4.198					ND	U
47 cis-1,2-Dichloroethene	96		4.212					ND	
48 2,2-Dichloropropane	77		4.220					ND	
49 Propionitrile	54		4.234					ND	
50 sec-Butyl Alcohol	45		4.291					ND	
51 Methacrylonitrile	41		4.348					ND	
52 Chlorobromomethane	128		4.384					ND	
53 Tetrahydrofuran	42		4.391					ND	
54 Chloroform	83		4.441					ND	
55 1,1,1-Trichloroethane	97		4.584					ND	
56 Cyclohexane	56		4.649					ND	
58 1,2-Dichloro-1,1,2-trifluoroetha	117		4.678					ND	
57 1,1-Dichloropropene	75		4.699					ND	
60 Isobutyl alcohol	41		4.706					ND	U
59 Carbon tetrachloride	117		4.706					ND	
61 1,1,1-Trifluoro-2,2-dichloroetha	83		4.706					ND	
62 Benzene	78		4.849					ND	
63 1,2-Dichloroethane	62		4.877					ND	7
64 Tert-amyl methyl ether	73		4.913					ND	
65 n-Heptane	43		5.028					ND	
66 n-Butanol	56		5.199					ND	
67 Trichloroethene	95		5.335					ND	
68 2-Pentanone	43		5.435					ND	
69 Methylcyclohexane	55		5.528					ND	
70 1,2-Dichloropropane	63		5.535					ND	
71 Methyl methacrylate	100		5.542					ND	
72 1,4-Dioxane	88		5.578					ND	
73 Dibromomethane	93		5.607					ND	
74 Dichlorobromomethane	83		5.728					ND	
75 2-Nitropropane	41		5.893					ND	
76 2-Chloroethyl vinyl ether	63		5.929					ND	
77 cis-1,3-Dichloropropene	75		6.079					ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179					ND	
79 Toluene	91		6.365					ND	
80 trans-1,3-Dichloropropene	75		6.536					ND	
81 Ethyl methacrylate	69		6.558					ND	
82 1,1,2-Trichloroethane	97		6.715					ND	
83 Tetrachloroethene	164		6.801					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 1,3-Dichloropropane	76		6.858					ND	
85 2-Hexanone	43		6.872					ND	
86 Tetrahydrothiophene	60		7.051					ND	
87 Chlorodibromomethane	129		7.051					ND	
88 Ethylene Dibromide	107		7.166					ND	
89 1-Chlorohexane	91		7.552					ND	U
90 Chlorobenzene	112		7.595					ND	
91 1,1,1,2-Tetrachloroethane	131		7.666					ND	
92 Ethylbenzene	106		7.673					ND	
93 m-Xylene & p-Xylene	106		7.788					ND	7
94 o-Xylene	106		8.152					ND	
95 Styrene	104		8.167					ND	
96 Bromoform	173		8.345					ND	
97 Isopropylbenzene	105		8.488					ND	
98 cis-1,4-Dichloro-2-butene	53		8.538					ND	
99 Cyclohexanone	55		8.588					ND	
100 1,1,2,2-Tetrachloroethane	83		8.774					ND	
101 Bromobenzene	156		8.810					ND	
102 trans-1,4-Dichloro-2-butene	53		8.810					ND	
103 1,2,3-Trichloropropane	110		8.839					ND	
104 N-Propylbenzene	120		8.889					ND	
105 2-Chlorotoluene	126		8.982					ND	
106 1,3,5-Trimethylbenzene	105		9.060					ND	
107 4-Chlorotoluene	126		9.103					ND	
108 tert-Butylbenzene	119		9.368					ND	
109 Pentachloroethane	167		9.403					ND	
110 1,2,4-Trimethylbenzene	105		9.425					ND	
111 sec-Butylbenzene	134		9.589					ND	
112 1,3-Dichlorobenzene	146		9.711					ND	
113 4-Isopropyltoluene	119		9.732					ND	
114 1,4-Dichlorobenzene	146		9.811					ND	
115 1,2,3-Trimethylbenzene	105		9.832					ND	
116 n-Butylbenzene	91		10.133					ND	
117 1,2-Dichlorobenzene	146		10.169					ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948					ND	U
119 1,3,5-Trichlorobenzene	180		11.134					ND	7
120 1,2,4-Trichlorobenzene	180		11.763					ND	7
121 Hexachlorobutadiene	225		11.906					ND	
122 Naphthalene	128		12.035					ND	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	33	1225		0.2365	
172 4-Chlorobenzotrifluoride	1		0.000					ND	
128 2,4-Dimethylpentane	1		0.000					ND	
133 2-Methylhexane	1		0.000					ND	
168 1,2-dichloro-4-(trifluoromethyl)	1		0.000					ND	
171 4-Bromofluorobenzene	95		0.000					ND	
132 3,3-Dimethylpentane	1		0.000					ND	
169 1,4-Dibromobenzene	1		0.000					ND	
125 3-Ethylpentane	1		0.000					ND	
165 t-Amyl alcohol	1		0.000					ND	
131 2,3-Dimethylpentane	1		0.000					ND	
173 Benzene, 1-bromo-4-ethyl-	1		0.000					ND	
174 Benzene, 1-bromo-3-fluoro-	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
126 Dimethyl disulfide	1		0.000				ND		
175 1-Bromo-2-chloroethane	1		0.000				ND		
170 1,3-Dibromobenzene	1		0.000				ND		
166 Ethyl acrylate	55		0.000				ND		
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND		
130 2,2-Dimethylpentane	1		0.000				ND		
127 n-Nonyl Aldehyde	1		0.000				ND		
124 3-Methylhexane	1		0.000				ND		
177 Pentachloroethane TIC	1		0.000				ND		
129 2,2,3-Trimethylbutane	1		0.000				ND		
134 Propene oxide TIC	58		5.334				ND		
S 135 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 139 Xylenes, Total (URS)	1		0.000				ND		7
S 136 1,3-Dichloropropene, Total	1		0.000				ND		7
S 138 Xylenes, Total	106		0.000				ND		7
S 137 Total BTEX	1		0.000				ND		7
S 140 Trihalomethanes, Total	1		0.000				ND		7
S 142 TAH	1				0			0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND		7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

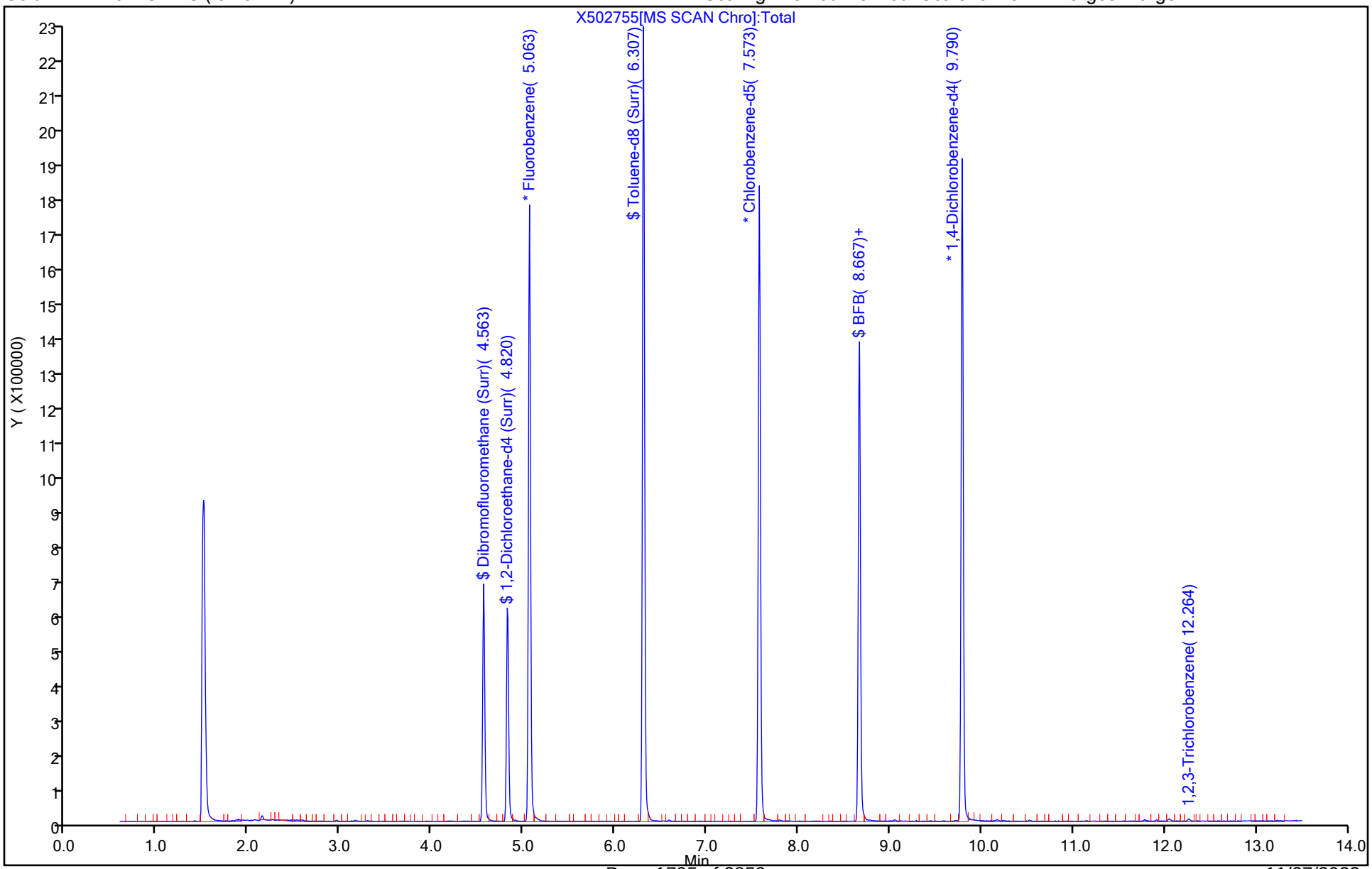
Report Date: 25-Apr-2023 04:09:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D

Injection Date:	24-Apr-2023 20:30:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 24-Apr-2023 20:30:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

First Level Reviewer: V8PV Date: 24-Apr-2023 21:32:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.8	103.58
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	49.5	98.92
$ 6 Toluene-d8 (Surr)	50.0	50.9	101.85
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.8	101.56

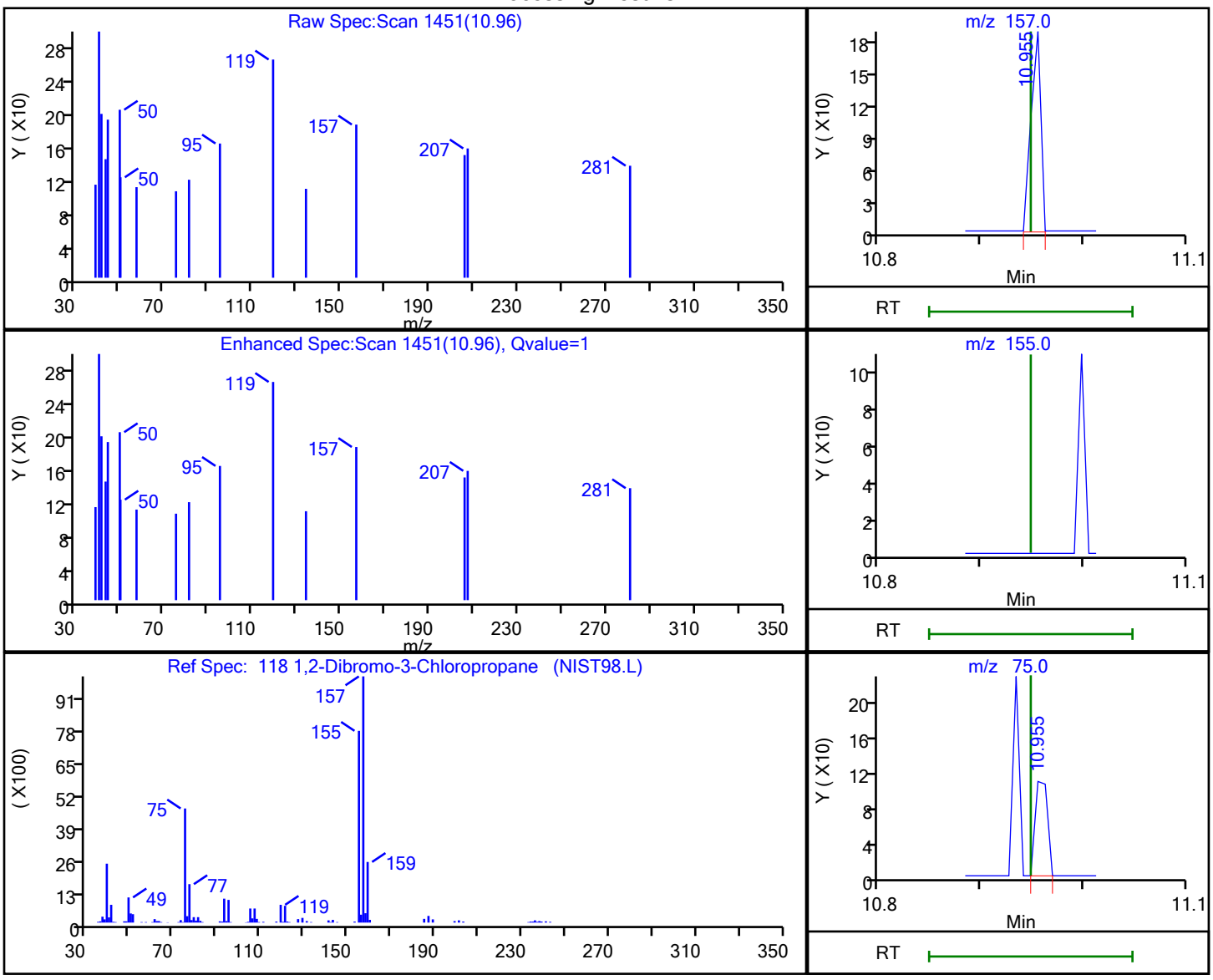
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Injection Date: 24-Apr-2023 20:30:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: bj ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

118 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Processing Results



RT	Mass	Response	Amount
10.96	157.00	124	0.478052
10.95	155.00	0	
10.96	75.00	89	

Reviewer: V8PV, 24-Apr-2023 21:21:21
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

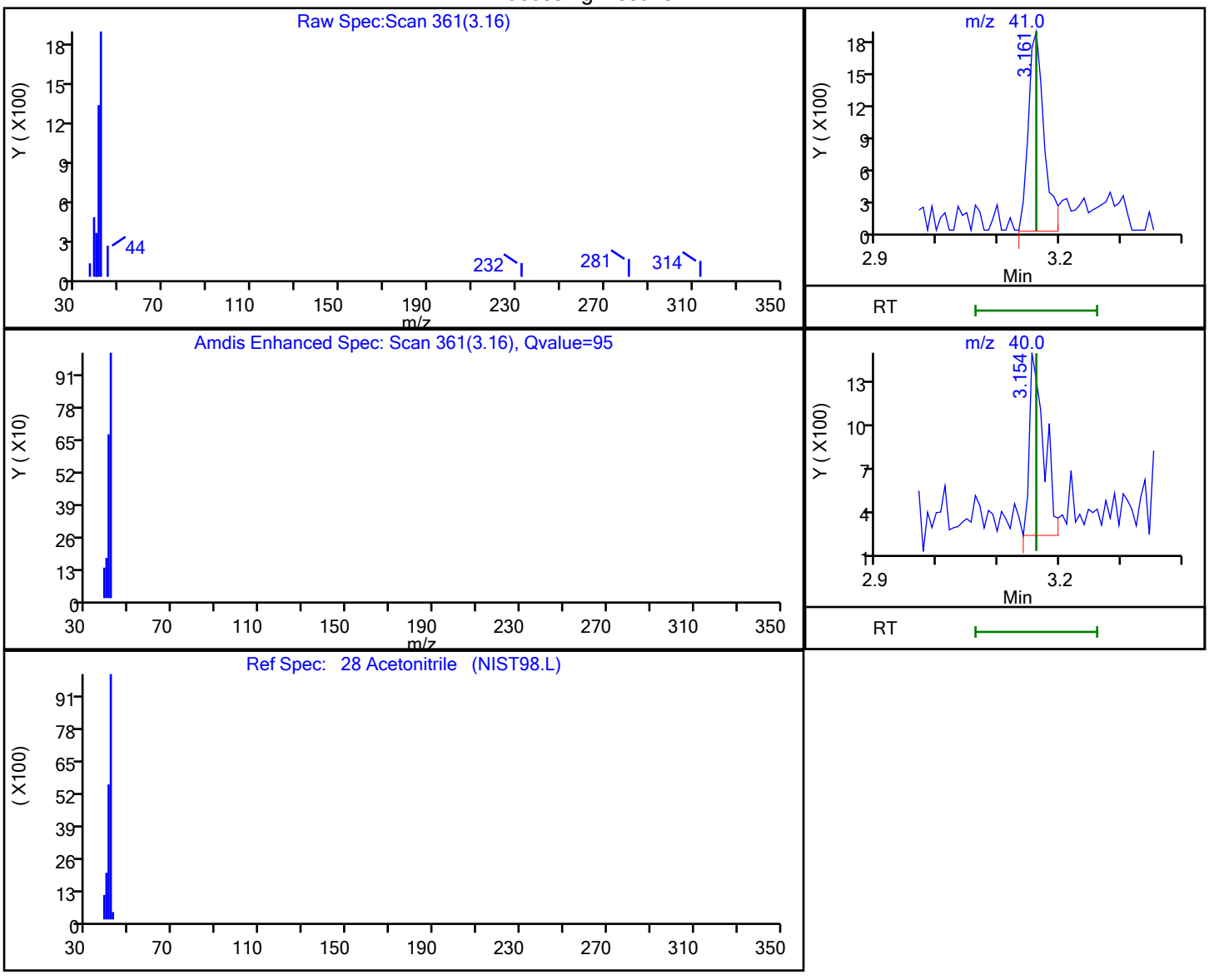
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Injection Date: 24-Apr-2023 20:30:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: bj ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

28 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
3.16	41.00	3244	4.144637
3.15	40.00	2046	

Reviewer: V8PV, 24-Apr-2023 21:21:09
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

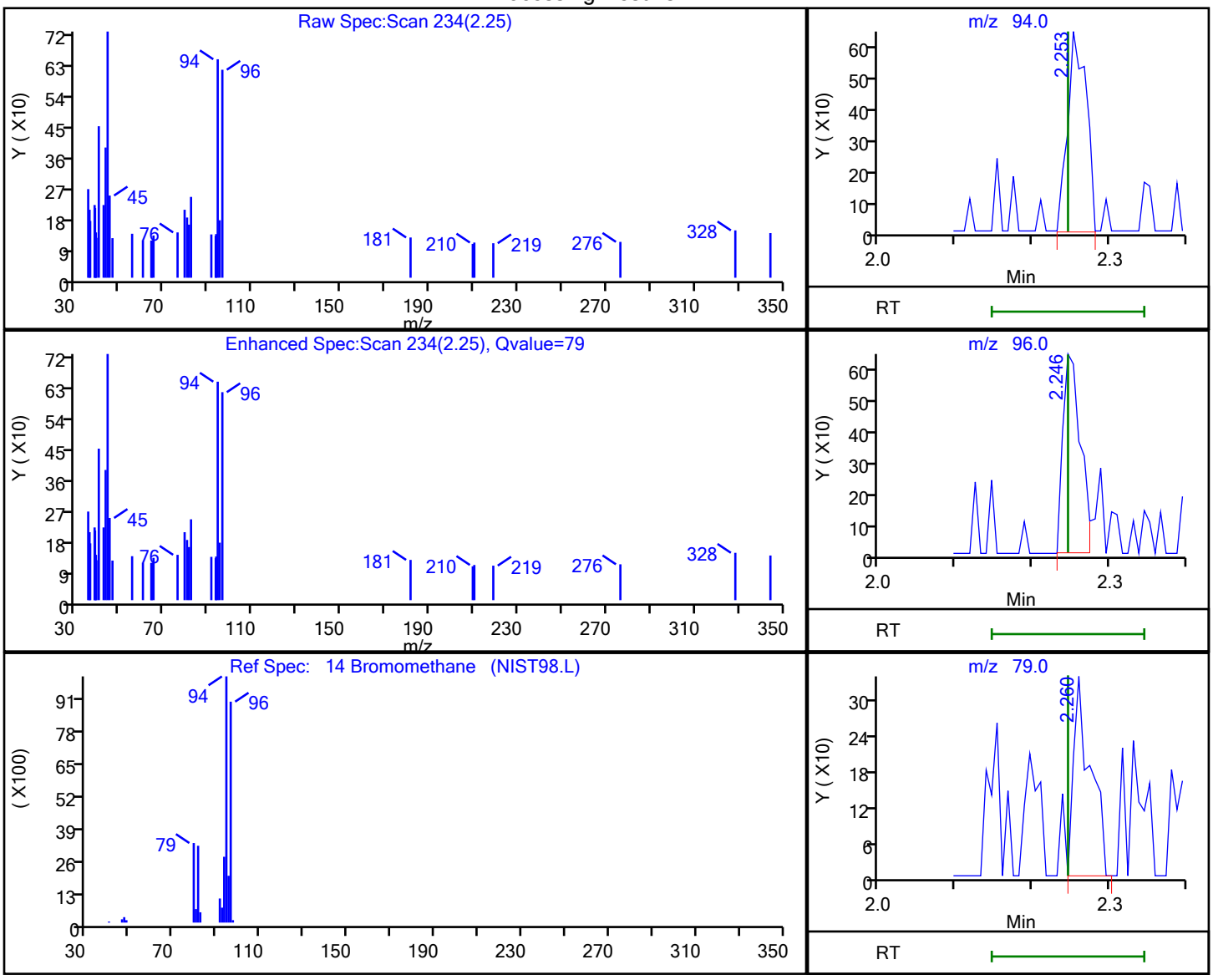
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D
Injection Date: 24-Apr-2023 20:30:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: bj ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.25	94.00	1096	0.322801
2.25	96.00	1047	
2.26	79.00	519	

Reviewer: V8PV, 24-Apr-2023 21:21:05
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

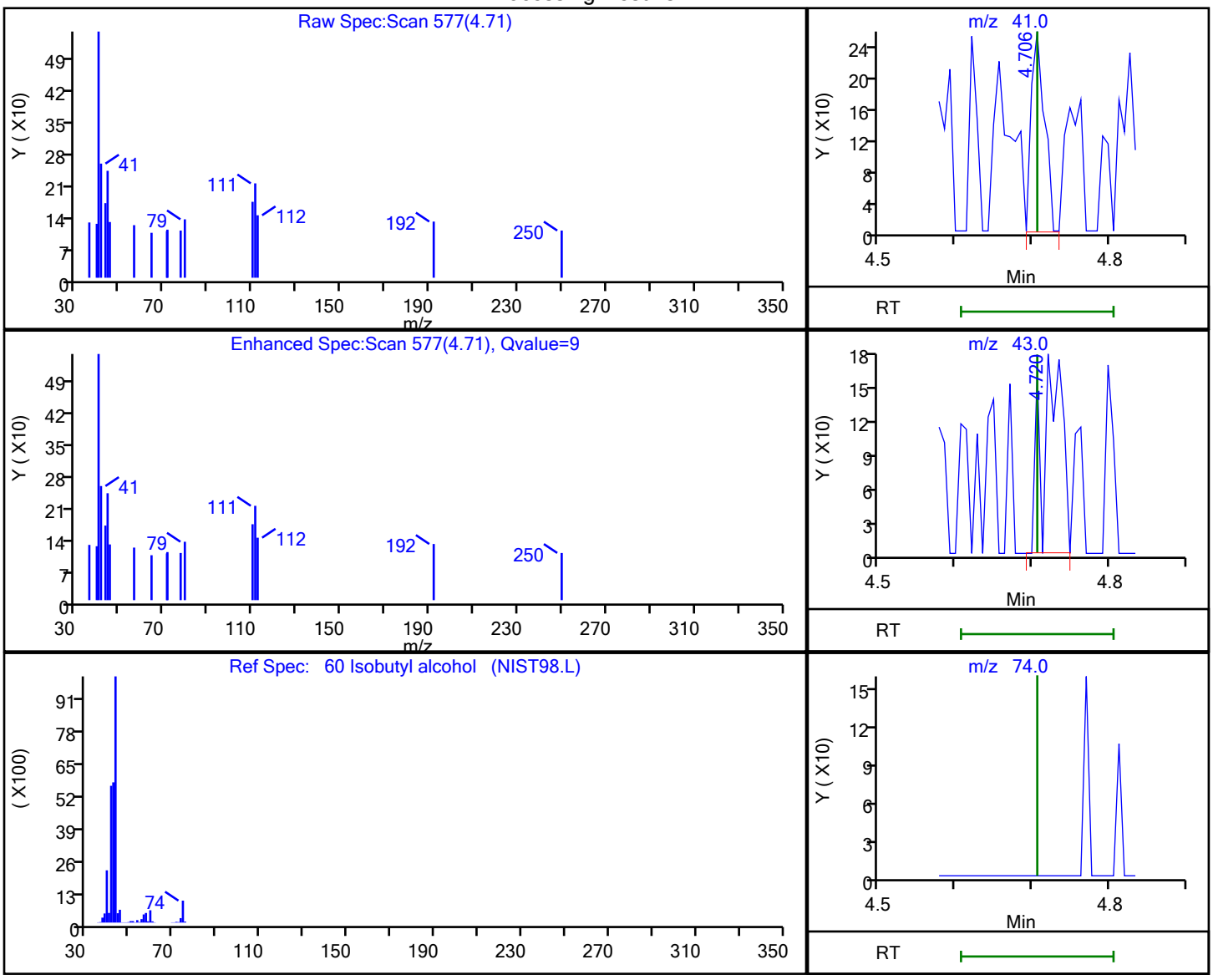
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502755.D				
Injection Date:	24-Apr-2023 20:30:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	bj	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.71	41.00	305	13.053949
4.72	43.00	325	
4.71	74.00	0	

Reviewer: V8PV, 24-Apr-2023 21:21:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610121/7

Matrix: Water | Lab File ID: X502851.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 11:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610121/7

Matrix: Water | Lab File ID: X502851.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 11:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610121/7

Matrix: Water | Lab File ID: X502851.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 11:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-127
460-00-4	4-Bromofluorobenzene (Surr)	98		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 26-Apr-2023 11:43:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 12:16:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 12:16:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942					ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2025881	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	487961	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	789543	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	500343	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	483299	50.0	47.2	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2115079	50.0	50.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	92	693696	50.0	49.2	
$ 8 Trifluorotoluene (Surr)	1		0.000					ND	
$ 9 BFB	95	8.667	8.660	0.007	92	693696		NR	
10 Dichlorodifluoromethane	85		1.696					ND	7
11 Chloromethane	50		1.867					ND	
12 Vinyl chloride	62		1.960					ND	
13 Ethylene oxide	43		2.225					ND	7
14 Bromomethane	94		2.239					ND	U
15 Chloroethane	64		2.332					ND	U
16 Dichlorofluoromethane	67		2.504					ND	
20 Propene oxide	58		2.504					ND	7
17 Trichlorofluoromethane	101		2.539					ND	
18 Ethanol	45		2.654					ND	U
19 Ethyl ether	59		2.747					ND	
21 Acrolein	56		2.854					ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933					ND	
23 1,1-Dichloroethene	96		2.933					ND	
24 Acetone	43		2.954					ND	7
25 Isopropyl alcohol	45		3.033					ND	U
26 Iodomethane	142		3.054					ND	
27 Carbon disulfide	76		3.119					ND	7
28 Acetonitrile	41	3.161	3.161	0.000	98	4919		4.35	
29 Methyl acetate	43		3.176					ND	
30 3-Chloro-1-propene	41		3.197					ND	
31 Methylene Chloride	84	3.297	3.297	0.000	79	2713		0.2715	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333					ND	
33 Acrylonitrile	53		3.455					ND	
34 Methyl tert-butyl ether	73		3.476					ND	
35 trans-1,2-Dichloroethene	96		3.490					ND	
36 Chlorotrifluoroethene	116		3.526					ND	
37 Hexane	57		3.683					ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733					ND	
39 Vinyl acetate	43		3.784					ND	
40 1,1-Dichloroethane	63		3.805					ND	
41 Isopropyl ether	87		3.805					ND	
42 2-Chloro-1,3-butadiene	53		3.855					ND	
43 2-Chloro-1,1,1-Trifluoroethane	118		3.948					ND	
44 Tert-butyl ethyl ether	59		4.062					ND	
45 2-Butanone (MEK)	43		4.184					ND	
46 Ethyl acetate	43		4.198					ND	U
47 cis-1,2-Dichloroethene	96		4.213					ND	
48 2,2-Dichloropropane	77		4.220					ND	
49 Propionitrile	54		4.234					ND	
50 sec-Butyl Alcohol	45		4.291					ND	U
51 Methacrylonitrile	41		4.348					ND	
52 Chlorobromomethane	128		4.384					ND	
53 Tetrahydrofuran	42		4.398					ND	
54 Chloroform	83		4.441					ND	
55 1,1,1-Trichloroethane	97		4.584					ND	
56 Cyclohexane	56		4.649					ND	
58 1,2-Dichloro-1,1,2-trifluoroetha	117		4.678					ND	
57 1,1-Dichloropropene	75		4.699					ND	
60 Isobutyl alcohol	41		4.706					ND	U
59 Carbon tetrachloride	117		4.706					ND	
61 1,1,1-Trifluoro-2,2-dichloroetha	83		4.706					ND	
62 Benzene	78		4.849					ND	
63 1,2-Dichloroethane	62		4.878					ND	7
64 Tert-amyl methyl ether	73		4.913					ND	
65 n-Heptane	43		5.035					ND	
66 n-Butanol	56		5.199					ND	
67 Trichloroethene	95		5.335					ND	
68 2-Pentanone	43		5.435					ND	
69 Methylcyclohexane	55		5.528					ND	
70 1,2-Dichloropropane	63		5.535					ND	
71 Methyl methacrylate	100		5.543					ND	
72 1,4-Dioxane	88		5.578					ND	
73 Dibromomethane	93		5.607					ND	
74 Dichlorobromomethane	83		5.728					ND	
75 2-Nitropropane	41		5.893					ND	
76 2-Chloroethyl vinyl ether	63		5.929					ND	
77 cis-1,3-Dichloropropene	75		6.079					ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179					ND	
79 Toluene	91		6.365					ND	
80 trans-1,3-Dichloropropene	75		6.536					ND	
81 Ethyl methacrylate	69		6.558					ND	
82 1,1,2-Trichloroethane	97		6.715					ND	
83 Tetrachloroethene	164		6.801					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 1,3-Dichloropropane	76		6.858					ND	
85 2-Hexanone	43		6.872					ND	
86 Tetrahydrothiophene	60		7.051					ND	
87 Chlorodibromomethane	129		7.051					ND	
88 Ethylene Dibromide	107		7.173					ND	
89 1-Chlorohexane	91		7.559					ND	U
90 Chlorobenzene	112		7.602					ND	
91 1,1,1,2-Tetrachloroethane	131		7.673					ND	
92 Ethylbenzene	106		7.673					ND	
93 m-Xylene & p-Xylene	106		7.795					ND	7
94 o-Xylene	106		8.152					ND	
95 Styrene	104		8.167					ND	
96 Bromoform	173		8.353					ND	
97 Isopropylbenzene	105		8.488					ND	
98 cis-1,4-Dichloro-2-butene	53		8.538					ND	
99 Cyclohexanone	55		8.589					ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774					ND	
101 Bromobenzene	156		8.810					ND	
102 trans-1,4-Dichloro-2-butene	53		8.810					ND	
103 1,2,3-Trichloropropane	110		8.839					ND	
104 N-Propylbenzene	120		8.889					ND	
105 2-Chlorotoluene	126		8.982					ND	
106 1,3,5-Trimethylbenzene	105		9.060					ND	
107 4-Chlorotoluene	126		9.103					ND	
108 tert-Butylbenzene	119		9.368					ND	
109 Pentachloroethane	167		9.403					ND	
110 1,2,4-Trimethylbenzene	105		9.425					ND	
111 sec-Butylbenzene	134		9.590					ND	
112 1,3-Dichlorobenzene	146		9.711					ND	
113 4-Isopropyltoluene	119		9.733					ND	
114 1,4-Dichlorobenzene	146		9.811					ND	
115 1,2,3-Trimethylbenzene	105		9.833					ND	
116 n-Butylbenzene	91		10.140					ND	
117 1,2-Dichlorobenzene	146		10.169					ND	7
118 1,2-Dibromo-3-Chloropropane	157		10.948					ND	
119 1,3,5-Trichlorobenzene	180		11.134					ND	7
120 1,2,4-Trichlorobenzene	180	11.777	11.770	0.007	23	2462		0.2437	
121 Hexachlorobutadiene	225		11.906					ND	
122 Naphthalene	128	12.049	12.035	0.014	95	10571		0.4102	
123 1,2,3-Trichlorobenzene	180	12.256	12.257	-0.001	56	1991		0.2611	
172 4-Chlorobenzotrifluoride	1		0.000					ND	
175 1-Bromo-2-chloroethane	1		0.000					ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000					ND	
124 3-Methylhexane	1		0.000					ND	
129 2,2,3-Trimethylbutane	1		0.000					ND	
132 3,3-Dimethylpentane	1		0.000					ND	
127 n-Nonyl Aldehyde	1		0.000					ND	
171 4-Bromofluorobenzene	95		0.000					ND	
133 2-Methylhexane	1		0.000					ND	
128 2,4-Dimethylpentane	1		0.000					ND	
173 Benzene, 1-bromo-4-ethyl-	1		0.000					ND	
168 1,2-dichloro-4-(trifluoromethyl)	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 2,2-Dimethylpentane	1		0.000				ND		
131 2,3-Dimethylpentane	1		0.000				ND		
169 1,4-Dibromobenzene	1		0.000				ND		
166 Ethyl acrylate	55		0.000				ND		
165 t-Amyl alcohol	1		0.000				ND		
126 Dimethyl disulfide	1		0.000				ND		
170 1,3-Dibromobenzene	1		0.000				ND		
174 Benzene, 1-bromo-3-fluoro-	1		0.000				ND		
177 Pentachloroethane TIC	1		0.000				ND		
125 3-Ethylpentane	1		0.000				ND		
134 Propene oxide TIC	58		5.334				ND		
S 135 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 139 Xylenes, Total (URS)	1		0.000				ND		7
S 136 1,3-Dichloropropene, Total	1		0.000				ND		7
S 138 Xylenes, Total	106		0.000				ND		7
S 137 Total BTEX	1		0.000				ND		7
S 140 Trihalomethanes, Total	1		0.000				ND		7
S 142 TAH	1				0			0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND		7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

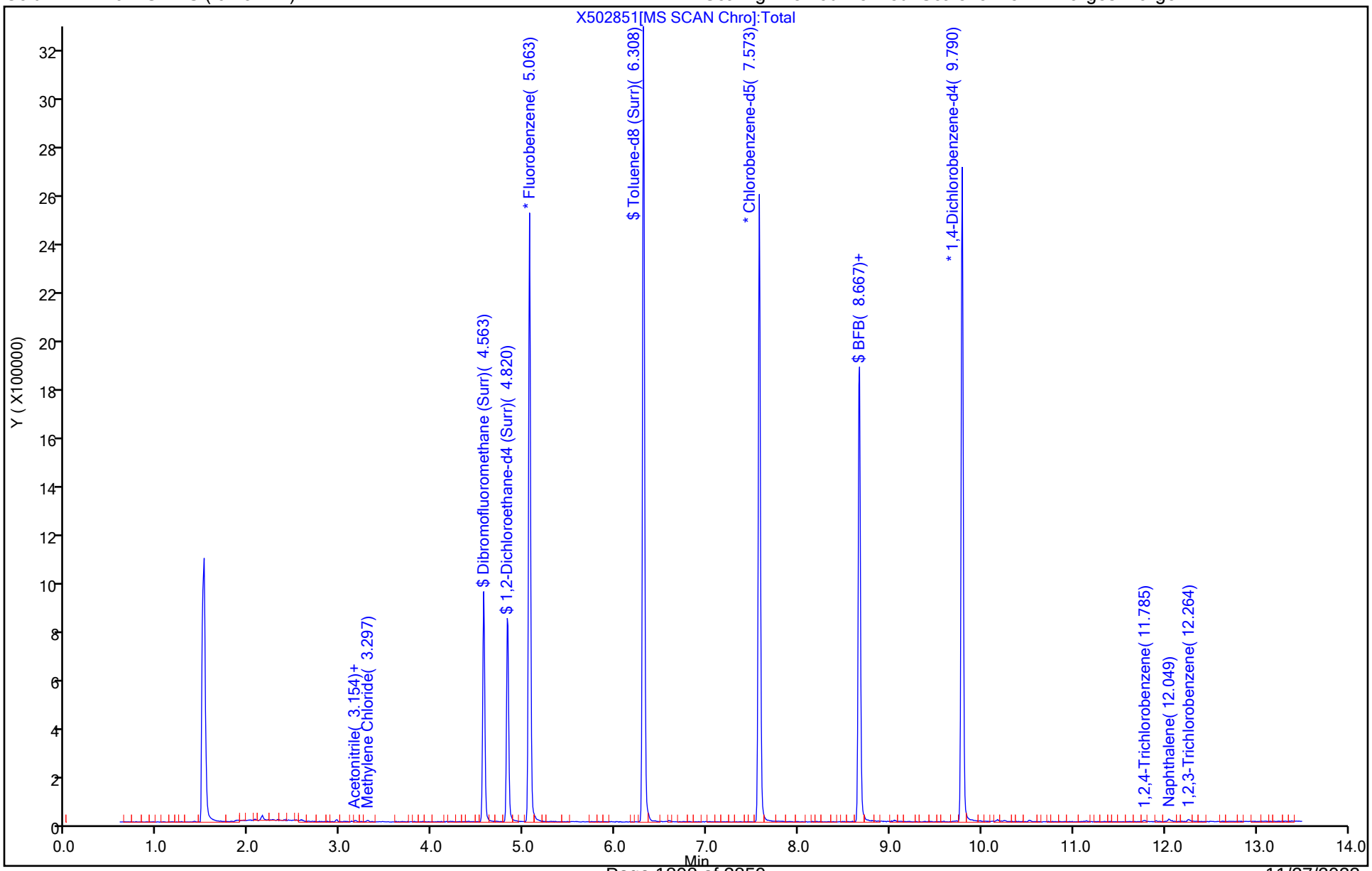
Report Date: 26-Apr-2023 12:16:47 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D

Injection Date:	26-Apr-2023 11:43:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 26-Apr-2023 11:43:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 12:16:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 12:16:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.69
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.2	94.44
$ 6 Toluene-d8 (Surr)	50.0	50.9	101.77
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.2	98.33

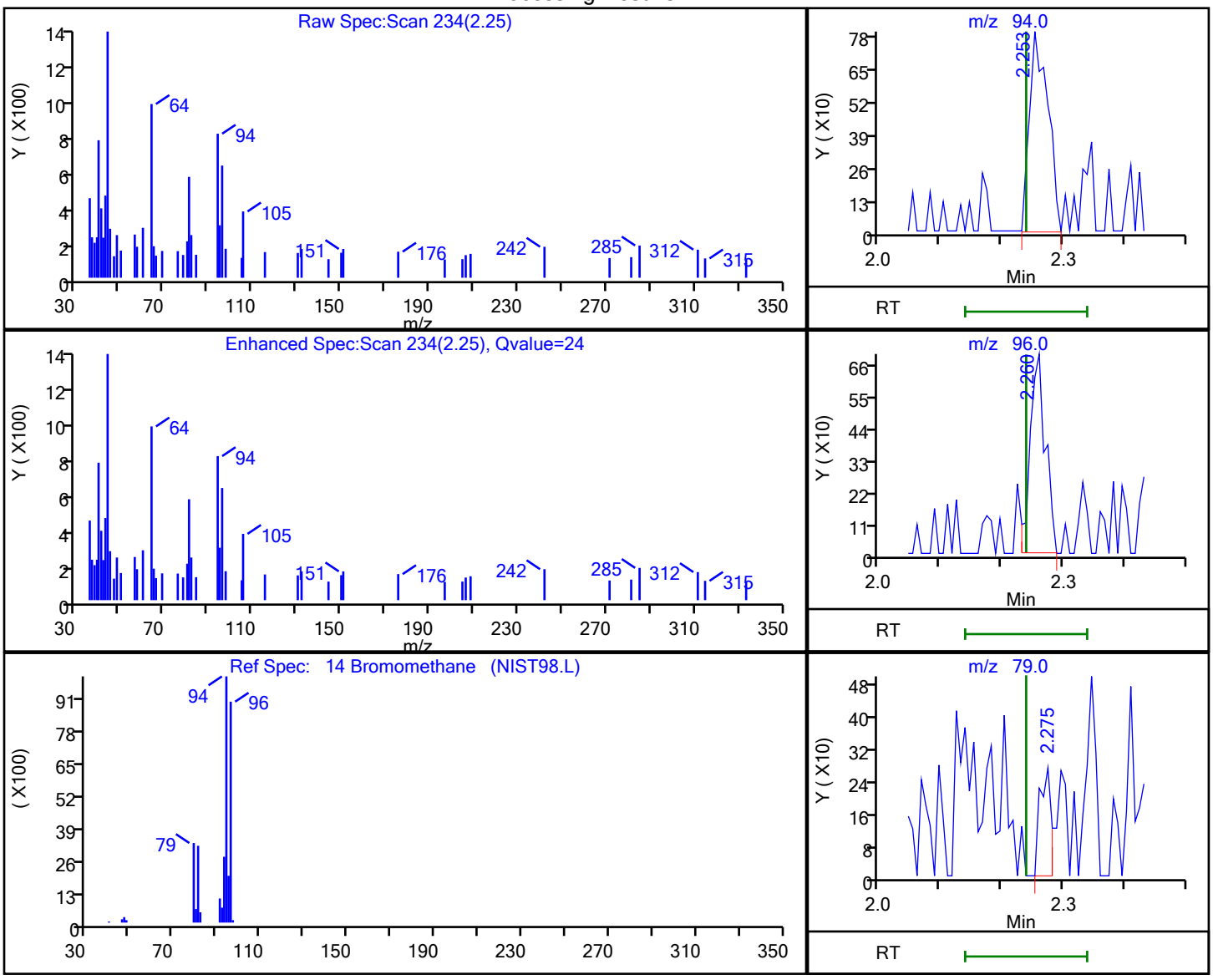
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D
Injection Date: 26-Apr-2023 11:43:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: MED ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.25	94.00	1666	0.339420
2.26	96.00	1217	
2.27	79.00	346	

Reviewer: BX8N, 26-Apr-2023 12:15:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

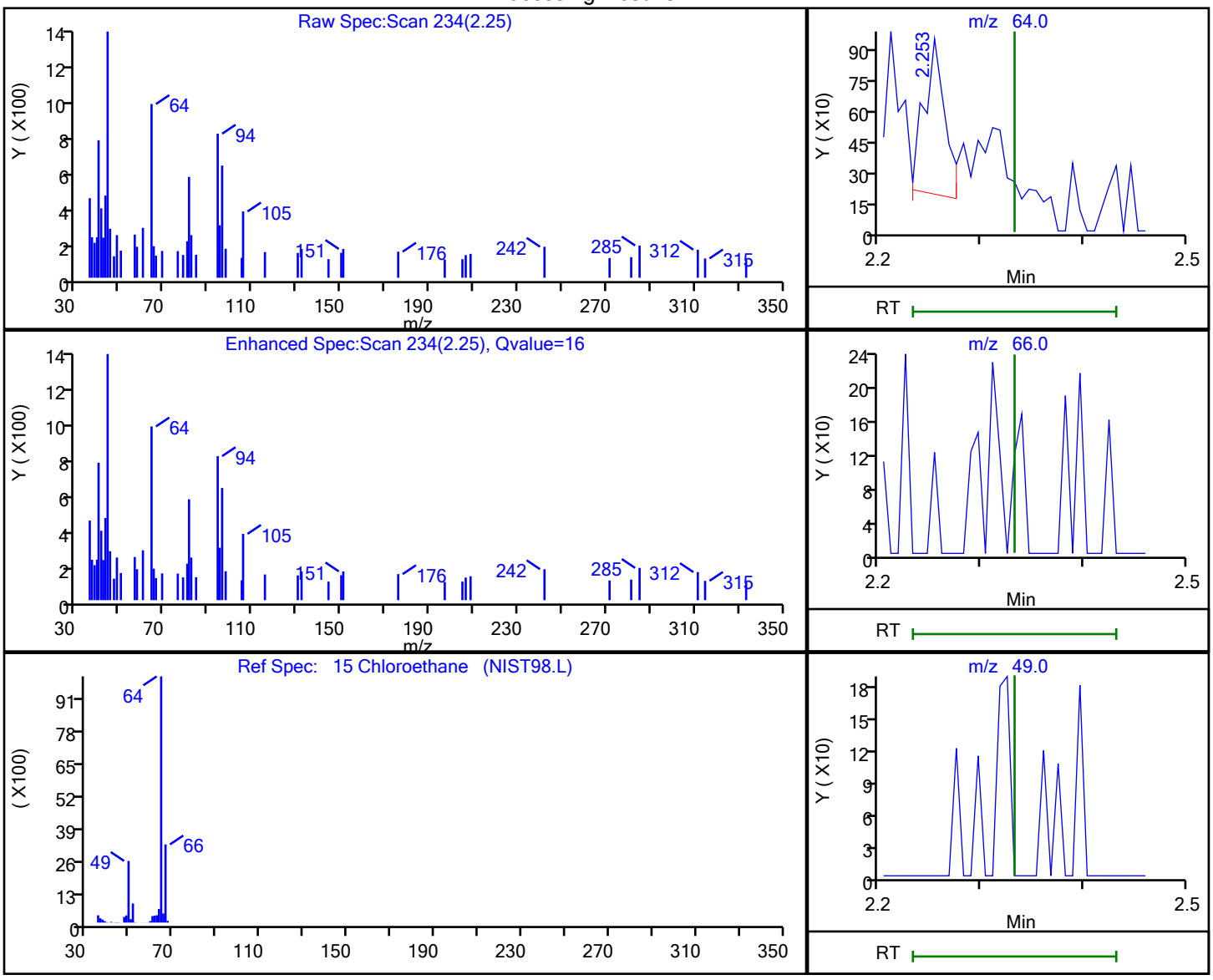
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D				
Injection Date:	26-Apr-2023 11:43:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	MED	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

15 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.25	64.00	1105	0.179497
2.33	66.00	0	
2.33	49.00	0	

Reviewer: BX8N, 26-Apr-2023 12:15:14

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

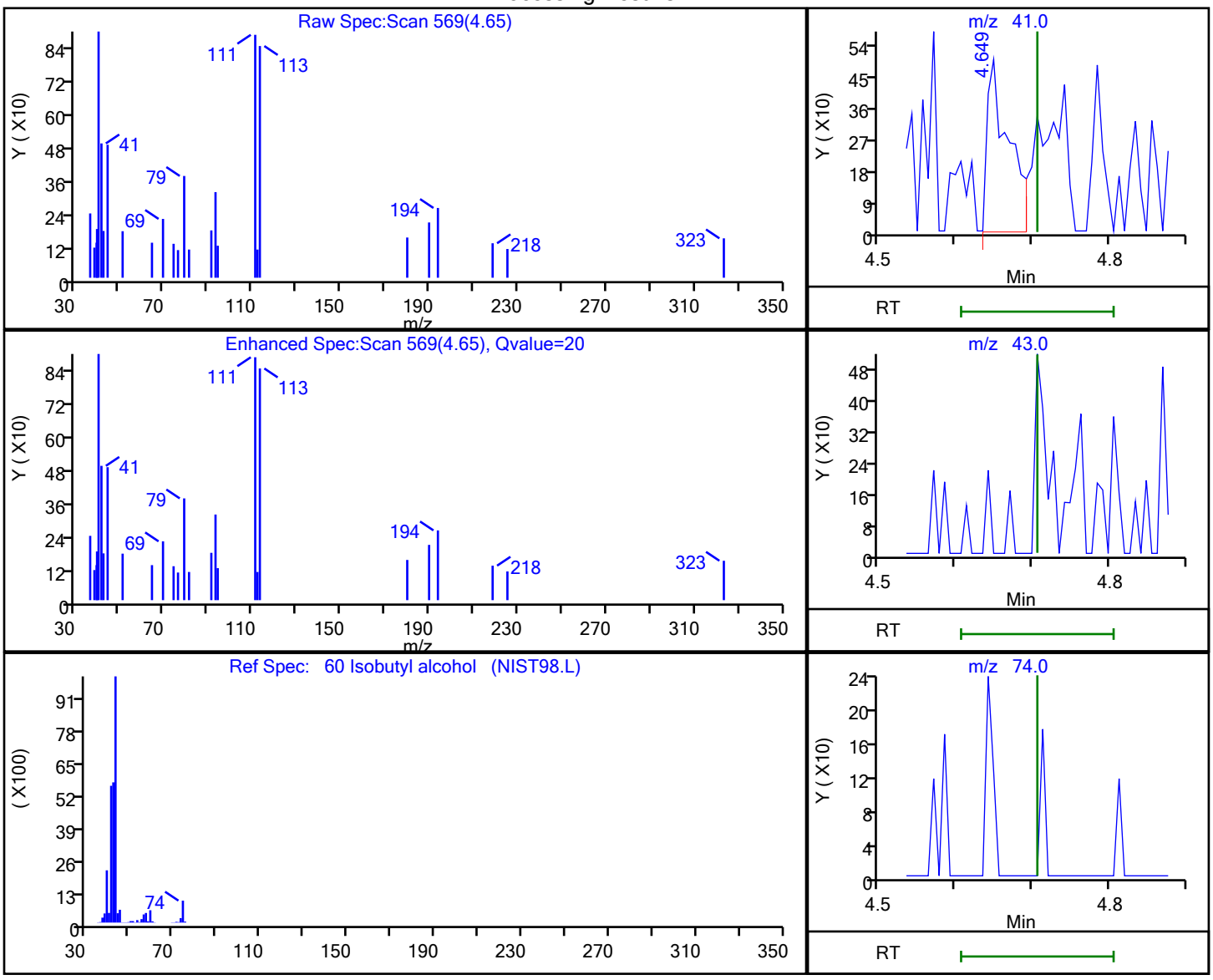
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D				
Injection Date:	26-Apr-2023 11:43:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	MED	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.65	41.00	963	15.101847
4.71	43.00	0	
4.71	74.00	0	

Reviewer: BX8N, 26-Apr-2023 12:15:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610123/7

Matrix: Water | Lab File ID: P01132.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610123/7

Matrix: Water | Lab File ID: P01132.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610123/7

Matrix: Water | Lab File ID: P01132.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		70-127
460-00-4	4-Bromofluorobenzene (Surr)	95		78-120
1868-53-7	Dibromofluoromethane (Surr)	108		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01132.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 26-Apr-2023 10:12:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 14:05:06 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1630

First Level Reviewer: V8PV Date: 26-Apr-2023 16:56:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1579293	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.278	-0.011	87	391972	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	582090	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	422635	50.0	54.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	474941	50.0	51.8	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	93	1708887	50.0	50.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	603782	50.0	47.6	
$ 8 Trifluorotoluene (Surr)	1		0.000					ND	
$ 9 BFB	95	8.365	8.365	0.000	85	603782		NR	
10 Dichlorodifluoromethane	85		1.474					ND	
11 Chloromethane	50		1.664					ND	
12 Vinyl chloride	62		1.727					ND	
14 Bromomethane	94		1.980					ND	7
13 Ethylene oxide	43	1.927	1.991	-0.064	96	12910		5.03	
15 Chloroethane	64		2.075					ND	
16 Dichlorofluoromethane	67		2.244					ND	
17 Trichlorofluoromethane	101		2.276					ND	
18 Ethanol	45		2.392					ND	
19 Ethyl ether	59		2.476					ND	
21 Acrolein	56		2.582					ND	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.666					ND	
22 1,1-Dichloroethene	96		2.666					ND	
24 Acetone	43	2.677	2.677	0.000	98	18487		1.74	
20 Propene oxide	58		2.719					ND	
25 Isopropyl alcohol	45	2.772	2.772	0.000	98	5973		1.31	
26 Iodomethane	142	2.778	2.782	-0.004	25	0		0	7a
27 Carbon disulfide	76		2.835					ND	U
28 Acetonitrile	41	2.888	2.877	0.011	97	23478		4.53	
29 Methyl acetate	43		2.898					ND	
30 3-Chloro-1-propene	41		2.919					ND	
31 Methylene Chloride	84		3.014					ND	7
32 2-Methyl-2-propanol	59		3.067					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 Acrylonitrile	53		3.173					ND	
34 Methyl tert-butyl ether	73		3.194					ND	
35 trans-1,2-Dichloroethene	96		3.215					ND	
36 Hexane	57		3.394					ND	
38 Vinyl acetate	43		3.500					ND	
39 1,1-Dichloroethane	63		3.521					ND	
40 Isopropyl ether	87		3.521					ND	
41 2-Chloro-1,3-butadiene	53		3.574					ND	
43 Tert-butyl ethyl ether	59		3.774					ND	
37 Chlorotrifluoroethene	116		3.818					ND	
44 2-Butanone (MEK)	43		3.901					ND	7
46 Ethyl acetate	43		3.912					ND	7
47 cis-1,2-Dichloroethene	96		3.922					ND	
48 2,2-Dichloropropane	77		3.932					ND	
49 Propionitrile	54		3.943					ND	
50 sec-Butyl Alcohol	45		4.017					ND	
42 1,2-Dichloro-1,1,2,2-tetrafluoro	85		4.027					ND	
51 Methacrylonitrile	41		4.059					ND	
53 Chlorobromomethane	128		4.101					ND	
52 Tetrahydrofuran	42		4.101					ND	
54 Chloroform	83		4.154					ND	
55 1,1,1-Trichloroethane	97		4.291					ND	
45 2-Chloro-1,1,1-Trifluoroethane	118		4.307					ND	
56 Cyclohexane	56		4.355					ND	
59 Carbon tetrachloride	117		4.407					ND	
57 1,1-Dichloropropene	75		4.407					ND	
58 Isobutyl alcohol	41		4.428					ND	U
60 Benzene	78		4.555					ND	
61 1,2-Dichloroethane	62		4.587					ND	
62 Tert-amyl methyl ether	73		4.629					ND	
63 n-Butanol	56		4.629					ND	
66 n-Heptane	43		4.745					ND	
67 Trichloroethene	95		5.040					ND	
64 1,2-Dichloro-1,1,2-trifluoroetha	117		5.089					ND	
65 1,1,1-Trifluoro-2,2-dichloroetha	83		5.131					ND	
68 2-Pentanone	43		5.146					ND	
69 Methylcyclohexane	55		5.230					ND	
70 1,2-Dichloropropane	63		5.241					ND	
71 Methyl methacrylate	100		5.252					ND	
72 1,4-Dioxane	88		5.294					ND	
73 Dibromomethane	93		5.315					ND	
74 Dichlorobromomethane	83		5.442					ND	
75 2-Nitropropane	41		5.600					ND	
76 2-Chloroethyl vinyl ether	63		5.642					ND	
77 cis-1,3-Dichloropropene	75		5.790					ND	
78 4-Methyl-2-pentanone (MIBK)	43		5.885					ND	
79 Toluene	91		6.064					ND	
80 trans-1,3-Dichloropropene	75		6.244					ND	
81 Ethyl methacrylate	69		6.275					ND	
82 1,1,2-Trichloroethane	97		6.423					ND	
83 Tetrachloroethene	164		6.507					ND	
84 1,3-Dichloropropane	76		6.560					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
85 2-Hexanone	43		6.592					ND	
86 Chlorodibromomethane	129		6.761					ND	
87 Tetrahydrothiophene	60		6.782					ND	
88 Ethylene Dibromide	107		6.866					ND	
89 1-Chlorohexane	91		7.267					ND	7
90 Chlorobenzene	112		7.299					ND	
91 1,1,1,2-Tetrachloroethane	131		7.373					ND	
92 Ethylbenzene	106		7.383					ND	
93 m-Xylene & p-Xylene	106		7.499					ND	7
94 o-Xylene	106		7.858					ND	
95 Styrene	104		7.869					ND	
96 Bromoform	173		8.048					ND	
97 Isopropylbenzene	105		8.196					ND	7
98 cis-1,4-Dichloro-2-butene	53		8.249					ND	
99 Cyclohexanone	55		8.280					ND	U
100 1,1,2,2-Tetrachloroethane	83		8.481					ND	
101 Bromobenzene	156		8.502					ND	
102 trans-1,4-Dichloro-2-butene	53		8.523					ND	
103 1,2,3-Trichloropropane	110		8.544					ND	
104 N-Propylbenzene	120		8.597					ND	
105 2-Chlorotoluene	126		8.681					ND	
106 1,3,5-Trimethylbenzene	105		8.766					ND	
107 4-Chlorotoluene	126		8.797					ND	
108 tert-Butylbenzene	119		9.072					ND	
127 Pentachloroethane	167		9.103					ND	
109 1,2,4-Trimethylbenzene	105		9.135					ND	
110 sec-Butylbenzene	134		9.293					ND	
111 1,3-Dichlorobenzene	146		9.409					ND	
112 4-Isopropyltoluene	119		9.441					ND	
113 1,4-Dichlorobenzene	146		9.515					ND	
114 1,2,3-Trimethylbenzene	105		9.526					ND	
115 n-Butylbenzene	91	9.842	9.842	0.000	95	2480		0.1047	
116 1,2-Dichlorobenzene	146		9.863					ND	
117 1,2-Dibromo-3-Chloropropane	157		10.644					ND	
118 1,3,5-Trichlorobenzene	180		10.824					ND	
119 1,2,4-Trichlorobenzene	180		11.457					ND	
120 Hexachlorobutadiene	225		11.604					ND	
121 Naphthalene	128		11.720					ND	
122 1,2,3-Trichlorobenzene	180		11.942					ND	
129 n-Nonyl Aldehyde	1		0.000					ND	
135 3-Methylhexane	1		0.000					ND	
136 1-Chlorohexane TIC	1		0.000					ND	
124 2,3-Dimethylpentane	1		0.000					ND	
125 2,2,3-Trimethylbutane	1		0.000					ND	
134 2,2-Dimethylpentane	1		0.000					ND	
123 3,3-Dimethylpentane	1		0.000					ND	
126 3-Ethylpentane	1		0.000					ND	
132 2-Methylhexane	1		0.000					ND	
128 2,4-Dimethylpentane	1		0.000					ND	
130 1-Chloro-1-fluoroethane TIC	1		0.000					ND	
138 Dimethyl disulfide	1		0.000					ND	
131 Propene oxide TIC	58		3.357					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 139 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 144 1,2-Dichloroethene, Total	1		0.000				ND		7
S 145 1,3-Dichloropropene, Total	1		0.000				ND		7
S 146 Total BTEX	1		0.000				ND		7
S 143 Xylenes, Total (URS)	1		0.000				ND		7
S 140 Trihalomethanes, Total	1		0.000				ND		7
S 141 TAH	1				0			0	7
S 142 Xylenes, Total	106		0.000				ND		7

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

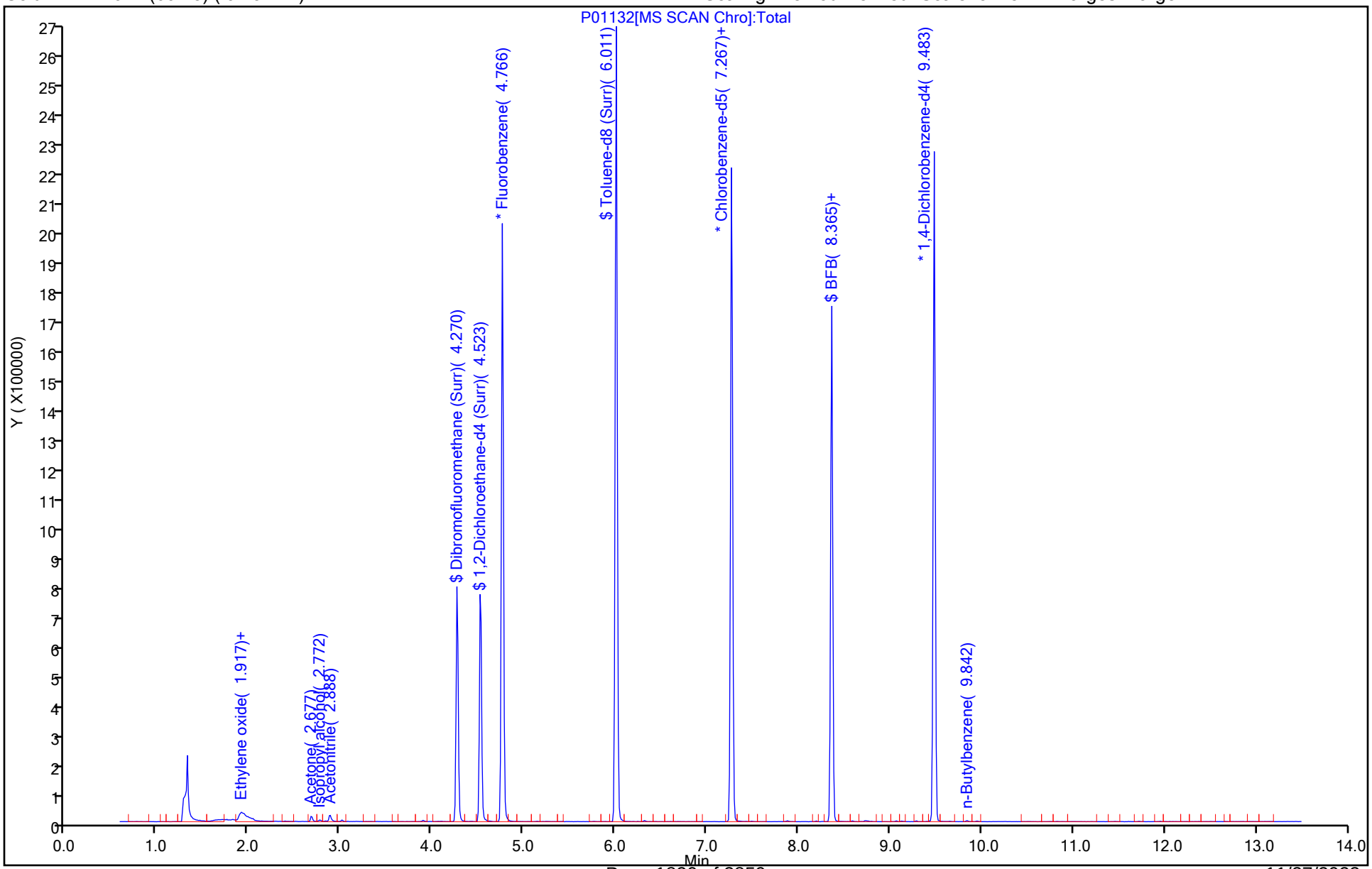
Report Date: 27-Apr-2023 14:05:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01132.D

Injection Date:	26-Apr-2023 10:12:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01132.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	26-Apr-2023 10:12:30	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	MB				
Operator ID:	COULTERD	Instrument ID:	VMS_P		
Method:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	27-Apr-2023 14:05:06	Calib Date:	12-Apr-2023 14:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1630				

First Level Reviewer: V8PV Date: 26-Apr-2023 16:56:53

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	54.2	108.45
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	51.8	103.51
$ 6 Toluene-d8 (Surr)	50.0	50.9	101.86
$ 7 4-Bromofluorobenzene (Surr)	50.0	47.6	95.22

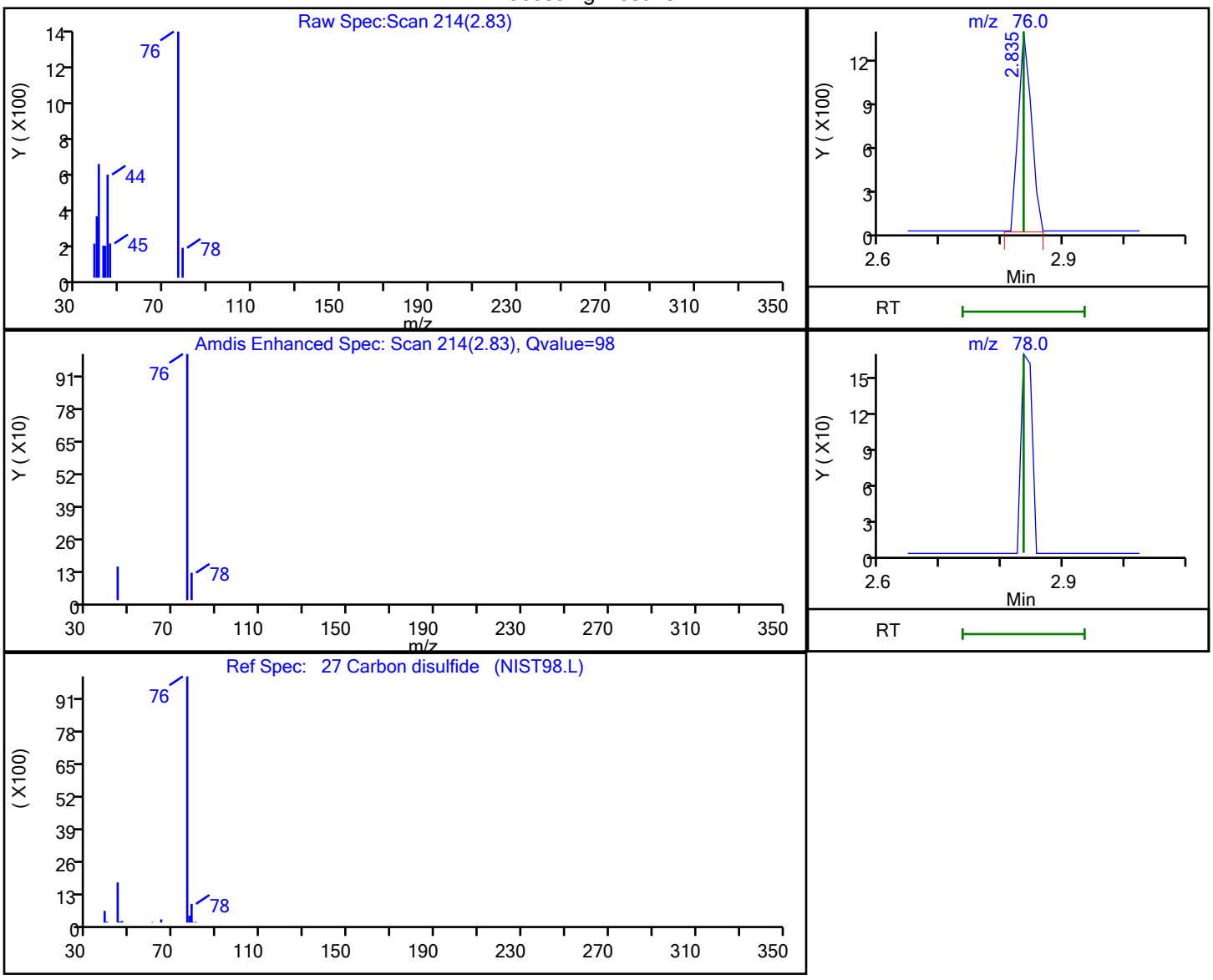
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01132.D
Injection Date: 26-Apr-2023 10:12:30 Instrument ID: VMS_P
Lims ID: MB
Client ID:
Operator ID: COULTERD ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

27 Carbon disulfide, CAS: 75-15-0

Processing Results



RT	Mass	Response	Amount
2.83	76.00	1979	0.103466
2.83	78.00	0	

Reviewer: NNS5, 27-Apr-2023 08:08:19
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

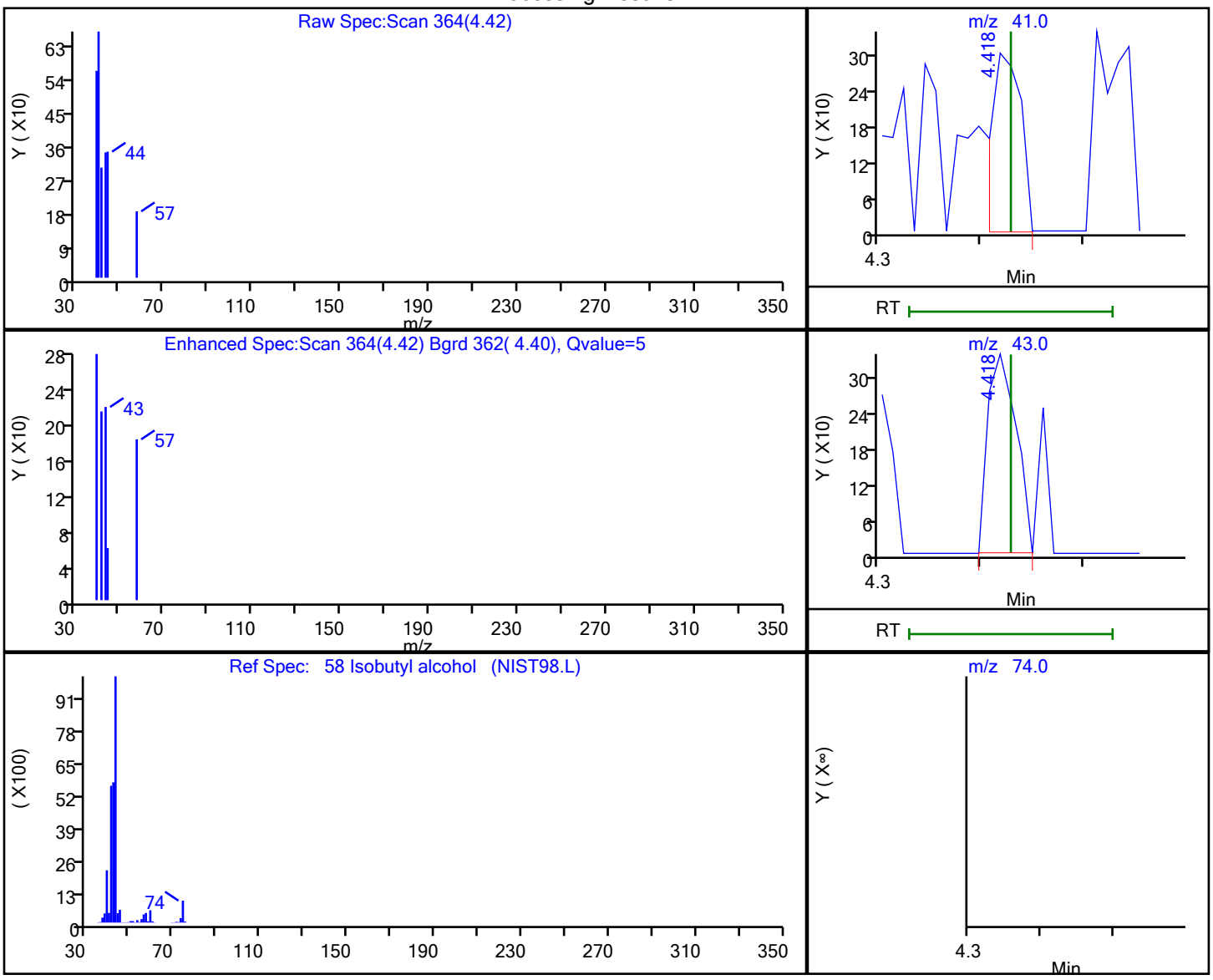
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01132.D				
Injection Date:	26-Apr-2023 10:12:30	Instrument ID:	VMS_P		
Lims ID:	MB				
Client ID:					
Operator ID:	COULTERD	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

58 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.42	41.00	598	1.052111
4.42	43.00	659	
4.43	74.00	0	

Reviewer: V8PV, 26-Apr-2023 16:56:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610347/7

Matrix: Water | Lab File ID: X502915.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610347/7

Matrix: Water | Lab File ID: X502915.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610347/7

Matrix: Water | Lab File ID: X502915.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-127
460-00-4	4-Bromofluorobenzene (Surr)	99		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Apr-2023 12:59:30 ALS Bottle#: 9 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 13:57:39 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 13:57:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942					ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2037332	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	495922	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	787571	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	501407	50.0	51.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	498413	50.0	48.4	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	92	2113755	50.0	50.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	92	693485	50.0	49.3	
$ 8 Trifluorotoluene (Surr)	1		0.000					ND	
$ 9 BFB	95	8.667	8.660	0.007	90	693485		NR	
10 Dichlorodifluoromethane	85		1.695					ND	
11 Chloromethane	50		1.867					ND	
12 Vinyl chloride	62		1.960					ND	
13 Ethylene oxide	43		2.225					ND	7
14 Bromomethane	94		2.246					ND	U
15 Chloroethane	64		2.339					ND	
16 Dichlorofluoromethane	67		2.503					ND	
20 Propene oxide	58		2.504					ND	7
17 Trichlorofluoromethane	101		2.539					ND	
18 Ethanol	45		2.647					ND	U
19 Ethyl ether	59		2.747					ND	
21 Acrolein	56		2.854					ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.932					ND	
23 1,1-Dichloroethene	96		2.940					ND	
24 Acetone	43		2.954					ND	7
25 Isopropyl alcohol	45		3.040					ND	U
26 Iodomethane	142		3.054					ND	
27 Carbon disulfide	76		3.118					ND	7
28 Acetonitrile	41	3.161	3.161	0.000	98	6623		5.82	
29 Methyl acetate	43		3.183					ND	
30 3-Chloro-1-propene	41		3.204					ND	
31 Methylene Chloride	84		3.297					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333					ND	
33 Acrylonitrile	53		3.454					ND	
34 Methyl tert-butyl ether	73		3.476					ND	
35 trans-1,2-Dichloroethene	96		3.490					ND	
36 Chlorotrifluoroethene	116		3.526					ND	
37 Hexane	57		3.683					ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733					ND	
39 Vinyl acetate	43		3.783					ND	
40 1,1-Dichloroethane	63		3.805					ND	
41 Isopropyl ether	87		3.805					ND	
42 2-Chloro-1,3-butadiene	53		3.862					ND	
43 2-Chloro-1,1,1-Trifluoroethane	118		3.948					ND	
44 Tert-butyl ethyl ether	59		4.062					ND	
45 2-Butanone (MEK)	43		4.184					ND	
46 Ethyl acetate	43		4.198					ND	U
47 cis-1,2-Dichloroethene	96		4.212					ND	
48 2,2-Dichloropropane	77		4.227					ND	
49 Propionitrile	54		4.234					ND	
50 sec-Butyl Alcohol	45		4.291					ND	
51 Methacrylonitrile	41		4.348					ND	
52 Chlorobromomethane	128		4.384					ND	
53 Tetrahydrofuran	42		4.398					ND	
54 Chloroform	83		4.441					ND	
55 1,1,1-Trichloroethane	97		4.584					ND	
56 Cyclohexane	56		4.648					ND	
58 1,2-Dichloro-1,1,2-trifluoroetha	117		4.678					ND	
57 1,1-Dichloropropene	75		4.699					ND	
60 Isobutyl alcohol	41		4.706					ND	U
59 Carbon tetrachloride	117		4.706					ND	
61 1,1,1-Trifluoro-2,2-dichloroetha	83		4.706					ND	
62 Benzene	78		4.849					ND	
63 1,2-Dichloroethane	62		4.877					ND	7
64 Tert-amyl methyl ether	73		4.920					ND	
65 n-Heptane	43		5.035					ND	U
66 n-Butanol	56		5.199					ND	
67 Trichloroethene	95		5.335					ND	
68 2-Pentanone	43		5.435					ND	
69 Methylcyclohexane	55		5.528					ND	
70 1,2-Dichloropropane	63		5.542					ND	
71 Methyl methacrylate	100		5.542					ND	
72 1,4-Dioxane	88		5.578					ND	
73 Dibromomethane	93		5.614					ND	
74 Dichlorobromomethane	83		5.728					ND	
75 2-Nitropropane	41		5.900					ND	
76 2-Chloroethyl vinyl ether	63		5.936					ND	
77 cis-1,3-Dichloropropene	75		6.079					ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179					ND	
79 Toluene	91		6.365					ND	
80 trans-1,3-Dichloropropene	75		6.536					ND	
81 Ethyl methacrylate	69		6.558					ND	
82 1,1,2-Trichloroethane	97		6.715					ND	
83 Tetrachloroethene	164		6.808					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 1,3-Dichloropropane	76		6.858					ND	7
85 2-Hexanone	43		6.872					ND	
86 Tetrahydrothiophene	60		7.051					ND	
87 Chlorodibromomethane	129		7.051					ND	
88 Ethylene Dibromide	107		7.173					ND	
89 1-Chlorohexane	91		7.559					ND	U
90 Chlorobenzene	112		7.602					ND	
91 1,1,1,2-Tetrachloroethane	131		7.673					ND	
92 Ethylbenzene	106		7.673					ND	
93 m-Xylene & p-Xylene	106		7.795					ND	7
94 o-Xylene	106		8.152					ND	
95 Styrene	104		8.166					ND	
96 Bromoform	173		8.345					ND	
97 Isopropylbenzene	105		8.488					ND	
98 cis-1,4-Dichloro-2-butene	53		8.538					ND	
99 Cyclohexanone	55		8.588					ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774					ND	
101 Bromobenzene	156		8.810					ND	
102 trans-1,4-Dichloro-2-butene	53		8.817					ND	
103 1,2,3-Trichloropropane	110		8.839					ND	
104 N-Propylbenzene	120		8.889					ND	
105 2-Chlorotoluene	126		8.982					ND	
106 1,3,5-Trimethylbenzene	105		9.060					ND	
107 4-Chlorotoluene	126		9.103					ND	
108 tert-Butylbenzene	119		9.368					ND	
109 Pentachloroethane	167		9.403					ND	
110 1,2,4-Trimethylbenzene	105		9.425					ND	
111 sec-Butylbenzene	134		9.589					ND	
112 1,3-Dichlorobenzene	146		9.711					ND	
113 4-Isopropyltoluene	119		9.732					ND	
114 1,4-Dichlorobenzene	146		9.811					ND	7
115 1,2,3-Trimethylbenzene	105		9.833					ND	
116 n-Butylbenzene	91		10.140					ND	
117 1,2-Dichlorobenzene	146		10.168					ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948					ND	
119 1,3,5-Trichlorobenzene	180		11.134					ND	7
120 1,2,4-Trichlorobenzene	180		11.770					ND	7
121 Hexachlorobutadiene	225		11.906					ND	
122 Naphthalene	128		12.035					ND	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	86	2356		0.3098	
166 Ethyl acrylate	55		0.000					ND	
133 2-Methylhexane	1		0.000					ND	
169 1,4-Dibromobenzene	1		0.000					ND	
131 2,3-Dimethylpentane	1		0.000					ND	
168 1,2-dichloro-4-(trifluoromethyl)	1		0.000					ND	
177 Pentachloroethane TIC	1		0.000					ND	
125 3-Ethylpentane	1		0.000					ND	
174 Benzene, 1-bromo-3-fluoro-	1		0.000					ND	
170 1,3-Dibromobenzene	1		0.000					ND	
165 t-Amyl alcohol	1		0.000					ND	
172 4-Chlorobenzotrifluoride	1		0.000					ND	
175 1-Bromo-2-chloroethane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 2,2-Dimethylpentane	1		0.000				ND		
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND		
129 2,2,3-Trimethylbutane	1		0.000				ND		
132 3,3-Dimethylpentane	1		0.000				ND		
127 n-Nonyl Aldehyde	1		0.000				ND		
126 Dimethyl disulfide	1		0.000				ND		
171 4-Bromofluorobenzene	95		0.000				ND		
128 2,4-Dimethylpentane	1		0.000				ND		
173 Benzene, 1-bromo-4-ethyl-	1		0.000				ND		
124 3-Methylhexane	1		0.000				ND		
134 Propene oxide TIC	58		5.334				ND		
S 135 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 139 Xylenes, Total (URS)	1		0.000				ND		7
S 136 1,3-Dichloropropene, Total	1		0.000				ND		7
S 138 Xylenes, Total	106		0.000				ND		7
S 137 Total BTEX	1		0.000				ND		7
S 140 Trihalomethanes, Total	1		0.000				ND		7
S 142 TAH	1				0			0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND		7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

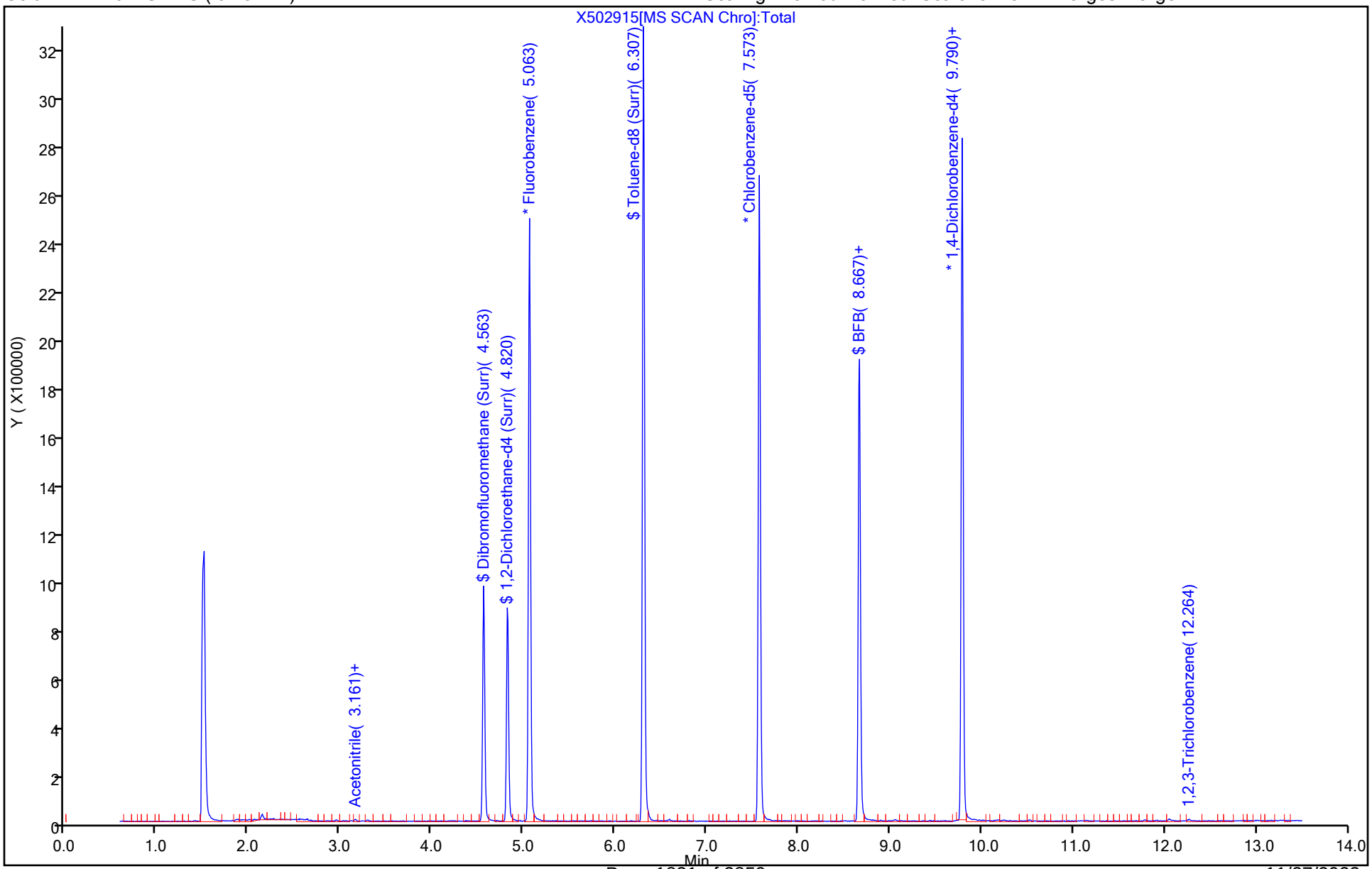
Report Date: 27-Apr-2023 13:57:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D

Injection Date:	27-Apr-2023 12:59:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	27-Apr-2023 12:59:30	ALS Bottle#:	9	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	MB				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	27-Apr-2023 13:57:39	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1649				

First Level Reviewer: BX8N Date: 27-Apr-2023 13:57:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.2	102.33
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.4	96.85
$ 6 Toluene-d8 (Surr)	50.0	50.0	100.07
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.3	98.54

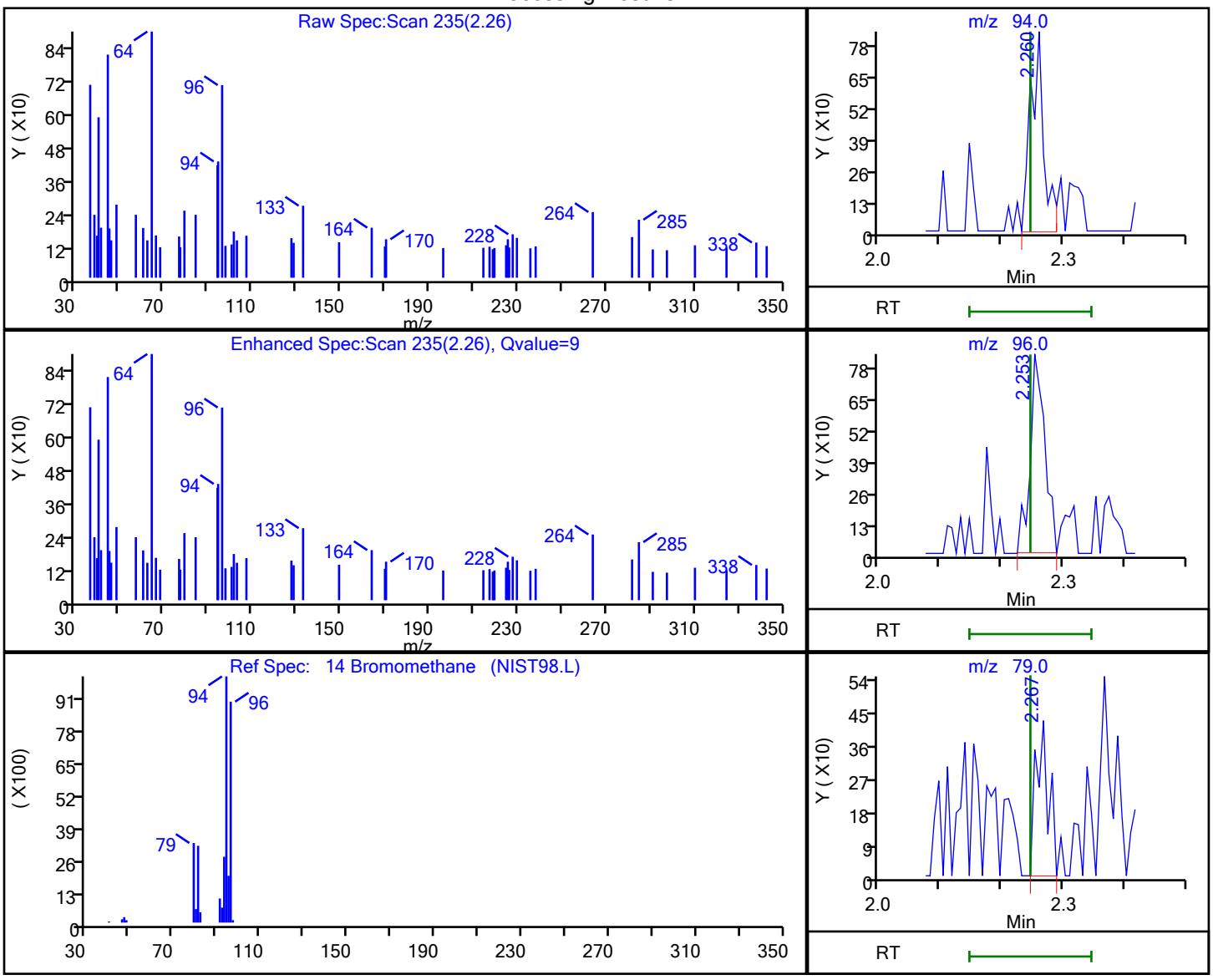
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D
Injection Date: 27-Apr-2023 12:59:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: MED ALS Bottle#: 9 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.26	94.00	1249	0.253033
2.25	96.00	1416	
2.27	79.00	609	

Reviewer: BX8N, 27-Apr-2023 13:57:06
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

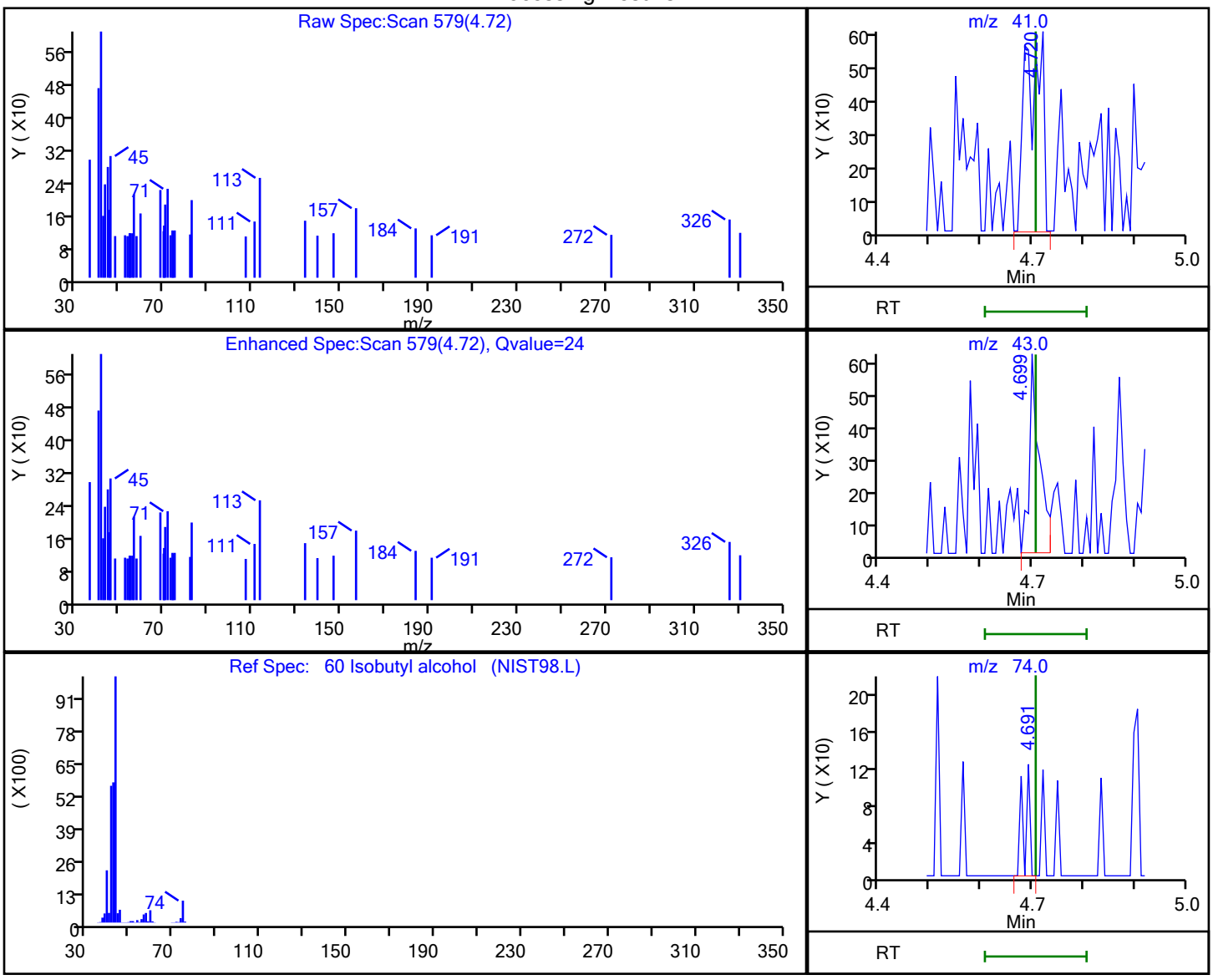
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D				
Injection Date:	27-Apr-2023 12:59:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	MED	ALS Bottle#:	9	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.72	41.00	1374	16.683738
4.70	43.00	874	
4.69	74.00	100	

Reviewer: BX8N, 27-Apr-2023 13:57:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610485/7

Matrix: Water | Lab File ID: X502944.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 23:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610485/7

Matrix: Water | Lab File ID: X502944.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 23:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610485/7

Matrix: Water | Lab File ID: X502944.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 23:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502944.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Apr-2023 23:10:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:12 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: V8PV Date: 28-Apr-2023 02:55:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96	5.006	4.942	0.064	1	44		0	
* 1 Fluorobenzene	96	5.056	5.056	0.000	99	2038926	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	487849	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	95	754424	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.556	0.007	93	502554	50.0	51.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	475616	50.0	46.2	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	2112455	50.0	50.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	691519	50.0	51.3	
$ 8 Trifluorotoluene (Surr)	1		0.000					ND	
$ 9 BFB	95	8.660	8.660	0.000	89	691519		NR	
10 Dichlorodifluoromethane	85		1.696					ND	
11 Chloromethane	50		1.860					ND	
12 Vinyl chloride	62		1.960					ND	
13 Ethylene oxide	43		2.225					ND	
14 Bromomethane	94		2.246					ND	U
15 Chloroethane	64		2.332					ND	
16 Dichlorofluoromethane	67		2.504					ND	
20 Propene oxide	58		2.504					ND	7
17 Trichlorofluoromethane	101		2.539					ND	
18 Ethanol	45		2.647					ND	U
19 Ethyl ether	59		2.739					ND	
21 Acrolein	56		2.854					ND	
23 1,1-Dichloroethene	96		2.933					ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933					ND	
24 Acetone	43		2.947					ND	7
25 Isopropyl alcohol	45		3.033					ND	
26 Iodomethane	142		3.054					ND	
27 Carbon disulfide	76		3.118					ND	7
28 Acetonitrile	41		3.154					ND	U
29 Methyl acetate	43		3.176					ND	
30 3-Chloro-1-propene	41		3.197					ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
31 Methylene Chloride	84	3.290	3.290	0.000	86	5064		0.5035	
32 2-Methyl-2-propanol	59		3.333					ND	
33 Acrylonitrile	53		3.447					ND	
34 Methyl tert-butyl ether	73		3.476					ND	
35 trans-1,2-Dichloroethene	96		3.490					ND	
36 Chlorotrifluoroethene	116		3.526					ND	
37 Hexane	57		3.676					ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733					ND	
39 Vinyl acetate	43		3.776					ND	
41 Isopropyl ether	87		3.805					ND	
40 1,1-Dichloroethane	63		3.805					ND	
42 2-Chloro-1,3-butadiene	53		3.862					ND	
43 2-Chloro-1,1,1-Trifluoroethane	118		3.948					ND	
44 Tert-butyl ethyl ether	59		4.062					ND	
45 2-Butanone (MEK)	43		4.184					ND	
46 Ethyl acetate	43		4.198					ND	7
47 cis-1,2-Dichloroethene	96		4.212					ND	
48 2,2-Dichloropropane	77		4.220					ND	
49 Propionitrile	54		4.234					ND	
50 sec-Butyl Alcohol	45		4.291					ND	
51 Methacrylonitrile	41		4.348					ND	
52 Chlorobromomethane	128		4.384					ND	
53 Tetrahydrofuran	42		4.391					ND	
54 Chloroform	83		4.441					ND	
55 1,1,1-Trichloroethane	97		4.584					ND	
56 Cyclohexane	56		4.641					ND	
58 1,2-Dichloro-1,1,2-trifluoroetha	117		4.678					ND	
57 1,1-Dichloropropene	75		4.692					ND	
60 Isobutyl alcohol	41		4.699					ND	U
59 Carbon tetrachloride	117		4.699					ND	
61 1,1,1-Trifluoro-2,2-dichloroetha	83		4.706					ND	
62 Benzene	78		4.849					ND	
63 1,2-Dichloroethane	62		4.877					ND	7
64 Tert-amyl methyl ether	73		4.913					ND	
65 n-Heptane	43		5.028					ND	
66 n-Butanol	56		5.192					ND	
67 Trichloroethene	95		5.328					ND	
68 2-Pentanone	43		5.428					ND	
69 Methylcyclohexane	55		5.521					ND	
71 Methyl methacrylate	100		5.535					ND	
70 1,2-Dichloropropane	63		5.535					ND	
72 1,4-Dioxane	88		5.578					ND	
73 Dibromomethane	93		5.607					ND	
74 Dichlorobromomethane	83		5.728					ND	
75 2-Nitropropane	41		5.900					ND	
76 2-Chloroethyl vinyl ether	63		5.929					ND	
77 cis-1,3-Dichloropropene	75		6.072					ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.172					ND	
79 Toluene	91		6.365					ND	
80 trans-1,3-Dichloropropene	75		6.536					ND	
81 Ethyl methacrylate	69		6.558					ND	
82 1,1,2-Trichloroethane	97		6.708					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
83 Tetrachloroethene	164		6.801					ND	
84 1,3-Dichloropropane	76		6.858					ND	
85 2-Hexanone	43		6.872					ND	
86 Tetrahydrothiophene	60		7.051					ND	
87 Chlorodibromomethane	129		7.051					ND	
88 Ethylene Dibromide	107		7.165					ND	
89 1-Chlorohexane	91		7.552					ND	U
90 Chlorobenzene	112		7.595					ND	
91 1,1,1,2-Tetrachloroethane	131		7.666					ND	
92 Ethylbenzene	106		7.673					ND	
93 m-Xylene & p-Xylene	106		7.788					ND	7
94 o-Xylene	106		8.145					ND	
95 Styrene	104		8.167					ND	
96 Bromoform	173		8.345					ND	
97 Isopropylbenzene	105		8.488					ND	
98 cis-1,4-Dichloro-2-butene	53		8.538					ND	
99 Cyclohexanone	55		8.581					ND	U
100 1,1,2,2-Tetrachloroethane	83		8.767					ND	
101 Bromobenzene	156		8.803					ND	
102 trans-1,4-Dichloro-2-butene	53		8.810					ND	
103 1,2,3-Trichloropropane	110		8.839					ND	
104 N-Propylbenzene	120		8.882					ND	
105 2-Chlorotoluene	126		8.982					ND	
106 1,3,5-Trimethylbenzene	105		9.053					ND	
107 4-Chlorotoluene	126		9.096					ND	
108 tert-Butylbenzene	119		9.368					ND	
109 Pentachloroethane	167		9.403					ND	
110 1,2,4-Trimethylbenzene	105		9.425					ND	
111 sec-Butylbenzene	134		9.582					ND	
112 1,3-Dichlorobenzene	146		9.711					ND	
113 4-Isopropyltoluene	119		9.732					ND	
114 1,4-Dichlorobenzene	146		9.811					ND	
115 1,2,3-Trimethylbenzene	105		9.825					ND	7
116 n-Butylbenzene	91		10.133					ND	
117 1,2-Dichlorobenzene	146		10.161					ND	
118 1,2-Dibromo-3-Chloropropane	157		10.941					ND	U
119 1,3,5-Trichlorobenzene	180		11.127					ND	7
120 1,2,4-Trichlorobenzene	180		11.763					ND	U
121 Hexachlorobutadiene	225		11.899					ND	
122 Naphthalene	128		12.035					ND	U
123 1,2,3-Trichlorobenzene	180		12.249					ND	U
132 3,3-Dimethylpentane	1		0.000					ND	
169 1,4-Dibromobenzene	1		0.000					ND	
125 3-Ethylpentane	1		0.000					ND	
165 t-Amyl alcohol	1		0.000					ND	
131 2,3-Dimethylpentane	1		0.000					ND	
173 Benzene, 1-bromo-4-ethyl-	1		0.000					ND	
174 Benzene, 1-bromo-3-fluoro-	1		0.000					ND	
175 1-Bromo-2-chloroethane	1		0.000					ND	
129 2,2,3-Trimethylbutane	1		0.000					ND	
170 1,3-Dibromobenzene	1		0.000					ND	
166 Ethyl acrylate	55		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND		
126 Dimethyl disulfide	1		0.000				ND		
127 n-Nonyl Aldehyde	1		0.000				ND		
124 3-Methylhexane	1		0.000				ND		
177 Pentachloroethane TIC	1		0.000				ND		
171 4-Bromofluorobenzene	95		0.000				ND		
130 2,2-Dimethylpentane	1		0.000				ND		
168 1,2-dichloro-4-(trifluoromethyl)	1		0.000				ND		
133 2-Methylhexane	1		0.000				ND		
172 4-Chlorobenzotrifluoride	1		0.000				ND		
128 2,4-Dimethylpentane	1		0.000				ND		
134 Propene oxide TIC	58		5.334				ND		
S 135 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 139 Xylenes, Total (URS)	1		0.000				ND		7
S 136 1,3-Dichloropropene, Total	1		0.000				ND		7
S 138 Xylenes, Total	106		0.000				ND		7
S 137 Total BTEX	1		0.000				ND		7
S 140 Trihalomethanes, Total	1		0.000				ND		7
S 142 TAH	1				0			0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND		7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

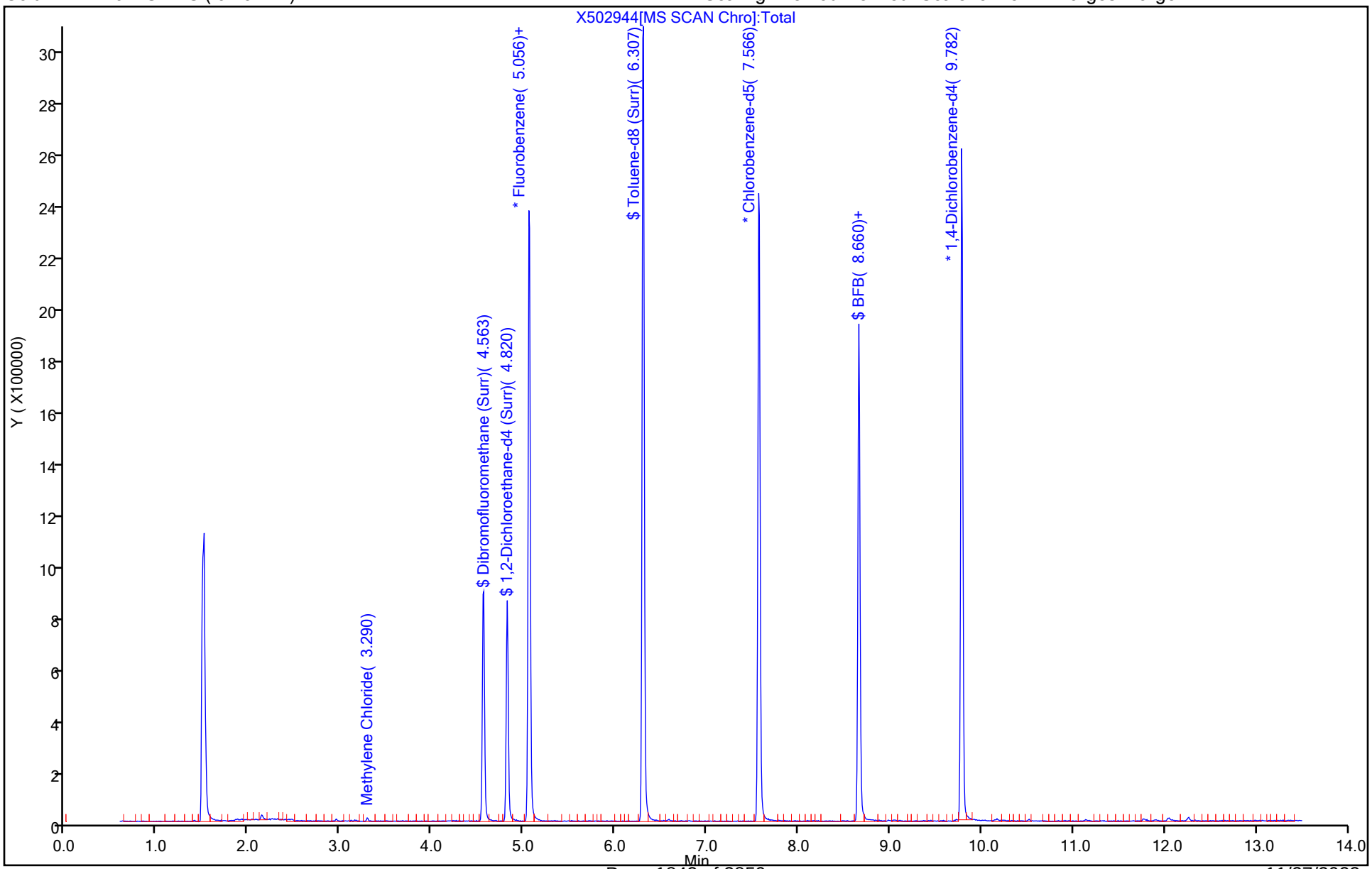
Report Date: 28-Apr-2023 02:56:16 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502944.D

Injection Date:	27-Apr-2023 23:10:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502944.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Apr-2023 23:10:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:12 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: V8PV Date: 28-Apr-2023 02:55:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.2	102.48
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.2	92.35
$ 6 Toluene-d8 (Surr)	50.0	50.8	101.66
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.3	102.58

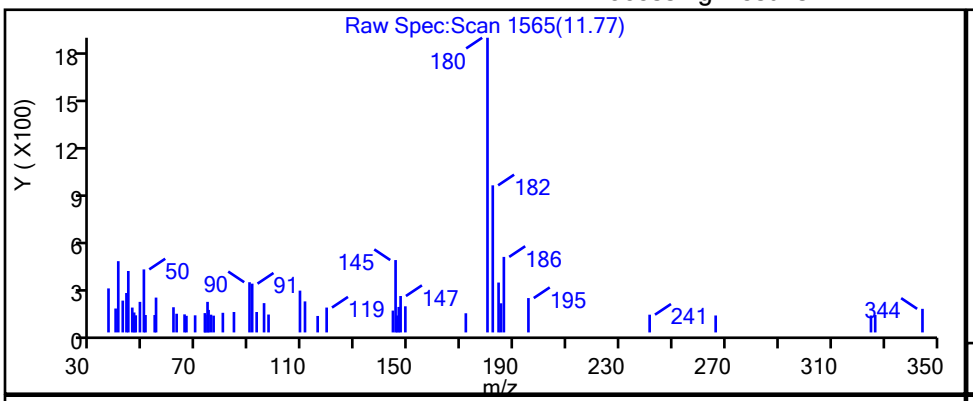
User Disabled Compound Report

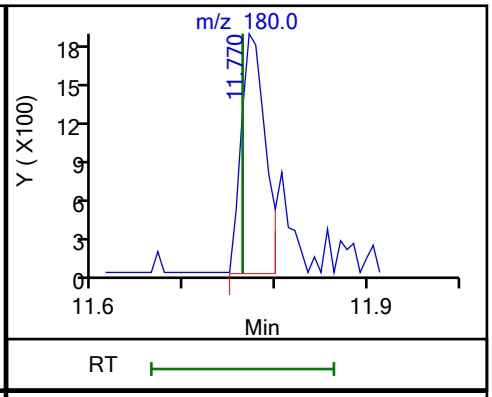
Eurofins Denver

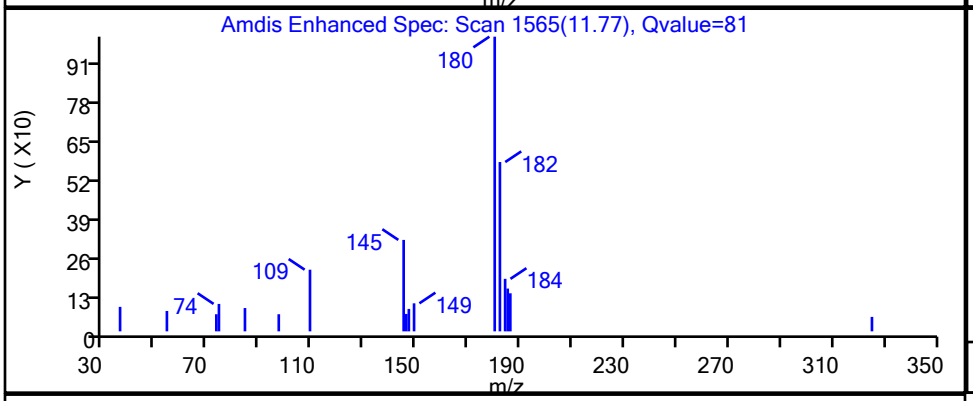
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502944.D
Injection Date: 27-Apr-2023 23:10:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: bj ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

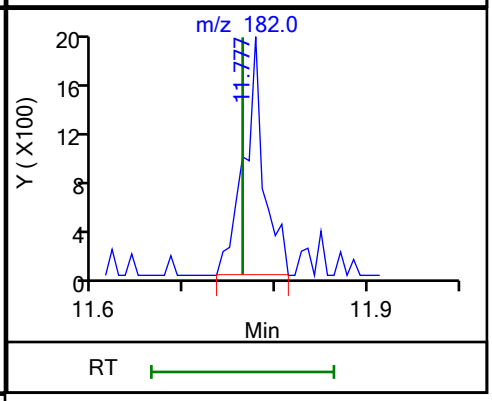
120 1,2,4-Trichlorobenzene, CAS: 120-82-1

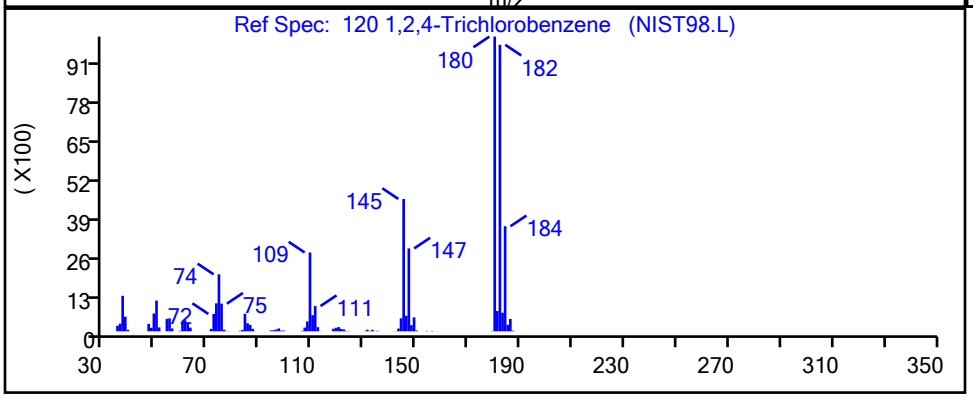
Processing Results











RT	Mass	Response	Amount
11.77	180.00	3402	0.352461
11.78	182.00	2923	

Reviewer: V8PV, 28-Apr-2023 02:54:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

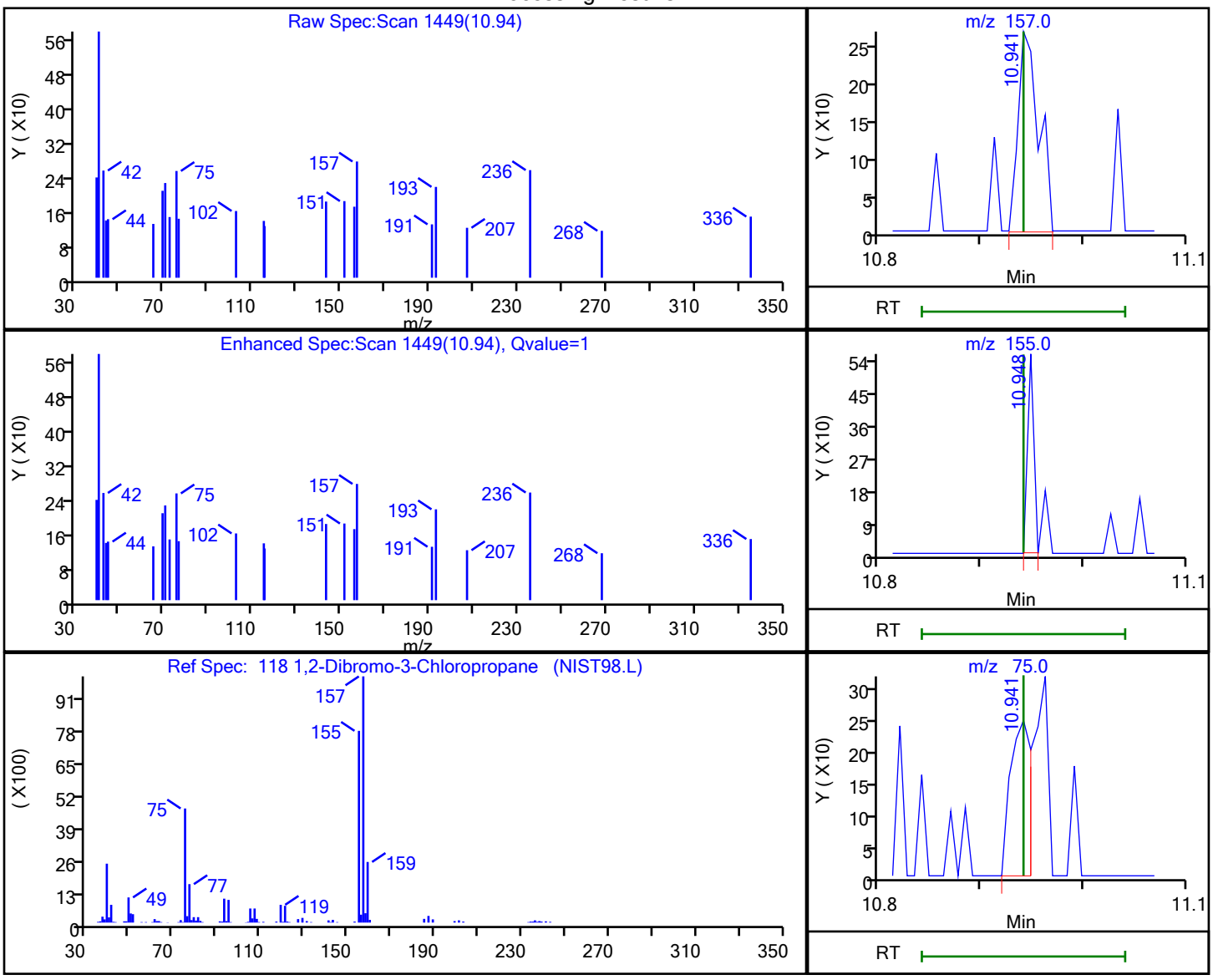
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502944.D				
Injection Date:	27-Apr-2023 23:10:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	bj	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

118 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Processing Results



RT	Mass	Response	Amount
10.94	157.00	380	0.571681
10.95	155.00	239	
10.94	75.00	353	

Reviewer: V8PV, 28-Apr-2023 02:54:46

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

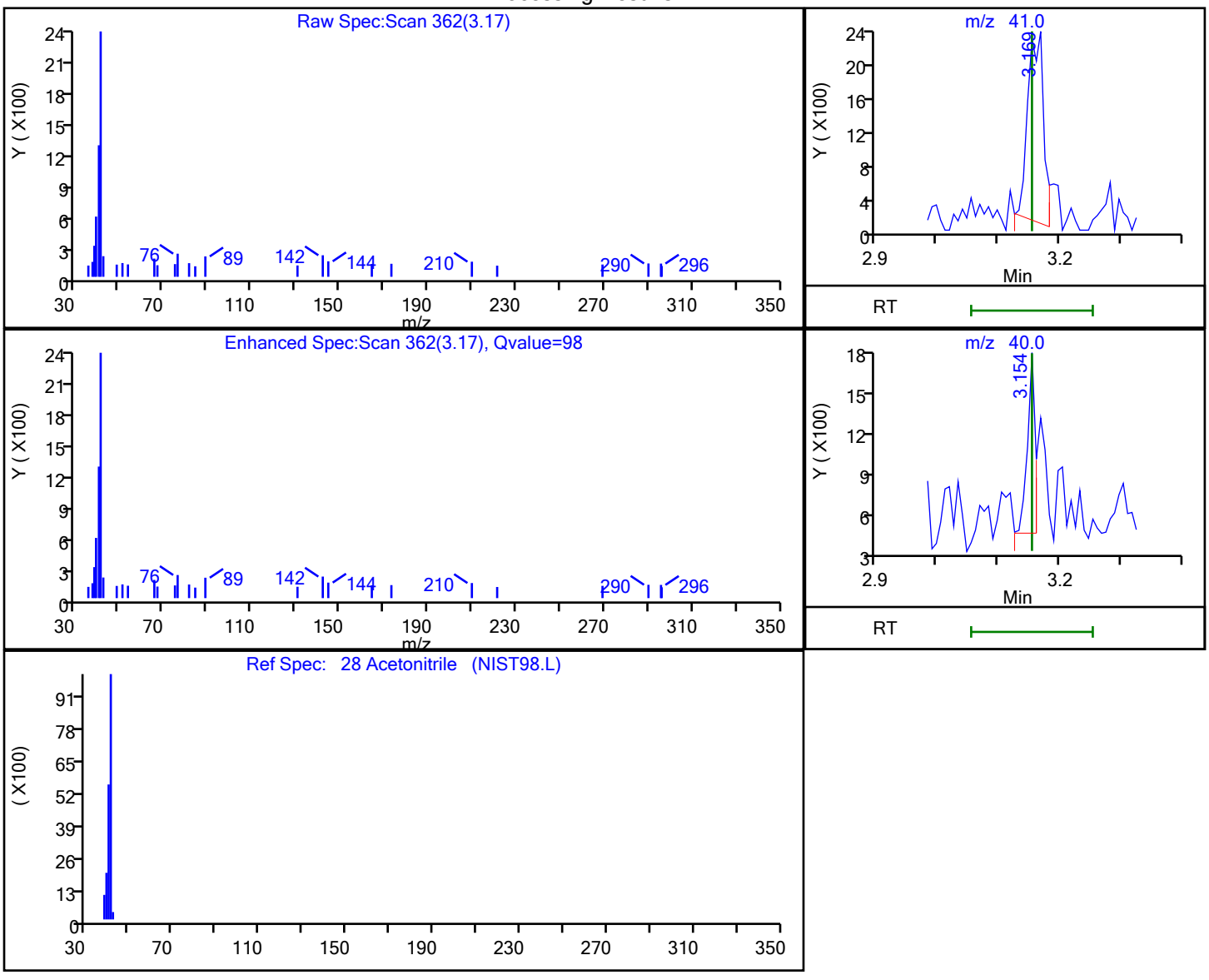
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502944.D
Injection Date: 27-Apr-2023 23:10:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: bj ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

28 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
3.17	41.00	4067	3.571334
3.15	40.00	1143	

Reviewer: V8PV, 28-Apr-2023 02:54:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

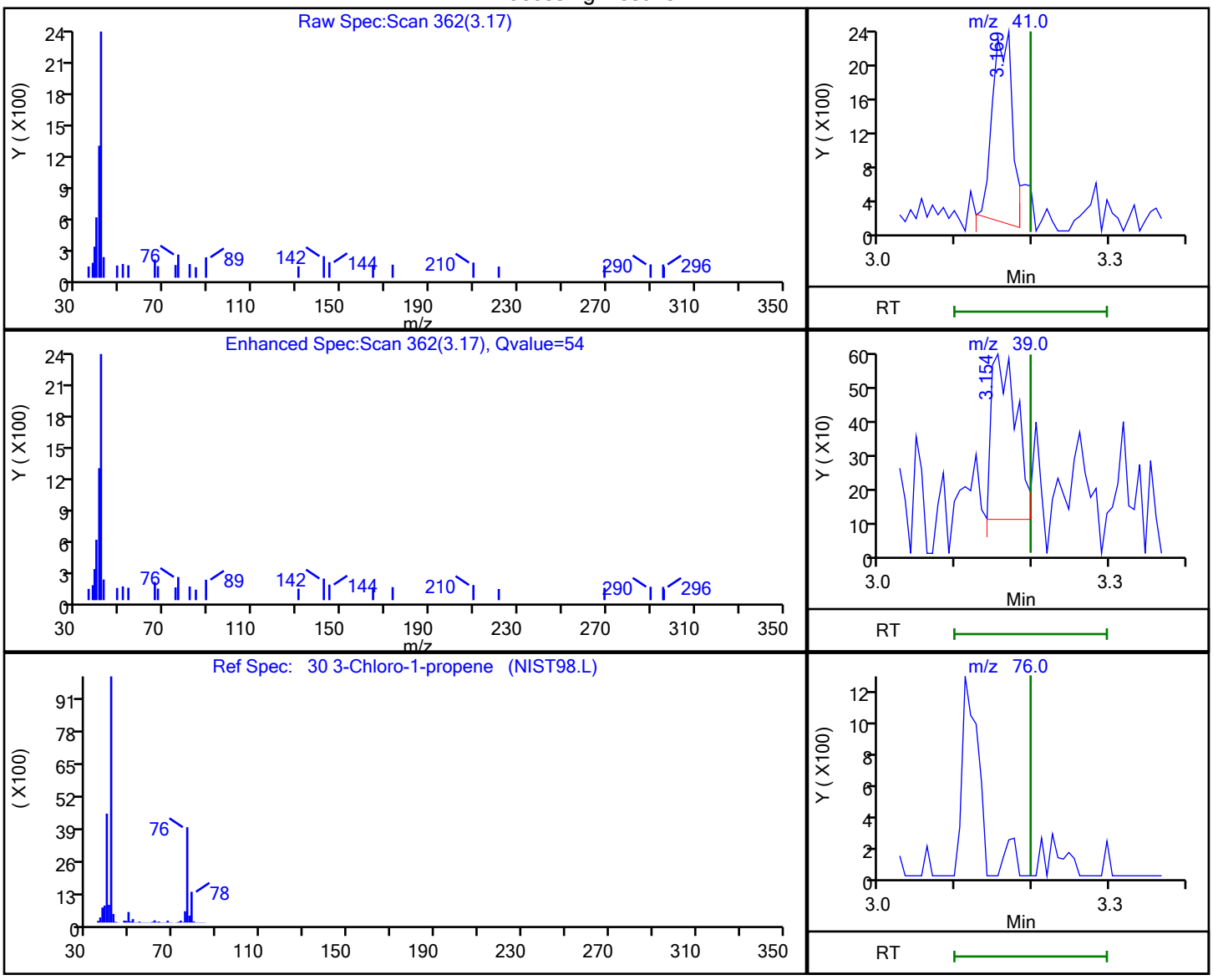
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502944.D				
Injection Date:	27-Apr-2023 23:10:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	bj	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

30 3-Chloro-1-propene, CAS: 107-05-1

Processing Results



RT	Mass	Response	Amount
3.17	41.00	4067	0.390997
3.15	39.00	1116	
3.20	76.00	0	

Reviewer: V8PV, 28-Apr-2023 02:54:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

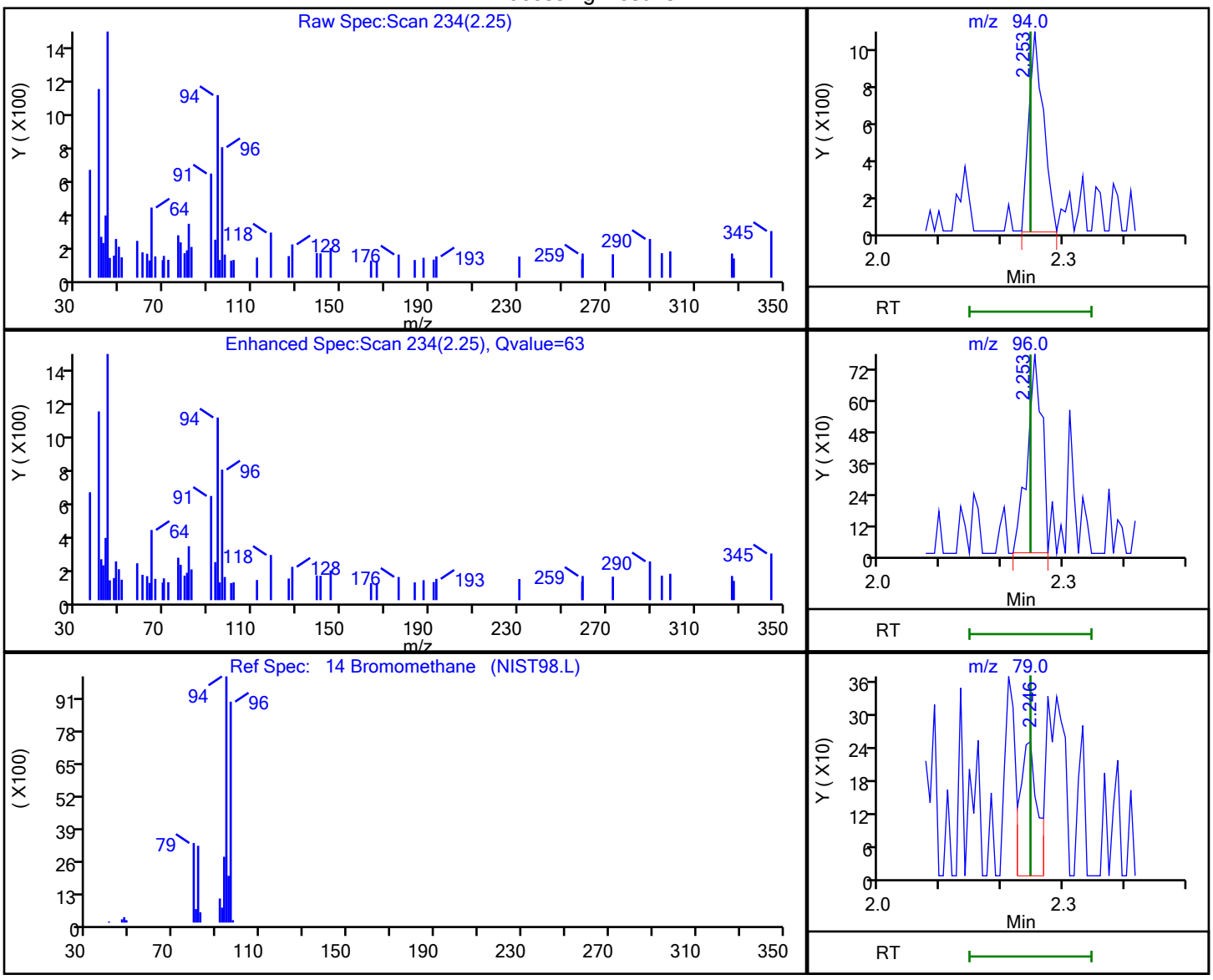
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502944.D				
Injection Date:	27-Apr-2023 23:10:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	bj	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.25	94.00	1779	0.360123
2.25	96.00	1286	
2.25	79.00	483	

Reviewer: V8PV, 28-Apr-2023 02:55:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

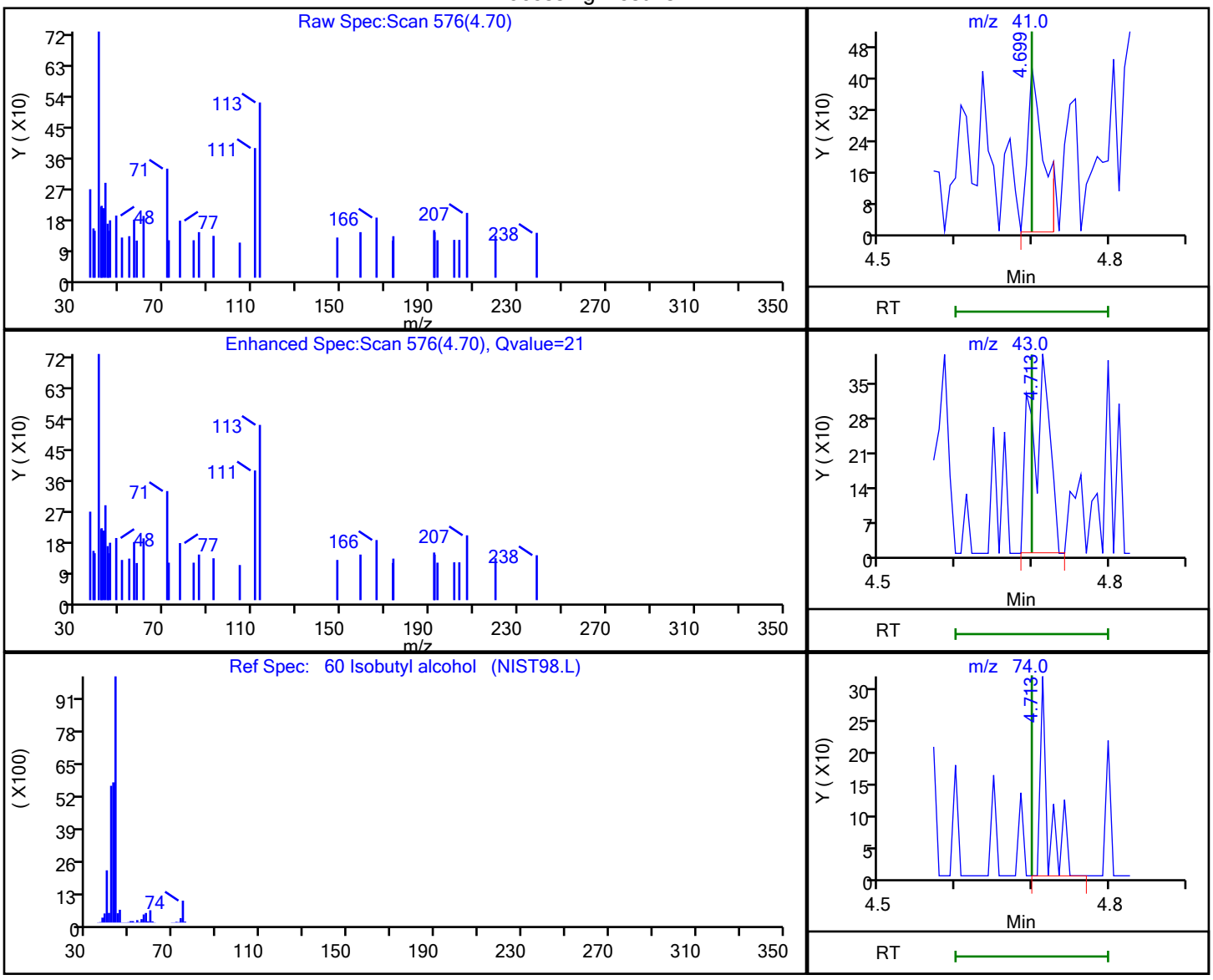
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502944.D
Injection Date: 27-Apr-2023 23:10:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: bj ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.70	41.00	602	13.670684
4.71	43.00	681	
4.71	74.00	237	

Reviewer: V8PV, 28-Apr-2023 02:54:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609561/1002

Matrix: Water | Lab File ID: -MS1_8308-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 07:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	46.8		1.0	0.58
71-55-6	1,1,1-Trichloroethane	51.5		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	49.4		1.0	0.21
79-00-5	1,1,2-Trichloroethane	49.2		1.0	0.27
75-34-3	1,1-Dichloroethane	50.1		1.0	0.22
75-35-4	1,1-Dichloroethene	45.5		1.0	0.23
563-58-6	1,1-Dichloropropene	51.0		1.0	0.42
96-18-4	1,2,3-Trichloropropane	48.0		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	46.2		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	43.2		5.0	1.8
106-93-4	1,2-Dibromoethane	47.9		1.0	0.40
95-50-1	1,2-Dichlorobenzene	48.6		1.0	0.37
107-06-2	1,2-Dichloroethane	49.1		1.0	0.54
78-87-5	1,2-Dichloropropane	49.1		1.0	0.52
541-73-1	1,3-Dichlorobenzene	49.1		1.0	0.33
142-28-9	1,3-Dichloropropane	49.7		1.0	0.38
106-46-7	1,4-Dichlorobenzene	47.7		1.0	0.39
594-20-7	2,2-Dichloropropane	49.6		1.0	0.38
78-93-3	2-Butanone (MEK)	193		15	6.0
591-78-6	2-Hexanone	200		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	207		5.0	0.98
67-64-1	Acetone	190		15	6.6
107-02-8	Acrolein	511		20	4.9
107-13-1	Acrylonitrile	513		20	4.5
107-05-1	Allyl chloride	49.6		2.0	0.17
71-43-2	Benzene	50.4		1.0	0.31
75-25-2	Bromoform	44.4		2.0	1.2
74-83-9	Bromomethane	52.9		5.0	2.4
75-15-0	Carbon disulfide	44.0		2.0	0.63
56-23-5	Carbon tetrachloride	47.8		1.0	0.57
108-90-7	Chlorobenzene	48.7		1.0	0.42
74-97-5	Chlorobromomethane	47.9		1.0	0.40
124-48-1	Chlorodibromomethane	45.6		2.0	0.62
75-00-3	Chloroethane	50.3		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609561/1002

Matrix: Water | Lab File ID: -MS1_8308-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 07:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	50.4		1.0	0.36
74-87-3	Chloromethane	53.3		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	49.9		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	47.9		2.0	0.63
74-95-3	Dibromomethane	47.5		1.0	0.34
75-27-4	Dichlorobromomethane	49.4		1.0	0.39
75-71-8	Dichlorodifluoromethane	45.5		3.0	0.96
97-63-2	Ethyl methacrylate	48.4		3.0	0.86
100-41-4	Ethylbenzene	47.8		1.0	0.30
74-88-4	Iodomethane	46.7		5.0	2.6
78-83-1	Isobutyl alcohol	1290		110	37
75-09-2	Methylene Chloride	46.9		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	48.3		2.0	0.36
95-47-6	o-Xylene	48.5		1.0	0.33
100-42-5	Styrene	48.7		1.0	0.36
127-18-4	Tetrachloroethene	48.3		1.0	0.40
108-88-3	Toluene	50.7		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	47.3		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	48.7		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	48.0		3.0	1.4
79-01-6	Trichloroethene	48.6		1.0	0.30
75-69-4	Trichlorofluoromethane	49.4		2.0	0.57
108-05-4	Vinyl acetate	112		3.0	0.94
75-01-4	Vinyl chloride	52.3		2.0	0.51
1330-20-7	Xylenes, Total	96.8		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		70-127
460-00-4	4-Bromofluorobenzene (Surr)	104		78-120
1868-53-7	Dibromofluoromethane (Surr)	107		77-120
2037-26-5	Toluene-d8 (Surr)	106		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\-MS1_8308-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 21-Apr-2023 07:58:30 ALS Bottle#: 2 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: m
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:16 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: LP8K Date: 21-Apr-2023 08:36:36

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	98	1009627	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	242470	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	386005	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	255988	50.0	53.3	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	372381	50.0	57.2	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1103875	50.0	53.0	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	395202	50.0	52.1	
	11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	221328	50.0	45.5	
	12 Chloromethane	50	2.009	2.009	0.000	99	248468	50.0	53.3	
	13 Vinyl chloride	62	2.135	2.135	0.000	98	251471	50.0	52.3	
	15 Bromomethane	94	2.498	2.498	0.000	91	134087	50.0	52.9	
	16 Chloroethane	64	2.623	2.623	0.000	99	148764	50.0	50.3	
	17 Dichlorofluoromethane	67	2.861	2.861	0.000	98	354921	50.0	52.7	
	18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	280950	50.0	49.4	
	20 Ethyl ether	59	3.182	3.182	0.000	93	174354	50.0	48.7	
	22 Acrolein	56	3.322	3.322	0.000	99	279377	493.8	511.1	
	23 1,1-Dichloroethene	96	3.420	3.420	0.000	94	142380	50.0	45.5	
	24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	94	103046	50.0	45.0	
	25 Acetone	43	3.448	3.448	0.000	98	332010	200.0	190.5	
	26 Iodomethane	142	3.559	3.559	0.000	100	195491	50.0	46.7	
	28 Carbon disulfide	76	3.629	3.629	0.000	100	495070	50.0	44.0	
	30 Methyl acetate	43	3.755	3.755	0.000	98	394162	100.0	99.5	
	31 3-Chloro-1-propene	41	3.769	3.769	0.000	86	358680	50.0	49.6	
	32 Methylene Chloride	84	3.894	3.894	0.000	99	182858	50.0	46.9	
	33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	292430	500.0	511.6	
	34 Acrylonitrile	53	4.104	4.104	0.000	97	947449	500.0	513.1	
	35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	621346	50.0	51.3	
	36 trans-1,2-Dichloroethene	96	4.132	4.132	0.000	94	171692	50.0	47.3	
	37 Hexane	57	4.383	4.383	0.000	96	234942	50.0	44.8	
	39 Vinyl acetate	43	4.523	4.523	0.000	97	1057240	100.0	111.8	
	40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	361218	50.0	50.1	
	46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	522907	200.0	193.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
49 2,2-Dichloropropane	77	5.040	5.040	0.000	90	303621	50.0	49.6	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	87	194916	50.0	49.9	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	599324	1200.0	1247.7	
53 Chlorobromomethane	128	5.249	5.249	0.000	93	85683	50.0	47.9	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	175822	100.0	103.5	
55 Chloroform	83	5.319	5.319	0.000	96	331134	50.0	50.4	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	281245	50.0	51.5	
57 Cyclohexane	56	5.542	5.542	0.000	96	340687	50.0	48.3	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	272752	50.0	51.0	
59 Carbon tetrachloride	117	5.612	5.612	0.000	81	220815	50.0	47.8	
60 Isobutyl alcohol	41	5.654	5.654	0.000	93	259611	1250.0	1291.1	
63 Benzene	78	5.780	5.780	0.000	99	786689	50.0	50.4	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	298943	50.0	49.1	
66 n-Heptane	43	6.003	6.003	0.000	96	216703	50.0	44.6	
68 Trichloroethene	95	6.339	6.339	0.000	95	189159	50.0	48.6	
69 2-Pentanone	43	6.478	6.478	0.000	98	678243	160.0	164.4	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	248366	50.0	48.6	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	90	211299	50.0	49.1	
73 1,4-Dioxane	88	6.632	6.632	0.000	98	63408	1000.0	912.7	
74 Dibromomethane	93	6.660	6.660	0.000	92	112039	50.0	47.5	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	253479	50.0	49.4	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	94	147718	50.0	48.2	
78 cis-1,3-Dichloropropene	75	7.176	7.176	0.000	90	332782	50.0	47.9	
79 4-Methyl-2-pentanone (MIBK)	43	7.288	7.288	0.000	99	1068640	200.0	206.9	
82 Toluene	91	7.484	7.484	0.000	97	819253	50.0	50.7	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	310547	50.0	48.7	
85 Ethyl methacrylate	69	7.707	7.707	0.000	92	285739	50.0	48.4	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	94	166520	50.0	49.2	
89 Tetrachloroethene	164	7.959	7.959	0.000	92	128849	50.0	48.3	
90 1,3-Dichloropropane	76	8.014	8.014	0.000	98	322229	50.0	49.7	
91 2-Hexanone	43	8.042	8.042	0.000	98	765614	200.0	200.0	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	162504	50.0	45.6	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	171815	50.0	47.9	
98 1-Chlorohexane	91	8.755	8.755	0.000	89	195524	40.0	39.4	
99 Chlorobenzene	112	8.797	8.797	0.000	91	492286	50.0	48.7	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	43	162245	50.0	46.8	
101 Ethylbenzene	106	8.880	8.880	0.000	99	275856	50.0	47.8	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	340188	50.0	48.3	
103 o-Xylene	106	9.369	9.369	0.000	98	340858	50.0	48.5	
104 Styrene	104	9.383	9.383	0.000	95	574191	50.0	48.7	
106 Bromoform	173	9.579	9.579	0.000	92	98603	50.0	44.4	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	836927	50.0	50.8	
109 Cyclohexanone	55	9.830	9.830	0.000	96	378948	1500.0	1552.6	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	95	242329	50.0	49.4	
111 Bromobenzene	156	10.054	10.054	0.000	97	188941	50.0	48.9	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.054	0.000	75	69232	50.0	48.0	
113 1,2,3-Trichloropropane	110	10.081	10.081	0.000	88	71871	50.0	48.0	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	223878	50.0	50.3	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	186646	50.0	49.0	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	688688	50.0	50.3	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	196593	50.0	48.5	
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	558765	50.0	50.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	714366	50.0	49.5	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	150398	50.0	49.0	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	355134	50.0	49.1	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	679538	50.0	49.6	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	368358	50.0	47.7	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	615032	50.0	49.3	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	94	335454	50.0	48.6	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	75	42980	50.0	43.2	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	178864	50.0	46.2	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	96	65496	50.0	43.8	
132 Naphthalene	128	13.336	13.336	0.000	98	574271	50.0	44.7	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	148808	50.0	45.3	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	97.2	
S 151 Trihalomethanes, Total	1				0		200.0	189.8	
S 150 1,2-Dichloroethene, Total	1				0		100.0	97.2	
S 156 1,3-Dichloropropene, Total	1				0		100.0	96.6	
S 155 Xylenes, Total	106				0		100.0	96.8	
S 153 Xylenes, Total (URS)	1				0		100.0	96.8	
S 152 Total BTEX	1				0			245.8	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00151	Amount Added:	10.00	Units: uL	
MV-MegaMainA_00087	Amount Added:	25.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 22-Apr-2023 00:29:18 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\-MS1_8308-LCS.d

Injection Date: 21-Apr-2023 07:58:30 Instrument ID: VMS_MS1 Operator ID: wickhamt/bustillose

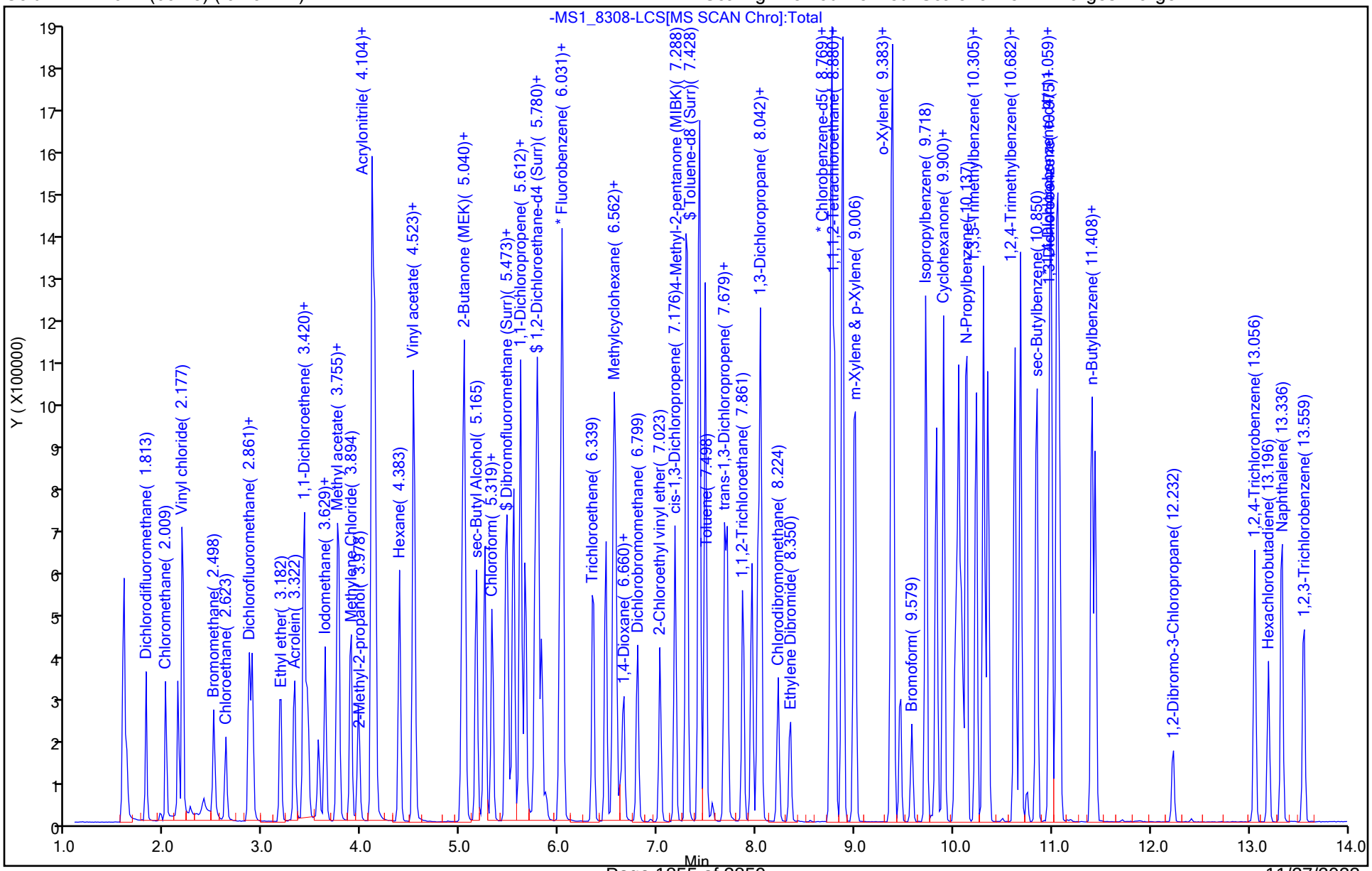
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\-MS1_8308-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 21-Apr-2023 07:58:30 ALS Bottle#: 2 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: m
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:16 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: LP8K Date: 21-Apr-2023 08:36:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	53.3	106.55
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	57.2	114.37
$ 7 Toluene-d8 (Surr)	50.0	53.0	106.09
$ 8 4-Bromofluorobenzene (Surr)	50.0	52.1	104.24

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609561/1003

Matrix: Water | Lab File ID: -MS1_8307-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 07:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	236		30	9.6
126-99-8	Chloroprene	29.2		3.0	1.2
126-98-7	Methacrylonitrile	244		15	5.3
80-62-6	Methyl methacrylate	40.4		4.0	1.1
107-12-0	Propionitrile	225		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		70-127
460-00-4	4-Bromofluorobenzene (Surr)	106		78-120
1868-53-7	Dibromofluoromethane (Surr)	110		77-120
2037-26-5	Toluene-d8 (Surr)	105		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\-MS1_8307-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 21-Apr-2023 07:37:30 ALS Bottle#: 1 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: s
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:14 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: LP8K Date: 21-Apr-2023 08:18:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	97	1004527	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	239490	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	376743	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	91	262578	50.0	54.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	373713	50.0	57.7	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1081734	50.0	52.6	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	79	392659	50.0	53.1	
19 Ethanol	45	3.070	3.070	0.000	99	103305	1500.0	1463.4	
27 Isopropyl alcohol	45	3.573	3.573	0.000	98	84121	250.0	248.7	
29 Acetonitrile	41	3.727	3.727	0.000	100	190172	250.0	236.4	
41 Isopropyl ether	87	4.551	4.551	0.000	93	79519	25.0	24.2	
42 2-Chloro-1,3-butadiene	53	4.593	4.593	0.000	95	182765	25.0	29.2	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	328205	25.0	26.6	
47 Ethyl acetate	43	5.040	5.040	0.000	100	227772	50.0	46.3	
50 Propionitrile	54	5.081	5.081	0.000	98	182670	250.0	225.1	
52 Methacrylonitrile	41	5.207	5.207	0.000	96	769578	250.0	244.3	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	87	293349	25.0	25.7	
67 n-Butanol	56	6.227	6.227	0.000	95	80344	625.0	663.8	
72 Methyl methacrylate	100	6.590	6.590	0.000	93	51514	50.0	40.4	
76 2-Nitropropane	41	6.995	6.995	0.000	99	74440	50.0	68.6	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	59227	50.0	42.2	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	338616	25.0	21.4	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	92050	25.0	17.9	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added:	25.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 22-Apr-2023 00:29:16 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\-MS1_8307-LCS.d

Injection Date: 21-Apr-2023 07:37:30 Instrument ID: VMS_MS1 Operator ID: wickhamt/bustillose

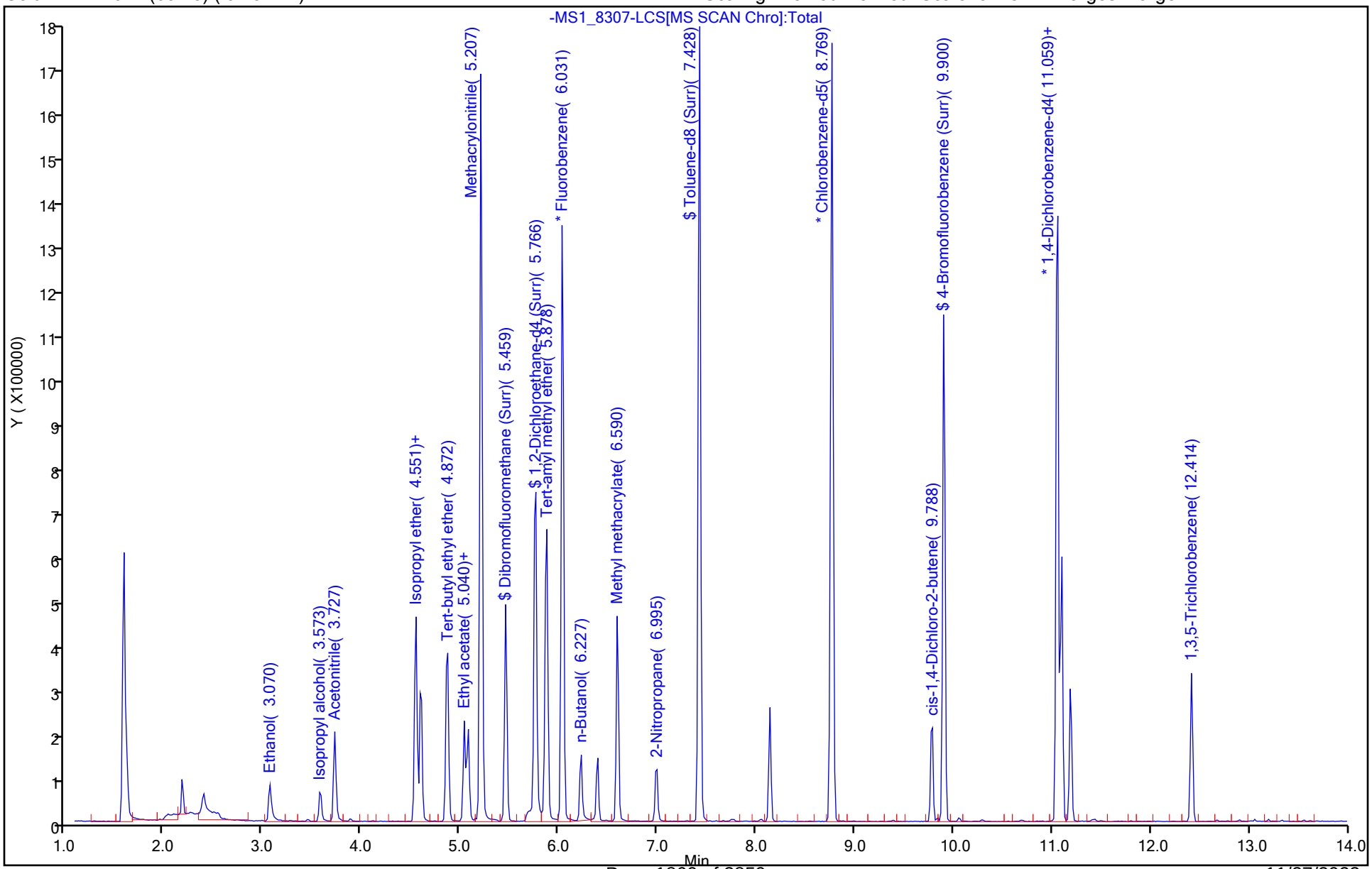
Lims ID: LCS Worklist Smp#: 1003

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 1

Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\-MS1_8307-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 21-Apr-2023 07:37:30 ALS Bottle#: 1 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: s
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:29:14 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: LP8K Date: 21-Apr-2023 08:18:48

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	54.9	109.85
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	57.7	115.36
$ 7 Toluene-d8 (Surr)	50.0	52.6	105.25
$ 8 4-Bromofluorobenzene (Surr)	50.0	53.1	106.11

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609932/1002

Matrix: Water | Lab File ID: -X502750-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 18:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	49.0		1.0	0.58
71-55-6	1,1,1-Trichloroethane	51.4		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	45.1		1.0	0.21
79-00-5	1,1,2-Trichloroethane	50.1		1.0	0.27
75-34-3	1,1-Dichloroethane	54.5		1.0	0.22
75-35-4	1,1-Dichloroethene	51.7		1.0	0.23
563-58-6	1,1-Dichloropropene	52.5		1.0	0.42
96-18-4	1,2,3-Trichloropropane	43.3		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	49.7		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	39.3		5.0	1.8
106-93-4	1,2-Dibromoethane	47.7		1.0	0.40
95-50-1	1,2-Dichlorobenzene	46.8		1.0	0.37
107-06-2	1,2-Dichloroethane	48.8		1.0	0.54
78-87-5	1,2-Dichloropropane	54.1		1.0	0.52
541-73-1	1,3-Dichlorobenzene	47.9		1.0	0.33
142-28-9	1,3-Dichloropropane	49.5		1.0	0.38
106-46-7	1,4-Dichlorobenzene	45.8		1.0	0.39
594-20-7	2,2-Dichloropropane	54.6		1.0	0.38
78-93-3	2-Butanone (MEK)	213		15	6.0
591-78-6	2-Hexanone	210		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	225		5.0	0.98
67-64-1	Acetone	191		15	6.6
107-02-8	Acrolein	452		20	4.9
107-13-1	Acrylonitrile	544		20	4.5
107-05-1	Allyl chloride	62.8		2.0	0.17
71-43-2	Benzene	53.1		1.0	0.31
75-25-2	Bromoform	47.7		2.0	1.2
74-83-9	Bromomethane	40.8		5.0	2.4
75-15-0	Carbon disulfide	53.5		2.0	0.63
56-23-5	Carbon tetrachloride	53.6		1.0	0.57
108-90-7	Chlorobenzene	48.9		1.0	0.42
74-97-5	Chlorobromomethane	50.3		1.0	0.40
124-48-1	Chlorodibromomethane	47.4		2.0	0.62
75-00-3	Chloroethane	64.0		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609932/1002

Matrix: Water | Lab File ID: -X502750-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 18:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	50.1		1.0	0.36
74-87-3	Chloromethane	53.7		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	51.0		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	52.4		2.0	0.63
74-95-3	Dibromomethane	48.0		1.0	0.34
75-27-4	Dichlorobromomethane	50.0		1.0	0.39
75-71-8	Dichlorodifluoromethane	59.2		3.0	0.96
97-63-2	Ethyl methacrylate	51.6		3.0	0.86
100-41-4	Ethylbenzene	48.4		1.0	0.30
74-88-4	Iodomethane	44.6		5.0	2.6
78-83-1	Isobutyl alcohol	1130		110	37
75-09-2	Methylene Chloride	48.0		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	50.8		2.0	0.36
95-47-6	o-Xylene	49.3		1.0	0.33
100-42-5	Styrene	51.0		1.0	0.36
127-18-4	Tetrachloroethene	54.0		1.0	0.40
108-88-3	Toluene	52.1		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	54.1		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	54.0		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	42.6		3.0	1.4
79-01-6	Trichloroethene	51.5		1.0	0.30
75-69-4	Trichlorofluoromethane	61.1		2.0	0.57
108-05-4	Vinyl acetate	120		3.0	0.94
75-01-4	Vinyl chloride	68.1		2.0	0.51
1330-20-7	Xylenes, Total	100		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		70-127
460-00-4	4-Bromofluorobenzene (Surr)	99		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502750-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Apr-2023 18:48:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	1463413	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	353452	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	560008	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	362866	50.0	51.5	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	370928	50.0	50.2	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1510607	50.0	50.2	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	495188	50.0	49.5	
	10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	380047	50.0	59.2	
	11 Chloromethane	50	1.867	1.867	0.000	99	350094	50.0	53.7	
	12 Vinyl chloride	62	1.967	1.967	0.000	98	452648	50.0	68.1	
	14 Bromomethane	94	2.246	2.246	0.000	90	144822	50.0	40.8	
	15 Chloroethane	64	2.339	2.339	0.000	99	284414	50.0	64.0	
	16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	624742	50.0	56.3	
	17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	523413	50.0	61.1	
	19 Ethyl ether	59	2.747	2.747	0.000	89	264482	50.0	53.6	
	21 Acrolein	56	2.854	2.854	0.000	99	360363	493.8	452.5	
	22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	230452	50.0	57.0	
	23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	290890	50.0	51.7	
	24 Acetone	43	2.954	2.954	0.000	100	307619	200.0	190.7	
	26 Iodomethane	142	3.054	3.054	0.000	98	345371	50.0	44.6	
	27 Carbon disulfide	76	3.118	3.118	0.000	98	973811	50.0	53.5	
	29 Methyl acetate	43	3.176	3.176	0.000	97	401488	100.0	108.7	
	30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	468668	50.0	62.8	
	31 Methylene Chloride	84	3.297	3.297	0.000	91	346526	50.0	48.0	
	32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	246817	500.0	431.8	
	33 Acrylonitrile	53	3.455	3.455	0.000	99	1141505	500.0	544.2	
	34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	894663	50.0	50.6	
	35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	337851	50.0	54.1	
	37 Hexane	57	3.683	3.683	0.000	89	465931	50.0	57.5	
	39 Vinyl acetate	43	3.783	3.783	0.000	97	1185731	100.0	119.9	
	40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	619971	50.0	54.5	
	45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	511833	200.0	212.9	
	47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	381447	50.0	51.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 2,2-Dichloropropane	77	4.220	4.220	0.000	86	477624	50.0	54.6	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	484520	1200.0	1127.9	
52 Chlorobromomethane	128	4.384	4.384	0.000	97	173322	50.0	50.3	
53 Tetrahydrofuran	42	4.391	4.391	0.000	88	173592	100.0	106.5	
54 Chloroform	83	4.441	4.441	0.000	93	580982	50.0	50.1	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	99	482377	50.0	51.4	
56 Cyclohexane	56	4.649	4.649	0.000	88	593915	50.0	61.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	99	483232	50.0	52.5	
60 Isobutyl alcohol	41	4.706	4.706	0.000	92	206694	1250.0	1133.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	407141	50.0	53.6	
62 Benzene	78	4.849	4.849	0.000	95	1443961	50.0	53.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	420549	50.0	48.8	
65 n-Heptane	43	5.028	5.028	0.000	91	354968	50.0	62.9	
67 Trichloroethene	95	5.335	5.335	0.000	99	347916	50.0	51.5	
68 2-Pentanone	43	5.435	5.435	0.000	99	635523	160.0	164.0	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	424346	50.0	59.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	98	373818	50.0	54.1	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	83485	1000.0	953.9	
73 Dibromomethane	93	5.607	5.607	0.000	97	197897	50.0	48.0	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	434831	50.0	50.0	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	216347	50.0	98.5	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	97	563882	50.0	52.4	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1039137	200.0	224.6	
79 Toluene	91	6.365	6.365	0.000	98	1526884	50.0	52.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	91	484824	50.0	54.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	398472	50.0	51.6	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	293530	50.0	50.1	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	277102	50.0	54.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	536227	50.0	49.5	
85 2-Hexanone	43	6.872	6.872	0.000	95	710512	200.0	209.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	91	309879	50.0	47.4	
88 Ethylene Dibromide	107	7.166	7.166	0.000	98	295159	50.0	47.7	
89 1-Chlorohexane	91	7.552	7.552	0.000	96	390042	40.0	40.8	
90 Chlorobenzene	112	7.595	7.595	0.000	95	962841	50.0	48.9	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.666	0.000	96	309971	50.0	49.0	
92 Ethylbenzene	106	7.673	7.673	0.000	98	524068	50.0	48.4	
93 m-Xylene & p-Xylene	106	7.788	7.788	0.000	0	660648	50.0	50.8	
94 o-Xylene	106	8.152	8.152	0.000	95	649886	50.0	49.3	
95 Styrene	104	8.167	8.167	0.000	95	1067989	50.0	51.0	
96 Bromoform	173	8.345	8.345	0.000	96	188235	50.0	47.7	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1577400	50.0	49.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	398165	1500.0	1324.3	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	361902	50.0	45.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	382712	50.0	47.8	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	80	89277	50.0	42.6	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	83	105306	50.0	43.3	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	449972	50.0	50.9	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	382812	50.0	48.8	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1313988	50.0	49.0	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	396139	50.0	48.6	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1103049	50.0	49.2	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1383726	50.0	49.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	333933	50.0	49.8	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	708319	50.0	47.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1381584	50.0	49.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	719234	50.0	45.8	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1230613	50.0	51.3	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	665529	50.0	46.8	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	88	63330	50.0	39.3	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	355759	50.0	49.7	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	140126	50.0	53.7	
122 Naphthalene	128	12.035	12.035	0.000	97	799006	50.0	43.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	251296	50.0	46.5	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	105.1	
S 139 Xylenes, Total (URS)	1				0		100.0	100.1	
S 136 1,3-Dichloropropene, Total	1				0		100.0	106.3	
S 138 Xylenes, Total	106				0		100.0	100.1	
S 140 Trihalomethanes, Total	1				0		200.0	195.2	
S 141 1,2-Dichloroethene, Total	1				0		100.0	105.1	

Reagents:

MV-MegaMain B_00083	Amount Added:	25.00	Units: uL	
MV-Gas B_00132	Amount Added:	10.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 25-Apr-2023 04:09:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502750-LCS.d

Injection Date: 24-Apr-2023 18:48:30 Instrument ID: VMS_X4 Operator ID: bj

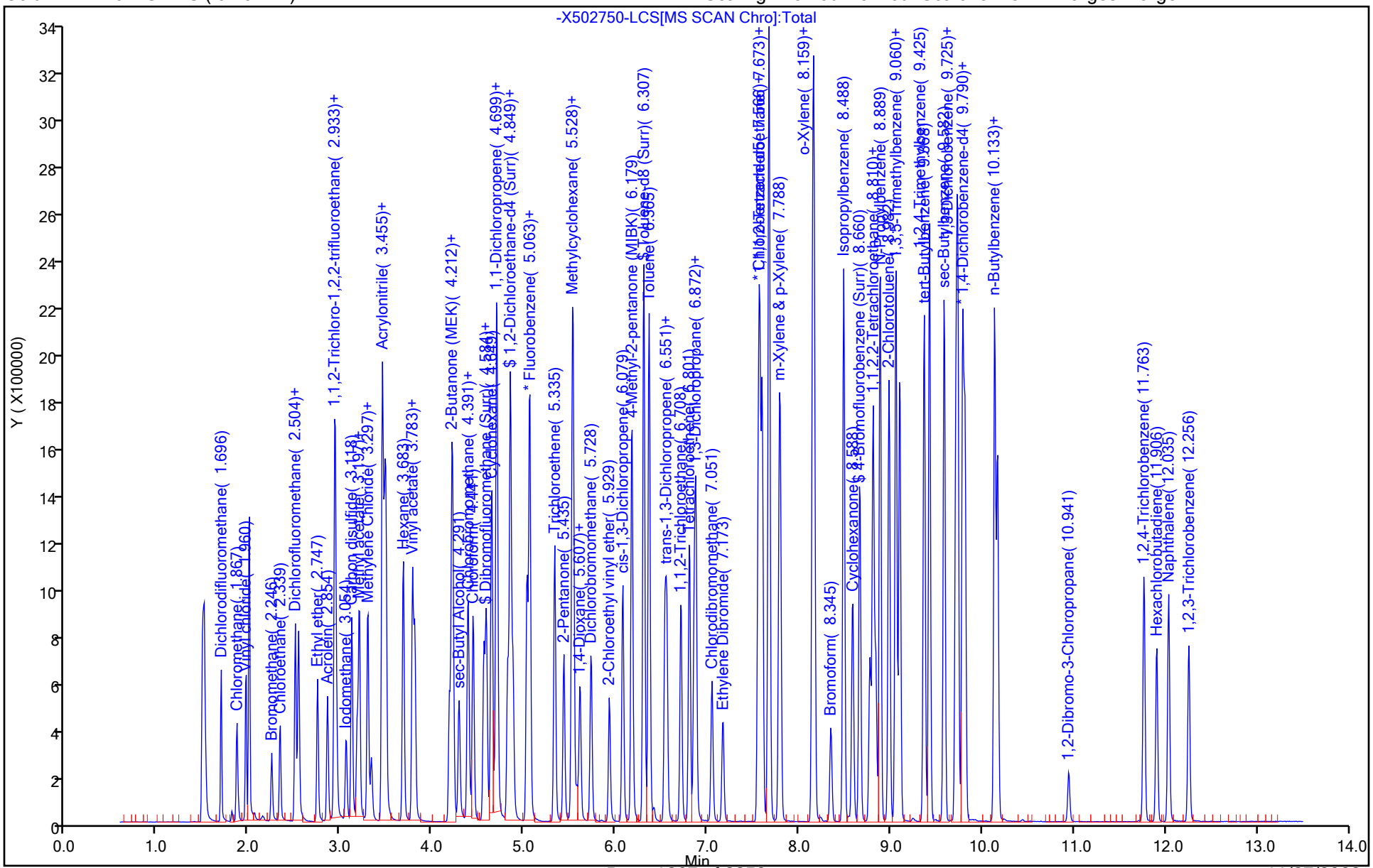
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 1

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502750-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Apr-2023 18:48:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.5	103.10
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.2	100.34
$ 6 Toluene-d8 (Surr)	50.0	50.2	100.34
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.5	98.96

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-609932/1003

Matrix: Water | Lab File ID: -X502751-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 19:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	234		30	9.6
126-99-8	Chloroprene	25.4		3.0	1.2
126-98-7	Methacrylonitrile	233		15	5.3
80-62-6	Methyl methacrylate	38.9		4.0	1.1
107-12-0	Propionitrile	246		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502751-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Apr-2023 19:08:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1417408	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	339994	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	535901	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	349770	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	363967	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1476755	50.0	51.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	488319	50.0	51.0	
18 Ethanol	45	2.646	2.646	0.000	100	97227	1500.0	1295.9	
25 Isopropyl alcohol	45	3.033	3.033	0.000	98	71036	250.0	161.6	
28 Acetonitrile	41	3.161	3.161	0.000	100	185585	250.0	234.4	
41 Isopropyl ether	87	3.805	3.805	0.000	95	136832	25.0	25.9	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	89	235503	25.0	25.4	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	458314	25.0	25.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	235175	50.0	42.9	
49 Propionitrile	54	4.234	4.234	0.000	99	216813	250.0	246.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	804721	250.0	233.4	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	426417	25.0	24.1	
66 n-Butanol	56	5.199	5.199	0.000	86	77987	625.0	448.9	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	72770	50.0	38.9	
75 2-Nitropropane	41	5.893	5.893	0.000	97	48468	50.0	24.4	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	81872	50.0	38.8	
115 1,2,3-Trimethylbenzene	105	9.832	9.832	0.000	97	635983	25.0	21.9	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	201994	25.0	22.3	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

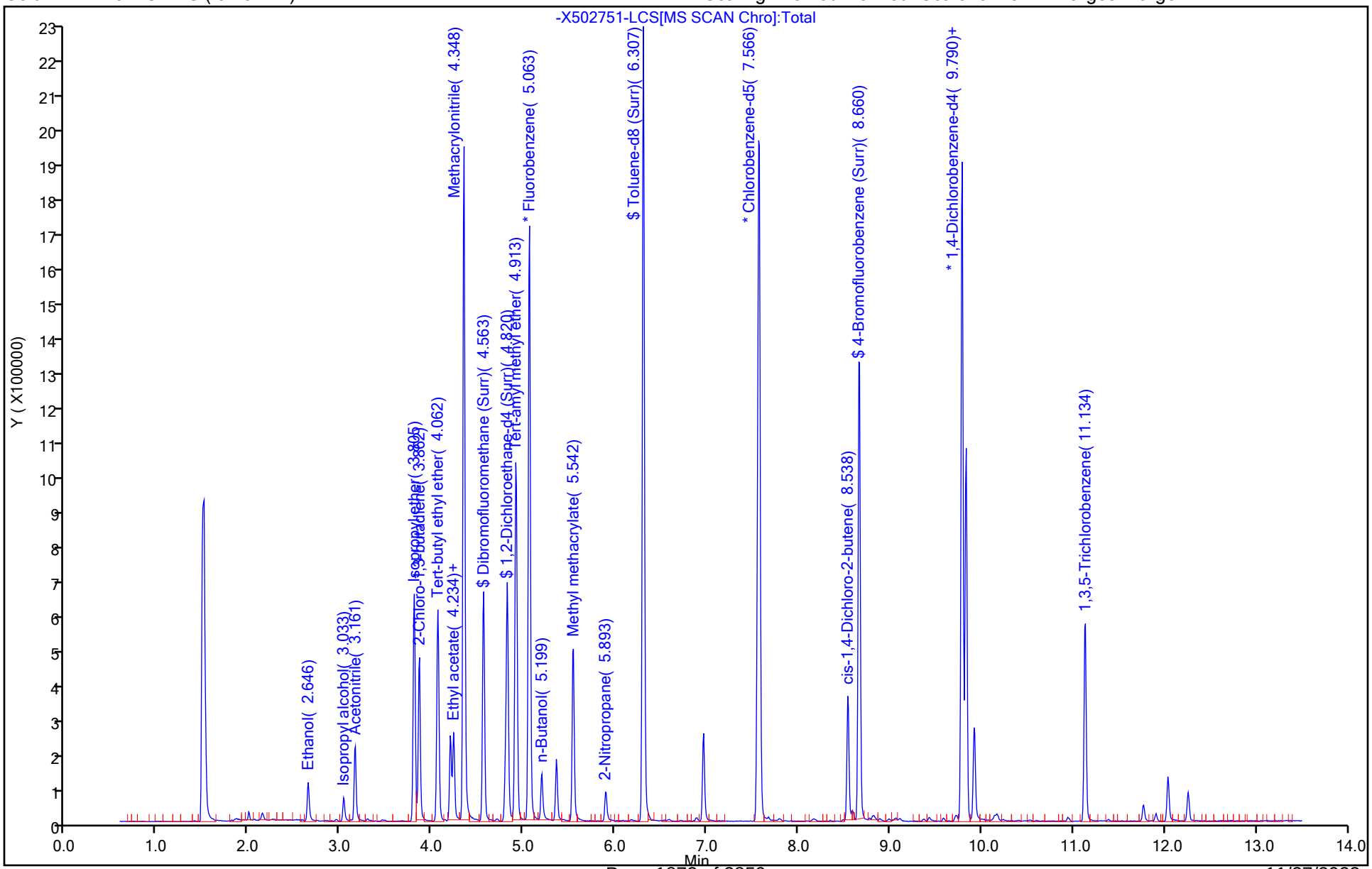
Report Date: 25-Apr-2023 04:09:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502751-LCS.d

Injection Date:	24-Apr-2023 19:08:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\-X502751-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Apr-2023 19:08:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.60
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.8	101.66
$ 6 Toluene-d8 (Surr)	50.0	51.0	101.98
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.0	101.98

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610121/1002

Matrix: Water | Lab File ID: -X502847-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	24.4		1.0	0.58
71-55-6	1,1,1-Trichloroethane	25.7		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	24.4		1.0	0.21
79-00-5	1,1,2-Trichloroethane	26.7		1.0	0.27
75-34-3	1,1-Dichloroethane	28.6		1.0	0.22
75-35-4	1,1-Dichloroethene	26.5		1.0	0.23
563-58-6	1,1-Dichloropropene	26.4		1.0	0.42
96-18-4	1,2,3-Trichloropropane	23.4		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	25.3		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	22.9		5.0	1.8
106-93-4	1,2-Dibromoethane	24.9		1.0	0.40
95-50-1	1,2-Dichlorobenzene	24.8		1.0	0.37
107-06-2	1,2-Dichloroethane	24.4		1.0	0.54
78-87-5	1,2-Dichloropropane	27.9		1.0	0.52
541-73-1	1,3-Dichlorobenzene	25.3		1.0	0.33
142-28-9	1,3-Dichloropropane	25.8		1.0	0.38
106-46-7	1,4-Dichlorobenzene	24.2		1.0	0.39
594-20-7	2,2-Dichloropropane	26.9		1.0	0.38
78-93-3	2-Butanone (MEK)	114		15	6.0
591-78-6	2-Hexanone	110		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	117		5.0	0.98
67-64-1	Acetone	100		15	6.6
107-02-8	Acrolein	244		20	4.9
107-13-1	Acrylonitrile	299		20	4.5
107-05-1	Allyl chloride	32.2		2.0	0.17
71-43-2	Benzene	27.5		1.0	0.31
75-25-2	Bromoform	25.2		2.0	1.2
74-83-9	Bromomethane	22.2		5.0	2.4
75-15-0	Carbon disulfide	27.5		2.0	0.63
56-23-5	Carbon tetrachloride	25.4		1.0	0.57
108-90-7	Chlorobenzene	25.2		1.0	0.42
74-97-5	Chlorobromomethane	26.2		1.0	0.40
124-48-1	Chlorodibromomethane	24.5		2.0	0.62
75-00-3	Chloroethane	26.6		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610121/1002

Matrix: Water | Lab File ID: -X502847-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	26.5		1.0	0.36
74-87-3	Chloromethane	23.0		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	26.9		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	26.7		2.0	0.63
74-95-3	Dibromomethane	26.1		1.0	0.34
75-27-4	Dichlorobromomethane	25.7		1.0	0.39
75-71-8	Dichlorodifluoromethane	17.7		3.0	0.96
97-63-2	Ethyl methacrylate	28.2		3.0	0.86
100-41-4	Ethylbenzene	25.6		1.0	0.30
74-88-4	Iodomethane	18.9		5.0	2.6
78-83-1	Isobutyl alcohol	538		110	37
75-09-2	Methylene Chloride	25.6		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	26.5		2.0	0.36
95-47-6	o-Xylene	26.0		1.0	0.33
100-42-5	Styrene	26.7		1.0	0.36
127-18-4	Tetrachloroethene	25.2		1.0	0.40
108-88-3	Toluene	26.9		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	28.0		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	27.5		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	22.5		3.0	1.4
79-01-6	Trichloroethene	25.9		1.0	0.30
75-69-4	Trichlorofluoromethane	20.9		2.0	0.57
108-05-4	Vinyl acetate	58.3		3.0	0.94
75-01-4	Vinyl chloride	27.5		2.0	0.51
1330-20-7	Xylenes, Total	52.5		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502847-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 10:19:30 ALS Bottle#: 3 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:01 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:44:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2064544	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	504405	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	799833	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518622	50.0	52.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	508168	50.0	48.7	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2175562	50.0	50.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	90	726751	50.0	50.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	98	160251	25.0	17.7	
11 Chloromethane	50	1.867	1.867	0.000	99	211940	25.0	23.0	
12 Vinyl chloride	62	1.960	1.960	0.000	97	257527	25.0	27.5	
14 Bromomethane	94	2.239	2.239	0.000	90	110813	25.0	22.2	
15 Chloroethane	64	2.332	2.332	0.000	99	167146	25.0	26.6	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	368994	25.0	23.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	252967	25.0	20.9	
19 Ethyl ether	59	2.747	2.747	0.000	89	193482	25.0	27.8	
21 Acrolein	56	2.854	2.854	0.000	98	273823	246.9	243.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	94	127530	25.0	22.4	
23 1,1-Dichloroethene	96	2.933	2.933	0.000	97	210157	25.0	26.5	
24 Acetone	43	2.954	2.954	0.000	98	233790	100.0	100.5	
26 Iodomethane	142	3.054	3.054	0.000	98	198535	25.0	18.9	
27 Carbon disulfide	76	3.119	3.119	0.000	98	707220	25.0	27.5	
29 Methyl acetate	43	3.176	3.176	0.000	96	303445	50.0	58.2	
30 3-Chloro-1-propene	41	3.197	3.197	0.000	93	338883	25.0	32.2	
31 Methylene Chloride	84	3.297	3.297	0.000	89	260505	25.0	25.6	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	200237	250.0	249.6	
33 Acrylonitrile	53	3.455	3.455	0.000	99	885921	250.0	299.4	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	92	664390	25.0	26.6	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	100	246544	25.0	28.0	
37 Hexane	57	3.683	3.683	0.000	88	247487	25.0	21.4	
39 Vinyl acetate	43	3.784	3.784	0.000	96	813503	50.0	58.3	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	460148	25.0	28.6	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	387907	100.0	114.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.213	4.213	0.000	81	283630	25.0	26.9	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	85	332397	25.0	26.9	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	368927	600.0	613.5	
52 Chlorobromomethane	128	4.384	4.384	0.000	98	127348	25.0	26.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	86	129512	50.0	56.3	
54 Chloroform	83	4.441	4.441	0.000	92	433861	25.0	26.5	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	340016	25.0	25.7	
56 Cyclohexane	56	4.649	4.649	0.000	87	345989	25.0	25.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	342640	25.0	26.4	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	136733	625.0	537.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	271844	25.0	25.4	
62 Benzene	78	4.849	4.849	0.000	95	1053859	25.0	27.5	
63 1,2-Dichloroethane	62	4.878	4.878	0.000	97	296701	25.0	24.4	
65 n-Heptane	43	5.035	5.035	0.000	89	194507	25.0	24.4	
67 Trichloroethene	95	5.335	5.335	0.000	99	250320	25.0	25.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	451835	80.0	83.3	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	229366	25.0	22.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	97	271905	25.0	27.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	94	65099	500.0	527.3	
73 Dibromomethane	93	5.607	5.607	0.000	96	151912	25.0	26.1	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	315102	25.0	25.7	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	131240	25.0	41.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	410463	25.0	26.7	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	761100	100.0	116.6	
79 Toluene	91	6.365	6.365	0.000	98	1113418	25.0	26.9	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	348188	25.0	27.5	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	310693	25.0	28.2	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	220679	25.0	26.7	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	184278	25.0	25.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	87	398218	25.0	25.8	
85 2-Hexanone	43	6.872	6.872	0.000	93	531399	100.0	110.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	228393	25.0	24.5	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	219893	25.0	24.9	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	269568	20.0	19.7	
90 Chlorobenzene	112	7.602	7.602	0.000	96	709470	25.0	25.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	220347	25.0	24.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	395495	25.0	25.6	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	491574	25.0	26.5	
94 o-Xylene	106	8.152	8.152	0.000	96	488359	25.0	26.0	
95 Styrene	104	8.167	8.167	0.000	94	798517	25.0	26.7	
96 Bromoform	173	8.353	8.353	0.000	96	142182	25.0	25.2	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1153171	25.0	25.4	
99 Cyclohexanone	55	8.589	8.589	0.000	88	374895	750.0	876.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	279953	25.0	24.4	
101 Bromobenzene	156	8.810	8.810	0.000	95	283598	25.0	24.8	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	70	66703	25.0	22.5	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	81217	25.0	23.4	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	334843	25.0	26.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	285481	25.0	25.5	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	971615	25.0	25.4	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	301230	25.0	25.9	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	803789	25.0	25.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1010569	25.0	25.5	
111 sec-Butylbenzene	134	9.590	9.590	0.000	94	236118	25.0	24.6	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	534768	25.0	25.3	
113 4-Isopropyltoluene	119	9.733	9.733	0.000	97	1017060	25.0	25.7	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	542632	25.0	24.2	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	882556	25.0	25.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	504066	25.0	24.8	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	89	52321	25.0	22.9	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	259074	25.0	25.3	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	97383	25.0	26.1	
122 Naphthalene	128	12.035	12.035	0.000	97	628270	25.0	24.1	
123 1,2,3-Trichlorobenzene	180	12.257	12.257	0.000	95	193272	25.0	25.0	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	54.9	
S 139 Xylenes, Total (URS)	1				0		50.0	52.5	
S 136 1,3-Dichloropropene, Total	1				0		50.0	54.2	
S 138 Xylenes, Total	106				0		50.0	52.5	
S 140 Trihalomethanes, Total	1				0		100.0	101.9	
S 141 1,2-Dichloroethene, Total	1				0		50.0	54.9	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 26-Apr-2023 11:04:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502847-LCS.d

Injection Date: 26-Apr-2023 10:19:30 Instrument ID: VMS_X4 Operator ID: MED

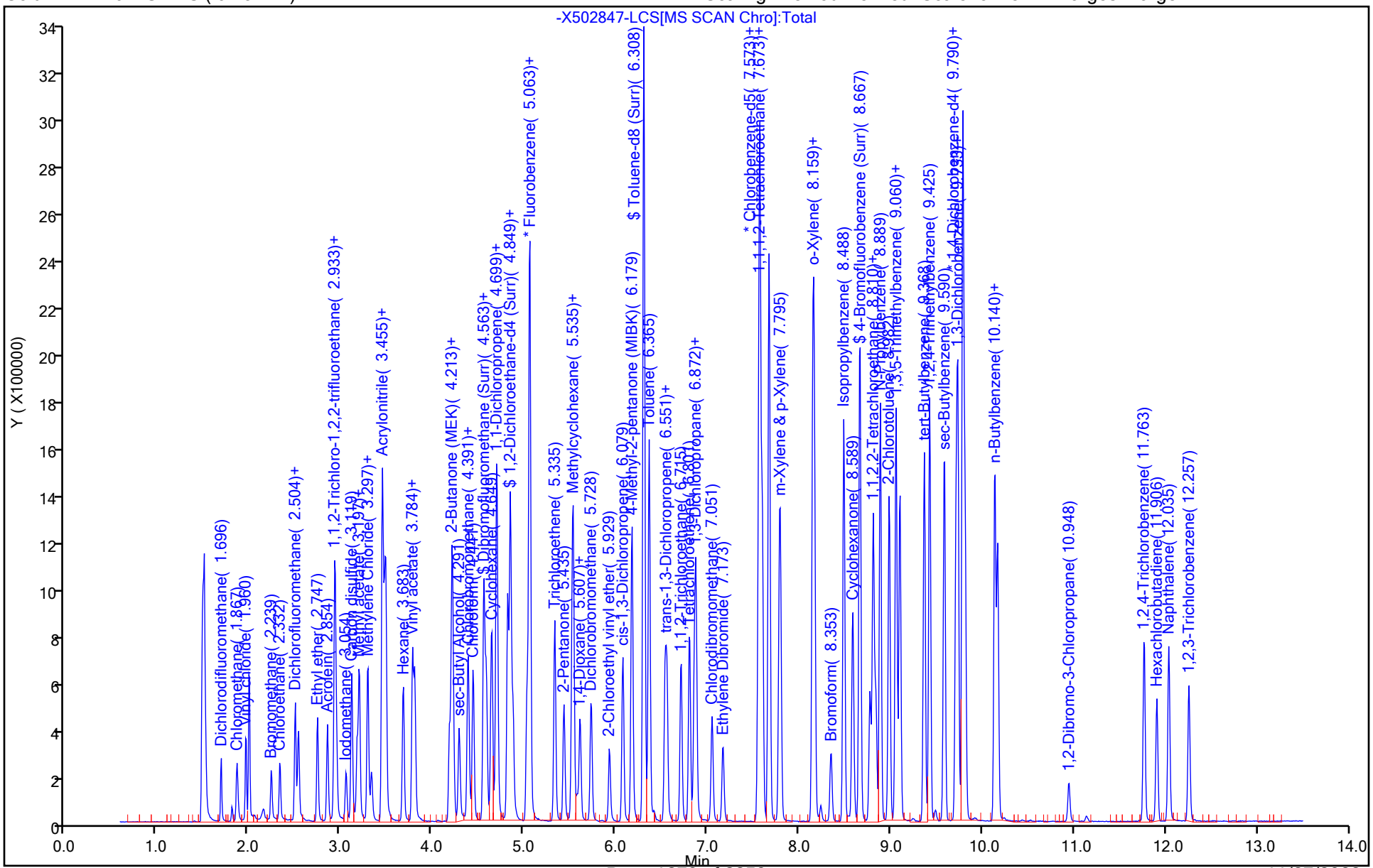
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502847-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 10:19:30 ALS Bottle#: 3 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:01 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:44:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.2	104.45
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.7	97.44
$ 6 Toluene-d8 (Surr)	50.0	50.6	101.26
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.8	101.69

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610121/1003

Matrix: Water | Lab File ID: -X502846-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 09:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	254		30	9.6
126-99-8	Chloroprene	26.0		3.0	1.2
126-98-7	Methacrylonitrile	243		15	5.3
80-62-6	Methyl methacrylate	43.0		4.0	1.1
107-12-0	Propionitrile	248		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	106		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502846-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 09:51:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:17:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2035170	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	505460	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	795445	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518213	50.0	52.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	507773	50.0	49.4	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2148658	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	711206	50.0	50.0	
18 Ethanol	45	2.654	2.654	0.000	100	148229	1500.0	1376.0	
25 Isopropyl alcohol	45	3.033	3.033	0.000	99	117927	250.0	186.9	
28 Acetonitrile	41	3.161	3.161	0.000	99	288783	250.0	254.1	
41 Isopropyl ether	87	3.805	3.805	0.000	95	207116	25.0	27.3	
42 2-Chloro-1,3-butadiene	53	3.855	3.855	0.000	88	346526	25.0	26.0	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	680555	25.0	25.9	
46 Ethyl acetate	43	4.198	4.198	0.000	98	363952	50.0	46.2	
49 Propionitrile	54	4.234	4.234	0.000	99	314088	250.0	248.4	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	1203797	250.0	243.2	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	92	637713	25.0	25.1	
66 n-Butanol	56	5.199	5.199	0.000	86	124737	625.0	500.0	
71 Methyl methacrylate	100	5.543	5.543	0.000	88	115629	50.0	43.0	
75 2-Nitropropane	41	5.893	5.893	0.000	98	71079	50.0	25.0	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	126262	50.0	40.3	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	990988	25.0	23.0	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	312775	25.0	23.3	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

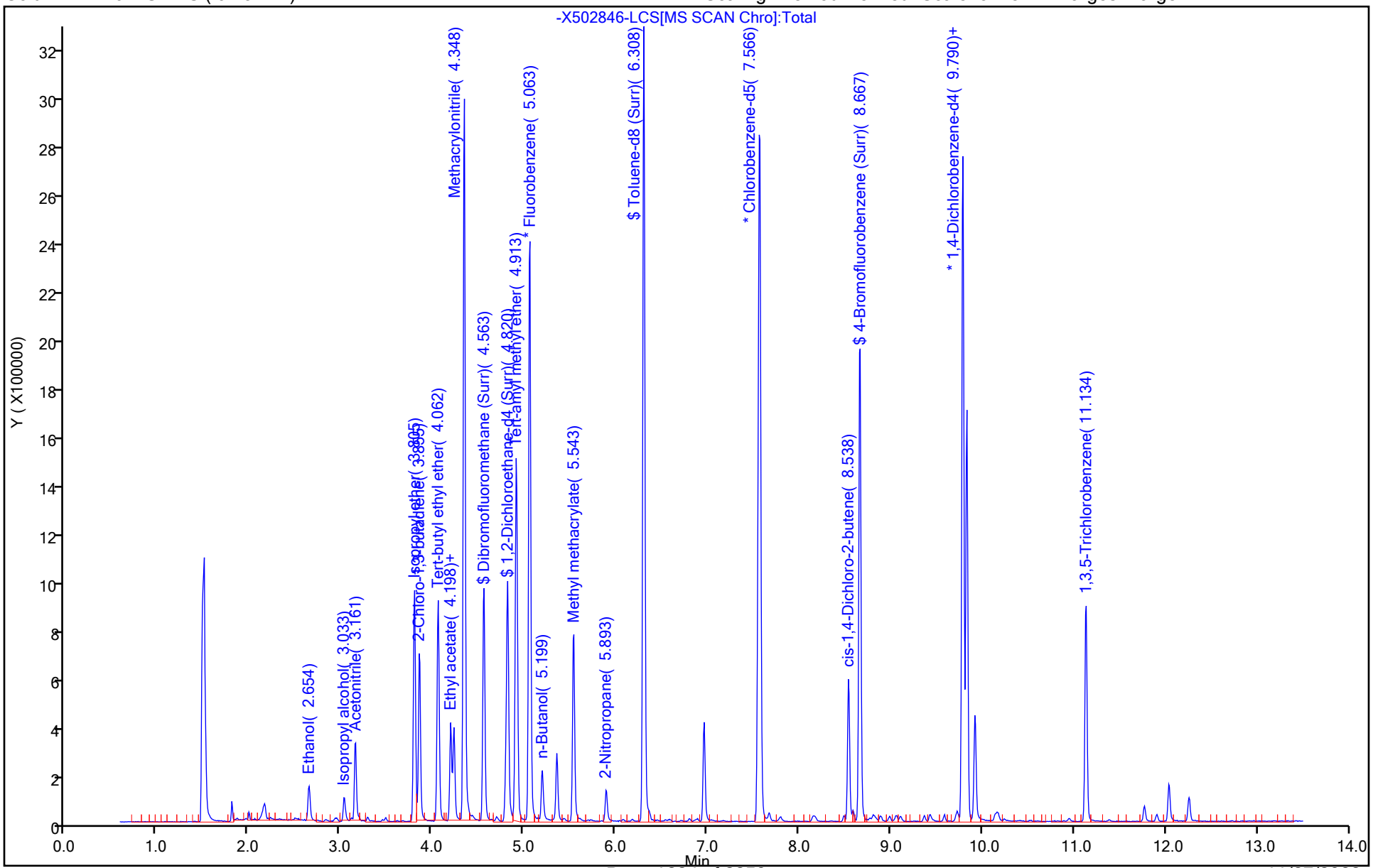
Report Date: 26-Apr-2023 11:04:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502846-LCS.d

Injection Date:	26-Apr-2023 09:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502846-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 09:51:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:17:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.9	105.87
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	49.4	98.77
$ 6 Toluene-d8 (Surr)	50.0	49.9	99.80
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.0	100.06

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610123/1002

Matrix: Water | Lab File ID: -P01127-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 08:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	47.2		1.0	0.58
71-55-6	1,1,1-Trichloroethane	48.3		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	45.3		1.0	0.21
79-00-5	1,1,2-Trichloroethane	51.4		1.0	0.27
75-34-3	1,1-Dichloroethane	49.2		1.0	0.22
75-35-4	1,1-Dichloroethene	48.8		1.0	0.23
563-58-6	1,1-Dichloropropene	49.3		1.0	0.42
96-18-4	1,2,3-Trichloropropane	46.3		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	48.8		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	43.7		5.0	1.8
106-93-4	1,2-Dibromoethane	48.4		1.0	0.40
95-50-1	1,2-Dichlorobenzene	48.6		1.0	0.37
107-06-2	1,2-Dichloroethane	48.0		1.0	0.54
78-87-5	1,2-Dichloropropane	48.2		1.0	0.52
541-73-1	1,3-Dichlorobenzene	47.5		1.0	0.33
142-28-9	1,3-Dichloropropane	47.8		1.0	0.38
106-46-7	1,4-Dichlorobenzene	47.0		1.0	0.39
594-20-7	2,2-Dichloropropane	47.1		1.0	0.38
78-93-3	2-Butanone (MEK)	166		15	6.0
591-78-6	2-Hexanone	161		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	175		5.0	0.98
67-64-1	Acetone	171		15	6.6
107-02-8	Acrolein	368		20	4.9
107-13-1	Acrylonitrile	449		20	4.5
107-05-1	Allyl chloride	40.1		2.0	0.17
71-43-2	Benzene	48.9		1.0	0.31
75-25-2	Bromoform	48.7		2.0	1.2
74-83-9	Bromomethane	50.4		5.0	2.4
75-15-0	Carbon disulfide	45.3		2.0	0.63
56-23-5	Carbon tetrachloride	48.0		1.0	0.57
108-90-7	Chlorobenzene	48.3		1.0	0.42
74-97-5	Chlorobromomethane	49.4		1.0	0.40
124-48-1	Chlorodibromomethane	49.3		2.0	0.62
75-00-3	Chloroethane	40.8		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610123/1002

Matrix: Water | Lab File ID: -P01127-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 08:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	48.6		1.0	0.36
74-87-3	Chloromethane	40.2		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	49.3		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	44.6		2.0	0.63
74-95-3	Dibromomethane	50.5		1.0	0.34
75-27-4	Dichlorobromomethane	49.1		1.0	0.39
75-71-8	Dichlorodifluoromethane	38.5		3.0	0.96
97-63-2	Ethyl methacrylate	43.3		3.0	0.86
100-41-4	Ethylbenzene	48.3		1.0	0.30
74-88-4	Iodomethane	33.1		5.0	2.6
78-83-1	Isobutyl alcohol	942		110	37
75-09-2	Methylene Chloride	48.1		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	47.8		2.0	0.36
95-47-6	o-Xylene	47.6		1.0	0.33
100-42-5	Styrene	48.2		1.0	0.36
127-18-4	Tetrachloroethene	48.6		1.0	0.40
108-88-3	Toluene	50.0		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	48.5		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	46.9		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	37.2		3.0	1.4
79-01-6	Trichloroethene	45.5		1.0	0.30
75-69-4	Trichlorofluoromethane	44.5		2.0	0.57
108-05-4	Vinyl acetate	91.1		3.0	0.94
75-01-4	Vinyl chloride	42.4		2.0	0.51
1330-20-7	Xylenes, Total	95.4		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	95		78-120
1868-53-7	Dibromofluoromethane (Surr)	109		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\-P01127-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 08:20:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:45 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

First Level Reviewer: NNS5 Date: 26-Apr-2023 09:57:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	98	1625149	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.278	7.278	0.000	84	404191	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	89	616884	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	56	437709	50.0	54.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.523	0.000	0	486466	50.0	51.5	
$ 6 Toluene-d8 (Surr)	98	6.011	6.011	0.000	83	1769917	50.0	51.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	83	637673	50.0	47.4	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	87	262576	50.0	38.5	
11 Chloromethane	50	1.664	1.664	0.000	88	300237	50.0	40.2	
12 Vinyl chloride	62	1.727	1.727	0.000	82	364431	50.0	42.4	
14 Bromomethane	94	1.980	1.980	0.000	90	197712	50.0	50.4	
15 Chloroethane	64	2.075	2.075	0.000	86	226794	50.0	40.8	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	83	504464	50.0	40.5	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	84	442631	50.0	44.5	
19 Ethyl ether	59	2.476	2.476	0.000	87	269031	50.0	45.1	
21 Acrolein	56	2.582	2.582	0.000	95	601964	493.8	367.5	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	67	216435	50.0	52.2	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	88	288809	50.0	48.8	
24 Acetone	43	2.677	2.677	0.000	95	731275	200.0	171.3	
26 Iodomethane	142	2.782	2.782	0.000	98	278843	50.0	33.1	
27 Carbon disulfide	76	2.835	2.835	0.000	98	890942	50.0	45.3	
29 Methyl acetate	43	2.898	2.898	0.000	97	764600	100.0	84.4	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	87	370830	50.0	40.1	
31 Methylene Chloride	84	3.014	3.014	0.000	82	340871	50.0	48.1	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	78	738380	500.0	359.8	
33 Acrylonitrile	53	3.173	3.173	0.000	98	2227402	500.0	448.7	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	88	1070705	50.0	49.1	
35 trans-1,2-Dichloroethene	96	3.215	3.215	0.000	92	328271	50.0	48.5	
36 Hexane	57	3.394	3.394	0.000	69	407012	50.0	44.1	
38 Vinyl acetate	43	3.500	3.500	0.000	97	1368617	100.0	91.1	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	85	592610	50.0	49.2	
44 2-Butanone (MEK)	43	3.901	3.901	0.000	97	1129753	200.0	165.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	70	374382	50.0	49.3	
48 2,2-Dichloropropane	77	3.932	3.932	0.000	82	494095	50.0	47.1	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	98	1323349	1200.0	876.4	
53 Chlorobromomethane	128	4.101	4.101	0.000	73	165750	50.0	49.4	
52 Tetrahydrofuran	42	4.101	4.101	0.000	81	358902	100.0	78.9	
54 Chloroform	83	4.154	4.154	0.000	67	593815	50.0	48.6	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	52	498027	50.0	48.3	
56 Cyclohexane	56	4.355	4.355	0.000	71	528826	50.0	44.2	
59 Carbon tetrachloride	117	4.407	4.407	0.000	60	399870	50.0	48.0	
57 1,1-Dichloropropene	75	4.407	4.407	0.000	87	473715	50.0	49.3	
58 Isobutyl alcohol	41	4.428	4.428	0.000	94	551079	1250.0	942.2	
60 Benzene	78	4.555	4.555	0.000	95	1389468	50.0	48.9	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	87	462433	50.0	48.0	
66 n-Heptane	43	4.745	4.745	0.000	85	328217	50.0	43.7	
67 Trichloroethene	95	5.040	5.040	0.000	92	346940	50.0	45.5	
68 2-Pentanone	43	5.146	5.146	0.000	97	1388201	160.0	132.4	
69 Methylcyclohexane	55	5.230	5.230	0.000	86	395276	50.0	45.0	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	88	355499	50.0	48.2	
72 1,4-Dioxane	88	5.294	5.294	0.000	77	214181	1000.0	930.3	
73 Dibromomethane	93	5.315	5.315	0.000	88	228762	50.0	50.5	
74 Dichlorobromomethane	83	5.442	5.442	0.000	91	451562	50.0	49.1	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	90	245344	50.0	42.4	
77 cis-1,3-Dichloropropene	75	5.790	5.790	0.000	86	553499	50.0	44.6	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	94	1973766	200.0	175.5	
79 Toluene	91	6.064	6.064	0.000	89	1510612	50.0	50.0	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	90	528014	50.0	46.9	
81 Ethyl methacrylate	69	6.275	6.275	0.000	85	538788	50.0	43.3	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	84	334270	50.0	51.4	
83 Tetrachloroethene	164	6.507	6.507	0.000	88	251052	50.0	48.6	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	87	579231	50.0	47.8	
85 2-Hexanone	43	6.592	6.592	0.000	92	1580181	200.0	161.2	
86 Chlorodibromomethane	129	6.761	6.761	0.000	84	335596	50.0	49.3	
88 Ethylene Dibromide	107	6.866	6.866	0.000	98	356464	50.0	48.4	
89 1-Chlorohexane	91	7.267	7.267	0.000	55	384599	40.0	37.4	
90 Chlorobenzene	112	7.299	7.299	0.000	93	957359	50.0	48.3	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	41	313309	50.0	47.2	
92 Ethylbenzene	106	7.383	7.383	0.000	97	530965	50.0	48.3	
93 m-Xylene & p-Xylene	106	7.499	7.499	0.000	0	640795	50.0	47.8	
94 o-Xylene	106	7.858	7.858	0.000	92	622406	50.0	47.6	
95 Styrene	104	7.869	7.869	0.000	93	1055309	50.0	48.2	
96 Bromoform	173	8.048	8.048	0.000	92	216276	50.0	48.7	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	1562149	50.0	45.7	
99 Cyclohexanone	55	8.280	8.280	0.000	88	1240739	1500.0	1307.0	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	75	542897	50.0	45.3	
101 Bromobenzene	156	8.502	8.502	0.000	96	373473	50.0	47.2	
102 trans-1,4-Dichloro-2-butene	53	8.523	8.523	0.000	72	140814	50.0	37.2	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	49	170932	50.0	46.3	
104 N-Propylbenzene	120	8.597	8.597	0.000	88	431863	50.0	47.0	
105 2-Chlorotoluene	126	8.681	8.681	0.000	95	364543	50.0	46.1	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	92	1300883	50.0	46.5	
107 4-Chlorotoluene	126	8.797	8.797	0.000	96	379102	50.0	45.8	
108 tert-Butylbenzene	119	9.072	9.072	0.000	88	1045723	50.0	46.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
109 1,2,4-Trimethylbenzene	105	9.135	9.135	0.000	71	1324066	50.0	46.3	
110 sec-Butylbenzene	134	9.293	9.293	0.000	93	306539	50.0	47.1	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	95	681909	50.0	47.5	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	77	1293856	50.0	47.1	
113 1,4-Dichlorobenzene	146	9.515	9.515	0.000	94	696471	50.0	47.0	
115 n-Butylbenzene	91	9.842	9.842	0.000	95	1185772	50.0	47.2	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	96	658675	50.0	48.6	
117 1,2-Dibromo-3-Chloropropane	157	10.644	10.644	0.000	90	134204	50.0	43.7	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	93	324862	50.0	48.8	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	95	122111	50.0	48.8	
121 Naphthalene	128	11.720	11.720	0.000	97	1209678	50.0	40.7	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	92	254343	50.0	42.1	
S 139 1,2-Dichloroethene, Total (URS)	96				0		100.0	97.8	
S 144 1,2-Dichloroethene, Total	1				0		100.0	97.8	
S 145 1,3-Dichloropropene, Total	1				0		100.0	91.5	
S 143 Xylenes, Total (URS)	1				0		100.0	95.3	
S 140 Trihalomethanes, Total	1				0		200.0	195.7	
S 142 Xylenes, Total	106				0		100.0	95.3	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00133	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 27-Apr-2023 12:42:48 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\-P01127-LCS.d

Injection Date: 26-Apr-2023 08:20:30 Instrument ID: VMS_P Operator ID: COULTERD

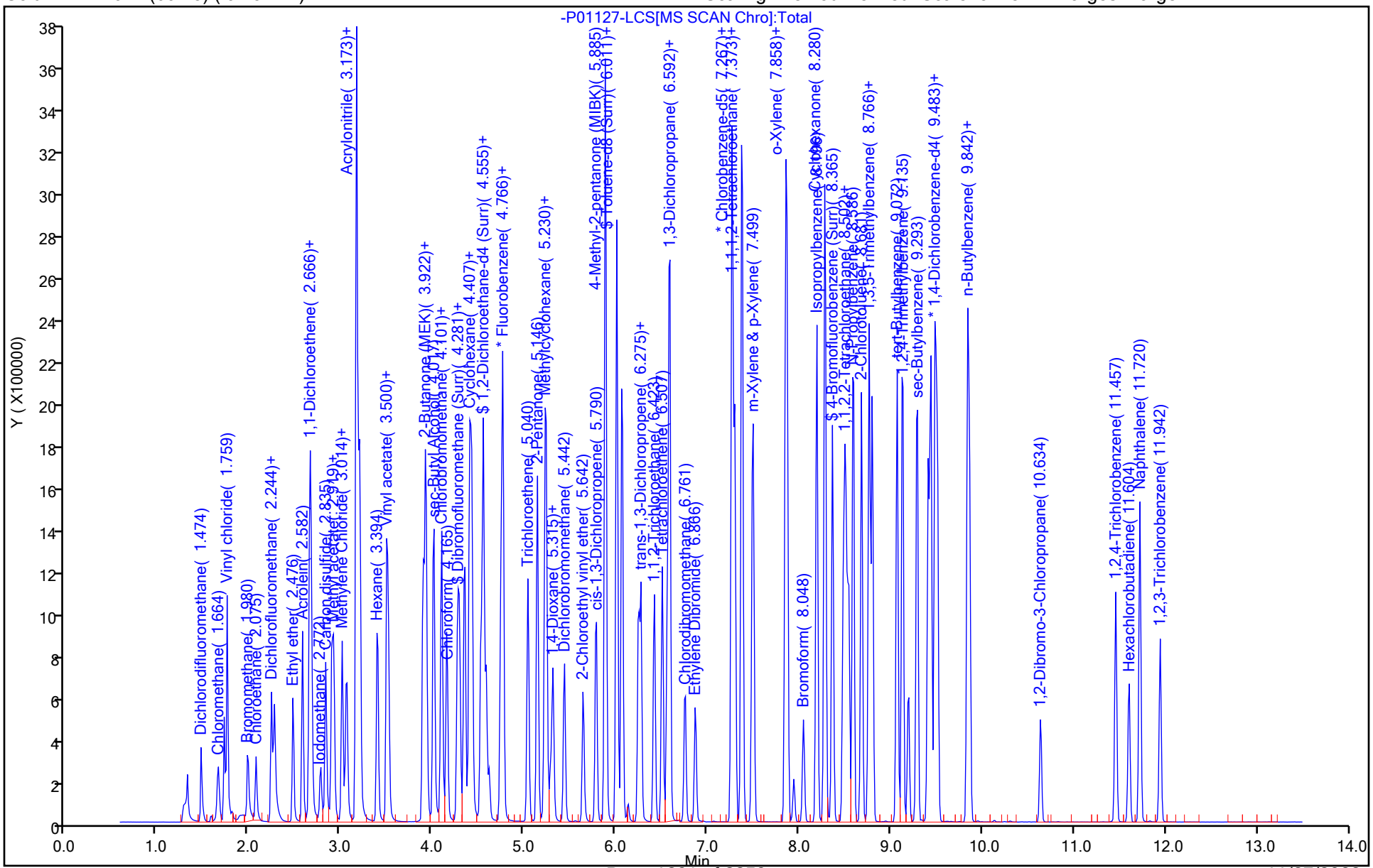
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 1

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\-P01127-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 08:20:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:45 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

First Level Reviewer: NNS5 Date: 26-Apr-2023 09:57:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	54.6	109.15
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	51.5	103.03
$ 6 Toluene-d8 (Surr)	50.0	51.2	102.31
$ 7 4-Bromofluorobenzene (Surr)	50.0	47.4	94.89

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610123/1003

Matrix: Water | Lab File ID: -P01128-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 08:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	227		30	9.6
126-99-8	Chloroprene	21.9		3.0	1.2
126-98-7	Methacrylonitrile	235		15	5.3
80-62-6	Methyl methacrylate	50.1		4.0	1.1
107-12-0	Propionitrile	228		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		70-127
460-00-4	4-Bromofluorobenzene (Surr)	95		78-120
1868-53-7	Dibromofluoromethane (Surr)	109		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\-P01128-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 08:42:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:50 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1602033	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	402142	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	585754	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	431835	50.0	54.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	493988	50.0	53.1	
$ 6 Toluene-d8 (Surr)	98	6.012	6.012	0.000	93	1723522	50.0	50.1	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	86	608853	50.0	47.7	
18 Ethanol	45	2.392	2.392	0.000	100	313676	1500.0	1319.7	
25 Isopropyl alcohol	45	2.772	2.772	0.000	98	274572	250.0	212.6	
28 Acetonitrile	41	2.877	2.877	0.000	99	470502	250.0	227.2	
40 Isopropyl ether	87	3.521	3.521	0.000	92	151468	25.0	23.5	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	91	246124	25.0	21.9	
43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	514531	25.0	22.3	
46 Ethyl acetate	43	3.912	3.912	0.000	98	504111	50.0	44.6	
49 Propionitrile	54	3.943	3.943	0.000	99	571822	250.0	228.4	
51 Methacrylonitrile	41	4.059	4.059	0.000	88	1513969	250.0	235.1	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	91	535104	25.0	23.5	
63 n-Butanol	56	4.629	4.629	0.000	48	159121	625.0	568.5	
71 Methyl methacrylate	100	5.252	5.252	0.000	85	140268	50.0	50.1	
75 2-Nitropropane	41	5.600	5.600	0.000	99	105822	50.0	29.4	
98 cis-1,4-Dichloro-2-butene	53	8.238	8.238	0.000	0	146737	50.0	37.4	
114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	99	687652	25.0	24.5	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	97	200308	25.0	24.4	

Reagents:

MV-Supp A_00080 Amount Added: 25.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

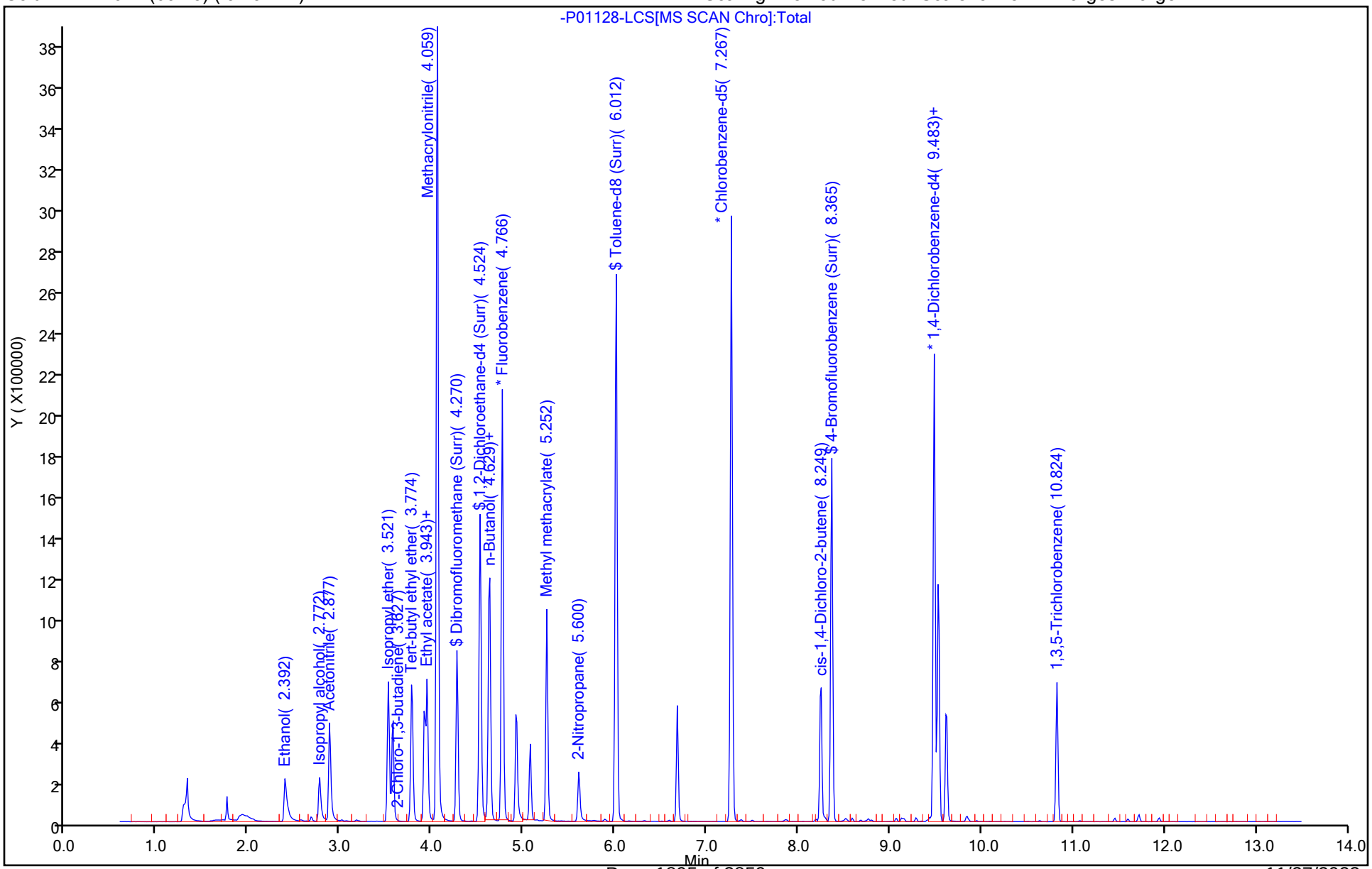
Report Date: 27-Apr-2023 12:42:52 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\-P01128-LCS.d

Injection Date:	26-Apr-2023 08:42:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\-P01128-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 08:42:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:50 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	54.6	109.24
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	53.1	106.14
$ 6 Toluene-d8 (Surr)	50.0	50.1	100.14
$ 7 4-Bromofluorobenzene (Surr)	50.0	47.7	95.42

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610347/1002

Matrix: Water | Lab File ID: -X502910-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	26.6		1.0	0.58
71-55-6	1,1,1-Trichloroethane	25.2		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	28.1		1.0	0.21
79-00-5	1,1,2-Trichloroethane	27.7		1.0	0.27
75-34-3	1,1-Dichloroethane	27.9		1.0	0.22
75-35-4	1,1-Dichloroethene	26.6		1.0	0.23
563-58-6	1,1-Dichloropropene	25.7		1.0	0.42
96-18-4	1,2,3-Trichloropropane	25.2		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	28.9		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	23.4		5.0	1.8
106-93-4	1,2-Dibromoethane	26.0		1.0	0.40
95-50-1	1,2-Dichlorobenzene	26.3		1.0	0.37
107-06-2	1,2-Dichloroethane	23.9		1.0	0.54
78-87-5	1,2-Dichloropropane	27.7		1.0	0.52
541-73-1	1,3-Dichlorobenzene	26.3		1.0	0.33
142-28-9	1,3-Dichloropropane	26.8		1.0	0.38
106-46-7	1,4-Dichlorobenzene	25.7		1.0	0.39
594-20-7	2,2-Dichloropropane	26.7		1.0	0.38
78-93-3	2-Butanone (MEK)	118		15	6.0
591-78-6	2-Hexanone	117		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	122		5.0	0.98
67-64-1	Acetone	98.5		15	6.6
107-02-8	Acrolein	238		20	4.9
107-13-1	Acrylonitrile	303		20	4.5
107-05-1	Allyl chloride	32.1		2.0	0.17
71-43-2	Benzene	28.1		1.0	0.31
75-25-2	Bromoform	26.0		2.0	1.2
74-83-9	Bromomethane	25.7		5.0	2.4
75-15-0	Carbon disulfide	27.7		2.0	0.63
56-23-5	Carbon tetrachloride	25.4		1.0	0.57
108-90-7	Chlorobenzene	26.5		1.0	0.42
74-97-5	Chlorobromomethane	26.9		1.0	0.40
124-48-1	Chlorodibromomethane	25.2		2.0	0.62
75-00-3	Chloroethane	27.5		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610347/1002

Matrix: Water | Lab File ID: -X502910-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	25.5		1.0	0.36
74-87-3	Chloromethane	24.7		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	26.4		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	26.8		2.0	0.63
74-95-3	Dibromomethane	25.5		1.0	0.34
75-27-4	Dichlorobromomethane	25.6		1.0	0.39
75-71-8	Dichlorodifluoromethane	17.9		3.0	0.96
97-63-2	Ethyl methacrylate	29.0		3.0	0.86
100-41-4	Ethylbenzene	26.3		1.0	0.30
74-88-4	Iodomethane	20.0		5.0	2.6
78-83-1	Isobutyl alcohol	651		110	37
75-09-2	Methylene Chloride	26.0		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	26.8		2.0	0.36
95-47-6	o-Xylene	25.9		1.0	0.33
100-42-5	Styrene	27.0		1.0	0.36
127-18-4	Tetrachloroethene	27.2		1.0	0.40
108-88-3	Toluene	27.3		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	28.3		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	28.4		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	24.7		3.0	1.4
79-01-6	Trichloroethene	26.9		1.0	0.30
75-69-4	Trichlorofluoromethane	21.6		2.0	0.57
108-05-4	Vinyl acetate	60.7		3.0	0.94
75-01-4	Vinyl chloride	26.7		2.0	0.51
1330-20-7	Xylenes, Total	52.7		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502910-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 11:12:30 ALS Bottle#: 4 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:13:19

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2075744	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	498852	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	782929	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	510246	50.0	51.1	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	491370	50.0	46.9	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2165513	50.0	51.0	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	712384	50.0	50.9	
	10 Dichlorodifluoromethane	85	1.695	1.695	0.000	99	163334	25.0	17.9	
	11 Chloromethane	50	1.867	1.867	0.000	99	228796	25.0	24.7	
	12 Vinyl chloride	62	1.960	1.960	0.000	98	251101	25.0	26.7	
	14 Bromomethane	94	2.246	2.246	0.000	90	129061	25.0	25.7	
	15 Chloroethane	64	2.339	2.339	0.000	99	173572	25.0	27.5	
	16 Dichlorofluoromethane	67	2.503	2.503	0.000	97	358050	25.0	22.7	
	17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	262426	25.0	21.6	
	19 Ethyl ether	59	2.747	2.747	0.000	88	194217	25.0	27.7	
	21 Acrolein	56	2.854	2.854	0.000	99	268897	246.9	238.0	
	22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.932	0.000	94	143495	25.0	25.0	
	23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	211927	25.0	26.6	
	24 Acetone	43	2.954	2.954	0.000	99	230572	100.0	98.5	
	26 Iodomethane	142	3.054	3.054	0.000	99	212470	25.0	20.0	
	27 Carbon disulfide	76	3.118	3.118	0.000	98	715021	25.0	27.7	
	29 Methyl acetate	43	3.183	3.183	0.000	97	319280	50.0	60.9	
	30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	340282	25.0	32.1	
	31 Methylene Chloride	84	3.297	3.297	0.000	89	266407	25.0	26.0	
	32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	213644	250.0	264.7	
	33 Acrylonitrile	53	3.454	3.454	0.000	99	900911	250.0	302.8	
	34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	665726	25.0	26.5	
	35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	250701	25.0	28.3	
	37 Hexane	57	3.683	3.683	0.000	89	277302	25.0	24.3	
	39 Vinyl acetate	43	3.783	3.783	0.000	97	852234	50.0	60.7	
	40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	451091	25.0	27.9	
	45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	400913	100.0	117.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	80	279614	25.0	26.4	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	86	331830	25.0	26.7	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	417159	600.0	688.6	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	131447	25.0	26.9	
53 Tetrahydrofuran	42	4.398	4.398	0.000	87	139656	50.0	60.4	
54 Chloroform	83	4.441	4.441	0.000	93	418879	25.0	25.5	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	336079	25.0	25.2	
56 Cyclohexane	56	4.648	4.648	0.000	86	375128	25.0	27.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	335247	25.0	25.7	
60 Isobutyl alcohol	41	4.706	4.706	0.000	97	166976	625.0	650.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	273405	25.0	25.4	
62 Benzene	78	4.849	4.849	0.000	94	1082545	25.0	28.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	291629	25.0	23.9	
65 n-Heptane	43	5.035	5.035	0.000	88	225963	25.0	28.2	
67 Trichloroethene	95	5.335	5.335	0.000	98	257097	25.0	26.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	500452	80.0	91.6	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	252227	25.0	25.1	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	97	271590	25.0	27.7	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	69013	500.0	556.0	
73 Dibromomethane	93	5.614	5.614	0.000	96	149015	25.0	25.5	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	316050	25.0	25.6	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	88	125945	25.0	39.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	407461	25.0	26.8	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	93	802839	100.0	122.3	
79 Toluene	91	6.365	6.365	0.000	98	1132572	25.0	27.3	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	362408	25.0	28.4	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	316517	25.0	29.0	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	229681	25.0	27.7	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	196675	25.0	27.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	91	409613	25.0	26.8	
85 2-Hexanone	43	6.872	6.872	0.000	93	557461	100.0	116.7	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	232179	25.0	25.2	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	227268	25.0	26.0	
89 1-Chlorohexane	91	7.559	7.559	0.000	92	284848	20.0	21.1	
90 Chlorobenzene	112	7.602	7.602	0.000	96	736579	25.0	26.5	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	237658	25.0	26.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	402699	25.0	26.3	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	492316	25.0	26.8	
94 o-Xylene	106	8.152	8.152	0.000	95	481974	25.0	25.9	
95 Styrene	104	8.166	8.166	0.000	95	799043	25.0	27.0	
96 Bromoform	173	8.345	8.345	0.000	96	145079	25.0	26.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1168056	25.0	26.3	
99 Cyclohexanone	55	8.588	8.588	0.000	89	434326	750.0	1025.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	315261	25.0	28.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	294565	25.0	26.3	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	75	71938	25.0	24.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	82	85723	25.0	25.2	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	339348	25.0	27.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	287640	25.0	26.2	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	998455	25.0	26.6	
107 4-Chlorotoluene	126	9.103	9.103	0.000	96	308247	25.0	27.0	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	817928	25.0	26.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1028843	25.0	26.5	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	244445	25.0	26.1	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	543942	25.0	26.3	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1037887	25.0	26.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	564532	25.0	25.7	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	919303	25.0	27.4	
117 1,2-Dichlorobenzene	146	10.168	10.168	0.000	98	522970	25.0	26.3	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	87	52521	25.0	23.4	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	289025	25.0	28.9	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	110154	25.0	30.2	
122 Naphthalene	128	12.035	12.035	0.000	97	764333	25.0	29.9	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	96	239241	25.0	31.6	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	54.7	
S 139 Xylenes, Total (URS)	1				0		50.0	52.8	
S 136 1,3-Dichloropropene, Total	1				0		50.0	55.3	
S 138 Xylenes, Total	106				0		50.0	52.8	
S 140 Trihalomethanes, Total	1				0		100.0	102.3	
S 141 1,2-Dichloroethene, Total	1				0		50.0	54.7	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

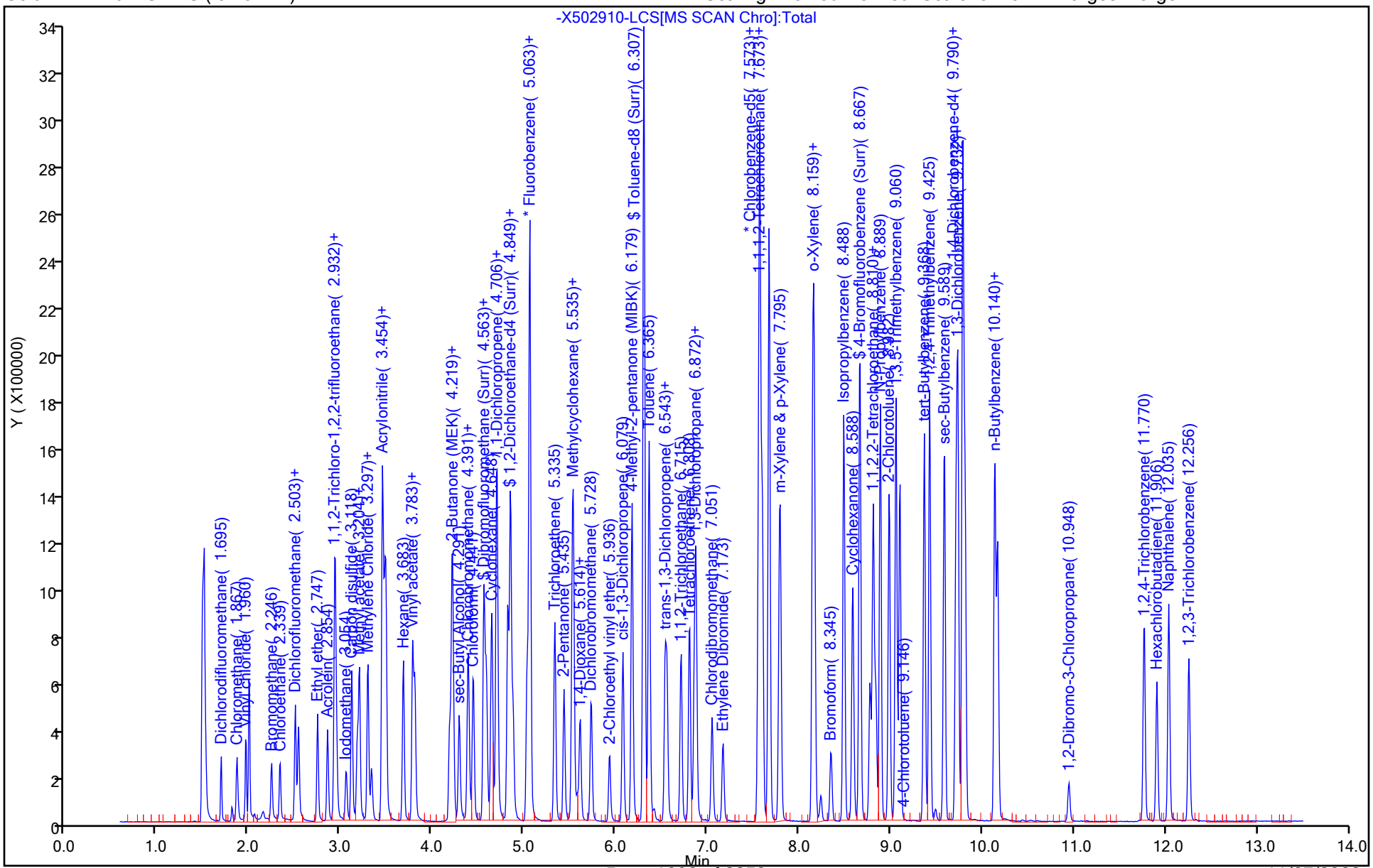
Report Date: 27-Apr-2023 12:40:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502910-LCS.d

Injection Date:	27-Apr-2023 11:12:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:27 PM

Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502910-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 11:12:30 ALS Bottle#: 4 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:13:19

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.1	102.21
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.9	93.71
$ 6 Toluene-d8 (Surr)	50.0	51.0	101.92
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.9	101.83

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610347/1003

Matrix: Water | Lab File ID: -X502911-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	300		30	9.6
126-99-8	Chloroprene	28.2		3.0	1.2
126-98-7	Methacrylonitrile	286		15	5.3
80-62-6	Methyl methacrylate	53.6		4.0	1.1
107-12-0	Propionitrile	305		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502911-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 11:36:30 ALS Bottle#: 5 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:14:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2059516	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	497540	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	790650	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	499980	50.0	50.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	492603	50.0	47.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2149937	50.0	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	714000	50.0	50.5	
18 Ethanol	45	2.647	2.647	0.000	99	175008	1500.0	1605.4	
25 Isopropyl alcohol	45	3.040	3.040	0.000	99	146574	250.0	229.5	
28 Acetonitrile	41	3.161	3.161	0.000	98	344647	250.0	299.6	
41 Isopropyl ether	87	3.805	3.805	0.000	95	230296	25.0	30.0	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	380277	25.0	28.2	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	769768	25.0	28.9	
46 Ethyl acetate	43	4.198	4.198	0.000	98	433749	50.0	54.4	
49 Propionitrile	54	4.234	4.234	0.000	99	390737	250.0	305.3	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	1432481	250.0	285.9	
64 Tert-amyl methyl ether	73	4.920	4.920	0.000	92	739780	25.0	28.8	
66 n-Butanol	56	5.199	5.199	0.000	84	162457	625.0	643.5	
71 Methyl methacrylate	100	5.542	5.542	0.000	89	145808	50.0	53.6	
75 2-Nitropropane	41	5.900	5.900	0.000	95	83659	50.0	29.0	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	148716	50.0	47.8	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	1088923	25.0	25.4	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	347222	25.0	26.0	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

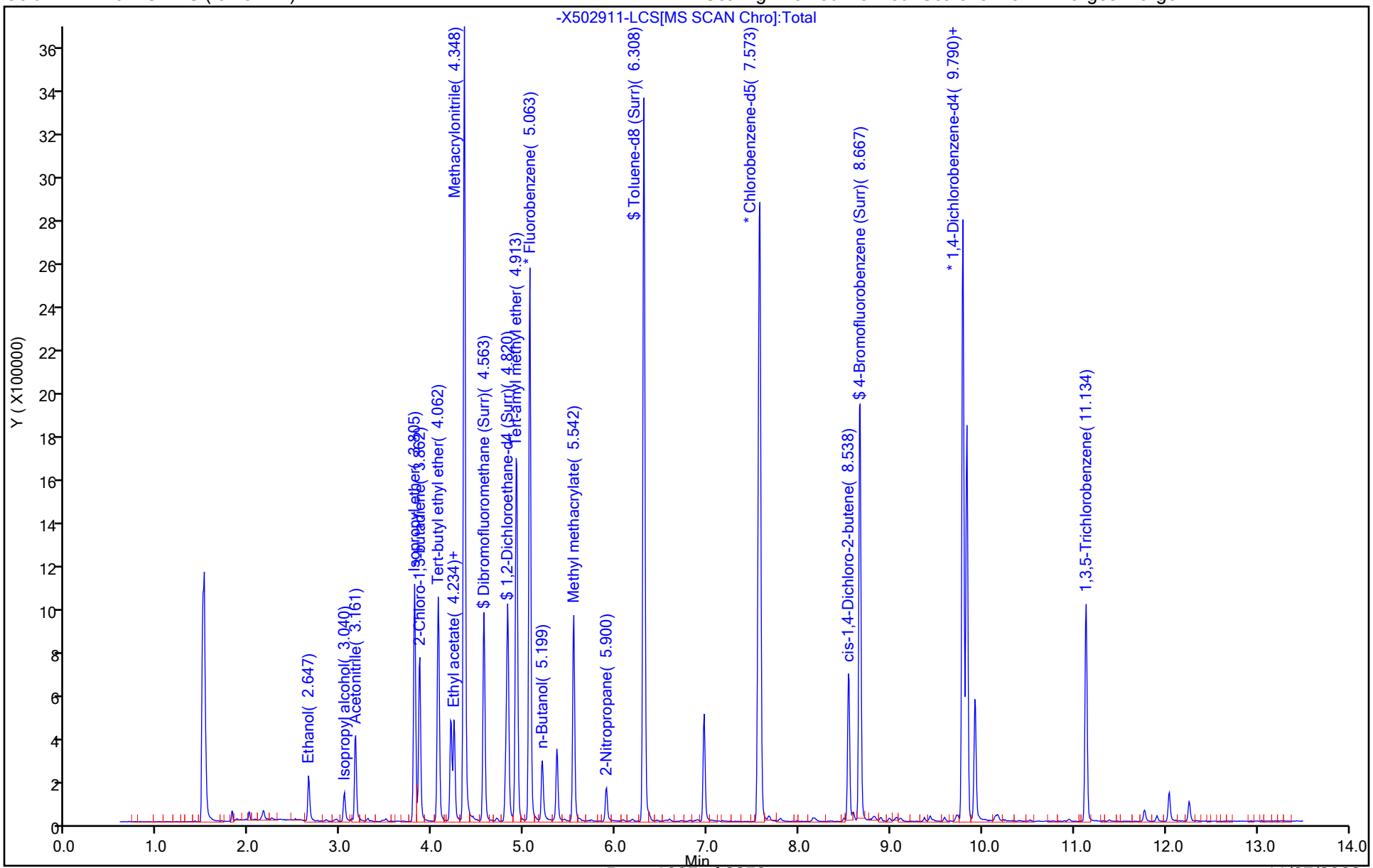
Report Date: 27-Apr-2023 12:40:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502911-LCS.d

Injection Date:	27-Apr-2023 11:36:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502911-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 11:36:30 ALS Bottle#: 5 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:14:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	50.5	100.94
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.3	94.69
$ 6 Toluene-d8 (Surr)	50.0	50.7	101.45
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.5	101.07

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610485/1002

Matrix: Water | Lab File ID: -X502939-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 21:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	49.2		1.0	0.58
71-55-6	1,1,1-Trichloroethane	49.6		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	45.6		1.0	0.21
79-00-5	1,1,2-Trichloroethane	49.7		1.0	0.27
75-34-3	1,1-Dichloroethane	53.1		1.0	0.22
75-35-4	1,1-Dichloroethene	53.9		1.0	0.23
563-58-6	1,1-Dichloropropene	52.4		1.0	0.42
96-18-4	1,2,3-Trichloropropane	42.3		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	46.9		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	38.6		5.0	1.8
106-93-4	1,2-Dibromoethane	48.4		1.0	0.40
95-50-1	1,2-Dichlorobenzene	46.8		1.0	0.37
107-06-2	1,2-Dichloroethane	45.0		1.0	0.54
78-87-5	1,2-Dichloropropane	53.2		1.0	0.52
541-73-1	1,3-Dichlorobenzene	47.9		1.0	0.33
142-28-9	1,3-Dichloropropane	49.7		1.0	0.38
106-46-7	1,4-Dichlorobenzene	46.5		1.0	0.39
594-20-7	2,2-Dichloropropane	53.8		1.0	0.38
78-93-3	2-Butanone (MEK)	190		15	6.0
591-78-6	2-Hexanone	186		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	200		5.0	0.98
67-64-1	Acetone	165		15	6.6
107-02-8	Acrolein	428		20	4.9
107-13-1	Acrylonitrile	515		20	4.5
107-05-1	Allyl chloride	61.3		2.0	0.17
71-43-2	Benzene	53.0		1.0	0.31
75-25-2	Bromoform	47.7		2.0	1.2
74-83-9	Bromomethane	57.3		5.0	2.4
75-15-0	Carbon disulfide	53.5		2.0	0.63
56-23-5	Carbon tetrachloride	51.7		1.0	0.57
108-90-7	Chlorobenzene	49.9		1.0	0.42
74-97-5	Chlorobromomethane	50.8		1.0	0.40
124-48-1	Chlorodibromomethane	47.8		2.0	0.62
75-00-3	Chloroethane	60.5		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610485/1002

Matrix: Water | Lab File ID: -X502939-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 21:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	49.9		1.0	0.36
74-87-3	Chloromethane	53.6		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	50.9		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	53.6		2.0	0.63
74-95-3	Dibromomethane	47.6		1.0	0.34
75-27-4	Dichlorobromomethane	49.7		1.0	0.39
75-71-8	Dichlorodifluoromethane	58.2		3.0	0.96
97-63-2	Ethyl methacrylate	51.1		3.0	0.86
100-41-4	Ethylbenzene	50.2		1.0	0.30
74-88-4	Iodomethane	48.1		5.0	2.6
78-83-1	Isobutyl alcohol	972		110	37
75-09-2	Methylene Chloride	48.7		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	51.4		2.0	0.36
95-47-6	o-Xylene	50.2		1.0	0.33
100-42-5	Styrene	52.3		1.0	0.36
127-18-4	Tetrachloroethene	52.0		1.0	0.40
108-88-3	Toluene	52.4		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	54.2		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	53.1		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	40.9		3.0	1.4
79-01-6	Trichloroethene	52.7		1.0	0.30
75-69-4	Trichlorofluoromethane	56.4		2.0	0.57
108-05-4	Vinyl acetate	111		3.0	0.94
75-01-4	Vinyl chloride	65.3		2.0	0.51
1330-20-7	Xylenes, Total	102		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	103		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\-X502939-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 21:28:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:39 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.056	5.056	0.000	99	2106634	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.566	7.566	0.000	84	502022	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	95	809058	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.556	4.556	0.000	94	519481	50.0	51.3	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	493498	50.0	46.4	
$	6 Toluene-d8 (Surr)	98	6.300	6.300	0.000	92	2197981	50.0	51.4	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	720177	50.0	49.8	
	10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	538147	50.0	58.2	
	11 Chloromethane	50	1.860	1.860	0.000	98	503235	50.0	53.6	
	12 Vinyl chloride	62	1.960	1.960	0.000	97	624631	50.0	65.3	
	14 Bromomethane	94	2.246	2.246	0.000	89	292599	50.0	57.3	
	15 Chloroethane	64	2.332	2.332	0.000	99	387599	50.0	60.5	
	16 Dichlorofluoromethane	67	2.504	2.504	0.000	96	821321	50.0	51.4	
	17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	694839	50.0	56.4	
	19 Ethyl ether	59	2.739	2.739	0.000	89	365425	50.0	51.4	
	21 Acrolein	56	2.854	2.854	0.000	100	490474	493.8	427.8	
	23 1,1-Dichloroethene	96	2.933	2.933	0.000	97	435921	50.0	53.9	
	22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	94	327876	50.0	56.3	
	24 Acetone	43	2.947	2.947	0.000	98	385073	200.0	165.2	
	26 Iodomethane	142	3.054	3.054	0.000	98	536368	50.0	48.1	
	27 Carbon disulfide	76	3.118	3.118	0.000	98	1402401	50.0	53.5	
	29 Methyl acetate	43	3.176	3.176	0.000	97	514314	100.0	96.7	
	30 3-Chloro-1-propene	41	3.197	3.197	0.000	93	659084	50.0	61.3	
	31 Methylene Chloride	84	3.290	3.290	0.000	89	505749	50.0	48.7	
	32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	312086	500.0	379.6	
	33 Acrylonitrile	53	3.447	3.447	0.000	100	1556425	500.0	515.5	
	34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	1203813	50.0	47.3	
	35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	487416	50.0	54.2	
	37 Hexane	57	3.676	3.676	0.000	88	663953	50.0	57.7	
	39 Vinyl acetate	43	3.776	3.776	0.000	96	1585428	100.0	111.3	
	40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	869887	50.0	53.1	
	45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	657463	200.0	190.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	81	547998	50.0	50.9	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	85	677325	50.0	53.8	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	616608	1200.0	998.3	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	251948	50.0	50.8	
53 Tetrahydrofuran	42	4.391	4.391	0.000	86	223187	100.0	95.1	
54 Chloroform	83	4.441	4.441	0.000	92	832641	50.0	49.9	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	670275	50.0	49.6	
56 Cyclohexane	56	4.641	4.641	0.000	87	826327	50.0	59.3	
57 1,1-Dichloropropene	75	4.692	4.692	0.000	98	693280	50.0	52.4	
60 Isobutyl alcohol	41	4.699	4.699	0.000	90	254540	1250.0	971.5	
59 Carbon tetrachloride	117	4.699	4.699	0.000	94	565072	50.0	51.7	
62 Benzene	78	4.849	4.849	0.000	94	2075433	50.0	53.0	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	558286	50.0	45.0	
65 n-Heptane	43	5.028	5.028	0.000	88	508485	50.0	62.6	
67 Trichloroethene	95	5.328	5.328	0.000	98	505676	50.0	52.7	
68 2-Pentanone	43	5.428	5.428	0.000	98	812418	160.0	145.8	
69 Methylcyclohexane	55	5.521	5.521	0.000	90	592585	50.0	58.1	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	96	529896	50.0	53.2	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	110828	1000.0	879.7	
73 Dibromomethane	93	5.607	5.607	0.000	97	282391	50.0	47.6	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	622312	50.0	49.7	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	248389	50.0	78.4	
77 cis-1,3-Dichloropropene	75	6.072	6.072	0.000	98	819514	50.0	53.6	
78 4-Methyl-2-pentanone (MIBK)	43	6.172	6.172	0.000	94	1333524	200.0	200.2	
79 Toluene	91	6.365	6.365	0.000	98	2209827	50.0	52.4	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	686346	50.0	53.1	
81 Ethyl methacrylate	69	6.558	6.558	0.000	86	560106	50.0	51.1	
82 1,1,2-Trichloroethane	97	6.708	6.708	0.000	90	419000	50.0	49.7	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	379245	50.0	52.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	87	764459	50.0	49.7	
85 2-Hexanone	43	6.872	6.872	0.000	94	894949	200.0	186.1	
87 Chlorodibromomethane	129	7.051	7.051	0.000	91	443616	50.0	47.8	
88 Ethylene Dibromide	107	7.165	7.165	0.000	98	425116	50.0	48.4	
89 1-Chlorohexane	91	7.552	7.552	0.000	93	568540	40.0	41.8	
90 Chlorobenzene	112	7.595	7.595	0.000	96	1396446	50.0	49.9	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.666	0.000	97	441972	50.0	49.2	
92 Ethylbenzene	106	7.673	7.673	0.000	97	773447	50.0	50.2	
93 m-Xylene & p-Xylene	106	7.788	7.788	0.000	0	948885	50.0	51.4	
94 o-Xylene	106	8.145	8.145	0.000	95	939963	50.0	50.2	
95 Styrene	104	8.167	8.167	0.000	95	1555720	50.0	52.3	
96 Bromoform	173	8.345	8.345	0.000	96	267373	50.0	47.7	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	2277007	50.0	49.6	
99 Cyclohexanone	55	8.581	8.581	0.000	89	584485	1500.0	1368.5	
100 1,1,2,2-Tetrachloroethane	83	8.767	8.767	0.000	93	528337	50.0	45.6	
101 Bromobenzene	156	8.803	8.803	0.000	94	553619	50.0	47.9	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	73	123667	50.0	40.9	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	83	148752	50.0	42.3	
104 N-Propylbenzene	120	8.882	8.882	0.000	99	670298	50.0	52.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	561480	50.0	49.6	
106 1,3,5-Trimethylbenzene	105	9.053	9.053	0.000	95	1890336	50.0	48.8	
107 4-Chlorotoluene	126	9.096	9.096	0.000	97	584300	50.0	49.6	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	1578090	50.0	48.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1952636	50.0	48.7	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	479344	50.0	49.4	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	1022334	50.0	47.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1978324	50.0	49.5	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	1054747	50.0	46.5	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1790939	50.0	51.7	
117 1,2-Dichlorobenzene	146	10.161	10.161	0.000	98	961593	50.0	46.8	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.941	0.000	90	89866	50.0	38.6	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	485437	50.0	46.9	
121 Hexachlorobutadiene	225	11.899	11.899	0.000	98	196896	50.0	52.2	
122 Naphthalene	128	12.035	12.035	0.000	97	1065292	50.0	40.3	
123 1,2,3-Trichlorobenzene	180	12.249	12.249	0.000	96	335398	50.0	42.9	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	105.2	
S 139 Xylenes, Total (URS)	1				0		100.0	101.6	
S 136 1,3-Dichloropropene, Total	1				0		100.0	106.7	
S 138 Xylenes, Total	106				0		100.0	101.6	
S 140 Trihalomethanes, Total	1				0		200.0	195.1	
S 141 1,2-Dichloroethene, Total	1				0		100.0	105.2	

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00133	Amount Added: 10.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 28-Apr-2023 02:56:41 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\-X502939-LCS.d

Injection Date: 27-Apr-2023 21:28:30 Instrument ID: VMS_X4 Operator ID: bj

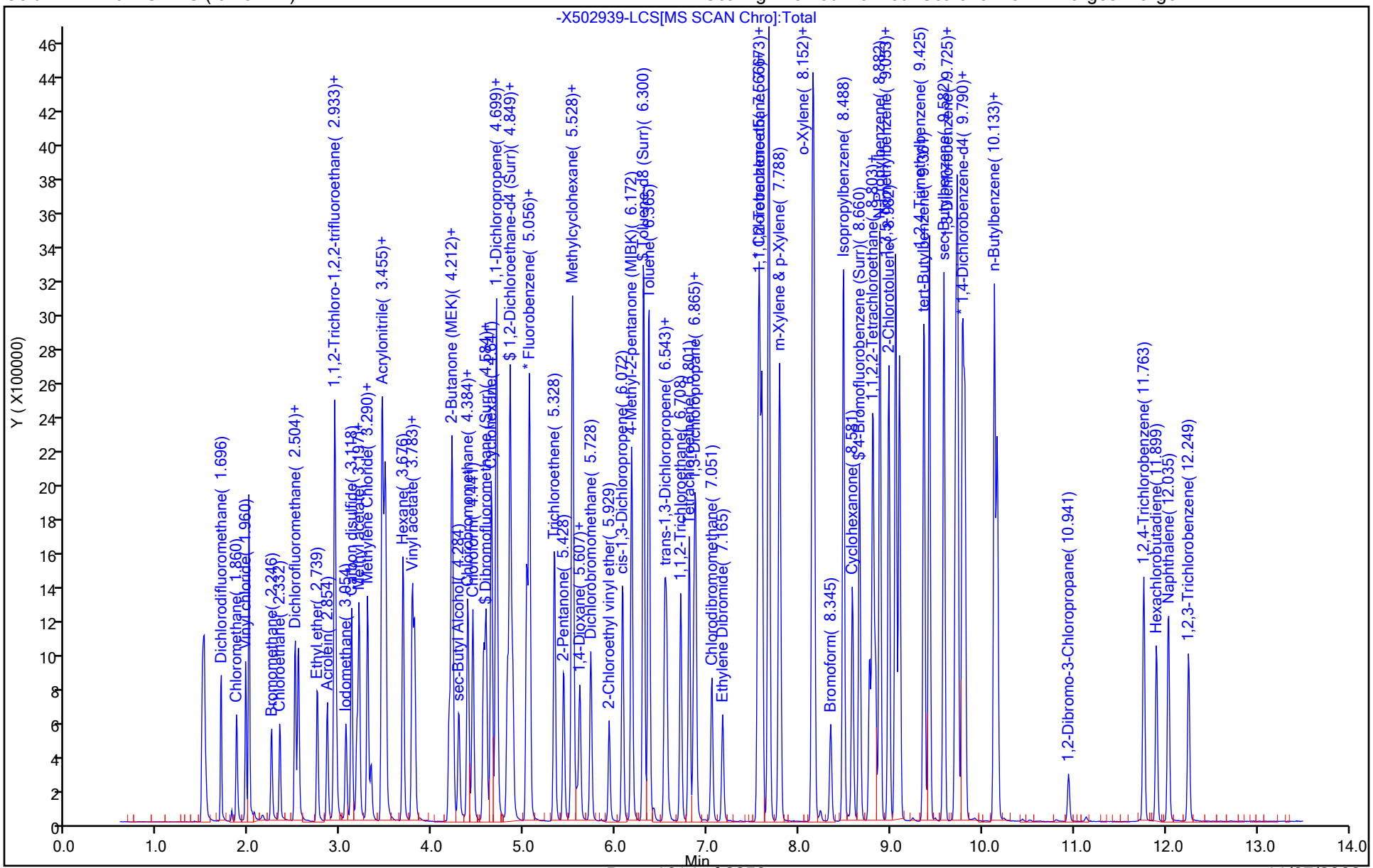
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 1

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\-X502939-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 21:28:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:39 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.53
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.4	92.74
$ 6 Toluene-d8 (Surr)	50.0	51.4	102.79
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.8	99.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610485/1003

Matrix: Water | Lab File ID: -X502940-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 21:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	212		30	9.6
126-99-8	Chloroprene	24.7		3.0	1.2
126-98-7	Methacrylonitrile	204		15	5.3
80-62-6	Methyl methacrylate	37.0		4.0	1.1
107-12-0	Propionitrile	223		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\-X502940-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 21:48:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:42 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.056	0.000	99	2005972	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	481290	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	95	751797	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.556	4.556	0.000	94	490492	50.0	50.8	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	462225	50.0	45.6	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2077745	50.0	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	673766	50.0	50.1	
18 Ethanol	45	2.647	2.647	0.000	99	116579	1500.0	1098.0	
25 Isopropyl alcohol	45	3.033	3.033	0.000	99	88024	250.0	141.5	
28 Acetonitrile	41	3.154	3.154	0.000	99	237650	250.0	212.1	
41 Isopropyl ether	87	3.805	3.805	0.000	94	187345	25.0	25.0	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	323941	25.0	24.7	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	613479	25.0	23.7	
46 Ethyl acetate	43	4.198	4.198	0.000	98	285171	50.0	36.7	
49 Propionitrile	54	4.234	4.234	0.000	100	278171	250.0	223.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	994612	250.0	203.8	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	88	565581	25.0	22.6	
66 n-Butanol	56	5.192	5.192	0.000	82	89141	625.0	362.5	
71 Methyl methacrylate	100	5.535	5.535	0.000	90	98026	50.0	37.0	
75 2-Nitropropane	41	5.900	5.900	0.000	97	54192	50.0	19.3	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	104391	50.0	35.3	
115 1,2,3-Trimethylbenzene	105	9.825	9.825	0.000	98	910116	25.0	22.3	
119 1,3,5-Trichlorobenzene	180	11.127	11.127	0.000	97	286271	25.0	22.6	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

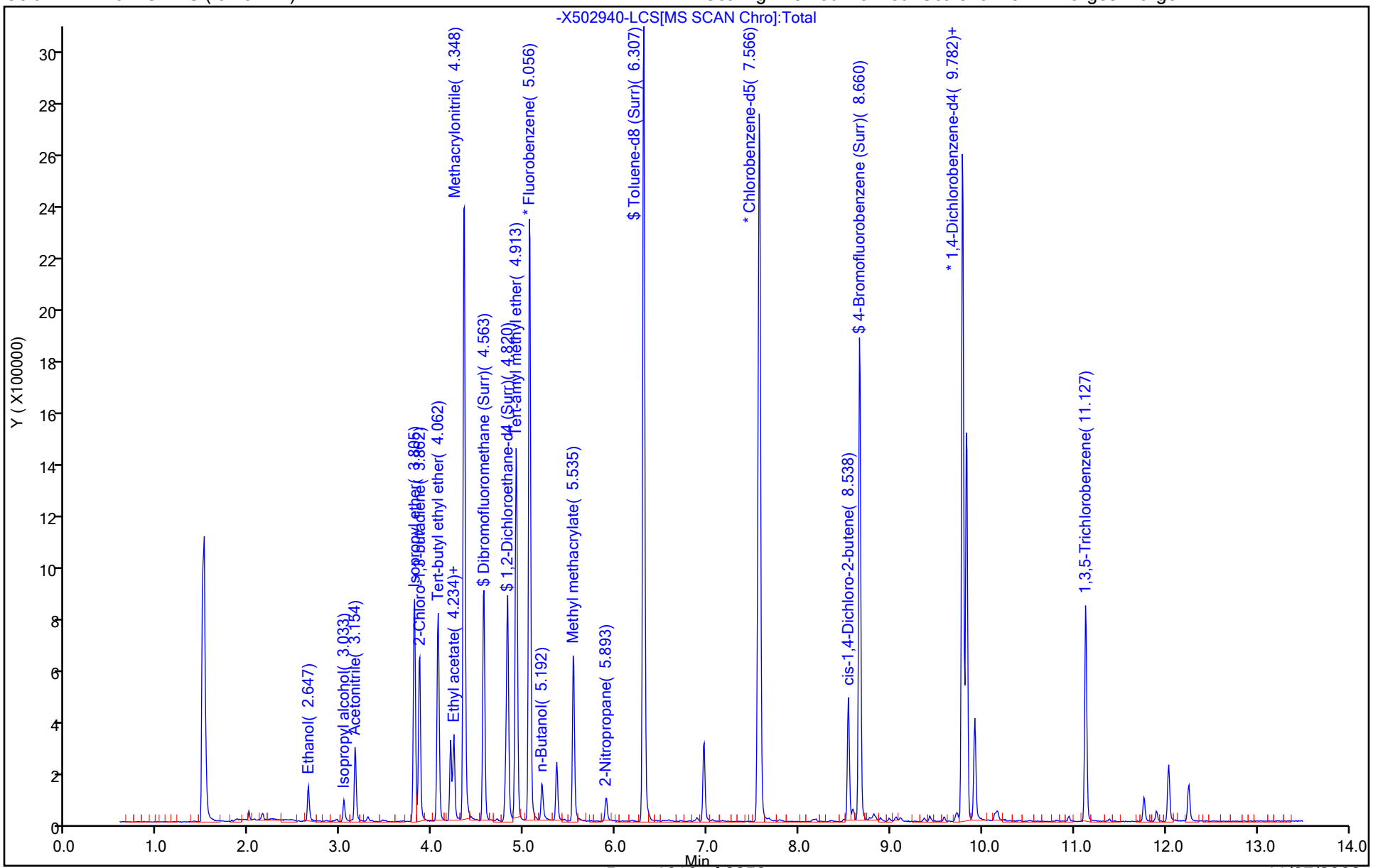
Report Date: 28-Apr-2023 02:56:43 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\-X502940-LCS.d

Injection Date:	27-Apr-2023 21:48:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\-X502940-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 21:48:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv s
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:42 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	50.8	101.67
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	45.6	91.22
$ 6 Toluene-d8 (Surr)	50.0	50.7	101.36
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.1	100.30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609561/4

Matrix: Water | Lab File ID: MS1_8310.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 08:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	46.3		1.0	0.58
71-55-6	1,1,1-Trichloroethane	52.5		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	50.2		1.0	0.21
79-00-5	1,1,2-Trichloroethane	50.5		1.0	0.27
75-34-3	1,1-Dichloroethane	51.4		1.0	0.22
75-35-4	1,1-Dichloroethene	46.4		1.0	0.23
563-58-6	1,1-Dichloropropene	50.7		1.0	0.42
96-18-4	1,2,3-Trichloropropane	49.0		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	46.8		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	42.5		5.0	1.8
106-93-4	1,2-Dibromoethane	47.8		1.0	0.40
95-50-1	1,2-Dichlorobenzene	49.0		1.0	0.37
107-06-2	1,2-Dichloroethane	50.0		1.0	0.54
78-87-5	1,2-Dichloropropane	50.3		1.0	0.52
541-73-1	1,3-Dichlorobenzene	49.7		1.0	0.33
142-28-9	1,3-Dichloropropane	50.4		1.0	0.38
106-46-7	1,4-Dichlorobenzene	47.6		1.0	0.39
594-20-7	2,2-Dichloropropane	49.2		1.0	0.38
78-93-3	2-Butanone (MEK)	196		15	6.0
591-78-6	2-Hexanone	202		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	209		5.0	0.98
67-64-1	Acetone	183		15	6.6
107-02-8	Acrolein	514		20	4.9
107-13-1	Acrylonitrile	515		20	4.5
107-05-1	Allyl chloride	50.4		2.0	0.17
71-43-2	Benzene	50.3		1.0	0.31
75-25-2	Bromoform	42.6		2.0	1.2
74-83-9	Bromomethane	51.3		5.0	2.4
75-15-0	Carbon disulfide	43.6		2.0	0.63
56-23-5	Carbon tetrachloride	49.0		1.0	0.57
108-90-7	Chlorobenzene	48.9		1.0	0.42
74-97-5	Chlorobromomethane	48.7		1.0	0.40
124-48-1	Chlorodibromomethane	46.4		2.0	0.62
75-00-3	Chloroethane	48.5		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609561/4

Matrix: Water | Lab File ID: MS1_8310.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 08:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	51.3		1.0	0.36
74-87-3	Chloromethane	52.4		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	50.8		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	48.4		2.0	0.63
74-95-3	Dibromomethane	50.2		1.0	0.34
75-27-4	Dichlorobromomethane	50.8		1.0	0.39
75-71-8	Dichlorodifluoromethane	44.5		3.0	0.96
97-63-2	Ethyl methacrylate	48.2		3.0	0.86
100-41-4	Ethylbenzene	47.8		1.0	0.30
74-88-4	Iodomethane	47.4		5.0	2.6
78-83-1	Isobutyl alcohol	1320		110	37
75-09-2	Methylene Chloride	48.1		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	48.1		2.0	0.36
95-47-6	o-Xylene	48.1		1.0	0.33
100-42-5	Styrene	49.1		1.0	0.36
127-18-4	Tetrachloroethene	48.7		1.0	0.40
108-88-3	Toluene	51.4		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	47.4		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	49.7		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	47.5		3.0	1.4
79-01-6	Trichloroethene	48.7		1.0	0.30
75-69-4	Trichlorofluoromethane	48.9		2.0	0.57
108-05-4	Vinyl acetate	113		3.0	0.94
75-01-4	Vinyl chloride	50.4		2.0	0.51
1330-20-7	Xylenes, Total	96.2		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		70-127
460-00-4	4-Bromofluorobenzene (Surr)	104		78-120
1868-53-7	Dibromofluoromethane (Surr)	107		77-120
2037-26-5	Toluene-d8 (Surr)	106		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8310.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 21-Apr-2023 08:40:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:28:51 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: LP8K Date: 21-Apr-2023 08:56:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1038278	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	250146	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	401231	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	263575	50.0	53.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	384003	50.0	57.3	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1142400	50.0	53.2	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	80	409388	50.0	51.9	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	222556	50.0	44.5	
12 Chloromethane	50	2.009	2.009	0.000	99	251283	50.0	52.4	
13 Vinyl chloride	62	2.135	2.135	0.000	98	249475	50.0	50.4	
15 Bromomethane	94	2.498	2.498	0.000	92	133834	50.0	51.3	
16 Chloroethane	64	2.624	2.623	0.001	99	147449	50.0	48.5	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	98	351494	50.0	50.7	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	97	285480	50.0	48.9	
20 Ethyl ether	59	3.168	3.182	-0.014	96	187187	50.0	50.8	
22 Acrolein	56	3.322	3.322	0.000	99	289036	493.8	514.1	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	149430	50.0	46.4	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	93	106800	50.0	45.4	
25 Acetone	43	3.448	3.448	0.000	98	328476	200.0	183.2	
26 Iodomethane	142	3.559	3.559	0.000	100	203999	50.0	47.4	
28 Carbon disulfide	76	3.629	3.629	0.000	100	504293	50.0	43.6	
30 Methyl acetate	43	3.755	3.755	0.000	99	411935	100.0	101.1	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	87	374717	50.0	50.4	
32 Methylene Chloride	84	3.894	3.894	0.000	99	192554	50.0	48.1	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	304196	500.0	517.5	
34 Acrylonitrile	53	4.104	4.104	0.000	98	977257	500.0	514.7	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	640318	50.0	51.4	
36 trans-1,2-Dichloroethene	96	4.132	4.132	0.000	94	177072	50.0	47.4	
37 Hexane	57	4.383	4.383	0.000	96	243186	50.0	44.9	
39 Vinyl acetate	43	4.523	4.523	0.000	98	1103746	100.0	113.4	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	381246	50.0	51.4	
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	545599	200.0	196.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	309653	50.0	49.2	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	87	204002	50.0	50.8	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	627099	1200.0	1269.5	
53 Chlorobromomethane	128	5.249	5.249	0.000	93	89478	50.0	48.7	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	180822	100.0	103.5	
55 Chloroform	83	5.319	5.319	0.000	96	346513	50.0	51.3	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	295133	50.0	52.5	
57 Cyclohexane	56	5.542	5.542	0.000	96	355035	50.0	49.0	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	90	278820	50.0	50.7	
59 Carbon tetrachloride	117	5.612	5.612	0.000	82	232513	50.0	49.0	
60 Isobutyl alcohol	41	5.654	5.654	0.000	93	271965	1250.0	1315.2	
63 Benzene	78	5.780	5.780	0.000	99	806684	50.0	50.3	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	313342	50.0	50.0	
66 n-Heptane	43	6.003	6.003	0.000	96	228611	50.0	45.8	
68 Trichloroethene	95	6.339	6.339	0.001	95	195625	50.0	48.7	
69 2-Pentanone	43	6.478	6.478	0.000	98	700689	160.0	165.1	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	261520	50.0	49.8	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	89	222278	50.0	50.3	
73 1,4-Dioxane	88	6.632	6.632	0.000	97	66101	1000.0	925.2	
74 Dibromomethane	93	6.660	6.660	0.000	92	121673	50.0	50.2	
75 Dichlorobromomethane	83	6.799	6.799	0.000	97	268250	50.0	50.8	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	94	147599	50.0	46.8	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	90	347103	50.0	48.4	
79 4-Methyl-2-pentanone (MIBK)	43	7.288	7.288	0.000	99	1108570	200.0	208.7	
82 Toluene	91	7.484	7.484	0.000	97	853697	50.0	51.4	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	325700	50.0	49.7	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	293558	50.0	48.2	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	94	175636	50.0	50.5	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	134146	50.0	48.7	
90 1,3-Dichloropropane	76	8.014	8.014	0.000	98	337214	50.0	50.4	
91 2-Hexanone	43	8.042	8.042	0.000	98	796081	200.0	201.5	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	170580	50.0	46.4	
96 Ethylene Dibromide	107	8.350	8.350	0.000	99	176652	50.0	47.8	
98 1-Chlorohexane	91	8.755	8.755	0.000	90	202030	40.0	39.5	
99 Chlorobenzene	112	8.797	8.797	0.000	91	509972	50.0	48.9	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	43	165726	50.0	46.3	
101 Ethylbenzene	106	8.880	8.880	0.000	99	284608	50.0	47.8	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	349656	50.0	48.1	
103 o-Xylene	106	9.369	9.369	0.000	98	349154	50.0	48.1	
104 Styrene	104	9.383	9.383	0.000	91	597041	50.0	49.1	
106 Bromoform	173	9.579	9.579	0.000	92	97583	50.0	42.6	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	865367	50.0	50.5	
109 Cyclohexanone	55	9.830	9.830	0.000	96	389675	1500.0	1547.6	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	95	256105	50.0	50.2	
111 Bromobenzene	156	10.054	10.054	0.000	97	195460	50.0	48.7	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.054	0.000	77	71262	50.0	47.5	
113 1,2,3-Trichloropropane	110	10.081	10.081	0.000	88	76354	50.0	49.0	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	231177	50.0	50.0	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	195753	50.0	49.5	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	717312	50.0	50.4	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	206561	50.0	49.0	
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	578275	50.0	50.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	752023	50.0	50.1	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	157439	50.0	49.3	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	373750	50.0	49.7	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	713442	50.0	50.1	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	381831	50.0	47.6	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	643466	50.0	49.6	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	94	351643	50.0	49.0	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	73	43922	50.0	42.5	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	188225	50.0	46.8	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	96	69117	50.0	44.5	
132 Naphthalene	128	13.336	13.336	0.000	98	602075	50.0	45.1	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	93	153368	50.0	44.9	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	98.2	
S 151 Trihalomethanes, Total	1				0		200.0	191.1	
S 150 1,2-Dichloroethene, Total	1				0		100.0	98.2	
S 156 1,3-Dichloropropene, Total	1				0		100.0	98.1	
S 155 Xylenes, Total	106				0		100.0	96.3	
S 153 Xylenes, Total (URS)	1				0		100.0	96.3	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00151	Amount Added:	10.00	Units: uL	
MV-MegaMainA_00087	Amount Added:	25.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

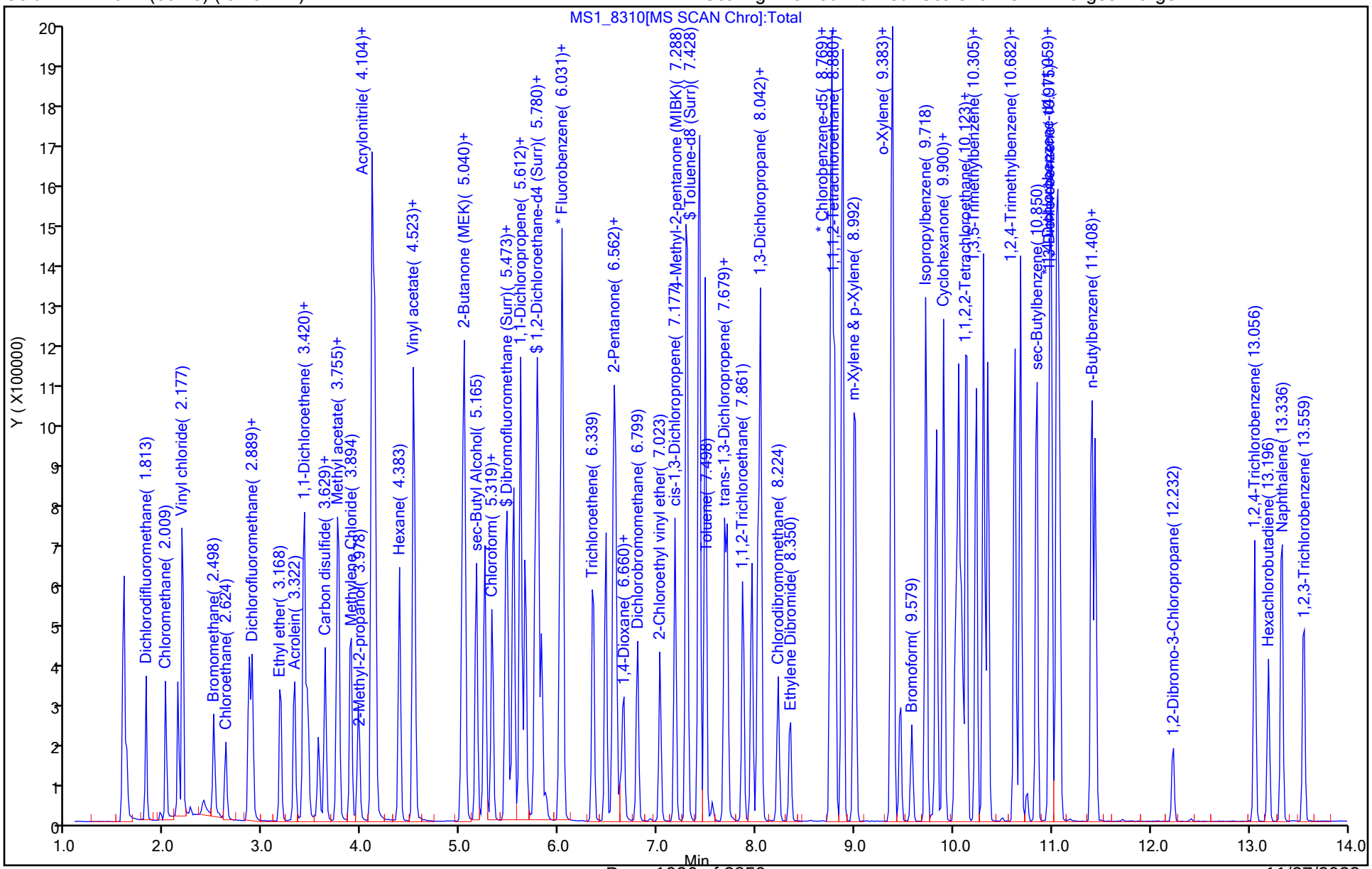
Report Date: 22-Apr-2023 00:29:14 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8310.D

Injection Date:	21-Apr-2023 08:40:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8310.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 21-Apr-2023 08:40:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:28:51 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

First Level Reviewer: LP8K Date: 21-Apr-2023 08:56:56

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	53.3	106.68
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	57.3	114.68
$ 7 Toluene-d8 (Surr)	50.0	53.2	106.42
$ 8 4-Bromofluorobenzene (Surr)	50.0	51.9	103.88

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609561/5

Matrix: Water | Lab File ID: MS1_8309.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/21/2023 08:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609561 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	249		30	9.6
126-99-8	Chloroprene	28.8		3.0	1.2
126-98-7	Methacrylonitrile	259		15	5.3
80-62-6	Methyl methacrylate	42.8		4.0	1.1
107-12-0	Propionitrile	243		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		70-127
460-00-4	4-Bromofluorobenzene (Surr)	107		78-120
1868-53-7	Dibromofluoromethane (Surr)	107		77-120
2037-26-5	Toluene-d8 (Surr)	107		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8309.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 21-Apr-2023 08:19:30 ALS Bottle#: 3 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:28:51 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	97	1006770	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	238566	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	375847	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	256312	50.0	53.5	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	371419	50.0	57.2	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	95	1093730	50.0	53.4	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	80	393515	50.0	53.3	
	19 Ethanol	45	3.070	3.070	0.000	100	113024	1500.0	1597.5	
	27 Isopropyl alcohol	45	3.587	3.573	0.014	99	94666	250.0	279.2	
	29 Acetonitrile	41	3.727	3.727	0.000	100	200952	250.0	249.3	
	41 Isopropyl ether	87	4.551	4.551	0.000	92	81759	25.0	24.8	
	42 2-Chloro-1,3-butadiene	53	4.607	4.593	0.014	95	180656	25.0	28.8	
	44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	99	340137	25.0	27.5	
	47 Ethyl acetate	43	5.040	5.040	0.000	100	246688	50.0	50.1	
	50 Propionitrile	54	5.082	5.081	0.001	99	197319	250.0	242.6	
	52 Methacrylonitrile	41	5.207	5.207	0.000	96	818214	250.0	259.2	
	65 Tert-amyl methyl ether	73	5.878	5.878	0.000	89	298258	25.0	26.1	
	67 n-Butanol	56	6.227	6.227	0.000	92	96967	625.0	799.4	
	72 Methyl methacrylate	100	6.590	6.590	0.000	92	54659	50.0	42.8	
	76 2-Nitropropane	41	6.981	6.995	-0.014	100	79355	50.0	72.9	
	108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	57160	50.0	40.9	
	124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	347995	25.0	22.1	
	129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	94	93334	25.0	18.2	
	146 t-Amyl alcohol	1		0.000				ND	ND	
	145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added: 25.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

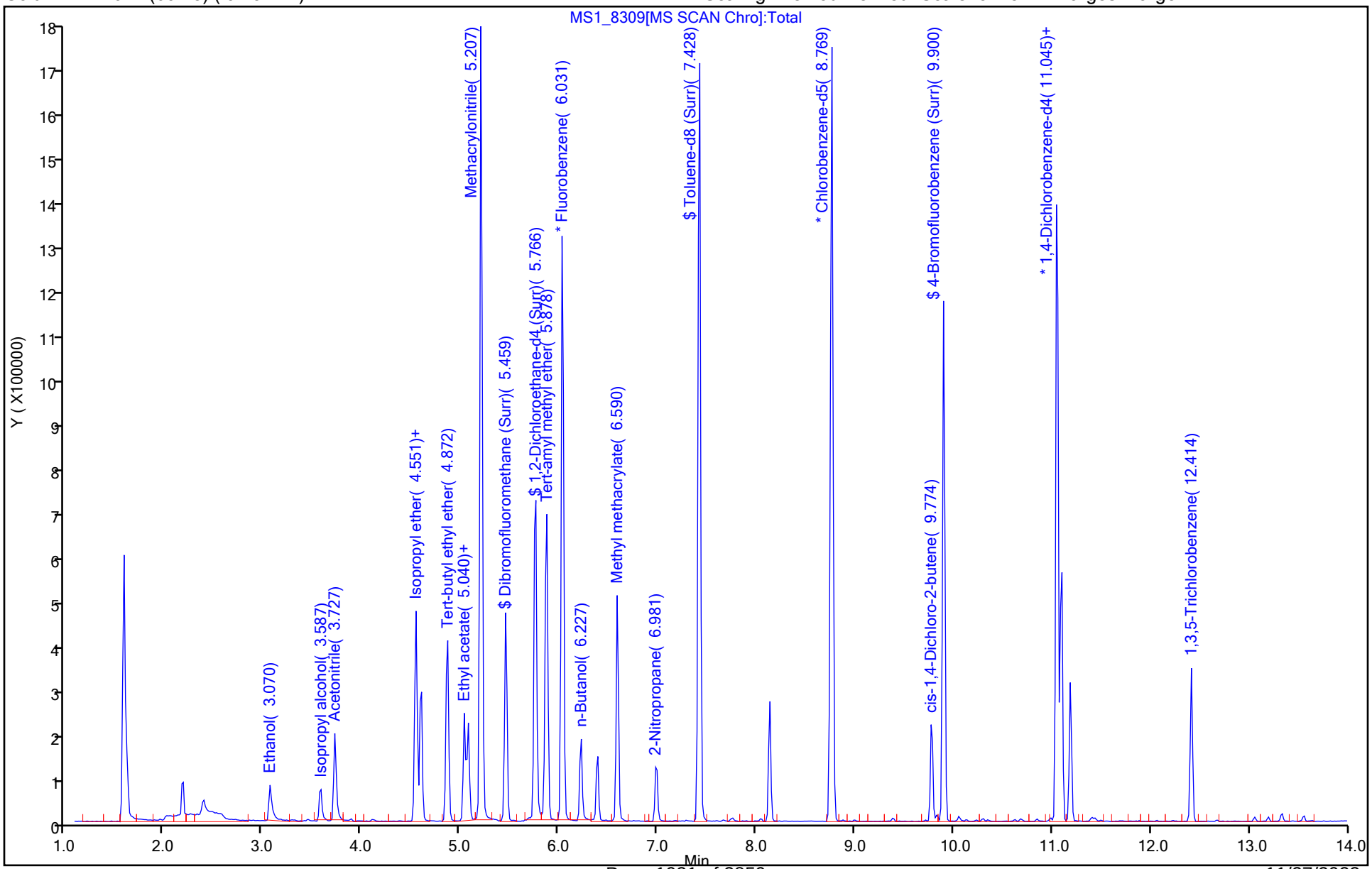
Report Date: 22-Apr-2023 00:29:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8309.D

Injection Date:	21-Apr-2023 08:19:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\MS1_8309.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 21-Apr-2023 08:19:30 ALS Bottle#: 3 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Apr-2023 00:28:51 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1642

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	53.5	106.99
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	57.2	114.40
$ 7 Toluene-d8 (Surr)	50.0	53.4	106.83
$ 8 4-Bromofluorobenzene (Surr)	50.0	53.3	106.60

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609932/4

Matrix: Water | Lab File ID: X502752.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 19:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	48.5		1.0	0.58
71-55-6	1,1,1-Trichloroethane	51.0		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	47.7		1.0	0.21
79-00-5	1,1,2-Trichloroethane	50.2		1.0	0.27
75-34-3	1,1-Dichloroethane	54.8		1.0	0.22
75-35-4	1,1-Dichloroethene	51.5		1.0	0.23
563-58-6	1,1-Dichloropropene	53.1		1.0	0.42
96-18-4	1,2,3-Trichloropropane	46.5		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	50.4		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	43.9		5.0	1.8
106-93-4	1,2-Dibromoethane	47.2		1.0	0.40
95-50-1	1,2-Dichlorobenzene	47.4		1.0	0.37
107-06-2	1,2-Dichloroethane	49.3		1.0	0.54
78-87-5	1,2-Dichloropropane	54.5		1.0	0.52
541-73-1	1,3-Dichlorobenzene	49.1		1.0	0.33
142-28-9	1,3-Dichloropropane	49.7		1.0	0.38
106-46-7	1,4-Dichlorobenzene	46.1		1.0	0.39
594-20-7	2,2-Dichloropropane	53.4		1.0	0.38
78-93-3	2-Butanone (MEK)	222		15	6.0
591-78-6	2-Hexanone	213		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	232		5.0	0.98
67-64-1	Acetone	203		15	6.6
107-02-8	Acrolein	466		20	4.9
107-13-1	Acrylonitrile	555		20	4.5
107-05-1	Allyl chloride	61.6		2.0	0.17
71-43-2	Benzene	52.6		1.0	0.31
75-25-2	Bromoform	48.9		2.0	1.2
74-83-9	Bromomethane	49.0		5.0	2.4
75-15-0	Carbon disulfide	52.3		2.0	0.63
56-23-5	Carbon tetrachloride	52.9		1.0	0.57
108-90-7	Chlorobenzene	48.2		1.0	0.42
74-97-5	Chlorobromomethane	51.2		1.0	0.40
124-48-1	Chlorodibromomethane	47.3		2.0	0.62
75-00-3	Chloroethane	62.6		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609932/4

Matrix: Water | Lab File ID: X502752.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 19:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	50.4		1.0	0.36
74-87-3	Chloromethane	53.9		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	50.7		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	52.2		2.0	0.63
74-95-3	Dibromomethane	48.5		1.0	0.34
75-27-4	Dichlorobromomethane	50.2		1.0	0.39
75-71-8	Dichlorodifluoromethane	56.9		3.0	0.96
97-63-2	Ethyl methacrylate	52.0		3.0	0.86
100-41-4	Ethylbenzene	47.8		1.0	0.30
74-88-4	Iodomethane	43.9		5.0	2.6
78-83-1	Isobutyl alcohol	1190		110	37
75-09-2	Methylene Chloride	48.1		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	49.1		2.0	0.36
95-47-6	o-Xylene	47.8		1.0	0.33
100-42-5	Styrene	50.7		1.0	0.36
127-18-4	Tetrachloroethene	52.4		1.0	0.40
108-88-3	Toluene	52.1		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	54.1		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	54.9		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	45.7		3.0	1.4
79-01-6	Trichloroethene	50.9		1.0	0.30
75-69-4	Trichlorofluoromethane	59.1		2.0	0.57
108-05-4	Vinyl acetate	123		3.0	0.94
75-01-4	Vinyl chloride	67.0		2.0	0.51
1330-20-7	Xylenes, Total	96.9		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502752.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 24-Apr-2023 19:29:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	1432401	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	352466	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	542963	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	359519	50.0	52.2	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	367488	50.0	50.8	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1511248	50.0	50.3	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	495995	50.0	51.1	
	10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	357916	50.0	56.9	
	11 Chloromethane	50	1.867	1.867	0.000	99	344160	50.0	53.9	
	12 Vinyl chloride	62	1.967	1.967	0.000	98	435845	50.0	67.0	
	14 Bromomethane	94	2.246	2.246	0.000	89	170153	50.0	49.0	
	15 Chloroethane	64	2.339	2.339	0.000	99	272512	50.0	62.6	
	16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	608269	50.0	56.0	
	17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	495443	50.0	59.1	
	19 Ethyl ether	59	2.747	2.747	0.000	90	262239	50.0	54.3	
	21 Acrolein	56	2.854	2.854	0.000	100	363393	493.8	466.1	
	22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	94	221392	50.0	56.0	
	23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	283428	50.0	51.5	
	24 Acetone	43	2.954	2.954	0.000	100	319449	200.0	202.6	
	26 Iodomethane	142	3.061	3.054	0.007	97	332590	50.0	43.9	
	27 Carbon disulfide	76	3.118	3.118	0.000	99	932413	50.0	52.3	
	29 Methyl acetate	43	3.176	3.176	0.000	97	402673	100.0	111.3	
	30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	450090	50.0	61.6	
	31 Methylene Chloride	84	3.297	3.297	0.000	90	339670	50.0	48.1	
	32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	251862	500.0	450.0	
	33 Acrylonitrile	53	3.455	3.455	-0.001	99	1140141	500.0	555.3	
	34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	883660	50.0	51.0	
	35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	99	330869	50.0	54.1	
	37 Hexane	57	3.683	3.683	0.000	89	440700	50.0	54.6	
	39 Vinyl acetate	43	3.783	3.783	0.000	97	1191839	100.0	123.1	
	40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	610936	50.0	54.8	
	45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	522721	200.0	222.1	
	47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	371355	50.0	50.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 2,2-Dichloropropane	77	4.227	4.220	0.007	87	457724	50.0	53.4	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	490895	1200.0	1167.1	
52 Chlorobromomethane	128	4.384	4.384	0.000	96	172477	50.0	51.2	
53 Tetrahydrofuran	42	4.398	4.391	0.007	88	176705	100.0	110.8	
54 Chloroform	83	4.441	4.441	0.000	93	571773	50.0	50.4	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	99	468070	50.0	51.0	
56 Cyclohexane	56	4.649	4.649	0.000	88	577030	50.0	60.9	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	99	477835	50.0	53.1	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	213090	1250.0	1193.5	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	393222	50.0	52.9	
62 Benzene	78	4.849	4.849	0.000	96	1400259	50.0	52.6	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	415623	50.0	49.3	
65 n-Heptane	43	5.035	5.028	0.007	90	335182	50.0	60.7	
67 Trichloroethene	95	5.335	5.335	0.000	98	342890	50.0	50.9	
68 2-Pentanone	43	5.435	5.435	0.000	99	646302	160.0	170.4	
69 Methylcyclohexane	55	5.528	5.528	0.000	91	403377	50.0	58.1	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	98	368702	50.0	54.5	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	85271	1000.0	995.5	
73 Dibromomethane	93	5.607	5.607	0.000	97	195942	50.0	48.5	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	427397	50.0	50.2	
76 2-Chloroethyl vinyl ether	63	5.928	5.929	-0.001	90	236188	50.0	110.0	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	97	560635	50.0	52.2	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1052804	200.0	232.4	
79 Toluene	91	6.365	6.365	0.000	98	1494845	50.0	52.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	482438	50.0	54.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	400201	50.0	52.0	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	287682	50.0	50.2	
83 Tetrachloroethene	164	6.808	6.801	0.007	98	268107	50.0	52.4	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	536486	50.0	49.7	
85 2-Hexanone	43	6.872	6.872	0.000	94	718825	200.0	212.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	308051	50.0	47.3	
88 Ethylene Dibromide	107	7.173	7.166	0.007	99	291108	50.0	47.2	
89 1-Chlorohexane	91	7.559	7.552	0.007	96	370750	40.0	38.9	
90 Chlorobenzene	112	7.602	7.595	0.007	96	946104	50.0	48.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.666	0.007	97	306224	50.0	48.5	
92 Ethylbenzene	106	7.673	7.673	0.000	98	516914	50.0	47.8	
93 m-Xylene & p-Xylene	106	7.795	7.788	0.007	0	635689	50.0	49.1	
94 o-Xylene	106	8.152	8.152	0.000	96	627709	50.0	47.8	
95 Styrene	104	8.167	8.167	-0.001	94	1059367	50.0	50.7	
96 Bromoform	173	8.352	8.345	0.007	97	192652	50.0	48.9	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1533197	50.0	49.7	
99 Cyclohexanone	55	8.588	8.588	0.000	90	469526	1500.0	1564.9	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	370945	50.0	47.7	
101 Bromobenzene	156	8.810	8.810	0.000	95	375266	50.0	48.3	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.810	0.007	82	92752	50.0	45.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	109771	50.0	46.5	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	435416	50.0	50.8	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	376712	50.0	49.6	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1285325	50.0	49.4	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	391052	50.0	49.5	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1063334	50.0	49.0	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1325896	50.0	49.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	315194	50.0	48.4	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	703192	50.0	49.1	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1327774	50.0	49.5	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	701846	50.0	46.1	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1177707	50.0	50.7	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	653680	50.0	47.4	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	88	68671	50.0	43.9	
120 1,2,4-Trichlorobenzene	180	11.770	11.763	0.007	94	349969	50.0	50.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	134947	50.0	53.3	
122 Naphthalene	128	12.035	12.035	0.000	97	827153	50.0	46.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	257280	50.0	49.1	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	104.9	
S 139 Xylenes, Total (URS)	1				0		100.0	96.8	
S 136 1,3-Dichloropropene, Total	1				0		100.0	107.1	
S 138 Xylenes, Total	106				0		100.0	96.8	
S 140 Trihalomethanes, Total	1				0		200.0	196.8	
S 141 1,2-Dichloroethene, Total	1				0		100.0	104.9	

Reagents:

MV-Gas B_00132	Amount Added:	10.00	Units: uL	
MV-MegaMain B_00083	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 25-Apr-2023 04:09:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502752.D

Injection Date: 24-Apr-2023 19:29:30 Instrument ID: VMS_X4 Operator ID: bj

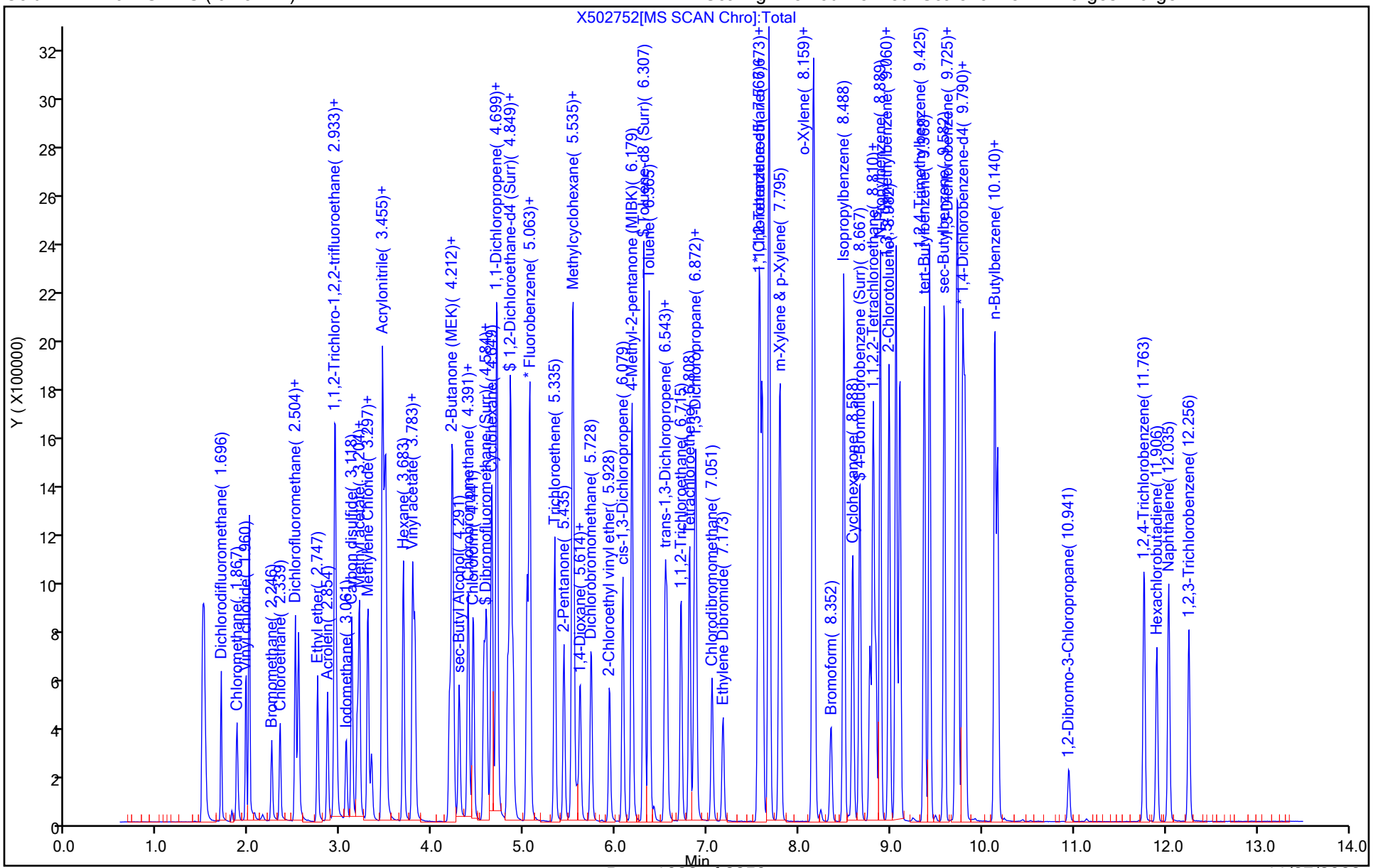
Lims ID: LCSD Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502752.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 24-Apr-2023 19:29:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.2	104.36
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.8	101.56
$ 6 Toluene-d8 (Surr)	50.0	50.3	100.67
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.1	102.23

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-609932/5

Matrix: Water | Lab File ID: X502753.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2023 19:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 609932 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	252		30	9.6
126-99-8	Chloroprene	25.9		3.0	1.2
126-98-7	Methacrylonitrile	241		15	5.3
80-62-6	Methyl methacrylate	42.2		4.0	1.1
107-12-0	Propionitrile	254		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	103		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502753.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 24-Apr-2023 19:49:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	1388739	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	333064	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	540029	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	343854	50.0	51.5	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	362080	50.0	51.6	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1462827	50.0	51.6	
$	7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	91	483535	50.0	50.1	
	18 Ethanol	45	2.646	2.646	0.000	99	101928	1500.0	1386.6	
	25 Isopropyl alcohol	45	3.033	3.033	0.000	99	78712	250.0	182.8	
	28 Acetonitrile	41	3.161	3.161	0.000	100	195423	250.0	251.9	
	41 Isopropyl ether	87	3.805	3.805	0.000	94	136475	25.0	26.3	
	42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	89	235552	25.0	25.9	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	459704	25.0	25.6	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	238035	50.0	44.3	
	49 Propionitrile	54	4.234	4.234	0.000	99	219589	250.0	254.5	
	51 Methacrylonitrile	41	4.348	4.348	0.000	90	814751	250.0	241.2	
	64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	427185	25.0	24.6	
	66 n-Butanol	56	5.199	5.199	0.000	85	79014	625.0	464.2	
	71 Methyl methacrylate	100	5.542	5.542	0.000	89	77462	50.0	42.2	
	75 2-Nitropropane	41	5.893	5.893	0.000	98	48885	50.0	25.1	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	84732	50.0	39.8	
	115 1,2,3-Trimethylbenzene	105	9.832	9.832	0.000	98	630361	25.0	21.5	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	204674	25.0	22.5	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 25-Apr-2023 04:09:11 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502753.D

Injection Date: 24-Apr-2023 19:49:30 Instrument ID: VMS_X4 Operator ID: bj

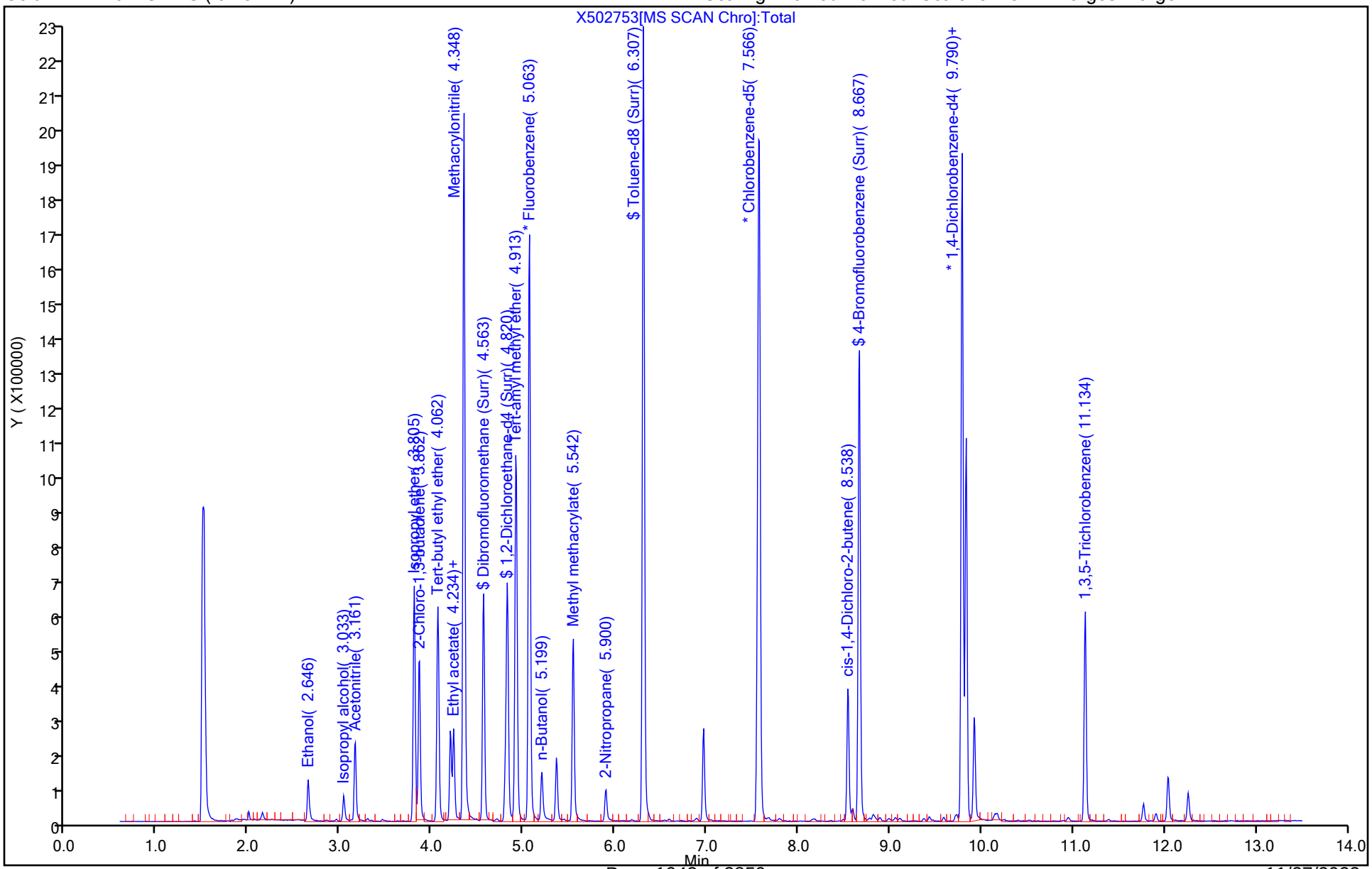
Lims ID: LCSD Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 4

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\X502753.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 24-Apr-2023 19:49:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 25-Apr-2023 04:09:08 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1648

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.5	102.95
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	51.6	103.22
$ 6 Toluene-d8 (Surr)	50.0	51.6	103.12
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.1	100.21

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610121/4

Matrix: Water | Lab File ID: X502848.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	24.9		1.0	0.58
71-55-6	1,1,1-Trichloroethane	25.4		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	24.4		1.0	0.21
79-00-5	1,1,2-Trichloroethane	26.0		1.0	0.27
75-34-3	1,1-Dichloroethane	27.4		1.0	0.22
75-35-4	1,1-Dichloroethene	26.5		1.0	0.23
563-58-6	1,1-Dichloropropene	25.6		1.0	0.42
96-18-4	1,2,3-Trichloropropane	23.9		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	26.7		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	22.8		5.0	1.8
106-93-4	1,2-Dibromoethane	25.3		1.0	0.40
95-50-1	1,2-Dichlorobenzene	24.4		1.0	0.37
107-06-2	1,2-Dichloroethane	23.8		1.0	0.54
78-87-5	1,2-Dichloropropane	27.4		1.0	0.52
541-73-1	1,3-Dichlorobenzene	25.4		1.0	0.33
142-28-9	1,3-Dichloropropane	25.7		1.0	0.38
106-46-7	1,4-Dichlorobenzene	24.3		1.0	0.39
594-20-7	2,2-Dichloropropane	26.3		1.0	0.38
78-93-3	2-Butanone (MEK)	108		15	6.0
591-78-6	2-Hexanone	104		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	110		5.0	0.98
67-64-1	Acetone	96.2		15	6.6
107-02-8	Acrolein	247		20	4.9
107-13-1	Acrylonitrile	286		20	4.5
107-05-1	Allyl chloride	30.3		2.0	0.17
71-43-2	Benzene	27.8		1.0	0.31
75-25-2	Bromoform	24.8		2.0	1.2
74-83-9	Bromomethane	22.4		5.0	2.4
75-15-0	Carbon disulfide	27.8		2.0	0.63
56-23-5	Carbon tetrachloride	25.7		1.0	0.57
108-90-7	Chlorobenzene	25.5		1.0	0.42
74-97-5	Chlorobromomethane	27.1		1.0	0.40
124-48-1	Chlorodibromomethane	24.1		2.0	0.62
75-00-3	Chloroethane	26.1		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610121/4

Matrix: Water | Lab File ID: X502848.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	26.2		1.0	0.36
74-87-3	Chloromethane	23.0		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	27.0		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	26.9		2.0	0.63
74-95-3	Dibromomethane	25.7		1.0	0.34
75-27-4	Dichlorobromomethane	25.9		1.0	0.39
75-71-8	Dichlorodifluoromethane	17.3		3.0	0.96
97-63-2	Ethyl methacrylate	27.4		3.0	0.86
100-41-4	Ethylbenzene	25.6		1.0	0.30
74-88-4	Iodomethane	21.1		5.0	2.6
78-83-1	Isobutyl alcohol	568		110	37
75-09-2	Methylene Chloride	26.2		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	26.4		2.0	0.36
95-47-6	o-Xylene	25.6		1.0	0.33
100-42-5	Styrene	26.8		1.0	0.36
127-18-4	Tetrachloroethene	26.0		1.0	0.40
108-88-3	Toluene	27.1		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	28.0		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	27.6		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	22.4		3.0	1.4
79-01-6	Trichloroethene	26.4		1.0	0.30
75-69-4	Trichlorofluoromethane	20.8		2.0	0.57
108-05-4	Vinyl acetate	60.0		3.0	0.94
75-01-4	Vinyl chloride	27.8		2.0	0.51
1330-20-7	Xylenes, Total	52.0		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-127
460-00-4	4-Bromofluorobenzene (Surr)	104		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502848.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 10:41:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 11:02:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2094082	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	509073	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	797999	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	520983	50.0	51.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	506027	50.0	47.8	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2186054	50.0	50.4	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	89	738657	50.0	51.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	158594	25.0	17.3	
11 Chloromethane	50	1.867	1.867	0.000	99	214652	25.0	23.0	
12 Vinyl chloride	62	1.967	1.960	0.007	98	263798	25.0	27.8	
14 Bromomethane	94	2.239	2.239	0.000	92	113724	25.0	22.4	
15 Chloroethane	64	2.339	2.332	0.007	98	166295	25.0	26.1	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	96	376410	25.0	23.7	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	255326	25.0	20.8	
19 Ethyl ether	59	2.747	2.747	0.000	89	194389	25.0	27.5	
21 Acrolein	56	2.854	2.854	0.000	99	280948	246.9	246.5	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	139700	25.0	24.2	
23 1,1-Dichloroethene	96	2.940	2.933	0.007	97	213290	25.0	26.5	
24 Acetone	43	2.954	2.954	0.000	99	227536	100.0	96.2	
26 Iodomethane	142	3.061	3.054	0.007	97	226196	25.0	21.1	
27 Carbon disulfide	76	3.119	3.119	-0.001	98	724827	25.0	27.8	
29 Methyl acetate	43	3.176	3.176	0.000	97	297188	50.0	56.2	
30 3-Chloro-1-propene	41	3.204	3.197	0.007	93	323472	25.0	30.3	
31 Methylene Chloride	84	3.297	3.297	0.000	90	270220	25.0	26.2	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	187474	250.0	230.6	
33 Acrylonitrile	53	3.455	3.455	0.000	99	857552	250.0	285.7	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	650214	25.0	25.7	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	249713	25.0	28.0	
37 Hexane	57	3.683	3.683	0.000	87	249143	25.0	21.4	
39 Vinyl acetate	43	3.783	3.784	-0.001	97	848895	50.0	60.0	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	446863	25.0	27.4	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	371033	100.0	107.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	81	288949	25.0	27.0	
48 2,2-Dichloropropane	77	4.227	4.220	0.007	85	329063	25.0	26.3	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	361373	600.0	592.8	
52 Chlorobromomethane	128	4.391	4.384	0.007	96	133511	25.0	27.1	
53 Tetrahydrofuran	42	4.398	4.398	0.000	88	128498	50.0	55.1	
54 Chloroform	83	4.441	4.441	0.000	92	434512	25.0	26.2	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	98	341618	25.0	25.4	
56 Cyclohexane	56	4.649	4.649	0.000	87	350771	25.0	25.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	99	337533	25.0	25.6	
60 Isobutyl alcohol	41	4.706	4.706	0.000	92	146780	625.0	568.3	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	279186	25.0	25.7	
62 Benzene	78	4.849	4.849	0.000	95	1081075	25.0	27.8	
63 1,2-Dichloroethane	62	4.877	4.878	-0.001	97	293772	25.0	23.8	
65 n-Heptane	43	5.035	5.035	0.000	86	192325	25.0	23.8	
67 Trichloroethene	95	5.335	5.335	0.000	98	257149	25.0	26.4	
68 2-Pentanone	43	5.435	5.435	0.000	98	450628	80.0	81.9	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	237662	25.0	23.4	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	96	271459	25.0	27.4	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	66461	500.0	530.7	
73 Dibromomethane	93	5.607	5.607	0.000	96	151778	25.0	25.7	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	323164	25.0	25.9	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	128086	25.0	40.2	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	416774	25.0	26.9	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	726962	100.0	109.8	
79 Toluene	91	6.365	6.365	0.000	98	1135544	25.0	27.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	354647	25.0	27.6	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	304379	25.0	27.4	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	217729	25.0	26.0	
83 Tetrachloroethene	164	6.808	6.801	0.007	97	192361	25.0	26.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	90	400390	25.0	25.7	
85 2-Hexanone	43	6.880	6.872	0.008	94	505921	100.0	103.8	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	226327	25.0	24.1	
88 Ethylene Dibromide	107	7.173	7.173	0.000	97	225445	25.0	25.3	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	271793	20.0	19.7	
90 Chlorobenzene	112	7.602	7.602	0.000	96	724145	25.0	25.5	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	226675	25.0	24.9	
92 Ethylbenzene	106	7.673	7.673	0.000	98	400272	25.0	25.6	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	493377	25.0	26.4	
94 o-Xylene	106	8.152	8.152	0.000	95	485237	25.0	25.6	
95 Styrene	104	8.167	8.167	0.000	95	809571	25.0	26.8	
96 Bromoform	173	8.352	8.353	-0.001	97	141279	25.0	24.8	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1164701	25.0	25.7	
99 Cyclohexanone	55	8.588	8.589	0.000	89	281413	750.0	653.2	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	278622	25.0	24.4	
101 Bromobenzene	156	8.810	8.810	0.000	94	289623	25.0	25.4	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.810	0.007	75	66139	25.0	22.4	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	82	82738	25.0	23.9	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	336648	25.0	26.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	288880	25.0	25.9	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	978126	25.0	25.6	
107 4-Chlorotoluene	126	9.103	9.103	0.000	96	298307	25.0	25.7	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	812985	25.0	25.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1015688	25.0	25.7	
111 sec-Butylbenzene	134	9.589	9.590	-0.001	94	238430	25.0	24.9	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	535133	25.0	25.4	
113 4-Isopropyltoluene	119	9.732	9.733	-0.001	97	1027523	25.0	26.1	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	544921	25.0	24.3	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	895815	25.0	26.2	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	99	494760	25.0	24.4	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	89	52062	25.0	22.8	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	93	272981	25.0	26.7	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	103070	25.0	27.7	
122 Naphthalene	128	12.035	12.035	0.000	97	712247	25.0	27.3	
123 1,2,3-Trichlorobenzene	180	12.257	12.257	0.000	96	206279	25.0	26.8	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	55.0	
S 139 Xylenes, Total (URS)	1				0		50.0	51.9	
S 136 1,3-Dichloropropene, Total	1				0		50.0	54.5	
S 138 Xylenes, Total	106				0		50.0	51.9	
S 140 Trihalomethanes, Total	1				0		100.0	101.0	
S 141 1,2-Dichloroethene, Total	1				0		50.0	55.0	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas B_00133	Amount Added:	5.00	Units: uL	
MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

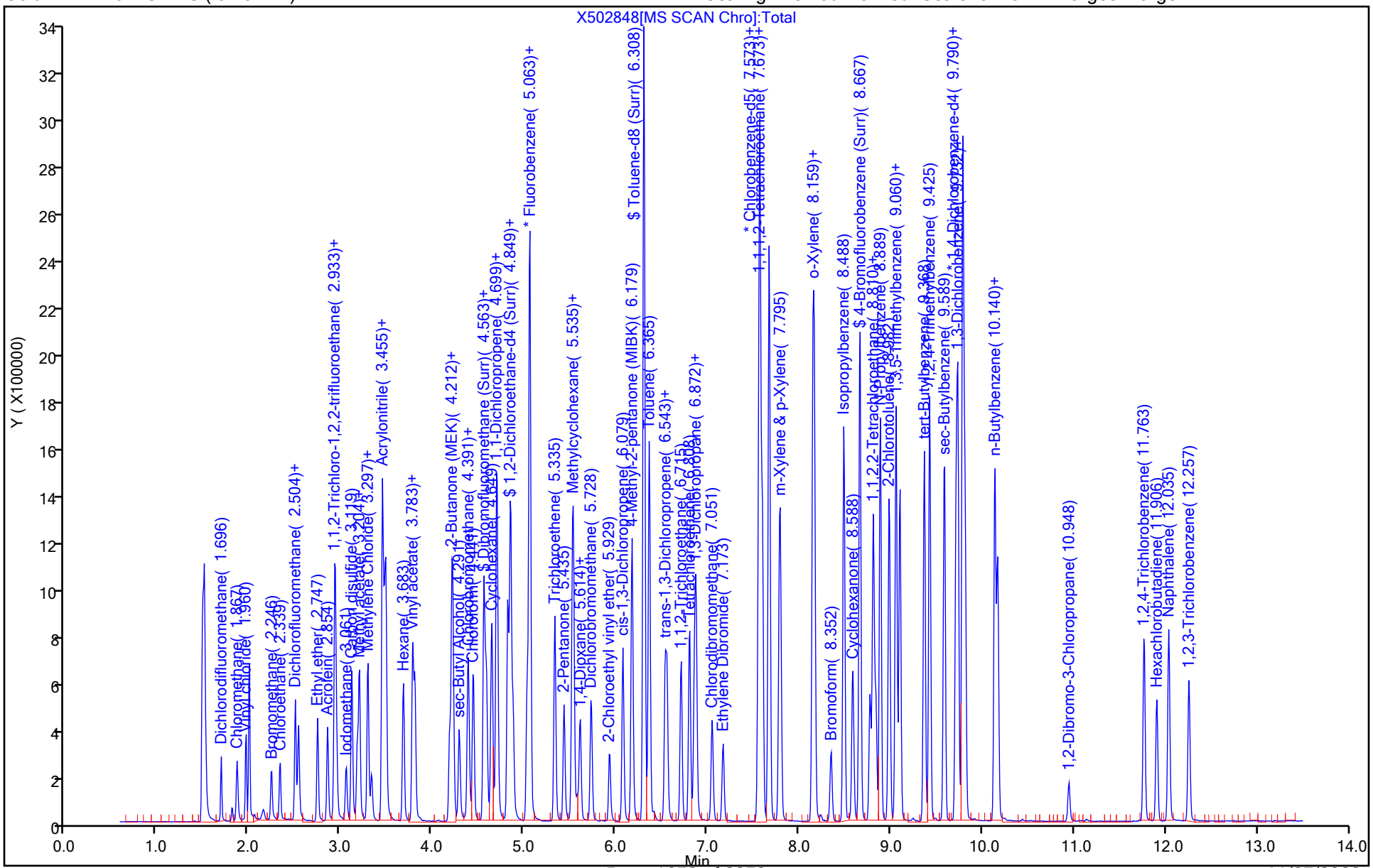
Report Date: 26-Apr-2023 11:04:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502848.D

Injection Date:	26-Apr-2023 10:41:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502848.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 10:41:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 11:02:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.7	103.44
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.8	95.66
$ 6 Toluene-d8 (Surr)	50.0	50.4	100.82
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.8	103.59

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610121/5

Matrix: Water | Lab File ID: X502849.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 11:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	265		30	9.6
126-99-8	Chloroprene	27.1		3.0	1.2
126-98-7	Methacrylonitrile	260		15	5.3
80-62-6	Methyl methacrylate	47.7		4.0	1.1
107-12-0	Propionitrile	278		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	99		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502849.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 11:02:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:48:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 11:49:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2049501	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	510941	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	790900	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	509128	50.0	51.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	506114	50.0	48.9	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	93	2164429	50.0	49.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	88	729576	50.0	51.6	
18 Ethanol	45	2.647	2.654	-0.007	98	165046	1500.0	1521.4	
25 Isopropyl alcohol	45	3.033	3.033	0.000	99	127939	250.0	201.3	
28 Acetonitrile	41	3.161	3.161	0.000	98	303285	250.0	264.9	
41 Isopropyl ether	87	3.805	3.805	0.000	95	216537	25.0	28.3	
42 2-Chloro-1,3-butadiene	53	3.862	3.855	0.007	87	363861	25.0	27.1	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	722750	25.0	27.3	
46 Ethyl acetate	43	4.198	4.198	0.000	98	387370	50.0	48.9	
49 Propionitrile	54	4.234	4.234	0.000	100	353878	250.0	277.9	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	1297399	250.0	260.2	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	93	694250	25.0	27.1	
66 n-Butanol	56	5.199	5.199	0.000	85	141522	625.0	563.4	
71 Methyl methacrylate	100	5.542	5.543	0.000	89	129079	50.0	47.7	
75 2-Nitropropane	41	5.900	5.893	0.007	95	74860	50.0	26.1	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	141434	50.0	45.4	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	1028034	25.0	24.0	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	324412	25.0	24.3	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

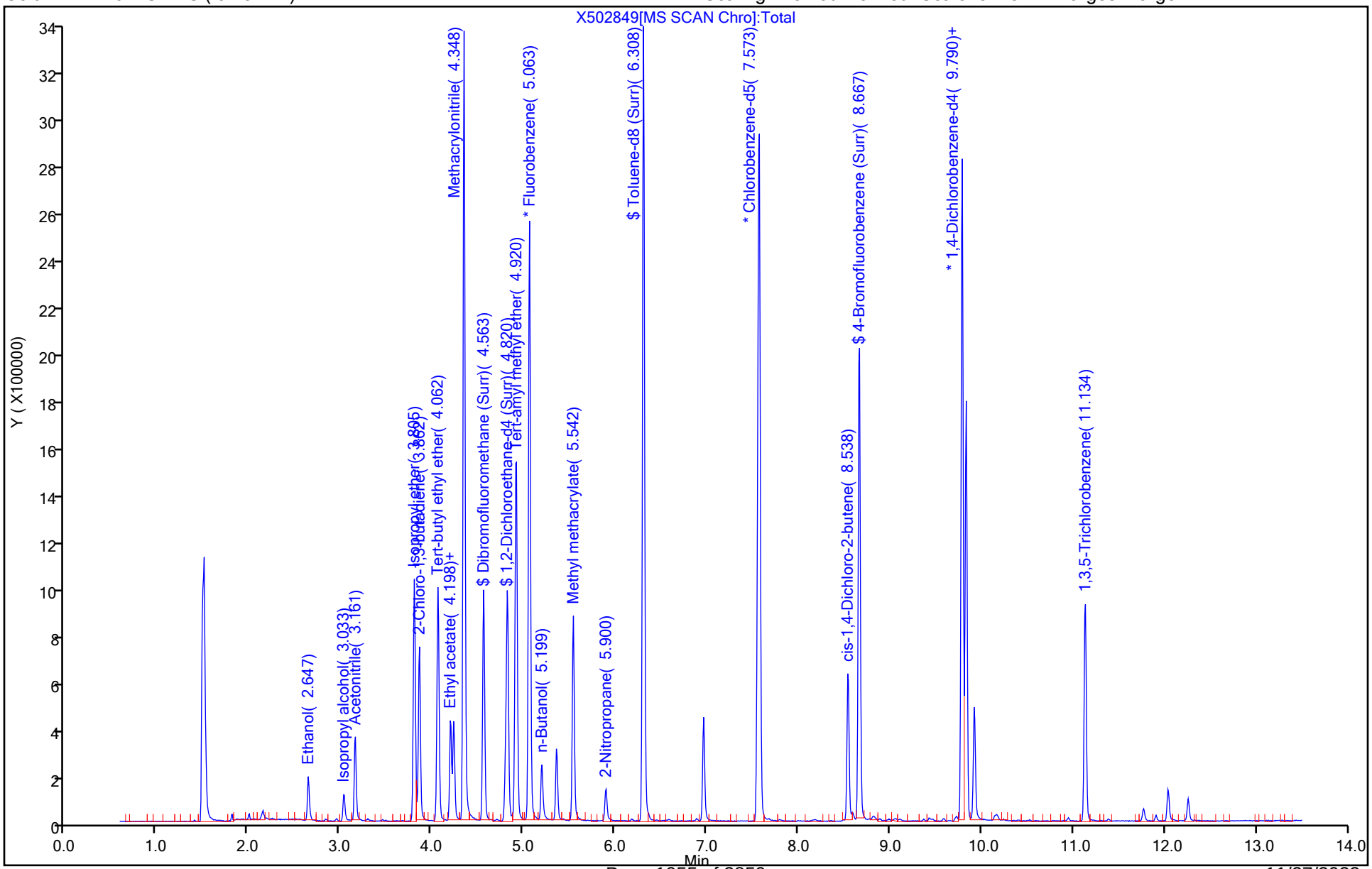
Report Date: 26-Apr-2023 11:49:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502849.D

Injection Date:	26-Apr-2023 11:02:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502849.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 11:02:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:48:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 11:49:02

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.6	103.29
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.9	97.76
$ 6 Toluene-d8 (Surr)	50.0	49.7	99.46
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.6	103.24

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610123/4

Matrix: Water | Lab File ID: P01129.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 09:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	46.9		1.0	0.58
71-55-6	1,1,1-Trichloroethane	47.2		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	46.2		1.0	0.21
79-00-5	1,1,2-Trichloroethane	51.5		1.0	0.27
75-34-3	1,1-Dichloroethane	48.7		1.0	0.22
75-35-4	1,1-Dichloroethene	47.0		1.0	0.23
563-58-6	1,1-Dichloropropene	48.6		1.0	0.42
96-18-4	1,2,3-Trichloropropane	47.6		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	49.4		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	45.4		5.0	1.8
106-93-4	1,2-Dibromoethane	47.6		1.0	0.40
95-50-1	1,2-Dichlorobenzene	47.8		1.0	0.37
107-06-2	1,2-Dichloroethane	48.6		1.0	0.54
78-87-5	1,2-Dichloropropane	48.2		1.0	0.52
541-73-1	1,3-Dichlorobenzene	47.1		1.0	0.33
142-28-9	1,3-Dichloropropane	47.2		1.0	0.38
106-46-7	1,4-Dichlorobenzene	46.7		1.0	0.39
594-20-7	2,2-Dichloropropane	45.8		1.0	0.38
78-93-3	2-Butanone (MEK)	181		15	6.0
591-78-6	2-Hexanone	172		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	186		5.0	0.98
67-64-1	Acetone	186		15	6.6
107-02-8	Acrolein	385		20	4.9
107-13-1	Acrylonitrile	472		20	4.5
107-05-1	Allyl chloride	40.6		2.0	0.17
71-43-2	Benzene	48.7		1.0	0.31
75-25-2	Bromoform	49.0		2.0	1.2
74-83-9	Bromomethane	55.6		5.0	2.4
75-15-0	Carbon disulfide	43.4		2.0	0.63
56-23-5	Carbon tetrachloride	46.6		1.0	0.57
108-90-7	Chlorobenzene	47.8		1.0	0.42
74-97-5	Chlorobromomethane	49.2		1.0	0.40
124-48-1	Chlorodibromomethane	48.1		2.0	0.62
75-00-3	Chloroethane	45.8		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610123/4

Matrix: Water | Lab File ID: P01129.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 09:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	48.4		1.0	0.36
74-87-3	Chloromethane	42.5		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	49.9		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	44.2		2.0	0.63
74-95-3	Dibromomethane	50.2		1.0	0.34
75-27-4	Dichlorobromomethane	48.7		1.0	0.39
75-71-8	Dichlorodifluoromethane	39.6		3.0	0.96
97-63-2	Ethyl methacrylate	44.0		3.0	0.86
100-41-4	Ethylbenzene	47.1		1.0	0.30
74-88-4	Iodomethane	33.8		5.0	2.6
78-83-1	Isobutyl alcohol	1090		110	37
75-09-2	Methylene Chloride	48.5		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	46.7		2.0	0.36
95-47-6	o-Xylene	47.4		1.0	0.33
100-42-5	Styrene	48.1		1.0	0.36
127-18-4	Tetrachloroethene	47.8		1.0	0.40
108-88-3	Toluene	50.2		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	47.8		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	47.6		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	39.9		3.0	1.4
79-01-6	Trichloroethene	44.5		1.0	0.30
75-69-4	Trichlorofluoromethane	46.8		2.0	0.57
108-05-4	Vinyl acetate	93.8		3.0	0.94
75-01-4	Vinyl chloride	44.5		2.0	0.51
1330-20-7	Xylenes, Total	94.1		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		70-127
460-00-4	4-Bromofluorobenzene (Surr)	95		78-120
1868-53-7	Dibromofluoromethane (Surr)	109		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01129.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 09:06:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:50 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1650393	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	88	415006	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	95	635435	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	442597	50.0	54.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.523	4.524	-0.001	0	502465	50.0	52.4	
$ 6 Toluene-d8 (Surr)	98	6.011	6.012	-0.001	93	1788214	50.0	50.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	656194	50.0	47.4	
10 Dichlorodifluoromethane	85	1.474	1.474	0.000	99	274230	50.0	39.6	
11 Chloromethane	50	1.664	1.664	0.000	99	321994	50.0	42.5	
12 Vinyl chloride	62	1.727	1.727	0.000	98	388357	50.0	44.5	
14 Bromomethane	94	1.980	1.980	0.000	91	220718	50.0	55.6	
15 Chloroethane	64	2.075	2.075	0.000	100	258224	50.0	45.8	
16 Dichlorofluoromethane	67	2.244	2.244	0.000	97	556078	50.0	43.9	
17 Trichlorofluoromethane	101	2.276	2.276	0.000	99	472228	50.0	46.8	
19 Ethyl ether	59	2.476	2.476	0.000	88	277364	50.0	45.8	
21 Acrolein	56	2.582	2.582	0.000	100	640545	493.8	385.1	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.666	2.666	0.000	73	207715	50.0	49.3	
22 1,1-Dichloroethene	96	2.666	2.666	0.000	98	282307	50.0	47.0	
24 Acetone	43	2.677	2.677	0.000	100	807029	200.0	186.4	
26 Iodomethane	142	2.782	2.782	0.000	99	288964	50.0	33.8	
27 Carbon disulfide	76	2.835	2.835	0.000	99	868375	50.0	43.4	
29 Methyl acetate	43	2.898	2.898	0.000	97	826302	100.0	89.8	
30 3-Chloro-1-propene	41	2.919	2.919	0.000	87	380992	50.0	40.6	
31 Methylene Chloride	84	3.014	3.014	0.000	87	349301	50.0	48.5	
32 2-Methyl-2-propanol	59	3.067	3.067	0.000	100	879223	500.0	421.9	
33 Acrylonitrile	53	3.173	3.173	0.000	98	2380059	500.0	472.1	
34 Methyl tert-butyl ether	73	3.194	3.194	0.000	93	1095765	50.0	49.5	
35 trans-1,2-Dichloroethene	96	3.204	3.215	-0.011	99	328353	50.0	47.8	
36 Hexane	57	3.394	3.394	0.000	88	387368	50.0	40.9	
38 Vinyl acetate	43	3.500	3.500	0.000	97	1430123	100.0	93.8	
39 1,1-Dichloroethane	63	3.521	3.521	0.000	96	595327	50.0	48.7	
44 2-Butanone (MEK)	43	3.901	3.901	0.000	98	1250810	200.0	181.0	
47 cis-1,2-Dichloroethene	96	3.922	3.922	0.000	82	384697	50.0	49.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 2,2-Dichloropropane	77	3.933	3.932	0.001	89	487506	50.0	45.8	
50 sec-Butyl Alcohol	45	4.017	4.017	0.000	98	1566374	1200.0	1021.4	
53 Chlorobromomethane	128	4.101	4.101	0.000	96	167652	50.0	49.2	
52 Tetrahydrofuran	42	4.101	4.101	0.000	83	396740	100.0	85.8	
54 Chloroform	83	4.154	4.154	0.000	93	601410	50.0	48.4	
55 1,1,1-Trichloroethane	97	4.291	4.291	0.000	98	493569	50.0	47.2	
56 Cyclohexane	56	4.344	4.355	-0.011	87	513433	50.0	42.2	
59 Carbon tetrachloride	117	4.407	4.407	0.000	96	394300	50.0	46.6	
57 1,1-Dichloropropene	75	4.407	4.407	0.000	89	474378	50.0	48.6	
58 Isobutyl alcohol	41	4.429	4.428	0.000	93	649078	1250.0	1092.8	
60 Benzene	78	4.555	4.555	0.000	95	1405647	50.0	48.7	
61 1,2-Dichloroethane	62	4.587	4.587	0.000	98	475017	50.0	48.6	
66 n-Heptane	43	4.745	4.745	0.000	89	319270	50.0	41.9	
67 Trichloroethene	95	5.041	5.040	0.001	99	348099	50.0	44.5	
68 2-Pentanone	43	5.146	5.146	0.000	97	1528441	160.0	143.5	
69 Methylcyclohexane	55	5.231	5.230	0.001	91	387023	50.0	43.4	
70 1,2-Dichloropropane	63	5.241	5.241	0.000	96	361193	50.0	48.2	
72 1,4-Dioxane	88	5.294	5.294	0.000	91	234641	1000.0	1003.6	
73 Dibromomethane	93	5.315	5.315	0.000	94	231017	50.0	50.2	
74 Dichlorobromomethane	83	5.442	5.442	0.000	99	454598	50.0	48.7	
76 2-Chloroethyl vinyl ether	63	5.642	5.642	0.000	91	284660	50.0	48.5	
77 cis-1,3-Dichloropropene	75	5.779	5.790	-0.011	97	564132	50.0	44.2	
78 4-Methyl-2-pentanone (MIBK)	43	5.885	5.885	0.000	94	2125167	200.0	186.1	
79 Toluene	91	6.064	6.064	0.000	98	1540482	50.0	50.2	
80 trans-1,3-Dichloropropene	75	6.244	6.244	0.000	91	544455	50.0	47.6	
81 Ethyl methacrylate	69	6.275	6.275	0.000	85	562170	50.0	44.0	
82 1,1,2-Trichloroethane	97	6.423	6.423	0.000	90	340375	50.0	51.5	
83 Tetrachloroethene	164	6.507	6.507	0.000	94	253590	50.0	47.8	
84 1,3-Dichloropropane	76	6.560	6.560	0.000	96	587473	50.0	47.2	
85 2-Hexanone	43	6.581	6.592	-0.011	95	1727279	200.0	171.6	
86 Chlorodibromomethane	129	6.750	6.761	-0.011	90	336007	50.0	48.1	
88 Ethylene Dibromide	107	6.866	6.866	0.000	99	360150	50.0	47.6	
89 1-Chlorohexane	91	7.267	7.267	0.000	96	373907	40.0	35.4	
90 Chlorobenzene	112	7.299	7.299	0.000	95	972774	50.0	47.8	
91 1,1,1,2-Tetrachloroethane	131	7.373	7.373	0.000	94	319663	50.0	46.9	
92 Ethylbenzene	106	7.373	7.383	-0.010	99	531576	50.0	47.1	
93 m-Xylene & p-Xylene	106	7.499	7.499	0.000	0	643148	50.0	46.7	
94 o-Xylene	106	7.848	7.858	-0.010	97	637074	50.0	47.4	
95 Styrene	104	7.869	7.869	0.000	94	1081841	50.0	48.1	
96 Bromoform	173	8.048	8.048	0.000	94	223186	50.0	49.0	
97 Isopropylbenzene	105	8.196	8.196	0.000	96	1571181	50.0	44.6	
99 Cyclohexanone	55	8.280	8.280	0.000	90	1437584	1500.0	1474.9	
100 1,1,2,2-Tetrachloroethane	83	8.481	8.481	0.000	94	571066	50.0	46.2	
101 Bromobenzene	156	8.502	8.502	0.000	96	385613	50.0	47.3	
102 trans-1,4-Dichloro-2-butene	53	8.512	8.523	-0.011	90	155514	50.0	39.9	
103 1,2,3-Trichloropropane	110	8.544	8.544	0.000	81	181184	50.0	47.6	
104 N-Propylbenzene	120	8.586	8.597	-0.011	99	427257	50.0	45.1	
105 2-Chlorotoluene	126	8.681	8.681	0.000	96	371494	50.0	45.6	
106 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	93	1307553	50.0	45.4	
107 4-Chlorotoluene	126	8.797	8.797	0.000	98	387868	50.0	45.5	
108 tert-Butylbenzene	119	9.072	9.072	0.000	93	1059072	50.0	45.5	
109 1,2,4-Trimethylbenzene	105	9.125	9.135	-0.010	98	1335785	50.0	45.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 sec-Butylbenzene	134	9.283	9.293	-0.010	95	307837	50.0	45.9	
111 1,3-Dichlorobenzene	146	9.409	9.409	0.000	97	697305	50.0	47.1	
112 4-Isopropyltoluene	119	9.441	9.441	0.000	97	1301706	50.0	46.0	
113 1,4-Dichlorobenzene	146	9.504	9.515	-0.011	95	713166	50.0	46.7	
115 n-Butylbenzene	91	9.842	9.842	0.000	98	1178287	50.0	45.6	
116 1,2-Dichlorobenzene	146	9.863	9.863	0.000	97	667726	50.0	47.8	
117 1,2-Dibromo-3-Chloropropane	157	10.634	10.644	-0.010	82	143521	50.0	45.4	
119 1,2,4-Trichlorobenzene	180	11.457	11.457	0.000	94	338658	50.0	49.4	
120 Hexachlorobutadiene	225	11.604	11.604	0.000	95	118220	50.0	45.9	
121 Naphthalene	128	11.721	11.720	0.001	97	1260566	50.0	41.2	
122 1,2,3-Trichlorobenzene	180	11.942	11.942	0.000	95	271170	50.0	43.6	
S 139 1,2-Dichloroethene, Total (URS)	96				0		100.0	97.7	
S 144 1,2-Dichloroethene, Total	1				0		100.0	97.7	
S 145 1,3-Dichloropropene, Total	1				0		100.0	91.9	
S 143 Xylenes, Total (URS)	1				0		100.0	94.1	
S 140 Trihalomethanes, Total	1				0		200.0	194.2	
S 142 Xylenes, Total	106				0		100.0	94.1	

Reagents:

MV-MegaMain B_00083	Amount Added:	25.00	Units: uL	
MV-Gas B_00133	Amount Added:	10.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

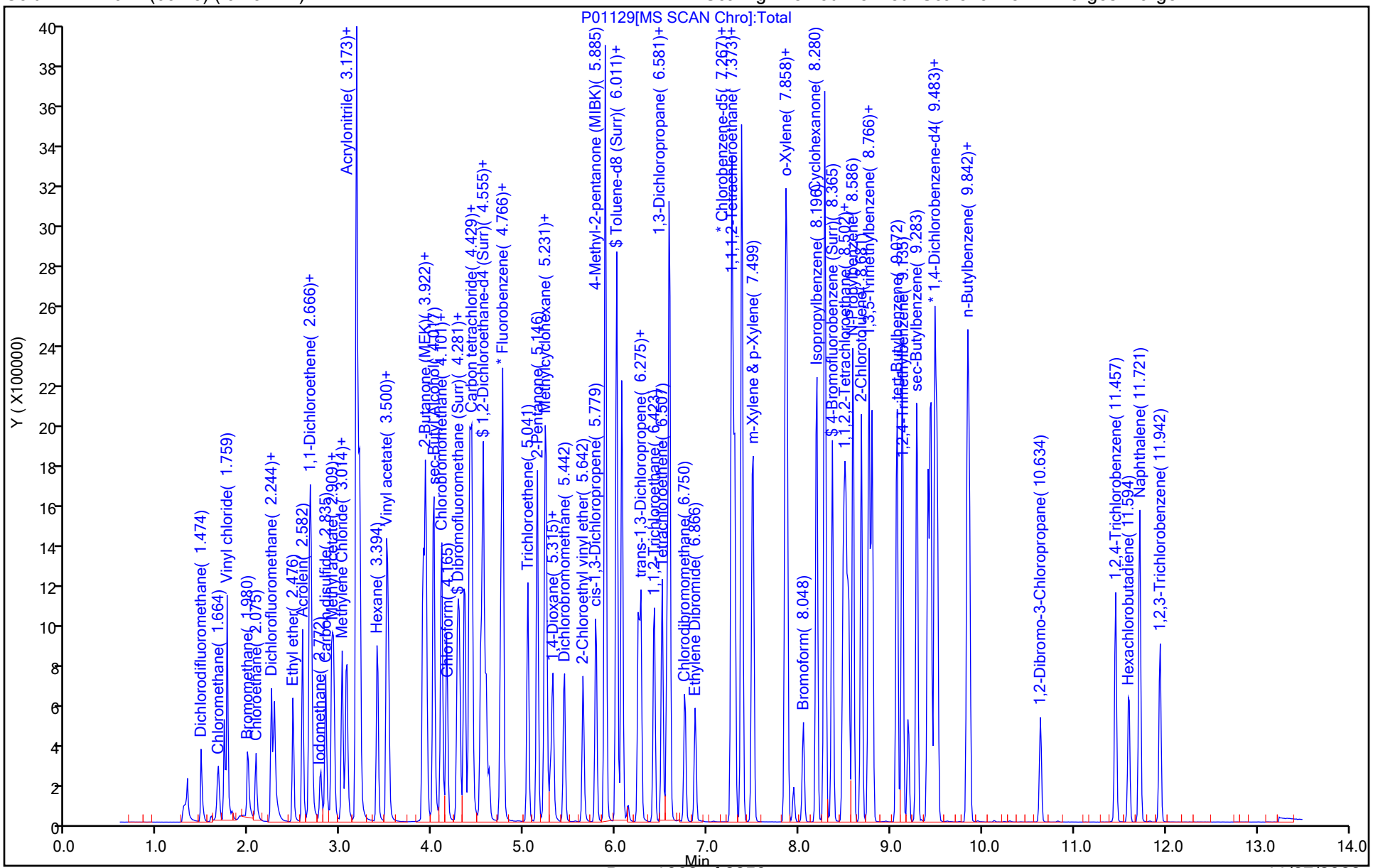
Report Date: 27-Apr-2023 12:42:54 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01129.D

Injection Date:	26-Apr-2023 09:06:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01129.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 09:06:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:50 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	54.3	108.68
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	52.4	104.79
$ 6 Toluene-d8 (Surr)	50.0	50.3	100.67
$ 7 4-Bromofluorobenzene (Surr)	50.0	47.4	94.80

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610123/5

Matrix: Water | Lab File ID: P01130.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 09:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	225		30	9.6
126-99-8	Chloroprene	21.7		3.0	1.2
126-98-7	Methacrylonitrile	232		15	5.3
80-62-6	Methyl methacrylate	46.8		4.0	1.1
107-12-0	Propionitrile	224		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		70-127
460-00-4	4-Bromofluorobenzene (Surr)	96		78-120
1868-53-7	Dibromofluoromethane (Surr)	108		77-120
2037-26-5	Toluene-d8 (Surr)	103		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01130.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 09:28:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:50 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	4.766	4.766	0.000	99	1621422	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.267	7.267	0.000	94	398421	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.483	9.483	0.000	96	588919	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.270	4.270	0.000	92	432461	50.0	54.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.524	4.524	0.000	0	496203	50.0	52.7	
$ 6 Toluene-d8 (Surr)	98	6.012	6.012	0.000	93	1751460	50.0	51.4	
$ 7 4-Bromofluorobenzene (Surr)	95	8.365	8.365	0.000	85	612831	50.0	47.8	
18 Ethanol	45	2.392	2.392	0.000	99	298143	1500.0	1239.3	
25 Isopropyl alcohol	45	2.772	2.772	0.000	98	262313	250.0	200.5	
28 Acetonitrile	41	2.877	2.877	0.000	99	472019	250.0	225.2	
40 Isopropyl ether	87	3.521	3.521	0.000	92	153124	25.0	23.5	
41 2-Chloro-1,3-butadiene	53	3.574	3.574	0.000	90	247445	25.0	21.7	
43 Tert-butyl ethyl ether	59	3.774	3.774	0.000	97	513570	25.0	22.0	
46 Ethyl acetate	43	3.912	3.912	0.000	98	508641	50.0	44.5	
49 Propionitrile	54	3.943	3.943	0.000	99	566943	250.0	223.8	
51 Methacrylonitrile	41	4.059	4.059	0.000	88	1513351	250.0	232.2	
62 Tert-amyl methyl ether	73	4.629	4.629	0.000	91	534117	25.0	23.2	
63 n-Butanol	56	4.629	4.629	0.000	47	156638	625.0	552.9	
71 Methyl methacrylate	100	5.252	5.252	0.000	85	132590	50.0	46.8	
75 2-Nitropropane	41	5.600	5.600	0.000	98	105300	50.0	28.9	
98 cis-1,4-Dichloro-2-butene	53	8.249	8.238	0.011	0	137368	50.0	34.8	
114 1,2,3-Trimethylbenzene	105	9.526	9.526	0.000	99	649267	25.0	23.0	
118 1,3,5-Trichlorobenzene	180	10.824	10.824	0.000	97	186531	25.0	22.6	

Reagents:

MV-Supp A_00080 Amount Added: 25.00 Units: uL
mv-IS_SS_00057 Amount Added: 5.00 Units: uL Run Reagent

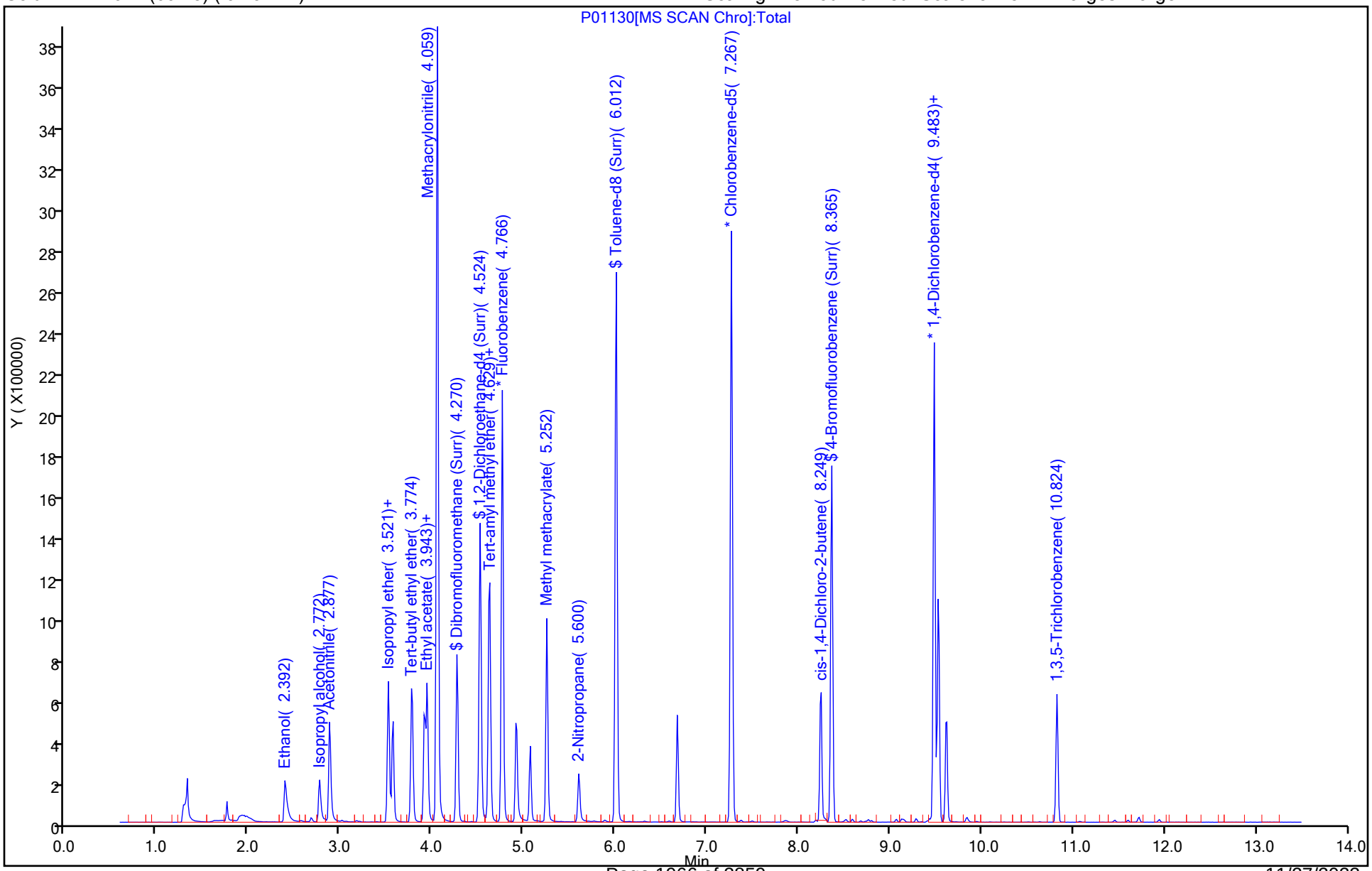
Report Date: 27-Apr-2023 12:42:56 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01130.D

Injection Date:	26-Apr-2023 09:28:30	Instrument ID:	VMS_P	Operator ID:	COULTERD
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\P01130.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 09:28:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: COULTERD Instrument ID: VMS_P

Method: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:42:50 Calib Date: 12-Apr-2023 14:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b\P00531.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1641

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	54.0	108.09
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	52.7	105.34
$ 6 Toluene-d8 (Surr)	50.0	51.4	102.71
$ 7 4-Bromofluorobenzene (Surr)	50.0	47.8	95.53

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610347/4

Matrix: Water | Lab File ID: X502912.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	22.7		1.0	0.58
71-55-6	1,1,1-Trichloroethane	22.8		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	25.1		1.0	0.21
79-00-5	1,1,2-Trichloroethane	25.0		1.0	0.27
75-34-3	1,1-Dichloroethane	24.4		1.0	0.22
75-35-4	1,1-Dichloroethene	24.2		1.0	0.23
563-58-6	1,1-Dichloropropene	23.1		1.0	0.42
96-18-4	1,2,3-Trichloropropane	22.5		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	24.7		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	21.8		5.0	1.8
106-93-4	1,2-Dibromoethane	23.3		1.0	0.40
95-50-1	1,2-Dichlorobenzene	22.9		1.0	0.37
107-06-2	1,2-Dichloroethane	21.4		1.0	0.54
78-87-5	1,2-Dichloropropane	24.8		1.0	0.52
541-73-1	1,3-Dichlorobenzene	22.9		1.0	0.33
142-28-9	1,3-Dichloropropane	23.9		1.0	0.38
106-46-7	1,4-Dichlorobenzene	22.0		1.0	0.39
594-20-7	2,2-Dichloropropane	22.5		1.0	0.38
78-93-3	2-Butanone (MEK)	113		15	6.0
591-78-6	2-Hexanone	108		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	114		5.0	0.98
67-64-1	Acetone	93.4		15	6.6
107-02-8	Acrolein	223		20	4.9
107-13-1	Acrylonitrile	281		20	4.5
107-05-1	Allyl chloride	28.5		2.0	0.17
71-43-2	Benzene	24.5		1.0	0.31
75-25-2	Bromoform	22.4		2.0	1.2
74-83-9	Bromomethane	21.0		5.0	2.4
75-15-0	Carbon disulfide	23.6		2.0	0.63
56-23-5	Carbon tetrachloride	22.2		1.0	0.57
108-90-7	Chlorobenzene	22.6		1.0	0.42
74-97-5	Chlorobromomethane	23.0		1.0	0.40
124-48-1	Chlorodibromomethane	21.7		2.0	0.62
75-00-3	Chloroethane	23.6		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610347/4

Matrix: Water | Lab File ID: X502912.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	22.9		1.0	0.36
74-87-3	Chloromethane	21.9		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	24.0		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	23.5		2.0	0.63
74-95-3	Dibromomethane	23.3		1.0	0.34
75-27-4	Dichlorobromomethane	22.7		1.0	0.39
75-71-8	Dichlorodifluoromethane	15.6		3.0	0.96
97-63-2	Ethyl methacrylate	25.8		3.0	0.86
100-41-4	Ethylbenzene	22.5		1.0	0.30
74-88-4	Iodomethane	16.5		5.0	2.6
78-83-1	Isobutyl alcohol	627		110	37
75-09-2	Methylene Chloride	23.0		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	23.0		2.0	0.36
95-47-6	o-Xylene	22.2		1.0	0.33
100-42-5	Styrene	23.5		1.0	0.36
127-18-4	Tetrachloroethene	22.5		1.0	0.40
108-88-3	Toluene	24.2		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	24.4		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	24.5		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	23.0		3.0	1.4
79-01-6	Trichloroethene	22.9		1.0	0.30
75-69-4	Trichlorofluoromethane	18.9		2.0	0.57
108-05-4	Vinyl acetate	55.6		3.0	0.94
75-01-4	Vinyl chloride	23.6		2.0	0.51
1330-20-7	Xylenes, Total	45.2		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502912.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 11:57:30 ALS Bottle#: 6 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:15:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2083610	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	508261	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	794649	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	513347	50.0	51.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	509585	50.0	48.4	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	92	2191469	50.0	50.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	720765	50.0	50.8	
10 Dichlorodifluoromethane	85	1.695	1.695	0.000	97	142212	25.0	15.6	
11 Chloromethane	50	1.867	1.867	0.000	99	203500	25.0	21.9	
12 Vinyl chloride	62	1.967	1.960	0.007	98	222446	25.0	23.6	
14 Bromomethane	94	2.246	2.246	0.000	89	105844	25.0	21.0	
15 Chloroethane	64	2.339	2.339	0.000	99	149112	25.0	23.6	
16 Dichlorofluoromethane	67	2.503	2.503	0.000	97	316238	25.0	20.0	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	230301	25.0	18.9	
19 Ethyl ether	59	2.747	2.747	0.000	88	176993	25.0	25.2	
21 Acrolein	56	2.854	2.854	0.000	99	252462	246.9	222.6	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.932	0.000	96	130035	25.0	22.6	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	97	193405	25.0	24.2	
24 Acetone	43	2.954	2.954	0.000	100	220241	100.0	93.4	
26 Iodomethane	142	3.061	3.054	0.007	96	172777	25.0	16.5	
27 Carbon disulfide	76	3.118	3.118	0.000	98	612987	25.0	23.6	
29 Methyl acetate	43	3.183	3.183	0.000	97	299125	50.0	56.9	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	94	302571	25.0	28.5	
31 Methylene Chloride	84	3.297	3.297	0.000	89	236358	25.0	23.0	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	196337	250.0	242.6	
33 Acrylonitrile	53	3.454	3.454	0.000	99	837761	250.0	280.5	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	92	611053	25.0	24.3	
35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	99	216838	25.0	24.4	
37 Hexane	57	3.683	3.683	0.000	88	254216	25.0	21.8	
39 Vinyl acetate	43	3.783	3.783	0.000	96	783385	50.0	55.6	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	394968	25.0	24.4	
45 2-Butanone (MEK)	43	4.191	4.184	0.007	99	386605	100.0	112.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	80	255647	25.0	24.0	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	280950	25.0	22.5	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	390601	600.0	643.1	
52 Chlorobromomethane	128	4.391	4.384	0.007	96	112693	25.0	23.0	
53 Tetrahydrofuran	42	4.398	4.398	0.000	87	131577	50.0	56.7	
54 Chloroform	83	4.448	4.441	0.007	92	377201	25.0	22.9	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	98	304063	25.0	22.8	
56 Cyclohexane	56	4.649	4.648	0.000	86	328058	25.0	23.8	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	302590	25.0	23.1	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	161547	625.0	627.4	
59 Carbon tetrachloride	117	4.706	4.706	0.000	93	239917	25.0	22.2	
62 Benzene	78	4.856	4.849	0.007	94	946732	25.0	24.5	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	96	262881	25.0	21.4	
65 n-Heptane	43	5.035	5.035	0.000	88	197205	25.0	24.5	
67 Trichloroethene	95	5.335	5.335	0.000	99	222595	25.0	22.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	473490	80.0	86.4	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	223126	25.0	22.1	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	98	244594	25.0	24.8	
72 1,4-Dioxane	88	5.578	5.578	0.000	95	61897	500.0	496.7	
73 Dibromomethane	93	5.614	5.614	0.000	94	137017	25.0	23.3	
74 Dichlorobromomethane	83	5.735	5.728	0.007	99	281477	25.0	22.7	
76 2-Chloroethyl vinyl ether	63	5.928	5.936	-0.008	90	100194	25.0	31.4	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	363626	25.0	23.5	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	93	752391	100.0	114.2	
79 Toluene	91	6.365	6.365	0.000	98	1011085	25.0	24.2	
80 trans-1,3-Dichloropropene	75	6.543	6.536	0.007	94	313647	25.0	24.5	
81 Ethyl methacrylate	69	6.558	6.558	0.000	86	286184	25.0	25.8	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	208039	25.0	25.0	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	165828	25.0	22.5	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	91	372843	25.0	23.9	
85 2-Hexanone	43	6.879	6.872	0.007	94	527464	100.0	108.4	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	204297	25.0	21.7	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	207027	25.0	23.3	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	246712	20.0	17.9	
90 Chlorobenzene	112	7.602	7.602	0.000	95	640914	25.0	22.6	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	206706	25.0	22.7	
92 Ethylbenzene	106	7.673	7.673	0.000	98	350085	25.0	22.5	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	430503	25.0	23.0	
94 o-Xylene	106	8.152	8.152	0.000	95	421016	25.0	22.2	
95 Styrene	104	8.166	8.166	0.000	95	707120	25.0	23.5	
96 Bromoform	173	8.345	8.345	0.000	95	127454	25.0	22.4	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1046015	25.0	23.2	
99 Cyclohexanone	55	8.588	8.588	0.000	88	347066	750.0	805.3	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	285556	25.0	25.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	249917	25.0	22.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.817	-0.007	76	67918	25.0	23.0	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	82	77558	25.0	22.5	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	293717	25.0	23.4	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	260349	25.0	23.4	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	871540	25.0	22.9	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	266769	25.0	23.1	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	725265	25.0	22.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	898677	25.0	22.8	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	216989	25.0	22.8	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	97	480139	25.0	22.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	903702	25.0	23.0	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	489977	25.0	22.0	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	803011	25.0	23.6	
117 1,2-Dichlorobenzene	146	10.168	10.168	0.000	97	462233	25.0	22.9	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	89	49461	25.0	21.8	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	93	250633	25.0	24.7	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	93162	25.0	25.1	
122 Naphthalene	128	12.035	12.035	0.000	97	640973	25.0	24.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	189121	25.0	24.6	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	48.4	
S 139 Xylenes, Total (URS)	1				0		50.0	45.3	
S 136 1,3-Dichloropropene, Total	1				0		50.0	48.0	
S 138 Xylenes, Total	106				0		50.0	45.3	
S 140 Trihalomethanes, Total	1				0		100.0	89.8	
S 141 1,2-Dichloroethene, Total	1				0		50.0	48.4	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas B_00133	Amount Added:	5.00	Units: uL	
MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

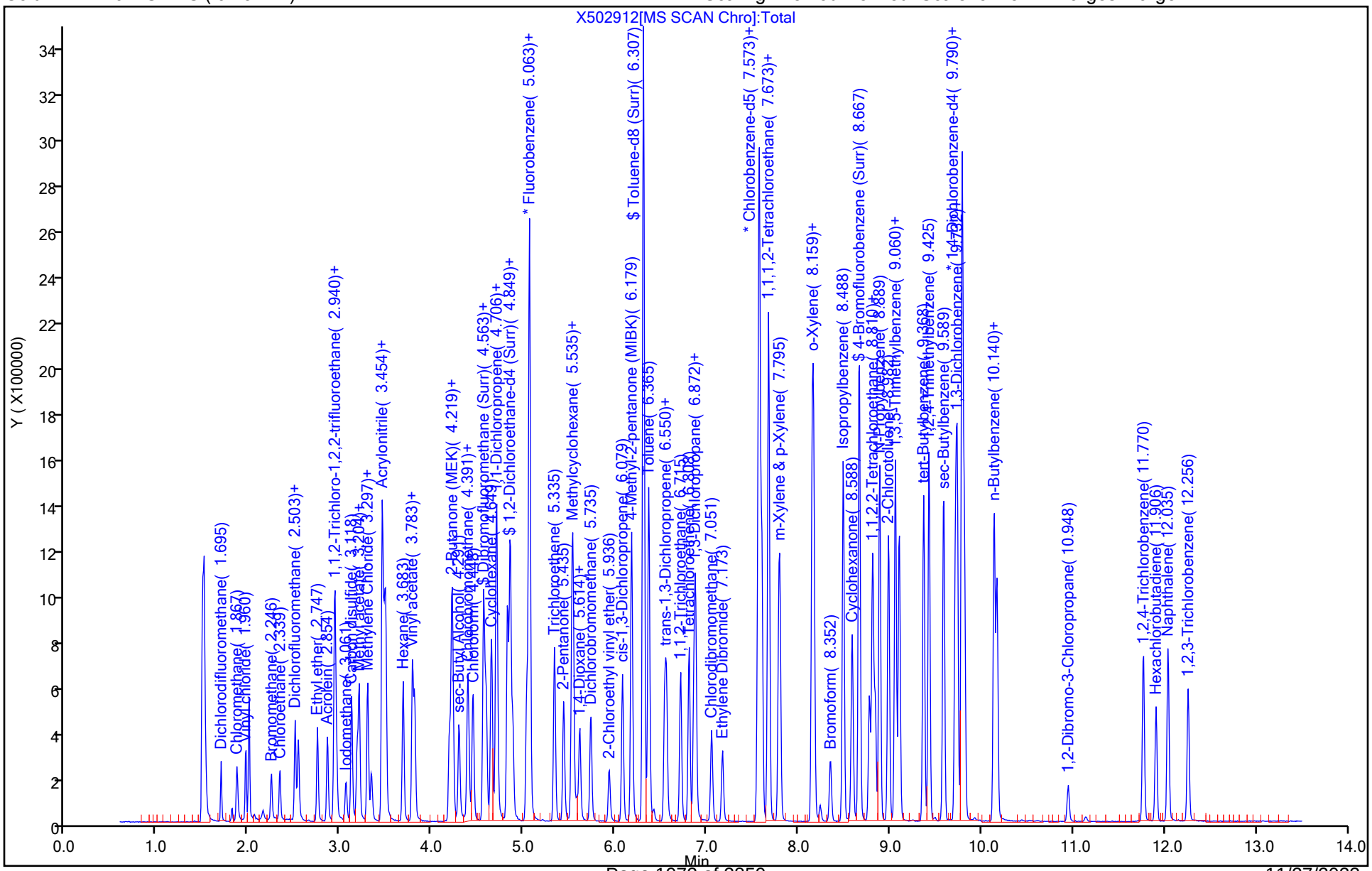
Report Date: 27-Apr-2023 12:40:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502912.D

Injection Date:	27-Apr-2023 11:57:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502912.D				
Lims ID:	LCSD				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	27-Apr-2023 11:57:30	ALS Bottle#:	6	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	LCSD M				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	27-Apr-2023 12:40:06	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1649				

First Level Reviewer: BX8N Date: 27-Apr-2023 12:15:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.2	102.44
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.4	96.82
$ 6 Toluene-d8 (Surr)	50.0	50.6	101.23
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.8	101.51

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610347/5

Matrix: Water | Lab File ID: X502913.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	280		30	9.6
126-99-8	Chloroprene	25.1		3.0	1.2
126-98-7	Methacrylonitrile	270		15	5.3
80-62-6	Methyl methacrylate	49.3		4.0	1.1
107-12-0	Propionitrile	290		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502913.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 12:18:30 ALS Bottle#: 7 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:39:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2066644	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	511317	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	795555	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	510098	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	501370	50.0	48.0	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	93	2179796	50.0	50.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	90	713411	50.0	50.2	
18 Ethanol	45	2.647	2.647	0.000	100	195768	1500.0	1789.6	
25 Isopropyl alcohol	45	3.040	3.040	0.000	99	137446	250.0	214.5	
28 Acetonitrile	41	3.161	3.161	0.000	99	322870	250.0	279.7	
41 Isopropyl ether	87	3.805	3.805	0.000	95	217052	25.0	28.1	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	339516	25.0	25.1	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	96	708557	25.0	26.5	
46 Ethyl acetate	43	4.198	4.198	0.000	98	414966	50.0	51.9	
49 Propionitrile	54	4.234	4.234	0.000	99	372660	250.0	290.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	1355834	250.0	269.7	
64 Tert-amyl methyl ether	73	4.920	4.920	0.000	92	685016	25.0	26.5	
66 n-Butanol	56	5.199	5.199	0.000	83	159225	625.0	628.6	
71 Methyl methacrylate	100	5.542	5.542	0.000	91	134529	50.0	49.3	
75 2-Nitropropane	41	5.900	5.900	0.000	98	75508	50.0	26.1	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	135980	50.0	43.4	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	988148	25.0	22.9	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	317098	25.0	23.6	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

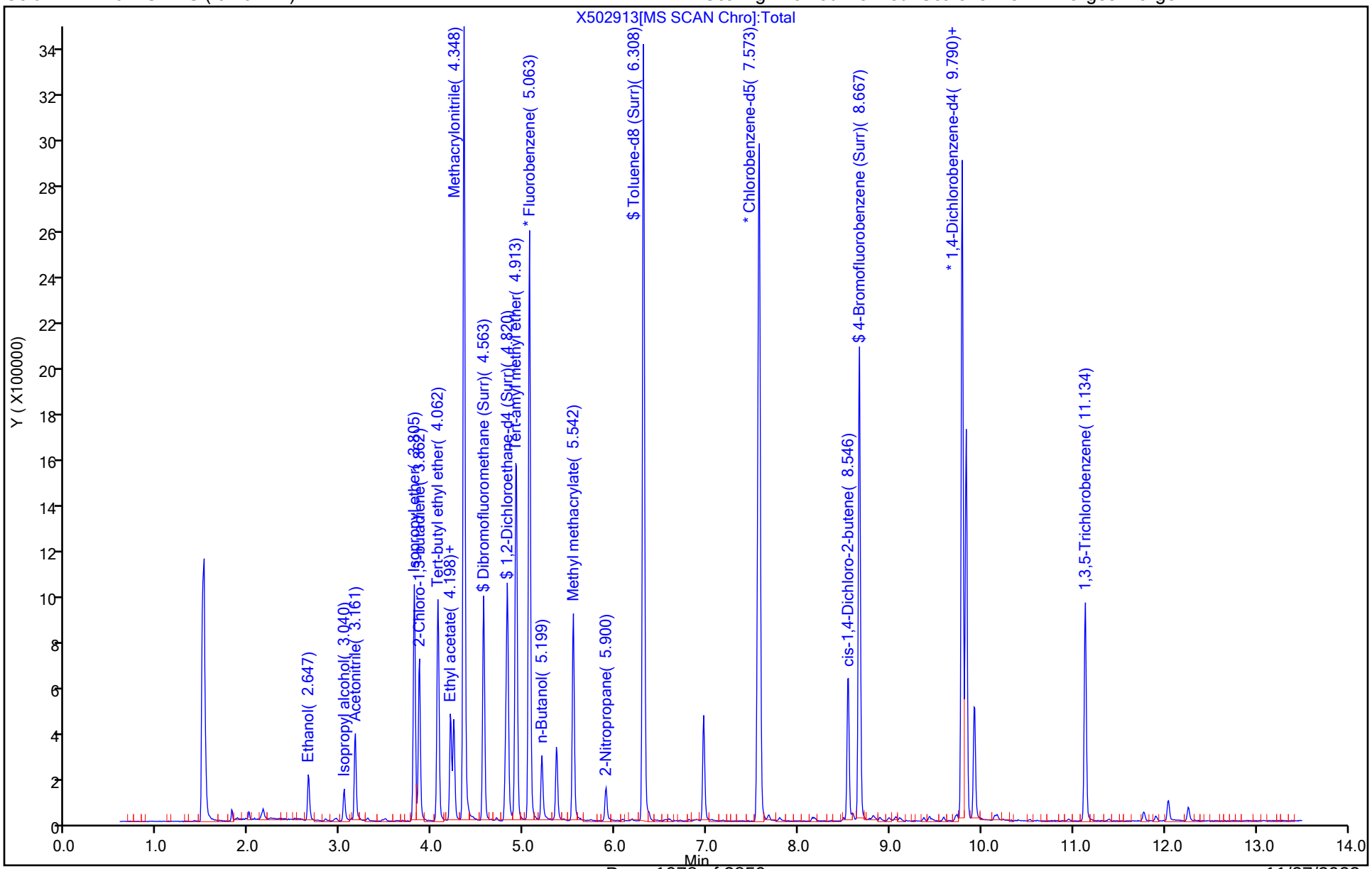
Report Date: 27-Apr-2023 12:40:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502913.D

Injection Date:	27-Apr-2023 12:18:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502913.D				
Lims ID:	LCSD				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	27-Apr-2023 12:18:30	ALS Bottle#:	7	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	LCSD S				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	27-Apr-2023 12:40:06	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1649				

First Level Reviewer: BX8N Date: 27-Apr-2023 12:39:54

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.63
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.0	96.04
$ 6 Toluene-d8 (Surr)	50.0	50.0	100.09
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.2	100.36

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610485/4

Matrix: Water | Lab File ID: X502941.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 22:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	49.5		1.0	0.58
71-55-6	1,1,1-Trichloroethane	51.9		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	45.3		1.0	0.21
79-00-5	1,1,2-Trichloroethane	51.5		1.0	0.27
75-34-3	1,1-Dichloroethane	55.5		1.0	0.22
75-35-4	1,1-Dichloroethene	53.2		1.0	0.23
563-58-6	1,1-Dichloropropene	54.9		1.0	0.42
96-18-4	1,2,3-Trichloropropane	42.9		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	47.7		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	38.4		5.0	1.8
106-93-4	1,2-Dibromoethane	47.5		1.0	0.40
95-50-1	1,2-Dichlorobenzene	46.8		1.0	0.37
107-06-2	1,2-Dichloroethane	46.3		1.0	0.54
78-87-5	1,2-Dichloropropane	54.7		1.0	0.52
541-73-1	1,3-Dichlorobenzene	49.6		1.0	0.33
142-28-9	1,3-Dichloropropane	50.3		1.0	0.38
106-46-7	1,4-Dichlorobenzene	46.4		1.0	0.39
594-20-7	2,2-Dichloropropane	54.3		1.0	0.38
78-93-3	2-Butanone (MEK)	195		15	6.0
591-78-6	2-Hexanone	188		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	207		5.0	0.98
67-64-1	Acetone	174		15	6.6
107-02-8	Acrolein	439		20	4.9
107-13-1	Acrylonitrile	531		20	4.5
107-05-1	Allyl chloride	61.9		2.0	0.17
71-43-2	Benzene	54.5		1.0	0.31
75-25-2	Bromoform	48.5		2.0	1.2
74-83-9	Bromomethane	60.6		5.0	2.4
75-15-0	Carbon disulfide	54.8		2.0	0.63
56-23-5	Carbon tetrachloride	54.0		1.0	0.57
108-90-7	Chlorobenzene	49.8		1.0	0.42
74-97-5	Chlorobromomethane	51.1		1.0	0.40
124-48-1	Chlorodibromomethane	47.5		2.0	0.62
75-00-3	Chloroethane	63.9		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610485/4

Matrix: Water | Lab File ID: X502941.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 22:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	50.8		1.0	0.36
74-87-3	Chloromethane	56.8		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	52.1		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	53.0		2.0	0.63
74-95-3	Dibromomethane	49.4		1.0	0.34
75-27-4	Dichlorobromomethane	50.8		1.0	0.39
75-71-8	Dichlorodifluoromethane	60.7		3.0	0.96
97-63-2	Ethyl methacrylate	50.6		3.0	0.86
100-41-4	Ethylbenzene	50.7		1.0	0.30
74-88-4	Iodomethane	48.6		5.0	2.6
78-83-1	Isobutyl alcohol	1040		110	37
75-09-2	Methylene Chloride	50.5		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	51.6		2.0	0.36
95-47-6	o-Xylene	50.7		1.0	0.33
100-42-5	Styrene	52.2		1.0	0.36
127-18-4	Tetrachloroethene	52.5		1.0	0.40
108-88-3	Toluene	54.1		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	55.7		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	55.7		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	41.6		3.0	1.4
79-01-6	Trichloroethene	51.3		1.0	0.30
75-69-4	Trichlorofluoromethane	59.6		2.0	0.57
108-05-4	Vinyl acetate	115		3.0	0.94
75-01-4	Vinyl chloride	67.3		2.0	0.51
1330-20-7	Xylenes, Total	102		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-127
460-00-4	4-Bromofluorobenzene (Surr)	99		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502941.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 22:09:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:42 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.056	0.000	99	2053254	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.566	7.573	-0.007	84	509714	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	94	805091	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.556	0.007	93	506320	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	491858	50.0	47.4	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2189107	50.0	50.4	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	710574	50.0	49.4	
10 Dichlorodifluoromethane	85	1.695	1.696	-0.001	99	547138	50.0	60.7	
11 Chloromethane	50	1.860	1.860	0.000	99	519611	50.0	56.8	
12 Vinyl chloride	62	1.960	1.960	0.000	97	627149	50.0	67.3	
14 Bromomethane	94	2.246	2.246	0.000	90	301367	50.0	60.6	
15 Chloroethane	64	2.332	2.332	0.000	99	398747	50.0	63.9	
16 Dichlorofluoromethane	67	2.503	2.504	-0.001	97	844680	50.0	54.3	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	715625	50.0	59.6	
19 Ethyl ether	59	2.747	2.739	0.008	88	362008	50.0	52.2	
21 Acrolein	56	2.854	2.854	0.000	100	490368	493.8	438.8	
23 1,1-Dichloroethene	96	2.932	2.933	-0.001	97	419868	50.0	53.2	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.933	-0.001	95	329701	50.0	58.1	
24 Acetone	43	2.954	2.947	0.007	98	395214	200.0	174.2	
26 Iodomethane	142	3.054	3.054	0.000	97	528364	50.0	48.6	
27 Carbon disulfide	76	3.118	3.118	0.000	98	1401544	50.0	54.8	
29 Methyl acetate	43	3.176	3.176	0.000	97	527620	100.0	101.8	
30 3-Chloro-1-propene	41	3.197	3.197	0.000	94	648358	50.0	61.9	
31 Methylene Chloride	84	3.290	3.290	0.000	89	511925	50.0	50.5	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	311855	500.0	389.1	
33 Acrylonitrile	53	3.454	3.447	0.007	99	1563440	500.0	531.2	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	1215838	50.0	49.0	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	100	488334	50.0	55.7	
37 Hexane	57	3.683	3.676	0.007	87	661833	50.0	56.7	
39 Vinyl acetate	43	3.783	3.776	0.007	96	1597054	100.0	115.1	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	886382	50.0	55.5	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	657350	200.0	194.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	81	546209	50.0	52.1	
48 2,2-Dichloropropane	77	4.219	4.220	-0.001	85	666649	50.0	54.3	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	621089	1200.0	1031.3	
52 Chlorobromomethane	128	4.384	4.384	0.000	96	246813	50.0	51.1	
53 Tetrahydrofuran	42	4.391	4.391	0.000	85	222894	100.0	97.5	
54 Chloroform	83	4.441	4.441	0.000	92	826062	50.0	50.8	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	683678	50.0	51.9	
56 Cyclohexane	56	4.641	4.641	0.000	87	843729	50.0	62.1	
57 1,1-Dichloropropene	75	4.699	4.692	0.007	98	707978	50.0	54.9	
60 Isobutyl alcohol	41	4.706	4.699	0.007	93	265210	1250.0	1037.8	
59 Carbon tetrachloride	117	4.706	4.699	0.007	94	575020	50.0	54.0	
62 Benzene	78	4.849	4.849	0.000	95	2078963	50.0	54.5	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	559555	50.0	46.3	
65 n-Heptane	43	5.027	5.028	-0.001	89	508930	50.0	64.3	
67 Trichloroethene	95	5.335	5.328	0.007	98	500508	50.0	51.3	
68 2-Pentanone	43	5.428	5.428	0.000	99	820041	160.0	150.9	
69 Methylcyclohexane	55	5.528	5.521	0.007	90	589837	50.0	59.3	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	96	530331	50.0	54.7	
72 1,4-Dioxane	88	5.578	5.578	0.000	89	111238	1000.0	905.9	
73 Dibromomethane	93	5.607	5.607	0.000	96	285657	50.0	49.4	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	620521	50.0	50.8	
76 2-Chloroethyl vinyl ether	63	5.928	5.929	0.000	89	187567	50.0	60.5	
77 cis-1,3-Dichloropropene	75	6.079	6.072	0.007	98	822692	50.0	53.0	
78 4-Methyl-2-pentanone (MIBK)	43	6.172	6.172	0.000	94	1342109	200.0	206.7	
79 Toluene	91	6.365	6.365	0.000	98	2224790	50.0	54.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	701325	50.0	55.7	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	563610	50.0	50.6	
82 1,1,2-Trichloroethane	97	6.708	6.708	0.000	89	422945	50.0	51.5	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	388736	50.0	52.5	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	88	785203	50.0	50.3	
85 2-Hexanone	43	6.872	6.872	0.000	92	916894	200.0	187.8	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	447222	50.0	47.5	
88 Ethylene Dibromide	107	7.165	7.165	0.000	99	423938	50.0	47.5	
89 1-Chlorohexane	91	7.552	7.552	0.000	93	585527	40.0	42.4	
90 Chlorobenzene	112	7.594	7.595	0.000	96	1414228	50.0	49.8	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.666	0.000	95	451621	50.0	49.5	
92 Ethylbenzene	106	7.673	7.673	0.000	97	793032	50.0	50.7	
93 m-Xylene & p-Xylene	106	7.787	7.788	-0.001	0	966770	50.0	51.6	
94 o-Xylene	106	8.145	8.145	0.000	95	964595	50.0	50.7	
95 Styrene	104	8.166	8.167	-0.001	95	1576263	50.0	52.2	
96 Bromoform	173	8.345	8.345	0.000	96	275940	50.0	48.5	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	2315772	50.0	50.7	
99 Cyclohexanone	55	8.581	8.581	0.000	88	724765	1500.0	1669.9	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.767	0.007	93	522507	50.0	45.3	
101 Bromobenzene	156	8.803	8.803	0.000	94	560725	50.0	48.7	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	70	125159	50.0	41.6	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	82	150169	50.0	42.9	
104 N-Propylbenzene	120	8.881	8.882	-0.001	99	661304	50.0	52.1	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	566458	50.0	50.3	
106 1,3,5-Trimethylbenzene	105	9.053	9.053	0.000	94	1911752	50.0	49.6	
107 4-Chlorotoluene	126	9.096	9.096	0.000	97	596431	50.0	50.9	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	1588727	50.0	49.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1981716	50.0	49.7	
111 sec-Butylbenzene	134	9.582	9.582	0.000	93	477483	50.0	49.5	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	1054244	50.0	49.6	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	2010641	50.0	50.5	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	1046671	50.0	46.4	
116 n-Butylbenzene	91	10.133	10.133	0.000	97	1788473	50.0	51.9	
117 1,2-Dichlorobenzene	146	10.161	10.161	0.000	98	958231	50.0	46.8	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.941	0.000	88	88935	50.0	38.4	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	491263	50.0	47.7	
121 Hexachlorobutadiene	225	11.899	11.899	0.000	98	198368	50.0	52.8	
122 Naphthalene	128	12.035	12.035	0.000	97	1083230	50.0	41.2	
123 1,2,3-Trichlorobenzene	180	12.249	12.249	0.000	95	335828	50.0	43.2	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	107.8	
S 139 Xylenes, Total (URS)	1				0		100.0	102.3	
S 136 1,3-Dichloropropene, Total	1				0		100.0	108.6	
S 138 Xylenes, Total	106				0		100.0	102.3	
S 140 Trihalomethanes, Total	1				0		200.0	197.5	
S 141 1,2-Dichloroethene, Total	1				0		100.0	107.8	

Reagents:

MV-Gas B_00133	Amount Added: 10.00	Units: uL	
MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 28-Apr-2023 02:56:44 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502941.D

Injection Date: 27-Apr-2023 22:09:30 Instrument ID: VMS_X4 Operator ID: bj

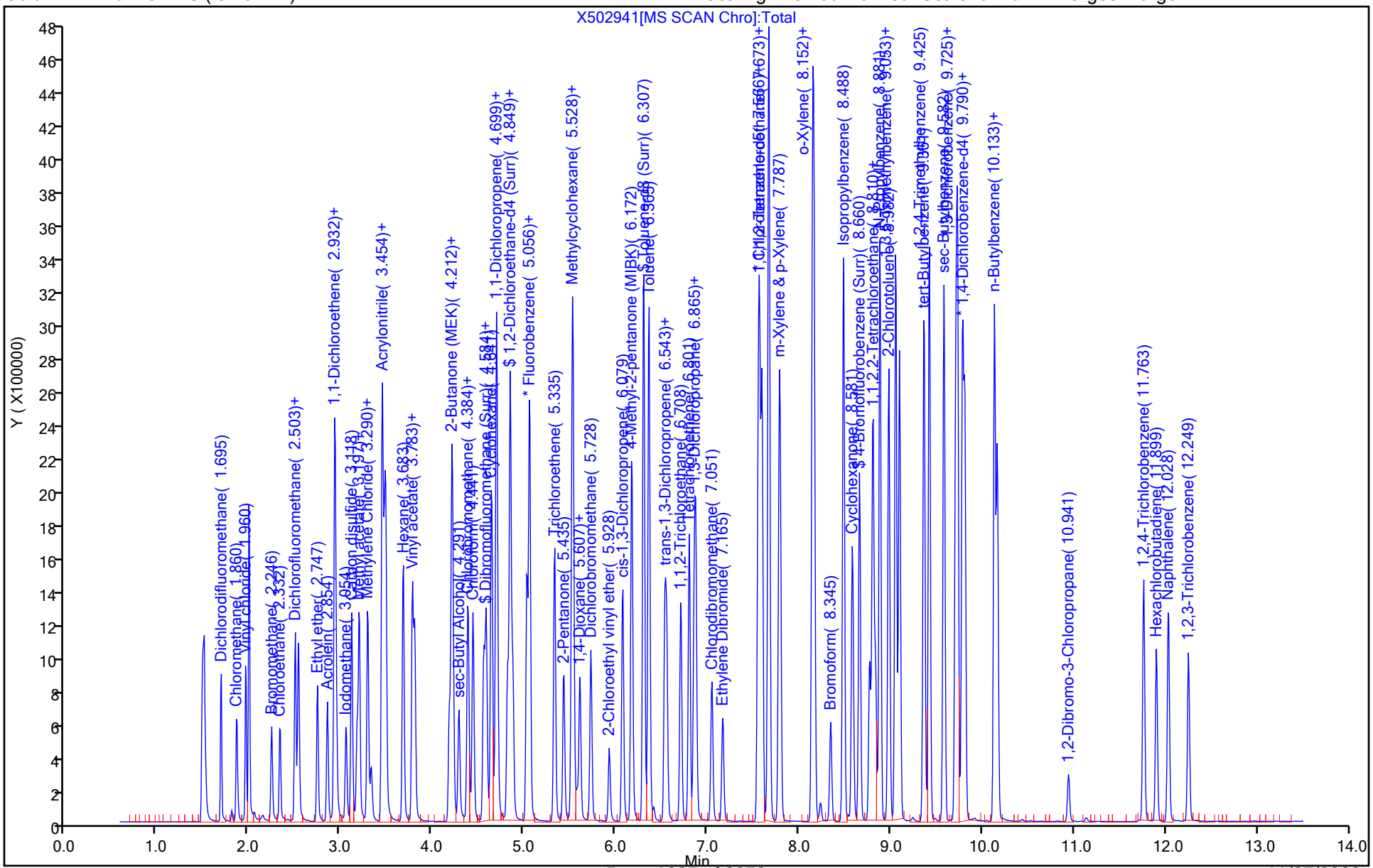
Lims ID: LCSD Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502941.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 22:09:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:42 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.53
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.4	94.83
$ 6 Toluene-d8 (Surr)	50.0	50.4	100.83
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.4	98.78

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610485/5

Matrix: Water | Lab File ID: X502942.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 22:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610485 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	219		30	9.6
126-99-8	Chloroprene	24.0		3.0	1.2
126-98-7	Methacrylonitrile	202		15	5.3
80-62-6	Methyl methacrylate	34.9		4.0	1.1
107-12-0	Propionitrile	220		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502942.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 22:29:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:12 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.056	0.007	99	2042281	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	495630	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.782	9.782	0.000	95	776161	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.556	4.556	0.000	94	503561	50.0	51.3	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	478769	50.0	46.4	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2141947	50.0	50.7	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	699043	50.0	50.4	
	18 Ethanol	45	2.646	2.647	-0.001	98	114675	1500.0	1060.8	
	25 Isopropyl alcohol	45	3.033	3.033	0.000	99	80424	250.0	127.0	
	28 Acetonitrile	41	3.154	3.154	0.000	99	249817	250.0	219.0	
	41 Isopropyl ether	87	3.805	3.805	0.000	96	191074	25.0	25.1	
	42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	88	321335	25.0	24.0	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	96	617078	25.0	23.4	
	46 Ethyl acetate	43	4.198	4.198	0.000	99	288473	50.0	36.5	
	49 Propionitrile	54	4.234	4.234	0.000	99	279359	250.0	220.1	
	51 Methacrylonitrile	41	4.348	4.348	0.000	88	1004086	250.0	202.1	
	64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	585026	25.0	22.9	
	66 n-Butanol	56	5.199	5.192	0.007	82	96286	625.0	384.6	
	71 Methyl methacrylate	100	5.542	5.535	0.007	89	94206	50.0	34.9	
	75 2-Nitropropane	41	5.893	5.900	-0.007	98	52695	50.0	18.4	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	106998	50.0	35.0	
	115 1,2,3-Trimethylbenzene	105	9.825	9.825	0.000	98	910090	25.0	21.6	
	119 1,3,5-Trichlorobenzene	180	11.134	11.127	0.007	97	281656	25.0	21.5	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

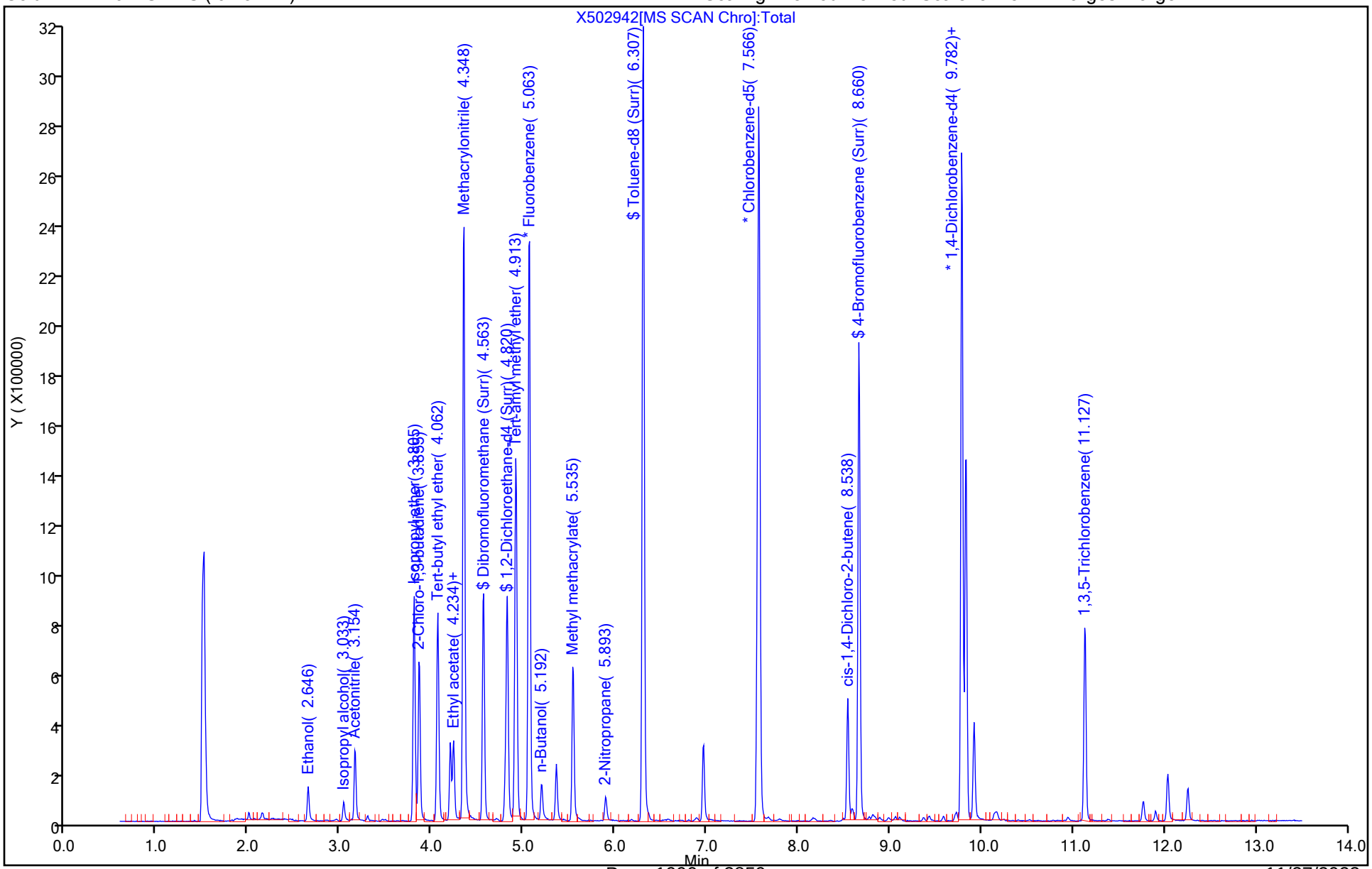
Report Date: 28-Apr-2023 02:56:15 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502942.D

Injection Date:	27-Apr-2023 22:29:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\X502942.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 22:29:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Misc. Info.: 280-0120830-034
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:56:12 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.52
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.4	92.81
$ 6 Toluene-d8 (Surr)	50.0	50.7	101.46
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.4	100.80

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 10/22/2022 11:07

Analysis Batch Number: 590907 End Date: 10/22/2022 17:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-590907/1		10/22/2022 11:07	1	X43661.D	DB-624 (60.25) 0.25(mm)
STD005 280-590907/13 IC		10/22/2022 11:33	1	X43662.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 11:33	1		DB-624 (60.25) 0.25(mm)
ICIS 280-590907/18		10/22/2022 11:54	1	X43663.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 11:54	1		DB-624 (60.25) 0.25(mm)
STD010 280-590907/14 IC		10/22/2022 12:14	1	X43664.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 12:14	1		DB-624 (60.25) 0.25(mm)
STD020 280-590907/15 IC		10/22/2022 12:35	1	X43665.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 12:35	1		DB-624 (60.25) 0.25(mm)
STD050 280-590907/16 IC		10/22/2022 12:55	1	X43666.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 12:55	1		DB-624 (60.25) 0.25(mm)
STD10 280-590907/17 IC		10/22/2022 13:16	1	X43667.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 13:16	1		DB-624 (60.25) 0.25(mm)
STD75 280-590907/19 IC		10/22/2022 13:36	1	X43668.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 13:36	1		DB-624 (60.25) 0.25(mm)
STD100 280-590907/20 IC		10/22/2022 13:57	1	X43669.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 13:57	1		DB-624 (60.25) 0.25(mm)
STD200 280-590907/21 IC		10/22/2022 14:18	1	X43670.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 14:18	1		DB-624 (60.25) 0.25(mm)
ICV 280-590907/22		10/22/2022 14:59	1	X43672.D	DB-624 (60.25) 0.25(mm)
STD010 280-590907/23 IC		10/22/2022 15:19	1	X43673.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 15:19	1		DB-624 (60.25) 0.25(mm)
STD020 280-590907/24 IC		10/22/2022 15:40	1	X43674.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 15:40	1		DB-624 (60.25) 0.25(mm)
STD050 280-590907/25 IC		10/22/2022 16:01	1	X43675.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 16:01	1		DB-624 (60.25) 0.25(mm)
STD10 280-590907/26 IC		10/22/2022 16:21	1	X43676.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 16:21	1		DB-624 (60.25) 0.25(mm)
STD50 280-590907/27 IC		10/22/2022 16:42	1	X43677.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 16:42	1		DB-624 (60.25) 0.25(mm)
STD100 280-590907/28 IC		10/22/2022 17:02	1	X43678.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 17:02	1		DB-624 (60.25) 0.25(mm)
STD200 280-590907/29 IC		10/22/2022 17:23	1	X43679.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 17:23	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 10/23/2022 12:37

Analysis Batch Number: 590924 End Date: 10/23/2022 15:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-590924/1		10/23/2022 12:37	1		DB-624 (60.25) 0.25(mm)
ICV 280-590924/12		10/23/2022 15:09	1	X43688.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_MS1 Start Date: 12/28/2022 07:14

Analysis Batch Number: 597846 End Date: 12/28/2022 14:55

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-597846/1		12/28/2022 07:14	1	MS1_4145.D	DB-624 (60.25) 0.25(mm)
STD1 280-597846/12 IC		12/28/2022 11:59	1	MS1_4150.D	DB-624 (60.25) 0.25(mm)
STD2 280-597846/13 IC		12/28/2022 12:21	1	MS1_4151.D	DB-624 (60.25) 0.25(mm)
STD5 280-597846/14 IC		12/28/2022 12:43	1	MS1_4152.D	DB-624 (60.25) 0.25(mm)
STD10 280-597846/15 IC		12/28/2022 13:05	1	MS1_4153.D	DB-624 (60.25) 0.25(mm)
STD50 280-597846/16 IC		12/28/2022 13:27	1	MS1_4154.D	DB-624 (60.25) 0.25(mm)
STD75 280-597846/17 IC		12/28/2022 13:49	1	MS1_4155.D	DB-624 (60.25) 0.25(mm)
STD100 280-597846/18 IC		12/28/2022 14:11	1	MS1_4156.D	DB-624 (60.25) 0.25(mm)
STD200 280-597846/19 IC		12/28/2022 14:33	1	MS1_4157.D	DB-624 (60.25) 0.25(mm)
ICV 280-597846/20		12/28/2022 14:55	1	MS1_4158.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/07/2023 02:33

Analysis Batch Number: 607881 End Date: 04/07/2023 06:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-607881/1		04/07/2023 02:33	1	X502125.D	RXI-624SilMS 0.25(mm)
STD 280-607881/19 IC		04/07/2023 03:14	1	X502127.D	RXI-624SilMS 0.25(mm)
STD 280-607881/18 IC		04/07/2023 03:34	1	X502128.D	RXI-624SilMS 0.25(mm)
STD 280-607881/16 IC		04/07/2023 03:55	1	X502129.D	RXI-624SilMS 0.25(mm)
STD 280-607881/17 IC		04/07/2023 04:15	1	X502130.D	RXI-624SilMS 0.25(mm)
STD 280-607881/15 IC		04/07/2023 04:36	1	X502131.D	RXI-624SilMS 0.25(mm)
ICIS 280-607881/14		04/07/2023 04:56	1	X502132.D	RXI-624SilMS 0.25(mm)
STD 280-607881/13 IC		04/07/2023 05:17	1	X502133.D	RXI-624SilMS 0.25(mm)
STD 280-607881/12 IC		04/07/2023 05:38	1	X502134.D	RXI-624SilMS 0.25(mm)
STD 280-607881/11 IC		04/07/2023 05:58	1	X502135.D	RXI-624SilMS 0.25(mm)
ICV 280-607881/20		04/07/2023 06:39	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_P Start Date: 04/10/2023 12:02

Analysis Batch Number: 608141 End Date: 04/10/2023 20:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-608141/1		04/10/2023 12:02	1	P00470.D	DB-624 (60.25) 0.25(mm)
STD005 280-608141/11 IC		04/10/2023 13:03	1	P00472.D	DB-624 (60.25) 0.25(mm)
STD010 280-608141/12 IC		04/10/2023 13:26	1	P00473.D	DB-624 (60.25) 0.25(mm)
STD020 280-608141/13 IC		04/10/2023 13:48	1	P00474.D	DB-624 (60.25) 0.25(mm)
STD050 280-608141/14 IC		04/10/2023 14:11	1	P00475.D	DB-624 (60.25) 0.25(mm)
STD10 280-608141/15 IC		04/10/2023 14:34	1	P00476.D	DB-624 (60.25) 0.25(mm)
ICIS 280-608141/16		04/10/2023 14:57	1	P00477.D	DB-624 (60.25) 0.25(mm)
STD75 280-608141/17 IC		04/10/2023 15:20	1	P00478.D	DB-624 (60.25) 0.25(mm)
STD100 280-608141/18 IC		04/10/2023 16:43	1	P00479.D	DB-624 (60.25) 0.25(mm)
STD200 280-608141/19 IC		04/10/2023 17:06	1	P00480.D	DB-624 (60.25) 0.25(mm)
STD01 280-608141/21 IC		04/10/2023 18:14	1	P00483.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/10/2023 18:14	1		DB-624 (60.25) 0.25(mm)
STD02 280-608141/22 IC		04/10/2023 18:37	1	P00484.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/10/2023 18:37	1		DB-624 (60.25) 0.25(mm)
STD05 280-608141/23 IC		04/10/2023 18:59	1	P00485.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/10/2023 18:59	1		DB-624 (60.25) 0.25(mm)
STD10 280-608141/24 IC		04/10/2023 19:22	1	P00486.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/10/2023 19:22	1		DB-624 (60.25) 0.25(mm)
STD50 280-608141/25 IC		04/10/2023 19:45	1	P00487.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/10/2023 19:45	1		DB-624 (60.25) 0.25(mm)
STD100 280-608141/26 IC		04/10/2023 20:07	1	P00488.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/10/2023 20:07	1		DB-624 (60.25) 0.25(mm)
STD200 280-608141/27 IC		04/10/2023 20:30	1	P00489.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/10/2023 20:30	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/10/2023 21:51

Analysis Batch Number: 608203 End Date: 04/11/2023 08:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-608203/1		04/10/2023 21:51	1	X502169.D	RXI-624SilMS 0.25(mm)
CCV 280-608203/3		04/10/2023 22:47	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 22:47	1		RXI-624SilMS 0.25(mm)
CCV 280-608203/2		04/10/2023 23:09	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 23:09	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 23:30	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 23:50	1		RXI-624SilMS 0.25(mm)
RINSE 280-608203/6		04/11/2023 00:11	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 00:32	1		RXI-624SilMS 0.25(mm)
ICV 280-608203/8		04/11/2023 00:52	1	X502177.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 01:13	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 01:33	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 01:54	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 02:14	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 02:35	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 02:55	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 03:16	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 03:36	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 03:57	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 04:17	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 04:38	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 04:59	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 05:20	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 05:41	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 06:02	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 06:23	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 06:44	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 07:05	20		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 07:25	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 07:46	1		RXI-624SilMS 0.25(mm)
CCVC 280-608203/32		04/11/2023 08:07	1		RXI-624SilMS 0.25(mm)
CCVC 280-608203/33		04/11/2023 08:27	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_P Start Date: 04/11/2023 15:41

Analysis Batch Number: 608296 End Date: 04/11/2023 21:18

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-608296/1		04/11/2023 15:41	1	P00502.D	DB-624 (60.25) 0.25(mm)
ICV 280-608296/11		04/11/2023 16:17	1	P00503.D	DB-624 (60.25) 0.25(mm)
STD005 280-608296/12 IC		04/11/2023 17:33	1	P00506.D	DB-624 (60.25) 0.25(mm)
STD010 280-608296/13 IC		04/11/2023 17:56	1	P00507.D	DB-624 (60.25) 0.25(mm)
STD020 280-608296/14 IC		04/11/2023 18:18	1	P00508.D	DB-624 (60.25) 0.25(mm)
STD050 280-608296/15 IC		04/11/2023 18:41	1	P00509.D	DB-624 (60.25) 0.25(mm)
STD10 280-608296/16 IC		04/11/2023 19:03	1	P00510.D	DB-624 (60.25) 0.25(mm)
ICIS 280-608296/17		04/11/2023 19:26	1	P00511.D	DB-624 (60.25) 0.25(mm)
STD75 280-608296/18 IC		04/11/2023 19:48	1	P00512.D	DB-624 (60.25) 0.25(mm)
STD100 280-608296/19 IC		04/11/2023 20:11	1	P00513.D	DB-624 (60.25) 0.25(mm)
STD200 280-608296/20 IC		04/11/2023 20:33	1	P00514.D	DB-624 (60.25) 0.25(mm)
ICV 280-608296/21		04/11/2023 21:18	1	P00516.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_P Start Date: 04/12/2023 08:16

Analysis Batch Number: 608364 End Date: 04/12/2023 15:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-608364/1		04/12/2023 08:16	1	P00517.D	DB-624 (60.25) 0.25(mm)
STD005 280-608364/12 IC		04/12/2023 11:05	1	P00521.D	DB-624 (60.25) 0.25(mm)
STD050 280-608364/15 IC		04/12/2023 12:13	1	P00524.D	DB-624 (60.25) 0.25(mm)
STD10 280-608364/16 IC		04/12/2023 12:36	1	P00525.D	DB-624 (60.25) 0.25(mm)
STD010 280-608364/13 IC		04/12/2023 12:58	1	P00526.D	DB-624 (60.25) 0.25(mm)
STD020 280-608364/14 IC		04/12/2023 13:21	1	P00527.D	DB-624 (60.25) 0.25(mm)
ICIS 280-608364/17		04/12/2023 13:43	1	P00528.D	DB-624 (60.25) 0.25(mm)
STD75 280-608364/18 IC		04/12/2023 14:06	1	P00529.D	DB-624 (60.25) 0.25(mm)
STD100 280-608364/19 IC		04/12/2023 14:28	1	P00530.D	DB-624 (60.25) 0.25(mm)
STD200 280-608364/20 IC		04/12/2023 14:51	1	P00531.D	DB-624 (60.25) 0.25(mm)
ICV 280-608364/21		04/12/2023 15:45	1	P00533.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_MS1 Start Date: 04/18/2023 09:29

Analysis Batch Number: 609046 End Date: 04/18/2023 19:19

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-609046/1		04/18/2023 09:29	1	MS1_8181.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/34		04/18/2023 11:03	1	MS1_8185.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/35		04/18/2023 11:24	1	MS1_8186.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/36		04/18/2023 11:45	1	MS1_8187.D	DB-624 (60.25) 0.25(mm)
ICIS 280-609046/37		04/18/2023 12:06	1	MS1_8188.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/38		04/18/2023 12:27	1	MS1_8189.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/39		04/18/2023 12:49	1	MS1_8190.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/42		04/18/2023 18:15	1	MS1_8195.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/41		04/18/2023 18:36	1	MS1_8196.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/40		04/18/2023 18:58	1	MS1_8197.D	DB-624 (60.25) 0.25(mm)
ICV 280-609046/43		04/18/2023 19:19	1	MS1_8198.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_MS1 Start Date: 04/21/2023 07:11

Analysis Batch Number: 609561 End Date: 04/21/2023 19:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-609561/1		04/21/2023 07:11	1	MS1_8306.D	DB-624 (60.25) 0.25(mm)
CCV 280-609561/3		04/21/2023 07:37	1	MS1_8307.D	DB-624 (60.25) 0.25(mm)
LCS 280-609561/1003		04/21/2023 07:37	1	-MS1_8307-LCS.d	DB-624 (60.25) 0.25(mm)
CCV 280-609561/2		04/21/2023 07:58	1	MS1_8308.D	DB-624 (60.25) 0.25(mm)
LCS 280-609561/1002		04/21/2023 07:58	1	-MS1_8308-LCS.d	DB-624 (60.25) 0.25(mm)
LCSD 280-609561/5		04/21/2023 08:19	1	MS1_8309.D	DB-624 (60.25) 0.25(mm)
LCSD 280-609561/4		04/21/2023 08:40	1	MS1_8310.D	DB-624 (60.25) 0.25(mm)
MB 280-609561/7		04/21/2023 09:22	1	MS1_8312.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 10:27	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 10:48	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 11:09	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 11:31	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 11:52	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 12:13	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 12:34	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 12:56	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 13:17	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 13:38	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 13:59	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 14:21	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 14:42	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 15:03	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 15:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 15:46	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 16:07	1		DB-624 (60.25) 0.25(mm)
280-175122-5	MW-111D-20230414	04/21/2023 16:28	1	MS1_8330.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 16:50	50		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/21/2023 17:12	200		DB-624 (60.25) 0.25(mm)
CCVC 280-609561/53		04/21/2023 17:33	1	MS1_8333.D	DB-624 (60.25) 0.25(mm)
CCVC 280-609561/54		04/21/2023 19:11	1	MS1_8337.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/24/2023 18:27

Analysis Batch Number: 609932 End Date: 04/25/2023 06:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-609932/1		04/24/2023 18:27	1	X502749.D	RXI-624SilMS 0.25(mm)
CCV 280-609932/2		04/24/2023 18:48	1	X502750.D	RXI-624SilMS 0.25(mm)
LCS 280-609932/1002		04/24/2023 18:48	1	-X502750-LCS.d	RXI-624SilMS 0.25(mm)
CCV 280-609932/3		04/24/2023 19:08	1	X502751.D	RXI-624SilMS 0.25(mm)
LCS 280-609932/1003		04/24/2023 19:08	1	-X502751-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-609932/4		04/24/2023 19:29	1	X502752.D	RXI-624SilMS 0.25(mm)
LCSD 280-609932/5		04/24/2023 19:49	1	X502753.D	RXI-624SilMS 0.25(mm)
MB 280-609932/7		04/24/2023 20:30	1	X502755.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 21:35	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 21:56	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 22:16	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 22:37	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 22:57	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 23:18	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 23:38	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/24/2023 23:59	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 00:19	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 00:40	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 01:00	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 01:21	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 01:41	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 02:02	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 02:23	4		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 02:44	4		RXI-624SilMS 0.25(mm)
280-175122-2	MP-2-20230411	04/25/2023 03:05	4	X502772.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 03:26	5		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 03:47	5		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 04:07	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/25/2023 05:28	1		RXI-624SilMS 0.25(mm)
CCVC 280-609932/32		04/25/2023 05:49	1		RXI-624SilMS 0.25(mm)
CCVC 280-609932/33		04/25/2023 06:09	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/26/2023 09:51

Analysis Batch Number: 610121 End Date: 04/26/2023 20:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-610121/1		04/26/2023 09:51	1	X502846A.D	RXI-624SilMS 0.25(mm)
CCV 280-610121/3		04/26/2023 09:51	1	X502846.D	RXI-624SilMS 0.25(mm)
LCS 280-610121/1003		04/26/2023 09:51	1	-X502846-LCS.d	RXI-624SilMS 0.25(mm)
CCV 280-610121/2		04/26/2023 10:19	1	X502847.D	RXI-624SilMS 0.25(mm)
LCS 280-610121/1002		04/26/2023 10:19	1	-X502847-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-610121/4		04/26/2023 10:41	1	X502848.D	RXI-624SilMS 0.25(mm)
LCSD 280-610121/5		04/26/2023 11:02	1	X502849.D	RXI-624SilMS 0.25(mm)
MB 280-610121/7		04/26/2023 11:43	1	X502851.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 12:18	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 12:38	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 12:59	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 13:19	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 13:40	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 14:00	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 14:21	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 14:41	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 15:02	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 15:22	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 15:43	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 16:03	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 16:24	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 16:45	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 17:06	2		RXI-624SilMS 0.25(mm)
280-175122-1	RW-1-20230413	04/26/2023 17:27	4	X502867.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 17:47	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 18:08	2000		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 18:28	2000		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 18:49	500		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 19:09	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 19:30	1		RXI-624SilMS 0.25(mm)
CCVC 280-610121/34		04/26/2023 19:51	1		RXI-624SilMS 0.25(mm)
CCVC 280-610121/35		04/26/2023 20:11	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_P Start Date: 04/26/2023 08:20

Analysis Batch Number: 610123 End Date: 04/26/2023 20:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-610123/1		04/26/2023 08:20	1	P01127P.D	DB-624 (60.25) 0.25(mm)
CCV 280-610123/2		04/26/2023 08:20	1	P01127.D	DB-624 (60.25) 0.25(mm)
LCS 280-610123/1002		04/26/2023 08:20	1	-P01127-LCS.d	DB-624 (60.25) 0.25(mm)
CCV 280-610123/3		04/26/2023 08:42	1	P01128.D	DB-624 (60.25) 0.25(mm)
LCS 280-610123/1003		04/26/2023 08:42	1	-P01128-LCS.d	DB-624 (60.25) 0.25(mm)
LCSD 280-610123/4		04/26/2023 09:06	1	P01129.D	DB-624 (60.25) 0.25(mm)
LCSD 280-610123/5		04/26/2023 09:28	1	P01130.D	DB-624 (60.25) 0.25(mm)
MB 280-610123/7		04/26/2023 10:12	1	P01132.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 10:34	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 10:57	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 11:19	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 11:41	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 12:03	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 12:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 12:44	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 14:08	1		DB-624 (60.25) 0.25(mm)
280-175122-3	MW-118D-20230412	04/26/2023 14:30	1	P01141.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 14:52	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 15:14	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 15:36	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 15:58	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 16:21	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 16:43	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 17:05	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 17:27	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 17:49	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 18:11	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 18:33	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 18:55	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/26/2023 19:17	1		DB-624 (60.25) 0.25(mm)
CCVC 280-610123/33		04/26/2023 19:39	1		DB-624 (60.25) 0.25(mm)
CCVC 280-610123/34		04/26/2023 20:01	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/27/2023 10:51

Analysis Batch Number: 610347 End Date: 04/27/2023 20:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-610347/1		04/27/2023 10:51	1	X502909.D	RXI-624SilMS 0.25(mm)
CCV 280-610347/2		04/27/2023 11:12	1	X502910.D	RXI-624SilMS 0.25(mm)
LCS 280-610347/1002		04/27/2023 11:12	1	-X502910-LCS.d	RXI-624SilMS 0.25(mm)
CCV 280-610347/3		04/27/2023 11:36	1	X502911.D	RXI-624SilMS 0.25(mm)
LCS 280-610347/1003		04/27/2023 11:36	1	-X502911-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-610347/4		04/27/2023 11:57	1	X502912.D	RXI-624SilMS 0.25(mm)
LCSD 280-610347/5		04/27/2023 12:18	1	X502913.D	RXI-624SilMS 0.25(mm)
MB 280-610347/7		04/27/2023 12:59	1	X502915.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 13:20	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 13:41	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 14:01	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 14:22	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 14:42	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 15:03	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 15:23	1		RXI-624SilMS 0.25(mm)
280-175122-7	MW-102S-20230414	04/27/2023 15:44	1	X502923.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 16:04	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 16:25	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 16:46	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 17:06	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 17:27	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 17:47	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 18:07	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 18:28	1		RXI-624SilMS 0.25(mm)
280-175122-4	MP-3-20230413	04/27/2023 18:49	2	X502932.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 19:10	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 19:31	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 19:51	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 20:12	1		RXI-624SilMS 0.25(mm)
CCVC 280-610347/33		04/27/2023 20:32	1		RXI-624SilMS 0.25(mm)
CCVC 280-610347/34		04/27/2023 20:53	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/27/2023 21:28

Analysis Batch Number: 610485 End Date: 04/28/2023 07:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-610485/1		04/27/2023 21:28	1	X502939b.D	RXI-624SilMS 0.25(mm)
CCV 280-610485/2		04/27/2023 21:28	1	X502939.D	RXI-624SilMS 0.25(mm)
LCS 280-610485/1002		04/27/2023 21:28	1	-X502939-LCS.d	RXI-624SilMS 0.25(mm)
CCV 280-610485/3		04/27/2023 21:48	1	X502940.D	RXI-624SilMS 0.25(mm)
LCS 280-610485/1003		04/27/2023 21:48	1	-X502940-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-610485/4		04/27/2023 22:09	1	X502941.D	RXI-624SilMS 0.25(mm)
LCSD 280-610485/5		04/27/2023 22:29	1	X502942.D	RXI-624SilMS 0.25(mm)
MB 280-610485/7		04/27/2023 23:10	1	X502944.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 23:52	1		RXI-624SilMS 0.25(mm)
280-175122-9	TB-07-20230416	04/28/2023 00:12	1	X502946.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 00:33	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 00:54	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 01:14	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 01:35	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 01:55	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 02:15	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 02:36	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 02:57	1		RXI-624SilMS 0.25(mm)
280-175122-6	MW-123-20230415	04/28/2023 03:17	1	X502955.D	RXI-624SilMS 0.25(mm)
280-175122-8	MW-115S-20230415	04/28/2023 03:38	1	X502956.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 03:58	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 04:19	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 04:39	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 05:00	4		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 05:21	4		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 05:42	5		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 06:02	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/28/2023 06:23	1		RXI-624SilMS 0.25(mm)
CCVC 280-610485/29		04/28/2023 06:43	1		RXI-624SilMS 0.25(mm)
CCVC 280-610485/30		04/28/2023 07:04	1		RXI-624SilMS 0.25(mm)

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042123am
Worklist Number: 120611
Instrument Name: VMS_MS1
Chrom Method: AQ_VMS1_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_MS1

Run Reagent: mv-IS_SS_00057
Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	5.000	mL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-Gas A_00151 MV-MegaMainA_00087		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp A_00080		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas A_00151 MV-MegaMainA_00087		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp A_00080		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
33	#33 280-175100-A-8	Client	1.000	voaWater	5.000	mL		cz	
34	#34 280-175106-E-1	Client	1.000	voaWater	5.000	mL		cz	
35	#35 280-175106-G-2	Client	1.000	voaWater	5.000	mL		cz	
36	#36 280-175106-F-3	Client	1.000	voaWater	5.000	mL		cz	
37	#37 280-175106-H-4	Client	1.000	voaWater	5.000	mL		cz	
38	#38 280-175106-H-5	Client	1.000	voaWater	5.000	mL		cz	
39	#39 280-175106-G-6	Client	1.000	voaWater	5.000	mL		cz	
40	#40 280-174852-B-2	Client	1.000	voaWater	5.000	mL		cz	
41	#41 280-174912-B-16	Client	1.000	voaWater	5.000	mL		cz	
42	#42 280-174912-B-17	Client	1.000	voaWater	5.000	mL		cz	
43	#43 280-175061-C-5	Client	1.000	voaWater	5.000	mL		cz	
44	#44 280-175064-B-5	Client	1.000	voaWater	5.000	mL		cz	
45	#45 280-175064-C-18	Client	1.000	voaWater	5.000	mL		cz	
46	#46 280-175064-C-27	Client	1.000	voaWater	5.000	mL		cz	
47	#47 280-175100-B-1	Client	1.000	voaWater	5.000	mL		cz	
48	#48 280-175100-B-9	Client	1.000	voaWater	5.000	mL		4 cz	HCl 4/10
49	#49 280-175100-C-15	Client	1.000	voaWater	5.000	mL		cz	
50	#50 280-175122-D-5	Client	1.000	voaWater	5.000	mL		6	UP
51	#51 280-174851-B-2	Client	50.00	voaWater	5.000	mL		cz	
52	#52 280-174851-A-1	Client	200.0	voaWater	5.000	mL		cz	
53	#53 ccvc	CCVC	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
54	#54 ccvc	CCVC	1.000	voaWater	5.000	mL	MV-Supp A_00080		

DIW ✓ BJ 04/21/23

HC293085

Eurofins TestAmerica Denver
Instrument ID: VMS1
SOP: DV-MS 0010 Rev. 29
Method: (8240) (8260B) (8260C)
Purge Volume (20mL / 5mL)
Matrix: (Water / Soil / Waste)
Tune Time: 7:11 - 17:11
TALs Batch: 609561

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b

Worklist Name:	042123am	Worklist Num:	120611
Instrument:	VMS_MS1	Method:	AQ_VMS1_8260
Analysis Type:	VOA	Creator:	Bustillos, Ethan T
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 609561
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 33 280-175100-A-8	# 33 280-175100-A-8
# 34 280-175106-E-1	# 34 280-175106-E-1
# 35 280-175106-G-2	# 35 280-175106-G-2
# 36 280-175106-F-3	# 36 280-175106-F-3
# 37 280-175106-H-4	# 37 280-175106-H-4
# 38 280-175106-H-5	# 38 280-175106-H-5
# 39 280-175106-G-6	# 39 280-175106-G-6
# 40 280-174852-B-2	# 40 280-174852-B-2
# 41 280-174912-B-16	# 41 280-174912-B-16
# 42 280-174912-B-17	# 42 280-174912-B-17
# 43 280-175061-C-5	# 43 280-175061-C-5
# 44 280-175064-B-5	# 44 280-175064-B-5
# 45 280-175064-C-18	# 45 280-175064-C-18
# 46 280-175064-C-27	# 46 280-175064-C-27
# 47 280-175100-B-1	# 47 280-175100-B-1
# 48 280-175100-B-9	# 48 280-175100-B-9
# 49 280-175100-C-15	# 49 280-175100-C-15
# 50 280-175122-D-5	# 50 280-175122-D-5
# 51 280-174851-B-2	# 51 280-174851-B-2
# 52 280-174851-A-1	# 52 280-174851-A-1
# 53 ccvc	# 53 ccvc
# 54 ccvc	# 54 ccvc

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042123am
Worklist Number: 120611
Instrument Name: VMS_MS1
Chrom Method: AQ_VMS1_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_MS1\20230421-120611.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_MS1
Run Reagent: mv-IS_SS_00057
Amount Added: 5.000, Units: uL
Batch #s: 609561

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120611-001	# 1 BFB	mv-Cent BFB_00005	BFB	voaWater	5.000	mL	1.000
280-0120611-002	# 2 CCV	MV-Gas A_00151 MV-MegaMainA_00087	CCV	voaWater	5.000	mL	1.000
280-0120611-003	# 3 CCV	MV-Supp A_00080	CCV	voaWater	5.000	mL	1.000
280-0120611-004	# 4 LCSD	MV-Gas A_00151 MV-MegaMainA_00087	LCSD	voaWater	5.000	mL	1.000
280-0120611-005	# 5 LCSD	MV-Supp A_00080	LCSD	voaWater	5.000	mL	1.000
280-0120611-006	# 6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120611-007	# 7 MB		MB	voaWater	5.000	mL	1.000
280-0120611-008	# 8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120611-009	# 9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120611-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120611-033	#33 280-175100-A-8		Client	voaWater	5.000	mL	1.000
280-0120611-034	#34 280-175106-E-1		Client	voaWater	5.000	mL	1.000
280-0120611-035	#35 280-175106-G-2		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120611-036	#36 280-175106-F-3		Client	voaWater	5.000	mL	1.000
280-0120611-037	#37 280-175106-H-4		Client	voaWater	5.000	mL	1.000
280-0120611-038	#38 280-175106-H-5		Client	voaWater	5.000	mL	1.000
280-0120611-039	#39 280-175106-G-6		Client	voaWater	5.000	mL	1.000
280-0120611-040	#40 280-174852-B-2		Client	voaWater	5.000	mL	1.000
280-0120611-041	#41 280-174912-B-16		Client	voaWater	5.000	mL	1.000
280-0120611-042	#42 280-174912-B-17		Client	voaWater	5.000	mL	1.000
280-0120611-043	#43 280-175061-C-5		Client	voaWater	5.000	mL	1.000
280-0120611-044	#44 280-175064-B-5		Client	voaWater	5.000	mL	1.000
280-0120611-045	#45 280-175064-C-18		Client	voaWater	5.000	mL	1.000
280-0120611-046	#46 280-175064-C-27		Client	voaWater	5.000	mL	1.000
280-0120611-047	#47 280-175100-B-1		Client	voaWater	5.000	mL	1.000
280-0120611-048	#48 280-175100-B-9		Client	voaWater	5.000	mL	1.000
280-0120611-049	#49 280-175100-C-15		Client	voaWater	5.000	mL	1.000
280-0120611-050	#50 280-175122-D-5		Client	voaWater	5.000	mL	1.000
280-0120611-051	#51 280-174851-B-2		Client	voaWater	5.000	mL	50.00
280-0120611-052	#52 280-174851-A-1		Client	voaWater	5.000	mL	200.0
280-0120611-053	#53 ccvc	MV-MegaMainA_00087 MV-Gas A_00151	CCVC	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120611-054	#54 ccvc	MV-Supp A_00080	CCVC	voaWater	5.000	mL	1.000

MS1

Sample Request Form: 82102

den_msvoa_totalbacklog Gabe 4/21/2023 9:05:45 AM Assigned to:Bustillos, Ethan T

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-174851-1 200x	OU2-00238		8260D_DOD5	8260D_DOD5	04/21 23:59	04/28/23	SRT	UT	VS-9	Unconfirmed
M DOD 5.3_ DIL3										
280-174851-2 50x ~~20x~~	OU2-00239		8260D_DOD5	8260D_DOD5	04/21 23:59	04/28/23	SRT	UT	VS-9	Unconfirmed
M DOD 5.3_ DIL3										
280-174852-2 1x	OU6-00390		8260D_DOD5	8260D_DOD5	04/21 23:59	04/28/23	SRT	UT	VS-9	Unconfirmed
M DOD 5.3_ DIL3										
280-174912-16 1x	2304-EW9		8260D	8260D	04/21 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-17 1x	2304-EW4		8260D	8260D	04/21 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-175061-5 1x	23-WDPBL00713		624_5ml_DOD5	624_5ml_DOD5	04/24 23:59	05/05/23	PJM	OH	VS-5	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175064-5 1x	23-WDPBL00615		624_5ml_DOD5	624_5ml_DOD5	04/24 23:59	05/05/23	PJM	OH	VS-5	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175064-18 1x	23-WDPBL00631		624_5ml_DOD5	624_5ml_DOD5	04/24 23:59	05/05/23	PJM	OH	VS-5	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175064-27 1x	23-WDPBL00643		624_5ml_DOD5	624_5ml_DOD5	04/24 23:59	05/05/23	PJM	OH	VS-5	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175100-1 1x	23-WDPGW00481		624_5ml_DOD5	624_5ml_DOD5	04/24 23:59	05/05/23	PJM	OH	AA-2	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175100-8 1x	23-WDPGW00491 ~~5T3~~		624_5ml_DOD5	624_5ml_DOD5	04/24 23:59	05/05/23	PJM	OH	AA-2	Unconfirmed

11/27/2023
7:27 PM

MS1

Sample Request Form: 82102

11/27/2023
7:27 PM

den_msvoa_totalbacklog Gabe 4/21/2023 9:05:45 AM Assigned to:Bustillos, Ethan T

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175100-9 1x	23-WDPGW00492		624_5ml_DOD5	624_5ml_DOD5	04/24 23:59	05/05/23	PJM	OH	AA-2	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175100-15 1x	23-WDPGW00502		624_5ml_DOD5	624_5ml_DOD5	04/24 23:59	05/05/23	PJM	OH	AA-2	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175122-5 1x	MW-111D-20230414		8260D	8260D	04/21 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175348-16 1x	GW1H23-MW-20S-A		8260D	8260D	04/22 23:59	05/02/23	MAJ	MS	VS-13	Unconfirmed
M DIL3										
280-175348-16MS	GW1H23-MW-20S-A		8260D	8260D	04/22 23:59	05/02/23	MAJ	MS	VS-13	Unconfirmed
M DIL3										
280-175348-16MSD	GW1H23-MW-20S-A		8260D	8260D	04/22 23:59	05/02/23	MAJ	MS	VS-13	Unconfirmed
M DIL3										
280-175348-17	GW1H23-MW-20S-A-D		8260D	8260D	04/22 23:59	05/02/23	MAJ	MS	VS-13	Unconfirmed
M DIL3										
280-175348-18 1x	EB-0419202-GW-A		8260D	8260D	04/22 23:59	05/02/23	MAJ	MS	VS-13	Unconfirmed
M DIL3										
280-175348-20 1x	TB-04192023-GW-A		8260D	8260D	04/22 23:59	05/02/23	MAJ	MS	VS-13	Unconfirmed
M DIL3										

Sample Request Form: 82103

den_msvoa_totalbacklog Gabe 4/21/2023 9:16:30 AM Assigned to:Bustillos, Ethan T

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175106-1 1x	MW-4B		8260B	8260B	04/28 23:59	05/02/23	JSC	CA	Mtls-Strge & AA-2 & 188 & VS-15 & Marked as Disposed	Unconfirmed
M ethanol needed										
280-175106-2 1x	MW-3B		8260B	8260B	04/28 23:59	05/02/23	JSC	CA	188 & AA-2 & Mtls-Strge & Marked as Disposed & VS-15	Unconfirmed
M ethanol needed										
280-175106-3 1x	E20B		8260B	8260B	04/28 23:59	05/02/23	JSC	CA	VS-15 & AA-2 & Marked as Disposed & 182 & Mtls-Strge	Unconfirmed
M ethanol needed										
280-175106-4 1x	E-05R		8260B	8260B	04/28 23:59	05/02/23	JSC	CA	Mtls-Strge & AA-2 & 182 & VS-15 & Marked as Disposed	Unconfirmed
M ethanol needed										
280-175106-5 1x	E-07		8260B	8260B	04/28 23:59	05/02/23	JSC	CA	Marked as Disposed & Mtls-Strge & AA-2 & 188 & VS-15	Unconfirmed
M ethanol needed										
280-175106-6 1x	MW-31		8260B	8260B	04/28 23:59	05/02/23	JSC	CA	Mtls-Strge & VS-15 & 188 & Marked as Disposed & AA-2	Unconfirmed
M ethanol needed										

11/27/2023
7:27 PM

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042423pM
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120722
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00083		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-174912-A-26	Client	1.000	voaWater	5.000	mL		LL	HS
12	#12 280-174912-B-36	Client	1.000	voaWater	5.000	mL		LL	
13	#13 280-174955-A-14	Client	1.000	voaWater	5.000	mL		LL	
14	#14 280-174957-B-7	Client	1.000	voaWater	5.000	mL		LL	
15	#15 280-174912-C-3	Client	1.000	voaWater	5.000	mL		LL	
16	#16 280-174912-B-6	Client	1.000	voaWater	5.000	mL		LL	
17	#17 280-174912-C-7	Client	1.000	voaWater	5.000	mL		LL	
18	#18 280-174912-C-30	Client	1.000	voaWater	5.000	mL		LL	
19	#19 280-174912-D-31	Client	1.000	voaWater	5.000	mL		LL	
20	#20 280-174912-E-32	Client	1.000	voaWater	5.000	mL		LL	
21	#21 280-174962-B-3	Client	1.000	voaWater	5.000	mL		LL	
22	#22 280-174962-C-4	Client	1.000	voaWater	5.000	mL		LL	
23	#23 280-175031-P-1	Client	1.000	voaWater	5.000	mL		LL	
24	#24 280-174962-A-7	Client	2.000	voaWater	5.000	mL		LL	
25	#25 280-174962-A-5	Client	4.000	voaWater	5.000	mL		LL	
26	#26 280-174962-B-6	Client	4.00	voaWater	5.000	mL		LL	
27	#27 280-175122-E-2	Client	4.000	voaWater	5.000	mL		LL	
28	#28 280-175168-A-4	Client	5.000	voaWater	5.000	mL		LL	HS
29	#29 280-175168-B-14	Client	5.000	voaWater	5.000	mL		LL	
30	#30 280-174912-A-3 MS	MS	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132	LL	
31	#31 280-174912-B-3 MSD	MSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132	LL	
32	#32 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00132		
33	#33 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp B_00062		

DIL ✓ LL 4/25/23 pH Lot #: HC281827

Eurofins TestAmerica Denver
Instrument ID: X4
SOP: DV-MS-0010 Rev. 29
Method: (524 / 624 / 8260B / 8260C)
Purge Volume (20mL / (5mL))
Matrix: (Water / Soil / Waste)
Tune Time:
TALs Batch: 609932

Sample Request Form: 82183

den_msvoa_totalbacklog Gabe 4/24/2023 9:08:30 PM Assigned to:Jones, Branden M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-174912-3MS	2304-B11	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-3MSD	2304-B11	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-6	2304-B9	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-7	2304-FD04	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-26	2304-TB01	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174912-30	2304-MW112	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	Mtls-Strge & VS-9	Unconfirmed
280-174912-31	2304-P3	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	Mtls-Strge & VS-9	Unconfirmed
280-174912-32	2304-MW103	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	Mtls-Strge & VS-9	Unconfirmed
280-174912-36	2304-TB02	1x	8260D	8260D	04/25 23:59	04/24/23	NCR	ID	VS-9	Unconfirmed
280-174955-14	TRIP BLANKS	1x	8260D	8260D	04/25 23:59	04/25/23	PJM	UT	VS-15 & VS-12	Unconfirmed
280-174957-7	EB-01-20230411	1x	8260D	8260D	04/25 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-3	RW-10-20230411	1x	8260D	8260D	04/25 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-4	RW-5-20230411	1x	8260D	8260D	04/25 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed
M 8260 Supp Spk DIL2										
280-174962-5	RW-9R-20230411	4x	8260D	8260D	04/25 23:59	05/01/23	DTB	ID	VS-12	Unconfirmed

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b

Worklist Name:	042423pM	Worklist Num:	120722
Instrument:	VMS_X4	Method:	VMS_X4_8260
Analysis Type:	VOA	Creator:	Jones, Branden M
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 609932
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-174912-A-26	# 11 280-174912-A-26
# 12 280-174912-B-36	# 12 280-174912-B-36
# 13 280-174955-A-14	# 13 280-174955-A-14
# 14 280-174957-B-7	# 14 280-174957-B-7
# 15 280-174912-C-3	# 15 280-174912-C-3
# 16 280-174912-B-6	# 16 280-174912-B-6
# 17 280-174912-C-7	# 17 280-174912-C-7
# 18 280-174912-C-30	# 18 280-174912-C-30
# 19 280-174912-D-31	# 19 280-174912-D-31
# 20 280-174912-E-32	# 20 280-174912-E-32
# 21 280-174962-B-3	# 21 280-174962-B-3
# 22 280-174962-C-4	# 22 280-174962-C-4
# 23 280-175031-P-1	# 23 280-175031-P-1
# 24 280-174962-A-7	# 24 280-174962-A-7
# 25 280-174962-A-5	# 25 280-174962-A-5
# 26 280-174962-B-6	# 26 280-174962-B-6
# 27 280-175122-E-2	# 27 280-175122-E-2
# 28 280-175168-A-4	# 28 280-175168-A-4
# 29 280-175168-B-14	# 29 280-175168-B-14
# 30 280-174912-A-3 MS	# 30 280-174912-A-3 MS
# 31 280-174912-B-3 MSD	# 31 280-174912-B-3 MSD
# 32 CCVC	# 32 CCVC
# 33 CCVC	# 33 CCVC

Eurofins Environment Testing America
Worklist Report

Worklist Name:	042423pM	Worklist Number:	120722
Instrument Name:	VMS_X4	Chrom Method:	VMS_X4_8260
Purge Volume:	5.000	Units:	mL
Analysis Type:	VOA		
Batch Directory:	\\chromfs\Denver\ChromData\VMS_X4\20230424-120722.b		
Upload Directory:	\\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4		
Run Reagent:	mv-IS_SS_00058	Amount Added:	5.000, Units: uL
Batch #s:	609932		

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120722-001	# 1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120722-002	# 2 CCV	MV-MegaMain B_00083 MV-Gas B_00132	CCV	voaWater	5.000	mL	1.000
280-0120722-003	# 3 CCV	MV-Supp B_00062	CCV	voaWater	5.000	mL	1.000
280-0120722-004	# 4 LCSD	MV-Gas B_00132 MV-MegaMain B_00083	LCSD	voaWater	5.000	mL	1.000
280-0120722-005	# 5 LCSD	MV-Supp B_00062	LCSD	voaWater	5.000	mL	1.000
280-0120722-006	# 6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120722-007	# 7 MB		MB	voaWater	5.000	mL	1.000
280-0120722-008	# 8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120722-009	# 9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120722-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120722-011	#11 280-174912-A-26		Client	voaWater	5.000	mL	1.000
280-0120722-012	#12 280-174912-B-36		Client	voaWater	5.000	mL	1.000
280-0120722-013	#13 280-174955-A-14		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120722-014	#14 280-174957-B-7		Client	voaWater	5.000	mL	1.000
280-0120722-015	#15 280-174912-C-3		Client	voaWater	5.000	mL	1.000
280-0120722-016	#16 280-174912-B-6		Client	voaWater	5.000	mL	1.000
280-0120722-017	#17 280-174912-C-7		Client	voaWater	5.000	mL	1.000
280-0120722-018	#18 280-174912-C-30		Client	voaWater	5.000	mL	1.000
280-0120722-019	#19 280-174912-D-31		Client	voaWater	5.000	mL	1.000
280-0120722-020	#20 280-174912-E-32		Client	voaWater	5.000	mL	1.000
280-0120722-021	#21 280-174962-B-3		Client	voaWater	5.000	mL	1.000
280-0120722-022	#22 280-174962-C-4		Client	voaWater	5.000	mL	1.000
280-0120722-023	#23 280-175031-P-1		Client	voaWater	5.000	mL	1.000
280-0120722-024	#24 280-174962-A-7		Client	voaWater	5.000	mL	2.000
280-0120722-025	#25 280-174962-A-5		Client	voaWater	5.000	mL	4.000
280-0120722-026	#26 280-174962-B-6		Client	voaWater	5.000	mL	14.00
280-0120722-027	#27 280-175122-E-2		Client	voaWater	5.000	mL	4.000
280-0120722-028	#28 280-175168-A-4		Client	voaWater	5.000	mL	5.000
280-0120722-029	#29 280-175168-B-14		Client	voaWater	5.000	mL	5.000
280-0120722-030	#30 280-174912-A-3 MS	MV-MegaMain B_00083 MV-Gas B_00132	MS	voaWater	5.000	mL	1.000
280-0120722-031	#31 280-174912-B-3 MSD	MV-MegaMain B_00083 MV-Gas B_00132	MSD	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120722-032	#32 CCVC	MV-MegaMain B_00083 MV-Gas B_00132	CCVC	voaWater	5.000	mL	1.000
280-0120722-033	#33 CCVC	MV-Supp B_00062	CCVC	voaWater	5.000	mL	1.000

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042623AM
Instrument Name: VMS_P
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P

Worklist Number: 120769
Chrom Method: AQ_VMSP_8260
Units: mL

Run Reagent: mv-IS_SS_00057 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp A_00080		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp A_00080		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	~~#11 280-174970-A-14~~	~~Client~~	~~1.000~~	~~voaWater~~	~~5.000~~	~~mL~~	SC 4/26 [illegible]	6	UP
12	#12 160-49724-C-7	Client	1.000	voaWater	5.000	mL		6	UP
13	#13 280-174448-A-3	Client	1.000	voaWater	5.000	mL		5	PT
14	#14 160-49724-A-1	Client	1.000	voaWater	5.000	mL		6	UP
15	#15 160-49724-B-6	Client	1.000	voaWater	5.000	mL		6	UP
16	#16 160-49724-C-9	Client	1.000	voaWater	5.000	mL		6	UP
17	#17 280-174950-G-1	Client	1.000	voaWater	5.000	mL		<2	
18	#18 280-175032-C-5	Client	1.000	voaWater	5.000	mL	BAD PURGE		
19	#19 280-175121-F-3	Client	1.000	voaWater	5.000	mL		<2	
20	#20 280-175122-E-3	Client	1.000	voaWater	5.000	mL		<2	
21	#21 280-175165-A-5	Client	1.000	voaWater	5.000	mL		<2	
22	#22 280-175165-C-14	Client	1.000	voaWater	5.000	mL		<2	
23	#23 280-175337-A-3	Client	1.000	voaWater	5.000	mL		<2	
24	#24 280-175337-C-7	Client	1.000	voaWater	5.000	mL		<2	
25	#25 280-175337-C-11	Client	1.000	voaWater	5.000	mL		<2	
26	#26 280-175038-I-7	Client	1.000	voaWater	5.000	mL		<2	
27	#27 320-98853-G-2	Client	1.000	voaWater	5.000	mL		<2	
28	#28 280-175337-C-15	Client	4.000	voaWater	5.000	mL		<2	
29	#29 160-49724-A-1 MS	MS	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	6	UP
30	#30 160-49724-A-1 MSD	MSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	6	UP
31	#31 280-175337-B-3 MS	MS	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	<2	
32	#32 280-175337-A-3 MSD	MSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	<2	
33	#33 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
34	#34 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp A_00080		

Eurofins TestAmerica Denver
Instrument ID: P
SOP: DV-MS-0010 Rev. 29
Method: (524 / 624 / ~~8260B~~ / 8260C)
Purge Volume (20mL / 5mL)
Matrix: (Water / Soil / Waste)
Tune Time: 8:20 - 20:01
TALs Batch: 610123

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042623AM
Worklist Number: 120769
Instrument Name: VMS_P
Chrom Method: AQ_VMSP_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P

Run Reagent: mv-IS_SS_00057
Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp A_00080		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp A_00080		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
12	#12 160-49724-C-7	Client	1.000	voaWater	5.000	mL		6	UP
13	#13 280-174448-A-3	Client	1.000	voaWater	5.000	mL		6	PT
14	#14 160-49724-A-1	Client	1.000	voaWater	5.000	mL		6	UP
15	#15 160-49724-B-6	Client	1.000	voaWater	5.000	mL		6	UP
16	#16 160-49724-C-9	Client	1.000	voaWater	5.000	mL		6	UP
17	#17 280-174950-G-1	Client	1.000	voaWater	5.000	mL		<2	
18	#18 280-175032-C-5	Client	1.000	voaWater	5.000	mL		<2	
19	#19 280-175121-F-3	Client	1.000	voaWater	5.000	mL		<2	
20	#20 280-175122-E-3	Client	1.000	voaWater	5.000	mL		<2	
21	#21 280-175165-A-5	Client	1.000	voaWater	5.000	mL		<2	
22	#22 280-175165-C-14	Client	1.000	voaWater	5.000	mL		<2	
23	#23 280-175337-A-3	Client	1.000	voaWater	5.000	mL		<2	
24	#24 280-175337-C-7	Client	1.000	voaWater	5.000	mL		<2	
25	#25 280-175337-C-11	Client	1.000	voaWater	5.000	mL		<2	
26	#26 280-175038-I-7	Client	1.000	voaWater	5.000	mL		<2	
27	#27 320-98853-G-2	Client	1.000	voaWater	5.000	mL		<2	
35	#35 280-175032-D-5	Client	1.000	voaWater	5.000	mL		<2	
28	#28 280-175337-C-15	Client	4.000	voaWater	5.000	mL		<2	
29	#29 160-49724-A-1 MS	MS	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133 MV-Supp A_00080	6	UP
30	#30 160-49724-A-1 MSD	MSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133 MV-Supp A_00080	6	UP
31	#31 280-175337-B-3 MS	MS	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	<2	
32	#32 280-175337-A-3 MSD	MSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	<2	
33	#33 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
34	#34 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp A_00080		

Eurofins TestAmerica Denver
Instrument ID: P
SOP: DV-MS-0010 Rev. 29
Method: (524.2 / 8260B / 8260C)
Purge Volume (20mL / 5mL)
Matrix: (Water / Soil / Waste)
Date Time:
TALs Batch: 042623

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b

Worklist Name:	042623AM	Worklist Num:	120769
Instrument:	VMS_P	Method:	AQ_VMSP_8260
Analysis Type:	VOA	Creator:	Coulter, Dawn (goes by Shelli) M
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 610123
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-174970-A-14 S.C 4/26/23	# 11 280-174970-A-14
# 12 160-49724-C-7	# 12 160-49724-C-7
# 13 280-174448-A-3	# 13 280-174448-A-3
# 14 160-49724-A-1	# 14 160-49724-A-1
# 15 160-49724-B-6	# 15 160-49724-B-6
# 16 160-49724-C-9	# 16 160-49724-C-9
# 17 280-174950-G-1	# 17 280-174950-G-1
# 18 280-175032-C-5	# 18 280-175032-C-5
# 19 280-175121-F-3	# 19 280-175121-F-3
# 20 280-175122-E-3	# 20 280-175122-E-3
# 21 280-175165-A-5	# 21 280-175165-A-5
# 22 280-175165-C-14	# 22 280-175165-C-14
# 23 280-175337-A-3	# 23 280-175337-A-3
# 24 280-175337-C-7	# 24 280-175337-C-7
# 25 280-175337-C-11	# 25 280-175337-C-11
# 26 280-175038-I-7	# 26 280-175038-I-7
# 27 320-98853-G-2	# 27 320-98853-G-2
# 28 280-175337-C-15	# 28 280-175337-C-15
# 29 160-49724-A-1 MS	# 29 160-49724-A-1 MS
# 30 160-49724-A-1 MSD	# 30 160-49724-A-1 MSD
# 31 280-175337-B-3 MS	# 31 280-175337-B-3 MS
# 32 280-175337-A-3 MSD	# 32 280-175337-A-3 MSD
# 33 CCVC	# 33 CCVC
# 34 CCVC	# 34 CCVC

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042623AM
Worklist Number: 120769
Instrument Name: VMS_P
Chrom Method: AQ_VMSP_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_P\20230426-120769.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: mv-IS_SS_00057
Amount Added: 5.000, Units: uL
Batch #s: 610123

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120769-001	# 1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120769-002	# 2 CCV	MV-MegaMain B_00083 MV-Gas B_00133	CCV	voaWater	5.000	mL	1.000
280-0120769-003	# 3 CCV	MV-Supp A_00080	CCV	voaWater	5.000	mL	1.000
280-0120769-004	# 4 LCSD	MV-MegaMain B_00083 MV-Gas B_00133	LCSD	voaWater	5.000	mL	1.000
280-0120769-005	# 5 LCSD	MV-Supp A_00080	LCSD	voaWater	5.000	mL	1.000
280-0120769-006	# 6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120769-007	# 7 MB		MB	voaWater	5.000	mL	1.000
280-0120769-008	# 8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120769-009	# 9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120769-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120769-011	#11 280-174970-A-14		Client	voaWater	5.000	mL	1.000
280-0120769-012	#12 160-49724-C-7		Client	voaWater	5.000	mL	1.000
280-0120769-013	#13 280-174448-A-3		Client	voaWater	5.000	mL	1.000

SC 4/26/23

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120769-014	#14 160-49724-A-1		Client	voaWater	5.000	mL	1.000
280-0120769-015	#15 160-49724-B-6		Client	voaWater	5.000	mL	1.000
280-0120769-016	#16 160-49724-C-9		Client	voaWater	5.000	mL	1.000
280-0120769-017	#17 280-174950-G-1		Client	voaWater	5.000	mL	1.000
280-0120769-018	#18 280-175032-C-5		Client	voaWater	5.000	mL	1.000
280-0120769-019	#19 280-175121-F-3		Client	voaWater	5.000	mL	1.000
280-0120769-020	#20 280-175122-E-3		Client	voaWater	5.000	mL	1.000
280-0120769-021	#21 280-175165-A-5		Client	voaWater	5.000	mL	1.000
280-0120769-022	#22 280-175165-C-14		Client	voaWater	5.000	mL	1.000
280-0120769-023	#23 280-175337-A-3		Client	voaWater	5.000	mL	1.000
280-0120769-024	#24 280-175337-C-7		Client	voaWater	5.000	mL	1.000
280-0120769-025	#25 280-175337-C-11		Client	voaWater	5.000	mL	1.000
280-0120769-026	#26 280-175038-I-7		Client	voaWater	5.000	mL	1.000
280-0120769-027	#27 320-98853-G-2		Client	voaWater	5.000	mL	1.000
280-0120769-028	#28 280-175337-C-15		Client	voaWater	5.000	mL	4.000
280-0120769-029	#29 160-49724-A-1 MS	MV-MegaMain B_00083 MV-Gas B_00133	MS	voaWater	5.000	mL	1.000
280-0120769-030	#30 160-49724-A-1 MSD	MV-MegaMain B_00083 MV-Gas B_00133	MSD	voaWater	5.000	mL	1.000
280-0120769-031	#31 280-175337-B-3 MS	MV-MegaMain B_00083 MV-Gas B_00133	MS	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120769-032	#32 280-175337-A-3 MSD	MV-MegaMain B_00083 MV-Gas B_00133	MSD	voaWater	5.000	mL	1.000
280-0120769-033	#33 CCVC	MV-MegaMain B_00083 MV-Gas B_00133	CCVC	voaWater	5.000	mL	1.000
280-0120769-034	#34 CCVC	MV-Supp A_00080	CCVC	voaWater	5.000	mL	1.000

Sample Request Form: 82269

11/27/2023
7:27 PM

den_msvoa_totalbacklog Gabe 4/26/2023 9:32:11 AM Assigned to:Coulter, Dawn (goes by Shelli) M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175038-7	MW-5	1Y	8260B	8260B	04/26 23:59	05/02/23	JSC	OR	VS-12 & Mtls-Strge & 177	Unconfirmed

M Use Historical Data Checker for dilutions guidance prior to analysis

Sample Request Form: 82268

den_msvoa_totalbacklog Gabe 4/26/2023 9:31:03 AM Assigned to:Coulter, Dawn (goes by Shelli) M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175165-5	23-WDPBL00729	1X	624_5ml_DOD5	624_5ml_DOD5	04/26 23:59	05/09/23	PJM	OH	AA-2	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175165-14	23-WDPBL00741	1X	624_5ml_DOD5	624_5ml_DOD5	04/26 23:59	05/09/23	PJM	OH	AA-2	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175337-3	23-WDPHW00125	1X	624_5ml_DOD5	624_5ml_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175337-3MS	23-WDPHW00125	1X	624_5ml_DOD5	624_5ml_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175337-3MSD	23-WDPHW00125	1X	624_5ml_DOD5	624_5ml_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175337-7	23-WDPHW00130	1X	624_5ml_DOD5	624_5ml_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175337-11	23-WDPHW00135	1X	624_5ml_DOD5	624_5ml_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
280-175337-15	23-WDPHW00140	4X	624_5ml_DOD5	624_5ml_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										

Sample Request Form: 82271

den_msvoa_totalbacklog Gabe 4/26/2023 9:43:50 AM Assigned to:Coulter, Dawn (goes by Shelli) M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level	Dilution History
280-174448-3	PT-VOA-WP	PT	624.1	624.1	04/18 23:59	04/25/23	AEH	CO	W017	Unconfirmed	

S See Instructions in QASs / PT Instructions Folder

Sample Request Form: 82268

den_msvoa_totalbacklog Gabe 4/26/2023 9:31:03 AM Assigned to:Coulter, Dawn (goes by Shelli) M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
160-49724-1	E007537-01	1x	8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
S Additional volume included with sample for MS/MSD.										
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
160-49724-1MS	E007537-01	1x	8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
S Additional volume included with sample for MS/MSD.										
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
160-49724-1MSD	E007537-01	1x	8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
S Additional volume included with sample for MS/MSD.										
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
160-49724-6	E007538-01	1x	8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
160-49724-7	E007538-TB	1x	8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
280-174950-1	S29I-IDW02	1x	8260D_DOD5	8260D_DOD5	04/26 23:59	04/28/23	MOG	CO	VS-9 & Mtls-Strge & 144	Unconfirmed
M Q5.3/DIL3										
280-175032-5	MW-01	1x	8260B	8260B	04/26 23:59	05/01/23	MOG	MS	Mtls-Strge & VS-12	Unconfirmed
280-175121-3	RW-2-20230412	1x	8260D	8260D	04/26 23:59	05/03/23	DTB	ID	AA-2 & Mtls-Strge & 188	Unconfirmed
M 8260 Supp Spk DIL2										
280-175122-3	MW-118D-20230412	1x	8260D	8260D	04/26 23:59	05/03/23	DTB	ID	188 & AA-2 & Mtls-Strge	Unconfirmed
M 8260 Supp Spk DIL2										

Sample Request Form: 82268

den_msvoa_totalbacklog Gabe 4/26/2023 9:31:03 AM Assigned to:Coulter, Dawn (goes by Shelli) M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3_AP9_batch samples from this job together										
320-98853-2	FHL-IDW-W-041223	14	8260C_DOD5	8260C_DOD5	04/26 23:59	05/08/23	JMK	CA	L Soil & 164 & WC Dpt & Marked as Disposed & Shared Samples In-Transi	Unconfirmed

eurofins | Environment Testing TestAmerica

Performance Test (PT) Preparation Form

Preparation

Job #: 174448 Sample # 3

Method: 8260

Sample Name (*from vial or PT instructions*): WP Volatiles

Standard Lot #(s) or Vial #(s) (If Applicable): R35547-26

Analyst Review of PT Instructions by (Initials): S.C. (Date): 4/26/23

PT Sample Type: X Ampoule ____ Whole volume

Volume or Weight of PT Sample Used : 5.0 (Units): ul

Prepared Volume of diluted PT Sample (If reagent blank spiked from ampoule):

100 (Units): ml

2nd Analyst Witness/Review of PT Instructions by (Initials): JM (Date): 4/26/23
(This 2nd level review is to be done at the time of PT preparation)

Include a copy of the PT instructions with this form, and include both in the batch folder.

phenova™ | A Phenomenex Company
Certified Reference Materials

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Instructions for WP - Volatiles

SAMPLE DESCRIPTION

- Provided as a 1.2 mL concentrate in methanol flame sealed in a 2 mL amber ampoule.
- The concentrate should be stored at 4±2°C.

GENERAL INFORMATION

- The concentrate must be diluted prior to analysis.
- Store any remaining standard at 4±2°C.
- It is recommended to save any remaining standard until final reports have been sent.

ADDITIONAL INFORMATION

- Due to nature of volatile analytes, the standard must be analyzed **immediately** after dilution.
- The diluted standard will contain all or a subset of the analytes in the required concentration range.

INSTRUCTIONS

- The standard should be brought to room temperature when used.
- Bring a 100 mL class A volumetric flask to volume with volatile free deionized water.
- Carefully open the ampule by snapping off the top at the narrow part of the neck.
- **NEW DESIGN** - transfer exactly **5.0 µL** of the concentrate to the flask using a gas tight calibrated syringe and delivering the aliquot below the surface of the water.
- Mix the solution by inverting the volumetric flask a minimum of three times.
- **Immediately** analyze the diluted sample by your normal procedures.
- Report all results in µg/L.

Please take all necessary safety precautions when handling this product. Phenova products are intended for use by laboratory professionals only and may be hazardous. Buyer/user shall ensure sufficient knowledge, training, facilities and skills necessary to safely handle and store products provided. Material Safety Data Sheets (MSDS) for all Phenova products are available upon request.

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042623AM
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120767
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-175066-A-8	Client	1.000	voaWater	5.000	mL		<2	
12	#12 280-175066-A-7	Client	1.000	voaWater	5.000	mL			
13	#13 280-175097-A-3	Client	1.000	voaWater	5.000	mL			
14	#14 280-175097-A-2	Client	1.000	voaWater	5.000	mL			
15	#15 280-175123-B-9	Client	1.000	voaWater	5.000	mL		<2	
16	#16 160-49724-C-8	Client	1.000	voaWater	5.000	mL		6	
17	#17 280-175097-B-4	Client	1.000	voaWater	5.000	mL		<2	
18	#18 280-175097-B-5	Client	1.000	voaWater	5.000	mL			
19	#19 280-175097-B-6	Client	1.000	voaWater	5.000	mL			
20	#20 280-175097-B-7	Client	1.000	voaWater	5.000	mL			
21	#21 280-175097-A-8	Client	1.000	voaWater	5.000	mL			
22	#22 280-175097-A-9	Client	1.000	voaWater	5.000	mL			
23	#23 280-175123-F-1	Client	1.000	voaWater	5.000	mL			
24	#24 280-175123-F-2	Client	2.000	voaWater	5.000	mL			
25	#25 280-175123-D-3	Client	2.000	voaWater	5.000	mL			
26	#26 280-175122-F-1	Client	4.000	voaWater	5.000	mL			
27	#27 280-175122-D-2	Client	2.000	voaWater	5.000	mL			
28	#28 280-175066-B-1	Client	2000.0	voaWater	5.000	mL			
29	#29 280-175066-B-3	Client	2000.0	voaWater	5.000	mL			
30	#30 280-175066-A-2	Client	500.0	voaWater	5.000	mL		<2	
31	#31 160-49724-A-8 MS	MS	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083	6	
32	#32 160-49724-A-8 MSD	MSD	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083	6	
34	#34 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
35	#35 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp B_00062		
33	#33 Samp 33	Client	1.000	voaWater	5.000	mL			

dil ✓ CF
4-27-23

pH = HC293085

Eurofins TestAmerica Denver
Instrument ID: X4
SOP: DV-MS 0010 Rev. 29
Method: (524 / 624 / 8260B / 8260C) 8260D
Purge Volume: (20mL / 5mL)
Matrix: (Water / Soil / Waste)
Tune Time:
Analysis: 6/01/21

Sample Request Form: 82279

XY 4/26/23 AM

den_msvoa_totalbacklog Gabe 4/26/2023 11:55:24 AM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
160-49724-8 1X	E007539-01		8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
S Additional volume included with sample for MS/MSD										
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
160-49724-8MS	E007539-01		8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
S Additional volume included with sample for MS/MSD										
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
160-49724-8MSD	E007539-01		8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
S Additional volume included with sample for MS/MSD										
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
280-175066-1 2000X	GWS1H23-OW-37-B2		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175066-2 500X	GWS1H23-OW-37-D		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175066-3 2000X	GWS1H23-OW-41-B2		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175066-7 1X	EB-041323		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175066-8	TB-041323		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175097-2	EB-CMPSC-GMW-9-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed

11/27/2023 7:27 PM

Sample Request Form: 82279

den_msvoa_totalbacklog Gabe 4/26/2023 11:55:24 AM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
M Q5.4_No variances										
280-175097-3	FB-CMPSC-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-4	CMPSC-GMW-01-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-5	CMPSC-GMW-02-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-6	CMPSC-GMW-10-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-7	CMPSC-GMW-03-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-8	CMPSC-GMW-05-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-9	CMPSC-GMW-13-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175122-1	RW-1-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2 & Mtls-Strge & 188	Unconfirmed
M 8260 Supp Spk DIL2										
280-175122-4	MP-3-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										

Sample Request Form: 82279

den_msvoa_totalbacklog Gabe 4/26/2023 11:55:24 AM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175123-1 1x	MW-119D-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	Mtls-Strge & AA-2 & 188	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-2 2x	MW-119S-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	Mtls-Strge & 188 & AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-3 2x	RW-3-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2 & Mtls-Strge & 188	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-9 1x	EB-03-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b

Worklist Name:	042623AM	Worklist Num:	120767
Instrument:	VMS_X4	Method:	VMS_X4_8260
Analysis Type:	VOA	Creator:	Dobransky, Michael E
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 610121
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-175066-A-8	# 11 280-175066-A-8
# 12 280-175066-A-7	# 12 280-175066-A-7
# 13 280-175097-A-3	# 13 280-175097-A-3
# 14 280-175097-A-2	# 14 280-175097-A-2
# 15 280-175123-B-9	# 15 280-175123-B-9
# 16 160-49724-C-8	# 16 160-49724-C-8
# 17 280-175097-B-4	# 17 280-175097-B-4
# 18 280-175097-B-5	# 18 280-175097-B-5
# 19 280-175097-B-6	# 19 280-175097-B-6
# 20 280-175097-B-7	# 20 280-175097-B-7
# 21 280-175097-A-8	# 21 280-175097-A-8
# 22 280-175097-A-9	# 22 280-175097-A-9
# 23 280-175123-F-1	# 23 280-175123-F-1
# 24 280-175123-F-2	# 24 280-175123-F-2
# 25 280-175123-D-3	# 25 280-175123-D-3
# 26 280-175122-F-1	# 26 280-175122-F-1
# 27 280-175122-D-2	# 27 280-175122-D-2
# 28 280-175066-B-1	# 28 280-175066-B-1
# 29 280-175066-B-3	# 29 280-175066-B-3
# 30 280-175066-A-2	# 30 280-175066-A-2
# 31 160-49724-A-8 MS	# 31 160-49724-A-8 MS
# 32 160-49724-A-8 MSD	# 32 160-49724-A-8 MSD
# 34 CCVC	# 34 CCVC
# 35 CCVC	# 35 CCVC
# 33 Samp 33	# 33 Samp 33

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042623AM
Worklist Number: 120767
Instrument Name: VMS_X4
Chrom Method: VMS_X4_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4
Run Reagent: mv-IS_SS_00058
Amount Added: 5.000, Units: uL
Batch #s: 610121

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120767-001	#1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120767-002	#2 CCV	MV-MegaMain B_00083 MV-Gas B_00133	CCV	voaWater	5.000	mL	1.000
280-0120767-003	#3 CCV	MV-Supp B_00062	CCV	voaWater	5.000	mL	1.000
280-0120767-004	#4 LCSD	MV-Gas B_00133 MV-MegaMain B_00083	LCSD	voaWater	5.000	mL	1.000
280-0120767-005	#5 LCSD	MV-Supp B_00062	LCSD	voaWater	5.000	mL	1.000
280-0120767-006	#6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120767-007	#7 MB		MB	voaWater	5.000	mL	1.000
280-0120767-008	#8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120767-009	#9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120767-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120767-011	#11 280-175066-A-8		Client	voaWater	5.000	mL	1.000
280-0120767-012	#12 280-175066-A-7		Client	voaWater	5.000	mL	1.000
280-0120767-013	#13 280-175097-A-3		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120767-032	#32 160-49724-A-8 MSD	MV-Gas B_00133 MV-MegaMain B_00083	MSD	voaWater	5.000	mL	1.000
280-0120767-034	#34 CCVC	MV-MegaMain B_00083 MV-Gas B_00133	CCVC	voaWater	5.000	mL	1.000
280-0120767-035	#35 CCVC	MV-Supp B_00062	CCVC	voaWater	5.000	mL	1.000
280-0120767-033	#33 Samp 33		Client	voaWater	5.000	mL	1.000

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042723AM
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120830
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-175202-A-21	Client	1.000	voaWater	5.000	mL		CZ	
12	#12 280-175489-B-2	Client	1.000	voaWater	5.000	mL		CZ	
13	#13 280-175123-B-8	Client	1.000	voaWater	5.000	mL		CZ	
14	#14 280-175339-B-1	Client	1.000	voaWater	5.000	mL		CZ	
15	#15 280-175176-B-2	Client	1.000	voaWater	5.000	mL		CZ	
16	#16 280-175339-B-2	Client	1.000	voaWater	5.000	mL		CZ	
17	#17 280-175339-B-3	Client	1.000	voaWater	5.000	mL		CZ	
18	#18 280-175122-B-7	Client	1.000	voaWater	5.000	mL		CZ	
19	#19 280-175123-B-4	Client	1.000	voaWater	5.000	mL	#5	CZ	
20	#20 280-175123-B-5	Client	1.000	voaWater	5.000	mL		CZ	
21	#21 280-175202-C-17	Client	1.000	voaWater	5.000	mL		CZ	
22	#22 280-175202-C-19	Client	1.000	voaWater	5.000	mL		CZ	
23	#23 280-175202-C-20	Client	1.000	voaWater	5.000	mL		CZ	
24	#24 280-175489-B-1	Client	1.000	voaWater	5.000	mL		CZ	
25	#25 280-175489-B-5	Client	1.000	voaWater	5.000	mL		CZ	
26	#26 280-175489-B-6	Client	1.000	voaWater	5.000	mL		CZ	
27	#27 280-175122-A-4	Client	2.000	voaWater	5.000	mL		CZ	
28	#28 280-175121-B-5	Client	2.000	voaWater	5.000	mL		CZ	
29	#29 280-175121-B-8	Client	2.000	voaWater	5.000	mL		CZ	
30	#30 280-175339-B-1 MS	MS	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083	CZ	
31	#31 280-175339-B-1 MSD	MSD	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083	CZ	
33	#33 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
34	#34 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp B_00062		
32	#32 Samp 32	Client	1.000	voaWater	5.000	mL			

Dilution 04/27
check B5

HC293080

X9 29
Vol
TALs Batch: 610847

Sample Request Form: 82320

X4 4/27/23

den_msvoa_totalbacklog Gabe 4/27/2023 12:36:39 PM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175121-5 2x	MW-110S-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175121-8 2x	MP-4-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175122-4 2x	MP-3-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175122-7 1x	MW-102S-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-4	MW-113D-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-5	MW-113S-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-8	EB-04-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175176-2	SB64-02-1A_F23Q3_53SPL		8260B_DOD5	8260B_DOD5	04/28 23:59	05/04/23	PJM	CA	AA-2	Unconfirmed
M Q5.3_ DIL3_ Client must be immediately notified of dilutions > 3x										
280-175202-17	2304-B6A		8260D	8260D	04/28 23:59	05/01/23	NCR	ID	VS-8	Unconfirmed
280-175202-19	2304-EW6		8260D	8260D	04/28 23:59	05/01/23	NCR	ID	VS-8	Unconfirmed
280-175202-20	2304-MW106		8260D	8260D	04/28 23:59	05/01/23	NCR	ID	VS-8 & Mtls-Strge	Unconfirmed

4/27/2023
12:36PM

Sample Request Form: 82320

den_msvoa_totalbacklog Gabe 4/27/2023 12:36:39 PM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175202-21	TB11		8260D	8260D	04/28 23:59	05/01/23	NCR	ID	VS-8	Unconfirmed
280-175339-1	23-PP006		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175339-1MS	23-PP006		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175339-1MSD	23-PP006		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175339-2	23-PP007		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175339-3	23-PP008		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175489-1	23-DTOP0535		8260D_DOD5	8260D_DOD5	05/02 23:59	04/28/23	PJM	OH	VS-9	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3										
280-175489-2	23-DTOP0536		8260D_DOD5	8260D_DOD5	05/02 23:59	04/28/23	PJM	OH	VS-9	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3										
280-175489-5	23-DTOP0548		8260D_DOD5	8260D_DOD5	05/02 23:59	04/28/23	PJM	OH	VS-9	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3										
280-175489-6	23-DTOP0552		8260D_DOD5	8260D_DOD5	05/02 23:59	04/28/23	PJM	OH	VS-9	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3										

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11/27/2023 7:27 PM

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b

Worklist Name:	042723AM	Worklist Num:	120830
Instrument:	VMS_X4	Method:	VMS_X4_8260
Analysis Type:	VOA	Creator:	Dobransky, Michael E
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 610347
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-175202-A-21	# 11 280-175202-A-21
# 12 280-175489-B-2	# 12 280-175489-B-2
# 13 280-175123-B-8	# 13 280-175123-B-8
# 14 280-175339-B-1	# 14 280-175339-B-1
# 15 280-175176-B-2	# 15 280-175176-B-2
# 16 280-175339-B-2	# 16 280-175339-B-2
# 17 280-175339-B-3	# 17 280-175339-B-3
# 18 280-175122-B-7	# 18 280-175122-B-7
# 19 280-175123-B-4	# 19 280-175123-B-4
# 20 280-175123-B-5	# 20 280-175123-B-5
# 21 280-175202-C-17	# 21 280-175202-C-17
# 22 280-175202-C-19	# 22 280-175202-C-19
# 23 280-175202-C-20	# 23 280-175202-C-20
# 24 280-175489-B-1	# 24 280-175489-B-1
# 25 280-175489-B-5	# 25 280-175489-B-5
# 26 280-175489-B-6	# 26 280-175489-B-6
# 27 280-175122-A-4	# 27 280-175122-A-4
# 28 280-175121-B-5	# 28 280-175121-B-5
# 29 280-175121-B-8	# 29 280-175121-B-8
# 30 280-175339-B-1 MS	# 30 280-175339-B-1 MS
# 31 280-175339-B-1 MSD	# 31 280-175339-B-1 MSD
# 33 CCVC	# 33 CCVC
# 34 CCVC	# 34 CCVC
# 32 Samp 32	# 32 Samp 32

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042723AM
Worklist Number: 120830
Instrument Name: VMS_X4
Chrom Method: VMS_X4_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4
Run Reagent: mv-IS_SS_00058
Amount Added: 5.000, Units: uL
Batch #s: 610347

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120830-001	#1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120830-002	#2 CCV	MV-MegaMain B_00083 MV-Gas B_00133	CCV	voaWater	5.000	mL	1.000
280-0120830-003	#3 CCV	MV-Supp B_00062	CCV	voaWater	5.000	mL	1.000
280-0120830-004	#4 LCSD	MV-Gas B_00133 MV-MegaMain B_00083	LCSD	voaWater	5.000	mL	1.000
280-0120830-005	#5 LCSD	MV-Supp B_00062	LCSD	voaWater	5.000	mL	1.000
280-0120830-006	#6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120830-007	#7 MB		MB	voaWater	5.000	mL	1.000
280-0120830-008	#8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120830-009	#9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120830-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120830-011	#11 280-175202-A-21		Client	voaWater	5.000	mL	1.000
280-0120830-012	#12 280-175489-B-2		Client	voaWater	5.000	mL	1.000
280-0120830-013	#13 280-175123-B-8		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120830-033	#33 CCVC	MV-MegaMain B_00083 MV-Gas B_00133	CCVC	voaWater	5.000	mL	1.000
280-0120830-034	#34 CCVC	MV-Supp B_00062	CCVC	voaWater	5.000	mL	1.000
280-0120830-032	#32 Samp 32		Client	voaWater	5.000	mL	1.000

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042723pM
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230427-120863.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120863
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083 MV-Supp B_00062		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL			
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-175121-B-11	Client	1.000	voaWater	5.000	mL		LL	
12	#12 280-175122-A-9	Client	1.000	voaWater	5.000	mL		LL	
13	#13 280-175143-B-2	Client	1.000	voaWater	5.000	mL		5	UP HS
14	#14 280-175548-A-2	Client	1.000	voaWater	5.000	mL		LL	
15	#15 280-175121-C-1	Client	1.000	voaWater	5.000	mL		5	UP
16	#16 280-175714-G-9	Client	1.000	voaWater	5.000	mL		LL	
17	#17 280-175121-A-6	Client	1.000	voaWater	5.000	mL		LL	
18	#18 280-175121-B-7	Client	1.000	voaWater	5.000	mL		LL	
19	#19 280-175121-B-9	Client	1.000	voaWater	5.000	mL		LL	
20	#20 280-175121-C-10	Client	1.000	voaWater	5.000	mL		LL	
21	#21 280-175122-C-6	Client	1.000	voaWater	5.000	mL		LL	
22	#22 280-175122-A-8	Client	1.000	voaWater	5.000	mL		6	UP
23	#23 280-175548-D-1	Client	1.000	voaWater	5.000	mL		6	UP
24	#24 280-175549-C-2	Client	1.000	voaWater	5.000	mL		LL	DBR
31	#31 280-174968-F-7	Client	1.000	voaWater	5.000	mL		6	UP
25	#25 280-175549-E-1	Client	4.000	voaWater	5.000	mL		6	UP
26	#26 280-175549-C-3	Client	4.000	voaWater	5.000	mL		LL	
32	#32 280-175112-V-10	Client	5.000	voaWater	5.000	mL			
27	#27 280-175121-A-6 MS	MS	5.000 1x MD 4/28/23	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	LL	
28	#28 280-175121-A-6 MSD	MSD	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133	LL	
29	#29 ccvc	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133 MV-Supp B_00062		
30	#30 ccvc	CCVC	1.000	voaWater	5.000	mL			
33	#33 Samp 33	Client	1.000	voaWater	5.000	mL			

DIL ✓ MD 4/28/23

pH Lot #: HC29085

Eurofins Test America, Denver
Instrument ID: X4
SOP: UV-MS-0010 Rev. 29
Method: (524 / 624 / 8260B / 8260C)
Purge Volume: (20mL / 40mL)
Matrix: (Water / Soil / Waste)
Tune Time: 21:28 - 07:04
TALs Batch: 610485

4/28/2023
12:22AM

Sample Request Form: 82345

den_msvoa_totalbacklog Gabe 4/28/2023 12:22:14 AM Assigned to:Jones, Branden M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175121-1	EB-05-20230415	1p	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175121-6	MW-109S-20230415	1p	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175121-6MS	MW-109S-20230415	1p	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175121-6MSD	MW-109S-20230415	1p	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175121-7	MW-109S-Q-20230415	1x	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175121-9	MW-103S-20230415	1x	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175121-10	MW-101S-20230415	1p	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175121-11 ✓	TB-06-20230416	1p	8260D	8260D	04/30 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175122-6	MW-123-20230415	1p	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175122-8	MW-115S-20230415	1x	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed

04/19

04/27/2023 7:27 PM

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Sample Request Form: 82345

den_msvoa_totalbacklog Gabe 4/28/2023 12:22:14 AM Assigned to:Jones, Branden M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
M 8260 Supp Spk DIL2										
280-175122-9	TB-07-20230416	1x	8260D	8260D	04/30 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175143-2	TRPBLK	1x	8260B	8260B	04/30 23:59	05/16/23	MOG	TX	AA-2	Unconfirmed
M SUPSPK/TXQAS										
280-175548-1	MW-16R	1x	8260B	8260B	05/01 23:59	05/11/23	JSC	OH	232 & VS-9	Unconfirmed
M 2-CLEVE; ME not allowed (per state of OH)										
280-175548-2	TB042423T	1x	8260B	8260B	05/01 23:59	05/11/23	JSC	OH	VS-9	Unconfirmed
M 2-CLEVE; ME not allowed (per state of OH)										
280-175549-1	North Primary	1x	8260B	8260B	05/01 23:59	05/11/23	JSC	OH	232 & VS-9	Unconfirmed
M 2-CLEVE; ME not allowed (per state of OH)										
280-175549-2	South Secondary	1x	8260B	8260B	05/01 23:59	05/11/23	JSC	OH	VS-9 & 232	Unconfirmed
M 2-CLEVE; ME not allowed (per state of OH)										
280-175549-3	South Primary	1x	8260B	8260B	05/01 23:59	05/11/23	JSC	OH	VS-9 & 232	Unconfirmed
M 2-CLEVE; ME not allowed (per state of OH)										
280-175714-9	BD	1x	8260B	8260B	04/30 23:59	05/09/23	NCR	LA	AA-2 & Mtls-Strge & VS-15 & 237	Unconfirmed

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Office MS9

11/27/2023
7:27 PM

Sample Request Form: 82346

den_msvoa_totalbacklog Gabe 4/28/2023 3:43:32 AM Assigned to:Jones, Branden M

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175112-10	G01S		8260B	8260B	04/28 23:59	05/04/23	JSC	IL	WC Dpt & Mtls-Strge & 183 & Marked as Disposed & AA-2	Unconfirmed
M DIL3										

Eurofins Environment Testing America
Worklist Report

Worklist Name: 040623ical
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120207
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Ical Lvl	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB		1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV		1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		
3	# 3 CCV	CCV		1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00082		
5	# 5 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client		1.000	voaWater	5.000	mL			
7	# 7 MB	MB		1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client		1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client		1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client		1.000	voaWater	5.000	mL			
19	#19 STD	IC	1	1.000	voaWater	5.000	mL	Cal Dil Std_00162		
18	#18 STD	IC	2	1.000	voaWater	5.000	mL	Cal Dil Std_00162		
16	#16 STD	IC	4	1.000	voaWater	5.000	mL	Cal Dil Std_00162		
17	#17 STD	IC	3	1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00086		
15	#15 STD	IC	5	1.000	voaWater	5.000	mL	MV-MegaMainA_00086 MV-Gas A_00150		
14	#14 ICIS	ICIS	6	1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00086		
13	#13 STD	IC	7	1.000	voaWater	5.000	mL	MV-MegaMainA_00086 MV-Gas A_00150		
12	#12 STD	IC	8	1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00086		
11	#11 STD	IC	9	1.000	voaWater	5.000	mL	MV-MegaMainA_00086 MV-Gas A_00150		
20	#20 ICV	ICV		1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00082		

Rerun of ICV in batch 608203 Line 8: All compounds within 20%, except:
2-CLEVE (+52.1%)

Eurofins TestAmerica Denver
Instrument ID: _____
SOP: DV-MS-00010 Rev. _____
Method: (_____)
Purge Volume: (5ml / 25ml)
Matrix: (Water / Soil / Waste)
Time Times: _____
TALs Batch: _____
4/11/23

Eurofins TestAmerica Denver
Instrument ID: X4 28 29
SOP: DV-MS-00010 Rev. 4
Method: (624 / 8260 / 8260C / 8260D)
Purge Volume: (5ml / 25ml)
Matrix: (Water / Soil / Waste)
02:33 - 06:39
607881
4/11/23

ICV Line 20: All compounds ≤ 20% except for: Vinyl Chloride (+22.5%) & Cyclohexanone (+27.2%)

4/11/23

Main only

Eurofins Environment Testing America
Worklist Report

Worklist Name: 041123ical
Instrument Name: VMS_P
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_P\20230411-120312.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P

Worklist Number: 120312
Chrom Method: AQ_VMSP_8260
Units: mL

Run Reagent: mv-IS_SS_00057 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Ical Lvl	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB		1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV		1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		
3	# 3 CCV	CCV		1.000	voaWater	5.000	mL	MV-Supp A_00079		
4	# 4 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		
5	# 5 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Supp A_00079		
6	# 6 RINSE	Client		1.000	voaWater	5.000	mL			Supp ICV: 11
7	# 7 MB	MB		1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client		1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client		1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client		1.000	voaWater	5.000	mL			
11	#11 ICV	ICV		1.000	voaWater	5.000	mL	MV-Supp A_00080		
12	#12 STD005	IC	1	1.000	voaWater	5.000	mL	Cal Dil Std_00161		Calib: 79167
13	#13 STD010	IC	2	1.000	voaWater	5.000	mL	Cal Dil Std_00161		
14	#14 STD020	IC	3	1.000	voaWater	5.000	mL	Cal Dil Std_00161		
15	#15 STD050	IC	4	1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		Main Only
16	#16 STD10	IC	5	1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		ICIS: 17
17	#17 ICIS	ICIS	6	1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		
18	#18 STD75	IC	7	1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		ICV: 21
19	#19 STD100	IC	8	1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		
20	#20 STD200	IC	9	1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		
21	#21 ICV	ICV		1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00087		
22	#22 Samp 22	Client		1.000	voaWater	5.000	mL			

Cyclohexanone -22%D

4/13/23

GAS only

Eurofins Environment Testing America
Worklist Report

Worklist Name: 041223
Instrument Name: VMS_P
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_P\20230412-120328.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P

Worklist Number: 120328
Chrom Method: AQ_VMSP_8260
Units: mL

Run Reagent: mv-IS_SS_00057 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Ical Lvl	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB		1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV		1.000	voaWater	5.000	mL	MV-MegaMain B_00082		
3	# 3 CCV	CCV		1.000	voaWater	5.000	mL	MV-Supp A_00079		
11	#11 CCV	CCV		1.000	voaWater	5.000	mL	MV-Gas B_00132		
4	# 4 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		
5	# 5 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Supp A_00079		
6	# 6 RINSE	Client		1.000	voaWater	5.000	mL			Calib: 74197
7	# 7 MB	MB		1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client		1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client		1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client		1.000	voaWater	5.000	mL			
12	#12 STD005	IC	1	1.000	voaWater	5.000	mL	Cal Dil Std_00165		
13	#13 STD010	IC	2	1.000	voaWater	5.000	mL	Cal Dil Std_00165		
14	#14 STD020	IC	3	1.000	voaWater	5.000	mL	Cal Dil Std_00165		ICIS: 17
15	#15 STD050	IC	4	1.000	voaWater	5.000	mL	MV-Gas B_00132		
16	#16 STD10	IC	5	1.000	voaWater	5.000	mL	MV-Gas B_00132		
17	#17 ICIS	ICIS	6	1.000	voaWater	5.000	mL	MV-Gas B_00132		ICV: 21
18	#18 STD75	IC	7	1.000	voaWater	5.000	mL	MV-Gas B_00132		
19	#19 STD100	IC	8	1.000	voaWater	5.000	mL	MV-Gas B_00132		
20	#20 STD200	IC	9	1.000	voaWater	5.000	mL	MV-Gas B_00132		
21	#21 ICV	ICV		1.000	voaWater	5.000	mL	MV-Gas A_00150		

Eurofins Denver
Instrument ID: P
VMS-0010 Rev. 29
8260B / 624 / 8260B / 8260C
Purge Volume (20mL / 5mL)
Matrix: (Water / Soil / Waste)
Run Time: 816-1515 JL 4/13/23
Worklist: ~~600~~8346 600~~8~~364

Bromomethane -20.5%D

Reviewed By: JL 4/13/23
Date: 4/18/23

Eurofins Environment Testing America
Worklist Report

Worklist Name: 041823ic
Instrument Name: VMS_MS1
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_MS1

Worklist Number: 120497
Chrom Method: AQ_VMS1_8260
Units: mL

Run Reagent: mv-IS_SS_00057 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Ical Lvl	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB		1.000	voaWater	5.000	mL	mv-Cent BFB_00005		
2	# 2 CCV	CCV		1.000	voaWater	5.000	mL	MV-Gas A_00151 MV-MegaMainA_00087		
3	# 3 CCV	CCV		1.000	voaWater	5.000	mL	MV-Supp A_00080		
4	# 4 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Gas A_00151 MV-MegaMainA_00087		
5	# 5 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Supp A_00080		
6	# 6 RINSE	Client		1.000	voaWater	5.000	mL			
7	# 7 MB	MB		1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client		1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client		1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client		1.000	voaWater	5.000	mL			
34	#34 ic	IC	9	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
35	#35 ic	IC	8	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
36	#36 ic	IC	7	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
37	#37 icis	ICIS	6	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
38	#38 ic	IC	5	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
39	#39 ic	IC	4	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
40	#40 ic	IC	3	1.000	voaWater	5.000	mL	Cal Dil Std_00169		
41	#41 ic	IC	2	1.000	voaWater	5.000	mL	Cal Dil Std_00169		
42	#42 ic	IC	1	1.000	voaWater	5.000	mL	Cal Dil Std_00169		
43	#43 icv	ICV		1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		

Calib ID 79362

ICV: all ±20%D

Eurofins TestAmerica Denver
Instrument ID: MS1
SOP: DV-MS 0010 Rev.___
Method: (524 / 624 / 8260B / 8260C)
Purge Volume (20mL / 5mL)
Matrix: (Water / Soil / Waste)
Tune Time: 09:29-19.19
TALs Batch: 609046

1st Level Review: Tam 4-19-23
2nd Level Review: JL 4/19/23

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 590907 Batch Start Date: 10/22/22 11:07 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Acrolein_A 00015	Cal Dil Std 00104	mv-Cent BFB 00004	mv-Cent IS 00007
BFB 280-590907/1		8260D		2 uL	2 uL			5 uL	
STD005 280-590907/13 IC		8260D		5 mL	5 mL		5 uL		
STD010 280-590907/14 IC		8260D		5 mL	5 mL		10 uL		
STD020 280-590907/15 IC		8260D		5 mL	5 mL		20 uL		
STD050 280-590907/16 IC		8260D		5 mL	5 mL	2.5 uL			
STD10 280-590907/17 IC		8260D		5 mL	5 mL	5 uL			
ICIS 280-590907/18		8260D		5 mL	5 mL	25 uL			
STD75 280-590907/19 IC		8260D		5 mL	5 mL	37.5 uL			
STD100 280-590907/20 IC		8260D		5 mL	5 mL	50 uL			
STD200 280-590907/21 IC		8260D		5 mL	5 mL	100 uL			
ICV 280-590907/22		8260D		5 mL	5 mL				
STD010 280-590907/23 IC		8260D		5 mL	5 mL				5 uL
STD020 280-590907/24 IC		8260D		5 mL	5 mL				5 uL
STD050 280-590907/25 IC		8260D		5 mL	5 mL				5 uL
STD10 280-590907/26 IC		8260D		5 mL	5 mL				5 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 590907 Batch Start Date: 10/22/22 11:07 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Acrolein_A 00015	Cal Dil Std 00104	mv-Cent BFB 00004	mv-Cent IS 00007
STD50 280-590907/27 IC		8260D		5 mL	5 mL				5 uL
STD100 280-590907/28 IC		8260D		5 mL	5 mL				5 uL
STD200 280-590907/29 IC		8260D		5 mL	5 mL				5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas A 00136	MV-Gas B 00120	mv-IS_SS 00049	MV-MegaMain B 00076	MV-MegaMainA 00078	MV-Supp A 00073
BFB 280-590907/1		8260D							
STD005 280-590907/13 IC		8260D				5 uL			
STD010 280-590907/14 IC		8260D				5 uL			
STD020 280-590907/15 IC		8260D				5 uL			
STD050 280-590907/16 IC		8260D		1 uL		5 uL		2.5 uL	
STD10 280-590907/17 IC		8260D		2 uL		5 uL		5 uL	
ICIS 280-590907/18		8260D		10 uL		5 uL		25 uL	
STD75 280-590907/19 IC		8260D		15 uL		5 uL		37.5 uL	
STD100 280-590907/20 IC		8260D		20 uL		5 uL		50 uL	
STD200 280-590907/21 IC		8260D		40 uL		5 uL		100 uL	
ICV 280-590907/22		8260D			10 uL	5 uL	25 uL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 590907 Batch Start Date: 10/22/22 11:07 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas A 00136	MV-Gas B 00120	mv-IS_SS 00049	MV-MegaMain B 00076	MV-MegaMainA 00078	MV-Supp A 00073
STD010 280-590907/23 IC		8260D							1 uL
STD020 280-590907/24 IC		8260D							2 uL
STD050 280-590907/25 IC		8260D							5 uL
STD10 280-590907/26 IC		8260D							10 uL
STD50 280-590907/27 IC		8260D							50 uL
STD100 280-590907/28 IC		8260D							100 uL
STD200 280-590907/29 IC		8260D							200 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-TAOH_CUST 00004					
BFB 280-590907/1		8260D							
STD005 280-590907/13 IC		8260D							
STD010 280-590907/14 IC		8260D							
STD020 280-590907/15 IC		8260D							
STD050 280-590907/16 IC		8260D							
STD10 280-590907/17 IC		8260D							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 590907 Batch Start Date: 10/22/22 11:07 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-TAOH_CUST 00004					
ICIS 280-590907/18		8260D							
STD75 280-590907/19 IC		8260D							
STD100 280-590907/20 IC		8260D							
STD200 280-590907/21 IC		8260D							
ICV 280-590907/22		8260D							
STD010 280-590907/23 IC		8260D		1 uL					
STD020 280-590907/24 IC		8260D		2 uL					
STD050 280-590907/25 IC		8260D		5 uL					
STD10 280-590907/26 IC		8260D		10 uL					
STD50 280-590907/27 IC		8260D		50 uL					
STD100 280-590907/28 IC		8260D		100 uL					
STD200 280-590907/29 IC		8260D		200 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 590907 Batch Start Date: 10/22/22 11:07 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 590924 Batch Start Date: 10/23/22 12:37 Batch Analyst: Pepping, Andrew J

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-ETOH_CUS B 00003	mv-IS_SS 00049	MV-Supp B 00054	
ICV 280-590924/12		8260D		5 mL	5 mL	25 uL	5 uL	25 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 597846 Batch Start Date: 12/28/22 07:14 Batch Analyst: Sunlee, Claire K

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00004	mv-Cent IS 00007	MV-Supp A 00076	MV-Supp B 00057
BFB 280-597846/1		8260D		5 mL	5 mL	5 uL			
STD1 280-597846/12 IC		8260D		5 mL	5 mL		5 uL	1 uL	
STD2 280-597846/13 IC		8260D		5 mL	5 mL		5 uL	2 uL	
STD5 280-597846/14 IC		8260D		5 mL	5 mL		5 uL	5 uL	
STD10 280-597846/15 IC		8260D		5 mL	5 mL		5 uL	10 uL	
STD50 280-597846/16 IC		8260D		5 mL	5 mL		5 uL	50 uL	
STD75 280-597846/17 IC		8260D		5 mL	5 mL		5 uL	75 uL	
STD100 280-597846/18 IC		8260D		5 mL	5 mL		5 uL	100 uL	
STD200 280-597846/19 IC		8260D		5 mL	5 mL		5 uL	100 uL	
ICV 280-597846/20		8260D		5 mL	5 mL		5 uL		50 uL

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 607881 Batch Start Date: 04/07/23 02:33 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00162	mv-Cent BFB 00005	MV-Gas A 00150	mv-IS_SS 00058
BFB 280-607881/1		8260D		2 uL	2 uL		5 uL		
STD 280-607881/11 IC		8260D		5 mL	5 mL			40 uL	5 uL
STD 280-607881/12 IC		8260D		5 mL	5 mL			20 uL	5 uL
STD 280-607881/13 IC		8260D		5 mL	5 mL			15 uL	5 uL
ICIS 280-607881/14		8260D		5 mL	5 mL			10 uL	5 uL
STD 280-607881/15 IC		8260D		5 mL	5 mL			2 uL	5 uL
STD 280-607881/16 IC		8260D		5 mL	5 mL	20 uL			5 uL
STD 280-607881/17 IC		8260D		5 mL	5 mL			1 uL	5 uL
STD 280-607881/18 IC		8260D		5 mL	5 mL	10 uL			5 uL
STD 280-607881/19 IC		8260D		5 mL	5 mL	5 uL			5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00086					
BFB 280-607881/1		8260D							
STD 280-607881/11 IC		8260D		100 uL					
STD 280-607881/12 IC		8260D		50 uL					
STD 280-607881/13 IC		8260D		37.5 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 607881 Batch Start Date: 04/07/23 02:33 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00086					
ICIS 280-607881/14		8260D		25 uL					
STD 280-607881/15 IC		8260D		5 uL					
STD 280-607881/16 IC		8260D							
STD 280-607881/17 IC		8260D		2.5 uL					
STD 280-607881/18 IC		8260D							
STD 280-607881/19 IC		8260D							

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608141 Batch Start Date: 04/10/23 12:02 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00161	mv-Cent BFB 00005	mv-Cent IS 00007	MV-Gas B 00132
BFB 280-608141/1		8260D		2 uL	2 uL		2 uL		
STD005 280-608141/11 IC		8260D		5 mL	5 mL	5 uL			
STD010 280-608141/12 IC		8260D		5 mL	5 mL	10 uL			
STD020 280-608141/13 IC		8260D		5 mL	5 mL	20 uL			
STD050 280-608141/14 IC		8260D		5 mL	5 mL				1 uL
STD10 280-608141/15 IC		8260D		5 mL	5 mL				2 uL
ICIS 280-608141/16		8260D		5 mL	5 mL				10 uL
STD75 280-608141/17 IC		8260D		5 mL	5 mL				15 uL
STD100 280-608141/18 IC		8260D		5 mL	5 mL				20 uL
STD200 280-608141/19 IC		8260D		5 mL	5 mL				40 uL
STD01 280-608141/21 IC		8260D		5 mL	5 mL			5 uL	
STD02 280-608141/22 IC		8260D		5 mL	5 mL			5 uL	
STD05 280-608141/23 IC		8260D		5 mL	5 mL			5 uL	
STD10 280-608141/24 IC		8260D		5 mL	5 mL			5 uL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608141 Batch Start Date: 04/10/23 12:02 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00161	mv-Cent BFB 00005	mv-Cent IS 00007	MV-Gas B 00132
STD50 280-608141/25 IC		8260D		5 mL	5 mL			5 uL	
STD100 280-608141/26 IC		8260D		5 mL	5 mL			5 uL	
STD200 280-608141/27 IC		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057	MV-MegaMain B 00082	MV-Supp B 00062			
BFB 280-608141/1		8260D							
STD005 280-608141/11 IC		8260D		5 uL					
STD010 280-608141/12 IC		8260D		5 uL					
STD020 280-608141/13 IC		8260D		5 uL					
STD050 280-608141/14 IC		8260D		5 uL	2.5 uL				
STD10 280-608141/15 IC		8260D		5 uL	5 uL				
ICIS 280-608141/16		8260D		5 uL	25 uL				
STD75 280-608141/17 IC		8260D		5 uL	37.5 uL				
STD100 280-608141/18 IC		8260D		5 uL	50 uL				
STD200 280-608141/19 IC		8260D		5 uL	100 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608141 Batch Start Date: 04/10/23 12:02 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057	MV-MegaMain B 00082	MV-Supp B 00062			
STD01 280-608141/21 IC		8260D				1 uL			
STD02 280-608141/22 IC		8260D				2 uL			
STD05 280-608141/23 IC		8260D				5 uL			
STD10 280-608141/24 IC		8260D				10 uL			
STD50 280-608141/25 IC		8260D				50 uL			
STD100 280-608141/26 IC		8260D				100 uL			
STD200 280-608141/27 IC		8260D				200 uL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608203 Batch Start Date: 04/10/23 21:51 Batch Analyst: Coulter, Dawn (goes by Sh

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00131	mv-IS_SS 00058	MV-MegaMain B 00082
BFB 280-608203/1		8260D		2 uL	2 uL	5 uL			
ICV 280-608203/8		8260D		5 mL	5 mL		10 uL	5 uL	25 uL

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608296 Batch Start Date: 04/11/23 15:41 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00161	mv-Cent BFB 00005	MV-Gas B 00132	mv-IS_SS 00057
BFB 280-608296/1		8260D		2 uL	2 uL		2 uL		
ICV 280-608296/11		8260D		5 mL	5 mL				5 uL
STD005 280-608296/12 IC		8260D		5 mL	5 mL	5 uL			5 uL
STD010 280-608296/13 IC		8260D		5 mL	5 mL	10 uL			5 uL
STD020 280-608296/14 IC		8260D		5 mL	5 mL	20 uL			5 uL
STD050 280-608296/15 IC		8260D		5 mL	5 mL			1 uL	5 uL
STD10 280-608296/16 IC		8260D		5 mL	5 mL			2 uL	5 uL
ICIS 280-608296/17		8260D		5 mL	5 mL			10 uL	5 uL
STD75 280-608296/18 IC		8260D		5 mL	5 mL			15 uL	5 uL
STD100 280-608296/19 IC		8260D		5 mL	5 mL			20 uL	5 uL
STD200 280-608296/20 IC		8260D		5 mL	5 mL			40 uL	5 uL
ICV 280-608296/21		8260D		5 mL	5 mL				5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00082	MV-MegaMainA 00087	MV-Supp A 00080			
BFB 280-608296/1		8260D							
ICV 280-608296/11		8260D				50 uL			
STD005 280-608296/12 IC		8260D							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608296 Batch Start Date: 04/11/23 15:41 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00082	MV-MegaMainA 00087	MV-Supp A 00080			
STD010 280-608296/13 IC		8260D							
STD020 280-608296/14 IC		8260D							
STD050 280-608296/15 IC		8260D		2.5 uL					
STD10 280-608296/16 IC		8260D		5 uL					
ICIS 280-608296/17		8260D		25 uL					
STD75 280-608296/18 IC		8260D		37.5 uL					
STD100 280-608296/19 IC		8260D		50 uL					
STD200 280-608296/20 IC		8260D		100 uL					
ICV 280-608296/21		8260D			25 uL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608364 Batch Start Date: 04/12/23 08:16 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00165	mv-Cent BFB 00005	MV-Gas A 00150	MV-Gas B 00132
BFB 280-608364/1		8260D		2 uL	2 uL		2 uL		
STD005 280-608364/12 IC		8260D		5 mL	5 mL	5 uL			
STD010 280-608364/13 IC		8260D		5 mL	5 mL	10 uL			
STD020 280-608364/14 IC		8260D		5 mL	5 mL	20 uL			
STD050 280-608364/15 IC		8260D		5 mL	5 mL				1 uL
STD10 280-608364/16 IC		8260D		5 mL	5 mL				2 uL
ICIS 280-608364/17		8260D		5 mL	5 mL				10 uL
STD75 280-608364/18 IC		8260D		5 mL	5 mL				15 uL
STD100 280-608364/19 IC		8260D		5 mL	5 mL				20 uL
STD200 280-608364/20 IC		8260D		5 mL	5 mL				40 uL
ICV 280-608364/21		8260D		5 mL	5 mL			10 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057					
BFB 280-608364/1		8260D							
STD005 280-608364/12 IC		8260D		5 uL					
STD010 280-608364/13 IC		8260D		5 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608364 Batch Start Date: 04/12/23 08:16 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057					
STD020 280-608364/14 IC		8260D		5 uL					
STD050 280-608364/15 IC		8260D		5 uL					
STD10 280-608364/16 IC		8260D		5 uL					
ICIS 280-608364/17		8260D		5 uL					
STD75 280-608364/18 IC		8260D		5 uL					
STD100 280-608364/19 IC		8260D		5 uL					
STD200 280-608364/20 IC		8260D		5 uL					
ICV 280-608364/21		8260D		5 uL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 609046 Batch Start Date: 04/18/23 09:29 Batch Analyst: Bustillos, Ethan T

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00169	mv-Cent BFB 00005	MV-Gas A 00151	MV-Gas B 00133
BFB 280-609046/1		8260D		5 mL	5 mL		5 uL		
IC 280-609046/34		8260D		5 mL	5 mL			40 uL	
IC 280-609046/35		8260D		5 mL	5 mL			20 uL	
IC 280-609046/36		8260D		5 mL	5 mL			15 uL	
ICIS 280-609046/37		8260D		5 mL	5 mL			10 uL	
IC 280-609046/38		8260D		5 mL	5 mL			2 uL	
IC 280-609046/39		8260D		5 mL	5 mL			1 uL	
IC 280-609046/40		8260D		5 mL	5 mL	20 uL			
IC 280-609046/41		8260D		5 mL	5 mL	10 uL			
IC 280-609046/42		8260D		5 mL	5 mL	5 uL			
ICV 280-609046/43		8260D		5 mL	5 mL				10 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057	MV-MegaMain B 00083	MV-MegaMainA 00087			
BFB 280-609046/1		8260D							
IC 280-609046/34		8260D		5 uL		100 uL			
IC 280-609046/35		8260D		5 uL		50 uL			
IC 280-609046/36		8260D		5 uL		37.5 uL			
ICIS 280-609046/37		8260D		5 uL		25 uL			
IC 280-609046/38		8260D		5 uL		5 uL			
IC 280-609046/39		8260D		5 uL		2.5 uL			
IC 280-609046/40		8260D		5 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 609046 Batch Start Date: 04/18/23 09:29 Batch Analyst: Bustillos, Ethan T

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057	MV-MegaMain B 00083	MV-MegaMainA 00087			
IC 280-609046/41		8260D		5 uL					
IC 280-609046/42		8260D		5 uL					
ICV 280-609046/43		8260D		5 uL	25 uL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 609561 Batch Start Date: 04/21/23 07:11 Batch Analyst: Bustillos, Ethan T

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas A 00151	mv-IS_SS 00057	MV-MegaMainA 00087
BFB 280-609561/1		8260D		5 mL	5 mL	5 uL			
CCV 280-609561/2		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
CCV 280-609561/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-609561/4		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCSD 280-609561/5		8260D		5 mL	5 mL			5 uL	
MB 280-609561/7		8260D		5 mL	5 mL			5 uL	
280-175122-D-5	MW-111D-20230414	8260D	T	5 mL	5 mL			5 uL	
CCVC 280-609561/53		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
CCVC 280-609561/54		8260D		5 mL	5 mL			5 uL	
LCS 280-609561/1002		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCS 280-609561/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp A 00080					
BFB 280-609561/1		8260D							
CCV 280-609561/2		8260D							
CCV 280-609561/3		8260D		25 uL					
LCSD 280-609561/4		8260D							
LCSD 280-609561/5		8260D		25 uL					
MB 280-609561/7		8260D							
280-175122-D-5	MW-111D-20230414	8260D	T						
CCVC 280-609561/53		8260D							
CCVC 280-609561/54		8260D		25 uL					
LCS 280-609561/1002		8260D							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 609561 Batch Start Date: 04/21/23 07:11 Batch Analyst: Bustillos, Ethan T

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp A 00080					
LCS 280-609561/1003		8260D		25 uL					

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 609932 Batch Start Date: 04/24/23 18:27 Batch Analyst: Jones, Branden M

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00132	mv-IS_SS 00058	MV-MegaMain B 00083
BFB 280-609932/1		8260D		2 uL	2 uL	5 uL			
CCV 280-609932/2		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
CCV 280-609932/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-609932/4		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCSD 280-609932/5		8260D		5 mL	5 mL			5 uL	
MB 280-609932/7		8260D		5 mL	5 mL			5 uL	
280-175122-E-2	MP-2-20230411	8260D	T	5 mL	5 mL			5 uL	
LCS 280-609932/1002		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCS 280-609932/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00062					
BFB 280-609932/1		8260D							
CCV 280-609932/2		8260D							
CCV 280-609932/3		8260D		25 uL					
LCSD 280-609932/4		8260D							
LCSD 280-609932/5		8260D		25 uL					
MB 280-609932/7		8260D							
280-175122-E-2	MP-2-20230411	8260D	T						
LCS 280-609932/1002		8260D							
LCS 280-609932/1003		8260D		25 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 609932 Batch Start Date: 04/24/23 18:27 Batch Analyst: Jones, Branden M

Batch Method: 8260D Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610121 Batch Start Date: 04/26/23 09:51 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Headspace	mv-Cent BFB 00005	MV-Gas B 00133
BFB 280-610121/1		8260D		2 uL	2 uL			5 uL	
CCV 280-610121/2		8260D		5 mL	5 mL				5 uL
CCV 280-610121/3		8260D		5 mL	5 mL				
LCSD 280-610121/4		8260D		5 mL	5 mL				5 uL
LCSD 280-610121/5		8260D		5 mL	5 mL				
MB 280-610121/7		8260D		5 mL	5 mL				
280-175122-F-1	RW-1-20230413	8260D	T	5 mL	5 mL	<2 SU	NO		
LCS 280-610121/1002		8260D		5 mL	5 mL				5 uL
LCS 280-610121/1003		8260D		5 mL	5 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00058	MV-MegaMain B 00083	MV-Supp B 00062			
BFB 280-610121/1		8260D							
CCV 280-610121/2		8260D		5 uL	12.5 uL				
CCV 280-610121/3		8260D		5 uL		25 uL			
LCSD 280-610121/4		8260D		5 uL	12.5 uL				
LCSD 280-610121/5		8260D		5 uL		25 uL			
MB 280-610121/7		8260D		5 uL					
280-175122-F-1	RW-1-20230413	8260D	T	5 uL					
LCS 280-610121/1002		8260D		5 uL	12.5 uL				
LCS 280-610121/1003		8260D		5 uL		25 uL			

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610121 Batch Start Date: 04/26/23 09:51 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610123 Batch Start Date: 04/26/23 08:20 Batch Analyst: Coulter, Dawn (goes by Sh

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00133	mv-IS_SS 00057	MV-MegaMain B 00083
BFB 280-610123/1		8260D		2 uL	2 uL	2 uL			
CCV 280-610123/2		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
CCV 280-610123/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-610123/4		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCSD 280-610123/5		8260D		5 mL	5 mL			5 uL	
MB 280-610123/7		8260D		5 mL	5 mL			5 uL	
280-175122-E-3	MW-118D-20230412	8260D	T	5 mL	5 mL			5 uL	
LCS 280-610123/1002		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCS 280-610123/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp A 00080					
BFB 280-610123/1		8260D							
CCV 280-610123/2		8260D							
CCV 280-610123/3		8260D		25 uL					
LCSD 280-610123/4		8260D							
LCSD 280-610123/5		8260D		25 uL					
MB 280-610123/7		8260D							
280-175122-E-3	MW-118D-20230412	8260D	T						
LCS 280-610123/1002		8260D							
LCS 280-610123/1003		8260D		25 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610123 Batch Start Date: 04/26/23 08:20 Batch Analyst: Coulter, Dawn (goes by Sh

Batch Method: 8260D Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610347 Batch Start Date: 04/27/23 10:51 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00133	mv-IS_SS 00058	MV-MegaMain B 00083
BFB 280-610347/1		8260D		2 uL	2 uL	5 uL			
CCV 280-610347/2		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
CCV 280-610347/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-610347/4		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
LCSD 280-610347/5		8260D		5 mL	5 mL			5 uL	
MB 280-610347/7		8260D		5 mL	5 mL			5 uL	
280-175122-B-7	MW-102S-20230414	8260D	T	5 mL	5 mL			5 uL	
280-175122-A-4	MP-3-20230413	8260D	T	5 mL	5 mL			5 uL	
LCS 280-610347/1002		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
LCS 280-610347/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00062					
BFB 280-610347/1		8260D							
CCV 280-610347/2		8260D							
CCV 280-610347/3		8260D		25 uL					
LCSD 280-610347/4		8260D							
LCSD 280-610347/5		8260D		25 uL					
MB 280-610347/7		8260D							
280-175122-B-7	MW-102S-20230414	8260D	T						
280-175122-A-4	MP-3-20230413	8260D	T						
LCS 280-610347/1002		8260D							
LCS 280-610347/1003		8260D		25 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610347 Batch Start Date: 04/27/23 10:51 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610485 Batch Start Date: 04/27/23 21:28 Batch Analyst: Jones, Branden M

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00133	mv-IS_SS 00058	MV-MegaMain B 00083
BFB 280-610485/1		8260D		2 uL	2 uL	5 uL			
CCV 280-610485/2		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
CCV 280-610485/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-610485/4		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCSD 280-610485/5		8260D		5 mL	5 mL			5 uL	
MB 280-610485/7		8260D		5 mL	5 mL			5 uL	
280-175122-A-9	TB-07-20230416	8260D	T	5 mL	5 mL			5 uL	
280-175122-C-6	MW-123-20230415	8260D	T	5 mL	5 mL			5 uL	
280-175122-A-8	MW-115S-20230415	8260D	T	5 mL	5 mL			5 uL	
LCS 280-610485/1002		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCS 280-610485/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00062					
BFB 280-610485/1		8260D							
CCV 280-610485/2		8260D							
CCV 280-610485/3		8260D		25 uL					
LCSD 280-610485/4		8260D							
LCSD 280-610485/5		8260D		25 uL					
MB 280-610485/7		8260D							
280-175122-A-9	TB-07-20230416	8260D	T						
280-175122-C-6	MW-123-20230415	8260D	T						
280-175122-A-8	MW-115S-20230415	8260D	T						
LCS 280-610485/1002		8260D							
LCS 280-610485/1003		8260D		25 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610485 Batch Start Date: 04/27/23 21:28 Batch Analyst: Jones, Branden M

Batch Method: 8260D Batch End Date:

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG No.:

Project: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID	Lab Sample ID
RW-1-20230413	280-175122-1
MP-2-20230411	280-175122-2
MW-118D-20230412	280-175122-3

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: RW-1-20230413 Lab Sample ID: 280-175122-1

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG ID.:

Matrix: Water Date Sampled: 04/13/2023 15:20

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	0.62	5.0	0.50	ug/L	J		1	6020B
7440-39-3	Barium	340	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	210000	2000	320	ug/L			10	6020B
7440-43-9	Cadmium	ND	1.0	0.19	ug/L			1	6020B
7440-48-4	Co	ND	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	ND	3.0	0.50	ug/L			1	6020B
7440-50-8	Copper	1.3	2.0	0.71	ug/L	J		1	6020B
7439-89-6	Iron	44	200	8.7	ug/L	J		1	6020B
7440-09-7	Potassium	4800	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	74000	200	4.2	ug/L			1	6020B
7439-96-5	Manganese	390	3.0	0.51	ug/L			1	6020B
7440-23-5	Sodium	100000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	8.7	3.0	0.83	ug/L			1	6020B
7439-92-1	Lead	ND	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	1.2	5.0	1.1	ug/L	J		1	6020B
7440-66-6	Zinc	ND	10	2.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MP-2-20230411 Lab Sample ID: 280-175122-2

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG ID.:

Matrix: Water Date Sampled: 04/11/2023 14:40

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	0.91	5.0	0.50	ug/L	J		1	6020B
7440-39-3	Barium	370	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	210000	2000	320	ug/L			10	6020B
7440-43-9	Cadmium	ND	1.0	0.19	ug/L			1	6020B
7440-48-4	Co	ND	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	ND	3.0	0.50	ug/L			1	6020B
7440-50-8	Copper	1.1	2.0	0.71	ug/L	J		1	6020B
7439-89-6	Iron	8.8	200	8.7	ug/L	J		1	6020B
7440-09-7	Potassium	4200	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	67000	200	4.2	ug/L			1	6020B
7439-96-5	Manganese	3.5	3.0	0.51	ug/L			1	6020B
7440-23-5	Sodium	86000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	2.0	3.0	0.83	ug/L	J		1	6020B
7439-92-1	Lead	ND	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	2.5	5.0	1.1	ug/L	J		1	6020B
7440-66-6	Zinc	ND	10	2.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-118D-20230412 Lab Sample ID: 280-175122-3

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG ID.:

Matrix: Water Date Sampled: 04/12/2023 17:05

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	1.2	5.0	0.50	ug/L	J		1	6020B
7440-39-3	Barium	520	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	270000	2000	320	ug/L			10	6020B
7440-43-9	Cadmium	ND	1.0	0.19	ug/L			1	6020B
7440-48-4	Co	4.0	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	0.62	3.0	0.50	ug/L	J		1	6020B
7440-50-8	Copper	4.0	2.0	0.71	ug/L			1	6020B
7439-89-6	Iron	23	200	8.7	ug/L	J		1	6020B
7440-09-7	Potassium	5700	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	96000	200	4.2	ug/L			1	6020B
7439-96-5	Manganese	23	3.0	0.51	ug/L			1	6020B
7440-23-5	Sodium	170000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	70	3.0	0.83	ug/L			1	6020B
7439-92-1	Lead	2.8	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	2.6	5.0	1.1	ug/L	J		1	6020B
7440-66-6	Zinc	ND	10	2.0	ug/L			1	6020B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

ICV Source: ms 77 icv_02965 Concentration Units: ug/L

CCV Source: ms 77 ccv_02963

Analyte	ICV 280-609240/44 04/18/2023 16:21				CCV 280-609240/93 04/18/2023 17:54				CCV 280-609240/104 04/18/2023 18:14			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	40.8		40.0	102	49.8		50.0	100	49.3		50.0	99
Arsenic	39.4		40.0	99	51.8		50.0	104	53.4		50.0	107
Barium	40.9		40.0	102	50.1		50.0	100	49.3		50.0	99
Cadmium	40.8		40.0	102	48.6		50.0	97	49.8		50.0	100
Calcium	4920		4800	103	10300		11000	94	10200		11000	93
Chromium	42.1		40.0	105	51.1		50.0	102	51.4		50.0	103
Co	40.8		40.0	102	50.2		50.0	100	50.4		50.0	101
Copper	42.3		40.0	106	50.3		50.0	101	51.4		50.0	103
Iron	820		800	103	1040		1000	104	1030		1000	103
Lead	40.8		40.0	102	48.9		50.0	98	48.1		50.0	96
Magnesium	4700		4800	98	9920		11000	90	10100		11000	92
Nickel	40.1		40.0	100	49.1		50.0	98	49.4		50.0	99
Potassium	4840		4800	101	10300		11000	93	10400		11000	95
Selenium	42.6		40.0	107	52.7		50.0	105	52.7		50.0	105
Silver	80.5		80.0	101	48.7		50.0	97	47.1		50.0	94
Sodium	12900		12800	100	46100		51000	90	47000		51000	92
Thallium	40.7		40.0	102	48.5		50.0	97	48.4		50.0	97
Tin	39.1		40.0	98	47.8		50.0	96	47.9		50.0	96
Vanadium	41.1		40.0	103	49.7		50.0	99	50.7		50.0	101
Zinc	80.4		80.0	100	50.6		50.0	101	49.9		50.0	100
Beryllium	42.7		40.0	107	49.9		50.0	100	49.3		50.0	99
Manganese	42.0		40.0	105	50.8		50.0	102	51.4		50.0	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

ICV Source: ms 77 icv_02965 Concentration Units: ug/L

CCV Source: ms 77 ccv_02963

Analyte	CCV 280-609240/113 04/18/2023 18:31				CCV 280-609240/124 04/18/2023 18:51				CCV 280-609240/136 04/18/2023 19:12			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	50.2		50.0	100	48.6		50.0	97	53.3		50.0	107
Arsenic	52.8		50.0	106	51.5		50.0	103	52.2		50.0	104
Barium	52.5		50.0	105	48.7		50.0	97	49.7		50.0	99
Cadmium	50.4		50.0	101	49.9		50.0	100	50.0		50.0	100
Calcium	10100		11000	92	10100		11000	92	10000		11000	91
Chromium	50.6		50.0	101	50.8		50.0	102	49.8		50.0	100
Co	50.2		50.0	100	50.4		50.0	101	49.5		50.0	99
Copper	50.7		50.0	101	50.7		50.0	101	49.6		50.0	99
Iron	1020		1000	102	1020		1000	102	1030		1000	103
Lead	47.8		50.0	96	47.6		50.0	95	47.9		50.0	96
Magnesium	10100		11000	91	10000		11000	91				
Nickel	50.3		50.0	101	50.2		50.0	100	48.5		50.0	97
Potassium	10100		11000	92	10100		11000	92	10200		11000	92
Selenium	52.0		50.0	104	50.9		50.0	102	53.0		50.0	106
Silver	49.9		50.0	100	48.3		50.0	97	48.6		50.0	97
Sodium	47300		51000	93	47100		51000	92				
Thallium	47.4		50.0	95	47.6		50.0	95	48.3		50.0	97
Tin	49.3		50.0	99	48.1		50.0	96	50.8		50.0	102
Vanadium	50.4		50.0	101	50.0		50.0	100	48.7		50.0	97
Zinc	50.3		50.0	101	50.2		50.0	100	49.7		50.0	99
Beryllium	47.6		50.0	95	47.3		50.0	95	47.7		50.0	95
Manganese	51.6		50.0	103	51.4		50.0	103	49.7		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

ICV Source: ms 77 icv_02966 Concentration Units: ug/L

CCV Source: ms 77 ccv_02964

Analyte	ICV 280-609394/47 04/19/2023 14:19				CCV 280-609394/86 04/19/2023 15:40				CCV 280-609394/98 04/19/2023 16:01			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	43.9		40.0	110	47.7		50.0	95	45.8		50.0	92
Magnesium	4680		4800	98	10200		11000	92	10300		11000	94
Manganese	41.7		40.0	104	51.1		50.0	102	51.5		50.0	103
Sodium	13000		12800	102	48000		51000	94	48900		51000	96
Antimony	41.3		40.0	103	49.7		50.0	99	49.9		50.0	100
Arsenic	40.5		40.0	101	50.1		50.0	100	50.0		50.0	100
Barium	41.8		40.0	104	50.5		50.0	101	51.1		50.0	102
Cadmium	39.3		40.0	98	48.8		50.0	98	49.0		50.0	98
Calcium	4800		4800	100	10300		11000	94				
Chromium	41.0		40.0	103	51.1		50.0	102	51.4		50.0	103
Cobalt	40.7		40.0	102	50.4		50.0	101	50.6		50.0	101
Copper	41.6		40.0	104	50.5		50.0	101	50.2		50.0	100
Iron	812		800	102	1020		1000	102	917		1000	92
Lead	40.0		40.0	100	48.7		50.0	97	48.5		50.0	97
Nickel	41.5		40.0	104	51.8		50.0	104	51.6		50.0	103
Potassium	4590		4800	96	10000		11000	91	10000		11000	91
Selenium	40.6		40.0	101	50.0		50.0	100	46.4		50.0	93
Silver	81.6		80.0	102	49.9		50.0	100	50.4		50.0	101
Thallium	38.8		40.0	97	47.9		50.0	96	47.8		50.0	96
Tin	42.1		40.0	105	49.7		50.0	99	49.4		50.0	99
Vanadium	40.5		40.0	101	50.7		50.0	101	50.8		50.0	102
Zinc	85.0		80.0	106	51.6		50.0	103	52.5		50.0	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

ICV Source: ms 77 icv_02966 Concentration Units: ug/L

CCV Source: ms 77 ccv_02964

Analyte	CCV 280-609394/109 04/19/2023 16:21				CCV 280-609394/120 04/19/2023 16:41							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	49.4		50.0	99	51.9		50.0	104				
Magnesium	10200		11000	93	10200		11000	92				
Manganese	50.3		50.0	101	49.9		50.0	100				
Sodium	47600		51000	93	47500		51000	93				
Antimony	49.8		50.0	100	48.7		50.0	97				
Arsenic	50.7		50.0	101	50.5		50.0	101				
Barium	52.8		50.0	106	50.6		50.0	101				
Cadmium	48.4		50.0	97	47.8		50.0	96				
Calcium	10300		11000	94	10000		11000	91				
Chromium	51.1		50.0	102	51.2		50.0	102				
Cobalt	49.7		50.0	99	50.0		50.0	100				
Copper	49.5		50.0	99	50.5		50.0	101				
Iron	1020		1000	102	1010		1000	101				
Lead	48.2		50.0	96	48.7		50.0	97				
Nickel	50.3		50.0	101	51.7		50.0	103				
Potassium	10100		11000	92	10000		11000	91				
Selenium	50.5		50.0	101	49.6		50.0	99				
Silver	49.9		50.0	100	49.8		50.0	100				
Thallium	47.7		50.0	95	48.2		50.0	96				
Tin	49.6		50.0	99	49.5		50.0	99				
Vanadium	49.9		50.0	100	49.1		50.0	98				
Zinc	51.8		50.0	104	51.1		50.0	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

ICV Source: ms 77 icv_02966 Concentration Units: ug/L

CCV Source: ms 77 ccv_02964

Analyte	ICV 280-609488/26 04/20/2023 08:55				CCV 280-609488/27 04/20/2023 08:56				CCV 280-609488/34 04/20/2023 09:25			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	38.1		40.0	95	48.2		50.0	96	54.6		50.0	109
Manganese	41.4		40.0	103	52.8		50.0	106	54.5		50.0	109
Antimony	40.6		40.0	101	50.4		50.0	101	50.9		50.0	102
Arsenic	40.3		40.0	101	52.1		50.0	104				
Barium	39.2		40.0	98	51.0		50.0	102	51.2		50.0	102
Cadmium	39.3		40.0	98	50.8		50.0	102	50.8		50.0	102
Calcium	4900		4800	102	10500		11000	96	10700		11000	97
Chromium	41.8		40.0	104	53.3		50.0	107				
Cobalt	40.9		40.0	102	52.7		50.0	105	54.9		50.0	110
Copper	41.6		40.0	104	52.8		50.0	106	54.7		50.0	109
Iron	827		800	103	1070		1000	107				
Lead	42.1		40.0	105	50.6		50.0	101	50.3		50.0	101
Magnesium	4630		4800	97	10400		11000	94	10300		11000	94
Nickel	41.7		40.0	104	52.0		50.0	104				
Potassium	4710		4800	98	10300		11000	94	10400		11000	95
Selenium	41.3		40.0	103	53.7		50.0	107	54.7		50.0	109
Silver	80.2		80.0	100	50.9		50.0	102	50.0		50.0	100
Sodium	13300		12800	104	49200		51000	96	48900		51000	96
Thallium	41.4		40.0	104	50.2		50.0	100	50.0		50.0	100
Tin	41.1		40.0	103	50.9		50.0	102	49.9		50.0	100
Vanadium	40.8		40.0	102	54.3		50.0	109	55.2		50.0	110
Zinc	84.9		80.0	106	53.7		50.0	107				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

ICV Source: ms 77 icv_02966 Concentration Units: ug/L

CCV Source: ms 77 ccv_02964

Analyte	CCV 280-609488/40 04/20/2023 09:36											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	49.6		50.0	99								
Manganese	54.6		50.0	109								
Antimony	50.4		50.0	101								
Arsenic	54.4		50.0	109								
Barium	49.0		50.0	98								
Cadmium	51.0		50.0	102								
Calcium	10500		11000	96								
Chromium												
Cobalt	54.1		50.0	108								
Copper												
Iron												
Lead	51.3		50.0	103								
Magnesium	10400		11000	95								
Nickel	54.3		50.0	109								
Potassium	10600		11000	96								
Selenium	54.5		50.0	109								
Silver	49.8		50.0	100								
Sodium	48300		51000	95								
Thallium	51.4		50.0	103								
Tin	49.3		50.0	99								
Vanadium	54.4		50.0	109								
Zinc												

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

ICV Source: ms 77 icv_02967 Concentration Units: ug/L

CCV Source: ms 77 ccv_02965

Analyte	ICV 280-609564/49 04/20/2023 17:14				CCV 280-609564/58 04/20/2023 17:30				CCV 280-609564/69 04/20/2023 17:49			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	4950		4800	103	10800		11000	98	10500		11000	95
Antimony	39.8		40.0	100	49.8		50.0	100	49.5		50.0	99
Arsenic	38.0		40.0	95	53.0		50.0	106	52.9		50.0	106
Barium	39.8		40.0	100	49.0		50.0	98	48.6		50.0	97
Beryllium	40.1		40.0	100	45.6		50.0	91	46.6		50.0	93
Cadmium	39.7		40.0	99	51.2		50.0	102	51.7		50.0	103
Chromium	41.4		40.0	104	54.5		50.0	109	52.8		50.0	106
Cobalt	39.5		40.0	99	52.4		50.0	105	51.9		50.0	104
Copper	41.3		40.0	103	52.8		50.0	106	52.0		50.0	104
Iron	822		800	103	1090		1000	109	1070		1000	107
Lead	39.7		40.0	99	49.9		50.0	100	50.2		50.0	100
Magnesium	4760		4800	99	10600		11000	97	10500		11000	96
Manganese	40.8		40.0	102	51.9		50.0	104	51.8		50.0	104
Nickel	39.5		40.0	99	52.7		50.0	105	52.8		50.0	106
Potassium	4820		4800	101	10800		11000	98	10800		11000	98
Selenium	40.9		40.0	102	50.9		50.0	102	52.3		50.0	105
Silver	78.5		80.0	98	49.8		50.0	100	49.5		50.0	99
Thallium	39.8		40.0	100	50.6		50.0	101	50.3		50.0	101
Tin	39.0		40.0	98	50.9		50.0	102	49.2		50.0	98
Vanadium	39.4		40.0	98	52.7		50.0	105	51.6		50.0	103
Zinc	80.7		80.0	101	53.7		50.0	107	52.9		50.0	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Method: 6020B Instrument ID: MT_079

Lab Sample ID: CRI 280-609240/46 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02785

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	1.01		101	80-120
Arsenic	5.00	5.92		118	80-120
Calcium	200	225		112	80-120
Cadmium	1.00	1.14		114	80-120
Co	1.00	1.12		112	80-120
Chromium	2.00	2.34	J	117	80-120
Copper	2.00	2.17		108	80-120
Iron	50.0	55.4	J	111	80-120
Potassium	120	119	J	99	80-120
Magnesium	50.0	53.2	J	106	80-120
Sodium	300	327	J	109	80-120
Nickel	2.00	2.17	J	109	80-120
Lead	1.00	1.00		100	80-120
Antimony	2.00	2.20		110	80-120
Selenium	5.00	5.33		107	80-120
Tin	10.0	10.4		104	80-120
Thallium	1.00	1.05		105	80-120
Vanadium	5.00	6.01		120	80-120
Zinc	10.0	10.4		104	80-120

Lab Sample ID: CRI 280-609240/47 Concentration Units: ug/L

CRQL Check Standard Source: MS 79 alt cri_00013

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Barium	2.00	2.02	J	101	80-120

Lab Sample ID: CRI 280-609394/50 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02786

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	0.855	J	86	80-120
Arsenic	5.00	4.98	J	100	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Method: 6020B Instrument ID: MT_079

Lab Sample ID: CRI 280-609394/50 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02786

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Barium	1.00	0.925	J	93	80-120
Beryllium	1.00	1.03		103	80-120
Calcium	200	201		101	80-120
Cadmium	1.00	0.853	J	85	80-120
Cobalt	1.00	0.929	J	93	80-120
Chromium	2.00	1.89	J	94	80-120
Copper	2.00	1.96	J	98	80-120
Iron	50.0	50.5	J	101	80-120
Magnesium	50.0	45.6	J	91	80-120
Manganese	1.00	1.08	J	108	80-120
Sodium	300	292	J	97	80-120
Nickel	2.00	2.14	J	107	80-120
Lead	1.00	0.900	J	90	80-120
Antimony	2.00	1.82	J	91	80-120
Selenium	5.00	4.73	J	95	80-120
Tin	10.0	8.55	J	86	80-120
Thallium	1.00	0.866	J	87	80-120
Vanadium	5.00	4.89	J	98	80-120
Zinc	10.0	9.76	J	98	80-120

Lab Sample ID: CRI 280-609488/9 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02786

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	0.855	J	86	80-120
Arsenic	5.00	4.98	J	100	80-120
Barium	1.00	0.925	J	93	80-120
Beryllium	1.00	1.03		103	80-120
Calcium	200	201		101	80-120
Cadmium	1.00	0.853	J	85	80-120
Cobalt	1.00	0.929	J	93	80-120
Chromium	2.00	1.89	J	94	80-120
Copper	2.00	1.96	J	98	80-120
Iron	50.0	50.5	J	101	80-120
Magnesium	50.0	45.6	J	91	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Method: 6020B Instrument ID: MT_079

Lab Sample ID: CRI 280-609488/9 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02786

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Manganese	1.00	1.08	J	108	80-120
Sodium	300	292	J	97	80-120
Nickel	2.00	2.14	J	107	80-120
Lead	1.00	0.900	J	90	80-120
Antimony	2.00	1.82	J	91	80-120
Selenium	5.00	4.73	J	95	80-120
Tin	10.0	8.55	J	86	80-120
Thallium	1.00	0.866	J	87	80-120
Vanadium	5.00	4.89	J	98	80-120
Zinc	10.0	9.76	J	98	80-120

Lab Sample ID: CRI 280-609394/59 Concentration Units: ug/L

CRQL Check Standard Source:

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver		ND			
Arsenic		ND			
Barium		ND			
Beryllium		ND			
Calcium		ND			
Cadmium		ND			
Cobalt		ND			
Chromium		ND			
Copper		ND			
Iron		ND			
Magnesium		ND			
Manganese		ND			
Sodium		ND			
Nickel		ND			
Lead		ND			
Antimony		ND			
Selenium		ND			
Tin		ND			
Thallium		ND			
Vanadium		ND			

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Method: 6020B Instrument ID: MT_079

Lab Sample ID: CRI 280-609394/59 Concentration Units: ug/L

CRQL Check Standard Source:

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Zinc		ND			

Lab Sample ID: CRI 280-609394/59 Concentration Units: ug/L

CRQL Check Standard Source: MS 79 alt cri_00014

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Potassium	500	535	J	107	80-120

Lab Sample ID: CRI 280-609564/52 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02787

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	0.929	J	93	80-120
Arsenic	5.00	4.94	J	99	80-120
Barium	1.00	1.00	J	100	80-120
Beryllium	1.00	0.994	J	99	80-120
Calcium	200	196	J	98	80-120
Cadmium	1.00	1.16		116	80-120
Cobalt	1.00	0.887	J	89	80-120
Chromium	2.00	2.05	J	103	80-120
Copper	2.00	1.96	J	98	80-120
Iron	50.0	50.7	J	101	80-120
Potassium	120	134	J	112	80-120
Magnesium	50.0	50.3	J	101	80-120
Manganese	1.00	0.831	J	83	80-120
Sodium	300	288	J	96	80-120
Nickel	2.00	2.03	J	102	80-120
Lead	1.00	0.932	J	93	80-120
Antimony	2.00	1.99	J	99	80-120
Selenium	5.00	5.42		108	80-120
Tin	10.0	9.19	J	92	80-120
Thallium	1.00	0.947	J	95	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Method: 6020B Instrument ID: MT_079

Lab Sample ID: CRI 280-609564/52 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02787

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Vanadium	5.00	4.50	J	90	80-120
Zinc	10.0	9.12	J	91	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-609240/45 04/18/2023 16:23		CCB 280-609240/94 04/18/2023 17:56		CCB 280-609240/105 04/18/2023 18:16		CCB 280-609240/114 04/18/2023 18:32	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	ND		ND		ND		ND	
Arsenic	5.0	ND		ND		ND		ND	
Barium	3.0	ND		ND		ND		ND	
Cadmium	1.0	ND		ND		ND		ND	
Calcium	200	ND		ND		ND		ND	
Chromium	3.0	ND		ND		ND		ND	
Co	1.0	ND		ND		ND		ND	
Copper	2.0	ND		ND		ND		ND	
Iron	200	ND		ND		ND		ND	
Lead	1.0	ND		ND		ND		ND	
Magnesium	200	ND		ND		ND		ND	
Nickel	3.0	ND		ND		ND		ND	
Potassium	1000	ND		ND		ND		ND	
Selenium	5.0	ND		ND		ND		ND	
Silver	1.0	ND		ND		ND		ND	
Sodium	1000	ND		ND		ND		ND	
Thallium	1.0	ND		ND		ND		ND	
Tin	10	ND		ND		ND		ND	
Vanadium	5.0	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	
Beryllium	1.0	ND		ND		ND		ND	
Manganese	3.0	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 280-609240/125 04/18/2023 18:52		CCB 280-609240/137 04/18/2023 19:14					
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	ND		0.625	J				
Arsenic	5.0	ND		ND					
Barium	3.0	ND		ND					
Cadmium	1.0	ND		ND					
Calcium	200	ND		ND					
Chromium	3.0	ND		ND					
Co	1.0	ND		ND					
Copper	2.0	ND		ND					
Iron	200	ND		15.7	J				
Lead	1.0	ND		ND					
Magnesium	200	7.81	J	ND					
Nickel	3.0	ND		ND					
Potassium	1000	ND		ND					
Selenium	5.0	ND		ND					
Silver	1.0	ND		0.0450	J				
Sodium	1000	ND		ND					
Thallium	1.0	ND		ND					
Tin	10	ND		0.934	J				
Vanadium	5.0	ND		ND					
Zinc	10	ND		ND					
Beryllium	1.0	ND		ND					
Manganese	3.0	ND		ND					

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-609394/49 04/19/2023 14:26		CCB 280-609394/87 04/19/2023 15:41		CCB 280-609394/99 04/19/2023 16:03		CCB 280-609394/110 04/19/2023 16:23	
		Found	C	Found	C	Found	C	Found	C
Beryllium	1.0	ND		ND		ND		ND	
Magnesium	200	ND		ND		ND		ND	
Manganese	3.0	ND		ND		ND		ND	
Sodium	1000	ND		ND		ND		ND	
Antimony	2.0	ND		ND		ND		ND	
Arsenic	5.0	ND		ND		ND		ND	
Barium	3.0	ND		ND		ND		ND	
Cadmium	1.0	ND		ND		ND		ND	
Calcium	200	ND		ND		ND		ND	
Chromium	3.0	ND		0.599	J	0.542	J	0.720	J
Cobalt	1.0	ND		ND		ND		ND	
Copper	2.0	ND		ND		ND		ND	
Iron	200	ND		10.1	J	10.3	J	10.7	J
Lead	1.0	ND		ND		ND		ND	
Nickel	3.0	ND		ND		ND		ND	
Potassium	1000	ND		ND		ND		ND	
Selenium	5.0	ND		ND		ND		ND	
Silver	1.0	ND		ND		ND		ND	
Thallium	1.0	ND		ND		ND		ND	
Tin	10	ND		ND		ND		ND	
Vanadium	5.0	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 280-609394/121 04/19/2023 16:43							
		Found	C	Found	C	Found	C	Found	C
Beryllium	1.0	ND							
Magnesium	200	ND							
Manganese	3.0	ND							
Sodium	1000	ND							
Antimony	2.0	ND							
Arsenic	5.0	ND							
Barium	3.0	ND							
Cadmium	1.0	ND							
Calcium	200	ND							
Chromium	3.0	0.815	J						
Cobalt	1.0	ND							
Copper	2.0	ND							
Iron	200	19.8	J						
Lead	1.0	ND							
Nickel	3.0	0.979	J						
Potassium	1000	ND							
Selenium	5.0	ND							
Silver	1.0	ND							
Thallium	1.0	ND							
Tin	10	0.646	J						
Vanadium	5.0	ND							
Zinc	10	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-609488/8 04/19/2023 14:26		CCB 280-609488/28 04/20/2023 08:58		CCB 280-609488/35 04/20/2023 09:27		CCB 280-609488/41 04/20/2023 09:39	
		Found	C	Found	C	Found	C	Found	C
Beryllium	1.0	ND		ND		ND		ND	
Manganese	3.0	ND		ND		ND		ND	
Antimony	2.0	ND		ND		ND		ND	
Arsenic	5.0	ND		ND		ND		ND	
Barium	3.0	ND		ND		ND		ND	
Cadmium	1.0	ND		ND		ND		ND	
Calcium	200	ND		ND		ND		ND	
Chromium	3.0	ND		ND		0.550	J	0.545	J
Cobalt	1.0	ND		ND		ND		ND	
Copper	2.0	ND		ND		ND		ND	
Iron	200	ND		ND		8.73	J	ND	
Lead	1.0	ND		ND		ND		ND	
Magnesium	200	ND		ND		ND		ND	
Nickel	3.0	ND		ND		ND		0.838	J
Potassium	1000	ND		ND		ND		ND	
Selenium	5.0	ND		ND		ND		ND	
Silver	1.0	ND		ND		ND		ND	
Sodium	1000	ND		ND		ND		ND	
Thallium	1.0	ND		ND		ND		ND	
Tin	10	ND		ND		ND		ND	
Vanadium	5.0	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-609564/50 04/20/2023 17:15		CCB 280-609564/59 04/20/2023 17:32		CCB 280-609564/70 04/20/2023 17:51			
		Found	C	Found	C	Found	C	Found	C
Calcium	200	ND		ND		ND			
Antimony	2.0	ND		ND		ND			
Arsenic	5.0	ND		ND		ND			
Barium	3.0	ND		ND		ND			
Beryllium	1.0	ND		ND		ND			
Cadmium	1.0	ND		ND		ND			
Chromium	3.0	ND		ND		ND			
Cobalt	1.0	ND		ND		ND			
Copper	2.0	ND		ND		ND			
Iron	200	ND		9.34	J	ND			
Lead	1.0	ND		ND		ND			
Magnesium	200	ND		10.9	J	ND			
Manganese	3.0	ND		ND		ND			
Nickel	3.0	ND		ND		ND			
Potassium	1000	ND		ND		ND			
Selenium	5.0	ND		ND		ND			
Silver	1.0	ND		ND		ND			
Thallium	1.0	ND		ND		ND			
Tin	10	ND		0.730	J	ND			
Vanadium	5.0	ND		ND		ND			
Zinc	10	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-608984/1-A

Instrument Code: MT_079 Batch No.: 609240

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	ND			6020B
7440-38-2	Arsenic	ND			6020B
7440-39-3	Barium	ND			6020B
7440-70-2	Calcium	ND			6020B
7440-43-9	Cadmium	ND			6020B
7440-48-4	Co	ND			6020B
7440-47-3	Chromium	ND			6020B
7440-50-8	Copper	ND			6020B
7439-89-6	Iron	ND			6020B
7440-09-7	Potassium	ND			6020B
7439-95-4	Magnesium	ND			6020B
7440-23-5	Sodium	ND			6020B
7440-02-0	Nickel	ND			6020B
7439-92-1	Lead	ND			6020B
7440-36-0	Antimony	ND			6020B
7782-49-2	Selenium	ND			6020B
7440-31-5	Tin	ND			6020B
7440-28-0	Thallium	ND			6020B
7440-62-2	Vanadium	ND			6020B
7440-66-6	Zinc	5.19	J		6020B

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-608984/1-A

Instrument Code: MT_079 Batch No.: 609488

CAS No.	Analyte	Concentration	C	Q	Method
7440-41-7	Beryllium	ND			6020B
7439-96-5	Manganese	ND			6020B

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSA 280-609240/48 Instrument ID: MT_079

Lab File ID: 048ICSA.d ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.136**	
Arsenic		**0.122**	
Barium		**1.59**	
Cadmium		**0.235**	
Calcium	**100000**	**95525**	**96**
Chromium		**1.05**	
Co		**0.230**	
Copper		**0.122**	
Iron	**100000**	**95433**	**95**
Lead		**0.102**	
Magnesium	**100000**	**95613**	**96**
Nickel		**0.0600**	
Potassium	**100000**	**95916**	**96**
Selenium		**0.0360**	
Silver		**0.0320**	
Sodium	**100000**	**95336**	**95**
Thallium		**-0.0340**	
Tin		**0.0770**	
Vanadium		**0.211**	
Zinc		**0.464**	
Aluminum	*100000*	*96041*	*96*
Beryllium		*-0.0020*	
Manganese		*0.230*	
Molybdenum	*2000*	*1981*	*99*
Strontium		*0.607*	
Thorium		*0.0400*	
Uranium		*0.0160*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSAB 280-609240/49 Instrument ID: MT_079

Lab File ID: 049ICSB.d ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**99.3**	**99**
Arsenic	**100**	**92.7**	**93**
Barium	**100**	**99.8**	**100**
Cadmium	**100**	**95.5**	**95**
Calcium	**107000**	**97685**	**91**
Chromium	**100**	**99.7**	**100**
Co	**100**	**96.5**	**96**
Copper	**100**	**97.0**	**97**
Iron	**102000**	**95624**	**94**
Lead	**100**	**95.1**	**95**
Magnesium	**107000**	**97688**	**91**
Nickel	**100**	**92.5**	**93**
Potassium	**107000**	**100044**	**93**
Selenium	**100**	**101**	**101**
Silver	**100**	**96.8**	**97**
Sodium	**107000**	**98434**	**92**
Thallium	**100**	**94.0**	**94**
Tin	**100**	**98.2**	**98**
Vanadium	**100**	**96.2**	**96**
Zinc	**100**	**92.7**	**93**
Aluminum	*102000*	*95133*	*93*
Beryllium	*100*	*95.7*	*96*
Manganese	*100*	*97.5*	*97*
Molybdenum	*2100*	*2049*	*98*
Strontium	*200*	*193*	*97*
Thorium	*100*	*95.9*	*96*
Uranium	*100*	*103*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSA 280-609394/51 Instrument ID: MT_079

Lab File ID: 054ICSA_79_041923.D ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**-0.0020**	
Magnesium	**100000**	**94133**	**94**
Manganese		**0.241**	
Sodium	**100000**	**94525**	**95**
Aluminum	*100000*	*93661*	*94*
Antimony		*0.127*	
Arsenic		*-0.0600*	
Barium		*1.91*	
Cadmium		*0.0980*	
Calcium	*100000*	*95001*	*95*
Chromium		*1.04*	
Cobalt		*0.225*	
Copper		*0.151*	
Iron	*100000*	*92693*	*93*
Lead		*0.121*	
Molybdenum	*2000*	*1923*	*96*
Nickel		*0.423*	
Potassium	*100000*	*91707*	*92*
Selenium		*-0.0020*	
Silver		*0.0280*	
Strontium		*0.793*	
Thallium		*-0.0940*	
Thorium		*0.0680*	
Tin		*-0.0060*	
Uranium		*0.0430*	
Vanadium		*-0.197*	
Zinc		*0.884*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSA 280-609488/10 Instrument ID: MT_079

Lab File ID: 054ICSA_79_041923.D ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**-0.0020**	
Manganese		**0.241**	
Aluminum	*100000*	*93661*	*94*
Antimony		*0.127*	
Arsenic		*-0.0600*	
Barium		*1.91*	
Cadmium		*0.0980*	
Calcium	*100000*	*95001*	*95*
Chromium		*1.04*	
Cobalt		*0.225*	
Copper		*0.151*	
Iron	*100000*	*92693*	*93*
Lead		*0.121*	
Magnesium	*100000*	*94133*	*94*
Molybdenum	*2000*	*1923*	*96*
Nickel		*0.423*	
Potassium	*100000*	*91707*	*92*
Selenium		*-0.0020*	
Silver		*0.0280*	
Sodium	*100000*	*94525*	*95*
Strontium		*0.793*	
Thallium		*-0.0940*	
Thorium		*0.0680*	
Tin		*-0.0060*	
Uranium		*0.0430*	
Vanadium		*-0.197*	
Zinc		*0.884*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSAB 280-609394/52 Instrument ID: MT_079

Lab File ID: 055ICSB_79_041923.D ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Beryllium	**100**	**102**	**102**
Magnesium	**107000**	**99805**	**93**
Manganese	**100**	**97.6**	**98**
Sodium	**107000**	**100769**	**94**
Aluminum	*102000*	*94151*	*92*
Antimony	*100*	*99.6*	*100*
Arsenic	*100*	*95.9*	*96*
Barium	*100*	*104*	*104*
Cadmium	*100*	*96.4*	*96*
Calcium	*107000*	*99439*	*93*
Chromium	*100*	*99.5*	*99*
Cobalt	*100*	*95.8*	*96*
Copper	*100*	*96.3*	*96*
Iron	*102000*	*95494*	*94*
Lead	*100*	*98.7*	*99*
Molybdenum	*2100*	*2048*	*98*
Nickel	*100*	*96.4*	*96*
Potassium	*107000*	*98905*	*92*
Selenium	*100*	*102*	*102*
Silver	*100*	*99.9*	*100*
Strontium	*200*	*194*	*97*
Thallium	*100*	*97.7*	*98*
Thorium	*100*	*101*	*101*
Tin	*100*	*101*	*101*
Uranium	*100*	*107*	*107*
Vanadium	*100*	*95.4*	*95*
Zinc	*100*	*97.3*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSAB 280-609488/11 | Instrument ID: MT_079

Lab File ID: 055ICSB_79_041923.D | ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Beryllium	**100**	**102**	**102**
Manganese	**100**	**97.6**	**98**
Aluminum	*102000*	*94151*	*92*
Antimony	*100*	*99.6*	*100*
Arsenic	*100*	*95.9*	*96*
Barium	*100*	*104*	*104*
Cadmium	*100*	*96.4*	*96*
Calcium	*107000*	*99439*	*93*
Chromium	*100*	*99.5*	*99*
Cobalt	*100*	*95.8*	*96*
Copper	*100*	*96.3*	*96*
Iron	*102000*	*95494*	*94*
Lead	*100*	*98.7*	*99*
Magnesium	*107000*	*99805*	*93*
Molybdenum	*2100*	*2048*	*98*
Nickel	*100*	*96.4*	*96*
Potassium	*107000*	*98905*	*92*
Selenium	*100*	*102*	*102*
Silver	*100*	*99.9*	*100*
Sodium	*107000*	*100769*	*94*
Strontium	*200*	*194*	*97*
Thallium	*100*	*97.7*	*98*
Thorium	*100*	*101*	*101*
Tin	*100*	*101*	*101*
Uranium	*100*	*107*	*107*
Vanadium	*100*	*95.4*	*95*
Zinc	*100*	*97.3*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSA 280-609488/31 Instrument ID: MT_079

Lab File ID: 306ICSA.d ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**0.0000**	
Manganese		**0.940**	
Aluminum	*100000*	*93390*	*93*
Antimony		*0.125*	
Arsenic		*-0.0130*	
Barium		*1.55*	
Cadmium		*0.185*	
Calcium	*100000*	*91301*	*91*
Chromium		*2.00*	
Cobalt		*0.242*	
Copper		*0.221*	
Iron	*100000*	*98240*	*98*
Lead		*0.144*	
Magnesium	*100000*	*90240*	*90*
Molybdenum	*2000*	*1826*	*91*
Nickel		*0.717*	
Potassium	*100000*	*91289*	*91*
Selenium		*0.0440*	
Silver		*0.0340*	
Sodium	*100000*	*90482*	*90*
Strontium		*0.827*	
Thallium		*0.0230*	
Thorium		*-0.387*	
Tin		*0.495*	
Uranium		*0.0530*	
Vanadium		*-0.108*	
Zinc		*1.52*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSAB 280-609488/32 | Instrument ID: MT_079

Lab File ID: 307ICSB.d | ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Beryllium	**100**	**99.7**	**100**
Manganese	**100**	**100**	**100**
Aluminum	*102000*	*95349*	*93*
Antimony	*100*	*95.7*	*96*
Arsenic	*100*	*99.9*	*100*
Barium	*100*	*96.8*	*97*
Cadmium	*100*	*93.7*	*94*
Calcium	*107000*	*101480*	*95*
Chromium	*100*	*101*	*101*
Cobalt	*100*	*98.5*	*98*
Copper	*100*	*100*	*100*
Iron	*102000*	*97095*	*95*
Lead	*100*	*98.2*	*98*
Magnesium	*107000*	*93564*	*87*
Molybdenum	*2100*	*1955*	*93*
Nickel	*100*	*97.6*	*98*
Potassium	*107000*	*96389*	*90*
Selenium	*100*	*101*	*101*
Silver	*100*	*94.4*	*94*
Sodium	*107000*	*95050*	*89*
Strontium	*200*	*198*	*99*
Thallium	*100*	*97.4*	*97*
Thorium	*100*	*98.0*	*98*
Tin	*100*	*97.0*	*97*
Uranium	*100*	*106*	*106*
Vanadium	*100*	*98.5*	*99*
Zinc	*100*	*97.3*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSA 280-609564/53 | Instrument ID: MT_079

Lab File ID: 053ICSA_79_042023.D | ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**100000**	**95193**	**95**
Aluminum	*100000*	*97757*	*98*
Antimony		*0.147*	
Arsenic		*0.132*	
Barium		*1.26*	
Beryllium		*0.108*	
Cadmium		*0.197*	
Chromium		*1.28*	
Cobalt		*0.244*	
Copper		*0.326*	
Iron	*100000*	*95245*	*95*
Lead		*0.145*	
Magnesium	*100000*	*96606*	*97*
Manganese		*1.04*	
Molybdenum	*2000*	*1930*	*97*
Nickel		*0.484*	
Potassium	*100000*	*96338*	*96*
Selenium		*0.155*	
Silver		*0.0220*	
Sodium	*100000*	*96857*	*97*
Strontium		*0.877*	
Thallium		*-0.0090*	
Thorium		*0.170*	
Tin		*0.719*	
Uranium		*0.0570*	
Vanadium		*0.103*	
Zinc		*0.779*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Lab Sample ID: ICSAB 280-609564/54 Instrument ID: MT_079

Lab File ID: 054ICSB_79_042023.D ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Calcium	**107000**	**100932**	**94**
Aluminum	*102000*	*96418*	*95*
Antimony	*100*	*99.8*	*100*
Arsenic	*100*	*96.0*	*96*
Barium	*100*	*98.7*	*99*
Beryllium	*100*	*96.2*	*96*
Cadmium	*100*	*97.7*	*98*
Chromium	*100*	*102*	*102*
Cobalt	*100*	*98.5*	*98*
Copper	*100*	*99.3*	*99*
Iron	*102000*	*94152*	*92*
Lead	*100*	*97.2*	*97*
Magnesium	*107000*	*100292*	*94*
Manganese	*100*	*98.6*	*99*
Molybdenum	*2100*	*2012*	*96*
Nickel	*100*	*97.4*	*97*
Potassium	*107000*	*100796*	*94*
Selenium	*100*	*97.8*	*98*
Silver	*100*	*98.1*	*98*
Sodium	*107000*	*101385*	*95*
Strontium	*200*	*196*	*98*
Thallium	*100*	*97.3*	*97*
Thorium	*100*	*100.0*	*100*
Tin	*100*	*99.1*	*99*
Uranium	*100*	*105*	*105*
Vanadium	*100*	*97.9*	*98*
Zinc	*100*	*94.5*	*94*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 280-608984/2-A

Lab Name: Eurofins Denver Job No.: 280-175122-1

Sample Matrix: Water LCS Source: MS spike 2_00106

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	40.0	39.9		100	85	115		6020B
Arsenic	40.0	40.6		101	85	117		6020B
Barium	40.0	40.9		102	85	118		6020B
Calcium	800	849		106	80	120		6020B
Cadmium	40.0	39.3		98	85	115		6020B
Co	40.0	40.0		100	85	120		6020B
Chromium	40.0	40.5		101	84	121		6020B
Copper	40.0	41.1		103	85	119		6020B
Iron	800	830		104	80	120		6020B
Potassium	800	767	J	96	80	120		6020B
Magnesium	800	724		90	80	120		6020B
Sodium	800	886	J	111	80	120		6020B
Nickel	40.0	39.2		98	85	119		6020B
Lead	40.0	38.7		97	85	118		6020B
Antimony	40.0	39.1		98	85	115		6020B
Selenium	40.0	42.1		105	77	122		6020B
Tin	40.0	37.1		93	77	115		6020B
Thallium	40.0	38.6		97	85	118		6020B
Vanadium	40.0	39.3		98	85	120		6020B
Zinc	40.0	39.2		98	83	122		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 280-608984/2-A

Lab Name: Eurofins Denver Job No.: 280-175122-1

Sample Matrix: Water LCS Source: ms spike 1_00017

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Beryllium	40.0	39.1		98	80	125		6020B
Manganese	40.0	41.3		103	85	117		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG Number:

Matrix: Water Instrument ID: MT_079

Method: 6020B MDL Date: 09/01/2022 00:00

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony		2	0.4
Arsenic		5	0.5
Barium		3	0.38
Beryllium		1	0.303
Cadmium		1	0.19
Calcium		200	32.29
Chromium		3	0.5
Co		1	0.33
Copper		2	0.71
Iron		200	8.67
Lead		1	0.23
Magnesium		200	4.16
Manganese		3	0.51
Nickel		3	0.83
Potassium		1000	52
Selenium		5	1
Silver		1	0.045
Sodium		1000	73.3
Thallium		1	0.21
Tin		10	0.58
Vanadium		5	1.12
Zinc		10	2

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG Number:

Matrix: Water Instrument ID: MT_079

Method: 6020B XMDL Date: 01/03/2023 12:35

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony		2	0.4
Arsenic		5	0.5
Barium		3	0.38
Beryllium		1	0.303
Cadmium		1	0.19
Calcium		200	32.29
Chromium		3	0.5
Co		1	0.33
Copper		2	0.71
Iron		200	8.67
Lead		1	0.23
Magnesium		200	4.16
Manganese		3	0.51
Nickel		3	0.83
Potassium		1000	52
Selenium		5	1
Silver		1	0.045
Sodium		1000	73.3
Thallium		1	0.21
Tin		10	0.58
Vanadium		5	1.12
Zinc		10	2

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.:

Instrument ID: MT_079 Date: 10/06/2022 14:28

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Silver		900	6020B
Arsenic		3600	6020B
Barium		4500	6020B
Beryllium		3600	6020B
Calcium		72000	6020B
Cadmium		3600	6020B
Co		3600	6020B
Chromium		4500	6020B
Copper		4500	6020B
Iron		72000	6020B
Potassium		72000	6020B
Magnesium		72000	6020B
Manganese		18000	6020B
Sodium		72000	6020B
Nickel		4500	6020B
Lead		4500	6020B
Antimony		3600	6020B
Selenium		3600	6020B
Tin		3600	6020B
Thallium		3600	6020B
Vanadium		3600	6020B
Zinc		4500	6020B

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-608984/1-A	04/18/2023 07:56	608984		50	50
LCS 280-608984/2-A	04/18/2023 07:56	608984		50	50
280-175122-1	04/18/2023 07:56	608984		50	50
280-175122-2	04/18/2023 07:56	608984		50	50
280-175122-3	04/18/2023 07:56	608984		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/18/2023 14:56 End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn							
RINSE 280-609240/1			14:56																											
RINSE 280-609240/2			14:57																											
RINSE 280-609240/3			14:59																											
RINSE 280-609240/4			15:01																											
RINSE 280-609240/5			15:03																											
RINSE 280-609240/6			15:07																											
RINSE 280-609240/7			15:09																											
RINSE 280-609240/8			15:10																											
RINSE 280-609240/9			15:12																											
RINSE 280-609240/10			15:14																											
RINSE 280-609240/11			15:16																											
RINSE 280-609240/12			15:18																											
RINSE 280-609240/13			15:20																											
RINSE 280-609240/14			15:21																											
RINSE 280-609240/15			15:23																											
RINSE 280-609240/16			15:25																											
RINSE 280-609240/17			15:27																											
RINSE 280-609240/18			15:29																											
RINSE 280-609240/19			15:30																											
RINSE 280-609240/20			15:32																											
RINSE 280-609240/21			15:34																											
RINSE 280-609240/22			15:36																											
RINSE 280-609240/23			15:38																											
RINSE 280-609240/24			15:41																											
RINSE 280-609240/25			15:43																											
RINSE 280-609240/26			15:46																											
RINSE 280-609240/27			15:48																											
RINSE 280-609240/28			15:50																											
RINSE 280-609240/29			15:52																											
RINSE 280-609240/30			15:54																											
RINSE 280-609240/31			15:55																											
ICIS 280-609240/32			15:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
IC 280-609240/33			15:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
IC 280-609240/34			16:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICV 280-609240/35			16:03																											
ICB 280-609240/36			16:04																											
CRI 280-609240/37			16:06																											
RINSE 280-609240/38			16:10																											
RINSE 280-609240/39			16:12																											
RINSE 280-609240/40			16:14																											
ICIS 280-609240/41			16:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/18/2023 14:56 End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn						
IC 280-609240/42	1		16:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
IC 280-609240/43	1		16:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 280-609240/44	1		16:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 280-609240/45	1		16:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CRI 280-609240/46	1		16:25	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CRI 280-609240/47	1		16:31			X																							
ICSA 280-609240/48	1		16:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 280-609240/49	1		16:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
RINSE 280-609240/50			16:36																										
LRA 280-609240/51			16:38																										
RINSE 280-609240/52			16:40																										
CCV 280-609240/53			16:42																										
CCB 280-609240/54			16:44																										
CCVL 280-609240/55			16:45																										
ZZZZZZ			16:47																										
ZZZZZZ			16:49																										
ZZZZZZ			16:51																										
ZZZZZZ			16:53																										
ZZZZZZ			16:54																										
ZZZZZZ			16:56																										
ZZZZZZ			16:58																										
ZZZZZZ			17:00																										
CCV 280-609240/64			17:02																										
CCB 280-609240/65			17:03																										
ZZZZZZ			17:05																										
ZZZZZZ			17:07																										
ZZZZZZ			17:09																										
ZZZZZZ			17:11																										
ZZZZZZ			17:13																										
ZZZZZZ			17:14																										
ZZZZZZ			17:16																										
ZZZZZZ			17:18																										
ZZZZZZ			17:20																										
ZZZZZZ			17:22																										
CCV 280-609240/76			17:24																										
CCB 280-609240/77			17:25																										
ZZZZZZ			17:27																										
ZZZZZZ			17:29																										
ZZZZZZ			17:31																										
ZZZZZZ			17:33																										
ZZZZZZ			17:34																										

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/18/2023 14:56 End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn						
ZZZZZZ			17:36																										
ZZZZZZ			17:38																										
ZZZZZZ			17:40																										
ZZZZZZ			17:42																										
ZZZZZZ			17:43																										
CCV 280-609240/88			17:45																										
CCB 280-609240/89			17:47																										
ZZZZZZ			17:49																										
ZZZZZZ			17:51																										
ZZZZZZ			17:53																										
CCV 280-609240/93	1		17:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 280-609240/94	1		17:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
MB 280-608984/1-A	1	R	17:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 280-608984/2-A	1	R	18:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:02																										
ZZZZZZ			18:03																										
ZZZZZZ			18:05																										
ZZZZZZ			18:07																										
ZZZZZZ			18:09																										
ZZZZZZ			18:11																										
ZZZZZZ			18:12																										
CCV 280-609240/104	1		18:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 280-609240/105	1		18:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:18																										
ZZZZZZ			18:20																										
ZZZZZZ			18:22																										
ZZZZZZ			18:23																										
ZZZZZZ			18:25																										
ZZZZZZ			18:27																										
ZZZZZZ			18:29																										
CCV 280-609240/113	1		18:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 280-609240/114	1		18:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:34																										
ZZZZZZ			18:36																										
ZZZZZZ			18:38																										
ZZZZZZ			18:40																										
ZZZZZZ			18:42																										
ZZZZZZ			18:43																										
ZZZZZZ			18:45																										
280-175122-1	1	D	18:47	X	X	X		X	X	X	X	X	X			X	X	X	X	X	X	X	X						
280-175122-2	1	D	18:49	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X						

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/18/2023 14:56 End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn							
CCV 280-609240/124	1		18:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 280-609240/125	1		18:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
280-175122-3	1	D	18:54	X	X	X		X	X	X	X	X	X			X	X	X	X	X	X	X	X						
ZZZZZZ			18:56																										
ZZZZZZ			18:58																										
ZZZZZZ			19:00																										
ZZZZZZ			19:01																										
ZZZZZZ			19:03																										
ZZZZZZ			19:05																										
ZZZZZZ			19:07																										
ZZZZZZ			19:09																										
ZZZZZZ			19:11																										
CCV 280-609240/136	1		19:12	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X						
CCB 280-609240/137	1		19:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:16																										
ZZZZZZ			19:18																										
ZZZZZZ			19:19																										
ZZZZZZ			19:21																										
ZZZZZZ			19:23																										
ZZZZZZ			19:25																										
ZZZZZZ			19:27																										
ZZZZZZ			19:28																										
ZZZZZZ			19:30																										
ZZZZZZ			19:32																										
CCV 280-609240/148			19:34																										
CCB 280-609240/149			19:36																										
ZZZZZZ			19:38																										
ZZZZZZ			19:39																										
ZZZZZZ			19:41																										
ZZZZZZ			19:43																										
ZZZZZZ			19:45																										
ZZZZZZ			19:47																										
CCV 280-609240/156			19:49																										
CCB 280-609240/157			19:50																										
ZZZZZZ			19:52																										
ZZZZZZ			19:54																										
ZZZZZZ			19:56																										
ZZZZZZ			19:58																										
ZZZZZZ			19:59																										
ZZZZZZ			20:01																										
ZZZZZZ			20:03																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 | Analysis Method: 6020B

Start Date: 04/18/2023 14:56 | End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn								
ZZZZZZ			20:05																											
CCV 280-609240/166			20:07																											
CCB 280-609240/167			20:08																											
ZZZZZZ			20:10																											
ZZZZZZ			20:12																											
ZZZZZZ			20:14																											
ZZZZZZ			20:16																											
ZZZZZZ			20:18																											
ZZZZZZ			20:19																											
ZZZZZZ			20:21																											
ZZZZZZ			20:23																											
ZZZZZZ			20:25																											
ZZZZZZ			20:27																											
ZZZZZZ			20:29																											
ZZZZZZ			20:30																											
ZZZZZZ			20:32																											

Prep Types:
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 12:48 End Date: 04/19/2023 17:38

Lab Sample Id	D/F	Type	Time	Analytes																										
				Be	Mg	Mn	Na																								
RINSE 280-609394/1			12:48																											
RINSE 280-609394/2			12:50																											
RINSE 280-609394/3			12:52																											
RINSE 280-609394/4			12:54																											
RINSE 280-609394/5			12:55																											
RINSE 280-609394/6			12:57																											
RINSE 280-609394/7			12:59																											
RINSE 280-609394/8			13:01																											
RINSE 280-609394/9			13:03																											
RINSE 280-609394/10			13:05																											
RINSE 280-609394/11			13:06																											
RINSE 280-609394/12			13:08																											
RINSE 280-609394/13			13:10																											
RINSE 280-609394/14			13:12																											
RINSE 280-609394/15			13:14																											
RINSE 280-609394/16			13:15																											
RINSE 280-609394/17			13:17																											
RINSE 280-609394/18			13:19																											
RINSE 280-609394/19			13:21																											
RINSE 280-609394/20			13:23																											
RINSE 280-609394/21			13:25																											
RINSE 280-609394/22			13:26																											
RINSE 280-609394/23			13:28																											
RINSE 280-609394/24			13:30																											
RINSE 280-609394/25			13:32																											
RINSE 280-609394/26			13:34																											
RINSE 280-609394/27			13:35																											
ICIS 280-609394/28			13:37	X	X	X	X																							
IC 280-609394/29			13:39	X	X	X	X																							
IC 280-609394/30			13:41	X	X	X	X																							
ICV 280-609394/31			13:43																											
ICB 280-609394/32			13:44																											
RINSE 280-609394/33			13:46																											
RINSE 280-609394/34			13:48																											
ICIS 280-609394/35			13:50	X	X	X	X																							
IC 280-609394/36			13:52	X	X	X	X																							
IC 280-609394/37			13:54	X	X	X	X																							
ICV 280-609394/38			13:55																											
ICB 280-609394/39			14:00																											
ICB 280-609394/40			14:02																											
CRI 280-609394/41			14:07																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 12:48 End Date: 04/19/2023 17:38

Lab Sample Id	D/F	Type	Time	Analytes																											
				Be	Mg	Mn	Na																									
RINSE 280-609394/42			14:09																												
RINSE 280-609394/43			14:11																												
ICIS 280-609394/44			14:13	X	X	X	X																								
IC 280-609394/45	1		14:15	X	X	X	X																								
IC 280-609394/46	1		14:17	X	X	X	X																								
ICV 280-609394/47	1		14:19	X	X	X	X																								
ICB 280-609394/48			14:21																												
ICB 280-609394/49	1		14:26	X	X	X	X																								
CRI 280-609394/50	1		14:28	X	X	X	X																								
ICSA 280-609394/51	1		14:32	X	X	X	X																								
ICSAB 280-609394/52	1		14:34	X	X	X	X																								
RINSE 280-609394/53			14:35																												
LRA 280-609394/54			14:37																												
ZZZZZZ			14:39																												
CCV 280-609394/56			14:41																												
CCB 280-609394/57			14:42																												
CCVL 280-609394/58			14:44																												
CRI 280-609394/59	1		14:46	X	X	X	X																								
ZZZZZZ			14:48																												
ZZZZZZ			14:50																												
ZZZZZZ			14:51																												
ZZZZZZ			14:53																												
ZZZZZZ			14:55																												
ZZZZZZ			14:57																												
ZZZZZZ			14:59																												
CCV 280-609394/67			15:00																												
CCB 280-609394/68			15:02																												
ZZZZZZ			15:04																												
ZZZZZZ			15:06																												
ZZZZZZ			15:08																												
ZZZZZZ			15:10																												
ZZZZZZ			15:11																												
ZZZZZZ			15:14																												
ZZZZZZ			15:15																												
ZZZZZZ			15:17																												
ZZZZZZ			15:20																												
ZZZZZZ			15:21																												
CCV 280-609394/79			15:23																												
CCB 280-609394/80			15:28																												
ZZZZZZ			15:30																												
ZZZZZZ			15:32																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 12:48 End Date: 04/19/2023 17:38

Lab Sample Id	D/F	Type	Time	Analytes																									
				Be	Mg	Mn	Na																						
ZZZZZZ			15:34																										
ZZZZZZ			15:36																										
ZZZZZZ			15:38																										
CCV 280-609394/86	1		15:40	X	X	X	X																						
CCB 280-609394/87	1		15:41	X	X	X	X																						
ZZZZZZ			15:43																										
LCS 280-608984/2-A	1	R	15:45	X		X																							
ZZZZZZ			15:47																										
ZZZZZZ			15:49																										
ZZZZZZ			15:51																										
ZZZZZZ			15:52																										
ZZZZZZ			15:54																										
ZZZZZZ			15:56																										
ZZZZZZ			15:58																										
ZZZZZZ			16:00																										
CCV 280-609394/98	1		16:01	X	X	X	X																						
CCB 280-609394/99	1		16:03	X	X	X	X																						
ZZZZZZ			16:05																										
ZZZZZZ			16:07																										
ZZZZZZ			16:09																										
ZZZZZZ			16:10																										
ZZZZZZ			16:12																										
ZZZZZZ			16:14																										
ZZZZZZ			16:16																										
280-175122-1	1	D	16:18	X	X	X	X																						
280-175122-2	1	D	16:20	X		X	X																						
CCV 280-609394/109	1		16:21	X	X	X	X																						
CCB 280-609394/110	1		16:23	X	X	X	X																						
280-175122-3	1	D	16:25	X	X	X	X																						
ZZZZZZ			16:27																										
ZZZZZZ			16:29																										
ZZZZZZ			16:30																										
ZZZZZZ			16:32																										
ZZZZZZ			16:34																										
ZZZZZZ			16:36																										
ZZZZZZ			16:38																										
ZZZZZZ			16:39																										
CCV 280-609394/120	1		16:41	X	X	X	X																						
CCB 280-609394/121	1		16:43	X	X	X	X																						
ZZZZZZ			16:45																										
ZZZZZZ			16:47																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 12:48 End Date: 04/19/2023 17:38

Lab Sample Id	D/F	Type	Time	Analytes																									
				Be	Mg	Mn	Na																						
ZZZZZZ			16:48																										
ZZZZZZ			16:50																										
ZZZZZZ			16:52																										
ZZZZZZ			16:54																										
ZZZZZZ			16:56																										
ZZZZZZ			16:58																										
ZZZZZZ			16:59																										
ZZZZZZ			17:01																										
CCV 280-609394/132			17:03																										
CCB 280-609394/133			17:05																										
ZZZZZZ			17:07																										
ZZZZZZ			17:08																										
ZZZZZZ			17:10																										
ZZZZZZ			17:12																										
ZZZZZZ			17:14																										
ZZZZZZ			17:16																										
CCV 280-609394/140			17:17																										
CCB 280-609394/141			17:19																										
ZZZZZZ			17:21																										
ZZZZZZ			17:23																										
ZZZZZZ			17:25																										
ZZZZZZ			17:27																										
ZZZZZZ			17:28																										
ZZZZZZ			17:30																										
ZZZZZZ			17:32																										
ZZZZZZ			17:34																										
CCV 280-609394/150			17:36																										
CCB 280-609394/151			17:38																										

Prep Types:
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 14:09 End Date: 04/20/2023 12:49

Lab Sample Id	D/F	Type	Time	Analytes																									
				Be	Mn																								
RINSE 280-609488/1			14:09																										
RINSE 280-609488/2			14:11																										
ICIS 280-609488/3			14:13	X	X																								
IC 280-609488/4			14:15	X	X																								
IC 280-609488/5			14:17	X	X																								
ICV 280-609488/6			14:19																										
ICB 280-609488/7			14:21																										
ICB 280-609488/8	1		14:26	X	X																								
CRI 280-609488/9	1		14:28	X	X																								
ICSA 280-609488/10	1		14:32	X	X																								
ICSAB 280-609488/11	1		14:34	X	X																								
RINSE 280-609488/12			14:35																										
LRA 280-609488/13			14:37																										
ZZZZZZ			14:39																										
CCV 280-609488/15			14:41																										
CCB 280-609488/16			14:42																										
CCVL 280-609488/17			14:44																										
CRI 280-609488/18			14:46																										
RINSE 280-609488/19			08:41																										
RINSE 280-609488/20			08:44																										
RINSE 280-609488/21			08:45																										
RINSE 280-609488/22			08:47																										
ICIS 280-609488/23			08:49	X	X																								
IC 280-609488/24	1		08:51	X	X																								
IC 280-609488/25	1		08:53	X	X																								
ICV 280-609488/26	1		08:55	X	X																								
CCV 280-609488/27	1		08:56	X	X																								
CCB 280-609488/28	1		08:58	X	X																								
CCVL 280-609488/29			09:12																										
ZZZZZZ			09:15																										
ICSA 280-609488/31	1		09:20	X	X																								
ICSAB 280-609488/32	1		09:22	X	X																								
RINSE 280-609488/33			09:23																										
CCV 280-609488/34	1		09:25	X	X																								
CCB 280-609488/35	1		09:27	X	X																								
MB 280-608984/1-A	1	R	09:29	X	X																								
ZZZZZZ			09:31																										
ZZZZZZ			09:33																										
ZZZZZZ			09:34																										
CCV 280-609488/40	1		09:36	X	X																								
CCB 280-609488/41	1		09:39	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 14:09 End Date: 04/20/2023 12:49

Lab Sample Id	D/F	Type	Time	Analytes																									
				Be	Mn																								
ZZZZZZ			09:40																										
ZZZZZZ			09:42																										
ZZZZZZ			09:44																										
ZZZZZZ			09:46																										
ZZZZZZ			09:48																										
ZZZZZZ			09:49																										
ZZZZZZ			09:52																										
CCV 280-609488/49			09:54																										
CCB 280-609488/50			09:55																										
ZZZZZZ			09:57																										
ZZZZZZ			09:59																										
ZZZZZZ			10:01																										
ZZZZZZ			10:03																										
ZZZZZZ			10:04																										
ZZZZZZ			10:06																										
ZZZZZZ			10:08																										
ZZZZZZ			10:10																										
ZZZZZZ			10:12																										
CCV 280-609488/60			10:14																										
CCB 280-609488/61			10:37																										
RINSE 280-609488/62			10:38																										
RINSE 280-609488/63			10:40																										
RINSE 280-609488/64			10:42																										
RINSE 280-609488/65			10:44																										
RINSE 280-609488/66			10:47																										
ICIS 280-609488/67			10:49	X	X																								
IC 280-609488/68			10:51	X	X																								
IC 280-609488/69			10:53	X	X																								
ICV 280-609488/70			10:54																										
CCV 280-609488/71			10:56																										
CCB 280-609488/72			10:58																										
CCVL 280-609488/73			11:00																										
CCVL 280-609488/74			11:02																										
ZZZZZZ			11:03																										
ZZZZZZ			11:05																										
ZZZZZZ			11:07																										
ZZZZZZ			11:09																										
ZZZZZZ			11:11																										
ZZZZZZ			11:13																										
ZZZZZZ			11:15																										
ZZZZZZ			11:16																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 14:09 End Date: 04/20/2023 12:49

Lab Sample Id	D/F	Type	Time	Analytes																								
				Be	Mn																							
ZZZZZZ			11:18																									
ZZZZZZ			11:20																									
CCV 280-609488/85			11:23																									
CCB 280-609488/86			11:25																									
CCVL 280-609488/87			11:27																									
ZZZZZZ			11:29																									
ZZZZZZ			11:31																									
ZZZZZZ			11:32																									
ZZZZZZ			11:34																									
ZZZZZZ			11:36																									
ZZZZZZ			11:38																									
ZZZZZZ			11:40																									
ZZZZZZ			11:41																									
ZZZZZZ			11:43																									
CCV 280-609488/97			11:45																									
CCB 280-609488/98			11:47																									
CCVL 280-609488/99			11:49																									
ZZZZZZ			11:51																									
ZZZZZZ			11:52																									
ZZZZZZ			11:54																									
ZZZZZZ			11:56																									
ZZZZZZ			11:58																									
ZZZZZZ			12:00																									
CCV 280-609488/106			12:02																									
CCB 280-609488/107			12:04																									
CCVL 280-609488/108			12:06																									
ZZZZZZ			12:08																									
ZZZZZZ			12:09																									
ZZZZZZ			12:27																									
ZZZZZZ			12:29																									
ZZZZZZ			12:31																									
ZZZZZZ			12:33																									
ZZZZZZ			12:34																									
ZZZZZZ			12:36																									
ZZZZZZ			12:38																									
ZZZZZZ			12:40																									
CCV 280-609488/119			12:42																									
CCB 280-609488/120			12:44																									
ZZZZZZ			12:45																									
CCVL 280-609488/122			12:47																									
ZZZZZZ			12:49																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 14:09 End Date: 04/20/2023 12:49

Lab Sample Id	D/F	Type	Time	Analytes																							
				Be	Mn																						

Prep Types:
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/20/2023 15:34 End Date: 04/20/2023 19:31

Lab Sample Id	D/F	Type	Time	Analytes
				Ca
RINSE 280-609564/1			15:34	
RINSE 280-609564/2			15:36	
RINSE 280-609564/3			15:38	
RINSE 280-609564/4			15:40	
RINSE 280-609564/5			15:41	
RINSE 280-609564/6			15:43	
RINSE 280-609564/7			15:45	
RINSE 280-609564/8			15:47	
RINSE 280-609564/9			15:49	
RINSE 280-609564/10			15:51	
RINSE 280-609564/11			15:52	
RINSE 280-609564/12			15:54	
RINSE 280-609564/13			15:56	
RINSE 280-609564/14			15:58	
RINSE 280-609564/15			16:00	
RINSE 280-609564/16			16:01	
RINSE 280-609564/17			16:03	
RINSE 280-609564/18			16:05	
RINSE 280-609564/19			16:08	
RINSE 280-609564/20			16:13	
RINSE 280-609564/21			16:15	
RINSE 280-609564/22			16:17	
RINSE 280-609564/23			16:19	
RINSE 280-609564/24			16:20	
RINSE 280-609564/25			16:22	
RINSE 280-609564/26			16:25	
RINSE 280-609564/27			16:27	
RINSE 280-609564/28			16:29	
ICIS 280-609564/29			16:31	X
IC 280-609564/30			16:32	X
IC 280-609564/31			16:34	X
ICV 280-609564/32			16:36	
ICB 280-609564/33			16:42	
CRI 280-609564/34			16:44	
RINSE 280-609564/35			16:46	
RINSE 280-609564/36			16:48	
ICIS 280-609564/37			16:50	X
IC 280-609564/38			16:52	X
IC 280-609564/39			16:53	X
ICV 280-609564/40			16:55	
ICB 280-609564/41			16:57	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/20/2023 15:34 End Date: 04/20/2023 19:31

Lab Sample Id	D/F	Type	Time	Analytes
				Ca
CRI 280-609564/42			16:59	
CRI 280-609564/43			17:02	
RINSE 280-609564/44			17:05	
RINSE 280-609564/45			17:06	
ICIS 280-609564/46			17:08	X
IC 280-609564/47	1		17:10	X
IC 280-609564/48	1		17:12	X
ICV 280-609564/49	1		17:14	X
ICB 280-609564/50	1		17:15	X
ZZZZZZ			17:17	
CRI 280-609564/52	1		17:19	X
ICSA 280-609564/53	1		17:21	X
ICSAB 280-609564/54	1		17:23	X
RINSE 280-609564/55			17:25	
LRA 280-609564/56			17:26	
RINSE 280-609564/57			17:28	
CCV 280-609564/58	1		17:30	X
CCB 280-609564/59	1		17:32	X
CCVL 280-609564/60			17:33	
ZZZZZZ			17:35	
280-175122-1	10	D	17:37	X
280-175122-2	10	D	17:39	X
280-175122-3	10	D	17:41	X
ZZZZZZ			17:42	
ZZZZZZ			17:44	
ZZZZZZ			17:46	
ZZZZZZ			17:48	
CCV 280-609564/69	1		17:49	X
CCB 280-609564/70	1		17:51	X
CCVL 280-609564/71			17:53	
ZZZZZZ			17:55	
ZZZZZZ			17:57	
ZZZZZZ			17:59	
ZZZZZZ			18:00	
ZZZZZZ			18:02	
ZZZZZZ			18:04	
ZZZZZZ			18:06	
ZZZZZZ			18:08	
ZZZZZZ			18:09	
ZZZZZZ			18:11	
CCV 280-609564/82			18:13	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/20/2023 15:34 End Date: 04/20/2023 19:31

Lab Sample Id	D/F	Type	Time	Analytes
				Ca
CCB 280-609564/83			18:15	
CCVL 280-609564/84			18:17	
ZZZZZZ			18:18	
ZZZZZZ			18:20	
ZZZZZZ			18:22	
ZZZZZZ			18:24	
ZZZZZZ			18:26	
ZZZZZZ			18:27	
ZZZZZZ			18:29	
ZZZZZZ			18:31	
ZZZZZZ			18:33	
CCV 280-609564/94			18:35	
CCB 280-609564/95			18:37	
CCVL 280-609564/96			18:38	
ZZZZZZ			18:40	
ZZZZZZ			18:42	
ZZZZZZ			18:44	
ZZZZZZ			18:46	
ZZZZZZ			18:47	
ZZZZZZ			18:49	
ZZZZZZ			18:51	
CCV 280-609564/104			18:53	
CCB 280-609564/105			18:55	
CCVL 280-609564/106			18:56	
ZZZZZZ			18:58	
ZZZZZZ			19:00	
ZZZZZZ			19:02	
ZZZZZZ			19:04	
ZZZZZZ			19:05	
ZZZZZZ			19:07	
ZZZZZZ			19:09	
ZZZZZZ			19:11	
ZZZZZZ			19:13	
CCV 280-609564/116			19:14	
CCB 280-609564/117			19:16	
ZZZZZZ			19:18	
ZZZZZZ			19:20	
ZZZZZZ			19:22	
ZZZZZZ			19:24	
ZZZZZZ			19:25	
ZZZZZZ			19:27	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/20/2023 15:34 End Date: 04/20/2023 19:31

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ca																								
ZZZZZZ			19:29																									
ZZZZZZ			19:31																									

Prep Types:
D = Dissolved

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609240

ICP-MS Instrument ID: MT_079 Start Date: 04/18/2023 End Date: 04/18/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/2	Q	Element Sc/3	Q	Element Ge/2	Q
IC 280-609240/42	16:17	105		102		101		101		98	
IC 280-609240/43	16:19	107		102		101		101		105	
ICV 280-609240/44	16:21	101		102		102		100		102	
ICB 280-609240/45	16:23	104		102		103		101		104	
CRI 280-609240/46	16:25	104		102		102		100		104	
CRI 280-609240/47	16:31	96		100		99		100		103	
ICSA 280-609240/48	16:33	108		102		101		101		101	
ICSAB 280-609240/49	16:35	102		101		104		101		101	
CCV 280-609240/93	17:54	104		99		103		102		102	
CCB 280-609240/94	17:56	106		99		104		101		102	
MB 280-608984/1-A	17:58	98		100		103		103		103	
LCS 280-608984/2-A	18:00	95		98		102		102		103	
CCV 280-609240/104	18:14	100		100		105		103		103	
CCB 280-609240/105	18:16	112		100		103		103		105	
CCV 280-609240/113	18:31	102		101		106		103		103	
CCB 280-609240/114	18:32	99		100		103		103		106	
280-175122-1	18:47	99		102		104		102		108	
280-175122-2	18:49	97		102		104		104		109	
CCV 280-609240/124	18:51	100		101		105		103		103	
CCB 280-609240/125	18:52	102		101		105		102		104	
280-175122-3	18:54	99		102		105		103		106	
CCV 280-609240/136	19:12	93		98		102		101		102	
CCB 280-609240/137	19:14	103		100		102		99		104	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609240

ICP-MS Instrument ID: MT_079 Start Date: 04/18/2023 End Date: 04/18/2023

Analyte	Mass	Internal Standard Used:				
		Element In 115	Element Ir 193	Element Sc/2 45	Element Sc/3 45	Element Li-6/1 6
Silver	107	X				
Arsenic	75					
Barium	137	X				
Beryllium	9					
Calcium	40			X		
Cadmium	111	X				
Co	59					
Chromium	52					
Copper	63					
Iron	56					
Potassium	39				X	
Magnesium	24				X	
Manganese	55					
Sodium	23				X	
Nickel	60					
Lead	208		X			
Antimony	121	X				
Selenium	78					
Tin	120	X				
Thallium	205		X			
Vanadium	51					
Zinc	66					
Aluminum	27				X	
Molybdenum	95	X				
Strontium	88					
Thorium	232		X			
Uranium	238		X			
Internal Standard Name on Instrument		In Internal Standard	Ir (IS)	Sc (IS)	Sc (IS)	Li-6 Internal standard

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609240

ICP-MS Instrument ID: MT_079 Start Date: 04/18/2023 End Date: 04/18/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In	Q	Element Ir	Q	Element	Q	Element	Q
IC 280-609240/42	16:17	95		101		100					
IC 280-609240/43	16:19	103		102		100					
ICV 280-609240/44	16:21	101		103		101					
ICB 280-609240/45	16:23	101		101		103					
CRI 280-609240/46	16:25	100		101		101					
CRI 280-609240/47	16:31	100		100		100					
ICSA 280-609240/48	16:33	102		101		101					
ICSAB 280-609240/49	16:35	101		100		101					
CCV 280-609240/93	17:54	101		104		102					
CCB 280-609240/94	17:56	100		103		102					
MB 280-608984/1-A	17:58	102		105		102					
LCS 280-608984/2-A	18:00	102		103		103					
CCV 280-609240/104	18:14	102		107		104					
CCB 280-609240/105	18:16	104		106		104					
CCV 280-609240/113	18:31	101		103		105					
CCB 280-609240/114	18:32	103		104		105					
280-175122-1	18:47	104		104		105					
280-175122-2	18:49	105		103		104					
CCV 280-609240/124	18:51	101		105		106					
CCB 280-609240/125	18:52	103		105		106					
280-175122-3	18:54	104		106		106					
CCV 280-609240/136	19:12	101		103		104					
CCB 280-609240/137	19:14	101		105		105					
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609240

ICP-MS Instrument ID: MT_079 Start Date: 04/18/2023 End Date: 04/18/2023

Analyte	Mass	Internal Standard Used:				
		Element Li-6/2 6	Element Ge/2 72	Element Ge/3 72	Element	Element
Silver	107					
Arsenic	75			X		
Barium	137					
Beryllium	9	X				
Calcium	40					
Cadmium	111					
Co	59			X		
Chromium	52			X		
Copper	63			X		
Iron	56		X			
Potassium	39					
Magnesium	24					
Manganese	55			X		
Sodium	23					
Nickel	60			X		
Lead	208					
Antimony	121					
Selenium	78		X			
Tin	120					
Thallium	205					
Vanadium	51			X		
Zinc	66			X		
Aluminum	27					
Molybdenum	95					
Strontium	88			X		
Thorium	232					
Uranium	238					
Internal Standard Name on Instrument		Li-6 Internal standard	Ge Internal standard	Ge Internal standard		

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609394

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/19/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/2	Q	Element Sc/3	Q	Element Ge/2	Q
IC 280-609394/45	14:15	103		100		101		102		97	
IC 280-609394/46	14:17	98		101		103		101		103	
ICV 280-609394/47	14:19	101		101		103		103		104	
ICB 280-609394/49	14:26	98		100		100		102		101	
CRI 280-609394/50	14:28	99		101		99		102		102	
ICSA 280-609394/51	14:32	100		102		102		104		104	
ICSAB 280-609394/52	14:34	98		101		102		102		101	
CRI 280-609394/59	14:46	100		103		104		105		105	
CCV 280-609394/86	15:40	94		105		105		107		103	
CCB 280-609394/87	15:41	97		105		106		105		106	
LCS 280-608984/2-A	15:45	92		105		107		106		107	
CCV 280-609394/98	16:01	94		106		109		106		107	
CCB 280-609394/99	16:03	99		105		105		106		106	
280-175122-1	16:18	95		106		106		109		109	
280-175122-2	16:20	101		106		109		109		110	
CCV 280-609394/109	16:21	96		106		106		108		104	
CCB 280-609394/110	16:23	100		108		108		106		107	
280-175122-3	16:25	94		106		109		109		109	
CCV 280-609394/120	16:41	90		103		107		107		104	
CCB 280-609394/121	16:43	99		104		104		107		104	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609394

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/19/2023

Analyte	Mass	Internal Standard Used:				
		Element In 115	Element Ir 193	Element Sc/2 45	Element Sc/3 45	Element Li-6/1 6
Silver	107	X				
Arsenic	75					
Barium	137	X				
Beryllium	9					
Calcium	40			X		
Cadmium	111	X				
Cobalt	59					
Chromium	52					
Copper	63					
Iron	56					
Potassium	39				X	
Magnesium	24				X	
Manganese	55					
Sodium	23				X	
Nickel	60					
Lead	208		X			
Antimony	121	X				
Selenium	78					
Tin	120	X				
Thallium	205		X			
Vanadium	51					
Zinc	66					
Aluminum	27				X	
Molybdenum	95	X				
Strontium	88					
Thorium	232		X			
Uranium	238		X			
Internal Standard Name on Instrument		In Internal Standard	Ir (IS)	Sc (IS)	Sc (IS)	Li-6 Internal standard

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609394

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/19/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In	Q	Element Ir	Q	Element	Q	Element	Q
IC 280-609394/45	14:15	97		100		103					
IC 280-609394/46	14:17	103		102		101					
ICV 280-609394/47	14:19	103		101		102					
ICB 280-609394/49	14:26	101		101		100					
CRI 280-609394/50	14:28	103		103		102					
ICSA 280-609394/51	14:32	105		100		101					
ICSAB 280-609394/52	14:34	105		100		100					
CRI 280-609394/59	14:46	104		104		104					
CCV 280-609394/86	15:40	104		104		104					
CCB 280-609394/87	15:41	104		103		106					
LCS 280-608984/2-A	15:45	107		104		107					
CCV 280-609394/98	16:01	103		104		106					
CCB 280-609394/99	16:03	105		104		106					
280-175122-1	16:18	110		106		107					
280-175122-2	16:20	110		106		107					
CCV 280-609394/109	16:21	106		105		107					
CCB 280-609394/110	16:23	105		106		106					
280-175122-3	16:25	109		106		106					
CCV 280-609394/120	16:41	104		106		105					
CCB 280-609394/121	16:43	107		107		106					
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609394

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/19/2023

Analyte	Mass	Internal Standard Used:				
		Element Li-6/2 6	Element Ge/2 72	Element Ge/3 72	Element	Element
Silver	107					
Arsenic	75			X		
Barium	137					
Beryllium	9	X				
Calcium	40					
Cadmium	111					
Cobalt	59			X		
Chromium	52			X		
Copper	63			X		
Iron	56		X			
Potassium	39					
Magnesium	24					
Manganese	55			X		
Sodium	23					
Nickel	60			X		
Lead	208					
Antimony	121					
Selenium	78		X			
Tin	120					
Thallium	205					
Vanadium	51			X		
Zinc	66			X		
Aluminum	27					
Molybdenum	95					
Strontium	88			X		
Thorium	232					
Uranium	238					
Internal Standard Name on Instrument		Li-6 Internal standard	Ge Internal standard	Ge Internal standard		

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609488

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/20/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/2	Q	Element Sc/3	Q	Element Ge/2	Q
ICB 280-609488/8	14:26	98		100		100		102		101	
CRI 280-609488/9	14:28	99		101		99		102		102	
ICSA 280-609488/10	14:32	100		102		102		104		104	
ICSAB 280-609488/11	14:34	98		101		102		102		101	
IC 280-609488/24	08:51	106		102		101		101		92	
IC 280-609488/25	08:53	107		102		101		100		101	
ICV 280-609488/26	08:55	103		100		101		101		97	
CCV 280-609488/27	08:56	103		101		102		102		97	
CCB 280-609488/28	08:58	104		100		101		101		98	
ICSA 280-609488/31	09:20	101		102		104		104		94	
ICSAB 280-609488/32	09:22	104		100		102		105		97	
CCV 280-609488/34	09:25	106		96		102		102		91	
CCB 280-609488/35	09:27	101		99		102		101		93	
MB 280-608984/1-A	09:29	102		98		101		103		92	
CCV 280-609488/40	09:36	101		100		100		100		92	
CCB 280-609488/41	09:39	101		100		102		100		90	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609488

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/20/2023

Analyte	Mass	Internal Standard Used:				
		Element In 115	Element Ir 193	Element Sc/2 45	Element Sc/3 45	Element Li-6/1 6
Silver	107	X				
Arsenic	75					
Barium	137	X				
Beryllium	9					
Calcium	40			X		
Cadmium	111	X				
Cobalt	59					
Chromium	52					
Copper	63					
Iron	56					
Potassium	39				X	
Magnesium	24				X	
Manganese	55					
Sodium	23				X	
Nickel	60					
Lead	208		X			
Antimony	121	X				
Selenium	78					
Tin	120	X				
Thallium	205		X			
Vanadium	51					
Zinc	66					
Aluminum	27				X	
Molybdenum	95	X				
Strontium	88					
Thorium	232		X			
Uranium	238		X			
Internal Standard Name on Instrument		In Internal Standard	Ir (IS)	Sc (IS)	Sc (IS)	Li-6 Internal standard

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609488

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/20/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In	Q	Element Ir	Q	Element	Q	Element	Q
ICB 280-609488/8	14:26	101		101		100					
CRI 280-609488/9	14:28	103		103		102					
ICSA 280-609488/10	14:32	105		100		101					
ICSAB 280-609488/11	14:34	105		100		100					
IC 280-609488/24	08:51	93		102		99					
IC 280-609488/25	08:53	99		99		102					
ICV 280-609488/26	08:55	98		101		99					
CCV 280-609488/27	08:56	96		100		103					
CCB 280-609488/28	08:58	98		100		103					
ICSA 280-609488/31	09:20	98		105		101					
ICSAB 280-609488/32	09:22	97		102		101					
CCV 280-609488/34	09:25	93		101		105					
CCB 280-609488/35	09:27	94		103		103					
MB 280-608984/1-A	09:29	95		103		104					
CCV 280-609488/40	09:36	92		100		103					
CCB 280-609488/41	09:39	93		100		102					
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609488

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/20/2023

Analyte	Mass	Internal Standard Used:				
		Element Li-6/2 6	Element Ge/2 72	Element Ge/3 72	Element	Element
Silver	107					
Arsenic	75			X		
Barium	137					
Beryllium	9	X				
Calcium	40					
Cadmium	111					
Cobalt	59			X		
Chromium	52			X		
Copper	63			X		
Iron	56		X			
Potassium	39					
Magnesium	24					
Manganese	55			X		
Sodium	23					
Nickel	60			X		
Lead	208					
Antimony	121					
Selenium	78		X			
Tin	120					
Thallium	205					
Vanadium	51			X		
Zinc	66			X		
Aluminum	27					
Molybdenum	95					
Strontium	88			X		
Thorium	232					
Uranium	238					
Internal Standard Name on Instrument		Li-6 Internal standard	Ge Internal standard	Ge Internal standard		

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609564

ICP-MS Instrument ID: MT_079 Start Date: 04/20/2023 End Date: 04/20/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/2	Q	Element Sc/3	Q	Element Ge/2	Q
IC 280-609564/47	17:10	100		100		102		101		97	
IC 280-609564/48	17:12	102		99		101		101		103	
ICV 280-609564/49	17:14	100		98		103		101		101	
ICB 280-609564/50	17:15	99		100		102		102		102	
CRI 280-609564/52	17:19	98		99		102		99		99	
ICSA 280-609564/53	17:21	97		100		103		100		102	
ICSAB 280-609564/54	17:23	102		99		104		100		103	
CCV 280-609564/58	17:30	103		100		101		99		97	
CCB 280-609564/59	17:32	101		97		101		99		96	
280-175122-1	17:37	97		96		98		96		99	
280-175122-2	17:39	93		93		95		92		97	
280-175122-3	17:41	97		95		98		96		96	
CCV 280-609564/69	17:49	93		95		100		96		96	
CCB 280-609564/70	17:51	99		96		98		96		98	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609564

ICP-MS Instrument ID: MT_079 Start Date: 04/20/2023 End Date: 04/20/2023

Analyte	Mass	Internal Standard Used:				
		Element In 115	Element Ir 193	Element Sc/2 45	Element Sc/3 45	Element Li-6/1 6
Silver	107	X				
Arsenic	75					
Barium	137	X				
Beryllium	9					
Calcium	40			X		
Cadmium	111	X				
Cobalt	59					
Chromium	52					
Copper	63					
Iron	56					
Potassium	39				X	
Magnesium	24				X	
Manganese	55					
Sodium	23				X	
Nickel	60					
Lead	208		X			
Antimony	121	X				
Selenium	78					
Tin	120	X				
Thallium	205		X			
Vanadium	51					
Zinc	66					
Aluminum	27				X	
Molybdenum	95	X				
Strontium	88					
Thorium	232		X			
Uranium	238		X			
Internal Standard Name on Instrument		In Internal Standard	Ir (IS)	Sc (IS)	Sc (IS)	Li-6 Internal standard

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609564

ICP-MS Instrument ID: MT_079 Start Date: 04/20/2023 End Date: 04/20/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In	Q	Element Ir	Q	Element	Q	Element	Q
IC 280-609564/47	17:10	97		103		101					
IC 280-609564/48	17:12	104		104		102					
ICV 280-609564/49	17:14	101		103		101					
ICB 280-609564/50	17:15	102		104		103					
CRI 280-609564/52	17:19	100		101		102					
ICSA 280-609564/53	17:21	102		101		101					
ICSAB 280-609564/54	17:23	101		100		101					
CCV 280-609564/58	17:30	97		103		100					
CCB 280-609564/59	17:32	98		99		102					
280-175122-1	17:37	96		98		98					
280-175122-2	17:39	94		94		95					
280-175122-3	17:41	100		100		102					
CCV 280-609564/69	17:49	96		99		99					
CCB 280-609564/70	17:51	97		99		98					
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.: Analysis Batch No.: 609564

ICP-MS Instrument ID: MT_079 Start Date: 04/20/2023 End Date: 04/20/2023

Analyte	Mass	Internal Standard Used:				
		Element Li-6/2 6	Element Ge/2 72	Element Ge/3 72	Element	Element
Silver	107					
Arsenic	75			X		
Barium	137					
Beryllium	9	X				
Calcium	40					
Cadmium	111					
Cobalt	59			X		
Chromium	52			X		
Copper	63			X		
Iron	56		X			
Potassium	39					
Magnesium	24					
Manganese	55			X		
Sodium	23					
Nickel	60			X		
Lead	208					
Antimony	121					
Selenium	78		X			
Tin	120					
Thallium	205					
Vanadium	51			X		
Zinc	66			X		
Aluminum	27					
Molybdenum	95					
Strontium	88			X		
Thorium	232					
Uranium	238					
Internal Standard Name on Instrument		Li-6 Internal standard	Ge Internal standard	Ge Internal standard		

METALS BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608984 Batch Start Date: 04/18/23 07:56 Batch Analyst: Sweet, Lydia J

Batch Method: 3005A Batch End Date: 04/18/23 13:44

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	ms spike 1 00017	MS spike 2 00106	
MB 280-608984/1		3005A, 6020B		<2 SU	50 mL	50 mL			
LCS 280-608984/2		3005A, 6020B		<2 SU	50 mL	50 mL	0.1 mL	0.1 mL	
280-175122-A-1	RW-1-20230413	3005A, 6020B	D	<2 SU	50 mL	50 mL			
280-175122-A-2	MP-2-20230411	3005A, 6020B	D	<2 SU	50 mL	50 mL			
280-175122-A-3	MW-118D-20230412	3005A, 6020B	D	<2 SU	50 mL	50 mL			

Batch Notes	
Digestion Tube/Cup ID	2210117
Pipette/Syringe/Dispenser ID	MET88
Analyst ID - Spike Analyst	LJS
Sufficient Volume for Batch QC	YES
Hydrochloric Acid ID	226031
Nitric Acid ID	225038
Digestion Unit ID	05
Thermometer ID	QA55
Thermometer Location ID	B5
Temperature - Uncorrected - Start	92 Degrees C
Temperature - Corrected - Start	91 Degrees C
Digestion Start Time	04/18/2023 07:56
Digestion End Time	04/18/2023 13:44
Temperature - Uncorrected - End	96 Degrees C
Temperature - Corrected - End	95 Degrees C

Basis	Basis Description
D	Dissolved

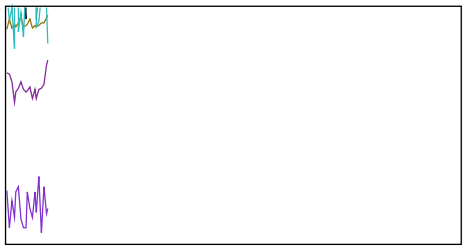
The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/18/2023 2:30:47 PM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041823.b

[HMI He]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	53	20	27	29	16 978
2	59	2000	1527	1530	2 418
3	66	50	38	32	19.724
4	70	50	82	95	11 401
5	78	20	4	2	80 653
6	115	2000	2226	2294	2.669
7	118	20	31	29	19 147
8	137	500	389	334	6 974
9	140	5000	4829	4658	1.913
10	205	5000	5194	5175	1.500
11	51/59	1	1.768 %	1.586 %	22 178
12	70/140	2	1.698 %	2.039 %	11 580
13	156/140	1	0.145 %	0.153 %	46 421

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas	---	Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-60 V
Extract 2	190 0 V	Q1 Exit		Def ect	0 8 V
Omega Bias	90 V	Cel Focus		P ate Bias	55 V
Omega Lens	10 3 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	4.3 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0.0 mL/min	OctP Bias	18 0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Torch H	0.4 mm	Torch V	0.3 mm		

Current Signal

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

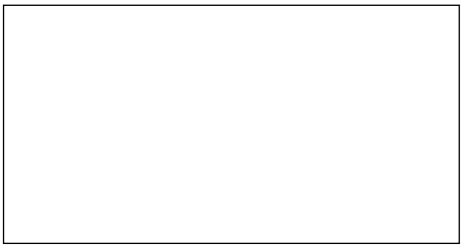
Name	Value	Unit
F/BK Press	2 09E+2	Pa
Ana yzer Press	1 82E-4	Pa
Reflected Power	0	W
Forward Power	1600	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/18/2023 2:38:47 PM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041823.b

[No Gas]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	200000	4290	4290	0.000
2	59	100000	5328	5328	0 000
3	63	100000	116	116	0 000
4	70	500000	381	381	0.000
5	80	1000000	1060789	1060789	0.000
6	89	100000	8459	8459	0.000
7	115	2000000	9043	9043	0.000
8	118	100000	104	104	0 000
9	137	50000	1185	1185	0.000
10	140	20000	9628	9628	0.000
11	205	2000000	7916	7916	0.000
12	6	5000000	6468	6468	0.000
13	70/140	1000	3.958 %	3.958 %	0.000
14	156/140	500	0 467 %	0 467 %	0 000

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-50 V
Extract 2	185 0 V	Q1 Exit		Def ect	12 8 V
Omega Bias	85 V	Cel Focus		P ate Bias	35 V
Omega Lens	10 3 V	Cel Entrance	30 V		

Cell Parameters

Use Gas	No	3rd Gas F ow		Axia Acce eration	
He F ow	0.0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0 0 mL/min	OctP Bias	8 0 V	Energy Discrimination	5 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	-3 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Current Signal

Torch H	0 4 mm	Torch V	0 3 mm		

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

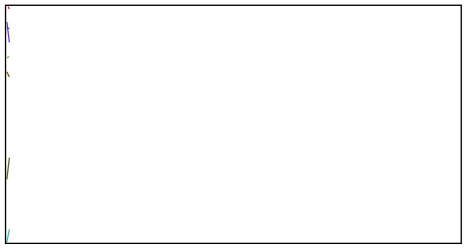
Name	Value	Unit
F/BK Press	2.11E+2	Pa
Ana yzer Press	3 24E 5	Pa
Reflected Power	2	W
Forward Power	1601	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/18/2023 2:39:03 PM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041823.b

[HMI H2]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	100	106	100	8.486
2	9	200	169	178	7 151
3	59	1000	701	699	0 506
4	63	20	3	6	64 283
5	70	100	142	147	4.811
6	78	20	1	1	141 421
7	89	5000	6194	6147	1.086
8	115	10000	7897	7851	0 833
9	118	100	99	100	1.414
10	137	1000	1106	1092	1.814
11	140	5000	5866	5925	1.403
12	205	10000	7012	7119	2.118
13	238	10000	9073	9081	0.126
14	70/140	2	2 421 %	2 481 %	3 409
15	156/140	1	0.358 %	0.313 %	20 486

Integration Time [sec] 0 1

Tune Parameters

Plasma Parameters

P asma Mode		Nebulizer Gas	0.64 L/min	Dilution Gas	0.26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1 40 V	Nebulizer Pump	0 10 rps	P asma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance		Cel Exit	60 V
Extract 2	155 0 V	Q1 Exit		Def ect	1 0 V
Omega Bias	80 V	Cel Focus		P ate Bias	60 V
Omega Lens	9 8 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	0 0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	5 0 mL/min	OctP Bias	18.0 V	Energy Discrimination	3 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Current Signal

Torch

Torch H	0 4 mm	Torch V	-0 3 mm		

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

Name	Value	Unit
F/BK Press	2.20E+2	Pa
Ana yzer Press	1.34E 4	Pa
Reflected Power	2	W
Forward Power	1601	W
Tune/ISTD Va ve		

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041823.b
Acq. Date-Time	4/18/2023 2:46:40 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

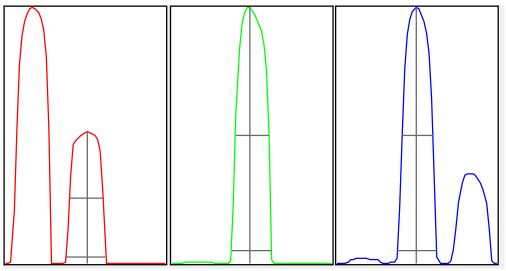
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2195	21950 93	2.009	5 000	
89		4280	42799 61	1.993	5 000	
205		3940	39401 13	2.244	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2148	2166	2194	2204	2263
89	4191	4202	4290	4321	4396
205	3872	3857	3919	3980	4073

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3598.56	7.05	6 90 7 10	
89	7306.42	89.00	88 90 89.10	
205	7100 83	205 00	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.63	0.737	0.900	
89	0.61	0.738	0.900	
205	0.57	0.739	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	10 3 V	Def ect	12 8 V
Extract 2	-185.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	85 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

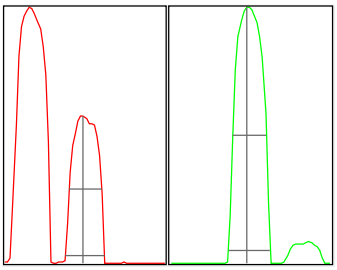
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		59	585 72	2 676	5.000	
9		111	1112 67	1.241	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	58	56	59	61	59
9	111	113	113	110	110

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	101 15	7 00	6.90 - 7.10	
9	190 26	8 95	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.61	0.738	0.900	
9	0.61	0.776	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	9 8 V	Def ect	-1 0 V
Extract 2	-155 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	80 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		173	1733.96	1 217	5.000	
25		26	258 30	4 835	5.000	
26		32	324.51	4.187	5 000	
59		942	9419 88	0.260	5 000	
103		2769	27691.16	1 031	5.000	
115		1349	13486.57	0 664	5.000	
205		2924	29244.43	1 042	5.000	
206		963	9629 36	1.323	5 000	
207		832	8319 86	0.671	5 000	

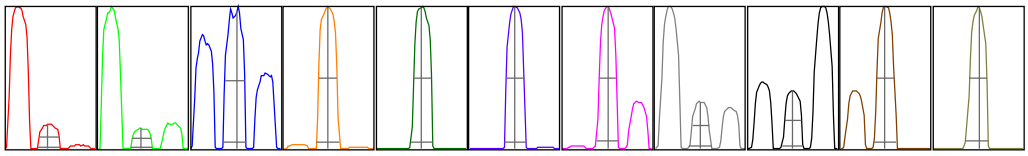
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		2055	20554.49	1 189	5.000	
238		4144	41438.26	1 213	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	171	171	175	174	176
25	26	25	24	26	27
26	33	31	34	31	33
59	942	944	943	938	943
103	2726	2755	2780	2796	2789
115	1334	1356	1352	1354	1348
205	2882	2918	2932	2923	2967
206	943	962	973	961	976
207	822	836	834	835	834
208	2016	2054	2071	2057	2079
238	4060	4137	4183	4160	4179

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	287.58	23.95	23 90 24.10	
25	43.50	24.95	24 90 25.10	
26	52 55	26 05	25.90 - 26 10	
59	1578 60	59 00	58.90 - 59 10	
103	4834.54	103.00	102.90 103.10	
115	2359.68	115.05	114.90 115.10	
205	5273.78	205.05	204.90 205.10	
206	1743 05	206 05	205 90 - 206 10	
207	1518 87	207 00	206 90 - 207 10	
208	3737.15	208.00	207.90 208.10	
238	7490.04	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 739	0 900	
25	0.64	0.743	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.741	0.900	
59	0.62	0.777	0.900	
103	0 59	0 732	0 900	
115	0 59	0 691	0 900	
205	0.57	0.735	0.900	
206	0.56	0.724	0.900	
207	0.56	0.707	0.900	
208	0 57	0 759	0 900	
238	0 57	0 746	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.3 V	Def ect	0.8 V
Extract 2	190.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	90 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
6		0.094412	☑
9		0.104837	☑
23		0.107206	☑
24		0.112530	☑
27		0.117478	☑
39		0.123213	☑
45		0.124033	☑
48		0.125664	☑
51		0.129069	☑
52		0.130073	☑
55		0.133751	☑
59		0.140041	☑
60		0.140568	☑
63		0.144149	☑
66		0.143387	☑
72		0.141018	☑
75		0.140025	☑
88		0.143997	☑
98		0.140283	☑
102		0.145265	☑
106		0.150754	☑
114		0.155430	☑
115		0.154387	☑

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
118		0.152626	☑
121		0.152586	☑
138		0.154903	☑
175		0.162539	☑
193		0.164423	☑
205		0.168782	☑
208		0.169618	☑
209		0.169141	☑
232		0.165052	☑
238		0.167563	☑

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	001SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T14:56:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	002SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T14:57:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	003SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T14:59:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	004SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:01:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	005SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:03:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	006SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:07:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	007SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:09:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	008SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:10:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	009SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:12:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	010SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:14:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	011SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:16:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	012SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:18:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	013SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:20:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	014SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:21:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	015SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:23:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	016SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:25:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	017SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:27:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	018SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:29:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	019SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:30:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	020SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:32:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	021SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:34:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	022SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:36:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	023SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:38:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	024SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:41:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:43:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	026SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:46:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	027SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:48:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	028SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:50:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	029SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:52:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	030SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:54:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	031SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:55:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7689701
Data File Name	032CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Method	
Acq Date Time	2023-04-18T15:57:46-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	2000.00
Na	23	45	3	HMI He	23253	0.01
Mg	24	45	3	HMI He	908	1.09
Al	27	45	3	HMI He	113	16.19
K	39	45	3	HMI He	27344	0.01
Ca	40	45	2	HMI H2	26756	0.00
V	51	72	3	HMI He	728	1.33
Cr	52	72	3	HMI He	1753	0.18
Mn	55	72	3	HMI He	192	3.14
Fe	56	72	2	HMI H2	16406	0.01
Co	59	72	3	HMI He	73	61.94
Ni	60	72	3	HMI He	318	4.20
Cu	63	72	3	HMI He	446	4.24
Zn	66	72	3	HMI He	332	6.90
As	75	72	3	HMI He	48	24.71
Se	78	72	2	HMI H2	5	405.95
(Se)	78	72	3	HMI He	22	221.73
Sr	88	72	3	HMI He	200	15.16
Mo	95	115	3	HMI He	33	93.70
Ag	107	115	3	HMI He	43	40.71
Cd	111	115	3	HMI He	20	433.01
Sn	120	115	3	HMI He	908	0.79
Sb	121	115	3	HMI He	142	10.38
Ba	137	115	3	HMI He	82	11.46
Tl	205	193	3	HMI He	1448	0.44
(Pb)	206	193	3	HMI He	440	2.37
(Pb)	207	193	3	HMI He	683	1.33
Pb	208	193	3	HMI He	2002	0.24
Th	232	193	3	HMI He	5648	0.06
U	238	193	3	HMI He	2337	0.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3913058	1.25
Sc (IS)	45	3	HMI He	607591	1.32
Ge Internal standard	72	2	HMI H2	2473250	1.48
Ge Internal standard	72	3	HMI He	757568	0.25
In Internal Standard	115	3	HMI He	3087258	2.11
Ir (IS)	193	3	HMI He	7041080	1.85

Calibration Standard Report

Sample Table

Sample Name	ic-7689703
Data File Name	033CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
method	
Acq Date Time	2023-04-18T15:59:33-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	032CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	10543128	0.00
Mg	24	45	3	HMI He	1141345	0.00
Al	27	45	3	HMI He	147	22.91
K	39	45	3	HMI He	986143	0.00
V	51	72	3	HMI He	855	0.25
Cr	52	72	3	HMI He	1841	0.44
Mn	55	72	3	HMI He	302	1.77
Co	59	72	3	HMI He	93	34.61
Ni	60	72	3	HMI He	267	4.24
Cu	63	72	3	HMI He	605	1.50
Zn	66	72	3	HMI He	416	2.72
As	75	72	3	HMI He	43	15.39
Se	78	72	2	HMI H2	7	429.43
(Se)	78	72	3	HMI He	15	444.62
Sr	88	72	3	HMI He	503	2.79
Mo	95	115	3	HMI He	53	20.29
Ag	107	115	3	HMI He	95	36.35
Cd	111	115	3	HMI He	28	95.18
Sn	120	115	3	HMI He	1058	0.39
Sb	121	115	3	HMI He	157	4.71
Ba	137	115	3	HMI He	253	5.64
Tl	205	193	3	HMI He	1103	0.58
(Pb)	206	193	3	HMI He	506	0.79
(Pb)	207	193	3	HMI He	683	2.31
Pb	208	193	3	HMI He	2422	0.10
Th	232	193	3	HMI He	5850	0.07
U	238	193	3	HMI He	2267	0.16

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4009817	1.21	3913058	102.47	60	120	
Sc (IS)	45	3	HMI He	619553	0.53	607591	101.97	60	120	
Ge Internal standard	72	2	HMI H2	2358414	1.62	2473250	95.36	60	120	
Ge Internal standard	72	3	HMI He	730010	0.41	757568	96.36	60	120	
In Internal Standard	115	3	HMI He	3098321	1.59	3087258	100.36	60	120	
Ir (IS)	193	3	HMI He	7015722	1.00	7041080	99.64	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7689702
Data File Name	034CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
method	
Acq Date Time	2023-04-18T16:01:20-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	032CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4117	0.07
Na	23	45	3	HMI He	240460	0.00
Mg	24	45	3	HMI He	114628	0.00
Al	27	45	3	HMI He	45940	0.00
K	39	45	3	HMI He	119158	0.00
V	51	72	3	HMI He	62266	0.00
Cr	52	72	3	HMI He	78620	0.00
Mn	55	72	3	HMI He	42738	0.00
Co	59	72	3	HMI He	132263	0.00
Ni	60	72	3	HMI He	36622	0.00
Cu	63	72	3	HMI He	100333	0.00
Zn	66	72	3	HMI He	16964	0.01
As	75	72	3	HMI He	11903	0.02
Se	78	72	2	HMI H2	5898	0.02
(Se)	78	72	3	HMI He	716	1.72
Sr	88	72	3	HMI He	120728	0.00
Mo	95	115	3	HMI He	52560	0.00
Ag	107	115	3	HMI He	186100	0.00
Cd	111	115	3	HMI He	26964	0.00
Sn	120	115	3	HMI He	87433	0.00
Sb	121	115	3	HMI He	86575	0.00
Ba	137	115	3	HMI He	28672	0.00
Tl	205	193	3	HMI He	468423	0.00
(Pb)	206	193	3	HMI He	159593	0.00
(Pb)	207	193	3	HMI He	139130	0.00
Pb	208	193	3	HMI He	639905	0.00
Th	232	193	3	HMI He	650625	0.00
U	238	193	3	HMI He	677168	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4069725	0.32	3913058	104.00	60	120	
Sc (IS)	45	3	HMI He	622261	0.27	607591	102.41	60	120	
Ge Internal standard	72	2	HMI H2	2521556	2.85	2473250	101.95	60	120	
Ge Internal standard	72	3	HMI He	781607	0.72	757568	103.17	60	120	
In Internal Standard	115	3	HMI He	3080334	1.33	3087258	99.78	60	120	
Ir (IS)	193	3	HMI He	7202488	1.61	7041080	102.29	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7689705
Data File Name	035_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:03:07-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	032CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.441	ppb	7.915	1676	40	101.1	90	110	
Na	23	3	45	13430.668	ppb	0.400	1444252	12800	104.9	90	110	
Mg	24	3	45	4760.924	ppb	1.466	273844	4800	99.2	90	110	
Al	27	3	45	775.431	ppb	2.096	17899	800	96.9	90	110	
K	39	3	45	4529.889	ppb	3.045	246206	4800	94.4	90	110	
Ca	40	2	45	4865.692	ppb	1.951	2741454	4800	101.4	90	110	
V	51	3	72	42.122	ppb	1.541	26028	40	105.3	90	110	
Cr	52	3	72	42.710	ppb	1.097	33796	40	106.8	90	110	
Mn	55	3	72	42.154	ppb	1.394	17699	40	105.4	90	110	
Fe	56	2	72	818.412	ppb	1.161	1293355	800	102.3	90	110	
Co	59	3	72	41.069	ppb	0.480	53075	40	102.7	90	110	
Ni	60	3	72	41.332	ppb	1.085	14966	40	103.3	90	110	
Cu	63	3	72	42.939	ppb	0.999	42315	40	107.3	90	110	
Zn	66	3	72	82.170	ppb	2.502	13667	80	102.7	90	110	
As	75	3	72	41.235	ppb	9.237	4818	40	103.1	90	110	
Se	78	2	72	42.512	ppb	0.415	2482	40	106.3	90	110	
Sr	88	3	72	122.646	ppb	1.170	72355	120	102.2	90	110	
Mo	95	3	115	41.298	ppb	1.947	21623	40	103.2	90	110	
Ag	107	3	115	81.311	ppb	1.499	150603	80	101.6	90	110	
Cd	111	3	115	39.958	ppb	3.581	10734	40	99.9	90	110	
Sn	120	3	115	40.029	ppb	1.491	35374	40	100.1	90	110	
Sb	121	3	115	40.974	ppb	0.634	35391	40	102.4	90	110	
Ba	137	3	115	41.450	ppb	1.317	11878	40	103.6	90	110	
Tl	205	3	193	41.449	ppb	0.633	189290	40	103.6	90	110	
(Pb)	206	3	193	42.062	ppb	1.891	65395	40	105.2	90	110	
(Pb)	207	3	193	40.952	ppb	2.229	55691	40	102.4	90	110	
Pb	208	3	193	41.726	ppb	1.950	260290	40	104.3	90	110	
Th	232	3	193	83.569	ppb	1.697	528508	80	104.5	90	110	
U	238	3	193	44.995	ppb	1.568	296984	40	112.5	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068443	0.85	3913058	103.97	60	120	
Sc (IS)	45	3	HMI He	622907	1.04	607591	102.52	60	120	
Ge Internal standard	72	2	HMI H2	2491911	1.34	2473250	100.75	60	120	
Ge Internal standard	72	3	HMI He	763065	0.48	757568	100.73	60	120	
In Internal Standard	115	3	HMI He	3065434	1.13	3087258	99.29	60	120	
Ir (IS)	193	3	HMI He	6990365	1.84	7041080	99.28	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7689701
Data File Name	036_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:04:55-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	032CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	-0.084	ppb	-84.0	2	0.5	
Na	23	3	16.394	ppb	29.6	25158	25	
Mg	24	3	-0.309	ppb	-178.0	898	25	
Al	27	3	0.382	ppb	524.9	123	15	
K	39	3	-4.267	ppb	-519.0	27388	50	
V	51	3	0.261	ppb	19.9	896	1	
Cr	52	3	-0.117	ppb	-41.6	1689	1	
Mn	55	3	0.045	ppb	140.2	213	0.5	
Co	59	3	0.002	ppb	466.3	77	0.5	
Ni	60	3	0.048	ppb	88.9	340	1	
Cu	63	3	0.007	ppb	794.5	460	1	
Zn	66	3	0.176	ppb	234.6	365	5	
As	75	3	0.008	ppb	1382.5	50	1	
Se	78	2	-0.059	ppb	-57.5	2	1	
Sr	88	3	0.007	ppb	208.8	207	0.5	
Mo	95	3	0.065	ppb	49.0	67	0.5	
Ag	107	3	0.024	ppb	22.0	87	1	
Cd	111	3	-0.005	ppb	-571.4	18	0.5	
Sn	120	3	0.276	ppb	37.9	1129	1	
Sb	121	3	-0.003	ppb	-288.0	137	0.6	
Ba	137	3	-0.002	ppb	-5498.1	80	0.5	
Tl	205	3	-0.075	ppb	-1.7	1100	0.1	
(Pb)	206	3	0.019	ppb	342.0	466	1	
(Pb)	207	3	-0.028	ppb	-124.6	643	1	
Pb	208	3	0.010	ppb	180.4	2059	0.5	
Th	232	3	4.021	ppb	11.0	30846	1	>RL
U	238	3	0.010	ppb	190.5	2396	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4001038	1.39	3913058	102.25	60	120	
Sc (IS)	45	3	HMI He	612961	1.19	607591	100.88	60	120	
Ge Internal standard	72	2	HMI H2	2513706	2.42	2473250	101.64	60	120	
Ge Internal standard	72	3	HMI He	768291	0.67	757568	101.42	60	120	
In Internal Standard	115	3	HMI He	3036737	1.15	3087258	98.36	60	120	
Ir (IS)	193	3	HMI He	7009291	0.61	7041080	99.55	60	120	

CRI Report

Sample Table

Sample Name	cri-7689706
Data File Name	037LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:06:43-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	032CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.807	ppb	29.530	38	1	80.7	80	120	
Na	23	3	45	346.543	ppb	1.602	59501	300	115.5	80	120	
Mg	24	3	45	50.524	ppb	0.964	3764	50	101.0	80	120	
Al	27	3	45	58.665	ppb	6.777	1438	50	117.3	80	120	
K	39	3	45	113.105	ppb	19.896	32942	120	94.3	80	120	
Ca	40	2	45	226.701	ppb	2.757	152568	200	113.4	80	120	
V	51	3	72	6.024	ppb	4.186	4350	5	120.5	80	120	>+/-30%
Cr	52	3	72	1.941	ppb	17.013	3220	2	97.0	80	120	
Mn	55	3	72	1.237	ppb	6.713	706	1	123.7	80	120	>+/-30%
Fe	56	2	72	57.594	ppb	1.361	104939	50	115.2	80	120	
Co	59	3	72	1.127	ppb	2.696	1528	1	112.7	80	120	
Ni	60	3	72	2.503	ppb	19.114	1206	2	125.1	80	120	>+/-30%
Cu	63	3	72	2.267	ppb	4.414	2659	2	113.4	80	120	
Zn	66	3	72	11.234	ppb	4.561	2156	10	112.3	80	120	
As	75	3	72	5.399	ppb	7.158	673	5	108.0	80	120	
Se	78	2	72	5.535	ppb	3.732	323	5	110.7	80	120	
Sr	88	3	72	5.762	ppb	3.873	3590	5	115.2	80	120	
Mo	95	3	115	2.174	ppb	5.282	1173	2	108.7	80	120	
Ag	107	3	115	0.970	ppb	8.043	1844	1	97.0	80	120	
Cd	111	3	115	1.010	ppb	4.346	292	1	101.0	80	120	
Sn	120	3	115	10.048	ppb	3.604	9582	10	100.5	80	120	
Sb	121	3	115	2.163	ppb	4.610	2007	2	108.1	80	120	
Ba	137	3	115	1.197	ppb	4.250	423	1	119.7	80	120	
Tl	205	3	193	0.977	ppb	3.745	5948	1	97.7	80	120	
(Pb)	206	3	193	1.045	ppb	3.087	2079	1	104.5	80	120	
(Pb)	207	3	193	1.031	ppb	5.734	2094	1	103.1	80	120	
Pb	208	3	193	1.074	ppb	1.435	8762	1	107.4	80	120	
Th	232	3	193	3.378	ppb	15.960	27135	1	337.8	80	120	>+/-30%
U	238	3	193	1.135	ppb	6.324	9894	1	113.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4024219	1.35	3913058	102.84	60	120	
Sc (IS)	45	3	HMI He	612751	0.24	607591	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2458051	0.84	2473250	99.39	60	120	
Ge Internal standard	72	3	HMI He	762783	0.64	757568	100.69	60	120	
In Internal Standard	115	3	HMI He	3074417	1.34	3087258	99.58	60	120	
Ir (IS)	193	3	HMI He	7089731	0.33	7041080	100.69	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	038SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:10:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	032CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.050	ppb	-0.050	-128.43	3	2000	
Na	23	3	45	2.055	ppb	2.055	181.78	25184	400000	
Mg	24	3	45	7.331	ppb	7.331	23.63	1415	400000	
Al	27	3	45	7.561	ppb	7.561	15.98	304	400000	
K	39	3	45	-59.630	ppb	-59.630	-32.43	26355	400000	
Ca	40	2	45	27.840	ppb	27.840	5.26	46550	400000	
V	51	3	72	-0.778	ppb	-0.778	-4.73	283	2000	
Cr	52	3	72	-1.002	ppb	-1.002	-9.81	1080	5000	
Mn	55	3	72	0.127	ppb	0.127	84.69	262	10000	
Fe	56	2	72	7.810	ppb	7.810	3.59	31066	10000	
Co	59	3	72	0.018	ppb	0.018	21.71	103	2000	
Ni	60	3	72	-0.450	ppb	-0.450	-2.90	172	5000	
Cu	63	3	72	-0.021	ppb	-0.021	-348.07	456	5000	
Zn	66	3	72	-0.968	ppb	-0.968	-4.91	188	5000	
As	75	3	72	-0.191	ppb	-0.191	-43.62	28	2000	
Se	78	2	72	-0.029	ppb	-0.029	-111.33	4	2000	
Sr	88	3	72	0.301	ppb	0.301	27.36	403	4000	
Mo	95	3	115	0.033	ppb	0.033	149.93	53	2000	
Ag	107	3	115	0.014	ppb	0.014	62.89	72	100	
Cd	111	3	115	0.033	ppb	0.033	146.20	30	2000	
Sn	120	3	115	-0.653	ppb	-0.653	-10.72	358	2000	
Sb	121	3	115	-0.047	ppb	-0.047	-43.72	105	1000	
Ba	137	3	115	-0.052	ppb	-0.052	-126.40	70	5000	
Tl	205	3	193	-0.186	ppb	-0.186	-5.60	641	2000	
(Pb)	206	3	193	-0.015	ppb	-0.015	-54.17	446	100	
(Pb)	207	3	193	-0.019	ppb	-0.019	-209.12	706	100	
Pb	208	3	193	0.015	ppb	0.015	120.26	2252	5000	
Th	232	3	193	0.013	ppb	0.013	30.17	6153	2000	
U	238	3	193	0.016	ppb	0.016	98.44	2624	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368093	1.87	3913058	111.63	60	120	
Sc (IS)	45	3	HMI He	652252	1.17	607591	107.35	60	120	
Ge Internal standard	72	2	HMI H2	2695995	1.49	2473250	109.01	60	120	
Ge Internal standard	72	3	HMI He	812341	0.54	757568	107.23	60	120	
In Internal Standard	115	3	HMI He	3228082	0.66	3087258	104.56	60	120	
Ir (IS)	193	3	HMI He	7556125	1.56	7041080	107.31	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	039SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:12:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	032CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.125	ppb	-0.125	0.00	0	2000	
Na	23	3	45	-6.067	ppb	-6.067	-158.39	24339	400000	
Mg	24	3	45	7.734	ppb	7.734	35.02	1442	400000	
Al	27	3	45	6.029	ppb	6.029	34.65	267	400000	
K	39	3	45	-63.930	ppb	-63.930	-19.74	26197	400000	
Ca	40	2	45	27.210	ppb	27.210	1.67	46045	400000	
V	51	3	72	-0.819	ppb	-0.819	-3.88	257	2000	
Cr	52	3	72	-0.967	ppb	-0.967	-12.78	1106	5000	
Mn	55	3	72	0.105	ppb	0.105	102.03	252	10000	
Fe	56	2	72	7.267	ppb	7.267	3.27	30063	10000	
Co	59	3	72	0.010	ppb	0.010	57.59	92	2000	
Ni	60	3	72	-0.480	ppb	-0.480	-6.95	160	5000	
Cu	63	3	72	0.023	ppb	0.023	180.70	501	5000	
Zn	66	3	72	-1.015	ppb	-1.015	-14.50	180	5000	
As	75	3	72	-0.244	ppb	-0.244	-53.83	22	2000	
Se	78	2	72	-0.060	ppb	-0.060	-52.49	2	2000	
Sr	88	3	72	0.348	ppb	0.348	17.53	431	4000	
Mo	95	3	115	0.031	ppb	0.031	129.71	53	2000	
Ag	107	3	115	0.009	ppb	0.009	90.52	65	100	
Cd	111	3	115	-0.039	ppb	-0.039	-46.34	10	2000	
Sn	120	3	115	-0.652	ppb	-0.652	-1.42	366	2000	
Sb	121	3	115	-0.072	ppb	-0.072	-29.58	85	1000	
Ba	137	3	115	0.031	ppb	0.031	82.43	97	5000	
Tl	205	3	193	-0.174	ppb	-0.174	-2.13	695	2000	
(Pb)	206	3	193	0.016	ppb	0.016	122.14	493	100	
(Pb)	207	3	193	0.035	ppb	0.035	119.10	776	100	
Pb	208	3	193	0.037	ppb	0.037	33.76	2367	5000	
Th	232	3	193	0.010	ppb	0.010	296.75	6060	2000	
U	238	3	193	0.029	ppb	0.029	42.91	2687	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4357096	0.97	3913058	111.35	60	120	
Sc (IS)	45	3	HMI He	653713	1.11	607591	107.59	60	120	
Ge Internal standard	72	2	HMI H2	2688443	2.57	2473250	108.70	60	120	
Ge Internal standard	72	3	HMI He	811275	0.41	757568	107.09	60	120	
In Internal Standard	115	3	HMI He	3291398	2.31	3087258	106.61	60	120	
Ir (IS)	193	3	HMI He	7469785	0.70	7041080	106.09	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	040SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:14:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	032CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.048	ppb	-0.048	-141.02	3	2000	
Na	23	3	45	-10.580	ppb	-10.580	-61.20	23794	400000	
Mg	24	3	45	8.667	ppb	8.667	6.25	1495	400000	
Al	27	3	45	9.651	ppb	9.651	8.20	354	400000	
K	39	3	45	-52.477	ppb	-52.477	-27.28	26732	400000	
Ca	40	2	45	28.220	ppb	28.220	5.20	46273	400000	
V	51	3	72	-0.909	ppb	-0.909	-5.32	200	2000	
Cr	52	3	72	-1.107	ppb	-1.107	-4.14	998	5000	
Mn	55	3	72	0.073	ppb	0.073	113.20	238	10000	
Fe	56	2	72	7.483	ppb	7.483	4.41	29993	10000	
Co	59	3	72	0.009	ppb	0.009	217.63	92	2000	
Ni	60	3	72	-0.482	ppb	-0.482	-6.68	160	5000	
Cu	63	3	72	-0.050	ppb	-0.050	-118.80	428	5000	
Zn	66	3	72	-0.672	ppb	-0.672	-43.47	240	5000	
As	75	3	72	-0.151	ppb	-0.151	-30.54	33	2000	
Se	78	2	72	-0.006	ppb	-0.006	-1319.66	5	2000	
Sr	88	3	72	0.295	ppb	0.295	2.86	400	4000	
Mo	95	3	115	0.053	ppb	0.053	32.55	65	2000	
Ag	107	3	115	0.003	ppb	0.003	286.76	52	100	
Cd	111	3	115	-0.022	ppb	-0.022	-79.38	15	2000	
Sn	120	3	115	-0.673	ppb	-0.673	-4.08	345	2000	
Sb	121	3	115	-0.078	ppb	-0.078	-51.80	78	1000	
Ba	137	3	115	0.043	ppb	0.043	210.56	100	5000	
Tl	205	3	193	-0.204	ppb	-0.204	-8.65	546	2000	
(Pb)	206	3	193	0.018	ppb	0.018	236.27	495	100	
(Pb)	207	3	193	-0.050	ppb	-0.050	-95.29	651	100	
Pb	208	3	193	0.009	ppb	0.009	169.24	2181	5000	
Th	232	3	193	0.010	ppb	0.010	164.37	6040	2000	
U	238	3	193	0.016	ppb	0.016	55.89	2587	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4321856	0.54	3913058	110.45	60	120	
Sc (IS)	45	3	HMI He	652607	1.39	607591	107.41	60	120	
Ge Internal standard	72	2	HMI H2	2649820	1.01	2473250	107.14	60	120	
Ge Internal standard	72	3	HMI He	814217	0.76	757568	107.48	60	120	
In Internal Standard	115	3	HMI He	3274689	0.72	3087258	106.07	60	120	
Ir (IS)	193	3	HMI He	7443423	1.41	7041080	105.71	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7689701
Data File Name	041CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Method	
Acq Date Time	2023-04-18T16:15:54-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	2000.00
Na	23	45	3	HMI He	23593	0.00
Mg	24	45	3	HMI He	767	1.72
Al	27	45	3	HMI He	127	46.73
K	39	45	3	HMI He	27364	0.01
Ca	40	45	2	HMI H2	26649	0.00
V	51	72	3	HMI He	755	0.85
Cr	52	72	3	HMI He	1671	0.02
Mn	55	72	3	HMI He	188	6.67
Fe	56	72	2	HMI H2	16710	0.01
Co	59	72	3	HMI He	72	39.36
Ni	60	72	3	HMI He	320	1.29
Cu	63	72	3	HMI He	466	1.95
Zn	66	72	3	HMI He	300	0.96
As	75	72	3	HMI He	73	29.91
Se	78	72	2	HMI H2	4	1250.00
(Se)	78	72	3	HMI He	20	125.13
Sr	88	72	3	HMI He	248	2.61
Mo	95	115	3	HMI He	52	60.24
Ag	107	115	3	HMI He	37	93.64
Cd	111	115	3	HMI He	17	275.02
Sn	120	115	3	HMI He	965	0.79
Sb	121	115	3	HMI He	137	10.14
Ba	137	115	3	HMI He	98	21.54
Tl	205	193	3	HMI He	836	0.80
(Pb)	206	193	3	HMI He	443	1.06
(Pb)	207	193	3	HMI He	665	0.90
Pb	208	193	3	HMI He	2001	0.16
Th	232	193	3	HMI He	7897	0.08
U	238	193	3	HMI He	2234	0.39

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3936624	0.34
Sc (IS)	45	3	HMI He	609520	1.05
Ge Internal standard	72	2	HMI H2	2391663	0.61
Ge Internal standard	72	3	HMI He	756863	0.67
In Internal Standard	115	3	HMI He	2988279	1.34
Ir (IS)	193	3	HMI He	6996686	0.72

Calibration Standard Report

Sample Table

Sample Name	ic-7689703
Data File Name	042CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
method	
Acq Date Time	2023-04-18T16:17:43-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	041CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	10550073	0.00
Mg	24	45	3	HMI He	1141095	0.00
Al	27	45	3	HMI He	170	5.99
K	39	45	3	HMI He	933741	0.00
V	51	72	3	HMI He	930	1.17
Cr	52	72	3	HMI He	1758	0.26
Mn	55	72	3	HMI He	255	4.68
Co	59	72	3	HMI He	100	13.23
Ni	60	72	3	HMI He	268	8.96
Cu	63	72	3	HMI He	550	1.44
Zn	66	72	3	HMI He	401	2.64
As	75	72	3	HMI He	48	24.71
Se	78	72	2	HMI H2	5	1074.04
(Se)	78	72	3	HMI He	28	71.91
Sr	88	72	3	HMI He	435	0.95
Mo	95	115	3	HMI He	73	41.94
Ag	107	115	3	HMI He	75	15.40
Cd	111	115	3	HMI He	18	478.38
Sn	120	115	3	HMI He	1123	0.87
Sb	121	115	3	HMI He	113	18.41
Ba	137	115	3	HMI He	263	2.73
Tl	205	193	3	HMI He	785	0.99
(Pb)	206	193	3	HMI He	560	1.80
(Pb)	207	193	3	HMI He	648	1.45
Pb	208	193	3	HMI He	2281	0.18
Th	232	193	3	HMI He	7637	0.08
U	238	193	3	HMI He	2382	0.15

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3985603	3.43	3936624	101.24	60	120	
Sc (IS)	45	3	HMI He	612266	0.23	609520	100.45	60	120	
Ge Internal standard	72	2	HMI H2	2351254	0.65	2391663	98.31	60	120	
Ge Internal standard	72	3	HMI He	718498	0.61	756863	94.93	60	120	
In Internal Standard	115	3	HMI He	3020920	1.40	2988279	101.09	60	120	
Ir (IS)	193	3	HMI He	6989999	2.07	6996686	99.90	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7689702
Data File Name	043CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
method	
Acq Date Time	2023-04-18T16:19:30-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	041CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4042	0.07
Na	23	45	3	HMI He	237964	0.00
Mg	24	45	3	HMI He	115567	0.00
Al	27	45	3	HMI He	44735	0.00
K	39	45	3	HMI He	118653	0.00
V	51	72	3	HMI He	62845	0.00
Cr	52	72	3	HMI He	77874	0.00
Mn	55	72	3	HMI He	42218	0.00
Co	59	72	3	HMI He	130363	0.00
Ni	60	72	3	HMI He	37016	0.00
Cu	63	72	3	HMI He	99347	0.00
Zn	66	72	3	HMI He	17094	0.02
As	75	72	3	HMI He	11561	0.04
Se	78	72	2	HMI H2	5760	0.02
(Se)	78	72	3	HMI He	721	0.40
Sr	88	72	3	HMI He	119503	0.00
Mo	95	115	3	HMI He	52843	0.00
Ag	107	115	3	HMI He	182284	0.00
Cd	111	115	3	HMI He	26643	0.00
Sn	120	115	3	HMI He	86591	0.00
Sb	121	115	3	HMI He	85435	0.00
Ba	137	115	3	HMI He	28163	0.00
Tl	205	193	3	HMI He	469934	0.00
(Pb)	206	193	3	HMI He	156879	0.00
(Pb)	207	193	3	HMI He	139136	0.00
Pb	208	193	3	HMI He	633972	0.00
Th	232	193	3	HMI He	647200	0.00
U	238	193	3	HMI He	677502	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3975929	0.96	3936624	101.00	60	120	
Sc (IS)	45	3	HMI He	613207	0.94	609520	100.60	60	120	
Ge Internal standard	72	2	HMI H2	2502926	0.39	2391663	104.65	60	120	
Ge Internal standard	72	3	HMI He	778479	0.49	756863	102.86	60	120	
In Internal Standard	115	3	HMI He	3052272	3.79	2988279	102.14	60	120	
Ir (IS)	193	3	HMI He	7022884	1.55	6996686	100.37	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7689705
Data File Name	044_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:21:19-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	42.733	ppb	7.235	1721	40	106.8	90	110	
Na	23	3	45	12857.380	ppb	2.397	1374557	12800	100.4	90	110	
Mg	24	3	45	4702.144	ppb	1.318	268386	4800	98.0	90	110	
Al	27	3	45	795.439	ppb	3.406	17809	800	99.4	90	110	
K	39	3	45	4837.919	ppb	0.924	246268	4800	100.8	90	110	
Ca	40	2	45	4922.670	ppb	1.632	2730731	4800	102.6	90	110	
V	51	3	72	41.090	ppb	1.460	25689	40	102.7	90	110	
Cr	52	3	72	42.124	ppb	1.464	33038	40	105.3	90	110	
Mn	55	3	72	42.031	ppb	1.870	17454	40	105.1	90	110	
Fe	56	2	72	820.161	ppb	2.825	1262153	800	102.5	90	110	
Co	59	3	72	40.838	ppb	1.226	52080	40	102.1	90	110	
Ni	60	3	72	40.086	ppb	1.778	14695	40	100.2	90	110	
Cu	63	3	72	42.346	ppb	2.359	41391	40	105.9	90	110	
Zn	66	3	72	80.364	ppb	3.004	13487	80	100.5	90	110	
As	75	3	72	39.443	ppb	3.010	4502	40	98.6	90	110	
Se	78	2	72	42.639	ppb	0.738	2387	40	106.6	90	110	
Sr	88	3	72	123.869	ppb	0.632	72442	120	103.2	90	110	
Mo	95	3	115	40.474	ppb	1.161	21565	40	101.2	90	110	
Ag	107	3	115	80.496	ppb	0.898	147809	80	100.6	90	110	
Cd	111	3	115	40.833	ppb	4.714	10961	40	102.1	90	110	
Sn	120	3	115	39.131	ppb	1.236	34741	40	97.8	90	110	
Sb	121	3	115	40.813	ppb	1.178	35184	40	102.0	90	110	
Ba	137	3	115	40.887	ppb	1.543	11658	40	102.2	90	110	
Tl	205	3	193	40.729	ppb	5.266	192383	40	101.8	90	110	
(Pb)	206	3	193	41.228	ppb	3.420	65124	40	103.1	90	110	
(Pb)	207	3	193	40.273	ppb	2.522	56606	40	100.7	90	110	
Pb	208	3	193	40.756	ppb	4.925	260248	40	101.9	90	110	
Th	232	3	193	80.771	ppb	2.719	525808	80	101.0	90	110	
U	238	3	193	43.714	ppb	5.146	298184	40	109.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4009115	1.10	3936624	101.84	60	120	
Sc (IS)	45	3	HMI He	611184	0.65	609520	100.27	60	120	
Ge Internal standard	72	2	HMI H2	2430317	0.67	2391663	101.62	60	120	
Ge Internal standard	72	3	HMI He	760930	0.38	756863	100.54	60	120	
In Internal Standard	115	3	HMI He	3070743	1.17	2988279	102.76	60	120	
Ir (IS)	193	3	HMI He	7046104	3.32	6996686	100.71	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7689701
Data File Name	045_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:23:07-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.040	ppb	181.7	7	0.5	
Na	23	3	11.696	ppb	20.8	24977	25	
Mg	24	3	0.198	ppb	1023.4	784	25	
Al	27	3	-1.095	ppb	-27.2	103	15	
K	39	3	-15.243	ppb	-94.8	26846	50	
V	51	3	0.205	ppb	51.9	888	1	
Cr	52	3	-0.014	ppb	-557.6	1678	1	
Mn	55	3	0.096	ppb	93.8	230	0.5	
Co	59	3	0.022	ppb	80.0	100	0.5	
Ni	60	3	0.004	ppb	2650.0	325	1	
Cu	63	3	-0.061	ppb	-87.6	411	1	
Zn	66	3	0.082	ppb	191.9	317	5	
As	75	3	-0.125	ppb	-124.5	60	1	
Se	78	2	-0.026	ppb	-78.8	3	1	
Sr	88	3	-0.070	ppb	-56.3	210	0.5	
Mo	95	3	0.059	ppb	73.3	83	0.5	
Ag	107	3	0.030	ppb	52.2	92	1	
Cd	111	3	-0.001	ppb	-4832.4	17	0.5	
Sn	120	3	0.261	ppb	6.7	1199	1	
Sb	121	3	-0.042	ppb	-43.1	103	0.6	
Ba	137	3	-0.070	ppb	-90.6	80	0.5	
Tl	205	3	0.003	ppb	515.5	876	0.1	
(Pb)	206	3	-0.046	ppb	-36.9	383	1	
(Pb)	207	3	-0.008	ppb	-512.5	673	1	
Pb	208	3	-0.020	ppb	-108.8	1929	0.5	
Th	232	3	4.040	ppb	12.3	34599	1	>RL
U	238	3	0.021	ppb	87.0	2446	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4065398	0.42	3936624	103.27	60	120	
Sc (IS)	45	3	HMI He	613340	0.84	609520	100.63	60	120	
Ge Internal standard	72	2	HMI H2	2480833	2.54	2391663	103.73	60	120	
Ge Internal standard	72	3	HMI He	764802	0.61	756863	101.05	60	120	
In Internal Standard	115	3	HMI He	3027920	0.84	2988279	101.33	60	120	
Ir (IS)	193	3	HMI He	7205137	2.02	6996686	102.98	60	120	

CRI Report

Sample Table

Sample Name	cri-7689706
Data File Name	046LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:25:33-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.742	ppb	72.263	35	1	74.2	80	120	>+/-30%
Na	23	3	45	326.633	ppb	4.045	57842	300	108.9	80	120	
Mg	24	3	45	53.173	ppb	6.145	3788	50	106.3	80	120	
Al	27	3	45	52.927	ppb	8.974	1301	50	105.9	80	120	
K	39	3	45	119.004	ppb	22.178	32741	120	99.2	80	120	
Ca	40	2	45	224.510	ppb	1.373	150811	200	112.3	80	120	
V	51	3	72	6.005	ppb	4.367	4357	5	120.1	80	120	>+/-30%
Cr	52	3	72	2.338	ppb	5.056	3385	2	116.9	80	120	
Mn	55	3	72	1.236	ppb	11.749	690	1	123.6	80	120	>+/-30%
Fe	56	2	72	55.437	ppb	1.883	103137	50	110.9	80	120	
Co	59	3	72	1.117	ppb	6.543	1479	1	111.7	80	120	
Ni	60	3	72	2.173	ppb	3.861	1090	2	108.7	80	120	
Cu	63	3	72	2.168	ppb	3.547	2537	2	108.4	80	120	
Zn	66	3	72	10.421	ppb	1.090	1991	10	104.2	80	120	
As	75	3	72	5.924	ppb	8.398	731	5	118.5	80	120	
Se	78	2	72	5.330	ppb	6.495	308	5	106.6	80	120	
Sr	88	3	72	5.476	ppb	3.818	3405	5	109.5	80	120	
Mo	95	3	115	2.298	ppb	5.642	1248	2	114.9	80	120	
Ag	107	3	115	1.013	ppb	7.964	1856	1	101.3	80	120	
Cd	111	3	115	1.138	ppb	14.494	315	1	113.8	80	120	
Sn	120	3	115	10.398	ppb	1.609	9744	10	104.0	80	120	
Sb	121	3	115	2.195	ppb	6.056	1983	2	109.7	80	120	
Ba	137	3	115	1.245	ppb	2.101	443	1	124.5	80	120	>+/-30%
Tl	205	3	193	1.045	ppb	4.955	5772	1	104.5	80	120	
(Pb)	206	3	193	1.028	ppb	4.961	2064	1	102.8	80	120	
(Pb)	207	3	193	0.911	ppb	6.807	1939	1	91.1	80	120	
Pb	208	3	193	1.003	ppb	5.220	8395	1	100.3	80	120	
Th	232	3	193	3.348	ppb	15.703	29502	1	334.8	80	120	>+/-30%
U	238	3	193	1.103	ppb	4.456	9744	1	110.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4019147	1.36	3936624	102.10	60	120	
Sc (IS)	45	3	HMI He	609705	0.70	609520	100.03	60	120	
Ge Internal standard	72	2	HMI H2	2478358	1.66	2391663	103.62	60	120	
Ge Internal standard	72	3	HMI He	753160	0.99	756863	99.51	60	120	
In Internal Standard	115	3	HMI He	3004752	1.35	2988279	100.55	60	120	
Ir (IS)	193	3	HMI He	7062491	1.83	6996686	100.94	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	047LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:31:34-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.085	ppb	172.452	8	1	8.5	80	120	>+/-30%
Na	23	3	45	-4.522	ppb	-196.661	23009	300	-1.5	80	120	>+/-30%
Mg	24	3	45	0.888	ppb	206.471	814	50	1.8	80	120	>+/-30%
Al	27	3	45	-1.501	ppb	-91.289	93	50	-3.0	80	120	>+/-30%
K	39	3	45	-12.024	ppb	-95.579	26692	120	-10.0	80	120	>+/-30%
Ca	40	2	45	-2.015	ppb	-70.047	25325	200	-1.0	80	120	>+/-30%
V	51	3	72	0.214	ppb	20.662	883	5	4.3	80	120	>+/-30%
Cr	52	3	72	-0.101	ppb	-215.130	1593	2	-5.0	80	120	>+/-30%
Mn	55	3	72	1.565	ppb	1.540	826	1	156.5	80	120	>+/-30%
Fe	56	2	72	-0.626	ppb	-60.594	16283	50	-1.3	80	120	>+/-30%
Co	59	3	72	0.003	ppb	367.672	75	1	0.3	80	120	>+/-30%
Ni	60	3	72	0.006	ppb	429.658	322	2	0.3	80	120	>+/-30%
Cu	63	3	72	-0.006	ppb	-1040.085	460	2	-0.3	80	120	>+/-30%
Zn	66	3	72	-0.292	ppb	-104.959	252	10	-2.9	80	120	>+/-30%
As	75	3	72	-0.207	ppb	-67.390	50	5	-4.1	80	120	>+/-30%
Se	78	2	72	-0.014	ppb	-306.915	3	5	-0.3	80	120	>+/-30%
Sr	88	3	72	-0.132	ppb	-51.363	172	5	-2.6	80	120	>+/-30%
Mo	95	3	115	0.000	ppb	-4455.495	52	2	0.0	80	120	>+/-30%
Ag	107	3	115	0.009	ppb	39.716	53	1	0.9	80	120	>+/-30%
Cd	111	3	115	0.006	ppb	472.565	18	1	0.6	80	120	>+/-30%
Sn	120	3	115	-0.028	ppb	-308.865	943	10	-0.3	80	120	>+/-30%
Sb	121	3	115	-0.005	ppb	-417.423	133	2	-0.2	80	120	>+/-30%
Ba	137	3	115	2.017	ppb	4.545	655	1	201.7	80	120	>+/-30%
Tl	205	3	193	-0.026	ppb	-61.024	715	1	-2.6	80	120	>+/-30%
(Pb)	206	3	193	-0.037	ppb	-55.067	385	1	-3.7	80	120	>+/-30%
(Pb)	207	3	193	-0.040	ppb	-183.299	608	1	-4.0	80	120	>+/-30%
Pb	208	3	193	-0.025	ppb	-80.034	1837	1	-2.5	80	120	>+/-30%
Th	232	3	193	0.062	ppb	163.589	8289	1	6.2	80	120	>+/-30%
U	238	3	193	0.004	ppb	822.038	2254	1	0.4	80	120	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3900710	1.20	3936624	99.09	60	120	
Sc (IS)	45	3	HMI He	606498	0.63	609520	99.50	60	120	
Ge Internal standard	72	2	HMI H2	2467828	1.56	2391663	103.18	60	120	
Ge Internal standard	72	3	HMI He	755630	1.18	756863	99.84	60	120	
In Internal Standard	115	3	HMI He	2996648	2.22	2988279	100.28	60	120	
Ir (IS)	193	3	HMI He	6994183	2.59	6996686	99.96	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	048ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:33:24-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.002	ppb	-5436.2	5	0.5	
Na	23	3	45	95336.197	ppb	1.7	10062096	100000	
Mg	24	3	45	95613.307	ppb	1.4	5454208	100000	
Al	27	3	45	96041.201	ppb	2.1	2139685	100000	
K	39	3	45	95915.765	ppb	0.7	4375067	100000	
Ca	40	2	45	95524.955	ppb	0.6	52259702	100000	
V	51	3	72	0.211	ppb	54.2	896	1	
Cr	52	3	72	1.045	ppb	23.3	2482	1	>RL or LOD
Mn	55	3	72	0.230	ppb	14.6	287	0.95	
Fe	56	2	72	95432.708	ppb	1.2	143280651	100000	
Co	59	3	72	0.230	ppb	4.2	368	0.5	
Ni	60	3	72	0.060	ppb	215.0	347	1	
Cu	63	3	72	0.122	ppb	25.5	593	1	
Zn	66	3	72	0.464	ppb	35.1	381	1	
As	75	3	72	0.122	ppb	103.5	88	1	
Se	78	2	72	0.036	ppb	101.5	6	1	
(Se)	78	3	72	0.930	ppb	349.9	27	1	
Sr	88	3	72	0.607	ppb	13.1	610	1	
Mo	95	3	115	1981.484	ppb	5.2	1034037	2000	
Ag	107	3	115	0.032	ppb	51.3	95	1	
Cd	111	3	115	0.235	ppb	36.3	78	1	
Sn	120	3	115	0.077	ppb	40.5	1040	1	
Sb	121	3	115	0.136	ppb	17.9	253	1	
Ba	137	3	115	1.592	ppb	11.5	541	0.95	>RL or LOD
Tl	205	3	193	-0.034	ppb	-46.0	683	1	
(Pb)	206	3	193	0.126	ppb	39.1	645	1	
(Pb)	207	3	193	0.084	ppb	23.9	788	1	
Pb	208	3	193	0.102	ppb	3.8	2667	1	
Th	232	3	193	0.040	ppb	228.7	8232	1	
U	238	3	193	0.016	ppb	101.2	2361	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3991653	2.38	3936624	101.40	60	120	
Sc (IS)	45	3	HMI He	612485	0.74	609520	100.49	60	120	
Ge Internal standard	72	2	HMI H2	2402882	0.40	2391663	100.47	60	120	
Ge Internal standard	72	3	HMI He	768894	1.32	756863	101.59	60	120	
In Internal Standard	115	3	HMI He	3018640	3.91	2988279	101.02	60	120	
Ir (IS)	193	3	HMI He	7059843	2.44	6996686	100.90	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	049ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:35:09-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	95.731	ppb	6.384	3819	100	95.7	80	120	
Na	23	3	45	98434.351	ppb	0.769	10418460	100	98434.4	80	120	>+\-20%
Mg	24	3	45	97688.443	ppb	0.752	5588419	100	97688.4	80	120	>+\-20%
Al	27	3	45	95132.883	ppb	1.823	2125575	100	95132.9	80	120	>+\-20%
K	39	3	45	100043.929	ppb	1.589	4575275	100	100043.9	80	120	>+\-20%
Ca	40	2	45	97684.946	ppb	1.310	54529637	100	97684.9	80	120	>+\-20%
V	51	3	72	96.213	ppb	0.809	59323	100	96.2	80	120	
Cr	52	3	72	99.652	ppb	0.598	76101	100	99.7	80	120	
Mn	55	3	72	97.499	ppb	1.786	40367	100	97.5	80	120	
Fe	56	2	72	95623.562	ppb	1.468	143854199	100	95623.6	80	120	>+\-20%
Co	59	3	72	96.489	ppb	0.456	123346	100	96.5	80	120	
Ni	60	3	72	92.535	ppb	0.807	33611	100	92.5	80	120	
Cu	63	3	72	97.020	ppb	0.935	94531	100	97.0	80	120	
Zn	66	3	72	92.671	ppb	2.175	15556	100	92.7	80	120	
As	75	3	72	92.738	ppb	2.477	10519	100	92.7	80	120	
Se	78	2	72	100.948	ppb	1.127	5593	100	100.9	80	120	
(Se)	78	3	72	105.459	ppb	5.381	745	100	105.5	80	120	
Sr	88	3	72	193.458	ppb	0.660	113361	100	193.5	80	120	>+\-20%
Mo	95	3	115	2048.899	ppb	1.905	1059043	100	2048.9	80	120	>+\-20%
Ag	107	3	115	96.794	ppb	1.406	172835	100	96.8	80	120	
Cd	111	3	115	95.450	ppb	0.794	24902	100	95.5	80	120	
Sn	120	3	115	98.180	ppb	1.452	83305	100	98.2	80	120	
Sb	121	3	115	99.296	ppb	1.317	83044	100	99.3	80	120	
Ba	137	3	115	99.845	ppb	1.546	27545	100	99.8	80	120	
Tl	205	3	193	93.992	ppb	1.107	444954	100	94.0	80	120	
(Pb)	206	3	193	95.288	ppb	1.746	150579	100	95.3	80	120	
(Pb)	207	3	193	93.897	ppb	1.976	131613	100	93.9	80	120	
Pb	208	3	193	95.062	ppb	1.863	607096	100	95.1	80	120	
Th	232	3	193	95.862	ppb	2.433	625067	100	95.9	80	120	
U	238	3	193	103.074	ppb	1.913	703285	100	103.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4072523	0.80	3936624	103.45	60	120	
Sc (IS)	45	3	HMI He	614217	0.19	609520	100.77	60	120	
Ge Internal standard	72	2	HMI H2	2407755	0.69	2391663	100.67	60	120	
Ge Internal standard	72	3	HMI He	763361	0.54	756863	100.86	60	120	
In Internal Standard	115	3	HMI He	2986324	1.05	2988279	99.93	60	120	
Ir (IS)	193	3	HMI He	7072411	1.78	6996686	101.08	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	050SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:36:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.001	ppb	-0.001	-20511.61	5	2000	
Na	23	3	45	39.183	ppb	39.183	16.27	27133	400000	
Mg	24	3	45	5.145	ppb	5.145	55.00	1038	400000	
Al	27	3	45	6.559	ppb	6.559	39.98	267	400000	
K	39	3	45	15.325	ppb	15.325	88.75	27481	400000	
Ca	40	2	45	6.680	ppb	6.680	17.75	30323	400000	
V	51	3	72	0.529	ppb	0.529	28.52	1048	2000	
Cr	52	3	72	-0.067	ppb	-0.067	-19.66	1583	5000	
Mn	55	3	72	-0.026	ppb	-0.026	-352.67	173	10000	
Fe	56	2	72	11.957	ppb	11.957	8.24	34762	10000	
Co	59	3	72	0.008	ppb	0.008	212.47	80	2000	
Ni	60	3	72	-0.041	ppb	-0.041	-215.79	298	5000	
Cu	63	3	72	0.019	ppb	0.019	47.61	473	5000	
Zn	66	3	72	0.087	ppb	0.087	276.12	307	5000	
As	75	3	72	-0.153	ppb	-0.153	-128.34	55	2000	
Se	78	2	72	0.048	ppb	0.048	117.91	7	2000	
Sr	88	3	72	-0.096	ppb	-0.096	-58.74	188	4000	
Mo	95	3	115	3.751	ppb	3.751	25.08	2024	2000	
Ag	107	3	115	0.006	ppb	0.006	189.30	48	100	
Cd	111	3	115	-0.001	ppb	-0.001	-4165.42	17	2000	
Sn	120	3	115	-0.097	ppb	-0.097	-69.63	898	2000	
Sb	121	3	115	-0.030	ppb	-0.030	-29.07	113	1000	
Ba	137	3	115	-0.131	ppb	-0.131	-20.78	63	5000	
Tl	205	3	193	-0.011	ppb	-0.011	-44.58	798	2000	
(Pb)	206	3	193	0.001	ppb	0.001	2715.16	453	100	
(Pb)	207	3	193	-0.070	ppb	-0.070	-36.38	578	100	
Pb	208	3	193	-0.024	ppb	-0.024	-29.84	1879	5000	
Th	232	3	193	2.410	ppb	2.410	11.34	23654	2000	
U	238	3	193	0.019	ppb	0.019	76.01	2404	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3947112	1.97	3936624	100.27	60	120	
Sc (IS)	45	3	HMI He	597018	0.09	609520	97.95	60	120	
Ge Internal standard	72	2	HMI H2	2405201	1.32	2391663	100.57	60	120	
Ge Internal standard	72	3	HMI He	738661	0.95	756863	97.60	60	120	
In Internal Standard	115	3	HMI He	3037084	0.14	2988279	101.63	60	120	
Ir (IS)	193	3	HMI He	7117390	0.91	6996686	101.73	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-7616617
Data File Name	051_LR.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:38:45-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	2023.462	ppb	2.389	87373	2000	101.2	90	110	
Na	23	3	45	189555.451	ppb	2.323	21675985	200000	94.8	90	110	
Mg	24	3	45	186670.922	ppb	2.041	11550314	200000	93.3	90	110	
Al	27	3	45	290616.003	ppb	1.870	7023204	300000	96.9	90	110	
V	51	3	72	1992.263	ppb	2.255	1294439	2000	99.6	90	110	
Cr	52	3	72	4895.348	ppb	0.738	3902415	5000	97.9	90	110	
Mn	55	3	72	9868.435	ppb	1.291	4338776	10000	98.7	90	110	
Fe	56	2	72	195193.040	ppb	1.705	321383249	200000	97.6	90	110	
Co	59	3	72	1928.158	ppb	0.550	2628345	2000	96.4	90	110	
Ni	60	3	72	4682.171	ppb	2.367	1797165	5000	93.6	90	110	
Cu	63	3	72	4949.046	ppb	1.268	5119355	5000	99.0	90	110	
Zn	66	3	72	4786.488	ppb	1.562	840788	5000	95.7	90	110	
As	75	3	72	2042.561	ppb	1.246	245495	2000	102.1	90	110	
Se	78	2	72	2038.133	ppb	0.914	123522	2000	101.9	90	110	
(Se)	78	3	72	2006.903	ppb	0.997	14734	2000	100.3	90	110	
Sr	88	3	72	5151.291	ppb	1.653	3213491	5000	103.0	90	110	
Mo	95	3	115	1996.865	ppb	2.237	1098017	2000	99.8	90	110	
Cd	111	3	115	1954.613	ppb	1.704	542080	2000	97.7	90	110	
Sn	120	3	115	2085.854	ppb	0.727	1862278	2000	104.3	90	110	
Sb	121	3	115	1017.873	ppb	1.302	904260	1000	101.8	90	110	
Ba	137	3	115	5272.915	ppb	0.712	1542301	5000	105.5	90	110	
Tl	205	3	193	971.297	ppb	0.576	4918008	1000	97.1	90	110	
(Pb)	206	3	193	4886.389	ppb	0.608	8249751	5000	97.7	90	110	
(Pb)	207	3	193	4890.926	ppb	0.054	7309205	5000	97.8	90	110	
Pb	208	3	193	4871.107	ppb	0.278	33225301	5000	97.4	90	110	
Th	232	3	193	942.292	ppb	2.733	6509689	1000	94.2	90	110	
U	238	3	193	2029.180	ppb	0.595	14789609	2000	101.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4366053	2.40	3936624	110.91	60	120	
Sc (IS)	45	3	HMI He	664398	1.22	609520	109.00	60	120	
Ge Internal standard	72	2	HMI H2	2635342	0.64	2391663	110.19	60	120	
Ge Internal standard	72	3	HMI He	814468	1.05	756863	107.61	60	120	
In Internal Standard	115	3	HMI He	3177004	1.40	2988279	106.32	60	120	
Ir (IS)	193	3	HMI He	7576642	1.61	6996686	108.29	60	120	

Sample Report

Sample Table

Sample Name	rinse-
Data File Name	052SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:40:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.255	ppb	0.255	86.53	15	2000	
Na	23	3	45	103.991	ppb	103.991	3.52	33577	400000	
Mg	24	3	45	28.333	ppb	28.333	22.57	2313	400000	
Al	27	3	45	39.885	ppb	39.885	30.70	984	400000	
K	39	3	45	120.318	ppb	120.318	19.44	31922	400000	
Ca	40	2	45	10.694	ppb	10.694	26.81	32039	400000	
V	51	3	72	0.316	ppb	0.316	38.83	931	2000	
Cr	52	3	72	0.797	ppb	0.797	11.28	2227	5000	
Mn	55	3	72	1.448	ppb	1.448	17.57	768	10000	
Fe	56	2	72	21.466	ppb	21.466	5.74	48008	10000	
Co	59	3	72	0.277	ppb	0.277	17.75	416	2000	
Ni	60	3	72	0.768	ppb	0.768	6.66	585	5000	
Cu	63	3	72	1.082	ppb	1.082	18.62	1483	5000	
Zn	66	3	72	1.024	ppb	1.024	50.78	460	5000	
As	75	3	72	0.130	ppb	0.130	136.12	87	2000	
Se	78	2	72	0.530	ppb	0.530	17.20	33	2000	
Sr	88	3	72	0.529	ppb	0.529	17.19	546	4000	
Mo	95	3	115	10.124	ppb	10.124	17.60	5352	2000	
Ag	107	3	115	0.009	ppb	0.009	59.83	53	100	
Cd	111	3	115	0.372	ppb	0.372	24.67	115	2000	
Sn	120	3	115	12.486	ppb	12.486	3.13	11561	2000	
Sb	121	3	115	1.536	ppb	1.536	10.26	1436	1000	
Ba	137	3	115	0.603	ppb	0.603	20.00	267	5000	
Tl	205	3	193	0.390	ppb	0.390	2.89	2707	2000	
(Pb)	206	3	193	0.800	ppb	0.800	12.10	1719	100	
(Pb)	207	3	193	0.717	ppb	0.717	12.89	1683	100	
Pb	208	3	193	0.773	ppb	0.773	13.96	6987	5000	
Th	232	3	193	43.697	ppb	43.697	13.35	291191	2000	
U	238	3	193	0.851	ppb	0.851	15.51	8095	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3891614	0.79	3936624	98.86	60	120	
Sc (IS)	45	3	HMI He	593328	0.17	609520	97.34	60	120	
Ge Internal standard	72	2	HMI H2	2354325	2.37	2391663	98.44	60	120	
Ge Internal standard	72	3	HMI He	745502	0.82	756863	98.50	60	120	
In Internal Standard	115	3	HMI He	3017820	1.78	2988279	100.99	60	120	
Ir (IS)	193	3	HMI He	7120606	0.66	6996686	101.77	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	053_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:42:15-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.191	ppb	5.133	2071	50	102.4	90	110	
Na	23	3	45	48631.638	ppb	1.729	5074740	51000	95.4	90	110	
Mg	24	3	45	10120.861	ppb	0.784	570157	11000	92.0	90	110	
Al	27	3	45	990.777	ppb	2.123	21899	1000	99.1	90	110	
K	39	3	45	10526.946	ppb	0.127	497785	11000	95.7	90	110	
Ca	40	2	45	10313.670	ppb	1.118	5665316	11000	93.8	90	110	
V	51	3	72	50.921	ppb	2.647	30737	50	101.8	90	110	
Cr	52	3	72	52.345	ppb	1.192	39469	50	104.7	90	110	
Mn	55	3	72	52.204	ppb	1.725	21007	50	104.4	90	110	
Fe	56	2	72	1043.807	ppb	1.723	1579895	1000	104.4	90	110	
Co	59	3	72	51.797	ppb	1.575	64127	50	103.6	90	110	
Ni	60	3	72	50.591	ppb	1.140	17931	50	101.2	90	110	
Cu	63	3	72	52.429	ppb	1.324	49661	50	104.9	90	110	
Zn	66	3	72	50.805	ppb	2.455	8387	50	101.6	90	110	
As	75	3	72	54.483	ppb	0.835	6012	50	109.0	90	110	
Se	78	2	72	52.100	ppb	2.124	2876	50	104.2	90	110	
Sr	88	3	72	105.697	ppb	0.523	60065	100	105.7	90	110	
Mo	95	3	115	50.722	ppb	1.021	26658	50	101.4	90	110	
Ag	107	3	115	48.442	ppb	2.001	87786	50	96.9	90	110	
Cd	111	3	115	49.949	ppb	2.577	13230	50	99.9	90	110	
Sn	120	3	115	49.042	ppb	3.600	42704	50	98.1	90	110	
Sb	121	3	115	50.451	ppb	2.286	42881	50	100.9	90	110	
Ba	137	3	115	49.829	ppb	4.405	13994	50	99.7	90	110	
Tl	205	3	193	50.440	ppb	0.848	235705	50	100.9	90	110	
(Pb)	206	3	193	49.801	ppb	0.406	77767	50	99.6	90	110	
(Pb)	207	3	193	49.094	ppb	0.460	68139	50	98.2	90	110	
Pb	208	3	193	49.812	ppb	0.727	314465	50	99.6	90	110	
Th	232	3	193	60.825	ppb	4.640	393842	50	121.6	90	110	>+\-10%
U	238	3	193	50.525	ppb	0.589	340891	50	101.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3990427	0.34	3936624	101.37	60	120	
Sc (IS)	45	3	HMI He	604134	0.65	609520	99.12	60	120	
Ge Internal standard	72	2	HMI H2	2396928	0.27	2391663	100.22	60	120	
Ge Internal standard	72	3	HMI He	738967	0.81	756863	97.64	60	120	
In Internal Standard	115	3	HMI He	3030528	1.70	2988279	101.41	60	120	
Ir (IS)	193	3	HMI He	6968734	0.62	6996686	99.60	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	054_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:44:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.044	ppb	-164.0	3	0.5	
Na	23	3	45	40.592	ppb	9.6	27742	25	>RL
Mg	24	3	45	3.011	ppb	75.3	934	25	
Al	27	3	45	4.387	ppb	20.8	224	15	
K	39	3	45	23.326	ppb	19.9	28310	50	
V	51	3	72	0.348	ppb	50.8	961	1	
Cr	52	3	72	0.322	ppb	76.3	1903	1	
Mn	55	3	72	0.108	ppb	97.6	232	0.5	
Co	59	3	72	0.005	ppb	521.0	78	0.5	
Ni	60	3	72	0.092	ppb	79.2	352	1	
Cu	63	3	72	0.122	ppb	20.2	581	1	
Zn	66	3	72	0.262	ppb	49.9	342	5	
As	75	3	72	-0.252	ppb	-98.5	45	1	
Se	78	2	72	0.225	ppb	38.2	17	1	
Sr	88	3	72	-0.019	ppb	-272.7	237	0.5	
Mo	95	3	115	0.283	ppb	9.2	198	0.5	
Ag	107	3	115	0.029	ppb	20.2	88	1	
Cd	111	3	115	0.083	ppb	37.0	38	0.5	
Sn	120	3	115	0.570	ppb	6.5	1444	1	
Sb	121	3	115	0.165	ppb	4.8	275	0.6	
Ba	137	3	115	-0.031	ppb	-380.5	90	0.5	
Tl	205	3	193	0.032	ppb	10.4	1011	0.1	
(Pb)	206	3	193	0.025	ppb	106.9	495	1	
(Pb)	207	3	193	0.068	ppb	80.3	778	1	
Pb	208	3	193	0.056	ppb	40.7	2414	0.5	
Th	232	3	193	3.704	ppb	17.3	32368	1	>RL
U	238	3	193	0.037	ppb	78.9	2546	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3998985	1.32	3936624	101.58	60	120	
Sc (IS)	45	3	HMI He	607208	0.78	609520	99.62	60	120	
Ge Internal standard	72	2	HMI H2	2442163	1.23	2391663	102.11	60	120	
Ge Internal standard	72	3	HMI He	754094	0.52	756863	99.63	60	120	
In Internal Standard	115	3	HMI He	2990984	1.43	2988279	100.09	60	120	
Ir (IS)	193	3	HMI He	7180675	2.17	6996686	102.63	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7689706
Data File Name	055LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:45:50-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.057	ppb	6.494	47	1	105.7	70	130	
Na	23	3	45	344.849	ppb	1.754	59986	300	114.9	70	130	
Mg	24	3	45	60.069	ppb	1.367	4195	50	120.1	70	130	
Al	27	3	45	54.801	ppb	15.352	1348	50	109.6	70	130	
K	39	3	45	137.012	ppb	11.382	33687	120	114.2	70	130	
Ca	40	2	45	232.240	ppb	1.986	153860	200	116.1	70	130	
V	51	3	72	5.716	ppb	7.452	4227	5	114.3	70	130	
Cr	52	3	72	2.259	ppb	1.382	3362	2	113.0	70	130	
Mn	55	3	72	1.295	ppb	8.909	721	1	129.5	70	130	
Fe	56	2	72	59.054	ppb	2.235	108402	50	118.1	70	130	
Co	59	3	72	1.173	ppb	8.581	1566	1	117.3	70	130	
Ni	60	3	72	2.039	ppb	7.432	1053	2	102.0	70	130	
Cu	63	3	72	2.312	ppb	4.161	2704	2	115.6	70	130	
Zn	66	3	72	11.099	ppb	5.545	2122	10	111.0	70	130	
As	75	3	72	5.577	ppb	6.804	700	5	111.5	70	130	
Se	78	2	72	5.761	ppb	9.220	331	5	115.2	70	130	
Sr	88	3	72	5.403	ppb	5.010	3399	5	108.1	70	130	
Mo	95	3	115	2.350	ppb	6.275	1303	2	117.5	70	130	
Ag	107	3	115	0.980	ppb	2.225	1839	1	98.0	70	130	
Cd	111	3	115	1.297	ppb	10.527	365	1	129.7	70	130	
Sn	120	3	115	10.431	ppb	2.344	9994	10	104.3	70	130	
Sb	121	3	115	2.140	ppb	3.748	1979	2	107.0	70	130	
Ba	137	3	115	0.972	ppb	14.462	376	1	97.2	70	130	
Tl	205	3	193	1.027	ppb	7.460	5735	1	102.7	70	130	
(Pb)	206	3	193	1.060	ppb	3.263	2132	1	106.0	70	130	
(Pb)	207	3	193	1.071	ppb	6.657	2181	1	107.1	70	130	
Pb	208	3	193	1.116	ppb	1.899	9192	1	111.6	70	130	
Th	232	3	193	3.639	ppb	21.232	31690	1	363.9	70	130	>+/-30%
U	238	3	193	1.147	ppb	1.788	10132	1	114.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3987615	0.34	3936624	101.30	60	120	
Sc (IS)	45	3	HMI He	612114	0.28	609520	100.43	60	120	
Ge Internal standard	72	2	HMI H2	2470696	1.52	2391663	103.30	60	120	
Ge Internal standard	72	3	HMI He	760964	0.28	756863	100.54	60	120	
In Internal Standard	115	3	HMI He	3073589	1.98	2988279	102.85	60	120	
Ir (IS)	193	3	HMI He	7120734	1.99	6996686	101.77	60	120	

Sample Report

Sample Table

Sample Name	07646136
Data File Name	056SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:47:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.043	ppb	0.043	170.38	7	2000	
Na	23	3	45	46085.452	ppb	46085.452	0.24	4907285	400000	
Mg	24	3	45	70045.027	ppb	70045.027	0.58	4021009	400000	
Al	27	3	45	32.679	ppb	32.679	13.70	861	400000	
K	39	3	45	8761.584	ppb	8761.584	1.41	427304	400000	
Ca	40	2	45	419313.931	ppb	419313.931	1.62	225171360	400000	
V	51	3	72	-0.246	ppb	-0.246	-57.96	586	2000	
Cr	52	3	72	0.282	ppb	0.282	121.06	1816	5000	
Mn	55	3	72	90.381	ppb	90.381	1.59	35868	10000	
Fe	56	2	72	223.965	ppb	223.965	2.57	349594	10000	
Co	59	3	72	0.233	ppb	0.233	4.37	355	2000	
Ni	60	3	72	3.979	ppb	3.979	16.89	1681	5000	
Cu	63	3	72	1.383	ppb	1.383	6.85	1736	5000	
Zn	66	3	72	10.491	ppb	10.491	4.70	1944	5000	
As	75	3	72	-0.209	ppb	-0.209	-55.61	48	2000	
Se	78	2	72	0.242	ppb	0.242	53.44	17	2000	
Sr	88	3	72	2220.926	ppb	2220.926	0.71	1244456	4000	
Mo	95	3	115	0.174	ppb	0.174	19.61	143	2000	
Ag	107	3	115	0.017	ppb	0.017	65.81	68	100	
Cd	111	3	115	0.074	ppb	0.074	75.05	37	2000	
Sn	120	3	115	0.538	ppb	0.538	12.36	1434	2000	
Sb	121	3	115	0.145	ppb	0.145	5.54	262	1000	
Ba	137	3	115	3.171	ppb	3.171	1.62	983	5000	
Tl	205	3	193	0.046	ppb	0.046	10.16	1070	2000	
(Pb)	206	3	193	0.095	ppb	0.095	17.09	601	100	
(Pb)	207	3	193	0.068	ppb	0.068	46.26	771	100	
Pb	208	3	193	0.089	ppb	0.089	14.07	2607	5000	
Th	232	3	193	0.386	ppb	0.386	58.23	10531	2000	
U	238	3	193	0.488	ppb	0.488	2.26	5615	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3919452	0.42	3936624	99.56	60	120	
Sc (IS)	45	3	HMI He	616340	0.44	609520	101.12	60	120	
Ge Internal standard	72	2	HMI H2	2380476	2.41	2391663	99.53	60	120	
Ge Internal standard	72	3	HMI He	731438	0.32	756863	96.64	60	120	
In Internal Standard	115	3	HMI He	3027041	1.73	2988279	101.30	60	120	
Ir (IS)	193	3	HMI He	7117865	0.48	6996686	101.73	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608988/1-A
Data File Name	057_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:49:27-06:00
Sample Type	Blank
Dilution	1
Comment	608988 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.044	ppb	-321.0276816	3	0.5
Na	23	3	45	61.604	ppb	1.725422507	30279	25
Mg	24	3	45	5.278	ppb	34.80472678	1074	25
Al	27	3	45	5.174	ppb	22.44213393	244	15
K	39	3	45	28.000	ppb	89.45930801	28855	50
Ca	40	2	45	36.773	ppb	7.430288725	47582	200
V	51	3	72	0.083	ppb	115.2881194	813	1
Cr	52	3	72	-0.080	ppb	-171.4636165	1628	1
Mn	55	3	72	0.331	ppb	43.36226534	327	0.5
Fe	56	2	72	4.859	ppb	2.450064103	24927	50
Co	59	3	72	-0.012	ppb	-18.81117387	57	0.5
Ni	60	3	72	0.570	ppb	13.9753172	528	1
Cu	63	3	72	0.164	ppb	6.41419743	630	1
Zn	66	3	72	0.063	ppb	69.10900256	313	5
As	75	3	72	-0.228	ppb	-11.08640188	48	1
(Se)	78	3	72	1.913	ppb	44.09982287	33	1
Sr	88	3	72	0.115	ppb	68.13703367	318	0.5
Mo	95	3	115	0.075	ppb	106.8583026	93	0.5
Ag	107	3	115	0.005	ppb	30.81743947	48	1
Cd	111	3	115	0.035	ppb	162.0698733	27	0.5
Sn	120	3	115	0.020	ppb	472.8983403	1020	1
Sb	121	3	115	0.020	ppb	247.9946202	160	0.6
Ba	137	3	115	0.000	ppb	60172.67308	102	0.5
Tl	205	3	193	-0.030	ppb	-9.410549234	720	0.1
(Pb)	206	3	193	0.004	ppb	263.9839086	465	1
(Pb)	207	3	193	0.004	ppb	1324.596008	693	1
Pb	208	3	193	0.021	ppb	97.69472547	2211	0.5
Th	232	3	193	-0.114	ppb	-33.8856839	7424	1
U	238	3	193	0.006	ppb	516.4768832	2359	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4030655	1.88	3936624	102.39	60	120	
Sc (IS)	45	3	HMI He	614157	1.19	609520	100.76	60	120	
Ge Internal standard	72	2	HMI H2	2487414	2.91	2391663	104.00	60	120	
Ge Internal standard	72	3	HMI He	764122	0.21	756863	100.96	60	120	
In Internal Standard	115	3	HMI He	3103312	1.89	2988279	103.85	60	120	
Ir (IS)	193	3	HMI He	7246645	1.66	6996686	103.57	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608988/2-A
Data File Name	058_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:51:18-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608988 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.049	40.049	ppb	1.910	1586	40	100.1	80	120	
Na	23	3	45	811.112	811.112	ppb	1.174	110820	40	2027.8	80	120	>+/-20%
Mg	24	3	45	745.347	745.347	ppb	0.480	43962	40	1863.4	80	120	>+/-20%
Al	27	3	45	796.060	796.060	ppb	1.909	18140	40	1990.1	80	120	>+/-20%
K	39	3	45	791.602	791.602	ppb	5.579	64361	40	1979.0	80	120	>+/-20%
Ca	40	2	45	828.740	828.740	ppb	0.630	492343	40	2071.8	80	120	>+/-20%
V	51	3	72	40.016	40.016	ppb	0.274	25517	40	100.0	80	120	
Cr	52	3	72	41.732	41.732	ppb	1.620	33372	40	104.3	80	120	
Mn	55	3	72	42.214	42.214	ppb	2.748	17864	40	105.5	80	120	
Fe	56	2	72	811.694	811.694	ppb	4.279	1280215	40	2029.2	80	120	>+/-20%
(Fe)	56	3	72	810.317	810.317	ppb	1.194	540160	40	2025.8	80	120	>+/-20%
Co	59	3	72	40.958	40.958	ppb	1.340	53237	40	102.4	80	120	
Ni	60	3	72	38.219	38.219	ppb	1.825	14295	40	95.5	80	120	
Cu	63	3	72	41.471	41.471	ppb	1.215	41323	40	103.7	80	120	
Zn	66	3	72	41.450	41.450	ppb	1.461	7238	40	103.6	80	120	
As	75	3	72	41.078	41.078	ppb	4.110	4775	40	102.7	80	120	
Se	78	2	72	42.038	42.038	ppb	3.513	2412	40	105.1	80	120	
(Se)	78	3	72	41.213	41.213	ppb	4.103	308	40	103.0	80	120	
Sr	88	3	72	82.162	82.162	ppb	1.180	49057	40	205.4	80	120	>+/-20%
Mo	95	3	115	38.819	38.819	ppb	1.280	21174	40	97.0	80	120	
Ag	107	3	115	40.439	40.439	ppb	0.639	76026	40	101.1	80	120	
Cd	111	3	115	40.033	40.033	ppb	2.246	11004	40	100.1	80	120	
Sn	120	3	115	37.105	37.105	ppb	3.392	33761	40	92.8	80	120	
Sb	121	3	115	39.396	39.396	ppb	0.943	34766	40	98.5	80	120	
Ba	137	3	115	39.836	39.836	ppb	1.740	11631	40	99.6	80	120	
Tl	205	3	193	38.669	38.669	ppb	1.279	191299	40	96.7	80	120	
(Pb)	206	3	193	38.976	38.976	ppb	1.291	64469	40	97.4	80	120	
(Pb)	207	3	193	38.528	38.528	ppb	1.918	56700	40	96.3	80	120	
Pb	208	3	193	39.197	39.197	ppb	1.289	262145	40	98.0	80	120	
Th	232	3	193	36.769	36.769	ppb	0.451	255031	40	91.9	80	120	
U	238	3	193	39.475	39.475	ppb	1.818	282168	40	98.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4092547	0.67	3936624	103.96	60	120	
Sc (IS)	45	3	HMI He	622065	1.30	609520	102.06	60	120	
Ge Internal standard	72	2	HMI H2	2491566	2.38	2391663	104.18	60	120	
Ge Internal standard	72	3	HMI He	775518	0.53	756863	102.46	60	120	
In Internal Standard	115	3	HMI He	3143141	1.36	2988279	105.18	60	120	
Ir (IS)	193	3	HMI He	7369962	0.43	6996686	105.34	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-608988/3-A
Data File Name	059SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:53:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.311	ppb	42.311	3.77	1698	2000	
Na	23	3	45	802.860	ppb	802.860	2.22	109822	400000	
Mg	24	3	45	741.393	ppb	741.393	1.78	43684	400000	
Al	27	3	45	820.529	ppb	820.529	2.11	18678	400000	
K	39	3	45	796.314	ppb	796.314	5.56	64512	400000	
Ca	40	2	45	833.238	ppb	833.238	2.15	494199	400000	
V	51	3	72	40.234	ppb	40.234	2.52	25809	2000	
Cr	52	3	72	41.134	ppb	41.134	0.69	33123	5000	
Mn	55	3	72	41.575	ppb	41.575	4.40	17704	10000	
Fe	56	2	72	818.913	ppb	818.913	1.93	1295787	10000	
Co	59	3	72	40.526	ppb	40.526	1.32	52999	2000	
Ni	60	3	72	39.754	ppb	39.754	1.22	14949	5000	
Cu	63	3	72	41.623	ppb	41.623	1.52	41730	5000	
Zn	66	3	72	40.741	ppb	40.741	2.42	7163	5000	
As	75	3	72	40.203	ppb	40.203	4.48	4705	2000	
Se	78	2	72	42.376	ppb	42.376	2.49	2439	2000	
Sr	88	3	72	81.283	ppb	81.283	0.69	48836	4000	
Mo	95	3	115	39.260	ppb	39.260	1.03	21183	2000	
Ag	107	3	115	40.548	ppb	40.548	0.26	75408	100	
Cd	111	3	115	40.403	ppb	40.403	1.16	10984	2000	
Sn	120	3	115	37.877	ppb	37.877	0.60	34078	2000	
Sb	121	3	115	40.041	ppb	40.041	0.70	34952	1000	
Ba	137	3	115	40.398	ppb	40.398	1.53	11664	5000	
Tl	205	3	193	39.418	ppb	39.418	1.71	192169	2000	
(Pb)	206	3	193	39.381	ppb	39.381	2.44	64187	100	
(Pb)	207	3	193	39.062	ppb	39.062	1.67	56646	100	
Pb	208	3	193	39.439	ppb	39.439	2.06	259944	5000	
Th	232	3	193	39.380	ppb	39.380	1.52	268613	2000	
U	238	3	193	39.891	ppb	39.891	2.31	281000	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4087545	1.95	3936624	103.83	60	120	
Sc (IS)	45	3	HMI He	621403	0.62	609520	101.95	60	120	
Ge Internal standard	72	2	HMI H2	2498758	0.58	2391663	104.48	60	120	
Ge Internal standard	72	3	HMI He	780346	0.84	756863	103.10	60	120	
In Internal Standard	115	3	HMI He	3109050	0.22	2988279	104.04	60	120	
Ir (IS)	193	3	HMI He	7264494	1.56	6996686	103.83	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-D
Data File Name	060SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:54:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	19545.399	ppb	19545.399	1.02	2130238	400000	
Mg	24	3	45	26093.020	ppb	26093.020	3.35	1523373	400000	
Al	27	3	45	14.894	ppb	14.894	63.21	471	400000	
K	39	3	45	11049.524	ppb	11049.524	1.71	540602	400000	
Ca	40	2	45	70521.865	ppb	70521.865	2.09	38581225	400000	
V	51	3	72	0.247	ppb	0.247	47.08	936	2000	
Cr	52	3	72	1.057	ppb	1.057	16.75	2542	5000	
Mn	55	3	72	9.080	ppb	9.080	5.33	4039	10000	
Fe	56	2	72	60.210	ppb	60.210	3.00	113329	10000	
Co	59	3	72	0.200	ppb	0.200	12.48	337	2000	
Ni	60	3	72	2.372	ppb	2.372	6.36	1208	5000	
Cu	63	3	72	1.973	ppb	1.973	3.24	2447	5000	
Zn	66	3	72	4.204	ppb	4.204	5.35	1021	5000	
As	75	3	72	0.841	ppb	0.841	18.70	173	2000	
Se	78	2	72	1.197	ppb	1.197	26.89	74	2000	
Sr	88	3	72	155.897	ppb	155.897	0.38	93870	4000	
Mo	95	3	115	17.638	ppb	17.638	2.49	9620	2000	
Ag	107	3	115	0.017	ppb	0.017	15.03	70	100	
Cd	111	3	115	0.040	ppb	0.040	95.88	28	2000	
Sn	120	3	115	0.124	ppb	0.124	50.80	1121	2000	
Sb	121	3	115	0.804	ppb	0.804	6.56	848	1000	
Ba	137	3	115	23.361	ppb	23.361	1.14	6842	5000	
Tl	205	3	193	0.012	ppb	0.012	64.71	916	2000	
(Pb)	206	3	193	0.129	ppb	0.129	10.57	663	100	
(Pb)	207	3	193	0.093	ppb	0.093	51.92	816	100	
Pb	208	3	193	0.136	ppb	0.136	12.64	2942	5000	
Th	232	3	193	2.719	ppb	2.719	10.72	25956	2000	
U	238	3	193	0.126	ppb	0.126	12.72	3171	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3990427	1.77	3936624	101.37	60	120	
Sc (IS)	45	3	HMI He	626752	1.03	609520	102.83	60	120	
Ge Internal standard	72	2	HMI H2	2541628	2.20	2391663	106.27	60	120	
Ge Internal standard	72	3	HMI He	783987	0.51	756863	103.58	60	120	
In Internal Standard	115	3	HMI He	3133503	0.53	2988279	104.86	60	120	
Ir (IS)	193	3	HMI He	7199182	1.82	6996686	102.89	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-E MS
Data File Name	061SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:56:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.079	ppb	40.079	4.07	1633	2000	
Na	23	3	45	19881.152	ppb	19881.152	1.68	2148737	400000	
Mg	24	3	45	26000.278	ppb	26000.278	2.95	1505531	400000	
Al	27	3	45	851.792	ppb	851.792	9.29	19398	400000	
K	39	3	45	11643.301	ppb	11643.301	1.37	563491	400000	
Ca	40	2	45	67641.581	ppb	67641.581	1.27	38656994	400000	
V	51	3	72	39.704	ppb	39.704	0.53	25501	2000	
Cr	52	3	72	40.961	ppb	40.961	0.53	33016	5000	
Mn	55	3	72	48.863	ppb	48.863	1.78	20794	10000	
Fe	56	2	72	855.087	ppb	855.087	1.30	1368496	10000	
Co	59	3	72	39.700	ppb	39.700	1.56	51961	2000	
Ni	60	3	72	41.156	ppb	41.156	2.86	15474	5000	
Cu	63	3	72	41.873	ppb	41.873	0.66	42011	5000	
Zn	66	3	72	43.808	ppb	43.808	2.85	7685	5000	
As	75	3	72	41.559	ppb	41.559	1.63	4863	2000	
Se	78	2	72	41.690	ppb	41.690	2.54	2428	2000	
Sr	88	3	72	232.131	ppb	232.131	1.41	139097	4000	
Mo	95	3	115	56.340	ppb	56.340	1.75	29967	2000	
Ag	107	3	115	40.466	ppb	40.466	1.58	74252	100	
Cd	111	3	115	39.864	ppb	39.864	2.82	10694	2000	
Sn	120	3	115	38.685	ppb	38.685	1.00	34322	2000	
Sb	121	3	115	41.023	ppb	41.023	1.50	35327	1000	
Ba	137	3	115	62.903	ppb	62.903	1.61	17867	5000	
Tl	205	3	193	39.025	ppb	39.025	3.47	190190	2000	
(Pb)	206	3	193	39.289	ppb	39.289	1.48	64029	100	
(Pb)	207	3	193	38.832	ppb	38.832	1.83	56302	100	
Pb	208	3	193	39.192	ppb	39.192	1.59	258258	5000	
Th	232	3	193	37.940	ppb	37.940	2.26	259009	2000	
U	238	3	193	39.855	ppb	39.855	2.02	280672	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4168827	1.81	3936624	105.90	60	120	
Sc (IS)	45	3	HMI He	621606	1.08	609520	101.98	60	120	
Ge Internal standard	72	2	HMI H2	2528732	1.27	2391663	105.73	60	120	
Ge Internal standard	72	3	HMI He	780942	0.67	756863	103.18	60	120	
In Internal Standard	115	3	HMI He	3067858	1.51	2988279	102.66	60	120	
Ir (IS)	193	3	HMI He	7262868	1.84	6996686	103.80	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-F MSD
Data File Name	062SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:58:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.732	ppb	41.732	2.25	1681	2000	
Na	23	3	45	20117.790	ppb	20117.790	1.28	2168285	400000	
Mg	24	3	45	26700.257	ppb	26700.257	1.78	1542303	400000	
Al	27	3	45	815.127	ppb	815.127	3.55	18511	400000	
K	39	3	45	11782.468	ppb	11782.468	0.32	568431	400000	
Ca	40	2	45	69474.555	ppb	69474.555	0.85	39011152	400000	
V	51	3	72	40.221	ppb	40.221	1.53	25871	2000	
Cr	52	3	72	41.859	ppb	41.859	1.56	33766	5000	
Mn	55	3	72	49.222	ppb	49.222	2.00	20984	10000	
Fe	56	2	72	853.433	ppb	853.433	0.73	1352857	10000	
Co	59	3	72	39.508	ppb	39.508	0.59	51809	2000	
Ni	60	3	72	40.883	ppb	40.883	0.89	15404	5000	
Cu	63	3	72	42.427	ppb	42.427	1.26	42643	5000	
Zn	66	3	72	43.934	ppb	43.934	1.31	7722	5000	
As	75	3	72	41.196	ppb	41.196	8.24	4830	2000	
Se	78	2	72	42.553	ppb	42.553	1.97	2455	2000	
Sr	88	3	72	234.492	ppb	234.492	1.13	140780	4000	
Mo	95	3	115	57.869	ppb	57.869	1.91	31023	2000	
Ag	107	3	115	40.403	ppb	40.403	2.63	74696	100	
Cd	111	3	115	40.680	ppb	40.680	2.63	10994	2000	
Sn	120	3	115	39.318	ppb	39.318	1.93	35134	2000	
Sb	121	3	115	40.749	ppb	40.749	2.28	35361	1000	
Ba	137	3	115	63.493	ppb	63.493	3.08	18165	5000	
Tl	205	3	193	39.361	ppb	39.361	3.64	191206	2000	
(Pb)	206	3	193	39.754	ppb	39.754	2.38	64573	100	
(Pb)	207	3	193	39.232	ppb	39.232	2.61	56695	100	
Pb	208	3	193	39.480	ppb	39.480	2.56	259311	5000	
Th	232	3	193	39.931	ppb	39.931	2.43	271324	2000	
U	238	3	193	40.208	ppb	40.208	2.48	282256	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4096378	2.51	3936624	104.06	60	120	
Sc (IS)	45	3	HMI He	619959	0.29	609520	101.71	60	120	
Ge Internal standard	72	2	HMI H2	2504477	0.36	2391663	104.72	60	120	
Ge Internal standard	72	3	HMI He	782420	0.44	756863	103.38	60	120	
In Internal Standard	115	3	HMI He	3092159	2.59	2988279	103.48	60	120	
Ir (IS)	193	3	HMI He	7240269	1.65	6996686	103.48	60	120	

Sample Report

Sample Table

Sample Name	280-175093-A-1-A
Data File Name	063SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:00:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-170.45	3	2000	
Na	23	3	45	100.269	ppb	100.269	10.18	34540	400000	
Mg	24	3	45	3.248	ppb	3.248	99.63	964	400000	
Al	27	3	45	7.050	ppb	7.050	17.15	287	400000	
K	39	3	45	0.410	ppb	0.410	3727.56	27739	400000	
Ca	40	2	45	23.049	ppb	23.049	2.16	39679	400000	
V	51	3	72	0.435	ppb	0.435	10.20	1033	2000	
Cr	52	3	72	-0.161	ppb	-0.161	-41.70	1576	5000	
Mn	55	3	72	0.109	ppb	0.109	56.11	237	10000	
Fe	56	2	72	6.576	ppb	6.576	6.12	27431	10000	
Co	59	3	72	0.010	ppb	0.010	70.38	85	2000	
Ni	60	3	72	-0.405	ppb	-0.405	-8.48	178	5000	
Cu	63	3	72	0.158	ppb	0.158	38.52	628	5000	
Zn	66	3	72	0.223	ppb	0.223	97.22	342	5000	
As	75	3	72	-0.098	ppb	-0.098	-50.67	63	2000	
Se	78	2	72	0.068	ppb	0.068	51.05	8	2000	
Sr	88	3	72	0.050	ppb	0.050	175.06	282	4000	
Mo	95	3	115	0.051	ppb	0.051	25.82	82	2000	
Ag	107	3	115	0.024	ppb	0.024	68.93	83	100	
Cd	111	3	115	0.016	ppb	0.016	355.13	22	2000	
Sn	120	3	115	0.297	ppb	0.297	24.12	1269	2000	
Sb	121	3	115	0.048	ppb	0.048	82.70	185	1000	
Ba	137	3	115	0.083	ppb	0.083	79.80	127	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-26.62	608	2000	
(Pb)	206	3	193	-0.024	ppb	-0.024	-92.15	420	100	
(Pb)	207	3	193	-0.021	ppb	-0.021	-130.54	656	100	
Pb	208	3	193	-0.009	ppb	-0.009	-251.72	2006	5000	
Th	232	3	193	2.010	ppb	2.010	13.00	21389	2000	
U	238	3	193	0.012	ppb	0.012	224.71	2389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997235	0.81	3936624	101.54	60	120	
Sc (IS)	45	3	HMI He	617411	0.69	609520	101.29	60	120	
Ge Internal standard	72	2	HMI H2	2472889	1.71	2391663	103.40	60	120	
Ge Internal standard	72	3	HMI He	768552	0.27	756863	101.54	60	120	
In Internal Standard	115	3	HMI He	3124341	0.67	2988279	104.55	60	120	
Ir (IS)	193	3	HMI He	7230733	1.92	6996686	103.35	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	064_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:02:08-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.954	ppb	8.196	1928	50	95.9	90	110	
Na	23	3	45	47011.024	ppb	2.438	5070202	51000	92.2	90	110	
Mg	24	3	45	10053.804	ppb	2.682	585337	11000	91.4	90	110	
Al	27	3	45	1008.409	ppb	2.903	23032	1000	100.8	90	110	
K	39	3	45	10408.192	ppb	1.816	508979	11000	94.6	90	110	
Ca	40	2	45	10172.036	ppb	0.348	5711216	11000	92.5	90	110	
V	51	3	72	51.211	ppb	0.687	31388	50	102.4	90	110	
Cr	52	3	72	52.636	ppb	0.568	40295	50	105.3	90	110	
Mn	55	3	72	52.728	ppb	1.705	21546	50	105.5	90	110	
Fe	56	2	72	1041.188	ppb	1.788	1597210	1000	104.1	90	110	
Co	59	3	72	52.075	ppb	1.297	65470	50	104.2	90	110	
Ni	60	3	72	51.459	ppb	1.592	18513	50	102.9	90	110	
Cu	63	3	72	52.871	ppb	1.361	50848	50	105.7	90	110	
Zn	66	3	72	52.553	ppb	2.032	8800	50	105.1	90	110	
As	75	3	72	52.352	ppb	1.636	5868	50	104.7	90	110	
Se	78	2	72	52.558	ppb	1.824	2939	50	105.1	90	110	
Sr	88	3	72	104.504	ppb	2.010	60306	100	104.5	90	110	
Mo	95	3	115	50.107	ppb	1.736	27040	50	100.2	90	110	
Ag	107	3	115	49.292	ppb	0.468	91735	50	98.6	90	110	
Cd	111	3	115	50.845	ppb	1.582	13830	50	101.7	90	110	
Sn	120	3	115	48.870	ppb	0.790	43713	50	97.7	90	110	
Sb	121	3	115	50.429	ppb	1.994	44017	50	100.9	90	110	
Ba	137	3	115	49.468	ppb	1.316	14272	50	98.9	90	110	
Tl	205	3	193	48.769	ppb	4.177	236181	50	97.5	90	110	
(Pb)	206	3	193	49.173	ppb	5.001	79564	50	98.3	90	110	
(Pb)	207	3	193	48.714	ppb	3.136	70083	50	97.4	90	110	
Pb	208	3	193	48.943	ppb	4.087	320243	50	97.9	90	110	
Th	232	3	193	49.622	ppb	1.670	334628	50	99.2	90	110	
U	238	3	193	50.066	ppb	5.245	349980	50	100.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4078462	0.49	3936624	103.60	60	120	
Sc (IS)	45	3	HMI He	624492	1.73	609520	102.46	60	120	
Ge Internal standard	72	2	HMI H2	2428719	2.92	2391663	101.55	60	120	
Ge Internal standard	72	3	HMI He	750379	0.40	756863	99.14	60	120	
In Internal Standard	115	3	HMI He	3111707	0.85	2988279	104.13	60	120	
Ir (IS)	193	3	HMI He	7228248	3.42	6996686	103.31	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	065_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:03:58-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.041	ppb	173.9	7	0.5	
Na	23	3	45	20.292	ppb	32.6	25850	25	
Mg	24	3	45	2.053	ppb	143.8	888	25	
Al	27	3	45	-0.638	ppb	-114.6	113	15	
K	39	3	45	-5.245	ppb	-210.4	27274	50	
V	51	3	72	0.487	ppb	25.3	1068	1	
Cr	52	3	72	0.029	ppb	301.5	1723	1	
Mn	55	3	72	0.024	ppb	190.3	202	0.5	
Co	59	3	72	-0.014	ppb	-48.9	55	0.5	
Ni	60	3	72	-0.002	ppb	-2709.4	325	1	
Cu	63	3	72	0.054	ppb	155.6	528	1	
Zn	66	3	72	-0.204	ppb	-118.7	272	5	
As	75	3	72	0.047	ppb	426.3	80	1	
Se	78	2	72	0.139	ppb	26.1	12	1	
Sr	88	3	72	-0.053	ppb	-92.7	222	0.5	
Mo	95	3	115	0.021	ppb	222.3	65	0.5	
Ag	107	3	115	0.011	ppb	113.5	58	1	
Cd	111	3	115	0.005	ppb	501.8	18	0.5	
Sn	120	3	115	0.150	ppb	79.7	1124	1	
Sb	121	3	115	0.025	ppb	68.9	163	0.6	
Ba	137	3	115	-0.058	ppb	-39.4	85	0.5	
Tl	205	3	193	-0.059	ppb	-17.6	588	0.1	
(Pb)	206	3	193	-0.029	ppb	-107.8	416	1	
(Pb)	207	3	193	-0.081	ppb	-4.5	578	1	
Pb	208	3	193	-0.047	ppb	-27.6	1781	0.5	
Th	232	3	193	1.793	ppb	17.6	20191	1	>RL
U	238	3	193	0.008	ppb	37.5	2392	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4016611	1.17	3936624	102.03	60	120	
Sc (IS)	45	3	HMI He	612687	1.34	609520	100.52	60	120	
Ge Internal standard	72	2	HMI H2	2471620	0.65	2391663	103.34	60	120	
Ge Internal standard	72	3	HMI He	770411	0.66	756863	101.79	60	120	
In Internal Standard	115	3	HMI He	3084099	1.81	2988279	103.21	60	120	
Ir (IS)	193	3	HMI He	7310733	1.29	6996686	104.49	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-1-A
Data File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:05:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-86.68	2	2000	
Na	23	3	45	5948.177	ppb	5948.177	1.89	663657	400000	
Mg	24	3	45	24920.793	ppb	24920.793	1.61	1451991	400000	
Al	27	3	45	52.195	ppb	52.195	14.77	1318	400000	
K	39	3	45	2963.270	ppb	2963.270	1.68	165204	400000	
Ca	40	2	45	72671.323	ppb	72671.323	1.62	41222099	400000	
V	51	3	72	0.521	ppb	0.521	27.08	1101	2000	
Cr	52	3	72	0.302	ppb	0.302	103.70	1953	5000	
Mn	55	3	72	6.279	ppb	6.279	4.67	2837	10000	
Fe	56	2	72	56.344	ppb	56.344	1.16	104397	10000	
Co	59	3	72	0.150	ppb	0.150	20.25	270	2000	
Ni	60	3	72	0.427	ppb	0.427	21.18	486	5000	
Cu	63	3	72	0.564	ppb	0.564	16.26	1040	5000	
Zn	66	3	72	292.541	ppb	292.541	0.99	49482	5000	
As	75	3	72	-0.207	ppb	-0.207	-49.71	52	2000	
Se	78	2	72	0.278	ppb	0.278	18.28	20	2000	
Sr	88	3	72	357.913	ppb	357.913	1.86	213962	4000	
Mo	95	3	115	2.447	ppb	2.447	5.57	1403	2000	
Ag	107	3	115	0.015	ppb	0.015	79.46	67	100	
Cd	111	3	115	0.308	ppb	0.308	15.91	103	2000	
Sn	120	3	115	-0.064	ppb	-0.064	-125.52	970	2000	
Sb	121	3	115	0.112	ppb	0.112	41.78	245	1000	
Ba	137	3	115	43.544	ppb	43.544	1.86	12857	5000	
Tl	205	3	193	-0.051	ppb	-0.051	-11.96	615	2000	
(Pb)	206	3	193	0.169	ppb	0.169	22.16	726	100	
(Pb)	207	3	193	0.141	ppb	0.141	17.91	883	100	
Pb	208	3	193	0.169	ppb	0.169	5.52	3154	5000	
Th	232	3	193	0.615	ppb	0.615	12.58	12157	2000	
U	238	3	193	0.940	ppb	0.940	3.56	8797	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4137626	1.18	3936624	105.11	60	120	
Sc (IS)	45	3	HMI He	625343	0.76	609520	102.60	60	120	
Ge Internal standard	72	2	HMI H2	2474879	2.70	2391663	103.48	60	120	
Ge Internal standard	72	3	HMI He	779639	0.83	756863	103.01	60	120	
In Internal Standard	115	3	HMI He	3180954	1.66	2988279	106.45	60	120	
Ir (IS)	193	3	HMI He	7195601	3.13	6996686	102.84	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-2-A
Data File Name	067SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:07:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-6386.69	5	2000	
Na	23	3	45	21921.288	ppb	21921.288	1.92	2342875	400000	
Mg	24	3	45	30776.878	ppb	30776.878	2.44	1764251	400000	
Al	27	3	45	110.985	ppb	110.985	4.69	2613	400000	
K	39	3	45	4612.812	ppb	4612.812	0.96	237700	400000	
Ca	40	2	45	92289.739	ppb	92289.739	1.62	50580187	400000	
V	51	3	72	0.248	ppb	0.248	70.20	931	2000	
Cr	52	3	72	0.208	ppb	0.208	30.52	1879	5000	
Mn	55	3	72	5.244	ppb	5.244	1.80	2401	10000	
Fe	56	2	72	66.729	ppb	66.729	2.78	121537	10000	
Co	59	3	72	0.204	ppb	0.204	15.71	340	2000	
Ni	60	3	72	1.044	ppb	1.044	21.11	713	5000	
Cu	63	3	72	0.652	ppb	0.652	2.03	1126	5000	
Zn	66	3	72	83.162	ppb	83.162	1.07	14285	5000	
As	75	3	72	0.169	ppb	0.169	203.29	95	2000	
Se	78	2	72	0.159	ppb	0.159	23.89	13	2000	
Sr	88	3	72	2161.673	ppb	2161.673	3.06	1290805	4000	
Mo	95	3	115	2.158	ppb	2.158	1.56	1213	2000	
Ag	107	3	115	0.000	ppb	0.000	2727.36	38	100	
Cd	111	3	115	0.311	ppb	0.311	28.17	102	2000	
Sn	120	3	115	0.030	ppb	0.030	276.90	1028	2000	
Sb	121	3	115	0.211	ppb	0.211	21.27	325	1000	
Ba	137	3	115	29.098	ppb	29.098	1.65	8410	5000	
Tl	205	3	193	-0.082	ppb	-0.082	-9.24	475	2000	
(Pb)	206	3	193	0.620	ppb	0.620	7.83	1476	100	
(Pb)	207	3	193	0.495	ppb	0.495	10.75	1409	100	
Pb	208	3	193	0.602	ppb	0.602	7.23	6063	5000	
Th	232	3	193	0.223	ppb	0.223	65.02	9747	2000	
U	238	3	193	1.239	ppb	1.239	3.91	11058	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3998379	1.07	3936624	101.57	60	120	
Sc (IS)	45	3	HMI He	615372	0.76	609520	100.96	60	120	
Ge Internal standard	72	2	HMI H2	2496627	0.94	2391663	104.39	60	120	
Ge Internal standard	72	3	HMI He	779493	0.28	756863	102.99	60	120	
In Internal Standard	115	3	HMI He	3102078	1.06	2988279	103.81	60	120	
Ir (IS)	193	3	HMI He	7321001	0.61	6996686	104.64	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-3-A
Data File Name	068SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:09:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.079	ppb	0.079	85.17	8	2000	
Na	23	3	45	7368.820	ppb	7368.820	0.82	809323	400000	
Mg	24	3	45	37701.785	ppb	37701.785	2.58	2177274	400000	
Al	27	3	45	33.943	ppb	33.943	6.98	894	400000	
K	39	3	45	4952.131	ppb	4952.131	1.28	254996	400000	
Ca	40	2	45	81714.772	ppb	81714.772	2.22	45885373	400000	
V	51	3	72	0.445	ppb	0.445	3.24	1050	2000	
Cr	52	3	72	0.116	ppb	0.116	110.95	1803	5000	
Mn	55	3	72	11.827	ppb	11.827	0.82	5150	10000	
Fe	56	2	72	37.853	ppb	37.853	2.43	77982	10000	
Co	59	3	72	0.240	ppb	0.240	13.62	385	2000	
Ni	60	3	72	3.435	ppb	3.435	10.51	1584	5000	
Cu	63	3	72	10.662	ppb	10.662	1.89	10992	5000	
Zn	66	3	72	187.375	ppb	187.375	1.78	31674	5000	
As	75	3	72	0.187	ppb	0.187	71.98	97	2000	
Se	78	2	72	0.279	ppb	0.279	48.53	21	2000	
Sr	88	3	72	844.437	ppb	844.437	1.15	502403	4000	
Mo	95	3	115	7.353	ppb	7.353	1.55	4024	2000	
Ag	107	3	115	0.016	ppb	0.016	26.06	68	100	
Cd	111	3	115	0.799	ppb	0.799	14.98	235	2000	
Sn	120	3	115	-0.115	ppb	-0.115	-16.11	906	2000	
Sb	121	3	115	2.202	ppb	2.202	5.80	2062	1000	
Ba	137	3	115	26.310	ppb	26.310	1.18	7657	5000	
Tl	205	3	193	-0.030	ppb	-0.030	-6.55	723	2000	
(Pb)	206	3	193	0.081	ppb	0.081	35.10	595	100	
(Pb)	207	3	193	0.050	ppb	0.050	87.76	765	100	
Pb	208	3	193	0.085	ppb	0.085	24.12	2644	5000	
Th	232	3	193	-0.025	ppb	-0.025	-323.88	8062	2000	
U	238	3	193	1.960	ppb	1.960	0.78	16082	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4097067	2.18	3936624	104.08	60	120	
Sc (IS)	45	3	HMI He	619913	1.60	609520	101.71	60	120	
Ge Internal standard	72	2	HMI H2	2545717	1.74	2391663	106.44	60	120	
Ge Internal standard	72	3	HMI He	776390	0.66	756863	102.58	60	120	
In Internal Standard	115	3	HMI He	3119096	0.71	2988279	104.38	60	120	
Ir (IS)	193	3	HMI He	7294218	1.60	6996686	104.25	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-4-A
Data File Name	069SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:11:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-175.44	3	2000	
Na	23	3	45	5916.292	ppb	5916.292	2.39	662167	400000	
Mg	24	3	45	33801.903	ppb	33801.903	0.92	1975245	400000	
Al	27	3	45	47.828	ppb	47.828	17.15	1225	400000	
K	39	3	45	4318.799	ppb	4318.799	2.69	228600	400000	
Ca	40	2	45	83917.351	ppb	83917.351	2.05	47593732	400000	
V	51	3	72	0.606	ppb	0.606	14.86	1159	2000	
Cr	52	3	72	0.096	ppb	0.096	121.98	1803	5000	
Mn	55	3	72	3.392	ppb	3.392	6.82	1629	10000	
Fe	56	2	72	52.369	ppb	52.369	0.71	99343	10000	
Co	59	3	72	0.144	ppb	0.144	12.57	263	2000	
Ni	60	3	72	1.518	ppb	1.518	5.15	891	5000	
Cu	63	3	72	0.853	ppb	0.853	10.24	1331	5000	
Zn	66	3	72	91.424	ppb	91.424	1.09	15748	5000	
As	75	3	72	0.252	ppb	0.252	60.65	105	2000	
Se	78	2	72	0.136	ppb	0.136	45.50	12	2000	
Sr	88	3	72	851.299	ppb	851.299	1.09	510913	4000	
Mo	95	3	115	4.122	ppb	4.122	7.38	2274	2000	
Ag	107	3	115	0.011	ppb	0.011	33.90	58	100	
Cd	111	3	115	0.114	ppb	0.114	30.99	48	2000	
Sn	120	3	115	-0.095	ppb	-0.095	-93.62	921	2000	
Sb	121	3	115	0.312	ppb	0.312	30.05	413	1000	
Ba	137	3	115	29.489	ppb	29.489	1.62	8557	5000	
Tl	205	3	193	-0.067	ppb	-0.067	-18.84	546	2000	
(Pb)	206	3	193	0.128	ppb	0.128	35.02	673	100	
(Pb)	207	3	193	0.043	ppb	0.043	32.67	758	100	
Pb	208	3	193	0.105	ppb	0.105	27.09	2785	5000	
Th	232	3	193	-0.155	ppb	-0.155	-42.20	7229	2000	
U	238	3	193	2.003	ppb	2.003	4.95	16444	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4137957	1.39	3936624	105.11	60	120	
Sc (IS)	45	3	HMI He	627327	2.11	609520	102.92	60	120	
Ge Internal standard	72	2	HMI H2	2502127	1.12	2391663	104.62	60	120	
Ge Internal standard	72	3	HMI He	783181	0.36	756863	103.48	60	120	
In Internal Standard	115	3	HMI He	3114018	1.63	2988279	104.21	60	120	
Ir (IS)	193	3	HMI He	7326463	2.17	6996686	104.71	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-5-A
Data File Name	070SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:13:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-84.72	2	2000	
Na	23	3	45	4056.058	ppb	4056.058	0.41	462715	400000	
Mg	24	3	45	25509.596	ppb	25509.596	2.68	1494040	400000	
Al	27	3	45	15.596	ppb	15.596	33.89	487	400000	
K	39	3	45	2780.645	ppb	2780.645	2.63	157580	400000	
Ca	40	2	45	63006.278	ppb	63006.278	1.36	35367017	400000	
V	51	3	72	0.382	ppb	0.382	18.42	1018	2000	
Cr	52	3	72	0.045	ppb	0.045	410.21	1759	5000	
Mn	55	3	72	1.893	ppb	1.893	9.80	993	10000	
Fe	56	2	72	19.841	ppb	19.841	3.05	49628	10000	
Co	59	3	72	0.175	ppb	0.175	5.61	303	2000	
Ni	60	3	72	1.886	ppb	1.886	14.77	1025	5000	
Cu	63	3	72	0.876	ppb	0.876	11.36	1351	5000	
Zn	66	3	72	326.021	ppb	326.021	1.91	55269	5000	
As	75	3	72	-0.078	ppb	-0.078	-127.45	67	2000	
Se	78	2	72	0.097	ppb	0.097	91.93	10	2000	
Sr	88	3	72	445.011	ppb	445.011	0.65	266799	4000	
Mo	95	3	115	2.516	ppb	2.516	11.66	1426	2000	
Ag	107	3	115	0.006	ppb	0.006	162.46	50	100	
Cd	111	3	115	0.433	ppb	0.433	27.57	137	2000	
Sn	120	3	115	-0.255	ppb	-0.255	-31.11	791	2000	
Sb	121	3	115	0.069	ppb	0.069	27.16	205	1000	
Ba	137	3	115	77.173	ppb	77.173	2.73	22490	5000	
Tl	205	3	193	-0.079	ppb	-0.079	-18.96	485	2000	
(Pb)	206	3	193	0.028	ppb	0.028	84.70	508	100	
(Pb)	207	3	193	0.048	ppb	0.048	98.03	763	100	
Pb	208	3	193	0.068	ppb	0.068	21.64	2536	5000	
Th	232	3	193	-0.224	ppb	-0.224	-27.64	6748	2000	
U	238	3	193	1.964	ppb	1.964	3.58	16119	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4095055	2.81	3936624	104.02	60	120	
Sc (IS)	45	3	HMI He	628648	0.85	609520	103.14	60	120	
Ge Internal standard	72	2	HMI H2	2560618	0.80	2391663	107.06	60	120	
Ge Internal standard	72	3	HMI He	782032	1.67	756863	103.33	60	120	
In Internal Standard	115	3	HMI He	3151672	1.12	2988279	105.47	60	120	
Ir (IS)	193	3	HMI He	7302202	2.10	6996686	104.37	60	120	

Sample Report

Sample Table

Sample Name	280-175085-A-1-A
Data File Name	071SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:14:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-172.28	3	2000	
Na	23	3	45	146112.814	ppb	146112.814	1.88	15860309	400000	
Mg	24	3	45	3001.175	ppb	3001.175	0.43	176957	400000	
Al	27	3	45	61.635	ppb	61.635	7.55	1545	400000	
K	39	3	45	10772.173	ppb	10772.173	1.41	530738	400000	
Ca	40	2	45	21655.638	ppb	21655.638	0.66	12290582	400000	
V	51	3	72	0.805	ppb	0.805	12.44	1301	2000	
Cr	52	3	72	0.268	ppb	0.268	53.12	1961	5000	
Mn	55	3	72	11.805	ppb	11.805	5.95	5257	10000	
Fe	56	2	72	118.001	ppb	118.001	1.82	205445	10000	
Co	59	3	72	0.439	ppb	0.439	8.03	658	2000	
Ni	60	3	72	0.921	ppb	0.921	25.19	680	5000	
Cu	63	3	72	104.589	ppb	104.589	1.76	105986	5000	
Zn	66	3	72	28.825	ppb	28.825	2.59	5250	5000	
As	75	3	72	0.027	ppb	0.027	204.73	80	2000	
Se	78	2	72	0.132	ppb	0.132	67.59	12	2000	
Sr	88	3	72	72.330	ppb	72.330	1.52	44260	4000	
Mo	95	3	115	0.853	ppb	0.853	7.59	511	2000	
Ag	107	3	115	0.018	ppb	0.018	60.36	72	100	
Cd	111	3	115	0.016	ppb	0.016	172.26	22	2000	
Sn	120	3	115	0.336	ppb	0.336	29.03	1293	2000	
Sb	121	3	115	0.050	ppb	0.050	49.08	185	1000	
Ba	137	3	115	16.169	ppb	16.169	2.69	4712	5000	
Tl	205	3	193	-0.075	ppb	-0.075	-25.21	505	2000	
(Pb)	206	3	193	0.264	ppb	0.264	17.09	893	100	
(Pb)	207	3	193	0.228	ppb	0.228	18.28	1023	100	
Pb	208	3	193	0.260	ppb	0.260	12.44	3802	5000	
Th	232	3	193	-0.235	ppb	-0.235	-11.40	6690	2000	
U	238	3	193	0.055	ppb	0.055	42.71	2716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4133216	1.83	3936624	104.99	60	120	
Sc (IS)	45	3	HMI He	630304	1.17	609520	103.41	60	120	
Ge Internal standard	72	2	HMI H2	2545654	0.61	2391663	106.44	60	120	
Ge Internal standard	72	3	HMI He	794348	1.75	756863	104.95	60	120	
In Internal Standard	115	3	HMI He	3098695	2.57	2988279	103.69	60	120	
Ir (IS)	193	3	HMI He	7312487	3.49	6996686	104.51	60	120	

Sample Report

Sample Table

Sample Name	280-175085-A-2-A
Data File Name	072SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:16:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.040	ppb	-0.040	-375.50	3	2000	
Na	23	3	45	86364.653	ppb	86364.653	2.88	9423269	400000	
Mg	24	3	45	5403.261	ppb	5403.261	2.65	319275	400000	
Al	27	3	45	73.564	ppb	73.564	8.25	1825	400000	
K	39	3	45	6469.492	ppb	6469.492	1.06	331484	400000	
Ca	40	2	45	26360.069	ppb	26360.069	0.74	14767077	400000	
V	51	3	72	1.308	ppb	1.308	12.23	1643	2000	
Cr	52	3	72	0.616	ppb	0.616	7.52	2262	5000	
Mn	55	3	72	10.986	ppb	10.986	3.39	4973	10000	
Fe	56	2	72	227.709	ppb	227.709	2.83	380573	10000	
Co	59	3	72	0.384	ppb	0.384	3.77	593	2000	
Ni	60	3	72	0.768	ppb	0.768	8.10	631	5000	
Cu	63	3	72	61.758	ppb	61.758	1.26	63626	5000	
Zn	66	3	72	45.454	ppb	45.454	1.76	8207	5000	
As	75	3	72	0.282	ppb	0.282	79.85	112	2000	
Se	78	2	72	0.325	ppb	0.325	66.16	23	2000	
Sr	88	3	72	123.933	ppb	123.933	1.67	76668	4000	
Mo	95	3	115	2.739	ppb	2.739	7.18	1528	2000	
Ag	107	3	115	0.037	ppb	0.037	20.97	107	100	
Cd	111	3	115	0.022	ppb	0.022	131.19	23	2000	
Sn	120	3	115	0.520	ppb	0.520	20.40	1458	2000	
Sb	121	3	115	0.104	ppb	0.104	17.87	233	1000	
Ba	137	3	115	39.146	ppb	39.146	4.67	11308	5000	
Tl	205	3	193	-0.085	ppb	-0.085	-16.91	463	2000	
(Pb)	206	3	193	0.264	ppb	0.264	5.58	903	100	
(Pb)	207	3	193	0.292	ppb	0.292	8.30	1128	100	
Pb	208	3	193	0.260	ppb	0.260	1.57	3845	5000	
Th	232	3	193	-0.231	ppb	-0.231	-27.95	6787	2000	
U	238	3	193	0.217	ppb	0.217	10.55	3907	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4081205	1.43	3936624	103.67	60	120	
Sc (IS)	45	3	HMI He	632996	0.66	609520	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2550903	2.21	2391663	106.66	60	120	
Ge Internal standard	72	3	HMI He	804919	0.86	756863	106.35	60	120	
In Internal Standard	115	3	HMI He	3110547	1.72	2988279	104.09	60	120	
Ir (IS)	193	3	HMI He	7395703	0.68	6996686	105.70	60	120	

Sample Report

Sample Table

Sample Name	280-172265-A-10-E
Data File Name	073SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:18:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.045	ppb	-0.045	-157.81	3	2000	
Na	23	3	45	15386.183	ppb	15386.183	0.40	1691612	400000	
Mg	24	3	45	16994.244	ppb	16994.244	1.50	998198	400000	
Al	27	3	45	7.079	ppb	7.079	19.55	294	400000	
K	39	3	45	4899.121	ppb	4899.121	0.70	256810	400000	
Ca	40	2	45	48022.189	ppb	48022.189	1.54	27024479	400000	
V	51	3	72	29.742	ppb	29.742	0.55	19742	2000	
Cr	52	3	72	15.029	ppb	15.029	2.93	13508	5000	
Mn	55	3	72	1.844	ppb	1.844	15.70	995	10000	
Fe	56	2	72	73.940	ppb	73.940	2.65	137637	10000	
Co	59	3	72	0.161	ppb	0.161	11.86	292	2000	
Ni	60	3	72	6.369	ppb	6.369	2.78	2736	5000	
Cu	63	3	72	0.743	ppb	0.743	6.35	1246	5000	
Zn	66	3	72	1.866	ppb	1.866	7.66	638	5000	
As	75	3	72	1.138	ppb	1.138	21.89	212	2000	
Se	78	2	72	2.851	ppb	2.851	4.22	174	2000	
Sr	88	3	72	231.022	ppb	231.022	0.87	141623	4000	
Mo	95	3	115	1.585	ppb	1.585	15.57	926	2000	
Ag	107	3	115	0.029	ppb	0.029	44.66	95	100	
Cd	111	3	115	-0.028	ppb	-0.028	-65.32	10	2000	
Sn	120	3	115	-0.273	ppb	-0.273	-9.40	781	2000	
Sb	121	3	115	0.013	ppb	0.013	133.20	157	1000	
Ba	137	3	115	85.730	ppb	85.730	1.50	25155	5000	
Tl	205	3	193	-0.074	ppb	-0.074	-12.50	505	2000	
(Pb)	206	3	193	0.092	ppb	0.092	7.01	605	100	
(Pb)	207	3	193	0.035	ppb	0.035	51.84	735	100	
Pb	208	3	193	0.106	ppb	0.106	20.90	2750	5000	
Th	232	3	193	-0.280	ppb	-0.280	-7.55	6295	2000	
U	238	3	193	0.959	ppb	0.959	3.73	8952	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4103504	2.88	3936624	104.24	60	120	
Sc (IS)	45	3	HMI He	630261	0.41	609520	103.40	60	120	
Ge Internal standard	72	2	HMI H2	2589010	2.80	2391663	108.25	60	120	
Ge Internal standard	72	3	HMI He	798924	0.78	756863	105.56	60	120	
In Internal Standard	115	3	HMI He	3174264	0.17	2988279	106.22	60	120	
Ir (IS)	193	3	HMI He	7210691	0.29	6996686	103.06	60	120	

Sample Report

Sample Table

Sample Name	280-172265-A-11-E
Data File Name	074SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:20:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-82.47	2	2000	
Na	23	3	45	87.679	ppb	87.679	3.83	33908	400000	
Mg	24	3	45	2.683	ppb	2.683	47.93	951	400000	
Al	27	3	45	5.199	ppb	5.199	45.71	250	400000	
K	39	3	45	-20.722	ppb	-20.722	-94.30	27344	400000	
Ca	40	2	45	9.727	ppb	9.727	20.96	33373	400000	
V	51	3	72	0.496	ppb	0.496	30.30	1093	2000	
Cr	52	3	72	0.097	ppb	0.097	93.84	1806	5000	
Mn	55	3	72	0.247	ppb	0.247	57.00	300	10000	
Fe	56	2	72	7.255	ppb	7.255	13.05	29096	10000	
Co	59	3	72	-0.007	ppb	-0.007	-90.71	65	2000	
Ni	60	3	72	-0.311	ppb	-0.311	-20.71	217	5000	
Cu	63	3	72	0.085	ppb	0.085	90.80	568	5000	
Zn	66	3	72	0.467	ppb	0.467	41.31	390	5000	
As	75	3	72	-0.138	ppb	-0.138	-60.96	60	2000	
Se	78	2	72	0.030	ppb	0.030	223.59	6	2000	
Sr	88	3	72	0.049	ppb	0.049	133.64	287	4000	
Mo	95	3	115	-0.008	ppb	-0.008	-320.10	50	2000	
Ag	107	3	115	0.022	ppb	0.022	57.69	80	100	
Cd	111	3	115	-0.009	ppb	-0.009	-205.76	15	2000	
Sn	120	3	115	-0.333	ppb	-0.333	-6.52	721	2000	
Sb	121	3	115	-0.004	ppb	-0.004	-290.51	140	1000	
Ba	137	3	115	0.029	ppb	0.029	248.15	112	5000	
Tl	205	3	193	-0.075	ppb	-0.075	-2.48	508	2000	
(Pb)	206	3	193	-0.031	ppb	-0.031	-91.69	413	100	
(Pb)	207	3	193	-0.081	ppb	-0.081	-24.34	580	100	
Pb	208	3	193	-0.040	ppb	-0.040	-18.41	1832	5000	
Th	232	3	193	-0.306	ppb	-0.306	-10.53	6232	2000	
U	238	3	193	0.010	ppb	0.010	83.36	2414	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4119352	0.72	3936624	104.64	60	120	
Sc (IS)	45	3	HMI He	630419	1.38	609520	103.43	60	120	
Ge Internal standard	72	2	HMI H2	2526507	0.83	2391663	105.64	60	120	
Ge Internal standard	72	3	HMI He	784452	0.40	756863	103.65	60	120	
In Internal Standard	115	3	HMI He	3145842	2.03	2988279	105.27	60	120	
Ir (IS)	193	3	HMI He	7333844	1.46	6996686	104.82	60	120	

Sample Report

Sample Table

Sample Name	280-175043-K-1-B
Data File Name	075SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:22:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	-29779.62	5	2000	
Na	23	3	45	990455.993	ppb	990455.993	0.42	107103825	400000	
Mg	24	3	45	100535.661	ppb	100535.661	1.30	5887762	400000	
Al	27	3	45	87.317	ppb	87.317	9.68	2129	400000	
K	39	3	45	235508.282	ppb	235508.282	0.66	10988082	400000	
Ca	40	2	45	81432.970	ppb	81432.970	1.76	45568270	400000	
V	51	3	72	33.626	ppb	33.626	2.55	21728	2000	
Cr	52	3	72	53.614	ppb	53.614	1.15	42712	5000	
Mn	55	3	72	214.448	ppb	214.448	1.30	90654	10000	
Fe	56	2	72	2246.324	ppb	2246.324	2.79	3499945	10000	
Co	59	3	72	18.865	ppb	18.865	1.77	24745	2000	
Ni	60	3	72	105.062	ppb	105.062	1.45	39017	5000	
Cu	63	3	72	2.765	ppb	2.765	2.95	3225	5000	
Zn	66	3	72	9.783	ppb	9.783	4.71	1958	5000	
As	75	3	72	51.221	ppb	51.221	2.40	5982	2000	
Se	78	2	72	0.687	ppb	0.687	23.70	43	2000	
Sr	88	3	72	623.088	ppb	623.088	2.19	373150	4000	
Mo	95	3	115	2.895	ppb	2.895	7.30	1578	2000	
Ag	107	3	115	0.014	ppb	0.014	85.11	63	100	
Cd	111	3	115	-0.039	ppb	-0.039	-75.11	7	2000	
Sn	120	3	115	6.888	ppb	6.888	0.92	6868	2000	
Sb	121	3	115	5.162	ppb	5.162	2.24	4532	1000	
Ba	137	3	115	496.311	ppb	496.311	2.55	139091	5000	
Tl	205	3	193	-0.094	ppb	-0.094	-13.14	405	2000	
(Pb)	206	3	193	0.159	ppb	0.159	8.69	705	100	
(Pb)	207	3	193	0.127	ppb	0.127	47.79	856	100	
Pb	208	3	193	0.176	ppb	0.176	21.16	3170	5000	
Th	232	3	193	-0.294	ppb	-0.294	-4.30	6138	2000	
U	238	3	193	0.120	ppb	0.120	5.27	3102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4082225	0.33	3936624	103.70	60	120	
Sc (IS)	45	3	HMI He	628835	0.69	609520	103.17	60	120	
Ge Internal standard	72	2	HMI H2	2481977	1.10	2391663	103.78	60	120	
Ge Internal standard	72	3	HMI He	781459	0.97	756863	103.25	60	120	
In Internal Standard	115	3	HMI He	3042778	1.11	2988279	101.82	60	120	
Ir (IS)	193	3	HMI He	7131823	0.66	6996686	101.93	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	076_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:24:00-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.765	ppb	2.651	1928	50	95.5	90	110	
Na	23	3	45	47558.077	ppb	2.299	5218634	51000	93.3	90	110	
Mg	24	3	45	10088.336	ppb	0.729	597553	11000	91.7	90	110	
Al	27	3	45	1001.022	ppb	2.711	23263	1000	100.1	90	110	
K	39	3	45	10408.751	ppb	1.440	517799	11000	94.6	90	110	
Ca	40	2	45	10426.970	ppb	2.580	5797972	11000	94.8	90	110	
V	51	3	72	51.884	ppb	0.939	32214	50	103.8	90	110	
Cr	52	3	72	53.712	ppb	0.751	41635	50	107.4	90	110	
Mn	55	3	72	52.305	ppb	0.702	21659	50	104.6	90	110	
Fe	56	2	72	1047.478	ppb	2.782	1615272	1000	104.7	90	110	
Co	59	3	72	52.166	ppb	1.782	66460	50	104.3	90	110	
Ni	60	3	72	49.854	ppb	1.195	18186	50	99.7	90	110	
Cu	63	3	72	52.384	ppb	2.170	51060	50	104.8	90	110	
Zn	66	3	72	52.489	ppb	4.492	8905	50	105.0	90	110	
As	75	3	72	54.038	ppb	3.273	6137	50	108.1	90	110	
Se	78	2	72	52.714	ppb	3.364	2965	50	105.4	90	110	
Sr	88	3	72	104.997	ppb	2.050	61401	100	105.0	90	110	
Mo	95	3	115	49.397	ppb	0.254	26865	50	98.8	90	110	
Ag	107	3	115	49.821	ppb	1.283	93424	50	99.6	90	110	
Cd	111	3	115	50.160	ppb	1.513	13747	50	100.3	90	110	
Sn	120	3	115	49.056	ppb	1.686	44208	50	98.1	90	110	
Sb	121	3	115	49.701	ppb	1.957	43713	50	99.4	90	110	
Ba	137	3	115	50.657	ppb	2.026	14723	50	101.3	90	110	
Tl	205	3	193	50.355	ppb	2.221	235595	50	100.7	90	110	
(Pb)	206	3	193	50.981	ppb	2.537	79703	50	102.0	90	110	
(Pb)	207	3	193	49.274	ppb	2.022	68470	50	98.5	90	110	
Pb	208	3	193	50.656	ppb	1.881	320179	50	101.3	90	110	
Th	232	3	193	48.973	ppb	0.585	319020	50	97.9	90	110	
U	238	3	193	51.381	ppb	3.278	347030	50	102.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4041074	2.13	3936624	102.65	60	120	
Sc (IS)	45	3	HMI He	635192	0.51	609520	104.21	60	120	
Ge Internal standard	72	2	HMI H2	2442602	0.98	2391663	102.13	60	120	
Ge Internal standard	72	3	HMI He	760399	0.65	756863	100.47	60	120	
In Internal Standard	115	3	HMI He	3135592	1.38	2988279	104.93	60	120	
Ir (IS)	193	3	HMI He	6978490	1.07	6996686	99.74	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	077_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:25:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.079	ppb	88.0	8	0.5	
Na	23	3	45	111.387	ppb	3.2	36604	25	>RL
Mg	24	3	45	1.823	ppb	78.8	904	25	
Al	27	3	45	-2.250	ppb	-51.4	80	15	
K	39	3	45	0.493	ppb	2999.9	28427	50	
V	51	3	72	1.107	ppb	6.8	1469	1	>RL
Cr	52	3	72	0.061	ppb	25.1	1773	1	
Mn	55	3	72	0.052	ppb	74.3	217	0.5	
Co	59	3	72	-0.016	ppb	-111.2	53	0.5	
Ni	60	3	72	-0.078	ppb	-74.1	302	1	
Cu	63	3	72	0.144	ppb	15.5	625	1	
Zn	66	3	72	0.031	ppb	553.7	315	5	
As	75	3	72	0.007	ppb	2168.2	77	1	
Se	78	2	72	0.007	ppb	1140.3	5	1	
Sr	88	3	72	-0.077	ppb	-117.0	210	0.5	
Mo	95	3	115	0.015	ppb	159.1	62	0.5	
Ag	107	3	115	0.018	ppb	31.3	72	1	
Cd	111	3	115	-0.008	ppb	-581.4	15	0.5	
Sn	120	3	115	-0.039	ppb	-35.1	968	1	
Sb	121	3	115	-0.004	ppb	-465.8	138	0.6	
Ba	137	3	115	-0.071	ppb	-51.2	82	0.5	
Tl	205	3	193	-0.066	ppb	-21.0	551	0.1	
(Pb)	206	3	193	-0.076	ppb	-13.0	340	1	
(Pb)	207	3	193	-0.084	ppb	-37.3	575	1	
Pb	208	3	193	-0.056	ppb	-22.5	1726	0.5	
Th	232	3	193	1.455	ppb	8.3	17999	1	>RL
U	238	3	193	-0.004	ppb	-481.6	2312	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4194282	1.34	3936624	106.55	60	120	
Sc (IS)	45	3	HMI He	632580	0.80	609520	103.78	60	120	
Ge Internal standard	72	2	HMI H2	2538337	1.22	2391663	106.13	60	120	
Ge Internal standard	72	3	HMI He	781688	0.89	756863	103.28	60	120	
In Internal Standard	115	3	HMI He	3102611	0.15	2988279	103.83	60	120	
Ir (IS)	193	3	HMI He	7335342	1.16	6996686	104.84	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A
Data File Name	078SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:27:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	-299.90	3	2000	
Na	23	3	45	7561.313	ppb	7561.313	0.16	862619	400000	
Mg	24	3	45	40329.121	ppb	40329.121	1.94	2420903	400000	
Al	27	3	45	7.214	ppb	7.214	45.26	304	400000	
K	39	3	45	849.273	ppb	849.273	3.24	69434	400000	
Ca	40	2	45	118938.970	ppb	118938.970	2.59	68713851	400000	
V	51	3	72	0.801	ppb	0.801	11.13	1304	2000	
Cr	52	3	72	-0.025	ppb	-0.025	-635.43	1741	5000	
Mn	55	3	72	46.144	ppb	46.144	0.71	20056	10000	
Fe	56	2	72	769.713	ppb	769.713	1.20	1242903	10000	
Co	59	3	72	0.027	ppb	0.027	46.11	112	2000	
Ni	60	3	72	-0.165	ppb	-0.165	-43.53	275	5000	
Cu	63	3	72	0.525	ppb	0.525	4.06	1023	5000	
Zn	66	3	72	0.935	ppb	0.935	35.81	476	5000	
As	75	3	72	1.001	ppb	1.001	5.31	195	2000	
Se	78	2	72	0.087	ppb	0.087	99.74	9	2000	
Sr	88	3	72	135.776	ppb	135.776	0.69	83165	4000	
Mo	95	3	115	0.358	ppb	0.358	5.15	255	2000	
Ag	107	3	115	0.011	ppb	0.011	106.62	62	100	
Cd	111	3	115	-0.040	ppb	-0.040	-68.15	7	2000	
Sn	120	3	115	-0.218	ppb	-0.218	-32.56	841	2000	
Sb	121	3	115	-0.027	ppb	-0.027	-83.29	123	1000	
Ba	137	3	115	140.527	ppb	140.527	0.21	41700	5000	
Tl	205	3	193	-0.089	ppb	-0.089	-7.23	441	2000	
(Pb)	206	3	193	0.037	ppb	0.037	28.79	528	100	
(Pb)	207	3	193	0.013	ppb	0.013	298.52	720	100	
Pb	208	3	193	0.026	ppb	0.026	57.04	2286	5000	
Th	232	3	193	0.112	ppb	0.112	54.16	9092	2000	
U	238	3	193	0.197	ppb	0.197	13.48	3754	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4216773	2.13	3936624	107.12	60	120	
Sc (IS)	45	3	HMI He	644371	0.37	609520	105.72	60	120	
Ge Internal standard	72	2	HMI H2	2547707	0.60	2391663	106.52	60	120	
Ge Internal standard	72	3	HMI He	797163	0.64	756863	105.32	60	120	
In Internal Standard	115	3	HMI He	3215367	0.22	2988279	107.60	60	120	
Ir (IS)	193	3	HMI He	7385929	1.62	6996686	105.56	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-Asd@5
Data File Name	079SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:29:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.079	ppb	0.079	322.81	8	2000	
Na	23	3	45	1513.165	ppb	1513.165	2.40	190909	400000	
Mg	24	3	45	8154.585	ppb	8154.585	2.30	485851	400000	
Al	27	3	45	1.025	ppb	1.025	152.96	157	400000	
K	39	3	45	172.163	ppb	172.163	13.09	36822	400000	
Ca	40	2	45	24313.736	ppb	24313.736	3.44	13978654	400000	
V	51	3	72	0.885	ppb	0.885	5.94	1359	2000	
Cr	52	3	72	0.133	ppb	0.133	168.26	1866	5000	
Mn	55	3	72	10.681	ppb	10.681	2.57	4802	10000	
Fe	56	2	72	156.111	ppb	156.111	1.25	265520	10000	
Co	59	3	72	-0.004	ppb	-0.004	-246.59	70	2000	
Ni	60	3	72	0.002	ppb	0.002	6612.82	338	5000	
Cu	63	3	72	0.127	ppb	0.127	53.73	621	5000	
Zn	66	3	72	2.645	ppb	2.645	17.53	771	5000	
As	75	3	72	0.107	ppb	0.107	100.55	90	2000	
Se	78	2	72	0.064	ppb	0.064	50.99	8	2000	
Sr	88	3	72	26.932	ppb	26.932	2.02	16727	4000	
Mo	95	3	115	0.085	ppb	0.085	70.65	102	2000	
Ag	107	3	115	0.014	ppb	0.014	51.78	65	100	
Cd	111	3	115	-0.022	ppb	-0.022	-46.40	12	2000	
Sn	120	3	115	-0.115	ppb	-0.115	-26.94	920	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-207.51	128	1000	
Ba	137	3	115	29.054	ppb	29.054	1.44	8570	5000	
Tl	205	3	193	-0.080	ppb	-0.080	-7.01	486	2000	
(Pb)	206	3	193	0.356	ppb	0.356	17.74	1051	100	
(Pb)	207	3	193	0.315	ppb	0.315	13.81	1158	100	
Pb	208	3	193	0.326	ppb	0.326	10.11	4275	5000	
Th	232	3	193	0.022	ppb	0.022	454.83	8464	2000	
U	238	3	193	0.057	ppb	0.057	11.05	2756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4189858	2.16	3936624	106.43	60	120	
Sc (IS)	45	3	HMI He	638799	0.84	609520	104.80	60	120	
Ge Internal standard	72	2	HMI H2	2540139	1.65	2391663	106.21	60	120	
Ge Internal standard	72	3	HMI He	798243	0.58	756863	105.47	60	120	
In Internal Standard	115	3	HMI He	3165737	1.08	2988279	105.94	60	120	
Ir (IS)	193	3	HMI He	7372374	1.03	6996686	105.37	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-B MS
Data File Name	080SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:31:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.554	ppb	39.554	2.24	1596	2000	
Na	23	3	45	8386.385	ppb	8386.385	0.86	940481	400000	
Mg	24	3	45	41461.765	ppb	41461.765	2.23	2453211	400000	
Al	27	3	45	778.671	ppb	778.671	2.17	18123	400000	
K	39	3	45	1623.449	ppb	1623.449	2.57	104834	400000	
Ca	40	2	45	123859.994	ppb	123859.994	1.84	71365093	400000	
V	51	3	72	39.994	ppb	39.994	2.43	26300	2000	
Cr	52	3	72	40.037	ppb	40.037	1.49	33088	5000	
Mn	55	3	72	85.352	ppb	85.352	1.90	37046	10000	
Fe	56	2	72	1584.685	ppb	1584.685	3.83	2581798	10000	
Co	59	3	72	39.321	ppb	39.321	1.05	52707	2000	
Ni	60	3	72	38.342	ppb	38.342	2.37	14787	5000	
Cu	63	3	72	40.410	ppb	40.410	2.02	41535	5000	
Zn	66	3	72	40.653	ppb	40.653	5.10	7325	5000	
As	75	3	72	39.698	ppb	39.698	5.26	4760	2000	
Se	78	2	72	35.788	ppb	35.788	8.04	2134	2000	
Sr	88	3	72	214.714	ppb	214.714	1.40	131784	4000	
Mo	95	3	115	40.160	ppb	40.160	5.17	21867	2000	
Ag	107	3	115	39.504	ppb	39.504	3.07	74165	100	
Cd	111	3	115	39.110	ppb	39.110	2.80	10741	2000	
Sn	120	3	115	37.936	ppb	37.936	1.02	34464	2000	
Sb	121	3	115	39.924	ppb	39.924	0.94	35192	1000	
Ba	137	3	115	185.517	ppb	185.517	2.40	53709	5000	
Tl	205	3	193	38.829	ppb	38.829	2.28	191996	2000	
(Pb)	206	3	193	38.843	ppb	38.843	1.79	64230	100	
(Pb)	207	3	193	38.683	ppb	38.683	2.41	56897	100	
Pb	208	3	193	38.963	ppb	38.963	1.49	260491	5000	
Th	232	3	193	36.509	ppb	36.509	1.69	253179	2000	
U	238	3	193	39.545	ppb	39.545	0.94	282581	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203901	0.52	3936624	106.79	60	120	
Sc (IS)	45	3	HMI He	635206	0.47	609520	104.21	60	120	
Ge Internal standard	72	2	HMI H2	2591517	3.11	2391663	108.36	60	120	
Ge Internal standard	72	3	HMI He	799808	1.20	756863	105.67	60	120	
In Internal Standard	115	3	HMI He	3139843	2.00	2988279	105.07	60	120	
Ir (IS)	193	3	HMI He	7368153	1.79	6996686	105.31	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-C MSD
Data File Name	081SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:33:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.977	ppb	39.977	7.05	1589	2000	
Na	23	3	45	8317.695	ppb	8317.695	0.93	934832	400000	
Mg	24	3	45	40946.968	ppb	40946.968	2.13	2428055	400000	
Al	27	3	45	789.532	ppb	789.532	2.77	18411	400000	
K	39	3	45	1617.651	ppb	1617.651	0.64	104780	400000	
Ca	40	2	45	118837.640	ppb	118837.640	0.99	67859249	400000	
V	51	3	72	40.537	ppb	40.537	0.52	26485	2000	
Cr	52	3	72	41.268	ppb	41.268	1.19	33846	5000	
Mn	55	3	72	86.893	ppb	86.893	2.99	37478	10000	
Fe	56	2	72	1593.781	ppb	1593.781	2.44	2553948	10000	
Co	59	3	72	39.824	ppb	39.824	0.70	53055	2000	
Ni	60	3	72	38.531	ppb	38.531	1.68	14771	5000	
Cu	63	3	72	41.204	ppb	41.204	2.04	42083	5000	
Zn	66	3	72	41.253	ppb	41.253	0.45	7385	5000	
As	75	3	72	43.003	ppb	43.003	3.27	5120	2000	
Se	78	2	72	37.270	ppb	37.270	5.09	2186	2000	
Sr	88	3	72	215.359	ppb	215.359	1.24	131370	4000	
Mo	95	3	115	40.323	ppb	40.323	3.78	22074	2000	
Ag	107	3	115	40.222	ppb	40.222	2.12	75905	100	
Cd	111	3	115	40.499	ppb	40.499	2.37	11172	2000	
Sn	120	3	115	38.505	ppb	38.505	3.74	35135	2000	
Sb	121	3	115	40.203	ppb	40.203	2.66	35608	1000	
Ba	137	3	115	181.631	ppb	181.631	1.54	52859	5000	
Tl	205	3	193	39.094	ppb	39.094	1.50	194389	2000	
(Pb)	206	3	193	39.594	ppb	39.594	2.31	65817	100	
(Pb)	207	3	193	38.795	ppb	38.795	3.63	57366	100	
Pb	208	3	193	39.401	ppb	39.401	2.64	264828	5000	
Th	232	3	193	38.926	ppb	38.926	3.11	270837	2000	
U	238	3	193	39.974	ppb	39.974	2.40	287158	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4166195	0.74	3936624	105.83	60	120	
Sc (IS)	45	3	HMI He	636505	0.69	609520	104.43	60	120	
Ge Internal standard	72	2	HMI H2	2548161	2.75	2391663	106.54	60	120	
Ge Internal standard	72	3	HMI He	794896	0.83	756863	105.03	60	120	
In Internal Standard	115	3	HMI He	3155792	1.89	2988279	105.61	60	120	
Ir (IS)	193	3	HMI He	7409515	2.22	6996686	105.90	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A pds
Data File Name	082SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:34:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	96.784	ppb	96.784	2.19	3894	2000	
Na	23	3	45	12833.985	ppb	12833.985	3.53	1410566	400000	
Mg	24	3	45	42483.363	ppb	42483.363	0.41	2486820	400000	
Al	27	3	45	1989.629	ppb	1989.629	0.19	45609	400000	
K	39	3	45	2924.067	ppb	2924.067	0.85	164199	400000	
Ca	40	2	45	120409.525	ppb	120409.525	1.17	68427449	400000	
V	51	3	72	98.167	ppb	98.167	1.51	62585	2000	
Cr	52	3	72	99.444	ppb	99.444	1.54	78555	5000	
Mn	55	3	72	144.043	ppb	144.043	1.45	61590	10000	
Fe	56	2	72	1758.639	ppb	1758.639	2.33	2791698	10000	
Co	59	3	72	97.947	ppb	97.947	2.13	129499	2000	
Ni	60	3	72	96.569	ppb	96.569	2.05	36264	5000	
Cu	63	3	72	100.928	ppb	100.928	0.99	101694	5000	
Zn	66	3	72	199.884	ppb	199.884	1.87	34339	5000	
As	75	3	72	105.685	ppb	105.685	1.07	12388	2000	
Se	78	2	72	104.977	ppb	104.977	1.13	6100	2000	
Sr	88	3	72	233.087	ppb	233.087	0.67	141219	4000	
Mo	95	3	115	98.465	ppb	98.465	1.31	53716	2000	
Ag	107	3	115	26.030	ppb	26.030	1.47	49033	100	
Cd	111	3	115	99.948	ppb	99.948	2.42	27495	2000	
Sn	120	3	115	95.746	ppb	95.746	1.05	85689	2000	
Sb	121	3	115	95.345	ppb	95.345	0.46	84093	1000	
Ba	137	3	115	240.535	ppb	240.535	1.66	69812	5000	
Tl	205	3	193	96.759	ppb	96.759	1.18	475654	2000	
(Pb)	206	3	193	95.105	ppb	95.105	1.07	156080	100	
(Pb)	207	3	193	94.501	ppb	94.501	0.51	137570	100	
Pb	208	3	193	95.258	ppb	95.258	1.06	631817	5000	
Th	232	3	193	104.665	ppb	104.665	1.42	708091	2000	
U	238	3	193	210.006	ppb	210.006	1.77	1485664	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4146474	0.26	3936624	105.33	60	120	
Sc (IS)	45	3	HMI He	628372	0.81	609520	103.09	60	120	
Ge Internal standard	72	2	HMI H2	2525395	1.57	2391663	105.59	60	120	
Ge Internal standard	72	3	HMI He	789596	0.83	756863	104.32	60	120	
In Internal Standard	115	3	HMI He	3148763	1.51	2988279	105.37	60	120	
Ir (IS)	193	3	HMI He	7343874	0.65	6996686	104.96	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-2-A
Data File Name	083SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:36:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-87.03	2	2000	
Na	23	3	45	7606.228	ppb	7606.228	0.05	838016	400000	
Mg	24	3	45	40604.418	ppb	40604.418	0.56	2354122	400000	
Al	27	3	45	5.162	ppb	5.162	27.53	247	400000	
K	39	3	45	854.890	ppb	854.890	3.95	67308	400000	
Ca	40	2	45	121151.707	ppb	121151.707	0.77	68898322	400000	
V	51	3	72	0.619	ppb	0.619	35.13	1164	2000	
Cr	52	3	72	0.183	ppb	0.183	59.19	1864	5000	
Mn	55	3	72	45.770	ppb	45.770	1.28	19492	10000	
Fe	56	2	72	747.360	ppb	747.360	5.58	1202259	10000	
Co	59	3	72	-0.006	ppb	-0.006	-212.98	67	2000	
Ni	60	3	72	0.099	ppb	0.099	30.14	366	5000	
Cu	63	3	72	0.408	ppb	0.408	6.89	886	5000	
Zn	66	3	72	1.230	ppb	1.230	29.51	516	5000	
As	75	3	72	1.238	ppb	1.238	36.45	218	2000	
Se	78	2	72	0.041	ppb	0.041	121.41	7	2000	
Sr	88	3	72	135.636	ppb	135.636	0.10	81396	4000	
Mo	95	3	115	0.438	ppb	0.438	7.60	292	2000	
Ag	107	3	115	0.023	ppb	0.023	23.64	82	100	
Cd	111	3	115	0.028	ppb	0.028	116.24	25	2000	
Sn	120	3	115	0.167	ppb	0.167	50.24	1156	2000	
Sb	121	3	115	0.025	ppb	0.025	182.48	165	1000	
Ba	137	3	115	143.011	ppb	143.011	3.17	41259	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-23.70	608	2000	
(Pb)	206	3	193	-0.002	ppb	-0.002	-277.54	466	100	
(Pb)	207	3	193	-0.006	ppb	-0.006	-564.67	696	100	
Pb	208	3	193	0.021	ppb	0.021	54.89	2261	5000	
Th	232	3	193	3.309	ppb	3.309	11.53	30766	2000	
U	238	3	193	0.233	ppb	0.233	7.08	4034	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4149464	0.26	3936624	105.41	60	120	
Sc (IS)	45	3	HMI He	622399	1.32	609520	102.11	60	120	
Ge Internal standard	72	2	HMI H2	2538557	2.27	2391663	106.14	60	120	
Ge Internal standard	72	3	HMI He	781039	0.28	756863	103.19	60	120	
In Internal Standard	115	3	HMI He	3127086	1.29	2988279	104.65	60	120	
Ir (IS)	193	3	HMI He	7424770	2.06	6996686	106.12	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-3-A
Data File Name	084SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:38:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.003	ppb	-0.003	-3605.37	5	2000	
Na	23	3	45	2455.336	ppb	2455.336	2.75	288363	400000	
Mg	24	3	45	32918.539	ppb	32918.539	3.41	1918992	400000	
Al	27	3	45	263.002	ppb	263.002	11.26	6118	400000	
K	39	3	45	1048.369	ppb	1048.369	5.99	76642	400000	
Ca	40	2	45	159367.867	ppb	159367.867	1.27	91231088	400000	
V	51	3	72	1.020	ppb	1.020	23.94	1429	2000	
Cr	52	3	72	0.445	ppb	0.445	45.27	2087	5000	
Mn	55	3	72	78.669	ppb	78.669	2.60	33742	10000	
Fe	56	2	72	241.368	ppb	241.368	0.46	398101	10000	
Co	59	3	72	0.493	ppb	0.493	5.97	726	2000	
Ni	60	3	72	0.700	ppb	0.700	17.08	595	5000	
Cu	63	3	72	0.714	ppb	0.714	7.91	1203	5000	
Zn	66	3	72	3.365	ppb	3.365	8.72	886	5000	
As	75	3	72	0.128	ppb	0.128	231.37	92	2000	
Se	78	2	72	0.478	ppb	0.478	30.29	32	2000	
Sr	88	3	72	262.961	ppb	262.961	0.65	159367	4000	
Mo	95	3	115	0.228	ppb	0.228	46.85	177	2000	
Ag	107	3	115	0.020	ppb	0.020	49.61	75	100	
Cd	111	3	115	0.004	ppb	0.004	573.24	18	2000	
Sn	120	3	115	0.041	ppb	0.041	166.12	1040	2000	
Sb	121	3	115	0.062	ppb	0.062	31.02	197	1000	
Ba	137	3	115	100.162	ppb	100.162	0.30	28784	5000	
Tl	205	3	193	-0.066	ppb	-0.066	-14.45	555	2000	
(Pb)	206	3	193	0.489	ppb	0.489	2.12	1266	100	
(Pb)	207	3	193	0.412	ppb	0.412	9.85	1294	100	
Pb	208	3	193	0.466	ppb	0.466	4.89	5183	5000	
Th	232	3	193	1.072	ppb	1.072	16.97	15454	2000	
U	238	3	193	0.679	ppb	0.679	8.21	7135	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4177772	1.55	3936624	106.13	60	120	
Sc (IS)	45	3	HMI He	625837	1.26	609520	102.68	60	120	
Ge Internal standard	72	2	HMI H2	2523170	1.24	2391663	105.50	60	120	
Ge Internal standard	72	3	HMI He	789997	0.88	756863	104.38	60	120	
In Internal Standard	115	3	HMI He	3110689	0.49	2988279	104.10	60	120	
Ir (IS)	193	3	HMI He	7344623	2.19	6996686	104.97	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-4-A
Data File Name	085SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:40:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	3522.169	ppb	3522.169	0.64	407174	400000	
Mg	24	3	45	43699.303	ppb	43699.303	1.88	2572844	400000	
Al	27	3	45	268.558	ppb	268.558	15.52	6305	400000	
K	39	3	45	2482.221	ppb	2482.221	3.92	144437	400000	
Ca	40	2	45	85755.954	ppb	85755.954	3.44	48547364	400000	
V	51	3	72	1.228	ppb	1.228	15.85	1556	2000	
Cr	52	3	72	0.684	ppb	0.684	22.93	2264	5000	
Mn	55	3	72	12.382	ppb	12.382	8.08	5455	10000	
Fe	56	2	72	942.309	ppb	942.309	3.55	1509200	10000	
Co	59	3	72	0.210	ppb	0.210	34.31	351	2000	
Ni	60	3	72	0.805	ppb	0.805	36.26	631	5000	
Cu	63	3	72	0.740	ppb	0.740	8.53	1224	5000	
Zn	66	3	72	2.600	ppb	2.600	8.58	753	5000	
As	75	3	72	1.008	ppb	1.008	3.21	193	2000	
Se	78	2	72	0.076	ppb	0.076	24.57	9	2000	
Sr	88	3	72	343.361	ppb	343.361	1.04	207238	4000	
Mo	95	3	115	0.349	ppb	0.349	14.89	243	2000	
Ag	107	3	115	0.039	ppb	0.039	12.85	112	100	
Cd	111	3	115	0.028	ppb	0.028	174.34	25	2000	
Sn	120	3	115	-0.035	ppb	-0.035	-499.17	976	2000	
Sb	121	3	115	0.077	ppb	0.077	25.89	210	1000	
Ba	137	3	115	137.245	ppb	137.245	2.94	39559	5000	
Tl	205	3	193	-0.085	ppb	-0.085	-9.45	465	2000	
(Pb)	206	3	193	0.458	ppb	0.458	7.93	1221	100	
(Pb)	207	3	193	0.401	ppb	0.401	4.16	1286	100	
Pb	208	3	193	0.433	ppb	0.433	5.84	4993	5000	
Th	232	3	193	0.426	ppb	0.426	40.44	11215	2000	
U	238	3	193	0.434	ppb	0.434	7.04	5437	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4131934	2.20	3936624	104.96	60	120	
Sc (IS)	45	3	HMI He	632016	1.43	609520	103.69	60	120	
Ge Internal standard	72	2	HMI H2	2534028	0.94	2391663	105.95	60	120	
Ge Internal standard	72	3	HMI He	786996	0.50	756863	103.98	60	120	
In Internal Standard	115	3	HMI He	3123949	2.11	2988279	104.54	60	120	
Ir (IS)	193	3	HMI He	7386971	1.69	6996686	105.58	60	120	

Sample Report

Sample Table

Sample Name	280-175012-J-16-A
Data File Name	086SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:42:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-85.90	2	2000	
Na	23	3	45	4783.589	ppb	4783.589	0.16	547395	400000	
Mg	24	3	45	7717.361	ppb	7717.361	1.16	457632	400000	
Al	27	3	45	8.553	ppb	8.553	35.02	330	400000	
K	39	3	45	1822.448	ppb	1822.448	1.60	114279	400000	
Ca	40	2	45	33719.706	ppb	33719.706	2.23	19008321	400000	
V	51	3	72	0.809	ppb	0.809	17.96	1306	2000	
Cr	52	3	72	0.142	ppb	0.142	98.94	1866	5000	
Mn	55	3	72	1.006	ppb	1.006	6.19	630	10000	
Fe	56	2	72	47.828	ppb	47.828	1.51	94834	10000	
Co	59	3	72	0.030	ppb	0.030	75.62	115	2000	
Ni	60	3	72	-0.065	ppb	-0.065	-196.92	312	5000	
Cu	63	3	72	30.097	ppb	30.097	0.55	30882	5000	
Zn	66	3	72	199.939	ppb	199.939	1.57	34589	5000	
As	75	3	72	-0.031	ppb	-0.031	-1234.07	73	2000	
Se	78	2	72	0.119	ppb	0.119	42.90	11	2000	
Sr	88	3	72	141.155	ppb	141.155	0.79	86222	4000	
Mo	95	3	115	0.158	ppb	0.158	47.66	140	2000	
Ag	107	3	115	0.026	ppb	0.026	75.03	87	100	
Cd	111	3	115	0.028	ppb	0.028	66.32	25	2000	
Sn	120	3	115	-0.127	ppb	-0.127	-38.51	900	2000	
Sb	121	3	115	0.049	ppb	0.049	133.47	187	1000	
Ba	137	3	115	34.244	ppb	34.244	0.27	9977	5000	
Tl	205	3	193	-0.085	ppb	-0.085	-7.60	453	2000	
(Pb)	206	3	193	0.855	ppb	0.855	1.88	1839	100	
(Pb)	207	3	193	0.887	ppb	0.887	1.29	1956	100	
Pb	208	3	193	0.873	ppb	0.873	3.94	7769	5000	
Th	232	3	193	0.159	ppb	0.159	65.99	9222	2000	
U	238	3	193	0.024	ppb	0.024	98.13	2482	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109485	1.44	3936624	104.39	60	120	
Sc (IS)	45	3	HMI He	635667	0.50	609520	104.29	60	120	
Ge Internal standard	72	2	HMI H2	2572134	0.50	2391663	107.55	60	120	
Ge Internal standard	72	3	HMI He	795109	0.50	756863	105.05	60	120	
In Internal Standard	115	3	HMI He	3132373	0.11	2988279	104.82	60	120	
Ir (IS)	193	3	HMI He	7247102	0.55	6996686	103.58	60	120	

Sample Report

Sample Table

Sample Name	280-175031-E-1-A
Data File Name	087SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:43:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	85497.238	ppb	85497.238	0.72	9335003	400000	
Mg	24	3	45	68753.195	ppb	68753.195	1.73	4055768	400000	
Al	27	3	45	6.727	ppb	6.727	49.55	287	400000	
K	39	3	45	4610.960	ppb	4610.960	0.87	244570	400000	
Ca	40	2	45	160927.968	ppb	160927.968	1.35	91810813	400000	
V	51	3	72	1.509	ppb	1.509	4.20	1733	2000	
Cr	52	3	72	0.427	ppb	0.427	24.17	2067	5000	
Mn	55	3	72	181.155	ppb	181.155	0.42	77198	10000	
Fe	56	2	72	11.251	ppb	11.251	5.50	35705	10000	
Co	59	3	72	0.194	ppb	0.194	20.71	330	2000	
Ni	60	3	72	2.340	ppb	2.340	7.41	1201	5000	
Cu	63	3	72	9.575	ppb	9.575	2.40	10060	5000	
Zn	66	3	72	19.517	ppb	19.517	4.16	3625	5000	
As	75	3	72	0.835	ppb	0.835	26.50	173	2000	
Se	78	2	72	0.529	ppb	0.529	18.88	35	2000	
Sr	88	3	72	752.586	ppb	752.586	0.35	454136	4000	
Mo	95	3	115	0.030	ppb	0.030	58.39	70	2000	
Ag	107	3	115	0.199	ppb	0.199	15.39	408	100	
Cd	111	3	115	0.090	ppb	0.090	11.84	42	2000	
Sn	120	3	115	1.705	ppb	1.705	8.93	2494	2000	
Sb	121	3	115	0.074	ppb	0.074	28.26	207	1000	
Ba	137	3	115	279.104	ppb	279.104	1.34	80036	5000	
Tl	205	3	193	-0.071	ppb	-0.071	-20.41	525	2000	
(Pb)	206	3	193	1.107	ppb	1.107	0.43	2249	100	
(Pb)	207	3	193	0.993	ppb	0.993	6.33	2109	100	
Pb	208	3	193	1.097	ppb	1.097	3.33	9237	5000	
Th	232	3	193	0.006	ppb	0.006	1663.15	8219	2000	
U	238	3	193	4.219	ppb	4.219	2.64	31745	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162915	2.89	3936624	105.75	60	120	
Sc (IS)	45	3	HMI He	633388	0.76	609520	103.92	60	120	
Ge Internal standard	72	2	HMI H2	2547754	2.00	2391663	106.53	60	120	
Ge Internal standard	72	3	HMI He	787392	0.16	756863	104.03	60	120	
In Internal Standard	115	3	HMI He	3111511	1.39	2988279	104.12	60	120	
Ir (IS)	193	3	HMI He	7252528	1.10	6996686	103.66	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	088_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:45:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.681	ppb	8.161	1987	50	99.4	90	110	
Na	23	3	45	47437.069	ppb	0.760	5217193	51000	93.0	90	110	
Mg	24	3	45	9986.239	ppb	2.032	592775	11000	90.8	90	110	
Al	27	3	45	974.685	ppb	5.769	22694	1000	97.5	90	110	
K	39	3	45	10385.536	ppb	1.893	517886	11000	94.4	90	110	
Ca	40	2	45	10477.816	ppb	1.225	5898421	11000	95.3	90	110	
V	51	3	72	51.875	ppb	1.349	32615	50	103.7	90	110	
Cr	52	3	72	52.810	ppb	2.107	41474	50	105.6	90	110	
Mn	55	3	72	52.395	ppb	1.186	21970	50	104.8	90	110	
Fe	56	2	72	1059.635	ppb	3.492	1647979	1000	106.0	90	110	
Co	59	3	72	52.189	ppb	2.525	67317	50	104.4	90	110	
Ni	60	3	72	50.343	ppb	2.347	18598	50	100.7	90	110	
Cu	63	3	72	51.809	ppb	2.282	51132	50	103.6	90	110	
Zn	66	3	72	49.745	ppb	1.383	8563	50	99.5	90	110	
As	75	3	72	54.290	ppb	4.927	6240	50	108.6	90	110	
Se	78	2	72	53.226	ppb	3.333	3020	50	106.5	90	110	
Sr	88	3	72	104.588	ppb	1.875	61929	100	104.6	90	110	
Mo	95	3	115	50.065	ppb	1.085	27444	50	100.1	90	110	
Ag	107	3	115	49.611	ppb	1.291	93782	50	99.2	90	110	
Cd	111	3	115	49.768	ppb	2.423	13750	50	99.5	90	110	
Sn	120	3	115	48.720	ppb	1.086	44268	50	97.4	90	110	
Sb	121	3	115	50.245	ppb	1.039	44552	50	100.5	90	110	
Ba	137	3	115	50.724	ppb	1.751	14863	50	101.4	90	110	
Tl	205	3	193	49.715	ppb	1.159	239691	50	99.4	90	110	
(Pb)	206	3	193	49.904	ppb	3.634	80375	50	99.8	90	110	
(Pb)	207	3	193	48.960	ppb	1.875	70108	50	97.9	90	110	
Pb	208	3	193	49.771	ppb	3.047	324095	50	99.5	90	110	
Th	232	3	193	48.813	ppb	1.062	327658	50	97.6	90	110	
U	238	3	193	50.631	ppb	2.741	352386	50	101.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4089736	0.32	3936624	103.89	60	120	
Sc (IS)	45	3	HMI He	636700	1.65	609520	104.46	60	120	
Ge Internal standard	72	2	HMI H2	2464240	1.63	2391663	103.03	60	120	
Ge Internal standard	72	3	HMI He	770063	1.60	756863	101.74	60	120	
In Internal Standard	115	3	HMI He	3160729	0.94	2988279	105.77	60	120	
Ir (IS)	193	3	HMI He	7190979	2.12	6996686	102.78	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	089_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:47:33-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.126	ppb	0.0	0	0.5	
Na	23	3	45	40.545	ppb	10.7	29032	25	>RL
Mg	24	3	45	2.494	ppb	18.5	948	25	
Al	27	3	45	-0.534	ppb	-165.2	120	15	
K	39	3	45	-10.249	ppb	-95.3	28050	50	
V	51	3	72	0.792	ppb	18.2	1273	1	
Cr	52	3	72	0.027	ppb	126.7	1746	1	
Mn	55	3	72	0.160	ppb	76.8	262	0.5	
Co	59	3	72	-0.005	ppb	-218.1	67	0.5	
Ni	60	3	72	-0.010	ppb	-1342.5	327	1	
Cu	63	3	72	-0.022	ppb	-129.3	460	1	
Zn	66	3	72	-0.069	ppb	-440.2	298	5	
As	75	3	72	-0.194	ppb	-68.9	53	1	
Se	78	2	72	0.045	ppb	185.0	7	1	
Sr	88	3	72	-0.033	ppb	-301.6	237	0.5	
Mo	95	3	115	0.004	ppb	531.2	57	0.5	
Ag	107	3	115	0.014	ppb	50.2	65	1	
Cd	111	3	115	-0.021	ppb	-130.8	12	0.5	
Sn	120	3	115	-0.042	ppb	-117.8	981	1	
Sb	121	3	115	0.004	ppb	183.0	148	0.6	
Ba	137	3	115	-0.099	ppb	-63.9	75	0.5	
Tl	205	3	193	-0.076	ppb	-13.1	506	0.1	
(Pb)	206	3	193	-0.054	ppb	-36.6	376	1	
(Pb)	207	3	193	-0.055	ppb	-64.5	618	1	
Pb	208	3	193	-0.040	ppb	-2.1	1834	0.5	
Th	232	3	193	1.563	ppb	16.6	18716	1	>RL
U	238	3	193	0.028	ppb	63.1	2537	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4179894	1.12	3936624	106.18	60	120	
Sc (IS)	45	3	HMI He	635464	1.03	609520	104.26	60	120	
Ge Internal standard	72	2	HMI H2	2486693	1.18	2391663	103.97	60	120	
Ge Internal standard	72	3	HMI He	781251	0.71	756863	103.22	60	120	
In Internal Standard	115	3	HMI He	3154758	0.41	2988279	105.57	60	120	
Ir (IS)	193	3	HMI He	7337461	0.61	6996686	104.87	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608988/1-A
Data File Name	090_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:49:23-06:00
Sample Type	Blank
Dilution	1
Comment	608988 6020b filt
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.001	ppb	-22016.19114	5	0.5
Na	23	3	45	277.175	ppb	5.163222761	54398	25
Mg	24	3	45	2.864	ppb	34.56722668	961	25
Al	27	3	45	5.043	ppb	44.13580395	247	15
K	39	3	45	-17.020	ppb	-137.6620215	27488	50
Ca	40	2	45	28.724	ppb	7.531075469	44826	200
V	51	3	72	0.713	ppb	12.61089963	1229	1
Cr	52	3	72	-0.115	ppb	-141.7976741	1646	1
Mn	55	3	72	0.298	ppb	57.98073513	322	0.5
Fe	56	2	72	4.829	ppb	5.586342572	25058	50
Co	59	3	72	0.007	ppb	223.914722	83	0.5
Ni	60	3	72	0.481	ppb	21.88876384	510	1
Cu	63	3	72	0.051	ppb	101.6606682	535	1
Zn	66	3	72	12.293	ppb	10.54172818	2392	5
As	75	3	72	-0.153	ppb	-69.51952095	58	1
(Se)	78	3	72	0.603	ppb	2.458309925	25	1
Sr	88	3	72	-0.052	ppb	-143.6373535	227	0.5
Mo	95	3	115	-0.027	ppb	-88.87834352	40	0.5
Ag	107	3	115	0.006	ppb	206.0486684	50	1
Cd	111	3	115	-0.004	ppb	-266.2320767	17	0.5
Sn	120	3	115	-0.167	ppb	-73.20502323	876	1
Sb	121	3	115	-0.030	ppb	-118.5547753	118	0.6
Ba	137	3	115	1.121	ppb	10.01685152	431	0.5
Tl	205	3	193	-0.097	ppb	-4.07339559	398	0.1
(Pb)	206	3	193	-0.048	ppb	-33.63512566	383	1
(Pb)	207	3	193	-0.049	ppb	-83.38357006	621	1
Pb	208	3	193	-0.029	ppb	-52.13322609	1896	0.5
Th	232	3	193	0.294	ppb	42.88489074	10182	1
U	238	3	193	0.025	ppb	52.48341714	2501	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4188631	1.70	3936624	106.40	60	120	
Sc (IS)	45	3	HMI He	629851	0.51	609520	103.34	60	120	
Ge Internal standard	72	2	HMI H2	2505057	1.47	2391663	104.74	60	120	
Ge Internal standard	72	3	HMI He	785281	0.42	756863	103.75	60	120	
In Internal Standard	115	3	HMI He	3172686	1.03	2988279	106.17	60	120	
Ir (IS)	193	3	HMI He	7287513	1.64	6996686	104.16	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608988/2-A
Data File Name	091_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:51:13-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608988 6020b filt
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.118	41.118	ppb	2.288	1648	40	102.8	80	120	
Na	23	3	45	987.005	987.005	ppb	1.434	131267	40	2467.5	80	120	>+/-20%
Mg	24	3	45	736.809	736.809	ppb	0.741	44012	40	1842.0	80	120	>+/-20%
Al	27	3	45	785.179	785.179	ppb	2.145	18123	40	1962.9	80	120	>+/-20%
K	39	3	45	777.625	777.625	ppb	4.192	64536	40	1944.1	80	120	>+/-20%
Ca	40	2	45	841.265	841.265	ppb	2.621	517418	40	2103.2	80	120	>+/-20%
V	51	3	72	40.047	40.047	ppb	1.843	25928	40	100.1	80	120	
Cr	52	3	72	40.860	40.860	ppb	1.861	33208	40	102.2	80	120	
Mn	55	3	72	40.951	40.951	ppb	0.180	17602	40	102.4	80	120	
Fe	56	2	72	815.045	815.045	ppb	4.090	1302366	40	2037.6	80	120	>+/-20%
(Fe)	56	3	72	805.357	805.357	ppb	0.195	545134	40	2013.4	80	120	>+/-20%
Co	59	3	72	39.745	39.745	ppb	0.988	52451	40	99.4	80	120	
Ni	60	3	72	38.900	38.900	ppb	1.090	14767	40	97.3	80	120	
Cu	63	3	72	41.065	41.065	ppb	1.739	41547	40	102.7	80	120	
Zn	66	3	72	124.958	124.958	ppb	1.726	21524	40	312.4	80	120	>+/-20%
As	75	3	72	40.185	40.185	ppb	3.364	4743	40	100.5	80	120	
Se	78	2	72	44.197	44.197	ppb	2.479	2570	40	110.5	80	120	
(Se)	78	3	72	43.386	43.386	ppb	10.479	328	40	108.5	80	120	
Sr	88	3	72	81.389	81.389	ppb	0.994	49340	40	203.5	80	120	>+/-20%
Mo	95	3	115	38.750	38.750	ppb	1.382	21189	40	96.9	80	120	
Ag	107	3	115	40.255	40.255	ppb	1.087	75872	40	100.6	80	120	
Cd	111	3	115	39.065	39.065	ppb	1.373	10764	40	97.7	80	120	
Sn	120	3	115	37.054	37.054	ppb	0.329	33809	40	92.6	80	120	
Sb	121	3	115	39.218	39.218	ppb	1.150	34698	40	98.0	80	120	
Ba	137	3	115	42.224	42.224	ppb	1.974	12351	40	105.6	80	120	
Tl	205	3	193	37.858	37.858	ppb	1.253	185748	40	94.6	80	120	
(Pb)	206	3	193	39.483	39.483	ppb	1.164	64756	40	98.7	80	120	
(Pb)	207	3	193	38.891	38.891	ppb	1.341	56750	40	97.2	80	120	
Pb	208	3	193	39.015	39.015	ppb	0.900	258766	40	97.5	80	120	
Th	232	3	193	36.953	36.953	ppb	1.318	254121	40	92.4	80	120	
U	238	3	193	39.601	39.601	ppb	1.174	280704	40	99.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4241607	1.74	3936624	107.75	60	120	
Sc (IS)	45	3	HMI He	629888	0.58	609520	103.34	60	120	
Ge Internal standard	72	2	HMI H2	2525113	3.23	2391663	105.58	60	120	
Ge Internal standard	72	3	HMI He	787381	0.87	756863	104.03	60	120	
In Internal Standard	115	3	HMI He	3150965	0.12	2988279	105.44	60	120	
Ir (IS)	193	3	HMI He	7308413	0.94	6996686	104.46	60	120	

Sample Report

Sample Table

Sample Name	590-20247-A-3-A
Data File Name	092SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:53:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b filt
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-82.89	2	2000	
Na	23	3	45	162886.840	ppb	162886.840	1.65	18002352	400000	
Mg	24	3	45	13829.562	ppb	13829.562	2.20	827431	400000	
Al	27	3	45	193.304	ppb	193.304	3.15	4649	400000	
K	39	3	45	26699.018	ppb	26699.018	1.83	1297106	400000	
Ca	40	2	45	56746.897	ppb	56746.897	1.41	32879863	400000	
V	51	3	72	2.729	ppb	2.729	6.21	2536	2000	
Cr	52	3	72	5.580	ppb	5.580	1.57	6127	5000	
Mn	55	3	72	24.615	ppb	24.615	0.59	10819	10000	
Fe	56	2	72	591.945	ppb	591.945	1.52	963864	10000	
Co	59	3	72	0.698	ppb	0.698	3.49	1010	2000	
Ni	60	3	72	4.336	ppb	4.336	2.70	1971	5000	
Cu	63	3	72	25.250	ppb	25.250	0.61	26122	5000	
Zn	66	3	72	120.067	ppb	120.067	2.98	21004	5000	
As	75	3	72	1.986	ppb	1.986	14.32	312	2000	
Se	78	2	72	0.833	ppb	0.833	14.98	53	2000	
Sr	88	3	72	261.812	ppb	261.812	0.19	160523	4000	
Mo	95	3	115	4.484	ppb	4.484	4.69	2556	2000	
Ag	107	3	115	0.016	ppb	0.016	53.27	70	100	
Cd	111	3	115	0.107	ppb	0.107	55.10	48	2000	
Sn	120	3	115	0.478	ppb	0.478	13.31	1473	2000	
Sb	121	3	115	0.636	ppb	0.636	21.15	720	1000	
Ba	137	3	115	60.797	ppb	60.797	2.80	18132	5000	
Tl	205	3	193	-0.088	ppb	-0.088	-4.78	455	2000	
(Pb)	206	3	193	1.101	ppb	1.101	2.80	2302	100	
(Pb)	207	3	193	1.072	ppb	1.072	2.27	2284	100	
Pb	208	3	193	1.063	ppb	1.063	2.33	9265	5000	
Th	232	3	193	2.241	ppb	2.241	14.47	23624	2000	
U	238	3	193	1.129	ppb	1.129	0.53	10481	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4225965	1.61	3936624	107.35	60	120	
Sc (IS)	45	3	HMI He	641960	1.17	609520	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2558456	2.10	2391663	106.97	60	120	
Ge Internal standard	72	3	HMI He	799190	0.46	756863	105.59	60	120	
In Internal Standard	115	3	HMI He	3222049	2.25	2988279	107.82	60	120	
Ir (IS)	193	3	HMI He	7456997	1.20	6996686	106.58	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	093_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:54:50-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.907	ppb	1.700	1954	50	99.8	90	110	
Na	23	3	45	46120.602	ppb	1.901	4968440	51000	90.4	90	110	
Mg	24	3	45	9922.448	ppb	1.322	576985	11000	90.2	90	110	
Al	27	3	45	993.172	ppb	2.960	22654	1000	99.3	90	110	
K	39	3	45	10265.524	ppb	3.390	501639	11000	93.3	90	110	
Ca	40	2	45	10311.004	ppb	1.317	5760902	11000	93.7	90	110	
V	51	3	72	49.735	ppb	0.470	31178	50	99.5	90	110	
Cr	52	3	72	51.125	ppb	3.075	40048	50	102.2	90	110	
Mn	55	3	72	50.819	ppb	1.448	21231	50	101.6	90	110	
Fe	56	2	72	1038.243	ppb	2.585	1604884	1000	103.8	90	110	
Co	59	3	72	50.224	ppb	1.578	64536	50	100.4	90	110	
Ni	60	3	72	49.097	ppb	0.867	18068	50	98.2	90	110	
Cu	63	3	72	50.301	ppb	2.633	49464	50	100.6	90	110	
Zn	66	3	72	50.554	ppb	0.167	8663	50	101.1	90	110	
As	75	3	72	51.840	ppb	2.655	5940	50	103.7	90	110	
Se	78	2	72	52.743	ppb	0.196	2973	50	105.5	90	110	
Sr	88	3	72	102.274	ppb	1.779	60325	100	102.3	90	110	
Mo	95	3	115	49.083	ppb	0.786	26514	50	98.2	90	110	
Ag	107	3	115	48.661	ppb	2.054	90639	50	97.3	90	110	
Cd	111	3	115	48.589	ppb	3.221	13230	50	97.2	90	110	
Sn	120	3	115	47.794	ppb	1.959	42812	50	95.6	90	110	
Sb	121	3	115	49.820	ppb	1.035	43529	50	99.6	90	110	
Ba	137	3	115	50.136	ppb	1.394	14476	50	100.3	90	110	
Tl	205	3	193	48.532	ppb	2.619	232769	50	97.1	90	110	
(Pb)	206	3	193	48.762	ppb	1.702	78161	50	97.5	90	110	
(Pb)	207	3	193	48.883	ppb	0.924	69629	50	97.8	90	110	
Pb	208	3	193	48.944	ppb	0.948	317162	50	97.9	90	110	
Th	232	3	193	48.218	ppb	1.512	322028	50	96.4	90	110	
U	238	3	193	49.198	ppb	1.490	340729	50	98.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4058604	1.10	3936624	103.10	60	120	
Sc (IS)	45	3	HMI He	623653	1.62	609520	102.32	60	120	
Ge Internal standard	72	2	HMI H2	2447772	0.57	2391663	102.35	60	120	
Ge Internal standard	72	3	HMI He	766940	0.82	756863	101.33	60	120	
In Internal Standard	115	3	HMI He	3114420	0.40	2988279	104.22	60	120	
Ir (IS)	193	3	HMI He	7152029	0.42	6996686	102.22	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	094_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:56:37-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-175.5	3	0.5	
Na	23	3	45	47.964	ppb	18.2	28785	25	>RL
Mg	24	3	45	1.027	ppb	81.7	831	25	
Al	27	3	45	-1.688	ppb	-72.0	90	15	
K	39	3	45	-4.298	ppb	-379.8	27334	50	
V	51	3	72	0.757	ppb	18.9	1214	1	
Cr	52	3	72	-0.035	ppb	-238.0	1649	1	
Mn	55	3	72	-0.018	ppb	-490.1	182	0.5	
Co	59	3	72	-0.007	ppb	-129.1	63	0.5	
Ni	60	3	72	0.031	ppb	345.8	332	1	
Cu	63	3	72	0.030	ppb	230.7	496	1	
Zn	66	3	72	-0.239	ppb	-91.5	262	5	
As	75	3	72	0.029	ppb	334.1	77	1	
Se	78	2	72	0.011	ppb	197.1	5	1	
Sr	88	3	72	-0.030	ppb	-256.4	232	0.5	
Mo	95	3	115	0.049	ppb	96.3	80	0.5	
Ag	107	3	115	0.009	ppb	164.3	55	1	
Cd	111	3	115	-0.026	ppb	-71.7	10	0.5	
Sn	120	3	115	-0.013	ppb	-927.0	985	1	
Sb	121	3	115	-0.016	ppb	-317.3	128	0.6	
Ba	137	3	115	-0.111	ppb	-40.8	70	0.5	
Tl	205	3	193	-0.069	ppb	-32.6	520	0.1	
(Pb)	206	3	193	-0.072	ppb	-37.9	337	1	
(Pb)	207	3	193	-0.063	ppb	-12.1	588	1	
Pb	208	3	193	-0.054	ppb	-21.4	1686	0.5	
Th	232	3	193	1.739	ppb	12.1	19310	1	>RL
U	238	3	193	0.020	ppb	82.8	2412	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4076326	1.42	3936624	103.55	60	120	
Sc (IS)	45	3	HMI He	613088	0.82	609520	100.59	60	120	
Ge Internal standard	72	2	HMI H2	2437541	1.01	2391663	101.92	60	120	
Ge Internal standard	72	3	HMI He	758506	0.72	756863	100.22	60	120	
In Internal Standard	115	3	HMI He	3085971	1.79	2988279	103.27	60	120	
Ir (IS)	193	3	HMI He	7119400	3.15	6996686	101.75	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	095_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:58:26-06:00
Sample Type	Blank
Dilution	1
Comment	608984 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.084	ppb	-85.29810963	2	0.5
Na	23	3	45	40.127	ppb	12.75160892	28564	25
Mg	24	3	45	-0.425	ppb	-382.2468311	764	25
Al	27	3	45	1.157	ppb	156.4601325	157	15
K	39	3	45	-19.889	ppb	-114.9460835	27197	50
Ca	40	2	45	4.257	ppb	29.87997565	29848	200
V	51	3	72	0.836	ppb	5.682867746	1279	1
Cr	52	3	72	-0.016	ppb	-52.78139698	1686	1
Mn	55	3	72	0.184	ppb	84.75112884	268	0.5
Fe	56	2	72	4.414	ppb	11.87156484	24085	50
Co	59	3	72	0.002	ppb	1366.584667	75	0.5
Ni	60	3	72	-0.226	ppb	-16.70561547	243	1
Cu	63	3	72	0.033	ppb	40.97504732	506	1
Zn	66	3	72	5.186	ppb	8.901231564	1164	5
As	75	3	72	0.122	ppb	145.3331813	88	1
(Se)	78	3	72	1.401	ppb	52.6846484	30	1
Sr	88	3	72	-0.066	ppb	-34.74179611	213	0.5
Mo	95	3	115	-0.035	ppb	-69.78161744	35	0.5
Ag	107	3	115	0.001	ppb	1397.674608	40	1
Cd	111	3	115	-0.015	ppb	-186.0572267	13	0.5
Sn	120	3	115	0.340	ppb	13.01324535	1308	1
Sb	121	3	115	-0.042	ppb	-40.6443549	107	0.6
Ba	137	3	115	-0.033	ppb	-117.5122285	93	0.5
Tl	205	3	193	-0.087	ppb	-6.842555303	436	0.1
(Pb)	206	3	193	-0.063	ppb	-35.36996248	351	1
(Pb)	207	3	193	-0.075	ppb	-109.0161451	570	1
Pb	208	3	193	-0.055	ppb	-20.8755518	1683	0.5
Th	232	3	193	0.350	ppb	25.42954326	10321	1
U	238	3	193	0.015	ppb	144.7857104	2381	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4059072	1.58	3936624	103.11	60	120	
Sc (IS)	45	3	HMI He	626220	0.52	609520	102.74	60	120	
Ge Internal standard	72	2	HMI H2	2472059	1.06	2391663	103.36	60	120	
Ge Internal standard	72	3	HMI He	769118	0.55	756863	101.62	60	120	
In Internal Standard	115	3	HMI He	3126968	0.41	2988279	104.64	60	120	
Ir (IS)	193	3	HMI He	7132243	2.23	6996686	101.94	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608984/2-A
Data File Name	096_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:00:15-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608984 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.419	39.419	ppb	3.519	1539	40	98.5	80	120	
Na	23	3	45	885.573	885.573	ppb	1.636	118658	40	2213.9	80	120	>+/-20%
Mg	24	3	45	723.660	723.660	ppb	3.153	42657	40	1809.2	80	120	>+/-20%
Al	27	3	45	788.243	788.243	ppb	1.146	17946	40	1970.6	80	120	>+/-20%
K	39	3	45	767.036	767.036	ppb	6.306	63165	40	1917.6	80	120	>+/-20%
Ca	40	2	45	849.056	849.056	ppb	2.986	492018	40	2122.6	80	120	>+/-20%
V	51	3	72	39.281	39.281	ppb	1.147	25012	40	98.2	80	120	
Cr	52	3	72	40.537	40.537	ppb	1.467	32400	40	101.3	80	120	
Mn	55	3	72	41.558	41.558	ppb	3.165	17556	40	103.9	80	120	
Fe	56	2	72	830.416	830.416	ppb	0.788	1293772	40	2076.0	80	120	>+/-20%
(Fe)	56	3	72	803.814	803.814	ppb	0.336	534828	40	2009.5	80	120	>+/-20%
Co	59	3	72	39.954	39.954	ppb	0.438	51827	40	99.9	80	120	
Ni	60	3	72	39.198	39.198	ppb	1.129	14624	40	98.0	80	120	
Cu	63	3	72	41.050	41.050	ppb	1.590	40828	40	102.6	80	120	
Zn	66	3	72	39.183	39.183	ppb	2.697	6845	40	98.0	80	120	
As	75	3	72	40.550	40.550	ppb	1.796	4705	40	101.4	80	120	
Se	78	2	72	42.059	42.059	ppb	3.170	2383	40	105.1	80	120	
(Se)	78	3	72	43.695	43.695	ppb	2.771	325	40	109.2	80	120	
Sr	88	3	72	80.909	80.909	ppb	1.568	48218	40	202.3	80	120	>+/-20%
Mo	95	3	115	38.444	38.444	ppb	1.883	20595	40	96.1	80	120	
Ag	107	3	115	39.916	39.916	ppb	1.484	73706	40	99.8	80	120	
Cd	111	3	115	39.348	39.348	ppb	0.521	10622	40	98.4	80	120	
Sn	120	3	115	37.072	37.072	ppb	1.744	33138	40	92.7	80	120	
Sb	121	3	115	39.102	39.102	ppb	1.325	33894	40	97.8	80	120	
Ba	137	3	115	40.871	40.871	ppb	2.096	11716	40	102.2	80	120	
Tl	205	3	193	38.612	38.612	ppb	1.165	187008	40	96.5	80	120	
(Pb)	206	3	193	39.090	39.090	ppb	2.054	63293	40	97.7	80	120	
(Pb)	207	3	193	38.371	38.371	ppb	2.755	55276	40	95.9	80	120	
Pb	208	3	193	38.672	38.672	ppb	1.834	253215	40	96.7	80	120	
Th	232	3	193	36.131	36.131	ppb	3.042	245430	40	90.3	80	120	
U	238	3	193	38.835	38.835	ppb	2.526	271786	40	97.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997262	0.30	3936624	101.54	60	120	
Sc (IS)	45	3	HMI He	621369	0.37	609520	101.94	60	120	
Ge Internal standard	72	2	HMI H2	2460417	1.94	2391663	102.87	60	120	
Ge Internal standard	72	3	HMI He	773961	0.25	756863	102.26	60	120	
In Internal Standard	115	3	HMI He	3087210	0.77	2988279	103.31	60	120	
Ir (IS)	193	3	HMI He	7216044	1.79	6996686	103.14	60	120	

Sample Report

Sample Table

Sample Name	280-175067-C-1-A
Data File Name	097SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:02:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.001	ppb	0.001	17499.86	5	2000	
Na	23	3	45	151468.658	ppb	151468.658	0.99	16149895	400000	
Mg	24	3	45	40619.339	ppb	40619.339	1.72	2343069	400000	
Al	27	3	45	44.941	ppb	44.941	7.67	1141	400000	
K	39	3	45	10343.325	ppb	10343.325	0.55	501836	400000	
Ca	40	2	45	69462.190	ppb	69462.190	0.85	38973465	400000	
V	51	3	72	1.020	ppb	1.020	15.88	1386	2000	
Cr	52	3	72	0.320	ppb	0.320	61.07	1929	5000	
Mn	55	3	72	61.943	ppb	61.943	1.16	25788	10000	
Fe	56	2	72	75.295	ppb	75.295	1.71	131483	10000	
Co	59	3	72	0.370	ppb	0.370	5.96	546	2000	
Ni	60	3	72	3.091	ppb	3.091	14.55	1438	5000	
Cu	63	3	72	13.656	ppb	13.656	1.35	13748	5000	
Zn	66	3	72	1005.584	ppb	1005.584	1.40	166273	5000	
As	75	3	72	0.790	ppb	0.790	22.82	163	2000	
Se	78	2	72	1.116	ppb	1.116	16.24	67	2000	
Sr	88	3	72	3341.608	ppb	3341.608	2.31	1959329	4000	
Mo	95	3	115	16.492	ppb	16.492	4.11	8960	2000	
Ag	107	3	115	0.024	ppb	0.024	22.55	83	100	
Cd	111	3	115	4.066	ppb	4.066	9.47	1124	2000	
Sn	120	3	115	-0.096	ppb	-0.096	-58.84	923	2000	
Sb	121	3	115	7.892	ppb	7.892	6.36	7027	1000	
Ba	137	3	115	99.129	ppb	99.129	1.78	28572	5000	
Tl	205	3	193	-0.010	ppb	-0.010	-126.75	813	2000	
(Pb)	206	3	193	0.661	ppb	0.661	10.40	1516	100	
(Pb)	207	3	193	0.634	ppb	0.634	9.53	1584	100	
Pb	208	3	193	0.649	ppb	0.649	4.78	6269	5000	
Th	232	3	193	2.215	ppb	2.215	12.26	22663	2000	
U	238	3	193	3.170	ppb	3.170	0.75	24253	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4092203	2.16	3936624	103.95	60	120	
Sc (IS)	45	3	HMI He	619252	0.50	609520	101.60	60	120	
Ge Internal standard	72	2	HMI H2	2433953	1.96	2391663	101.77	60	120	
Ge Internal standard	72	3	HMI He	765540	0.92	756863	101.15	60	120	
In Internal Standard	115	3	HMI He	3119971	0.65	2988279	104.41	60	120	
Ir (IS)	193	3	HMI He	7200862	1.70	6996686	102.92	60	120	

Sample Report

Sample Table

Sample Name	280-175067-C-2-A
Data File Name	098SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:03:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.009	ppb	0.009	29.32	5	2000	
Na	23	3	45	879567.759	ppb	879567.759	0.25	94856412	400000	
Mg	24	3	45	69245.716	ppb	69245.716	1.08	4044365	400000	
Al	27	3	45	57.371	ppb	57.371	16.03	1438	400000	
K	39	3	45	32327.446	ppb	32327.446	0.19	1528514	400000	
Ca	40	2	45	157915.045	ppb	157915.045	2.10	88726228	400000	
V	51	3	72	0.456	ppb	0.456	42.10	1038	2000	
Cr	52	3	72	0.295	ppb	0.295	33.03	1903	5000	
Mn	55	3	72	7.428	ppb	7.428	4.98	3245	10000	
Fe	56	2	72	98.735	ppb	98.735	4.02	165678	10000	
Co	59	3	72	0.205	ppb	0.205	10.89	333	2000	
Ni	60	3	72	0.741	ppb	0.741	20.83	588	5000	
Cu	63	3	72	1.198	ppb	1.198	6.42	1629	5000	
Zn	66	3	72	333.962	ppb	333.962	1.16	55179	5000	
As	75	3	72	13.627	ppb	13.627	2.02	1606	2000	
Se	78	2	72	0.095	ppb	0.095	53.98	9	2000	
Sr	88	3	72	10454.075	ppb	10454.075	1.31	6102670	4000	
Mo	95	3	115	0.703	ppb	0.703	7.74	430	2000	
Ag	107	3	115	0.017	ppb	0.017	109.20	70	100	
Cd	111	3	115	0.991	ppb	0.991	6.23	285	2000	
Sn	120	3	115	-0.089	ppb	-0.089	-110.48	921	2000	
Sb	121	3	115	0.073	ppb	0.073	25.49	205	1000	
Ba	137	3	115	22.053	ppb	22.053	0.28	6378	5000	
Tl	205	3	193	-0.105	ppb	-0.105	-8.70	345	2000	
(Pb)	206	3	193	0.324	ppb	0.324	8.39	945	100	
(Pb)	207	3	193	0.310	ppb	0.310	24.92	1088	100	
Pb	208	3	193	0.331	ppb	0.331	6.79	4068	5000	
Th	232	3	193	0.592	ppb	0.592	35.72	11613	2000	
U	238	3	193	1.392	ppb	1.392	4.51	11546	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4101023	4.25	3936624	104.18	60	120	
Sc (IS)	45	3	HMI He	627118	1.20	609520	102.89	60	120	
Ge Internal standard	72	2	HMI H2	2413944	2.87	2391663	100.93	60	120	
Ge Internal standard	72	3	HMI He	762154	0.60	756863	100.70	60	120	
In Internal Standard	115	3	HMI He	3091856	0.58	2988279	103.47	60	120	
Ir (IS)	193	3	HMI He	6963746	1.66	6996686	99.53	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A
Data File Name	099SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:05:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-82.58	2	2000	
Na	23	3	45	18064.090	ppb	18064.090	1.85	1976160	400000	
Mg	24	3	45	13215.431	ppb	13215.431	1.61	774331	400000	
Al	27	3	45	6.805	ppb	6.805	37.79	287	400000	
K	39	3	45	5943.480	ppb	5943.480	0.31	304670	400000	
Ca	40	2	45	53679.410	ppb	53679.410	1.11	30350096	400000	
V	51	3	72	8.907	ppb	8.907	3.35	6315	2000	
Cr	52	3	72	19.449	ppb	19.449	2.06	16557	5000	
Mn	55	3	72	0.303	ppb	0.303	14.39	322	10000	
Fe	56	2	72	8.120	ppb	8.120	7.73	30939	10000	
Co	59	3	72	0.024	ppb	0.024	16.88	105	2000	
Ni	60	3	72	-0.152	ppb	-0.152	-85.52	273	5000	
Cu	63	3	72	0.312	ppb	0.312	7.79	790	5000	
Zn	66	3	72	1.074	ppb	1.074	20.25	490	5000	
As	75	3	72	1.851	ppb	1.851	14.69	288	2000	
Se	78	2	72	1.995	ppb	1.995	8.62	122	2000	
Sr	88	3	72	283.172	ppb	283.172	0.45	169344	4000	
Mo	95	3	115	1.186	ppb	1.186	11.46	691	2000	
Ag	107	3	115	0.011	ppb	0.011	81.26	58	100	
Cd	111	3	115	-0.039	ppb	-0.039	-26.21	7	2000	
Sn	120	3	115	-0.102	ppb	-0.102	-80.65	915	2000	
Sb	121	3	115	0.212	ppb	0.212	47.14	325	1000	
Ba	137	3	115	48.722	ppb	48.722	2.71	14022	5000	
Tl	205	3	193	-0.095	ppb	-0.095	-5.78	390	2000	
(Pb)	206	3	193	-0.047	ppb	-0.047	-97.95	371	100	
(Pb)	207	3	193	-0.065	ppb	-0.065	-85.74	575	100	
Pb	208	3	193	-0.039	ppb	-0.039	-47.32	1753	5000	
Th	232	3	193	-0.115	ppb	-0.115	-49.49	7162	2000	
U	238	3	193	2.246	ppb	2.246	1.82	17340	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4123693	3.23	3936624	104.75	60	120	
Sc (IS)	45	3	HMI He	628489	0.93	609520	103.11	60	120	
Ge Internal standard	72	2	HMI H2	2565381	0.59	2391663	107.26	60	120	
Ge Internal standard	72	3	HMI He	779611	1.32	756863	103.01	60	120	
In Internal Standard	115	3	HMI He	3104653	1.99	2988279	103.89	60	120	
Ir (IS)	193	3	HMI He	6995900	2.60	6996686	99.99	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-Asd@5
Data File Name	100SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:07:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-85.09	2	2000	
Na	23	3	45	3567.832	ppb	3567.832	1.67	411327	400000	
Mg	24	3	45	2676.096	ppb	2676.096	0.63	158000	400000	
Al	27	3	45	3.141	ppb	3.141	35.87	204	400000	
K	39	3	45	1196.187	ppb	1196.187	2.25	84162	400000	
Ca	40	2	45	10808.632	ppb	10808.632	1.35	6179306	400000	
V	51	3	72	2.348	ppb	2.348	4.48	2304	2000	
Cr	52	3	72	3.852	ppb	3.852	5.07	4798	5000	
Mn	55	3	72	1.572	ppb	1.572	13.21	881	10000	
Fe	56	2	72	5.774	ppb	5.774	7.00	27699	10000	
Co	59	3	72	-0.009	ppb	-0.009	-136.70	63	2000	
Ni	60	3	72	0.010	ppb	0.010	901.43	343	5000	
Cu	63	3	72	0.180	ppb	0.180	33.32	678	5000	
Zn	66	3	72	2.907	ppb	2.907	8.67	821	5000	
As	75	3	72	0.342	ppb	0.342	38.51	118	2000	
Se	78	2	72	0.359	ppb	0.359	16.48	26	2000	
Sr	88	3	72	56.578	ppb	56.578	1.68	35058	4000	
Mo	95	3	115	0.265	ppb	0.265	13.58	200	2000	
Ag	107	3	115	0.023	ppb	0.023	42.44	82	100	
Cd	111	3	115	-0.022	ppb	-0.022	-48.46	12	2000	
Sn	120	3	115	-0.039	ppb	-0.039	-292.05	986	2000	
Sb	121	3	115	0.049	ppb	0.049	44.64	188	1000	
Ba	137	3	115	9.739	ppb	9.739	4.11	2937	5000	
Tl	205	3	193	-0.100	ppb	-0.100	-7.08	378	2000	
(Pb)	206	3	193	0.306	ppb	0.306	8.25	946	100	
(Pb)	207	3	193	0.266	ppb	0.266	16.76	1061	100	
Pb	208	3	193	0.287	ppb	0.287	8.16	3918	5000	
Th	232	3	193	-0.163	ppb	-0.163	-45.57	7052	2000	
U	238	3	193	0.447	ppb	0.447	1.75	5389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4153489	2.33	3936624	105.51	60	120	
Sc (IS)	45	3	HMI He	630813	0.87	609520	103.49	60	120	
Ge Internal standard	72	2	HMI H2	2614048	1.92	2391663	109.30	60	120	
Ge Internal standard	72	3	HMI He	802957	0.46	756863	106.09	60	120	
In Internal Standard	115	3	HMI He	3161208	1.05	2988279	105.79	60	120	
Ir (IS)	193	3	HMI He	7195674	0.92	6996686	102.84	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-B MS
Data File Name	101SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:09:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.482	ppb	41.482	6.63	1688	2000	
Na	23	3	45	19334.124	ppb	19334.124	1.07	2143758	400000	
Mg	24	3	45	14974.241	ppb	14974.241	1.43	889737	400000	
Al	27	3	45	767.052	ppb	767.052	2.38	17919	400000	
K	39	3	45	6973.304	ppb	6973.304	0.97	357623	400000	
Ca	40	2	45	56976.183	ppb	56976.183	0.58	32353915	400000	
V	51	3	72	47.639	ppb	47.639	0.66	31860	2000	
Cr	52	3	72	57.843	ppb	57.843	0.67	48055	5000	
Mn	55	3	72	39.182	ppb	39.182	2.44	17492	10000	
Fe	56	2	72	771.194	ppb	771.194	2.88	1293242	10000	
Co	59	3	72	37.997	ppb	37.997	2.04	52053	2000	
Ni	60	3	72	37.178	ppb	37.178	0.64	14665	5000	
Cu	63	3	72	39.101	ppb	39.101	0.94	41094	5000	
Zn	66	3	72	39.169	ppb	39.169	1.77	7227	5000	
As	75	3	72	40.615	ppb	40.615	2.03	4977	2000	
Se	78	2	72	41.600	ppb	41.600	3.41	2536	2000	
Sr	88	3	72	364.209	ppb	364.209	0.66	228271	4000	
Mo	95	3	115	39.626	ppb	39.626	1.07	21643	2000	
Ag	107	3	115	40.114	ppb	40.114	1.49	75513	100	
Cd	111	3	115	39.020	ppb	39.020	0.78	10739	2000	
Sn	120	3	115	38.390	ppb	38.390	1.04	34950	2000	
Sb	121	3	115	38.957	ppb	38.957	0.52	34429	1000	
Ba	137	3	115	90.567	ppb	90.567	1.26	26341	5000	
Tl	205	3	193	38.594	ppb	38.594	1.39	189280	2000	
(Pb)	206	3	193	38.975	ppb	38.975	1.45	63907	100	
(Pb)	207	3	193	38.034	ppb	38.034	1.17	55499	100	
Pb	208	3	193	38.691	ppb	38.691	0.67	256549	5000	
Th	232	3	193	36.371	ppb	36.371	1.25	250168	2000	
U	238	3	193	41.296	ppb	41.296	0.50	292535	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4141485	1.02	3936624	105.20	60	120	
Sc (IS)	45	3	HMI He	637497	0.35	609520	104.59	60	120	
Ge Internal standard	72	2	HMI H2	2646106	1.14	2391663	110.64	60	120	
Ge Internal standard	72	3	HMI He	817346	0.50	756863	107.99	60	120	
In Internal Standard	115	3	HMI He	3147333	0.75	2988279	105.32	60	120	
Ir (IS)	193	3	HMI He	7305965	0.44	6996686	104.42	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-C MSD
Data File Name	102SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:11:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.138	ppb	40.138	3.83	1616	2000	
Na	23	3	45	19584.623	ppb	19584.623	1.56	2170095	400000	
Mg	24	3	45	15082.089	ppb	15082.089	0.76	895691	400000	
Al	27	3	45	777.926	ppb	777.926	2.21	18160	400000	
K	39	3	45	7005.783	ppb	7005.783	1.46	358948	400000	
Ca	40	2	45	57439.541	ppb	57439.541	1.91	32926144	400000	
V	51	3	72	47.370	ppb	47.370	0.38	31727	2000	
Cr	52	3	72	58.007	ppb	58.007	1.42	48241	5000	
Mn	55	3	72	40.053	ppb	40.053	1.41	17896	10000	
Fe	56	2	72	788.049	ppb	788.049	2.21	1312699	10000	
Co	59	3	72	37.781	ppb	37.781	2.19	51816	2000	
Ni	60	3	72	37.190	ppb	37.190	3.05	14685	5000	
Cu	63	3	72	38.494	ppb	38.494	1.20	40509	5000	
Zn	66	3	72	38.616	ppb	38.616	1.55	7138	5000	
As	75	3	72	41.381	ppb	41.381	2.51	5075	2000	
Se	78	2	72	41.474	ppb	41.474	3.12	2513	2000	
Sr	88	3	72	367.999	ppb	367.999	1.31	230907	4000	
Mo	95	3	115	38.870	ppb	38.870	0.70	21616	2000	
Ag	107	3	115	38.852	ppb	38.852	0.50	74473	100	
Cd	111	3	115	38.774	ppb	38.774	1.33	10866	2000	
Sn	120	3	115	38.016	ppb	38.016	0.14	35251	2000	
Sb	121	3	115	38.979	ppb	38.979	1.40	35072	1000	
Ba	137	3	115	89.552	ppb	89.552	1.12	26522	5000	
Tl	205	3	193	39.257	ppb	39.257	0.70	191249	2000	
(Pb)	206	3	193	39.297	ppb	39.297	1.29	64007	100	
(Pb)	207	3	193	38.627	ppb	38.627	0.28	55985	100	
Pb	208	3	193	38.885	ppb	38.885	1.39	256128	5000	
Th	232	3	193	39.061	ppb	39.061	0.61	266309	2000	
U	238	3	193	41.572	ppb	41.572	0.62	292544	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4181299	1.32	3936624	106.22	60	120	
Sc (IS)	45	3	HMI He	637143	0.90	609520	104.53	60	120	
Ge Internal standard	72	2	HMI H2	2629529	1.56	2391663	109.95	60	120	
Ge Internal standard	72	3	HMI He	818370	1.43	756863	108.13	60	120	
In Internal Standard	115	3	HMI He	3204587	0.57	2988279	107.24	60	120	
Ir (IS)	193	3	HMI He	7258465	1.26	6996686	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A pds
Data File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:12:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	100.348	ppb	100.348	5.79	4007	2000	
Na	23	3	45	22933.453	ppb	22933.453	2.52	2509616	400000	
Mg	24	3	45	15503.882	ppb	15503.882	2.82	910866	400000	
Al	27	3	45	2011.577	ppb	2011.577	1.04	46259	400000	
K	39	3	45	7924.753	ppb	7924.753	0.47	398006	400000	
Ca	40	2	45	55108.681	ppb	55108.681	2.94	31178927	400000	
V	51	3	72	104.212	ppb	104.212	1.24	67420	2000	
Cr	52	3	72	117.161	ppb	117.161	0.69	93666	5000	
Mn	55	3	72	98.808	ppb	98.808	1.88	42963	10000	
Fe	56	2	72	1023.124	ppb	1023.124	1.25	1666996	10000	
Co	59	3	72	97.128	ppb	97.128	0.74	130415	2000	
Ni	60	3	72	95.093	ppb	95.093	1.56	36266	5000	
Cu	63	3	72	100.621	ppb	100.621	1.57	102953	5000	
Zn	66	3	72	198.070	ppb	198.070	1.11	34558	5000	
As	75	3	72	106.763	ppb	106.763	1.73	12706	2000	
Se	78	2	72	100.870	ppb	100.870	3.89	5988	2000	
Sr	88	3	72	373.548	ppb	373.548	1.32	229652	4000	
Mo	95	3	115	98.244	ppb	98.244	2.14	54310	2000	
Ag	107	3	115	25.872	ppb	25.872	0.67	49394	100	
Cd	111	3	115	95.241	ppb	95.241	3.13	26543	2000	
Sn	120	3	115	97.082	ppb	97.082	2.31	88018	2000	
Sb	121	3	115	94.998	ppb	94.998	0.62	84903	1000	
Ba	137	3	115	145.784	ppb	145.784	1.08	42923	5000	
Tl	205	3	193	96.735	ppb	96.735	0.21	470375	2000	
(Pb)	206	3	193	96.489	ppb	96.489	1.02	156628	100	
(Pb)	207	3	193	95.360	ppb	95.360	0.87	137307	100	
Pb	208	3	193	96.144	ppb	96.144	0.61	630737	5000	
Th	232	3	193	104.251	ppb	104.251	0.77	697621	2000	
U	238	3	193	211.083	ppb	211.083	2.16	1476860	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4127139	1.40	3936624	104.84	60	120	
Sc (IS)	45	3	HMI He	630383	0.82	609520	103.42	60	120	
Ge Internal standard	72	2	HMI H2	2579859	0.79	2391663	107.87	60	120	
Ge Internal standard	72	3	HMI He	801814	0.98	756863	105.94	60	120	
In Internal Standard	115	3	HMI He	3190924	1.32	2988279	106.78	60	120	
Ir (IS)	193	3	HMI He	7263891	1.22	6996686	103.82	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	104_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:14:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.292	ppb	8.873	1959	50	98.6	90	110	
Na	23	3	45	46966.072	ppb	2.337	5103972	51000	92.1	90	110	
Mg	24	3	45	10094.290	ppb	0.145	592191	11000	91.8	90	110	
Al	27	3	45	993.926	ppb	4.318	22871	1000	99.4	90	110	
K	39	3	45	10407.758	ppb	0.632	512837	11000	94.6	90	110	
Ca	40	2	45	10207.763	ppb	0.810	5788642	11000	92.8	90	110	
V	51	3	72	50.732	ppb	2.512	32016	50	101.5	90	110	
Cr	52	3	72	51.373	ppb	1.495	40529	50	102.7	90	110	
Mn	55	3	72	51.350	ppb	0.702	21608	50	102.7	90	110	
Fe	56	2	72	1030.200	ppb	2.085	1608904	1000	103.0	90	110	
Co	59	3	72	50.372	ppb	2.334	65199	50	100.7	90	110	
Ni	60	3	72	49.430	ppb	1.381	18321	50	98.9	90	110	
Cu	63	3	72	51.368	ppb	1.804	50871	50	102.7	90	110	
Zn	66	3	72	49.943	ppb	6.192	8622	50	99.9	90	110	
As	75	3	72	53.356	ppb	3.879	6155	50	106.7	90	110	
Se	78	2	72	52.660	ppb	0.952	2999	50	105.3	90	110	
Sr	88	3	72	103.989	ppb	1.556	61782	100	104.0	90	110	
Mo	95	3	115	48.411	ppb	2.031	26917	50	96.8	90	110	
Ag	107	3	115	47.096	ppb	1.069	90296	50	94.2	90	110	
Cd	111	3	115	49.763	ppb	0.463	13945	50	99.5	90	110	
Sn	120	3	115	47.930	ppb	2.223	44183	50	95.9	90	110	
Sb	121	3	115	49.271	ppb	2.240	44303	50	98.5	90	110	
Ba	137	3	115	49.276	ppb	0.915	14646	50	98.6	90	110	
Tl	205	3	193	48.388	ppb	2.424	236856	50	96.8	90	110	
(Pb)	206	3	193	48.184	ppb	5.276	78788	50	96.4	90	110	
(Pb)	207	3	193	48.436	ppb	2.913	70411	50	96.9	90	110	
Pb	208	3	193	48.134	ppb	4.261	318257	50	96.3	90	110	
Th	232	3	193	51.267	ppb	1.844	348961	50	102.5	90	110	
U	238	3	193	48.569	ppb	3.676	343251	50	97.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4119449	0.54	3936624	104.64	60	120	
Sc (IS)	45	3	HMI He	629136	0.97	609520	103.22	60	120	
Ge Internal standard	72	2	HMI H2	2473093	0.91	2391663	103.40	60	120	
Ge Internal standard	72	3	HMI He	772583	1.17	756863	102.08	60	120	
In Internal Standard	115	3	HMI He	3205849	1.70	2988279	107.28	60	120	
Ir (IS)	193	3	HMI He	7302275	2.88	6996686	104.37	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	105_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:16:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.126	ppb	0.0	0	0.5	
Na	23	3	45	44.284	ppb	6.6	29169	25	>RL
Mg	24	3	45	1.164	ppb	144.2	861	25	
Al	27	3	45	-0.051	ppb	-42.9	130	15	
K	39	3	45	-12.688	ppb	-92.0	27678	50	
V	51	3	72	0.643	ppb	34.1	1184	1	
Cr	52	3	72	-0.052	ppb	-283.3	1693	1	
Mn	55	3	72	0.042	ppb	81.7	213	0.5	
Co	59	3	72	-0.007	ppb	-216.5	65	0.5	
Ni	60	3	72	-0.032	ppb	-435.8	320	1	
Cu	63	3	72	0.015	ppb	120.4	498	1	
Zn	66	3	72	-0.174	ppb	-125.5	282	5	
As	75	3	72	-0.253	ppb	-43.3	47	1	
Se	78	2	72	-0.015	ppb	-365.4	3	1	
Sr	88	3	72	-0.012	ppb	-384.2	250	0.5	
Mo	95	3	115	0.006	ppb	366.7	58	0.5	
Ag	107	3	115	0.008	ppb	55.4	55	1	
Cd	111	3	115	-0.004	ppb	-300.7	17	0.5	
Sn	120	3	115	0.179	ppb	30.4	1181	1	
Sb	121	3	115	-0.006	ppb	-89.1	140	0.6	
Ba	137	3	115	-0.037	ppb	-189.2	93	0.5	
Tl	205	3	193	-0.063	ppb	-29.2	565	0.1	
(Pb)	206	3	193	-0.084	ppb	-13.1	327	1	
(Pb)	207	3	193	-0.123	ppb	-7.2	516	1	
Pb	208	3	193	-0.079	ppb	-4.4	1568	0.5	
Th	232	3	193	1.971	ppb	15.7	21311	1	>RL
U	238	3	193	0.015	ppb	139.3	2434	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071310	2.14	3936624	103.42	60	120	
Sc (IS)	45	3	HMI He	629644	0.38	609520	103.30	60	120	
Ge Internal standard	72	2	HMI H2	2510933	0.83	2391663	104.99	60	120	
Ge Internal standard	72	3	HMI He	784650	0.29	756863	103.67	60	120	
In Internal Standard	115	3	HMI He	3166850	0.57	2988279	105.98	60	120	
Ir (IS)	193	3	HMI He	7297726	1.83	6996686	104.30	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-1-A
Data File Name	106SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:18:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-172.20	3	2000	
Na	23	3	45	17285.573	ppb	17285.573	1.83	1904213	400000	
Mg	24	3	45	14370.697	ppb	14370.697	2.45	847025	400000	
Al	27	3	45	92.376	ppb	92.376	6.65	2256	400000	
K	39	3	45	2023.414	ppb	2023.414	0.83	123105	400000	
Ca	40	2	45	52927.291	ppb	52927.291	2.96	30568405	400000	
V	51	3	72	0.941	ppb	0.941	14.99	1388	2000	
Cr	52	3	72	0.421	ppb	0.421	48.99	2079	5000	
Mn	55	3	72	19.826	ppb	19.826	2.41	8693	10000	
Fe	56	2	72	107.454	ppb	107.454	1.28	193535	10000	
Co	59	3	72	0.083	ppb	0.083	50.18	185	2000	
Ni	60	3	72	0.118	ppb	0.118	128.04	380	5000	
Cu	63	3	72	3.529	ppb	3.529	2.01	4047	5000	
Zn	66	3	72	16.114	ppb	16.114	3.94	3072	5000	
As	75	3	72	0.339	ppb	0.339	75.67	117	2000	
Se	78	2	72	0.405	ppb	0.405	20.52	29	2000	
Sr	88	3	72	140.516	ppb	140.516	0.96	85691	4000	
Mo	95	3	115	28.106	ppb	28.106	1.05	15416	2000	
Ag	107	3	115	0.020	ppb	0.020	39.51	77	100	
Cd	111	3	115	0.057	ppb	0.057	49.36	33	2000	
Sn	120	3	115	-0.135	ppb	-0.135	-36.56	900	2000	
Sb	121	3	115	0.080	ppb	0.080	68.93	215	1000	
Ba	137	3	115	59.685	ppb	59.685	1.71	17451	5000	
Tl	205	3	193	-0.093	ppb	-0.093	-13.95	418	2000	
(Pb)	206	3	193	0.036	ppb	0.036	26.18	518	100	
(Pb)	207	3	193	0.072	ppb	0.072	25.54	793	100	
Pb	208	3	193	0.050	ppb	0.050	22.59	2409	5000	
Th	232	3	193	0.631	ppb	0.631	29.66	12382	2000	
U	238	3	193	19.248	ppb	19.248	1.09	136891	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214375	3.44	3936624	107.06	60	120	
Sc (IS)	45	3	HMI He	632482	1.58	609520	103.77	60	120	
Ge Internal standard	72	2	HMI H2	2611510	2.10	2391663	109.19	60	120	
Ge Internal standard	72	3	HMI He	793772	0.37	756863	104.88	60	120	
In Internal Standard	115	3	HMI He	3157762	1.10	2988279	105.67	60	120	
Ir (IS)	193	3	HMI He	7268422	0.34	6996686	103.88	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-5-A
Data File Name	107SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:20:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-169.22	3	2000	
Na	23	3	45	12326.902	ppb	12326.902	2.03	1339107	400000	
Mg	24	3	45	14242.885	ppb	14242.885	0.30	823848	400000	
Al	27	3	45	511.727	ppb	511.727	2.57	11680	400000	
K	39	3	45	2115.777	ppb	2115.777	0.59	125028	400000	
Ca	40	2	45	53903.828	ppb	53903.828	0.60	30405221	400000	
V	51	3	72	1.133	ppb	1.133	22.22	1503	2000	
Cr	52	3	72	0.892	ppb	0.892	18.35	2437	5000	
Mn	55	3	72	41.118	ppb	41.118	1.41	17756	10000	
Fe	56	2	72	250.180	ppb	250.180	3.24	421554	10000	
Co	59	3	72	0.286	ppb	0.286	3.76	453	2000	
Ni	60	3	72	0.449	ppb	0.449	16.09	501	5000	
Cu	63	3	72	13.117	ppb	13.117	2.43	13668	5000	
Zn	66	3	72	32.597	ppb	32.597	5.07	5873	5000	
As	75	3	72	0.072	ppb	0.072	161.45	85	2000	
Se	78	2	72	0.364	ppb	0.364	30.88	26	2000	
Sr	88	3	72	142.978	ppb	142.978	1.50	86894	4000	
Mo	95	3	115	36.759	ppb	36.759	1.70	19795	2000	
Ag	107	3	115	0.010	ppb	0.010	112.33	57	100	
Cd	111	3	115	0.429	ppb	0.429	26.16	133	2000	
Sn	120	3	115	-0.142	ppb	-0.142	-32.07	878	2000	
Sb	121	3	115	0.081	ppb	0.081	51.88	212	1000	
Ba	137	3	115	60.370	ppb	60.370	0.97	17344	5000	
Tl	205	3	193	-0.091	ppb	-0.091	-7.42	428	2000	
(Pb)	206	3	193	0.375	ppb	0.375	4.04	1068	100	
(Pb)	207	3	193	0.391	ppb	0.391	29.80	1251	100	
Pb	208	3	193	0.411	ppb	0.411	11.31	4763	5000	
Th	232	3	193	0.233	ppb	0.233	52.18	9742	2000	
U	238	3	193	39.218	ppb	39.218	0.88	276334	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4113688	1.11	3936624	104.50	60	120	
Sc (IS)	45	3	HMI He	620544	0.39	609520	101.81	60	120	
Ge Internal standard	72	2	HMI H2	2582883	2.46	2391663	108.00	60	120	
Ge Internal standard	72	3	HMI He	791110	1.30	756863	104.52	60	120	
In Internal Standard	115	3	HMI He	3102767	1.49	2988279	103.83	60	120	
Ir (IS)	193	3	HMI He	7264165	0.74	6996686	103.82	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-A
Data File Name	108SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:22:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.003	ppb	-0.003	-4710.65	5	2000	
Na	23	3	45	11881.271	ppb	11881.271	2.86	1303634	400000	
Mg	24	3	45	13207.241	ppb	13207.241	0.22	771045	400000	
Al	27	3	45	57.115	ppb	57.115	8.41	1432	400000	
K	39	3	45	2008.452	ppb	2008.452	1.80	121211	400000	
Ca	40	2	45	51349.006	ppb	51349.006	2.39	29166001	400000	
V	51	3	72	0.879	ppb	0.879	8.53	1363	2000	
Cr	52	3	72	0.219	ppb	0.219	50.85	1944	5000	
Mn	55	3	72	10.201	ppb	10.201	3.82	4620	10000	
Fe	56	2	72	18.923	ppb	18.923	1.54	48533	10000	
Co	59	3	72	0.071	ppb	0.071	31.51	172	2000	
Ni	60	3	72	-0.091	ppb	-0.091	-132.86	305	5000	
Cu	63	3	72	7.646	ppb	7.646	4.08	8288	5000	
Zn	66	3	72	11.860	ppb	11.860	4.25	2371	5000	
As	75	3	72	0.131	ppb	0.131	218.45	93	2000	
Se	78	2	72	0.243	ppb	0.243	69.79	19	2000	
Sr	88	3	72	135.579	ppb	135.579	0.99	83609	4000	
Mo	95	3	115	36.229	ppb	36.229	4.28	19746	2000	
Ag	107	3	115	0.004	ppb	0.004	174.68	47	100	
Cd	111	3	115	0.325	ppb	0.325	10.49	107	2000	
Sn	120	3	115	-0.254	ppb	-0.254	-13.36	790	2000	
Sb	121	3	115	0.111	ppb	0.111	20.63	242	1000	
Ba	137	3	115	54.335	ppb	54.335	3.15	15812	5000	
Tl	205	3	193	-0.101	ppb	-0.101	-1.41	385	2000	
(Pb)	206	3	193	-0.025	ppb	-0.025	-76.56	428	100	
(Pb)	207	3	193	-0.054	ppb	-0.054	-125.21	623	100	
Pb	208	3	193	-0.031	ppb	-0.031	-58.25	1907	5000	
Th	232	3	193	0.007	ppb	0.007	1015.82	8409	2000	
U	238	3	193	37.220	ppb	37.220	1.89	267452	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4142560	0.98	3936624	105.23	60	120	
Sc (IS)	45	3	HMI He	626274	0.40	609520	102.75	60	120	
Ge Internal standard	72	2	HMI H2	2580345	0.82	2391663	107.89	60	120	
Ge Internal standard	72	3	HMI He	802602	0.53	756863	106.04	60	120	
In Internal Standard	115	3	HMI He	3141998	2.21	2988279	105.14	60	120	
Ir (IS)	193	3	HMI He	7406866	2.90	6996686	105.86	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-B MS
Data File Name	109SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:23:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.197	ppb	38.197	10.97	1533	2000	
Na	23	3	45	12592.389	ppb	12592.389	2.83	1388231	400000	
Mg	24	3	45	13986.585	ppb	13986.585	1.17	821362	400000	
Al	27	3	45	819.554	ppb	819.554	2.99	18915	400000	
K	39	3	45	2755.825	ppb	2755.825	0.58	156771	400000	
Ca	40	2	45	51307.895	ppb	51307.895	0.74	29396624	400000	
V	51	3	72	39.254	ppb	39.254	2.12	25564	2000	
Cr	52	3	72	39.182	ppb	39.182	1.14	32091	5000	
Mn	55	3	72	49.290	ppb	49.290	0.43	21261	10000	
Fe	56	2	72	801.790	ppb	801.790	1.71	1304684	10000	
Co	59	3	72	37.977	ppb	37.977	1.13	50391	2000	
Ni	60	3	72	37.312	ppb	37.312	0.61	14254	5000	
Cu	63	3	72	46.935	ppb	46.935	1.43	47676	5000	
Zn	66	3	72	50.895	ppb	50.895	0.82	9000	5000	
As	75	3	72	40.382	ppb	40.382	4.72	4793	2000	
Se	78	2	72	39.977	ppb	39.977	3.54	2365	2000	
Sr	88	3	72	216.856	ppb	216.856	0.13	131744	4000	
Mo	95	3	115	75.924	ppb	75.924	2.13	40594	2000	
Ag	107	3	115	39.585	ppb	39.585	2.02	73039	100	
Cd	111	3	115	39.828	ppb	39.828	3.38	10742	2000	
Sn	120	3	115	37.983	ppb	37.983	2.90	33901	2000	
Sb	121	3	115	39.709	ppb	39.709	0.78	34394	1000	
Ba	137	3	115	97.062	ppb	97.062	3.16	27660	5000	
Tl	205	3	193	38.176	ppb	38.176	1.42	187474	2000	
(Pb)	206	3	193	38.481	ppb	38.481	0.78	63180	100	
(Pb)	207	3	193	38.089	ppb	38.089	1.30	55642	100	
Pb	208	3	193	38.534	ppb	38.534	0.48	255829	5000	
Th	232	3	193	35.613	ppb	35.613	1.11	245417	2000	
U	238	3	193	77.285	ppb	77.285	1.27	546139	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4178433	1.60	3936624	106.14	60	120	
Sc (IS)	45	3	HMI He	629999	0.83	609520	103.36	60	120	
Ge Internal standard	72	2	HMI H2	2568797	2.19	2391663	107.41	60	120	
Ge Internal standard	72	3	HMI He	791612	0.52	756863	104.59	60	120	
In Internal Standard	115	3	HMI He	3085102	1.13	2988279	103.24	60	120	
Ir (IS)	193	3	HMI He	7314935	0.74	6996686	104.55	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-C MSD
Data File Name	110SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:25:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.080	ppb	40.080	2.90	1584	2000	
Na	23	3	45	13020.300	ppb	13020.300	1.90	1412924	400000	
Mg	24	3	45	14514.750	ppb	14514.750	1.31	839252	400000	
Al	27	3	45	841.549	ppb	841.549	1.66	19119	400000	
K	39	3	45	2878.251	ppb	2878.251	1.89	160010	400000	
Ca	40	2	45	53586.224	ppb	53586.224	2.59	29493471	400000	
V	51	3	72	39.701	ppb	39.701	2.07	25714	2000	
Cr	52	3	72	40.665	ppb	40.665	0.46	33068	5000	
Mn	55	3	72	51.382	ppb	51.382	1.01	22042	10000	
Fe	56	2	72	794.071	ppb	794.071	0.55	1286946	10000	
Co	59	3	72	39.119	ppb	39.119	0.93	51638	2000	
Ni	60	3	72	38.311	ppb	38.311	2.34	14550	5000	
Cu	63	3	72	47.610	ppb	47.610	1.62	48103	5000	
Zn	66	3	72	53.985	ppb	53.985	5.37	9479	5000	
As	75	3	72	40.170	ppb	40.170	3.30	4743	2000	
Se	78	2	72	40.610	ppb	40.610	3.94	2394	2000	
Sr	88	3	72	222.495	ppb	222.495	1.31	134467	4000	
Mo	95	3	115	76.287	ppb	76.287	1.98	41108	2000	
Ag	107	3	115	39.829	ppb	39.829	3.04	74053	100	
Cd	111	3	115	39.796	ppb	39.796	1.86	10819	2000	
Sn	120	3	115	37.171	ppb	37.171	2.37	33460	2000	
Sb	121	3	115	39.645	ppb	39.645	1.67	34603	1000	
Ba	137	3	115	96.902	ppb	96.902	1.52	27832	5000	
Tl	205	3	193	38.613	ppb	38.613	0.58	188123	2000	
(Pb)	206	3	193	39.529	ppb	39.529	1.50	64386	100	
(Pb)	207	3	193	38.577	ppb	38.577	0.67	55910	100	
Pb	208	3	193	38.915	ppb	38.915	0.15	256325	5000	
Th	232	3	193	39.123	ppb	39.123	0.34	266709	2000	
U	238	3	193	79.259	ppb	79.259	0.96	555632	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4015371	3.06	3936624	102.00	60	120	
Sc (IS)	45	3	HMI He	620375	1.13	609520	101.78	60	120	
Ge Internal standard	72	2	HMI H2	2558158	1.72	2391663	106.96	60	120	
Ge Internal standard	72	3	HMI He	787540	0.62	756863	104.05	60	120	
In Internal Standard	115	3	HMI He	3109125	1.53	2988279	104.04	60	120	
Ir (IS)	193	3	HMI He	7257954	0.06	6996686	103.73	60	120	

Sample Report

Sample Table

Sample Name	160-49634-A-2-A
Data File Name	111SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:27:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	13962.888	ppb	13962.888	1.24	1517593	400000	
Mg	24	3	45	13116.752	ppb	13116.752	1.03	760738	400000	
Al	27	3	45	125.257	ppb	125.257	7.79	2963	400000	
K	39	3	45	2359.130	ppb	2359.130	0.32	136568	400000	
Ca	40	2	45	57643.916	ppb	57643.916	2.66	32358698	400000	
V	51	3	72	1.066	ppb	1.066	9.37	1446	2000	
Cr	52	3	72	0.802	ppb	0.802	3.80	2344	5000	
Mn	55	3	72	51.603	ppb	51.603	1.31	22016	10000	
Fe	56	2	72	168.913	ppb	168.913	2.63	285268	10000	
Co	59	3	72	0.256	ppb	0.256	15.69	410	2000	
Ni	60	3	72	0.728	ppb	0.728	25.36	600	5000	
Cu	63	3	72	15.999	ppb	15.999	1.98	16397	5000	
Zn	66	3	72	35.394	ppb	35.394	2.04	6287	5000	
As	75	3	72	0.164	ppb	0.164	71.68	95	2000	
Se	78	2	72	0.248	ppb	0.248	49.39	19	2000	
Sr	88	3	72	164.797	ppb	164.797	1.52	99106	4000	
Mo	95	3	115	52.757	ppb	52.757	1.34	28292	2000	
Ag	107	3	115	0.017	ppb	0.017	54.48	70	100	
Cd	111	3	115	0.528	ppb	0.528	28.73	160	2000	
Sn	120	3	115	0.060	ppb	0.060	266.69	1050	2000	
Sb	121	3	115	0.141	ppb	0.141	32.16	263	1000	
Ba	137	3	115	59.723	ppb	59.723	2.17	17101	5000	
Tl	205	3	193	-0.094	ppb	-0.094	-19.84	410	2000	
(Pb)	206	3	193	0.408	ppb	0.408	18.22	1118	100	
(Pb)	207	3	193	0.322	ppb	0.322	19.23	1148	100	
Pb	208	3	193	0.400	ppb	0.400	2.83	4675	5000	
Th	232	3	193	2.242	ppb	2.242	13.65	22940	2000	
U	238	3	193	53.554	ppb	53.554	4.22	375047	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4096006	2.77	3936624	104.05	60	120	
Sc (IS)	45	3	HMI He	622197	1.08	609520	102.08	60	120	
Ge Internal standard	72	2	HMI H2	2535799	1.47	2391663	106.03	60	120	
Ge Internal standard	72	3	HMI He	783233	1.63	756863	103.48	60	120	
In Internal Standard	115	3	HMI He	3092574	1.45	2988279	103.49	60	120	
Ir (IS)	193	3	HMI He	7239355	1.90	6996686	103.47	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-2-B
Data File Name	112SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:29:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-85.09	2	2000	
Na	23	3	45	182049.617	ppb	182049.617	0.69	19408474	400000	
Mg	24	3	45	78938.703	ppb	78938.703	1.19	4553478	400000	
Al	27	3	45	4.931	ppb	4.931	8.51	240	400000	
K	39	3	45	862.424	ppb	862.424	1.16	67335	400000	
Ca	40	2	45	312262.594	ppb	312262.594	1.15	171689243	400000	
V	51	3	72	0.960	ppb	0.960	19.98	1356	2000	
Cr	52	3	72	0.122	ppb	0.122	113.70	1789	5000	
Mn	55	3	72	5.355	ppb	5.355	4.86	2414	10000	
Fe	56	2	72	8.320	ppb	8.320	9.06	30554	10000	
Co	59	3	72	0.131	ppb	0.131	11.04	242	2000	
Ni	60	3	72	2.255	ppb	2.255	3.01	1143	5000	
Cu	63	3	72	1.309	ppb	1.309	2.43	1753	5000	
Zn	66	3	72	1.076	ppb	1.076	16.31	483	5000	
As	75	3	72	1.045	ppb	1.045	18.42	193	2000	
Se	78	2	72	2.308	ppb	2.308	1.13	137	2000	
Sr	88	3	72	2544.906	ppb	2544.906	1.81	1499804	4000	
Mo	95	3	115	2.257	ppb	2.257	10.08	1256	2000	
Ag	107	3	115	0.110	ppb	0.110	15.28	240	100	
Cd	111	3	115	0.035	ppb	0.035	79.81	27	2000	
Sn	120	3	115	0.150	ppb	0.150	37.67	1124	2000	
Sb	121	3	115	0.041	ppb	0.041	47.29	177	1000	
Ba	137	3	115	33.124	ppb	33.124	1.24	9494	5000	
Tl	205	3	193	-0.094	ppb	-0.094	-5.43	411	2000	
(Pb)	206	3	193	-0.071	ppb	-0.071	-22.15	347	100	
(Pb)	207	3	193	-0.118	ppb	-0.118	-5.55	523	100	
Pb	208	3	193	-0.077	ppb	-0.077	-6.81	1581	5000	
Th	232	3	193	0.938	ppb	0.938	21.00	14455	2000	
U	238	3	193	49.846	ppb	49.846	0.88	351724	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4012918	1.75	3936624	101.94	60	120	
Sc (IS)	45	3	HMI He	619336	0.24	609520	101.61	60	120	
Ge Internal standard	72	2	HMI H2	2508441	1.74	2391663	104.88	60	120	
Ge Internal standard	72	3	HMI He	769212	1.38	756863	101.63	60	120	
In Internal Standard	115	3	HMI He	3080482	0.77	2988279	103.09	60	120	
Ir (IS)	193	3	HMI He	7287477	1.23	6996686	104.16	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	113_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:31:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.628	ppb	4.855	1908	50	95.3	90	110	
Na	23	3	45	47280.003	ppb	1.471	5110988	51000	92.7	90	110	
Mg	24	3	45	10063.495	ppb	2.537	587162	11000	91.5	90	110	
Al	27	3	45	980.032	ppb	1.235	22440	1000	98.0	90	110	
K	39	3	45	10115.530	ppb	2.933	496478	11000	92.0	90	110	
Ca	40	2	45	10090.575	ppb	1.650	5771756	11000	91.7	90	110	
V	51	3	72	50.373	ppb	0.776	31388	50	100.7	90	110	
Cr	52	3	72	50.646	ppb	1.613	39466	50	101.3	90	110	
Mn	55	3	72	51.560	ppb	1.115	21412	50	103.1	90	110	
Fe	56	2	72	1024.564	ppb	1.294	1588332	1000	102.5	90	110	
Co	59	3	72	50.248	ppb	2.053	64193	50	100.5	90	110	
Ni	60	3	72	50.317	ppb	1.288	18401	50	100.6	90	110	
Cu	63	3	72	50.667	ppb	1.086	49539	50	101.3	90	110	
Zn	66	3	72	50.314	ppb	4.208	8572	50	100.6	90	110	
As	75	3	72	52.752	ppb	2.828	6008	50	105.5	90	110	
Se	78	2	72	52.037	ppb	5.161	2941	50	104.1	90	110	
Sr	88	3	72	102.130	ppb	1.661	59891	100	102.1	90	110	
Mo	95	3	115	50.168	ppb	1.565	26771	50	100.3	90	110	
Ag	107	3	115	49.850	ppb	0.647	91740	50	99.7	90	110	
Cd	111	3	115	50.433	ppb	2.418	13563	50	100.9	90	110	
Sn	120	3	115	49.315	ppb	1.622	43609	50	98.6	90	110	
Sb	121	3	115	50.224	ppb	1.072	43350	50	100.4	90	110	
Ba	137	3	115	52.479	ppb	3.803	14963	50	105.0	90	110	
Tl	205	3	193	47.378	ppb	0.491	233619	50	94.8	90	110	
(Pb)	206	3	193	48.294	ppb	1.810	79582	50	96.6	90	110	
(Pb)	207	3	193	47.682	ppb	1.264	69837	50	95.4	90	110	
Pb	208	3	193	47.795	ppb	0.806	318426	50	95.6	90	110	
Th	232	3	193	48.158	ppb	1.485	330643	50	96.3	90	110	
U	238	3	193	47.709	ppb	1.314	339736	50	95.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4155707	1.96	3936624	105.57	60	120	
Sc (IS)	45	3	HMI He	625902	2.05	609520	102.69	60	120	
Ge Internal standard	72	2	HMI H2	2454510	0.50	2391663	102.63	60	120	
Ge Internal standard	72	3	HMI He	762523	1.01	756863	100.75	60	120	
In Internal Standard	115	3	HMI He	3077140	1.27	2988279	102.97	60	120	
Ir (IS)	193	3	HMI He	7352168	0.38	6996686	105.08	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	114_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:32:55-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.044	ppb	-323.4	3	0.5	
Na	23	3	45	41.344	ppb	7.1	28624	25	>RL
Mg	24	3	45	3.280	ppb	35.2	978	25	
Al	27	3	45	0.439	ppb	309.9	140	15	
K	39	3	45	-32.083	ppb	-61.0	26562	50	
V	51	3	72	0.331	ppb	58.3	981	1	
Cr	52	3	72	-0.013	ppb	-1220.9	1708	1	
Mn	55	3	72	0.062	ppb	166.5	220	0.5	
Co	59	3	72	-0.013	ppb	-60.0	57	0.5	
Ni	60	3	72	0.057	ppb	193.8	350	1	
Cu	63	3	72	-0.015	ppb	-193.8	465	1	
Zn	66	3	72	-0.079	ppb	-336.0	295	5	
As	75	3	72	-0.323	ppb	-27.7	38	1	
Se	78	2	72	-0.004	ppb	-862.9	4	1	
Sr	88	3	72	0.025	ppb	206.7	270	0.5	
Mo	95	3	115	0.008	ppb	271.6	58	0.5	
Ag	107	3	115	0.018	ppb	18.4	72	1	
Cd	111	3	115	0.003	ppb	858.6	18	0.5	
Sn	120	3	115	-0.003	ppb	-2347.1	1003	1	
Sb	121	3	115	-0.004	ppb	-1104.9	140	0.6	
Ba	137	3	115	-0.057	ppb	-159.5	87	0.5	
Tl	205	3	193	-0.104	ppb	-11.2	370	0.1	
(Pb)	206	3	193	-0.075	ppb	-20.2	343	1	
(Pb)	207	3	193	-0.094	ppb	-46.8	561	1	
Pb	208	3	193	-0.076	ppb	-18.2	1601	0.5	
Th	232	3	193	1.493	ppb	10.2	18296	1	>RL
U	238	3	193	0.011	ppb	167.2	2427	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4060712	2.11	3936624	103.15	60	120	
Sc (IS)	45	3	HMI He	624745	1.08	609520	102.50	60	120	
Ge Internal standard	72	2	HMI H2	2525724	1.02	2391663	105.61	60	120	
Ge Internal standard	72	3	HMI He	778031	0.42	756863	102.80	60	120	
In Internal Standard	115	3	HMI He	3118168	2.92	2988279	104.35	60	120	
Ir (IS)	193	3	HMI He	7350761	1.95	6996686	105.06	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-D
Data File Name	115SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:34:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.044	ppb	-0.044	-162.22	3	2000	
Na	23	3	45	124123.114	ppb	124123.114	2.22	13390180	400000	
Mg	24	3	45	25904.094	ppb	25904.094	1.01	1511795	400000	
Al	27	3	45	4.647	ppb	4.647	57.53	237	400000	
K	39	3	45	316.408	ppb	316.408	1.69	42791	400000	
Ca	40	2	45	88409.578	ppb	88409.578	2.13	49452427	400000	
V	51	3	72	1.259	ppb	1.259	6.86	1586	2000	
Cr	52	3	72	-0.003	ppb	-0.003	-6204.51	1748	5000	
Mn	55	3	72	18.039	ppb	18.039	0.76	7913	10000	
Fe	56	2	72	174.377	ppb	174.377	3.30	295080	10000	
Co	59	3	72	0.244	ppb	0.244	22.93	398	2000	
Ni	60	3	72	0.611	ppb	0.611	4.31	563	5000	
Cu	63	3	72	0.586	ppb	0.586	6.60	1078	5000	
Zn	66	3	72	0.756	ppb	0.756	22.21	443	5000	
As	75	3	72	0.213	ppb	0.213	76.90	102	2000	
Se	78	2	72	4.170	ppb	4.170	12.72	248	2000	
Sr	88	3	72	826.502	ppb	826.502	0.37	501873	4000	
Mo	95	3	115	1.147	ppb	1.147	4.80	681	2000	
Ag	107	3	115	0.013	ppb	0.013	50.04	63	100	
Cd	111	3	115	0.003	ppb	0.003	970.98	18	2000	
Sn	120	3	115	-0.047	ppb	-0.047	-167.26	978	2000	
Sb	121	3	115	0.076	ppb	0.076	40.82	212	1000	
Ba	137	3	115	113.922	ppb	113.922	0.71	33220	5000	
Tl	205	3	193	-0.099	ppb	-0.099	-6.97	391	2000	
(Pb)	206	3	193	-0.081	ppb	-0.081	-14.17	332	100	
(Pb)	207	3	193	-0.081	ppb	-0.081	-53.94	578	100	
Pb	208	3	193	-0.073	ppb	-0.073	-7.17	1616	5000	
Th	232	3	193	0.507	ppb	0.507	21.52	11645	2000	
U	238	3	193	13.937	ppb	13.937	0.71	100539	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4082018	2.50	3936624	103.69	60	120	
Sc (IS)	45	3	HMI He	626422	1.02	609520	102.77	60	120	
Ge Internal standard	72	2	HMI H2	2546783	3.04	2391663	106.49	60	120	
Ge Internal standard	72	3	HMI He	792389	0.41	756863	104.69	60	120	
In Internal Standard	115	3	HMI He	3157951	1.11	2988279	105.68	60	120	
Ir (IS)	193	3	HMI He	7324983	0.93	6996686	104.69	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-Dsd@5
Data File Name	116SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:36:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.042	ppb	0.042	348.74	7	2000	
Na	23	3	45	25261.984	ppb	25261.984	1.20	2738810	400000	
Mg	24	3	45	5122.896	ppb	5122.896	1.41	298910	400000	
Al	27	3	45	1.737	ppb	1.737	121.95	170	400000	
K	39	3	45	51.444	ppb	51.444	32.66	30440	400000	
Ca	40	2	45	18272.703	ppb	18272.703	2.77	10369970	400000	
V	51	3	72	0.443	ppb	0.443	17.44	1078	2000	
Cr	52	3	72	0.064	ppb	0.064	252.35	1813	5000	
Mn	55	3	72	4.728	ppb	4.728	3.55	2236	10000	
Fe	56	2	72	39.429	ppb	39.429	4.15	79969	10000	
Co	59	3	72	0.045	ppb	0.045	70.31	135	2000	
Ni	60	3	72	0.114	ppb	0.114	123.94	380	5000	
Cu	63	3	72	0.160	ppb	0.160	59.28	653	5000	
Zn	66	3	72	2.364	ppb	2.364	30.73	723	5000	
As	75	3	72	-0.104	ppb	-0.104	-113.44	65	2000	
Se	78	2	72	0.993	ppb	0.993	30.66	62	2000	
Sr	88	3	72	165.160	ppb	165.160	1.31	101234	4000	
Mo	95	3	115	0.251	ppb	0.251	28.58	192	2000	
Ag	107	3	115	0.028	ppb	0.028	46.84	92	100	
Cd	111	3	115	-0.003	ppb	-0.003	-1589.43	17	2000	
Sn	120	3	115	0.023	ppb	0.023	57.02	1038	2000	
Sb	121	3	115	-0.007	ppb	-0.007	-416.76	138	1000	
Ba	137	3	115	22.909	ppb	22.909	2.83	6750	5000	
Tl	205	3	193	-0.095	ppb	-0.095	-20.63	403	2000	
(Pb)	206	3	193	0.269	ppb	0.269	24.44	888	100	
(Pb)	207	3	193	0.282	ppb	0.282	23.02	1085	100	
Pb	208	3	193	0.290	ppb	0.290	11.43	3942	5000	
Th	232	3	193	0.023	ppb	0.023	304.70	8279	2000	
U	238	3	193	2.881	ppb	2.881	3.29	22257	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4132224	1.47	3936624	104.97	60	120	
Sc (IS)	45	3	HMI He	624978	1.17	609520	102.54	60	120	
Ge Internal standard	72	2	HMI H2	2531114	3.84	2391663	105.83	60	120	
Ge Internal standard	72	3	HMI He	798121	1.08	756863	105.45	60	120	
In Internal Standard	115	3	HMI He	3151446	0.77	2988279	105.46	60	120	
Ir (IS)	193	3	HMI He	7203475	1.52	6996686	102.96	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-E MS
Data File Name	117SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:38:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.862	ppb	40.862	8.11	1644	2000	
Na	23	3	45	123306.783	ppb	123306.783	0.93	13436195	400000	
Mg	24	3	45	26113.975	ppb	26113.975	1.72	1539265	400000	
Al	27	3	45	743.701	ppb	743.701	3.90	17248	400000	
K	39	3	45	1084.491	ppb	1084.491	4.17	79188	400000	
Ca	40	2	45	90208.631	ppb	90208.631	2.39	50956277	400000	
V	51	3	72	39.290	ppb	39.290	2.36	25733	2000	
Cr	52	3	72	39.189	ppb	39.189	1.49	32275	5000	
Mn	55	3	72	55.999	ppb	55.999	2.66	24262	10000	
Fe	56	2	72	963.149	ppb	963.149	1.84	1565207	10000	
Co	59	3	72	38.366	ppb	38.366	0.87	51190	2000	
Ni	60	3	72	37.264	ppb	37.264	1.07	14315	5000	
Cu	63	3	72	39.131	ppb	39.131	2.75	40048	5000	
Zn	66	3	72	37.840	ppb	37.840	2.96	6810	5000	
As	75	3	72	38.726	ppb	38.726	2.18	4625	2000	
Se	78	2	72	44.233	ppb	44.233	3.97	2620	2000	
Sr	88	3	72	895.210	ppb	895.210	0.34	546093	4000	
Mo	95	3	115	39.217	ppb	39.217	1.03	21601	2000	
Ag	107	3	115	38.511	ppb	38.511	0.84	73118	100	
Cd	111	3	115	38.121	ppb	38.121	2.89	10582	2000	
Sn	120	3	115	36.835	ppb	36.835	0.80	33863	2000	
Sb	121	3	115	38.568	ppb	38.568	1.26	34374	1000	
Ba	137	3	115	152.414	ppb	152.414	0.95	44636	5000	
Tl	205	3	193	37.515	ppb	37.515	1.52	185885	2000	
(Pb)	206	3	193	37.510	ppb	37.510	2.57	62146	100	
(Pb)	207	3	193	37.244	ppb	37.244	1.76	54913	100	
Pb	208	3	193	37.494	ppb	37.494	2.58	251180	5000	
Th	232	3	193	36.329	ppb	36.329	2.64	252406	2000	
U	238	3	193	52.416	ppb	52.416	1.32	374461	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121888	1.80	3936624	104.71	60	120	
Sc (IS)	45	3	HMI He	632662	0.64	609520	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2571758	1.59	2391663	107.53	60	120	
Ge Internal standard	72	3	HMI He	796063	0.71	756863	105.18	60	120	
In Internal Standard	115	3	HMI He	3174039	0.52	2988279	106.22	60	120	
Ir (IS)	193	3	HMI He	7381855	1.83	6996686	105.51	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-F MSD
Data File Name	118SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:40:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.397	ppb	40.397	1.69	1639	2000	
Na	23	3	45	119565.989	ppb	119565.989	0.90	12901846	400000	
Mg	24	3	45	25415.333	ppb	25415.333	0.91	1483437	400000	
Al	27	3	45	766.497	ppb	766.497	4.83	17595	400000	
K	39	3	45	1110.259	ppb	1110.259	2.82	79601	400000	
Ca	40	2	45	87695.939	ppb	87695.939	2.82	49003851	400000	
V	51	3	72	40.200	ppb	40.200	0.85	26148	2000	
Cr	52	3	72	39.088	ppb	39.088	1.85	31997	5000	
Mn	55	3	72	55.825	ppb	55.825	2.27	24037	10000	
Fe	56	2	72	970.296	ppb	970.296	0.57	1552823	10000	
Co	59	3	72	39.146	ppb	39.146	2.21	51909	2000	
Ni	60	3	72	37.377	ppb	37.377	1.53	14270	5000	
Cu	63	3	72	40.327	ppb	40.327	1.44	41007	5000	
Zn	66	3	72	40.772	ppb	40.772	1.22	7268	5000	
As	75	3	72	38.294	ppb	38.294	5.35	4545	2000	
Se	78	2	72	45.790	ppb	45.790	5.25	2669	2000	
Sr	88	3	72	867.572	ppb	867.572	1.12	525978	4000	
Mo	95	3	115	39.791	ppb	39.791	1.53	21682	2000	
Ag	107	3	115	38.798	ppb	38.798	1.31	72870	100	
Cd	111	3	115	38.941	ppb	38.941	3.21	10692	2000	
Sn	120	3	115	37.376	ppb	37.376	1.56	33975	2000	
Sb	121	3	115	38.463	ppb	38.463	0.30	33916	1000	
Ba	137	3	115	150.748	ppb	150.748	1.65	43675	5000	
Tl	205	3	193	38.415	ppb	38.415	1.48	188386	2000	
(Pb)	206	3	193	39.280	ppb	39.280	2.04	64391	100	
(Pb)	207	3	193	38.254	ppb	38.254	2.25	55801	100	
Pb	208	3	193	38.799	ppb	38.799	2.06	257204	5000	
Th	232	3	193	39.003	ppb	39.003	2.73	267612	2000	
U	238	3	193	53.079	ppb	53.079	2.13	375251	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4078132	2.18	3936624	103.59	60	120	
Sc (IS)	45	3	HMI He	626434	0.38	609520	102.78	60	120	
Ge Internal standard	72	2	HMI H2	2532555	2.20	2391663	105.89	60	120	
Ge Internal standard	72	3	HMI He	791205	1.03	756863	104.54	60	120	
In Internal Standard	115	3	HMI He	3140121	0.74	2988279	105.08	60	120	
Ir (IS)	193	3	HMI He	7306020	1.73	6996686	104.42	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-2-A
Data File Name	119SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:42:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.003	ppb	-0.003	-82.51	5	2000	
Na	23	3	45	54440.987	ppb	54440.987	0.23	5923917	400000	
Mg	24	3	45	43483.476	ppb	43483.476	1.34	2553138	400000	
Al	27	3	45	2.273	ppb	2.273	30.64	184	400000	
K	39	3	45	6032.020	ppb	6032.020	0.76	309678	400000	
Ca	40	2	45	135623.360	ppb	135623.360	0.08	76295390	400000	
V	51	3	72	1.378	ppb	1.378	13.25	1678	2000	
Cr	52	3	72	1.210	ppb	1.210	12.76	2714	5000	
Mn	55	3	72	224.737	ppb	224.737	1.18	97305	10000	
Fe	56	2	72	5.559	ppb	5.559	2.90	26716	10000	
Co	59	3	72	0.677	ppb	0.677	7.71	983	2000	
Ni	60	3	72	2.542	ppb	2.542	8.40	1298	5000	
Cu	63	3	72	1.004	ppb	1.004	10.69	1514	5000	
Zn	66	3	72	5.508	ppb	5.508	1.59	1268	5000	
As	75	3	72	0.839	ppb	0.839	20.18	177	2000	
Se	78	2	72	0.052	ppb	0.052	136.79	7	2000	
Sr	88	3	72	461.633	ppb	461.633	2.00	283262	4000	
Mo	95	3	115	0.313	ppb	0.313	25.44	223	2000	
Ag	107	3	115	0.018	ppb	0.018	54.73	72	100	
Cd	111	3	115	0.052	ppb	0.052	26.76	32	2000	
Sn	120	3	115	0.189	ppb	0.189	17.79	1178	2000	
Sb	121	3	115	0.109	ppb	0.109	55.92	238	1000	
Ba	137	3	115	275.022	ppb	275.022	2.71	79394	5000	
Tl	205	3	193	-0.078	ppb	-0.078	-10.85	498	2000	
(Pb)	206	3	193	-0.021	ppb	-0.021	-62.87	436	100	
(Pb)	207	3	193	-0.094	ppb	-0.094	-6.73	568	100	
Pb	208	3	193	-0.043	ppb	-0.043	-9.08	1837	5000	
Th	232	3	193	1.891	ppb	1.891	8.36	21191	2000	
U	238	3	193	3.601	ppb	3.601	2.72	28109	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4104785	1.36	3936624	104.27	60	120	
Sc (IS)	45	3	HMI He	630300	0.43	609520	103.41	60	120	
Ge Internal standard	72	2	HMI H2	2554037	2.01	2391663	106.79	60	120	
Ge Internal standard	72	3	HMI He	800454	0.75	756863	105.76	60	120	
In Internal Standard	115	3	HMI He	3133211	2.78	2988279	104.85	60	120	
Ir (IS)	193	3	HMI He	7432443	2.16	6996686	106.23	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A
Data File Name	120SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:43:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	102014.154	ppb	102014.154	0.87	11114750	400000	
Mg	24	3	45	72727.141	ppb	72727.141	1.63	4282855	400000	
Al	27	3	45	4.127	ppb	4.127	41.60	227	400000	
K	39	3	45	4721.231	ppb	4721.231	1.99	249300	400000	
Ca	40	2	45	217361.451	ppb	217361.451	2.60	121754262	400000	
V	51	3	72	2.693	ppb	2.693	3.46	2482	2000	
Cr	52	3	72	0.977	ppb	0.977	5.70	2497	5000	
Mn	55	3	72	3.601	ppb	3.601	5.61	1731	10000	
Fe	56	2	72	33.829	ppb	33.829	2.02	71227	10000	
Co	59	3	72	0.295	ppb	0.295	2.64	465	2000	
Ni	60	3	72	3.506	ppb	3.506	7.57	1638	5000	
Cu	63	3	72	1.743	ppb	1.743	5.96	2234	5000	
Zn	66	3	72	2.470	ppb	2.470	15.86	733	5000	
As	75	3	72	1.747	ppb	1.747	6.96	280	2000	
Se	78	2	72	0.191	ppb	0.191	75.26	15	2000	
Sr	88	3	72	795.694	ppb	795.694	0.26	481337	4000	
Mo	95	3	115	0.087	ppb	0.087	68.48	100	2000	
Ag	107	3	115	0.009	ppb	0.009	85.44	55	100	
Cd	111	3	115	0.060	ppb	0.060	64.30	33	2000	
Sn	120	3	115	0.087	ppb	0.087	124.40	1075	2000	
Sb	121	3	115	0.104	ppb	0.104	9.88	232	1000	
Ba	137	3	115	345.175	ppb	345.175	3.14	98281	5000	
Tl	205	3	193	-0.055	ppb	-0.055	-12.81	608	2000	
(Pb)	206	3	193	-0.031	ppb	-0.031	-85.76	416	100	
(Pb)	207	3	193	-0.088	ppb	-0.088	-7.97	573	100	
Pb	208	3	193	-0.046	ppb	-0.046	-30.39	1801	5000	
Th	232	3	193	0.503	ppb	0.503	33.63	11696	2000	
U	238	3	193	4.539	ppb	4.539	2.75	34546	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4087944	0.45	3936624	103.84	60	120	
Sc (IS)	45	3	HMI He	632316	0.83	609520	103.74	60	120	
Ge Internal standard	72	2	HMI H2	2532744	0.52	2391663	105.90	60	120	
Ge Internal standard	72	3	HMI He	789367	0.35	756863	104.29	60	120	
In Internal Standard	115	3	HMI He	3091407	2.44	2988279	103.45	60	120	
Ir (IS)	193	3	HMI He	7373963	1.34	6996686	105.39	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A
Data File Name	121SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:45:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-175.75	3	2000	
Na	23	3	45	98552.440	ppb	98552.440	1.67	10610049	400000	
Mg	24	3	45	72312.198	ppb	72312.198	3.31	4208335	400000	
Al	27	3	45	2.191	ppb	2.191	86.30	180	400000	
K	39	3	45	5760.677	ppb	5760.677	1.15	294419	400000	
Ca	40	2	45	192651.345	ppb	192651.345	1.26	108820163	400000	
V	51	3	72	1.505	ppb	1.505	9.79	1729	2000	
Cr	52	3	72	0.333	ppb	0.333	20.03	1994	5000	
Mn	55	3	72	180.470	ppb	180.470	1.51	76877	10000	
Fe	56	2	72	511.301	ppb	511.301	2.44	834908	10000	
Co	59	3	72	3.051	ppb	3.051	0.41	4094	2000	
Ni	60	3	72	5.010	ppb	5.010	3.66	2191	5000	
Cu	63	3	72	1.061	ppb	1.061	7.33	1546	5000	
Zn	66	3	72	5.938	ppb	5.938	7.49	1319	5000	
As	75	3	72	0.835	ppb	0.835	28.84	173	2000	
Se	78	2	72	0.107	ppb	0.107	108.59	11	2000	
Sr	88	3	72	775.951	ppb	775.951	1.06	468021	4000	
Mo	95	3	115	0.222	ppb	0.222	27.95	175	2000	
Ag	107	3	115	0.007	ppb	0.007	171.31	52	100	
Cd	111	3	115	0.070	ppb	0.070	31.09	37	2000	
Sn	120	3	115	2.433	ppb	2.433	3.37	3152	2000	
Sb	121	3	115	0.028	ppb	0.028	102.40	168	1000	
Ba	137	3	115	339.505	ppb	339.505	1.76	98014	5000	
Tl	205	3	193	-0.073	ppb	-0.073	-11.90	520	2000	
(Pb)	206	3	193	0.258	ppb	0.258	12.00	888	100	
(Pb)	207	3	193	0.256	ppb	0.256	12.71	1068	100	
Pb	208	3	193	0.292	ppb	0.292	5.94	4030	5000	
Th	232	3	193	0.087	ppb	0.087	69.49	8874	2000	
U	238	3	193	4.322	ppb	4.322	1.48	32870	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4122301	0.90	3936624	104.72	60	120	
Sc (IS)	45	3	HMI He	624794	0.97	609520	102.51	60	120	
Ge Internal standard	72	2	HMI H2	2558048	2.23	2391663	106.96	60	120	
Ge Internal standard	72	3	HMI He	787066	0.34	756863	103.99	60	120	
In Internal Standard	115	3	HMI He	3133105	0.76	2988279	104.85	60	120	
Ir (IS)	193	3	HMI He	7343874	1.73	6996686	104.96	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-1-A
Data File Name	122SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:47:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-85.81	2	2000	
Na	23	3	45	101940.386	ppb	101940.386	0.37	10959921	400000	
Mg	24	3	45	75525.847	ppb	75525.847	1.45	4389183	400000	
Al	27	3	45	5.155	ppb	5.155	69.67	247	400000	
K	39	3	45	4774.749	ppb	4774.749	0.17	248499	400000	
Ca	40	2	45	199516.995	ppb	199516.995	1.72	111869428	400000	
V	51	3	72	1.184	ppb	1.184	3.42	1524	2000	
Cr	52	3	72	0.298	ppb	0.298	37.62	1963	5000	
Mn	55	3	72	388.557	ppb	388.557	0.60	164868	10000	
Fe	56	2	72	43.963	ppb	43.963	0.85	89060	10000	
Co	59	3	72	0.225	ppb	0.225	11.17	370	2000	
Ni	60	3	72	8.673	ppb	8.673	2.29	3540	5000	
Cu	63	3	72	1.345	ppb	1.345	9.45	1824	5000	
Zn	66	3	72	1.756	ppb	1.756	20.00	608	5000	
As	75	3	72	0.624	ppb	0.624	14.63	148	2000	
Se	78	2	72	0.151	ppb	0.151	43.24	13	2000	
Sr	88	3	72	793.526	ppb	793.526	0.60	477403	4000	
Mo	95	3	115	0.148	ppb	0.148	30.71	133	2000	
Ag	107	3	115	0.018	ppb	0.018	69.05	72	100	
Cd	111	3	115	0.140	ppb	0.140	35.95	55	2000	
Sn	120	3	115	-0.002	ppb	-0.002	-2094.61	998	2000	
Sb	121	3	115	-0.016	ppb	-0.016	-30.24	128	1000	
Ba	137	3	115	340.379	ppb	340.379	0.90	97170	5000	
Tl	205	3	193	0.028	ppb	0.028	58.66	1013	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-808.68	458	100	
(Pb)	207	3	193	-0.011	ppb	-0.011	-335.53	680	100	
Pb	208	3	193	0.011	ppb	0.011	71.30	2162	5000	
Th	232	3	193	-0.095	ppb	-0.095	-75.97	7627	2000	
U	238	3	193	3.945	ppb	3.945	1.70	30093	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4092134	0.89	3936624	103.95	60	120	
Sc (IS)	45	3	HMI He	623957	0.69	609520	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2585202	2.18	2391663	108.09	60	120	
Ge Internal standard	72	3	HMI He	785067	0.53	756863	103.73	60	120	
In Internal Standard	115	3	HMI He	3098117	1.03	2988279	103.68	60	120	
Ir (IS)	193	3	HMI He	7315630	1.22	6996686	104.56	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-2-A
Data File Name	123SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:49:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-83.88	2	2000	
Na	23	3	45	84633.718	ppb	84633.718	1.87	9229226	400000	
Mg	24	3	45	67185.854	ppb	67185.854	1.23	3958817	400000	
Al	27	3	45	2.382	ppb	2.382	56.76	187	400000	
K	39	3	45	4243.423	ppb	4243.423	1.34	227074	400000	
Ca	40	2	45	200297.710	ppb	200297.710	3.14	112649561	400000	
V	51	3	72	2.468	ppb	2.468	6.18	2346	2000	
Cr	52	3	72	0.367	ppb	0.367	22.65	2031	5000	
Mn	55	3	72	3.443	ppb	3.443	1.65	1668	10000	
Fe	56	2	72	8.777	ppb	8.777	6.97	32363	10000	
Co	59	3	72	0.121	ppb	0.121	12.67	235	2000	
Ni	60	3	72	2.026	ppb	2.026	12.84	1090	5000	
Cu	63	3	72	1.055	ppb	1.055	4.42	1548	5000	
Zn	66	3	72	1.356	ppb	1.356	3.28	545	5000	
As	75	3	72	0.913	ppb	0.913	15.94	183	2000	
Se	78	2	72	0.050	ppb	0.050	192.73	7	2000	
Sr	88	3	72	721.521	ppb	721.521	1.16	437500	4000	
Mo	95	3	115	0.080	ppb	0.080	74.83	97	2000	
Ag	107	3	115	0.009	ppb	0.009	134.77	55	100	
Cd	111	3	115	0.023	ppb	0.023	168.72	23	2000	
Sn	120	3	115	-0.283	ppb	-0.283	-30.80	751	2000	
Sb	121	3	115	0.004	ppb	0.004	1482.73	145	1000	
Ba	137	3	115	366.868	ppb	366.868	1.52	104363	5000	
Tl	205	3	193	-0.042	ppb	-0.042	-37.34	665	2000	
(Pb)	206	3	193	-0.008	ppb	-0.008	-677.20	450	100	
(Pb)	207	3	193	-0.036	ppb	-0.036	-48.53	641	100	
Pb	208	3	193	-0.011	ppb	-0.011	-163.09	2017	5000	
Th	232	3	193	-0.122	ppb	-0.122	-20.69	7430	2000	
U	238	3	193	4.375	ppb	4.375	2.07	33036	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4105639	2.96	3936624	104.29	60	120	
Sc (IS)	45	3	HMI He	632643	0.69	609520	103.79	60	120	
Ge Internal standard	72	2	HMI H2	2595653	1.31	2391663	108.53	60	120	
Ge Internal standard	72	3	HMI He	791231	0.67	756863	104.54	60	120	
In Internal Standard	115	3	HMI He	3087670	1.45	2988279	103.33	60	120	
Ir (IS)	193	3	HMI He	7298731	1.94	6996686	104.32	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	124_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:51:05-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.344	ppb	8.529	1888	50	94.7	90	110	
Na	23	3	45	47119.933	ppb	1.014	5083734	51000	92.4	90	110	
Mg	24	3	45	10011.521	ppb	0.948	583082	11000	91.0	90	110	
Al	27	3	45	1000.806	ppb	1.548	22868	1000	100.1	90	110	
K	39	3	45	10142.029	ppb	1.259	496810	11000	92.2	90	110	
Ca	40	2	45	10097.776	ppb	1.701	5744410	11000	91.8	90	110	
V	51	3	72	49.991	ppb	1.931	31069	50	100.0	90	110	
Cr	52	3	72	50.789	ppb	1.060	39466	50	101.6	90	110	
Mn	55	3	72	51.409	ppb	2.359	21292	50	102.8	90	110	
Fe	56	2	72	1016.835	ppb	0.450	1583593	1000	101.7	90	110	
Co	59	3	72	50.381	ppb	0.975	64198	50	100.8	90	110	
Ni	60	3	72	50.231	ppb	2.295	18321	50	100.5	90	110	
Cu	63	3	72	50.659	ppb	1.348	49400	50	101.3	90	110	
Zn	66	3	72	50.232	ppb	2.290	8538	50	100.5	90	110	
As	75	3	72	51.485	ppb	5.304	5848	50	103.0	90	110	
Se	78	2	72	50.879	ppb	3.405	2889	50	101.8	90	110	
Sr	88	3	72	103.201	ppb	1.149	60370	100	103.2	90	110	
Mo	95	3	115	48.972	ppb	0.996	26693	50	97.9	90	110	
Ag	107	3	115	48.302	ppb	2.700	90771	50	96.6	90	110	
Cd	111	3	115	49.941	ppb	1.649	13719	50	99.9	90	110	
Sn	120	3	115	48.131	ppb	2.404	43491	50	96.3	90	110	
Sb	121	3	115	48.648	ppb	2.102	42892	50	97.3	90	110	
Ba	137	3	115	48.690	ppb	4.864	14186	50	97.4	90	110	
Tl	205	3	193	47.620	ppb	0.948	236493	50	95.2	90	110	
(Pb)	206	3	193	47.713	ppb	2.133	79177	50	95.4	90	110	
(Pb)	207	3	193	47.473	ppb	1.283	70028	50	94.9	90	110	
Pb	208	3	193	47.635	ppb	1.051	319606	50	95.3	90	110	
Th	232	3	193	47.208	ppb	1.850	326575	50	94.4	90	110	
U	238	3	193	47.719	ppb	0.259	342220	50	95.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4132637	1.17	3936624	104.98	60	120	
Sc (IS)	45	3	HMI He	624578	0.84	609520	102.47	60	120	
Ge Internal standard	72	2	HMI H2	2465729	1.40	2391663	103.10	60	120	
Ge Internal standard	72	3	HMI He	760529	1.00	756863	100.48	60	120	
In Internal Standard	115	3	HMI He	3142516	1.14	2988279	105.16	60	120	
Ir (IS)	193	3	HMI He	7404509	0.95	6996686	105.83	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	125_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:52:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.126	ppb	0.0	0	0.5	
Na	23	3	45	61.091	ppb	4.1	30594	25	>RL
Mg	24	3	45	7.807	ppb	17.8	1235	25	
Al	27	3	45	-0.860	ppb	-156.0	110	15	
K	39	3	45	-28.094	ppb	-75.8	26615	50	
V	51	3	72	0.152	ppb	30.6	868	1	
Cr	52	3	72	0.053	ppb	178.4	1753	1	
Mn	55	3	72	-0.011	ppb	-519.6	188	0.5	
Co	59	3	72	0.008	ppb	116.6	83	0.5	
Ni	60	3	72	0.129	ppb	50.6	375	1	
Cu	63	3	72	-0.042	ppb	-165.8	436	1	
Zn	66	3	72	0.115	ppb	253.7	327	5	
As	75	3	72	-0.147	ppb	-45.9	58	1	
Se	78	2	72	0.067	ppb	53.5	8	1	
Sr	88	3	72	0.018	ppb	140.3	265	0.5	
Mo	95	3	115	0.022	ppb	89.3	67	0.5	
Ag	107	3	115	0.010	ppb	39.8	57	1	
Cd	111	3	115	-0.034	ppb	-111.3	8	0.5	
Sn	120	3	115	-0.025	ppb	-113.7	993	1	
Sb	121	3	115	-0.021	ppb	-199.5	125	0.6	
Ba	137	3	115	-0.023	ppb	-314.1	97	0.5	
Tl	205	3	193	-0.088	ppb	-8.1	448	0.1	
(Pb)	206	3	193	-0.071	ppb	-47.3	352	1	
(Pb)	207	3	193	-0.129	ppb	-14.4	515	1	
Pb	208	3	193	-0.068	ppb	-25.1	1663	0.5	
Th	232	3	193	1.626	ppb	12.4	19330	1	>RL
U	238	3	193	0.003	ppb	714.6	2389	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4125760	1.81	3936624	104.80	60	120	
Sc (IS)	45	3	HMI He	621638	0.30	609520	101.99	60	120	
Ge Internal standard	72	2	HMI H2	2490140	0.77	2391663	104.12	60	120	
Ge Internal standard	72	3	HMI He	775683	0.28	756863	102.49	60	120	
In Internal Standard	115	3	HMI He	3143264	1.07	2988279	105.19	60	120	
Ir (IS)	193	3	HMI He	7408693	0.59	6996686	105.89	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-3-A
Data File Name	126SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:54:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-10023.55	5	2000	
Na	23	3	45	167713.615	ppb	167713.615	0.96	18111297	400000	
Mg	24	3	45	92788.410	ppb	92788.410	1.71	5421324	400000	
Al	27	3	45	3.621	ppb	3.621	44.91	214	400000	
K	39	3	45	5653.897	ppb	5653.897	0.22	290655	400000	
Ca	40	2	45	251533.861	ppb	251533.861	0.62	142164751	400000	
V	51	3	72	2.552	ppb	2.552	5.36	2389	2000	
Cr	52	3	72	0.616	ppb	0.616	6.14	2214	5000	
Mn	55	3	72	23.342	ppb	23.342	1.50	10124	10000	
Fe	56	2	72	22.755	ppb	22.755	1.25	53912	10000	
Co	59	3	72	3.998	ppb	3.998	0.50	5347	2000	
Ni	60	3	72	70.012	ppb	70.012	1.18	26327	5000	
Cu	63	3	72	4.017	ppb	4.017	4.41	4505	5000	
Zn	66	3	72	1.379	ppb	1.379	9.21	546	5000	
As	75	3	72	1.192	ppb	1.192	15.48	215	2000	
Se	78	2	72	0.817	ppb	0.817	11.44	52	2000	
Sr	88	3	72	948.121	ppb	948.121	0.48	572411	4000	
Mo	95	3	115	0.348	ppb	0.348	22.40	245	2000	
Ag	107	3	115	0.008	ppb	0.008	130.18	53	100	
Cd	111	3	115	0.027	ppb	0.027	178.52	25	2000	
Sn	120	3	115	-0.064	ppb	-0.064	-102.22	963	2000	
Sb	121	3	115	0.032	ppb	0.032	130.36	173	1000	
Ba	137	3	115	516.090	ppb	516.090	0.81	150268	5000	
Tl	205	3	193	-0.092	ppb	-0.092	-5.57	428	2000	
(Pb)	206	3	193	2.899	ppb	2.899	7.04	5245	100	
(Pb)	207	3	193	2.590	ppb	2.590	0.93	4480	100	
Pb	208	3	193	2.797	ppb	2.797	1.91	20735	5000	
Th	232	3	193	0.320	ppb	0.320	45.84	10494	2000	
U	238	3	193	5.347	ppb	5.347	3.10	40392	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124713	0.37	3936624	104.78	60	120	
Sc (IS)	45	3	HMI He	627313	1.28	609520	102.92	60	120	
Ge Internal standard	72	2	HMI H2	2542646	0.73	2391663	106.31	60	120	
Ge Internal standard	72	3	HMI He	787880	0.23	756863	104.10	60	120	
In Internal Standard	115	3	HMI He	3160918	1.08	2988279	105.78	60	120	
Ir (IS)	193	3	HMI He	7394626	0.37	6996686	105.69	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-1-A
Data File Name	127SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:56:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-82.10	2	2000	
Na	23	3	45	67189.015	ppb	67189.015	1.97	7256437	400000	
Mg	24	3	45	53382.977	ppb	53382.977	1.22	3114227	400000	
Al	27	3	45	5.833	ppb	5.833	49.84	264	400000	
K	39	3	45	3533.542	ppb	3533.542	1.13	191854	400000	
Ca	40	2	45	119678.828	ppb	119678.828	0.79	66870377	400000	
V	51	3	72	0.740	ppb	0.740	12.97	1258	2000	
Cr	52	3	72	0.199	ppb	0.199	87.72	1904	5000	
Mn	55	3	72	0.606	ppb	0.606	10.22	456	10000	
Fe	56	2	72	9.879	ppb	9.879	7.64	33531	10000	
Co	59	3	72	0.005	ppb	0.005	92.71	82	2000	
Ni	60	3	72	0.102	ppb	0.102	89.40	373	5000	
Cu	63	3	72	0.696	ppb	0.696	6.51	1189	5000	
Zn	66	3	72	1.186	ppb	1.186	41.07	516	5000	
As	75	3	72	0.298	ppb	0.298	54.43	112	2000	
Se	78	2	72	0.519	ppb	0.519	20.62	35	2000	
Sr	88	3	72	617.601	ppb	617.601	1.00	375144	4000	
Mo	95	3	115	0.044	ppb	0.044	124.57	78	2000	
Ag	107	3	115	0.018	ppb	0.018	8.19	72	100	
Cd	111	3	115	-0.015	ppb	-0.015	-182.34	13	2000	
Sn	120	3	115	-0.225	ppb	-0.225	-34.44	810	2000	
Sb	121	3	115	-0.001	ppb	-0.001	-1018.65	142	1000	
Ba	137	3	115	215.791	ppb	215.791	2.05	62098	5000	
Tl	205	3	193	-0.106	ppb	-0.106	-8.32	356	2000	
(Pb)	206	3	193	-0.016	ppb	-0.016	-149.97	436	100	
(Pb)	207	3	193	-0.072	ppb	-0.072	-24.05	590	100	
Pb	208	3	193	-0.033	ppb	-0.033	-53.75	1872	5000	
Th	232	3	193	0.026	ppb	0.026	444.65	8412	2000	
U	238	3	193	2.234	ppb	2.234	2.41	18032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4077153	1.56	3936624	103.57	60	120	
Sc (IS)	45	3	HMI He	626213	1.65	609520	102.74	60	120	
Ge Internal standard	72	2	HMI H2	2547770	0.61	2391663	106.53	60	120	
Ge Internal standard	72	3	HMI He	792516	0.73	756863	104.71	60	120	
In Internal Standard	115	3	HMI He	3121447	1.28	2988279	104.46	60	120	
Ir (IS)	193	3	HMI He	7307098	0.83	6996686	104.44	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-2-A
Data File Name	128SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:58:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-164.33	3	2000	
Na	23	3	45	76608.289	ppb	76608.289	2.48	8265446	400000	
Mg	24	3	45	61962.030	ppb	61962.030	0.83	3611624	400000	
Al	27	3	45	2.480	ppb	2.480	55.30	187	400000	
K	39	3	45	4438.322	ppb	4438.322	2.10	233629	400000	
Ca	40	2	45	138987.728	ppb	138987.728	1.70	79814627	400000	
V	51	3	72	0.820	ppb	0.820	21.27	1309	2000	
Cr	52	3	72	0.227	ppb	0.227	49.79	1926	5000	
Mn	55	3	72	0.217	ppb	0.217	73.69	290	10000	
Fe	56	2	72	2.843	ppb	2.843	35.50	21796	10000	
Co	59	3	72	0.033	ppb	0.033	10.31	118	2000	
Ni	60	3	72	0.445	ppb	0.445	25.33	501	5000	
Cu	63	3	72	0.957	ppb	0.957	6.66	1453	5000	
Zn	66	3	72	-0.066	ppb	-0.066	-412.34	303	5000	
As	75	3	72	0.581	ppb	0.581	51.46	145	2000	
Se	78	2	72	0.754	ppb	0.754	28.07	47	2000	
Sr	88	3	72	689.857	ppb	689.857	2.42	419161	4000	
Mo	95	3	115	0.000	ppb	0.000	-7232.63	53	2000	
Ag	107	3	115	0.019	ppb	0.019	48.69	73	100	
Cd	111	3	115	-0.021	ppb	-0.021	-102.96	12	2000	
Sn	120	3	115	-0.258	ppb	-0.258	-22.15	775	2000	
Sb	121	3	115	0.002	ppb	0.002	902.21	143	1000	
Ba	137	3	115	246.724	ppb	246.724	0.30	70377	5000	
Tl	205	3	193	-0.099	ppb	-0.099	-19.75	390	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-36.98	380	100	
(Pb)	207	3	193	-0.109	ppb	-0.109	-56.30	536	100	
Pb	208	3	193	-0.072	ppb	-0.072	-27.86	1618	5000	
Th	232	3	193	-0.074	ppb	-0.074	-69.70	7752	2000	
U	238	3	193	3.366	ppb	3.366	3.01	25994	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4191098	1.88	3936624	106.46	60	120	
Sc (IS)	45	3	HMI He	625814	1.00	609520	102.67	60	120	
Ge Internal standard	72	2	HMI H2	2488871	1.97	2391663	104.06	60	120	
Ge Internal standard	72	3	HMI He	792936	1.09	756863	104.77	60	120	
In Internal Standard	115	3	HMI He	3094224	0.66	2988279	103.55	60	120	
Ir (IS)	193	3	HMI He	7308322	0.31	6996686	104.45	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A
Data File Name	129SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:00:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-84.20	2	2000	
Na	23	3	45	151785.087	ppb	151785.087	1.61	16327451	400000	
Mg	24	3	45	57987.729	ppb	57987.729	2.04	3374672	400000	
Al	27	3	45	4.991	ppb	4.991	40.71	244	400000	
K	39	3	45	4805.759	ppb	4805.759	1.21	250245	400000	
Ca	40	2	45	199701.563	ppb	199701.563	1.17	113426248	400000	
V	51	3	72	2.923	ppb	2.923	5.92	2619	2000	
Cr	52	3	72	0.804	ppb	0.804	32.96	2354	5000	
Mn	55	3	72	278.088	ppb	278.088	0.98	118291	10000	
Fe	56	2	72	52.100	ppb	52.100	1.74	100859	10000	
Co	59	3	72	1.642	ppb	1.642	2.79	2236	2000	
Ni	60	3	72	38.794	ppb	38.794	1.83	14715	5000	
Cu	63	3	72	1.156	ppb	1.156	4.54	1639	5000	
Zn	66	3	72	7.252	ppb	7.252	8.82	1543	5000	
As	75	3	72	1.395	ppb	1.395	30.25	238	2000	
Se	78	2	72	0.530	ppb	0.530	20.73	35	2000	
Sr	88	3	72	1028.343	ppb	1028.343	0.31	619897	4000	
Mo	95	3	115	0.352	ppb	0.352	15.96	245	2000	
Ag	107	3	115	0.007	ppb	0.007	122.21	52	100	
Cd	111	3	115	0.010	ppb	0.010	385.06	20	2000	
Sn	120	3	115	-0.220	ppb	-0.220	-3.97	816	2000	
Sb	121	3	115	0.023	ppb	0.023	108.70	163	1000	
Ba	137	3	115	406.082	ppb	406.082	0.55	117040	5000	
Tl	205	3	193	-0.089	ppb	-0.089	-6.97	443	2000	
(Pb)	206	3	193	0.028	ppb	0.028	77.63	511	100	
(Pb)	207	3	193	-0.040	ppb	-0.040	-41.58	640	100	
Pb	208	3	193	0.000	ppb	0.000	14474.97	2102	5000	
Th	232	3	193	-0.167	ppb	-0.167	-35.43	7164	2000	
U	238	3	193	3.650	ppb	3.650	3.17	28114	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4145165	1.21	3936624	105.30	60	120	
Sc (IS)	45	3	HMI He	624769	0.68	609520	102.50	60	120	
Ge Internal standard	72	2	HMI H2	2551311	2.01	2391663	106.68	60	120	
Ge Internal standard	72	3	HMI He	786718	1.06	756863	103.94	60	120	
In Internal Standard	115	3	HMI He	3128326	1.00	2988279	104.69	60	120	
Ir (IS)	193	3	HMI He	7343873	2.48	6996686	104.96	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-3-A
Data File Name	130SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:01:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.044	ppb	-0.044	-320.02	3	2000	
Na	23	3	45	18530.328	ppb	18530.328	2.85	2013098	400000	
Mg	24	3	45	13996.982	ppb	13996.982	3.56	814492	400000	
Al	27	3	45	2.342	ppb	2.342	24.02	184	400000	
K	39	3	45	5985.919	ppb	5985.919	1.24	304625	400000	
Ca	40	2	45	55740.691	ppb	55740.691	0.88	31400928	400000	
V	51	3	72	8.551	ppb	8.551	3.14	6210	2000	
Cr	52	3	72	19.163	ppb	19.163	0.67	16650	5000	
Mn	55	3	72	0.370	ppb	0.370	23.07	356	10000	
Fe	56	2	72	9.008	ppb	9.008	10.22	32146	10000	
Co	59	3	72	0.080	ppb	0.080	2.67	182	2000	
Ni	60	3	72	-0.149	ppb	-0.149	-132.07	280	5000	
Cu	63	3	72	0.132	ppb	0.132	81.73	623	5000	
Zn	66	3	72	0.438	ppb	0.438	54.77	390	5000	
As	75	3	72	2.031	ppb	2.031	31.26	315	2000	
Se	78	2	72	1.926	ppb	1.926	11.70	117	2000	
Sr	88	3	72	283.615	ppb	283.615	1.17	172866	4000	
Mo	95	3	115	1.184	ppb	1.184	8.42	696	2000	
Ag	107	3	115	0.004	ppb	0.004	190.97	47	100	
Cd	111	3	115	-0.009	ppb	-0.009	-215.50	15	2000	
Sn	120	3	115	-0.199	ppb	-0.199	-22.03	836	2000	
Sb	121	3	115	0.181	ppb	0.181	22.68	302	1000	
Ba	137	3	115	49.674	ppb	49.674	1.61	14431	5000	
Tl	205	3	193	-0.104	ppb	-0.104	-6.73	368	2000	
(Pb)	206	3	193	-0.085	ppb	-0.085	-21.40	325	100	
(Pb)	207	3	193	-0.103	ppb	-0.103	-39.14	546	100	
Pb	208	3	193	-0.066	ppb	-0.066	-27.79	1659	5000	
Th	232	3	193	-0.227	ppb	-0.227	-24.22	6748	2000	
U	238	3	193	2.231	ppb	2.231	1.17	18049	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4108230	0.60	3936624	104.36	60	120	
Sc (IS)	45	3	HMI He	624423	1.44	609520	102.45	60	120	
Ge Internal standard	72	2	HMI H2	2548773	2.07	2391663	106.57	60	120	
Ge Internal standard	72	3	HMI He	794599	0.40	756863	104.99	60	120	
In Internal Standard	115	3	HMI He	3133731	1.29	2988279	104.87	60	120	
Ir (IS)	193	3	HMI He	7322261	1.70	6996686	104.65	60	120	

Sample Report

Sample Table

Sample Name	160-49634-A-3-A
Data File Name	131SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:03:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-7084.51	5	2000	
Na	23	3	45	13170.019	ppb	13170.019	0.97	1441918	400000	
Mg	24	3	45	12221.328	ppb	12221.328	2.14	713301	400000	
Al	27	3	45	32.064	ppb	32.064	11.05	861	400000	
K	39	3	45	2176.788	ppb	2176.788	2.98	128967	400000	
Ca	40	2	45	53271.089	ppb	53271.089	0.71	30181550	400000	
V	51	3	72	0.566	ppb	0.566	24.46	1136	2000	
Cr	52	3	72	0.708	ppb	0.708	17.37	2274	5000	
Mn	55	3	72	36.325	ppb	36.325	2.90	15568	10000	
Fe	56	2	72	29.972	ppb	29.972	1.76	66314	10000	
Co	59	3	72	0.194	ppb	0.194	6.65	328	2000	
Ni	60	3	72	0.108	ppb	0.108	200.37	371	5000	
Cu	63	3	72	11.922	ppb	11.922	3.19	12353	5000	
Zn	66	3	72	25.789	ppb	25.789	4.32	4670	5000	
As	75	3	72	0.006	ppb	0.006	4201.88	77	2000	
Se	78	2	72	0.377	ppb	0.377	33.79	27	2000	
Sr	88	3	72	156.359	ppb	156.359	1.17	94142	4000	
Mo	95	3	115	50.551	ppb	50.551	2.81	27347	2000	
Ag	107	3	115	0.012	ppb	0.012	101.80	62	100	
Cd	111	3	115	0.494	ppb	0.494	28.38	152	2000	
Sn	120	3	115	-0.236	ppb	-0.236	-24.29	801	2000	
Sb	121	3	115	0.079	ppb	0.079	59.17	212	1000	
Ba	137	3	115	56.022	ppb	56.022	0.90	16194	5000	
Tl	205	3	193	-0.092	ppb	-0.092	-8.25	423	2000	
(Pb)	206	3	193	0.023	ppb	0.023	228.20	498	100	
(Pb)	207	3	193	-0.049	ppb	-0.049	-23.68	620	100	
Pb	208	3	193	0.012	ppb	0.012	294.61	2156	5000	
Th	232	3	193	-0.238	ppb	-0.238	-15.41	6627	2000	
U	238	3	193	51.227	ppb	51.227	4.16	360453	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4131755	0.77	3936624	104.96	60	120	
Sc (IS)	45	3	HMI He	626147	1.04	609520	102.73	60	120	
Ge Internal standard	72	2	HMI H2	2579091	0.79	2391663	107.84	60	120	
Ge Internal standard	72	3	HMI He	783954	0.37	756863	103.58	60	120	
In Internal Standard	115	3	HMI He	3119851	1.68	2988279	104.40	60	120	
Ir (IS)	193	3	HMI He	7271491	1.91	6996686	103.93	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608663/1-A
Data File Name	132_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:05:38-06:00
Sample Type	Blank
Dilution	1
Comment	608663 soil 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.126	ppb	-1.47853E-06	0	0.5
Na	23	3	45	116.070	ppb	1.205243455	36898	25
Mg	24	3	45	25.330	ppb	20.00976072	2276	25
Al	27	3	45	9.585	ppb	24.5009312	350	15
K	39	3	45	-22.823	ppb	-89.40554613	27177	50
Ca	40	2	45	115.298	ppb	4.610579821	92580	200
V	51	3	72	-0.070	ppb	-122.291256	731	1
Cr	52	3	72	1.561	ppb	14.54506082	2902	1
Mn	55	3	72	1.097	ppb	19.21295524	653	0.5
Fe	56	2	72	24.859	ppb	4.142000334	56391	50
Co	59	3	72	0.014	ppb	105.8046466	92	0.5
Ni	60	3	72	0.023	ppb	829.1350658	337	1
Cu	63	3	72	1.750	ppb	3.882699469	2206	1
Zn	66	3	72	3.931	ppb	13.67322508	966	5
As	75	3	72	-0.380	ppb	-35.1517608	32	1
(Se)	78	3	72	-0.074	ppb	-951.0679512	20	1
Sr	88	3	72	0.530	ppb	21.65422238	570	0.5
Mo	95	3	115	0.275	ppb	16.82335094	203	0.5
Ag	107	3	115	0.006	ppb	190.9061164	50	1
Cd	111	3	115	-0.033	ppb	-31.05502038	8	0.5
Sn	120	3	115	9.393	ppb	2.484415903	9284	1
Sb	121	3	115	-0.088	ppb	-27.7803613	67	0.6
Ba	137	3	115	0.416	ppb	9.717369596	223	0.5
Tl	205	3	193	-0.093	ppb	-16.34933833	418	0.1
(Pb)	206	3	193	0.489	ppb	17.76979082	1264	1
(Pb)	207	3	193	0.417	ppb	10.38063903	1299	1
Pb	208	3	193	0.492	ppb	9.661192083	5344	0.5
Th	232	3	193	-0.247	ppb	-25.70722489	6625	1
U	238	3	193	0.035	ppb	48.83319259	2586	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4103806	1.21	3936624	104.25	60	120	
Sc (IS)	45	3	HMI He	628944	0.28	609520	103.19	60	120	
Ge Internal standard	72	2	HMI H2	2504540	0.97	2391663	104.72	60	120	
Ge Internal standard	72	3	HMI He	776893	0.73	756863	102.65	60	120	
In Internal Standard	115	3	HMI He	3135642	0.88	2988279	104.93	60	120	
Ir (IS)	193	3	HMI He	7333204	1.83	6996686	104.81	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608663/2-A
Data File Name	133_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:07:28-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608663 soil 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	183.722	183.722	ppb	3.704	7293	40	459.3	80	120	>+/-20%
Na	23	3	45	3744.215	3744.215	ppb	1.006	415890	40	9360.5	80	120	>+/-20%
Mg	24	3	45	3386.854	3386.854	ppb	0.321	192982	40	8467.1	80	120	>+/-20%
Al	27	3	45	3652.572	3652.572	ppb	0.887	81102	40	9131.4	80	120	>+/-20%
K	39	3	45	3703.557	3703.557	ppb	1.640	194389	40	9258.9	80	120	>+/-20%
Ca	40	2	45	3864.873	3864.873	ppb	1.242	2167278	40	9662.2	80	120	>+/-20%
V	51	3	72	182.326	182.326	ppb	1.295	112943	40	455.8	80	120	>+/-20%
Cr	52	3	72	190.138	190.138	ppb	1.631	145227	40	475.3	80	120	>+/-20%
Mn	55	3	72	190.273	190.273	ppb	1.843	79450	40	475.7	80	120	>+/-20%
Fe	56	2	72	3613.254	3613.254	ppb	1.263	5712154	40	9033.1	80	120	>+/-20%
(Fe)	56	3	72	3723.731	3723.731	ppb	0.299	2443840	40	9309.3	80	120	>+/-20%
Co	59	3	72	187.101	187.101	ppb	1.306	241701	40	467.8	80	120	>+/-20%
Ni	60	3	72	182.434	182.434	ppb	0.389	66665	40	456.1	80	120	>+/-20%
Cu	63	3	72	190.936	190.936	ppb	1.287	187590	40	477.3	80	120	>+/-20%
Zn	66	3	72	188.157	188.157	ppb	1.763	31609	40	470.4	80	120	>+/-20%
As	75	3	72	186.861	186.861	ppb	3.539	21346	40	467.2	80	120	>+/-20%
Se	78	2	72	188.047	188.047	ppb	1.519	10914	40	470.1	80	120	>+/-20%
(Se)	78	3	72	195.886	195.886	ppb	4.044	1381	40	489.7	80	120	>+/-20%
Sr	88	3	72	378.255	378.255	ppb	1.109	223813	40	945.6	80	120	>+/-20%
Mo	95	3	115	180.569	180.569	ppb	2.022	97101	40	451.4	80	120	>+/-20%
Ag	107	3	115	185.733	185.733	ppb	2.342	344771	40	464.3	80	120	>+/-20%
Cd	111	3	115	182.527	182.527	ppb	1.518	49496	40	456.3	80	120	>+/-20%
Sn	120	3	115	181.819	181.819	ppb	3.146	159527	40	454.5	80	120	>+/-20%
Sb	121	3	115	182.734	182.734	ppb	2.037	158780	40	456.8	80	120	>+/-20%
Ba	137	3	115	189.926	189.926	ppb	3.428	54384	40	474.8	80	120	>+/-20%
Tl	205	3	193	181.681	181.681	ppb	0.412	885028	40	454.2	80	120	>+/-20%
(Pb)	206	3	193	185.046	185.046	ppb	1.868	300755	40	462.6	80	120	>+/-20%
(Pb)	207	3	193	180.077	180.077	ppb	1.371	259344	40	450.2	80	120	>+/-20%
Pb	208	3	193	183.250	183.250	ppb	1.336	1203492	40	458.1	80	120	>+/-20%
Th	232	3	193	182.084	182.084	ppb	1.979	1215742	40	455.2	80	120	>+/-20%
U	238	3	193	191.309	191.309	ppb	1.920	1342406	40	478.3	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4041763	0.92	3936624	102.67	60	120	
Sc (IS)	45	3	HMI He	609436	0.89	609520	99.99	60	120	
Ge Internal standard	72	2	HMI H2	2522778	0.93	2391663	105.48	60	120	
Ge Internal standard	72	3	HMI He	771636	0.28	756863	101.95	60	120	
In Internal Standard	115	3	HMI He	3105731	2.55	2988279	103.93	60	120	
Ir (IS)	193	3	HMI He	7283659	1.27	6996686	104.10	60	120	

Sample Report

Sample Table

Sample Name	GB 280-608265/1-B
Data File Name	134SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:09:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.490	ppb	0.490	110.77	25	2000	
Na	23	3	45	485.327	ppb	485.327	2.53	75365	400000	
Mg	24	3	45	2623.047	ppb	2623.047	0.48	151493	400000	
Al	27	3	45	3606.027	ppb	3606.027	1.18	81059	400000	
K	39	3	45	1951.163	ppb	1951.163	2.09	116800	400000	
Ca	40	2	45	7741.449	ppb	7741.449	3.79	4387317	400000	
V	51	3	72	8.544	ppb	8.544	2.15	6020	2000	
Cr	52	3	72	32.778	ppb	32.778	1.74	26420	5000	
Mn	55	3	72	476.551	ppb	476.551	1.67	198500	10000	
Fe	56	2	72	36245.110	ppb	36245.110	3.05	57288856	10000	
Co	59	3	72	2.420	ppb	2.420	3.30	3197	2000	
Ni	60	3	72	9.422	ppb	9.422	6.05	3747	5000	
Cu	63	3	72	13.335	ppb	13.335	1.51	13530	5000	
Zn	66	3	72	15.219	ppb	15.219	6.06	2836	5000	
As	75	3	72	3.515	ppb	3.515	10.94	475	2000	
Se	78	2	72	0.031	ppb	0.031	11.11	6	2000	
Sr	88	3	72	32.621	ppb	32.621	1.45	19514	4000	
Mo	95	3	115	2.932	ppb	2.932	6.64	1609	2000	
Ag	107	3	115	0.105	ppb	0.105	9.13	230	100	
Cd	111	3	115	0.148	ppb	0.148	96.13	57	2000	
Sn	120	3	115	7.818	ppb	7.818	6.67	7718	2000	
Sb	121	3	115	0.375	ppb	0.375	11.64	461	1000	
Ba	137	3	115	61.732	ppb	61.732	0.92	17520	5000	
Tl	205	3	193	0.018	ppb	0.018	78.04	961	2000	
(Pb)	206	3	193	9.375	ppb	9.375	2.24	15739	100	
(Pb)	207	3	193	6.149	ppb	6.149	3.78	9562	100	
Pb	208	3	193	7.463	ppb	7.463	1.47	51213	5000	
Th	232	3	193	12.235	ppb	12.235	5.67	89686	2000	
U	238	3	193	3.322	ppb	3.322	1.99	25697	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4114212	3.60	3936624	104.51	60	120	
Sc (IS)	45	3	HMI He	617029	0.94	609520	101.23	60	120	
Ge Internal standard	72	2	HMI H2	2530785	3.31	2391663	105.82	60	120	
Ge Internal standard	72	3	HMI He	770970	1.44	756863	101.86	60	120	
In Internal Standard	115	3	HMI He	3065142	0.57	2988279	102.57	60	120	
Ir (IS)	193	3	HMI He	7312030	0.77	6996686	104.51	60	120	

Sample Report

Sample Table

Sample Name	LCSSRM 280-608265/2-B
Data File Name	135SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:11:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1096.374	ppb	1096.374	0.96	43033	2000	
Na	23	3	45	7418.191	ppb	7418.191	4.07	826215	400000	
Mg	24	3	45	34983.978	ppb	34983.978	3.20	2049265	400000	
Al	27	3	45	149283.047	ppb	149283.047	2.13	3414200	400000	
K	39	3	45	38586.350	ppb	38586.350	0.48	1823706	400000	
Ca	40	2	45	68174.576	ppb	68174.576	0.89	38559383	400000	
V	51	3	72	3144.502	ppb	3144.502	1.89	1947343	2000	
Cr	52	3	72	2921.051	ppb	2921.051	2.51	2220328	5000	
Mn	55	3	72	5892.859	ppb	5892.859	0.47	2470142	10000	
Fe	56	2	72	281899.763	ppb	281899.763	0.27	426646939	10000	>LDR
Co	59	3	72	1386.311	ppb	1386.311	1.70	1801696	2000	
Ni	60	3	72	2262.927	ppb	2262.927	0.95	828285	5000	
Cu	63	3	72	1901.240	ppb	1901.240	0.83	1875298	5000	
Zn	66	3	72	3073.305	ppb	3073.305	0.67	514809	5000	
As	75	3	72	2626.352	ppb	2626.352	1.37	300910	2000	
Se	78	2	72	3270.691	ppb	3270.691	0.26	182207	2000	
Sr	88	3	72	1778.740	ppb	1778.740	2.86	1057944	4000	
Mo	95	3	115	2566.701	ppb	2566.701	1.98	1385147	2000	
Ag	107	3	115	938.902	ppb	938.902	2.63	1749882	100	>LDR
Cd	111	3	115	3001.334	ppb	3001.334	1.78	816938	2000	
Sn	120	3	115	2060.017	ppb	2060.017	1.35	1805109	2000	
Sb	121	3	115	2854.197	ppb	2854.197	2.78	2487996	1000	
Ba	137	3	115	4503.736	ppb	4503.736	2.31	1292558	5000	
Tl	205	3	193	1138.077	ppb	1138.077	1.86	5520203	2000	
(Pb)	206	3	193	3697.309	ppb	3697.309	1.93	5979868	100	>LDR
(Pb)	207	3	193	3534.401	ppb	3534.401	0.82	5059690	100	>LDR
Pb	208	3	193	3585.822	ppb	3585.822	0.70	23428858	5000	
Th	232	3	193	365.783	ppb	365.783	2.23	2425359	2000	
U	238	3	193	1820.627	ppb	1820.627	1.13	12711640	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4125595	0.40	3936624	104.80	60	120	
Sc (IS)	45	3	HMI He	628745	0.34	609520	103.15	60	120	
Ge Internal standard	72	2	HMI H2	2422405	0.35	2391663	101.29	60	120	
Ge Internal standard	72	3	HMI He	776444	0.67	756863	102.59	60	120	
In Internal Standard	115	3	HMI He	3118228	1.63	2988279	104.35	60	120	
Ir (IS)	193	3	HMI He	7257808	0.68	6996686	103.73	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	136_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:12:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.710	ppb	2.486	1849	50	95.4	90	110	
Na	23	3	45	45624.059	ppb	2.707	4826309	51000	89.5	90	110	>+\-10%
Mg	24	3	45	9838.274	ppb	2.134	561740	11000	89.4	90	110	>+\-10%
Al	27	3	45	970.425	ppb	2.373	21742	1000	97.0	90	110	
K	39	3	45	10170.477	ppb	0.527	488462	11000	92.5	90	110	
Ca	40	2	45	10044.261	ppb	2.317	5547048	11000	91.3	90	110	
V	51	3	72	48.678	ppb	1.173	30410	50	97.4	90	110	
Cr	52	3	72	49.819	ppb	0.790	38913	50	99.6	90	110	
Mn	55	3	72	49.692	ppb	4.280	20677	50	99.4	90	110	
Fe	56	2	72	1026.977	ppb	0.499	1580115	1000	102.7	90	110	
Co	59	3	72	49.497	ppb	1.279	63349	50	99.0	90	110	
Ni	60	3	72	48.510	ppb	1.940	17783	50	97.0	90	110	
Cu	63	3	72	49.613	ppb	1.336	48597	50	99.2	90	110	
Zn	66	3	72	49.732	ppb	2.239	8492	50	99.5	90	110	
As	75	3	72	52.161	ppb	2.958	5952	50	104.3	90	110	
Se	78	2	72	52.988	ppb	1.781	2972	50	106.0	90	110	
Sr	88	3	72	101.616	ppb	1.470	59697	100	101.6	90	110	
Mo	95	3	115	55.353	ppb	1.654	29586	50	110.7	90	110	>+\-10%
Ag	107	3	115	48.575	ppb	1.185	89523	50	97.1	90	110	
Cd	111	3	115	50.016	ppb	0.519	13473	50	100.0	90	110	
Sn	120	3	115	50.840	ppb	3.146	44987	50	101.7	90	110	
Sb	121	3	115	53.312	ppb	0.410	46080	50	106.6	90	110	
Ba	137	3	115	49.744	ppb	4.438	14209	50	99.5	90	110	
Tl	205	3	193	48.261	ppb	3.007	235797	50	96.5	90	110	
(Pb)	206	3	193	47.795	ppb	2.428	78050	50	95.6	90	110	
(Pb)	207	3	193	47.981	ppb	3.013	69638	50	96.0	90	110	
Pb	208	3	193	47.873	ppb	2.934	316038	50	95.7	90	110	
Th	232	3	193	55.787	ppb	3.172	378247	50	111.6	90	110	>+\-10%
U	238	3	193	48.778	ppb	3.706	344108	50	97.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4012436	1.69	3936624	101.93	60	120	
Sc (IS)	45	3	HMI He	612400	1.24	609520	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2436131	0.91	2391663	101.86	60	120	
Ge Internal standard	72	3	HMI He	763832	0.99	756863	100.92	60	120	
In Internal Standard	115	3	HMI He	3081766	1.52	2988279	103.13	60	120	
Ir (IS)	193	3	HMI He	7287459	1.53	6996686	104.16	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	137_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:14:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.127	ppb	200.2	10	0.5	
Na	23	3	45	27.669	ppb	16.6	26304	25	>RL
Mg	24	3	45	-0.562	ppb	-257.0	731	25	
Al	27	3	45	2.890	ppb	117.1	190	15	
K	39	3	45	-27.679	ppb	-7.0	25930	50	
V	51	3	72	-0.435	ppb	-23.0	495	1	
Cr	52	3	72	0.116	ppb	151.0	1768	1	
Mn	55	3	72	0.180	ppb	51.9	263	0.5	
Co	59	3	72	0.039	ppb	74.1	122	0.5	
Ni	60	3	72	0.171	ppb	110.4	383	1	
Cu	63	3	72	-0.003	ppb	-2347.4	466	1	
Zn	66	3	72	0.182	ppb	77.2	332	5	
As	75	3	72	-0.048	ppb	-554.8	68	1	
Se	78	2	72	0.302	ppb	37.8	21	1	
Sr	88	3	72	-0.057	ppb	-48.0	217	0.5	
Mo	95	3	115	0.408	ppb	28.7	277	0.5	
Ag	107	3	115	0.045	ppb	12.9	123	1	
Cd	111	3	115	0.155	ppb	34.3	60	0.5	
Sn	120	3	115	0.934	ppb	6.0	1838	1	
Sb	121	3	115	0.625	ppb	4.2	693	0.6	>RL
Ba	137	3	115	0.052	ppb	19.5	118	0.5	
Tl	205	3	193	0.014	ppb	127.3	941	0.1	
(Pb)	206	3	193	0.021	ppb	102.4	498	1	
(Pb)	207	3	193	-0.001	ppb	-5621.4	691	1	
Pb	208	3	193	0.025	ppb	52.6	2257	0.5	
Th	232	3	193	2.131	ppb	16.7	22459	1	>RL
U	238	3	193	0.078	ppb	20.9	2882	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997028	1.38	3936624	101.53	60	120	
Sc (IS)	45	3	HMI He	605161	0.99	609520	99.28	60	120	
Ge Internal standard	72	2	HMI H2	2480019	0.80	2391663	103.69	60	120	
Ge Internal standard	72	3	HMI He	761454	0.85	756863	100.61	60	120	
In Internal Standard	115	3	HMI He	3140976	0.70	2988279	105.11	60	120	
Ir (IS)	193	3	HMI He	7312615	2.05	6996686	104.52	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C
Data File Name	138SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:16:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	10.554	ppb	10.554	6.78	411	2000	
Na	23	3	45	2612.120	ppb	2612.120	0.65	303677	400000	
Mg	24	3	45	77219.795	ppb	77219.795	1.24	4477507	400000	
Al	27	3	45	122687.550	ppb	122687.550	1.17	2778359	400000	
K	39	3	45	10147.329	ppb	10147.329	0.59	495463	400000	
Ca	40	2	45	240603.484	ppb	240603.484	2.61	134562554	400000	
V	51	3	72	386.736	ppb	386.736	0.75	241715	2000	
Cr	52	3	72	1788.103	ppb	1788.103	7.85	1368527	5000	
Mn	55	3	72	110022.490	ppb	110022.490	0.63	46407811	10000	>LDR
Fe	56	2	72	225153.852	ppb	225153.852	0.86	338925090	10000	>LDR
Co	59	3	72	108.632	ppb	108.632	0.67	142135	2000	
Ni	60	3	72	527.638	ppb	527.638	0.90	194616	5000	
Cu	63	3	72	1155.048	ppb	1155.048	1.32	1146638	5000	
Zn	66	3	72	3120.282	ppb	3120.282	0.71	525983	5000	
As	75	3	72	554.636	ppb	554.636	0.85	64013	2000	
Se	78	2	72	6.664	ppb	6.664	7.89	373	2000	
Sr	88	3	72	540.364	ppb	540.364	1.00	323637	4000	
Mo	95	3	115	30.877	ppb	30.877	5.30	16544	2000	
Ag	107	3	115	2.352	ppb	2.352	1.54	4379	100	
Cd	111	3	115	4.149	ppb	4.149	11.25	1136	2000	
Sn	120	3	115	903.554	ppb	903.554	1.65	784172	2000	
Sb	121	3	115	25.872	ppb	25.872	1.61	22468	1000	
Ba	137	3	115	2783.667	ppb	2783.667	1.72	790904	5000	
Tl	205	3	193	1.245	ppb	1.245	2.00	7090	2000	
(Pb)	206	3	193	1661.428	ppb	1661.428	2.77	2757116	100	>LDR
(Pb)	207	3	193	1596.468	ppb	1596.468	0.69	2346124	100	>LDR
Pb	208	3	193	1619.606	ppb	1619.606	0.61	10861454	5000	
Th	232	3	193	34.605	ppb	34.605	3.37	243004	2000	
U	238	3	193	9.324	ppb	9.324	2.37	69170	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4083327	2.63	3936624	103.73	60	120	
Sc (IS)	45	3	HMI He	622553	0.59	609520	102.14	60	120	
Ge Internal standard	72	2	HMI H2	2409306	0.23	2391663	100.74	60	120	
Ge Internal standard	72	3	HMI He	781353	0.52	756863	103.24	60	120	
In Internal Standard	115	3	HMI He	3086641	1.58	2988279	103.29	60	120	
Ir (IS)	193	3	HMI He	7448867	1.63	6996686	106.46	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-2-C
Data File Name	139SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:18:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	5.100	ppb	5.100	8.53	208	2000	
Na	23	3	45	789.763	ppb	789.763	0.40	111120	400000	
Mg	24	3	45	15866.826	ppb	15866.826	2.03	941765	400000	
Al	27	3	45	86303.687	ppb	86303.687	1.25	1999339	400000	
K	39	3	45	6277.120	ppb	6277.120	1.05	324421	400000	
Ca	40	2	45	51492.371	ppb	51492.371	0.17	29329394	400000	
V	51	3	72	182.887	ppb	182.887	0.22	116225	2000	
Cr	52	3	72	180.256	ppb	180.256	2.26	141332	5000	
Mn	55	3	72	8529.665	ppb	8529.665	0.92	3645307	10000	
Fe	56	2	72	100467.871	ppb	100467.871	3.34	157866302	10000	>LDR
Co	59	3	72	31.416	ppb	31.416	0.82	41698	2000	
Ni	60	3	72	93.197	ppb	93.197	1.51	35100	5000	
Cu	63	3	72	112.095	ppb	112.095	2.21	113180	5000	
Zn	66	3	72	289.111	ppb	289.111	1.26	49658	5000	
As	75	3	72	587.339	ppb	587.339	0.48	68673	2000	
Se	78	2	72	1.885	ppb	1.885	9.83	113	2000	
Sr	88	3	72	146.691	ppb	146.691	0.33	89203	4000	
Mo	95	3	115	9.872	ppb	9.872	2.64	5525	2000	
Ag	107	3	115	0.457	ppb	0.457	2.57	915	100	
Cd	111	3	115	0.335	ppb	0.335	41.29	112	2000	
Sn	120	3	115	21.476	ppb	21.476	1.38	20342	2000	
Sb	121	3	115	5.677	ppb	5.677	3.21	5228	1000	
Ba	137	3	115	1028.871	ppb	1028.871	1.13	303281	5000	
Tl	205	3	193	0.844	ppb	0.844	0.39	5007	2000	
(Pb)	206	3	193	163.530	ppb	163.530	2.17	267221	100	
(Pb)	207	3	193	152.603	ppb	152.603	1.97	221048	100	
Pb	208	3	193	158.355	ppb	158.355	2.51	1045666	5000	
Th	232	3	193	27.786	ppb	27.786	3.25	193433	2000	
U	238	3	193	6.692	ppb	6.692	2.53	49458	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4153571	1.31	3936624	105.51	60	120	
Sc (IS)	45	3	HMI He	636812	0.34	609520	104.48	60	120	
Ge Internal standard	72	2	HMI H2	2515524	1.39	2391663	105.18	60	120	
Ge Internal standard	72	3	HMI He	791627	0.44	756863	104.59	60	120	
In Internal Standard	115	3	HMI He	3201197	0.64	2988279	107.13	60	120	
Ir (IS)	193	3	HMI He	7324161	2.91	6996686	104.68	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-3-C
Data File Name	140SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:19:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.642	ppb	0.642	51.17	30	2000	
Na	23	3	45	316.874	ppb	316.874	1.55	58107	400000	
Mg	24	3	45	1060.031	ppb	1060.031	0.98	62332	400000	
Al	27	3	45	22541.235	ppb	22541.235	1.70	511261	400000	
K	39	3	45	2966.547	ppb	2966.547	0.50	164867	400000	
Ca	40	2	45	1602.986	ppb	1602.986	3.70	932360	400000	
V	51	3	72	133.290	ppb	133.290	1.46	83847	2000	
Cr	52	3	72	130.464	ppb	130.464	1.33	101484	5000	
Mn	55	3	72	423.586	ppb	423.586	0.91	178931	10000	
Fe	56	2	72	54655.134	ppb	54655.134	1.14	85924488	10000	>LDR
Co	59	3	72	7.558	ppb	7.558	2.39	9962	2000	
Ni	60	3	72	18.392	ppb	18.392	2.64	7107	5000	
Cu	63	3	72	116.229	ppb	116.229	3.27	115834	5000	
Zn	66	3	72	192.002	ppb	192.002	2.40	32664	5000	
As	75	3	72	58.293	ppb	58.293	0.52	6798	2000	
Se	78	2	72	1.286	ppb	1.286	11.91	79	2000	
Sr	88	3	72	38.794	ppb	38.794	0.99	23482	4000	
Mo	95	3	115	16.557	ppb	16.557	3.44	9129	2000	
Ag	107	3	115	0.225	ppb	0.225	5.60	465	100	
Cd	111	3	115	0.334	ppb	0.334	56.52	110	2000	
Sn	120	3	115	16.525	ppb	16.525	1.54	15718	2000	
Sb	121	3	115	3.964	ppb	3.964	6.03	3654	1000	
Ba	137	3	115	325.850	ppb	325.850	1.48	95078	5000	
Tl	205	3	193	0.169	ppb	0.169	9.26	1728	2000	
(Pb)	206	3	193	111.553	ppb	111.553	0.93	185296	100	
(Pb)	207	3	193	106.669	ppb	106.669	0.74	157144	100	
Pb	208	3	193	109.496	ppb	109.496	0.71	735078	5000	
Th	232	3	193	21.846	ppb	21.846	1.32	156287	2000	
U	238	3	193	3.064	ppb	3.064	1.42	24293	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4119076	1.24	3936624	104.63	60	120	
Sc (IS)	45	3	HMI He	623469	1.54	609520	102.29	60	120	
Ge Internal standard	72	2	HMI H2	2515868	0.86	2391663	105.19	60	120	
Ge Internal standard	72	3	HMI He	781747	2.05	756863	103.29	60	120	
In Internal Standard	115	3	HMI He	3166568	1.08	2988279	105.97	60	120	
Ir (IS)	193	3	HMI He	7436462	1.02	6996686	106.29	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-4-C
Data File Name	141SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:21:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.582	ppb	0.582	86.47	28	2000	
Na	23	3	45	370.200	ppb	370.200	2.98	63988	400000	
Mg	24	3	45	2137.377	ppb	2137.377	2.83	125207	400000	
Al	27	3	45	21111.479	ppb	21111.479	0.39	480248	400000	
K	39	3	45	2144.906	ppb	2144.906	2.93	127304	400000	
Ca	40	2	45	3237.618	ppb	3237.618	1.26	1839546	400000	
V	51	3	72	93.424	ppb	93.424	1.10	59363	2000	
Cr	52	3	72	118.544	ppb	118.544	1.83	92934	5000	
Mn	55	3	72	3561.726	ppb	3561.726	1.52	1512292	10000	
Fe	56	2	72	82266.798	ppb	82266.798	2.65	128708495	10000	>LDR
Co	59	3	72	11.908	ppb	11.908	1.26	15748	2000	
Ni	60	3	72	37.146	ppb	37.146	1.06	14099	5000	
Cu	63	3	72	317.827	ppb	317.827	0.28	317917	5000	
Zn	66	3	72	885.661	ppb	885.661	1.19	150477	5000	
As	75	3	72	50.957	ppb	50.957	2.37	5988	2000	
Se	78	2	72	1.503	ppb	1.503	8.96	91	2000	
Sr	88	3	72	40.020	ppb	40.020	1.23	24363	4000	
Mo	95	3	115	8.010	ppb	8.010	6.27	4432	2000	
Ag	107	3	115	2.647	ppb	2.647	1.39	5035	100	
Cd	111	3	115	1.889	ppb	1.889	7.62	538	2000	
Sn	120	3	115	221.005	ppb	221.005	2.92	196991	2000	
Sb	121	3	115	31.996	ppb	31.996	0.79	28389	1000	
Ba	137	3	115	486.005	ppb	486.005	1.25	141340	5000	
Tl	205	3	193	0.366	ppb	0.366	3.80	2671	2000	
(Pb)	206	3	193	2235.938	ppb	2235.938	0.45	3653863	100	>LDR
(Pb)	207	3	193	2143.020	ppb	2143.020	0.56	3100212	100	>LDR
Pb	208	3	193	2141.304	ppb	2141.304	0.46	14137456	5000	
Th	232	3	193	15.086	ppb	15.086	1.15	108994	2000	
U	238	3	193	2.376	ppb	2.376	1.96	19099	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4085849	2.55	3936624	103.79	60	120	
Sc (IS)	45	3	HMI He	625196	0.83	609520	102.57	60	120	
Ge Internal standard	72	2	HMI H2	2504650	2.03	2391663	104.72	60	120	
Ge Internal standard	72	3	HMI He	786405	0.29	756863	103.90	60	120	
In Internal Standard	115	3	HMI He	3157161	0.94	2988279	105.65	60	120	
Ir (IS)	193	3	HMI He	7333497	1.28	6996686	104.81	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-5-C
Data File Name	142SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:23:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.087	ppb	0.087	226.38	8	2000	
Na	23	3	45	235.244	ppb	235.244	2.57	49827	400000	
Mg	24	3	45	319.364	ppb	319.364	4.58	19520	400000	
Al	27	3	45	6858.009	ppb	6858.009	0.61	157169	400000	
K	39	3	45	1192.626	ppb	1192.626	6.52	83805	400000	
Ca	40	2	45	701.825	ppb	701.825	3.37	420115	400000	
V	51	3	72	67.998	ppb	67.998	1.37	43874	2000	
Cr	52	3	72	74.162	ppb	74.162	0.97	59400	5000	
Mn	55	3	72	458.112	ppb	458.112	0.33	196705	10000	
Fe	56	2	72	50315.442	ppb	50315.442	0.87	78949146	10000	>LDR
Co	59	3	72	5.060	ppb	5.060	2.74	6803	2000	
Ni	60	3	72	12.675	ppb	12.675	3.17	5082	5000	
Cu	63	3	72	55.879	ppb	55.879	0.35	56880	5000	
Zn	66	3	72	120.092	ppb	120.092	0.38	20889	5000	
As	75	3	72	17.026	ppb	17.026	5.47	2072	2000	
Se	78	2	72	0.677	ppb	0.677	20.09	43	2000	
Sr	88	3	72	20.392	ppb	20.392	2.78	12671	4000	
Mo	95	3	115	13.999	ppb	13.999	4.50	7668	2000	
Ag	107	3	115	0.210	ppb	0.210	6.66	433	100	
Cd	111	3	115	0.211	ppb	0.211	33.78	75	2000	
Sn	120	3	115	46.651	ppb	46.651	3.06	42194	2000	
Sb	121	3	115	2.562	ppb	2.562	9.70	2392	1000	
Ba	137	3	115	236.121	ppb	236.121	4.79	68392	5000	
Tl	205	3	193	0.013	ppb	0.013	108.48	960	2000	
(Pb)	206	3	193	146.194	ppb	146.194	2.59	244133	100	
(Pb)	207	3	193	139.421	ppb	139.421	1.61	206415	100	
Pb	208	3	193	141.686	ppb	141.686	2.81	956068	5000	
Th	232	3	193	14.764	ppb	14.764	0.21	109031	2000	
U	238	3	193	1.424	ppb	1.424	6.24	12623	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4083617	2.00	3936624	103.73	60	120	
Sc (IS)	45	3	HMI He	629528	0.97	609520	103.28	60	120	
Ge Internal standard	72	2	HMI H2	2510933	0.60	2391663	104.99	60	120	
Ge Internal standard	72	3	HMI He	794596	0.67	756863	104.99	60	120	
In Internal Standard	115	3	HMI He	3144605	2.84	2988279	105.23	60	120	
Ir (IS)	193	3	HMI He	7483195	2.92	6996686	106.95	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-1-C
Data File Name	143SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:25:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.495	ppb	0.495	52.02	25	2000	
Na	23	3	45	410.845	ppb	410.845	2.99	69737	400000	
Mg	24	3	45	1775.241	ppb	1775.241	0.63	106239	400000	
Al	27	3	45	16079.144	ppb	16079.144	0.76	373164	400000	
K	39	3	45	2032.045	ppb	2032.045	2.73	124540	400000	
Ca	40	2	45	3458.167	ppb	3458.167	19.90	2031271	400000	
V	51	3	72	101.438	ppb	101.438	1.26	65700	2000	
Cr	52	3	72	161.060	ppb	161.060	0.75	128202	5000	
Mn	55	3	72	6586.738	ppb	6586.738	1.51	2853621	10000	
Fe	56	2	72	110516.230	ppb	110516.230	19.20	176234600	10000	>LDR
Co	59	3	72	13.184	ppb	13.184	0.93	17783	2000	
Ni	60	3	72	50.126	ppb	50.126	2.01	19294	5000	
Cu	63	3	72	542.887	ppb	542.887	0.20	553770	5000	
Zn	66	3	72	1630.337	ppb	1630.337	1.24	282379	5000	
As	75	3	72	62.049	ppb	62.049	1.76	7423	2000	
Se	78	2	72	1.738	ppb	1.738	8.02	107	2000	
Sr	88	3	72	53.158	ppb	53.158	2.13	32935	4000	
Mo	95	3	115	10.690	ppb	10.690	3.93	5953	2000	
Ag	107	3	115	5.501	ppb	5.501	1.31	10519	100	
Cd	111	3	115	4.222	ppb	4.222	12.35	1193	2000	
Sn	120	3	115	214.825	ppb	214.825	0.49	193293	2000	
Sb	121	3	115	22.299	ppb	22.299	0.68	20015	1000	
Ba	137	3	115	509.634	ppb	509.634	0.40	149603	5000	
Tl	205	3	193	0.410	ppb	0.410	6.84	2966	2000	
(Pb)	206	3	193	1735.687	ppb	1735.687	0.84	2913454	100	>LDR
(Pb)	207	3	193	1662.039	ppb	1662.039	4.07	2468963	100	>LDR
Pb	208	3	193	1694.588	ppb	1694.588	2.26	11490533	5000	
Th	232	3	193	16.891	ppb	16.891	1.78	124321	2000	
U	238	3	193	2.362	ppb	2.362	2.23	19519	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4278982	9.31	3936624	108.70	60	120	
Sc (IS)	45	3	HMI He	637794	0.76	609520	104.64	60	120	
Ge Internal standard	72	2	HMI H2	2583416	9.45	2391663	108.02	60	120	
Ge Internal standard	72	3	HMI He	802450	0.47	756863	106.02	60	120	
In Internal Standard	115	3	HMI He	3186649	0.97	2988279	106.64	60	120	
Ir (IS)	193	3	HMI He	7532851	1.48	6996686	107.66	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-2-C
Data File Name	144SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:27:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.284	ppb	0.284	63.46	17	2000	
Na	23	3	45	258.875	ppb	258.875	1.54	53407	400000	
Mg	24	3	45	883.501	ppb	883.501	4.56	53578	400000	
Al	27	3	45	15873.136	ppb	15873.136	2.40	370530	400000	
K	39	3	45	1855.761	ppb	1855.761	4.87	116887	400000	
Ca	40	2	45	1122.069	ppb	1122.069	0.86	662749	400000	
V	51	3	72	105.465	ppb	105.465	1.91	68642	2000	
Cr	52	3	72	97.808	ppb	97.808	1.27	78967	5000	
Mn	55	3	72	937.761	ppb	937.761	0.49	408604	10000	
Fe	56	2	72	54589.487	ppb	54589.487	1.68	88362813	10000	>LDR
Co	59	3	72	6.558	ppb	6.558	2.60	8930	2000	
Ni	60	3	72	16.757	ppb	16.757	1.10	6712	5000	
Cu	63	3	72	170.900	ppb	170.900	1.72	175587	5000	
Zn	66	3	72	207.257	ppb	207.257	1.34	36368	5000	
As	75	3	72	31.816	ppb	31.816	2.40	3865	2000	
Se	78	2	72	1.471	ppb	1.471	1.52	92	2000	
Sr	88	3	72	28.108	ppb	28.108	2.87	17634	4000	
Mo	95	3	115	10.991	ppb	10.991	0.42	6130	2000	
Ag	107	3	115	0.533	ppb	0.533	3.42	1056	100	
Cd	111	3	115	0.336	ppb	0.336	21.11	112	2000	
Sn	120	3	115	39.849	ppb	39.849	2.47	36762	2000	
Sb	121	3	115	4.424	ppb	4.424	1.22	4095	1000	
Ba	137	3	115	241.704	ppb	241.704	1.15	71142	5000	
Tl	205	3	193	0.182	ppb	0.182	14.09	1816	2000	
(Pb)	206	3	193	187.389	ppb	187.389	3.49	315399	100	
(Pb)	207	3	193	180.893	ppb	180.893	1.31	269916	100	
Pb	208	3	193	184.103	ppb	184.103	3.20	1252162	5000	
Th	232	3	193	16.124	ppb	16.124	2.36	119277	2000	
U	238	3	193	3.079	ppb	3.079	2.60	24751	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4129785	2.00	3936624	104.91	60	120	
Sc (IS)	45	3	HMI He	641699	1.94	609520	105.28	60	120	
Ge Internal standard	72	2	HMI H2	2591203	2.97	2391663	108.34	60	120	
Ge Internal standard	72	3	HMI He	806740	0.72	756863	106.59	60	120	
In Internal Standard	115	3	HMI He	3193022	1.46	2988279	106.85	60	120	
Ir (IS)	193	3	HMI He	7547320	2.99	6996686	107.87	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-3-C
Data File Name	145SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:28:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.900	ppb	3.900	22.00	162	2000	
Na	23	3	45	518.283	ppb	518.283	2.61	83461	400000	
Mg	24	3	45	6807.432	ppb	6807.432	1.27	414861	400000	
Al	27	3	45	78264.943	ppb	78264.943	2.05	1859122	400000	
K	39	3	45	6065.410	ppb	6065.410	2.08	322431	400000	
Ca	40	2	45	2580.882	ppb	2580.882	3.58	1520355	400000	
V	51	3	72	186.295	ppb	186.295	2.58	121011	2000	
Cr	52	3	72	139.946	ppb	139.946	0.88	112577	5000	
Mn	55	3	72	4058.835	ppb	4058.835	0.43	1773389	10000	
Fe	56	2	72	93948.247	ppb	93948.247	1.66	147825355	10000	>LDR
Co	59	3	72	43.966	ppb	43.966	0.78	59626	2000	
Ni	60	3	72	67.014	ppb	67.014	3.23	25898	5000	
Cu	63	3	72	193.752	ppb	193.752	1.16	199639	5000	
Zn	66	3	72	346.228	ppb	346.228	1.50	60731	5000	
As	75	3	72	39.059	ppb	39.059	0.56	4742	2000	
Se	78	2	72	3.383	ppb	3.383	14.15	200	2000	
Sr	88	3	72	50.126	ppb	50.126	3.60	31338	4000	
Mo	95	3	115	7.199	ppb	7.199	4.38	4010	2000	
Ag	107	3	115	0.878	ppb	0.878	3.39	1704	100	
Cd	111	3	115	0.628	ppb	0.628	9.04	192	2000	
Sn	120	3	115	31.102	ppb	31.102	0.75	28750	2000	
Sb	121	3	115	5.660	ppb	5.660	2.91	5168	1000	
Ba	137	3	115	517.973	ppb	517.973	1.08	151444	5000	
Tl	205	3	193	1.062	ppb	1.062	4.30	6212	2000	
(Pb)	206	3	193	381.492	ppb	381.492	3.62	637227	100	
(Pb)	207	3	193	360.762	ppb	360.762	3.31	533711	100	
Pb	208	3	193	385.273	ppb	385.273	4.69	2599739	5000	
Th	232	3	193	22.028	ppb	22.028	4.21	158720	2000	
U	238	3	193	6.204	ppb	6.204	3.77	47094	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4219956	1.51	3936624	107.20	60	120	
Sc (IS)	45	3	HMI He	653059	1.20	609520	107.14	60	120	
Ge Internal standard	72	2	HMI H2	2518266	0.91	2391663	105.29	60	120	
Ge Internal standard	72	3	HMI He	809274	0.26	756863	106.92	60	120	
In Internal Standard	115	3	HMI He	3173957	0.24	2988279	106.21	60	120	
Ir (IS)	193	3	HMI He	7496020	2.97	6996686	107.14	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-4-C
Data File Name	146SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:30:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.014	ppb	3.014	14.85	127	2000	
Na	23	3	45	460.390	ppb	460.390	1.43	76633	400000	
Mg	24	3	45	6755.713	ppb	6755.713	0.69	409857	400000	
Al	27	3	45	80449.061	ppb	80449.061	1.16	1902811	400000	
K	39	3	45	7045.866	ppb	7045.866	0.91	368214	400000	
Ca	40	2	45	1887.722	ppb	1887.722	2.50	1126738	400000	
V	51	3	72	190.074	ppb	190.074	0.79	121966	2000	
Cr	52	3	72	136.635	ppb	136.635	0.36	108634	5000	
Mn	55	3	72	1548.697	ppb	1548.697	0.23	668632	10000	
Fe	56	2	72	98796.189	ppb	98796.189	1.69	156511292	10000	>LDR
Co	59	3	72	29.698	ppb	29.698	1.19	39816	2000	
Ni	60	3	72	58.111	ppb	58.111	2.02	22232	5000	
Cu	63	3	72	57.897	ppb	57.897	1.15	59284	5000	
Zn	66	3	72	184.315	ppb	184.315	0.20	32090	5000	
As	75	3	72	27.466	ppb	27.466	1.53	3317	2000	
Se	78	2	72	1.389	ppb	1.389	14.20	85	2000	
Sr	88	3	72	49.226	ppb	49.226	5.00	30408	4000	
Mo	95	3	115	8.490	ppb	8.490	3.85	4818	2000	
Ag	107	3	115	0.198	ppb	0.198	9.03	423	100	
Cd	111	3	115	0.254	ppb	0.254	12.94	90	2000	
Sn	120	3	115	12.671	ppb	12.671	1.65	12580	2000	
Sb	121	3	115	1.539	ppb	1.539	4.52	1543	1000	
Ba	137	3	115	470.409	ppb	470.409	2.46	140428	5000	
Tl	205	3	193	0.694	ppb	0.694	4.19	4369	2000	
(Pb)	206	3	193	58.258	ppb	58.258	2.21	97678	100	
(Pb)	207	3	193	54.588	ppb	54.588	1.47	81346	100	
Pb	208	3	193	56.222	ppb	56.222	1.41	381155	5000	
Th	232	3	193	30.811	ppb	30.811	0.95	218553	2000	
U	238	3	193	5.415	ppb	5.415	1.38	41398	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4247065	2.00	3936624	107.89	60	120	
Sc (IS)	45	3	HMI He	650171	0.28	609520	106.67	60	120	
Ge Internal standard	72	2	HMI H2	2535752	1.40	2391663	106.02	60	120	
Ge Internal standard	72	3	HMI He	799523	0.29	756863	105.64	60	120	
In Internal Standard	115	3	HMI He	3240932	0.92	2988279	108.45	60	120	
Ir (IS)	193	3	HMI He	7490009	1.72	6996686	107.05	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-5-F
Data File Name	147SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:32:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.533	ppb	6.533	16.91	265	2000	
Na	23	3	45	832.718	ppb	832.718	2.14	119981	400000	
Mg	24	3	45	14432.514	ppb	14432.514	1.91	887466	400000	
Al	27	3	45	133721.521	ppb	133721.521	0.80	3209084	400000	
K	39	3	45	10457.260	ppb	10457.260	1.74	540151	400000	
Ca	40	2	45	10382.861	ppb	10382.861	1.08	6038147	400000	
V	51	3	72	315.920	ppb	315.920	1.81	206320	2000	
Cr	52	3	72	223.777	ppb	223.777	1.11	180407	5000	
Mn	55	3	72	5738.163	ppb	5738.163	2.10	2527491	10000	
Fe	56	2	72	149748.892	ppb	149748.892	2.07	236105484	10000	>LDR
Co	59	3	72	64.547	ppb	64.547	1.04	88218	2000	
Ni	60	3	72	114.094	ppb	114.094	2.48	44208	5000	
Cu	63	3	72	209.495	ppb	209.495	2.97	217558	5000	
Zn	66	3	72	679.625	ppb	679.625	1.80	119872	5000	
As	75	3	72	57.390	ppb	57.390	2.22	6988	2000	
Se	78	2	72	4.946	ppb	4.946	1.43	291	2000	
Sr	88	3	72	83.437	ppb	83.437	1.80	52407	4000	
Mo	95	3	115	9.738	ppb	9.738	0.57	5455	2000	
Ag	107	3	115	1.035	ppb	1.035	3.40	2021	100	
Cd	111	3	115	1.210	ppb	1.210	8.01	356	2000	
Sn	120	3	115	36.829	ppb	36.829	0.78	34165	2000	
Sb	121	3	115	6.320	ppb	6.320	4.05	5805	1000	
Ba	137	3	115	823.225	ppb	823.225	1.03	242826	5000	
Tl	205	3	193	1.669	ppb	1.669	3.78	9384	2000	
(Pb)	206	3	193	433.086	ppb	433.086	0.51	733770	100	
(Pb)	207	3	193	407.000	ppb	407.000	0.60	610702	100	
Pb	208	3	193	437.208	ppb	437.208	1.94	2993024	5000	
Th	232	3	193	35.923	ppb	35.923	0.84	257106	2000	
U	238	3	193	9.180	ppb	9.180	0.97	69525	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4224863	0.52	3936624	107.32	60	120	
Sc (IS)	45	3	HMI He	659735	0.79	609520	108.24	60	120	
Ge Internal standard	72	2	HMI H2	2524016	1.63	2391663	105.53	60	120	
Ge Internal standard	72	3	HMI He	815932	0.87	756863	107.80	60	120	
In Internal Standard	115	3	HMI He	3203105	1.07	2988279	107.19	60	120	
Ir (IS)	193	3	HMI He	7599095	0.65	6996686	108.61	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	148_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:34:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.155	ppb	3.787	1921	50	96.3	90	110	
Na	23	3	45	46904.283	ppb	1.785	5215716	51000	92.0	90	110	
Mg	24	3	45	9763.839	ppb	1.523	586086	11000	88.8	90	110	>+\-10%
Al	27	3	45	969.157	ppb	2.756	22825	1000	96.9	90	110	
K	39	3	45	10181.935	ppb	1.768	513940	11000	92.6	90	110	
Ca	40	2	45	10348.328	ppb	1.403	6003035	11000	94.1	90	110	
V	51	3	72	50.110	ppb	1.161	31997	50	100.2	90	110	
Cr	52	3	72	51.286	ppb	3.276	40920	50	102.6	90	110	
Mn	55	3	72	51.005	ppb	1.572	21708	50	102.0	90	110	
Fe	56	2	72	1063.202	ppb	4.133	1701756	1000	106.3	90	110	
Co	59	3	72	49.991	ppb	1.983	65441	50	100.0	90	110	
Ni	60	3	72	49.949	ppb	2.579	18722	50	99.9	90	110	
Cu	63	3	72	50.477	ppb	2.611	50565	50	101.0	90	110	
Zn	66	3	72	49.464	ppb	3.162	8642	50	98.9	90	110	
As	75	3	72	52.412	ppb	3.485	6117	50	104.8	90	110	
Se	78	2	72	50.843	ppb	2.671	2969	50	101.7	90	110	
Sr	88	3	72	101.297	ppb	1.368	60877	100	101.3	90	110	
Mo	95	3	115	48.523	ppb	0.620	27272	50	97.0	90	110	
Ag	107	3	115	48.453	ppb	2.501	93896	50	96.9	90	110	
Cd	111	3	115	47.490	ppb	0.936	13453	50	95.0	90	110	
Sn	120	3	115	48.742	ppb	1.486	45404	50	97.5	90	110	
Sb	121	3	115	48.532	ppb	1.201	44124	50	97.1	90	110	
Ba	137	3	115	49.277	ppb	1.543	14804	50	98.6	90	110	
Tl	205	3	193	47.197	ppb	1.654	234509	50	94.4	90	110	
(Pb)	206	3	193	48.207	ppb	4.935	79980	50	96.4	90	110	
(Pb)	207	3	193	46.928	ppb	1.959	69266	50	93.9	90	110	
Pb	208	3	193	47.791	ppb	4.111	320646	50	95.6	90	110	
Th	232	3	193	49.074	ppb	3.045	339240	50	98.1	90	110	
U	238	3	193	47.755	ppb	4.208	342464	50	95.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214582	1.26	3936624	107.06	60	120	
Sc (IS)	45	3	HMI He	643796	1.60	609520	105.62	60	120	
Ge Internal standard	72	2	HMI H2	2535987	1.05	2391663	106.03	60	120	
Ge Internal standard	72	3	HMI He	781361	0.88	756863	103.24	60	120	
In Internal Standard	115	3	HMI He	3240450	1.07	2988279	108.44	60	120	
Ir (IS)	193	3	HMI He	7411323	3.75	6996686	105.93	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	149_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:36:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.126	ppb	0.0	0	0.5	
Na	23	3	45	15.556	ppb	21.5	26451	25	
Mg	24	3	45	-0.165	ppb	-1213.0	794	25	
Al	27	3	45	1.736	ppb	54.5	174	15	
K	39	3	45	-30.407	ppb	-63.0	27261	50	
V	51	3	72	-0.562	ppb	-3.5	436	1	
Cr	52	3	72	0.093	ppb	184.0	1828	1	
Mn	55	3	72	0.490	ppb	39.8	408	0.5	
Co	59	3	72	-0.004	ppb	-416.5	70	0.5	
Ni	60	3	72	-0.026	ppb	-305.4	327	1	
Cu	63	3	72	-0.013	ppb	-358.4	476	1	
Zn	66	3	72	0.107	ppb	139.1	333	5	
As	75	3	72	-0.201	ppb	-76.5	53	1	
Se	78	2	72	0.087	ppb	60.4	9	1	
Sr	88	3	72	-0.072	ppb	-29.7	217	0.5	
Mo	95	3	115	0.043	ppb	59.7	80	0.5	
Ag	107	3	115	0.019	ppb	67.9	77	1	
Cd	111	3	115	0.014	ppb	275.1	22	0.5	
Sn	120	3	115	0.729	ppb	4.6	1696	1	
Sb	121	3	115	-0.049	ppb	-47.3	103	0.6	
Ba	137	3	115	0.071	ppb	105.9	127	0.5	
Tl	205	3	193	-0.081	ppb	-11.6	480	0.1	
(Pb)	206	3	193	-0.036	ppb	-88.8	405	1	
(Pb)	207	3	193	-0.072	ppb	-70.3	593	1	
Pb	208	3	193	-0.038	ppb	-51.2	1847	0.5	
Th	232	3	193	1.291	ppb	17.6	16891	1	>RL
U	238	3	193	0.025	ppb	77.8	2514	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214099	0.61	3936624	107.05	60	120	
Sc (IS)	45	3	HMI He	639120	1.04	609520	104.86	60	120	
Ge Internal standard	72	2	HMI H2	2547253	0.39	2391663	106.51	60	120	
Ge Internal standard	72	3	HMI He	794598	1.18	756863	104.99	60	120	
In Internal Standard	115	3	HMI He	3213898	0.72	2988279	107.55	60	120	
Ir (IS)	193	3	HMI He	7326628	1.48	6996686	104.72	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-6-C
Data File Name	150SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:38:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.749	ppb	3.749	13.10	153	2000	
Na	23	3	45	697.145	ppb	697.145	3.24	104293	400000	
Mg	24	3	45	9725.768	ppb	9725.768	0.45	596495	400000	
Al	27	3	45	117627.044	ppb	117627.044	2.21	2813955	400000	
K	39	3	45	11423.586	ppb	11423.586	1.53	585516	400000	
Ca	40	2	45	3754.647	ppb	3754.647	1.05	2234165	400000	
V	51	3	72	270.537	ppb	270.537	0.10	174481	2000	
Cr	52	3	72	181.292	ppb	181.292	0.48	144572	5000	
Mn	55	3	72	1450.498	ppb	1450.498	0.21	630663	10000	
Fe	56	2	72	142291.788	ppb	142291.788	2.02	226204388	10000	>LDR
Co	59	3	72	38.426	ppb	38.426	1.92	51858	2000	
Ni	60	3	72	70.927	ppb	70.927	1.43	27252	5000	
Cu	63	3	72	74.688	ppb	74.688	0.18	76871	5000	
Zn	66	3	72	240.605	ppb	240.605	0.67	42088	5000	
As	75	3	72	38.406	ppb	38.406	1.46	4640	2000	
Se	78	2	72	1.988	ppb	1.988	3.90	121	2000	
Sr	88	3	72	65.557	ppb	65.557	1.92	40692	4000	
Mo	95	3	115	9.778	ppb	9.778	2.18	5417	2000	
Ag	107	3	115	0.213	ppb	0.213	13.39	443	100	
Cd	111	3	115	0.268	ppb	0.268	4.46	92	2000	
Sn	120	3	115	13.689	ppb	13.689	2.54	13203	2000	
Sb	121	3	115	1.764	ppb	1.764	8.36	1708	1000	
Ba	137	3	115	535.834	ppb	535.834	0.28	156382	5000	
Tl	205	3	193	1.063	ppb	1.063	3.91	6193	2000	
(Pb)	206	3	193	80.445	ppb	80.445	0.55	134269	100	
(Pb)	207	3	193	75.465	ppb	75.465	0.72	111808	100	
Pb	208	3	193	77.913	ppb	77.913	0.40	525661	5000	
Th	232	3	193	41.635	ppb	41.635	0.39	291371	2000	
U	238	3	193	7.765	ppb	7.765	1.63	58130	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4286810	0.66	3936624	108.90	60	120	
Sc (IS)	45	3	HMI He	657674	0.59	609520	107.90	60	120	
Ge Internal standard	72	2	HMI H2	2545075	2.17	2391663	106.41	60	120	
Ge Internal standard	72	3	HMI He	805158	0.16	756863	106.38	60	120	
In Internal Standard	115	3	HMI He	3168260	0.45	2988279	106.02	60	120	
Ir (IS)	193	3	HMI He	7464286	1.04	6996686	106.68	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-1-C
Data File Name	151SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:39:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.721	ppb	3.721	21.47	155	2000	
Na	23	3	45	562.621	ppb	562.621	1.45	88946	400000	
Mg	24	3	45	6691.766	ppb	6691.766	0.59	410080	400000	
Al	27	3	45	75692.566	ppb	75692.566	1.27	1808307	400000	
K	39	3	45	6581.819	ppb	6581.819	1.48	349373	400000	
Ca	40	2	45	2071.728	ppb	2071.728	1.14	1258839	400000	
V	51	3	72	189.650	ppb	189.650	1.91	123912	2000	
Cr	52	3	72	137.982	ppb	137.982	1.16	111694	5000	
Mn	55	3	72	2391.699	ppb	2391.699	1.69	1051311	10000	
Fe	56	2	72	93803.540	ppb	93803.540	2.99	150552097	10000	>LDR
Co	59	3	72	38.728	ppb	38.728	0.56	52852	2000	
Ni	60	3	72	60.569	ppb	60.569	2.98	23580	5000	
Cu	63	3	72	166.396	ppb	166.396	2.58	172528	5000	
Zn	66	3	72	313.264	ppb	313.264	1.66	55309	5000	
As	75	3	72	38.987	ppb	38.987	3.07	4763	2000	
Se	78	2	72	3.364	ppb	3.364	14.59	203	2000	
Sr	88	3	72	52.794	ppb	52.794	2.35	33192	4000	
Mo	95	3	115	6.686	ppb	6.686	4.77	3802	2000	
Ag	107	3	115	0.855	ppb	0.855	9.11	1693	100	
Cd	111	3	115	0.508	ppb	0.508	2.77	162	2000	
Sn	120	3	115	22.074	ppb	22.074	0.92	21106	2000	
Sb	121	3	115	5.354	ppb	5.354	4.19	4992	1000	
Ba	137	3	115	509.589	ppb	509.589	1.16	151894	5000	
Tl	205	3	193	0.957	ppb	0.957	6.34	5760	2000	
(Pb)	206	3	193	408.264	ppb	408.264	2.33	691251	100	
(Pb)	207	3	193	375.055	ppb	375.055	1.47	562490	100	
Pb	208	3	193	402.659	ppb	402.659	3.12	2754362	5000	
Th	232	3	193	22.061	ppb	22.061	3.25	161074	2000	
U	238	3	193	5.906	ppb	5.906	2.40	45561	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4332041	0.22	3936624	110.04	60	120	
Sc (IS)	45	3	HMI He	656727	0.35	609520	107.74	60	120	
Ge Internal standard	72	2	HMI H2	2569941	2.54	2391663	107.45	60	120	
Ge Internal standard	72	3	HMI He	814255	1.75	756863	107.58	60	120	
In Internal Standard	115	3	HMI He	3235916	0.76	2988279	108.29	60	120	
Ir (IS)	193	3	HMI He	7595751	1.89	6996686	108.56	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-2-C
Data File Name	152SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:41:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.434	ppb	2.434	18.97	102	2000	
Na	23	3	45	464.719	ppb	464.719	2.22	77367	400000	
Mg	24	3	45	4809.020	ppb	4809.020	0.82	292961	400000	
Al	27	3	45	63898.050	ppb	63898.050	0.28	1516414	400000	
K	39	3	45	6556.146	ppb	6556.146	0.69	345794	400000	
Ca	40	2	45	1383.954	ppb	1383.954	1.46	826351	400000	
V	51	3	72	169.423	ppb	169.423	1.33	109243	2000	
Cr	52	3	72	127.186	ppb	127.186	0.55	101653	5000	
Mn	55	3	72	1026.284	ppb	1026.284	1.32	444948	10000	
Fe	56	2	72	72203.240	ppb	72203.240	2.85	114906171	10000	>LDR
Co	59	3	72	23.944	ppb	23.944	0.22	32246	2000	
Ni	60	3	72	44.113	ppb	44.113	0.64	17027	5000	
Cu	63	3	72	57.424	ppb	57.424	0.99	59041	5000	
Zn	66	3	72	150.046	ppb	150.046	0.87	26289	5000	
As	75	3	72	25.310	ppb	25.310	6.73	3075	2000	
Se	78	2	72	1.131	ppb	1.131	15.84	71	2000	
Sr	88	3	72	48.466	ppb	48.466	1.90	30063	4000	
Mo	95	3	115	6.776	ppb	6.776	1.87	3797	2000	
Ag	107	3	115	0.207	ppb	0.207	11.74	435	100	
Cd	111	3	115	0.170	ppb	0.170	53.51	65	2000	
Sn	120	3	115	10.816	ppb	10.816	1.72	10722	2000	
Sb	121	3	115	1.582	ppb	1.582	9.17	1558	1000	
Ba	137	3	115	435.333	ppb	435.333	0.90	127956	5000	
Tl	205	3	193	0.501	ppb	0.501	2.67	3460	2000	
(Pb)	206	3	193	55.622	ppb	55.622	2.32	94869	100	
(Pb)	207	3	193	52.092	ppb	52.092	2.02	78971	100	
Pb	208	3	193	53.887	ppb	53.887	2.36	371609	5000	
Th	232	3	193	26.506	ppb	26.506	2.74	192380	2000	
U	238	3	193	4.466	ppb	4.466	4.00	35144	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4208118	1.00	3936624	106.90	60	120	
Sc (IS)	45	3	HMI He	652346	0.98	609520	107.03	60	120	
Ge Internal standard	72	2	HMI H2	2548365	3.08	2391663	106.55	60	120	
Ge Internal standard	72	3	HMI He	802763	0.14	756863	106.06	60	120	
In Internal Standard	115	3	HMI He	3190489	0.78	2988279	106.77	60	120	
Ir (IS)	193	3	HMI He	7618241	1.96	6996686	108.88	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-3-C
Data File Name	153SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:43:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.696	ppb	2.696	9.95	112	2000	
Na	23	3	45	492.639	ppb	492.639	1.31	79964	400000	
Mg	24	3	45	5212.931	ppb	5212.931	0.64	315381	400000	
Al	27	3	45	69647.748	ppb	69647.748	0.89	1641724	400000	
K	39	3	45	7042.061	ppb	7042.061	1.60	366806	400000	
Ca	40	2	45	1531.501	ppb	1531.501	3.65	932512	400000	
V	51	3	72	177.788	ppb	177.788	1.53	115141	2000	
Cr	52	3	72	130.882	ppb	130.882	1.50	105050	5000	
Mn	55	3	72	1022.332	ppb	1022.332	1.15	445341	10000	
Fe	56	2	72	80878.649	ppb	80878.649	4.86	128655250	10000	>LDR
Co	59	3	72	28.502	ppb	28.502	1.55	38551	2000	
Ni	60	3	72	46.845	ppb	46.845	1.86	18146	5000	
Cu	63	3	72	58.044	ppb	58.044	2.34	59953	5000	
Zn	66	3	72	179.624	ppb	179.624	1.21	31557	5000	
As	75	3	72	25.507	ppb	25.507	1.94	3114	2000	
Se	78	2	72	0.910	ppb	0.910	22.16	57	2000	
Sr	88	3	72	50.983	ppb	50.983	1.33	31765	4000	
Mo	95	3	115	8.594	ppb	8.594	2.98	4870	2000	
Ag	107	3	115	0.231	ppb	0.231	2.24	486	100	
Cd	111	3	115	0.272	ppb	0.272	28.67	95	2000	
Sn	120	3	115	16.048	ppb	16.048	1.61	15633	2000	
Sb	121	3	115	1.631	ppb	1.631	4.05	1624	1000	
Ba	137	3	115	442.937	ppb	442.937	1.74	132075	5000	
Tl	205	3	193	0.532	ppb	0.532	1.59	3600	2000	
(Pb)	206	3	193	58.048	ppb	58.048	0.53	98473	100	
(Pb)	207	3	193	54.269	ppb	54.269	1.85	81811	100	
Pb	208	3	193	56.359	ppb	56.359	1.12	386532	5000	
Th	232	3	193	28.541	ppb	28.541	1.28	205412	2000	
U	238	3	193	4.664	ppb	4.664	1.35	36408	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4307028	1.57	3936624	109.41	60	120	
Sc (IS)	45	3	HMI He	647982	0.62	609520	106.31	60	120	
Ge Internal standard	72	2	HMI H2	2548161	2.97	2391663	106.54	60	120	
Ge Internal standard	72	3	HMI He	806620	0.75	756863	106.57	60	120	
In Internal Standard	115	3	HMI He	3237290	2.02	2988279	108.33	60	120	
Ir (IS)	193	3	HMI He	7576678	1.07	6996686	108.29	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-4-C
Data File Name	154SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:45:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.706	ppb	2.706	28.26	110	2000	
Na	23	3	45	417.151	ppb	417.151	2.54	71370	400000	
Mg	24	3	45	5225.883	ppb	5225.883	1.05	315326	400000	
Al	27	3	45	66843.467	ppb	66843.467	2.02	1571433	400000	
K	39	3	45	6293.833	ppb	6293.833	1.60	330037	400000	
Ca	40	2	45	1397.435	ppb	1397.435	2.85	835682	400000	
V	51	3	72	174.427	ppb	174.427	0.38	112459	2000	
Cr	52	3	72	126.811	ppb	126.811	0.76	101371	5000	
Mn	55	3	72	958.400	ppb	958.400	0.82	415582	10000	
Fe	56	2	72	85134.783	ppb	85134.783	0.41	133259840	10000	>LDR
Co	59	3	72	24.963	ppb	24.963	1.01	33619	2000	
Ni	60	3	72	46.731	ppb	46.731	1.07	18019	5000	
Cu	63	3	72	52.444	ppb	52.444	0.29	53970	5000	
Zn	66	3	72	158.805	ppb	158.805	2.31	27807	5000	
As	75	3	72	30.850	ppb	30.850	5.71	3732	2000	
Se	78	2	72	1.118	ppb	1.118	9.78	69	2000	
Sr	88	3	72	44.016	ppb	44.016	1.28	27330	4000	
Mo	95	3	115	7.899	ppb	7.899	6.53	4382	2000	
Ag	107	3	115	0.168	ppb	0.168	18.27	356	100	
Cd	111	3	115	0.117	ppb	0.117	102.41	50	2000	
Sn	120	3	115	11.883	ppb	11.883	2.81	11589	2000	
Sb	121	3	115	1.503	ppb	1.503	4.16	1474	1000	
Ba	137	3	115	402.847	ppb	402.847	1.17	117484	5000	
Tl	205	3	193	0.557	ppb	0.557	6.26	3679	2000	
(Pb)	206	3	193	52.160	ppb	52.160	0.13	87415	100	
(Pb)	207	3	193	49.075	ppb	49.075	1.98	73112	100	
Pb	208	3	193	50.693	ppb	50.693	1.78	343488	5000	
Th	232	3	193	26.152	ppb	26.152	2.29	186548	2000	
U	238	3	193	4.462	ppb	4.462	2.11	34492	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4217655	4.08	3936624	107.14	60	120	
Sc (IS)	45	3	HMI He	646276	0.47	609520	106.03	60	120	
Ge Internal standard	72	2	HMI H2	2505088	1.37	2391663	104.74	60	120	
Ge Internal standard	72	3	HMI He	802861	0.06	756863	106.08	60	120	
In Internal Standard	115	3	HMI He	3165603	1.41	2988279	105.93	60	120	
Ir (IS)	193	3	HMI He	7480692	0.46	6996686	106.92	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-1-C
Data File Name	155SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:47:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.375	ppb	3.375	32.57	133	2000	
Na	23	3	45	424.915	ppb	424.915	1.46	72309	400000	
Mg	24	3	45	4800.471	ppb	4800.471	0.72	290034	400000	
Al	27	3	45	59993.553	ppb	59993.553	1.00	1412094	400000	
K	39	3	45	4803.852	ppb	4803.852	1.05	259057	400000	
Ca	40	2	45	1485.021	ppb	1485.021	4.39	881897	400000	
V	51	3	72	155.323	ppb	155.323	1.14	101099	2000	
Cr	52	3	72	129.564	ppb	129.564	0.43	104440	5000	
Mn	55	3	72	1919.255	ppb	1919.255	0.68	839264	10000	
Fe	56	2	72	95065.647	ppb	95065.647	2.41	148313290	10000	>LDR
Co	59	3	72	28.086	ppb	28.086	1.14	38145	2000	
Ni	60	3	72	48.494	ppb	48.494	1.62	18850	5000	
Cu	63	3	72	131.866	ppb	131.866	1.12	136127	5000	
Zn	66	3	72	217.657	ppb	217.657	1.48	38324	5000	
As	75	3	72	35.742	ppb	35.742	2.70	4349	2000	
Se	78	2	72	2.980	ppb	2.980	2.60	175	2000	
Sr	88	3	72	42.659	ppb	42.659	2.13	26725	4000	
Mo	95	3	115	7.090	ppb	7.090	1.38	3932	2000	
Ag	107	3	115	0.726	ppb	0.726	8.42	1408	100	
Cd	111	3	115	0.201	ppb	0.201	39.73	73	2000	
Sn	120	3	115	25.086	ppb	25.086	1.05	23274	2000	
Sb	121	3	115	6.526	ppb	6.526	1.45	5908	1000	
Ba	137	3	115	407.891	ppb	407.891	2.25	118681	5000	
Tl	205	3	193	0.824	ppb	0.824	2.26	5012	2000	
(Pb)	206	3	193	546.854	ppb	546.854	1.48	911619	100	>LDR
(Pb)	207	3	193	525.116	ppb	525.116	2.21	775048	100	>LDR
Pb	208	3	193	553.390	ppb	553.390	0.96	3727851	5000	
Th	232	3	193	19.296	ppb	19.296	2.00	139795	2000	
U	238	3	193	4.799	ppb	4.799	3.08	36898	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4196873	1.60	3936624	106.61	60	120	
Sc (IS)	45	3	HMI He	646985	0.60	609520	106.15	60	120	
Ge Internal standard	72	2	HMI H2	2497270	1.09	2391663	104.42	60	120	
Ge Internal standard	72	3	HMI He	809877	0.94	756863	107.00	60	120	
In Internal Standard	115	3	HMI He	3158864	1.93	2988279	105.71	60	120	
Ir (IS)	193	3	HMI He	7480016	3.02	6996686	106.91	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	156_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:49:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.386	ppb	6.074	2052	50	104.8	90	110	
Na	23	3	45	46104.541	ppb	2.166	5173608	51000	90.4	90	110	
Mg	24	3	45	9705.160	ppb	1.014	587907	11000	88.2	90	110	>+\-10%
Al	27	3	45	932.287	ppb	1.036	22166	1000	93.2	90	110	
K	39	3	45	10197.541	ppb	2.033	519363	11000	92.7	90	110	
Ca	40	2	45	10103.938	ppb	1.314	5876909	11000	91.9	90	110	
V	51	3	72	50.054	ppb	1.611	32446	50	100.1	90	110	
Cr	52	3	72	51.051	ppb	1.297	41366	50	102.1	90	110	
Mn	55	3	72	50.281	ppb	2.039	21726	50	100.6	90	110	
Fe	56	2	72	1046.429	ppb	0.773	1664751	1000	104.6	90	110	
Co	59	3	72	50.461	ppb	3.719	67051	50	100.9	90	110	
Ni	60	3	72	49.295	ppb	2.107	18762	50	98.6	90	110	
Cu	63	3	72	51.142	ppb	0.940	52012	50	102.3	90	110	
Zn	66	3	72	51.403	ppb	3.179	9105	50	102.8	90	110	
As	75	3	72	53.166	ppb	1.701	6300	50	106.3	90	110	
Se	78	2	72	53.882	ppb	0.910	3126	50	107.8	90	110	
Sr	88	3	72	100.917	ppb	1.094	61573	100	100.9	90	110	
Mo	95	3	115	49.208	ppb	4.349	27703	50	98.4	90	110	
Ag	107	3	115	48.246	ppb	2.262	93698	50	96.5	90	110	
Cd	111	3	115	47.656	ppb	5.401	13520	50	95.3	90	110	
Sn	120	3	115	48.198	ppb	1.774	45007	50	96.4	90	110	
Sb	121	3	115	48.997	ppb	3.240	44626	50	98.0	90	110	
Ba	137	3	115	49.772	ppb	3.808	14981	50	99.5	90	110	
Tl	205	3	193	47.785	ppb	2.690	236412	50	95.6	90	110	
(Pb)	206	3	193	48.091	ppb	0.723	79520	50	96.2	90	110	
(Pb)	207	3	193	47.044	ppb	3.197	69137	50	94.1	90	110	
Pb	208	3	193	48.123	ppb	0.552	321691	50	96.2	90	110	
Th	232	3	193	48.109	ppb	0.535	331458	50	96.2	90	110	
U	238	3	193	48.850	ppb	0.514	349009	50	97.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4225690	2.34	3936624	107.34	60	120	
Sc (IS)	45	3	HMI He	649639	1.31	609520	106.58	60	120	
Ge Internal standard	72	2	HMI H2	2519582	0.84	2391663	105.35	60	120	
Ge Internal standard	72	3	HMI He	793281	1.31	756863	104.81	60	120	
In Internal Standard	115	3	HMI He	3248382	2.88	2988279	108.70	60	120	
Ir (IS)	193	3	HMI He	7377690	1.38	6996686	105.45	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	157_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:50:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.083	ppb	-88.4	2	0.5	
Na	23	3	45	9.384	ppb	98.9	25890	25	
Mg	24	3	45	1.428	ppb	90.6	894	25	
Al	27	3	45	2.820	ppb	118.7	200	15	
K	39	3	45	-29.914	ppb	-0.9	27404	50	
V	51	3	72	-0.336	ppb	-6.9	581	1	
Cr	52	3	72	0.133	ppb	90.9	1863	1	
Mn	55	3	72	0.306	ppb	43.4	330	0.5	
Co	59	3	72	-0.012	ppb	-85.2	60	0.5	
Ni	60	3	72	0.102	ppb	199.2	375	1	
Cu	63	3	72	-0.034	ppb	-145.0	456	1	
Zn	66	3	72	0.218	ppb	102.1	353	5	
As	75	3	72	-0.273	ppb	-67.9	45	1	
Se	78	2	72	0.018	ppb	284.6	5	1	
Sr	88	3	72	-0.032	ppb	-381.6	242	0.5	
Mo	95	3	115	0.010	ppb	87.4	62	0.5	
Ag	107	3	115	0.011	ppb	129.4	60	1	
Cd	111	3	115	-0.004	ppb	-1018.1	17	0.5	
Sn	120	3	115	0.307	ppb	46.0	1318	1	
Sb	121	3	115	-0.023	ppb	-95.9	127	0.6	
Ba	137	3	115	-0.003	ppb	-1336.9	105	0.5	
Tl	205	3	193	-0.080	ppb	-12.6	488	0.1	
(Pb)	206	3	193	-0.081	ppb	-26.0	333	1	
(Pb)	207	3	193	-0.113	ppb	-25.2	535	1	
Pb	208	3	193	-0.077	ppb	-18.3	1593	0.5	
Th	232	3	193	1.002	ppb	14.5	15008	1	>RL
U	238	3	193	0.016	ppb	48.4	2461	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4205390	1.06	3936624	106.83	60	120	
Sc (IS)	45	3	HMI He	642045	0.93	609520	105.34	60	120	
Ge Internal standard	72	2	HMI H2	2547268	1.40	2391663	106.51	60	120	
Ge Internal standard	72	3	HMI He	796719	0.23	756863	105.27	60	120	
In Internal Standard	115	3	HMI He	3222977	1.85	2988279	107.85	60	120	
Ir (IS)	193	3	HMI He	7352461	1.27	6996686	105.08	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F
Data File Name	158SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:52:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.245	ppb	2.245	26.86	93	2000	
Na	23	3	45	298.435	ppb	298.435	3.50	59028	400000	
Mg	24	3	45	3173.279	ppb	3173.279	1.64	194552	400000	
Al	27	3	45	47531.224	ppb	47531.224	2.83	1133515	400000	
K	39	3	45	3638.192	ppb	3638.192	0.38	205977	400000	
Ca	40	2	45	1093.048	ppb	1093.048	1.30	670625	400000	
V	51	3	72	125.083	ppb	125.083	1.17	81880	2000	
Cr	52	3	72	100.258	ppb	100.258	0.78	81515	5000	
Mn	55	3	72	1395.887	ppb	1395.887	0.70	612710	10000	
Fe	56	2	72	57529.581	ppb	57529.581	1.93	93130262	10000	>LDR
Co	59	3	72	18.383	ppb	18.383	1.43	25085	2000	
Ni	60	3	72	32.097	ppb	32.097	2.39	12638	5000	
Cu	63	3	72	63.119	ppb	63.119	1.09	65661	5000	
Zn	66	3	72	124.261	ppb	124.261	1.09	22100	5000	
As	75	3	72	21.251	ppb	21.251	3.66	2627	2000	
Se	78	2	72	1.214	ppb	1.214	8.82	77	2000	
Sr	88	3	72	33.836	ppb	33.836	1.98	21333	4000	
Mo	95	3	115	4.598	ppb	4.598	8.21	2642	2000	
Ag	107	3	115	0.241	ppb	0.241	6.53	508	100	
Cd	111	3	115	0.242	ppb	0.242	38.11	87	2000	
Sn	120	3	115	19.786	ppb	19.786	2.30	19092	2000	
Sb	121	3	115	1.782	ppb	1.782	5.36	1768	1000	
Ba	137	3	115	340.105	ppb	340.105	0.90	101774	5000	
Tl	205	3	193	0.461	ppb	0.461	5.76	3164	2000	
(Pb)	206	3	193	159.780	ppb	159.780	1.88	264036	100	
(Pb)	207	3	193	147.481	ppb	147.481	1.41	216053	100	
Pb	208	3	193	153.702	ppb	153.702	1.38	1026479	5000	
Th	232	3	193	18.504	ppb	18.504	0.96	133082	2000	
U	238	3	193	3.600	ppb	3.600	0.77	27999	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4285281	1.83	3936624	108.86	60	120	
Sc (IS)	45	3	HMI He	655655	1.17	609520	107.57	60	120	
Ge Internal standard	72	2	HMI H2	2591203	1.93	2391663	108.34	60	120	
Ge Internal standard	72	3	HMI He	812840	0.42	756863	107.40	60	120	
In Internal Standard	115	3	HMI He	3247502	1.11	2988279	108.67	60	120	
Ir (IS)	193	3	HMI He	7403979	0.87	6996686	105.82	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-Fsd@5
Data File Name	159SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:54:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.702	ppb	0.702	71.33	33	2000	
Na	23	3	45	63.522	ppb	63.522	2.01	32105	400000	
Mg	24	3	45	645.772	ppb	645.772	2.26	39705	400000	
Al	27	3	45	9296.215	ppb	9296.215	1.76	218825	400000	
K	39	3	45	714.789	ppb	714.789	6.93	63236	400000	
Ca	40	2	45	241.406	ppb	241.406	1.06	169486	400000	
V	51	3	72	24.300	ppb	24.300	3.80	16473	2000	
Cr	52	3	72	20.044	ppb	20.044	3.76	17641	5000	
Mn	55	3	72	282.430	ppb	282.430	3.92	123485	10000	
Fe	56	2	72	11641.607	ppb	11641.607	1.03	18760918	10000	
Co	59	3	72	3.626	ppb	3.626	2.14	4985	2000	
Ni	60	3	72	6.492	ppb	6.492	4.73	2816	5000	
Cu	63	3	72	12.513	ppb	12.513	3.50	13350	5000	
Zn	66	3	72	28.383	ppb	28.383	4.15	5268	5000	
As	75	3	72	3.782	ppb	3.782	4.61	530	2000	
Se	78	2	72	0.332	ppb	0.332	16.85	24	2000	
Sr	88	3	72	6.559	ppb	6.559	5.56	4327	4000	
Mo	95	3	115	0.864	ppb	0.864	6.36	535	2000	
Ag	107	3	115	0.059	ppb	0.059	36.24	152	100	
Cd	111	3	115	0.032	ppb	0.032	185.70	27	2000	
Sn	120	3	115	3.987	ppb	3.987	6.96	4619	2000	
Sb	121	3	115	0.366	ppb	0.366	3.46	475	1000	
Ba	137	3	115	69.034	ppb	69.034	2.91	20457	5000	
Tl	205	3	193	-0.001	ppb	-0.001	-917.97	898	2000	
(Pb)	206	3	193	31.054	ppb	31.054	4.73	52822	100	
(Pb)	207	3	193	29.664	ppb	29.664	1.25	44984	100	
Pb	208	3	193	30.227	ppb	30.227	2.57	208017	5000	
Th	232	3	193	3.749	ppb	3.749	4.29	34362	2000	
U	238	3	193	0.731	ppb	0.731	3.11	7732	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4253790	0.85	3936624	108.06	60	120	
Sc (IS)	45	3	HMI He	646827	1.54	609520	106.12	60	120	
Ge Internal standard	72	2	HMI H2	2577117	0.76	2391663	107.75	60	120	
Ge Internal standard	72	3	HMI He	808905	1.63	756863	106.88	60	120	
In Internal Standard	115	3	HMI He	3204138	2.56	2988279	107.22	60	120	
Ir (IS)	193	3	HMI He	7566374	1.06	6996686	108.14	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-G MS
Data File Name	160SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:56:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	203.565	ppb	203.565	1.78	7933	2000	
Na	23	3	45	4048.997	ppb	4048.997	2.64	483132	400000	
Mg	24	3	45	7017.567	ppb	7017.567	2.22	430510	400000	
Al	27	3	45	67648.974	ppb	67648.974	1.81	1618179	400000	
K	39	3	45	9286.917	ppb	9286.917	3.21	481344	400000	
Ca	40	2	45	4993.433	ppb	4993.433	1.09	2956582	400000	
V	51	3	72	326.743	ppb	326.743	3.54	212841	2000	
Cr	52	3	72	305.975	ppb	305.975	3.60	245403	5000	
Mn	55	3	72	1598.790	ppb	1598.790	4.43	702486	10000	
Fe	56	2	72	62974.233	ppb	62974.233	1.16	101421028	10000	>LDR
Co	59	3	72	207.933	ppb	207.933	5.07	283218	2000	
Ni	60	3	72	222.990	ppb	222.990	4.96	85839	5000	
Cu	63	3	72	256.671	ppb	256.671	5.31	265699	5000	
Zn	66	3	72	320.144	ppb	320.144	5.08	56481	5000	
As	75	3	72	202.891	ppb	202.891	5.75	24435	2000	
Se	78	2	72	192.900	ppb	192.900	0.76	11438	2000	
Sr	88	3	72	428.584	ppb	428.584	4.98	267345	4000	
Mo	95	3	115	187.122	ppb	187.122	5.00	103821	2000	
Ag	107	3	115	191.250	ppb	191.250	5.11	366336	100	
Cd	111	3	115	185.742	ppb	185.742	5.55	51961	2000	
Sn	120	3	115	198.925	ppb	198.925	5.50	180000	2000	
Sb	121	3	115	181.273	ppb	181.273	6.34	162482	1000	
Ba	137	3	115	589.132	ppb	589.132	6.10	173800	5000	
Tl	205	3	193	181.788	ppb	181.788	7.32	905231	2000	
(Pb)	206	3	193	352.388	ppb	352.388	8.55	584860	100	
(Pb)	207	3	193	335.151	ppb	335.151	8.33	492710	100	
Pb	208	3	193	351.991	ppb	351.991	6.85	2361530	5000	
Th	232	3	193	195.604	ppb	195.604	9.13	1333624	2000	
U	238	3	193	197.070	ppb	197.070	6.05	1414180	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4279754	0.86	3936624	108.72	60	120	
Sc (IS)	45	3	HMI He	657653	1.97	609520	107.90	60	120	
Ge Internal standard	72	2	HMI H2	2577525	1.10	2391663	107.77	60	120	
Ge Internal standard	72	3	HMI He	814473	3.27	756863	107.61	60	120	
In Internal Standard	115	3	HMI He	3207038	3.25	2988279	107.32	60	120	
Ir (IS)	193	3	HMI He	7461052	4.34	6996686	106.64	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-H MSD
Data File Name	161SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:58:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	188.869	ppb	188.869	1.75	7407	2000	
Na	23	3	45	4034.057	ppb	4034.057	0.14	478329	400000	
Mg	24	3	45	7065.961	ppb	7065.961	0.22	430641	400000	
Al	27	3	45	68252.871	ppb	68252.871	1.72	1621948	400000	
K	39	3	45	9190.725	ppb	9190.725	0.28	473631	400000	
Ca	40	2	45	4912.609	ppb	4912.609	0.76	2909236	400000	
V	51	3	72	332.306	ppb	332.306	0.74	215683	2000	
Cr	52	3	72	311.186	ppb	311.186	0.60	248683	5000	
Mn	55	3	72	1599.204	ppb	1599.204	0.57	700347	10000	
Fe	56	2	72	62600.251	ppb	62600.251	2.20	102452934	10000	>LDR
Co	59	3	72	209.685	ppb	209.685	0.35	284691	2000	
Ni	60	3	72	222.659	ppb	222.659	0.42	85438	5000	
Cu	63	3	72	257.687	ppb	257.687	0.58	265911	5000	
Zn	66	3	72	322.182	ppb	322.182	0.76	56656	5000	
As	75	3	72	205.702	ppb	205.702	1.48	24690	2000	
Se	78	2	72	189.791	ppb	189.791	1.47	11436	2000	
Sr	88	3	72	434.094	ppb	434.094	0.82	269907	4000	
Mo	95	3	115	189.646	ppb	189.646	2.43	106258	2000	
Ag	107	3	115	190.680	ppb	190.680	1.35	368900	100	
Cd	111	3	115	184.690	ppb	184.690	2.69	52182	2000	
Sn	120	3	115	199.697	ppb	199.697	0.86	182536	2000	
Sb	121	3	115	182.144	ppb	182.144	1.91	164930	1000	
Ba	137	3	115	585.005	ppb	585.005	2.12	174335	5000	
Tl	205	3	193	182.488	ppb	182.488	0.75	924358	2000	
(Pb)	206	3	193	343.506	ppb	343.506	1.12	580111	100	
(Pb)	207	3	193	331.413	ppb	331.413	1.51	495699	100	
Pb	208	3	193	343.615	ppb	343.615	0.65	2344751	5000	
Th	232	3	193	193.098	ppb	193.098	1.90	1339843	2000	
U	238	3	193	196.555	ppb	196.555	1.68	1434113	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4279437	1.16	3936624	108.71	60	120	
Sc (IS)	45	3	HMI He	653212	0.37	609520	107.17	60	120	
Ge Internal standard	72	2	HMI H2	2619485	1.76	2391663	109.53	60	120	
Ge Internal standard	72	3	HMI He	811002	0.64	756863	107.15	60	120	
In Internal Standard	115	3	HMI He	3236246	2.05	2988279	108.30	60	120	
Ir (IS)	193	3	HMI He	7573938	1.58	6996686	108.25	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-I DU
Data File Name	162SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:59:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.375	ppb	2.375	0.47	100	2000	
Na	23	3	45	307.368	ppb	307.368	5.39	60198	400000	
Mg	24	3	45	3200.563	ppb	3200.563	1.94	196781	400000	
Al	27	3	45	46222.253	ppb	46222.253	1.08	1105634	400000	
K	39	3	45	3513.295	ppb	3513.295	1.58	200494	400000	
Ca	40	2	45	1144.464	ppb	1144.464	1.68	694434	400000	
V	51	3	72	125.249	ppb	125.249	0.80	82131	2000	
Cr	52	3	72	101.755	ppb	101.755	1.82	82850	5000	
Mn	55	3	72	1393.368	ppb	1393.368	1.54	612676	10000	
Fe	56	2	72	56960.254	ppb	56960.254	1.16	93826255	10000	>LDR
Co	59	3	72	18.070	ppb	18.070	1.85	24703	2000	
Ni	60	3	72	32.347	ppb	32.347	2.18	12758	5000	
Cu	63	3	72	61.153	ppb	61.153	0.40	63746	5000	
Zn	66	3	72	123.584	ppb	123.584	0.68	22020	5000	
As	75	3	72	21.807	ppb	21.807	4.94	2699	2000	
Se	78	2	72	1.422	ppb	1.422	16.13	91	2000	
Sr	88	3	72	34.490	ppb	34.490	7.04	21771	4000	
Mo	95	3	115	4.880	ppb	4.880	4.02	2779	2000	
Ag	107	3	115	0.262	ppb	0.262	12.08	545	100	
Cd	111	3	115	0.309	ppb	0.309	14.89	105	2000	
Sn	120	3	115	18.307	ppb	18.307	4.17	17616	2000	
Sb	121	3	115	2.137	ppb	2.137	2.33	2074	1000	
Ba	137	3	115	339.806	ppb	339.806	0.56	100953	5000	
Tl	205	3	193	0.499	ppb	0.499	2.06	3437	2000	
(Pb)	206	3	193	156.268	ppb	156.268	0.23	264542	100	
(Pb)	207	3	193	145.940	ppb	145.940	0.39	219006	100	
Pb	208	3	193	150.331	ppb	150.331	0.46	1028448	5000	
Th	232	3	193	22.218	ppb	22.218	3.43	161984	2000	
U	238	3	193	3.669	ppb	3.669	1.89	29183	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4246375	2.64	3936624	107.87	60	120	
Sc (IS)	45	3	HMI He	657536	1.03	609520	107.88	60	120	
Ge Internal standard	72	2	HMI H2	2635937	0.71	2391663	110.21	60	120	
Ge Internal standard	72	3	HMI He	814322	0.88	756863	107.59	60	120	
In Internal Standard	115	3	HMI He	3223998	0.27	2988279	107.89	60	120	
Ir (IS)	193	3	HMI He	7584077	1.27	6996686	108.40	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F pds
Data File Name	163SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:01:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	100.442	ppb	100.442	3.77	4044	2000	
Na	23	3	45	4947.157	ppb	4947.157	1.44	585304	400000	
Mg	24	3	45	4959.434	ppb	4959.434	0.96	304857	400000	
Al	27	3	45	48400.520	ppb	48400.520	2.08	1158852	400000	
K	39	3	45	5495.348	ppb	5495.348	2.04	297223	400000	
Ca	40	2	45	3038.356	ppb	3038.356	2.99	1816326	400000	
V	51	3	72	215.096	ppb	215.096	1.01	140166	2000	
Cr	52	3	72	196.773	ppb	196.773	1.19	158205	5000	
Mn	55	3	72	1460.250	ppb	1460.250	0.74	640749	10000	
Fe	56	2	72	57022.369	ppb	57022.369	0.29	93455229	10000	>LDR
Co	59	3	72	113.951	ppb	113.951	1.30	155037	2000	
Ni	60	3	72	124.102	ppb	124.102	0.59	47865	5000	
Cu	63	3	72	160.143	ppb	160.143	1.11	165760	5000	
Zn	66	3	72	313.095	ppb	313.095	1.43	55171	5000	
As	75	3	72	117.946	ppb	117.946	2.69	14215	2000	
Se	78	2	72	99.583	ppb	99.583	0.46	6011	2000	
Sr	88	3	72	129.736	ppb	129.736	1.18	81010	4000	
Mo	95	3	115	97.780	ppb	97.780	1.90	54992	2000	
Ag	107	3	115	25.099	ppb	25.099	2.10	48744	100	
Cd	111	3	115	93.378	ppb	93.378	0.25	26485	2000	
Sn	120	3	115	112.613	ppb	112.613	1.63	103710	2000	
Sb	121	3	115	91.224	ppb	91.224	1.52	82945	1000	
Ba	137	3	115	430.239	ppb	430.239	1.87	128658	5000	
Tl	205	3	193	92.016	ppb	92.016	2.30	463542	2000	
(Pb)	206	3	193	244.010	ppb	244.010	1.82	409623	100	
(Pb)	207	3	193	231.848	ppb	231.848	1.10	344865	100	
Pb	208	3	193	238.572	ppb	238.572	1.91	1618282	5000	
Th	232	3	193	114.481	ppb	114.481	1.70	792869	2000	
U	238	3	193	198.056	ppb	198.056	2.02	1435971	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4293177	0.81	3936624	109.06	60	120	
Sc (IS)	45	3	HMI He	658276	1.48	609520	108.00	60	120	
Ge Internal standard	72	2	HMI H2	2622775	0.49	2391663	109.66	60	120	
Ge Internal standard	72	3	HMI He	812644	1.81	756863	107.37	60	120	
In Internal Standard	115	3	HMI He	3246498	1.79	2988279	108.64	60	120	
Ir (IS)	193	3	HMI He	7527753	2.58	6996686	107.59	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-3-C
Data File Name	164SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:03:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.140	ppb	4.140	8.11	170	2000	
Na	23	3	45	493.843	ppb	493.843	0.96	81393	400000	
Mg	24	3	45	5987.982	ppb	5987.982	2.03	367938	400000	
Al	27	3	45	78107.645	ppb	78107.645	1.41	1870701	400000	
K	39	3	45	5744.112	ppb	5744.112	1.10	309444	400000	
Ca	40	2	45	1699.327	ppb	1699.327	2.51	1035194	400000	
V	51	3	72	174.422	ppb	174.422	2.33	114649	2000	
Cr	52	3	72	132.789	ppb	132.789	2.19	108137	5000	
Mn	55	3	72	3787.106	ppb	3787.106	2.01	1673774	10000	
Fe	56	2	72	86798.214	ppb	86798.214	1.18	139885966	10000	>LDR
Co	59	3	72	41.114	ppb	41.114	2.25	56401	2000	
Ni	60	3	72	61.841	ppb	61.841	1.39	24206	5000	
Cu	63	3	72	183.125	ppb	183.125	2.96	190856	5000	
Zn	66	3	72	291.636	ppb	291.636	2.05	51794	5000	
As	75	3	72	41.074	ppb	41.074	8.31	5037	2000	
Se	78	2	72	3.466	ppb	3.466	6.34	210	2000	
Sr	88	3	72	45.583	ppb	45.583	0.47	28853	4000	
Mo	95	3	115	6.623	ppb	6.623	1.77	3752	2000	
Ag	107	3	115	0.917	ppb	0.917	2.36	1808	100	
Cd	111	3	115	0.505	ppb	0.505	16.08	160	2000	
Sn	120	3	115	28.360	ppb	28.360	0.80	26718	2000	
Sb	121	3	115	5.788	ppb	5.788	2.84	5363	1000	
Ba	137	3	115	505.752	ppb	505.752	1.36	150179	5000	
Tl	205	3	193	1.121	ppb	1.121	4.49	6598	2000	
(Pb)	206	3	193	425.936	ppb	425.936	4.36	721269	100	
(Pb)	207	3	193	406.283	ppb	406.283	2.82	609437	100	
Pb	208	3	193	431.623	ppb	431.623	4.48	2953060	5000	
Th	232	3	193	21.582	ppb	21.582	6.44	157771	2000	
U	238	3	193	6.092	ppb	6.092	1.45	46952	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4321760	1.15	3936624	109.78	60	120	
Sc (IS)	45	3	HMI He	658415	0.85	609520	108.02	60	120	
Ge Internal standard	72	2	HMI H2	2579405	0.84	2391663	107.85	60	120	
Ge Internal standard	72	3	HMI He	818737	1.76	756863	108.18	60	120	
In Internal Standard	115	3	HMI He	3224128	2.35	2988279	107.89	60	120	
Ir (IS)	193	3	HMI He	7599953	2.29	6996686	108.62	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-4-C
Data File Name	165SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:05:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.387	ppb	4.387	4.99	178	2000	
Na	23	3	45	459.502	ppb	459.502	1.15	77197	400000	
Mg	24	3	45	4404.722	ppb	4404.722	0.39	269831	400000	
Al	27	3	45	67069.742	ppb	67069.742	3.17	1600137	400000	
K	39	3	45	4784.991	ppb	4784.991	0.11	261679	400000	
Ca	40	2	45	1352.367	ppb	1352.367	3.43	842067	400000	
V	51	3	72	126.422	ppb	126.422	1.82	82833	2000	
Cr	52	3	72	97.224	ppb	97.224	1.68	79189	5000	
Mn	55	3	72	2458.899	ppb	2458.899	1.84	1080330	10000	
Fe	56	2	72	62542.843	ppb	62542.843	2.09	101679361	10000	>LDR
Co	59	3	72	25.308	ppb	25.308	2.94	34541	2000	
Ni	60	3	72	52.303	ppb	52.303	2.12	20402	5000	
Cu	63	3	72	58.528	ppb	58.528	1.65	60989	5000	
Zn	66	3	72	177.320	ppb	177.320	1.26	31435	5000	
As	75	3	72	17.942	ppb	17.942	3.93	2232	2000	
Se	78	2	72	1.120	ppb	1.120	17.34	71	2000	
Sr	88	3	72	46.596	ppb	46.596	3.04	29305	4000	
Mo	95	3	115	4.347	ppb	4.347	3.85	2477	2000	
Ag	107	3	115	0.219	ppb	0.219	11.88	461	100	
Cd	111	3	115	0.244	ppb	0.244	8.41	87	2000	
Sn	120	3	115	16.083	ppb	16.083	0.92	15581	2000	
Sb	121	3	115	1.522	ppb	1.522	9.06	1516	1000	
Ba	137	3	115	570.920	ppb	570.920	2.03	169279	5000	
Tl	205	3	193	0.694	ppb	0.694	2.81	4439	2000	
(Pb)	206	3	193	100.281	ppb	100.281	1.68	170559	100	
(Pb)	207	3	193	94.315	ppb	94.315	1.14	142316	100	
Pb	208	3	193	97.636	ppb	97.636	1.54	671182	5000	
Th	232	3	193	22.207	ppb	22.207	1.90	162480	2000	
U	238	3	193	4.018	ppb	4.018	2.13	31848	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386532	1.78	3936624	111.43	60	120	
Sc (IS)	45	3	HMI He	655805	0.69	609520	107.59	60	120	
Ge Internal standard	72	2	HMI H2	2601827	1.13	2391663	108.79	60	120	
Ge Internal standard	72	3	HMI He	813798	0.93	756863	107.52	60	120	
In Internal Standard	115	3	HMI He	3219766	2.07	2988279	107.75	60	120	
Ir (IS)	193	3	HMI He	7612504	0.94	6996686	108.80	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	166_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:07:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.267	ppb	5.867	2027	50	102.5	90	110	
Na	23	3	45	46693.764	ppb	1.819	5237955	51000	91.6	90	110	
Mg	24	3	45	9839.566	ppb	2.204	595817	11000	89.5	90	110	>+\-10%
Al	27	3	45	958.080	ppb	2.786	22765	1000	95.8	90	110	
K	39	3	45	10120.232	ppb	1.729	515471	11000	92.0	90	110	
Ca	40	2	45	10218.384	ppb	2.591	5973573	11000	92.9	90	110	
V	51	3	72	50.413	ppb	1.872	33131	50	100.8	90	110	
Cr	52	3	72	50.742	ppb	0.934	41701	50	101.5	90	110	
Mn	55	3	72	50.110	ppb	4.212	21958	50	100.2	90	110	
Fe	56	2	72	1047.942	ppb	1.350	1689108	1000	104.8	90	110	
Co	59	3	72	49.418	ppb	1.073	66603	50	98.8	90	110	
Ni	60	3	72	49.299	ppb	0.492	19027	50	98.6	90	110	
Cu	63	3	72	49.690	ppb	0.706	51257	50	99.4	90	110	
Zn	66	3	72	50.163	ppb	2.689	9018	50	100.3	90	110	
As	75	3	72	51.764	ppb	2.304	6220	50	103.5	90	110	
Se	78	2	72	51.481	ppb	3.541	3026	50	103.0	90	110	
Sr	88	3	72	99.500	ppb	1.037	61561	100	99.5	90	110	
Mo	95	3	115	49.237	ppb	3.175	27861	50	98.5	90	110	
Ag	107	3	115	48.051	ppb	2.823	93763	50	96.1	90	110	
Cd	111	3	115	48.747	ppb	1.442	13905	50	97.5	90	110	
Sn	120	3	115	48.950	ppb	3.590	45904	50	97.9	90	110	
Sb	121	3	115	48.879	ppb	2.173	44748	50	97.8	90	110	
Ba	137	3	115	49.070	ppb	2.803	14844	50	98.1	90	110	
Tl	205	3	193	46.297	ppb	2.410	236354	50	92.6	90	110	
(Pb)	206	3	193	45.970	ppb	1.452	78449	50	91.9	90	110	
(Pb)	207	3	193	45.823	ppb	2.238	69529	50	91.6	90	110	
Pb	208	3	193	46.024	ppb	0.492	317584	50	92.0	90	110	
Th	232	3	193	47.332	ppb	0.745	336705	50	94.7	90	110	
U	238	3	193	46.458	ppb	2.164	342566	50	92.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4247450	1.17	3936624	107.90	60	120	
Sc (IS)	45	3	HMI He	649328	0.24	609520	106.53	60	120	
Ge Internal standard	72	2	HMI H2	2552752	1.04	2391663	106.74	60	120	
Ge Internal standard	72	3	HMI He	804357	0.70	756863	106.28	60	120	
In Internal Standard	115	3	HMI He	3263098	1.03	2988279	109.20	60	120	
Ir (IS)	193	3	HMI He	7613418	2.00	6996686	108.81	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	167_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:08:58-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.084	ppb	-85.8	2	0.5	
Na	23	3	45	9.648	ppb	30.1	26167	25	
Mg	24	3	45	-0.807	ppb	-98.0	767	25	
Al	27	3	45	4.170	ppb	47.4	234	15	
K	39	3	45	-25.507	ppb	-113.0	27876	50	
V	51	3	72	-0.391	ppb	-8.6	551	1	
Cr	52	3	72	0.249	ppb	24.0	1972	1	
Mn	55	3	72	0.371	ppb	25.5	361	0.5	
Co	59	3	72	-0.006	ppb	-366.7	68	0.5	
Ni	60	3	72	0.144	ppb	75.9	395	1	
Cu	63	3	72	-0.011	ppb	-258.4	485	1	
Zn	66	3	72	0.102	ppb	190.0	337	5	
As	75	3	72	-0.222	ppb	-110.2	52	1	
Se	78	2	72	0.074	ppb	138.7	9	1	
Sr	88	3	72	-0.041	ppb	-188.9	238	0.5	
Mo	95	3	115	0.046	ppb	67.2	82	0.5	
Ag	107	3	115	0.015	ppb	19.6	68	1	
Cd	111	3	115	-0.028	ppb	-65.5	10	0.5	
Sn	120	3	115	0.358	ppb	14.8	1374	1	
Sb	121	3	115	-0.059	ppb	-35.9	95	0.6	
Ba	137	3	115	0.024	ppb	446.8	113	0.5	
Tl	205	3	193	-0.083	ppb	-12.5	473	0.1	
(Pb)	206	3	193	-0.067	ppb	-23.5	356	1	
(Pb)	207	3	193	-0.113	ppb	-12.3	536	1	
Pb	208	3	193	-0.063	ppb	-25.1	1689	0.5	
Th	232	3	193	1.480	ppb	10.1	18303	1	>RL
U	238	3	193	0.037	ppb	39.4	2621	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4240822	2.43	3936624	107.73	60	120	
Sc (IS)	45	3	HMI He	648217	0.82	609520	106.35	60	120	
Ge Internal standard	72	2	HMI H2	2577697	2.18	2391663	107.78	60	120	
Ge Internal standard	72	3	HMI He	804425	0.66	756863	106.28	60	120	
In Internal Standard	115	3	HMI He	3245413	2.63	2988279	108.60	60	120	
Ir (IS)	193	3	HMI He	7388286	2.17	6996686	105.60	60	120	

Sample Report

Sample Table

Sample Name	
Data File Name	168SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:10:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.033	ppb	-0.033	-240.63	7	2000	
Na	23	3	45	-83.865	ppb	-83.865	-5.77	30029	400000	
Mg	24	3	45	-1.278	ppb	-1.278	-67.25	1408	400000	
Al	27	3	45	-1.069	ppb	-1.069	-41.02	210	400000	
K	39	3	45	-330.216	ppb	-330.216	-3.14	25288	400000	
Ca	40	2	45	-13.069	ppb	-13.069	-4.36	38174	400000	
V	51	3	72	-1.043	ppb	-1.043	-5.51	250	2000	
Cr	52	3	72	-1.535	ppb	-1.535	-2.57	1073	5000	
Mn	55	3	72	-0.022	ppb	-0.022	-129.76	360	10000	
Fe	56	2	72	-2.341	ppb	-2.341	-29.67	26009	10000	
Co	59	3	72	0.000	ppb	0.000	-7239.76	143	2000	
Ni	60	3	72	-0.694	ppb	-0.694	-4.04	145	5000	
Cu	63	3	72	-0.220	ppb	-0.220	-7.44	511	5000	
Zn	66	3	72	-1.117	ppb	-1.117	-2.50	237	5000	
As	75	3	72	-0.411	ppb	-0.411	-5.54	55	2000	
Se	78	2	72	0.063	ppb	0.063	14.98	15	2000	
Sr	88	3	72	-0.082	ppb	-0.082	-57.42	405	4000	
Mo	95	3	115	-0.052	ppb	-0.052	-32.29	48	2000	
Ag	107	3	115	0.007	ppb	0.007	84.55	98	100	
Cd	111	3	115	-0.018	ppb	-0.018	-126.10	23	2000	
Sn	120	3	115	-0.889	ppb	-0.889	-4.20	433	2000	
Sb	121	3	115	-0.117	ppb	-0.117	-3.93	77	1000	
Ba	137	3	115	-0.204	ppb	-0.204	-4.05	83	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-1.47	608	2000	
(Pb)	206	3	193	-0.139	ppb	-0.139	-8.81	443	100	
(Pb)	207	3	193	-0.199	ppb	-0.199	-17.83	760	100	
Pb	208	3	193	-0.144	ppb	-0.144	-5.92	2139	5000	
Th	232	3	193	-0.352	ppb	-0.352	-9.89	11018	2000	
U	238	3	193	0.004	ppb	0.004	599.32	4422	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7667919	1.92	3936624	194.78	60	120	IS Failed
Sc (IS)	45	3	HMI He	1236855	3.55	609520	202.92	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4707474	1.21	2391663	196.83	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1520157	3.80	756863	200.85	60	120	IS Failed
In Internal Standard	115	3	HMI He	5904819	3.84	2988279	197.60	60	120	IS Failed
Ir (IS)	193	3	HMI He	13658479	4.91	6996686	195.21	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	169SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:12:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	-82.581	ppb	-82.581	-5.14	29092	400000	
Mg	24	3	45	-2.172	ppb	-2.172	-65.10	1255	400000	
Al	27	3	45	0.126	ppb	0.126	503.63	254	400000	
K	39	3	45	-320.709	ppb	-320.709	-2.95	25128	400000	
Ca	40	2	45	-11.805	ppb	-11.805	-5.08	39412	400000	
V	51	3	72	-1.088	ppb	-1.088	-1.65	197	2000	
Cr	52	3	72	-1.536	ppb	-1.536	-3.84	1068	5000	
Mn	55	3	72	-0.096	ppb	-0.096	-11.36	298	10000	
Fe	56	2	72	-2.251	ppb	-2.251	-15.32	26094	10000	
Co	59	3	72	-0.005	ppb	-0.005	-42.23	130	2000	
Ni	60	3	72	-0.692	ppb	-0.692	-3.83	147	5000	
Cu	63	3	72	-0.244	ppb	-0.244	-10.48	465	5000	
Zn	66	3	72	-1.195	ppb	-1.195	-4.31	210	5000	
As	75	3	72	-0.545	ppb	-0.545	-16.33	25	2000	
Se	78	2	72	-0.017	ppb	-0.017	-194.15	6	2000	
Sr	88	3	72	-0.105	ppb	-0.105	-8.04	375	4000	
Mo	95	3	115	-0.046	ppb	-0.046	-43.64	53	2000	
Ag	107	3	115	0.005	ppb	0.005	9.24	88	100	
Cd	111	3	115	-0.033	ppb	-0.033	-53.87	15	2000	
Sn	120	3	115	-0.756	ppb	-0.756	-24.92	642	2000	
Sb	121	3	115	-0.116	ppb	-0.116	-10.46	77	1000	
Ba	137	3	115	-0.214	ppb	-0.214	-16.77	75	5000	
Tl	205	3	193	-0.114	ppb	-0.114	-3.57	580	2000	
(Pb)	206	3	193	-0.144	ppb	-0.144	-22.09	418	100	
(Pb)	207	3	193	-0.203	ppb	-0.203	-12.44	733	100	
Pb	208	3	193	-0.148	ppb	-0.148	-0.94	2042	5000	
Th	232	3	193	-0.370	ppb	-0.370	-3.85	10554	2000	
U	238	3	193	0.010	ppb	0.010	45.97	4389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7651780	3.16	3936624	194.37	60	120	IS Failed
Sc (IS)	45	3	HMI He	1187449	3.05	609520	194.82	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4676622	0.98	2391663	195.54	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1514454	1.24	756863	200.10	60	120	IS Failed
In Internal Standard	115	3	HMI He	5710360	4.92	2988279	191.09	60	120	IS Failed
Ir (IS)	193	3	HMI He	13339919	1.75	6996686	190.66	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	170SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:14:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.031	ppb	-0.031	-125.91	7	2000	
Na	23	3	45	-80.103	ppb	-80.103	-5.52	29005	400000	
Mg	24	3	45	-0.359	ppb	-0.359	-245.79	1425	400000	
Al	27	3	45	-0.542	ppb	-0.542	-255.91	220	400000	
K	39	3	45	-311.211	ppb	-311.211	-4.11	25435	400000	
Ca	40	2	45	-12.933	ppb	-12.933	-6.86	37421	400000	
V	51	3	72	-1.099	ppb	-1.099	-3.55	177	2000	
Cr	52	3	72	-1.535	ppb	-1.535	-4.69	1033	5000	
Mn	55	3	72	-0.114	ppb	-0.114	-63.81	273	10000	
Fe	56	2	72	-2.875	ppb	-2.875	-9.61	23587	10000	
Co	59	3	72	-0.018	ppb	-0.018	-44.15	95	2000	
Ni	60	3	72	-0.672	ppb	-0.672	-8.56	155	5000	
Cu	63	3	72	-0.203	ppb	-0.203	-11.35	525	5000	
Zn	66	3	72	-1.047	ppb	-1.047	-7.44	250	5000	
As	75	3	72	-0.572	ppb	-0.572	-11.81	18	2000	
Se	78	2	72	-0.002	ppb	-0.002	-1151.19	7	2000	
Sr	88	3	72	-0.070	ppb	-0.070	-69.19	403	4000	
Mo	95	3	115	-0.065	ppb	-0.065	-20.04	35	2000	
Ag	107	3	115	0.012	ppb	0.012	24.76	112	100	
Cd	111	3	115	-0.037	ppb	-0.037	-16.36	13	2000	
Sn	120	3	115	-0.880	ppb	-0.880	-4.23	435	2000	
Sb	121	3	115	-0.109	ppb	-0.109	-2.33	88	1000	
Ba	137	3	115	-0.137	ppb	-0.137	-10.52	117	5000	
Tl	205	3	193	-0.119	ppb	-0.119	-4.16	533	2000	
(Pb)	206	3	193	-0.122	ppb	-0.122	-32.50	478	100	
(Pb)	207	3	193	-0.178	ppb	-0.178	-7.48	795	100	
Pb	208	3	193	-0.135	ppb	-0.135	-11.80	2179	5000	
Th	232	3	193	-0.377	ppb	-0.377	-1.69	10429	2000	
U	238	3	193	-0.005	ppb	-0.005	-168.93	4175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7490924	3.65	3936624	190.29	60	120	IS Failed
Sc (IS)	45	3	HMI He	1163420	2.11	609520	190.87	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4541574	2.40	2391663	189.89	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1464034	3.17	756863	193.43	60	120	IS Failed
In Internal Standard	115	3	HMI He	5751564	2.21	2988279	192.47	60	120	IS Failed
Ir (IS)	193	3	HMI He	13287212	2.98	6996686	189.91	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	171SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:16:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.103	ppb	-0.103	-37.99	2	2000	
Na	23	3	45	-85.019	ppb	-85.019	-3.20	27762	400000	
Mg	24	3	45	0.200	ppb	0.200	774.31	1472	400000	
Al	27	3	45	-1.266	ppb	-1.266	-53.46	187	400000	
K	39	3	45	-306.657	ppb	-306.657	-3.05	25582	400000	
Ca	40	2	45	-12.581	ppb	-12.581	-5.65	38026	400000	
V	51	3	72	-1.085	ppb	-1.085	-1.80	190	2000	
Cr	52	3	72	-1.517	ppb	-1.517	-6.93	1038	5000	
Mn	55	3	72	-0.114	ppb	-0.114	-63.56	268	10000	
Fe	56	2	72	-3.052	ppb	-3.052	-8.42	23276	10000	
Co	59	3	72	-0.011	ppb	-0.011	-73.99	110	2000	
Ni	60	3	72	-0.712	ppb	-0.712	-4.78	125	5000	
Cu	63	3	72	-0.205	ppb	-0.205	-6.93	511	5000	
Zn	66	3	72	-1.045	ppb	-1.045	-21.21	245	5000	
As	75	3	72	-0.529	ppb	-0.529	-16.23	27	2000	
Se	78	2	72	0.023	ppb	0.023	150.76	10	2000	
Sr	88	3	72	-0.083	ppb	-0.083	-57.65	380	4000	
Mo	95	3	115	-0.046	ppb	-0.046	-28.49	52	2000	
Ag	107	3	115	0.006	ppb	0.006	100.59	88	100	
Cd	111	3	115	-0.019	ppb	-0.019	-82.91	22	2000	
Sn	120	3	115	-0.894	ppb	-0.894	-3.29	395	2000	
Sb	121	3	115	-0.099	ppb	-0.099	-17.04	100	1000	
Ba	137	3	115	-0.170	ppb	-0.170	-42.37	95	5000	
Tl	205	3	193	-0.122	ppb	-0.122	-5.92	498	2000	
(Pb)	206	3	193	-0.152	ppb	-0.152	-11.07	385	100	
(Pb)	207	3	193	-0.214	ppb	-0.214	-6.80	688	100	
Pb	208	3	193	-0.153	ppb	-0.153	-7.09	1927	5000	
Th	232	3	193	-0.424	ppb	-0.424	-4.83	9677	2000	
U	238	3	193	-0.008	ppb	-0.008	-93.30	4059	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7536747	1.09	3936624	191.45	60	120	IS Failed
Sc (IS)	45	3	HMI He	1151887	2.02	609520	188.98	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4580746	1.91	2391663	191.53	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1436793	2.27	756863	189.84	60	120	IS Failed
In Internal Standard	115	3	HMI He	5511991	0.56	2988279	184.45	60	120	IS Failed
Ir (IS)	193	3	HMI He	13032813	1.99	6996686	186.27	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	172SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:18:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.056	ppb	-0.056	-1.22	5	2000	
Na	23	3	45	-88.749	ppb	-88.749	-1.76	27220	400000	
Mg	24	3	45	-1.204	ppb	-1.204	-48.83	1331	400000	
Al	27	3	45	-0.982	ppb	-0.982	-79.55	200	400000	
K	39	3	45	-308.363	ppb	-308.363	-0.84	25622	400000	
Ca	40	2	45	-12.983	ppb	-12.983	-3.88	38220	400000	
V	51	3	72	-1.063	ppb	-1.063	-1.31	212	2000	
Cr	52	3	72	-1.532	ppb	-1.532	-2.63	1001	5000	
Mn	55	3	72	-0.109	ppb	-0.109	-39.08	268	10000	
Fe	56	2	72	-2.977	ppb	-2.977	-11.94	23701	10000	
Co	59	3	72	-0.019	ppb	-0.019	-73.67	88	2000	
Ni	60	3	72	-0.707	ppb	-0.707	-0.80	127	5000	
Cu	63	3	72	-0.206	ppb	-0.206	-13.43	501	5000	
Zn	66	3	72	-1.067	ppb	-1.067	-9.65	235	5000	
As	75	3	72	-0.465	ppb	-0.465	-14.90	40	2000	
Se	78	2	72	0.015	ppb	0.015	251.31	9	2000	
Sr	88	3	72	-0.085	ppb	-0.085	-50.82	371	4000	
Mo	95	3	115	-0.059	ppb	-0.059	-23.52	40	2000	
Ag	107	3	115	0.002	ppb	0.002	570.19	75	100	
Cd	111	3	115	-0.026	ppb	-0.026	-57.38	18	2000	
Sn	120	3	115	-0.895	ppb	-0.895	-4.53	396	2000	
Sb	121	3	115	-0.097	ppb	-0.097	-4.23	103	1000	
Ba	137	3	115	-0.195	ppb	-0.195	-17.10	83	5000	
Tl	205	3	193	-0.117	ppb	-0.117	-6.34	530	2000	
(Pb)	206	3	193	-0.157	ppb	-0.157	-12.04	363	100	
(Pb)	207	3	193	-0.193	ppb	-0.193	-9.31	731	100	
Pb	208	3	193	-0.154	ppb	-0.154	-4.03	1899	5000	
Th	232	3	193	-0.409	ppb	-0.409	-6.00	9732	2000	
U	238	3	193	0.000	ppb	0.000	5894.06	4112	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7659636	1.97	3936624	194.57	60	120	IS Failed
Sc (IS)	45	3	HMI He	1160568	1.61	609520	190.41	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4624696	2.53	2391663	193.37	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1413098	1.36	756863	186.70	60	120	IS Failed
In Internal Standard	115	3	HMI He	5555905	2.15	2988279	185.92	60	120	IS Failed
Ir (IS)	193	3	HMI He	12866344	1.82	6996686	183.89	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	173SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:19:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.057	ppb	-0.057	-2.03	5	2000	
Na	23	3	45	-88.016	ppb	-88.016	-0.44	27571	400000	
Mg	24	3	45	-1.278	ppb	-1.278	-64.07	1335	400000	
Al	27	3	45	-0.326	ppb	-0.326	-298.95	230	400000	
K	39	3	45	-313.445	ppb	-313.445	-1.36	25379	400000	
Ca	40	2	45	-13.231	ppb	-13.231	-0.59	38117	400000	
V	51	3	72	-1.051	ppb	-1.051	-1.56	227	2000	
Cr	52	3	72	-1.518	ppb	-1.518	-3.30	1026	5000	
Mn	55	3	72	-0.150	ppb	-0.150	-25.03	238	10000	
Fe	56	2	72	-3.031	ppb	-3.031	-15.62	23627	10000	
Co	59	3	72	-0.014	ppb	-0.014	-42.34	100	2000	
Ni	60	3	72	-0.675	ppb	-0.675	-4.71	148	5000	
Cu	63	3	72	-0.206	ppb	-0.206	-7.95	503	5000	
Zn	66	3	72	-1.087	ppb	-1.087	-5.00	230	5000	
As	75	3	72	-0.458	ppb	-0.458	-19.58	42	2000	
Se	78	2	72	-0.023	ppb	-0.023	-124.99	5	2000	
Sr	88	3	72	-0.137	ppb	-0.137	-36.30	317	4000	
Mo	95	3	115	-0.063	ppb	-0.063	-7.27	35	2000	
Ag	107	3	115	0.004	ppb	0.004	103.20	82	100	
Cd	111	3	115	-0.019	ppb	-0.019	-117.94	22	2000	
Sn	120	3	115	-0.887	ppb	-0.887	-0.80	405	2000	
Sb	121	3	115	-0.115	ppb	-0.115	-16.36	75	1000	
Ba	137	3	115	-0.206	ppb	-0.206	-1.73	77	5000	
Tl	205	3	193	-0.118	ppb	-0.118	-1.05	523	2000	
(Pb)	206	3	193	-0.149	ppb	-0.149	-10.85	388	100	
(Pb)	207	3	193	-0.194	ppb	-0.194	-18.92	728	100	
Pb	208	3	193	-0.155	ppb	-0.155	-6.55	1882	5000	
Th	232	3	193	-0.394	ppb	-0.394	-1.11	9884	2000	
U	238	3	193	0.011	ppb	0.011	118.45	4242	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7689914	0.84	3936624	195.34	60	120	IS Failed
Sc (IS)	45	3	HMI He	1169335	3.08	609520	191.85	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4637545	1.44	2391663	193.90	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1419546	0.50	756863	187.56	60	120	IS Failed
In Internal Standard	115	3	HMI He	5501870	1.72	2988279	184.11	60	120	IS Failed
Ir (IS)	193	3	HMI He	12845828	2.00	6996686	183.60	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	174SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:21:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.057	ppb	-0.057	-0.61	5	2000	
Na	23	3	45	-81.156	ppb	-81.156	-3.41	27788	400000	
Mg	24	3	45	-0.098	ppb	-0.098	-845.83	1405	400000	
Al	27	3	45	-1.516	ppb	-1.516	-116.35	174	400000	
K	39	3	45	-296.461	ppb	-296.461	-3.89	25760	400000	
Ca	40	2	45	-12.987	ppb	-12.987	-2.31	38568	400000	
V	51	3	72	-1.062	ppb	-1.062	-1.90	217	2000	
Cr	52	3	72	-1.610	ppb	-1.610	-1.28	911	5000	
Mn	55	3	72	-0.131	ppb	-0.131	-28.85	257	10000	
Fe	56	2	72	-3.306	ppb	-3.306	-6.09	23086	10000	
Co	59	3	72	-0.012	ppb	-0.012	-76.01	107	2000	
Ni	60	3	72	-0.698	ppb	-0.698	-1.65	135	5000	
Cu	63	3	72	-0.232	ppb	-0.232	-10.88	463	5000	
Zn	66	3	72	-1.119	ppb	-1.119	-7.75	223	5000	
As	75	3	72	-0.508	ppb	-0.508	-17.46	32	2000	
Se	78	2	72	0.008	ppb	0.008	140.69	9	2000	
Sr	88	3	72	-0.114	ppb	-0.114	-63.33	345	4000	
Mo	95	3	115	-0.057	ppb	-0.057	-43.57	42	2000	
Ag	107	3	115	0.001	ppb	0.001	193.54	72	100	
Cd	111	3	115	-0.023	ppb	-0.023	-76.03	20	2000	
Sn	120	3	115	-0.897	ppb	-0.897	-0.38	393	2000	
Sb	121	3	115	-0.100	ppb	-0.100	-13.91	98	1000	
Ba	137	3	115	-0.120	ppb	-0.120	-65.73	122	5000	
Tl	205	3	193	-0.121	ppb	-0.121	-5.02	498	2000	
(Pb)	206	3	193	-0.140	ppb	-0.140	-10.50	411	100	
(Pb)	207	3	193	-0.204	ppb	-0.204	-8.22	701	100	
Pb	208	3	193	-0.153	ppb	-0.153	-3.68	1899	5000	
Th	232	3	193	-0.388	ppb	-0.388	-7.29	9917	2000	
U	238	3	193	0.008	ppb	0.008	100.72	4184	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7730045	3.08	3936624	196.36	60	120	IS Failed
Sc (IS)	45	3	HMI He	1122798	3.07	609520	184.21	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4690677	0.92	2391663	196.13	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1439213	2.08	756863	190.16	60	120	IS Failed
In Internal Standard	115	3	HMI He	5537207	3.02	2988279	185.30	60	120	IS Failed
Ir (IS)	193	3	HMI He	12799187	3.69	6996686	182.93	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	175SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:23:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.012	ppb	-0.012	-339.23	8	2000	
Na	23	3	45	-87.486	ppb	-87.486	-3.12	27698	400000	
Mg	24	3	45	-2.146	ppb	-2.146	-33.65	1241	400000	
Al	27	3	45	-0.369	ppb	-0.369	-455.90	227	400000	
K	39	3	45	-309.267	ppb	-309.267	-2.04	25773	400000	
Ca	40	2	45	-12.557	ppb	-12.557	-6.95	39358	400000	
V	51	3	72	-1.050	ppb	-1.050	-3.10	233	2000	
Cr	52	3	72	-1.545	ppb	-1.545	-0.80	1011	5000	
Mn	55	3	72	-0.066	ppb	-0.066	-33.49	310	10000	
Fe	56	2	72	-3.060	ppb	-3.060	-4.51	24289	10000	
Co	59	3	72	-0.025	ppb	-0.025	-27.58	77	2000	
Ni	60	3	72	-0.693	ppb	-0.693	-3.17	140	5000	
Cu	63	3	72	-0.222	ppb	-0.222	-7.53	486	5000	
Zn	66	3	72	-0.994	ppb	-0.994	-15.37	265	5000	
As	75	3	72	-0.525	ppb	-0.525	-6.31	28	2000	
Se	78	2	72	0.000	ppb	0.000	-44856.84	8	2000	
Sr	88	3	72	-0.075	ppb	-0.075	-26.02	393	4000	
Mo	95	3	115	-0.035	ppb	-0.035	-27.91	62	2000	
Ag	107	3	115	0.011	ppb	0.011	15.89	103	100	
Cd	111	3	115	-0.026	ppb	-0.026	-21.10	18	2000	
Sn	120	3	115	-0.891	ppb	-0.891	-3.66	400	2000	
Sb	121	3	115	-0.110	ppb	-0.110	-14.78	82	1000	
Ba	137	3	115	-0.147	ppb	-0.147	-11.65	107	5000	
Tl	205	3	193	-0.118	ppb	-0.118	-2.31	518	2000	
(Pb)	206	3	193	-0.155	ppb	-0.155	-9.24	368	100	
(Pb)	207	3	193	-0.206	ppb	-0.206	-3.32	696	100	
Pb	208	3	193	-0.150	ppb	-0.150	-1.69	1932	5000	
Th	232	3	193	-0.354	ppb	-0.354	-9.42	10336	2000	
U	238	3	193	0.004	ppb	0.004	289.00	4147	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7795025	0.29	3936624	198.01	60	120	IS Failed
Sc (IS)	45	3	HMI He	1170584	3.35	609520	192.05	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4786366	1.45	2391663	200.13	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1452218	2.09	756863	191.87	60	120	IS Failed
In Internal Standard	115	3	HMI He	5511631	3.90	2988279	184.44	60	120	IS Failed
Ir (IS)	193	3	HMI He	12816579	1.22	6996686	183.18	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	176SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:25:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.080	ppb	-0.080	-50.25	3	2000	
Na	23	3	45	-88.097	ppb	-88.097	-6.52	27885	400000	
Mg	24	3	45	0.112	ppb	0.112	1314.87	1505	400000	
Al	27	3	45	-1.082	ppb	-1.082	-24.26	200	400000	
K	39	3	45	-309.832	ppb	-309.832	-3.67	26000	400000	
Ca	40	2	45	-12.851	ppb	-12.851	-2.99	37759	400000	
V	51	3	72	-1.094	ppb	-1.094	-1.86	185	2000	
Cr	52	3	72	-1.540	ppb	-1.540	-0.64	1040	5000	
Mn	55	3	72	-0.107	ppb	-0.107	-49.33	283	10000	
Fe	56	2	72	-2.576	ppb	-2.576	-21.11	24797	10000	
Co	59	3	72	-0.014	ppb	-0.014	-33.28	107	2000	
Ni	60	3	72	-0.680	ppb	-0.680	-3.67	152	5000	
Cu	63	3	72	-0.233	ppb	-0.233	-7.47	475	5000	
Zn	66	3	72	-1.103	ppb	-1.103	-7.69	235	5000	
As	75	3	72	-0.489	ppb	-0.489	-2.10	37	2000	
Se	78	2	72	-0.004	ppb	-0.004	-1025.95	7	2000	
Sr	88	3	72	-0.093	ppb	-0.093	-63.56	380	4000	
Mo	95	3	115	-0.056	ppb	-0.056	-18.69	43	2000	
Ag	107	3	115	0.009	ppb	0.009	77.97	98	100	
Cd	111	3	115	-0.023	ppb	-0.023	-118.28	20	2000	
Sn	120	3	115	-0.906	ppb	-0.906	-2.20	385	2000	
Sb	121	3	115	-0.106	ppb	-0.106	-0.81	90	1000	
Ba	137	3	115	-0.203	ppb	-0.203	-13.15	80	5000	
Tl	205	3	193	-0.120	ppb	-0.120	-1.27	490	2000	
(Pb)	206	3	193	-0.149	ppb	-0.149	-11.06	376	100	
(Pb)	207	3	193	-0.220	ppb	-0.220	-6.50	645	100	
Pb	208	3	193	-0.153	ppb	-0.153	-0.75	1852	5000	
Th	232	3	193	-0.373	ppb	-0.373	-9.33	9867	2000	
U	238	3	193	0.032	ppb	0.032	25.86	4377	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7539517	2.51	3936624	191.52	60	120	IS Failed
Sc (IS)	45	3	HMI He	1183824	1.68	609520	194.22	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4611457	1.13	2391663	192.81	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1481612	1.86	756863	195.76	60	120	IS Failed
In Internal Standard	115	3	HMI He	5624882	1.49	2988279	188.23	60	120	IS Failed
Ir (IS)	193	3	HMI He	12520198	2.56	6996686	178.94	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	177SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:27:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.079	ppb	-0.079	-50.93	3	2000	
Na	23	3	45	-85.507	ppb	-85.507	-2.89	27274	400000	
Mg	24	3	45	-1.025	ppb	-1.025	-121.08	1321	400000	
Al	27	3	45	-0.967	ppb	-0.967	-32.12	197	400000	
K	39	3	45	-305.279	ppb	-305.279	-4.23	25335	400000	
Ca	40	2	45	-12.088	ppb	-12.088	-0.88	38779	400000	
V	51	3	72	-1.084	ppb	-1.084	-2.32	192	2000	
Cr	52	3	72	-1.524	ppb	-1.524	-3.48	1031	5000	
Mn	55	3	72	-0.072	ppb	-0.072	-47.10	302	10000	
Fe	56	2	72	-3.373	ppb	-3.373	-7.45	22882	10000	
Co	59	3	72	-0.015	ppb	-0.015	-14.15	100	2000	
Ni	60	3	72	-0.656	ppb	-0.656	-5.44	163	5000	
Cu	63	3	72	-0.229	ppb	-0.229	-8.90	468	5000	
Zn	66	3	72	-1.064	ppb	-1.064	-12.85	240	5000	
As	75	3	72	-0.531	ppb	-0.531	-2.68	27	2000	
Se	78	2	72	0.008	ppb	0.008	363.60	9	2000	
Sr	88	3	72	-0.058	ppb	-0.058	-52.28	408	4000	
Mo	95	3	115	-0.039	ppb	-0.039	-48.44	60	2000	
Ag	107	3	115	0.009	ppb	0.009	70.17	98	100	
Cd	111	3	115	-0.023	ppb	-0.023	-132.10	20	2000	
Sn	120	3	115	-0.903	ppb	-0.903	-3.28	390	2000	
Sb	121	3	115	-0.119	ppb	-0.119	-7.13	70	1000	
Ba	137	3	115	-0.161	ppb	-0.161	-18.85	102	5000	
Tl	205	3	193	-0.114	ppb	-0.114	-6.17	555	2000	
(Pb)	206	3	193	-0.154	ppb	-0.154	-6.27	373	100	
(Pb)	207	3	193	-0.201	ppb	-0.201	-2.35	710	100	
Pb	208	3	193	-0.149	ppb	-0.149	-2.95	1956	5000	
Th	232	3	193	-0.396	ppb	-0.396	-5.58	9852	2000	
U	238	3	193	0.016	ppb	0.016	29.28	4292	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7584128	1.75	3936624	192.66	60	120	IS Failed
Sc (IS)	45	3	HMI He	1135984	0.76	609520	186.37	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4690411	1.44	2391663	196.12	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1437693	0.87	756863	189.95	60	120	IS Failed
In Internal Standard	115	3	HMI He	5628827	0.30	2988279	188.36	60	120	IS Failed
Ir (IS)	193	3	HMI He	12840676	3.64	6996686	183.53	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	178SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:29:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.056	ppb	-0.056	-1.11	5	2000	
Na	23	3	45	-91.233	ppb	-91.233	-8.29	26909	400000	
Mg	24	3	45	-1.375	ppb	-1.375	-62.95	1321	400000	
Al	27	3	45	-0.862	ppb	-0.862	-75.30	207	400000	
K	39	3	45	-312.077	ppb	-312.077	-2.09	25492	400000	
Ca	40	2	45	-12.033	ppb	-12.033	-6.40	38900	400000	
V	51	3	72	-1.059	ppb	-1.059	-1.15	220	2000	
Cr	52	3	72	-1.550	ppb	-1.550	-1.88	995	5000	
Mn	55	3	72	-0.055	ppb	-0.055	-124.04	315	10000	
Fe	56	2	72	-2.928	ppb	-2.928	-12.67	23654	10000	
Co	59	3	72	-0.020	ppb	-0.020	-59.38	88	2000	
Ni	60	3	72	-0.671	ppb	-0.671	-8.14	153	5000	
Cu	63	3	72	-0.264	ppb	-0.264	-9.60	403	5000	
Zn	66	3	72	-1.166	ppb	-1.166	-6.24	208	5000	
As	75	3	72	-0.571	ppb	-0.571	-7.81	18	2000	
Se	78	2	72	-0.047	ppb	-0.047	-23.29	3	2000	
Sr	88	3	72	-0.080	ppb	-0.080	-133.70	381	4000	
Mo	95	3	115	-0.062	ppb	-0.062	-18.77	37	2000	
Ag	107	3	115	0.005	ppb	0.005	184.56	85	100	
Cd	111	3	115	-0.025	ppb	-0.025	-105.17	18	2000	
Sn	120	3	115	-0.894	ppb	-0.894	-3.36	396	2000	
Sb	121	3	115	-0.107	ppb	-0.107	-5.44	87	1000	
Ba	137	3	115	-0.190	ppb	-0.190	-3.73	85	5000	
Tl	205	3	193	-0.119	ppb	-0.119	-3.75	526	2000	
(Pb)	206	3	193	-0.158	ppb	-0.158	-6.12	370	100	
(Pb)	207	3	193	-0.214	ppb	-0.214	-13.14	690	100	
Pb	208	3	193	-0.154	ppb	-0.154	-4.61	1932	5000	
Th	232	3	193	-0.375	ppb	-0.375	-11.18	10304	2000	
U	238	3	193	0.001	ppb	0.001	1443.18	4194	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7594601	1.78	3936624	192.92	60	120	IS Failed
Sc (IS)	45	3	HMI He	1169240	1.96	609520	191.83	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4587186	0.69	2391663	191.80	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1437512	4.28	756863	189.93	60	120	IS Failed
In Internal Standard	115	3	HMI He	5511390	2.05	2988279	184.43	60	120	IS Failed
Ir (IS)	193	3	HMI He	13100811	1.55	6996686	187.24	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	179SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:30:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.056	ppb	-0.056	-124.36	5	2000	
Na	23	3	45	-89.667	ppb	-89.667	-3.76	27524	400000	
Mg	24	3	45	-1.391	ppb	-1.391	-142.52	1331	400000	
Al	27	3	45	-1.998	ppb	-1.998	-49.82	160	400000	
K	39	3	45	-309.747	ppb	-309.747	-5.70	25960	400000	
Ca	40	2	45	-12.653	ppb	-12.653	-0.56	39321	400000	
V	51	3	72	-1.081	ppb	-1.081	-3.59	198	2000	
Cr	52	3	72	-1.546	ppb	-1.546	-7.57	1025	5000	
Mn	55	3	72	-0.146	ppb	-0.146	-34.11	250	10000	
Fe	56	2	72	-2.924	ppb	-2.924	-2.84	23744	10000	
Co	59	3	72	-0.014	ppb	-0.014	-78.22	103	2000	
Ni	60	3	72	-0.683	ppb	-0.683	-4.52	148	5000	
Cu	63	3	72	-0.241	ppb	-0.241	-7.29	458	5000	
Zn	66	3	72	-1.103	ppb	-1.103	-10.33	235	5000	
As	75	3	72	-0.480	ppb	-0.480	-4.33	38	2000	
Se	78	2	72	-0.035	ppb	-0.035	-94.17	4	2000	
Sr	88	3	72	-0.102	ppb	-0.102	-50.74	368	4000	
Mo	95	3	115	-0.054	ppb	-0.054	-33.40	45	2000	
Ag	107	3	115	0.008	ppb	0.008	77.57	97	100	
Cd	111	3	115	-0.040	ppb	-0.040	-38.36	12	2000	
Sn	120	3	115	-0.895	ppb	-0.895	-2.34	405	2000	
Sb	121	3	115	-0.102	ppb	-0.102	-8.96	98	1000	
Ba	137	3	115	-0.172	ppb	-0.172	-10.97	97	5000	
Tl	205	3	193	-0.119	ppb	-0.119	-4.66	521	2000	
(Pb)	206	3	193	-0.148	ppb	-0.148	-10.37	395	100	
(Pb)	207	3	193	-0.204	ppb	-0.204	-14.25	710	100	
Pb	208	3	193	-0.149	ppb	-0.149	-6.91	1976	5000	
Th	232	3	193	-0.379	ppb	-0.379	-17.15	10164	2000	
U	238	3	193	0.003	ppb	0.003	747.18	4177	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7808020	2.06	3936624	198.34	60	120	IS Failed
Sc (IS)	45	3	HMI He	1182067	2.80	609520	193.93	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4601428	1.32	2391663	192.39	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1477899	5.06	756863	195.27	60	120	IS Failed
In Internal Standard	115	3	HMI He	5672604	0.81	2988279	189.83	60	120	IS Failed
Ir (IS)	193	3	HMI He	13004678	4.65	6996686	185.87	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	180SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:32:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.080	ppb	-0.080	-99.62	3	2000	
Na	23	3	45	-87.912	ppb	-87.912	-3.33	27611	400000	
Mg	24	3	45	-0.965	ppb	-0.965	-41.23	1368	400000	
Al	27	3	45	-1.107	ppb	-1.107	-15.47	197	400000	
K	39	3	45	-310.196	ppb	-310.196	-3.87	25686	400000	
Ca	40	2	45	-12.261	ppb	-12.261	-3.55	39110	400000	
V	51	3	72	-1.093	ppb	-1.093	-1.56	183	2000	
Cr	52	3	72	-1.557	ppb	-1.557	-2.77	998	5000	
Mn	55	3	72	-0.099	ppb	-0.099	-3.26	285	10000	
Fe	56	2	72	-3.047	ppb	-3.047	-3.42	23808	10000	
Co	59	3	72	-0.016	ppb	-0.016	-31.32	98	2000	
Ni	60	3	72	-0.703	ppb	-0.703	-7.34	133	5000	
Cu	63	3	72	-0.241	ppb	-0.241	-2.73	451	5000	
Zn	66	3	72	-1.180	ppb	-1.180	-9.65	207	5000	
As	75	3	72	-0.518	ppb	-0.518	-18.86	30	2000	
Se	78	2	72	-0.029	ppb	-0.029	-162.38	5	2000	
Sr	88	3	72	-0.074	ppb	-0.074	-47.29	395	4000	
Mo	95	3	115	-0.059	ppb	-0.059	-26.34	40	2000	
Ag	107	3	115	0.002	ppb	0.002	153.16	75	100	
Cd	111	3	115	-0.026	ppb	-0.026	-133.74	18	2000	
Sn	120	3	115	-0.876	ppb	-0.876	-3.68	428	2000	
Sb	121	3	115	-0.110	ppb	-0.110	-12.35	83	1000	
Ba	137	3	115	-0.186	ppb	-0.186	-21.52	88	5000	
Tl	205	3	193	-0.124	ppb	-0.124	-2.86	473	2000	
(Pb)	206	3	193	-0.140	ppb	-0.140	-6.32	420	100	
(Pb)	207	3	193	-0.197	ppb	-0.197	-11.70	731	100	
Pb	208	3	193	-0.153	ppb	-0.153	-1.35	1934	5000	
Th	232	3	193	-0.403	ppb	-0.403	-7.96	9912	2000	
U	238	3	193	-0.001	ppb	-0.001	-2283.00	4142	2000	

QC ISTD Table

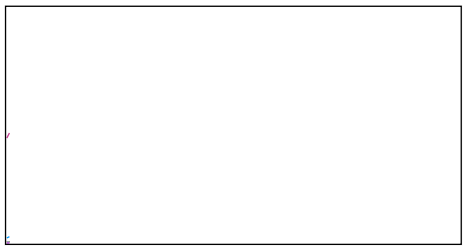
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7684773	1.27	3936624	195.21	60	120	IS Failed
Sc (IS)	45	3	HMI He	1170390	1.76	609520	192.02	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4683611	1.80	2391663	195.83	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1457592	1.88	756863	192.58	60	120	IS Failed
In Internal Standard	115	3	HMI He	5565837	2.46	2988279	186.26	60	120	IS Failed
Ir (IS)	193	3	HMI He	13024739	1.58	6996686	186.16	60	120	IS Failed

Current Signal

Operator Name	Denver Meta s
Acq. Date-Tlme	4/19/2023 11:55:42 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[No Gas]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	200000	3796	3822	0.946
2	59	100000	4792	4861	2 014
3	63	100000	87	98	15.874
4	70	500000	238	236	1.199
5	80	1000000	1052236	1049470	0.373
6	89	100000	7628	7727	1.813
7	115	2000000	9048	9011	0.593
8	118	100000	147	138	9 771
9	137	50000	1150	1134	2.060
10	140	20000	9278	9070	3.242
11	205	2000000	7199	7110	1.770
12	6	5000000	4870	4963	2.645
13	70/140	1000	2.565 %	2.603 %	2.044
14	156/140	500	0 291 %	0 253 %	21.439

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-50 V
Extract 2	200 0 V	Q1 Exit		Def ect	12 6 V
Omega Bias	95 V	Cel Focus		P ate Bias	35 V
Omega Lens	8.0 V	Cel Entrance	30 V		

Cell Parameters

Use Gas	No	3rd Gas F ow		Axia Acce eration	
He F ow	0.0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0 0 mL/min	OctP Bias	8 0 V	Energy Discrimination	5 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	-3 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Current Signal

Torch H	0 4 mm	Torch V	0 3 mm		

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

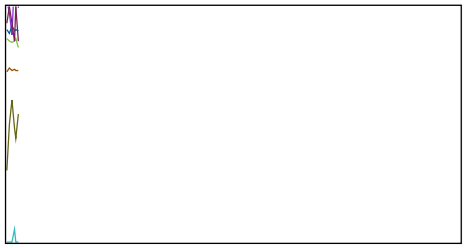
Name	Value	Unit
F/BK Press	2.11E+2	Pa
Ana yzer Press	7 25E 5	Pa
Reflected Power	0	W
Forward Power	1599	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:55:59 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[HMI H2]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	100	100	93	4.047
2	9	200	199	200	7 260
3	59	1000	747	750	2 051
4	63	20	11	5	60 078
5	70	100	100	110	6.567
6	78	20	0	0	244 949
7	89	5000	6404	6294	1.209
8	115	10000	8267	8519	1 644
9	118	100	141	143	8.632
10	137	1000	1069	1097	1.817
11	140	5000	5878	5900	2.664
12	205	10000	7259	7290	0.791
13	238	10000	8988	9012	1.188
14	70/140	2	1 701 %	1 861 %	7 553
15	156/140	1	0.544 %	0.479 %	21 242

Integration Time [sec] 0 1

Tune Parameters

Plasma Parameters

P asma Mode		Nebulizer Gas	0.64 L/min	Dilution Gas	0.26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1 40 V	Nebulizer Pump	0 10 rps	P asma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance		Cel Exit	60 V
Extract 2	190 0 V	Q1 Exit		Def ect	0 8 V
Omega Bias	95 V	Cel Focus		P ate Bias	60 V
Omega Lens	7 9 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	0 0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	5 0 mL/min	OctP Bias	18.0 V	Energy Discrimination	3 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Current Signal

Torch

Torch H	0 4 mm	Torch V	-0 3 mm		

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

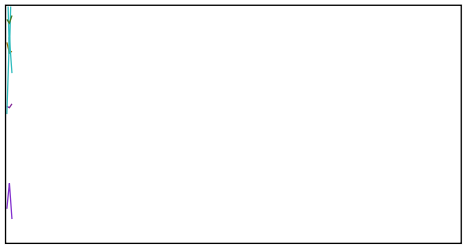
Name	Value	Unit
F/BK Press	2.20E+2	Pa
Ana yzer Press	2.35E 4	Pa
Reflected Power	0	W
Forward Power	1600	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:56:11 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[HMI He]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	53	20	22	20	17 321
2	59	2000	1520	1483	2 247
3	66	50	36	31	25.797
4	70	50	58	58	20 690
5	78	20	3	3	21 651
6	115	2000	2037	2171	5.418
7	118	20	43	37	17 745
8	137	500	292	288	1 402
9	140	5000	4048	4099	2.749
10	205	5000	4799	4720	1.628
11	51/59	1	1.316 %	1.440 %	7.495
12	70/140	2	1.433 %	1.421 %	23 001
13	156/140	1	0.099 %	0.163 %	47 312

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas	---	Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-60 V
Extract 2	200 0 V	Q1 Exit		Def ect	0 2 V
Omega Bias	100 V	Cel Focus		P ate Bias	55 V
Omega Lens	8.2 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	4.3 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0.0 mL/min	OctP Bias	18 0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Torch H	0.4 mm	Torch V	0.3 mm		

Current Signal

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

Name	Value	Unit
F/BK Press	2 13E+2	Pa
Ana yzer Press	2 46E-4	Pa
Reflected Power	0	W
Forward Power	1599	W
Tune/ISTD Va ve		

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:03:48 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

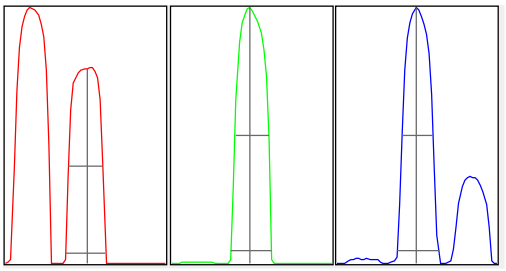
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2368	23683 69	0.619	5 000	
89		4594	45941 66	0.441	5 000	
205		3945	39452 88	0.410	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2385	2364	2380	2365	2348
89	4581	4592	4627	4596	4574
205	3943	3966	3956	3936	3925

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3738.86	7.05	6 90 7 10	
89	7792.04	89.00	88 90 89.10	
205	7082 03	205 00	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.742	0.900	
89	0.62	0.740	0.900	
205	0.58	0.771	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

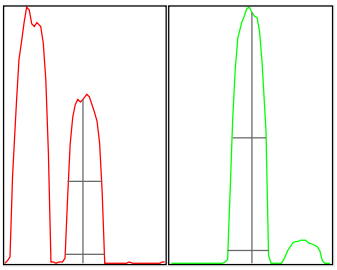
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	616 52	1 812	5.000	
9		119	1194 58	2.113	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	61	61	61	64	61
9	122	121	121	116	118

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	101 30	7 00	6.90 - 7.10	
9	199 16	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.741	0.900	
9	0.62	0.741	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		167	1667.65	3 184	5.000	
25		23	234 90	4 441	5.000	
26		31	311.61	5.056	5 000	Fai
59		874	8744 50	1.312	5 000	
103		2521	25210.46	0 616	5.000	
115		1169	11693.27	0 334	5.000	
205		2568	25683.92	0 311	5.000	
206		835	8351 79	0.437	5 000	
207		718	7179 82	0.950	5 000	

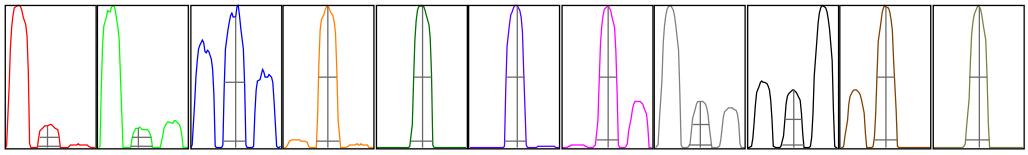
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1787	17869.62	0 558	5.000	
238		3626	36263.35	0 868	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	173	170	168	160	163
25	25	23	22	23	25
26	33	32	31	31	29
59	890	875	880	861	866
103	2534	2509	2538	2522	2502
115	1173	1170	1163	1168	1172
205	2558	2563	2577	2568	2576
206	838	835	839	830	835
207	723	725	720	711	711
208	1801	1790	1789	1775	1780
238	3644	3618	3668	3584	3618

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	265.03	23.95	23 90 24.10	
25	38.55	24.85	24 90 25.10	Fail
26	49 05	26 00	25.90 - 26 10	
59	1479 29	59 00	58.90 - 59 10	
103	4374.57	103.05	102.90 103.10	
115	2045.31	115.10	114.90 115.10	
205	4619.84	205.05	204.90 205.10	
206	1514 26	206 05	205 90 - 206 10	
207	1316 19	207 05	206 90 - 207 10	
208	3238.59	208.05	207.90 208.10	
238	6568.26	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 64	0 741	0 900	
25	0.64	0.743	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.744	0.900	
59	0.62	0.777	0.900	
103	0 60	0 734	0 900	
115	0 59	0 692	0 900	
205	0.58	0.737	0.900	
206	0.56	0.724	0.900	
207	0.56	0.734	0.900	
208	0 57	0 758	0 900	
238	0 57	0 776	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:12:16 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

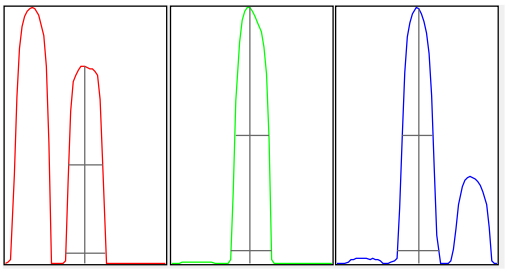
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2343	23429 98	0.525	5 000	
89		4553	45533 05	0.175	5 000	
205		3885	38854 32	0.405	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2332	2350	2359	2344	2330
89	4555	4546	4553	4547	4566
205	3872	3869	3907	3886	3894

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3733.04	7.00	6 90 7 10	
89	7702.53	89.00	88 90 89.10	
205	6978 55	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.741	0.900	
89	0.62	0.740	0.900	
205	0.58	0.770	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

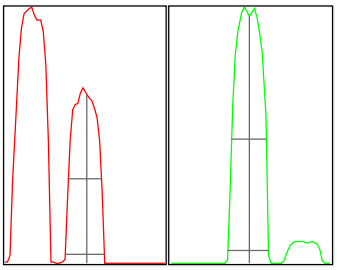
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		60	604 02	1 152	5.000	
9		120	1197 78	2.470	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	60	60	60	62	60
9	121	115	122	119	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	100 35	7 05	6.90 - 7.10	
9	191 91	9 00	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.740	0.900	
9	0.63	0.742	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		165	1646.75	1 767	5.000	
25		25	251 40	3 437	5.000	
26		30	302.81	6.894	5 000	Fai
59		874	8737 48	0.430	5 000	
103		2508	25080.94	0 353	5.000	
115		1161	11609.59	1 029	5.000	
205		2535	25345.57	0 415	5.000	
206		828	8281 54	1.404	5 000	
207		711	7107 08	0.581	5 000	

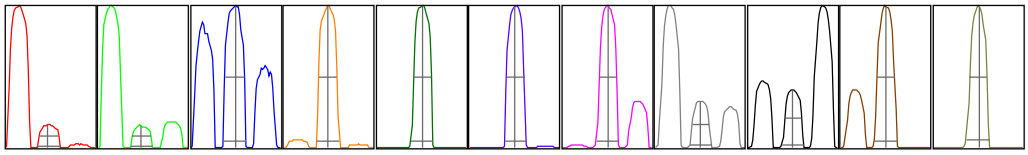
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1756	17555.50	0 234	5.000	
238		3560	35602.23	0 975	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	165	162	164	169	163
25	26	24	26	26	25
26	28	32	29	30	33
59	871	873	877	878	869
103	2505	2514	2509	2518	2495
115	1163	1178	1150	1149	1165
205	2525	2530	2527	2550	2541
206	814	840	832	818	837
207	709	711	705	717	711
208	1751	1760	1752	1758	1758
238	3513	3610	3557	3553	3568

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	271.13	23.95	23 90 24.10	
25	43.15	24.95	24 90 25.10	
26	49 90	26 00	25.90 - 26 10	
59	1465 38	59 00	58.90 - 59 10	
103	4375.58	103.05	102.90 103.10	
115	2034.75	115.05	114.90 115.10	
205	4548.33	205.05	204.90 205.10	
206	1498 74	206 05	205 90 - 206 10	
207	1316 74	207 00	206 90 - 207 10	
208	3194.53	208.05	207.90 208.10	
238	6501.97	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.63	0.741	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.63	0.741	0.900	
59	0.62	0.778	0.900	
103	0 59	0 733	0 900	
115	0 59	0 692	0 900	
205	0.57	0.736	0.900	
206	0.56	0.717	0.900	
207	0.56	0.733	0.900	
208	0 57	0 754	0 900	
238	0 57	0 773	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:22:24 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

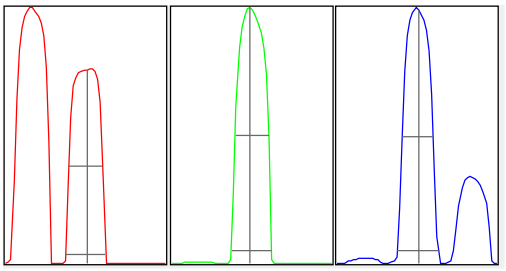
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2268	22679 02	6.280	5 000	Fai
89		4370	43701 67	5.855	5 000	Fai
205		3674	36738 02	7.214	5 000	Fai

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2292	2017	2329	2345	2357
89	4339	3937	4540	4538	4498
205	3712	3214	3755	3800	3888

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3620.00	7.05	6 90 7 10	
89	7467.06	89.00	88 90 89.10	
205	6528 70	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.740	0.900	
89	0.61	0.739	0.900	
205	0.58	0.769	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

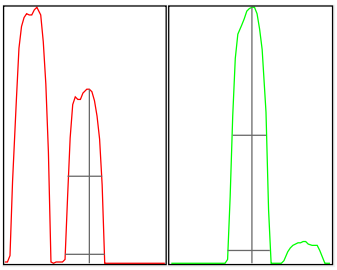
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	622 42	2 779	5.000	
9		121	1212 18	2.034	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	61	62	62	61	65
9	117	121	122	124	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	103 50	7 10	6.90 - 7.10	
9	202 36	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.740	0.900	
9	0.62	0.780	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		164	1638.35	1 204	5.000	
25		24	244 80	3 996	5.000	
26		30	301.11	3.829	5 000	
59		870	8700 25	0.981	5 000	
103		2489	24888.79	0 570	5.000	
115		1143	11431.44	0 367	5.000	
205		2513	25126.52	0 433	5.000	
206		823	8228 81	1.018	5 000	
207		709	7085 06	1.110	5 000	

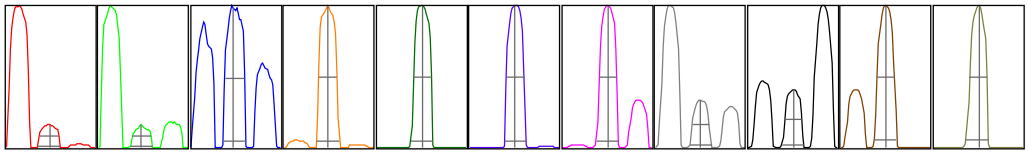
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1749	17493.20	1 169	5.000	
238		3571	35705.33	0 629	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	162	163	167	164	164
25	26	24	24	25	23
26	32	29	30	30	30
59	871	879	874	856	870
103	2495	2477	2487	2510	2476
115	1145	1149	1141	1138	1143
205	2524	2507	2499	2510	2524
206	830	818	833	812	821
207	715	716	700	700	710
208	1721	1760	1771	1736	1759
238	3541	3600	3563	3583	3565

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	270.33	24.00	23 90 24.10	
25	44.00	24.95	24 90 25.10	
26	48 65	25 95	25.90 - 26 10	
59	1466 58	59 00	58.90 - 59 10	
103	4329.68	103.05	102.90 103.10	
115	1993.58	115.05	114.90 115.10	
205	4507.84	205.05	204.90 205.10	
206	1515 76	206 05	205 90 - 206 10	
207	1304 28	207 05	206 90 - 207 10	
208	3207.15	208.05	207.90 208.10	
238	6505.08	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.63	0.745	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.743	0.900	
59	0.62	0.778	0.900	
103	0 59	0 733	0 900	
115	0 59	0 692	0 900	
205	0.57	0.736	0.900	
206	0.56	0.718	0.900	
207	0.56	0.733	0.900	
208	0 56	0 754	0 900	
238	0 57	0 736	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:30:35 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

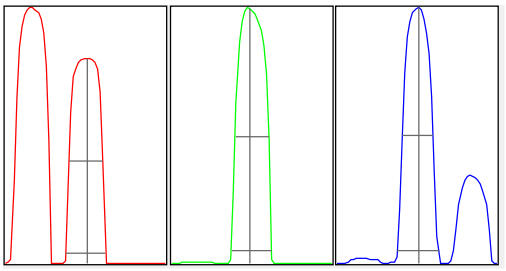
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2332	23319 89	0.259	5 000	
89		4495	44946 11	0.530	5 000	
205		3765	37653 97	0.292	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2328	2340	2335	2334	2324
89	4494	4494	4519	4509	4456
205	3782	3763	3762	3752	3768

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3741.12	7.05	6 90 7 10	
89	7577.14	89.00	88 90 89.10	
205	6771 30	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.63	0.740	0.900	
89	0.62	0.740	0.900	
205	0.57	0.768	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

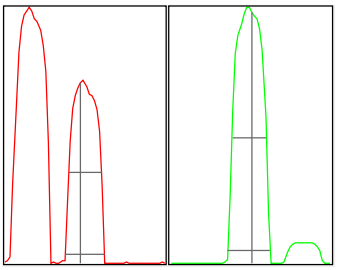
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	622 22	2 332	5.000	
9		121	1211 48	1.028	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	64	61	62	64	60
9	122	119	120	122	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	106 10	6 95	6.90 - 7.10	
9	198 71	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.61	0.739	0.900	
9	0.63	0.780	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		168	1683.25	2 072	5.000	
25		24	237 60	2 643	5.000	
26		31	313.51	4.696	5 000	
59		869	8690 25	0.751	5 000	
103		2475	24753.67	0 805	5.000	
115		1130	11297.36	0 840	5.000	
205		2492	24916.75	0 522	5.000	
206		818	8176 75	0.943	5 000	
207		701	7005 29	0.913	5 000	

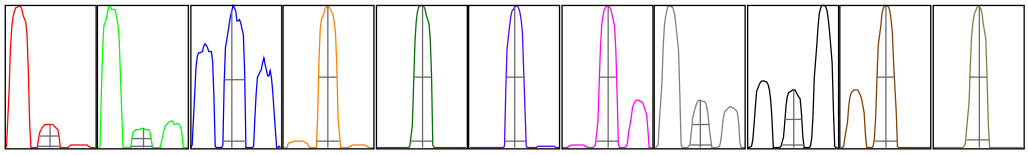
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1732	17320.34	0 753	5.000	
238		3531	35311.90	0 857	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	170	170	162	170	170
25	24	24	23	24	24
26	33	32	30	30	32
59	872	867	877	859	870
103	2489	2463	2446	2494	2484
115	1138	1141	1122	1119	1128
205	2469	2497	2499	2496	2498
206	808	828	813	820	819
207	696	709	706	695	697
208	1737	1750	1722	1735	1717
238	3493	3529	3576	3519	3539

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	274.48	24.00	23 90 24.10	
25	38.05	25.05	24 90 25.10	
26	50 65	25 90	25.90 - 26 10	
59	1460 77	59 00	58.90 - 59 10	
103	4340.01	103.05	102.90 103.10	
115	1976.06	115.05	114.90 115.10	
205	4474.77	205.05	204.90 205.10	
206	1505 20	206 05	205 90 - 206 10	
207	1293 06	207 05	206 90 - 207 10	
208	3179.14	208.05	207.90 208.10	
238	6410.45	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.65	0.744	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.65	0.742	0.900	
59	0.62	0.777	0.900	
103	0 59	0 732	0 900	
115	0 59	0 691	0 900	
205	0.57	0.736	0.900	
206	0.56	0.719	0.900	
207	0.55	0.732	0.900	
208	0 56	0 754	0 900	
238	0 57	0 772	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
6		0.095136	☑
9		0.105250	☑
23		0.106345	☑
24		0.112207	☑
27		0.117441	☑
39		0.122445	☑
45		0.123608	☑
48		0.123190	☑
51		0.126432	☑
52		0.130208	☑
55		0.133122	☑
59		0.139351	☑
60		0.140186	☑
63		0.144222	☑
66		0.143375	☑
72		0.140891	☑
75		0.139603	☑
88		0.142791	☑
98		0.139456	☑
102		0.144294	☑
106		0.150388	☑
114		0.154121	☑
115		0.153759	☑

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
118		0.151558	☑
121		0.151549	☑
138		0.154070	☑
175		0.161681	☑
193		0.163213	☑
205		0.166749	☑
208		0.168611	☑
209		0.167650	☑
232		0.164717	☑
238		0.165737	☑

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	001SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:41:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	002SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:43:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	003SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:46:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	004SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:48:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	005SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:50:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	006SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:52:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	007SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:54:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	008SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:55:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	009SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:57:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	010SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:59:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	011SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:01:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	012SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:03:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	013SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:05:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	014SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:06:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	015SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:08:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	016SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:10:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	017SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:12:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	018SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:14:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	019SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:15:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	020SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:17:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	021SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:19:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	022SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:21:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	023SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:23:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	024SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:25:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:26:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	026SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:28:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	027SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:30:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	028SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:32:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	029SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:34:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	030SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:35:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	031CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T13:37:45-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	15203	0.02
Mg	24	45	3	HMI He	220	14.30
Al	27	45	3	HMI He	97	16.33
K	39	45	3	HMI He	24506	0.03
Ca	40	45	2	HMI H2	9907	0.03
V	51	72	3	HMI He	823	0.93
Cr	52	72	3	HMI He	2084	0.05
Mn	55	72	3	HMI He	173	5.35
Fe	56	72	2	HMI H2	31461	0.02
Co	59	72	3	HMI He	52	60.24
Ni	60	72	3	HMI He	371	3.29
Cu	63	72	3	HMI He	530	3.21
Zn	66	72	3	HMI He	190	13.65
As	75	72	3	HMI He	58	37.00
Se	78	72	2	HMI H2	1	25980.76
(Se)	78	72	3	HMI He	22	162.85
Sr	88	72	3	HMI He	18	309.78
Mo	95	115	3	HMI He	40	125.06
Ag	107	115	3	HMI He	18	85.98
Cd	111	115	3	HMI He	42	44.03
Sn	120	115	3	HMI He	1163	0.31
Sb	121	115	3	HMI He	88	40.71
Ba	137	115	3	HMI He	50	72.16
Tl	205	193	3	HMI He	4050	0.07
(Pb)	206	193	3	HMI He	505	2.57
(Pb)	207	193	3	HMI He	580	0.93
Pb	208	193	3	HMI He	2139	0.23
Th	232	193	3	HMI He	5207	0.04
U	238	193	3	HMI He	1538	0.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3892690	1.21
Sc (IS)	45	3	HMI He	558682	0.71
Ge Internal standard	72	2	HMI H2	2351137	1.90
Ge Internal standard	72	3	HMI He	686329	0.71
In Internal Standard	115	3	HMI He	2596034	0.99
Ir (IS)	193	3	HMI He	5774995	1.94

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	032CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:39:33-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	031CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	649.52
Na	23	45	3	HMI He	10742393	0.00
Mg	24	45	3	HMI He	1134826	0.00
Al	27	45	3	HMI He	107	30.84
K	39	45	3	HMI He	895777	0.00
V	51	72	3	HMI He	818	1.06
Cr	52	72	3	HMI He	2189	0.33
Mn	55	72	3	HMI He	258	3.03
Co	59	72	3	HMI He	78	20.52
Ni	60	72	3	HMI He	510	2.31
Cu	63	72	3	HMI He	651	0.41
Zn	66	72	3	HMI He	351	6.22
As	75	72	3	HMI He	55	43.76
Se	78	72	2	HMI H2	3	2078.46
(Se)	78	72	3	HMI He	17	207.80
Sr	88	72	3	HMI He	278	6.14
Mo	95	115	3	HMI He	47	35.08
Ag	107	115	3	HMI He	28	71.91
Cd	111	115	3	HMI He	47	103.57
Sn	120	115	3	HMI He	1046	0.67
Sb	121	115	3	HMI He	80	20.68
Ba	137	115	3	HMI He	238	5.73
Tl	205	193	3	HMI He	2547	0.12
(Pb)	206	193	3	HMI He	511	3.18
(Pb)	207	193	3	HMI He	561	1.39
Pb	208	193	3	HMI He	2102	0.24
Th	232	193	3	HMI He	4807	0.14
U	238	193	3	HMI He	1648	0.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4062280	1.43	3892690	104.36	60	120	
Sc (IS)	45	3	HMI He	567214	0.07	558682	101.53	60	120	
Ge Internal standard	72	2	HMI H2	2234245	1.68	2351137	95.03	60	120	
Ge Internal standard	72	3	HMI He	663901	0.73	686329	96.73	60	120	
In Internal Standard	115	3	HMI He	2619267	1.35	2596034	100.89	60	120	
Ir (IS)	193	3	HMI He	5907923	1.45	5774995	102.30	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	033CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:41:20-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	031CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4663	0.06
Na	23	45	3	HMI He	228024	0.00
Mg	24	45	3	HMI He	111342	0.00
Al	27	45	3	HMI He	43286	0.01
K	39	45	3	HMI He	112991	0.00
V	51	72	3	HMI He	60009	0.00
Cr	52	72	3	HMI He	75692	0.00
Mn	55	72	3	HMI He	39326	0.00
Co	59	72	3	HMI He	126170	0.00
Ni	60	72	3	HMI He	36012	0.00
Cu	63	72	3	HMI He	98515	0.00
Zn	66	72	3	HMI He	15870	0.02
As	75	72	3	HMI He	10916	0.01
Se	78	72	2	HMI H2	5851	0.03
(Se)	78	72	3	HMI He	601	1.31
Sr	88	72	3	HMI He	106061	0.00
Mo	95	115	3	HMI He	48643	0.01
Ag	107	115	3	HMI He	167827	0.00
Cd	111	115	3	HMI He	23853	0.00
Sn	120	115	3	HMI He	76843	0.00
Sb	121	115	3	HMI He	74925	0.00
Ba	137	115	3	HMI He	24853	0.01
Tl	205	193	3	HMI He	386055	0.00
(Pb)	206	193	3	HMI He	129422	0.00
(Pb)	207	193	3	HMI He	113785	0.00
Pb	208	193	3	HMI He	521753	0.00
Th	232	193	3	HMI He	529561	0.00
U	238	193	3	HMI He	549424	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3974834	2.44	3892690	102.11	60	120	
Sc (IS)	45	3	HMI He	572255	0.57	558682	102.43	60	120	
Ge Internal standard	72	2	HMI H2	2406898	0.94	2351137	102.37	60	120	
Ge Internal standard	72	3	HMI He	712494	0.83	686329	103.81	60	120	
In Internal Standard	115	3	HMI He	2634865	0.10	2596034	101.50	60	120	
Ir (IS)	193	3	HMI He	5938117	1.80	5774995	102.82	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	034_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:43:08-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.074	ppb	2.894	1756	40	95.2	90	110	
Na	23	3	45	12422.210	ppb	2.590	1360213	12800	97.0	90	110	
Mg	24	3	45	4563.419	ppb	1.861	261473	4800	95.1	90	110	
Al	27	3	45	786.237	ppb	1.429	17084	800	98.3	90	110	
K	39	3	45	4723.360	ppb	1.284	232681	4800	98.4	90	110	
Ca	40	2	45	5032.893	ppb	2.779	2698189	4800	104.9	90	110	
V	51	3	72	41.551	ppb	1.953	24801	40	103.9	90	110	
Cr	52	3	72	41.694	ppb	2.696	32006	40	104.2	90	110	
Mn	55	3	72	42.460	ppb	1.165	16390	40	106.2	90	110	
Fe	56	2	72	806.726	ppb	2.562	1272035	800	100.8	90	110	
Co	59	3	72	41.216	ppb	2.797	50739	40	103.0	90	110	
Ni	60	3	72	41.898	ppb	2.073	14936	40	104.7	90	110	
Cu	63	3	72	42.051	ppb	1.688	40718	40	105.1	90	110	
Zn	66	3	72	82.283	ppb	1.344	12771	80	102.9	90	110	
As	75	3	72	41.410	ppb	3.799	4442	40	103.5	90	110	
Se	78	2	72	40.535	ppb	5.141	2334	40	101.3	90	110	
Sr	88	3	72	122.900	ppb	2.320	63573	120	102.4	90	110	
Mo	95	3	115	39.950	ppb	0.643	19695	40	99.9	90	110	
Ag	107	3	115	79.510	ppb	2.259	135049	80	99.4	90	110	
Cd	111	3	115	39.885	ppb	2.723	9654	40	99.7	90	110	
Sn	120	3	115	39.389	ppb	3.956	31351	40	98.5	90	110	
Sb	121	3	115	38.890	ppb	2.406	29545	40	97.2	90	110	
Ba	137	3	115	39.019	ppb	2.082	9845	40	97.5	90	110	
Tl	205	3	193	40.956	ppb	2.435	158694	40	102.4	90	110	
(Pb)	206	3	193	41.113	ppb	0.891	52902	40	102.8	90	110	
(Pb)	207	3	193	40.662	ppb	0.632	46079	40	101.7	90	110	
Pb	208	3	193	41.132	ppb	0.713	213401	40	102.8	90	110	
Th	232	3	193	81.341	ppb	0.792	426795	80	101.7	90	110	
U	238	3	193	43.848	ppb	2.189	238966	40	109.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3944042	1.80	3892690	101.32	60	120	
Sc (IS)	45	3	HMI He	572458	0.94	558682	102.47	60	120	
Ge Internal standard	72	2	HMI H2	2367950	0.88	2351137	100.72	60	120	
Ge Internal standard	72	3	HMI He	694948	1.86	686329	101.26	60	120	
In Internal Standard	115	3	HMI He	2667207	1.57	2596034	102.74	60	120	
Ir (IS)	193	3	HMI He	5868335	0.85	5774995	101.62	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	035_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:44:54-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	031CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.109	ppb	58.9	7	0.5	
Na	23	3	14.222	ppb	12.1	17041	25	
Mg	24	3	-0.078	ppb	-198.0	220	25	
Al	27	3	0.681	ppb	140.3	113	15	
K	39	3	-14.262	ppb	-150.5	24376	50	
V	51	3	0.106	ppb	76.2	893	1	
Cr	52	3	0.198	ppb	106.0	2249	1	
Mn	55	3	-0.053	ppb	-68.1	155	0.5	
Co	59	3	0.008	ppb	80.0	62	0.5	
Ni	60	3	0.016	ppb	1285.5	381	1	
Cu	63	3	-0.027	ppb	-190.8	510	1	
Zn	66	3	0.216	ppb	215.7	225	5	
As	75	3	-0.131	ppb	-219.3	45	1	
Se	78	2	0.138	ppb	15.7	9	1	
Sr	88	3	0.019	ppb	106.6	28	0.5	
Mo	95	3	0.057	ppb	89.3	68	0.5	
Ag	107	3	0.016	ppb	42.0	47	1	
Cd	111	3	0.024	ppb	214.3	48	0.5	
Sn	120	3	-0.086	ppb	-79.7	1121	1	
Sb	121	3	-0.022	ppb	-94.2	73	0.6	
Ba	137	3	-0.037	ppb	-232.2	42	0.5	
Tl	205	3	-0.452	ppb	-4.6	2416	0.1	
(Pb)	206	3	-0.046	ppb	-30.2	456	1	
(Pb)	207	3	0.037	ppb	52.3	631	1	
Pb	208	3	-0.035	ppb	-81.9	1997	0.5	
Th	232	3	3.245	ppb	11.8	22149	1	>RL
U	238	3	0.026	ppb	40.2	1704	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3933329	1.01	3892690	101.04	60	120	
Sc (IS)	45	3	HMI He	569801	0.55	558682	101.99	60	120	
Ge Internal standard	72	2	HMI H2	2382195	1.10	2351137	101.32	60	120	
Ge Internal standard	72	3	HMI He	693916	0.36	686329	101.11	60	120	
In Internal Standard	115	3	HMI He	2649286	2.26	2596034	102.05	60	120	
Ir (IS)	193	3	HMI He	5879016	0.69	5774995	101.80	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	036SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:46:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1427.20	2	2000	
Na	23	3	45	12.131	ppb	12.131	24.38	18347	400000	
Mg	24	3	45	12.469	ppb	12.469	25.43	1021	400000	
Al	27	3	45	7.654	ppb	7.654	38.30	287	400000	
K	39	3	45	-70.740	ppb	-70.740	-41.03	23908	400000	
Ca	40	2	45	31.260	ppb	31.260	1.61	29745	400000	
V	51	3	72	-0.988	ppb	-0.988	-2.91	288	2000	
Cr	52	3	72	-0.809	ppb	-0.809	-14.90	1678	5000	
Mn	55	3	72	0.062	ppb	0.062	61.30	218	10000	
Fe	56	2	72	8.931	ppb	8.931	18.15	50499	10000	
Co	59	3	72	0.016	ppb	0.016	114.96	78	2000	
Ni	60	3	72	-0.030	ppb	-0.030	-272.70	401	5000	
Cu	63	3	72	-0.082	ppb	-0.082	-31.60	503	5000	
Zn	66	3	72	-0.295	ppb	-0.295	-83.92	162	5000	
As	75	3	72	-0.371	ppb	-0.371	-26.39	22	2000	
Se	78	2	72	0.145	ppb	0.145	21.42	10	2000	
Sr	88	3	72	0.320	ppb	0.320	11.30	202	4000	
Mo	95	3	115	0.004	ppb	0.004	1226.58	47	2000	
Ag	107	3	115	0.011	ppb	0.011	70.59	42	100	
Cd	111	3	115	-0.107	ppb	-0.107	-9.27	18	2000	
Sn	120	3	115	-1.232	ppb	-1.232	-4.83	273	2000	
Sb	121	3	115	-0.033	ppb	-0.033	-32.61	72	1000	
Ba	137	3	115	-0.021	ppb	-0.021	-242.38	50	5000	
Tl	205	3	193	-0.807	ppb	-0.807	-1.02	1188	2000	
(Pb)	206	3	193	-0.060	ppb	-0.060	-13.10	485	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-2303.71	650	100	
Pb	208	3	193	-0.044	ppb	-0.044	-11.71	2161	5000	
Th	232	3	193	-0.151	ppb	-0.151	-34.62	5000	2000	
U	238	3	193	0.031	ppb	0.031	44.62	1921	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386792	0.70	3892690	112.69	60	120	
Sc (IS)	45	3	HMI He	621731	1.02	558682	111.29	60	120	
Ge Internal standard	72	2	HMI H2	2631494	0.70	2351137	111.92	60	120	
Ge Internal standard	72	3	HMI He	761976	0.71	686329	111.02	60	120	
In Internal Standard	115	3	HMI He	2892268	2.63	2596034	111.41	60	120	
Ir (IS)	193	3	HMI He	6507059	1.27	5774995	112.68	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	037SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:48:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.032	ppb	0.032	186.24	3	2000	
Na	23	3	45	2.294	ppb	2.294	314.20	16984	400000	
Mg	24	3	45	10.413	ppb	10.413	20.13	881	400000	
Al	27	3	45	7.463	ppb	7.463	38.39	280	400000	
K	39	3	45	-51.796	ppb	-51.796	-37.44	24533	400000	
Ca	40	2	45	31.991	ppb	31.991	2.93	29507	400000	
V	51	3	72	-0.930	ppb	-0.930	-6.17	320	2000	
Cr	52	3	72	-0.820	ppb	-0.820	-16.38	1643	5000	
Mn	55	3	72	0.143	ppb	0.143	33.29	248	10000	
Fe	56	2	72	6.499	ppb	6.499	26.29	45651	10000	
Co	59	3	72	0.005	ppb	0.005	293.36	63	2000	
Ni	60	3	72	-0.061	ppb	-0.061	-143.05	383	5000	
Cu	63	3	72	-0.072	ppb	-0.072	-78.50	505	5000	
Zn	66	3	72	-0.532	ppb	-0.532	-30.94	120	5000	
As	75	3	72	-0.338	ppb	-0.338	-35.11	25	2000	
Se	78	2	72	0.062	ppb	0.062	78.10	5	2000	
Sr	88	3	72	0.293	ppb	0.293	26.26	183	4000	
Mo	95	3	115	0.025	ppb	0.025	118.22	57	2000	
Ag	107	3	115	0.011	ppb	0.011	90.40	40	100	
Cd	111	3	115	-0.068	ppb	-0.068	-98.26	28	2000	
Sn	120	3	115	-1.173	ppb	-1.173	-2.03	317	2000	
Sb	121	3	115	-0.071	ppb	-0.071	-29.61	40	1000	
Ba	137	3	115	-0.030	ppb	-0.030	-97.12	47	5000	
Tl	205	3	193	-0.838	ppb	-0.838	-2.38	1028	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-27.31	460	100	
(Pb)	207	3	193	-0.033	ppb	-0.033	-208.78	595	100	
Pb	208	3	193	-0.056	ppb	-0.056	-11.73	2036	5000	
Th	232	3	193	-0.172	ppb	-0.172	-16.74	4750	2000	
U	238	3	193	0.052	ppb	0.052	33.63	1991	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4289210	0.30	3892690	110.19	60	120	
Sc (IS)	45	3	HMI He	614573	1.76	558682	110.00	60	120	
Ge Internal standard	72	2	HMI H2	2591903	0.38	2351137	110.24	60	120	
Ge Internal standard	72	3	HMI He	749726	1.21	686329	109.24	60	120	
In Internal Standard	115	3	HMI He	2849472	2.56	2596034	109.76	60	120	
Ir (IS)	193	3	HMI He	6330898	0.80	5774995	109.63	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	038CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T13:50:34-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	2000.00
Na	23	45	3	HMI He	16212	0.01
Mg	24	45	3	HMI He	204	16.97
Al	27	45	3	HMI He	70	61.16
K	39	45	3	HMI He	24416	0.02
Ca	40	45	2	HMI H2	10237	0.01
V	51	72	3	HMI He	830	0.13
Cr	52	72	3	HMI He	2006	0.16
Mn	55	72	3	HMI He	180	6.73
Fe	56	72	2	HMI H2	29695	0.02
Co	59	72	3	HMI He	37	187.24
Ni	60	72	3	HMI He	353	7.13
Cu	63	72	3	HMI He	553	0.74
Zn	66	72	3	HMI He	187	5.80
As	75	72	3	HMI He	77	19.65
Se	78	72	2	HMI H2	1	12990.38
(Se)	78	72	3	HMI He	25	211.80
Sr	88	72	3	HMI He	12	924.61
Mo	95	115	3	HMI He	38	119.55
Ag	107	115	3	HMI He	15	587.95
Cd	111	115	3	HMI He	27	226.17
Sn	120	115	3	HMI He	888	0.37
Sb	121	115	3	HMI He	67	79.86
Ba	137	115	3	HMI He	28	95.18
Tl	205	193	3	HMI He	1656	0.14
(Pb)	206	193	3	HMI He	450	1.08
(Pb)	207	193	3	HMI He	566	0.80
Pb	208	193	3	HMI He	1784	0.08
Th	232	193	3	HMI He	9326	0.10
U	238	193	3	HMI He	1606	0.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3906300	1.35
Sc (IS)	45	3	HMI He	564278	0.18
Ge Internal standard	72	2	HMI H2	2319843	0.48
Ge Internal standard	72	3	HMI He	683756	1.23
In Internal Standard	115	3	HMI He	2609293	1.64
Ir (IS)	193	3	HMI He	5781904	1.76

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	039CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:52:22-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	038CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	10524268	0.00
Mg	24	45	3	HMI He	1127552	0.00
Al	27	45	3	HMI He	107	36.56
K	39	45	3	HMI He	914177	0.00
V	51	72	3	HMI He	865	1.17
Cr	52	72	3	HMI He	2187	0.35
Mn	55	72	3	HMI He	238	9.00
Co	59	72	3	HMI He	75	58.32
Ni	60	72	3	HMI He	513	0.58
Cu	63	72	3	HMI He	566	0.72
Zn	66	72	3	HMI He	393	0.37
As	75	72	3	HMI He	52	21.63
Se	78	72	2	HMI H2	3	4296.16
(Se)	78	72	3	HMI He	13	429.74
Sr	88	72	3	HMI He	280	4.82
Mo	95	115	3	HMI He	43	15.39
Ag	107	115	3	HMI He	30	96.27
Cd	111	115	3	HMI He	33	51.95
Sn	120	115	3	HMI He	986	0.44
Sb	121	115	3	HMI He	75	54.10
Ba	137	115	3	HMI He	193	10.82
Tl	205	193	3	HMI He	1379	0.23
(Pb)	206	193	3	HMI He	481	0.82
(Pb)	207	193	3	HMI He	581	0.60
Pb	208	193	3	HMI He	1914	0.44
Th	232	193	3	HMI He	6462	0.10
U	238	193	3	HMI He	1619	0.29

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3974477	2.57	3906300	101.75	60	120	
Sc (IS)	45	3	HMI He	572943	1.24	564278	101.54	60	120	
Ge Internal standard	72	2	HMI H2	2295156	2.80	2319843	98.94	60	120	
Ge Internal standard	72	3	HMI He	658531	0.28	683756	96.31	60	120	
In Internal Standard	115	3	HMI He	2604919	1.76	2609293	99.83	60	120	
Ir (IS)	193	3	HMI He	5871218	2.38	5781904	101.54	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	040CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:54:10-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	038CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4613	0.03
Na	23	45	3	HMI He	228432	0.00
Mg	24	45	3	HMI He	110616	0.00
Al	27	45	3	HMI He	42982	0.00
K	39	45	3	HMI He	111605	0.00
V	51	72	3	HMI He	60954	0.00
Cr	52	72	3	HMI He	76201	0.00
Mn	55	72	3	HMI He	38578	0.00
Co	59	72	3	HMI He	126473	0.00
Ni	60	72	3	HMI He	36263	0.00
Cu	63	72	3	HMI He	98347	0.00
Zn	66	72	3	HMI He	15790	0.01
As	75	72	3	HMI He	11211	0.01
Se	78	72	2	HMI H2	5820	0.01
(Se)	78	72	3	HMI He	688	1.57
Sr	88	72	3	HMI He	105245	0.00
Mo	95	115	3	HMI He	48623	0.00
Ag	107	115	3	HMI He	168890	0.00
Cd	111	115	3	HMI He	23996	0.01
Sn	120	115	3	HMI He	75408	0.00
Sb	121	115	3	HMI He	74287	0.00
Ba	137	115	3	HMI He	24162	0.00
Tl	205	193	3	HMI He	390694	0.00
(Pb)	206	193	3	HMI He	128772	0.00
(Pb)	207	193	3	HMI He	113250	0.00
Pb	208	193	3	HMI He	520116	0.00
Th	232	193	3	HMI He	531664	0.00
U	238	193	3	HMI He	547505	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4007727	2.96	3906300	102.60	60	120	
Sc (IS)	45	3	HMI He	566930	1.66	564278	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2451576	1.76	2319843	105.68	60	120	
Ge Internal standard	72	3	HMI He	713945	0.68	683756	104.42	60	120	
In Internal Standard	115	3	HMI He	2623653	1.87	2609293	100.55	60	120	
Ir (IS)	193	3	HMI He	5785749	1.71	5781904	100.07	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	041_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:55:57-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	37.542	ppb	3.969	1746	40	93.9	90	110	
Na	23	3	45	13081.363	ppb	0.681	1399561	12800	102.2	90	110	
Mg	24	3	45	4584.841	ppb	1.478	260240	4800	95.5	90	110	
Al	27	3	45	758.470	ppb	5.457	16620	800	94.8	90	110	
K	39	3	45	4653.277	ppb	2.368	233131	4800	96.9	90	110	
Ca	40	2	45	4990.228	ppb	0.493	2733606	4800	104.0	90	110	
V	51	3	72	40.980	ppb	1.554	24533	40	102.5	90	110	
Cr	52	3	72	42.293	ppb	2.337	32183	40	105.7	90	110	
Mn	55	3	72	42.725	ppb	1.594	15968	40	106.8	90	110	
Fe	56	2	72	831.084	ppb	0.497	1295086	800	103.9	90	110	
Co	59	3	72	42.257	ppb	1.426	51466	40	105.6	90	110	
Ni	60	3	72	42.257	ppb	1.119	14957	40	105.6	90	110	
Cu	63	3	72	42.032	ppb	1.606	40113	40	105.1	90	110	
Zn	66	3	72	81.691	ppb	0.612	12449	80	102.1	90	110	
As	75	3	72	40.727	ppb	1.699	4440	40	101.8	90	110	
Se	78	2	72	40.977	ppb	1.702	2312	40	102.4	90	110	
Sr	88	3	72	125.294	ppb	1.473	63469	120	104.4	90	110	
Mo	95	3	115	39.035	ppb	0.544	19533	40	97.6	90	110	
Ag	107	3	115	77.277	ppb	1.945	134127	80	96.6	90	110	
Cd	111	3	115	38.871	ppb	3.018	9602	40	97.2	90	110	
Sn	120	3	115	39.918	ppb	2.355	31491	40	99.8	90	110	
Sb	121	3	115	39.619	ppb	2.279	30288	40	99.0	90	110	
Ba	137	3	115	39.943	ppb	2.484	9935	40	99.9	90	110	
Tl	205	3	193	39.484	ppb	3.629	155560	40	98.7	90	110	
(Pb)	206	3	193	40.880	ppb	1.586	53032	40	102.2	90	110	
(Pb)	207	3	193	39.502	ppb	3.285	45161	40	98.8	90	110	
Pb	208	3	193	40.392	ppb	3.246	211592	40	101.0	90	110	
Th	232	3	193	79.116	ppb	1.792	423459	80	98.9	90	110	
U	238	3	193	43.524	ppb	4.279	239648	40	108.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3986563	1.80	3906300	102.05	60	120	
Sc (IS)	45	3	HMI He	576416	0.37	564278	102.15	60	120	
Ge Internal standard	72	2	HMI H2	2375558	0.37	2319843	102.40	60	120	
Ge Internal standard	72	3	HMI He	687241	1.16	683756	100.51	60	120	
In Internal Standard	115	3	HMI He	2696458	2.30	2609293	103.34	60	120	
Ir (IS)	193	3	HMI He	5799785	2.98	5781904	100.31	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	042_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:00:22-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.110	ppb	99.5	10	0.5	
Na	23	3	7.477	ppb	46.5	16991	25	
Mg	24	3	0.418	ppb	577.4	227	25	
Al	27	3	2.036	ppb	76.2	113	15	
K	39	3	4.847	ppb	408.7	24630	50	
V	51	3	0.137	ppb	126.2	918	1	
Cr	52	3	0.002	ppb	5532.9	2029	1	
Mn	55	3	-0.049	ppb	-152.1	163	0.5	
Co	59	3	-0.002	ppb	-566.1	35	0.5	
Ni	60	3	0.165	ppb	66.6	415	1	
Cu	63	3	-0.107	ppb	-48.7	458	1	
Zn	66	3	-0.113	ppb	-121.9	172	5	
As	75	3	0.008	ppb	2328.6	78	1	
Se	78	2	0.024	ppb	82.3	3	1	
Sr	88	3	0.075	ppb	23.6	50	0.5	
Mo	95	3	0.027	ppb	212.4	52	0.5	
Ag	107	3	0.007	ppb	87.6	27	1	
Cd	111	3	0.027	ppb	166.2	33	0.5	
Sn	120	3	0.040	ppb	247.2	930	1	
Sb	121	3	-0.004	ppb	-766.9	65	0.6	
Ba	137	3	0.041	ppb	210.1	38	0.5	
Tl	205	3	-0.101	ppb	-18.3	1261	0.1	
(Pb)	206	3	-0.054	ppb	-14.0	380	1	
(Pb)	207	3	-0.031	ppb	-202.5	531	1	
Pb	208	3	-0.020	ppb	-71.8	1679	0.5	
Th	232	3	2.669	ppb	13.7	23220	1	>RL
U	238	3	0.015	ppb	136.0	1686	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3860126	2.02	3906300	98.82	60	120	
Sc (IS)	45	3	HMI He	564381	0.80	564278	100.02	60	120	
Ge Internal standard	72	2	HMI H2	2328375	2.48	2319843	100.37	60	120	
Ge Internal standard	72	3	HMI He	691008	0.98	683756	101.06	60	120	
In Internal Standard	115	3	HMI He	2644486	2.21	2609293	101.35	60	120	
Ir (IS)	193	3	HMI He	5776591	0.92	5781904	99.91	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	043_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:02:13-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	-0.073	ppb	-83.0	2	0.5	
Na	23	3	6.912	ppb	18.6	17077	25	
Mg	24	3	1.214	ppb	93.6	274	25	
Al	27	3	0.743	ppb	34.4	87	15	
K	39	3	-12.844	ppb	-256.4	24061	50	
V	51	3	0.033	ppb	282.7	865	1	
Cr	52	3	-0.055	ppb	-463.7	2001	1	
Mn	55	3	-0.088	ppb	-85.3	150	0.5	
Co	59	3	0.001	ppb	1765.4	38	0.5	
Ni	60	3	0.026	ppb	318.2	370	1	
Cu	63	3	-0.112	ppb	-46.2	456	1	
Zn	66	3	0.119	ppb	127.6	208	5	
As	75	3	-0.058	ppb	-272.4	72	1	
Se	78	2	0.012	ppb	537.7	2	1	
Sr	88	3	0.019	ppb	129.9	22	0.5	
Mo	95	3	0.023	ppb	116.3	50	0.5	
Ag	107	3	-0.001	ppb	-162.2	13	1	
Cd	111	3	0.006	ppb	206.9	28	0.5	
Sn	120	3	-0.050	ppb	-137.2	863	1	
Sb	121	3	-0.003	ppb	-1394.6	65	0.6	
Ba	137	3	0.053	ppb	124.1	42	0.5	
Tl	205	3	-0.121	ppb	-5.5	1189	0.1	
(Pb)	206	3	-0.076	ppb	-37.5	353	1	
(Pb)	207	3	-0.020	ppb	-119.1	546	1	
Pb	208	3	-0.024	ppb	-58.6	1666	0.5	
Th	232	3	0.086	ppb	189.6	9802	1	
U	238	3	0.012	ppb	126.6	1676	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3952585	1.17	3906300	101.18	60	120	
Sc (IS)	45	3	HMI He	569282	0.55	564278	100.89	60	120	
Ge Internal standard	72	2	HMI H2	2377233	2.29	2319843	102.47	60	120	
Ge Internal standard	72	3	HMI He	696104	1.53	683756	101.81	60	120	
In Internal Standard	115	3	HMI He	2645120	0.21	2609293	101.37	60	120	
Ir (IS)	193	3	HMI He	5801436	1.21	5781904	100.34	60	120	

CRI Report

Sample Table

Sample Name	cri-7691038
Data File Name	044LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:07:35-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.566	ppb	29.296	32	1	56.6	80	120	>+/-30%
Na	23	3	45	284.797	ppb	0.943	46232	300	94.9	80	120	
Mg	24	3	45	47.184	ppb	10.179	2857	50	94.4	80	120	
Al	27	3	45	47.657	ppb	6.580	1101	50	95.3	80	120	
K	39	3	45	100.258	ppb	6.588	29153	120	83.5	80	120	
Ca	40	2	45	200.940	ppb	1.652	116685	200	100.5	80	120	
V	51	3	72	4.684	ppb	2.255	3567	5	93.7	80	120	
Cr	52	3	72	1.885	ppb	21.006	3384	2	94.3	80	120	
Mn	55	3	72	0.962	ppb	6.226	540	1	96.2	80	120	
Fe	56	2	72	48.154	ppb	5.557	102347	50	96.3	80	120	
Co	59	3	72	0.931	ppb	6.565	1178	1	93.1	80	120	
Ni	60	3	72	2.065	ppb	10.757	1076	2	103.3	80	120	
Cu	63	3	72	1.888	ppb	8.935	2347	2	94.4	80	120	
Zn	66	3	72	9.322	ppb	7.559	1598	10	93.2	80	120	
As	75	3	72	4.271	ppb	7.356	538	5	85.4	80	120	
Se	78	2	72	5.384	ppb	4.191	301	5	107.7	80	120	
Sr	88	3	72	4.807	ppb	4.129	2462	5	96.1	80	120	
Mo	95	3	115	1.873	ppb	5.477	953	2	93.6	80	120	
Ag	107	3	115	1.012	ppb	7.948	1733	1	101.2	80	120	
Cd	111	3	115	0.884	ppb	9.634	240	1	88.4	80	120	
Sn	120	3	115	8.351	ppb	3.628	7152	10	83.5	80	120	
Sb	121	3	115	1.772	ppb	2.655	1389	2	88.6	80	120	
Ba	137	3	115	0.982	ppb	34.334	267	1	98.2	80	120	
Tl	205	3	193	0.738	ppb	1.661	4527	1	73.8	80	120	>+/-30%
(Pb)	206	3	193	0.816	ppb	3.871	1496	1	81.6	80	120	
(Pb)	207	3	193	0.784	ppb	6.274	1449	1	78.4	80	120	>+/-30%
Pb	208	3	193	0.853	ppb	5.095	6203	1	85.3	80	120	
Th	232	3	193	0.601	ppb	23.137	12457	1	60.1	80	120	>+/-30%
U	238	3	193	0.917	ppb	3.485	6608	1	91.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3873805	2.16	3906300	99.17	60	120	
Sc (IS)	45	3	HMI He	571007	0.59	564278	101.19	60	120	
Ge Internal standard	72	2	HMI H2	2345423	2.06	2319843	101.10	60	120	
Ge Internal standard	72	3	HMI He	691858	0.82	683756	101.18	60	120	
In Internal Standard	115	3	HMI He	2636372	0.90	2609293	101.04	60	120	
Ir (IS)	193	3	HMI He	5782158	1.55	5781904	100.00	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	045SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:09:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.075	ppb	-0.075	-77.59	2	2000	
Na	23	3	45	-4.199	ppb	-4.199	-139.75	17007	400000	
Mg	24	3	45	10.822	ppb	10.822	15.30	868	400000	
Al	27	3	45	7.143	ppb	7.143	26.96	240	400000	
K	39	3	45	-53.199	ppb	-53.199	-13.91	23814	400000	
Ca	40	2	45	26.487	ppb	26.487	1.72	26465	400000	
V	51	3	72	-0.858	ppb	-0.858	-5.12	365	2000	
Cr	52	3	72	-0.996	ppb	-0.996	-18.01	1411	5000	
Mn	55	3	72	0.095	ppb	0.095	110.61	233	10000	
Fe	56	2	72	5.704	ppb	5.704	31.89	42494	10000	
Co	59	3	72	0.010	ppb	0.010	153.19	53	2000	
Ni	60	3	72	-0.222	ppb	-0.222	-33.18	302	5000	
Cu	63	3	72	-0.207	ppb	-0.207	-5.44	390	5000	
Zn	66	3	72	-0.274	ppb	-0.274	-86.16	158	5000	
As	75	3	72	-0.546	ppb	-0.546	-8.02	20	2000	
Se	78	2	72	0.008	ppb	0.008	387.19	2	2000	
Sr	88	3	72	0.293	ppb	0.293	14.27	173	4000	
Mo	95	3	115	0.004	ppb	0.004	473.74	43	2000	
Ag	107	3	115	0.009	ppb	0.009	17.36	32	100	
Cd	111	3	115	-0.033	ppb	-0.033	-155.33	20	2000	
Sn	120	3	115	-0.860	ppb	-0.860	-7.16	270	2000	
Sb	121	3	115	-0.042	ppb	-0.042	-37.10	38	1000	
Ba	137	3	115	0.075	ppb	0.075	102.38	50	5000	
Tl	205	3	193	-0.273	ppb	-0.273	-4.62	645	2000	
(Pb)	206	3	193	-0.034	ppb	-0.034	-41.24	441	100	
(Pb)	207	3	193	-0.041	ppb	-0.041	-44.93	565	100	
Pb	208	3	193	-0.028	ppb	-0.028	-34.37	1783	5000	
Th	232	3	193	-0.888	ppb	-0.888	-2.97	5085	2000	
U	238	3	193	0.029	ppb	0.029	25.60	1918	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4236402	0.90	3906300	108.45	60	120	
Sc (IS)	45	3	HMI He	608358	0.70	564278	107.81	60	120	
Ge Internal standard	72	2	HMI H2	2583669	1.39	2319843	111.37	60	120	
Ge Internal standard	72	3	HMI He	742975	0.38	683756	108.66	60	120	
In Internal Standard	115	3	HMI He	2813030	0.71	2609293	107.81	60	120	
Ir (IS)	193	3	HMI He	6278216	0.67	5781904	108.58	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	046SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:11:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.128	ppb	0.128	45.05	12	2000	
Na	23	3	45	-9.049	ppb	-9.049	-40.04	16389	400000	
Mg	24	3	45	8.648	ppb	8.648	34.35	734	400000	
Al	27	3	45	8.953	ppb	8.953	22.79	280	400000	
K	39	3	45	-44.755	ppb	-44.755	-48.92	24095	400000	
Ca	40	2	45	25.717	ppb	25.717	4.01	25897	400000	
V	51	3	72	-0.899	ppb	-0.899	-8.78	337	2000	
Cr	52	3	72	-0.716	ppb	-0.716	-12.44	1613	5000	
Mn	55	3	72	0.096	ppb	0.096	50.56	232	10000	
Fe	56	2	72	6.255	ppb	6.255	30.86	42987	10000	
Co	59	3	72	0.010	ppb	0.010	181.01	53	2000	
Ni	60	3	72	-0.008	ppb	-0.008	-1332.56	378	5000	
Cu	63	3	72	-0.148	ppb	-0.148	-5.26	446	5000	
Zn	66	3	72	-0.348	ppb	-0.348	-31.81	145	5000	
As	75	3	72	-0.414	ppb	-0.414	-37.76	35	2000	
Se	78	2	72	0.031	ppb	0.031	63.12	3	2000	
Sr	88	3	72	0.324	ppb	0.324	20.09	188	4000	
Mo	95	3	115	0.022	ppb	0.022	111.57	52	2000	
Ag	107	3	115	0.007	ppb	0.007	21.77	28	100	
Cd	111	3	115	-0.085	ppb	-0.085	-13.69	7	2000	
Sn	120	3	115	-0.758	ppb	-0.758	-5.75	346	2000	
Sb	121	3	115	-0.022	ppb	-0.022	-118.87	53	1000	
Ba	137	3	115	0.039	ppb	0.039	152.51	40	5000	
Tl	205	3	193	-0.271	ppb	-0.271	-4.64	651	2000	
(Pb)	206	3	193	-0.087	ppb	-0.087	-67.22	365	100	
(Pb)	207	3	193	-0.039	ppb	-0.039	-172.22	565	100	
Pb	208	3	193	-0.022	ppb	-0.022	-90.77	1802	5000	
Th	232	3	193	-0.932	ppb	-0.932	-2.04	4814	2000	
U	238	3	193	0.012	ppb	0.012	147.92	1808	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4217586	1.15	3906300	107.97	60	120	
Sc (IS)	45	3	HMI He	605387	0.44	564278	107.29	60	120	
Ge Internal standard	72	2	HMI H2	2558121	1.53	2319843	110.27	60	120	
Ge Internal standard	72	3	HMI He	736145	0.14	683756	107.66	60	120	
In Internal Standard	115	3	HMI He	2766834	0.72	2609293	106.04	60	120	
Ir (IS)	193	3	HMI He	6253263	1.73	5781904	108.15	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	047CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T14:13:35-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	16232	0.01
Mg	24	45	3	HMI He	220	7.44
Al	27	45	3	HMI He	83	72.41
K	39	45	3	HMI He	24713	0.02
Ca	40	45	2	HMI H2	10638	0.03
V	51	72	3	HMI He	958	0.76
Cr	52	72	3	HMI He	2041	0.23
Mn	55	72	3	HMI He	172	10.91
Fe	56	72	2	HMI H2	29407	0.03
Co	59	72	3	HMI He	35	122.52
Ni	60	72	3	HMI He	325	5.68
Cu	63	72	3	HMI He	430	0.00
Zn	66	72	3	HMI He	198	11.54
As	75	72	3	HMI He	65	61.51
Se	78	72	2	HMI H2	3	2749.55
(Se)	78	72	3	HMI He	30	55.55
Sr	88	72	3	HMI He	23	140.40
Mo	95	115	3	HMI He	37	21.50
Ag	107	115	3	HMI He	15	444.62
Cd	111	115	3	HMI He	23	53.07
Sn	120	115	3	HMI He	881	1.18
Sb	121	115	3	HMI He	38	39.33
Ba	137	115	3	HMI He	37	21.50
Tl	205	193	3	HMI He	970	0.51
(Pb)	206	193	3	HMI He	347	4.27
(Pb)	207	193	3	HMI He	496	1.02
Pb	208	193	3	HMI He	1524	0.24
Th	232	193	3	HMI He	5338	0.04
U	238	193	3	HMI He	1693	0.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3887690	1.05
Sc (IS)	45	3	HMI He	560366	0.91
Ge Internal standard	72	2	HMI H2	2321471	1.97
Ge Internal standard	72	3	HMI He	685485	0.75
In Internal Standard	115	3	HMI He	2631879	2.69
Ir (IS)	193	3	HMI He	5771767	2.03

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	048CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T14:15:25-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	10397055	0.00
Mg	24	45	3	HMI He	1104369	0.00
Al	27	45	3	HMI He	137	22.27
K	39	45	3	HMI He	917458	0.00
V	51	72	3	HMI He	905	0.90
Cr	52	72	3	HMI He	2387	0.18
Mn	55	72	3	HMI He	248	12.04
Co	59	72	3	HMI He	93	17.55
Ni	60	72	3	HMI He	505	1.37
Cu	63	72	3	HMI He	531	2.10
Zn	66	72	3	HMI He	288	3.53
As	75	72	3	HMI He	43	85.62
Se	78	72	2	HMI H2	2	5000.00
(Se)	78	72	3	HMI He	8	1499.19
Sr	88	72	3	HMI He	258	3.12
Mo	95	115	3	HMI He	58	59.42
Ag	107	115	3	HMI He	37	130.68
Cd	111	115	3	HMI He	23	140.40
Sn	120	115	3	HMI He	956	1.11
Sb	121	115	3	HMI He	75	17.79
Ba	137	115	3	HMI He	185	2.53
Tl	205	193	3	HMI He	746	0.51
(Pb)	206	193	3	HMI He	381	3.61
(Pb)	207	193	3	HMI He	550	1.88
Pb	208	193	3	HMI He	1716	0.68
Th	232	193	3	HMI He	4812	0.03
U	238	193	3	HMI He	1711	0.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3923317	1.55	3887690	100.92	60	120	
Sc (IS)	45	3	HMI He	573668	1.64	560366	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2251543	0.98	2321471	96.99	60	120	
Ge Internal standard	72	3	HMI He	664487	0.73	685485	96.94	60	120	
In Internal Standard	115	3	HMI He	2642607	2.90	2631879	100.41	60	120	
Ir (IS)	193	3	HMI He	5930827	0.38	5771767	102.76	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	049CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T14:17:31-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4360	0.20
Na	23	45	3	HMI He	225411	0.00
Mg	24	45	3	HMI He	108864	0.00
Al	27	45	3	HMI He	43075	0.00
K	39	45	3	HMI He	113960	0.00
V	51	72	3	HMI He	60640	0.00
Cr	52	72	3	HMI He	75653	0.00
Mn	55	72	3	HMI He	38895	0.00
Co	59	72	3	HMI He	126285	0.00
Ni	60	72	3	HMI He	35389	0.00
Cu	63	72	3	HMI He	97271	0.00
Zn	66	72	3	HMI He	15246	0.01
As	75	72	3	HMI He	11109	0.02
Se	78	72	2	HMI H2	5765	0.01
(Se)	78	72	3	HMI He	586	1.92
Sr	88	72	3	HMI He	105252	0.00
Mo	95	115	3	HMI He	49103	0.00
Ag	107	115	3	HMI He	165265	0.00
Cd	111	115	3	HMI He	24136	0.01
Sn	120	115	3	HMI He	74607	0.00
Sb	121	115	3	HMI He	74527	0.00
Ba	137	115	3	HMI He	23659	0.00
Tl	205	193	3	HMI He	383650	0.00
(Pb)	206	193	3	HMI He	126139	0.00
(Pb)	207	193	3	HMI He	112363	0.00
Pb	208	193	3	HMI He	512273	0.00
Th	232	193	3	HMI He	514586	0.00
U	238	193	3	HMI He	541664	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3983857	0.59	3887690	102.47	60	120	
Sc (IS)	45	3	HMI He	566455	1.47	560366	101.09	60	120	
Ge Internal standard	72	2	HMI H2	2391072	1.28	2321471	103.00	60	120	
Ge Internal standard	72	3	HMI He	708657	1.38	685485	103.38	60	120	
In Internal Standard	115	3	HMI He	2686640	1.54	2631879	102.08	60	120	
Ir (IS)	193	3	HMI He	5820840	3.05	5771767	100.85	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	050_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:19:31-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	43.871	ppb	2.578	1913	40	109.7	90	110	
Na	23	3	45	13029.017	ppb	4.250	1380135	12800	101.8	90	110	
Mg	24	3	45	4684.011	ppb	1.329	260916	4800	97.6	90	110	
Al	27	3	45	772.380	ppb	3.501	17034	800	96.5	90	110	
K	39	3	45	4591.791	ppb	1.040	231957	4800	95.7	90	110	
Ca	40	2	45	4795.142	ppb	1.722	2682583	4800	99.9	90	110	
V	51	3	72	40.531	ppb	0.641	25023	40	101.3	90	110	
Cr	52	3	72	41.042	ppb	1.487	32113	40	102.6	90	110	
Mn	55	3	72	41.707	ppb	1.436	16233	40	104.3	90	110	
Fe	56	2	72	812.491	ppb	2.008	1300933	800	101.6	90	110	
Co	59	3	72	40.721	ppb	2.203	51152	40	101.8	90	110	
Ni	60	3	72	41.523	ppb	1.878	14807	40	103.8	90	110	
Cu	63	3	72	41.567	ppb	1.312	40461	40	103.9	90	110	
Zn	66	3	72	85.032	ppb	1.570	12920	80	106.3	90	110	
As	75	3	72	40.459	ppb	5.199	4509	40	101.1	90	110	
Se	78	2	72	40.565	ppb	0.608	2353	40	101.4	90	110	
Sr	88	3	72	119.048	ppb	1.306	62306	120	99.2	90	110	
Mo	95	3	115	39.798	ppb	3.088	19391	40	99.5	90	110	
Ag	107	3	115	81.636	ppb	1.183	133730	80	102.0	90	110	
Cd	111	3	115	39.269	ppb	2.245	9409	40	98.2	90	110	
Sn	120	3	115	42.148	ppb	1.676	31680	40	105.4	90	110	
Sb	121	3	115	41.295	ppb	0.829	30526	40	103.2	90	110	
Ba	137	3	115	41.767	ppb	2.369	9817	40	104.4	90	110	
Tl	205	3	193	38.782	ppb	0.744	151574	40	97.0	90	110	
(Pb)	206	3	193	41.019	ppb	2.339	52710	40	102.5	90	110	
(Pb)	207	3	193	39.270	ppb	1.823	45076	40	98.2	90	110	
Pb	208	3	193	40.010	ppb	1.911	208925	40	100.0	90	110	
Th	232	3	193	81.667	ppb	1.170	427428	80	102.1	90	110	
U	238	3	193	42.395	ppb	1.173	234052	40	106.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4001080	0.88	3887690	102.92	60	120	
Sc (IS)	45	3	HMI He	578216	0.76	560366	103.19	60	120	
Ge Internal standard	72	2	HMI H2	2403423	1.34	2321471	103.53	60	120	
Ge Internal standard	72	3	HMI He	704595	0.49	685485	102.79	60	120	
In Internal Standard	115	3	HMI He	2662723	0.49	2631879	101.17	60	120	
Ir (IS)	193	3	HMI He	5904260	0.87	5771767	102.30	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	051_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:21:17-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.033	ppb	582.0	5	0.5	
Na	23	3	3.979	ppb	80.7	17007	25	
Mg	24	3	0.815	ppb	79.8	270	25	
Al	27	3	-0.375	ppb	-397.4	77	15	
K	39	3	-5.445	ppb	-475.8	25021	50	
V	51	3	0.006	ppb	1957.2	986	1	
Cr	52	3	0.134	ppb	133.1	2192	1	
Mn	55	3	0.092	ppb	98.5	212	0.5	
Co	59	3	0.023	ppb	75.1	65	0.5	
Ni	60	3	0.144	ppb	106.9	383	1	
Cu	63	3	0.016	ppb	91.5	456	1	
Zn	66	3	0.044	ppb	315.8	210	5	
As	75	3	-0.078	ppb	-87.7	58	1	
Se	78	2	-0.014	ppb	-377.8	3	1	
Sr	88	3	0.047	ppb	31.6	48	0.5	
Mo	95	3	0.052	ppb	32.5	62	0.5	
Ag	107	3	0.029	ppb	22.4	62	1	
Cd	111	3	-0.042	ppb	-153.4	13	0.5	
Sn	120	3	0.168	ppb	42.6	1001	1	
Sb	121	3	0.048	ppb	110.6	73	0.6	
Ba	137	3	0.072	ppb	104.6	53	0.5	
Tl	205	3	0.007	ppb	365.3	1001	0.1	
(Pb)	206	3	-0.026	ppb	-57.0	315	1	
(Pb)	207	3	-0.022	ppb	-341.2	473	1	
Pb	208	3	-0.008	ppb	-315.7	1486	0.5	
Th	232	3	3.365	ppb	11.3	22424	1	>RL
U	238	3	-0.001	ppb	-3540.9	1696	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3981413	1.34	3887690	102.41	60	120	
Sc (IS)	45	3	HMI He	572923	0.63	560366	102.24	60	120	
Ge Internal standard	72	2	HMI H2	2359261	2.32	2321471	101.63	60	120	
Ge Internal standard	72	3	HMI He	703442	0.43	685485	102.62	60	120	
In Internal Standard	115	3	HMI He	2627129	0.81	2631879	99.82	60	120	
Ir (IS)	193	3	HMI He	5792350	2.30	5771767	100.36	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	052_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:26:07-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.000	ppb	19162.2	3	0.5	
Na	23	3	1.070	ppb	265.4	16660	25	
Mg	24	3	0.403	ppb	566.3	247	25	
Al	27	3	0.248	ppb	812.7	90	15	
K	39	3	-14.955	ppb	-154.3	24529	50	
V	51	3	-0.051	ppb	-167.6	940	1	
Cr	52	3	0.227	ppb	64.3	2229	1	
Mn	55	3	0.034	ppb	75.9	187	0.5	
Co	59	3	0.002	ppb	273.6	38	0.5	
Ni	60	3	0.137	ppb	204.8	375	1	
Cu	63	3	-0.033	ppb	-123.3	403	1	
Zn	66	3	0.087	ppb	133.4	213	5	
As	75	3	-0.116	ppb	-116.4	53	1	
Se	78	2	-0.013	ppb	-151.1	3	1	
Sr	88	3	0.012	ppb	152.7	30	0.5	
Mo	95	3	0.023	ppb	92.4	48	0.5	
Ag	107	3	0.006	ppb	53.4	25	1	
Cd	111	3	-0.015	ppb	-279.8	20	0.5	
Sn	120	3	-0.092	ppb	-63.7	826	1	
Sb	121	3	0.031	ppb	15.4	62	0.6	
Ba	137	3	-0.002	ppb	-2638.1	37	0.5	
Tl	205	3	-0.067	ppb	-18.1	716	0.1	
(Pb)	206	3	-0.027	ppb	-109.1	313	1	
(Pb)	207	3	-0.032	ppb	-87.4	461	1	
Pb	208	3	-0.016	ppb	-107.5	1446	0.5	
Th	232	3	0.928	ppb	26.5	10054	1	
U	238	3	-0.018	ppb	-86.6	1601	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3884367	0.48	3887690	99.91	60	120	
Sc (IS)	45	3	HMI He	571345	0.37	560366	101.96	60	120	
Ge Internal standard	72	2	HMI H2	2347114	1.44	2321471	101.10	60	120	
Ge Internal standard	72	3	HMI He	693628	0.89	685485	101.19	60	120	
In Internal Standard	115	3	HMI He	2667841	1.04	2631879	101.37	60	120	
Ir (IS)	193	3	HMI He	5784770	0.50	5771767	100.23	60	120	

CRI Report

Sample Table

Sample Name	cri-7691038
Data File Name	053LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:28:30-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	1.032	ppb	4.982	48	1	103.2	80	120	
Na	23	3	45	291.700	ppb	1.534	46924	300	97.2	80	120	
Mg	24	3	45	45.630	ppb	4.626	2746	50	91.3	80	120	
Al	27	3	45	45.301	ppb	13.381	1071	50	90.6	80	120	
K	39	3	45	91.661	ppb	11.631	29400	120	76.4	80	120	>+/-30%
Ca	40	2	45	201.007	ppb	1.917	118297	200	100.5	80	120	
V	51	3	72	4.887	ppb	11.222	3870	5	97.7	80	120	
Cr	52	3	72	1.889	ppb	4.031	3469	2	94.4	80	120	
Mn	55	3	72	1.082	ppb	6.894	591	1	108.2	80	120	
Fe	56	2	72	50.474	ppb	2.654	107434	50	100.9	80	120	
Co	59	3	72	0.929	ppb	6.682	1199	1	92.9	80	120	
Ni	60	3	72	2.140	ppb	5.739	1076	2	107.0	80	120	
Cu	63	3	72	1.958	ppb	7.435	2319	2	97.9	80	120	
Zn	66	3	72	9.757	ppb	6.100	1658	10	97.6	80	120	
As	75	3	72	4.976	ppb	2.137	611	5	99.5	80	120	
Se	78	2	72	4.729	ppb	9.503	273	5	94.6	80	120	
Sr	88	3	72	4.723	ppb	6.623	2487	5	94.5	80	120	
Mo	95	3	115	1.814	ppb	9.970	930	2	90.7	80	120	
Ag	107	3	115	0.855	ppb	1.951	1433	1	85.5	80	120	
Cd	111	3	115	0.853	ppb	20.772	230	1	85.3	80	120	
Sn	120	3	115	8.553	ppb	9.024	7222	10	85.5	80	120	
Sb	121	3	115	1.818	ppb	3.333	1398	2	90.9	80	120	
Ba	137	3	115	0.925	ppb	18.799	257	1	92.5	80	120	
Tl	205	3	193	0.866	ppb	7.183	4340	1	86.6	80	120	
(Pb)	206	3	193	0.931	ppb	11.281	1536	1	93.1	80	120	
(Pb)	207	3	193	0.917	ppb	12.527	1543	1	91.7	80	120	
Pb	208	3	193	0.900	ppb	4.275	6204	1	90.0	80	120	
Th	232	3	193	1.482	ppb	14.759	13074	1	148.2	80	120	>+/-30%
U	238	3	193	0.949	ppb	5.036	6910	1	94.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3850484	1.88	3887690	99.04	60	120	
Sc (IS)	45	3	HMI He	573947	0.97	560366	102.42	60	120	
Ge Internal standard	72	2	HMI H2	2360389	1.29	2321471	101.68	60	120	
Ge Internal standard	72	3	HMI He	702506	0.67	685485	102.48	60	120	
In Internal Standard	115	3	HMI He	2696475	2.84	2631879	102.45	60	120	
Ir (IS)	193	3	HMI He	5884982	1.43	5771767	101.96	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	054ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:32:20-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.002	ppb	-6451.4	3	0.5	
Na	23	3	45	94524.593	ppb	0.4	9991609	100000	
Mg	24	3	45	94132.759	ppb	1.3	5283346	100000	
Al	27	3	45	93660.568	ppb	0.7	2072628	100000	
K	39	3	45	91707.384	ppb	0.7	4183716	100000	
Ca	40	2	45	95000.943	ppb	2.6	52202626	100000	
V	51	3	72	-0.197	ppb	-98.2	886	1	
Cr	52	3	72	1.040	ppb	2.9	2921	1	>RL or LOD
Mn	55	3	72	0.241	ppb	57.6	275	0.95	
Fe	56	2	72	92692.524	ppb	1.6	145127449	100000	
Co	59	3	72	0.225	ppb	23.7	325	0.5	
Ni	60	3	72	0.423	ppb	9.0	491	1	
Cu	63	3	72	0.151	ppb	8.8	600	1	
Zn	66	3	72	0.884	ppb	68.7	343	1	
As	75	3	72	-0.060	ppb	-373.7	62	1	
Se	78	2	72	-0.002	ppb	-2411.2	3	1	
(Se)	78	3	72	-2.931	ppb	-30.1	15	1	
Sr	88	3	72	0.793	ppb	18.2	448	1	
Mo	95	3	115	1923.280	ppb	2.2	928344	2000	
Ag	107	3	115	0.028	ppb	50.9	62	1	
Cd	111	3	115	0.098	ppb	46.1	47	1	
Sn	120	3	115	-0.006	ppb	-2543.5	880	1	
Sb	121	3	115	0.127	ppb	27.6	132	1	
Ba	137	3	115	1.914	ppb	4.2	481	0.95	>RL or LOD
Tl	205	3	193	-0.094	ppb	-7.9	616	1	
(Pb)	206	3	193	0.116	ppb	16.8	493	1	
(Pb)	207	3	193	0.082	ppb	64.1	591	1	
Pb	208	3	193	0.121	ppb	9.2	2146	1	
Th	232	3	193	0.068	ppb	150.4	5702	1	
U	238	3	193	0.043	ppb	62.3	1934	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3945924	1.86	3887690	101.50	60	120	
Sc (IS)	45	3	HMI He	583054	0.40	560366	104.05	60	120	
Ge Internal standard	72	2	HMI H2	2406131	2.04	2321471	103.65	60	120	
Ge Internal standard	72	3	HMI He	719839	0.44	685485	105.01	60	120	
In Internal Standard	115	3	HMI He	2643255	1.77	2631879	100.43	60	120	
Ir (IS)	193	3	HMI He	5798317	2.43	5771767	100.46	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	055ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:34:06-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	102.117	ppb	0.480	4465	100	102.1	80	120	
Na	23	3	45	100769.299	ppb	2.086	10480122	100	100769.3	80	120	>+\-20%
Mg	24	3	45	99804.508	ppb	1.313	5512260	100	99804.5	80	120	>+\-20%
Al	27	3	45	94151.240	ppb	2.269	2050210	100	94151.2	80	120	>+\-20%
K	39	3	45	98905.142	ppb	1.913	4437926	100	98905.1	80	120	>+\-20%
Ca	40	2	45	99439.167	ppb	1.295	55029414	100	99439.2	80	120	>+\-20%
V	51	3	72	95.424	ppb	1.400	58851	100	95.4	80	120	
Cr	52	3	72	99.491	ppb	0.382	76514	100	99.5	80	120	
Mn	55	3	72	97.590	ppb	0.191	38581	100	97.6	80	120	
Fe	56	2	72	95494.333	ppb	3.418	145586867	100	95494.3	80	120	>+\-20%
Co	59	3	72	95.829	ppb	1.560	122990	100	95.8	80	120	
Ni	60	3	72	96.435	ppb	1.917	34696	100	96.4	80	120	
Cu	63	3	72	96.265	ppb	1.622	95181	100	96.3	80	120	
Zn	66	3	72	97.324	ppb	3.308	15082	100	97.3	80	120	
As	75	3	72	95.870	ppb	1.547	10827	100	95.9	80	120	
Se	78	2	72	101.635	ppb	3.645	5741	100	101.6	80	120	
(Se)	78	3	72	106.353	ppb	10.660	631	100	106.4	80	120	
Sr	88	3	72	193.635	ppb	1.102	103571	100	193.6	80	120	>+\-20%
Mo	95	3	115	2047.668	ppb	0.472	985060	100	2047.7	80	120	>+\-20%
Ag	107	3	115	99.932	ppb	0.633	161907	100	99.9	80	120	
Cd	111	3	115	96.442	ppb	1.224	22820	100	96.4	80	120	
Sn	120	3	115	101.378	ppb	2.229	74121	100	101.4	80	120	
Sb	121	3	115	99.600	ppb	2.106	72763	100	99.6	80	120	
Ba	137	3	115	103.516	ppb	3.251	24007	100	103.5	80	120	
Tl	205	3	193	97.675	ppb	0.694	372586	100	97.7	80	120	
(Pb)	206	3	193	100.420	ppb	0.495	125950	100	100.4	80	120	
(Pb)	207	3	193	97.403	ppb	1.388	108815	100	97.4	80	120	
Pb	208	3	193	98.726	ppb	1.065	502915	100	98.7	80	120	
Th	232	3	193	101.085	ppb	1.565	517103	100	101.1	80	120	
U	238	3	193	106.845	ppb	1.413	575380	100	106.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3973309	1.11	3887690	102.20	60	120	
Sc (IS)	45	3	HMI He	573772	0.73	560366	102.39	60	120	
Ge Internal standard	72	2	HMI H2	2343889	2.98	2321471	100.97	60	120	
Ge Internal standard	72	3	HMI He	720178	0.44	685485	105.06	60	120	
In Internal Standard	115	3	HMI He	2633692	0.98	2631879	100.07	60	120	
Ir (IS)	193	3	HMI He	5785314	1.06	5771767	100.23	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	056SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:35:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1626.20	3	2000	
Na	23	3	45	51.072	ppb	51.072	13.19	21785	400000	
Mg	24	3	45	18.520	ppb	18.520	16.88	1241	400000	
Al	27	3	45	16.910	ppb	16.910	9.71	450	400000	
K	39	3	45	44.536	ppb	44.536	50.60	27113	400000	
Ca	40	2	45	20.142	ppb	20.142	5.55	22140	400000	
V	51	3	72	0.067	ppb	0.067	164.65	991	2000	
Cr	52	3	72	0.251	ppb	0.251	65.75	2207	5000	
Mn	55	3	72	0.011	ppb	0.011	480.04	175	10000	
Fe	56	2	72	23.590	ppb	23.590	9.52	67216	10000	
Co	59	3	72	0.016	ppb	0.016	128.65	55	2000	
Ni	60	3	72	0.806	ppb	0.806	7.53	595	5000	
Cu	63	3	72	0.055	ppb	0.055	178.71	478	5000	
Zn	66	3	72	0.046	ppb	0.046	858.82	203	5000	
As	75	3	72	0.160	ppb	0.160	116.02	82	2000	
Se	78	2	72	0.078	ppb	0.078	73.97	8	2000	
Sr	88	3	72	0.036	ppb	0.036	119.92	42	4000	
Mo	95	3	115	4.287	ppb	4.287	18.44	2119	2000	
Ag	107	3	115	0.025	ppb	0.025	5.19	57	100	
Cd	111	3	115	-0.036	ppb	-0.036	-98.82	15	2000	
Sn	120	3	115	-0.027	ppb	-0.027	-622.60	871	2000	
Sb	121	3	115	0.071	ppb	0.071	33.44	92	1000	
Ba	137	3	115	0.013	ppb	0.013	453.25	40	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-10.12	743	2000	
(Pb)	206	3	193	-0.015	ppb	-0.015	-145.33	337	100	
(Pb)	207	3	193	0.000	ppb	0.000	-13947.95	510	100	
Pb	208	3	193	-0.005	ppb	-0.005	-189.60	1539	5000	
Th	232	3	193	2.809	ppb	2.809	10.58	20050	2000	
U	238	3	193	0.028	ppb	0.028	10.95	1894	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997248	2.23	3887690	102.82	60	120	
Sc (IS)	45	3	HMI He	570094	0.69	560366	101.74	60	120	
Ge Internal standard	72	2	HMI H2	2399134	3.10	2321471	103.35	60	120	
Ge Internal standard	72	3	HMI He	681944	1.36	685485	99.48	60	120	
In Internal Standard	115	3	HMI He	2657198	1.67	2631879	100.96	60	120	
Ir (IS)	193	3	HMI He	5927581	0.81	5771767	102.70	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-7616617
Data File Name	057_LR.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:37:39-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	2066.706	ppb	1.423	96354	2000	103.3	90	110	
Na	23	3	45	186848.823	ppb	1.774	21522621	200000	93.4	90	110	
Mg	24	3	45	188460.576	ppb	1.542	11535286	200000	94.2	90	110	
Al	27	3	45	279528.764	ppb	2.099	6746213	300000	93.2	90	110	
V	51	3	72	2009.353	ppb	2.841	1291601	2000	100.5	90	110	
Cr	52	3	72	4838.814	ppb	1.700	3834383	5000	96.8	90	110	
Mn	55	3	72	9987.391	ppb	0.914	4163867	10000	99.9	90	110	
Fe	56	2	72	194847.620	ppb	3.046	323357860	200000	97.4	90	110	
Co	59	3	72	1916.087	ppb	1.336	2604865	2000	95.8	90	110	
Ni	60	3	72	4806.176	ppb	1.444	1814525	5000	96.1	90	110	
Cu	63	3	72	4933.338	ppb	2.278	5144180	5000	98.7	90	110	
Zn	66	3	72	4918.573	ppb	0.100	796734	5000	98.4	90	110	
As	75	3	72	2001.397	ppb	0.990	238046	2000	100.1	90	110	
Se	78	2	72	2021.175	ppb	1.871	124239	2000	101.1	90	110	
(Se)	78	3	72	2300.185	ppb	0.825	13775	2000	115.0	90	110	LRS Main CR1 Failed
Sr	88	3	72	5082.538	ppb	1.132	2879656	5000	101.7	90	110	
Mo	95	3	115	1963.220	ppb	1.676	1021690	2000	98.2	90	110	
Cd	111	3	115	1908.068	ppb	0.692	487978	2000	95.4	90	110	
Sn	120	3	115	2057.089	ppb	1.771	1609011	2000	102.9	90	110	
Sb	121	3	115	1005.126	ppb	0.408	794104	1000	100.5	90	110	
Ba	137	3	115	5280.243	ppb	1.330	1323058	5000	105.6	90	110	
Tl	205	3	193	997.221	ppb	1.213	4115447	1000	99.7	90	110	
(Pb)	206	3	193	5060.418	ppb	1.517	6863910	5000	101.2	90	110	
(Pb)	207	3	193	5031.909	ppb	0.689	6069453	5000	100.6	90	110	
Pb	208	3	193	5020.632	ppb	2.187	27649840	5000	100.4	90	110	
Th	232	3	193	979.449	ppb	1.957	5383019	1000	97.9	90	110	
U	238	3	193	2030.449	ppb	1.923	11824134	2000	101.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4401817	2.27	3887690	113.22	60	120	
Sc (IS)	45	3	HMI He	635832	0.77	560366	113.47	60	120	
Ge Internal standard	72	2	HMI H2	2551092	1.79	2321471	109.89	60	120	
Ge Internal standard	72	3	HMI He	763021	0.29	685485	111.31	60	120	
In Internal Standard	115	3	HMI He	2849262	0.42	2631879	108.26	60	120	
Ir (IS)	193	3	HMI He	6274390	1.71	5771767	108.71	60	120	

Sample Report

Sample Table

Sample Name	rinse-
Data File Name	058SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:39:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.265	ppb	0.265	44.58	15	2000	
Na	23	3	45	88.244	ppb	88.244	4.27	25726	400000	
Mg	24	3	45	30.249	ppb	30.249	3.34	1892	400000	
Al	27	3	45	45.387	ppb	45.387	20.44	1071	400000	
K	39	3	45	103.505	ppb	103.505	22.14	29848	400000	
Ca	40	2	45	34.202	ppb	34.202	7.83	29340	400000	
V	51	3	72	-0.075	ppb	-0.075	-130.86	936	2000	
Cr	52	3	72	0.791	ppb	0.791	6.34	2664	5000	
Mn	55	3	72	1.407	ppb	1.407	3.71	715	10000	
Fe	56	2	72	42.553	ppb	42.553	9.61	96894	10000	
Co	59	3	72	0.265	ppb	0.265	1.93	366	2000	
Ni	60	3	72	1.245	ppb	1.245	17.35	765	5000	
Cu	63	3	72	1.100	ppb	1.100	2.13	1494	5000	
Zn	66	3	72	1.425	ppb	1.425	10.61	415	5000	
As	75	3	72	0.673	ppb	0.673	48.70	140	2000	
Se	78	2	72	0.447	ppb	0.447	30.71	29	2000	
Sr	88	3	72	0.654	ppb	0.654	10.96	365	4000	
Mo	95	3	115	10.697	ppb	10.697	19.88	5233	2000	
Ag	107	3	115	0.004	ppb	0.004	328.19	22	100	
Cd	111	3	115	0.397	ppb	0.397	20.96	118	2000	
Sn	120	3	115	13.636	ppb	13.636	8.36	10851	2000	
Sb	121	3	115	1.696	ppb	1.696	7.50	1291	1000	
Ba	137	3	115	0.681	ppb	0.681	13.48	197	5000	
Tl	205	3	193	0.401	ppb	0.401	9.30	2581	2000	
(Pb)	206	3	193	0.851	ppb	0.851	10.02	1459	100	
(Pb)	207	3	193	0.825	ppb	0.825	4.35	1463	100	
Pb	208	3	193	0.826	ppb	0.826	2.48	5916	5000	
Th	232	3	193	46.184	ppb	46.184	10.95	247312	2000	
U	238	3	193	0.879	ppb	0.879	7.18	6634	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3912426	1.08	3887690	100.64	60	120	
Sc (IS)	45	3	HMI He	572471	0.08	560366	102.16	60	120	
Ge Internal standard	72	2	HMI H2	2400198	0.56	2321471	103.39	60	120	
Ge Internal standard	72	3	HMI He	701364	1.15	685485	102.32	60	120	
In Internal Standard	115	3	HMI He	2664197	1.62	2631879	101.23	60	120	
Ir (IS)	193	3	HMI He	5979591	1.43	5771767	103.60	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	059_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:41:07-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.479	ppb	1.431	2379	50	109.0	90	110	
Na	23	3	45	47771.331	ppb	0.960	5054773	51000	93.7	90	110	
Mg	24	3	45	10300.216	ppb	1.938	577904	11000	93.6	90	110	
Al	27	3	45	939.202	ppb	3.060	20853	1000	93.9	90	110	
K	39	3	45	10180.941	ppb	2.962	486943	11000	92.6	90	110	
Ca	40	2	45	10254.331	ppb	0.623	5731991	11000	93.2	90	110	
V	51	3	72	50.201	ppb	1.620	30513	50	100.4	90	110	
Cr	52	3	72	51.391	ppb	1.039	39366	50	102.8	90	110	
Mn	55	3	72	51.080	ppb	1.887	19686	50	102.2	90	110	
Fe	56	2	72	1038.773	ppb	2.432	1599553	1000	103.9	90	110	
Co	59	3	72	50.925	ppb	1.697	63458	50	101.9	90	110	
Ni	60	3	72	51.178	ppb	0.480	18028	50	102.4	90	110	
Cu	63	3	72	50.941	ppb	2.200	49094	50	101.9	90	110	
Zn	66	3	72	51.070	ppb	2.498	7778	50	102.1	90	110	
As	75	3	72	51.243	ppb	2.066	5648	50	102.5	90	110	
Se	78	2	72	51.487	ppb	3.774	2886	50	103.0	90	110	
Sr	88	3	72	102.155	ppb	1.904	53042	100	102.2	90	110	
Mo	95	3	115	51.453	ppb	2.204	24772	50	102.9	90	110	
Ag	107	3	115	51.296	ppb	2.062	83074	50	102.6	90	110	
Cd	111	3	115	50.134	ppb	4.205	11866	50	100.3	90	110	
Sn	120	3	115	52.194	ppb	0.581	38573	50	104.4	90	110	
Sb	121	3	115	50.755	ppb	1.353	37080	50	101.5	90	110	
Ba	137	3	115	51.689	ppb	1.594	12001	50	103.4	90	110	
Tl	205	3	193	49.934	ppb	3.092	191446	50	99.9	90	110	
(Pb)	206	3	193	51.439	ppb	2.159	64865	50	102.9	90	110	
(Pb)	207	3	193	49.638	ppb	1.771	55861	50	99.3	90	110	
Pb	208	3	193	50.780	ppb	1.399	260148	50	101.6	90	110	
Th	232	3	193	60.028	ppb	3.882	310214	50	120.1	90	110	>+\-10%
U	238	3	193	50.888	ppb	2.251	275689	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4006258	0.98	3887690	103.05	60	120	
Sc (IS)	45	3	HMI He	582711	1.02	560366	103.99	60	120	
Ge Internal standard	72	2	HMI H2	2323334	1.22	2321471	100.08	60	120	
Ge Internal standard	72	3	HMI He	699010	0.80	685485	101.97	60	120	
In Internal Standard	115	3	HMI He	2632265	0.75	2631879	100.01	60	120	
Ir (IS)	193	3	HMI He	5802179	1.82	5771767	100.53	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	060_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:42:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.194	ppb	153.0	12	0.5	
Na	23	3	45	36.278	ppb	21.6	20723	25	>RL
Mg	24	3	45	5.069	ppb	30.3	514	25	
Al	27	3	45	5.895	ppb	29.9	217	15	
K	39	3	45	26.109	ppb	159.5	26896	50	
V	51	3	72	-0.041	ppb	-232.0	965	1	
Cr	52	3	72	0.541	ppb	14.3	2504	1	
Mn	55	3	72	0.213	ppb	62.2	260	0.5	
Co	59	3	72	0.040	ppb	81.2	87	0.5	
Ni	60	3	72	0.452	ppb	45.2	493	1	
Cu	63	3	72	0.249	ppb	27.7	685	1	
Zn	66	3	72	0.458	ppb	10.8	273	5	
As	75	3	72	0.024	ppb	979.9	70	1	
Se	78	2	72	0.067	ppb	119.5	7	1	
Sr	88	3	72	0.088	ppb	65.9	70	0.5	
Mo	95	3	115	0.317	ppb	14.9	193	0.5	
Ag	107	3	115	0.013	ppb	57.0	37	1	
Cd	111	3	115	0.102	ppb	49.3	48	0.5	
Sn	120	3	115	0.324	ppb	50.6	1139	1	
Sb	121	3	115	0.166	ppb	11.1	163	0.6	
Ba	137	3	115	0.101	ppb	48.8	62	0.5	
Tl	205	3	193	-0.004	ppb	-594.7	996	0.1	
(Pb)	206	3	193	0.077	ppb	23.8	461	1	
(Pb)	207	3	193	0.096	ppb	46.2	628	1	
Pb	208	3	193	0.086	ppb	12.4	2042	0.5	
Th	232	3	193	3.195	ppb	17.6	22366	1	>RL
U	238	3	193	0.060	ppb	61.0	2096	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4032600	1.65	3887690	103.73	60	120	
Sc (IS)	45	3	HMI He	583251	0.79	560366	104.08	60	120	
Ge Internal standard	72	2	HMI H2	2399572	0.75	2321471	103.36	60	120	
Ge Internal standard	72	3	HMI He	707538	1.09	685485	103.22	60	120	
In Internal Standard	115	3	HMI He	2690712	1.42	2631879	102.24	60	120	
Ir (IS)	193	3	HMI He	6013757	2.38	5771767	104.19	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	061LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:44:45-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.595	ppb	33.903	30	1	59.5	70	130	>+/-30%
Na	23	3	45	299.744	ppb	1.623	48458	300	99.9	70	130	
Mg	24	3	45	51.366	ppb	4.934	3107	50	102.7	70	130	
Al	27	3	45	44.215	ppb	12.751	1064	50	88.4	70	130	
K	39	3	45	120.199	ppb	24.134	31126	120	100.2	70	130	
Ca	40	2	45	190.911	ppb	2.690	118960	200	95.5	70	130	
V	51	3	72	4.670	ppb	8.416	3795	5	93.4	70	130	
Cr	52	3	72	2.206	ppb	2.706	3752	2	110.3	70	130	
Mn	55	3	72	0.920	ppb	7.213	536	1	92.0	70	130	
Fe	56	2	72	52.714	ppb	2.270	114292	50	105.4	70	130	
Co	59	3	72	0.911	ppb	4.571	1193	1	91.1	70	130	
Ni	60	3	72	2.301	ppb	17.406	1148	2	115.0	70	130	
Cu	63	3	72	2.073	ppb	8.753	2464	2	103.6	70	130	
Zn	66	3	72	8.931	ppb	2.454	1556	10	89.3	70	130	
As	75	3	72	4.553	ppb	3.505	573	5	91.1	70	130	
Se	78	2	72	4.542	ppb	10.350	270	5	90.8	70	130	
Sr	88	3	72	4.661	ppb	6.242	2489	5	93.2	70	130	
Mo	95	3	115	2.172	ppb	9.398	1108	2	108.6	70	130	
Ag	107	3	115	0.934	ppb	4.232	1566	1	93.4	70	130	
Cd	111	3	115	1.030	ppb	7.177	273	1	103.0	70	130	
Sn	120	3	115	9.186	ppb	2.223	7702	10	91.9	70	130	
Sb	121	3	115	2.030	ppb	3.590	1558	2	101.5	70	130	
Ba	137	3	115	0.994	ppb	12.394	273	1	99.4	70	130	
Tl	205	3	193	0.888	ppb	0.760	4520	1	88.8	70	130	
(Pb)	206	3	193	1.015	ppb	13.812	1678	1	101.5	70	130	
(Pb)	207	3	193	0.878	ppb	9.253	1531	1	87.8	70	130	
Pb	208	3	193	0.924	ppb	0.915	6464	1	92.4	70	130	
Th	232	3	193	2.525	ppb	20.300	18808	1	252.5	70	130	>+/-30%
U	238	3	193	0.947	ppb	8.887	7037	1	94.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4058091	2.47	3887690	104.38	60	120	
Sc (IS)	45	3	HMI He	582259	1.23	560366	103.91	60	120	
Ge Internal standard	72	2	HMI H2	2432916	1.01	2321471	104.80	60	120	
Ge Internal standard	72	3	HMI He	712270	0.43	685485	103.91	60	120	
In Internal Standard	115	3	HMI He	2697478	0.71	2631879	102.49	60	120	
Ir (IS)	193	3	HMI He	6009713	1.91	5771767	104.12	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	062LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:46:33-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.073	ppb	180.028	7	1	7.3	80	120	>+/-30%
Na	23	3	45	11.735	ppb	30.138	18280	300	3.9	80	120	>+/-30%
Mg	24	3	45	0.340	ppb	333.707	250	50	0.7	80	120	>+/-30%
Al	27	3	45	2.819	ppb	31.218	150	50	5.6	80	120	>+/-30%
K	39	3	45	534.617	ppb	4.325	50374	120	445.5	80	120	>+/-30%
Ca	40	2	45	1.222	ppb	74.643	11723	200	0.6	80	120	>+/-30%
V	51	3	72	-0.025	ppb	-816.473	985	5	-0.5	80	120	>+/-30%
Cr	52	3	72	0.226	ppb	66.236	2299	2	11.3	80	120	>+/-30%
Mn	55	3	72	0.066	ppb	39.026	205	1	6.6	80	120	>+/-30%
Fe	56	2	72	6.343	ppb	32.198	40938	50	12.7	80	120	>+/-30%
Co	59	3	72	0.012	ppb	162.221	52	1	1.2	80	120	>+/-30%
Ni	60	3	72	0.652	ppb	24.714	570	2	32.6	80	120	>+/-30%
Cu	63	3	72	0.085	ppb	9.000	531	2	4.2	80	120	>+/-30%
Zn	66	3	72	0.262	ppb	29.688	247	10	2.6	80	120	>+/-30%
As	75	3	72	-0.131	ppb	-42.295	53	5	-2.6	80	120	>+/-30%
Se	78	2	72	0.008	ppb	425.083	4	5	0.2	80	120	>+/-30%
Sr	88	3	72	-0.005	ppb	-688.893	22	5	-0.1	80	120	>+/-30%
Mo	95	3	115	0.094	ppb	28.001	85	2	4.7	80	120	>+/-30%
Ag	107	3	115	0.004	ppb	208.713	22	1	0.4	80	120	>+/-30%
Cd	111	3	115	0.058	ppb	38.051	38	1	5.8	80	120	>+/-30%
Sn	120	3	115	0.057	ppb	189.254	958	10	0.6	80	120	>+/-30%
Sb	121	3	115	0.088	ppb	7.837	107	2	4.4	80	120	>+/-30%
Ba	137	3	115	0.015	ppb	356.018	42	1	1.5	80	120	>+/-30%
Tl	205	3	193	-0.084	ppb	-5.339	676	1	-8.4	80	120	>+/-30%
(Pb)	206	3	193	-0.010	ppb	-11.538	347	1	-1.0	80	120	>+/-30%
(Pb)	207	3	193	-0.034	ppb	-118.625	476	1	-3.4	80	120	>+/-30%
Pb	208	3	193	-0.012	ppb	-100.747	1518	1	-1.2	80	120	>+/-30%
Th	232	3	193	1.951	ppb	6.409	15767	1	195.1	80	120	>+/-30%
U	238	3	193	0.002	ppb	541.089	1771	1	0.2	80	120	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4036226	2.54	3887690	103.82	60	120	
Sc (IS)	45	3	HMI He	588013	0.66	560366	104.93	60	120	
Ge Internal standard	72	2	HMI H2	2437644	1.49	2321471	105.00	60	120	
Ge Internal standard	72	3	HMI He	715645	0.80	685485	104.40	60	120	
In Internal Standard	115	3	HMI He	2731905	0.99	2631879	103.80	60	120	
Ir (IS)	193	3	HMI He	5990926	1.76	5771767	103.80	60	120	

Sample Report

Sample Table

Sample Name	MB 280-608551/1-A
Data File Name	063SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:48:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-153.63	2	2000	
Na	23	3	45	19.053	ppb	19.053	55.91	18948	400000	
Mg	24	3	45	1.618	ppb	1.618	83.37	320	400000	
Al	27	3	45	2.851	ppb	2.851	40.56	150	400000	
K	39	3	45	7.112	ppb	7.112	354.69	26107	400000	
Ca	40	2	45	10.881	ppb	10.881	6.09	17318	400000	
V	51	3	72	-0.020	ppb	-0.020	-480.85	991	2000	
Cr	52	3	72	0.264	ppb	0.264	45.64	2334	5000	
Mn	55	3	72	0.268	ppb	0.268	21.31	285	10000	
Fe	56	2	72	12.484	ppb	12.484	13.97	50740	10000	
Co	59	3	72	-0.001	ppb	-0.001	-584.44	35	2000	
Ni	60	3	72	0.620	ppb	0.620	39.18	560	5000	
Cu	63	3	72	0.100	ppb	0.100	36.95	548	5000	
Zn	66	3	72	2.608	ppb	2.608	9.60	605	5000	
As	75	3	72	-0.103	ppb	-0.103	-183.49	57	2000	
Se	78	2	72	0.110	ppb	0.110	81.64	10	2000	
Sr	88	3	72	0.020	ppb	0.020	124.88	35	4000	
Mo	95	3	115	0.080	ppb	0.080	16.36	78	2000	
Ag	107	3	115	0.001	ppb	0.001	313.18	17	100	
Cd	111	3	115	-0.058	ppb	-0.058	-62.72	10	2000	
Sn	120	3	115	-0.012	ppb	-0.012	-419.68	906	2000	
Sb	121	3	115	0.094	ppb	0.094	24.72	112	1000	
Ba	137	3	115	0.056	ppb	0.056	88.57	52	5000	
Tl	205	3	193	-0.091	ppb	-0.091	-22.54	655	2000	
(Pb)	206	3	193	-0.036	ppb	-0.036	-78.37	315	100	
(Pb)	207	3	193	0.028	ppb	0.028	304.41	550	100	
Pb	208	3	193	0.006	ppb	0.006	307.88	1624	5000	
Th	232	3	193	0.158	ppb	0.158	58.17	6408	2000	
U	238	3	193	-0.009	ppb	-0.009	-267.12	1716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4073816	0.51	3887690	104.79	60	120	
Sc (IS)	45	3	HMI He	584940	1.68	560366	104.39	60	120	
Ge Internal standard	72	2	HMI H2	2438599	1.95	2321471	105.05	60	120	
Ge Internal standard	72	3	HMI He	717897	0.75	685485	104.73	60	120	
In Internal Standard	115	3	HMI He	2733342	1.40	2631879	103.86	60	120	
Ir (IS)	193	3	HMI He	6029117	2.24	5771767	104.46	60	120	

Sample Report

Sample Table

Sample Name	LCS 280-608551/2-A
Data File Name	064SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:50:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.093	ppb	40.093	9.86	1768	2000	
Na	23	3	45	805.342	ppb	805.342	1.29	103142	400000	
Mg	24	3	45	742.717	ppb	742.717	2.37	42439	400000	
Al	27	3	45	772.505	ppb	772.505	0.62	17395	400000	
K	39	3	45	770.617	ppb	770.617	4.47	61405	400000	
Ca	40	2	45	829.825	ppb	829.825	2.88	479609	400000	
V	51	3	72	39.543	ppb	39.543	1.46	25105	2000	
Cr	52	3	72	40.983	ppb	40.983	2.07	32947	5000	
Mn	55	3	72	40.995	ppb	40.995	2.64	16392	10000	
Fe	56	2	72	797.537	ppb	797.537	2.48	1284300	10000	
Co	59	3	72	40.053	ppb	40.053	1.48	51685	2000	
Ni	60	3	72	41.430	ppb	41.430	2.33	15177	5000	
Cu	63	3	72	41.867	ppb	41.867	1.74	41864	5000	
Zn	66	3	72	42.768	ppb	42.768	6.58	6780	5000	
As	75	3	72	39.057	ppb	39.057	2.55	4474	2000	
Se	78	2	72	40.700	ppb	40.700	3.13	2373	2000	
Sr	88	3	72	79.630	ppb	79.630	0.73	42823	4000	
Mo	95	3	115	39.385	ppb	39.385	3.54	19561	2000	
Ag	107	3	115	40.666	ppb	40.666	3.19	67912	100	
Cd	111	3	115	39.328	ppb	39.328	5.12	9602	2000	
Sn	120	3	115	38.241	ppb	38.241	1.69	29389	2000	
Sb	121	3	115	39.568	ppb	39.568	0.60	29827	1000	
Ba	137	3	115	42.095	ppb	42.095	2.68	10086	5000	
Tl	205	3	193	39.024	ppb	39.024	0.99	156757	2000	
(Pb)	206	3	193	40.318	ppb	40.318	0.71	53262	100	
(Pb)	207	3	193	39.424	ppb	39.424	0.55	46514	100	
Pb	208	3	193	39.624	ppb	39.624	0.76	212701	5000	
Th	232	3	193	37.236	ppb	37.236	1.92	203357	2000	
U	238	3	193	39.431	ppb	39.431	0.81	223893	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4056566	3.28	3887690	104.34	60	120	
Sc (IS)	45	3	HMI He	590336	1.47	560366	105.35	60	120	
Ge Internal standard	72	2	HMI H2	2416275	1.35	2321471	104.08	60	120	
Ge Internal standard	72	3	HMI He	723821	0.92	685485	105.59	60	120	
In Internal Standard	115	3	HMI He	2715108	1.79	2631879	103.16	60	120	
Ir (IS)	193	3	HMI He	6068669	0.86	5771767	105.14	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-A
Data File Name	065SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:51:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1535.06	3	2000	
Na	23	3	45	10792.076	ppb	10792.076	2.77	1171427	400000	
Mg	24	3	45	11001.414	ppb	11001.414	1.60	626076	400000	
Al	27	3	45	3.975	ppb	3.975	50.06	177	400000	
K	39	3	45	6251.886	ppb	6251.886	2.58	313339	400000	
Ca	40	2	45	28383.611	ppb	28383.611	1.56	16278352	400000	
V	51	3	72	19.843	ppb	19.843	0.52	13366	2000	
Cr	52	3	72	1.297	ppb	1.297	12.31	3192	5000	
Mn	55	3	72	0.331	ppb	0.331	35.01	318	10000	
Fe	56	2	72	14.129	ppb	14.129	18.80	55145	10000	
Co	59	3	72	0.071	ppb	0.071	24.54	132	2000	
Ni	60	3	72	0.726	ppb	0.726	12.61	615	5000	
Cu	63	3	72	1.034	ppb	1.034	2.96	1506	5000	
Zn	66	3	72	1.010	ppb	1.010	26.39	371	5000	
As	75	3	72	5.981	ppb	5.981	5.85	758	2000	
Se	78	2	72	2.846	ppb	2.846	9.85	177	2000	
Sr	88	3	72	212.370	ppb	212.370	0.76	116467	4000	
Mo	95	3	115	3.414	ppb	3.414	1.94	1759	2000	
Ag	107	3	115	0.008	ppb	0.008	107.90	30	100	
Cd	111	3	115	-0.018	ppb	-0.018	-231.37	20	2000	
Sn	120	3	115	-0.036	ppb	-0.036	-374.46	896	2000	
Sb	121	3	115	0.357	ppb	0.357	15.13	313	1000	
Ba	137	3	115	24.546	ppb	24.546	0.59	5997	5000	
Tl	205	3	193	-0.064	ppb	-0.064	-32.48	751	2000	
(Pb)	206	3	193	0.000	ppb	0.000	-9664.91	356	100	
(Pb)	207	3	193	-0.029	ppb	-0.029	-241.58	478	100	
Pb	208	3	193	-0.014	ppb	-0.014	-178.20	1499	5000	
Th	232	3	193	2.179	ppb	2.179	4.43	16843	2000	
U	238	3	193	2.220	ppb	2.220	2.81	13999	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4116159	2.15	3887690	105.88	60	120	
Sc (IS)	45	3	HMI He	591063	1.64	560366	105.48	60	120	
Ge Internal standard	72	2	HMI H2	2521286	0.68	2321471	108.61	60	120	
Ge Internal standard	72	3	HMI He	738468	1.64	685485	107.73	60	120	
In Internal Standard	115	3	HMI He	2760353	1.66	2631879	104.88	60	120	
Ir (IS)	193	3	HMI He	5946659	0.48	5771767	103.03	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-Asd@5
Data File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:53:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.034	ppb	0.034	333.29	5	2000	
Na	23	3	45	2048.668	ppb	2048.668	0.24	236279	400000	
Mg	24	3	45	2219.061	ppb	2219.061	0.92	126494	400000	
Al	27	3	45	3.983	ppb	3.983	35.98	177	400000	
K	39	3	45	1230.570	ppb	1230.570	1.20	82625	400000	
Ca	40	2	45	5993.113	ppb	5993.113	3.68	3421695	400000	
V	51	3	72	4.629	ppb	4.629	2.86	3860	2000	
Cr	52	3	72	0.443	ppb	0.443	30.04	2506	5000	
Mn	55	3	72	1.838	ppb	1.838	8.30	915	10000	
Fe	56	2	72	10.646	ppb	10.646	13.38	48624	10000	
Co	59	3	72	0.027	ppb	0.027	73.98	72	2000	
Ni	60	3	72	0.757	ppb	0.757	8.24	618	5000	
Cu	63	3	72	0.382	ppb	0.382	18.61	838	5000	
Zn	66	3	72	3.408	ppb	3.408	3.00	738	5000	
As	75	3	72	0.916	ppb	0.916	24.89	173	2000	
Se	78	2	72	0.597	ppb	0.597	30.20	39	2000	
Sr	88	3	72	42.198	ppb	42.198	2.88	22868	4000	
Mo	95	3	115	0.799	ppb	0.799	6.55	428	2000	
Ag	107	3	115	0.012	ppb	0.012	52.52	35	100	
Cd	111	3	115	-0.036	ppb	-0.036	-111.97	15	2000	
Sn	120	3	115	-0.011	ppb	-0.011	-727.27	890	2000	
Sb	121	3	115	0.138	ppb	0.138	9.35	142	1000	
Ba	137	3	115	7.493	ppb	7.493	2.76	1803	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-11.14	565	2000	
(Pb)	206	3	193	0.332	ppb	0.332	13.39	791	100	
(Pb)	207	3	193	0.297	ppb	0.297	34.89	856	100	
Pb	208	3	193	0.346	ppb	0.346	3.35	3403	5000	
Th	232	3	193	0.496	ppb	0.496	17.96	8155	2000	
U	238	3	193	0.443	ppb	0.443	6.79	4219	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4088828	3.84	3887690	105.17	60	120	
Sc (IS)	45	3	HMI He	591067	0.94	560366	105.48	60	120	
Ge Internal standard	72	2	HMI H2	2480396	1.00	2321471	106.85	60	120	
Ge Internal standard	72	3	HMI He	729120	0.80	685485	106.37	60	120	
In Internal Standard	115	3	HMI He	2679288	1.12	2631879	101.80	60	120	
Ir (IS)	193	3	HMI He	5993846	1.73	5771767	103.85	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-B MS
Data File Name	067SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:55:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.761	ppb	39.761	7.35	1761	2000	
Na	23	3	45	11398.664	ppb	11398.664	1.01	1226065	400000	
Mg	24	3	45	11754.343	ppb	11754.343	2.63	663225	400000	
Al	27	3	45	762.564	ppb	762.564	1.64	17047	400000	
K	39	3	45	7043.927	ppb	7043.927	1.53	346861	400000	
Ca	40	2	45	29814.424	ppb	29814.424	1.26	17203188	400000	
V	51	3	72	57.459	ppb	57.459	0.96	37124	2000	
Cr	52	3	72	40.040	ppb	40.040	3.19	33225	5000	
Mn	55	3	72	39.195	ppb	39.195	1.35	16163	10000	
Fe	56	2	72	788.527	ppb	788.527	4.74	1294325	10000	
Co	59	3	72	38.100	ppb	38.100	1.98	50677	2000	
Ni	60	3	72	39.030	ppb	39.030	3.04	14757	5000	
Cu	63	3	72	39.062	ppb	39.062	1.67	40287	5000	
Zn	66	3	72	41.787	ppb	41.787	1.48	6832	5000	
As	75	3	72	43.319	ppb	43.319	0.78	5107	2000	
Se	78	2	72	43.801	ppb	43.801	5.92	2602	2000	
Sr	88	3	72	287.719	ppb	287.719	2.38	159402	4000	
Mo	95	3	115	42.927	ppb	42.927	2.46	21356	2000	
Ag	107	3	115	39.451	ppb	39.451	0.75	66005	100	
Cd	111	3	115	39.169	ppb	39.169	0.45	9584	2000	
Sn	120	3	115	39.106	ppb	39.106	1.01	30082	2000	
Sb	121	3	115	39.920	ppb	39.920	0.54	30137	1000	
Ba	137	3	115	65.932	ppb	65.932	3.06	15802	5000	
Tl	205	3	193	39.475	ppb	39.475	0.64	156884	2000	
(Pb)	206	3	193	40.260	ppb	40.260	1.25	52623	100	
(Pb)	207	3	193	39.364	ppb	39.364	0.35	45952	100	
Pb	208	3	193	39.603	ppb	39.603	0.65	210339	5000	
Th	232	3	193	37.577	ppb	37.577	1.23	203008	2000	
U	238	3	193	41.961	ppb	41.961	1.63	235611	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4140524	0.49	3887690	106.50	60	120	
Sc (IS)	45	3	HMI He	586132	1.64	560366	104.60	60	120	
Ge Internal standard	72	2	HMI H2	2464225	3.22	2321471	106.15	60	120	
Ge Internal standard	72	3	HMI He	746009	0.07	685485	108.83	60	120	
In Internal Standard	115	3	HMI He	2719235	1.03	2631879	103.32	60	120	
Ir (IS)	193	3	HMI He	6004218	0.19	5771767	104.03	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-C MSD
Data File Name	068SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:57:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.852	ppb	41.852	3.62	1869	2000	
Na	23	3	45	11137.291	ppb	11137.291	1.94	1220984	400000	
Mg	24	3	45	11633.446	ppb	11633.446	1.21	668909	400000	
Al	27	3	45	758.029	ppb	758.029	1.37	17268	400000	
K	39	3	45	6897.578	ppb	6897.578	1.70	346620	400000	
Ca	40	2	45	30099.817	ppb	30099.817	2.65	17055420	400000	
V	51	3	72	59.164	ppb	59.164	1.14	38103	2000	
Cr	52	3	72	40.770	ppb	40.770	1.67	33712	5000	
Mn	55	3	72	43.763	ppb	43.763	3.74	17978	10000	
Fe	56	2	72	765.594	ppb	765.594	3.23	1282860	10000	
Co	59	3	72	38.446	ppb	38.446	1.17	51018	2000	
Ni	60	3	72	40.054	ppb	40.054	3.78	15096	5000	
Cu	63	3	72	40.665	ppb	40.665	1.83	41822	5000	
Zn	66	3	72	41.731	ppb	41.731	3.66	6807	5000	
As	75	3	72	44.314	ppb	44.314	5.75	5208	2000	
Se	78	2	72	41.375	ppb	41.375	2.07	2508	2000	
Sr	88	3	72	286.375	ppb	286.375	0.41	158285	4000	
Mo	95	3	115	41.743	ppb	41.743	1.72	20839	2000	
Ag	107	3	115	40.725	ppb	40.725	2.29	68352	100	
Cd	111	3	115	39.816	ppb	39.816	3.80	9770	2000	
Sn	120	3	115	39.737	ppb	39.737	3.55	30647	2000	
Sb	121	3	115	39.488	ppb	39.488	1.38	29914	1000	
Ba	137	3	115	67.389	ppb	67.389	3.90	16200	5000	
Tl	205	3	193	39.113	ppb	39.113	1.94	156974	2000	
(Pb)	206	3	193	40.059	ppb	40.059	3.94	52850	100	
(Pb)	207	3	193	39.231	ppb	39.231	2.71	46233	100	
Pb	208	3	193	39.674	ppb	39.674	2.66	212711	5000	
Th	232	3	193	40.150	ppb	40.150	2.31	218603	2000	
U	238	3	193	42.066	ppb	42.066	2.06	238455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068075	2.90	3887690	104.64	60	120	
Sc (IS)	45	3	HMI He	597141	0.30	560366	106.56	60	120	
Ge Internal standard	72	2	HMI H2	2512331	2.78	2321471	108.22	60	120	
Ge Internal standard	72	3	HMI He	744230	0.88	685485	108.57	60	120	
In Internal Standard	115	3	HMI He	2728532	1.81	2631879	103.67	60	120	
Ir (IS)	193	3	HMI He	6063356	2.04	5771767	105.05	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-A pds
Data File Name	069SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:59:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	103.188	ppb	103.188	2.48	4633	2000	
Na	23	3	45	10631.149	ppb	10631.149	1.44	1159563	400000	
Mg	24	3	45	10805.902	ppb	10805.902	0.22	617752	400000	
Al	27	3	45	15.342	ppb	15.342	14.10	434	400000	
K	39	3	45	6131.504	ppb	6131.504	2.55	309196	400000	
Ca	40	2	45	29216.836	ppb	29216.836	1.21	16530248	400000	
V	51	3	72	115.923	ppb	115.923	0.02	72744	2000	
Cr	52	3	72	101.020	ppb	101.020	1.52	79258	5000	
Mn	55	3	72	97.717	ppb	97.717	1.66	39421	10000	
Fe	56	2	72	1016.350	ppb	1016.350	1.08	1661555	10000	
Co	59	3	72	97.329	ppb	97.329	1.14	127488	2000	
Ni	60	3	72	97.866	ppb	97.866	0.43	35930	5000	
Cu	63	3	72	100.753	ppb	100.753	2.27	101647	5000	
Zn	66	3	72	3.469	ppb	3.469	17.54	753	5000	
As	75	3	72	105.684	ppb	105.684	1.02	12174	2000	
Se	78	2	72	102.686	ppb	102.686	4.01	6101	2000	
Sr	88	3	72	309.849	ppb	309.849	1.49	169115	4000	
Mo	95	3	115	100.224	ppb	100.224	1.12	50313	2000	
Ag	107	3	115	26.058	ppb	26.058	2.04	44035	100	
Cd	111	3	115	96.058	ppb	96.058	4.03	23696	2000	
Sn	120	3	115	100.568	ppb	100.568	0.34	76694	2000	
Sb	121	3	115	92.995	ppb	92.995	1.17	70850	1000	
Ba	137	3	115	126.853	ppb	126.853	0.48	30675	5000	
Tl	205	3	193	99.649	ppb	99.649	1.99	387833	2000	
(Pb)	206	3	193	100.959	ppb	100.959	1.41	129204	100	
(Pb)	207	3	193	98.841	ppb	98.841	0.92	112679	100	
Pb	208	3	193	99.910	ppb	99.910	1.06	519335	5000	
Th	232	3	193	105.445	ppb	105.445	2.01	550176	2000	
U	238	3	193	2.330	ppb	2.330	0.77	14501	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4060247	1.22	3887690	104.44	60	120	
Sc (IS)	45	3	HMI He	593677	1.00	560366	105.94	60	120	
Ge Internal standard	72	2	HMI H2	2465493	2.05	2321471	106.20	60	120	
Ge Internal standard	72	3	HMI He	734974	0.78	685485	107.22	60	120	
In Internal Standard	115	3	HMI He	2746483	1.29	2631879	104.35	60	120	
Ir (IS)	193	3	HMI He	5903552	0.92	5771767	102.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	070_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:00:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.902	ppb	3.236	2289	50	109.8	90	110	
Na	23	3	45	48405.358	ppb	2.121	5130408	51000	94.9	90	110	
Mg	24	3	45	10238.992	ppb	2.428	575548	11000	93.1	90	110	
Al	27	3	45	935.202	ppb	4.328	20810	1000	93.5	90	110	
K	39	3	45	10258.099	ppb	0.835	491345	11000	93.3	90	110	
Ca	40	2	45	11630.992	ppb	5.610	6139288	11000	105.7	90	110	
V	51	3	72	52.008	ppb	1.126	31348	50	104.0	90	110	
Cr	52	3	72	52.330	ppb	3.978	39745	50	104.7	90	110	
Mn	55	3	72	52.836	ppb	2.413	20203	50	105.7	90	110	
Fe	56	2	72	1131.389	ppb	5.474	1673369	1000	113.1	90	110	>+\-10%
Co	59	3	72	51.250	ppb	2.632	63381	50	102.5	90	110	
Ni	60	3	72	51.585	ppb	4.048	18029	50	103.2	90	110	
Cu	63	3	72	51.125	ppb	2.359	48902	50	102.3	90	110	
Zn	66	3	72	54.439	ppb	1.036	8218	50	108.9	90	110	
As	75	3	72	52.316	ppb	1.556	5723	50	104.6	90	110	
Se	78	2	72	56.301	ppb	5.606	3035	50	112.6	90	110	>+\-10%
Sr	88	3	72	103.361	ppb	0.562	53282	100	103.4	90	110	
Mo	95	3	115	49.698	ppb	1.900	24266	50	99.4	90	110	
Ag	107	3	115	50.780	ppb	1.452	83375	50	101.6	90	110	
Cd	111	3	115	50.101	ppb	0.746	12024	50	100.2	90	110	
Sn	120	3	115	50.186	ppb	1.872	37636	50	100.4	90	110	
Sb	121	3	115	50.675	ppb	0.497	37539	50	101.3	90	110	
Ba	137	3	115	53.754	ppb	0.145	12653	50	107.5	90	110	
Tl	205	3	193	49.880	ppb	2.252	191663	50	99.8	90	110	
(Pb)	206	3	193	50.754	ppb	1.283	64140	50	101.5	90	110	
(Pb)	207	3	193	50.076	ppb	1.552	56464	50	100.2	90	110	
Pb	208	3	193	50.430	ppb	1.212	258899	50	100.9	90	110	
Th	232	3	193	54.357	ppb	1.079	281948	50	108.7	90	110	
U	238	3	193	50.892	ppb	2.078	276288	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3789367	3.99	3887690	97.47	60	120	
Sc (IS)	45	3	HMI He	583718	0.83	560366	104.17	60	120	
Ge Internal standard	72	2	HMI H2	2235904	1.88	2321471	96.31	60	120	
Ge Internal standard	72	3	HMI He	693956	1.77	685485	101.24	60	120	
In Internal Standard	115	3	HMI He	2668880	0.99	2631879	101.41	60	120	
Ir (IS)	193	3	HMI He	5813876	1.41	5771767	100.73	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	071_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:02:40-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.003	ppb	-4086.6	3	0.5	
Na	23	3	45	26.349	ppb	17.0	19633	25	>RL
Mg	24	3	45	1.271	ppb	113.0	300	25	
Al	27	3	45	0.326	ppb	406.7	93	15	
K	39	3	45	4.034	ppb	407.9	25840	50	
V	51	3	72	0.736	ppb	12.6	1431	1	
Cr	52	3	72	0.493	ppb	24.4	2476	1	
Mn	55	3	72	0.105	ppb	156.6	218	0.5	
Co	59	3	72	0.023	ppb	79.6	65	0.5	
Ni	60	3	72	0.466	ppb	43.2	500	1	
Cu	63	3	72	0.057	ppb	99.8	500	1	
Zn	66	3	72	0.043	ppb	931.1	212	5	
As	75	3	72	0.054	ppb	256.3	73	1	
Se	78	2	72	0.068	ppb	77.6	7	1	
Sr	88	3	72	0.046	ppb	48.2	48	0.5	
Mo	95	3	115	0.094	ppb	72.8	83	0.5	
Ag	107	3	115	0.013	ppb	51.3	37	1	
Cd	111	3	115	-0.050	ppb	-47.6	12	0.5	
Sn	120	3	115	-0.028	ppb	-55.3	881	1	
Sb	121	3	115	0.103	ppb	12.9	117	0.6	
Ba	137	3	115	0.066	ppb	75.1	53	0.5	
Tl	205	3	193	-0.091	ppb	-28.9	653	0.1	
(Pb)	206	3	193	-0.029	ppb	-75.1	325	1	
(Pb)	207	3	193	-0.044	ppb	-69.4	468	1	
Pb	208	3	193	-0.026	ppb	-31.6	1458	0.5	
Th	232	3	193	2.125	ppb	17.4	16815	1	>RL
U	238	3	193	-0.003	ppb	-694.2	1753	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3927630	1.49	3887690	101.03	60	120	
Sc (IS)	45	3	HMI He	581946	0.47	560366	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2380771	0.71	2321471	102.55	60	120	
Ge Internal standard	72	3	HMI He	709450	0.39	685485	103.50	60	120	
In Internal Standard	115	3	HMI He	2692289	1.64	2631879	102.30	60	120	
Ir (IS)	193	3	HMI He	6037224	1.15	5771767	104.60	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608988/1-A
Data File Name	072_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:04:30-06:00
Sample Type	Blank
Dilution	1
Comment	608988 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.041	ppb	-155.0859771	2	0.5
Na	23	3	45	46.687	ppb	7.492511907	22026	25
Mg	24	3	45	1.096	ppb	23.5942986	294	25
Al	27	3	45	2.510	ppb	61.89514535	143	15
K	39	3	45	-14.903	ppb	-130.8927844	25275	50
Ca	40	2	45	16.778	ppb	5.606056658	20699	200
V	51	3	72	0.569	ppb	22.58078858	1353	1
Cr	52	3	72	0.369	ppb	70.51278155	2422	1
Mn	55	3	72	0.239	ppb	54.84651189	275	0.5
Fe	56	2	72	9.694	ppb	17.63140757	46833	50
Co	59	3	72	0.019	ppb	104.5183753	62	0.5
Ni	60	3	72	1.247	ppb	7.441109716	786	1
Cu	63	3	72	0.061	ppb	195.1232072	511	1
Zn	66	3	72	0.338	ppb	114.8307696	260	5
As	75	3	72	-0.031	ppb	-295.0944246	65	1
(Se)	78	3	72	1.488	ppb	156.1533275	40	1
Sr	88	3	72	0.035	ppb	192.2389977	43	0.5
Mo	95	3	115	0.040	ppb	114.1373571	58	0.5
Ag	107	3	115	0.004	ppb	96.58909184	22	1
Cd	111	3	115	-0.071	ppb	-65.92145891	7	0.5
Sn	120	3	115	-0.176	ppb	-22.40229225	783	1
Sb	121	3	115	0.062	ppb	4.491696795	87	0.6
Ba	137	3	115	0.056	ppb	89.18887751	52	0.5
Tl	205	3	193	-0.134	ppb	-17.02348229	488	0.1
(Pb)	206	3	193	-0.044	ppb	-61.51707365	308	1
(Pb)	207	3	193	-0.030	ppb	-206.0445783	488	1
Pb	208	3	193	-0.021	ppb	-83.7024333	1496	0.5
Th	232	3	193	0.487	ppb	23.30643585	8224	1
U	238	3	193	-0.001	ppb	-2076.619115	1779	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4080491	2.12	3887690	104.96	60	120	
Sc (IS)	45	3	HMI He	588644	0.54	560366	105.05	60	120	
Ge Internal standard	72	2	HMI H2	2465571	1.01	2321471	106.21	60	120	
Ge Internal standard	72	3	HMI He	720912	0.59	685485	105.17	60	120	
In Internal Standard	115	3	HMI He	2731807	1.09	2631879	103.80	60	120	
Ir (IS)	193	3	HMI He	6092263	2.92	5771767	105.55	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608988/2-A
Data File Name	073_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:06:20-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608988 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	43.090	43.090	ppb	6.781	1946	40	107.7	80	120	
Na	23	3	45	811.400	811.400	ppb	0.945	103902	40	2028.5	80	120	>+/-20%
Mg	24	3	45	745.047	745.047	ppb	0.367	42613	40	1862.6	80	120	>+/-20%
Al	27	3	45	771.606	771.606	ppb	3.182	17392	40	1929.0	80	120	>+/-20%
K	39	3	45	757.516	757.516	ppb	2.741	60862	40	1893.8	80	120	>+/-20%
Ca	40	2	45	827.387	827.387	ppb	0.847	480307	40	2068.5	80	120	>+/-20%
V	51	3	72	40.595	40.595	ppb	1.690	25714	40	101.5	80	120	
Cr	52	3	72	40.977	40.977	ppb	1.440	32901	40	102.4	80	120	
Mn	55	3	72	42.078	42.078	ppb	0.946	16802	40	105.2	80	120	
Fe	56	2	72	819.547	819.547	ppb	0.710	1305737	40	2048.9	80	120	>+/-20%
(Fe)	56	3	72	801.511	801.511	ppb	1.218	530316	40	2003.8	80	120	>+/-20%
Co	59	3	72	40.546	40.546	ppb	0.843	52264	40	101.4	80	120	
Ni	60	3	72	41.323	41.323	ppb	1.858	15121	40	103.3	80	120	
Cu	63	3	72	41.223	41.223	ppb	2.360	41181	40	103.1	80	120	
Zn	66	3	72	42.803	42.803	ppb	2.551	6777	40	107.0	80	120	
As	75	3	72	40.197	40.197	ppb	3.021	4597	40	100.5	80	120	
Se	78	2	72	42.120	42.120	ppb	3.947	2431	40	105.3	80	120	
(Se)	78	3	72	42.976	42.976	ppb	7.483	275	40	107.4	80	120	
Sr	88	3	72	81.052	81.052	ppb	2.355	43533	40	202.6	80	120	>+/-20%
Mo	95	3	115	40.275	40.275	ppb	3.079	20262	40	100.7	80	120	
Ag	107	3	115	40.935	40.935	ppb	2.521	69248	40	102.3	80	120	
Cd	111	3	115	39.674	39.674	ppb	3.938	9814	40	99.2	80	120	
Sn	120	3	115	38.212	38.212	ppb	3.073	29742	40	95.5	80	120	
Sb	121	3	115	39.722	39.722	ppb	2.763	30323	40	99.3	80	120	
Ba	137	3	115	42.004	42.004	ppb	4.533	10199	40	105.0	80	120	
Tl	205	3	193	40.005	40.005	ppb	1.152	159664	40	100.0	80	120	
(Pb)	206	3	193	40.922	40.922	ppb	1.528	53713	40	102.3	80	120	
(Pb)	207	3	193	39.942	39.942	ppb	1.764	46820	40	99.9	80	120	
Pb	208	3	193	40.694	40.694	ppb	1.066	217024	40	101.7	80	120	
Th	232	3	193	39.081	39.081	ppb	1.977	211821	40	97.7	80	120	
U	238	3	193	40.713	40.713	ppb	1.873	229633	40	101.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071852	0.66	3887690	104.74	60	120	
Sc (IS)	45	3	HMI He	590953	0.76	560366	105.46	60	120	
Ge Internal standard	72	2	HMI H2	2391682	1.26	2321471	103.02	60	120	
Ge Internal standard	72	3	HMI He	722977	0.73	685485	105.47	60	120	
In Internal Standard	115	3	HMI He	2750626	2.73	2631879	104.51	60	120	
Ir (IS)	193	3	HMI He	6030532	0.80	5771767	104.48	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-608988/3-A
Data File Name	074SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:08:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.206	ppb	39.206	3.81	1794	2000	
Na	23	3	45	800.848	ppb	800.848	0.28	102904	400000	
Mg	24	3	45	740.941	ppb	740.941	2.38	42436	400000	
Al	27	3	45	769.090	ppb	769.090	2.07	17358	400000	
K	39	3	45	759.474	ppb	759.474	2.47	61033	400000	
Ca	40	2	45	842.949	ppb	842.949	1.25	487356	400000	
V	51	3	72	40.594	ppb	40.594	2.01	25609	2000	
Cr	52	3	72	41.488	ppb	41.488	0.55	33153	5000	
Mn	55	3	72	41.673	ppb	41.673	1.39	16575	10000	
Fe	56	2	72	808.807	ppb	808.807	1.94	1322330	10000	
Co	59	3	72	40.334	ppb	40.334	1.23	51781	2000	
Ni	60	3	72	40.551	ppb	40.551	2.41	14784	5000	
Cu	63	3	72	41.533	ppb	41.533	0.89	41321	5000	
Zn	66	3	72	43.977	ppb	43.977	2.85	6930	5000	
As	75	3	72	38.963	ppb	38.963	3.54	4440	2000	
Se	78	2	72	40.964	ppb	40.964	3.63	2425	2000	
Sr	88	3	72	80.793	ppb	80.793	1.04	43222	4000	
Mo	95	3	115	40.379	ppb	40.379	1.41	19960	2000	
Ag	107	3	115	41.365	ppb	41.365	2.42	68751	100	
Cd	111	3	115	40.373	ppb	40.373	1.35	9814	2000	
Sn	120	3	115	39.308	ppb	39.308	1.03	30035	2000	
Sb	121	3	115	40.389	ppb	40.389	0.92	30291	1000	
Ba	137	3	115	43.929	ppb	43.929	1.71	10474	5000	
Tl	205	3	193	39.483	ppb	39.483	3.59	158099	2000	
(Pb)	206	3	193	40.910	ppb	40.910	2.38	53882	100	
(Pb)	207	3	193	39.670	ppb	39.670	2.66	46664	100	
Pb	208	3	193	40.205	ppb	40.205	2.26	215173	5000	
Th	232	3	193	40.301	ppb	40.301	2.98	218988	2000	
U	238	3	193	39.939	ppb	39.939	2.56	226077	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4057130	0.57	3887690	104.36	60	120	
Sc (IS)	45	3	HMI He	591701	0.43	560366	105.59	60	120	
Ge Internal standard	72	2	HMI H2	2454144	2.35	2321471	105.71	60	120	
Ge Internal standard	72	3	HMI He	720119	1.27	685485	105.05	60	120	
In Internal Standard	115	3	HMI He	2701513	1.31	2631879	102.65	60	120	
Ir (IS)	193	3	HMI He	6053291	2.61	5771767	104.88	60	120	

Sample Report

Sample Table

Sample Name	280-175093-A-1-A
Data File Name	075SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:10:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-6191.75	3	2000	
Na	23	3	45	83.402	ppb	83.402	1.96	26003	400000	
Mg	24	3	45	1.318	ppb	1.318	30.35	307	400000	
Al	27	3	45	5.922	ppb	5.922	19.57	220	400000	
K	39	3	45	-18.125	ppb	-18.125	-90.40	25188	400000	
Ca	40	2	45	9.137	ppb	9.137	7.29	16062	400000	
V	51	3	72	0.617	ppb	0.617	7.67	1378	2000	
Cr	52	3	72	0.400	ppb	0.400	54.72	2439	5000	
Mn	55	3	72	0.229	ppb	0.229	11.34	270	10000	
Fe	56	2	72	13.122	ppb	13.122	15.71	51892	10000	
Co	59	3	72	0.017	ppb	0.017	54.09	58	2000	
Ni	60	3	72	0.514	ppb	0.514	13.76	523	5000	
Cu	63	3	72	0.063	ppb	0.063	21.69	513	5000	
Zn	66	3	72	0.594	ppb	0.594	56.99	298	5000	
As	75	3	72	-0.105	ppb	-0.105	-233.23	57	2000	
Se	78	2	72	0.053	ppb	0.053	32.30	7	2000	
Sr	88	3	72	0.067	ppb	0.067	78.82	60	4000	
Mo	95	3	115	0.050	ppb	0.050	74.96	62	2000	
Ag	107	3	115	0.015	ppb	0.015	60.83	40	100	
Cd	111	3	115	-0.022	ppb	-0.022	-58.24	18	2000	
Sn	120	3	115	0.422	ppb	0.422	29.43	1204	2000	
Sb	121	3	115	0.117	ppb	0.117	52.99	125	1000	
Ba	137	3	115	0.125	ppb	0.125	36.94	67	5000	
Tl	205	3	193	-0.123	ppb	-0.123	-18.64	530	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-67.23	298	100	
(Pb)	207	3	193	-0.038	ppb	-0.038	-43.88	478	100	
Pb	208	3	193	-0.034	ppb	-0.034	-45.78	1423	5000	
Th	232	3	193	2.011	ppb	2.011	11.59	16303	2000	
U	238	3	193	-0.017	ppb	-0.017	-124.41	1688	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4008249	1.98	3887690	103.10	60	120	
Sc (IS)	45	3	HMI He	590153	0.23	560366	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2447318	2.07	2321471	105.42	60	120	
Ge Internal standard	72	3	HMI He	718840	0.53	685485	104.87	60	120	
In Internal Standard	115	3	HMI He	2669990	1.54	2631879	101.45	60	120	
Ir (IS)	193	3	HMI He	6071933	0.56	5771767	105.20	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A
Data File Name	076SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:11:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	7738.623	ppb	7738.623	3.18	848583	400000	
Mg	24	3	45	42209.492	ppb	42209.492	2.25	2411612	400000	
Al	27	3	45	6.440	ppb	6.440	51.32	234	400000	
K	39	3	45	825.746	ppb	825.746	3.35	64288	400000	
Ca	40	2	45	120955.501	ppb	120955.501	0.38	68652573	400000	
V	51	3	72	0.033	ppb	0.033	293.85	1043	2000	
Cr	52	3	72	0.499	ppb	0.499	22.96	2557	5000	
Mn	55	3	72	46.466	ppb	46.466	2.36	18755	10000	
Fe	56	2	72	757.313	ppb	757.313	1.38	1244226	10000	
Co	59	3	72	0.049	ppb	0.049	22.87	102	2000	
Ni	60	3	72	0.912	ppb	0.912	13.95	676	5000	
Cu	63	3	72	0.505	ppb	0.505	7.41	963	5000	
Zn	66	3	72	1.812	ppb	1.812	30.80	493	5000	
As	75	3	72	1.043	ppb	1.043	34.98	188	2000	
Se	78	2	72	0.063	ppb	0.063	133.10	7	2000	
Sr	88	3	72	133.935	ppb	133.935	1.62	72777	4000	
Mo	95	3	115	0.390	ppb	0.390	21.88	232	2000	
Ag	107	3	115	0.003	ppb	0.003	198.94	20	100	
Cd	111	3	115	-0.011	ppb	-0.011	-587.72	22	2000	
Sn	120	3	115	-0.128	ppb	-0.128	-57.00	816	2000	
Sb	121	3	115	0.124	ppb	0.124	45.11	133	1000	
Ba	137	3	115	147.519	ppb	147.519	0.69	35375	5000	
Tl	205	3	193	-0.124	ppb	-0.124	-7.13	528	2000	
(Pb)	206	3	193	0.011	ppb	0.011	446.15	380	100	
(Pb)	207	3	193	0.018	ppb	0.018	101.90	543	100	
Pb	208	3	193	0.022	ppb	0.022	42.70	1723	5000	
Th	232	3	193	0.539	ppb	0.539	28.48	8487	2000	
U	238	3	193	0.156	ppb	0.156	17.87	2659	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4074929	1.54	3887690	104.82	60	120	
Sc (IS)	45	3	HMI He	593579	0.96	560366	105.93	60	120	
Ge Internal standard	72	2	HMI H2	2461830	1.14	2321471	106.05	60	120	
Ge Internal standard	72	3	HMI He	731546	0.68	685485	106.72	60	120	
In Internal Standard	115	3	HMI He	2724050	1.23	2631879	103.50	60	120	
Ir (IS)	193	3	HMI He	6074618	0.56	5771767	105.25	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-Asd@5
Data File Name	077SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:14:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.033	ppb	0.033	5.77	5	2000	
Na	23	3	45	1521.062	ppb	1521.062	1.21	176932	400000	
Mg	24	3	45	8440.542	ppb	8440.542	1.53	472673	400000	
Al	27	3	45	4.395	ppb	4.395	33.99	184	400000	
K	39	3	45	163.730	ppb	163.730	6.54	33049	400000	
Ca	40	2	45	24304.593	ppb	24304.593	2.67	13779359	400000	
V	51	3	72	0.350	ppb	0.350	46.47	1204	2000	
Cr	52	3	72	0.671	ppb	0.671	20.77	2616	5000	
Mn	55	3	72	10.960	ppb	10.960	1.54	4442	10000	
Fe	56	2	72	161.532	ppb	161.532	1.07	286821	10000	
Co	59	3	72	0.029	ppb	0.029	56.93	73	2000	
Ni	60	3	72	0.713	ppb	0.713	29.24	588	5000	
Cu	63	3	72	0.181	ppb	0.181	57.00	623	5000	
Zn	66	3	72	3.060	ppb	3.060	25.96	668	5000	
As	75	3	72	0.352	ppb	0.352	52.62	107	2000	
Se	78	2	72	0.031	ppb	0.031	169.51	5	2000	
Sr	88	3	72	27.151	ppb	27.151	1.23	14379	4000	
Mo	95	3	115	0.103	ppb	0.103	24.89	88	2000	
Ag	107	3	115	0.014	ppb	0.014	65.06	38	100	
Cd	111	3	115	-0.037	ppb	-0.037	-54.73	15	2000	
Sn	120	3	115	0.023	ppb	0.023	153.77	918	2000	
Sb	121	3	115	0.072	ppb	0.072	72.66	93	1000	
Ba	137	3	115	28.613	ppb	28.613	6.35	6807	5000	
Tl	205	3	193	-0.144	ppb	-0.144	-4.48	446	2000	
(Pb)	206	3	193	0.326	ppb	0.326	22.44	793	100	
(Pb)	207	3	193	0.325	ppb	0.325	26.09	903	100	
Pb	208	3	193	0.302	ppb	0.302	3.20	3220	5000	
Th	232	3	193	0.353	ppb	0.353	28.78	7502	2000	
U	238	3	193	0.031	ppb	0.031	25.18	1961	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4070493	4.19	3887690	104.70	60	120	
Sc (IS)	45	3	HMI He	581540	1.28	560366	103.78	60	120	
Ge Internal standard	72	2	HMI H2	2434810	1.65	2321471	104.88	60	120	
Ge Internal standard	72	3	HMI He	711984	0.35	685485	103.87	60	120	
In Internal Standard	115	3	HMI He	2690154	1.06	2631879	102.21	60	120	
Ir (IS)	193	3	HMI He	6081327	0.81	5771767	105.36	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-B MS
Data File Name	078SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:15:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.684	ppb	42.684	3.37	1916	2000	
Na	23	3	45	8578.782	ppb	8578.782	2.58	938167	400000	
Mg	24	3	45	42423.693	ppb	42423.693	1.25	2422396	400000	
Al	27	3	45	762.195	ppb	762.195	4.43	17248	400000	
K	39	3	45	1616.705	ppb	1616.705	3.46	100717	400000	
Ca	40	2	45	123116.006	ppb	123116.006	0.80	68779943	400000	
V	51	3	72	40.363	ppb	40.363	2.71	25454	2000	
Cr	52	3	72	40.998	ppb	40.998	1.22	32769	5000	
Mn	55	3	72	87.639	ppb	87.639	2.85	34644	10000	
Fe	56	2	72	1545.885	ppb	1545.885	0.82	2492756	10000	
Co	59	3	72	39.912	ppb	39.912	0.90	51209	2000	
Ni	60	3	72	40.901	ppb	40.901	3.03	14904	5000	
Cu	63	3	72	41.387	ppb	41.387	1.06	41149	5000	
Zn	66	3	72	42.659	ppb	42.659	1.06	6723	5000	
As	75	3	72	39.330	ppb	39.330	6.07	4479	2000	
Se	78	2	72	35.472	ppb	35.472	2.45	2096	2000	
Sr	88	3	72	215.447	ppb	215.447	1.86	115145	4000	
Mo	95	3	115	40.597	ppb	40.597	2.45	20200	2000	
Ag	107	3	115	41.141	ppb	41.141	1.06	68836	100	
Cd	111	3	115	39.967	ppb	39.967	5.42	9775	2000	
Sn	120	3	115	39.067	ppb	39.067	2.26	30054	2000	
Sb	121	3	115	40.121	ppb	40.121	1.08	30296	1000	
Ba	137	3	115	191.828	ppb	191.828	1.51	45910	5000	
Tl	205	3	193	39.200	ppb	39.200	2.19	157198	2000	
(Pb)	206	3	193	40.010	ppb	40.010	2.84	52773	100	
(Pb)	207	3	193	39.865	ppb	39.865	3.01	46945	100	
Pb	208	3	193	39.984	ppb	39.984	2.99	214251	5000	
Th	232	3	193	38.003	ppb	38.003	1.66	207108	2000	
U	238	3	193	40.244	ppb	40.244	1.45	228091	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4011257	1.93	3887690	103.18	60	120	
Sc (IS)	45	3	HMI He	593154	0.59	560366	105.85	60	120	
Ge Internal standard	72	2	HMI H2	2447350	1.38	2321471	105.42	60	120	
Ge Internal standard	72	3	HMI He	719660	0.64	685485	104.99	60	120	
In Internal Standard	115	3	HMI He	2719608	1.30	2631879	103.33	60	120	
Ir (IS)	193	3	HMI He	6059439	1.44	5771767	104.98	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-C MSD
Data File Name	079SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:17:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.736	ppb	42.736	3.00	1933	2000	
Na	23	3	45	8446.635	ppb	8446.635	3.02	905938	400000	
Mg	24	3	45	42438.924	ppb	42438.924	0.36	2376291	400000	
Al	27	3	45	790.574	ppb	790.574	4.37	17535	400000	
K	39	3	45	1622.604	ppb	1622.604	3.21	99026	400000	
Ca	40	2	45	118450.603	ppb	118450.603	1.39	68138137	400000	
V	51	3	72	39.848	ppb	39.848	0.92	25329	2000	
Cr	52	3	72	41.086	ppb	41.086	2.08	33074	5000	
Mn	55	3	72	87.349	ppb	87.349	0.63	34779	10000	
Fe	56	2	72	1525.394	ppb	1525.394	0.61	2486346	10000	
Co	59	3	72	40.190	ppb	40.190	1.57	51944	2000	
Ni	60	3	72	41.005	ppb	41.005	1.91	15049	5000	
Cu	63	3	72	40.953	ppb	40.953	0.79	41022	5000	
Zn	66	3	72	43.994	ppb	43.994	1.99	6978	5000	
As	75	3	72	39.935	ppb	39.935	0.58	4580	2000	
Se	78	2	72	37.422	ppb	37.422	2.37	2234	2000	
Sr	88	3	72	213.172	ppb	213.172	0.90	114772	4000	
Mo	95	3	115	41.088	ppb	41.088	4.89	20140	2000	
Ag	107	3	115	41.800	ppb	41.800	0.89	68918	100	
Cd	111	3	115	40.742	ppb	40.742	4.55	9819	2000	
Sn	120	3	115	40.123	ppb	40.123	2.27	30393	2000	
Sb	121	3	115	41.201	ppb	41.201	1.19	30650	1000	
Ba	137	3	115	188.912	ppb	188.912	1.94	44548	5000	
Tl	205	3	193	40.244	ppb	40.244	2.53	162147	2000	
(Pb)	206	3	193	40.540	ppb	40.540	1.64	53733	100	
(Pb)	207	3	193	39.607	ppb	39.607	2.79	46875	100	
Pb	208	3	193	40.340	ppb	40.340	2.24	217218	5000	
Th	232	3	193	39.889	ppb	39.889	3.46	218129	2000	
U	238	3	193	40.558	ppb	40.558	3.23	230933	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4130044	0.73	3887690	106.23	60	120	
Sc (IS)	45	3	HMI He	581644	0.72	560366	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2473524	2.46	2321471	106.55	60	120	
Ge Internal standard	72	3	HMI He	724932	0.23	685485	105.75	60	120	
In Internal Standard	115	3	HMI He	2680050	2.27	2631879	101.83	60	120	
Ir (IS)	193	3	HMI He	6090630	2.76	5771767	105.52	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A pds
Data File Name	080SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:20:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	103.321	ppb	103.321	5.59	4565	2000	
Na	23	3	45	12506.495	ppb	12506.495	0.93	1350169	400000	
Mg	24	3	45	42805.231	ppb	42805.231	0.73	2426946	400000	
Al	27	3	45	1981.447	ppb	1981.447	0.10	44377	400000	
K	39	3	45	2809.713	ppb	2809.713	0.56	154649	400000	
Ca	40	2	45	120054.245	ppb	120054.245	1.69	67167121	400000	
V	51	3	72	98.724	ppb	98.724	2.33	60278	2000	
Cr	52	3	72	99.956	ppb	99.956	1.37	76139	5000	
Mn	55	3	72	145.888	ppb	145.888	0.58	57048	10000	
Fe	56	2	72	1733.613	ppb	1733.613	2.40	2733317	10000	
Co	59	3	72	97.208	ppb	97.208	1.25	123594	2000	
Ni	60	3	72	98.644	ppb	98.644	1.49	35152	5000	
Cu	63	3	72	101.063	ppb	101.063	1.10	98969	5000	
Zn	66	3	72	214.043	ppb	214.043	0.80	32616	5000	
As	75	3	72	102.174	ppb	102.174	2.59	11426	2000	
Se	78	2	72	102.654	ppb	102.654	3.35	5933	2000	
Sr	88	3	72	231.646	ppb	231.646	1.30	122735	4000	
Mo	95	3	115	101.343	ppb	101.343	1.53	48887	2000	
Ag	107	3	115	27.320	ppb	27.320	2.29	44363	100	
Cd	111	3	115	101.041	ppb	101.041	0.35	23958	2000	
Sn	120	3	115	100.386	ppb	100.386	1.97	73560	2000	
Sb	121	3	115	98.901	ppb	98.901	1.49	72405	1000	
Ba	137	3	115	253.395	ppb	253.395	1.13	58845	5000	
Tl	205	3	193	96.952	ppb	96.952	3.18	387858	2000	
(Pb)	206	3	193	98.210	ppb	98.210	1.80	129221	100	
(Pb)	207	3	193	96.111	ppb	96.111	2.72	112631	100	
Pb	208	3	193	96.854	ppb	96.854	2.76	517526	5000	
Th	232	3	193	106.875	ppb	106.875	5.31	572861	2000	
U	238	3	193	203.028	ppb	203.028	1.33	1145547	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4017822	2.72	3887690	103.35	60	120	
Sc (IS)	45	3	HMI He	588953	0.17	560366	105.10	60	120	
Ge Internal standard	72	2	HMI H2	2397318	3.28	2321471	103.27	60	120	
Ge Internal standard	72	3	HMI He	713465	0.96	685485	104.08	60	120	
In Internal Standard	115	3	HMI He	2639293	1.21	2631879	100.28	60	120	
Ir (IS)	193	3	HMI He	6070628	2.78	5771767	105.18	60	120	

Sample Report

Sample Table

Sample Name	280-175031-E-1-A
Data File Name	081SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:21:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.034	ppb	0.034	0.85	5	2000	
Na	23	3	45	87875.630	ppb	87875.630	1.28	9268025	400000	
Mg	24	3	45	70920.104	ppb	70920.104	1.55	3971162	400000	
Al	27	3	45	5.767	ppb	5.767	23.04	214	400000	
K	39	3	45	4579.884	ppb	4579.884	1.20	232809	400000	
Ca	40	2	45	165454.527	ppb	165454.527	2.27	91154689	400000	
V	51	3	72	0.907	ppb	0.907	7.22	1576	2000	
Cr	52	3	72	0.465	ppb	0.465	25.33	2522	5000	
Mn	55	3	72	176.350	ppb	176.350	1.33	70429	10000	
Fe	56	2	72	15.591	ppb	15.591	14.25	55463	10000	
Co	59	3	72	0.212	ppb	0.212	17.39	313	2000	
Ni	60	3	72	2.858	ppb	2.858	2.85	1376	5000	
Cu	63	3	72	9.500	ppb	9.500	0.60	9922	5000	
Zn	66	3	72	19.111	ppb	19.111	7.02	3167	5000	
As	75	3	72	0.226	ppb	0.226	108.33	95	2000	
Se	78	2	72	0.590	ppb	0.590	22.64	38	2000	
Sr	88	3	72	728.579	ppb	728.579	0.83	394462	4000	
Mo	95	3	115	0.267	ppb	0.267	32.82	165	2000	
Ag	107	3	115	0.210	ppb	0.210	8.49	356	100	
Cd	111	3	115	0.014	ppb	0.014	227.68	27	2000	
Sn	120	3	115	1.974	ppb	1.974	10.32	2312	2000	
Sb	121	3	115	0.155	ppb	0.155	34.99	152	1000	
Ba	137	3	115	291.057	ppb	291.057	1.13	67567	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-13.23	765	2000	
(Pb)	206	3	193	1.170	ppb	1.170	3.93	1884	100	
(Pb)	207	3	193	1.123	ppb	1.123	8.91	1818	100	
Pb	208	3	193	1.159	ppb	1.159	5.87	7715	5000	
Th	232	3	193	3.343	ppb	3.343	9.66	23180	2000	
U	238	3	193	4.275	ppb	4.275	1.25	25652	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3955469	0.93	3887690	101.74	60	120	
Sc (IS)	45	3	HMI He	581681	0.22	560366	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2430677	1.97	2321471	104.70	60	120	
Ge Internal standard	72	3	HMI He	729103	0.84	685485	106.36	60	120	
In Internal Standard	115	3	HMI He	2638493	1.42	2631879	100.25	60	120	
Ir (IS)	193	3	HMI He	6019252	0.15	5771767	104.29	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	082_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:23:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.271	ppb	4.377	2209	50	98.5	90	110	
Na	23	3	45	48132.845	ppb	1.176	5134508	51000	94.4	90	110	
Mg	24	3	45	10416.280	ppb	1.446	589215	11000	94.7	90	110	
Al	27	3	45	946.518	ppb	4.165	21184	1000	94.7	90	110	
K	39	3	45	10101.218	ppb	2.282	487285	11000	91.8	90	110	
Ca	40	2	45	10502.896	ppb	0.675	5847917	11000	95.5	90	110	
V	51	3	72	51.196	ppb	2.207	31011	50	102.4	90	110	
Cr	52	3	72	51.211	ppb	1.313	39122	50	102.4	90	110	
Mn	55	3	72	51.663	ppb	1.137	19848	50	103.3	90	110	
Fe	56	2	72	1016.356	ppb	5.095	1589974	1000	101.6	90	110	
Co	59	3	72	50.831	ppb	0.922	63153	50	101.7	90	110	
Ni	60	3	72	50.586	ppb	1.072	17771	50	101.2	90	110	
Cu	63	3	72	50.363	ppb	0.388	48400	50	100.7	90	110	
Zn	66	3	72	51.360	ppb	3.708	7798	50	102.7	90	110	
As	75	3	72	51.108	ppb	2.928	5617	50	102.2	90	110	
Se	78	2	72	50.608	ppb	1.314	2881	50	101.2	90	110	
Sr	88	3	72	100.838	ppb	1.358	52209	100	100.8	90	110	
Mo	95	3	115	49.766	ppb	0.669	24351	50	99.5	90	110	
Ag	107	3	115	50.272	ppb	3.552	82707	50	100.5	90	110	
Cd	111	3	115	49.157	ppb	0.977	11828	50	98.3	90	110	
Sn	120	3	115	49.549	ppb	0.989	37255	50	99.1	90	110	
Sb	121	3	115	49.617	ppb	3.306	36826	50	99.2	90	110	
Ba	137	3	115	53.283	ppb	3.458	12566	50	106.6	90	110	
Tl	205	3	193	47.760	ppb	1.250	191269	50	95.5	90	110	
(Pb)	206	3	193	48.473	ppb	1.402	63837	50	96.9	90	110	
(Pb)	207	3	193	47.478	ppb	2.938	55811	50	95.0	90	110	
Pb	208	3	193	47.924	ppb	0.405	256427	50	95.8	90	110	
Th	232	3	193	49.713	ppb	0.830	269116	50	99.4	90	110	
U	238	3	193	48.335	ppb	2.374	273483	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3990518	0.60	3887690	102.64	60	120	
Sc (IS)	45	3	HMI He	587506	1.47	560366	104.84	60	120	
Ge Internal standard	72	2	HMI H2	2359700	1.36	2321471	101.65	60	120	
Ge Internal standard	72	3	HMI He	696960	0.43	685485	101.67	60	120	
In Internal Standard	115	3	HMI He	2675089	1.94	2631879	101.64	60	120	
Ir (IS)	193	3	HMI He	6056991	0.78	5771767	104.94	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	083_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:28:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.041	ppb	-157.4	2	0.5	
Na	23	3	45	14.622	ppb	17.6	18444	25	
Mg	24	3	45	0.194	ppb	407.1	240	25	
Al	27	3	45	-1.048	ppb	-172.9	63	15	
K	39	3	45	1.391	ppb	2091.3	25790	50	
V	51	3	72	0.601	ppb	45.4	1363	1	
Cr	52	3	72	0.306	ppb	36.5	2356	1	
Mn	55	3	72	0.066	ppb	190.5	205	0.5	
Co	59	3	72	0.000	ppb	38142.3	37	0.5	
Ni	60	3	72	0.408	ppb	11.4	483	1	
Cu	63	3	72	0.022	ppb	53.7	470	1	
Zn	66	3	72	-0.076	ppb	-239.8	195	5	
As	75	3	72	0.018	ppb	1745.3	70	1	
Se	78	2	72	0.008	ppb	409.7	4	1	
Sr	88	3	72	0.004	ppb	239.9	27	0.5	
Mo	95	3	115	0.058	ppb	26.5	67	0.5	
Ag	107	3	115	-0.003	ppb	-87.8	10	1	
Cd	111	3	115	0.003	ppb	579.1	25	0.5	
Sn	120	3	115	0.071	ppb	54.5	966	1	
Sb	121	3	115	0.060	ppb	45.6	85	0.6	
Ba	137	3	115	0.078	ppb	113.9	57	0.5	
Tl	205	3	193	-0.123	ppb	-3.5	525	0.1	
(Pb)	206	3	193	-0.065	ppb	-32.7	277	1	
(Pb)	207	3	193	-0.052	ppb	-51.5	456	1	
Pb	208	3	193	-0.037	ppb	-32.3	1391	0.5	
Th	232	3	193	2.134	ppb	11.8	16765	1	>RL
U	238	3	193	-0.003	ppb	-698.8	1744	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4010735	1.58	3887690	103.16	60	120	
Sc (IS)	45	3	HMI He	583392	0.98	560366	104.11	60	120	
Ge Internal standard	72	2	HMI H2	2428000	1.28	2321471	104.59	60	120	
Ge Internal standard	72	3	HMI He	715216	1.24	685485	104.34	60	120	
In Internal Standard	115	3	HMI He	2726729	0.79	2631879	103.60	60	120	
Ir (IS)	193	3	HMI He	6001879	1.46	5771767	103.99	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608652/1-A
Data File Name	084_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:30:09-06:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.041	ppb	-154.1565254	2	0.5
Na	23	3	45	98.834	ppb	6.447903046	27698	25
Mg	24	3	45	19.546	ppb	1.300379086	1345	25
Al	27	3	45	7.244	ppb	21.02101515	250	15
K	39	3	45	13.935	ppb	158.8611174	26706	50
Ca	40	2	45	120.589	ppb	1.184974186	80286	200
V	51	3	72	0.361	ppb	25.74720255	1226	1
Cr	52	3	72	1.790	ppb	9.147913719	3485	1
Mn	55	3	72	0.471	ppb	58.2378923	366	0.5
Fe	56	2	72	23.146	ppb	11.78747805	68122	50
Co	59	3	72	0.027	ppb	54.27537698	72	0.5
Ni	60	3	72	1.594	ppb	3.166002109	910	1
Cu	63	3	72	1.867	ppb	3.464822222	2291	1
Zn	66	3	72	2.558	ppb	6.958246608	600	5
As	75	3	72	-0.224	ppb	-29.94015954	43	1
(Se)	78	3	72	-1.457	ppb	-35.12611855	23	1
Sr	88	3	72	0.602	ppb	21.84269628	347	0.5
Mo	95	3	115	0.275	ppb	37.36694057	175	0.5
Ag	107	3	115	0.002	ppb	288.8867943	18	1
Cd	111	3	115	-0.051	ppb	-23.61649586	12	0.5
Sn	120	3	115	11.713	ppb	3.425963108	9709	1
Sb	121	3	115	0.013	ppb	84.71639555	50	0.6
Ba	137	3	115	0.429	ppb	12.62987632	142	0.5
Tl	205	3	193	-0.151	ppb	-11.4741905	421	0.1
(Pb)	206	3	193	0.322	ppb	10.57615086	795	1
(Pb)	207	3	193	0.367	ppb	15.56702065	958	1
Pb	208	3	193	0.346	ppb	5.183500973	3480	0.5
Th	232	3	193	0.674	ppb	24.14334344	9281	1
U	238	3	193	0.000	ppb	-114.2060878	1794	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4111146	0.80	3887690	105.75	60	120	
Sc (IS)	45	3	HMI He	591166	0.30	560366	105.50	60	120	
Ge Internal standard	72	2	HMI H2	2456523	1.05	2321471	105.82	60	120	
Ge Internal standard	72	3	HMI He	720830	0.46	685485	105.16	60	120	
In Internal Standard	115	3	HMI He	2737248	2.05	2631879	104.00	60	120	
Ir (IS)	193	3	HMI He	6123509	2.26	5771767	106.09	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-10-C MDLV
Data File Name	085SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:32:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.510	ppb	0.510	50.99	27	2000	
Na	23	3	45	427.007	ppb	427.007	0.53	62440	400000	
Mg	24	3	45	115.629	ppb	115.629	5.11	6772	400000	
Al	27	3	45	102.208	ppb	102.208	8.32	2366	400000	
K	39	3	45	195.500	ppb	195.500	10.44	34842	400000	
Ca	40	2	45	381.008	ppb	381.008	2.33	228917	400000	
V	51	3	72	2.699	ppb	2.699	10.13	2632	2000	
Cr	52	3	72	5.237	ppb	5.237	4.28	6035	5000	
Mn	55	3	72	3.554	ppb	3.554	6.06	1573	10000	
Fe	56	2	72	157.966	ppb	157.966	2.82	284498	10000	
Co	59	3	72	0.252	ppb	0.252	12.08	358	2000	
Ni	60	3	72	15.358	ppb	15.358	6.62	5790	5000	
Cu	63	3	72	7.289	ppb	7.289	3.21	7595	5000	
Zn	66	3	72	17.457	ppb	17.457	7.43	2866	5000	
As	75	3	72	1.686	ppb	1.686	15.64	257	2000	
Se	78	2	72	1.243	ppb	1.243	8.76	77	2000	
Sr	88	3	72	2.900	ppb	2.900	10.82	1569	4000	
Mo	95	3	115	1.992	ppb	1.992	16.49	1020	2000	
Ag	107	3	115	0.181	ppb	0.181	15.04	317	100	
Cd	111	3	115	0.472	ppb	0.472	9.61	138	2000	
Sn	120	3	115	11.349	ppb	11.349	2.44	9315	2000	
Sb	121	3	115	1.183	ppb	1.183	11.73	925	1000	
Ba	137	3	115	2.431	ppb	2.431	11.13	615	5000	
Tl	205	3	193	0.390	ppb	0.390	7.54	2599	2000	
(Pb)	206	3	193	1.408	ppb	1.408	2.35	2229	100	
(Pb)	207	3	193	1.491	ppb	1.491	2.63	2279	100	
Pb	208	3	193	1.473	ppb	1.473	4.15	9527	5000	
Th	232	3	193	1.103	ppb	1.103	4.74	11571	2000	
U	238	3	193	0.468	ppb	0.468	7.05	4457	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4103826	1.99	3887690	105.56	60	120	
Sc (IS)	45	3	HMI He	587658	0.64	560366	104.87	60	120	
Ge Internal standard	72	2	HMI H2	2464695	1.98	2321471	106.17	60	120	
Ge Internal standard	72	3	HMI He	717394	0.37	685485	104.66	60	120	
In Internal Standard	115	3	HMI He	2700866	1.07	2631879	102.62	60	120	
Ir (IS)	193	3	HMI He	6119139	2.29	5771767	106.02	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-11-C MDLV
Data File Name	086SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:34:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.730	ppb	0.730	29.04	35	2000	
Na	23	3	45	434.341	ppb	434.341	3.27	63488	400000	
Mg	24	3	45	115.993	ppb	115.993	11.48	6819	400000	
Al	27	3	45	174.421	ppb	174.421	3.13	3995	400000	
K	39	3	45	223.893	ppb	223.893	7.93	36293	400000	
Ca	40	2	45	942.159	ppb	942.159	9.83	504859	400000	
V	51	3	72	2.838	ppb	2.838	9.40	2719	2000	
Cr	52	3	72	5.537	ppb	5.537	2.45	6268	5000	
Mn	55	3	72	7.026	ppb	7.026	4.14	2937	10000	
Fe	56	2	72	266.871	ppb	266.871	7.09	429241	10000	
Co	59	3	72	0.252	ppb	0.252	16.50	360	2000	
Ni	60	3	72	6.075	ppb	6.075	3.14	2499	5000	
Cu	63	3	72	7.295	ppb	7.295	2.02	7612	5000	
Zn	66	3	72	21.602	ppb	21.602	7.33	3500	5000	
As	75	3	72	1.787	ppb	1.787	5.00	268	2000	
Se	78	2	72	1.091	ppb	1.091	8.89	64	2000	
Sr	88	3	72	4.254	ppb	4.254	1.54	2294	4000	
Mo	95	3	115	1.805	ppb	1.805	8.55	946	2000	
Ag	107	3	115	0.184	ppb	0.184	28.20	328	100	
Cd	111	3	115	0.556	ppb	0.556	23.11	162	2000	
Sn	120	3	115	10.371	ppb	10.371	3.84	8752	2000	
Sb	121	3	115	1.159	ppb	1.159	0.35	925	1000	
Ba	137	3	115	2.456	ppb	2.456	13.41	633	5000	
Tl	205	3	193	0.388	ppb	0.388	11.27	2534	2000	
(Pb)	206	3	193	1.815	ppb	1.815	12.54	2707	100	
(Pb)	207	3	193	1.686	ppb	1.686	4.17	2456	100	
Pb	208	3	193	1.768	ppb	1.768	5.94	10876	5000	
Th	232	3	193	0.957	ppb	0.957	5.23	10558	2000	
U	238	3	193	0.465	ppb	0.465	5.29	4340	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3783475	6.03	3887690	97.32	60	120	
Sc (IS)	45	3	HMI He	590168	0.61	560366	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2307257	3.55	2321471	99.39	60	120	
Ge Internal standard	72	3	HMI He	718490	1.35	685485	104.81	60	120	
In Internal Standard	115	3	HMI He	2752644	1.11	2631879	104.59	60	120	
Ir (IS)	193	3	HMI He	5990055	1.59	5771767	103.78	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-12-C LOQV
Data File Name	087SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:36:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.031	ppb	1.031	41.90	50	2000	
Na	23	3	45	490.298	ppb	490.298	2.63	69620	400000	
Mg	24	3	45	504.059	ppb	504.059	1.85	28935	400000	
Al	27	3	45	109.217	ppb	109.217	2.84	2539	400000	
K	39	3	45	257.919	ppb	257.919	8.74	37943	400000	
Ca	40	2	45	636.159	ppb	636.159	2.68	368484	400000	
V	51	3	72	4.804	ppb	4.804	6.63	3969	2000	
Cr	52	3	72	7.585	ppb	7.585	4.01	7915	5000	
Mn	55	3	72	5.568	ppb	5.568	1.30	2402	10000	
Fe	56	2	72	173.924	ppb	173.924	3.20	304164	10000	
Co	59	3	72	1.002	ppb	1.002	5.29	1339	2000	
Ni	60	3	72	6.974	ppb	6.974	1.48	2862	5000	
Cu	63	3	72	8.923	ppb	8.923	1.82	9352	5000	
Zn	66	3	72	17.340	ppb	17.340	5.81	2896	5000	
As	75	3	72	5.309	ppb	5.309	12.71	673	2000	
Se	78	2	72	4.623	ppb	4.623	7.19	273	2000	
Sr	88	3	72	3.863	ppb	3.863	1.90	2117	4000	
Mo	95	3	115	2.153	ppb	2.153	11.23	1123	2000	
Ag	107	3	115	0.977	ppb	0.977	6.25	1674	100	
Cd	111	3	115	0.701	ppb	0.701	19.93	198	2000	
Sn	120	3	115	9.386	ppb	9.386	2.68	8028	2000	
Sb	121	3	115	1.952	ppb	1.952	10.94	1533	1000	
Ba	137	3	115	4.428	ppb	4.428	2.14	1113	5000	
Tl	205	3	193	0.758	ppb	0.758	1.50	4087	2000	
(Pb)	206	3	193	3.797	ppb	3.797	2.06	5400	100	
(Pb)	207	3	193	3.985	ppb	3.985	3.26	5223	100	
Pb	208	3	193	3.893	ppb	3.893	1.80	22568	5000	
Th	232	3	193	1.729	ppb	1.729	2.70	14945	2000	
U	238	3	193	0.955	ppb	0.955	0.97	7234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4036817	3.15	3887690	103.84	60	120	
Sc (IS)	45	3	HMI He	591546	1.10	560366	105.56	60	120	
Ge Internal standard	72	2	HMI H2	2418029	2.59	2321471	104.16	60	120	
Ge Internal standard	72	3	HMI He	729502	0.93	685485	106.42	60	120	
In Internal Standard	115	3	HMI He	2759282	1.34	2631879	104.84	60	120	
Ir (IS)	193	3	HMI He	6129185	0.99	5771767	106.19	60	120	

Sample Report

Sample Table

Sample Name	280-173726-A-12-A LOQV
Data File Name	088SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:38:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.203	ppb	1.203	11.26	58	2000	
Na	23	3	45	963.131	ppb	963.131	0.41	121225	400000	
Mg	24	3	45	192.671	ppb	192.671	3.14	11296	400000	
Al	27	3	45	95.788	ppb	95.788	4.30	2256	400000	
K	39	3	45	944.747	ppb	944.747	4.30	70094	400000	
Ca	40	2	45	202.997	ppb	202.997	0.63	128425	400000	
V	51	3	72	5.426	ppb	5.426	7.04	4337	2000	
Cr	52	3	72	3.362	ppb	3.362	5.01	4702	5000	
Mn	55	3	72	3.252	ppb	3.252	6.01	1474	10000	
Fe	56	2	72	110.504	ppb	110.504	2.08	202533	10000	
Co	59	3	72	0.932	ppb	0.932	3.83	1244	2000	
Ni	60	3	72	3.477	ppb	3.477	8.20	1594	5000	
Cu	63	3	72	2.035	ppb	2.035	8.92	2477	5000	
Zn	66	3	72	10.827	ppb	10.827	2.92	1881	5000	
As	75	3	72	4.788	ppb	4.788	7.34	611	2000	
Se	78	2	72	4.769	ppb	4.769	5.70	279	2000	
Sr	88	3	72	9.402	ppb	9.402	3.41	5100	4000	
Mo	95	3	115	1.873	ppb	1.873	8.79	968	2000	
Ag	107	3	115	0.950	ppb	0.950	8.38	1604	100	
Cd	111	3	115	0.959	ppb	0.959	6.68	258	2000	
Sn	120	3	115	9.734	ppb	9.734	1.86	8172	2000	
Sb	121	3	115	1.982	ppb	1.982	2.39	1534	1000	
Ba	137	3	115	3.206	ppb	3.206	7.97	805	5000	
Tl	205	3	193	0.760	ppb	0.760	6.98	4079	2000	
(Pb)	206	3	193	0.900	ppb	0.900	2.14	1554	100	
(Pb)	207	3	193	0.945	ppb	0.945	7.59	1634	100	
Pb	208	3	193	0.916	ppb	0.916	1.88	6524	5000	
Th	232	3	193	4.305	ppb	4.305	1.44	28654	2000	
U	238	3	193	0.899	ppb	0.899	1.36	6885	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4141979	1.85	3887690	106.54	60	120	
Sc (IS)	45	3	HMI He	596350	1.03	560366	106.42	60	120	
Ge Internal standard	72	2	HMI H2	2394625	0.65	2321471	103.15	60	120	
Ge Internal standard	72	3	HMI He	727120	0.98	685485	106.07	60	120	
In Internal Standard	115	3	HMI He	2719096	0.33	2631879	103.31	60	120	
Ir (IS)	193	3	HMI He	6104957	0.77	5771767	105.77	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	089_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:40:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.717	ppb	2.803	2167	50	95.4	90	110	
Na	23	3	45	48032.938	ppb	1.299	5211183	51000	94.2	90	110	
Mg	24	3	45	10168.678	ppb	1.637	585081	11000	92.4	90	110	
Al	27	3	45	932.118	ppb	4.329	21224	1000	93.2	90	110	
K	39	3	45	10047.516	ppb	0.127	493186	11000	91.3	90	110	
Ca	40	2	45	10291.280	ppb	1.286	5881343	11000	93.6	90	110	
V	51	3	72	50.659	ppb	1.792	31246	50	101.3	90	110	
Cr	52	3	72	51.104	ppb	1.899	39747	50	102.2	90	110	
Mn	55	3	72	51.113	ppb	2.365	19991	50	102.2	90	110	
Fe	56	2	72	1023.278	ppb	2.233	1624100	1000	102.3	90	110	
Co	59	3	72	50.354	ppb	1.467	63691	50	100.7	90	110	
Ni	60	3	72	51.781	ppb	2.207	18510	50	103.6	90	110	
Cu	63	3	72	50.500	ppb	0.325	49412	50	101.0	90	110	
Zn	66	3	72	51.574	ppb	3.666	7972	50	103.1	90	110	
As	75	3	72	50.126	ppb	1.412	5610	50	100.3	90	110	
Se	78	2	72	49.998	ppb	4.594	2887	50	100.0	90	110	
Sr	88	3	72	101.868	ppb	1.060	53694	100	101.9	90	110	
Mo	95	3	115	48.866	ppb	2.008	24423	50	97.7	90	110	
Ag	107	3	115	49.903	ppb	1.497	83904	50	99.8	90	110	
Cd	111	3	115	48.847	ppb	2.498	12003	50	97.7	90	110	
Sn	120	3	115	49.690	ppb	1.946	38161	50	99.4	90	110	
Sb	121	3	115	49.671	ppb	1.074	37671	50	99.3	90	110	
Ba	137	3	115	50.460	ppb	1.232	12163	50	100.9	90	110	
Tl	205	3	193	47.877	ppb	2.041	190644	50	95.8	90	110	
(Pb)	206	3	193	49.197	ppb	1.631	64424	50	98.4	90	110	
(Pb)	207	3	193	48.620	ppb	1.447	56812	50	97.2	90	110	
Pb	208	3	193	48.703	ppb	0.221	259107	50	97.4	90	110	
Th	232	3	193	49.280	ppb	1.717	265318	50	98.6	90	110	
U	238	3	193	49.139	ppb	0.334	276464	50	98.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4095722	0.23	3887690	105.35	60	120	
Sc (IS)	45	3	HMI He	597500	1.22	560366	106.63	60	120	
Ge Internal standard	72	2	HMI H2	2393874	0.94	2321471	103.12	60	120	
Ge Internal standard	72	3	HMI He	709588	1.10	685485	103.52	60	120	
In Internal Standard	115	3	HMI He	2732719	1.66	2631879	103.83	60	120	
Ir (IS)	193	3	HMI He	6022843	0.39	5771767	104.35	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	090_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:41:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.030	ppb	358.3	5	0.5	
Na	23	3	45	16.137	ppb	14.2	18701	25	
Mg	24	3	45	1.650	ppb	97.4	324	25	
Al	27	3	45	-0.013	ppb	-7211.6	87	15	
K	39	3	45	1.918	ppb	1346.4	25940	50	
V	51	3	72	0.630	ppb	47.3	1376	1	
Cr	52	3	72	0.599	ppb	12.5	2569	1	
Mn	55	3	72	0.063	ppb	48.9	203	0.5	
Co	59	3	72	0.018	ppb	22.1	60	0.5	
Ni	60	3	72	0.661	ppb	39.3	571	1	
Cu	63	3	72	0.018	ppb	346.3	465	1	
Zn	66	3	72	-0.074	ppb	-492.2	195	5	
As	75	3	72	0.065	ppb	209.8	75	1	
Se	78	2	72	0.076	ppb	121.1	8	1	
Sr	88	3	72	0.014	ppb	102.0	32	0.5	
Mo	95	3	115	0.059	ppb	63.1	67	0.5	
Ag	107	3	115	0.008	ppb	100.0	28	1	
Cd	111	3	115	-0.044	ppb	-108.5	13	0.5	
Sn	120	3	115	0.068	ppb	44.5	958	1	
Sb	121	3	115	0.069	ppb	18.2	92	0.6	
Ba	137	3	115	0.058	ppb	72.8	52	0.5	
Tl	205	3	193	-0.143	ppb	-6.9	451	0.1	
(Pb)	206	3	193	-0.072	ppb	-35.2	272	1	
(Pb)	207	3	193	-0.052	ppb	-32.3	463	1	
Pb	208	3	193	-0.050	ppb	-13.6	1343	0.5	
Th	232	3	193	1.776	ppb	12.6	15122	1	>RL
U	238	3	193	-0.025	ppb	-46.4	1644	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124042	2.19	3887690	106.08	60	120	
Sc (IS)	45	3	HMI He	586442	0.60	560366	104.65	60	120	
Ge Internal standard	72	2	HMI H2	2452171	1.70	2321471	105.63	60	120	
Ge Internal standard	72	3	HMI He	713813	0.33	685485	104.13	60	120	
In Internal Standard	115	3	HMI He	2708057	1.14	2631879	102.89	60	120	
Ir (IS)	193	3	HMI He	6095708	1.13	5771767	105.61	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	091_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:43:41-06:00
Sample Type	Blank
Dilution	1
Comment	608984 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.251	ppb	115.5603826	15	0.5
Na	23	3	45	137.641	ppb	2.655608454	32530	25
Mg	24	3	45	9.001	ppb	19.65298475	761	25
Al	27	3	45	142.844	ppb	8.673987484	3364	15
K	39	3	45	27.635	ppb	34.65418719	27919	50
Ca	40	2	45	100.206	ppb	2.699899156	69263	200
V	51	3	72	0.534	ppb	11.04765122	1353	1
Cr	52	3	72	0.865	ppb	13.47348038	2839	1
Mn	55	3	72	5.102	ppb	2.04078623	2226	0.5
Fe	56	2	72	43.115	ppb	9.083568193	99935	50
Co	59	3	72	0.044	ppb	10.04421936	95	0.5
Ni	60	3	72	1.374	ppb	15.74551772	845	1
Cu	63	3	72	1.575	ppb	7.14721645	2036	1
Zn	66	3	72	53.167	ppb	1.579788832	8478	5
As	75	3	72	-0.026	ppb	-938.375574	67	1
(Se)	78	3	72	-1.233	ppb	-70.19177681	25	1
Sr	88	3	72	0.217	ppb	22.38827528	143	0.5
Mo	95	3	115	0.086	ppb	19.13719293	82	0.5
Ag	107	3	115	0.017	ppb	17.31199483	45	1
Cd	111	3	115	-0.004	ppb	-558.6848725	23	0.5
Sn	120	3	115	2.827	ppb	3.499246731	3062	1
Sb	121	3	115	0.089	ppb	16.45981833	108	0.6
Ba	137	3	115	0.351	ppb	53.66450349	123	0.5
Tl	205	3	193	-0.136	ppb	-14.84670383	480	0.1
(Pb)	206	3	193	0.086	ppb	73.75227593	480	1
(Pb)	207	3	193	0.058	ppb	108.1179244	593	1
Pb	208	3	193	0.083	ppb	25.43927819	2057	0.5
Th	232	3	193	0.324	ppb	9.710350369	7382	1
U	238	3	193	0.021	ppb	102.2623103	1908	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4150467	1.39	3887690	106.76	60	120	
Sc (IS)	45	3	HMI He	603810	0.87	560366	107.75	60	120	
Ge Internal standard	72	2	HMI H2	2454692	1.38	2321471	105.74	60	120	
Ge Internal standard	72	3	HMI He	732547	0.94	685485	106.87	60	120	
In Internal Standard	115	3	HMI He	2757358	1.03	2631879	104.77	60	120	
Ir (IS)	193	3	HMI He	6104594	0.74	5771767	105.77	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608984/2-A
Data File Name	092_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:45:33-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608984 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.050	39.050	ppb	6.208	1778	40	97.6	80	120	
Na	23	3	45	880.738	880.738	ppb	0.901	112250	40	2201.8	80	120	>+/-20%
Mg	24	3	45	747.486	747.486	ppb	1.484	43109	40	1868.7	80	120	>+/-20%
Al	27	3	45	768.652	768.652	ppb	1.847	17472	40	1921.6	80	120	>+/-20%
K	39	3	45	752.692	752.692	ppb	3.885	61154	40	1881.7	80	120	>+/-20%
Ca	40	2	45	826.463	826.463	ppb	3.526	489006	40	2066.2	80	120	>+/-20%
V	51	3	72	40.493	40.493	ppb	1.866	25903	40	101.2	80	120	
Cr	52	3	72	40.948	40.948	ppb	2.367	33200	40	102.4	80	120	
Mn	55	3	72	41.267	41.267	ppb	1.440	16643	40	103.2	80	120	
Fe	56	2	72	793.847	793.847	ppb	2.765	1315287	40	1984.6	80	120	>+/-20%
(Fe)	56	3	72	795.365	795.365	ppb	0.914	531497	40	1988.4	80	120	>+/-20%
Co	59	3	72	40.322	40.322	ppb	0.958	52484	40	100.8	80	120	
Ni	60	3	72	41.525	41.525	ppb	3.191	15341	40	103.8	80	120	
Cu	63	3	72	41.300	41.300	ppb	2.214	41655	40	103.2	80	120	
Zn	66	3	72	42.935	42.935	ppb	2.500	6863	40	107.3	80	120	
As	75	3	72	39.152	39.152	ppb	1.078	4524	40	97.9	80	120	
Se	78	2	72	39.851	39.851	ppb	4.154	2391	40	99.6	80	120	
(Se)	78	3	72	43.933	43.933	ppb	10.222	283	40	109.8	80	120	
Sr	88	3	72	79.349	79.349	ppb	2.623	43036	40	198.4	80	120	>+/-20%
Mo	95	3	115	39.691	39.691	ppb	2.588	19906	40	99.2	80	120	
Ag	107	3	115	41.176	41.176	ppb	1.264	69427	40	102.9	80	120	
Cd	111	3	115	39.528	39.528	ppb	4.277	9745	40	98.8	80	120	
Sn	120	3	115	38.821	38.821	ppb	0.650	30107	40	97.1	80	120	
Sb	121	3	115	40.121	40.121	ppb	0.920	30526	40	100.3	80	120	
Ba	137	3	115	41.965	41.965	ppb	3.541	10154	40	104.9	80	120	
Tl	205	3	193	38.713	38.713	ppb	1.419	158787	40	96.8	80	120	
(Pb)	206	3	193	39.684	39.684	ppb	1.965	53529	40	99.2	80	120	
(Pb)	207	3	193	39.100	39.100	ppb	2.369	47101	40	97.7	80	120	
Pb	208	3	193	39.398	39.398	ppb	1.942	215929	40	98.5	80	120	
Th	232	3	193	37.157	37.157	ppb	1.359	207209	40	92.9	80	120	
U	238	3	193	38.895	38.895	ppb	1.124	225503	40	97.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152046	2.72	3887690	106.80	60	120	
Sc (IS)	45	3	HMI He	595896	0.41	560366	106.34	60	120	
Ge Internal standard	72	2	HMI H2	2485734	1.85	2321471	107.08	60	120	
Ge Internal standard	72	3	HMI He	730076	0.72	685485	106.51	60	120	
In Internal Standard	115	3	HMI He	2740611	1.02	2631879	104.13	60	120	
Ir (IS)	193	3	HMI He	6196556	1.28	5771767	107.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A
Data File Name	093SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:47:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-157.84	2	2000	
Na	23	3	45	17914.017	ppb	17914.017	2.42	1961264	400000	
Mg	24	3	45	13409.445	ppb	13409.445	1.68	774191	400000	
Al	27	3	45	5.176	ppb	5.176	30.99	207	400000	
K	39	3	45	5852.172	ppb	5852.172	1.69	299288	400000	
Ca	40	2	45	53566.531	ppb	53566.531	1.75	31264270	400000	
V	51	3	72	8.484	ppb	8.484	5.93	6465	2000	
Cr	52	3	72	18.688	ppb	18.688	2.15	16939	5000	
Mn	55	3	72	0.492	ppb	0.492	45.24	393	10000	
Fe	56	2	72	17.702	ppb	17.702	8.40	61390	10000	
Co	59	3	72	0.049	ppb	0.049	59.62	105	2000	
Ni	60	3	72	0.881	ppb	0.881	24.10	688	5000	
Cu	63	3	72	0.250	ppb	0.250	11.82	733	5000	
Zn	66	3	72	1.158	ppb	1.158	22.05	405	5000	
As	75	3	72	1.918	ppb	1.918	18.87	298	2000	
Se	78	2	72	1.598	ppb	1.598	17.33	101	2000	
Sr	88	3	72	270.175	ppb	270.175	1.27	151902	4000	
Mo	95	3	115	1.043	ppb	1.043	5.59	565	2000	
Ag	107	3	115	0.011	ppb	0.011	26.57	35	100	
Cd	111	3	115	-0.065	ppb	-0.065	-64.71	8	2000	
Sn	120	3	115	-0.076	ppb	-0.076	-118.71	868	2000	
Sb	121	3	115	0.276	ppb	0.276	21.01	252	1000	
Ba	137	3	115	50.727	ppb	50.727	0.15	12365	5000	
Tl	205	3	193	-0.146	ppb	-0.146	-10.88	435	2000	
(Pb)	206	3	193	-0.061	ppb	-0.061	-23.28	283	100	
(Pb)	207	3	193	-0.052	ppb	-0.052	-79.00	460	100	
Pb	208	3	193	-0.049	ppb	-0.049	-4.77	1334	5000	
Th	232	3	193	1.763	ppb	1.763	11.54	14908	2000	
U	238	3	193	2.264	ppb	2.264	1.37	14463	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4189665	2.16	3887690	107.77	60	120	
Sc (IS)	45	3	HMI He	599609	0.64	560366	107.00	60	120	
Ge Internal standard	72	2	HMI H2	2537300	0.62	2321471	109.30	60	120	
Ge Internal standard	72	3	HMI He	757077	0.41	685485	110.44	60	120	
In Internal Standard	115	3	HMI He	2763153	0.32	2631879	104.99	60	120	
Ir (IS)	193	3	HMI He	6040053	1.02	5771767	104.65	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-Asd@5
Data File Name	094SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:49:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1267.74	3	2000	
Na	23	3	45	3599.153	ppb	3599.153	0.82	409008	400000	
Mg	24	3	45	2793.413	ppb	2793.413	2.61	161882	400000	
Al	27	3	45	1.509	ppb	1.509	147.55	123	400000	
K	39	3	45	1173.832	ppb	1173.832	2.62	81386	400000	
Ca	40	2	45	10730.584	ppb	10730.584	0.94	6216013	400000	
V	51	3	72	2.240	ppb	2.240	6.23	2459	2000	
Cr	52	3	72	4.132	ppb	4.132	7.61	5440	5000	
Mn	55	3	72	1.668	ppb	1.668	10.70	870	10000	
Fe	56	2	72	16.129	ppb	16.129	10.84	59001	10000	
Co	59	3	72	0.031	ppb	0.031	36.92	80	2000	
Ni	60	3	72	0.764	ppb	0.764	34.31	638	5000	
Cu	63	3	72	0.122	ppb	0.122	59.70	595	5000	
Zn	66	3	72	3.199	ppb	3.199	18.93	725	5000	
As	75	3	72	0.476	ppb	0.476	91.00	127	2000	
Se	78	2	72	0.333	ppb	0.333	70.28	24	2000	
Sr	88	3	72	55.920	ppb	55.920	1.87	31113	4000	
Mo	95	3	115	0.274	ppb	0.274	25.41	175	2000	
Ag	107	3	115	0.017	ppb	0.017	49.90	45	100	
Cd	111	3	115	-0.078	ppb	-0.078	-0.36	5	2000	
Sn	120	3	115	0.033	ppb	0.033	144.00	941	2000	
Sb	121	3	115	0.138	ppb	0.138	19.08	145	1000	
Ba	137	3	115	11.099	ppb	11.099	7.33	2707	5000	
Tl	205	3	193	-0.157	ppb	-0.157	-9.38	391	2000	
(Pb)	206	3	193	0.361	ppb	0.361	18.28	831	100	
(Pb)	207	3	193	0.306	ppb	0.306	39.84	873	100	
Pb	208	3	193	0.325	ppb	0.325	10.62	3312	5000	
Th	232	3	193	0.554	ppb	0.554	21.05	8522	2000	
U	238	3	193	0.407	ppb	0.407	10.65	4045	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152198	1.30	3887690	106.80	60	120	
Sc (IS)	45	3	HMI He	601168	0.54	560366	107.28	60	120	
Ge Internal standard	72	2	HMI H2	2546850	1.20	2321471	109.71	60	120	
Ge Internal standard	72	3	HMI He	748778	0.87	685485	109.23	60	120	
In Internal Standard	115	3	HMI He	2736314	1.39	2631879	103.97	60	120	
Ir (IS)	193	3	HMI He	6036389	3.00	5771767	104.58	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-B MS
Data File Name	095SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:51:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.252	ppb	39.252	3.76	1809	2000	
Na	23	3	45	20027.897	ppb	20027.897	0.70	2201368	400000	
Mg	24	3	45	15262.236	ppb	15262.236	1.76	885444	400000	
Al	27	3	45	739.852	ppb	739.852	1.23	17007	400000	
K	39	3	45	6898.320	ppb	6898.320	2.33	349736	400000	
Ca	40	2	45	57038.548	ppb	57038.548	0.88	33485443	400000	
V	51	3	72	47.169	ppb	47.169	1.50	30907	2000	
Cr	52	3	72	59.519	ppb	59.519	1.17	48696	5000	
Mn	55	3	72	40.863	ppb	40.863	2.17	16977	10000	
Fe	56	2	72	789.256	ppb	789.256	1.23	1329144	10000	
Co	59	3	72	39.035	ppb	39.035	1.14	52336	2000	
Ni	60	3	72	39.005	ppb	39.005	2.81	14866	5000	
Cu	63	3	72	39.727	ppb	39.727	0.96	41293	5000	
Zn	66	3	72	40.602	ppb	40.602	4.43	6697	5000	
As	75	3	72	40.410	ppb	40.410	2.60	4807	2000	
Se	78	2	72	41.257	ppb	41.257	1.51	2515	2000	
Sr	88	3	72	367.664	ppb	367.664	0.94	205322	4000	
Mo	95	3	115	40.617	ppb	40.617	1.68	20437	2000	
Ag	107	3	115	41.307	ppb	41.307	1.00	69886	100	
Cd	111	3	115	39.841	ppb	39.841	1.26	9857	2000	
Sn	120	3	115	40.191	ppb	40.191	0.37	31241	2000	
Sb	121	3	115	40.847	ppb	40.847	1.35	31183	1000	
Ba	137	3	115	94.890	ppb	94.890	0.76	22984	5000	
Tl	205	3	193	39.714	ppb	39.714	2.78	160022	2000	
(Pb)	206	3	193	40.125	ppb	40.125	3.92	53168	100	
(Pb)	207	3	193	39.759	ppb	39.759	3.48	47054	100	
Pb	208	3	193	39.820	ppb	39.820	2.92	214420	5000	
Th	232	3	193	38.010	ppb	38.010	2.88	208145	2000	
U	238	3	193	42.430	ppb	42.430	3.07	241530	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214070	0.16	3887690	108.40	60	120	
Sc (IS)	45	3	HMI He	602503	0.60	560366	107.52	60	120	
Ge Internal standard	72	2	HMI H2	2525763	1.63	2321471	108.80	60	120	
Ge Internal standard	72	3	HMI He	751980	0.27	685485	109.70	60	120	
In Internal Standard	115	3	HMI He	2749766	0.54	2631879	104.48	60	120	
Ir (IS)	193	3	HMI He	6090250	2.25	5771767	105.52	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-C MSD
Data File Name	096SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:52:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.876	ppb	41.876	5.76	1901	2000	
Na	23	3	45	19433.463	ppb	19433.463	0.32	2147451	400000	
Mg	24	3	45	15284.279	ppb	15284.279	2.76	891211	400000	
Al	27	3	45	749.309	ppb	749.309	2.68	17311	400000	
K	39	3	45	6894.447	ppb	6894.447	1.37	351356	400000	
Ca	40	2	45	57623.698	ppb	57623.698	1.24	33504178	400000	
V	51	3	72	48.660	ppb	48.660	0.72	31962	2000	
Cr	52	3	72	59.955	ppb	59.955	1.17	49205	5000	
Mn	55	3	72	39.673	ppb	39.673	3.23	16545	10000	
Fe	56	2	72	792.766	ppb	792.766	1.15	1340223	10000	
Co	59	3	72	38.274	ppb	38.274	0.31	51496	2000	
Ni	60	3	72	39.676	ppb	39.676	1.32	15167	5000	
Cu	63	3	72	39.935	ppb	39.935	0.81	41650	5000	
Zn	66	3	72	41.262	ppb	41.262	3.31	6827	5000	
As	75	3	72	42.006	ppb	42.006	3.59	5012	2000	
Se	78	2	72	42.094	ppb	42.094	2.24	2576	2000	
Sr	88	3	72	368.238	ppb	368.238	1.28	206362	4000	
Mo	95	3	115	41.127	ppb	41.127	2.94	20916	2000	
Ag	107	3	115	40.769	ppb	40.769	1.67	69729	100	
Cd	111	3	115	39.166	ppb	39.166	4.39	9792	2000	
Sn	120	3	115	39.489	ppb	39.489	2.12	31046	2000	
Sb	121	3	115	39.947	ppb	39.947	2.72	30824	1000	
Ba	137	3	115	94.369	ppb	94.369	3.59	23104	5000	
Tl	205	3	193	39.641	ppb	39.641	0.61	160819	2000	
(Pb)	206	3	193	39.679	ppb	39.679	0.79	52949	100	
(Pb)	207	3	193	39.409	ppb	39.409	0.87	46962	100	
Pb	208	3	193	39.692	ppb	39.692	0.94	215191	5000	
Th	232	3	193	39.813	ppb	39.813	0.64	219238	2000	
U	238	3	193	42.110	ppb	42.110	0.63	241361	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174008	1.26	3887690	107.36	60	120	
Sc (IS)	45	3	HMI He	605563	0.52	560366	108.07	60	120	
Ge Internal standard	72	2	HMI H2	2535688	1.13	2321471	109.23	60	120	
Ge Internal standard	72	3	HMI He	754614	0.80	685485	110.08	60	120	
In Internal Standard	115	3	HMI He	2780533	2.51	2631879	105.65	60	120	
Ir (IS)	193	3	HMI He	6129421	0.72	5771767	106.20	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A pds
Data File Name	097SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:54:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	102.840	ppb	102.840	3.46	4645	2000	
Na	23	3	45	22842.210	ppb	22842.210	2.64	2521703	400000	
Mg	24	3	45	15805.602	ppb	15805.602	3.12	921803	400000	
Al	27	3	45	1965.312	ppb	1965.312	1.88	45284	400000	
K	39	3	45	7817.373	ppb	7817.373	1.20	394970	400000	
Ca	40	2	45	55168.937	ppb	55168.937	1.71	32175907	400000	
V	51	3	72	104.218	ppb	104.218	0.84	67420	2000	
Cr	52	3	72	118.251	ppb	118.251	0.88	95099	5000	
Mn	55	3	72	97.322	ppb	97.322	2.84	40408	10000	
Fe	56	2	72	1040.449	ppb	1040.449	0.77	1737532	10000	
Co	59	3	72	97.205	ppb	97.205	1.09	131037	2000	
Ni	60	3	72	97.480	ppb	97.480	0.10	36837	5000	
Cu	63	3	72	99.577	ppb	99.577	1.23	103404	5000	
Zn	66	3	72	207.822	ppb	207.822	2.93	33577	5000	
As	75	3	72	101.968	ppb	101.968	3.24	12093	2000	
Se	78	2	72	104.727	ppb	104.727	1.98	6362	2000	
Sr	88	3	72	370.790	ppb	370.790	0.25	208296	4000	
Mo	95	3	115	100.570	ppb	100.570	1.01	51624	2000	
Ag	107	3	115	26.843	ppb	26.843	0.04	46388	100	
Cd	111	3	115	97.786	ppb	97.786	0.76	24672	2000	
Sn	120	3	115	100.566	ppb	100.566	0.84	78424	2000	
Sb	121	3	115	96.052	ppb	96.052	1.59	74828	1000	
Ba	137	3	115	153.335	ppb	153.335	0.86	37905	5000	
Tl	205	3	193	99.487	ppb	99.487	2.25	399153	2000	
(Pb)	206	3	193	100.781	ppb	100.781	1.40	132964	100	
(Pb)	207	3	193	98.321	ppb	98.321	2.48	115536	100	
Pb	208	3	193	99.715	ppb	99.715	1.87	534314	5000	
Th	232	3	193	109.455	ppb	109.455	1.46	588555	2000	
U	238	3	193	221.224	ppb	221.224	1.81	1251312	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4186780	1.32	3887690	107.69	60	120	
Sc (IS)	45	3	HMI He	605843	1.23	560366	108.12	60	120	
Ge Internal standard	72	2	HMI H2	2519282	0.67	2321471	108.52	60	120	
Ge Internal standard	72	3	HMI He	756465	1.04	685485	110.35	60	120	
In Internal Standard	115	3	HMI He	2808319	1.05	2631879	106.70	60	120	
Ir (IS)	193	3	HMI He	6086170	1.22	5771767	105.45	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A@10
Data File Name	098SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:56:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.103	ppb	0.103	161.00	8	2000	
Na	23	3	45	10921.066	ppb	10921.066	1.37	1212098	400000	
Mg	24	3	45	7713.438	ppb	7713.438	0.66	448922	400000	
Al	27	3	45	4.527	ppb	4.527	33.27	194	400000	
K	39	3	45	469.924	ppb	469.924	12.77	48713	400000	
Ca	40	2	45	21572.581	ppb	21572.581	1.27	12513438	400000	
V	51	3	72	0.456	ppb	0.456	33.95	1328	2000	
Cr	52	3	72	0.587	ppb	0.587	6.76	2672	5000	
Mn	55	3	72	2.036	ppb	2.036	9.97	1015	10000	
Fe	56	2	72	15.437	ppb	15.437	17.28	56853	10000	
Co	59	3	72	0.054	ppb	0.054	25.20	110	2000	
Ni	60	3	72	1.226	ppb	1.226	7.09	805	5000	
Cu	63	3	72	0.226	ppb	0.226	39.68	698	5000	
Zn	66	3	72	3.447	ppb	3.447	9.95	760	5000	
As	75	3	72	0.049	ppb	0.049	546.25	77	2000	
Se	78	2	72	0.016	ppb	0.016	653.03	5	2000	
Sr	88	3	72	79.927	ppb	79.927	2.05	44235	4000	
Mo	95	3	115	0.127	ppb	0.127	10.88	105	2000	
Ag	107	3	115	0.020	ppb	0.020	67.57	50	100	
Cd	111	3	115	-0.046	ppb	-0.046	-48.77	13	2000	
Sn	120	3	115	0.014	ppb	0.014	726.94	956	2000	
Sb	121	3	115	0.101	ppb	0.101	61.12	120	1000	
Ba	137	3	115	35.985	ppb	35.985	4.35	8977	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-17.08	581	2000	
(Pb)	206	3	193	0.325	ppb	0.325	21.73	805	100	
(Pb)	207	3	193	0.239	ppb	0.239	2.51	816	100	
Pb	208	3	193	0.330	ppb	0.330	6.70	3425	5000	
Th	232	3	193	2.934	ppb	2.934	12.89	21583	2000	
U	238	3	193	0.500	ppb	0.500	6.91	4680	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162017	1.91	3887690	107.06	60	120	
Sc (IS)	45	3	HMI He	604324	0.89	560366	107.84	60	120	
Ge Internal standard	72	2	HMI H2	2505287	2.97	2321471	107.92	60	120	
Ge Internal standard	72	3	HMI He	745095	1.97	685485	108.70	60	120	
In Internal Standard	115	3	HMI He	2825906	2.04	2631879	107.37	60	120	
Ir (IS)	193	3	HMI He	6185566	2.43	5771767	107.17	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A@10
Data File Name	099SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:58:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1375.84	3	2000	
Na	23	3	45	10805.958	ppb	10805.958	1.90	1189884	400000	
Mg	24	3	45	7663.222	ppb	7663.222	2.36	442447	400000	
Al	27	3	45	1.384	ppb	1.384	91.47	120	400000	
K	39	3	45	576.068	ppb	576.068	5.37	53298	400000	
Ca	40	2	45	19667.839	ppb	19667.839	0.72	11660286	400000	
V	51	3	72	0.397	ppb	0.397	10.54	1304	2000	
Cr	52	3	72	0.576	ppb	0.576	26.27	2694	5000	
Mn	55	3	72	20.293	ppb	20.293	2.20	8538	10000	
Fe	56	2	72	68.986	ppb	68.986	6.02	144281	10000	
Co	59	3	72	0.322	ppb	0.322	21.08	470	2000	
Ni	60	3	72	1.314	ppb	1.314	10.04	846	5000	
Cu	63	3	72	0.156	ppb	0.156	6.61	633	5000	
Zn	66	3	72	3.710	ppb	3.710	11.21	811	5000	
As	75	3	72	0.269	ppb	0.269	97.82	103	2000	
Se	78	2	72	0.093	ppb	0.093	121.39	9	2000	
Sr	88	3	72	77.405	ppb	77.405	2.41	43304	4000	
Mo	95	3	115	0.047	ppb	0.047	42.90	62	2000	
Ag	107	3	115	0.014	ppb	0.014	22.11	40	100	
Cd	111	3	115	-0.044	ppb	-0.044	-69.85	13	2000	
Sn	120	3	115	0.163	ppb	0.163	69.88	1038	2000	
Sb	121	3	115	0.072	ppb	0.072	53.60	95	1000	
Ba	137	3	115	36.934	ppb	36.934	2.64	8907	5000	
Tl	205	3	193	-0.155	ppb	-0.155	-8.81	410	2000	
(Pb)	206	3	193	0.330	ppb	0.330	5.30	811	100	
(Pb)	207	3	193	0.329	ppb	0.329	18.40	921	100	
Pb	208	3	193	0.349	ppb	0.349	4.34	3520	5000	
Th	232	3	193	0.934	ppb	0.934	30.00	10743	2000	
U	238	3	193	0.391	ppb	0.391	5.62	4049	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4252924	2.09	3887690	109.39	60	120	
Sc (IS)	45	3	HMI He	599621	1.78	560366	107.01	60	120	
Ge Internal standard	72	2	HMI H2	2507932	2.53	2321471	108.03	60	120	
Ge Internal standard	72	3	HMI He	753164	1.52	685485	109.87	60	120	
In Internal Standard	115	3	HMI He	2730779	2.29	2631879	103.76	60	120	
Ir (IS)	193	3	HMI He	6171312	2.13	5771767	106.92	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A@10
Data File Name	100SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:00:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-141.90	2	2000	
Na	23	3	45	15877.568	ppb	15877.568	3.66	1755463	400000	
Mg	24	3	45	6043.050	ppb	6043.050	3.56	351935	400000	
Al	27	3	45	2.343	ppb	2.343	47.47	143	400000	
K	39	3	45	474.216	ppb	474.216	7.24	48954	400000	
Ca	40	2	45	20388.438	ppb	20388.438	2.43	11925654	400000	
V	51	3	72	0.528	ppb	0.528	33.87	1394	2000	
Cr	52	3	72	0.718	ppb	0.718	32.90	2817	5000	
Mn	55	3	72	30.081	ppb	30.081	2.14	12623	10000	
Fe	56	2	72	23.420	ppb	23.420	12.54	71100	10000	
Co	59	3	72	0.201	ppb	0.201	20.39	310	2000	
Ni	60	3	72	5.070	ppb	5.070	2.37	2256	5000	
Cu	63	3	72	0.131	ppb	0.131	23.66	610	5000	
Zn	66	3	72	3.361	ppb	3.361	8.57	758	5000	
As	75	3	72	0.139	ppb	0.139	58.89	88	2000	
Se	78	2	72	-0.006	ppb	-0.006	-907.84	3	2000	
Sr	88	3	72	102.825	ppb	102.825	1.04	57793	4000	
Mo	95	3	115	0.083	ppb	0.083	74.82	80	2000	
Ag	107	3	115	0.011	ppb	0.011	95.21	35	100	
Cd	111	3	115	-0.024	ppb	-0.024	-131.12	18	2000	
Sn	120	3	115	-0.174	ppb	-0.174	-102.80	788	2000	
Sb	121	3	115	0.074	ppb	0.074	37.51	97	1000	
Ba	137	3	115	43.555	ppb	43.555	1.52	10559	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-1.06	383	2000	
(Pb)	206	3	193	0.303	ppb	0.303	21.59	781	100	
(Pb)	207	3	193	0.310	ppb	0.310	11.93	906	100	
Pb	208	3	193	0.315	ppb	0.315	16.67	3360	5000	
Th	232	3	193	0.411	ppb	0.411	25.46	7989	2000	
U	238	3	193	0.360	ppb	0.360	5.08	3905	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4197012	1.44	3887690	107.96	60	120	
Sc (IS)	45	3	HMI He	604845	1.76	560366	107.94	60	120	
Ge Internal standard	72	2	HMI H2	2545269	1.23	2321471	109.64	60	120	
Ge Internal standard	72	3	HMI He	756617	1.21	685485	110.38	60	120	
In Internal Standard	115	3	HMI He	2747128	1.57	2631879	104.38	60	120	
Ir (IS)	193	3	HMI He	6221582	1.36	5771767	107.79	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	101_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:01:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	45.782	ppb	17.096	2084	50	91.6	90	110	
Na	23	3	45	48912.847	ppb	2.441	5274647	51000	95.9	90	110	
Mg	24	3	45	10296.130	ppb	1.589	588861	11000	93.6	90	110	
Al	27	3	45	969.464	ppb	5.584	21936	1000	96.9	90	110	
K	39	3	45	9998.926	ppb	1.513	488012	11000	90.9	90	110	
Ca	40	2	45	9530.339	ppb	15.221	5577677	11000	86.6	90	110	>+\-10%
V	51	3	72	50.847	ppb	0.161	31311	50	101.7	90	110	
Cr	52	3	72	51.442	ppb	0.633	39936	50	102.9	90	110	
Mn	55	3	72	51.476	ppb	2.407	20101	50	103.0	90	110	
Fe	56	2	72	917.002	ppb	15.499	1501016	1000	91.7	90	110	
Co	59	3	72	50.635	ppb	0.353	63948	50	101.3	90	110	
Ni	60	3	72	51.601	ppb	1.255	18420	50	103.2	90	110	
Cu	63	3	72	50.213	ppb	0.680	49052	50	100.4	90	110	
Zn	66	3	72	52.466	ppb	3.787	8093	50	104.9	90	110	
As	75	3	72	49.971	ppb	2.933	5583	50	99.9	90	110	
Se	78	2	72	46.359	ppb	11.353	2761	50	92.7	90	110	
Sr	88	3	72	102.378	ppb	0.099	53879	100	102.4	90	110	
Mo	95	3	115	49.312	ppb	1.695	24679	50	98.6	90	110	
Ag	107	3	115	50.389	ppb	1.182	84803	50	100.8	90	110	
Cd	111	3	115	48.993	ppb	1.457	12053	50	98.0	90	110	
Sn	120	3	115	49.434	ppb	1.388	38013	50	98.9	90	110	
Sb	121	3	115	49.867	ppb	0.913	37861	50	99.7	90	110	
Ba	137	3	115	51.102	ppb	1.207	12331	50	102.2	90	110	
Tl	205	3	193	47.786	ppb	2.717	192810	50	95.6	90	110	
(Pb)	206	3	193	48.618	ppb	2.241	64516	50	97.2	90	110	
(Pb)	207	3	193	48.104	ppb	3.840	56956	50	96.2	90	110	
Pb	208	3	193	48.482	ppb	2.183	261371	50	97.0	90	110	
Th	232	3	193	48.691	ppb	2.475	265746	50	97.4	90	110	
U	238	3	193	47.868	ppb	3.025	272928	50	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4223794	7.01	3887690	108.65	60	120	
Sc (IS)	45	3	HMI He	593979	1.09	560366	106.00	60	120	
Ge Internal standard	72	2	HMI H2	2481946	7.49	2321471	106.91	60	120	
Ge Internal standard	72	3	HMI He	708440	0.70	685485	103.35	60	120	
In Internal Standard	115	3	HMI He	2735594	0.92	2631879	103.94	60	120	
Ir (IS)	193	3	HMI He	6104431	1.68	5771767	105.76	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	102_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:03:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.006	ppb	-1067.7	3	0.5	
Na	23	3	45	16.801	ppb	28.6	19052	25	
Mg	24	3	45	1.674	ppb	55.7	330	25	
Al	27	3	45	0.815	ppb	124.0	107	15	
K	39	3	45	-6.107	ppb	-385.5	25960	50	
V	51	3	72	0.465	ppb	32.4	1289	1	
Cr	52	3	72	0.542	ppb	43.8	2551	1	
Mn	55	3	72	0.189	ppb	42.4	255	0.5	
Co	59	3	72	0.011	ppb	50.0	52	0.5	
Ni	60	3	72	0.726	ppb	23.4	600	1	
Cu	63	3	72	0.005	ppb	1022.5	456	1	
Zn	66	3	72	-0.295	ppb	-97.3	163	5	
As	75	3	72	0.207	ppb	67.5	92	1	
Se	78	2	72	-0.014	ppb	-559.9	3	1	
Sr	88	3	72	0.023	ppb	132.5	37	0.5	
Mo	95	3	115	0.070	ppb	58.4	73	0.5	
Ag	107	3	115	0.009	ppb	18.9	32	1	
Cd	111	3	115	-0.051	ppb	-45.9	12	0.5	
Sn	120	3	115	-0.057	ppb	-62.5	876	1	
Sb	121	3	115	0.055	ppb	35.1	82	0.6	
Ba	137	3	115	0.097	ppb	117.5	62	0.5	
Tl	205	3	193	-0.153	ppb	-4.6	415	0.1	
(Pb)	206	3	193	-0.067	ppb	-71.6	278	1	
(Pb)	207	3	193	-0.089	ppb	-25.5	421	1	
Pb	208	3	193	-0.056	ppb	-48.3	1314	0.5	
Th	232	3	193	1.720	ppb	8.9	14872	1	>RL
U	238	3	193	-0.020	ppb	-66.8	1683	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4061277	1.56	3887690	104.47	60	120	
Sc (IS)	45	3	HMI He	595316	0.83	560366	106.24	60	120	
Ge Internal standard	72	2	HMI H2	2460703	1.65	2321471	106.00	60	120	
Ge Internal standard	72	3	HMI He	720699	0.50	685485	105.14	60	120	
In Internal Standard	115	3	HMI He	2744652	0.38	2631879	104.28	60	120	
Ir (IS)	193	3	HMI He	6118649	0.66	5771767	106.01	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-5-A
Data File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:05:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	12222.928	ppb	12222.928	1.60	1350819	400000	
Mg	24	3	45	13889.901	ppb	13889.901	2.11	806019	400000	
Al	27	3	45	459.582	ppb	459.582	4.40	10605	400000	
K	39	3	45	2061.823	ppb	2061.823	2.91	123203	400000	
Ca	40	2	45	52019.243	ppb	52019.243	1.00	30253398	400000	
V	51	3	72	0.865	ppb	0.865	12.48	1576	2000	
Cr	52	3	72	1.415	ppb	1.415	27.70	3297	5000	
Mn	55	3	72	40.795	ppb	40.795	1.56	16713	10000	
Fe	56	2	72	252.605	ppb	252.605	2.15	441116	10000	
Co	59	3	72	0.289	ppb	0.289	8.95	420	2000	
Ni	60	3	72	1.195	ppb	1.195	7.50	790	5000	
Cu	63	3	72	13.132	ppb	13.132	2.00	13772	5000	
Zn	66	3	72	32.658	ppb	32.658	3.82	5353	5000	
As	75	3	72	0.097	ppb	0.097	155.06	82	2000	
Se	78	2	72	0.295	ppb	0.295	26.02	21	2000	
Sr	88	3	72	141.546	ppb	141.546	1.19	77962	4000	
Mo	95	3	115	37.887	ppb	37.887	1.14	19007	2000	
Ag	107	3	115	0.013	ppb	0.013	51.20	38	100	
Cd	111	3	115	0.409	ppb	0.409	4.85	125	2000	
Sn	120	3	115	0.024	ppb	0.024	208.54	936	2000	
Sb	121	3	115	0.232	ppb	0.232	14.37	217	1000	
Ba	137	3	115	62.945	ppb	62.945	3.01	15211	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-6.04	375	2000	
(Pb)	206	3	193	0.446	ppb	0.446	23.88	951	100	
(Pb)	207	3	193	0.429	ppb	0.429	19.97	1025	100	
Pb	208	3	193	0.458	ppb	0.458	7.99	4053	5000	
Th	232	3	193	0.496	ppb	0.496	26.97	8265	2000	
U	238	3	193	39.766	ppb	39.766	1.44	226237	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4175024	1.93	3887690	107.39	60	120	
Sc (IS)	45	3	HMI He	602726	0.88	560366	107.56	60	120	
Ge Internal standard	72	2	HMI H2	2491307	0.95	2321471	107.32	60	120	
Ge Internal standard	72	3	HMI He	741544	0.50	685485	108.18	60	120	
In Internal Standard	115	3	HMI He	2741253	0.34	2631879	104.16	60	120	
Ir (IS)	193	3	HMI He	6080946	0.80	5771767	105.36	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-A
Data File Name	104SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:07:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	12099.879	ppb	12099.879	1.77	1350855	400000	
Mg	24	3	45	13670.591	ppb	13670.591	2.15	801246	400000	
Al	27	3	45	65.165	ppb	65.165	12.98	1595	400000	
K	39	3	45	1935.929	ppb	1935.929	2.90	118471	400000	
Ca	40	2	45	49573.100	ppb	49573.100	0.08	28797080	400000	
V	51	3	72	0.457	ppb	0.457	58.36	1333	2000	
Cr	52	3	72	1.064	ppb	1.064	22.89	3057	5000	
Mn	55	3	72	10.733	ppb	10.733	3.67	4575	10000	
Fe	56	2	72	27.561	ppb	27.561	10.22	77661	10000	
Co	59	3	72	0.117	ppb	0.117	36.18	193	2000	
Ni	60	3	72	1.007	ppb	1.007	17.56	728	5000	
Cu	63	3	72	7.480	ppb	7.480	3.09	8118	5000	
Zn	66	3	72	13.566	ppb	13.566	1.89	2371	5000	
As	75	3	72	0.135	ppb	0.135	119.65	87	2000	
Se	78	2	72	0.180	ppb	0.180	10.09	15	2000	
Sr	88	3	72	135.164	ppb	135.164	4.20	75112	4000	
Mo	95	3	115	35.498	ppb	35.498	1.92	18111	2000	
Ag	107	3	115	0.007	ppb	0.007	22.78	28	100	
Cd	111	3	115	0.221	ppb	0.221	30.95	80	2000	
Sn	120	3	115	-0.273	ppb	-0.273	-22.74	725	2000	
Sb	121	3	115	0.200	ppb	0.200	11.38	195	1000	
Ba	137	3	115	57.365	ppb	57.365	3.31	14101	5000	
Tl	205	3	193	-0.168	ppb	-0.168	-3.64	355	2000	
(Pb)	206	3	193	-0.046	ppb	-0.046	-41.50	308	100	
(Pb)	207	3	193	-0.040	ppb	-0.040	-93.54	481	100	
Pb	208	3	193	-0.040	ppb	-0.040	-33.72	1406	5000	
Th	232	3	193	0.128	ppb	0.128	61.19	6370	2000	
U	238	3	193	37.991	ppb	37.991	2.04	218174	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4169572	1.07	3887690	107.25	60	120	
Sc (IS)	45	3	HMI He	608833	1.72	560366	108.65	60	120	
Ge Internal standard	72	2	HMI H2	2537144	0.87	2321471	109.29	60	120	
Ge Internal standard	72	3	HMI He	748452	1.50	685485	109.19	60	120	
In Internal Standard	115	3	HMI He	2787467	0.30	2631879	105.91	60	120	
Ir (IS)	193	3	HMI He	6136766	1.11	5771767	106.32	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-B MS
Data File Name	105SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:09:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.921	ppb	39.921	4.78	1803	2000	
Na	23	3	45	12723.771	ppb	12723.771	1.31	1402775	400000	
Mg	24	3	45	14081.516	ppb	14081.516	1.46	815544	400000	
Al	27	3	45	793.783	ppb	793.783	5.67	18207	400000	
K	39	3	45	2736.637	ppb	2736.637	1.59	154528	400000	
Ca	40	2	45	51721.198	ppb	51721.198	2.05	29942925	400000	
V	51	3	72	38.436	ppb	38.436	2.49	25085	2000	
Cr	52	3	72	39.553	ppb	39.553	1.51	32725	5000	
Mn	55	3	72	49.963	ppb	49.963	0.89	20477	10000	
Fe	56	2	72	778.064	ppb	778.064	1.45	1302764	10000	
Co	59	3	72	38.147	ppb	38.147	1.25	50552	2000	
Ni	60	3	72	39.096	ppb	39.096	3.45	14727	5000	
Cu	63	3	72	46.144	ppb	46.144	1.84	47327	5000	
Zn	66	3	72	53.436	ppb	53.436	1.46	8643	5000	
As	75	3	72	38.290	ppb	38.290	3.34	4505	2000	
Se	78	2	72	40.248	ppb	40.248	2.05	2438	2000	
Sr	88	3	72	213.739	ppb	213.739	0.51	117984	4000	
Mo	95	3	115	74.073	ppb	74.073	3.57	37597	2000	
Ag	107	3	115	40.002	ppb	40.002	2.13	68340	100	
Cd	111	3	115	39.348	ppb	39.348	0.76	9834	2000	
Sn	120	3	115	37.273	ppb	37.273	2.42	29323	2000	
Sb	121	3	115	39.140	ppb	39.140	3.40	30167	1000	
Ba	137	3	115	97.833	ppb	97.833	1.66	23928	5000	
Tl	205	3	193	38.403	ppb	38.403	2.88	156426	2000	
(Pb)	206	3	193	39.189	ppb	39.189	2.10	52506	100	
(Pb)	207	3	193	38.134	ppb	38.134	2.79	45636	100	
Pb	208	3	193	38.708	ppb	38.708	2.55	210706	5000	
Th	232	3	193	36.300	ppb	36.300	3.50	201126	2000	
U	238	3	193	76.696	ppb	76.696	2.33	439821	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4155920	0.80	3887690	106.90	60	120	
Sc (IS)	45	3	HMI He	601539	0.77	560366	107.35	60	120	
Ge Internal standard	72	2	HMI H2	2510610	1.44	2321471	108.15	60	120	
Ge Internal standard	72	3	HMI He	743252	0.56	685485	108.43	60	120	
In Internal Standard	115	3	HMI He	2777277	1.94	2631879	105.52	60	120	
Ir (IS)	193	3	HMI He	6155480	2.64	5771767	106.65	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-C MSD
Data File Name	106SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:10:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.466	ppb	40.466	5.84	1819	2000	
Na	23	3	45	13221.335	ppb	13221.335	1.91	1444935	400000	
Mg	24	3	45	15264.498	ppb	15264.498	1.39	876981	400000	
Al	27	3	45	818.101	ppb	818.101	2.84	18614	400000	
K	39	3	45	2868.564	ppb	2868.564	2.13	159427	400000	
Ca	40	2	45	54026.279	ppb	54026.279	1.03	31079946	400000	
V	51	3	72	40.629	ppb	40.629	1.61	26337	2000	
Cr	52	3	72	41.501	ppb	41.501	0.34	34075	5000	
Mn	55	3	72	51.156	ppb	51.156	1.74	20864	10000	
Fe	56	2	72	838.633	ppb	838.633	2.25	1387350	10000	
Co	59	3	72	38.979	ppb	38.979	1.12	51418	2000	
Ni	60	3	72	40.229	ppb	40.229	2.34	15072	5000	
Cu	63	3	72	47.199	ppb	47.199	0.09	48185	5000	
Zn	66	3	72	57.144	ppb	57.144	2.64	9185	5000	
As	75	3	72	39.718	ppb	39.718	3.46	4648	2000	
Se	78	2	72	41.316	ppb	41.316	3.81	2477	2000	
Sr	88	3	72	221.593	ppb	221.593	2.36	121745	4000	
Mo	95	3	115	77.575	ppb	77.575	2.26	39080	2000	
Ag	107	3	115	41.172	ppb	41.172	0.41	69809	100	
Cd	111	3	115	39.228	ppb	39.228	2.35	9725	2000	
Sn	120	3	115	38.614	ppb	38.614	0.40	30116	2000	
Sb	121	3	115	40.076	ppb	40.076	1.31	30658	1000	
Ba	137	3	115	100.728	ppb	100.728	0.36	24449	5000	
Tl	205	3	193	39.105	ppb	39.105	1.66	159782	2000	
(Pb)	206	3	193	40.050	ppb	40.050	2.62	53815	100	
(Pb)	207	3	193	39.331	ppb	39.331	0.71	47209	100	
Pb	208	3	193	39.463	ppb	39.463	1.68	215477	5000	
Th	232	3	193	39.894	ppb	39.894	1.19	221234	2000	
U	238	3	193	78.696	ppb	78.696	1.93	452676	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4129550	2.31	3887690	106.22	60	120	
Sc (IS)	45	3	HMI He	596734	1.57	560366	106.49	60	120	
Ge Internal standard	72	2	HMI H2	2485233	1.66	2321471	107.05	60	120	
Ge Internal standard	72	3	HMI He	739917	1.40	685485	107.94	60	120	
In Internal Standard	115	3	HMI He	2755824	1.52	2631879	104.71	60	120	
Ir (IS)	193	3	HMI He	6173488	1.30	5771767	106.96	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-2-A
Data File Name	107SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:12:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	54975.635	ppb	54975.635	0.81	5940982	400000	
Mg	24	3	45	44390.809	ppb	44390.809	0.66	2544340	400000	
Al	27	3	45	2.141	ppb	2.141	85.49	137	400000	
K	39	3	45	5987.668	ppb	5987.668	1.97	303438	400000	
Ca	40	2	45	131606.253	ppb	131606.253	1.00	77118771	400000	
V	51	3	72	1.109	ppb	1.109	20.95	1728	2000	
Cr	52	3	72	1.787	ppb	1.787	8.90	3582	5000	
Mn	55	3	72	222.372	ppb	222.372	0.99	90248	10000	
Fe	56	2	72	12.987	ppb	12.987	7.71	54079	10000	
Co	59	3	72	0.657	ppb	0.657	3.03	906	2000	
Ni	60	3	72	3.613	ppb	3.613	4.92	1676	5000	
Cu	63	3	72	0.891	ppb	0.891	6.01	1368	5000	
Zn	66	3	72	6.305	ppb	6.305	6.61	1206	5000	
As	75	3	72	1.004	ppb	1.004	38.72	187	2000	
Se	78	2	72	0.059	ppb	0.059	116.14	7	2000	
Sr	88	3	72	456.895	ppb	456.895	0.74	251512	4000	
Mo	95	3	115	0.445	ppb	0.445	11.82	260	2000	
Ag	107	3	115	0.010	ppb	0.010	156.95	32	100	
Cd	111	3	115	-0.024	ppb	-0.024	-92.89	18	2000	
Sn	120	3	115	0.030	ppb	0.030	162.11	936	2000	
Sb	121	3	115	0.210	ppb	0.210	8.39	198	1000	
Ba	137	3	115	285.678	ppb	285.678	2.47	68540	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-5.83	373	2000	
(Pb)	206	3	193	-0.053	ppb	-0.053	-30.65	295	100	
(Pb)	207	3	193	-0.045	ppb	-0.045	-52.12	468	100	
Pb	208	3	193	-0.037	ppb	-0.037	-33.19	1404	5000	
Th	232	3	193	2.032	ppb	2.032	9.13	16378	2000	
U	238	3	193	3.676	ppb	3.676	1.94	22444	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4207162	0.60	3887690	108.22	60	120	
Sc (IS)	45	3	HMI He	595385	1.01	560366	106.25	60	120	
Ge Internal standard	72	2	HMI H2	2558575	1.31	2321471	110.21	60	120	
Ge Internal standard	72	3	HMI He	741297	0.79	685485	108.14	60	120	
In Internal Standard	115	3	HMI He	2727397	1.53	2631879	103.63	60	120	
Ir (IS)	193	3	HMI He	6057680	0.60	5771767	104.95	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A
Data File Name	108SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:14:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1585.01	3	2000	
Na	23	3	45	103880.243	ppb	103880.243	1.02	11384280	400000	
Mg	24	3	45	75774.293	ppb	75774.293	1.50	4409940	400000	
Al	27	3	45	8.017	ppb	8.017	16.74	274	400000	
K	39	3	45	4680.306	ppb	4680.306	1.72	246676	400000	
Ca	40	2	45	218740.119	ppb	218740.119	0.78	122754230	400000	
V	51	3	72	2.273	ppb	2.273	6.15	2459	2000	
Cr	52	3	72	1.901	ppb	1.901	19.40	3675	5000	
Mn	55	3	72	3.586	ppb	3.586	3.98	1641	10000	
Fe	56	2	72	40.904	ppb	40.904	5.78	98567	10000	
Co	59	3	72	0.323	ppb	0.323	14.62	465	2000	
Ni	60	3	72	4.462	ppb	4.462	6.54	1991	5000	
Cu	63	3	72	1.835	ppb	1.835	2.69	2327	5000	
Zn	66	3	72	3.271	ppb	3.271	16.51	730	5000	
As	75	3	72	1.549	ppb	1.549	13.73	250	2000	
Se	78	2	72	0.249	ppb	0.249	27.44	19	2000	
Sr	88	3	72	786.302	ppb	786.302	0.75	433545	4000	
Mo	95	3	115	0.153	ppb	0.153	28.74	115	2000	
Ag	107	3	115	0.010	ppb	0.010	100.94	33	100	
Cd	111	3	115	-0.004	ppb	-0.004	-317.22	23	2000	
Sn	120	3	115	-0.132	ppb	-0.132	-56.57	821	2000	
Sb	121	3	115	0.142	ppb	0.142	20.36	148	1000	
Ba	137	3	115	354.242	ppb	354.242	1.44	85624	5000	
Tl	205	3	193	-0.129	ppb	-0.129	-6.95	510	2000	
(Pb)	206	3	193	-0.066	ppb	-0.066	-19.44	282	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-103.77	433	100	
Pb	208	3	193	-0.057	ppb	-0.057	-8.61	1318	5000	
Th	232	3	193	0.701	ppb	0.701	11.40	9466	2000	
U	238	3	193	4.529	ppb	4.529	2.26	27645	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4029469	1.05	3887690	103.65	60	120	
Sc (IS)	45	3	HMI He	604560	0.48	560366	107.89	60	120	
Ge Internal standard	72	2	HMI H2	2507432	1.96	2321471	108.01	60	120	
Ge Internal standard	72	3	HMI He	742531	0.57	685485	108.32	60	120	
In Internal Standard	115	3	HMI He	2747609	1.01	2631879	104.40	60	120	
Ir (IS)	193	3	HMI He	6147791	1.88	5771767	106.51	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A
Data File Name	109SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:16:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-145.43	2	2000	
Na	23	3	45	98723.510	ppb	98723.510	1.51	10737773	400000	
Mg	24	3	45	73507.326	ppb	73507.326	0.49	4245819	400000	
Al	27	3	45	4.303	ppb	4.303	43.29	187	400000	
K	39	3	45	5790.288	ppb	5790.288	1.05	296626	400000	
Ca	40	2	45	197588.775	ppb	197588.775	0.75	113471840	400000	
V	51	3	72	1.256	ppb	1.256	23.91	1804	2000	
Cr	52	3	72	0.988	ppb	0.988	20.87	2944	5000	
Mn	55	3	72	183.692	ppb	183.692	1.83	73984	10000	
Fe	56	2	72	521.844	ppb	521.844	0.27	878726	10000	
Co	59	3	72	3.058	ppb	3.058	4.80	4044	2000	
Ni	60	3	72	6.014	ppb	6.014	3.15	2536	5000	
Cu	63	3	72	1.041	ppb	1.041	17.12	1508	5000	
Zn	66	3	72	6.507	ppb	6.507	6.03	1228	5000	
As	75	3	72	0.873	ppb	0.873	25.36	170	2000	
Se	78	2	72	0.173	ppb	0.173	39.21	14	2000	
Sr	88	3	72	779.074	ppb	779.074	1.06	425401	4000	
Mo	95	3	115	0.259	ppb	0.259	26.21	170	2000	
Ag	107	3	115	0.001	ppb	0.001	317.44	18	100	
Cd	111	3	115	0.015	ppb	0.015	200.82	28	2000	
Sn	120	3	115	2.347	ppb	2.347	22.64	2716	2000	
Sb	121	3	115	0.140	ppb	0.140	10.96	148	1000	
Ba	137	3	115	354.366	ppb	354.366	1.47	86485	5000	
Tl	205	3	193	-0.145	ppb	-0.145	-6.94	441	2000	
(Pb)	206	3	193	0.259	ppb	0.259	13.23	705	100	
(Pb)	207	3	193	0.245	ppb	0.245	26.76	808	100	
Pb	208	3	193	0.273	ppb	0.273	9.86	3060	5000	
Th	232	3	193	0.252	ppb	0.252	29.95	6957	2000	
U	238	3	193	4.244	ppb	4.244	0.88	25697	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4123370	0.77	3887690	106.06	60	120	
Sc (IS)	45	3	HMI He	600040	0.95	560366	107.08	60	120	
Ge Internal standard	72	2	HMI H2	2494657	0.61	2321471	107.46	60	120	
Ge Internal standard	72	3	HMI He	735346	0.68	685485	107.27	60	120	
In Internal Standard	115	3	HMI He	2774174	0.55	2631879	105.41	60	120	
Ir (IS)	193	3	HMI He	6070700	0.79	5771767	105.18	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-1-A
Data File Name	110SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:18:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.032	ppb	0.032	343.14	5	2000	
Na	23	3	45	100950.593	ppb	100950.593	1.17	11216941	400000	
Mg	24	3	45	74323.710	ppb	74323.710	1.34	4385504	400000	
Al	27	3	45	3.120	ppb	3.120	28.99	163	400000	
K	39	3	45	4660.248	ppb	4660.248	0.43	249165	400000	
Ca	40	2	45	205720.452	ppb	205720.452	0.76	118533026	400000	
V	51	3	72	0.949	ppb	0.949	8.27	1649	2000	
Cr	52	3	72	1.120	ppb	1.120	16.49	3109	5000	
Mn	55	3	72	388.948	ppb	388.948	1.52	159782	10000	
Fe	56	2	72	54.752	ppb	54.752	3.95	122307	10000	
Co	59	3	72	0.274	ppb	0.274	11.46	405	2000	
Ni	60	3	72	9.676	ppb	9.676	2.84	3950	5000	
Cu	63	3	72	1.322	ppb	1.322	1.53	1828	5000	
Zn	66	3	72	2.265	ppb	2.265	18.37	578	5000	
As	75	3	72	0.415	ppb	0.415	63.38	120	2000	
Se	78	2	72	0.082	ppb	0.082	58.56	9	2000	
Sr	88	3	72	784.697	ppb	784.697	0.44	437606	4000	
Mo	95	3	115	0.143	ppb	0.143	29.45	112	2000	
Ag	107	3	115	0.010	ppb	0.010	47.55	33	100	
Cd	111	3	115	0.086	ppb	0.086	135.75	47	2000	
Sn	120	3	115	-0.237	ppb	-0.237	-29.12	751	2000	
Sb	121	3	115	0.068	ppb	0.068	48.92	93	1000	
Ba	137	3	115	352.201	ppb	352.201	2.22	86313	5000	
Tl	205	3	193	-0.038	ppb	-0.038	-45.13	881	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-573.34	365	100	
(Pb)	207	3	193	-0.008	ppb	-0.008	-132.54	520	100	
Pb	208	3	193	-0.005	ppb	-0.005	-396.87	1599	5000	
Th	232	3	193	0.061	ppb	0.061	79.01	6027	2000	
U	238	3	193	3.907	ppb	3.907	2.98	24140	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4137186	1.16	3887690	106.42	60	120	
Sc (IS)	45	3	HMI He	612990	0.97	560366	109.39	60	120	
Ge Internal standard	72	2	HMI H2	2531649	1.69	2321471	109.05	60	120	
Ge Internal standard	72	3	HMI He	751006	0.42	685485	109.56	60	120	
In Internal Standard	115	3	HMI He	2786373	2.25	2631879	105.87	60	120	
Ir (IS)	193	3	HMI He	6161882	3.12	5771767	106.76	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-2-A
Data File Name	111SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:20:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1267.00	3	2000	
Na	23	3	45	85549.071	ppb	85549.071	1.04	9474771	400000	
Mg	24	3	45	68064.018	ppb	68064.018	0.71	4001844	400000	
Al	27	3	45	1.990	ppb	1.990	48.80	137	400000	
K	39	3	45	4256.764	ppb	4256.764	1.87	229091	400000	
Ca	40	2	45	195592.112	ppb	195592.112	1.22	115819176	400000	
V	51	3	72	1.968	ppb	1.968	4.14	2304	2000	
Cr	52	3	72	1.008	ppb	1.008	17.58	3035	5000	
Mn	55	3	72	3.457	ppb	3.457	3.91	1614	10000	
Fe	56	2	72	20.423	ppb	20.423	13.41	65963	10000	
Co	59	3	72	0.115	ppb	0.115	43.20	193	2000	
Ni	60	3	72	2.941	ppb	2.941	13.90	1454	5000	
Cu	63	3	72	0.994	ppb	0.994	3.62	1498	5000	
Zn	66	3	72	2.113	ppb	2.113	18.64	556	5000	
As	75	3	72	1.078	ppb	1.078	25.10	198	2000	
Se	78	2	72	0.103	ppb	0.103	30.46	10	2000	
Sr	88	3	72	714.732	ppb	714.732	0.47	400443	4000	
Mo	95	3	115	0.123	ppb	0.123	32.26	102	2000	
Ag	107	3	115	0.004	ppb	0.004	102.92	23	100	
Cd	111	3	115	-0.052	ppb	-0.052	-97.75	12	2000	
Sn	120	3	115	-0.277	ppb	-0.277	-24.71	721	2000	
Sb	121	3	115	0.118	ppb	0.118	22.63	132	1000	
Ba	137	3	115	367.949	ppb	367.949	1.71	90220	5000	
Tl	205	3	193	-0.117	ppb	-0.117	-9.23	565	2000	
(Pb)	206	3	193	-0.008	ppb	-0.008	-655.35	360	100	
(Pb)	207	3	193	-0.010	ppb	-0.010	-784.41	520	100	
Pb	208	3	193	-0.008	ppb	-0.008	-582.34	1589	5000	
Th	232	3	193	-0.054	ppb	-0.054	-37.34	5432	2000	
U	238	3	193	4.396	ppb	4.396	1.40	27041	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4251675	0.44	3887690	109.36	60	120	
Sc (IS)	45	3	HMI He	610770	0.68	560366	108.99	60	120	
Ge Internal standard	72	2	HMI H2	2541856	1.58	2321471	109.49	60	120	
Ge Internal standard	72	3	HMI He	754497	0.69	685485	110.07	60	120	
In Internal Standard	115	3	HMI He	2787143	0.59	2631879	105.90	60	120	
Ir (IS)	193	3	HMI He	6183535	1.42	5771767	107.13	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	112_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:21:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.425	ppb	2.218	2261	50	98.9	90	110	
Na	23	3	45	47592.519	ppb	1.319	5243535	51000	93.3	90	110	
Mg	24	3	45	10216.810	ppb	2.199	596876	11000	92.9	90	110	
Al	27	3	45	948.900	ppb	1.622	21942	1000	94.9	90	110	
K	39	3	45	10087.458	ppb	0.420	502712	11000	91.7	90	110	
Ca	40	2	45	10300.432	ppb	0.519	5940615	11000	93.6	90	110	
V	51	3	72	49.914	ppb	2.019	31480	50	99.8	90	110	
Cr	52	3	72	51.065	ppb	2.663	40590	50	102.1	90	110	
Mn	55	3	72	50.346	ppb	4.059	20126	50	100.7	90	110	
Fe	56	2	72	1021.105	ppb	1.574	1635899	1000	102.1	90	110	
Co	59	3	72	49.728	ppb	1.093	64283	50	99.5	90	110	
Ni	60	3	72	50.273	ppb	1.740	18376	50	100.5	90	110	
Cu	63	3	72	49.494	ppb	3.797	49482	50	99.0	90	110	
Zn	66	3	72	51.793	ppb	4.009	8180	50	103.6	90	110	
As	75	3	72	50.723	ppb	1.684	5802	50	101.4	90	110	
Se	78	2	72	50.542	ppb	2.785	2947	50	101.1	90	110	
Sr	88	3	72	99.417	ppb	1.996	53550	100	99.4	90	110	
Mo	95	3	115	49.059	ppb	2.234	24667	50	98.1	90	110	
Ag	107	3	115	49.920	ppb	1.678	84423	50	99.8	90	110	
Cd	111	3	115	48.399	ppb	2.863	11963	50	96.8	90	110	
Sn	120	3	115	49.630	ppb	3.425	38342	50	99.3	90	110	
Sb	121	3	115	49.845	ppb	2.642	38030	50	99.7	90	110	
Ba	137	3	115	52.783	ppb	2.216	12797	50	105.6	90	110	
Tl	205	3	193	47.718	ppb	4.074	193837	50	95.4	90	110	
(Pb)	206	3	193	48.909	ppb	2.699	65350	50	97.8	90	110	
(Pb)	207	3	193	47.613	ppb	2.366	56783	50	95.2	90	110	
Pb	208	3	193	48.219	ppb	3.517	261720	50	96.4	90	110	
Th	232	3	193	47.280	ppb	2.105	259986	50	94.6	90	110	
U	238	3	193	47.903	ppb	3.766	274996	50	95.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4133382	0.88	3887690	106.32	60	120	
Sc (IS)	45	3	HMI He	606749	0.88	560366	108.28	60	120	
Ge Internal standard	72	2	HMI H2	2416244	0.92	2321471	104.08	60	120	
Ge Internal standard	72	3	HMI He	725235	1.73	685485	105.80	60	120	
In Internal Standard	115	3	HMI He	2749334	1.94	2631879	104.46	60	120	
Ir (IS)	193	3	HMI He	6148045	2.59	5771767	106.52	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	113_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:23:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.043	ppb	-142.9	2	0.5	
Na	23	3	45	50.825	ppb	9.2	22758	25	>RL
Mg	24	3	45	3.186	ppb	35.3	417	25	
Al	27	3	45	-0.222	ppb	-459.9	83	15	
K	39	3	45	1.440	ppb	1349.6	26365	50	
V	51	3	72	0.083	ppb	139.8	1058	1	
Cr	52	3	72	0.720	ppb	30.2	2684	1	
Mn	55	3	72	0.214	ppb	19.0	265	0.5	
Co	59	3	72	0.023	ppb	7.0	67	0.5	
Ni	60	3	72	0.776	ppb	18.1	618	1	
Cu	63	3	72	0.035	ppb	83.4	486	1	
Zn	66	3	72	-0.030	ppb	-867.0	203	5	
As	75	3	72	-0.018	ppb	-1381.4	67	1	
Se	78	2	72	-0.005	ppb	-850.1	3	1	
Sr	88	3	72	0.045	ppb	33.7	48	0.5	
Mo	95	3	115	0.035	ppb	68.0	57	0.5	
Ag	107	3	115	0.015	ppb	28.5	42	1	
Cd	111	3	115	-0.045	ppb	-53.5	13	0.5	
Sn	120	3	115	-0.107	ppb	-15.2	850	1	
Sb	121	3	115	0.079	ppb	75.9	102	0.6	
Ba	137	3	115	0.066	ppb	58.9	55	0.5	
Tl	205	3	193	-0.163	ppb	-3.2	375	0.1	
(Pb)	206	3	193	-0.071	ppb	-28.0	273	1	
(Pb)	207	3	193	-0.076	ppb	-90.0	438	1	
Pb	208	3	193	-0.067	ppb	-18.6	1258	0.5	
Th	232	3	193	1.842	ppb	8.3	15564	1	>RL
U	238	3	193	-0.010	ppb	-136.4	1741	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4178087	1.16	3887690	107.47	60	120	
Sc (IS)	45	3	HMI He	596356	0.85	560366	106.42	60	120	
Ge Internal standard	72	2	HMI H2	2490963	0.63	2321471	107.30	60	120	
Ge Internal standard	72	3	HMI He	720583	1.38	685485	105.12	60	120	
In Internal Standard	115	3	HMI He	2781673	1.45	2631879	105.69	60	120	
Ir (IS)	193	3	HMI He	6133719	2.30	5771767	106.27	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-3-A
Data File Name	114SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:25:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	170724.098	ppb	170724.098	0.70	18875018	400000	
Mg	24	3	45	96302.930	ppb	96302.930	1.81	5657257	400000	
Al	27	3	45	4.586	ppb	4.586	18.01	197	400000	
K	39	3	45	5651.461	ppb	5651.461	0.69	295116	400000	
Ca	40	2	45	253157.959	ppb	253157.959	0.51	149488191	400000	
V	51	3	72	2.575	ppb	2.575	6.46	2657	2000	
Cr	52	3	72	1.155	ppb	1.155	20.48	3112	5000	
Mn	55	3	72	23.186	ppb	23.186	1.58	9629	10000	
Fe	56	2	72	31.146	ppb	31.146	7.80	83229	10000	
Co	59	3	72	4.172	ppb	4.172	1.84	5578	2000	
Ni	60	3	72	72.772	ppb	72.772	1.61	27186	5000	
Cu	63	3	72	4.203	ppb	4.203	6.74	4747	5000	
Zn	66	3	72	2.168	ppb	2.168	11.82	558	5000	
As	75	3	72	1.256	ppb	1.256	23.60	217	2000	
Se	78	2	72	0.783	ppb	0.783	10.85	51	2000	
Sr	88	3	72	946.650	ppb	946.650	2.08	523898	4000	
Mo	95	3	115	0.379	ppb	0.379	11.46	232	2000	
Ag	107	3	115	0.003	ppb	0.003	219.48	22	100	
Cd	111	3	115	0.002	ppb	0.002	3460.71	25	2000	
Sn	120	3	115	-0.078	ppb	-0.078	-102.74	873	2000	
Sb	121	3	115	0.157	ppb	0.157	54.26	162	1000	
Ba	137	3	115	543.061	ppb	543.061	0.60	132955	5000	
Tl	205	3	193	-0.177	ppb	-0.177	-3.38	315	2000	
(Pb)	206	3	193	3.026	ppb	3.026	2.97	4362	100	
(Pb)	207	3	193	2.851	ppb	2.851	2.35	3870	100	
Pb	208	3	193	2.916	ppb	2.916	1.68	17236	5000	
Th	232	3	193	0.397	ppb	0.397	21.76	7775	2000	
U	238	3	193	5.530	ppb	5.530	1.92	33118	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4240014	2.12	3887690	109.06	60	120	
Sc (IS)	45	3	HMI He	610310	0.83	560366	108.91	60	120	
Ge Internal standard	72	2	HMI H2	2525967	0.54	2321471	108.81	60	120	
Ge Internal standard	72	3	HMI He	745338	0.59	685485	108.73	60	120	
In Internal Standard	115	3	HMI He	2783315	1.08	2631879	105.75	60	120	
Ir (IS)	193	3	HMI He	6104304	1.60	5771767	105.76	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-1-A
Data File Name	115SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:27:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-149.18	2	2000	
Na	23	3	45	67559.157	ppb	67559.157	2.44	7441689	400000	
Mg	24	3	45	53903.643	ppb	53903.643	1.30	3150705	400000	
Al	27	3	45	3.903	ppb	3.903	68.64	180	400000	
K	39	3	45	3491.573	ppb	3491.573	2.07	191626	400000	
Ca	40	2	45	120897.680	ppb	120897.680	1.25	71326803	400000	
V	51	3	72	0.648	ppb	0.648	9.80	1476	2000	
Cr	52	3	72	0.902	ppb	0.902	46.77	2972	5000	
Mn	55	3	72	0.522	ppb	0.522	27.67	406	10000	
Fe	56	2	72	20.048	ppb	20.048	11.71	65463	10000	
Co	59	3	72	0.043	ppb	0.043	25.55	97	2000	
Ni	60	3	72	1.148	ppb	1.148	15.40	791	5000	
Cu	63	3	72	0.682	ppb	0.682	10.16	1184	5000	
Zn	66	3	72	1.387	ppb	1.387	23.85	443	5000	
As	75	3	72	0.699	ppb	0.699	25.11	155	2000	
Se	78	2	72	0.429	ppb	0.429	27.26	30	2000	
Sr	88	3	72	604.409	ppb	604.409	0.89	340949	4000	
Mo	95	3	115	0.067	ppb	0.067	55.21	72	2000	
Ag	107	3	115	0.002	ppb	0.002	108.90	20	100	
Cd	111	3	115	-0.025	ppb	-0.025	-125.66	18	2000	
Sn	120	3	115	-0.341	ppb	-0.341	-23.25	663	2000	
Sb	121	3	115	0.099	ppb	0.099	31.99	115	1000	
Ba	137	3	115	225.430	ppb	225.430	3.16	54517	5000	
Tl	205	3	193	-0.191	ppb	-0.191	-4.01	262	2000	
(Pb)	206	3	193	-0.065	ppb	-0.065	-24.62	282	100	
(Pb)	207	3	193	-0.064	ppb	-0.064	-140.52	451	100	
Pb	208	3	193	-0.057	ppb	-0.057	-33.78	1311	5000	
Th	232	3	193	0.141	ppb	0.141	32.88	6427	2000	
U	238	3	193	2.194	ppb	2.194	2.42	14274	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4235317	1.88	3887690	108.94	60	120	
Sc (IS)	45	3	HMI He	607202	0.44	560366	108.36	60	120	
Ge Internal standard	72	2	HMI H2	2545049	0.33	2321471	109.63	60	120	
Ge Internal standard	72	3	HMI He	759660	0.71	685485	110.82	60	120	
In Internal Standard	115	3	HMI He	2749677	2.96	2631879	104.48	60	120	
Ir (IS)	193	3	HMI He	6126356	0.64	5771767	106.14	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-2-A
Data File Name	116SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:29:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	78145.393	ppb	78145.393	0.91	8614144	400000	
Mg	24	3	45	62532.700	ppb	62532.700	2.05	3659401	400000	
Al	27	3	45	2.307	ppb	2.307	70.27	143	400000	
K	39	3	45	4376.001	ppb	4376.001	2.08	233633	400000	
Ca	40	2	45	143482.977	ppb	143482.977	0.81	84247471	400000	
V	51	3	72	0.689	ppb	0.689	7.21	1483	2000	
Cr	52	3	72	1.060	ppb	1.060	13.73	3057	5000	
Mn	55	3	72	0.277	ppb	0.277	29.77	302	10000	
Fe	56	2	72	11.966	ppb	11.966	22.43	52358	10000	
Co	59	3	72	0.089	ppb	0.089	27.28	157	2000	
Ni	60	3	72	1.321	ppb	1.321	10.37	845	5000	
Cu	63	3	72	1.025	ppb	1.025	12.84	1519	5000	
Zn	66	3	72	0.188	ppb	0.188	154.92	247	5000	
As	75	3	72	0.218	ppb	0.218	28.31	97	2000	
Se	78	2	72	0.545	ppb	0.545	5.84	37	2000	
Sr	88	3	72	695.714	ppb	695.714	1.30	387199	4000	
Mo	95	3	115	0.065	ppb	0.065	34.98	72	2000	
Ag	107	3	115	0.017	ppb	0.017	34.38	45	100	
Cd	111	3	115	-0.058	ppb	-0.058	-34.42	10	2000	
Sn	120	3	115	-0.334	ppb	-0.334	-12.38	673	2000	
Sb	121	3	115	0.128	ppb	0.128	34.71	138	1000	
Ba	137	3	115	252.707	ppb	252.707	0.42	61545	5000	
Tl	205	3	193	-0.183	ppb	-0.183	-4.59	292	2000	
(Pb)	206	3	193	-0.045	ppb	-0.045	-56.90	308	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-74.10	431	100	
Pb	208	3	193	-0.057	ppb	-0.057	-31.08	1308	5000	
Th	232	3	193	-0.008	ppb	-0.008	-953.36	5614	2000	
U	238	3	193	3.312	ppb	3.312	1.22	20577	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4216213	2.82	3887690	108.45	60	120	
Sc (IS)	45	3	HMI He	607849	1.05	560366	108.47	60	120	
Ge Internal standard	72	2	HMI H2	2557917	1.04	2321471	110.19	60	120	
Ge Internal standard	72	3	HMI He	749534	1.08	685485	109.34	60	120	
In Internal Standard	115	3	HMI He	2767717	0.05	2631879	105.16	60	120	
Ir (IS)	193	3	HMI He	6111522	0.76	5771767	105.89	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A
Data File Name	117SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:30:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-155.60	2	2000	
Na	23	3	45	154926.575	ppb	154926.575	3.05	17045859	400000	
Mg	24	3	45	60742.988	ppb	60742.988	3.69	3550847	400000	
Al	27	3	45	4.496	ppb	4.496	26.57	194	400000	
K	39	3	45	4832.545	ppb	4832.545	0.49	255027	400000	
Ca	40	2	45	206686.521	ppb	206686.521	1.77	120629445	400000	
V	51	3	72	3.077	ppb	3.077	9.32	2964	2000	
Cr	52	3	72	1.720	ppb	1.720	13.51	3540	5000	
Mn	55	3	72	284.052	ppb	284.052	1.70	115578	10000	
Fe	56	2	72	61.614	ppb	61.614	4.35	134222	10000	
Co	59	3	72	1.678	ppb	1.678	1.98	2261	2000	
Ni	60	3	72	42.167	ppb	42.167	2.72	15861	5000	
Cu	63	3	72	1.256	ppb	1.256	6.89	1743	5000	
Zn	66	3	72	8.407	ppb	8.407	10.94	1541	5000	
As	75	3	72	1.617	ppb	1.617	14.99	258	2000	
Se	78	2	72	0.288	ppb	0.288	75.29	21	2000	
Sr	88	3	72	1032.507	ppb	1032.507	1.00	570072	4000	
Mo	95	3	115	0.350	ppb	0.350	14.88	217	2000	
Ag	107	3	115	0.007	ppb	0.007	87.93	28	100	
Cd	111	3	115	-0.051	ppb	-0.051	-82.75	12	2000	
Sn	120	3	115	-0.332	ppb	-0.332	-25.48	678	2000	
Sb	121	3	115	0.131	ppb	0.131	28.76	142	1000	
Ba	137	3	115	424.821	ppb	424.821	1.85	103841	5000	
Tl	205	3	193	-0.167	ppb	-0.167	-3.86	355	2000	
(Pb)	206	3	193	-0.017	ppb	-0.017	-106.75	343	100	
(Pb)	207	3	193	0.033	ppb	0.033	107.72	561	100	
Pb	208	3	193	-0.004	ppb	-0.004	-382.39	1588	5000	
Th	232	3	193	-0.064	ppb	-0.064	-74.46	5290	2000	
U	238	3	193	3.772	ppb	3.772	1.07	23087	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4190914	0.99	3887690	107.80	60	120	
Sc (IS)	45	3	HMI He	607397	1.27	560366	108.39	60	120	
Ge Internal standard	72	2	HMI H2	2543625	0.35	2321471	109.57	60	120	
Ge Internal standard	72	3	HMI He	743582	1.02	685485	108.48	60	120	
In Internal Standard	115	3	HMI He	2779303	2.27	2631879	105.60	60	120	
Ir (IS)	193	3	HMI He	6084737	0.93	5771767	105.42	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608663/1-A
Data File Name	118_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:32:45-06:00
Sample Type	Blank
Dilution	1
Comment	608663 soil 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.043	ppb	-141.7169234	2	0.5
Na	23	3	45	171.643	ppb	3.598355403	36601	25
Mg	24	3	45	31.737	ppb	6.179301456	2102	25
Al	27	3	45	8.346	ppb	42.09065349	284	15
K	39	3	45	16.523	ppb	81.60693185	27665	50
Ca	40	2	45	153.213	ppb	0.951974283	103180	200
V	51	3	72	-0.321	ppb	-47.78181136	830	1
Cr	52	3	72	2.042	ppb	7.54744709	3752	1
Mn	55	3	72	1.331	ppb	7.453917504	720	0.5
Fe	56	2	72	33.896	ppb	8.210389911	86734	50
Co	59	3	72	0.041	ppb	29.29743347	92	0.5
Ni	60	3	72	0.923	ppb	23.22381397	685	1
Cu	63	3	72	1.717	ppb	6.853433621	2189	1
Zn	66	3	72	4.503	ppb	8.664139578	916	5
As	75	3	72	-0.086	ppb	-101.7801397	60	1
(Se)	78	3	72	-0.098	ppb	-3362.582687	32	1
Sr	88	3	72	0.799	ppb	3.597958779	461	0.5
Mo	95	3	115	0.286	ppb	35.5767915	185	0.5
Ag	107	3	115	0.005	ppb	57.21913302	25	1
Cd	111	3	115	-0.059	ppb	-0.75781046	10	0.5
Sn	120	3	115	9.761	ppb	1.745941336	8408	1
Sb	121	3	115	0.018	ppb	32.53543956	55	0.6
Ba	137	3	115	0.615	ppb	2.688866575	190	0.5
Tl	205	3	193	-0.169	ppb	-3.852107335	352	0.1
(Pb)	206	3	193	0.149	ppb	34.55289268	566	1
(Pb)	207	3	193	0.184	ppb	34.02063022	746	1
Pb	208	3	193	0.169	ppb	8.30571369	2536	0.5
Th	232	3	193	-0.044	ppb	-31.77776377	5445	1
U	238	3	193	0.001	ppb	744.7012945	1809	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4286106	0.06	3887690	110.25	60	120	
Sc (IS)	45	3	HMI He	609688	0.10	560366	108.80	60	120	
Ge Internal standard	72	2	HMI H2	2498055	2.26	2321471	107.61	60	120	
Ge Internal standard	72	3	HMI He	736122	0.31	685485	107.39	60	120	
In Internal Standard	115	3	HMI He	2791177	1.12	2631879	106.05	60	120	
Ir (IS)	193	3	HMI He	6141915	1.47	5771767	106.41	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608663/2-A
Data File Name	119_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:34:36-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608663 soil 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	199.584	199.584	ppb	2.437	8917	40	499.0	80	120	>+/-20%
Na	23	3	45	3876.425	3876.425	ppb	1.025	441966	40	9691.1	80	120	>+/-20%
Mg	24	3	45	3485.198	3485.198	ppb	2.031	203179	40	8713.0	80	120	>+/-20%
Al	27	3	45	3496.844	3496.844	ppb	1.549	80374	40	8742.1	80	120	>+/-20%
K	39	3	45	3679.085	3679.085	ppb	0.697	199768	40	9197.7	80	120	>+/-20%
Ca	40	2	45	3910.233	3910.233	ppb	0.991	2284228	40	9775.6	80	120	>+/-20%
V	51	3	72	185.994	185.994	ppb	1.191	116334	40	465.0	80	120	>+/-20%
Cr	52	3	72	195.966	195.966	ppb	2.233	151988	40	489.9	80	120	>+/-20%
Mn	55	3	72	193.862	193.862	ppb	0.841	78195	40	484.7	80	120	>+/-20%
Fe	56	2	72	3713.938	3713.938	ppb	1.496	6117641	40	9284.8	80	120	>+/-20%
(Fe)	56	3	72	3694.361	3694.361	ppb	1.331	2455724	40	9235.9	80	120	>+/-20%
Co	59	3	72	190.119	190.119	ppb	1.562	249497	40	475.3	80	120	>+/-20%
Ni	60	3	72	192.243	192.243	ppb	1.132	70389	40	480.6	80	120	>+/-20%
Cu	63	3	72	195.602	195.602	ppb	0.433	197316	40	489.0	80	120	>+/-20%
Zn	66	3	72	199.452	199.452	ppb	0.882	31390	40	498.6	80	120	>+/-20%
As	75	3	72	186.402	186.402	ppb	1.298	21463	40	466.0	80	120	>+/-20%
Se	78	2	72	190.851	190.851	ppb	2.956	11585	40	477.1	80	120	>+/-20%
(Se)	78	3	72	212.222	212.222	ppb	6.651	1256	40	530.6	80	120	>+/-20%
Sr	88	3	72	379.707	379.707	ppb	1.270	207671	40	949.3	80	120	>+/-20%
Mo	95	3	115	186.506	186.506	ppb	2.102	93512	40	466.3	80	120	>+/-20%
Ag	107	3	115	197.433	197.433	ppb	2.634	333243	40	493.6	80	120	>+/-20%
Cd	111	3	115	188.660	188.660	ppb	1.616	46490	40	471.7	80	120	>+/-20%
Sn	120	3	115	193.261	193.261	ppb	1.219	146424	40	483.2	80	120	>+/-20%
Sb	121	3	115	188.244	188.244	ppb	1.627	143267	40	470.6	80	120	>+/-20%
Ba	137	3	115	200.985	200.985	ppb	0.987	48545	40	502.5	80	120	>+/-20%
Tl	205	3	193	187.343	187.343	ppb	1.599	749850	40	468.4	80	120	>+/-20%
(Pb)	206	3	193	196.068	196.068	ppb	2.359	257987	40	490.2	80	120	>+/-20%
(Pb)	207	3	193	186.744	186.744	ppb	1.738	218713	40	466.9	80	120	>+/-20%
Pb	208	3	193	190.540	190.540	ppb	2.497	1018180	40	476.4	80	120	>+/-20%
Th	232	3	193	188.277	188.277	ppb	2.123	1007022	40	470.7	80	120	>+/-20%
U	238	3	193	190.374	190.374	ppb	2.463	1075673	40	475.9	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174021	1.33	3887690	107.37	60	120	
Sc (IS)	45	3	HMI He	605022	1.29	560366	107.97	60	120	
Ge Internal standard	72	2	HMI H2	2518405	0.82	2321471	108.48	60	120	
Ge Internal standard	72	3	HMI He	736509	0.59	685485	107.44	60	120	
In Internal Standard	115	3	HMI He	2744742	2.03	2631879	104.29	60	120	
Ir (IS)	193	3	HMI He	6078825	1.68	5771767	105.32	60	120	

Sample Report

Sample Table

Sample Name	GB 280-608265/1-B
Data File Name	120SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:36:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.440	ppb	0.440	14.50	23	2000	
Na	23	3	45	528.981	ppb	528.981	0.97	73469	400000	
Mg	24	3	45	2812.111	ppb	2812.111	1.79	159704	400000	
Al	27	3	45	3661.657	ppb	3661.657	1.33	81955	400000	
K	39	3	45	1965.066	ppb	1965.066	4.46	115989	400000	
Ca	40	2	45	8021.145	ppb	8021.145	1.54	4558271	400000	
V	51	3	72	8.469	ppb	8.469	3.12	6302	2000	
Cr	52	3	72	33.984	ppb	33.984	4.75	28270	5000	
Mn	55	3	72	476.187	ppb	476.187	1.04	192494	10000	
Fe	56	2	72	36460.790	ppb	36460.790	1.41	59360494	10000	
Co	59	3	72	2.481	ppb	2.481	5.56	3305	2000	
Ni	60	3	72	10.321	ppb	10.321	4.04	4124	5000	
Cu	63	3	72	13.777	ppb	13.777	2.15	14377	5000	
Zn	66	3	72	15.003	ppb	15.003	1.94	2567	5000	
As	75	3	72	4.177	ppb	4.177	5.14	551	2000	
Se	78	2	72	0.206	ppb	0.206	49.13	16	2000	
Sr	88	3	72	32.791	ppb	32.791	2.47	18021	4000	
Mo	95	3	115	2.931	ppb	2.931	1.24	1506	2000	
Ag	107	3	115	0.126	ppb	0.126	9.79	228	100	
Cd	111	3	115	-0.004	ppb	-0.004	-293.14	23	2000	
Sn	120	3	115	8.192	ppb	8.192	3.70	7080	2000	
Sb	121	3	115	0.322	ppb	0.322	23.56	285	1000	
Ba	137	3	115	63.209	ppb	63.209	1.81	15275	5000	
Tl	205	3	193	-0.042	ppb	-0.042	-7.40	855	2000	
(Pb)	206	3	193	9.149	ppb	9.149	2.64	12397	100	
(Pb)	207	3	193	6.323	ppb	6.323	3.73	7915	100	
Pb	208	3	193	7.391	ppb	7.391	2.92	41074	5000	
Th	232	3	193	12.315	ppb	12.315	1.61	71219	2000	
U	238	3	193	3.423	ppb	3.423	5.80	21102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071440	2.01	3887690	104.73	60	120	
Sc (IS)	45	3	HMI He	589131	0.52	560366	105.13	60	120	
Ge Internal standard	72	2	HMI H2	2500685	0.96	2321471	107.72	60	120	
Ge Internal standard	72	3	HMI He	739184	0.81	685485	107.83	60	120	
In Internal Standard	115	3	HMI He	2741303	0.83	2631879	104.16	60	120	
Ir (IS)	193	3	HMI He	6084302	2.08	5771767	105.41	60	120	

Sample Report

Sample Table

Sample Name	LCSSRM 280-608265/2-B
Data File Name	121SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:38:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1140.877	ppb	1140.877	1.13	51207	2000	
Na	23	3	45	7920.150	ppb	7920.150	0.46	891545	400000	
Mg	24	3	45	37776.767	ppb	37776.767	2.11	2216858	400000	
Al	27	3	45	150485.133	ppb	150485.133	1.60	3481570	400000	
K	39	3	45	39536.183	ppb	39536.183	1.63	1900979	400000	
Ca	40	2	45	68989.074	ppb	68989.074	2.31	40824230	400000	
V	51	3	72	3152.636	ppb	3152.636	0.80	1941779	2000	
Cr	52	3	72	3042.589	ppb	3042.589	1.56	2311541	5000	
Mn	55	3	72	6020.589	ppb	6020.589	1.93	2405605	10000	
Fe	56	2	72	281695.384	ppb	281695.384	0.84	447890074	10000	>LDR
Co	59	3	72	1409.918	ppb	1409.918	1.14	1837039	2000	
Ni	60	3	72	2419.080	ppb	2419.080	2.03	875445	5000	
Cu	63	3	72	1981.913	ppb	1981.913	1.51	1980843	5000	
Zn	66	3	72	3306.123	ppb	3306.123	1.77	513310	5000	
As	75	3	72	2672.940	ppb	2672.940	0.89	304675	2000	
Se	78	2	72	3225.503	ppb	3225.503	0.95	189943	2000	
Sr	88	3	72	1775.095	ppb	1775.095	0.78	963935	4000	
Mo	95	3	115	2645.922	ppb	2645.922	2.41	1336456	2000	
Ag	107	3	115	1011.953	ppb	1011.953	0.72	1721279	100	>LDR
Cd	111	3	115	3080.935	ppb	3080.935	0.55	764663	2000	
Sn	120	3	115	2167.336	ppb	2167.336	1.42	1645367	2000	
Sb	121	3	115	2926.627	ppb	2926.627	1.98	2243845	1000	
Ba	137	3	115	4768.281	ppb	4768.281	0.68	1159605	5000	
Tl	205	3	193	1176.504	ppb	1176.504	0.86	4817811	2000	
(Pb)	206	3	193	3838.811	ppb	3838.811	1.68	5167130	100	>LDR
(Pb)	207	3	193	3631.367	ppb	3631.367	3.09	4346072	100	>LDR
Pb	208	3	193	3678.870	ppb	3678.870	2.03	20106542	5000	
Th	232	3	193	368.515	ppb	368.515	1.13	2013407	2000	
U	238	3	193	1842.145	ppb	1842.145	2.34	10645648	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4248763	1.58	3887690	109.29	60	120	
Sc (IS)	45	3	HMI He	609626	0.78	560366	108.79	60	120	
Ge Internal standard	72	2	HMI H2	2443451	0.76	2321471	105.25	60	120	
Ge Internal standard	72	3	HMI He	731333	0.99	685485	106.69	60	120	
In Internal Standard	115	3	HMI He	2765278	1.37	2631879	105.07	60	120	
Ir (IS)	193	3	HMI He	6225281	0.62	5771767	107.86	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C@50
Data File Name	122SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:39:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.221	ppb	0.221	59.91	13	2000	
Na	23	3	45	92.561	ppb	92.561	2.95	27347	400000	
Mg	24	3	45	1605.423	ppb	1605.423	2.44	92667	400000	
Al	27	3	45	2442.798	ppb	2442.798	1.82	55541	400000	
K	39	3	45	209.250	ppb	209.250	15.81	36109	400000	
Ca	40	2	45	5040.710	ppb	5040.710	3.09	2851980	400000	
V	51	3	72	7.097	ppb	7.097	4.46	5343	2000	
Cr	52	3	72	36.091	ppb	36.091	7.16	29290	5000	
Mn	55	3	72	2267.569	ppb	2267.569	2.04	897972	10000	
Fe	56	2	72	4422.665	ppb	4422.665	1.89	6918294	10000	
Co	59	3	72	2.402	ppb	2.402	4.70	3139	2000	
Ni	60	3	72	12.465	ppb	12.465	5.36	4812	5000	
Cu	63	3	72	24.042	ppb	24.042	1.99	24264	5000	
Zn	66	3	72	71.637	ppb	71.637	3.41	11226	5000	
As	75	3	72	11.016	ppb	11.016	2.22	1313	2000	
Se	78	2	72	0.829	ppb	0.829	16.09	51	2000	
Sr	88	3	72	10.832	ppb	10.832	5.16	5857	4000	
Mo	95	3	115	5.987	ppb	5.987	22.11	3014	2000	
Ag	107	3	115	0.185	ppb	0.185	10.07	327	100	
Cd	111	3	115	0.395	ppb	0.395	24.63	122	2000	
Sn	120	3	115	20.232	ppb	20.232	8.29	16070	2000	
Sb	121	3	115	3.047	ppb	3.047	5.39	2347	1000	
Ba	137	3	115	56.803	ppb	56.803	5.68	13677	5000	
Tl	205	3	193	0.254	ppb	0.254	17.00	2072	2000	
(Pb)	206	3	193	33.807	ppb	33.807	1.97	45586	100	
(Pb)	207	3	193	31.826	ppb	31.826	1.09	38381	100	
Pb	208	3	193	32.463	ppb	32.463	0.65	177930	5000	
Th	232	3	193	8.465	ppb	8.465	13.02	51540	2000	
U	238	3	193	0.497	ppb	0.497	2.46	4670	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4048793	2.43	3887690	104.14	60	120	
Sc (IS)	45	3	HMI He	598185	0.82	560366	106.75	60	120	
Ge Internal standard	72	2	HMI H2	2393764	0.99	2321471	103.11	60	120	
Ge Internal standard	72	3	HMI He	724778	1.41	685485	105.73	60	120	
In Internal Standard	115	3	HMI He	2733501	3.04	2631879	103.86	60	120	
Ir (IS)	193	3	HMI He	6186110	0.49	5771767	107.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	123_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:41:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.880	ppb	2.130	2306	50	103.8	90	110	
Na	23	3	45	47529.208	ppb	0.822	5176644	51000	93.2	90	110	
Mg	24	3	45	10158.602	ppb	2.127	586677	11000	92.4	90	110	
Al	27	3	45	933.106	ppb	1.302	21328	1000	93.3	90	110	
K	39	3	45	9996.589	ppb	1.470	492661	11000	90.9	90	110	
Ca	40	2	45	9998.745	ppb	1.185	5785476	11000	90.9	90	110	
V	51	3	72	49.116	ppb	3.425	30426	50	98.2	90	110	
Cr	52	3	72	51.192	ppb	1.941	39951	50	102.4	90	110	
Mn	55	3	72	49.941	ppb	1.694	19607	50	99.9	90	110	
Fe	56	2	72	1010.473	ppb	0.811	1620026	1000	101.0	90	110	
Co	59	3	72	50.033	ppb	2.162	63502	50	100.1	90	110	
Ni	60	3	72	51.673	ppb	1.438	18540	50	103.3	90	110	
Cu	63	3	72	50.463	ppb	2.499	49542	50	100.9	90	110	
Zn	66	3	72	51.116	ppb	3.585	7928	50	102.2	90	110	
As	75	3	72	50.499	ppb	2.944	5670	50	101.0	90	110	
Se	78	2	72	49.641	ppb	2.367	2896	50	99.3	90	110	
Sr	88	3	72	100.203	ppb	2.778	52995	100	100.2	90	110	
Mo	95	3	115	49.857	ppb	2.867	25433	50	99.7	90	110	
Ag	107	3	115	49.781	ppb	1.270	85422	50	99.6	90	110	
Cd	111	3	115	47.776	ppb	0.440	11986	50	95.6	90	110	
Sn	120	3	115	49.544	ppb	1.915	38840	50	99.1	90	110	
Sb	121	3	115	48.747	ppb	0.853	37743	50	97.5	90	110	
Ba	137	3	115	50.571	ppb	4.886	12440	50	101.1	90	110	
Tl	205	3	193	48.237	ppb	3.225	193375	50	96.5	90	110	
(Pb)	206	3	193	49.131	ppb	2.980	64776	50	98.3	90	110	
(Pb)	207	3	193	48.133	ppb	2.434	56638	50	96.3	90	110	
Pb	208	3	193	48.736	ppb	3.456	261021	50	97.5	90	110	
Th	232	3	193	51.079	ppb	1.451	276752	50	102.2	90	110	
U	238	3	193	48.746	ppb	4.486	276073	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4147267	1.91	3887690	106.68	60	120	
Sc (IS)	45	3	HMI He	599768	0.94	560366	107.03	60	120	
Ge Internal standard	72	2	HMI H2	2417434	1.34	2321471	104.13	60	120	
Ge Internal standard	72	3	HMI He	712099	1.50	685485	103.88	60	120	
In Internal Standard	115	3	HMI He	2789356	1.51	2631879	105.98	60	120	
Ir (IS)	193	3	HMI He	6066983	2.63	5771767	105.11	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	124_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:43:30-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.078	ppb	0.0	0	0.5	
Na	23	3	45	28.249	ppb	16.5	20412	25	>RL
Mg	24	3	45	1.815	ppb	91.5	340	25	
Al	27	3	45	1.228	ppb	73.7	117	15	
K	39	3	45	3.995	ppb	585.8	26592	50	
V	51	3	72	-0.695	ppb	-8.1	595	1	
Cr	52	3	72	0.815	ppb	24.2	2799	1	
Mn	55	3	72	0.400	ppb	20.7	343	0.5	
Co	59	3	72	0.053	ppb	17.2	107	0.5	
Ni	60	3	72	0.979	ppb	13.6	701	1	
Cu	63	3	72	0.037	ppb	23.5	496	1	
Zn	66	3	72	0.107	ppb	289.2	228	5	
As	75	3	72	-0.391	ppb	-19.1	25	1	
Se	78	2	72	0.203	ppb	25.4	15	1	
Sr	88	3	72	0.037	ppb	107.9	45	0.5	
Mo	95	3	115	0.232	ppb	36.7	158	0.5	
Ag	107	3	115	0.041	ppb	17.1	87	1	
Cd	111	3	115	0.086	ppb	14.1	47	0.5	
Sn	120	3	115	0.646	ppb	13.9	1439	1	
Sb	121	3	115	0.253	ppb	5.5	238	0.6	
Ba	137	3	115	0.111	ppb	72.6	67	0.5	
Tl	205	3	193	-0.108	ppb	-11.5	590	0.1	
(Pb)	206	3	193	-0.007	ppb	-316.0	356	1	
(Pb)	207	3	193	-0.040	ppb	-219.9	478	1	
Pb	208	3	193	-0.001	ppb	-1742.2	1603	0.5	
Th	232	3	193	1.876	ppb	16.0	15624	1	>RL
U	238	3	193	0.012	ppb	315.3	1854	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4056923	1.28	3887690	104.35	60	120	
Sc (IS)	45	3	HMI He	598933	0.28	560366	106.88	60	120	
Ge Internal standard	72	2	HMI H2	2420674	1.08	2321471	104.27	60	120	
Ge Internal standard	72	3	HMI He	732045	0.53	685485	106.79	60	120	
In Internal Standard	115	3	HMI He	2810593	0.63	2631879	106.79	60	120	
Ir (IS)	193	3	HMI He	6088926	1.01	5771767	105.50	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C
Data File Name	125SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:45:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	11.470	ppb	11.470	2.82	520	2000	
Na	23	3	45	2754.283	ppb	2754.283	2.13	322458	400000	
Mg	24	3	45	80848.193	ppb	80848.193	0.40	4758430	400000	
Al	27	3	45	126319.364	ppb	126319.364	0.64	2931489	400000	
K	39	3	45	10371.384	ppb	10371.384	0.20	520075	400000	
Ca	40	2	45	253074.888	ppb	253074.888	1.47	147445484	400000	
V	51	3	72	404.300	ppb	404.300	0.49	250521	2000	
Cr	52	3	72	1818.228	ppb	1818.228	1.41	1385829	5000	
Mn	55	3	72	115287.611	ppb	115287.611	1.71	46179156	10000	>LDR
Fe	56	2	72	226181.025	ppb	226181.025	1.46	353591172	10000	>LDR
Co	59	3	72	114.264	ppb	114.264	0.49	149284	2000	
Ni	60	3	72	565.391	ppb	565.391	0.25	205402	5000	
Cu	63	3	72	1208.770	ppb	1208.770	1.33	1211395	5000	
Zn	66	3	72	3354.855	ppb	3354.855	0.33	522207	5000	
As	75	3	72	563.688	ppb	563.688	1.22	64469	2000	
Se	78	2	72	6.816	ppb	6.816	6.82	398	2000	
Sr	88	3	72	555.177	ppb	555.177	0.63	302242	4000	
Mo	95	3	115	31.962	ppb	31.962	3.18	16203	2000	
Ag	107	3	115	2.389	ppb	2.389	5.97	4085	100	
Cd	111	3	115	4.243	ppb	4.243	5.32	1080	2000	
Sn	120	3	115	941.002	ppb	941.002	1.24	715864	2000	
Sb	121	3	115	25.997	ppb	25.997	1.58	20002	1000	
Ba	137	3	115	2906.258	ppb	2906.258	1.16	707837	5000	
Tl	205	3	193	1.199	ppb	1.199	4.88	5830	2000	
(Pb)	206	3	193	1792.190	ppb	1792.190	1.88	2361494	100	>LDR
(Pb)	207	3	193	1703.106	ppb	1703.106	3.37	1995365	100	>LDR
Pb	208	3	193	1725.678	ppb	1725.678	2.57	9232264	5000	
Th	232	3	193	36.524	ppb	36.524	1.46	200419	2000	
U	238	3	193	9.746	ppb	9.746	1.11	56915	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4183855	2.10	3887690	107.62	60	120	
Sc (IS)	45	3	HMI He	611426	1.06	560366	109.11	60	120	
Ge Internal standard	72	2	HMI H2	2402452	1.16	2321471	103.49	60	120	
Ge Internal standard	72	3	HMI He	733130	0.65	685485	106.95	60	120	
In Internal Standard	115	3	HMI He	2769737	1.64	2631879	105.24	60	120	
Ir (IS)	193	3	HMI He	6094457	1.44	5771767	105.59	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-2-C
Data File Name	126SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:47:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.173	ppb	6.173	8.49	285	2000	
Na	23	3	45	839.606	ppb	839.606	0.79	112452	400000	
Mg	24	3	45	17021.087	ppb	17021.087	2.54	1018628	400000	
Al	27	3	45	88099.444	ppb	88099.444	0.64	2078304	400000	
K	39	3	45	6268.805	ppb	6268.805	0.41	330395	400000	
Ca	40	2	45	51915.457	ppb	51915.457	3.32	30753459	400000	
V	51	3	72	189.779	ppb	189.779	1.41	120272	2000	
Cr	52	3	72	186.060	ppb	186.060	0.20	146370	5000	
Mn	55	3	72	8851.364	ppb	8851.364	0.43	3610005	10000	
Fe	56	2	72	103538.949	ppb	103538.949	0.52	166453878	10000	>LDR
Co	59	3	72	32.704	ppb	32.704	1.93	43530	2000	
Ni	60	3	72	100.740	ppb	100.740	2.27	37549	5000	
Cu	63	3	72	115.624	ppb	115.624	0.85	118394	5000	
Zn	66	3	72	311.378	ppb	311.378	1.09	49541	5000	
As	75	3	72	599.672	ppb	599.672	1.59	69820	2000	
Se	78	2	72	2.068	ppb	2.068	8.43	127	2000	
Sr	88	3	72	148.710	ppb	148.710	0.41	82446	4000	
Mo	95	3	115	10.378	ppb	10.378	3.96	5400	2000	
Ag	107	3	115	0.469	ppb	0.469	13.24	833	100	
Cd	111	3	115	0.354	ppb	0.354	8.58	115	2000	
Sn	120	3	115	22.226	ppb	22.226	1.78	18192	2000	
Sb	121	3	115	6.122	ppb	6.122	5.30	4842	1000	
Ba	137	3	115	1098.325	ppb	1098.325	2.57	273176	5000	
Tl	205	3	193	0.759	ppb	0.759	3.05	4125	2000	
(Pb)	206	3	193	169.370	ppb	169.370	1.14	226570	100	
(Pb)	207	3	193	158.115	ppb	158.115	2.35	188261	100	
Pb	208	3	193	163.172	ppb	163.172	1.89	886427	5000	
Th	232	3	193	28.562	ppb	28.562	1.72	160113	2000	
U	238	3	193	6.791	ppb	6.791	2.94	40743	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4252677	0.83	3887690	109.39	60	120	
Sc (IS)	45	3	HMI He	621542	0.29	560366	110.92	60	120	
Ge Internal standard	72	2	HMI H2	2470174	0.81	2321471	106.41	60	120	
Ge Internal standard	72	3	HMI He	746410	0.62	685485	108.89	60	120	
In Internal Standard	115	3	HMI He	2828415	1.08	2631879	107.47	60	120	
Ir (IS)	193	3	HMI He	6178221	2.17	5771767	107.04	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-3-C
Data File Name	127SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:48:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.329	ppb	0.329	19.25	18	2000	
Na	23	3	45	346.427	ppb	346.427	2.49	55581	400000	
Mg	24	3	45	1107.458	ppb	1107.458	1.78	64876	400000	
Al	27	3	45	22288.288	ppb	22288.288	2.02	512957	400000	
K	39	3	45	2958.161	ppb	2958.161	1.58	166207	400000	
Ca	40	2	45	1713.513	ppb	1713.513	4.07	1004044	400000	
V	51	3	72	138.312	ppb	138.312	1.95	87077	2000	
Cr	52	3	72	135.108	ppb	135.108	1.34	105843	5000	
Mn	55	3	72	440.768	ppb	440.768	0.78	178177	10000	
Fe	56	2	72	55657.552	ppb	55657.552	1.74	89623796	10000	>LDR
Co	59	3	72	7.942	ppb	7.942	3.47	10497	2000	
Ni	60	3	72	20.362	ppb	20.362	3.50	7795	5000	
Cu	63	3	72	119.111	ppb	119.111	1.67	120748	5000	
Zn	66	3	72	201.035	ppb	201.035	2.29	31749	5000	
As	75	3	72	60.182	ppb	60.182	4.97	7003	2000	
Se	78	2	72	1.415	ppb	1.415	6.73	88	2000	
Sr	88	3	72	40.401	ppb	40.401	2.67	22194	4000	
Mo	95	3	115	17.726	ppb	17.726	2.77	8970	2000	
Ag	107	3	115	0.221	ppb	0.221	3.05	391	100	
Cd	111	3	115	0.190	ppb	0.190	45.46	72	2000	
Sn	120	3	115	17.246	ppb	17.246	6.41	13965	2000	
Sb	121	3	115	4.200	ppb	4.200	3.44	3252	1000	
Ba	137	3	115	353.269	ppb	353.269	2.55	85705	5000	
Tl	205	3	193	0.111	ppb	0.111	17.96	1486	2000	
(Pb)	206	3	193	116.940	ppb	116.940	4.59	156220	100	
(Pb)	207	3	193	110.332	ppb	110.332	4.05	131292	100	
Pb	208	3	193	113.169	ppb	113.169	4.63	614038	5000	
Th	232	3	193	22.653	ppb	22.653	3.35	127952	2000	
U	238	3	193	3.095	ppb	3.095	3.49	19524	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4161990	2.21	3887690	107.06	60	120	
Sc (IS)	45	3	HMI He	606311	0.50	560366	108.20	60	120	
Ge Internal standard	72	2	HMI H2	2474291	1.62	2321471	106.58	60	120	
Ge Internal standard	72	3	HMI He	739114	1.20	685485	107.82	60	120	
In Internal Standard	115	3	HMI He	2758278	1.57	2631879	104.80	60	120	
Ir (IS)	193	3	HMI He	6172201	4.40	5771767	106.94	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-4-C
Data File Name	128SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:50:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.772	ppb	0.772	40.23	40	2000	
Na	23	3	45	380.104	ppb	380.104	2.21	60559	400000	
Mg	24	3	45	2178.239	ppb	2178.239	0.69	130129	400000	
Al	27	3	45	20659.284	ppb	20659.284	0.80	485797	400000	
K	39	3	45	2178.835	ppb	2178.835	4.11	132266	400000	
Ca	40	2	45	3192.877	ppb	3192.877	1.64	1929238	400000	
V	51	3	72	95.442	ppb	95.442	1.96	61615	2000	
Cr	52	3	72	120.514	ppb	120.514	1.79	96541	5000	
Mn	55	3	72	3653.153	ppb	3653.153	3.45	1504901	10000	
Fe	56	2	72	82079.891	ppb	82079.891	2.98	133186982	10000	>LDR
Co	59	3	72	11.603	ppb	11.603	3.28	15621	2000	
Ni	60	3	72	39.316	ppb	39.316	1.49	15022	5000	
Cu	63	3	72	317.989	ppb	317.989	1.35	328034	5000	
Zn	66	3	72	913.764	ppb	913.764	0.75	146424	5000	
As	75	3	72	51.087	ppb	51.087	2.10	6073	2000	
Se	78	2	72	1.379	ppb	1.379	8.99	87	2000	
Sr	88	3	72	40.078	ppb	40.078	2.15	22459	4000	
Mo	95	3	115	8.222	ppb	8.222	1.64	4209	2000	
Ag	107	3	115	2.740	ppb	2.740	4.33	4695	100	
Cd	111	3	115	1.839	ppb	1.839	22.95	481	2000	
Sn	120	3	115	224.428	ppb	224.428	3.32	171834	2000	
Sb	121	3	115	33.153	ppb	33.153	3.79	25553	1000	
Ba	137	3	115	519.594	ppb	519.594	4.28	126845	5000	
Tl	205	3	193	0.303	ppb	0.303	11.88	2292	2000	
(Pb)	206	3	193	2285.316	ppb	2285.316	0.63	3082426	100	>LDR
(Pb)	207	3	193	2154.131	ppb	2154.131	3.52	2583238	100	>LDR
Pb	208	3	193	2202.132	ppb	2202.132	1.44	12060255	5000	
Th	232	3	193	15.380	ppb	15.380	2.53	89726	2000	
U	238	3	193	2.343	ppb	2.343	1.58	15395	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4313053	1.94	3887690	110.94	60	120	
Sc (IS)	45	3	HMI He	619468	0.17	560366	110.55	60	120	
Ge Internal standard	72	2	HMI H2	2494438	2.64	2321471	107.45	60	120	
Ge Internal standard	72	3	HMI He	753935	1.14	685485	109.99	60	120	
In Internal Standard	115	3	HMI He	2777509	2.95	2631879	105.53	60	120	
Ir (IS)	193	3	HMI He	6237939	0.78	5771767	108.08	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-5-C
Data File Name	129SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:52:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.101	ppb	0.101	119.08	8	2000	
Na	23	3	45	259.540	ppb	259.540	3.83	46473	400000	
Mg	24	3	45	331.787	ppb	331.787	1.91	19784	400000	
Al	27	3	45	6815.304	ppb	6815.304	0.37	158394	400000	
K	39	3	45	1238.864	ppb	1238.864	1.41	85941	400000	
Ca	40	2	45	740.020	ppb	740.020	2.46	439930	400000	
V	51	3	72	69.786	ppb	69.786	0.83	44796	2000	
Cr	52	3	72	77.604	ppb	77.604	1.31	62212	5000	
Mn	55	3	72	471.601	ppb	471.601	1.17	192110	10000	
Fe	56	2	72	49632.381	ppb	49632.381	0.92	81971535	10000	
Co	59	3	72	5.314	ppb	5.314	3.09	7090	2000	
Ni	60	3	72	15.333	ppb	15.333	3.97	6002	5000	
Cu	63	3	72	56.871	ppb	56.871	0.63	58355	5000	
Zn	66	3	72	125.636	ppb	125.636	1.47	20076	5000	
As	75	3	72	17.272	ppb	17.272	9.63	2074	2000	
Se	78	2	72	0.714	ppb	0.714	2.60	47	2000	
Sr	88	3	72	20.647	ppb	20.647	3.38	11446	4000	
Mo	95	3	115	14.850	ppb	14.850	2.50	7615	2000	
Ag	107	3	115	0.217	ppb	0.217	7.25	388	100	
Cd	111	3	115	0.067	ppb	0.067	69.27	42	2000	
Sn	120	3	115	47.862	ppb	47.862	4.82	37596	2000	
Sb	121	3	115	2.677	ppb	2.677	3.02	2114	1000	
Ba	137	3	115	243.741	ppb	243.741	3.36	59897	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-47.82	785	2000	
(Pb)	206	3	193	154.705	ppb	154.705	1.69	205874	100	
(Pb)	207	3	193	145.218	ppb	145.218	0.92	172051	100	
Pb	208	3	193	149.482	ppb	149.482	1.37	807865	5000	
Th	232	3	193	15.286	ppb	15.286	1.63	87876	2000	
U	238	3	193	1.487	ppb	1.487	4.91	10279	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4159340	1.56	3887690	106.99	60	120	
Sc (IS)	45	3	HMI He	612022	1.34	560366	109.22	60	120	
Ge Internal standard	72	2	HMI H2	2537081	0.79	2321471	109.29	60	120	
Ge Internal standard	72	3	HMI He	744901	1.21	685485	108.67	60	120	
In Internal Standard	115	3	HMI He	2794560	3.12	2631879	106.18	60	120	
Ir (IS)	193	3	HMI He	6144400	1.27	5771767	106.46	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-1-C
Data File Name	130SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:54:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.473	ppb	0.473	61.79	25	2000	
Na	23	3	45	430.912	ppb	430.912	3.96	66395	400000	
Mg	24	3	45	1813.945	ppb	1813.945	1.01	108645	400000	
Al	27	3	45	15708.236	ppb	15708.236	1.19	370205	400000	
K	39	3	45	2034.319	ppb	2034.319	4.09	125569	400000	
Ca	40	2	45	3677.056	ppb	3677.056	2.37	2200865	400000	
V	51	3	72	102.635	ppb	102.635	0.78	66639	2000	
Cr	52	3	72	166.589	ppb	166.589	3.87	133474	5000	
Mn	55	3	72	6731.703	ppb	6731.703	2.11	2791644	10000	
Fe	56	2	72	113716.284	ppb	113716.284	1.89	186725744	10000	>LDR
Co	59	3	72	13.403	ppb	13.403	2.56	18163	2000	
Ni	60	3	72	53.109	ppb	53.109	2.51	20300	5000	
Cu	63	3	72	551.711	ppb	551.711	1.58	572656	5000	
Zn	66	3	72	1709.105	ppb	1709.105	1.32	275536	5000	
As	75	3	72	62.884	ppb	62.884	4.01	7508	2000	
Se	78	2	72	1.297	ppb	1.297	15.72	83	2000	
Sr	88	3	72	54.357	ppb	54.357	1.79	30663	4000	
Mo	95	3	115	10.962	ppb	10.962	1.52	5712	2000	
Ag	107	3	115	5.702	ppb	5.702	3.11	9952	100	
Cd	111	3	115	4.115	ppb	4.115	7.94	1071	2000	
Sn	120	3	115	221.876	ppb	221.876	1.77	173390	2000	
Sb	121	3	115	23.140	ppb	23.140	1.99	18217	1000	
Ba	137	3	115	530.738	ppb	530.738	1.07	132266	5000	
Tl	205	3	193	0.352	ppb	0.352	3.13	2481	2000	
(Pb)	206	3	193	1801.387	ppb	1801.387	0.38	2417470	100	>LDR
(Pb)	207	3	193	1745.502	ppb	1745.502	0.98	2083079	100	>LDR
Pb	208	3	193	1745.767	ppb	1745.767	0.59	9513185	5000	
Th	232	3	193	17.693	ppb	17.693	0.87	101839	2000	
U	238	3	193	2.434	ppb	2.434	3.26	15841	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4274528	0.77	3887690	109.95	60	120	
Sc (IS)	45	3	HMI He	620843	0.70	560366	110.79	60	120	
Ge Internal standard	72	2	HMI H2	2523524	1.50	2321471	108.70	60	120	
Ge Internal standard	72	3	HMI He	759071	1.15	685485	110.73	60	120	
In Internal Standard	115	3	HMI He	2833208	0.96	2631879	107.65	60	120	
Ir (IS)	193	3	HMI He	6206203	0.47	5771767	107.53	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-2-C
Data File Name	131SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:56:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.633	ppb	0.633	50.11	33	2000	
Na	23	3	45	264.314	ppb	264.314	2.51	47939	400000	
Mg	24	3	45	915.784	ppb	915.784	2.33	55273	400000	
Al	27	3	45	15745.222	ppb	15745.222	1.65	373110	400000	
K	39	3	45	1906.639	ppb	1906.639	0.58	120070	400000	
Ca	40	2	45	1088.665	ppb	1088.665	0.66	674240	400000	
V	51	3	72	108.474	ppb	108.474	1.63	70256	2000	
Cr	52	3	72	102.840	ppb	102.840	2.17	83145	5000	
Mn	55	3	72	978.416	ppb	978.416	0.50	405323	10000	
Fe	56	2	72	54058.073	ppb	54058.073	0.56	91702059	10000	>LDR
Co	59	3	72	6.952	ppb	6.952	3.17	9425	2000	
Ni	60	3	72	18.994	ppb	18.994	1.56	7480	5000	
Cu	63	3	72	175.911	ppb	175.911	1.21	182642	5000	
Zn	66	3	72	222.957	ppb	222.957	0.46	36081	5000	
As	75	3	72	31.555	ppb	31.555	0.27	3799	2000	
Se	78	2	72	1.318	ppb	1.318	21.19	87	2000	
Sr	88	3	72	28.789	ppb	28.789	0.41	16227	4000	
Mo	95	3	115	11.191	ppb	11.191	1.87	6037	2000	
Ag	107	3	115	0.534	ppb	0.534	7.85	981	100	
Cd	111	3	115	0.459	ppb	0.459	24.20	147	2000	
Sn	120	3	115	39.698	ppb	39.698	1.54	32931	2000	
Sb	121	3	115	4.500	ppb	4.500	5.87	3702	1000	
Ba	137	3	115	248.059	ppb	248.059	1.78	64031	5000	
Tl	205	3	193	0.093	ppb	0.093	13.94	1428	2000	
(Pb)	206	3	193	200.300	ppb	200.300	0.87	270302	100	
(Pb)	207	3	193	187.327	ppb	187.327	1.66	224994	100	
Pb	208	3	193	194.449	ppb	194.449	1.27	1065664	5000	
Th	232	3	193	16.864	ppb	16.864	1.67	97757	2000	
U	238	3	193	3.195	ppb	3.195	1.62	20313	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368388	0.50	3887690	112.36	60	120	
Sc (IS)	45	3	HMI He	624195	0.48	560366	111.39	60	120	
Ge Internal standard	72	2	HMI H2	2605914	1.65	2321471	112.25	60	120	
Ge Internal standard	72	3	HMI He	757867	0.73	685485	110.56	60	120	
In Internal Standard	115	3	HMI He	2933795	1.15	2631879	111.47	60	120	
Ir (IS)	193	3	HMI He	6233297	0.55	5771767	108.00	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-3-C
Data File Name	132SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:58:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.998	ppb	4.998	9.41	237	2000	
Na	23	3	45	548.963	ppb	548.963	2.53	81912	400000	
Mg	24	3	45	7071.727	ppb	7071.727	0.83	434799	400000	
Al	27	3	45	79457.757	ppb	79457.757	1.17	1925122	400000	
K	39	3	45	6184.386	ppb	6184.386	0.71	335154	400000	
Ca	40	2	45	2596.471	ppb	2596.471	2.62	1597606	400000	
V	51	3	72	188.151	ppb	188.151	1.38	123886	2000	
Cr	52	3	72	144.065	ppb	144.065	1.88	118251	5000	
Mn	55	3	72	4126.257	ppb	4126.257	1.31	1748307	10000	
Fe	56	2	72	93318.248	ppb	93318.248	1.66	156383319	10000	>LDR
Co	59	3	72	45.016	ppb	45.016	1.39	62230	2000	
Ni	60	3	72	71.999	ppb	71.999	1.56	27986	5000	
Cu	63	3	72	196.523	ppb	196.523	0.14	208722	5000	
Zn	66	3	72	368.769	ppb	368.769	1.05	60912	5000	
As	75	3	72	40.402	ppb	40.402	3.63	4955	2000	
Se	78	2	72	3.323	ppb	3.323	7.54	210	2000	
Sr	88	3	72	48.059	ppb	48.059	2.00	27696	4000	
Mo	95	3	115	7.419	ppb	7.419	7.03	3887	2000	
Ag	107	3	115	0.920	ppb	0.920	6.19	1624	100	
Cd	111	3	115	0.581	ppb	0.581	3.56	173	2000	
Sn	120	3	115	32.439	ppb	32.439	2.24	26231	2000	
Sb	121	3	115	5.771	ppb	5.771	2.61	4589	1000	
Ba	137	3	115	543.878	ppb	543.878	1.80	135905	5000	
Tl	205	3	193	1.089	ppb	1.089	3.65	5552	2000	
(Pb)	206	3	193	398.231	ppb	398.231	2.25	540806	100	
(Pb)	207	3	193	378.554	ppb	378.554	1.80	457344	100	
Pb	208	3	193	396.585	ppb	396.585	2.01	2187056	5000	
Th	232	3	193	22.562	ppb	22.562	2.62	129757	2000	
U	238	3	193	6.557	ppb	6.557	1.40	40048	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386710	2.81	3887690	112.84	60	120	
Sc (IS)	45	3	HMI He	638398	0.97	560366	113.93	60	120	
Ge Internal standard	72	2	HMI H2	2574730	1.29	2321471	110.91	60	120	
Ge Internal standard	72	3	HMI He	775452	0.88	685485	113.12	60	120	
In Internal Standard	115	3	HMI He	2841104	1.39	2631879	107.95	60	120	
Ir (IS)	193	3	HMI He	6278416	1.75	5771767	108.78	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-4-C
Data File Name	133SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:59:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.602	ppb	3.602	38.96	172	2000	
Na	23	3	45	486.291	ppb	486.291	3.06	75241	400000	
Mg	24	3	45	7011.771	ppb	7011.771	1.57	434357	400000	
Al	27	3	45	80604.704	ppb	80604.704	0.58	1967675	400000	
K	39	3	45	7109.555	ppb	7109.555	1.70	383935	400000	
Ca	40	2	45	1954.884	ppb	1954.884	0.67	1201753	400000	
V	51	3	72	195.323	ppb	195.323	1.45	125841	2000	
Cr	52	3	72	142.762	ppb	142.762	1.62	114719	5000	
Mn	55	3	72	1605.139	ppb	1605.139	1.58	665784	10000	
Fe	56	2	72	99323.417	ppb	99323.417	1.41	164644604	10000	>LDR
Co	59	3	72	31.216	ppb	31.216	1.68	42248	2000	
Ni	60	3	72	61.108	ppb	61.108	2.62	23301	5000	
Cu	63	3	72	59.335	ppb	59.335	1.90	62009	5000	
Zn	66	3	72	197.539	ppb	197.539	1.83	32038	5000	
As	75	3	72	27.957	ppb	27.957	0.48	3379	2000	
Se	78	2	72	1.146	ppb	1.146	3.80	74	2000	
Sr	88	3	72	49.752	ppb	49.752	1.53	28063	4000	
Mo	95	3	115	9.305	ppb	9.305	2.27	4867	2000	
Ag	107	3	115	0.200	ppb	0.200	14.80	366	100	
Cd	111	3	115	0.234	ppb	0.234	58.21	85	2000	
Sn	120	3	115	12.959	ppb	12.959	1.67	11049	2000	
Sb	121	3	115	1.479	ppb	1.479	3.30	1206	1000	
Ba	137	3	115	500.459	ppb	500.459	0.62	125035	5000	
Tl	205	3	193	0.652	ppb	0.652	6.26	3689	2000	
(Pb)	206	3	193	61.348	ppb	61.348	0.41	82337	100	
(Pb)	207	3	193	57.361	ppb	57.361	0.87	68674	100	
Pb	208	3	193	59.147	ppb	59.147	0.92	322515	5000	
Th	232	3	193	32.598	ppb	32.598	1.86	182008	2000	
U	238	3	193	5.566	ppb	5.566	1.64	33741	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370407	0.73	3887690	112.42	60	120	
Sc (IS)	45	3	HMI He	643170	0.30	560366	114.78	60	120	
Ge Internal standard	72	2	HMI H2	2547319	1.25	2321471	109.73	60	120	
Ge Internal standard	72	3	HMI He	758985	0.61	685485	110.72	60	120	
In Internal Standard	115	3	HMI He	2840156	0.35	2631879	107.91	60	120	
Ir (IS)	193	3	HMI He	6179835	0.57	5771767	107.07	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-5-F
Data File Name	134SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:01:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.189	ppb	6.189	23.62	297	2000	
Na	23	3	45	853.572	ppb	853.572	3.17	118541	400000	
Mg	24	3	45	14978.474	ppb	14978.474	1.37	931906	400000	
Al	27	3	45	133979.574	ppb	133979.574	3.09	3285769	400000	
K	39	3	45	10676.065	ppb	10676.065	2.03	564936	400000	
Ca	40	2	45	10418.987	ppb	10418.987	1.68	6509008	400000	
V	51	3	72	326.616	ppb	326.616	0.63	215174	2000	
Cr	52	3	72	231.474	ppb	231.474	0.15	189413	5000	
Mn	55	3	72	5969.624	ppb	5969.624	0.80	2540103	10000	
Fe	56	2	72	148928.611	ppb	148928.611	0.80	249677746	10000	>LDR
Co	59	3	72	66.316	ppb	66.316	0.56	92046	2000	
Ni	60	3	72	123.671	ppb	123.671	1.16	48012	5000	
Cu	63	3	72	215.223	ppb	215.223	0.39	229497	5000	
Zn	66	3	72	728.383	ppb	728.383	0.63	120605	5000	
As	75	3	72	59.131	ppb	59.131	3.97	7248	2000	
Se	78	2	72	4.642	ppb	4.642	3.01	292	2000	
Sr	88	3	72	83.778	ppb	83.778	1.07	48467	4000	
Mo	95	3	115	10.214	ppb	10.214	4.66	5477	2000	
Ag	107	3	115	0.983	ppb	0.983	3.30	1779	100	
Cd	111	3	115	1.411	ppb	1.411	6.84	395	2000	
Sn	120	3	115	37.677	ppb	37.677	0.70	31094	2000	
Sb	121	3	115	6.454	ppb	6.454	1.20	5257	1000	
Ba	137	3	115	857.362	ppb	857.362	1.25	219723	5000	
Tl	205	3	193	1.661	ppb	1.661	4.17	7909	2000	
(Pb)	206	3	193	463.246	ppb	463.246	1.05	628831	100	
(Pb)	207	3	193	434.477	ppb	434.477	1.19	524632	100	
Pb	208	3	193	458.096	ppb	458.096	1.50	2525087	5000	
Th	232	3	193	37.378	ppb	37.378	0.78	211067	2000	
U	238	3	193	9.695	ppb	9.695	1.44	58307	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4478193	1.52	3887690	115.19	60	120	
Sc (IS)	45	3	HMI He	646171	0.10	560366	115.31	60	120	
Ge Internal standard	72	2	HMI H2	2576218	0.61	2321471	110.97	60	120	
Ge Internal standard	72	3	HMI He	778717	0.75	685485	113.60	60	120	
In Internal Standard	115	3	HMI He	2913845	0.64	2631879	110.71	60	120	
Ir (IS)	193	3	HMI He	6275188	0.90	5771767	108.72	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	135_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:03:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.310	ppb	2.613	2399	50	102.6	90	110	
Na	23	3	45	47587.606	ppb	1.678	5383592	51000	93.3	90	110	
Mg	24	3	45	10257.222	ppb	1.653	615351	11000	93.2	90	110	
Al	27	3	45	978.341	ppb	2.903	23219	1000	97.8	90	110	
K	39	3	45	10254.951	ppb	2.212	524225	11000	93.2	90	110	
Ca	40	2	45	10106.217	ppb	1.075	6205290	11000	91.9	90	110	
V	51	3	72	49.457	ppb	0.653	32234	50	98.9	90	110	
Cr	52	3	72	51.677	ppb	1.666	42415	50	103.4	90	110	
Mn	55	3	72	51.333	ppb	3.174	21196	50	102.7	90	110	
Fe	56	2	72	1059.956	ppb	2.247	1782522	1000	106.0	90	110	
Co	59	3	72	49.535	ppb	1.762	66149	50	99.1	90	110	
Ni	60	3	72	51.498	ppb	3.857	19436	50	103.0	90	110	
Cu	63	3	72	49.728	ppb	2.189	51370	50	99.5	90	110	
Zn	66	3	72	52.461	ppb	1.886	8557	50	104.9	90	110	
As	75	3	72	50.555	ppb	1.007	5973	50	101.1	90	110	
Se	78	2	72	50.504	ppb	3.106	3092	50	101.0	90	110	
Sr	88	3	72	99.457	ppb	1.848	55348	100	99.5	90	110	
Mo	95	3	115	49.512	ppb	0.887	25630	50	99.0	90	110	
Ag	107	3	115	49.754	ppb	2.080	86613	50	99.5	90	110	
Cd	111	3	115	49.670	ppb	0.433	12640	50	99.3	90	110	
Sn	120	3	115	49.364	ppb	1.246	39268	50	98.7	90	110	
Sb	121	3	115	50.081	ppb	1.295	39332	50	100.2	90	110	
Ba	137	3	115	51.851	ppb	3.355	12943	50	103.7	90	110	
Tl	205	3	193	47.339	ppb	2.632	193904	50	94.7	90	110	
(Pb)	206	3	193	48.988	ppb	1.601	65990	50	98.0	90	110	
(Pb)	207	3	193	48.087	ppb	2.297	57799	50	96.2	90	110	
Pb	208	3	193	48.160	ppb	2.008	263564	50	96.3	90	110	
Th	232	3	193	49.642	ppb	2.027	274879	50	99.3	90	110	
U	238	3	193	47.338	ppb	1.025	274046	50	94.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400100	1.08	3887690	113.18	60	120	
Sc (IS)	45	3	HMI He	623088	2.11	560366	111.19	60	120	
Ge Internal standard	72	2	HMI H2	2538005	0.52	2321471	109.33	60	120	
Ge Internal standard	72	3	HMI He	749194	1.17	685485	109.29	60	120	
In Internal Standard	115	3	HMI He	2829705	0.88	2631879	107.52	60	120	
Ir (IS)	193	3	HMI He	6196520	1.81	5771767	107.36	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	136_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:05:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-145.9	2	0.5	
Na	23	3	45	19.080	ppb	13.5	20338	25	
Mg	24	3	45	0.994	ppb	57.6	307	25	
Al	27	3	45	4.656	ppb	43.4	204	15	
K	39	3	45	-10.517	ppb	-172.1	27140	50	
V	51	3	72	-0.869	ppb	-2.0	505	1	
Cr	52	3	72	1.103	ppb	9.0	3122	1	>RL
Mn	55	3	72	0.778	ppb	22.0	511	0.5	>RL
Co	59	3	72	0.033	ppb	5.8	83	0.5	
Ni	60	3	72	1.172	ppb	10.4	798	1	>RL
Cu	63	3	72	0.045	ppb	49.3	521	1	
Zn	66	3	72	-0.014	ppb	-616.2	217	5	
As	75	3	72	-0.313	ppb	-35.6	35	1	
Se	78	2	72	0.025	ppb	70.2	5	1	
Sr	88	3	72	0.028	ppb	77.9	42	0.5	
Mo	95	3	115	0.093	ppb	39.4	88	0.5	
Ag	107	3	115	0.011	ppb	79.5	35	1	
Cd	111	3	115	-0.086	ppb	-26.1	3	0.5	
Sn	120	3	115	0.413	ppb	15.2	1278	1	
Sb	121	3	115	0.044	ppb	6.6	77	0.6	
Ba	137	3	115	0.120	ppb	43.9	70	0.5	
Tl	205	3	193	-0.165	ppb	-2.9	375	0.1	
(Pb)	206	3	193	-0.054	ppb	-36.4	303	1	
(Pb)	207	3	193	-0.044	ppb	-54.1	486	1	
Pb	208	3	193	-0.028	ppb	-11.0	1503	0.5	
Th	232	3	193	1.600	ppb	11.6	14561	1	>RL
U	238	3	193	-0.005	ppb	-169.5	1808	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4425097	1.22	3887690	113.82	60	120	
Sc (IS)	45	3	HMI He	627274	1.14	560366	111.94	60	120	
Ge Internal standard	72	2	HMI H2	2592154	1.63	2321471	111.66	60	120	
Ge Internal standard	72	3	HMI He	757452	0.47	685485	110.50	60	120	
In Internal Standard	115	3	HMI He	2851270	0.80	2631879	108.34	60	120	
Ir (IS)	193	3	HMI He	6264724	1.05	5771767	108.54	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-6-C
Data File Name	137SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:07:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.189	ppb	4.189	23.43	198	2000	
Na	23	3	45	715.144	ppb	715.144	0.16	102806	400000	
Mg	24	3	45	10061.423	ppb	10061.423	0.85	628838	400000	
Al	27	3	45	120622.987	ppb	120622.987	1.53	2971353	400000	
K	39	3	45	11606.268	ppb	11606.268	1.78	614382	400000	
Ca	40	2	45	3688.066	ppb	3688.066	0.62	2316411	400000	
V	51	3	72	276.012	ppb	276.012	0.64	181595	2000	
Cr	52	3	72	185.813	ppb	185.813	1.15	152157	5000	
Mn	55	3	72	1488.915	ppb	1488.915	0.61	632244	10000	
Fe	56	2	72	143081.334	ppb	143081.334	0.44	243028293	10000	>LDR
Co	59	3	72	39.191	ppb	39.191	1.14	54289	2000	
Ni	60	3	72	74.282	ppb	74.282	2.54	28917	5000	
Cu	63	3	72	76.553	ppb	76.553	0.68	81760	5000	
Zn	66	3	72	253.850	ppb	253.850	3.17	42081	5000	
As	75	3	72	37.167	ppb	37.167	3.72	4573	2000	
Se	78	2	72	1.752	ppb	1.752	7.84	114	2000	
Sr	88	3	72	67.167	ppb	67.167	2.63	38774	4000	
Mo	95	3	115	9.806	ppb	9.806	1.28	5228	2000	
Ag	107	3	115	0.197	ppb	0.197	12.51	366	100	
Cd	111	3	115	0.241	ppb	0.241	4.88	88	2000	
Sn	120	3	115	14.405	ppb	14.405	1.01	12418	2000	
Sb	121	3	115	1.918	ppb	1.918	1.97	1583	1000	
Ba	137	3	115	555.447	ppb	555.447	2.09	141508	5000	
Tl	205	3	193	1.009	ppb	1.009	6.29	5155	2000	
(Pb)	206	3	193	85.918	ppb	85.918	1.20	115520	100	
(Pb)	207	3	193	79.418	ppb	79.418	1.87	95165	100	
Pb	208	3	193	82.475	ppb	82.475	1.66	450439	5000	
Th	232	3	193	43.798	ppb	43.798	1.57	243329	2000	
U	238	3	193	8.022	ppb	8.022	1.86	47972	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4486186	0.91	3887690	115.39	60	120	
Sc (IS)	45	3	HMI He	649031	0.08	560366	115.82	60	120	
Ge Internal standard	72	2	HMI H2	2610031	1.11	2321471	112.43	60	120	
Ge Internal standard	72	3	HMI He	776951	0.27	685485	113.34	60	120	
In Internal Standard	115	3	HMI He	2896576	0.91	2631879	110.06	60	120	
Ir (IS)	193	3	HMI He	6199729	1.84	5771767	107.41	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-1-C
Data File Name	138SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:08:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.926	ppb	2.926	18.14	143	2000	
Na	23	3	45	594.578	ppb	594.578	1.65	88403	400000	
Mg	24	3	45	6931.501	ppb	6931.501	2.03	432057	400000	
Al	27	3	45	74251.511	ppb	74251.511	1.56	1823901	400000	
K	39	3	45	6556.294	ppb	6556.294	1.55	358505	400000	
Ca	40	2	45	2170.304	ppb	2170.304	4.51	1343668	400000	
V	51	3	72	199.035	ppb	199.035	0.86	130143	2000	
Cr	52	3	72	143.173	ppb	143.173	1.36	116778	5000	
Mn	55	3	72	2610.667	ppb	2610.667	1.60	1099018	10000	
Fe	56	2	72	95828.196	ppb	95828.196	1.26	161021678	10000	>LDR
Co	59	3	72	40.481	ppb	40.481	1.47	55600	2000	
Ni	60	3	72	66.521	ppb	66.521	1.45	25716	5000	
Cu	63	3	72	175.754	ppb	175.754	1.44	185496	5000	
Zn	66	3	72	335.404	ppb	335.404	1.13	55062	5000	
As	75	3	72	39.267	ppb	39.267	2.62	4787	2000	
Se	78	2	72	3.182	ppb	3.182	7.47	202	2000	
Sr	88	3	72	54.676	ppb	54.676	1.95	31300	4000	
Mo	95	3	115	7.001	ppb	7.001	5.53	3770	2000	
Ag	107	3	115	0.780	ppb	0.780	7.71	1416	100	
Cd	111	3	115	0.442	ppb	0.442	29.35	142	2000	
Sn	120	3	115	22.261	ppb	22.261	1.96	18792	2000	
Sb	121	3	115	5.410	ppb	5.410	4.51	4419	1000	
Ba	137	3	115	532.549	ppb	532.549	0.52	136663	5000	
Tl	205	3	193	1.025	ppb	1.025	2.25	5220	2000	
(Pb)	206	3	193	436.106	ppb	436.106	2.47	584611	100	
(Pb)	207	3	193	403.938	ppb	403.938	1.31	481765	100	
Pb	208	3	193	432.766	ppb	432.766	1.07	2356079	5000	
Th	232	3	193	23.415	ppb	23.415	1.74	132718	2000	
U	238	3	193	6.042	ppb	6.042	1.70	36569	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4409220	2.94	3887690	113.41	60	120	
Sc (IS)	45	3	HMI He	647257	1.00	560366	115.51	60	120	
Ge Internal standard	72	2	HMI H2	2582245	2.43	2321471	111.23	60	120	
Ge Internal standard	72	3	HMI He	770380	0.68	685485	112.38	60	120	
In Internal Standard	115	3	HMI He	2917344	0.69	2631879	110.85	60	120	
Ir (IS)	193	3	HMI He	6197589	1.23	5771767	107.38	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-2-C
Data File Name	139SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:10:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.964	ppb	1.964	11.42	95	2000	
Na	23	3	45	485.761	ppb	485.761	1.80	74976	400000	
Mg	24	3	45	5050.298	ppb	5050.298	0.71	312068	400000	
Al	27	3	45	65362.535	ppb	65362.535	1.78	1591367	400000	
K	39	3	45	6671.806	ppb	6671.806	0.97	361074	400000	
Ca	40	2	45	1441.563	ppb	1441.563	0.35	878375	400000	
V	51	3	72	177.532	ppb	177.532	0.69	115852	2000	
Cr	52	3	72	133.601	ppb	133.601	0.28	108796	5000	
Mn	55	3	72	1075.532	ppb	1075.532	1.01	451553	10000	
Fe	56	2	72	73921.805	ppb	73921.805	2.40	124566174	10000	>LDR
Co	59	3	72	24.804	ppb	24.804	0.40	33981	2000	
Ni	60	3	72	47.752	ppb	47.752	1.48	18508	5000	
Cu	63	3	72	59.379	ppb	59.379	0.64	62802	5000	
Zn	66	3	72	160.000	ppb	160.000	0.34	26304	5000	
As	75	3	72	25.546	ppb	25.546	2.66	3130	2000	
Se	78	2	72	1.008	ppb	1.008	11.90	67	2000	
Sr	88	3	72	48.911	ppb	48.911	1.03	27922	4000	
Mo	95	3	115	6.964	ppb	6.964	6.34	3675	2000	
Ag	107	3	115	0.196	ppb	0.196	15.79	360	100	
Cd	111	3	115	0.124	ppb	0.124	86.60	57	2000	
Sn	120	3	115	11.434	ppb	11.434	3.45	9930	2000	
Sb	121	3	115	1.779	ppb	1.779	6.29	1453	1000	
Ba	137	3	115	463.814	ppb	463.814	3.26	116670	5000	
Tl	205	3	193	0.450	ppb	0.450	10.00	2904	2000	
(Pb)	206	3	193	59.288	ppb	59.288	2.77	80583	100	
(Pb)	207	3	193	55.586	ppb	55.586	2.66	67403	100	
Pb	208	3	193	57.555	ppb	57.555	2.75	317822	5000	
Th	232	3	193	28.635	ppb	28.635	3.18	162599	2000	
U	238	3	193	4.660	ppb	4.660	1.61	28908	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4316322	1.35	3887690	111.03	60	120	
Sc (IS)	45	3	HMI He	641420	0.84	560366	114.46	60	120	
Ge Internal standard	72	2	HMI H2	2589430	1.87	2321471	111.54	60	120	
Ge Internal standard	72	3	HMI He	768070	0.27	685485	112.05	60	120	
In Internal Standard	115	3	HMI He	2861187	2.80	2631879	108.71	60	120	
Ir (IS)	193	3	HMI He	6259393	1.81	5771767	108.45	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-3-C
Data File Name	140SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:12:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.481	ppb	2.481	22.15	120	2000	
Na	23	3	45	498.272	ppb	498.272	2.34	77203	400000	
Mg	24	3	45	5450.700	ppb	5450.700	1.63	340226	400000	
Al	27	3	45	70932.221	ppb	70932.221	0.20	1744680	400000	
K	39	3	45	6959.237	ppb	6959.237	1.36	379258	400000	
Ca	40	2	45	1633.721	ppb	1633.721	2.50	1013132	400000	
V	51	3	72	186.680	ppb	186.680	0.89	121697	2000	
Cr	52	3	72	137.821	ppb	137.821	1.09	112097	5000	
Mn	55	3	72	1064.094	ppb	1064.094	1.27	446520	10000	
Fe	56	2	72	82659.434	ppb	82659.434	0.98	136581223	10000	>LDR
Co	59	3	72	29.950	ppb	29.950	1.08	41005	2000	
Ni	60	3	72	51.601	ppb	51.601	2.78	19959	5000	
Cu	63	3	72	60.412	ppb	60.412	1.38	63852	5000	
Zn	66	3	72	192.380	ppb	192.380	2.97	31562	5000	
As	75	3	72	25.409	ppb	25.409	3.37	3112	2000	
Se	78	2	72	1.117	ppb	1.117	10.85	72	2000	
Sr	88	3	72	52.161	ppb	52.161	1.53	29759	4000	
Mo	95	3	115	9.088	ppb	9.088	4.10	4870	2000	
Ag	107	3	115	0.226	ppb	0.226	14.43	420	100	
Cd	111	3	115	0.279	ppb	0.279	30.74	98	2000	
Sn	120	3	115	16.793	ppb	16.793	3.17	14374	2000	
Sb	121	3	115	1.745	ppb	1.745	12.02	1448	1000	
Ba	137	3	115	467.628	ppb	467.628	2.60	119654	5000	
Tl	205	3	193	0.497	ppb	0.497	3.86	3052	2000	
(Pb)	206	3	193	63.093	ppb	63.093	1.91	84429	100	
(Pb)	207	3	193	58.658	ppb	58.658	0.91	70023	100	
Pb	208	3	193	60.706	ppb	60.706	1.90	330030	5000	
Th	232	3	193	31.010	ppb	31.010	1.31	172945	2000	
U	238	3	193	4.892	ppb	4.892	2.07	29789	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400581	0.76	3887690	113.19	60	120	
Sc (IS)	45	3	HMI He	648059	1.38	560366	115.65	60	120	
Ge Internal standard	72	2	HMI H2	2538819	0.52	2321471	109.36	60	120	
Ge Internal standard	72	3	HMI He	767669	0.69	685485	111.99	60	120	
In Internal Standard	115	3	HMI He	2909642	2.12	2631879	110.55	60	120	
Ir (IS)	193	3	HMI He	6163297	1.58	5771767	106.78	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-4-C
Data File Name	141SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:14:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.664	ppb	2.664	12.57	128	2000	
Na	23	3	45	432.791	ppb	432.791	1.66	69127	400000	
Mg	24	3	45	5431.231	ppb	5431.231	0.44	337073	400000	
Al	27	3	45	66479.128	ppb	66479.128	2.70	1625660	400000	
K	39	3	45	6316.089	ppb	6316.089	1.07	344853	400000	
Ca	40	2	45	1435.414	ppb	1435.414	3.93	896599	400000	
V	51	3	72	181.982	ppb	181.982	0.86	118108	2000	
Cr	52	3	72	132.625	ppb	132.625	1.02	107453	5000	
Mn	55	3	72	996.228	ppb	996.228	0.96	416077	10000	
Fe	56	2	72	85505.582	ppb	85505.582	2.10	143944893	10000	>LDR
Co	59	3	72	25.584	ppb	25.584	1.39	34865	2000	
Ni	60	3	72	51.297	ppb	51.297	1.98	19751	5000	
Cu	63	3	72	54.332	ppb	54.332	1.83	57203	5000	
Zn	66	3	72	168.731	ppb	168.731	3.52	27579	5000	
As	75	3	72	30.580	ppb	30.580	0.12	3714	2000	
Se	78	2	72	0.774	ppb	0.774	4.80	52	2000	
Sr	88	3	72	44.467	ppb	44.467	0.99	25254	4000	
Mo	95	3	115	7.912	ppb	7.912	5.22	4235	2000	
Ag	107	3	115	0.160	ppb	0.160	17.62	302	100	
Cd	111	3	115	0.163	ppb	0.163	15.16	68	2000	
Sn	120	3	115	11.914	ppb	11.914	2.52	10464	2000	
Sb	121	3	115	1.705	ppb	1.705	5.04	1416	1000	
Ba	137	3	115	411.832	ppb	411.832	1.73	105223	5000	
Tl	205	3	193	0.476	ppb	0.476	5.94	3024	2000	
(Pb)	206	3	193	54.117	ppb	54.117	3.53	73817	100	
(Pb)	207	3	193	50.633	ppb	50.633	1.58	61654	100	
Pb	208	3	193	52.287	ppb	52.287	1.91	289822	5000	
Th	232	3	193	27.103	ppb	27.103	1.34	154717	2000	
U	238	3	193	4.468	ppb	4.468	0.47	27877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4425152	1.30	3887690	113.82	60	120	
Sc (IS)	45	3	HMI He	644267	0.58	560366	114.97	60	120	
Ge Internal standard	72	2	HMI H2	2586612	0.69	2321471	111.42	60	120	
Ge Internal standard	72	3	HMI He	764089	0.72	685485	111.47	60	120	
In Internal Standard	115	3	HMI He	2904677	1.83	2631879	110.37	60	120	
Ir (IS)	193	3	HMI He	6278670	1.33	5771767	108.78	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-1-C
Data File Name	142SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:16:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.272	ppb	2.272	28.29	110	2000	
Na	23	3	45	438.400	ppb	438.400	1.73	69888	400000	
Mg	24	3	45	5019.582	ppb	5019.582	1.94	311972	400000	
Al	27	3	45	58841.653	ppb	58841.653	1.93	1440951	400000	
K	39	3	45	4843.192	ppb	4843.192	0.96	271434	400000	
Ca	40	2	45	1506.943	ppb	1506.943	0.40	943913	400000	
V	51	3	72	160.911	ppb	160.911	0.42	106493	2000	
Cr	52	3	72	134.318	ppb	134.318	1.47	110813	5000	
Mn	55	3	72	2005.388	ppb	2005.388	1.39	852868	10000	
Fe	56	2	72	94990.130	ppb	94990.130	1.42	160776629	10000	>LDR
Co	59	3	72	29.188	ppb	29.188	1.26	40509	2000	
Ni	60	3	72	53.070	ppb	53.070	2.92	20799	5000	
Cu	63	3	72	135.686	ppb	135.686	0.87	144774	5000	
Zn	66	3	72	233.419	ppb	233.419	1.60	38777	5000	
As	75	3	72	36.321	ppb	36.321	2.65	4479	2000	
Se	78	2	72	2.866	ppb	2.866	21.66	183	2000	
Sr	88	3	72	43.386	ppb	43.386	1.66	25097	4000	
Mo	95	3	115	7.383	ppb	7.383	6.73	3835	2000	
Ag	107	3	115	0.779	ppb	0.779	7.36	1364	100	
Cd	111	3	115	0.258	ppb	0.258	15.01	90	2000	
Sn	120	3	115	26.420	ppb	26.420	2.20	21338	2000	
Sb	121	3	115	7.185	ppb	7.185	1.48	5648	1000	
Ba	137	3	115	439.111	ppb	439.111	1.20	108710	5000	
Tl	205	3	193	0.737	ppb	0.737	2.52	4134	2000	
(Pb)	206	3	193	571.319	ppb	571.319	1.78	782456	100	>LDR
(Pb)	207	3	193	540.489	ppb	540.489	2.23	658363	100	>LDR
Pb	208	3	193	572.858	ppb	572.858	1.20	3185998	5000	
Th	232	3	193	19.283	ppb	19.283	2.64	112697	2000	
U	238	3	193	4.868	ppb	4.868	3.70	30460	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4439682	2.27	3887690	114.20	60	120	
Sc (IS)	45	3	HMI He	645210	0.82	560366	115.14	60	120	
Ge Internal standard	72	2	HMI H2	2600748	0.45	2321471	112.03	60	120	
Ge Internal standard	72	3	HMI He	778208	0.16	685485	113.53	60	120	
In Internal Standard	115	3	HMI He	2814465	1.41	2631879	106.94	60	120	
Ir (IS)	193	3	HMI He	6332494	1.63	5771767	109.71	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	143_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:17:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.431	ppb	3.013	2396	50	102.9	90	110	
Na	23	3	45	46993.385	ppb	2.456	5436114	51000	92.1	90	110	
Mg	24	3	45	10004.647	ppb	1.036	613710	11000	91.0	90	110	
Al	27	3	45	944.350	ppb	0.614	22925	1000	94.4	90	110	
K	39	3	45	10141.085	ppb	0.456	530426	11000	92.2	90	110	
Ca	40	2	45	10180.057	ppb	1.709	6265138	11000	92.5	90	110	
V	51	3	72	48.672	ppb	0.776	32525	50	97.3	90	110	
Cr	52	3	72	52.045	ppb	0.343	43758	50	104.1	90	110	
Mn	55	3	72	51.181	ppb	2.058	21659	50	102.4	90	110	
Fe	56	2	72	1055.651	ppb	2.011	1813392	1000	105.6	90	110	
Co	59	3	72	49.715	ppb	0.977	68041	50	99.4	90	110	
Ni	60	3	72	51.598	ppb	0.407	19959	50	103.2	90	110	
Cu	63	3	72	49.962	ppb	2.225	52896	50	99.9	90	110	
Zn	66	3	72	49.903	ppb	2.325	8353	50	99.8	90	110	
As	75	3	72	50.482	ppb	4.022	6113	50	101.0	90	110	
Se	78	2	72	49.834	ppb	2.197	3117	50	99.7	90	110	
Sr	88	3	72	100.922	ppb	2.103	57563	100	100.9	90	110	
Mo	95	3	115	48.882	ppb	2.664	25904	50	97.8	90	110	
Ag	107	3	115	48.901	ppb	3.260	87142	50	97.8	90	110	
Cd	111	3	115	48.478	ppb	2.511	12631	50	97.0	90	110	
Sn	120	3	115	48.819	ppb	2.056	39769	50	97.6	90	110	
Sb	121	3	115	49.583	ppb	1.919	39875	50	99.2	90	110	
Ba	137	3	115	51.071	ppb	4.063	13048	50	102.1	90	110	
Tl	205	3	193	48.810	ppb	3.392	195428	50	97.6	90	110	
(Pb)	206	3	193	49.999	ppb	0.269	65839	50	100.0	90	110	
(Pb)	207	3	193	49.815	ppb	1.784	58521	50	99.6	90	110	
Pb	208	3	193	49.562	ppb	0.927	265134	50	99.1	90	110	
Th	232	3	193	49.633	ppb	0.872	268700	50	99.3	90	110	
U	238	3	193	48.751	ppb	2.669	275832	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4411060	0.90	3887690	113.46	60	120	
Sc (IS)	45	3	HMI He	637012	0.46	560366	113.68	60	120	
Ge Internal standard	72	2	HMI H2	2592091	0.73	2321471	111.66	60	120	
Ge Internal standard	72	3	HMI He	767712	0.80	685485	112.00	60	120	
In Internal Standard	115	3	HMI He	2897444	1.86	2631879	110.09	60	120	
Ir (IS)	193	3	HMI He	6057081	0.68	5771767	104.94	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	144_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:19:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.043	ppb	-138.7	2	0.5	
Na	23	3	45	9.227	ppb	48.4	19680	25	
Mg	24	3	45	0.826	ppb	116.2	304	25	
Al	27	3	45	7.182	ppb	15.9	270	15	
K	39	3	45	-19.630	ppb	-135.9	27337	50	
V	51	3	72	-0.693	ppb	-6.5	630	1	
Cr	52	3	72	1.332	ppb	13.2	3370	1	>RL
Mn	55	3	72	0.654	ppb	20.8	470	0.5	>RL
Co	59	3	72	0.020	ppb	56.6	67	0.5	
Ni	60	3	72	1.012	ppb	2.4	753	1	>RL
Cu	63	3	72	-0.024	ppb	-118.6	460	1	
Zn	66	3	72	0.335	ppb	128.2	278	5	
As	75	3	72	-0.291	ppb	-78.2	38	1	
Se	78	2	72	0.014	ppb	342.3	5	1	
Sr	88	3	72	-0.005	ppb	-430.9	23	0.5	
Mo	95	3	115	0.124	ppb	35.6	107	0.5	
Ag	107	3	115	0.006	ppb	154.4	27	1	
Cd	111	3	115	-0.060	ppb	-54.8	10	0.5	
Sn	120	3	115	0.089	ppb	87.1	1048	1	
Sb	121	3	115	0.030	ppb	30.1	67	0.6	
Ba	137	3	115	0.095	ppb	53.2	65	0.5	
Tl	205	3	193	-0.173	ppb	-3.9	337	0.1	
(Pb)	206	3	193	-0.026	ppb	-182.5	337	1	
(Pb)	207	3	193	-0.069	ppb	-7.0	450	1	
Pb	208	3	193	-0.029	ppb	-82.0	1478	0.5	
Th	232	3	193	1.044	ppb	12.5	11380	1	>RL
U	238	3	193	-0.024	ppb	-142.5	1676	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4420399	1.14	3887690	113.70	60	120	
Sc (IS)	45	3	HMI He	642349	0.52	560366	114.63	60	120	
Ge Internal standard	72	2	HMI H2	2615448	1.01	2321471	112.66	60	120	
Ge Internal standard	72	3	HMI He	773131	0.17	685485	112.79	60	120	
In Internal Standard	115	3	HMI He	2915236	0.63	2631879	110.77	60	120	
Ir (IS)	193	3	HMI He	6188177	0.95	5771767	107.21	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F
Data File Name	145SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:21:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.450	ppb	2.450	28.35	120	2000	
Na	23	3	45	309.968	ppb	309.968	1.61	55437	400000	
Mg	24	3	45	3301.253	ppb	3301.253	0.89	207346	400000	
Al	27	3	45	46978.160	ppb	46978.160	2.47	1162067	400000	
K	39	3	45	3549.198	ppb	3549.198	1.83	208604	400000	
Ca	40	2	45	1126.425	ppb	1126.425	0.19	718715	400000	
V	51	3	72	126.987	ppb	126.987	2.48	85314	2000	
Cr	52	3	72	103.072	ppb	103.072	2.05	86636	5000	
Mn	55	3	72	1428.123	ppb	1428.123	2.40	614941	10000	
Fe	56	2	72	58434.781	ppb	58434.781	1.61	99674320	10000	>LDR
Co	59	3	72	18.312	ppb	18.312	2.24	25744	2000	
Ni	60	3	72	34.483	ppb	34.483	3.03	13812	5000	
Cu	63	3	72	63.062	ppb	63.062	1.99	68388	5000	
Zn	66	3	72	130.342	ppb	130.342	1.79	22023	5000	
As	75	3	72	21.336	ppb	21.336	4.90	2694	2000	
Se	78	2	72	1.417	ppb	1.417	13.30	93	2000	
Sr	88	3	72	34.043	ppb	34.043	1.28	19946	4000	
Mo	95	3	115	4.681	ppb	4.681	6.26	2552	2000	
Ag	107	3	115	0.252	ppb	0.252	5.74	471	100	
Cd	111	3	115	0.123	ppb	0.123	32.74	58	2000	
Sn	120	3	115	20.020	ppb	20.020	1.26	17117	2000	
Sb	121	3	115	1.972	ppb	1.972	2.51	1649	1000	
Ba	137	3	115	355.606	ppb	355.606	0.76	91899	5000	
Tl	205	3	193	0.371	ppb	0.371	4.57	2601	2000	
(Pb)	206	3	193	163.900	ppb	163.900	2.07	223989	100	
(Pb)	207	3	193	151.299	ppb	151.299	2.37	184074	100	
Pb	208	3	193	156.792	ppb	156.792	1.72	870292	5000	
Th	232	3	193	18.765	ppb	18.765	2.95	109459	2000	
U	238	3	193	3.563	ppb	3.563	1.51	22719	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4503121	1.68	3887690	115.83	60	120	
Sc (IS)	45	3	HMI He	651694	0.30	560366	116.30	60	120	
Ge Internal standard	72	2	HMI H2	2620301	0.98	2321471	112.87	60	120	
Ge Internal standard	72	3	HMI He	788002	1.30	685485	114.96	60	120	
In Internal Standard	115	3	HMI He	2937436	0.30	2631879	111.61	60	120	
Ir (IS)	193	3	HMI He	6311602	1.56	5771767	109.35	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-Fsd@5
Data File Name	146SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:23:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.577	ppb	0.577	26.59	32	2000	
Na	23	3	45	65.284	ppb	65.284	15.87	26438	400000	
Mg	24	3	45	648.302	ppb	648.302	4.96	40709	400000	
Al	27	3	45	8933.363	ppb	8933.363	3.17	219916	400000	
K	39	3	45	690.511	ppb	690.511	4.36	63410	400000	
Ca	40	2	45	241.059	ppb	241.059	3.01	165080	400000	
V	51	3	72	24.475	ppb	24.475	0.92	17150	2000	
Cr	52	3	72	21.428	ppb	21.428	4.79	19654	5000	
Mn	55	3	72	283.125	ppb	283.125	0.65	120782	10000	
Fe	56	2	72	11192.627	ppb	11192.627	1.18	19344357	10000	
Co	59	3	72	3.706	ppb	3.706	1.18	5187	2000	
Ni	60	3	72	7.773	ppb	7.773	7.30	3365	5000	
Cu	63	3	72	12.717	ppb	12.717	3.43	14032	5000	
Zn	66	3	72	29.224	ppb	29.224	0.57	5060	5000	
As	75	3	72	3.919	ppb	3.919	9.41	550	2000	
Se	78	2	72	0.272	ppb	0.272	31.89	21	2000	
Sr	88	3	72	6.634	ppb	6.634	4.88	3865	4000	
Mo	95	3	115	0.955	ppb	0.955	3.27	555	2000	
Ag	107	3	115	0.072	ppb	0.072	21.81	147	100	
Cd	111	3	115	-0.010	ppb	-0.010	-104.69	23	2000	
Sn	120	3	115	3.904	ppb	3.904	3.12	4142	2000	
Sb	121	3	115	0.404	ppb	0.404	10.99	373	1000	
Ba	137	3	115	69.018	ppb	69.018	1.47	17918	5000	
Tl	205	3	193	-0.087	ppb	-0.087	-35.16	688	2000	
(Pb)	206	3	193	32.981	ppb	32.981	1.88	44775	100	
(Pb)	207	3	193	30.194	ppb	30.194	2.72	36676	100	
Pb	208	3	193	31.339	ppb	31.339	2.25	172938	5000	
Th	232	3	193	3.987	ppb	3.987	2.69	27495	2000	
U	238	3	193	0.656	ppb	0.656	1.03	5618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4548938	2.88	3887690	117.01	60	120	
Sc (IS)	45	3	HMI He	648565	1.61	560366	115.74	60	120	
Ge Internal standard	72	2	HMI H2	2652048	2.67	2321471	114.24	60	120	
Ge Internal standard	72	3	HMI He	779546	1.06	685485	113.72	60	120	
In Internal Standard	115	3	HMI He	2945460	0.66	2631879	111.91	60	120	
Ir (IS)	193	3	HMI He	6227421	1.55	5771767	107.89	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-G MS
Data File Name	147SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:25:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	193.765	ppb	193.765	4.64	9113	2000	
Na	23	3	45	4166.747	ppb	4166.747	0.64	510473	400000	
Mg	24	3	45	7355.056	ppb	7355.056	1.37	461754	400000	
Al	27	3	45	67832.438	ppb	67832.438	1.04	1678156	400000	
K	39	3	45	9218.341	ppb	9218.341	1.23	496033	400000	
Ca	40	2	45	5067.503	ppb	5067.503	2.17	3174748	400000	
V	51	3	72	338.491	ppb	338.491	1.92	223167	2000	
Cr	52	3	72	316.674	ppb	316.674	1.57	258521	5000	
Mn	55	3	72	1640.593	ppb	1640.593	1.88	698857	10000	
Fe	56	2	72	62055.132	ppb	62055.132	1.31	106460384	10000	>LDR
Co	59	3	72	211.276	ppb	211.276	1.09	293455	2000	
Ni	60	3	72	231.644	ppb	231.644	2.41	89684	5000	
Cu	63	3	72	261.561	ppb	261.561	2.34	279050	5000	
Zn	66	3	72	337.209	ppb	337.209	3.11	56004	5000	
As	75	3	72	204.550	ppb	204.550	1.26	24920	2000	
Se	78	2	72	187.244	ppb	187.244	0.76	11897	2000	
Sr	88	3	72	433.167	ppb	433.167	2.43	250711	4000	
Mo	95	3	115	193.287	ppb	193.287	1.60	101764	2000	
Ag	107	3	115	197.690	ppb	197.690	1.49	350412	100	
Cd	111	3	115	188.026	ppb	188.026	2.42	48649	2000	
Sn	120	3	115	207.155	ppb	207.155	2.21	164714	2000	
Sb	121	3	115	187.611	ppb	187.611	2.29	149919	1000	
Ba	137	3	115	619.418	ppb	619.418	2.03	156988	5000	
Tl	205	3	193	186.484	ppb	186.484	1.50	768831	2000	
(Pb)	206	3	193	363.207	ppb	363.207	1.51	491979	100	
(Pb)	207	3	193	345.124	ppb	345.124	2.12	415856	100	
Pb	208	3	193	354.560	ppb	354.560	1.61	1950218	5000	
Th	232	3	193	195.607	ppb	195.607	1.79	1077404	2000	
U	238	3	193	195.841	ppb	195.841	0.67	1140017	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4481228	0.46	3887690	115.27	60	120	
Sc (IS)	45	3	HMI He	651847	0.63	560366	116.33	60	120	
Ge Internal standard	72	2	HMI H2	2635673	1.18	2321471	113.53	60	120	
Ge Internal standard	72	3	HMI He	779566	1.45	685485	113.72	60	120	
In Internal Standard	115	3	HMI He	2881637	0.90	2631879	109.49	60	120	
Ir (IS)	193	3	HMI He	6261260	1.92	5771767	108.48	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-H MSD
Data File Name	148SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:27:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	200.085	ppb	200.085	1.96	9383	2000	
Na	23	3	45	4208.604	ppb	4208.604	0.92	510652	400000	
Mg	24	3	45	7411.526	ppb	7411.526	2.21	461001	400000	
Al	27	3	45	67067.461	ppb	67067.461	3.38	1643955	400000	
K	39	3	45	9233.295	ppb	9233.295	1.70	492192	400000	
Ca	40	2	45	5010.660	ppb	5010.660	1.93	3143508	400000	
V	51	3	72	337.793	ppb	337.793	1.76	224669	2000	
Cr	52	3	72	313.459	ppb	313.459	1.02	258168	5000	
Mn	55	3	72	1624.329	ppb	1624.329	0.94	698040	10000	
Fe	56	2	72	63605.187	ppb	63605.187	2.54	108268171	10000	>LDR
Co	59	3	72	211.748	ppb	211.748	1.57	296679	2000	
Ni	60	3	72	232.745	ppb	232.745	1.02	90906	5000	
Cu	63	3	72	261.966	ppb	261.966	0.98	281962	5000	
Zn	66	3	72	333.896	ppb	333.896	0.78	55948	5000	
As	75	3	72	202.823	ppb	202.823	1.95	24927	2000	
Se	78	2	72	193.485	ppb	193.485	1.71	12200	2000	
Sr	88	3	72	432.213	ppb	432.213	1.30	252376	4000	
Mo	95	3	115	191.656	ppb	191.656	1.39	101977	2000	
Ag	107	3	115	197.055	ppb	197.055	0.80	353004	100	
Cd	111	3	115	186.698	ppb	186.698	2.19	48819	2000	
Sn	120	3	115	206.906	ppb	206.906	1.54	166269	2000	
Sb	121	3	115	186.278	ppb	186.278	1.35	150443	1000	
Ba	137	3	115	613.840	ppb	613.840	1.33	157233	5000	
Tl	205	3	193	191.194	ppb	191.194	3.79	783103	2000	
(Pb)	206	3	193	366.607	ppb	366.607	3.15	493428	100	
(Pb)	207	3	193	352.518	ppb	352.518	3.68	422040	100	
Pb	208	3	193	358.469	ppb	358.469	3.20	1959212	5000	
Th	232	3	193	201.484	ppb	201.484	3.61	1102609	2000	
U	238	3	193	196.697	ppb	196.697	3.65	1137455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4487656	0.72	3887690	115.43	60	120	
Sc (IS)	45	3	HMI He	645862	0.51	560366	115.26	60	120	
Ge Internal standard	72	2	HMI H2	2616262	2.46	2321471	112.70	60	120	
Ge Internal standard	72	3	HMI He	786323	0.41	685485	114.71	60	120	
In Internal Standard	115	3	HMI He	2912165	0.70	2631879	110.65	60	120	
Ir (IS)	193	3	HMI He	6224211	2.85	5771767	107.84	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-I DU
Data File Name	149SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:28:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.354	ppb	2.354	15.35	117	2000	
Na	23	3	45	324.996	ppb	324.996	3.12	57145	400000	
Mg	24	3	45	3266.229	ppb	3266.229	2.04	204900	400000	
Al	27	3	45	45621.808	ppb	45621.808	4.35	1126893	400000	
K	39	3	45	3453.736	ppb	3453.736	0.74	203540	400000	
Ca	40	2	45	1163.245	ppb	1163.245	1.38	734183	400000	
V	51	3	72	127.975	ppb	127.975	1.24	85384	2000	
Cr	52	3	72	104.183	ppb	104.183	0.60	86948	5000	
Mn	55	3	72	1429.728	ppb	1429.728	0.33	611482	10000	
Fe	56	2	72	58069.717	ppb	58069.717	1.11	99823246	10000	>LDR
Co	59	3	72	18.797	ppb	18.797	0.73	26247	2000	
Ni	60	3	72	34.092	ppb	34.092	1.30	13568	5000	
Cu	63	3	72	63.014	ppb	63.014	0.91	67869	5000	
Zn	66	3	72	130.745	ppb	130.745	2.03	21942	5000	
As	75	3	72	21.237	ppb	21.237	2.40	2664	2000	
Se	78	2	72	1.217	ppb	1.217	29.67	81	2000	
Sr	88	3	72	32.848	ppb	32.848	1.62	19112	4000	
Mo	95	3	115	5.169	ppb	5.169	6.06	2794	2000	
Ag	107	3	115	0.272	ppb	0.272	6.38	505	100	
Cd	111	3	115	0.251	ppb	0.251	22.32	92	2000	
Sn	120	3	115	18.427	ppb	18.427	3.41	15716	2000	
Sb	121	3	115	2.388	ppb	2.388	10.74	1971	1000	
Ba	137	3	115	353.123	ppb	353.123	3.86	90570	5000	
Tl	205	3	193	0.437	ppb	0.437	8.05	2876	2000	
(Pb)	206	3	193	161.924	ppb	161.924	2.21	221461	100	
(Pb)	207	3	193	151.099	ppb	151.099	2.36	183968	100	
Pb	208	3	193	156.455	ppb	156.455	1.64	869056	5000	
Th	232	3	193	22.929	ppb	22.929	2.30	132582	2000	
U	238	3	193	3.770	ppb	3.770	1.72	23951	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4456974	1.09	3887690	114.64	60	120	
Sc (IS)	45	3	HMI He	651031	1.52	560366	116.18	60	120	
Ge Internal standard	72	2	HMI H2	2641184	1.64	2321471	113.77	60	120	
Ge Internal standard	72	3	HMI He	782523	0.68	685485	114.16	60	120	
In Internal Standard	115	3	HMI He	2917259	2.65	2631879	110.84	60	120	
Ir (IS)	193	3	HMI He	6315610	0.88	5771767	109.42	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F pds
Data File Name	150SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:30:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	114.117	ppb	114.117	8.03	5183	2000	
Na	23	3	45	5179.635	ppb	5179.635	0.40	627434	400000	
Mg	24	3	45	5226.595	ppb	5226.595	0.51	326887	400000	
Al	27	3	45	47233.603	ppb	47233.603	1.01	1163933	400000	
K	39	3	45	5484.415	ppb	5484.415	0.32	305512	400000	
Ca	40	2	45	3335.503	ppb	3335.503	12.77	1990448	400000	
V	51	3	72	222.345	ppb	222.345	1.12	147417	2000	
Cr	52	3	72	201.596	ppb	201.596	1.17	165918	5000	
Mn	55	3	72	1513.037	ppb	1513.037	0.96	646510	10000	
Fe	56	2	72	61799.646	ppb	61799.646	12.31	103009140	10000	>LDR
Co	59	3	72	116.993	ppb	116.993	1.21	163000	2000	
Ni	60	3	72	132.128	ppb	132.128	0.53	51473	5000	
Cu	63	3	72	162.579	ppb	162.579	0.45	174176	5000	
Zn	66	3	72	334.695	ppb	334.695	0.99	55761	5000	
As	75	3	72	121.381	ppb	121.381	0.82	14862	2000	
Se	78	2	72	108.328	ppb	108.328	6.59	6703	2000	
Sr	88	3	72	131.921	ppb	131.921	0.49	76611	4000	
Mo	95	3	115	103.109	ppb	103.109	0.37	54407	2000	
Ag	107	3	115	26.813	ppb	26.813	1.43	47629	100	
Cd	111	3	115	95.483	ppb	95.483	1.03	24764	2000	
Sn	120	3	115	119.907	ppb	119.907	2.06	95922	2000	
Sb	121	3	115	95.396	ppb	95.396	1.45	76395	1000	
Ba	137	3	115	453.572	ppb	453.572	1.44	115182	5000	
Tl	205	3	193	94.749	ppb	94.749	1.08	392562	2000	
(Pb)	206	3	193	257.226	ppb	257.226	1.34	349787	100	
(Pb)	207	3	193	244.528	ppb	244.528	2.17	295862	100	
Pb	208	3	193	249.730	ppb	249.730	2.02	1379010	5000	
Th	232	3	193	119.871	ppb	119.871	2.15	664871	2000	
U	238	3	193	207.401	ppb	207.401	1.04	1211439	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4283634	6.56	3887690	110.18	60	120	
Sc (IS)	45	3	HMI He	649231	0.17	560366	115.86	60	120	
Ge Internal standard	72	2	HMI H2	2571928	5.28	2321471	110.79	60	120	
Ge Internal standard	72	3	HMI He	781830	0.37	685485	114.06	60	120	
In Internal Standard	115	3	HMI He	2886792	0.69	2631879	109.69	60	120	
Ir (IS)	193	3	HMI He	6283711	1.50	5771767	108.87	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-3-C
Data File Name	151SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:32:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.721	ppb	4.721	16.77	232	2000	
Na	23	3	45	513.703	ppb	513.703	2.77	79461	400000	
Mg	24	3	45	6220.968	ppb	6220.968	0.39	390521	400000	
Al	27	3	45	77914.627	ppb	77914.627	0.35	1927314	400000	
K	39	3	45	5804.251	ppb	5804.251	0.68	322903	400000	
Ca	40	2	45	1769.363	ppb	1769.363	3.25	1116060	400000	
V	51	3	72	179.538	ppb	179.538	1.98	119724	2000	
Cr	52	3	72	136.216	ppb	136.216	0.96	113321	5000	
Mn	55	3	72	3864.060	ppb	3864.060	1.56	1657429	10000	
Fe	56	2	72	85927.257	ppb	85927.257	3.13	146892032	10000	>LDR
Co	59	3	72	42.629	ppb	42.629	1.20	59658	2000	
Ni	60	3	72	66.732	ppb	66.732	0.95	26285	5000	
Cu	63	3	72	185.647	ppb	185.647	0.84	199620	5000	
Zn	66	3	72	307.083	ppb	307.083	0.92	51386	5000	
As	75	3	72	41.915	ppb	41.915	1.78	5202	2000	
Se	78	2	72	3.391	ppb	3.391	9.17	219	2000	
Sr	88	3	72	47.307	ppb	47.307	2.23	27599	4000	
Mo	95	3	115	6.713	ppb	6.713	1.41	3565	2000	
Ag	107	3	115	0.949	ppb	0.949	4.84	1696	100	
Cd	111	3	115	0.585	ppb	0.585	24.54	177	2000	
Sn	120	3	115	30.213	ppb	30.213	1.83	24787	2000	
Sb	121	3	115	5.894	ppb	5.894	3.72	4738	1000	
Ba	137	3	115	541.344	ppb	541.344	1.96	136869	5000	
Tl	205	3	193	1.104	ppb	1.104	2.89	5648	2000	
(Pb)	206	3	193	451.030	ppb	451.030	1.63	616352	100	
(Pb)	207	3	193	425.475	ppb	425.475	1.33	517214	100	
Pb	208	3	193	449.225	ppb	449.225	2.13	2492680	5000	
Th	232	3	193	22.573	ppb	22.573	0.98	130642	2000	
U	238	3	193	6.286	ppb	6.286	2.02	38707	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4481009	1.71	3887690	115.26	60	120	
Sc (IS)	45	3	HMI He	651748	1.66	560366	116.31	60	120	
Ge Internal standard	72	2	HMI H2	2627674	2.06	2321471	113.19	60	120	
Ge Internal standard	72	3	HMI He	784987	0.40	685485	114.52	60	120	
In Internal Standard	115	3	HMI He	2874859	1.86	2631879	109.23	60	120	
Ir (IS)	193	3	HMI He	6317641	1.45	5771767	109.46	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-4-C
Data File Name	152SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:34:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.979	ppb	3.979	14.00	192	2000	
Na	23	3	45	465.714	ppb	465.714	3.04	74691	400000	
Mg	24	3	45	4532.297	ppb	4532.297	0.41	287980	400000	
Al	27	3	45	65427.523	ppb	65427.523	1.20	1637717	400000	
K	39	3	45	4669.811	ppb	4669.811	0.57	268566	400000	
Ca	40	2	45	1358.959	ppb	1358.959	1.66	870659	400000	
V	51	3	72	128.358	ppb	128.358	0.76	85755	2000	
Cr	52	3	72	100.073	ppb	100.073	1.66	83722	5000	
Mn	55	3	72	2551.571	ppb	2551.571	1.27	1092557	10000	
Fe	56	2	72	62059.425	ppb	62059.425	1.34	106727098	10000	>LDR
Co	59	3	72	25.524	ppb	25.524	1.62	35671	2000	
Ni	60	3	72	55.909	ppb	55.909	1.95	22042	5000	
Cu	63	3	72	59.817	ppb	59.817	0.66	64538	5000	
Zn	66	3	72	183.107	ppb	183.107	2.10	30675	5000	
As	75	3	72	18.905	ppb	18.905	6.42	2382	2000	
Se	78	2	72	1.312	ppb	1.312	5.41	87	2000	
Sr	88	3	72	46.408	ppb	46.408	2.11	27027	4000	
Mo	95	3	115	4.642	ppb	4.642	5.84	2504	2000	
Ag	107	3	115	0.237	ppb	0.237	3.80	440	100	
Cd	111	3	115	0.234	ppb	0.234	32.56	87	2000	
Sn	120	3	115	16.174	ppb	16.174	1.98	13870	2000	
Sb	121	3	115	1.617	ppb	1.617	10.84	1344	1000	
Ba	137	3	115	596.869	ppb	596.869	1.75	152595	5000	
Tl	205	3	193	0.646	ppb	0.646	4.03	3762	2000	
(Pb)	206	3	193	106.034	ppb	106.034	0.81	145874	100	
(Pb)	207	3	193	98.857	ppb	98.857	1.01	121155	100	
Pb	208	3	193	102.139	ppb	102.139	0.82	570747	5000	
Th	232	3	193	23.031	ppb	23.031	0.56	133791	2000	
U	238	3	193	4.174	ppb	4.174	1.21	26448	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4535108	0.61	3887690	116.65	60	120	
Sc (IS)	45	3	HMI He	659498	0.13	560366	117.69	60	120	
Ge Internal standard	72	2	HMI H2	2642655	2.47	2321471	113.84	60	120	
Ge Internal standard	72	3	HMI He	783583	0.61	685485	114.31	60	120	
In Internal Standard	115	3	HMI He	2906888	1.37	2631879	110.45	60	120	
Ir (IS)	193	3	HMI He	6346548	0.29	5771767	109.96	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	153_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:36:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.422	ppb	1.301	2319	50	96.8	90	110	
Na	23	3	45	47951.096	ppb	0.975	5641940	51000	94.0	90	110	
Mg	24	3	45	10005.675	ppb	0.531	624316	11000	91.0	90	110	
Al	27	3	45	922.090	ppb	2.944	22775	1000	92.2	90	110	
K	39	3	45	10005.551	ppb	1.668	532660	11000	91.0	90	110	
Ca	40	2	45	9898.260	ppb	0.580	6180491	11000	90.0	90	110	>+\-10%
V	51	3	72	49.908	ppb	0.687	32857	50	99.8	90	110	
Cr	52	3	72	52.498	ppb	0.348	43499	50	105.0	90	110	
Mn	55	3	72	51.911	ppb	2.470	21658	50	103.8	90	110	
Fe	56	2	72	1040.811	ppb	4.873	1775878	1000	104.1	90	110	
Co	59	3	72	50.403	ppb	1.268	68007	50	100.8	90	110	
Ni	60	3	72	51.864	ppb	0.208	19779	50	103.7	90	110	
Cu	63	3	72	50.332	ppb	2.578	52528	50	100.7	90	110	
Zn	66	3	72	51.125	ppb	3.832	8430	50	102.3	90	110	
As	75	3	72	52.955	ppb	2.085	6318	50	105.9	90	110	
Se	78	2	72	49.481	ppb	3.964	3074	50	99.0	90	110	
Sr	88	3	72	100.481	ppb	1.953	56495	100	100.5	90	110	
Mo	95	3	115	47.449	ppb	1.115	25543	50	94.9	90	110	
Ag	107	3	115	48.658	ppb	0.688	88091	50	97.3	90	110	
Cd	111	3	115	47.154	ppb	1.189	12480	50	94.3	90	110	
Sn	120	3	115	47.285	ppb	0.536	39158	50	94.6	90	110	
Sb	121	3	115	48.081	ppb	1.064	39271	50	96.2	90	110	
Ba	137	3	115	50.080	ppb	1.570	13000	50	100.2	90	110	
Tl	205	3	193	46.933	ppb	3.604	194017	50	93.9	90	110	
(Pb)	206	3	193	48.036	ppb	3.536	65312	50	96.1	90	110	
(Pb)	207	3	193	46.344	ppb	1.957	56248	50	92.7	90	110	
Pb	208	3	193	47.389	ppb	2.124	261797	50	94.8	90	110	
Th	232	3	193	48.390	ppb	1.268	270649	50	96.8	90	110	
U	238	3	193	47.208	ppb	2.962	275796	50	94.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4474595	0.81	3887690	115.10	60	120	
Sc (IS)	45	3	HMI He	647936	0.82	560366	115.63	60	120	
Ge Internal standard	72	2	HMI H2	2576750	3.35	2321471	111.00	60	120	
Ge Internal standard	72	3	HMI He	756937	0.87	685485	110.42	60	120	
In Internal Standard	115	3	HMI He	2942544	0.22	2631879	111.80	60	120	
Ir (IS)	193	3	HMI He	6255004	2.23	5771767	108.37	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	154_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:38:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-148.6	2	0.5	
Na	23	3	45	11.884	ppb	36.4	20081	25	
Mg	24	3	45	-0.164	ppb	-162.9	244	25	
Al	27	3	45	4.542	ppb	23.5	207	15	
K	39	3	45	-21.360	ppb	-119.7	27378	50	
V	51	3	72	-0.592	ppb	-16.3	698	1	
Cr	52	3	72	1.346	ppb	35.5	3395	1	>RL
Mn	55	3	72	0.716	ppb	24.6	498	0.5	>RL
Co	59	3	72	0.038	ppb	19.7	92	0.5	
Ni	60	3	72	1.276	ppb	12.6	858	1	>RL
Cu	63	3	72	-0.039	ppb	-172.8	445	1	
Zn	66	3	72	0.034	ppb	131.2	230	5	
As	75	3	72	-0.224	ppb	-46.9	47	1	
Se	78	2	72	0.002	ppb	1658.8	4	1	
Sr	88	3	72	0.035	ppb	74.5	47	0.5	
Mo	95	3	115	0.098	ppb	14.4	92	0.5	
Ag	107	3	115	0.011	ppb	51.6	37	1	
Cd	111	3	115	-0.053	ppb	-75.3	12	0.5	
Sn	120	3	115	0.169	ppb	70.8	1100	1	
Sb	121	3	115	0.043	ppb	64.8	77	0.6	
Ba	137	3	115	0.071	ppb	16.6	58	0.5	
Tl	205	3	193	-0.158	ppb	-8.4	396	0.1	
(Pb)	206	3	193	-0.047	ppb	-60.2	308	1	
(Pb)	207	3	193	-0.123	ppb	-33.5	386	1	
Pb	208	3	193	-0.070	ppb	-7.9	1256	0.5	
Th	232	3	193	1.430	ppb	12.0	13489	1	>RL
U	238	3	193	0.004	ppb	597.5	1841	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4478124	2.06	3887690	115.19	60	120	
Sc (IS)	45	3	HMI He	645318	0.77	560366	115.16	60	120	
Ge Internal standard	72	2	HMI H2	2680164	0.91	2321471	115.45	60	120	
Ge Internal standard	72	3	HMI He	776456	0.59	685485	113.27	60	120	
In Internal Standard	115	3	HMI He	2883459	0.22	2631879	109.56	60	120	
Ir (IS)	193	3	HMI He	6193817	1.04	5771767	107.31	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	156SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:12:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	157SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:14:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	158SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:15:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	159SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:17:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	160SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:19:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	161CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-19T18:21:18-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	649.52
Na	23	45	3	HMI He	16700	0.00
Mg	24	45	3	HMI He	270	8.56
Al	27	45	3	HMI He	153	30.15
K	39	45	3	HMI He	28103	0.01
Ca	40	45	2	HMI H2	12952	0.04
V	51	72	3	HMI He	996	0.98
Cr	52	72	3	HMI He	3124	0.29
Mn	55	72	3	HMI He	378	4.77
Fe	56	72	2	HMI H2	63727	0.01
Co	59	72	3	HMI He	55	28.64
Ni	60	72	3	HMI He	690	2.05
Cu	63	72	3	HMI He	395	1.16
Zn	66	72	3	HMI He	228	6.17
As	75	72	3	HMI He	43	81.37
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	23	347.82
Sr	88	72	3	HMI He	43	85.62
Mo	95	115	3	HMI He	38	85.67
Ag	107	115	3	HMI He	13	429.74
Cd	111	115	3	HMI He	10	866.60
Sn	120	115	3	HMI He	755	1.48
Sb	121	115	3	HMI He	45	65.37
Ba	137	115	3	HMI He	62	27.38
Tl	205	193	3	HMI He	380	3.81
(Pb)	206	193	3	HMI He	318	5.97
(Pb)	207	193	3	HMI He	481	2.29
Pb	208	193	3	HMI He	1484	0.12
Th	232	193	3	HMI He	6897	0.12
U	238	193	3	HMI He	1533	0.18

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	4300192	1.48
Sc (IS)	45	3	HMI He	644593	0.42
Ge Internal standard	72	2	HMI H2	2598552	1.09
Ge Internal standard	72	3	HMI He	772392	0.66
In Internal Standard	115	3	HMI He	2872781	1.83
Ir (IS)	193	3	HMI He	6092963	0.22

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	162CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-19T18:23:05-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	161CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	11542953	0.00
Mg	24	45	3	HMI He	1211814	0.00
Al	27	45	3	HMI He	153	19.16
K	39	45	3	HMI He	1018275	0.00
V	51	72	3	HMI He	1091	0.43
Cr	52	72	3	HMI He	3375	0.12
Mn	55	72	3	HMI He	398	3.46
Co	59	72	3	HMI He	93	28.33
Ni	60	72	3	HMI He	793	0.53
Cu	63	72	3	HMI He	578	1.48
Zn	66	72	3	HMI He	353	3.26
As	75	72	3	HMI He	63	80.17
Se	78	72	2	HMI H2	7	568.09
(Se)	78	72	3	HMI He	22	325.48
Sr	88	72	3	HMI He	292	3.83
Mo	95	115	3	HMI He	73	56.07
Ag	107	115	3	HMI He	42	66.55
Cd	111	115	3	HMI He	15	444.62
Sn	120	115	3	HMI He	908	0.88
Sb	121	115	3	HMI He	53	71.07
Ba	137	115	3	HMI He	182	6.31
Tl	205	193	3	HMI He	212	10.07
(Pb)	206	193	3	HMI He	388	2.35
(Pb)	207	193	3	HMI He	560	0.84
Pb	208	193	3	HMI He	1639	0.13
Th	232	193	3	HMI He	5652	0.04
U	238	193	3	HMI He	1659	0.28

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4345877	0.57	4300192	101.06	60	120	
Sc (IS)	45	3	HMI He	646398	1.04	644593	100.28	60	120	
Ge Internal standard	72	2	HMI H2	2478875	2.60	2598552	95.39	60	120	
Ge Internal standard	72	3	HMI He	746652	0.46	772392	96.67	60	120	
In Internal Standard	115	3	HMI He	2913487	0.28	2872781	101.42	60	120	
Ir (IS)	193	3	HMI He	6127949	1.75	6092963	100.57	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	163CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-19T18:24:50-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	161CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4492	0.08
Na	23	45	3	HMI He	247645	0.00
Mg	24	45	3	HMI He	121495	0.00
Al	27	45	3	HMI He	46834	0.00
K	39	45	3	HMI He	125530	0.00
V	51	72	3	HMI He	66816	0.00
Cr	52	72	3	HMI He	84037	0.00
Mn	55	72	3	HMI He	43088	0.00
Co	59	72	3	HMI He	137360	0.00
Ni	60	72	3	HMI He	39433	0.00
Cu	63	72	3	HMI He	105761	0.00
Zn	66	72	3	HMI He	17100	0.01
As	75	72	3	HMI He	11966	0.02
Se	78	72	2	HMI H2	6170	0.01
(Se)	78	72	3	HMI He	693	2.06
Sr	88	72	3	HMI He	113456	0.00
Mo	95	115	3	HMI He	51821	0.00
Ag	107	115	3	HMI He	174838	0.00
Cd	111	115	3	HMI He	24926	0.01
Sn	120	115	3	HMI He	79605	0.00
Sb	121	115	3	HMI He	78154	0.00
Ba	137	115	3	HMI He	25524	0.01
Tl	205	193	3	HMI He	385460	0.00
(Pb)	206	193	3	HMI He	128141	0.00
(Pb)	207	193	3	HMI He	112870	0.00
Pb	208	193	3	HMI He	517163	0.00
Th	232	193	3	HMI He	520653	0.00
U	238	193	3	HMI He	542005	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416121	3.15	4300192	102.70	60	120	
Sc (IS)	45	3	HMI He	643874	0.14	644593	99.89	60	120	
Ge Internal standard	72	2	HMI H2	2663498	2.80	2598552	102.50	60	120	
Ge Internal standard	72	3	HMI He	799151	0.74	772392	103.46	60	120	
In Internal Standard	115	3	HMI He	2887881	0.25	2872781	100.53	60	120	
Ir (IS)	193	3	HMI He	6075954	2.08	6092963	99.72	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	164_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:26:37-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.973	ppb	3.165	1806	40	102.4	90	110	
Na	23	3	45	12931.845	ppb	1.631	1517283	12800	101.0	90	110	
Mg	24	3	45	4626.207	ppb	1.911	282388	4800	96.4	90	110	
Al	27	3	45	744.838	ppb	1.321	17726	800	93.1	90	110	
K	39	3	45	4627.923	ppb	0.835	259015	4800	96.4	90	110	
Ca	40	2	45	4818.738	ppb	0.754	2869774	4800	100.4	90	110	
V	51	3	72	41.258	ppb	1.431	27185	40	103.1	90	110	
Cr	52	3	72	42.319	ppb	2.232	36122	40	105.8	90	110	
Mn	55	3	72	42.645	ppb	1.090	17948	40	106.6	90	110	
Fe	56	2	72	848.670	ppb	2.786	1389452	800	106.1	90	110	
Co	59	3	72	41.368	ppb	0.725	54869	40	103.4	90	110	
Ni	60	3	72	41.149	ppb	1.929	16063	40	102.9	90	110	
Cu	63	3	72	42.156	ppb	0.788	43253	40	105.4	90	110	
Zn	66	3	72	82.201	ppb	2.648	13607	80	102.8	90	110	
As	75	3	72	40.365	ppb	1.868	4687	40	100.9	90	110	
Se	78	2	72	43.250	ppb	1.023	2564	40	108.1	90	110	
Sr	88	3	72	123.495	ppb	0.758	67625	120	102.9	90	110	
Mo	95	3	115	39.776	ppb	2.602	20856	40	99.4	90	110	
Ag	107	3	115	79.963	ppb	2.670	141296	80	100.0	90	110	
Cd	111	3	115	39.060	ppb	3.141	9845	40	97.6	90	110	
Sn	120	3	115	40.280	ppb	1.873	32876	40	100.7	90	110	
Sb	121	3	115	40.073	ppb	1.960	31687	40	100.2	90	110	
Ba	137	3	115	41.077	ppb	3.815	10636	40	102.7	90	110	
Tl	205	3	193	39.290	ppb	0.825	154016	40	98.2	90	110	
(Pb)	206	3	193	40.919	ppb	2.103	53436	40	102.3	90	110	
(Pb)	207	3	193	39.233	ppb	0.588	45256	40	98.1	90	110	
Pb	208	3	193	40.171	ppb	1.236	211862	40	100.4	90	110	
Th	232	3	193	79.580	ppb	1.149	422112	80	99.5	90	110	
U	238	3	193	42.356	ppb	1.978	234041	40	105.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4410499	1.73	4300192	102.57	60	120	
Sc (IS)	45	3	HMI He	650733	0.35	644593	100.95	60	120	
Ge Internal standard	72	2	HMI H2	2556811	0.53	2598552	98.39	60	120	
Ge Internal standard	72	3	HMI He	771169	0.53	772392	99.84	60	120	
In Internal Standard	115	3	HMI He	2919678	2.13	2872781	101.63	60	120	
Ir (IS)	193	3	HMI He	6169073	0.98	6092963	101.25	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	165_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:28:25-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.006	ppb	3.891	2321	50	104.0	90	110	
Na	23	3	45	48491.391	ppb	1.073	5551354	51000	95.1	90	110	
Mg	24	3	45	10203.337	ppb	1.802	612356	11000	92.8	90	110	
Al	27	3	45	1002.387	ppb	1.233	23413	1000	100.2	90	110	
K	39	3	45	10543.587	ppb	0.309	544843	11000	95.9	90	110	
Ca	40	2	45	10179.436	ppb	1.940	6198045	11000	92.5	90	110	
V	51	3	72	51.102	ppb	0.489	33410	50	102.2	90	110	
Cr	52	3	72	52.074	ppb	0.482	43700	50	104.1	90	110	
Mn	55	3	72	50.606	ppb	0.742	21214	50	101.2	90	110	
Fe	56	2	72	1059.567	ppb	1.387	1747757	1000	106.0	90	110	
Co	59	3	72	51.122	ppb	1.167	67751	50	102.2	90	110	
Ni	60	3	72	51.762	ppb	0.666	20014	50	103.5	90	110	
Cu	63	3	72	51.722	ppb	1.334	52945	50	103.4	90	110	
Zn	66	3	72	51.114	ppb	1.255	8540	50	102.2	90	110	
As	75	3	72	52.863	ppb	0.581	6120	50	105.7	90	110	
Se	78	2	72	49.921	ppb	2.193	3009	50	99.8	90	110	
Sr	88	3	72	104.058	ppb	2.472	56954	100	104.1	90	110	
Mo	95	3	115	50.298	ppb	1.711	26326	50	100.6	90	110	
Ag	107	3	115	49.062	ppb	1.613	86574	50	98.1	90	110	
Cd	111	3	115	51.918	ppb	1.842	13067	50	103.8	90	110	
Sn	120	3	115	48.086	ppb	2.074	39031	50	96.2	90	110	
Sb	121	3	115	49.760	ppb	1.825	39271	50	99.5	90	110	
Ba	137	3	115	49.998	ppb	2.148	12910	50	100.0	90	110	
Tl	205	3	193	50.154	ppb	3.024	194787	50	100.3	90	110	
(Pb)	206	3	193	49.492	ppb	1.528	64016	50	99.0	90	110	
(Pb)	207	3	193	49.793	ppb	1.699	56817	50	99.6	90	110	
Pb	208	3	193	49.602	ppb	1.671	259029	50	99.2	90	110	
Th	232	3	193	52.550	ppb	1.303	278746	50	105.1	90	110	
U	238	3	193	50.129	ppb	1.545	274365	50	100.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4520502	1.04	4300192	105.12	60	120	
Sc (IS)	45	3	HMI He	640162	0.73	644593	99.31	60	120	
Ge Internal standard	72	2	HMI H2	2599539	1.83	2598552	100.04	60	120	
Ge Internal standard	72	3	HMI He	770642	0.73	772392	99.77	60	120	
In Internal Standard	115	3	HMI He	2914703	0.58	2872781	101.46	60	120	
Ir (IS)	193	3	HMI He	6117188	1.67	6092963	100.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	166_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:30:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	27.455	ppb	17.7	19944	25	>RL
Mg	24	3	45	1.301	ppb	17.3	350	25	
Al	27	3	45	-0.591	ppb	-132.5	140	15	
K	39	3	45	1.275	ppb	1206.6	28294	50	
V	51	3	72	0.235	ppb	36.9	1153	1	
Cr	52	3	72	0.547	ppb	36.1	3572	1	
Mn	55	3	72	0.035	ppb	402.8	395	0.5	
Co	59	3	72	0.016	ppb	77.0	77	0.5	
Ni	60	3	72	0.692	ppb	16.1	955	1	
Cu	63	3	72	0.012	ppb	439.1	410	1	
Zn	66	3	72	-0.060	ppb	-268.5	220	5	
As	75	3	72	0.342	ppb	19.9	83	1	
Se	78	2	72	0.088	ppb	20.9	7	1	
Sr	88	3	72	0.006	ppb	737.4	47	0.5	
Mo	95	3	115	0.088	ppb	24.7	85	0.5	
Ag	107	3	115	0.023	ppb	48.8	53	1	
Cd	111	3	115	0.013	ppb	246.7	13	0.5	
Sn	120	3	115	0.239	ppb	16.9	958	1	
Sb	121	3	115	0.054	ppb	25.9	88	0.6	
Ba	137	3	115	-0.017	ppb	-206.9	58	0.5	
Tl	205	3	193	-0.013	ppb	-72.0	337	0.1	
(Pb)	206	3	193	-0.045	ppb	-48.4	268	1	
(Pb)	207	3	193	-0.051	ppb	-46.6	435	1	
Pb	208	3	193	-0.042	ppb	-23.6	1301	0.5	
Th	232	3	193	1.890	ppb	9.6	17070	1	>RL
U	238	3	193	0.039	ppb	42.5	1789	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400686	1.62	4300192	102.34	60	120	
Sc (IS)	45	3	HMI He	647440	1.12	644593	100.44	60	120	
Ge Internal standard	72	2	HMI H2	2603566	0.77	2598552	100.19	60	120	
Ge Internal standard	72	3	HMI He	777078	0.56	772392	100.61	60	120	
In Internal Standard	115	3	HMI He	2919165	2.18	2872781	101.61	60	120	
Ir (IS)	193	3	HMI He	6249640	2.31	6092963	102.57	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	167LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:32:01-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.750	ppb	14.535	40	1	75.0	70	130	
Na	23	3	45	305.665	ppb	3.372	51676	300	101.9	70	130	
Mg	24	3	45	48.963	ppb	5.725	3220	50	97.9	70	130	
Al	27	3	45	42.950	ppb	12.095	1155	50	85.9	70	130	
K	39	3	45	108.683	ppb	19.880	33376	120	90.6	70	130	
Ca	40	2	45	193.555	ppb	1.929	129189	200	96.8	70	130	
V	51	3	72	4.845	ppb	4.984	4065	5	96.9	70	130	
Cr	52	3	72	2.353	ppb	9.813	4950	2	117.7	70	130	
Mn	55	3	72	0.852	ppb	18.335	728	1	85.2	70	130	
Fe	56	2	72	51.681	ppb	11.099	146450	50	103.4	70	130	
Co	59	3	72	1.018	ppb	6.673	1401	1	101.8	70	130	
Ni	60	3	72	2.261	ppb	11.155	1531	2	113.0	70	130	
Cu	63	3	72	1.988	ppb	4.488	2412	2	99.4	70	130	
Zn	66	3	72	9.072	ppb	9.450	1703	10	90.7	70	130	
As	75	3	72	5.334	ppb	4.456	656	5	106.7	70	130	
Se	78	2	72	4.672	ppb	11.759	285	5	93.4	70	130	
Sr	88	3	72	4.832	ppb	5.014	2686	5	96.6	70	130	
Mo	95	3	115	1.767	ppb	4.821	960	2	88.4	70	130	
Ag	107	3	115	0.988	ppb	8.495	1751	1	98.8	70	130	
Cd	111	3	115	0.977	ppb	17.634	255	1	97.7	70	130	
Sn	120	3	115	8.684	ppb	5.012	7652	10	86.8	70	130	
Sb	121	3	115	2.021	ppb	8.462	1634	2	101.0	70	130	
Ba	137	3	115	0.823	ppb	2.187	273	1	82.3	70	130	
Tl	205	3	193	0.891	ppb	3.046	3902	1	89.1	70	130	
(Pb)	206	3	193	0.865	ppb	13.601	1456	1	86.5	70	130	
(Pb)	207	3	193	0.874	ppb	9.420	1498	1	87.4	70	130	
Pb	208	3	193	0.856	ppb	7.152	6033	1	85.6	70	130	
Th	232	3	193	1.485	ppb	14.965	14846	1	148.5	70	130	>+/-30%
U	238	3	193	0.960	ppb	6.242	6878	1	96.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4451222	1.52	4300192	103.51	60	120	
Sc (IS)	45	3	HMI He	642760	1.42	644593	99.72	60	120	
Ge Internal standard	72	2	HMI H2	2611259	1.43	2598552	100.49	60	120	
Ge Internal standard	72	3	HMI He	770357	1.05	772392	99.74	60	120	
In Internal Standard	115	3	HMI He	2906088	1.38	2872781	101.16	60	120	
Ir (IS)	193	3	HMI He	6220701	1.89	6092963	102.10	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609036/1-B
Data File Name	168_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:55:36-06:00
Sample Type	Blank
Dilution	1
Comment	609057 6020b
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	54.581	ppb	0.167723457	23286	25
Mg	24	3	45	1.085	ppb	41.94777928	340	25
Al	27	3	45	2.592	ppb	19.64914671	217	15
K	39	3	45	-0.837	ppb	-1980.866517	28444	50
Ca	40	2	45	15.020	ppb	6.233689535	22334	200
V	51	3	72	0.039	ppb	107.1646743	1033	1
Cr	52	3	72	-0.525	ppb	-23.84580673	2746	1
Mn	55	3	72	-0.117	ppb	-179.8126051	333	0.5
Fe	56	2	72	-1.241	ppb	-89.07008604	63592	50
Co	59	3	72	-0.003	ppb	-211.7968476	52	0.5
Ni	60	3	72	-0.283	ppb	-64.93569685	590	1
Cu	63	3	72	0.287	ppb	12.7890343	695	1
Zn	66	3	72	1.299	ppb	18.4746995	445	5
As	75	3	72	0.123	ppb	118.4989319	58	1
(Se)	78	3	72	-0.058	ppb	-1458.039627	23	1
Sr	88	3	72	0.041	ppb	47.430189	67	0.5
Mo	95	3	115	0.024	ppb	239.1274034	52	0.5
Ag	107	3	115	0.005	ppb	166.9571439	23	1
Cd	111	3	115	-0.021	ppb	-93.40690784	5	0.5
Sn	120	3	115	0.100	ppb	141.460846	853	1
Sb	121	3	115	0.026	ppb	113.668541	67	0.6
Ba	137	3	115	0.091	ppb	39.32124844	87	0.5
Tl	205	3	193	-0.042	ppb	-23.36577668	222	0.1
(Pb)	206	3	193	-0.034	ppb	-49.8860987	282	1
(Pb)	207	3	193	0.029	ppb	81.81627739	526	1
Pb	208	3	193	-0.025	ppb	-51.68552183	1386	0.5
Th	232	3	193	-0.271	ppb	-21.66249358	5637	1
U	238	3	193	0.016	ppb	55.47367837	1658	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4439674	1.24	4300192	103.24	60	120	
Sc (IS)	45	3	HMI He	653353	0.53	644593	101.36	60	120	
Ge Internal standard	72	2	HMI H2	2675845	2.23	2598552	102.97	60	120	
Ge Internal standard	72	3	HMI He	781210	1.04	772392	101.14	60	120	
In Internal Standard	115	3	HMI He	2942634	1.42	2872781	102.43	60	120	
Ir (IS)	193	3	HMI He	6241327	0.54	6092963	102.44	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609036/2-C
Data File Name	169_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:57:25-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609057 6020b
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.014	40.014	ppb	9.952	1799	40	100.0	80	120	
Na	23	3	45	750.740	750.740	ppb	2.033	104588	40	1876.9	80	120	>+/-20%
Mg	24	3	45	695.339	695.339	ppb	0.989	42935	40	1738.3	80	120	>+/-20%
Al	27	3	45	728.186	728.186	ppb	1.940	17438	40	1820.5	80	120	>+/-20%
K	39	3	45	719.728	719.728	ppb	2.026	64630	40	1799.3	80	120	>+/-20%
Ca	40	2	45	799.056	799.056	ppb	0.299	493622	40	1997.6	80	120	>+/-20%
V	51	3	72	38.057	38.057	ppb	2.103	25746	40	95.1	80	120	
Cr	52	3	72	38.687	38.687	ppb	1.631	34076	40	96.7	80	120	
Mn	55	3	72	38.377	38.377	ppb	1.985	16572	40	95.9	80	120	
Fe	56	2	72	789.066	789.066	ppb	2.403	1348924	40	1972.7	80	120	>+/-20%
(Fe)	56	3	72	766.951	766.951	ppb	0.186	538037	40	1917.4	80	120	>+/-20%
Co	59	3	72	38.717	38.717	ppb	1.057	52570	40	96.8	80	120	
Ni	60	3	72	37.369	37.369	ppb	0.714	14997	40	93.4	80	120	
Cu	63	3	72	39.974	39.974	ppb	0.514	42006	40	99.9	80	120	
Zn	66	3	72	39.173	39.173	ppb	3.503	6760	40	97.9	80	120	
As	75	3	72	38.522	38.522	ppb	0.825	4580	40	96.3	80	120	
Se	78	2	72	40.163	40.163	ppb	2.005	2478	40	100.4	80	120	
(Se)	78	3	72	35.958	35.958	ppb	19.270	262	40	89.9	80	120	
Sr	88	3	72	77.569	77.569	ppb	1.761	43498	40	193.9	80	120	>+/-20%
Mo	95	3	115	37.431	37.431	ppb	2.205	19469	40	93.6	80	120	
Ag	107	3	115	39.188	39.188	ppb	1.948	68679	40	98.0	80	120	
Cd	111	3	115	38.099	38.099	ppb	2.794	9524	40	95.2	80	120	
Sn	120	3	115	35.737	35.737	ppb	3.187	28999	40	89.3	80	120	
Sb	121	3	115	38.145	38.145	ppb	1.208	29912	40	95.4	80	120	
Ba	137	3	115	38.632	38.632	ppb	4.952	9919	40	96.6	80	120	
Tl	205	3	193	37.380	37.380	ppb	0.733	149090	40	93.5	80	120	
(Pb)	206	3	193	37.287	37.287	ppb	1.300	49570	40	93.2	80	120	
(Pb)	207	3	193	37.186	37.186	ppb	1.084	43665	40	93.0	80	120	
Pb	208	3	193	37.467	37.467	ppb	0.663	201142	40	93.7	80	120	
Th	232	3	193	34.463	34.463	ppb	1.761	189994	40	86.2	80	120	
U	238	3	193	37.304	37.304	ppb	0.036	209911	40	93.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4470655	1.94	4300192	103.96	60	120	
Sc (IS)	45	3	HMI He	654656	0.71	644593	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2661148	1.75	2598552	102.41	60	120	
Ge Internal standard	72	3	HMI He	789409	0.54	772392	102.20	60	120	
In Internal Standard	115	3	HMI He	2895205	1.98	2872781	100.78	60	120	
Ir (IS)	193	3	HMI He	6275966	0.46	6092963	103.00	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-E
Data File Name	170SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:59:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.036	ppb	-0.036	-551.78	5	2000	
Na	23	3	45	113589.274	ppb	113589.274	1.40	13433384	400000	
Mg	24	3	45	49480.849	ppb	49480.849	2.51	3071678	400000	
Al	27	3	45	0.946	ppb	0.946	182.28	180	400000	
K	39	3	45	6750.228	ppb	6750.228	1.63	371314	400000	
Ca	40	2	45	74700.350	ppb	74700.350	2.12	45019419	400000	
V	51	3	72	1.643	ppb	1.643	3.20	2086	2000	
Cr	52	3	72	0.243	ppb	0.243	91.45	3387	5000	
Mn	55	3	72	1.308	ppb	1.308	23.15	940	10000	
Fe	56	2	72	9.263	ppb	9.263	28.26	78567	10000	
Co	59	3	72	0.392	ppb	0.392	12.22	588	2000	
Ni	60	3	72	1.123	ppb	1.123	3.68	1134	5000	
Cu	63	3	72	1.500	ppb	1.500	5.97	1966	5000	
Zn	66	3	72	9.405	ppb	9.405	8.79	1799	5000	
As	75	3	72	1.606	ppb	1.606	21.42	233	2000	
Se	78	2	72	1.712	ppb	1.712	11.49	105	2000	
Sr	88	3	72	1290.108	ppb	1290.108	1.42	722767	4000	
Mo	95	3	115	2.965	ppb	2.965	4.56	1621	2000	
Ag	107	3	115	0.021	ppb	0.021	19.64	52	100	
Cd	111	3	115	0.050	ppb	0.050	117.02	23	2000	
Sn	120	3	115	0.074	ppb	0.074	178.75	841	2000	
Sb	121	3	115	0.280	ppb	0.280	30.64	272	1000	
Ba	137	3	115	50.712	ppb	50.712	1.18	13367	5000	
Tl	205	3	193	-0.021	ppb	-0.021	-27.50	303	2000	
(Pb)	206	3	193	0.030	ppb	0.030	66.87	363	100	
(Pb)	207	3	193	0.078	ppb	0.078	42.95	580	100	
Pb	208	3	193	0.035	ppb	0.035	61.91	1694	5000	
Th	232	3	193	1.901	ppb	1.901	14.03	16997	2000	
U	238	3	193	10.980	ppb	10.980	0.05	62175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4482052	0.63	4300192	104.23	60	120	
Sc (IS)	45	3	HMI He	662428	0.83	644593	102.77	60	120	
Ge Internal standard	72	2	HMI H2	2601889	1.70	2598552	100.13	60	120	
Ge Internal standard	72	3	HMI He	789531	1.30	772392	102.22	60	120	
In Internal Standard	115	3	HMI He	2975586	1.37	2872781	103.58	60	120	
Ir (IS)	193	3	HMI He	6203985	0.87	6092963	101.82	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-Esd@5
Data File Name	171SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:01:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	23727.265	ppb	23727.265	0.82	2815188	400000	
Mg	24	3	45	10031.707	ppb	10031.707	2.00	621905	400000	
Al	27	3	45	0.276	ppb	0.276	1041.43	163	400000	
K	39	3	45	1355.979	ppb	1355.979	4.68	97487	400000	
Ca	40	2	45	15276.510	ppb	15276.510	2.24	9300859	400000	
V	51	3	72	0.562	ppb	0.562	14.62	1358	2000	
Cr	52	3	72	0.026	ppb	0.026	1051.69	3154	5000	
Mn	55	3	72	1.719	ppb	1.719	4.74	1091	10000	
Fe	56	2	72	2.911	ppb	2.911	83.03	68484	10000	
Co	59	3	72	0.080	ppb	0.080	18.45	162	2000	
Ni	60	3	72	0.415	ppb	0.415	37.29	848	5000	
Cu	63	3	72	0.442	ppb	0.442	11.24	848	5000	
Zn	66	3	72	4.732	ppb	4.732	11.99	1003	5000	
As	75	3	72	0.503	ppb	0.503	43.27	102	2000	
Se	78	2	72	0.320	ppb	0.320	57.77	21	2000	
Sr	88	3	72	267.709	ppb	267.709	0.37	147257	4000	
Mo	95	3	115	0.619	ppb	0.619	13.42	366	2000	
Ag	107	3	115	0.018	ppb	0.018	53.95	47	100	
Cd	111	3	115	-0.014	ppb	-0.014	-158.20	7	2000	
Sn	120	3	115	0.162	ppb	0.162	23.73	906	2000	
Sb	121	3	115	0.090	ppb	0.090	44.04	118	1000	
Ba	137	3	115	10.643	ppb	10.643	6.45	2832	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-3.19	227	2000	
(Pb)	206	3	193	0.336	ppb	0.336	21.98	765	100	
(Pb)	207	3	193	0.341	ppb	0.341	2.72	885	100	
Pb	208	3	193	0.336	ppb	0.336	8.44	3290	5000	
Th	232	3	193	0.092	ppb	0.092	95.41	7525	2000	
U	238	3	193	2.325	ppb	2.325	2.29	14438	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4523217	0.56	4300192	105.19	60	120	
Sc (IS)	45	3	HMI He	661327	1.55	644593	102.60	60	120	
Ge Internal standard	72	2	HMI H2	2603127	3.41	2598552	100.18	60	120	
Ge Internal standard	72	3	HMI He	774925	0.47	772392	100.33	60	120	
In Internal Standard	115	3	HMI He	2952119	1.11	2872781	102.76	60	120	
Ir (IS)	193	3	HMI He	6224081	1.43	6092963	102.15	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-F MS
Data File Name	172SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:02:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.961	ppb	40.961	6.41	1804	2000	
Na	23	3	45	112416.789	ppb	112416.789	1.89	13297912	400000	
Mg	24	3	45	49051.373	ppb	49051.373	0.69	3046009	400000	
Al	27	3	45	768.019	ppb	768.019	3.66	18601	400000	
K	39	3	45	7477.776	ppb	7477.776	1.09	408308	400000	
Ca	40	2	45	77230.298	ppb	77230.298	2.51	46507105	400000	
V	51	3	72	40.336	ppb	40.336	0.49	27340	2000	
Cr	52	3	72	40.248	ppb	40.248	0.39	35467	5000	
Mn	55	3	72	41.720	ppb	41.720	0.66	18056	10000	
Fe	56	2	72	827.816	ppb	827.816	4.08	1408820	10000	
Co	59	3	72	39.568	ppb	39.568	1.76	53948	2000	
Ni	60	3	72	40.210	ppb	40.210	0.68	16150	5000	
Cu	63	3	72	40.711	ppb	40.711	0.45	42948	5000	
Zn	66	3	72	49.318	ppb	49.318	2.82	8483	5000	
As	75	3	72	41.308	ppb	41.308	2.32	4928	2000	
Se	78	2	72	42.433	ppb	42.433	3.27	2613	2000	
Sr	88	3	72	1343.910	ppb	1343.910	0.43	755962	4000	
Mo	95	3	115	40.421	ppb	40.421	1.41	21491	2000	
Ag	107	3	115	39.098	ppb	39.098	0.92	70068	100	
Cd	111	3	115	37.918	ppb	37.918	1.00	9694	2000	
Sn	120	3	115	36.414	ppb	36.414	1.66	30204	2000	
Sb	121	3	115	38.541	ppb	38.541	1.25	30904	1000	
Ba	137	3	115	90.284	ppb	90.284	1.00	23623	5000	
Tl	205	3	193	38.490	ppb	38.490	1.22	153680	2000	
(Pb)	206	3	193	38.588	ppb	38.588	0.71	51348	100	
(Pb)	207	3	193	38.254	ppb	38.254	0.88	44962	100	
Pb	208	3	193	38.393	ppb	38.393	1.58	206298	5000	
Th	232	3	193	37.288	ppb	37.288	2.22	205203	2000	
U	238	3	193	49.750	ppb	49.750	2.51	279687	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4479640	1.16	4300192	104.17	60	120	
Sc (IS)	45	3	HMI He	662539	0.58	644593	102.78	60	120	
Ge Internal standard	72	2	HMI H2	2655570	1.84	2598552	102.19	60	120	
Ge Internal standard	72	3	HMI He	792644	0.36	772392	102.62	60	120	
In Internal Standard	115	3	HMI He	2959887	1.03	2872781	103.03	60	120	
Ir (IS)	193	3	HMI He	6283931	1.83	6092963	103.13	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-G MSD
Data File Name	173SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:04:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.380	ppb	42.380	2.81	1889	2000	
Na	23	3	45	115435.643	ppb	115435.643	1.71	13536457	400000	
Mg	24	3	45	49902.808	ppb	49902.808	1.24	3072016	400000	
Al	27	3	45	723.973	ppb	723.973	3.83	17395	400000	
K	39	3	45	7420.791	ppb	7420.791	0.56	401919	400000	
Ca	40	2	45	77241.280	ppb	77241.280	2.98	46317509	400000	
V	51	3	72	41.099	ppb	41.099	1.74	27735	2000	
Cr	52	3	72	39.441	ppb	39.441	3.11	34691	5000	
Mn	55	3	72	41.561	ppb	41.561	0.89	17923	10000	
Fe	56	2	72	828.013	ppb	828.013	1.56	1379899	10000	
Co	59	3	72	38.840	ppb	38.840	2.79	52755	2000	
Ni	60	3	72	39.717	ppb	39.717	1.07	15903	5000	
Cu	63	3	72	41.274	ppb	41.274	1.01	43376	5000	
Zn	66	3	72	48.204	ppb	48.204	3.29	8267	5000	
As	75	3	72	42.427	ppb	42.427	2.67	5042	2000	
Se	78	2	72	44.448	ppb	44.448	0.62	2679	2000	
Sr	88	3	72	1356.414	ppb	1356.414	1.18	760169	4000	
Mo	95	3	115	41.303	ppb	41.303	1.52	21737	2000	
Ag	107	3	115	38.673	ppb	38.673	1.97	68598	100	
Cd	111	3	115	37.127	ppb	37.127	1.17	9395	2000	
Sn	120	3	115	37.236	ppb	37.236	2.22	30553	2000	
Sb	121	3	115	38.514	ppb	38.514	2.94	30561	1000	
Ba	137	3	115	90.773	ppb	90.773	3.87	23506	5000	
Tl	205	3	193	38.171	ppb	38.171	1.21	152739	2000	
(Pb)	206	3	193	38.339	ppb	38.339	1.90	51122	100	
(Pb)	207	3	193	38.048	ppb	38.048	1.66	44812	100	
Pb	208	3	193	38.162	ppb	38.162	1.45	205516	5000	
Th	232	3	193	38.451	ppb	38.451	0.99	211868	2000	
U	238	3	193	49.359	ppb	49.359	1.25	278150	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4462344	2.79	4300192	103.77	60	120	
Sc (IS)	45	3	HMI He	656805	0.31	644593	101.89	60	120	
Ge Internal standard	72	2	HMI H2	2599351	0.52	2598552	100.03	60	120	
Ge Internal standard	72	3	HMI He	789766	0.90	772392	102.25	60	120	
In Internal Standard	115	3	HMI He	2930146	1.57	2872781	102.00	60	120	
Ir (IS)	193	3	HMI He	6297450	1.67	6092963	103.36	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-E pds
Data File Name	174SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:06:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	102.986	ppb	102.986	3.46	4512	2000	
Na	23	3	45	116614.091	ppb	116614.091	3.10	13625033	400000	
Mg	24	3	45	51284.976	ppb	51284.976	2.96	3145673	400000	
Al	27	3	45	1965.215	ppb	1965.215	2.70	46787	400000	
K	39	3	45	8570.501	ppb	8570.501	2.25	458138	400000	
Ca	40	2	45	77402.595	ppb	77402.595	2.23	46420770	400000	
V	51	3	72	100.130	ppb	100.130	1.37	65976	2000	
Cr	52	3	72	98.937	ppb	98.937	0.75	82044	5000	
Mn	55	3	72	100.129	ppb	100.129	0.29	42550	10000	
Fe	56	2	72	1065.924	ppb	1065.924	2.07	1768813	10000	
Co	59	3	72	98.371	ppb	98.371	1.67	133276	2000	
Ni	60	3	72	99.067	ppb	99.067	1.85	38533	5000	
Cu	63	3	72	103.135	ppb	103.135	1.20	107567	5000	
Zn	66	3	72	208.325	ppb	208.325	1.92	34882	5000	
As	75	3	72	106.960	ppb	106.960	3.15	12618	2000	
Se	78	2	72	102.030	ppb	102.030	2.64	6186	2000	
Sr	88	3	72	1349.986	ppb	1349.986	1.21	755062	4000	
Mo	95	3	115	99.856	ppb	99.856	1.30	52866	2000	
Ag	107	3	115	25.652	ppb	25.652	2.79	45832	100	
Cd	111	3	115	96.205	ppb	96.205	1.98	24498	2000	
Sn	120	3	115	95.095	ppb	95.095	2.54	77368	2000	
Sb	121	3	115	95.043	ppb	95.043	2.15	75882	1000	
Ba	137	3	115	146.726	ppb	146.726	1.96	38226	5000	
Tl	205	3	193	95.854	ppb	95.854	2.43	383238	2000	
(Pb)	206	3	193	95.204	ppb	95.204	3.48	126534	100	
(Pb)	207	3	193	95.828	ppb	95.828	3.23	112173	100	
Pb	208	3	193	94.787	ppb	94.787	3.15	508490	5000	
Th	232	3	193	103.200	ppb	103.200	3.88	556865	2000	
U	238	3	193	217.206	ppb	217.206	3.09	1219389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4461007	1.81	4300192	103.74	60	120	
Sc (IS)	45	3	HMI He	654622	1.43	644593	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2615474	0.42	2598552	100.65	60	120	
Ge Internal standard	72	3	HMI He	788174	0.53	772392	102.04	60	120	
In Internal Standard	115	3	HMI He	2950563	1.29	2872781	102.71	60	120	
Ir (IS)	193	3	HMI He	6303790	2.68	6092963	103.46	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-2-B
Data File Name	175SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:08:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.110	ppb	-0.110	-60.50	2	2000	
Na	23	3	45	114204.456	ppb	114204.456	3.02	13178151	400000	
Mg	24	3	45	45766.703	ppb	45766.703	3.64	2772397	400000	
Al	27	3	45	1.410	ppb	1.410	65.07	187	400000	
K	39	3	45	7633.489	ppb	7633.489	1.96	406049	400000	
Ca	40	2	45	71666.266	ppb	71666.266	0.51	42559849	400000	
V	51	3	72	2.016	ppb	2.016	12.91	2281	2000	
Cr	52	3	72	0.305	ppb	0.305	32.47	3365	5000	
Mn	55	3	72	1.628	ppb	1.628	6.32	1051	10000	
Fe	56	2	72	20.999	ppb	20.999	13.21	96705	10000	
Co	59	3	72	0.327	ppb	0.327	3.45	490	2000	
Ni	60	3	72	1.612	ppb	1.612	6.67	1294	5000	
Cu	63	3	72	1.599	ppb	1.599	4.82	2026	5000	
Zn	66	3	72	19.398	ppb	19.398	7.57	3394	5000	
As	75	3	72	1.501	ppb	1.501	14.37	217	2000	
Se	78	2	72	1.712	ppb	1.712	8.00	105	2000	
Sr	88	3	72	1166.101	ppb	1166.101	1.24	639916	4000	
Mo	95	3	115	2.837	ppb	2.837	4.83	1514	2000	
Ag	107	3	115	0.014	ppb	0.014	51.55	38	100	
Cd	111	3	115	0.039	ppb	0.039	88.03	20	2000	
Sn	120	3	115	0.339	ppb	0.339	23.37	1031	2000	
Sb	121	3	115	0.462	ppb	0.462	14.55	408	1000	
Ba	137	3	115	46.402	ppb	46.402	1.71	11931	5000	
Tl	205	3	193	0.005	ppb	0.005	337.95	405	2000	
(Pb)	206	3	193	0.076	ppb	0.076	14.90	423	100	
(Pb)	207	3	193	0.128	ppb	0.128	66.47	636	100	
Pb	208	3	193	0.110	ppb	0.110	15.75	2091	5000	
Th	232	3	193	2.409	ppb	2.409	13.45	19654	2000	
U	238	3	193	9.799	ppb	9.799	1.36	55606	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416590	1.54	4300192	102.71	60	120	
Sc (IS)	45	3	HMI He	646370	0.34	644593	100.28	60	120	
Ge Internal standard	72	2	HMI H2	2589746	2.03	2598552	99.66	60	120	
Ge Internal standard	72	3	HMI He	773307	0.52	772392	100.12	60	120	
In Internal Standard	115	3	HMI He	2901427	0.73	2872781	101.00	60	120	
Ir (IS)	193	3	HMI He	6198212	0.81	6092963	101.73	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-3-B
Data File Name	176SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:10:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	105877.743	ppb	105877.743	1.11	12161316	400000	
Mg	24	3	45	41195.081	ppb	41195.081	0.46	2483957	400000	
Al	27	3	45	0.160	ppb	0.160	822.66	157	400000	
K	39	3	45	2644.294	ppb	2644.294	1.43	158346	400000	
Ca	40	2	45	92134.882	ppb	92134.882	1.60	55877767	400000	
V	51	3	72	0.215	ppb	0.215	28.81	1173	2000	
Cr	52	3	72	0.135	ppb	0.135	140.36	3342	5000	
Mn	55	3	72	0.703	ppb	0.703	40.10	691	10000	
Fe	56	2	72	5.917	ppb	5.917	46.87	74584	10000	
Co	59	3	72	0.372	ppb	0.372	4.59	568	2000	
Ni	60	3	72	1.058	ppb	1.058	36.10	1124	5000	
Cu	63	3	72	1.227	ppb	1.227	10.43	1701	5000	
Zn	66	3	72	295.418	ppb	295.418	2.25	50071	5000	
As	75	3	72	0.377	ppb	0.377	66.18	90	2000	
Se	78	2	72	0.704	ppb	0.704	21.77	45	2000	
Sr	88	3	72	830.627	ppb	830.627	1.12	471215	4000	
Mo	95	3	115	2.756	ppb	2.756	4.43	1478	2000	
Ag	107	3	115	0.006	ppb	0.006	77.67	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	-154.04	8	2000	
Sn	120	3	115	0.046	ppb	0.046	263.82	801	2000	
Sb	121	3	115	0.090	ppb	0.090	9.41	117	1000	
Ba	137	3	115	34.268	ppb	34.268	4.11	8860	5000	
Tl	205	3	193	-0.037	ppb	-0.037	-16.30	245	2000	
(Pb)	206	3	193	-0.079	ppb	-0.079	-44.05	225	100	
(Pb)	207	3	193	-0.067	ppb	-0.067	-101.69	420	100	
Pb	208	3	193	-0.058	ppb	-0.058	-15.65	1223	5000	
Th	232	3	193	0.160	ppb	0.160	62.38	7990	2000	
U	238	3	193	24.818	ppb	24.818	1.04	140733	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4511558	2.34	4300192	104.92	60	120	
Sc (IS)	45	3	HMI He	643348	1.22	644593	99.81	60	120	
Ge Internal standard	72	2	HMI H2	2652295	1.38	2598552	102.07	60	120	
Ge Internal standard	72	3	HMI He	799395	0.85	772392	103.50	60	120	
In Internal Standard	115	3	HMI He	2913180	1.93	2872781	101.41	60	120	
Ir (IS)	193	3	HMI He	6301086	1.17	6092963	103.42	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-4-B
Data File Name	177SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:11:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-93.00	3	2000	
Na	23	3	45	89462.249	ppb	89462.249	1.70	10348586	400000	
Mg	24	3	45	39594.831	ppb	39594.831	1.52	2403698	400000	
Al	27	3	45	28.524	ppb	28.524	11.14	824	400000	
K	39	3	45	4845.430	ppb	4845.430	0.83	268577	400000	
Ca	40	2	45	45391.731	ppb	45391.731	1.17	26791230	400000	
V	51	3	72	1.030	ppb	1.030	14.15	1621	2000	
Cr	52	3	72	0.376	ppb	0.376	88.68	3355	5000	
Mn	55	3	72	3.109	ppb	3.109	15.64	1629	10000	
Fe	56	2	72	21.482	ppb	21.482	13.83	93471	10000	
Co	59	3	72	0.259	ppb	0.259	8.89	391	2000	
Ni	60	3	72	1.492	ppb	1.492	12.39	1224	5000	
Cu	63	3	72	1.910	ppb	1.910	7.01	2297	5000	
Zn	66	3	72	5.924	ppb	5.924	11.96	1171	5000	
As	75	3	72	2.984	ppb	2.984	4.90	380	2000	
Se	78	2	72	0.442	ppb	0.442	13.10	27	2000	
Sr	88	3	72	905.772	ppb	905.772	1.21	487232	4000	
Mo	95	3	115	3.394	ppb	3.394	2.28	1808	2000	
Ag	107	3	115	0.003	ppb	0.003	162.20	18	100	
Cd	111	3	115	-0.028	ppb	-0.028	-41.63	3	2000	
Sn	120	3	115	0.219	ppb	0.219	45.63	938	2000	
Sb	121	3	115	0.245	ppb	0.245	13.24	238	1000	
Ba	137	3	115	24.321	ppb	24.321	4.22	6293	5000	
Tl	205	3	193	-0.036	ppb	-0.036	-6.55	247	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-948.34	325	100	
(Pb)	207	3	193	0.003	ppb	0.003	258.75	500	100	
Pb	208	3	193	0.002	ppb	0.002	639.53	1539	5000	
Th	232	3	193	-0.086	ppb	-0.086	-169.18	6642	2000	
U	238	3	193	5.958	ppb	5.958	4.56	34861	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4388875	0.15	4300192	102.06	60	120	
Sc (IS)	45	3	HMI He	647650	0.78	644593	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2481147	1.82	2598552	95.48	60	120	
Ge Internal standard	72	3	HMI He	758014	1.50	772392	98.14	60	120	
In Internal Standard	115	3	HMI He	2906436	0.86	2872781	101.17	60	120	
Ir (IS)	193	3	HMI He	6282213	2.62	6092963	103.11	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	178_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:13:34-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.150	ppb	7.804	2334	50	108.3	90	110	
Na	23	3	45	47325.525	ppb	2.947	5422838	51000	92.8	90	110	
Mg	24	3	45	10103.494	ppb	2.344	606804	11000	91.8	90	110	
Al	27	3	45	950.310	ppb	3.582	22216	1000	95.0	90	110	
K	39	3	45	10115.044	ppb	3.540	524111	11000	92.0	90	110	
Ca	40	2	45	10264.042	ppb	0.986	6081381	11000	93.3	90	110	
V	51	3	72	49.799	ppb	1.516	32066	50	99.6	90	110	
Cr	52	3	72	51.680	ppb	1.889	42701	50	103.4	90	110	
Mn	55	3	72	50.452	ppb	0.921	20814	50	100.9	90	110	
Fe	56	2	72	1061.157	ppb	2.619	1720685	1000	106.1	90	110	
Co	59	3	72	49.920	ppb	1.727	65103	50	99.8	90	110	
Ni	60	3	72	49.999	ppb	0.789	19049	50	100.0	90	110	
Cu	63	3	72	50.697	ppb	1.784	51075	50	101.4	90	110	
Zn	66	3	72	49.513	ppb	1.503	8148	50	99.0	90	110	
As	75	3	72	52.178	ppb	2.392	5945	50	104.4	90	110	
Se	78	2	72	51.880	ppb	1.148	3075	50	103.8	90	110	
Sr	88	3	72	104.238	ppb	0.393	56139	100	104.2	90	110	
Mo	95	3	115	48.661	ppb	1.948	25520	50	97.3	90	110	
Ag	107	3	115	47.997	ppb	1.183	84847	50	96.0	90	110	
Cd	111	3	115	48.094	ppb	1.250	12126	50	96.2	90	110	
Sn	120	3	115	47.893	ppb	1.552	38949	50	95.8	90	110	
Sb	121	3	115	48.814	ppb	0.701	38596	50	97.6	90	110	
Ba	137	3	115	48.728	ppb	1.341	12606	50	97.5	90	110	
Tl	205	3	193	49.031	ppb	2.961	191697	50	98.1	90	110	
(Pb)	206	3	193	49.211	ppb	2.116	64066	50	98.4	90	110	
(Pb)	207	3	193	49.575	ppb	3.019	56937	50	99.1	90	110	
Pb	208	3	193	49.258	ppb	1.547	258924	50	98.5	90	110	
Th	232	3	193	48.105	ppb	2.113	257381	50	96.2	90	110	
U	238	3	193	49.372	ppb	1.977	271998	50	98.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4397985	2.08	4300192	102.27	60	120	
Sc (IS)	45	3	HMI He	640744	1.75	644593	99.40	60	120	
Ge Internal standard	72	2	HMI H2	2556215	2.38	2598552	98.37	60	120	
Ge Internal standard	72	3	HMI He	758374	0.41	772392	98.19	60	120	
In Internal Standard	115	3	HMI He	2919949	0.93	2872781	101.64	60	120	
Ir (IS)	193	3	HMI He	6156759	1.07	6092963	101.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	179_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:15:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	61.009	ppb	6.0	23460	25	>RL
Mg	24	3	45	1.774	ppb	39.7	374	25	
Al	27	3	45	-2.956	ppb	-30.9	83	15	
K	39	3	45	8.307	ppb	265.5	28213	50	
V	51	3	72	0.355	ppb	17.0	1233	1	
Cr	52	3	72	0.115	ppb	292.7	3242	1	
Mn	55	3	72	-0.188	ppb	-63.6	303	0.5	
Co	59	3	72	0.005	ppb	396.6	62	0.5	
Ni	60	3	72	0.470	ppb	42.0	873	1	
Cu	63	3	72	0.050	ppb	96.7	450	1	
Zn	66	3	72	0.098	ppb	62.5	247	5	
As	75	3	72	0.297	ppb	65.8	78	1	
Se	78	2	72	0.088	ppb	77.7	7	1	
Sr	88	3	72	0.041	ppb	106.4	67	0.5	
Mo	95	3	115	0.078	ppb	37.2	80	0.5	
Ag	107	3	115	0.006	ppb	78.2	25	1	
Cd	111	3	115	-0.021	ppb	-97.2	5	0.5	
Sn	120	3	115	0.146	ppb	48.5	885	1	
Sb	121	3	115	0.045	ppb	58.9	82	0.6	
Ba	137	3	115	0.001	ppb	4373.0	63	0.5	
Tl	205	3	193	-0.039	ppb	-12.4	242	0.1	
(Pb)	206	3	193	-0.063	ppb	-79.8	248	1	
(Pb)	207	3	193	-0.053	ppb	-39.0	441	1	
Pb	208	3	193	-0.070	ppb	-20.8	1176	0.5	
Th	232	3	193	1.310	ppb	12.4	14293	1	>RL
U	238	3	193	0.028	ppb	48.1	1766	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4360444	1.50	4300192	101.40	60	120	
Sc (IS)	45	3	HMI He	637775	0.83	644593	98.94	60	120	
Ge Internal standard	72	2	HMI H2	2592300	0.57	2598552	99.76	60	120	
Ge Internal standard	72	3	HMI He	779118	0.45	772392	100.87	60	120	
In Internal Standard	115	3	HMI He	2922581	3.34	2872781	101.73	60	120	
Ir (IS)	193	3	HMI He	6380356	0.42	6092963	104.72	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-B
Data File Name	180SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:17:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-64.38	2	2000	
Na	23	3	45	108276.094	ppb	108276.094	2.03	12204949	400000	
Mg	24	3	45	15319.471	ppb	15319.471	2.18	906643	400000	
Al	27	3	45	83.602	ppb	83.602	10.72	2066	400000	
K	39	3	45	5760.462	ppb	5760.462	1.48	306068	400000	
Ca	40	2	45	143543.621	ppb	143543.621	1.90	85006146	400000	
V	51	3	72	0.062	ppb	0.062	204.24	995	2000	
Cr	52	3	72	0.776	ppb	0.776	28.44	3582	5000	
Mn	55	3	72	0.059	ppb	0.059	74.30	386	10000	
Fe	56	2	72	6.962	ppb	6.962	43.85	71814	10000	
Co	59	3	72	0.119	ppb	0.119	18.86	205	2000	
Ni	60	3	72	23.598	ppb	23.598	2.98	9140	5000	
Cu	63	3	72	0.502	ppb	0.502	11.91	870	5000	
Zn	66	3	72	4.361	ppb	4.361	12.28	901	5000	
As	75	3	72	0.286	ppb	0.286	31.05	73	2000	
Se	78	2	72	0.877	ppb	0.877	10.00	53	2000	
Sr	88	3	72	1011.970	ppb	1011.970	0.95	532523	4000	
Mo	95	3	115	4.706	ppb	4.706	4.23	2476	2000	
Ag	107	3	115	0.007	ppb	0.007	132.35	27	100	
Cd	111	3	115	-0.014	ppb	-0.014	-167.75	7	2000	
Sn	120	3	115	-0.004	ppb	-0.004	-2238.58	756	2000	
Sb	121	3	115	0.418	ppb	0.418	8.04	371	1000	
Ba	137	3	115	82.390	ppb	82.390	1.80	21041	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-6.21	217	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-94.96	273	100	
(Pb)	207	3	193	-0.084	ppb	-0.084	-57.10	390	100	
Pb	208	3	193	-0.061	ppb	-0.061	-19.91	1178	5000	
Th	232	3	193	0.165	ppb	0.165	113.36	7812	2000	
U	238	3	193	0.155	ppb	0.155	26.39	2396	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4405896	1.60	4300192	102.46	60	120	
Sc (IS)	45	3	HMI He	631448	1.53	644593	97.96	60	120	
Ge Internal standard	72	2	HMI H2	2494716	1.27	2598552	96.00	60	120	
Ge Internal standard	72	3	HMI He	741538	0.78	772392	96.01	60	120	
In Internal Standard	115	3	HMI He	2887980	0.77	2872781	100.53	60	120	
Ir (IS)	193	3	HMI He	6149543	1.69	6092963	100.93	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-E MS
Data File Name	181SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:18:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.804	ppb	40.804	3.45	1744	2000	
Na	23	3	45	106166.409	ppb	106166.409	1.90	12113896	400000	
Mg	24	3	45	15563.043	ppb	15563.043	1.29	932365	400000	
Al	27	3	45	803.423	ppb	803.423	2.91	18765	400000	
K	39	3	45	6248.382	ppb	6248.382	0.35	333722	400000	
Ca	40	2	45	142741.361	ppb	142741.361	0.99	84257908	400000	
V	51	3	72	38.459	ppb	38.459	1.00	24930	2000	
Cr	52	3	72	39.730	ppb	39.730	1.44	33460	5000	
Mn	55	3	72	39.918	ppb	39.918	1.64	16508	10000	
Fe	56	2	72	797.625	ppb	797.625	1.90	1312212	10000	
Co	59	3	72	38.586	ppb	38.586	1.69	50219	2000	
Ni	60	3	72	61.788	ppb	61.788	0.59	23328	5000	
Cu	63	3	72	39.014	ppb	39.014	0.38	39306	5000	
Zn	66	3	72	41.208	ppb	41.208	3.32	6803	5000	
As	75	3	72	39.970	ppb	39.970	2.34	4554	2000	
Se	78	2	72	39.618	ppb	39.618	1.59	2354	2000	
Sr	88	3	72	1057.854	ppb	1057.854	0.93	568042	4000	
Mo	95	3	115	41.243	ppb	41.243	0.45	21430	2000	
Ag	107	3	115	38.269	ppb	38.269	1.25	67016	100	
Cd	111	3	115	37.014	ppb	37.014	3.85	9245	2000	
Sn	120	3	115	35.422	ppb	35.422	1.70	28732	2000	
Sb	121	3	115	37.513	ppb	37.513	1.15	29391	1000	
Ba	137	3	115	120.543	ppb	120.543	1.21	30802	5000	
Tl	205	3	193	37.373	ppb	37.373	1.03	149872	2000	
(Pb)	206	3	193	37.457	ppb	37.457	2.75	50060	100	
(Pb)	207	3	193	37.031	ppb	37.031	2.38	43718	100	
Pb	208	3	193	37.222	ppb	37.222	1.79	200916	5000	
Th	232	3	193	35.932	ppb	35.932	1.36	198869	2000	
U	238	3	193	38.035	ppb	38.035	0.94	215151	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4391094	1.12	4300192	102.11	60	120	
Sc (IS)	45	3	HMI He	639138	1.24	644593	99.15	60	120	
Ge Internal standard	72	2	HMI H2	2561715	0.89	2598552	98.58	60	120	
Ge Internal standard	72	3	HMI He	756687	0.68	772392	97.97	60	120	
In Internal Standard	115	3	HMI He	2892476	0.95	2872781	100.69	60	120	
Ir (IS)	193	3	HMI He	6310165	0.57	6092963	103.56	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-F MSD
Data File Name	182SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:20:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	43.133	ppb	43.133	6.51	1876	2000	
Na	23	3	45	106808.788	ppb	106808.788	1.10	12180911	400000	
Mg	24	3	45	15751.164	ppb	15751.164	1.82	943024	400000	
Al	27	3	45	790.424	ppb	790.424	2.60	18451	400000	
K	39	3	45	6409.061	ppb	6409.061	2.40	341321	400000	
Ca	40	2	45	143677.144	ppb	143677.144	2.31	84303284	400000	
V	51	3	72	39.486	ppb	39.486	3.82	25492	2000	
Cr	52	3	72	41.025	ppb	41.025	1.31	34357	5000	
Mn	55	3	72	40.427	ppb	40.427	1.79	16667	10000	
Fe	56	2	72	817.129	ppb	817.129	3.74	1319265	10000	
Co	59	3	72	40.024	ppb	40.024	2.14	51941	2000	
Ni	60	3	72	61.926	ppb	61.926	2.54	23311	5000	
Cu	63	3	72	40.689	ppb	40.689	3.83	40853	5000	
Zn	66	3	72	42.775	ppb	42.775	2.17	7035	5000	
As	75	3	72	40.432	ppb	40.432	4.57	4592	2000	
Se	78	2	72	41.550	ppb	41.550	4.59	2425	2000	
Sr	88	3	72	1062.937	ppb	1062.937	1.05	569220	4000	
Mo	95	3	115	43.684	ppb	43.684	2.61	22307	2000	
Ag	107	3	115	39.235	ppb	39.235	1.66	67547	100	
Cd	111	3	115	40.072	ppb	40.072	1.28	9842	2000	
Sn	120	3	115	36.665	ppb	36.665	1.11	29214	2000	
Sb	121	3	115	39.517	ppb	39.517	3.45	30428	1000	
Ba	137	3	115	126.060	ppb	126.060	2.09	31660	5000	
Tl	205	3	193	38.156	ppb	38.156	1.03	152006	2000	
(Pb)	206	3	193	38.702	ppb	38.702	0.89	51378	100	
(Pb)	207	3	193	37.800	ppb	37.800	1.65	44325	100	
Pb	208	3	193	38.405	ppb	38.405	1.56	205899	5000	
Th	232	3	193	38.654	ppb	38.654	0.61	212004	2000	
U	238	3	193	38.965	ppb	38.965	0.78	218931	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365392	1.23	4300192	101.52	60	120	
Sc (IS)	45	3	HMI He	638707	0.78	644593	99.09	60	120	
Ge Internal standard	72	2	HMI H2	2517827	1.71	2598552	96.89	60	120	
Ge Internal standard	72	3	HMI He	754656	1.46	772392	97.70	60	120	
In Internal Standard	115	3	HMI He	2843989	2.11	2872781	99.00	60	120	
Ir (IS)	193	3	HMI He	6268932	0.69	6092963	102.89	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-1-B@50
Data File Name	183SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:22:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.073	ppb	-0.073	-181.67	3	2000	
Na	23	3	45	22827.275	ppb	22827.275	1.44	2586351	400000	
Mg	24	3	45	7235.369	ppb	7235.369	1.23	428414	400000	
Al	27	3	45	1.002	ppb	1.002	129.82	174	400000	
K	39	3	45	314.388	ppb	314.388	7.95	42745	400000	
Ca	40	2	45	10718.537	ppb	10718.537	0.39	6220647	400000	
V	51	3	72	-0.118	ppb	-0.118	-96.99	895	2000	
Cr	52	3	72	0.235	ppb	0.235	165.07	3210	5000	
Mn	55	3	72	2.007	ppb	2.007	11.75	1171	10000	
Fe	56	2	72	4.042	ppb	4.042	86.88	68286	10000	
Co	59	3	72	0.019	ppb	0.019	74.31	78	2000	
Ni	60	3	72	0.510	ppb	0.510	22.80	855	5000	
Cu	63	3	72	0.217	ppb	0.217	2.79	598	5000	
Zn	66	3	72	4.146	ppb	4.146	4.84	878	5000	
As	75	3	72	0.174	ppb	0.174	76.33	62	2000	
Se	78	2	72	47.813	ppb	47.813	3.63	2804	2000	
Sr	88	3	72	198.424	ppb	198.424	0.63	105641	4000	
Mo	95	3	115	0.086	ppb	0.086	64.20	80	2000	
Ag	107	3	115	0.016	ppb	0.016	31.12	40	100	
Cd	111	3	115	-0.020	ppb	-0.020	-103.20	5	2000	
Sn	120	3	115	0.531	ppb	0.531	7.97	1134	2000	
Sb	121	3	115	0.064	ppb	0.064	79.71	92	1000	
Ba	137	3	115	0.219	ppb	0.219	40.95	113	5000	
Tl	205	3	193	-0.024	ppb	-0.024	-30.09	300	2000	
(Pb)	206	3	193	0.404	ppb	0.404	13.61	868	100	
(Pb)	207	3	193	0.382	ppb	0.382	6.56	946	100	
Pb	208	3	193	0.373	ppb	0.373	9.29	3543	5000	
Th	232	3	193	1.903	ppb	1.903	11.44	17327	2000	
U	238	3	193	3.677	ppb	3.677	1.58	22276	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4308668	0.80	4300192	100.20	60	120	
Sc (IS)	45	3	HMI He	631484	1.27	644593	97.97	60	120	
Ge Internal standard	72	2	HMI H2	2529892	0.61	2598552	97.36	60	120	
Ge Internal standard	72	3	HMI He	749987	0.75	772392	97.10	60	120	
In Internal Standard	115	3	HMI He	2782601	1.68	2872781	96.86	60	120	
Ir (IS)	193	3	HMI He	6321109	0.94	6092963	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-2-B@50
Data File Name	184SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:24:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.074	ppb	-0.074	-88.64	3	2000	
Na	23	3	45	45712.170	ppb	45712.170	0.97	5182280	400000	
Mg	24	3	45	6806.536	ppb	6806.536	1.95	404553	400000	
Al	27	3	45	2.581	ppb	2.581	102.17	210	400000	
K	39	3	45	321.613	ppb	321.613	7.01	43240	400000	
Ca	40	2	45	5812.678	ppb	5812.678	1.06	3442662	400000	
V	51	3	72	0.021	ppb	0.021	272.28	990	2000	
Cr	52	3	72	0.363	ppb	0.363	53.70	3339	5000	
Mn	55	3	72	6.153	ppb	6.153	3.58	2859	10000	
Fe	56	2	72	5.935	ppb	5.935	53.24	72136	10000	
Co	59	3	72	0.186	ppb	0.186	10.80	297	2000	
Ni	60	3	72	1.006	ppb	1.006	7.83	1045	5000	
Cu	63	3	72	0.180	ppb	0.180	6.64	566	5000	
Zn	66	3	72	3.918	ppb	3.918	12.99	850	5000	
As	75	3	72	0.215	ppb	0.215	80.00	67	2000	
Se	78	2	72	0.123	ppb	0.123	102.00	9	2000	
Sr	88	3	72	172.552	ppb	172.552	0.76	92729	4000	
Mo	95	3	115	0.163	ppb	0.163	14.48	122	2000	
Ag	107	3	115	0.014	ppb	0.014	89.36	38	100	
Cd	111	3	115	-0.014	ppb	-0.014	-222.87	7	2000	
Sn	120	3	115	0.337	ppb	0.337	47.05	1016	2000	
Sb	121	3	115	0.059	ppb	0.059	62.05	90	1000	
Ba	137	3	115	0.292	ppb	0.292	36.37	135	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-6.86	220	2000	
(Pb)	206	3	193	0.365	ppb	0.365	8.49	806	100	
(Pb)	207	3	193	0.319	ppb	0.319	4.77	861	100	
Pb	208	3	193	0.330	ppb	0.330	1.56	3272	5000	
Th	232	3	193	0.392	ppb	0.392	25.98	9144	2000	
U	238	3	193	1.054	ppb	1.054	3.89	7425	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4389440	1.35	4300192	102.08	60	120	
Sc (IS)	45	3	HMI He	633781	0.15	644593	98.32	60	120	
Ge Internal standard	72	2	HMI H2	2561668	1.44	2598552	98.58	60	120	
Ge Internal standard	72	3	HMI He	757000	1.06	772392	98.01	60	120	
In Internal Standard	115	3	HMI He	2859777	1.68	2872781	99.55	60	120	
Ir (IS)	193	3	HMI He	6244634	1.73	6092963	102.49	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-3-B@50
Data File Name	185SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:26:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.073	ppb	-0.073	-178.91	3	2000	
Na	23	3	45	22808.443	ppb	22808.443	0.67	2588615	400000	
Mg	24	3	45	5761.280	ppb	5761.280	1.03	341760	400000	
Al	27	3	45	0.564	ppb	0.564	41.94	163	400000	
K	39	3	45	239.810	ppb	239.810	10.22	39187	400000	
Ca	40	2	45	7870.827	ppb	7870.827	0.82	4588819	400000	
V	51	3	72	0.169	ppb	0.169	18.72	1088	2000	
Cr	52	3	72	0.405	ppb	0.405	55.81	3390	5000	
Mn	55	3	72	5.811	ppb	5.811	6.77	2737	10000	
Fe	56	2	72	6.852	ppb	6.852	51.09	72810	10000	
Co	59	3	72	0.018	ppb	0.018	81.53	78	2000	
Ni	60	3	72	0.620	ppb	0.620	20.70	908	5000	
Cu	63	3	72	0.202	ppb	0.202	8.96	591	5000	
Zn	66	3	72	3.616	ppb	3.616	10.23	806	5000	
As	75	3	72	0.285	ppb	0.285	43.59	75	2000	
Se	78	2	72	5.563	ppb	5.563	14.12	329	2000	
Sr	88	3	72	157.871	ppb	157.871	1.85	85302	4000	
Mo	95	3	115	0.089	ppb	0.089	50.70	85	2000	
Ag	107	3	115	0.025	ppb	0.025	12.05	58	100	
Cd	111	3	115	-0.028	ppb	-0.028	-82.70	3	2000	
Sn	120	3	115	0.198	ppb	0.198	32.75	923	2000	
Sb	121	3	115	0.035	ppb	0.035	19.19	73	1000	
Ba	137	3	115	0.120	ppb	0.120	49.63	93	5000	
Tl	205	3	193	-0.047	ppb	-0.047	-13.85	202	2000	
(Pb)	206	3	193	0.352	ppb	0.352	7.91	785	100	
(Pb)	207	3	193	0.344	ppb	0.344	18.32	886	100	
Pb	208	3	193	0.346	ppb	0.346	1.37	3339	5000	
Th	232	3	193	-0.035	ppb	-0.035	-298.91	6840	2000	
U	238	3	193	2.473	ppb	2.473	3.29	15228	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4325564	1.84	4300192	100.59	60	120	
Sc (IS)	45	3	HMI He	632470	0.34	644593	98.12	60	120	
Ge Internal standard	72	2	HMI H2	2537883	1.65	2598552	97.67	60	120	
Ge Internal standard	72	3	HMI He	761130	1.47	772392	98.54	60	120	
In Internal Standard	115	3	HMI He	2911788	1.00	2872781	101.36	60	120	
Ir (IS)	193	3	HMI He	6208479	1.78	6092963	101.90	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-1-B
Data File Name	186SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:28:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	1035626.592	ppb	1035626.592	0.84	118340153	400000	
Mg	24	3	45	327846.123	ppb	327846.123	1.09	19689796	400000	
Al	27	3	45	-0.104	ppb	-0.104	-2282.91	150	400000	
K	39	3	45	15034.455	ppb	15034.455	1.56	765817	400000	
Ca	40	2	45	524072.720	ppb	524072.720	0.58	297473506	400000	
V	51	3	72	-0.236	ppb	-0.236	-51.66	828	2000	
Cr	52	3	72	0.308	ppb	0.308	76.42	3292	5000	
Mn	55	3	72	20.070	ppb	20.070	0.98	8473	10000	
Fe	56	2	72	7.936	ppb	7.936	45.89	74004	10000	
Co	59	3	72	0.127	ppb	0.127	16.60	218	2000	
Ni	60	3	72	1.511	ppb	1.511	3.75	1228	5000	
Cu	63	3	72	1.189	ppb	1.189	3.42	1571	5000	
Zn	66	3	72	2.694	ppb	2.694	6.35	653	5000	
As	75	3	72	0.214	ppb	0.214	105.80	67	2000	
Se	78	2	72	2264.598	ppb	2264.598	0.77	132166	2000	
Sr	88	3	72	9743.235	ppb	9743.235	2.09	5224020	4000	
Mo	95	3	115	0.996	ppb	0.996	20.26	530	2000	
Ag	107	3	115	0.008	ppb	0.008	20.96	27	100	
Cd	111	3	115	-0.013	ppb	-0.013	-250.93	7	2000	
Sn	120	3	115	-0.001	ppb	-0.001	-12900.80	725	2000	
Sb	121	3	115	0.087	ppb	0.087	52.36	108	1000	
Ba	137	3	115	11.154	ppb	11.154	6.98	2776	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-14.88	215	2000	
(Pb)	206	3	193	-0.032	ppb	-0.032	-30.65	277	100	
(Pb)	207	3	193	-0.021	ppb	-0.021	-44.57	456	100	
Pb	208	3	193	-0.026	ppb	-0.026	-28.77	1348	5000	
Th	232	3	193	-0.111	ppb	-0.111	-60.45	6312	2000	
U	238	3	193	182.125	ppb	182.125	3.30	985818	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4222837	1.31	4300192	98.20	60	120	
Sc (IS)	45	3	HMI He	640786	1.10	644593	99.41	60	120	
Ge Internal standard	72	2	HMI H2	2518751	0.98	2598552	96.93	60	120	
Ge Internal standard	72	3	HMI He	755730	1.56	772392	97.84	60	120	
In Internal Standard	115	3	HMI He	2763803	1.18	2872781	96.21	60	120	
Ir (IS)	193	3	HMI He	6076904	2.70	6092963	99.74	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-2-B
Data File Name	187SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:29:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-96.48	3	2000	
Na	23	3	45	2080505.447	ppb	2080505.447	0.24	233686306	400000	>LDR
Mg	24	3	45	308910.886	ppb	308910.886	0.92	18235279	400000	
Al	27	3	45	1.762	ppb	1.762	41.81	190	400000	
K	39	3	45	15359.140	ppb	15359.140	0.89	768431	400000	
Ca	40	2	45	270339.985	ppb	270339.985	1.21	156862090	400000	
V	51	3	72	-0.297	ppb	-0.297	-50.31	778	2000	
Cr	52	3	72	2.288	ppb	2.288	9.43	4727	5000	
Mn	55	3	72	191.126	ppb	191.126	1.30	76270	10000	
Fe	56	2	72	9.680	ppb	9.680	48.63	78084	10000	
Co	59	3	72	6.594	ppb	6.594	1.05	8475	2000	
Ni	60	3	72	18.634	ppb	18.634	4.34	7375	5000	
Cu	63	3	72	0.605	ppb	0.605	6.09	973	5000	
Zn	66	3	72	7.687	ppb	7.687	5.39	1426	5000	
As	75	3	72	0.225	ppb	0.225	66.60	67	2000	
Se	78	2	72	3.702	ppb	3.702	12.64	222	2000	
Sr	88	3	72	8569.151	ppb	8569.151	1.49	4519780	4000	
Mo	95	3	115	6.110	ppb	6.110	3.77	3050	2000	
Ag	107	3	115	0.003	ppb	0.003	52.08	18	100	
Cd	111	3	115	-0.013	ppb	-0.013	-86.14	7	2000	
Sn	120	3	115	0.661	ppb	0.661	11.64	1219	2000	
Sb	121	3	115	0.798	ppb	0.798	5.43	638	1000	
Ba	137	3	115	11.926	ppb	11.926	5.62	2951	5000	
Tl	205	3	193	-0.050	ppb	-0.050	-8.21	180	2000	
(Pb)	206	3	193	0.019	ppb	0.019	197.17	330	100	
(Pb)	207	3	193	-0.035	ppb	-0.035	-276.14	425	100	
Pb	208	3	193	-0.010	ppb	-0.010	-382.06	1376	5000	
Th	232	3	193	-0.255	ppb	-0.255	-21.15	5382	2000	
U	238	3	193	49.188	ppb	49.188	2.49	258432	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4316178	1.41	4300192	100.37	60	120	
Sc (IS)	45	3	HMI He	629887	0.64	644593	97.72	60	120	
Ge Internal standard	72	2	HMI H2	2572009	3.91	2598552	98.98	60	120	
Ge Internal standard	72	3	HMI He	743395	1.66	772392	96.25	60	120	
In Internal Standard	115	3	HMI He	2753145	3.17	2872781	95.84	60	120	
Ir (IS)	193	3	HMI He	5872618	2.08	6092963	96.38	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-3-B
Data File Name	188SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:31:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.27	2	2000	
Na	23	3	45	1061466.876	ppb	1061466.876	1.06	119050991	400000	
Mg	24	3	45	269346.915	ppb	269346.915	1.06	15874380	400000	
Al	27	3	45	2.065	ppb	2.065	84.81	197	400000	
K	39	3	45	11479.921	ppb	11479.921	0.35	580359	400000	
Ca	40	2	45	377803.164	ppb	377803.164	0.93	214963825	400000	
V	51	3	72	-0.169	ppb	-0.169	-51.94	861	2000	
Cr	52	3	72	0.483	ppb	0.483	39.23	3394	5000	
Mn	55	3	72	190.064	ppb	190.064	0.62	76381	10000	
Fe	56	2	72	6.447	ppb	6.447	63.56	71026	10000	
Co	59	3	72	0.217	ppb	0.217	16.24	333	2000	
Ni	60	3	72	4.486	ppb	4.486	4.63	2296	5000	
Cu	63	3	72	2.403	ppb	2.403	4.95	2754	5000	
Zn	66	3	72	2.672	ppb	2.672	13.50	643	5000	
As	75	3	72	0.578	ppb	0.578	15.26	107	2000	
Se	78	2	72	262.819	ppb	262.819	0.99	15195	2000	
Sr	88	3	72	7868.433	ppb	7868.433	1.31	4179756	4000	
Mo	95	3	115	2.102	ppb	2.102	3.25	1091	2000	
Ag	107	3	115	0.013	ppb	0.013	82.36	35	100	
Cd	111	3	115	0.022	ppb	0.022	256.15	15	2000	
Sn	120	3	115	-0.062	ppb	-0.062	-71.05	688	2000	
Sb	121	3	115	0.089	ppb	0.089	9.74	112	1000	
Ba	137	3	115	10.246	ppb	10.246	2.34	2586	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-37.19	215	2000	
(Pb)	206	3	193	-0.032	ppb	-0.032	-78.99	267	100	
(Pb)	207	3	193	-0.044	ppb	-0.044	-118.65	416	100	
Pb	208	3	193	-0.043	ppb	-0.043	-19.24	1214	5000	
Th	232	3	193	-0.387	ppb	-0.387	-23.21	4717	2000	
U	238	3	193	117.315	ppb	117.315	1.51	613804	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4232952	1.30	4300192	98.44	60	120	
Sc (IS)	45	3	HMI He	628919	1.28	644593	97.57	60	120	
Ge Internal standard	72	2	HMI H2	2494872	1.01	2598552	96.01	60	120	
Ge Internal standard	72	3	HMI He	748592	1.23	772392	96.92	60	120	
In Internal Standard	115	3	HMI He	2796362	1.01	2872781	97.34	60	120	
Ir (IS)	193	3	HMI He	5866571	1.61	6092963	96.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	189_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:33:24-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	50.581	ppb	1.959	2269	50	101.2	90	110	
Na	23	3	45	47905.615	ppb	1.639	5559584	51000	93.9	90	110	
Mg	24	3	45	10179.456	ppb	1.173	619353	11000	92.5	90	110	
Al	27	3	45	959.724	ppb	4.008	22725	1000	96.0	90	110	
K	39	3	45	10120.786	ppb	2.799	531221	11000	92.0	90	110	
Ca	40	2	45	10171.823	ppb	2.661	6189346	11000	92.5	90	110	
V	51	3	72	50.608	ppb	0.345	32994	50	101.2	90	110	
Cr	52	3	72	51.370	ppb	2.720	43013	50	102.7	90	110	
Mn	55	3	72	50.900	ppb	2.778	21267	50	101.8	90	110	
Fe	56	2	72	1056.325	ppb	1.111	1721888	1000	105.6	90	110	
Co	59	3	72	50.242	ppb	2.223	66372	50	100.5	90	110	
Ni	60	3	72	49.146	ppb	1.269	18979	50	98.3	90	110	
Cu	63	3	72	49.971	ppb	0.949	51005	50	99.9	90	110	
Zn	66	3	72	50.784	ppb	1.973	8460	50	101.6	90	110	
As	75	3	72	51.935	ppb	1.069	5995	50	103.9	90	110	
Se	78	2	72	50.756	ppb	1.366	3022	50	101.5	90	110	
Sr	88	3	72	103.197	ppb	1.044	56301	100	103.2	90	110	
Mo	95	3	115	48.448	ppb	2.848	25301	50	96.9	90	110	
Ag	107	3	115	48.711	ppb	1.473	85773	50	97.4	90	110	
Cd	111	3	115	49.009	ppb	2.645	12306	50	98.0	90	110	
Sn	120	3	115	46.987	ppb	1.108	38072	50	94.0	90	110	
Sb	121	3	115	49.400	ppb	1.570	38904	50	98.8	90	110	
Ba	137	3	115	48.663	ppb	1.805	12540	50	97.3	90	110	
Tl	205	3	193	48.146	ppb	2.531	192047	50	96.3	90	110	
(Pb)	206	3	193	48.508	ppb	3.603	64419	50	97.0	90	110	
(Pb)	207	3	193	48.086	ppb	2.594	56354	50	96.2	90	110	
Pb	208	3	193	48.144	ppb	3.899	258143	50	96.3	90	110	
Th	232	3	193	47.400	ppb	0.501	258884	50	94.8	90	110	
U	238	3	193	48.445	ppb	3.485	272268	50	96.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4517622	1.35	4300192	105.06	60	120	
Sc (IS)	45	3	HMI He	648996	1.47	644593	100.68	60	120	
Ge Internal standard	72	2	HMI H2	2568452	1.23	2598552	98.84	60	120	
Ge Internal standard	72	3	HMI He	768265	0.61	772392	99.47	60	120	
In Internal Standard	115	3	HMI He	2908196	0.66	2872781	101.23	60	120	
Ir (IS)	193	3	HMI He	6281867	1.93	6092963	103.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	190_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:35:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	382.206	ppb	6.9	61035	25	>RL
Mg	24	3	45	20.213	ppb	13.6	1502	25	
Al	27	3	45	-2.435	ppb	-87.8	97	15	
K	39	3	45	2.161	ppb	1404.0	28397	50	
V	51	3	72	0.272	ppb	36.9	1183	1	
Cr	52	3	72	0.296	ppb	52.4	3392	1	
Mn	55	3	72	-0.198	ppb	-49.7	300	0.5	
Co	59	3	72	0.021	ppb	74.6	83	0.5	
Ni	60	3	72	0.228	ppb	82.2	783	1	
Cu	63	3	72	0.082	ppb	35.9	483	1	
Zn	66	3	72	-0.371	ppb	-54.5	170	5	
As	75	3	72	0.109	ppb	78.8	57	1	
Se	78	2	72	0.151	ppb	44.6	11	1	
Sr	88	3	72	0.490	ppb	17.4	315	0.5	
Mo	95	3	115	0.077	ppb	15.1	80	0.5	
Ag	107	3	115	0.012	ppb	105.5	35	1	
Cd	111	3	115	-0.021	ppb	-89.9	5	0.5	
Sn	120	3	115	0.095	ppb	142.2	855	1	
Sb	121	3	115	0.030	ppb	48.4	70	0.6	
Ba	137	3	115	-0.033	ppb	-139.7	55	0.5	
Tl	205	3	193	-0.029	ppb	-13.3	277	0.1	
(Pb)	206	3	193	-0.065	ppb	-26.8	243	1	
(Pb)	207	3	193	-0.030	ppb	-143.4	463	1	
Pb	208	3	193	-0.056	ppb	-38.6	1238	0.5	
Th	232	3	193	1.404	ppb	11.7	14611	1	>RL
U	238	3	193	0.047	ppb	24.6	1851	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4449982	1.41	4300192	103.48	60	120	
Sc (IS)	45	3	HMI He	649116	1.39	644593	100.70	60	120	
Ge Internal standard	72	2	HMI H2	2650603	0.92	2598552	102.00	60	120	
Ge Internal standard	72	3	HMI He	780881	1.24	772392	101.10	60	120	
In Internal Standard	115	3	HMI He	2956235	2.19	2872781	102.90	60	120	
Ir (IS)	193	3	HMI He	6301634	0.35	6092963	103.42	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	191LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:36:58-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.675	ppb	10.287	37	1	67.5	70	130	>+/-30%
Na	23	3	45	506.186	ppb	2.751	74543	300	168.7	70	130	>+/-30%
Mg	24	3	45	53.060	ppb	6.589	3461	50	106.1	70	130	
Al	27	3	45	43.520	ppb	7.793	1165	50	87.0	70	130	
K	39	3	45	89.064	ppb	26.200	32357	120	74.2	70	130	
Ca	40	2	45	208.763	ppb	2.831	137189	200	104.4	70	130	
V	51	3	72	5.184	ppb	3.978	4365	5	103.7	70	130	
Cr	52	3	72	2.138	ppb	19.417	4873	2	106.9	70	130	
Mn	55	3	72	0.843	ppb	23.255	738	1	84.3	70	130	
Fe	56	2	72	51.523	ppb	9.516	147650	50	103.0	70	130	
Co	59	3	72	0.948	ppb	4.360	1336	1	94.8	70	130	
Ni	60	3	72	2.352	ppb	15.171	1596	2	117.6	70	130	
Cu	63	3	72	2.061	ppb	6.016	2536	2	103.1	70	130	
Zn	66	3	72	8.597	ppb	7.708	1658	10	86.0	70	130	
As	75	3	72	5.355	ppb	11.386	671	5	107.1	70	130	
Se	78	2	72	5.144	ppb	11.427	316	5	102.9	70	130	
Sr	88	3	72	4.920	ppb	8.739	2786	5	98.4	70	130	
Mo	95	3	115	1.862	ppb	12.747	1006	2	93.1	70	130	
Ag	107	3	115	0.944	ppb	3.858	1671	1	94.4	70	130	
Cd	111	3	115	0.984	ppb	2.421	257	1	98.4	70	130	
Sn	120	3	115	8.470	ppb	4.451	7470	10	84.7	70	130	
Sb	121	3	115	1.879	ppb	4.896	1519	2	93.9	70	130	
Ba	137	3	115	0.870	ppb	11.112	285	1	87.0	70	130	
Tl	205	3	193	0.878	ppb	4.638	3942	1	87.8	70	130	
(Pb)	206	3	193	0.851	ppb	6.392	1474	1	85.1	70	130	
(Pb)	207	3	193	0.873	ppb	9.175	1533	1	87.3	70	130	
Pb	208	3	193	0.829	ppb	3.541	6034	1	82.9	70	130	
Th	232	3	193	1.076	ppb	7.697	13010	1	107.6	70	130	
U	238	3	193	0.967	ppb	2.474	7085	1	96.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4415970	1.23	4300192	102.69	60	120	
Sc (IS)	45	3	HMI He	641660	0.90	644593	99.54	60	120	
Ge Internal standard	72	2	HMI H2	2636047	1.40	2598552	101.44	60	120	
Ge Internal standard	72	3	HMI He	785536	0.72	772392	101.70	60	120	
In Internal Standard	115	3	HMI He	2901834	1.75	2872781	101.01	60	120	
Ir (IS)	193	3	HMI He	6371714	0.75	6092963	104.57	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608911/1-A
Data File Name	192_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:38:47-06:00
Sample Type	Blank
Dilution	1
Comment	608911 6020a
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.033	ppb	-349.025718	5	0.5
Na	23	3	45	320.204	ppb	29.00000116	52358	25
Mg	24	3	45	27.052	ppb	70.39938229	1862	25
Al	27	3	45	-0.149	ppb	-174.3655859	147	15
K	39	3	45	4.101	ppb	505.1885651	27712	50
Ca	40	2	45	18.116	ppb	3.291432152	23500	200
V	51	3	72	0.364	ppb	12.46072274	1219	1
Cr	52	3	72	1.174	ppb	18.88421992	4014	1
Mn	55	3	72	0.075	ppb	83.10990192	406	0.5
Fe	56	2	72	6.647	ppb	60.38003348	73092	50
Co	59	3	72	0.022	ppb	40.30865654	83	0.5
Ni	60	3	72	0.236	ppb	80.56793972	773	1
Cu	63	3	72	0.085	ppb	89.16352533	478	1
Zn	66	3	72	0.255	ppb	114.8503603	268	5
As	75	3	72	0.133	ppb	114.5280332	58	1
(Se)	78	3	72	1.055	ppb	130.4585939	30	1
Sr	88	3	72	0.663	ppb	76.11594634	403	0.5
Mo	95	3	115	0.042	ppb	19.56234625	60	0.5
Ag	107	3	115	0.008	ppb	191.478153	27	1
Cd	111	3	115	-0.014	ppb	-81.45558274	7	0.5
Sn	120	3	115	0.023	ppb	278.4439662	773	1
Sb	121	3	115	0.030	ppb	29.3351865	68	0.6
Ba	137	3	115	0.066	ppb	143.7242161	78	0.5
Tl	205	3	193	-0.036	ppb	-10.37806758	245	0.1
(Pb)	206	3	193	-0.033	ppb	-172.641127	280	1
(Pb)	207	3	193	-0.044	ppb	-92.5715793	438	1
Pb	208	3	193	-0.057	ppb	-19.34123853	1211	0.5
Th	232	3	193	-0.146	ppb	-29.64398167	6245	1
U	238	3	193	0.059	ppb	24.7279098	1884	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4315007	1.38	4300192	100.34	60	120	
Sc (IS)	45	3	HMI He	631093	0.35	644593	97.91	60	120	
Ge Internal standard	72	2	HMI H2	2558221	0.54	2598552	98.45	60	120	
Ge Internal standard	72	3	HMI He	767083	0.58	772392	99.31	60	120	
In Internal Standard	115	3	HMI He	2870398	1.26	2872781	99.92	60	120	
Ir (IS)	193	3	HMI He	6190210	0.42	6092963	101.60	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608911/24-A
Data File Name	193_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:40:36-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608911 6020a
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.974	41.974	ppb	4.861	1866	40	104.9	80	120	
Na	23	3	45	905.381	905.381	ppb	1.531	122302	40	2263.5	80	120	>+/-20%
Mg	24	3	45	717.109	717.109	ppb	1.371	44146	40	1792.8	80	120	>+/-20%
Al	27	3	45	728.956	728.956	ppb	4.531	17402	40	1822.4	80	120	>+/-20%
K	39	3	45	723.121	723.121	ppb	5.300	64603	40	1807.8	80	120	>+/-20%
Ca	40	2	45	793.203	793.203	ppb	2.760	498916	40	1983.0	80	120	>+/-20%
V	51	3	72	38.136	38.136	ppb	0.702	25873	40	95.3	80	120	
Cr	52	3	72	39.201	39.201	ppb	0.641	34586	40	98.0	80	120	
Mn	55	3	72	39.203	39.203	ppb	2.525	16970	40	98.0	80	120	
Fe	56	2	72	824.506	824.506	ppb	2.489	1408703	40	2061.3	80	120	>+/-20%
(Fe)	56	3	72	768.920	768.920	ppb	1.053	540931	40	1922.3	80	120	>+/-20%
Co	59	3	72	38.638	38.638	ppb	0.984	52617	40	96.6	80	120	
Ni	60	3	72	38.056	38.056	ppb	1.183	15304	40	95.1	80	120	
Cu	63	3	72	39.404	39.404	ppb	1.865	41533	40	98.5	80	120	
Zn	66	3	72	40.428	40.428	ppb	1.381	6988	40	101.1	80	120	
As	75	3	72	39.243	39.243	ppb	1.666	4678	40	98.1	80	120	
Se	78	2	72	41.442	41.442	ppb	3.258	2560	40	103.6	80	120	
(Se)	78	3	72	44.651	44.651	ppb	20.621	320	40	111.6	80	120	
Sr	88	3	72	80.247	80.247	ppb	1.488	45127	40	200.6	80	120	>+/-20%
Mo	95	3	115	37.287	37.287	ppb	2.100	20125	40	93.2	80	120	
Ag	107	3	115	38.420	38.420	ppb	2.514	69879	40	96.1	80	120	
Cd	111	3	115	38.465	38.465	ppb	6.030	9975	40	96.2	80	120	
Sn	120	3	115	35.883	35.883	ppb	1.187	30224	40	89.7	80	120	
Sb	121	3	115	38.113	38.113	ppb	1.887	31021	40	95.3	80	120	
Ba	137	3	115	38.225	38.225	ppb	2.219	10192	40	95.6	80	120	
Tl	205	3	193	37.678	37.678	ppb	1.783	157442	40	94.2	80	120	
(Pb)	206	3	193	38.255	38.255	ppb	2.124	53270	40	95.6	80	120	
(Pb)	207	3	193	37.543	37.543	ppb	1.515	46183	40	93.9	80	120	
Pb	208	3	193	38.013	38.013	ppb	2.138	213772	40	95.0	80	120	
Th	232	3	193	34.769	34.769	ppb	2.973	200735	40	86.9	80	120	
U	238	3	193	37.928	37.928	ppb	1.719	223569	40	94.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4553343	2.98	4300192	105.89	60	120	
Sc (IS)	45	3	HMI He	652843	1.11	644593	101.28	60	120	
Ge Internal standard	72	2	HMI H2	2665629	2.67	2598552	102.58	60	120	
Ge Internal standard	72	3	HMI He	791688	0.31	772392	102.50	60	120	
In Internal Standard	115	3	HMI He	3004777	1.89	2872781	104.59	60	120	
Ir (IS)	193	3	HMI He	6576293	1.51	6092963	107.93	60	120	

Sample Report

Sample Table

Sample Name	280-175070-D-2-A
Data File Name	194SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:42:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3041812.782	ppb	3041812.782	0.45	346055296	400000	>LDR
Mg	24	3	45	64345.029	ppb	64345.029	1.40	3847550	400000	
Al	27	3	45	140.175	ppb	140.175	2.96	3394	400000	
K	39	3	45	224844.315	ppb	224844.315	1.59	11014505	400000	
Ca	40	2	45	5585.121	ppb	5585.121	1.23	3420743	400000	
V	51	3	72	209.428	ppb	209.428	2.18	134270	2000	
Cr	52	3	72	242.206	ppb	242.206	2.09	192486	5000	
Mn	55	3	72	134.477	ppb	134.477	1.27	55929	10000	
Fe	56	2	72	1771.257	ppb	1771.257	1.10	2993661	10000	
Co	59	3	72	12.162	ppb	12.162	2.45	16211	2000	
Ni	60	3	72	188.940	ppb	188.940	2.77	71459	5000	
Cu	63	3	72	3.399	ppb	3.399	1.87	3860	5000	
Zn	66	3	72	17.775	ppb	17.775	1.72	3129	5000	
As	75	3	72	97.443	ppb	97.443	2.00	11282	2000	
Se	78	2	72	0.892	ppb	0.892	9.11	58	2000	
Sr	88	3	72	261.918	ppb	261.918	1.85	143739	4000	
Mo	95	3	115	9.786	ppb	9.786	3.00	4913	2000	
Ag	107	3	115	0.061	ppb	0.061	26.96	115	100	
Cd	111	3	115	0.036	ppb	0.036	147.42	18	2000	
Sn	120	3	115	5.307	ppb	5.307	5.29	4757	2000	
Sb	121	3	115	16.451	ppb	16.451	4.92	12408	1000	
Ba	137	3	115	159.262	ppb	159.262	2.07	39083	5000	
Tl	205	3	193	0.490	ppb	0.490	10.35	2222	2000	
(Pb)	206	3	193	0.500	ppb	0.500	9.01	938	100	
(Pb)	207	3	193	0.459	ppb	0.459	4.88	976	100	
Pb	208	3	193	0.491	ppb	0.491	0.93	3937	5000	
Th	232	3	193	0.621	ppb	0.621	9.22	9874	2000	
U	238	3	193	0.478	ppb	0.478	4.48	4032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4537949	1.20	4300192	105.53	60	120	
Sc (IS)	45	3	HMI He	638008	0.12	644593	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2702999	1.53	2598552	104.02	60	120	
Ge Internal standard	72	3	HMI He	773235	1.22	772392	100.11	60	120	
In Internal Standard	115	3	HMI He	2779540	0.98	2872781	96.75	60	120	
Ir (IS)	193	3	HMI He	5957679	0.51	6092963	97.78	60	120	

Sample Report

Sample Table

Sample Name	280-175070-D-3-A
Data File Name	195SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:44:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	275744.557	ppb	275744.557	2.23	29957417	400000	
Mg	24	3	45	149426.163	ppb	149426.163	1.03	8529274	400000	
Al	27	3	45	26.245	ppb	26.245	8.46	724	400000	
K	39	3	45	25770.808	ppb	25770.808	1.14	1228855	400000	
Ca	40	2	45	293856.186	ppb	293856.186	2.77	160900637	400000	
V	51	3	72	2.356	ppb	2.356	6.77	2406	2000	
Cr	52	3	72	2.995	ppb	2.995	11.07	5267	5000	
Mn	55	3	72	5626.433	ppb	5626.433	3.94	2239392	10000	
Fe	56	2	72	9422.300	ppb	9422.300	1.98	14364102	10000	
Co	59	3	72	4.947	ppb	4.947	3.70	6383	2000	
Ni	60	3	72	107.431	ppb	107.431	1.28	39436	5000	
Cu	63	3	72	8.885	ppb	8.885	2.29	9105	5000	
Zn	66	3	72	26.121	ppb	26.121	3.32	4327	5000	
As	75	3	72	2.938	ppb	2.938	13.29	368	2000	
Se	78	2	72	0.244	ppb	0.244	50.27	16	2000	
Sr	88	3	72	1678.839	ppb	1678.839	1.43	887464	4000	
Mo	95	3	115	0.404	ppb	0.404	13.90	237	2000	
Ag	107	3	115	0.009	ppb	0.009	53.88	28	100	
Cd	111	3	115	-0.026	ppb	-0.026	-95.21	3	2000	
Sn	120	3	115	0.921	ppb	0.921	12.14	1414	2000	
Sb	121	3	115	0.206	ppb	0.206	20.65	197	1000	
Ba	137	3	115	416.941	ppb	416.941	2.35	101205	5000	
Tl	205	3	193	0.061	ppb	0.061	4.38	596	2000	
(Pb)	206	3	193	3.255	ppb	3.255	2.90	4344	100	
(Pb)	207	3	193	3.178	ppb	3.178	1.96	3930	100	
Pb	208	3	193	3.243	ppb	3.243	1.59	17659	5000	
Th	232	3	193	0.917	ppb	0.917	12.50	11238	2000	
U	238	3	193	0.331	ppb	0.331	4.95	3217	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4076175	4.12	4300192	94.79	60	120	
Sc (IS)	45	3	HMI He	609128	1.91	644593	94.50	60	120	
Ge Internal standard	72	2	HMI H2	2482886	1.33	2598552	95.55	60	120	
Ge Internal standard	72	3	HMI He	744845	0.89	772392	96.43	60	120	
In Internal Standard	115	3	HMI He	2752750	2.98	2872781	95.82	60	120	
Ir (IS)	193	3	HMI He	5892696	0.96	6092963	96.71	60	120	

Sample Report

Sample Table

Sample Name	280-174977-C-12-A
Data File Name	196SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:45:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.43	2	2000	
Na	23	3	45	1120.298	ppb	1120.298	2.98	140447	400000	
Mg	24	3	45	107.913	ppb	107.913	6.08	6555	400000	
Al	27	3	45	503.614	ppb	503.614	5.25	11510	400000	
K	39	3	45	225.195	ppb	225.195	13.59	37866	400000	
Ca	40	2	45	299.520	ppb	299.520	4.12	183985	400000	
V	51	3	72	1.259	ppb	1.259	21.23	1779	2000	
Cr	52	3	72	1.753	ppb	1.753	23.91	4454	5000	
Mn	55	3	72	8.672	ppb	8.672	3.26	3920	10000	
Fe	56	2	72	435.817	ppb	435.817	2.94	736093	10000	
Co	59	3	72	0.136	ppb	0.136	6.87	233	2000	
Ni	60	3	72	0.910	ppb	0.910	28.35	1020	5000	
Cu	63	3	72	0.646	ppb	0.646	4.92	1043	5000	
Zn	66	3	72	2.840	ppb	2.840	8.40	685	5000	
As	75	3	72	0.236	ppb	0.236	62.01	70	2000	
Se	78	2	72	0.023	ppb	0.023	86.41	3	2000	
Sr	88	3	72	1.294	ppb	1.294	13.34	746	4000	
Mo	95	3	115	8.510	ppb	8.510	6.14	4405	2000	
Ag	107	3	115	0.009	ppb	0.009	15.37	28	100	
Cd	111	3	115	0.000	ppb	0.000	-75700.74	10	2000	
Sn	120	3	115	0.428	ppb	0.428	164.43	1091	2000	
Sb	121	3	115	0.127	ppb	0.127	8.68	143	1000	
Ba	137	3	115	3.185	ppb	3.185	9.99	866	5000	
Tl	205	3	193	0.024	ppb	0.024	63.70	470	2000	
(Pb)	206	3	193	0.204	ppb	0.204	19.45	576	100	
(Pb)	207	3	193	0.218	ppb	0.218	7.27	723	100	
Pb	208	3	193	0.190	ppb	0.190	3.30	2451	5000	
Th	232	3	193	0.050	ppb	0.050	41.04	7110	2000	
U	238	3	193	0.045	ppb	0.045	75.85	1764	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4254796	2.72	4300192	98.94	60	120	
Sc (IS)	45	3	HMI He	622400	0.29	644593	96.56	60	120	
Ge Internal standard	72	2	HMI H2	2529955	1.41	2598552	97.36	60	120	
Ge Internal standard	72	3	HMI He	764969	1.58	772392	99.04	60	120	
In Internal Standard	115	3	HMI He	2864496	2.21	2872781	99.71	60	120	
Ir (IS)	193	3	HMI He	6056571	0.25	6092963	99.40	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-2-A
Data File Name	197SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:47:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-185.10	3	2000	
Na	23	3	45	18992.908	ppb	18992.908	1.68	2239779	400000	
Mg	24	3	45	13172.659	ppb	13172.659	2.88	810423	400000	
Al	27	3	45	0.723	ppb	0.723	260.41	174	400000	
K	39	3	45	7427.584	ppb	7427.584	0.66	401966	400000	
Ca	40	2	45	49558.479	ppb	49558.479	2.89	30100787	400000	
V	51	3	72	24.265	ppb	24.265	0.40	17110	2000	
Cr	52	3	72	1.828	ppb	1.828	18.03	4742	5000	
Mn	55	3	72	3.995	ppb	3.995	7.94	2111	10000	
Fe	56	2	72	9.111	ppb	9.111	54.00	82853	10000	
Co	59	3	72	0.037	ppb	0.037	40.72	108	2000	
Ni	60	3	72	0.410	ppb	0.410	52.32	878	5000	
Cu	63	3	72	0.555	ppb	0.555	10.15	1000	5000	
Zn	66	3	72	1.365	ppb	1.365	9.72	470	5000	
As	75	3	72	13.560	ppb	13.560	4.50	1673	2000	
Se	78	2	72	3.948	ppb	3.948	8.36	255	2000	
Sr	88	3	72	264.945	ppb	264.945	1.66	151324	4000	
Mo	95	3	115	9.370	ppb	9.370	3.47	4988	2000	
Ag	107	3	115	0.004	ppb	0.004	82.56	20	100	
Cd	111	3	115	-0.021	ppb	-0.021	-94.64	5	2000	
Sn	120	3	115	-0.192	ppb	-0.192	-31.98	620	2000	
Sb	121	3	115	0.314	ppb	0.314	13.06	297	1000	
Ba	137	3	115	42.893	ppb	42.893	3.38	11204	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-1092.19	385	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-46.98	262	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-69.10	426	100	
Pb	208	3	193	-0.057	ppb	-0.057	-22.98	1226	5000	
Th	232	3	193	-0.154	ppb	-0.154	-34.33	6295	2000	
U	238	3	193	1.660	ppb	1.660	1.40	10866	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4518104	2.86	4300192	105.07	60	120	
Sc (IS)	45	3	HMI He	656296	0.93	644593	101.82	60	120	
Ge Internal standard	72	2	HMI H2	2758294	3.29	2598552	106.15	60	120	
Ge Internal standard	72	3	HMI He	804689	0.86	772392	104.18	60	120	
In Internal Standard	115	3	HMI He	2945724	0.84	2872781	102.54	60	120	
Ir (IS)	193	3	HMI He	6285356	1.74	6092963	103.16	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-5-A
Data File Name	198SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:49:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.111	ppb	-0.111	-59.96	2	2000	
Na	23	3	45	17580.192	ppb	17580.192	1.59	2041698	400000	
Mg	24	3	45	17301.380	ppb	17301.380	1.69	1047709	400000	
Al	27	3	45	7.532	ppb	7.532	54.55	330	400000	
K	39	3	45	6992.106	ppb	6992.106	2.05	374092	400000	
Ca	40	2	45	59037.914	ppb	59037.914	2.07	35174806	400000	
V	51	3	72	21.574	ppb	21.574	5.10	15221	2000	
Cr	52	3	72	0.949	ppb	0.949	30.05	4000	5000	
Mn	55	3	72	0.324	ppb	0.324	29.24	530	10000	
Fe	56	2	72	6.338	ppb	6.338	49.52	75028	10000	
Co	59	3	72	0.022	ppb	0.022	20.98	87	2000	
Ni	60	3	72	1.422	ppb	1.422	6.71	1264	5000	
Cu	63	3	72	17.739	ppb	17.739	1.10	19099	5000	
Zn	66	3	72	1.857	ppb	1.857	11.63	550	5000	
As	75	3	72	5.353	ppb	5.353	15.41	683	2000	
Se	78	2	72	5.677	ppb	5.677	4.10	349	2000	
Sr	88	3	72	300.982	ppb	300.982	1.82	170738	4000	
Mo	95	3	115	2.774	ppb	2.774	4.88	1499	2000	
Ag	107	3	115	0.004	ppb	0.004	74.14	22	100	
Cd	111	3	115	0.005	ppb	0.005	208.81	12	2000	
Sn	120	3	115	-0.051	ppb	-0.051	-27.74	731	2000	
Sb	121	3	115	0.202	ppb	0.202	17.50	207	1000	
Ba	137	3	115	38.769	ppb	38.769	2.44	10101	5000	
Tl	205	3	193	-0.021	ppb	-0.021	-24.96	305	2000	
(Pb)	206	3	193	-0.012	ppb	-0.012	-96.57	310	100	
(Pb)	207	3	193	-0.083	ppb	-0.083	-35.25	396	100	
Pb	208	3	193	-0.049	ppb	-0.049	-40.17	1254	5000	
Th	232	3	193	-0.320	ppb	-0.320	-9.02	5360	2000	
U	238	3	193	3.048	ppb	3.048	1.02	18446	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4432053	2.40	4300192	103.07	60	120	
Sc (IS)	45	3	HMI He	646075	1.42	644593	100.23	60	120	
Ge Internal standard	72	2	HMI H2	2640387	2.05	2598552	101.61	60	120	
Ge Internal standard	72	3	HMI He	799244	0.87	772392	103.48	60	120	
In Internal Standard	115	3	HMI He	2937128	1.59	2872781	102.24	60	120	
Ir (IS)	193	3	HMI He	6224811	0.93	6092963	102.16	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-7-A
Data File Name	199SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:51:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.09	2	2000	
Na	23	3	45	18389.089	ppb	18389.089	0.50	2121519	400000	
Mg	24	3	45	10855.172	ppb	10855.172	1.87	653296	400000	
Al	27	3	45	11.215	ppb	11.215	3.00	414	400000	
K	39	3	45	5847.061	ppb	5847.061	2.09	315453	400000	
Ca	40	2	45	30972.346	ppb	30972.346	1.11	18199042	400000	
V	51	3	72	18.273	ppb	18.273	2.16	13081	2000	
Cr	52	3	72	1.964	ppb	1.964	20.15	4830	5000	
Mn	55	3	72	78.795	ppb	78.795	1.40	34111	10000	
Fe	56	2	72	312.361	ppb	312.361	1.46	565076	10000	
Co	59	3	72	0.093	ppb	0.093	34.13	185	2000	
Ni	60	3	72	0.738	ppb	0.738	18.68	1001	5000	
Cu	63	3	72	0.869	ppb	0.869	5.07	1328	5000	
Zn	66	3	72	4.856	ppb	4.856	5.24	1058	5000	
As	75	3	72	5.900	ppb	5.900	7.08	750	2000	
Se	78	2	72	1.667	ppb	1.667	8.36	103	2000	
Sr	88	3	72	168.391	ppb	168.391	2.92	95745	4000	
Mo	95	3	115	3.498	ppb	3.498	6.53	1894	2000	
Ag	107	3	115	0.030	ppb	0.030	21.74	67	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.239	ppb	-0.239	-11.09	585	2000	
Sb	121	3	115	0.115	ppb	0.115	40.54	138	1000	
Ba	137	3	115	19.957	ppb	19.957	3.36	5268	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-15.82	215	2000	
(Pb)	206	3	193	0.175	ppb	0.175	26.29	550	100	
(Pb)	207	3	193	0.133	ppb	0.133	23.75	640	100	
Pb	208	3	193	0.167	ppb	0.167	2.70	2381	5000	
Th	232	3	193	-0.339	ppb	-0.339	-4.81	5219	2000	
U	238	3	193	1.931	ppb	1.931	2.08	12158	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368755	1.68	4300192	101.59	60	120	
Sc (IS)	45	3	HMI He	641954	0.50	644593	99.59	60	120	
Ge Internal standard	72	2	HMI H2	2621726	0.84	2598552	100.89	60	120	
Ge Internal standard	72	3	HMI He	801016	0.86	772392	103.71	60	120	
In Internal Standard	115	3	HMI He	2959568	2.18	2872781	103.02	60	120	
Ir (IS)	193	3	HMI He	6173384	0.19	6092963	101.32	60	120	

Sample Report

Sample Table

Sample Name	280-175081-A-1-A
Data File Name	200SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:53:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.57	2	2000	
Na	23	3	45	2998.985	ppb	2998.985	1.66	359616	400000	
Mg	24	3	45	4467.315	ppb	4467.315	0.50	268825	400000	
Al	27	3	45	0.606	ppb	0.606	283.29	167	400000	
K	39	3	45	2062.071	ppb	2062.071	1.46	129284	400000	
Ca	40	2	45	19940.107	ppb	19940.107	1.68	11746433	400000	
V	51	3	72	3.340	ppb	3.340	5.01	3209	2000	
Cr	52	3	72	1.652	ppb	1.652	10.03	4540	5000	
Mn	55	3	72	0.124	ppb	0.124	158.50	441	10000	
Fe	56	2	72	7.009	ppb	7.009	50.29	77017	10000	
Co	59	3	72	0.031	ppb	0.031	92.77	98	2000	
Ni	60	3	72	0.278	ppb	0.278	92.44	816	5000	
Cu	63	3	72	0.314	ppb	0.314	19.27	735	5000	
Zn	66	3	72	1.749	ppb	1.749	8.87	528	5000	
As	75	3	72	0.931	ppb	0.931	34.00	155	2000	
Se	78	2	72	0.183	ppb	0.183	40.57	13	2000	
Sr	88	3	72	97.612	ppb	97.612	2.05	55069	4000	
Mo	95	3	115	0.715	ppb	0.715	24.45	415	2000	
Ag	107	3	115	0.026	ppb	0.026	0.25	60	100	
Cd	111	3	115	-0.008	ppb	-0.008	-521.26	8	2000	
Sn	120	3	115	-0.280	ppb	-0.280	-32.51	546	2000	
Sb	121	3	115	0.121	ppb	0.121	21.37	142	1000	
Ba	137	3	115	24.147	ppb	24.147	2.44	6305	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-57.90	257	2000	
(Pb)	206	3	193	-0.075	ppb	-0.075	-7.72	225	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-73.52	421	100	
Pb	208	3	193	-0.063	ppb	-0.063	-18.17	1171	5000	
Th	232	3	193	-0.404	ppb	-0.404	-11.78	4874	2000	
U	238	3	193	0.274	ppb	0.274	6.70	3051	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4378112	1.60	4300192	101.81	60	120	
Sc (IS)	45	3	HMI He	641482	1.01	644593	99.52	60	120	
Ge Internal standard	72	2	HMI H2	2677349	2.94	2598552	103.03	60	120	
Ge Internal standard	72	3	HMI He	794389	0.16	772392	102.85	60	120	
In Internal Standard	115	3	HMI He	2932034	0.19	2872781	102.06	60	120	
Ir (IS)	193	3	HMI He	6161290	1.12	6092963	101.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	201_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:55:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	55.314	ppb	4.202	2271	50	110.6	90	110	>+\-10%
Na	23	3	45	47026.133	ppb	2.730	5299158	51000	92.2	90	110	
Mg	24	3	45	10016.072	ppb	1.295	591673	11000	91.1	90	110	
Al	27	3	45	935.853	ppb	0.548	21525	1000	93.6	90	110	
K	39	3	45	9982.011	ppb	1.000	509142	11000	90.7	90	110	
Ca	40	2	45	10306.743	ppb	0.889	5939670	11000	93.7	90	110	
V	51	3	72	49.961	ppb	3.697	31770	50	99.9	90	110	
Cr	52	3	72	51.181	ppb	5.138	41788	50	102.4	90	110	
Mn	55	3	72	51.032	ppb	5.485	20784	50	102.1	90	110	
Fe	56	2	72	1035.671	ppb	3.033	1680774	1000	103.6	90	110	
Co	59	3	72	49.716	ppb	3.473	64042	50	99.4	90	110	
Ni	60	3	72	50.013	ppb	4.635	18817	50	100.0	90	110	
Cu	63	3	72	49.248	ppb	2.443	49029	50	98.5	90	110	
Zn	66	3	72	50.505	ppb	5.836	8202	50	101.0	90	110	
As	75	3	72	53.650	ppb	4.733	6035	50	107.3	90	110	
Se	78	2	72	49.250	ppb	1.770	2918	50	98.5	90	110	
Sr	88	3	72	101.516	ppb	3.729	54010	100	101.5	90	110	
Mo	95	3	115	47.552	ppb	1.381	24548	50	95.1	90	110	
Ag	107	3	115	47.668	ppb	0.695	82961	50	95.3	90	110	
Cd	111	3	115	47.955	ppb	4.120	11903	50	95.9	90	110	
Sn	120	3	115	46.953	ppb	1.911	37606	50	93.9	90	110	
Sb	121	3	115	48.290	ppb	2.036	37589	50	96.6	90	110	
Ba	137	3	115	48.685	ppb	4.488	12400	50	97.4	90	110	
Tl	205	3	193	47.913	ppb	0.742	185137	50	95.8	90	110	
(Pb)	206	3	193	48.314	ppb	2.700	62147	50	96.6	90	110	
(Pb)	207	3	193	48.078	ppb	1.871	54583	50	96.2	90	110	
Pb	208	3	193	48.139	ppb	2.449	250032	50	96.3	90	110	
Th	232	3	193	47.596	ppb	1.118	251705	50	95.2	90	110	
U	238	3	193	48.401	ppb	1.964	263488	50	96.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4278307	0.82	4300192	99.49	60	120	
Sc (IS)	45	3	HMI He	630052	0.42	644593	97.74	60	120	
Ge Internal standard	72	2	HMI H2	2555306	1.02	2598552	98.34	60	120	
Ge Internal standard	72	3	HMI He	749526	2.79	772392	97.04	60	120	
In Internal Standard	115	3	HMI He	2874606	0.37	2872781	100.06	60	120	
Ir (IS)	193	3	HMI He	6083536	1.67	6092963	99.85	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	202_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:56:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	134.539	ppb	0.1	31540	25	>RL
Mg	24	3	45	1.496	ppb	71.8	354	25	
Al	27	3	45	-3.068	ppb	-49.6	80	15	
K	39	3	45	6.069	ppb	625.6	27849	50	
V	51	3	72	0.708	ppb	38.3	1438	1	
Cr	52	3	72	0.263	ppb	82.1	3310	1	
Mn	55	3	72	0.010	ppb	1566.3	380	0.5	
Co	59	3	72	0.017	ppb	160.7	77	0.5	
Ni	60	3	72	0.306	ppb	36.3	800	1	
Cu	63	3	72	0.076	ppb	82.2	470	1	
Zn	66	3	72	-0.466	ppb	-12.8	152	5	
As	75	3	72	0.090	ppb	200.5	53	1	
Se	78	2	72	0.057	ppb	68.5	5	1	
Sr	88	3	72	0.031	ppb	157.3	60	0.5	
Mo	95	3	115	0.079	ppb	53.6	80	0.5	
Ag	107	3	115	0.009	ppb	32.2	30	1	
Cd	111	3	115	-0.021	ppb	-94.6	5	0.5	
Sn	120	3	115	-0.058	ppb	-56.4	718	1	
Sb	121	3	115	0.008	ppb	100.8	52	0.6	
Ba	137	3	115	-0.093	ppb	-54.1	38	0.5	
Tl	205	3	193	-0.026	ppb	-35.8	283	0.1	
(Pb)	206	3	193	-0.054	ppb	-29.6	252	1	
(Pb)	207	3	193	-0.073	ppb	-51.6	403	1	
Pb	208	3	193	-0.068	ppb	-14.9	1143	0.5	
Th	232	3	193	1.269	ppb	8.8	13549	1	>RL
U	238	3	193	0.028	ppb	93.7	1699	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4301515	0.79	4300192	100.03	60	120	
Sc (IS)	45	3	HMI He	632095	0.35	644593	98.06	60	120	
Ge Internal standard	72	2	HMI H2	2545655	0.44	2598552	97.96	60	120	
Ge Internal standard	72	3	HMI He	768110	0.68	772392	99.45	60	120	
In Internal Standard	115	3	HMI He	2906748	1.03	2872781	101.18	60	120	
Ir (IS)	193	3	HMI He	6143386	1.74	6092963	100.83	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	203LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:58:36-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.611	ppb	29.631	32	1	61.1	70	130	>+/-30%
Na	23	3	45	381.963	ppb	2.652	59695	300	127.3	70	130	
Mg	24	3	45	45.888	ppb	8.534	2997	50	91.8	70	130	
Al	27	3	45	39.103	ppb	13.662	1051	50	78.2	70	130	
K	39	3	45	112.573	ppb	13.665	33159	120	93.8	70	130	
Ca	40	2	45	196.061	ppb	2.359	125576	200	98.0	70	130	
V	51	3	72	5.435	ppb	0.970	4472	5	108.7	70	130	
Cr	52	3	72	2.225	ppb	8.752	4883	2	111.3	70	130	
Mn	55	3	72	0.799	ppb	23.505	711	1	79.9	70	130	
Fe	56	2	72	54.451	ppb	7.939	149862	50	108.9	70	130	
Co	59	3	72	0.957	ppb	4.085	1331	1	95.7	70	130	
Ni	60	3	72	2.256	ppb	4.110	1541	2	112.8	70	130	
Cu	63	3	72	1.880	ppb	1.630	2319	2	94.0	70	130	
Zn	66	3	72	9.255	ppb	9.686	1744	10	92.5	70	130	
As	75	3	72	4.908	ppb	10.232	611	5	98.2	70	130	
Se	78	2	72	4.795	ppb	5.582	290	5	95.9	70	130	
Sr	88	3	72	4.756	ppb	4.963	2662	5	95.1	70	130	
Mo	95	3	115	1.742	ppb	20.869	955	2	87.1	70	130	
Ag	107	3	115	0.946	ppb	9.562	1691	1	94.6	70	130	
Cd	111	3	115	0.975	ppb	22.741	257	1	97.5	70	130	
Sn	120	3	115	8.235	ppb	4.463	7362	10	82.3	70	130	
Sb	121	3	115	1.848	ppb	9.346	1511	2	92.4	70	130	
Ba	137	3	115	0.761	ppb	13.013	260	1	76.1	70	130	
Tl	205	3	193	0.888	ppb	1.506	3910	1	88.8	70	130	
(Pb)	206	3	193	0.821	ppb	4.233	1408	1	82.1	70	130	
(Pb)	207	3	193	0.828	ppb	3.923	1453	1	82.8	70	130	
Pb	208	3	193	0.841	ppb	3.905	5991	1	84.1	70	130	
Th	232	3	193	0.990	ppb	17.033	12317	1	99.0	70	130	
U	238	3	193	0.971	ppb	1.622	6980	1	97.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4276736	0.64	4300192	99.45	60	120	
Sc (IS)	45	3	HMI He	635007	0.71	644593	98.51	60	120	
Ge Internal standard	72	2	HMI H2	2591673	0.80	2598552	99.74	60	120	
Ge Internal standard	72	3	HMI He	775846	0.50	772392	100.45	60	120	
In Internal Standard	115	3	HMI He	2932884	1.84	2872781	102.09	60	120	
Ir (IS)	193	3	HMI He	6257349	0.81	6092963	102.70	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A
Data File Name	204SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:00:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	66.508	ppb	66.508	6.10	2679	2000	
Na	23	3	45	36018.963	ppb	36018.963	1.81	4025220	400000	
Mg	24	3	45	214314.481	ppb	214314.481	0.88	12538480	400000	
Al	27	3	45	230487.389	ppb	230487.389	1.85	5215615	400000	
K	39	3	45	6881.028	ppb	6881.028	2.10	356170	400000	
Ca	40	2	45	443052.895	ppb	443052.895	1.14	245756423	400000	
V	51	3	72	55.279	ppb	55.279	2.82	35853	2000	
Cr	52	3	72	7.105	ppb	7.105	2.81	8605	5000	
Mn	55	3	72	12183.473	ppb	12183.473	1.89	4988345	10000	
Fe	56	2	72	808.990	ppb	808.990	1.31	1313749	10000	
Co	59	3	72	588.979	ppb	588.979	3.08	775423	2000	
Ni	60	3	72	534.943	ppb	534.943	2.44	199274	5000	
Cu	63	3	72	7.139	ppb	7.139	4.72	7602	5000	
Zn	66	3	72	2747.999	ppb	2747.999	2.20	444575	5000	
As	75	3	72	4.594	ppb	4.594	7.82	568	2000	
Se	78	2	72	14.072	ppb	14.072	4.73	827	2000	
Sr	88	3	72	3410.465	ppb	3410.465	2.50	1854356	4000	
Mo	95	3	115	0.064	ppb	0.064	47.61	70	2000	
Ag	107	3	115	0.022	ppb	0.022	48.33	50	100	
Cd	111	3	115	7.651	ppb	7.651	6.84	1878	2000	
Sn	120	3	115	-0.047	ppb	-0.047	-281.87	708	2000	
Sb	121	3	115	0.057	ppb	0.057	39.45	88	1000	
Ba	137	3	115	10.534	ppb	10.534	0.68	2689	5000	
Tl	205	3	193	0.687	ppb	0.687	0.95	2992	2000	
(Pb)	206	3	193	10.215	ppb	10.215	2.07	13239	100	
(Pb)	207	3	193	9.137	ppb	9.137	3.13	10634	100	
Pb	208	3	193	9.537	ppb	9.537	1.20	50135	5000	
Th	232	3	193	2.327	ppb	2.327	6.71	18630	2000	
U	238	3	193	98.474	ppb	98.474	1.94	528231	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4126753	1.22	4300192	95.97	60	120	
Sc (IS)	45	3	HMI He	624296	1.10	644593	96.85	60	120	
Ge Internal standard	72	2	HMI H2	2530315	1.19	2598552	97.37	60	120	
Ge Internal standard	72	3	HMI He	766376	1.33	772392	99.22	60	120	
In Internal Standard	115	3	HMI He	2830137	1.09	2872781	98.52	60	120	
Ir (IS)	193	3	HMI He	6011628	1.36	6092963	98.67	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A
Data File Name	205SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:02:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	80.479	ppb	80.479	2.79	3145	2000	
Na	23	3	45	62599.010	ppb	62599.010	1.52	6902206	400000	
Mg	24	3	45	315441.966	ppb	315441.966	1.69	18238867	400000	
Al	27	3	45	86190.242	ppb	86190.242	2.05	1927703	400000	
K	39	3	45	14970.773	ppb	14970.773	1.20	734266	400000	
Ca	40	2	45	452445.885	ppb	452445.885	0.18	253162962	400000	
V	51	3	72	4.207	ppb	4.207	7.75	3622	2000	
Cr	52	3	72	2.783	ppb	2.783	14.83	5227	5000	
Mn	55	3	72	15542.305	ppb	15542.305	0.14	6329272	10000	
Fe	56	2	72	282.266	ppb	282.266	3.38	501951	10000	
Co	59	3	72	758.186	ppb	758.186	2.21	992978	2000	
Ni	60	3	72	612.129	ppb	612.129	0.32	226718	5000	
Cu	63	3	72	4.891	ppb	4.891	3.36	5303	5000	
Zn	66	3	72	3422.970	ppb	3422.970	0.78	550762	5000	
As	75	3	72	3.565	ppb	3.565	15.39	448	2000	
Se	78	2	72	17.076	ppb	17.076	6.86	1009	2000	
Sr	88	3	72	4417.561	ppb	4417.561	1.65	2389255	4000	
Mo	95	3	115	0.082	ppb	0.082	15.03	78	2000	
Ag	107	3	115	0.017	ppb	0.017	42.91	42	100	
Cd	111	3	115	10.678	ppb	10.678	3.95	2576	2000	
Sn	120	3	115	-0.139	ppb	-0.139	-58.26	626	2000	
Sb	121	3	115	0.046	ppb	0.046	88.12	78	1000	
Ba	137	3	115	8.387	ppb	8.387	5.45	2119	5000	
Tl	205	3	193	1.896	ppb	1.896	0.35	7445	2000	
(Pb)	206	3	193	10.695	ppb	10.695	1.14	13562	100	
(Pb)	207	3	193	9.425	ppb	9.425	2.01	10734	100	
Pb	208	3	193	9.989	ppb	9.989	1.18	51380	5000	
Th	232	3	193	0.493	ppb	0.493	9.85	9122	2000	
U	238	3	193	178.002	ppb	178.002	0.97	934440	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162571	0.67	4300192	96.80	60	120	
Sc (IS)	45	3	HMI He	616938	0.27	644593	95.71	60	120	
Ge Internal standard	72	2	HMI H2	2547065	1.51	2598552	98.02	60	120	
Ge Internal standard	72	3	HMI He	762151	0.25	772392	98.67	60	120	
In Internal Standard	115	3	HMI He	2786327	1.97	2872781	96.99	60	120	
Ir (IS)	193	3	HMI He	5890028	0.48	6092963	96.67	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-3-A
Data File Name	206SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:03:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-96.79	3	2000	
Na	23	3	45	2156.261	ppb	2156.261	1.39	259640	400000	
Mg	24	3	45	7370.378	ppb	7370.378	2.69	437197	400000	
Al	27	3	45	1706.327	ppb	1706.327	2.59	39279	400000	
K	39	3	45	21401.330	ppb	21401.330	0.48	1064798	400000	
Ca	40	2	45	43170.960	ppb	43170.960	1.11	25707597	400000	
V	51	3	72	4.145	ppb	4.145	1.14	3719	2000	
Cr	52	3	72	1.640	ppb	1.640	27.37	4507	5000	
Mn	55	3	72	26.790	ppb	26.790	5.11	11701	10000	
Fe	56	2	72	882.769	ppb	882.769	5.31	1491636	10000	
Co	59	3	72	1.019	ppb	1.019	8.11	1439	2000	
Ni	60	3	72	2.095	ppb	2.095	13.30	1508	5000	
Cu	63	3	72	5.104	ppb	5.104	4.34	5723	5000	
Zn	66	3	72	4.493	ppb	4.493	10.26	983	5000	
As	75	3	72	1.261	ppb	1.261	39.98	193	2000	
Se	78	2	72	0.467	ppb	0.467	4.25	31	2000	
Sr	88	3	72	286.002	ppb	286.002	1.13	160524	4000	
Mo	95	3	115	2.492	ppb	2.492	7.03	1344	2000	
Ag	107	3	115	0.014	ppb	0.014	42.94	38	100	
Cd	111	3	115	-0.014	ppb	-0.014	-213.93	7	2000	
Sn	120	3	115	-0.259	ppb	-0.259	-6.89	561	2000	
Sb	121	3	115	0.317	ppb	0.317	8.21	297	1000	
Ba	137	3	115	64.781	ppb	64.781	0.60	16756	5000	
Tl	205	3	193	0.016	ppb	0.016	46.38	458	2000	
(Pb)	206	3	193	0.932	ppb	0.932	14.01	1566	100	
(Pb)	207	3	193	0.804	ppb	0.804	11.73	1436	100	
Pb	208	3	193	0.897	ppb	0.897	5.15	6343	5000	
Th	232	3	193	0.122	ppb	0.122	17.72	7792	2000	
U	238	3	193	4.368	ppb	4.368	2.83	26102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4428318	1.37	4300192	102.98	60	120	
Sc (IS)	45	3	HMI He	632769	1.81	644593	98.17	60	120	
Ge Internal standard	72	2	HMI H2	2643364	0.42	2598552	101.72	60	120	
Ge Internal standard	72	3	HMI He	790807	1.48	772392	102.38	60	120	
In Internal Standard	115	3	HMI He	2922634	2.31	2872781	101.74	60	120	
Ir (IS)	193	3	HMI He	6308338	1.49	6092963	103.53	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A
Data File Name	207SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:05:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	65.797	ppb	65.797	5.14	2726	2000	
Na	23	3	45	34986.640	ppb	34986.640	2.87	4018561	400000	
Mg	24	3	45	209631.690	ppb	209631.690	0.55	12605173	400000	
Al	27	3	45	222943.233	ppb	222943.233	1.30	5185188	400000	
K	39	3	45	6654.281	ppb	6654.281	2.40	354908	400000	
Ca	40	2	45	423680.196	ppb	423680.196	2.15	246279286	400000	
V	51	3	72	55.627	ppb	55.627	1.95	36605	2000	
Cr	52	3	72	6.354	ppb	6.354	4.98	8140	5000	
Mn	55	3	72	12154.415	ppb	12154.415	2.79	5049231	10000	
Fe	56	2	72	795.128	ppb	795.128	2.26	1295704	10000	
Co	59	3	72	586.403	ppb	586.403	1.86	783478	2000	
Ni	60	3	72	533.288	ppb	533.288	2.17	201593	5000	
Cu	63	3	72	7.069	ppb	7.069	2.78	7645	5000	
Zn	66	3	72	2728.319	ppb	2728.319	1.53	447907	5000	
As	75	3	72	4.263	ppb	4.263	4.13	538	2000	
Se	78	2	72	13.834	ppb	13.834	6.52	815	2000	
Sr	88	3	72	3360.743	ppb	3360.743	2.24	1854308	4000	
Mo	95	3	115	0.049	ppb	0.049	40.71	63	2000	
Ag	107	3	115	0.018	ppb	0.018	13.83	45	100	
Cd	111	3	115	7.527	ppb	7.527	3.94	1873	2000	
Sn	120	3	115	-0.180	ppb	-0.180	-20.64	613	2000	
Sb	121	3	115	0.039	ppb	0.039	21.00	75	1000	
Ba	137	3	115	9.960	ppb	9.960	4.91	2579	5000	
Tl	205	3	193	0.627	ppb	0.627	3.31	2842	2000	
(Pb)	206	3	193	9.813	ppb	9.813	4.48	13082	100	
(Pb)	207	3	193	9.081	ppb	9.081	1.68	10869	100	
Pb	208	3	193	9.398	ppb	9.398	2.24	50808	5000	
Th	232	3	193	2.038	ppb	2.038	5.71	17645	2000	
U	238	3	193	96.572	ppb	96.572	2.05	532610	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4325701	2.23	4300192	100.59	60	120	
Sc (IS)	45	3	HMI He	641628	1.23	644593	99.54	60	120	
Ge Internal standard	72	2	HMI H2	2537099	0.36	2598552	97.64	60	120	
Ge Internal standard	72	3	HMI He	777618	1.00	772392	100.68	60	120	
In Internal Standard	115	3	HMI He	2868118	2.03	2872781	99.84	60	120	
Ir (IS)	193	3	HMI He	6180838	1.26	6092963	101.44	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	208SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:07:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-97.30	3	2000	
Na	23	3	45	19570.011	ppb	19570.011	0.71	2192442	400000	
Mg	24	3	45	13625.582	ppb	13625.582	1.91	796602	400000	
Al	27	3	45	37.280	ppb	37.280	8.08	991	400000	
K	39	3	45	7502.718	ppb	7502.718	1.03	385543	400000	
Ca	40	2	45	51463.936	ppb	51463.936	1.86	29801781	400000	
V	51	3	72	22.809	ppb	22.809	1.79	15679	2000	
Cr	52	3	72	1.945	ppb	1.945	19.45	4697	5000	
Mn	55	3	72	5.541	ppb	5.541	8.19	2696	10000	
Fe	56	2	72	10.224	ppb	10.224	43.62	79943	10000	
Co	59	3	72	0.156	ppb	0.156	18.30	265	2000	
Ni	60	3	72	0.658	ppb	0.658	49.41	946	5000	
Cu	63	3	72	0.612	ppb	0.612	12.23	1030	5000	
Zn	66	3	72	1.873	ppb	1.873	24.34	540	5000	
As	75	3	72	14.349	ppb	14.349	4.05	1716	2000	
Se	78	2	72	4.091	ppb	4.091	15.50	249	2000	
Sr	88	3	72	263.079	ppb	263.079	2.10	145899	4000	
Mo	95	3	115	9.682	ppb	9.682	7.58	4997	2000	
Ag	107	3	115	0.010	ppb	0.010	4.67	30	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.262	ppb	-0.262	-15.57	546	2000	
Sb	121	3	115	0.407	ppb	0.407	29.33	358	1000	
Ba	137	3	115	42.041	ppb	42.041	1.87	10657	5000	
Tl	205	3	193	-0.039	ppb	-0.039	-10.83	230	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-56.12	272	100	
(Pb)	207	3	193	-0.010	ppb	-0.010	-458.88	471	100	
Pb	208	3	193	-0.038	ppb	-0.038	-35.26	1294	5000	
Th	232	3	193	-0.363	ppb	-0.363	-6.54	5040	2000	
U	238	3	193	1.722	ppb	1.722	1.63	10898	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4306104	0.63	4300192	100.14	60	120	
Sc (IS)	45	3	HMI He	623665	0.60	644593	96.75	60	120	
Ge Internal standard	72	2	HMI H2	2599664	1.13	2598552	100.04	60	120	
Ge Internal standard	72	3	HMI He	781373	0.78	772392	101.16	60	120	
In Internal Standard	115	3	HMI He	2859165	2.61	2872781	99.53	60	120	
Ir (IS)	193	3	HMI He	6110465	1.42	6092963	100.29	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	209SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:09:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3733.612	ppb	3733.612	1.23	431951	400000	
Mg	24	3	45	2610.885	ppb	2610.885	1.37	153072	400000	
Al	27	3	45	9.053	ppb	9.053	31.16	354	400000	
K	39	3	45	1488.268	ppb	1488.268	3.12	98408	400000	
Ca	40	2	45	10478.390	ppb	10478.390	0.65	5934046	400000	
V	51	3	72	4.245	ppb	4.245	5.80	3732	2000	
Cr	52	3	72	0.622	ppb	0.622	77.10	3644	5000	
Mn	55	3	72	2.986	ppb	2.986	6.54	1626	10000	
Fe	56	2	72	9.044	ppb	9.044	30.42	76457	10000	
Co	59	3	72	0.066	ppb	0.066	15.58	143	2000	
Ni	60	3	72	0.537	ppb	0.537	22.08	900	5000	
Cu	63	3	72	0.262	ppb	0.262	14.02	668	5000	
Zn	66	3	72	3.184	ppb	3.184	7.85	755	5000	
As	75	3	72	2.829	ppb	2.829	12.57	373	2000	
Se	78	2	72	0.803	ppb	0.803	6.79	49	2000	
Sr	88	3	72	52.806	ppb	52.806	1.01	29277	4000	
Mo	95	3	115	1.822	ppb	1.822	0.99	971	2000	
Ag	107	3	115	0.017	ppb	0.017	24.61	43	100	
Cd	111	3	115	-0.034	ppb	-0.034	-34.83	2	2000	
Sn	120	3	115	-0.093	ppb	-0.093	-87.77	678	2000	
Sb	121	3	115	0.093	ppb	0.093	39.07	117	1000	
Ba	137	3	115	8.826	ppb	8.826	3.42	2284	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-22.47	205	2000	
(Pb)	206	3	193	0.281	ppb	0.281	35.46	680	100	
(Pb)	207	3	193	0.294	ppb	0.294	8.88	816	100	
Pb	208	3	193	0.280	ppb	0.280	15.61	2944	5000	
Th	232	3	193	-0.417	ppb	-0.417	-9.10	4774	2000	
U	238	3	193	0.322	ppb	0.322	5.31	3294	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4204632	2.57	4300192	97.78	60	120	
Sc (IS)	45	3	HMI He	624529	0.52	644593	96.89	60	120	
Ge Internal standard	72	2	HMI H2	2542709	2.14	2598552	97.85	60	120	
Ge Internal standard	72	3	HMI He	780147	0.80	772392	101.00	60	120	
In Internal Standard	115	3	HMI He	2856264	0.76	2872781	99.43	60	120	
Ir (IS)	193	3	HMI He	6126451	2.42	6092963	100.55	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	210SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:11:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.333	ppb	42.333	5.59	1751	2000	
Na	23	3	45	20149.916	ppb	20149.916	1.81	2280184	400000	
Mg	24	3	45	14544.064	ppb	14544.064	3.48	858963	400000	
Al	27	3	45	746.564	ppb	746.564	1.18	17201	400000	
K	39	3	45	8472.126	ppb	8472.126	0.69	436284	400000	
Ca	40	2	45	52832.747	ppb	52832.747	0.77	30789867	400000	
V	51	3	72	61.977	ppb	61.977	3.45	40889	2000	
Cr	52	3	72	40.728	ppb	40.728	0.93	35366	5000	
Mn	55	3	72	43.898	ppb	43.898	0.84	18722	10000	
Fe	56	2	72	803.842	ppb	803.842	0.74	1341676	10000	
Co	59	3	72	38.789	ppb	38.789	1.00	52170	2000	
Ni	60	3	72	38.522	ppb	38.522	3.20	15289	5000	
Cu	63	3	72	39.733	ppb	39.733	1.33	41359	5000	
Zn	66	3	72	41.138	ppb	41.138	3.16	7018	5000	
As	75	3	72	52.785	ppb	52.785	5.24	6198	2000	
Se	78	2	72	43.027	ppb	43.027	4.88	2594	2000	
Sr	88	3	72	350.038	ppb	350.038	0.59	194262	4000	
Mo	95	3	115	48.231	ppb	48.231	0.88	24817	2000	
Ag	107	3	115	39.016	ppb	39.016	2.00	67672	100	
Cd	111	3	115	38.545	ppb	38.545	2.65	9537	2000	
Sn	120	3	115	37.829	ppb	37.829	1.94	30341	2000	
Sb	121	3	115	39.897	ppb	39.897	0.15	30965	1000	
Ba	137	3	115	84.570	ppb	84.570	0.63	21425	5000	
Tl	205	3	193	38.895	ppb	38.895	1.75	152930	2000	
(Pb)	206	3	193	38.743	ppb	38.743	2.00	50764	100	
(Pb)	207	3	193	38.255	ppb	38.255	2.99	44267	100	
Pb	208	3	193	38.805	ppb	38.805	2.32	205320	5000	
Th	232	3	193	36.836	ppb	36.836	0.46	199763	2000	
U	238	3	193	40.406	ppb	40.406	1.85	224021	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4333860	0.29	4300192	100.78	60	120	
Sc (IS)	45	3	HMI He	630064	0.46	644593	97.75	60	120	
Ge Internal standard	72	2	HMI H2	2599837	1.19	2598552	100.05	60	120	
Ge Internal standard	72	3	HMI He	781920	0.98	772392	101.23	60	120	
In Internal Standard	115	3	HMI He	2865374	1.92	2872781	99.74	60	120	
Ir (IS)	193	3	HMI He	6188054	1.10	6092963	101.56	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	211SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:12:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.706	ppb	40.706	11.26	1703	2000	
Na	23	3	45	19638.019	ppb	19638.019	2.67	2247474	400000	
Mg	24	3	45	14205.849	ppb	14205.849	1.32	848420	400000	
Al	27	3	45	742.830	ppb	742.830	2.29	17308	400000	
K	39	3	45	8084.840	ppb	8084.840	0.32	422257	400000	
Ca	40	2	45	52969.865	ppb	52969.865	1.57	30608600	400000	
V	51	3	72	60.625	ppb	60.625	1.35	40625	2000	
Cr	52	3	72	40.305	ppb	40.305	2.55	35554	5000	
Mn	55	3	72	42.297	ppb	42.297	0.55	18323	10000	
Fe	56	2	72	808.243	ppb	808.243	0.91	1366429	10000	
Co	59	3	72	37.472	ppb	37.472	0.86	51153	2000	
Ni	60	3	72	37.776	ppb	37.776	2.97	15232	5000	
Cu	63	3	72	38.982	ppb	38.982	1.86	41189	5000	
Zn	66	3	72	39.835	ppb	39.835	5.15	6905	5000	
As	75	3	72	53.814	ppb	53.814	0.48	6415	2000	
Se	78	2	72	42.703	ppb	42.703	3.90	2608	2000	
Sr	88	3	72	336.853	ppb	336.853	1.59	189740	4000	
Mo	95	3	115	46.018	ppb	46.018	5.07	24103	2000	
Ag	107	3	115	38.291	ppb	38.291	2.92	67626	100	
Cd	111	3	115	38.413	ppb	38.413	1.68	9680	2000	
Sn	120	3	115	37.396	ppb	37.396	1.83	30553	2000	
Sb	121	3	115	39.477	ppb	39.477	0.29	31201	1000	
Ba	137	3	115	81.374	ppb	81.374	2.65	20991	5000	
Tl	205	3	193	39.117	ppb	39.117	1.41	153075	2000	
(Pb)	206	3	193	39.454	ppb	39.454	2.60	51457	100	
(Pb)	207	3	193	39.035	ppb	39.035	1.66	44956	100	
Pb	208	3	193	38.989	ppb	38.989	2.14	205349	5000	
Th	232	3	193	38.725	ppb	38.725	0.31	208647	2000	
U	238	3	193	40.456	ppb	40.456	1.04	223252	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4297767	1.35	4300192	99.94	60	120	
Sc (IS)	45	3	HMI He	637082	0.43	644593	98.83	60	120	
Ge Internal standard	72	2	HMI H2	2634308	1.50	2598552	101.38	60	120	
Ge Internal standard	72	3	HMI He	793611	0.49	772392	102.75	60	120	
In Internal Standard	115	3	HMI He	2917914	1.78	2872781	101.57	60	120	
Ir (IS)	193	3	HMI He	6158732	0.90	6092963	101.08	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D pds
Data File Name	212SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:14:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	110.211	ppb	110.211	1.35	4660	2000	
Na	23	3	45	23925.909	ppb	23925.909	1.05	2709352	400000	
Mg	24	3	45	15391.736	ppb	15391.736	3.13	910776	400000	
Al	27	3	45	2023.025	ppb	2023.025	2.72	46439	400000	
K	39	3	45	9453.909	ppb	9453.909	1.29	484563	400000	
Ca	40	2	45	53409.699	ppb	53409.699	1.69	31188875	400000	
V	51	3	72	116.746	ppb	116.746	0.51	77415	2000	
Cr	52	3	72	98.533	ppb	98.533	0.88	82421	5000	
Mn	55	3	72	97.745	ppb	97.745	1.79	41900	10000	
Fe	56	2	72	1058.323	ppb	1058.323	1.69	1748432	10000	
Co	59	3	72	96.194	ppb	96.194	1.48	131441	2000	
Ni	60	3	72	94.646	ppb	94.646	0.65	37163	5000	
Cu	63	3	72	97.959	ppb	97.959	0.56	103069	5000	
Zn	66	3	72	201.755	ppb	201.755	2.04	34078	5000	
As	75	3	72	117.837	ppb	117.837	1.26	14017	2000	
Se	78	2	72	106.172	ppb	106.172	1.69	6406	2000	
Sr	88	3	72	356.230	ppb	356.230	1.09	200985	4000	
Mo	95	3	115	106.449	ppb	106.449	2.56	55086	2000	
Ag	107	3	115	26.103	ppb	26.103	0.96	45588	100	
Cd	111	3	115	99.167	ppb	99.167	1.71	24687	2000	
Sn	120	3	115	98.130	ppb	98.130	1.02	78033	2000	
Sb	121	3	115	95.655	ppb	95.655	1.01	74666	1000	
Ba	137	3	115	142.131	ppb	142.131	0.70	36205	5000	
Tl	205	3	193	98.154	ppb	98.154	1.19	385849	2000	
(Pb)	206	3	193	97.892	ppb	97.892	1.44	127941	100	
(Pb)	207	3	193	96.998	ppb	96.998	3.06	111633	100	
Pb	208	3	193	97.265	ppb	97.265	1.60	513054	5000	
Th	232	3	193	104.980	ppb	104.980	2.01	556961	2000	
U	238	3	193	214.112	ppb	214.112	3.98	1181706	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4343562	2.01	4300192	101.01	60	120	
Sc (IS)	45	3	HMI He	631265	0.66	644593	97.93	60	120	
Ge Internal standard	72	2	HMI H2	2603174	0.31	2598552	100.18	60	120	
Ge Internal standard	72	3	HMI He	794934	0.61	772392	102.92	60	120	
In Internal Standard	115	3	HMI He	2884393	1.06	2872781	100.40	60	120	
Ir (IS)	193	3	HMI He	6196001	1.16	6092963	101.69	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	213_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:16:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.166	ppb	4.253	2199	50	106.3	90	110	
Na	23	3	45	48077.438	ppb	0.728	5396703	51000	94.3	90	110	
Mg	24	3	45	10265.689	ppb	1.400	604064	11000	93.3	90	110	
Al	27	3	45	972.928	ppb	2.884	22283	1000	97.3	90	110	
K	39	3	45	10181.534	ppb	1.063	516772	11000	92.6	90	110	
Ca	40	2	45	10406.909	ppb	1.045	5978238	11000	94.6	90	110	
V	51	3	72	51.478	ppb	1.701	32670	50	103.0	90	110	
Cr	52	3	72	51.808	ppb	2.226	42228	50	103.6	90	110	
Mn	55	3	72	50.939	ppb	1.550	20730	50	101.9	90	110	
Fe	56	2	72	1073.315	ppb	0.849	1697398	1000	107.3	90	110	
Co	59	3	72	50.702	ppb	1.882	65237	50	101.4	90	110	
Ni	60	3	72	50.905	ppb	0.572	19124	50	101.8	90	110	
Cu	63	3	72	50.169	ppb	2.599	49868	50	100.3	90	110	
Zn	66	3	72	49.873	ppb	1.541	8097	50	99.7	90	110	
As	75	3	72	53.952	ppb	2.057	6063	50	107.9	90	110	
Se	78	2	72	50.244	ppb	3.823	2904	50	100.5	90	110	
Sr	88	3	72	103.817	ppb	2.957	55159	100	103.8	90	110	
Mo	95	3	115	49.334	ppb	2.913	25495	50	98.7	90	110	
Ag	107	3	115	48.425	ppb	3.274	84361	50	96.8	90	110	
Cd	111	3	115	49.329	ppb	2.339	12258	50	98.7	90	110	
Sn	120	3	115	48.001	ppb	3.144	38471	50	96.0	90	110	
Sb	121	3	115	49.566	ppb	3.388	38620	50	99.1	90	110	
Ba	137	3	115	48.750	ppb	4.260	12428	50	97.5	90	110	
Tl	205	3	193	48.712	ppb	2.849	189756	50	97.4	90	110	
(Pb)	206	3	193	49.709	ppb	2.843	64474	50	99.4	90	110	
(Pb)	207	3	193	48.995	ppb	3.456	56066	50	98.0	90	110	
Pb	208	3	193	49.000	ppb	3.002	256611	50	98.0	90	110	
Th	232	3	193	51.785	ppb	2.011	275559	50	103.6	90	110	
U	238	3	193	48.273	ppb	2.856	265002	50	96.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4264829	1.09	4300192	99.18	60	120	
Sc (IS)	45	3	HMI He	627631	0.58	644593	97.37	60	120	
Ge Internal standard	72	2	HMI H2	2493149	1.33	2598552	95.94	60	120	
Ge Internal standard	72	3	HMI He	748314	1.08	772392	96.88	60	120	
In Internal Standard	115	3	HMI He	2878701	2.31	2872781	100.21	60	120	
Ir (IS)	193	3	HMI He	6135421	1.91	6092963	100.70	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	214_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:18:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.070	ppb	-192.6	3	0.5	
Na	23	3	45	75.801	ppb	4.2	24927	25	>RL
Mg	24	3	45	3.129	ppb	43.3	450	25	
Al	27	3	45	-0.894	ppb	-125.4	130	15	
K	39	3	45	-9.953	ppb	-223.3	27080	50	
V	51	3	72	0.202	ppb	56.8	1121	1	
Cr	52	3	72	0.547	ppb	60.5	3540	1	
Mn	55	3	72	0.188	ppb	55.0	455	0.5	
Co	59	3	72	0.030	ppb	41.3	95	0.5	
Ni	60	3	72	0.447	ppb	48.7	855	1	
Cu	63	3	72	0.059	ppb	19.3	453	1	
Zn	66	3	72	-0.108	ppb	-181.0	210	5	
As	75	3	72	0.073	ppb	146.4	52	1	
Se	78	2	72	0.068	ppb	49.6	6	1	
Sr	88	3	72	0.037	ppb	90.5	63	0.5	
Mo	95	3	115	0.107	ppb	46.4	93	0.5	
Ag	107	3	115	0.010	ppb	17.0	32	1	
Cd	111	3	115	-0.007	ppb	-306.3	8	0.5	
Sn	120	3	115	0.050	ppb	215.1	796	1	
Sb	121	3	115	0.055	ppb	42.6	88	0.6	
Ba	137	3	115	-0.040	ppb	-31.8	52	0.5	
Tl	205	3	193	-0.004	ppb	-327.0	365	0.1	
(Pb)	206	3	193	-0.064	ppb	-32.5	237	1	
(Pb)	207	3	193	-0.050	ppb	-97.0	426	1	
Pb	208	3	193	-0.054	ppb	-21.1	1209	0.5	
Th	232	3	193	1.912	ppb	13.4	16803	1	>RL
U	238	3	193	0.038	ppb	69.7	1746	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4256588	0.88	4300192	98.99	60	120	
Sc (IS)	45	3	HMI He	632311	0.97	644593	98.09	60	120	
Ge Internal standard	72	2	HMI H2	2558926	0.27	2598552	98.48	60	120	
Ge Internal standard	72	3	HMI He	769939	1.85	772392	99.68	60	120	
In Internal Standard	115	3	HMI He	2880210	1.16	2872781	100.26	60	120	
Ir (IS)	193	3	HMI He	6113205	1.49	6092963	100.33	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	215LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:20:07-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.069	ppb	21.974	50	1	106.9	70	130	
Na	23	3	45	336.198	ppb	3.848	54918	300	112.1	70	130	
Mg	24	3	45	44.087	ppb	6.897	2910	50	88.2	70	130	
Al	27	3	45	45.104	ppb	7.255	1198	50	90.2	70	130	
K	39	3	45	98.456	ppb	44.011	32698	120	82.0	70	130	
Ca	40	2	45	203.148	ppb	1.687	126238	200	101.6	70	130	
V	51	3	72	4.669	ppb	5.436	4015	5	93.4	70	130	
Cr	52	3	72	2.058	ppb	10.851	4792	2	102.9	70	130	
Mn	55	3	72	0.920	ppb	8.343	768	1	92.0	70	130	
Fe	56	2	72	53.543	ppb	8.305	143126	50	107.1	70	130	
Co	59	3	72	0.991	ppb	1.470	1388	1	99.1	70	130	
Ni	60	3	72	2.200	ppb	5.698	1533	2	110.0	70	130	
Cu	63	3	72	1.867	ppb	2.391	2326	2	93.4	70	130	
Zn	66	3	72	8.714	ppb	6.137	1669	10	87.1	70	130	
As	75	3	72	5.336	ppb	8.820	666	5	106.7	70	130	
Se	78	2	72	5.096	ppb	8.007	297	5	101.9	70	130	
Sr	88	3	72	4.740	ppb	3.159	2676	5	94.8	70	130	
Mo	95	3	115	2.020	ppb	13.177	1086	2	101.0	70	130	
Ag	107	3	115	0.871	ppb	3.995	1543	1	87.1	70	130	
Cd	111	3	115	0.867	ppb	11.077	227	1	86.7	70	130	
Sn	120	3	115	8.286	ppb	3.578	7317	10	82.9	70	130	
Sb	121	3	115	1.935	ppb	6.939	1561	2	96.7	70	130	
Ba	137	3	115	0.838	ppb	25.362	277	1	83.8	70	130	
Tl	205	3	193	0.834	ppb	5.022	3682	1	83.4	70	130	
(Pb)	206	3	193	0.776	ppb	9.358	1343	1	77.6	70	130	
(Pb)	207	3	193	0.837	ppb	11.739	1456	1	83.7	70	130	
Pb	208	3	193	0.803	ppb	7.923	5764	1	80.3	70	130	
Th	232	3	193	1.370	ppb	14.931	14286	1	137.0	70	130	>+/-30%
U	238	3	193	0.938	ppb	6.796	6767	1	93.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4164266	1.42	4300192	96.84	60	120	
Sc (IS)	45	3	HMI He	639897	2.10	644593	99.27	60	120	
Ge Internal standard	72	2	HMI H2	2499401	1.15	2598552	96.18	60	120	
Ge Internal standard	72	3	HMI He	782523	1.75	772392	101.31	60	120	
In Internal Standard	115	3	HMI He	2898903	2.53	2872781	100.91	60	120	
Ir (IS)	193	3	HMI He	6232941	1.98	6092963	102.30	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-6-A
Data File Name	216SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:21:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17162.830	ppb	17162.830	0.96	1975564	400000	
Mg	24	3	45	17042.542	ppb	17042.542	2.71	1022747	400000	
Al	27	3	45	4.072	ppb	4.072	42.28	247	400000	
K	39	3	45	6978.035	ppb	6978.035	0.53	370000	400000	
Ca	40	2	45	59240.009	ppb	59240.009	0.26	34581404	400000	
V	51	3	72	21.099	ppb	21.099	2.82	14987	2000	
Cr	52	3	72	1.250	ppb	1.250	14.67	4265	5000	
Mn	55	3	72	0.364	ppb	0.364	27.72	550	10000	
Fe	56	2	72	5.910	ppb	5.910	57.53	75279	10000	
Co	59	3	72	0.129	ppb	0.129	6.21	235	2000	
Ni	60	3	72	1.478	ppb	1.478	7.59	1293	5000	
Cu	63	3	72	16.258	ppb	16.258	0.46	17629	5000	
Zn	66	3	72	1.823	ppb	1.823	13.97	546	5000	
As	75	3	72	5.993	ppb	5.993	14.90	763	2000	
Se	78	2	72	4.957	ppb	4.957	11.29	309	2000	
Sr	88	3	72	293.571	ppb	293.571	2.10	167392	4000	
Mo	95	3	115	3.131	ppb	3.131	6.12	1696	2000	
Ag	107	3	115	0.013	ppb	0.013	53.47	37	100	
Cd	111	3	115	-0.015	ppb	-0.015	-72.96	7	2000	
Sn	120	3	115	-0.143	ppb	-0.143	-28.61	660	2000	
Sb	121	3	115	0.268	ppb	0.268	17.04	260	1000	
Ba	137	3	115	38.564	ppb	38.564	3.14	10086	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-17.02	230	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-15.57	237	100	
(Pb)	207	3	193	-0.114	ppb	-0.114	-26.19	363	100	
Pb	208	3	193	-0.082	ppb	-0.082	-15.15	1088	5000	
Th	232	3	193	-0.288	ppb	-0.288	-14.29	5573	2000	
U	238	3	193	3.079	ppb	3.079	1.27	18755	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4341330	1.77	4300192	100.96	60	120	
Sc (IS)	45	3	HMI He	640116	0.56	644593	99.31	60	120	
Ge Internal standard	72	2	HMI H2	2675516	0.62	2598552	102.96	60	120	
Ge Internal standard	72	3	HMI He	803351	0.49	772392	104.01	60	120	
In Internal Standard	115	3	HMI He	2948846	2.15	2872781	102.65	60	120	
Ir (IS)	193	3	HMI He	6270777	1.95	6092963	102.92	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-8-A
Data File Name	217SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:23:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17968.914	ppb	17968.914	2.72	2112895	400000	
Mg	24	3	45	10644.127	ppb	10644.127	1.38	652916	400000	
Al	27	3	45	-0.110	ppb	-0.110	-1386.71	153	400000	
K	39	3	45	5698.770	ppb	5698.770	1.35	314079	400000	
Ca	40	2	45	31171.925	ppb	31171.925	1.19	18301108	400000	
V	51	3	72	17.074	ppb	17.074	2.32	12398	2000	
Cr	52	3	72	2.015	ppb	2.015	16.17	4915	5000	
Mn	55	3	72	0.762	ppb	0.762	4.70	725	10000	
Fe	56	2	72	14.068	ppb	14.068	30.23	89850	10000	
Co	59	3	72	0.046	ppb	0.046	5.25	122	2000	
Ni	60	3	72	0.413	ppb	0.413	5.39	883	5000	
Cu	63	3	72	0.288	ppb	0.288	22.25	720	5000	
Zn	66	3	72	0.426	ppb	0.426	45.62	312	5000	
As	75	3	72	5.940	ppb	5.940	4.18	761	2000	
Se	78	2	72	1.395	ppb	1.395	6.90	90	2000	
Sr	88	3	72	167.249	ppb	167.249	1.22	95938	4000	
Mo	95	3	115	3.677	ppb	3.677	1.10	2039	2000	
Ag	107	3	115	0.006	ppb	0.006	44.53	25	100	
Cd	111	3	115	-0.022	ppb	-0.022	-88.42	5	2000	
Sn	120	3	115	-0.208	ppb	-0.208	-44.96	625	2000	
Sb	121	3	115	0.166	ppb	0.166	26.21	183	1000	
Ba	137	3	115	17.688	ppb	17.688	4.32	4792	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-18.83	162	2000	
(Pb)	206	3	193	-0.057	ppb	-0.057	-12.22	252	100	
(Pb)	207	3	193	-0.099	ppb	-0.099	-71.07	378	100	
Pb	208	3	193	-0.081	ppb	-0.081	-16.71	1089	5000	
Th	232	3	193	-0.347	ppb	-0.347	-8.90	5234	2000	
U	238	3	193	1.938	ppb	1.938	2.58	12330	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365199	2.77	4300192	101.51	60	120	
Sc (IS)	45	3	HMI He	654338	1.46	644593	101.51	60	120	
Ge Internal standard	72	2	HMI H2	2716067	2.17	2598552	104.52	60	120	
Ge Internal standard	72	3	HMI He	807997	0.39	772392	104.61	60	120	
In Internal Standard	115	3	HMI He	3031665	1.80	2872781	105.53	60	120	
Ir (IS)	193	3	HMI He	6239719	0.59	6092963	102.41	60	120	

Sample Report

Sample Table

Sample Name	280-175081-A-2-A
Data File Name	218SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:25:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3130.310	ppb	3130.310	1.08	371814	400000	
Mg	24	3	45	4854.081	ppb	4854.081	0.17	289875	400000	
Al	27	3	45	2.835	ppb	2.835	62.70	217	400000	
K	39	3	45	2217.382	ppb	2217.382	1.53	135861	400000	
Ca	40	2	45	21781.359	ppb	21781.359	0.40	12665898	400000	
V	51	3	72	2.782	ppb	2.782	12.74	2886	2000	
Cr	52	3	72	1.780	ppb	1.780	28.15	4708	5000	
Mn	55	3	72	0.252	ppb	0.252	43.35	503	10000	
Fe	56	2	72	9.383	ppb	9.383	38.45	81329	10000	
Co	59	3	72	0.030	ppb	0.030	8.33	98	2000	
Ni	60	3	72	0.719	ppb	0.719	40.44	1000	5000	
Cu	63	3	72	0.241	ppb	0.241	16.77	668	5000	
Zn	66	3	72	2.852	ppb	2.852	6.81	723	5000	
As	75	3	72	1.093	ppb	1.093	4.71	177	2000	
Se	78	2	72	0.220	ppb	0.220	87.72	16	2000	
Sr	88	3	72	103.186	ppb	103.186	1.16	59041	4000	
Mo	95	3	115	0.725	ppb	0.725	5.36	421	2000	
Ag	107	3	115	0.000	ppb	0.000	-615.10	13	100	
Cd	111	3	115	-0.021	ppb	-0.021	-92.44	5	2000	
Sn	120	3	115	-0.189	ppb	-0.189	-19.17	621	2000	
Sb	121	3	115	0.187	ppb	0.187	16.50	195	1000	
Ba	137	3	115	26.829	ppb	26.829	2.59	7022	5000	
Tl	205	3	193	-0.058	ppb	-0.058	-17.28	160	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-62.91	233	100	
(Pb)	207	3	193	-0.106	ppb	-0.106	-43.36	366	100	
Pb	208	3	193	-0.072	ppb	-0.072	-13.93	1124	5000	
Th	232	3	193	-0.393	ppb	-0.393	-6.21	4939	2000	
U	238	3	193	0.306	ppb	0.306	6.63	3234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4321856	1.19	4300192	100.50	60	120	
Sc (IS)	45	3	HMI He	636629	0.82	644593	98.76	60	120	
Ge Internal standard	72	2	HMI H2	2688098	2.28	2598552	103.45	60	120	
Ge Internal standard	72	3	HMI He	805737	0.71	772392	104.32	60	120	
In Internal Standard	115	3	HMI He	2942533	1.38	2872781	102.43	60	120	
Ir (IS)	193	3	HMI He	6172800	1.02	6092963	101.31	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	219SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:27:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	67.268	ppb	67.268	6.24	2772	2000	
Na	23	3	45	35834.303	ppb	35834.303	1.80	4077929	400000	
Mg	24	3	45	216104.005	ppb	216104.005	0.81	12874859	400000	
Al	27	3	45	224973.435	ppb	224973.435	0.96	5184366	400000	
K	39	3	45	6732.856	ppb	6732.856	1.57	355488	400000	
Ca	40	2	45	431773.739	ppb	431773.739	0.43	248277294	400000	
V	51	3	72	54.221	ppb	54.221	1.95	35900	2000	
Cr	52	3	72	5.861	ppb	5.861	4.81	7797	5000	
Mn	55	3	72	12172.671	ppb	12172.671	1.11	5085344	10000	
Fe	56	2	72	785.076	ppb	785.076	1.31	1310068	10000	
Co	59	3	72	588.483	ppb	588.483	1.63	790573	2000	
Ni	60	3	72	539.096	ppb	539.096	2.03	204898	5000	
Cu	63	3	72	7.273	ppb	7.273	3.90	7895	5000	
Zn	66	3	72	2748.503	ppb	2748.503	0.74	453722	5000	
As	75	3	72	4.195	ppb	4.195	2.68	533	2000	
Se	78	2	72	13.431	ppb	13.431	5.90	810	2000	
Sr	88	3	72	3393.452	ppb	3393.452	0.87	1883011	4000	
Mo	95	3	115	0.093	ppb	0.093	46.54	85	2000	
Ag	107	3	115	0.011	ppb	0.011	70.85	32	100	
Cd	111	3	115	8.115	ppb	8.115	11.63	1989	2000	
Sn	120	3	115	-0.007	ppb	-0.007	-472.37	738	2000	
Sb	121	3	115	0.068	ppb	0.068	53.79	97	1000	
Ba	137	3	115	10.952	ppb	10.952	0.89	2792	5000	
Tl	205	3	193	0.668	ppb	0.668	1.98	2899	2000	
(Pb)	206	3	193	10.275	ppb	10.275	1.49	13214	100	
(Pb)	207	3	193	9.340	ppb	9.340	1.21	10783	100	
Pb	208	3	193	9.650	ppb	9.650	1.06	50334	5000	
Th	232	3	193	2.205	ppb	2.205	3.98	17876	2000	
U	238	3	193	99.861	ppb	99.861	0.65	531729	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4277811	0.81	4300192	99.48	60	120	
Sc (IS)	45	3	HMI He	635708	0.89	644593	98.62	60	120	
Ge Internal standard	72	2	HMI H2	2596452	0.89	2598552	99.92	60	120	
Ge Internal standard	72	3	HMI He	781901	1.28	772392	101.23	60	120	
In Internal Standard	115	3	HMI He	2829213	1.93	2872781	98.48	60	120	
Ir (IS)	193	3	HMI He	5967399	1.74	6092963	97.94	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	220SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:29:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	84.503	ppb	84.503	4.47	3474	2000	
Na	23	3	45	63181.090	ppb	63181.090	0.51	7214329	400000	
Mg	24	3	45	314358.980	ppb	314358.980	1.83	18822124	400000	
Al	27	3	45	90010.661	ppb	90010.661	1.36	2084758	400000	
K	39	3	45	15188.374	ppb	15188.374	1.72	771002	400000	
Ca	40	2	45	456069.231	ppb	456069.231	1.24	263651549	400000	
V	51	3	72	3.994	ppb	3.994	3.76	3595	2000	
Cr	52	3	72	1.959	ppb	1.959	8.29	4733	5000	
Mn	55	3	72	16070.615	ppb	16070.615	0.92	6744301	10000	
Fe	56	2	72	228.948	ppb	228.948	1.92	425119	10000	
Co	59	3	72	787.154	ppb	787.154	3.40	1062163	2000	
Ni	60	3	72	623.663	ppb	623.663	0.99	238020	5000	
Cu	63	3	72	4.808	ppb	4.808	1.73	5380	5000	
Zn	66	3	72	3475.035	ppb	3475.035	1.15	576182	5000	
As	75	3	72	2.911	ppb	2.911	24.70	385	2000	
Se	78	2	72	18.023	ppb	18.023	3.04	1081	2000	
Sr	88	3	72	4494.422	ppb	4494.422	1.46	2505028	4000	
Mo	95	3	115	0.051	ppb	0.051	51.31	65	2000	
Ag	107	3	115	0.023	ppb	0.023	40.47	55	100	
Cd	111	3	115	11.474	ppb	11.474	2.64	2887	2000	
Sn	120	3	115	-0.216	ppb	-0.216	-51.45	591	2000	
Sb	121	3	115	0.044	ppb	0.044	15.07	80	1000	
Ba	137	3	115	8.957	ppb	8.957	1.95	2357	5000	
Tl	205	3	193	1.914	ppb	1.914	2.99	7835	2000	
(Pb)	206	3	193	10.508	ppb	10.508	2.55	13906	100	
(Pb)	207	3	193	9.097	ppb	9.097	3.16	10823	100	
Pb	208	3	193	9.785	ppb	9.785	1.39	52530	5000	
Th	232	3	193	0.474	ppb	0.474	7.56	9421	2000	
U	238	3	193	178.277	ppb	178.277	1.01	976190	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4300550	0.35	4300192	100.01	60	120	
Sc (IS)	45	3	HMI He	638908	0.68	644593	99.12	60	120	
Ge Internal standard	72	2	HMI H2	2584356	0.97	2598552	99.45	60	120	
Ge Internal standard	72	3	HMI He	785426	0.83	772392	101.69	60	120	
In Internal Standard	115	3	HMI He	2906612	1.39	2872781	101.18	60	120	
Ir (IS)	193	3	HMI He	6143952	0.53	6092963	100.84	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-3-A
Data File Name	221SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:30:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.028	ppb	-0.028	-440.75	5	2000	
Na	23	3	45	2208.436	ppb	2208.436	1.04	266122	400000	
Mg	24	3	45	7581.004	ppb	7581.004	0.64	450767	400000	
Al	27	3	45	1688.905	ppb	1688.905	4.08	38970	400000	
K	39	3	45	21546.320	ppb	21546.320	1.40	1074026	400000	
Ca	40	2	45	46050.758	ppb	46050.758	2.89	26223808	400000	
V	51	3	72	4.134	ppb	4.134	4.38	3732	2000	
Cr	52	3	72	1.601	ppb	1.601	18.47	4502	5000	
Mn	55	3	72	25.755	ppb	25.755	1.84	11331	10000	
Fe	56	2	72	914.341	ppb	914.341	3.35	1509772	10000	
Co	59	3	72	0.868	ppb	0.868	18.93	1241	2000	
Ni	60	3	72	2.039	ppb	2.039	3.42	1496	5000	
Cu	63	3	72	5.135	ppb	5.135	3.36	5792	5000	
Zn	66	3	72	4.677	ppb	4.677	6.35	1020	5000	
As	75	3	72	1.167	ppb	1.167	18.07	183	2000	
Se	78	2	72	0.444	ppb	0.444	4.16	29	2000	
Sr	88	3	72	292.814	ppb	292.814	0.94	165268	4000	
Mo	95	3	115	2.502	ppb	2.502	9.93	1354	2000	
Ag	107	3	115	0.011	ppb	0.011	51.66	33	100	
Cd	111	3	115	-0.014	ppb	-0.014	-217.50	7	2000	
Sn	120	3	115	-0.152	ppb	-0.152	-6.16	648	2000	
Sb	121	3	115	0.409	ppb	0.409	27.75	370	1000	
Ba	137	3	115	66.593	ppb	66.593	1.91	17261	5000	
Tl	205	3	193	0.003	ppb	0.003	423.09	401	2000	
(Pb)	206	3	193	1.012	ppb	1.012	14.38	1654	100	
(Pb)	207	3	193	0.864	ppb	0.864	3.51	1493	100	
Pb	208	3	193	0.909	ppb	0.909	5.45	6337	5000	
Th	232	3	193	0.252	ppb	0.252	28.23	8395	2000	
U	238	3	193	4.484	ppb	4.484	0.27	26500	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4235543	1.45	4300192	98.50	60	120	
Sc (IS)	45	3	HMI He	634109	0.67	644593	98.37	60	120	
Ge Internal standard	72	2	HMI H2	2586800	0.19	2598552	99.55	60	120	
Ge Internal standard	72	3	HMI He	795233	1.38	772392	102.96	60	120	
In Internal Standard	115	3	HMI He	2929632	1.33	2872781	101.98	60	120	
Ir (IS)	193	3	HMI He	6247794	3.26	6092963	102.54	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-4-A
Data File Name	222SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:32:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	65.285	ppb	65.285	4.76	2731	2000	
Na	23	3	45	36872.250	ppb	36872.250	2.50	4269720	400000	
Mg	24	3	45	222207.082	ppb	222207.082	2.16	13471794	400000	
Al	27	3	45	234239.822	ppb	234239.822	1.43	5493358	400000	
K	39	3	45	6922.680	ppb	6922.680	1.25	371203	400000	
Ca	40	2	45	425333.995	ppb	425333.995	2.01	253506795	400000	
V	51	3	72	56.523	ppb	56.523	1.01	38369	2000	
Cr	52	3	72	6.214	ppb	6.214	6.06	8287	5000	
Mn	55	3	72	12366.508	ppb	12366.508	0.91	5302362	10000	
Fe	56	2	72	804.463	ppb	804.463	0.87	1357626	10000	
Co	59	3	72	602.236	ppb	602.236	0.65	830404	2000	
Ni	60	3	72	547.621	ppb	547.621	1.42	213620	5000	
Cu	63	3	72	7.371	ppb	7.371	2.39	8208	5000	
Zn	66	3	72	2779.945	ppb	2779.945	1.70	470971	5000	
As	75	3	72	4.675	ppb	4.675	3.36	605	2000	
Se	78	2	72	13.570	ppb	13.570	7.41	829	2000	
Sr	88	3	72	3391.624	ppb	3391.624	2.47	1931218	4000	
Mo	95	3	115	0.081	ppb	0.081	8.34	82	2000	
Ag	107	3	115	0.016	ppb	0.016	46.07	42	100	
Cd	111	3	115	7.991	ppb	7.991	8.04	2029	2000	
Sn	120	3	115	-0.100	ppb	-0.100	-26.51	690	2000	
Sb	121	3	115	0.075	ppb	0.075	18.30	105	1000	
Ba	137	3	115	10.974	ppb	10.974	4.20	2896	5000	
Tl	205	3	193	0.680	ppb	0.680	4.13	3014	2000	
(Pb)	206	3	193	10.650	ppb	10.650	1.74	14007	100	
(Pb)	207	3	193	9.403	ppb	9.403	3.02	11104	100	
Pb	208	3	193	10.004	ppb	10.004	2.86	53351	5000	
Th	232	3	193	2.327	ppb	2.327	5.04	18930	2000	
U	238	3	193	102.773	ppb	102.773	1.71	560113	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4434933	1.71	4300192	103.13	60	120	
Sc (IS)	45	3	HMI He	646982	1.00	644593	100.37	60	120	
Ge Internal standard	72	2	HMI H2	2628933	0.70	2598552	101.17	60	120	
Ge Internal standard	72	3	HMI He	802459	0.79	772392	103.89	60	120	
In Internal Standard	115	3	HMI He	2927505	0.81	2872781	101.90	60	120	
Ir (IS)	193	3	HMI He	6109168	2.05	6092963	100.27	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	223_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:34:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.943	ppb	8.515	2286	50	107.9	90	110	
Na	23	3	45	47999.546	ppb	1.128	5477143	51000	94.1	90	110	
Mg	24	3	45	10360.068	ppb	1.740	619640	11000	94.2	90	110	
Al	27	3	45	994.342	ppb	2.521	23146	1000	99.4	90	110	
K	39	3	45	10118.174	ppb	3.178	522092	11000	92.0	90	110	
Ca	40	2	45	10517.787	ppb	1.906	6167572	11000	95.6	90	110	
V	51	3	72	49.582	ppb	2.792	32735	50	99.2	90	110	
Cr	52	3	72	50.144	ppb	2.048	42572	50	100.3	90	110	
Mn	55	3	72	50.908	ppb	0.867	21529	50	101.8	90	110	
Fe	56	2	72	1092.971	ppb	1.216	1769928	1000	109.3	90	110	
Co	59	3	72	49.035	ppb	1.776	65565	50	98.1	90	110	
Ni	60	3	72	50.159	ppb	1.360	19591	50	100.3	90	110	
Cu	63	3	72	49.239	ppb	0.341	50871	50	98.5	90	110	
Zn	66	3	72	51.449	ppb	2.390	8672	50	102.9	90	110	
As	75	3	72	50.465	ppb	2.179	5897	50	100.9	90	110	
Se	78	2	72	51.686	ppb	1.751	3062	50	103.4	90	110	
Sr	88	3	72	101.403	ppb	1.979	55992	100	101.4	90	110	
Mo	95	3	115	49.431	ppb	1.994	25680	50	98.9	90	110	
Ag	107	3	115	49.148	ppb	0.449	86083	50	98.3	90	110	
Cd	111	3	115	49.996	ppb	2.193	12490	50	100.0	90	110	
Sn	120	3	115	48.505	ppb	1.353	39071	50	97.0	90	110	
Sb	121	3	115	49.652	ppb	2.147	38894	50	99.3	90	110	
Ba	137	3	115	48.918	ppb	3.706	12536	50	97.8	90	110	
Tl	205	3	193	47.342	ppb	2.525	192861	50	94.7	90	110	
(Pb)	206	3	193	47.676	ppb	0.190	64685	50	95.4	90	110	
(Pb)	207	3	193	47.902	ppb	1.871	57339	50	95.8	90	110	
Pb	208	3	193	47.440	ppb	0.895	259876	50	94.9	90	110	
Th	232	3	193	47.038	ppb	0.447	262392	50	94.1	90	110	
U	238	3	193	46.999	ppb	1.354	269860	50	94.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4353678	1.03	4300192	101.24	60	120	
Sc (IS)	45	3	HMI He	637998	1.36	644593	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2554492	1.33	2598552	98.30	60	120	
Ge Internal standard	72	3	HMI He	777537	0.22	772392	100.67	60	120	
In Internal Standard	115	3	HMI He	2892981	0.88	2872781	100.70	60	120	
Ir (IS)	193	3	HMI He	6414355	0.74	6092963	105.27	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	224_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:36:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	63.518	ppb	18.5	23700	25	>RL
Mg	24	3	45	6.831	ppb	49.4	674	25	
Al	27	3	45	2.973	ppb	37.3	220	15	
K	39	3	45	-19.033	ppb	-132.2	26826	50	
V	51	3	72	-0.193	ppb	-45.1	885	1	
Cr	52	3	72	0.565	ppb	68.4	3610	1	
Mn	55	3	72	0.479	ppb	26.0	583	0.5	
Co	59	3	72	0.028	ppb	6.7	93	0.5	
Ni	60	3	72	0.492	ppb	17.3	885	1	
Cu	63	3	72	0.070	ppb	69.1	471	1	
Zn	66	3	72	-0.159	ppb	-19.7	205	5	
As	75	3	72	-0.020	ppb	-657.3	42	1	
Se	78	2	72	-0.001	ppb	-2433.6	2	1	
Sr	88	3	72	0.086	ppb	73.9	92	0.5	
Mo	95	3	115	0.099	ppb	27.2	90	0.5	
Ag	107	3	115	0.007	ppb	47.6	25	1	
Cd	111	3	115	-0.041	ppb	0.0	0	0.5	
Sn	120	3	115	-0.018	ppb	-119.4	748	1	
Sb	121	3	115	0.051	ppb	48.6	85	0.6	
Ba	137	3	115	-0.008	ppb	-442.0	60	0.5	
Tl	205	3	193	-0.032	ppb	-35.2	267	0.1	
(Pb)	206	3	193	-0.065	ppb	-37.3	245	1	
(Pb)	207	3	193	-0.091	ppb	-29.4	395	1	
Pb	208	3	193	-0.075	ppb	-9.8	1141	0.5	
Th	232	3	193	1.466	ppb	13.1	15058	1	>RL
U	238	3	193	0.019	ppb	58.6	1704	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365902	1.22	4300192	101.53	60	120	
Sc (IS)	45	3	HMI He	636615	0.44	644593	98.76	60	120	
Ge Internal standard	72	2	HMI H2	2653141	1.02	2598552	102.10	60	120	
Ge Internal standard	72	3	HMI He	782023	0.41	772392	101.25	60	120	
In Internal Standard	115	3	HMI He	2899354	2.07	2872781	100.92	60	120	
Ir (IS)	193	3	HMI He	6348915	0.36	6092963	104.20	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	225LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:38:04-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.243	ppb	65.111	60	1	124.3	70	130	
Na	23	3	45	324.988	ppb	2.716	52774	300	108.3	70	130	
Mg	24	3	45	50.330	ppb	12.335	3230	50	100.7	70	130	
Al	27	3	45	50.927	ppb	8.285	1311	50	101.9	70	130	
K	39	3	45	99.128	ppb	42.526	32223	120	82.6	70	130	
Ca	40	2	45	204.322	ppb	2.522	133548	200	102.2	70	130	
V	51	3	72	4.381	ppb	5.914	3812	5	87.6	70	130	
Cr	52	3	72	2.222	ppb	4.226	4900	2	111.1	70	130	
Mn	55	3	72	1.381	ppb	10.622	956	1	138.1	70	130	>+/-30%
Fe	56	2	72	56.407	ppb	10.188	155439	50	112.8	70	130	
Co	59	3	72	0.940	ppb	5.084	1313	1	94.0	70	130	
Ni	60	3	72	2.324	ppb	8.125	1573	2	116.2	70	130	
Cu	63	3	72	1.937	ppb	4.077	2386	2	96.8	70	130	
Zn	66	3	72	9.920	ppb	2.531	1861	10	99.2	70	130	
As	75	3	72	4.874	ppb	5.530	610	5	97.5	70	130	
Se	78	2	72	5.122	ppb	8.041	315	5	102.4	70	130	
Sr	88	3	72	4.929	ppb	2.905	2767	5	98.6	70	130	
Mo	95	3	115	1.897	ppb	6.582	1011	2	94.9	70	130	
Ag	107	3	115	0.927	ppb	8.981	1619	1	92.7	70	130	
Cd	111	3	115	0.951	ppb	19.130	245	1	95.1	70	130	
Sn	120	3	115	8.979	ppb	2.171	7770	10	89.8	70	130	
Sb	121	3	115	1.906	ppb	9.839	1519	2	95.3	70	130	
Ba	137	3	115	1.060	ppb	22.355	328	1	106.0	70	130	
Tl	205	3	193	0.877	ppb	2.601	3805	1	87.7	70	130	
(Pb)	206	3	193	0.861	ppb	6.662	1438	1	86.1	70	130	
(Pb)	207	3	193	0.762	ppb	0.766	1354	1	76.2	70	130	
Pb	208	3	193	0.854	ppb	4.112	5963	1	85.4	70	130	
Th	232	3	193	1.090	ppb	16.365	12644	1	109.0	70	130	
U	238	3	193	0.957	ppb	4.070	6792	1	95.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4383115	1.53	4300192	101.93	60	120	
Sc (IS)	45	3	HMI He	629416	1.25	644593	97.65	60	120	
Ge Internal standard	72	2	HMI H2	2635514	1.33	2598552	101.42	60	120	
Ge Internal standard	72	3	HMI He	778798	1.18	772392	100.83	60	120	
In Internal Standard	115	3	HMI He	2862811	1.62	2872781	99.65	60	120	
Ir (IS)	193	3	HMI He	6157855	1.35	6092963	101.07	60	120	

Blank Report

Sample Table

Sample Name	mb 280-609143/1-a
Data File Name	226_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:39:53-06:00
Sample Type	Blank
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	45.502	ppb	12.0009917	22116	25
Mg	24	3	45	4.121	ppb	29.63340442	524	25
Al	27	3	45	2.632	ppb	47.45452554	217	15
K	39	3	45	-22.906	ppb	-121.2845018	27207	50
Ca	40	2	45	16.975	ppb	3.678945867	23380	200
V	51	3	72	-0.258	ppb	-44.29458665	861	1
Cr	52	3	72	0.729	ppb	39.36049459	3825	1
Mn	55	3	72	0.444	ppb	27.04636596	581	0.5
Fe	56	2	72	12.418	ppb	35.2160176	85506	50
Co	59	3	72	0.036	ppb	43.49347516	107	0.5
Ni	60	3	72	0.709	ppb	43.47275477	990	1
Cu	63	3	72	0.018	ppb	180.1674152	428	1
Zn	66	3	72	-0.157	ppb	-164.570884	210	5
As	75	3	72	0.043	ppb	449.5222468	50	1
(Se)	78	3	72	1.351	ppb	81.49243514	33	1
Sr	88	3	72	0.056	ppb	103.6082434	77	0.5
Mo	95	3	115	0.030	ppb	33.63924674	55	0.5
Ag	107	3	115	0.008	ppb	84.72416675	28	1
Cd	111	3	115	-0.008	ppb	-391.5766997	8	0.5
Sn	120	3	115	-0.152	ppb	-34.14916741	653	1
Sb	121	3	115	-0.012	ppb	-217.611064	37	0.6
Ba	137	3	115	-0.058	ppb	-137.7335862	48	0.5
Tl	205	3	193	-0.059	ppb	-2.560123429	162	0.1
(Pb)	206	3	193	-0.095	ppb	-20.53285127	207	1
(Pb)	207	3	193	-0.101	ppb	-40.25824719	388	1
Pb	208	3	193	-0.087	ppb	-13.11454761	1093	0.5
Th	232	3	193	-0.350	ppb	-10.59033505	5377	1
U	238	3	193	0.011	ppb	169.1043338	1683	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416245	1.39	4300192	102.70	60	120	
Sc (IS)	45	3	HMI He	650133	0.69	644593	100.86	60	120	
Ge Internal standard	72	2	HMI H2	2662668	0.73	2598552	102.47	60	120	
Ge Internal standard	72	3	HMI He	799828	0.88	772392	103.55	60	120	
In Internal Standard	115	3	HMI He	2947969	1.27	2872781	102.62	60	120	
Ir (IS)	193	3	HMI He	6432258	1.88	6092963	105.57	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-609143/19-a
Data File Name	227_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:41:42-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609143 200.8/6020B
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.895	38.895	ppb	1.956	1686	40	97.2	80	120	
Na	23	3	45	825.258	825.258	ppb	2.918	112533	40	2063.1	80	120	>+/-20%
Mg	24	3	45	729.088	729.088	ppb	1.698	44705	40	1822.7	80	120	>+/-20%
Al	27	3	45	749.049	749.049	ppb	3.424	17812	40	1872.6	80	120	>+/-20%
K	39	3	45	734.359	734.359	ppb	5.887	64918	40	1835.9	80	120	>+/-20%
Ca	40	2	45	804.999	804.999	ppb	1.179	496868	40	2012.5	80	120	>+/-20%
V	51	3	72	37.089	37.089	ppb	1.550	25794	40	92.7	80	120	
Cr	52	3	72	39.002	39.002	ppb	2.673	35252	40	97.5	80	120	
Mn	55	3	72	38.996	38.996	ppb	1.923	17287	40	97.5	80	120	
Fe	56	2	72	816.789	816.789	ppb	0.397	1384419	40	2042.0	80	120	>+/-20%
(Fe)	56	3	72	749.593	749.593	ppb	1.080	540418	40	1874.0	80	120	>+/-20%
Co	59	3	72	38.426	38.426	ppb	1.385	53580	40	96.1	80	120	
Ni	60	3	72	38.192	38.192	ppb	0.791	15724	40	95.5	80	120	
Cu	63	3	72	39.194	39.194	ppb	0.100	42303	40	98.0	80	120	
Zn	66	3	72	39.145	39.145	ppb	1.422	6937	40	97.9	80	120	
As	75	3	72	38.724	38.724	ppb	2.507	4728	40	96.8	80	120	
Se	78	2	72	39.654	39.654	ppb	0.917	2430	40	99.1	80	120	
(Se)	78	3	72	39.840	39.840	ppb	8.293	295	40	99.6	80	120	
Sr	88	3	72	78.228	78.228	ppb	1.458	45047	40	195.6	80	120	>+/-20%
Mo	95	3	115	38.210	38.210	ppb	3.065	20157	40	95.5	80	120	
Ag	107	3	115	39.835	39.835	ppb	2.225	70820	40	99.6	80	120	
Cd	111	3	115	39.479	39.479	ppb	3.964	10010	40	98.7	80	120	
Sn	120	3	115	36.722	36.722	ppb	3.403	30209	40	91.8	80	120	
Sb	121	3	115	38.791	38.791	ppb	1.178	30860	40	97.0	80	120	
Ba	137	3	115	39.384	39.384	ppb	4.998	10256	40	98.5	80	120	
Tl	205	3	193	38.127	38.127	ppb	1.915	156306	40	95.3	80	120	
(Pb)	206	3	193	38.976	38.976	ppb	2.206	53243	40	97.4	80	120	
(Pb)	207	3	193	38.541	38.541	ppb	1.626	46502	40	96.4	80	120	
Pb	208	3	193	38.630	38.630	ppb	1.913	213123	40	96.6	80	120	
Th	232	3	193	35.532	35.532	ppb	3.249	201109	40	88.8	80	120	
U	238	3	193	38.402	38.402	ppb	1.056	222091	40	96.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4467733	0.99	4300192	103.90	60	120	
Sc (IS)	45	3	HMI He	650340	0.78	644593	100.89	60	120	
Ge Internal standard	72	2	HMI H2	2642126	0.38	2598552	101.68	60	120	
Ge Internal standard	72	3	HMI He	810674	0.54	772392	104.96	60	120	
In Internal Standard	115	3	HMI He	2937072	1.77	2872781	102.24	60	120	
Ir (IS)	193	3	HMI He	6452373	1.59	6092963	105.90	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-g
Data File Name	228SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:43:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.161	ppb	0.161	111.32	13	2000	
Na	23	3	45	11790.045	ppb	11790.045	1.59	1362073	400000	
Mg	24	3	45	6115.585	ppb	6115.585	2.01	367083	400000	
Al	27	3	45	6296.376	ppb	6296.376	2.35	146253	400000	
K	39	3	45	1916.707	ppb	1916.707	3.57	121854	400000	
Ca	40	2	45	15442.848	ppb	15442.848	1.07	9084061	400000	
V	51	3	72	10.053	ppb	10.053	5.10	7648	2000	
Cr	52	3	72	4.407	ppb	4.407	3.83	6798	5000	
Mn	55	3	72	164.620	ppb	164.620	0.22	70722	10000	
Fe	56	2	72	6120.061	ppb	6120.061	2.05	10217214	10000	
Co	59	3	72	2.054	ppb	2.054	7.88	2877	2000	
Ni	60	3	72	4.367	ppb	4.367	2.43	2406	5000	
Cu	63	3	72	5.245	ppb	5.245	2.14	5938	5000	
Zn	66	3	72	22.455	ppb	22.455	4.54	4025	5000	
As	75	3	72	1.479	ppb	1.479	30.33	222	2000	
Se	78	2	72	0.465	ppb	0.465	11.37	31	2000	
Sr	88	3	72	134.770	ppb	134.770	1.15	76514	4000	
Mo	95	3	115	0.527	ppb	0.527	7.83	318	2000	
Ag	107	3	115	0.045	ppb	0.045	25.74	93	100	
Cd	111	3	115	0.044	ppb	0.044	110.98	22	2000	
Sn	120	3	115	0.116	ppb	0.116	68.65	870	2000	
Sb	121	3	115	0.399	ppb	0.399	11.65	365	1000	
Ba	137	3	115	125.537	ppb	125.537	0.62	32734	5000	
Tl	205	3	193	0.012	ppb	0.012	74.73	445	2000	
(Pb)	206	3	193	3.998	ppb	3.998	0.58	5705	100	
(Pb)	207	3	193	3.778	ppb	3.778	0.70	4967	100	
Pb	208	3	193	4.674	ppb	4.674	28.68	26861	5000	
Th	232	3	193	3.251	ppb	3.251	8.68	24782	2000	
U	238	3	193	0.486	ppb	0.486	2.89	4367	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370022	0.26	4300192	101.62	60	120	
Sc (IS)	45	3	HMI He	640062	0.68	644593	99.30	60	120	
Ge Internal standard	72	2	HMI H2	2712792	1.18	2598552	104.40	60	120	
Ge Internal standard	72	3	HMI He	799644	0.93	772392	103.53	60	120	
In Internal Standard	115	3	HMI He	2951896	0.89	2872781	102.75	60	120	
Ir (IS)	193	3	HMI He	6385270	1.06	6092963	104.80	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-h ms
Data File Name	229SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:45:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.868	ppb	38.868	3.77	1676	2000	
Na	23	3	45	12735.514	ppb	12735.514	1.76	1470613	400000	
Mg	24	3	45	7005.833	ppb	7005.833	1.12	420671	400000	
Al	27	3	45	7415.005	ppb	7415.005	2.30	172262	400000	
K	39	3	45	2752.028	ppb	2752.028	1.12	162880	400000	
Ca	40	2	45	16099.985	ppb	16099.985	1.61	9631968	400000	
V	51	3	72	48.266	ppb	48.266	1.70	32944	2000	
Cr	52	3	72	43.095	ppb	43.095	1.28	38245	5000	
Mn	55	3	72	205.052	ppb	205.052	0.61	88374	10000	
Fe	56	2	72	7062.430	ppb	7062.430	3.43	11721997	10000	
Co	59	3	72	40.211	ppb	40.211	1.04	55541	2000	
Ni	60	3	72	41.901	ppb	41.901	0.71	17020	5000	
Cu	63	3	72	43.635	ppb	43.635	1.63	46607	5000	
Zn	66	3	72	61.617	ppb	61.617	3.39	10679	5000	
As	75	3	72	39.821	ppb	39.821	0.96	4815	2000	
Se	78	2	72	38.164	ppb	38.164	2.85	2389	2000	
Sr	88	3	72	213.281	ppb	213.281	1.20	121586	4000	
Mo	95	3	115	38.069	ppb	38.069	2.11	20255	2000	
Ag	107	3	115	38.642	ppb	38.642	0.33	69290	100	
Cd	111	3	115	38.008	ppb	38.008	1.65	9722	2000	
Sn	120	3	115	34.602	ppb	34.602	0.94	28757	2000	
Sb	121	3	115	36.571	ppb	36.571	0.95	29341	1000	
Ba	137	3	115	164.309	ppb	164.309	0.52	42965	5000	
Tl	205	3	193	38.594	ppb	38.594	2.44	154641	2000	
(Pb)	206	3	193	43.525	ppb	43.525	1.61	58080	100	
(Pb)	207	3	193	42.866	ppb	42.866	0.72	50498	100	
Pb	208	3	193	43.076	ppb	43.076	1.25	232127	5000	
Th	232	3	193	39.175	ppb	39.175	1.89	216016	2000	
U	238	3	193	39.279	ppb	39.279	1.34	221981	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4444952	1.18	4300192	103.37	60	120	
Sc (IS)	45	3	HMI He	640331	0.61	644593	99.34	60	120	
Ge Internal standard	72	2	HMI H2	2700304	2.25	2598552	103.92	60	120	
Ge Internal standard	72	3	HMI He	803091	0.79	772392	103.97	60	120	
In Internal Standard	115	3	HMI He	2961545	0.46	2872781	103.09	60	120	
Ir (IS)	193	3	HMI He	6306055	0.73	6092963	103.50	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-i msd
Data File Name	230SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:47:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.777	ppb	41.777	8.96	1806	2000	
Na	23	3	45	13036.975	ppb	13036.975	0.26	1502108	400000	
Mg	24	3	45	7210.290	ppb	7210.290	0.95	432092	400000	
Al	27	3	45	7518.560	ppb	7518.560	0.29	174328	400000	
K	39	3	45	2861.264	ppb	2861.264	2.88	167890	400000	
Ca	40	2	45	16924.049	ppb	16924.049	1.93	9978203	400000	
V	51	3	72	49.058	ppb	49.058	3.20	33636	2000	
Cr	52	3	72	44.157	ppb	44.157	1.15	39307	5000	
Mn	55	3	72	212.503	ppb	212.503	0.46	92040	10000	
Fe	56	2	72	7304.557	ppb	7304.557	3.58	12146538	10000	
Co	59	3	72	41.308	ppb	41.308	1.53	57346	2000	
Ni	60	3	72	42.731	ppb	42.731	1.30	17432	5000	
Cu	63	3	72	44.457	ppb	44.457	2.13	47720	5000	
Zn	66	3	72	62.017	ppb	62.017	1.78	10804	5000	
As	75	3	72	40.596	ppb	40.596	0.73	4933	2000	
Se	78	2	72	40.381	ppb	40.381	4.56	2536	2000	
Sr	88	3	72	219.971	ppb	219.971	0.77	126047	4000	
Mo	95	3	115	39.532	ppb	39.532	1.42	20806	2000	
Ag	107	3	115	39.977	ppb	39.977	0.83	70911	100	
Cd	111	3	115	38.694	ppb	38.694	1.82	9790	2000	
Sn	120	3	115	36.494	ppb	36.494	1.43	29962	2000	
Sb	121	3	115	37.789	ppb	37.789	1.42	29989	1000	
Ba	137	3	115	172.759	ppb	172.759	1.74	44683	5000	
Tl	205	3	193	40.152	ppb	40.152	0.92	158579	2000	
(Pb)	206	3	193	45.133	ppb	45.133	1.20	59354	100	
(Pb)	207	3	193	44.577	ppb	44.577	0.81	51741	100	
Pb	208	3	193	44.933	ppb	44.933	0.27	238604	5000	
Th	232	3	193	42.064	ppb	42.064	0.94	228126	2000	
U	238	3	193	41.032	ppb	41.032	0.48	228503	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4380221	0.62	4300192	101.86	60	120	
Sc (IS)	45	3	HMI He	639065	0.74	644593	99.14	60	120	
Ge Internal standard	72	2	HMI H2	2706070	2.42	2598552	104.14	60	120	
Ge Internal standard	72	3	HMI He	807207	0.87	772392	104.51	60	120	
In Internal Standard	115	3	HMI He	2929724	0.75	2872781	101.98	60	120	
Ir (IS)	193	3	HMI He	6215586	0.56	6092963	102.01	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-k
Data File Name	231SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:48:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17997.152	ppb	17997.152	1.50	2039030	400000	
Mg	24	3	45	10950.376	ppb	10950.376	2.84	646999	400000	
Al	27	3	45	1.760	ppb	1.760	90.26	190	400000	
K	39	3	45	5922.532	ppb	5922.532	1.59	313386	400000	
Ca	40	2	45	31264.279	ppb	31264.279	2.15	18251014	400000	
V	51	3	72	17.034	ppb	17.034	1.36	12254	2000	
Cr	52	3	72	2.160	ppb	2.160	0.49	4985	5000	
Mn	55	3	72	0.990	ppb	0.990	22.27	815	10000	
Fe	56	2	72	20.896	ppb	20.896	23.47	99788	10000	
Co	59	3	72	0.061	ppb	0.061	32.48	142	2000	
Ni	60	3	72	0.559	ppb	0.559	11.14	931	5000	
Cu	63	3	72	0.313	ppb	0.313	13.01	740	5000	
Zn	66	3	72	1.667	ppb	1.667	9.63	518	5000	
As	75	3	72	6.183	ppb	6.183	4.44	783	2000	
Se	78	2	72	1.442	ppb	1.442	18.99	91	2000	
Sr	88	3	72	168.532	ppb	168.532	0.37	95765	4000	
Mo	95	3	115	3.633	ppb	3.633	3.40	1971	2000	
Ag	107	3	115	0.017	ppb	0.017	89.84	45	100	
Cd	111	3	115	-0.021	ppb	-0.021	-93.19	5	2000	
Sn	120	3	115	-0.016	ppb	-0.016	-203.62	766	2000	
Sb	121	3	115	0.185	ppb	0.185	25.97	195	1000	
Ba	137	3	115	18.119	ppb	18.119	2.40	4800	5000	
Tl	205	3	193	-0.026	ppb	-0.026	-33.81	288	2000	
(Pb)	206	3	193	-0.084	ppb	-0.084	-26.37	217	100	
(Pb)	207	3	193	-0.090	ppb	-0.090	-31.75	391	100	
Pb	208	3	193	-0.088	ppb	-0.088	-12.40	1059	5000	
Th	232	3	193	2.051	ppb	2.051	17.81	18017	2000	
U	238	3	193	1.945	ppb	1.945	2.39	12452	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4340971	2.59	4300192	100.95	60	120	
Sc (IS)	45	3	HMI He	630417	1.90	644593	97.80	60	120	
Ge Internal standard	72	2	HMI H2	2676347	1.88	2598552	102.99	60	120	
Ge Internal standard	72	3	HMI He	800393	1.00	772392	103.63	60	120	
In Internal Standard	115	3	HMI He	2965449	0.90	2872781	103.23	60	120	
Ir (IS)	193	3	HMI He	6282269	1.75	6092963	103.11	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-kSD@5
Data File Name	232SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:50:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3626.512	ppb	3626.512	0.89	424691	400000	
Mg	24	3	45	2225.418	ppb	2225.418	2.33	131958	400000	
Al	27	3	45	2.619	ppb	2.619	73.35	210	400000	
K	39	3	45	1177.166	ppb	1177.166	2.54	84467	400000	
Ca	40	2	45	6479.623	ppb	6479.623	0.17	3860370	400000	
V	51	3	72	3.499	ppb	3.499	3.85	3319	2000	
Cr	52	3	72	0.588	ppb	0.588	6.95	3692	5000	
Mn	55	3	72	1.635	ppb	1.635	11.77	1085	10000	
Fe	56	2	72	15.499	ppb	15.499	34.10	89821	10000	
Co	59	3	72	0.026	ppb	0.026	51.75	92	2000	
Ni	60	3	72	0.579	ppb	0.579	40.15	935	5000	
Cu	63	3	72	0.200	ppb	0.200	13.98	616	5000	
Zn	66	3	72	3.481	ppb	3.481	10.53	820	5000	
As	75	3	72	1.460	ppb	1.460	16.93	218	2000	
Se	78	2	72	0.403	ppb	0.403	31.46	27	2000	
Sr	88	3	72	34.412	ppb	34.412	3.14	19476	4000	
Mo	95	3	115	0.782	ppb	0.782	14.44	445	2000	
Ag	107	3	115	0.013	ppb	0.013	30.99	37	100	
Cd	111	3	115	-0.034	ppb	-0.034	-33.50	2	2000	
Sn	120	3	115	0.104	ppb	0.104	130.43	843	2000	
Sb	121	3	115	0.076	ppb	0.076	23.39	105	1000	
Ba	137	3	115	3.851	ppb	3.851	4.68	1045	5000	
Tl	205	3	193	-0.050	ppb	-0.050	-11.45	188	2000	
(Pb)	206	3	193	0.316	ppb	0.316	11.02	730	100	
(Pb)	207	3	193	0.221	ppb	0.221	10.67	736	100	
Pb	208	3	193	0.271	ppb	0.271	12.70	2910	5000	
Th	232	3	193	0.406	ppb	0.406	19.79	9074	2000	
U	238	3	193	0.439	ppb	0.439	5.40	3950	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4417059	0.43	4300192	102.72	60	120	
Sc (IS)	45	3	HMI He	631480	0.60	644593	97.97	60	120	
Ge Internal standard	72	2	HMI H2	2640356	1.66	2598552	101.61	60	120	
Ge Internal standard	72	3	HMI He	795916	1.11	772392	103.05	60	120	
In Internal Standard	115	3	HMI He	2895339	1.87	2872781	100.79	60	120	
Ir (IS)	193	3	HMI He	6147606	1.43	6092963	100.90	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-I ms
Data File Name	233SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:52:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.396	ppb	39.396	1.59	1699	2000	
Na	23	3	45	18121.049	ppb	18121.049	1.03	2112216	400000	
Mg	24	3	45	11018.360	ppb	11018.360	1.12	669967	400000	
Al	27	3	45	745.153	ppb	745.153	2.83	17672	400000	
K	39	3	45	6258.895	ppb	6258.895	2.42	339117	400000	
Ca	40	2	45	30681.148	ppb	30681.148	2.49	18214549	400000	
V	51	3	72	54.329	ppb	54.329	0.88	36996	2000	
Cr	52	3	72	40.188	ppb	40.188	0.82	35933	5000	
Mn	55	3	72	39.633	ppb	39.633	3.61	17416	10000	
Fe	56	2	72	798.361	ppb	798.361	1.12	1398589	10000	
Co	59	3	72	38.583	ppb	38.583	2.03	53357	2000	
Ni	60	3	72	37.638	ppb	37.638	1.93	15379	5000	
Cu	63	3	72	38.903	ppb	38.903	2.21	41645	5000	
Zn	66	3	72	39.768	ppb	39.768	1.40	6987	5000	
As	75	3	72	45.112	ppb	45.112	3.96	5458	2000	
Se	78	2	72	39.596	ppb	39.596	2.73	2505	2000	
Sr	88	3	72	241.075	ppb	241.075	0.76	137600	4000	
Mo	95	3	115	41.721	ppb	41.721	0.86	21930	2000	
Ag	107	3	115	39.022	ppb	39.022	1.99	69132	100	
Cd	111	3	115	38.798	ppb	38.798	3.05	9805	2000	
Sn	120	3	115	38.165	ppb	38.165	2.65	31263	2000	
Sb	121	3	115	39.101	ppb	39.101	1.75	30994	1000	
Ba	137	3	115	57.685	ppb	57.685	1.04	14944	5000	
Tl	205	3	193	38.412	ppb	38.412	0.69	155218	2000	
(Pb)	206	3	193	38.774	ppb	38.774	2.37	52201	100	
(Pb)	207	3	193	37.961	ppb	37.961	0.75	45149	100	
Pb	208	3	193	38.715	ppb	38.715	2.02	210493	5000	
Th	232	3	193	36.529	ppb	36.529	0.40	203624	2000	
U	238	3	193	40.376	ppb	40.376	2.52	230014	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4414605	1.52	4300192	102.66	60	120	
Sc (IS)	45	3	HMI He	648520	0.69	644593	100.61	60	120	
Ge Internal standard	72	2	HMI H2	2727850	0.47	2598552	104.98	60	120	
Ge Internal standard	72	3	HMI He	804143	1.55	772392	104.11	60	120	
In Internal Standard	115	3	HMI He	2926156	0.50	2872781	101.86	60	120	
Ir (IS)	193	3	HMI He	6358816	1.49	6092963	104.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-m msd
Data File Name	234SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:54:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.537	ppb	38.537	6.87	1649	2000	
Na	23	3	45	18071.159	ppb	18071.159	2.57	2063008	400000	
Mg	24	3	45	10888.089	ppb	10888.089	2.21	648414	400000	
Al	27	3	45	744.057	ppb	744.057	4.57	17281	400000	
K	39	3	45	6272.587	ppb	6272.587	2.63	332813	400000	
Ca	40	2	45	30468.657	ppb	30468.657	1.97	18023836	400000	
V	51	3	72	51.998	ppb	51.998	2.27	35407	2000	
Cr	52	3	72	40.219	ppb	40.219	2.99	35907	5000	
Mn	55	3	72	37.945	ppb	37.945	3.30	16672	10000	
Fe	56	2	72	789.889	ppb	789.889	1.93	1364505	10000	
Co	59	3	72	37.409	ppb	37.409	1.09	51675	2000	
Ni	60	3	72	36.047	ppb	36.047	0.96	14742	5000	
Cu	63	3	72	38.735	ppb	38.735	1.45	41420	5000	
Zn	66	3	72	38.441	ppb	38.441	0.48	6752	5000	
As	75	3	72	43.105	ppb	43.105	1.40	5208	2000	
Se	78	2	72	39.231	ppb	39.231	2.90	2446	2000	
Sr	88	3	72	235.137	ppb	235.137	1.29	134035	4000	
Mo	95	3	115	39.749	ppb	39.749	2.58	21448	2000	
Ag	107	3	115	37.119	ppb	37.119	0.59	67498	100	
Cd	111	3	115	35.757	ppb	35.757	2.46	9277	2000	
Sn	120	3	115	35.233	ppb	35.233	1.11	29680	2000	
Sb	121	3	115	36.698	ppb	36.698	0.78	29857	1000	
Ba	137	3	115	55.094	ppb	55.094	2.42	14651	5000	
Tl	205	3	193	38.591	ppb	38.591	1.27	152321	2000	
(Pb)	206	3	193	38.423	ppb	38.423	0.76	50544	100	
(Pb)	207	3	193	37.869	ppb	37.869	1.53	43999	100	
Pb	208	3	193	38.361	ppb	38.361	1.03	203779	5000	
Th	232	3	193	38.119	ppb	38.119	1.87	207234	2000	
U	238	3	193	40.375	ppb	40.375	0.88	224718	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4398536	1.41	4300192	102.29	60	120	
Sc (IS)	45	3	HMI He	635293	1.48	644593	98.56	60	120	
Ge Internal standard	72	2	HMI H2	2688788	0.79	2598552	103.47	60	120	
Ge Internal standard	72	3	HMI He	803022	0.36	772392	103.97	60	120	
In Internal Standard	115	3	HMI He	3003228	0.81	2872781	104.54	60	120	
Ir (IS)	193	3	HMI He	6211329	0.47	6092963	101.94	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-kPDS
Data File Name	235SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:56:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	105.792	ppb	105.792	1.49	4442	2000	
Na	23	3	45	22567.554	ppb	22567.554	2.09	2588090	400000	
Mg	24	3	45	12450.362	ppb	12450.362	0.29	745994	400000	
Al	27	3	45	1907.289	ppb	1907.289	3.42	44334	400000	
K	39	3	45	7613.407	ppb	7613.407	0.88	400514	400000	
Ca	40	2	45	32874.878	ppb	32874.878	3.77	19268719	400000	
V	51	3	72	109.502	ppb	109.502	1.14	73662	2000	
Cr	52	3	72	94.537	ppb	94.537	0.82	80288	5000	
Mn	55	3	72	92.815	ppb	92.815	2.02	40347	10000	
Fe	56	2	72	1037.663	ppb	1037.663	4.15	1746407	10000	
Co	59	3	72	92.951	ppb	92.951	2.24	128741	2000	
Ni	60	3	72	91.606	ppb	91.606	2.75	36476	5000	
Cu	63	3	72	95.654	ppb	95.654	0.90	102020	5000	
Zn	66	3	72	192.155	ppb	192.155	2.43	32908	5000	
As	75	3	72	103.696	ppb	103.696	2.01	12508	2000	
Se	78	2	72	99.226	ppb	99.226	1.48	6095	2000	
Sr	88	3	72	261.381	ppb	261.381	1.47	149484	4000	
Mo	95	3	115	97.249	ppb	97.249	1.32	50871	2000	
Ag	107	3	115	25.127	ppb	25.127	3.27	44346	100	
Cd	111	3	115	95.153	ppb	95.153	1.10	23943	2000	
Sn	120	3	115	94.647	ppb	94.647	1.74	76096	2000	
Sb	121	3	115	93.950	ppb	93.950	2.55	74118	1000	
Ba	137	3	115	114.610	ppb	114.610	4.24	29510	5000	
Tl	205	3	193	95.361	ppb	95.361	0.57	376721	2000	
(Pb)	206	3	193	95.279	ppb	95.279	1.48	125144	100	
(Pb)	207	3	193	94.622	ppb	94.622	0.91	109464	100	
Pb	208	3	193	94.794	ppb	94.794	0.95	502520	5000	
Th	232	3	193	102.053	ppb	102.053	0.48	544327	2000	
U	238	3	193	206.103	ppb	206.103	3.49	1143319	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4360555	2.72	4300192	101.40	60	120	
Sc (IS)	45	3	HMI He	639121	0.71	644593	99.15	60	120	
Ge Internal standard	72	2	HMI H2	2650713	2.23	2598552	102.01	60	120	
Ge Internal standard	72	3	HMI He	805763	0.99	772392	104.32	60	120	
In Internal Standard	115	3	HMI He	2915437	1.51	2872781	101.48	60	120	
Ir (IS)	193	3	HMI He	6225981	0.36	6092963	102.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	236_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:57:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	55.626	ppb	1.863	2329	50	111.3	90	110	>+\-10%
Na	23	3	45	48121.679	ppb	2.417	5537524	51000	94.4	90	110	
Mg	24	3	45	10269.952	ppb	0.849	619427	11000	93.4	90	110	
Al	27	3	45	964.318	ppb	3.670	22638	1000	96.4	90	110	
K	39	3	45	10148.410	ppb	1.281	528057	11000	92.3	90	110	
Ca	40	2	45	10340.438	ppb	0.569	6079357	11000	94.0	90	110	
V	51	3	72	51.000	ppb	0.547	33041	50	102.0	90	110	
Cr	52	3	72	51.278	ppb	0.748	42682	50	102.6	90	110	
Mn	55	3	72	49.990	ppb	1.624	20769	50	100.0	90	110	
Fe	56	2	72	1068.488	ppb	0.371	1724500	1000	106.8	90	110	
Co	59	3	72	51.521	ppb	1.238	67646	50	103.0	90	110	
Ni	60	3	72	51.082	ppb	0.960	19581	50	102.2	90	110	
Cu	63	3	72	50.190	ppb	0.414	50915	50	100.4	90	110	
Zn	66	3	72	49.300	ppb	5.291	8167	50	98.6	90	110	
As	75	3	72	53.499	ppb	2.644	6135	50	107.0	90	110	
Se	78	2	72	50.432	ppb	2.126	2975	50	100.9	90	110	
Sr	88	3	72	103.848	ppb	2.707	56310	100	103.8	90	110	
Mo	95	3	115	48.579	ppb	4.570	25411	50	97.2	90	110	
Ag	107	3	115	49.270	ppb	3.110	86919	50	98.5	90	110	
Cd	111	3	115	49.684	ppb	4.314	12498	50	99.4	90	110	
Sn	120	3	115	48.408	ppb	3.961	39268	50	96.8	90	110	
Sb	121	3	115	49.877	ppb	2.655	39358	50	99.8	90	110	
Ba	137	3	115	50.989	ppb	4.473	13157	50	102.0	90	110	
Tl	205	3	193	48.622	ppb	3.805	193361	50	97.2	90	110	
(Pb)	206	3	193	48.897	ppb	4.108	64749	50	97.8	90	110	
(Pb)	207	3	193	48.536	ppb	2.937	56723	50	97.1	90	110	
Pb	208	3	193	48.787	ppb	3.530	260852	50	97.6	90	110	
Th	232	3	193	52.210	ppb	3.981	283514	50	104.4	90	110	
U	238	3	193	49.055	ppb	4.869	274823	50	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4364730	2.95	4300192	101.50	60	120	
Sc (IS)	45	3	HMI He	643338	0.99	644593	99.81	60	120	
Ge Internal standard	72	2	HMI H2	2543915	1.33	2598552	97.90	60	120	
Ge Internal standard	72	3	HMI He	763583	1.25	772392	98.86	60	120	
In Internal Standard	115	3	HMI He	2915636	3.40	2872781	101.49	60	120	
Ir (IS)	193	3	HMI He	6266173	3.14	6092963	102.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	237_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:59:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.110	ppb	-60.9	2	0.5	
Na	23	3	45	46.922	ppb	13.6	21815	25	>RL
Mg	24	3	45	1.900	ppb	37.3	380	25	
Al	27	3	45	-2.952	ppb	-8.2	83	15	
K	39	3	45	-6.033	ppb	-455.9	27458	50	
V	51	3	72	0.059	ppb	154.4	1040	1	
Cr	52	3	72	0.184	ppb	139.7	3285	1	
Mn	55	3	72	0.079	ppb	73.8	413	0.5	
Co	59	3	72	0.034	ppb	59.4	100	0.5	
Ni	60	3	72	0.587	ppb	66.0	915	1	
Cu	63	3	72	-0.002	ppb	-2605.5	395	1	
Zn	66	3	72	0.012	ppb	628.4	232	5	
As	75	3	72	0.141	ppb	30.1	60	1	
Se	78	2	72	0.089	ppb	109.7	7	1	
Sr	88	3	72	0.069	ppb	33.4	82	0.5	
Mo	95	3	115	0.049	ppb	68.3	65	0.5	
Ag	107	3	115	0.017	ppb	53.7	43	1	
Cd	111	3	115	-0.001	ppb	-1341.9	10	0.5	
Sn	120	3	115	0.136	ppb	61.7	881	1	
Sb	121	3	115	0.085	ppb	56.8	113	0.6	
Ba	137	3	115	-0.057	ppb	-152.0	48	0.5	
Tl	205	3	193	-0.034	ppb	-67.6	257	0.1	
(Pb)	206	3	193	-0.079	ppb	-76.3	223	1	
(Pb)	207	3	193	-0.100	ppb	-23.4	380	1	
Pb	208	3	193	-0.086	ppb	-20.8	1069	0.5	
Th	232	3	193	1.729	ppb	14.7	16286	1	>RL
U	238	3	193	0.043	ppb	40.3	1819	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4317419	0.59	4300192	100.40	60	120	
Sc (IS)	45	3	HMI He	636554	0.53	644593	98.75	60	120	
Ge Internal standard	72	2	HMI H2	2596922	1.25	2598552	99.94	60	120	
Ge Internal standard	72	3	HMI He	776490	0.41	772392	100.53	60	120	
In Internal Standard	115	3	HMI He	2939974	0.90	2872781	102.34	60	120	
Ir (IS)	193	3	HMI He	6278103	0.19	6092963	103.04	60	120	

Sample Report

Sample Table

Sample Name	280-175143-n-1-a
Data File Name	238SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:01:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.014	ppb	0.014	1032.53	7	2000	
Na	23	3	45	1402798.912	ppb	1402798.912	2.34	157748304	400000	
Mg	24	3	45	434245.480	ppb	434245.480	3.80	25658718	400000	
Al	27	3	45	671.133	ppb	671.133	5.78	15491	400000	
K	39	3	45	86616.998	ppb	86616.998	1.83	4211002	400000	
Ca	40	2	45	1654612.756	ppb	1654612.756	1.79	949464745	400000	
V	51	3	72	18.126	ppb	18.126	1.90	12298	2000	
Cr	52	3	72	10.062	ppb	10.062	1.50	10789	5000	
Mn	55	3	72	3867.904	ppb	3867.904	0.84	1568259	10000	
Fe	56	2	72	359136.250	ppb	359136.250	2.12	551286534	10000	>LDR
Co	59	3	72	7.366	ppb	7.366	0.92	9657	2000	
Ni	60	3	72	30.380	ppb	30.380	3.77	11843	5000	
Cu	63	3	72	11.357	ppb	11.357	2.68	11746	5000	
Zn	66	3	72	44.684	ppb	44.684	4.14	7377	5000	
As	75	3	72	33.607	ppb	33.607	2.62	3845	2000	
Se	78	2	72	3.392	ppb	3.392	9.39	199	2000	
Sr	88	3	72	8260.934	ppb	8260.934	2.16	4447190	4000	
Mo	95	3	115	19.614	ppb	19.614	3.68	9859	2000	
Ag	107	3	115	0.022	ppb	0.022	28.43	50	100	
Cd	111	3	115	0.050	ppb	0.050	89.12	22	2000	
Sn	120	3	115	1.960	ppb	1.960	10.03	2227	2000	
Sb	121	3	115	1.707	ppb	1.707	9.96	1333	1000	
Ba	137	3	115	10052.436	ppb	10052.436	4.55	2474872	5000	
Tl	205	3	193	-0.019	ppb	-0.019	-31.58	313	2000	
(Pb)	206	3	193	1.323	ppb	1.323	3.98	2066	100	
(Pb)	207	3	193	1.214	ppb	1.214	9.54	1896	100	
Pb	208	3	193	1.216	ppb	1.216	1.33	7972	5000	
Th	232	3	193	0.828	ppb	0.828	34.43	11436	2000	
U	238	3	193	0.594	ppb	0.594	1.82	4875	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4269749	1.41	4300192	99.29	60	120	
Sc (IS)	45	3	HMI He	630756	1.70	644593	97.85	60	120	
Ge Internal standard	72	2	HMI H2	2510275	0.76	2598552	96.60	60	120	
Ge Internal standard	72	3	HMI He	758749	1.29	772392	98.23	60	120	
In Internal Standard	115	3	HMI He	2793533	1.44	2872781	97.24	60	120	
Ir (IS)	193	3	HMI He	6246406	0.96	6092963	102.52	60	120	

Sample Report

Sample Table

Sample Name	280-175147-c-1-a
Data File Name	239SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:03:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.004	ppb	0.004	4196.71	7	2000	
Na	23	3	45	7861.977	ppb	7861.977	1.20	912408	400000	
Mg	24	3	45	4621.481	ppb	4621.481	0.34	277046	400000	
Al	27	3	45	4211.198	ppb	4211.198	1.57	97712	400000	
K	39	3	45	1722.683	ppb	1722.683	1.53	112172	400000	
Ca	40	2	45	11853.012	ppb	11853.012	4.61	7057613	400000	
V	51	3	72	6.387	ppb	6.387	3.06	5257	2000	
Cr	52	3	72	3.120	ppb	3.120	12.76	5780	5000	
Mn	55	3	72	127.204	ppb	127.204	0.45	54966	10000	
Fe	56	2	72	3917.360	ppb	3917.360	2.29	6515087	10000	
Co	59	3	72	1.686	ppb	1.686	2.72	2384	2000	
Ni	60	3	72	3.099	ppb	3.099	6.40	1923	5000	
Cu	63	3	72	4.927	ppb	4.927	0.74	5627	5000	
Zn	66	3	72	17.752	ppb	17.752	2.58	3245	5000	
As	75	3	72	1.321	ppb	1.321	22.98	203	2000	
Se	78	2	72	0.489	ppb	0.489	12.86	33	2000	
Sr	88	3	72	72.655	ppb	72.655	2.10	41442	4000	
Mo	95	3	115	0.408	ppb	0.408	14.96	258	2000	
Ag	107	3	115	0.035	ppb	0.035	16.21	77	100	
Cd	111	3	115	0.056	ppb	0.056	33.11	25	2000	
Sn	120	3	115	-0.059	ppb	-0.059	-74.11	738	2000	
Sb	121	3	115	0.249	ppb	0.249	9.70	248	1000	
Ba	137	3	115	110.661	ppb	110.661	2.03	29234	5000	
Tl	205	3	193	0.003	ppb	0.003	196.03	405	2000	
(Pb)	206	3	193	3.663	ppb	3.663	3.44	5195	100	
(Pb)	207	3	193	3.317	ppb	3.317	5.41	4372	100	
Pb	208	3	193	3.562	ppb	3.562	1.64	20625	5000	
Th	232	3	193	0.917	ppb	0.917	10.49	12038	2000	
U	238	3	193	0.483	ppb	0.483	4.29	4304	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4426444	3.70	4300192	102.94	60	120	
Sc (IS)	45	3	HMI He	639052	0.39	644593	99.14	60	120	
Ge Internal standard	72	2	HMI H2	2692924	1.72	2598552	103.63	60	120	
Ge Internal standard	72	3	HMI He	802989	0.57	772392	103.96	60	120	
In Internal Standard	115	3	HMI He	2990700	2.18	2872781	104.10	60	120	
Ir (IS)	193	3	HMI He	6313162	1.57	6092963	103.61	60	120	

Sample Report

Sample Table

Sample Name	280-175148-c-1-a
Data File Name	240SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:05:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.089	ppb	0.089	134.28	10	2000	
Na	23	3	45	16353.605	ppb	16353.605	1.22	1892408	400000	
Mg	24	3	45	10438.489	ppb	10438.489	0.69	629567	400000	
Al	27	3	45	1589.391	ppb	1589.391	7.64	37205	400000	
K	39	3	45	1470.640	ppb	1470.640	1.87	100504	400000	
Ca	40	2	45	21496.262	ppb	21496.262	1.70	12795098	400000	
V	51	3	72	1.894	ppb	1.894	5.17	2296	2000	
Cr	52	3	72	1.162	ppb	1.162	9.89	4205	5000	
Mn	55	3	72	86.580	ppb	86.580	0.76	37666	10000	
Fe	56	2	72	1589.093	ppb	1589.093	3.09	2667915	10000	
Co	59	3	72	0.858	ppb	0.858	5.04	1244	2000	
Ni	60	3	72	1.916	ppb	1.916	10.53	1468	5000	
Cu	63	3	72	2.586	ppb	2.586	0.53	3159	5000	
Zn	66	3	72	8.516	ppb	8.516	4.28	1686	5000	
As	75	3	72	0.525	ppb	0.525	32.90	108	2000	
Se	78	2	72	0.214	ppb	0.214	18.14	15	2000	
Sr	88	3	72	202.537	ppb	202.537	0.34	115840	4000	
Mo	95	3	115	0.380	ppb	0.380	19.09	245	2000	
Ag	107	3	115	0.014	ppb	0.014	66.06	40	100	
Cd	111	3	115	0.049	ppb	0.049	78.77	23	2000	
Sn	120	3	115	-0.210	ppb	-0.210	-42.57	618	2000	
Sb	121	3	115	0.165	ppb	0.165	7.55	182	1000	
Ba	137	3	115	88.103	ppb	88.103	1.36	23446	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-9.82	210	2000	
(Pb)	206	3	193	1.654	ppb	1.654	3.63	2537	100	
(Pb)	207	3	193	1.599	ppb	1.599	3.58	2376	100	
Pb	208	3	193	1.634	ppb	1.634	2.49	10335	5000	
Th	232	3	193	0.162	ppb	0.162	15.19	8044	2000	
U	238	3	193	1.413	ppb	1.413	0.41	9564	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4423412	1.02	4300192	102.87	60	120	
Sc (IS)	45	3	HMI He	643287	0.64	644593	99.80	60	120	
Ge Internal standard	72	2	HMI H2	2678227	0.95	2598552	103.07	60	120	
Ge Internal standard	72	3	HMI He	805690	0.85	772392	104.31	60	120	
In Internal Standard	115	3	HMI He	3010480	1.66	2872781	104.79	60	120	
Ir (IS)	193	3	HMI He	6339067	0.93	6092963	104.04	60	120	

Sample Report

Sample Table

Sample Name	280-175150-c-1-a
Data File Name	241SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:07:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.031	ppb	-0.031	-5.62	5	2000	
Na	23	3	45	9683.477	ppb	9683.477	1.45	1120829	400000	
Mg	24	3	45	6919.401	ppb	6919.401	2.23	414937	400000	
Al	27	3	45	969.086	ppb	969.086	1.54	22621	400000	
K	39	3	45	1220.723	ppb	1220.723	2.45	87684	400000	
Ca	40	2	45	13911.860	ppb	13911.860	1.81	8240512	400000	
V	51	3	72	0.937	ppb	0.937	8.53	1643	2000	
Cr	52	3	72	1.128	ppb	1.128	11.78	4132	5000	
Mn	55	3	72	80.597	ppb	80.597	1.61	34701	10000	
Fe	56	2	72	1163.379	ppb	1163.379	1.95	1993607	10000	
Co	59	3	72	0.795	ppb	0.795	8.64	1144	2000	
Ni	60	3	72	1.415	ppb	1.415	15.76	1258	5000	
Cu	63	3	72	2.574	ppb	2.574	5.43	3112	5000	
Zn	66	3	72	10.229	ppb	10.229	7.00	1956	5000	
As	75	3	72	0.858	ppb	0.858	23.65	147	2000	
Se	78	2	72	0.330	ppb	0.330	68.50	23	2000	
Sr	88	3	72	98.099	ppb	98.099	1.45	55512	4000	
Mo	95	3	115	0.460	ppb	0.460	18.33	282	2000	
Ag	107	3	115	0.014	ppb	0.014	114.47	38	100	
Cd	111	3	115	-0.001	ppb	-0.001	-3682.55	10	2000	
Sn	120	3	115	-0.239	ppb	-0.239	-14.22	580	2000	
Sb	121	3	115	0.208	ppb	0.208	21.90	212	1000	
Ba	137	3	115	78.642	ppb	78.642	1.29	20422	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-15.43	222	2000	
(Pb)	206	3	193	2.280	ppb	2.280	4.26	3327	100	
(Pb)	207	3	193	2.152	ppb	2.152	9.39	2982	100	
Pb	208	3	193	2.176	ppb	2.176	4.40	13074	5000	
Th	232	3	193	0.009	ppb	0.009	654.67	7134	2000	
U	238	3	193	0.282	ppb	0.282	8.50	3141	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400369	1.36	4300192	102.33	60	120	
Sc (IS)	45	3	HMI He	639608	1.79	644593	99.23	60	120	
Ge Internal standard	72	2	HMI H2	2709439	2.01	2598552	104.27	60	120	
Ge Internal standard	72	3	HMI He	796851	0.82	772392	103.17	60	120	
In Internal Standard	115	3	HMI He	2936425	0.86	2872781	102.22	60	120	
Ir (IS)	193	3	HMI He	6256362	2.14	6092963	102.68	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-7-b
Data File Name	242SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:08:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.79	2	2000	
Na	23	3	45	17220.218	ppb	17220.218	1.77	1993753	400000	
Mg	24	3	45	10385.738	ppb	10385.738	0.37	627006	400000	
Al	27	3	45	11.300	ppb	11.300	10.41	417	400000	
K	39	3	45	5585.165	ppb	5585.165	1.29	303525	400000	
Ca	40	2	45	30201.679	ppb	30201.679	1.39	17773082	400000	
V	51	3	72	15.526	ppb	15.526	2.43	11489	2000	
Cr	52	3	72	1.964	ppb	1.964	16.16	4925	5000	
Mn	55	3	72	71.672	ppb	71.672	1.16	31667	10000	
Fe	56	2	72	194.497	ppb	194.497	5.08	389896	10000	
Co	59	3	72	0.076	ppb	0.076	27.94	165	2000	
Ni	60	3	72	0.561	ppb	0.561	9.09	951	5000	
Cu	63	3	72	0.669	ppb	0.669	6.14	1138	5000	
Zn	66	3	72	1.588	ppb	1.588	17.20	515	5000	
As	75	3	72	4.970	ppb	4.970	20.95	651	2000	
Se	78	2	72	1.390	ppb	1.390	31.95	89	2000	
Sr	88	3	72	162.171	ppb	162.171	2.54	94001	4000	
Mo	95	3	115	3.039	ppb	3.039	3.36	1673	2000	
Ag	107	3	115	0.035	ppb	0.035	27.28	78	100	
Cd	111	3	115	-0.021	ppb	-0.021	-1.18	5	2000	
Sn	120	3	115	-0.320	ppb	-0.320	-42.51	525	2000	
Sb	121	3	115	0.166	ppb	0.166	16.30	182	1000	
Ba	137	3	115	18.588	ppb	18.588	7.00	4972	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-16.16	165	2000	
(Pb)	206	3	193	0.156	ppb	0.156	7.92	541	100	
(Pb)	207	3	193	0.105	ppb	0.105	49.40	626	100	
Pb	208	3	193	0.123	ppb	0.123	9.68	2214	5000	
Th	232	3	193	-0.329	ppb	-0.329	-3.54	5430	2000	
U	238	3	193	1.862	ppb	1.862	3.12	12142	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4375356	1.50	4300192	101.75	60	120	
Sc (IS)	45	3	HMI He	643926	0.62	644593	99.90	60	120	
Ge Internal standard	72	2	HMI H2	2720109	2.81	2598552	104.68	60	120	
Ge Internal standard	72	3	HMI He	816541	1.00	772392	105.72	60	120	
In Internal Standard	115	3	HMI He	2996380	1.31	2872781	104.30	60	120	
Ir (IS)	193	3	HMI He	6361557	1.15	6092963	104.41	60	120	

Sample Report

Sample Table

Sample Name	280-175151-c-1-a
Data File Name	243SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:10:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-196.80	3	2000	
Na	23	3	45	35007.353	ppb	35007.353	3.96	4005589	400000	
Mg	24	3	45	16432.033	ppb	16432.033	1.66	984485	400000	
Al	27	3	45	1245.100	ppb	1245.100	7.67	28994	400000	
K	39	3	45	2481.115	ppb	2481.115	3.30	149304	400000	
Ca	40	2	45	37438.980	ppb	37438.980	2.69	22096088	400000	
V	51	3	72	2.062	ppb	2.062	6.22	2372	2000	
Cr	52	3	72	1.363	ppb	1.363	16.97	4305	5000	
Mn	55	3	72	33.581	ppb	33.581	3.58	14632	10000	
Fe	56	2	72	1029.757	ppb	1029.757	4.65	1757192	10000	
Co	59	3	72	0.451	ppb	0.451	18.13	671	2000	
Ni	60	3	72	1.081	ppb	1.081	7.81	1124	5000	
Cu	63	3	72	3.296	ppb	3.296	2.69	3855	5000	
Zn	66	3	72	5.450	ppb	5.450	3.90	1148	5000	
As	75	3	72	0.750	ppb	0.750	35.67	133	2000	
Se	78	2	72	1.411	ppb	1.411	1.58	90	2000	
Sr	88	3	72	309.871	ppb	309.871	2.72	174613	4000	
Mo	95	3	115	1.522	ppb	1.522	12.96	841	2000	
Ag	107	3	115	0.011	ppb	0.011	49.27	33	100	
Cd	111	3	115	-0.001	ppb	-0.001	-1800.23	10	2000	
Sn	120	3	115	-0.203	ppb	-0.203	-38.14	610	2000	
Sb	121	3	115	0.460	ppb	0.460	19.61	411	1000	
Ba	137	3	115	106.837	ppb	106.837	2.54	27759	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-12.94	220	2000	
(Pb)	206	3	193	0.926	ppb	0.926	8.52	1574	100	
(Pb)	207	3	193	0.857	ppb	0.857	10.24	1513	100	
Pb	208	3	193	0.903	ppb	0.903	1.96	6437	5000	
Th	232	3	193	-0.002	ppb	-0.002	-3182.62	7200	2000	
U	238	3	193	1.846	ppb	1.846	1.77	12067	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4389027	1.10	4300192	102.07	60	120	
Sc (IS)	45	3	HMI He	639160	0.60	644593	99.16	60	120	
Ge Internal standard	72	2	HMI H2	2687738	2.16	2598552	103.43	60	120	
Ge Internal standard	72	3	HMI He	794027	0.99	772392	102.80	60	120	
In Internal Standard	115	3	HMI He	2941435	2.40	2872781	102.39	60	120	
Ir (IS)	193	3	HMI He	6369997	0.08	6092963	104.55	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-3-a
Data File Name	244SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:12:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	19587.315	ppb	19587.315	0.20	2249940	400000	
Mg	24	3	45	20063.211	ppb	20063.211	2.35	1202618	400000	
Al	27	3	45	6.387	ppb	6.387	37.42	300	400000	
K	39	3	45	7886.015	ppb	7886.015	0.85	414097	400000	
Ca	40	2	45	105136.073	ppb	105136.073	2.77	62380392	400000	
V	51	3	72	6.374	ppb	6.374	6.25	5235	2000	
Cr	52	3	72	4.765	ppb	4.765	8.37	7097	5000	
Mn	55	3	72	0.626	ppb	0.626	37.18	660	10000	
Fe	56	2	72	31.833	ppb	31.833	14.04	118589	10000	
Co	59	3	72	0.029	ppb	0.029	33.61	97	2000	
Ni	60	3	72	2.086	ppb	2.086	11.17	1524	5000	
Cu	63	3	72	0.616	ppb	0.616	19.14	1060	5000	
Zn	66	3	72	2.728	ppb	2.728	4.72	698	5000	
As	75	3	72	1.699	ppb	1.699	17.36	248	2000	
Se	78	2	72	2.504	ppb	2.504	9.94	159	2000	
Sr	88	3	72	458.141	ppb	458.141	1.26	260429	4000	
Mo	95	3	115	1.670	ppb	1.670	7.39	930	2000	
Ag	107	3	115	0.023	ppb	0.023	20.46	55	100	
Cd	111	3	115	-0.028	ppb	-0.028	-78.02	3	2000	
Sn	120	3	115	-0.176	ppb	-0.176	-58.86	638	2000	
Sb	121	3	115	0.151	ppb	0.151	28.91	168	1000	
Ba	137	3	115	124.046	ppb	124.046	4.10	32494	5000	
Tl	205	3	193	-0.068	ppb	-0.068	-3.59	123	2000	
(Pb)	206	3	193	-0.034	ppb	-0.034	-96.20	285	100	
(Pb)	207	3	193	-0.072	ppb	-0.072	-11.26	415	100	
Pb	208	3	193	-0.046	ppb	-0.046	-26.94	1294	5000	
Th	232	3	193	-0.378	ppb	-0.378	-14.88	5135	2000	
U	238	3	193	7.457	ppb	7.457	0.29	43536	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4413916	0.86	4300192	102.64	60	120	
Sc (IS)	45	3	HMI He	639471	0.51	644593	99.21	60	120	
Ge Internal standard	72	2	HMI H2	2695870	1.02	2598552	103.75	60	120	
Ge Internal standard	72	3	HMI He	801012	1.31	772392	103.71	60	120	
In Internal Standard	115	3	HMI He	2967749	3.29	2872781	103.31	60	120	
Ir (IS)	193	3	HMI He	6321017	0.62	6092963	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-2-a
Data File Name	245SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:14:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	19163.049	ppb	19163.049	2.38	2191000	400000	
Mg	24	3	45	20401.832	ppb	20401.832	2.33	1217070	400000	
Al	27	3	45	1.821	ppb	1.821	59.27	194	400000	
K	39	3	45	7894.035	ppb	7894.035	0.75	412498	400000	
Ca	40	2	45	102671.245	ppb	102671.245	2.58	60081219	400000	
V	51	3	72	6.558	ppb	6.558	6.28	5362	2000	
Cr	52	3	72	2.506	ppb	2.506	8.64	5275	5000	
Mn	55	3	72	0.461	ppb	0.461	35.63	590	10000	
Fe	56	2	72	26.264	ppb	26.264	14.96	110582	10000	
Co	59	3	72	0.093	ppb	0.093	17.01	185	2000	
Ni	60	3	72	1.672	ppb	1.672	23.79	1366	5000	
Cu	63	3	72	0.274	ppb	0.274	10.78	700	5000	
Zn	66	3	72	1.334	ppb	1.334	33.60	463	5000	
As	75	3	72	1.699	ppb	1.699	12.27	248	2000	
Se	78	2	72	2.406	ppb	2.406	8.49	154	2000	
Sr	88	3	72	453.998	ppb	453.998	1.26	258325	4000	
Mo	95	3	115	1.693	ppb	1.693	10.03	933	2000	
Ag	107	3	115	0.025	ppb	0.025	27.66	58	100	
Cd	111	3	115	-0.015	ppb	-0.015	-74.11	7	2000	
Sn	120	3	115	-0.294	ppb	-0.294	-41.48	536	2000	
Sb	121	3	115	0.176	ppb	0.176	8.96	187	1000	
Ba	137	3	115	123.325	ppb	123.325	1.18	32093	5000	
Tl	205	3	193	-0.068	ppb	-0.068	-8.38	120	2000	
(Pb)	206	3	193	-0.064	ppb	-0.064	-30.68	243	100	
(Pb)	207	3	193	-0.066	ppb	-0.066	-56.71	418	100	
Pb	208	3	193	-0.054	ppb	-0.054	-26.41	1239	5000	
Th	232	3	193	-0.410	ppb	-0.410	-5.02	4917	2000	
U	238	3	193	7.375	ppb	7.375	0.79	42678	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4353871	1.71	4300192	101.25	60	120	
Sc (IS)	45	3	HMI He	636396	0.15	644593	98.73	60	120	
Ge Internal standard	72	2	HMI H2	2724747	1.03	2598552	104.86	60	120	
Ge Internal standard	72	3	HMI He	801745	0.79	772392	103.80	60	120	
In Internal Standard	115	3	HMI He	2946170	1.64	2872781	102.55	60	120	
Ir (IS)	193	3	HMI He	6263068	0.72	6092963	102.79	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-5-a
Data File Name	246SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:16:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.53	2	2000	
Na	23	3	45	19683.583	ppb	19683.583	1.27	2257051	400000	
Mg	24	3	45	20532.071	ppb	20532.071	1.32	1228669	400000	
Al	27	3	45	3.093	ppb	3.093	5.38	224	400000	
K	39	3	45	8031.140	ppb	8031.140	1.33	420464	400000	
Ca	40	2	45	106918.000	ppb	106918.000	1.04	62819914	400000	
V	51	3	72	6.825	ppb	6.825	2.86	5527	2000	
Cr	52	3	72	4.623	ppb	4.623	8.61	6975	5000	
Mn	55	3	72	0.538	ppb	0.538	26.92	621	10000	
Fe	56	2	72	28.474	ppb	28.474	13.35	111616	10000	
Co	59	3	72	0.046	ppb	0.046	53.13	120	2000	
Ni	60	3	72	2.085	ppb	2.085	7.00	1523	5000	
Cu	63	3	72	0.514	ppb	0.514	19.73	951	5000	
Zn	66	3	72	1.036	ppb	1.036	1.80	411	5000	
As	75	3	72	1.702	ppb	1.702	20.14	248	2000	
Se	78	2	72	2.690	ppb	2.690	7.09	168	2000	
Sr	88	3	72	461.692	ppb	461.692	0.03	262145	4000	
Mo	95	3	115	1.803	ppb	1.803	12.41	990	2000	
Ag	107	3	115	0.022	ppb	0.022	37.90	53	100	
Cd	111	3	115	-0.008	ppb	-0.008	-153.39	8	2000	
Sn	120	3	115	-0.251	ppb	-0.251	-39.88	570	2000	
Sb	121	3	115	0.120	ppb	0.120	34.05	142	1000	
Ba	137	3	115	122.888	ppb	122.888	3.69	31894	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-15.24	135	2000	
(Pb)	206	3	193	0.093	ppb	0.093	25.16	458	100	
(Pb)	207	3	193	0.045	ppb	0.045	59.05	556	100	
Pb	208	3	193	0.093	ppb	0.093	14.80	2056	5000	
Th	232	3	193	-0.414	ppb	-0.414	-11.23	4985	2000	
U	238	3	193	7.413	ppb	7.413	0.55	43650	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370670	1.43	4300192	101.64	60	120	
Sc (IS)	45	3	HMI He	638386	1.03	644593	99.04	60	120	
Ge Internal standard	72	2	HMI H2	2661258	2.29	2598552	102.41	60	120	
Ge Internal standard	72	3	HMI He	800000	0.71	772392	103.57	60	120	
In Internal Standard	115	3	HMI He	2939788	2.56	2872781	102.33	60	120	
Ir (IS)	193	3	HMI He	6374364	0.97	6092963	104.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	247_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:17:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.765	ppb	11.044	2214	50	105.5	90	110	
Na	23	3	45	48488.942	ppb	1.733	5395202	51000	95.1	90	110	
Mg	24	3	45	10290.100	ppb	1.491	600249	11000	93.5	90	110	
Al	27	3	45	959.856	ppb	2.973	21795	1000	96.0	90	110	
K	39	3	45	10210.153	ppb	1.242	513612	11000	92.8	90	110	
Ca	40	2	45	10529.589	ppb	1.914	6145915	11000	95.7	90	110	
V	51	3	72	48.879	ppb	1.036	31388	50	97.8	90	110	
Cr	52	3	72	50.791	ppb	2.473	41885	50	101.6	90	110	
Mn	55	3	72	50.373	ppb	2.699	20713	50	100.7	90	110	
Fe	56	2	72	1086.154	ppb	2.566	1741359	1000	108.6	90	110	
Co	59	3	72	50.313	ppb	0.398	65403	50	100.6	90	110	
Ni	60	3	72	51.074	ppb	0.479	19381	50	102.1	90	110	
Cu	63	3	72	50.256	ppb	0.356	50470	50	100.5	90	110	
Zn	66	3	72	50.191	ppb	3.783	8230	50	100.4	90	110	
As	75	3	72	53.445	ppb	2.242	6068	50	106.9	90	110	
Se	78	2	72	51.915	ppb	1.983	3044	50	103.8	90	110	
Sr	88	3	72	104.209	ppb	2.121	55942	100	104.2	90	110	
Mo	95	3	115	49.974	ppb	1.843	25446	50	99.9	90	110	
Ag	107	3	115	49.191	ppb	3.576	84423	50	98.4	90	110	
Cd	111	3	115	50.394	ppb	0.720	12341	50	100.8	90	110	
Sn	120	3	115	49.086	ppb	3.170	38740	50	98.2	90	110	
Sb	121	3	115	50.486	ppb	2.700	38759	50	101.0	90	110	
Ba	137	3	115	51.425	ppb	5.326	12910	50	102.8	90	110	
Tl	205	3	193	47.951	ppb	2.112	193301	50	95.9	90	110	
(Pb)	206	3	193	47.466	ppb	1.100	63730	50	94.9	90	110	
(Pb)	207	3	193	47.616	ppb	0.647	56405	50	95.2	90	110	
Pb	208	3	193	47.686	ppb	0.926	258493	50	95.4	90	110	
Th	232	3	193	47.516	ppb	0.670	262226	50	95.0	90	110	
U	238	3	193	47.862	ppb	1.895	271900	50	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4334439	2.31	4300192	100.80	60	120	
Sc (IS)	45	3	HMI He	622156	0.55	644593	96.52	60	120	
Ge Internal standard	72	2	HMI H2	2528670	0.37	2598552	97.31	60	120	
Ge Internal standard	72	3	HMI He	755913	0.31	772392	97.87	60	120	
In Internal Standard	115	3	HMI He	2835965	1.95	2872781	98.72	60	120	
Ir (IS)	193	3	HMI He	6347234	0.74	6092963	104.17	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	248_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:19:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	74.760	ppb	8.4	24335	25	>RL
Mg	24	3	45	3.222	ppb	36.2	447	25	
Al	27	3	45	-1.963	ppb	-35.9	103	15	
K	39	3	45	-6.900	ppb	-477.6	26712	50	
V	51	3	72	-0.560	ppb	-9.0	631	1	
Cr	52	3	72	0.368	ppb	83.4	3364	1	
Mn	55	3	72	-0.007	ppb	-1381.9	370	0.5	
Co	59	3	72	0.017	ppb	108.5	77	0.5	
Ni	60	3	72	0.505	ppb	48.4	866	1	
Cu	63	3	72	0.009	ppb	425.9	398	1	
Zn	66	3	72	0.009	ppb	2275.1	227	5	
As	75	3	72	0.049	ppb	184.6	48	1	
Se	78	2	72	0.055	ppb	35.0	5	1	
Sr	88	3	72	0.072	ppb	91.9	82	0.5	
Mo	95	3	115	0.049	ppb	55.0	63	0.5	
Ag	107	3	115	0.010	ppb	30.9	30	1	
Cd	111	3	115	-0.027	ppb	-86.5	3	0.5	
Sn	120	3	115	0.032	ppb	101.3	780	1	
Sb	121	3	115	0.036	ppb	25.8	73	0.6	
Ba	137	3	115	-0.033	ppb	-191.4	53	0.5	
Tl	205	3	193	-0.039	ppb	-27.9	233	0.1	
(Pb)	206	3	193	-0.067	ppb	-19.3	235	1	
(Pb)	207	3	193	-0.134	ppb	-18.0	335	1	
Pb	208	3	193	-0.089	ppb	-17.4	1038	0.5	
Th	232	3	193	1.564	ppb	9.2	15150	1	>RL
U	238	3	193	0.033	ppb	49.3	1738	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4332137	0.82	4300192	100.74	60	120	
Sc (IS)	45	3	HMI He	620232	0.72	644593	96.22	60	120	
Ge Internal standard	72	2	HMI H2	2594948	0.33	2598552	99.86	60	120	
Ge Internal standard	72	3	HMI He	761522	0.44	772392	98.59	60	120	
In Internal Standard	115	3	HMI He	2870724	0.98	2872781	99.93	60	120	
Ir (IS)	193	3	HMI He	6174407	2.28	6092963	101.34	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609194/1-B
Data File Name	249_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:05:58-06:00
Sample Type	Blank
Dilution	1
Comment	609233 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	281.230	ppb	1.082267342	46650	25
Mg	24	3	45	1.563	ppb	45.98899089	347	25
Al	27	3	45	-0.262	ppb	-303.3904984	140	15
K	39	3	45	-2.733	ppb	-1025.155607	26612	50
Ca	40	2	45	16.072	ppb	3.172188851	21786	200
V	51	3	72	-0.358	ppb	-36.15352345	760	1
Cr	52	3	72	-0.469	ppb	-12.89308656	2724	1
Mn	55	3	72	0.188	ppb	45.45909871	450	0.5
Fe	56	2	72	20.001	ppb	13.2390376	97474	50
Co	59	3	72	0.003	ppb	288.8187496	58	0.5
Ni	60	3	72	-0.581	ppb	-18.75977448	466	1
Cu	63	3	72	0.121	ppb	16.28564249	511	1
Zn	66	3	72	1.393	ppb	7.443895937	450	5
As	75	3	72	0.092	ppb	112.1561568	53	1
(Se)	78	3	72	0.293	ppb	264.0718631	25	1
Sr	88	3	72	0.056	ppb	51.92766477	73	0.5
Mo	95	3	115	0.046	ppb	101.1237291	62	0.5
Ag	107	3	115	0.005	ppb	125.3402849	22	1
Cd	111	3	115	-0.041	ppb	0	0	0.5
Sn	120	3	115	-0.132	ppb	-40.30787229	650	1
Sb	121	3	115	0.009	ppb	284.4853356	52	0.6
Ba	137	3	115	0.219	ppb	51.55799151	117	0.5
Tl	205	3	193	-0.061	ppb	-18.25714322	143	0.1
(Pb)	206	3	193	-0.007	ppb	-344.8737397	310	1
(Pb)	207	3	193	0.068	ppb	78.34724986	560	1
Pb	208	3	193	0.002	ppb	652.1535081	1503	0.5
Th	232	3	193	0.030	ppb	404.0969576	7077	1
U	238	3	193	0.011	ppb	159.4563042	1598	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4212308	0.52	4300192	97.96	60	120	
Sc (IS)	45	3	HMI He	613371	0.41	644593	95.16	60	120	
Ge Internal standard	72	2	HMI H2	2653486	1.92	2598552	102.11	60	120	
Ge Internal standard	72	3	HMI He	762841	0.76	772392	98.76	60	120	
In Internal Standard	115	3	HMI He	2865732	0.86	2872781	99.75	60	120	
Ir (IS)	193	3	HMI He	6116676	1.21	6092963	100.39	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609194/2-C
Data File Name	250_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:07:46-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609233 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.163	41.163	ppb	4.612	1784	40	102.9	80	120	
Na	23	3	45	824.460	824.460	ppb	1.679	107441	40	2061.1	80	120	>+/-20%
Mg	24	3	45	698.999	698.999	ppb	1.645	40967	40	1747.5	80	120	>+/-20%
Al	27	3	45	761.725	761.725	ppb	3.092	17305	40	1904.3	80	120	>+/-20%
K	39	3	45	757.724	757.724	ppb	1.037	63148	40	1894.3	80	120	>+/-20%
Ca	40	2	45	801.018	801.018	ppb	1.655	479066	40	2002.5	80	120	>+/-20%
V	51	3	72	38.527	38.527	ppb	2.065	25187	40	96.3	80	120	
Cr	52	3	72	37.658	37.658	ppb	0.635	32151	40	94.1	80	120	
Mn	55	3	72	39.176	39.176	ppb	0.499	16348	40	97.9	80	120	
Fe	56	2	72	773.093	773.093	ppb	1.989	1309478	40	1932.7	80	120	>+/-20%
(Fe)	56	3	72	754.416	754.416	ppb	0.655	511947	40	1886.0	80	120	>+/-20%
Co	59	3	72	38.356	38.356	ppb	2.256	50351	40	95.9	80	120	
Ni	60	3	72	37.869	37.869	ppb	2.291	14684	40	94.7	80	120	
Cu	63	3	72	39.145	39.145	ppb	0.733	39777	40	97.9	80	120	
Zn	66	3	72	39.778	39.778	ppb	4.304	6632	40	99.4	80	120	
As	75	3	72	38.143	38.143	ppb	5.616	4385	40	95.4	80	120	
Se	78	2	72	39.470	39.470	ppb	0.941	2411	40	98.7	80	120	
(Se)	78	3	72	42.557	42.557	ppb	18.467	295	40	106.4	80	120	
Sr	88	3	72	78.554	78.554	ppb	1.938	42587	40	196.4	80	120	>+/-20%
Mo	95	3	115	36.550	36.550	ppb	4.096	18869	40	91.4	80	120	
Ag	107	3	115	38.059	38.059	ppb	1.738	66218	40	95.1	80	120	
Cd	111	3	115	36.763	36.763	ppb	3.147	9127	40	91.9	80	120	
Sn	120	3	115	35.786	35.786	ppb	2.087	28835	40	89.5	80	120	
Sb	121	3	115	38.069	38.069	ppb	1.840	29633	40	95.2	80	120	
Ba	137	3	115	38.212	38.212	ppb	2.119	9742	40	95.5	80	120	
Tl	205	3	193	37.354	37.354	ppb	1.662	148953	40	93.4	80	120	
(Pb)	206	3	193	37.722	37.722	ppb	1.004	50134	40	94.3	80	120	
(Pb)	207	3	193	36.963	36.963	ppb	2.713	43393	40	92.4	80	120	
Pb	208	3	193	37.509	37.509	ppb	1.850	201317	40	93.8	80	120	
Th	232	3	193	34.808	34.808	ppb	0.302	191800	40	87.0	80	120	
U	238	3	193	37.561	37.561	ppb	2.263	211284	40	93.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4329078	1.58	4300192	100.67	60	120	
Sc (IS)	45	3	HMI He	621380	0.57	644593	96.40	60	120	
Ge Internal standard	72	2	HMI H2	2633775	1.83	2598552	101.36	60	120	
Ge Internal standard	72	3	HMI He	763204	0.37	772392	98.81	60	120	
In Internal Standard	115	3	HMI He	2873938	1.43	2872781	100.04	60	120	
Ir (IS)	193	3	HMI He	6274906	0.73	6092963	102.99	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-G
Data File Name	251SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:09:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.110	ppb	-0.110	-62.10	2	2000	
Na	23	3	45	64588.015	ppb	64588.015	1.04	7139357	400000	
Mg	24	3	45	25228.902	ppb	25228.902	1.30	1462682	400000	
Al	27	3	45	-0.018	ppb	-0.018	-7612.56	147	400000	
K	39	3	45	2797.418	ppb	2797.418	0.87	159483	400000	
Ca	40	2	45	91824.080	ppb	91824.080	0.49	52558958	400000	
V	51	3	72	-0.187	ppb	-0.187	-48.76	878	2000	
Cr	52	3	72	-0.521	ppb	-0.521	-67.96	2719	5000	
Mn	55	3	72	0.410	ppb	0.410	20.06	548	10000	
Fe	56	2	72	-1.611	ppb	-1.611	-128.64	61354	10000	
Co	59	3	72	0.085	ppb	0.085	38.33	168	2000	
Ni	60	3	72	0.425	ppb	0.425	35.17	850	5000	
Cu	63	3	72	0.472	ppb	0.472	11.02	876	5000	
Zn	66	3	72	1.099	ppb	1.099	22.65	408	5000	
As	75	3	72	0.245	ppb	0.245	81.02	72	2000	
Se	78	2	72	2.010	ppb	2.010	17.63	123	2000	
Sr	88	3	72	711.645	ppb	711.645	0.38	390537	4000	
Mo	95	3	115	1.402	ppb	1.402	6.06	753	2000	
Ag	107	3	115	0.008	ppb	0.008	76.43	27	100	
Cd	111	3	115	-0.021	ppb	-0.021	-98.10	5	2000	
Sn	120	3	115	-0.117	ppb	-0.117	-37.98	656	2000	
Sb	121	3	115	0.133	ppb	0.133	2.04	147	1000	
Ba	137	3	115	76.719	ppb	76.719	2.69	19289	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-26.08	210	2000	
(Pb)	206	3	193	-0.084	ppb	-0.084	-18.73	212	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-26.24	418	100	
Pb	208	3	193	-0.064	ppb	-0.064	-8.93	1158	5000	
Th	232	3	193	1.797	ppb	1.797	17.49	16234	2000	
U	238	3	193	7.065	ppb	7.065	1.94	40028	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4257359	0.48	4300192	99.00	60	120	
Sc (IS)	45	3	HMI He	618551	0.84	644593	95.96	60	120	
Ge Internal standard	72	2	HMI H2	2607060	1.09	2598552	100.33	60	120	
Ge Internal standard	72	3	HMI He	773259	0.68	772392	100.11	60	120	
In Internal Standard	115	3	HMI He	2843433	1.40	2872781	98.98	60	120	
Ir (IS)	193	3	HMI He	6123162	1.16	6092963	100.50	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-H MS
Data File Name	252SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:11:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.146	ppb	40.146	2.59	1699	2000	
Na	23	3	45	65304.473	ppb	65304.473	1.14	7149696	400000	
Mg	24	3	45	25258.121	ppb	25258.121	1.00	1450429	400000	
Al	27	3	45	730.811	ppb	730.811	0.96	16376	400000	
K	39	3	45	3515.170	ppb	3515.170	0.20	191642	400000	
Ca	40	2	45	91340.960	ppb	91340.960	1.04	52532165	400000	
V	51	3	72	36.612	ppb	36.612	2.62	24064	2000	
Cr	52	3	72	36.935	ppb	36.935	3.17	31697	5000	
Mn	55	3	72	37.777	ppb	37.777	2.35	15831	10000	
Fe	56	2	72	765.281	ppb	765.281	2.39	1280209	10000	
Co	59	3	72	36.344	ppb	36.344	1.58	47874	2000	
Ni	60	3	72	36.757	ppb	36.757	1.49	14324	5000	
Cu	63	3	72	37.231	ppb	37.231	0.41	37983	5000	
Zn	66	3	72	38.946	ppb	38.946	2.47	6522	5000	
As	75	3	72	38.842	ppb	38.842	5.44	4482	2000	
Se	78	2	72	39.966	ppb	39.966	3.93	2409	2000	
Sr	88	3	72	784.544	ppb	784.544	0.81	426380	4000	
Mo	95	3	115	36.891	ppb	36.891	1.03	18957	2000	
Ag	107	3	115	37.399	ppb	37.399	1.48	64760	100	
Cd	111	3	115	36.983	ppb	36.983	1.74	9137	2000	
Sn	120	3	115	34.754	ppb	34.754	0.27	27894	2000	
Sb	121	3	115	36.625	ppb	36.625	2.19	28373	1000	
Ba	137	3	115	111.807	ppb	111.807	1.20	28255	5000	
Tl	205	3	193	37.250	ppb	37.250	1.21	144783	2000	
(Pb)	206	3	193	37.268	ppb	37.268	0.55	48279	100	
(Pb)	207	3	193	36.978	ppb	36.978	1.15	42318	100	
Pb	208	3	193	37.127	ppb	37.127	1.24	194237	5000	
Th	232	3	193	36.564	ppb	36.564	0.61	196013	2000	
U	238	3	193	44.745	ppb	44.745	1.46	245052	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4277770	0.87	4300192	99.48	60	120	
Sc (IS)	45	3	HMI He	612639	0.39	644593	95.04	60	120	
Ge Internal standard	72	2	HMI H2	2600338	2.15	2598552	100.07	60	120	
Ge Internal standard	72	3	HMI He	765830	1.16	772392	99.15	60	120	
In Internal Standard	115	3	HMI He	2860310	1.55	2872781	99.57	60	120	
Ir (IS)	193	3	HMI He	6116074	1.35	6092963	100.38	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-I MSD
Data File Name	253SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:13:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.146	ppb	39.146	5.78	1654	2000	
Na	23	3	45	66001.043	ppb	66001.043	1.32	7236759	400000	
Mg	24	3	45	25769.290	ppb	25769.290	2.15	1481875	400000	
Al	27	3	45	713.503	ppb	713.503	1.68	16015	400000	
K	39	3	45	3514.291	ppb	3514.291	0.57	191903	400000	
Ca	40	2	45	92678.286	ppb	92678.286	2.91	53190519	400000	
V	51	3	72	37.014	ppb	37.014	1.44	24087	2000	
Cr	52	3	72	36.818	ppb	36.818	3.77	31306	5000	
Mn	55	3	72	38.222	ppb	38.222	0.35	15861	10000	
Fe	56	2	72	752.179	ppb	752.179	2.84	1265483	10000	
Co	59	3	72	36.609	ppb	36.609	0.59	47767	2000	
Ni	60	3	72	37.907	ppb	37.907	2.23	14607	5000	
Cu	63	3	72	37.706	ppb	37.706	0.45	38093	5000	
Zn	66	3	72	38.311	ppb	38.311	5.09	6357	5000	
As	75	3	72	38.281	ppb	38.281	3.63	4374	2000	
Se	78	2	72	39.274	ppb	39.274	2.99	2379	2000	
Sr	88	3	72	797.322	ppb	797.322	0.37	429194	4000	
Mo	95	3	115	37.418	ppb	37.418	2.60	19259	2000	
Ag	107	3	115	36.583	ppb	36.583	1.62	63456	100	
Cd	111	3	115	36.628	ppb	36.628	1.73	9064	2000	
Sn	120	3	115	35.220	ppb	35.220	1.65	28303	2000	
Sb	121	3	115	36.786	ppb	36.786	0.67	28551	1000	
Ba	137	3	115	114.317	ppb	114.317	1.72	28936	5000	
Tl	205	3	193	36.799	ppb	36.799	1.34	144089	2000	
(Pb)	206	3	193	37.149	ppb	37.149	0.48	48482	100	
(Pb)	207	3	193	36.957	ppb	36.957	2.83	42602	100	
Pb	208	3	193	36.868	ppb	36.868	0.32	194326	5000	
Th	232	3	193	37.536	ppb	37.536	1.29	202528	2000	
U	238	3	193	44.511	ppb	44.511	0.58	245572	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4270534	2.12	4300192	99.31	60	120	
Sc (IS)	45	3	HMI He	613615	1.30	644593	95.19	60	120	
Ge Internal standard	72	2	HMI H2	2612372	0.69	2598552	100.53	60	120	
Ge Internal standard	72	3	HMI He	758502	0.41	772392	98.20	60	120	
In Internal Standard	115	3	HMI He	2865262	1.50	2872781	99.74	60	120	
Ir (IS)	193	3	HMI He	6161016	0.32	6092963	101.12	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-2-B
Data File Name	254SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:14:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.97	2	2000	
Na	23	3	45	68988.229	ppb	68988.229	0.72	7494637	400000	
Mg	24	3	45	27563.941	ppb	27563.941	2.21	1570786	400000	
Al	27	3	45	5.546	ppb	5.546	53.46	267	400000	
K	39	3	45	2795.503	ppb	2795.503	2.11	156683	400000	
Ca	40	2	45	98923.752	ppb	98923.752	2.25	55845415	400000	
V	51	3	72	-0.273	ppb	-0.273	-22.53	810	2000	
Cr	52	3	72	0.192	ppb	0.192	193.43	3222	5000	
Mn	55	3	72	0.742	ppb	0.742	3.72	673	10000	
Fe	56	2	72	10.285	ppb	10.285	46.68	79232	10000	
Co	59	3	72	0.067	ppb	0.067	18.13	142	2000	
Ni	60	3	72	0.733	ppb	0.733	8.82	948	5000	
Cu	63	3	72	0.944	ppb	0.944	16.84	1333	5000	
Zn	66	3	72	1.092	ppb	1.092	18.89	400	5000	
As	75	3	72	0.314	ppb	0.314	57.03	78	2000	
Se	78	2	72	1.964	ppb	1.964	7.87	119	2000	
Sr	88	3	72	783.478	ppb	783.478	0.87	422417	4000	
Mo	95	3	115	1.585	ppb	1.585	7.64	848	2000	
Ag	107	3	115	0.014	ppb	0.014	23.35	38	100	
Cd	111	3	115	0.000	ppb	0.000	-17552.63	10	2000	
Sn	120	3	115	-0.008	ppb	-0.008	-939.58	743	2000	
Sb	121	3	115	0.104	ppb	0.104	38.67	125	1000	
Ba	137	3	115	77.648	ppb	77.648	1.93	19575	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-9.04	252	2000	
(Pb)	206	3	193	-0.007	ppb	-0.007	-453.91	308	100	
(Pb)	207	3	193	-0.054	ppb	-0.054	-113.21	420	100	
Pb	208	3	193	-0.020	ppb	-0.020	-49.57	1379	5000	
Th	232	3	193	2.203	ppb	2.203	14.22	18191	2000	
U	238	3	193	8.221	ppb	8.221	1.15	46002	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4200235	2.16	4300192	97.68	60	120	
Sc (IS)	45	3	HMI He	607979	0.49	644593	94.32	60	120	
Ge Internal standard	72	2	HMI H2	2574955	1.75	2598552	99.09	60	120	
Ge Internal standard	72	3	HMI He	759750	1.11	772392	98.36	60	120	
In Internal Standard	115	3	HMI He	2850466	0.20	2872781	99.22	60	120	
Ir (IS)	193	3	HMI He	6079371	1.69	6092963	99.78	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-3-B
Data File Name	255SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:16:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	69004.482	ppb	69004.482	1.41	7468753	400000	
Mg	24	3	45	26735.746	ppb	26735.746	0.68	1518122	400000	
Al	27	3	45	-1.702	ppb	-1.702	-18.96	107	400000	
K	39	3	45	2695.500	ppb	2695.500	2.84	151444	400000	
Ca	40	2	45	94297.291	ppb	94297.291	1.31	53516808	400000	
V	51	3	72	-0.326	ppb	-0.326	-35.64	770	2000	
Cr	52	3	72	0.245	ppb	0.245	80.92	3234	5000	
Mn	55	3	72	0.374	ppb	0.374	35.35	520	10000	
Fe	56	2	72	12.611	ppb	12.611	20.56	82171	10000	
Co	59	3	72	0.086	ppb	0.086	11.68	165	2000	
Ni	60	3	72	0.763	ppb	0.763	15.91	951	5000	
Cu	63	3	72	0.630	ppb	0.630	7.81	1011	5000	
Zn	66	3	72	0.884	ppb	0.884	27.19	363	5000	
As	75	3	72	0.394	ppb	0.394	63.64	87	2000	
Se	78	2	72	1.929	ppb	1.929	8.34	116	2000	
Sr	88	3	72	756.090	ppb	756.090	1.50	404250	4000	
Mo	95	3	115	1.705	ppb	1.705	9.63	890	2000	
Ag	107	3	115	0.012	ppb	0.012	78.59	33	100	
Cd	111	3	115	-0.027	ppb	-0.027	-90.06	3	2000	
Sn	120	3	115	-0.260	ppb	-0.260	-16.95	535	2000	
Sb	121	3	115	0.085	ppb	0.085	37.78	108	1000	
Ba	137	3	115	78.377	ppb	78.377	0.31	19328	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-10.50	180	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-235.08	320	100	
(Pb)	207	3	193	-0.048	ppb	-0.048	-92.66	435	100	
Pb	208	3	193	-0.035	ppb	-0.035	-11.86	1326	5000	
Th	232	3	193	0.345	ppb	0.345	38.32	8837	2000	
U	238	3	193	8.419	ppb	8.419	1.64	48033	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4222024	2.71	4300192	98.18	60	120	
Sc (IS)	45	3	HMI He	605807	1.31	644593	93.98	60	120	
Ge Internal standard	72	2	HMI H2	2549493	0.96	2598552	98.11	60	120	
Ge Internal standard	72	3	HMI He	753417	0.65	772392	97.54	60	120	
In Internal Standard	115	3	HMI He	2788404	0.77	2872781	97.06	60	120	
Ir (IS)	193	3	HMI He	6203747	1.14	6092963	101.82	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-4-B
Data File Name	256SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:18:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	69550.283	ppb	69550.283	1.06	7628858	400000	
Mg	24	3	45	27019.688	ppb	27019.688	1.95	1554657	400000	
Al	27	3	45	-0.426	ppb	-0.426	-573.56	137	400000	
K	39	3	45	2790.537	ppb	2790.537	0.91	157965	400000	
Ca	40	2	45	100310.879	ppb	100310.879	2.61	56287277	400000	
V	51	3	72	-0.260	ppb	-0.260	-83.09	825	2000	
Cr	52	3	72	0.266	ppb	0.266	83.91	3305	5000	
Mn	55	3	72	0.573	ppb	0.573	18.49	610	10000	
Fe	56	2	72	14.191	ppb	14.191	28.83	84427	10000	
Co	59	3	72	0.104	ppb	0.104	23.44	192	2000	
Ni	60	3	72	0.643	ppb	0.643	10.49	923	5000	
Cu	63	3	72	0.617	ppb	0.617	10.97	1015	5000	
Zn	66	3	72	3.698	ppb	3.698	4.23	825	5000	
As	75	3	72	0.148	ppb	0.148	58.36	60	2000	
Se	78	2	72	1.798	ppb	1.798	6.45	108	2000	
Sr	88	3	72	765.968	ppb	765.968	0.15	416563	4000	
Mo	95	3	115	1.772	ppb	1.772	5.06	943	2000	
Ag	107	3	115	0.012	ppb	0.012	38.83	33	100	
Cd	111	3	115	0.000	ppb	0.000	-1617.94	10	2000	
Sn	120	3	115	-0.229	ppb	-0.229	-21.60	570	2000	
Sb	121	3	115	0.078	ppb	0.078	5.90	105	1000	
Ba	137	3	115	78.564	ppb	78.564	2.00	19782	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-13.11	178	2000	
(Pb)	206	3	193	-0.074	ppb	-0.074	-20.60	225	100	
(Pb)	207	3	193	-0.066	ppb	-0.066	-57.99	408	100	
Pb	208	3	193	-0.061	ppb	-0.061	-13.64	1174	5000	
Th	232	3	193	-0.023	ppb	-0.023	-114.65	6815	2000	
U	238	3	193	8.654	ppb	8.654	2.29	48713	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174202	1.04	4300192	97.07	60	120	
Sc (IS)	45	3	HMI He	613924	0.99	644593	95.24	60	120	
Ge Internal standard	72	2	HMI H2	2543759	0.59	2598552	97.89	60	120	
Ge Internal standard	72	3	HMI He	766302	0.26	772392	99.21	60	120	
In Internal Standard	115	3	HMI He	2847414	1.46	2872781	99.12	60	120	
Ir (IS)	193	3	HMI He	6127656	2.62	6092963	100.57	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-5-B
Data File Name	257SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:20:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	73605.834	ppb	73605.834	2.11	7868952	400000	
Mg	24	3	45	27022.897	ppb	27022.897	2.24	1515646	400000	
Al	27	3	45	0.934	ppb	0.934	585.87	164	400000	
K	39	3	45	2720.268	ppb	2720.268	1.34	150767	400000	
Ca	40	2	45	91273.610	ppb	91273.610	1.75	51713820	400000	
V	51	3	72	-0.079	ppb	-0.079	-272.61	918	2000	
Cr	52	3	72	0.049	ppb	0.049	87.99	3069	5000	
Mn	55	3	72	0.827	ppb	0.827	15.22	698	10000	
Fe	56	2	72	9.543	ppb	9.543	31.93	79281	10000	
Co	59	3	72	0.080	ppb	0.080	17.48	157	2000	
Ni	60	3	72	0.588	ppb	0.588	17.41	883	5000	
Cu	63	3	72	0.464	ppb	0.464	11.05	841	5000	
Zn	66	3	72	0.790	ppb	0.790	23.34	347	5000	
As	75	3	72	0.204	ppb	0.204	57.43	65	2000	
Se	78	2	72	1.629	ppb	1.629	7.20	101	2000	
Sr	88	3	72	738.204	ppb	738.204	1.32	392705	4000	
Mo	95	3	115	1.774	ppb	1.774	9.38	918	2000	
Ag	107	3	115	0.004	ppb	0.004	71.84	20	100	
Cd	111	3	115	-0.006	ppb	-0.006	-416.03	8	2000	
Sn	120	3	115	-0.152	ppb	-0.152	-76.68	613	2000	
Sb	121	3	115	0.084	ppb	0.084	29.48	107	1000	
Ba	137	3	115	72.699	ppb	72.699	2.12	17805	5000	
Tl	205	3	193	-0.058	ppb	-0.058	-14.64	158	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-23.29	232	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-35.70	393	100	
Pb	208	3	193	-0.063	ppb	-0.063	-3.01	1164	5000	
Th	232	3	193	-0.183	ppb	-0.183	-51.44	5978	2000	
U	238	3	193	9.420	ppb	9.420	1.78	52844	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214265	0.67	4300192	98.00	60	120	
Sc (IS)	45	3	HMI He	598474	1.13	644593	92.85	60	120	
Ge Internal standard	72	2	HMI H2	2614675	2.52	2598552	100.62	60	120	
Ge Internal standard	72	3	HMI He	749610	0.41	772392	97.05	60	120	
In Internal Standard	115	3	HMI He	2768727	0.51	2872781	96.38	60	120	
Ir (IS)	193	3	HMI He	6121207	1.31	6092963	100.46	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-6-B
Data File Name	258SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:22:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	75592.496	ppb	75592.496	1.11	8070618	400000	
Mg	24	3	45	27196.551	ppb	27196.551	3.78	1523348	400000	
Al	27	3	45	-0.406	ppb	-0.406	-328.96	133	400000	
K	39	3	45	2755.581	ppb	2755.581	1.50	152186	400000	
Ca	40	2	45	95851.899	ppb	95851.899	1.32	54222036	400000	
V	51	3	72	-0.259	ppb	-0.259	-10.16	806	2000	
Cr	52	3	72	0.000	ppb	0.000	-209880.55	3029	5000	
Mn	55	3	72	1.374	ppb	1.374	7.73	916	10000	
Fe	56	2	72	20.036	ppb	20.036	16.59	93947	10000	
Co	59	3	72	0.098	ppb	0.098	19.43	180	2000	
Ni	60	3	72	0.738	ppb	0.738	24.66	936	5000	
Cu	63	3	72	1.257	ppb	1.257	11.36	1623	5000	
Zn	66	3	72	1.299	ppb	1.299	31.33	426	5000	
As	75	3	72	0.430	ppb	0.430	38.97	90	2000	
Se	78	2	72	1.790	ppb	1.790	11.45	108	2000	
Sr	88	3	72	747.254	ppb	747.254	0.56	397071	4000	
Mo	95	3	115	1.832	ppb	1.832	1.95	951	2000	
Ag	107	3	115	0.004	ppb	0.004	68.85	20	100	
Cd	111	3	115	-0.006	ppb	-0.006	-516.75	8	2000	
Sn	120	3	115	-0.232	ppb	-0.232	-41.82	555	2000	
Sb	121	3	115	0.099	ppb	0.099	9.53	118	1000	
Ba	137	3	115	71.423	ppb	71.423	2.36	17576	5000	
Tl	205	3	193	-0.059	ppb	-0.059	-4.78	150	2000	
(Pb)	206	3	193	0.003	ppb	0.003	1038.99	318	100	
(Pb)	207	3	193	0.054	ppb	0.054	52.43	536	100	
Pb	208	3	193	0.003	ppb	0.003	1098.54	1483	5000	
Th	232	3	193	-0.250	ppb	-0.250	-22.25	5552	2000	
U	238	3	193	10.086	ppb	10.086	2.01	55656	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4207787	1.41	4300192	97.85	60	120	
Sc (IS)	45	3	HMI He	597638	0.46	644593	92.72	60	120	
Ge Internal standard	72	2	HMI H2	2555103	0.81	2598552	98.33	60	120	
Ge Internal standard	72	3	HMI He	748759	0.84	772392	96.94	60	120	
In Internal Standard	115	3	HMI He	2782160	1.03	2872781	96.85	60	120	
Ir (IS)	193	3	HMI He	6033021	1.72	6092963	99.02	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	259_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:23:57-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.103	ppb	9.691	2159	50	104.2	90	110	
Na	23	3	45	48340.448	ppb	2.156	5161446	51000	94.8	90	110	
Mg	24	3	45	10235.290	ppb	2.941	572862	11000	93.0	90	110	
Al	27	3	45	934.612	ppb	4.740	20365	1000	93.5	90	110	
K	39	3	45	10095.410	ppb	2.563	487602	11000	91.8	90	110	
Ca	40	2	45	10398.909	ppb	0.790	5821928	11000	94.5	90	110	
V	51	3	72	49.847	ppb	1.753	30248	50	99.7	90	110	
Cr	52	3	72	50.016	ppb	0.209	39045	50	100.0	90	110	
Mn	55	3	72	49.819	ppb	1.672	19374	50	99.6	90	110	
Fe	56	2	72	1056.946	ppb	2.387	1657473	1000	105.7	90	110	
Co	59	3	72	50.040	ppb	1.004	61505	50	100.1	90	110	
Ni	60	3	72	51.129	ppb	0.536	18345	50	102.3	90	110	
Cu	63	3	72	50.046	ppb	2.452	47519	50	100.1	90	110	
Zn	66	3	72	50.143	ppb	0.196	7775	50	100.3	90	110	
As	75	3	72	52.668	ppb	2.744	5655	50	105.3	90	110	
Se	78	2	72	49.777	ppb	3.528	2851	50	99.6	90	110	
Sr	88	3	72	102.966	ppb	0.615	52266	100	103.0	90	110	
Mo	95	3	115	48.790	ppb	3.971	24121	50	97.6	90	110	
Ag	107	3	115	48.770	ppb	1.975	81311	50	97.5	90	110	
Cd	111	3	115	49.568	ppb	1.512	11788	50	99.1	90	110	
Sn	120	3	115	48.649	ppb	2.463	37298	50	97.3	90	110	
Sb	121	3	115	49.672	ppb	2.500	37038	50	99.3	90	110	
Ba	137	3	115	49.558	ppb	1.360	12095	50	99.1	90	110	
Tl	205	3	193	47.670	ppb	0.352	184409	50	95.3	90	110	
(Pb)	206	3	193	48.401	ppb	1.672	62340	50	96.8	90	110	
(Pb)	207	3	193	47.398	ppb	1.201	53882	50	94.8	90	110	
Pb	208	3	193	48.229	ppb	1.356	250818	50	96.5	90	110	
Th	232	3	193	47.417	ppb	0.609	251108	50	94.8	90	110	
U	238	3	193	48.341	ppb	0.702	263505	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4156576	1.75	4300192	96.66	60	120	
Sc (IS)	45	3	HMI He	597176	2.13	644593	92.64	60	120	
Ge Internal standard	72	2	HMI H2	2471134	1.61	2598552	95.10	60	120	
Ge Internal standard	72	3	HMI He	714790	1.01	772392	92.54	60	120	
In Internal Standard	115	3	HMI He	2754191	1.74	2872781	95.87	60	120	
Ir (IS)	193	3	HMI He	6090424	1.00	6092963	99.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	260_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:25:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.108	ppb	-64.5	2	0.5	
Na	23	3	45	62.656	ppb	4.6	21912	25	>RL
Mg	24	3	45	1.496	ppb	180.2	330	25	
Al	27	3	45	-3.751	ppb	-38.3	60	15	
K	39	3	45	-12.521	ppb	-236.8	25205	50	
V	51	3	72	-0.509	ppb	-19.3	638	1	
Cr	52	3	72	0.153	ppb	231.8	3079	1	
Mn	55	3	72	-0.116	ppb	-36.4	313	0.5	
Co	59	3	72	0.027	ppb	48.7	87	0.5	
Ni	60	3	72	0.662	ppb	31.2	890	1	
Cu	63	3	72	-0.024	ppb	-113.2	351	1	
Zn	66	3	72	-0.076	ppb	-143.7	205	5	
As	75	3	72	0.004	ppb	3973.7	42	1	
Se	78	2	72	0.082	ppb	23.7	7	1	
Sr	88	3	72	0.062	ppb	89.5	73	0.5	
Mo	95	3	115	0.030	ppb	142.2	52	0.5	
Ag	107	3	115	0.021	ppb	55.4	48	1	
Cd	111	3	115	-0.020	ppb	-106.8	5	0.5	
Sn	120	3	115	0.102	ppb	73.6	805	1	
Sb	121	3	115	0.024	ppb	71.1	62	0.6	
Ba	137	3	115	0.009	ppb	780.2	62	0.5	
Tl	205	3	193	-0.039	ppb	-7.7	228	0.1	
(Pb)	206	3	193	-0.094	ppb	-21.7	198	1	
(Pb)	207	3	193	-0.081	ppb	-66.7	391	1	
Pb	208	3	193	-0.077	ppb	-26.1	1088	0.5	
Th	232	3	193	1.470	ppb	12.0	14506	1	>RL
U	238	3	193	0.024	ppb	62.8	1666	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109760	0.94	4300192	95.57	60	120	
Sc (IS)	45	3	HMI He	590897	1.24	644593	91.67	60	120	
Ge Internal standard	72	2	HMI H2	2479940	1.93	2598552	95.44	60	120	
Ge Internal standard	72	3	HMI He	732941	0.90	772392	94.89	60	120	
In Internal Standard	115	3	HMI He	2770663	1.35	2872781	96.45	60	120	
Ir (IS)	193	3	HMI He	6107195	0.60	6092963	100.23	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609246/1-A
Data File Name	261_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:27:34-06:00
Sample Type	Blank
Dilution	1
Comment	609246 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.031	ppb	-656.0920877	5	0.5
Na	23	3	45	91.889	ppb	2.920074882	25121	25
Mg	24	3	45	1.158	ppb	118.0304718	314	25
Al	27	3	45	1.025	ppb	92.07209853	163	15
K	39	3	45	-9.415	ppb	-426.1376362	25472	50
Ca	40	2	45	12.972	ppb	6.12751493	19981	200
V	51	3	72	-0.543	ppb	-7.607723281	626	1
Cr	52	3	72	0.133	ppb	93.81636075	3107	1
Mn	55	3	72	-0.103	ppb	-101.7702416	323	0.5
Fe	56	2	72	1.775	ppb	207.4065478	65269	50
Co	59	3	72	0.020	ppb	19.57785546	78	0.5
Ni	60	3	72	0.081	ppb	28.21117499	693	1
Cu	63	3	72	0.163	ppb	13.05018855	540	1
Zn	66	3	72	0.130	ppb	220.8150574	240	5
As	75	3	72	0.119	ppb	211.572423	55	1
(Se)	78	3	72	0.663	ppb	253.1302327	27	1
Sr	88	3	72	0.038	ppb	63.19564445	62	0.5
Mo	95	3	115	0.019	ppb	283.0322028	47	0.5
Ag	107	3	115	0.008	ppb	55.41541296	27	1
Cd	111	3	115	-0.027	ppb	-43.51917327	3	0.5
Sn	120	3	115	-0.110	ppb	-58.76283385	650	1
Sb	121	3	115	0.013	ppb	42.74688118	53	0.6
Ba	137	3	115	0.090	ppb	89.38543346	82	0.5
Tl	205	3	193	-0.065	ppb	-10.56832699	128	0.1
(Pb)	206	3	193	-0.108	ppb	-10.26379454	178	1
(Pb)	207	3	193	-0.076	ppb	-66.55678964	393	1
Pb	208	3	193	-0.095	ppb	-5.56824325	985	0.5
Th	232	3	193	0.044	ppb	241.1659186	7074	1
U	238	3	193	0.020	ppb	103.3668355	1633	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203060	1.95	4300192	97.74	60	120	
Sc (IS)	45	3	HMI He	593948	0.57	644593	92.14	60	120	
Ge Internal standard	72	2	HMI H2	2548365	2.86	2598552	98.07	60	120	
Ge Internal standard	72	3	HMI He	743470	1.02	772392	96.26	60	120	
In Internal Standard	115	3	HMI He	2788061	2.98	2872781	97.05	60	120	
Ir (IS)	193	3	HMI He	6054579	1.12	6092963	99.37	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609246/2-A
Data File Name	262_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:29:23-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609246 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.856	39.856	ppb	6.170	1674	40	99.6	80	120	
Na	23	3	45	763.874	763.874	ppb	1.392	97786	40	1909.7	80	120	>+/-20%
Mg	24	3	45	694.716	694.716	ppb	1.185	39525	40	1736.8	80	120	>+/-20%
Al	27	3	45	743.128	743.128	ppb	2.800	16393	40	1857.8	80	120	>+/-20%
K	39	3	45	712.085	712.085	ppb	2.327	59194	40	1780.2	80	120	>+/-20%
Ca	40	2	45	785.723	785.723	ppb	0.932	446843	40	1964.3	80	120	>+/-20%
V	51	3	72	36.608	36.608	ppb	1.107	23470	40	91.5	80	120	
Cr	52	3	72	38.118	38.118	ppb	0.353	31812	40	95.3	80	120	
Mn	55	3	72	39.357	39.357	ppb	0.426	16071	40	98.4	80	120	
Fe	56	2	72	798.123	798.123	ppb	2.781	1268234	40	1995.3	80	120	>+/-20%
(Fe)	56	3	72	740.340	740.340	ppb	0.719	491973	40	1850.9	80	120	>+/-20%
Co	59	3	72	37.884	37.884	ppb	1.118	48671	40	94.7	80	120	
Ni	60	3	72	38.130	38.130	ppb	2.847	14464	40	95.3	80	120	
Cu	63	3	72	38.046	38.046	ppb	1.012	37844	40	95.1	80	120	
Zn	66	3	72	37.755	37.755	ppb	0.944	6172	40	94.4	80	120	
As	75	3	72	39.209	39.209	ppb	2.591	4410	40	98.0	80	120	
Se	78	2	72	39.358	39.358	ppb	3.140	2258	40	98.4	80	120	
(Se)	78	3	72	38.189	38.189	ppb	16.810	262	40	95.5	80	120	
Sr	88	3	72	75.985	75.985	ppb	2.124	40318	40	190.0	80	120	>+/-20%
Mo	95	3	115	37.076	37.076	ppb	0.894	18527	40	92.7	80	120	
Ag	107	3	115	38.387	38.387	ppb	1.634	64637	40	96.0	80	120	
Cd	111	3	115	37.601	37.601	ppb	0.963	9034	40	94.0	80	120	
Sn	120	3	115	35.075	35.075	ppb	3.309	27358	40	87.7	80	120	
Sb	121	3	115	37.421	37.421	ppb	0.275	28194	40	93.6	80	120	
Ba	137	3	115	38.593	38.593	ppb	2.718	9520	40	96.5	80	120	
Tl	205	3	193	36.656	36.656	ppb	1.348	145627	40	91.6	80	120	
(Pb)	206	3	193	37.194	37.194	ppb	1.774	49248	40	93.0	80	120	
(Pb)	207	3	193	36.913	36.913	ppb	2.332	43174	40	92.3	80	120	
Pb	208	3	193	37.165	37.165	ppb	1.443	198739	40	92.9	80	120	
Th	232	3	193	34.411	34.411	ppb	1.591	188962	40	86.0	80	120	
U	238	3	193	37.280	37.280	ppb	0.265	208942	40	93.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4113826	0.85	4300192	95.67	60	120	
Sc (IS)	45	3	HMI He	603197	0.10	644593	93.58	60	120	
Ge Internal standard	72	2	HMI H2	2474550	0.60	2598552	95.23	60	120	
Ge Internal standard	72	3	HMI He	746911	0.63	772392	96.70	60	120	
In Internal Standard	115	3	HMI He	2781363	1.83	2872781	96.82	60	120	
Ir (IS)	193	3	HMI He	6251064	0.50	6092963	102.59	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-609246/3-A
Data File Name	263SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:31:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.246	ppb	41.246	1.43	1684	2000	
Na	23	3	45	800.808	ppb	800.808	0.71	101395	400000	
Mg	24	3	45	698.893	ppb	698.893	0.72	39618	400000	
Al	27	3	45	733.603	ppb	733.603	2.81	16132	400000	
K	39	3	45	716.201	ppb	716.201	2.18	59180	400000	
Ca	40	2	45	803.572	ppb	803.572	0.21	450280	400000	
V	51	3	72	36.514	ppb	36.514	1.36	23483	2000	
Cr	52	3	72	37.674	ppb	37.674	1.33	31568	5000	
Mn	55	3	72	37.929	ppb	37.929	1.48	15549	10000	
Fe	56	2	72	779.472	ppb	779.472	1.03	1249732	10000	
Co	59	3	72	37.722	ppb	37.722	1.91	48599	2000	
Ni	60	3	72	37.484	ppb	37.484	2.16	14270	5000	
Cu	63	3	72	37.842	ppb	37.842	3.21	37749	5000	
Zn	66	3	72	38.531	ppb	38.531	3.25	6312	5000	
As	75	3	72	36.320	ppb	36.320	4.63	4102	2000	
Se	78	2	72	38.314	ppb	38.314	4.00	2216	2000	
Sr	88	3	72	76.170	ppb	76.170	1.09	40527	4000	
Mo	95	3	115	36.275	ppb	36.275	3.16	18111	2000	
Ag	107	3	115	38.212	ppb	38.212	2.28	64277	100	
Cd	111	3	115	38.340	ppb	38.340	0.97	9204	2000	
Sn	120	3	115	35.529	ppb	35.529	2.62	27682	2000	
Sb	121	3	115	38.167	ppb	38.167	1.68	28727	1000	
Ba	137	3	115	38.660	ppb	38.660	2.66	9529	5000	
Tl	205	3	193	37.379	ppb	37.379	2.09	145536	2000	
(Pb)	206	3	193	38.218	ppb	38.218	0.70	49597	100	
(Pb)	207	3	193	37.526	ppb	37.526	3.10	43006	100	
Pb	208	3	193	37.748	ppb	37.748	1.98	197819	5000	
Th	232	3	193	37.327	ppb	37.327	2.58	200301	2000	
U	238	3	193	37.627	ppb	37.627	1.67	206694	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4055751	1.77	4300192	94.32	60	120	
Sc (IS)	45	3	HMI He	601056	1.63	644593	93.25	60	120	
Ge Internal standard	72	2	HMI H2	2493869	1.44	2598552	95.97	60	120	
Ge Internal standard	72	3	HMI He	749116	2.08	772392	96.99	60	120	
In Internal Standard	115	3	HMI He	2778977	1.90	2872781	96.73	60	120	
Ir (IS)	193	3	HMI He	6128113	1.99	6092963	100.58	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-A
Data File Name	264SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:32:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.056	ppb	0.056	132.18	8	2000	
Na	23	3	45	1301.573	ppb	1301.573	1.18	153244	400000	
Mg	24	3	45	1797.249	ppb	1797.249	3.28	100297	400000	
Al	27	3	45	1586.943	ppb	1586.943	3.38	34310	400000	
K	39	3	45	2166.349	ppb	2166.349	2.36	124449	400000	
Ca	40	2	45	34010.724	ppb	34010.724	1.20	18785032	400000	
V	51	3	72	4.399	ppb	4.399	6.55	3662	2000	
Cr	52	3	72	2.147	ppb	2.147	16.98	4635	5000	
Mn	55	3	72	30.246	ppb	30.246	2.14	12418	10000	
Fe	56	2	72	1299.935	ppb	1299.935	2.43	2081661	10000	
Co	59	3	72	0.538	ppb	0.538	3.57	743	2000	
Ni	60	3	72	1.555	ppb	1.555	10.37	1228	5000	
Cu	63	3	72	5.886	ppb	5.886	2.63	6168	5000	
Zn	66	3	72	24.196	ppb	24.196	0.25	4029	5000	
As	75	3	72	1.226	ppb	1.226	7.34	178	2000	
Se	78	2	72	0.226	ppb	0.226	36.04	15	2000	
Sr	88	3	72	63.384	ppb	63.384	1.15	33586	4000	
Mo	95	3	115	2.676	ppb	2.676	7.51	1354	2000	
Ag	107	3	115	0.027	ppb	0.027	17.74	58	100	
Cd	111	3	115	0.023	ppb	0.023	188.04	15	2000	
Sn	120	3	115	0.355	ppb	0.355	5.56	988	2000	
Sb	121	3	115	0.391	ppb	0.391	18.92	333	1000	
Ba	137	3	115	23.470	ppb	23.470	1.64	5740	5000	
Tl	205	3	193	-0.014	ppb	-0.014	-23.27	327	2000	
(Pb)	206	3	193	1.791	ppb	1.791	4.12	2612	100	
(Pb)	207	3	193	1.655	ppb	1.655	4.65	2344	100	
Pb	208	3	193	1.691	ppb	1.691	3.86	10220	5000	
Th	232	3	193	2.288	ppb	2.288	18.05	18651	2000	
U	238	3	193	0.301	ppb	0.301	7.51	3162	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4106577	0.50	4300192	95.50	60	120	
Sc (IS)	45	3	HMI He	594026	0.72	644593	92.16	60	120	
Ge Internal standard	72	2	HMI H2	2541267	2.18	2598552	97.80	60	120	
Ge Internal standard	72	3	HMI He	745801	0.32	772392	96.56	60	120	
In Internal Standard	115	3	HMI He	2745634	0.85	2872781	95.57	60	120	
Ir (IS)	193	3	HMI He	6085984	1.00	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-B MS
Data File Name	265SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:34:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.394	ppb	39.394	6.50	1646	2000	
Na	23	3	45	2152.293	ppb	2152.293	2.82	240263	400000	
Mg	24	3	45	2546.946	ppb	2546.946	2.11	140228	400000	
Al	27	3	45	2623.558	ppb	2623.558	2.18	55908	400000	
K	39	3	45	2981.928	ppb	2981.928	1.35	159470	400000	
Ca	40	2	45	33900.198	ppb	33900.198	2.43	19175801	400000	
V	51	3	72	41.356	ppb	41.356	1.27	26100	2000	
Cr	52	3	72	40.812	ppb	40.812	1.32	33470	5000	
Mn	55	3	72	67.900	ppb	67.900	0.59	27161	10000	
Fe	56	2	72	2049.449	ppb	2049.449	0.51	3268974	10000	
Co	59	3	72	38.114	ppb	38.114	2.10	48422	2000	
Ni	60	3	72	37.429	ppb	37.429	3.69	14048	5000	
Cu	63	3	72	44.359	ppb	44.359	2.54	43563	5000	
Zn	66	3	72	65.575	ppb	65.575	2.64	10437	5000	
As	75	3	72	38.898	ppb	38.898	1.41	4327	2000	
Se	78	2	72	37.707	ppb	37.707	2.94	2237	2000	
Sr	88	3	72	139.392	ppb	139.392	2.36	73091	4000	
Mo	95	3	115	38.407	ppb	38.407	1.52	19391	2000	
Ag	107	3	115	37.035	ppb	37.035	0.85	63024	100	
Cd	111	3	115	36.180	ppb	36.180	1.39	8787	2000	
Sn	120	3	115	34.620	ppb	34.620	0.59	27309	2000	
Sb	121	3	115	37.444	ppb	37.444	3.56	28493	1000	
Ba	137	3	115	61.414	ppb	61.414	2.12	15285	5000	
Tl	205	3	193	37.930	ppb	37.930	0.88	142709	2000	
(Pb)	206	3	193	40.084	ppb	40.084	0.33	50243	100	
(Pb)	207	3	193	39.918	ppb	39.918	1.90	44185	100	
Pb	208	3	193	39.834	ppb	39.834	0.54	201640	5000	
Th	232	3	193	36.936	ppb	36.936	2.09	191624	2000	
U	238	3	193	38.659	ppb	38.659	1.06	205148	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4205734	0.88	4300192	97.80	60	120	
Sc (IS)	45	3	HMI He	586401	1.90	644593	90.97	60	120	
Ge Internal standard	72	2	HMI H2	2558409	0.66	2598552	98.46	60	120	
Ge Internal standard	72	3	HMI He	738682	2.11	772392	95.64	60	120	
In Internal Standard	115	3	HMI He	2810993	3.09	2872781	97.85	60	120	
Ir (IS)	193	3	HMI He	5920209	0.57	6092963	97.16	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-C MSD
Data File Name	266SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:36:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.492	ppb	42.492	4.12	1718	2000	
Na	23	3	45	2103.886	ppb	2103.886	1.52	235817	400000	
Mg	24	3	45	2605.111	ppb	2605.111	1.78	143804	400000	
Al	27	3	45	2898.152	ppb	2898.152	2.25	61914	400000	
K	39	3	45	3087.279	ppb	3087.279	1.57	164672	400000	
Ca	40	2	45	36046.908	ppb	36046.908	3.03	19880045	400000	
V	51	3	72	42.432	ppb	42.432	2.02	26717	2000	
Cr	52	3	72	40.705	ppb	40.705	1.49	33347	5000	
Mn	55	3	72	68.723	ppb	68.723	1.77	27445	10000	
Fe	56	2	72	2237.995	ppb	2237.995	1.65	3436924	10000	
Co	59	3	72	38.567	ppb	38.567	0.80	48935	2000	
Ni	60	3	72	38.424	ppb	38.424	0.62	14392	5000	
Cu	63	3	72	44.688	ppb	44.688	0.82	43836	5000	
Zn	66	3	72	63.294	ppb	63.294	2.35	10070	5000	
As	75	3	72	41.600	ppb	41.600	3.64	4618	2000	
Se	78	2	72	40.684	ppb	40.684	1.96	2328	2000	
Sr	88	3	72	143.051	ppb	143.051	0.61	74921	4000	
Mo	95	3	115	38.793	ppb	38.793	2.76	19624	2000	
Ag	107	3	115	37.829	ppb	37.829	2.22	64500	100	
Cd	111	3	115	36.412	ppb	36.412	1.42	8857	2000	
Sn	120	3	115	35.129	ppb	35.129	1.80	27753	2000	
Sb	121	3	115	36.789	ppb	36.789	2.58	28067	1000	
Ba	137	3	115	63.158	ppb	63.158	3.53	15747	5000	
Tl	205	3	193	39.580	ppb	39.580	1.61	147006	2000	
(Pb)	206	3	193	41.898	ppb	41.898	0.60	51840	100	
(Pb)	207	3	193	40.005	ppb	40.005	0.62	43717	100	
Pb	208	3	193	41.424	ppb	41.424	1.17	206970	5000	
Th	232	3	193	39.641	ppb	39.641	0.95	202550	2000	
U	238	3	193	40.316	ppb	40.316	0.75	211172	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4101257	1.94	4300192	95.37	60	120	
Sc (IS)	45	3	HMI He	588063	1.02	644593	91.23	60	120	
Ge Internal standard	72	2	HMI H2	2467217	0.08	2598552	94.95	60	120	
Ge Internal standard	72	3	HMI He	737667	0.66	772392	95.50	60	120	
In Internal Standard	115	3	HMI He	2816315	1.12	2872781	98.03	60	120	
Ir (IS)	193	3	HMI He	5845561	1.08	6092963	95.94	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-D
Data File Name	267SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:38:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	72565.526	ppb	72565.526	0.55	7651693	400000	
Mg	24	3	45	20243.865	ppb	20243.865	1.31	1119964	400000	
Al	27	3	45	20.571	ppb	20.571	19.44	581	400000	
K	39	3	45	23130.494	ppb	23130.494	2.02	1071282	400000	
Ca	40	2	45	32028.400	ppb	32028.400	2.02	17622410	400000	
V	51	3	72	1.368	ppb	1.368	21.19	1781	2000	
Cr	52	3	72	10.186	ppb	10.186	2.44	10574	5000	
Mn	55	3	72	12.931	ppb	12.931	1.85	5453	10000	
Fe	56	2	72	509.255	ppb	509.255	0.86	847722	10000	
Co	59	3	72	0.846	ppb	0.846	3.69	1124	2000	
Ni	60	3	72	2.565	ppb	2.565	4.07	1574	5000	
Cu	63	3	72	18.023	ppb	18.023	0.30	17891	5000	
Zn	66	3	72	33.509	ppb	33.509	1.08	5430	5000	
As	75	3	72	5.741	ppb	5.741	9.57	673	2000	
Se	78	2	72	0.468	ppb	0.468	41.41	29	2000	
Sr	88	3	72	185.618	ppb	185.618	0.86	97136	4000	
Mo	95	3	115	325.500	ppb	325.500	0.81	162790	2000	
Ag	107	3	115	0.022	ppb	0.022	46.32	50	100	
Cd	111	3	115	0.325	ppb	0.325	24.05	88	2000	
Sn	120	3	115	0.138	ppb	0.138	12.45	838	2000	
Sb	121	3	115	2.561	ppb	2.561	9.03	1974	1000	
Ba	137	3	115	10.233	ppb	10.233	4.08	2576	5000	
Tl	205	3	193	-0.023	ppb	-0.023	-102.47	288	2000	
(Pb)	206	3	193	0.324	ppb	0.324	8.40	728	100	
(Pb)	207	3	193	0.281	ppb	0.281	7.79	793	100	
Pb	208	3	193	0.340	ppb	0.340	4.41	3219	5000	
Th	232	3	193	1.913	ppb	1.913	13.36	16636	2000	
U	238	3	193	0.517	ppb	0.517	6.47	4305	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4090645	1.68	4300192	95.13	60	120	
Sc (IS)	45	3	HMI He	590181	0.35	644593	91.56	60	120	
Ge Internal standard	72	2	HMI H2	2523718	1.03	2598552	97.12	60	120	
Ge Internal standard	72	3	HMI He	737103	1.11	772392	95.43	60	120	
In Internal Standard	115	3	HMI He	2788676	1.49	2872781	97.07	60	120	
Ir (IS)	193	3	HMI He	6049500	1.20	6092963	99.29	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-E MS
Data File Name	268SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:40:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.156	ppb	40.156	8.11	1649	2000	
Na	23	3	45	74172.749	ppb	74172.749	1.23	7830500	400000	
Mg	24	3	45	21167.215	ppb	21167.215	2.79	1172529	400000	
Al	27	3	45	728.701	ppb	728.701	1.36	15751	400000	
K	39	3	45	24499.414	ppb	24499.414	1.31	1134619	400000	
Ca	40	2	45	32500.007	ppb	32500.007	0.46	18375655	400000	
V	51	3	72	37.644	ppb	37.644	2.91	24077	2000	
Cr	52	3	72	46.540	ppb	46.540	1.30	38140	5000	
Mn	55	3	72	49.786	ppb	49.786	1.91	20211	10000	
Fe	56	2	72	1277.468	ppb	1277.468	0.84	2004568	10000	
Co	59	3	72	36.913	ppb	36.913	2.66	47369	2000	
Ni	60	3	72	37.284	ppb	37.284	0.29	14147	5000	
Cu	63	3	72	55.289	ppb	55.289	1.96	54762	5000	
Zn	66	3	72	70.220	ppb	70.220	1.94	11277	5000	
As	75	3	72	42.357	ppb	42.357	4.02	4755	2000	
Se	78	2	72	38.500	ppb	38.500	5.85	2221	2000	
Sr	88	3	72	260.972	ppb	260.972	1.85	138209	4000	
Mo	95	3	115	366.777	ppb	366.777	0.46	183666	2000	
Ag	107	3	115	36.275	ppb	36.275	0.71	61324	100	
Cd	111	3	115	35.917	ppb	35.917	1.93	8664	2000	
Sn	120	3	115	35.379	ppb	35.379	1.33	27702	2000	
Sb	121	3	115	38.541	ppb	38.541	0.97	29147	1000	
Ba	137	3	115	48.797	ppb	48.797	0.40	12073	5000	
Tl	205	3	193	36.496	ppb	36.496	2.42	141397	2000	
(Pb)	206	3	193	37.202	ppb	37.202	0.81	48050	100	
(Pb)	207	3	193	36.777	ppb	36.777	4.55	41940	100	
Pb	208	3	193	36.928	ppb	36.928	1.89	192597	5000	
Th	232	3	193	34.899	ppb	34.899	0.94	186834	2000	
U	238	3	193	37.567	ppb	37.567	2.03	205331	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203419	1.52	4300192	97.75	60	120	
Sc (IS)	45	3	HMI He	590960	0.88	644593	91.68	60	120	
Ge Internal standard	72	2	HMI H2	2487978	0.64	2598552	95.74	60	120	
Ge Internal standard	72	3	HMI He	746231	1.89	772392	96.61	60	120	
In Internal Standard	115	3	HMI He	2792165	1.57	2872781	97.19	60	120	
Ir (IS)	193	3	HMI He	6097658	1.86	6092963	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-F MSD
Data File Name	269SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:41:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.045	ppb	41.045	4.63	1679	2000	
Na	23	3	45	71713.121	ppb	71713.121	1.27	7600520	400000	
Mg	24	3	45	19843.226	ppb	19843.226	0.41	1103435	400000	
Al	27	3	45	719.342	ppb	719.342	0.71	15611	400000	
K	39	3	45	23528.364	ppb	23528.364	2.90	1094657	400000	
Ca	40	2	45	32380.931	ppb	32380.931	0.73	17884845	400000	
V	51	3	72	36.641	ppb	36.641	1.95	23315	2000	
Cr	52	3	72	45.481	ppb	45.481	1.27	37096	5000	
Mn	55	3	72	48.881	ppb	48.881	1.73	19724	10000	
Fe	56	2	72	1260.135	ppb	1260.135	1.11	1991538	10000	
Co	59	3	72	36.493	ppb	36.493	2.88	46531	2000	
Ni	60	3	72	36.286	ppb	36.286	3.94	13692	5000	
Cu	63	3	72	54.840	ppb	54.840	2.04	53981	5000	
Zn	66	3	72	69.397	ppb	69.397	3.17	11074	5000	
As	75	3	72	42.370	ppb	42.370	1.75	4727	2000	
Se	78	2	72	37.521	ppb	37.521	3.65	2180	2000	
Sr	88	3	72	255.410	ppb	255.410	2.15	134391	4000	
Mo	95	3	115	358.305	ppb	358.305	1.46	178374	2000	
Ag	107	3	115	35.588	ppb	35.588	2.00	59811	100	
Cd	111	3	115	36.631	ppb	36.631	1.71	8782	2000	
Sn	120	3	115	35.311	ppb	35.311	1.52	27490	2000	
Sb	121	3	115	38.230	ppb	38.230	1.50	28745	1000	
Ba	137	3	115	46.893	ppb	46.893	1.39	11536	5000	
Tl	205	3	193	35.783	ppb	35.783	1.03	138025	2000	
(Pb)	206	3	193	36.506	ppb	36.506	0.78	46935	100	
(Pb)	207	3	193	36.139	ppb	36.139	0.81	41048	100	
Pb	208	3	193	36.247	ppb	36.247	1.04	188213	5000	
Th	232	3	193	35.103	ppb	35.103	2.19	187012	2000	
U	238	3	193	36.539	ppb	36.539	0.68	198852	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4106232	0.65	4300192	95.49	60	120	
Sc (IS)	45	3	HMI He	593235	1.14	644593	92.03	60	120	
Ge Internal standard	72	2	HMI H2	2504885	0.50	2598552	96.40	60	120	
Ge Internal standard	72	3	HMI He	741428	1.58	772392	95.99	60	120	
In Internal Standard	115	3	HMI He	2776228	2.26	2872781	96.64	60	120	
Ir (IS)	193	3	HMI He	6069067	1.11	6092963	99.61	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	270_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:43:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.511	ppb	4.215	2086	50	107.0	90	110	
Na	23	3	45	46656.803	ppb	2.443	4841818	51000	91.5	90	110	
Mg	24	3	45	9984.710	ppb	2.401	543184	11000	90.8	90	110	
Al	27	3	45	929.153	ppb	5.168	19673	1000	92.9	90	110	
K	39	3	45	9947.093	ppb	1.446	467374	11000	90.4	90	110	
Ca	40	2	45	10357.151	ppb	1.771	5506443	11000	94.2	90	110	
V	51	3	72	47.783	ppb	2.517	28578	50	95.6	90	110	
Cr	52	3	72	48.909	ppb	1.969	37642	50	97.8	90	110	
Mn	55	3	72	47.868	ppb	2.287	18335	50	95.7	90	110	
Fe	56	2	72	1084.984	ppb	2.855	1586836	1000	108.5	90	110	
Co	59	3	72	48.949	ppb	1.675	59221	50	97.9	90	110	
Ni	60	3	72	48.472	ppb	1.235	17149	50	96.9	90	110	
Cu	63	3	72	48.797	ppb	1.467	45614	50	97.6	90	110	
Zn	66	3	72	49.370	ppb	2.225	7537	50	98.7	90	110	
As	75	3	72	52.034	ppb	1.571	5500	50	104.1	90	110	
Se	78	2	72	51.391	ppb	2.206	2749	50	102.8	90	110	
Sr	88	3	72	100.969	ppb	1.972	50446	100	101.0	90	110	
Mo	95	3	115	48.511	ppb	2.824	23407	50	97.0	90	110	
Ag	107	3	115	48.337	ppb	3.077	78623	50	96.7	90	110	
Cd	111	3	115	48.109	ppb	2.117	11162	50	96.2	90	110	
Sn	120	3	115	46.972	ppb	0.418	35175	50	93.9	90	110	
Sb	121	3	115	49.418	ppb	2.518	35954	50	98.8	90	110	
Ba	137	3	115	48.611	ppb	1.678	11574	50	97.2	90	110	
Tl	205	3	193	47.156	ppb	1.317	179717	50	94.3	90	110	
(Pb)	206	3	193	47.258	ppb	1.509	59978	50	94.5	90	110	
(Pb)	207	3	193	47.346	ppb	1.676	53019	50	94.7	90	110	
Pb	208	3	193	47.007	ppb	1.904	240880	50	94.0	90	110	
Th	232	3	193	49.411	ppb	1.072	257517	50	98.8	90	110	
U	238	3	193	47.461	ppb	3.388	254863	50	94.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3947305	1.22	4300192	91.79	60	120	
Sc (IS)	45	3	HMI He	580386	2.06	644593	90.04	60	120	
Ge Internal standard	72	2	HMI H2	2306927	0.92	2598552	88.78	60	120	
Ge Internal standard	72	3	HMI He	703504	0.94	772392	91.08	60	120	
In Internal Standard	115	3	HMI He	2687875	2.51	2872781	93.56	60	120	
Ir (IS)	193	3	HMI He	6000795	1.65	6092963	98.49	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	271_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:45:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.024	ppb	-9.9	5	0.5	
Na	23	3	45	61.916	ppb	14.1	21394	25	>RL
Mg	24	3	45	1.801	ppb	100.0	340	25	
Al	27	3	45	-2.274	ppb	-91.4	90	15	
K	39	3	45	-9.286	ppb	-236.3	24830	50	
V	51	3	72	-0.530	ppb	-8.5	615	1	
Cr	52	3	72	0.629	ppb	30.6	3372	1	
Mn	55	3	72	-0.176	ppb	-70.0	285	0.5	
Co	59	3	72	0.011	ppb	94.4	65	0.5	
Ni	60	3	72	0.687	ppb	28.5	883	1	
Cu	63	3	72	-0.028	ppb	-134.8	342	1	
Zn	66	3	72	-0.162	ppb	-143.9	188	5	
As	75	3	72	0.027	ppb	534.2	43	1	
Se	78	2	72	0.048	ppb	39.2	5	1	
Sr	88	3	72	0.022	ppb	181.7	52	0.5	
Mo	95	3	115	0.145	ppb	20.9	107	0.5	
Ag	107	3	115	0.013	ppb	36.7	33	1	
Cd	111	3	115	0.002	ppb	2393.8	10	0.5	
Sn	120	3	115	0.096	ppb	56.4	785	1	
Sb	121	3	115	0.040	ppb	20.9	72	0.6	
Ba	137	3	115	-0.027	ppb	-112.1	52	0.5	
Tl	205	3	193	-0.018	ppb	-81.0	310	0.1	
(Pb)	206	3	193	-0.089	ppb	-9.8	203	1	
(Pb)	207	3	193	-0.107	ppb	-16.7	358	1	
Pb	208	3	193	-0.092	ppb	-21.8	998	0.5	
Th	232	3	193	1.906	ppb	18.7	16563	1	>RL
U	238	3	193	0.018	ppb	34.6	1616	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4107211	2.34	4300192	95.51	60	120	
Sc (IS)	45	3	HMI He	578971	0.38	644593	89.82	60	120	
Ge Internal standard	72	2	HMI H2	2454682	1.53	2598552	94.46	60	120	
Ge Internal standard	72	3	HMI He	720395	0.78	772392	93.27	60	120	
In Internal Standard	115	3	HMI He	2715462	0.52	2872781	94.52	60	120	
Ir (IS)	193	3	HMI He	6043618	1.78	6092963	99.19	60	120	

Sample Report

Sample Table

Sample Name	280-175167-A-3-A
Data File Name	272SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:47:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.36	2	2000	
Na	23	3	45	222351.348	ppb	222351.348	1.41	23953796	400000	
Mg	24	3	45	10784.708	ppb	10784.708	0.77	610469	400000	
Al	27	3	45	826.412	ppb	826.412	2.61	18230	400000	
K	39	3	45	135302.275	ppb	135302.275	0.26	6282886	400000	
Ca	40	2	45	27209.340	ppb	27209.340	0.55	15107044	400000	
V	51	3	72	-0.441	ppb	-0.441	-33.68	708	2000	
Cr	52	3	72	0.438	ppb	0.438	40.47	3427	5000	
Mn	55	3	72	11.684	ppb	11.684	4.37	5142	10000	
Fe	56	2	72	218.926	ppb	218.926	3.07	393654	10000	
Co	59	3	72	0.086	ppb	0.086	14.36	167	2000	
Ni	60	3	72	3.394	ppb	3.394	12.91	1938	5000	
Cu	63	3	72	2.978	ppb	2.978	6.29	3389	5000	
Zn	66	3	72	5.968	ppb	5.968	4.28	1188	5000	
As	75	3	72	4.215	ppb	4.215	6.86	523	2000	
Se	78	2	72	1.597	ppb	1.597	12.33	94	2000	
Sr	88	3	72	294.483	ppb	294.483	0.84	159654	4000	
Mo	95	3	115	32.268	ppb	32.268	2.56	16253	2000	
Ag	107	3	115	0.011	ppb	0.011	13.06	32	100	
Cd	111	3	115	-0.034	ppb	-0.034	-35.82	2	2000	
Sn	120	3	115	-0.074	ppb	-0.074	-154.69	680	2000	
Sb	121	3	115	2.690	ppb	2.690	6.48	2082	1000	
Ba	137	3	115	7.448	ppb	7.448	6.73	1901	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-29.18	203	2000	
(Pb)	206	3	193	0.009	ppb	0.009	523.01	332	100	
(Pb)	207	3	193	0.016	ppb	0.016	142.86	501	100	
Pb	208	3	193	0.008	ppb	0.008	326.64	1531	5000	
Th	232	3	193	0.484	ppb	0.484	34.95	9442	2000	
U	238	3	193	0.117	ppb	0.117	18.70	2179	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4127125	0.91	4300192	95.98	60	120	
Sc (IS)	45	3	HMI He	603766	0.66	644593	93.67	60	120	
Ge Internal standard	72	2	HMI H2	2485738	1.96	2598552	95.66	60	120	
Ge Internal standard	72	3	HMI He	763809	0.44	772392	98.89	60	120	
In Internal Standard	115	3	HMI He	2803258	1.50	2872781	97.58	60	120	
Ir (IS)	193	3	HMI He	6121810	0.90	6092963	100.47	60	120	

Sample Report

Sample Table

Sample Name	280-175184-B-1-C
Data File Name	273SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:49:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.40	2	2000	
Na	23	3	45	111523.927	ppb	111523.927	1.01	12017006	400000	
Mg	24	3	45	14033.761	ppb	14033.761	2.07	793963	400000	
Al	27	3	45	0.453	ppb	0.453	483.18	153	400000	
K	39	3	45	5709.616	ppb	5709.616	0.93	290235	400000	
Ca	40	2	45	84225.108	ppb	84225.108	1.23	47021819	400000	
V	51	3	72	-0.586	ppb	-0.586	-13.08	606	2000	
Cr	52	3	72	0.243	ppb	0.243	87.39	3224	5000	
Mn	55	3	72	1.428	ppb	1.428	6.75	941	10000	
Fe	56	2	72	11.050	ppb	11.050	38.12	80688	10000	
Co	59	3	72	0.160	ppb	0.160	16.77	260	2000	
Ni	60	3	72	1.943	ppb	1.943	6.54	1378	5000	
Cu	63	3	72	0.417	ppb	0.417	11.71	796	5000	
Zn	66	3	72	2.509	ppb	2.509	16.04	620	5000	
As	75	3	72	0.173	ppb	0.173	105.25	62	2000	
Se	78	2	72	0.100	ppb	0.100	34.21	8	2000	
Sr	88	3	72	612.500	ppb	612.500	0.54	326550	4000	
Mo	95	3	115	1.304	ppb	1.304	12.72	698	2000	
Ag	107	3	115	0.007	ppb	0.007	224.10	25	100	
Cd	111	3	115	0.014	ppb	0.014	225.18	13	2000	
Sn	120	3	115	-0.188	ppb	-0.188	-36.45	598	2000	
Sb	121	3	115	0.064	ppb	0.064	39.97	93	1000	
Ba	137	3	115	70.836	ppb	70.836	1.57	17706	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-4.16	143	2000	
(Pb)	206	3	193	-0.058	ppb	-0.058	-58.28	245	100	
(Pb)	207	3	193	-0.106	ppb	-0.106	-28.25	363	100	
Pb	208	3	193	-0.064	ppb	-0.064	-14.13	1158	5000	
Th	232	3	193	-0.085	ppb	-0.085	-116.38	6488	2000	
U	238	3	193	1.687	ppb	1.687	1.78	10716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152455	0.33	4300192	96.56	60	120	
Sc (IS)	45	3	HMI He	603567	1.26	644593	93.64	60	120	
Ge Internal standard	72	2	HMI H2	2580063	1.34	2598552	99.29	60	120	
Ge Internal standard	72	3	HMI He	751232	0.79	772392	97.26	60	120	
In Internal Standard	115	3	HMI He	2825559	0.88	2872781	98.36	60	120	
Ir (IS)	193	3	HMI He	6113881	2.52	6092963	100.34	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-1-A
Data File Name	274SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:51:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.04	2	2000	
Na	23	3	45	146619.899	ppb	146619.899	3.91	15664528	400000	
Mg	24	3	45	24215.029	ppb	24215.029	2.49	1358779	400000	
Al	27	3	45	20.346	ppb	20.346	11.01	584	400000	
K	39	3	45	5344.690	ppb	5344.690	2.21	271139	400000	
Ca	40	2	45	233156.457	ppb	233156.457	1.15	129033443	400000	
V	51	3	72	-0.434	ppb	-0.434	-17.85	705	2000	
Cr	52	3	72	0.516	ppb	0.516	29.47	3449	5000	
Mn	55	3	72	207.027	ppb	207.027	2.18	83893	10000	
Fe	56	2	72	87.842	ppb	87.842	6.94	200150	10000	
Co	59	3	72	11.815	ppb	11.815	1.32	15386	2000	
Ni	60	3	72	11.160	ppb	11.160	3.68	4757	5000	
Cu	63	3	72	0.275	ppb	0.275	26.59	660	5000	
Zn	66	3	72	15.227	ppb	15.227	2.00	2651	5000	
As	75	3	72	0.689	ppb	0.689	8.50	120	2000	
Se	78	2	72	65.677	ppb	65.677	4.32	3896	2000	
Sr	88	3	72	4807.969	ppb	4807.969	1.34	2576802	4000	
Mo	95	3	115	8072.694	ppb	8072.694	3.74	4018905	2000	
Ag	107	3	115	0.010	ppb	0.010	4.49	30	100	
Cd	111	3	115	0.800	ppb	0.800	23.53	202	2000	
Sn	120	3	115	-0.215	ppb	-0.215	-34.45	568	2000	
Sb	121	3	115	0.082	ppb	0.082	12.25	105	1000	
Ba	137	3	115	29.359	ppb	29.359	6.97	7243	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-15.60	202	2000	
(Pb)	206	3	193	-0.097	ppb	-0.097	-47.85	195	100	
(Pb)	207	3	193	-0.115	ppb	-0.115	-19.45	353	100	
Pb	208	3	193	-0.095	ppb	-0.095	-14.54	1000	5000	
Th	232	3	193	-0.097	ppb	-0.097	-68.04	6427	2000	
U	238	3	193	81.590	ppb	81.590	1.81	445756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4117657	2.72	4300192	95.76	60	120	
Sc (IS)	45	3	HMI He	598724	1.30	644593	92.88	60	120	
Ge Internal standard	72	2	HMI H2	2560759	2.87	2598552	98.55	60	120	
Ge Internal standard	72	3	HMI He	755251	1.34	772392	97.78	60	120	
In Internal Standard	115	3	HMI He	2778111	2.58	2872781	96.70	60	120	
Ir (IS)	193	3	HMI He	6118978	0.79	6092963	100.43	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-2-A
Data File Name	275SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:52:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.106	ppb	-0.106	-69.55	2	2000	
Na	23	3	45	148949.145	ppb	148949.145	1.28	15554272	400000	
Mg	24	3	45	24485.819	ppb	24485.819	2.52	1342875	400000	
Al	27	3	45	32.756	ppb	32.756	9.67	834	400000	
K	39	3	45	5449.826	ppb	5449.826	0.90	269731	400000	
Ca	40	2	45	242988.654	ppb	242988.654	2.42	130740830	400000	
V	51	3	72	-0.427	ppb	-0.427	-24.16	691	2000	
Cr	52	3	72	0.593	ppb	0.593	65.61	3420	5000	
Mn	55	3	72	213.825	ppb	213.825	0.68	84520	10000	
Fe	56	2	72	71.807	ppb	71.807	5.15	171680	10000	
Co	59	3	72	11.843	ppb	11.843	2.71	15044	2000	
Ni	60	3	72	11.529	ppb	11.529	9.14	4772	5000	
Cu	63	3	72	0.310	ppb	0.310	9.53	678	5000	
Zn	66	3	72	14.064	ppb	14.064	5.70	2404	5000	
As	75	3	72	0.624	ppb	0.624	21.52	110	2000	
Se	78	2	72	68.248	ppb	68.248	2.81	3970	2000	
Sr	88	3	72	4893.607	ppb	4893.607	2.60	2558371	4000	
Mo	95	3	115	1775.495	ppb	1775.495	1.96	883470	2000	
Ag	107	3	115	0.008	ppb	0.008	56.43	27	100	
Cd	111	3	115	0.154	ppb	0.154	65.77	47	2000	
Sn	120	3	115	-0.109	ppb	-0.109	-44.05	646	2000	
Sb	121	3	115	0.073	ppb	0.073	43.92	98	1000	
Ba	137	3	115	28.531	ppb	28.531	3.33	7040	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-21.96	158	2000	
(Pb)	206	3	193	-0.062	ppb	-0.062	-4.52	232	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-64.77	401	100	
Pb	208	3	193	-0.076	ppb	-0.076	-14.73	1059	5000	
Th	232	3	193	-0.306	ppb	-0.306	-22.83	5164	2000	
U	238	3	193	66.524	ppb	66.524	0.72	351622	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4003450	1.39	4300192	93.10	60	120	
Sc (IS)	45	3	HMI He	585105	0.45	644593	90.77	60	120	
Ge Internal standard	72	2	HMI H2	2509350	1.56	2598552	96.57	60	120	
Ge Internal standard	72	3	HMI He	736678	0.34	772392	95.38	60	120	
In Internal Standard	115	3	HMI He	2775126	0.79	2872781	96.60	60	120	
Ir (IS)	193	3	HMI He	5915021	0.67	6092963	97.08	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-3-A
Data File Name	276SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:54:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.107	ppb	-0.107	-68.68	2	2000	
Na	23	3	45	141774.209	ppb	141774.209	0.78	15202327	400000	
Mg	24	3	45	23036.447	ppb	23036.447	2.19	1297200	400000	
Al	27	3	45	22.378	ppb	22.378	13.94	631	400000	
K	39	3	45	5238.748	ppb	5238.748	0.45	267235	400000	
Ca	40	2	45	231239.118	ppb	231239.118	0.77	124586190	400000	
V	51	3	72	-0.540	ppb	-0.540	-13.69	636	2000	
Cr	52	3	72	0.511	ppb	0.511	54.64	3434	5000	
Mn	55	3	72	205.028	ppb	205.028	2.15	82839	10000	
Fe	56	2	72	60.194	ppb	60.194	9.81	150551	10000	
Co	59	3	72	11.182	ppb	11.182	2.91	14517	2000	
Ni	60	3	72	10.353	ppb	10.353	0.61	4449	5000	
Cu	63	3	72	0.220	ppb	0.220	2.61	603	5000	
Zn	66	3	72	13.813	ppb	13.813	5.05	2417	5000	
As	75	3	72	0.603	ppb	0.603	7.74	110	2000	
Se	78	2	72	65.226	ppb	65.226	3.18	3714	2000	
Sr	88	3	72	4686.175	ppb	4686.175	1.79	2503540	4000	
Mo	95	3	115	556.933	ppb	556.933	1.25	278234	2000	
Ag	107	3	115	0.014	ppb	0.014	43.84	37	100	
Cd	111	3	115	0.035	ppb	0.035	121.30	18	2000	
Sn	120	3	115	-0.218	ppb	-0.218	-25.15	566	2000	
Sb	121	3	115	0.099	ppb	0.099	16.99	118	1000	
Ba	137	3	115	27.876	ppb	27.876	2.75	6907	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-9.97	163	2000	
(Pb)	206	3	193	-0.089	ppb	-0.089	-18.22	205	100	
(Pb)	207	3	193	-0.089	ppb	-0.089	-6.75	381	100	
Pb	208	3	193	-0.088	ppb	-0.088	-3.08	1028	5000	
Th	232	3	193	-0.338	ppb	-0.338	-19.02	5159	2000	
U	238	3	193	40.981	ppb	40.981	2.06	223877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4007957	1.51	4300192	93.20	60	120	
Sc (IS)	45	3	HMI He	600780	0.69	644593	93.20	60	120	
Ge Internal standard	72	2	HMI H2	2456782	2.01	2598552	94.54	60	120	
Ge Internal standard	72	3	HMI He	752863	0.52	772392	97.47	60	120	
In Internal Standard	115	3	HMI He	2785796	0.38	2872781	96.97	60	120	
Ir (IS)	193	3	HMI He	6097951	1.04	6092963	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-4-A
Data File Name	277SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:56:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	143927.787	ppb	143927.787	0.93	15073239	400000	
Mg	24	3	45	23667.301	ppb	23667.301	2.54	1301563	400000	
Al	27	3	45	26.213	ppb	26.213	4.82	697	400000	
K	39	3	45	5321.918	ppb	5321.918	0.79	264740	400000	
Ca	40	2	45	224463.963	ppb	224463.963	1.05	125578983	400000	
V	51	3	72	-0.904	ppb	-0.904	-4.92	401	2000	
Cr	52	3	72	0.284	ppb	0.284	26.11	3184	5000	
Mn	55	3	72	208.336	ppb	208.336	1.13	82184	10000	
Fe	56	2	72	47.767	ppb	47.767	9.32	136646	10000	
Co	59	3	72	11.157	ppb	11.157	3.60	14145	2000	
Ni	60	3	72	11.161	ppb	11.161	1.74	4632	5000	
Cu	63	3	72	0.169	ppb	0.169	11.57	540	5000	
Zn	66	3	72	13.893	ppb	13.893	6.90	2372	5000	
As	75	3	72	0.641	ppb	0.641	14.83	112	2000	
Se	78	2	72	66.069	ppb	66.069	2.69	3893	2000	
Sr	88	3	72	4713.522	ppb	4713.522	1.99	2458885	4000	
Mo	95	3	115	247.264	ppb	247.264	2.10	122431	2000	
Ag	107	3	115	0.005	ppb	0.005	86.61	22	100	
Cd	111	3	115	-0.013	ppb	-0.013	-190.39	7	2000	
Sn	120	3	115	-0.284	ppb	-0.284	-32.11	511	2000	
Sb	121	3	115	0.078	ppb	0.078	10.25	102	1000	
Ba	137	3	115	28.395	ppb	28.395	2.54	6970	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-11.62	158	2000	
(Pb)	206	3	193	-0.122	ppb	-0.122	-5.99	158	100	
(Pb)	207	3	193	-0.110	ppb	-0.110	-21.91	348	100	
Pb	208	3	193	-0.104	ppb	-0.104	-4.16	926	5000	
Th	232	3	193	-0.372	ppb	-0.372	-7.88	4862	2000	
U	238	3	193	40.472	ppb	40.472	2.64	215663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4161771	0.25	4300192	96.78	60	120	
Sc (IS)	45	3	HMI He	586789	1.00	644593	91.03	60	120	
Ge Internal standard	72	2	HMI H2	2542380	1.74	2598552	97.84	60	120	
Ge Internal standard	72	3	HMI He	735119	0.35	772392	95.17	60	120	
In Internal Standard	115	3	HMI He	2760871	1.02	2872781	96.10	60	120	
Ir (IS)	193	3	HMI He	5949495	2.63	6092963	97.65	60	120	

Sample Report

Sample Table

Sample Name	280-175184-D-1-A
Data File Name	278SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:58:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	112433.923	ppb	112433.923	1.95	11930622	400000	
Mg	24	3	45	14269.181	ppb	14269.181	2.51	795276	400000	
Al	27	3	45	-1.459	ppb	-1.459	-167.08	110	400000	
K	39	3	45	5839.064	ppb	5839.064	1.09	291711	400000	
Ca	40	2	45	85978.585	ppb	85978.585	2.26	47808009	400000	
V	51	3	72	-0.894	ppb	-0.894	-1.37	408	2000	
Cr	52	3	72	0.347	ppb	0.347	87.98	3237	5000	
Mn	55	3	72	1.112	ppb	1.112	10.92	798	10000	
Fe	56	2	72	10.245	ppb	10.245	39.07	78004	10000	
Co	59	3	72	0.153	ppb	0.153	22.26	247	2000	
Ni	60	3	72	1.903	ppb	1.903	28.17	1338	5000	
Cu	63	3	72	0.366	ppb	0.366	15.93	731	5000	
Zn	66	3	72	2.158	ppb	2.158	22.00	553	5000	
As	75	3	72	0.033	ppb	0.033	364.33	45	2000	
Se	78	2	72	0.182	ppb	0.182	29.26	13	2000	
Sr	88	3	72	630.759	ppb	630.759	1.20	329802	4000	
Mo	95	3	115	1.959	ppb	1.959	15.51	1001	2000	
Ag	107	3	115	0.007	ppb	0.007	84.72	25	100	
Cd	111	3	115	-0.020	ppb	-0.020	-179.30	5	2000	
Sn	120	3	115	-0.220	ppb	-0.220	-19.71	556	2000	
Sb	121	3	115	0.021	ppb	0.021	106.67	58	1000	
Ba	137	3	115	71.235	ppb	71.235	1.97	17271	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-4.36	137	2000	
(Pb)	206	3	193	-0.094	ppb	-0.094	-11.53	197	100	
(Pb)	207	3	193	-0.138	ppb	-0.138	-19.46	323	100	
Pb	208	3	193	-0.102	ppb	-0.102	-11.91	951	5000	
Th	232	3	193	-0.388	ppb	-0.388	-2.90	4867	2000	
U	238	3	193	1.627	ppb	1.627	2.72	10296	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4135573	0.91	4300192	96.17	60	120	
Sc (IS)	45	3	HMI He	594403	1.20	644593	92.21	60	120	
Ge Internal standard	72	2	HMI H2	2533245	0.78	2598552	97.49	60	120	
Ge Internal standard	72	3	HMI He	736843	2.10	772392	95.40	60	120	
In Internal Standard	115	3	HMI He	2741316	2.01	2872781	95.42	60	120	
Ir (IS)	193	3	HMI He	6056954	2.78	6092963	99.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	279_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:00:00-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.634	ppb	8.365	2174	50	109.3	90	110	
Na	23	3	45	49740.630	ppb	1.684	5076849	51000	97.5	90	110	
Mg	24	3	45	10556.685	ppb	0.693	564862	11000	96.0	90	110	
Al	27	3	45	991.563	ppb	1.276	20653	1000	99.2	90	110	
K	39	3	45	10215.103	ppb	0.302	471404	11000	92.9	90	110	
Ca	40	2	45	10481.448	ppb	2.357	5635998	11000	95.3	90	110	
V	51	3	72	50.408	ppb	0.437	29378	50	100.8	90	110	
Cr	52	3	72	51.663	ppb	2.478	38643	50	103.3	90	110	
Mn	55	3	72	51.216	ppb	2.520	19120	50	102.4	90	110	
Fe	56	2	72	1052.637	ppb	0.490	1589257	1000	105.3	90	110	
Co	59	3	72	50.880	ppb	2.929	60060	50	101.8	90	110	
Ni	60	3	72	51.098	ppb	3.657	17606	50	102.2	90	110	
Cu	63	3	72	50.003	ppb	2.346	45607	50	100.0	90	110	
Zn	66	3	72	49.746	ppb	3.779	7408	50	99.5	90	110	
As	75	3	72	52.498	ppb	3.509	5413	50	105.0	90	110	
Se	78	2	72	51.129	ppb	1.178	2820	50	102.3	90	110	
Sr	88	3	72	105.011	ppb	2.904	51189	100	105.0	90	110	
Mo	95	3	115	48.415	ppb	2.663	23474	50	96.8	90	110	
Ag	107	3	115	48.777	ppb	0.749	79737	50	97.6	90	110	
Cd	111	3	115	48.610	ppb	2.167	11336	50	97.2	90	110	
Sn	120	3	115	48.256	ppb	3.113	36278	50	96.5	90	110	
Sb	121	3	115	49.122	ppb	1.062	35917	50	98.2	90	110	
Ba	137	3	115	50.156	ppb	2.033	11998	50	100.3	90	110	
Tl	205	3	193	47.529	ppb	2.954	181192	50	95.1	90	110	
(Pb)	206	3	193	48.244	ppb	3.394	61238	50	96.5	90	110	
(Pb)	207	3	193	47.983	ppb	1.319	53759	50	96.0	90	110	
Pb	208	3	193	47.962	ppb	3.196	245823	50	95.9	90	110	
Th	232	3	193	47.319	ppb	2.029	246995	50	94.6	90	110	
U	238	3	193	48.140	ppb	3.560	258595	50	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3993183	2.12	4300192	92.86	60	120	
Sc (IS)	45	3	HMI He	570735	1.12	644593	88.54	60	120	
Ge Internal standard	72	2	HMI H2	2378470	0.41	2598552	91.53	60	120	
Ge Internal standard	72	3	HMI He	686667	1.86	772392	88.90	60	120	
In Internal Standard	115	3	HMI He	2700127	1.08	2872781	93.99	60	120	
Ir (IS)	193	3	HMI He	6004595	2.30	6092963	98.55	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	280_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:01:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	93.551	ppb	5.7	24208	25	>RL
Mg	24	3	45	1.353	ppb	78.0	310	25	
Al	27	3	45	-3.816	ppb	-19.0	57	15	
K	39	3	45	5.229	ppb	203.3	25007	50	
V	51	3	72	-0.690	ppb	-12.3	508	1	
Cr	52	3	72	0.257	ppb	56.3	3034	1	
Mn	55	3	72	-0.032	ppb	-314.1	333	0.5	
Co	59	3	72	0.019	ppb	117.4	73	0.5	
Ni	60	3	72	0.681	ppb	23.9	861	1	
Cu	63	3	72	-0.004	ppb	-1012.4	356	1	
Zn	66	3	72	-0.113	ppb	-68.5	192	5	
As	75	3	72	-0.028	ppb	-93.9	37	1	
Se	78	2	72	0.039	ppb	161.4	4	1	
Sr	88	3	72	0.214	ppb	14.3	147	0.5	
Mo	95	3	115	0.257	ppb	27.9	157	0.5	
Ag	107	3	115	0.005	ppb	169.9	20	1	
Cd	111	3	115	-0.019	ppb	-116.7	5	0.5	
Sn	120	3	115	0.048	ppb	215.2	728	1	
Sb	121	3	115	0.024	ppb	46.9	58	0.6	
Ba	137	3	115	-0.036	ppb	-187.6	48	0.5	
Tl	205	3	193	-0.037	ppb	-35.6	228	0.1	
(Pb)	206	3	193	-0.095	ppb	-15.0	190	1	
(Pb)	207	3	193	-0.103	ppb	-8.8	353	1	
Pb	208	3	193	-0.099	ppb	-9.6	943	0.5	
Th	232	3	193	1.488	ppb	12.7	14091	1	>RL
U	238	3	193	0.018	ppb	97.7	1578	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3930491	1.87	4300192	91.40	60	120	
Sc (IS)	45	3	HMI He	568357	0.68	644593	88.17	60	120	
Ge Internal standard	72	2	HMI H2	2385082	0.54	2598552	91.79	60	120	
Ge Internal standard	72	3	HMI He	704571	1.60	772392	91.22	60	120	
In Internal Standard	115	3	HMI He	2639316	1.70	2872781	91.87	60	120	
Ir (IS)	193	3	HMI He	5897336	1.32	6092963	96.79	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609219/1-B
Data File Name	281_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:03:37-06:00
Sample Type	Blank
Dilution	1
Comment	609238 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	102.446	ppb	4.557803575	25452	25
Mg	24	3	45	1.637	ppb	76.48505131	330	25
Al	27	3	45	-0.810	ppb	-108.1551599	120	15
K	39	3	45	7.183	ppb	455.6774478	25445	50
Ca	40	2	45	23.990	ppb	6.398590519	25693	200
V	51	3	72	-0.728	ppb	-8.523607271	493	1
Cr	52	3	72	0.248	ppb	130.5760524	3069	1
Mn	55	3	72	0.018	ppb	197.6406077	356	0.5
Fe	56	2	72	23.443	ppb	20.1867278	94882	50
Co	59	3	72	-0.009	ppb	-248.519874	40	0.5
Ni	60	3	72	0.074	ppb	328.5979583	663	1
Cu	63	3	72	0.033	ppb	152.6084584	396	1
Zn	66	3	72	1.089	ppb	27.18987172	375	5
As	75	3	72	-0.064	ppb	-181.2821806	33	1
(Se)	78	3	72	-0.003	ppb	-86436.2757	22	1
Sr	88	3	72	0.181	ppb	6.587186937	132	0.5
Mo	95	3	115	0.173	ppb	38.82058169	120	0.5
Ag	107	3	115	0.007	ppb	30.4280059	23	1
Cd	111	3	115	-0.027	ppb	-46.04698027	3	0.5
Sn	120	3	115	-0.203	ppb	-74.97139209	563	1
Sb	121	3	115	-0.015	ppb	-107.3440591	32	0.6
Ba	137	3	115	-0.027	ppb	-397.7907335	52	0.5
Tl	205	3	193	-0.055	ppb	-16.41795192	163	0.1
(Pb)	206	3	193	-0.105	ppb	-22.2516493	180	1
(Pb)	207	3	193	-0.081	ppb	-27.46311505	381	1
Pb	208	3	193	-0.097	ppb	-20.54734367	960	0.5
Th	232	3	193	0.058	ppb	160.6732833	7040	1
U	238	3	193	0.008	ppb	408.9550533	1541	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121585	2.04	4300192	95.85	60	120	
Sc (IS)	45	3	HMI He	576216	0.91	644593	89.39	60	120	
Ge Internal standard	72	2	HMI H2	2442241	0.78	2598552	93.98	60	120	
Ge Internal standard	72	3	HMI He	714043	1.23	772392	92.45	60	120	
In Internal Standard	115	3	HMI He	2710472	1.81	2872781	94.35	60	120	
Ir (IS)	193	3	HMI He	5967033	1.86	6092963	97.93	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609219/2-B
Data File Name	282_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:05:28-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609238 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	42.854	42.854	ppb	10.059	1728	40	107.1	80	120	
Na	23	3	45	810.573	810.573	ppb	0.616	99295	40	2026.4	80	120	>+/-20%
Mg	24	3	45	712.214	712.214	ppb	0.179	39130	40	1780.5	80	120	>+/-20%
Al	27	3	45	725.490	725.490	ppb	2.699	15461	40	1813.7	80	120	>+/-20%
K	39	3	45	713.102	713.102	ppb	1.486	57217	40	1782.8	80	120	>+/-20%
Ca	40	2	45	807.631	807.631	ppb	1.504	460022	40	2019.1	80	120	>+/-20%
V	51	3	72	36.866	36.866	ppb	2.793	22769	40	92.2	80	120	
Cr	52	3	72	38.070	38.070	ppb	0.355	30622	40	95.2	80	120	
Mn	55	3	72	38.431	38.431	ppb	2.065	15132	40	96.1	80	120	
Fe	56	2	72	793.905	793.905	ppb	1.920	1269805	40	1984.8	80	120	>+/-20%
(Fe)	56	3	72	746.427	746.427	ppb	0.391	477879	40	1866.1	80	120	>+/-20%
Co	59	3	72	38.851	38.851	ppb	1.493	48101	40	97.1	80	120	
Ni	60	3	72	38.205	38.205	ppb	2.674	13965	40	95.5	80	120	
Cu	63	3	72	38.752	38.752	ppb	0.663	37141	40	96.9	80	120	
Zn	66	3	72	39.374	39.374	ppb	2.741	6193	40	98.4	80	120	
As	75	3	72	37.657	37.657	ppb	0.567	4084	40	94.1	80	120	
Se	78	2	72	40.075	40.075	ppb	2.478	2314	40	100.2	80	120	
(Se)	78	3	72	45.601	45.601	ppb	2.324	297	40	114.0	80	120	
Sr	88	3	72	78.996	78.996	ppb	0.154	40390	40	197.5	80	120	>+/-20%
Mo	95	3	115	36.361	36.361	ppb	4.616	18040	40	90.9	80	120	
Ag	107	3	115	38.036	38.036	ppb	2.559	63613	40	95.1	80	120	
Cd	111	3	115	37.319	37.319	ppb	2.623	8904	40	93.3	80	120	
Sn	120	3	115	35.292	35.292	ppb	3.004	27341	40	88.2	80	120	
Sb	121	3	115	37.164	37.164	ppb	2.195	27815	40	92.9	80	120	
Ba	137	3	115	39.036	39.036	ppb	6.206	9560	40	97.6	80	120	
Tl	205	3	193	37.451	37.451	ppb	1.569	144072	40	93.6	80	120	
(Pb)	206	3	193	37.621	37.621	ppb	1.523	48236	40	94.1	80	120	
(Pb)	207	3	193	37.503	37.503	ppb	0.531	42478	40	93.8	80	120	
Pb	208	3	193	37.820	37.820	ppb	1.575	195820	40	94.5	80	120	
Th	232	3	193	35.468	35.468	ppb	2.328	188383	40	88.7	80	120	
U	238	3	193	37.680	37.680	ppb	1.999	204477	40	94.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124548	3.35	4300192	95.92	60	120	
Sc (IS)	45	3	HMI He	582584	0.35	644593	90.38	60	120	
Ge Internal standard	72	2	HMI H2	2489999	1.39	2598552	95.82	60	120	
Ge Internal standard	72	3	HMI He	719786	0.55	772392	93.19	60	120	
In Internal Standard	115	3	HMI He	2763459	2.75	2872781	96.19	60	120	
Ir (IS)	193	3	HMI He	6054342	1.89	6092963	99.37	60	120	

Sample Report

Sample Table

Sample Name	280-175144-D-1-B
Data File Name	283SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:07:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.107	ppb	-0.107	-67.74	2	2000	
Na	23	3	45	11572.433	ppb	11572.433	1.06	1225981	400000	
Mg	24	3	45	4808.600	ppb	4808.600	1.24	264668	400000	
Al	27	3	45	766.111	ppb	766.111	1.16	16436	400000	
K	39	3	45	675.829	ppb	675.829	2.87	55957	400000	
Ca	40	2	45	15017.744	ppb	15017.744	0.35	8225229	400000	
V	51	3	72	0.974	ppb	0.974	24.76	1524	2000	
Cr	52	3	72	0.979	ppb	0.979	23.89	3667	5000	
Mn	55	3	72	107.160	ppb	107.160	1.06	42069	10000	
Fe	56	2	72	879.554	ppb	879.554	2.56	1401572	10000	
Co	59	3	72	0.900	ppb	0.900	11.71	1178	2000	
Ni	60	3	72	1.401	ppb	1.401	19.62	1144	5000	
Cu	63	3	72	2.658	ppb	2.658	3.33	2926	5000	
Zn	66	3	72	17.937	ppb	17.937	5.63	2974	5000	
As	75	3	72	0.497	ppb	0.497	24.69	95	2000	
Se	78	2	72	0.289	ppb	0.289	56.19	19	2000	
Sr	88	3	72	121.887	ppb	121.887	1.33	63049	4000	
Mo	95	3	115	0.354	ppb	0.354	13.50	207	2000	
Ag	107	3	115	0.014	ppb	0.014	101.13	35	100	
Cd	111	3	115	0.045	ppb	0.045	93.79	20	2000	
Sn	120	3	115	-0.020	ppb	-0.020	-683.39	693	2000	
Sb	121	3	115	0.246	ppb	0.246	12.30	222	1000	
Ba	137	3	115	93.880	ppb	93.880	2.73	22319	5000	
Tl	205	3	193	-0.039	ppb	-0.039	-20.88	232	2000	
(Pb)	206	3	193	2.500	ppb	2.500	4.34	3565	100	
(Pb)	207	3	193	2.108	ppb	2.108	2.17	2894	100	
Pb	208	3	193	2.252	ppb	2.252	5.18	13284	5000	
Th	232	3	193	1.690	ppb	1.690	8.12	15799	2000	
U	238	3	193	0.344	ppb	0.344	14.09	3434	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068650	0.81	4300192	94.62	60	120	
Sc (IS)	45	3	HMI He	586791	0.63	644593	91.03	60	120	
Ge Internal standard	72	2	HMI H2	2492804	1.35	2598552	95.93	60	120	
Ge Internal standard	72	3	HMI He	728527	0.83	772392	94.32	60	120	
In Internal Standard	115	3	HMI He	2690024	0.89	2872781	93.64	60	120	
Ir (IS)	193	3	HMI He	6172836	4.71	6092963	101.31	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-B
Data File Name	284SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:09:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.059	ppb	0.059	440.95	8	2000	
Na	23	3	45	7165.497	ppb	7165.497	2.47	756191	400000	
Mg	24	3	45	3843.821	ppb	3843.821	1.77	209223	400000	
Al	27	3	45	625.710	ppb	625.710	0.82	13300	400000	
K	39	3	45	865.692	ppb	865.692	4.19	63755	400000	
Ca	40	2	45	11333.695	ppb	11333.695	1.96	6271397	400000	
V	51	3	72	0.586	ppb	0.586	13.40	1316	2000	
Cr	52	3	72	0.417	ppb	0.417	57.07	3317	5000	
Mn	55	3	72	92.926	ppb	92.926	2.20	37218	10000	
Fe	56	2	72	614.610	ppb	614.610	0.58	1013627	10000	
Co	59	3	72	0.926	ppb	0.926	3.45	1234	2000	
Ni	60	3	72	1.447	ppb	1.447	13.45	1183	5000	
Cu	63	3	72	2.434	ppb	2.434	4.25	2762	5000	
Zn	66	3	72	13.675	ppb	13.675	6.05	2362	5000	
As	75	3	72	0.630	ppb	0.630	26.54	112	2000	
Se	78	2	72	0.262	ppb	0.262	32.46	17	2000	
Sr	88	3	72	61.742	ppb	61.742	1.26	32574	4000	
Mo	95	3	115	0.296	ppb	0.296	20.63	180	2000	
Ag	107	3	115	0.005	ppb	0.005	61.33	22	100	
Cd	111	3	115	0.045	ppb	0.045	5.78	20	2000	
Sn	120	3	115	-0.082	ppb	-0.082	-57.13	653	2000	
Sb	121	3	115	0.096	ppb	0.096	57.59	113	1000	
Ba	137	3	115	87.774	ppb	87.774	2.14	21048	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-9.27	160	2000	
(Pb)	206	3	193	2.173	ppb	2.173	4.59	3114	100	
(Pb)	207	3	193	2.030	ppb	2.030	2.38	2779	100	
Pb	208	3	193	2.085	ppb	2.085	3.01	12308	5000	
Th	232	3	193	0.266	ppb	0.266	56.59	8295	2000	
U	238	3	193	0.350	ppb	0.350	7.08	3442	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109030	0.94	4300192	95.55	60	120	
Sc (IS)	45	3	HMI He	580225	1.44	644593	90.01	60	120	
Ge Internal standard	72	2	HMI H2	2531866	0.57	2598552	97.43	60	120	
Ge Internal standard	72	3	HMI He	742443	1.41	772392	96.12	60	120	
In Internal Standard	115	3	HMI He	2713182	3.07	2872781	94.44	60	120	
Ir (IS)	193	3	HMI He	6114356	1.78	6092963	100.35	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-C MS
Data File Name	285SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:10:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.524	ppb	39.524	4.50	1591	2000	
Na	23	3	45	7817.512	ppb	7817.512	3.76	834572	400000	
Mg	24	3	45	4437.266	ppb	4437.266	0.47	244624	400000	
Al	27	3	45	1335.842	ppb	1335.842	3.96	28591	400000	
K	39	3	45	1551.719	ppb	1551.719	1.31	95468	400000	
Ca	40	2	45	11610.329	ppb	11610.329	0.95	6471913	400000	
V	51	3	72	37.252	ppb	37.252	2.44	23735	2000	
Cr	52	3	72	36.960	ppb	36.960	2.77	30769	5000	
Mn	55	3	72	129.144	ppb	129.144	2.25	51616	10000	
Fe	56	2	72	1331.326	ppb	1331.326	2.26	2141645	10000	
Co	59	3	72	37.647	ppb	37.647	1.17	48104	2000	
Ni	60	3	72	36.673	ppb	36.673	2.20	13862	5000	
Cu	63	3	72	39.627	ppb	39.627	0.96	39191	5000	
Zn	66	3	72	49.791	ppb	49.791	0.70	8025	5000	
As	75	3	72	36.831	ppb	36.831	5.03	4124	2000	
Se	78	2	72	37.784	ppb	37.784	2.97	2239	2000	
Sr	88	3	72	136.441	ppb	136.441	1.37	71970	4000	
Mo	95	3	115	37.253	ppb	37.253	2.93	18453	2000	
Ag	107	3	115	37.525	ppb	37.525	3.03	62639	100	
Cd	111	3	115	37.644	ppb	37.644	0.80	8967	2000	
Sn	120	3	115	34.400	ppb	34.400	0.93	26628	2000	
Sb	121	3	115	36.998	ppb	36.998	2.87	27637	1000	
Ba	137	3	115	123.796	ppb	123.796	3.22	30149	5000	
Tl	205	3	193	36.923	ppb	36.923	1.01	142444	2000	
(Pb)	206	3	193	39.565	ppb	39.565	2.20	50850	100	
(Pb)	207	3	193	38.878	ppb	38.878	1.42	44135	100	
Pb	208	3	193	39.445	ppb	39.445	1.57	204736	5000	
Th	232	3	193	35.064	ppb	35.064	1.82	186849	2000	
U	238	3	193	37.667	ppb	37.667	0.72	204990	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4139638	2.13	4300192	96.27	60	120	
Sc (IS)	45	3	HMI He	587687	1.24	644593	91.17	60	120	
Ge Internal standard	72	2	HMI H2	2554539	1.98	2598552	98.31	60	120	
Ge Internal standard	72	3	HMI He	742873	0.72	772392	96.18	60	120	
In Internal Standard	115	3	HMI He	2758122	2.13	2872781	96.01	60	120	
Ir (IS)	193	3	HMI He	6070528	0.98	6092963	99.63	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-D MSD
Data File Name	286SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:12:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.484	ppb	40.484	3.29	1589	2000	
Na	23	3	45	7879.973	ppb	7879.973	1.71	839886	400000	
Mg	24	3	45	4460.038	ppb	4460.038	0.84	245558	400000	
Al	27	3	45	1339.339	ppb	1339.339	1.42	28634	400000	
K	39	3	45	1566.658	ppb	1566.658	2.19	96010	400000	
Ca	40	2	45	11762.212	ppb	11762.212	1.10	6479167	400000	
V	51	3	72	36.940	ppb	36.940	1.09	23318	2000	
Cr	52	3	72	37.289	ppb	37.289	1.17	30714	5000	
Mn	55	3	72	129.643	ppb	129.643	2.12	51307	10000	
Fe	56	2	72	1379.945	ppb	1379.945	1.13	2164535	10000	
Co	59	3	72	37.872	ppb	37.872	1.88	47917	2000	
Ni	60	3	72	37.307	ppb	37.307	1.01	13953	5000	
Cu	63	3	72	40.051	ppb	40.051	1.11	39218	5000	
Zn	66	3	72	50.399	ppb	50.399	4.62	8040	5000	
As	75	3	72	36.880	ppb	36.880	2.66	4089	2000	
Se	78	2	72	38.154	ppb	38.154	1.04	2206	2000	
Sr	88	3	72	138.287	ppb	138.287	2.05	72228	4000	
Mo	95	3	115	36.413	ppb	36.413	0.74	17923	2000	
Ag	107	3	115	37.544	ppb	37.544	2.71	62256	100	
Cd	111	3	115	36.329	ppb	36.329	1.28	8598	2000	
Sn	120	3	115	35.588	ppb	35.588	2.22	27333	2000	
Sb	121	3	115	37.273	ppb	37.273	1.67	27658	1000	
Ba	137	3	115	123.590	ppb	123.590	1.05	29907	5000	
Tl	205	3	193	37.035	ppb	37.035	2.15	142703	2000	
(Pb)	206	3	193	39.888	ppb	39.888	2.68	51196	100	
(Pb)	207	3	193	38.386	ppb	38.386	2.66	43521	100	
Pb	208	3	193	39.299	ppb	39.299	2.28	203722	5000	
Th	232	3	193	37.047	ppb	37.047	2.00	196786	2000	
U	238	3	193	37.787	ppb	37.787	2.77	205347	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4090604	1.89	4300192	95.13	60	120	
Sc (IS)	45	3	HMI He	586899	0.66	644593	91.05	60	120	
Ge Internal standard	72	2	HMI H2	2492804	0.49	2598552	95.93	60	120	
Ge Internal standard	72	3	HMI He	735622	0.92	772392	95.24	60	120	
In Internal Standard	115	3	HMI He	2739675	2.10	2872781	95.37	60	120	
Ir (IS)	193	3	HMI He	6064390	2.40	6092963	99.53	60	120	

Sample Report

Sample Table

Sample Name	280-175148-D-1-B
Data File Name	287SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:14:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.024	ppb	-0.024	-531.34	5	2000	
Na	23	3	45	16737.373	ppb	16737.373	3.07	1780247	400000	
Mg	24	3	45	10487.159	ppb	10487.159	1.35	581537	400000	
Al	27	3	45	511.421	ppb	511.421	1.60	11106	400000	
K	39	3	45	1188.145	ppb	1188.145	4.00	79598	400000	
Ca	40	2	45	22526.553	ppb	22526.553	2.22	12554069	400000	
V	51	3	72	0.502	ppb	0.502	14.38	1246	2000	
Cr	52	3	72	0.482	ppb	0.482	33.62	3315	5000	
Mn	55	3	72	101.191	ppb	101.191	0.51	39919	10000	
Fe	56	2	72	593.641	ppb	593.641	2.91	952269	10000	
Co	59	3	72	0.768	ppb	0.768	3.33	1018	2000	
Ni	60	3	72	1.044	ppb	1.044	30.20	1023	5000	
Cu	63	3	72	2.364	ppb	2.364	2.19	2654	5000	
Zn	66	3	72	12.213	ppb	12.213	2.02	2102	5000	
As	75	3	72	0.738	ppb	0.738	39.88	122	2000	
Se	78	2	72	0.212	ppb	0.212	15.86	14	2000	
Sr	88	3	72	206.902	ppb	206.902	0.69	107471	4000	
Mo	95	3	115	0.416	ppb	0.416	6.82	242	2000	
Ag	107	3	115	0.012	ppb	0.012	39.45	33	100	
Cd	111	3	115	0.050	ppb	0.050	102.67	22	2000	
Sn	120	3	115	0.045	ppb	0.045	243.81	755	2000	
Sb	121	3	115	0.202	ppb	0.202	29.09	193	1000	
Ba	137	3	115	93.503	ppb	93.503	0.57	22700	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-11.68	208	2000	
(Pb)	206	3	193	1.654	ppb	1.654	5.28	2397	100	
(Pb)	207	3	193	1.549	ppb	1.549	8.82	2191	100	
Pb	208	3	193	1.636	ppb	1.636	2.36	9775	5000	
Th	232	3	193	2.182	ppb	2.182	11.66	17836	2000	
U	238	3	193	1.482	ppb	1.482	8.74	9402	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4142891	1.44	4300192	96.34	60	120	
Sc (IS)	45	3	HMI He	591499	1.03	644593	91.76	60	120	
Ge Internal standard	72	2	HMI H2	2457534	0.78	2598552	94.57	60	120	
Ge Internal standard	72	3	HMI He	731731	0.94	772392	94.74	60	120	
In Internal Standard	115	3	HMI He	2746563	1.57	2872781	95.61	60	120	
Ir (IS)	193	3	HMI He	5988865	1.30	6092963	98.29	60	120	

Sample Report

Sample Table

Sample Name	280-175150-D-1-B
Data File Name	288SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:16:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.059	ppb	0.059	125.48	8	2000	
Na	23	3	45	9355.284	ppb	9355.284	0.69	984018	400000	
Mg	24	3	45	6942.019	ppb	6942.019	0.93	378120	400000	
Al	27	3	45	564.764	ppb	564.764	3.99	12027	400000	
K	39	3	45	1140.639	ppb	1140.639	0.74	76065	400000	
Ca	40	2	45	13562.306	ppb	13562.306	2.59	7406739	400000	
V	51	3	72	0.599	ppb	0.599	33.24	1321	2000	
Cr	52	3	72	0.465	ppb	0.465	63.09	3347	5000	
Mn	55	3	72	70.320	ppb	70.320	1.99	28233	10000	
Fe	56	2	72	679.587	ppb	679.587	0.18	1092820	10000	
Co	59	3	72	0.636	ppb	0.636	3.41	865	2000	
Ni	60	3	72	1.307	ppb	1.307	38.65	1129	5000	
Cu	63	3	72	2.041	ppb	2.041	4.83	2377	5000	
Zn	66	3	72	16.299	ppb	16.299	6.51	2769	5000	
As	75	3	72	0.666	ppb	0.666	49.65	115	2000	
Se	78	2	72	0.279	ppb	0.279	37.05	18	2000	
Sr	88	3	72	93.786	ppb	93.786	0.39	49428	4000	
Mo	95	3	115	0.462	ppb	0.462	3.37	263	2000	
Ag	107	3	115	0.004	ppb	0.004	235.96	20	100	
Cd	111	3	115	0.022	ppb	0.022	247.41	15	2000	
Sn	120	3	115	0.047	ppb	0.047	43.42	755	2000	
Sb	121	3	115	0.193	ppb	0.193	34.35	185	1000	
Ba	137	3	115	71.054	ppb	71.054	2.79	17208	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-19.49	160	2000	
(Pb)	206	3	193	1.656	ppb	1.656	1.57	2439	100	
(Pb)	207	3	193	1.595	ppb	1.595	2.61	2277	100	
Pb	208	3	193	1.598	ppb	1.598	2.08	9740	5000	
Th	232	3	193	0.649	ppb	0.649	24.36	10237	2000	
U	238	3	193	0.239	ppb	0.239	11.23	2824	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4057584	1.84	4300192	94.36	60	120	
Sc (IS)	45	3	HMI He	580855	0.90	644593	90.11	60	120	
Ge Internal standard	72	2	HMI H2	2483262	0.29	2598552	95.56	60	120	
Ge Internal standard	72	3	HMI He	742031	2.56	772392	96.07	60	120	
In Internal Standard	115	3	HMI He	2738483	2.62	2872781	95.33	60	120	
Ir (IS)	193	3	HMI He	6086386	2.40	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175151-D-1-B
Data File Name	289SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:18:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.30	2	2000	
Na	23	3	45	33756.301	ppb	33756.301	2.12	3511537	400000	
Mg	24	3	45	15483.833	ppb	15483.833	0.54	843297	400000	
Al	27	3	45	268.799	ppb	268.799	8.27	5797	400000	
K	39	3	45	2124.758	ppb	2124.758	0.79	119871	400000	
Ca	40	2	45	35574.343	ppb	35574.343	1.41	19670776	400000	
V	51	3	72	0.312	ppb	0.312	31.35	1139	2000	
Cr	52	3	72	0.613	ppb	0.613	50.78	3437	5000	
Mn	55	3	72	26.100	ppb	26.100	3.74	10629	10000	
Fe	56	2	72	287.060	ppb	287.060	1.10	499430	10000	
Co	59	3	72	0.300	ppb	0.300	26.77	431	2000	
Ni	60	3	72	0.850	ppb	0.850	16.39	961	5000	
Cu	63	3	72	1.739	ppb	1.739	4.45	2066	5000	
Zn	66	3	72	16.210	ppb	16.210	7.18	2737	5000	
As	75	3	72	0.488	ppb	0.488	64.89	95	2000	
Se	78	2	72	1.015	ppb	1.015	21.79	61	2000	
Sr	88	3	72	291.994	ppb	291.994	0.78	152649	4000	
Mo	95	3	115	1.434	ppb	1.434	10.31	733	2000	
Ag	107	3	115	0.008	ppb	0.008	122.66	25	100	
Cd	111	3	115	-0.019	ppb	-0.019	-113.88	5	2000	
Sn	120	3	115	-0.161	ppb	-0.161	-37.02	593	2000	
Sb	121	3	115	0.416	ppb	0.416	8.38	348	1000	
Ba	137	3	115	96.857	ppb	96.857	3.59	23224	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-7.48	143	2000	
(Pb)	206	3	193	0.572	ppb	0.572	4.43	1051	100	
(Pb)	207	3	193	0.536	ppb	0.536	2.35	1085	100	
Pb	208	3	193	0.551	ppb	0.551	5.31	4331	5000	
Th	232	3	193	0.103	ppb	0.103	115.28	7422	2000	
U	238	3	193	1.677	ppb	1.677	2.37	10609	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4111690	1.40	4300192	95.62	60	120	
Sc (IS)	45	3	HMI He	580971	0.75	644593	90.13	60	120	
Ge Internal standard	72	2	HMI H2	2496659	1.50	2598552	96.08	60	120	
Ge Internal standard	72	3	HMI He	736547	1.10	772392	95.36	60	120	
In Internal Standard	115	3	HMI He	2714316	2.43	2872781	94.48	60	120	
Ir (IS)	193	3	HMI He	6086203	1.25	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175184-B-1-B
Data File Name	290SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:19:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	112279.486	ppb	112279.486	2.64	11890467	400000	
Mg	24	3	45	14237.072	ppb	14237.072	0.99	791841	400000	
Al	27	3	45	2.280	ppb	2.280	36.77	190	400000	
K	39	3	45	5722.800	ppb	5722.800	1.23	285867	400000	
Ca	40	2	45	85405.564	ppb	85405.564	1.15	47321837	400000	
V	51	3	72	-0.731	ppb	-0.731	-19.23	511	2000	
Cr	52	3	72	0.239	ppb	0.239	22.74	3185	5000	
Mn	55	3	72	1.291	ppb	1.291	5.59	876	10000	
Fe	56	2	72	15.014	ppb	15.014	30.78	84189	10000	
Co	59	3	72	0.128	ppb	0.128	20.81	217	2000	
Ni	60	3	72	2.053	ppb	2.053	9.29	1403	5000	
Cu	63	3	72	0.743	ppb	0.743	1.26	1108	5000	
Zn	66	3	72	7.352	ppb	7.352	4.50	1373	5000	
As	75	3	72	0.119	ppb	0.119	36.29	55	2000	
Se	78	2	72	0.105	ppb	0.105	120.27	8	2000	
Sr	88	3	72	615.647	ppb	615.647	0.75	324718	4000	
Mo	95	3	115	1.186	ppb	1.186	9.73	628	2000	
Ag	107	3	115	0.002	ppb	0.002	442.12	17	100	
Cd	111	3	115	-0.027	ppb	-0.027	-88.90	3	2000	
Sn	120	3	115	-0.163	ppb	-0.163	-51.81	606	2000	
Sb	121	3	115	0.072	ppb	0.072	43.53	98	1000	
Ba	137	3	115	71.434	ppb	71.434	3.33	17566	5000	
Tl	205	3	193	-0.060	ppb	-0.060	-12.43	147	2000	
(Pb)	206	3	193	-0.085	ppb	-0.085	-21.49	208	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-9.43	413	100	
Pb	208	3	193	-0.077	ppb	-0.077	-9.74	1083	5000	
Th	232	3	193	-0.140	ppb	-0.140	-47.31	6165	2000	
U	238	3	193	1.656	ppb	1.656	1.38	10488	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121309	2.20	4300192	95.84	60	120	
Sc (IS)	45	3	HMI He	593266	1.05	644593	92.04	60	120	
Ge Internal standard	72	2	HMI H2	2499918	1.15	2598552	96.20	60	120	
Ge Internal standard	72	3	HMI He	743202	0.70	772392	96.22	60	120	
In Internal Standard	115	3	HMI He	2780409	1.15	2872781	96.78	60	120	
Ir (IS)	193	3	HMI He	6081197	0.78	6092963	99.81	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	291_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:21:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.871	ppb	16.885	2057	50	103.7	90	110	
Na	23	3	45	47934.715	ppb	2.548	5013990	51000	94.0	90	110	
Mg	24	3	45	10256.258	ppb	2.625	562389	11000	93.2	90	110	
Al	27	3	45	946.469	ppb	3.521	20205	1000	94.6	90	110	
K	39	3	45	10001.919	ppb	1.504	473514	11000	90.9	90	110	
Ca	40	2	45	10611.587	ppb	0.888	5723766	11000	96.5	90	110	
V	51	3	72	48.709	ppb	2.624	29548	50	97.4	90	110	
Cr	52	3	72	49.408	ppb	1.234	38561	50	98.8	90	110	
Mn	55	3	72	49.225	ppb	4.747	19129	50	98.5	90	110	
Fe	56	2	72	1058.089	ppb	4.180	1604561	1000	105.8	90	110	
Co	59	3	72	48.543	ppb	0.586	59603	50	97.1	90	110	
Ni	60	3	72	48.529	ppb	1.287	17426	50	97.1	90	110	
Cu	63	3	72	48.940	ppb	0.996	46430	50	97.9	90	110	
Zn	66	3	72	49.852	ppb	3.162	7720	50	99.7	90	110	
As	75	3	72	52.034	ppb	0.580	5582	50	104.1	90	110	
Se	78	2	72	51.153	ppb	2.762	2834	50	102.3	90	110	
Sr	88	3	72	100.585	ppb	1.110	51003	100	100.6	90	110	
Mo	95	3	115	47.245	ppb	2.181	23510	50	94.5	90	110	
Ag	107	3	115	47.358	ppb	1.234	79432	50	94.7	90	110	
Cd	111	3	115	47.190	ppb	1.351	11289	50	94.4	90	110	
Sn	120	3	115	47.102	ppb	1.387	36358	50	94.2	90	110	
Sb	121	3	115	48.685	ppb	1.885	36520	50	97.4	90	110	
Ba	137	3	115	49.823	ppb	0.830	12230	50	99.6	90	110	
Tl	205	3	193	46.336	ppb	3.440	182749	50	92.7	90	110	
(Pb)	206	3	193	46.576	ppb	1.713	61187	50	93.2	90	110	
(Pb)	207	3	193	46.716	ppb	2.871	54145	50	93.4	90	110	
Pb	208	3	193	46.494	ppb	1.378	246606	50	93.0	90	110	
Th	232	3	193	46.382	ppb	2.165	250572	50	92.8	90	110	
U	238	3	193	46.958	ppb	2.328	261012	50	93.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4004539	1.18	4300192	93.12	60	120	
Sc (IS)	45	3	HMI He	584902	0.74	644593	90.74	60	120	
Ge Internal standard	72	2	HMI H2	2390425	1.58	2598552	91.99	60	120	
Ge Internal standard	72	3	HMI He	713942	1.43	772392	92.43	60	120	
In Internal Standard	115	3	HMI He	2770617	1.76	2872781	96.44	60	120	
Ir (IS)	193	3	HMI He	6209575	0.56	6092963	101.91	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	292_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:23:30-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.106	ppb	-69.9	2	0.5	
Na	23	3	45	66.160	ppb	4.2	21839	25	>RL
Mg	24	3	45	1.548	ppb	37.4	327	25	
Al	27	3	45	-3.859	ppb	-28.9	57	15	
K	39	3	45	0.297	ppb	10315.7	25258	50	
V	51	3	72	-0.669	ppb	-6.7	535	1	
Cr	52	3	72	0.394	ppb	109.1	3212	1	
Mn	55	3	72	-0.067	ppb	-166.9	328	0.5	
Co	59	3	72	0.018	ppb	55.9	73	0.5	
Ni	60	3	72	0.492	ppb	39.6	818	1	
Cu	63	3	72	-0.022	ppb	-101.2	348	1	
Zn	66	3	72	0.072	ppb	470.4	225	5	
As	75	3	72	0.009	ppb	2469.4	42	1	
Se	78	2	72	0.111	ppb	33.1	8	1	
Sr	88	3	72	0.041	ppb	49.2	62	0.5	
Mo	95	3	115	0.086	ppb	48.5	80	0.5	
Ag	107	3	115	0.008	ppb	92.9	27	1	
Cd	111	3	115	-0.020	ppb	-2.2	5	0.5	
Sn	120	3	115	0.010	ppb	289.4	736	1	
Sb	121	3	115	0.038	ppb	41.8	72	0.6	
Ba	137	3	115	-0.052	ppb	-28.2	47	0.5	
Tl	205	3	193	-0.039	ppb	-11.2	228	0.1	
(Pb)	206	3	193	-0.092	ppb	-25.5	198	1	
(Pb)	207	3	193	-0.133	ppb	-21.4	328	1	
Pb	208	3	193	-0.103	ppb	-6.0	943	0.5	
Th	232	3	193	1.312	ppb	12.5	13511	1	>RL
U	238	3	193	0.018	ppb	90.3	1614	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4047303	1.23	4300192	94.12	60	120	
Sc (IS)	45	3	HMI He	579226	0.80	644593	89.86	60	120	
Ge Internal standard	72	2	HMI H2	2392133	1.10	2598552	92.06	60	120	
Ge Internal standard	72	3	HMI He	723187	0.55	772392	93.63	60	120	
In Internal Standard	115	3	HMI He	2772876	2.15	2872781	96.52	60	120	
Ir (IS)	193	3	HMI He	6024106	1.01	6092963	98.87	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	293SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:39:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-22.058	ppb	-22.058	-11.76	12251	400000	
Mg	24	3	45	-1.927	ppb	-1.927	-53.76	133	400000	
Al	27	3	45	-1.125	ppb	-1.125	-112.15	110	400000	
K	39	3	45	2.069	ppb	2.069	1051.97	24389	400000	
Ca	40	2	45	-9.812	ppb	-9.812	-3.08	6592	400000	
V	51	3	72	-1.198	ppb	-1.198	-3.33	208	2000	
Cr	52	3	72	-2.341	ppb	-2.341	-3.08	1149	5000	
Mn	55	3	72	-0.694	ppb	-0.694	-3.87	82	10000	
Fe	56	2	72	-25.906	ppb	-25.906	-4.64	20573	10000	
Co	59	3	72	-0.026	ppb	-0.026	-58.19	18	2000	
Ni	60	3	72	-1.311	ppb	-1.311	-7.13	177	5000	
Cu	63	3	72	-0.174	ppb	-0.174	-32.24	193	5000	
Zn	66	3	72	-0.859	ppb	-0.859	-12.79	78	5000	
As	75	3	72	-0.246	ppb	-0.246	-41.86	13	2000	
Se	78	2	72	0.003	ppb	0.003	22.43	2	2000	
Sr	88	3	72	-0.024	ppb	-0.024	-51.06	27	4000	
Mo	95	3	115	0.196	ppb	0.196	49.41	127	2000	
Ag	107	3	115	0.006	ppb	0.006	128.02	22	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.744	ppb	-0.744	-5.53	157	2000	
Sb	121	3	115	-0.016	ppb	-0.016	-111.40	30	1000	
Ba	137	3	115	-0.105	ppb	-0.105	-106.18	32	5000	
Tl	205	3	193	-0.071	ppb	-0.071	-12.48	97	2000	
(Pb)	206	3	193	-0.116	ppb	-0.116	-17.33	153	100	
(Pb)	207	3	193	0.546	ppb	0.546	8.96	993	100	
Pb	208	3	193	0.012	ppb	0.012	105.36	1401	5000	
Th	232	3	193	-0.530	ppb	-0.530	-4.16	3767	2000	
U	238	3	193	0.000	ppb	0.000	-5648.87	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3894329	1.11	4300192	90.56	60	120	
Sc (IS)	45	3	HMI He	557420	1.01	644593	86.48	60	120	
Ge Internal standard	72	2	HMI H2	2372720	1.69	2598552	91.31	60	120	
Ge Internal standard	72	3	HMI He	685387	1.02	772392	88.74	60	120	
In Internal Standard	115	3	HMI He	2630300	2.48	2872781	91.56	60	120	
Ir (IS)	193	3	HMI He	5510011	1.89	6092963	90.43	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	294SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:41:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.104	ppb	-0.104	-74.35	2	2000	
Na	23	3	45	-22.786	ppb	-22.786	-15.29	12224	400000	
Mg	24	3	45	-1.353	ppb	-1.353	-47.73	163	400000	
Al	27	3	45	-4.430	ppb	-4.430	-25.49	43	400000	
K	39	3	45	-0.102	ppb	-0.102	-21969.39	24389	400000	
Ca	40	2	45	-8.690	ppb	-8.690	-1.43	7283	400000	
V	51	3	72	-1.249	ppb	-1.249	-5.48	182	2000	
Cr	52	3	72	-2.383	ppb	-2.383	-2.59	1133	5000	
Mn	55	3	72	-0.678	ppb	-0.678	-4.04	88	10000	
Fe	56	2	72	-31.228	ppb	-31.228	-0.43	13423	10000	
Co	59	3	72	-0.023	ppb	-0.023	-20.79	22	2000	
Ni	60	3	72	-1.426	ppb	-1.426	-10.35	140	5000	
Cu	63	3	72	-0.138	ppb	-0.138	-16.53	228	5000	
Zn	66	3	72	-0.558	ppb	-0.558	-41.59	123	5000	
As	75	3	72	-0.119	ppb	-0.119	-101.69	27	2000	
Se	78	2	72	0.013	ppb	0.013	156.71	3	2000	
Sr	88	3	72	-0.021	ppb	-0.021	-109.90	28	4000	
Mo	95	3	115	-0.042	ppb	-0.042	-26.28	15	2000	
Ag	107	3	115	0.001	ppb	0.001	679.16	13	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.597	ppb	-0.597	-5.11	260	2000	
Sb	121	3	115	-0.025	ppb	-0.025	-14.56	23	1000	
Ba	137	3	115	-0.171	ppb	-0.171	-19.57	17	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-24.97	130	2000	
(Pb)	206	3	193	-0.134	ppb	-0.134	-9.05	133	100	
(Pb)	207	3	193	0.201	ppb	0.201	43.99	643	100	
Pb	208	3	193	-0.062	ppb	-0.062	-39.15	1056	5000	
Th	232	3	193	-0.500	ppb	-0.500	-10.02	3922	2000	
U	238	3	193	-0.017	ppb	-0.017	-7.76	1306	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3950461	1.39	4300192	91.87	60	120	
Sc (IS)	45	3	HMI He	559488	0.93	644593	86.80	60	120	
Ge Internal standard	72	2	HMI H2	2477104	1.22	2598552	95.33	60	120	
Ge Internal standard	72	3	HMI He	693043	0.29	772392	89.73	60	120	
In Internal Standard	115	3	HMI He	2606729	2.20	2872781	90.74	60	120	
Ir (IS)	193	3	HMI He	5534291	1.01	6092963	90.83	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	295SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:44:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-23.293	ppb	-23.293	-28.45	12324	400000	
Mg	24	3	45	-0.457	ppb	-0.457	-229.77	214	400000	
Al	27	3	45	-3.477	ppb	-3.477	-21.93	63	400000	
K	39	3	45	2.295	ppb	2.295	1607.12	24797	400000	
Ca	40	2	45	-8.792	ppb	-8.792	-5.78	7283	400000	
V	51	3	72	-1.265	ppb	-1.265	-1.36	173	2000	
Cr	52	3	72	-2.093	ppb	-2.093	-4.69	1343	5000	
Mn	55	3	72	-0.675	ppb	-0.675	-9.91	90	10000	
Fe	56	2	72	-20.969	ppb	-20.969	-7.28	28455	10000	
Co	59	3	72	-0.019	ppb	-0.019	-74.20	27	2000	
Ni	60	3	72	-1.029	ppb	-1.029	-4.88	275	5000	
Cu	63	3	72	-0.121	ppb	-0.121	-17.87	245	5000	
Zn	66	3	72	-0.609	ppb	-0.609	-18.75	117	5000	
As	75	3	72	-0.248	ppb	-0.248	-29.84	13	2000	
Se	78	2	72	0.002	ppb	0.002	1743.86	2	2000	
Sr	88	3	72	0.005	ppb	0.005	616.55	42	4000	
Mo	95	3	115	-0.046	ppb	-0.046	-25.88	13	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-151.48	8	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.704	ppb	-0.704	-11.01	185	2000	
Sb	121	3	115	-0.032	ppb	-0.032	-46.43	18	1000	
Ba	137	3	115	-0.142	ppb	-0.142	-8.46	23	5000	
Tl	205	3	193	-0.075	ppb	-0.075	-7.63	83	2000	
(Pb)	206	3	193	-0.121	ppb	-0.121	-28.30	148	100	
(Pb)	207	3	193	0.044	ppb	0.044	97.32	481	100	
Pb	208	3	193	-0.083	ppb	-0.083	-21.35	956	5000	
Th	232	3	193	-0.448	ppb	-0.448	-3.75	4160	2000	
U	238	3	193	-0.002	ppb	-0.002	-372.71	1379	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3979829	0.38	4300192	92.55	60	120	
Sc (IS)	45	3	HMI He	566574	0.82	644593	87.90	60	120	
Ge Internal standard	72	2	HMI H2	2432480	0.88	2598552	93.61	60	120	
Ge Internal standard	72	3	HMI He	696897	1.56	772392	90.23	60	120	
In Internal Standard	115	3	HMI He	2614140	1.26	2872781	91.00	60	120	
Ir (IS)	193	3	HMI He	5525558	1.46	6092963	90.69	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	296SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:45:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-20.512	ppb	-20.512	-11.17	12655	400000	
Mg	24	3	45	-2.347	ppb	-2.347	-24.24	113	400000	
Al	27	3	45	-2.198	ppb	-2.198	-21.53	90	400000	
K	39	3	45	-0.154	ppb	-0.154	-10624.14	24790	400000	
Ca	40	2	45	-9.299	ppb	-9.299	-3.64	6829	400000	
V	51	3	72	-1.229	ppb	-1.229	-2.77	197	2000	
Cr	52	3	72	-1.735	ppb	-1.735	-8.40	1616	5000	
Mn	55	3	72	-0.475	ppb	-0.475	-20.46	167	10000	
Fe	56	2	72	-15.957	ppb	-15.957	-15.40	35997	10000	
Co	59	3	72	0.000	ppb	0.000	-11904.55	50	2000	
Ni	60	3	72	-0.946	ppb	-0.946	-8.58	307	5000	
Cu	63	3	72	-0.150	ppb	-0.150	-4.73	222	5000	
Zn	66	3	72	-0.652	ppb	-0.652	-15.37	112	5000	
As	75	3	72	-0.234	ppb	-0.234	-20.01	15	2000	
Se	78	2	72	-0.010	ppb	-0.010	-213.87	1	2000	
Sr	88	3	72	-0.016	ppb	-0.016	-97.84	32	4000	
Mo	95	3	115	-0.021	ppb	-0.021	-134.61	25	2000	
Ag	107	3	115	0.008	ppb	0.008	104.03	25	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.732	ppb	-0.732	-6.74	165	2000	
Sb	121	3	115	-0.032	ppb	-0.032	-55.17	18	1000	
Ba	137	3	115	-0.157	ppb	-0.157	-13.64	20	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-3.76	117	2000	
(Pb)	206	3	193	-0.107	ppb	-0.107	-23.00	163	100	
(Pb)	207	3	193	-0.056	ppb	-0.056	-75.96	378	100	
Pb	208	3	193	-0.109	ppb	-0.109	-18.14	830	5000	
Th	232	3	193	-0.487	ppb	-0.487	-5.46	3962	2000	
U	238	3	193	0.027	ppb	0.027	27.23	1516	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3874690	1.86	4300192	90.11	60	120	
Sc (IS)	45	3	HMI He	568774	0.52	644593	88.24	60	120	
Ge Internal standard	72	2	HMI H2	2436021	2.33	2598552	93.75	60	120	
Ge Internal standard	72	3	HMI He	705662	0.48	772392	91.36	60	120	
In Internal Standard	115	3	HMI He	2623077	0.35	2872781	91.31	60	120	
Ir (IS)	193	3	HMI He	5499269	1.76	6092963	90.26	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	297SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:47:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.105	ppb	-0.105	-72.44	2	2000	
Na	23	3	45	-17.368	ppb	-17.368	-19.26	12792	400000	
Mg	24	3	45	-1.494	ppb	-1.494	-17.08	157	400000	
Al	27	3	45	-2.110	ppb	-2.110	-149.03	90	400000	
K	39	3	45	6.742	ppb	6.742	404.67	24750	400000	
Ca	40	2	45	-9.543	ppb	-9.543	-6.84	6815	400000	
V	51	3	72	-1.252	ppb	-1.252	-4.69	182	2000	
Cr	52	3	72	-1.229	ppb	-1.229	-17.83	1961	5000	
Mn	55	3	72	-0.484	ppb	-0.484	-6.32	162	10000	
Fe	56	2	72	-10.135	ppb	-10.135	-25.54	43864	10000	
Co	59	3	72	-0.005	ppb	-0.005	-39.93	43	2000	
Ni	60	3	72	-0.629	ppb	-0.629	-18.57	411	5000	
Cu	63	3	72	-0.136	ppb	-0.136	-36.51	232	5000	
Zn	66	3	72	-0.702	ppb	-0.702	-38.30	103	5000	
As	75	3	72	-0.201	ppb	-0.201	-72.38	18	2000	
Se	78	2	72	0.002	ppb	0.002	1486.33	2	2000	
Sr	88	3	72	-0.025	ppb	-0.025	-182.19	27	4000	
Mo	95	3	115	-0.035	ppb	-0.035	-93.36	18	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-208.69	8	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.750	ppb	-0.750	-4.44	150	2000	
Sb	121	3	115	-0.037	ppb	-0.037	-20.18	15	1000	
Ba	137	3	115	-0.155	ppb	-0.155	-37.23	20	5000	
Tl	205	3	193	-0.069	ppb	-0.069	-7.80	102	2000	
(Pb)	206	3	193	-0.135	ppb	-0.135	-7.87	132	100	
(Pb)	207	3	193	-0.116	ppb	-0.116	-41.86	318	100	
Pb	208	3	193	-0.129	ppb	-0.129	-11.34	743	5000	
Th	232	3	193	-0.483	ppb	-0.483	-6.13	4012	2000	
U	238	3	193	0.008	ppb	0.008	113.65	1433	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3940703	1.16	4300192	91.64	60	120	
Sc (IS)	45	3	HMI He	560859	1.24	644593	87.01	60	120	
Ge Internal standard	72	2	HMI H2	2393104	1.20	2598552	92.09	60	120	
Ge Internal standard	72	3	HMI He	699661	0.75	772392	90.58	60	120	
In Internal Standard	115	3	HMI He	2584395	1.03	2872781	89.96	60	120	
Ir (IS)	193	3	HMI He	5543461	1.88	6092963	90.98	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	298CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T08:49:33-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	13183	0.03
Mg	24	45	3	HMI He	153	27.65
Al	27	45	3	HMI He	117	22.42
K	39	45	3	HMI He	24011	0.03
Ca	40	45	2	HMI H2	10100	0.03
V	51	72	3	HMI He	586	2.47
Cr	52	72	3	HMI He	2272	0.26
Mn	55	72	3	HMI He	163	5.73
Fe	56	72	2	HMI H2	45775	0.02
Co	59	72	3	HMI He	55	59.62
Ni	60	72	3	HMI He	485	1.91
Cu	63	72	3	HMI He	298	6.51
Zn	66	72	3	HMI He	138	7.54
As	75	72	3	HMI He	30	166.76
Se	78	72	2	HMI H2	1	25980.76
(Se)	78	72	3	HMI He	25	80.06
Sr	88	72	3	HMI He	25	138.67
Mo	95	115	3	HMI He	27	332.46
Ag	107	115	3	HMI He	15	222.20
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	546	1.56
Sb	121	115	3	HMI He	33	93.70
Ba	137	115	3	HMI He	33	113.31
Tl	205	193	3	HMI He	100	10.00
(Pb)	206	193	3	HMI He	228	3.63
(Pb)	207	193	3	HMI He	332	5.01
Pb	208	193	3	HMI He	1008	0.77
Th	232	193	3	HMI He	6115	0.14
U	238	193	3	HMI He	1258	0.32

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3535116	3.27
Sc (IS)	45	3	HMI He	505423	0.85
Ge Internal standard	72	2	HMI H2	2359166	1.21
Ge Internal standard	72	3	HMI He	680743	1.25
In Internal Standard	115	3	HMI He	2361818	2.47
Ir (IS)	193	3	HMI He	5045699	1.11

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	299CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T08:51:22-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	298CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	1718.96
Na	23	45	3	HMI He	8793161	0.00
Mg	24	45	3	HMI He	933559	0.00
Al	27	45	3	HMI He	97	62.64
K	39	45	3	HMI He	779161	0.00
V	51	72	3	HMI He	621	0.78
Cr	52	72	3	HMI He	2431	0.32
Mn	55	72	3	HMI He	225	5.50
Co	59	72	3	HMI He	53	61.78
Ni	60	72	3	HMI He	506	4.76
Cu	63	72	3	HMI He	298	4.58
Zn	66	72	3	HMI He	232	5.92
As	75	72	3	HMI He	55	16.53
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	40	82.71
Sr	88	72	3	HMI He	192	8.21
Mo	95	115	3	HMI He	28	190.39
Ag	107	115	3	HMI He	27	107.43
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	713	1.19
Sb	121	115	3	HMI He	38	70.87
Ba	137	115	3	HMI He	148	4.73
Tl	205	193	3	HMI He	85	24.96
(Pb)	206	193	3	HMI He	268	7.81
(Pb)	207	193	3	HMI He	423	0.70
Pb	208	193	3	HMI He	1254	0.55
Th	232	193	3	HMI He	4917	0.12
U	238	193	3	HMI He	1283	0.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3582014	1.43	3535116	101.33	60	120	
Sc (IS)	45	3	HMI He	510430	0.72	505423	100.99	60	120	
Ge Internal standard	72	2	HMI H2	2176579	1.11	2359166	92.26	60	120	
Ge Internal standard	72	3	HMI He	632822	0.14	680743	92.96	60	120	
In Internal Standard	115	3	HMI He	2398594	1.71	2361818	101.56	60	120	
Ir (IS)	193	3	HMI He	5017108	1.62	5045699	99.43	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	300CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T08:53:12-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	298CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3592	0.10
Na	23	45	3	HMI He	189383	0.00
Mg	24	45	3	HMI He	91744	0.00
Al	27	45	3	HMI He	34854	0.00
K	39	45	3	HMI He	99251	0.00
V	51	72	3	HMI He	50546	0.00
Cr	52	72	3	HMI He	63927	0.00
Mn	55	72	3	HMI He	32884	0.00
Co	59	72	3	HMI He	105575	0.00
Ni	60	72	3	HMI He	29849	0.00
Cu	63	72	3	HMI He	79642	0.00
Zn	66	72	3	HMI He	12678	0.02
As	75	72	3	HMI He	9370	0.01
Se	78	72	2	HMI H2	4929	0.03
(Se)	78	72	3	HMI He	485	3.15
Sr	88	72	3	HMI He	88851	0.00
Mo	95	115	3	HMI He	40093	0.00
Ag	107	115	3	HMI He	136255	0.00
Cd	111	115	3	HMI He	19546	0.01
Sn	120	115	3	HMI He	61790	0.00
Sb	121	115	3	HMI He	61892	0.00
Ba	137	115	3	HMI He	20446	0.00
Tl	205	193	3	HMI He	307831	0.00
(Pb)	206	193	3	HMI He	101959	0.00
(Pb)	207	193	3	HMI He	91778	0.00
Pb	208	193	3	HMI He	412678	0.00
Th	232	193	3	HMI He	421028	0.00
U	238	193	3	HMI He	425852	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3570589	0.97	3535116	101.00	60	120	
Sc (IS)	45	3	HMI He	506403	0.83	505423	100.19	60	120	
Ge Internal standard	72	2	HMI H2	2377013	1.72	2359166	100.76	60	120	
Ge Internal standard	72	3	HMI He	673582	0.24	680743	98.95	60	120	
In Internal Standard	115	3	HMI He	2337354	0.47	2361818	98.96	60	120	
Ir (IS)	193	3	HMI He	5150856	1.56	5045699	102.08	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	301_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:55:01-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.124	ppb	1.454	1351	40	95.3	90	110	
Na	23	3	45	13256.336	ppb	0.776	1174427	12800	103.6	90	110	
Mg	24	3	45	4634.094	ppb	0.495	215904	4800	96.5	90	110	
Al	27	3	45	819.580	ppb	2.404	14432	800	102.4	90	110	
K	39	3	45	4710.191	ppb	1.718	201545	4800	98.1	90	110	
Ca	40	2	45	4900.840	ppb	2.256	2271761	4800	102.1	90	110	
V	51	3	72	40.783	ppb	0.691	20784	40	102.0	90	110	
Cr	52	3	72	41.764	ppb	6.280	27740	40	104.4	90	110	
Mn	55	3	72	41.396	ppb	2.257	13585	40	103.5	90	110	
Fe	56	2	72	827.454	ppb	2.394	1115438	800	103.4	90	110	
Co	59	3	72	40.922	ppb	3.101	42840	40	102.3	90	110	
Ni	60	3	72	41.652	ppb	5.407	12593	40	104.1	90	110	
Cu	63	3	72	41.577	ppb	3.314	32983	40	103.9	90	110	
Zn	66	3	72	84.919	ppb	4.085	10686	80	106.1	90	110	
As	75	3	72	40.277	ppb	5.923	3755	40	100.7	90	110	
Se	78	2	72	41.308	ppb	3.480	1956	40	103.3	90	110	
Sr	88	3	72	121.627	ppb	3.796	53541	120	101.4	90	110	
Mo	95	3	115	40.266	ppb	1.084	16450	40	100.7	90	110	
Ag	107	3	115	80.243	ppb	1.676	111288	80	100.3	90	110	
Cd	111	3	115	39.321	ppb	1.645	7825	40	98.3	90	110	
Sn	120	3	115	41.074	ppb	2.075	26156	40	102.7	90	110	
Sb	121	3	115	40.589	ppb	0.513	25595	40	101.5	90	110	
Ba	137	3	115	39.237	ppb	2.338	8185	40	98.1	90	110	
Tl	205	3	193	41.410	ppb	3.832	123428	40	103.5	90	110	
(Pb)	206	3	193	43.039	ppb	3.520	42607	40	107.6	90	110	
(Pb)	207	3	193	41.173	ppb	2.819	36775	40	102.9	90	110	
Pb	208	3	193	42.107	ppb	2.934	168795	40	105.3	90	110	
Th	232	3	193	83.812	ppb	1.904	342727	80	104.8	90	110	
U	238	3	193	45.448	ppb	4.219	187962	40	113.6	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3552026	2.96	3535116	100.48	60	120	
Sc (IS)	45	3	HMI He	509192	0.15	505423	100.75	60	120	
Ge Internal standard	72	2	HMI H2	2283565	0.30	2359166	96.80	60	120	
Ge Internal standard	72	3	HMI He	667882	3.49	680743	98.11	60	120	
In Internal Standard	115	3	HMI He	2379400	1.22	2361818	100.74	60	120	
Ir (IS)	193	3	HMI He	4989247	3.61	5045699	98.88	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	302_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:56:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.223	ppb	4.132	1724	50	96.4	90	110	
Na	23	3	45	49185.508	ppb	1.182	4390625	51000	96.4	90	110	
Mg	24	3	45	10380.009	ppb	2.066	490992	11000	94.4	90	110	
Al	27	3	45	1000.553	ppb	2.842	17866	1000	100.1	90	110	
K	39	3	45	10296.171	ppb	2.252	418336	11000	93.6	90	110	
Ca	40	2	45	10525.914	ppb	3.043	4918180	11000	95.7	90	110	
V	51	3	72	54.349	ppb	0.704	26772	50	108.7	90	110	
Cr	52	3	72	53.278	ppb	2.290	33888	50	106.6	90	110	
Mn	55	3	72	52.844	ppb	1.247	16847	50	105.7	90	110	
Fe	56	2	72	1067.031	ppb	2.405	1424286	1000	106.7	90	110	
Co	59	3	72	52.669	ppb	1.557	53697	50	105.3	90	110	
Ni	60	3	72	52.046	ppb	0.453	15217	50	104.1	90	110	
Cu	63	3	72	52.783	ppb	2.292	40710	50	105.6	90	110	
Zn	66	3	72	53.729	ppb	3.558	6635	50	107.5	90	110	
As	75	3	72	52.146	ppb	7.343	4728	50	104.3	90	110	
Se	78	2	72	53.747	ppb	3.074	2544	50	107.5	90	110	
Sr	88	3	72	105.555	ppb	2.121	45271	100	105.6	90	110	
Mo	95	3	115	51.025	ppb	3.989	20650	50	102.1	90	110	
Ag	107	3	115	50.892	ppb	0.926	69970	50	101.8	90	110	
Cd	111	3	115	50.757	ppb	1.405	10010	50	101.5	90	110	
Sn	120	3	115	50.946	ppb	2.845	32027	50	101.9	90	110	
Sb	121	3	115	50.353	ppb	1.970	31460	50	100.7	90	110	
Ba	137	3	115	50.993	ppb	2.584	10534	50	102.0	90	110	
Tl	205	3	193	50.210	ppb	2.315	155668	50	100.4	90	110	
(Pb)	206	3	193	51.324	ppb	2.090	52810	50	102.6	90	110	
(Pb)	207	3	193	49.754	ppb	1.519	46153	50	99.5	90	110	
Pb	208	3	193	50.638	ppb	2.440	210922	50	101.3	90	110	
Th	232	3	193	52.973	ppb	0.749	227594	50	105.9	90	110	
U	238	3	193	51.012	ppb	2.513	219330	50	102.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588946	1.61	3535116	101.52	60	120	
Sc (IS)	45	3	HMI He	517334	2.35	505423	102.36	60	120	
Ge Internal standard	72	2	HMI H2	2281982	1.94	2359166	96.73	60	120	
Ge Internal standard	72	3	HMI He	650198	0.84	680743	95.51	60	120	
In Internal Standard	115	3	HMI He	2358401	1.08	2361818	99.86	60	120	
Ir (IS)	193	3	HMI He	5187194	1.85	5045699	102.80	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	303_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:58:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.047	ppb	171.4	3	0.5	
Na	23	3	45	26.393	ppb	7.0	15608	25	>RL
Mg	24	3	45	0.551	ppb	32.5	180	25	
Al	27	3	45	-4.067	ppb	-7.6	47	15	
K	39	3	45	-8.726	ppb	-371.6	23888	50	
V	51	3	72	0.125	ppb	11.2	636	1	
Cr	52	3	72	0.432	ppb	28.0	2494	1	
Mn	55	3	72	0.204	ppb	44.4	227	0.5	
Co	59	3	72	0.001	ppb	1484.0	55	0.5	
Ni	60	3	72	0.558	ppb	11.1	638	1	
Cu	63	3	72	-0.063	ppb	-30.9	243	1	
Zn	66	3	72	0.357	ppb	30.6	180	5	
As	75	3	72	0.059	ppb	172.5	35	1	
Se	78	2	72	0.044	ppb	150.8	3	1	
Sr	88	3	72	0.020	ppb	127.6	33	0.5	
Mo	95	3	115	0.028	ppb	93.0	38	0.5	
Ag	107	3	115	0.007	ppb	1.4	25	1	
Cd	111	3	115	0.017	ppb	149.6	5	0.5	
Sn	120	3	115	0.277	ppb	31.3	718	1	
Sb	121	3	115	0.045	ppb	9.0	62	0.6	
Ba	137	3	115	0.057	ppb	151.0	45	0.5	
Tl	205	3	193	0.039	ppb	18.7	225	0.1	
(Pb)	206	3	193	-0.058	ppb	-94.1	175	1	
(Pb)	207	3	193	0.051	ppb	51.1	388	1	
Pb	208	3	193	0.002	ppb	818.0	1046	0.5	
Th	232	3	193	1.303	ppb	22.5	11736	1	>RL
U	238	3	193	0.027	ppb	91.1	1411	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3575013	1.82	3535116	101.13	60	120	
Sc (IS)	45	3	HMI He	509724	0.92	505423	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2312207	4.09	2359166	98.01	60	120	
Ge Internal standard	72	3	HMI He	667560	1.66	680743	98.06	60	120	
In Internal Standard	115	3	HMI He	2361470	0.56	2361818	99.99	60	120	
Ir (IS)	193	3	HMI He	5195379	2.13	5045699	102.97	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	304LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:12:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.920	ppb	28.609	35	1	92.0	70	130	
Na	23	3	45	287.802	ppb	0.568	38394	300	95.9	70	130	
Mg	24	3	45	46.476	ppb	3.126	2313	50	93.0	70	130	
Al	27	3	45	47.635	ppb	11.073	948	50	95.3	70	130	
K	39	3	45	117.142	ppb	25.961	28528	120	97.6	70	130	
Ca	40	2	45	199.977	ppb	0.860	101154	200	100.0	70	130	
V	51	3	72	4.910	ppb	9.630	2957	5	98.2	70	130	
Cr	52	3	72	2.425	ppb	16.138	3654	2	121.3	70	130	
Mn	55	3	72	1.223	ppb	18.870	548	1	122.3	70	130	
Fe	56	2	72	51.530	ppb	3.891	110787	50	103.1	70	130	
Co	59	3	72	0.939	ppb	8.699	1020	1	93.9	70	130	
Ni	60	3	72	2.131	ppb	20.552	1078	2	106.6	70	130	
Cu	63	3	72	1.990	ppb	5.182	1828	2	99.5	70	130	
Zn	66	3	72	9.781	ppb	4.658	1329	10	97.8	70	130	
As	75	3	72	4.857	ppb	6.096	471	5	97.1	70	130	
Se	78	2	72	5.197	ppb	9.402	246	5	103.9	70	130	
Sr	88	3	72	5.178	ppb	5.831	2267	5	103.6	70	130	
Mo	95	3	115	1.876	ppb	2.948	793	2	93.8	70	130	
Ag	107	3	115	0.985	ppb	8.441	1381	1	98.5	70	130	
Cd	111	3	115	0.821	ppb	16.756	165	1	82.1	70	130	
Sn	120	3	115	8.811	ppb	5.022	6050	10	88.1	70	130	
Sb	121	3	115	1.970	ppb	2.568	1274	2	98.5	70	130	
Ba	137	3	115	0.848	ppb	16.998	210	1	84.8	70	130	
Tl	205	3	193	0.974	ppb	6.148	3076	1	97.4	70	130	
(Pb)	206	3	193	0.862	ppb	12.549	1100	1	86.2	70	130	
(Pb)	207	3	193	0.930	ppb	17.537	1179	1	93.0	70	130	
Pb	208	3	193	0.906	ppb	2.430	4718	1	90.6	70	130	
Th	232	3	193	1.534	ppb	13.639	12520	1	153.4	70	130	>+/-30%
U	238	3	193	1.010	ppb	4.286	5527	1	101.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3506520	0.34	3535116	99.19	60	120	
Sc (IS)	45	3	HMI He	507916	0.69	505423	100.49	60	120	
Ge Internal standard	72	2	HMI H2	2278128	2.73	2359166	96.56	60	120	
Ge Internal standard	72	3	HMI He	656862	0.76	680743	96.49	60	120	
In Internal Standard	115	3	HMI He	2380764	1.56	2361818	100.80	60	120	
Ir (IS)	193	3	HMI He	5109678	2.08	5045699	101.27	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	305ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:15:51-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	4549.083	ppb	103.8	650309	100000	
Mg	24	3	45	4608.740	ppb	100.3	339470	100000	
Al	27	3	45	4744.814	ppb	100.0	131215	100000	
K	39	3	45	4193.521	ppb	106.8	289630	100000	
Ca	40	2	45	41161.156	ppb	17.2	12524673	100000	
V	51	3	72	-0.944	ppb	-7.0	168	1	
Cr	52	3	72	-0.315	ppb	-571.7	3237	1	
Mn	55	3	72	0.081	ppb	251.9	298	0.95	
Fe	56	2	72	45509.826	ppb	18.0	36303315	100000	
Co	59	3	72	-0.007	ppb	-403.9	75	0.5	
Ni	60	3	72	0.144	ppb	750.1	821	1	
Cu	63	3	72	-0.167	ppb	-16.9	257	1	
Zn	66	3	72	-0.281	ppb	-25.7	162	1	
As	75	3	72	-0.185	ppb	-24.8	20	1	
Se	78	2	72	0.003	ppb	887.2	1	1	
(Se)	78	3	72	-1.460	ppb	-56.4	28	1	
Sr	88	3	72	0.043	ppb	118.9	68	1	
Mo	95	3	115	86.188	ppb	86.3	56938	2000	
Ag	107	3	115	0.001	ppb	688.5	27	1	
Cd	111	3	115	0.012	ppb	95.1	7	1	
Sn	120	3	115	-0.680	ppb	-4.9	215	1	
Sb	121	3	115	-0.022	ppb	-56.2	33	1	
Ba	137	3	115	0.109	ppb	250.8	100	0.95	
Tl	205	3	193	-0.004	ppb	-203.2	143	1	
(Pb)	206	3	193	-0.082	ppb	-34.2	245	1	
(Pb)	207	3	193	-0.052	ppb	-32.3	481	1	
Pb	208	3	193	-0.076	ppb	-25.2	1176	1	
Th	232	3	193	-0.423	ppb	-30.2	7379	1	
U	238	3	193	0.012	ppb	142.4	2217	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2412949	28.80	3535116	68.26	60	120	
Sc (IS)	45	3	HMI He	868321	12.21	505423	171.80	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	1453442	29.85	2359166	61.61	60	120	
Ge Internal standard	72	3	HMI He	1075211	13.43	680743	157.95	60	120	IS Failed
In Internal Standard	115	3	HMI He	4057722	11.15	2361818	171.81	60	120	IS Failed
Ir (IS)	193	3	HMI He	8521306	11.31	5045699	168.88	60	120	IS Failed

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	306ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:20:28-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	-45300.1	2	0.5	
Na	23	3	45	90482.365	ppb	0.5	8219991	100000	
Mg	24	3	45	90239.909	ppb	0.9	4350548	100000	
Al	27	3	45	93389.621	ppb	0.5	1688950	100000	
K	39	3	45	91288.553	ppb	2.0	3583984	100000	
Ca	40	2	45	91300.863	ppb	0.9	43727031	100000	
V	51	3	72	-0.108	ppb	-102.8	523	1	
Cr	52	3	72	2.000	ppb	15.9	3464	1	>RL or LOD
Mn	55	3	72	0.940	ppb	16.9	466	0.95	
Fe	56	2	72	98239.665	ppb	1.9	122981440	100000	
Co	59	3	72	0.242	ppb	10.4	308	0.5	
Ni	60	3	72	0.717	ppb	29.4	686	1	
Cu	63	3	72	0.221	ppb	14.3	468	1	
Zn	66	3	72	1.515	ppb	14.9	325	1	>RL or LOD
As	75	3	72	-0.013	ppb	-257.5	28	1	
Se	78	2	72	0.044	ppb	146.8	3	1	
(Se)	78	3	72	1.551	ppb	230.1	32	1	>RL or LOD
Sr	88	3	72	0.827	ppb	7.6	390	1	
Mo	95	3	115	1826.386	ppb	2.2	774878	2000	
Ag	107	3	115	0.034	ppb	18.7	65	1	
Cd	111	3	115	0.185	ppb	40.3	40	1	
Sn	120	3	115	0.495	ppb	18.2	895	1	
Sb	121	3	115	0.125	ppb	38.9	117	1	
Ba	137	3	115	1.552	ppb	13.3	370	0.95	>RL or LOD
Tl	205	3	193	0.023	ppb	32.0	170	1	
(Pb)	206	3	193	0.097	ppb	52.6	327	1	
(Pb)	207	3	193	0.137	ppb	49.5	456	1	
Pb	208	3	193	0.144	ppb	29.6	1596	1	
Th	232	3	193	-0.387	ppb	-16.0	4572	1	
U	238	3	193	0.053	ppb	30.0	1484	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3684245	0.36	3535116	104.22	60	120	
Sc (IS)	45	3	HMI He	527232	0.91	505423	104.31	60	120	
Ge Internal standard	72	2	HMI H2	2208340	2.86	2359166	93.61	60	120	
Ge Internal standard	72	3	HMI He	669944	0.71	680743	98.41	60	120	
In Internal Standard	115	3	HMI He	2475459	1.65	2361818	104.81	60	120	
Ir (IS)	193	3	HMI He	5073596	0.38	5045699	100.55	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	307ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:22:14-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	99.709	ppb	3.463	3522	100	99.7	80	120	
Na	23	3	45	95050.388	ppb	1.214	8659487	100	95050.4	80	120	>+\-20%
Mg	24	3	45	93564.093	ppb	1.593	4523620	100	93564.1	80	120	>+\-20%
Al	27	3	45	95349.028	ppb	1.136	1729427	100	95349.0	80	120	>+\-20%
K	39	3	45	96388.768	ppb	2.151	3794486	100	96388.8	80	120	>+\-20%
Ca	40	2	45	101479.803	ppb	2.127	47497334	100	101479.8	80	120	>+\-20%
V	51	3	72	98.530	ppb	1.390	48864	100	98.5	80	120	
Cr	52	3	72	100.906	ppb	0.600	63265	100	100.9	80	120	
Mn	55	3	72	100.263	ppb	1.229	32347	100	100.3	80	120	
Fe	56	2	72	97094.673	ppb	1.064	125460063	100	97094.7	80	120	>+\-20%
Co	59	3	72	98.491	ppb	0.704	102009	100	98.5	80	120	
Ni	60	3	72	97.614	ppb	1.222	28597	100	97.6	80	120	
Cu	63	3	72	100.425	ppb	1.067	78459	100	100.4	80	120	
Zn	66	3	72	97.276	ppb	2.173	12103	100	97.3	80	120	
As	75	3	72	99.906	ppb	3.743	9185	100	99.9	80	120	
Se	78	2	72	100.651	ppb	0.510	4756	100	100.7	80	120	
(Se)	78	3	72	116.480	ppb	9.506	550	100	116.5	80	120	
Sr	88	3	72	197.986	ppb	0.733	86289	100	198.0	80	120	>+\-20%
Mo	95	3	115	1954.505	ppb	2.487	806073	100	1954.5	80	120	>+\-20%
Ag	107	3	115	94.399	ppb	2.503	132387	100	94.4	80	120	
Cd	111	3	115	93.674	ppb	4.005	18841	100	93.7	80	120	
Sn	120	3	115	96.973	ppb	4.353	61668	100	97.0	80	120	
Sb	121	3	115	95.737	ppb	1.859	60999	100	95.7	80	120	
Ba	137	3	115	96.760	ppb	2.190	20366	100	96.8	80	120	
Tl	205	3	193	97.445	ppb	0.657	296059	100	97.4	80	120	
(Pb)	206	3	193	98.524	ppb	0.652	99164	100	98.5	80	120	
(Pb)	207	3	193	95.607	ppb	1.808	86627	100	95.6	80	120	
Pb	208	3	193	98.223	ppb	0.361	400121	100	98.2	80	120	
Th	232	3	193	97.967	ppb	0.944	407287	100	98.0	80	120	
U	238	3	193	106.129	ppb	0.362	445956	100	106.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3601336	1.97	3535116	101.87	60	120	
Sc (IS)	45	3	HMI He	528792	0.64	505423	104.62	60	120	
Ge Internal standard	72	2	HMI H2	2278692	0.77	2359166	96.59	60	120	
Ge Internal standard	72	3	HMI He	660810	0.74	680743	97.07	60	120	
In Internal Standard	115	3	HMI He	2406784	2.57	2361818	101.90	60	120	
Ir (IS)	193	3	HMI He	5083516	0.66	5045699	100.75	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	308SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:23:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.050	ppb	0.050	166.86	3	2000	
Na	23	3	45	51.625	ppb	51.625	5.14	18217	400000	
Mg	24	3	45	20.502	ppb	20.502	5.28	1135	400000	
Al	27	3	45	13.428	ppb	13.428	33.46	360	400000	
K	39	3	45	7.683	ppb	7.683	355.64	25041	400000	
Ca	40	2	45	25.744	ppb	25.744	1.58	22240	400000	
V	51	3	72	0.010	ppb	0.010	83.63	558	2000	
Cr	52	3	72	0.487	ppb	0.487	115.44	2431	5000	
Mn	55	3	72	0.100	ppb	0.100	158.29	185	10000	
Fe	56	2	72	34.923	ppb	34.923	12.94	84370	10000	
Co	59	3	72	0.006	ppb	0.006	56.17	58	2000	
Ni	60	3	72	0.561	ppb	0.561	31.98	615	5000	
Cu	63	3	72	0.035	ppb	0.035	173.05	308	5000	
Zn	66	3	72	0.573	ppb	0.573	114.70	198	5000	
As	75	3	72	0.187	ppb	0.187	80.33	45	2000	
Se	78	2	72	0.076	ppb	0.076	58.97	4	2000	
Sr	88	3	72	0.046	ppb	0.046	60.92	43	4000	
Mo	95	3	115	3.819	ppb	3.819	19.21	1599	2000	
Ag	107	3	115	0.008	ppb	0.008	91.00	27	100	
Cd	111	3	115	0.008	ppb	0.008	360.00	3	2000	
Sn	120	3	115	0.036	ppb	0.036	167.16	578	2000	
Sb	121	3	115	0.025	ppb	0.025	57.53	50	1000	
Ba	137	3	115	0.316	ppb	0.316	10.52	100	5000	
Tl	205	3	193	0.057	ppb	0.057	15.81	277	2000	
(Pb)	206	3	193	0.012	ppb	0.012	78.10	243	100	
(Pb)	207	3	193	0.005	ppb	0.005	524.28	340	100	
Pb	208	3	193	0.017	ppb	0.017	67.39	1089	5000	
Th	232	3	193	2.353	ppb	2.353	13.21	15896	2000	
U	238	3	193	0.049	ppb	0.049	62.33	1481	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3584564	1.00	3535116	101.40	60	120	
Sc (IS)	45	3	HMI He	521035	0.40	505423	103.09	60	120	
Ge Internal standard	72	2	HMI H2	2152700	0.32	2359166	91.25	60	120	
Ge Internal standard	72	3	HMI He	643045	1.76	680743	94.46	60	120	
In Internal Standard	115	3	HMI He	2401681	2.09	2361818	101.69	60	120	
Ir (IS)	193	3	HMI He	5114446	1.10	5045699	101.36	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	309_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:25:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.576	ppb	5.837	1863	50	109.2	90	110	
Na	23	3	45	48907.588	ppb	2.640	4368242	51000	95.9	90	110	
Mg	24	3	45	10299.317	ppb	0.297	487547	11000	93.6	90	110	
Al	27	3	45	1003.695	ppb	2.916	17936	1000	100.4	90	110	
K	39	3	45	10433.987	ppb	0.681	423910	11000	94.9	90	110	
Ca	40	2	45	10654.689	ppb	1.547	5002190	11000	96.9	90	110	
V	51	3	72	55.204	ppb	1.521	26330	50	110.4	90	110	>+\-10%
Cr	52	3	72	55.510	ppb	1.754	34110	50	111.0	90	110	>+\-10%
Mn	55	3	72	54.502	ppb	2.518	16823	50	109.0	90	110	
Fe	56	2	72	1122.671	ppb	1.912	1413390	1000	112.3	90	110	>+\-10%
Co	59	3	72	54.861	ppb	0.851	54172	50	109.7	90	110	
Ni	60	3	72	56.219	ppb	2.621	15883	50	112.4	90	110	>+\-10%
Cu	63	3	72	54.651	ppb	1.974	40815	50	109.3	90	110	
Zn	66	3	72	56.976	ppb	3.800	6808	50	114.0	90	110	>+\-10%
As	75	3	72	55.780	ppb	2.967	4898	50	111.6	90	110	>+\-10%
Se	78	2	72	54.683	ppb	4.332	2444	50	109.4	90	110	
Sr	88	3	72	110.315	ppb	2.840	45822	100	110.3	90	110	>+\-10%
Mo	95	3	115	50.901	ppb	1.508	20919	50	101.8	90	110	
Ag	107	3	115	50.010	ppb	3.048	69774	50	100.0	90	110	
Cd	111	3	115	50.802	ppb	0.960	10172	50	101.6	90	110	
Sn	120	3	115	49.949	ppb	2.961	31875	50	99.9	90	110	
Sb	121	3	115	50.855	ppb	0.271	32260	50	101.7	90	110	
Ba	137	3	115	51.190	ppb	1.989	10734	50	102.4	90	110	
Tl	205	3	193	50.019	ppb	3.763	157603	50	100.0	90	110	
(Pb)	206	3	193	50.980	ppb	1.586	53329	50	102.0	90	110	
(Pb)	207	3	193	49.839	ppb	1.576	46990	50	99.7	90	110	
Pb	208	3	193	50.279	ppb	1.480	212910	50	100.6	90	110	
Th	232	3	193	50.479	ppb	3.112	220685	50	101.0	90	110	
U	238	3	193	50.357	ppb	3.084	220073	50	100.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3605856	2.19	3535116	102.00	60	120	
Sc (IS)	45	3	HMI He	517560	0.60	505423	102.40	60	120	
Ge Internal standard	72	2	HMI H2	2155458	1.19	2359166	91.37	60	120	
Ge Internal standard	72	3	HMI He	629708	0.40	680743	92.50	60	120	
In Internal Standard	115	3	HMI He	2394159	2.25	2361818	101.37	60	120	
Ir (IS)	193	3	HMI He	5272767	2.14	5045699	104.50	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	310_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:27:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.001	ppb	7094.2	2	0.5	
Na	23	3	45	43.558	ppb	16.4	17204	25	>RL
Mg	24	3	45	2.807	ppb	56.1	287	25	
Al	27	3	45	-0.859	ppb	-294.8	103	15	
K	39	3	45	-17.386	ppb	-179.8	23677	50	
V	51	3	72	0.022	ppb	864.5	563	1	
Cr	52	3	72	0.550	ppb	49.2	2466	1	
Mn	55	3	72	0.222	ppb	35.1	223	0.5	
Co	59	3	72	-0.004	ppb	-669.9	48	0.5	
Ni	60	3	72	0.797	ppb	23.5	680	1	
Cu	63	3	72	-0.002	ppb	-1768.1	280	1	
Zn	66	3	72	0.194	ppb	123.0	153	5	
As	75	3	72	0.151	ppb	115.4	42	1	
Se	78	2	72	0.030	ppb	142.6	2	1	
Sr	88	3	72	0.004	ppb	589.2	25	0.5	
Mo	95	3	115	0.269	ppb	21.4	140	0.5	
Ag	107	3	115	0.013	ppb	40.5	33	1	
Cd	111	3	115	0.016	ppb	150.5	5	0.5	
Sn	120	3	115	0.151	ppb	60.1	658	1	
Sb	121	3	115	0.009	ppb	268.6	40	0.6	
Ba	137	3	115	0.115	ppb	101.1	58	0.5	
Tl	205	3	193	0.028	ppb	24.8	190	0.1	
(Pb)	206	3	193	-0.001	ppb	-4973.0	233	1	
(Pb)	207	3	193	-0.024	ppb	-83.0	318	1	
Pb	208	3	193	-0.009	ppb	-322.3	996	0.5	
Th	232	3	193	1.270	ppb	12.8	11580	1	>RL
U	238	3	193	0.005	ppb	362.0	1313	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3605443	0.61	3535116	101.99	60	120	
Sc (IS)	45	3	HMI He	512374	0.71	505423	101.38	60	120	
Ge Internal standard	72	2	HMI H2	2191449	2.12	2359166	92.89	60	120	
Ge Internal standard	72	3	HMI He	641679	0.69	680743	94.26	60	120	
In Internal Standard	115	3	HMI He	2429300	1.66	2361818	102.86	60	120	
Ir (IS)	193	3	HMI He	5179229	0.65	5045699	102.65	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	311_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:29:25-06:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.049	ppb	335.8119925	3	0.5
Na	23	3	45	32.722	ppb	26.03049258	16543	25
Mg	24	3	45	2.771	ppb	40.09669	290	25
Al	27	3	45	1.471	ppb	145.9897711	147	15
K	39	3	45	-22.602	ppb	-83.50806129	23908	50
Ca	40	2	45	6.502	ppb	14.37913377	13233	200
V	51	3	72	-0.007	ppb	-149.6448632	553	1
Cr	52	3	72	0.496	ppb	20.66988758	2452	1
Mn	55	3	72	0.423	ppb	15.01403708	288	0.5
Fe	56	2	72	15.568	ppb	26.8767949	60995	50
Co	59	3	72	0.004	ppb	161.4321325	57	0.5
Ni	60	3	72	0.494	ppb	35.25475843	600	1
Cu	63	3	72	0.053	ppb	102.4399317	323	1
Zn	66	3	72	6.132	ppb	8.39335439	870	5
As	75	3	72	0.109	ppb	114.9429451	38	1
(Se)	78	3	72	1.390	ppb	209.0691421	30	1
Sr	88	3	72	0.042	ppb	106.3123949	42	0.5
Mo	95	3	115	0.170	ppb	31.58238968	98	0.5
Ag	107	3	115	0.002	ppb	195.1008711	18	1
Cd	111	3	115	0.008	ppb	177.7477712	3	0.5
Sn	120	3	115	0.407	ppb	27.43698073	823	1
Sb	121	3	115	0.016	ppb	204.4683249	45	0.6
Ba	137	3	115	0.005	ppb	1353.86144	35	0.5
Tl	205	3	193	0.025	ppb	25.40133462	180	0.1
(Pb)	206	3	193	-0.047	ppb	-8.86716873	188	1
(Pb)	207	3	193	0.008	ppb	613.346312	350	1
Pb	208	3	193	-0.015	ppb	-141.7022912	978	0.5
Th	232	3	193	-0.100	ppb	-69.65103754	5912	1
U	238	3	193	0.013	ppb	92.24450009	1358	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3573029	0.76	3535116	101.07	60	120	
Sc (IS)	45	3	HMI He	521752	0.39	505423	103.23	60	120	
Ge Internal standard	72	2	HMI H2	2159109	1.55	2359166	91.52	60	120	
Ge Internal standard	72	3	HMI He	646402	1.27	680743	94.96	60	120	
In Internal Standard	115	3	HMI He	2433826	2.47	2361818	103.05	60	120	
Ir (IS)	193	3	HMI He	5221412	0.84	5045699	103.48	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A@10
Data File Name	312SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:31:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	11030.895	ppb	11030.895	0.99	982946	400000	
Mg	24	3	45	7781.643	ppb	7781.643	0.75	363725	400000	
Al	27	3	45	3.133	ppb	3.133	149.29	174	400000	
K	39	3	45	480.754	ppb	480.754	5.68	42433	400000	
Ca	40	2	45	22291.512	ppb	22291.512	1.08	10275816	400000	
V	51	3	72	0.211	ppb	0.211	31.88	663	2000	
Cr	52	3	72	0.702	ppb	0.702	42.43	2596	5000	
Mn	55	3	72	2.379	ppb	2.379	13.79	910	10000	
Fe	56	2	72	20.049	ppb	20.049	21.39	67820	10000	
Co	59	3	72	0.048	ppb	0.048	37.78	102	2000	
Ni	60	3	72	0.993	ppb	0.993	22.79	746	5000	
Cu	63	3	72	0.316	ppb	0.316	35.00	528	5000	
Zn	66	3	72	4.183	ppb	4.183	4.07	640	5000	
As	75	3	72	0.382	ppb	0.382	71.80	63	2000	
Se	78	2	72	0.044	ppb	0.044	148.46	3	2000	
Sr	88	3	72	84.465	ppb	84.465	0.97	36312	4000	
Mo	95	3	115	0.120	ppb	0.120	11.22	75	2000	
Ag	107	3	115	0.004	ppb	0.004	99.66	20	100	
Cd	111	3	115	0.017	ppb	0.017	149.00	5	2000	
Sn	120	3	115	0.155	ppb	0.155	78.54	638	2000	
Sb	121	3	115	0.030	ppb	0.030	84.91	52	1000	
Ba	137	3	115	36.055	ppb	36.055	3.98	7417	5000	
Tl	205	3	193	0.032	ppb	0.032	27.25	200	2000	
(Pb)	206	3	193	0.409	ppb	0.409	15.38	651	100	
(Pb)	207	3	193	0.382	ppb	0.382	14.79	690	100	
Pb	208	3	193	0.387	ppb	0.387	8.06	2630	5000	
Th	232	3	193	-0.218	ppb	-0.218	-33.20	5357	2000	
U	238	3	193	0.494	ppb	0.494	5.28	3392	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3543729	1.02	3535116	100.24	60	120	
Sc (IS)	45	3	HMI He	511036	1.85	505423	101.11	60	120	
Ge Internal standard	72	2	HMI H2	2204109	2.30	2359166	93.43	60	120	
Ge Internal standard	72	3	HMI He	651604	0.58	680743	95.72	60	120	
In Internal Standard	115	3	HMI He	2345384	0.67	2361818	99.30	60	120	
Ir (IS)	193	3	HMI He	5166531	0.59	5045699	102.39	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A@10
Data File Name	313SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:33:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	10262.685	ppb	10262.685	1.47	919270	400000	
Mg	24	3	45	7541.734	ppb	7541.734	0.89	353946	400000	
Al	27	3	45	-1.049	ppb	-1.049	-5.66	100	400000	
K	39	3	45	577.266	ppb	577.266	4.72	46279	400000	
Ca	40	2	45	20605.234	ppb	20605.234	1.53	9374303	400000	
V	51	3	72	0.155	ppb	0.155	91.93	636	2000	
Cr	52	3	72	0.380	ppb	0.380	38.65	2407	5000	
Mn	55	3	72	21.135	ppb	21.135	2.83	6860	10000	
Fe	56	2	72	68.467	ppb	68.467	7.34	126993	10000	
Co	59	3	72	0.317	ppb	0.317	12.19	376	2000	
Ni	60	3	72	1.146	ppb	1.146	30.79	791	5000	
Cu	63	3	72	0.198	ppb	0.198	21.52	438	5000	
Zn	66	3	72	4.185	ppb	4.185	27.59	640	5000	
As	75	3	72	0.176	ppb	0.176	119.68	45	2000	
Se	78	2	72	0.105	ppb	0.105	26.11	5	2000	
Sr	88	3	72	84.742	ppb	84.742	0.76	36514	4000	
Mo	95	3	115	0.096	ppb	0.096	18.23	68	2000	
Ag	107	3	115	0.019	ppb	0.019	24.32	43	100	
Cd	111	3	115	0.032	ppb	0.032	158.40	8	2000	
Sn	120	3	115	0.366	ppb	0.366	19.02	803	2000	
Sb	121	3	115	0.011	ppb	0.011	156.03	42	1000	
Ba	137	3	115	33.946	ppb	33.946	5.02	7297	5000	
Tl	205	3	193	0.005	ppb	0.005	55.72	120	2000	
(Pb)	206	3	193	0.425	ppb	0.425	6.40	673	100	
(Pb)	207	3	193	0.434	ppb	0.434	23.46	743	100	
Pb	208	3	193	0.397	ppb	0.397	16.01	2694	5000	
Th	232	3	193	-0.364	ppb	-0.364	-19.20	4792	2000	
U	238	3	193	0.495	ppb	0.495	0.42	3430	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3497479	1.57	3535116	98.94	60	120	
Sc (IS)	45	3	HMI He	513095	1.05	505423	101.52	60	120	
Ge Internal standard	72	2	HMI H2	2182800	1.78	2359166	92.52	60	120	
Ge Internal standard	72	3	HMI He	653132	1.94	680743	95.94	60	120	
In Internal Standard	115	3	HMI He	2451496	2.27	2361818	103.80	60	120	
Ir (IS)	193	3	HMI He	5216644	2.77	5045699	103.39	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A@10
Data File Name	314SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:34:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	15771.825	ppb	15771.825	1.21	1417248	400000	
Mg	24	3	45	5895.950	ppb	5895.950	0.60	279039	400000	
Al	27	3	45	1.926	ppb	1.926	134.79	153	400000	
K	39	3	45	464.868	ppb	464.868	9.85	42366	400000	
Ca	40	2	45	20568.645	ppb	20568.645	2.48	9742220	400000	
V	51	3	72	0.317	ppb	0.317	3.59	708	2000	
Cr	52	3	72	0.795	ppb	0.795	24.06	2629	5000	
Mn	55	3	72	32.292	ppb	32.292	1.44	10292	10000	
Fe	56	2	72	18.996	ppb	18.996	24.42	67160	10000	
Co	59	3	72	0.204	ppb	0.204	21.87	258	2000	
Ni	60	3	72	5.047	ppb	5.047	7.88	1881	5000	
Cu	63	3	72	0.175	ppb	0.175	32.48	416	5000	
Zn	66	3	72	4.194	ppb	4.194	12.97	635	5000	
As	75	3	72	0.219	ppb	0.219	99.12	48	2000	
Se	78	2	72	0.131	ppb	0.131	101.68	7	2000	
Sr	88	3	72	110.974	ppb	110.974	1.59	47292	4000	
Mo	95	3	115	0.113	ppb	0.113	26.46	73	2000	
Ag	107	3	115	0.015	ppb	0.015	65.99	37	100	
Cd	111	3	115	0.000	ppb	0.000	18160.17	2	2000	
Sn	120	3	115	0.179	ppb	0.179	15.73	661	2000	
Sb	121	3	115	0.013	ppb	0.013	66.65	42	1000	
Ba	137	3	115	41.416	ppb	41.416	1.59	8624	5000	
Tl	205	3	193	0.007	ppb	0.007	200.58	123	2000	
(Pb)	206	3	193	0.407	ppb	0.407	8.47	651	100	
(Pb)	207	3	193	0.456	ppb	0.456	20.40	758	100	
Pb	208	3	193	0.386	ppb	0.386	2.56	2632	5000	
Th	232	3	193	-0.434	ppb	-0.434	-12.85	4469	2000	
U	238	3	193	0.434	ppb	0.434	6.94	3141	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3642046	2.46	3535116	103.02	60	120	
Sc (IS)	45	3	HMI He	517351	1.32	505423	102.36	60	120	
Ge Internal standard	72	2	HMI H2	2227174	1.21	2359166	94.41	60	120	
Ge Internal standard	72	3	HMI He	646162	2.57	680743	94.92	60	120	
In Internal Standard	115	3	HMI He	2375162	1.22	2361818	100.57	60	120	
Ir (IS)	193	3	HMI He	5177986	1.94	5045699	102.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	315_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:36:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.645	ppb	3.574	1751	50	99.3	90	110	
Na	23	3	45	48341.984	ppb	1.150	4219381	51000	94.8	90	110	
Mg	24	3	45	10407.657	ppb	2.103	481443	11000	94.6	90	110	
Al	27	3	45	1017.163	ppb	4.280	17759	1000	101.7	90	110	
K	39	3	45	10582.439	ppb	1.569	419832	11000	96.2	90	110	
Ca	40	2	45	10520.169	ppb	1.373	4833842	11000	95.6	90	110	
V	51	3	72	54.400	ppb	1.999	25863	50	108.8	90	110	
Cr	52	3	72	55.526	ppb	1.884	33999	50	111.1	90	110	>+\-10%
Mn	55	3	72	54.607	ppb	3.151	16795	50	109.2	90	110	
Fe	56	2	72	1112.380	ppb	4.814	1402540	1000	111.2	90	110	>+\-10%
Co	59	3	72	54.068	ppb	1.154	53199	50	108.1	90	110	
Ni	60	3	72	54.326	ppb	1.141	15311	50	108.7	90	110	
Cu	63	3	72	55.746	ppb	0.618	41481	50	111.5	90	110	>+\-10%
Zn	66	3	72	56.486	ppb	0.843	6727	50	113.0	90	110	>+\-10%
As	75	3	72	54.405	ppb	2.870	4762	50	108.8	90	110	
Se	78	2	72	54.508	ppb	2.554	2441	50	109.0	90	110	
Sr	88	3	72	111.350	ppb	0.512	46093	100	111.4	90	110	>+\-10%
Mo	95	3	115	50.429	ppb	0.745	20459	50	100.9	90	110	
Ag	107	3	115	49.751	ppb	1.164	68551	50	99.5	90	110	
Cd	111	3	115	50.966	ppb	0.443	10074	50	101.9	90	110	
Sn	120	3	115	49.347	ppb	1.745	31106	50	98.7	90	110	
Sb	121	3	115	50.352	ppb	1.160	31528	50	100.7	90	110	
Ba	137	3	115	48.955	ppb	1.540	10137	50	97.9	90	110	
Tl	205	3	193	51.449	ppb	2.437	159107	50	102.9	90	110	
(Pb)	206	3	193	51.729	ppb	2.601	53091	50	103.5	90	110	
(Pb)	207	3	193	51.247	ppb	2.013	47406	50	102.5	90	110	
Pb	208	3	193	51.310	ppb	3.350	213150	50	102.6	90	110	
Th	232	3	193	50.688	ppb	1.557	217565	50	101.4	90	110	
U	238	3	193	52.127	ppb	3.642	223498	50	104.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3528763	1.82	3535116	99.82	60	120	
Sc (IS)	45	3	HMI He	505848	1.19	505423	100.08	60	120	
Ge Internal standard	72	2	HMI H2	2158858	1.62	2359166	91.51	60	120	
Ge Internal standard	72	3	HMI He	627496	0.38	680743	92.18	60	120	
In Internal Standard	115	3	HMI He	2363551	1.18	2361818	100.07	60	120	
Ir (IS)	193	3	HMI He	5174825	2.43	5045699	102.56	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	316_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:39:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.002	ppb	5442.7	2	0.5	
Na	23	3	45	30.015	ppb	21.6	15808	25	>RL
Mg	24	3	45	0.735	ppb	199.9	187	25	
Al	27	3	45	-1.160	ppb	-57.7	97	15	
K	39	3	45	-21.569	ppb	-122.2	23219	50	
V	51	3	72	0.084	ppb	168.0	586	1	
Cr	52	3	72	0.545	ppb	13.3	2439	1	
Mn	55	3	72	0.192	ppb	69.2	212	0.5	
Co	59	3	72	-0.003	ppb	-175.5	48	0.5	
Ni	60	3	72	0.838	ppb	27.4	685	1	
Cu	63	3	72	0.006	ppb	331.8	283	1	
Zn	66	3	72	0.628	ppb	19.2	203	5	
As	75	3	72	0.214	ppb	164.9	47	1	
Se	78	2	72	0.137	ppb	68.5	7	1	
Sr	88	3	72	-0.024	ppb	-29.3	13	0.5	
Mo	95	3	115	0.099	ppb	65.0	67	0.5	
Ag	107	3	115	-0.002	ppb	-222.9	12	1	
Cd	111	3	115	0.009	ppb	171.3	3	0.5	
Sn	120	3	115	0.213	ppb	25.0	676	1	
Sb	121	3	115	0.022	ppb	134.4	47	0.6	
Ba	137	3	115	-0.015	ppb	-153.5	30	0.5	
Tl	205	3	193	0.028	ppb	25.0	188	0.1	
(Pb)	206	3	193	-0.021	ppb	-162.6	212	1	
(Pb)	207	3	193	-0.007	ppb	-228.8	332	1	
Pb	208	3	193	-0.014	ppb	-43.1	973	0.5	
Th	232	3	193	2.487	ppb	12.7	16568	1	>RL
U	238	3	193	0.013	ppb	280.4	1338	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3590007	2.26	3535116	101.55	60	120	
Sc (IS)	45	3	HMI He	505833	1.03	505423	100.08	60	120	
Ge Internal standard	72	2	HMI H2	2128978	0.38	2359166	90.24	60	120	
Ge Internal standard	72	3	HMI He	635267	0.88	680743	93.32	60	120	
In Internal Standard	115	3	HMI He	2352965	1.37	2361818	99.63	60	120	
Ir (IS)	193	3	HMI He	5152464	1.09	5045699	102.12	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608636/1-A
Data File Name	317_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:40:50-06:00
Sample Type	Blank
Dilution	1
Comment	608636 6020b
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.046	ppb	0	0	0.5
Na	23	3	45	19.128	ppb	20.10431403	15000	25
Mg	24	3	45	1.544	ppb	34.04804705	227	25
Al	27	3	45	-2.739	ppb	-20.27437345	70	15
K	39	3	45	-22.891	ppb	-175.1159629	23386	50
Ca	40	2	45	4.696	ppb	11.13416432	12331	200
V	51	3	72	0.076	ppb	155.7592463	581	1
Cr	52	3	72	0.526	ppb	54.75986058	2424	1
Mn	55	3	72	0.187	ppb	55.79688735	210	0.5
Fe	56	2	72	7.863	ppb	36.55504845	51484	50
Co	59	3	72	0.024	ppb	100.7951035	75	0.5
Ni	60	3	72	0.168	ppb	129.8976574	498	1
Cu	63	3	72	0.038	ppb	223.0146129	307	1
Zn	66	3	72	0.362	ppb	26.89432818	172	5
As	75	3	72	0.232	ppb	127.2844153	48	1
(Se)	78	3	72	1.530	ppb	259.7864212	30	1
Sr	88	3	72	0.040	ppb	139.1878506	40	0.5
Mo	95	3	115	0.054	ppb	60.09709859	50	0.5
Ag	107	3	115	0.001	ppb	587.348189	17	1
Cd	111	3	115	-0.008	ppb	0	0	0.5
Sn	120	3	115	-0.085	ppb	-128.583389	503	1
Sb	121	3	115	0.041	ppb	132.7315572	60	0.6
Ba	137	3	115	0.180	ppb	33.46057732	72	0.5
Tl	205	3	193	0.000	ppb	-1109.485115	102	0.1
(Pb)	206	3	193	-0.028	ppb	-129.9232032	207	1
(Pb)	207	3	193	0.025	ppb	144.0738827	363	1
Pb	208	3	193	-0.019	ppb	-58.35542812	956	0.5
Th	232	3	193	0.090	ppb	30.9366016	6673	1
U	238	3	193	0.024	ppb	51.00239527	1399	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3554189	2.13	3535116	100.54	60	120	
Sc (IS)	45	3	HMI He	510729	0.65	505423	101.05	60	120	
Ge Internal standard	72	2	HMI H2	2158169	0.38	2359166	91.48	60	120	
Ge Internal standard	72	3	HMI He	634614	1.34	680743	93.22	60	120	
In Internal Standard	115	3	HMI He	2407122	1.25	2361818	101.92	60	120	
Ir (IS)	193	3	HMI He	5191085	2.53	5045699	102.88	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608636/19-A
Data File Name	318_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:42:41-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608636 6020b
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	37.962	37.962	ppb	4.626	1329	40	94.9	80	120	
Na	23	3	45	767.533	767.533	ppb	2.330	80776	40	1918.8	80	120	>+/-20%
Mg	24	3	45	710.915	710.915	ppb	2.929	33359	40	1777.3	80	120	>+/-20%
Al	27	3	45	756.549	756.549	ppb	3.507	13380	40	1891.4	80	120	>+/-20%
K	39	3	45	726.949	726.949	ppb	6.038	51727	40	1817.4	80	120	>+/-20%
Ca	40	2	45	811.514	811.514	ppb	1.200	386295	40	2028.8	80	120	>+/-20%
V	51	3	72	41.240	41.240	ppb	1.169	19989	40	103.1	80	120	
Cr	52	3	72	42.009	42.009	ppb	1.580	26572	40	105.0	80	120	
Mn	55	3	72	42.808	42.808	ppb	0.658	13370	40	107.0	80	120	
Fe	56	2	72	845.644	845.644	ppb	0.896	1081138	40	2114.1	80	120	>+/-20%
(Fe)	56	3	72	824.254	824.254	ppb	1.473	420075	40	2060.6	80	120	>+/-20%
Co	59	3	72	41.830	41.830	ppb	1.496	41700	40	104.6	80	120	
Ni	60	3	72	42.415	42.415	ppb	2.964	12206	40	106.0	80	120	
Cu	63	3	72	43.114	43.114	ppb	1.133	32559	40	107.8	80	120	
Zn	66	3	72	43.981	43.981	ppb	0.433	5333	40	110.0	80	120	
As	75	3	72	39.646	39.646	ppb	2.614	3522	40	99.1	80	120	
Se	78	2	72	43.076	43.076	ppb	5.733	1936	40	107.7	80	120	
(Se)	78	3	72	47.576	47.576	ppb	18.039	230	40	118.9	80	120	
Sr	88	3	72	83.610	83.610	ppb	1.288	35059	40	209.0	80	120	>+/-20%
Mo	95	3	115	39.172	39.172	ppb	2.153	15878	40	97.9	80	120	
Ag	107	3	115	40.251	40.251	ppb	0.906	55403	40	100.6	80	120	
Cd	111	3	115	38.605	38.605	ppb	1.858	7622	40	96.5	80	120	
Sn	120	3	115	37.708	37.708	ppb	0.770	23871	40	94.3	80	120	
Sb	121	3	115	38.876	38.876	ppb	1.390	24322	40	97.2	80	120	
Ba	137	3	115	39.715	39.715	ppb	2.833	8222	40	99.3	80	120	
Tl	205	3	193	39.608	39.608	ppb	0.687	124218	40	99.0	80	120	
(Pb)	206	3	193	39.506	39.506	ppb	0.348	41166	40	98.8	80	120	
(Pb)	207	3	193	38.568	38.568	ppb	2.746	36254	40	96.4	80	120	
Pb	208	3	193	39.545	39.545	ppb	1.253	166821	40	98.9	80	120	
Th	232	3	193	36.797	36.797	ppb	1.320	161826	40	92.0	80	120	
U	238	3	193	40.130	40.130	ppb	1.302	174783	40	100.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3566014	0.53	3535116	100.87	60	120	
Sc (IS)	45	3	HMI He	510928	1.15	505423	101.09	60	120	
Ge Internal standard	72	2	HMI H2	2167601	1.03	2359166	91.88	60	120	
Ge Internal standard	72	3	HMI He	635565	0.59	680743	93.36	60	120	
In Internal Standard	115	3	HMI He	2360718	0.57	2361818	99.95	60	120	
Ir (IS)	193	3	HMI He	5245053	0.88	5045699	103.95	60	120	

Sample Report

Sample Table

Sample Name	280-174977-A-2-A
Data File Name	319SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:44:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	530.270	ppb	530.270	1.78	59896	400000	
Mg	24	3	45	14.420	ppb	14.420	18.01	828	400000	
Al	27	3	45	19.567	ppb	19.567	25.40	460	400000	
K	39	3	45	-25.981	ppb	-25.981	-156.43	23266	400000	
Ca	40	2	45	133.741	ppb	133.741	1.52	71687	400000	
V	51	3	72	0.078	ppb	0.078	159.76	590	2000	
Cr	52	3	72	0.926	ppb	0.926	26.77	2689	5000	
Mn	55	3	72	2.310	ppb	2.310	13.82	875	10000	
Fe	56	2	72	34.634	ppb	34.634	9.14	84008	10000	
Co	59	3	72	0.036	ppb	0.036	30.48	88	2000	
Ni	60	3	72	0.338	ppb	0.338	95.56	551	5000	
Cu	63	3	72	0.264	ppb	0.264	7.20	481	5000	
Zn	66	3	72	0.974	ppb	0.974	23.29	247	5000	
As	75	3	72	0.169	ppb	0.169	97.68	43	2000	
Se	78	2	72	0.106	ppb	0.106	24.09	5	2000	
Sr	88	3	72	0.523	ppb	0.523	10.22	245	4000	
Mo	95	3	115	1.886	ppb	1.886	3.74	788	2000	
Ag	107	3	115	0.008	ppb	0.008	204.82	27	100	
Cd	111	3	115	0.000	ppb	0.000	-25000.59	2	2000	
Sn	120	3	115	0.238	ppb	0.238	15.99	691	2000	
Sb	121	3	115	0.105	ppb	0.105	18.61	98	1000	
Ba	137	3	115	0.759	ppb	0.759	43.78	188	5000	
Tl	205	3	193	0.022	ppb	0.022	59.06	173	2000	
(Pb)	206	3	193	0.021	ppb	0.021	106.51	258	100	
(Pb)	207	3	193	-0.001	ppb	-0.001	-3854.42	342	100	
Pb	208	3	193	0.008	ppb	0.008	114.42	1076	5000	
Th	232	3	193	1.476	ppb	1.476	10.76	12553	2000	
U	238	3	193	0.022	ppb	0.022	7.45	1399	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3542282	1.15	3535116	100.20	60	120	
Sc (IS)	45	3	HMI He	510631	0.55	505423	101.03	60	120	
Ge Internal standard	72	2	HMI H2	2151933	0.38	2359166	91.22	60	120	
Ge Internal standard	72	3	HMI He	641944	0.58	680743	94.30	60	120	
In Internal Standard	115	3	HMI He	2352964	1.67	2361818	99.63	60	120	
Ir (IS)	193	3	HMI He	5226619	1.85	5045699	103.59	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-5-A
Data File Name	320SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:46:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.097	ppb	0.097	147.58	5	2000	
Na	23	3	45	27943.364	ppb	27943.364	1.36	2455608	400000	
Mg	24	3	45	10482.176	ppb	10482.176	1.57	487119	400000	
Al	27	3	45	1.689	ppb	1.689	53.24	147	400000	
K	39	3	45	6733.950	ppb	6733.950	0.20	277142	400000	
Ca	40	2	45	34923.832	ppb	34923.832	1.00	16510182	400000	
V	51	3	72	17.121	ppb	17.121	4.59	8813	2000	
Cr	52	3	72	3.403	ppb	3.403	11.02	4195	5000	
Mn	55	3	72	3.726	ppb	3.726	4.15	1333	10000	
Fe	56	2	72	134.708	ppb	134.708	1.27	211301	10000	
Co	59	3	72	0.030	ppb	0.030	23.44	83	2000	
Ni	60	3	72	0.999	ppb	0.999	16.45	746	5000	
Cu	63	3	72	0.120	ppb	0.120	36.04	376	5000	
Zn	66	3	72	3.989	ppb	3.989	1.14	615	5000	
As	75	3	72	6.707	ppb	6.707	17.67	633	2000	
Se	78	2	72	3.204	ppb	3.204	5.52	147	2000	
Sr	88	3	72	198.432	ppb	198.432	1.12	85072	4000	
Mo	95	3	115	5.870	ppb	5.870	5.01	2477	2000	
Ag	107	3	115	0.003	ppb	0.003	102.20	20	100	
Cd	111	3	115	0.000	ppb	0.000	-2815.34	2	2000	
Sn	120	3	115	-0.032	ppb	-0.032	-371.79	543	2000	
Sb	121	3	115	0.176	ppb	0.176	20.57	148	1000	
Ba	137	3	115	26.628	ppb	26.628	8.15	5688	5000	
Tl	205	3	193	0.004	ppb	0.004	113.16	112	2000	
(Pb)	206	3	193	2.273	ppb	2.273	7.51	2514	100	
(Pb)	207	3	193	2.080	ppb	2.080	4.13	2211	100	
Pb	208	3	193	2.151	ppb	2.151	2.42	9755	5000	
Th	232	3	193	0.318	ppb	0.318	51.55	7472	2000	
U	238	3	193	2.709	ppb	2.709	3.48	12618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3635665	1.96	3535116	102.84	60	120	
Sc (IS)	45	3	HMI He	508089	0.27	505423	100.53	60	120	
Ge Internal standard	72	2	HMI H2	2206334	1.93	2359166	93.52	60	120	
Ge Internal standard	72	3	HMI He	650044	0.81	680743	95.49	60	120	
In Internal Standard	115	3	HMI He	2436780	4.13	2361818	103.17	60	120	
Ir (IS)	193	3	HMI He	5084375	1.34	5045699	100.77	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-7-A
Data File Name	321SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:48:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	27928.920	ppb	27928.920	2.00	2458872	400000	
Mg	24	3	45	9155.057	ppb	9155.057	1.54	426232	400000	
Al	27	3	45	-0.055	ppb	-0.055	-2916.40	117	400000	
K	39	3	45	5859.896	ppb	5859.896	0.82	244760	400000	
Ca	40	2	45	28723.013	ppb	28723.013	2.06	13255764	400000	
V	51	3	72	22.439	ppb	22.439	0.96	11249	2000	
Cr	52	3	72	2.656	ppb	2.656	17.65	3707	5000	
Mn	55	3	72	0.707	ppb	0.707	10.64	375	10000	
Fe	56	2	72	15.816	ppb	15.816	24.25	62798	10000	
Co	59	3	72	-0.005	ppb	-0.005	-369.95	47	2000	
Ni	60	3	72	0.591	ppb	0.591	18.62	623	5000	
Cu	63	3	72	0.048	ppb	0.048	238.10	318	5000	
Zn	66	3	72	3.017	ppb	3.017	17.24	491	5000	
As	75	3	72	7.908	ppb	7.908	6.97	733	2000	
Se	78	2	72	2.411	ppb	2.411	19.99	111	2000	
Sr	88	3	72	158.759	ppb	158.759	2.11	67274	4000	
Mo	95	3	115	4.540	ppb	4.540	5.95	1918	2000	
Ag	107	3	115	0.014	ppb	0.014	89.27	35	100	
Cd	111	3	115	0.016	ppb	0.016	151.85	5	2000	
Sn	120	3	115	-0.087	ppb	-0.087	-112.15	506	2000	
Sb	121	3	115	0.183	ppb	0.183	42.64	152	1000	
Ba	137	3	115	17.091	ppb	17.091	4.54	3657	5000	
Tl	205	3	193	0.001	ppb	0.001	628.79	108	2000	
(Pb)	206	3	193	0.003	ppb	0.003	1667.30	240	100	
(Pb)	207	3	193	0.010	ppb	0.010	40.63	353	100	
Pb	208	3	193	0.006	ppb	0.006	356.96	1071	5000	
Th	232	3	193	-0.180	ppb	-0.180	-40.22	5593	2000	
U	238	3	193	1.724	ppb	1.724	1.78	8744	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3548374	0.85	3535116	100.38	60	120	
Sc (IS)	45	3	HMI He	509073	1.31	505423	100.72	60	120	
Ge Internal standard	72	2	HMI H2	2217067	3.73	2359166	93.98	60	120	
Ge Internal standard	72	3	HMI He	642547	1.09	680743	94.39	60	120	
In Internal Standard	115	3	HMI He	2427328	0.84	2361818	102.77	60	120	
Ir (IS)	193	3	HMI He	5236484	2.10	5045699	103.78	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-9-A
Data File Name	322SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:49:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.001	ppb	0.001	7653.12	2	2000	
Na	23	3	45	25486.621	ppb	25486.621	2.27	2194467	400000	
Mg	24	3	45	19044.582	ppb	19044.582	0.22	866632	400000	
Al	27	3	45	2.635	ppb	2.635	109.17	160	400000	
K	39	3	45	7352.144	ppb	7352.144	1.11	294175	400000	
Ca	40	2	45	62119.638	ppb	62119.638	0.90	28569394	400000	
V	51	3	72	19.443	ppb	19.443	3.40	9629	2000	
Cr	52	3	72	3.235	ppb	3.235	3.90	3970	5000	
Mn	55	3	72	0.846	ppb	0.846	27.67	410	10000	
Fe	56	2	72	18.565	ppb	18.565	13.85	64269	10000	
Co	59	3	72	0.046	ppb	0.046	6.19	97	2000	
Ni	60	3	72	0.616	ppb	0.616	20.11	618	5000	
Cu	63	3	72	0.387	ppb	0.387	12.49	563	5000	
Zn	66	3	72	3.384	ppb	3.384	1.64	525	5000	
As	75	3	72	5.727	ppb	5.727	4.17	528	2000	
Se	78	2	72	6.319	ppb	6.319	3.99	282	2000	
Sr	88	3	72	354.225	ppb	354.225	0.76	147171	4000	
Mo	95	3	115	6.517	ppb	6.517	6.54	2612	2000	
Ag	107	3	115	0.005	ppb	0.005	150.11	22	100	
Cd	111	3	115	0.000	ppb	0.000	12043.03	2	2000	
Sn	120	3	115	-0.046	ppb	-0.046	-92.14	508	2000	
Sb	121	3	115	0.384	ppb	0.384	22.84	268	1000	
Ba	137	3	115	76.231	ppb	76.231	0.87	15445	5000	
Tl	205	3	193	0.005	ppb	0.005	42.39	115	2000	
(Pb)	206	3	193	-0.071	ppb	-0.071	-40.96	158	100	
(Pb)	207	3	193	0.023	ppb	0.023	260.20	353	100	
Pb	208	3	193	-0.023	ppb	-0.023	-85.64	920	5000	
Th	232	3	193	-0.311	ppb	-0.311	-28.99	4879	2000	
U	238	3	193	9.434	ppb	9.434	1.68	40668	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3538024	2.24	3535116	100.08	60	120	
Sc (IS)	45	3	HMI He	497608	0.59	505423	98.45	60	120	
Ge Internal standard	72	2	HMI H2	2147357	1.71	2359166	91.02	60	120	
Ge Internal standard	72	3	HMI He	630037	0.37	680743	92.55	60	120	
In Internal Standard	115	3	HMI He	2314935	0.94	2361818	98.01	60	120	
Ir (IS)	193	3	HMI He	5067184	1.06	5045699	100.43	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-10-A
Data File Name	323SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:52:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	24829.367	ppb	24829.367	2.04	2136099	400000	
Mg	24	3	45	18036.696	ppb	18036.696	2.21	819926	400000	
Al	27	3	45	5.016	ppb	5.016	59.43	200	400000	
K	39	3	45	7027.693	ppb	7027.693	1.14	281923	400000	
Ca	40	2	45	62138.428	ppb	62138.428	2.94	27909528	400000	
V	51	3	72	19.117	ppb	19.117	2.98	9482	2000	
Cr	52	3	72	3.114	ppb	3.114	4.70	3904	5000	
Mn	55	3	72	0.633	ppb	0.633	20.72	345	10000	
Fe	56	2	72	13.619	ppb	13.619	20.82	58341	10000	
Co	59	3	72	0.056	ppb	0.056	36.75	107	2000	
Ni	60	3	72	0.614	ppb	0.614	25.74	618	5000	
Cu	63	3	72	0.131	ppb	0.131	100.40	373	5000	
Zn	66	3	72	3.281	ppb	3.281	10.84	513	5000	
As	75	3	72	5.704	ppb	5.704	5.29	526	2000	
Se	78	2	72	6.545	ppb	6.545	13.80	293	2000	
Sr	88	3	72	342.492	ppb	342.492	1.60	142389	4000	
Mo	95	3	115	5.989	ppb	5.989	4.69	2382	2000	
Ag	107	3	115	0.000	ppb	0.000	1281.69	15	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.157	ppb	-0.157	-101.52	436	2000	
Sb	121	3	115	0.292	ppb	0.292	16.30	210	1000	
Ba	137	3	115	74.307	ppb	74.307	4.06	14919	5000	
Tl	205	3	193	0.006	ppb	0.006	262.06	118	2000	
(Pb)	206	3	193	-0.042	ppb	-0.042	-73.84	188	100	
(Pb)	207	3	193	-0.042	ppb	-0.042	-62.67	297	100	
Pb	208	3	193	-0.039	ppb	-0.039	-36.41	860	5000	
Th	232	3	193	-0.419	ppb	-0.419	-6.40	4460	2000	
U	238	3	193	9.101	ppb	9.101	2.29	39518	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3455321	1.11	3535116	97.74	60	120	
Sc (IS)	45	3	HMI He	497069	1.13	505423	98.35	60	120	
Ge Internal standard	72	2	HMI H2	2151682	0.78	2359166	91.21	60	120	
Ge Internal standard	72	3	HMI He	630452	0.72	680743	92.61	60	120	
In Internal Standard	115	3	HMI He	2294832	1.31	2361818	97.16	60	120	
Ir (IS)	193	3	HMI He	5098570	1.22	5045699	101.05	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	324_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:54:02-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.761	ppb	3.599	1736	50	103.5	90	110	
Na	23	3	45	49004.735	ppb	1.549	4140061	51000	96.1	90	110	
Mg	24	3	45	10503.851	ppb	0.606	470274	11000	95.5	90	110	
Al	27	3	45	1040.575	ppb	2.457	17582	1000	104.1	90	110	
K	39	3	45	10431.775	ppb	1.819	400800	11000	94.8	90	110	
Ca	40	2	45	10857.125	ppb	3.206	4803829	11000	98.7	90	110	
V	51	3	72	55.725	ppb	2.430	25426	50	111.5	90	110	>+\-10%
Cr	52	3	72	55.692	ppb	2.138	32740	50	111.4	90	110	>+\-10%
Mn	55	3	72	54.125	ppb	2.505	15986	50	108.2	90	110	
Fe	56	2	72	1129.556	ppb	0.880	1352343	1000	113.0	90	110	>+\-10%
Co	59	3	72	53.818	ppb	0.924	50851	50	107.6	90	110	
Ni	60	3	72	54.850	ppb	2.162	14839	50	109.7	90	110	
Cu	63	3	72	54.857	ppb	1.443	39203	50	109.7	90	110	
Zn	66	3	72	56.881	ppb	2.882	6503	50	113.8	90	110	>+\-10%
As	75	3	72	54.017	ppb	6.398	4539	50	108.0	90	110	
Se	78	2	72	57.112	ppb	4.169	2428	50	114.2	90	110	>+\-10%
Sr	88	3	72	108.429	ppb	1.560	43102	100	108.4	90	110	
Mo	95	3	115	51.203	ppb	1.927	20132	50	102.4	90	110	
Ag	107	3	115	51.095	ppb	1.482	68235	50	102.2	90	110	
Cd	111	3	115	52.298	ppb	3.717	10017	50	104.6	90	110	
Sn	120	3	115	51.936	ppb	1.266	31707	50	103.9	90	110	
Sb	121	3	115	51.097	ppb	1.584	31012	50	102.2	90	110	
Ba	137	3	115	50.207	ppb	2.987	10076	50	100.4	90	110	
Tl	205	3	193	51.283	ppb	0.687	153418	50	102.6	90	110	
(Pb)	206	3	193	52.037	ppb	0.345	51661	50	104.1	90	110	
(Pb)	207	3	193	51.098	ppb	0.765	45724	50	102.2	90	110	
Pb	208	3	193	51.595	ppb	0.301	207362	50	103.2	90	110	
Th	232	3	193	50.660	ppb	1.510	210249	50	101.3	90	110	
U	238	3	193	52.042	ppb	0.502	215897	50	104.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3397839	0.36	3535116	96.12	60	120	
Sc (IS)	45	3	HMI He	489530	2.03	505423	96.86	60	120	
Ge Internal standard	72	2	HMI H2	2049992	1.74	2359166	86.89	60	120	
Ge Internal standard	72	3	HMI He	602613	1.18	680743	88.52	60	120	
In Internal Standard	115	3	HMI He	2290869	1.11	2361818	97.00	60	120	
Ir (IS)	193	3	HMI He	5004027	0.22	5045699	99.17	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	325_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:55:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	40.801	ppb	5.4	16316	25	>RL
Mg	24	3	45	2.232	ppb	89.9	250	25	
Al	27	3	45	-1.810	ppb	-134.7	83	15	
K	39	3	45	-36.448	ppb	-98.6	22086	50	
V	51	3	72	0.192	ppb	105.2	616	1	
Cr	52	3	72	0.514	ppb	21.1	2342	1	
Mn	55	3	72	0.315	ppb	38.1	242	0.5	
Co	59	3	72	-0.005	ppb	-574.1	45	0.5	
Ni	60	3	72	0.516	ppb	48.4	576	1	
Cu	63	3	72	0.021	ppb	240.7	285	1	
Zn	66	3	72	0.380	ppb	16.2	168	5	
As	75	3	72	0.250	ppb	84.5	48	1	
Se	78	2	72	0.094	ppb	29.7	5	1	
Sr	88	3	72	0.035	ppb	175.0	37	0.5	
Mo	95	3	115	0.038	ppb	82.9	42	0.5	
Ag	107	3	115	0.010	ppb	78.0	28	1	
Cd	111	3	115	0.000	ppb	10981.3	2	0.5	
Sn	120	3	115	0.187	ppb	53.6	651	1	
Sb	121	3	115	0.041	ppb	73.8	58	0.6	
Ba	137	3	115	0.102	ppb	60.5	53	0.5	
Tl	205	3	193	0.036	ppb	10.5	210	0.1	
(Pb)	206	3	193	-0.047	ppb	-68.1	183	1	
(Pb)	207	3	193	0.027	ppb	164.2	358	1	
Pb	208	3	193	-0.018	ppb	-122.1	945	0.5	
Th	232	3	193	1.036	ppb	16.6	10431	1	>RL
U	238	3	193	0.019	ppb	129.4	1349	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3361732	0.43	3535116	95.10	60	120	
Sc (IS)	45	3	HMI He	492927	0.46	505423	97.53	60	120	
Ge Internal standard	72	2	HMI H2	2100696	2.34	2359166	89.04	60	120	
Ge Internal standard	72	3	HMI He	614823	1.11	680743	90.32	60	120	
In Internal Standard	115	3	HMI He	2323185	0.52	2361818	98.36	60	120	
Ir (IS)	193	3	HMI He	5092048	2.40	5045699	100.92	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-E
Data File Name	326SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:57:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	29000.961	ppb	29000.961	2.73	2505101	400000	
Mg	24	3	45	3362.944	ppb	3362.944	0.58	153733	400000	
Al	27	3	45	1.634	ppb	1.634	72.10	143	400000	
K	39	3	45	9224.257	ppb	9224.257	0.40	364415	400000	
Ca	40	2	45	13097.203	ppb	13097.203	1.75	6069606	400000	
V	51	3	72	0.941	ppb	0.941	7.01	1021	2000	
Cr	52	3	72	0.711	ppb	0.711	27.24	2614	5000	
Mn	55	3	72	5.852	ppb	5.852	7.83	2019	10000	
Fe	56	2	72	103.714	ppb	103.714	3.93	172088	10000	
Co	59	3	72	0.091	ppb	0.091	15.90	147	2000	
Ni	60	3	72	0.565	ppb	0.565	31.15	628	5000	
Cu	63	3	72	0.023	ppb	0.023	277.30	305	5000	
Zn	66	3	72	1.178	ppb	1.178	28.69	277	5000	
As	75	3	72	1.534	ppb	1.534	15.84	168	2000	
Se	78	2	72	0.060	ppb	0.060	43.89	3	2000	
Sr	88	3	72	157.496	ppb	157.496	1.80	68047	4000	
Mo	95	3	115	6.308	ppb	6.308	1.34	2622	2000	
Ag	107	3	115	0.015	ppb	0.015	33.86	37	100	
Cd	111	3	115	0.016	ppb	0.016	262.82	5	2000	
Sn	120	3	115	0.022	ppb	0.022	288.21	570	2000	
Sb	121	3	115	0.054	ppb	0.054	65.04	68	1000	
Ba	137	3	115	37.292	ppb	37.292	4.24	7845	5000	
Tl	205	3	193	0.009	ppb	0.009	69.07	130	2000	
(Pb)	206	3	193	-0.056	ppb	-0.056	-62.38	178	100	
(Pb)	207	3	193	-0.006	ppb	-0.006	-948.88	337	100	
Pb	208	3	193	-0.030	ppb	-0.030	-98.50	915	5000	
Th	232	3	193	-0.150	ppb	-0.150	-42.50	5700	2000	
U	238	3	193	0.084	ppb	0.084	15.81	1663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3559743	1.65	3535116	100.70	60	120	
Sc (IS)	45	3	HMI He	499467	0.95	505423	98.82	60	120	
Ge Internal standard	72	2	HMI H2	2201398	1.72	2359166	93.31	60	120	
Ge Internal standard	72	3	HMI He	655070	0.31	680743	96.23	60	120	
In Internal Standard	115	3	HMI He	2399504	1.49	2361818	101.60	60	120	
Ir (IS)	193	3	HMI He	5218069	0.43	5045699	103.42	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-Esd@5
Data File Name	327SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:59:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	6083.618	ppb	6083.618	1.00	531233	400000	
Mg	24	3	45	710.660	ppb	710.660	0.80	32333	400000	
Al	27	3	45	0.724	ppb	0.724	202.13	127	400000	
K	39	3	45	2016.212	ppb	2016.212	1.79	97370	400000	
Ca	40	2	45	2869.761	ppb	2869.761	1.65	1314596	400000	
V	51	3	72	0.251	ppb	0.251	25.22	678	2000	
Cr	52	3	72	0.098	ppb	0.098	687.04	2217	5000	
Mn	55	3	72	2.584	ppb	2.584	9.55	968	10000	
Fe	56	2	72	25.373	ppb	25.373	17.82	72548	10000	
Co	59	3	72	0.027	ppb	0.027	34.00	80	2000	
Ni	60	3	72	0.332	ppb	0.332	24.20	555	5000	
Cu	63	3	72	0.117	ppb	0.117	29.35	373	5000	
Zn	66	3	72	3.538	ppb	3.538	10.72	558	5000	
As	75	3	72	0.257	ppb	0.257	54.00	52	2000	
Se	78	2	72	0.017	ppb	0.017	156.72	1	2000	
Sr	88	3	72	34.131	ppb	34.131	1.20	14599	4000	
Mo	95	3	115	1.365	ppb	1.365	5.95	578	2000	
Ag	107	3	115	0.012	ppb	0.012	34.69	32	100	
Cd	111	3	115	0.000	ppb	0.000	25470.54	2	2000	
Sn	120	3	115	0.138	ppb	0.138	83.11	631	2000	
Sb	121	3	115	0.027	ppb	0.027	62.10	50	1000	
Ba	137	3	115	8.120	ppb	8.120	7.89	1704	5000	
Tl	205	3	193	0.006	ppb	0.006	118.85	120	2000	
(Pb)	206	3	193	0.339	ppb	0.339	9.38	573	100	
(Pb)	207	3	193	0.342	ppb	0.342	3.83	645	100	
Pb	208	3	193	0.331	ppb	0.331	8.30	2371	5000	
Th	232	3	193	-0.262	ppb	-0.262	-41.24	5112	2000	
U	238	3	193	0.038	ppb	0.038	28.01	1433	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3498154	0.49	3535116	98.95	60	120	
Sc (IS)	45	3	HMI He	495282	0.32	505423	97.99	60	120	
Ge Internal standard	72	2	HMI H2	2149410	1.92	2359166	91.11	60	120	
Ge Internal standard	72	3	HMI He	647714	1.54	680743	95.15	60	120	
In Internal Standard	115	3	HMI He	2356104	1.77	2361818	99.76	60	120	
Ir (IS)	193	3	HMI He	5104873	0.52	5045699	101.17	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-F MS
Data File Name	328SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:01:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	7315.738	ppb	7315.738	104.33	764302	400000	
Mg	24	3	45	1021.024	ppb	1021.024	105.48	55390	400000	
Al	27	3	45	194.167	ppb	194.167	107.97	4082	400000	
K	39	3	45	2417.410	ppb	2417.410	119.37	136813	400000	
Ca	40	2	45	42.648	ppb	42.648	67.34	7606	400000	
V	51	3	72	9.601	ppb	9.601	115.94	5834	2000	
Cr	52	3	72	10.156	ppb	10.156	129.37	9402	5000	
Mn	55	3	72	12.104	ppb	12.104	108.84	4461	10000	
Fe	56	2	72	-18.354	ppb	-18.354	-28.28	5280	10000	
Co	59	3	72	10.424	ppb	10.424	109.30	11853	2000	
Ni	60	3	72	10.097	ppb	10.097	117.78	3756	5000	
Cu	63	3	72	10.651	ppb	10.651	111.93	9389	5000	
Zn	66	3	72	10.062	ppb	10.062	120.19	1501	5000	
As	75	3	72	9.808	ppb	9.808	109.64	1020	2000	
Se	78	2	72	0.180	ppb	0.180	116.27	2	2000	
Sr	88	3	72	64.796	ppb	64.796	110.61	30760	4000	
Mo	95	3	115	11.152	ppb	11.152	117.86	5064	2000	
Ag	107	3	115	9.706	ppb	9.706	111.46	15107	100	
Cd	111	3	115	9.947	ppb	9.947	115.37	2201	2000	
Sn	120	3	115	9.081	ppb	9.081	127.92	6885	2000	
Sb	121	3	115	9.202	ppb	9.202	116.56	6469	1000	
Ba	137	3	115	20.092	ppb	20.092	115.20	4689	5000	
Tl	205	3	193	9.632	ppb	9.632	114.78	34778	2000	
(Pb)	206	3	193	9.509	ppb	9.509	119.33	11538	100	
(Pb)	207	3	193	9.366	ppb	9.366	118.17	10424	100	
Pb	208	3	193	9.617	ppb	9.617	118.00	47432	5000	
Th	232	3	193	5.412	ppb	5.412	124.68	34703	2000	
U	238	3	193	9.792	ppb	9.792	117.54	50147	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	1006298	36.17	3535116	28.47	60	120	IS Failed
Sc (IS)	45	3	HMI He	720287	25.53	505423	142.51	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	621276	28.55	2359166	26.33	60	120	IS Failed
Ge Internal standard	72	3	HMI He	893930	26.70	680743	131.32	60	120	IS Failed
In Internal Standard	115	3	HMI He	3343475	27.44	2361818	141.56	60	120	IS Failed
Ir (IS)	193	3	HMI He	7464596	25.55	5045699	147.94	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-174901-A-7-G MSD
Data File Name	329SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:03:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.145	ppb	39.145	10.01	1379	2000	
Na	23	3	45	30743.078	ppb	30743.078	3.01	2682682	400000	
Mg	24	3	45	4142.862	ppb	4142.862	1.11	191302	400000	
Al	27	3	45	765.966	ppb	765.966	1.79	13373	400000	
K	39	3	45	10409.165	ppb	10409.165	1.29	412369	400000	
Ca	40	2	45	14083.654	ppb	14083.654	1.27	6451269	400000	
V	51	3	72	40.758	ppb	40.758	1.11	20320	2000	
Cr	52	3	72	39.945	ppb	39.945	0.56	26083	5000	
Mn	55	3	72	45.474	ppb	45.474	5.55	14585	10000	
Fe	56	2	72	873.713	ppb	873.713	1.13	1152491	10000	
Co	59	3	72	39.544	ppb	39.544	1.87	40527	2000	
Ni	60	3	72	40.619	ppb	40.619	2.85	12038	5000	
Cu	63	3	72	41.394	ppb	41.394	1.16	32148	5000	
Zn	66	3	72	48.372	ppb	48.372	2.14	6017	5000	
As	75	3	72	42.419	ppb	42.419	1.82	3872	2000	
Se	78	2	72	41.781	ppb	41.781	4.49	1941	2000	
Sr	88	3	72	243.788	ppb	243.788	0.32	105062	4000	
Mo	95	3	115	44.332	ppb	44.332	0.45	18150	2000	
Ag	107	3	115	39.011	ppb	39.011	2.08	54239	100	
Cd	111	3	115	38.164	ppb	38.164	0.66	7612	2000	
Sn	120	3	115	39.033	ppb	39.033	2.74	24941	2000	
Sb	121	3	115	37.550	ppb	37.550	1.44	23733	1000	
Ba	137	3	115	77.919	ppb	77.919	1.45	16260	5000	
Tl	205	3	193	39.053	ppb	39.053	1.28	120663	2000	
(Pb)	206	3	193	39.901	ppb	39.901	2.25	40956	100	
(Pb)	207	3	193	38.428	ppb	38.428	2.54	35584	100	
Pb	208	3	193	39.502	ppb	39.502	2.48	164142	5000	
Th	232	3	193	38.450	ppb	38.450	2.38	166259	2000	
U	238	3	193	39.781	ppb	39.781	1.82	170693	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3519584	1.42	3535116	99.56	60	120	
Sc (IS)	45	3	HMI He	504635	1.52	505423	99.84	60	120	
Ge Internal standard	72	2	HMI H2	2239113	1.42	2359166	94.91	60	120	
Ge Internal standard	72	3	HMI He	653459	1.28	680743	95.99	60	120	
In Internal Standard	115	3	HMI He	2384746	0.67	2361818	100.97	60	120	
Ir (IS)	193	3	HMI He	5167701	1.98	5045699	102.42	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-E pds
Data File Name	330SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:04:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	99.899	ppb	99.899	0.69	3447	2000	
Na	23	3	45	33354.369	ppb	33354.369	2.39	2916998	400000	
Mg	24	3	45	5312.063	ppb	5312.063	3.69	245919	400000	
Al	27	3	45	1992.190	ppb	1992.190	3.01	34694	400000	
K	39	3	45	11452.526	ppb	11452.526	1.42	452621	400000	
Ca	40	2	45	15198.590	ppb	15198.590	1.49	6965785	400000	
V	51	3	72	100.629	ppb	100.629	3.06	49389	2000	
Cr	52	3	72	101.586	ppb	101.586	2.74	63027	5000	
Mn	55	3	72	105.013	ppb	105.013	4.36	33517	10000	
Fe	56	2	72	1152.508	ppb	1152.508	2.50	1508422	10000	
Co	59	3	72	102.215	ppb	102.215	3.07	104783	2000	
Ni	60	3	72	100.633	ppb	100.633	3.16	29164	5000	
Cu	63	3	72	106.296	ppb	106.296	2.73	82187	5000	
Zn	66	3	72	216.215	ppb	216.215	2.93	26462	5000	
As	75	3	72	101.489	ppb	101.489	3.11	9234	2000	
Se	78	2	72	105.359	ppb	105.359	4.24	4898	2000	
Sr	88	3	72	264.751	ppb	264.751	0.95	114226	4000	
Mo	95	3	115	105.746	ppb	105.746	0.59	42499	2000	
Ag	107	3	115	26.165	ppb	26.165	3.42	35736	100	
Cd	111	3	115	98.690	ppb	98.690	2.39	19334	2000	
Sn	120	3	115	100.664	ppb	100.664	2.95	62331	2000	
Sb	121	3	115	95.246	ppb	95.246	3.10	59083	1000	
Ba	137	3	115	136.948	ppb	136.948	2.51	28049	5000	
Tl	205	3	193	99.923	ppb	99.923	1.66	309131	2000	
(Pb)	206	3	193	100.119	ppb	100.119	3.97	102567	100	
(Pb)	207	3	193	98.627	ppb	98.627	2.30	90968	100	
Pb	208	3	193	99.825	ppb	99.825	3.33	413932	5000	
Th	232	3	193	106.213	ppb	106.213	1.78	449135	2000	
U	238	3	193	209.286	ppb	209.286	3.48	893963	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3521858	1.27	3535116	99.62	60	120	
Sc (IS)	45	3	HMI He	506099	0.93	505423	100.13	60	120	
Ge Internal standard	72	2	HMI H2	2242701	1.79	2359166	95.06	60	120	
Ge Internal standard	72	3	HMI He	654292	1.91	680743	96.11	60	120	
In Internal Standard	115	3	HMI He	2343133	1.71	2361818	99.21	60	120	
Ir (IS)	193	3	HMI He	5177877	2.63	5045699	102.62	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-4-A
Data File Name	331SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:06:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.050	ppb	0.050	332.64	3	2000	
Na	23	3	45	27709.376	ppb	27709.376	2.77	2432904	400000	
Mg	24	3	45	10757.566	ppb	10757.566	0.62	499447	400000	
Al	27	3	45	2.654	ppb	2.654	50.54	163	400000	
K	39	3	45	6755.443	ppb	6755.443	0.76	277691	400000	
Ca	40	2	45	36014.999	ppb	36014.999	0.55	16535505	400000	
V	51	3	72	18.420	ppb	18.420	1.97	9362	2000	
Cr	52	3	72	3.124	ppb	3.124	10.79	3997	5000	
Mn	55	3	72	0.938	ppb	0.938	6.35	448	10000	
Fe	56	2	72	6.971	ppb	6.971	32.83	51929	10000	
Co	59	3	72	0.062	ppb	0.062	22.35	115	2000	
Ni	60	3	72	0.862	ppb	0.862	22.53	701	5000	
Cu	63	3	72	0.098	ppb	0.098	98.24	356	5000	
Zn	66	3	72	3.394	ppb	3.394	5.85	538	5000	
As	75	3	72	6.694	ppb	6.694	9.91	626	2000	
Se	78	2	72	3.197	ppb	3.197	15.75	148	2000	
Sr	88	3	72	197.080	ppb	197.080	1.03	83776	4000	
Mo	95	3	115	6.490	ppb	6.490	4.20	2641	2000	
Ag	107	3	115	0.016	ppb	0.016	29.08	37	100	
Cd	111	3	115	0.043	ppb	0.043	60.85	10	2000	
Sn	120	3	115	-0.054	ppb	-0.054	-190.52	511	2000	
Sb	121	3	115	0.293	ppb	0.293	28.71	215	1000	
Ba	137	3	115	28.141	ppb	28.141	2.08	5803	5000	
Tl	205	3	193	0.057	ppb	0.057	13.02	270	2000	
(Pb)	206	3	193	1.242	ppb	1.242	2.77	1458	100	
(Pb)	207	3	193	1.069	ppb	1.069	7.48	1281	100	
Pb	208	3	193	1.090	ppb	1.090	6.37	5369	5000	
Th	232	3	193	3.148	ppb	3.148	13.06	18792	2000	
U	238	3	193	2.773	ppb	2.773	6.80	12705	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3530775	1.26	3535116	99.88	60	120	
Sc (IS)	45	3	HMI He	507615	0.25	505423	100.43	60	120	
Ge Internal standard	72	2	HMI H2	2223836	0.48	2359166	94.26	60	120	
Ge Internal standard	72	3	HMI He	644513	0.81	680743	94.68	60	120	
In Internal Standard	115	3	HMI He	2348368	1.69	2361818	99.43	60	120	
Ir (IS)	193	3	HMI He	5015829	1.94	5045699	99.41	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-6-A
Data File Name	332SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:08:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	26739.677	ppb	26739.677	2.63	2326878	400000	
Mg	24	3	45	8727.088	ppb	8727.088	1.21	401555	400000	
Al	27	3	45	2.529	ppb	2.529	176.71	160	400000	
K	39	3	45	5652.393	ppb	5652.393	1.56	234135	400000	
Ca	40	2	45	27300.723	ppb	27300.723	0.53	12734309	400000	
V	51	3	72	21.140	ppb	21.140	1.84	10797	2000	
Cr	52	3	72	2.057	ppb	2.057	6.48	3410	5000	
Mn	55	3	72	0.585	ppb	0.585	29.60	342	10000	
Fe	56	2	72	2.890	ppb	2.890	85.32	48075	10000	
Co	59	3	72	0.038	ppb	0.038	17.16	92	2000	
Ni	60	3	72	0.155	ppb	0.155	190.88	510	5000	
Cu	63	3	72	0.082	ppb	0.082	63.37	350	5000	
Zn	66	3	72	3.448	ppb	3.448	4.49	551	5000	
As	75	3	72	6.936	ppb	6.936	3.26	656	2000	
Se	78	2	72	2.027	ppb	2.027	8.12	97	2000	
Sr	88	3	72	150.240	ppb	150.240	2.17	64669	4000	
Mo	95	3	115	4.239	ppb	4.239	8.11	1778	2000	
Ag	107	3	115	0.002	ppb	0.002	260.20	18	100	
Cd	111	3	115	0.008	ppb	0.008	178.15	3	2000	
Sn	120	3	115	-0.055	ppb	-0.055	-77.82	523	2000	
Sb	121	3	115	0.205	ppb	0.205	12.16	165	1000	
Ba	137	3	115	15.594	ppb	15.594	1.68	3317	5000	
Tl	205	3	193	0.023	ppb	0.023	21.33	173	2000	
(Pb)	206	3	193	-0.055	ppb	-0.055	-82.16	177	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-591.00	335	100	
Pb	208	3	193	-0.028	ppb	-0.028	-65.94	913	5000	
Th	232	3	193	0.511	ppb	0.511	37.32	8362	2000	
U	238	3	193	1.680	ppb	1.680	2.02	8410	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3586149	0.74	3535116	101.44	60	120	
Sc (IS)	45	3	HMI He	503019	0.86	505423	99.52	60	120	
Ge Internal standard	72	2	HMI H2	2284646	2.83	2359166	96.84	60	120	
Ge Internal standard	72	3	HMI He	652697	1.78	680743	95.88	60	120	
In Internal Standard	115	3	HMI He	2410810	1.85	2361818	102.07	60	120	
Ir (IS)	193	3	HMI He	5148006	0.07	5045699	102.03	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-8-A
Data File Name	333SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:10:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.002	ppb	0.002	3967.09	2	2000	
Na	23	3	45	26076.770	ppb	26076.770	1.08	2271678	400000	
Mg	24	3	45	19048.080	ppb	19048.080	0.71	877054	400000	
Al	27	3	45	1.959	ppb	1.959	205.35	150	400000	
K	39	3	45	7454.233	ppb	7454.233	1.24	301444	400000	
Ca	40	2	45	62445.260	ppb	62445.260	1.46	29075250	400000	
V	51	3	72	19.490	ppb	19.490	2.74	9879	2000	
Cr	52	3	72	2.631	ppb	2.631	5.03	3709	5000	
Mn	55	3	72	0.501	ppb	0.501	17.66	312	10000	
Fe	56	2	72	3.960	ppb	3.960	63.95	48718	10000	
Co	59	3	72	0.062	ppb	0.062	26.33	115	2000	
Ni	60	3	72	0.512	ppb	0.512	31.05	603	5000	
Cu	63	3	72	0.130	ppb	0.130	60.58	381	5000	
Zn	66	3	72	3.181	ppb	3.181	7.78	513	5000	
As	75	3	72	6.291	ppb	6.291	14.62	591	2000	
Se	78	2	72	6.383	ppb	6.383	6.26	299	2000	
Sr	88	3	72	355.755	ppb	355.755	0.75	151313	4000	
Mo	95	3	115	6.161	ppb	6.161	4.19	2497	2000	
Ag	107	3	115	0.000	ppb	0.000	4477.50	15	100	
Cd	111	3	115	0.026	ppb	0.026	152.94	7	2000	
Sn	120	3	115	-0.151	ppb	-0.151	-101.12	450	2000	
Sb	121	3	115	0.282	ppb	0.282	31.82	208	1000	
Ba	137	3	115	77.981	ppb	77.981	3.56	15958	5000	
Tl	205	3	193	0.004	ppb	0.004	75.46	113	2000	
(Pb)	206	3	193	-0.062	ppb	-0.062	-36.06	168	100	
(Pb)	207	3	193	-0.063	ppb	-0.063	-88.23	278	100	
Pb	208	3	193	-0.043	ppb	-0.043	-64.39	843	5000	
Th	232	3	193	0.045	ppb	0.045	383.13	6362	2000	
U	238	3	193	9.559	ppb	9.559	3.04	41443	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3581670	0.64	3535116	101.32	60	120	
Sc (IS)	45	3	HMI He	503490	0.40	505423	99.62	60	120	
Ge Internal standard	72	2	HMI H2	2251867	1.13	2359166	95.45	60	120	
Ge Internal standard	72	3	HMI He	645004	1.26	680743	94.75	60	120	
In Internal Standard	115	3	HMI He	2339141	1.38	2361818	99.04	60	120	
Ir (IS)	193	3	HMI He	5100233	1.92	5045699	101.08	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-11-A
Data File Name	334SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:12:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.003	ppb	0.003	2838.65	2	2000	
Na	23	3	45	26306.467	ppb	26306.467	0.34	2290654	400000	
Mg	24	3	45	19365.692	ppb	19365.692	1.56	891366	400000	
Al	27	3	45	75.043	ppb	75.043	4.24	1411	400000	
K	39	3	45	7533.880	ppb	7533.880	0.61	304298	400000	
Ca	40	2	45	65545.557	ppb	65545.557	1.71	30103205	400000	
V	51	3	72	19.871	ppb	19.871	0.47	10005	2000	
Cr	52	3	72	2.512	ppb	2.512	5.26	3617	5000	
Mn	55	3	72	3.131	ppb	3.131	4.22	1129	10000	
Fe	56	2	72	83.540	ppb	83.540	7.66	144858	10000	
Co	59	3	72	0.089	ppb	0.089	23.43	142	2000	
Ni	60	3	72	0.607	ppb	0.607	27.69	626	5000	
Cu	63	3	72	0.331	ppb	0.331	22.12	531	5000	
Zn	66	3	72	3.119	ppb	3.119	23.51	503	5000	
As	75	3	72	5.994	ppb	5.994	4.61	561	2000	
Se	78	2	72	6.587	ppb	6.587	10.96	297	2000	
Sr	88	3	72	362.698	ppb	362.698	0.94	153387	4000	
Mo	95	3	115	6.254	ppb	6.254	4.27	2582	2000	
Ag	107	3	115	0.001	ppb	0.001	197.92	17	100	
Cd	111	3	115	0.000	ppb	0.000	-45829.80	2	2000	
Sn	120	3	115	-0.225	ppb	-0.225	-24.57	411	2000	
Sb	121	3	115	0.380	ppb	0.380	5.12	273	1000	
Ba	137	3	115	79.515	ppb	79.515	1.23	16582	5000	
Tl	205	3	193	0.003	ppb	0.003	183.23	110	2000	
(Pb)	206	3	193	0.109	ppb	0.109	23.10	342	100	
(Pb)	207	3	193	0.131	ppb	0.131	13.67	455	100	
Pb	208	3	193	0.148	ppb	0.148	11.16	1628	5000	
Th	232	3	193	-0.214	ppb	-0.214	-33.68	5329	2000	
U	238	3	193	9.860	ppb	9.860	3.66	42834	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3533063	2.56	3535116	99.94	60	120	
Sc (IS)	45	3	HMI He	503287	0.64	505423	99.58	60	120	
Ge Internal standard	72	2	HMI H2	2171550	2.55	2359166	92.05	60	120	
Ge Internal standard	72	3	HMI He	641289	0.91	680743	94.20	60	120	
In Internal Standard	115	3	HMI He	2383054	0.23	2361818	100.90	60	120	
Ir (IS)	193	3	HMI He	5116730	2.66	5045699	101.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	335_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:14:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.120	ppb	6.694	1801	50	108.2	90	110	
Na	23	3	45	50452.994	ppb	1.552	4355247	51000	98.9	90	110	
Mg	24	3	45	10781.619	ppb	1.082	493292	11000	98.0	90	110	
Al	27	3	45	1033.590	ppb	4.721	17846	1000	103.4	90	110	
K	39	3	45	10819.057	ppb	0.744	424004	11000	98.4	90	110	
Ca	40	2	45	10868.234	ppb	0.747	4895578	11000	98.8	90	110	
V	51	3	72	56.276	ppb	2.674	26188	50	112.6	90	110	>+\-10%
Cr	52	3	72	57.404	ppb	0.354	34368	50	114.8	90	110	>+\-10%
Mn	55	3	72	55.969	ppb	3.458	16857	50	111.9	90	110	>+\-10%
Fe	56	2	72	1129.478	ppb	2.582	1374235	1000	112.9	90	110	>+\-10%
Co	59	3	72	56.040	ppb	3.462	54003	50	112.1	90	110	>+\-10%
Ni	60	3	72	56.430	ppb	1.810	15561	50	112.9	90	110	>+\-10%
Cu	63	3	72	56.674	ppb	0.805	41309	50	113.3	90	110	>+\-10%
Zn	66	3	72	59.353	ppb	2.547	6918	50	118.7	90	110	>+\-10%
As	75	3	72	57.755	ppb	6.043	4948	50	115.5	90	110	>+\-10%
Se	78	2	72	58.047	ppb	2.898	2508	50	116.1	90	110	>+\-10%
Sr	88	3	72	114.771	ppb	2.584	46534	100	114.8	90	110	>+\-10%
Mo	95	3	115	53.225	ppb	1.592	21126	50	106.4	90	110	
Ag	107	3	115	52.295	ppb	0.697	70507	50	104.6	90	110	
Cd	111	3	115	53.499	ppb	0.921	10347	50	107.0	90	110	
Sn	120	3	115	52.098	ppb	0.835	32106	50	104.2	90	110	
Sb	121	3	115	51.781	ppb	1.022	31725	50	103.6	90	110	
Ba	137	3	115	52.532	ppb	2.022	10642	50	105.1	90	110	
Tl	205	3	193	51.861	ppb	2.822	158066	50	103.7	90	110	
(Pb)	206	3	193	53.327	ppb	3.782	53924	50	106.7	90	110	
(Pb)	207	3	193	52.736	ppb	1.646	48079	50	105.5	90	110	
Pb	208	3	193	52.949	ppb	3.191	216774	50	105.9	90	110	
Th	232	3	193	52.274	ppb	3.255	220836	50	104.5	90	110	
U	238	3	193	53.630	ppb	3.325	226614	50	107.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3459263	1.50	3535116	97.85	60	120	
Sc (IS)	45	3	HMI He	500282	1.07	505423	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2083633	1.32	2359166	88.32	60	120	
Ge Internal standard	72	3	HMI He	614770	1.51	680743	90.31	60	120	
In Internal Standard	115	3	HMI He	2312597	0.52	2361818	97.92	60	120	
Ir (IS)	193	3	HMI He	5101183	3.14	5045699	101.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	336_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:37:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	18.482	ppb	15.7	14616	25	
Mg	24	3	45	0.917	ppb	85.3	194	25	
Al	27	3	45	-2.446	ppb	-50.7	73	15	
K	39	3	45	-9.592	ppb	-282.6	23370	50	
V	51	3	72	0.402	ppb	28.7	733	1	
Cr	52	3	72	0.149	ppb	53.1	2199	1	
Mn	55	3	72	0.152	ppb	74.1	198	0.5	
Co	59	3	72	-0.001	ppb	-1436.7	50	0.5	
Ni	60	3	72	0.467	ppb	89.6	580	1	
Cu	63	3	72	-0.075	ppb	-28.8	222	1	
Zn	66	3	72	0.452	ppb	43.4	182	5	
As	75	3	72	0.158	ppb	77.4	42	1	
Se	78	2	72	0.017	ppb	157.0	1	1	
Sr	88	3	72	0.016	ppb	266.3	30	0.5	
Mo	95	3	115	0.055	ppb	45.0	48	0.5	
Ag	107	3	115	-0.001	ppb	-385.2	13	1	
Cd	111	3	115	0.000	ppb	3875.9	2	0.5	
Sn	120	3	115	0.158	ppb	43.6	631	1	
Sb	121	3	115	0.029	ppb	202.8	50	0.6	
Ba	137	3	115	0.045	ppb	134.9	42	0.5	
Tl	205	3	193	0.010	ppb	146.2	128	0.1	
(Pb)	206	3	193	-0.034	ppb	-60.2	192	1	
(Pb)	207	3	193	0.069	ppb	121.4	388	1	
Pb	208	3	193	-0.007	ppb	-302.5	965	0.5	
Th	232	3	193	1.351	ppb	16.3	11455	1	>RL
U	238	3	193	0.013	ppb	138.7	1293	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3458643	1.28	3535116	97.84	60	120	
Sc (IS)	45	3	HMI He	499504	1.42	505423	98.83	60	120	
Ge Internal standard	72	2	HMI H2	2143080	0.58	2359166	90.84	60	120	
Ge Internal standard	72	3	HMI He	632646	0.84	680743	92.93	60	120	
In Internal Standard	115	3	HMI He	2314694	1.93	2361818	98.00	60	120	
Ir (IS)	193	3	HMI He	4978249	0.38	5045699	98.66	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	337SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:38:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.001	ppb	-0.001	-6949.53	2	2000	
Na	23	3	45	-13.604	ppb	-13.604	-34.99	13210	400000	
Mg	24	3	45	-0.428	ppb	-0.428	-174.02	147	400000	
Al	27	3	45	-2.714	ppb	-2.714	-11.90	77	400000	
K	39	3	45	-59.795	ppb	-59.795	-35.80	23961	400000	
Ca	40	2	45	-7.416	ppb	-7.416	-16.43	7299	400000	
V	51	3	72	-0.656	ppb	-0.656	-8.53	260	2000	
Cr	52	3	72	-1.058	ppb	-1.058	-7.68	1648	5000	
Mn	55	3	72	-0.070	ppb	-0.070	-75.79	143	10000	
Fe	56	2	72	-10.162	ppb	-10.162	-17.81	32330	10000	
Co	59	3	72	-0.012	ppb	-0.012	-99.78	43	2000	
Ni	60	3	72	-0.512	ppb	-0.512	-18.46	340	5000	
Cu	63	3	72	-0.152	ppb	-0.152	-28.84	180	5000	
Zn	66	3	72	-0.214	ppb	-0.214	-37.31	113	5000	
As	75	3	72	-0.127	ppb	-0.127	-24.12	18	2000	
Se	78	2	72	0.054	ppb	0.054	43.54	3	2000	
Sr	88	3	72	0.043	ppb	0.043	93.10	45	4000	
Mo	95	3	115	0.004	ppb	0.004	367.38	32	2000	
Ag	107	3	115	0.005	ppb	0.005	215.74	23	100	
Cd	111	3	115	0.022	ppb	0.022	56.89	7	2000	
Sn	120	3	115	-0.619	ppb	-0.619	-6.59	180	2000	
Sb	121	3	115	-0.014	ppb	-0.014	-36.35	27	1000	
Ba	137	3	115	-0.109	ppb	-0.109	-13.04	12	5000	
Tl	205	3	193	0.006	ppb	0.006	222.17	128	2000	
(Pb)	206	3	193	-0.123	ppb	-0.123	-3.89	117	100	
(Pb)	207	3	193	-0.071	ppb	-0.071	-46.24	295	100	
Pb	208	3	193	-0.083	ppb	-0.083	-14.35	741	5000	
Th	232	3	193	-0.563	ppb	-0.563	-10.79	4220	2000	
U	238	3	193	0.007	ppb	0.007	200.85	1418	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3851345	1.74	3535116	108.95	60	120	
Sc (IS)	45	3	HMI He	556317	0.64	505423	110.07	60	120	
Ge Internal standard	72	2	HMI H2	2370777	0.43	2359166	100.49	60	120	
Ge Internal standard	72	3	HMI He	694862	0.66	680743	102.07	60	120	
In Internal Standard	115	3	HMI He	2591788	2.54	2361818	109.74	60	120	
Ir (IS)	193	3	HMI He	5564197	2.49	5045699	110.28	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	338SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:40:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-13.286	ppb	-13.286	-6.22	13229	400000	
Mg	24	3	45	-0.557	ppb	-0.557	-105.67	140	400000	
Al	27	3	45	-1.836	ppb	-1.836	-44.61	93	400000	
K	39	3	45	-70.544	ppb	-70.544	-32.76	23503	400000	
Ca	40	2	45	-7.131	ppb	-7.131	-6.42	7433	400000	
V	51	3	72	-0.718	ppb	-0.718	-11.37	225	2000	
Cr	52	3	72	-0.947	ppb	-0.947	-18.84	1693	5000	
Mn	55	3	72	0.027	ppb	0.027	414.14	173	10000	
Fe	56	2	72	-8.185	ppb	-8.185	-14.03	34404	10000	
Co	59	3	72	-0.016	ppb	-0.016	-102.18	38	2000	
Ni	60	3	72	-0.138	ppb	-0.138	-111.96	446	5000	
Cu	63	3	72	-0.077	ppb	-0.077	-75.14	238	5000	
Zn	66	3	72	-0.333	ppb	-0.333	-34.44	97	5000	
As	75	3	72	-0.177	ppb	-0.177	-17.41	13	2000	
Se	78	2	72	0.042	ppb	0.042	152.29	3	2000	
Sr	88	3	72	0.022	ppb	0.022	103.29	35	4000	
Mo	95	3	115	-0.025	ppb	-0.025	-66.99	18	2000	
Ag	107	3	115	0.002	ppb	0.002	145.04	20	100	
Cd	111	3	115	0.000	ppb	0.000	-2955.06	2	2000	
Sn	120	3	115	-0.664	ppb	-0.664	-5.92	148	2000	
Sb	121	3	115	-0.026	ppb	-0.026	-44.21	18	1000	
Ba	137	3	115	-0.086	ppb	-0.086	-41.60	17	5000	
Tl	205	3	193	0.007	ppb	0.007	197.32	130	2000	
(Pb)	206	3	193	-0.103	ppb	-0.103	-6.02	135	100	
(Pb)	207	3	193	-0.053	ppb	-0.053	-156.38	303	100	
Pb	208	3	193	-0.079	ppb	-0.079	-28.13	736	5000	
Th	232	3	193	-0.566	ppb	-0.566	-4.07	4085	2000	
U	238	3	193	0.022	ppb	0.022	69.33	1446	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3848602	1.61	3535116	108.87	60	120	
Sc (IS)	45	3	HMI He	555943	0.34	505423	110.00	60	120	
Ge Internal standard	72	2	HMI H2	2329975	1.16	2359166	98.76	60	120	
Ge Internal standard	72	3	HMI He	684858	0.75	680743	100.60	60	120	
In Internal Standard	115	3	HMI He	2563587	1.97	2361818	108.54	60	120	
Ir (IS)	193	3	HMI He	5399902	1.61	5045699	107.02	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	339SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:42:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.046	ppb	0.046	174.15	3	2000	
Na	23	3	45	-10.440	ppb	-10.440	-48.24	13290	400000	
Mg	24	3	45	0.356	ppb	0.356	291.93	184	400000	
Al	27	3	45	-3.001	ppb	-3.001	-31.49	70	400000	
K	39	3	45	-48.934	ppb	-48.934	-112.26	24021	400000	
Ca	40	2	45	-6.731	ppb	-6.731	-9.53	7510	400000	
V	51	3	72	-0.677	ppb	-0.677	-15.47	245	2000	
Cr	52	3	72	-0.947	ppb	-0.947	-9.90	1689	5000	
Mn	55	3	72	-0.042	ppb	-0.042	-173.40	150	10000	
Fe	56	2	72	-8.029	ppb	-8.029	-30.79	34906	10000	
Co	59	3	72	-0.025	ppb	-0.025	-28.72	28	2000	
Ni	60	3	72	-0.285	ppb	-0.285	-71.61	401	5000	
Cu	63	3	72	-0.134	ppb	-0.134	-23.03	192	5000	
Zn	66	3	72	-0.173	ppb	-0.173	-96.37	117	5000	
As	75	3	72	-0.106	ppb	-0.106	-131.94	20	2000	
Se	78	2	72	0.000	ppb	0.000	10604.11	1	2000	
Sr	88	3	72	0.018	ppb	0.018	126.82	33	4000	
Mo	95	3	115	-0.021	ppb	-0.021	-107.25	20	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-187.61	13	100	
Cd	111	3	115	0.007	ppb	0.007	379.75	3	2000	
Sn	120	3	115	-0.651	ppb	-0.651	-7.43	157	2000	
Sb	121	3	115	-0.024	ppb	-0.024	-31.10	20	1000	
Ba	137	3	115	-0.064	ppb	-0.064	-40.26	22	5000	
Tl	205	3	193	0.005	ppb	0.005	201.30	122	2000	
(Pb)	206	3	193	-0.093	ppb	-0.093	-24.41	143	100	
(Pb)	207	3	193	-0.025	ppb	-0.025	-167.99	327	100	
Pb	208	3	193	-0.069	ppb	-0.069	-17.67	770	5000	
Th	232	3	193	-0.573	ppb	-0.573	-5.09	4010	2000	
U	238	3	193	0.009	ppb	0.009	352.13	1371	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3785607	0.48	3535116	107.09	60	120	
Sc (IS)	45	3	HMI He	547295	0.68	505423	108.28	60	120	
Ge Internal standard	72	2	HMI H2	2350047	0.81	2359166	99.61	60	120	
Ge Internal standard	72	3	HMI He	683098	0.53	680743	100.35	60	120	
In Internal Standard	115	3	HMI He	2569814	0.33	2361818	108.81	60	120	
Ir (IS)	193	3	HMI He	5337440	0.65	5045699	105.78	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	340SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:44:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-15.664	ppb	-15.664	-20.26	12926	400000	
Mg	24	3	45	0.249	ppb	0.249	479.97	180	400000	
Al	27	3	45	-4.627	ppb	-4.627	-19.58	40	400000	
K	39	3	45	-63.196	ppb	-63.196	-61.73	23664	400000	
Ca	40	2	45	-7.309	ppb	-7.309	-6.04	7263	400000	
V	51	3	72	-0.732	ppb	-0.732	-12.97	220	2000	
Cr	52	3	72	-0.826	ppb	-0.826	-21.69	1789	5000	
Mn	55	3	72	-0.063	ppb	-0.063	-99.48	145	10000	
Fe	56	2	72	-7.348	ppb	-7.348	-43.65	35535	10000	
Co	59	3	72	-0.024	ppb	-0.024	-38.99	30	2000	
Ni	60	3	72	-0.238	ppb	-0.238	-24.98	421	5000	
Cu	63	3	72	-0.091	ppb	-0.091	-22.29	230	5000	
Zn	66	3	72	-0.392	ppb	-0.392	-26.91	90	5000	
As	75	3	72	-0.179	ppb	-0.179	-17.23	13	2000	
Se	78	2	72	0.097	ppb	0.097	23.43	5	2000	
Sr	88	3	72	0.032	ppb	0.032	119.29	40	4000	
Mo	95	3	115	-0.036	ppb	-0.036	-67.28	13	2000	
Ag	107	3	115	0.002	ppb	0.002	126.49	20	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.648	ppb	-0.648	-9.41	158	2000	
Sb	121	3	115	-0.029	ppb	-0.029	-51.33	17	1000	
Ba	137	3	115	-0.026	ppb	-0.026	-155.86	30	5000	
Tl	205	3	193	0.002	ppb	0.002	209.05	113	2000	
(Pb)	206	3	193	-0.105	ppb	-0.105	-7.73	133	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-55.95	300	100	
Pb	208	3	193	-0.081	ppb	-0.081	-13.01	735	5000	
Th	232	3	193	-0.593	ppb	-0.593	-7.11	4005	2000	
U	238	3	193	0.006	ppb	0.006	398.73	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3805921	1.18	3535116	107.66	60	120	
Sc (IS)	45	3	HMI He	552690	0.34	505423	109.35	60	120	
Ge Internal standard	72	2	HMI H2	2334660	1.31	2359166	98.96	60	120	
Ge Internal standard	72	3	HMI He	692445	0.68	680743	101.72	60	120	
In Internal Standard	115	3	HMI He	2565285	2.70	2361818	108.61	60	120	
Ir (IS)	193	3	HMI He	5449448	1.24	5045699	108.00	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	341SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:47:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-9.391	ppb	-9.391	-64.39	13564	400000	
Mg	24	3	45	0.039	ppb	0.039	3644.51	170	400000	
Al	27	3	45	-3.937	ppb	-3.937	-32.79	53	400000	
K	39	3	45	-56.036	ppb	-56.036	-52.87	24021	400000	
Ca	40	2	45	-7.167	ppb	-7.167	-9.44	7419	400000	
V	51	3	72	-0.820	ppb	-0.820	-5.11	178	2000	
Cr	52	3	72	-0.461	ppb	-0.461	-53.74	2059	5000	
Mn	55	3	72	0.016	ppb	0.016	570.63	175	10000	
Fe	56	2	72	-1.964	ppb	-1.964	-146.35	43489	10000	
Co	59	3	72	-0.007	ppb	-0.007	-180.66	50	2000	
Ni	60	3	72	-0.156	ppb	-0.156	-80.88	455	5000	
Cu	63	3	72	-0.102	ppb	-0.102	-17.26	225	5000	
Zn	66	3	72	-0.305	ppb	-0.305	-48.14	103	5000	
As	75	3	72	-0.164	ppb	-0.164	-55.07	15	2000	
Se	78	2	72	0.027	ppb	0.027	149.81	2	2000	
Sr	88	3	72	0.009	ppb	0.009	246.74	30	4000	
Mo	95	3	115	-0.018	ppb	-0.018	-94.45	22	2000	
Ag	107	3	115	0.007	ppb	0.007	121.47	27	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.647	ppb	-0.647	-2.14	160	2000	
Sb	121	3	115	-0.024	ppb	-0.024	-31.72	20	1000	
Ba	137	3	115	-0.057	ppb	-0.057	-60.45	23	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-318.90	102	2000	
(Pb)	206	3	193	-0.116	ppb	-0.116	-9.62	123	100	
(Pb)	207	3	193	-0.069	ppb	-0.069	-28.52	295	100	
Pb	208	3	193	-0.083	ppb	-0.083	-14.27	738	5000	
Th	232	3	193	-0.594	ppb	-0.594	-4.03	4054	2000	
U	238	3	193	0.008	ppb	0.008	163.58	1413	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3851813	1.51	3535116	108.96	60	120	
Sc (IS)	45	3	HMI He	554184	1.24	505423	109.65	60	120	
Ge Internal standard	72	2	HMI H2	2377937	0.33	2359166	100.80	60	120	
Ge Internal standard	72	3	HMI He	706006	0.96	680743	103.71	60	120	
In Internal Standard	115	3	HMI He	2581239	1.04	2361818	109.29	60	120	
Ir (IS)	193	3	HMI He	5521502	0.74	5045699	109.43	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	342CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T10:49:28-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	13537	0.02
Mg	24	45	3	HMI He	133	17.17
Al	27	45	3	HMI He	80	94.95
K	39	45	3	HMI He	23062	0.02
Ca	40	45	2	HMI H2	9519	0.02
V	51	72	3	HMI He	633	2.56
Cr	52	72	3	HMI He	2137	0.35
Mn	55	72	3	HMI He	183	13.51
Fe	56	72	2	HMI H2	34036	0.03
Co	59	72	3	HMI He	32	160.36
Ni	60	72	3	HMI He	421	2.11
Cu	63	72	3	HMI He	252	1.21
Zn	66	72	3	HMI He	132	9.28
As	75	72	3	HMI He	60	100.19
Se	78	72	2	HMI H2	1	6495.19
(Se)	78	72	3	HMI He	33	93.70
Sr	88	72	3	HMI He	15	384.99
Mo	95	115	3	HMI He	27	226.17
Ag	107	115	3	HMI He	15	0.00
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	506	3.03
Sb	121	115	3	HMI He	27	107.43
Ba	137	115	3	HMI He	40	54.18
Tl	205	193	3	HMI He	100	18.04
(Pb)	206	193	3	HMI He	172	10.78
(Pb)	207	193	3	HMI He	282	5.25
Pb	208	193	3	HMI He	851	0.85
Th	232	193	3	HMI He	6263	0.09
U	238	193	3	HMI He	1218	0.37

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3473788	3.33
Sc (IS)	45	3	HMI He	498630	0.87
Ge Internal standard	72	2	HMI H2	2241871	1.81
Ge Internal standard	72	3	HMI He	647352	0.70
In Internal Standard	115	3	HMI He	2356036	1.72
Ir (IS)	193	3	HMI He	4999588	0.98

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	343CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T10:51:15-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	342CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	8693007	0.00
Mg	24	45	3	HMI He	928288	0.00
Al	27	45	3	HMI He	157	35.09
K	39	45	3	HMI He	772526	0.00
V	51	72	3	HMI He	620	1.17
Cr	52	72	3	HMI He	2432	0.17
Mn	55	72	3	HMI He	280	4.47
Co	59	72	3	HMI He	68	40.57
Ni	60	72	3	HMI He	560	0.97
Cu	63	72	3	HMI He	347	0.64
Zn	66	72	3	HMI He	257	2.19
As	75	72	3	HMI He	45	74.09
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	22	325.48
Sr	88	72	3	HMI He	238	3.09
Mo	95	115	3	HMI He	48	24.71
Ag	107	115	3	HMI He	27	177.05
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	661	2.60
Sb	121	115	3	HMI He	33	113.31
Ba	137	115	3	HMI He	138	18.36
Tl	205	193	3	HMI He	130	7.83
(Pb)	206	193	3	HMI He	242	2.16
(Pb)	207	193	3	HMI He	376	1.47
Pb	208	193	3	HMI He	1091	0.09
Th	232	193	3	HMI He	5192	0.16
U	238	193	3	HMI He	1361	0.12

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3414129	0.37	3473788	98.28	60	120	
Sc (IS)	45	3	HMI He	503279	0.64	498630	100.93	60	120	
Ge Internal standard	72	2	HMI H2	2085309	2.25	2241871	93.02	60	120	
Ge Internal standard	72	3	HMI He	612711	1.17	647352	94.65	60	120	
In Internal Standard	115	3	HMI He	2393601	2.81	2356036	101.59	60	120	
Ir (IS)	193	3	HMI He	5033952	1.74	4999588	100.69	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	344CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T10:53:03-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	342CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3545	0.02
Na	23	45	3	HMI He	187074	0.00
Mg	24	45	3	HMI He	90081	0.00
Al	27	45	3	HMI He	34560	0.00
K	39	45	3	HMI He	96187	0.00
V	51	72	3	HMI He	50132	0.00
Cr	52	72	3	HMI He	64021	0.00
Mn	55	72	3	HMI He	32544	0.01
Co	59	72	3	HMI He	105629	0.00
Ni	60	72	3	HMI He	29919	0.01
Cu	63	72	3	HMI He	79384	0.00
Zn	66	72	3	HMI He	12920	0.02
As	75	72	3	HMI He	9334	0.04
Se	78	72	2	HMI H2	4743	0.01
(Se)	78	72	3	HMI He	593	0.50
Sr	88	72	3	HMI He	88301	0.00
Mo	95	115	3	HMI He	39969	0.00
Ag	107	115	3	HMI He	136047	0.00
Cd	111	115	3	HMI He	19710	0.01
Sn	120	115	3	HMI He	63402	0.00
Sb	121	115	3	HMI He	62224	0.00
Ba	137	115	3	HMI He	20180	0.01
Tl	205	193	3	HMI He	306600	0.00
(Pb)	206	193	3	HMI He	103769	0.00
(Pb)	207	193	3	HMI He	89872	0.00
Pb	208	193	3	HMI He	414964	0.00
Th	232	193	3	HMI He	420230	0.00
U	238	193	3	HMI He	429581	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3480266	1.17	3473788	100.19	60	120	
Sc (IS)	45	3	HMI He	504412	0.09	498630	101.16	60	120	
Ge Internal standard	72	2	HMI H2	2242215	2.27	2241871	100.02	60	120	
Ge Internal standard	72	3	HMI He	649916	1.04	647352	100.40	60	120	
In Internal Standard	115	3	HMI He	2372947	2.94	2356036	100.72	60	120	
Ir (IS)	193	3	HMI He	5069595	1.85	4999588	101.40	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	345_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:54:50-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.484	ppb	2.917	1458	40	103.7	90	110	
Na	23	3	45	12909.197	ppb	2.551	1137641	12800	100.9	90	110	
Mg	24	3	45	4618.014	ppb	0.637	215176	4800	96.2	90	110	
Al	27	3	45	822.352	ppb	1.609	14272	800	102.8	90	110	
K	39	3	45	4655.089	ppb	1.708	198352	4800	97.0	90	110	
Ca	40	2	45	4709.401	ppb	1.416	2226359	4800	98.1	90	110	
V	51	3	72	42.066	ppb	2.040	20837	40	105.2	90	110	
Cr	52	3	72	42.074	ppb	3.134	27362	40	105.2	90	110	
Mn	55	3	72	43.065	ppb	4.336	13708	40	107.7	90	110	
Fe	56	2	72	821.974	ppb	2.155	1097251	800	102.7	90	110	
Co	59	3	72	40.742	ppb	1.152	41817	40	101.9	90	110	
Ni	60	3	72	40.805	ppb	2.749	12096	40	102.0	90	110	
Cu	63	3	72	43.576	ppb	2.532	33733	40	108.9	90	110	
Zn	66	3	72	82.154	ppb	1.848	10330	80	102.7	90	110	
As	75	3	72	38.578	ppb	5.399	3532	40	96.4	90	110	
Se	78	2	72	42.293	ppb	2.035	1967	40	105.7	90	110	
Sr	88	3	72	123.523	ppb	3.430	52961	120	102.9	90	110	
Mo	95	3	115	40.524	ppb	1.235	16055	40	101.3	90	110	
Ag	107	3	115	82.659	ppb	1.882	111347	80	103.3	90	110	
Cd	111	3	115	39.675	ppb	3.190	7743	40	99.2	90	110	
Sn	120	3	115	40.434	ppb	1.093	25689	40	101.1	90	110	
Sb	121	3	115	41.010	ppb	0.451	25275	40	102.5	90	110	
Ba	137	3	115	40.112	ppb	0.694	8042	40	100.3	90	110	
Tl	205	3	193	40.599	ppb	2.474	123694	40	101.5	90	110	
(Pb)	206	3	193	41.032	ppb	3.365	42386	40	102.6	90	110	
(Pb)	207	3	193	41.014	ppb	2.299	36778	40	102.5	90	110	
Pb	208	3	193	41.074	ppb	3.449	169760	40	102.7	90	110	
Th	232	3	193	82.088	ppb	2.226	343738	80	102.6	90	110	
U	238	3	193	44.049	ppb	3.397	188631	40	110.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508656	1.01	3473788	101.00	60	120	
Sc (IS)	45	3	HMI He	504927	1.13	498630	101.26	60	120	
Ge Internal standard	72	2	HMI H2	2196933	0.58	2241871	98.00	60	120	
Ge Internal standard	72	3	HMI He	631209	1.83	647352	97.51	60	120	
In Internal Standard	115	3	HMI He	2348519	2.06	2356036	99.68	60	120	
Ir (IS)	193	3	HMI He	5036455	3.30	4999588	100.74	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	346_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:56:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.493	ppb	2.210	1683	50	95.0	90	110	
Na	23	3	45	49891.766	ppb	2.101	4292460	51000	97.8	90	110	
Mg	24	3	45	10528.717	ppb	1.078	482959	11000	95.7	90	110	
Al	27	3	45	1035.871	ppb	1.149	17686	1000	103.6	90	110	
K	39	3	45	10644.494	ppb	1.963	416994	11000	96.8	90	110	
Ca	40	2	45	10462.540	ppb	0.428	4890440	11000	95.1	90	110	
V	51	3	72	53.802	ppb	1.421	26330	50	107.6	90	110	
Cr	52	3	72	52.350	ppb	1.358	33352	50	104.7	90	110	
Mn	55	3	72	52.786	ppb	1.779	16673	50	105.6	90	110	
Fe	56	2	72	1053.226	ppb	2.714	1361550	1000	105.3	90	110	
Co	59	3	72	51.737	ppb	1.563	52792	50	103.5	90	110	
Ni	60	3	72	53.289	ppb	1.888	15584	50	106.6	90	110	
Cu	63	3	72	53.477	ppb	0.592	41114	50	107.0	90	110	
Zn	66	3	72	53.111	ppb	2.775	6685	50	106.2	90	110	
As	75	3	72	54.409	ppb	2.021	4930	50	108.8	90	110	
Se	78	2	72	53.686	ppb	0.814	2434	50	107.4	90	110	
Sr	88	3	72	106.256	ppb	2.789	45306	100	106.3	90	110	
Mo	95	3	115	53.109	ppb	2.353	21229	50	106.2	90	110	
Ag	107	3	115	51.023	ppb	2.143	69392	50	102.0	90	110	
Cd	111	3	115	52.246	ppb	1.932	10294	50	104.5	90	110	
Sn	120	3	115	49.458	ppb	0.591	31603	50	98.9	90	110	
Sb	121	3	115	51.096	ppb	1.187	31782	50	102.2	90	110	
Ba	137	3	115	50.503	ppb	3.473	10209	50	101.0	90	110	
Tl	205	3	193	50.389	ppb	3.406	157073	50	100.8	90	110	
(Pb)	206	3	193	49.254	ppb	1.003	52051	50	98.5	90	110	
(Pb)	207	3	193	50.922	ppb	2.255	46651	50	101.8	90	110	
Pb	208	3	193	49.899	ppb	0.343	210923	50	99.8	90	110	
Th	232	3	193	52.397	ppb	1.324	226865	50	104.8	90	110	
U	238	3	193	50.099	ppb	0.849	219429	50	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3477165	0.46	3473788	100.10	60	120	
Sc (IS)	45	3	HMI He	497336	1.96	498630	99.74	60	120	
Ge Internal standard	72	2	HMI H2	2142171	0.63	2241871	95.55	60	120	
Ge Internal standard	72	3	HMI He	627603	1.26	647352	96.95	60	120	
In Internal Standard	115	3	HMI He	2370598	0.84	2356036	100.62	60	120	
Ir (IS)	193	3	HMI He	5152062	1.18	4999588	103.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	347_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:58:26-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.142	ppb	98.6	5	0.5	
Na	23	3	45	28.259	ppb	38.0	16012	25	>RL
Mg	24	3	45	2.305	ppb	39.6	240	25	
Al	27	3	45	-0.411	ppb	-228.0	73	15	
K	39	3	45	0.058	ppb	44172.5	23136	50	
V	51	3	72	0.157	ppb	109.5	686	1	
Cr	52	3	72	0.151	ppb	38.1	2154	1	
Mn	55	3	72	0.154	ppb	90.9	225	0.5	
Co	59	3	72	0.022	ppb	45.5	53	0.5	
Ni	60	3	72	0.133	ppb	107.1	445	1	
Cu	63	3	72	0.038	ppb	9.2	272	1	
Zn	66	3	72	0.253	ppb	79.1	158	5	
As	75	3	72	-0.237	ppb	-27.4	37	1	
Se	78	2	72	0.001	ppb	5501.4	1	1	
Sr	88	3	72	0.064	ppb	56.3	42	0.5	
Mo	95	3	115	0.064	ppb	41.8	52	0.5	
Ag	107	3	115	0.018	ppb	101.3	38	1	
Cd	111	3	115	0.026	ppb	152.3	7	0.5	
Sn	120	3	115	0.395	ppb	22.9	746	1	
Sb	121	3	115	0.038	ppb	0.9	50	0.6	
Ba	137	3	115	0.094	ppb	41.4	58	0.5	
Tl	205	3	193	0.038	ppb	18.1	218	0.1	
(Pb)	206	3	193	-0.002	ppb	-537.7	172	1	
(Pb)	207	3	193	0.038	ppb	41.9	318	1	
Pb	208	3	193	0.001	ppb	2040.5	863	0.5	
Th	232	3	193	1.679	ppb	15.7	13255	1	>RL
U	238	3	193	0.032	ppb	109.5	1368	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3492159	1.36	3473788	100.53	60	120	
Sc (IS)	45	3	HMI He	500112	0.97	498630	100.30	60	120	
Ge Internal standard	72	2	HMI H2	2148438	0.46	2241871	95.83	60	120	
Ge Internal standard	72	3	HMI He	625308	0.13	647352	96.59	60	120	
In Internal Standard	115	3	HMI He	2337987	0.42	2356036	99.23	60	120	
Ir (IS)	193	3	HMI He	5050924	0.46	4999588	101.03	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	348LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:00:14-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.089	ppb	6.436	38	1	108.9	70	130	
Na	23	3	45	279.281	ppb	1.679	38287	300	93.1	70	130	
Mg	24	3	45	42.154	ppb	0.804	2112	50	84.3	70	130	
Al	27	3	45	42.915	ppb	4.862	828	50	85.8	70	130	
K	39	3	45	99.900	ppb	20.872	27297	120	83.2	70	130	
Ca	40	2	45	190.277	ppb	2.423	98640	200	95.1	70	130	
V	51	3	72	4.860	ppb	8.579	2966	5	97.2	70	130	
Cr	52	3	72	2.006	ppb	12.384	3302	2	100.3	70	130	
Mn	55	3	72	0.904	ppb	22.545	465	1	90.4	70	130	
Fe	56	2	72	48.534	ppb	6.278	94572	50	97.1	70	130	
Co	59	3	72	0.916	ppb	3.363	975	1	91.6	70	130	
Ni	60	3	72	1.740	ppb	12.001	913	2	87.0	70	130	
Cu	63	3	72	2.049	ppb	1.312	1828	2	102.5	70	130	
Zn	66	3	72	9.014	ppb	5.881	1253	10	90.1	70	130	
As	75	3	72	4.695	ppb	1.452	483	5	93.9	70	130	
Se	78	2	72	4.615	ppb	12.263	213	5	92.3	70	130	
Sr	88	3	72	4.552	ppb	1.011	1974	5	91.0	70	130	
Mo	95	3	115	1.831	ppb	7.624	763	2	91.6	70	130	
Ag	107	3	115	0.936	ppb	9.828	1296	1	93.6	70	130	
Cd	111	3	115	0.972	ppb	30.273	195	1	97.2	70	130	
Sn	120	3	115	8.236	ppb	1.497	5722	10	82.4	70	130	
Sb	121	3	115	1.877	ppb	7.779	1201	2	93.8	70	130	
Ba	137	3	115	0.778	ppb	13.728	198	1	77.8	70	130	
Tl	205	3	193	0.897	ppb	5.384	2891	1	89.7	70	130	
(Pb)	206	3	193	0.864	ppb	6.794	1085	1	86.4	70	130	
(Pb)	207	3	193	0.966	ppb	0.981	1168	1	96.6	70	130	
Pb	208	3	193	0.884	ppb	3.072	4590	1	88.4	70	130	
Th	232	3	193	1.356	ppb	25.078	12128	1	135.6	70	130	>+/-30%
U	238	3	193	0.942	ppb	6.537	5344	1	94.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3489651	1.02	3473788	100.46	60	120	
Sc (IS)	45	3	HMI He	508372	1.06	498630	101.95	60	120	
Ge Internal standard	72	2	HMI H2	2161929	1.79	2241871	96.43	60	120	
Ge Internal standard	72	3	HMI He	633715	0.13	647352	97.89	60	120	
In Internal Standard	115	3	HMI He	2385291	1.23	2356036	101.24	60	120	
Ir (IS)	193	3	HMI He	5141959	1.12	4999588	102.85	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-
Data File Name	349LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:02:03-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	28.720	ppb	14.485	16386	300	9.6	70	130	>+/-30%
Mg	24	3	45	1.496	ppb	41.687	207	50	3.0	70	130	>+/-30%
Al	27	3	45	1.834	ppb	209.543	113	50	3.7	70	130	>+/-30%
K	39	3	45	-12.738	ppb	-105.515	23139	120	-10.6	70	130	>+/-30%
Ca	40	2	45	13.993	ppb	2.332	16142	200	7.0	70	130	>+/-30%
V	51	3	72	-0.035	ppb	-309.222	610	5	-0.7	70	130	>+/-30%
Cr	52	3	72	0.005	ppb	5367.617	2121	2	0.2	70	130	>+/-30%
Mn	55	3	72	0.146	ppb	105.184	228	1	14.6	70	130	>+/-30%
Fe	56	2	72	3.243	ppb	67.449	36856	50	6.5	70	130	>+/-30%
Co	59	3	72	0.016	ppb	105.628	48	1	1.6	70	130	>+/-30%
Ni	60	3	72	0.202	ppb	56.442	476	2	10.1	70	130	>+/-30%
Cu	63	3	72	0.137	ppb	43.578	356	2	6.9	70	130	>+/-30%
Zn	66	3	72	1.028	ppb	40.659	260	10	10.3	70	130	>+/-30%
As	75	3	72	-0.138	ppb	-48.940	47	5	-2.8	70	130	>+/-30%
Se	78	2	72	0.031	ppb	167.029	3	5	0.6	70	130	>+/-30%
Sr	88	3	72	0.119	ppb	30.419	67	5	2.4	70	130	>+/-30%
Mo	95	3	115	0.017	ppb	92.746	33	2	0.9	70	130	>+/-30%
Ag	107	3	115	0.014	ppb	40.185	33	1	1.4	70	130	>+/-30%
Cd	111	3	115	0.009	ppb	172.167	3	1	0.9	70	130	>+/-30%
Sn	120	3	115	0.262	ppb	53.190	670	10	2.6	70	130	>+/-30%
Sb	121	3	115	0.040	ppb	69.908	52	2	2.0	70	130	>+/-30%
Ba	137	3	115	0.000	ppb	-66641.315	40	1	0.0	70	130	>+/-30%
Tl	205	3	193	0.009	ppb	80.691	133	1	0.9	70	130	>+/-30%
(Pb)	206	3	193	0.034	ppb	37.050	215	1	3.4	70	130	>+/-30%
(Pb)	207	3	193	0.062	ppb	84.894	350	1	6.2	70	130	>+/-30%
Pb	208	3	193	0.027	ppb	81.613	1001	1	2.7	70	130	>+/-30%
Th	232	3	193	3.115	ppb	3.124	19766	1	311.5	70	130	>+/-30%
U	238	3	193	0.022	ppb	131.233	1368	1	2.2	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3495425	1.73	3473788	100.62	60	120	
Sc (IS)	45	3	HMI He	510446	1.70	498630	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2156743	2.14	2241871	96.20	60	120	
Ge Internal standard	72	3	HMI He	641199	1.20	647352	99.05	60	120	
In Internal Standard	115	3	HMI He	2356977	1.88	2356036	100.04	60	120	
Ir (IS)	193	3	HMI He	5207217	2.29	4999588	104.15	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-1-A@10
Data File Name	350SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:03:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	15349.017	ppb	15349.017	1.14	1344754	400000	
Mg	24	3	45	2364.896	ppb	2364.896	1.10	109792	400000	
Al	27	3	45	4.816	ppb	4.816	50.76	163	400000	
K	39	3	45	545.655	ppb	545.655	5.30	43702	400000	
Ca	40	2	45	23163.276	ppb	23163.276	1.00	11053254	400000	
V	51	3	72	-0.030	ppb	-0.030	-368.25	615	2000	
Cr	52	3	72	-0.111	ppb	-0.111	-66.68	2056	5000	
Mn	55	3	72	23.910	ppb	23.910	2.56	7842	10000	
Fe	56	2	72	15.208	ppb	15.208	12.14	52753	10000	
Co	59	3	72	1.254	ppb	1.254	5.53	1343	2000	
Ni	60	3	72	1.369	ppb	1.369	36.34	818	5000	
Cu	63	3	72	0.083	ppb	0.083	38.45	315	5000	
Zn	66	3	72	5.822	ppb	5.822	3.66	868	5000	
As	75	3	72	-0.085	ppb	-0.085	-325.05	52	2000	
Se	78	2	72	7.363	ppb	7.363	2.34	342	2000	
Sr	88	3	72	470.202	ppb	470.202	1.18	205511	4000	
Mo	95	3	115	825.993	ppb	825.993	2.69	331876	2000	
Ag	107	3	115	0.013	ppb	0.013	12.66	33	100	
Cd	111	3	115	0.134	ppb	0.134	41.97	28	2000	
Sn	120	3	115	0.339	ppb	0.339	30.95	728	2000	
Sb	121	3	115	0.002	ppb	0.002	621.26	28	1000	
Ba	137	3	115	3.028	ppb	3.028	4.78	655	5000	
Tl	205	3	193	0.013	ppb	0.013	64.88	143	2000	
(Pb)	206	3	193	0.540	ppb	0.540	5.42	750	100	
(Pb)	207	3	193	0.495	ppb	0.495	6.22	745	100	
Pb	208	3	193	0.482	ppb	0.482	4.04	2924	5000	
Th	232	3	193	-0.245	ppb	-0.245	-13.73	5455	2000	
U	238	3	193	8.434	ppb	8.434	2.18	38181	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3553238	1.40	3473788	102.29	60	120	
Sc (IS)	45	3	HMI He	502853	1.66	498630	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2186889	1.62	2241871	97.55	60	120	
Ge Internal standard	72	3	HMI He	643394	0.99	647352	99.39	60	120	
In Internal Standard	115	3	HMI He	2386278	2.37	2356036	101.28	60	120	
Ir (IS)	193	3	HMI He	5179302	0.67	4999588	103.59	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A@50
Data File Name	351SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:05:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.445	ppb	1.445	19.65	52	2000	
Na	23	3	45	716.104	ppb	716.104	2.26	76552	400000	
Mg	24	3	45	4281.973	ppb	4281.973	1.68	200794	400000	
Al	27	3	45	4739.155	ppb	4739.155	2.32	82384	400000	
K	39	3	45	142.777	ppb	142.777	24.53	28909	400000	
Ca	40	2	45	8638.941	ppb	8638.941	3.34	4034775	400000	
V	51	3	72	1.156	ppb	1.156	7.87	1203	2000	
Cr	52	3	72	0.191	ppb	0.191	97.71	2254	5000	
Mn	55	3	72	252.311	ppb	252.311	0.92	81497	10000	
Fe	56	2	72	22.725	ppb	22.725	12.81	62798	10000	
Co	59	3	72	11.904	ppb	11.904	1.81	12551	2000	
Ni	60	3	72	11.465	ppb	11.465	4.11	3789	5000	
Cu	63	3	72	0.273	ppb	0.273	15.91	466	5000	
Zn	66	3	72	61.426	ppb	61.426	1.85	7953	5000	
As	75	3	72	-0.089	ppb	-0.089	-70.60	52	2000	
Se	78	2	72	0.455	ppb	0.455	48.97	23	2000	
Sr	88	3	72	64.787	ppb	64.787	0.44	28497	4000	
Mo	95	3	115	0.871	ppb	0.871	19.88	376	2000	
Ag	107	3	115	0.008	ppb	0.008	95.95	27	100	
Cd	111	3	115	0.203	ppb	0.203	26.25	42	2000	
Sn	120	3	115	0.303	ppb	0.303	26.09	700	2000	
Sb	121	3	115	0.016	ppb	0.016	65.94	37	1000	
Ba	137	3	115	0.330	ppb	0.330	23.22	107	5000	
Tl	205	3	193	0.043	ppb	0.043	29.59	235	2000	
(Pb)	206	3	193	0.729	ppb	0.729	17.32	938	100	
(Pb)	207	3	193	0.806	ppb	0.806	14.59	1018	100	
Pb	208	3	193	0.734	ppb	0.734	9.00	3943	5000	
Th	232	3	193	-0.360	ppb	-0.360	-10.09	4915	2000	
U	238	3	193	1.967	ppb	1.967	2.05	9761	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3475746	3.72	3473788	100.06	60	120	
Sc (IS)	45	3	HMI He	508185	0.75	498630	101.92	60	120	
Ge Internal standard	72	2	HMI H2	2201351	2.82	2241871	98.19	60	120	
Ge Internal standard	72	3	HMI He	647166	0.27	647352	99.97	60	120	
In Internal Standard	115	3	HMI He	2375625	2.86	2356036	100.83	60	120	
Ir (IS)	193	3	HMI He	5121991	1.29	4999588	102.45	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A@50
Data File Name	352SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:07:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.355	ppb	1.355	13.63	47	2000	
Na	23	3	45	1258.387	ppb	1258.387	1.00	125042	400000	
Mg	24	3	45	6238.150	ppb	6238.150	1.20	294728	400000	
Al	27	3	45	1833.126	ppb	1833.126	3.23	32169	400000	
K	39	3	45	277.651	ppb	277.651	18.03	34286	400000	
Ca	40	2	45	8941.626	ppb	8941.626	0.74	4270587	400000	
V	51	3	72	0.190	ppb	0.190	98.59	723	2000	
Cr	52	3	72	0.245	ppb	0.245	82.29	2276	5000	
Mn	55	3	72	327.321	ppb	327.321	1.56	105128	10000	
Fe	56	2	72	12.153	ppb	12.153	16.79	48423	10000	
Co	59	3	72	15.274	ppb	15.274	1.04	16013	2000	
Ni	60	3	72	13.830	ppb	13.830	0.90	4460	5000	
Cu	63	3	72	0.238	ppb	0.238	30.79	436	5000	
Zn	66	3	72	77.415	ppb	77.415	1.43	9939	5000	
As	75	3	72	-0.013	ppb	-0.013	-823.14	58	2000	
Se	78	2	72	0.349	ppb	0.349	24.22	17	2000	
Sr	88	3	72	85.979	ppb	85.979	1.68	37620	4000	
Mo	95	3	115	0.151	ppb	0.151	50.47	88	2000	
Ag	107	3	115	0.017	ppb	0.017	86.39	38	100	
Cd	111	3	115	0.201	ppb	0.201	32.86	42	2000	
Sn	120	3	115	0.137	ppb	0.137	76.99	603	2000	
Sb	121	3	115	-0.009	ppb	-0.009	-299.97	22	1000	
Ba	137	3	115	0.166	ppb	0.166	118.52	75	5000	
Tl	205	3	193	0.039	ppb	0.039	43.13	225	2000	
(Pb)	206	3	193	0.758	ppb	0.758	7.27	980	100	
(Pb)	207	3	193	0.768	ppb	0.768	8.03	995	100	
Pb	208	3	193	0.703	ppb	0.703	2.89	3857	5000	
Th	232	3	193	-0.469	ppb	-0.469	-8.50	4504	2000	
U	238	3	193	3.556	ppb	3.556	2.29	16813	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3551695	0.11	3473788	102.24	60	120	
Sc (IS)	45	3	HMI He	512085	0.79	498630	102.70	60	120	
Ge Internal standard	72	2	HMI H2	2167304	1.67	2241871	96.67	60	120	
Ge Internal standard	72	3	HMI He	643857	0.37	647352	99.46	60	120	
In Internal Standard	115	3	HMI He	2403088	1.32	2356036	102.00	60	120	
Ir (IS)	193	3	HMI He	5175721	1.67	4999588	103.52	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A@50
Data File Name	353SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:09:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.211	ppb	1.211	17.16	42	2000	
Na	23	3	45	742.395	ppb	742.395	2.93	79900	400000	
Mg	24	3	45	4399.171	ppb	4399.171	2.55	209019	400000	
Al	27	3	45	4826.085	ppb	4826.085	2.97	85006	400000	
K	39	3	45	131.474	ppb	131.474	24.45	28859	400000	
Ca	40	2	45	8849.345	ppb	8849.345	1.33	4268379	400000	
V	51	3	72	1.153	ppb	1.153	3.25	1216	2000	
Cr	52	3	72	-0.055	ppb	-0.055	-238.45	2129	5000	
Mn	55	3	72	259.575	ppb	259.575	1.37	84884	10000	
Fe	56	2	72	23.437	ppb	23.437	7.01	63847	10000	
Co	59	3	72	12.623	ppb	12.623	2.00	13473	2000	
Ni	60	3	72	11.923	ppb	11.923	3.66	3972	5000	
Cu	63	3	72	0.305	ppb	0.305	16.94	498	5000	
Zn	66	3	72	63.591	ppb	63.591	1.88	8332	5000	
As	75	3	72	-0.096	ppb	-0.096	-305.92	52	2000	
Se	78	2	72	0.444	ppb	0.444	34.95	22	2000	
Sr	88	3	72	67.078	ppb	67.078	0.51	29873	4000	
Mo	95	3	115	0.061	ppb	0.061	21.59	52	2000	
Ag	107	3	115	0.008	ppb	0.008	144.03	27	100	
Cd	111	3	115	0.158	ppb	0.158	14.87	33	2000	
Sn	120	3	115	0.278	ppb	0.278	24.09	691	2000	
Sb	121	3	115	0.031	ppb	0.031	86.37	47	1000	
Ba	137	3	115	0.382	ppb	0.382	16.63	118	5000	
Tl	205	3	193	0.024	ppb	0.024	37.07	178	2000	
(Pb)	206	3	193	0.799	ppb	0.799	9.07	1018	100	
(Pb)	207	3	193	0.768	ppb	0.768	6.00	990	100	
Pb	208	3	193	0.769	ppb	0.769	3.49	4110	5000	
Th	232	3	193	-0.454	ppb	-0.454	-11.88	4542	2000	
U	238	3	193	2.058	ppb	2.058	4.41	10211	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3587210	1.30	3473788	103.27	60	120	
Sc (IS)	45	3	HMI He	515033	1.98	498630	103.29	60	120	
Ge Internal standard	72	2	HMI H2	2203341	0.31	2241871	98.28	60	120	
Ge Internal standard	72	3	HMI He	655255	0.28	647352	101.22	60	120	
In Internal Standard	115	3	HMI He	2398268	3.00	2356036	101.79	60	120	
Ir (IS)	193	3	HMI He	5148208	0.65	4999588	102.97	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608911/1-A
Data File Name	354_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:11:15-06:00
Sample Type	Blank
Dilution	1
Comment	608911 6020a
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5
Na	23	3	45	40.437	ppb	20.64133431	16827	25
Mg	24	3	45	4.660	ppb	8.780518785	344	25
Al	27	3	45	2.420	ppb	107.4491378	120	15
K	39	3	45	13.323	ppb	236.5352786	23313	50
Ca	40	2	45	15.415	ppb	5.402050742	16583	200
V	51	3	72	0.087	ppb	162.9532908	648	1
Cr	52	3	72	0.929	ppb	49.4483936	2602	1
Mn	55	3	72	0.357	ppb	19.6560088	287	0.5
Fe	56	2	72	5.111	ppb	42.38813449	37515	50
Co	59	3	72	0.036	ppb	53.164863	67	0.5
Ni	60	3	72	0.013	ppb	916.5315212	408	1
Cu	63	3	72	0.062	ppb	91.53498698	288	1
Zn	66	3	72	1.104	ppb	45.02423846	262	5
As	75	3	72	-0.160	ppb	-52.34701567	43	1
(Se)	78	3	72	-2.841	ppb	-101.3383529	17	1
Sr	88	3	72	0.152	ppb	32.81966272	78	0.5
Mo	95	3	115	0.132	ppb	20.13916644	77	0.5
Ag	107	3	115	0.009	ppb	48.04210485	27	1
Cd	111	3	115	0.009	ppb	335.397613	3	0.5
Sn	120	3	115	0.098	ppb	61.72807631	551	1
Sb	121	3	115	0.015	ppb	56.54409414	35	0.6
Ba	137	3	115	0.057	ppb	163.0090434	50	0.5
Tl	205	3	193	0.016	ppb	26.79545598	150	0.1
(Pb)	206	3	193	-0.018	ppb	-213.2659241	155	1
(Pb)	207	3	193	0.019	ppb	129.0148589	303	1
Pb	208	3	193	0.006	ppb	186.8353461	890	0.5
Th	232	3	193	-0.507	ppb	-18.24446952	4249	1
U	238	3	193	0.039	ppb	29.47320768	1401	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3448693	1.08	3473788	99.28	60	120	
Sc (IS)	45	3	HMI He	493176	1.03	498630	98.91	60	120	
Ge Internal standard	72	2	HMI H2	2065363	2.16	2241871	92.13	60	120	
Ge Internal standard	72	3	HMI He	621277	1.01	647352	95.97	60	120	
In Internal Standard	115	3	HMI He	2291880	0.25	2356036	97.28	60	120	
Ir (IS)	193	3	HMI He	5068499	2.48	4999588	101.38	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608911/24-A
Data File Name	355_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:13:05-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608911 6020a
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.709	39.709	ppb	5.755	1403	40	99.3	80	120	
Na	23	3	45	797.819	797.819	ppb	0.778	83807	40	1994.5	80	120	>+/-20%
Mg	24	3	45	696.917	696.917	ppb	0.850	32831	40	1742.3	80	120	>+/-20%
Al	27	3	45	792.385	792.385	ppb	3.271	13857	40	1981.0	80	120	>+/-20%
K	39	3	45	766.059	766.059	ppb	4.038	52544	40	1915.1	80	120	>+/-20%
Ca	40	2	45	799.011	799.011	ppb	2.685	389519	40	1997.5	80	120	>+/-20%
V	51	3	72	40.713	40.713	ppb	0.216	20877	40	101.8	80	120	
Cr	52	3	72	39.838	39.838	ppb	1.178	26913	40	99.6	80	120	
Mn	55	3	72	40.580	40.580	ppb	0.865	13375	40	101.5	80	120	
Fe	56	2	72	800.600	800.600	ppb	3.143	1075400	40	2001.5	80	120	>+/-20%
(Fe)	56	3	72	775.934	775.934	ppb	0.714	419771	40	1939.8	80	120	>+/-20%
Co	59	3	72	39.175	39.175	ppb	1.131	41583	40	97.9	80	120	
Ni	60	3	72	38.711	38.711	ppb	2.859	11891	40	96.8	80	120	
Cu	63	3	72	41.621	41.621	ppb	0.165	33333	40	104.1	80	120	
Zn	66	3	72	42.273	42.273	ppb	1.178	5562	40	105.7	80	120	
As	75	3	72	39.189	39.189	ppb	1.400	3710	40	98.0	80	120	
Se	78	2	72	41.587	41.587	ppb	3.873	1946	40	104.0	80	120	
(Se)	78	3	72	30.771	30.771	ppb	25.989	207	40	76.9	80	120	>+/-20%
Sr	88	3	72	79.086	79.086	ppb	2.552	35079	40	197.7	80	120	>+/-20%
Mo	95	3	115	39.802	39.802	ppb	1.628	16083	40	99.5	80	120	
Ag	107	3	115	40.057	40.057	ppb	1.389	55033	40	100.1	80	120	
Cd	111	3	115	39.423	39.423	ppb	0.828	7847	40	98.6	80	120	
Sn	120	3	115	36.533	36.533	ppb	4.429	23704	40	91.3	80	120	
Sb	121	3	115	39.446	39.446	ppb	2.124	24791	40	98.6	80	120	
Ba	137	3	115	40.498	40.498	ppb	2.689	8277	40	101.2	80	120	
Tl	205	3	193	39.826	39.826	ppb	2.520	124222	40	99.6	80	120	
(Pb)	206	3	193	39.646	39.646	ppb	2.938	41942	40	99.1	80	120	
(Pb)	207	3	193	39.673	39.673	ppb	2.632	36424	40	99.2	80	120	
Pb	208	3	193	39.908	39.908	ppb	3.025	168898	40	99.8	80	120	
Th	232	3	193	36.367	36.367	ppb	1.083	159516	40	90.9	80	120	
U	238	3	193	39.943	39.943	ppb	3.189	175233	40	99.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3544446	2.41	3473788	102.03	60	120	
Sc (IS)	45	3	HMI He	508708	0.43	498630	102.02	60	120	
Ge Internal standard	72	2	HMI H2	2209734	1.80	2241871	98.57	60	120	
Ge Internal standard	72	3	HMI He	652696	0.35	647352	100.83	60	120	
In Internal Standard	115	3	HMI He	2394637	1.70	2356036	101.64	60	120	
Ir (IS)	193	3	HMI He	5154912	1.93	4999588	103.11	60	120	

Sample Report

Sample Table

Sample Name	280-174977-C-12-A
Data File Name	356SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:15:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.048	ppb	0.048	173.21	2	2000	
Na	23	3	45	559.330	ppb	559.330	2.31	63197	400000	
Mg	24	3	45	85.372	ppb	85.372	2.87	4161	400000	
Al	27	3	45	488.591	ppb	488.591	4.29	8618	400000	
K	39	3	45	135.575	ppb	135.575	27.89	28809	400000	
Ca	40	2	45	244.189	ppb	244.189	0.30	125506	400000	
V	51	3	72	0.810	ppb	0.810	12.83	1038	2000	
Cr	52	3	72	1.595	ppb	1.595	9.64	3137	5000	
Mn	55	3	72	8.349	ppb	8.349	7.28	2891	10000	
Fe	56	2	72	440.606	ppb	440.606	2.37	602436	10000	
Co	59	3	72	0.139	ppb	0.139	14.52	178	2000	
Ni	60	3	72	0.556	ppb	0.556	31.40	588	5000	
Cu	63	3	72	0.467	ppb	0.467	7.29	623	5000	
Zn	66	3	72	3.171	ppb	3.171	11.00	538	5000	
As	75	3	72	-0.163	ppb	-0.163	-1.77	45	2000	
Se	78	2	72	0.058	ppb	0.058	73.63	4	2000	
Sr	88	3	72	1.156	ppb	1.156	13.67	526	4000	
Mo	95	3	115	8.681	ppb	8.681	3.44	3564	2000	
Ag	107	3	115	0.008	ppb	0.008	94.04	27	100	
Cd	111	3	115	0.025	ppb	0.025	59.31	7	2000	
Sn	120	3	115	0.313	ppb	0.313	31.80	720	2000	
Sb	121	3	115	0.149	ppb	0.149	26.25	122	1000	
Ba	137	3	115	3.143	ppb	3.143	12.46	686	5000	
Tl	205	3	193	0.018	ppb	0.018	58.69	160	2000	
(Pb)	206	3	193	0.216	ppb	0.216	20.01	405	100	
(Pb)	207	3	193	0.263	ppb	0.263	21.42	530	100	
Pb	208	3	193	0.234	ppb	0.234	11.93	1862	5000	
Th	232	3	193	0.984	ppb	0.984	18.24	10601	2000	
U	238	3	193	0.035	ppb	0.035	17.42	1411	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3535102	0.32	3473788	101.77	60	120	
Sc (IS)	45	3	HMI He	511291	0.94	498630	102.54	60	120	
Ge Internal standard	72	2	HMI H2	2193188	1.61	2241871	97.83	60	120	
Ge Internal standard	72	3	HMI He	650777	0.59	647352	100.53	60	120	
In Internal Standard	115	3	HMI He	2418954	1.19	2356036	102.67	60	120	
Ir (IS)	193	3	HMI He	5157287	1.32	4999588	103.15	60	120	

Sample Report

Sample Table

Sample Name	174894-2
Data File Name	357SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:16:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	62948.894	ppb	62948.894	1.02	6633286	400000	
Mg	24	3	45	13563.478	ppb	13563.478	0.88	762533	400000	
Al	27	3	45	4.666	ppb	4.666	134.38	197	400000	
K	39	3	45	1608.507	ppb	1608.507	0.64	101184	400000	
Ca	40	2	45	34551.559	ppb	34551.559	1.96	19942962	400000	
V	51	3	72	-0.857	ppb	-0.857	-4.40	250	2000	
Cr	52	3	72	-0.665	ppb	-0.665	-19.71	2051	5000	
Mn	55	3	72	511.045	ppb	511.045	3.16	195808	10000	
Fe	56	2	72	-8.440	ppb	-8.440	-18.37	27187	10000	
Co	59	3	72	0.155	ppb	0.155	14.33	232	2000	
Ni	60	3	72	0.342	ppb	0.342	19.17	620	5000	
Cu	63	3	72	0.124	ppb	0.124	35.44	415	5000	
Zn	66	3	72	0.630	ppb	0.630	28.24	252	5000	
As	75	3	72	16.061	ppb	16.061	2.24	1833	2000	
Se	78	2	72	0.019	ppb	0.019	217.92	3	2000	
Sr	88	3	72	263.447	ppb	263.447	0.81	137578	4000	
Mo	95	3	115	4.968	ppb	4.968	9.47	2461	2000	
Ag	107	3	115	0.008	ppb	0.008	209.63	32	100	
Cd	111	3	115	-0.002	ppb	-0.002	-752.67	2	2000	
Sn	120	3	115	-0.628	ppb	-0.628	-4.49	140	2000	
Sb	121	3	115	0.016	ppb	0.016	154.27	45	1000	
Ba	137	3	115	334.947	ppb	334.947	1.78	82651	5000	
Tl	205	3	193	0.008	ppb	0.008	39.39	152	2000	
(Pb)	206	3	193	-0.014	ppb	-0.014	-176.38	192	100	
(Pb)	207	3	193	0.014	ppb	0.014	177.34	358	100	
Pb	208	3	193	-0.020	ppb	-0.020	-73.68	938	5000	
Th	232	3	193	-0.630	ppb	-0.630	-9.03	4487	2000	
U	238	3	193	0.026	ppb	0.026	10.07	1614	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4300040	1.20	3473788	123.79	60	120	IS Failed
Sc (IS)	45	3	HMI He	609537	1.74	498630	122.24	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2664767	0.84	2241871	118.86	60	120	
Ge Internal standard	72	3	HMI He	768667	0.71	647352	118.74	60	120	
In Internal Standard	115	3	HMI He	2903289	1.57	2356036	123.23	60	120	IS Failed
Ir (IS)	193	3	HMI He	6076046	1.55	4999588	121.53	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	358_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:18:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
Na	23	3	45	-63.184	ppb	-8.625	14689	51000	-0.1	90	110	>+\-10%
Mg	24	3	45	-0.131	ppb	-740.638	230	11000	0.0	90	110	>+\-10%
Al	27	3	45	-2.433	ppb	-26.198	70	1000	-0.2	90	110	>+\-10%
K	39	3	45	-305.327	ppb	-6.449	21271	11000	-2.8	90	110	>+\-10%
Ca	40	2	45	-8.144	ppb	-6.370	9686	11000	-0.1	90	110	>+\-10%
V	51	3	72	-1.072	ppb	-2.015	183	50	-2.1	90	110	>+\-10%
Cr	52	3	72	-2.785	ppb	-3.286	740	50	-5.6	90	110	>+\-10%
Mn	55	3	72	-0.388	ppb	-10.498	103	50	-0.8	90	110	>+\-10%
Fe	56	2	72	-20.192	ppb	-1.960	11620	1000	-2.0	90	110	>+\-10%
Co	59	3	72	-0.018	ppb	-46.918	22	50	0.0	90	110	>+\-10%
Ni	60	3	72	-1.243	ppb	-2.228	98	50	-2.5	90	110	>+\-10%
Cu	63	3	72	-0.130	ppb	-25.108	262	50	-0.3	90	110	>+\-10%
Zn	66	3	72	-0.489	ppb	-13.643	122	50	-1.0	90	110	>+\-10%
As	75	3	72	-0.501	ppb	-22.789	23	50	-1.0	90	110	>+\-10%
Se	78	2	72	-0.001	ppb	-1817.518	2	50	0.0	90	110	>+\-10%
Sr	88	3	72	0.001	ppb	2250.974	27	100	0.0	90	110	>+\-10%
Mo	95	3	115	-0.045	ppb	-27.002	15	50	-0.1	90	110	>+\-10%
Ag	107	3	115	-0.001	ppb	-448.581	23	50	0.0	90	110	>+\-10%
Cd	111	3	115	-0.008	ppb	0.000	0	50	0.0	90	110	>+\-10%
Sn	120	3	115	-0.638	ppb	-1.841	188	50	-1.3	90	110	>+\-10%
Sb	121	3	115	-0.019	ppb	-51.889	27	50	0.0	90	110	>+\-10%
Ba	137	3	115	-0.100	ppb	-28.062	35	50	-0.2	90	110	>+\-10%
Tl	205	3	193	-0.009	ppb	-16.003	130	50	0.0	90	110	>+\-10%
(Pb)	206	3	193	-0.064	ppb	-9.276	192	50	-0.1	90	110	>+\-10%
(Pb)	207	3	193	-0.050	ppb	-62.433	428	50	-0.1	90	110	>+\-10%
Pb	208	3	193	-0.069	ppb	-10.295	1023	50	-0.1	90	110	>+\-10%
Th	232	3	193	-0.637	ppb	-5.679	6592	50	-1.3	90	110	>+\-10%
U	238	3	193	0.032	ppb	63.314	2434	50	0.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	5875479	1.13	3473788	169.14	60	120	IS Failed
Sc (IS)	45	3	HMI He	905025	3.95	498630	181.50	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3552600	3.34	2241871	158.47	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1139526	4.43	647352	176.03	60	120	IS Failed
In Internal Standard	115	3	HMI He	4133853	1.63	2356036	175.46	60	120	IS Failed
Ir (IS)	193	3	HMI He	8994679	2.28	4999588	179.91	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	359_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:20:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.047	ppb	173.2	2	0.5	
Na	23	3	45	66.102	ppb	7.1	18985	25	>RL
Mg	24	3	45	9.300	ppb	14.6	554	25	
Al	27	3	45	-1.337	ppb	-113.1	57	15	
K	39	3	45	8.330	ppb	200.0	23092	50	
V	51	3	72	0.182	ppb	74.7	701	1	
Cr	52	3	72	0.422	ppb	28.8	2326	1	
Mn	55	3	72	0.645	ppb	29.3	380	0.5	>RL
Co	59	3	72	0.022	ppb	63.6	53	0.5	
Ni	60	3	72	0.290	ppb	128.9	491	1	
Cu	63	3	72	-0.032	ppb	-109.5	220	1	
Zn	66	3	72	0.100	ppb	288.3	140	5	
As	75	3	72	-0.108	ppb	-109.7	48	1	
Se	78	2	72	0.001	ppb	4883.5	1	1	
Sr	88	3	72	0.219	ppb	38.0	108	0.5	
Mo	95	3	115	0.067	ppb	27.4	53	0.5	
Ag	107	3	115	-0.006	ppb	-34.3	7	1	
Cd	111	3	115	0.000	ppb	102379.6	2	0.5	
Sn	120	3	115	0.140	ppb	59.8	595	1	
Sb	121	3	115	0.019	ppb	68.0	38	0.6	
Ba	137	3	115	0.232	ppb	33.3	87	0.5	
Tl	205	3	193	0.013	ppb	44.2	137	0.1	
(Pb)	206	3	193	0.008	ppb	452.0	178	1	
(Pb)	207	3	193	0.067	ppb	91.3	338	1	
Pb	208	3	193	0.010	ppb	190.9	886	0.5	
Th	232	3	193	0.287	ppb	63.9	7357	1	
U	238	3	193	0.036	ppb	64.9	1356	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3441292	2.36	3473788	99.06	60	120	
Sc (IS)	45	3	HMI He	492503	0.49	498630	98.77	60	120	
Ge Internal standard	72	2	HMI H2	2146543	1.72	2241871	95.75	60	120	
Ge Internal standard	72	3	HMI He	628060	0.58	647352	97.02	60	120	
In Internal Standard	115	3	HMI He	2363188	0.80	2356036	100.30	60	120	
Ir (IS)	193	3	HMI He	4951375	2.17	4999588	99.04	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	360_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:23:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	46.261	ppb	8.273	1636	50	92.5	90	110	
Na	23	3	45	49524.871	ppb	1.663	4287731	51000	97.1	90	110	
Mg	24	3	45	10510.389	ppb	0.900	485168	11000	95.5	90	110	
Al	27	3	45	1035.059	ppb	3.692	17782	1000	103.5	90	110	
K	39	3	45	10677.234	ppb	1.975	420883	11000	97.1	90	110	
Ca	40	2	45	10311.240	ppb	5.485	4806207	11000	93.7	90	110	
V	51	3	72	53.459	ppb	0.951	25920	50	106.9	90	110	
Cr	52	3	72	53.471	ppb	1.577	33701	50	106.9	90	110	
Mn	55	3	72	53.834	ppb	1.281	16842	50	107.7	90	110	
Fe	56	2	72	1071.515	ppb	4.096	1358426	1000	107.2	90	110	
Co	59	3	72	52.421	ppb	1.242	52986	50	104.8	90	110	
Ni	60	3	72	53.654	ppb	0.960	15541	50	107.3	90	110	
Cu	63	3	72	53.714	ppb	1.662	40900	50	107.4	90	110	
Zn	66	3	72	56.395	ppb	1.826	7025	50	112.8	90	110	>+\-10%
As	75	3	72	53.332	ppb	2.908	4788	50	106.7	90	110	
Se	78	2	72	55.964	ppb	4.036	2489	50	111.9	90	110	>+\-10%
Sr	88	3	72	107.479	ppb	1.888	45401	100	107.5	90	110	
Mo	95	3	115	52.612	ppb	2.033	20444	50	105.2	90	110	
Ag	107	3	115	52.762	ppb	1.880	69752	50	105.5	90	110	
Cd	111	3	115	52.244	ppb	0.574	10007	50	104.5	90	110	
Sn	120	3	115	51.217	ppb	1.591	31794	50	102.4	90	110	
Sb	121	3	115	51.864	ppb	3.720	31353	50	103.7	90	110	
Ba	137	3	115	53.316	ppb	2.718	10474	50	106.6	90	110	
Tl	205	3	193	51.263	ppb	1.974	157223	50	102.5	90	110	
(Pb)	206	3	193	50.856	ppb	1.979	52860	50	101.7	90	110	
(Pb)	207	3	193	52.141	ppb	0.727	47000	50	104.3	90	110	
Pb	208	3	193	50.957	ppb	1.677	211876	50	101.9	90	110	
Th	232	3	193	50.537	ppb	2.694	215465	50	101.1	90	110	
U	238	3	193	51.124	ppb	0.937	220289	50	102.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3473182	4.66	3473788	99.98	60	120	
Sc (IS)	45	3	HMI He	500408	0.14	498630	100.36	60	120	
Ge Internal standard	72	2	HMI H2	2102404	2.20	2241871	93.78	60	120	
Ge Internal standard	72	3	HMI He	621657	0.59	647352	96.03	60	120	
In Internal Standard	115	3	HMI He	2304539	1.60	2356036	97.81	60	120	
Ir (IS)	193	3	HMI He	5069760	2.66	4999588	101.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	361_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:25:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	28.091	ppb	27.1	16102	25	>RL
Mg	24	3	45	2.422	ppb	28.5	247	25	
Al	27	3	45	0.138	ppb	882.9	83	15	
K	39	3	45	0.008	ppb	521420.4	23286	50	
V	51	3	72	-0.024	ppb	-419.4	615	1	
Cr	52	3	72	0.186	ppb	80.7	2229	1	
Mn	55	3	72	0.178	ppb	31.7	238	0.5	
Co	59	3	72	0.015	ppb	134.4	47	0.5	
Ni	60	3	72	0.646	ppb	19.2	605	1	
Cu	63	3	72	0.053	ppb	108.4	290	1	
Zn	66	3	72	0.195	ppb	120.4	155	5	
As	75	3	72	-0.320	ppb	-45.5	30	1	
Se	78	2	72	0.104	ppb	72.7	6	1	
Sr	88	3	72	0.035	ppb	87.0	30	0.5	
Mo	95	3	115	0.126	ppb	38.4	78	0.5	
Ag	107	3	115	0.002	ppb	192.8	18	1	
Cd	111	3	115	0.008	ppb	354.0	3	0.5	
Sn	120	3	115	0.312	ppb	40.0	715	1	
Sb	121	3	115	0.039	ppb	48.1	52	0.6	
Ba	137	3	115	0.037	ppb	203.9	48	0.5	
Tl	205	3	193	0.034	ppb	23.6	212	0.1	
(Pb)	206	3	193	0.009	ppb	130.2	190	1	
(Pb)	207	3	193	0.009	ppb	636.6	303	1	
Pb	208	3	193	-0.014	ppb	-122.6	833	0.5	
Th	232	3	193	1.172	ppb	16.6	11566	1	>RL
U	238	3	193	0.027	ppb	39.0	1393	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3514954	2.47	3473788	101.19	60	120	
Sc (IS)	45	3	HMI He	503353	0.63	498630	100.95	60	120	
Ge Internal standard	72	2	HMI H2	2143158	0.60	2241871	95.60	60	120	
Ge Internal standard	72	3	HMI He	640786	0.58	647352	98.99	60	120	
In Internal Standard	115	3	HMI He	2404117	0.72	2356036	102.04	60	120	
Ir (IS)	193	3	HMI He	5233634	0.08	4999588	104.68	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	362LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:27:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.735	ppb	56.252	27	1	73.5	70	130	
Na	23	3	45	291.626	ppb	2.905	39364	300	97.2	70	130	
Mg	24	3	45	44.492	ppb	6.813	2222	50	89.0	70	130	
Al	27	3	45	43.316	ppb	7.559	834	50	86.6	70	130	
K	39	3	45	113.419	ppb	34.459	27819	120	94.5	70	130	
Ca	40	2	45	183.551	ppb	2.262	97575	200	91.8	70	130	
V	51	3	72	5.139	ppb	5.836	3150	5	102.8	70	130	
Cr	52	3	72	2.140	ppb	11.549	3437	2	107.0	70	130	
Mn	55	3	72	0.916	ppb	18.722	476	1	91.6	70	130	
Fe	56	2	72	49.969	ppb	8.831	97666	50	99.9	70	130	
Co	59	3	72	0.958	ppb	6.101	1033	1	95.8	70	130	
Ni	60	3	72	1.979	ppb	19.354	996	2	99.0	70	130	
Cu	63	3	72	1.936	ppb	4.789	1768	2	96.8	70	130	
Zn	66	3	72	10.445	ppb	6.368	1454	10	104.4	70	130	
As	75	3	72	4.903	ppb	11.294	510	5	98.1	70	130	
Se	78	2	72	4.302	ppb	4.850	201	5	86.0	70	130	
Sr	88	3	72	4.594	ppb	3.028	2024	5	91.9	70	130	
Mo	95	3	115	1.695	ppb	1.970	715	2	84.8	70	130	
Ag	107	3	115	0.971	ppb	6.711	1356	1	97.1	70	130	
Cd	111	3	115	0.791	ppb	12.531	160	1	79.1	70	130	
Sn	120	3	115	8.880	ppb	4.821	6187	10	88.8	70	130	
Sb	121	3	115	1.898	ppb	6.352	1226	2	94.9	70	130	
Ba	137	3	115	1.061	ppb	22.114	258	1	106.1	70	130	
Tl	205	3	193	0.914	ppb	4.862	2932	1	91.4	70	130	
(Pb)	206	3	193	0.893	ppb	11.712	1110	1	89.3	70	130	
(Pb)	207	3	193	0.868	ppb	10.258	1075	1	86.8	70	130	
Pb	208	3	193	0.909	ppb	3.273	4673	1	90.9	70	130	
Th	232	3	193	1.173	ppb	16.852	11321	1	117.3	70	130	
U	238	3	193	0.983	ppb	1.229	5500	1	98.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3565931	1.54	3473788	102.65	60	120	
Sc (IS)	45	3	HMI He	508281	1.10	498630	101.94	60	120	
Ge Internal standard	72	2	HMI H2	2190963	1.89	2241871	97.73	60	120	
Ge Internal standard	72	3	HMI He	643918	1.81	647352	99.47	60	120	
In Internal Standard	115	3	HMI He	2408073	0.78	2356036	102.21	60	120	
Ir (IS)	193	3	HMI He	5118118	0.88	4999588	102.37	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A
Data File Name	363SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:29:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	60.581	ppb	60.581	6.11	2037	2000	
Na	23	3	45	35840.265	ppb	35840.265	2.12	3123381	400000	
Mg	24	3	45	212863.531	ppb	212863.531	1.01	9876113	400000	
Al	27	3	45	239670.632	ppb	239670.632	1.02	4121102	400000	
K	39	3	45	6901.004	ppb	6901.004	1.43	281731	400000	
Ca	40	2	45	424239.762	ppb	424239.762	2.16	194494464	400000	
V	51	3	72	59.108	ppb	59.108	2.27	28747	2000	
Cr	52	3	72	6.899	ppb	6.899	4.42	6170	5000	
Mn	55	3	72	12685.926	ppb	12685.926	1.47	3949278	10000	
Fe	56	2	72	813.299	ppb	813.299	2.40	1039931	10000	
Co	59	3	72	612.104	ppb	612.104	1.55	621764	2000	
Ni	60	3	72	564.723	ppb	564.723	1.33	160596	5000	
Cu	63	3	72	7.342	ppb	7.342	5.98	5828	5000	
Zn	66	3	72	2864.956	ppb	2864.956	1.63	352465	5000	
As	75	3	72	3.595	ppb	3.595	13.41	378	2000	
Se	78	2	72	14.366	ppb	14.366	7.92	641	2000	
Sr	88	3	72	3485.993	ppb	3485.993	2.58	1480189	4000	
Mo	95	3	115	0.162	ppb	0.162	35.29	90	2000	
Ag	107	3	115	0.024	ppb	0.024	32.01	47	100	
Cd	111	3	115	8.440	ppb	8.440	0.98	1643	2000	
Sn	120	3	115	0.251	ppb	0.251	31.97	658	2000	
Sb	121	3	115	0.052	ppb	0.052	56.20	58	1000	
Ba	137	3	115	10.428	ppb	10.428	2.47	2112	5000	
Tl	205	3	193	0.719	ppb	0.719	4.93	2261	2000	
(Pb)	206	3	193	10.411	ppb	10.411	3.17	10736	100	
(Pb)	207	3	193	9.608	ppb	9.608	0.93	8714	100	
Pb	208	3	193	9.842	ppb	9.842	2.47	40770	5000	
Th	232	3	193	2.471	ppb	2.471	2.35	16246	2000	
U	238	3	193	102.308	ppb	102.308	1.70	430618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3418181	2.68	3473788	98.40	60	120	
Sc (IS)	45	3	HMI He	503103	0.22	498630	100.90	60	120	
Ge Internal standard	72	2	HMI H2	2104222	1.70	2241871	93.86	60	120	
Ge Internal standard	72	3	HMI He	625147	1.87	647352	96.57	60	120	
In Internal Standard	115	3	HMI He	2339653	0.73	2356036	99.30	60	120	
Ir (IS)	193	3	HMI He	4966703	2.34	4999588	99.34	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A
Data File Name	364SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:31:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	73.276	ppb	73.276	1.34	2422	2000	
Na	23	3	45	62093.367	ppb	62093.367	1.41	5377585	400000	
Mg	24	3	45	306187.371	ppb	306187.371	1.76	14143200	400000	
Al	27	3	45	91226.880	ppb	91226.880	2.76	1561643	400000	
K	39	3	45	14917.053	ppb	14917.053	2.19	579343	400000	
Ca	40	2	45	441552.111	ppb	441552.111	0.70	202504125	400000	
V	51	3	72	4.300	ppb	4.300	3.60	2697	2000	
Cr	52	3	72	3.024	ppb	3.024	6.03	3920	5000	
Mn	55	3	72	16023.426	ppb	16023.426	0.92	5061298	10000	
Fe	56	2	72	279.809	ppb	279.809	0.54	377439	10000	
Co	59	3	72	743.454	ppb	743.454	0.03	766373	2000	
Ni	60	3	72	624.357	ppb	624.357	0.36	180138	5000	
Cu	63	3	72	5.203	ppb	5.203	2.42	4265	5000	
Zn	66	3	72	3518.706	ppb	3518.706	0.34	439287	5000	
As	75	3	72	2.777	ppb	2.777	19.61	310	2000	
Se	78	2	72	18.727	ppb	18.727	6.12	832	2000	
Sr	88	3	72	4367.568	ppb	4367.568	3.12	1882131	4000	
Mo	95	3	115	0.090	ppb	0.090	10.17	62	2000	
Ag	107	3	115	0.019	ppb	0.019	19.76	40	100	
Cd	111	3	115	10.743	ppb	10.743	4.39	2084	2000	
Sn	120	3	115	-0.026	ppb	-0.026	-418.25	485	2000	
Sb	121	3	115	0.063	ppb	0.063	37.47	65	1000	
Ba	137	3	115	8.697	ppb	8.697	2.35	1763	5000	
Tl	205	3	193	1.987	ppb	1.987	2.36	6165	2000	
(Pb)	206	3	193	10.489	ppb	10.489	3.15	10994	100	
(Pb)	207	3	193	9.425	ppb	9.425	2.02	8692	100	
Pb	208	3	193	9.838	ppb	9.838	2.51	41431	5000	
Th	232	3	193	0.297	ppb	0.297	9.60	7550	2000	
U	238	3	193	178.748	ppb	178.748	0.36	763922	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3418263	1.18	3473788	98.40	60	120	
Sc (IS)	45	3	HMI He	500941	1.13	498630	100.46	60	120	
Ge Internal standard	72	2	HMI H2	2096795	1.22	2241871	93.53	60	120	
Ge Internal standard	72	3	HMI He	634296	0.48	647352	97.98	60	120	
In Internal Standard	115	3	HMI He	2332431	1.12	2356036	99.00	60	120	
Ir (IS)	193	3	HMI He	5047763	0.79	4999588	100.96	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-3-A
Data File Name	365SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:32:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.047	ppb	0.047	173.21	2	2000	
Na	23	3	45	2063.597	ppb	2063.597	2.02	197694	400000	
Mg	24	3	45	7142.523	ppb	7142.523	0.80	340122	400000	
Al	27	3	45	1104.902	ppb	1104.902	3.83	19577	400000	
K	39	3	45	20614.237	ppb	20614.237	0.87	815926	400000	
Ca	40	2	45	42922.982	ppb	42922.982	1.91	20641832	400000	
V	51	3	72	3.410	ppb	3.410	11.09	2349	2000	
Cr	52	3	72	1.196	ppb	1.196	28.01	2917	5000	
Mn	55	3	72	26.936	ppb	26.936	3.24	8998	10000	
Fe	56	2	72	783.898	ppb	783.898	1.42	1073723	10000	
Co	59	3	72	0.979	ppb	0.979	6.63	1078	2000	
Ni	60	3	72	1.600	ppb	1.600	13.91	905	5000	
Cu	63	3	72	5.112	ppb	5.112	0.77	4345	5000	
Zn	66	3	72	5.024	ppb	5.024	11.65	783	5000	
As	75	3	72	1.129	ppb	1.129	28.37	167	2000	
Se	78	2	72	0.503	ppb	0.503	30.90	25	2000	
Sr	88	3	72	284.589	ppb	284.589	1.38	127030	4000	
Mo	95	3	115	2.512	ppb	2.512	2.06	1048	2000	
Ag	107	3	115	0.015	ppb	0.015	49.29	37	100	
Cd	111	3	115	0.025	ppb	0.025	115.99	7	2000	
Sn	120	3	115	-0.012	ppb	-0.012	-381.48	510	2000	
Sb	121	3	115	0.349	ppb	0.349	12.05	248	1000	
Ba	137	3	115	66.333	ppb	66.333	3.58	13630	5000	
Tl	205	3	193	0.038	ppb	0.038	22.79	225	2000	
(Pb)	206	3	193	0.977	ppb	0.977	6.08	1233	100	
(Pb)	207	3	193	1.027	ppb	1.027	5.31	1253	100	
Pb	208	3	193	0.984	ppb	0.984	5.87	5131	5000	
Th	232	3	193	0.024	ppb	0.024	88.62	6704	2000	
U	238	3	193	4.474	ppb	4.474	1.24	21202	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3582855	0.40	3473788	103.14	60	120	
Sc (IS)	45	3	HMI He	516188	1.29	498630	103.52	60	120	
Ge Internal standard	72	2	HMI H2	2250849	1.04	2241871	100.40	60	120	
Ge Internal standard	72	3	HMI He	657005	0.15	647352	101.49	60	120	
In Internal Standard	115	3	HMI He	2412251	1.39	2356036	102.39	60	120	
Ir (IS)	193	3	HMI He	5267286	0.51	4999588	105.35	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A
Data File Name	366SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:34:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	59.376	ppb	59.376	5.51	2056	2000	
Na	23	3	45	35708.041	ppb	35708.041	3.09	3201498	400000	
Mg	24	3	45	209813.921	ppb	209813.921	0.95	10015900	400000	
Al	27	3	45	230532.171	ppb	230532.171	2.12	4078719	400000	
K	39	3	45	6698.976	ppb	6698.976	2.17	282068	400000	
Ca	40	2	45	412764.710	ppb	412764.710	0.32	197451903	400000	
V	51	3	72	58.530	ppb	58.530	0.85	29497	2000	
Cr	52	3	72	6.527	ppb	6.527	4.46	6162	5000	
Mn	55	3	72	12531.776	ppb	12531.776	2.22	4040779	10000	
Fe	56	2	72	761.786	ppb	761.786	2.94	1023517	10000	
Co	59	3	72	601.626	ppb	601.626	0.98	633050	2000	
Ni	60	3	72	558.455	ppb	558.455	0.90	164511	5000	
Cu	63	3	72	7.219	ppb	7.219	1.42	5943	5000	
Zn	66	3	72	2855.269	ppb	2855.269	0.20	363886	5000	
As	75	3	72	3.842	ppb	3.842	9.86	415	2000	
Se	78	2	72	14.522	ppb	14.522	3.37	679	2000	
Sr	88	3	72	3447.605	ppb	3447.605	1.03	1516412	4000	
Mo	95	3	115	0.089	ppb	0.089	48.17	63	2000	
Ag	107	3	115	0.006	ppb	0.006	41.93	23	100	
Cd	111	3	115	8.115	ppb	8.115	7.27	1624	2000	
Sn	120	3	115	-0.029	ppb	-0.029	-300.72	498	2000	
Sb	121	3	115	0.065	ppb	0.065	16.53	68	1000	
Ba	137	3	115	10.981	ppb	10.981	1.06	2287	5000	
Tl	205	3	193	0.722	ppb	0.722	3.90	2351	2000	
(Pb)	206	3	193	10.044	ppb	10.044	3.05	10744	100	
(Pb)	207	3	193	9.491	ppb	9.491	2.84	8925	100	
Pb	208	3	193	9.693	ppb	9.693	0.47	41639	5000	
Th	232	3	193	1.984	ppb	1.984	2.67	14786	2000	
U	238	3	193	100.626	ppb	100.626	0.42	439082	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3565435	2.16	3473788	102.64	60	120	
Sc (IS)	45	3	HMI He	517666	0.96	498630	103.82	60	120	
Ge Internal standard	72	2	HMI H2	2206977	2.44	2241871	98.44	60	120	
Ge Internal standard	72	3	HMI He	647471	0.51	647352	100.02	60	120	
In Internal Standard	115	3	HMI He	2408459	2.31	2356036	102.23	60	120	
Ir (IS)	193	3	HMI He	5147276	0.70	4999588	102.95	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	367SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:36:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	19267.134	ppb	19267.134	1.72	1690099	400000	
Mg	24	3	45	12942.004	ppb	12942.004	2.84	602164	400000	
Al	27	3	45	29.271	ppb	29.271	30.20	584	400000	
K	39	3	45	7408.323	ppb	7408.323	2.03	301574	400000	
Ca	40	2	45	50349.201	ppb	50349.201	1.35	23860298	400000	
V	51	3	72	23.841	ppb	23.841	2.95	12373	2000	
Cr	52	3	72	1.595	ppb	1.595	21.10	3115	5000	
Mn	55	3	72	5.948	ppb	5.948	8.52	2097	10000	
Fe	56	2	72	8.448	ppb	8.448	21.54	44419	10000	
Co	59	3	72	0.167	ppb	0.167	9.14	207	2000	
Ni	60	3	72	0.582	ppb	0.582	17.24	591	5000	
Cu	63	3	72	0.512	ppb	0.512	19.41	655	5000	
Zn	66	3	72	2.661	ppb	2.661	9.01	470	5000	
As	75	3	72	13.469	ppb	13.469	5.74	1303	2000	
Se	78	2	72	4.035	ppb	4.035	14.43	189	2000	
Sr	88	3	72	264.582	ppb	264.582	1.59	116218	4000	
Mo	95	3	115	9.930	ppb	9.930	3.45	4024	2000	
Ag	107	3	115	0.002	ppb	0.002	453.02	18	100	
Cd	111	3	115	0.026	ppb	0.026	152.96	7	2000	
Sn	120	3	115	-0.121	ppb	-0.121	-60.53	436	2000	
Sb	121	3	115	0.281	ppb	0.281	12.37	203	1000	
Ba	137	3	115	43.073	ppb	43.073	3.71	8782	5000	
Tl	205	3	193	0.002	ppb	0.002	224.14	110	2000	
(Pb)	206	3	193	0.035	ppb	0.035	106.64	213	100	
(Pb)	207	3	193	0.044	ppb	0.044	96.52	330	100	
Pb	208	3	193	0.018	ppb	0.018	84.10	950	5000	
Th	232	3	193	-0.543	ppb	-0.543	-4.83	4164	2000	
U	238	3	193	1.779	ppb	1.779	1.59	8982	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3530609	1.34	3473788	101.64	60	120	
Sc (IS)	45	3	HMI He	504644	2.45	498630	101.21	60	120	
Ge Internal standard	72	2	HMI H2	2204814	1.51	2241871	98.35	60	120	
Ge Internal standard	72	3	HMI He	646574	0.76	647352	99.88	60	120	
In Internal Standard	115	3	HMI He	2390053	2.25	2356036	101.44	60	120	
Ir (IS)	193	3	HMI He	5140772	1.24	4999588	102.82	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	368SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:38:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	3632.102	ppb	3632.102	0.90	326817	400000	
Mg	24	3	45	2560.339	ppb	2560.339	2.47	118197	400000	
Al	27	3	45	17.356	ppb	17.356	14.06	377	400000	
K	39	3	45	1482.202	ppb	1482.202	4.64	78306	400000	
Ca	40	2	45	10086.417	ppb	10086.417	2.00	4720660	400000	
V	51	3	72	4.338	ppb	4.338	1.66	2764	2000	
Cr	52	3	72	0.204	ppb	0.204	73.02	2256	5000	
Mn	55	3	72	3.423	ppb	3.423	4.20	1283	10000	
Fe	56	2	72	9.520	ppb	9.520	21.43	45647	10000	
Co	59	3	72	0.060	ppb	0.060	12.94	95	2000	
Ni	60	3	72	0.449	ppb	0.449	75.48	551	5000	
Cu	63	3	72	0.217	ppb	0.217	31.51	421	5000	
Zn	66	3	72	4.174	ppb	4.174	6.49	661	5000	
As	75	3	72	2.319	ppb	2.319	12.51	273	2000	
Se	78	2	72	0.888	ppb	0.888	18.97	43	2000	
Sr	88	3	72	51.727	ppb	51.727	1.73	22694	4000	
Mo	95	3	115	1.841	ppb	1.841	7.21	768	2000	
Ag	107	3	115	0.006	ppb	0.006	233.87	23	100	
Cd	111	3	115	0.008	ppb	0.008	175.35	3	2000	
Sn	120	3	115	0.082	ppb	0.082	37.17	565	2000	
Sb	121	3	115	0.082	ppb	0.082	22.48	78	1000	
Ba	137	3	115	8.595	ppb	8.595	0.72	1784	5000	
Tl	205	3	193	0.003	ppb	0.003	211.42	113	2000	
(Pb)	206	3	193	0.342	ppb	0.342	4.51	536	100	
(Pb)	207	3	193	0.333	ppb	0.333	14.84	593	100	
Pb	208	3	193	0.321	ppb	0.321	7.90	2227	5000	
Th	232	3	193	-0.589	ppb	-0.589	-2.83	3970	2000	
U	238	3	193	0.392	ppb	0.392	1.03	2956	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3482209	1.93	3473788	100.24	60	120	
Sc (IS)	45	3	HMI He	500075	0.62	498630	100.29	60	120	
Ge Internal standard	72	2	HMI H2	2196510	1.26	2241871	97.98	60	120	
Ge Internal standard	72	3	HMI He	645469	0.66	647352	99.71	60	120	
In Internal Standard	115	3	HMI He	2388062	1.61	2356036	101.36	60	120	
Ir (IS)	193	3	HMI He	5143275	1.20	4999588	102.87	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	369SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:40:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.025	ppb	38.025	12.16	1343	2000	
Na	23	3	45	20018.373	ppb	20018.373	1.20	1764345	400000	
Mg	24	3	45	13697.995	ppb	13697.995	1.77	640650	400000	
Al	27	3	45	769.296	ppb	769.296	1.32	13413	400000	
K	39	3	45	8199.277	ppb	8199.277	2.16	332917	400000	
Ca	40	2	45	51593.393	ppb	51593.393	1.01	24292644	400000	
V	51	3	72	62.052	ppb	62.052	1.52	31435	2000	
Cr	52	3	72	39.875	ppb	39.875	0.35	26891	5000	
Mn	55	3	72	44.350	ppb	44.350	0.76	14575	10000	
Fe	56	2	72	791.203	ppb	791.203	3.96	1055648	10000	
Co	59	3	72	38.137	ppb	38.137	3.15	40407	2000	
Ni	60	3	72	37.374	ppb	37.374	2.66	11477	5000	
Cu	63	3	72	39.687	ppb	39.687	1.37	31741	5000	
Zn	66	3	72	40.789	ppb	40.789	3.72	5363	5000	
As	75	3	72	49.864	ppb	49.864	3.69	4697	2000	
Se	78	2	72	45.396	ppb	45.396	2.67	2108	2000	
Sr	88	3	72	342.967	ppb	342.967	0.96	151819	4000	
Mo	95	3	115	48.787	ppb	48.787	2.39	19564	2000	
Ag	107	3	115	39.367	ppb	39.367	1.16	53703	100	
Cd	111	3	115	38.123	ppb	38.123	1.76	7535	2000	
Sn	120	3	115	37.283	ppb	37.283	1.10	24018	2000	
Sb	121	3	115	38.915	ppb	38.915	1.36	24283	1000	
Ba	137	3	115	83.671	ppb	83.671	2.58	16937	5000	
Tl	205	3	193	38.678	ppb	38.678	2.49	120936	2000	
(Pb)	206	3	193	38.624	ppb	38.624	4.12	40954	100	
(Pb)	207	3	193	38.712	ppb	38.712	1.55	35646	100	
Pb	208	3	193	38.988	ppb	38.988	2.56	165433	5000	
Th	232	3	193	36.339	ppb	36.339	0.19	159815	2000	
U	238	3	193	41.121	ppb	41.121	2.75	180806	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508049	0.26	3473788	100.99	60	120	
Sc (IS)	45	3	HMI He	507106	1.38	498630	101.70	60	120	
Ge Internal standard	72	2	HMI H2	2194708	2.41	2241871	97.90	60	120	
Ge Internal standard	72	3	HMI He	651605	1.08	647352	100.66	60	120	
In Internal Standard	115	3	HMI He	2377573	0.96	2356036	100.91	60	120	
Ir (IS)	193	3	HMI He	5167774	2.42	4999588	103.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	370SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:41:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	37.140	ppb	37.140	7.15	1309	2000	
Na	23	3	45	19361.507	ppb	19361.507	2.22	1696531	400000	
Mg	24	3	45	13167.113	ppb	13167.113	1.26	612109	400000	
Al	27	3	45	756.336	ppb	756.336	4.94	13109	400000	
K	39	3	45	7929.399	ppb	7929.399	0.95	320798	400000	
Ca	40	2	45	50131.320	ppb	50131.320	1.81	23606942	400000	
V	51	3	72	61.711	ppb	61.711	0.66	31069	2000	
Cr	52	3	72	40.085	ppb	40.085	0.76	26854	5000	
Mn	55	3	72	42.302	ppb	42.302	3.25	13823	10000	
Fe	56	2	72	755.198	ppb	755.198	3.12	1020924	10000	
Co	59	3	72	37.944	ppb	37.944	1.50	39963	2000	
Ni	60	3	72	36.876	ppb	36.876	3.24	11259	5000	
Cu	63	3	72	40.004	ppb	40.004	1.21	31796	5000	
Zn	66	3	72	40.031	ppb	40.031	3.03	5232	5000	
As	75	3	72	50.844	ppb	50.844	4.67	4758	2000	
Se	78	2	72	43.756	ppb	43.756	5.02	2056	2000	
Sr	88	3	72	335.133	ppb	335.133	0.55	147442	4000	
Mo	95	3	115	48.815	ppb	48.815	3.62	19394	2000	
Ag	107	3	115	39.183	ppb	39.183	0.66	52967	100	
Cd	111	3	115	39.458	ppb	39.458	6.42	7722	2000	
Sn	120	3	115	37.725	ppb	37.725	5.19	24065	2000	
Sb	121	3	115	38.553	ppb	38.553	1.81	23836	1000	
Ba	137	3	115	81.022	ppb	81.022	4.57	16250	5000	
Tl	205	3	193	38.361	ppb	38.361	3.10	120949	2000	
(Pb)	206	3	193	37.938	ppb	37.938	2.15	40581	100	
(Pb)	207	3	193	38.684	ppb	38.684	2.72	35910	100	
Pb	208	3	193	38.430	ppb	38.430	3.18	164437	5000	
Th	232	3	193	37.011	ppb	37.011	1.83	163991	2000	
U	238	3	193	40.651	ppb	40.651	3.86	180234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508559	0.58	3473788	101.00	60	120	
Sc (IS)	45	3	HMI He	503980	0.10	498630	101.07	60	120	
Ge Internal standard	72	2	HMI H2	2219935	2.13	2241871	99.02	60	120	
Ge Internal standard	72	3	HMI He	647563	0.46	647352	100.03	60	120	
In Internal Standard	115	3	HMI He	2355962	1.69	2356036	100.00	60	120	
Ir (IS)	193	3	HMI He	5211565	2.54	4999588	104.24	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D pds
Data File Name	371SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:43:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	100.856	ppb	100.856	3.57	3515	2000	
Na	23	3	45	23209.530	ppb	23209.530	3.00	2036898	400000	
Mg	24	3	45	14657.546	ppb	14657.546	4.59	683158	400000	
Al	27	3	45	2003.283	ppb	2003.283	2.37	34691	400000	
K	39	3	45	9096.044	ppb	9096.044	2.55	365656	400000	
Ca	40	2	45	50896.223	ppb	50896.223	1.12	24093219	400000	
V	51	3	72	120.869	ppb	120.869	1.15	60308	2000	
Cr	52	3	72	97.307	ppb	97.307	1.78	62199	5000	
Mn	55	3	72	101.465	ppb	101.465	0.97	32938	10000	
Fe	56	2	72	1031.252	ppb	1031.252	2.79	1355643	10000	
Co	59	3	72	96.061	ppb	96.061	1.21	101225	2000	
Ni	60	3	72	96.032	ppb	96.032	1.04	28674	5000	
Cu	63	3	72	100.295	ppb	100.295	1.46	79419	5000	
Zn	66	3	72	201.921	ppb	201.921	1.59	25886	5000	
As	75	3	72	115.644	ppb	115.644	0.64	10757	2000	
Se	78	2	72	108.244	ppb	108.244	2.17	4987	2000	
Sr	88	3	72	350.993	ppb	350.993	1.81	154577	4000	
Mo	95	3	115	106.714	ppb	106.714	2.12	43072	2000	
Ag	107	3	115	26.151	ppb	26.151	1.74	35942	100	
Cd	111	3	115	94.122	ppb	94.122	4.46	18729	2000	
Sn	120	3	115	97.404	ppb	97.404	3.73	62368	2000	
Sb	121	3	115	93.266	ppb	93.266	2.91	58577	1000	
Ba	137	3	115	139.610	ppb	139.610	1.69	28445	5000	
Tl	205	3	193	97.060	ppb	97.060	1.96	307095	2000	
(Pb)	206	3	193	94.907	ppb	94.907	1.29	101646	100	
(Pb)	207	3	193	96.957	ppb	96.957	1.68	89914	100	
Pb	208	3	193	95.548	ppb	95.548	1.33	409180	5000	
Th	232	3	193	104.423	ppb	104.423	0.50	452549	2000	
U	238	3	193	202.315	ppb	202.315	0.78	895733	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3526792	0.41	3473788	101.53	60	120	
Sc (IS)	45	3	HMI He	505704	2.74	498630	101.42	60	120	
Ge Internal standard	72	2	HMI H2	2177551	2.07	2241871	97.13	60	120	
Ge Internal standard	72	3	HMI He	648252	0.42	647352	100.14	60	120	
In Internal Standard	115	3	HMI He	2395399	1.79	2356036	101.67	60	120	
Ir (IS)	193	3	HMI He	5230638	1.42	4999588	104.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	372_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:45:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
Na	23	3	45	-75.894	ppb	-1.418	14245	51000	-0.1	90	110	>+\-10%
Mg	24	3	45	1.461	ppb	38.566	407	11000	0.0	90	110	>+\-10%
Al	27	3	45	-1.246	ppb	-90.685	120	1000	-0.1	90	110	>+\-10%
K	39	3	45	-344.027	ppb	-7.705	20907	11000	-3.1	90	110	>+\-10%
Ca	40	2	45	-1.876	ppb	-40.641	14956	11000	0.0	90	110	>+\-10%
V	51	3	72	-1.078	ppb	-2.208	197	50	-2.2	90	110	>+\-10%
Cr	52	3	72	-2.852	ppb	-0.408	731	50	-5.7	90	110	>+\-10%
Mn	55	3	72	-0.156	ppb	-24.378	257	50	-0.3	90	110	>+\-10%
Fe	56	2	72	-11.840	ppb	-23.644	30502	1000	-1.2	90	110	>+\-10%
Co	59	3	72	-0.005	ppb	-190.004	52	50	0.0	90	110	>+\-10%
Ni	60	3	72	-1.311	ppb	-3.680	70	50	-2.6	90	110	>+\-10%
Cu	63	3	72	-0.124	ppb	-31.016	297	50	-0.2	90	110	>+\-10%
Zn	66	3	72	-0.403	ppb	-21.571	155	50	-0.8	90	110	>+\-10%
As	75	3	72	-0.451	ppb	-6.395	35	50	-0.9	90	110	>+\-10%
Se	78	2	72	0.031	ppb	263.977	5	50	0.1	90	110	>+\-10%
Sr	88	3	72	0.040	ppb	70.586	63	100	0.0	90	110	>+\-10%
Mo	95	3	115	-0.049	ppb	-14.819	13	50	-0.1	90	110	>+\-10%
Ag	107	3	115	0.007	ppb	37.909	47	50	0.0	90	110	>+\-10%
Cd	111	3	115	0.000	ppb	3511.370	3	50	0.0	90	110	>+\-10%
Sn	120	3	115	-0.627	ppb	-4.690	217	50	-1.3	90	110	>+\-10%
Sb	121	3	115	-0.010	ppb	-231.344	40	50	0.0	90	110	>+\-10%
Ba	137	3	115	-0.078	ppb	-18.639	47	50	-0.2	90	110	>+\-10%
Tl	205	3	193	0.002	ppb	212.715	210	50	0.0	90	110	>+\-10%
(Pb)	206	3	193	-0.049	ppb	-35.187	243	50	-0.1	90	110	>+\-10%
(Pb)	207	3	193	-0.042	ppb	-112.604	488	50	-0.1	90	110	>+\-10%
Pb	208	3	193	-0.069	ppb	-27.363	1136	50	-0.1	90	110	>+\-10%
Th	232	3	193	-0.617	ppb	-3.454	7479	50	-1.2	90	110	>+\-10%
U	238	3	193	0.034	ppb	47.808	2717	50	0.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6011818	2.26	3473788	173.06	60	120	IS Failed
Sc (IS)	45	3	HMI He	1013190	1.86	498630	203.19	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3726272	1.26	2241871	166.21	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1249194	1.31	647352	192.97	60	120	IS Failed
In Internal Standard	115	3	HMI He	4500401	5.11	2356036	191.02	60	120	IS Failed
Ir (IS)	193	3	HMI He	9984157	3.69	4999588	199.70	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	373_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:47:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.096	ppb	86.6	3	0.5	
Na	23	3	45	28.084	ppb	17.8	16052	25	>RL
Mg	24	3	45	11.151	ppb	16.4	651	25	
Al	27	3	45	5.204	ppb	28.3	170	15	
K	39	3	45	5.426	ppb	482.4	23413	50	
V	51	3	72	0.089	ppb	219.2	656	1	
Cr	52	3	72	0.300	ppb	131.1	2251	1	
Mn	55	3	72	0.877	ppb	21.4	451	0.5	>RL
Co	59	3	72	0.060	ppb	32.4	92	0.5	
Ni	60	3	72	0.268	ppb	31.9	485	1	
Cu	63	3	72	0.071	ppb	67.5	298	1	
Zn	66	3	72	0.371	ppb	36.1	173	5	
As	75	3	72	-0.294	ppb	-47.5	32	1	
Se	78	2	72	0.017	ppb	272.9	2	1	
Sr	88	3	72	0.220	ppb	39.6	108	0.5	
Mo	95	3	115	0.094	ppb	31.2	63	0.5	
Ag	107	3	115	0.014	ppb	69.3	33	1	
Cd	111	3	115	0.060	ppb	107.5	13	0.5	
Sn	120	3	115	0.123	ppb	101.4	580	1	
Sb	121	3	115	0.033	ppb	62.5	47	0.6	
Ba	137	3	115	0.060	ppb	48.3	52	0.5	
Tl	205	3	193	0.037	ppb	21.3	220	0.1	
(Pb)	206	3	193	0.010	ppb	293.2	188	1	
(Pb)	207	3	193	0.068	ppb	38.2	353	1	
Pb	208	3	193	0.019	ppb	74.4	961	0.5	
Th	232	3	193	2.965	ppb	9.7	18982	1	>RL
U	238	3	193	0.054	ppb	18.3	1494	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3520563	0.32	3473788	101.35	60	120	
Sc (IS)	45	3	HMI He	501777	0.90	498630	100.63	60	120	
Ge Internal standard	72	2	HMI H2	2094429	1.25	2241871	93.42	60	120	
Ge Internal standard	72	3	HMI He	627386	0.77	647352	96.92	60	120	
In Internal Standard	115	3	HMI He	2343737	0.66	2356036	99.48	60	120	
Ir (IS)	193	3	HMI He	5164412	1.02	4999588	103.30	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	374LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:49:12-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.654	ppb	24.589	23	1	65.4	70	130	>+/-30%
Na	23	3	45	280.488	ppb	2.579	38461	300	93.5	70	130	
Mg	24	3	45	47.332	ppb	7.845	2359	50	94.7	70	130	
Al	27	3	45	44.535	ppb	16.213	858	50	89.1	70	130	
K	39	3	45	87.238	ppb	33.804	26866	120	72.7	70	130	
Ca	40	2	45	186.694	ppb	1.971	99846	200	93.3	70	130	
V	51	3	72	4.442	ppb	5.748	2774	5	88.8	70	130	
Cr	52	3	72	2.041	ppb	11.706	3334	2	102.1	70	130	
Mn	55	3	72	1.540	ppb	12.893	668	1	154.0	70	130	>+/-30%
Fe	56	2	72	48.919	ppb	7.375	97044	50	97.8	70	130	
Co	59	3	72	0.975	ppb	8.688	1038	1	97.5	70	130	
Ni	60	3	72	2.268	ppb	8.617	1068	2	113.4	70	130	
Cu	63	3	72	1.922	ppb	9.697	1734	2	96.1	70	130	
Zn	66	3	72	9.308	ppb	12.063	1293	10	93.1	70	130	
As	75	3	72	3.924	ppb	3.020	415	5	78.5	70	130	
Se	78	2	72	4.878	ppb	7.896	229	5	97.6	70	130	
Sr	88	3	72	4.330	ppb	8.167	1886	5	86.6	70	130	
Mo	95	3	115	1.781	ppb	4.062	746	2	89.0	70	130	
Ag	107	3	115	0.898	ppb	9.070	1249	1	89.8	70	130	
Cd	111	3	115	0.896	ppb	19.735	180	1	89.6	70	130	
Sn	120	3	115	7.938	ppb	8.495	5560	10	79.4	70	130	
Sb	121	3	115	1.811	ppb	3.975	1166	2	90.5	70	130	
Ba	137	3	115	0.816	ppb	29.405	207	1	81.6	70	130	
Tl	205	3	193	0.926	ppb	3.111	3019	1	92.6	70	130	
(Pb)	206	3	193	0.920	ppb	7.732	1156	1	92.0	70	130	
(Pb)	207	3	193	0.885	ppb	15.253	1108	1	88.5	70	130	
Pb	208	3	193	0.860	ppb	3.372	4543	1	86.0	70	130	
Th	232	3	193	1.841	ppb	11.517	14341	1	184.1	70	130	>+/-30%
U	238	3	193	0.891	ppb	8.594	5187	1	89.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3593149	0.62	3473788	103.44	60	120	
Sc (IS)	45	3	HMI He	509299	1.09	498630	102.14	60	120	
Ge Internal standard	72	2	HMI H2	2207384	1.95	2241871	98.46	60	120	
Ge Internal standard	72	3	HMI He	635847	1.12	647352	98.22	60	120	
In Internal Standard	115	3	HMI He	2398472	1.66	2356036	101.80	60	120	
Ir (IS)	193	3	HMI He	5202905	1.34	4999588	104.07	60	120	

Sample Report

Sample Table

Sample Name	174894-2
Data File Name	375SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:51:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	59568.772	ppb	59568.772	2.86	6500553	400000	
Mg	24	3	45	12898.859	ppb	12898.859	1.91	750853	400000	
Al	27	3	45	8.966	ppb	8.966	87.05	297	400000	
K	39	3	45	1497.502	ppb	1497.502	1.35	99557	400000	
Ca	40	2	45	33469.326	ppb	33469.326	1.30	19677215	400000	
V	51	3	72	-0.875	ppb	-0.875	-8.19	243	2000	
Cr	52	3	72	-0.410	ppb	-0.410	-63.40	2277	5000	
Mn	55	3	72	495.457	ppb	495.457	2.18	193127	10000	
Fe	56	2	72	-2.827	ppb	-2.827	-68.58	36668	10000	
Co	59	3	72	0.188	ppb	0.188	3.58	277	2000	
Ni	60	3	72	0.603	ppb	0.603	5.01	723	5000	
Cu	63	3	72	0.137	ppb	0.137	41.76	435	5000	
Zn	66	3	72	0.668	ppb	0.668	17.08	262	5000	
As	75	3	72	15.553	ppb	15.553	2.53	1808	2000	
Se	78	2	72	0.018	ppb	0.018	223.26	3	2000	
Sr	88	3	72	253.776	ppb	253.776	2.58	134795	4000	
Mo	95	3	115	3.480	ppb	3.480	12.07	1746	2000	
Ag	107	3	115	0.007	ppb	0.007	40.92	30	100	
Cd	111	3	115	0.012	ppb	0.012	170.92	5	2000	
Sn	120	3	115	-0.639	ppb	-0.639	-5.23	132	2000	
Sb	121	3	115	-0.011	ppb	-0.011	-106.30	25	1000	
Ba	137	3	115	328.908	ppb	328.908	2.12	81759	5000	
Tl	205	3	193	0.014	ppb	0.014	58.84	177	2000	
(Pb)	206	3	193	-0.040	ppb	-0.040	-47.93	162	100	
(Pb)	207	3	193	0.018	ppb	0.018	141.66	366	100	
Pb	208	3	193	-0.034	ppb	-0.034	-47.36	876	5000	
Th	232	3	193	-0.601	ppb	-0.601	-8.22	4684	2000	
U	238	3	193	0.052	ppb	0.052	29.34	1768	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4378746	2.12	3473788	126.05	60	120	IS Failed
Sc (IS)	45	3	HMI He	631209	1.71	498630	126.59	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2713356	1.65	2241871	121.03	60	120	IS Failed
Ge Internal standard	72	3	HMI He	781959	1.43	647352	120.79	60	120	IS Failed
In Internal Standard	115	3	HMI He	2924749	1.19	2356036	124.14	60	120	IS Failed
Ir (IS)	193	3	HMI He	6151132	2.15	4999588	123.03	60	120	IS Failed

Sample Report

Sample Table

Sample Name	07658979@10
Data File Name	376SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:52:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.076	ppb	1.076	20.84	38	2000	
Na	23	3	45	157.687	ppb	157.687	5.12	27454	400000	
Mg	24	3	45	5457.613	ppb	5457.613	1.93	254390	400000	
Al	27	3	45	32029.811	ppb	32029.811	2.09	553086	400000	
K	39	3	45	6217.242	ppb	6217.242	2.45	257171	400000	
Ca	40	2	45	110603.204	ppb	110603.204	0.91	53155880	400000	
V	51	3	72	44.820	ppb	44.820	0.58	21636	2000	
Cr	52	3	72	27.341	ppb	27.341	2.96	18071	5000	
Mn	55	3	72	710.618	ppb	710.618	0.92	218211	10000	
Fe	56	2	72	21427.131	ppb	21427.131	1.40	26999714	10000	
Co	59	3	72	8.803	ppb	8.803	2.13	8843	2000	
Ni	60	3	72	22.966	ppb	22.966	4.44	6822	5000	
Cu	63	3	72	29.212	ppb	29.212	1.69	22155	5000	
Zn	66	3	72	55.625	ppb	55.625	4.11	6867	5000	
As	75	3	72	8.473	ppb	8.473	13.28	803	2000	
Se	78	2	72	0.355	ppb	0.355	15.61	17	2000	
Sr	88	3	72	71.018	ppb	71.018	1.43	29741	4000	
Mo	95	3	115	0.978	ppb	0.978	6.64	418	2000	
Ag	107	3	115	0.077	ppb	0.077	2.08	120	100	
Cd	111	3	115	0.395	ppb	0.395	26.51	80	2000	
Sn	120	3	115	2.667	ppb	2.667	5.05	2191	2000	
Sb	121	3	115	0.742	ppb	0.742	2.19	490	1000	
Ba	137	3	115	96.907	ppb	96.907	3.70	19606	5000	
Tl	205	3	193	0.384	ppb	0.384	7.76	1328	2000	
(Pb)	206	3	193	30.552	ppb	30.552	1.14	33097	100	
(Pb)	207	3	193	29.159	ppb	29.159	1.86	27456	100	
Pb	208	3	193	29.681	ppb	29.681	1.49	128701	5000	
Th	232	3	193	4.876	ppb	4.876	0.78	27588	2000	
U	238	3	193	0.834	ppb	0.834	4.84	5000	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3581311	1.01	3473788	103.10	60	120	
Sc (IS)	45	3	HMI He	505173	0.11	498630	101.31	60	120	
Ge Internal standard	72	2	HMI H2	2136342	1.14	2241871	95.29	60	120	
Ge Internal standard	72	3	HMI He	616183	1.48	647352	95.19	60	120	
In Internal Standard	115	3	HMI He	2377873	2.38	2356036	100.93	60	120	
Ir (IS)	193	3	HMI He	5270995	1.78	4999588	105.43	60	120	

Sample Report

Sample Table

Sample Name	07658982@10
Data File Name	377SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:54:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.785	ppb	1.785	37.20	63	2000	
Na	23	3	45	108.564	ppb	108.564	4.83	23764	400000	
Mg	24	3	45	5818.665	ppb	5818.665	0.44	278104	400000	
Al	27	3	45	40555.270	ppb	40555.270	1.38	718076	400000	
K	39	3	45	7358.744	ppb	7358.744	2.37	307735	400000	
Ca	40	2	45	124701.357	ppb	124701.357	1.57	59848466	400000	
V	51	3	72	63.541	ppb	63.541	0.68	30715	2000	
Cr	52	3	72	35.075	ppb	35.075	2.87	22827	5000	
Mn	55	3	72	763.170	ppb	763.170	1.30	236616	10000	
Fe	56	2	72	27427.001	ppb	27427.001	3.03	34104781	10000	
Co	59	3	72	11.378	ppb	11.378	5.31	11529	2000	
Ni	60	3	72	27.861	ppb	27.861	2.61	8270	5000	
Cu	63	3	72	21.261	ppb	21.261	1.25	16348	5000	
Zn	66	3	72	65.009	ppb	65.009	1.88	8083	5000	
As	75	3	72	10.527	ppb	10.527	13.20	991	2000	
Se	78	2	72	0.523	ppb	0.523	33.05	25	2000	
Sr	88	3	72	63.756	ppb	63.756	3.91	26955	4000	
Mo	95	3	115	1.071	ppb	1.071	9.00	461	2000	
Ag	107	3	115	0.089	ppb	0.089	12.46	138	100	
Cd	111	3	115	0.408	ppb	0.408	31.25	83	2000	
Sn	120	3	115	2.352	ppb	2.352	8.51	2016	2000	
Sb	121	3	115	1.158	ppb	1.158	11.18	756	1000	
Ba	137	3	115	132.249	ppb	132.249	0.90	27071	5000	
Tl	205	3	193	0.506	ppb	0.506	4.72	1719	2000	
(Pb)	206	3	193	76.282	ppb	76.282	2.40	82345	100	
(Pb)	207	3	193	72.057	ppb	72.057	0.56	67407	100	
Pb	208	3	193	73.383	ppb	73.383	1.76	316809	5000	
Th	232	3	193	7.225	ppb	7.225	1.89	37691	2000	
U	238	3	193	1.000	ppb	1.000	7.09	5735	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3577080	1.43	3473788	102.97	60	120	
Sc (IS)	45	3	HMI He	518006	0.51	498630	103.89	60	120	
Ge Internal standard	72	2	HMI H2	2109377	1.81	2241871	94.09	60	120	
Ge Internal standard	72	3	HMI He	622147	1.16	647352	96.11	60	120	
In Internal Standard	115	3	HMI He	2406144	2.41	2356036	102.13	60	120	
Ir (IS)	193	3	HMI He	5269387	0.81	4999588	105.40	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	378SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:56:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	60.591	ppb	60.591	7.42	2136	2000	
Na	23	3	45	34643.453	ppb	34643.453	0.38	3107872	400000	
Mg	24	3	45	207046.997	ppb	207046.997	0.76	9887953	400000	
Al	27	3	45	231244.994	ppb	231244.994	0.63	4092790	400000	
K	39	3	45	6520.176	ppb	6520.176	1.40	275273	400000	
Ca	40	2	45	394018.760	ppb	394018.760	2.95	191935744	400000	
V	51	3	72	56.383	ppb	56.383	3.20	28393	2000	
Cr	52	3	72	6.104	ppb	6.104	8.53	5890	5000	
Mn	55	3	72	12377.250	ppb	12377.250	2.15	3984930	10000	
Fe	56	2	72	746.264	ppb	746.264	1.39	1026846	10000	
Co	59	3	72	586.160	ppb	586.160	2.03	615844	2000	
Ni	60	3	72	542.118	ppb	542.118	1.29	159482	5000	
Cu	63	3	72	7.374	ppb	7.374	1.88	6057	5000	
Zn	66	3	72	2788.753	ppb	2788.753	0.16	354922	5000	
As	75	3	72	3.625	ppb	3.625	20.95	395	2000	
Se	78	2	72	13.637	ppb	13.637	5.12	653	2000	
Sr	88	3	72	3282.901	ppb	3282.901	0.70	1441930	4000	
Mo	95	3	115	0.098	ppb	0.098	77.53	67	2000	
Ag	107	3	115	0.011	ppb	0.011	35.91	30	100	
Cd	111	3	115	7.588	ppb	7.588	6.74	1519	2000	
Sn	120	3	115	0.036	ppb	0.036	206.21	540	2000	
Sb	121	3	115	0.081	ppb	0.081	13.28	78	1000	
Ba	137	3	115	10.012	ppb	10.012	8.52	2086	5000	
Tl	205	3	193	0.686	ppb	0.686	2.15	2249	2000	
(Pb)	206	3	193	9.862	ppb	9.862	2.34	10599	100	
(Pb)	207	3	193	9.075	ppb	9.075	1.84	8580	100	
Pb	208	3	193	9.485	ppb	9.485	2.08	40931	5000	
Th	232	3	193	2.697	ppb	2.697	5.51	17859	2000	
U	238	3	193	98.602	ppb	98.602	1.45	432005	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3631462	1.57	3473788	104.54	60	120	
Sc (IS)	45	3	HMI He	517828	0.90	498630	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2257743	1.14	2241871	100.71	60	120	
Ge Internal standard	72	3	HMI He	646584	1.37	647352	99.88	60	120	
In Internal Standard	115	3	HMI He	2406178	1.35	2356036	102.13	60	120	
Ir (IS)	193	3	HMI He	5168742	1.79	4999588	103.38	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	379SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:58:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	75.451	ppb	75.451	4.39	2584	2000	
Na	23	3	45	61901.829	ppb	61901.829	1.96	5512402	400000	
Mg	24	3	45	307183.068	ppb	307183.068	1.11	14591471	400000	
Al	27	3	45	90289.260	ppb	90289.260	3.83	1589329	400000	
K	39	3	45	14838.349	ppb	14838.349	0.94	592777	400000	
Ca	40	2	45	438462.668	ppb	438462.668	1.34	205412328	400000	
V	51	3	72	3.932	ppb	3.932	6.19	2582	2000	
Cr	52	3	72	1.752	ppb	1.752	21.51	3230	5000	
Mn	55	3	72	16087.149	ppb	16087.149	0.88	5207711	10000	
Fe	56	2	72	216.687	ppb	216.687	2.13	312316	10000	
Co	59	3	72	742.370	ppb	742.370	0.98	784222	2000	
Ni	60	3	72	621.961	ppb	621.961	0.77	183898	5000	
Cu	63	3	72	5.123	ppb	5.123	5.94	4309	5000	
Zn	66	3	72	3498.551	ppb	3498.551	0.35	447608	5000	
As	75	3	72	2.514	ppb	2.514	14.88	293	2000	
Se	78	2	72	17.469	ppb	17.469	3.90	809	2000	
Sr	88	3	72	4348.358	ppb	4348.358	0.22	1920162	4000	
Mo	95	3	115	0.071	ppb	0.071	78.76	55	2000	
Ag	107	3	115	0.026	ppb	0.026	37.28	50	100	
Cd	111	3	115	11.214	ppb	11.214	6.19	2214	2000	
Sn	120	3	115	-0.068	ppb	-0.068	-56.31	466	2000	
Sb	121	3	115	0.045	ppb	0.045	83.03	55	1000	
Ba	137	3	115	8.186	ppb	8.186	3.67	1691	5000	
Tl	205	3	193	1.955	ppb	1.955	1.25	6197	2000	
(Pb)	206	3	193	10.203	ppb	10.203	1.75	10929	100	
(Pb)	207	3	193	9.242	ppb	9.242	2.14	8710	100	
Pb	208	3	193	9.644	ppb	9.644	2.77	41489	5000	
Th	232	3	193	0.524	ppb	0.524	13.33	8665	2000	
U	238	3	193	178.046	ppb	178.046	1.94	777040	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3492159	1.63	3473788	100.53	60	120	
Sc (IS)	45	3	HMI He	515116	1.18	498630	103.31	60	120	
Ge Internal standard	72	2	HMI H2	2186905	1.86	2241871	97.55	60	120	
Ge Internal standard	72	3	HMI He	650040	0.55	647352	100.42	60	120	
In Internal Standard	115	3	HMI He	2373516	1.15	2356036	100.74	60	120	
Ir (IS)	193	3	HMI He	5155515	1.36	4999588	103.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	380_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:00:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.061	ppb	86.871	3	50	0.1	90	110	>+\-10%
Na	23	3	45	-0.158	ppb	-44349.447	30251	51000	0.0	90	110	>+\-10%
Mg	24	3	45	33.977	ppb	64.386	3798	11000	0.3	90	110	>+\-10%
Al	27	3	45	7.447	ppb	85.032	464	1000	0.7	90	110	>+\-10%
K	39	3	45	-327.261	ppb	-1.035	24329	11000	-3.0	90	110	>+\-10%
Ca	40	2	45	23.894	ppb	4.892	31229	11000	0.2	90	110	>+\-10%
V	51	3	72	-1.053	ppb	-5.496	243	50	-2.1	90	110	>+\-10%
Cr	52	3	72	0.672	ppb	129.424	5475	50	1.3	90	110	>+\-10%
Mn	55	3	72	2.017	ppb	36.491	1788	50	4.0	90	110	>+\-10%
Fe	56	2	72	-7.744	ppb	-25.444	33782	1000	-0.8	90	110	>+\-10%
Co	59	3	72	0.165	ppb	70.152	440	50	0.3	90	110	>+\-10%
Ni	60	3	72	1.383	ppb	38.224	1774	50	2.8	90	110	>+\-10%
Cu	63	3	72	-0.064	ppb	-72.589	431	50	-0.1	90	110	>+\-10%
Zn	66	3	72	0.018	ppb	955.368	287	50	0.0	90	110	>+\-10%
As	75	3	72	-0.395	ppb	-11.890	50	50	-0.8	90	110	>+\-10%
Se	78	2	72	0.040	ppb	28.381	5	50	0.1	90	110	>+\-10%
Sr	88	3	72	0.468	ppb	48.263	473	100	0.5	90	110	>+\-10%
Mo	95	3	115	0.116	ppb	92.756	153	50	0.2	90	110	>+\-10%
Ag	107	3	115	0.083	ppb	99.523	268	50	0.2	90	110	>+\-10%
Cd	111	3	115	0.072	ppb	61.887	33	50	0.1	90	110	>+\-10%
Sn	120	3	115	-0.567	ppb	-14.607	318	50	-1.1	90	110	>+\-10%
Sb	121	3	115	0.041	ppb	185.526	110	50	0.1	90	110	>+\-10%
Ba	137	3	115	-0.046	ppb	-218.608	65	50	-0.1	90	110	>+\-10%
Tl	205	3	193	0.081	ppb	108.472	738	50	0.2	90	110	>+\-10%
(Pb)	206	3	193	0.025	ppb	361.353	423	50	0.0	90	110	>+\-10%
(Pb)	207	3	193	0.030	ppb	236.804	660	50	0.1	90	110	>+\-10%
Pb	208	3	193	-0.001	ppb	-10814.341	1819	50	0.0	90	110	>+\-10%
Th	232	3	193	-0.530	ppb	-12.941	8779	50	-1.1	90	110	>+\-10%
U	238	3	193	0.109	ppb	66.136	3599	50	0.2	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	5256541	8.97	3473788	151.32	60	120	IS Failed
Sc (IS)	45	3	HMI He	1110560	1.46	498630	222.72	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3181551	9.57	2241871	141.92	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1387585	1.45	647352	214.35	60	120	IS Failed
In Internal Standard	115	3	HMI He	4948464	1.28	2356036	210.03	60	120	IS Failed
Ir (IS)	193	3	HMI He	10699689	1.37	4999588	214.01	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	381_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:02:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.188	ppb	1.466	1768	50	102.4	90	110	
Na	23	3	45	48973.563	ppb	2.116	4185683	51000	96.0	90	110	
Mg	24	3	45	10336.371	ppb	1.262	471048	11000	94.0	90	110	
Al	27	3	45	1026.144	ppb	1.509	17405	1000	102.6	90	110	
K	39	3	45	10323.915	ppb	0.853	402505	11000	93.9	90	110	
Ca	40	2	45	10352.476	ppb	4.052	4784867	11000	94.1	90	110	
V	51	3	72	52.052	ppb	0.938	25088	50	104.1	90	110	
Cr	52	3	72	52.055	ppb	0.561	32650	50	104.1	90	110	
Mn	55	3	72	54.234	ppb	2.289	16854	50	108.5	90	110	
Fe	56	2	72	1079.312	ppb	1.681	1337792	1000	107.9	90	110	
Co	59	3	72	51.734	ppb	3.046	51949	50	103.5	90	110	
Ni	60	3	72	51.178	ppb	0.897	14747	50	102.4	90	110	
Cu	63	3	72	51.808	ppb	1.460	39201	50	103.6	90	110	
Zn	66	3	72	52.070	ppb	0.703	6453	50	104.1	90	110	
As	75	3	72	50.241	ppb	1.801	4485	50	100.5	90	110	
Se	78	2	72	53.745	ppb	3.888	2338	50	107.5	90	110	
Sr	88	3	72	104.882	ppb	1.306	44019	100	104.9	90	110	
Mo	95	3	115	50.439	ppb	3.155	19851	50	100.9	90	110	
Ag	107	3	115	49.890	ppb	1.126	66814	50	99.8	90	110	
Cd	111	3	115	50.017	ppb	3.107	9704	50	100.0	90	110	
Sn	120	3	115	48.484	ppb	2.319	30513	50	97.0	90	110	
Sb	121	3	115	50.600	ppb	3.319	30982	50	101.2	90	110	
Ba	137	3	115	51.331	ppb	0.725	10219	50	102.7	90	110	
Tl	205	3	193	48.335	ppb	1.378	153319	50	96.7	90	110	
(Pb)	206	3	193	47.337	ppb	3.170	50888	50	94.7	90	110	
(Pb)	207	3	193	48.518	ppb	4.345	45225	50	97.0	90	110	
Pb	208	3	193	47.683	ppb	2.646	205060	50	95.4	90	110	
Th	232	3	193	48.221	ppb	2.627	212905	50	96.4	90	110	
U	238	3	193	48.753	ppb	2.267	217267	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3440437	2.55	3473788	99.04	60	120	
Sc (IS)	45	3	HMI He	494022	0.62	498630	99.08	60	120	
Ge Internal standard	72	2	HMI H2	2054881	0.11	2241871	91.66	60	120	
Ge Internal standard	72	3	HMI He	617617	0.63	647352	95.41	60	120	
In Internal Standard	115	3	HMI He	2334237	1.39	2356036	99.07	60	120	
Ir (IS)	193	3	HMI He	5241709	1.50	4999588	104.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	382_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:04:28-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	51.074	ppb	5.0	17869	25	>RL
Mg	24	3	45	9.566	ppb	18.5	571	25	
Al	27	3	45	4.129	ppb	24.4	150	15	
K	39	3	45	-5.571	ppb	-284.9	22795	50	
V	51	3	72	-0.198	ppb	-16.9	511	1	
Cr	52	3	72	0.386	ppb	11.1	2269	1	
Mn	55	3	72	0.936	ppb	29.2	463	0.5	>RL
Co	59	3	72	0.060	ppb	22.8	90	0.5	
Ni	60	3	72	0.661	ppb	19.6	588	1	
Cu	63	3	72	0.001	ppb	8107.6	242	1	
Zn	66	3	72	0.609	ppb	12.7	200	5	
As	75	3	72	-0.142	ppb	-215.7	45	1	
Se	78	2	72	0.045	ppb	114.3	3	1	
Sr	88	3	72	0.137	ppb	37.5	72	0.5	
Mo	95	3	115	0.077	ppb	49.4	57	0.5	
Ag	107	3	115	0.011	ppb	69.3	30	1	
Cd	111	3	115	0.009	ppb	168.3	3	0.5	
Sn	120	3	115	0.422	ppb	25.1	761	1	
Sb	121	3	115	0.052	ppb	41.3	58	0.6	
Ba	137	3	115	0.011	ppb	287.6	42	0.5	
Tl	205	3	193	0.039	ppb	14.0	223	0.1	
(Pb)	206	3	193	-0.010	ppb	-277.1	167	1	
(Pb)	207	3	193	0.026	ppb	191.7	313	1	
Pb	208	3	193	-0.004	ppb	-373.0	861	0.5	
Th	232	3	193	1.119	ppb	19.7	11154	1	>RL
U	238	3	193	0.039	ppb	27.9	1423	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3495508	5.71	3473788	100.63	60	120	
Sc (IS)	45	3	HMI He	496974	2.19	498630	99.67	60	120	
Ge Internal standard	72	2	HMI H2	2145320	2.50	2241871	95.69	60	120	
Ge Internal standard	72	3	HMI He	618498	2.13	647352	95.54	60	120	
In Internal Standard	115	3	HMI He	2327851	2.06	2356036	98.80	60	120	
Ir (IS)	193	3	HMI He	5149267	2.39	4999588	102.99	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	383LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:06:17-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.057	ppb	20.698	37	1	105.7	70	130	
Na	23	3	45	303.035	ppb	2.514	39495	300	101.0	70	130	
Mg	24	3	45	51.897	ppb	3.850	2513	50	103.8	70	130	
Al	27	3	45	49.085	ppb	3.054	914	50	98.2	70	130	
K	39	3	45	118.687	ppb	42.223	27394	120	98.9	70	130	
Ca	40	2	45	193.872	ppb	1.482	97750	200	96.9	70	130	
V	51	3	72	4.638	ppb	6.166	2816	5	92.8	70	130	
Cr	52	3	72	1.933	ppb	14.519	3207	2	96.7	70	130	
Mn	55	3	72	1.797	ppb	7.567	735	1	179.7	70	130	>+/-30%
Fe	56	2	72	51.960	ppb	10.187	95368	50	103.9	70	130	
Co	59	3	72	0.994	ppb	6.057	1038	1	99.4	70	130	
Ni	60	3	72	2.097	ppb	6.890	1000	2	104.8	70	130	
Cu	63	3	72	2.003	ppb	6.606	1764	2	100.2	70	130	
Zn	66	3	72	10.089	ppb	10.012	1364	10	100.9	70	130	
As	75	3	72	4.505	ppb	18.191	458	5	90.1	70	130	
Se	78	2	72	5.019	ppb	9.176	223	5	100.4	70	130	
Sr	88	3	72	4.688	ppb	4.681	2002	5	93.8	70	130	
Mo	95	3	115	1.843	ppb	13.336	756	2	92.1	70	130	
Ag	107	3	115	0.937	ppb	7.936	1279	1	93.7	70	130	
Cd	111	3	115	0.987	ppb	12.944	195	1	98.7	70	130	
Sn	120	3	115	8.151	ppb	3.293	5592	10	81.5	70	130	
Sb	121	3	115	1.674	ppb	7.605	1060	2	83.7	70	130	
Ba	137	3	115	0.908	ppb	19.379	222	1	90.8	70	130	
Tl	205	3	193	0.882	ppb	7.585	2856	1	88.2	70	130	
(Pb)	206	3	193	0.867	ppb	11.213	1093	1	86.7	70	130	
(Pb)	207	3	193	0.961	ppb	20.480	1166	1	96.1	70	130	
Pb	208	3	193	0.883	ppb	3.186	4603	1	88.3	70	130	
Th	232	3	193	1.191	ppb	22.052	11486	1	119.1	70	130	
U	238	3	193	0.976	ppb	2.602	5515	1	97.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3399465	0.97	3473788	97.86	60	120	
Sc (IS)	45	3	HMI He	497320	0.78	498630	99.74	60	120	
Ge Internal standard	72	2	HMI H2	2084448	1.47	2241871	92.98	60	120	
Ge Internal standard	72	3	HMI He	624012	1.63	647352	96.39	60	120	
In Internal Standard	115	3	HMI He	2353594	1.10	2356036	99.90	60	120	
Ir (IS)	193	3	HMI He	5161562	1.60	4999588	103.24	60	120	

Sample Report

Sample Table

Sample Name	07658979@10
Data File Name	384SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:08:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.928	ppb	0.928	48.13	33	2000	
Na	23	3	45	125.357	ppb	125.357	5.79	24696	400000	
Mg	24	3	45	5366.143	ppb	5366.143	1.22	250745	400000	
Al	27	3	45	31241.548	ppb	31241.548	0.68	540800	400000	
K	39	3	45	6095.922	ppb	6095.922	1.32	253226	400000	
Ca	40	2	45	111941.197	ppb	111941.197	0.13	53548925	400000	
V	51	3	72	45.515	ppb	45.515	1.33	21634	2000	
Cr	52	3	72	28.168	ppb	28.168	1.02	18285	5000	
Mn	55	3	72	707.646	ppb	707.646	0.86	214068	10000	
Fe	56	2	72	22405.948	ppb	22405.948	1.37	27620391	10000	
Co	59	3	72	8.731	ppb	8.731	4.06	8642	2000	
Ni	60	3	72	22.527	ppb	22.527	2.30	6600	5000	
Cu	63	3	72	29.295	ppb	29.295	1.65	21888	5000	
Zn	66	3	72	56.907	ppb	56.907	2.70	6920	5000	
As	75	3	72	9.104	ppb	9.104	2.64	845	2000	
Se	78	2	72	0.453	ppb	0.453	19.51	21	2000	
Sr	88	3	72	69.963	ppb	69.963	0.72	28863	4000	
Mo	95	3	115	0.915	ppb	0.915	7.94	388	2000	
Ag	107	3	115	0.097	ppb	0.097	47.50	145	100	
Cd	111	3	115	0.342	ppb	0.342	16.04	68	2000	
Sn	120	3	115	2.910	ppb	2.910	6.87	2314	2000	
Sb	121	3	115	0.849	ppb	0.849	11.30	550	1000	
Ba	137	3	115	96.196	ppb	96.196	2.42	19218	5000	
Tl	205	3	193	0.379	ppb	0.379	6.94	1286	2000	
(Pb)	206	3	193	31.175	ppb	31.175	1.56	33077	100	
(Pb)	207	3	193	29.329	ppb	29.329	2.10	27050	100	
Pb	208	3	193	30.021	ppb	30.021	1.58	127509	5000	
Th	232	3	193	4.716	ppb	4.716	1.68	26350	2000	
U	238	3	193	0.845	ppb	0.845	3.76	4944	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3564856	1.17	3473788	102.62	60	120	
Sc (IS)	45	3	HMI He	506412	0.31	498630	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2090245	1.07	2241871	93.24	60	120	
Ge Internal standard	72	3	HMI He	607004	0.75	647352	93.77	60	120	
In Internal Standard	115	3	HMI He	2347148	1.26	2356036	99.62	60	120	
Ir (IS)	193	3	HMI He	5162549	0.54	4999588	103.26	60	120	

Sample Report

Sample Table

Sample Name	07658982@10
Data File Name	385SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:09:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.797	ppb	1.797	42.39	63	2000	
Na	23	3	45	95.296	ppb	95.296	9.31	22323	400000	
Mg	24	3	45	5543.565	ppb	5543.565	2.50	261933	400000	
Al	27	3	45	38000.245	ppb	38000.245	2.17	665085	400000	
K	39	3	45	6975.166	ppb	6975.166	2.27	289554	400000	
Ca	40	2	45	117897.215	ppb	117897.215	0.75	56773553	400000	
V	51	3	72	58.506	ppb	58.506	0.49	28276	2000	
Cr	52	3	72	31.908	ppb	31.908	0.73	20917	5000	
Mn	55	3	72	709.731	ppb	709.731	0.91	219633	10000	
Fe	56	2	72	25350.285	ppb	25350.285	2.08	31812106	10000	
Co	59	3	72	10.531	ppb	10.531	2.05	10655	2000	
Ni	60	3	72	25.756	ppb	25.756	3.25	7660	5000	
Cu	63	3	72	19.638	ppb	19.638	3.37	15086	5000	
Zn	66	3	72	60.884	ppb	60.884	2.66	7563	5000	
As	75	3	72	9.691	ppb	9.691	3.66	916	2000	
Se	78	2	72	0.550	ppb	0.550	30.17	26	2000	
Sr	88	3	72	58.086	ppb	58.086	1.34	24515	4000	
Mo	95	3	115	1.066	ppb	1.066	0.83	458	2000	
Ag	107	3	115	0.100	ppb	0.100	20.76	153	100	
Cd	111	3	115	0.434	ppb	0.434	19.28	88	2000	
Sn	120	3	115	2.334	ppb	2.334	2.59	2001	2000	
Sb	121	3	115	1.213	ppb	1.213	9.84	791	1000	
Ba	137	3	115	121.199	ppb	121.199	2.15	24751	5000	
Tl	205	3	193	0.516	ppb	0.516	7.22	1746	2000	
(Pb)	206	3	193	70.392	ppb	70.392	2.02	75808	100	
(Pb)	207	3	193	66.784	ppb	66.784	0.86	62337	100	
Pb	208	3	193	67.837	ppb	67.837	1.68	292203	5000	
Th	232	3	193	6.659	ppb	6.659	1.11	35164	2000	
U	238	3	193	0.877	ppb	0.877	2.24	5175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588726	1.03	3473788	103.31	60	120	
Sc (IS)	45	3	HMI He	512117	1.23	498630	102.70	60	120	
Ge Internal standard	72	2	HMI H2	2128320	1.32	2241871	94.93	60	120	
Ge Internal standard	72	3	HMI He	620978	1.59	647352	95.93	60	120	
In Internal Standard	115	3	HMI He	2400312	1.06	2356036	101.88	60	120	
Ir (IS)	193	3	HMI He	5256105	0.47	4999588	105.13	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	386SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:27:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	57.494	ppb	57.494	3.68	2022	2000	
Na	23	3	45	33695.150	ppb	33695.150	1.95	3019880	400000	
Mg	24	3	45	201865.456	ppb	201865.456	0.39	9629284	400000	
Al	27	3	45	222653.489	ppb	222653.489	2.14	3936088	400000	
K	39	3	45	6468.337	ppb	6468.337	2.15	272980	400000	
Ca	40	2	45	391851.335	ppb	391851.335	0.88	188680956	400000	
V	51	3	72	53.966	ppb	53.966	3.54	27473	2000	
Cr	52	3	72	5.818	ppb	5.818	6.51	5772	5000	
Mn	55	3	72	11960.918	ppb	11960.918	0.30	3890175	10000	
Fe	56	2	72	739.362	ppb	739.362	1.54	997861	10000	
Co	59	3	72	560.252	ppb	560.252	1.69	594563	2000	
Ni	60	3	72	510.876	ppb	510.876	2.15	151814	5000	
Cu	63	3	72	7.058	ppb	7.058	5.39	5868	5000	
Zn	66	3	72	2624.572	ppb	2624.572	1.73	337356	5000	
As	75	3	72	4.006	ppb	4.006	17.49	433	2000	
Se	78	2	72	13.462	ppb	13.462	1.81	632	2000	
Sr	88	3	72	3220.101	ppb	3220.101	2.22	1428358	4000	
Mo	95	3	115	0.033	ppb	0.033	228.31	40	2000	
Ag	107	3	115	0.024	ppb	0.024	45.94	48	100	
Cd	111	3	115	7.012	ppb	7.012	8.75	1383	2000	
Sn	120	3	115	-0.025	ppb	-0.025	-143.50	493	2000	
Sb	121	3	115	0.061	ppb	0.061	34.83	65	1000	
Ba	137	3	115	9.500	ppb	9.500	7.20	1953	5000	
Tl	205	3	193	0.638	ppb	0.638	7.02	2062	2000	
(Pb)	206	3	193	9.523	ppb	9.523	3.81	10062	100	
(Pb)	207	3	193	9.012	ppb	9.012	2.17	8377	100	
Pb	208	3	193	9.097	ppb	9.097	1.20	38622	5000	
Th	232	3	193	2.333	ppb	2.333	0.96	16044	2000	
U	238	3	193	94.374	ppb	94.374	1.80	406476	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588657	0.80	3473788	103.31	60	120	
Sc (IS)	45	3	HMI He	517252	0.38	498630	103.73	60	120	
Ge Internal standard	72	2	HMI H2	2214043	1.23	2241871	98.76	60	120	
Ge Internal standard	72	3	HMI He	653108	1.47	647352	100.89	60	120	
In Internal Standard	115	3	HMI He	2369554	0.18	2356036	100.57	60	120	
Ir (IS)	193	3	HMI He	5080191	0.81	4999588	101.61	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	387SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:29:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	70.254	ppb	70.254	9.39	2431	2000	
Na	23	3	45	59394.392	ppb	59394.392	2.74	5307639	400000	
Mg	24	3	45	292349.259	ppb	292349.259	2.98	13932331	400000	
Al	27	3	45	87785.857	ppb	87785.857	1.43	1550652	400000	
K	39	3	45	14421.623	ppb	14421.623	1.24	578698	400000	
Ca	40	2	45	412226.099	ppb	412226.099	1.81	194088031	400000	
V	51	3	72	3.770	ppb	3.770	3.02	2496	2000	
Cr	52	3	72	1.269	ppb	1.269	7.66	2924	5000	
Mn	55	3	72	15561.500	ppb	15561.500	1.87	5023625	10000	
Fe	56	2	72	204.667	ppb	204.667	3.68	292333	10000	
Co	59	3	72	713.830	ppb	713.830	1.32	752015	2000	
Ni	60	3	72	604.005	ppb	604.005	2.34	178100	5000	
Cu	63	3	72	4.909	ppb	4.909	8.77	4125	5000	
Zn	66	3	72	3397.456	ppb	3397.456	1.24	433480	5000	
As	75	3	72	2.577	ppb	2.577	16.46	298	2000	
Se	78	2	72	17.438	ppb	17.438	3.59	796	2000	
Sr	88	3	72	4244.391	ppb	4244.391	1.73	1869027	4000	
Mo	95	3	115	0.047	ppb	0.047	92.22	45	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-176.09	13	100	
Cd	111	3	115	10.937	ppb	10.937	3.83	2131	2000	
Sn	120	3	115	-0.117	ppb	-0.117	-71.14	430	2000	
Sb	121	3	115	0.054	ppb	0.054	52.54	60	1000	
Ba	137	3	115	8.439	ppb	8.439	3.09	1719	5000	
Tl	205	3	193	1.916	ppb	1.916	2.82	5982	2000	
(Pb)	206	3	193	9.939	ppb	9.939	3.16	10487	100	
(Pb)	207	3	193	8.851	ppb	8.851	2.54	8227	100	
Pb	208	3	193	9.361	ppb	9.361	1.63	39688	5000	
Th	232	3	193	0.315	ppb	0.315	11.96	7667	2000	
U	238	3	193	172.348	ppb	172.348	1.44	740683	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3510089	2.28	3473788	101.04	60	120	
Sc (IS)	45	3	HMI He	516800	0.45	498630	103.64	60	120	
Ge Internal standard	72	2	HMI H2	2155035	3.24	2241871	96.13	60	120	
Ge Internal standard	72	3	HMI He	648293	0.97	647352	100.15	60	120	
In Internal Standard	115	3	HMI He	2342897	0.67	2356036	99.44	60	120	
Ir (IS)	193	3	HMI He	5075752	0.75	4999588	101.52	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-3-A
Data File Name	388SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:31:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.191	ppb	0.191	115.44	7	2000	
Na	23	3	45	2049.486	ppb	2049.486	1.44	192947	400000	
Mg	24	3	45	7046.825	ppb	7046.825	1.05	329578	400000	
Al	27	3	45	1100.042	ppb	1100.042	5.05	19143	400000	
K	39	3	45	20499.145	ppb	20499.145	0.76	797048	400000	
Ca	40	2	45	43549.435	ppb	43549.435	0.99	20019285	400000	
V	51	3	72	3.339	ppb	3.339	9.79	2264	2000	
Cr	52	3	72	0.941	ppb	0.941	19.91	2699	5000	
Mn	55	3	72	25.635	ppb	25.635	1.30	8392	10000	
Fe	56	2	72	784.525	ppb	784.525	2.21	1032656	10000	
Co	59	3	72	0.907	ppb	0.907	17.31	980	2000	
Ni	60	3	72	1.563	ppb	1.563	8.76	875	5000	
Cu	63	3	72	4.970	ppb	4.970	4.63	4142	5000	
Zn	66	3	72	4.588	ppb	4.588	11.22	711	5000	
As	75	3	72	1.221	ppb	1.221	25.70	172	2000	
Se	78	2	72	0.525	ppb	0.525	23.30	25	2000	
Sr	88	3	72	284.564	ppb	284.564	1.24	124333	4000	
Mo	95	3	115	2.563	ppb	2.563	6.63	1061	2000	
Ag	107	3	115	0.013	ppb	0.013	16.24	33	100	
Cd	111	3	115	0.025	ppb	0.025	58.46	7	2000	
Sn	120	3	115	-0.065	ppb	-0.065	-58.31	473	2000	
Sb	121	3	115	0.312	ppb	0.312	24.93	223	1000	
Ba	137	3	115	62.305	ppb	62.305	0.89	12723	5000	
Tl	205	3	193	0.030	ppb	0.030	42.58	193	2000	
(Pb)	206	3	193	0.928	ppb	0.928	11.23	1133	100	
(Pb)	207	3	193	0.928	ppb	0.928	15.80	1115	100	
Pb	208	3	193	0.910	ppb	0.910	5.95	4625	5000	
Th	232	3	193	0.062	ppb	0.062	44.53	6598	2000	
U	238	3	193	4.331	ppb	4.331	4.48	19756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3425126	2.07	3473788	98.60	60	120	
Sc (IS)	45	3	HMI He	506961	0.48	498630	101.67	60	120	
Ge Internal standard	72	2	HMI H2	2163433	0.85	2241871	96.50	60	120	
Ge Internal standard	72	3	HMI He	643106	0.28	647352	99.34	60	120	
In Internal Standard	115	3	HMI He	2396124	0.37	2356036	101.70	60	120	
Ir (IS)	193	3	HMI He	5061867	1.54	4999588	101.25	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-4-A
Data File Name	389SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:33:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	61.536	ppb	61.536	5.77	2137	2000	
Na	23	3	45	35887.234	ppb	35887.234	2.77	3143321	400000	
Mg	24	3	45	214042.979	ppb	214042.979	1.99	9981178	400000	
Al	27	3	45	236919.724	ppb	236919.724	1.33	4095022	400000	
K	39	3	45	6820.722	ppb	6820.722	1.95	280145	400000	
Ca	40	2	45	426366.865	ppb	426366.865	0.97	196522913	400000	
V	51	3	72	59.057	ppb	59.057	3.89	29004	2000	
Cr	52	3	72	5.974	ppb	5.974	3.39	5675	5000	
Mn	55	3	72	12978.212	ppb	12978.212	0.35	4080146	10000	
Fe	56	2	72	786.997	ppb	786.997	1.86	1024467	10000	
Co	59	3	72	609.090	ppb	609.090	1.60	624816	2000	
Ni	60	3	72	554.486	ppb	554.486	0.17	159263	5000	
Cu	63	3	72	7.296	ppb	7.296	2.16	5853	5000	
Zn	66	3	72	2857.333	ppb	2857.333	1.01	355021	5000	
As	75	3	72	3.699	ppb	3.699	16.87	391	2000	
Se	78	2	72	15.036	ppb	15.036	0.88	682	2000	
Sr	88	3	72	3468.778	ppb	3468.778	1.97	1487373	4000	
Mo	95	3	115	0.098	ppb	0.098	12.61	65	2000	
Ag	107	3	115	0.020	ppb	0.020	10.69	42	100	
Cd	111	3	115	8.386	ppb	8.386	3.28	1629	2000	
Sn	120	3	115	0.062	ppb	0.062	99.53	540	2000	
Sb	121	3	115	0.052	ppb	0.052	18.04	58	1000	
Ba	137	3	115	10.568	ppb	10.568	3.55	2136	5000	
Tl	205	3	193	0.675	ppb	0.675	2.63	2129	2000	
(Pb)	206	3	193	10.122	ppb	10.122	2.80	10457	100	
(Pb)	207	3	193	9.504	ppb	9.504	3.49	8630	100	
Pb	208	3	193	9.742	ppb	9.742	2.08	40417	5000	
Th	232	3	193	2.064	ppb	2.064	6.25	14605	2000	
U	238	3	193	101.861	ppb	101.861	2.01	429270	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3435380	0.58	3473788	98.89	60	120	
Sc (IS)	45	3	HMI He	505726	1.29	498630	101.42	60	120	
Ge Internal standard	72	2	HMI H2	2139445	1.02	2241871	95.43	60	120	
Ge Internal standard	72	3	HMI He	631279	1.04	647352	97.52	60	120	
In Internal Standard	115	3	HMI He	2335127	0.50	2356036	99.11	60	120	
Ir (IS)	193	3	HMI He	4972439	1.44	4999588	99.46	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	390SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:34:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	18419.688	ppb	18419.688	2.28	1615246	400000	
Mg	24	3	45	12309.509	ppb	12309.509	2.34	572438	400000	
Al	27	3	45	45.650	ppb	45.650	12.02	868	400000	
K	39	3	45	7216.587	ppb	7216.587	2.20	294166	400000	
Ca	40	2	45	49091.953	ppb	49091.953	0.87	22809741	400000	
V	51	3	72	22.839	ppb	22.839	4.47	11781	2000	
Cr	52	3	72	1.153	ppb	1.153	18.15	2821	5000	
Mn	55	3	72	6.432	ppb	6.432	6.10	2236	10000	
Fe	56	2	72	7.855	ppb	7.855	22.15	41431	10000	
Co	59	3	72	0.178	ppb	0.178	24.95	217	2000	
Ni	60	3	72	0.443	ppb	0.443	12.50	546	5000	
Cu	63	3	72	0.447	ppb	0.447	14.73	598	5000	
Zn	66	3	72	2.466	ppb	2.466	5.18	441	5000	
As	75	3	72	14.009	ppb	14.009	4.38	1341	2000	
Se	78	2	72	4.047	ppb	4.047	5.74	181	2000	
Sr	88	3	72	257.823	ppb	257.823	2.23	112334	4000	
Mo	95	3	115	9.181	ppb	9.181	7.10	3709	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-183.27	13	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.121	ppb	-0.121	-85.10	436	2000	
Sb	121	3	115	0.293	ppb	0.293	2.00	210	1000	
Ba	137	3	115	40.398	ppb	40.398	2.17	8220	5000	
Tl	205	3	193	0.002	ppb	0.002	151.82	103	2000	
(Pb)	206	3	193	0.069	ppb	0.069	58.51	240	100	
(Pb)	207	3	193	0.053	ppb	0.053	35.96	325	100	
Pb	208	3	193	0.019	ppb	0.019	119.97	920	5000	
Th	232	3	193	-0.485	ppb	-0.485	-13.85	4227	2000	
U	238	3	193	1.795	ppb	1.795	2.44	8684	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3461661	0.15	3473788	99.65	60	120	
Sc (IS)	45	3	HMI He	504276	1.61	498630	101.13	60	120	
Ge Internal standard	72	2	HMI H2	2093081	2.55	2241871	93.36	60	120	
Ge Internal standard	72	3	HMI He	641400	1.03	647352	99.08	60	120	
In Internal Standard	115	3	HMI He	2384445	3.25	2356036	101.21	60	120	
Ir (IS)	193	3	HMI He	4932886	1.56	4999588	98.67	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	391SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:36:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	3541.552	ppb	3541.552	1.00	314209	400000	
Mg	24	3	45	2505.806	ppb	2505.806	1.21	113943	400000	
Al	27	3	45	20.696	ppb	20.696	25.33	427	400000	
K	39	3	45	1435.278	ppb	1435.278	3.79	75414	400000	
Ca	40	2	45	10061.356	ppb	10061.356	1.51	4609923	400000	
V	51	3	72	4.424	ppb	4.424	0.74	2754	2000	
Cr	52	3	72	0.080	ppb	0.080	582.26	2139	5000	
Mn	55	3	72	3.862	ppb	3.862	8.14	1398	10000	
Fe	56	2	72	6.634	ppb	6.634	33.38	40778	10000	
Co	59	3	72	0.052	ppb	0.052	69.22	85	2000	
Ni	60	3	72	0.264	ppb	0.264	35.75	488	5000	
Cu	63	3	72	0.208	ppb	0.208	17.54	406	5000	
Zn	66	3	72	4.381	ppb	4.381	4.53	675	5000	
As	75	3	72	2.448	ppb	2.448	1.88	280	2000	
Se	78	2	72	0.799	ppb	0.799	21.16	37	2000	
Sr	88	3	72	52.251	ppb	52.251	0.65	22499	4000	
Mo	95	3	115	1.831	ppb	1.831	4.96	745	2000	
Ag	107	3	115	0.010	ppb	0.010	53.36	28	100	
Cd	111	3	115	0.009	ppb	0.009	167.98	3	2000	
Sn	120	3	115	0.194	ppb	0.194	31.93	620	2000	
Sb	121	3	115	0.112	ppb	0.112	19.16	95	1000	
Ba	137	3	115	8.706	ppb	8.706	3.23	1764	5000	
Tl	205	3	193	0.004	ppb	0.004	217.27	113	2000	
(Pb)	206	3	193	0.468	ppb	0.468	14.11	651	100	
(Pb)	207	3	193	0.363	ppb	0.363	17.62	603	100	
Pb	208	3	193	0.416	ppb	0.416	4.23	2554	5000	
Th	232	3	193	-0.537	ppb	-0.537	-8.34	4082	2000	
U	238	3	193	0.368	ppb	0.368	5.28	2779	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3408161	2.36	3473788	98.11	60	120	
Sc (IS)	45	3	HMI He	492547	1.10	498630	98.78	60	120	
Ge Internal standard	72	2	HMI H2	2136703	1.92	2241871	95.31	60	120	
Ge Internal standard	72	3	HMI He	633440	0.45	647352	97.85	60	120	
In Internal Standard	115	3	HMI He	2330819	2.35	2356036	98.93	60	120	
Ir (IS)	193	3	HMI He	5009270	1.36	4999588	100.19	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	392SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:38:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.207	ppb	39.207	7.78	1378	2000	
Na	23	3	45	19480.306	ppb	19480.306	1.33	1728598	400000	
Mg	24	3	45	13388.974	ppb	13388.974	1.63	630430	400000	
Al	27	3	45	765.165	ppb	765.165	0.89	13430	400000	
K	39	3	45	7945.808	ppb	7945.808	0.99	325515	400000	
Ca	40	2	45	51131.967	ppb	51131.967	3.26	23882414	400000	
V	51	3	72	62.212	ppb	62.212	2.50	31224	2000	
Cr	52	3	72	38.609	ppb	38.609	3.21	25868	5000	
Mn	55	3	72	43.238	ppb	43.238	4.31	14083	10000	
Fe	56	2	72	766.595	ppb	766.595	3.16	1023389	10000	
Co	59	3	72	37.254	ppb	37.254	0.87	39126	2000	
Ni	60	3	72	37.572	ppb	37.572	5.04	11429	5000	
Cu	63	3	72	39.360	ppb	39.360	1.70	31198	5000	
Zn	66	3	72	39.679	ppb	39.679	3.54	5173	5000	
As	75	3	72	49.640	ppb	49.640	1.52	4633	2000	
Se	78	2	72	43.010	ppb	43.010	0.78	1997	2000	
Sr	88	3	72	333.804	ppb	333.804	1.06	146438	4000	
Mo	95	3	115	47.154	ppb	47.154	1.83	19022	2000	
Ag	107	3	115	37.646	ppb	37.646	3.22	51651	100	
Cd	111	3	115	36.478	ppb	36.478	0.97	7252	2000	
Sn	120	3	115	36.118	ppb	36.118	1.80	23421	2000	
Sb	121	3	115	37.368	ppb	37.368	1.09	23456	1000	
Ba	137	3	115	79.975	ppb	79.975	2.04	16289	5000	
Tl	205	3	193	36.763	ppb	36.763	3.16	115919	2000	
(Pb)	206	3	193	37.213	ppb	37.213	2.32	39813	100	
(Pb)	207	3	193	36.573	ppb	36.573	3.51	33965	100	
Pb	208	3	193	37.184	ppb	37.184	2.60	159155	5000	
Th	232	3	193	33.844	ppb	33.844	0.10	150532	2000	
U	238	3	193	39.208	ppb	39.208	3.14	173917	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3481658	2.44	3473788	100.23	60	120	
Sc (IS)	45	3	HMI He	510434	1.16	498630	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2193078	1.58	2241871	97.82	60	120	
Ge Internal standard	72	3	HMI He	645747	0.79	647352	99.75	60	120	
In Internal Standard	115	3	HMI He	2391645	1.14	2356036	101.51	60	120	
Ir (IS)	193	3	HMI He	5210834	1.64	4999588	104.23	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	393SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:40:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	36.759	ppb	36.759	4.99	1293	2000	
Na	23	3	45	19113.012	ppb	19113.012	2.74	1669742	400000	
Mg	24	3	45	13348.269	ppb	13348.269	0.66	618719	400000	
Al	27	3	45	806.758	ppb	806.758	1.97	13938	400000	
K	39	3	45	7942.091	ppb	7942.091	2.52	320317	400000	
Ca	40	2	45	47753.423	ppb	47753.423	0.66	23027642	400000	
V	51	3	72	60.549	ppb	60.549	1.49	30857	2000	
Cr	52	3	72	38.913	ppb	38.913	3.25	26440	5000	
Mn	55	3	72	41.943	ppb	41.943	1.46	13872	10000	
Fe	56	2	72	766.921	ppb	766.921	0.85	1028950	10000	
Co	59	3	72	37.122	ppb	37.122	0.59	39562	2000	
Ni	60	3	72	37.699	ppb	37.699	0.71	11637	5000	
Cu	63	3	72	39.056	ppb	39.056	0.51	31418	5000	
Zn	66	3	72	54.369	ppb	54.369	0.41	7143	5000	
As	75	3	72	49.786	ppb	49.786	3.15	4715	2000	
Se	78	2	72	42.982	ppb	42.982	1.30	2005	2000	
Sr	88	3	72	327.212	ppb	327.212	0.64	145669	4000	
Mo	95	3	115	46.842	ppb	46.842	2.87	18819	2000	
Ag	107	3	115	37.928	ppb	37.928	3.12	51834	100	
Cd	111	3	115	37.242	ppb	37.242	2.43	7373	2000	
Sn	120	3	115	36.609	ppb	36.609	2.99	23636	2000	
Sb	121	3	115	37.620	ppb	37.620	2.47	23517	1000	
Ba	137	3	115	78.288	ppb	78.288	1.49	15883	5000	
Tl	205	3	193	38.074	ppb	38.074	1.69	119846	2000	
(Pb)	206	3	193	37.098	ppb	37.098	0.96	39615	100	
(Pb)	207	3	193	37.752	ppb	37.752	2.29	34991	100	
Pb	208	3	193	37.163	ppb	37.163	1.50	158788	5000	
Th	232	3	193	36.607	ppb	36.607	1.63	161964	2000	
U	238	3	193	39.369	ppb	39.369	1.19	174328	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3592736	0.76	3473788	103.42	60	120	
Sc (IS)	45	3	HMI He	502539	1.38	498630	100.78	60	120	
Ge Internal standard	72	2	HMI H2	2203451	1.02	2241871	98.29	60	120	
Ge Internal standard	72	3	HMI He	655287	0.87	647352	101.23	60	120	
In Internal Standard	115	3	HMI He	2382269	1.27	2356036	101.11	60	120	
Ir (IS)	193	3	HMI He	5200403	0.17	4999588	104.02	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	394_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:42:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.456	ppb	7.297	1758	50	98.9	90	110	
Na	23	3	45	48700.813	ppb	0.971	4233139	51000	95.5	90	110	
Mg	24	3	45	10225.766	ppb	1.644	473810	11000	93.0	90	110	
Al	27	3	45	1014.723	ppb	3.033	17498	1000	101.5	90	110	
K	39	3	45	10413.195	ppb	2.610	412564	11000	94.7	90	110	
Ca	40	2	45	10254.651	ppb	3.577	4822449	11000	93.2	90	110	
V	51	3	72	53.251	ppb	1.868	25614	50	106.5	90	110	
Cr	52	3	72	53.333	ppb	0.553	33347	50	106.7	90	110	
Mn	55	3	72	53.530	ppb	1.920	16613	50	107.1	90	110	
Fe	56	2	72	1054.357	ppb	2.710	1335865	1000	105.4	90	110	
Co	59	3	72	51.470	ppb	1.996	51597	50	102.9	90	110	
Ni	60	3	72	51.848	ppb	1.567	14911	50	103.7	90	110	
Cu	63	3	72	52.815	ppb	1.203	39893	50	105.6	90	110	
Zn	66	3	72	53.560	ppb	3.368	6623	50	107.1	90	110	
As	75	3	72	50.679	ppb	2.866	4517	50	101.4	90	110	
Se	78	2	72	54.931	ppb	3.605	2441	50	109.9	90	110	
Sr	88	3	72	105.285	ppb	1.661	44109	100	105.3	90	110	
Mo	95	3	115	49.917	ppb	0.658	20282	50	99.8	90	110	
Ag	107	3	115	49.180	ppb	3.617	67970	50	98.4	90	110	
Cd	111	3	115	48.955	ppb	3.140	9804	50	97.9	90	110	
Sn	120	3	115	47.171	ppb	3.740	30652	50	94.3	90	110	
Sb	121	3	115	49.597	ppb	1.236	31351	50	99.2	90	110	
Ba	137	3	115	48.447	ppb	1.341	9955	50	96.9	90	110	
Tl	205	3	193	50.129	ppb	0.673	154308	50	100.3	90	110	
(Pb)	206	3	193	49.211	ppb	0.806	51341	50	98.4	90	110	
(Pb)	207	3	193	50.439	ppb	1.556	45633	50	100.9	90	110	
Pb	208	3	193	49.603	ppb	0.795	207004	50	99.2	90	110	
Th	232	3	193	51.032	ppb	1.911	218342	50	102.1	90	110	
U	238	3	193	50.551	ppb	0.720	218575	50	101.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3500221	2.68	3473788	100.76	60	120	
Sc (IS)	45	3	HMI He	502384	1.62	498630	100.75	60	120	
Ge Internal standard	72	2	HMI H2	2099975	1.87	2241871	93.67	60	120	
Ge Internal standard	72	3	HMI He	616598	1.20	647352	95.25	60	120	
In Internal Standard	115	3	HMI He	2409117	0.63	2356036	102.25	60	120	
Ir (IS)	193	3	HMI He	5086348	0.73	4999588	101.74	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	395_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:44:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	40.231	ppb	8.5	17234	25	>RL
Mg	24	3	45	5.742	ppb	36.8	404	25	
Al	27	3	45	4.197	ppb	65.4	153	15	
K	39	3	45	-1.082	ppb	-2842.9	23360	50	
V	51	3	72	-0.061	ppb	-483.0	596	1	
Cr	52	3	72	-0.123	ppb	-103.7	2041	1	
Mn	55	3	72	0.759	ppb	23.6	423	0.5	>RL
Co	59	3	72	0.044	ppb	44.5	77	0.5	
Ni	60	3	72	0.342	ppb	14.9	516	1	
Cu	63	3	72	0.059	ppb	74.5	295	1	
Zn	66	3	72	0.882	ppb	25.4	242	5	
As	75	3	72	-0.192	ppb	-195.9	42	1	
Se	78	2	72	0.043	ppb	150.4	3	1	
Sr	88	3	72	0.084	ppb	27.4	52	0.5	
Mo	95	3	115	0.013	ppb	109.8	32	0.5	
Ag	107	3	115	0.011	ppb	116.1	30	1	
Cd	111	3	115	0.009	ppb	170.8	3	0.5	
Sn	120	3	115	0.198	ppb	42.4	628	1	
Sb	121	3	115	0.048	ppb	140.8	57	0.6	
Ba	137	3	115	0.034	ppb	308.6	47	0.5	
Tl	205	3	193	0.036	ppb	16.9	217	0.1	
(Pb)	206	3	193	-0.005	ppb	-769.3	173	1	
(Pb)	207	3	193	-0.002	ppb	-2319.7	292	1	
Pb	208	3	193	-0.019	ppb	-45.1	805	0.5	
Th	232	3	193	1.368	ppb	16.6	12295	1	>RL
U	238	3	193	0.034	ppb	103.4	1411	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3540753	0.45	3473788	101.93	60	120	
Sc (IS)	45	3	HMI He	505641	1.51	498630	101.41	60	120	
Ge Internal standard	72	2	HMI H2	2166207	2.15	2241871	96.62	60	120	
Ge Internal standard	72	3	HMI He	640795	0.97	647352	98.99	60	120	
In Internal Standard	115	3	HMI He	2351369	0.83	2356036	99.80	60	120	
Ir (IS)	193	3	HMI He	5189898	1.86	4999588	103.81	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	396LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:45:49-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	-73.618	ppb	-1.424	14282	300	-24.5	70	130	>+/-30%
Mg	24	3	45	1.241	ppb	80.699	377	50	2.5	70	130	>+/-30%
Al	27	3	45	0.121	ppb	420.408	163	50	0.2	70	130	>+/-30%
K	39	3	45	-324.308	ppb	-3.422	21869	120	-270.3	70	130	>+/-30%
Ca	40	2	45	-1.466	ppb	-85.353	15822	200	-0.7	70	130	>+/-30%
V	51	3	72	-1.079	ppb	-2.722	187	5	-21.6	70	130	>+/-30%
Cr	52	3	72	-2.851	ppb	-1.383	700	2	-142.5	70	130	>+/-30%
Mn	55	3	72	-0.004	ppb	-2999.456	335	1	-0.4	70	130	>+/-30%
Fe	56	2	72	-19.070	ppb	-9.233	14753	50	-38.1	70	130	>+/-30%
Co	59	3	72	-0.013	ppb	-45.522	33	1	-1.3	70	130	>+/-30%
Ni	60	3	72	-1.302	ppb	-1.975	72	2	-65.1	70	130	>+/-30%
Cu	63	3	72	-0.135	ppb	-25.834	268	2	-6.7	70	130	>+/-30%
Zn	66	3	72	-0.253	ppb	-13.329	183	10	-2.5	70	130	>+/-30%
As	75	3	72	-0.490	ppb	-16.201	27	5	-9.8	70	130	>+/-30%
Se	78	2	72	0.006	ppb	276.431	3	5	0.1	70	130	>+/-30%
Sr	88	3	72	0.041	ppb	83.538	60	5	0.8	70	130	>+/-30%
Mo	95	3	115	-0.051	ppb	-21.298	12	2	-2.5	70	130	>+/-30%
Ag	107	3	115	0.000	ppb	1117.419	28	1	0.0	70	130	>+/-30%
Cd	111	3	115	-0.004	ppb	-207.644	2	1	-0.4	70	130	>+/-30%
Sn	120	3	115	-0.628	ppb	-0.265	207	10	-6.3	70	130	>+/-30%
Sb	121	3	115	-0.018	ppb	-49.144	28	2	-0.9	70	130	>+/-30%
Ba	137	3	115	-0.122	ppb	-32.170	28	1	-12.2	70	130	>+/-30%
Tl	205	3	193	-0.007	ppb	-26.182	152	1	-0.7	70	130	>+/-30%
(Pb)	206	3	193	-0.061	ppb	-36.572	213	1	-6.1	70	130	>+/-30%
(Pb)	207	3	193	-0.066	ppb	-52.992	436	1	-6.6	70	130	>+/-30%
Pb	208	3	193	-0.076	ppb	-15.571	1054	1	-7.6	70	130	>+/-30%
Th	232	3	193	-0.660	ppb	-4.678	6952	1	-66.0	70	130	>+/-30%
U	238	3	193	0.011	ppb	206.313	2466	1	1.1	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6227566	3.45	3473788	179.27	60	120	IS Failed
Sc (IS)	45	3	HMI He	988217	2.41	498630	198.19	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3733041	2.35	2241871	166.51	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1194015	3.57	647352	184.45	60	120	IS Failed
In Internal Standard	115	3	HMI He	4299938	1.36	2356036	182.51	60	120	IS Failed
Ir (IS)	193	3	HMI He	9741451	2.37	4999588	194.85	60	120	IS Failed

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-
Data File Name	397LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:47:37-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	39.475	ppb	8.819	17245	300	13.2	70	130	>+/-30%
Mg	24	3	45	9.855	ppb	14.760	597	50	19.7	70	130	>+/-30%
Al	27	3	45	12.603	ppb	17.622	300	50	25.2	70	130	>+/-30%
K	39	3	45	-14.193	ppb	-66.082	22962	120	-11.8	70	130	>+/-30%
Ca	40	2	45	20.616	ppb	1.619	19259	200	10.3	70	130	>+/-30%
V	51	3	72	-0.105	ppb	-93.513	573	5	-2.1	70	130	>+/-30%
Cr	52	3	72	-0.019	ppb	-1576.937	2096	2	-0.9	70	130	>+/-30%
Mn	55	3	72	1.498	ppb	11.233	656	1	149.8	70	130	>+/-30%
Fe	56	2	72	2.378	ppb	68.794	35722	50	4.8	70	130	>+/-30%
Co	59	3	72	0.071	ppb	7.904	105	1	7.1	70	130	>+/-30%
Ni	60	3	72	0.315	ppb	14.502	506	2	15.7	70	130	>+/-30%
Cu	63	3	72	0.101	ppb	32.870	327	2	5.1	70	130	>+/-30%
Zn	66	3	72	1.277	ppb	17.080	290	10	12.8	70	130	>+/-30%
As	75	3	72	-0.245	ppb	-46.442	37	5	-4.9	70	130	>+/-30%
Se	78	2	72	0.074	ppb	35.140	5	5	1.5	70	130	>+/-30%
Sr	88	3	72	0.323	ppb	6.721	155	5	6.5	70	130	>+/-30%
Mo	95	3	115	0.093	ppb	50.985	63	2	4.6	70	130	>+/-30%
Ag	107	3	115	0.011	ppb	36.391	30	1	1.1	70	130	>+/-30%
Cd	111	3	115	0.017	ppb	148.114	5	1	1.7	70	130	>+/-30%
Sn	120	3	115	0.278	ppb	41.460	683	10	2.8	70	130	>+/-30%
Sb	121	3	115	0.029	ppb	25.903	45	2	1.5	70	130	>+/-30%
Ba	137	3	115	0.158	ppb	62.332	72	1	15.8	70	130	>+/-30%
Tl	205	3	193	0.002	ppb	326.361	108	1	0.2	70	130	>+/-30%
(Pb)	206	3	193	0.053	ppb	81.745	230	1	5.3	70	130	>+/-30%
(Pb)	207	3	193	0.041	ppb	154.180	323	1	4.1	70	130	>+/-30%
Pb	208	3	193	0.034	ppb	56.298	1008	1	3.4	70	130	>+/-30%
Th	232	3	193	3.298	ppb	2.429	20054	1	329.8	70	130	>+/-30%
U	238	3	193	0.018	ppb	134.345	1314	1	1.8	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3497024	1.74	3473788	100.67	60	120	
Sc (IS)	45	3	HMI He	507869	0.92	498630	101.85	60	120	
Ge Internal standard	72	2	HMI H2	2156273	0.85	2241871	96.18	60	120	
Ge Internal standard	72	3	HMI He	638056	0.95	647352	98.56	60	120	
In Internal Standard	115	3	HMI He	2365538	2.05	2356036	100.40	60	120	
Ir (IS)	193	3	HMI He	5081653	1.35	4999588	101.64	60	120	

Sample Report

Sample Table

Sample Name	174893-2
Data File Name	398SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:49:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	92563.341	ppb	92563.341	2.29	9995057	400000	
Mg	24	3	45	33494.216	ppb	33494.216	2.03	1930933	400000	
Al	27	3	45	9.324	ppb	9.324	33.48	300	400000	
K	39	3	45	1271.894	ppb	1271.894	4.68	88093	400000	
Ca	40	2	45	52750.583	ppb	52750.583	0.95	31463243	400000	
V	51	3	72	-1.009	ppb	-1.009	-10.90	163	2000	
Cr	52	3	72	-0.637	ppb	-0.637	-33.72	2106	5000	
Mn	55	3	72	694.239	ppb	694.239	2.64	270383	10000	
Fe	56	2	72	-4.512	ppb	-4.512	-181.09	33754	10000	
Co	59	3	72	1.971	ppb	1.971	6.16	2541	2000	
Ni	60	3	72	1.376	ppb	1.376	17.44	996	5000	
Cu	63	3	72	0.595	ppb	0.595	24.57	870	5000	
Zn	66	3	72	2.597	ppb	2.597	6.92	558	5000	
As	75	3	72	1.952	ppb	1.952	27.93	290	2000	
Se	78	2	72	0.134	ppb	0.134	52.82	9	2000	
Sr	88	3	72	460.103	ppb	460.103	0.93	244282	4000	
Mo	95	3	115	1.761	ppb	1.761	14.91	891	2000	
Ag	107	3	115	0.003	ppb	0.003	254.77	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.618	ppb	-0.618	-6.06	147	2000	
Sb	121	3	115	0.005	ppb	0.005	525.86	37	1000	
Ba	137	3	115	269.881	ppb	269.881	2.06	66343	5000	
Tl	205	3	193	0.015	ppb	0.015	134.47	178	2000	
(Pb)	206	3	193	-0.052	ppb	-0.052	-40.38	147	100	
(Pb)	207	3	193	-0.030	ppb	-0.030	-88.61	317	100	
Pb	208	3	193	-0.055	ppb	-0.055	-10.39	778	5000	
Th	232	3	193	-0.645	ppb	-0.645	-8.56	4494	2000	
U	238	3	193	0.100	ppb	0.100	7.14	2032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4443960	0.30	3473788	127.93	60	120	IS Failed
Sc (IS)	45	3	HMI He	625140	1.01	498630	125.37	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2705005	1.12	2241871	120.66	60	120	IS Failed
Ge Internal standard	72	3	HMI He	781543	0.92	647352	120.73	60	120	IS Failed
In Internal Standard	115	3	HMI He	2891916	0.97	2356036	122.75	60	120	IS Failed
Ir (IS)	193	3	HMI He	6189589	1.55	4999588	123.80	60	120	IS Failed

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	399SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:52:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	2.163	ppb	2.163	147.80	15521	400000	
Mg	24	3	45	7.217	ppb	7.217	145.85	527	400000	
Al	27	3	45	3.421	ppb	3.421	100.35	157	400000	
K	39	3	45	-45.867	ppb	-45.867	-13.34	24165	400000	
Ca	40	2	45	-1.732	ppb	-1.732	-55.91	9950	400000	
V	51	3	72	-0.928	ppb	-0.928	-3.83	192	2000	
Cr	52	3	72	-0.537	ppb	-0.537	-23.68	1969	5000	
Mn	55	3	72	0.540	ppb	0.540	36.15	390	10000	
Fe	56	2	72	7.029	ppb	7.029	47.56	45548	10000	
Co	59	3	72	0.030	ppb	0.030	46.03	68	2000	
Ni	60	3	72	0.095	ppb	0.095	223.80	490	5000	
Cu	63	3	72	-0.100	ppb	-0.100	-49.54	188	5000	
Zn	66	3	72	-0.025	ppb	-0.025	-747.66	140	5000	
As	75	3	72	-0.499	ppb	-0.499	-9.84	15	2000	
Se	78	2	72	0.012	ppb	0.012	585.99	2	2000	
Sr	88	3	72	0.115	ppb	0.115	72.12	72	4000	
Mo	95	3	115	-0.010	ppb	-0.010	-95.93	25	2000	
Ag	107	3	115	0.004	ppb	0.004	112.24	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.517	ppb	-0.517	-6.84	203	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-19.22	17	1000	
Ba	137	3	115	-0.043	ppb	-0.043	-173.14	35	5000	
Tl	205	3	193	0.002	ppb	0.002	99.04	118	2000	
(Pb)	206	3	193	-0.050	ppb	-0.050	-33.34	135	100	
(Pb)	207	3	193	0.021	ppb	0.021	363.29	335	100	
Pb	208	3	193	-0.044	ppb	-0.044	-44.39	751	5000	
Th	232	3	193	-0.661	ppb	-0.661	-2.82	3989	2000	
U	238	3	193	0.011	ppb	0.011	265.60	1414	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3966819	1.05	3473788	114.19	60	120	
Sc (IS)	45	3	HMI He	563892	0.40	498630	113.09	60	120	
Ge Internal standard	72	2	HMI H2	2357552	0.68	2241871	105.16	60	120	
Ge Internal standard	72	3	HMI He	705615	0.58	647352	109.00	60	120	
In Internal Standard	115	3	HMI He	2618086	2.56	2356036	111.12	60	120	
Ir (IS)	193	3	HMI He	5590669	1.64	4999588	111.82	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	400SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:54:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.046	ppb	0.046	173.21	2	2000	
Na	23	3	45	-4.869	ppb	-4.869	-92.13	14692	400000	
Mg	24	3	45	2.732	ppb	2.732	36.49	290	400000	
Al	27	3	45	1.751	ppb	1.751	42.00	123	400000	
K	39	3	45	-40.425	ppb	-40.425	-33.27	24165	400000	
Ca	40	2	45	-0.980	ppb	-0.980	-18.72	10291	400000	
V	51	3	72	-0.876	ppb	-0.876	-5.61	218	2000	
Cr	52	3	72	-0.561	ppb	-0.561	-27.88	1944	5000	
Mn	55	3	72	0.532	ppb	0.532	5.19	385	10000	
Fe	56	2	72	2.515	ppb	2.515	71.30	39449	10000	
Co	59	3	72	0.006	ppb	0.006	143.51	42	2000	
Ni	60	3	72	-0.087	ppb	-0.087	-287.87	430	5000	
Cu	63	3	72	-0.054	ppb	-0.054	-52.49	227	5000	
Zn	66	3	72	-0.358	ppb	-0.358	-31.60	93	5000	
As	75	3	72	-0.415	ppb	-0.415	-13.97	23	2000	
Se	78	2	72	-0.002	ppb	-0.002	-1455.33	1	2000	
Sr	88	3	72	0.085	ppb	0.085	52.24	57	4000	
Mo	95	3	115	0.090	ppb	0.090	204.75	68	2000	
Ag	107	3	115	0.000	ppb	0.000	1431.34	17	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.564	ppb	-0.564	-11.84	168	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-81.95	17	1000	
Ba	137	3	115	-0.048	ppb	-0.048	-138.17	33	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-510.26	107	2000	
(Pb)	206	3	193	-0.027	ppb	-0.027	-139.03	162	100	
(Pb)	207	3	193	-0.031	ppb	-0.031	-21.89	285	100	
Pb	208	3	193	-0.044	ppb	-0.044	-37.00	753	5000	
Th	232	3	193	-0.655	ppb	-0.655	-6.07	4022	2000	
U	238	3	193	0.004	ppb	0.004	332.58	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3943350	0.35	3473788	113.52	60	120	
Sc (IS)	45	3	HMI He	558532	0.99	498630	112.01	60	120	
Ge Internal standard	72	2	HMI H2	2367361	1.70	2241871	105.60	60	120	
Ge Internal standard	72	3	HMI He	702394	0.59	647352	108.50	60	120	
In Internal Standard	115	3	HMI He	2585407	0.39	2356036	109.74	60	120	
Ir (IS)	193	3	HMI He	5599036	1.15	4999588	111.99	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	401SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:56:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	-7.750	ppb	-7.750	-91.28	14586	400000	
Mg	24	3	45	2.228	ppb	2.228	71.13	267	400000	
Al	27	3	45	1.348	ppb	1.348	281.41	117	400000	
K	39	3	45	-51.495	ppb	-51.495	-42.39	23978	400000	
Ca	40	2	45	-1.079	ppb	-1.079	-101.32	10070	400000	
V	51	3	72	-0.905	ppb	-0.905	-8.26	203	2000	
Cr	52	3	72	-0.578	ppb	-0.578	-4.41	1938	5000	
Mn	55	3	72	0.386	ppb	0.386	63.12	335	10000	
Fe	56	2	72	2.135	ppb	2.135	120.75	39355	10000	
Co	59	3	72	0.012	ppb	0.012	101.78	48	2000	
Ni	60	3	72	0.217	ppb	0.217	79.34	528	5000	
Cu	63	3	72	-0.067	ppb	-0.067	-35.07	217	5000	
Zn	66	3	72	-0.263	ppb	-0.263	-37.06	107	5000	
As	75	3	72	-0.449	ppb	-0.449	-21.87	20	2000	
Se	78	2	72	-0.002	ppb	-0.002	-989.43	1	2000	
Sr	88	3	72	0.112	ppb	0.112	66.55	70	4000	
Mo	95	3	115	0.001	ppb	0.001	3396.36	30	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-311.70	15	100	
Cd	111	3	115	-0.001	ppb	-0.001	-1970.04	2	2000	
Sn	120	3	115	-0.524	ppb	-0.524	-11.56	198	2000	
Sb	121	3	115	0.003	ppb	0.003	729.89	32	1000	
Ba	137	3	115	-0.140	ppb	-0.140	-8.77	13	5000	
Tl	205	3	193	0.005	ppb	0.005	102.40	130	2000	
(Pb)	206	3	193	-0.042	ppb	-0.042	-60.21	145	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-14.82	258	100	
Pb	208	3	193	-0.059	ppb	-0.059	-17.53	686	5000	
Th	232	3	193	-0.615	ppb	-0.615	-5.86	4212	2000	
U	238	3	193	0.027	ppb	0.027	44.68	1493	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3877667	0.76	3473788	111.63	60	120	
Sc (IS)	45	3	HMI He	565139	0.61	498630	113.34	60	120	
Ge Internal standard	72	2	HMI H2	2396270	1.30	2241871	106.89	60	120	
Ge Internal standard	72	3	HMI He	704309	0.92	647352	108.80	60	120	
In Internal Standard	115	3	HMI He	2620830	1.43	2356036	111.24	60	120	
Ir (IS)	193	3	HMI He	5605741	0.81	4999588	112.12	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	402SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:58:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	-12.538	ppb	-12.538	-58.65	14235	400000	
Mg	24	3	45	2.500	ppb	2.500	31.41	284	400000	
Al	27	3	45	1.970	ppb	1.970	43.94	130	400000	
K	39	3	45	-46.022	ppb	-46.022	-64.64	24409	400000	
Ca	40	2	45	0.287	ppb	0.287	206.32	11042	400000	
V	51	3	72	-0.966	ppb	-0.966	-9.52	172	2000	
Cr	52	3	72	-0.684	ppb	-0.684	-31.43	1878	5000	
Mn	55	3	72	0.358	ppb	0.358	47.88	327	10000	
Fe	56	2	72	2.229	ppb	2.229	91.65	39322	10000	
Co	59	3	72	0.016	ppb	0.016	30.64	53	2000	
Ni	60	3	72	0.105	ppb	0.105	25.15	495	5000	
Cu	63	3	72	-0.068	ppb	-0.068	-40.00	217	5000	
Zn	66	3	72	-0.114	ppb	-0.114	-389.09	128	5000	
As	75	3	72	-0.533	ppb	-0.533	-19.28	12	2000	
Se	78	2	72	0.024	ppb	0.024	90.94	3	2000	
Sr	88	3	72	0.073	ppb	0.073	35.90	52	4000	
Mo	95	3	115	-0.029	ppb	-0.029	-121.97	17	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-28.18	7	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.593	ppb	-0.593	-1.57	152	2000	
Sb	121	3	115	-0.026	ppb	-0.026	-31.77	12	1000	
Ba	137	3	115	-0.096	ppb	-0.096	-35.74	23	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-285.93	107	2000	
(Pb)	206	3	193	-0.056	ppb	-0.056	-43.58	128	100	
(Pb)	207	3	193	-0.047	ppb	-0.047	-86.00	268	100	
Pb	208	3	193	-0.061	ppb	-0.061	-20.50	673	5000	
Th	232	3	193	-0.635	ppb	-0.635	-4.31	4104	2000	
U	238	3	193	0.007	ppb	0.007	42.11	1393	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3971822	1.27	3473788	114.34	60	120	
Sc (IS)	45	3	HMI He	569684	0.36	498630	114.25	60	120	
Ge Internal standard	72	2	HMI H2	2386069	1.30	2241871	106.43	60	120	
Ge Internal standard	72	3	HMI He	708232	0.68	647352	109.40	60	120	
In Internal Standard	115	3	HMI He	2638465	0.82	2356036	111.99	60	120	
Ir (IS)	193	3	HMI He	5585791	0.18	4999588	111.73	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	403SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:59:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	-5.421	ppb	-5.421	-92.91	14662	400000	
Mg	24	3	45	4.402	ppb	4.402	90.07	377	400000	
Al	27	3	45	4.881	ppb	4.881	121.75	184	400000	
K	39	3	45	-24.444	ppb	-24.444	-99.64	24860	400000	
Ca	40	2	45	0.033	ppb	0.033	1015.79	10755	400000	
V	51	3	72	-0.935	ppb	-0.935	-2.99	187	2000	
Cr	52	3	72	-0.606	ppb	-0.606	-7.11	1914	5000	
Mn	55	3	72	0.559	ppb	0.559	51.11	395	10000	
Fe	56	2	72	4.478	ppb	4.478	45.51	42317	10000	
Co	59	3	72	0.015	ppb	0.015	169.82	52	2000	
Ni	60	3	72	0.075	ppb	0.075	300.29	481	5000	
Cu	63	3	72	-0.087	ppb	-0.087	-39.30	198	5000	
Zn	66	3	72	-0.165	ppb	-0.165	-114.82	120	5000	
As	75	3	72	-0.449	ppb	-0.449	-11.06	20	2000	
Se	78	2	72	0.051	ppb	0.051	77.87	4	2000	
Sr	88	3	72	0.119	ppb	0.119	51.50	73	4000	
Mo	95	3	115	0.006	ppb	0.006	323.05	32	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-243.96	12	100	
Cd	111	3	115	-0.001	ppb	-0.001	-2097.85	2	2000	
Sn	120	3	115	-0.603	ppb	-0.603	-6.04	142	2000	
Sb	121	3	115	-0.031	ppb	-0.031	-14.35	8	1000	
Ba	137	3	115	-0.041	ppb	-0.041	-57.08	35	5000	
Tl	205	3	193	-0.004	ppb	-0.004	-149.92	98	2000	
(Pb)	206	3	193	-0.058	ppb	-0.058	-39.49	127	100	
(Pb)	207	3	193	-0.030	ppb	-0.030	-46.30	287	100	
Pb	208	3	193	-0.051	ppb	-0.051	-15.47	723	5000	
Th	232	3	193	-0.647	ppb	-0.647	-3.79	4060	2000	
U	238	3	193	0.025	ppb	0.025	93.24	1483	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3917564	0.77	3473788	112.77	60	120	
Sc (IS)	45	3	HMI He	559324	0.51	498630	112.17	60	120	
Ge Internal standard	72	2	HMI H2	2376386	0.25	2241871	106.00	60	120	
Ge Internal standard	72	3	HMI He	702732	0.48	647352	108.55	60	120	
In Internal Standard	115	3	HMI He	2597449	2.16	2356036	110.25	60	120	
Ir (IS)	193	3	HMI He	5602069	0.40	4999588	112.05	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	404CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T13:01:42-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	15651	0.01
Mg	24	45	3	HMI He	397	16.18
Al	27	45	3	HMI He	127	21.87
K	39	45	3	HMI He	23597	0.03
Ca	40	45	2	HMI H2	12278	0.01
V	51	72	3	HMI He	583	3.06
Cr	52	72	3	HMI He	2041	0.32
Mn	55	72	3	HMI He	443	1.28
Fe	56	72	2	HMI H2	35959	0.02
Co	59	72	3	HMI He	60	97.27
Ni	60	72	3	HMI He	348	1.26
Cu	63	72	3	HMI He	295	1.52
Zn	66	72	3	HMI He	152	10.04
As	75	72	3	HMI He	40	82.71
Se	78	72	2	HMI H2	4	2165.06
(Se)	78	72	3	HMI He	18	374.49
Sr	88	72	3	HMI He	63	47.21
Mo	95	115	3	HMI He	37	140.88
Ag	107	115	3	HMI He	17	207.80
Cd	111	115	3	HMI He	0	#VALUE!
Sn	120	115	3	HMI He	481	3.27
Sb	121	115	3	HMI He	28	95.18
Ba	137	115	3	HMI He	42	158.67
Tl	205	193	3	HMI He	90	16.34
(Pb)	206	193	3	HMI He	178	7.76
(Pb)	207	193	3	HMI He	270	1.19
Pb	208	193	3	HMI He	820	0.78
Th	232	193	3	HMI He	5647	0.14
U	238	193	3	HMI He	1351	0.43

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3460228	0.59
Sc (IS)	45	3	HMI He	505695	0.71
Ge Internal standard	72	2	HMI H2	2187657	2.33
Ge Internal standard	72	3	HMI He	654972	0.70
In Internal Standard	115	3	HMI He	2371544	1.25
Ir (IS)	193	3	HMI He	5024616	0.81

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	405CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T13:03:31-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	404CALB.d
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	2246946	0.01
Mg	24	45	3	HMI He	228150	0.06
Al	27	45	3	HMI He	113	27.31
K	39	45	3	HMI He	206298	0.06
V	51	72	3	HMI He	245	13.41
Cr	52	72	3	HMI He	3766	2.74
Mn	55	72	3	HMI He	528	15.10
Co	59	72	3	HMI He	100	101.17
Ni	60	72	3	HMI He	1113	11.67
Cu	63	72	3	HMI He	310	3.12
Zn	66	72	3	HMI He	175	11.78
As	75	72	3	HMI He	40	205.00
Se	78	72	2	HMI H2	3	1623.80
(Se)	78	72	3	HMI He	43	15.39
Sr	88	72	3	HMI He	90	52.76
Mo	95	115	3	HMI He	80	131.49
Ag	107	115	3	HMI He	22	268.08
Cd	111	115	3	HMI He	3	2598.08
Sn	120	115	3	HMI He	345	10.57
Sb	121	115	3	HMI He	23	140.40
Ba	137	115	3	HMI He	62	114.92
Tl	205	193	3	HMI He	152	13.11
(Pb)	206	193	3	HMI He	202	4.32
(Pb)	207	193	3	HMI He	448	2.26
Pb	208	193	3	HMI He	1035	0.40
Th	232	193	3	HMI He	9317	0.28
U	238	193	3	HMI He	2102	1.21

QC ISTD Table

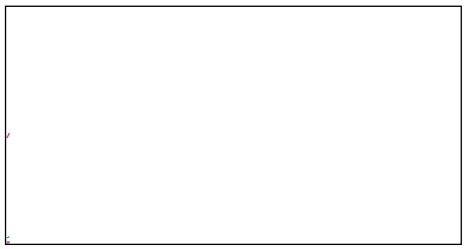
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6261358	4.80	3460228	180.95	60	120	IS Failed
Sc (IS)	45	3	HMI He	863843	26.82	505695	170.82	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3791234	4.78	2187657	173.30	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1057661	28.04	654972	161.48	60	120	IS Failed
In Internal Standard	115	3	HMI He	3913234	25.35	2371544	165.01	60	120	IS Failed
Ir (IS)	193	3	HMI He	8492440	25.47	5024616	169.02	60	120	IS Failed

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:55:42 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[No Gas]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	200000	3796	3822	0.946
2	59	100000	4792	4861	2 014
3	63	100000	87	98	15.874
4	70	500000	238	236	1.199
5	80	1000000	1052236	1049470	0.373
6	89	100000	7628	7727	1.813
7	115	2000000	9048	9011	0.593
8	118	100000	147	138	9 771
9	137	50000	1150	1134	2.060
10	140	20000	9278	9070	3.242
11	205	2000000	7199	7110	1.770
12	6	5000000	4870	4963	2.645
13	70/140	1000	2.565 %	2.603 %	2.044
14	156/140	500	0 291 %	0 253 %	21.439

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-50 V
Extract 2	200 0 V	Q1 Exit		Def ect	12 6 V
Omega Bias	95 V	Cel Focus		P ate Bias	35 V
Omega Lens	8.0 V	Cel Entrance	30 V		

Cell Parameters

Use Gas	No	3rd Gas F ow		Axia Acce eration	
He F ow	0.0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0 0 mL/min	OctP Bias	8 0 V	Energy Discrimination	5 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	-3 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Current Signal

Torch H	0 4 mm	Torch V	0 3 mm		

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

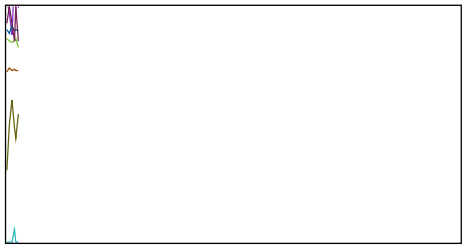
Name	Value	Unit
F/BK Press	2.11E+2	Pa
Ana yzer Press	7 25E 5	Pa
Reflected Power	0	W
Forward Power	1599	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:55:59 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[HMI H2]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	100	100	93	4.047
2	9	200	199	200	7 260
3	59	1000	747	750	2 051
4	63	20	11	5	60 078
5	70	100	100	110	6.567
6	78	20	0	0	244 949
7	89	5000	6404	6294	1.209
8	115	10000	8267	8519	1 644
9	118	100	141	143	8.632
10	137	1000	1069	1097	1.817
11	140	5000	5878	5900	2.664
12	205	10000	7259	7290	0.791
13	238	10000	8988	9012	1.188
14	70/140	2	1 701 %	1 861 %	7 553
15	156/140	1	0.544 %	0.479 %	21 242

Integration Time [sec] 0 1

Tune Parameters

Plasma Parameters

P asma Mode		Nebulizer Gas	0.64 L/min	Dilution Gas	0.26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1 40 V	Nebulizer Pump	0 10 rps	P asma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance		Cel Exit	60 V
Extract 2	190 0 V	Q1 Exit		Def ect	0 8 V
Omega Bias	95 V	Cel Focus		P ate Bias	60 V
Omega Lens	7 9 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	0 0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	5 0 mL/min	OctP Bias	18.0 V	Energy Discrimination	3 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Current Signal

Torch

Torch H	0 4 mm	Torch V	-0 3 mm		

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

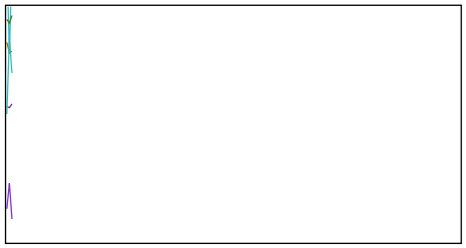
Name	Value	Unit
F/BK Press	2.20E+2	Pa
Ana yzer Press	2.35E 4	Pa
Reflected Power	0	W
Forward Power	1600	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:56:11 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[HMI He]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	53	20	22	20	17 321
2	59	2000	1520	1483	2 247
3	66	50	36	31	25.797
4	70	50	58	58	20 690
5	78	20	3	3	21 651
6	115	2000	2037	2171	5.418
7	118	20	43	37	17 745
8	137	500	292	288	1 402
9	140	5000	4048	4099	2.749
10	205	5000	4799	4720	1.628
11	51/59	1	1.316 %	1.440 %	7.495
12	70/140	2	1.433 %	1.421 %	23 001
13	156/140	1	0.099 %	0.163 %	47 312

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas	---	Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-60 V
Extract 2	200 0 V	Q1 Exit		Def ect	0 2 V
Omega Bias	100 V	Cel Focus		P ate Bias	55 V
Omega Lens	8.2 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	4.3 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0.0 mL/min	OctP Bias	18 0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Torch H	0.4 mm	Torch V	0.3 mm		

Current Signal

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

Name	Value	Unit
F/BK Press	2 13E+2	Pa
Ana yzer Press	2 46E-4	Pa
Reflected Power	0	W
Forward Power	1599	W
Tune/ISTD Va ve		

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:03:48 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

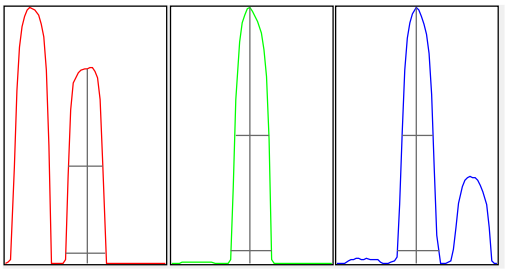
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2368	23683 69	0.619	5 000	
89		4594	45941 66	0.441	5 000	
205		3945	39452 88	0.410	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2385	2364	2380	2365	2348
89	4581	4592	4627	4596	4574
205	3943	3966	3956	3936	3925

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3738.86	7.05	6 90 7 10	
89	7792.04	89.00	88 90 89.10	
205	7082 03	205 00	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.742	0.900	
89	0.62	0.740	0.900	
205	0.58	0.771	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

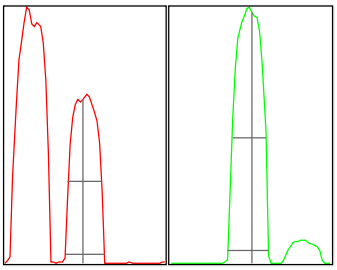
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	616 52	1 812	5.000	
9		119	1194 58	2.113	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	61	61	61	64	61
9	122	121	121	116	118

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	101 30	7 00	6.90 - 7.10	
9	199 16	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.741	0.900	
9	0.62	0.741	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		167	1667.65	3 184	5.000	
25		23	234 90	4 441	5.000	
26		31	311.61	5.056	5 000	Fai
59		874	8744 50	1.312	5 000	
103		2521	25210.46	0 616	5.000	
115		1169	11693.27	0 334	5.000	
205		2568	25683.92	0 311	5.000	
206		835	8351 79	0.437	5 000	
207		718	7179 82	0.950	5 000	

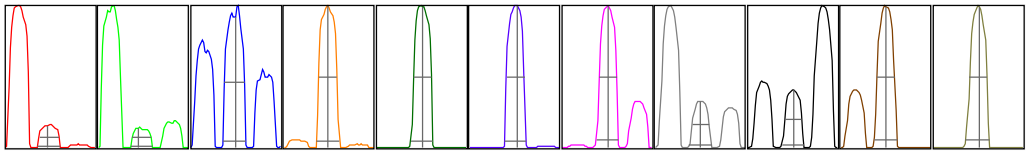
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1787	17869.62	0 558	5.000	
238		3626	36263.35	0 868	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	173	170	168	160	163
25	25	23	22	23	25
26	33	32	31	31	29
59	890	875	880	861	866
103	2534	2509	2538	2522	2502
115	1173	1170	1163	1168	1172
205	2558	2563	2577	2568	2576
206	838	835	839	830	835
207	723	725	720	711	711
208	1801	1790	1789	1775	1780
238	3644	3618	3668	3584	3618

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	265.03	23.95	23 90 24.10	
25	38.55	24.85	24 90 25.10	Fail
26	49 05	26 00	25.90 - 26 10	
59	1479 29	59 00	58.90 - 59 10	
103	4374.57	103.05	102.90 103.10	
115	2045.31	115.10	114.90 115.10	
205	4619.84	205.05	204.90 205.10	
206	1514 26	206 05	205 90 - 206 10	
207	1316 19	207 05	206 90 - 207 10	
208	3238.59	208.05	207.90 208.10	
238	6568.26	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 64	0 741	0 900	
25	0.64	0.743	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.744	0.900	
59	0.62	0.777	0.900	
103	0 60	0 734	0 900	
115	0 59	0 692	0 900	
205	0.58	0.737	0.900	
206	0.56	0.724	0.900	
207	0.56	0.734	0.900	
208	0 57	0 758	0 900	
238	0 57	0 776	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:12:16 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

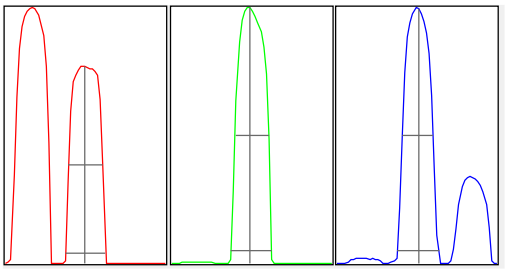
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2343	23429 98	0.525	5 000	
89		4553	45533 05	0.175	5 000	
205		3885	38854 32	0.405	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2332	2350	2359	2344	2330
89	4555	4546	4553	4547	4566
205	3872	3869	3907	3886	3894

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3733.04	7.00	6 90 7 10	
89	7702.53	89.00	88 90 89.10	
205	6978 55	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.741	0.900	
89	0.62	0.740	0.900	
205	0.58	0.770	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

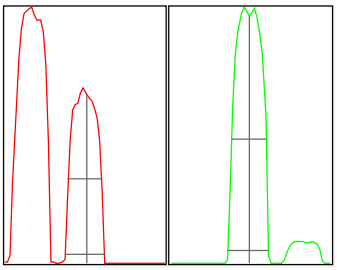
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		60	604 02	1 152	5.000	
9		120	1197 78	2.470	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	60	60	60	62	60
9	121	115	122	119	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	100 35	7 05	6.90 - 7.10	
9	191 91	9 00	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.740	0.900	
9	0.63	0.742	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		165	1646.75	1 767	5.000	
25		25	251 40	3 437	5.000	
26		30	302.81	6.894	5 000	Fai
59		874	8737 48	0.430	5 000	
103		2508	25080.94	0 353	5.000	
115		1161	11609.59	1 029	5.000	
205		2535	25345.57	0 415	5.000	
206		828	8281 54	1.404	5 000	
207		711	7107 08	0.581	5 000	

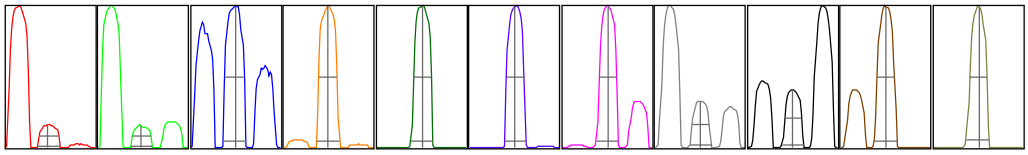
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1756	17555.50	0 234	5.000	
238		3560	35602.23	0 975	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	165	162	164	169	163
25	26	24	26	26	25
26	28	32	29	30	33
59	871	873	877	878	869
103	2505	2514	2509	2518	2495
115	1163	1178	1150	1149	1165
205	2525	2530	2527	2550	2541
206	814	840	832	818	837
207	709	711	705	717	711
208	1751	1760	1752	1758	1758
238	3513	3610	3557	3553	3568

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	271.13	23.95	23 90 24.10	
25	43.15	24.95	24 90 25.10	
26	49 90	26 00	25.90 - 26 10	
59	1465 38	59 00	58.90 - 59 10	
103	4375.58	103.05	102.90 103.10	
115	2034.75	115.05	114.90 115.10	
205	4548.33	205.05	204.90 205.10	
206	1498 74	206 05	205 90 - 206 10	
207	1316 74	207 00	206 90 - 207 10	
208	3194.53	208.05	207.90 208.10	
238	6501.97	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.63	0.741	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.63	0.741	0.900	
59	0.62	0.778	0.900	
103	0 59	0 733	0 900	
115	0 59	0 692	0 900	
205	0.57	0.736	0.900	
206	0.56	0.717	0.900	
207	0.56	0.733	0.900	
208	0 57	0 754	0 900	
238	0 57	0 773	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:22:24 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

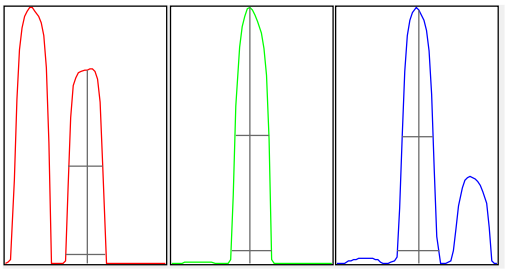
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2268	22679 02	6.280	5 000	Fai
89		4370	43701 67	5.855	5 000	Fai
205		3674	36738 02	7.214	5 000	Fai

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2292	2017	2329	2345	2357
89	4339	3937	4540	4538	4498
205	3712	3214	3755	3800	3888

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3620.00	7.05	6 90 7 10	
89	7467.06	89.00	88 90 89.10	
205	6528 70	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.740	0.900	
89	0.61	0.739	0.900	
205	0.58	0.769	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

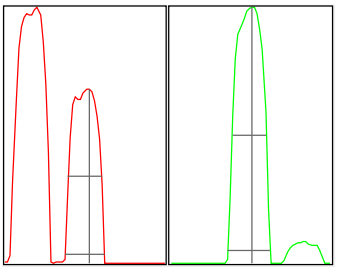
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	622 42	2 779	5.000	
9		121	1212 18	2.034	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	61	62	62	61	65
9	117	121	122	124	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	103 50	7 10	6.90 - 7.10	
9	202 36	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.740	0.900	
9	0.62	0.780	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		164	1638.35	1 204	5.000	
25		24	244 80	3 996	5.000	
26		30	301.11	3.829	5 000	
59		870	8700 25	0.981	5 000	
103		2489	24888.79	0 570	5.000	
115		1143	11431.44	0 367	5.000	
205		2513	25126.52	0 433	5.000	
206		823	8228 81	1.018	5 000	
207		709	7085 06	1.110	5 000	

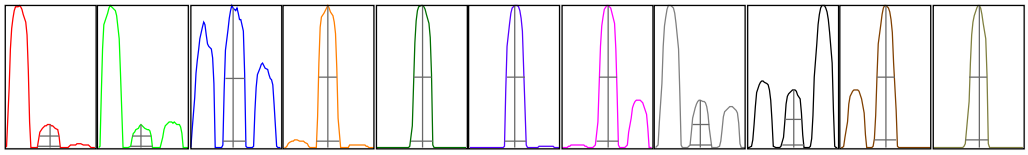
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1749	17493.20	1 169	5.000	
238		3571	35705.33	0 629	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	162	163	167	164	164
25	26	24	24	25	23
26	32	29	30	30	30
59	871	879	874	856	870
103	2495	2477	2487	2510	2476
115	1145	1149	1141	1138	1143
205	2524	2507	2499	2510	2524
206	830	818	833	812	821
207	715	716	700	700	710
208	1721	1760	1771	1736	1759
238	3541	3600	3563	3583	3565

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	270.33	24.00	23 90 24.10	
25	44.00	24.95	24 90 25.10	
26	48 65	25 95	25.90 - 26 10	
59	1466 58	59 00	58.90 - 59 10	
103	4329.68	103.05	102.90 103.10	
115	1993.58	115.05	114.90 115.10	
205	4507.84	205.05	204.90 205.10	
206	1515 76	206 05	205 90 - 206 10	
207	1304 28	207 05	206 90 - 207 10	
208	3207.15	208.05	207.90 208.10	
238	6505.08	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.63	0.745	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.743	0.900	
59	0.62	0.778	0.900	
103	0 59	0 733	0 900	
115	0 59	0 692	0 900	
205	0.57	0.736	0.900	
206	0.56	0.718	0.900	
207	0.56	0.733	0.900	
208	0 56	0 754	0 900	
238	0 57	0 736	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:30:35 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

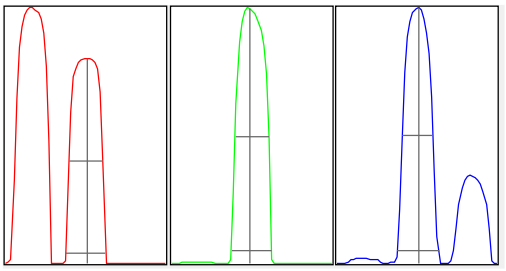
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2332	23319 89	0.259	5 000	
89		4495	44946 11	0.530	5 000	
205		3765	37653 97	0.292	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2328	2340	2335	2334	2324
89	4494	4494	4519	4509	4456
205	3782	3763	3762	3752	3768

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3741.12	7.05	6 90 7 10	
89	7577.14	89.00	88 90 89.10	
205	6771 30	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.63	0.740	0.900	
89	0.62	0.740	0.900	
205	0.57	0.768	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

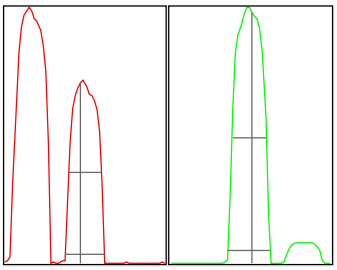
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	622 22	2 332	5.000	
9		121	1211 48	1.028	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	64	61	62	64	60
9	122	119	120	122	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	106 10	6 95	6.90 - 7.10	
9	198 71	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.61	0.739	0.900	
9	0.63	0.780	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		168	1683.25	2 072	5.000	
25		24	237 60	2 643	5.000	
26		31	313.51	4.696	5 000	
59		869	8690 25	0.751	5 000	
103		2475	24753.67	0 805	5.000	
115		1130	11297.36	0 840	5.000	
205		2492	24916.75	0 522	5.000	
206		818	8176 75	0.943	5 000	
207		701	7005 29	0.913	5 000	

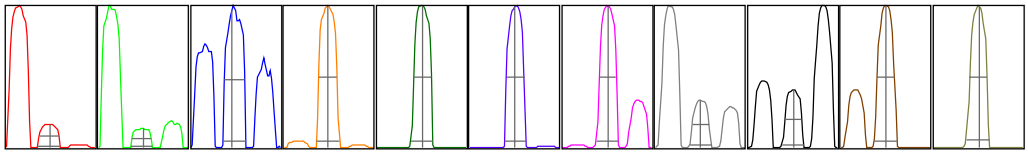
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1732	17320.34	0 753	5.000	
238		3531	35311.90	0 857	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	170	170	162	170	170
25	24	24	23	24	24
26	33	32	30	30	32
59	872	867	877	859	870
103	2489	2463	2446	2494	2484
115	1138	1141	1122	1119	1128
205	2469	2497	2499	2496	2498
206	808	828	813	820	819
207	696	709	706	695	697
208	1737	1750	1722	1735	1717
238	3493	3529	3576	3519	3539

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	274.48	24.00	23 90 24.10	
25	38.05	25.05	24 90 25.10	
26	50 65	25 90	25.90 - 26 10	
59	1460 77	59 00	58.90 - 59 10	
103	4340.01	103.05	102.90 103.10	
115	1976.06	115.05	114.90 115.10	
205	4474.77	205.05	204.90 205.10	
206	1505 20	206 05	205 90 - 206 10	
207	1293 06	207 05	206 90 - 207 10	
208	3179.14	208.05	207.90 208.10	
238	6410.45	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.65	0.744	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.65	0.742	0.900	
59	0.62	0.777	0.900	
103	0 59	0 732	0 900	
115	0 59	0 691	0 900	
205	0.57	0.736	0.900	
206	0.56	0.719	0.900	
207	0.55	0.732	0.900	
208	0 56	0 754	0 900	
238	0 57	0 772	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
6		0.095136	☑
9		0.105250	☑
23		0.106345	☑
24		0.112207	☑
27		0.117441	☑
39		0.122445	☑
45		0.123608	☑
48		0.123190	☑
51		0.126432	☑
52		0.130208	☑
55		0.133122	☑
59		0.139351	☑
60		0.140186	☑
63		0.144222	☑
66		0.143375	☑
72		0.140891	☑
75		0.139603	☑
88		0.142791	☑
98		0.139456	☑
102		0.144294	☑
106		0.150388	☑
114		0.154121	☑
115		0.153759	☑

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
118		0.151558	☑
121		0.151549	☑
138		0.154070	☑
175		0.161681	☑
193		0.163213	☑
205		0.166749	☑
208		0.168611	☑
209		0.167650	☑
232		0.164717	☑
238		0.165737	☑

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	001SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:41:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	002SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:43:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	003SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:46:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	004SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:48:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	005SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:50:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	006SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:52:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	007SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:54:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	008SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:55:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	009SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:57:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	010SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:59:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	011SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:01:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	012SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:03:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	013SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:05:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	014SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:06:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	015SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:08:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	016SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:10:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	017SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:12:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	018SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:14:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	019SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:15:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	020SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:17:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	021SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:19:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	022SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:21:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	023SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:23:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	024SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:25:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:26:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	026SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:28:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	027SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:30:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	028SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:32:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	029SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:34:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	030SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:35:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	031CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T13:37:45-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	15203	0.02
Mg	24	45	3	HMI He	220	14.30
Al	27	45	3	HMI He	97	16.33
K	39	45	3	HMI He	24506	0.03
Ca	40	45	2	HMI H2	9907	0.03
V	51	72	3	HMI He	823	0.93
Cr	52	72	3	HMI He	2084	0.05
Mn	55	72	3	HMI He	173	5.35
Fe	56	72	2	HMI H2	31461	0.02
Co	59	72	3	HMI He	52	60.24
Ni	60	72	3	HMI He	371	3.29
Cu	63	72	3	HMI He	530	3.21
Zn	66	72	3	HMI He	190	13.65
As	75	72	3	HMI He	58	37.00
Se	78	72	2	HMI H2	1	25980.76
(Se)	78	72	3	HMI He	22	162.85
Sr	88	72	3	HMI He	18	309.78
Mo	95	115	3	HMI He	40	125.06
Ag	107	115	3	HMI He	18	85.98
Cd	111	115	3	HMI He	42	44.03
Sn	120	115	3	HMI He	1163	0.31
Sb	121	115	3	HMI He	88	40.71
Ba	137	115	3	HMI He	50	72.16
Tl	205	193	3	HMI He	4050	0.07
(Pb)	206	193	3	HMI He	505	2.57
(Pb)	207	193	3	HMI He	580	0.93
Pb	208	193	3	HMI He	2139	0.23
Th	232	193	3	HMI He	5207	0.04
U	238	193	3	HMI He	1538	0.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3892690	1.21
Sc (IS)	45	3	HMI He	558682	0.71
Ge Internal standard	72	2	HMI H2	2351137	1.90
Ge Internal standard	72	3	HMI He	686329	0.71
In Internal Standard	115	3	HMI He	2596034	0.99
Ir (IS)	193	3	HMI He	5774995	1.94

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	032CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:39:33-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	031CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	649.52
Na	23	45	3	HMI He	10742393	0.00
Mg	24	45	3	HMI He	1134826	0.00
Al	27	45	3	HMI He	107	30.84
K	39	45	3	HMI He	895777	0.00
V	51	72	3	HMI He	818	1.06
Cr	52	72	3	HMI He	2189	0.33
Mn	55	72	3	HMI He	258	3.03
Co	59	72	3	HMI He	78	20.52
Ni	60	72	3	HMI He	510	2.31
Cu	63	72	3	HMI He	651	0.41
Zn	66	72	3	HMI He	351	6.22
As	75	72	3	HMI He	55	43.76
Se	78	72	2	HMI H2	3	2078.46
(Se)	78	72	3	HMI He	17	207.80
Sr	88	72	3	HMI He	278	6.14
Mo	95	115	3	HMI He	47	35.08
Ag	107	115	3	HMI He	28	71.91
Cd	111	115	3	HMI He	47	103.57
Sn	120	115	3	HMI He	1046	0.67
Sb	121	115	3	HMI He	80	20.68
Ba	137	115	3	HMI He	238	5.73
Tl	205	193	3	HMI He	2547	0.12
(Pb)	206	193	3	HMI He	511	3.18
(Pb)	207	193	3	HMI He	561	1.39
Pb	208	193	3	HMI He	2102	0.24
Th	232	193	3	HMI He	4807	0.14
U	238	193	3	HMI He	1648	0.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4062280	1.43	3892690	104.36	60	120	
Sc (IS)	45	3	HMI He	567214	0.07	558682	101.53	60	120	
Ge Internal standard	72	2	HMI H2	2234245	1.68	2351137	95.03	60	120	
Ge Internal standard	72	3	HMI He	663901	0.73	686329	96.73	60	120	
In Internal Standard	115	3	HMI He	2619267	1.35	2596034	100.89	60	120	
Ir (IS)	193	3	HMI He	5907923	1.45	5774995	102.30	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	033CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:41:20-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	031CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4663	0.06
Na	23	45	3	HMI He	228024	0.00
Mg	24	45	3	HMI He	111342	0.00
Al	27	45	3	HMI He	43286	0.01
K	39	45	3	HMI He	112991	0.00
V	51	72	3	HMI He	60009	0.00
Cr	52	72	3	HMI He	75692	0.00
Mn	55	72	3	HMI He	39326	0.00
Co	59	72	3	HMI He	126170	0.00
Ni	60	72	3	HMI He	36012	0.00
Cu	63	72	3	HMI He	98515	0.00
Zn	66	72	3	HMI He	15870	0.02
As	75	72	3	HMI He	10916	0.01
Se	78	72	2	HMI H2	5851	0.03
(Se)	78	72	3	HMI He	601	1.31
Sr	88	72	3	HMI He	106061	0.00
Mo	95	115	3	HMI He	48643	0.01
Ag	107	115	3	HMI He	167827	0.00
Cd	111	115	3	HMI He	23853	0.00
Sn	120	115	3	HMI He	76843	0.00
Sb	121	115	3	HMI He	74925	0.00
Ba	137	115	3	HMI He	24853	0.01
Tl	205	193	3	HMI He	386055	0.00
(Pb)	206	193	3	HMI He	129422	0.00
(Pb)	207	193	3	HMI He	113785	0.00
Pb	208	193	3	HMI He	521753	0.00
Th	232	193	3	HMI He	529561	0.00
U	238	193	3	HMI He	549424	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3974834	2.44	3892690	102.11	60	120	
Sc (IS)	45	3	HMI He	572255	0.57	558682	102.43	60	120	
Ge Internal standard	72	2	HMI H2	2406898	0.94	2351137	102.37	60	120	
Ge Internal standard	72	3	HMI He	712494	0.83	686329	103.81	60	120	
In Internal Standard	115	3	HMI He	2634865	0.10	2596034	101.50	60	120	
Ir (IS)	193	3	HMI He	5938117	1.80	5774995	102.82	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	034_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:43:08-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.074	ppb	2.894	1756	40	95.2	90	110	
Na	23	3	45	12422.210	ppb	2.590	1360213	12800	97.0	90	110	
Mg	24	3	45	4563.419	ppb	1.861	261473	4800	95.1	90	110	
Al	27	3	45	786.237	ppb	1.429	17084	800	98.3	90	110	
K	39	3	45	4723.360	ppb	1.284	232681	4800	98.4	90	110	
Ca	40	2	45	5032.893	ppb	2.779	2698189	4800	104.9	90	110	
V	51	3	72	41.551	ppb	1.953	24801	40	103.9	90	110	
Cr	52	3	72	41.694	ppb	2.696	32006	40	104.2	90	110	
Mn	55	3	72	42.460	ppb	1.165	16390	40	106.2	90	110	
Fe	56	2	72	806.726	ppb	2.562	1272035	800	100.8	90	110	
Co	59	3	72	41.216	ppb	2.797	50739	40	103.0	90	110	
Ni	60	3	72	41.898	ppb	2.073	14936	40	104.7	90	110	
Cu	63	3	72	42.051	ppb	1.688	40718	40	105.1	90	110	
Zn	66	3	72	82.283	ppb	1.344	12771	80	102.9	90	110	
As	75	3	72	41.410	ppb	3.799	4442	40	103.5	90	110	
Se	78	2	72	40.535	ppb	5.141	2334	40	101.3	90	110	
Sr	88	3	72	122.900	ppb	2.320	63573	120	102.4	90	110	
Mo	95	3	115	39.950	ppb	0.643	19695	40	99.9	90	110	
Ag	107	3	115	79.510	ppb	2.259	135049	80	99.4	90	110	
Cd	111	3	115	39.885	ppb	2.723	9654	40	99.7	90	110	
Sn	120	3	115	39.389	ppb	3.956	31351	40	98.5	90	110	
Sb	121	3	115	38.890	ppb	2.406	29545	40	97.2	90	110	
Ba	137	3	115	39.019	ppb	2.082	9845	40	97.5	90	110	
Tl	205	3	193	40.956	ppb	2.435	158694	40	102.4	90	110	
(Pb)	206	3	193	41.113	ppb	0.891	52902	40	102.8	90	110	
(Pb)	207	3	193	40.662	ppb	0.632	46079	40	101.7	90	110	
Pb	208	3	193	41.132	ppb	0.713	213401	40	102.8	90	110	
Th	232	3	193	81.341	ppb	0.792	426795	80	101.7	90	110	
U	238	3	193	43.848	ppb	2.189	238966	40	109.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3944042	1.80	3892690	101.32	60	120	
Sc (IS)	45	3	HMI He	572458	0.94	558682	102.47	60	120	
Ge Internal standard	72	2	HMI H2	2367950	0.88	2351137	100.72	60	120	
Ge Internal standard	72	3	HMI He	694948	1.86	686329	101.26	60	120	
In Internal Standard	115	3	HMI He	2667207	1.57	2596034	102.74	60	120	
Ir (IS)	193	3	HMI He	5868335	0.85	5774995	101.62	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	035_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:44:54-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	031CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.109	ppb	58.9	7	0.5	
Na	23	3	14.222	ppb	12.1	17041	25	
Mg	24	3	-0.078	ppb	-198.0	220	25	
Al	27	3	0.681	ppb	140.3	113	15	
K	39	3	-14.262	ppb	-150.5	24376	50	
V	51	3	0.106	ppb	76.2	893	1	
Cr	52	3	0.198	ppb	106.0	2249	1	
Mn	55	3	-0.053	ppb	-68.1	155	0.5	
Co	59	3	0.008	ppb	80.0	62	0.5	
Ni	60	3	0.016	ppb	1285.5	381	1	
Cu	63	3	-0.027	ppb	-190.8	510	1	
Zn	66	3	0.216	ppb	215.7	225	5	
As	75	3	-0.131	ppb	-219.3	45	1	
Se	78	2	0.138	ppb	15.7	9	1	
Sr	88	3	0.019	ppb	106.6	28	0.5	
Mo	95	3	0.057	ppb	89.3	68	0.5	
Ag	107	3	0.016	ppb	42.0	47	1	
Cd	111	3	0.024	ppb	214.3	48	0.5	
Sn	120	3	-0.086	ppb	-79.7	1121	1	
Sb	121	3	-0.022	ppb	-94.2	73	0.6	
Ba	137	3	-0.037	ppb	-232.2	42	0.5	
Tl	205	3	-0.452	ppb	-4.6	2416	0.1	
(Pb)	206	3	-0.046	ppb	-30.2	456	1	
(Pb)	207	3	0.037	ppb	52.3	631	1	
Pb	208	3	-0.035	ppb	-81.9	1997	0.5	
Th	232	3	3.245	ppb	11.8	22149	1	>RL
U	238	3	0.026	ppb	40.2	1704	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3933329	1.01	3892690	101.04	60	120	
Sc (IS)	45	3	HMI He	569801	0.55	558682	101.99	60	120	
Ge Internal standard	72	2	HMI H2	2382195	1.10	2351137	101.32	60	120	
Ge Internal standard	72	3	HMI He	693916	0.36	686329	101.11	60	120	
In Internal Standard	115	3	HMI He	2649286	2.26	2596034	102.05	60	120	
Ir (IS)	193	3	HMI He	5879016	0.69	5774995	101.80	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	036SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:46:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1427.20	2	2000	
Na	23	3	45	12.131	ppb	12.131	24.38	18347	400000	
Mg	24	3	45	12.469	ppb	12.469	25.43	1021	400000	
Al	27	3	45	7.654	ppb	7.654	38.30	287	400000	
K	39	3	45	-70.740	ppb	-70.740	-41.03	23908	400000	
Ca	40	2	45	31.260	ppb	31.260	1.61	29745	400000	
V	51	3	72	-0.988	ppb	-0.988	-2.91	288	2000	
Cr	52	3	72	-0.809	ppb	-0.809	-14.90	1678	5000	
Mn	55	3	72	0.062	ppb	0.062	61.30	218	10000	
Fe	56	2	72	8.931	ppb	8.931	18.15	50499	10000	
Co	59	3	72	0.016	ppb	0.016	114.96	78	2000	
Ni	60	3	72	-0.030	ppb	-0.030	-272.70	401	5000	
Cu	63	3	72	-0.082	ppb	-0.082	-31.60	503	5000	
Zn	66	3	72	-0.295	ppb	-0.295	-83.92	162	5000	
As	75	3	72	-0.371	ppb	-0.371	-26.39	22	2000	
Se	78	2	72	0.145	ppb	0.145	21.42	10	2000	
Sr	88	3	72	0.320	ppb	0.320	11.30	202	4000	
Mo	95	3	115	0.004	ppb	0.004	1226.58	47	2000	
Ag	107	3	115	0.011	ppb	0.011	70.59	42	100	
Cd	111	3	115	-0.107	ppb	-0.107	-9.27	18	2000	
Sn	120	3	115	-1.232	ppb	-1.232	-4.83	273	2000	
Sb	121	3	115	-0.033	ppb	-0.033	-32.61	72	1000	
Ba	137	3	115	-0.021	ppb	-0.021	-242.38	50	5000	
Tl	205	3	193	-0.807	ppb	-0.807	-1.02	1188	2000	
(Pb)	206	3	193	-0.060	ppb	-0.060	-13.10	485	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-2303.71	650	100	
Pb	208	3	193	-0.044	ppb	-0.044	-11.71	2161	5000	
Th	232	3	193	-0.151	ppb	-0.151	-34.62	5000	2000	
U	238	3	193	0.031	ppb	0.031	44.62	1921	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386792	0.70	3892690	112.69	60	120	
Sc (IS)	45	3	HMI He	621731	1.02	558682	111.29	60	120	
Ge Internal standard	72	2	HMI H2	2631494	0.70	2351137	111.92	60	120	
Ge Internal standard	72	3	HMI He	761976	0.71	686329	111.02	60	120	
In Internal Standard	115	3	HMI He	2892268	2.63	2596034	111.41	60	120	
Ir (IS)	193	3	HMI He	6507059	1.27	5774995	112.68	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	037SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:48:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.032	ppb	0.032	186.24	3	2000	
Na	23	3	45	2.294	ppb	2.294	314.20	16984	400000	
Mg	24	3	45	10.413	ppb	10.413	20.13	881	400000	
Al	27	3	45	7.463	ppb	7.463	38.39	280	400000	
K	39	3	45	-51.796	ppb	-51.796	-37.44	24533	400000	
Ca	40	2	45	31.991	ppb	31.991	2.93	29507	400000	
V	51	3	72	-0.930	ppb	-0.930	-6.17	320	2000	
Cr	52	3	72	-0.820	ppb	-0.820	-16.38	1643	5000	
Mn	55	3	72	0.143	ppb	0.143	33.29	248	10000	
Fe	56	2	72	6.499	ppb	6.499	26.29	45651	10000	
Co	59	3	72	0.005	ppb	0.005	293.36	63	2000	
Ni	60	3	72	-0.061	ppb	-0.061	-143.05	383	5000	
Cu	63	3	72	-0.072	ppb	-0.072	-78.50	505	5000	
Zn	66	3	72	-0.532	ppb	-0.532	-30.94	120	5000	
As	75	3	72	-0.338	ppb	-0.338	-35.11	25	2000	
Se	78	2	72	0.062	ppb	0.062	78.10	5	2000	
Sr	88	3	72	0.293	ppb	0.293	26.26	183	4000	
Mo	95	3	115	0.025	ppb	0.025	118.22	57	2000	
Ag	107	3	115	0.011	ppb	0.011	90.40	40	100	
Cd	111	3	115	-0.068	ppb	-0.068	-98.26	28	2000	
Sn	120	3	115	-1.173	ppb	-1.173	-2.03	317	2000	
Sb	121	3	115	-0.071	ppb	-0.071	-29.61	40	1000	
Ba	137	3	115	-0.030	ppb	-0.030	-97.12	47	5000	
Tl	205	3	193	-0.838	ppb	-0.838	-2.38	1028	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-27.31	460	100	
(Pb)	207	3	193	-0.033	ppb	-0.033	-208.78	595	100	
Pb	208	3	193	-0.056	ppb	-0.056	-11.73	2036	5000	
Th	232	3	193	-0.172	ppb	-0.172	-16.74	4750	2000	
U	238	3	193	0.052	ppb	0.052	33.63	1991	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4289210	0.30	3892690	110.19	60	120	
Sc (IS)	45	3	HMI He	614573	1.76	558682	110.00	60	120	
Ge Internal standard	72	2	HMI H2	2591903	0.38	2351137	110.24	60	120	
Ge Internal standard	72	3	HMI He	749726	1.21	686329	109.24	60	120	
In Internal Standard	115	3	HMI He	2849472	2.56	2596034	109.76	60	120	
Ir (IS)	193	3	HMI He	6330898	0.80	5774995	109.63	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	038CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T13:50:34-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	2000.00
Na	23	45	3	HMI He	16212	0.01
Mg	24	45	3	HMI He	204	16.97
Al	27	45	3	HMI He	70	61.16
K	39	45	3	HMI He	24416	0.02
Ca	40	45	2	HMI H2	10237	0.01
V	51	72	3	HMI He	830	0.13
Cr	52	72	3	HMI He	2006	0.16
Mn	55	72	3	HMI He	180	6.73
Fe	56	72	2	HMI H2	29695	0.02
Co	59	72	3	HMI He	37	187.24
Ni	60	72	3	HMI He	353	7.13
Cu	63	72	3	HMI He	553	0.74
Zn	66	72	3	HMI He	187	5.80
As	75	72	3	HMI He	77	19.65
Se	78	72	2	HMI H2	1	12990.38
(Se)	78	72	3	HMI He	25	211.80
Sr	88	72	3	HMI He	12	924.61
Mo	95	115	3	HMI He	38	119.55
Ag	107	115	3	HMI He	15	587.95
Cd	111	115	3	HMI He	27	226.17
Sn	120	115	3	HMI He	888	0.37
Sb	121	115	3	HMI He	67	79.86
Ba	137	115	3	HMI He	28	95.18
Tl	205	193	3	HMI He	1656	0.14
(Pb)	206	193	3	HMI He	450	1.08
(Pb)	207	193	3	HMI He	566	0.80
Pb	208	193	3	HMI He	1784	0.08
Th	232	193	3	HMI He	9326	0.10
U	238	193	3	HMI He	1606	0.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3906300	1.35
Sc (IS)	45	3	HMI He	564278	0.18
Ge Internal standard	72	2	HMI H2	2319843	0.48
Ge Internal standard	72	3	HMI He	683756	1.23
In Internal Standard	115	3	HMI He	2609293	1.64
Ir (IS)	193	3	HMI He	5781904	1.76

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	039CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:52:22-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	038CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	10524268	0.00
Mg	24	45	3	HMI He	1127552	0.00
Al	27	45	3	HMI He	107	36.56
K	39	45	3	HMI He	914177	0.00
V	51	72	3	HMI He	865	1.17
Cr	52	72	3	HMI He	2187	0.35
Mn	55	72	3	HMI He	238	9.00
Co	59	72	3	HMI He	75	58.32
Ni	60	72	3	HMI He	513	0.58
Cu	63	72	3	HMI He	566	0.72
Zn	66	72	3	HMI He	393	0.37
As	75	72	3	HMI He	52	21.63
Se	78	72	2	HMI H2	3	4296.16
(Se)	78	72	3	HMI He	13	429.74
Sr	88	72	3	HMI He	280	4.82
Mo	95	115	3	HMI He	43	15.39
Ag	107	115	3	HMI He	30	96.27
Cd	111	115	3	HMI He	33	51.95
Sn	120	115	3	HMI He	986	0.44
Sb	121	115	3	HMI He	75	54.10
Ba	137	115	3	HMI He	193	10.82
Tl	205	193	3	HMI He	1379	0.23
(Pb)	206	193	3	HMI He	481	0.82
(Pb)	207	193	3	HMI He	581	0.60
Pb	208	193	3	HMI He	1914	0.44
Th	232	193	3	HMI He	6462	0.10
U	238	193	3	HMI He	1619	0.29

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3974477	2.57	3906300	101.75	60	120	
Sc (IS)	45	3	HMI He	572943	1.24	564278	101.54	60	120	
Ge Internal standard	72	2	HMI H2	2295156	2.80	2319843	98.94	60	120	
Ge Internal standard	72	3	HMI He	658531	0.28	683756	96.31	60	120	
In Internal Standard	115	3	HMI He	2604919	1.76	2609293	99.83	60	120	
Ir (IS)	193	3	HMI He	5871218	2.38	5781904	101.54	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	040CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:54:10-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	038CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4613	0.03
Na	23	45	3	HMI He	228432	0.00
Mg	24	45	3	HMI He	110616	0.00
Al	27	45	3	HMI He	42982	0.00
K	39	45	3	HMI He	111605	0.00
V	51	72	3	HMI He	60954	0.00
Cr	52	72	3	HMI He	76201	0.00
Mn	55	72	3	HMI He	38578	0.00
Co	59	72	3	HMI He	126473	0.00
Ni	60	72	3	HMI He	36263	0.00
Cu	63	72	3	HMI He	98347	0.00
Zn	66	72	3	HMI He	15790	0.01
As	75	72	3	HMI He	11211	0.01
Se	78	72	2	HMI H2	5820	0.01
(Se)	78	72	3	HMI He	688	1.57
Sr	88	72	3	HMI He	105245	0.00
Mo	95	115	3	HMI He	48623	0.00
Ag	107	115	3	HMI He	168890	0.00
Cd	111	115	3	HMI He	23996	0.01
Sn	120	115	3	HMI He	75408	0.00
Sb	121	115	3	HMI He	74287	0.00
Ba	137	115	3	HMI He	24162	0.00
Tl	205	193	3	HMI He	390694	0.00
(Pb)	206	193	3	HMI He	128772	0.00
(Pb)	207	193	3	HMI He	113250	0.00
Pb	208	193	3	HMI He	520116	0.00
Th	232	193	3	HMI He	531664	0.00
U	238	193	3	HMI He	547505	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4007727	2.96	3906300	102.60	60	120	
Sc (IS)	45	3	HMI He	566930	1.66	564278	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2451576	1.76	2319843	105.68	60	120	
Ge Internal standard	72	3	HMI He	713945	0.68	683756	104.42	60	120	
In Internal Standard	115	3	HMI He	2623653	1.87	2609293	100.55	60	120	
Ir (IS)	193	3	HMI He	5785749	1.71	5781904	100.07	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	041_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:55:57-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	37.542	ppb	3.969	1746	40	93.9	90	110	
Na	23	3	45	13081.363	ppb	0.681	1399561	12800	102.2	90	110	
Mg	24	3	45	4584.841	ppb	1.478	260240	4800	95.5	90	110	
Al	27	3	45	758.470	ppb	5.457	16620	800	94.8	90	110	
K	39	3	45	4653.277	ppb	2.368	233131	4800	96.9	90	110	
Ca	40	2	45	4990.228	ppb	0.493	2733606	4800	104.0	90	110	
V	51	3	72	40.980	ppb	1.554	24533	40	102.5	90	110	
Cr	52	3	72	42.293	ppb	2.337	32183	40	105.7	90	110	
Mn	55	3	72	42.725	ppb	1.594	15968	40	106.8	90	110	
Fe	56	2	72	831.084	ppb	0.497	1295086	800	103.9	90	110	
Co	59	3	72	42.257	ppb	1.426	51466	40	105.6	90	110	
Ni	60	3	72	42.257	ppb	1.119	14957	40	105.6	90	110	
Cu	63	3	72	42.032	ppb	1.606	40113	40	105.1	90	110	
Zn	66	3	72	81.691	ppb	0.612	12449	80	102.1	90	110	
As	75	3	72	40.727	ppb	1.699	4440	40	101.8	90	110	
Se	78	2	72	40.977	ppb	1.702	2312	40	102.4	90	110	
Sr	88	3	72	125.294	ppb	1.473	63469	120	104.4	90	110	
Mo	95	3	115	39.035	ppb	0.544	19533	40	97.6	90	110	
Ag	107	3	115	77.277	ppb	1.945	134127	80	96.6	90	110	
Cd	111	3	115	38.871	ppb	3.018	9602	40	97.2	90	110	
Sn	120	3	115	39.918	ppb	2.355	31491	40	99.8	90	110	
Sb	121	3	115	39.619	ppb	2.279	30288	40	99.0	90	110	
Ba	137	3	115	39.943	ppb	2.484	9935	40	99.9	90	110	
Tl	205	3	193	39.484	ppb	3.629	155560	40	98.7	90	110	
(Pb)	206	3	193	40.880	ppb	1.586	53032	40	102.2	90	110	
(Pb)	207	3	193	39.502	ppb	3.285	45161	40	98.8	90	110	
Pb	208	3	193	40.392	ppb	3.246	211592	40	101.0	90	110	
Th	232	3	193	79.116	ppb	1.792	423459	80	98.9	90	110	
U	238	3	193	43.524	ppb	4.279	239648	40	108.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3986563	1.80	3906300	102.05	60	120	
Sc (IS)	45	3	HMI He	576416	0.37	564278	102.15	60	120	
Ge Internal standard	72	2	HMI H2	2375558	0.37	2319843	102.40	60	120	
Ge Internal standard	72	3	HMI He	687241	1.16	683756	100.51	60	120	
In Internal Standard	115	3	HMI He	2696458	2.30	2609293	103.34	60	120	
Ir (IS)	193	3	HMI He	5799785	2.98	5781904	100.31	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	042_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:00:22-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.110	ppb	99.5	10	0.5	
Na	23	3	7.477	ppb	46.5	16991	25	
Mg	24	3	0.418	ppb	577.4	227	25	
Al	27	3	2.036	ppb	76.2	113	15	
K	39	3	4.847	ppb	408.7	24630	50	
V	51	3	0.137	ppb	126.2	918	1	
Cr	52	3	0.002	ppb	5532.9	2029	1	
Mn	55	3	-0.049	ppb	-152.1	163	0.5	
Co	59	3	-0.002	ppb	-566.1	35	0.5	
Ni	60	3	0.165	ppb	66.6	415	1	
Cu	63	3	-0.107	ppb	-48.7	458	1	
Zn	66	3	-0.113	ppb	-121.9	172	5	
As	75	3	0.008	ppb	2328.6	78	1	
Se	78	2	0.024	ppb	82.3	3	1	
Sr	88	3	0.075	ppb	23.6	50	0.5	
Mo	95	3	0.027	ppb	212.4	52	0.5	
Ag	107	3	0.007	ppb	87.6	27	1	
Cd	111	3	0.027	ppb	166.2	33	0.5	
Sn	120	3	0.040	ppb	247.2	930	1	
Sb	121	3	-0.004	ppb	-766.9	65	0.6	
Ba	137	3	0.041	ppb	210.1	38	0.5	
Tl	205	3	-0.101	ppb	-18.3	1261	0.1	
(Pb)	206	3	-0.054	ppb	-14.0	380	1	
(Pb)	207	3	-0.031	ppb	-202.5	531	1	
Pb	208	3	-0.020	ppb	-71.8	1679	0.5	
Th	232	3	2.669	ppb	13.7	23220	1	>RL
U	238	3	0.015	ppb	136.0	1686	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3860126	2.02	3906300	98.82	60	120	
Sc (IS)	45	3	HMI He	564381	0.80	564278	100.02	60	120	
Ge Internal standard	72	2	HMI H2	2328375	2.48	2319843	100.37	60	120	
Ge Internal standard	72	3	HMI He	691008	0.98	683756	101.06	60	120	
In Internal Standard	115	3	HMI He	2644486	2.21	2609293	101.35	60	120	
Ir (IS)	193	3	HMI He	5776591	0.92	5781904	99.91	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	043_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:02:13-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	-0.073	ppb	-83.0	2	0.5	
Na	23	3	6.912	ppb	18.6	17077	25	
Mg	24	3	1.214	ppb	93.6	274	25	
Al	27	3	0.743	ppb	34.4	87	15	
K	39	3	-12.844	ppb	-256.4	24061	50	
V	51	3	0.033	ppb	282.7	865	1	
Cr	52	3	-0.055	ppb	-463.7	2001	1	
Mn	55	3	-0.088	ppb	-85.3	150	0.5	
Co	59	3	0.001	ppb	1765.4	38	0.5	
Ni	60	3	0.026	ppb	318.2	370	1	
Cu	63	3	-0.112	ppb	-46.2	456	1	
Zn	66	3	0.119	ppb	127.6	208	5	
As	75	3	-0.058	ppb	-272.4	72	1	
Se	78	2	0.012	ppb	537.7	2	1	
Sr	88	3	0.019	ppb	129.9	22	0.5	
Mo	95	3	0.023	ppb	116.3	50	0.5	
Ag	107	3	-0.001	ppb	-162.2	13	1	
Cd	111	3	0.006	ppb	206.9	28	0.5	
Sn	120	3	-0.050	ppb	-137.2	863	1	
Sb	121	3	-0.003	ppb	-1394.6	65	0.6	
Ba	137	3	0.053	ppb	124.1	42	0.5	
Tl	205	3	-0.121	ppb	-5.5	1189	0.1	
(Pb)	206	3	-0.076	ppb	-37.5	353	1	
(Pb)	207	3	-0.020	ppb	-119.1	546	1	
Pb	208	3	-0.024	ppb	-58.6	1666	0.5	
Th	232	3	0.086	ppb	189.6	9802	1	
U	238	3	0.012	ppb	126.6	1676	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3952585	1.17	3906300	101.18	60	120	
Sc (IS)	45	3	HMI He	569282	0.55	564278	100.89	60	120	
Ge Internal standard	72	2	HMI H2	2377233	2.29	2319843	102.47	60	120	
Ge Internal standard	72	3	HMI He	696104	1.53	683756	101.81	60	120	
In Internal Standard	115	3	HMI He	2645120	0.21	2609293	101.37	60	120	
Ir (IS)	193	3	HMI He	5801436	1.21	5781904	100.34	60	120	

CRI Report

Sample Table

Sample Name	cri-7691038
Data File Name	044LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:07:35-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.566	ppb	29.296	32	1	56.6	80	120	>+/-30%
Na	23	3	45	284.797	ppb	0.943	46232	300	94.9	80	120	
Mg	24	3	45	47.184	ppb	10.179	2857	50	94.4	80	120	
Al	27	3	45	47.657	ppb	6.580	1101	50	95.3	80	120	
K	39	3	45	100.258	ppb	6.588	29153	120	83.5	80	120	
Ca	40	2	45	200.940	ppb	1.652	116685	200	100.5	80	120	
V	51	3	72	4.684	ppb	2.255	3567	5	93.7	80	120	
Cr	52	3	72	1.885	ppb	21.006	3384	2	94.3	80	120	
Mn	55	3	72	0.962	ppb	6.226	540	1	96.2	80	120	
Fe	56	2	72	48.154	ppb	5.557	102347	50	96.3	80	120	
Co	59	3	72	0.931	ppb	6.565	1178	1	93.1	80	120	
Ni	60	3	72	2.065	ppb	10.757	1076	2	103.3	80	120	
Cu	63	3	72	1.888	ppb	8.935	2347	2	94.4	80	120	
Zn	66	3	72	9.322	ppb	7.559	1598	10	93.2	80	120	
As	75	3	72	4.271	ppb	7.356	538	5	85.4	80	120	
Se	78	2	72	5.384	ppb	4.191	301	5	107.7	80	120	
Sr	88	3	72	4.807	ppb	4.129	2462	5	96.1	80	120	
Mo	95	3	115	1.873	ppb	5.477	953	2	93.6	80	120	
Ag	107	3	115	1.012	ppb	7.948	1733	1	101.2	80	120	
Cd	111	3	115	0.884	ppb	9.634	240	1	88.4	80	120	
Sn	120	3	115	8.351	ppb	3.628	7152	10	83.5	80	120	
Sb	121	3	115	1.772	ppb	2.655	1389	2	88.6	80	120	
Ba	137	3	115	0.982	ppb	34.334	267	1	98.2	80	120	
Tl	205	3	193	0.738	ppb	1.661	4527	1	73.8	80	120	>+/-30%
(Pb)	206	3	193	0.816	ppb	3.871	1496	1	81.6	80	120	
(Pb)	207	3	193	0.784	ppb	6.274	1449	1	78.4	80	120	>+/-30%
Pb	208	3	193	0.853	ppb	5.095	6203	1	85.3	80	120	
Th	232	3	193	0.601	ppb	23.137	12457	1	60.1	80	120	>+/-30%
U	238	3	193	0.917	ppb	3.485	6608	1	91.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3873805	2.16	3906300	99.17	60	120	
Sc (IS)	45	3	HMI He	571007	0.59	564278	101.19	60	120	
Ge Internal standard	72	2	HMI H2	2345423	2.06	2319843	101.10	60	120	
Ge Internal standard	72	3	HMI He	691858	0.82	683756	101.18	60	120	
In Internal Standard	115	3	HMI He	2636372	0.90	2609293	101.04	60	120	
Ir (IS)	193	3	HMI He	5782158	1.55	5781904	100.00	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	045SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:09:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.075	ppb	-0.075	-77.59	2	2000	
Na	23	3	45	-4.199	ppb	-4.199	-139.75	17007	400000	
Mg	24	3	45	10.822	ppb	10.822	15.30	868	400000	
Al	27	3	45	7.143	ppb	7.143	26.96	240	400000	
K	39	3	45	-53.199	ppb	-53.199	-13.91	23814	400000	
Ca	40	2	45	26.487	ppb	26.487	1.72	26465	400000	
V	51	3	72	-0.858	ppb	-0.858	-5.12	365	2000	
Cr	52	3	72	-0.996	ppb	-0.996	-18.01	1411	5000	
Mn	55	3	72	0.095	ppb	0.095	110.61	233	10000	
Fe	56	2	72	5.704	ppb	5.704	31.89	42494	10000	
Co	59	3	72	0.010	ppb	0.010	153.19	53	2000	
Ni	60	3	72	-0.222	ppb	-0.222	-33.18	302	5000	
Cu	63	3	72	-0.207	ppb	-0.207	-5.44	390	5000	
Zn	66	3	72	-0.274	ppb	-0.274	-86.16	158	5000	
As	75	3	72	-0.546	ppb	-0.546	-8.02	20	2000	
Se	78	2	72	0.008	ppb	0.008	387.19	2	2000	
Sr	88	3	72	0.293	ppb	0.293	14.27	173	4000	
Mo	95	3	115	0.004	ppb	0.004	473.74	43	2000	
Ag	107	3	115	0.009	ppb	0.009	17.36	32	100	
Cd	111	3	115	-0.033	ppb	-0.033	-155.33	20	2000	
Sn	120	3	115	-0.860	ppb	-0.860	-7.16	270	2000	
Sb	121	3	115	-0.042	ppb	-0.042	-37.10	38	1000	
Ba	137	3	115	0.075	ppb	0.075	102.38	50	5000	
Tl	205	3	193	-0.273	ppb	-0.273	-4.62	645	2000	
(Pb)	206	3	193	-0.034	ppb	-0.034	-41.24	441	100	
(Pb)	207	3	193	-0.041	ppb	-0.041	-44.93	565	100	
Pb	208	3	193	-0.028	ppb	-0.028	-34.37	1783	5000	
Th	232	3	193	-0.888	ppb	-0.888	-2.97	5085	2000	
U	238	3	193	0.029	ppb	0.029	25.60	1918	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4236402	0.90	3906300	108.45	60	120	
Sc (IS)	45	3	HMI He	608358	0.70	564278	107.81	60	120	
Ge Internal standard	72	2	HMI H2	2583669	1.39	2319843	111.37	60	120	
Ge Internal standard	72	3	HMI He	742975	0.38	683756	108.66	60	120	
In Internal Standard	115	3	HMI He	2813030	0.71	2609293	107.81	60	120	
Ir (IS)	193	3	HMI He	6278216	0.67	5781904	108.58	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	046SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:11:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.128	ppb	0.128	45.05	12	2000	
Na	23	3	45	-9.049	ppb	-9.049	-40.04	16389	400000	
Mg	24	3	45	8.648	ppb	8.648	34.35	734	400000	
Al	27	3	45	8.953	ppb	8.953	22.79	280	400000	
K	39	3	45	-44.755	ppb	-44.755	-48.92	24095	400000	
Ca	40	2	45	25.717	ppb	25.717	4.01	25897	400000	
V	51	3	72	-0.899	ppb	-0.899	-8.78	337	2000	
Cr	52	3	72	-0.716	ppb	-0.716	-12.44	1613	5000	
Mn	55	3	72	0.096	ppb	0.096	50.56	232	10000	
Fe	56	2	72	6.255	ppb	6.255	30.86	42987	10000	
Co	59	3	72	0.010	ppb	0.010	181.01	53	2000	
Ni	60	3	72	-0.008	ppb	-0.008	-1332.56	378	5000	
Cu	63	3	72	-0.148	ppb	-0.148	-5.26	446	5000	
Zn	66	3	72	-0.348	ppb	-0.348	-31.81	145	5000	
As	75	3	72	-0.414	ppb	-0.414	-37.76	35	2000	
Se	78	2	72	0.031	ppb	0.031	63.12	3	2000	
Sr	88	3	72	0.324	ppb	0.324	20.09	188	4000	
Mo	95	3	115	0.022	ppb	0.022	111.57	52	2000	
Ag	107	3	115	0.007	ppb	0.007	21.77	28	100	
Cd	111	3	115	-0.085	ppb	-0.085	-13.69	7	2000	
Sn	120	3	115	-0.758	ppb	-0.758	-5.75	346	2000	
Sb	121	3	115	-0.022	ppb	-0.022	-118.87	53	1000	
Ba	137	3	115	0.039	ppb	0.039	152.51	40	5000	
Tl	205	3	193	-0.271	ppb	-0.271	-4.64	651	2000	
(Pb)	206	3	193	-0.087	ppb	-0.087	-67.22	365	100	
(Pb)	207	3	193	-0.039	ppb	-0.039	-172.22	565	100	
Pb	208	3	193	-0.022	ppb	-0.022	-90.77	1802	5000	
Th	232	3	193	-0.932	ppb	-0.932	-2.04	4814	2000	
U	238	3	193	0.012	ppb	0.012	147.92	1808	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4217586	1.15	3906300	107.97	60	120	
Sc (IS)	45	3	HMI He	605387	0.44	564278	107.29	60	120	
Ge Internal standard	72	2	HMI H2	2558121	1.53	2319843	110.27	60	120	
Ge Internal standard	72	3	HMI He	736145	0.14	683756	107.66	60	120	
In Internal Standard	115	3	HMI He	2766834	0.72	2609293	106.04	60	120	
Ir (IS)	193	3	HMI He	6253263	1.73	5781904	108.15	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	047CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T14:13:35-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	16232	0.01
Mg	24	45	3	HMI He	220	7.44
Al	27	45	3	HMI He	83	72.41
K	39	45	3	HMI He	24713	0.02
Ca	40	45	2	HMI H2	10638	0.03
V	51	72	3	HMI He	958	0.76
Cr	52	72	3	HMI He	2041	0.23
Mn	55	72	3	HMI He	172	10.91
Fe	56	72	2	HMI H2	29407	0.03
Co	59	72	3	HMI He	35	122.52
Ni	60	72	3	HMI He	325	5.68
Cu	63	72	3	HMI He	430	0.00
Zn	66	72	3	HMI He	198	11.54
As	75	72	3	HMI He	65	61.51
Se	78	72	2	HMI H2	3	2749.55
(Se)	78	72	3	HMI He	30	55.55
Sr	88	72	3	HMI He	23	140.40
Mo	95	115	3	HMI He	37	21.50
Ag	107	115	3	HMI He	15	444.62
Cd	111	115	3	HMI He	23	53.07
Sn	120	115	3	HMI He	881	1.18
Sb	121	115	3	HMI He	38	39.33
Ba	137	115	3	HMI He	37	21.50
Tl	205	193	3	HMI He	970	0.51
(Pb)	206	193	3	HMI He	347	4.27
(Pb)	207	193	3	HMI He	496	1.02
Pb	208	193	3	HMI He	1524	0.24
Th	232	193	3	HMI He	5338	0.04
U	238	193	3	HMI He	1693	0.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3887690	1.05
Sc (IS)	45	3	HMI He	560366	0.91
Ge Internal standard	72	2	HMI H2	2321471	1.97
Ge Internal standard	72	3	HMI He	685485	0.75
In Internal Standard	115	3	HMI He	2631879	2.69
Ir (IS)	193	3	HMI He	5771767	2.03

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	048CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T14:15:25-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	10397055	0.00
Mg	24	45	3	HMI He	1104369	0.00
Al	27	45	3	HMI He	137	22.27
K	39	45	3	HMI He	917458	0.00
V	51	72	3	HMI He	905	0.90
Cr	52	72	3	HMI He	2387	0.18
Mn	55	72	3	HMI He	248	12.04
Co	59	72	3	HMI He	93	17.55
Ni	60	72	3	HMI He	505	1.37
Cu	63	72	3	HMI He	531	2.10
Zn	66	72	3	HMI He	288	3.53
As	75	72	3	HMI He	43	85.62
Se	78	72	2	HMI H2	2	5000.00
(Se)	78	72	3	HMI He	8	1499.19
Sr	88	72	3	HMI He	258	3.12
Mo	95	115	3	HMI He	58	59.42
Ag	107	115	3	HMI He	37	130.68
Cd	111	115	3	HMI He	23	140.40
Sn	120	115	3	HMI He	956	1.11
Sb	121	115	3	HMI He	75	17.79
Ba	137	115	3	HMI He	185	2.53
Tl	205	193	3	HMI He	746	0.51
(Pb)	206	193	3	HMI He	381	3.61
(Pb)	207	193	3	HMI He	550	1.88
Pb	208	193	3	HMI He	1716	0.68
Th	232	193	3	HMI He	4812	0.03
U	238	193	3	HMI He	1711	0.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3923317	1.55	3887690	100.92	60	120	
Sc (IS)	45	3	HMI He	573668	1.64	560366	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2251543	0.98	2321471	96.99	60	120	
Ge Internal standard	72	3	HMI He	664487	0.73	685485	96.94	60	120	
In Internal Standard	115	3	HMI He	2642607	2.90	2631879	100.41	60	120	
Ir (IS)	193	3	HMI He	5930827	0.38	5771767	102.76	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	049CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T14:17:31-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4360	0.20
Na	23	45	3	HMI He	225411	0.00
Mg	24	45	3	HMI He	108864	0.00
Al	27	45	3	HMI He	43075	0.00
K	39	45	3	HMI He	113960	0.00
V	51	72	3	HMI He	60640	0.00
Cr	52	72	3	HMI He	75653	0.00
Mn	55	72	3	HMI He	38895	0.00
Co	59	72	3	HMI He	126285	0.00
Ni	60	72	3	HMI He	35389	0.00
Cu	63	72	3	HMI He	97271	0.00
Zn	66	72	3	HMI He	15246	0.01
As	75	72	3	HMI He	11109	0.02
Se	78	72	2	HMI H2	5765	0.01
(Se)	78	72	3	HMI He	586	1.92
Sr	88	72	3	HMI He	105252	0.00
Mo	95	115	3	HMI He	49103	0.00
Ag	107	115	3	HMI He	165265	0.00
Cd	111	115	3	HMI He	24136	0.01
Sn	120	115	3	HMI He	74607	0.00
Sb	121	115	3	HMI He	74527	0.00
Ba	137	115	3	HMI He	23659	0.00
Tl	205	193	3	HMI He	383650	0.00
(Pb)	206	193	3	HMI He	126139	0.00
(Pb)	207	193	3	HMI He	112363	0.00
Pb	208	193	3	HMI He	512273	0.00
Th	232	193	3	HMI He	514586	0.00
U	238	193	3	HMI He	541664	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3983857	0.59	3887690	102.47	60	120	
Sc (IS)	45	3	HMI He	566455	1.47	560366	101.09	60	120	
Ge Internal standard	72	2	HMI H2	2391072	1.28	2321471	103.00	60	120	
Ge Internal standard	72	3	HMI He	708657	1.38	685485	103.38	60	120	
In Internal Standard	115	3	HMI He	2686640	1.54	2631879	102.08	60	120	
Ir (IS)	193	3	HMI He	5820840	3.05	5771767	100.85	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	050_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:19:31-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	43.871	ppb	2.578	1913	40	109.7	90	110	
Na	23	3	45	13029.017	ppb	4.250	1380135	12800	101.8	90	110	
Mg	24	3	45	4684.011	ppb	1.329	260916	4800	97.6	90	110	
Al	27	3	45	772.380	ppb	3.501	17034	800	96.5	90	110	
K	39	3	45	4591.791	ppb	1.040	231957	4800	95.7	90	110	
Ca	40	2	45	4795.142	ppb	1.722	2682583	4800	99.9	90	110	
V	51	3	72	40.531	ppb	0.641	25023	40	101.3	90	110	
Cr	52	3	72	41.042	ppb	1.487	32113	40	102.6	90	110	
Mn	55	3	72	41.707	ppb	1.436	16233	40	104.3	90	110	
Fe	56	2	72	812.491	ppb	2.008	1300933	800	101.6	90	110	
Co	59	3	72	40.721	ppb	2.203	51152	40	101.8	90	110	
Ni	60	3	72	41.523	ppb	1.878	14807	40	103.8	90	110	
Cu	63	3	72	41.567	ppb	1.312	40461	40	103.9	90	110	
Zn	66	3	72	85.032	ppb	1.570	12920	80	106.3	90	110	
As	75	3	72	40.459	ppb	5.199	4509	40	101.1	90	110	
Se	78	2	72	40.565	ppb	0.608	2353	40	101.4	90	110	
Sr	88	3	72	119.048	ppb	1.306	62306	120	99.2	90	110	
Mo	95	3	115	39.798	ppb	3.088	19391	40	99.5	90	110	
Ag	107	3	115	81.636	ppb	1.183	133730	80	102.0	90	110	
Cd	111	3	115	39.269	ppb	2.245	9409	40	98.2	90	110	
Sn	120	3	115	42.148	ppb	1.676	31680	40	105.4	90	110	
Sb	121	3	115	41.295	ppb	0.829	30526	40	103.2	90	110	
Ba	137	3	115	41.767	ppb	2.369	9817	40	104.4	90	110	
Tl	205	3	193	38.782	ppb	0.744	151574	40	97.0	90	110	
(Pb)	206	3	193	41.019	ppb	2.339	52710	40	102.5	90	110	
(Pb)	207	3	193	39.270	ppb	1.823	45076	40	98.2	90	110	
Pb	208	3	193	40.010	ppb	1.911	208925	40	100.0	90	110	
Th	232	3	193	81.667	ppb	1.170	427428	80	102.1	90	110	
U	238	3	193	42.395	ppb	1.173	234052	40	106.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4001080	0.88	3887690	102.92	60	120	
Sc (IS)	45	3	HMI He	578216	0.76	560366	103.19	60	120	
Ge Internal standard	72	2	HMI H2	2403423	1.34	2321471	103.53	60	120	
Ge Internal standard	72	3	HMI He	704595	0.49	685485	102.79	60	120	
In Internal Standard	115	3	HMI He	2662723	0.49	2631879	101.17	60	120	
Ir (IS)	193	3	HMI He	5904260	0.87	5771767	102.30	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	051_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:21:17-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.033	ppb	582.0	5	0.5	
Na	23	3	3.979	ppb	80.7	17007	25	
Mg	24	3	0.815	ppb	79.8	270	25	
Al	27	3	-0.375	ppb	-397.4	77	15	
K	39	3	-5.445	ppb	-475.8	25021	50	
V	51	3	0.006	ppb	1957.2	986	1	
Cr	52	3	0.134	ppb	133.1	2192	1	
Mn	55	3	0.092	ppb	98.5	212	0.5	
Co	59	3	0.023	ppb	75.1	65	0.5	
Ni	60	3	0.144	ppb	106.9	383	1	
Cu	63	3	0.016	ppb	91.5	456	1	
Zn	66	3	0.044	ppb	315.8	210	5	
As	75	3	-0.078	ppb	-87.7	58	1	
Se	78	2	-0.014	ppb	-377.8	3	1	
Sr	88	3	0.047	ppb	31.6	48	0.5	
Mo	95	3	0.052	ppb	32.5	62	0.5	
Ag	107	3	0.029	ppb	22.4	62	1	
Cd	111	3	-0.042	ppb	-153.4	13	0.5	
Sn	120	3	0.168	ppb	42.6	1001	1	
Sb	121	3	0.048	ppb	110.6	73	0.6	
Ba	137	3	0.072	ppb	104.6	53	0.5	
Tl	205	3	0.007	ppb	365.3	1001	0.1	
(Pb)	206	3	-0.026	ppb	-57.0	315	1	
(Pb)	207	3	-0.022	ppb	-341.2	473	1	
Pb	208	3	-0.008	ppb	-315.7	1486	0.5	
Th	232	3	3.365	ppb	11.3	22424	1	>RL
U	238	3	-0.001	ppb	-3540.9	1696	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3981413	1.34	3887690	102.41	60	120	
Sc (IS)	45	3	HMI He	572923	0.63	560366	102.24	60	120	
Ge Internal standard	72	2	HMI H2	2359261	2.32	2321471	101.63	60	120	
Ge Internal standard	72	3	HMI He	703442	0.43	685485	102.62	60	120	
In Internal Standard	115	3	HMI He	2627129	0.81	2631879	99.82	60	120	
Ir (IS)	193	3	HMI He	5792350	2.30	5771767	100.36	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	052_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:26:07-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.000	ppb	19162.2	3	0.5	
Na	23	3	1.070	ppb	265.4	16660	25	
Mg	24	3	0.403	ppb	566.3	247	25	
Al	27	3	0.248	ppb	812.7	90	15	
K	39	3	-14.955	ppb	-154.3	24529	50	
V	51	3	-0.051	ppb	-167.6	940	1	
Cr	52	3	0.227	ppb	64.3	2229	1	
Mn	55	3	0.034	ppb	75.9	187	0.5	
Co	59	3	0.002	ppb	273.6	38	0.5	
Ni	60	3	0.137	ppb	204.8	375	1	
Cu	63	3	-0.033	ppb	-123.3	403	1	
Zn	66	3	0.087	ppb	133.4	213	5	
As	75	3	-0.116	ppb	-116.4	53	1	
Se	78	2	-0.013	ppb	-151.1	3	1	
Sr	88	3	0.012	ppb	152.7	30	0.5	
Mo	95	3	0.023	ppb	92.4	48	0.5	
Ag	107	3	0.006	ppb	53.4	25	1	
Cd	111	3	-0.015	ppb	-279.8	20	0.5	
Sn	120	3	-0.092	ppb	-63.7	826	1	
Sb	121	3	0.031	ppb	15.4	62	0.6	
Ba	137	3	-0.002	ppb	-2638.1	37	0.5	
Tl	205	3	-0.067	ppb	-18.1	716	0.1	
(Pb)	206	3	-0.027	ppb	-109.1	313	1	
(Pb)	207	3	-0.032	ppb	-87.4	461	1	
Pb	208	3	-0.016	ppb	-107.5	1446	0.5	
Th	232	3	0.928	ppb	26.5	10054	1	
U	238	3	-0.018	ppb	-86.6	1601	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3884367	0.48	3887690	99.91	60	120	
Sc (IS)	45	3	HMI He	571345	0.37	560366	101.96	60	120	
Ge Internal standard	72	2	HMI H2	2347114	1.44	2321471	101.10	60	120	
Ge Internal standard	72	3	HMI He	693628	0.89	685485	101.19	60	120	
In Internal Standard	115	3	HMI He	2667841	1.04	2631879	101.37	60	120	
Ir (IS)	193	3	HMI He	5784770	0.50	5771767	100.23	60	120	

CRI Report

Sample Table

Sample Name	cri-7691038
Data File Name	053LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:28:30-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	1.032	ppb	4.982	48	1	103.2	80	120	
Na	23	3	45	291.700	ppb	1.534	46924	300	97.2	80	120	
Mg	24	3	45	45.630	ppb	4.626	2746	50	91.3	80	120	
Al	27	3	45	45.301	ppb	13.381	1071	50	90.6	80	120	
K	39	3	45	91.661	ppb	11.631	29400	120	76.4	80	120	>+/-30%
Ca	40	2	45	201.007	ppb	1.917	118297	200	100.5	80	120	
V	51	3	72	4.887	ppb	11.222	3870	5	97.7	80	120	
Cr	52	3	72	1.889	ppb	4.031	3469	2	94.4	80	120	
Mn	55	3	72	1.082	ppb	6.894	591	1	108.2	80	120	
Fe	56	2	72	50.474	ppb	2.654	107434	50	100.9	80	120	
Co	59	3	72	0.929	ppb	6.682	1199	1	92.9	80	120	
Ni	60	3	72	2.140	ppb	5.739	1076	2	107.0	80	120	
Cu	63	3	72	1.958	ppb	7.435	2319	2	97.9	80	120	
Zn	66	3	72	9.757	ppb	6.100	1658	10	97.6	80	120	
As	75	3	72	4.976	ppb	2.137	611	5	99.5	80	120	
Se	78	2	72	4.729	ppb	9.503	273	5	94.6	80	120	
Sr	88	3	72	4.723	ppb	6.623	2487	5	94.5	80	120	
Mo	95	3	115	1.814	ppb	9.970	930	2	90.7	80	120	
Ag	107	3	115	0.855	ppb	1.951	1433	1	85.5	80	120	
Cd	111	3	115	0.853	ppb	20.772	230	1	85.3	80	120	
Sn	120	3	115	8.553	ppb	9.024	7222	10	85.5	80	120	
Sb	121	3	115	1.818	ppb	3.333	1398	2	90.9	80	120	
Ba	137	3	115	0.925	ppb	18.799	257	1	92.5	80	120	
Tl	205	3	193	0.866	ppb	7.183	4340	1	86.6	80	120	
(Pb)	206	3	193	0.931	ppb	11.281	1536	1	93.1	80	120	
(Pb)	207	3	193	0.917	ppb	12.527	1543	1	91.7	80	120	
Pb	208	3	193	0.900	ppb	4.275	6204	1	90.0	80	120	
Th	232	3	193	1.482	ppb	14.759	13074	1	148.2	80	120	>+/-30%
U	238	3	193	0.949	ppb	5.036	6910	1	94.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3850484	1.88	3887690	99.04	60	120	
Sc (IS)	45	3	HMI He	573947	0.97	560366	102.42	60	120	
Ge Internal standard	72	2	HMI H2	2360389	1.29	2321471	101.68	60	120	
Ge Internal standard	72	3	HMI He	702506	0.67	685485	102.48	60	120	
In Internal Standard	115	3	HMI He	2696475	2.84	2631879	102.45	60	120	
Ir (IS)	193	3	HMI He	5884982	1.43	5771767	101.96	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	054ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:32:20-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.002	ppb	-6451.4	3	0.5	
Na	23	3	45	94524.593	ppb	0.4	9991609	100000	
Mg	24	3	45	94132.759	ppb	1.3	5283346	100000	
Al	27	3	45	93660.568	ppb	0.7	2072628	100000	
K	39	3	45	91707.384	ppb	0.7	4183716	100000	
Ca	40	2	45	95000.943	ppb	2.6	52202626	100000	
V	51	3	72	-0.197	ppb	-98.2	886	1	
Cr	52	3	72	1.040	ppb	2.9	2921	1	>RL or LOD
Mn	55	3	72	0.241	ppb	57.6	275	0.95	
Fe	56	2	72	92692.524	ppb	1.6	145127449	100000	
Co	59	3	72	0.225	ppb	23.7	325	0.5	
Ni	60	3	72	0.423	ppb	9.0	491	1	
Cu	63	3	72	0.151	ppb	8.8	600	1	
Zn	66	3	72	0.884	ppb	68.7	343	1	
As	75	3	72	-0.060	ppb	-373.7	62	1	
Se	78	2	72	-0.002	ppb	-2411.2	3	1	
(Se)	78	3	72	-2.931	ppb	-30.1	15	1	
Sr	88	3	72	0.793	ppb	18.2	448	1	
Mo	95	3	115	1923.280	ppb	2.2	928344	2000	
Ag	107	3	115	0.028	ppb	50.9	62	1	
Cd	111	3	115	0.098	ppb	46.1	47	1	
Sn	120	3	115	-0.006	ppb	-2543.5	880	1	
Sb	121	3	115	0.127	ppb	27.6	132	1	
Ba	137	3	115	1.914	ppb	4.2	481	0.95	>RL or LOD
Tl	205	3	193	-0.094	ppb	-7.9	616	1	
(Pb)	206	3	193	0.116	ppb	16.8	493	1	
(Pb)	207	3	193	0.082	ppb	64.1	591	1	
Pb	208	3	193	0.121	ppb	9.2	2146	1	
Th	232	3	193	0.068	ppb	150.4	5702	1	
U	238	3	193	0.043	ppb	62.3	1934	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3945924	1.86	3887690	101.50	60	120	
Sc (IS)	45	3	HMI He	583054	0.40	560366	104.05	60	120	
Ge Internal standard	72	2	HMI H2	2406131	2.04	2321471	103.65	60	120	
Ge Internal standard	72	3	HMI He	719839	0.44	685485	105.01	60	120	
In Internal Standard	115	3	HMI He	2643255	1.77	2631879	100.43	60	120	
Ir (IS)	193	3	HMI He	5798317	2.43	5771767	100.46	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	055ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:34:06-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	102.117	ppb	0.480	4465	100	102.1	80	120	
Na	23	3	45	100769.299	ppb	2.086	10480122	100	100769.3	80	120	>+\-20%
Mg	24	3	45	99804.508	ppb	1.313	5512260	100	99804.5	80	120	>+\-20%
Al	27	3	45	94151.240	ppb	2.269	2050210	100	94151.2	80	120	>+\-20%
K	39	3	45	98905.142	ppb	1.913	4437926	100	98905.1	80	120	>+\-20%
Ca	40	2	45	99439.167	ppb	1.295	55029414	100	99439.2	80	120	>+\-20%
V	51	3	72	95.424	ppb	1.400	58851	100	95.4	80	120	
Cr	52	3	72	99.491	ppb	0.382	76514	100	99.5	80	120	
Mn	55	3	72	97.590	ppb	0.191	38581	100	97.6	80	120	
Fe	56	2	72	95494.333	ppb	3.418	145586867	100	95494.3	80	120	>+\-20%
Co	59	3	72	95.829	ppb	1.560	122990	100	95.8	80	120	
Ni	60	3	72	96.435	ppb	1.917	34696	100	96.4	80	120	
Cu	63	3	72	96.265	ppb	1.622	95181	100	96.3	80	120	
Zn	66	3	72	97.324	ppb	3.308	15082	100	97.3	80	120	
As	75	3	72	95.870	ppb	1.547	10827	100	95.9	80	120	
Se	78	2	72	101.635	ppb	3.645	5741	100	101.6	80	120	
(Se)	78	3	72	106.353	ppb	10.660	631	100	106.4	80	120	
Sr	88	3	72	193.635	ppb	1.102	103571	100	193.6	80	120	>+\-20%
Mo	95	3	115	2047.668	ppb	0.472	985060	100	2047.7	80	120	>+\-20%
Ag	107	3	115	99.932	ppb	0.633	161907	100	99.9	80	120	
Cd	111	3	115	96.442	ppb	1.224	22820	100	96.4	80	120	
Sn	120	3	115	101.378	ppb	2.229	74121	100	101.4	80	120	
Sb	121	3	115	99.600	ppb	2.106	72763	100	99.6	80	120	
Ba	137	3	115	103.516	ppb	3.251	24007	100	103.5	80	120	
Tl	205	3	193	97.675	ppb	0.694	372586	100	97.7	80	120	
(Pb)	206	3	193	100.420	ppb	0.495	125950	100	100.4	80	120	
(Pb)	207	3	193	97.403	ppb	1.388	108815	100	97.4	80	120	
Pb	208	3	193	98.726	ppb	1.065	502915	100	98.7	80	120	
Th	232	3	193	101.085	ppb	1.565	517103	100	101.1	80	120	
U	238	3	193	106.845	ppb	1.413	575380	100	106.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3973309	1.11	3887690	102.20	60	120	
Sc (IS)	45	3	HMI He	573772	0.73	560366	102.39	60	120	
Ge Internal standard	72	2	HMI H2	2343889	2.98	2321471	100.97	60	120	
Ge Internal standard	72	3	HMI He	720178	0.44	685485	105.06	60	120	
In Internal Standard	115	3	HMI He	2633692	0.98	2631879	100.07	60	120	
Ir (IS)	193	3	HMI He	5785314	1.06	5771767	100.23	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	056SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:35:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1626.20	3	2000	
Na	23	3	45	51.072	ppb	51.072	13.19	21785	400000	
Mg	24	3	45	18.520	ppb	18.520	16.88	1241	400000	
Al	27	3	45	16.910	ppb	16.910	9.71	450	400000	
K	39	3	45	44.536	ppb	44.536	50.60	27113	400000	
Ca	40	2	45	20.142	ppb	20.142	5.55	22140	400000	
V	51	3	72	0.067	ppb	0.067	164.65	991	2000	
Cr	52	3	72	0.251	ppb	0.251	65.75	2207	5000	
Mn	55	3	72	0.011	ppb	0.011	480.04	175	10000	
Fe	56	2	72	23.590	ppb	23.590	9.52	67216	10000	
Co	59	3	72	0.016	ppb	0.016	128.65	55	2000	
Ni	60	3	72	0.806	ppb	0.806	7.53	595	5000	
Cu	63	3	72	0.055	ppb	0.055	178.71	478	5000	
Zn	66	3	72	0.046	ppb	0.046	858.82	203	5000	
As	75	3	72	0.160	ppb	0.160	116.02	82	2000	
Se	78	2	72	0.078	ppb	0.078	73.97	8	2000	
Sr	88	3	72	0.036	ppb	0.036	119.92	42	4000	
Mo	95	3	115	4.287	ppb	4.287	18.44	2119	2000	
Ag	107	3	115	0.025	ppb	0.025	5.19	57	100	
Cd	111	3	115	-0.036	ppb	-0.036	-98.82	15	2000	
Sn	120	3	115	-0.027	ppb	-0.027	-622.60	871	2000	
Sb	121	3	115	0.071	ppb	0.071	33.44	92	1000	
Ba	137	3	115	0.013	ppb	0.013	453.25	40	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-10.12	743	2000	
(Pb)	206	3	193	-0.015	ppb	-0.015	-145.33	337	100	
(Pb)	207	3	193	0.000	ppb	0.000	-13947.95	510	100	
Pb	208	3	193	-0.005	ppb	-0.005	-189.60	1539	5000	
Th	232	3	193	2.809	ppb	2.809	10.58	20050	2000	
U	238	3	193	0.028	ppb	0.028	10.95	1894	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997248	2.23	3887690	102.82	60	120	
Sc (IS)	45	3	HMI He	570094	0.69	560366	101.74	60	120	
Ge Internal standard	72	2	HMI H2	2399134	3.10	2321471	103.35	60	120	
Ge Internal standard	72	3	HMI He	681944	1.36	685485	99.48	60	120	
In Internal Standard	115	3	HMI He	2657198	1.67	2631879	100.96	60	120	
Ir (IS)	193	3	HMI He	5927581	0.81	5771767	102.70	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-7616617
Data File Name	057_LR.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:37:39-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	2066.706	ppb	1.423	96354	2000	103.3	90	110	
Na	23	3	45	186848.823	ppb	1.774	21522621	200000	93.4	90	110	
Mg	24	3	45	188460.576	ppb	1.542	11535286	200000	94.2	90	110	
Al	27	3	45	279528.764	ppb	2.099	6746213	300000	93.2	90	110	
V	51	3	72	2009.353	ppb	2.841	1291601	2000	100.5	90	110	
Cr	52	3	72	4838.814	ppb	1.700	3834383	5000	96.8	90	110	
Mn	55	3	72	9987.391	ppb	0.914	4163867	10000	99.9	90	110	
Fe	56	2	72	194847.620	ppb	3.046	323357860	200000	97.4	90	110	
Co	59	3	72	1916.087	ppb	1.336	2604865	2000	95.8	90	110	
Ni	60	3	72	4806.176	ppb	1.444	1814525	5000	96.1	90	110	
Cu	63	3	72	4933.338	ppb	2.278	5144180	5000	98.7	90	110	
Zn	66	3	72	4918.573	ppb	0.100	796734	5000	98.4	90	110	
As	75	3	72	2001.397	ppb	0.990	238046	2000	100.1	90	110	
Se	78	2	72	2021.175	ppb	1.871	124239	2000	101.1	90	110	
(Se)	78	3	72	2300.185	ppb	0.825	13775	2000	115.0	90	110	LRS Main CR1 Failed
Sr	88	3	72	5082.538	ppb	1.132	2879656	5000	101.7	90	110	
Mo	95	3	115	1963.220	ppb	1.676	1021690	2000	98.2	90	110	
Cd	111	3	115	1908.068	ppb	0.692	487978	2000	95.4	90	110	
Sn	120	3	115	2057.089	ppb	1.771	1609011	2000	102.9	90	110	
Sb	121	3	115	1005.126	ppb	0.408	794104	1000	100.5	90	110	
Ba	137	3	115	5280.243	ppb	1.330	1323058	5000	105.6	90	110	
Tl	205	3	193	997.221	ppb	1.213	4115447	1000	99.7	90	110	
(Pb)	206	3	193	5060.418	ppb	1.517	6863910	5000	101.2	90	110	
(Pb)	207	3	193	5031.909	ppb	0.689	6069453	5000	100.6	90	110	
Pb	208	3	193	5020.632	ppb	2.187	27649840	5000	100.4	90	110	
Th	232	3	193	979.449	ppb	1.957	5383019	1000	97.9	90	110	
U	238	3	193	2030.449	ppb	1.923	11824134	2000	101.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4401817	2.27	3887690	113.22	60	120	
Sc (IS)	45	3	HMI He	635832	0.77	560366	113.47	60	120	
Ge Internal standard	72	2	HMI H2	2551092	1.79	2321471	109.89	60	120	
Ge Internal standard	72	3	HMI He	763021	0.29	685485	111.31	60	120	
In Internal Standard	115	3	HMI He	2849262	0.42	2631879	108.26	60	120	
Ir (IS)	193	3	HMI He	6274390	1.71	5771767	108.71	60	120	

Sample Report

Sample Table

Sample Name	rinse-
Data File Name	058SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:39:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.265	ppb	0.265	44.58	15	2000	
Na	23	3	45	88.244	ppb	88.244	4.27	25726	400000	
Mg	24	3	45	30.249	ppb	30.249	3.34	1892	400000	
Al	27	3	45	45.387	ppb	45.387	20.44	1071	400000	
K	39	3	45	103.505	ppb	103.505	22.14	29848	400000	
Ca	40	2	45	34.202	ppb	34.202	7.83	29340	400000	
V	51	3	72	-0.075	ppb	-0.075	-130.86	936	2000	
Cr	52	3	72	0.791	ppb	0.791	6.34	2664	5000	
Mn	55	3	72	1.407	ppb	1.407	3.71	715	10000	
Fe	56	2	72	42.553	ppb	42.553	9.61	96894	10000	
Co	59	3	72	0.265	ppb	0.265	1.93	366	2000	
Ni	60	3	72	1.245	ppb	1.245	17.35	765	5000	
Cu	63	3	72	1.100	ppb	1.100	2.13	1494	5000	
Zn	66	3	72	1.425	ppb	1.425	10.61	415	5000	
As	75	3	72	0.673	ppb	0.673	48.70	140	2000	
Se	78	2	72	0.447	ppb	0.447	30.71	29	2000	
Sr	88	3	72	0.654	ppb	0.654	10.96	365	4000	
Mo	95	3	115	10.697	ppb	10.697	19.88	5233	2000	
Ag	107	3	115	0.004	ppb	0.004	328.19	22	100	
Cd	111	3	115	0.397	ppb	0.397	20.96	118	2000	
Sn	120	3	115	13.636	ppb	13.636	8.36	10851	2000	
Sb	121	3	115	1.696	ppb	1.696	7.50	1291	1000	
Ba	137	3	115	0.681	ppb	0.681	13.48	197	5000	
Tl	205	3	193	0.401	ppb	0.401	9.30	2581	2000	
(Pb)	206	3	193	0.851	ppb	0.851	10.02	1459	100	
(Pb)	207	3	193	0.825	ppb	0.825	4.35	1463	100	
Pb	208	3	193	0.826	ppb	0.826	2.48	5916	5000	
Th	232	3	193	46.184	ppb	46.184	10.95	247312	2000	
U	238	3	193	0.879	ppb	0.879	7.18	6634	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3912426	1.08	3887690	100.64	60	120	
Sc (IS)	45	3	HMI He	572471	0.08	560366	102.16	60	120	
Ge Internal standard	72	2	HMI H2	2400198	0.56	2321471	103.39	60	120	
Ge Internal standard	72	3	HMI He	701364	1.15	685485	102.32	60	120	
In Internal Standard	115	3	HMI He	2664197	1.62	2631879	101.23	60	120	
Ir (IS)	193	3	HMI He	5979591	1.43	5771767	103.60	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	059_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:41:07-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.479	ppb	1.431	2379	50	109.0	90	110	
Na	23	3	45	47771.331	ppb	0.960	5054773	51000	93.7	90	110	
Mg	24	3	45	10300.216	ppb	1.938	577904	11000	93.6	90	110	
Al	27	3	45	939.202	ppb	3.060	20853	1000	93.9	90	110	
K	39	3	45	10180.941	ppb	2.962	486943	11000	92.6	90	110	
Ca	40	2	45	10254.331	ppb	0.623	5731991	11000	93.2	90	110	
V	51	3	72	50.201	ppb	1.620	30513	50	100.4	90	110	
Cr	52	3	72	51.391	ppb	1.039	39366	50	102.8	90	110	
Mn	55	3	72	51.080	ppb	1.887	19686	50	102.2	90	110	
Fe	56	2	72	1038.773	ppb	2.432	1599553	1000	103.9	90	110	
Co	59	3	72	50.925	ppb	1.697	63458	50	101.9	90	110	
Ni	60	3	72	51.178	ppb	0.480	18028	50	102.4	90	110	
Cu	63	3	72	50.941	ppb	2.200	49094	50	101.9	90	110	
Zn	66	3	72	51.070	ppb	2.498	7778	50	102.1	90	110	
As	75	3	72	51.243	ppb	2.066	5648	50	102.5	90	110	
Se	78	2	72	51.487	ppb	3.774	2886	50	103.0	90	110	
Sr	88	3	72	102.155	ppb	1.904	53042	100	102.2	90	110	
Mo	95	3	115	51.453	ppb	2.204	24772	50	102.9	90	110	
Ag	107	3	115	51.296	ppb	2.062	83074	50	102.6	90	110	
Cd	111	3	115	50.134	ppb	4.205	11866	50	100.3	90	110	
Sn	120	3	115	52.194	ppb	0.581	38573	50	104.4	90	110	
Sb	121	3	115	50.755	ppb	1.353	37080	50	101.5	90	110	
Ba	137	3	115	51.689	ppb	1.594	12001	50	103.4	90	110	
Tl	205	3	193	49.934	ppb	3.092	191446	50	99.9	90	110	
(Pb)	206	3	193	51.439	ppb	2.159	64865	50	102.9	90	110	
(Pb)	207	3	193	49.638	ppb	1.771	55861	50	99.3	90	110	
Pb	208	3	193	50.780	ppb	1.399	260148	50	101.6	90	110	
Th	232	3	193	60.028	ppb	3.882	310214	50	120.1	90	110	>+\-10%
U	238	3	193	50.888	ppb	2.251	275689	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4006258	0.98	3887690	103.05	60	120	
Sc (IS)	45	3	HMI He	582711	1.02	560366	103.99	60	120	
Ge Internal standard	72	2	HMI H2	2323334	1.22	2321471	100.08	60	120	
Ge Internal standard	72	3	HMI He	699010	0.80	685485	101.97	60	120	
In Internal Standard	115	3	HMI He	2632265	0.75	2631879	100.01	60	120	
Ir (IS)	193	3	HMI He	5802179	1.82	5771767	100.53	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	060_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:42:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.194	ppb	153.0	12	0.5	
Na	23	3	45	36.278	ppb	21.6	20723	25	>RL
Mg	24	3	45	5.069	ppb	30.3	514	25	
Al	27	3	45	5.895	ppb	29.9	217	15	
K	39	3	45	26.109	ppb	159.5	26896	50	
V	51	3	72	-0.041	ppb	-232.0	965	1	
Cr	52	3	72	0.541	ppb	14.3	2504	1	
Mn	55	3	72	0.213	ppb	62.2	260	0.5	
Co	59	3	72	0.040	ppb	81.2	87	0.5	
Ni	60	3	72	0.452	ppb	45.2	493	1	
Cu	63	3	72	0.249	ppb	27.7	685	1	
Zn	66	3	72	0.458	ppb	10.8	273	5	
As	75	3	72	0.024	ppb	979.9	70	1	
Se	78	2	72	0.067	ppb	119.5	7	1	
Sr	88	3	72	0.088	ppb	65.9	70	0.5	
Mo	95	3	115	0.317	ppb	14.9	193	0.5	
Ag	107	3	115	0.013	ppb	57.0	37	1	
Cd	111	3	115	0.102	ppb	49.3	48	0.5	
Sn	120	3	115	0.324	ppb	50.6	1139	1	
Sb	121	3	115	0.166	ppb	11.1	163	0.6	
Ba	137	3	115	0.101	ppb	48.8	62	0.5	
Tl	205	3	193	-0.004	ppb	-594.7	996	0.1	
(Pb)	206	3	193	0.077	ppb	23.8	461	1	
(Pb)	207	3	193	0.096	ppb	46.2	628	1	
Pb	208	3	193	0.086	ppb	12.4	2042	0.5	
Th	232	3	193	3.195	ppb	17.6	22366	1	>RL
U	238	3	193	0.060	ppb	61.0	2096	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4032600	1.65	3887690	103.73	60	120	
Sc (IS)	45	3	HMI He	583251	0.79	560366	104.08	60	120	
Ge Internal standard	72	2	HMI H2	2399572	0.75	2321471	103.36	60	120	
Ge Internal standard	72	3	HMI He	707538	1.09	685485	103.22	60	120	
In Internal Standard	115	3	HMI He	2690712	1.42	2631879	102.24	60	120	
Ir (IS)	193	3	HMI He	6013757	2.38	5771767	104.19	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	061LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:44:45-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.595	ppb	33.903	30	1	59.5	70	130	>+/-30%
Na	23	3	45	299.744	ppb	1.623	48458	300	99.9	70	130	
Mg	24	3	45	51.366	ppb	4.934	3107	50	102.7	70	130	
Al	27	3	45	44.215	ppb	12.751	1064	50	88.4	70	130	
K	39	3	45	120.199	ppb	24.134	31126	120	100.2	70	130	
Ca	40	2	45	190.911	ppb	2.690	118960	200	95.5	70	130	
V	51	3	72	4.670	ppb	8.416	3795	5	93.4	70	130	
Cr	52	3	72	2.206	ppb	2.706	3752	2	110.3	70	130	
Mn	55	3	72	0.920	ppb	7.213	536	1	92.0	70	130	
Fe	56	2	72	52.714	ppb	2.270	114292	50	105.4	70	130	
Co	59	3	72	0.911	ppb	4.571	1193	1	91.1	70	130	
Ni	60	3	72	2.301	ppb	17.406	1148	2	115.0	70	130	
Cu	63	3	72	2.073	ppb	8.753	2464	2	103.6	70	130	
Zn	66	3	72	8.931	ppb	2.454	1556	10	89.3	70	130	
As	75	3	72	4.553	ppb	3.505	573	5	91.1	70	130	
Se	78	2	72	4.542	ppb	10.350	270	5	90.8	70	130	
Sr	88	3	72	4.661	ppb	6.242	2489	5	93.2	70	130	
Mo	95	3	115	2.172	ppb	9.398	1108	2	108.6	70	130	
Ag	107	3	115	0.934	ppb	4.232	1566	1	93.4	70	130	
Cd	111	3	115	1.030	ppb	7.177	273	1	103.0	70	130	
Sn	120	3	115	9.186	ppb	2.223	7702	10	91.9	70	130	
Sb	121	3	115	2.030	ppb	3.590	1558	2	101.5	70	130	
Ba	137	3	115	0.994	ppb	12.394	273	1	99.4	70	130	
Tl	205	3	193	0.888	ppb	0.760	4520	1	88.8	70	130	
(Pb)	206	3	193	1.015	ppb	13.812	1678	1	101.5	70	130	
(Pb)	207	3	193	0.878	ppb	9.253	1531	1	87.8	70	130	
Pb	208	3	193	0.924	ppb	0.915	6464	1	92.4	70	130	
Th	232	3	193	2.525	ppb	20.300	18808	1	252.5	70	130	>+/-30%
U	238	3	193	0.947	ppb	8.887	7037	1	94.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4058091	2.47	3887690	104.38	60	120	
Sc (IS)	45	3	HMI He	582259	1.23	560366	103.91	60	120	
Ge Internal standard	72	2	HMI H2	2432916	1.01	2321471	104.80	60	120	
Ge Internal standard	72	3	HMI He	712270	0.43	685485	103.91	60	120	
In Internal Standard	115	3	HMI He	2697478	0.71	2631879	102.49	60	120	
Ir (IS)	193	3	HMI He	6009713	1.91	5771767	104.12	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	062LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:46:33-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.073	ppb	180.028	7	1	7.3	80	120	>+/-30%
Na	23	3	45	11.735	ppb	30.138	18280	300	3.9	80	120	>+/-30%
Mg	24	3	45	0.340	ppb	333.707	250	50	0.7	80	120	>+/-30%
Al	27	3	45	2.819	ppb	31.218	150	50	5.6	80	120	>+/-30%
K	39	3	45	534.617	ppb	4.325	50374	120	445.5	80	120	>+/-30%
Ca	40	2	45	1.222	ppb	74.643	11723	200	0.6	80	120	>+/-30%
V	51	3	72	-0.025	ppb	-816.473	985	5	-0.5	80	120	>+/-30%
Cr	52	3	72	0.226	ppb	66.236	2299	2	11.3	80	120	>+/-30%
Mn	55	3	72	0.066	ppb	39.026	205	1	6.6	80	120	>+/-30%
Fe	56	2	72	6.343	ppb	32.198	40938	50	12.7	80	120	>+/-30%
Co	59	3	72	0.012	ppb	162.221	52	1	1.2	80	120	>+/-30%
Ni	60	3	72	0.652	ppb	24.714	570	2	32.6	80	120	>+/-30%
Cu	63	3	72	0.085	ppb	9.000	531	2	4.2	80	120	>+/-30%
Zn	66	3	72	0.262	ppb	29.688	247	10	2.6	80	120	>+/-30%
As	75	3	72	-0.131	ppb	-42.295	53	5	-2.6	80	120	>+/-30%
Se	78	2	72	0.008	ppb	425.083	4	5	0.2	80	120	>+/-30%
Sr	88	3	72	-0.005	ppb	-688.893	22	5	-0.1	80	120	>+/-30%
Mo	95	3	115	0.094	ppb	28.001	85	2	4.7	80	120	>+/-30%
Ag	107	3	115	0.004	ppb	208.713	22	1	0.4	80	120	>+/-30%
Cd	111	3	115	0.058	ppb	38.051	38	1	5.8	80	120	>+/-30%
Sn	120	3	115	0.057	ppb	189.254	958	10	0.6	80	120	>+/-30%
Sb	121	3	115	0.088	ppb	7.837	107	2	4.4	80	120	>+/-30%
Ba	137	3	115	0.015	ppb	356.018	42	1	1.5	80	120	>+/-30%
Tl	205	3	193	-0.084	ppb	-5.339	676	1	-8.4	80	120	>+/-30%
(Pb)	206	3	193	-0.010	ppb	-11.538	347	1	-1.0	80	120	>+/-30%
(Pb)	207	3	193	-0.034	ppb	-118.625	476	1	-3.4	80	120	>+/-30%
Pb	208	3	193	-0.012	ppb	-100.747	1518	1	-1.2	80	120	>+/-30%
Th	232	3	193	1.951	ppb	6.409	15767	1	195.1	80	120	>+/-30%
U	238	3	193	0.002	ppb	541.089	1771	1	0.2	80	120	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4036226	2.54	3887690	103.82	60	120	
Sc (IS)	45	3	HMI He	588013	0.66	560366	104.93	60	120	
Ge Internal standard	72	2	HMI H2	2437644	1.49	2321471	105.00	60	120	
Ge Internal standard	72	3	HMI He	715645	0.80	685485	104.40	60	120	
In Internal Standard	115	3	HMI He	2731905	0.99	2631879	103.80	60	120	
Ir (IS)	193	3	HMI He	5990926	1.76	5771767	103.80	60	120	

Sample Report

Sample Table

Sample Name	MB 280-608551/1-A
Data File Name	063SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:48:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-153.63	2	2000	
Na	23	3	45	19.053	ppb	19.053	55.91	18948	400000	
Mg	24	3	45	1.618	ppb	1.618	83.37	320	400000	
Al	27	3	45	2.851	ppb	2.851	40.56	150	400000	
K	39	3	45	7.112	ppb	7.112	354.69	26107	400000	
Ca	40	2	45	10.881	ppb	10.881	6.09	17318	400000	
V	51	3	72	-0.020	ppb	-0.020	-480.85	991	2000	
Cr	52	3	72	0.264	ppb	0.264	45.64	2334	5000	
Mn	55	3	72	0.268	ppb	0.268	21.31	285	10000	
Fe	56	2	72	12.484	ppb	12.484	13.97	50740	10000	
Co	59	3	72	-0.001	ppb	-0.001	-584.44	35	2000	
Ni	60	3	72	0.620	ppb	0.620	39.18	560	5000	
Cu	63	3	72	0.100	ppb	0.100	36.95	548	5000	
Zn	66	3	72	2.608	ppb	2.608	9.60	605	5000	
As	75	3	72	-0.103	ppb	-0.103	-183.49	57	2000	
Se	78	2	72	0.110	ppb	0.110	81.64	10	2000	
Sr	88	3	72	0.020	ppb	0.020	124.88	35	4000	
Mo	95	3	115	0.080	ppb	0.080	16.36	78	2000	
Ag	107	3	115	0.001	ppb	0.001	313.18	17	100	
Cd	111	3	115	-0.058	ppb	-0.058	-62.72	10	2000	
Sn	120	3	115	-0.012	ppb	-0.012	-419.68	906	2000	
Sb	121	3	115	0.094	ppb	0.094	24.72	112	1000	
Ba	137	3	115	0.056	ppb	0.056	88.57	52	5000	
Tl	205	3	193	-0.091	ppb	-0.091	-22.54	655	2000	
(Pb)	206	3	193	-0.036	ppb	-0.036	-78.37	315	100	
(Pb)	207	3	193	0.028	ppb	0.028	304.41	550	100	
Pb	208	3	193	0.006	ppb	0.006	307.88	1624	5000	
Th	232	3	193	0.158	ppb	0.158	58.17	6408	2000	
U	238	3	193	-0.009	ppb	-0.009	-267.12	1716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4073816	0.51	3887690	104.79	60	120	
Sc (IS)	45	3	HMI He	584940	1.68	560366	104.39	60	120	
Ge Internal standard	72	2	HMI H2	2438599	1.95	2321471	105.05	60	120	
Ge Internal standard	72	3	HMI He	717897	0.75	685485	104.73	60	120	
In Internal Standard	115	3	HMI He	2733342	1.40	2631879	103.86	60	120	
Ir (IS)	193	3	HMI He	6029117	2.24	5771767	104.46	60	120	

Sample Report

Sample Table

Sample Name	LCS 280-608551/2-A
Data File Name	064SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:50:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.093	ppb	40.093	9.86	1768	2000	
Na	23	3	45	805.342	ppb	805.342	1.29	103142	400000	
Mg	24	3	45	742.717	ppb	742.717	2.37	42439	400000	
Al	27	3	45	772.505	ppb	772.505	0.62	17395	400000	
K	39	3	45	770.617	ppb	770.617	4.47	61405	400000	
Ca	40	2	45	829.825	ppb	829.825	2.88	479609	400000	
V	51	3	72	39.543	ppb	39.543	1.46	25105	2000	
Cr	52	3	72	40.983	ppb	40.983	2.07	32947	5000	
Mn	55	3	72	40.995	ppb	40.995	2.64	16392	10000	
Fe	56	2	72	797.537	ppb	797.537	2.48	1284300	10000	
Co	59	3	72	40.053	ppb	40.053	1.48	51685	2000	
Ni	60	3	72	41.430	ppb	41.430	2.33	15177	5000	
Cu	63	3	72	41.867	ppb	41.867	1.74	41864	5000	
Zn	66	3	72	42.768	ppb	42.768	6.58	6780	5000	
As	75	3	72	39.057	ppb	39.057	2.55	4474	2000	
Se	78	2	72	40.700	ppb	40.700	3.13	2373	2000	
Sr	88	3	72	79.630	ppb	79.630	0.73	42823	4000	
Mo	95	3	115	39.385	ppb	39.385	3.54	19561	2000	
Ag	107	3	115	40.666	ppb	40.666	3.19	67912	100	
Cd	111	3	115	39.328	ppb	39.328	5.12	9602	2000	
Sn	120	3	115	38.241	ppb	38.241	1.69	29389	2000	
Sb	121	3	115	39.568	ppb	39.568	0.60	29827	1000	
Ba	137	3	115	42.095	ppb	42.095	2.68	10086	5000	
Tl	205	3	193	39.024	ppb	39.024	0.99	156757	2000	
(Pb)	206	3	193	40.318	ppb	40.318	0.71	53262	100	
(Pb)	207	3	193	39.424	ppb	39.424	0.55	46514	100	
Pb	208	3	193	39.624	ppb	39.624	0.76	212701	5000	
Th	232	3	193	37.236	ppb	37.236	1.92	203357	2000	
U	238	3	193	39.431	ppb	39.431	0.81	223893	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4056566	3.28	3887690	104.34	60	120	
Sc (IS)	45	3	HMI He	590336	1.47	560366	105.35	60	120	
Ge Internal standard	72	2	HMI H2	2416275	1.35	2321471	104.08	60	120	
Ge Internal standard	72	3	HMI He	723821	0.92	685485	105.59	60	120	
In Internal Standard	115	3	HMI He	2715108	1.79	2631879	103.16	60	120	
Ir (IS)	193	3	HMI He	6068669	0.86	5771767	105.14	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-A
Data File Name	065SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:51:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1535.06	3	2000	
Na	23	3	45	10792.076	ppb	10792.076	2.77	1171427	400000	
Mg	24	3	45	11001.414	ppb	11001.414	1.60	626076	400000	
Al	27	3	45	3.975	ppb	3.975	50.06	177	400000	
K	39	3	45	6251.886	ppb	6251.886	2.58	313339	400000	
Ca	40	2	45	28383.611	ppb	28383.611	1.56	16278352	400000	
V	51	3	72	19.843	ppb	19.843	0.52	13366	2000	
Cr	52	3	72	1.297	ppb	1.297	12.31	3192	5000	
Mn	55	3	72	0.331	ppb	0.331	35.01	318	10000	
Fe	56	2	72	14.129	ppb	14.129	18.80	55145	10000	
Co	59	3	72	0.071	ppb	0.071	24.54	132	2000	
Ni	60	3	72	0.726	ppb	0.726	12.61	615	5000	
Cu	63	3	72	1.034	ppb	1.034	2.96	1506	5000	
Zn	66	3	72	1.010	ppb	1.010	26.39	371	5000	
As	75	3	72	5.981	ppb	5.981	5.85	758	2000	
Se	78	2	72	2.846	ppb	2.846	9.85	177	2000	
Sr	88	3	72	212.370	ppb	212.370	0.76	116467	4000	
Mo	95	3	115	3.414	ppb	3.414	1.94	1759	2000	
Ag	107	3	115	0.008	ppb	0.008	107.90	30	100	
Cd	111	3	115	-0.018	ppb	-0.018	-231.37	20	2000	
Sn	120	3	115	-0.036	ppb	-0.036	-374.46	896	2000	
Sb	121	3	115	0.357	ppb	0.357	15.13	313	1000	
Ba	137	3	115	24.546	ppb	24.546	0.59	5997	5000	
Tl	205	3	193	-0.064	ppb	-0.064	-32.48	751	2000	
(Pb)	206	3	193	0.000	ppb	0.000	-9664.91	356	100	
(Pb)	207	3	193	-0.029	ppb	-0.029	-241.58	478	100	
Pb	208	3	193	-0.014	ppb	-0.014	-178.20	1499	5000	
Th	232	3	193	2.179	ppb	2.179	4.43	16843	2000	
U	238	3	193	2.220	ppb	2.220	2.81	13999	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4116159	2.15	3887690	105.88	60	120	
Sc (IS)	45	3	HMI He	591063	1.64	560366	105.48	60	120	
Ge Internal standard	72	2	HMI H2	2521286	0.68	2321471	108.61	60	120	
Ge Internal standard	72	3	HMI He	738468	1.64	685485	107.73	60	120	
In Internal Standard	115	3	HMI He	2760353	1.66	2631879	104.88	60	120	
Ir (IS)	193	3	HMI He	5946659	0.48	5771767	103.03	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-Asd@5
Data File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:53:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.034	ppb	0.034	333.29	5	2000	
Na	23	3	45	2048.668	ppb	2048.668	0.24	236279	400000	
Mg	24	3	45	2219.061	ppb	2219.061	0.92	126494	400000	
Al	27	3	45	3.983	ppb	3.983	35.98	177	400000	
K	39	3	45	1230.570	ppb	1230.570	1.20	82625	400000	
Ca	40	2	45	5993.113	ppb	5993.113	3.68	3421695	400000	
V	51	3	72	4.629	ppb	4.629	2.86	3860	2000	
Cr	52	3	72	0.443	ppb	0.443	30.04	2506	5000	
Mn	55	3	72	1.838	ppb	1.838	8.30	915	10000	
Fe	56	2	72	10.646	ppb	10.646	13.38	48624	10000	
Co	59	3	72	0.027	ppb	0.027	73.98	72	2000	
Ni	60	3	72	0.757	ppb	0.757	8.24	618	5000	
Cu	63	3	72	0.382	ppb	0.382	18.61	838	5000	
Zn	66	3	72	3.408	ppb	3.408	3.00	738	5000	
As	75	3	72	0.916	ppb	0.916	24.89	173	2000	
Se	78	2	72	0.597	ppb	0.597	30.20	39	2000	
Sr	88	3	72	42.198	ppb	42.198	2.88	22868	4000	
Mo	95	3	115	0.799	ppb	0.799	6.55	428	2000	
Ag	107	3	115	0.012	ppb	0.012	52.52	35	100	
Cd	111	3	115	-0.036	ppb	-0.036	-111.97	15	2000	
Sn	120	3	115	-0.011	ppb	-0.011	-727.27	890	2000	
Sb	121	3	115	0.138	ppb	0.138	9.35	142	1000	
Ba	137	3	115	7.493	ppb	7.493	2.76	1803	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-11.14	565	2000	
(Pb)	206	3	193	0.332	ppb	0.332	13.39	791	100	
(Pb)	207	3	193	0.297	ppb	0.297	34.89	856	100	
Pb	208	3	193	0.346	ppb	0.346	3.35	3403	5000	
Th	232	3	193	0.496	ppb	0.496	17.96	8155	2000	
U	238	3	193	0.443	ppb	0.443	6.79	4219	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4088828	3.84	3887690	105.17	60	120	
Sc (IS)	45	3	HMI He	591067	0.94	560366	105.48	60	120	
Ge Internal standard	72	2	HMI H2	2480396	1.00	2321471	106.85	60	120	
Ge Internal standard	72	3	HMI He	729120	0.80	685485	106.37	60	120	
In Internal Standard	115	3	HMI He	2679288	1.12	2631879	101.80	60	120	
Ir (IS)	193	3	HMI He	5993846	1.73	5771767	103.85	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-B MS
Data File Name	067SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:55:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.761	ppb	39.761	7.35	1761	2000	
Na	23	3	45	11398.664	ppb	11398.664	1.01	1226065	400000	
Mg	24	3	45	11754.343	ppb	11754.343	2.63	663225	400000	
Al	27	3	45	762.564	ppb	762.564	1.64	17047	400000	
K	39	3	45	7043.927	ppb	7043.927	1.53	346861	400000	
Ca	40	2	45	29814.424	ppb	29814.424	1.26	17203188	400000	
V	51	3	72	57.459	ppb	57.459	0.96	37124	2000	
Cr	52	3	72	40.040	ppb	40.040	3.19	33225	5000	
Mn	55	3	72	39.195	ppb	39.195	1.35	16163	10000	
Fe	56	2	72	788.527	ppb	788.527	4.74	1294325	10000	
Co	59	3	72	38.100	ppb	38.100	1.98	50677	2000	
Ni	60	3	72	39.030	ppb	39.030	3.04	14757	5000	
Cu	63	3	72	39.062	ppb	39.062	1.67	40287	5000	
Zn	66	3	72	41.787	ppb	41.787	1.48	6832	5000	
As	75	3	72	43.319	ppb	43.319	0.78	5107	2000	
Se	78	2	72	43.801	ppb	43.801	5.92	2602	2000	
Sr	88	3	72	287.719	ppb	287.719	2.38	159402	4000	
Mo	95	3	115	42.927	ppb	42.927	2.46	21356	2000	
Ag	107	3	115	39.451	ppb	39.451	0.75	66005	100	
Cd	111	3	115	39.169	ppb	39.169	0.45	9584	2000	
Sn	120	3	115	39.106	ppb	39.106	1.01	30082	2000	
Sb	121	3	115	39.920	ppb	39.920	0.54	30137	1000	
Ba	137	3	115	65.932	ppb	65.932	3.06	15802	5000	
Tl	205	3	193	39.475	ppb	39.475	0.64	156884	2000	
(Pb)	206	3	193	40.260	ppb	40.260	1.25	52623	100	
(Pb)	207	3	193	39.364	ppb	39.364	0.35	45952	100	
Pb	208	3	193	39.603	ppb	39.603	0.65	210339	5000	
Th	232	3	193	37.577	ppb	37.577	1.23	203008	2000	
U	238	3	193	41.961	ppb	41.961	1.63	235611	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4140524	0.49	3887690	106.50	60	120	
Sc (IS)	45	3	HMI He	586132	1.64	560366	104.60	60	120	
Ge Internal standard	72	2	HMI H2	2464225	3.22	2321471	106.15	60	120	
Ge Internal standard	72	3	HMI He	746009	0.07	685485	108.83	60	120	
In Internal Standard	115	3	HMI He	2719235	1.03	2631879	103.32	60	120	
Ir (IS)	193	3	HMI He	6004218	0.19	5771767	104.03	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-C MSD
Data File Name	068SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:57:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.852	ppb	41.852	3.62	1869	2000	
Na	23	3	45	11137.291	ppb	11137.291	1.94	1220984	400000	
Mg	24	3	45	11633.446	ppb	11633.446	1.21	668909	400000	
Al	27	3	45	758.029	ppb	758.029	1.37	17268	400000	
K	39	3	45	6897.578	ppb	6897.578	1.70	346620	400000	
Ca	40	2	45	30099.817	ppb	30099.817	2.65	17055420	400000	
V	51	3	72	59.164	ppb	59.164	1.14	38103	2000	
Cr	52	3	72	40.770	ppb	40.770	1.67	33712	5000	
Mn	55	3	72	43.763	ppb	43.763	3.74	17978	10000	
Fe	56	2	72	765.594	ppb	765.594	3.23	1282860	10000	
Co	59	3	72	38.446	ppb	38.446	1.17	51018	2000	
Ni	60	3	72	40.054	ppb	40.054	3.78	15096	5000	
Cu	63	3	72	40.665	ppb	40.665	1.83	41822	5000	
Zn	66	3	72	41.731	ppb	41.731	3.66	6807	5000	
As	75	3	72	44.314	ppb	44.314	5.75	5208	2000	
Se	78	2	72	41.375	ppb	41.375	2.07	2508	2000	
Sr	88	3	72	286.375	ppb	286.375	0.41	158285	4000	
Mo	95	3	115	41.743	ppb	41.743	1.72	20839	2000	
Ag	107	3	115	40.725	ppb	40.725	2.29	68352	100	
Cd	111	3	115	39.816	ppb	39.816	3.80	9770	2000	
Sn	120	3	115	39.737	ppb	39.737	3.55	30647	2000	
Sb	121	3	115	39.488	ppb	39.488	1.38	29914	1000	
Ba	137	3	115	67.389	ppb	67.389	3.90	16200	5000	
Tl	205	3	193	39.113	ppb	39.113	1.94	156974	2000	
(Pb)	206	3	193	40.059	ppb	40.059	3.94	52850	100	
(Pb)	207	3	193	39.231	ppb	39.231	2.71	46233	100	
Pb	208	3	193	39.674	ppb	39.674	2.66	212711	5000	
Th	232	3	193	40.150	ppb	40.150	2.31	218603	2000	
U	238	3	193	42.066	ppb	42.066	2.06	238455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068075	2.90	3887690	104.64	60	120	
Sc (IS)	45	3	HMI He	597141	0.30	560366	106.56	60	120	
Ge Internal standard	72	2	HMI H2	2512331	2.78	2321471	108.22	60	120	
Ge Internal standard	72	3	HMI He	744230	0.88	685485	108.57	60	120	
In Internal Standard	115	3	HMI He	2728532	1.81	2631879	103.67	60	120	
Ir (IS)	193	3	HMI He	6063356	2.04	5771767	105.05	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-A pds
Data File Name	069SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:59:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	103.188	ppb	103.188	2.48	4633	2000	
Na	23	3	45	10631.149	ppb	10631.149	1.44	1159563	400000	
Mg	24	3	45	10805.902	ppb	10805.902	0.22	617752	400000	
Al	27	3	45	15.342	ppb	15.342	14.10	434	400000	
K	39	3	45	6131.504	ppb	6131.504	2.55	309196	400000	
Ca	40	2	45	29216.836	ppb	29216.836	1.21	16530248	400000	
V	51	3	72	115.923	ppb	115.923	0.02	72744	2000	
Cr	52	3	72	101.020	ppb	101.020	1.52	79258	5000	
Mn	55	3	72	97.717	ppb	97.717	1.66	39421	10000	
Fe	56	2	72	1016.350	ppb	1016.350	1.08	1661555	10000	
Co	59	3	72	97.329	ppb	97.329	1.14	127488	2000	
Ni	60	3	72	97.866	ppb	97.866	0.43	35930	5000	
Cu	63	3	72	100.753	ppb	100.753	2.27	101647	5000	
Zn	66	3	72	3.469	ppb	3.469	17.54	753	5000	
As	75	3	72	105.684	ppb	105.684	1.02	12174	2000	
Se	78	2	72	102.686	ppb	102.686	4.01	6101	2000	
Sr	88	3	72	309.849	ppb	309.849	1.49	169115	4000	
Mo	95	3	115	100.224	ppb	100.224	1.12	50313	2000	
Ag	107	3	115	26.058	ppb	26.058	2.04	44035	100	
Cd	111	3	115	96.058	ppb	96.058	4.03	23696	2000	
Sn	120	3	115	100.568	ppb	100.568	0.34	76694	2000	
Sb	121	3	115	92.995	ppb	92.995	1.17	70850	1000	
Ba	137	3	115	126.853	ppb	126.853	0.48	30675	5000	
Tl	205	3	193	99.649	ppb	99.649	1.99	387833	2000	
(Pb)	206	3	193	100.959	ppb	100.959	1.41	129204	100	
(Pb)	207	3	193	98.841	ppb	98.841	0.92	112679	100	
Pb	208	3	193	99.910	ppb	99.910	1.06	519335	5000	
Th	232	3	193	105.445	ppb	105.445	2.01	550176	2000	
U	238	3	193	2.330	ppb	2.330	0.77	14501	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4060247	1.22	3887690	104.44	60	120	
Sc (IS)	45	3	HMI He	593677	1.00	560366	105.94	60	120	
Ge Internal standard	72	2	HMI H2	2465493	2.05	2321471	106.20	60	120	
Ge Internal standard	72	3	HMI He	734974	0.78	685485	107.22	60	120	
In Internal Standard	115	3	HMI He	2746483	1.29	2631879	104.35	60	120	
Ir (IS)	193	3	HMI He	5903552	0.92	5771767	102.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	070_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:00:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.902	ppb	3.236	2289	50	109.8	90	110	
Na	23	3	45	48405.358	ppb	2.121	5130408	51000	94.9	90	110	
Mg	24	3	45	10238.992	ppb	2.428	575548	11000	93.1	90	110	
Al	27	3	45	935.202	ppb	4.328	20810	1000	93.5	90	110	
K	39	3	45	10258.099	ppb	0.835	491345	11000	93.3	90	110	
Ca	40	2	45	11630.992	ppb	5.610	6139288	11000	105.7	90	110	
V	51	3	72	52.008	ppb	1.126	31348	50	104.0	90	110	
Cr	52	3	72	52.330	ppb	3.978	39745	50	104.7	90	110	
Mn	55	3	72	52.836	ppb	2.413	20203	50	105.7	90	110	
Fe	56	2	72	1131.389	ppb	5.474	1673369	1000	113.1	90	110	>+\-10%
Co	59	3	72	51.250	ppb	2.632	63381	50	102.5	90	110	
Ni	60	3	72	51.585	ppb	4.048	18029	50	103.2	90	110	
Cu	63	3	72	51.125	ppb	2.359	48902	50	102.3	90	110	
Zn	66	3	72	54.439	ppb	1.036	8218	50	108.9	90	110	
As	75	3	72	52.316	ppb	1.556	5723	50	104.6	90	110	
Se	78	2	72	56.301	ppb	5.606	3035	50	112.6	90	110	>+\-10%
Sr	88	3	72	103.361	ppb	0.562	53282	100	103.4	90	110	
Mo	95	3	115	49.698	ppb	1.900	24266	50	99.4	90	110	
Ag	107	3	115	50.780	ppb	1.452	83375	50	101.6	90	110	
Cd	111	3	115	50.101	ppb	0.746	12024	50	100.2	90	110	
Sn	120	3	115	50.186	ppb	1.872	37636	50	100.4	90	110	
Sb	121	3	115	50.675	ppb	0.497	37539	50	101.3	90	110	
Ba	137	3	115	53.754	ppb	0.145	12653	50	107.5	90	110	
Tl	205	3	193	49.880	ppb	2.252	191663	50	99.8	90	110	
(Pb)	206	3	193	50.754	ppb	1.283	64140	50	101.5	90	110	
(Pb)	207	3	193	50.076	ppb	1.552	56464	50	100.2	90	110	
Pb	208	3	193	50.430	ppb	1.212	258899	50	100.9	90	110	
Th	232	3	193	54.357	ppb	1.079	281948	50	108.7	90	110	
U	238	3	193	50.892	ppb	2.078	276288	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3789367	3.99	3887690	97.47	60	120	
Sc (IS)	45	3	HMI He	583718	0.83	560366	104.17	60	120	
Ge Internal standard	72	2	HMI H2	2235904	1.88	2321471	96.31	60	120	
Ge Internal standard	72	3	HMI He	693956	1.77	685485	101.24	60	120	
In Internal Standard	115	3	HMI He	2668880	0.99	2631879	101.41	60	120	
Ir (IS)	193	3	HMI He	5813876	1.41	5771767	100.73	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	071_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:02:40-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.003	ppb	-4086.6	3	0.5	
Na	23	3	45	26.349	ppb	17.0	19633	25	>RL
Mg	24	3	45	1.271	ppb	113.0	300	25	
Al	27	3	45	0.326	ppb	406.7	93	15	
K	39	3	45	4.034	ppb	407.9	25840	50	
V	51	3	72	0.736	ppb	12.6	1431	1	
Cr	52	3	72	0.493	ppb	24.4	2476	1	
Mn	55	3	72	0.105	ppb	156.6	218	0.5	
Co	59	3	72	0.023	ppb	79.6	65	0.5	
Ni	60	3	72	0.466	ppb	43.2	500	1	
Cu	63	3	72	0.057	ppb	99.8	500	1	
Zn	66	3	72	0.043	ppb	931.1	212	5	
As	75	3	72	0.054	ppb	256.3	73	1	
Se	78	2	72	0.068	ppb	77.6	7	1	
Sr	88	3	72	0.046	ppb	48.2	48	0.5	
Mo	95	3	115	0.094	ppb	72.8	83	0.5	
Ag	107	3	115	0.013	ppb	51.3	37	1	
Cd	111	3	115	-0.050	ppb	-47.6	12	0.5	
Sn	120	3	115	-0.028	ppb	-55.3	881	1	
Sb	121	3	115	0.103	ppb	12.9	117	0.6	
Ba	137	3	115	0.066	ppb	75.1	53	0.5	
Tl	205	3	193	-0.091	ppb	-28.9	653	0.1	
(Pb)	206	3	193	-0.029	ppb	-75.1	325	1	
(Pb)	207	3	193	-0.044	ppb	-69.4	468	1	
Pb	208	3	193	-0.026	ppb	-31.6	1458	0.5	
Th	232	3	193	2.125	ppb	17.4	16815	1	>RL
U	238	3	193	-0.003	ppb	-694.2	1753	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3927630	1.49	3887690	101.03	60	120	
Sc (IS)	45	3	HMI He	581946	0.47	560366	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2380771	0.71	2321471	102.55	60	120	
Ge Internal standard	72	3	HMI He	709450	0.39	685485	103.50	60	120	
In Internal Standard	115	3	HMI He	2692289	1.64	2631879	102.30	60	120	
Ir (IS)	193	3	HMI He	6037224	1.15	5771767	104.60	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608988/1-A
Data File Name	072_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:04:30-06:00
Sample Type	Blank
Dilution	1
Comment	608988 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.041	ppb	-155.0859771	2	0.5
Na	23	3	45	46.687	ppb	7.492511907	22026	25
Mg	24	3	45	1.096	ppb	23.5942986	294	25
Al	27	3	45	2.510	ppb	61.89514535	143	15
K	39	3	45	-14.903	ppb	-130.8927844	25275	50
Ca	40	2	45	16.778	ppb	5.606056658	20699	200
V	51	3	72	0.569	ppb	22.58078858	1353	1
Cr	52	3	72	0.369	ppb	70.51278155	2422	1
Mn	55	3	72	0.239	ppb	54.84651189	275	0.5
Fe	56	2	72	9.694	ppb	17.63140757	46833	50
Co	59	3	72	0.019	ppb	104.5183753	62	0.5
Ni	60	3	72	1.247	ppb	7.441109716	786	1
Cu	63	3	72	0.061	ppb	195.1232072	511	1
Zn	66	3	72	0.338	ppb	114.8307696	260	5
As	75	3	72	-0.031	ppb	-295.0944246	65	1
(Se)	78	3	72	1.488	ppb	156.1533275	40	1
Sr	88	3	72	0.035	ppb	192.2389977	43	0.5
Mo	95	3	115	0.040	ppb	114.1373571	58	0.5
Ag	107	3	115	0.004	ppb	96.58909184	22	1
Cd	111	3	115	-0.071	ppb	-65.92145891	7	0.5
Sn	120	3	115	-0.176	ppb	-22.40229225	783	1
Sb	121	3	115	0.062	ppb	4.491696795	87	0.6
Ba	137	3	115	0.056	ppb	89.18887751	52	0.5
Tl	205	3	193	-0.134	ppb	-17.02348229	488	0.1
(Pb)	206	3	193	-0.044	ppb	-61.51707365	308	1
(Pb)	207	3	193	-0.030	ppb	-206.0445783	488	1
Pb	208	3	193	-0.021	ppb	-83.7024333	1496	0.5
Th	232	3	193	0.487	ppb	23.30643585	8224	1
U	238	3	193	-0.001	ppb	-2076.619115	1779	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4080491	2.12	3887690	104.96	60	120	
Sc (IS)	45	3	HMI He	588644	0.54	560366	105.05	60	120	
Ge Internal standard	72	2	HMI H2	2465571	1.01	2321471	106.21	60	120	
Ge Internal standard	72	3	HMI He	720912	0.59	685485	105.17	60	120	
In Internal Standard	115	3	HMI He	2731807	1.09	2631879	103.80	60	120	
Ir (IS)	193	3	HMI He	6092263	2.92	5771767	105.55	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608988/2-A
Data File Name	073_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:06:20-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608988 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	43.090	43.090	ppb	6.781	1946	40	107.7	80	120	
Na	23	3	45	811.400	811.400	ppb	0.945	103902	40	2028.5	80	120	>+/-20%
Mg	24	3	45	745.047	745.047	ppb	0.367	42613	40	1862.6	80	120	>+/-20%
Al	27	3	45	771.606	771.606	ppb	3.182	17392	40	1929.0	80	120	>+/-20%
K	39	3	45	757.516	757.516	ppb	2.741	60862	40	1893.8	80	120	>+/-20%
Ca	40	2	45	827.387	827.387	ppb	0.847	480307	40	2068.5	80	120	>+/-20%
V	51	3	72	40.595	40.595	ppb	1.690	25714	40	101.5	80	120	
Cr	52	3	72	40.977	40.977	ppb	1.440	32901	40	102.4	80	120	
Mn	55	3	72	42.078	42.078	ppb	0.946	16802	40	105.2	80	120	
Fe	56	2	72	819.547	819.547	ppb	0.710	1305737	40	2048.9	80	120	>+/-20%
(Fe)	56	3	72	801.511	801.511	ppb	1.218	530316	40	2003.8	80	120	>+/-20%
Co	59	3	72	40.546	40.546	ppb	0.843	52264	40	101.4	80	120	
Ni	60	3	72	41.323	41.323	ppb	1.858	15121	40	103.3	80	120	
Cu	63	3	72	41.223	41.223	ppb	2.360	41181	40	103.1	80	120	
Zn	66	3	72	42.803	42.803	ppb	2.551	6777	40	107.0	80	120	
As	75	3	72	40.197	40.197	ppb	3.021	4597	40	100.5	80	120	
Se	78	2	72	42.120	42.120	ppb	3.947	2431	40	105.3	80	120	
(Se)	78	3	72	42.976	42.976	ppb	7.483	275	40	107.4	80	120	
Sr	88	3	72	81.052	81.052	ppb	2.355	43533	40	202.6	80	120	>+/-20%
Mo	95	3	115	40.275	40.275	ppb	3.079	20262	40	100.7	80	120	
Ag	107	3	115	40.935	40.935	ppb	2.521	69248	40	102.3	80	120	
Cd	111	3	115	39.674	39.674	ppb	3.938	9814	40	99.2	80	120	
Sn	120	3	115	38.212	38.212	ppb	3.073	29742	40	95.5	80	120	
Sb	121	3	115	39.722	39.722	ppb	2.763	30323	40	99.3	80	120	
Ba	137	3	115	42.004	42.004	ppb	4.533	10199	40	105.0	80	120	
Tl	205	3	193	40.005	40.005	ppb	1.152	159664	40	100.0	80	120	
(Pb)	206	3	193	40.922	40.922	ppb	1.528	53713	40	102.3	80	120	
(Pb)	207	3	193	39.942	39.942	ppb	1.764	46820	40	99.9	80	120	
Pb	208	3	193	40.694	40.694	ppb	1.066	217024	40	101.7	80	120	
Th	232	3	193	39.081	39.081	ppb	1.977	211821	40	97.7	80	120	
U	238	3	193	40.713	40.713	ppb	1.873	229633	40	101.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071852	0.66	3887690	104.74	60	120	
Sc (IS)	45	3	HMI He	590953	0.76	560366	105.46	60	120	
Ge Internal standard	72	2	HMI H2	2391682	1.26	2321471	103.02	60	120	
Ge Internal standard	72	3	HMI He	722977	0.73	685485	105.47	60	120	
In Internal Standard	115	3	HMI He	2750626	2.73	2631879	104.51	60	120	
Ir (IS)	193	3	HMI He	6030532	0.80	5771767	104.48	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-608988/3-A
Data File Name	074SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:08:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.206	ppb	39.206	3.81	1794	2000	
Na	23	3	45	800.848	ppb	800.848	0.28	102904	400000	
Mg	24	3	45	740.941	ppb	740.941	2.38	42436	400000	
Al	27	3	45	769.090	ppb	769.090	2.07	17358	400000	
K	39	3	45	759.474	ppb	759.474	2.47	61033	400000	
Ca	40	2	45	842.949	ppb	842.949	1.25	487356	400000	
V	51	3	72	40.594	ppb	40.594	2.01	25609	2000	
Cr	52	3	72	41.488	ppb	41.488	0.55	33153	5000	
Mn	55	3	72	41.673	ppb	41.673	1.39	16575	10000	
Fe	56	2	72	808.807	ppb	808.807	1.94	1322330	10000	
Co	59	3	72	40.334	ppb	40.334	1.23	51781	2000	
Ni	60	3	72	40.551	ppb	40.551	2.41	14784	5000	
Cu	63	3	72	41.533	ppb	41.533	0.89	41321	5000	
Zn	66	3	72	43.977	ppb	43.977	2.85	6930	5000	
As	75	3	72	38.963	ppb	38.963	3.54	4440	2000	
Se	78	2	72	40.964	ppb	40.964	3.63	2425	2000	
Sr	88	3	72	80.793	ppb	80.793	1.04	43222	4000	
Mo	95	3	115	40.379	ppb	40.379	1.41	19960	2000	
Ag	107	3	115	41.365	ppb	41.365	2.42	68751	100	
Cd	111	3	115	40.373	ppb	40.373	1.35	9814	2000	
Sn	120	3	115	39.308	ppb	39.308	1.03	30035	2000	
Sb	121	3	115	40.389	ppb	40.389	0.92	30291	1000	
Ba	137	3	115	43.929	ppb	43.929	1.71	10474	5000	
Tl	205	3	193	39.483	ppb	39.483	3.59	158099	2000	
(Pb)	206	3	193	40.910	ppb	40.910	2.38	53882	100	
(Pb)	207	3	193	39.670	ppb	39.670	2.66	46664	100	
Pb	208	3	193	40.205	ppb	40.205	2.26	215173	5000	
Th	232	3	193	40.301	ppb	40.301	2.98	218988	2000	
U	238	3	193	39.939	ppb	39.939	2.56	226077	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4057130	0.57	3887690	104.36	60	120	
Sc (IS)	45	3	HMI He	591701	0.43	560366	105.59	60	120	
Ge Internal standard	72	2	HMI H2	2454144	2.35	2321471	105.71	60	120	
Ge Internal standard	72	3	HMI He	720119	1.27	685485	105.05	60	120	
In Internal Standard	115	3	HMI He	2701513	1.31	2631879	102.65	60	120	
Ir (IS)	193	3	HMI He	6053291	2.61	5771767	104.88	60	120	

Sample Report

Sample Table

Sample Name	280-175093-A-1-A
Data File Name	075SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:10:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-6191.75	3	2000	
Na	23	3	45	83.402	ppb	83.402	1.96	26003	400000	
Mg	24	3	45	1.318	ppb	1.318	30.35	307	400000	
Al	27	3	45	5.922	ppb	5.922	19.57	220	400000	
K	39	3	45	-18.125	ppb	-18.125	-90.40	25188	400000	
Ca	40	2	45	9.137	ppb	9.137	7.29	16062	400000	
V	51	3	72	0.617	ppb	0.617	7.67	1378	2000	
Cr	52	3	72	0.400	ppb	0.400	54.72	2439	5000	
Mn	55	3	72	0.229	ppb	0.229	11.34	270	10000	
Fe	56	2	72	13.122	ppb	13.122	15.71	51892	10000	
Co	59	3	72	0.017	ppb	0.017	54.09	58	2000	
Ni	60	3	72	0.514	ppb	0.514	13.76	523	5000	
Cu	63	3	72	0.063	ppb	0.063	21.69	513	5000	
Zn	66	3	72	0.594	ppb	0.594	56.99	298	5000	
As	75	3	72	-0.105	ppb	-0.105	-233.23	57	2000	
Se	78	2	72	0.053	ppb	0.053	32.30	7	2000	
Sr	88	3	72	0.067	ppb	0.067	78.82	60	4000	
Mo	95	3	115	0.050	ppb	0.050	74.96	62	2000	
Ag	107	3	115	0.015	ppb	0.015	60.83	40	100	
Cd	111	3	115	-0.022	ppb	-0.022	-58.24	18	2000	
Sn	120	3	115	0.422	ppb	0.422	29.43	1204	2000	
Sb	121	3	115	0.117	ppb	0.117	52.99	125	1000	
Ba	137	3	115	0.125	ppb	0.125	36.94	67	5000	
Tl	205	3	193	-0.123	ppb	-0.123	-18.64	530	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-67.23	298	100	
(Pb)	207	3	193	-0.038	ppb	-0.038	-43.88	478	100	
Pb	208	3	193	-0.034	ppb	-0.034	-45.78	1423	5000	
Th	232	3	193	2.011	ppb	2.011	11.59	16303	2000	
U	238	3	193	-0.017	ppb	-0.017	-124.41	1688	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4008249	1.98	3887690	103.10	60	120	
Sc (IS)	45	3	HMI He	590153	0.23	560366	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2447318	2.07	2321471	105.42	60	120	
Ge Internal standard	72	3	HMI He	718840	0.53	685485	104.87	60	120	
In Internal Standard	115	3	HMI He	2669990	1.54	2631879	101.45	60	120	
Ir (IS)	193	3	HMI He	6071933	0.56	5771767	105.20	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A
Data File Name	076SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:11:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	7738.623	ppb	7738.623	3.18	848583	400000	
Mg	24	3	45	42209.492	ppb	42209.492	2.25	2411612	400000	
Al	27	3	45	6.440	ppb	6.440	51.32	234	400000	
K	39	3	45	825.746	ppb	825.746	3.35	64288	400000	
Ca	40	2	45	120955.501	ppb	120955.501	0.38	68652573	400000	
V	51	3	72	0.033	ppb	0.033	293.85	1043	2000	
Cr	52	3	72	0.499	ppb	0.499	22.96	2557	5000	
Mn	55	3	72	46.466	ppb	46.466	2.36	18755	10000	
Fe	56	2	72	757.313	ppb	757.313	1.38	1244226	10000	
Co	59	3	72	0.049	ppb	0.049	22.87	102	2000	
Ni	60	3	72	0.912	ppb	0.912	13.95	676	5000	
Cu	63	3	72	0.505	ppb	0.505	7.41	963	5000	
Zn	66	3	72	1.812	ppb	1.812	30.80	493	5000	
As	75	3	72	1.043	ppb	1.043	34.98	188	2000	
Se	78	2	72	0.063	ppb	0.063	133.10	7	2000	
Sr	88	3	72	133.935	ppb	133.935	1.62	72777	4000	
Mo	95	3	115	0.390	ppb	0.390	21.88	232	2000	
Ag	107	3	115	0.003	ppb	0.003	198.94	20	100	
Cd	111	3	115	-0.011	ppb	-0.011	-587.72	22	2000	
Sn	120	3	115	-0.128	ppb	-0.128	-57.00	816	2000	
Sb	121	3	115	0.124	ppb	0.124	45.11	133	1000	
Ba	137	3	115	147.519	ppb	147.519	0.69	35375	5000	
Tl	205	3	193	-0.124	ppb	-0.124	-7.13	528	2000	
(Pb)	206	3	193	0.011	ppb	0.011	446.15	380	100	
(Pb)	207	3	193	0.018	ppb	0.018	101.90	543	100	
Pb	208	3	193	0.022	ppb	0.022	42.70	1723	5000	
Th	232	3	193	0.539	ppb	0.539	28.48	8487	2000	
U	238	3	193	0.156	ppb	0.156	17.87	2659	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4074929	1.54	3887690	104.82	60	120	
Sc (IS)	45	3	HMI He	593579	0.96	560366	105.93	60	120	
Ge Internal standard	72	2	HMI H2	2461830	1.14	2321471	106.05	60	120	
Ge Internal standard	72	3	HMI He	731546	0.68	685485	106.72	60	120	
In Internal Standard	115	3	HMI He	2724050	1.23	2631879	103.50	60	120	
Ir (IS)	193	3	HMI He	6074618	0.56	5771767	105.25	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-Asd@5
Data File Name	077SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:14:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.033	ppb	0.033	5.77	5	2000	
Na	23	3	45	1521.062	ppb	1521.062	1.21	176932	400000	
Mg	24	3	45	8440.542	ppb	8440.542	1.53	472673	400000	
Al	27	3	45	4.395	ppb	4.395	33.99	184	400000	
K	39	3	45	163.730	ppb	163.730	6.54	33049	400000	
Ca	40	2	45	24304.593	ppb	24304.593	2.67	13779359	400000	
V	51	3	72	0.350	ppb	0.350	46.47	1204	2000	
Cr	52	3	72	0.671	ppb	0.671	20.77	2616	5000	
Mn	55	3	72	10.960	ppb	10.960	1.54	4442	10000	
Fe	56	2	72	161.532	ppb	161.532	1.07	286821	10000	
Co	59	3	72	0.029	ppb	0.029	56.93	73	2000	
Ni	60	3	72	0.713	ppb	0.713	29.24	588	5000	
Cu	63	3	72	0.181	ppb	0.181	57.00	623	5000	
Zn	66	3	72	3.060	ppb	3.060	25.96	668	5000	
As	75	3	72	0.352	ppb	0.352	52.62	107	2000	
Se	78	2	72	0.031	ppb	0.031	169.51	5	2000	
Sr	88	3	72	27.151	ppb	27.151	1.23	14379	4000	
Mo	95	3	115	0.103	ppb	0.103	24.89	88	2000	
Ag	107	3	115	0.014	ppb	0.014	65.06	38	100	
Cd	111	3	115	-0.037	ppb	-0.037	-54.73	15	2000	
Sn	120	3	115	0.023	ppb	0.023	153.77	918	2000	
Sb	121	3	115	0.072	ppb	0.072	72.66	93	1000	
Ba	137	3	115	28.613	ppb	28.613	6.35	6807	5000	
Tl	205	3	193	-0.144	ppb	-0.144	-4.48	446	2000	
(Pb)	206	3	193	0.326	ppb	0.326	22.44	793	100	
(Pb)	207	3	193	0.325	ppb	0.325	26.09	903	100	
Pb	208	3	193	0.302	ppb	0.302	3.20	3220	5000	
Th	232	3	193	0.353	ppb	0.353	28.78	7502	2000	
U	238	3	193	0.031	ppb	0.031	25.18	1961	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4070493	4.19	3887690	104.70	60	120	
Sc (IS)	45	3	HMI He	581540	1.28	560366	103.78	60	120	
Ge Internal standard	72	2	HMI H2	2434810	1.65	2321471	104.88	60	120	
Ge Internal standard	72	3	HMI He	711984	0.35	685485	103.87	60	120	
In Internal Standard	115	3	HMI He	2690154	1.06	2631879	102.21	60	120	
Ir (IS)	193	3	HMI He	6081327	0.81	5771767	105.36	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-B MS
Data File Name	078SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:15:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.684	ppb	42.684	3.37	1916	2000	
Na	23	3	45	8578.782	ppb	8578.782	2.58	938167	400000	
Mg	24	3	45	42423.693	ppb	42423.693	1.25	2422396	400000	
Al	27	3	45	762.195	ppb	762.195	4.43	17248	400000	
K	39	3	45	1616.705	ppb	1616.705	3.46	100717	400000	
Ca	40	2	45	123116.006	ppb	123116.006	0.80	68779943	400000	
V	51	3	72	40.363	ppb	40.363	2.71	25454	2000	
Cr	52	3	72	40.998	ppb	40.998	1.22	32769	5000	
Mn	55	3	72	87.639	ppb	87.639	2.85	34644	10000	
Fe	56	2	72	1545.885	ppb	1545.885	0.82	2492756	10000	
Co	59	3	72	39.912	ppb	39.912	0.90	51209	2000	
Ni	60	3	72	40.901	ppb	40.901	3.03	14904	5000	
Cu	63	3	72	41.387	ppb	41.387	1.06	41149	5000	
Zn	66	3	72	42.659	ppb	42.659	1.06	6723	5000	
As	75	3	72	39.330	ppb	39.330	6.07	4479	2000	
Se	78	2	72	35.472	ppb	35.472	2.45	2096	2000	
Sr	88	3	72	215.447	ppb	215.447	1.86	115145	4000	
Mo	95	3	115	40.597	ppb	40.597	2.45	20200	2000	
Ag	107	3	115	41.141	ppb	41.141	1.06	68836	100	
Cd	111	3	115	39.967	ppb	39.967	5.42	9775	2000	
Sn	120	3	115	39.067	ppb	39.067	2.26	30054	2000	
Sb	121	3	115	40.121	ppb	40.121	1.08	30296	1000	
Ba	137	3	115	191.828	ppb	191.828	1.51	45910	5000	
Tl	205	3	193	39.200	ppb	39.200	2.19	157198	2000	
(Pb)	206	3	193	40.010	ppb	40.010	2.84	52773	100	
(Pb)	207	3	193	39.865	ppb	39.865	3.01	46945	100	
Pb	208	3	193	39.984	ppb	39.984	2.99	214251	5000	
Th	232	3	193	38.003	ppb	38.003	1.66	207108	2000	
U	238	3	193	40.244	ppb	40.244	1.45	228091	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4011257	1.93	3887690	103.18	60	120	
Sc (IS)	45	3	HMI He	593154	0.59	560366	105.85	60	120	
Ge Internal standard	72	2	HMI H2	2447350	1.38	2321471	105.42	60	120	
Ge Internal standard	72	3	HMI He	719660	0.64	685485	104.99	60	120	
In Internal Standard	115	3	HMI He	2719608	1.30	2631879	103.33	60	120	
Ir (IS)	193	3	HMI He	6059439	1.44	5771767	104.98	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-C MSD
Data File Name	079SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:17:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.736	ppb	42.736	3.00	1933	2000	
Na	23	3	45	8446.635	ppb	8446.635	3.02	905938	400000	
Mg	24	3	45	42438.924	ppb	42438.924	0.36	2376291	400000	
Al	27	3	45	790.574	ppb	790.574	4.37	17535	400000	
K	39	3	45	1622.604	ppb	1622.604	3.21	99026	400000	
Ca	40	2	45	118450.603	ppb	118450.603	1.39	68138137	400000	
V	51	3	72	39.848	ppb	39.848	0.92	25329	2000	
Cr	52	3	72	41.086	ppb	41.086	2.08	33074	5000	
Mn	55	3	72	87.349	ppb	87.349	0.63	34779	10000	
Fe	56	2	72	1525.394	ppb	1525.394	0.61	2486346	10000	
Co	59	3	72	40.190	ppb	40.190	1.57	51944	2000	
Ni	60	3	72	41.005	ppb	41.005	1.91	15049	5000	
Cu	63	3	72	40.953	ppb	40.953	0.79	41022	5000	
Zn	66	3	72	43.994	ppb	43.994	1.99	6978	5000	
As	75	3	72	39.935	ppb	39.935	0.58	4580	2000	
Se	78	2	72	37.422	ppb	37.422	2.37	2234	2000	
Sr	88	3	72	213.172	ppb	213.172	0.90	114772	4000	
Mo	95	3	115	41.088	ppb	41.088	4.89	20140	2000	
Ag	107	3	115	41.800	ppb	41.800	0.89	68918	100	
Cd	111	3	115	40.742	ppb	40.742	4.55	9819	2000	
Sn	120	3	115	40.123	ppb	40.123	2.27	30393	2000	
Sb	121	3	115	41.201	ppb	41.201	1.19	30650	1000	
Ba	137	3	115	188.912	ppb	188.912	1.94	44548	5000	
Tl	205	3	193	40.244	ppb	40.244	2.53	162147	2000	
(Pb)	206	3	193	40.540	ppb	40.540	1.64	53733	100	
(Pb)	207	3	193	39.607	ppb	39.607	2.79	46875	100	
Pb	208	3	193	40.340	ppb	40.340	2.24	217218	5000	
Th	232	3	193	39.889	ppb	39.889	3.46	218129	2000	
U	238	3	193	40.558	ppb	40.558	3.23	230933	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4130044	0.73	3887690	106.23	60	120	
Sc (IS)	45	3	HMI He	581644	0.72	560366	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2473524	2.46	2321471	106.55	60	120	
Ge Internal standard	72	3	HMI He	724932	0.23	685485	105.75	60	120	
In Internal Standard	115	3	HMI He	2680050	2.27	2631879	101.83	60	120	
Ir (IS)	193	3	HMI He	6090630	2.76	5771767	105.52	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A pds
Data File Name	080SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:20:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	103.321	ppb	103.321	5.59	4565	2000	
Na	23	3	45	12506.495	ppb	12506.495	0.93	1350169	400000	
Mg	24	3	45	42805.231	ppb	42805.231	0.73	2426946	400000	
Al	27	3	45	1981.447	ppb	1981.447	0.10	44377	400000	
K	39	3	45	2809.713	ppb	2809.713	0.56	154649	400000	
Ca	40	2	45	120054.245	ppb	120054.245	1.69	67167121	400000	
V	51	3	72	98.724	ppb	98.724	2.33	60278	2000	
Cr	52	3	72	99.956	ppb	99.956	1.37	76139	5000	
Mn	55	3	72	145.888	ppb	145.888	0.58	57048	10000	
Fe	56	2	72	1733.613	ppb	1733.613	2.40	2733317	10000	
Co	59	3	72	97.208	ppb	97.208	1.25	123594	2000	
Ni	60	3	72	98.644	ppb	98.644	1.49	35152	5000	
Cu	63	3	72	101.063	ppb	101.063	1.10	98969	5000	
Zn	66	3	72	214.043	ppb	214.043	0.80	32616	5000	
As	75	3	72	102.174	ppb	102.174	2.59	11426	2000	
Se	78	2	72	102.654	ppb	102.654	3.35	5933	2000	
Sr	88	3	72	231.646	ppb	231.646	1.30	122735	4000	
Mo	95	3	115	101.343	ppb	101.343	1.53	48887	2000	
Ag	107	3	115	27.320	ppb	27.320	2.29	44363	100	
Cd	111	3	115	101.041	ppb	101.041	0.35	23958	2000	
Sn	120	3	115	100.386	ppb	100.386	1.97	73560	2000	
Sb	121	3	115	98.901	ppb	98.901	1.49	72405	1000	
Ba	137	3	115	253.395	ppb	253.395	1.13	58845	5000	
Tl	205	3	193	96.952	ppb	96.952	3.18	387858	2000	
(Pb)	206	3	193	98.210	ppb	98.210	1.80	129221	100	
(Pb)	207	3	193	96.111	ppb	96.111	2.72	112631	100	
Pb	208	3	193	96.854	ppb	96.854	2.76	517526	5000	
Th	232	3	193	106.875	ppb	106.875	5.31	572861	2000	
U	238	3	193	203.028	ppb	203.028	1.33	1145547	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4017822	2.72	3887690	103.35	60	120	
Sc (IS)	45	3	HMI He	588953	0.17	560366	105.10	60	120	
Ge Internal standard	72	2	HMI H2	2397318	3.28	2321471	103.27	60	120	
Ge Internal standard	72	3	HMI He	713465	0.96	685485	104.08	60	120	
In Internal Standard	115	3	HMI He	2639293	1.21	2631879	100.28	60	120	
Ir (IS)	193	3	HMI He	6070628	2.78	5771767	105.18	60	120	

Sample Report

Sample Table

Sample Name	280-175031-E-1-A
Data File Name	081SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:21:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.034	ppb	0.034	0.85	5	2000	
Na	23	3	45	87875.630	ppb	87875.630	1.28	9268025	400000	
Mg	24	3	45	70920.104	ppb	70920.104	1.55	3971162	400000	
Al	27	3	45	5.767	ppb	5.767	23.04	214	400000	
K	39	3	45	4579.884	ppb	4579.884	1.20	232809	400000	
Ca	40	2	45	165454.527	ppb	165454.527	2.27	91154689	400000	
V	51	3	72	0.907	ppb	0.907	7.22	1576	2000	
Cr	52	3	72	0.465	ppb	0.465	25.33	2522	5000	
Mn	55	3	72	176.350	ppb	176.350	1.33	70429	10000	
Fe	56	2	72	15.591	ppb	15.591	14.25	55463	10000	
Co	59	3	72	0.212	ppb	0.212	17.39	313	2000	
Ni	60	3	72	2.858	ppb	2.858	2.85	1376	5000	
Cu	63	3	72	9.500	ppb	9.500	0.60	9922	5000	
Zn	66	3	72	19.111	ppb	19.111	7.02	3167	5000	
As	75	3	72	0.226	ppb	0.226	108.33	95	2000	
Se	78	2	72	0.590	ppb	0.590	22.64	38	2000	
Sr	88	3	72	728.579	ppb	728.579	0.83	394462	4000	
Mo	95	3	115	0.267	ppb	0.267	32.82	165	2000	
Ag	107	3	115	0.210	ppb	0.210	8.49	356	100	
Cd	111	3	115	0.014	ppb	0.014	227.68	27	2000	
Sn	120	3	115	1.974	ppb	1.974	10.32	2312	2000	
Sb	121	3	115	0.155	ppb	0.155	34.99	152	1000	
Ba	137	3	115	291.057	ppb	291.057	1.13	67567	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-13.23	765	2000	
(Pb)	206	3	193	1.170	ppb	1.170	3.93	1884	100	
(Pb)	207	3	193	1.123	ppb	1.123	8.91	1818	100	
Pb	208	3	193	1.159	ppb	1.159	5.87	7715	5000	
Th	232	3	193	3.343	ppb	3.343	9.66	23180	2000	
U	238	3	193	4.275	ppb	4.275	1.25	25652	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3955469	0.93	3887690	101.74	60	120	
Sc (IS)	45	3	HMI He	581681	0.22	560366	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2430677	1.97	2321471	104.70	60	120	
Ge Internal standard	72	3	HMI He	729103	0.84	685485	106.36	60	120	
In Internal Standard	115	3	HMI He	2638493	1.42	2631879	100.25	60	120	
Ir (IS)	193	3	HMI He	6019252	0.15	5771767	104.29	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	082_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:23:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.271	ppb	4.377	2209	50	98.5	90	110	
Na	23	3	45	48132.845	ppb	1.176	5134508	51000	94.4	90	110	
Mg	24	3	45	10416.280	ppb	1.446	589215	11000	94.7	90	110	
Al	27	3	45	946.518	ppb	4.165	21184	1000	94.7	90	110	
K	39	3	45	10101.218	ppb	2.282	487285	11000	91.8	90	110	
Ca	40	2	45	10502.896	ppb	0.675	5847917	11000	95.5	90	110	
V	51	3	72	51.196	ppb	2.207	31011	50	102.4	90	110	
Cr	52	3	72	51.211	ppb	1.313	39122	50	102.4	90	110	
Mn	55	3	72	51.663	ppb	1.137	19848	50	103.3	90	110	
Fe	56	2	72	1016.356	ppb	5.095	1589974	1000	101.6	90	110	
Co	59	3	72	50.831	ppb	0.922	63153	50	101.7	90	110	
Ni	60	3	72	50.586	ppb	1.072	17771	50	101.2	90	110	
Cu	63	3	72	50.363	ppb	0.388	48400	50	100.7	90	110	
Zn	66	3	72	51.360	ppb	3.708	7798	50	102.7	90	110	
As	75	3	72	51.108	ppb	2.928	5617	50	102.2	90	110	
Se	78	2	72	50.608	ppb	1.314	2881	50	101.2	90	110	
Sr	88	3	72	100.838	ppb	1.358	52209	100	100.8	90	110	
Mo	95	3	115	49.766	ppb	0.669	24351	50	99.5	90	110	
Ag	107	3	115	50.272	ppb	3.552	82707	50	100.5	90	110	
Cd	111	3	115	49.157	ppb	0.977	11828	50	98.3	90	110	
Sn	120	3	115	49.549	ppb	0.989	37255	50	99.1	90	110	
Sb	121	3	115	49.617	ppb	3.306	36826	50	99.2	90	110	
Ba	137	3	115	53.283	ppb	3.458	12566	50	106.6	90	110	
Tl	205	3	193	47.760	ppb	1.250	191269	50	95.5	90	110	
(Pb)	206	3	193	48.473	ppb	1.402	63837	50	96.9	90	110	
(Pb)	207	3	193	47.478	ppb	2.938	55811	50	95.0	90	110	
Pb	208	3	193	47.924	ppb	0.405	256427	50	95.8	90	110	
Th	232	3	193	49.713	ppb	0.830	269116	50	99.4	90	110	
U	238	3	193	48.335	ppb	2.374	273483	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3990518	0.60	3887690	102.64	60	120	
Sc (IS)	45	3	HMI He	587506	1.47	560366	104.84	60	120	
Ge Internal standard	72	2	HMI H2	2359700	1.36	2321471	101.65	60	120	
Ge Internal standard	72	3	HMI He	696960	0.43	685485	101.67	60	120	
In Internal Standard	115	3	HMI He	2675089	1.94	2631879	101.64	60	120	
Ir (IS)	193	3	HMI He	6056991	0.78	5771767	104.94	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	083_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:28:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.041	ppb	-157.4	2	0.5	
Na	23	3	45	14.622	ppb	17.6	18444	25	
Mg	24	3	45	0.194	ppb	407.1	240	25	
Al	27	3	45	-1.048	ppb	-172.9	63	15	
K	39	3	45	1.391	ppb	2091.3	25790	50	
V	51	3	72	0.601	ppb	45.4	1363	1	
Cr	52	3	72	0.306	ppb	36.5	2356	1	
Mn	55	3	72	0.066	ppb	190.5	205	0.5	
Co	59	3	72	0.000	ppb	38142.3	37	0.5	
Ni	60	3	72	0.408	ppb	11.4	483	1	
Cu	63	3	72	0.022	ppb	53.7	470	1	
Zn	66	3	72	-0.076	ppb	-239.8	195	5	
As	75	3	72	0.018	ppb	1745.3	70	1	
Se	78	2	72	0.008	ppb	409.7	4	1	
Sr	88	3	72	0.004	ppb	239.9	27	0.5	
Mo	95	3	115	0.058	ppb	26.5	67	0.5	
Ag	107	3	115	-0.003	ppb	-87.8	10	1	
Cd	111	3	115	0.003	ppb	579.1	25	0.5	
Sn	120	3	115	0.071	ppb	54.5	966	1	
Sb	121	3	115	0.060	ppb	45.6	85	0.6	
Ba	137	3	115	0.078	ppb	113.9	57	0.5	
Tl	205	3	193	-0.123	ppb	-3.5	525	0.1	
(Pb)	206	3	193	-0.065	ppb	-32.7	277	1	
(Pb)	207	3	193	-0.052	ppb	-51.5	456	1	
Pb	208	3	193	-0.037	ppb	-32.3	1391	0.5	
Th	232	3	193	2.134	ppb	11.8	16765	1	>RL
U	238	3	193	-0.003	ppb	-698.8	1744	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4010735	1.58	3887690	103.16	60	120	
Sc (IS)	45	3	HMI He	583392	0.98	560366	104.11	60	120	
Ge Internal standard	72	2	HMI H2	2428000	1.28	2321471	104.59	60	120	
Ge Internal standard	72	3	HMI He	715216	1.24	685485	104.34	60	120	
In Internal Standard	115	3	HMI He	2726729	0.79	2631879	103.60	60	120	
Ir (IS)	193	3	HMI He	6001879	1.46	5771767	103.99	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608652/1-A
Data File Name	084_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:30:09-06:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.041	ppb	-154.1565254	2	0.5
Na	23	3	45	98.834	ppb	6.447903046	27698	25
Mg	24	3	45	19.546	ppb	1.300379086	1345	25
Al	27	3	45	7.244	ppb	21.02101515	250	15
K	39	3	45	13.935	ppb	158.8611174	26706	50
Ca	40	2	45	120.589	ppb	1.184974186	80286	200
V	51	3	72	0.361	ppb	25.74720255	1226	1
Cr	52	3	72	1.790	ppb	9.147913719	3485	1
Mn	55	3	72	0.471	ppb	58.2378923	366	0.5
Fe	56	2	72	23.146	ppb	11.78747805	68122	50
Co	59	3	72	0.027	ppb	54.27537698	72	0.5
Ni	60	3	72	1.594	ppb	3.166002109	910	1
Cu	63	3	72	1.867	ppb	3.464822222	2291	1
Zn	66	3	72	2.558	ppb	6.958246608	600	5
As	75	3	72	-0.224	ppb	-29.94015954	43	1
(Se)	78	3	72	-1.457	ppb	-35.12611855	23	1
Sr	88	3	72	0.602	ppb	21.84269628	347	0.5
Mo	95	3	115	0.275	ppb	37.36694057	175	0.5
Ag	107	3	115	0.002	ppb	288.8867943	18	1
Cd	111	3	115	-0.051	ppb	-23.61649586	12	0.5
Sn	120	3	115	11.713	ppb	3.425963108	9709	1
Sb	121	3	115	0.013	ppb	84.71639555	50	0.6
Ba	137	3	115	0.429	ppb	12.62987632	142	0.5
Tl	205	3	193	-0.151	ppb	-11.4741905	421	0.1
(Pb)	206	3	193	0.322	ppb	10.57615086	795	1
(Pb)	207	3	193	0.367	ppb	15.56702065	958	1
Pb	208	3	193	0.346	ppb	5.183500973	3480	0.5
Th	232	3	193	0.674	ppb	24.14334344	9281	1
U	238	3	193	0.000	ppb	-114.2060878	1794	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4111146	0.80	3887690	105.75	60	120	
Sc (IS)	45	3	HMI He	591166	0.30	560366	105.50	60	120	
Ge Internal standard	72	2	HMI H2	2456523	1.05	2321471	105.82	60	120	
Ge Internal standard	72	3	HMI He	720830	0.46	685485	105.16	60	120	
In Internal Standard	115	3	HMI He	2737248	2.05	2631879	104.00	60	120	
Ir (IS)	193	3	HMI He	6123509	2.26	5771767	106.09	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-10-C MDLV
Data File Name	085SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:32:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.510	ppb	0.510	50.99	27	2000	
Na	23	3	45	427.007	ppb	427.007	0.53	62440	400000	
Mg	24	3	45	115.629	ppb	115.629	5.11	6772	400000	
Al	27	3	45	102.208	ppb	102.208	8.32	2366	400000	
K	39	3	45	195.500	ppb	195.500	10.44	34842	400000	
Ca	40	2	45	381.008	ppb	381.008	2.33	228917	400000	
V	51	3	72	2.699	ppb	2.699	10.13	2632	2000	
Cr	52	3	72	5.237	ppb	5.237	4.28	6035	5000	
Mn	55	3	72	3.554	ppb	3.554	6.06	1573	10000	
Fe	56	2	72	157.966	ppb	157.966	2.82	284498	10000	
Co	59	3	72	0.252	ppb	0.252	12.08	358	2000	
Ni	60	3	72	15.358	ppb	15.358	6.62	5790	5000	
Cu	63	3	72	7.289	ppb	7.289	3.21	7595	5000	
Zn	66	3	72	17.457	ppb	17.457	7.43	2866	5000	
As	75	3	72	1.686	ppb	1.686	15.64	257	2000	
Se	78	2	72	1.243	ppb	1.243	8.76	77	2000	
Sr	88	3	72	2.900	ppb	2.900	10.82	1569	4000	
Mo	95	3	115	1.992	ppb	1.992	16.49	1020	2000	
Ag	107	3	115	0.181	ppb	0.181	15.04	317	100	
Cd	111	3	115	0.472	ppb	0.472	9.61	138	2000	
Sn	120	3	115	11.349	ppb	11.349	2.44	9315	2000	
Sb	121	3	115	1.183	ppb	1.183	11.73	925	1000	
Ba	137	3	115	2.431	ppb	2.431	11.13	615	5000	
Tl	205	3	193	0.390	ppb	0.390	7.54	2599	2000	
(Pb)	206	3	193	1.408	ppb	1.408	2.35	2229	100	
(Pb)	207	3	193	1.491	ppb	1.491	2.63	2279	100	
Pb	208	3	193	1.473	ppb	1.473	4.15	9527	5000	
Th	232	3	193	1.103	ppb	1.103	4.74	11571	2000	
U	238	3	193	0.468	ppb	0.468	7.05	4457	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4103826	1.99	3887690	105.56	60	120	
Sc (IS)	45	3	HMI He	587658	0.64	560366	104.87	60	120	
Ge Internal standard	72	2	HMI H2	2464695	1.98	2321471	106.17	60	120	
Ge Internal standard	72	3	HMI He	717394	0.37	685485	104.66	60	120	
In Internal Standard	115	3	HMI He	2700866	1.07	2631879	102.62	60	120	
Ir (IS)	193	3	HMI He	6119139	2.29	5771767	106.02	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-11-C MDLV
Data File Name	086SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:34:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.730	ppb	0.730	29.04	35	2000	
Na	23	3	45	434.341	ppb	434.341	3.27	63488	400000	
Mg	24	3	45	115.993	ppb	115.993	11.48	6819	400000	
Al	27	3	45	174.421	ppb	174.421	3.13	3995	400000	
K	39	3	45	223.893	ppb	223.893	7.93	36293	400000	
Ca	40	2	45	942.159	ppb	942.159	9.83	504859	400000	
V	51	3	72	2.838	ppb	2.838	9.40	2719	2000	
Cr	52	3	72	5.537	ppb	5.537	2.45	6268	5000	
Mn	55	3	72	7.026	ppb	7.026	4.14	2937	10000	
Fe	56	2	72	266.871	ppb	266.871	7.09	429241	10000	
Co	59	3	72	0.252	ppb	0.252	16.50	360	2000	
Ni	60	3	72	6.075	ppb	6.075	3.14	2499	5000	
Cu	63	3	72	7.295	ppb	7.295	2.02	7612	5000	
Zn	66	3	72	21.602	ppb	21.602	7.33	3500	5000	
As	75	3	72	1.787	ppb	1.787	5.00	268	2000	
Se	78	2	72	1.091	ppb	1.091	8.89	64	2000	
Sr	88	3	72	4.254	ppb	4.254	1.54	2294	4000	
Mo	95	3	115	1.805	ppb	1.805	8.55	946	2000	
Ag	107	3	115	0.184	ppb	0.184	28.20	328	100	
Cd	111	3	115	0.556	ppb	0.556	23.11	162	2000	
Sn	120	3	115	10.371	ppb	10.371	3.84	8752	2000	
Sb	121	3	115	1.159	ppb	1.159	0.35	925	1000	
Ba	137	3	115	2.456	ppb	2.456	13.41	633	5000	
Tl	205	3	193	0.388	ppb	0.388	11.27	2534	2000	
(Pb)	206	3	193	1.815	ppb	1.815	12.54	2707	100	
(Pb)	207	3	193	1.686	ppb	1.686	4.17	2456	100	
Pb	208	3	193	1.768	ppb	1.768	5.94	10876	5000	
Th	232	3	193	0.957	ppb	0.957	5.23	10558	2000	
U	238	3	193	0.465	ppb	0.465	5.29	4340	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3783475	6.03	3887690	97.32	60	120	
Sc (IS)	45	3	HMI He	590168	0.61	560366	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2307257	3.55	2321471	99.39	60	120	
Ge Internal standard	72	3	HMI He	718490	1.35	685485	104.81	60	120	
In Internal Standard	115	3	HMI He	2752644	1.11	2631879	104.59	60	120	
Ir (IS)	193	3	HMI He	5990055	1.59	5771767	103.78	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-12-C LOQV
Data File Name	087SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:36:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.031	ppb	1.031	41.90	50	2000	
Na	23	3	45	490.298	ppb	490.298	2.63	69620	400000	
Mg	24	3	45	504.059	ppb	504.059	1.85	28935	400000	
Al	27	3	45	109.217	ppb	109.217	2.84	2539	400000	
K	39	3	45	257.919	ppb	257.919	8.74	37943	400000	
Ca	40	2	45	636.159	ppb	636.159	2.68	368484	400000	
V	51	3	72	4.804	ppb	4.804	6.63	3969	2000	
Cr	52	3	72	7.585	ppb	7.585	4.01	7915	5000	
Mn	55	3	72	5.568	ppb	5.568	1.30	2402	10000	
Fe	56	2	72	173.924	ppb	173.924	3.20	304164	10000	
Co	59	3	72	1.002	ppb	1.002	5.29	1339	2000	
Ni	60	3	72	6.974	ppb	6.974	1.48	2862	5000	
Cu	63	3	72	8.923	ppb	8.923	1.82	9352	5000	
Zn	66	3	72	17.340	ppb	17.340	5.81	2896	5000	
As	75	3	72	5.309	ppb	5.309	12.71	673	2000	
Se	78	2	72	4.623	ppb	4.623	7.19	273	2000	
Sr	88	3	72	3.863	ppb	3.863	1.90	2117	4000	
Mo	95	3	115	2.153	ppb	2.153	11.23	1123	2000	
Ag	107	3	115	0.977	ppb	0.977	6.25	1674	100	
Cd	111	3	115	0.701	ppb	0.701	19.93	198	2000	
Sn	120	3	115	9.386	ppb	9.386	2.68	8028	2000	
Sb	121	3	115	1.952	ppb	1.952	10.94	1533	1000	
Ba	137	3	115	4.428	ppb	4.428	2.14	1113	5000	
Tl	205	3	193	0.758	ppb	0.758	1.50	4087	2000	
(Pb)	206	3	193	3.797	ppb	3.797	2.06	5400	100	
(Pb)	207	3	193	3.985	ppb	3.985	3.26	5223	100	
Pb	208	3	193	3.893	ppb	3.893	1.80	22568	5000	
Th	232	3	193	1.729	ppb	1.729	2.70	14945	2000	
U	238	3	193	0.955	ppb	0.955	0.97	7234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4036817	3.15	3887690	103.84	60	120	
Sc (IS)	45	3	HMI He	591546	1.10	560366	105.56	60	120	
Ge Internal standard	72	2	HMI H2	2418029	2.59	2321471	104.16	60	120	
Ge Internal standard	72	3	HMI He	729502	0.93	685485	106.42	60	120	
In Internal Standard	115	3	HMI He	2759282	1.34	2631879	104.84	60	120	
Ir (IS)	193	3	HMI He	6129185	0.99	5771767	106.19	60	120	

Sample Report

Sample Table

Sample Name	280-173726-A-12-A LOQV
Data File Name	088SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:38:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.203	ppb	1.203	11.26	58	2000	
Na	23	3	45	963.131	ppb	963.131	0.41	121225	400000	
Mg	24	3	45	192.671	ppb	192.671	3.14	11296	400000	
Al	27	3	45	95.788	ppb	95.788	4.30	2256	400000	
K	39	3	45	944.747	ppb	944.747	4.30	70094	400000	
Ca	40	2	45	202.997	ppb	202.997	0.63	128425	400000	
V	51	3	72	5.426	ppb	5.426	7.04	4337	2000	
Cr	52	3	72	3.362	ppb	3.362	5.01	4702	5000	
Mn	55	3	72	3.252	ppb	3.252	6.01	1474	10000	
Fe	56	2	72	110.504	ppb	110.504	2.08	202533	10000	
Co	59	3	72	0.932	ppb	0.932	3.83	1244	2000	
Ni	60	3	72	3.477	ppb	3.477	8.20	1594	5000	
Cu	63	3	72	2.035	ppb	2.035	8.92	2477	5000	
Zn	66	3	72	10.827	ppb	10.827	2.92	1881	5000	
As	75	3	72	4.788	ppb	4.788	7.34	611	2000	
Se	78	2	72	4.769	ppb	4.769	5.70	279	2000	
Sr	88	3	72	9.402	ppb	9.402	3.41	5100	4000	
Mo	95	3	115	1.873	ppb	1.873	8.79	968	2000	
Ag	107	3	115	0.950	ppb	0.950	8.38	1604	100	
Cd	111	3	115	0.959	ppb	0.959	6.68	258	2000	
Sn	120	3	115	9.734	ppb	9.734	1.86	8172	2000	
Sb	121	3	115	1.982	ppb	1.982	2.39	1534	1000	
Ba	137	3	115	3.206	ppb	3.206	7.97	805	5000	
Tl	205	3	193	0.760	ppb	0.760	6.98	4079	2000	
(Pb)	206	3	193	0.900	ppb	0.900	2.14	1554	100	
(Pb)	207	3	193	0.945	ppb	0.945	7.59	1634	100	
Pb	208	3	193	0.916	ppb	0.916	1.88	6524	5000	
Th	232	3	193	4.305	ppb	4.305	1.44	28654	2000	
U	238	3	193	0.899	ppb	0.899	1.36	6885	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4141979	1.85	3887690	106.54	60	120	
Sc (IS)	45	3	HMI He	596350	1.03	560366	106.42	60	120	
Ge Internal standard	72	2	HMI H2	2394625	0.65	2321471	103.15	60	120	
Ge Internal standard	72	3	HMI He	727120	0.98	685485	106.07	60	120	
In Internal Standard	115	3	HMI He	2719096	0.33	2631879	103.31	60	120	
Ir (IS)	193	3	HMI He	6104957	0.77	5771767	105.77	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	089_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:40:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.717	ppb	2.803	2167	50	95.4	90	110	
Na	23	3	45	48032.938	ppb	1.299	5211183	51000	94.2	90	110	
Mg	24	3	45	10168.678	ppb	1.637	585081	11000	92.4	90	110	
Al	27	3	45	932.118	ppb	4.329	21224	1000	93.2	90	110	
K	39	3	45	10047.516	ppb	0.127	493186	11000	91.3	90	110	
Ca	40	2	45	10291.280	ppb	1.286	5881343	11000	93.6	90	110	
V	51	3	72	50.659	ppb	1.792	31246	50	101.3	90	110	
Cr	52	3	72	51.104	ppb	1.899	39747	50	102.2	90	110	
Mn	55	3	72	51.113	ppb	2.365	19991	50	102.2	90	110	
Fe	56	2	72	1023.278	ppb	2.233	1624100	1000	102.3	90	110	
Co	59	3	72	50.354	ppb	1.467	63691	50	100.7	90	110	
Ni	60	3	72	51.781	ppb	2.207	18510	50	103.6	90	110	
Cu	63	3	72	50.500	ppb	0.325	49412	50	101.0	90	110	
Zn	66	3	72	51.574	ppb	3.666	7972	50	103.1	90	110	
As	75	3	72	50.126	ppb	1.412	5610	50	100.3	90	110	
Se	78	2	72	49.998	ppb	4.594	2887	50	100.0	90	110	
Sr	88	3	72	101.868	ppb	1.060	53694	100	101.9	90	110	
Mo	95	3	115	48.866	ppb	2.008	24423	50	97.7	90	110	
Ag	107	3	115	49.903	ppb	1.497	83904	50	99.8	90	110	
Cd	111	3	115	48.847	ppb	2.498	12003	50	97.7	90	110	
Sn	120	3	115	49.690	ppb	1.946	38161	50	99.4	90	110	
Sb	121	3	115	49.671	ppb	1.074	37671	50	99.3	90	110	
Ba	137	3	115	50.460	ppb	1.232	12163	50	100.9	90	110	
Tl	205	3	193	47.877	ppb	2.041	190644	50	95.8	90	110	
(Pb)	206	3	193	49.197	ppb	1.631	64424	50	98.4	90	110	
(Pb)	207	3	193	48.620	ppb	1.447	56812	50	97.2	90	110	
Pb	208	3	193	48.703	ppb	0.221	259107	50	97.4	90	110	
Th	232	3	193	49.280	ppb	1.717	265318	50	98.6	90	110	
U	238	3	193	49.139	ppb	0.334	276464	50	98.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4095722	0.23	3887690	105.35	60	120	
Sc (IS)	45	3	HMI He	597500	1.22	560366	106.63	60	120	
Ge Internal standard	72	2	HMI H2	2393874	0.94	2321471	103.12	60	120	
Ge Internal standard	72	3	HMI He	709588	1.10	685485	103.52	60	120	
In Internal Standard	115	3	HMI He	2732719	1.66	2631879	103.83	60	120	
Ir (IS)	193	3	HMI He	6022843	0.39	5771767	104.35	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	090_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:41:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.030	ppb	358.3	5	0.5	
Na	23	3	45	16.137	ppb	14.2	18701	25	
Mg	24	3	45	1.650	ppb	97.4	324	25	
Al	27	3	45	-0.013	ppb	-7211.6	87	15	
K	39	3	45	1.918	ppb	1346.4	25940	50	
V	51	3	72	0.630	ppb	47.3	1376	1	
Cr	52	3	72	0.599	ppb	12.5	2569	1	
Mn	55	3	72	0.063	ppb	48.9	203	0.5	
Co	59	3	72	0.018	ppb	22.1	60	0.5	
Ni	60	3	72	0.661	ppb	39.3	571	1	
Cu	63	3	72	0.018	ppb	346.3	465	1	
Zn	66	3	72	-0.074	ppb	-492.2	195	5	
As	75	3	72	0.065	ppb	209.8	75	1	
Se	78	2	72	0.076	ppb	121.1	8	1	
Sr	88	3	72	0.014	ppb	102.0	32	0.5	
Mo	95	3	115	0.059	ppb	63.1	67	0.5	
Ag	107	3	115	0.008	ppb	100.0	28	1	
Cd	111	3	115	-0.044	ppb	-108.5	13	0.5	
Sn	120	3	115	0.068	ppb	44.5	958	1	
Sb	121	3	115	0.069	ppb	18.2	92	0.6	
Ba	137	3	115	0.058	ppb	72.8	52	0.5	
Tl	205	3	193	-0.143	ppb	-6.9	451	0.1	
(Pb)	206	3	193	-0.072	ppb	-35.2	272	1	
(Pb)	207	3	193	-0.052	ppb	-32.3	463	1	
Pb	208	3	193	-0.050	ppb	-13.6	1343	0.5	
Th	232	3	193	1.776	ppb	12.6	15122	1	>RL
U	238	3	193	-0.025	ppb	-46.4	1644	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124042	2.19	3887690	106.08	60	120	
Sc (IS)	45	3	HMI He	586442	0.60	560366	104.65	60	120	
Ge Internal standard	72	2	HMI H2	2452171	1.70	2321471	105.63	60	120	
Ge Internal standard	72	3	HMI He	713813	0.33	685485	104.13	60	120	
In Internal Standard	115	3	HMI He	2708057	1.14	2631879	102.89	60	120	
Ir (IS)	193	3	HMI He	6095708	1.13	5771767	105.61	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	091_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:43:41-06:00
Sample Type	Blank
Dilution	1
Comment	608984 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.251	ppb	115.5603826	15	0.5
Na	23	3	45	137.641	ppb	2.655608454	32530	25
Mg	24	3	45	9.001	ppb	19.65298475	761	25
Al	27	3	45	142.844	ppb	8.673987484	3364	15
K	39	3	45	27.635	ppb	34.65418719	27919	50
Ca	40	2	45	100.206	ppb	2.699899156	69263	200
V	51	3	72	0.534	ppb	11.04765122	1353	1
Cr	52	3	72	0.865	ppb	13.47348038	2839	1
Mn	55	3	72	5.102	ppb	2.04078623	2226	0.5
Fe	56	2	72	43.115	ppb	9.083568193	99935	50
Co	59	3	72	0.044	ppb	10.04421936	95	0.5
Ni	60	3	72	1.374	ppb	15.74551772	845	1
Cu	63	3	72	1.575	ppb	7.14721645	2036	1
Zn	66	3	72	53.167	ppb	1.579788832	8478	5
As	75	3	72	-0.026	ppb	-938.375574	67	1
(Se)	78	3	72	-1.233	ppb	-70.19177681	25	1
Sr	88	3	72	0.217	ppb	22.38827528	143	0.5
Mo	95	3	115	0.086	ppb	19.13719293	82	0.5
Ag	107	3	115	0.017	ppb	17.31199483	45	1
Cd	111	3	115	-0.004	ppb	-558.6848725	23	0.5
Sn	120	3	115	2.827	ppb	3.499246731	3062	1
Sb	121	3	115	0.089	ppb	16.45981833	108	0.6
Ba	137	3	115	0.351	ppb	53.66450349	123	0.5
Tl	205	3	193	-0.136	ppb	-14.84670383	480	0.1
(Pb)	206	3	193	0.086	ppb	73.75227593	480	1
(Pb)	207	3	193	0.058	ppb	108.1179244	593	1
Pb	208	3	193	0.083	ppb	25.43927819	2057	0.5
Th	232	3	193	0.324	ppb	9.710350369	7382	1
U	238	3	193	0.021	ppb	102.2623103	1908	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4150467	1.39	3887690	106.76	60	120	
Sc (IS)	45	3	HMI He	603810	0.87	560366	107.75	60	120	
Ge Internal standard	72	2	HMI H2	2454692	1.38	2321471	105.74	60	120	
Ge Internal standard	72	3	HMI He	732547	0.94	685485	106.87	60	120	
In Internal Standard	115	3	HMI He	2757358	1.03	2631879	104.77	60	120	
Ir (IS)	193	3	HMI He	6104594	0.74	5771767	105.77	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608984/2-A
Data File Name	092_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:45:33-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608984 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.050	39.050	ppb	6.208	1778	40	97.6	80	120	
Na	23	3	45	880.738	880.738	ppb	0.901	112250	40	2201.8	80	120	>+/-20%
Mg	24	3	45	747.486	747.486	ppb	1.484	43109	40	1868.7	80	120	>+/-20%
Al	27	3	45	768.652	768.652	ppb	1.847	17472	40	1921.6	80	120	>+/-20%
K	39	3	45	752.692	752.692	ppb	3.885	61154	40	1881.7	80	120	>+/-20%
Ca	40	2	45	826.463	826.463	ppb	3.526	489006	40	2066.2	80	120	>+/-20%
V	51	3	72	40.493	40.493	ppb	1.866	25903	40	101.2	80	120	
Cr	52	3	72	40.948	40.948	ppb	2.367	33200	40	102.4	80	120	
Mn	55	3	72	41.267	41.267	ppb	1.440	16643	40	103.2	80	120	
Fe	56	2	72	793.847	793.847	ppb	2.765	1315287	40	1984.6	80	120	>+/-20%
(Fe)	56	3	72	795.365	795.365	ppb	0.914	531497	40	1988.4	80	120	>+/-20%
Co	59	3	72	40.322	40.322	ppb	0.958	52484	40	100.8	80	120	
Ni	60	3	72	41.525	41.525	ppb	3.191	15341	40	103.8	80	120	
Cu	63	3	72	41.300	41.300	ppb	2.214	41655	40	103.2	80	120	
Zn	66	3	72	42.935	42.935	ppb	2.500	6863	40	107.3	80	120	
As	75	3	72	39.152	39.152	ppb	1.078	4524	40	97.9	80	120	
Se	78	2	72	39.851	39.851	ppb	4.154	2391	40	99.6	80	120	
(Se)	78	3	72	43.933	43.933	ppb	10.222	283	40	109.8	80	120	
Sr	88	3	72	79.349	79.349	ppb	2.623	43036	40	198.4	80	120	>+/-20%
Mo	95	3	115	39.691	39.691	ppb	2.588	19906	40	99.2	80	120	
Ag	107	3	115	41.176	41.176	ppb	1.264	69427	40	102.9	80	120	
Cd	111	3	115	39.528	39.528	ppb	4.277	9745	40	98.8	80	120	
Sn	120	3	115	38.821	38.821	ppb	0.650	30107	40	97.1	80	120	
Sb	121	3	115	40.121	40.121	ppb	0.920	30526	40	100.3	80	120	
Ba	137	3	115	41.965	41.965	ppb	3.541	10154	40	104.9	80	120	
Tl	205	3	193	38.713	38.713	ppb	1.419	158787	40	96.8	80	120	
(Pb)	206	3	193	39.684	39.684	ppb	1.965	53529	40	99.2	80	120	
(Pb)	207	3	193	39.100	39.100	ppb	2.369	47101	40	97.7	80	120	
Pb	208	3	193	39.398	39.398	ppb	1.942	215929	40	98.5	80	120	
Th	232	3	193	37.157	37.157	ppb	1.359	207209	40	92.9	80	120	
U	238	3	193	38.895	38.895	ppb	1.124	225503	40	97.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152046	2.72	3887690	106.80	60	120	
Sc (IS)	45	3	HMI He	595896	0.41	560366	106.34	60	120	
Ge Internal standard	72	2	HMI H2	2485734	1.85	2321471	107.08	60	120	
Ge Internal standard	72	3	HMI He	730076	0.72	685485	106.51	60	120	
In Internal Standard	115	3	HMI He	2740611	1.02	2631879	104.13	60	120	
Ir (IS)	193	3	HMI He	6196556	1.28	5771767	107.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A
Data File Name	093SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:47:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-157.84	2	2000	
Na	23	3	45	17914.017	ppb	17914.017	2.42	1961264	400000	
Mg	24	3	45	13409.445	ppb	13409.445	1.68	774191	400000	
Al	27	3	45	5.176	ppb	5.176	30.99	207	400000	
K	39	3	45	5852.172	ppb	5852.172	1.69	299288	400000	
Ca	40	2	45	53566.531	ppb	53566.531	1.75	31264270	400000	
V	51	3	72	8.484	ppb	8.484	5.93	6465	2000	
Cr	52	3	72	18.688	ppb	18.688	2.15	16939	5000	
Mn	55	3	72	0.492	ppb	0.492	45.24	393	10000	
Fe	56	2	72	17.702	ppb	17.702	8.40	61390	10000	
Co	59	3	72	0.049	ppb	0.049	59.62	105	2000	
Ni	60	3	72	0.881	ppb	0.881	24.10	688	5000	
Cu	63	3	72	0.250	ppb	0.250	11.82	733	5000	
Zn	66	3	72	1.158	ppb	1.158	22.05	405	5000	
As	75	3	72	1.918	ppb	1.918	18.87	298	2000	
Se	78	2	72	1.598	ppb	1.598	17.33	101	2000	
Sr	88	3	72	270.175	ppb	270.175	1.27	151902	4000	
Mo	95	3	115	1.043	ppb	1.043	5.59	565	2000	
Ag	107	3	115	0.011	ppb	0.011	26.57	35	100	
Cd	111	3	115	-0.065	ppb	-0.065	-64.71	8	2000	
Sn	120	3	115	-0.076	ppb	-0.076	-118.71	868	2000	
Sb	121	3	115	0.276	ppb	0.276	21.01	252	1000	
Ba	137	3	115	50.727	ppb	50.727	0.15	12365	5000	
Tl	205	3	193	-0.146	ppb	-0.146	-10.88	435	2000	
(Pb)	206	3	193	-0.061	ppb	-0.061	-23.28	283	100	
(Pb)	207	3	193	-0.052	ppb	-0.052	-79.00	460	100	
Pb	208	3	193	-0.049	ppb	-0.049	-4.77	1334	5000	
Th	232	3	193	1.763	ppb	1.763	11.54	14908	2000	
U	238	3	193	2.264	ppb	2.264	1.37	14463	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4189665	2.16	3887690	107.77	60	120	
Sc (IS)	45	3	HMI He	599609	0.64	560366	107.00	60	120	
Ge Internal standard	72	2	HMI H2	2537300	0.62	2321471	109.30	60	120	
Ge Internal standard	72	3	HMI He	757077	0.41	685485	110.44	60	120	
In Internal Standard	115	3	HMI He	2763153	0.32	2631879	104.99	60	120	
Ir (IS)	193	3	HMI He	6040053	1.02	5771767	104.65	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-Asd@5
Data File Name	094SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:49:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1267.74	3	2000	
Na	23	3	45	3599.153	ppb	3599.153	0.82	409008	400000	
Mg	24	3	45	2793.413	ppb	2793.413	2.61	161882	400000	
Al	27	3	45	1.509	ppb	1.509	147.55	123	400000	
K	39	3	45	1173.832	ppb	1173.832	2.62	81386	400000	
Ca	40	2	45	10730.584	ppb	10730.584	0.94	6216013	400000	
V	51	3	72	2.240	ppb	2.240	6.23	2459	2000	
Cr	52	3	72	4.132	ppb	4.132	7.61	5440	5000	
Mn	55	3	72	1.668	ppb	1.668	10.70	870	10000	
Fe	56	2	72	16.129	ppb	16.129	10.84	59001	10000	
Co	59	3	72	0.031	ppb	0.031	36.92	80	2000	
Ni	60	3	72	0.764	ppb	0.764	34.31	638	5000	
Cu	63	3	72	0.122	ppb	0.122	59.70	595	5000	
Zn	66	3	72	3.199	ppb	3.199	18.93	725	5000	
As	75	3	72	0.476	ppb	0.476	91.00	127	2000	
Se	78	2	72	0.333	ppb	0.333	70.28	24	2000	
Sr	88	3	72	55.920	ppb	55.920	1.87	31113	4000	
Mo	95	3	115	0.274	ppb	0.274	25.41	175	2000	
Ag	107	3	115	0.017	ppb	0.017	49.90	45	100	
Cd	111	3	115	-0.078	ppb	-0.078	-0.36	5	2000	
Sn	120	3	115	0.033	ppb	0.033	144.00	941	2000	
Sb	121	3	115	0.138	ppb	0.138	19.08	145	1000	
Ba	137	3	115	11.099	ppb	11.099	7.33	2707	5000	
Tl	205	3	193	-0.157	ppb	-0.157	-9.38	391	2000	
(Pb)	206	3	193	0.361	ppb	0.361	18.28	831	100	
(Pb)	207	3	193	0.306	ppb	0.306	39.84	873	100	
Pb	208	3	193	0.325	ppb	0.325	10.62	3312	5000	
Th	232	3	193	0.554	ppb	0.554	21.05	8522	2000	
U	238	3	193	0.407	ppb	0.407	10.65	4045	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152198	1.30	3887690	106.80	60	120	
Sc (IS)	45	3	HMI He	601168	0.54	560366	107.28	60	120	
Ge Internal standard	72	2	HMI H2	2546850	1.20	2321471	109.71	60	120	
Ge Internal standard	72	3	HMI He	748778	0.87	685485	109.23	60	120	
In Internal Standard	115	3	HMI He	2736314	1.39	2631879	103.97	60	120	
Ir (IS)	193	3	HMI He	6036389	3.00	5771767	104.58	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-B MS
Data File Name	095SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:51:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.252	ppb	39.252	3.76	1809	2000	
Na	23	3	45	20027.897	ppb	20027.897	0.70	2201368	400000	
Mg	24	3	45	15262.236	ppb	15262.236	1.76	885444	400000	
Al	27	3	45	739.852	ppb	739.852	1.23	17007	400000	
K	39	3	45	6898.320	ppb	6898.320	2.33	349736	400000	
Ca	40	2	45	57038.548	ppb	57038.548	0.88	33485443	400000	
V	51	3	72	47.169	ppb	47.169	1.50	30907	2000	
Cr	52	3	72	59.519	ppb	59.519	1.17	48696	5000	
Mn	55	3	72	40.863	ppb	40.863	2.17	16977	10000	
Fe	56	2	72	789.256	ppb	789.256	1.23	1329144	10000	
Co	59	3	72	39.035	ppb	39.035	1.14	52336	2000	
Ni	60	3	72	39.005	ppb	39.005	2.81	14866	5000	
Cu	63	3	72	39.727	ppb	39.727	0.96	41293	5000	
Zn	66	3	72	40.602	ppb	40.602	4.43	6697	5000	
As	75	3	72	40.410	ppb	40.410	2.60	4807	2000	
Se	78	2	72	41.257	ppb	41.257	1.51	2515	2000	
Sr	88	3	72	367.664	ppb	367.664	0.94	205322	4000	
Mo	95	3	115	40.617	ppb	40.617	1.68	20437	2000	
Ag	107	3	115	41.307	ppb	41.307	1.00	69886	100	
Cd	111	3	115	39.841	ppb	39.841	1.26	9857	2000	
Sn	120	3	115	40.191	ppb	40.191	0.37	31241	2000	
Sb	121	3	115	40.847	ppb	40.847	1.35	31183	1000	
Ba	137	3	115	94.890	ppb	94.890	0.76	22984	5000	
Tl	205	3	193	39.714	ppb	39.714	2.78	160022	2000	
(Pb)	206	3	193	40.125	ppb	40.125	3.92	53168	100	
(Pb)	207	3	193	39.759	ppb	39.759	3.48	47054	100	
Pb	208	3	193	39.820	ppb	39.820	2.92	214420	5000	
Th	232	3	193	38.010	ppb	38.010	2.88	208145	2000	
U	238	3	193	42.430	ppb	42.430	3.07	241530	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214070	0.16	3887690	108.40	60	120	
Sc (IS)	45	3	HMI He	602503	0.60	560366	107.52	60	120	
Ge Internal standard	72	2	HMI H2	2525763	1.63	2321471	108.80	60	120	
Ge Internal standard	72	3	HMI He	751980	0.27	685485	109.70	60	120	
In Internal Standard	115	3	HMI He	2749766	0.54	2631879	104.48	60	120	
Ir (IS)	193	3	HMI He	6090250	2.25	5771767	105.52	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-C MSD
Data File Name	096SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:52:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.876	ppb	41.876	5.76	1901	2000	
Na	23	3	45	19433.463	ppb	19433.463	0.32	2147451	400000	
Mg	24	3	45	15284.279	ppb	15284.279	2.76	891211	400000	
Al	27	3	45	749.309	ppb	749.309	2.68	17311	400000	
K	39	3	45	6894.447	ppb	6894.447	1.37	351356	400000	
Ca	40	2	45	57623.698	ppb	57623.698	1.24	33504178	400000	
V	51	3	72	48.660	ppb	48.660	0.72	31962	2000	
Cr	52	3	72	59.955	ppb	59.955	1.17	49205	5000	
Mn	55	3	72	39.673	ppb	39.673	3.23	16545	10000	
Fe	56	2	72	792.766	ppb	792.766	1.15	1340223	10000	
Co	59	3	72	38.274	ppb	38.274	0.31	51496	2000	
Ni	60	3	72	39.676	ppb	39.676	1.32	15167	5000	
Cu	63	3	72	39.935	ppb	39.935	0.81	41650	5000	
Zn	66	3	72	41.262	ppb	41.262	3.31	6827	5000	
As	75	3	72	42.006	ppb	42.006	3.59	5012	2000	
Se	78	2	72	42.094	ppb	42.094	2.24	2576	2000	
Sr	88	3	72	368.238	ppb	368.238	1.28	206362	4000	
Mo	95	3	115	41.127	ppb	41.127	2.94	20916	2000	
Ag	107	3	115	40.769	ppb	40.769	1.67	69729	100	
Cd	111	3	115	39.166	ppb	39.166	4.39	9792	2000	
Sn	120	3	115	39.489	ppb	39.489	2.12	31046	2000	
Sb	121	3	115	39.947	ppb	39.947	2.72	30824	1000	
Ba	137	3	115	94.369	ppb	94.369	3.59	23104	5000	
Tl	205	3	193	39.641	ppb	39.641	0.61	160819	2000	
(Pb)	206	3	193	39.679	ppb	39.679	0.79	52949	100	
(Pb)	207	3	193	39.409	ppb	39.409	0.87	46962	100	
Pb	208	3	193	39.692	ppb	39.692	0.94	215191	5000	
Th	232	3	193	39.813	ppb	39.813	0.64	219238	2000	
U	238	3	193	42.110	ppb	42.110	0.63	241361	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174008	1.26	3887690	107.36	60	120	
Sc (IS)	45	3	HMI He	605563	0.52	560366	108.07	60	120	
Ge Internal standard	72	2	HMI H2	2535688	1.13	2321471	109.23	60	120	
Ge Internal standard	72	3	HMI He	754614	0.80	685485	110.08	60	120	
In Internal Standard	115	3	HMI He	2780533	2.51	2631879	105.65	60	120	
Ir (IS)	193	3	HMI He	6129421	0.72	5771767	106.20	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A pds
Data File Name	097SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:54:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	102.840	ppb	102.840	3.46	4645	2000	
Na	23	3	45	22842.210	ppb	22842.210	2.64	2521703	400000	
Mg	24	3	45	15805.602	ppb	15805.602	3.12	921803	400000	
Al	27	3	45	1965.312	ppb	1965.312	1.88	45284	400000	
K	39	3	45	7817.373	ppb	7817.373	1.20	394970	400000	
Ca	40	2	45	55168.937	ppb	55168.937	1.71	32175907	400000	
V	51	3	72	104.218	ppb	104.218	0.84	67420	2000	
Cr	52	3	72	118.251	ppb	118.251	0.88	95099	5000	
Mn	55	3	72	97.322	ppb	97.322	2.84	40408	10000	
Fe	56	2	72	1040.449	ppb	1040.449	0.77	1737532	10000	
Co	59	3	72	97.205	ppb	97.205	1.09	131037	2000	
Ni	60	3	72	97.480	ppb	97.480	0.10	36837	5000	
Cu	63	3	72	99.577	ppb	99.577	1.23	103404	5000	
Zn	66	3	72	207.822	ppb	207.822	2.93	33577	5000	
As	75	3	72	101.968	ppb	101.968	3.24	12093	2000	
Se	78	2	72	104.727	ppb	104.727	1.98	6362	2000	
Sr	88	3	72	370.790	ppb	370.790	0.25	208296	4000	
Mo	95	3	115	100.570	ppb	100.570	1.01	51624	2000	
Ag	107	3	115	26.843	ppb	26.843	0.04	46388	100	
Cd	111	3	115	97.786	ppb	97.786	0.76	24672	2000	
Sn	120	3	115	100.566	ppb	100.566	0.84	78424	2000	
Sb	121	3	115	96.052	ppb	96.052	1.59	74828	1000	
Ba	137	3	115	153.335	ppb	153.335	0.86	37905	5000	
Tl	205	3	193	99.487	ppb	99.487	2.25	399153	2000	
(Pb)	206	3	193	100.781	ppb	100.781	1.40	132964	100	
(Pb)	207	3	193	98.321	ppb	98.321	2.48	115536	100	
Pb	208	3	193	99.715	ppb	99.715	1.87	534314	5000	
Th	232	3	193	109.455	ppb	109.455	1.46	588555	2000	
U	238	3	193	221.224	ppb	221.224	1.81	1251312	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4186780	1.32	3887690	107.69	60	120	
Sc (IS)	45	3	HMI He	605843	1.23	560366	108.12	60	120	
Ge Internal standard	72	2	HMI H2	2519282	0.67	2321471	108.52	60	120	
Ge Internal standard	72	3	HMI He	756465	1.04	685485	110.35	60	120	
In Internal Standard	115	3	HMI He	2808319	1.05	2631879	106.70	60	120	
Ir (IS)	193	3	HMI He	6086170	1.22	5771767	105.45	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A@10
Data File Name	098SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:56:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.103	ppb	0.103	161.00	8	2000	
Na	23	3	45	10921.066	ppb	10921.066	1.37	1212098	400000	
Mg	24	3	45	7713.438	ppb	7713.438	0.66	448922	400000	
Al	27	3	45	4.527	ppb	4.527	33.27	194	400000	
K	39	3	45	469.924	ppb	469.924	12.77	48713	400000	
Ca	40	2	45	21572.581	ppb	21572.581	1.27	12513438	400000	
V	51	3	72	0.456	ppb	0.456	33.95	1328	2000	
Cr	52	3	72	0.587	ppb	0.587	6.76	2672	5000	
Mn	55	3	72	2.036	ppb	2.036	9.97	1015	10000	
Fe	56	2	72	15.437	ppb	15.437	17.28	56853	10000	
Co	59	3	72	0.054	ppb	0.054	25.20	110	2000	
Ni	60	3	72	1.226	ppb	1.226	7.09	805	5000	
Cu	63	3	72	0.226	ppb	0.226	39.68	698	5000	
Zn	66	3	72	3.447	ppb	3.447	9.95	760	5000	
As	75	3	72	0.049	ppb	0.049	546.25	77	2000	
Se	78	2	72	0.016	ppb	0.016	653.03	5	2000	
Sr	88	3	72	79.927	ppb	79.927	2.05	44235	4000	
Mo	95	3	115	0.127	ppb	0.127	10.88	105	2000	
Ag	107	3	115	0.020	ppb	0.020	67.57	50	100	
Cd	111	3	115	-0.046	ppb	-0.046	-48.77	13	2000	
Sn	120	3	115	0.014	ppb	0.014	726.94	956	2000	
Sb	121	3	115	0.101	ppb	0.101	61.12	120	1000	
Ba	137	3	115	35.985	ppb	35.985	4.35	8977	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-17.08	581	2000	
(Pb)	206	3	193	0.325	ppb	0.325	21.73	805	100	
(Pb)	207	3	193	0.239	ppb	0.239	2.51	816	100	
Pb	208	3	193	0.330	ppb	0.330	6.70	3425	5000	
Th	232	3	193	2.934	ppb	2.934	12.89	21583	2000	
U	238	3	193	0.500	ppb	0.500	6.91	4680	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162017	1.91	3887690	107.06	60	120	
Sc (IS)	45	3	HMI He	604324	0.89	560366	107.84	60	120	
Ge Internal standard	72	2	HMI H2	2505287	2.97	2321471	107.92	60	120	
Ge Internal standard	72	3	HMI He	745095	1.97	685485	108.70	60	120	
In Internal Standard	115	3	HMI He	2825906	2.04	2631879	107.37	60	120	
Ir (IS)	193	3	HMI He	6185566	2.43	5771767	107.17	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A@10
Data File Name	099SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:58:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1375.84	3	2000	
Na	23	3	45	10805.958	ppb	10805.958	1.90	1189884	400000	
Mg	24	3	45	7663.222	ppb	7663.222	2.36	442447	400000	
Al	27	3	45	1.384	ppb	1.384	91.47	120	400000	
K	39	3	45	576.068	ppb	576.068	5.37	53298	400000	
Ca	40	2	45	19667.839	ppb	19667.839	0.72	11660286	400000	
V	51	3	72	0.397	ppb	0.397	10.54	1304	2000	
Cr	52	3	72	0.576	ppb	0.576	26.27	2694	5000	
Mn	55	3	72	20.293	ppb	20.293	2.20	8538	10000	
Fe	56	2	72	68.986	ppb	68.986	6.02	144281	10000	
Co	59	3	72	0.322	ppb	0.322	21.08	470	2000	
Ni	60	3	72	1.314	ppb	1.314	10.04	846	5000	
Cu	63	3	72	0.156	ppb	0.156	6.61	633	5000	
Zn	66	3	72	3.710	ppb	3.710	11.21	811	5000	
As	75	3	72	0.269	ppb	0.269	97.82	103	2000	
Se	78	2	72	0.093	ppb	0.093	121.39	9	2000	
Sr	88	3	72	77.405	ppb	77.405	2.41	43304	4000	
Mo	95	3	115	0.047	ppb	0.047	42.90	62	2000	
Ag	107	3	115	0.014	ppb	0.014	22.11	40	100	
Cd	111	3	115	-0.044	ppb	-0.044	-69.85	13	2000	
Sn	120	3	115	0.163	ppb	0.163	69.88	1038	2000	
Sb	121	3	115	0.072	ppb	0.072	53.60	95	1000	
Ba	137	3	115	36.934	ppb	36.934	2.64	8907	5000	
Tl	205	3	193	-0.155	ppb	-0.155	-8.81	410	2000	
(Pb)	206	3	193	0.330	ppb	0.330	5.30	811	100	
(Pb)	207	3	193	0.329	ppb	0.329	18.40	921	100	
Pb	208	3	193	0.349	ppb	0.349	4.34	3520	5000	
Th	232	3	193	0.934	ppb	0.934	30.00	10743	2000	
U	238	3	193	0.391	ppb	0.391	5.62	4049	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4252924	2.09	3887690	109.39	60	120	
Sc (IS)	45	3	HMI He	599621	1.78	560366	107.01	60	120	
Ge Internal standard	72	2	HMI H2	2507932	2.53	2321471	108.03	60	120	
Ge Internal standard	72	3	HMI He	753164	1.52	685485	109.87	60	120	
In Internal Standard	115	3	HMI He	2730779	2.29	2631879	103.76	60	120	
Ir (IS)	193	3	HMI He	6171312	2.13	5771767	106.92	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A@10
Data File Name	100SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:00:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-141.90	2	2000	
Na	23	3	45	15877.568	ppb	15877.568	3.66	1755463	400000	
Mg	24	3	45	6043.050	ppb	6043.050	3.56	351935	400000	
Al	27	3	45	2.343	ppb	2.343	47.47	143	400000	
K	39	3	45	474.216	ppb	474.216	7.24	48954	400000	
Ca	40	2	45	20388.438	ppb	20388.438	2.43	11925654	400000	
V	51	3	72	0.528	ppb	0.528	33.87	1394	2000	
Cr	52	3	72	0.718	ppb	0.718	32.90	2817	5000	
Mn	55	3	72	30.081	ppb	30.081	2.14	12623	10000	
Fe	56	2	72	23.420	ppb	23.420	12.54	71100	10000	
Co	59	3	72	0.201	ppb	0.201	20.39	310	2000	
Ni	60	3	72	5.070	ppb	5.070	2.37	2256	5000	
Cu	63	3	72	0.131	ppb	0.131	23.66	610	5000	
Zn	66	3	72	3.361	ppb	3.361	8.57	758	5000	
As	75	3	72	0.139	ppb	0.139	58.89	88	2000	
Se	78	2	72	-0.006	ppb	-0.006	-907.84	3	2000	
Sr	88	3	72	102.825	ppb	102.825	1.04	57793	4000	
Mo	95	3	115	0.083	ppb	0.083	74.82	80	2000	
Ag	107	3	115	0.011	ppb	0.011	95.21	35	100	
Cd	111	3	115	-0.024	ppb	-0.024	-131.12	18	2000	
Sn	120	3	115	-0.174	ppb	-0.174	-102.80	788	2000	
Sb	121	3	115	0.074	ppb	0.074	37.51	97	1000	
Ba	137	3	115	43.555	ppb	43.555	1.52	10559	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-1.06	383	2000	
(Pb)	206	3	193	0.303	ppb	0.303	21.59	781	100	
(Pb)	207	3	193	0.310	ppb	0.310	11.93	906	100	
Pb	208	3	193	0.315	ppb	0.315	16.67	3360	5000	
Th	232	3	193	0.411	ppb	0.411	25.46	7989	2000	
U	238	3	193	0.360	ppb	0.360	5.08	3905	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4197012	1.44	3887690	107.96	60	120	
Sc (IS)	45	3	HMI He	604845	1.76	560366	107.94	60	120	
Ge Internal standard	72	2	HMI H2	2545269	1.23	2321471	109.64	60	120	
Ge Internal standard	72	3	HMI He	756617	1.21	685485	110.38	60	120	
In Internal Standard	115	3	HMI He	2747128	1.57	2631879	104.38	60	120	
Ir (IS)	193	3	HMI He	6221582	1.36	5771767	107.79	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	101_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:01:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	45.782	ppb	17.096	2084	50	91.6	90	110	
Na	23	3	45	48912.847	ppb	2.441	5274647	51000	95.9	90	110	
Mg	24	3	45	10296.130	ppb	1.589	588861	11000	93.6	90	110	
Al	27	3	45	969.464	ppb	5.584	21936	1000	96.9	90	110	
K	39	3	45	9998.926	ppb	1.513	488012	11000	90.9	90	110	
Ca	40	2	45	9530.339	ppb	15.221	5577677	11000	86.6	90	110	>+\-10%
V	51	3	72	50.847	ppb	0.161	31311	50	101.7	90	110	
Cr	52	3	72	51.442	ppb	0.633	39936	50	102.9	90	110	
Mn	55	3	72	51.476	ppb	2.407	20101	50	103.0	90	110	
Fe	56	2	72	917.002	ppb	15.499	1501016	1000	91.7	90	110	
Co	59	3	72	50.635	ppb	0.353	63948	50	101.3	90	110	
Ni	60	3	72	51.601	ppb	1.255	18420	50	103.2	90	110	
Cu	63	3	72	50.213	ppb	0.680	49052	50	100.4	90	110	
Zn	66	3	72	52.466	ppb	3.787	8093	50	104.9	90	110	
As	75	3	72	49.971	ppb	2.933	5583	50	99.9	90	110	
Se	78	2	72	46.359	ppb	11.353	2761	50	92.7	90	110	
Sr	88	3	72	102.378	ppb	0.099	53879	100	102.4	90	110	
Mo	95	3	115	49.312	ppb	1.695	24679	50	98.6	90	110	
Ag	107	3	115	50.389	ppb	1.182	84803	50	100.8	90	110	
Cd	111	3	115	48.993	ppb	1.457	12053	50	98.0	90	110	
Sn	120	3	115	49.434	ppb	1.388	38013	50	98.9	90	110	
Sb	121	3	115	49.867	ppb	0.913	37861	50	99.7	90	110	
Ba	137	3	115	51.102	ppb	1.207	12331	50	102.2	90	110	
Tl	205	3	193	47.786	ppb	2.717	192810	50	95.6	90	110	
(Pb)	206	3	193	48.618	ppb	2.241	64516	50	97.2	90	110	
(Pb)	207	3	193	48.104	ppb	3.840	56956	50	96.2	90	110	
Pb	208	3	193	48.482	ppb	2.183	261371	50	97.0	90	110	
Th	232	3	193	48.691	ppb	2.475	265746	50	97.4	90	110	
U	238	3	193	47.868	ppb	3.025	272928	50	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4223794	7.01	3887690	108.65	60	120	
Sc (IS)	45	3	HMI He	593979	1.09	560366	106.00	60	120	
Ge Internal standard	72	2	HMI H2	2481946	7.49	2321471	106.91	60	120	
Ge Internal standard	72	3	HMI He	708440	0.70	685485	103.35	60	120	
In Internal Standard	115	3	HMI He	2735594	0.92	2631879	103.94	60	120	
Ir (IS)	193	3	HMI He	6104431	1.68	5771767	105.76	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	102_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:03:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.006	ppb	-1067.7	3	0.5	
Na	23	3	45	16.801	ppb	28.6	19052	25	
Mg	24	3	45	1.674	ppb	55.7	330	25	
Al	27	3	45	0.815	ppb	124.0	107	15	
K	39	3	45	-6.107	ppb	-385.5	25960	50	
V	51	3	72	0.465	ppb	32.4	1289	1	
Cr	52	3	72	0.542	ppb	43.8	2551	1	
Mn	55	3	72	0.189	ppb	42.4	255	0.5	
Co	59	3	72	0.011	ppb	50.0	52	0.5	
Ni	60	3	72	0.726	ppb	23.4	600	1	
Cu	63	3	72	0.005	ppb	1022.5	456	1	
Zn	66	3	72	-0.295	ppb	-97.3	163	5	
As	75	3	72	0.207	ppb	67.5	92	1	
Se	78	2	72	-0.014	ppb	-559.9	3	1	
Sr	88	3	72	0.023	ppb	132.5	37	0.5	
Mo	95	3	115	0.070	ppb	58.4	73	0.5	
Ag	107	3	115	0.009	ppb	18.9	32	1	
Cd	111	3	115	-0.051	ppb	-45.9	12	0.5	
Sn	120	3	115	-0.057	ppb	-62.5	876	1	
Sb	121	3	115	0.055	ppb	35.1	82	0.6	
Ba	137	3	115	0.097	ppb	117.5	62	0.5	
Tl	205	3	193	-0.153	ppb	-4.6	415	0.1	
(Pb)	206	3	193	-0.067	ppb	-71.6	278	1	
(Pb)	207	3	193	-0.089	ppb	-25.5	421	1	
Pb	208	3	193	-0.056	ppb	-48.3	1314	0.5	
Th	232	3	193	1.720	ppb	8.9	14872	1	>RL
U	238	3	193	-0.020	ppb	-66.8	1683	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4061277	1.56	3887690	104.47	60	120	
Sc (IS)	45	3	HMI He	595316	0.83	560366	106.24	60	120	
Ge Internal standard	72	2	HMI H2	2460703	1.65	2321471	106.00	60	120	
Ge Internal standard	72	3	HMI He	720699	0.50	685485	105.14	60	120	
In Internal Standard	115	3	HMI He	2744652	0.38	2631879	104.28	60	120	
Ir (IS)	193	3	HMI He	6118649	0.66	5771767	106.01	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-5-A
Data File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:05:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	12222.928	ppb	12222.928	1.60	1350819	400000	
Mg	24	3	45	13889.901	ppb	13889.901	2.11	806019	400000	
Al	27	3	45	459.582	ppb	459.582	4.40	10605	400000	
K	39	3	45	2061.823	ppb	2061.823	2.91	123203	400000	
Ca	40	2	45	52019.243	ppb	52019.243	1.00	30253398	400000	
V	51	3	72	0.865	ppb	0.865	12.48	1576	2000	
Cr	52	3	72	1.415	ppb	1.415	27.70	3297	5000	
Mn	55	3	72	40.795	ppb	40.795	1.56	16713	10000	
Fe	56	2	72	252.605	ppb	252.605	2.15	441116	10000	
Co	59	3	72	0.289	ppb	0.289	8.95	420	2000	
Ni	60	3	72	1.195	ppb	1.195	7.50	790	5000	
Cu	63	3	72	13.132	ppb	13.132	2.00	13772	5000	
Zn	66	3	72	32.658	ppb	32.658	3.82	5353	5000	
As	75	3	72	0.097	ppb	0.097	155.06	82	2000	
Se	78	2	72	0.295	ppb	0.295	26.02	21	2000	
Sr	88	3	72	141.546	ppb	141.546	1.19	77962	4000	
Mo	95	3	115	37.887	ppb	37.887	1.14	19007	2000	
Ag	107	3	115	0.013	ppb	0.013	51.20	38	100	
Cd	111	3	115	0.409	ppb	0.409	4.85	125	2000	
Sn	120	3	115	0.024	ppb	0.024	208.54	936	2000	
Sb	121	3	115	0.232	ppb	0.232	14.37	217	1000	
Ba	137	3	115	62.945	ppb	62.945	3.01	15211	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-6.04	375	2000	
(Pb)	206	3	193	0.446	ppb	0.446	23.88	951	100	
(Pb)	207	3	193	0.429	ppb	0.429	19.97	1025	100	
Pb	208	3	193	0.458	ppb	0.458	7.99	4053	5000	
Th	232	3	193	0.496	ppb	0.496	26.97	8265	2000	
U	238	3	193	39.766	ppb	39.766	1.44	226237	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4175024	1.93	3887690	107.39	60	120	
Sc (IS)	45	3	HMI He	602726	0.88	560366	107.56	60	120	
Ge Internal standard	72	2	HMI H2	2491307	0.95	2321471	107.32	60	120	
Ge Internal standard	72	3	HMI He	741544	0.50	685485	108.18	60	120	
In Internal Standard	115	3	HMI He	2741253	0.34	2631879	104.16	60	120	
Ir (IS)	193	3	HMI He	6080946	0.80	5771767	105.36	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-A
Data File Name	104SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:07:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	12099.879	ppb	12099.879	1.77	1350855	400000	
Mg	24	3	45	13670.591	ppb	13670.591	2.15	801246	400000	
Al	27	3	45	65.165	ppb	65.165	12.98	1595	400000	
K	39	3	45	1935.929	ppb	1935.929	2.90	118471	400000	
Ca	40	2	45	49573.100	ppb	49573.100	0.08	28797080	400000	
V	51	3	72	0.457	ppb	0.457	58.36	1333	2000	
Cr	52	3	72	1.064	ppb	1.064	22.89	3057	5000	
Mn	55	3	72	10.733	ppb	10.733	3.67	4575	10000	
Fe	56	2	72	27.561	ppb	27.561	10.22	77661	10000	
Co	59	3	72	0.117	ppb	0.117	36.18	193	2000	
Ni	60	3	72	1.007	ppb	1.007	17.56	728	5000	
Cu	63	3	72	7.480	ppb	7.480	3.09	8118	5000	
Zn	66	3	72	13.566	ppb	13.566	1.89	2371	5000	
As	75	3	72	0.135	ppb	0.135	119.65	87	2000	
Se	78	2	72	0.180	ppb	0.180	10.09	15	2000	
Sr	88	3	72	135.164	ppb	135.164	4.20	75112	4000	
Mo	95	3	115	35.498	ppb	35.498	1.92	18111	2000	
Ag	107	3	115	0.007	ppb	0.007	22.78	28	100	
Cd	111	3	115	0.221	ppb	0.221	30.95	80	2000	
Sn	120	3	115	-0.273	ppb	-0.273	-22.74	725	2000	
Sb	121	3	115	0.200	ppb	0.200	11.38	195	1000	
Ba	137	3	115	57.365	ppb	57.365	3.31	14101	5000	
Tl	205	3	193	-0.168	ppb	-0.168	-3.64	355	2000	
(Pb)	206	3	193	-0.046	ppb	-0.046	-41.50	308	100	
(Pb)	207	3	193	-0.040	ppb	-0.040	-93.54	481	100	
Pb	208	3	193	-0.040	ppb	-0.040	-33.72	1406	5000	
Th	232	3	193	0.128	ppb	0.128	61.19	6370	2000	
U	238	3	193	37.991	ppb	37.991	2.04	218174	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4169572	1.07	3887690	107.25	60	120	
Sc (IS)	45	3	HMI He	608833	1.72	560366	108.65	60	120	
Ge Internal standard	72	2	HMI H2	2537144	0.87	2321471	109.29	60	120	
Ge Internal standard	72	3	HMI He	748452	1.50	685485	109.19	60	120	
In Internal Standard	115	3	HMI He	2787467	0.30	2631879	105.91	60	120	
Ir (IS)	193	3	HMI He	6136766	1.11	5771767	106.32	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-B MS
Data File Name	105SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:09:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.921	ppb	39.921	4.78	1803	2000	
Na	23	3	45	12723.771	ppb	12723.771	1.31	1402775	400000	
Mg	24	3	45	14081.516	ppb	14081.516	1.46	815544	400000	
Al	27	3	45	793.783	ppb	793.783	5.67	18207	400000	
K	39	3	45	2736.637	ppb	2736.637	1.59	154528	400000	
Ca	40	2	45	51721.198	ppb	51721.198	2.05	29942925	400000	
V	51	3	72	38.436	ppb	38.436	2.49	25085	2000	
Cr	52	3	72	39.553	ppb	39.553	1.51	32725	5000	
Mn	55	3	72	49.963	ppb	49.963	0.89	20477	10000	
Fe	56	2	72	778.064	ppb	778.064	1.45	1302764	10000	
Co	59	3	72	38.147	ppb	38.147	1.25	50552	2000	
Ni	60	3	72	39.096	ppb	39.096	3.45	14727	5000	
Cu	63	3	72	46.144	ppb	46.144	1.84	47327	5000	
Zn	66	3	72	53.436	ppb	53.436	1.46	8643	5000	
As	75	3	72	38.290	ppb	38.290	3.34	4505	2000	
Se	78	2	72	40.248	ppb	40.248	2.05	2438	2000	
Sr	88	3	72	213.739	ppb	213.739	0.51	117984	4000	
Mo	95	3	115	74.073	ppb	74.073	3.57	37597	2000	
Ag	107	3	115	40.002	ppb	40.002	2.13	68340	100	
Cd	111	3	115	39.348	ppb	39.348	0.76	9834	2000	
Sn	120	3	115	37.273	ppb	37.273	2.42	29323	2000	
Sb	121	3	115	39.140	ppb	39.140	3.40	30167	1000	
Ba	137	3	115	97.833	ppb	97.833	1.66	23928	5000	
Tl	205	3	193	38.403	ppb	38.403	2.88	156426	2000	
(Pb)	206	3	193	39.189	ppb	39.189	2.10	52506	100	
(Pb)	207	3	193	38.134	ppb	38.134	2.79	45636	100	
Pb	208	3	193	38.708	ppb	38.708	2.55	210706	5000	
Th	232	3	193	36.300	ppb	36.300	3.50	201126	2000	
U	238	3	193	76.696	ppb	76.696	2.33	439821	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4155920	0.80	3887690	106.90	60	120	
Sc (IS)	45	3	HMI He	601539	0.77	560366	107.35	60	120	
Ge Internal standard	72	2	HMI H2	2510610	1.44	2321471	108.15	60	120	
Ge Internal standard	72	3	HMI He	743252	0.56	685485	108.43	60	120	
In Internal Standard	115	3	HMI He	2777277	1.94	2631879	105.52	60	120	
Ir (IS)	193	3	HMI He	6155480	2.64	5771767	106.65	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-C MSD
Data File Name	106SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:10:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.466	ppb	40.466	5.84	1819	2000	
Na	23	3	45	13221.335	ppb	13221.335	1.91	1444935	400000	
Mg	24	3	45	15264.498	ppb	15264.498	1.39	876981	400000	
Al	27	3	45	818.101	ppb	818.101	2.84	18614	400000	
K	39	3	45	2868.564	ppb	2868.564	2.13	159427	400000	
Ca	40	2	45	54026.279	ppb	54026.279	1.03	31079946	400000	
V	51	3	72	40.629	ppb	40.629	1.61	26337	2000	
Cr	52	3	72	41.501	ppb	41.501	0.34	34075	5000	
Mn	55	3	72	51.156	ppb	51.156	1.74	20864	10000	
Fe	56	2	72	838.633	ppb	838.633	2.25	1387350	10000	
Co	59	3	72	38.979	ppb	38.979	1.12	51418	2000	
Ni	60	3	72	40.229	ppb	40.229	2.34	15072	5000	
Cu	63	3	72	47.199	ppb	47.199	0.09	48185	5000	
Zn	66	3	72	57.144	ppb	57.144	2.64	9185	5000	
As	75	3	72	39.718	ppb	39.718	3.46	4648	2000	
Se	78	2	72	41.316	ppb	41.316	3.81	2477	2000	
Sr	88	3	72	221.593	ppb	221.593	2.36	121745	4000	
Mo	95	3	115	77.575	ppb	77.575	2.26	39080	2000	
Ag	107	3	115	41.172	ppb	41.172	0.41	69809	100	
Cd	111	3	115	39.228	ppb	39.228	2.35	9725	2000	
Sn	120	3	115	38.614	ppb	38.614	0.40	30116	2000	
Sb	121	3	115	40.076	ppb	40.076	1.31	30658	1000	
Ba	137	3	115	100.728	ppb	100.728	0.36	24449	5000	
Tl	205	3	193	39.105	ppb	39.105	1.66	159782	2000	
(Pb)	206	3	193	40.050	ppb	40.050	2.62	53815	100	
(Pb)	207	3	193	39.331	ppb	39.331	0.71	47209	100	
Pb	208	3	193	39.463	ppb	39.463	1.68	215477	5000	
Th	232	3	193	39.894	ppb	39.894	1.19	221234	2000	
U	238	3	193	78.696	ppb	78.696	1.93	452676	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4129550	2.31	3887690	106.22	60	120	
Sc (IS)	45	3	HMI He	596734	1.57	560366	106.49	60	120	
Ge Internal standard	72	2	HMI H2	2485233	1.66	2321471	107.05	60	120	
Ge Internal standard	72	3	HMI He	739917	1.40	685485	107.94	60	120	
In Internal Standard	115	3	HMI He	2755824	1.52	2631879	104.71	60	120	
Ir (IS)	193	3	HMI He	6173488	1.30	5771767	106.96	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-2-A
Data File Name	107SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:12:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	54975.635	ppb	54975.635	0.81	5940982	400000	
Mg	24	3	45	44390.809	ppb	44390.809	0.66	2544340	400000	
Al	27	3	45	2.141	ppb	2.141	85.49	137	400000	
K	39	3	45	5987.668	ppb	5987.668	1.97	303438	400000	
Ca	40	2	45	131606.253	ppb	131606.253	1.00	77118771	400000	
V	51	3	72	1.109	ppb	1.109	20.95	1728	2000	
Cr	52	3	72	1.787	ppb	1.787	8.90	3582	5000	
Mn	55	3	72	222.372	ppb	222.372	0.99	90248	10000	
Fe	56	2	72	12.987	ppb	12.987	7.71	54079	10000	
Co	59	3	72	0.657	ppb	0.657	3.03	906	2000	
Ni	60	3	72	3.613	ppb	3.613	4.92	1676	5000	
Cu	63	3	72	0.891	ppb	0.891	6.01	1368	5000	
Zn	66	3	72	6.305	ppb	6.305	6.61	1206	5000	
As	75	3	72	1.004	ppb	1.004	38.72	187	2000	
Se	78	2	72	0.059	ppb	0.059	116.14	7	2000	
Sr	88	3	72	456.895	ppb	456.895	0.74	251512	4000	
Mo	95	3	115	0.445	ppb	0.445	11.82	260	2000	
Ag	107	3	115	0.010	ppb	0.010	156.95	32	100	
Cd	111	3	115	-0.024	ppb	-0.024	-92.89	18	2000	
Sn	120	3	115	0.030	ppb	0.030	162.11	936	2000	
Sb	121	3	115	0.210	ppb	0.210	8.39	198	1000	
Ba	137	3	115	285.678	ppb	285.678	2.47	68540	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-5.83	373	2000	
(Pb)	206	3	193	-0.053	ppb	-0.053	-30.65	295	100	
(Pb)	207	3	193	-0.045	ppb	-0.045	-52.12	468	100	
Pb	208	3	193	-0.037	ppb	-0.037	-33.19	1404	5000	
Th	232	3	193	2.032	ppb	2.032	9.13	16378	2000	
U	238	3	193	3.676	ppb	3.676	1.94	22444	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4207162	0.60	3887690	108.22	60	120	
Sc (IS)	45	3	HMI He	595385	1.01	560366	106.25	60	120	
Ge Internal standard	72	2	HMI H2	2558575	1.31	2321471	110.21	60	120	
Ge Internal standard	72	3	HMI He	741297	0.79	685485	108.14	60	120	
In Internal Standard	115	3	HMI He	2727397	1.53	2631879	103.63	60	120	
Ir (IS)	193	3	HMI He	6057680	0.60	5771767	104.95	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A
Data File Name	108SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:14:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1585.01	3	2000	
Na	23	3	45	103880.243	ppb	103880.243	1.02	11384280	400000	
Mg	24	3	45	75774.293	ppb	75774.293	1.50	4409940	400000	
Al	27	3	45	8.017	ppb	8.017	16.74	274	400000	
K	39	3	45	4680.306	ppb	4680.306	1.72	246676	400000	
Ca	40	2	45	218740.119	ppb	218740.119	0.78	122754230	400000	
V	51	3	72	2.273	ppb	2.273	6.15	2459	2000	
Cr	52	3	72	1.901	ppb	1.901	19.40	3675	5000	
Mn	55	3	72	3.586	ppb	3.586	3.98	1641	10000	
Fe	56	2	72	40.904	ppb	40.904	5.78	98567	10000	
Co	59	3	72	0.323	ppb	0.323	14.62	465	2000	
Ni	60	3	72	4.462	ppb	4.462	6.54	1991	5000	
Cu	63	3	72	1.835	ppb	1.835	2.69	2327	5000	
Zn	66	3	72	3.271	ppb	3.271	16.51	730	5000	
As	75	3	72	1.549	ppb	1.549	13.73	250	2000	
Se	78	2	72	0.249	ppb	0.249	27.44	19	2000	
Sr	88	3	72	786.302	ppb	786.302	0.75	433545	4000	
Mo	95	3	115	0.153	ppb	0.153	28.74	115	2000	
Ag	107	3	115	0.010	ppb	0.010	100.94	33	100	
Cd	111	3	115	-0.004	ppb	-0.004	-317.22	23	2000	
Sn	120	3	115	-0.132	ppb	-0.132	-56.57	821	2000	
Sb	121	3	115	0.142	ppb	0.142	20.36	148	1000	
Ba	137	3	115	354.242	ppb	354.242	1.44	85624	5000	
Tl	205	3	193	-0.129	ppb	-0.129	-6.95	510	2000	
(Pb)	206	3	193	-0.066	ppb	-0.066	-19.44	282	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-103.77	433	100	
Pb	208	3	193	-0.057	ppb	-0.057	-8.61	1318	5000	
Th	232	3	193	0.701	ppb	0.701	11.40	9466	2000	
U	238	3	193	4.529	ppb	4.529	2.26	27645	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4029469	1.05	3887690	103.65	60	120	
Sc (IS)	45	3	HMI He	604560	0.48	560366	107.89	60	120	
Ge Internal standard	72	2	HMI H2	2507432	1.96	2321471	108.01	60	120	
Ge Internal standard	72	3	HMI He	742531	0.57	685485	108.32	60	120	
In Internal Standard	115	3	HMI He	2747609	1.01	2631879	104.40	60	120	
Ir (IS)	193	3	HMI He	6147791	1.88	5771767	106.51	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A
Data File Name	109SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:16:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-145.43	2	2000	
Na	23	3	45	98723.510	ppb	98723.510	1.51	10737773	400000	
Mg	24	3	45	73507.326	ppb	73507.326	0.49	4245819	400000	
Al	27	3	45	4.303	ppb	4.303	43.29	187	400000	
K	39	3	45	5790.288	ppb	5790.288	1.05	296626	400000	
Ca	40	2	45	197588.775	ppb	197588.775	0.75	113471840	400000	
V	51	3	72	1.256	ppb	1.256	23.91	1804	2000	
Cr	52	3	72	0.988	ppb	0.988	20.87	2944	5000	
Mn	55	3	72	183.692	ppb	183.692	1.83	73984	10000	
Fe	56	2	72	521.844	ppb	521.844	0.27	878726	10000	
Co	59	3	72	3.058	ppb	3.058	4.80	4044	2000	
Ni	60	3	72	6.014	ppb	6.014	3.15	2536	5000	
Cu	63	3	72	1.041	ppb	1.041	17.12	1508	5000	
Zn	66	3	72	6.507	ppb	6.507	6.03	1228	5000	
As	75	3	72	0.873	ppb	0.873	25.36	170	2000	
Se	78	2	72	0.173	ppb	0.173	39.21	14	2000	
Sr	88	3	72	779.074	ppb	779.074	1.06	425401	4000	
Mo	95	3	115	0.259	ppb	0.259	26.21	170	2000	
Ag	107	3	115	0.001	ppb	0.001	317.44	18	100	
Cd	111	3	115	0.015	ppb	0.015	200.82	28	2000	
Sn	120	3	115	2.347	ppb	2.347	22.64	2716	2000	
Sb	121	3	115	0.140	ppb	0.140	10.96	148	1000	
Ba	137	3	115	354.366	ppb	354.366	1.47	86485	5000	
Tl	205	3	193	-0.145	ppb	-0.145	-6.94	441	2000	
(Pb)	206	3	193	0.259	ppb	0.259	13.23	705	100	
(Pb)	207	3	193	0.245	ppb	0.245	26.76	808	100	
Pb	208	3	193	0.273	ppb	0.273	9.86	3060	5000	
Th	232	3	193	0.252	ppb	0.252	29.95	6957	2000	
U	238	3	193	4.244	ppb	4.244	0.88	25697	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4123370	0.77	3887690	106.06	60	120	
Sc (IS)	45	3	HMI He	600040	0.95	560366	107.08	60	120	
Ge Internal standard	72	2	HMI H2	2494657	0.61	2321471	107.46	60	120	
Ge Internal standard	72	3	HMI He	735346	0.68	685485	107.27	60	120	
In Internal Standard	115	3	HMI He	2774174	0.55	2631879	105.41	60	120	
Ir (IS)	193	3	HMI He	6070700	0.79	5771767	105.18	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-1-A
Data File Name	110SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:18:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.032	ppb	0.032	343.14	5	2000	
Na	23	3	45	100950.593	ppb	100950.593	1.17	11216941	400000	
Mg	24	3	45	74323.710	ppb	74323.710	1.34	4385504	400000	
Al	27	3	45	3.120	ppb	3.120	28.99	163	400000	
K	39	3	45	4660.248	ppb	4660.248	0.43	249165	400000	
Ca	40	2	45	205720.452	ppb	205720.452	0.76	118533026	400000	
V	51	3	72	0.949	ppb	0.949	8.27	1649	2000	
Cr	52	3	72	1.120	ppb	1.120	16.49	3109	5000	
Mn	55	3	72	388.948	ppb	388.948	1.52	159782	10000	
Fe	56	2	72	54.752	ppb	54.752	3.95	122307	10000	
Co	59	3	72	0.274	ppb	0.274	11.46	405	2000	
Ni	60	3	72	9.676	ppb	9.676	2.84	3950	5000	
Cu	63	3	72	1.322	ppb	1.322	1.53	1828	5000	
Zn	66	3	72	2.265	ppb	2.265	18.37	578	5000	
As	75	3	72	0.415	ppb	0.415	63.38	120	2000	
Se	78	2	72	0.082	ppb	0.082	58.56	9	2000	
Sr	88	3	72	784.697	ppb	784.697	0.44	437606	4000	
Mo	95	3	115	0.143	ppb	0.143	29.45	112	2000	
Ag	107	3	115	0.010	ppb	0.010	47.55	33	100	
Cd	111	3	115	0.086	ppb	0.086	135.75	47	2000	
Sn	120	3	115	-0.237	ppb	-0.237	-29.12	751	2000	
Sb	121	3	115	0.068	ppb	0.068	48.92	93	1000	
Ba	137	3	115	352.201	ppb	352.201	2.22	86313	5000	
Tl	205	3	193	-0.038	ppb	-0.038	-45.13	881	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-573.34	365	100	
(Pb)	207	3	193	-0.008	ppb	-0.008	-132.54	520	100	
Pb	208	3	193	-0.005	ppb	-0.005	-396.87	1599	5000	
Th	232	3	193	0.061	ppb	0.061	79.01	6027	2000	
U	238	3	193	3.907	ppb	3.907	2.98	24140	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4137186	1.16	3887690	106.42	60	120	
Sc (IS)	45	3	HMI He	612990	0.97	560366	109.39	60	120	
Ge Internal standard	72	2	HMI H2	2531649	1.69	2321471	109.05	60	120	
Ge Internal standard	72	3	HMI He	751006	0.42	685485	109.56	60	120	
In Internal Standard	115	3	HMI He	2786373	2.25	2631879	105.87	60	120	
Ir (IS)	193	3	HMI He	6161882	3.12	5771767	106.76	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-2-A
Data File Name	111SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:20:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1267.00	3	2000	
Na	23	3	45	85549.071	ppb	85549.071	1.04	9474771	400000	
Mg	24	3	45	68064.018	ppb	68064.018	0.71	4001844	400000	
Al	27	3	45	1.990	ppb	1.990	48.80	137	400000	
K	39	3	45	4256.764	ppb	4256.764	1.87	229091	400000	
Ca	40	2	45	195592.112	ppb	195592.112	1.22	115819176	400000	
V	51	3	72	1.968	ppb	1.968	4.14	2304	2000	
Cr	52	3	72	1.008	ppb	1.008	17.58	3035	5000	
Mn	55	3	72	3.457	ppb	3.457	3.91	1614	10000	
Fe	56	2	72	20.423	ppb	20.423	13.41	65963	10000	
Co	59	3	72	0.115	ppb	0.115	43.20	193	2000	
Ni	60	3	72	2.941	ppb	2.941	13.90	1454	5000	
Cu	63	3	72	0.994	ppb	0.994	3.62	1498	5000	
Zn	66	3	72	2.113	ppb	2.113	18.64	556	5000	
As	75	3	72	1.078	ppb	1.078	25.10	198	2000	
Se	78	2	72	0.103	ppb	0.103	30.46	10	2000	
Sr	88	3	72	714.732	ppb	714.732	0.47	400443	4000	
Mo	95	3	115	0.123	ppb	0.123	32.26	102	2000	
Ag	107	3	115	0.004	ppb	0.004	102.92	23	100	
Cd	111	3	115	-0.052	ppb	-0.052	-97.75	12	2000	
Sn	120	3	115	-0.277	ppb	-0.277	-24.71	721	2000	
Sb	121	3	115	0.118	ppb	0.118	22.63	132	1000	
Ba	137	3	115	367.949	ppb	367.949	1.71	90220	5000	
Tl	205	3	193	-0.117	ppb	-0.117	-9.23	565	2000	
(Pb)	206	3	193	-0.008	ppb	-0.008	-655.35	360	100	
(Pb)	207	3	193	-0.010	ppb	-0.010	-784.41	520	100	
Pb	208	3	193	-0.008	ppb	-0.008	-582.34	1589	5000	
Th	232	3	193	-0.054	ppb	-0.054	-37.34	5432	2000	
U	238	3	193	4.396	ppb	4.396	1.40	27041	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4251675	0.44	3887690	109.36	60	120	
Sc (IS)	45	3	HMI He	610770	0.68	560366	108.99	60	120	
Ge Internal standard	72	2	HMI H2	2541856	1.58	2321471	109.49	60	120	
Ge Internal standard	72	3	HMI He	754497	0.69	685485	110.07	60	120	
In Internal Standard	115	3	HMI He	2787143	0.59	2631879	105.90	60	120	
Ir (IS)	193	3	HMI He	6183535	1.42	5771767	107.13	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	112_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:21:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.425	ppb	2.218	2261	50	98.9	90	110	
Na	23	3	45	47592.519	ppb	1.319	5243535	51000	93.3	90	110	
Mg	24	3	45	10216.810	ppb	2.199	596876	11000	92.9	90	110	
Al	27	3	45	948.900	ppb	1.622	21942	1000	94.9	90	110	
K	39	3	45	10087.458	ppb	0.420	502712	11000	91.7	90	110	
Ca	40	2	45	10300.432	ppb	0.519	5940615	11000	93.6	90	110	
V	51	3	72	49.914	ppb	2.019	31480	50	99.8	90	110	
Cr	52	3	72	51.065	ppb	2.663	40590	50	102.1	90	110	
Mn	55	3	72	50.346	ppb	4.059	20126	50	100.7	90	110	
Fe	56	2	72	1021.105	ppb	1.574	1635899	1000	102.1	90	110	
Co	59	3	72	49.728	ppb	1.093	64283	50	99.5	90	110	
Ni	60	3	72	50.273	ppb	1.740	18376	50	100.5	90	110	
Cu	63	3	72	49.494	ppb	3.797	49482	50	99.0	90	110	
Zn	66	3	72	51.793	ppb	4.009	8180	50	103.6	90	110	
As	75	3	72	50.723	ppb	1.684	5802	50	101.4	90	110	
Se	78	2	72	50.542	ppb	2.785	2947	50	101.1	90	110	
Sr	88	3	72	99.417	ppb	1.996	53550	100	99.4	90	110	
Mo	95	3	115	49.059	ppb	2.234	24667	50	98.1	90	110	
Ag	107	3	115	49.920	ppb	1.678	84423	50	99.8	90	110	
Cd	111	3	115	48.399	ppb	2.863	11963	50	96.8	90	110	
Sn	120	3	115	49.630	ppb	3.425	38342	50	99.3	90	110	
Sb	121	3	115	49.845	ppb	2.642	38030	50	99.7	90	110	
Ba	137	3	115	52.783	ppb	2.216	12797	50	105.6	90	110	
Tl	205	3	193	47.718	ppb	4.074	193837	50	95.4	90	110	
(Pb)	206	3	193	48.909	ppb	2.699	65350	50	97.8	90	110	
(Pb)	207	3	193	47.613	ppb	2.366	56783	50	95.2	90	110	
Pb	208	3	193	48.219	ppb	3.517	261720	50	96.4	90	110	
Th	232	3	193	47.280	ppb	2.105	259986	50	94.6	90	110	
U	238	3	193	47.903	ppb	3.766	274996	50	95.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4133382	0.88	3887690	106.32	60	120	
Sc (IS)	45	3	HMI He	606749	0.88	560366	108.28	60	120	
Ge Internal standard	72	2	HMI H2	2416244	0.92	2321471	104.08	60	120	
Ge Internal standard	72	3	HMI He	725235	1.73	685485	105.80	60	120	
In Internal Standard	115	3	HMI He	2749334	1.94	2631879	104.46	60	120	
Ir (IS)	193	3	HMI He	6148045	2.59	5771767	106.52	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	113_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:23:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.043	ppb	-142.9	2	0.5	
Na	23	3	45	50.825	ppb	9.2	22758	25	>RL
Mg	24	3	45	3.186	ppb	35.3	417	25	
Al	27	3	45	-0.222	ppb	-459.9	83	15	
K	39	3	45	1.440	ppb	1349.6	26365	50	
V	51	3	72	0.083	ppb	139.8	1058	1	
Cr	52	3	72	0.720	ppb	30.2	2684	1	
Mn	55	3	72	0.214	ppb	19.0	265	0.5	
Co	59	3	72	0.023	ppb	7.0	67	0.5	
Ni	60	3	72	0.776	ppb	18.1	618	1	
Cu	63	3	72	0.035	ppb	83.4	486	1	
Zn	66	3	72	-0.030	ppb	-867.0	203	5	
As	75	3	72	-0.018	ppb	-1381.4	67	1	
Se	78	2	72	-0.005	ppb	-850.1	3	1	
Sr	88	3	72	0.045	ppb	33.7	48	0.5	
Mo	95	3	115	0.035	ppb	68.0	57	0.5	
Ag	107	3	115	0.015	ppb	28.5	42	1	
Cd	111	3	115	-0.045	ppb	-53.5	13	0.5	
Sn	120	3	115	-0.107	ppb	-15.2	850	1	
Sb	121	3	115	0.079	ppb	75.9	102	0.6	
Ba	137	3	115	0.066	ppb	58.9	55	0.5	
Tl	205	3	193	-0.163	ppb	-3.2	375	0.1	
(Pb)	206	3	193	-0.071	ppb	-28.0	273	1	
(Pb)	207	3	193	-0.076	ppb	-90.0	438	1	
Pb	208	3	193	-0.067	ppb	-18.6	1258	0.5	
Th	232	3	193	1.842	ppb	8.3	15564	1	>RL
U	238	3	193	-0.010	ppb	-136.4	1741	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4178087	1.16	3887690	107.47	60	120	
Sc (IS)	45	3	HMI He	596356	0.85	560366	106.42	60	120	
Ge Internal standard	72	2	HMI H2	2490963	0.63	2321471	107.30	60	120	
Ge Internal standard	72	3	HMI He	720583	1.38	685485	105.12	60	120	
In Internal Standard	115	3	HMI He	2781673	1.45	2631879	105.69	60	120	
Ir (IS)	193	3	HMI He	6133719	2.30	5771767	106.27	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-3-A
Data File Name	114SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:25:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	170724.098	ppb	170724.098	0.70	18875018	400000	
Mg	24	3	45	96302.930	ppb	96302.930	1.81	5657257	400000	
Al	27	3	45	4.586	ppb	4.586	18.01	197	400000	
K	39	3	45	5651.461	ppb	5651.461	0.69	295116	400000	
Ca	40	2	45	253157.959	ppb	253157.959	0.51	149488191	400000	
V	51	3	72	2.575	ppb	2.575	6.46	2657	2000	
Cr	52	3	72	1.155	ppb	1.155	20.48	3112	5000	
Mn	55	3	72	23.186	ppb	23.186	1.58	9629	10000	
Fe	56	2	72	31.146	ppb	31.146	7.80	83229	10000	
Co	59	3	72	4.172	ppb	4.172	1.84	5578	2000	
Ni	60	3	72	72.772	ppb	72.772	1.61	27186	5000	
Cu	63	3	72	4.203	ppb	4.203	6.74	4747	5000	
Zn	66	3	72	2.168	ppb	2.168	11.82	558	5000	
As	75	3	72	1.256	ppb	1.256	23.60	217	2000	
Se	78	2	72	0.783	ppb	0.783	10.85	51	2000	
Sr	88	3	72	946.650	ppb	946.650	2.08	523898	4000	
Mo	95	3	115	0.379	ppb	0.379	11.46	232	2000	
Ag	107	3	115	0.003	ppb	0.003	219.48	22	100	
Cd	111	3	115	0.002	ppb	0.002	3460.71	25	2000	
Sn	120	3	115	-0.078	ppb	-0.078	-102.74	873	2000	
Sb	121	3	115	0.157	ppb	0.157	54.26	162	1000	
Ba	137	3	115	543.061	ppb	543.061	0.60	132955	5000	
Tl	205	3	193	-0.177	ppb	-0.177	-3.38	315	2000	
(Pb)	206	3	193	3.026	ppb	3.026	2.97	4362	100	
(Pb)	207	3	193	2.851	ppb	2.851	2.35	3870	100	
Pb	208	3	193	2.916	ppb	2.916	1.68	17236	5000	
Th	232	3	193	0.397	ppb	0.397	21.76	7775	2000	
U	238	3	193	5.530	ppb	5.530	1.92	33118	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4240014	2.12	3887690	109.06	60	120	
Sc (IS)	45	3	HMI He	610310	0.83	560366	108.91	60	120	
Ge Internal standard	72	2	HMI H2	2525967	0.54	2321471	108.81	60	120	
Ge Internal standard	72	3	HMI He	745338	0.59	685485	108.73	60	120	
In Internal Standard	115	3	HMI He	2783315	1.08	2631879	105.75	60	120	
Ir (IS)	193	3	HMI He	6104304	1.60	5771767	105.76	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-1-A
Data File Name	115SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:27:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-149.18	2	2000	
Na	23	3	45	67559.157	ppb	67559.157	2.44	7441689	400000	
Mg	24	3	45	53903.643	ppb	53903.643	1.30	3150705	400000	
Al	27	3	45	3.903	ppb	3.903	68.64	180	400000	
K	39	3	45	3491.573	ppb	3491.573	2.07	191626	400000	
Ca	40	2	45	120897.680	ppb	120897.680	1.25	71326803	400000	
V	51	3	72	0.648	ppb	0.648	9.80	1476	2000	
Cr	52	3	72	0.902	ppb	0.902	46.77	2972	5000	
Mn	55	3	72	0.522	ppb	0.522	27.67	406	10000	
Fe	56	2	72	20.048	ppb	20.048	11.71	65463	10000	
Co	59	3	72	0.043	ppb	0.043	25.55	97	2000	
Ni	60	3	72	1.148	ppb	1.148	15.40	791	5000	
Cu	63	3	72	0.682	ppb	0.682	10.16	1184	5000	
Zn	66	3	72	1.387	ppb	1.387	23.85	443	5000	
As	75	3	72	0.699	ppb	0.699	25.11	155	2000	
Se	78	2	72	0.429	ppb	0.429	27.26	30	2000	
Sr	88	3	72	604.409	ppb	604.409	0.89	340949	4000	
Mo	95	3	115	0.067	ppb	0.067	55.21	72	2000	
Ag	107	3	115	0.002	ppb	0.002	108.90	20	100	
Cd	111	3	115	-0.025	ppb	-0.025	-125.66	18	2000	
Sn	120	3	115	-0.341	ppb	-0.341	-23.25	663	2000	
Sb	121	3	115	0.099	ppb	0.099	31.99	115	1000	
Ba	137	3	115	225.430	ppb	225.430	3.16	54517	5000	
Tl	205	3	193	-0.191	ppb	-0.191	-4.01	262	2000	
(Pb)	206	3	193	-0.065	ppb	-0.065	-24.62	282	100	
(Pb)	207	3	193	-0.064	ppb	-0.064	-140.52	451	100	
Pb	208	3	193	-0.057	ppb	-0.057	-33.78	1311	5000	
Th	232	3	193	0.141	ppb	0.141	32.88	6427	2000	
U	238	3	193	2.194	ppb	2.194	2.42	14274	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4235317	1.88	3887690	108.94	60	120	
Sc (IS)	45	3	HMI He	607202	0.44	560366	108.36	60	120	
Ge Internal standard	72	2	HMI H2	2545049	0.33	2321471	109.63	60	120	
Ge Internal standard	72	3	HMI He	759660	0.71	685485	110.82	60	120	
In Internal Standard	115	3	HMI He	2749677	2.96	2631879	104.48	60	120	
Ir (IS)	193	3	HMI He	6126356	0.64	5771767	106.14	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-2-A
Data File Name	116SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:29:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	78145.393	ppb	78145.393	0.91	8614144	400000	
Mg	24	3	45	62532.700	ppb	62532.700	2.05	3659401	400000	
Al	27	3	45	2.307	ppb	2.307	70.27	143	400000	
K	39	3	45	4376.001	ppb	4376.001	2.08	233633	400000	
Ca	40	2	45	143482.977	ppb	143482.977	0.81	84247471	400000	
V	51	3	72	0.689	ppb	0.689	7.21	1483	2000	
Cr	52	3	72	1.060	ppb	1.060	13.73	3057	5000	
Mn	55	3	72	0.277	ppb	0.277	29.77	302	10000	
Fe	56	2	72	11.966	ppb	11.966	22.43	52358	10000	
Co	59	3	72	0.089	ppb	0.089	27.28	157	2000	
Ni	60	3	72	1.321	ppb	1.321	10.37	845	5000	
Cu	63	3	72	1.025	ppb	1.025	12.84	1519	5000	
Zn	66	3	72	0.188	ppb	0.188	154.92	247	5000	
As	75	3	72	0.218	ppb	0.218	28.31	97	2000	
Se	78	2	72	0.545	ppb	0.545	5.84	37	2000	
Sr	88	3	72	695.714	ppb	695.714	1.30	387199	4000	
Mo	95	3	115	0.065	ppb	0.065	34.98	72	2000	
Ag	107	3	115	0.017	ppb	0.017	34.38	45	100	
Cd	111	3	115	-0.058	ppb	-0.058	-34.42	10	2000	
Sn	120	3	115	-0.334	ppb	-0.334	-12.38	673	2000	
Sb	121	3	115	0.128	ppb	0.128	34.71	138	1000	
Ba	137	3	115	252.707	ppb	252.707	0.42	61545	5000	
Tl	205	3	193	-0.183	ppb	-0.183	-4.59	292	2000	
(Pb)	206	3	193	-0.045	ppb	-0.045	-56.90	308	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-74.10	431	100	
Pb	208	3	193	-0.057	ppb	-0.057	-31.08	1308	5000	
Th	232	3	193	-0.008	ppb	-0.008	-953.36	5614	2000	
U	238	3	193	3.312	ppb	3.312	1.22	20577	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4216213	2.82	3887690	108.45	60	120	
Sc (IS)	45	3	HMI He	607849	1.05	560366	108.47	60	120	
Ge Internal standard	72	2	HMI H2	2557917	1.04	2321471	110.19	60	120	
Ge Internal standard	72	3	HMI He	749534	1.08	685485	109.34	60	120	
In Internal Standard	115	3	HMI He	2767717	0.05	2631879	105.16	60	120	
Ir (IS)	193	3	HMI He	6111522	0.76	5771767	105.89	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A
Data File Name	117SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:30:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-155.60	2	2000	
Na	23	3	45	154926.575	ppb	154926.575	3.05	17045859	400000	
Mg	24	3	45	60742.988	ppb	60742.988	3.69	3550847	400000	
Al	27	3	45	4.496	ppb	4.496	26.57	194	400000	
K	39	3	45	4832.545	ppb	4832.545	0.49	255027	400000	
Ca	40	2	45	206686.521	ppb	206686.521	1.77	120629445	400000	
V	51	3	72	3.077	ppb	3.077	9.32	2964	2000	
Cr	52	3	72	1.720	ppb	1.720	13.51	3540	5000	
Mn	55	3	72	284.052	ppb	284.052	1.70	115578	10000	
Fe	56	2	72	61.614	ppb	61.614	4.35	134222	10000	
Co	59	3	72	1.678	ppb	1.678	1.98	2261	2000	
Ni	60	3	72	42.167	ppb	42.167	2.72	15861	5000	
Cu	63	3	72	1.256	ppb	1.256	6.89	1743	5000	
Zn	66	3	72	8.407	ppb	8.407	10.94	1541	5000	
As	75	3	72	1.617	ppb	1.617	14.99	258	2000	
Se	78	2	72	0.288	ppb	0.288	75.29	21	2000	
Sr	88	3	72	1032.507	ppb	1032.507	1.00	570072	4000	
Mo	95	3	115	0.350	ppb	0.350	14.88	217	2000	
Ag	107	3	115	0.007	ppb	0.007	87.93	28	100	
Cd	111	3	115	-0.051	ppb	-0.051	-82.75	12	2000	
Sn	120	3	115	-0.332	ppb	-0.332	-25.48	678	2000	
Sb	121	3	115	0.131	ppb	0.131	28.76	142	1000	
Ba	137	3	115	424.821	ppb	424.821	1.85	103841	5000	
Tl	205	3	193	-0.167	ppb	-0.167	-3.86	355	2000	
(Pb)	206	3	193	-0.017	ppb	-0.017	-106.75	343	100	
(Pb)	207	3	193	0.033	ppb	0.033	107.72	561	100	
Pb	208	3	193	-0.004	ppb	-0.004	-382.39	1588	5000	
Th	232	3	193	-0.064	ppb	-0.064	-74.46	5290	2000	
U	238	3	193	3.772	ppb	3.772	1.07	23087	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4190914	0.99	3887690	107.80	60	120	
Sc (IS)	45	3	HMI He	607397	1.27	560366	108.39	60	120	
Ge Internal standard	72	2	HMI H2	2543625	0.35	2321471	109.57	60	120	
Ge Internal standard	72	3	HMI He	743582	1.02	685485	108.48	60	120	
In Internal Standard	115	3	HMI He	2779303	2.27	2631879	105.60	60	120	
Ir (IS)	193	3	HMI He	6084737	0.93	5771767	105.42	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608663/1-A
Data File Name	118_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:32:45-06:00
Sample Type	Blank
Dilution	1
Comment	608663 soil 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.043	ppb	-141.7169234	2	0.5
Na	23	3	45	171.643	ppb	3.598355403	36601	25
Mg	24	3	45	31.737	ppb	6.179301456	2102	25
Al	27	3	45	8.346	ppb	42.09065349	284	15
K	39	3	45	16.523	ppb	81.60693185	27665	50
Ca	40	2	45	153.213	ppb	0.951974283	103180	200
V	51	3	72	-0.321	ppb	-47.78181136	830	1
Cr	52	3	72	2.042	ppb	7.54744709	3752	1
Mn	55	3	72	1.331	ppb	7.453917504	720	0.5
Fe	56	2	72	33.896	ppb	8.210389911	86734	50
Co	59	3	72	0.041	ppb	29.29743347	92	0.5
Ni	60	3	72	0.923	ppb	23.22381397	685	1
Cu	63	3	72	1.717	ppb	6.853433621	2189	1
Zn	66	3	72	4.503	ppb	8.664139578	916	5
As	75	3	72	-0.086	ppb	-101.7801397	60	1
(Se)	78	3	72	-0.098	ppb	-3362.582687	32	1
Sr	88	3	72	0.799	ppb	3.597958779	461	0.5
Mo	95	3	115	0.286	ppb	35.5767915	185	0.5
Ag	107	3	115	0.005	ppb	57.21913302	25	1
Cd	111	3	115	-0.059	ppb	-0.75781046	10	0.5
Sn	120	3	115	9.761	ppb	1.745941336	8408	1
Sb	121	3	115	0.018	ppb	32.53543956	55	0.6
Ba	137	3	115	0.615	ppb	2.688866575	190	0.5
Tl	205	3	193	-0.169	ppb	-3.852107335	352	0.1
(Pb)	206	3	193	0.149	ppb	34.55289268	566	1
(Pb)	207	3	193	0.184	ppb	34.02063022	746	1
Pb	208	3	193	0.169	ppb	8.30571369	2536	0.5
Th	232	3	193	-0.044	ppb	-31.77776377	5445	1
U	238	3	193	0.001	ppb	744.7012945	1809	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4286106	0.06	3887690	110.25	60	120	
Sc (IS)	45	3	HMI He	609688	0.10	560366	108.80	60	120	
Ge Internal standard	72	2	HMI H2	2498055	2.26	2321471	107.61	60	120	
Ge Internal standard	72	3	HMI He	736122	0.31	685485	107.39	60	120	
In Internal Standard	115	3	HMI He	2791177	1.12	2631879	106.05	60	120	
Ir (IS)	193	3	HMI He	6141915	1.47	5771767	106.41	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608663/2-A
Data File Name	119_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:34:36-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608663 soil 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	199.584	199.584	ppb	2.437	8917	40	499.0	80	120	>+/-20%
Na	23	3	45	3876.425	3876.425	ppb	1.025	441966	40	9691.1	80	120	>+/-20%
Mg	24	3	45	3485.198	3485.198	ppb	2.031	203179	40	8713.0	80	120	>+/-20%
Al	27	3	45	3496.844	3496.844	ppb	1.549	80374	40	8742.1	80	120	>+/-20%
K	39	3	45	3679.085	3679.085	ppb	0.697	199768	40	9197.7	80	120	>+/-20%
Ca	40	2	45	3910.233	3910.233	ppb	0.991	2284228	40	9775.6	80	120	>+/-20%
V	51	3	72	185.994	185.994	ppb	1.191	116334	40	465.0	80	120	>+/-20%
Cr	52	3	72	195.966	195.966	ppb	2.233	151988	40	489.9	80	120	>+/-20%
Mn	55	3	72	193.862	193.862	ppb	0.841	78195	40	484.7	80	120	>+/-20%
Fe	56	2	72	3713.938	3713.938	ppb	1.496	6117641	40	9284.8	80	120	>+/-20%
(Fe)	56	3	72	3694.361	3694.361	ppb	1.331	2455724	40	9235.9	80	120	>+/-20%
Co	59	3	72	190.119	190.119	ppb	1.562	249497	40	475.3	80	120	>+/-20%
Ni	60	3	72	192.243	192.243	ppb	1.132	70389	40	480.6	80	120	>+/-20%
Cu	63	3	72	195.602	195.602	ppb	0.433	197316	40	489.0	80	120	>+/-20%
Zn	66	3	72	199.452	199.452	ppb	0.882	31390	40	498.6	80	120	>+/-20%
As	75	3	72	186.402	186.402	ppb	1.298	21463	40	466.0	80	120	>+/-20%
Se	78	2	72	190.851	190.851	ppb	2.956	11585	40	477.1	80	120	>+/-20%
(Se)	78	3	72	212.222	212.222	ppb	6.651	1256	40	530.6	80	120	>+/-20%
Sr	88	3	72	379.707	379.707	ppb	1.270	207671	40	949.3	80	120	>+/-20%
Mo	95	3	115	186.506	186.506	ppb	2.102	93512	40	466.3	80	120	>+/-20%
Ag	107	3	115	197.433	197.433	ppb	2.634	333243	40	493.6	80	120	>+/-20%
Cd	111	3	115	188.660	188.660	ppb	1.616	46490	40	471.7	80	120	>+/-20%
Sn	120	3	115	193.261	193.261	ppb	1.219	146424	40	483.2	80	120	>+/-20%
Sb	121	3	115	188.244	188.244	ppb	1.627	143267	40	470.6	80	120	>+/-20%
Ba	137	3	115	200.985	200.985	ppb	0.987	48545	40	502.5	80	120	>+/-20%
Tl	205	3	193	187.343	187.343	ppb	1.599	749850	40	468.4	80	120	>+/-20%
(Pb)	206	3	193	196.068	196.068	ppb	2.359	257987	40	490.2	80	120	>+/-20%
(Pb)	207	3	193	186.744	186.744	ppb	1.738	218713	40	466.9	80	120	>+/-20%
Pb	208	3	193	190.540	190.540	ppb	2.497	1018180	40	476.4	80	120	>+/-20%
Th	232	3	193	188.277	188.277	ppb	2.123	1007022	40	470.7	80	120	>+/-20%
U	238	3	193	190.374	190.374	ppb	2.463	1075673	40	475.9	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174021	1.33	3887690	107.37	60	120	
Sc (IS)	45	3	HMI He	605022	1.29	560366	107.97	60	120	
Ge Internal standard	72	2	HMI H2	2518405	0.82	2321471	108.48	60	120	
Ge Internal standard	72	3	HMI He	736509	0.59	685485	107.44	60	120	
In Internal Standard	115	3	HMI He	2744742	2.03	2631879	104.29	60	120	
Ir (IS)	193	3	HMI He	6078825	1.68	5771767	105.32	60	120	

Sample Report

Sample Table

Sample Name	GB 280-608265/1-B
Data File Name	120SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:36:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.440	ppb	0.440	14.50	23	2000	
Na	23	3	45	528.981	ppb	528.981	0.97	73469	400000	
Mg	24	3	45	2812.111	ppb	2812.111	1.79	159704	400000	
Al	27	3	45	3661.657	ppb	3661.657	1.33	81955	400000	
K	39	3	45	1965.066	ppb	1965.066	4.46	115989	400000	
Ca	40	2	45	8021.145	ppb	8021.145	1.54	4558271	400000	
V	51	3	72	8.469	ppb	8.469	3.12	6302	2000	
Cr	52	3	72	33.984	ppb	33.984	4.75	28270	5000	
Mn	55	3	72	476.187	ppb	476.187	1.04	192494	10000	
Fe	56	2	72	36460.790	ppb	36460.790	1.41	59360494	10000	
Co	59	3	72	2.481	ppb	2.481	5.56	3305	2000	
Ni	60	3	72	10.321	ppb	10.321	4.04	4124	5000	
Cu	63	3	72	13.777	ppb	13.777	2.15	14377	5000	
Zn	66	3	72	15.003	ppb	15.003	1.94	2567	5000	
As	75	3	72	4.177	ppb	4.177	5.14	551	2000	
Se	78	2	72	0.206	ppb	0.206	49.13	16	2000	
Sr	88	3	72	32.791	ppb	32.791	2.47	18021	4000	
Mo	95	3	115	2.931	ppb	2.931	1.24	1506	2000	
Ag	107	3	115	0.126	ppb	0.126	9.79	228	100	
Cd	111	3	115	-0.004	ppb	-0.004	-293.14	23	2000	
Sn	120	3	115	8.192	ppb	8.192	3.70	7080	2000	
Sb	121	3	115	0.322	ppb	0.322	23.56	285	1000	
Ba	137	3	115	63.209	ppb	63.209	1.81	15275	5000	
Tl	205	3	193	-0.042	ppb	-0.042	-7.40	855	2000	
(Pb)	206	3	193	9.149	ppb	9.149	2.64	12397	100	
(Pb)	207	3	193	6.323	ppb	6.323	3.73	7915	100	
Pb	208	3	193	7.391	ppb	7.391	2.92	41074	5000	
Th	232	3	193	12.315	ppb	12.315	1.61	71219	2000	
U	238	3	193	3.423	ppb	3.423	5.80	21102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071440	2.01	3887690	104.73	60	120	
Sc (IS)	45	3	HMI He	589131	0.52	560366	105.13	60	120	
Ge Internal standard	72	2	HMI H2	2500685	0.96	2321471	107.72	60	120	
Ge Internal standard	72	3	HMI He	739184	0.81	685485	107.83	60	120	
In Internal Standard	115	3	HMI He	2741303	0.83	2631879	104.16	60	120	
Ir (IS)	193	3	HMI He	6084302	2.08	5771767	105.41	60	120	

Sample Report

Sample Table

Sample Name	LCSSRM 280-608265/2-B
Data File Name	121SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:38:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1140.877	ppb	1140.877	1.13	51207	2000	
Na	23	3	45	7920.150	ppb	7920.150	0.46	891545	400000	
Mg	24	3	45	37776.767	ppb	37776.767	2.11	2216858	400000	
Al	27	3	45	150485.133	ppb	150485.133	1.60	3481570	400000	
K	39	3	45	39536.183	ppb	39536.183	1.63	1900979	400000	
Ca	40	2	45	68989.074	ppb	68989.074	2.31	40824230	400000	
V	51	3	72	3152.636	ppb	3152.636	0.80	1941779	2000	
Cr	52	3	72	3042.589	ppb	3042.589	1.56	2311541	5000	
Mn	55	3	72	6020.589	ppb	6020.589	1.93	2405605	10000	
Fe	56	2	72	281695.384	ppb	281695.384	0.84	447890074	10000	>LDR
Co	59	3	72	1409.918	ppb	1409.918	1.14	1837039	2000	
Ni	60	3	72	2419.080	ppb	2419.080	2.03	875445	5000	
Cu	63	3	72	1981.913	ppb	1981.913	1.51	1980843	5000	
Zn	66	3	72	3306.123	ppb	3306.123	1.77	513310	5000	
As	75	3	72	2672.940	ppb	2672.940	0.89	304675	2000	
Se	78	2	72	3225.503	ppb	3225.503	0.95	189943	2000	
Sr	88	3	72	1775.095	ppb	1775.095	0.78	963935	4000	
Mo	95	3	115	2645.922	ppb	2645.922	2.41	1336456	2000	
Ag	107	3	115	1011.953	ppb	1011.953	0.72	1721279	100	>LDR
Cd	111	3	115	3080.935	ppb	3080.935	0.55	764663	2000	
Sn	120	3	115	2167.336	ppb	2167.336	1.42	1645367	2000	
Sb	121	3	115	2926.627	ppb	2926.627	1.98	2243845	1000	
Ba	137	3	115	4768.281	ppb	4768.281	0.68	1159605	5000	
Tl	205	3	193	1176.504	ppb	1176.504	0.86	4817811	2000	
(Pb)	206	3	193	3838.811	ppb	3838.811	1.68	5167130	100	>LDR
(Pb)	207	3	193	3631.367	ppb	3631.367	3.09	4346072	100	>LDR
Pb	208	3	193	3678.870	ppb	3678.870	2.03	20106542	5000	
Th	232	3	193	368.515	ppb	368.515	1.13	2013407	2000	
U	238	3	193	1842.145	ppb	1842.145	2.34	10645648	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4248763	1.58	3887690	109.29	60	120	
Sc (IS)	45	3	HMI He	609626	0.78	560366	108.79	60	120	
Ge Internal standard	72	2	HMI H2	2443451	0.76	2321471	105.25	60	120	
Ge Internal standard	72	3	HMI He	731333	0.99	685485	106.69	60	120	
In Internal Standard	115	3	HMI He	2765278	1.37	2631879	105.07	60	120	
Ir (IS)	193	3	HMI He	6225281	0.62	5771767	107.86	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C@50
Data File Name	122SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:39:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.221	ppb	0.221	59.91	13	2000	
Na	23	3	45	92.561	ppb	92.561	2.95	27347	400000	
Mg	24	3	45	1605.423	ppb	1605.423	2.44	92667	400000	
Al	27	3	45	2442.798	ppb	2442.798	1.82	55541	400000	
K	39	3	45	209.250	ppb	209.250	15.81	36109	400000	
Ca	40	2	45	5040.710	ppb	5040.710	3.09	2851980	400000	
V	51	3	72	7.097	ppb	7.097	4.46	5343	2000	
Cr	52	3	72	36.091	ppb	36.091	7.16	29290	5000	
Mn	55	3	72	2267.569	ppb	2267.569	2.04	897972	10000	
Fe	56	2	72	4422.665	ppb	4422.665	1.89	6918294	10000	
Co	59	3	72	2.402	ppb	2.402	4.70	3139	2000	
Ni	60	3	72	12.465	ppb	12.465	5.36	4812	5000	
Cu	63	3	72	24.042	ppb	24.042	1.99	24264	5000	
Zn	66	3	72	71.637	ppb	71.637	3.41	11226	5000	
As	75	3	72	11.016	ppb	11.016	2.22	1313	2000	
Se	78	2	72	0.829	ppb	0.829	16.09	51	2000	
Sr	88	3	72	10.832	ppb	10.832	5.16	5857	4000	
Mo	95	3	115	5.987	ppb	5.987	22.11	3014	2000	
Ag	107	3	115	0.185	ppb	0.185	10.07	327	100	
Cd	111	3	115	0.395	ppb	0.395	24.63	122	2000	
Sn	120	3	115	20.232	ppb	20.232	8.29	16070	2000	
Sb	121	3	115	3.047	ppb	3.047	5.39	2347	1000	
Ba	137	3	115	56.803	ppb	56.803	5.68	13677	5000	
Tl	205	3	193	0.254	ppb	0.254	17.00	2072	2000	
(Pb)	206	3	193	33.807	ppb	33.807	1.97	45586	100	
(Pb)	207	3	193	31.826	ppb	31.826	1.09	38381	100	
Pb	208	3	193	32.463	ppb	32.463	0.65	177930	5000	
Th	232	3	193	8.465	ppb	8.465	13.02	51540	2000	
U	238	3	193	0.497	ppb	0.497	2.46	4670	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4048793	2.43	3887690	104.14	60	120	
Sc (IS)	45	3	HMI He	598185	0.82	560366	106.75	60	120	
Ge Internal standard	72	2	HMI H2	2393764	0.99	2321471	103.11	60	120	
Ge Internal standard	72	3	HMI He	724778	1.41	685485	105.73	60	120	
In Internal Standard	115	3	HMI He	2733501	3.04	2631879	103.86	60	120	
Ir (IS)	193	3	HMI He	6186110	0.49	5771767	107.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	123_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:41:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.880	ppb	2.130	2306	50	103.8	90	110	
Na	23	3	45	47529.208	ppb	0.822	5176644	51000	93.2	90	110	
Mg	24	3	45	10158.602	ppb	2.127	586677	11000	92.4	90	110	
Al	27	3	45	933.106	ppb	1.302	21328	1000	93.3	90	110	
K	39	3	45	9996.589	ppb	1.470	492661	11000	90.9	90	110	
Ca	40	2	45	9998.745	ppb	1.185	5785476	11000	90.9	90	110	
V	51	3	72	49.116	ppb	3.425	30426	50	98.2	90	110	
Cr	52	3	72	51.192	ppb	1.941	39951	50	102.4	90	110	
Mn	55	3	72	49.941	ppb	1.694	19607	50	99.9	90	110	
Fe	56	2	72	1010.473	ppb	0.811	1620026	1000	101.0	90	110	
Co	59	3	72	50.033	ppb	2.162	63502	50	100.1	90	110	
Ni	60	3	72	51.673	ppb	1.438	18540	50	103.3	90	110	
Cu	63	3	72	50.463	ppb	2.499	49542	50	100.9	90	110	
Zn	66	3	72	51.116	ppb	3.585	7928	50	102.2	90	110	
As	75	3	72	50.499	ppb	2.944	5670	50	101.0	90	110	
Se	78	2	72	49.641	ppb	2.367	2896	50	99.3	90	110	
Sr	88	3	72	100.203	ppb	2.778	52995	100	100.2	90	110	
Mo	95	3	115	49.857	ppb	2.867	25433	50	99.7	90	110	
Ag	107	3	115	49.781	ppb	1.270	85422	50	99.6	90	110	
Cd	111	3	115	47.776	ppb	0.440	11986	50	95.6	90	110	
Sn	120	3	115	49.544	ppb	1.915	38840	50	99.1	90	110	
Sb	121	3	115	48.747	ppb	0.853	37743	50	97.5	90	110	
Ba	137	3	115	50.571	ppb	4.886	12440	50	101.1	90	110	
Tl	205	3	193	48.237	ppb	3.225	193375	50	96.5	90	110	
(Pb)	206	3	193	49.131	ppb	2.980	64776	50	98.3	90	110	
(Pb)	207	3	193	48.133	ppb	2.434	56638	50	96.3	90	110	
Pb	208	3	193	48.736	ppb	3.456	261021	50	97.5	90	110	
Th	232	3	193	51.079	ppb	1.451	276752	50	102.2	90	110	
U	238	3	193	48.746	ppb	4.486	276073	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4147267	1.91	3887690	106.68	60	120	
Sc (IS)	45	3	HMI He	599768	0.94	560366	107.03	60	120	
Ge Internal standard	72	2	HMI H2	2417434	1.34	2321471	104.13	60	120	
Ge Internal standard	72	3	HMI He	712099	1.50	685485	103.88	60	120	
In Internal Standard	115	3	HMI He	2789356	1.51	2631879	105.98	60	120	
Ir (IS)	193	3	HMI He	6066983	2.63	5771767	105.11	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	124_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:43:30-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.078	ppb	0.0	0	0.5	
Na	23	3	45	28.249	ppb	16.5	20412	25	>RL
Mg	24	3	45	1.815	ppb	91.5	340	25	
Al	27	3	45	1.228	ppb	73.7	117	15	
K	39	3	45	3.995	ppb	585.8	26592	50	
V	51	3	72	-0.695	ppb	-8.1	595	1	
Cr	52	3	72	0.815	ppb	24.2	2799	1	
Mn	55	3	72	0.400	ppb	20.7	343	0.5	
Co	59	3	72	0.053	ppb	17.2	107	0.5	
Ni	60	3	72	0.979	ppb	13.6	701	1	
Cu	63	3	72	0.037	ppb	23.5	496	1	
Zn	66	3	72	0.107	ppb	289.2	228	5	
As	75	3	72	-0.391	ppb	-19.1	25	1	
Se	78	2	72	0.203	ppb	25.4	15	1	
Sr	88	3	72	0.037	ppb	107.9	45	0.5	
Mo	95	3	115	0.232	ppb	36.7	158	0.5	
Ag	107	3	115	0.041	ppb	17.1	87	1	
Cd	111	3	115	0.086	ppb	14.1	47	0.5	
Sn	120	3	115	0.646	ppb	13.9	1439	1	
Sb	121	3	115	0.253	ppb	5.5	238	0.6	
Ba	137	3	115	0.111	ppb	72.6	67	0.5	
Tl	205	3	193	-0.108	ppb	-11.5	590	0.1	
(Pb)	206	3	193	-0.007	ppb	-316.0	356	1	
(Pb)	207	3	193	-0.040	ppb	-219.9	478	1	
Pb	208	3	193	-0.001	ppb	-1742.2	1603	0.5	
Th	232	3	193	1.876	ppb	16.0	15624	1	>RL
U	238	3	193	0.012	ppb	315.3	1854	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4056923	1.28	3887690	104.35	60	120	
Sc (IS)	45	3	HMI He	598933	0.28	560366	106.88	60	120	
Ge Internal standard	72	2	HMI H2	2420674	1.08	2321471	104.27	60	120	
Ge Internal standard	72	3	HMI He	732045	0.53	685485	106.79	60	120	
In Internal Standard	115	3	HMI He	2810593	0.63	2631879	106.79	60	120	
Ir (IS)	193	3	HMI He	6088926	1.01	5771767	105.50	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C
Data File Name	125SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:45:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	11.470	ppb	11.470	2.82	520	2000	
Na	23	3	45	2754.283	ppb	2754.283	2.13	322458	400000	
Mg	24	3	45	80848.193	ppb	80848.193	0.40	4758430	400000	
Al	27	3	45	126319.364	ppb	126319.364	0.64	2931489	400000	
K	39	3	45	10371.384	ppb	10371.384	0.20	520075	400000	
Ca	40	2	45	253074.888	ppb	253074.888	1.47	147445484	400000	
V	51	3	72	404.300	ppb	404.300	0.49	250521	2000	
Cr	52	3	72	1818.228	ppb	1818.228	1.41	1385829	5000	
Mn	55	3	72	115287.611	ppb	115287.611	1.71	46179156	10000	>LDR
Fe	56	2	72	226181.025	ppb	226181.025	1.46	353591172	10000	>LDR
Co	59	3	72	114.264	ppb	114.264	0.49	149284	2000	
Ni	60	3	72	565.391	ppb	565.391	0.25	205402	5000	
Cu	63	3	72	1208.770	ppb	1208.770	1.33	1211395	5000	
Zn	66	3	72	3354.855	ppb	3354.855	0.33	522207	5000	
As	75	3	72	563.688	ppb	563.688	1.22	64469	2000	
Se	78	2	72	6.816	ppb	6.816	6.82	398	2000	
Sr	88	3	72	555.177	ppb	555.177	0.63	302242	4000	
Mo	95	3	115	31.962	ppb	31.962	3.18	16203	2000	
Ag	107	3	115	2.389	ppb	2.389	5.97	4085	100	
Cd	111	3	115	4.243	ppb	4.243	5.32	1080	2000	
Sn	120	3	115	941.002	ppb	941.002	1.24	715864	2000	
Sb	121	3	115	25.997	ppb	25.997	1.58	20002	1000	
Ba	137	3	115	2906.258	ppb	2906.258	1.16	707837	5000	
Tl	205	3	193	1.199	ppb	1.199	4.88	5830	2000	
(Pb)	206	3	193	1792.190	ppb	1792.190	1.88	2361494	100	>LDR
(Pb)	207	3	193	1703.106	ppb	1703.106	3.37	1995365	100	>LDR
Pb	208	3	193	1725.678	ppb	1725.678	2.57	9232264	5000	
Th	232	3	193	36.524	ppb	36.524	1.46	200419	2000	
U	238	3	193	9.746	ppb	9.746	1.11	56915	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4183855	2.10	3887690	107.62	60	120	
Sc (IS)	45	3	HMI He	611426	1.06	560366	109.11	60	120	
Ge Internal standard	72	2	HMI H2	2402452	1.16	2321471	103.49	60	120	
Ge Internal standard	72	3	HMI He	733130	0.65	685485	106.95	60	120	
In Internal Standard	115	3	HMI He	2769737	1.64	2631879	105.24	60	120	
Ir (IS)	193	3	HMI He	6094457	1.44	5771767	105.59	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-2-C
Data File Name	126SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:47:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.173	ppb	6.173	8.49	285	2000	
Na	23	3	45	839.606	ppb	839.606	0.79	112452	400000	
Mg	24	3	45	17021.087	ppb	17021.087	2.54	1018628	400000	
Al	27	3	45	88099.444	ppb	88099.444	0.64	2078304	400000	
K	39	3	45	6268.805	ppb	6268.805	0.41	330395	400000	
Ca	40	2	45	51915.457	ppb	51915.457	3.32	30753459	400000	
V	51	3	72	189.779	ppb	189.779	1.41	120272	2000	
Cr	52	3	72	186.060	ppb	186.060	0.20	146370	5000	
Mn	55	3	72	8851.364	ppb	8851.364	0.43	3610005	10000	
Fe	56	2	72	103538.949	ppb	103538.949	0.52	166453878	10000	>LDR
Co	59	3	72	32.704	ppb	32.704	1.93	43530	2000	
Ni	60	3	72	100.740	ppb	100.740	2.27	37549	5000	
Cu	63	3	72	115.624	ppb	115.624	0.85	118394	5000	
Zn	66	3	72	311.378	ppb	311.378	1.09	49541	5000	
As	75	3	72	599.672	ppb	599.672	1.59	69820	2000	
Se	78	2	72	2.068	ppb	2.068	8.43	127	2000	
Sr	88	3	72	148.710	ppb	148.710	0.41	82446	4000	
Mo	95	3	115	10.378	ppb	10.378	3.96	5400	2000	
Ag	107	3	115	0.469	ppb	0.469	13.24	833	100	
Cd	111	3	115	0.354	ppb	0.354	8.58	115	2000	
Sn	120	3	115	22.226	ppb	22.226	1.78	18192	2000	
Sb	121	3	115	6.122	ppb	6.122	5.30	4842	1000	
Ba	137	3	115	1098.325	ppb	1098.325	2.57	273176	5000	
Tl	205	3	193	0.759	ppb	0.759	3.05	4125	2000	
(Pb)	206	3	193	169.370	ppb	169.370	1.14	226570	100	
(Pb)	207	3	193	158.115	ppb	158.115	2.35	188261	100	
Pb	208	3	193	163.172	ppb	163.172	1.89	886427	5000	
Th	232	3	193	28.562	ppb	28.562	1.72	160113	2000	
U	238	3	193	6.791	ppb	6.791	2.94	40743	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4252677	0.83	3887690	109.39	60	120	
Sc (IS)	45	3	HMI He	621542	0.29	560366	110.92	60	120	
Ge Internal standard	72	2	HMI H2	2470174	0.81	2321471	106.41	60	120	
Ge Internal standard	72	3	HMI He	746410	0.62	685485	108.89	60	120	
In Internal Standard	115	3	HMI He	2828415	1.08	2631879	107.47	60	120	
Ir (IS)	193	3	HMI He	6178221	2.17	5771767	107.04	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-3-C
Data File Name	127SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:48:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.329	ppb	0.329	19.25	18	2000	
Na	23	3	45	346.427	ppb	346.427	2.49	55581	400000	
Mg	24	3	45	1107.458	ppb	1107.458	1.78	64876	400000	
Al	27	3	45	22288.288	ppb	22288.288	2.02	512957	400000	
K	39	3	45	2958.161	ppb	2958.161	1.58	166207	400000	
Ca	40	2	45	1713.513	ppb	1713.513	4.07	1004044	400000	
V	51	3	72	138.312	ppb	138.312	1.95	87077	2000	
Cr	52	3	72	135.108	ppb	135.108	1.34	105843	5000	
Mn	55	3	72	440.768	ppb	440.768	0.78	178177	10000	
Fe	56	2	72	55657.552	ppb	55657.552	1.74	89623796	10000	>LDR
Co	59	3	72	7.942	ppb	7.942	3.47	10497	2000	
Ni	60	3	72	20.362	ppb	20.362	3.50	7795	5000	
Cu	63	3	72	119.111	ppb	119.111	1.67	120748	5000	
Zn	66	3	72	201.035	ppb	201.035	2.29	31749	5000	
As	75	3	72	60.182	ppb	60.182	4.97	7003	2000	
Se	78	2	72	1.415	ppb	1.415	6.73	88	2000	
Sr	88	3	72	40.401	ppb	40.401	2.67	22194	4000	
Mo	95	3	115	17.726	ppb	17.726	2.77	8970	2000	
Ag	107	3	115	0.221	ppb	0.221	3.05	391	100	
Cd	111	3	115	0.190	ppb	0.190	45.46	72	2000	
Sn	120	3	115	17.246	ppb	17.246	6.41	13965	2000	
Sb	121	3	115	4.200	ppb	4.200	3.44	3252	1000	
Ba	137	3	115	353.269	ppb	353.269	2.55	85705	5000	
Tl	205	3	193	0.111	ppb	0.111	17.96	1486	2000	
(Pb)	206	3	193	116.940	ppb	116.940	4.59	156220	100	
(Pb)	207	3	193	110.332	ppb	110.332	4.05	131292	100	
Pb	208	3	193	113.169	ppb	113.169	4.63	614038	5000	
Th	232	3	193	22.653	ppb	22.653	3.35	127952	2000	
U	238	3	193	3.095	ppb	3.095	3.49	19524	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4161990	2.21	3887690	107.06	60	120	
Sc (IS)	45	3	HMI He	606311	0.50	560366	108.20	60	120	
Ge Internal standard	72	2	HMI H2	2474291	1.62	2321471	106.58	60	120	
Ge Internal standard	72	3	HMI He	739114	1.20	685485	107.82	60	120	
In Internal Standard	115	3	HMI He	2758278	1.57	2631879	104.80	60	120	
Ir (IS)	193	3	HMI He	6172201	4.40	5771767	106.94	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-4-C
Data File Name	128SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:50:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.772	ppb	0.772	40.23	40	2000	
Na	23	3	45	380.104	ppb	380.104	2.21	60559	400000	
Mg	24	3	45	2178.239	ppb	2178.239	0.69	130129	400000	
Al	27	3	45	20659.284	ppb	20659.284	0.80	485797	400000	
K	39	3	45	2178.835	ppb	2178.835	4.11	132266	400000	
Ca	40	2	45	3192.877	ppb	3192.877	1.64	1929238	400000	
V	51	3	72	95.442	ppb	95.442	1.96	61615	2000	
Cr	52	3	72	120.514	ppb	120.514	1.79	96541	5000	
Mn	55	3	72	3653.153	ppb	3653.153	3.45	1504901	10000	
Fe	56	2	72	82079.891	ppb	82079.891	2.98	133186982	10000	>LDR
Co	59	3	72	11.603	ppb	11.603	3.28	15621	2000	
Ni	60	3	72	39.316	ppb	39.316	1.49	15022	5000	
Cu	63	3	72	317.989	ppb	317.989	1.35	328034	5000	
Zn	66	3	72	913.764	ppb	913.764	0.75	146424	5000	
As	75	3	72	51.087	ppb	51.087	2.10	6073	2000	
Se	78	2	72	1.379	ppb	1.379	8.99	87	2000	
Sr	88	3	72	40.078	ppb	40.078	2.15	22459	4000	
Mo	95	3	115	8.222	ppb	8.222	1.64	4209	2000	
Ag	107	3	115	2.740	ppb	2.740	4.33	4695	100	
Cd	111	3	115	1.839	ppb	1.839	22.95	481	2000	
Sn	120	3	115	224.428	ppb	224.428	3.32	171834	2000	
Sb	121	3	115	33.153	ppb	33.153	3.79	25553	1000	
Ba	137	3	115	519.594	ppb	519.594	4.28	126845	5000	
Tl	205	3	193	0.303	ppb	0.303	11.88	2292	2000	
(Pb)	206	3	193	2285.316	ppb	2285.316	0.63	3082426	100	>LDR
(Pb)	207	3	193	2154.131	ppb	2154.131	3.52	2583238	100	>LDR
Pb	208	3	193	2202.132	ppb	2202.132	1.44	12060255	5000	
Th	232	3	193	15.380	ppb	15.380	2.53	89726	2000	
U	238	3	193	2.343	ppb	2.343	1.58	15395	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4313053	1.94	3887690	110.94	60	120	
Sc (IS)	45	3	HMI He	619468	0.17	560366	110.55	60	120	
Ge Internal standard	72	2	HMI H2	2494438	2.64	2321471	107.45	60	120	
Ge Internal standard	72	3	HMI He	753935	1.14	685485	109.99	60	120	
In Internal Standard	115	3	HMI He	2777509	2.95	2631879	105.53	60	120	
Ir (IS)	193	3	HMI He	6237939	0.78	5771767	108.08	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-5-C
Data File Name	129SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:52:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.101	ppb	0.101	119.08	8	2000	
Na	23	3	45	259.540	ppb	259.540	3.83	46473	400000	
Mg	24	3	45	331.787	ppb	331.787	1.91	19784	400000	
Al	27	3	45	6815.304	ppb	6815.304	0.37	158394	400000	
K	39	3	45	1238.864	ppb	1238.864	1.41	85941	400000	
Ca	40	2	45	740.020	ppb	740.020	2.46	439930	400000	
V	51	3	72	69.786	ppb	69.786	0.83	44796	2000	
Cr	52	3	72	77.604	ppb	77.604	1.31	62212	5000	
Mn	55	3	72	471.601	ppb	471.601	1.17	192110	10000	
Fe	56	2	72	49632.381	ppb	49632.381	0.92	81971535	10000	
Co	59	3	72	5.314	ppb	5.314	3.09	7090	2000	
Ni	60	3	72	15.333	ppb	15.333	3.97	6002	5000	
Cu	63	3	72	56.871	ppb	56.871	0.63	58355	5000	
Zn	66	3	72	125.636	ppb	125.636	1.47	20076	5000	
As	75	3	72	17.272	ppb	17.272	9.63	2074	2000	
Se	78	2	72	0.714	ppb	0.714	2.60	47	2000	
Sr	88	3	72	20.647	ppb	20.647	3.38	11446	4000	
Mo	95	3	115	14.850	ppb	14.850	2.50	7615	2000	
Ag	107	3	115	0.217	ppb	0.217	7.25	388	100	
Cd	111	3	115	0.067	ppb	0.067	69.27	42	2000	
Sn	120	3	115	47.862	ppb	47.862	4.82	37596	2000	
Sb	121	3	115	2.677	ppb	2.677	3.02	2114	1000	
Ba	137	3	115	243.741	ppb	243.741	3.36	59897	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-47.82	785	2000	
(Pb)	206	3	193	154.705	ppb	154.705	1.69	205874	100	
(Pb)	207	3	193	145.218	ppb	145.218	0.92	172051	100	
Pb	208	3	193	149.482	ppb	149.482	1.37	807865	5000	
Th	232	3	193	15.286	ppb	15.286	1.63	87876	2000	
U	238	3	193	1.487	ppb	1.487	4.91	10279	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4159340	1.56	3887690	106.99	60	120	
Sc (IS)	45	3	HMI He	612022	1.34	560366	109.22	60	120	
Ge Internal standard	72	2	HMI H2	2537081	0.79	2321471	109.29	60	120	
Ge Internal standard	72	3	HMI He	744901	1.21	685485	108.67	60	120	
In Internal Standard	115	3	HMI He	2794560	3.12	2631879	106.18	60	120	
Ir (IS)	193	3	HMI He	6144400	1.27	5771767	106.46	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-1-C
Data File Name	130SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:54:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.473	ppb	0.473	61.79	25	2000	
Na	23	3	45	430.912	ppb	430.912	3.96	66395	400000	
Mg	24	3	45	1813.945	ppb	1813.945	1.01	108645	400000	
Al	27	3	45	15708.236	ppb	15708.236	1.19	370205	400000	
K	39	3	45	2034.319	ppb	2034.319	4.09	125569	400000	
Ca	40	2	45	3677.056	ppb	3677.056	2.37	2200865	400000	
V	51	3	72	102.635	ppb	102.635	0.78	66639	2000	
Cr	52	3	72	166.589	ppb	166.589	3.87	133474	5000	
Mn	55	3	72	6731.703	ppb	6731.703	2.11	2791644	10000	
Fe	56	2	72	113716.284	ppb	113716.284	1.89	186725744	10000	>LDR
Co	59	3	72	13.403	ppb	13.403	2.56	18163	2000	
Ni	60	3	72	53.109	ppb	53.109	2.51	20300	5000	
Cu	63	3	72	551.711	ppb	551.711	1.58	572656	5000	
Zn	66	3	72	1709.105	ppb	1709.105	1.32	275536	5000	
As	75	3	72	62.884	ppb	62.884	4.01	7508	2000	
Se	78	2	72	1.297	ppb	1.297	15.72	83	2000	
Sr	88	3	72	54.357	ppb	54.357	1.79	30663	4000	
Mo	95	3	115	10.962	ppb	10.962	1.52	5712	2000	
Ag	107	3	115	5.702	ppb	5.702	3.11	9952	100	
Cd	111	3	115	4.115	ppb	4.115	7.94	1071	2000	
Sn	120	3	115	221.876	ppb	221.876	1.77	173390	2000	
Sb	121	3	115	23.140	ppb	23.140	1.99	18217	1000	
Ba	137	3	115	530.738	ppb	530.738	1.07	132266	5000	
Tl	205	3	193	0.352	ppb	0.352	3.13	2481	2000	
(Pb)	206	3	193	1801.387	ppb	1801.387	0.38	2417470	100	>LDR
(Pb)	207	3	193	1745.502	ppb	1745.502	0.98	2083079	100	>LDR
Pb	208	3	193	1745.767	ppb	1745.767	0.59	9513185	5000	
Th	232	3	193	17.693	ppb	17.693	0.87	101839	2000	
U	238	3	193	2.434	ppb	2.434	3.26	15841	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4274528	0.77	3887690	109.95	60	120	
Sc (IS)	45	3	HMI He	620843	0.70	560366	110.79	60	120	
Ge Internal standard	72	2	HMI H2	2523524	1.50	2321471	108.70	60	120	
Ge Internal standard	72	3	HMI He	759071	1.15	685485	110.73	60	120	
In Internal Standard	115	3	HMI He	2833208	0.96	2631879	107.65	60	120	
Ir (IS)	193	3	HMI He	6206203	0.47	5771767	107.53	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-2-C
Data File Name	131SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:56:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.633	ppb	0.633	50.11	33	2000	
Na	23	3	45	264.314	ppb	264.314	2.51	47939	400000	
Mg	24	3	45	915.784	ppb	915.784	2.33	55273	400000	
Al	27	3	45	15745.222	ppb	15745.222	1.65	373110	400000	
K	39	3	45	1906.639	ppb	1906.639	0.58	120070	400000	
Ca	40	2	45	1088.665	ppb	1088.665	0.66	674240	400000	
V	51	3	72	108.474	ppb	108.474	1.63	70256	2000	
Cr	52	3	72	102.840	ppb	102.840	2.17	83145	5000	
Mn	55	3	72	978.416	ppb	978.416	0.50	405323	10000	
Fe	56	2	72	54058.073	ppb	54058.073	0.56	91702059	10000	>LDR
Co	59	3	72	6.952	ppb	6.952	3.17	9425	2000	
Ni	60	3	72	18.994	ppb	18.994	1.56	7480	5000	
Cu	63	3	72	175.911	ppb	175.911	1.21	182642	5000	
Zn	66	3	72	222.957	ppb	222.957	0.46	36081	5000	
As	75	3	72	31.555	ppb	31.555	0.27	3799	2000	
Se	78	2	72	1.318	ppb	1.318	21.19	87	2000	
Sr	88	3	72	28.789	ppb	28.789	0.41	16227	4000	
Mo	95	3	115	11.191	ppb	11.191	1.87	6037	2000	
Ag	107	3	115	0.534	ppb	0.534	7.85	981	100	
Cd	111	3	115	0.459	ppb	0.459	24.20	147	2000	
Sn	120	3	115	39.698	ppb	39.698	1.54	32931	2000	
Sb	121	3	115	4.500	ppb	4.500	5.87	3702	1000	
Ba	137	3	115	248.059	ppb	248.059	1.78	64031	5000	
Tl	205	3	193	0.093	ppb	0.093	13.94	1428	2000	
(Pb)	206	3	193	200.300	ppb	200.300	0.87	270302	100	
(Pb)	207	3	193	187.327	ppb	187.327	1.66	224994	100	
Pb	208	3	193	194.449	ppb	194.449	1.27	1065664	5000	
Th	232	3	193	16.864	ppb	16.864	1.67	97757	2000	
U	238	3	193	3.195	ppb	3.195	1.62	20313	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368388	0.50	3887690	112.36	60	120	
Sc (IS)	45	3	HMI He	624195	0.48	560366	111.39	60	120	
Ge Internal standard	72	2	HMI H2	2605914	1.65	2321471	112.25	60	120	
Ge Internal standard	72	3	HMI He	757867	0.73	685485	110.56	60	120	
In Internal Standard	115	3	HMI He	2933795	1.15	2631879	111.47	60	120	
Ir (IS)	193	3	HMI He	6233297	0.55	5771767	108.00	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-3-C
Data File Name	132SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:58:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.998	ppb	4.998	9.41	237	2000	
Na	23	3	45	548.963	ppb	548.963	2.53	81912	400000	
Mg	24	3	45	7071.727	ppb	7071.727	0.83	434799	400000	
Al	27	3	45	79457.757	ppb	79457.757	1.17	1925122	400000	
K	39	3	45	6184.386	ppb	6184.386	0.71	335154	400000	
Ca	40	2	45	2596.471	ppb	2596.471	2.62	1597606	400000	
V	51	3	72	188.151	ppb	188.151	1.38	123886	2000	
Cr	52	3	72	144.065	ppb	144.065	1.88	118251	5000	
Mn	55	3	72	4126.257	ppb	4126.257	1.31	1748307	10000	
Fe	56	2	72	93318.248	ppb	93318.248	1.66	156383319	10000	>LDR
Co	59	3	72	45.016	ppb	45.016	1.39	62230	2000	
Ni	60	3	72	71.999	ppb	71.999	1.56	27986	5000	
Cu	63	3	72	196.523	ppb	196.523	0.14	208722	5000	
Zn	66	3	72	368.769	ppb	368.769	1.05	60912	5000	
As	75	3	72	40.402	ppb	40.402	3.63	4955	2000	
Se	78	2	72	3.323	ppb	3.323	7.54	210	2000	
Sr	88	3	72	48.059	ppb	48.059	2.00	27696	4000	
Mo	95	3	115	7.419	ppb	7.419	7.03	3887	2000	
Ag	107	3	115	0.920	ppb	0.920	6.19	1624	100	
Cd	111	3	115	0.581	ppb	0.581	3.56	173	2000	
Sn	120	3	115	32.439	ppb	32.439	2.24	26231	2000	
Sb	121	3	115	5.771	ppb	5.771	2.61	4589	1000	
Ba	137	3	115	543.878	ppb	543.878	1.80	135905	5000	
Tl	205	3	193	1.089	ppb	1.089	3.65	5552	2000	
(Pb)	206	3	193	398.231	ppb	398.231	2.25	540806	100	
(Pb)	207	3	193	378.554	ppb	378.554	1.80	457344	100	
Pb	208	3	193	396.585	ppb	396.585	2.01	2187056	5000	
Th	232	3	193	22.562	ppb	22.562	2.62	129757	2000	
U	238	3	193	6.557	ppb	6.557	1.40	40048	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386710	2.81	3887690	112.84	60	120	
Sc (IS)	45	3	HMI He	638398	0.97	560366	113.93	60	120	
Ge Internal standard	72	2	HMI H2	2574730	1.29	2321471	110.91	60	120	
Ge Internal standard	72	3	HMI He	775452	0.88	685485	113.12	60	120	
In Internal Standard	115	3	HMI He	2841104	1.39	2631879	107.95	60	120	
Ir (IS)	193	3	HMI He	6278416	1.75	5771767	108.78	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-4-C
Data File Name	133SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:59:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.602	ppb	3.602	38.96	172	2000	
Na	23	3	45	486.291	ppb	486.291	3.06	75241	400000	
Mg	24	3	45	7011.771	ppb	7011.771	1.57	434357	400000	
Al	27	3	45	80604.704	ppb	80604.704	0.58	1967675	400000	
K	39	3	45	7109.555	ppb	7109.555	1.70	383935	400000	
Ca	40	2	45	1954.884	ppb	1954.884	0.67	1201753	400000	
V	51	3	72	195.323	ppb	195.323	1.45	125841	2000	
Cr	52	3	72	142.762	ppb	142.762	1.62	114719	5000	
Mn	55	3	72	1605.139	ppb	1605.139	1.58	665784	10000	
Fe	56	2	72	99323.417	ppb	99323.417	1.41	164644604	10000	>LDR
Co	59	3	72	31.216	ppb	31.216	1.68	42248	2000	
Ni	60	3	72	61.108	ppb	61.108	2.62	23301	5000	
Cu	63	3	72	59.335	ppb	59.335	1.90	62009	5000	
Zn	66	3	72	197.539	ppb	197.539	1.83	32038	5000	
As	75	3	72	27.957	ppb	27.957	0.48	3379	2000	
Se	78	2	72	1.146	ppb	1.146	3.80	74	2000	
Sr	88	3	72	49.752	ppb	49.752	1.53	28063	4000	
Mo	95	3	115	9.305	ppb	9.305	2.27	4867	2000	
Ag	107	3	115	0.200	ppb	0.200	14.80	366	100	
Cd	111	3	115	0.234	ppb	0.234	58.21	85	2000	
Sn	120	3	115	12.959	ppb	12.959	1.67	11049	2000	
Sb	121	3	115	1.479	ppb	1.479	3.30	1206	1000	
Ba	137	3	115	500.459	ppb	500.459	0.62	125035	5000	
Tl	205	3	193	0.652	ppb	0.652	6.26	3689	2000	
(Pb)	206	3	193	61.348	ppb	61.348	0.41	82337	100	
(Pb)	207	3	193	57.361	ppb	57.361	0.87	68674	100	
Pb	208	3	193	59.147	ppb	59.147	0.92	322515	5000	
Th	232	3	193	32.598	ppb	32.598	1.86	182008	2000	
U	238	3	193	5.566	ppb	5.566	1.64	33741	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370407	0.73	3887690	112.42	60	120	
Sc (IS)	45	3	HMI He	643170	0.30	560366	114.78	60	120	
Ge Internal standard	72	2	HMI H2	2547319	1.25	2321471	109.73	60	120	
Ge Internal standard	72	3	HMI He	758985	0.61	685485	110.72	60	120	
In Internal Standard	115	3	HMI He	2840156	0.35	2631879	107.91	60	120	
Ir (IS)	193	3	HMI He	6179835	0.57	5771767	107.07	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-5-F
Data File Name	134SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:01:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.189	ppb	6.189	23.62	297	2000	
Na	23	3	45	853.572	ppb	853.572	3.17	118541	400000	
Mg	24	3	45	14978.474	ppb	14978.474	1.37	931906	400000	
Al	27	3	45	133979.574	ppb	133979.574	3.09	3285769	400000	
K	39	3	45	10676.065	ppb	10676.065	2.03	564936	400000	
Ca	40	2	45	10418.987	ppb	10418.987	1.68	6509008	400000	
V	51	3	72	326.616	ppb	326.616	0.63	215174	2000	
Cr	52	3	72	231.474	ppb	231.474	0.15	189413	5000	
Mn	55	3	72	5969.624	ppb	5969.624	0.80	2540103	10000	
Fe	56	2	72	148928.611	ppb	148928.611	0.80	249677746	10000	>LDR
Co	59	3	72	66.316	ppb	66.316	0.56	92046	2000	
Ni	60	3	72	123.671	ppb	123.671	1.16	48012	5000	
Cu	63	3	72	215.223	ppb	215.223	0.39	229497	5000	
Zn	66	3	72	728.383	ppb	728.383	0.63	120605	5000	
As	75	3	72	59.131	ppb	59.131	3.97	7248	2000	
Se	78	2	72	4.642	ppb	4.642	3.01	292	2000	
Sr	88	3	72	83.778	ppb	83.778	1.07	48467	4000	
Mo	95	3	115	10.214	ppb	10.214	4.66	5477	2000	
Ag	107	3	115	0.983	ppb	0.983	3.30	1779	100	
Cd	111	3	115	1.411	ppb	1.411	6.84	395	2000	
Sn	120	3	115	37.677	ppb	37.677	0.70	31094	2000	
Sb	121	3	115	6.454	ppb	6.454	1.20	5257	1000	
Ba	137	3	115	857.362	ppb	857.362	1.25	219723	5000	
Tl	205	3	193	1.661	ppb	1.661	4.17	7909	2000	
(Pb)	206	3	193	463.246	ppb	463.246	1.05	628831	100	
(Pb)	207	3	193	434.477	ppb	434.477	1.19	524632	100	
Pb	208	3	193	458.096	ppb	458.096	1.50	2525087	5000	
Th	232	3	193	37.378	ppb	37.378	0.78	211067	2000	
U	238	3	193	9.695	ppb	9.695	1.44	58307	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4478193	1.52	3887690	115.19	60	120	
Sc (IS)	45	3	HMI He	646171	0.10	560366	115.31	60	120	
Ge Internal standard	72	2	HMI H2	2576218	0.61	2321471	110.97	60	120	
Ge Internal standard	72	3	HMI He	778717	0.75	685485	113.60	60	120	
In Internal Standard	115	3	HMI He	2913845	0.64	2631879	110.71	60	120	
Ir (IS)	193	3	HMI He	6275188	0.90	5771767	108.72	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	135_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:03:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.310	ppb	2.613	2399	50	102.6	90	110	
Na	23	3	45	47587.606	ppb	1.678	5383592	51000	93.3	90	110	
Mg	24	3	45	10257.222	ppb	1.653	615351	11000	93.2	90	110	
Al	27	3	45	978.341	ppb	2.903	23219	1000	97.8	90	110	
K	39	3	45	10254.951	ppb	2.212	524225	11000	93.2	90	110	
Ca	40	2	45	10106.217	ppb	1.075	6205290	11000	91.9	90	110	
V	51	3	72	49.457	ppb	0.653	32234	50	98.9	90	110	
Cr	52	3	72	51.677	ppb	1.666	42415	50	103.4	90	110	
Mn	55	3	72	51.333	ppb	3.174	21196	50	102.7	90	110	
Fe	56	2	72	1059.956	ppb	2.247	1782522	1000	106.0	90	110	
Co	59	3	72	49.535	ppb	1.762	66149	50	99.1	90	110	
Ni	60	3	72	51.498	ppb	3.857	19436	50	103.0	90	110	
Cu	63	3	72	49.728	ppb	2.189	51370	50	99.5	90	110	
Zn	66	3	72	52.461	ppb	1.886	8557	50	104.9	90	110	
As	75	3	72	50.555	ppb	1.007	5973	50	101.1	90	110	
Se	78	2	72	50.504	ppb	3.106	3092	50	101.0	90	110	
Sr	88	3	72	99.457	ppb	1.848	55348	100	99.5	90	110	
Mo	95	3	115	49.512	ppb	0.887	25630	50	99.0	90	110	
Ag	107	3	115	49.754	ppb	2.080	86613	50	99.5	90	110	
Cd	111	3	115	49.670	ppb	0.433	12640	50	99.3	90	110	
Sn	120	3	115	49.364	ppb	1.246	39268	50	98.7	90	110	
Sb	121	3	115	50.081	ppb	1.295	39332	50	100.2	90	110	
Ba	137	3	115	51.851	ppb	3.355	12943	50	103.7	90	110	
Tl	205	3	193	47.339	ppb	2.632	193904	50	94.7	90	110	
(Pb)	206	3	193	48.988	ppb	1.601	65990	50	98.0	90	110	
(Pb)	207	3	193	48.087	ppb	2.297	57799	50	96.2	90	110	
Pb	208	3	193	48.160	ppb	2.008	263564	50	96.3	90	110	
Th	232	3	193	49.642	ppb	2.027	274879	50	99.3	90	110	
U	238	3	193	47.338	ppb	1.025	274046	50	94.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400100	1.08	3887690	113.18	60	120	
Sc (IS)	45	3	HMI He	623088	2.11	560366	111.19	60	120	
Ge Internal standard	72	2	HMI H2	2538005	0.52	2321471	109.33	60	120	
Ge Internal standard	72	3	HMI He	749194	1.17	685485	109.29	60	120	
In Internal Standard	115	3	HMI He	2829705	0.88	2631879	107.52	60	120	
Ir (IS)	193	3	HMI He	6196520	1.81	5771767	107.36	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	136_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:05:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-145.9	2	0.5	
Na	23	3	45	19.080	ppb	13.5	20338	25	
Mg	24	3	45	0.994	ppb	57.6	307	25	
Al	27	3	45	4.656	ppb	43.4	204	15	
K	39	3	45	-10.517	ppb	-172.1	27140	50	
V	51	3	72	-0.869	ppb	-2.0	505	1	
Cr	52	3	72	1.103	ppb	9.0	3122	1	>RL
Mn	55	3	72	0.778	ppb	22.0	511	0.5	>RL
Co	59	3	72	0.033	ppb	5.8	83	0.5	
Ni	60	3	72	1.172	ppb	10.4	798	1	>RL
Cu	63	3	72	0.045	ppb	49.3	521	1	
Zn	66	3	72	-0.014	ppb	-616.2	217	5	
As	75	3	72	-0.313	ppb	-35.6	35	1	
Se	78	2	72	0.025	ppb	70.2	5	1	
Sr	88	3	72	0.028	ppb	77.9	42	0.5	
Mo	95	3	115	0.093	ppb	39.4	88	0.5	
Ag	107	3	115	0.011	ppb	79.5	35	1	
Cd	111	3	115	-0.086	ppb	-26.1	3	0.5	
Sn	120	3	115	0.413	ppb	15.2	1278	1	
Sb	121	3	115	0.044	ppb	6.6	77	0.6	
Ba	137	3	115	0.120	ppb	43.9	70	0.5	
Tl	205	3	193	-0.165	ppb	-2.9	375	0.1	
(Pb)	206	3	193	-0.054	ppb	-36.4	303	1	
(Pb)	207	3	193	-0.044	ppb	-54.1	486	1	
Pb	208	3	193	-0.028	ppb	-11.0	1503	0.5	
Th	232	3	193	1.600	ppb	11.6	14561	1	>RL
U	238	3	193	-0.005	ppb	-169.5	1808	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4425097	1.22	3887690	113.82	60	120	
Sc (IS)	45	3	HMI He	627274	1.14	560366	111.94	60	120	
Ge Internal standard	72	2	HMI H2	2592154	1.63	2321471	111.66	60	120	
Ge Internal standard	72	3	HMI He	757452	0.47	685485	110.50	60	120	
In Internal Standard	115	3	HMI He	2851270	0.80	2631879	108.34	60	120	
Ir (IS)	193	3	HMI He	6264724	1.05	5771767	108.54	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-6-C
Data File Name	137SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:07:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.189	ppb	4.189	23.43	198	2000	
Na	23	3	45	715.144	ppb	715.144	0.16	102806	400000	
Mg	24	3	45	10061.423	ppb	10061.423	0.85	628838	400000	
Al	27	3	45	120622.987	ppb	120622.987	1.53	2971353	400000	
K	39	3	45	11606.268	ppb	11606.268	1.78	614382	400000	
Ca	40	2	45	3688.066	ppb	3688.066	0.62	2316411	400000	
V	51	3	72	276.012	ppb	276.012	0.64	181595	2000	
Cr	52	3	72	185.813	ppb	185.813	1.15	152157	5000	
Mn	55	3	72	1488.915	ppb	1488.915	0.61	632244	10000	
Fe	56	2	72	143081.334	ppb	143081.334	0.44	243028293	10000	>LDR
Co	59	3	72	39.191	ppb	39.191	1.14	54289	2000	
Ni	60	3	72	74.282	ppb	74.282	2.54	28917	5000	
Cu	63	3	72	76.553	ppb	76.553	0.68	81760	5000	
Zn	66	3	72	253.850	ppb	253.850	3.17	42081	5000	
As	75	3	72	37.167	ppb	37.167	3.72	4573	2000	
Se	78	2	72	1.752	ppb	1.752	7.84	114	2000	
Sr	88	3	72	67.167	ppb	67.167	2.63	38774	4000	
Mo	95	3	115	9.806	ppb	9.806	1.28	5228	2000	
Ag	107	3	115	0.197	ppb	0.197	12.51	366	100	
Cd	111	3	115	0.241	ppb	0.241	4.88	88	2000	
Sn	120	3	115	14.405	ppb	14.405	1.01	12418	2000	
Sb	121	3	115	1.918	ppb	1.918	1.97	1583	1000	
Ba	137	3	115	555.447	ppb	555.447	2.09	141508	5000	
Tl	205	3	193	1.009	ppb	1.009	6.29	5155	2000	
(Pb)	206	3	193	85.918	ppb	85.918	1.20	115520	100	
(Pb)	207	3	193	79.418	ppb	79.418	1.87	95165	100	
Pb	208	3	193	82.475	ppb	82.475	1.66	450439	5000	
Th	232	3	193	43.798	ppb	43.798	1.57	243329	2000	
U	238	3	193	8.022	ppb	8.022	1.86	47972	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4486186	0.91	3887690	115.39	60	120	
Sc (IS)	45	3	HMI He	649031	0.08	560366	115.82	60	120	
Ge Internal standard	72	2	HMI H2	2610031	1.11	2321471	112.43	60	120	
Ge Internal standard	72	3	HMI He	776951	0.27	685485	113.34	60	120	
In Internal Standard	115	3	HMI He	2896576	0.91	2631879	110.06	60	120	
Ir (IS)	193	3	HMI He	6199729	1.84	5771767	107.41	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-1-C
Data File Name	138SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:08:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.926	ppb	2.926	18.14	143	2000	
Na	23	3	45	594.578	ppb	594.578	1.65	88403	400000	
Mg	24	3	45	6931.501	ppb	6931.501	2.03	432057	400000	
Al	27	3	45	74251.511	ppb	74251.511	1.56	1823901	400000	
K	39	3	45	6556.294	ppb	6556.294	1.55	358505	400000	
Ca	40	2	45	2170.304	ppb	2170.304	4.51	1343668	400000	
V	51	3	72	199.035	ppb	199.035	0.86	130143	2000	
Cr	52	3	72	143.173	ppb	143.173	1.36	116778	5000	
Mn	55	3	72	2610.667	ppb	2610.667	1.60	1099018	10000	
Fe	56	2	72	95828.196	ppb	95828.196	1.26	161021678	10000	>LDR
Co	59	3	72	40.481	ppb	40.481	1.47	55600	2000	
Ni	60	3	72	66.521	ppb	66.521	1.45	25716	5000	
Cu	63	3	72	175.754	ppb	175.754	1.44	185496	5000	
Zn	66	3	72	335.404	ppb	335.404	1.13	55062	5000	
As	75	3	72	39.267	ppb	39.267	2.62	4787	2000	
Se	78	2	72	3.182	ppb	3.182	7.47	202	2000	
Sr	88	3	72	54.676	ppb	54.676	1.95	31300	4000	
Mo	95	3	115	7.001	ppb	7.001	5.53	3770	2000	
Ag	107	3	115	0.780	ppb	0.780	7.71	1416	100	
Cd	111	3	115	0.442	ppb	0.442	29.35	142	2000	
Sn	120	3	115	22.261	ppb	22.261	1.96	18792	2000	
Sb	121	3	115	5.410	ppb	5.410	4.51	4419	1000	
Ba	137	3	115	532.549	ppb	532.549	0.52	136663	5000	
Tl	205	3	193	1.025	ppb	1.025	2.25	5220	2000	
(Pb)	206	3	193	436.106	ppb	436.106	2.47	584611	100	
(Pb)	207	3	193	403.938	ppb	403.938	1.31	481765	100	
Pb	208	3	193	432.766	ppb	432.766	1.07	2356079	5000	
Th	232	3	193	23.415	ppb	23.415	1.74	132718	2000	
U	238	3	193	6.042	ppb	6.042	1.70	36569	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4409220	2.94	3887690	113.41	60	120	
Sc (IS)	45	3	HMI He	647257	1.00	560366	115.51	60	120	
Ge Internal standard	72	2	HMI H2	2582245	2.43	2321471	111.23	60	120	
Ge Internal standard	72	3	HMI He	770380	0.68	685485	112.38	60	120	
In Internal Standard	115	3	HMI He	2917344	0.69	2631879	110.85	60	120	
Ir (IS)	193	3	HMI He	6197589	1.23	5771767	107.38	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-2-C
Data File Name	139SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:10:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.964	ppb	1.964	11.42	95	2000	
Na	23	3	45	485.761	ppb	485.761	1.80	74976	400000	
Mg	24	3	45	5050.298	ppb	5050.298	0.71	312068	400000	
Al	27	3	45	65362.535	ppb	65362.535	1.78	1591367	400000	
K	39	3	45	6671.806	ppb	6671.806	0.97	361074	400000	
Ca	40	2	45	1441.563	ppb	1441.563	0.35	878375	400000	
V	51	3	72	177.532	ppb	177.532	0.69	115852	2000	
Cr	52	3	72	133.601	ppb	133.601	0.28	108796	5000	
Mn	55	3	72	1075.532	ppb	1075.532	1.01	451553	10000	
Fe	56	2	72	73921.805	ppb	73921.805	2.40	124566174	10000	>LDR
Co	59	3	72	24.804	ppb	24.804	0.40	33981	2000	
Ni	60	3	72	47.752	ppb	47.752	1.48	18508	5000	
Cu	63	3	72	59.379	ppb	59.379	0.64	62802	5000	
Zn	66	3	72	160.000	ppb	160.000	0.34	26304	5000	
As	75	3	72	25.546	ppb	25.546	2.66	3130	2000	
Se	78	2	72	1.008	ppb	1.008	11.90	67	2000	
Sr	88	3	72	48.911	ppb	48.911	1.03	27922	4000	
Mo	95	3	115	6.964	ppb	6.964	6.34	3675	2000	
Ag	107	3	115	0.196	ppb	0.196	15.79	360	100	
Cd	111	3	115	0.124	ppb	0.124	86.60	57	2000	
Sn	120	3	115	11.434	ppb	11.434	3.45	9930	2000	
Sb	121	3	115	1.779	ppb	1.779	6.29	1453	1000	
Ba	137	3	115	463.814	ppb	463.814	3.26	116670	5000	
Tl	205	3	193	0.450	ppb	0.450	10.00	2904	2000	
(Pb)	206	3	193	59.288	ppb	59.288	2.77	80583	100	
(Pb)	207	3	193	55.586	ppb	55.586	2.66	67403	100	
Pb	208	3	193	57.555	ppb	57.555	2.75	317822	5000	
Th	232	3	193	28.635	ppb	28.635	3.18	162599	2000	
U	238	3	193	4.660	ppb	4.660	1.61	28908	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4316322	1.35	3887690	111.03	60	120	
Sc (IS)	45	3	HMI He	641420	0.84	560366	114.46	60	120	
Ge Internal standard	72	2	HMI H2	2589430	1.87	2321471	111.54	60	120	
Ge Internal standard	72	3	HMI He	768070	0.27	685485	112.05	60	120	
In Internal Standard	115	3	HMI He	2861187	2.80	2631879	108.71	60	120	
Ir (IS)	193	3	HMI He	6259393	1.81	5771767	108.45	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-3-C
Data File Name	140SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:12:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.481	ppb	2.481	22.15	120	2000	
Na	23	3	45	498.272	ppb	498.272	2.34	77203	400000	
Mg	24	3	45	5450.700	ppb	5450.700	1.63	340226	400000	
Al	27	3	45	70932.221	ppb	70932.221	0.20	1744680	400000	
K	39	3	45	6959.237	ppb	6959.237	1.36	379258	400000	
Ca	40	2	45	1633.721	ppb	1633.721	2.50	1013132	400000	
V	51	3	72	186.680	ppb	186.680	0.89	121697	2000	
Cr	52	3	72	137.821	ppb	137.821	1.09	112097	5000	
Mn	55	3	72	1064.094	ppb	1064.094	1.27	446520	10000	
Fe	56	2	72	82659.434	ppb	82659.434	0.98	136581223	10000	>LDR
Co	59	3	72	29.950	ppb	29.950	1.08	41005	2000	
Ni	60	3	72	51.601	ppb	51.601	2.78	19959	5000	
Cu	63	3	72	60.412	ppb	60.412	1.38	63852	5000	
Zn	66	3	72	192.380	ppb	192.380	2.97	31562	5000	
As	75	3	72	25.409	ppb	25.409	3.37	3112	2000	
Se	78	2	72	1.117	ppb	1.117	10.85	72	2000	
Sr	88	3	72	52.161	ppb	52.161	1.53	29759	4000	
Mo	95	3	115	9.088	ppb	9.088	4.10	4870	2000	
Ag	107	3	115	0.226	ppb	0.226	14.43	420	100	
Cd	111	3	115	0.279	ppb	0.279	30.74	98	2000	
Sn	120	3	115	16.793	ppb	16.793	3.17	14374	2000	
Sb	121	3	115	1.745	ppb	1.745	12.02	1448	1000	
Ba	137	3	115	467.628	ppb	467.628	2.60	119654	5000	
Tl	205	3	193	0.497	ppb	0.497	3.86	3052	2000	
(Pb)	206	3	193	63.093	ppb	63.093	1.91	84429	100	
(Pb)	207	3	193	58.658	ppb	58.658	0.91	70023	100	
Pb	208	3	193	60.706	ppb	60.706	1.90	330030	5000	
Th	232	3	193	31.010	ppb	31.010	1.31	172945	2000	
U	238	3	193	4.892	ppb	4.892	2.07	29789	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400581	0.76	3887690	113.19	60	120	
Sc (IS)	45	3	HMI He	648059	1.38	560366	115.65	60	120	
Ge Internal standard	72	2	HMI H2	2538819	0.52	2321471	109.36	60	120	
Ge Internal standard	72	3	HMI He	767669	0.69	685485	111.99	60	120	
In Internal Standard	115	3	HMI He	2909642	2.12	2631879	110.55	60	120	
Ir (IS)	193	3	HMI He	6163297	1.58	5771767	106.78	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-4-C
Data File Name	141SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:14:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.664	ppb	2.664	12.57	128	2000	
Na	23	3	45	432.791	ppb	432.791	1.66	69127	400000	
Mg	24	3	45	5431.231	ppb	5431.231	0.44	337073	400000	
Al	27	3	45	66479.128	ppb	66479.128	2.70	1625660	400000	
K	39	3	45	6316.089	ppb	6316.089	1.07	344853	400000	
Ca	40	2	45	1435.414	ppb	1435.414	3.93	896599	400000	
V	51	3	72	181.982	ppb	181.982	0.86	118108	2000	
Cr	52	3	72	132.625	ppb	132.625	1.02	107453	5000	
Mn	55	3	72	996.228	ppb	996.228	0.96	416077	10000	
Fe	56	2	72	85505.582	ppb	85505.582	2.10	143944893	10000	>LDR
Co	59	3	72	25.584	ppb	25.584	1.39	34865	2000	
Ni	60	3	72	51.297	ppb	51.297	1.98	19751	5000	
Cu	63	3	72	54.332	ppb	54.332	1.83	57203	5000	
Zn	66	3	72	168.731	ppb	168.731	3.52	27579	5000	
As	75	3	72	30.580	ppb	30.580	0.12	3714	2000	
Se	78	2	72	0.774	ppb	0.774	4.80	52	2000	
Sr	88	3	72	44.467	ppb	44.467	0.99	25254	4000	
Mo	95	3	115	7.912	ppb	7.912	5.22	4235	2000	
Ag	107	3	115	0.160	ppb	0.160	17.62	302	100	
Cd	111	3	115	0.163	ppb	0.163	15.16	68	2000	
Sn	120	3	115	11.914	ppb	11.914	2.52	10464	2000	
Sb	121	3	115	1.705	ppb	1.705	5.04	1416	1000	
Ba	137	3	115	411.832	ppb	411.832	1.73	105223	5000	
Tl	205	3	193	0.476	ppb	0.476	5.94	3024	2000	
(Pb)	206	3	193	54.117	ppb	54.117	3.53	73817	100	
(Pb)	207	3	193	50.633	ppb	50.633	1.58	61654	100	
Pb	208	3	193	52.287	ppb	52.287	1.91	289822	5000	
Th	232	3	193	27.103	ppb	27.103	1.34	154717	2000	
U	238	3	193	4.468	ppb	4.468	0.47	27877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4425152	1.30	3887690	113.82	60	120	
Sc (IS)	45	3	HMI He	644267	0.58	560366	114.97	60	120	
Ge Internal standard	72	2	HMI H2	2586612	0.69	2321471	111.42	60	120	
Ge Internal standard	72	3	HMI He	764089	0.72	685485	111.47	60	120	
In Internal Standard	115	3	HMI He	2904677	1.83	2631879	110.37	60	120	
Ir (IS)	193	3	HMI He	6278670	1.33	5771767	108.78	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-1-C
Data File Name	142SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:16:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.272	ppb	2.272	28.29	110	2000	
Na	23	3	45	438.400	ppb	438.400	1.73	69888	400000	
Mg	24	3	45	5019.582	ppb	5019.582	1.94	311972	400000	
Al	27	3	45	58841.653	ppb	58841.653	1.93	1440951	400000	
K	39	3	45	4843.192	ppb	4843.192	0.96	271434	400000	
Ca	40	2	45	1506.943	ppb	1506.943	0.40	943913	400000	
V	51	3	72	160.911	ppb	160.911	0.42	106493	2000	
Cr	52	3	72	134.318	ppb	134.318	1.47	110813	5000	
Mn	55	3	72	2005.388	ppb	2005.388	1.39	852868	10000	
Fe	56	2	72	94990.130	ppb	94990.130	1.42	160776629	10000	>LDR
Co	59	3	72	29.188	ppb	29.188	1.26	40509	2000	
Ni	60	3	72	53.070	ppb	53.070	2.92	20799	5000	
Cu	63	3	72	135.686	ppb	135.686	0.87	144774	5000	
Zn	66	3	72	233.419	ppb	233.419	1.60	38777	5000	
As	75	3	72	36.321	ppb	36.321	2.65	4479	2000	
Se	78	2	72	2.866	ppb	2.866	21.66	183	2000	
Sr	88	3	72	43.386	ppb	43.386	1.66	25097	4000	
Mo	95	3	115	7.383	ppb	7.383	6.73	3835	2000	
Ag	107	3	115	0.779	ppb	0.779	7.36	1364	100	
Cd	111	3	115	0.258	ppb	0.258	15.01	90	2000	
Sn	120	3	115	26.420	ppb	26.420	2.20	21338	2000	
Sb	121	3	115	7.185	ppb	7.185	1.48	5648	1000	
Ba	137	3	115	439.111	ppb	439.111	1.20	108710	5000	
Tl	205	3	193	0.737	ppb	0.737	2.52	4134	2000	
(Pb)	206	3	193	571.319	ppb	571.319	1.78	782456	100	>LDR
(Pb)	207	3	193	540.489	ppb	540.489	2.23	658363	100	>LDR
Pb	208	3	193	572.858	ppb	572.858	1.20	3185998	5000	
Th	232	3	193	19.283	ppb	19.283	2.64	112697	2000	
U	238	3	193	4.868	ppb	4.868	3.70	30460	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4439682	2.27	3887690	114.20	60	120	
Sc (IS)	45	3	HMI He	645210	0.82	560366	115.14	60	120	
Ge Internal standard	72	2	HMI H2	2600748	0.45	2321471	112.03	60	120	
Ge Internal standard	72	3	HMI He	778208	0.16	685485	113.53	60	120	
In Internal Standard	115	3	HMI He	2814465	1.41	2631879	106.94	60	120	
Ir (IS)	193	3	HMI He	6332494	1.63	5771767	109.71	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	143_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:17:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.431	ppb	3.013	2396	50	102.9	90	110	
Na	23	3	45	46993.385	ppb	2.456	5436114	51000	92.1	90	110	
Mg	24	3	45	10004.647	ppb	1.036	613710	11000	91.0	90	110	
Al	27	3	45	944.350	ppb	0.614	22925	1000	94.4	90	110	
K	39	3	45	10141.085	ppb	0.456	530426	11000	92.2	90	110	
Ca	40	2	45	10180.057	ppb	1.709	6265138	11000	92.5	90	110	
V	51	3	72	48.672	ppb	0.776	32525	50	97.3	90	110	
Cr	52	3	72	52.045	ppb	0.343	43758	50	104.1	90	110	
Mn	55	3	72	51.181	ppb	2.058	21659	50	102.4	90	110	
Fe	56	2	72	1055.651	ppb	2.011	1813392	1000	105.6	90	110	
Co	59	3	72	49.715	ppb	0.977	68041	50	99.4	90	110	
Ni	60	3	72	51.598	ppb	0.407	19959	50	103.2	90	110	
Cu	63	3	72	49.962	ppb	2.225	52896	50	99.9	90	110	
Zn	66	3	72	49.903	ppb	2.325	8353	50	99.8	90	110	
As	75	3	72	50.482	ppb	4.022	6113	50	101.0	90	110	
Se	78	2	72	49.834	ppb	2.197	3117	50	99.7	90	110	
Sr	88	3	72	100.922	ppb	2.103	57563	100	100.9	90	110	
Mo	95	3	115	48.882	ppb	2.664	25904	50	97.8	90	110	
Ag	107	3	115	48.901	ppb	3.260	87142	50	97.8	90	110	
Cd	111	3	115	48.478	ppb	2.511	12631	50	97.0	90	110	
Sn	120	3	115	48.819	ppb	2.056	39769	50	97.6	90	110	
Sb	121	3	115	49.583	ppb	1.919	39875	50	99.2	90	110	
Ba	137	3	115	51.071	ppb	4.063	13048	50	102.1	90	110	
Tl	205	3	193	48.810	ppb	3.392	195428	50	97.6	90	110	
(Pb)	206	3	193	49.999	ppb	0.269	65839	50	100.0	90	110	
(Pb)	207	3	193	49.815	ppb	1.784	58521	50	99.6	90	110	
Pb	208	3	193	49.562	ppb	0.927	265134	50	99.1	90	110	
Th	232	3	193	49.633	ppb	0.872	268700	50	99.3	90	110	
U	238	3	193	48.751	ppb	2.669	275832	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4411060	0.90	3887690	113.46	60	120	
Sc (IS)	45	3	HMI He	637012	0.46	560366	113.68	60	120	
Ge Internal standard	72	2	HMI H2	2592091	0.73	2321471	111.66	60	120	
Ge Internal standard	72	3	HMI He	767712	0.80	685485	112.00	60	120	
In Internal Standard	115	3	HMI He	2897444	1.86	2631879	110.09	60	120	
Ir (IS)	193	3	HMI He	6057081	0.68	5771767	104.94	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	144_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:19:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.043	ppb	-138.7	2	0.5	
Na	23	3	45	9.227	ppb	48.4	19680	25	
Mg	24	3	45	0.826	ppb	116.2	304	25	
Al	27	3	45	7.182	ppb	15.9	270	15	
K	39	3	45	-19.630	ppb	-135.9	27337	50	
V	51	3	72	-0.693	ppb	-6.5	630	1	
Cr	52	3	72	1.332	ppb	13.2	3370	1	>RL
Mn	55	3	72	0.654	ppb	20.8	470	0.5	>RL
Co	59	3	72	0.020	ppb	56.6	67	0.5	
Ni	60	3	72	1.012	ppb	2.4	753	1	>RL
Cu	63	3	72	-0.024	ppb	-118.6	460	1	
Zn	66	3	72	0.335	ppb	128.2	278	5	
As	75	3	72	-0.291	ppb	-78.2	38	1	
Se	78	2	72	0.014	ppb	342.3	5	1	
Sr	88	3	72	-0.005	ppb	-430.9	23	0.5	
Mo	95	3	115	0.124	ppb	35.6	107	0.5	
Ag	107	3	115	0.006	ppb	154.4	27	1	
Cd	111	3	115	-0.060	ppb	-54.8	10	0.5	
Sn	120	3	115	0.089	ppb	87.1	1048	1	
Sb	121	3	115	0.030	ppb	30.1	67	0.6	
Ba	137	3	115	0.095	ppb	53.2	65	0.5	
Tl	205	3	193	-0.173	ppb	-3.9	337	0.1	
(Pb)	206	3	193	-0.026	ppb	-182.5	337	1	
(Pb)	207	3	193	-0.069	ppb	-7.0	450	1	
Pb	208	3	193	-0.029	ppb	-82.0	1478	0.5	
Th	232	3	193	1.044	ppb	12.5	11380	1	>RL
U	238	3	193	-0.024	ppb	-142.5	1676	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4420399	1.14	3887690	113.70	60	120	
Sc (IS)	45	3	HMI He	642349	0.52	560366	114.63	60	120	
Ge Internal standard	72	2	HMI H2	2615448	1.01	2321471	112.66	60	120	
Ge Internal standard	72	3	HMI He	773131	0.17	685485	112.79	60	120	
In Internal Standard	115	3	HMI He	2915236	0.63	2631879	110.77	60	120	
Ir (IS)	193	3	HMI He	6188177	0.95	5771767	107.21	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F
Data File Name	145SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:21:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.450	ppb	2.450	28.35	120	2000	
Na	23	3	45	309.968	ppb	309.968	1.61	55437	400000	
Mg	24	3	45	3301.253	ppb	3301.253	0.89	207346	400000	
Al	27	3	45	46978.160	ppb	46978.160	2.47	1162067	400000	
K	39	3	45	3549.198	ppb	3549.198	1.83	208604	400000	
Ca	40	2	45	1126.425	ppb	1126.425	0.19	718715	400000	
V	51	3	72	126.987	ppb	126.987	2.48	85314	2000	
Cr	52	3	72	103.072	ppb	103.072	2.05	86636	5000	
Mn	55	3	72	1428.123	ppb	1428.123	2.40	614941	10000	
Fe	56	2	72	58434.781	ppb	58434.781	1.61	99674320	10000	>LDR
Co	59	3	72	18.312	ppb	18.312	2.24	25744	2000	
Ni	60	3	72	34.483	ppb	34.483	3.03	13812	5000	
Cu	63	3	72	63.062	ppb	63.062	1.99	68388	5000	
Zn	66	3	72	130.342	ppb	130.342	1.79	22023	5000	
As	75	3	72	21.336	ppb	21.336	4.90	2694	2000	
Se	78	2	72	1.417	ppb	1.417	13.30	93	2000	
Sr	88	3	72	34.043	ppb	34.043	1.28	19946	4000	
Mo	95	3	115	4.681	ppb	4.681	6.26	2552	2000	
Ag	107	3	115	0.252	ppb	0.252	5.74	471	100	
Cd	111	3	115	0.123	ppb	0.123	32.74	58	2000	
Sn	120	3	115	20.020	ppb	20.020	1.26	17117	2000	
Sb	121	3	115	1.972	ppb	1.972	2.51	1649	1000	
Ba	137	3	115	355.606	ppb	355.606	0.76	91899	5000	
Tl	205	3	193	0.371	ppb	0.371	4.57	2601	2000	
(Pb)	206	3	193	163.900	ppb	163.900	2.07	223989	100	
(Pb)	207	3	193	151.299	ppb	151.299	2.37	184074	100	
Pb	208	3	193	156.792	ppb	156.792	1.72	870292	5000	
Th	232	3	193	18.765	ppb	18.765	2.95	109459	2000	
U	238	3	193	3.563	ppb	3.563	1.51	22719	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4503121	1.68	3887690	115.83	60	120	
Sc (IS)	45	3	HMI He	651694	0.30	560366	116.30	60	120	
Ge Internal standard	72	2	HMI H2	2620301	0.98	2321471	112.87	60	120	
Ge Internal standard	72	3	HMI He	788002	1.30	685485	114.96	60	120	
In Internal Standard	115	3	HMI He	2937436	0.30	2631879	111.61	60	120	
Ir (IS)	193	3	HMI He	6311602	1.56	5771767	109.35	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-Fsd@5
Data File Name	146SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:23:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.577	ppb	0.577	26.59	32	2000	
Na	23	3	45	65.284	ppb	65.284	15.87	26438	400000	
Mg	24	3	45	648.302	ppb	648.302	4.96	40709	400000	
Al	27	3	45	8933.363	ppb	8933.363	3.17	219916	400000	
K	39	3	45	690.511	ppb	690.511	4.36	63410	400000	
Ca	40	2	45	241.059	ppb	241.059	3.01	165080	400000	
V	51	3	72	24.475	ppb	24.475	0.92	17150	2000	
Cr	52	3	72	21.428	ppb	21.428	4.79	19654	5000	
Mn	55	3	72	283.125	ppb	283.125	0.65	120782	10000	
Fe	56	2	72	11192.627	ppb	11192.627	1.18	19344357	10000	
Co	59	3	72	3.706	ppb	3.706	1.18	5187	2000	
Ni	60	3	72	7.773	ppb	7.773	7.30	3365	5000	
Cu	63	3	72	12.717	ppb	12.717	3.43	14032	5000	
Zn	66	3	72	29.224	ppb	29.224	0.57	5060	5000	
As	75	3	72	3.919	ppb	3.919	9.41	550	2000	
Se	78	2	72	0.272	ppb	0.272	31.89	21	2000	
Sr	88	3	72	6.634	ppb	6.634	4.88	3865	4000	
Mo	95	3	115	0.955	ppb	0.955	3.27	555	2000	
Ag	107	3	115	0.072	ppb	0.072	21.81	147	100	
Cd	111	3	115	-0.010	ppb	-0.010	-104.69	23	2000	
Sn	120	3	115	3.904	ppb	3.904	3.12	4142	2000	
Sb	121	3	115	0.404	ppb	0.404	10.99	373	1000	
Ba	137	3	115	69.018	ppb	69.018	1.47	17918	5000	
Tl	205	3	193	-0.087	ppb	-0.087	-35.16	688	2000	
(Pb)	206	3	193	32.981	ppb	32.981	1.88	44775	100	
(Pb)	207	3	193	30.194	ppb	30.194	2.72	36676	100	
Pb	208	3	193	31.339	ppb	31.339	2.25	172938	5000	
Th	232	3	193	3.987	ppb	3.987	2.69	27495	2000	
U	238	3	193	0.656	ppb	0.656	1.03	5618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4548938	2.88	3887690	117.01	60	120	
Sc (IS)	45	3	HMI He	648565	1.61	560366	115.74	60	120	
Ge Internal standard	72	2	HMI H2	2652048	2.67	2321471	114.24	60	120	
Ge Internal standard	72	3	HMI He	779546	1.06	685485	113.72	60	120	
In Internal Standard	115	3	HMI He	2945460	0.66	2631879	111.91	60	120	
Ir (IS)	193	3	HMI He	6227421	1.55	5771767	107.89	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-G MS
Data File Name	147SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:25:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	193.765	ppb	193.765	4.64	9113	2000	
Na	23	3	45	4166.747	ppb	4166.747	0.64	510473	400000	
Mg	24	3	45	7355.056	ppb	7355.056	1.37	461754	400000	
Al	27	3	45	67832.438	ppb	67832.438	1.04	1678156	400000	
K	39	3	45	9218.341	ppb	9218.341	1.23	496033	400000	
Ca	40	2	45	5067.503	ppb	5067.503	2.17	3174748	400000	
V	51	3	72	338.491	ppb	338.491	1.92	223167	2000	
Cr	52	3	72	316.674	ppb	316.674	1.57	258521	5000	
Mn	55	3	72	1640.593	ppb	1640.593	1.88	698857	10000	
Fe	56	2	72	62055.132	ppb	62055.132	1.31	106460384	10000	>LDR
Co	59	3	72	211.276	ppb	211.276	1.09	293455	2000	
Ni	60	3	72	231.644	ppb	231.644	2.41	89684	5000	
Cu	63	3	72	261.561	ppb	261.561	2.34	279050	5000	
Zn	66	3	72	337.209	ppb	337.209	3.11	56004	5000	
As	75	3	72	204.550	ppb	204.550	1.26	24920	2000	
Se	78	2	72	187.244	ppb	187.244	0.76	11897	2000	
Sr	88	3	72	433.167	ppb	433.167	2.43	250711	4000	
Mo	95	3	115	193.287	ppb	193.287	1.60	101764	2000	
Ag	107	3	115	197.690	ppb	197.690	1.49	350412	100	
Cd	111	3	115	188.026	ppb	188.026	2.42	48649	2000	
Sn	120	3	115	207.155	ppb	207.155	2.21	164714	2000	
Sb	121	3	115	187.611	ppb	187.611	2.29	149919	1000	
Ba	137	3	115	619.418	ppb	619.418	2.03	156988	5000	
Tl	205	3	193	186.484	ppb	186.484	1.50	768831	2000	
(Pb)	206	3	193	363.207	ppb	363.207	1.51	491979	100	
(Pb)	207	3	193	345.124	ppb	345.124	2.12	415856	100	
Pb	208	3	193	354.560	ppb	354.560	1.61	1950218	5000	
Th	232	3	193	195.607	ppb	195.607	1.79	1077404	2000	
U	238	3	193	195.841	ppb	195.841	0.67	1140017	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4481228	0.46	3887690	115.27	60	120	
Sc (IS)	45	3	HMI He	651847	0.63	560366	116.33	60	120	
Ge Internal standard	72	2	HMI H2	2635673	1.18	2321471	113.53	60	120	
Ge Internal standard	72	3	HMI He	779566	1.45	685485	113.72	60	120	
In Internal Standard	115	3	HMI He	2881637	0.90	2631879	109.49	60	120	
Ir (IS)	193	3	HMI He	6261260	1.92	5771767	108.48	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-H MSD
Data File Name	148SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:27:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	200.085	ppb	200.085	1.96	9383	2000	
Na	23	3	45	4208.604	ppb	4208.604	0.92	510652	400000	
Mg	24	3	45	7411.526	ppb	7411.526	2.21	461001	400000	
Al	27	3	45	67067.461	ppb	67067.461	3.38	1643955	400000	
K	39	3	45	9233.295	ppb	9233.295	1.70	492192	400000	
Ca	40	2	45	5010.660	ppb	5010.660	1.93	3143508	400000	
V	51	3	72	337.793	ppb	337.793	1.76	224669	2000	
Cr	52	3	72	313.459	ppb	313.459	1.02	258168	5000	
Mn	55	3	72	1624.329	ppb	1624.329	0.94	698040	10000	
Fe	56	2	72	63605.187	ppb	63605.187	2.54	108268171	10000	>LDR
Co	59	3	72	211.748	ppb	211.748	1.57	296679	2000	
Ni	60	3	72	232.745	ppb	232.745	1.02	90906	5000	
Cu	63	3	72	261.966	ppb	261.966	0.98	281962	5000	
Zn	66	3	72	333.896	ppb	333.896	0.78	55948	5000	
As	75	3	72	202.823	ppb	202.823	1.95	24927	2000	
Se	78	2	72	193.485	ppb	193.485	1.71	12200	2000	
Sr	88	3	72	432.213	ppb	432.213	1.30	252376	4000	
Mo	95	3	115	191.656	ppb	191.656	1.39	101977	2000	
Ag	107	3	115	197.055	ppb	197.055	0.80	353004	100	
Cd	111	3	115	186.698	ppb	186.698	2.19	48819	2000	
Sn	120	3	115	206.906	ppb	206.906	1.54	166269	2000	
Sb	121	3	115	186.278	ppb	186.278	1.35	150443	1000	
Ba	137	3	115	613.840	ppb	613.840	1.33	157233	5000	
Tl	205	3	193	191.194	ppb	191.194	3.79	783103	2000	
(Pb)	206	3	193	366.607	ppb	366.607	3.15	493428	100	
(Pb)	207	3	193	352.518	ppb	352.518	3.68	422040	100	
Pb	208	3	193	358.469	ppb	358.469	3.20	1959212	5000	
Th	232	3	193	201.484	ppb	201.484	3.61	1102609	2000	
U	238	3	193	196.697	ppb	196.697	3.65	1137455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4487656	0.72	3887690	115.43	60	120	
Sc (IS)	45	3	HMI He	645862	0.51	560366	115.26	60	120	
Ge Internal standard	72	2	HMI H2	2616262	2.46	2321471	112.70	60	120	
Ge Internal standard	72	3	HMI He	786323	0.41	685485	114.71	60	120	
In Internal Standard	115	3	HMI He	2912165	0.70	2631879	110.65	60	120	
Ir (IS)	193	3	HMI He	6224211	2.85	5771767	107.84	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-I DU
Data File Name	149SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:28:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.354	ppb	2.354	15.35	117	2000	
Na	23	3	45	324.996	ppb	324.996	3.12	57145	400000	
Mg	24	3	45	3266.229	ppb	3266.229	2.04	204900	400000	
Al	27	3	45	45621.808	ppb	45621.808	4.35	1126893	400000	
K	39	3	45	3453.736	ppb	3453.736	0.74	203540	400000	
Ca	40	2	45	1163.245	ppb	1163.245	1.38	734183	400000	
V	51	3	72	127.975	ppb	127.975	1.24	85384	2000	
Cr	52	3	72	104.183	ppb	104.183	0.60	86948	5000	
Mn	55	3	72	1429.728	ppb	1429.728	0.33	611482	10000	
Fe	56	2	72	58069.717	ppb	58069.717	1.11	99823246	10000	>LDR
Co	59	3	72	18.797	ppb	18.797	0.73	26247	2000	
Ni	60	3	72	34.092	ppb	34.092	1.30	13568	5000	
Cu	63	3	72	63.014	ppb	63.014	0.91	67869	5000	
Zn	66	3	72	130.745	ppb	130.745	2.03	21942	5000	
As	75	3	72	21.237	ppb	21.237	2.40	2664	2000	
Se	78	2	72	1.217	ppb	1.217	29.67	81	2000	
Sr	88	3	72	32.848	ppb	32.848	1.62	19112	4000	
Mo	95	3	115	5.169	ppb	5.169	6.06	2794	2000	
Ag	107	3	115	0.272	ppb	0.272	6.38	505	100	
Cd	111	3	115	0.251	ppb	0.251	22.32	92	2000	
Sn	120	3	115	18.427	ppb	18.427	3.41	15716	2000	
Sb	121	3	115	2.388	ppb	2.388	10.74	1971	1000	
Ba	137	3	115	353.123	ppb	353.123	3.86	90570	5000	
Tl	205	3	193	0.437	ppb	0.437	8.05	2876	2000	
(Pb)	206	3	193	161.924	ppb	161.924	2.21	221461	100	
(Pb)	207	3	193	151.099	ppb	151.099	2.36	183968	100	
Pb	208	3	193	156.455	ppb	156.455	1.64	869056	5000	
Th	232	3	193	22.929	ppb	22.929	2.30	132582	2000	
U	238	3	193	3.770	ppb	3.770	1.72	23951	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4456974	1.09	3887690	114.64	60	120	
Sc (IS)	45	3	HMI He	651031	1.52	560366	116.18	60	120	
Ge Internal standard	72	2	HMI H2	2641184	1.64	2321471	113.77	60	120	
Ge Internal standard	72	3	HMI He	782523	0.68	685485	114.16	60	120	
In Internal Standard	115	3	HMI He	2917259	2.65	2631879	110.84	60	120	
Ir (IS)	193	3	HMI He	6315610	0.88	5771767	109.42	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F pds
Data File Name	150SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:30:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	114.117	ppb	114.117	8.03	5183	2000	
Na	23	3	45	5179.635	ppb	5179.635	0.40	627434	400000	
Mg	24	3	45	5226.595	ppb	5226.595	0.51	326887	400000	
Al	27	3	45	47233.603	ppb	47233.603	1.01	1163933	400000	
K	39	3	45	5484.415	ppb	5484.415	0.32	305512	400000	
Ca	40	2	45	3335.503	ppb	3335.503	12.77	1990448	400000	
V	51	3	72	222.345	ppb	222.345	1.12	147417	2000	
Cr	52	3	72	201.596	ppb	201.596	1.17	165918	5000	
Mn	55	3	72	1513.037	ppb	1513.037	0.96	646510	10000	
Fe	56	2	72	61799.646	ppb	61799.646	12.31	103009140	10000	>LDR
Co	59	3	72	116.993	ppb	116.993	1.21	163000	2000	
Ni	60	3	72	132.128	ppb	132.128	0.53	51473	5000	
Cu	63	3	72	162.579	ppb	162.579	0.45	174176	5000	
Zn	66	3	72	334.695	ppb	334.695	0.99	55761	5000	
As	75	3	72	121.381	ppb	121.381	0.82	14862	2000	
Se	78	2	72	108.328	ppb	108.328	6.59	6703	2000	
Sr	88	3	72	131.921	ppb	131.921	0.49	76611	4000	
Mo	95	3	115	103.109	ppb	103.109	0.37	54407	2000	
Ag	107	3	115	26.813	ppb	26.813	1.43	47629	100	
Cd	111	3	115	95.483	ppb	95.483	1.03	24764	2000	
Sn	120	3	115	119.907	ppb	119.907	2.06	95922	2000	
Sb	121	3	115	95.396	ppb	95.396	1.45	76395	1000	
Ba	137	3	115	453.572	ppb	453.572	1.44	115182	5000	
Tl	205	3	193	94.749	ppb	94.749	1.08	392562	2000	
(Pb)	206	3	193	257.226	ppb	257.226	1.34	349787	100	
(Pb)	207	3	193	244.528	ppb	244.528	2.17	295862	100	
Pb	208	3	193	249.730	ppb	249.730	2.02	1379010	5000	
Th	232	3	193	119.871	ppb	119.871	2.15	664871	2000	
U	238	3	193	207.401	ppb	207.401	1.04	1211439	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4283634	6.56	3887690	110.18	60	120	
Sc (IS)	45	3	HMI He	649231	0.17	560366	115.86	60	120	
Ge Internal standard	72	2	HMI H2	2571928	5.28	2321471	110.79	60	120	
Ge Internal standard	72	3	HMI He	781830	0.37	685485	114.06	60	120	
In Internal Standard	115	3	HMI He	2886792	0.69	2631879	109.69	60	120	
Ir (IS)	193	3	HMI He	6283711	1.50	5771767	108.87	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-3-C
Data File Name	151SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:32:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.721	ppb	4.721	16.77	232	2000	
Na	23	3	45	513.703	ppb	513.703	2.77	79461	400000	
Mg	24	3	45	6220.968	ppb	6220.968	0.39	390521	400000	
Al	27	3	45	77914.627	ppb	77914.627	0.35	1927314	400000	
K	39	3	45	5804.251	ppb	5804.251	0.68	322903	400000	
Ca	40	2	45	1769.363	ppb	1769.363	3.25	1116060	400000	
V	51	3	72	179.538	ppb	179.538	1.98	119724	2000	
Cr	52	3	72	136.216	ppb	136.216	0.96	113321	5000	
Mn	55	3	72	3864.060	ppb	3864.060	1.56	1657429	10000	
Fe	56	2	72	85927.257	ppb	85927.257	3.13	146892032	10000	>LDR
Co	59	3	72	42.629	ppb	42.629	1.20	59658	2000	
Ni	60	3	72	66.732	ppb	66.732	0.95	26285	5000	
Cu	63	3	72	185.647	ppb	185.647	0.84	199620	5000	
Zn	66	3	72	307.083	ppb	307.083	0.92	51386	5000	
As	75	3	72	41.915	ppb	41.915	1.78	5202	2000	
Se	78	2	72	3.391	ppb	3.391	9.17	219	2000	
Sr	88	3	72	47.307	ppb	47.307	2.23	27599	4000	
Mo	95	3	115	6.713	ppb	6.713	1.41	3565	2000	
Ag	107	3	115	0.949	ppb	0.949	4.84	1696	100	
Cd	111	3	115	0.585	ppb	0.585	24.54	177	2000	
Sn	120	3	115	30.213	ppb	30.213	1.83	24787	2000	
Sb	121	3	115	5.894	ppb	5.894	3.72	4738	1000	
Ba	137	3	115	541.344	ppb	541.344	1.96	136869	5000	
Tl	205	3	193	1.104	ppb	1.104	2.89	5648	2000	
(Pb)	206	3	193	451.030	ppb	451.030	1.63	616352	100	
(Pb)	207	3	193	425.475	ppb	425.475	1.33	517214	100	
Pb	208	3	193	449.225	ppb	449.225	2.13	2492680	5000	
Th	232	3	193	22.573	ppb	22.573	0.98	130642	2000	
U	238	3	193	6.286	ppb	6.286	2.02	38707	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4481009	1.71	3887690	115.26	60	120	
Sc (IS)	45	3	HMI He	651748	1.66	560366	116.31	60	120	
Ge Internal standard	72	2	HMI H2	2627674	2.06	2321471	113.19	60	120	
Ge Internal standard	72	3	HMI He	784987	0.40	685485	114.52	60	120	
In Internal Standard	115	3	HMI He	2874859	1.86	2631879	109.23	60	120	
Ir (IS)	193	3	HMI He	6317641	1.45	5771767	109.46	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-4-C
Data File Name	152SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:34:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.979	ppb	3.979	14.00	192	2000	
Na	23	3	45	465.714	ppb	465.714	3.04	74691	400000	
Mg	24	3	45	4532.297	ppb	4532.297	0.41	287980	400000	
Al	27	3	45	65427.523	ppb	65427.523	1.20	1637717	400000	
K	39	3	45	4669.811	ppb	4669.811	0.57	268566	400000	
Ca	40	2	45	1358.959	ppb	1358.959	1.66	870659	400000	
V	51	3	72	128.358	ppb	128.358	0.76	85755	2000	
Cr	52	3	72	100.073	ppb	100.073	1.66	83722	5000	
Mn	55	3	72	2551.571	ppb	2551.571	1.27	1092557	10000	
Fe	56	2	72	62059.425	ppb	62059.425	1.34	106727098	10000	>LDR
Co	59	3	72	25.524	ppb	25.524	1.62	35671	2000	
Ni	60	3	72	55.909	ppb	55.909	1.95	22042	5000	
Cu	63	3	72	59.817	ppb	59.817	0.66	64538	5000	
Zn	66	3	72	183.107	ppb	183.107	2.10	30675	5000	
As	75	3	72	18.905	ppb	18.905	6.42	2382	2000	
Se	78	2	72	1.312	ppb	1.312	5.41	87	2000	
Sr	88	3	72	46.408	ppb	46.408	2.11	27027	4000	
Mo	95	3	115	4.642	ppb	4.642	5.84	2504	2000	
Ag	107	3	115	0.237	ppb	0.237	3.80	440	100	
Cd	111	3	115	0.234	ppb	0.234	32.56	87	2000	
Sn	120	3	115	16.174	ppb	16.174	1.98	13870	2000	
Sb	121	3	115	1.617	ppb	1.617	10.84	1344	1000	
Ba	137	3	115	596.869	ppb	596.869	1.75	152595	5000	
Tl	205	3	193	0.646	ppb	0.646	4.03	3762	2000	
(Pb)	206	3	193	106.034	ppb	106.034	0.81	145874	100	
(Pb)	207	3	193	98.857	ppb	98.857	1.01	121155	100	
Pb	208	3	193	102.139	ppb	102.139	0.82	570747	5000	
Th	232	3	193	23.031	ppb	23.031	0.56	133791	2000	
U	238	3	193	4.174	ppb	4.174	1.21	26448	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4535108	0.61	3887690	116.65	60	120	
Sc (IS)	45	3	HMI He	659498	0.13	560366	117.69	60	120	
Ge Internal standard	72	2	HMI H2	2642655	2.47	2321471	113.84	60	120	
Ge Internal standard	72	3	HMI He	783583	0.61	685485	114.31	60	120	
In Internal Standard	115	3	HMI He	2906888	1.37	2631879	110.45	60	120	
Ir (IS)	193	3	HMI He	6346548	0.29	5771767	109.96	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	153_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:36:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.422	ppb	1.301	2319	50	96.8	90	110	
Na	23	3	45	47951.096	ppb	0.975	5641940	51000	94.0	90	110	
Mg	24	3	45	10005.675	ppb	0.531	624316	11000	91.0	90	110	
Al	27	3	45	922.090	ppb	2.944	22775	1000	92.2	90	110	
K	39	3	45	10005.551	ppb	1.668	532660	11000	91.0	90	110	
Ca	40	2	45	9898.260	ppb	0.580	6180491	11000	90.0	90	110	>+\-10%
V	51	3	72	49.908	ppb	0.687	32857	50	99.8	90	110	
Cr	52	3	72	52.498	ppb	0.348	43499	50	105.0	90	110	
Mn	55	3	72	51.911	ppb	2.470	21658	50	103.8	90	110	
Fe	56	2	72	1040.811	ppb	4.873	1775878	1000	104.1	90	110	
Co	59	3	72	50.403	ppb	1.268	68007	50	100.8	90	110	
Ni	60	3	72	51.864	ppb	0.208	19779	50	103.7	90	110	
Cu	63	3	72	50.332	ppb	2.578	52528	50	100.7	90	110	
Zn	66	3	72	51.125	ppb	3.832	8430	50	102.3	90	110	
As	75	3	72	52.955	ppb	2.085	6318	50	105.9	90	110	
Se	78	2	72	49.481	ppb	3.964	3074	50	99.0	90	110	
Sr	88	3	72	100.481	ppb	1.953	56495	100	100.5	90	110	
Mo	95	3	115	47.449	ppb	1.115	25543	50	94.9	90	110	
Ag	107	3	115	48.658	ppb	0.688	88091	50	97.3	90	110	
Cd	111	3	115	47.154	ppb	1.189	12480	50	94.3	90	110	
Sn	120	3	115	47.285	ppb	0.536	39158	50	94.6	90	110	
Sb	121	3	115	48.081	ppb	1.064	39271	50	96.2	90	110	
Ba	137	3	115	50.080	ppb	1.570	13000	50	100.2	90	110	
Tl	205	3	193	46.933	ppb	3.604	194017	50	93.9	90	110	
(Pb)	206	3	193	48.036	ppb	3.536	65312	50	96.1	90	110	
(Pb)	207	3	193	46.344	ppb	1.957	56248	50	92.7	90	110	
Pb	208	3	193	47.389	ppb	2.124	261797	50	94.8	90	110	
Th	232	3	193	48.390	ppb	1.268	270649	50	96.8	90	110	
U	238	3	193	47.208	ppb	2.962	275796	50	94.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4474595	0.81	3887690	115.10	60	120	
Sc (IS)	45	3	HMI He	647936	0.82	560366	115.63	60	120	
Ge Internal standard	72	2	HMI H2	2576750	3.35	2321471	111.00	60	120	
Ge Internal standard	72	3	HMI He	756937	0.87	685485	110.42	60	120	
In Internal Standard	115	3	HMI He	2942544	0.22	2631879	111.80	60	120	
Ir (IS)	193	3	HMI He	6255004	2.23	5771767	108.37	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	154_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:38:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-148.6	2	0.5	
Na	23	3	45	11.884	ppb	36.4	20081	25	
Mg	24	3	45	-0.164	ppb	-162.9	244	25	
Al	27	3	45	4.542	ppb	23.5	207	15	
K	39	3	45	-21.360	ppb	-119.7	27378	50	
V	51	3	72	-0.592	ppb	-16.3	698	1	
Cr	52	3	72	1.346	ppb	35.5	3395	1	>RL
Mn	55	3	72	0.716	ppb	24.6	498	0.5	>RL
Co	59	3	72	0.038	ppb	19.7	92	0.5	
Ni	60	3	72	1.276	ppb	12.6	858	1	>RL
Cu	63	3	72	-0.039	ppb	-172.8	445	1	
Zn	66	3	72	0.034	ppb	131.2	230	5	
As	75	3	72	-0.224	ppb	-46.9	47	1	
Se	78	2	72	0.002	ppb	1658.8	4	1	
Sr	88	3	72	0.035	ppb	74.5	47	0.5	
Mo	95	3	115	0.098	ppb	14.4	92	0.5	
Ag	107	3	115	0.011	ppb	51.6	37	1	
Cd	111	3	115	-0.053	ppb	-75.3	12	0.5	
Sn	120	3	115	0.169	ppb	70.8	1100	1	
Sb	121	3	115	0.043	ppb	64.8	77	0.6	
Ba	137	3	115	0.071	ppb	16.6	58	0.5	
Tl	205	3	193	-0.158	ppb	-8.4	396	0.1	
(Pb)	206	3	193	-0.047	ppb	-60.2	308	1	
(Pb)	207	3	193	-0.123	ppb	-33.5	386	1	
Pb	208	3	193	-0.070	ppb	-7.9	1256	0.5	
Th	232	3	193	1.430	ppb	12.0	13489	1	>RL
U	238	3	193	0.004	ppb	597.5	1841	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4478124	2.06	3887690	115.19	60	120	
Sc (IS)	45	3	HMI He	645318	0.77	560366	115.16	60	120	
Ge Internal standard	72	2	HMI H2	2680164	0.91	2321471	115.45	60	120	
Ge Internal standard	72	3	HMI He	776456	0.59	685485	113.27	60	120	
In Internal Standard	115	3	HMI He	2883459	0.22	2631879	109.56	60	120	
Ir (IS)	193	3	HMI He	6193817	1.04	5771767	107.31	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	156SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:12:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	157SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:14:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	158SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:15:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	159SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:17:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	160SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:19:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	161CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-19T18:21:18-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	649.52
Na	23	45	3	HMI He	16700	0.00
Mg	24	45	3	HMI He	270	8.56
Al	27	45	3	HMI He	153	30.15
K	39	45	3	HMI He	28103	0.01
Ca	40	45	2	HMI H2	12952	0.04
V	51	72	3	HMI He	996	0.98
Cr	52	72	3	HMI He	3124	0.29
Mn	55	72	3	HMI He	378	4.77
Fe	56	72	2	HMI H2	63727	0.01
Co	59	72	3	HMI He	55	28.64
Ni	60	72	3	HMI He	690	2.05
Cu	63	72	3	HMI He	395	1.16
Zn	66	72	3	HMI He	228	6.17
As	75	72	3	HMI He	43	81.37
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	23	347.82
Sr	88	72	3	HMI He	43	85.62
Mo	95	115	3	HMI He	38	85.67
Ag	107	115	3	HMI He	13	429.74
Cd	111	115	3	HMI He	10	866.60
Sn	120	115	3	HMI He	755	1.48
Sb	121	115	3	HMI He	45	65.37
Ba	137	115	3	HMI He	62	27.38
Tl	205	193	3	HMI He	380	3.81
(Pb)	206	193	3	HMI He	318	5.97
(Pb)	207	193	3	HMI He	481	2.29
Pb	208	193	3	HMI He	1484	0.12
Th	232	193	3	HMI He	6897	0.12
U	238	193	3	HMI He	1533	0.18

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	4300192	1.48
Sc (IS)	45	3	HMI He	644593	0.42
Ge Internal standard	72	2	HMI H2	2598552	1.09
Ge Internal standard	72	3	HMI He	772392	0.66
In Internal Standard	115	3	HMI He	2872781	1.83
Ir (IS)	193	3	HMI He	6092963	0.22

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	162CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-19T18:23:05-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	161CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	11542953	0.00
Mg	24	45	3	HMI He	1211814	0.00
Al	27	45	3	HMI He	153	19.16
K	39	45	3	HMI He	1018275	0.00
V	51	72	3	HMI He	1091	0.43
Cr	52	72	3	HMI He	3375	0.12
Mn	55	72	3	HMI He	398	3.46
Co	59	72	3	HMI He	93	28.33
Ni	60	72	3	HMI He	793	0.53
Cu	63	72	3	HMI He	578	1.48
Zn	66	72	3	HMI He	353	3.26
As	75	72	3	HMI He	63	80.17
Se	78	72	2	HMI H2	7	568.09
(Se)	78	72	3	HMI He	22	325.48
Sr	88	72	3	HMI He	292	3.83
Mo	95	115	3	HMI He	73	56.07
Ag	107	115	3	HMI He	42	66.55
Cd	111	115	3	HMI He	15	444.62
Sn	120	115	3	HMI He	908	0.88
Sb	121	115	3	HMI He	53	71.07
Ba	137	115	3	HMI He	182	6.31
Tl	205	193	3	HMI He	212	10.07
(Pb)	206	193	3	HMI He	388	2.35
(Pb)	207	193	3	HMI He	560	0.84
Pb	208	193	3	HMI He	1639	0.13
Th	232	193	3	HMI He	5652	0.04
U	238	193	3	HMI He	1659	0.28

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4345877	0.57	4300192	101.06	60	120	
Sc (IS)	45	3	HMI He	646398	1.04	644593	100.28	60	120	
Ge Internal standard	72	2	HMI H2	2478875	2.60	2598552	95.39	60	120	
Ge Internal standard	72	3	HMI He	746652	0.46	772392	96.67	60	120	
In Internal Standard	115	3	HMI He	2913487	0.28	2872781	101.42	60	120	
Ir (IS)	193	3	HMI He	6127949	1.75	6092963	100.57	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	163CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-19T18:24:50-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	161CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4492	0.08
Na	23	45	3	HMI He	247645	0.00
Mg	24	45	3	HMI He	121495	0.00
Al	27	45	3	HMI He	46834	0.00
K	39	45	3	HMI He	125530	0.00
V	51	72	3	HMI He	66816	0.00
Cr	52	72	3	HMI He	84037	0.00
Mn	55	72	3	HMI He	43088	0.00
Co	59	72	3	HMI He	137360	0.00
Ni	60	72	3	HMI He	39433	0.00
Cu	63	72	3	HMI He	105761	0.00
Zn	66	72	3	HMI He	17100	0.01
As	75	72	3	HMI He	11966	0.02
Se	78	72	2	HMI H2	6170	0.01
(Se)	78	72	3	HMI He	693	2.06
Sr	88	72	3	HMI He	113456	0.00
Mo	95	115	3	HMI He	51821	0.00
Ag	107	115	3	HMI He	174838	0.00
Cd	111	115	3	HMI He	24926	0.01
Sn	120	115	3	HMI He	79605	0.00
Sb	121	115	3	HMI He	78154	0.00
Ba	137	115	3	HMI He	25524	0.01
Tl	205	193	3	HMI He	385460	0.00
(Pb)	206	193	3	HMI He	128141	0.00
(Pb)	207	193	3	HMI He	112870	0.00
Pb	208	193	3	HMI He	517163	0.00
Th	232	193	3	HMI He	520653	0.00
U	238	193	3	HMI He	542005	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416121	3.15	4300192	102.70	60	120	
Sc (IS)	45	3	HMI He	643874	0.14	644593	99.89	60	120	
Ge Internal standard	72	2	HMI H2	2663498	2.80	2598552	102.50	60	120	
Ge Internal standard	72	3	HMI He	799151	0.74	772392	103.46	60	120	
In Internal Standard	115	3	HMI He	2887881	0.25	2872781	100.53	60	120	
Ir (IS)	193	3	HMI He	6075954	2.08	6092963	99.72	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	164_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:26:37-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.973	ppb	3.165	1806	40	102.4	90	110	
Na	23	3	45	12931.845	ppb	1.631	1517283	12800	101.0	90	110	
Mg	24	3	45	4626.207	ppb	1.911	282388	4800	96.4	90	110	
Al	27	3	45	744.838	ppb	1.321	17726	800	93.1	90	110	
K	39	3	45	4627.923	ppb	0.835	259015	4800	96.4	90	110	
Ca	40	2	45	4818.738	ppb	0.754	2869774	4800	100.4	90	110	
V	51	3	72	41.258	ppb	1.431	27185	40	103.1	90	110	
Cr	52	3	72	42.319	ppb	2.232	36122	40	105.8	90	110	
Mn	55	3	72	42.645	ppb	1.090	17948	40	106.6	90	110	
Fe	56	2	72	848.670	ppb	2.786	1389452	800	106.1	90	110	
Co	59	3	72	41.368	ppb	0.725	54869	40	103.4	90	110	
Ni	60	3	72	41.149	ppb	1.929	16063	40	102.9	90	110	
Cu	63	3	72	42.156	ppb	0.788	43253	40	105.4	90	110	
Zn	66	3	72	82.201	ppb	2.648	13607	80	102.8	90	110	
As	75	3	72	40.365	ppb	1.868	4687	40	100.9	90	110	
Se	78	2	72	43.250	ppb	1.023	2564	40	108.1	90	110	
Sr	88	3	72	123.495	ppb	0.758	67625	120	102.9	90	110	
Mo	95	3	115	39.776	ppb	2.602	20856	40	99.4	90	110	
Ag	107	3	115	79.963	ppb	2.670	141296	80	100.0	90	110	
Cd	111	3	115	39.060	ppb	3.141	9845	40	97.6	90	110	
Sn	120	3	115	40.280	ppb	1.873	32876	40	100.7	90	110	
Sb	121	3	115	40.073	ppb	1.960	31687	40	100.2	90	110	
Ba	137	3	115	41.077	ppb	3.815	10636	40	102.7	90	110	
Tl	205	3	193	39.290	ppb	0.825	154016	40	98.2	90	110	
(Pb)	206	3	193	40.919	ppb	2.103	53436	40	102.3	90	110	
(Pb)	207	3	193	39.233	ppb	0.588	45256	40	98.1	90	110	
Pb	208	3	193	40.171	ppb	1.236	211862	40	100.4	90	110	
Th	232	3	193	79.580	ppb	1.149	422112	80	99.5	90	110	
U	238	3	193	42.356	ppb	1.978	234041	40	105.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4410499	1.73	4300192	102.57	60	120	
Sc (IS)	45	3	HMI He	650733	0.35	644593	100.95	60	120	
Ge Internal standard	72	2	HMI H2	2556811	0.53	2598552	98.39	60	120	
Ge Internal standard	72	3	HMI He	771169	0.53	772392	99.84	60	120	
In Internal Standard	115	3	HMI He	2919678	2.13	2872781	101.63	60	120	
Ir (IS)	193	3	HMI He	6169073	0.98	6092963	101.25	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	165_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:28:25-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.006	ppb	3.891	2321	50	104.0	90	110	
Na	23	3	45	48491.391	ppb	1.073	5551354	51000	95.1	90	110	
Mg	24	3	45	10203.337	ppb	1.802	612356	11000	92.8	90	110	
Al	27	3	45	1002.387	ppb	1.233	23413	1000	100.2	90	110	
K	39	3	45	10543.587	ppb	0.309	544843	11000	95.9	90	110	
Ca	40	2	45	10179.436	ppb	1.940	6198045	11000	92.5	90	110	
V	51	3	72	51.102	ppb	0.489	33410	50	102.2	90	110	
Cr	52	3	72	52.074	ppb	0.482	43700	50	104.1	90	110	
Mn	55	3	72	50.606	ppb	0.742	21214	50	101.2	90	110	
Fe	56	2	72	1059.567	ppb	1.387	1747757	1000	106.0	90	110	
Co	59	3	72	51.122	ppb	1.167	67751	50	102.2	90	110	
Ni	60	3	72	51.762	ppb	0.666	20014	50	103.5	90	110	
Cu	63	3	72	51.722	ppb	1.334	52945	50	103.4	90	110	
Zn	66	3	72	51.114	ppb	1.255	8540	50	102.2	90	110	
As	75	3	72	52.863	ppb	0.581	6120	50	105.7	90	110	
Se	78	2	72	49.921	ppb	2.193	3009	50	99.8	90	110	
Sr	88	3	72	104.058	ppb	2.472	56954	100	104.1	90	110	
Mo	95	3	115	50.298	ppb	1.711	26326	50	100.6	90	110	
Ag	107	3	115	49.062	ppb	1.613	86574	50	98.1	90	110	
Cd	111	3	115	51.918	ppb	1.842	13067	50	103.8	90	110	
Sn	120	3	115	48.086	ppb	2.074	39031	50	96.2	90	110	
Sb	121	3	115	49.760	ppb	1.825	39271	50	99.5	90	110	
Ba	137	3	115	49.998	ppb	2.148	12910	50	100.0	90	110	
Tl	205	3	193	50.154	ppb	3.024	194787	50	100.3	90	110	
(Pb)	206	3	193	49.492	ppb	1.528	64016	50	99.0	90	110	
(Pb)	207	3	193	49.793	ppb	1.699	56817	50	99.6	90	110	
Pb	208	3	193	49.602	ppb	1.671	259029	50	99.2	90	110	
Th	232	3	193	52.550	ppb	1.303	278746	50	105.1	90	110	
U	238	3	193	50.129	ppb	1.545	274365	50	100.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4520502	1.04	4300192	105.12	60	120	
Sc (IS)	45	3	HMI He	640162	0.73	644593	99.31	60	120	
Ge Internal standard	72	2	HMI H2	2599539	1.83	2598552	100.04	60	120	
Ge Internal standard	72	3	HMI He	770642	0.73	772392	99.77	60	120	
In Internal Standard	115	3	HMI He	2914703	0.58	2872781	101.46	60	120	
Ir (IS)	193	3	HMI He	6117188	1.67	6092963	100.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	166_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:30:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	27.455	ppb	17.7	19944	25	>RL
Mg	24	3	45	1.301	ppb	17.3	350	25	
Al	27	3	45	-0.591	ppb	-132.5	140	15	
K	39	3	45	1.275	ppb	1206.6	28294	50	
V	51	3	72	0.235	ppb	36.9	1153	1	
Cr	52	3	72	0.547	ppb	36.1	3572	1	
Mn	55	3	72	0.035	ppb	402.8	395	0.5	
Co	59	3	72	0.016	ppb	77.0	77	0.5	
Ni	60	3	72	0.692	ppb	16.1	955	1	
Cu	63	3	72	0.012	ppb	439.1	410	1	
Zn	66	3	72	-0.060	ppb	-268.5	220	5	
As	75	3	72	0.342	ppb	19.9	83	1	
Se	78	2	72	0.088	ppb	20.9	7	1	
Sr	88	3	72	0.006	ppb	737.4	47	0.5	
Mo	95	3	115	0.088	ppb	24.7	85	0.5	
Ag	107	3	115	0.023	ppb	48.8	53	1	
Cd	111	3	115	0.013	ppb	246.7	13	0.5	
Sn	120	3	115	0.239	ppb	16.9	958	1	
Sb	121	3	115	0.054	ppb	25.9	88	0.6	
Ba	137	3	115	-0.017	ppb	-206.9	58	0.5	
Tl	205	3	193	-0.013	ppb	-72.0	337	0.1	
(Pb)	206	3	193	-0.045	ppb	-48.4	268	1	
(Pb)	207	3	193	-0.051	ppb	-46.6	435	1	
Pb	208	3	193	-0.042	ppb	-23.6	1301	0.5	
Th	232	3	193	1.890	ppb	9.6	17070	1	>RL
U	238	3	193	0.039	ppb	42.5	1789	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400686	1.62	4300192	102.34	60	120	
Sc (IS)	45	3	HMI He	647440	1.12	644593	100.44	60	120	
Ge Internal standard	72	2	HMI H2	2603566	0.77	2598552	100.19	60	120	
Ge Internal standard	72	3	HMI He	777078	0.56	772392	100.61	60	120	
In Internal Standard	115	3	HMI He	2919165	2.18	2872781	101.61	60	120	
Ir (IS)	193	3	HMI He	6249640	2.31	6092963	102.57	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	167LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:32:01-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.750	ppb	14.535	40	1	75.0	70	130	
Na	23	3	45	305.665	ppb	3.372	51676	300	101.9	70	130	
Mg	24	3	45	48.963	ppb	5.725	3220	50	97.9	70	130	
Al	27	3	45	42.950	ppb	12.095	1155	50	85.9	70	130	
K	39	3	45	108.683	ppb	19.880	33376	120	90.6	70	130	
Ca	40	2	45	193.555	ppb	1.929	129189	200	96.8	70	130	
V	51	3	72	4.845	ppb	4.984	4065	5	96.9	70	130	
Cr	52	3	72	2.353	ppb	9.813	4950	2	117.7	70	130	
Mn	55	3	72	0.852	ppb	18.335	728	1	85.2	70	130	
Fe	56	2	72	51.681	ppb	11.099	146450	50	103.4	70	130	
Co	59	3	72	1.018	ppb	6.673	1401	1	101.8	70	130	
Ni	60	3	72	2.261	ppb	11.155	1531	2	113.0	70	130	
Cu	63	3	72	1.988	ppb	4.488	2412	2	99.4	70	130	
Zn	66	3	72	9.072	ppb	9.450	1703	10	90.7	70	130	
As	75	3	72	5.334	ppb	4.456	656	5	106.7	70	130	
Se	78	2	72	4.672	ppb	11.759	285	5	93.4	70	130	
Sr	88	3	72	4.832	ppb	5.014	2686	5	96.6	70	130	
Mo	95	3	115	1.767	ppb	4.821	960	2	88.4	70	130	
Ag	107	3	115	0.988	ppb	8.495	1751	1	98.8	70	130	
Cd	111	3	115	0.977	ppb	17.634	255	1	97.7	70	130	
Sn	120	3	115	8.684	ppb	5.012	7652	10	86.8	70	130	
Sb	121	3	115	2.021	ppb	8.462	1634	2	101.0	70	130	
Ba	137	3	115	0.823	ppb	2.187	273	1	82.3	70	130	
Tl	205	3	193	0.891	ppb	3.046	3902	1	89.1	70	130	
(Pb)	206	3	193	0.865	ppb	13.601	1456	1	86.5	70	130	
(Pb)	207	3	193	0.874	ppb	9.420	1498	1	87.4	70	130	
Pb	208	3	193	0.856	ppb	7.152	6033	1	85.6	70	130	
Th	232	3	193	1.485	ppb	14.965	14846	1	148.5	70	130	>+/-30%
U	238	3	193	0.960	ppb	6.242	6878	1	96.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4451222	1.52	4300192	103.51	60	120	
Sc (IS)	45	3	HMI He	642760	1.42	644593	99.72	60	120	
Ge Internal standard	72	2	HMI H2	2611259	1.43	2598552	100.49	60	120	
Ge Internal standard	72	3	HMI He	770357	1.05	772392	99.74	60	120	
In Internal Standard	115	3	HMI He	2906088	1.38	2872781	101.16	60	120	
Ir (IS)	193	3	HMI He	6220701	1.89	6092963	102.10	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609036/1-B
Data File Name	168_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:55:36-06:00
Sample Type	Blank
Dilution	1
Comment	609057 6020b
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	54.581	ppb	0.167723457	23286	25
Mg	24	3	45	1.085	ppb	41.94777928	340	25
Al	27	3	45	2.592	ppb	19.64914671	217	15
K	39	3	45	-0.837	ppb	-1980.866517	28444	50
Ca	40	2	45	15.020	ppb	6.233689535	22334	200
V	51	3	72	0.039	ppb	107.1646743	1033	1
Cr	52	3	72	-0.525	ppb	-23.84580673	2746	1
Mn	55	3	72	-0.117	ppb	-179.8126051	333	0.5
Fe	56	2	72	-1.241	ppb	-89.07008604	63592	50
Co	59	3	72	-0.003	ppb	-211.7968476	52	0.5
Ni	60	3	72	-0.283	ppb	-64.93569685	590	1
Cu	63	3	72	0.287	ppb	12.7890343	695	1
Zn	66	3	72	1.299	ppb	18.4746995	445	5
As	75	3	72	0.123	ppb	118.4989319	58	1
(Se)	78	3	72	-0.058	ppb	-1458.039627	23	1
Sr	88	3	72	0.041	ppb	47.430189	67	0.5
Mo	95	3	115	0.024	ppb	239.1274034	52	0.5
Ag	107	3	115	0.005	ppb	166.9571439	23	1
Cd	111	3	115	-0.021	ppb	-93.40690784	5	0.5
Sn	120	3	115	0.100	ppb	141.460846	853	1
Sb	121	3	115	0.026	ppb	113.668541	67	0.6
Ba	137	3	115	0.091	ppb	39.32124844	87	0.5
Tl	205	3	193	-0.042	ppb	-23.36577668	222	0.1
(Pb)	206	3	193	-0.034	ppb	-49.8860987	282	1
(Pb)	207	3	193	0.029	ppb	81.81627739	526	1
Pb	208	3	193	-0.025	ppb	-51.68552183	1386	0.5
Th	232	3	193	-0.271	ppb	-21.66249358	5637	1
U	238	3	193	0.016	ppb	55.47367837	1658	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4439674	1.24	4300192	103.24	60	120	
Sc (IS)	45	3	HMI He	653353	0.53	644593	101.36	60	120	
Ge Internal standard	72	2	HMI H2	2675845	2.23	2598552	102.97	60	120	
Ge Internal standard	72	3	HMI He	781210	1.04	772392	101.14	60	120	
In Internal Standard	115	3	HMI He	2942634	1.42	2872781	102.43	60	120	
Ir (IS)	193	3	HMI He	6241327	0.54	6092963	102.44	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609036/2-C
Data File Name	169_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:57:25-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609057 6020b
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.014	40.014	ppb	9.952	1799	40	100.0	80	120	
Na	23	3	45	750.740	750.740	ppb	2.033	104588	40	1876.9	80	120	>+/-20%
Mg	24	3	45	695.339	695.339	ppb	0.989	42935	40	1738.3	80	120	>+/-20%
Al	27	3	45	728.186	728.186	ppb	1.940	17438	40	1820.5	80	120	>+/-20%
K	39	3	45	719.728	719.728	ppb	2.026	64630	40	1799.3	80	120	>+/-20%
Ca	40	2	45	799.056	799.056	ppb	0.299	493622	40	1997.6	80	120	>+/-20%
V	51	3	72	38.057	38.057	ppb	2.103	25746	40	95.1	80	120	
Cr	52	3	72	38.687	38.687	ppb	1.631	34076	40	96.7	80	120	
Mn	55	3	72	38.377	38.377	ppb	1.985	16572	40	95.9	80	120	
Fe	56	2	72	789.066	789.066	ppb	2.403	1348924	40	1972.7	80	120	>+/-20%
(Fe)	56	3	72	766.951	766.951	ppb	0.186	538037	40	1917.4	80	120	>+/-20%
Co	59	3	72	38.717	38.717	ppb	1.057	52570	40	96.8	80	120	
Ni	60	3	72	37.369	37.369	ppb	0.714	14997	40	93.4	80	120	
Cu	63	3	72	39.974	39.974	ppb	0.514	42006	40	99.9	80	120	
Zn	66	3	72	39.173	39.173	ppb	3.503	6760	40	97.9	80	120	
As	75	3	72	38.522	38.522	ppb	0.825	4580	40	96.3	80	120	
Se	78	2	72	40.163	40.163	ppb	2.005	2478	40	100.4	80	120	
(Se)	78	3	72	35.958	35.958	ppb	19.270	262	40	89.9	80	120	
Sr	88	3	72	77.569	77.569	ppb	1.761	43498	40	193.9	80	120	>+/-20%
Mo	95	3	115	37.431	37.431	ppb	2.205	19469	40	93.6	80	120	
Ag	107	3	115	39.188	39.188	ppb	1.948	68679	40	98.0	80	120	
Cd	111	3	115	38.099	38.099	ppb	2.794	9524	40	95.2	80	120	
Sn	120	3	115	35.737	35.737	ppb	3.187	28999	40	89.3	80	120	
Sb	121	3	115	38.145	38.145	ppb	1.208	29912	40	95.4	80	120	
Ba	137	3	115	38.632	38.632	ppb	4.952	9919	40	96.6	80	120	
Tl	205	3	193	37.380	37.380	ppb	0.733	149090	40	93.5	80	120	
(Pb)	206	3	193	37.287	37.287	ppb	1.300	49570	40	93.2	80	120	
(Pb)	207	3	193	37.186	37.186	ppb	1.084	43665	40	93.0	80	120	
Pb	208	3	193	37.467	37.467	ppb	0.663	201142	40	93.7	80	120	
Th	232	3	193	34.463	34.463	ppb	1.761	189994	40	86.2	80	120	
U	238	3	193	37.304	37.304	ppb	0.036	209911	40	93.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4470655	1.94	4300192	103.96	60	120	
Sc (IS)	45	3	HMI He	654656	0.71	644593	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2661148	1.75	2598552	102.41	60	120	
Ge Internal standard	72	3	HMI He	789409	0.54	772392	102.20	60	120	
In Internal Standard	115	3	HMI He	2895205	1.98	2872781	100.78	60	120	
Ir (IS)	193	3	HMI He	6275966	0.46	6092963	103.00	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-E
Data File Name	170SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:59:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.036	ppb	-0.036	-551.78	5	2000	
Na	23	3	45	113589.274	ppb	113589.274	1.40	13433384	400000	
Mg	24	3	45	49480.849	ppb	49480.849	2.51	3071678	400000	
Al	27	3	45	0.946	ppb	0.946	182.28	180	400000	
K	39	3	45	6750.228	ppb	6750.228	1.63	371314	400000	
Ca	40	2	45	74700.350	ppb	74700.350	2.12	45019419	400000	
V	51	3	72	1.643	ppb	1.643	3.20	2086	2000	
Cr	52	3	72	0.243	ppb	0.243	91.45	3387	5000	
Mn	55	3	72	1.308	ppb	1.308	23.15	940	10000	
Fe	56	2	72	9.263	ppb	9.263	28.26	78567	10000	
Co	59	3	72	0.392	ppb	0.392	12.22	588	2000	
Ni	60	3	72	1.123	ppb	1.123	3.68	1134	5000	
Cu	63	3	72	1.500	ppb	1.500	5.97	1966	5000	
Zn	66	3	72	9.405	ppb	9.405	8.79	1799	5000	
As	75	3	72	1.606	ppb	1.606	21.42	233	2000	
Se	78	2	72	1.712	ppb	1.712	11.49	105	2000	
Sr	88	3	72	1290.108	ppb	1290.108	1.42	722767	4000	
Mo	95	3	115	2.965	ppb	2.965	4.56	1621	2000	
Ag	107	3	115	0.021	ppb	0.021	19.64	52	100	
Cd	111	3	115	0.050	ppb	0.050	117.02	23	2000	
Sn	120	3	115	0.074	ppb	0.074	178.75	841	2000	
Sb	121	3	115	0.280	ppb	0.280	30.64	272	1000	
Ba	137	3	115	50.712	ppb	50.712	1.18	13367	5000	
Tl	205	3	193	-0.021	ppb	-0.021	-27.50	303	2000	
(Pb)	206	3	193	0.030	ppb	0.030	66.87	363	100	
(Pb)	207	3	193	0.078	ppb	0.078	42.95	580	100	
Pb	208	3	193	0.035	ppb	0.035	61.91	1694	5000	
Th	232	3	193	1.901	ppb	1.901	14.03	16997	2000	
U	238	3	193	10.980	ppb	10.980	0.05	62175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4482052	0.63	4300192	104.23	60	120	
Sc (IS)	45	3	HMI He	662428	0.83	644593	102.77	60	120	
Ge Internal standard	72	2	HMI H2	2601889	1.70	2598552	100.13	60	120	
Ge Internal standard	72	3	HMI He	789531	1.30	772392	102.22	60	120	
In Internal Standard	115	3	HMI He	2975586	1.37	2872781	103.58	60	120	
Ir (IS)	193	3	HMI He	6203985	0.87	6092963	101.82	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-Esd@5
Data File Name	171SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:01:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	23727.265	ppb	23727.265	0.82	2815188	400000	
Mg	24	3	45	10031.707	ppb	10031.707	2.00	621905	400000	
Al	27	3	45	0.276	ppb	0.276	1041.43	163	400000	
K	39	3	45	1355.979	ppb	1355.979	4.68	97487	400000	
Ca	40	2	45	15276.510	ppb	15276.510	2.24	9300859	400000	
V	51	3	72	0.562	ppb	0.562	14.62	1358	2000	
Cr	52	3	72	0.026	ppb	0.026	1051.69	3154	5000	
Mn	55	3	72	1.719	ppb	1.719	4.74	1091	10000	
Fe	56	2	72	2.911	ppb	2.911	83.03	68484	10000	
Co	59	3	72	0.080	ppb	0.080	18.45	162	2000	
Ni	60	3	72	0.415	ppb	0.415	37.29	848	5000	
Cu	63	3	72	0.442	ppb	0.442	11.24	848	5000	
Zn	66	3	72	4.732	ppb	4.732	11.99	1003	5000	
As	75	3	72	0.503	ppb	0.503	43.27	102	2000	
Se	78	2	72	0.320	ppb	0.320	57.77	21	2000	
Sr	88	3	72	267.709	ppb	267.709	0.37	147257	4000	
Mo	95	3	115	0.619	ppb	0.619	13.42	366	2000	
Ag	107	3	115	0.018	ppb	0.018	53.95	47	100	
Cd	111	3	115	-0.014	ppb	-0.014	-158.20	7	2000	
Sn	120	3	115	0.162	ppb	0.162	23.73	906	2000	
Sb	121	3	115	0.090	ppb	0.090	44.04	118	1000	
Ba	137	3	115	10.643	ppb	10.643	6.45	2832	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-3.19	227	2000	
(Pb)	206	3	193	0.336	ppb	0.336	21.98	765	100	
(Pb)	207	3	193	0.341	ppb	0.341	2.72	885	100	
Pb	208	3	193	0.336	ppb	0.336	8.44	3290	5000	
Th	232	3	193	0.092	ppb	0.092	95.41	7525	2000	
U	238	3	193	2.325	ppb	2.325	2.29	14438	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4523217	0.56	4300192	105.19	60	120	
Sc (IS)	45	3	HMI He	661327	1.55	644593	102.60	60	120	
Ge Internal standard	72	2	HMI H2	2603127	3.41	2598552	100.18	60	120	
Ge Internal standard	72	3	HMI He	774925	0.47	772392	100.33	60	120	
In Internal Standard	115	3	HMI He	2952119	1.11	2872781	102.76	60	120	
Ir (IS)	193	3	HMI He	6224081	1.43	6092963	102.15	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-F MS
Data File Name	172SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:02:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.961	ppb	40.961	6.41	1804	2000	
Na	23	3	45	112416.789	ppb	112416.789	1.89	13297912	400000	
Mg	24	3	45	49051.373	ppb	49051.373	0.69	3046009	400000	
Al	27	3	45	768.019	ppb	768.019	3.66	18601	400000	
K	39	3	45	7477.776	ppb	7477.776	1.09	408308	400000	
Ca	40	2	45	77230.298	ppb	77230.298	2.51	46507105	400000	
V	51	3	72	40.336	ppb	40.336	0.49	27340	2000	
Cr	52	3	72	40.248	ppb	40.248	0.39	35467	5000	
Mn	55	3	72	41.720	ppb	41.720	0.66	18056	10000	
Fe	56	2	72	827.816	ppb	827.816	4.08	1408820	10000	
Co	59	3	72	39.568	ppb	39.568	1.76	53948	2000	
Ni	60	3	72	40.210	ppb	40.210	0.68	16150	5000	
Cu	63	3	72	40.711	ppb	40.711	0.45	42948	5000	
Zn	66	3	72	49.318	ppb	49.318	2.82	8483	5000	
As	75	3	72	41.308	ppb	41.308	2.32	4928	2000	
Se	78	2	72	42.433	ppb	42.433	3.27	2613	2000	
Sr	88	3	72	1343.910	ppb	1343.910	0.43	755962	4000	
Mo	95	3	115	40.421	ppb	40.421	1.41	21491	2000	
Ag	107	3	115	39.098	ppb	39.098	0.92	70068	100	
Cd	111	3	115	37.918	ppb	37.918	1.00	9694	2000	
Sn	120	3	115	36.414	ppb	36.414	1.66	30204	2000	
Sb	121	3	115	38.541	ppb	38.541	1.25	30904	1000	
Ba	137	3	115	90.284	ppb	90.284	1.00	23623	5000	
Tl	205	3	193	38.490	ppb	38.490	1.22	153680	2000	
(Pb)	206	3	193	38.588	ppb	38.588	0.71	51348	100	
(Pb)	207	3	193	38.254	ppb	38.254	0.88	44962	100	
Pb	208	3	193	38.393	ppb	38.393	1.58	206298	5000	
Th	232	3	193	37.288	ppb	37.288	2.22	205203	2000	
U	238	3	193	49.750	ppb	49.750	2.51	279687	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4479640	1.16	4300192	104.17	60	120	
Sc (IS)	45	3	HMI He	662539	0.58	644593	102.78	60	120	
Ge Internal standard	72	2	HMI H2	2655570	1.84	2598552	102.19	60	120	
Ge Internal standard	72	3	HMI He	792644	0.36	772392	102.62	60	120	
In Internal Standard	115	3	HMI He	2959887	1.03	2872781	103.03	60	120	
Ir (IS)	193	3	HMI He	6283931	1.83	6092963	103.13	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-G MSD
Data File Name	173SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:04:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.380	ppb	42.380	2.81	1889	2000	
Na	23	3	45	115435.643	ppb	115435.643	1.71	13536457	400000	
Mg	24	3	45	49902.808	ppb	49902.808	1.24	3072016	400000	
Al	27	3	45	723.973	ppb	723.973	3.83	17395	400000	
K	39	3	45	7420.791	ppb	7420.791	0.56	401919	400000	
Ca	40	2	45	77241.280	ppb	77241.280	2.98	46317509	400000	
V	51	3	72	41.099	ppb	41.099	1.74	27735	2000	
Cr	52	3	72	39.441	ppb	39.441	3.11	34691	5000	
Mn	55	3	72	41.561	ppb	41.561	0.89	17923	10000	
Fe	56	2	72	828.013	ppb	828.013	1.56	1379899	10000	
Co	59	3	72	38.840	ppb	38.840	2.79	52755	2000	
Ni	60	3	72	39.717	ppb	39.717	1.07	15903	5000	
Cu	63	3	72	41.274	ppb	41.274	1.01	43376	5000	
Zn	66	3	72	48.204	ppb	48.204	3.29	8267	5000	
As	75	3	72	42.427	ppb	42.427	2.67	5042	2000	
Se	78	2	72	44.448	ppb	44.448	0.62	2679	2000	
Sr	88	3	72	1356.414	ppb	1356.414	1.18	760169	4000	
Mo	95	3	115	41.303	ppb	41.303	1.52	21737	2000	
Ag	107	3	115	38.673	ppb	38.673	1.97	68598	100	
Cd	111	3	115	37.127	ppb	37.127	1.17	9395	2000	
Sn	120	3	115	37.236	ppb	37.236	2.22	30553	2000	
Sb	121	3	115	38.514	ppb	38.514	2.94	30561	1000	
Ba	137	3	115	90.773	ppb	90.773	3.87	23506	5000	
Tl	205	3	193	38.171	ppb	38.171	1.21	152739	2000	
(Pb)	206	3	193	38.339	ppb	38.339	1.90	51122	100	
(Pb)	207	3	193	38.048	ppb	38.048	1.66	44812	100	
Pb	208	3	193	38.162	ppb	38.162	1.45	205516	5000	
Th	232	3	193	38.451	ppb	38.451	0.99	211868	2000	
U	238	3	193	49.359	ppb	49.359	1.25	278150	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4462344	2.79	4300192	103.77	60	120	
Sc (IS)	45	3	HMI He	656805	0.31	644593	101.89	60	120	
Ge Internal standard	72	2	HMI H2	2599351	0.52	2598552	100.03	60	120	
Ge Internal standard	72	3	HMI He	789766	0.90	772392	102.25	60	120	
In Internal Standard	115	3	HMI He	2930146	1.57	2872781	102.00	60	120	
Ir (IS)	193	3	HMI He	6297450	1.67	6092963	103.36	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-E pds
Data File Name	174SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:06:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	102.986	ppb	102.986	3.46	4512	2000	
Na	23	3	45	116614.091	ppb	116614.091	3.10	13625033	400000	
Mg	24	3	45	51284.976	ppb	51284.976	2.96	3145673	400000	
Al	27	3	45	1965.215	ppb	1965.215	2.70	46787	400000	
K	39	3	45	8570.501	ppb	8570.501	2.25	458138	400000	
Ca	40	2	45	77402.595	ppb	77402.595	2.23	46420770	400000	
V	51	3	72	100.130	ppb	100.130	1.37	65976	2000	
Cr	52	3	72	98.937	ppb	98.937	0.75	82044	5000	
Mn	55	3	72	100.129	ppb	100.129	0.29	42550	10000	
Fe	56	2	72	1065.924	ppb	1065.924	2.07	1768813	10000	
Co	59	3	72	98.371	ppb	98.371	1.67	133276	2000	
Ni	60	3	72	99.067	ppb	99.067	1.85	38533	5000	
Cu	63	3	72	103.135	ppb	103.135	1.20	107567	5000	
Zn	66	3	72	208.325	ppb	208.325	1.92	34882	5000	
As	75	3	72	106.960	ppb	106.960	3.15	12618	2000	
Se	78	2	72	102.030	ppb	102.030	2.64	6186	2000	
Sr	88	3	72	1349.986	ppb	1349.986	1.21	755062	4000	
Mo	95	3	115	99.856	ppb	99.856	1.30	52866	2000	
Ag	107	3	115	25.652	ppb	25.652	2.79	45832	100	
Cd	111	3	115	96.205	ppb	96.205	1.98	24498	2000	
Sn	120	3	115	95.095	ppb	95.095	2.54	77368	2000	
Sb	121	3	115	95.043	ppb	95.043	2.15	75882	1000	
Ba	137	3	115	146.726	ppb	146.726	1.96	38226	5000	
Tl	205	3	193	95.854	ppb	95.854	2.43	383238	2000	
(Pb)	206	3	193	95.204	ppb	95.204	3.48	126534	100	
(Pb)	207	3	193	95.828	ppb	95.828	3.23	112173	100	
Pb	208	3	193	94.787	ppb	94.787	3.15	508490	5000	
Th	232	3	193	103.200	ppb	103.200	3.88	556865	2000	
U	238	3	193	217.206	ppb	217.206	3.09	1219389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4461007	1.81	4300192	103.74	60	120	
Sc (IS)	45	3	HMI He	654622	1.43	644593	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2615474	0.42	2598552	100.65	60	120	
Ge Internal standard	72	3	HMI He	788174	0.53	772392	102.04	60	120	
In Internal Standard	115	3	HMI He	2950563	1.29	2872781	102.71	60	120	
Ir (IS)	193	3	HMI He	6303790	2.68	6092963	103.46	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-2-B
Data File Name	175SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:08:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.110	ppb	-0.110	-60.50	2	2000	
Na	23	3	45	114204.456	ppb	114204.456	3.02	13178151	400000	
Mg	24	3	45	45766.703	ppb	45766.703	3.64	2772397	400000	
Al	27	3	45	1.410	ppb	1.410	65.07	187	400000	
K	39	3	45	7633.489	ppb	7633.489	1.96	406049	400000	
Ca	40	2	45	71666.266	ppb	71666.266	0.51	42559849	400000	
V	51	3	72	2.016	ppb	2.016	12.91	2281	2000	
Cr	52	3	72	0.305	ppb	0.305	32.47	3365	5000	
Mn	55	3	72	1.628	ppb	1.628	6.32	1051	10000	
Fe	56	2	72	20.999	ppb	20.999	13.21	96705	10000	
Co	59	3	72	0.327	ppb	0.327	3.45	490	2000	
Ni	60	3	72	1.612	ppb	1.612	6.67	1294	5000	
Cu	63	3	72	1.599	ppb	1.599	4.82	2026	5000	
Zn	66	3	72	19.398	ppb	19.398	7.57	3394	5000	
As	75	3	72	1.501	ppb	1.501	14.37	217	2000	
Se	78	2	72	1.712	ppb	1.712	8.00	105	2000	
Sr	88	3	72	1166.101	ppb	1166.101	1.24	639916	4000	
Mo	95	3	115	2.837	ppb	2.837	4.83	1514	2000	
Ag	107	3	115	0.014	ppb	0.014	51.55	38	100	
Cd	111	3	115	0.039	ppb	0.039	88.03	20	2000	
Sn	120	3	115	0.339	ppb	0.339	23.37	1031	2000	
Sb	121	3	115	0.462	ppb	0.462	14.55	408	1000	
Ba	137	3	115	46.402	ppb	46.402	1.71	11931	5000	
Tl	205	3	193	0.005	ppb	0.005	337.95	405	2000	
(Pb)	206	3	193	0.076	ppb	0.076	14.90	423	100	
(Pb)	207	3	193	0.128	ppb	0.128	66.47	636	100	
Pb	208	3	193	0.110	ppb	0.110	15.75	2091	5000	
Th	232	3	193	2.409	ppb	2.409	13.45	19654	2000	
U	238	3	193	9.799	ppb	9.799	1.36	55606	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416590	1.54	4300192	102.71	60	120	
Sc (IS)	45	3	HMI He	646370	0.34	644593	100.28	60	120	
Ge Internal standard	72	2	HMI H2	2589746	2.03	2598552	99.66	60	120	
Ge Internal standard	72	3	HMI He	773307	0.52	772392	100.12	60	120	
In Internal Standard	115	3	HMI He	2901427	0.73	2872781	101.00	60	120	
Ir (IS)	193	3	HMI He	6198212	0.81	6092963	101.73	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-3-B
Data File Name	176SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:10:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	105877.743	ppb	105877.743	1.11	12161316	400000	
Mg	24	3	45	41195.081	ppb	41195.081	0.46	2483957	400000	
Al	27	3	45	0.160	ppb	0.160	822.66	157	400000	
K	39	3	45	2644.294	ppb	2644.294	1.43	158346	400000	
Ca	40	2	45	92134.882	ppb	92134.882	1.60	55877767	400000	
V	51	3	72	0.215	ppb	0.215	28.81	1173	2000	
Cr	52	3	72	0.135	ppb	0.135	140.36	3342	5000	
Mn	55	3	72	0.703	ppb	0.703	40.10	691	10000	
Fe	56	2	72	5.917	ppb	5.917	46.87	74584	10000	
Co	59	3	72	0.372	ppb	0.372	4.59	568	2000	
Ni	60	3	72	1.058	ppb	1.058	36.10	1124	5000	
Cu	63	3	72	1.227	ppb	1.227	10.43	1701	5000	
Zn	66	3	72	295.418	ppb	295.418	2.25	50071	5000	
As	75	3	72	0.377	ppb	0.377	66.18	90	2000	
Se	78	2	72	0.704	ppb	0.704	21.77	45	2000	
Sr	88	3	72	830.627	ppb	830.627	1.12	471215	4000	
Mo	95	3	115	2.756	ppb	2.756	4.43	1478	2000	
Ag	107	3	115	0.006	ppb	0.006	77.67	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	-154.04	8	2000	
Sn	120	3	115	0.046	ppb	0.046	263.82	801	2000	
Sb	121	3	115	0.090	ppb	0.090	9.41	117	1000	
Ba	137	3	115	34.268	ppb	34.268	4.11	8860	5000	
Tl	205	3	193	-0.037	ppb	-0.037	-16.30	245	2000	
(Pb)	206	3	193	-0.079	ppb	-0.079	-44.05	225	100	
(Pb)	207	3	193	-0.067	ppb	-0.067	-101.69	420	100	
Pb	208	3	193	-0.058	ppb	-0.058	-15.65	1223	5000	
Th	232	3	193	0.160	ppb	0.160	62.38	7990	2000	
U	238	3	193	24.818	ppb	24.818	1.04	140733	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4511558	2.34	4300192	104.92	60	120	
Sc (IS)	45	3	HMI He	643348	1.22	644593	99.81	60	120	
Ge Internal standard	72	2	HMI H2	2652295	1.38	2598552	102.07	60	120	
Ge Internal standard	72	3	HMI He	799395	0.85	772392	103.50	60	120	
In Internal Standard	115	3	HMI He	2913180	1.93	2872781	101.41	60	120	
Ir (IS)	193	3	HMI He	6301086	1.17	6092963	103.42	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-4-B
Data File Name	177SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:11:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-93.00	3	2000	
Na	23	3	45	89462.249	ppb	89462.249	1.70	10348586	400000	
Mg	24	3	45	39594.831	ppb	39594.831	1.52	2403698	400000	
Al	27	3	45	28.524	ppb	28.524	11.14	824	400000	
K	39	3	45	4845.430	ppb	4845.430	0.83	268577	400000	
Ca	40	2	45	45391.731	ppb	45391.731	1.17	26791230	400000	
V	51	3	72	1.030	ppb	1.030	14.15	1621	2000	
Cr	52	3	72	0.376	ppb	0.376	88.68	3355	5000	
Mn	55	3	72	3.109	ppb	3.109	15.64	1629	10000	
Fe	56	2	72	21.482	ppb	21.482	13.83	93471	10000	
Co	59	3	72	0.259	ppb	0.259	8.89	391	2000	
Ni	60	3	72	1.492	ppb	1.492	12.39	1224	5000	
Cu	63	3	72	1.910	ppb	1.910	7.01	2297	5000	
Zn	66	3	72	5.924	ppb	5.924	11.96	1171	5000	
As	75	3	72	2.984	ppb	2.984	4.90	380	2000	
Se	78	2	72	0.442	ppb	0.442	13.10	27	2000	
Sr	88	3	72	905.772	ppb	905.772	1.21	487232	4000	
Mo	95	3	115	3.394	ppb	3.394	2.28	1808	2000	
Ag	107	3	115	0.003	ppb	0.003	162.20	18	100	
Cd	111	3	115	-0.028	ppb	-0.028	-41.63	3	2000	
Sn	120	3	115	0.219	ppb	0.219	45.63	938	2000	
Sb	121	3	115	0.245	ppb	0.245	13.24	238	1000	
Ba	137	3	115	24.321	ppb	24.321	4.22	6293	5000	
Tl	205	3	193	-0.036	ppb	-0.036	-6.55	247	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-948.34	325	100	
(Pb)	207	3	193	0.003	ppb	0.003	258.75	500	100	
Pb	208	3	193	0.002	ppb	0.002	639.53	1539	5000	
Th	232	3	193	-0.086	ppb	-0.086	-169.18	6642	2000	
U	238	3	193	5.958	ppb	5.958	4.56	34861	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4388875	0.15	4300192	102.06	60	120	
Sc (IS)	45	3	HMI He	647650	0.78	644593	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2481147	1.82	2598552	95.48	60	120	
Ge Internal standard	72	3	HMI He	758014	1.50	772392	98.14	60	120	
In Internal Standard	115	3	HMI He	2906436	0.86	2872781	101.17	60	120	
Ir (IS)	193	3	HMI He	6282213	2.62	6092963	103.11	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	178_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:13:34-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.150	ppb	7.804	2334	50	108.3	90	110	
Na	23	3	45	47325.525	ppb	2.947	5422838	51000	92.8	90	110	
Mg	24	3	45	10103.494	ppb	2.344	606804	11000	91.8	90	110	
Al	27	3	45	950.310	ppb	3.582	22216	1000	95.0	90	110	
K	39	3	45	10115.044	ppb	3.540	524111	11000	92.0	90	110	
Ca	40	2	45	10264.042	ppb	0.986	6081381	11000	93.3	90	110	
V	51	3	72	49.799	ppb	1.516	32066	50	99.6	90	110	
Cr	52	3	72	51.680	ppb	1.889	42701	50	103.4	90	110	
Mn	55	3	72	50.452	ppb	0.921	20814	50	100.9	90	110	
Fe	56	2	72	1061.157	ppb	2.619	1720685	1000	106.1	90	110	
Co	59	3	72	49.920	ppb	1.727	65103	50	99.8	90	110	
Ni	60	3	72	49.999	ppb	0.789	19049	50	100.0	90	110	
Cu	63	3	72	50.697	ppb	1.784	51075	50	101.4	90	110	
Zn	66	3	72	49.513	ppb	1.503	8148	50	99.0	90	110	
As	75	3	72	52.178	ppb	2.392	5945	50	104.4	90	110	
Se	78	2	72	51.880	ppb	1.148	3075	50	103.8	90	110	
Sr	88	3	72	104.238	ppb	0.393	56139	100	104.2	90	110	
Mo	95	3	115	48.661	ppb	1.948	25520	50	97.3	90	110	
Ag	107	3	115	47.997	ppb	1.183	84847	50	96.0	90	110	
Cd	111	3	115	48.094	ppb	1.250	12126	50	96.2	90	110	
Sn	120	3	115	47.893	ppb	1.552	38949	50	95.8	90	110	
Sb	121	3	115	48.814	ppb	0.701	38596	50	97.6	90	110	
Ba	137	3	115	48.728	ppb	1.341	12606	50	97.5	90	110	
Tl	205	3	193	49.031	ppb	2.961	191697	50	98.1	90	110	
(Pb)	206	3	193	49.211	ppb	2.116	64066	50	98.4	90	110	
(Pb)	207	3	193	49.575	ppb	3.019	56937	50	99.1	90	110	
Pb	208	3	193	49.258	ppb	1.547	258924	50	98.5	90	110	
Th	232	3	193	48.105	ppb	2.113	257381	50	96.2	90	110	
U	238	3	193	49.372	ppb	1.977	271998	50	98.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4397985	2.08	4300192	102.27	60	120	
Sc (IS)	45	3	HMI He	640744	1.75	644593	99.40	60	120	
Ge Internal standard	72	2	HMI H2	2556215	2.38	2598552	98.37	60	120	
Ge Internal standard	72	3	HMI He	758374	0.41	772392	98.19	60	120	
In Internal Standard	115	3	HMI He	2919949	0.93	2872781	101.64	60	120	
Ir (IS)	193	3	HMI He	6156759	1.07	6092963	101.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	179_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:15:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	61.009	ppb	6.0	23460	25	>RL
Mg	24	3	45	1.774	ppb	39.7	374	25	
Al	27	3	45	-2.956	ppb	-30.9	83	15	
K	39	3	45	8.307	ppb	265.5	28213	50	
V	51	3	72	0.355	ppb	17.0	1233	1	
Cr	52	3	72	0.115	ppb	292.7	3242	1	
Mn	55	3	72	-0.188	ppb	-63.6	303	0.5	
Co	59	3	72	0.005	ppb	396.6	62	0.5	
Ni	60	3	72	0.470	ppb	42.0	873	1	
Cu	63	3	72	0.050	ppb	96.7	450	1	
Zn	66	3	72	0.098	ppb	62.5	247	5	
As	75	3	72	0.297	ppb	65.8	78	1	
Se	78	2	72	0.088	ppb	77.7	7	1	
Sr	88	3	72	0.041	ppb	106.4	67	0.5	
Mo	95	3	115	0.078	ppb	37.2	80	0.5	
Ag	107	3	115	0.006	ppb	78.2	25	1	
Cd	111	3	115	-0.021	ppb	-97.2	5	0.5	
Sn	120	3	115	0.146	ppb	48.5	885	1	
Sb	121	3	115	0.045	ppb	58.9	82	0.6	
Ba	137	3	115	0.001	ppb	4373.0	63	0.5	
Tl	205	3	193	-0.039	ppb	-12.4	242	0.1	
(Pb)	206	3	193	-0.063	ppb	-79.8	248	1	
(Pb)	207	3	193	-0.053	ppb	-39.0	441	1	
Pb	208	3	193	-0.070	ppb	-20.8	1176	0.5	
Th	232	3	193	1.310	ppb	12.4	14293	1	>RL
U	238	3	193	0.028	ppb	48.1	1766	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4360444	1.50	4300192	101.40	60	120	
Sc (IS)	45	3	HMI He	637775	0.83	644593	98.94	60	120	
Ge Internal standard	72	2	HMI H2	2592300	0.57	2598552	99.76	60	120	
Ge Internal standard	72	3	HMI He	779118	0.45	772392	100.87	60	120	
In Internal Standard	115	3	HMI He	2922581	3.34	2872781	101.73	60	120	
Ir (IS)	193	3	HMI He	6380356	0.42	6092963	104.72	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-B
Data File Name	180SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:17:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-64.38	2	2000	
Na	23	3	45	108276.094	ppb	108276.094	2.03	12204949	400000	
Mg	24	3	45	15319.471	ppb	15319.471	2.18	906643	400000	
Al	27	3	45	83.602	ppb	83.602	10.72	2066	400000	
K	39	3	45	5760.462	ppb	5760.462	1.48	306068	400000	
Ca	40	2	45	143543.621	ppb	143543.621	1.90	85006146	400000	
V	51	3	72	0.062	ppb	0.062	204.24	995	2000	
Cr	52	3	72	0.776	ppb	0.776	28.44	3582	5000	
Mn	55	3	72	0.059	ppb	0.059	74.30	386	10000	
Fe	56	2	72	6.962	ppb	6.962	43.85	71814	10000	
Co	59	3	72	0.119	ppb	0.119	18.86	205	2000	
Ni	60	3	72	23.598	ppb	23.598	2.98	9140	5000	
Cu	63	3	72	0.502	ppb	0.502	11.91	870	5000	
Zn	66	3	72	4.361	ppb	4.361	12.28	901	5000	
As	75	3	72	0.286	ppb	0.286	31.05	73	2000	
Se	78	2	72	0.877	ppb	0.877	10.00	53	2000	
Sr	88	3	72	1011.970	ppb	1011.970	0.95	532523	4000	
Mo	95	3	115	4.706	ppb	4.706	4.23	2476	2000	
Ag	107	3	115	0.007	ppb	0.007	132.35	27	100	
Cd	111	3	115	-0.014	ppb	-0.014	-167.75	7	2000	
Sn	120	3	115	-0.004	ppb	-0.004	-2238.58	756	2000	
Sb	121	3	115	0.418	ppb	0.418	8.04	371	1000	
Ba	137	3	115	82.390	ppb	82.390	1.80	21041	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-6.21	217	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-94.96	273	100	
(Pb)	207	3	193	-0.084	ppb	-0.084	-57.10	390	100	
Pb	208	3	193	-0.061	ppb	-0.061	-19.91	1178	5000	
Th	232	3	193	0.165	ppb	0.165	113.36	7812	2000	
U	238	3	193	0.155	ppb	0.155	26.39	2396	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4405896	1.60	4300192	102.46	60	120	
Sc (IS)	45	3	HMI He	631448	1.53	644593	97.96	60	120	
Ge Internal standard	72	2	HMI H2	2494716	1.27	2598552	96.00	60	120	
Ge Internal standard	72	3	HMI He	741538	0.78	772392	96.01	60	120	
In Internal Standard	115	3	HMI He	2887980	0.77	2872781	100.53	60	120	
Ir (IS)	193	3	HMI He	6149543	1.69	6092963	100.93	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-E MS
Data File Name	181SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:18:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.804	ppb	40.804	3.45	1744	2000	
Na	23	3	45	106166.409	ppb	106166.409	1.90	12113896	400000	
Mg	24	3	45	15563.043	ppb	15563.043	1.29	932365	400000	
Al	27	3	45	803.423	ppb	803.423	2.91	18765	400000	
K	39	3	45	6248.382	ppb	6248.382	0.35	333722	400000	
Ca	40	2	45	142741.361	ppb	142741.361	0.99	84257908	400000	
V	51	3	72	38.459	ppb	38.459	1.00	24930	2000	
Cr	52	3	72	39.730	ppb	39.730	1.44	33460	5000	
Mn	55	3	72	39.918	ppb	39.918	1.64	16508	10000	
Fe	56	2	72	797.625	ppb	797.625	1.90	1312212	10000	
Co	59	3	72	38.586	ppb	38.586	1.69	50219	2000	
Ni	60	3	72	61.788	ppb	61.788	0.59	23328	5000	
Cu	63	3	72	39.014	ppb	39.014	0.38	39306	5000	
Zn	66	3	72	41.208	ppb	41.208	3.32	6803	5000	
As	75	3	72	39.970	ppb	39.970	2.34	4554	2000	
Se	78	2	72	39.618	ppb	39.618	1.59	2354	2000	
Sr	88	3	72	1057.854	ppb	1057.854	0.93	568042	4000	
Mo	95	3	115	41.243	ppb	41.243	0.45	21430	2000	
Ag	107	3	115	38.269	ppb	38.269	1.25	67016	100	
Cd	111	3	115	37.014	ppb	37.014	3.85	9245	2000	
Sn	120	3	115	35.422	ppb	35.422	1.70	28732	2000	
Sb	121	3	115	37.513	ppb	37.513	1.15	29391	1000	
Ba	137	3	115	120.543	ppb	120.543	1.21	30802	5000	
Tl	205	3	193	37.373	ppb	37.373	1.03	149872	2000	
(Pb)	206	3	193	37.457	ppb	37.457	2.75	50060	100	
(Pb)	207	3	193	37.031	ppb	37.031	2.38	43718	100	
Pb	208	3	193	37.222	ppb	37.222	1.79	200916	5000	
Th	232	3	193	35.932	ppb	35.932	1.36	198869	2000	
U	238	3	193	38.035	ppb	38.035	0.94	215151	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4391094	1.12	4300192	102.11	60	120	
Sc (IS)	45	3	HMI He	639138	1.24	644593	99.15	60	120	
Ge Internal standard	72	2	HMI H2	2561715	0.89	2598552	98.58	60	120	
Ge Internal standard	72	3	HMI He	756687	0.68	772392	97.97	60	120	
In Internal Standard	115	3	HMI He	2892476	0.95	2872781	100.69	60	120	
Ir (IS)	193	3	HMI He	6310165	0.57	6092963	103.56	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-F MSD
Data File Name	182SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:20:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	43.133	ppb	43.133	6.51	1876	2000	
Na	23	3	45	106808.788	ppb	106808.788	1.10	12180911	400000	
Mg	24	3	45	15751.164	ppb	15751.164	1.82	943024	400000	
Al	27	3	45	790.424	ppb	790.424	2.60	18451	400000	
K	39	3	45	6409.061	ppb	6409.061	2.40	341321	400000	
Ca	40	2	45	143677.144	ppb	143677.144	2.31	84303284	400000	
V	51	3	72	39.486	ppb	39.486	3.82	25492	2000	
Cr	52	3	72	41.025	ppb	41.025	1.31	34357	5000	
Mn	55	3	72	40.427	ppb	40.427	1.79	16667	10000	
Fe	56	2	72	817.129	ppb	817.129	3.74	1319265	10000	
Co	59	3	72	40.024	ppb	40.024	2.14	51941	2000	
Ni	60	3	72	61.926	ppb	61.926	2.54	23311	5000	
Cu	63	3	72	40.689	ppb	40.689	3.83	40853	5000	
Zn	66	3	72	42.775	ppb	42.775	2.17	7035	5000	
As	75	3	72	40.432	ppb	40.432	4.57	4592	2000	
Se	78	2	72	41.550	ppb	41.550	4.59	2425	2000	
Sr	88	3	72	1062.937	ppb	1062.937	1.05	569220	4000	
Mo	95	3	115	43.684	ppb	43.684	2.61	22307	2000	
Ag	107	3	115	39.235	ppb	39.235	1.66	67547	100	
Cd	111	3	115	40.072	ppb	40.072	1.28	9842	2000	
Sn	120	3	115	36.665	ppb	36.665	1.11	29214	2000	
Sb	121	3	115	39.517	ppb	39.517	3.45	30428	1000	
Ba	137	3	115	126.060	ppb	126.060	2.09	31660	5000	
Tl	205	3	193	38.156	ppb	38.156	1.03	152006	2000	
(Pb)	206	3	193	38.702	ppb	38.702	0.89	51378	100	
(Pb)	207	3	193	37.800	ppb	37.800	1.65	44325	100	
Pb	208	3	193	38.405	ppb	38.405	1.56	205899	5000	
Th	232	3	193	38.654	ppb	38.654	0.61	212004	2000	
U	238	3	193	38.965	ppb	38.965	0.78	218931	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365392	1.23	4300192	101.52	60	120	
Sc (IS)	45	3	HMI He	638707	0.78	644593	99.09	60	120	
Ge Internal standard	72	2	HMI H2	2517827	1.71	2598552	96.89	60	120	
Ge Internal standard	72	3	HMI He	754656	1.46	772392	97.70	60	120	
In Internal Standard	115	3	HMI He	2843989	2.11	2872781	99.00	60	120	
Ir (IS)	193	3	HMI He	6268932	0.69	6092963	102.89	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-1-B@50
Data File Name	183SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:22:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.073	ppb	-0.073	-181.67	3	2000	
Na	23	3	45	22827.275	ppb	22827.275	1.44	2586351	400000	
Mg	24	3	45	7235.369	ppb	7235.369	1.23	428414	400000	
Al	27	3	45	1.002	ppb	1.002	129.82	174	400000	
K	39	3	45	314.388	ppb	314.388	7.95	42745	400000	
Ca	40	2	45	10718.537	ppb	10718.537	0.39	6220647	400000	
V	51	3	72	-0.118	ppb	-0.118	-96.99	895	2000	
Cr	52	3	72	0.235	ppb	0.235	165.07	3210	5000	
Mn	55	3	72	2.007	ppb	2.007	11.75	1171	10000	
Fe	56	2	72	4.042	ppb	4.042	86.88	68286	10000	
Co	59	3	72	0.019	ppb	0.019	74.31	78	2000	
Ni	60	3	72	0.510	ppb	0.510	22.80	855	5000	
Cu	63	3	72	0.217	ppb	0.217	2.79	598	5000	
Zn	66	3	72	4.146	ppb	4.146	4.84	878	5000	
As	75	3	72	0.174	ppb	0.174	76.33	62	2000	
Se	78	2	72	47.813	ppb	47.813	3.63	2804	2000	
Sr	88	3	72	198.424	ppb	198.424	0.63	105641	4000	
Mo	95	3	115	0.086	ppb	0.086	64.20	80	2000	
Ag	107	3	115	0.016	ppb	0.016	31.12	40	100	
Cd	111	3	115	-0.020	ppb	-0.020	-103.20	5	2000	
Sn	120	3	115	0.531	ppb	0.531	7.97	1134	2000	
Sb	121	3	115	0.064	ppb	0.064	79.71	92	1000	
Ba	137	3	115	0.219	ppb	0.219	40.95	113	5000	
Tl	205	3	193	-0.024	ppb	-0.024	-30.09	300	2000	
(Pb)	206	3	193	0.404	ppb	0.404	13.61	868	100	
(Pb)	207	3	193	0.382	ppb	0.382	6.56	946	100	
Pb	208	3	193	0.373	ppb	0.373	9.29	3543	5000	
Th	232	3	193	1.903	ppb	1.903	11.44	17327	2000	
U	238	3	193	3.677	ppb	3.677	1.58	22276	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4308668	0.80	4300192	100.20	60	120	
Sc (IS)	45	3	HMI He	631484	1.27	644593	97.97	60	120	
Ge Internal standard	72	2	HMI H2	2529892	0.61	2598552	97.36	60	120	
Ge Internal standard	72	3	HMI He	749987	0.75	772392	97.10	60	120	
In Internal Standard	115	3	HMI He	2782601	1.68	2872781	96.86	60	120	
Ir (IS)	193	3	HMI He	6321109	0.94	6092963	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-2-B@50
Data File Name	184SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:24:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.074	ppb	-0.074	-88.64	3	2000	
Na	23	3	45	45712.170	ppb	45712.170	0.97	5182280	400000	
Mg	24	3	45	6806.536	ppb	6806.536	1.95	404553	400000	
Al	27	3	45	2.581	ppb	2.581	102.17	210	400000	
K	39	3	45	321.613	ppb	321.613	7.01	43240	400000	
Ca	40	2	45	5812.678	ppb	5812.678	1.06	3442662	400000	
V	51	3	72	0.021	ppb	0.021	272.28	990	2000	
Cr	52	3	72	0.363	ppb	0.363	53.70	3339	5000	
Mn	55	3	72	6.153	ppb	6.153	3.58	2859	10000	
Fe	56	2	72	5.935	ppb	5.935	53.24	72136	10000	
Co	59	3	72	0.186	ppb	0.186	10.80	297	2000	
Ni	60	3	72	1.006	ppb	1.006	7.83	1045	5000	
Cu	63	3	72	0.180	ppb	0.180	6.64	566	5000	
Zn	66	3	72	3.918	ppb	3.918	12.99	850	5000	
As	75	3	72	0.215	ppb	0.215	80.00	67	2000	
Se	78	2	72	0.123	ppb	0.123	102.00	9	2000	
Sr	88	3	72	172.552	ppb	172.552	0.76	92729	4000	
Mo	95	3	115	0.163	ppb	0.163	14.48	122	2000	
Ag	107	3	115	0.014	ppb	0.014	89.36	38	100	
Cd	111	3	115	-0.014	ppb	-0.014	-222.87	7	2000	
Sn	120	3	115	0.337	ppb	0.337	47.05	1016	2000	
Sb	121	3	115	0.059	ppb	0.059	62.05	90	1000	
Ba	137	3	115	0.292	ppb	0.292	36.37	135	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-6.86	220	2000	
(Pb)	206	3	193	0.365	ppb	0.365	8.49	806	100	
(Pb)	207	3	193	0.319	ppb	0.319	4.77	861	100	
Pb	208	3	193	0.330	ppb	0.330	1.56	3272	5000	
Th	232	3	193	0.392	ppb	0.392	25.98	9144	2000	
U	238	3	193	1.054	ppb	1.054	3.89	7425	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4389440	1.35	4300192	102.08	60	120	
Sc (IS)	45	3	HMI He	633781	0.15	644593	98.32	60	120	
Ge Internal standard	72	2	HMI H2	2561668	1.44	2598552	98.58	60	120	
Ge Internal standard	72	3	HMI He	757000	1.06	772392	98.01	60	120	
In Internal Standard	115	3	HMI He	2859777	1.68	2872781	99.55	60	120	
Ir (IS)	193	3	HMI He	6244634	1.73	6092963	102.49	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-3-B@50
Data File Name	185SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:26:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.073	ppb	-0.073	-178.91	3	2000	
Na	23	3	45	22808.443	ppb	22808.443	0.67	2588615	400000	
Mg	24	3	45	5761.280	ppb	5761.280	1.03	341760	400000	
Al	27	3	45	0.564	ppb	0.564	41.94	163	400000	
K	39	3	45	239.810	ppb	239.810	10.22	39187	400000	
Ca	40	2	45	7870.827	ppb	7870.827	0.82	4588819	400000	
V	51	3	72	0.169	ppb	0.169	18.72	1088	2000	
Cr	52	3	72	0.405	ppb	0.405	55.81	3390	5000	
Mn	55	3	72	5.811	ppb	5.811	6.77	2737	10000	
Fe	56	2	72	6.852	ppb	6.852	51.09	72810	10000	
Co	59	3	72	0.018	ppb	0.018	81.53	78	2000	
Ni	60	3	72	0.620	ppb	0.620	20.70	908	5000	
Cu	63	3	72	0.202	ppb	0.202	8.96	591	5000	
Zn	66	3	72	3.616	ppb	3.616	10.23	806	5000	
As	75	3	72	0.285	ppb	0.285	43.59	75	2000	
Se	78	2	72	5.563	ppb	5.563	14.12	329	2000	
Sr	88	3	72	157.871	ppb	157.871	1.85	85302	4000	
Mo	95	3	115	0.089	ppb	0.089	50.70	85	2000	
Ag	107	3	115	0.025	ppb	0.025	12.05	58	100	
Cd	111	3	115	-0.028	ppb	-0.028	-82.70	3	2000	
Sn	120	3	115	0.198	ppb	0.198	32.75	923	2000	
Sb	121	3	115	0.035	ppb	0.035	19.19	73	1000	
Ba	137	3	115	0.120	ppb	0.120	49.63	93	5000	
Tl	205	3	193	-0.047	ppb	-0.047	-13.85	202	2000	
(Pb)	206	3	193	0.352	ppb	0.352	7.91	785	100	
(Pb)	207	3	193	0.344	ppb	0.344	18.32	886	100	
Pb	208	3	193	0.346	ppb	0.346	1.37	3339	5000	
Th	232	3	193	-0.035	ppb	-0.035	-298.91	6840	2000	
U	238	3	193	2.473	ppb	2.473	3.29	15228	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4325564	1.84	4300192	100.59	60	120	
Sc (IS)	45	3	HMI He	632470	0.34	644593	98.12	60	120	
Ge Internal standard	72	2	HMI H2	2537883	1.65	2598552	97.67	60	120	
Ge Internal standard	72	3	HMI He	761130	1.47	772392	98.54	60	120	
In Internal Standard	115	3	HMI He	2911788	1.00	2872781	101.36	60	120	
Ir (IS)	193	3	HMI He	6208479	1.78	6092963	101.90	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-1-B
Data File Name	186SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:28:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	1035626.592	ppb	1035626.592	0.84	118340153	400000	
Mg	24	3	45	327846.123	ppb	327846.123	1.09	19689796	400000	
Al	27	3	45	-0.104	ppb	-0.104	-2282.91	150	400000	
K	39	3	45	15034.455	ppb	15034.455	1.56	765817	400000	
Ca	40	2	45	524072.720	ppb	524072.720	0.58	297473506	400000	
V	51	3	72	-0.236	ppb	-0.236	-51.66	828	2000	
Cr	52	3	72	0.308	ppb	0.308	76.42	3292	5000	
Mn	55	3	72	20.070	ppb	20.070	0.98	8473	10000	
Fe	56	2	72	7.936	ppb	7.936	45.89	74004	10000	
Co	59	3	72	0.127	ppb	0.127	16.60	218	2000	
Ni	60	3	72	1.511	ppb	1.511	3.75	1228	5000	
Cu	63	3	72	1.189	ppb	1.189	3.42	1571	5000	
Zn	66	3	72	2.694	ppb	2.694	6.35	653	5000	
As	75	3	72	0.214	ppb	0.214	105.80	67	2000	
Se	78	2	72	2264.598	ppb	2264.598	0.77	132166	2000	
Sr	88	3	72	9743.235	ppb	9743.235	2.09	5224020	4000	
Mo	95	3	115	0.996	ppb	0.996	20.26	530	2000	
Ag	107	3	115	0.008	ppb	0.008	20.96	27	100	
Cd	111	3	115	-0.013	ppb	-0.013	-250.93	7	2000	
Sn	120	3	115	-0.001	ppb	-0.001	-12900.80	725	2000	
Sb	121	3	115	0.087	ppb	0.087	52.36	108	1000	
Ba	137	3	115	11.154	ppb	11.154	6.98	2776	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-14.88	215	2000	
(Pb)	206	3	193	-0.032	ppb	-0.032	-30.65	277	100	
(Pb)	207	3	193	-0.021	ppb	-0.021	-44.57	456	100	
Pb	208	3	193	-0.026	ppb	-0.026	-28.77	1348	5000	
Th	232	3	193	-0.111	ppb	-0.111	-60.45	6312	2000	
U	238	3	193	182.125	ppb	182.125	3.30	985818	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4222837	1.31	4300192	98.20	60	120	
Sc (IS)	45	3	HMI He	640786	1.10	644593	99.41	60	120	
Ge Internal standard	72	2	HMI H2	2518751	0.98	2598552	96.93	60	120	
Ge Internal standard	72	3	HMI He	755730	1.56	772392	97.84	60	120	
In Internal Standard	115	3	HMI He	2763803	1.18	2872781	96.21	60	120	
Ir (IS)	193	3	HMI He	6076904	2.70	6092963	99.74	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-2-B
Data File Name	187SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:29:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-96.48	3	2000	
Na	23	3	45	2080505.447	ppb	2080505.447	0.24	233686306	400000	>LDR
Mg	24	3	45	308910.886	ppb	308910.886	0.92	18235279	400000	
Al	27	3	45	1.762	ppb	1.762	41.81	190	400000	
K	39	3	45	15359.140	ppb	15359.140	0.89	768431	400000	
Ca	40	2	45	270339.985	ppb	270339.985	1.21	156862090	400000	
V	51	3	72	-0.297	ppb	-0.297	-50.31	778	2000	
Cr	52	3	72	2.288	ppb	2.288	9.43	4727	5000	
Mn	55	3	72	191.126	ppb	191.126	1.30	76270	10000	
Fe	56	2	72	9.680	ppb	9.680	48.63	78084	10000	
Co	59	3	72	6.594	ppb	6.594	1.05	8475	2000	
Ni	60	3	72	18.634	ppb	18.634	4.34	7375	5000	
Cu	63	3	72	0.605	ppb	0.605	6.09	973	5000	
Zn	66	3	72	7.687	ppb	7.687	5.39	1426	5000	
As	75	3	72	0.225	ppb	0.225	66.60	67	2000	
Se	78	2	72	3.702	ppb	3.702	12.64	222	2000	
Sr	88	3	72	8569.151	ppb	8569.151	1.49	4519780	4000	
Mo	95	3	115	6.110	ppb	6.110	3.77	3050	2000	
Ag	107	3	115	0.003	ppb	0.003	52.08	18	100	
Cd	111	3	115	-0.013	ppb	-0.013	-86.14	7	2000	
Sn	120	3	115	0.661	ppb	0.661	11.64	1219	2000	
Sb	121	3	115	0.798	ppb	0.798	5.43	638	1000	
Ba	137	3	115	11.926	ppb	11.926	5.62	2951	5000	
Tl	205	3	193	-0.050	ppb	-0.050	-8.21	180	2000	
(Pb)	206	3	193	0.019	ppb	0.019	197.17	330	100	
(Pb)	207	3	193	-0.035	ppb	-0.035	-276.14	425	100	
Pb	208	3	193	-0.010	ppb	-0.010	-382.06	1376	5000	
Th	232	3	193	-0.255	ppb	-0.255	-21.15	5382	2000	
U	238	3	193	49.188	ppb	49.188	2.49	258432	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4316178	1.41	4300192	100.37	60	120	
Sc (IS)	45	3	HMI He	629887	0.64	644593	97.72	60	120	
Ge Internal standard	72	2	HMI H2	2572009	3.91	2598552	98.98	60	120	
Ge Internal standard	72	3	HMI He	743395	1.66	772392	96.25	60	120	
In Internal Standard	115	3	HMI He	2753145	3.17	2872781	95.84	60	120	
Ir (IS)	193	3	HMI He	5872618	2.08	6092963	96.38	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-3-B
Data File Name	188SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:31:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.27	2	2000	
Na	23	3	45	1061466.876	ppb	1061466.876	1.06	119050991	400000	
Mg	24	3	45	269346.915	ppb	269346.915	1.06	15874380	400000	
Al	27	3	45	2.065	ppb	2.065	84.81	197	400000	
K	39	3	45	11479.921	ppb	11479.921	0.35	580359	400000	
Ca	40	2	45	377803.164	ppb	377803.164	0.93	214963825	400000	
V	51	3	72	-0.169	ppb	-0.169	-51.94	861	2000	
Cr	52	3	72	0.483	ppb	0.483	39.23	3394	5000	
Mn	55	3	72	190.064	ppb	190.064	0.62	76381	10000	
Fe	56	2	72	6.447	ppb	6.447	63.56	71026	10000	
Co	59	3	72	0.217	ppb	0.217	16.24	333	2000	
Ni	60	3	72	4.486	ppb	4.486	4.63	2296	5000	
Cu	63	3	72	2.403	ppb	2.403	4.95	2754	5000	
Zn	66	3	72	2.672	ppb	2.672	13.50	643	5000	
As	75	3	72	0.578	ppb	0.578	15.26	107	2000	
Se	78	2	72	262.819	ppb	262.819	0.99	15195	2000	
Sr	88	3	72	7868.433	ppb	7868.433	1.31	4179756	4000	
Mo	95	3	115	2.102	ppb	2.102	3.25	1091	2000	
Ag	107	3	115	0.013	ppb	0.013	82.36	35	100	
Cd	111	3	115	0.022	ppb	0.022	256.15	15	2000	
Sn	120	3	115	-0.062	ppb	-0.062	-71.05	688	2000	
Sb	121	3	115	0.089	ppb	0.089	9.74	112	1000	
Ba	137	3	115	10.246	ppb	10.246	2.34	2586	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-37.19	215	2000	
(Pb)	206	3	193	-0.032	ppb	-0.032	-78.99	267	100	
(Pb)	207	3	193	-0.044	ppb	-0.044	-118.65	416	100	
Pb	208	3	193	-0.043	ppb	-0.043	-19.24	1214	5000	
Th	232	3	193	-0.387	ppb	-0.387	-23.21	4717	2000	
U	238	3	193	117.315	ppb	117.315	1.51	613804	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4232952	1.30	4300192	98.44	60	120	
Sc (IS)	45	3	HMI He	628919	1.28	644593	97.57	60	120	
Ge Internal standard	72	2	HMI H2	2494872	1.01	2598552	96.01	60	120	
Ge Internal standard	72	3	HMI He	748592	1.23	772392	96.92	60	120	
In Internal Standard	115	3	HMI He	2796362	1.01	2872781	97.34	60	120	
Ir (IS)	193	3	HMI He	5866571	1.61	6092963	96.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	189_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:33:24-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	50.581	ppb	1.959	2269	50	101.2	90	110	
Na	23	3	45	47905.615	ppb	1.639	5559584	51000	93.9	90	110	
Mg	24	3	45	10179.456	ppb	1.173	619353	11000	92.5	90	110	
Al	27	3	45	959.724	ppb	4.008	22725	1000	96.0	90	110	
K	39	3	45	10120.786	ppb	2.799	531221	11000	92.0	90	110	
Ca	40	2	45	10171.823	ppb	2.661	6189346	11000	92.5	90	110	
V	51	3	72	50.608	ppb	0.345	32994	50	101.2	90	110	
Cr	52	3	72	51.370	ppb	2.720	43013	50	102.7	90	110	
Mn	55	3	72	50.900	ppb	2.778	21267	50	101.8	90	110	
Fe	56	2	72	1056.325	ppb	1.111	1721888	1000	105.6	90	110	
Co	59	3	72	50.242	ppb	2.223	66372	50	100.5	90	110	
Ni	60	3	72	49.146	ppb	1.269	18979	50	98.3	90	110	
Cu	63	3	72	49.971	ppb	0.949	51005	50	99.9	90	110	
Zn	66	3	72	50.784	ppb	1.973	8460	50	101.6	90	110	
As	75	3	72	51.935	ppb	1.069	5995	50	103.9	90	110	
Se	78	2	72	50.756	ppb	1.366	3022	50	101.5	90	110	
Sr	88	3	72	103.197	ppb	1.044	56301	100	103.2	90	110	
Mo	95	3	115	48.448	ppb	2.848	25301	50	96.9	90	110	
Ag	107	3	115	48.711	ppb	1.473	85773	50	97.4	90	110	
Cd	111	3	115	49.009	ppb	2.645	12306	50	98.0	90	110	
Sn	120	3	115	46.987	ppb	1.108	38072	50	94.0	90	110	
Sb	121	3	115	49.400	ppb	1.570	38904	50	98.8	90	110	
Ba	137	3	115	48.663	ppb	1.805	12540	50	97.3	90	110	
Tl	205	3	193	48.146	ppb	2.531	192047	50	96.3	90	110	
(Pb)	206	3	193	48.508	ppb	3.603	64419	50	97.0	90	110	
(Pb)	207	3	193	48.086	ppb	2.594	56354	50	96.2	90	110	
Pb	208	3	193	48.144	ppb	3.899	258143	50	96.3	90	110	
Th	232	3	193	47.400	ppb	0.501	258884	50	94.8	90	110	
U	238	3	193	48.445	ppb	3.485	272268	50	96.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4517622	1.35	4300192	105.06	60	120	
Sc (IS)	45	3	HMI He	648996	1.47	644593	100.68	60	120	
Ge Internal standard	72	2	HMI H2	2568452	1.23	2598552	98.84	60	120	
Ge Internal standard	72	3	HMI He	768265	0.61	772392	99.47	60	120	
In Internal Standard	115	3	HMI He	2908196	0.66	2872781	101.23	60	120	
Ir (IS)	193	3	HMI He	6281867	1.93	6092963	103.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	190_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:35:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	382.206	ppb	6.9	61035	25	>RL
Mg	24	3	45	20.213	ppb	13.6	1502	25	
Al	27	3	45	-2.435	ppb	-87.8	97	15	
K	39	3	45	2.161	ppb	1404.0	28397	50	
V	51	3	72	0.272	ppb	36.9	1183	1	
Cr	52	3	72	0.296	ppb	52.4	3392	1	
Mn	55	3	72	-0.198	ppb	-49.7	300	0.5	
Co	59	3	72	0.021	ppb	74.6	83	0.5	
Ni	60	3	72	0.228	ppb	82.2	783	1	
Cu	63	3	72	0.082	ppb	35.9	483	1	
Zn	66	3	72	-0.371	ppb	-54.5	170	5	
As	75	3	72	0.109	ppb	78.8	57	1	
Se	78	2	72	0.151	ppb	44.6	11	1	
Sr	88	3	72	0.490	ppb	17.4	315	0.5	
Mo	95	3	115	0.077	ppb	15.1	80	0.5	
Ag	107	3	115	0.012	ppb	105.5	35	1	
Cd	111	3	115	-0.021	ppb	-89.9	5	0.5	
Sn	120	3	115	0.095	ppb	142.2	855	1	
Sb	121	3	115	0.030	ppb	48.4	70	0.6	
Ba	137	3	115	-0.033	ppb	-139.7	55	0.5	
Tl	205	3	193	-0.029	ppb	-13.3	277	0.1	
(Pb)	206	3	193	-0.065	ppb	-26.8	243	1	
(Pb)	207	3	193	-0.030	ppb	-143.4	463	1	
Pb	208	3	193	-0.056	ppb	-38.6	1238	0.5	
Th	232	3	193	1.404	ppb	11.7	14611	1	>RL
U	238	3	193	0.047	ppb	24.6	1851	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4449982	1.41	4300192	103.48	60	120	
Sc (IS)	45	3	HMI He	649116	1.39	644593	100.70	60	120	
Ge Internal standard	72	2	HMI H2	2650603	0.92	2598552	102.00	60	120	
Ge Internal standard	72	3	HMI He	780881	1.24	772392	101.10	60	120	
In Internal Standard	115	3	HMI He	2956235	2.19	2872781	102.90	60	120	
Ir (IS)	193	3	HMI He	6301634	0.35	6092963	103.42	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	191LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:36:58-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.675	ppb	10.287	37	1	67.5	70	130	>+/-30%
Na	23	3	45	506.186	ppb	2.751	74543	300	168.7	70	130	>+/-30%
Mg	24	3	45	53.060	ppb	6.589	3461	50	106.1	70	130	
Al	27	3	45	43.520	ppb	7.793	1165	50	87.0	70	130	
K	39	3	45	89.064	ppb	26.200	32357	120	74.2	70	130	
Ca	40	2	45	208.763	ppb	2.831	137189	200	104.4	70	130	
V	51	3	72	5.184	ppb	3.978	4365	5	103.7	70	130	
Cr	52	3	72	2.138	ppb	19.417	4873	2	106.9	70	130	
Mn	55	3	72	0.843	ppb	23.255	738	1	84.3	70	130	
Fe	56	2	72	51.523	ppb	9.516	147650	50	103.0	70	130	
Co	59	3	72	0.948	ppb	4.360	1336	1	94.8	70	130	
Ni	60	3	72	2.352	ppb	15.171	1596	2	117.6	70	130	
Cu	63	3	72	2.061	ppb	6.016	2536	2	103.1	70	130	
Zn	66	3	72	8.597	ppb	7.708	1658	10	86.0	70	130	
As	75	3	72	5.355	ppb	11.386	671	5	107.1	70	130	
Se	78	2	72	5.144	ppb	11.427	316	5	102.9	70	130	
Sr	88	3	72	4.920	ppb	8.739	2786	5	98.4	70	130	
Mo	95	3	115	1.862	ppb	12.747	1006	2	93.1	70	130	
Ag	107	3	115	0.944	ppb	3.858	1671	1	94.4	70	130	
Cd	111	3	115	0.984	ppb	2.421	257	1	98.4	70	130	
Sn	120	3	115	8.470	ppb	4.451	7470	10	84.7	70	130	
Sb	121	3	115	1.879	ppb	4.896	1519	2	93.9	70	130	
Ba	137	3	115	0.870	ppb	11.112	285	1	87.0	70	130	
Tl	205	3	193	0.878	ppb	4.638	3942	1	87.8	70	130	
(Pb)	206	3	193	0.851	ppb	6.392	1474	1	85.1	70	130	
(Pb)	207	3	193	0.873	ppb	9.175	1533	1	87.3	70	130	
Pb	208	3	193	0.829	ppb	3.541	6034	1	82.9	70	130	
Th	232	3	193	1.076	ppb	7.697	13010	1	107.6	70	130	
U	238	3	193	0.967	ppb	2.474	7085	1	96.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4415970	1.23	4300192	102.69	60	120	
Sc (IS)	45	3	HMI He	641660	0.90	644593	99.54	60	120	
Ge Internal standard	72	2	HMI H2	2636047	1.40	2598552	101.44	60	120	
Ge Internal standard	72	3	HMI He	785536	0.72	772392	101.70	60	120	
In Internal Standard	115	3	HMI He	2901834	1.75	2872781	101.01	60	120	
Ir (IS)	193	3	HMI He	6371714	0.75	6092963	104.57	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608911/1-A
Data File Name	192_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:38:47-06:00
Sample Type	Blank
Dilution	1
Comment	608911 6020a
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.033	ppb	-349.025718	5	0.5
Na	23	3	45	320.204	ppb	29.00000116	52358	25
Mg	24	3	45	27.052	ppb	70.39938229	1862	25
Al	27	3	45	-0.149	ppb	-174.3655859	147	15
K	39	3	45	4.101	ppb	505.1885651	27712	50
Ca	40	2	45	18.116	ppb	3.291432152	23500	200
V	51	3	72	0.364	ppb	12.46072274	1219	1
Cr	52	3	72	1.174	ppb	18.88421992	4014	1
Mn	55	3	72	0.075	ppb	83.10990192	406	0.5
Fe	56	2	72	6.647	ppb	60.38003348	73092	50
Co	59	3	72	0.022	ppb	40.30865654	83	0.5
Ni	60	3	72	0.236	ppb	80.56793972	773	1
Cu	63	3	72	0.085	ppb	89.16352533	478	1
Zn	66	3	72	0.255	ppb	114.8503603	268	5
As	75	3	72	0.133	ppb	114.5280332	58	1
(Se)	78	3	72	1.055	ppb	130.4585939	30	1
Sr	88	3	72	0.663	ppb	76.11594634	403	0.5
Mo	95	3	115	0.042	ppb	19.56234625	60	0.5
Ag	107	3	115	0.008	ppb	191.478153	27	1
Cd	111	3	115	-0.014	ppb	-81.45558274	7	0.5
Sn	120	3	115	0.023	ppb	278.4439662	773	1
Sb	121	3	115	0.030	ppb	29.3351865	68	0.6
Ba	137	3	115	0.066	ppb	143.7242161	78	0.5
Tl	205	3	193	-0.036	ppb	-10.37806758	245	0.1
(Pb)	206	3	193	-0.033	ppb	-172.641127	280	1
(Pb)	207	3	193	-0.044	ppb	-92.5715793	438	1
Pb	208	3	193	-0.057	ppb	-19.34123853	1211	0.5
Th	232	3	193	-0.146	ppb	-29.64398167	6245	1
U	238	3	193	0.059	ppb	24.7279098	1884	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4315007	1.38	4300192	100.34	60	120	
Sc (IS)	45	3	HMI He	631093	0.35	644593	97.91	60	120	
Ge Internal standard	72	2	HMI H2	2558221	0.54	2598552	98.45	60	120	
Ge Internal standard	72	3	HMI He	767083	0.58	772392	99.31	60	120	
In Internal Standard	115	3	HMI He	2870398	1.26	2872781	99.92	60	120	
Ir (IS)	193	3	HMI He	6190210	0.42	6092963	101.60	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608911/24-A
Data File Name	193_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:40:36-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608911 6020a
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.974	41.974	ppb	4.861	1866	40	104.9	80	120	
Na	23	3	45	905.381	905.381	ppb	1.531	122302	40	2263.5	80	120	>+/-20%
Mg	24	3	45	717.109	717.109	ppb	1.371	44146	40	1792.8	80	120	>+/-20%
Al	27	3	45	728.956	728.956	ppb	4.531	17402	40	1822.4	80	120	>+/-20%
K	39	3	45	723.121	723.121	ppb	5.300	64603	40	1807.8	80	120	>+/-20%
Ca	40	2	45	793.203	793.203	ppb	2.760	498916	40	1983.0	80	120	>+/-20%
V	51	3	72	38.136	38.136	ppb	0.702	25873	40	95.3	80	120	
Cr	52	3	72	39.201	39.201	ppb	0.641	34586	40	98.0	80	120	
Mn	55	3	72	39.203	39.203	ppb	2.525	16970	40	98.0	80	120	
Fe	56	2	72	824.506	824.506	ppb	2.489	1408703	40	2061.3	80	120	>+/-20%
(Fe)	56	3	72	768.920	768.920	ppb	1.053	540931	40	1922.3	80	120	>+/-20%
Co	59	3	72	38.638	38.638	ppb	0.984	52617	40	96.6	80	120	
Ni	60	3	72	38.056	38.056	ppb	1.183	15304	40	95.1	80	120	
Cu	63	3	72	39.404	39.404	ppb	1.865	41533	40	98.5	80	120	
Zn	66	3	72	40.428	40.428	ppb	1.381	6988	40	101.1	80	120	
As	75	3	72	39.243	39.243	ppb	1.666	4678	40	98.1	80	120	
Se	78	2	72	41.442	41.442	ppb	3.258	2560	40	103.6	80	120	
(Se)	78	3	72	44.651	44.651	ppb	20.621	320	40	111.6	80	120	
Sr	88	3	72	80.247	80.247	ppb	1.488	45127	40	200.6	80	120	>+/-20%
Mo	95	3	115	37.287	37.287	ppb	2.100	20125	40	93.2	80	120	
Ag	107	3	115	38.420	38.420	ppb	2.514	69879	40	96.1	80	120	
Cd	111	3	115	38.465	38.465	ppb	6.030	9975	40	96.2	80	120	
Sn	120	3	115	35.883	35.883	ppb	1.187	30224	40	89.7	80	120	
Sb	121	3	115	38.113	38.113	ppb	1.887	31021	40	95.3	80	120	
Ba	137	3	115	38.225	38.225	ppb	2.219	10192	40	95.6	80	120	
Tl	205	3	193	37.678	37.678	ppb	1.783	157442	40	94.2	80	120	
(Pb)	206	3	193	38.255	38.255	ppb	2.124	53270	40	95.6	80	120	
(Pb)	207	3	193	37.543	37.543	ppb	1.515	46183	40	93.9	80	120	
Pb	208	3	193	38.013	38.013	ppb	2.138	213772	40	95.0	80	120	
Th	232	3	193	34.769	34.769	ppb	2.973	200735	40	86.9	80	120	
U	238	3	193	37.928	37.928	ppb	1.719	223569	40	94.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4553343	2.98	4300192	105.89	60	120	
Sc (IS)	45	3	HMI He	652843	1.11	644593	101.28	60	120	
Ge Internal standard	72	2	HMI H2	2665629	2.67	2598552	102.58	60	120	
Ge Internal standard	72	3	HMI He	791688	0.31	772392	102.50	60	120	
In Internal Standard	115	3	HMI He	3004777	1.89	2872781	104.59	60	120	
Ir (IS)	193	3	HMI He	6576293	1.51	6092963	107.93	60	120	

Sample Report

Sample Table

Sample Name	280-175070-D-2-A
Data File Name	194SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:42:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3041812.782	ppb	3041812.782	0.45	346055296	400000	>LDR
Mg	24	3	45	64345.029	ppb	64345.029	1.40	3847550	400000	
Al	27	3	45	140.175	ppb	140.175	2.96	3394	400000	
K	39	3	45	224844.315	ppb	224844.315	1.59	11014505	400000	
Ca	40	2	45	5585.121	ppb	5585.121	1.23	3420743	400000	
V	51	3	72	209.428	ppb	209.428	2.18	134270	2000	
Cr	52	3	72	242.206	ppb	242.206	2.09	192486	5000	
Mn	55	3	72	134.477	ppb	134.477	1.27	55929	10000	
Fe	56	2	72	1771.257	ppb	1771.257	1.10	2993661	10000	
Co	59	3	72	12.162	ppb	12.162	2.45	16211	2000	
Ni	60	3	72	188.940	ppb	188.940	2.77	71459	5000	
Cu	63	3	72	3.399	ppb	3.399	1.87	3860	5000	
Zn	66	3	72	17.775	ppb	17.775	1.72	3129	5000	
As	75	3	72	97.443	ppb	97.443	2.00	11282	2000	
Se	78	2	72	0.892	ppb	0.892	9.11	58	2000	
Sr	88	3	72	261.918	ppb	261.918	1.85	143739	4000	
Mo	95	3	115	9.786	ppb	9.786	3.00	4913	2000	
Ag	107	3	115	0.061	ppb	0.061	26.96	115	100	
Cd	111	3	115	0.036	ppb	0.036	147.42	18	2000	
Sn	120	3	115	5.307	ppb	5.307	5.29	4757	2000	
Sb	121	3	115	16.451	ppb	16.451	4.92	12408	1000	
Ba	137	3	115	159.262	ppb	159.262	2.07	39083	5000	
Tl	205	3	193	0.490	ppb	0.490	10.35	2222	2000	
(Pb)	206	3	193	0.500	ppb	0.500	9.01	938	100	
(Pb)	207	3	193	0.459	ppb	0.459	4.88	976	100	
Pb	208	3	193	0.491	ppb	0.491	0.93	3937	5000	
Th	232	3	193	0.621	ppb	0.621	9.22	9874	2000	
U	238	3	193	0.478	ppb	0.478	4.48	4032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4537949	1.20	4300192	105.53	60	120	
Sc (IS)	45	3	HMI He	638008	0.12	644593	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2702999	1.53	2598552	104.02	60	120	
Ge Internal standard	72	3	HMI He	773235	1.22	772392	100.11	60	120	
In Internal Standard	115	3	HMI He	2779540	0.98	2872781	96.75	60	120	
Ir (IS)	193	3	HMI He	5957679	0.51	6092963	97.78	60	120	

Sample Report

Sample Table

Sample Name	280-175070-D-3-A
Data File Name	195SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:44:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	275744.557	ppb	275744.557	2.23	29957417	400000	
Mg	24	3	45	149426.163	ppb	149426.163	1.03	8529274	400000	
Al	27	3	45	26.245	ppb	26.245	8.46	724	400000	
K	39	3	45	25770.808	ppb	25770.808	1.14	1228855	400000	
Ca	40	2	45	293856.186	ppb	293856.186	2.77	160900637	400000	
V	51	3	72	2.356	ppb	2.356	6.77	2406	2000	
Cr	52	3	72	2.995	ppb	2.995	11.07	5267	5000	
Mn	55	3	72	5626.433	ppb	5626.433	3.94	2239392	10000	
Fe	56	2	72	9422.300	ppb	9422.300	1.98	14364102	10000	
Co	59	3	72	4.947	ppb	4.947	3.70	6383	2000	
Ni	60	3	72	107.431	ppb	107.431	1.28	39436	5000	
Cu	63	3	72	8.885	ppb	8.885	2.29	9105	5000	
Zn	66	3	72	26.121	ppb	26.121	3.32	4327	5000	
As	75	3	72	2.938	ppb	2.938	13.29	368	2000	
Se	78	2	72	0.244	ppb	0.244	50.27	16	2000	
Sr	88	3	72	1678.839	ppb	1678.839	1.43	887464	4000	
Mo	95	3	115	0.404	ppb	0.404	13.90	237	2000	
Ag	107	3	115	0.009	ppb	0.009	53.88	28	100	
Cd	111	3	115	-0.026	ppb	-0.026	-95.21	3	2000	
Sn	120	3	115	0.921	ppb	0.921	12.14	1414	2000	
Sb	121	3	115	0.206	ppb	0.206	20.65	197	1000	
Ba	137	3	115	416.941	ppb	416.941	2.35	101205	5000	
Tl	205	3	193	0.061	ppb	0.061	4.38	596	2000	
(Pb)	206	3	193	3.255	ppb	3.255	2.90	4344	100	
(Pb)	207	3	193	3.178	ppb	3.178	1.96	3930	100	
Pb	208	3	193	3.243	ppb	3.243	1.59	17659	5000	
Th	232	3	193	0.917	ppb	0.917	12.50	11238	2000	
U	238	3	193	0.331	ppb	0.331	4.95	3217	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4076175	4.12	4300192	94.79	60	120	
Sc (IS)	45	3	HMI He	609128	1.91	644593	94.50	60	120	
Ge Internal standard	72	2	HMI H2	2482886	1.33	2598552	95.55	60	120	
Ge Internal standard	72	3	HMI He	744845	0.89	772392	96.43	60	120	
In Internal Standard	115	3	HMI He	2752750	2.98	2872781	95.82	60	120	
Ir (IS)	193	3	HMI He	5892696	0.96	6092963	96.71	60	120	

Sample Report

Sample Table

Sample Name	280-174977-C-12-A
Data File Name	196SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:45:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.43	2	2000	
Na	23	3	45	1120.298	ppb	1120.298	2.98	140447	400000	
Mg	24	3	45	107.913	ppb	107.913	6.08	6555	400000	
Al	27	3	45	503.614	ppb	503.614	5.25	11510	400000	
K	39	3	45	225.195	ppb	225.195	13.59	37866	400000	
Ca	40	2	45	299.520	ppb	299.520	4.12	183985	400000	
V	51	3	72	1.259	ppb	1.259	21.23	1779	2000	
Cr	52	3	72	1.753	ppb	1.753	23.91	4454	5000	
Mn	55	3	72	8.672	ppb	8.672	3.26	3920	10000	
Fe	56	2	72	435.817	ppb	435.817	2.94	736093	10000	
Co	59	3	72	0.136	ppb	0.136	6.87	233	2000	
Ni	60	3	72	0.910	ppb	0.910	28.35	1020	5000	
Cu	63	3	72	0.646	ppb	0.646	4.92	1043	5000	
Zn	66	3	72	2.840	ppb	2.840	8.40	685	5000	
As	75	3	72	0.236	ppb	0.236	62.01	70	2000	
Se	78	2	72	0.023	ppb	0.023	86.41	3	2000	
Sr	88	3	72	1.294	ppb	1.294	13.34	746	4000	
Mo	95	3	115	8.510	ppb	8.510	6.14	4405	2000	
Ag	107	3	115	0.009	ppb	0.009	15.37	28	100	
Cd	111	3	115	0.000	ppb	0.000	-75700.74	10	2000	
Sn	120	3	115	0.428	ppb	0.428	164.43	1091	2000	
Sb	121	3	115	0.127	ppb	0.127	8.68	143	1000	
Ba	137	3	115	3.185	ppb	3.185	9.99	866	5000	
Tl	205	3	193	0.024	ppb	0.024	63.70	470	2000	
(Pb)	206	3	193	0.204	ppb	0.204	19.45	576	100	
(Pb)	207	3	193	0.218	ppb	0.218	7.27	723	100	
Pb	208	3	193	0.190	ppb	0.190	3.30	2451	5000	
Th	232	3	193	0.050	ppb	0.050	41.04	7110	2000	
U	238	3	193	0.045	ppb	0.045	75.85	1764	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4254796	2.72	4300192	98.94	60	120	
Sc (IS)	45	3	HMI He	622400	0.29	644593	96.56	60	120	
Ge Internal standard	72	2	HMI H2	2529955	1.41	2598552	97.36	60	120	
Ge Internal standard	72	3	HMI He	764969	1.58	772392	99.04	60	120	
In Internal Standard	115	3	HMI He	2864496	2.21	2872781	99.71	60	120	
Ir (IS)	193	3	HMI He	6056571	0.25	6092963	99.40	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-2-A
Data File Name	197SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:47:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-185.10	3	2000	
Na	23	3	45	18992.908	ppb	18992.908	1.68	2239779	400000	
Mg	24	3	45	13172.659	ppb	13172.659	2.88	810423	400000	
Al	27	3	45	0.723	ppb	0.723	260.41	174	400000	
K	39	3	45	7427.584	ppb	7427.584	0.66	401966	400000	
Ca	40	2	45	49558.479	ppb	49558.479	2.89	30100787	400000	
V	51	3	72	24.265	ppb	24.265	0.40	17110	2000	
Cr	52	3	72	1.828	ppb	1.828	18.03	4742	5000	
Mn	55	3	72	3.995	ppb	3.995	7.94	2111	10000	
Fe	56	2	72	9.111	ppb	9.111	54.00	82853	10000	
Co	59	3	72	0.037	ppb	0.037	40.72	108	2000	
Ni	60	3	72	0.410	ppb	0.410	52.32	878	5000	
Cu	63	3	72	0.555	ppb	0.555	10.15	1000	5000	
Zn	66	3	72	1.365	ppb	1.365	9.72	470	5000	
As	75	3	72	13.560	ppb	13.560	4.50	1673	2000	
Se	78	2	72	3.948	ppb	3.948	8.36	255	2000	
Sr	88	3	72	264.945	ppb	264.945	1.66	151324	4000	
Mo	95	3	115	9.370	ppb	9.370	3.47	4988	2000	
Ag	107	3	115	0.004	ppb	0.004	82.56	20	100	
Cd	111	3	115	-0.021	ppb	-0.021	-94.64	5	2000	
Sn	120	3	115	-0.192	ppb	-0.192	-31.98	620	2000	
Sb	121	3	115	0.314	ppb	0.314	13.06	297	1000	
Ba	137	3	115	42.893	ppb	42.893	3.38	11204	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-1092.19	385	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-46.98	262	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-69.10	426	100	
Pb	208	3	193	-0.057	ppb	-0.057	-22.98	1226	5000	
Th	232	3	193	-0.154	ppb	-0.154	-34.33	6295	2000	
U	238	3	193	1.660	ppb	1.660	1.40	10866	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4518104	2.86	4300192	105.07	60	120	
Sc (IS)	45	3	HMI He	656296	0.93	644593	101.82	60	120	
Ge Internal standard	72	2	HMI H2	2758294	3.29	2598552	106.15	60	120	
Ge Internal standard	72	3	HMI He	804689	0.86	772392	104.18	60	120	
In Internal Standard	115	3	HMI He	2945724	0.84	2872781	102.54	60	120	
Ir (IS)	193	3	HMI He	6285356	1.74	6092963	103.16	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-5-A
Data File Name	198SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:49:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.111	ppb	-0.111	-59.96	2	2000	
Na	23	3	45	17580.192	ppb	17580.192	1.59	2041698	400000	
Mg	24	3	45	17301.380	ppb	17301.380	1.69	1047709	400000	
Al	27	3	45	7.532	ppb	7.532	54.55	330	400000	
K	39	3	45	6992.106	ppb	6992.106	2.05	374092	400000	
Ca	40	2	45	59037.914	ppb	59037.914	2.07	35174806	400000	
V	51	3	72	21.574	ppb	21.574	5.10	15221	2000	
Cr	52	3	72	0.949	ppb	0.949	30.05	4000	5000	
Mn	55	3	72	0.324	ppb	0.324	29.24	530	10000	
Fe	56	2	72	6.338	ppb	6.338	49.52	75028	10000	
Co	59	3	72	0.022	ppb	0.022	20.98	87	2000	
Ni	60	3	72	1.422	ppb	1.422	6.71	1264	5000	
Cu	63	3	72	17.739	ppb	17.739	1.10	19099	5000	
Zn	66	3	72	1.857	ppb	1.857	11.63	550	5000	
As	75	3	72	5.353	ppb	5.353	15.41	683	2000	
Se	78	2	72	5.677	ppb	5.677	4.10	349	2000	
Sr	88	3	72	300.982	ppb	300.982	1.82	170738	4000	
Mo	95	3	115	2.774	ppb	2.774	4.88	1499	2000	
Ag	107	3	115	0.004	ppb	0.004	74.14	22	100	
Cd	111	3	115	0.005	ppb	0.005	208.81	12	2000	
Sn	120	3	115	-0.051	ppb	-0.051	-27.74	731	2000	
Sb	121	3	115	0.202	ppb	0.202	17.50	207	1000	
Ba	137	3	115	38.769	ppb	38.769	2.44	10101	5000	
Tl	205	3	193	-0.021	ppb	-0.021	-24.96	305	2000	
(Pb)	206	3	193	-0.012	ppb	-0.012	-96.57	310	100	
(Pb)	207	3	193	-0.083	ppb	-0.083	-35.25	396	100	
Pb	208	3	193	-0.049	ppb	-0.049	-40.17	1254	5000	
Th	232	3	193	-0.320	ppb	-0.320	-9.02	5360	2000	
U	238	3	193	3.048	ppb	3.048	1.02	18446	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4432053	2.40	4300192	103.07	60	120	
Sc (IS)	45	3	HMI He	646075	1.42	644593	100.23	60	120	
Ge Internal standard	72	2	HMI H2	2640387	2.05	2598552	101.61	60	120	
Ge Internal standard	72	3	HMI He	799244	0.87	772392	103.48	60	120	
In Internal Standard	115	3	HMI He	2937128	1.59	2872781	102.24	60	120	
Ir (IS)	193	3	HMI He	6224811	0.93	6092963	102.16	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-7-A
Data File Name	199SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:51:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.09	2	2000	
Na	23	3	45	18389.089	ppb	18389.089	0.50	2121519	400000	
Mg	24	3	45	10855.172	ppb	10855.172	1.87	653296	400000	
Al	27	3	45	11.215	ppb	11.215	3.00	414	400000	
K	39	3	45	5847.061	ppb	5847.061	2.09	315453	400000	
Ca	40	2	45	30972.346	ppb	30972.346	1.11	18199042	400000	
V	51	3	72	18.273	ppb	18.273	2.16	13081	2000	
Cr	52	3	72	1.964	ppb	1.964	20.15	4830	5000	
Mn	55	3	72	78.795	ppb	78.795	1.40	34111	10000	
Fe	56	2	72	312.361	ppb	312.361	1.46	565076	10000	
Co	59	3	72	0.093	ppb	0.093	34.13	185	2000	
Ni	60	3	72	0.738	ppb	0.738	18.68	1001	5000	
Cu	63	3	72	0.869	ppb	0.869	5.07	1328	5000	
Zn	66	3	72	4.856	ppb	4.856	5.24	1058	5000	
As	75	3	72	5.900	ppb	5.900	7.08	750	2000	
Se	78	2	72	1.667	ppb	1.667	8.36	103	2000	
Sr	88	3	72	168.391	ppb	168.391	2.92	95745	4000	
Mo	95	3	115	3.498	ppb	3.498	6.53	1894	2000	
Ag	107	3	115	0.030	ppb	0.030	21.74	67	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.239	ppb	-0.239	-11.09	585	2000	
Sb	121	3	115	0.115	ppb	0.115	40.54	138	1000	
Ba	137	3	115	19.957	ppb	19.957	3.36	5268	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-15.82	215	2000	
(Pb)	206	3	193	0.175	ppb	0.175	26.29	550	100	
(Pb)	207	3	193	0.133	ppb	0.133	23.75	640	100	
Pb	208	3	193	0.167	ppb	0.167	2.70	2381	5000	
Th	232	3	193	-0.339	ppb	-0.339	-4.81	5219	2000	
U	238	3	193	1.931	ppb	1.931	2.08	12158	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368755	1.68	4300192	101.59	60	120	
Sc (IS)	45	3	HMI He	641954	0.50	644593	99.59	60	120	
Ge Internal standard	72	2	HMI H2	2621726	0.84	2598552	100.89	60	120	
Ge Internal standard	72	3	HMI He	801016	0.86	772392	103.71	60	120	
In Internal Standard	115	3	HMI He	2959568	2.18	2872781	103.02	60	120	
Ir (IS)	193	3	HMI He	6173384	0.19	6092963	101.32	60	120	

Sample Report

Sample Table

Sample Name	280-175081-A-1-A
Data File Name	200SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:53:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.57	2	2000	
Na	23	3	45	2998.985	ppb	2998.985	1.66	359616	400000	
Mg	24	3	45	4467.315	ppb	4467.315	0.50	268825	400000	
Al	27	3	45	0.606	ppb	0.606	283.29	167	400000	
K	39	3	45	2062.071	ppb	2062.071	1.46	129284	400000	
Ca	40	2	45	19940.107	ppb	19940.107	1.68	11746433	400000	
V	51	3	72	3.340	ppb	3.340	5.01	3209	2000	
Cr	52	3	72	1.652	ppb	1.652	10.03	4540	5000	
Mn	55	3	72	0.124	ppb	0.124	158.50	441	10000	
Fe	56	2	72	7.009	ppb	7.009	50.29	77017	10000	
Co	59	3	72	0.031	ppb	0.031	92.77	98	2000	
Ni	60	3	72	0.278	ppb	0.278	92.44	816	5000	
Cu	63	3	72	0.314	ppb	0.314	19.27	735	5000	
Zn	66	3	72	1.749	ppb	1.749	8.87	528	5000	
As	75	3	72	0.931	ppb	0.931	34.00	155	2000	
Se	78	2	72	0.183	ppb	0.183	40.57	13	2000	
Sr	88	3	72	97.612	ppb	97.612	2.05	55069	4000	
Mo	95	3	115	0.715	ppb	0.715	24.45	415	2000	
Ag	107	3	115	0.026	ppb	0.026	0.25	60	100	
Cd	111	3	115	-0.008	ppb	-0.008	-521.26	8	2000	
Sn	120	3	115	-0.280	ppb	-0.280	-32.51	546	2000	
Sb	121	3	115	0.121	ppb	0.121	21.37	142	1000	
Ba	137	3	115	24.147	ppb	24.147	2.44	6305	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-57.90	257	2000	
(Pb)	206	3	193	-0.075	ppb	-0.075	-7.72	225	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-73.52	421	100	
Pb	208	3	193	-0.063	ppb	-0.063	-18.17	1171	5000	
Th	232	3	193	-0.404	ppb	-0.404	-11.78	4874	2000	
U	238	3	193	0.274	ppb	0.274	6.70	3051	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4378112	1.60	4300192	101.81	60	120	
Sc (IS)	45	3	HMI He	641482	1.01	644593	99.52	60	120	
Ge Internal standard	72	2	HMI H2	2677349	2.94	2598552	103.03	60	120	
Ge Internal standard	72	3	HMI He	794389	0.16	772392	102.85	60	120	
In Internal Standard	115	3	HMI He	2932034	0.19	2872781	102.06	60	120	
Ir (IS)	193	3	HMI He	6161290	1.12	6092963	101.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	201_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:55:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	55.314	ppb	4.202	2271	50	110.6	90	110	>+\-10%
Na	23	3	45	47026.133	ppb	2.730	5299158	51000	92.2	90	110	
Mg	24	3	45	10016.072	ppb	1.295	591673	11000	91.1	90	110	
Al	27	3	45	935.853	ppb	0.548	21525	1000	93.6	90	110	
K	39	3	45	9982.011	ppb	1.000	509142	11000	90.7	90	110	
Ca	40	2	45	10306.743	ppb	0.889	5939670	11000	93.7	90	110	
V	51	3	72	49.961	ppb	3.697	31770	50	99.9	90	110	
Cr	52	3	72	51.181	ppb	5.138	41788	50	102.4	90	110	
Mn	55	3	72	51.032	ppb	5.485	20784	50	102.1	90	110	
Fe	56	2	72	1035.671	ppb	3.033	1680774	1000	103.6	90	110	
Co	59	3	72	49.716	ppb	3.473	64042	50	99.4	90	110	
Ni	60	3	72	50.013	ppb	4.635	18817	50	100.0	90	110	
Cu	63	3	72	49.248	ppb	2.443	49029	50	98.5	90	110	
Zn	66	3	72	50.505	ppb	5.836	8202	50	101.0	90	110	
As	75	3	72	53.650	ppb	4.733	6035	50	107.3	90	110	
Se	78	2	72	49.250	ppb	1.770	2918	50	98.5	90	110	
Sr	88	3	72	101.516	ppb	3.729	54010	100	101.5	90	110	
Mo	95	3	115	47.552	ppb	1.381	24548	50	95.1	90	110	
Ag	107	3	115	47.668	ppb	0.695	82961	50	95.3	90	110	
Cd	111	3	115	47.955	ppb	4.120	11903	50	95.9	90	110	
Sn	120	3	115	46.953	ppb	1.911	37606	50	93.9	90	110	
Sb	121	3	115	48.290	ppb	2.036	37589	50	96.6	90	110	
Ba	137	3	115	48.685	ppb	4.488	12400	50	97.4	90	110	
Tl	205	3	193	47.913	ppb	0.742	185137	50	95.8	90	110	
(Pb)	206	3	193	48.314	ppb	2.700	62147	50	96.6	90	110	
(Pb)	207	3	193	48.078	ppb	1.871	54583	50	96.2	90	110	
Pb	208	3	193	48.139	ppb	2.449	250032	50	96.3	90	110	
Th	232	3	193	47.596	ppb	1.118	251705	50	95.2	90	110	
U	238	3	193	48.401	ppb	1.964	263488	50	96.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4278307	0.82	4300192	99.49	60	120	
Sc (IS)	45	3	HMI He	630052	0.42	644593	97.74	60	120	
Ge Internal standard	72	2	HMI H2	2555306	1.02	2598552	98.34	60	120	
Ge Internal standard	72	3	HMI He	749526	2.79	772392	97.04	60	120	
In Internal Standard	115	3	HMI He	2874606	0.37	2872781	100.06	60	120	
Ir (IS)	193	3	HMI He	6083536	1.67	6092963	99.85	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	202_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:56:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	134.539	ppb	0.1	31540	25	>RL
Mg	24	3	45	1.496	ppb	71.8	354	25	
Al	27	3	45	-3.068	ppb	-49.6	80	15	
K	39	3	45	6.069	ppb	625.6	27849	50	
V	51	3	72	0.708	ppb	38.3	1438	1	
Cr	52	3	72	0.263	ppb	82.1	3310	1	
Mn	55	3	72	0.010	ppb	1566.3	380	0.5	
Co	59	3	72	0.017	ppb	160.7	77	0.5	
Ni	60	3	72	0.306	ppb	36.3	800	1	
Cu	63	3	72	0.076	ppb	82.2	470	1	
Zn	66	3	72	-0.466	ppb	-12.8	152	5	
As	75	3	72	0.090	ppb	200.5	53	1	
Se	78	2	72	0.057	ppb	68.5	5	1	
Sr	88	3	72	0.031	ppb	157.3	60	0.5	
Mo	95	3	115	0.079	ppb	53.6	80	0.5	
Ag	107	3	115	0.009	ppb	32.2	30	1	
Cd	111	3	115	-0.021	ppb	-94.6	5	0.5	
Sn	120	3	115	-0.058	ppb	-56.4	718	1	
Sb	121	3	115	0.008	ppb	100.8	52	0.6	
Ba	137	3	115	-0.093	ppb	-54.1	38	0.5	
Tl	205	3	193	-0.026	ppb	-35.8	283	0.1	
(Pb)	206	3	193	-0.054	ppb	-29.6	252	1	
(Pb)	207	3	193	-0.073	ppb	-51.6	403	1	
Pb	208	3	193	-0.068	ppb	-14.9	1143	0.5	
Th	232	3	193	1.269	ppb	8.8	13549	1	>RL
U	238	3	193	0.028	ppb	93.7	1699	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4301515	0.79	4300192	100.03	60	120	
Sc (IS)	45	3	HMI He	632095	0.35	644593	98.06	60	120	
Ge Internal standard	72	2	HMI H2	2545655	0.44	2598552	97.96	60	120	
Ge Internal standard	72	3	HMI He	768110	0.68	772392	99.45	60	120	
In Internal Standard	115	3	HMI He	2906748	1.03	2872781	101.18	60	120	
Ir (IS)	193	3	HMI He	6143386	1.74	6092963	100.83	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	203LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:58:36-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.611	ppb	29.631	32	1	61.1	70	130	>+/-30%
Na	23	3	45	381.963	ppb	2.652	59695	300	127.3	70	130	
Mg	24	3	45	45.888	ppb	8.534	2997	50	91.8	70	130	
Al	27	3	45	39.103	ppb	13.662	1051	50	78.2	70	130	
K	39	3	45	112.573	ppb	13.665	33159	120	93.8	70	130	
Ca	40	2	45	196.061	ppb	2.359	125576	200	98.0	70	130	
V	51	3	72	5.435	ppb	0.970	4472	5	108.7	70	130	
Cr	52	3	72	2.225	ppb	8.752	4883	2	111.3	70	130	
Mn	55	3	72	0.799	ppb	23.505	711	1	79.9	70	130	
Fe	56	2	72	54.451	ppb	7.939	149862	50	108.9	70	130	
Co	59	3	72	0.957	ppb	4.085	1331	1	95.7	70	130	
Ni	60	3	72	2.256	ppb	4.110	1541	2	112.8	70	130	
Cu	63	3	72	1.880	ppb	1.630	2319	2	94.0	70	130	
Zn	66	3	72	9.255	ppb	9.686	1744	10	92.5	70	130	
As	75	3	72	4.908	ppb	10.232	611	5	98.2	70	130	
Se	78	2	72	4.795	ppb	5.582	290	5	95.9	70	130	
Sr	88	3	72	4.756	ppb	4.963	2662	5	95.1	70	130	
Mo	95	3	115	1.742	ppb	20.869	955	2	87.1	70	130	
Ag	107	3	115	0.946	ppb	9.562	1691	1	94.6	70	130	
Cd	111	3	115	0.975	ppb	22.741	257	1	97.5	70	130	
Sn	120	3	115	8.235	ppb	4.463	7362	10	82.3	70	130	
Sb	121	3	115	1.848	ppb	9.346	1511	2	92.4	70	130	
Ba	137	3	115	0.761	ppb	13.013	260	1	76.1	70	130	
Tl	205	3	193	0.888	ppb	1.506	3910	1	88.8	70	130	
(Pb)	206	3	193	0.821	ppb	4.233	1408	1	82.1	70	130	
(Pb)	207	3	193	0.828	ppb	3.923	1453	1	82.8	70	130	
Pb	208	3	193	0.841	ppb	3.905	5991	1	84.1	70	130	
Th	232	3	193	0.990	ppb	17.033	12317	1	99.0	70	130	
U	238	3	193	0.971	ppb	1.622	6980	1	97.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4276736	0.64	4300192	99.45	60	120	
Sc (IS)	45	3	HMI He	635007	0.71	644593	98.51	60	120	
Ge Internal standard	72	2	HMI H2	2591673	0.80	2598552	99.74	60	120	
Ge Internal standard	72	3	HMI He	775846	0.50	772392	100.45	60	120	
In Internal Standard	115	3	HMI He	2932884	1.84	2872781	102.09	60	120	
Ir (IS)	193	3	HMI He	6257349	0.81	6092963	102.70	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A
Data File Name	204SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:00:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	66.508	ppb	66.508	6.10	2679	2000	
Na	23	3	45	36018.963	ppb	36018.963	1.81	4025220	400000	
Mg	24	3	45	214314.481	ppb	214314.481	0.88	12538480	400000	
Al	27	3	45	230487.389	ppb	230487.389	1.85	5215615	400000	
K	39	3	45	6881.028	ppb	6881.028	2.10	356170	400000	
Ca	40	2	45	443052.895	ppb	443052.895	1.14	245756423	400000	
V	51	3	72	55.279	ppb	55.279	2.82	35853	2000	
Cr	52	3	72	7.105	ppb	7.105	2.81	8605	5000	
Mn	55	3	72	12183.473	ppb	12183.473	1.89	4988345	10000	
Fe	56	2	72	808.990	ppb	808.990	1.31	1313749	10000	
Co	59	3	72	588.979	ppb	588.979	3.08	775423	2000	
Ni	60	3	72	534.943	ppb	534.943	2.44	199274	5000	
Cu	63	3	72	7.139	ppb	7.139	4.72	7602	5000	
Zn	66	3	72	2747.999	ppb	2747.999	2.20	444575	5000	
As	75	3	72	4.594	ppb	4.594	7.82	568	2000	
Se	78	2	72	14.072	ppb	14.072	4.73	827	2000	
Sr	88	3	72	3410.465	ppb	3410.465	2.50	1854356	4000	
Mo	95	3	115	0.064	ppb	0.064	47.61	70	2000	
Ag	107	3	115	0.022	ppb	0.022	48.33	50	100	
Cd	111	3	115	7.651	ppb	7.651	6.84	1878	2000	
Sn	120	3	115	-0.047	ppb	-0.047	-281.87	708	2000	
Sb	121	3	115	0.057	ppb	0.057	39.45	88	1000	
Ba	137	3	115	10.534	ppb	10.534	0.68	2689	5000	
Tl	205	3	193	0.687	ppb	0.687	0.95	2992	2000	
(Pb)	206	3	193	10.215	ppb	10.215	2.07	13239	100	
(Pb)	207	3	193	9.137	ppb	9.137	3.13	10634	100	
Pb	208	3	193	9.537	ppb	9.537	1.20	50135	5000	
Th	232	3	193	2.327	ppb	2.327	6.71	18630	2000	
U	238	3	193	98.474	ppb	98.474	1.94	528231	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4126753	1.22	4300192	95.97	60	120	
Sc (IS)	45	3	HMI He	624296	1.10	644593	96.85	60	120	
Ge Internal standard	72	2	HMI H2	2530315	1.19	2598552	97.37	60	120	
Ge Internal standard	72	3	HMI He	766376	1.33	772392	99.22	60	120	
In Internal Standard	115	3	HMI He	2830137	1.09	2872781	98.52	60	120	
Ir (IS)	193	3	HMI He	6011628	1.36	6092963	98.67	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A
Data File Name	205SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:02:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	80.479	ppb	80.479	2.79	3145	2000	
Na	23	3	45	62599.010	ppb	62599.010	1.52	6902206	400000	
Mg	24	3	45	315441.966	ppb	315441.966	1.69	18238867	400000	
Al	27	3	45	86190.242	ppb	86190.242	2.05	1927703	400000	
K	39	3	45	14970.773	ppb	14970.773	1.20	734266	400000	
Ca	40	2	45	452445.885	ppb	452445.885	0.18	253162962	400000	
V	51	3	72	4.207	ppb	4.207	7.75	3622	2000	
Cr	52	3	72	2.783	ppb	2.783	14.83	5227	5000	
Mn	55	3	72	15542.305	ppb	15542.305	0.14	6329272	10000	
Fe	56	2	72	282.266	ppb	282.266	3.38	501951	10000	
Co	59	3	72	758.186	ppb	758.186	2.21	992978	2000	
Ni	60	3	72	612.129	ppb	612.129	0.32	226718	5000	
Cu	63	3	72	4.891	ppb	4.891	3.36	5303	5000	
Zn	66	3	72	3422.970	ppb	3422.970	0.78	550762	5000	
As	75	3	72	3.565	ppb	3.565	15.39	448	2000	
Se	78	2	72	17.076	ppb	17.076	6.86	1009	2000	
Sr	88	3	72	4417.561	ppb	4417.561	1.65	2389255	4000	
Mo	95	3	115	0.082	ppb	0.082	15.03	78	2000	
Ag	107	3	115	0.017	ppb	0.017	42.91	42	100	
Cd	111	3	115	10.678	ppb	10.678	3.95	2576	2000	
Sn	120	3	115	-0.139	ppb	-0.139	-58.26	626	2000	
Sb	121	3	115	0.046	ppb	0.046	88.12	78	1000	
Ba	137	3	115	8.387	ppb	8.387	5.45	2119	5000	
Tl	205	3	193	1.896	ppb	1.896	0.35	7445	2000	
(Pb)	206	3	193	10.695	ppb	10.695	1.14	13562	100	
(Pb)	207	3	193	9.425	ppb	9.425	2.01	10734	100	
Pb	208	3	193	9.989	ppb	9.989	1.18	51380	5000	
Th	232	3	193	0.493	ppb	0.493	9.85	9122	2000	
U	238	3	193	178.002	ppb	178.002	0.97	934440	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162571	0.67	4300192	96.80	60	120	
Sc (IS)	45	3	HMI He	616938	0.27	644593	95.71	60	120	
Ge Internal standard	72	2	HMI H2	2547065	1.51	2598552	98.02	60	120	
Ge Internal standard	72	3	HMI He	762151	0.25	772392	98.67	60	120	
In Internal Standard	115	3	HMI He	2786327	1.97	2872781	96.99	60	120	
Ir (IS)	193	3	HMI He	5890028	0.48	6092963	96.67	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-3-A
Data File Name	206SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:03:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-96.79	3	2000	
Na	23	3	45	2156.261	ppb	2156.261	1.39	259640	400000	
Mg	24	3	45	7370.378	ppb	7370.378	2.69	437197	400000	
Al	27	3	45	1706.327	ppb	1706.327	2.59	39279	400000	
K	39	3	45	21401.330	ppb	21401.330	0.48	1064798	400000	
Ca	40	2	45	43170.960	ppb	43170.960	1.11	25707597	400000	
V	51	3	72	4.145	ppb	4.145	1.14	3719	2000	
Cr	52	3	72	1.640	ppb	1.640	27.37	4507	5000	
Mn	55	3	72	26.790	ppb	26.790	5.11	11701	10000	
Fe	56	2	72	882.769	ppb	882.769	5.31	1491636	10000	
Co	59	3	72	1.019	ppb	1.019	8.11	1439	2000	
Ni	60	3	72	2.095	ppb	2.095	13.30	1508	5000	
Cu	63	3	72	5.104	ppb	5.104	4.34	5723	5000	
Zn	66	3	72	4.493	ppb	4.493	10.26	983	5000	
As	75	3	72	1.261	ppb	1.261	39.98	193	2000	
Se	78	2	72	0.467	ppb	0.467	4.25	31	2000	
Sr	88	3	72	286.002	ppb	286.002	1.13	160524	4000	
Mo	95	3	115	2.492	ppb	2.492	7.03	1344	2000	
Ag	107	3	115	0.014	ppb	0.014	42.94	38	100	
Cd	111	3	115	-0.014	ppb	-0.014	-213.93	7	2000	
Sn	120	3	115	-0.259	ppb	-0.259	-6.89	561	2000	
Sb	121	3	115	0.317	ppb	0.317	8.21	297	1000	
Ba	137	3	115	64.781	ppb	64.781	0.60	16756	5000	
Tl	205	3	193	0.016	ppb	0.016	46.38	458	2000	
(Pb)	206	3	193	0.932	ppb	0.932	14.01	1566	100	
(Pb)	207	3	193	0.804	ppb	0.804	11.73	1436	100	
Pb	208	3	193	0.897	ppb	0.897	5.15	6343	5000	
Th	232	3	193	0.122	ppb	0.122	17.72	7792	2000	
U	238	3	193	4.368	ppb	4.368	2.83	26102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4428318	1.37	4300192	102.98	60	120	
Sc (IS)	45	3	HMI He	632769	1.81	644593	98.17	60	120	
Ge Internal standard	72	2	HMI H2	2643364	0.42	2598552	101.72	60	120	
Ge Internal standard	72	3	HMI He	790807	1.48	772392	102.38	60	120	
In Internal Standard	115	3	HMI He	2922634	2.31	2872781	101.74	60	120	
Ir (IS)	193	3	HMI He	6308338	1.49	6092963	103.53	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A
Data File Name	207SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:05:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	65.797	ppb	65.797	5.14	2726	2000	
Na	23	3	45	34986.640	ppb	34986.640	2.87	4018561	400000	
Mg	24	3	45	209631.690	ppb	209631.690	0.55	12605173	400000	
Al	27	3	45	222943.233	ppb	222943.233	1.30	5185188	400000	
K	39	3	45	6654.281	ppb	6654.281	2.40	354908	400000	
Ca	40	2	45	423680.196	ppb	423680.196	2.15	246279286	400000	
V	51	3	72	55.627	ppb	55.627	1.95	36605	2000	
Cr	52	3	72	6.354	ppb	6.354	4.98	8140	5000	
Mn	55	3	72	12154.415	ppb	12154.415	2.79	5049231	10000	
Fe	56	2	72	795.128	ppb	795.128	2.26	1295704	10000	
Co	59	3	72	586.403	ppb	586.403	1.86	783478	2000	
Ni	60	3	72	533.288	ppb	533.288	2.17	201593	5000	
Cu	63	3	72	7.069	ppb	7.069	2.78	7645	5000	
Zn	66	3	72	2728.319	ppb	2728.319	1.53	447907	5000	
As	75	3	72	4.263	ppb	4.263	4.13	538	2000	
Se	78	2	72	13.834	ppb	13.834	6.52	815	2000	
Sr	88	3	72	3360.743	ppb	3360.743	2.24	1854308	4000	
Mo	95	3	115	0.049	ppb	0.049	40.71	63	2000	
Ag	107	3	115	0.018	ppb	0.018	13.83	45	100	
Cd	111	3	115	7.527	ppb	7.527	3.94	1873	2000	
Sn	120	3	115	-0.180	ppb	-0.180	-20.64	613	2000	
Sb	121	3	115	0.039	ppb	0.039	21.00	75	1000	
Ba	137	3	115	9.960	ppb	9.960	4.91	2579	5000	
Tl	205	3	193	0.627	ppb	0.627	3.31	2842	2000	
(Pb)	206	3	193	9.813	ppb	9.813	4.48	13082	100	
(Pb)	207	3	193	9.081	ppb	9.081	1.68	10869	100	
Pb	208	3	193	9.398	ppb	9.398	2.24	50808	5000	
Th	232	3	193	2.038	ppb	2.038	5.71	17645	2000	
U	238	3	193	96.572	ppb	96.572	2.05	532610	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4325701	2.23	4300192	100.59	60	120	
Sc (IS)	45	3	HMI He	641628	1.23	644593	99.54	60	120	
Ge Internal standard	72	2	HMI H2	2537099	0.36	2598552	97.64	60	120	
Ge Internal standard	72	3	HMI He	777618	1.00	772392	100.68	60	120	
In Internal Standard	115	3	HMI He	2868118	2.03	2872781	99.84	60	120	
Ir (IS)	193	3	HMI He	6180838	1.26	6092963	101.44	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	208SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:07:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-97.30	3	2000	
Na	23	3	45	19570.011	ppb	19570.011	0.71	2192442	400000	
Mg	24	3	45	13625.582	ppb	13625.582	1.91	796602	400000	
Al	27	3	45	37.280	ppb	37.280	8.08	991	400000	
K	39	3	45	7502.718	ppb	7502.718	1.03	385543	400000	
Ca	40	2	45	51463.936	ppb	51463.936	1.86	29801781	400000	
V	51	3	72	22.809	ppb	22.809	1.79	15679	2000	
Cr	52	3	72	1.945	ppb	1.945	19.45	4697	5000	
Mn	55	3	72	5.541	ppb	5.541	8.19	2696	10000	
Fe	56	2	72	10.224	ppb	10.224	43.62	79943	10000	
Co	59	3	72	0.156	ppb	0.156	18.30	265	2000	
Ni	60	3	72	0.658	ppb	0.658	49.41	946	5000	
Cu	63	3	72	0.612	ppb	0.612	12.23	1030	5000	
Zn	66	3	72	1.873	ppb	1.873	24.34	540	5000	
As	75	3	72	14.349	ppb	14.349	4.05	1716	2000	
Se	78	2	72	4.091	ppb	4.091	15.50	249	2000	
Sr	88	3	72	263.079	ppb	263.079	2.10	145899	4000	
Mo	95	3	115	9.682	ppb	9.682	7.58	4997	2000	
Ag	107	3	115	0.010	ppb	0.010	4.67	30	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.262	ppb	-0.262	-15.57	546	2000	
Sb	121	3	115	0.407	ppb	0.407	29.33	358	1000	
Ba	137	3	115	42.041	ppb	42.041	1.87	10657	5000	
Tl	205	3	193	-0.039	ppb	-0.039	-10.83	230	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-56.12	272	100	
(Pb)	207	3	193	-0.010	ppb	-0.010	-458.88	471	100	
Pb	208	3	193	-0.038	ppb	-0.038	-35.26	1294	5000	
Th	232	3	193	-0.363	ppb	-0.363	-6.54	5040	2000	
U	238	3	193	1.722	ppb	1.722	1.63	10898	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4306104	0.63	4300192	100.14	60	120	
Sc (IS)	45	3	HMI He	623665	0.60	644593	96.75	60	120	
Ge Internal standard	72	2	HMI H2	2599664	1.13	2598552	100.04	60	120	
Ge Internal standard	72	3	HMI He	781373	0.78	772392	101.16	60	120	
In Internal Standard	115	3	HMI He	2859165	2.61	2872781	99.53	60	120	
Ir (IS)	193	3	HMI He	6110465	1.42	6092963	100.29	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	209SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:09:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3733.612	ppb	3733.612	1.23	431951	400000	
Mg	24	3	45	2610.885	ppb	2610.885	1.37	153072	400000	
Al	27	3	45	9.053	ppb	9.053	31.16	354	400000	
K	39	3	45	1488.268	ppb	1488.268	3.12	98408	400000	
Ca	40	2	45	10478.390	ppb	10478.390	0.65	5934046	400000	
V	51	3	72	4.245	ppb	4.245	5.80	3732	2000	
Cr	52	3	72	0.622	ppb	0.622	77.10	3644	5000	
Mn	55	3	72	2.986	ppb	2.986	6.54	1626	10000	
Fe	56	2	72	9.044	ppb	9.044	30.42	76457	10000	
Co	59	3	72	0.066	ppb	0.066	15.58	143	2000	
Ni	60	3	72	0.537	ppb	0.537	22.08	900	5000	
Cu	63	3	72	0.262	ppb	0.262	14.02	668	5000	
Zn	66	3	72	3.184	ppb	3.184	7.85	755	5000	
As	75	3	72	2.829	ppb	2.829	12.57	373	2000	
Se	78	2	72	0.803	ppb	0.803	6.79	49	2000	
Sr	88	3	72	52.806	ppb	52.806	1.01	29277	4000	
Mo	95	3	115	1.822	ppb	1.822	0.99	971	2000	
Ag	107	3	115	0.017	ppb	0.017	24.61	43	100	
Cd	111	3	115	-0.034	ppb	-0.034	-34.83	2	2000	
Sn	120	3	115	-0.093	ppb	-0.093	-87.77	678	2000	
Sb	121	3	115	0.093	ppb	0.093	39.07	117	1000	
Ba	137	3	115	8.826	ppb	8.826	3.42	2284	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-22.47	205	2000	
(Pb)	206	3	193	0.281	ppb	0.281	35.46	680	100	
(Pb)	207	3	193	0.294	ppb	0.294	8.88	816	100	
Pb	208	3	193	0.280	ppb	0.280	15.61	2944	5000	
Th	232	3	193	-0.417	ppb	-0.417	-9.10	4774	2000	
U	238	3	193	0.322	ppb	0.322	5.31	3294	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4204632	2.57	4300192	97.78	60	120	
Sc (IS)	45	3	HMI He	624529	0.52	644593	96.89	60	120	
Ge Internal standard	72	2	HMI H2	2542709	2.14	2598552	97.85	60	120	
Ge Internal standard	72	3	HMI He	780147	0.80	772392	101.00	60	120	
In Internal Standard	115	3	HMI He	2856264	0.76	2872781	99.43	60	120	
Ir (IS)	193	3	HMI He	6126451	2.42	6092963	100.55	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	210SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:11:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.333	ppb	42.333	5.59	1751	2000	
Na	23	3	45	20149.916	ppb	20149.916	1.81	2280184	400000	
Mg	24	3	45	14544.064	ppb	14544.064	3.48	858963	400000	
Al	27	3	45	746.564	ppb	746.564	1.18	17201	400000	
K	39	3	45	8472.126	ppb	8472.126	0.69	436284	400000	
Ca	40	2	45	52832.747	ppb	52832.747	0.77	30789867	400000	
V	51	3	72	61.977	ppb	61.977	3.45	40889	2000	
Cr	52	3	72	40.728	ppb	40.728	0.93	35366	5000	
Mn	55	3	72	43.898	ppb	43.898	0.84	18722	10000	
Fe	56	2	72	803.842	ppb	803.842	0.74	1341676	10000	
Co	59	3	72	38.789	ppb	38.789	1.00	52170	2000	
Ni	60	3	72	38.522	ppb	38.522	3.20	15289	5000	
Cu	63	3	72	39.733	ppb	39.733	1.33	41359	5000	
Zn	66	3	72	41.138	ppb	41.138	3.16	7018	5000	
As	75	3	72	52.785	ppb	52.785	5.24	6198	2000	
Se	78	2	72	43.027	ppb	43.027	4.88	2594	2000	
Sr	88	3	72	350.038	ppb	350.038	0.59	194262	4000	
Mo	95	3	115	48.231	ppb	48.231	0.88	24817	2000	
Ag	107	3	115	39.016	ppb	39.016	2.00	67672	100	
Cd	111	3	115	38.545	ppb	38.545	2.65	9537	2000	
Sn	120	3	115	37.829	ppb	37.829	1.94	30341	2000	
Sb	121	3	115	39.897	ppb	39.897	0.15	30965	1000	
Ba	137	3	115	84.570	ppb	84.570	0.63	21425	5000	
Tl	205	3	193	38.895	ppb	38.895	1.75	152930	2000	
(Pb)	206	3	193	38.743	ppb	38.743	2.00	50764	100	
(Pb)	207	3	193	38.255	ppb	38.255	2.99	44267	100	
Pb	208	3	193	38.805	ppb	38.805	2.32	205320	5000	
Th	232	3	193	36.836	ppb	36.836	0.46	199763	2000	
U	238	3	193	40.406	ppb	40.406	1.85	224021	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4333860	0.29	4300192	100.78	60	120	
Sc (IS)	45	3	HMI He	630064	0.46	644593	97.75	60	120	
Ge Internal standard	72	2	HMI H2	2599837	1.19	2598552	100.05	60	120	
Ge Internal standard	72	3	HMI He	781920	0.98	772392	101.23	60	120	
In Internal Standard	115	3	HMI He	2865374	1.92	2872781	99.74	60	120	
Ir (IS)	193	3	HMI He	6188054	1.10	6092963	101.56	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	211SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:12:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.706	ppb	40.706	11.26	1703	2000	
Na	23	3	45	19638.019	ppb	19638.019	2.67	2247474	400000	
Mg	24	3	45	14205.849	ppb	14205.849	1.32	848420	400000	
Al	27	3	45	742.830	ppb	742.830	2.29	17308	400000	
K	39	3	45	8084.840	ppb	8084.840	0.32	422257	400000	
Ca	40	2	45	52969.865	ppb	52969.865	1.57	30608600	400000	
V	51	3	72	60.625	ppb	60.625	1.35	40625	2000	
Cr	52	3	72	40.305	ppb	40.305	2.55	35554	5000	
Mn	55	3	72	42.297	ppb	42.297	0.55	18323	10000	
Fe	56	2	72	808.243	ppb	808.243	0.91	1366429	10000	
Co	59	3	72	37.472	ppb	37.472	0.86	51153	2000	
Ni	60	3	72	37.776	ppb	37.776	2.97	15232	5000	
Cu	63	3	72	38.982	ppb	38.982	1.86	41189	5000	
Zn	66	3	72	39.835	ppb	39.835	5.15	6905	5000	
As	75	3	72	53.814	ppb	53.814	0.48	6415	2000	
Se	78	2	72	42.703	ppb	42.703	3.90	2608	2000	
Sr	88	3	72	336.853	ppb	336.853	1.59	189740	4000	
Mo	95	3	115	46.018	ppb	46.018	5.07	24103	2000	
Ag	107	3	115	38.291	ppb	38.291	2.92	67626	100	
Cd	111	3	115	38.413	ppb	38.413	1.68	9680	2000	
Sn	120	3	115	37.396	ppb	37.396	1.83	30553	2000	
Sb	121	3	115	39.477	ppb	39.477	0.29	31201	1000	
Ba	137	3	115	81.374	ppb	81.374	2.65	20991	5000	
Tl	205	3	193	39.117	ppb	39.117	1.41	153075	2000	
(Pb)	206	3	193	39.454	ppb	39.454	2.60	51457	100	
(Pb)	207	3	193	39.035	ppb	39.035	1.66	44956	100	
Pb	208	3	193	38.989	ppb	38.989	2.14	205349	5000	
Th	232	3	193	38.725	ppb	38.725	0.31	208647	2000	
U	238	3	193	40.456	ppb	40.456	1.04	223252	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4297767	1.35	4300192	99.94	60	120	
Sc (IS)	45	3	HMI He	637082	0.43	644593	98.83	60	120	
Ge Internal standard	72	2	HMI H2	2634308	1.50	2598552	101.38	60	120	
Ge Internal standard	72	3	HMI He	793611	0.49	772392	102.75	60	120	
In Internal Standard	115	3	HMI He	2917914	1.78	2872781	101.57	60	120	
Ir (IS)	193	3	HMI He	6158732	0.90	6092963	101.08	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D pds
Data File Name	212SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:14:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	110.211	ppb	110.211	1.35	4660	2000	
Na	23	3	45	23925.909	ppb	23925.909	1.05	2709352	400000	
Mg	24	3	45	15391.736	ppb	15391.736	3.13	910776	400000	
Al	27	3	45	2023.025	ppb	2023.025	2.72	46439	400000	
K	39	3	45	9453.909	ppb	9453.909	1.29	484563	400000	
Ca	40	2	45	53409.699	ppb	53409.699	1.69	31188875	400000	
V	51	3	72	116.746	ppb	116.746	0.51	77415	2000	
Cr	52	3	72	98.533	ppb	98.533	0.88	82421	5000	
Mn	55	3	72	97.745	ppb	97.745	1.79	41900	10000	
Fe	56	2	72	1058.323	ppb	1058.323	1.69	1748432	10000	
Co	59	3	72	96.194	ppb	96.194	1.48	131441	2000	
Ni	60	3	72	94.646	ppb	94.646	0.65	37163	5000	
Cu	63	3	72	97.959	ppb	97.959	0.56	103069	5000	
Zn	66	3	72	201.755	ppb	201.755	2.04	34078	5000	
As	75	3	72	117.837	ppb	117.837	1.26	14017	2000	
Se	78	2	72	106.172	ppb	106.172	1.69	6406	2000	
Sr	88	3	72	356.230	ppb	356.230	1.09	200985	4000	
Mo	95	3	115	106.449	ppb	106.449	2.56	55086	2000	
Ag	107	3	115	26.103	ppb	26.103	0.96	45588	100	
Cd	111	3	115	99.167	ppb	99.167	1.71	24687	2000	
Sn	120	3	115	98.130	ppb	98.130	1.02	78033	2000	
Sb	121	3	115	95.655	ppb	95.655	1.01	74666	1000	
Ba	137	3	115	142.131	ppb	142.131	0.70	36205	5000	
Tl	205	3	193	98.154	ppb	98.154	1.19	385849	2000	
(Pb)	206	3	193	97.892	ppb	97.892	1.44	127941	100	
(Pb)	207	3	193	96.998	ppb	96.998	3.06	111633	100	
Pb	208	3	193	97.265	ppb	97.265	1.60	513054	5000	
Th	232	3	193	104.980	ppb	104.980	2.01	556961	2000	
U	238	3	193	214.112	ppb	214.112	3.98	1181706	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4343562	2.01	4300192	101.01	60	120	
Sc (IS)	45	3	HMI He	631265	0.66	644593	97.93	60	120	
Ge Internal standard	72	2	HMI H2	2603174	0.31	2598552	100.18	60	120	
Ge Internal standard	72	3	HMI He	794934	0.61	772392	102.92	60	120	
In Internal Standard	115	3	HMI He	2884393	1.06	2872781	100.40	60	120	
Ir (IS)	193	3	HMI He	6196001	1.16	6092963	101.69	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	213_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:16:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.166	ppb	4.253	2199	50	106.3	90	110	
Na	23	3	45	48077.438	ppb	0.728	5396703	51000	94.3	90	110	
Mg	24	3	45	10265.689	ppb	1.400	604064	11000	93.3	90	110	
Al	27	3	45	972.928	ppb	2.884	22283	1000	97.3	90	110	
K	39	3	45	10181.534	ppb	1.063	516772	11000	92.6	90	110	
Ca	40	2	45	10406.909	ppb	1.045	5978238	11000	94.6	90	110	
V	51	3	72	51.478	ppb	1.701	32670	50	103.0	90	110	
Cr	52	3	72	51.808	ppb	2.226	42228	50	103.6	90	110	
Mn	55	3	72	50.939	ppb	1.550	20730	50	101.9	90	110	
Fe	56	2	72	1073.315	ppb	0.849	1697398	1000	107.3	90	110	
Co	59	3	72	50.702	ppb	1.882	65237	50	101.4	90	110	
Ni	60	3	72	50.905	ppb	0.572	19124	50	101.8	90	110	
Cu	63	3	72	50.169	ppb	2.599	49868	50	100.3	90	110	
Zn	66	3	72	49.873	ppb	1.541	8097	50	99.7	90	110	
As	75	3	72	53.952	ppb	2.057	6063	50	107.9	90	110	
Se	78	2	72	50.244	ppb	3.823	2904	50	100.5	90	110	
Sr	88	3	72	103.817	ppb	2.957	55159	100	103.8	90	110	
Mo	95	3	115	49.334	ppb	2.913	25495	50	98.7	90	110	
Ag	107	3	115	48.425	ppb	3.274	84361	50	96.8	90	110	
Cd	111	3	115	49.329	ppb	2.339	12258	50	98.7	90	110	
Sn	120	3	115	48.001	ppb	3.144	38471	50	96.0	90	110	
Sb	121	3	115	49.566	ppb	3.388	38620	50	99.1	90	110	
Ba	137	3	115	48.750	ppb	4.260	12428	50	97.5	90	110	
Tl	205	3	193	48.712	ppb	2.849	189756	50	97.4	90	110	
(Pb)	206	3	193	49.709	ppb	2.843	64474	50	99.4	90	110	
(Pb)	207	3	193	48.995	ppb	3.456	56066	50	98.0	90	110	
Pb	208	3	193	49.000	ppb	3.002	256611	50	98.0	90	110	
Th	232	3	193	51.785	ppb	2.011	275559	50	103.6	90	110	
U	238	3	193	48.273	ppb	2.856	265002	50	96.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4264829	1.09	4300192	99.18	60	120	
Sc (IS)	45	3	HMI He	627631	0.58	644593	97.37	60	120	
Ge Internal standard	72	2	HMI H2	2493149	1.33	2598552	95.94	60	120	
Ge Internal standard	72	3	HMI He	748314	1.08	772392	96.88	60	120	
In Internal Standard	115	3	HMI He	2878701	2.31	2872781	100.21	60	120	
Ir (IS)	193	3	HMI He	6135421	1.91	6092963	100.70	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	214_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:18:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.070	ppb	-192.6	3	0.5	
Na	23	3	45	75.801	ppb	4.2	24927	25	>RL
Mg	24	3	45	3.129	ppb	43.3	450	25	
Al	27	3	45	-0.894	ppb	-125.4	130	15	
K	39	3	45	-9.953	ppb	-223.3	27080	50	
V	51	3	72	0.202	ppb	56.8	1121	1	
Cr	52	3	72	0.547	ppb	60.5	3540	1	
Mn	55	3	72	0.188	ppb	55.0	455	0.5	
Co	59	3	72	0.030	ppb	41.3	95	0.5	
Ni	60	3	72	0.447	ppb	48.7	855	1	
Cu	63	3	72	0.059	ppb	19.3	453	1	
Zn	66	3	72	-0.108	ppb	-181.0	210	5	
As	75	3	72	0.073	ppb	146.4	52	1	
Se	78	2	72	0.068	ppb	49.6	6	1	
Sr	88	3	72	0.037	ppb	90.5	63	0.5	
Mo	95	3	115	0.107	ppb	46.4	93	0.5	
Ag	107	3	115	0.010	ppb	17.0	32	1	
Cd	111	3	115	-0.007	ppb	-306.3	8	0.5	
Sn	120	3	115	0.050	ppb	215.1	796	1	
Sb	121	3	115	0.055	ppb	42.6	88	0.6	
Ba	137	3	115	-0.040	ppb	-31.8	52	0.5	
Tl	205	3	193	-0.004	ppb	-327.0	365	0.1	
(Pb)	206	3	193	-0.064	ppb	-32.5	237	1	
(Pb)	207	3	193	-0.050	ppb	-97.0	426	1	
Pb	208	3	193	-0.054	ppb	-21.1	1209	0.5	
Th	232	3	193	1.912	ppb	13.4	16803	1	>RL
U	238	3	193	0.038	ppb	69.7	1746	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4256588	0.88	4300192	98.99	60	120	
Sc (IS)	45	3	HMI He	632311	0.97	644593	98.09	60	120	
Ge Internal standard	72	2	HMI H2	2558926	0.27	2598552	98.48	60	120	
Ge Internal standard	72	3	HMI He	769939	1.85	772392	99.68	60	120	
In Internal Standard	115	3	HMI He	2880210	1.16	2872781	100.26	60	120	
Ir (IS)	193	3	HMI He	6113205	1.49	6092963	100.33	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	215LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:20:07-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.069	ppb	21.974	50	1	106.9	70	130	
Na	23	3	45	336.198	ppb	3.848	54918	300	112.1	70	130	
Mg	24	3	45	44.087	ppb	6.897	2910	50	88.2	70	130	
Al	27	3	45	45.104	ppb	7.255	1198	50	90.2	70	130	
K	39	3	45	98.456	ppb	44.011	32698	120	82.0	70	130	
Ca	40	2	45	203.148	ppb	1.687	126238	200	101.6	70	130	
V	51	3	72	4.669	ppb	5.436	4015	5	93.4	70	130	
Cr	52	3	72	2.058	ppb	10.851	4792	2	102.9	70	130	
Mn	55	3	72	0.920	ppb	8.343	768	1	92.0	70	130	
Fe	56	2	72	53.543	ppb	8.305	143126	50	107.1	70	130	
Co	59	3	72	0.991	ppb	1.470	1388	1	99.1	70	130	
Ni	60	3	72	2.200	ppb	5.698	1533	2	110.0	70	130	
Cu	63	3	72	1.867	ppb	2.391	2326	2	93.4	70	130	
Zn	66	3	72	8.714	ppb	6.137	1669	10	87.1	70	130	
As	75	3	72	5.336	ppb	8.820	666	5	106.7	70	130	
Se	78	2	72	5.096	ppb	8.007	297	5	101.9	70	130	
Sr	88	3	72	4.740	ppb	3.159	2676	5	94.8	70	130	
Mo	95	3	115	2.020	ppb	13.177	1086	2	101.0	70	130	
Ag	107	3	115	0.871	ppb	3.995	1543	1	87.1	70	130	
Cd	111	3	115	0.867	ppb	11.077	227	1	86.7	70	130	
Sn	120	3	115	8.286	ppb	3.578	7317	10	82.9	70	130	
Sb	121	3	115	1.935	ppb	6.939	1561	2	96.7	70	130	
Ba	137	3	115	0.838	ppb	25.362	277	1	83.8	70	130	
Tl	205	3	193	0.834	ppb	5.022	3682	1	83.4	70	130	
(Pb)	206	3	193	0.776	ppb	9.358	1343	1	77.6	70	130	
(Pb)	207	3	193	0.837	ppb	11.739	1456	1	83.7	70	130	
Pb	208	3	193	0.803	ppb	7.923	5764	1	80.3	70	130	
Th	232	3	193	1.370	ppb	14.931	14286	1	137.0	70	130	>+/-30%
U	238	3	193	0.938	ppb	6.796	6767	1	93.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4164266	1.42	4300192	96.84	60	120	
Sc (IS)	45	3	HMI He	639897	2.10	644593	99.27	60	120	
Ge Internal standard	72	2	HMI H2	2499401	1.15	2598552	96.18	60	120	
Ge Internal standard	72	3	HMI He	782523	1.75	772392	101.31	60	120	
In Internal Standard	115	3	HMI He	2898903	2.53	2872781	100.91	60	120	
Ir (IS)	193	3	HMI He	6232941	1.98	6092963	102.30	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-6-A
Data File Name	216SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:21:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17162.830	ppb	17162.830	0.96	1975564	400000	
Mg	24	3	45	17042.542	ppb	17042.542	2.71	1022747	400000	
Al	27	3	45	4.072	ppb	4.072	42.28	247	400000	
K	39	3	45	6978.035	ppb	6978.035	0.53	370000	400000	
Ca	40	2	45	59240.009	ppb	59240.009	0.26	34581404	400000	
V	51	3	72	21.099	ppb	21.099	2.82	14987	2000	
Cr	52	3	72	1.250	ppb	1.250	14.67	4265	5000	
Mn	55	3	72	0.364	ppb	0.364	27.72	550	10000	
Fe	56	2	72	5.910	ppb	5.910	57.53	75279	10000	
Co	59	3	72	0.129	ppb	0.129	6.21	235	2000	
Ni	60	3	72	1.478	ppb	1.478	7.59	1293	5000	
Cu	63	3	72	16.258	ppb	16.258	0.46	17629	5000	
Zn	66	3	72	1.823	ppb	1.823	13.97	546	5000	
As	75	3	72	5.993	ppb	5.993	14.90	763	2000	
Se	78	2	72	4.957	ppb	4.957	11.29	309	2000	
Sr	88	3	72	293.571	ppb	293.571	2.10	167392	4000	
Mo	95	3	115	3.131	ppb	3.131	6.12	1696	2000	
Ag	107	3	115	0.013	ppb	0.013	53.47	37	100	
Cd	111	3	115	-0.015	ppb	-0.015	-72.96	7	2000	
Sn	120	3	115	-0.143	ppb	-0.143	-28.61	660	2000	
Sb	121	3	115	0.268	ppb	0.268	17.04	260	1000	
Ba	137	3	115	38.564	ppb	38.564	3.14	10086	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-17.02	230	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-15.57	237	100	
(Pb)	207	3	193	-0.114	ppb	-0.114	-26.19	363	100	
Pb	208	3	193	-0.082	ppb	-0.082	-15.15	1088	5000	
Th	232	3	193	-0.288	ppb	-0.288	-14.29	5573	2000	
U	238	3	193	3.079	ppb	3.079	1.27	18755	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4341330	1.77	4300192	100.96	60	120	
Sc (IS)	45	3	HMI He	640116	0.56	644593	99.31	60	120	
Ge Internal standard	72	2	HMI H2	2675516	0.62	2598552	102.96	60	120	
Ge Internal standard	72	3	HMI He	803351	0.49	772392	104.01	60	120	
In Internal Standard	115	3	HMI He	2948846	2.15	2872781	102.65	60	120	
Ir (IS)	193	3	HMI He	6270777	1.95	6092963	102.92	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-8-A
Data File Name	217SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:23:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17968.914	ppb	17968.914	2.72	2112895	400000	
Mg	24	3	45	10644.127	ppb	10644.127	1.38	652916	400000	
Al	27	3	45	-0.110	ppb	-0.110	-1386.71	153	400000	
K	39	3	45	5698.770	ppb	5698.770	1.35	314079	400000	
Ca	40	2	45	31171.925	ppb	31171.925	1.19	18301108	400000	
V	51	3	72	17.074	ppb	17.074	2.32	12398	2000	
Cr	52	3	72	2.015	ppb	2.015	16.17	4915	5000	
Mn	55	3	72	0.762	ppb	0.762	4.70	725	10000	
Fe	56	2	72	14.068	ppb	14.068	30.23	89850	10000	
Co	59	3	72	0.046	ppb	0.046	5.25	122	2000	
Ni	60	3	72	0.413	ppb	0.413	5.39	883	5000	
Cu	63	3	72	0.288	ppb	0.288	22.25	720	5000	
Zn	66	3	72	0.426	ppb	0.426	45.62	312	5000	
As	75	3	72	5.940	ppb	5.940	4.18	761	2000	
Se	78	2	72	1.395	ppb	1.395	6.90	90	2000	
Sr	88	3	72	167.249	ppb	167.249	1.22	95938	4000	
Mo	95	3	115	3.677	ppb	3.677	1.10	2039	2000	
Ag	107	3	115	0.006	ppb	0.006	44.53	25	100	
Cd	111	3	115	-0.022	ppb	-0.022	-88.42	5	2000	
Sn	120	3	115	-0.208	ppb	-0.208	-44.96	625	2000	
Sb	121	3	115	0.166	ppb	0.166	26.21	183	1000	
Ba	137	3	115	17.688	ppb	17.688	4.32	4792	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-18.83	162	2000	
(Pb)	206	3	193	-0.057	ppb	-0.057	-12.22	252	100	
(Pb)	207	3	193	-0.099	ppb	-0.099	-71.07	378	100	
Pb	208	3	193	-0.081	ppb	-0.081	-16.71	1089	5000	
Th	232	3	193	-0.347	ppb	-0.347	-8.90	5234	2000	
U	238	3	193	1.938	ppb	1.938	2.58	12330	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365199	2.77	4300192	101.51	60	120	
Sc (IS)	45	3	HMI He	654338	1.46	644593	101.51	60	120	
Ge Internal standard	72	2	HMI H2	2716067	2.17	2598552	104.52	60	120	
Ge Internal standard	72	3	HMI He	807997	0.39	772392	104.61	60	120	
In Internal Standard	115	3	HMI He	3031665	1.80	2872781	105.53	60	120	
Ir (IS)	193	3	HMI He	6239719	0.59	6092963	102.41	60	120	

Sample Report

Sample Table

Sample Name	280-175081-A-2-A
Data File Name	218SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:25:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3130.310	ppb	3130.310	1.08	371814	400000	
Mg	24	3	45	4854.081	ppb	4854.081	0.17	289875	400000	
Al	27	3	45	2.835	ppb	2.835	62.70	217	400000	
K	39	3	45	2217.382	ppb	2217.382	1.53	135861	400000	
Ca	40	2	45	21781.359	ppb	21781.359	0.40	12665898	400000	
V	51	3	72	2.782	ppb	2.782	12.74	2886	2000	
Cr	52	3	72	1.780	ppb	1.780	28.15	4708	5000	
Mn	55	3	72	0.252	ppb	0.252	43.35	503	10000	
Fe	56	2	72	9.383	ppb	9.383	38.45	81329	10000	
Co	59	3	72	0.030	ppb	0.030	8.33	98	2000	
Ni	60	3	72	0.719	ppb	0.719	40.44	1000	5000	
Cu	63	3	72	0.241	ppb	0.241	16.77	668	5000	
Zn	66	3	72	2.852	ppb	2.852	6.81	723	5000	
As	75	3	72	1.093	ppb	1.093	4.71	177	2000	
Se	78	2	72	0.220	ppb	0.220	87.72	16	2000	
Sr	88	3	72	103.186	ppb	103.186	1.16	59041	4000	
Mo	95	3	115	0.725	ppb	0.725	5.36	421	2000	
Ag	107	3	115	0.000	ppb	0.000	-615.10	13	100	
Cd	111	3	115	-0.021	ppb	-0.021	-92.44	5	2000	
Sn	120	3	115	-0.189	ppb	-0.189	-19.17	621	2000	
Sb	121	3	115	0.187	ppb	0.187	16.50	195	1000	
Ba	137	3	115	26.829	ppb	26.829	2.59	7022	5000	
Tl	205	3	193	-0.058	ppb	-0.058	-17.28	160	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-62.91	233	100	
(Pb)	207	3	193	-0.106	ppb	-0.106	-43.36	366	100	
Pb	208	3	193	-0.072	ppb	-0.072	-13.93	1124	5000	
Th	232	3	193	-0.393	ppb	-0.393	-6.21	4939	2000	
U	238	3	193	0.306	ppb	0.306	6.63	3234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4321856	1.19	4300192	100.50	60	120	
Sc (IS)	45	3	HMI He	636629	0.82	644593	98.76	60	120	
Ge Internal standard	72	2	HMI H2	2688098	2.28	2598552	103.45	60	120	
Ge Internal standard	72	3	HMI He	805737	0.71	772392	104.32	60	120	
In Internal Standard	115	3	HMI He	2942533	1.38	2872781	102.43	60	120	
Ir (IS)	193	3	HMI He	6172800	1.02	6092963	101.31	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	219SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:27:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	67.268	ppb	67.268	6.24	2772	2000	
Na	23	3	45	35834.303	ppb	35834.303	1.80	4077929	400000	
Mg	24	3	45	216104.005	ppb	216104.005	0.81	12874859	400000	
Al	27	3	45	224973.435	ppb	224973.435	0.96	5184366	400000	
K	39	3	45	6732.856	ppb	6732.856	1.57	355488	400000	
Ca	40	2	45	431773.739	ppb	431773.739	0.43	248277294	400000	
V	51	3	72	54.221	ppb	54.221	1.95	35900	2000	
Cr	52	3	72	5.861	ppb	5.861	4.81	7797	5000	
Mn	55	3	72	12172.671	ppb	12172.671	1.11	5085344	10000	
Fe	56	2	72	785.076	ppb	785.076	1.31	1310068	10000	
Co	59	3	72	588.483	ppb	588.483	1.63	790573	2000	
Ni	60	3	72	539.096	ppb	539.096	2.03	204898	5000	
Cu	63	3	72	7.273	ppb	7.273	3.90	7895	5000	
Zn	66	3	72	2748.503	ppb	2748.503	0.74	453722	5000	
As	75	3	72	4.195	ppb	4.195	2.68	533	2000	
Se	78	2	72	13.431	ppb	13.431	5.90	810	2000	
Sr	88	3	72	3393.452	ppb	3393.452	0.87	1883011	4000	
Mo	95	3	115	0.093	ppb	0.093	46.54	85	2000	
Ag	107	3	115	0.011	ppb	0.011	70.85	32	100	
Cd	111	3	115	8.115	ppb	8.115	11.63	1989	2000	
Sn	120	3	115	-0.007	ppb	-0.007	-472.37	738	2000	
Sb	121	3	115	0.068	ppb	0.068	53.79	97	1000	
Ba	137	3	115	10.952	ppb	10.952	0.89	2792	5000	
Tl	205	3	193	0.668	ppb	0.668	1.98	2899	2000	
(Pb)	206	3	193	10.275	ppb	10.275	1.49	13214	100	
(Pb)	207	3	193	9.340	ppb	9.340	1.21	10783	100	
Pb	208	3	193	9.650	ppb	9.650	1.06	50334	5000	
Th	232	3	193	2.205	ppb	2.205	3.98	17876	2000	
U	238	3	193	99.861	ppb	99.861	0.65	531729	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4277811	0.81	4300192	99.48	60	120	
Sc (IS)	45	3	HMI He	635708	0.89	644593	98.62	60	120	
Ge Internal standard	72	2	HMI H2	2596452	0.89	2598552	99.92	60	120	
Ge Internal standard	72	3	HMI He	781901	1.28	772392	101.23	60	120	
In Internal Standard	115	3	HMI He	2829213	1.93	2872781	98.48	60	120	
Ir (IS)	193	3	HMI He	5967399	1.74	6092963	97.94	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	220SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:29:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	84.503	ppb	84.503	4.47	3474	2000	
Na	23	3	45	63181.090	ppb	63181.090	0.51	7214329	400000	
Mg	24	3	45	314358.980	ppb	314358.980	1.83	18822124	400000	
Al	27	3	45	90010.661	ppb	90010.661	1.36	2084758	400000	
K	39	3	45	15188.374	ppb	15188.374	1.72	771002	400000	
Ca	40	2	45	456069.231	ppb	456069.231	1.24	263651549	400000	
V	51	3	72	3.994	ppb	3.994	3.76	3595	2000	
Cr	52	3	72	1.959	ppb	1.959	8.29	4733	5000	
Mn	55	3	72	16070.615	ppb	16070.615	0.92	6744301	10000	
Fe	56	2	72	228.948	ppb	228.948	1.92	425119	10000	
Co	59	3	72	787.154	ppb	787.154	3.40	1062163	2000	
Ni	60	3	72	623.663	ppb	623.663	0.99	238020	5000	
Cu	63	3	72	4.808	ppb	4.808	1.73	5380	5000	
Zn	66	3	72	3475.035	ppb	3475.035	1.15	576182	5000	
As	75	3	72	2.911	ppb	2.911	24.70	385	2000	
Se	78	2	72	18.023	ppb	18.023	3.04	1081	2000	
Sr	88	3	72	4494.422	ppb	4494.422	1.46	2505028	4000	
Mo	95	3	115	0.051	ppb	0.051	51.31	65	2000	
Ag	107	3	115	0.023	ppb	0.023	40.47	55	100	
Cd	111	3	115	11.474	ppb	11.474	2.64	2887	2000	
Sn	120	3	115	-0.216	ppb	-0.216	-51.45	591	2000	
Sb	121	3	115	0.044	ppb	0.044	15.07	80	1000	
Ba	137	3	115	8.957	ppb	8.957	1.95	2357	5000	
Tl	205	3	193	1.914	ppb	1.914	2.99	7835	2000	
(Pb)	206	3	193	10.508	ppb	10.508	2.55	13906	100	
(Pb)	207	3	193	9.097	ppb	9.097	3.16	10823	100	
Pb	208	3	193	9.785	ppb	9.785	1.39	52530	5000	
Th	232	3	193	0.474	ppb	0.474	7.56	9421	2000	
U	238	3	193	178.277	ppb	178.277	1.01	976190	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4300550	0.35	4300192	100.01	60	120	
Sc (IS)	45	3	HMI He	638908	0.68	644593	99.12	60	120	
Ge Internal standard	72	2	HMI H2	2584356	0.97	2598552	99.45	60	120	
Ge Internal standard	72	3	HMI He	785426	0.83	772392	101.69	60	120	
In Internal Standard	115	3	HMI He	2906612	1.39	2872781	101.18	60	120	
Ir (IS)	193	3	HMI He	6143952	0.53	6092963	100.84	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-3-A
Data File Name	221SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:30:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.028	ppb	-0.028	-440.75	5	2000	
Na	23	3	45	2208.436	ppb	2208.436	1.04	266122	400000	
Mg	24	3	45	7581.004	ppb	7581.004	0.64	450767	400000	
Al	27	3	45	1688.905	ppb	1688.905	4.08	38970	400000	
K	39	3	45	21546.320	ppb	21546.320	1.40	1074026	400000	
Ca	40	2	45	46050.758	ppb	46050.758	2.89	26223808	400000	
V	51	3	72	4.134	ppb	4.134	4.38	3732	2000	
Cr	52	3	72	1.601	ppb	1.601	18.47	4502	5000	
Mn	55	3	72	25.755	ppb	25.755	1.84	11331	10000	
Fe	56	2	72	914.341	ppb	914.341	3.35	1509772	10000	
Co	59	3	72	0.868	ppb	0.868	18.93	1241	2000	
Ni	60	3	72	2.039	ppb	2.039	3.42	1496	5000	
Cu	63	3	72	5.135	ppb	5.135	3.36	5792	5000	
Zn	66	3	72	4.677	ppb	4.677	6.35	1020	5000	
As	75	3	72	1.167	ppb	1.167	18.07	183	2000	
Se	78	2	72	0.444	ppb	0.444	4.16	29	2000	
Sr	88	3	72	292.814	ppb	292.814	0.94	165268	4000	
Mo	95	3	115	2.502	ppb	2.502	9.93	1354	2000	
Ag	107	3	115	0.011	ppb	0.011	51.66	33	100	
Cd	111	3	115	-0.014	ppb	-0.014	-217.50	7	2000	
Sn	120	3	115	-0.152	ppb	-0.152	-6.16	648	2000	
Sb	121	3	115	0.409	ppb	0.409	27.75	370	1000	
Ba	137	3	115	66.593	ppb	66.593	1.91	17261	5000	
Tl	205	3	193	0.003	ppb	0.003	423.09	401	2000	
(Pb)	206	3	193	1.012	ppb	1.012	14.38	1654	100	
(Pb)	207	3	193	0.864	ppb	0.864	3.51	1493	100	
Pb	208	3	193	0.909	ppb	0.909	5.45	6337	5000	
Th	232	3	193	0.252	ppb	0.252	28.23	8395	2000	
U	238	3	193	4.484	ppb	4.484	0.27	26500	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4235543	1.45	4300192	98.50	60	120	
Sc (IS)	45	3	HMI He	634109	0.67	644593	98.37	60	120	
Ge Internal standard	72	2	HMI H2	2586800	0.19	2598552	99.55	60	120	
Ge Internal standard	72	3	HMI He	795233	1.38	772392	102.96	60	120	
In Internal Standard	115	3	HMI He	2929632	1.33	2872781	101.98	60	120	
Ir (IS)	193	3	HMI He	6247794	3.26	6092963	102.54	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-4-A
Data File Name	222SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:32:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	65.285	ppb	65.285	4.76	2731	2000	
Na	23	3	45	36872.250	ppb	36872.250	2.50	4269720	400000	
Mg	24	3	45	222207.082	ppb	222207.082	2.16	13471794	400000	
Al	27	3	45	234239.822	ppb	234239.822	1.43	5493358	400000	
K	39	3	45	6922.680	ppb	6922.680	1.25	371203	400000	
Ca	40	2	45	425333.995	ppb	425333.995	2.01	253506795	400000	
V	51	3	72	56.523	ppb	56.523	1.01	38369	2000	
Cr	52	3	72	6.214	ppb	6.214	6.06	8287	5000	
Mn	55	3	72	12366.508	ppb	12366.508	0.91	5302362	10000	
Fe	56	2	72	804.463	ppb	804.463	0.87	1357626	10000	
Co	59	3	72	602.236	ppb	602.236	0.65	830404	2000	
Ni	60	3	72	547.621	ppb	547.621	1.42	213620	5000	
Cu	63	3	72	7.371	ppb	7.371	2.39	8208	5000	
Zn	66	3	72	2779.945	ppb	2779.945	1.70	470971	5000	
As	75	3	72	4.675	ppb	4.675	3.36	605	2000	
Se	78	2	72	13.570	ppb	13.570	7.41	829	2000	
Sr	88	3	72	3391.624	ppb	3391.624	2.47	1931218	4000	
Mo	95	3	115	0.081	ppb	0.081	8.34	82	2000	
Ag	107	3	115	0.016	ppb	0.016	46.07	42	100	
Cd	111	3	115	7.991	ppb	7.991	8.04	2029	2000	
Sn	120	3	115	-0.100	ppb	-0.100	-26.51	690	2000	
Sb	121	3	115	0.075	ppb	0.075	18.30	105	1000	
Ba	137	3	115	10.974	ppb	10.974	4.20	2896	5000	
Tl	205	3	193	0.680	ppb	0.680	4.13	3014	2000	
(Pb)	206	3	193	10.650	ppb	10.650	1.74	14007	100	
(Pb)	207	3	193	9.403	ppb	9.403	3.02	11104	100	
Pb	208	3	193	10.004	ppb	10.004	2.86	53351	5000	
Th	232	3	193	2.327	ppb	2.327	5.04	18930	2000	
U	238	3	193	102.773	ppb	102.773	1.71	560113	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4434933	1.71	4300192	103.13	60	120	
Sc (IS)	45	3	HMI He	646982	1.00	644593	100.37	60	120	
Ge Internal standard	72	2	HMI H2	2628933	0.70	2598552	101.17	60	120	
Ge Internal standard	72	3	HMI He	802459	0.79	772392	103.89	60	120	
In Internal Standard	115	3	HMI He	2927505	0.81	2872781	101.90	60	120	
Ir (IS)	193	3	HMI He	6109168	2.05	6092963	100.27	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	223_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:34:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.943	ppb	8.515	2286	50	107.9	90	110	
Na	23	3	45	47999.546	ppb	1.128	5477143	51000	94.1	90	110	
Mg	24	3	45	10360.068	ppb	1.740	619640	11000	94.2	90	110	
Al	27	3	45	994.342	ppb	2.521	23146	1000	99.4	90	110	
K	39	3	45	10118.174	ppb	3.178	522092	11000	92.0	90	110	
Ca	40	2	45	10517.787	ppb	1.906	6167572	11000	95.6	90	110	
V	51	3	72	49.582	ppb	2.792	32735	50	99.2	90	110	
Cr	52	3	72	50.144	ppb	2.048	42572	50	100.3	90	110	
Mn	55	3	72	50.908	ppb	0.867	21529	50	101.8	90	110	
Fe	56	2	72	1092.971	ppb	1.216	1769928	1000	109.3	90	110	
Co	59	3	72	49.035	ppb	1.776	65565	50	98.1	90	110	
Ni	60	3	72	50.159	ppb	1.360	19591	50	100.3	90	110	
Cu	63	3	72	49.239	ppb	0.341	50871	50	98.5	90	110	
Zn	66	3	72	51.449	ppb	2.390	8672	50	102.9	90	110	
As	75	3	72	50.465	ppb	2.179	5897	50	100.9	90	110	
Se	78	2	72	51.686	ppb	1.751	3062	50	103.4	90	110	
Sr	88	3	72	101.403	ppb	1.979	55992	100	101.4	90	110	
Mo	95	3	115	49.431	ppb	1.994	25680	50	98.9	90	110	
Ag	107	3	115	49.148	ppb	0.449	86083	50	98.3	90	110	
Cd	111	3	115	49.996	ppb	2.193	12490	50	100.0	90	110	
Sn	120	3	115	48.505	ppb	1.353	39071	50	97.0	90	110	
Sb	121	3	115	49.652	ppb	2.147	38894	50	99.3	90	110	
Ba	137	3	115	48.918	ppb	3.706	12536	50	97.8	90	110	
Tl	205	3	193	47.342	ppb	2.525	192861	50	94.7	90	110	
(Pb)	206	3	193	47.676	ppb	0.190	64685	50	95.4	90	110	
(Pb)	207	3	193	47.902	ppb	1.871	57339	50	95.8	90	110	
Pb	208	3	193	47.440	ppb	0.895	259876	50	94.9	90	110	
Th	232	3	193	47.038	ppb	0.447	262392	50	94.1	90	110	
U	238	3	193	46.999	ppb	1.354	269860	50	94.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4353678	1.03	4300192	101.24	60	120	
Sc (IS)	45	3	HMI He	637998	1.36	644593	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2554492	1.33	2598552	98.30	60	120	
Ge Internal standard	72	3	HMI He	777537	0.22	772392	100.67	60	120	
In Internal Standard	115	3	HMI He	2892981	0.88	2872781	100.70	60	120	
Ir (IS)	193	3	HMI He	6414355	0.74	6092963	105.27	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	224_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:36:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	63.518	ppb	18.5	23700	25	>RL
Mg	24	3	45	6.831	ppb	49.4	674	25	
Al	27	3	45	2.973	ppb	37.3	220	15	
K	39	3	45	-19.033	ppb	-132.2	26826	50	
V	51	3	72	-0.193	ppb	-45.1	885	1	
Cr	52	3	72	0.565	ppb	68.4	3610	1	
Mn	55	3	72	0.479	ppb	26.0	583	0.5	
Co	59	3	72	0.028	ppb	6.7	93	0.5	
Ni	60	3	72	0.492	ppb	17.3	885	1	
Cu	63	3	72	0.070	ppb	69.1	471	1	
Zn	66	3	72	-0.159	ppb	-19.7	205	5	
As	75	3	72	-0.020	ppb	-657.3	42	1	
Se	78	2	72	-0.001	ppb	-2433.6	2	1	
Sr	88	3	72	0.086	ppb	73.9	92	0.5	
Mo	95	3	115	0.099	ppb	27.2	90	0.5	
Ag	107	3	115	0.007	ppb	47.6	25	1	
Cd	111	3	115	-0.041	ppb	0.0	0	0.5	
Sn	120	3	115	-0.018	ppb	-119.4	748	1	
Sb	121	3	115	0.051	ppb	48.6	85	0.6	
Ba	137	3	115	-0.008	ppb	-442.0	60	0.5	
Tl	205	3	193	-0.032	ppb	-35.2	267	0.1	
(Pb)	206	3	193	-0.065	ppb	-37.3	245	1	
(Pb)	207	3	193	-0.091	ppb	-29.4	395	1	
Pb	208	3	193	-0.075	ppb	-9.8	1141	0.5	
Th	232	3	193	1.466	ppb	13.1	15058	1	>RL
U	238	3	193	0.019	ppb	58.6	1704	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365902	1.22	4300192	101.53	60	120	
Sc (IS)	45	3	HMI He	636615	0.44	644593	98.76	60	120	
Ge Internal standard	72	2	HMI H2	2653141	1.02	2598552	102.10	60	120	
Ge Internal standard	72	3	HMI He	782023	0.41	772392	101.25	60	120	
In Internal Standard	115	3	HMI He	2899354	2.07	2872781	100.92	60	120	
Ir (IS)	193	3	HMI He	6348915	0.36	6092963	104.20	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	225LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:38:04-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.243	ppb	65.111	60	1	124.3	70	130	
Na	23	3	45	324.988	ppb	2.716	52774	300	108.3	70	130	
Mg	24	3	45	50.330	ppb	12.335	3230	50	100.7	70	130	
Al	27	3	45	50.927	ppb	8.285	1311	50	101.9	70	130	
K	39	3	45	99.128	ppb	42.526	32223	120	82.6	70	130	
Ca	40	2	45	204.322	ppb	2.522	133548	200	102.2	70	130	
V	51	3	72	4.381	ppb	5.914	3812	5	87.6	70	130	
Cr	52	3	72	2.222	ppb	4.226	4900	2	111.1	70	130	
Mn	55	3	72	1.381	ppb	10.622	956	1	138.1	70	130	>+/-30%
Fe	56	2	72	56.407	ppb	10.188	155439	50	112.8	70	130	
Co	59	3	72	0.940	ppb	5.084	1313	1	94.0	70	130	
Ni	60	3	72	2.324	ppb	8.125	1573	2	116.2	70	130	
Cu	63	3	72	1.937	ppb	4.077	2386	2	96.8	70	130	
Zn	66	3	72	9.920	ppb	2.531	1861	10	99.2	70	130	
As	75	3	72	4.874	ppb	5.530	610	5	97.5	70	130	
Se	78	2	72	5.122	ppb	8.041	315	5	102.4	70	130	
Sr	88	3	72	4.929	ppb	2.905	2767	5	98.6	70	130	
Mo	95	3	115	1.897	ppb	6.582	1011	2	94.9	70	130	
Ag	107	3	115	0.927	ppb	8.981	1619	1	92.7	70	130	
Cd	111	3	115	0.951	ppb	19.130	245	1	95.1	70	130	
Sn	120	3	115	8.979	ppb	2.171	7770	10	89.8	70	130	
Sb	121	3	115	1.906	ppb	9.839	1519	2	95.3	70	130	
Ba	137	3	115	1.060	ppb	22.355	328	1	106.0	70	130	
Tl	205	3	193	0.877	ppb	2.601	3805	1	87.7	70	130	
(Pb)	206	3	193	0.861	ppb	6.662	1438	1	86.1	70	130	
(Pb)	207	3	193	0.762	ppb	0.766	1354	1	76.2	70	130	
Pb	208	3	193	0.854	ppb	4.112	5963	1	85.4	70	130	
Th	232	3	193	1.090	ppb	16.365	12644	1	109.0	70	130	
U	238	3	193	0.957	ppb	4.070	6792	1	95.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4383115	1.53	4300192	101.93	60	120	
Sc (IS)	45	3	HMI He	629416	1.25	644593	97.65	60	120	
Ge Internal standard	72	2	HMI H2	2635514	1.33	2598552	101.42	60	120	
Ge Internal standard	72	3	HMI He	778798	1.18	772392	100.83	60	120	
In Internal Standard	115	3	HMI He	2862811	1.62	2872781	99.65	60	120	
Ir (IS)	193	3	HMI He	6157855	1.35	6092963	101.07	60	120	

Blank Report

Sample Table

Sample Name	mb 280-609143/1-a
Data File Name	226_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:39:53-06:00
Sample Type	Blank
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	45.502	ppb	12.0009917	22116	25
Mg	24	3	45	4.121	ppb	29.63340442	524	25
Al	27	3	45	2.632	ppb	47.45452554	217	15
K	39	3	45	-22.906	ppb	-121.2845018	27207	50
Ca	40	2	45	16.975	ppb	3.678945867	23380	200
V	51	3	72	-0.258	ppb	-44.29458665	861	1
Cr	52	3	72	0.729	ppb	39.36049459	3825	1
Mn	55	3	72	0.444	ppb	27.04636596	581	0.5
Fe	56	2	72	12.418	ppb	35.2160176	85506	50
Co	59	3	72	0.036	ppb	43.49347516	107	0.5
Ni	60	3	72	0.709	ppb	43.47275477	990	1
Cu	63	3	72	0.018	ppb	180.1674152	428	1
Zn	66	3	72	-0.157	ppb	-164.570884	210	5
As	75	3	72	0.043	ppb	449.5222468	50	1
(Se)	78	3	72	1.351	ppb	81.49243514	33	1
Sr	88	3	72	0.056	ppb	103.6082434	77	0.5
Mo	95	3	115	0.030	ppb	33.63924674	55	0.5
Ag	107	3	115	0.008	ppb	84.72416675	28	1
Cd	111	3	115	-0.008	ppb	-391.5766997	8	0.5
Sn	120	3	115	-0.152	ppb	-34.14916741	653	1
Sb	121	3	115	-0.012	ppb	-217.611064	37	0.6
Ba	137	3	115	-0.058	ppb	-137.7335862	48	0.5
Tl	205	3	193	-0.059	ppb	-2.560123429	162	0.1
(Pb)	206	3	193	-0.095	ppb	-20.53285127	207	1
(Pb)	207	3	193	-0.101	ppb	-40.25824719	388	1
Pb	208	3	193	-0.087	ppb	-13.11454761	1093	0.5
Th	232	3	193	-0.350	ppb	-10.59033505	5377	1
U	238	3	193	0.011	ppb	169.1043338	1683	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416245	1.39	4300192	102.70	60	120	
Sc (IS)	45	3	HMI He	650133	0.69	644593	100.86	60	120	
Ge Internal standard	72	2	HMI H2	2662668	0.73	2598552	102.47	60	120	
Ge Internal standard	72	3	HMI He	799828	0.88	772392	103.55	60	120	
In Internal Standard	115	3	HMI He	2947969	1.27	2872781	102.62	60	120	
Ir (IS)	193	3	HMI He	6432258	1.88	6092963	105.57	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-609143/19-a
Data File Name	227_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:41:42-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609143 200.8/6020B
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.895	38.895	ppb	1.956	1686	40	97.2	80	120	
Na	23	3	45	825.258	825.258	ppb	2.918	112533	40	2063.1	80	120	>+/-20%
Mg	24	3	45	729.088	729.088	ppb	1.698	44705	40	1822.7	80	120	>+/-20%
Al	27	3	45	749.049	749.049	ppb	3.424	17812	40	1872.6	80	120	>+/-20%
K	39	3	45	734.359	734.359	ppb	5.887	64918	40	1835.9	80	120	>+/-20%
Ca	40	2	45	804.999	804.999	ppb	1.179	496868	40	2012.5	80	120	>+/-20%
V	51	3	72	37.089	37.089	ppb	1.550	25794	40	92.7	80	120	
Cr	52	3	72	39.002	39.002	ppb	2.673	35252	40	97.5	80	120	
Mn	55	3	72	38.996	38.996	ppb	1.923	17287	40	97.5	80	120	
Fe	56	2	72	816.789	816.789	ppb	0.397	1384419	40	2042.0	80	120	>+/-20%
(Fe)	56	3	72	749.593	749.593	ppb	1.080	540418	40	1874.0	80	120	>+/-20%
Co	59	3	72	38.426	38.426	ppb	1.385	53580	40	96.1	80	120	
Ni	60	3	72	38.192	38.192	ppb	0.791	15724	40	95.5	80	120	
Cu	63	3	72	39.194	39.194	ppb	0.100	42303	40	98.0	80	120	
Zn	66	3	72	39.145	39.145	ppb	1.422	6937	40	97.9	80	120	
As	75	3	72	38.724	38.724	ppb	2.507	4728	40	96.8	80	120	
Se	78	2	72	39.654	39.654	ppb	0.917	2430	40	99.1	80	120	
(Se)	78	3	72	39.840	39.840	ppb	8.293	295	40	99.6	80	120	
Sr	88	3	72	78.228	78.228	ppb	1.458	45047	40	195.6	80	120	>+/-20%
Mo	95	3	115	38.210	38.210	ppb	3.065	20157	40	95.5	80	120	
Ag	107	3	115	39.835	39.835	ppb	2.225	70820	40	99.6	80	120	
Cd	111	3	115	39.479	39.479	ppb	3.964	10010	40	98.7	80	120	
Sn	120	3	115	36.722	36.722	ppb	3.403	30209	40	91.8	80	120	
Sb	121	3	115	38.791	38.791	ppb	1.178	30860	40	97.0	80	120	
Ba	137	3	115	39.384	39.384	ppb	4.998	10256	40	98.5	80	120	
Tl	205	3	193	38.127	38.127	ppb	1.915	156306	40	95.3	80	120	
(Pb)	206	3	193	38.976	38.976	ppb	2.206	53243	40	97.4	80	120	
(Pb)	207	3	193	38.541	38.541	ppb	1.626	46502	40	96.4	80	120	
Pb	208	3	193	38.630	38.630	ppb	1.913	213123	40	96.6	80	120	
Th	232	3	193	35.532	35.532	ppb	3.249	201109	40	88.8	80	120	
U	238	3	193	38.402	38.402	ppb	1.056	222091	40	96.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4467733	0.99	4300192	103.90	60	120	
Sc (IS)	45	3	HMI He	650340	0.78	644593	100.89	60	120	
Ge Internal standard	72	2	HMI H2	2642126	0.38	2598552	101.68	60	120	
Ge Internal standard	72	3	HMI He	810674	0.54	772392	104.96	60	120	
In Internal Standard	115	3	HMI He	2937072	1.77	2872781	102.24	60	120	
Ir (IS)	193	3	HMI He	6452373	1.59	6092963	105.90	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-g
Data File Name	228SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:43:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.161	ppb	0.161	111.32	13	2000	
Na	23	3	45	11790.045	ppb	11790.045	1.59	1362073	400000	
Mg	24	3	45	6115.585	ppb	6115.585	2.01	367083	400000	
Al	27	3	45	6296.376	ppb	6296.376	2.35	146253	400000	
K	39	3	45	1916.707	ppb	1916.707	3.57	121854	400000	
Ca	40	2	45	15442.848	ppb	15442.848	1.07	9084061	400000	
V	51	3	72	10.053	ppb	10.053	5.10	7648	2000	
Cr	52	3	72	4.407	ppb	4.407	3.83	6798	5000	
Mn	55	3	72	164.620	ppb	164.620	0.22	70722	10000	
Fe	56	2	72	6120.061	ppb	6120.061	2.05	10217214	10000	
Co	59	3	72	2.054	ppb	2.054	7.88	2877	2000	
Ni	60	3	72	4.367	ppb	4.367	2.43	2406	5000	
Cu	63	3	72	5.245	ppb	5.245	2.14	5938	5000	
Zn	66	3	72	22.455	ppb	22.455	4.54	4025	5000	
As	75	3	72	1.479	ppb	1.479	30.33	222	2000	
Se	78	2	72	0.465	ppb	0.465	11.37	31	2000	
Sr	88	3	72	134.770	ppb	134.770	1.15	76514	4000	
Mo	95	3	115	0.527	ppb	0.527	7.83	318	2000	
Ag	107	3	115	0.045	ppb	0.045	25.74	93	100	
Cd	111	3	115	0.044	ppb	0.044	110.98	22	2000	
Sn	120	3	115	0.116	ppb	0.116	68.65	870	2000	
Sb	121	3	115	0.399	ppb	0.399	11.65	365	1000	
Ba	137	3	115	125.537	ppb	125.537	0.62	32734	5000	
Tl	205	3	193	0.012	ppb	0.012	74.73	445	2000	
(Pb)	206	3	193	3.998	ppb	3.998	0.58	5705	100	
(Pb)	207	3	193	3.778	ppb	3.778	0.70	4967	100	
Pb	208	3	193	4.674	ppb	4.674	28.68	26861	5000	
Th	232	3	193	3.251	ppb	3.251	8.68	24782	2000	
U	238	3	193	0.486	ppb	0.486	2.89	4367	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370022	0.26	4300192	101.62	60	120	
Sc (IS)	45	3	HMI He	640062	0.68	644593	99.30	60	120	
Ge Internal standard	72	2	HMI H2	2712792	1.18	2598552	104.40	60	120	
Ge Internal standard	72	3	HMI He	799644	0.93	772392	103.53	60	120	
In Internal Standard	115	3	HMI He	2951896	0.89	2872781	102.75	60	120	
Ir (IS)	193	3	HMI He	6385270	1.06	6092963	104.80	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-h ms
Data File Name	229SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:45:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.868	ppb	38.868	3.77	1676	2000	
Na	23	3	45	12735.514	ppb	12735.514	1.76	1470613	400000	
Mg	24	3	45	7005.833	ppb	7005.833	1.12	420671	400000	
Al	27	3	45	7415.005	ppb	7415.005	2.30	172262	400000	
K	39	3	45	2752.028	ppb	2752.028	1.12	162880	400000	
Ca	40	2	45	16099.985	ppb	16099.985	1.61	9631968	400000	
V	51	3	72	48.266	ppb	48.266	1.70	32944	2000	
Cr	52	3	72	43.095	ppb	43.095	1.28	38245	5000	
Mn	55	3	72	205.052	ppb	205.052	0.61	88374	10000	
Fe	56	2	72	7062.430	ppb	7062.430	3.43	11721997	10000	
Co	59	3	72	40.211	ppb	40.211	1.04	55541	2000	
Ni	60	3	72	41.901	ppb	41.901	0.71	17020	5000	
Cu	63	3	72	43.635	ppb	43.635	1.63	46607	5000	
Zn	66	3	72	61.617	ppb	61.617	3.39	10679	5000	
As	75	3	72	39.821	ppb	39.821	0.96	4815	2000	
Se	78	2	72	38.164	ppb	38.164	2.85	2389	2000	
Sr	88	3	72	213.281	ppb	213.281	1.20	121586	4000	
Mo	95	3	115	38.069	ppb	38.069	2.11	20255	2000	
Ag	107	3	115	38.642	ppb	38.642	0.33	69290	100	
Cd	111	3	115	38.008	ppb	38.008	1.65	9722	2000	
Sn	120	3	115	34.602	ppb	34.602	0.94	28757	2000	
Sb	121	3	115	36.571	ppb	36.571	0.95	29341	1000	
Ba	137	3	115	164.309	ppb	164.309	0.52	42965	5000	
Tl	205	3	193	38.594	ppb	38.594	2.44	154641	2000	
(Pb)	206	3	193	43.525	ppb	43.525	1.61	58080	100	
(Pb)	207	3	193	42.866	ppb	42.866	0.72	50498	100	
Pb	208	3	193	43.076	ppb	43.076	1.25	232127	5000	
Th	232	3	193	39.175	ppb	39.175	1.89	216016	2000	
U	238	3	193	39.279	ppb	39.279	1.34	221981	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4444952	1.18	4300192	103.37	60	120	
Sc (IS)	45	3	HMI He	640331	0.61	644593	99.34	60	120	
Ge Internal standard	72	2	HMI H2	2700304	2.25	2598552	103.92	60	120	
Ge Internal standard	72	3	HMI He	803091	0.79	772392	103.97	60	120	
In Internal Standard	115	3	HMI He	2961545	0.46	2872781	103.09	60	120	
Ir (IS)	193	3	HMI He	6306055	0.73	6092963	103.50	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-i msd
Data File Name	230SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:47:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.777	ppb	41.777	8.96	1806	2000	
Na	23	3	45	13036.975	ppb	13036.975	0.26	1502108	400000	
Mg	24	3	45	7210.290	ppb	7210.290	0.95	432092	400000	
Al	27	3	45	7518.560	ppb	7518.560	0.29	174328	400000	
K	39	3	45	2861.264	ppb	2861.264	2.88	167890	400000	
Ca	40	2	45	16924.049	ppb	16924.049	1.93	9978203	400000	
V	51	3	72	49.058	ppb	49.058	3.20	33636	2000	
Cr	52	3	72	44.157	ppb	44.157	1.15	39307	5000	
Mn	55	3	72	212.503	ppb	212.503	0.46	92040	10000	
Fe	56	2	72	7304.557	ppb	7304.557	3.58	12146538	10000	
Co	59	3	72	41.308	ppb	41.308	1.53	57346	2000	
Ni	60	3	72	42.731	ppb	42.731	1.30	17432	5000	
Cu	63	3	72	44.457	ppb	44.457	2.13	47720	5000	
Zn	66	3	72	62.017	ppb	62.017	1.78	10804	5000	
As	75	3	72	40.596	ppb	40.596	0.73	4933	2000	
Se	78	2	72	40.381	ppb	40.381	4.56	2536	2000	
Sr	88	3	72	219.971	ppb	219.971	0.77	126047	4000	
Mo	95	3	115	39.532	ppb	39.532	1.42	20806	2000	
Ag	107	3	115	39.977	ppb	39.977	0.83	70911	100	
Cd	111	3	115	38.694	ppb	38.694	1.82	9790	2000	
Sn	120	3	115	36.494	ppb	36.494	1.43	29962	2000	
Sb	121	3	115	37.789	ppb	37.789	1.42	29989	1000	
Ba	137	3	115	172.759	ppb	172.759	1.74	44683	5000	
Tl	205	3	193	40.152	ppb	40.152	0.92	158579	2000	
(Pb)	206	3	193	45.133	ppb	45.133	1.20	59354	100	
(Pb)	207	3	193	44.577	ppb	44.577	0.81	51741	100	
Pb	208	3	193	44.933	ppb	44.933	0.27	238604	5000	
Th	232	3	193	42.064	ppb	42.064	0.94	228126	2000	
U	238	3	193	41.032	ppb	41.032	0.48	228503	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4380221	0.62	4300192	101.86	60	120	
Sc (IS)	45	3	HMI He	639065	0.74	644593	99.14	60	120	
Ge Internal standard	72	2	HMI H2	2706070	2.42	2598552	104.14	60	120	
Ge Internal standard	72	3	HMI He	807207	0.87	772392	104.51	60	120	
In Internal Standard	115	3	HMI He	2929724	0.75	2872781	101.98	60	120	
Ir (IS)	193	3	HMI He	6215586	0.56	6092963	102.01	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-k
Data File Name	231SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:48:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17997.152	ppb	17997.152	1.50	2039030	400000	
Mg	24	3	45	10950.376	ppb	10950.376	2.84	646999	400000	
Al	27	3	45	1.760	ppb	1.760	90.26	190	400000	
K	39	3	45	5922.532	ppb	5922.532	1.59	313386	400000	
Ca	40	2	45	31264.279	ppb	31264.279	2.15	18251014	400000	
V	51	3	72	17.034	ppb	17.034	1.36	12254	2000	
Cr	52	3	72	2.160	ppb	2.160	0.49	4985	5000	
Mn	55	3	72	0.990	ppb	0.990	22.27	815	10000	
Fe	56	2	72	20.896	ppb	20.896	23.47	99788	10000	
Co	59	3	72	0.061	ppb	0.061	32.48	142	2000	
Ni	60	3	72	0.559	ppb	0.559	11.14	931	5000	
Cu	63	3	72	0.313	ppb	0.313	13.01	740	5000	
Zn	66	3	72	1.667	ppb	1.667	9.63	518	5000	
As	75	3	72	6.183	ppb	6.183	4.44	783	2000	
Se	78	2	72	1.442	ppb	1.442	18.99	91	2000	
Sr	88	3	72	168.532	ppb	168.532	0.37	95765	4000	
Mo	95	3	115	3.633	ppb	3.633	3.40	1971	2000	
Ag	107	3	115	0.017	ppb	0.017	89.84	45	100	
Cd	111	3	115	-0.021	ppb	-0.021	-93.19	5	2000	
Sn	120	3	115	-0.016	ppb	-0.016	-203.62	766	2000	
Sb	121	3	115	0.185	ppb	0.185	25.97	195	1000	
Ba	137	3	115	18.119	ppb	18.119	2.40	4800	5000	
Tl	205	3	193	-0.026	ppb	-0.026	-33.81	288	2000	
(Pb)	206	3	193	-0.084	ppb	-0.084	-26.37	217	100	
(Pb)	207	3	193	-0.090	ppb	-0.090	-31.75	391	100	
Pb	208	3	193	-0.088	ppb	-0.088	-12.40	1059	5000	
Th	232	3	193	2.051	ppb	2.051	17.81	18017	2000	
U	238	3	193	1.945	ppb	1.945	2.39	12452	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4340971	2.59	4300192	100.95	60	120	
Sc (IS)	45	3	HMI He	630417	1.90	644593	97.80	60	120	
Ge Internal standard	72	2	HMI H2	2676347	1.88	2598552	102.99	60	120	
Ge Internal standard	72	3	HMI He	800393	1.00	772392	103.63	60	120	
In Internal Standard	115	3	HMI He	2965449	0.90	2872781	103.23	60	120	
Ir (IS)	193	3	HMI He	6282269	1.75	6092963	103.11	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-kSD@5
Data File Name	232SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:50:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3626.512	ppb	3626.512	0.89	424691	400000	
Mg	24	3	45	2225.418	ppb	2225.418	2.33	131958	400000	
Al	27	3	45	2.619	ppb	2.619	73.35	210	400000	
K	39	3	45	1177.166	ppb	1177.166	2.54	84467	400000	
Ca	40	2	45	6479.623	ppb	6479.623	0.17	3860370	400000	
V	51	3	72	3.499	ppb	3.499	3.85	3319	2000	
Cr	52	3	72	0.588	ppb	0.588	6.95	3692	5000	
Mn	55	3	72	1.635	ppb	1.635	11.77	1085	10000	
Fe	56	2	72	15.499	ppb	15.499	34.10	89821	10000	
Co	59	3	72	0.026	ppb	0.026	51.75	92	2000	
Ni	60	3	72	0.579	ppb	0.579	40.15	935	5000	
Cu	63	3	72	0.200	ppb	0.200	13.98	616	5000	
Zn	66	3	72	3.481	ppb	3.481	10.53	820	5000	
As	75	3	72	1.460	ppb	1.460	16.93	218	2000	
Se	78	2	72	0.403	ppb	0.403	31.46	27	2000	
Sr	88	3	72	34.412	ppb	34.412	3.14	19476	4000	
Mo	95	3	115	0.782	ppb	0.782	14.44	445	2000	
Ag	107	3	115	0.013	ppb	0.013	30.99	37	100	
Cd	111	3	115	-0.034	ppb	-0.034	-33.50	2	2000	
Sn	120	3	115	0.104	ppb	0.104	130.43	843	2000	
Sb	121	3	115	0.076	ppb	0.076	23.39	105	1000	
Ba	137	3	115	3.851	ppb	3.851	4.68	1045	5000	
Tl	205	3	193	-0.050	ppb	-0.050	-11.45	188	2000	
(Pb)	206	3	193	0.316	ppb	0.316	11.02	730	100	
(Pb)	207	3	193	0.221	ppb	0.221	10.67	736	100	
Pb	208	3	193	0.271	ppb	0.271	12.70	2910	5000	
Th	232	3	193	0.406	ppb	0.406	19.79	9074	2000	
U	238	3	193	0.439	ppb	0.439	5.40	3950	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4417059	0.43	4300192	102.72	60	120	
Sc (IS)	45	3	HMI He	631480	0.60	644593	97.97	60	120	
Ge Internal standard	72	2	HMI H2	2640356	1.66	2598552	101.61	60	120	
Ge Internal standard	72	3	HMI He	795916	1.11	772392	103.05	60	120	
In Internal Standard	115	3	HMI He	2895339	1.87	2872781	100.79	60	120	
Ir (IS)	193	3	HMI He	6147606	1.43	6092963	100.90	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-I ms
Data File Name	233SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:52:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.396	ppb	39.396	1.59	1699	2000	
Na	23	3	45	18121.049	ppb	18121.049	1.03	2112216	400000	
Mg	24	3	45	11018.360	ppb	11018.360	1.12	669967	400000	
Al	27	3	45	745.153	ppb	745.153	2.83	17672	400000	
K	39	3	45	6258.895	ppb	6258.895	2.42	339117	400000	
Ca	40	2	45	30681.148	ppb	30681.148	2.49	18214549	400000	
V	51	3	72	54.329	ppb	54.329	0.88	36996	2000	
Cr	52	3	72	40.188	ppb	40.188	0.82	35933	5000	
Mn	55	3	72	39.633	ppb	39.633	3.61	17416	10000	
Fe	56	2	72	798.361	ppb	798.361	1.12	1398589	10000	
Co	59	3	72	38.583	ppb	38.583	2.03	53357	2000	
Ni	60	3	72	37.638	ppb	37.638	1.93	15379	5000	
Cu	63	3	72	38.903	ppb	38.903	2.21	41645	5000	
Zn	66	3	72	39.768	ppb	39.768	1.40	6987	5000	
As	75	3	72	45.112	ppb	45.112	3.96	5458	2000	
Se	78	2	72	39.596	ppb	39.596	2.73	2505	2000	
Sr	88	3	72	241.075	ppb	241.075	0.76	137600	4000	
Mo	95	3	115	41.721	ppb	41.721	0.86	21930	2000	
Ag	107	3	115	39.022	ppb	39.022	1.99	69132	100	
Cd	111	3	115	38.798	ppb	38.798	3.05	9805	2000	
Sn	120	3	115	38.165	ppb	38.165	2.65	31263	2000	
Sb	121	3	115	39.101	ppb	39.101	1.75	30994	1000	
Ba	137	3	115	57.685	ppb	57.685	1.04	14944	5000	
Tl	205	3	193	38.412	ppb	38.412	0.69	155218	2000	
(Pb)	206	3	193	38.774	ppb	38.774	2.37	52201	100	
(Pb)	207	3	193	37.961	ppb	37.961	0.75	45149	100	
Pb	208	3	193	38.715	ppb	38.715	2.02	210493	5000	
Th	232	3	193	36.529	ppb	36.529	0.40	203624	2000	
U	238	3	193	40.376	ppb	40.376	2.52	230014	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4414605	1.52	4300192	102.66	60	120	
Sc (IS)	45	3	HMI He	648520	0.69	644593	100.61	60	120	
Ge Internal standard	72	2	HMI H2	2727850	0.47	2598552	104.98	60	120	
Ge Internal standard	72	3	HMI He	804143	1.55	772392	104.11	60	120	
In Internal Standard	115	3	HMI He	2926156	0.50	2872781	101.86	60	120	
Ir (IS)	193	3	HMI He	6358816	1.49	6092963	104.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-m msd
Data File Name	234SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:54:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.537	ppb	38.537	6.87	1649	2000	
Na	23	3	45	18071.159	ppb	18071.159	2.57	2063008	400000	
Mg	24	3	45	10888.089	ppb	10888.089	2.21	648414	400000	
Al	27	3	45	744.057	ppb	744.057	4.57	17281	400000	
K	39	3	45	6272.587	ppb	6272.587	2.63	332813	400000	
Ca	40	2	45	30468.657	ppb	30468.657	1.97	18023836	400000	
V	51	3	72	51.998	ppb	51.998	2.27	35407	2000	
Cr	52	3	72	40.219	ppb	40.219	2.99	35907	5000	
Mn	55	3	72	37.945	ppb	37.945	3.30	16672	10000	
Fe	56	2	72	789.889	ppb	789.889	1.93	1364505	10000	
Co	59	3	72	37.409	ppb	37.409	1.09	51675	2000	
Ni	60	3	72	36.047	ppb	36.047	0.96	14742	5000	
Cu	63	3	72	38.735	ppb	38.735	1.45	41420	5000	
Zn	66	3	72	38.441	ppb	38.441	0.48	6752	5000	
As	75	3	72	43.105	ppb	43.105	1.40	5208	2000	
Se	78	2	72	39.231	ppb	39.231	2.90	2446	2000	
Sr	88	3	72	235.137	ppb	235.137	1.29	134035	4000	
Mo	95	3	115	39.749	ppb	39.749	2.58	21448	2000	
Ag	107	3	115	37.119	ppb	37.119	0.59	67498	100	
Cd	111	3	115	35.757	ppb	35.757	2.46	9277	2000	
Sn	120	3	115	35.233	ppb	35.233	1.11	29680	2000	
Sb	121	3	115	36.698	ppb	36.698	0.78	29857	1000	
Ba	137	3	115	55.094	ppb	55.094	2.42	14651	5000	
Tl	205	3	193	38.591	ppb	38.591	1.27	152321	2000	
(Pb)	206	3	193	38.423	ppb	38.423	0.76	50544	100	
(Pb)	207	3	193	37.869	ppb	37.869	1.53	43999	100	
Pb	208	3	193	38.361	ppb	38.361	1.03	203779	5000	
Th	232	3	193	38.119	ppb	38.119	1.87	207234	2000	
U	238	3	193	40.375	ppb	40.375	0.88	224718	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4398536	1.41	4300192	102.29	60	120	
Sc (IS)	45	3	HMI He	635293	1.48	644593	98.56	60	120	
Ge Internal standard	72	2	HMI H2	2688788	0.79	2598552	103.47	60	120	
Ge Internal standard	72	3	HMI He	803022	0.36	772392	103.97	60	120	
In Internal Standard	115	3	HMI He	3003228	0.81	2872781	104.54	60	120	
Ir (IS)	193	3	HMI He	6211329	0.47	6092963	101.94	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-kPDS
Data File Name	235SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:56:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	105.792	ppb	105.792	1.49	4442	2000	
Na	23	3	45	22567.554	ppb	22567.554	2.09	2588090	400000	
Mg	24	3	45	12450.362	ppb	12450.362	0.29	745994	400000	
Al	27	3	45	1907.289	ppb	1907.289	3.42	44334	400000	
K	39	3	45	7613.407	ppb	7613.407	0.88	400514	400000	
Ca	40	2	45	32874.878	ppb	32874.878	3.77	19268719	400000	
V	51	3	72	109.502	ppb	109.502	1.14	73662	2000	
Cr	52	3	72	94.537	ppb	94.537	0.82	80288	5000	
Mn	55	3	72	92.815	ppb	92.815	2.02	40347	10000	
Fe	56	2	72	1037.663	ppb	1037.663	4.15	1746407	10000	
Co	59	3	72	92.951	ppb	92.951	2.24	128741	2000	
Ni	60	3	72	91.606	ppb	91.606	2.75	36476	5000	
Cu	63	3	72	95.654	ppb	95.654	0.90	102020	5000	
Zn	66	3	72	192.155	ppb	192.155	2.43	32908	5000	
As	75	3	72	103.696	ppb	103.696	2.01	12508	2000	
Se	78	2	72	99.226	ppb	99.226	1.48	6095	2000	
Sr	88	3	72	261.381	ppb	261.381	1.47	149484	4000	
Mo	95	3	115	97.249	ppb	97.249	1.32	50871	2000	
Ag	107	3	115	25.127	ppb	25.127	3.27	44346	100	
Cd	111	3	115	95.153	ppb	95.153	1.10	23943	2000	
Sn	120	3	115	94.647	ppb	94.647	1.74	76096	2000	
Sb	121	3	115	93.950	ppb	93.950	2.55	74118	1000	
Ba	137	3	115	114.610	ppb	114.610	4.24	29510	5000	
Tl	205	3	193	95.361	ppb	95.361	0.57	376721	2000	
(Pb)	206	3	193	95.279	ppb	95.279	1.48	125144	100	
(Pb)	207	3	193	94.622	ppb	94.622	0.91	109464	100	
Pb	208	3	193	94.794	ppb	94.794	0.95	502520	5000	
Th	232	3	193	102.053	ppb	102.053	0.48	544327	2000	
U	238	3	193	206.103	ppb	206.103	3.49	1143319	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4360555	2.72	4300192	101.40	60	120	
Sc (IS)	45	3	HMI He	639121	0.71	644593	99.15	60	120	
Ge Internal standard	72	2	HMI H2	2650713	2.23	2598552	102.01	60	120	
Ge Internal standard	72	3	HMI He	805763	0.99	772392	104.32	60	120	
In Internal Standard	115	3	HMI He	2915437	1.51	2872781	101.48	60	120	
Ir (IS)	193	3	HMI He	6225981	0.36	6092963	102.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	236_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:57:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	55.626	ppb	1.863	2329	50	111.3	90	110	>+\-10%
Na	23	3	45	48121.679	ppb	2.417	5537524	51000	94.4	90	110	
Mg	24	3	45	10269.952	ppb	0.849	619427	11000	93.4	90	110	
Al	27	3	45	964.318	ppb	3.670	22638	1000	96.4	90	110	
K	39	3	45	10148.410	ppb	1.281	528057	11000	92.3	90	110	
Ca	40	2	45	10340.438	ppb	0.569	6079357	11000	94.0	90	110	
V	51	3	72	51.000	ppb	0.547	33041	50	102.0	90	110	
Cr	52	3	72	51.278	ppb	0.748	42682	50	102.6	90	110	
Mn	55	3	72	49.990	ppb	1.624	20769	50	100.0	90	110	
Fe	56	2	72	1068.488	ppb	0.371	1724500	1000	106.8	90	110	
Co	59	3	72	51.521	ppb	1.238	67646	50	103.0	90	110	
Ni	60	3	72	51.082	ppb	0.960	19581	50	102.2	90	110	
Cu	63	3	72	50.190	ppb	0.414	50915	50	100.4	90	110	
Zn	66	3	72	49.300	ppb	5.291	8167	50	98.6	90	110	
As	75	3	72	53.499	ppb	2.644	6135	50	107.0	90	110	
Se	78	2	72	50.432	ppb	2.126	2975	50	100.9	90	110	
Sr	88	3	72	103.848	ppb	2.707	56310	100	103.8	90	110	
Mo	95	3	115	48.579	ppb	4.570	25411	50	97.2	90	110	
Ag	107	3	115	49.270	ppb	3.110	86919	50	98.5	90	110	
Cd	111	3	115	49.684	ppb	4.314	12498	50	99.4	90	110	
Sn	120	3	115	48.408	ppb	3.961	39268	50	96.8	90	110	
Sb	121	3	115	49.877	ppb	2.655	39358	50	99.8	90	110	
Ba	137	3	115	50.989	ppb	4.473	13157	50	102.0	90	110	
Tl	205	3	193	48.622	ppb	3.805	193361	50	97.2	90	110	
(Pb)	206	3	193	48.897	ppb	4.108	64749	50	97.8	90	110	
(Pb)	207	3	193	48.536	ppb	2.937	56723	50	97.1	90	110	
Pb	208	3	193	48.787	ppb	3.530	260852	50	97.6	90	110	
Th	232	3	193	52.210	ppb	3.981	283514	50	104.4	90	110	
U	238	3	193	49.055	ppb	4.869	274823	50	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4364730	2.95	4300192	101.50	60	120	
Sc (IS)	45	3	HMI He	643338	0.99	644593	99.81	60	120	
Ge Internal standard	72	2	HMI H2	2543915	1.33	2598552	97.90	60	120	
Ge Internal standard	72	3	HMI He	763583	1.25	772392	98.86	60	120	
In Internal Standard	115	3	HMI He	2915636	3.40	2872781	101.49	60	120	
Ir (IS)	193	3	HMI He	6266173	3.14	6092963	102.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	237_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:59:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.110	ppb	-60.9	2	0.5	
Na	23	3	45	46.922	ppb	13.6	21815	25	>RL
Mg	24	3	45	1.900	ppb	37.3	380	25	
Al	27	3	45	-2.952	ppb	-8.2	83	15	
K	39	3	45	-6.033	ppb	-455.9	27458	50	
V	51	3	72	0.059	ppb	154.4	1040	1	
Cr	52	3	72	0.184	ppb	139.7	3285	1	
Mn	55	3	72	0.079	ppb	73.8	413	0.5	
Co	59	3	72	0.034	ppb	59.4	100	0.5	
Ni	60	3	72	0.587	ppb	66.0	915	1	
Cu	63	3	72	-0.002	ppb	-2605.5	395	1	
Zn	66	3	72	0.012	ppb	628.4	232	5	
As	75	3	72	0.141	ppb	30.1	60	1	
Se	78	2	72	0.089	ppb	109.7	7	1	
Sr	88	3	72	0.069	ppb	33.4	82	0.5	
Mo	95	3	115	0.049	ppb	68.3	65	0.5	
Ag	107	3	115	0.017	ppb	53.7	43	1	
Cd	111	3	115	-0.001	ppb	-1341.9	10	0.5	
Sn	120	3	115	0.136	ppb	61.7	881	1	
Sb	121	3	115	0.085	ppb	56.8	113	0.6	
Ba	137	3	115	-0.057	ppb	-152.0	48	0.5	
Tl	205	3	193	-0.034	ppb	-67.6	257	0.1	
(Pb)	206	3	193	-0.079	ppb	-76.3	223	1	
(Pb)	207	3	193	-0.100	ppb	-23.4	380	1	
Pb	208	3	193	-0.086	ppb	-20.8	1069	0.5	
Th	232	3	193	1.729	ppb	14.7	16286	1	>RL
U	238	3	193	0.043	ppb	40.3	1819	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4317419	0.59	4300192	100.40	60	120	
Sc (IS)	45	3	HMI He	636554	0.53	644593	98.75	60	120	
Ge Internal standard	72	2	HMI H2	2596922	1.25	2598552	99.94	60	120	
Ge Internal standard	72	3	HMI He	776490	0.41	772392	100.53	60	120	
In Internal Standard	115	3	HMI He	2939974	0.90	2872781	102.34	60	120	
Ir (IS)	193	3	HMI He	6278103	0.19	6092963	103.04	60	120	

Sample Report

Sample Table

Sample Name	280-175143-n-1-a
Data File Name	238SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:01:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.014	ppb	0.014	1032.53	7	2000	
Na	23	3	45	1402798.912	ppb	1402798.912	2.34	157748304	400000	
Mg	24	3	45	434245.480	ppb	434245.480	3.80	25658718	400000	
Al	27	3	45	671.133	ppb	671.133	5.78	15491	400000	
K	39	3	45	86616.998	ppb	86616.998	1.83	4211002	400000	
Ca	40	2	45	1654612.756	ppb	1654612.756	1.79	949464745	400000	
V	51	3	72	18.126	ppb	18.126	1.90	12298	2000	
Cr	52	3	72	10.062	ppb	10.062	1.50	10789	5000	
Mn	55	3	72	3867.904	ppb	3867.904	0.84	1568259	10000	
Fe	56	2	72	359136.250	ppb	359136.250	2.12	551286534	10000	>LDR
Co	59	3	72	7.366	ppb	7.366	0.92	9657	2000	
Ni	60	3	72	30.380	ppb	30.380	3.77	11843	5000	
Cu	63	3	72	11.357	ppb	11.357	2.68	11746	5000	
Zn	66	3	72	44.684	ppb	44.684	4.14	7377	5000	
As	75	3	72	33.607	ppb	33.607	2.62	3845	2000	
Se	78	2	72	3.392	ppb	3.392	9.39	199	2000	
Sr	88	3	72	8260.934	ppb	8260.934	2.16	4447190	4000	
Mo	95	3	115	19.614	ppb	19.614	3.68	9859	2000	
Ag	107	3	115	0.022	ppb	0.022	28.43	50	100	
Cd	111	3	115	0.050	ppb	0.050	89.12	22	2000	
Sn	120	3	115	1.960	ppb	1.960	10.03	2227	2000	
Sb	121	3	115	1.707	ppb	1.707	9.96	1333	1000	
Ba	137	3	115	10052.436	ppb	10052.436	4.55	2474872	5000	
Tl	205	3	193	-0.019	ppb	-0.019	-31.58	313	2000	
(Pb)	206	3	193	1.323	ppb	1.323	3.98	2066	100	
(Pb)	207	3	193	1.214	ppb	1.214	9.54	1896	100	
Pb	208	3	193	1.216	ppb	1.216	1.33	7972	5000	
Th	232	3	193	0.828	ppb	0.828	34.43	11436	2000	
U	238	3	193	0.594	ppb	0.594	1.82	4875	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4269749	1.41	4300192	99.29	60	120	
Sc (IS)	45	3	HMI He	630756	1.70	644593	97.85	60	120	
Ge Internal standard	72	2	HMI H2	2510275	0.76	2598552	96.60	60	120	
Ge Internal standard	72	3	HMI He	758749	1.29	772392	98.23	60	120	
In Internal Standard	115	3	HMI He	2793533	1.44	2872781	97.24	60	120	
Ir (IS)	193	3	HMI He	6246406	0.96	6092963	102.52	60	120	

Sample Report

Sample Table

Sample Name	280-175147-c-1-a
Data File Name	239SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:03:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.004	ppb	0.004	4196.71	7	2000	
Na	23	3	45	7861.977	ppb	7861.977	1.20	912408	400000	
Mg	24	3	45	4621.481	ppb	4621.481	0.34	277046	400000	
Al	27	3	45	4211.198	ppb	4211.198	1.57	97712	400000	
K	39	3	45	1722.683	ppb	1722.683	1.53	112172	400000	
Ca	40	2	45	11853.012	ppb	11853.012	4.61	7057613	400000	
V	51	3	72	6.387	ppb	6.387	3.06	5257	2000	
Cr	52	3	72	3.120	ppb	3.120	12.76	5780	5000	
Mn	55	3	72	127.204	ppb	127.204	0.45	54966	10000	
Fe	56	2	72	3917.360	ppb	3917.360	2.29	6515087	10000	
Co	59	3	72	1.686	ppb	1.686	2.72	2384	2000	
Ni	60	3	72	3.099	ppb	3.099	6.40	1923	5000	
Cu	63	3	72	4.927	ppb	4.927	0.74	5627	5000	
Zn	66	3	72	17.752	ppb	17.752	2.58	3245	5000	
As	75	3	72	1.321	ppb	1.321	22.98	203	2000	
Se	78	2	72	0.489	ppb	0.489	12.86	33	2000	
Sr	88	3	72	72.655	ppb	72.655	2.10	41442	4000	
Mo	95	3	115	0.408	ppb	0.408	14.96	258	2000	
Ag	107	3	115	0.035	ppb	0.035	16.21	77	100	
Cd	111	3	115	0.056	ppb	0.056	33.11	25	2000	
Sn	120	3	115	-0.059	ppb	-0.059	-74.11	738	2000	
Sb	121	3	115	0.249	ppb	0.249	9.70	248	1000	
Ba	137	3	115	110.661	ppb	110.661	2.03	29234	5000	
Tl	205	3	193	0.003	ppb	0.003	196.03	405	2000	
(Pb)	206	3	193	3.663	ppb	3.663	3.44	5195	100	
(Pb)	207	3	193	3.317	ppb	3.317	5.41	4372	100	
Pb	208	3	193	3.562	ppb	3.562	1.64	20625	5000	
Th	232	3	193	0.917	ppb	0.917	10.49	12038	2000	
U	238	3	193	0.483	ppb	0.483	4.29	4304	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4426444	3.70	4300192	102.94	60	120	
Sc (IS)	45	3	HMI He	639052	0.39	644593	99.14	60	120	
Ge Internal standard	72	2	HMI H2	2692924	1.72	2598552	103.63	60	120	
Ge Internal standard	72	3	HMI He	802989	0.57	772392	103.96	60	120	
In Internal Standard	115	3	HMI He	2990700	2.18	2872781	104.10	60	120	
Ir (IS)	193	3	HMI He	6313162	1.57	6092963	103.61	60	120	

Sample Report

Sample Table

Sample Name	280-175148-c-1-a
Data File Name	240SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:05:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.089	ppb	0.089	134.28	10	2000	
Na	23	3	45	16353.605	ppb	16353.605	1.22	1892408	400000	
Mg	24	3	45	10438.489	ppb	10438.489	0.69	629567	400000	
Al	27	3	45	1589.391	ppb	1589.391	7.64	37205	400000	
K	39	3	45	1470.640	ppb	1470.640	1.87	100504	400000	
Ca	40	2	45	21496.262	ppb	21496.262	1.70	12795098	400000	
V	51	3	72	1.894	ppb	1.894	5.17	2296	2000	
Cr	52	3	72	1.162	ppb	1.162	9.89	4205	5000	
Mn	55	3	72	86.580	ppb	86.580	0.76	37666	10000	
Fe	56	2	72	1589.093	ppb	1589.093	3.09	2667915	10000	
Co	59	3	72	0.858	ppb	0.858	5.04	1244	2000	
Ni	60	3	72	1.916	ppb	1.916	10.53	1468	5000	
Cu	63	3	72	2.586	ppb	2.586	0.53	3159	5000	
Zn	66	3	72	8.516	ppb	8.516	4.28	1686	5000	
As	75	3	72	0.525	ppb	0.525	32.90	108	2000	
Se	78	2	72	0.214	ppb	0.214	18.14	15	2000	
Sr	88	3	72	202.537	ppb	202.537	0.34	115840	4000	
Mo	95	3	115	0.380	ppb	0.380	19.09	245	2000	
Ag	107	3	115	0.014	ppb	0.014	66.06	40	100	
Cd	111	3	115	0.049	ppb	0.049	78.77	23	2000	
Sn	120	3	115	-0.210	ppb	-0.210	-42.57	618	2000	
Sb	121	3	115	0.165	ppb	0.165	7.55	182	1000	
Ba	137	3	115	88.103	ppb	88.103	1.36	23446	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-9.82	210	2000	
(Pb)	206	3	193	1.654	ppb	1.654	3.63	2537	100	
(Pb)	207	3	193	1.599	ppb	1.599	3.58	2376	100	
Pb	208	3	193	1.634	ppb	1.634	2.49	10335	5000	
Th	232	3	193	0.162	ppb	0.162	15.19	8044	2000	
U	238	3	193	1.413	ppb	1.413	0.41	9564	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4423412	1.02	4300192	102.87	60	120	
Sc (IS)	45	3	HMI He	643287	0.64	644593	99.80	60	120	
Ge Internal standard	72	2	HMI H2	2678227	0.95	2598552	103.07	60	120	
Ge Internal standard	72	3	HMI He	805690	0.85	772392	104.31	60	120	
In Internal Standard	115	3	HMI He	3010480	1.66	2872781	104.79	60	120	
Ir (IS)	193	3	HMI He	6339067	0.93	6092963	104.04	60	120	

Sample Report

Sample Table

Sample Name	280-175150-c-1-a
Data File Name	241SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:07:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.031	ppb	-0.031	-5.62	5	2000	
Na	23	3	45	9683.477	ppb	9683.477	1.45	1120829	400000	
Mg	24	3	45	6919.401	ppb	6919.401	2.23	414937	400000	
Al	27	3	45	969.086	ppb	969.086	1.54	22621	400000	
K	39	3	45	1220.723	ppb	1220.723	2.45	87684	400000	
Ca	40	2	45	13911.860	ppb	13911.860	1.81	8240512	400000	
V	51	3	72	0.937	ppb	0.937	8.53	1643	2000	
Cr	52	3	72	1.128	ppb	1.128	11.78	4132	5000	
Mn	55	3	72	80.597	ppb	80.597	1.61	34701	10000	
Fe	56	2	72	1163.379	ppb	1163.379	1.95	1993607	10000	
Co	59	3	72	0.795	ppb	0.795	8.64	1144	2000	
Ni	60	3	72	1.415	ppb	1.415	15.76	1258	5000	
Cu	63	3	72	2.574	ppb	2.574	5.43	3112	5000	
Zn	66	3	72	10.229	ppb	10.229	7.00	1956	5000	
As	75	3	72	0.858	ppb	0.858	23.65	147	2000	
Se	78	2	72	0.330	ppb	0.330	68.50	23	2000	
Sr	88	3	72	98.099	ppb	98.099	1.45	55512	4000	
Mo	95	3	115	0.460	ppb	0.460	18.33	282	2000	
Ag	107	3	115	0.014	ppb	0.014	114.47	38	100	
Cd	111	3	115	-0.001	ppb	-0.001	-3682.55	10	2000	
Sn	120	3	115	-0.239	ppb	-0.239	-14.22	580	2000	
Sb	121	3	115	0.208	ppb	0.208	21.90	212	1000	
Ba	137	3	115	78.642	ppb	78.642	1.29	20422	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-15.43	222	2000	
(Pb)	206	3	193	2.280	ppb	2.280	4.26	3327	100	
(Pb)	207	3	193	2.152	ppb	2.152	9.39	2982	100	
Pb	208	3	193	2.176	ppb	2.176	4.40	13074	5000	
Th	232	3	193	0.009	ppb	0.009	654.67	7134	2000	
U	238	3	193	0.282	ppb	0.282	8.50	3141	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400369	1.36	4300192	102.33	60	120	
Sc (IS)	45	3	HMI He	639608	1.79	644593	99.23	60	120	
Ge Internal standard	72	2	HMI H2	2709439	2.01	2598552	104.27	60	120	
Ge Internal standard	72	3	HMI He	796851	0.82	772392	103.17	60	120	
In Internal Standard	115	3	HMI He	2936425	0.86	2872781	102.22	60	120	
Ir (IS)	193	3	HMI He	6256362	2.14	6092963	102.68	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-7-b
Data File Name	242SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:08:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.79	2	2000	
Na	23	3	45	17220.218	ppb	17220.218	1.77	1993753	400000	
Mg	24	3	45	10385.738	ppb	10385.738	0.37	627006	400000	
Al	27	3	45	11.300	ppb	11.300	10.41	417	400000	
K	39	3	45	5585.165	ppb	5585.165	1.29	303525	400000	
Ca	40	2	45	30201.679	ppb	30201.679	1.39	17773082	400000	
V	51	3	72	15.526	ppb	15.526	2.43	11489	2000	
Cr	52	3	72	1.964	ppb	1.964	16.16	4925	5000	
Mn	55	3	72	71.672	ppb	71.672	1.16	31667	10000	
Fe	56	2	72	194.497	ppb	194.497	5.08	389896	10000	
Co	59	3	72	0.076	ppb	0.076	27.94	165	2000	
Ni	60	3	72	0.561	ppb	0.561	9.09	951	5000	
Cu	63	3	72	0.669	ppb	0.669	6.14	1138	5000	
Zn	66	3	72	1.588	ppb	1.588	17.20	515	5000	
As	75	3	72	4.970	ppb	4.970	20.95	651	2000	
Se	78	2	72	1.390	ppb	1.390	31.95	89	2000	
Sr	88	3	72	162.171	ppb	162.171	2.54	94001	4000	
Mo	95	3	115	3.039	ppb	3.039	3.36	1673	2000	
Ag	107	3	115	0.035	ppb	0.035	27.28	78	100	
Cd	111	3	115	-0.021	ppb	-0.021	-1.18	5	2000	
Sn	120	3	115	-0.320	ppb	-0.320	-42.51	525	2000	
Sb	121	3	115	0.166	ppb	0.166	16.30	182	1000	
Ba	137	3	115	18.588	ppb	18.588	7.00	4972	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-16.16	165	2000	
(Pb)	206	3	193	0.156	ppb	0.156	7.92	541	100	
(Pb)	207	3	193	0.105	ppb	0.105	49.40	626	100	
Pb	208	3	193	0.123	ppb	0.123	9.68	2214	5000	
Th	232	3	193	-0.329	ppb	-0.329	-3.54	5430	2000	
U	238	3	193	1.862	ppb	1.862	3.12	12142	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4375356	1.50	4300192	101.75	60	120	
Sc (IS)	45	3	HMI He	643926	0.62	644593	99.90	60	120	
Ge Internal standard	72	2	HMI H2	2720109	2.81	2598552	104.68	60	120	
Ge Internal standard	72	3	HMI He	816541	1.00	772392	105.72	60	120	
In Internal Standard	115	3	HMI He	2996380	1.31	2872781	104.30	60	120	
Ir (IS)	193	3	HMI He	6361557	1.15	6092963	104.41	60	120	

Sample Report

Sample Table

Sample Name	280-175151-c-1-a
Data File Name	243SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:10:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-196.80	3	2000	
Na	23	3	45	35007.353	ppb	35007.353	3.96	4005589	400000	
Mg	24	3	45	16432.033	ppb	16432.033	1.66	984485	400000	
Al	27	3	45	1245.100	ppb	1245.100	7.67	28994	400000	
K	39	3	45	2481.115	ppb	2481.115	3.30	149304	400000	
Ca	40	2	45	37438.980	ppb	37438.980	2.69	22096088	400000	
V	51	3	72	2.062	ppb	2.062	6.22	2372	2000	
Cr	52	3	72	1.363	ppb	1.363	16.97	4305	5000	
Mn	55	3	72	33.581	ppb	33.581	3.58	14632	10000	
Fe	56	2	72	1029.757	ppb	1029.757	4.65	1757192	10000	
Co	59	3	72	0.451	ppb	0.451	18.13	671	2000	
Ni	60	3	72	1.081	ppb	1.081	7.81	1124	5000	
Cu	63	3	72	3.296	ppb	3.296	2.69	3855	5000	
Zn	66	3	72	5.450	ppb	5.450	3.90	1148	5000	
As	75	3	72	0.750	ppb	0.750	35.67	133	2000	
Se	78	2	72	1.411	ppb	1.411	1.58	90	2000	
Sr	88	3	72	309.871	ppb	309.871	2.72	174613	4000	
Mo	95	3	115	1.522	ppb	1.522	12.96	841	2000	
Ag	107	3	115	0.011	ppb	0.011	49.27	33	100	
Cd	111	3	115	-0.001	ppb	-0.001	-1800.23	10	2000	
Sn	120	3	115	-0.203	ppb	-0.203	-38.14	610	2000	
Sb	121	3	115	0.460	ppb	0.460	19.61	411	1000	
Ba	137	3	115	106.837	ppb	106.837	2.54	27759	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-12.94	220	2000	
(Pb)	206	3	193	0.926	ppb	0.926	8.52	1574	100	
(Pb)	207	3	193	0.857	ppb	0.857	10.24	1513	100	
Pb	208	3	193	0.903	ppb	0.903	1.96	6437	5000	
Th	232	3	193	-0.002	ppb	-0.002	-3182.62	7200	2000	
U	238	3	193	1.846	ppb	1.846	1.77	12067	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4389027	1.10	4300192	102.07	60	120	
Sc (IS)	45	3	HMI He	639160	0.60	644593	99.16	60	120	
Ge Internal standard	72	2	HMI H2	2687738	2.16	2598552	103.43	60	120	
Ge Internal standard	72	3	HMI He	794027	0.99	772392	102.80	60	120	
In Internal Standard	115	3	HMI He	2941435	2.40	2872781	102.39	60	120	
Ir (IS)	193	3	HMI He	6369997	0.08	6092963	104.55	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-3-a
Data File Name	244SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:12:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	19587.315	ppb	19587.315	0.20	2249940	400000	
Mg	24	3	45	20063.211	ppb	20063.211	2.35	1202618	400000	
Al	27	3	45	6.387	ppb	6.387	37.42	300	400000	
K	39	3	45	7886.015	ppb	7886.015	0.85	414097	400000	
Ca	40	2	45	105136.073	ppb	105136.073	2.77	62380392	400000	
V	51	3	72	6.374	ppb	6.374	6.25	5235	2000	
Cr	52	3	72	4.765	ppb	4.765	8.37	7097	5000	
Mn	55	3	72	0.626	ppb	0.626	37.18	660	10000	
Fe	56	2	72	31.833	ppb	31.833	14.04	118589	10000	
Co	59	3	72	0.029	ppb	0.029	33.61	97	2000	
Ni	60	3	72	2.086	ppb	2.086	11.17	1524	5000	
Cu	63	3	72	0.616	ppb	0.616	19.14	1060	5000	
Zn	66	3	72	2.728	ppb	2.728	4.72	698	5000	
As	75	3	72	1.699	ppb	1.699	17.36	248	2000	
Se	78	2	72	2.504	ppb	2.504	9.94	159	2000	
Sr	88	3	72	458.141	ppb	458.141	1.26	260429	4000	
Mo	95	3	115	1.670	ppb	1.670	7.39	930	2000	
Ag	107	3	115	0.023	ppb	0.023	20.46	55	100	
Cd	111	3	115	-0.028	ppb	-0.028	-78.02	3	2000	
Sn	120	3	115	-0.176	ppb	-0.176	-58.86	638	2000	
Sb	121	3	115	0.151	ppb	0.151	28.91	168	1000	
Ba	137	3	115	124.046	ppb	124.046	4.10	32494	5000	
Tl	205	3	193	-0.068	ppb	-0.068	-3.59	123	2000	
(Pb)	206	3	193	-0.034	ppb	-0.034	-96.20	285	100	
(Pb)	207	3	193	-0.072	ppb	-0.072	-11.26	415	100	
Pb	208	3	193	-0.046	ppb	-0.046	-26.94	1294	5000	
Th	232	3	193	-0.378	ppb	-0.378	-14.88	5135	2000	
U	238	3	193	7.457	ppb	7.457	0.29	43536	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4413916	0.86	4300192	102.64	60	120	
Sc (IS)	45	3	HMI He	639471	0.51	644593	99.21	60	120	
Ge Internal standard	72	2	HMI H2	2695870	1.02	2598552	103.75	60	120	
Ge Internal standard	72	3	HMI He	801012	1.31	772392	103.71	60	120	
In Internal Standard	115	3	HMI He	2967749	3.29	2872781	103.31	60	120	
Ir (IS)	193	3	HMI He	6321017	0.62	6092963	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-2-a
Data File Name	245SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:14:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	19163.049	ppb	19163.049	2.38	2191000	400000	
Mg	24	3	45	20401.832	ppb	20401.832	2.33	1217070	400000	
Al	27	3	45	1.821	ppb	1.821	59.27	194	400000	
K	39	3	45	7894.035	ppb	7894.035	0.75	412498	400000	
Ca	40	2	45	102671.245	ppb	102671.245	2.58	60081219	400000	
V	51	3	72	6.558	ppb	6.558	6.28	5362	2000	
Cr	52	3	72	2.506	ppb	2.506	8.64	5275	5000	
Mn	55	3	72	0.461	ppb	0.461	35.63	590	10000	
Fe	56	2	72	26.264	ppb	26.264	14.96	110582	10000	
Co	59	3	72	0.093	ppb	0.093	17.01	185	2000	
Ni	60	3	72	1.672	ppb	1.672	23.79	1366	5000	
Cu	63	3	72	0.274	ppb	0.274	10.78	700	5000	
Zn	66	3	72	1.334	ppb	1.334	33.60	463	5000	
As	75	3	72	1.699	ppb	1.699	12.27	248	2000	
Se	78	2	72	2.406	ppb	2.406	8.49	154	2000	
Sr	88	3	72	453.998	ppb	453.998	1.26	258325	4000	
Mo	95	3	115	1.693	ppb	1.693	10.03	933	2000	
Ag	107	3	115	0.025	ppb	0.025	27.66	58	100	
Cd	111	3	115	-0.015	ppb	-0.015	-74.11	7	2000	
Sn	120	3	115	-0.294	ppb	-0.294	-41.48	536	2000	
Sb	121	3	115	0.176	ppb	0.176	8.96	187	1000	
Ba	137	3	115	123.325	ppb	123.325	1.18	32093	5000	
Tl	205	3	193	-0.068	ppb	-0.068	-8.38	120	2000	
(Pb)	206	3	193	-0.064	ppb	-0.064	-30.68	243	100	
(Pb)	207	3	193	-0.066	ppb	-0.066	-56.71	418	100	
Pb	208	3	193	-0.054	ppb	-0.054	-26.41	1239	5000	
Th	232	3	193	-0.410	ppb	-0.410	-5.02	4917	2000	
U	238	3	193	7.375	ppb	7.375	0.79	42678	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4353871	1.71	4300192	101.25	60	120	
Sc (IS)	45	3	HMI He	636396	0.15	644593	98.73	60	120	
Ge Internal standard	72	2	HMI H2	2724747	1.03	2598552	104.86	60	120	
Ge Internal standard	72	3	HMI He	801745	0.79	772392	103.80	60	120	
In Internal Standard	115	3	HMI He	2946170	1.64	2872781	102.55	60	120	
Ir (IS)	193	3	HMI He	6263068	0.72	6092963	102.79	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-5-a
Data File Name	246SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:16:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.53	2	2000	
Na	23	3	45	19683.583	ppb	19683.583	1.27	2257051	400000	
Mg	24	3	45	20532.071	ppb	20532.071	1.32	1228669	400000	
Al	27	3	45	3.093	ppb	3.093	5.38	224	400000	
K	39	3	45	8031.140	ppb	8031.140	1.33	420464	400000	
Ca	40	2	45	106918.000	ppb	106918.000	1.04	62819914	400000	
V	51	3	72	6.825	ppb	6.825	2.86	5527	2000	
Cr	52	3	72	4.623	ppb	4.623	8.61	6975	5000	
Mn	55	3	72	0.538	ppb	0.538	26.92	621	10000	
Fe	56	2	72	28.474	ppb	28.474	13.35	111616	10000	
Co	59	3	72	0.046	ppb	0.046	53.13	120	2000	
Ni	60	3	72	2.085	ppb	2.085	7.00	1523	5000	
Cu	63	3	72	0.514	ppb	0.514	19.73	951	5000	
Zn	66	3	72	1.036	ppb	1.036	1.80	411	5000	
As	75	3	72	1.702	ppb	1.702	20.14	248	2000	
Se	78	2	72	2.690	ppb	2.690	7.09	168	2000	
Sr	88	3	72	461.692	ppb	461.692	0.03	262145	4000	
Mo	95	3	115	1.803	ppb	1.803	12.41	990	2000	
Ag	107	3	115	0.022	ppb	0.022	37.90	53	100	
Cd	111	3	115	-0.008	ppb	-0.008	-153.39	8	2000	
Sn	120	3	115	-0.251	ppb	-0.251	-39.88	570	2000	
Sb	121	3	115	0.120	ppb	0.120	34.05	142	1000	
Ba	137	3	115	122.888	ppb	122.888	3.69	31894	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-15.24	135	2000	
(Pb)	206	3	193	0.093	ppb	0.093	25.16	458	100	
(Pb)	207	3	193	0.045	ppb	0.045	59.05	556	100	
Pb	208	3	193	0.093	ppb	0.093	14.80	2056	5000	
Th	232	3	193	-0.414	ppb	-0.414	-11.23	4985	2000	
U	238	3	193	7.413	ppb	7.413	0.55	43650	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370670	1.43	4300192	101.64	60	120	
Sc (IS)	45	3	HMI He	638386	1.03	644593	99.04	60	120	
Ge Internal standard	72	2	HMI H2	2661258	2.29	2598552	102.41	60	120	
Ge Internal standard	72	3	HMI He	800000	0.71	772392	103.57	60	120	
In Internal Standard	115	3	HMI He	2939788	2.56	2872781	102.33	60	120	
Ir (IS)	193	3	HMI He	6374364	0.97	6092963	104.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	247_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:17:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.765	ppb	11.044	2214	50	105.5	90	110	
Na	23	3	45	48488.942	ppb	1.733	5395202	51000	95.1	90	110	
Mg	24	3	45	10290.100	ppb	1.491	600249	11000	93.5	90	110	
Al	27	3	45	959.856	ppb	2.973	21795	1000	96.0	90	110	
K	39	3	45	10210.153	ppb	1.242	513612	11000	92.8	90	110	
Ca	40	2	45	10529.589	ppb	1.914	6145915	11000	95.7	90	110	
V	51	3	72	48.879	ppb	1.036	31388	50	97.8	90	110	
Cr	52	3	72	50.791	ppb	2.473	41885	50	101.6	90	110	
Mn	55	3	72	50.373	ppb	2.699	20713	50	100.7	90	110	
Fe	56	2	72	1086.154	ppb	2.566	1741359	1000	108.6	90	110	
Co	59	3	72	50.313	ppb	0.398	65403	50	100.6	90	110	
Ni	60	3	72	51.074	ppb	0.479	19381	50	102.1	90	110	
Cu	63	3	72	50.256	ppb	0.356	50470	50	100.5	90	110	
Zn	66	3	72	50.191	ppb	3.783	8230	50	100.4	90	110	
As	75	3	72	53.445	ppb	2.242	6068	50	106.9	90	110	
Se	78	2	72	51.915	ppb	1.983	3044	50	103.8	90	110	
Sr	88	3	72	104.209	ppb	2.121	55942	100	104.2	90	110	
Mo	95	3	115	49.974	ppb	1.843	25446	50	99.9	90	110	
Ag	107	3	115	49.191	ppb	3.576	84423	50	98.4	90	110	
Cd	111	3	115	50.394	ppb	0.720	12341	50	100.8	90	110	
Sn	120	3	115	49.086	ppb	3.170	38740	50	98.2	90	110	
Sb	121	3	115	50.486	ppb	2.700	38759	50	101.0	90	110	
Ba	137	3	115	51.425	ppb	5.326	12910	50	102.8	90	110	
Tl	205	3	193	47.951	ppb	2.112	193301	50	95.9	90	110	
(Pb)	206	3	193	47.466	ppb	1.100	63730	50	94.9	90	110	
(Pb)	207	3	193	47.616	ppb	0.647	56405	50	95.2	90	110	
Pb	208	3	193	47.686	ppb	0.926	258493	50	95.4	90	110	
Th	232	3	193	47.516	ppb	0.670	262226	50	95.0	90	110	
U	238	3	193	47.862	ppb	1.895	271900	50	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4334439	2.31	4300192	100.80	60	120	
Sc (IS)	45	3	HMI He	622156	0.55	644593	96.52	60	120	
Ge Internal standard	72	2	HMI H2	2528670	0.37	2598552	97.31	60	120	
Ge Internal standard	72	3	HMI He	755913	0.31	772392	97.87	60	120	
In Internal Standard	115	3	HMI He	2835965	1.95	2872781	98.72	60	120	
Ir (IS)	193	3	HMI He	6347234	0.74	6092963	104.17	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	248_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:19:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	74.760	ppb	8.4	24335	25	>RL
Mg	24	3	45	3.222	ppb	36.2	447	25	
Al	27	3	45	-1.963	ppb	-35.9	103	15	
K	39	3	45	-6.900	ppb	-477.6	26712	50	
V	51	3	72	-0.560	ppb	-9.0	631	1	
Cr	52	3	72	0.368	ppb	83.4	3364	1	
Mn	55	3	72	-0.007	ppb	-1381.9	370	0.5	
Co	59	3	72	0.017	ppb	108.5	77	0.5	
Ni	60	3	72	0.505	ppb	48.4	866	1	
Cu	63	3	72	0.009	ppb	425.9	398	1	
Zn	66	3	72	0.009	ppb	2275.1	227	5	
As	75	3	72	0.049	ppb	184.6	48	1	
Se	78	2	72	0.055	ppb	35.0	5	1	
Sr	88	3	72	0.072	ppb	91.9	82	0.5	
Mo	95	3	115	0.049	ppb	55.0	63	0.5	
Ag	107	3	115	0.010	ppb	30.9	30	1	
Cd	111	3	115	-0.027	ppb	-86.5	3	0.5	
Sn	120	3	115	0.032	ppb	101.3	780	1	
Sb	121	3	115	0.036	ppb	25.8	73	0.6	
Ba	137	3	115	-0.033	ppb	-191.4	53	0.5	
Tl	205	3	193	-0.039	ppb	-27.9	233	0.1	
(Pb)	206	3	193	-0.067	ppb	-19.3	235	1	
(Pb)	207	3	193	-0.134	ppb	-18.0	335	1	
Pb	208	3	193	-0.089	ppb	-17.4	1038	0.5	
Th	232	3	193	1.564	ppb	9.2	15150	1	>RL
U	238	3	193	0.033	ppb	49.3	1738	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4332137	0.82	4300192	100.74	60	120	
Sc (IS)	45	3	HMI He	620232	0.72	644593	96.22	60	120	
Ge Internal standard	72	2	HMI H2	2594948	0.33	2598552	99.86	60	120	
Ge Internal standard	72	3	HMI He	761522	0.44	772392	98.59	60	120	
In Internal Standard	115	3	HMI He	2870724	0.98	2872781	99.93	60	120	
Ir (IS)	193	3	HMI He	6174407	2.28	6092963	101.34	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609194/1-B
Data File Name	249_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:05:58-06:00
Sample Type	Blank
Dilution	1
Comment	609233 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	281.230	ppb	1.082267342	46650	25
Mg	24	3	45	1.563	ppb	45.98899089	347	25
Al	27	3	45	-0.262	ppb	-303.3904984	140	15
K	39	3	45	-2.733	ppb	-1025.155607	26612	50
Ca	40	2	45	16.072	ppb	3.172188851	21786	200
V	51	3	72	-0.358	ppb	-36.15352345	760	1
Cr	52	3	72	-0.469	ppb	-12.89308656	2724	1
Mn	55	3	72	0.188	ppb	45.45909871	450	0.5
Fe	56	2	72	20.001	ppb	13.2390376	97474	50
Co	59	3	72	0.003	ppb	288.8187496	58	0.5
Ni	60	3	72	-0.581	ppb	-18.75977448	466	1
Cu	63	3	72	0.121	ppb	16.28564249	511	1
Zn	66	3	72	1.393	ppb	7.443895937	450	5
As	75	3	72	0.092	ppb	112.1561568	53	1
(Se)	78	3	72	0.293	ppb	264.0718631	25	1
Sr	88	3	72	0.056	ppb	51.92766477	73	0.5
Mo	95	3	115	0.046	ppb	101.1237291	62	0.5
Ag	107	3	115	0.005	ppb	125.3402849	22	1
Cd	111	3	115	-0.041	ppb	0	0	0.5
Sn	120	3	115	-0.132	ppb	-40.30787229	650	1
Sb	121	3	115	0.009	ppb	284.4853356	52	0.6
Ba	137	3	115	0.219	ppb	51.55799151	117	0.5
Tl	205	3	193	-0.061	ppb	-18.25714322	143	0.1
(Pb)	206	3	193	-0.007	ppb	-344.8737397	310	1
(Pb)	207	3	193	0.068	ppb	78.34724986	560	1
Pb	208	3	193	0.002	ppb	652.1535081	1503	0.5
Th	232	3	193	0.030	ppb	404.0969576	7077	1
U	238	3	193	0.011	ppb	159.4563042	1598	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4212308	0.52	4300192	97.96	60	120	
Sc (IS)	45	3	HMI He	613371	0.41	644593	95.16	60	120	
Ge Internal standard	72	2	HMI H2	2653486	1.92	2598552	102.11	60	120	
Ge Internal standard	72	3	HMI He	762841	0.76	772392	98.76	60	120	
In Internal Standard	115	3	HMI He	2865732	0.86	2872781	99.75	60	120	
Ir (IS)	193	3	HMI He	6116676	1.21	6092963	100.39	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609194/2-C
Data File Name	250_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:07:46-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609233 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.163	41.163	ppb	4.612	1784	40	102.9	80	120	
Na	23	3	45	824.460	824.460	ppb	1.679	107441	40	2061.1	80	120	>+/-20%
Mg	24	3	45	698.999	698.999	ppb	1.645	40967	40	1747.5	80	120	>+/-20%
Al	27	3	45	761.725	761.725	ppb	3.092	17305	40	1904.3	80	120	>+/-20%
K	39	3	45	757.724	757.724	ppb	1.037	63148	40	1894.3	80	120	>+/-20%
Ca	40	2	45	801.018	801.018	ppb	1.655	479066	40	2002.5	80	120	>+/-20%
V	51	3	72	38.527	38.527	ppb	2.065	25187	40	96.3	80	120	
Cr	52	3	72	37.658	37.658	ppb	0.635	32151	40	94.1	80	120	
Mn	55	3	72	39.176	39.176	ppb	0.499	16348	40	97.9	80	120	
Fe	56	2	72	773.093	773.093	ppb	1.989	1309478	40	1932.7	80	120	>+/-20%
(Fe)	56	3	72	754.416	754.416	ppb	0.655	511947	40	1886.0	80	120	>+/-20%
Co	59	3	72	38.356	38.356	ppb	2.256	50351	40	95.9	80	120	
Ni	60	3	72	37.869	37.869	ppb	2.291	14684	40	94.7	80	120	
Cu	63	3	72	39.145	39.145	ppb	0.733	39777	40	97.9	80	120	
Zn	66	3	72	39.778	39.778	ppb	4.304	6632	40	99.4	80	120	
As	75	3	72	38.143	38.143	ppb	5.616	4385	40	95.4	80	120	
Se	78	2	72	39.470	39.470	ppb	0.941	2411	40	98.7	80	120	
(Se)	78	3	72	42.557	42.557	ppb	18.467	295	40	106.4	80	120	
Sr	88	3	72	78.554	78.554	ppb	1.938	42587	40	196.4	80	120	>+/-20%
Mo	95	3	115	36.550	36.550	ppb	4.096	18869	40	91.4	80	120	
Ag	107	3	115	38.059	38.059	ppb	1.738	66218	40	95.1	80	120	
Cd	111	3	115	36.763	36.763	ppb	3.147	9127	40	91.9	80	120	
Sn	120	3	115	35.786	35.786	ppb	2.087	28835	40	89.5	80	120	
Sb	121	3	115	38.069	38.069	ppb	1.840	29633	40	95.2	80	120	
Ba	137	3	115	38.212	38.212	ppb	2.119	9742	40	95.5	80	120	
Tl	205	3	193	37.354	37.354	ppb	1.662	148953	40	93.4	80	120	
(Pb)	206	3	193	37.722	37.722	ppb	1.004	50134	40	94.3	80	120	
(Pb)	207	3	193	36.963	36.963	ppb	2.713	43393	40	92.4	80	120	
Pb	208	3	193	37.509	37.509	ppb	1.850	201317	40	93.8	80	120	
Th	232	3	193	34.808	34.808	ppb	0.302	191800	40	87.0	80	120	
U	238	3	193	37.561	37.561	ppb	2.263	211284	40	93.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4329078	1.58	4300192	100.67	60	120	
Sc (IS)	45	3	HMI He	621380	0.57	644593	96.40	60	120	
Ge Internal standard	72	2	HMI H2	2633775	1.83	2598552	101.36	60	120	
Ge Internal standard	72	3	HMI He	763204	0.37	772392	98.81	60	120	
In Internal Standard	115	3	HMI He	2873938	1.43	2872781	100.04	60	120	
Ir (IS)	193	3	HMI He	6274906	0.73	6092963	102.99	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-G
Data File Name	251SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:09:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.110	ppb	-0.110	-62.10	2	2000	
Na	23	3	45	64588.015	ppb	64588.015	1.04	7139357	400000	
Mg	24	3	45	25228.902	ppb	25228.902	1.30	1462682	400000	
Al	27	3	45	-0.018	ppb	-0.018	-7612.56	147	400000	
K	39	3	45	2797.418	ppb	2797.418	0.87	159483	400000	
Ca	40	2	45	91824.080	ppb	91824.080	0.49	52558958	400000	
V	51	3	72	-0.187	ppb	-0.187	-48.76	878	2000	
Cr	52	3	72	-0.521	ppb	-0.521	-67.96	2719	5000	
Mn	55	3	72	0.410	ppb	0.410	20.06	548	10000	
Fe	56	2	72	-1.611	ppb	-1.611	-128.64	61354	10000	
Co	59	3	72	0.085	ppb	0.085	38.33	168	2000	
Ni	60	3	72	0.425	ppb	0.425	35.17	850	5000	
Cu	63	3	72	0.472	ppb	0.472	11.02	876	5000	
Zn	66	3	72	1.099	ppb	1.099	22.65	408	5000	
As	75	3	72	0.245	ppb	0.245	81.02	72	2000	
Se	78	2	72	2.010	ppb	2.010	17.63	123	2000	
Sr	88	3	72	711.645	ppb	711.645	0.38	390537	4000	
Mo	95	3	115	1.402	ppb	1.402	6.06	753	2000	
Ag	107	3	115	0.008	ppb	0.008	76.43	27	100	
Cd	111	3	115	-0.021	ppb	-0.021	-98.10	5	2000	
Sn	120	3	115	-0.117	ppb	-0.117	-37.98	656	2000	
Sb	121	3	115	0.133	ppb	0.133	2.04	147	1000	
Ba	137	3	115	76.719	ppb	76.719	2.69	19289	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-26.08	210	2000	
(Pb)	206	3	193	-0.084	ppb	-0.084	-18.73	212	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-26.24	418	100	
Pb	208	3	193	-0.064	ppb	-0.064	-8.93	1158	5000	
Th	232	3	193	1.797	ppb	1.797	17.49	16234	2000	
U	238	3	193	7.065	ppb	7.065	1.94	40028	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4257359	0.48	4300192	99.00	60	120	
Sc (IS)	45	3	HMI He	618551	0.84	644593	95.96	60	120	
Ge Internal standard	72	2	HMI H2	2607060	1.09	2598552	100.33	60	120	
Ge Internal standard	72	3	HMI He	773259	0.68	772392	100.11	60	120	
In Internal Standard	115	3	HMI He	2843433	1.40	2872781	98.98	60	120	
Ir (IS)	193	3	HMI He	6123162	1.16	6092963	100.50	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-H MS
Data File Name	252SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:11:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.146	ppb	40.146	2.59	1699	2000	
Na	23	3	45	65304.473	ppb	65304.473	1.14	7149696	400000	
Mg	24	3	45	25258.121	ppb	25258.121	1.00	1450429	400000	
Al	27	3	45	730.811	ppb	730.811	0.96	16376	400000	
K	39	3	45	3515.170	ppb	3515.170	0.20	191642	400000	
Ca	40	2	45	91340.960	ppb	91340.960	1.04	52532165	400000	
V	51	3	72	36.612	ppb	36.612	2.62	24064	2000	
Cr	52	3	72	36.935	ppb	36.935	3.17	31697	5000	
Mn	55	3	72	37.777	ppb	37.777	2.35	15831	10000	
Fe	56	2	72	765.281	ppb	765.281	2.39	1280209	10000	
Co	59	3	72	36.344	ppb	36.344	1.58	47874	2000	
Ni	60	3	72	36.757	ppb	36.757	1.49	14324	5000	
Cu	63	3	72	37.231	ppb	37.231	0.41	37983	5000	
Zn	66	3	72	38.946	ppb	38.946	2.47	6522	5000	
As	75	3	72	38.842	ppb	38.842	5.44	4482	2000	
Se	78	2	72	39.966	ppb	39.966	3.93	2409	2000	
Sr	88	3	72	784.544	ppb	784.544	0.81	426380	4000	
Mo	95	3	115	36.891	ppb	36.891	1.03	18957	2000	
Ag	107	3	115	37.399	ppb	37.399	1.48	64760	100	
Cd	111	3	115	36.983	ppb	36.983	1.74	9137	2000	
Sn	120	3	115	34.754	ppb	34.754	0.27	27894	2000	
Sb	121	3	115	36.625	ppb	36.625	2.19	28373	1000	
Ba	137	3	115	111.807	ppb	111.807	1.20	28255	5000	
Tl	205	3	193	37.250	ppb	37.250	1.21	144783	2000	
(Pb)	206	3	193	37.268	ppb	37.268	0.55	48279	100	
(Pb)	207	3	193	36.978	ppb	36.978	1.15	42318	100	
Pb	208	3	193	37.127	ppb	37.127	1.24	194237	5000	
Th	232	3	193	36.564	ppb	36.564	0.61	196013	2000	
U	238	3	193	44.745	ppb	44.745	1.46	245052	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4277770	0.87	4300192	99.48	60	120	
Sc (IS)	45	3	HMI He	612639	0.39	644593	95.04	60	120	
Ge Internal standard	72	2	HMI H2	2600338	2.15	2598552	100.07	60	120	
Ge Internal standard	72	3	HMI He	765830	1.16	772392	99.15	60	120	
In Internal Standard	115	3	HMI He	2860310	1.55	2872781	99.57	60	120	
Ir (IS)	193	3	HMI He	6116074	1.35	6092963	100.38	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-I MSD
Data File Name	253SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:13:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.146	ppb	39.146	5.78	1654	2000	
Na	23	3	45	66001.043	ppb	66001.043	1.32	7236759	400000	
Mg	24	3	45	25769.290	ppb	25769.290	2.15	1481875	400000	
Al	27	3	45	713.503	ppb	713.503	1.68	16015	400000	
K	39	3	45	3514.291	ppb	3514.291	0.57	191903	400000	
Ca	40	2	45	92678.286	ppb	92678.286	2.91	53190519	400000	
V	51	3	72	37.014	ppb	37.014	1.44	24087	2000	
Cr	52	3	72	36.818	ppb	36.818	3.77	31306	5000	
Mn	55	3	72	38.222	ppb	38.222	0.35	15861	10000	
Fe	56	2	72	752.179	ppb	752.179	2.84	1265483	10000	
Co	59	3	72	36.609	ppb	36.609	0.59	47767	2000	
Ni	60	3	72	37.907	ppb	37.907	2.23	14607	5000	
Cu	63	3	72	37.706	ppb	37.706	0.45	38093	5000	
Zn	66	3	72	38.311	ppb	38.311	5.09	6357	5000	
As	75	3	72	38.281	ppb	38.281	3.63	4374	2000	
Se	78	2	72	39.274	ppb	39.274	2.99	2379	2000	
Sr	88	3	72	797.322	ppb	797.322	0.37	429194	4000	
Mo	95	3	115	37.418	ppb	37.418	2.60	19259	2000	
Ag	107	3	115	36.583	ppb	36.583	1.62	63456	100	
Cd	111	3	115	36.628	ppb	36.628	1.73	9064	2000	
Sn	120	3	115	35.220	ppb	35.220	1.65	28303	2000	
Sb	121	3	115	36.786	ppb	36.786	0.67	28551	1000	
Ba	137	3	115	114.317	ppb	114.317	1.72	28936	5000	
Tl	205	3	193	36.799	ppb	36.799	1.34	144089	2000	
(Pb)	206	3	193	37.149	ppb	37.149	0.48	48482	100	
(Pb)	207	3	193	36.957	ppb	36.957	2.83	42602	100	
Pb	208	3	193	36.868	ppb	36.868	0.32	194326	5000	
Th	232	3	193	37.536	ppb	37.536	1.29	202528	2000	
U	238	3	193	44.511	ppb	44.511	0.58	245572	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4270534	2.12	4300192	99.31	60	120	
Sc (IS)	45	3	HMI He	613615	1.30	644593	95.19	60	120	
Ge Internal standard	72	2	HMI H2	2612372	0.69	2598552	100.53	60	120	
Ge Internal standard	72	3	HMI He	758502	0.41	772392	98.20	60	120	
In Internal Standard	115	3	HMI He	2865262	1.50	2872781	99.74	60	120	
Ir (IS)	193	3	HMI He	6161016	0.32	6092963	101.12	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-2-B
Data File Name	254SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:14:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.97	2	2000	
Na	23	3	45	68988.229	ppb	68988.229	0.72	7494637	400000	
Mg	24	3	45	27563.941	ppb	27563.941	2.21	1570786	400000	
Al	27	3	45	5.546	ppb	5.546	53.46	267	400000	
K	39	3	45	2795.503	ppb	2795.503	2.11	156683	400000	
Ca	40	2	45	98923.752	ppb	98923.752	2.25	55845415	400000	
V	51	3	72	-0.273	ppb	-0.273	-22.53	810	2000	
Cr	52	3	72	0.192	ppb	0.192	193.43	3222	5000	
Mn	55	3	72	0.742	ppb	0.742	3.72	673	10000	
Fe	56	2	72	10.285	ppb	10.285	46.68	79232	10000	
Co	59	3	72	0.067	ppb	0.067	18.13	142	2000	
Ni	60	3	72	0.733	ppb	0.733	8.82	948	5000	
Cu	63	3	72	0.944	ppb	0.944	16.84	1333	5000	
Zn	66	3	72	1.092	ppb	1.092	18.89	400	5000	
As	75	3	72	0.314	ppb	0.314	57.03	78	2000	
Se	78	2	72	1.964	ppb	1.964	7.87	119	2000	
Sr	88	3	72	783.478	ppb	783.478	0.87	422417	4000	
Mo	95	3	115	1.585	ppb	1.585	7.64	848	2000	
Ag	107	3	115	0.014	ppb	0.014	23.35	38	100	
Cd	111	3	115	0.000	ppb	0.000	-17552.63	10	2000	
Sn	120	3	115	-0.008	ppb	-0.008	-939.58	743	2000	
Sb	121	3	115	0.104	ppb	0.104	38.67	125	1000	
Ba	137	3	115	77.648	ppb	77.648	1.93	19575	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-9.04	252	2000	
(Pb)	206	3	193	-0.007	ppb	-0.007	-453.91	308	100	
(Pb)	207	3	193	-0.054	ppb	-0.054	-113.21	420	100	
Pb	208	3	193	-0.020	ppb	-0.020	-49.57	1379	5000	
Th	232	3	193	2.203	ppb	2.203	14.22	18191	2000	
U	238	3	193	8.221	ppb	8.221	1.15	46002	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4200235	2.16	4300192	97.68	60	120	
Sc (IS)	45	3	HMI He	607979	0.49	644593	94.32	60	120	
Ge Internal standard	72	2	HMI H2	2574955	1.75	2598552	99.09	60	120	
Ge Internal standard	72	3	HMI He	759750	1.11	772392	98.36	60	120	
In Internal Standard	115	3	HMI He	2850466	0.20	2872781	99.22	60	120	
Ir (IS)	193	3	HMI He	6079371	1.69	6092963	99.78	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-3-B
Data File Name	255SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:16:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	69004.482	ppb	69004.482	1.41	7468753	400000	
Mg	24	3	45	26735.746	ppb	26735.746	0.68	1518122	400000	
Al	27	3	45	-1.702	ppb	-1.702	-18.96	107	400000	
K	39	3	45	2695.500	ppb	2695.500	2.84	151444	400000	
Ca	40	2	45	94297.291	ppb	94297.291	1.31	53516808	400000	
V	51	3	72	-0.326	ppb	-0.326	-35.64	770	2000	
Cr	52	3	72	0.245	ppb	0.245	80.92	3234	5000	
Mn	55	3	72	0.374	ppb	0.374	35.35	520	10000	
Fe	56	2	72	12.611	ppb	12.611	20.56	82171	10000	
Co	59	3	72	0.086	ppb	0.086	11.68	165	2000	
Ni	60	3	72	0.763	ppb	0.763	15.91	951	5000	
Cu	63	3	72	0.630	ppb	0.630	7.81	1011	5000	
Zn	66	3	72	0.884	ppb	0.884	27.19	363	5000	
As	75	3	72	0.394	ppb	0.394	63.64	87	2000	
Se	78	2	72	1.929	ppb	1.929	8.34	116	2000	
Sr	88	3	72	756.090	ppb	756.090	1.50	404250	4000	
Mo	95	3	115	1.705	ppb	1.705	9.63	890	2000	
Ag	107	3	115	0.012	ppb	0.012	78.59	33	100	
Cd	111	3	115	-0.027	ppb	-0.027	-90.06	3	2000	
Sn	120	3	115	-0.260	ppb	-0.260	-16.95	535	2000	
Sb	121	3	115	0.085	ppb	0.085	37.78	108	1000	
Ba	137	3	115	78.377	ppb	78.377	0.31	19328	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-10.50	180	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-235.08	320	100	
(Pb)	207	3	193	-0.048	ppb	-0.048	-92.66	435	100	
Pb	208	3	193	-0.035	ppb	-0.035	-11.86	1326	5000	
Th	232	3	193	0.345	ppb	0.345	38.32	8837	2000	
U	238	3	193	8.419	ppb	8.419	1.64	48033	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4222024	2.71	4300192	98.18	60	120	
Sc (IS)	45	3	HMI He	605807	1.31	644593	93.98	60	120	
Ge Internal standard	72	2	HMI H2	2549493	0.96	2598552	98.11	60	120	
Ge Internal standard	72	3	HMI He	753417	0.65	772392	97.54	60	120	
In Internal Standard	115	3	HMI He	2788404	0.77	2872781	97.06	60	120	
Ir (IS)	193	3	HMI He	6203747	1.14	6092963	101.82	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-4-B
Data File Name	256SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:18:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	69550.283	ppb	69550.283	1.06	7628858	400000	
Mg	24	3	45	27019.688	ppb	27019.688	1.95	1554657	400000	
Al	27	3	45	-0.426	ppb	-0.426	-573.56	137	400000	
K	39	3	45	2790.537	ppb	2790.537	0.91	157965	400000	
Ca	40	2	45	100310.879	ppb	100310.879	2.61	56287277	400000	
V	51	3	72	-0.260	ppb	-0.260	-83.09	825	2000	
Cr	52	3	72	0.266	ppb	0.266	83.91	3305	5000	
Mn	55	3	72	0.573	ppb	0.573	18.49	610	10000	
Fe	56	2	72	14.191	ppb	14.191	28.83	84427	10000	
Co	59	3	72	0.104	ppb	0.104	23.44	192	2000	
Ni	60	3	72	0.643	ppb	0.643	10.49	923	5000	
Cu	63	3	72	0.617	ppb	0.617	10.97	1015	5000	
Zn	66	3	72	3.698	ppb	3.698	4.23	825	5000	
As	75	3	72	0.148	ppb	0.148	58.36	60	2000	
Se	78	2	72	1.798	ppb	1.798	6.45	108	2000	
Sr	88	3	72	765.968	ppb	765.968	0.15	416563	4000	
Mo	95	3	115	1.772	ppb	1.772	5.06	943	2000	
Ag	107	3	115	0.012	ppb	0.012	38.83	33	100	
Cd	111	3	115	0.000	ppb	0.000	-1617.94	10	2000	
Sn	120	3	115	-0.229	ppb	-0.229	-21.60	570	2000	
Sb	121	3	115	0.078	ppb	0.078	5.90	105	1000	
Ba	137	3	115	78.564	ppb	78.564	2.00	19782	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-13.11	178	2000	
(Pb)	206	3	193	-0.074	ppb	-0.074	-20.60	225	100	
(Pb)	207	3	193	-0.066	ppb	-0.066	-57.99	408	100	
Pb	208	3	193	-0.061	ppb	-0.061	-13.64	1174	5000	
Th	232	3	193	-0.023	ppb	-0.023	-114.65	6815	2000	
U	238	3	193	8.654	ppb	8.654	2.29	48713	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174202	1.04	4300192	97.07	60	120	
Sc (IS)	45	3	HMI He	613924	0.99	644593	95.24	60	120	
Ge Internal standard	72	2	HMI H2	2543759	0.59	2598552	97.89	60	120	
Ge Internal standard	72	3	HMI He	766302	0.26	772392	99.21	60	120	
In Internal Standard	115	3	HMI He	2847414	1.46	2872781	99.12	60	120	
Ir (IS)	193	3	HMI He	6127656	2.62	6092963	100.57	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-5-B
Data File Name	257SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:20:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	73605.834	ppb	73605.834	2.11	7868952	400000	
Mg	24	3	45	27022.897	ppb	27022.897	2.24	1515646	400000	
Al	27	3	45	0.934	ppb	0.934	585.87	164	400000	
K	39	3	45	2720.268	ppb	2720.268	1.34	150767	400000	
Ca	40	2	45	91273.610	ppb	91273.610	1.75	51713820	400000	
V	51	3	72	-0.079	ppb	-0.079	-272.61	918	2000	
Cr	52	3	72	0.049	ppb	0.049	87.99	3069	5000	
Mn	55	3	72	0.827	ppb	0.827	15.22	698	10000	
Fe	56	2	72	9.543	ppb	9.543	31.93	79281	10000	
Co	59	3	72	0.080	ppb	0.080	17.48	157	2000	
Ni	60	3	72	0.588	ppb	0.588	17.41	883	5000	
Cu	63	3	72	0.464	ppb	0.464	11.05	841	5000	
Zn	66	3	72	0.790	ppb	0.790	23.34	347	5000	
As	75	3	72	0.204	ppb	0.204	57.43	65	2000	
Se	78	2	72	1.629	ppb	1.629	7.20	101	2000	
Sr	88	3	72	738.204	ppb	738.204	1.32	392705	4000	
Mo	95	3	115	1.774	ppb	1.774	9.38	918	2000	
Ag	107	3	115	0.004	ppb	0.004	71.84	20	100	
Cd	111	3	115	-0.006	ppb	-0.006	-416.03	8	2000	
Sn	120	3	115	-0.152	ppb	-0.152	-76.68	613	2000	
Sb	121	3	115	0.084	ppb	0.084	29.48	107	1000	
Ba	137	3	115	72.699	ppb	72.699	2.12	17805	5000	
Tl	205	3	193	-0.058	ppb	-0.058	-14.64	158	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-23.29	232	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-35.70	393	100	
Pb	208	3	193	-0.063	ppb	-0.063	-3.01	1164	5000	
Th	232	3	193	-0.183	ppb	-0.183	-51.44	5978	2000	
U	238	3	193	9.420	ppb	9.420	1.78	52844	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214265	0.67	4300192	98.00	60	120	
Sc (IS)	45	3	HMI He	598474	1.13	644593	92.85	60	120	
Ge Internal standard	72	2	HMI H2	2614675	2.52	2598552	100.62	60	120	
Ge Internal standard	72	3	HMI He	749610	0.41	772392	97.05	60	120	
In Internal Standard	115	3	HMI He	2768727	0.51	2872781	96.38	60	120	
Ir (IS)	193	3	HMI He	6121207	1.31	6092963	100.46	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-6-B
Data File Name	258SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:22:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	75592.496	ppb	75592.496	1.11	8070618	400000	
Mg	24	3	45	27196.551	ppb	27196.551	3.78	1523348	400000	
Al	27	3	45	-0.406	ppb	-0.406	-328.96	133	400000	
K	39	3	45	2755.581	ppb	2755.581	1.50	152186	400000	
Ca	40	2	45	95851.899	ppb	95851.899	1.32	54222036	400000	
V	51	3	72	-0.259	ppb	-0.259	-10.16	806	2000	
Cr	52	3	72	0.000	ppb	0.000	-209880.55	3029	5000	
Mn	55	3	72	1.374	ppb	1.374	7.73	916	10000	
Fe	56	2	72	20.036	ppb	20.036	16.59	93947	10000	
Co	59	3	72	0.098	ppb	0.098	19.43	180	2000	
Ni	60	3	72	0.738	ppb	0.738	24.66	936	5000	
Cu	63	3	72	1.257	ppb	1.257	11.36	1623	5000	
Zn	66	3	72	1.299	ppb	1.299	31.33	426	5000	
As	75	3	72	0.430	ppb	0.430	38.97	90	2000	
Se	78	2	72	1.790	ppb	1.790	11.45	108	2000	
Sr	88	3	72	747.254	ppb	747.254	0.56	397071	4000	
Mo	95	3	115	1.832	ppb	1.832	1.95	951	2000	
Ag	107	3	115	0.004	ppb	0.004	68.85	20	100	
Cd	111	3	115	-0.006	ppb	-0.006	-516.75	8	2000	
Sn	120	3	115	-0.232	ppb	-0.232	-41.82	555	2000	
Sb	121	3	115	0.099	ppb	0.099	9.53	118	1000	
Ba	137	3	115	71.423	ppb	71.423	2.36	17576	5000	
Tl	205	3	193	-0.059	ppb	-0.059	-4.78	150	2000	
(Pb)	206	3	193	0.003	ppb	0.003	1038.99	318	100	
(Pb)	207	3	193	0.054	ppb	0.054	52.43	536	100	
Pb	208	3	193	0.003	ppb	0.003	1098.54	1483	5000	
Th	232	3	193	-0.250	ppb	-0.250	-22.25	5552	2000	
U	238	3	193	10.086	ppb	10.086	2.01	55656	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4207787	1.41	4300192	97.85	60	120	
Sc (IS)	45	3	HMI He	597638	0.46	644593	92.72	60	120	
Ge Internal standard	72	2	HMI H2	2555103	0.81	2598552	98.33	60	120	
Ge Internal standard	72	3	HMI He	748759	0.84	772392	96.94	60	120	
In Internal Standard	115	3	HMI He	2782160	1.03	2872781	96.85	60	120	
Ir (IS)	193	3	HMI He	6033021	1.72	6092963	99.02	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	259_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:23:57-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.103	ppb	9.691	2159	50	104.2	90	110	
Na	23	3	45	48340.448	ppb	2.156	5161446	51000	94.8	90	110	
Mg	24	3	45	10235.290	ppb	2.941	572862	11000	93.0	90	110	
Al	27	3	45	934.612	ppb	4.740	20365	1000	93.5	90	110	
K	39	3	45	10095.410	ppb	2.563	487602	11000	91.8	90	110	
Ca	40	2	45	10398.909	ppb	0.790	5821928	11000	94.5	90	110	
V	51	3	72	49.847	ppb	1.753	30248	50	99.7	90	110	
Cr	52	3	72	50.016	ppb	0.209	39045	50	100.0	90	110	
Mn	55	3	72	49.819	ppb	1.672	19374	50	99.6	90	110	
Fe	56	2	72	1056.946	ppb	2.387	1657473	1000	105.7	90	110	
Co	59	3	72	50.040	ppb	1.004	61505	50	100.1	90	110	
Ni	60	3	72	51.129	ppb	0.536	18345	50	102.3	90	110	
Cu	63	3	72	50.046	ppb	2.452	47519	50	100.1	90	110	
Zn	66	3	72	50.143	ppb	0.196	7775	50	100.3	90	110	
As	75	3	72	52.668	ppb	2.744	5655	50	105.3	90	110	
Se	78	2	72	49.777	ppb	3.528	2851	50	99.6	90	110	
Sr	88	3	72	102.966	ppb	0.615	52266	100	103.0	90	110	
Mo	95	3	115	48.790	ppb	3.971	24121	50	97.6	90	110	
Ag	107	3	115	48.770	ppb	1.975	81311	50	97.5	90	110	
Cd	111	3	115	49.568	ppb	1.512	11788	50	99.1	90	110	
Sn	120	3	115	48.649	ppb	2.463	37298	50	97.3	90	110	
Sb	121	3	115	49.672	ppb	2.500	37038	50	99.3	90	110	
Ba	137	3	115	49.558	ppb	1.360	12095	50	99.1	90	110	
Tl	205	3	193	47.670	ppb	0.352	184409	50	95.3	90	110	
(Pb)	206	3	193	48.401	ppb	1.672	62340	50	96.8	90	110	
(Pb)	207	3	193	47.398	ppb	1.201	53882	50	94.8	90	110	
Pb	208	3	193	48.229	ppb	1.356	250818	50	96.5	90	110	
Th	232	3	193	47.417	ppb	0.609	251108	50	94.8	90	110	
U	238	3	193	48.341	ppb	0.702	263505	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4156576	1.75	4300192	96.66	60	120	
Sc (IS)	45	3	HMI He	597176	2.13	644593	92.64	60	120	
Ge Internal standard	72	2	HMI H2	2471134	1.61	2598552	95.10	60	120	
Ge Internal standard	72	3	HMI He	714790	1.01	772392	92.54	60	120	
In Internal Standard	115	3	HMI He	2754191	1.74	2872781	95.87	60	120	
Ir (IS)	193	3	HMI He	6090424	1.00	6092963	99.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	260_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:25:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.108	ppb	-64.5	2	0.5	
Na	23	3	45	62.656	ppb	4.6	21912	25	>RL
Mg	24	3	45	1.496	ppb	180.2	330	25	
Al	27	3	45	-3.751	ppb	-38.3	60	15	
K	39	3	45	-12.521	ppb	-236.8	25205	50	
V	51	3	72	-0.509	ppb	-19.3	638	1	
Cr	52	3	72	0.153	ppb	231.8	3079	1	
Mn	55	3	72	-0.116	ppb	-36.4	313	0.5	
Co	59	3	72	0.027	ppb	48.7	87	0.5	
Ni	60	3	72	0.662	ppb	31.2	890	1	
Cu	63	3	72	-0.024	ppb	-113.2	351	1	
Zn	66	3	72	-0.076	ppb	-143.7	205	5	
As	75	3	72	0.004	ppb	3973.7	42	1	
Se	78	2	72	0.082	ppb	23.7	7	1	
Sr	88	3	72	0.062	ppb	89.5	73	0.5	
Mo	95	3	115	0.030	ppb	142.2	52	0.5	
Ag	107	3	115	0.021	ppb	55.4	48	1	
Cd	111	3	115	-0.020	ppb	-106.8	5	0.5	
Sn	120	3	115	0.102	ppb	73.6	805	1	
Sb	121	3	115	0.024	ppb	71.1	62	0.6	
Ba	137	3	115	0.009	ppb	780.2	62	0.5	
Tl	205	3	193	-0.039	ppb	-7.7	228	0.1	
(Pb)	206	3	193	-0.094	ppb	-21.7	198	1	
(Pb)	207	3	193	-0.081	ppb	-66.7	391	1	
Pb	208	3	193	-0.077	ppb	-26.1	1088	0.5	
Th	232	3	193	1.470	ppb	12.0	14506	1	>RL
U	238	3	193	0.024	ppb	62.8	1666	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109760	0.94	4300192	95.57	60	120	
Sc (IS)	45	3	HMI He	590897	1.24	644593	91.67	60	120	
Ge Internal standard	72	2	HMI H2	2479940	1.93	2598552	95.44	60	120	
Ge Internal standard	72	3	HMI He	732941	0.90	772392	94.89	60	120	
In Internal Standard	115	3	HMI He	2770663	1.35	2872781	96.45	60	120	
Ir (IS)	193	3	HMI He	6107195	0.60	6092963	100.23	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609246/1-A
Data File Name	261_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:27:34-06:00
Sample Type	Blank
Dilution	1
Comment	609246 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.031	ppb	-656.0920877	5	0.5
Na	23	3	45	91.889	ppb	2.920074882	25121	25
Mg	24	3	45	1.158	ppb	118.0304718	314	25
Al	27	3	45	1.025	ppb	92.07209853	163	15
K	39	3	45	-9.415	ppb	-426.1376362	25472	50
Ca	40	2	45	12.972	ppb	6.12751493	19981	200
V	51	3	72	-0.543	ppb	-7.607723281	626	1
Cr	52	3	72	0.133	ppb	93.81636075	3107	1
Mn	55	3	72	-0.103	ppb	-101.7702416	323	0.5
Fe	56	2	72	1.775	ppb	207.4065478	65269	50
Co	59	3	72	0.020	ppb	19.57785546	78	0.5
Ni	60	3	72	0.081	ppb	28.21117499	693	1
Cu	63	3	72	0.163	ppb	13.05018855	540	1
Zn	66	3	72	0.130	ppb	220.8150574	240	5
As	75	3	72	0.119	ppb	211.572423	55	1
(Se)	78	3	72	0.663	ppb	253.1302327	27	1
Sr	88	3	72	0.038	ppb	63.19564445	62	0.5
Mo	95	3	115	0.019	ppb	283.0322028	47	0.5
Ag	107	3	115	0.008	ppb	55.41541296	27	1
Cd	111	3	115	-0.027	ppb	-43.51917327	3	0.5
Sn	120	3	115	-0.110	ppb	-58.76283385	650	1
Sb	121	3	115	0.013	ppb	42.74688118	53	0.6
Ba	137	3	115	0.090	ppb	89.38543346	82	0.5
Tl	205	3	193	-0.065	ppb	-10.56832699	128	0.1
(Pb)	206	3	193	-0.108	ppb	-10.26379454	178	1
(Pb)	207	3	193	-0.076	ppb	-66.55678964	393	1
Pb	208	3	193	-0.095	ppb	-5.56824325	985	0.5
Th	232	3	193	0.044	ppb	241.1659186	7074	1
U	238	3	193	0.020	ppb	103.3668355	1633	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203060	1.95	4300192	97.74	60	120	
Sc (IS)	45	3	HMI He	593948	0.57	644593	92.14	60	120	
Ge Internal standard	72	2	HMI H2	2548365	2.86	2598552	98.07	60	120	
Ge Internal standard	72	3	HMI He	743470	1.02	772392	96.26	60	120	
In Internal Standard	115	3	HMI He	2788061	2.98	2872781	97.05	60	120	
Ir (IS)	193	3	HMI He	6054579	1.12	6092963	99.37	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609246/2-A
Data File Name	262_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:29:23-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609246 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.856	39.856	ppb	6.170	1674	40	99.6	80	120	
Na	23	3	45	763.874	763.874	ppb	1.392	97786	40	1909.7	80	120	>+/-20%
Mg	24	3	45	694.716	694.716	ppb	1.185	39525	40	1736.8	80	120	>+/-20%
Al	27	3	45	743.128	743.128	ppb	2.800	16393	40	1857.8	80	120	>+/-20%
K	39	3	45	712.085	712.085	ppb	2.327	59194	40	1780.2	80	120	>+/-20%
Ca	40	2	45	785.723	785.723	ppb	0.932	446843	40	1964.3	80	120	>+/-20%
V	51	3	72	36.608	36.608	ppb	1.107	23470	40	91.5	80	120	
Cr	52	3	72	38.118	38.118	ppb	0.353	31812	40	95.3	80	120	
Mn	55	3	72	39.357	39.357	ppb	0.426	16071	40	98.4	80	120	
Fe	56	2	72	798.123	798.123	ppb	2.781	1268234	40	1995.3	80	120	>+/-20%
(Fe)	56	3	72	740.340	740.340	ppb	0.719	491973	40	1850.9	80	120	>+/-20%
Co	59	3	72	37.884	37.884	ppb	1.118	48671	40	94.7	80	120	
Ni	60	3	72	38.130	38.130	ppb	2.847	14464	40	95.3	80	120	
Cu	63	3	72	38.046	38.046	ppb	1.012	37844	40	95.1	80	120	
Zn	66	3	72	37.755	37.755	ppb	0.944	6172	40	94.4	80	120	
As	75	3	72	39.209	39.209	ppb	2.591	4410	40	98.0	80	120	
Se	78	2	72	39.358	39.358	ppb	3.140	2258	40	98.4	80	120	
(Se)	78	3	72	38.189	38.189	ppb	16.810	262	40	95.5	80	120	
Sr	88	3	72	75.985	75.985	ppb	2.124	40318	40	190.0	80	120	>+/-20%
Mo	95	3	115	37.076	37.076	ppb	0.894	18527	40	92.7	80	120	
Ag	107	3	115	38.387	38.387	ppb	1.634	64637	40	96.0	80	120	
Cd	111	3	115	37.601	37.601	ppb	0.963	9034	40	94.0	80	120	
Sn	120	3	115	35.075	35.075	ppb	3.309	27358	40	87.7	80	120	
Sb	121	3	115	37.421	37.421	ppb	0.275	28194	40	93.6	80	120	
Ba	137	3	115	38.593	38.593	ppb	2.718	9520	40	96.5	80	120	
Tl	205	3	193	36.656	36.656	ppb	1.348	145627	40	91.6	80	120	
(Pb)	206	3	193	37.194	37.194	ppb	1.774	49248	40	93.0	80	120	
(Pb)	207	3	193	36.913	36.913	ppb	2.332	43174	40	92.3	80	120	
Pb	208	3	193	37.165	37.165	ppb	1.443	198739	40	92.9	80	120	
Th	232	3	193	34.411	34.411	ppb	1.591	188962	40	86.0	80	120	
U	238	3	193	37.280	37.280	ppb	0.265	208942	40	93.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4113826	0.85	4300192	95.67	60	120	
Sc (IS)	45	3	HMI He	603197	0.10	644593	93.58	60	120	
Ge Internal standard	72	2	HMI H2	2474550	0.60	2598552	95.23	60	120	
Ge Internal standard	72	3	HMI He	746911	0.63	772392	96.70	60	120	
In Internal Standard	115	3	HMI He	2781363	1.83	2872781	96.82	60	120	
Ir (IS)	193	3	HMI He	6251064	0.50	6092963	102.59	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-609246/3-A
Data File Name	263SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:31:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.246	ppb	41.246	1.43	1684	2000	
Na	23	3	45	800.808	ppb	800.808	0.71	101395	400000	
Mg	24	3	45	698.893	ppb	698.893	0.72	39618	400000	
Al	27	3	45	733.603	ppb	733.603	2.81	16132	400000	
K	39	3	45	716.201	ppb	716.201	2.18	59180	400000	
Ca	40	2	45	803.572	ppb	803.572	0.21	450280	400000	
V	51	3	72	36.514	ppb	36.514	1.36	23483	2000	
Cr	52	3	72	37.674	ppb	37.674	1.33	31568	5000	
Mn	55	3	72	37.929	ppb	37.929	1.48	15549	10000	
Fe	56	2	72	779.472	ppb	779.472	1.03	1249732	10000	
Co	59	3	72	37.722	ppb	37.722	1.91	48599	2000	
Ni	60	3	72	37.484	ppb	37.484	2.16	14270	5000	
Cu	63	3	72	37.842	ppb	37.842	3.21	37749	5000	
Zn	66	3	72	38.531	ppb	38.531	3.25	6312	5000	
As	75	3	72	36.320	ppb	36.320	4.63	4102	2000	
Se	78	2	72	38.314	ppb	38.314	4.00	2216	2000	
Sr	88	3	72	76.170	ppb	76.170	1.09	40527	4000	
Mo	95	3	115	36.275	ppb	36.275	3.16	18111	2000	
Ag	107	3	115	38.212	ppb	38.212	2.28	64277	100	
Cd	111	3	115	38.340	ppb	38.340	0.97	9204	2000	
Sn	120	3	115	35.529	ppb	35.529	2.62	27682	2000	
Sb	121	3	115	38.167	ppb	38.167	1.68	28727	1000	
Ba	137	3	115	38.660	ppb	38.660	2.66	9529	5000	
Tl	205	3	193	37.379	ppb	37.379	2.09	145536	2000	
(Pb)	206	3	193	38.218	ppb	38.218	0.70	49597	100	
(Pb)	207	3	193	37.526	ppb	37.526	3.10	43006	100	
Pb	208	3	193	37.748	ppb	37.748	1.98	197819	5000	
Th	232	3	193	37.327	ppb	37.327	2.58	200301	2000	
U	238	3	193	37.627	ppb	37.627	1.67	206694	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4055751	1.77	4300192	94.32	60	120	
Sc (IS)	45	3	HMI He	601056	1.63	644593	93.25	60	120	
Ge Internal standard	72	2	HMI H2	2493869	1.44	2598552	95.97	60	120	
Ge Internal standard	72	3	HMI He	749116	2.08	772392	96.99	60	120	
In Internal Standard	115	3	HMI He	2778977	1.90	2872781	96.73	60	120	
Ir (IS)	193	3	HMI He	6128113	1.99	6092963	100.58	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-A
Data File Name	264SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:32:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.056	ppb	0.056	132.18	8	2000	
Na	23	3	45	1301.573	ppb	1301.573	1.18	153244	400000	
Mg	24	3	45	1797.249	ppb	1797.249	3.28	100297	400000	
Al	27	3	45	1586.943	ppb	1586.943	3.38	34310	400000	
K	39	3	45	2166.349	ppb	2166.349	2.36	124449	400000	
Ca	40	2	45	34010.724	ppb	34010.724	1.20	18785032	400000	
V	51	3	72	4.399	ppb	4.399	6.55	3662	2000	
Cr	52	3	72	2.147	ppb	2.147	16.98	4635	5000	
Mn	55	3	72	30.246	ppb	30.246	2.14	12418	10000	
Fe	56	2	72	1299.935	ppb	1299.935	2.43	2081661	10000	
Co	59	3	72	0.538	ppb	0.538	3.57	743	2000	
Ni	60	3	72	1.555	ppb	1.555	10.37	1228	5000	
Cu	63	3	72	5.886	ppb	5.886	2.63	6168	5000	
Zn	66	3	72	24.196	ppb	24.196	0.25	4029	5000	
As	75	3	72	1.226	ppb	1.226	7.34	178	2000	
Se	78	2	72	0.226	ppb	0.226	36.04	15	2000	
Sr	88	3	72	63.384	ppb	63.384	1.15	33586	4000	
Mo	95	3	115	2.676	ppb	2.676	7.51	1354	2000	
Ag	107	3	115	0.027	ppb	0.027	17.74	58	100	
Cd	111	3	115	0.023	ppb	0.023	188.04	15	2000	
Sn	120	3	115	0.355	ppb	0.355	5.56	988	2000	
Sb	121	3	115	0.391	ppb	0.391	18.92	333	1000	
Ba	137	3	115	23.470	ppb	23.470	1.64	5740	5000	
Tl	205	3	193	-0.014	ppb	-0.014	-23.27	327	2000	
(Pb)	206	3	193	1.791	ppb	1.791	4.12	2612	100	
(Pb)	207	3	193	1.655	ppb	1.655	4.65	2344	100	
Pb	208	3	193	1.691	ppb	1.691	3.86	10220	5000	
Th	232	3	193	2.288	ppb	2.288	18.05	18651	2000	
U	238	3	193	0.301	ppb	0.301	7.51	3162	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4106577	0.50	4300192	95.50	60	120	
Sc (IS)	45	3	HMI He	594026	0.72	644593	92.16	60	120	
Ge Internal standard	72	2	HMI H2	2541267	2.18	2598552	97.80	60	120	
Ge Internal standard	72	3	HMI He	745801	0.32	772392	96.56	60	120	
In Internal Standard	115	3	HMI He	2745634	0.85	2872781	95.57	60	120	
Ir (IS)	193	3	HMI He	6085984	1.00	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-B MS
Data File Name	265SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:34:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.394	ppb	39.394	6.50	1646	2000	
Na	23	3	45	2152.293	ppb	2152.293	2.82	240263	400000	
Mg	24	3	45	2546.946	ppb	2546.946	2.11	140228	400000	
Al	27	3	45	2623.558	ppb	2623.558	2.18	55908	400000	
K	39	3	45	2981.928	ppb	2981.928	1.35	159470	400000	
Ca	40	2	45	33900.198	ppb	33900.198	2.43	19175801	400000	
V	51	3	72	41.356	ppb	41.356	1.27	26100	2000	
Cr	52	3	72	40.812	ppb	40.812	1.32	33470	5000	
Mn	55	3	72	67.900	ppb	67.900	0.59	27161	10000	
Fe	56	2	72	2049.449	ppb	2049.449	0.51	3268974	10000	
Co	59	3	72	38.114	ppb	38.114	2.10	48422	2000	
Ni	60	3	72	37.429	ppb	37.429	3.69	14048	5000	
Cu	63	3	72	44.359	ppb	44.359	2.54	43563	5000	
Zn	66	3	72	65.575	ppb	65.575	2.64	10437	5000	
As	75	3	72	38.898	ppb	38.898	1.41	4327	2000	
Se	78	2	72	37.707	ppb	37.707	2.94	2237	2000	
Sr	88	3	72	139.392	ppb	139.392	2.36	73091	4000	
Mo	95	3	115	38.407	ppb	38.407	1.52	19391	2000	
Ag	107	3	115	37.035	ppb	37.035	0.85	63024	100	
Cd	111	3	115	36.180	ppb	36.180	1.39	8787	2000	
Sn	120	3	115	34.620	ppb	34.620	0.59	27309	2000	
Sb	121	3	115	37.444	ppb	37.444	3.56	28493	1000	
Ba	137	3	115	61.414	ppb	61.414	2.12	15285	5000	
Tl	205	3	193	37.930	ppb	37.930	0.88	142709	2000	
(Pb)	206	3	193	40.084	ppb	40.084	0.33	50243	100	
(Pb)	207	3	193	39.918	ppb	39.918	1.90	44185	100	
Pb	208	3	193	39.834	ppb	39.834	0.54	201640	5000	
Th	232	3	193	36.936	ppb	36.936	2.09	191624	2000	
U	238	3	193	38.659	ppb	38.659	1.06	205148	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4205734	0.88	4300192	97.80	60	120	
Sc (IS)	45	3	HMI He	586401	1.90	644593	90.97	60	120	
Ge Internal standard	72	2	HMI H2	2558409	0.66	2598552	98.46	60	120	
Ge Internal standard	72	3	HMI He	738682	2.11	772392	95.64	60	120	
In Internal Standard	115	3	HMI He	2810993	3.09	2872781	97.85	60	120	
Ir (IS)	193	3	HMI He	5920209	0.57	6092963	97.16	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-C MSD
Data File Name	266SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:36:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.492	ppb	42.492	4.12	1718	2000	
Na	23	3	45	2103.886	ppb	2103.886	1.52	235817	400000	
Mg	24	3	45	2605.111	ppb	2605.111	1.78	143804	400000	
Al	27	3	45	2898.152	ppb	2898.152	2.25	61914	400000	
K	39	3	45	3087.279	ppb	3087.279	1.57	164672	400000	
Ca	40	2	45	36046.908	ppb	36046.908	3.03	19880045	400000	
V	51	3	72	42.432	ppb	42.432	2.02	26717	2000	
Cr	52	3	72	40.705	ppb	40.705	1.49	33347	5000	
Mn	55	3	72	68.723	ppb	68.723	1.77	27445	10000	
Fe	56	2	72	2237.995	ppb	2237.995	1.65	3436924	10000	
Co	59	3	72	38.567	ppb	38.567	0.80	48935	2000	
Ni	60	3	72	38.424	ppb	38.424	0.62	14392	5000	
Cu	63	3	72	44.688	ppb	44.688	0.82	43836	5000	
Zn	66	3	72	63.294	ppb	63.294	2.35	10070	5000	
As	75	3	72	41.600	ppb	41.600	3.64	4618	2000	
Se	78	2	72	40.684	ppb	40.684	1.96	2328	2000	
Sr	88	3	72	143.051	ppb	143.051	0.61	74921	4000	
Mo	95	3	115	38.793	ppb	38.793	2.76	19624	2000	
Ag	107	3	115	37.829	ppb	37.829	2.22	64500	100	
Cd	111	3	115	36.412	ppb	36.412	1.42	8857	2000	
Sn	120	3	115	35.129	ppb	35.129	1.80	27753	2000	
Sb	121	3	115	36.789	ppb	36.789	2.58	28067	1000	
Ba	137	3	115	63.158	ppb	63.158	3.53	15747	5000	
Tl	205	3	193	39.580	ppb	39.580	1.61	147006	2000	
(Pb)	206	3	193	41.898	ppb	41.898	0.60	51840	100	
(Pb)	207	3	193	40.005	ppb	40.005	0.62	43717	100	
Pb	208	3	193	41.424	ppb	41.424	1.17	206970	5000	
Th	232	3	193	39.641	ppb	39.641	0.95	202550	2000	
U	238	3	193	40.316	ppb	40.316	0.75	211172	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4101257	1.94	4300192	95.37	60	120	
Sc (IS)	45	3	HMI He	588063	1.02	644593	91.23	60	120	
Ge Internal standard	72	2	HMI H2	2467217	0.08	2598552	94.95	60	120	
Ge Internal standard	72	3	HMI He	737667	0.66	772392	95.50	60	120	
In Internal Standard	115	3	HMI He	2816315	1.12	2872781	98.03	60	120	
Ir (IS)	193	3	HMI He	5845561	1.08	6092963	95.94	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-D
Data File Name	267SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:38:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	72565.526	ppb	72565.526	0.55	7651693	400000	
Mg	24	3	45	20243.865	ppb	20243.865	1.31	1119964	400000	
Al	27	3	45	20.571	ppb	20.571	19.44	581	400000	
K	39	3	45	23130.494	ppb	23130.494	2.02	1071282	400000	
Ca	40	2	45	32028.400	ppb	32028.400	2.02	17622410	400000	
V	51	3	72	1.368	ppb	1.368	21.19	1781	2000	
Cr	52	3	72	10.186	ppb	10.186	2.44	10574	5000	
Mn	55	3	72	12.931	ppb	12.931	1.85	5453	10000	
Fe	56	2	72	509.255	ppb	509.255	0.86	847722	10000	
Co	59	3	72	0.846	ppb	0.846	3.69	1124	2000	
Ni	60	3	72	2.565	ppb	2.565	4.07	1574	5000	
Cu	63	3	72	18.023	ppb	18.023	0.30	17891	5000	
Zn	66	3	72	33.509	ppb	33.509	1.08	5430	5000	
As	75	3	72	5.741	ppb	5.741	9.57	673	2000	
Se	78	2	72	0.468	ppb	0.468	41.41	29	2000	
Sr	88	3	72	185.618	ppb	185.618	0.86	97136	4000	
Mo	95	3	115	325.500	ppb	325.500	0.81	162790	2000	
Ag	107	3	115	0.022	ppb	0.022	46.32	50	100	
Cd	111	3	115	0.325	ppb	0.325	24.05	88	2000	
Sn	120	3	115	0.138	ppb	0.138	12.45	838	2000	
Sb	121	3	115	2.561	ppb	2.561	9.03	1974	1000	
Ba	137	3	115	10.233	ppb	10.233	4.08	2576	5000	
Tl	205	3	193	-0.023	ppb	-0.023	-102.47	288	2000	
(Pb)	206	3	193	0.324	ppb	0.324	8.40	728	100	
(Pb)	207	3	193	0.281	ppb	0.281	7.79	793	100	
Pb	208	3	193	0.340	ppb	0.340	4.41	3219	5000	
Th	232	3	193	1.913	ppb	1.913	13.36	16636	2000	
U	238	3	193	0.517	ppb	0.517	6.47	4305	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4090645	1.68	4300192	95.13	60	120	
Sc (IS)	45	3	HMI He	590181	0.35	644593	91.56	60	120	
Ge Internal standard	72	2	HMI H2	2523718	1.03	2598552	97.12	60	120	
Ge Internal standard	72	3	HMI He	737103	1.11	772392	95.43	60	120	
In Internal Standard	115	3	HMI He	2788676	1.49	2872781	97.07	60	120	
Ir (IS)	193	3	HMI He	6049500	1.20	6092963	99.29	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-E MS
Data File Name	268SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:40:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.156	ppb	40.156	8.11	1649	2000	
Na	23	3	45	74172.749	ppb	74172.749	1.23	7830500	400000	
Mg	24	3	45	21167.215	ppb	21167.215	2.79	1172529	400000	
Al	27	3	45	728.701	ppb	728.701	1.36	15751	400000	
K	39	3	45	24499.414	ppb	24499.414	1.31	1134619	400000	
Ca	40	2	45	32500.007	ppb	32500.007	0.46	18375655	400000	
V	51	3	72	37.644	ppb	37.644	2.91	24077	2000	
Cr	52	3	72	46.540	ppb	46.540	1.30	38140	5000	
Mn	55	3	72	49.786	ppb	49.786	1.91	20211	10000	
Fe	56	2	72	1277.468	ppb	1277.468	0.84	2004568	10000	
Co	59	3	72	36.913	ppb	36.913	2.66	47369	2000	
Ni	60	3	72	37.284	ppb	37.284	0.29	14147	5000	
Cu	63	3	72	55.289	ppb	55.289	1.96	54762	5000	
Zn	66	3	72	70.220	ppb	70.220	1.94	11277	5000	
As	75	3	72	42.357	ppb	42.357	4.02	4755	2000	
Se	78	2	72	38.500	ppb	38.500	5.85	2221	2000	
Sr	88	3	72	260.972	ppb	260.972	1.85	138209	4000	
Mo	95	3	115	366.777	ppb	366.777	0.46	183666	2000	
Ag	107	3	115	36.275	ppb	36.275	0.71	61324	100	
Cd	111	3	115	35.917	ppb	35.917	1.93	8664	2000	
Sn	120	3	115	35.379	ppb	35.379	1.33	27702	2000	
Sb	121	3	115	38.541	ppb	38.541	0.97	29147	1000	
Ba	137	3	115	48.797	ppb	48.797	0.40	12073	5000	
Tl	205	3	193	36.496	ppb	36.496	2.42	141397	2000	
(Pb)	206	3	193	37.202	ppb	37.202	0.81	48050	100	
(Pb)	207	3	193	36.777	ppb	36.777	4.55	41940	100	
Pb	208	3	193	36.928	ppb	36.928	1.89	192597	5000	
Th	232	3	193	34.899	ppb	34.899	0.94	186834	2000	
U	238	3	193	37.567	ppb	37.567	2.03	205331	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203419	1.52	4300192	97.75	60	120	
Sc (IS)	45	3	HMI He	590960	0.88	644593	91.68	60	120	
Ge Internal standard	72	2	HMI H2	2487978	0.64	2598552	95.74	60	120	
Ge Internal standard	72	3	HMI He	746231	1.89	772392	96.61	60	120	
In Internal Standard	115	3	HMI He	2792165	1.57	2872781	97.19	60	120	
Ir (IS)	193	3	HMI He	6097658	1.86	6092963	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-F MSD
Data File Name	269SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:41:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.045	ppb	41.045	4.63	1679	2000	
Na	23	3	45	71713.121	ppb	71713.121	1.27	7600520	400000	
Mg	24	3	45	19843.226	ppb	19843.226	0.41	1103435	400000	
Al	27	3	45	719.342	ppb	719.342	0.71	15611	400000	
K	39	3	45	23528.364	ppb	23528.364	2.90	1094657	400000	
Ca	40	2	45	32380.931	ppb	32380.931	0.73	17884845	400000	
V	51	3	72	36.641	ppb	36.641	1.95	23315	2000	
Cr	52	3	72	45.481	ppb	45.481	1.27	37096	5000	
Mn	55	3	72	48.881	ppb	48.881	1.73	19724	10000	
Fe	56	2	72	1260.135	ppb	1260.135	1.11	1991538	10000	
Co	59	3	72	36.493	ppb	36.493	2.88	46531	2000	
Ni	60	3	72	36.286	ppb	36.286	3.94	13692	5000	
Cu	63	3	72	54.840	ppb	54.840	2.04	53981	5000	
Zn	66	3	72	69.397	ppb	69.397	3.17	11074	5000	
As	75	3	72	42.370	ppb	42.370	1.75	4727	2000	
Se	78	2	72	37.521	ppb	37.521	3.65	2180	2000	
Sr	88	3	72	255.410	ppb	255.410	2.15	134391	4000	
Mo	95	3	115	358.305	ppb	358.305	1.46	178374	2000	
Ag	107	3	115	35.588	ppb	35.588	2.00	59811	100	
Cd	111	3	115	36.631	ppb	36.631	1.71	8782	2000	
Sn	120	3	115	35.311	ppb	35.311	1.52	27490	2000	
Sb	121	3	115	38.230	ppb	38.230	1.50	28745	1000	
Ba	137	3	115	46.893	ppb	46.893	1.39	11536	5000	
Tl	205	3	193	35.783	ppb	35.783	1.03	138025	2000	
(Pb)	206	3	193	36.506	ppb	36.506	0.78	46935	100	
(Pb)	207	3	193	36.139	ppb	36.139	0.81	41048	100	
Pb	208	3	193	36.247	ppb	36.247	1.04	188213	5000	
Th	232	3	193	35.103	ppb	35.103	2.19	187012	2000	
U	238	3	193	36.539	ppb	36.539	0.68	198852	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4106232	0.65	4300192	95.49	60	120	
Sc (IS)	45	3	HMI He	593235	1.14	644593	92.03	60	120	
Ge Internal standard	72	2	HMI H2	2504885	0.50	2598552	96.40	60	120	
Ge Internal standard	72	3	HMI He	741428	1.58	772392	95.99	60	120	
In Internal Standard	115	3	HMI He	2776228	2.26	2872781	96.64	60	120	
Ir (IS)	193	3	HMI He	6069067	1.11	6092963	99.61	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	270_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:43:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.511	ppb	4.215	2086	50	107.0	90	110	
Na	23	3	45	46656.803	ppb	2.443	4841818	51000	91.5	90	110	
Mg	24	3	45	9984.710	ppb	2.401	543184	11000	90.8	90	110	
Al	27	3	45	929.153	ppb	5.168	19673	1000	92.9	90	110	
K	39	3	45	9947.093	ppb	1.446	467374	11000	90.4	90	110	
Ca	40	2	45	10357.151	ppb	1.771	5506443	11000	94.2	90	110	
V	51	3	72	47.783	ppb	2.517	28578	50	95.6	90	110	
Cr	52	3	72	48.909	ppb	1.969	37642	50	97.8	90	110	
Mn	55	3	72	47.868	ppb	2.287	18335	50	95.7	90	110	
Fe	56	2	72	1084.984	ppb	2.855	1586836	1000	108.5	90	110	
Co	59	3	72	48.949	ppb	1.675	59221	50	97.9	90	110	
Ni	60	3	72	48.472	ppb	1.235	17149	50	96.9	90	110	
Cu	63	3	72	48.797	ppb	1.467	45614	50	97.6	90	110	
Zn	66	3	72	49.370	ppb	2.225	7537	50	98.7	90	110	
As	75	3	72	52.034	ppb	1.571	5500	50	104.1	90	110	
Se	78	2	72	51.391	ppb	2.206	2749	50	102.8	90	110	
Sr	88	3	72	100.969	ppb	1.972	50446	100	101.0	90	110	
Mo	95	3	115	48.511	ppb	2.824	23407	50	97.0	90	110	
Ag	107	3	115	48.337	ppb	3.077	78623	50	96.7	90	110	
Cd	111	3	115	48.109	ppb	2.117	11162	50	96.2	90	110	
Sn	120	3	115	46.972	ppb	0.418	35175	50	93.9	90	110	
Sb	121	3	115	49.418	ppb	2.518	35954	50	98.8	90	110	
Ba	137	3	115	48.611	ppb	1.678	11574	50	97.2	90	110	
Tl	205	3	193	47.156	ppb	1.317	179717	50	94.3	90	110	
(Pb)	206	3	193	47.258	ppb	1.509	59978	50	94.5	90	110	
(Pb)	207	3	193	47.346	ppb	1.676	53019	50	94.7	90	110	
Pb	208	3	193	47.007	ppb	1.904	240880	50	94.0	90	110	
Th	232	3	193	49.411	ppb	1.072	257517	50	98.8	90	110	
U	238	3	193	47.461	ppb	3.388	254863	50	94.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3947305	1.22	4300192	91.79	60	120	
Sc (IS)	45	3	HMI He	580386	2.06	644593	90.04	60	120	
Ge Internal standard	72	2	HMI H2	2306927	0.92	2598552	88.78	60	120	
Ge Internal standard	72	3	HMI He	703504	0.94	772392	91.08	60	120	
In Internal Standard	115	3	HMI He	2687875	2.51	2872781	93.56	60	120	
Ir (IS)	193	3	HMI He	6000795	1.65	6092963	98.49	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	271_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:45:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.024	ppb	-9.9	5	0.5	
Na	23	3	45	61.916	ppb	14.1	21394	25	>RL
Mg	24	3	45	1.801	ppb	100.0	340	25	
Al	27	3	45	-2.274	ppb	-91.4	90	15	
K	39	3	45	-9.286	ppb	-236.3	24830	50	
V	51	3	72	-0.530	ppb	-8.5	615	1	
Cr	52	3	72	0.629	ppb	30.6	3372	1	
Mn	55	3	72	-0.176	ppb	-70.0	285	0.5	
Co	59	3	72	0.011	ppb	94.4	65	0.5	
Ni	60	3	72	0.687	ppb	28.5	883	1	
Cu	63	3	72	-0.028	ppb	-134.8	342	1	
Zn	66	3	72	-0.162	ppb	-143.9	188	5	
As	75	3	72	0.027	ppb	534.2	43	1	
Se	78	2	72	0.048	ppb	39.2	5	1	
Sr	88	3	72	0.022	ppb	181.7	52	0.5	
Mo	95	3	115	0.145	ppb	20.9	107	0.5	
Ag	107	3	115	0.013	ppb	36.7	33	1	
Cd	111	3	115	0.002	ppb	2393.8	10	0.5	
Sn	120	3	115	0.096	ppb	56.4	785	1	
Sb	121	3	115	0.040	ppb	20.9	72	0.6	
Ba	137	3	115	-0.027	ppb	-112.1	52	0.5	
Tl	205	3	193	-0.018	ppb	-81.0	310	0.1	
(Pb)	206	3	193	-0.089	ppb	-9.8	203	1	
(Pb)	207	3	193	-0.107	ppb	-16.7	358	1	
Pb	208	3	193	-0.092	ppb	-21.8	998	0.5	
Th	232	3	193	1.906	ppb	18.7	16563	1	>RL
U	238	3	193	0.018	ppb	34.6	1616	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4107211	2.34	4300192	95.51	60	120	
Sc (IS)	45	3	HMI He	578971	0.38	644593	89.82	60	120	
Ge Internal standard	72	2	HMI H2	2454682	1.53	2598552	94.46	60	120	
Ge Internal standard	72	3	HMI He	720395	0.78	772392	93.27	60	120	
In Internal Standard	115	3	HMI He	2715462	0.52	2872781	94.52	60	120	
Ir (IS)	193	3	HMI He	6043618	1.78	6092963	99.19	60	120	

Sample Report

Sample Table

Sample Name	280-175167-A-3-A
Data File Name	272SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:47:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.36	2	2000	
Na	23	3	45	222351.348	ppb	222351.348	1.41	23953796	400000	
Mg	24	3	45	10784.708	ppb	10784.708	0.77	610469	400000	
Al	27	3	45	826.412	ppb	826.412	2.61	18230	400000	
K	39	3	45	135302.275	ppb	135302.275	0.26	6282886	400000	
Ca	40	2	45	27209.340	ppb	27209.340	0.55	15107044	400000	
V	51	3	72	-0.441	ppb	-0.441	-33.68	708	2000	
Cr	52	3	72	0.438	ppb	0.438	40.47	3427	5000	
Mn	55	3	72	11.684	ppb	11.684	4.37	5142	10000	
Fe	56	2	72	218.926	ppb	218.926	3.07	393654	10000	
Co	59	3	72	0.086	ppb	0.086	14.36	167	2000	
Ni	60	3	72	3.394	ppb	3.394	12.91	1938	5000	
Cu	63	3	72	2.978	ppb	2.978	6.29	3389	5000	
Zn	66	3	72	5.968	ppb	5.968	4.28	1188	5000	
As	75	3	72	4.215	ppb	4.215	6.86	523	2000	
Se	78	2	72	1.597	ppb	1.597	12.33	94	2000	
Sr	88	3	72	294.483	ppb	294.483	0.84	159654	4000	
Mo	95	3	115	32.268	ppb	32.268	2.56	16253	2000	
Ag	107	3	115	0.011	ppb	0.011	13.06	32	100	
Cd	111	3	115	-0.034	ppb	-0.034	-35.82	2	2000	
Sn	120	3	115	-0.074	ppb	-0.074	-154.69	680	2000	
Sb	121	3	115	2.690	ppb	2.690	6.48	2082	1000	
Ba	137	3	115	7.448	ppb	7.448	6.73	1901	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-29.18	203	2000	
(Pb)	206	3	193	0.009	ppb	0.009	523.01	332	100	
(Pb)	207	3	193	0.016	ppb	0.016	142.86	501	100	
Pb	208	3	193	0.008	ppb	0.008	326.64	1531	5000	
Th	232	3	193	0.484	ppb	0.484	34.95	9442	2000	
U	238	3	193	0.117	ppb	0.117	18.70	2179	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4127125	0.91	4300192	95.98	60	120	
Sc (IS)	45	3	HMI He	603766	0.66	644593	93.67	60	120	
Ge Internal standard	72	2	HMI H2	2485738	1.96	2598552	95.66	60	120	
Ge Internal standard	72	3	HMI He	763809	0.44	772392	98.89	60	120	
In Internal Standard	115	3	HMI He	2803258	1.50	2872781	97.58	60	120	
Ir (IS)	193	3	HMI He	6121810	0.90	6092963	100.47	60	120	

Sample Report

Sample Table

Sample Name	280-175184-B-1-C
Data File Name	273SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:49:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.40	2	2000	
Na	23	3	45	111523.927	ppb	111523.927	1.01	12017006	400000	
Mg	24	3	45	14033.761	ppb	14033.761	2.07	793963	400000	
Al	27	3	45	0.453	ppb	0.453	483.18	153	400000	
K	39	3	45	5709.616	ppb	5709.616	0.93	290235	400000	
Ca	40	2	45	84225.108	ppb	84225.108	1.23	47021819	400000	
V	51	3	72	-0.586	ppb	-0.586	-13.08	606	2000	
Cr	52	3	72	0.243	ppb	0.243	87.39	3224	5000	
Mn	55	3	72	1.428	ppb	1.428	6.75	941	10000	
Fe	56	2	72	11.050	ppb	11.050	38.12	80688	10000	
Co	59	3	72	0.160	ppb	0.160	16.77	260	2000	
Ni	60	3	72	1.943	ppb	1.943	6.54	1378	5000	
Cu	63	3	72	0.417	ppb	0.417	11.71	796	5000	
Zn	66	3	72	2.509	ppb	2.509	16.04	620	5000	
As	75	3	72	0.173	ppb	0.173	105.25	62	2000	
Se	78	2	72	0.100	ppb	0.100	34.21	8	2000	
Sr	88	3	72	612.500	ppb	612.500	0.54	326550	4000	
Mo	95	3	115	1.304	ppb	1.304	12.72	698	2000	
Ag	107	3	115	0.007	ppb	0.007	224.10	25	100	
Cd	111	3	115	0.014	ppb	0.014	225.18	13	2000	
Sn	120	3	115	-0.188	ppb	-0.188	-36.45	598	2000	
Sb	121	3	115	0.064	ppb	0.064	39.97	93	1000	
Ba	137	3	115	70.836	ppb	70.836	1.57	17706	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-4.16	143	2000	
(Pb)	206	3	193	-0.058	ppb	-0.058	-58.28	245	100	
(Pb)	207	3	193	-0.106	ppb	-0.106	-28.25	363	100	
Pb	208	3	193	-0.064	ppb	-0.064	-14.13	1158	5000	
Th	232	3	193	-0.085	ppb	-0.085	-116.38	6488	2000	
U	238	3	193	1.687	ppb	1.687	1.78	10716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152455	0.33	4300192	96.56	60	120	
Sc (IS)	45	3	HMI He	603567	1.26	644593	93.64	60	120	
Ge Internal standard	72	2	HMI H2	2580063	1.34	2598552	99.29	60	120	
Ge Internal standard	72	3	HMI He	751232	0.79	772392	97.26	60	120	
In Internal Standard	115	3	HMI He	2825559	0.88	2872781	98.36	60	120	
Ir (IS)	193	3	HMI He	6113881	2.52	6092963	100.34	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-1-A
Data File Name	274SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:51:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.04	2	2000	
Na	23	3	45	146619.899	ppb	146619.899	3.91	15664528	400000	
Mg	24	3	45	24215.029	ppb	24215.029	2.49	1358779	400000	
Al	27	3	45	20.346	ppb	20.346	11.01	584	400000	
K	39	3	45	5344.690	ppb	5344.690	2.21	271139	400000	
Ca	40	2	45	233156.457	ppb	233156.457	1.15	129033443	400000	
V	51	3	72	-0.434	ppb	-0.434	-17.85	705	2000	
Cr	52	3	72	0.516	ppb	0.516	29.47	3449	5000	
Mn	55	3	72	207.027	ppb	207.027	2.18	83893	10000	
Fe	56	2	72	87.842	ppb	87.842	6.94	200150	10000	
Co	59	3	72	11.815	ppb	11.815	1.32	15386	2000	
Ni	60	3	72	11.160	ppb	11.160	3.68	4757	5000	
Cu	63	3	72	0.275	ppb	0.275	26.59	660	5000	
Zn	66	3	72	15.227	ppb	15.227	2.00	2651	5000	
As	75	3	72	0.689	ppb	0.689	8.50	120	2000	
Se	78	2	72	65.677	ppb	65.677	4.32	3896	2000	
Sr	88	3	72	4807.969	ppb	4807.969	1.34	2576802	4000	
Mo	95	3	115	8072.694	ppb	8072.694	3.74	4018905	2000	
Ag	107	3	115	0.010	ppb	0.010	4.49	30	100	
Cd	111	3	115	0.800	ppb	0.800	23.53	202	2000	
Sn	120	3	115	-0.215	ppb	-0.215	-34.45	568	2000	
Sb	121	3	115	0.082	ppb	0.082	12.25	105	1000	
Ba	137	3	115	29.359	ppb	29.359	6.97	7243	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-15.60	202	2000	
(Pb)	206	3	193	-0.097	ppb	-0.097	-47.85	195	100	
(Pb)	207	3	193	-0.115	ppb	-0.115	-19.45	353	100	
Pb	208	3	193	-0.095	ppb	-0.095	-14.54	1000	5000	
Th	232	3	193	-0.097	ppb	-0.097	-68.04	6427	2000	
U	238	3	193	81.590	ppb	81.590	1.81	445756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4117657	2.72	4300192	95.76	60	120	
Sc (IS)	45	3	HMI He	598724	1.30	644593	92.88	60	120	
Ge Internal standard	72	2	HMI H2	2560759	2.87	2598552	98.55	60	120	
Ge Internal standard	72	3	HMI He	755251	1.34	772392	97.78	60	120	
In Internal Standard	115	3	HMI He	2778111	2.58	2872781	96.70	60	120	
Ir (IS)	193	3	HMI He	6118978	0.79	6092963	100.43	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-2-A
Data File Name	275SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:52:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.106	ppb	-0.106	-69.55	2	2000	
Na	23	3	45	148949.145	ppb	148949.145	1.28	15554272	400000	
Mg	24	3	45	24485.819	ppb	24485.819	2.52	1342875	400000	
Al	27	3	45	32.756	ppb	32.756	9.67	834	400000	
K	39	3	45	5449.826	ppb	5449.826	0.90	269731	400000	
Ca	40	2	45	242988.654	ppb	242988.654	2.42	130740830	400000	
V	51	3	72	-0.427	ppb	-0.427	-24.16	691	2000	
Cr	52	3	72	0.593	ppb	0.593	65.61	3420	5000	
Mn	55	3	72	213.825	ppb	213.825	0.68	84520	10000	
Fe	56	2	72	71.807	ppb	71.807	5.15	171680	10000	
Co	59	3	72	11.843	ppb	11.843	2.71	15044	2000	
Ni	60	3	72	11.529	ppb	11.529	9.14	4772	5000	
Cu	63	3	72	0.310	ppb	0.310	9.53	678	5000	
Zn	66	3	72	14.064	ppb	14.064	5.70	2404	5000	
As	75	3	72	0.624	ppb	0.624	21.52	110	2000	
Se	78	2	72	68.248	ppb	68.248	2.81	3970	2000	
Sr	88	3	72	4893.607	ppb	4893.607	2.60	2558371	4000	
Mo	95	3	115	1775.495	ppb	1775.495	1.96	883470	2000	
Ag	107	3	115	0.008	ppb	0.008	56.43	27	100	
Cd	111	3	115	0.154	ppb	0.154	65.77	47	2000	
Sn	120	3	115	-0.109	ppb	-0.109	-44.05	646	2000	
Sb	121	3	115	0.073	ppb	0.073	43.92	98	1000	
Ba	137	3	115	28.531	ppb	28.531	3.33	7040	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-21.96	158	2000	
(Pb)	206	3	193	-0.062	ppb	-0.062	-4.52	232	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-64.77	401	100	
Pb	208	3	193	-0.076	ppb	-0.076	-14.73	1059	5000	
Th	232	3	193	-0.306	ppb	-0.306	-22.83	5164	2000	
U	238	3	193	66.524	ppb	66.524	0.72	351622	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4003450	1.39	4300192	93.10	60	120	
Sc (IS)	45	3	HMI He	585105	0.45	644593	90.77	60	120	
Ge Internal standard	72	2	HMI H2	2509350	1.56	2598552	96.57	60	120	
Ge Internal standard	72	3	HMI He	736678	0.34	772392	95.38	60	120	
In Internal Standard	115	3	HMI He	2775126	0.79	2872781	96.60	60	120	
Ir (IS)	193	3	HMI He	5915021	0.67	6092963	97.08	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-3-A
Data File Name	276SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:54:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.107	ppb	-0.107	-68.68	2	2000	
Na	23	3	45	141774.209	ppb	141774.209	0.78	15202327	400000	
Mg	24	3	45	23036.447	ppb	23036.447	2.19	1297200	400000	
Al	27	3	45	22.378	ppb	22.378	13.94	631	400000	
K	39	3	45	5238.748	ppb	5238.748	0.45	267235	400000	
Ca	40	2	45	231239.118	ppb	231239.118	0.77	124586190	400000	
V	51	3	72	-0.540	ppb	-0.540	-13.69	636	2000	
Cr	52	3	72	0.511	ppb	0.511	54.64	3434	5000	
Mn	55	3	72	205.028	ppb	205.028	2.15	82839	10000	
Fe	56	2	72	60.194	ppb	60.194	9.81	150551	10000	
Co	59	3	72	11.182	ppb	11.182	2.91	14517	2000	
Ni	60	3	72	10.353	ppb	10.353	0.61	4449	5000	
Cu	63	3	72	0.220	ppb	0.220	2.61	603	5000	
Zn	66	3	72	13.813	ppb	13.813	5.05	2417	5000	
As	75	3	72	0.603	ppb	0.603	7.74	110	2000	
Se	78	2	72	65.226	ppb	65.226	3.18	3714	2000	
Sr	88	3	72	4686.175	ppb	4686.175	1.79	2503540	4000	
Mo	95	3	115	556.933	ppb	556.933	1.25	278234	2000	
Ag	107	3	115	0.014	ppb	0.014	43.84	37	100	
Cd	111	3	115	0.035	ppb	0.035	121.30	18	2000	
Sn	120	3	115	-0.218	ppb	-0.218	-25.15	566	2000	
Sb	121	3	115	0.099	ppb	0.099	16.99	118	1000	
Ba	137	3	115	27.876	ppb	27.876	2.75	6907	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-9.97	163	2000	
(Pb)	206	3	193	-0.089	ppb	-0.089	-18.22	205	100	
(Pb)	207	3	193	-0.089	ppb	-0.089	-6.75	381	100	
Pb	208	3	193	-0.088	ppb	-0.088	-3.08	1028	5000	
Th	232	3	193	-0.338	ppb	-0.338	-19.02	5159	2000	
U	238	3	193	40.981	ppb	40.981	2.06	223877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4007957	1.51	4300192	93.20	60	120	
Sc (IS)	45	3	HMI He	600780	0.69	644593	93.20	60	120	
Ge Internal standard	72	2	HMI H2	2456782	2.01	2598552	94.54	60	120	
Ge Internal standard	72	3	HMI He	752863	0.52	772392	97.47	60	120	
In Internal Standard	115	3	HMI He	2785796	0.38	2872781	96.97	60	120	
Ir (IS)	193	3	HMI He	6097951	1.04	6092963	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-4-A
Data File Name	277SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:56:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	143927.787	ppb	143927.787	0.93	15073239	400000	
Mg	24	3	45	23667.301	ppb	23667.301	2.54	1301563	400000	
Al	27	3	45	26.213	ppb	26.213	4.82	697	400000	
K	39	3	45	5321.918	ppb	5321.918	0.79	264740	400000	
Ca	40	2	45	224463.963	ppb	224463.963	1.05	125578983	400000	
V	51	3	72	-0.904	ppb	-0.904	-4.92	401	2000	
Cr	52	3	72	0.284	ppb	0.284	26.11	3184	5000	
Mn	55	3	72	208.336	ppb	208.336	1.13	82184	10000	
Fe	56	2	72	47.767	ppb	47.767	9.32	136646	10000	
Co	59	3	72	11.157	ppb	11.157	3.60	14145	2000	
Ni	60	3	72	11.161	ppb	11.161	1.74	4632	5000	
Cu	63	3	72	0.169	ppb	0.169	11.57	540	5000	
Zn	66	3	72	13.893	ppb	13.893	6.90	2372	5000	
As	75	3	72	0.641	ppb	0.641	14.83	112	2000	
Se	78	2	72	66.069	ppb	66.069	2.69	3893	2000	
Sr	88	3	72	4713.522	ppb	4713.522	1.99	2458885	4000	
Mo	95	3	115	247.264	ppb	247.264	2.10	122431	2000	
Ag	107	3	115	0.005	ppb	0.005	86.61	22	100	
Cd	111	3	115	-0.013	ppb	-0.013	-190.39	7	2000	
Sn	120	3	115	-0.284	ppb	-0.284	-32.11	511	2000	
Sb	121	3	115	0.078	ppb	0.078	10.25	102	1000	
Ba	137	3	115	28.395	ppb	28.395	2.54	6970	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-11.62	158	2000	
(Pb)	206	3	193	-0.122	ppb	-0.122	-5.99	158	100	
(Pb)	207	3	193	-0.110	ppb	-0.110	-21.91	348	100	
Pb	208	3	193	-0.104	ppb	-0.104	-4.16	926	5000	
Th	232	3	193	-0.372	ppb	-0.372	-7.88	4862	2000	
U	238	3	193	40.472	ppb	40.472	2.64	215663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4161771	0.25	4300192	96.78	60	120	
Sc (IS)	45	3	HMI He	586789	1.00	644593	91.03	60	120	
Ge Internal standard	72	2	HMI H2	2542380	1.74	2598552	97.84	60	120	
Ge Internal standard	72	3	HMI He	735119	0.35	772392	95.17	60	120	
In Internal Standard	115	3	HMI He	2760871	1.02	2872781	96.10	60	120	
Ir (IS)	193	3	HMI He	5949495	2.63	6092963	97.65	60	120	

Sample Report

Sample Table

Sample Name	280-175184-D-1-A
Data File Name	278SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:58:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	112433.923	ppb	112433.923	1.95	11930622	400000	
Mg	24	3	45	14269.181	ppb	14269.181	2.51	795276	400000	
Al	27	3	45	-1.459	ppb	-1.459	-167.08	110	400000	
K	39	3	45	5839.064	ppb	5839.064	1.09	291711	400000	
Ca	40	2	45	85978.585	ppb	85978.585	2.26	47808009	400000	
V	51	3	72	-0.894	ppb	-0.894	-1.37	408	2000	
Cr	52	3	72	0.347	ppb	0.347	87.98	3237	5000	
Mn	55	3	72	1.112	ppb	1.112	10.92	798	10000	
Fe	56	2	72	10.245	ppb	10.245	39.07	78004	10000	
Co	59	3	72	0.153	ppb	0.153	22.26	247	2000	
Ni	60	3	72	1.903	ppb	1.903	28.17	1338	5000	
Cu	63	3	72	0.366	ppb	0.366	15.93	731	5000	
Zn	66	3	72	2.158	ppb	2.158	22.00	553	5000	
As	75	3	72	0.033	ppb	0.033	364.33	45	2000	
Se	78	2	72	0.182	ppb	0.182	29.26	13	2000	
Sr	88	3	72	630.759	ppb	630.759	1.20	329802	4000	
Mo	95	3	115	1.959	ppb	1.959	15.51	1001	2000	
Ag	107	3	115	0.007	ppb	0.007	84.72	25	100	
Cd	111	3	115	-0.020	ppb	-0.020	-179.30	5	2000	
Sn	120	3	115	-0.220	ppb	-0.220	-19.71	556	2000	
Sb	121	3	115	0.021	ppb	0.021	106.67	58	1000	
Ba	137	3	115	71.235	ppb	71.235	1.97	17271	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-4.36	137	2000	
(Pb)	206	3	193	-0.094	ppb	-0.094	-11.53	197	100	
(Pb)	207	3	193	-0.138	ppb	-0.138	-19.46	323	100	
Pb	208	3	193	-0.102	ppb	-0.102	-11.91	951	5000	
Th	232	3	193	-0.388	ppb	-0.388	-2.90	4867	2000	
U	238	3	193	1.627	ppb	1.627	2.72	10296	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4135573	0.91	4300192	96.17	60	120	
Sc (IS)	45	3	HMI He	594403	1.20	644593	92.21	60	120	
Ge Internal standard	72	2	HMI H2	2533245	0.78	2598552	97.49	60	120	
Ge Internal standard	72	3	HMI He	736843	2.10	772392	95.40	60	120	
In Internal Standard	115	3	HMI He	2741316	2.01	2872781	95.42	60	120	
Ir (IS)	193	3	HMI He	6056954	2.78	6092963	99.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	279_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:00:00-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.634	ppb	8.365	2174	50	109.3	90	110	
Na	23	3	45	49740.630	ppb	1.684	5076849	51000	97.5	90	110	
Mg	24	3	45	10556.685	ppb	0.693	564862	11000	96.0	90	110	
Al	27	3	45	991.563	ppb	1.276	20653	1000	99.2	90	110	
K	39	3	45	10215.103	ppb	0.302	471404	11000	92.9	90	110	
Ca	40	2	45	10481.448	ppb	2.357	5635998	11000	95.3	90	110	
V	51	3	72	50.408	ppb	0.437	29378	50	100.8	90	110	
Cr	52	3	72	51.663	ppb	2.478	38643	50	103.3	90	110	
Mn	55	3	72	51.216	ppb	2.520	19120	50	102.4	90	110	
Fe	56	2	72	1052.637	ppb	0.490	1589257	1000	105.3	90	110	
Co	59	3	72	50.880	ppb	2.929	60060	50	101.8	90	110	
Ni	60	3	72	51.098	ppb	3.657	17606	50	102.2	90	110	
Cu	63	3	72	50.003	ppb	2.346	45607	50	100.0	90	110	
Zn	66	3	72	49.746	ppb	3.779	7408	50	99.5	90	110	
As	75	3	72	52.498	ppb	3.509	5413	50	105.0	90	110	
Se	78	2	72	51.129	ppb	1.178	2820	50	102.3	90	110	
Sr	88	3	72	105.011	ppb	2.904	51189	100	105.0	90	110	
Mo	95	3	115	48.415	ppb	2.663	23474	50	96.8	90	110	
Ag	107	3	115	48.777	ppb	0.749	79737	50	97.6	90	110	
Cd	111	3	115	48.610	ppb	2.167	11336	50	97.2	90	110	
Sn	120	3	115	48.256	ppb	3.113	36278	50	96.5	90	110	
Sb	121	3	115	49.122	ppb	1.062	35917	50	98.2	90	110	
Ba	137	3	115	50.156	ppb	2.033	11998	50	100.3	90	110	
Tl	205	3	193	47.529	ppb	2.954	181192	50	95.1	90	110	
(Pb)	206	3	193	48.244	ppb	3.394	61238	50	96.5	90	110	
(Pb)	207	3	193	47.983	ppb	1.319	53759	50	96.0	90	110	
Pb	208	3	193	47.962	ppb	3.196	245823	50	95.9	90	110	
Th	232	3	193	47.319	ppb	2.029	246995	50	94.6	90	110	
U	238	3	193	48.140	ppb	3.560	258595	50	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3993183	2.12	4300192	92.86	60	120	
Sc (IS)	45	3	HMI He	570735	1.12	644593	88.54	60	120	
Ge Internal standard	72	2	HMI H2	2378470	0.41	2598552	91.53	60	120	
Ge Internal standard	72	3	HMI He	686667	1.86	772392	88.90	60	120	
In Internal Standard	115	3	HMI He	2700127	1.08	2872781	93.99	60	120	
Ir (IS)	193	3	HMI He	6004595	2.30	6092963	98.55	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	280_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:01:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	93.551	ppb	5.7	24208	25	>RL
Mg	24	3	45	1.353	ppb	78.0	310	25	
Al	27	3	45	-3.816	ppb	-19.0	57	15	
K	39	3	45	5.229	ppb	203.3	25007	50	
V	51	3	72	-0.690	ppb	-12.3	508	1	
Cr	52	3	72	0.257	ppb	56.3	3034	1	
Mn	55	3	72	-0.032	ppb	-314.1	333	0.5	
Co	59	3	72	0.019	ppb	117.4	73	0.5	
Ni	60	3	72	0.681	ppb	23.9	861	1	
Cu	63	3	72	-0.004	ppb	-1012.4	356	1	
Zn	66	3	72	-0.113	ppb	-68.5	192	5	
As	75	3	72	-0.028	ppb	-93.9	37	1	
Se	78	2	72	0.039	ppb	161.4	4	1	
Sr	88	3	72	0.214	ppb	14.3	147	0.5	
Mo	95	3	115	0.257	ppb	27.9	157	0.5	
Ag	107	3	115	0.005	ppb	169.9	20	1	
Cd	111	3	115	-0.019	ppb	-116.7	5	0.5	
Sn	120	3	115	0.048	ppb	215.2	728	1	
Sb	121	3	115	0.024	ppb	46.9	58	0.6	
Ba	137	3	115	-0.036	ppb	-187.6	48	0.5	
Tl	205	3	193	-0.037	ppb	-35.6	228	0.1	
(Pb)	206	3	193	-0.095	ppb	-15.0	190	1	
(Pb)	207	3	193	-0.103	ppb	-8.8	353	1	
Pb	208	3	193	-0.099	ppb	-9.6	943	0.5	
Th	232	3	193	1.488	ppb	12.7	14091	1	>RL
U	238	3	193	0.018	ppb	97.7	1578	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3930491	1.87	4300192	91.40	60	120	
Sc (IS)	45	3	HMI He	568357	0.68	644593	88.17	60	120	
Ge Internal standard	72	2	HMI H2	2385082	0.54	2598552	91.79	60	120	
Ge Internal standard	72	3	HMI He	704571	1.60	772392	91.22	60	120	
In Internal Standard	115	3	HMI He	2639316	1.70	2872781	91.87	60	120	
Ir (IS)	193	3	HMI He	5897336	1.32	6092963	96.79	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609219/1-B
Data File Name	281_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:03:37-06:00
Sample Type	Blank
Dilution	1
Comment	609238 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	102.446	ppb	4.557803575	25452	25
Mg	24	3	45	1.637	ppb	76.48505131	330	25
Al	27	3	45	-0.810	ppb	-108.1551599	120	15
K	39	3	45	7.183	ppb	455.6774478	25445	50
Ca	40	2	45	23.990	ppb	6.398590519	25693	200
V	51	3	72	-0.728	ppb	-8.523607271	493	1
Cr	52	3	72	0.248	ppb	130.5760524	3069	1
Mn	55	3	72	0.018	ppb	197.6406077	356	0.5
Fe	56	2	72	23.443	ppb	20.1867278	94882	50
Co	59	3	72	-0.009	ppb	-248.519874	40	0.5
Ni	60	3	72	0.074	ppb	328.5979583	663	1
Cu	63	3	72	0.033	ppb	152.6084584	396	1
Zn	66	3	72	1.089	ppb	27.18987172	375	5
As	75	3	72	-0.064	ppb	-181.2821806	33	1
(Se)	78	3	72	-0.003	ppb	-86436.2757	22	1
Sr	88	3	72	0.181	ppb	6.587186937	132	0.5
Mo	95	3	115	0.173	ppb	38.82058169	120	0.5
Ag	107	3	115	0.007	ppb	30.4280059	23	1
Cd	111	3	115	-0.027	ppb	-46.04698027	3	0.5
Sn	120	3	115	-0.203	ppb	-74.97139209	563	1
Sb	121	3	115	-0.015	ppb	-107.3440591	32	0.6
Ba	137	3	115	-0.027	ppb	-397.7907335	52	0.5
Tl	205	3	193	-0.055	ppb	-16.41795192	163	0.1
(Pb)	206	3	193	-0.105	ppb	-22.2516493	180	1
(Pb)	207	3	193	-0.081	ppb	-27.46311505	381	1
Pb	208	3	193	-0.097	ppb	-20.54734367	960	0.5
Th	232	3	193	0.058	ppb	160.6732833	7040	1
U	238	3	193	0.008	ppb	408.9550533	1541	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121585	2.04	4300192	95.85	60	120	
Sc (IS)	45	3	HMI He	576216	0.91	644593	89.39	60	120	
Ge Internal standard	72	2	HMI H2	2442241	0.78	2598552	93.98	60	120	
Ge Internal standard	72	3	HMI He	714043	1.23	772392	92.45	60	120	
In Internal Standard	115	3	HMI He	2710472	1.81	2872781	94.35	60	120	
Ir (IS)	193	3	HMI He	5967033	1.86	6092963	97.93	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609219/2-B
Data File Name	282_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:05:28-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609238 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	42.854	42.854	ppb	10.059	1728	40	107.1	80	120	
Na	23	3	45	810.573	810.573	ppb	0.616	99295	40	2026.4	80	120	>+/-20%
Mg	24	3	45	712.214	712.214	ppb	0.179	39130	40	1780.5	80	120	>+/-20%
Al	27	3	45	725.490	725.490	ppb	2.699	15461	40	1813.7	80	120	>+/-20%
K	39	3	45	713.102	713.102	ppb	1.486	57217	40	1782.8	80	120	>+/-20%
Ca	40	2	45	807.631	807.631	ppb	1.504	460022	40	2019.1	80	120	>+/-20%
V	51	3	72	36.866	36.866	ppb	2.793	22769	40	92.2	80	120	
Cr	52	3	72	38.070	38.070	ppb	0.355	30622	40	95.2	80	120	
Mn	55	3	72	38.431	38.431	ppb	2.065	15132	40	96.1	80	120	
Fe	56	2	72	793.905	793.905	ppb	1.920	1269805	40	1984.8	80	120	>+/-20%
(Fe)	56	3	72	746.427	746.427	ppb	0.391	477879	40	1866.1	80	120	>+/-20%
Co	59	3	72	38.851	38.851	ppb	1.493	48101	40	97.1	80	120	
Ni	60	3	72	38.205	38.205	ppb	2.674	13965	40	95.5	80	120	
Cu	63	3	72	38.752	38.752	ppb	0.663	37141	40	96.9	80	120	
Zn	66	3	72	39.374	39.374	ppb	2.741	6193	40	98.4	80	120	
As	75	3	72	37.657	37.657	ppb	0.567	4084	40	94.1	80	120	
Se	78	2	72	40.075	40.075	ppb	2.478	2314	40	100.2	80	120	
(Se)	78	3	72	45.601	45.601	ppb	2.324	297	40	114.0	80	120	
Sr	88	3	72	78.996	78.996	ppb	0.154	40390	40	197.5	80	120	>+/-20%
Mo	95	3	115	36.361	36.361	ppb	4.616	18040	40	90.9	80	120	
Ag	107	3	115	38.036	38.036	ppb	2.559	63613	40	95.1	80	120	
Cd	111	3	115	37.319	37.319	ppb	2.623	8904	40	93.3	80	120	
Sn	120	3	115	35.292	35.292	ppb	3.004	27341	40	88.2	80	120	
Sb	121	3	115	37.164	37.164	ppb	2.195	27815	40	92.9	80	120	
Ba	137	3	115	39.036	39.036	ppb	6.206	9560	40	97.6	80	120	
Tl	205	3	193	37.451	37.451	ppb	1.569	144072	40	93.6	80	120	
(Pb)	206	3	193	37.621	37.621	ppb	1.523	48236	40	94.1	80	120	
(Pb)	207	3	193	37.503	37.503	ppb	0.531	42478	40	93.8	80	120	
Pb	208	3	193	37.820	37.820	ppb	1.575	195820	40	94.5	80	120	
Th	232	3	193	35.468	35.468	ppb	2.328	188383	40	88.7	80	120	
U	238	3	193	37.680	37.680	ppb	1.999	204477	40	94.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124548	3.35	4300192	95.92	60	120	
Sc (IS)	45	3	HMI He	582584	0.35	644593	90.38	60	120	
Ge Internal standard	72	2	HMI H2	2489999	1.39	2598552	95.82	60	120	
Ge Internal standard	72	3	HMI He	719786	0.55	772392	93.19	60	120	
In Internal Standard	115	3	HMI He	2763459	2.75	2872781	96.19	60	120	
Ir (IS)	193	3	HMI He	6054342	1.89	6092963	99.37	60	120	

Sample Report

Sample Table

Sample Name	280-175144-D-1-B
Data File Name	283SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:07:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.107	ppb	-0.107	-67.74	2	2000	
Na	23	3	45	11572.433	ppb	11572.433	1.06	1225981	400000	
Mg	24	3	45	4808.600	ppb	4808.600	1.24	264668	400000	
Al	27	3	45	766.111	ppb	766.111	1.16	16436	400000	
K	39	3	45	675.829	ppb	675.829	2.87	55957	400000	
Ca	40	2	45	15017.744	ppb	15017.744	0.35	8225229	400000	
V	51	3	72	0.974	ppb	0.974	24.76	1524	2000	
Cr	52	3	72	0.979	ppb	0.979	23.89	3667	5000	
Mn	55	3	72	107.160	ppb	107.160	1.06	42069	10000	
Fe	56	2	72	879.554	ppb	879.554	2.56	1401572	10000	
Co	59	3	72	0.900	ppb	0.900	11.71	1178	2000	
Ni	60	3	72	1.401	ppb	1.401	19.62	1144	5000	
Cu	63	3	72	2.658	ppb	2.658	3.33	2926	5000	
Zn	66	3	72	17.937	ppb	17.937	5.63	2974	5000	
As	75	3	72	0.497	ppb	0.497	24.69	95	2000	
Se	78	2	72	0.289	ppb	0.289	56.19	19	2000	
Sr	88	3	72	121.887	ppb	121.887	1.33	63049	4000	
Mo	95	3	115	0.354	ppb	0.354	13.50	207	2000	
Ag	107	3	115	0.014	ppb	0.014	101.13	35	100	
Cd	111	3	115	0.045	ppb	0.045	93.79	20	2000	
Sn	120	3	115	-0.020	ppb	-0.020	-683.39	693	2000	
Sb	121	3	115	0.246	ppb	0.246	12.30	222	1000	
Ba	137	3	115	93.880	ppb	93.880	2.73	22319	5000	
Tl	205	3	193	-0.039	ppb	-0.039	-20.88	232	2000	
(Pb)	206	3	193	2.500	ppb	2.500	4.34	3565	100	
(Pb)	207	3	193	2.108	ppb	2.108	2.17	2894	100	
Pb	208	3	193	2.252	ppb	2.252	5.18	13284	5000	
Th	232	3	193	1.690	ppb	1.690	8.12	15799	2000	
U	238	3	193	0.344	ppb	0.344	14.09	3434	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068650	0.81	4300192	94.62	60	120	
Sc (IS)	45	3	HMI He	586791	0.63	644593	91.03	60	120	
Ge Internal standard	72	2	HMI H2	2492804	1.35	2598552	95.93	60	120	
Ge Internal standard	72	3	HMI He	728527	0.83	772392	94.32	60	120	
In Internal Standard	115	3	HMI He	2690024	0.89	2872781	93.64	60	120	
Ir (IS)	193	3	HMI He	6172836	4.71	6092963	101.31	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-B
Data File Name	284SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:09:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.059	ppb	0.059	440.95	8	2000	
Na	23	3	45	7165.497	ppb	7165.497	2.47	756191	400000	
Mg	24	3	45	3843.821	ppb	3843.821	1.77	209223	400000	
Al	27	3	45	625.710	ppb	625.710	0.82	13300	400000	
K	39	3	45	865.692	ppb	865.692	4.19	63755	400000	
Ca	40	2	45	11333.695	ppb	11333.695	1.96	6271397	400000	
V	51	3	72	0.586	ppb	0.586	13.40	1316	2000	
Cr	52	3	72	0.417	ppb	0.417	57.07	3317	5000	
Mn	55	3	72	92.926	ppb	92.926	2.20	37218	10000	
Fe	56	2	72	614.610	ppb	614.610	0.58	1013627	10000	
Co	59	3	72	0.926	ppb	0.926	3.45	1234	2000	
Ni	60	3	72	1.447	ppb	1.447	13.45	1183	5000	
Cu	63	3	72	2.434	ppb	2.434	4.25	2762	5000	
Zn	66	3	72	13.675	ppb	13.675	6.05	2362	5000	
As	75	3	72	0.630	ppb	0.630	26.54	112	2000	
Se	78	2	72	0.262	ppb	0.262	32.46	17	2000	
Sr	88	3	72	61.742	ppb	61.742	1.26	32574	4000	
Mo	95	3	115	0.296	ppb	0.296	20.63	180	2000	
Ag	107	3	115	0.005	ppb	0.005	61.33	22	100	
Cd	111	3	115	0.045	ppb	0.045	5.78	20	2000	
Sn	120	3	115	-0.082	ppb	-0.082	-57.13	653	2000	
Sb	121	3	115	0.096	ppb	0.096	57.59	113	1000	
Ba	137	3	115	87.774	ppb	87.774	2.14	21048	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-9.27	160	2000	
(Pb)	206	3	193	2.173	ppb	2.173	4.59	3114	100	
(Pb)	207	3	193	2.030	ppb	2.030	2.38	2779	100	
Pb	208	3	193	2.085	ppb	2.085	3.01	12308	5000	
Th	232	3	193	0.266	ppb	0.266	56.59	8295	2000	
U	238	3	193	0.350	ppb	0.350	7.08	3442	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109030	0.94	4300192	95.55	60	120	
Sc (IS)	45	3	HMI He	580225	1.44	644593	90.01	60	120	
Ge Internal standard	72	2	HMI H2	2531866	0.57	2598552	97.43	60	120	
Ge Internal standard	72	3	HMI He	742443	1.41	772392	96.12	60	120	
In Internal Standard	115	3	HMI He	2713182	3.07	2872781	94.44	60	120	
Ir (IS)	193	3	HMI He	6114356	1.78	6092963	100.35	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-C MS
Data File Name	285SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:10:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.524	ppb	39.524	4.50	1591	2000	
Na	23	3	45	7817.512	ppb	7817.512	3.76	834572	400000	
Mg	24	3	45	4437.266	ppb	4437.266	0.47	244624	400000	
Al	27	3	45	1335.842	ppb	1335.842	3.96	28591	400000	
K	39	3	45	1551.719	ppb	1551.719	1.31	95468	400000	
Ca	40	2	45	11610.329	ppb	11610.329	0.95	6471913	400000	
V	51	3	72	37.252	ppb	37.252	2.44	23735	2000	
Cr	52	3	72	36.960	ppb	36.960	2.77	30769	5000	
Mn	55	3	72	129.144	ppb	129.144	2.25	51616	10000	
Fe	56	2	72	1331.326	ppb	1331.326	2.26	2141645	10000	
Co	59	3	72	37.647	ppb	37.647	1.17	48104	2000	
Ni	60	3	72	36.673	ppb	36.673	2.20	13862	5000	
Cu	63	3	72	39.627	ppb	39.627	0.96	39191	5000	
Zn	66	3	72	49.791	ppb	49.791	0.70	8025	5000	
As	75	3	72	36.831	ppb	36.831	5.03	4124	2000	
Se	78	2	72	37.784	ppb	37.784	2.97	2239	2000	
Sr	88	3	72	136.441	ppb	136.441	1.37	71970	4000	
Mo	95	3	115	37.253	ppb	37.253	2.93	18453	2000	
Ag	107	3	115	37.525	ppb	37.525	3.03	62639	100	
Cd	111	3	115	37.644	ppb	37.644	0.80	8967	2000	
Sn	120	3	115	34.400	ppb	34.400	0.93	26628	2000	
Sb	121	3	115	36.998	ppb	36.998	2.87	27637	1000	
Ba	137	3	115	123.796	ppb	123.796	3.22	30149	5000	
Tl	205	3	193	36.923	ppb	36.923	1.01	142444	2000	
(Pb)	206	3	193	39.565	ppb	39.565	2.20	50850	100	
(Pb)	207	3	193	38.878	ppb	38.878	1.42	44135	100	
Pb	208	3	193	39.445	ppb	39.445	1.57	204736	5000	
Th	232	3	193	35.064	ppb	35.064	1.82	186849	2000	
U	238	3	193	37.667	ppb	37.667	0.72	204990	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4139638	2.13	4300192	96.27	60	120	
Sc (IS)	45	3	HMI He	587687	1.24	644593	91.17	60	120	
Ge Internal standard	72	2	HMI H2	2554539	1.98	2598552	98.31	60	120	
Ge Internal standard	72	3	HMI He	742873	0.72	772392	96.18	60	120	
In Internal Standard	115	3	HMI He	2758122	2.13	2872781	96.01	60	120	
Ir (IS)	193	3	HMI He	6070528	0.98	6092963	99.63	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-D MSD
Data File Name	286SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:12:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.484	ppb	40.484	3.29	1589	2000	
Na	23	3	45	7879.973	ppb	7879.973	1.71	839886	400000	
Mg	24	3	45	4460.038	ppb	4460.038	0.84	245558	400000	
Al	27	3	45	1339.339	ppb	1339.339	1.42	28634	400000	
K	39	3	45	1566.658	ppb	1566.658	2.19	96010	400000	
Ca	40	2	45	11762.212	ppb	11762.212	1.10	6479167	400000	
V	51	3	72	36.940	ppb	36.940	1.09	23318	2000	
Cr	52	3	72	37.289	ppb	37.289	1.17	30714	5000	
Mn	55	3	72	129.643	ppb	129.643	2.12	51307	10000	
Fe	56	2	72	1379.945	ppb	1379.945	1.13	2164535	10000	
Co	59	3	72	37.872	ppb	37.872	1.88	47917	2000	
Ni	60	3	72	37.307	ppb	37.307	1.01	13953	5000	
Cu	63	3	72	40.051	ppb	40.051	1.11	39218	5000	
Zn	66	3	72	50.399	ppb	50.399	4.62	8040	5000	
As	75	3	72	36.880	ppb	36.880	2.66	4089	2000	
Se	78	2	72	38.154	ppb	38.154	1.04	2206	2000	
Sr	88	3	72	138.287	ppb	138.287	2.05	72228	4000	
Mo	95	3	115	36.413	ppb	36.413	0.74	17923	2000	
Ag	107	3	115	37.544	ppb	37.544	2.71	62256	100	
Cd	111	3	115	36.329	ppb	36.329	1.28	8598	2000	
Sn	120	3	115	35.588	ppb	35.588	2.22	27333	2000	
Sb	121	3	115	37.273	ppb	37.273	1.67	27658	1000	
Ba	137	3	115	123.590	ppb	123.590	1.05	29907	5000	
Tl	205	3	193	37.035	ppb	37.035	2.15	142703	2000	
(Pb)	206	3	193	39.888	ppb	39.888	2.68	51196	100	
(Pb)	207	3	193	38.386	ppb	38.386	2.66	43521	100	
Pb	208	3	193	39.299	ppb	39.299	2.28	203722	5000	
Th	232	3	193	37.047	ppb	37.047	2.00	196786	2000	
U	238	3	193	37.787	ppb	37.787	2.77	205347	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4090604	1.89	4300192	95.13	60	120	
Sc (IS)	45	3	HMI He	586899	0.66	644593	91.05	60	120	
Ge Internal standard	72	2	HMI H2	2492804	0.49	2598552	95.93	60	120	
Ge Internal standard	72	3	HMI He	735622	0.92	772392	95.24	60	120	
In Internal Standard	115	3	HMI He	2739675	2.10	2872781	95.37	60	120	
Ir (IS)	193	3	HMI He	6064390	2.40	6092963	99.53	60	120	

Sample Report

Sample Table

Sample Name	280-175148-D-1-B
Data File Name	287SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:14:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.024	ppb	-0.024	-531.34	5	2000	
Na	23	3	45	16737.373	ppb	16737.373	3.07	1780247	400000	
Mg	24	3	45	10487.159	ppb	10487.159	1.35	581537	400000	
Al	27	3	45	511.421	ppb	511.421	1.60	11106	400000	
K	39	3	45	1188.145	ppb	1188.145	4.00	79598	400000	
Ca	40	2	45	22526.553	ppb	22526.553	2.22	12554069	400000	
V	51	3	72	0.502	ppb	0.502	14.38	1246	2000	
Cr	52	3	72	0.482	ppb	0.482	33.62	3315	5000	
Mn	55	3	72	101.191	ppb	101.191	0.51	39919	10000	
Fe	56	2	72	593.641	ppb	593.641	2.91	952269	10000	
Co	59	3	72	0.768	ppb	0.768	3.33	1018	2000	
Ni	60	3	72	1.044	ppb	1.044	30.20	1023	5000	
Cu	63	3	72	2.364	ppb	2.364	2.19	2654	5000	
Zn	66	3	72	12.213	ppb	12.213	2.02	2102	5000	
As	75	3	72	0.738	ppb	0.738	39.88	122	2000	
Se	78	2	72	0.212	ppb	0.212	15.86	14	2000	
Sr	88	3	72	206.902	ppb	206.902	0.69	107471	4000	
Mo	95	3	115	0.416	ppb	0.416	6.82	242	2000	
Ag	107	3	115	0.012	ppb	0.012	39.45	33	100	
Cd	111	3	115	0.050	ppb	0.050	102.67	22	2000	
Sn	120	3	115	0.045	ppb	0.045	243.81	755	2000	
Sb	121	3	115	0.202	ppb	0.202	29.09	193	1000	
Ba	137	3	115	93.503	ppb	93.503	0.57	22700	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-11.68	208	2000	
(Pb)	206	3	193	1.654	ppb	1.654	5.28	2397	100	
(Pb)	207	3	193	1.549	ppb	1.549	8.82	2191	100	
Pb	208	3	193	1.636	ppb	1.636	2.36	9775	5000	
Th	232	3	193	2.182	ppb	2.182	11.66	17836	2000	
U	238	3	193	1.482	ppb	1.482	8.74	9402	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4142891	1.44	4300192	96.34	60	120	
Sc (IS)	45	3	HMI He	591499	1.03	644593	91.76	60	120	
Ge Internal standard	72	2	HMI H2	2457534	0.78	2598552	94.57	60	120	
Ge Internal standard	72	3	HMI He	731731	0.94	772392	94.74	60	120	
In Internal Standard	115	3	HMI He	2746563	1.57	2872781	95.61	60	120	
Ir (IS)	193	3	HMI He	5988865	1.30	6092963	98.29	60	120	

Sample Report

Sample Table

Sample Name	280-175150-D-1-B
Data File Name	288SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:16:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.059	ppb	0.059	125.48	8	2000	
Na	23	3	45	9355.284	ppb	9355.284	0.69	984018	400000	
Mg	24	3	45	6942.019	ppb	6942.019	0.93	378120	400000	
Al	27	3	45	564.764	ppb	564.764	3.99	12027	400000	
K	39	3	45	1140.639	ppb	1140.639	0.74	76065	400000	
Ca	40	2	45	13562.306	ppb	13562.306	2.59	7406739	400000	
V	51	3	72	0.599	ppb	0.599	33.24	1321	2000	
Cr	52	3	72	0.465	ppb	0.465	63.09	3347	5000	
Mn	55	3	72	70.320	ppb	70.320	1.99	28233	10000	
Fe	56	2	72	679.587	ppb	679.587	0.18	1092820	10000	
Co	59	3	72	0.636	ppb	0.636	3.41	865	2000	
Ni	60	3	72	1.307	ppb	1.307	38.65	1129	5000	
Cu	63	3	72	2.041	ppb	2.041	4.83	2377	5000	
Zn	66	3	72	16.299	ppb	16.299	6.51	2769	5000	
As	75	3	72	0.666	ppb	0.666	49.65	115	2000	
Se	78	2	72	0.279	ppb	0.279	37.05	18	2000	
Sr	88	3	72	93.786	ppb	93.786	0.39	49428	4000	
Mo	95	3	115	0.462	ppb	0.462	3.37	263	2000	
Ag	107	3	115	0.004	ppb	0.004	235.96	20	100	
Cd	111	3	115	0.022	ppb	0.022	247.41	15	2000	
Sn	120	3	115	0.047	ppb	0.047	43.42	755	2000	
Sb	121	3	115	0.193	ppb	0.193	34.35	185	1000	
Ba	137	3	115	71.054	ppb	71.054	2.79	17208	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-19.49	160	2000	
(Pb)	206	3	193	1.656	ppb	1.656	1.57	2439	100	
(Pb)	207	3	193	1.595	ppb	1.595	2.61	2277	100	
Pb	208	3	193	1.598	ppb	1.598	2.08	9740	5000	
Th	232	3	193	0.649	ppb	0.649	24.36	10237	2000	
U	238	3	193	0.239	ppb	0.239	11.23	2824	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4057584	1.84	4300192	94.36	60	120	
Sc (IS)	45	3	HMI He	580855	0.90	644593	90.11	60	120	
Ge Internal standard	72	2	HMI H2	2483262	0.29	2598552	95.56	60	120	
Ge Internal standard	72	3	HMI He	742031	2.56	772392	96.07	60	120	
In Internal Standard	115	3	HMI He	2738483	2.62	2872781	95.33	60	120	
Ir (IS)	193	3	HMI He	6086386	2.40	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175151-D-1-B
Data File Name	289SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:18:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.30	2	2000	
Na	23	3	45	33756.301	ppb	33756.301	2.12	3511537	400000	
Mg	24	3	45	15483.833	ppb	15483.833	0.54	843297	400000	
Al	27	3	45	268.799	ppb	268.799	8.27	5797	400000	
K	39	3	45	2124.758	ppb	2124.758	0.79	119871	400000	
Ca	40	2	45	35574.343	ppb	35574.343	1.41	19670776	400000	
V	51	3	72	0.312	ppb	0.312	31.35	1139	2000	
Cr	52	3	72	0.613	ppb	0.613	50.78	3437	5000	
Mn	55	3	72	26.100	ppb	26.100	3.74	10629	10000	
Fe	56	2	72	287.060	ppb	287.060	1.10	499430	10000	
Co	59	3	72	0.300	ppb	0.300	26.77	431	2000	
Ni	60	3	72	0.850	ppb	0.850	16.39	961	5000	
Cu	63	3	72	1.739	ppb	1.739	4.45	2066	5000	
Zn	66	3	72	16.210	ppb	16.210	7.18	2737	5000	
As	75	3	72	0.488	ppb	0.488	64.89	95	2000	
Se	78	2	72	1.015	ppb	1.015	21.79	61	2000	
Sr	88	3	72	291.994	ppb	291.994	0.78	152649	4000	
Mo	95	3	115	1.434	ppb	1.434	10.31	733	2000	
Ag	107	3	115	0.008	ppb	0.008	122.66	25	100	
Cd	111	3	115	-0.019	ppb	-0.019	-113.88	5	2000	
Sn	120	3	115	-0.161	ppb	-0.161	-37.02	593	2000	
Sb	121	3	115	0.416	ppb	0.416	8.38	348	1000	
Ba	137	3	115	96.857	ppb	96.857	3.59	23224	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-7.48	143	2000	
(Pb)	206	3	193	0.572	ppb	0.572	4.43	1051	100	
(Pb)	207	3	193	0.536	ppb	0.536	2.35	1085	100	
Pb	208	3	193	0.551	ppb	0.551	5.31	4331	5000	
Th	232	3	193	0.103	ppb	0.103	115.28	7422	2000	
U	238	3	193	1.677	ppb	1.677	2.37	10609	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4111690	1.40	4300192	95.62	60	120	
Sc (IS)	45	3	HMI He	580971	0.75	644593	90.13	60	120	
Ge Internal standard	72	2	HMI H2	2496659	1.50	2598552	96.08	60	120	
Ge Internal standard	72	3	HMI He	736547	1.10	772392	95.36	60	120	
In Internal Standard	115	3	HMI He	2714316	2.43	2872781	94.48	60	120	
Ir (IS)	193	3	HMI He	6086203	1.25	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175184-B-1-B
Data File Name	290SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:19:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	112279.486	ppb	112279.486	2.64	11890467	400000	
Mg	24	3	45	14237.072	ppb	14237.072	0.99	791841	400000	
Al	27	3	45	2.280	ppb	2.280	36.77	190	400000	
K	39	3	45	5722.800	ppb	5722.800	1.23	285867	400000	
Ca	40	2	45	85405.564	ppb	85405.564	1.15	47321837	400000	
V	51	3	72	-0.731	ppb	-0.731	-19.23	511	2000	
Cr	52	3	72	0.239	ppb	0.239	22.74	3185	5000	
Mn	55	3	72	1.291	ppb	1.291	5.59	876	10000	
Fe	56	2	72	15.014	ppb	15.014	30.78	84189	10000	
Co	59	3	72	0.128	ppb	0.128	20.81	217	2000	
Ni	60	3	72	2.053	ppb	2.053	9.29	1403	5000	
Cu	63	3	72	0.743	ppb	0.743	1.26	1108	5000	
Zn	66	3	72	7.352	ppb	7.352	4.50	1373	5000	
As	75	3	72	0.119	ppb	0.119	36.29	55	2000	
Se	78	2	72	0.105	ppb	0.105	120.27	8	2000	
Sr	88	3	72	615.647	ppb	615.647	0.75	324718	4000	
Mo	95	3	115	1.186	ppb	1.186	9.73	628	2000	
Ag	107	3	115	0.002	ppb	0.002	442.12	17	100	
Cd	111	3	115	-0.027	ppb	-0.027	-88.90	3	2000	
Sn	120	3	115	-0.163	ppb	-0.163	-51.81	606	2000	
Sb	121	3	115	0.072	ppb	0.072	43.53	98	1000	
Ba	137	3	115	71.434	ppb	71.434	3.33	17566	5000	
Tl	205	3	193	-0.060	ppb	-0.060	-12.43	147	2000	
(Pb)	206	3	193	-0.085	ppb	-0.085	-21.49	208	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-9.43	413	100	
Pb	208	3	193	-0.077	ppb	-0.077	-9.74	1083	5000	
Th	232	3	193	-0.140	ppb	-0.140	-47.31	6165	2000	
U	238	3	193	1.656	ppb	1.656	1.38	10488	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121309	2.20	4300192	95.84	60	120	
Sc (IS)	45	3	HMI He	593266	1.05	644593	92.04	60	120	
Ge Internal standard	72	2	HMI H2	2499918	1.15	2598552	96.20	60	120	
Ge Internal standard	72	3	HMI He	743202	0.70	772392	96.22	60	120	
In Internal Standard	115	3	HMI He	2780409	1.15	2872781	96.78	60	120	
Ir (IS)	193	3	HMI He	6081197	0.78	6092963	99.81	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	291_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:21:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.871	ppb	16.885	2057	50	103.7	90	110	
Na	23	3	45	47934.715	ppb	2.548	5013990	51000	94.0	90	110	
Mg	24	3	45	10256.258	ppb	2.625	562389	11000	93.2	90	110	
Al	27	3	45	946.469	ppb	3.521	20205	1000	94.6	90	110	
K	39	3	45	10001.919	ppb	1.504	473514	11000	90.9	90	110	
Ca	40	2	45	10611.587	ppb	0.888	5723766	11000	96.5	90	110	
V	51	3	72	48.709	ppb	2.624	29548	50	97.4	90	110	
Cr	52	3	72	49.408	ppb	1.234	38561	50	98.8	90	110	
Mn	55	3	72	49.225	ppb	4.747	19129	50	98.5	90	110	
Fe	56	2	72	1058.089	ppb	4.180	1604561	1000	105.8	90	110	
Co	59	3	72	48.543	ppb	0.586	59603	50	97.1	90	110	
Ni	60	3	72	48.529	ppb	1.287	17426	50	97.1	90	110	
Cu	63	3	72	48.940	ppb	0.996	46430	50	97.9	90	110	
Zn	66	3	72	49.852	ppb	3.162	7720	50	99.7	90	110	
As	75	3	72	52.034	ppb	0.580	5582	50	104.1	90	110	
Se	78	2	72	51.153	ppb	2.762	2834	50	102.3	90	110	
Sr	88	3	72	100.585	ppb	1.110	51003	100	100.6	90	110	
Mo	95	3	115	47.245	ppb	2.181	23510	50	94.5	90	110	
Ag	107	3	115	47.358	ppb	1.234	79432	50	94.7	90	110	
Cd	111	3	115	47.190	ppb	1.351	11289	50	94.4	90	110	
Sn	120	3	115	47.102	ppb	1.387	36358	50	94.2	90	110	
Sb	121	3	115	48.685	ppb	1.885	36520	50	97.4	90	110	
Ba	137	3	115	49.823	ppb	0.830	12230	50	99.6	90	110	
Tl	205	3	193	46.336	ppb	3.440	182749	50	92.7	90	110	
(Pb)	206	3	193	46.576	ppb	1.713	61187	50	93.2	90	110	
(Pb)	207	3	193	46.716	ppb	2.871	54145	50	93.4	90	110	
Pb	208	3	193	46.494	ppb	1.378	246606	50	93.0	90	110	
Th	232	3	193	46.382	ppb	2.165	250572	50	92.8	90	110	
U	238	3	193	46.958	ppb	2.328	261012	50	93.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4004539	1.18	4300192	93.12	60	120	
Sc (IS)	45	3	HMI He	584902	0.74	644593	90.74	60	120	
Ge Internal standard	72	2	HMI H2	2390425	1.58	2598552	91.99	60	120	
Ge Internal standard	72	3	HMI He	713942	1.43	772392	92.43	60	120	
In Internal Standard	115	3	HMI He	2770617	1.76	2872781	96.44	60	120	
Ir (IS)	193	3	HMI He	6209575	0.56	6092963	101.91	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	292_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:23:30-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.106	ppb	-69.9	2	0.5	
Na	23	3	45	66.160	ppb	4.2	21839	25	>RL
Mg	24	3	45	1.548	ppb	37.4	327	25	
Al	27	3	45	-3.859	ppb	-28.9	57	15	
K	39	3	45	0.297	ppb	10315.7	25258	50	
V	51	3	72	-0.669	ppb	-6.7	535	1	
Cr	52	3	72	0.394	ppb	109.1	3212	1	
Mn	55	3	72	-0.067	ppb	-166.9	328	0.5	
Co	59	3	72	0.018	ppb	55.9	73	0.5	
Ni	60	3	72	0.492	ppb	39.6	818	1	
Cu	63	3	72	-0.022	ppb	-101.2	348	1	
Zn	66	3	72	0.072	ppb	470.4	225	5	
As	75	3	72	0.009	ppb	2469.4	42	1	
Se	78	2	72	0.111	ppb	33.1	8	1	
Sr	88	3	72	0.041	ppb	49.2	62	0.5	
Mo	95	3	115	0.086	ppb	48.5	80	0.5	
Ag	107	3	115	0.008	ppb	92.9	27	1	
Cd	111	3	115	-0.020	ppb	-2.2	5	0.5	
Sn	120	3	115	0.010	ppb	289.4	736	1	
Sb	121	3	115	0.038	ppb	41.8	72	0.6	
Ba	137	3	115	-0.052	ppb	-28.2	47	0.5	
Tl	205	3	193	-0.039	ppb	-11.2	228	0.1	
(Pb)	206	3	193	-0.092	ppb	-25.5	198	1	
(Pb)	207	3	193	-0.133	ppb	-21.4	328	1	
Pb	208	3	193	-0.103	ppb	-6.0	943	0.5	
Th	232	3	193	1.312	ppb	12.5	13511	1	>RL
U	238	3	193	0.018	ppb	90.3	1614	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4047303	1.23	4300192	94.12	60	120	
Sc (IS)	45	3	HMI He	579226	0.80	644593	89.86	60	120	
Ge Internal standard	72	2	HMI H2	2392133	1.10	2598552	92.06	60	120	
Ge Internal standard	72	3	HMI He	723187	0.55	772392	93.63	60	120	
In Internal Standard	115	3	HMI He	2772876	2.15	2872781	96.52	60	120	
Ir (IS)	193	3	HMI He	6024106	1.01	6092963	98.87	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	293SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:39:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-22.058	ppb	-22.058	-11.76	12251	400000	
Mg	24	3	45	-1.927	ppb	-1.927	-53.76	133	400000	
Al	27	3	45	-1.125	ppb	-1.125	-112.15	110	400000	
K	39	3	45	2.069	ppb	2.069	1051.97	24389	400000	
Ca	40	2	45	-9.812	ppb	-9.812	-3.08	6592	400000	
V	51	3	72	-1.198	ppb	-1.198	-3.33	208	2000	
Cr	52	3	72	-2.341	ppb	-2.341	-3.08	1149	5000	
Mn	55	3	72	-0.694	ppb	-0.694	-3.87	82	10000	
Fe	56	2	72	-25.906	ppb	-25.906	-4.64	20573	10000	
Co	59	3	72	-0.026	ppb	-0.026	-58.19	18	2000	
Ni	60	3	72	-1.311	ppb	-1.311	-7.13	177	5000	
Cu	63	3	72	-0.174	ppb	-0.174	-32.24	193	5000	
Zn	66	3	72	-0.859	ppb	-0.859	-12.79	78	5000	
As	75	3	72	-0.246	ppb	-0.246	-41.86	13	2000	
Se	78	2	72	0.003	ppb	0.003	22.43	2	2000	
Sr	88	3	72	-0.024	ppb	-0.024	-51.06	27	4000	
Mo	95	3	115	0.196	ppb	0.196	49.41	127	2000	
Ag	107	3	115	0.006	ppb	0.006	128.02	22	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.744	ppb	-0.744	-5.53	157	2000	
Sb	121	3	115	-0.016	ppb	-0.016	-111.40	30	1000	
Ba	137	3	115	-0.105	ppb	-0.105	-106.18	32	5000	
Tl	205	3	193	-0.071	ppb	-0.071	-12.48	97	2000	
(Pb)	206	3	193	-0.116	ppb	-0.116	-17.33	153	100	
(Pb)	207	3	193	0.546	ppb	0.546	8.96	993	100	
Pb	208	3	193	0.012	ppb	0.012	105.36	1401	5000	
Th	232	3	193	-0.530	ppb	-0.530	-4.16	3767	2000	
U	238	3	193	0.000	ppb	0.000	-5648.87	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3894329	1.11	4300192	90.56	60	120	
Sc (IS)	45	3	HMI He	557420	1.01	644593	86.48	60	120	
Ge Internal standard	72	2	HMI H2	2372720	1.69	2598552	91.31	60	120	
Ge Internal standard	72	3	HMI He	685387	1.02	772392	88.74	60	120	
In Internal Standard	115	3	HMI He	2630300	2.48	2872781	91.56	60	120	
Ir (IS)	193	3	HMI He	5510011	1.89	6092963	90.43	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	294SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:41:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.104	ppb	-0.104	-74.35	2	2000	
Na	23	3	45	-22.786	ppb	-22.786	-15.29	12224	400000	
Mg	24	3	45	-1.353	ppb	-1.353	-47.73	163	400000	
Al	27	3	45	-4.430	ppb	-4.430	-25.49	43	400000	
K	39	3	45	-0.102	ppb	-0.102	-21969.39	24389	400000	
Ca	40	2	45	-8.690	ppb	-8.690	-1.43	7283	400000	
V	51	3	72	-1.249	ppb	-1.249	-5.48	182	2000	
Cr	52	3	72	-2.383	ppb	-2.383	-2.59	1133	5000	
Mn	55	3	72	-0.678	ppb	-0.678	-4.04	88	10000	
Fe	56	2	72	-31.228	ppb	-31.228	-0.43	13423	10000	
Co	59	3	72	-0.023	ppb	-0.023	-20.79	22	2000	
Ni	60	3	72	-1.426	ppb	-1.426	-10.35	140	5000	
Cu	63	3	72	-0.138	ppb	-0.138	-16.53	228	5000	
Zn	66	3	72	-0.558	ppb	-0.558	-41.59	123	5000	
As	75	3	72	-0.119	ppb	-0.119	-101.69	27	2000	
Se	78	2	72	0.013	ppb	0.013	156.71	3	2000	
Sr	88	3	72	-0.021	ppb	-0.021	-109.90	28	4000	
Mo	95	3	115	-0.042	ppb	-0.042	-26.28	15	2000	
Ag	107	3	115	0.001	ppb	0.001	679.16	13	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.597	ppb	-0.597	-5.11	260	2000	
Sb	121	3	115	-0.025	ppb	-0.025	-14.56	23	1000	
Ba	137	3	115	-0.171	ppb	-0.171	-19.57	17	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-24.97	130	2000	
(Pb)	206	3	193	-0.134	ppb	-0.134	-9.05	133	100	
(Pb)	207	3	193	0.201	ppb	0.201	43.99	643	100	
Pb	208	3	193	-0.062	ppb	-0.062	-39.15	1056	5000	
Th	232	3	193	-0.500	ppb	-0.500	-10.02	3922	2000	
U	238	3	193	-0.017	ppb	-0.017	-7.76	1306	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3950461	1.39	4300192	91.87	60	120	
Sc (IS)	45	3	HMI He	559488	0.93	644593	86.80	60	120	
Ge Internal standard	72	2	HMI H2	2477104	1.22	2598552	95.33	60	120	
Ge Internal standard	72	3	HMI He	693043	0.29	772392	89.73	60	120	
In Internal Standard	115	3	HMI He	2606729	2.20	2872781	90.74	60	120	
Ir (IS)	193	3	HMI He	5534291	1.01	6092963	90.83	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	295SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:44:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-23.293	ppb	-23.293	-28.45	12324	400000	
Mg	24	3	45	-0.457	ppb	-0.457	-229.77	214	400000	
Al	27	3	45	-3.477	ppb	-3.477	-21.93	63	400000	
K	39	3	45	2.295	ppb	2.295	1607.12	24797	400000	
Ca	40	2	45	-8.792	ppb	-8.792	-5.78	7283	400000	
V	51	3	72	-1.265	ppb	-1.265	-1.36	173	2000	
Cr	52	3	72	-2.093	ppb	-2.093	-4.69	1343	5000	
Mn	55	3	72	-0.675	ppb	-0.675	-9.91	90	10000	
Fe	56	2	72	-20.969	ppb	-20.969	-7.28	28455	10000	
Co	59	3	72	-0.019	ppb	-0.019	-74.20	27	2000	
Ni	60	3	72	-1.029	ppb	-1.029	-4.88	275	5000	
Cu	63	3	72	-0.121	ppb	-0.121	-17.87	245	5000	
Zn	66	3	72	-0.609	ppb	-0.609	-18.75	117	5000	
As	75	3	72	-0.248	ppb	-0.248	-29.84	13	2000	
Se	78	2	72	0.002	ppb	0.002	1743.86	2	2000	
Sr	88	3	72	0.005	ppb	0.005	616.55	42	4000	
Mo	95	3	115	-0.046	ppb	-0.046	-25.88	13	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-151.48	8	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.704	ppb	-0.704	-11.01	185	2000	
Sb	121	3	115	-0.032	ppb	-0.032	-46.43	18	1000	
Ba	137	3	115	-0.142	ppb	-0.142	-8.46	23	5000	
Tl	205	3	193	-0.075	ppb	-0.075	-7.63	83	2000	
(Pb)	206	3	193	-0.121	ppb	-0.121	-28.30	148	100	
(Pb)	207	3	193	0.044	ppb	0.044	97.32	481	100	
Pb	208	3	193	-0.083	ppb	-0.083	-21.35	956	5000	
Th	232	3	193	-0.448	ppb	-0.448	-3.75	4160	2000	
U	238	3	193	-0.002	ppb	-0.002	-372.71	1379	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3979829	0.38	4300192	92.55	60	120	
Sc (IS)	45	3	HMI He	566574	0.82	644593	87.90	60	120	
Ge Internal standard	72	2	HMI H2	2432480	0.88	2598552	93.61	60	120	
Ge Internal standard	72	3	HMI He	696897	1.56	772392	90.23	60	120	
In Internal Standard	115	3	HMI He	2614140	1.26	2872781	91.00	60	120	
Ir (IS)	193	3	HMI He	5525558	1.46	6092963	90.69	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	296SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:45:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-20.512	ppb	-20.512	-11.17	12655	400000	
Mg	24	3	45	-2.347	ppb	-2.347	-24.24	113	400000	
Al	27	3	45	-2.198	ppb	-2.198	-21.53	90	400000	
K	39	3	45	-0.154	ppb	-0.154	-10624.14	24790	400000	
Ca	40	2	45	-9.299	ppb	-9.299	-3.64	6829	400000	
V	51	3	72	-1.229	ppb	-1.229	-2.77	197	2000	
Cr	52	3	72	-1.735	ppb	-1.735	-8.40	1616	5000	
Mn	55	3	72	-0.475	ppb	-0.475	-20.46	167	10000	
Fe	56	2	72	-15.957	ppb	-15.957	-15.40	35997	10000	
Co	59	3	72	0.000	ppb	0.000	-11904.55	50	2000	
Ni	60	3	72	-0.946	ppb	-0.946	-8.58	307	5000	
Cu	63	3	72	-0.150	ppb	-0.150	-4.73	222	5000	
Zn	66	3	72	-0.652	ppb	-0.652	-15.37	112	5000	
As	75	3	72	-0.234	ppb	-0.234	-20.01	15	2000	
Se	78	2	72	-0.010	ppb	-0.010	-213.87	1	2000	
Sr	88	3	72	-0.016	ppb	-0.016	-97.84	32	4000	
Mo	95	3	115	-0.021	ppb	-0.021	-134.61	25	2000	
Ag	107	3	115	0.008	ppb	0.008	104.03	25	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.732	ppb	-0.732	-6.74	165	2000	
Sb	121	3	115	-0.032	ppb	-0.032	-55.17	18	1000	
Ba	137	3	115	-0.157	ppb	-0.157	-13.64	20	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-3.76	117	2000	
(Pb)	206	3	193	-0.107	ppb	-0.107	-23.00	163	100	
(Pb)	207	3	193	-0.056	ppb	-0.056	-75.96	378	100	
Pb	208	3	193	-0.109	ppb	-0.109	-18.14	830	5000	
Th	232	3	193	-0.487	ppb	-0.487	-5.46	3962	2000	
U	238	3	193	0.027	ppb	0.027	27.23	1516	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3874690	1.86	4300192	90.11	60	120	
Sc (IS)	45	3	HMI He	568774	0.52	644593	88.24	60	120	
Ge Internal standard	72	2	HMI H2	2436021	2.33	2598552	93.75	60	120	
Ge Internal standard	72	3	HMI He	705662	0.48	772392	91.36	60	120	
In Internal Standard	115	3	HMI He	2623077	0.35	2872781	91.31	60	120	
Ir (IS)	193	3	HMI He	5499269	1.76	6092963	90.26	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	297SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:47:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.105	ppb	-0.105	-72.44	2	2000	
Na	23	3	45	-17.368	ppb	-17.368	-19.26	12792	400000	
Mg	24	3	45	-1.494	ppb	-1.494	-17.08	157	400000	
Al	27	3	45	-2.110	ppb	-2.110	-149.03	90	400000	
K	39	3	45	6.742	ppb	6.742	404.67	24750	400000	
Ca	40	2	45	-9.543	ppb	-9.543	-6.84	6815	400000	
V	51	3	72	-1.252	ppb	-1.252	-4.69	182	2000	
Cr	52	3	72	-1.229	ppb	-1.229	-17.83	1961	5000	
Mn	55	3	72	-0.484	ppb	-0.484	-6.32	162	10000	
Fe	56	2	72	-10.135	ppb	-10.135	-25.54	43864	10000	
Co	59	3	72	-0.005	ppb	-0.005	-39.93	43	2000	
Ni	60	3	72	-0.629	ppb	-0.629	-18.57	411	5000	
Cu	63	3	72	-0.136	ppb	-0.136	-36.51	232	5000	
Zn	66	3	72	-0.702	ppb	-0.702	-38.30	103	5000	
As	75	3	72	-0.201	ppb	-0.201	-72.38	18	2000	
Se	78	2	72	0.002	ppb	0.002	1486.33	2	2000	
Sr	88	3	72	-0.025	ppb	-0.025	-182.19	27	4000	
Mo	95	3	115	-0.035	ppb	-0.035	-93.36	18	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-208.69	8	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.750	ppb	-0.750	-4.44	150	2000	
Sb	121	3	115	-0.037	ppb	-0.037	-20.18	15	1000	
Ba	137	3	115	-0.155	ppb	-0.155	-37.23	20	5000	
Tl	205	3	193	-0.069	ppb	-0.069	-7.80	102	2000	
(Pb)	206	3	193	-0.135	ppb	-0.135	-7.87	132	100	
(Pb)	207	3	193	-0.116	ppb	-0.116	-41.86	318	100	
Pb	208	3	193	-0.129	ppb	-0.129	-11.34	743	5000	
Th	232	3	193	-0.483	ppb	-0.483	-6.13	4012	2000	
U	238	3	193	0.008	ppb	0.008	113.65	1433	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3940703	1.16	4300192	91.64	60	120	
Sc (IS)	45	3	HMI He	560859	1.24	644593	87.01	60	120	
Ge Internal standard	72	2	HMI H2	2393104	1.20	2598552	92.09	60	120	
Ge Internal standard	72	3	HMI He	699661	0.75	772392	90.58	60	120	
In Internal Standard	115	3	HMI He	2584395	1.03	2872781	89.96	60	120	
Ir (IS)	193	3	HMI He	5543461	1.88	6092963	90.98	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	298CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T08:49:33-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	13183	0.03
Mg	24	45	3	HMI He	153	27.65
Al	27	45	3	HMI He	117	22.42
K	39	45	3	HMI He	24011	0.03
Ca	40	45	2	HMI H2	10100	0.03
V	51	72	3	HMI He	586	2.47
Cr	52	72	3	HMI He	2272	0.26
Mn	55	72	3	HMI He	163	5.73
Fe	56	72	2	HMI H2	45775	0.02
Co	59	72	3	HMI He	55	59.62
Ni	60	72	3	HMI He	485	1.91
Cu	63	72	3	HMI He	298	6.51
Zn	66	72	3	HMI He	138	7.54
As	75	72	3	HMI He	30	166.76
Se	78	72	2	HMI H2	1	25980.76
(Se)	78	72	3	HMI He	25	80.06
Sr	88	72	3	HMI He	25	138.67
Mo	95	115	3	HMI He	27	332.46
Ag	107	115	3	HMI He	15	222.20
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	546	1.56
Sb	121	115	3	HMI He	33	93.70
Ba	137	115	3	HMI He	33	113.31
Tl	205	193	3	HMI He	100	10.00
(Pb)	206	193	3	HMI He	228	3.63
(Pb)	207	193	3	HMI He	332	5.01
Pb	208	193	3	HMI He	1008	0.77
Th	232	193	3	HMI He	6115	0.14
U	238	193	3	HMI He	1258	0.32

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3535116	3.27
Sc (IS)	45	3	HMI He	505423	0.85
Ge Internal standard	72	2	HMI H2	2359166	1.21
Ge Internal standard	72	3	HMI He	680743	1.25
In Internal Standard	115	3	HMI He	2361818	2.47
Ir (IS)	193	3	HMI He	5045699	1.11

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	299CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T08:51:22-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	298CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	1718.96
Na	23	45	3	HMI He	8793161	0.00
Mg	24	45	3	HMI He	933559	0.00
Al	27	45	3	HMI He	97	62.64
K	39	45	3	HMI He	779161	0.00
V	51	72	3	HMI He	621	0.78
Cr	52	72	3	HMI He	2431	0.32
Mn	55	72	3	HMI He	225	5.50
Co	59	72	3	HMI He	53	61.78
Ni	60	72	3	HMI He	506	4.76
Cu	63	72	3	HMI He	298	4.58
Zn	66	72	3	HMI He	232	5.92
As	75	72	3	HMI He	55	16.53
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	40	82.71
Sr	88	72	3	HMI He	192	8.21
Mo	95	115	3	HMI He	28	190.39
Ag	107	115	3	HMI He	27	107.43
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	713	1.19
Sb	121	115	3	HMI He	38	70.87
Ba	137	115	3	HMI He	148	4.73
Tl	205	193	3	HMI He	85	24.96
(Pb)	206	193	3	HMI He	268	7.81
(Pb)	207	193	3	HMI He	423	0.70
Pb	208	193	3	HMI He	1254	0.55
Th	232	193	3	HMI He	4917	0.12
U	238	193	3	HMI He	1283	0.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3582014	1.43	3535116	101.33	60	120	
Sc (IS)	45	3	HMI He	510430	0.72	505423	100.99	60	120	
Ge Internal standard	72	2	HMI H2	2176579	1.11	2359166	92.26	60	120	
Ge Internal standard	72	3	HMI He	632822	0.14	680743	92.96	60	120	
In Internal Standard	115	3	HMI He	2398594	1.71	2361818	101.56	60	120	
Ir (IS)	193	3	HMI He	5017108	1.62	5045699	99.43	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	300CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T08:53:12-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	298CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3592	0.10
Na	23	45	3	HMI He	189383	0.00
Mg	24	45	3	HMI He	91744	0.00
Al	27	45	3	HMI He	34854	0.00
K	39	45	3	HMI He	99251	0.00
V	51	72	3	HMI He	50546	0.00
Cr	52	72	3	HMI He	63927	0.00
Mn	55	72	3	HMI He	32884	0.00
Co	59	72	3	HMI He	105575	0.00
Ni	60	72	3	HMI He	29849	0.00
Cu	63	72	3	HMI He	79642	0.00
Zn	66	72	3	HMI He	12678	0.02
As	75	72	3	HMI He	9370	0.01
Se	78	72	2	HMI H2	4929	0.03
(Se)	78	72	3	HMI He	485	3.15
Sr	88	72	3	HMI He	88851	0.00
Mo	95	115	3	HMI He	40093	0.00
Ag	107	115	3	HMI He	136255	0.00
Cd	111	115	3	HMI He	19546	0.01
Sn	120	115	3	HMI He	61790	0.00
Sb	121	115	3	HMI He	61892	0.00
Ba	137	115	3	HMI He	20446	0.00
Tl	205	193	3	HMI He	307831	0.00
(Pb)	206	193	3	HMI He	101959	0.00
(Pb)	207	193	3	HMI He	91778	0.00
Pb	208	193	3	HMI He	412678	0.00
Th	232	193	3	HMI He	421028	0.00
U	238	193	3	HMI He	425852	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3570589	0.97	3535116	101.00	60	120	
Sc (IS)	45	3	HMI He	506403	0.83	505423	100.19	60	120	
Ge Internal standard	72	2	HMI H2	2377013	1.72	2359166	100.76	60	120	
Ge Internal standard	72	3	HMI He	673582	0.24	680743	98.95	60	120	
In Internal Standard	115	3	HMI He	2337354	0.47	2361818	98.96	60	120	
Ir (IS)	193	3	HMI He	5150856	1.56	5045699	102.08	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	301_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:55:01-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.124	ppb	1.454	1351	40	95.3	90	110	
Na	23	3	45	13256.336	ppb	0.776	1174427	12800	103.6	90	110	
Mg	24	3	45	4634.094	ppb	0.495	215904	4800	96.5	90	110	
Al	27	3	45	819.580	ppb	2.404	14432	800	102.4	90	110	
K	39	3	45	4710.191	ppb	1.718	201545	4800	98.1	90	110	
Ca	40	2	45	4900.840	ppb	2.256	2271761	4800	102.1	90	110	
V	51	3	72	40.783	ppb	0.691	20784	40	102.0	90	110	
Cr	52	3	72	41.764	ppb	6.280	27740	40	104.4	90	110	
Mn	55	3	72	41.396	ppb	2.257	13585	40	103.5	90	110	
Fe	56	2	72	827.454	ppb	2.394	1115438	800	103.4	90	110	
Co	59	3	72	40.922	ppb	3.101	42840	40	102.3	90	110	
Ni	60	3	72	41.652	ppb	5.407	12593	40	104.1	90	110	
Cu	63	3	72	41.577	ppb	3.314	32983	40	103.9	90	110	
Zn	66	3	72	84.919	ppb	4.085	10686	80	106.1	90	110	
As	75	3	72	40.277	ppb	5.923	3755	40	100.7	90	110	
Se	78	2	72	41.308	ppb	3.480	1956	40	103.3	90	110	
Sr	88	3	72	121.627	ppb	3.796	53541	120	101.4	90	110	
Mo	95	3	115	40.266	ppb	1.084	16450	40	100.7	90	110	
Ag	107	3	115	80.243	ppb	1.676	111288	80	100.3	90	110	
Cd	111	3	115	39.321	ppb	1.645	7825	40	98.3	90	110	
Sn	120	3	115	41.074	ppb	2.075	26156	40	102.7	90	110	
Sb	121	3	115	40.589	ppb	0.513	25595	40	101.5	90	110	
Ba	137	3	115	39.237	ppb	2.338	8185	40	98.1	90	110	
Tl	205	3	193	41.410	ppb	3.832	123428	40	103.5	90	110	
(Pb)	206	3	193	43.039	ppb	3.520	42607	40	107.6	90	110	
(Pb)	207	3	193	41.173	ppb	2.819	36775	40	102.9	90	110	
Pb	208	3	193	42.107	ppb	2.934	168795	40	105.3	90	110	
Th	232	3	193	83.812	ppb	1.904	342727	80	104.8	90	110	
U	238	3	193	45.448	ppb	4.219	187962	40	113.6	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3552026	2.96	3535116	100.48	60	120	
Sc (IS)	45	3	HMI He	509192	0.15	505423	100.75	60	120	
Ge Internal standard	72	2	HMI H2	2283565	0.30	2359166	96.80	60	120	
Ge Internal standard	72	3	HMI He	667882	3.49	680743	98.11	60	120	
In Internal Standard	115	3	HMI He	2379400	1.22	2361818	100.74	60	120	
Ir (IS)	193	3	HMI He	4989247	3.61	5045699	98.88	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	302_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:56:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.223	ppb	4.132	1724	50	96.4	90	110	
Na	23	3	45	49185.508	ppb	1.182	4390625	51000	96.4	90	110	
Mg	24	3	45	10380.009	ppb	2.066	490992	11000	94.4	90	110	
Al	27	3	45	1000.553	ppb	2.842	17866	1000	100.1	90	110	
K	39	3	45	10296.171	ppb	2.252	418336	11000	93.6	90	110	
Ca	40	2	45	10525.914	ppb	3.043	4918180	11000	95.7	90	110	
V	51	3	72	54.349	ppb	0.704	26772	50	108.7	90	110	
Cr	52	3	72	53.278	ppb	2.290	33888	50	106.6	90	110	
Mn	55	3	72	52.844	ppb	1.247	16847	50	105.7	90	110	
Fe	56	2	72	1067.031	ppb	2.405	1424286	1000	106.7	90	110	
Co	59	3	72	52.669	ppb	1.557	53697	50	105.3	90	110	
Ni	60	3	72	52.046	ppb	0.453	15217	50	104.1	90	110	
Cu	63	3	72	52.783	ppb	2.292	40710	50	105.6	90	110	
Zn	66	3	72	53.729	ppb	3.558	6635	50	107.5	90	110	
As	75	3	72	52.146	ppb	7.343	4728	50	104.3	90	110	
Se	78	2	72	53.747	ppb	3.074	2544	50	107.5	90	110	
Sr	88	3	72	105.555	ppb	2.121	45271	100	105.6	90	110	
Mo	95	3	115	51.025	ppb	3.989	20650	50	102.1	90	110	
Ag	107	3	115	50.892	ppb	0.926	69970	50	101.8	90	110	
Cd	111	3	115	50.757	ppb	1.405	10010	50	101.5	90	110	
Sn	120	3	115	50.946	ppb	2.845	32027	50	101.9	90	110	
Sb	121	3	115	50.353	ppb	1.970	31460	50	100.7	90	110	
Ba	137	3	115	50.993	ppb	2.584	10534	50	102.0	90	110	
Tl	205	3	193	50.210	ppb	2.315	155668	50	100.4	90	110	
(Pb)	206	3	193	51.324	ppb	2.090	52810	50	102.6	90	110	
(Pb)	207	3	193	49.754	ppb	1.519	46153	50	99.5	90	110	
Pb	208	3	193	50.638	ppb	2.440	210922	50	101.3	90	110	
Th	232	3	193	52.973	ppb	0.749	227594	50	105.9	90	110	
U	238	3	193	51.012	ppb	2.513	219330	50	102.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588946	1.61	3535116	101.52	60	120	
Sc (IS)	45	3	HMI He	517334	2.35	505423	102.36	60	120	
Ge Internal standard	72	2	HMI H2	2281982	1.94	2359166	96.73	60	120	
Ge Internal standard	72	3	HMI He	650198	0.84	680743	95.51	60	120	
In Internal Standard	115	3	HMI He	2358401	1.08	2361818	99.86	60	120	
Ir (IS)	193	3	HMI He	5187194	1.85	5045699	102.80	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	303_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:58:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.047	ppb	171.4	3	0.5	
Na	23	3	45	26.393	ppb	7.0	15608	25	>RL
Mg	24	3	45	0.551	ppb	32.5	180	25	
Al	27	3	45	-4.067	ppb	-7.6	47	15	
K	39	3	45	-8.726	ppb	-371.6	23888	50	
V	51	3	72	0.125	ppb	11.2	636	1	
Cr	52	3	72	0.432	ppb	28.0	2494	1	
Mn	55	3	72	0.204	ppb	44.4	227	0.5	
Co	59	3	72	0.001	ppb	1484.0	55	0.5	
Ni	60	3	72	0.558	ppb	11.1	638	1	
Cu	63	3	72	-0.063	ppb	-30.9	243	1	
Zn	66	3	72	0.357	ppb	30.6	180	5	
As	75	3	72	0.059	ppb	172.5	35	1	
Se	78	2	72	0.044	ppb	150.8	3	1	
Sr	88	3	72	0.020	ppb	127.6	33	0.5	
Mo	95	3	115	0.028	ppb	93.0	38	0.5	
Ag	107	3	115	0.007	ppb	1.4	25	1	
Cd	111	3	115	0.017	ppb	149.6	5	0.5	
Sn	120	3	115	0.277	ppb	31.3	718	1	
Sb	121	3	115	0.045	ppb	9.0	62	0.6	
Ba	137	3	115	0.057	ppb	151.0	45	0.5	
Tl	205	3	193	0.039	ppb	18.7	225	0.1	
(Pb)	206	3	193	-0.058	ppb	-94.1	175	1	
(Pb)	207	3	193	0.051	ppb	51.1	388	1	
Pb	208	3	193	0.002	ppb	818.0	1046	0.5	
Th	232	3	193	1.303	ppb	22.5	11736	1	>RL
U	238	3	193	0.027	ppb	91.1	1411	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3575013	1.82	3535116	101.13	60	120	
Sc (IS)	45	3	HMI He	509724	0.92	505423	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2312207	4.09	2359166	98.01	60	120	
Ge Internal standard	72	3	HMI He	667560	1.66	680743	98.06	60	120	
In Internal Standard	115	3	HMI He	2361470	0.56	2361818	99.99	60	120	
Ir (IS)	193	3	HMI He	5195379	2.13	5045699	102.97	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	304LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:12:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.920	ppb	28.609	35	1	92.0	70	130	
Na	23	3	45	287.802	ppb	0.568	38394	300	95.9	70	130	
Mg	24	3	45	46.476	ppb	3.126	2313	50	93.0	70	130	
Al	27	3	45	47.635	ppb	11.073	948	50	95.3	70	130	
K	39	3	45	117.142	ppb	25.961	28528	120	97.6	70	130	
Ca	40	2	45	199.977	ppb	0.860	101154	200	100.0	70	130	
V	51	3	72	4.910	ppb	9.630	2957	5	98.2	70	130	
Cr	52	3	72	2.425	ppb	16.138	3654	2	121.3	70	130	
Mn	55	3	72	1.223	ppb	18.870	548	1	122.3	70	130	
Fe	56	2	72	51.530	ppb	3.891	110787	50	103.1	70	130	
Co	59	3	72	0.939	ppb	8.699	1020	1	93.9	70	130	
Ni	60	3	72	2.131	ppb	20.552	1078	2	106.6	70	130	
Cu	63	3	72	1.990	ppb	5.182	1828	2	99.5	70	130	
Zn	66	3	72	9.781	ppb	4.658	1329	10	97.8	70	130	
As	75	3	72	4.857	ppb	6.096	471	5	97.1	70	130	
Se	78	2	72	5.197	ppb	9.402	246	5	103.9	70	130	
Sr	88	3	72	5.178	ppb	5.831	2267	5	103.6	70	130	
Mo	95	3	115	1.876	ppb	2.948	793	2	93.8	70	130	
Ag	107	3	115	0.985	ppb	8.441	1381	1	98.5	70	130	
Cd	111	3	115	0.821	ppb	16.756	165	1	82.1	70	130	
Sn	120	3	115	8.811	ppb	5.022	6050	10	88.1	70	130	
Sb	121	3	115	1.970	ppb	2.568	1274	2	98.5	70	130	
Ba	137	3	115	0.848	ppb	16.998	210	1	84.8	70	130	
Tl	205	3	193	0.974	ppb	6.148	3076	1	97.4	70	130	
(Pb)	206	3	193	0.862	ppb	12.549	1100	1	86.2	70	130	
(Pb)	207	3	193	0.930	ppb	17.537	1179	1	93.0	70	130	
Pb	208	3	193	0.906	ppb	2.430	4718	1	90.6	70	130	
Th	232	3	193	1.534	ppb	13.639	12520	1	153.4	70	130	>+/-30%
U	238	3	193	1.010	ppb	4.286	5527	1	101.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3506520	0.34	3535116	99.19	60	120	
Sc (IS)	45	3	HMI He	507916	0.69	505423	100.49	60	120	
Ge Internal standard	72	2	HMI H2	2278128	2.73	2359166	96.56	60	120	
Ge Internal standard	72	3	HMI He	656862	0.76	680743	96.49	60	120	
In Internal Standard	115	3	HMI He	2380764	1.56	2361818	100.80	60	120	
Ir (IS)	193	3	HMI He	5109678	2.08	5045699	101.27	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	305ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:15:51-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	4549.083	ppb	103.8	650309	100000	
Mg	24	3	45	4608.740	ppb	100.3	339470	100000	
Al	27	3	45	4744.814	ppb	100.0	131215	100000	
K	39	3	45	4193.521	ppb	106.8	289630	100000	
Ca	40	2	45	41161.156	ppb	17.2	12524673	100000	
V	51	3	72	-0.944	ppb	-7.0	168	1	
Cr	52	3	72	-0.315	ppb	-571.7	3237	1	
Mn	55	3	72	0.081	ppb	251.9	298	0.95	
Fe	56	2	72	45509.826	ppb	18.0	36303315	100000	
Co	59	3	72	-0.007	ppb	-403.9	75	0.5	
Ni	60	3	72	0.144	ppb	750.1	821	1	
Cu	63	3	72	-0.167	ppb	-16.9	257	1	
Zn	66	3	72	-0.281	ppb	-25.7	162	1	
As	75	3	72	-0.185	ppb	-24.8	20	1	
Se	78	2	72	0.003	ppb	887.2	1	1	
(Se)	78	3	72	-1.460	ppb	-56.4	28	1	
Sr	88	3	72	0.043	ppb	118.9	68	1	
Mo	95	3	115	86.188	ppb	86.3	56938	2000	
Ag	107	3	115	0.001	ppb	688.5	27	1	
Cd	111	3	115	0.012	ppb	95.1	7	1	
Sn	120	3	115	-0.680	ppb	-4.9	215	1	
Sb	121	3	115	-0.022	ppb	-56.2	33	1	
Ba	137	3	115	0.109	ppb	250.8	100	0.95	
Tl	205	3	193	-0.004	ppb	-203.2	143	1	
(Pb)	206	3	193	-0.082	ppb	-34.2	245	1	
(Pb)	207	3	193	-0.052	ppb	-32.3	481	1	
Pb	208	3	193	-0.076	ppb	-25.2	1176	1	
Th	232	3	193	-0.423	ppb	-30.2	7379	1	
U	238	3	193	0.012	ppb	142.4	2217	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2412949	28.80	3535116	68.26	60	120	
Sc (IS)	45	3	HMI He	868321	12.21	505423	171.80	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	1453442	29.85	2359166	61.61	60	120	
Ge Internal standard	72	3	HMI He	1075211	13.43	680743	157.95	60	120	IS Failed
In Internal Standard	115	3	HMI He	4057722	11.15	2361818	171.81	60	120	IS Failed
Ir (IS)	193	3	HMI He	8521306	11.31	5045699	168.88	60	120	IS Failed

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	306ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:20:28-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	-45300.1	2	0.5	
Na	23	3	45	90482.365	ppb	0.5	8219991	100000	
Mg	24	3	45	90239.909	ppb	0.9	4350548	100000	
Al	27	3	45	93389.621	ppb	0.5	1688950	100000	
K	39	3	45	91288.553	ppb	2.0	3583984	100000	
Ca	40	2	45	91300.863	ppb	0.9	43727031	100000	
V	51	3	72	-0.108	ppb	-102.8	523	1	
Cr	52	3	72	2.000	ppb	15.9	3464	1	>RL or LOD
Mn	55	3	72	0.940	ppb	16.9	466	0.95	
Fe	56	2	72	98239.665	ppb	1.9	122981440	100000	
Co	59	3	72	0.242	ppb	10.4	308	0.5	
Ni	60	3	72	0.717	ppb	29.4	686	1	
Cu	63	3	72	0.221	ppb	14.3	468	1	
Zn	66	3	72	1.515	ppb	14.9	325	1	>RL or LOD
As	75	3	72	-0.013	ppb	-257.5	28	1	
Se	78	2	72	0.044	ppb	146.8	3	1	
(Se)	78	3	72	1.551	ppb	230.1	32	1	>RL or LOD
Sr	88	3	72	0.827	ppb	7.6	390	1	
Mo	95	3	115	1826.386	ppb	2.2	774878	2000	
Ag	107	3	115	0.034	ppb	18.7	65	1	
Cd	111	3	115	0.185	ppb	40.3	40	1	
Sn	120	3	115	0.495	ppb	18.2	895	1	
Sb	121	3	115	0.125	ppb	38.9	117	1	
Ba	137	3	115	1.552	ppb	13.3	370	0.95	>RL or LOD
Tl	205	3	193	0.023	ppb	32.0	170	1	
(Pb)	206	3	193	0.097	ppb	52.6	327	1	
(Pb)	207	3	193	0.137	ppb	49.5	456	1	
Pb	208	3	193	0.144	ppb	29.6	1596	1	
Th	232	3	193	-0.387	ppb	-16.0	4572	1	
U	238	3	193	0.053	ppb	30.0	1484	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3684245	0.36	3535116	104.22	60	120	
Sc (IS)	45	3	HMI He	527232	0.91	505423	104.31	60	120	
Ge Internal standard	72	2	HMI H2	2208340	2.86	2359166	93.61	60	120	
Ge Internal standard	72	3	HMI He	669944	0.71	680743	98.41	60	120	
In Internal Standard	115	3	HMI He	2475459	1.65	2361818	104.81	60	120	
Ir (IS)	193	3	HMI He	5073596	0.38	5045699	100.55	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	307ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:22:14-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	99.709	ppb	3.463	3522	100	99.7	80	120	
Na	23	3	45	95050.388	ppb	1.214	8659487	100	95050.4	80	120	>+\-20%
Mg	24	3	45	93564.093	ppb	1.593	4523620	100	93564.1	80	120	>+\-20%
Al	27	3	45	95349.028	ppb	1.136	1729427	100	95349.0	80	120	>+\-20%
K	39	3	45	96388.768	ppb	2.151	3794486	100	96388.8	80	120	>+\-20%
Ca	40	2	45	101479.803	ppb	2.127	47497334	100	101479.8	80	120	>+\-20%
V	51	3	72	98.530	ppb	1.390	48864	100	98.5	80	120	
Cr	52	3	72	100.906	ppb	0.600	63265	100	100.9	80	120	
Mn	55	3	72	100.263	ppb	1.229	32347	100	100.3	80	120	
Fe	56	2	72	97094.673	ppb	1.064	125460063	100	97094.7	80	120	>+\-20%
Co	59	3	72	98.491	ppb	0.704	102009	100	98.5	80	120	
Ni	60	3	72	97.614	ppb	1.222	28597	100	97.6	80	120	
Cu	63	3	72	100.425	ppb	1.067	78459	100	100.4	80	120	
Zn	66	3	72	97.276	ppb	2.173	12103	100	97.3	80	120	
As	75	3	72	99.906	ppb	3.743	9185	100	99.9	80	120	
Se	78	2	72	100.651	ppb	0.510	4756	100	100.7	80	120	
(Se)	78	3	72	116.480	ppb	9.506	550	100	116.5	80	120	
Sr	88	3	72	197.986	ppb	0.733	86289	100	198.0	80	120	>+\-20%
Mo	95	3	115	1954.505	ppb	2.487	806073	100	1954.5	80	120	>+\-20%
Ag	107	3	115	94.399	ppb	2.503	132387	100	94.4	80	120	
Cd	111	3	115	93.674	ppb	4.005	18841	100	93.7	80	120	
Sn	120	3	115	96.973	ppb	4.353	61668	100	97.0	80	120	
Sb	121	3	115	95.737	ppb	1.859	60999	100	95.7	80	120	
Ba	137	3	115	96.760	ppb	2.190	20366	100	96.8	80	120	
Tl	205	3	193	97.445	ppb	0.657	296059	100	97.4	80	120	
(Pb)	206	3	193	98.524	ppb	0.652	99164	100	98.5	80	120	
(Pb)	207	3	193	95.607	ppb	1.808	86627	100	95.6	80	120	
Pb	208	3	193	98.223	ppb	0.361	400121	100	98.2	80	120	
Th	232	3	193	97.967	ppb	0.944	407287	100	98.0	80	120	
U	238	3	193	106.129	ppb	0.362	445956	100	106.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3601336	1.97	3535116	101.87	60	120	
Sc (IS)	45	3	HMI He	528792	0.64	505423	104.62	60	120	
Ge Internal standard	72	2	HMI H2	2278692	0.77	2359166	96.59	60	120	
Ge Internal standard	72	3	HMI He	660810	0.74	680743	97.07	60	120	
In Internal Standard	115	3	HMI He	2406784	2.57	2361818	101.90	60	120	
Ir (IS)	193	3	HMI He	5083516	0.66	5045699	100.75	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	308SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:23:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.050	ppb	0.050	166.86	3	2000	
Na	23	3	45	51.625	ppb	51.625	5.14	18217	400000	
Mg	24	3	45	20.502	ppb	20.502	5.28	1135	400000	
Al	27	3	45	13.428	ppb	13.428	33.46	360	400000	
K	39	3	45	7.683	ppb	7.683	355.64	25041	400000	
Ca	40	2	45	25.744	ppb	25.744	1.58	22240	400000	
V	51	3	72	0.010	ppb	0.010	83.63	558	2000	
Cr	52	3	72	0.487	ppb	0.487	115.44	2431	5000	
Mn	55	3	72	0.100	ppb	0.100	158.29	185	10000	
Fe	56	2	72	34.923	ppb	34.923	12.94	84370	10000	
Co	59	3	72	0.006	ppb	0.006	56.17	58	2000	
Ni	60	3	72	0.561	ppb	0.561	31.98	615	5000	
Cu	63	3	72	0.035	ppb	0.035	173.05	308	5000	
Zn	66	3	72	0.573	ppb	0.573	114.70	198	5000	
As	75	3	72	0.187	ppb	0.187	80.33	45	2000	
Se	78	2	72	0.076	ppb	0.076	58.97	4	2000	
Sr	88	3	72	0.046	ppb	0.046	60.92	43	4000	
Mo	95	3	115	3.819	ppb	3.819	19.21	1599	2000	
Ag	107	3	115	0.008	ppb	0.008	91.00	27	100	
Cd	111	3	115	0.008	ppb	0.008	360.00	3	2000	
Sn	120	3	115	0.036	ppb	0.036	167.16	578	2000	
Sb	121	3	115	0.025	ppb	0.025	57.53	50	1000	
Ba	137	3	115	0.316	ppb	0.316	10.52	100	5000	
Tl	205	3	193	0.057	ppb	0.057	15.81	277	2000	
(Pb)	206	3	193	0.012	ppb	0.012	78.10	243	100	
(Pb)	207	3	193	0.005	ppb	0.005	524.28	340	100	
Pb	208	3	193	0.017	ppb	0.017	67.39	1089	5000	
Th	232	3	193	2.353	ppb	2.353	13.21	15896	2000	
U	238	3	193	0.049	ppb	0.049	62.33	1481	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3584564	1.00	3535116	101.40	60	120	
Sc (IS)	45	3	HMI He	521035	0.40	505423	103.09	60	120	
Ge Internal standard	72	2	HMI H2	2152700	0.32	2359166	91.25	60	120	
Ge Internal standard	72	3	HMI He	643045	1.76	680743	94.46	60	120	
In Internal Standard	115	3	HMI He	2401681	2.09	2361818	101.69	60	120	
Ir (IS)	193	3	HMI He	5114446	1.10	5045699	101.36	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	309_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:25:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.576	ppb	5.837	1863	50	109.2	90	110	
Na	23	3	45	48907.588	ppb	2.640	4368242	51000	95.9	90	110	
Mg	24	3	45	10299.317	ppb	0.297	487547	11000	93.6	90	110	
Al	27	3	45	1003.695	ppb	2.916	17936	1000	100.4	90	110	
K	39	3	45	10433.987	ppb	0.681	423910	11000	94.9	90	110	
Ca	40	2	45	10654.689	ppb	1.547	5002190	11000	96.9	90	110	
V	51	3	72	55.204	ppb	1.521	26330	50	110.4	90	110	>+\-10%
Cr	52	3	72	55.510	ppb	1.754	34110	50	111.0	90	110	>+\-10%
Mn	55	3	72	54.502	ppb	2.518	16823	50	109.0	90	110	
Fe	56	2	72	1122.671	ppb	1.912	1413390	1000	112.3	90	110	>+\-10%
Co	59	3	72	54.861	ppb	0.851	54172	50	109.7	90	110	
Ni	60	3	72	56.219	ppb	2.621	15883	50	112.4	90	110	>+\-10%
Cu	63	3	72	54.651	ppb	1.974	40815	50	109.3	90	110	
Zn	66	3	72	56.976	ppb	3.800	6808	50	114.0	90	110	>+\-10%
As	75	3	72	55.780	ppb	2.967	4898	50	111.6	90	110	>+\-10%
Se	78	2	72	54.683	ppb	4.332	2444	50	109.4	90	110	
Sr	88	3	72	110.315	ppb	2.840	45822	100	110.3	90	110	>+\-10%
Mo	95	3	115	50.901	ppb	1.508	20919	50	101.8	90	110	
Ag	107	3	115	50.010	ppb	3.048	69774	50	100.0	90	110	
Cd	111	3	115	50.802	ppb	0.960	10172	50	101.6	90	110	
Sn	120	3	115	49.949	ppb	2.961	31875	50	99.9	90	110	
Sb	121	3	115	50.855	ppb	0.271	32260	50	101.7	90	110	
Ba	137	3	115	51.190	ppb	1.989	10734	50	102.4	90	110	
Tl	205	3	193	50.019	ppb	3.763	157603	50	100.0	90	110	
(Pb)	206	3	193	50.980	ppb	1.586	53329	50	102.0	90	110	
(Pb)	207	3	193	49.839	ppb	1.576	46990	50	99.7	90	110	
Pb	208	3	193	50.279	ppb	1.480	212910	50	100.6	90	110	
Th	232	3	193	50.479	ppb	3.112	220685	50	101.0	90	110	
U	238	3	193	50.357	ppb	3.084	220073	50	100.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3605856	2.19	3535116	102.00	60	120	
Sc (IS)	45	3	HMI He	517560	0.60	505423	102.40	60	120	
Ge Internal standard	72	2	HMI H2	2155458	1.19	2359166	91.37	60	120	
Ge Internal standard	72	3	HMI He	629708	0.40	680743	92.50	60	120	
In Internal Standard	115	3	HMI He	2394159	2.25	2361818	101.37	60	120	
Ir (IS)	193	3	HMI He	5272767	2.14	5045699	104.50	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	310_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:27:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.001	ppb	7094.2	2	0.5	
Na	23	3	45	43.558	ppb	16.4	17204	25	>RL
Mg	24	3	45	2.807	ppb	56.1	287	25	
Al	27	3	45	-0.859	ppb	-294.8	103	15	
K	39	3	45	-17.386	ppb	-179.8	23677	50	
V	51	3	72	0.022	ppb	864.5	563	1	
Cr	52	3	72	0.550	ppb	49.2	2466	1	
Mn	55	3	72	0.222	ppb	35.1	223	0.5	
Co	59	3	72	-0.004	ppb	-669.9	48	0.5	
Ni	60	3	72	0.797	ppb	23.5	680	1	
Cu	63	3	72	-0.002	ppb	-1768.1	280	1	
Zn	66	3	72	0.194	ppb	123.0	153	5	
As	75	3	72	0.151	ppb	115.4	42	1	
Se	78	2	72	0.030	ppb	142.6	2	1	
Sr	88	3	72	0.004	ppb	589.2	25	0.5	
Mo	95	3	115	0.269	ppb	21.4	140	0.5	
Ag	107	3	115	0.013	ppb	40.5	33	1	
Cd	111	3	115	0.016	ppb	150.5	5	0.5	
Sn	120	3	115	0.151	ppb	60.1	658	1	
Sb	121	3	115	0.009	ppb	268.6	40	0.6	
Ba	137	3	115	0.115	ppb	101.1	58	0.5	
Tl	205	3	193	0.028	ppb	24.8	190	0.1	
(Pb)	206	3	193	-0.001	ppb	-4973.0	233	1	
(Pb)	207	3	193	-0.024	ppb	-83.0	318	1	
Pb	208	3	193	-0.009	ppb	-322.3	996	0.5	
Th	232	3	193	1.270	ppb	12.8	11580	1	>RL
U	238	3	193	0.005	ppb	362.0	1313	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3605443	0.61	3535116	101.99	60	120	
Sc (IS)	45	3	HMI He	512374	0.71	505423	101.38	60	120	
Ge Internal standard	72	2	HMI H2	2191449	2.12	2359166	92.89	60	120	
Ge Internal standard	72	3	HMI He	641679	0.69	680743	94.26	60	120	
In Internal Standard	115	3	HMI He	2429300	1.66	2361818	102.86	60	120	
Ir (IS)	193	3	HMI He	5179229	0.65	5045699	102.65	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	311_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:29:25-06:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.049	ppb	335.8119925	3	0.5
Na	23	3	45	32.722	ppb	26.03049258	16543	25
Mg	24	3	45	2.771	ppb	40.09669	290	25
Al	27	3	45	1.471	ppb	145.9897711	147	15
K	39	3	45	-22.602	ppb	-83.50806129	23908	50
Ca	40	2	45	6.502	ppb	14.37913377	13233	200
V	51	3	72	-0.007	ppb	-149.6448632	553	1
Cr	52	3	72	0.496	ppb	20.66988758	2452	1
Mn	55	3	72	0.423	ppb	15.01403708	288	0.5
Fe	56	2	72	15.568	ppb	26.8767949	60995	50
Co	59	3	72	0.004	ppb	161.4321325	57	0.5
Ni	60	3	72	0.494	ppb	35.25475843	600	1
Cu	63	3	72	0.053	ppb	102.4399317	323	1
Zn	66	3	72	6.132	ppb	8.39335439	870	5
As	75	3	72	0.109	ppb	114.9429451	38	1
(Se)	78	3	72	1.390	ppb	209.0691421	30	1
Sr	88	3	72	0.042	ppb	106.3123949	42	0.5
Mo	95	3	115	0.170	ppb	31.58238968	98	0.5
Ag	107	3	115	0.002	ppb	195.1008711	18	1
Cd	111	3	115	0.008	ppb	177.7477712	3	0.5
Sn	120	3	115	0.407	ppb	27.43698073	823	1
Sb	121	3	115	0.016	ppb	204.4683249	45	0.6
Ba	137	3	115	0.005	ppb	1353.86144	35	0.5
Tl	205	3	193	0.025	ppb	25.40133462	180	0.1
(Pb)	206	3	193	-0.047	ppb	-8.86716873	188	1
(Pb)	207	3	193	0.008	ppb	613.346312	350	1
Pb	208	3	193	-0.015	ppb	-141.7022912	978	0.5
Th	232	3	193	-0.100	ppb	-69.65103754	5912	1
U	238	3	193	0.013	ppb	92.24450009	1358	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3573029	0.76	3535116	101.07	60	120	
Sc (IS)	45	3	HMI He	521752	0.39	505423	103.23	60	120	
Ge Internal standard	72	2	HMI H2	2159109	1.55	2359166	91.52	60	120	
Ge Internal standard	72	3	HMI He	646402	1.27	680743	94.96	60	120	
In Internal Standard	115	3	HMI He	2433826	2.47	2361818	103.05	60	120	
Ir (IS)	193	3	HMI He	5221412	0.84	5045699	103.48	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A@10
Data File Name	312SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:31:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	11030.895	ppb	11030.895	0.99	982946	400000	
Mg	24	3	45	7781.643	ppb	7781.643	0.75	363725	400000	
Al	27	3	45	3.133	ppb	3.133	149.29	174	400000	
K	39	3	45	480.754	ppb	480.754	5.68	42433	400000	
Ca	40	2	45	22291.512	ppb	22291.512	1.08	10275816	400000	
V	51	3	72	0.211	ppb	0.211	31.88	663	2000	
Cr	52	3	72	0.702	ppb	0.702	42.43	2596	5000	
Mn	55	3	72	2.379	ppb	2.379	13.79	910	10000	
Fe	56	2	72	20.049	ppb	20.049	21.39	67820	10000	
Co	59	3	72	0.048	ppb	0.048	37.78	102	2000	
Ni	60	3	72	0.993	ppb	0.993	22.79	746	5000	
Cu	63	3	72	0.316	ppb	0.316	35.00	528	5000	
Zn	66	3	72	4.183	ppb	4.183	4.07	640	5000	
As	75	3	72	0.382	ppb	0.382	71.80	63	2000	
Se	78	2	72	0.044	ppb	0.044	148.46	3	2000	
Sr	88	3	72	84.465	ppb	84.465	0.97	36312	4000	
Mo	95	3	115	0.120	ppb	0.120	11.22	75	2000	
Ag	107	3	115	0.004	ppb	0.004	99.66	20	100	
Cd	111	3	115	0.017	ppb	0.017	149.00	5	2000	
Sn	120	3	115	0.155	ppb	0.155	78.54	638	2000	
Sb	121	3	115	0.030	ppb	0.030	84.91	52	1000	
Ba	137	3	115	36.055	ppb	36.055	3.98	7417	5000	
Tl	205	3	193	0.032	ppb	0.032	27.25	200	2000	
(Pb)	206	3	193	0.409	ppb	0.409	15.38	651	100	
(Pb)	207	3	193	0.382	ppb	0.382	14.79	690	100	
Pb	208	3	193	0.387	ppb	0.387	8.06	2630	5000	
Th	232	3	193	-0.218	ppb	-0.218	-33.20	5357	2000	
U	238	3	193	0.494	ppb	0.494	5.28	3392	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3543729	1.02	3535116	100.24	60	120	
Sc (IS)	45	3	HMI He	511036	1.85	505423	101.11	60	120	
Ge Internal standard	72	2	HMI H2	2204109	2.30	2359166	93.43	60	120	
Ge Internal standard	72	3	HMI He	651604	0.58	680743	95.72	60	120	
In Internal Standard	115	3	HMI He	2345384	0.67	2361818	99.30	60	120	
Ir (IS)	193	3	HMI He	5166531	0.59	5045699	102.39	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A@10
Data File Name	313SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:33:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	10262.685	ppb	10262.685	1.47	919270	400000	
Mg	24	3	45	7541.734	ppb	7541.734	0.89	353946	400000	
Al	27	3	45	-1.049	ppb	-1.049	-5.66	100	400000	
K	39	3	45	577.266	ppb	577.266	4.72	46279	400000	
Ca	40	2	45	20605.234	ppb	20605.234	1.53	9374303	400000	
V	51	3	72	0.155	ppb	0.155	91.93	636	2000	
Cr	52	3	72	0.380	ppb	0.380	38.65	2407	5000	
Mn	55	3	72	21.135	ppb	21.135	2.83	6860	10000	
Fe	56	2	72	68.467	ppb	68.467	7.34	126993	10000	
Co	59	3	72	0.317	ppb	0.317	12.19	376	2000	
Ni	60	3	72	1.146	ppb	1.146	30.79	791	5000	
Cu	63	3	72	0.198	ppb	0.198	21.52	438	5000	
Zn	66	3	72	4.185	ppb	4.185	27.59	640	5000	
As	75	3	72	0.176	ppb	0.176	119.68	45	2000	
Se	78	2	72	0.105	ppb	0.105	26.11	5	2000	
Sr	88	3	72	84.742	ppb	84.742	0.76	36514	4000	
Mo	95	3	115	0.096	ppb	0.096	18.23	68	2000	
Ag	107	3	115	0.019	ppb	0.019	24.32	43	100	
Cd	111	3	115	0.032	ppb	0.032	158.40	8	2000	
Sn	120	3	115	0.366	ppb	0.366	19.02	803	2000	
Sb	121	3	115	0.011	ppb	0.011	156.03	42	1000	
Ba	137	3	115	33.946	ppb	33.946	5.02	7297	5000	
Tl	205	3	193	0.005	ppb	0.005	55.72	120	2000	
(Pb)	206	3	193	0.425	ppb	0.425	6.40	673	100	
(Pb)	207	3	193	0.434	ppb	0.434	23.46	743	100	
Pb	208	3	193	0.397	ppb	0.397	16.01	2694	5000	
Th	232	3	193	-0.364	ppb	-0.364	-19.20	4792	2000	
U	238	3	193	0.495	ppb	0.495	0.42	3430	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3497479	1.57	3535116	98.94	60	120	
Sc (IS)	45	3	HMI He	513095	1.05	505423	101.52	60	120	
Ge Internal standard	72	2	HMI H2	2182800	1.78	2359166	92.52	60	120	
Ge Internal standard	72	3	HMI He	653132	1.94	680743	95.94	60	120	
In Internal Standard	115	3	HMI He	2451496	2.27	2361818	103.80	60	120	
Ir (IS)	193	3	HMI He	5216644	2.77	5045699	103.39	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A@10
Data File Name	314SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:34:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	15771.825	ppb	15771.825	1.21	1417248	400000	
Mg	24	3	45	5895.950	ppb	5895.950	0.60	279039	400000	
Al	27	3	45	1.926	ppb	1.926	134.79	153	400000	
K	39	3	45	464.868	ppb	464.868	9.85	42366	400000	
Ca	40	2	45	20568.645	ppb	20568.645	2.48	9742220	400000	
V	51	3	72	0.317	ppb	0.317	3.59	708	2000	
Cr	52	3	72	0.795	ppb	0.795	24.06	2629	5000	
Mn	55	3	72	32.292	ppb	32.292	1.44	10292	10000	
Fe	56	2	72	18.996	ppb	18.996	24.42	67160	10000	
Co	59	3	72	0.204	ppb	0.204	21.87	258	2000	
Ni	60	3	72	5.047	ppb	5.047	7.88	1881	5000	
Cu	63	3	72	0.175	ppb	0.175	32.48	416	5000	
Zn	66	3	72	4.194	ppb	4.194	12.97	635	5000	
As	75	3	72	0.219	ppb	0.219	99.12	48	2000	
Se	78	2	72	0.131	ppb	0.131	101.68	7	2000	
Sr	88	3	72	110.974	ppb	110.974	1.59	47292	4000	
Mo	95	3	115	0.113	ppb	0.113	26.46	73	2000	
Ag	107	3	115	0.015	ppb	0.015	65.99	37	100	
Cd	111	3	115	0.000	ppb	0.000	18160.17	2	2000	
Sn	120	3	115	0.179	ppb	0.179	15.73	661	2000	
Sb	121	3	115	0.013	ppb	0.013	66.65	42	1000	
Ba	137	3	115	41.416	ppb	41.416	1.59	8624	5000	
Tl	205	3	193	0.007	ppb	0.007	200.58	123	2000	
(Pb)	206	3	193	0.407	ppb	0.407	8.47	651	100	
(Pb)	207	3	193	0.456	ppb	0.456	20.40	758	100	
Pb	208	3	193	0.386	ppb	0.386	2.56	2632	5000	
Th	232	3	193	-0.434	ppb	-0.434	-12.85	4469	2000	
U	238	3	193	0.434	ppb	0.434	6.94	3141	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3642046	2.46	3535116	103.02	60	120	
Sc (IS)	45	3	HMI He	517351	1.32	505423	102.36	60	120	
Ge Internal standard	72	2	HMI H2	2227174	1.21	2359166	94.41	60	120	
Ge Internal standard	72	3	HMI He	646162	2.57	680743	94.92	60	120	
In Internal Standard	115	3	HMI He	2375162	1.22	2361818	100.57	60	120	
Ir (IS)	193	3	HMI He	5177986	1.94	5045699	102.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	315_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:36:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.645	ppb	3.574	1751	50	99.3	90	110	
Na	23	3	45	48341.984	ppb	1.150	4219381	51000	94.8	90	110	
Mg	24	3	45	10407.657	ppb	2.103	481443	11000	94.6	90	110	
Al	27	3	45	1017.163	ppb	4.280	17759	1000	101.7	90	110	
K	39	3	45	10582.439	ppb	1.569	419832	11000	96.2	90	110	
Ca	40	2	45	10520.169	ppb	1.373	4833842	11000	95.6	90	110	
V	51	3	72	54.400	ppb	1.999	25863	50	108.8	90	110	
Cr	52	3	72	55.526	ppb	1.884	33999	50	111.1	90	110	>+\-10%
Mn	55	3	72	54.607	ppb	3.151	16795	50	109.2	90	110	
Fe	56	2	72	1112.380	ppb	4.814	1402540	1000	111.2	90	110	>+\-10%
Co	59	3	72	54.068	ppb	1.154	53199	50	108.1	90	110	
Ni	60	3	72	54.326	ppb	1.141	15311	50	108.7	90	110	
Cu	63	3	72	55.746	ppb	0.618	41481	50	111.5	90	110	>+\-10%
Zn	66	3	72	56.486	ppb	0.843	6727	50	113.0	90	110	>+\-10%
As	75	3	72	54.405	ppb	2.870	4762	50	108.8	90	110	
Se	78	2	72	54.508	ppb	2.554	2441	50	109.0	90	110	
Sr	88	3	72	111.350	ppb	0.512	46093	100	111.4	90	110	>+\-10%
Mo	95	3	115	50.429	ppb	0.745	20459	50	100.9	90	110	
Ag	107	3	115	49.751	ppb	1.164	68551	50	99.5	90	110	
Cd	111	3	115	50.966	ppb	0.443	10074	50	101.9	90	110	
Sn	120	3	115	49.347	ppb	1.745	31106	50	98.7	90	110	
Sb	121	3	115	50.352	ppb	1.160	31528	50	100.7	90	110	
Ba	137	3	115	48.955	ppb	1.540	10137	50	97.9	90	110	
Tl	205	3	193	51.449	ppb	2.437	159107	50	102.9	90	110	
(Pb)	206	3	193	51.729	ppb	2.601	53091	50	103.5	90	110	
(Pb)	207	3	193	51.247	ppb	2.013	47406	50	102.5	90	110	
Pb	208	3	193	51.310	ppb	3.350	213150	50	102.6	90	110	
Th	232	3	193	50.688	ppb	1.557	217565	50	101.4	90	110	
U	238	3	193	52.127	ppb	3.642	223498	50	104.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3528763	1.82	3535116	99.82	60	120	
Sc (IS)	45	3	HMI He	505848	1.19	505423	100.08	60	120	
Ge Internal standard	72	2	HMI H2	2158858	1.62	2359166	91.51	60	120	
Ge Internal standard	72	3	HMI He	627496	0.38	680743	92.18	60	120	
In Internal Standard	115	3	HMI He	2363551	1.18	2361818	100.07	60	120	
Ir (IS)	193	3	HMI He	5174825	2.43	5045699	102.56	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	316_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:39:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.002	ppb	5442.7	2	0.5	
Na	23	3	45	30.015	ppb	21.6	15808	25	>RL
Mg	24	3	45	0.735	ppb	199.9	187	25	
Al	27	3	45	-1.160	ppb	-57.7	97	15	
K	39	3	45	-21.569	ppb	-122.2	23219	50	
V	51	3	72	0.084	ppb	168.0	586	1	
Cr	52	3	72	0.545	ppb	13.3	2439	1	
Mn	55	3	72	0.192	ppb	69.2	212	0.5	
Co	59	3	72	-0.003	ppb	-175.5	48	0.5	
Ni	60	3	72	0.838	ppb	27.4	685	1	
Cu	63	3	72	0.006	ppb	331.8	283	1	
Zn	66	3	72	0.628	ppb	19.2	203	5	
As	75	3	72	0.214	ppb	164.9	47	1	
Se	78	2	72	0.137	ppb	68.5	7	1	
Sr	88	3	72	-0.024	ppb	-29.3	13	0.5	
Mo	95	3	115	0.099	ppb	65.0	67	0.5	
Ag	107	3	115	-0.002	ppb	-222.9	12	1	
Cd	111	3	115	0.009	ppb	171.3	3	0.5	
Sn	120	3	115	0.213	ppb	25.0	676	1	
Sb	121	3	115	0.022	ppb	134.4	47	0.6	
Ba	137	3	115	-0.015	ppb	-153.5	30	0.5	
Tl	205	3	193	0.028	ppb	25.0	188	0.1	
(Pb)	206	3	193	-0.021	ppb	-162.6	212	1	
(Pb)	207	3	193	-0.007	ppb	-228.8	332	1	
Pb	208	3	193	-0.014	ppb	-43.1	973	0.5	
Th	232	3	193	2.487	ppb	12.7	16568	1	>RL
U	238	3	193	0.013	ppb	280.4	1338	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3590007	2.26	3535116	101.55	60	120	
Sc (IS)	45	3	HMI He	505833	1.03	505423	100.08	60	120	
Ge Internal standard	72	2	HMI H2	2128978	0.38	2359166	90.24	60	120	
Ge Internal standard	72	3	HMI He	635267	0.88	680743	93.32	60	120	
In Internal Standard	115	3	HMI He	2352965	1.37	2361818	99.63	60	120	
Ir (IS)	193	3	HMI He	5152464	1.09	5045699	102.12	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608636/1-A
Data File Name	317_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:40:50-06:00
Sample Type	Blank
Dilution	1
Comment	608636 6020b
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.046	ppb	0	0	0.5
Na	23	3	45	19.128	ppb	20.10431403	15000	25
Mg	24	3	45	1.544	ppb	34.04804705	227	25
Al	27	3	45	-2.739	ppb	-20.27437345	70	15
K	39	3	45	-22.891	ppb	-175.1159629	23386	50
Ca	40	2	45	4.696	ppb	11.13416432	12331	200
V	51	3	72	0.076	ppb	155.7592463	581	1
Cr	52	3	72	0.526	ppb	54.75986058	2424	1
Mn	55	3	72	0.187	ppb	55.79688735	210	0.5
Fe	56	2	72	7.863	ppb	36.55504845	51484	50
Co	59	3	72	0.024	ppb	100.7951035	75	0.5
Ni	60	3	72	0.168	ppb	129.8976574	498	1
Cu	63	3	72	0.038	ppb	223.0146129	307	1
Zn	66	3	72	0.362	ppb	26.89432818	172	5
As	75	3	72	0.232	ppb	127.2844153	48	1
(Se)	78	3	72	1.530	ppb	259.7864212	30	1
Sr	88	3	72	0.040	ppb	139.1878506	40	0.5
Mo	95	3	115	0.054	ppb	60.09709859	50	0.5
Ag	107	3	115	0.001	ppb	587.348189	17	1
Cd	111	3	115	-0.008	ppb	0	0	0.5
Sn	120	3	115	-0.085	ppb	-128.583389	503	1
Sb	121	3	115	0.041	ppb	132.7315572	60	0.6
Ba	137	3	115	0.180	ppb	33.46057732	72	0.5
Tl	205	3	193	0.000	ppb	-1109.485115	102	0.1
(Pb)	206	3	193	-0.028	ppb	-129.9232032	207	1
(Pb)	207	3	193	0.025	ppb	144.0738827	363	1
Pb	208	3	193	-0.019	ppb	-58.35542812	956	0.5
Th	232	3	193	0.090	ppb	30.9366016	6673	1
U	238	3	193	0.024	ppb	51.00239527	1399	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3554189	2.13	3535116	100.54	60	120	
Sc (IS)	45	3	HMI He	510729	0.65	505423	101.05	60	120	
Ge Internal standard	72	2	HMI H2	2158169	0.38	2359166	91.48	60	120	
Ge Internal standard	72	3	HMI He	634614	1.34	680743	93.22	60	120	
In Internal Standard	115	3	HMI He	2407122	1.25	2361818	101.92	60	120	
Ir (IS)	193	3	HMI He	5191085	2.53	5045699	102.88	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608636/19-A
Data File Name	318_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:42:41-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608636 6020b
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	37.962	37.962	ppb	4.626	1329	40	94.9	80	120	
Na	23	3	45	767.533	767.533	ppb	2.330	80776	40	1918.8	80	120	>+/-20%
Mg	24	3	45	710.915	710.915	ppb	2.929	33359	40	1777.3	80	120	>+/-20%
Al	27	3	45	756.549	756.549	ppb	3.507	13380	40	1891.4	80	120	>+/-20%
K	39	3	45	726.949	726.949	ppb	6.038	51727	40	1817.4	80	120	>+/-20%
Ca	40	2	45	811.514	811.514	ppb	1.200	386295	40	2028.8	80	120	>+/-20%
V	51	3	72	41.240	41.240	ppb	1.169	19989	40	103.1	80	120	
Cr	52	3	72	42.009	42.009	ppb	1.580	26572	40	105.0	80	120	
Mn	55	3	72	42.808	42.808	ppb	0.658	13370	40	107.0	80	120	
Fe	56	2	72	845.644	845.644	ppb	0.896	1081138	40	2114.1	80	120	>+/-20%
(Fe)	56	3	72	824.254	824.254	ppb	1.473	420075	40	2060.6	80	120	>+/-20%
Co	59	3	72	41.830	41.830	ppb	1.496	41700	40	104.6	80	120	
Ni	60	3	72	42.415	42.415	ppb	2.964	12206	40	106.0	80	120	
Cu	63	3	72	43.114	43.114	ppb	1.133	32559	40	107.8	80	120	
Zn	66	3	72	43.981	43.981	ppb	0.433	5333	40	110.0	80	120	
As	75	3	72	39.646	39.646	ppb	2.614	3522	40	99.1	80	120	
Se	78	2	72	43.076	43.076	ppb	5.733	1936	40	107.7	80	120	
(Se)	78	3	72	47.576	47.576	ppb	18.039	230	40	118.9	80	120	
Sr	88	3	72	83.610	83.610	ppb	1.288	35059	40	209.0	80	120	>+/-20%
Mo	95	3	115	39.172	39.172	ppb	2.153	15878	40	97.9	80	120	
Ag	107	3	115	40.251	40.251	ppb	0.906	55403	40	100.6	80	120	
Cd	111	3	115	38.605	38.605	ppb	1.858	7622	40	96.5	80	120	
Sn	120	3	115	37.708	37.708	ppb	0.770	23871	40	94.3	80	120	
Sb	121	3	115	38.876	38.876	ppb	1.390	24322	40	97.2	80	120	
Ba	137	3	115	39.715	39.715	ppb	2.833	8222	40	99.3	80	120	
Tl	205	3	193	39.608	39.608	ppb	0.687	124218	40	99.0	80	120	
(Pb)	206	3	193	39.506	39.506	ppb	0.348	41166	40	98.8	80	120	
(Pb)	207	3	193	38.568	38.568	ppb	2.746	36254	40	96.4	80	120	
Pb	208	3	193	39.545	39.545	ppb	1.253	166821	40	98.9	80	120	
Th	232	3	193	36.797	36.797	ppb	1.320	161826	40	92.0	80	120	
U	238	3	193	40.130	40.130	ppb	1.302	174783	40	100.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3566014	0.53	3535116	100.87	60	120	
Sc (IS)	45	3	HMI He	510928	1.15	505423	101.09	60	120	
Ge Internal standard	72	2	HMI H2	2167601	1.03	2359166	91.88	60	120	
Ge Internal standard	72	3	HMI He	635565	0.59	680743	93.36	60	120	
In Internal Standard	115	3	HMI He	2360718	0.57	2361818	99.95	60	120	
Ir (IS)	193	3	HMI He	5245053	0.88	5045699	103.95	60	120	

Sample Report

Sample Table

Sample Name	280-174977-A-2-A
Data File Name	319SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:44:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	530.270	ppb	530.270	1.78	59896	400000	
Mg	24	3	45	14.420	ppb	14.420	18.01	828	400000	
Al	27	3	45	19.567	ppb	19.567	25.40	460	400000	
K	39	3	45	-25.981	ppb	-25.981	-156.43	23266	400000	
Ca	40	2	45	133.741	ppb	133.741	1.52	71687	400000	
V	51	3	72	0.078	ppb	0.078	159.76	590	2000	
Cr	52	3	72	0.926	ppb	0.926	26.77	2689	5000	
Mn	55	3	72	2.310	ppb	2.310	13.82	875	10000	
Fe	56	2	72	34.634	ppb	34.634	9.14	84008	10000	
Co	59	3	72	0.036	ppb	0.036	30.48	88	2000	
Ni	60	3	72	0.338	ppb	0.338	95.56	551	5000	
Cu	63	3	72	0.264	ppb	0.264	7.20	481	5000	
Zn	66	3	72	0.974	ppb	0.974	23.29	247	5000	
As	75	3	72	0.169	ppb	0.169	97.68	43	2000	
Se	78	2	72	0.106	ppb	0.106	24.09	5	2000	
Sr	88	3	72	0.523	ppb	0.523	10.22	245	4000	
Mo	95	3	115	1.886	ppb	1.886	3.74	788	2000	
Ag	107	3	115	0.008	ppb	0.008	204.82	27	100	
Cd	111	3	115	0.000	ppb	0.000	-25000.59	2	2000	
Sn	120	3	115	0.238	ppb	0.238	15.99	691	2000	
Sb	121	3	115	0.105	ppb	0.105	18.61	98	1000	
Ba	137	3	115	0.759	ppb	0.759	43.78	188	5000	
Tl	205	3	193	0.022	ppb	0.022	59.06	173	2000	
(Pb)	206	3	193	0.021	ppb	0.021	106.51	258	100	
(Pb)	207	3	193	-0.001	ppb	-0.001	-3854.42	342	100	
Pb	208	3	193	0.008	ppb	0.008	114.42	1076	5000	
Th	232	3	193	1.476	ppb	1.476	10.76	12553	2000	
U	238	3	193	0.022	ppb	0.022	7.45	1399	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3542282	1.15	3535116	100.20	60	120	
Sc (IS)	45	3	HMI He	510631	0.55	505423	101.03	60	120	
Ge Internal standard	72	2	HMI H2	2151933	0.38	2359166	91.22	60	120	
Ge Internal standard	72	3	HMI He	641944	0.58	680743	94.30	60	120	
In Internal Standard	115	3	HMI He	2352964	1.67	2361818	99.63	60	120	
Ir (IS)	193	3	HMI He	5226619	1.85	5045699	103.59	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-5-A
Data File Name	320SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:46:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.097	ppb	0.097	147.58	5	2000	
Na	23	3	45	27943.364	ppb	27943.364	1.36	2455608	400000	
Mg	24	3	45	10482.176	ppb	10482.176	1.57	487119	400000	
Al	27	3	45	1.689	ppb	1.689	53.24	147	400000	
K	39	3	45	6733.950	ppb	6733.950	0.20	277142	400000	
Ca	40	2	45	34923.832	ppb	34923.832	1.00	16510182	400000	
V	51	3	72	17.121	ppb	17.121	4.59	8813	2000	
Cr	52	3	72	3.403	ppb	3.403	11.02	4195	5000	
Mn	55	3	72	3.726	ppb	3.726	4.15	1333	10000	
Fe	56	2	72	134.708	ppb	134.708	1.27	211301	10000	
Co	59	3	72	0.030	ppb	0.030	23.44	83	2000	
Ni	60	3	72	0.999	ppb	0.999	16.45	746	5000	
Cu	63	3	72	0.120	ppb	0.120	36.04	376	5000	
Zn	66	3	72	3.989	ppb	3.989	1.14	615	5000	
As	75	3	72	6.707	ppb	6.707	17.67	633	2000	
Se	78	2	72	3.204	ppb	3.204	5.52	147	2000	
Sr	88	3	72	198.432	ppb	198.432	1.12	85072	4000	
Mo	95	3	115	5.870	ppb	5.870	5.01	2477	2000	
Ag	107	3	115	0.003	ppb	0.003	102.20	20	100	
Cd	111	3	115	0.000	ppb	0.000	-2815.34	2	2000	
Sn	120	3	115	-0.032	ppb	-0.032	-371.79	543	2000	
Sb	121	3	115	0.176	ppb	0.176	20.57	148	1000	
Ba	137	3	115	26.628	ppb	26.628	8.15	5688	5000	
Tl	205	3	193	0.004	ppb	0.004	113.16	112	2000	
(Pb)	206	3	193	2.273	ppb	2.273	7.51	2514	100	
(Pb)	207	3	193	2.080	ppb	2.080	4.13	2211	100	
Pb	208	3	193	2.151	ppb	2.151	2.42	9755	5000	
Th	232	3	193	0.318	ppb	0.318	51.55	7472	2000	
U	238	3	193	2.709	ppb	2.709	3.48	12618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3635665	1.96	3535116	102.84	60	120	
Sc (IS)	45	3	HMI He	508089	0.27	505423	100.53	60	120	
Ge Internal standard	72	2	HMI H2	2206334	1.93	2359166	93.52	60	120	
Ge Internal standard	72	3	HMI He	650044	0.81	680743	95.49	60	120	
In Internal Standard	115	3	HMI He	2436780	4.13	2361818	103.17	60	120	
Ir (IS)	193	3	HMI He	5084375	1.34	5045699	100.77	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-7-A
Data File Name	321SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:48:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	27928.920	ppb	27928.920	2.00	2458872	400000	
Mg	24	3	45	9155.057	ppb	9155.057	1.54	426232	400000	
Al	27	3	45	-0.055	ppb	-0.055	-2916.40	117	400000	
K	39	3	45	5859.896	ppb	5859.896	0.82	244760	400000	
Ca	40	2	45	28723.013	ppb	28723.013	2.06	13255764	400000	
V	51	3	72	22.439	ppb	22.439	0.96	11249	2000	
Cr	52	3	72	2.656	ppb	2.656	17.65	3707	5000	
Mn	55	3	72	0.707	ppb	0.707	10.64	375	10000	
Fe	56	2	72	15.816	ppb	15.816	24.25	62798	10000	
Co	59	3	72	-0.005	ppb	-0.005	-369.95	47	2000	
Ni	60	3	72	0.591	ppb	0.591	18.62	623	5000	
Cu	63	3	72	0.048	ppb	0.048	238.10	318	5000	
Zn	66	3	72	3.017	ppb	3.017	17.24	491	5000	
As	75	3	72	7.908	ppb	7.908	6.97	733	2000	
Se	78	2	72	2.411	ppb	2.411	19.99	111	2000	
Sr	88	3	72	158.759	ppb	158.759	2.11	67274	4000	
Mo	95	3	115	4.540	ppb	4.540	5.95	1918	2000	
Ag	107	3	115	0.014	ppb	0.014	89.27	35	100	
Cd	111	3	115	0.016	ppb	0.016	151.85	5	2000	
Sn	120	3	115	-0.087	ppb	-0.087	-112.15	506	2000	
Sb	121	3	115	0.183	ppb	0.183	42.64	152	1000	
Ba	137	3	115	17.091	ppb	17.091	4.54	3657	5000	
Tl	205	3	193	0.001	ppb	0.001	628.79	108	2000	
(Pb)	206	3	193	0.003	ppb	0.003	1667.30	240	100	
(Pb)	207	3	193	0.010	ppb	0.010	40.63	353	100	
Pb	208	3	193	0.006	ppb	0.006	356.96	1071	5000	
Th	232	3	193	-0.180	ppb	-0.180	-40.22	5593	2000	
U	238	3	193	1.724	ppb	1.724	1.78	8744	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3548374	0.85	3535116	100.38	60	120	
Sc (IS)	45	3	HMI He	509073	1.31	505423	100.72	60	120	
Ge Internal standard	72	2	HMI H2	2217067	3.73	2359166	93.98	60	120	
Ge Internal standard	72	3	HMI He	642547	1.09	680743	94.39	60	120	
In Internal Standard	115	3	HMI He	2427328	0.84	2361818	102.77	60	120	
Ir (IS)	193	3	HMI He	5236484	2.10	5045699	103.78	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-9-A
Data File Name	322SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:49:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.001	ppb	0.001	7653.12	2	2000	
Na	23	3	45	25486.621	ppb	25486.621	2.27	2194467	400000	
Mg	24	3	45	19044.582	ppb	19044.582	0.22	866632	400000	
Al	27	3	45	2.635	ppb	2.635	109.17	160	400000	
K	39	3	45	7352.144	ppb	7352.144	1.11	294175	400000	
Ca	40	2	45	62119.638	ppb	62119.638	0.90	28569394	400000	
V	51	3	72	19.443	ppb	19.443	3.40	9629	2000	
Cr	52	3	72	3.235	ppb	3.235	3.90	3970	5000	
Mn	55	3	72	0.846	ppb	0.846	27.67	410	10000	
Fe	56	2	72	18.565	ppb	18.565	13.85	64269	10000	
Co	59	3	72	0.046	ppb	0.046	6.19	97	2000	
Ni	60	3	72	0.616	ppb	0.616	20.11	618	5000	
Cu	63	3	72	0.387	ppb	0.387	12.49	563	5000	
Zn	66	3	72	3.384	ppb	3.384	1.64	525	5000	
As	75	3	72	5.727	ppb	5.727	4.17	528	2000	
Se	78	2	72	6.319	ppb	6.319	3.99	282	2000	
Sr	88	3	72	354.225	ppb	354.225	0.76	147171	4000	
Mo	95	3	115	6.517	ppb	6.517	6.54	2612	2000	
Ag	107	3	115	0.005	ppb	0.005	150.11	22	100	
Cd	111	3	115	0.000	ppb	0.000	12043.03	2	2000	
Sn	120	3	115	-0.046	ppb	-0.046	-92.14	508	2000	
Sb	121	3	115	0.384	ppb	0.384	22.84	268	1000	
Ba	137	3	115	76.231	ppb	76.231	0.87	15445	5000	
Tl	205	3	193	0.005	ppb	0.005	42.39	115	2000	
(Pb)	206	3	193	-0.071	ppb	-0.071	-40.96	158	100	
(Pb)	207	3	193	0.023	ppb	0.023	260.20	353	100	
Pb	208	3	193	-0.023	ppb	-0.023	-85.64	920	5000	
Th	232	3	193	-0.311	ppb	-0.311	-28.99	4879	2000	
U	238	3	193	9.434	ppb	9.434	1.68	40668	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3538024	2.24	3535116	100.08	60	120	
Sc (IS)	45	3	HMI He	497608	0.59	505423	98.45	60	120	
Ge Internal standard	72	2	HMI H2	2147357	1.71	2359166	91.02	60	120	
Ge Internal standard	72	3	HMI He	630037	0.37	680743	92.55	60	120	
In Internal Standard	115	3	HMI He	2314935	0.94	2361818	98.01	60	120	
Ir (IS)	193	3	HMI He	5067184	1.06	5045699	100.43	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-10-A
Data File Name	323SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:52:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	24829.367	ppb	24829.367	2.04	2136099	400000	
Mg	24	3	45	18036.696	ppb	18036.696	2.21	819926	400000	
Al	27	3	45	5.016	ppb	5.016	59.43	200	400000	
K	39	3	45	7027.693	ppb	7027.693	1.14	281923	400000	
Ca	40	2	45	62138.428	ppb	62138.428	2.94	27909528	400000	
V	51	3	72	19.117	ppb	19.117	2.98	9482	2000	
Cr	52	3	72	3.114	ppb	3.114	4.70	3904	5000	
Mn	55	3	72	0.633	ppb	0.633	20.72	345	10000	
Fe	56	2	72	13.619	ppb	13.619	20.82	58341	10000	
Co	59	3	72	0.056	ppb	0.056	36.75	107	2000	
Ni	60	3	72	0.614	ppb	0.614	25.74	618	5000	
Cu	63	3	72	0.131	ppb	0.131	100.40	373	5000	
Zn	66	3	72	3.281	ppb	3.281	10.84	513	5000	
As	75	3	72	5.704	ppb	5.704	5.29	526	2000	
Se	78	2	72	6.545	ppb	6.545	13.80	293	2000	
Sr	88	3	72	342.492	ppb	342.492	1.60	142389	4000	
Mo	95	3	115	5.989	ppb	5.989	4.69	2382	2000	
Ag	107	3	115	0.000	ppb	0.000	1281.69	15	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.157	ppb	-0.157	-101.52	436	2000	
Sb	121	3	115	0.292	ppb	0.292	16.30	210	1000	
Ba	137	3	115	74.307	ppb	74.307	4.06	14919	5000	
Tl	205	3	193	0.006	ppb	0.006	262.06	118	2000	
(Pb)	206	3	193	-0.042	ppb	-0.042	-73.84	188	100	
(Pb)	207	3	193	-0.042	ppb	-0.042	-62.67	297	100	
Pb	208	3	193	-0.039	ppb	-0.039	-36.41	860	5000	
Th	232	3	193	-0.419	ppb	-0.419	-6.40	4460	2000	
U	238	3	193	9.101	ppb	9.101	2.29	39518	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3455321	1.11	3535116	97.74	60	120	
Sc (IS)	45	3	HMI He	497069	1.13	505423	98.35	60	120	
Ge Internal standard	72	2	HMI H2	2151682	0.78	2359166	91.21	60	120	
Ge Internal standard	72	3	HMI He	630452	0.72	680743	92.61	60	120	
In Internal Standard	115	3	HMI He	2294832	1.31	2361818	97.16	60	120	
Ir (IS)	193	3	HMI He	5098570	1.22	5045699	101.05	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	324_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:54:02-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.761	ppb	3.599	1736	50	103.5	90	110	
Na	23	3	45	49004.735	ppb	1.549	4140061	51000	96.1	90	110	
Mg	24	3	45	10503.851	ppb	0.606	470274	11000	95.5	90	110	
Al	27	3	45	1040.575	ppb	2.457	17582	1000	104.1	90	110	
K	39	3	45	10431.775	ppb	1.819	400800	11000	94.8	90	110	
Ca	40	2	45	10857.125	ppb	3.206	4803829	11000	98.7	90	110	
V	51	3	72	55.725	ppb	2.430	25426	50	111.5	90	110	>+\-10%
Cr	52	3	72	55.692	ppb	2.138	32740	50	111.4	90	110	>+\-10%
Mn	55	3	72	54.125	ppb	2.505	15986	50	108.2	90	110	
Fe	56	2	72	1129.556	ppb	0.880	1352343	1000	113.0	90	110	>+\-10%
Co	59	3	72	53.818	ppb	0.924	50851	50	107.6	90	110	
Ni	60	3	72	54.850	ppb	2.162	14839	50	109.7	90	110	
Cu	63	3	72	54.857	ppb	1.443	39203	50	109.7	90	110	
Zn	66	3	72	56.881	ppb	2.882	6503	50	113.8	90	110	>+\-10%
As	75	3	72	54.017	ppb	6.398	4539	50	108.0	90	110	
Se	78	2	72	57.112	ppb	4.169	2428	50	114.2	90	110	>+\-10%
Sr	88	3	72	108.429	ppb	1.560	43102	100	108.4	90	110	
Mo	95	3	115	51.203	ppb	1.927	20132	50	102.4	90	110	
Ag	107	3	115	51.095	ppb	1.482	68235	50	102.2	90	110	
Cd	111	3	115	52.298	ppb	3.717	10017	50	104.6	90	110	
Sn	120	3	115	51.936	ppb	1.266	31707	50	103.9	90	110	
Sb	121	3	115	51.097	ppb	1.584	31012	50	102.2	90	110	
Ba	137	3	115	50.207	ppb	2.987	10076	50	100.4	90	110	
Tl	205	3	193	51.283	ppb	0.687	153418	50	102.6	90	110	
(Pb)	206	3	193	52.037	ppb	0.345	51661	50	104.1	90	110	
(Pb)	207	3	193	51.098	ppb	0.765	45724	50	102.2	90	110	
Pb	208	3	193	51.595	ppb	0.301	207362	50	103.2	90	110	
Th	232	3	193	50.660	ppb	1.510	210249	50	101.3	90	110	
U	238	3	193	52.042	ppb	0.502	215897	50	104.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3397839	0.36	3535116	96.12	60	120	
Sc (IS)	45	3	HMI He	489530	2.03	505423	96.86	60	120	
Ge Internal standard	72	2	HMI H2	2049992	1.74	2359166	86.89	60	120	
Ge Internal standard	72	3	HMI He	602613	1.18	680743	88.52	60	120	
In Internal Standard	115	3	HMI He	2290869	1.11	2361818	97.00	60	120	
Ir (IS)	193	3	HMI He	5004027	0.22	5045699	99.17	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	325_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:55:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	40.801	ppb	5.4	16316	25	>RL
Mg	24	3	45	2.232	ppb	89.9	250	25	
Al	27	3	45	-1.810	ppb	-134.7	83	15	
K	39	3	45	-36.448	ppb	-98.6	22086	50	
V	51	3	72	0.192	ppb	105.2	616	1	
Cr	52	3	72	0.514	ppb	21.1	2342	1	
Mn	55	3	72	0.315	ppb	38.1	242	0.5	
Co	59	3	72	-0.005	ppb	-574.1	45	0.5	
Ni	60	3	72	0.516	ppb	48.4	576	1	
Cu	63	3	72	0.021	ppb	240.7	285	1	
Zn	66	3	72	0.380	ppb	16.2	168	5	
As	75	3	72	0.250	ppb	84.5	48	1	
Se	78	2	72	0.094	ppb	29.7	5	1	
Sr	88	3	72	0.035	ppb	175.0	37	0.5	
Mo	95	3	115	0.038	ppb	82.9	42	0.5	
Ag	107	3	115	0.010	ppb	78.0	28	1	
Cd	111	3	115	0.000	ppb	10981.3	2	0.5	
Sn	120	3	115	0.187	ppb	53.6	651	1	
Sb	121	3	115	0.041	ppb	73.8	58	0.6	
Ba	137	3	115	0.102	ppb	60.5	53	0.5	
Tl	205	3	193	0.036	ppb	10.5	210	0.1	
(Pb)	206	3	193	-0.047	ppb	-68.1	183	1	
(Pb)	207	3	193	0.027	ppb	164.2	358	1	
Pb	208	3	193	-0.018	ppb	-122.1	945	0.5	
Th	232	3	193	1.036	ppb	16.6	10431	1	>RL
U	238	3	193	0.019	ppb	129.4	1349	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3361732	0.43	3535116	95.10	60	120	
Sc (IS)	45	3	HMI He	492927	0.46	505423	97.53	60	120	
Ge Internal standard	72	2	HMI H2	2100696	2.34	2359166	89.04	60	120	
Ge Internal standard	72	3	HMI He	614823	1.11	680743	90.32	60	120	
In Internal Standard	115	3	HMI He	2323185	0.52	2361818	98.36	60	120	
Ir (IS)	193	3	HMI He	5092048	2.40	5045699	100.92	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-E
Data File Name	326SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:57:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	29000.961	ppb	29000.961	2.73	2505101	400000	
Mg	24	3	45	3362.944	ppb	3362.944	0.58	153733	400000	
Al	27	3	45	1.634	ppb	1.634	72.10	143	400000	
K	39	3	45	9224.257	ppb	9224.257	0.40	364415	400000	
Ca	40	2	45	13097.203	ppb	13097.203	1.75	6069606	400000	
V	51	3	72	0.941	ppb	0.941	7.01	1021	2000	
Cr	52	3	72	0.711	ppb	0.711	27.24	2614	5000	
Mn	55	3	72	5.852	ppb	5.852	7.83	2019	10000	
Fe	56	2	72	103.714	ppb	103.714	3.93	172088	10000	
Co	59	3	72	0.091	ppb	0.091	15.90	147	2000	
Ni	60	3	72	0.565	ppb	0.565	31.15	628	5000	
Cu	63	3	72	0.023	ppb	0.023	277.30	305	5000	
Zn	66	3	72	1.178	ppb	1.178	28.69	277	5000	
As	75	3	72	1.534	ppb	1.534	15.84	168	2000	
Se	78	2	72	0.060	ppb	0.060	43.89	3	2000	
Sr	88	3	72	157.496	ppb	157.496	1.80	68047	4000	
Mo	95	3	115	6.308	ppb	6.308	1.34	2622	2000	
Ag	107	3	115	0.015	ppb	0.015	33.86	37	100	
Cd	111	3	115	0.016	ppb	0.016	262.82	5	2000	
Sn	120	3	115	0.022	ppb	0.022	288.21	570	2000	
Sb	121	3	115	0.054	ppb	0.054	65.04	68	1000	
Ba	137	3	115	37.292	ppb	37.292	4.24	7845	5000	
Tl	205	3	193	0.009	ppb	0.009	69.07	130	2000	
(Pb)	206	3	193	-0.056	ppb	-0.056	-62.38	178	100	
(Pb)	207	3	193	-0.006	ppb	-0.006	-948.88	337	100	
Pb	208	3	193	-0.030	ppb	-0.030	-98.50	915	5000	
Th	232	3	193	-0.150	ppb	-0.150	-42.50	5700	2000	
U	238	3	193	0.084	ppb	0.084	15.81	1663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3559743	1.65	3535116	100.70	60	120	
Sc (IS)	45	3	HMI He	499467	0.95	505423	98.82	60	120	
Ge Internal standard	72	2	HMI H2	2201398	1.72	2359166	93.31	60	120	
Ge Internal standard	72	3	HMI He	655070	0.31	680743	96.23	60	120	
In Internal Standard	115	3	HMI He	2399504	1.49	2361818	101.60	60	120	
Ir (IS)	193	3	HMI He	5218069	0.43	5045699	103.42	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-Esd@5
Data File Name	327SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:59:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	6083.618	ppb	6083.618	1.00	531233	400000	
Mg	24	3	45	710.660	ppb	710.660	0.80	32333	400000	
Al	27	3	45	0.724	ppb	0.724	202.13	127	400000	
K	39	3	45	2016.212	ppb	2016.212	1.79	97370	400000	
Ca	40	2	45	2869.761	ppb	2869.761	1.65	1314596	400000	
V	51	3	72	0.251	ppb	0.251	25.22	678	2000	
Cr	52	3	72	0.098	ppb	0.098	687.04	2217	5000	
Mn	55	3	72	2.584	ppb	2.584	9.55	968	10000	
Fe	56	2	72	25.373	ppb	25.373	17.82	72548	10000	
Co	59	3	72	0.027	ppb	0.027	34.00	80	2000	
Ni	60	3	72	0.332	ppb	0.332	24.20	555	5000	
Cu	63	3	72	0.117	ppb	0.117	29.35	373	5000	
Zn	66	3	72	3.538	ppb	3.538	10.72	558	5000	
As	75	3	72	0.257	ppb	0.257	54.00	52	2000	
Se	78	2	72	0.017	ppb	0.017	156.72	1	2000	
Sr	88	3	72	34.131	ppb	34.131	1.20	14599	4000	
Mo	95	3	115	1.365	ppb	1.365	5.95	578	2000	
Ag	107	3	115	0.012	ppb	0.012	34.69	32	100	
Cd	111	3	115	0.000	ppb	0.000	25470.54	2	2000	
Sn	120	3	115	0.138	ppb	0.138	83.11	631	2000	
Sb	121	3	115	0.027	ppb	0.027	62.10	50	1000	
Ba	137	3	115	8.120	ppb	8.120	7.89	1704	5000	
Tl	205	3	193	0.006	ppb	0.006	118.85	120	2000	
(Pb)	206	3	193	0.339	ppb	0.339	9.38	573	100	
(Pb)	207	3	193	0.342	ppb	0.342	3.83	645	100	
Pb	208	3	193	0.331	ppb	0.331	8.30	2371	5000	
Th	232	3	193	-0.262	ppb	-0.262	-41.24	5112	2000	
U	238	3	193	0.038	ppb	0.038	28.01	1433	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3498154	0.49	3535116	98.95	60	120	
Sc (IS)	45	3	HMI He	495282	0.32	505423	97.99	60	120	
Ge Internal standard	72	2	HMI H2	2149410	1.92	2359166	91.11	60	120	
Ge Internal standard	72	3	HMI He	647714	1.54	680743	95.15	60	120	
In Internal Standard	115	3	HMI He	2356104	1.77	2361818	99.76	60	120	
Ir (IS)	193	3	HMI He	5104873	0.52	5045699	101.17	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-F MS
Data File Name	328SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:01:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	7315.738	ppb	7315.738	104.33	764302	400000	
Mg	24	3	45	1021.024	ppb	1021.024	105.48	55390	400000	
Al	27	3	45	194.167	ppb	194.167	107.97	4082	400000	
K	39	3	45	2417.410	ppb	2417.410	119.37	136813	400000	
Ca	40	2	45	42.648	ppb	42.648	67.34	7606	400000	
V	51	3	72	9.601	ppb	9.601	115.94	5834	2000	
Cr	52	3	72	10.156	ppb	10.156	129.37	9402	5000	
Mn	55	3	72	12.104	ppb	12.104	108.84	4461	10000	
Fe	56	2	72	-18.354	ppb	-18.354	-28.28	5280	10000	
Co	59	3	72	10.424	ppb	10.424	109.30	11853	2000	
Ni	60	3	72	10.097	ppb	10.097	117.78	3756	5000	
Cu	63	3	72	10.651	ppb	10.651	111.93	9389	5000	
Zn	66	3	72	10.062	ppb	10.062	120.19	1501	5000	
As	75	3	72	9.808	ppb	9.808	109.64	1020	2000	
Se	78	2	72	0.180	ppb	0.180	116.27	2	2000	
Sr	88	3	72	64.796	ppb	64.796	110.61	30760	4000	
Mo	95	3	115	11.152	ppb	11.152	117.86	5064	2000	
Ag	107	3	115	9.706	ppb	9.706	111.46	15107	100	
Cd	111	3	115	9.947	ppb	9.947	115.37	2201	2000	
Sn	120	3	115	9.081	ppb	9.081	127.92	6885	2000	
Sb	121	3	115	9.202	ppb	9.202	116.56	6469	1000	
Ba	137	3	115	20.092	ppb	20.092	115.20	4689	5000	
Tl	205	3	193	9.632	ppb	9.632	114.78	34778	2000	
(Pb)	206	3	193	9.509	ppb	9.509	119.33	11538	100	
(Pb)	207	3	193	9.366	ppb	9.366	118.17	10424	100	
Pb	208	3	193	9.617	ppb	9.617	118.00	47432	5000	
Th	232	3	193	5.412	ppb	5.412	124.68	34703	2000	
U	238	3	193	9.792	ppb	9.792	117.54	50147	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	1006298	36.17	3535116	28.47	60	120	IS Failed
Sc (IS)	45	3	HMI He	720287	25.53	505423	142.51	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	621276	28.55	2359166	26.33	60	120	IS Failed
Ge Internal standard	72	3	HMI He	893930	26.70	680743	131.32	60	120	IS Failed
In Internal Standard	115	3	HMI He	3343475	27.44	2361818	141.56	60	120	IS Failed
Ir (IS)	193	3	HMI He	7464596	25.55	5045699	147.94	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-174901-A-7-G MSD
Data File Name	329SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:03:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.145	ppb	39.145	10.01	1379	2000	
Na	23	3	45	30743.078	ppb	30743.078	3.01	2682682	400000	
Mg	24	3	45	4142.862	ppb	4142.862	1.11	191302	400000	
Al	27	3	45	765.966	ppb	765.966	1.79	13373	400000	
K	39	3	45	10409.165	ppb	10409.165	1.29	412369	400000	
Ca	40	2	45	14083.654	ppb	14083.654	1.27	6451269	400000	
V	51	3	72	40.758	ppb	40.758	1.11	20320	2000	
Cr	52	3	72	39.945	ppb	39.945	0.56	26083	5000	
Mn	55	3	72	45.474	ppb	45.474	5.55	14585	10000	
Fe	56	2	72	873.713	ppb	873.713	1.13	1152491	10000	
Co	59	3	72	39.544	ppb	39.544	1.87	40527	2000	
Ni	60	3	72	40.619	ppb	40.619	2.85	12038	5000	
Cu	63	3	72	41.394	ppb	41.394	1.16	32148	5000	
Zn	66	3	72	48.372	ppb	48.372	2.14	6017	5000	
As	75	3	72	42.419	ppb	42.419	1.82	3872	2000	
Se	78	2	72	41.781	ppb	41.781	4.49	1941	2000	
Sr	88	3	72	243.788	ppb	243.788	0.32	105062	4000	
Mo	95	3	115	44.332	ppb	44.332	0.45	18150	2000	
Ag	107	3	115	39.011	ppb	39.011	2.08	54239	100	
Cd	111	3	115	38.164	ppb	38.164	0.66	7612	2000	
Sn	120	3	115	39.033	ppb	39.033	2.74	24941	2000	
Sb	121	3	115	37.550	ppb	37.550	1.44	23733	1000	
Ba	137	3	115	77.919	ppb	77.919	1.45	16260	5000	
Tl	205	3	193	39.053	ppb	39.053	1.28	120663	2000	
(Pb)	206	3	193	39.901	ppb	39.901	2.25	40956	100	
(Pb)	207	3	193	38.428	ppb	38.428	2.54	35584	100	
Pb	208	3	193	39.502	ppb	39.502	2.48	164142	5000	
Th	232	3	193	38.450	ppb	38.450	2.38	166259	2000	
U	238	3	193	39.781	ppb	39.781	1.82	170693	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3519584	1.42	3535116	99.56	60	120	
Sc (IS)	45	3	HMI He	504635	1.52	505423	99.84	60	120	
Ge Internal standard	72	2	HMI H2	2239113	1.42	2359166	94.91	60	120	
Ge Internal standard	72	3	HMI He	653459	1.28	680743	95.99	60	120	
In Internal Standard	115	3	HMI He	2384746	0.67	2361818	100.97	60	120	
Ir (IS)	193	3	HMI He	5167701	1.98	5045699	102.42	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-E pds
Data File Name	330SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:04:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	99.899	ppb	99.899	0.69	3447	2000	
Na	23	3	45	33354.369	ppb	33354.369	2.39	2916998	400000	
Mg	24	3	45	5312.063	ppb	5312.063	3.69	245919	400000	
Al	27	3	45	1992.190	ppb	1992.190	3.01	34694	400000	
K	39	3	45	11452.526	ppb	11452.526	1.42	452621	400000	
Ca	40	2	45	15198.590	ppb	15198.590	1.49	6965785	400000	
V	51	3	72	100.629	ppb	100.629	3.06	49389	2000	
Cr	52	3	72	101.586	ppb	101.586	2.74	63027	5000	
Mn	55	3	72	105.013	ppb	105.013	4.36	33517	10000	
Fe	56	2	72	1152.508	ppb	1152.508	2.50	1508422	10000	
Co	59	3	72	102.215	ppb	102.215	3.07	104783	2000	
Ni	60	3	72	100.633	ppb	100.633	3.16	29164	5000	
Cu	63	3	72	106.296	ppb	106.296	2.73	82187	5000	
Zn	66	3	72	216.215	ppb	216.215	2.93	26462	5000	
As	75	3	72	101.489	ppb	101.489	3.11	9234	2000	
Se	78	2	72	105.359	ppb	105.359	4.24	4898	2000	
Sr	88	3	72	264.751	ppb	264.751	0.95	114226	4000	
Mo	95	3	115	105.746	ppb	105.746	0.59	42499	2000	
Ag	107	3	115	26.165	ppb	26.165	3.42	35736	100	
Cd	111	3	115	98.690	ppb	98.690	2.39	19334	2000	
Sn	120	3	115	100.664	ppb	100.664	2.95	62331	2000	
Sb	121	3	115	95.246	ppb	95.246	3.10	59083	1000	
Ba	137	3	115	136.948	ppb	136.948	2.51	28049	5000	
Tl	205	3	193	99.923	ppb	99.923	1.66	309131	2000	
(Pb)	206	3	193	100.119	ppb	100.119	3.97	102567	100	
(Pb)	207	3	193	98.627	ppb	98.627	2.30	90968	100	
Pb	208	3	193	99.825	ppb	99.825	3.33	413932	5000	
Th	232	3	193	106.213	ppb	106.213	1.78	449135	2000	
U	238	3	193	209.286	ppb	209.286	3.48	893963	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3521858	1.27	3535116	99.62	60	120	
Sc (IS)	45	3	HMI He	506099	0.93	505423	100.13	60	120	
Ge Internal standard	72	2	HMI H2	2242701	1.79	2359166	95.06	60	120	
Ge Internal standard	72	3	HMI He	654292	1.91	680743	96.11	60	120	
In Internal Standard	115	3	HMI He	2343133	1.71	2361818	99.21	60	120	
Ir (IS)	193	3	HMI He	5177877	2.63	5045699	102.62	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-4-A
Data File Name	331SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:06:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.050	ppb	0.050	332.64	3	2000	
Na	23	3	45	27709.376	ppb	27709.376	2.77	2432904	400000	
Mg	24	3	45	10757.566	ppb	10757.566	0.62	499447	400000	
Al	27	3	45	2.654	ppb	2.654	50.54	163	400000	
K	39	3	45	6755.443	ppb	6755.443	0.76	277691	400000	
Ca	40	2	45	36014.999	ppb	36014.999	0.55	16535505	400000	
V	51	3	72	18.420	ppb	18.420	1.97	9362	2000	
Cr	52	3	72	3.124	ppb	3.124	10.79	3997	5000	
Mn	55	3	72	0.938	ppb	0.938	6.35	448	10000	
Fe	56	2	72	6.971	ppb	6.971	32.83	51929	10000	
Co	59	3	72	0.062	ppb	0.062	22.35	115	2000	
Ni	60	3	72	0.862	ppb	0.862	22.53	701	5000	
Cu	63	3	72	0.098	ppb	0.098	98.24	356	5000	
Zn	66	3	72	3.394	ppb	3.394	5.85	538	5000	
As	75	3	72	6.694	ppb	6.694	9.91	626	2000	
Se	78	2	72	3.197	ppb	3.197	15.75	148	2000	
Sr	88	3	72	197.080	ppb	197.080	1.03	83776	4000	
Mo	95	3	115	6.490	ppb	6.490	4.20	2641	2000	
Ag	107	3	115	0.016	ppb	0.016	29.08	37	100	
Cd	111	3	115	0.043	ppb	0.043	60.85	10	2000	
Sn	120	3	115	-0.054	ppb	-0.054	-190.52	511	2000	
Sb	121	3	115	0.293	ppb	0.293	28.71	215	1000	
Ba	137	3	115	28.141	ppb	28.141	2.08	5803	5000	
Tl	205	3	193	0.057	ppb	0.057	13.02	270	2000	
(Pb)	206	3	193	1.242	ppb	1.242	2.77	1458	100	
(Pb)	207	3	193	1.069	ppb	1.069	7.48	1281	100	
Pb	208	3	193	1.090	ppb	1.090	6.37	5369	5000	
Th	232	3	193	3.148	ppb	3.148	13.06	18792	2000	
U	238	3	193	2.773	ppb	2.773	6.80	12705	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3530775	1.26	3535116	99.88	60	120	
Sc (IS)	45	3	HMI He	507615	0.25	505423	100.43	60	120	
Ge Internal standard	72	2	HMI H2	2223836	0.48	2359166	94.26	60	120	
Ge Internal standard	72	3	HMI He	644513	0.81	680743	94.68	60	120	
In Internal Standard	115	3	HMI He	2348368	1.69	2361818	99.43	60	120	
Ir (IS)	193	3	HMI He	5015829	1.94	5045699	99.41	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-6-A
Data File Name	332SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:08:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	26739.677	ppb	26739.677	2.63	2326878	400000	
Mg	24	3	45	8727.088	ppb	8727.088	1.21	401555	400000	
Al	27	3	45	2.529	ppb	2.529	176.71	160	400000	
K	39	3	45	5652.393	ppb	5652.393	1.56	234135	400000	
Ca	40	2	45	27300.723	ppb	27300.723	0.53	12734309	400000	
V	51	3	72	21.140	ppb	21.140	1.84	10797	2000	
Cr	52	3	72	2.057	ppb	2.057	6.48	3410	5000	
Mn	55	3	72	0.585	ppb	0.585	29.60	342	10000	
Fe	56	2	72	2.890	ppb	2.890	85.32	48075	10000	
Co	59	3	72	0.038	ppb	0.038	17.16	92	2000	
Ni	60	3	72	0.155	ppb	0.155	190.88	510	5000	
Cu	63	3	72	0.082	ppb	0.082	63.37	350	5000	
Zn	66	3	72	3.448	ppb	3.448	4.49	551	5000	
As	75	3	72	6.936	ppb	6.936	3.26	656	2000	
Se	78	2	72	2.027	ppb	2.027	8.12	97	2000	
Sr	88	3	72	150.240	ppb	150.240	2.17	64669	4000	
Mo	95	3	115	4.239	ppb	4.239	8.11	1778	2000	
Ag	107	3	115	0.002	ppb	0.002	260.20	18	100	
Cd	111	3	115	0.008	ppb	0.008	178.15	3	2000	
Sn	120	3	115	-0.055	ppb	-0.055	-77.82	523	2000	
Sb	121	3	115	0.205	ppb	0.205	12.16	165	1000	
Ba	137	3	115	15.594	ppb	15.594	1.68	3317	5000	
Tl	205	3	193	0.023	ppb	0.023	21.33	173	2000	
(Pb)	206	3	193	-0.055	ppb	-0.055	-82.16	177	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-591.00	335	100	
Pb	208	3	193	-0.028	ppb	-0.028	-65.94	913	5000	
Th	232	3	193	0.511	ppb	0.511	37.32	8362	2000	
U	238	3	193	1.680	ppb	1.680	2.02	8410	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3586149	0.74	3535116	101.44	60	120	
Sc (IS)	45	3	HMI He	503019	0.86	505423	99.52	60	120	
Ge Internal standard	72	2	HMI H2	2284646	2.83	2359166	96.84	60	120	
Ge Internal standard	72	3	HMI He	652697	1.78	680743	95.88	60	120	
In Internal Standard	115	3	HMI He	2410810	1.85	2361818	102.07	60	120	
Ir (IS)	193	3	HMI He	5148006	0.07	5045699	102.03	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-8-A
Data File Name	333SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:10:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.002	ppb	0.002	3967.09	2	2000	
Na	23	3	45	26076.770	ppb	26076.770	1.08	2271678	400000	
Mg	24	3	45	19048.080	ppb	19048.080	0.71	877054	400000	
Al	27	3	45	1.959	ppb	1.959	205.35	150	400000	
K	39	3	45	7454.233	ppb	7454.233	1.24	301444	400000	
Ca	40	2	45	62445.260	ppb	62445.260	1.46	29075250	400000	
V	51	3	72	19.490	ppb	19.490	2.74	9879	2000	
Cr	52	3	72	2.631	ppb	2.631	5.03	3709	5000	
Mn	55	3	72	0.501	ppb	0.501	17.66	312	10000	
Fe	56	2	72	3.960	ppb	3.960	63.95	48718	10000	
Co	59	3	72	0.062	ppb	0.062	26.33	115	2000	
Ni	60	3	72	0.512	ppb	0.512	31.05	603	5000	
Cu	63	3	72	0.130	ppb	0.130	60.58	381	5000	
Zn	66	3	72	3.181	ppb	3.181	7.78	513	5000	
As	75	3	72	6.291	ppb	6.291	14.62	591	2000	
Se	78	2	72	6.383	ppb	6.383	6.26	299	2000	
Sr	88	3	72	355.755	ppb	355.755	0.75	151313	4000	
Mo	95	3	115	6.161	ppb	6.161	4.19	2497	2000	
Ag	107	3	115	0.000	ppb	0.000	4477.50	15	100	
Cd	111	3	115	0.026	ppb	0.026	152.94	7	2000	
Sn	120	3	115	-0.151	ppb	-0.151	-101.12	450	2000	
Sb	121	3	115	0.282	ppb	0.282	31.82	208	1000	
Ba	137	3	115	77.981	ppb	77.981	3.56	15958	5000	
Tl	205	3	193	0.004	ppb	0.004	75.46	113	2000	
(Pb)	206	3	193	-0.062	ppb	-0.062	-36.06	168	100	
(Pb)	207	3	193	-0.063	ppb	-0.063	-88.23	278	100	
Pb	208	3	193	-0.043	ppb	-0.043	-64.39	843	5000	
Th	232	3	193	0.045	ppb	0.045	383.13	6362	2000	
U	238	3	193	9.559	ppb	9.559	3.04	41443	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3581670	0.64	3535116	101.32	60	120	
Sc (IS)	45	3	HMI He	503490	0.40	505423	99.62	60	120	
Ge Internal standard	72	2	HMI H2	2251867	1.13	2359166	95.45	60	120	
Ge Internal standard	72	3	HMI He	645004	1.26	680743	94.75	60	120	
In Internal Standard	115	3	HMI He	2339141	1.38	2361818	99.04	60	120	
Ir (IS)	193	3	HMI He	5100233	1.92	5045699	101.08	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-11-A
Data File Name	334SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:12:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.003	ppb	0.003	2838.65	2	2000	
Na	23	3	45	26306.467	ppb	26306.467	0.34	2290654	400000	
Mg	24	3	45	19365.692	ppb	19365.692	1.56	891366	400000	
Al	27	3	45	75.043	ppb	75.043	4.24	1411	400000	
K	39	3	45	7533.880	ppb	7533.880	0.61	304298	400000	
Ca	40	2	45	65545.557	ppb	65545.557	1.71	30103205	400000	
V	51	3	72	19.871	ppb	19.871	0.47	10005	2000	
Cr	52	3	72	2.512	ppb	2.512	5.26	3617	5000	
Mn	55	3	72	3.131	ppb	3.131	4.22	1129	10000	
Fe	56	2	72	83.540	ppb	83.540	7.66	144858	10000	
Co	59	3	72	0.089	ppb	0.089	23.43	142	2000	
Ni	60	3	72	0.607	ppb	0.607	27.69	626	5000	
Cu	63	3	72	0.331	ppb	0.331	22.12	531	5000	
Zn	66	3	72	3.119	ppb	3.119	23.51	503	5000	
As	75	3	72	5.994	ppb	5.994	4.61	561	2000	
Se	78	2	72	6.587	ppb	6.587	10.96	297	2000	
Sr	88	3	72	362.698	ppb	362.698	0.94	153387	4000	
Mo	95	3	115	6.254	ppb	6.254	4.27	2582	2000	
Ag	107	3	115	0.001	ppb	0.001	197.92	17	100	
Cd	111	3	115	0.000	ppb	0.000	-45829.80	2	2000	
Sn	120	3	115	-0.225	ppb	-0.225	-24.57	411	2000	
Sb	121	3	115	0.380	ppb	0.380	5.12	273	1000	
Ba	137	3	115	79.515	ppb	79.515	1.23	16582	5000	
Tl	205	3	193	0.003	ppb	0.003	183.23	110	2000	
(Pb)	206	3	193	0.109	ppb	0.109	23.10	342	100	
(Pb)	207	3	193	0.131	ppb	0.131	13.67	455	100	
Pb	208	3	193	0.148	ppb	0.148	11.16	1628	5000	
Th	232	3	193	-0.214	ppb	-0.214	-33.68	5329	2000	
U	238	3	193	9.860	ppb	9.860	3.66	42834	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3533063	2.56	3535116	99.94	60	120	
Sc (IS)	45	3	HMI He	503287	0.64	505423	99.58	60	120	
Ge Internal standard	72	2	HMI H2	2171550	2.55	2359166	92.05	60	120	
Ge Internal standard	72	3	HMI He	641289	0.91	680743	94.20	60	120	
In Internal Standard	115	3	HMI He	2383054	0.23	2361818	100.90	60	120	
Ir (IS)	193	3	HMI He	5116730	2.66	5045699	101.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	335_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:14:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.120	ppb	6.694	1801	50	108.2	90	110	
Na	23	3	45	50452.994	ppb	1.552	4355247	51000	98.9	90	110	
Mg	24	3	45	10781.619	ppb	1.082	493292	11000	98.0	90	110	
Al	27	3	45	1033.590	ppb	4.721	17846	1000	103.4	90	110	
K	39	3	45	10819.057	ppb	0.744	424004	11000	98.4	90	110	
Ca	40	2	45	10868.234	ppb	0.747	4895578	11000	98.8	90	110	
V	51	3	72	56.276	ppb	2.674	26188	50	112.6	90	110	>+\-10%
Cr	52	3	72	57.404	ppb	0.354	34368	50	114.8	90	110	>+\-10%
Mn	55	3	72	55.969	ppb	3.458	16857	50	111.9	90	110	>+\-10%
Fe	56	2	72	1129.478	ppb	2.582	1374235	1000	112.9	90	110	>+\-10%
Co	59	3	72	56.040	ppb	3.462	54003	50	112.1	90	110	>+\-10%
Ni	60	3	72	56.430	ppb	1.810	15561	50	112.9	90	110	>+\-10%
Cu	63	3	72	56.674	ppb	0.805	41309	50	113.3	90	110	>+\-10%
Zn	66	3	72	59.353	ppb	2.547	6918	50	118.7	90	110	>+\-10%
As	75	3	72	57.755	ppb	6.043	4948	50	115.5	90	110	>+\-10%
Se	78	2	72	58.047	ppb	2.898	2508	50	116.1	90	110	>+\-10%
Sr	88	3	72	114.771	ppb	2.584	46534	100	114.8	90	110	>+\-10%
Mo	95	3	115	53.225	ppb	1.592	21126	50	106.4	90	110	
Ag	107	3	115	52.295	ppb	0.697	70507	50	104.6	90	110	
Cd	111	3	115	53.499	ppb	0.921	10347	50	107.0	90	110	
Sn	120	3	115	52.098	ppb	0.835	32106	50	104.2	90	110	
Sb	121	3	115	51.781	ppb	1.022	31725	50	103.6	90	110	
Ba	137	3	115	52.532	ppb	2.022	10642	50	105.1	90	110	
Tl	205	3	193	51.861	ppb	2.822	158066	50	103.7	90	110	
(Pb)	206	3	193	53.327	ppb	3.782	53924	50	106.7	90	110	
(Pb)	207	3	193	52.736	ppb	1.646	48079	50	105.5	90	110	
Pb	208	3	193	52.949	ppb	3.191	216774	50	105.9	90	110	
Th	232	3	193	52.274	ppb	3.255	220836	50	104.5	90	110	
U	238	3	193	53.630	ppb	3.325	226614	50	107.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3459263	1.50	3535116	97.85	60	120	
Sc (IS)	45	3	HMI He	500282	1.07	505423	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2083633	1.32	2359166	88.32	60	120	
Ge Internal standard	72	3	HMI He	614770	1.51	680743	90.31	60	120	
In Internal Standard	115	3	HMI He	2312597	0.52	2361818	97.92	60	120	
Ir (IS)	193	3	HMI He	5101183	3.14	5045699	101.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	336_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:37:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	18.482	ppb	15.7	14616	25	
Mg	24	3	45	0.917	ppb	85.3	194	25	
Al	27	3	45	-2.446	ppb	-50.7	73	15	
K	39	3	45	-9.592	ppb	-282.6	23370	50	
V	51	3	72	0.402	ppb	28.7	733	1	
Cr	52	3	72	0.149	ppb	53.1	2199	1	
Mn	55	3	72	0.152	ppb	74.1	198	0.5	
Co	59	3	72	-0.001	ppb	-1436.7	50	0.5	
Ni	60	3	72	0.467	ppb	89.6	580	1	
Cu	63	3	72	-0.075	ppb	-28.8	222	1	
Zn	66	3	72	0.452	ppb	43.4	182	5	
As	75	3	72	0.158	ppb	77.4	42	1	
Se	78	2	72	0.017	ppb	157.0	1	1	
Sr	88	3	72	0.016	ppb	266.3	30	0.5	
Mo	95	3	115	0.055	ppb	45.0	48	0.5	
Ag	107	3	115	-0.001	ppb	-385.2	13	1	
Cd	111	3	115	0.000	ppb	3875.9	2	0.5	
Sn	120	3	115	0.158	ppb	43.6	631	1	
Sb	121	3	115	0.029	ppb	202.8	50	0.6	
Ba	137	3	115	0.045	ppb	134.9	42	0.5	
Tl	205	3	193	0.010	ppb	146.2	128	0.1	
(Pb)	206	3	193	-0.034	ppb	-60.2	192	1	
(Pb)	207	3	193	0.069	ppb	121.4	388	1	
Pb	208	3	193	-0.007	ppb	-302.5	965	0.5	
Th	232	3	193	1.351	ppb	16.3	11455	1	>RL
U	238	3	193	0.013	ppb	138.7	1293	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3458643	1.28	3535116	97.84	60	120	
Sc (IS)	45	3	HMI He	499504	1.42	505423	98.83	60	120	
Ge Internal standard	72	2	HMI H2	2143080	0.58	2359166	90.84	60	120	
Ge Internal standard	72	3	HMI He	632646	0.84	680743	92.93	60	120	
In Internal Standard	115	3	HMI He	2314694	1.93	2361818	98.00	60	120	
Ir (IS)	193	3	HMI He	4978249	0.38	5045699	98.66	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	337SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:38:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.001	ppb	-0.001	-6949.53	2	2000	
Na	23	3	45	-13.604	ppb	-13.604	-34.99	13210	400000	
Mg	24	3	45	-0.428	ppb	-0.428	-174.02	147	400000	
Al	27	3	45	-2.714	ppb	-2.714	-11.90	77	400000	
K	39	3	45	-59.795	ppb	-59.795	-35.80	23961	400000	
Ca	40	2	45	-7.416	ppb	-7.416	-16.43	7299	400000	
V	51	3	72	-0.656	ppb	-0.656	-8.53	260	2000	
Cr	52	3	72	-1.058	ppb	-1.058	-7.68	1648	5000	
Mn	55	3	72	-0.070	ppb	-0.070	-75.79	143	10000	
Fe	56	2	72	-10.162	ppb	-10.162	-17.81	32330	10000	
Co	59	3	72	-0.012	ppb	-0.012	-99.78	43	2000	
Ni	60	3	72	-0.512	ppb	-0.512	-18.46	340	5000	
Cu	63	3	72	-0.152	ppb	-0.152	-28.84	180	5000	
Zn	66	3	72	-0.214	ppb	-0.214	-37.31	113	5000	
As	75	3	72	-0.127	ppb	-0.127	-24.12	18	2000	
Se	78	2	72	0.054	ppb	0.054	43.54	3	2000	
Sr	88	3	72	0.043	ppb	0.043	93.10	45	4000	
Mo	95	3	115	0.004	ppb	0.004	367.38	32	2000	
Ag	107	3	115	0.005	ppb	0.005	215.74	23	100	
Cd	111	3	115	0.022	ppb	0.022	56.89	7	2000	
Sn	120	3	115	-0.619	ppb	-0.619	-6.59	180	2000	
Sb	121	3	115	-0.014	ppb	-0.014	-36.35	27	1000	
Ba	137	3	115	-0.109	ppb	-0.109	-13.04	12	5000	
Tl	205	3	193	0.006	ppb	0.006	222.17	128	2000	
(Pb)	206	3	193	-0.123	ppb	-0.123	-3.89	117	100	
(Pb)	207	3	193	-0.071	ppb	-0.071	-46.24	295	100	
Pb	208	3	193	-0.083	ppb	-0.083	-14.35	741	5000	
Th	232	3	193	-0.563	ppb	-0.563	-10.79	4220	2000	
U	238	3	193	0.007	ppb	0.007	200.85	1418	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3851345	1.74	3535116	108.95	60	120	
Sc (IS)	45	3	HMI He	556317	0.64	505423	110.07	60	120	
Ge Internal standard	72	2	HMI H2	2370777	0.43	2359166	100.49	60	120	
Ge Internal standard	72	3	HMI He	694862	0.66	680743	102.07	60	120	
In Internal Standard	115	3	HMI He	2591788	2.54	2361818	109.74	60	120	
Ir (IS)	193	3	HMI He	5564197	2.49	5045699	110.28	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	338SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:40:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-13.286	ppb	-13.286	-6.22	13229	400000	
Mg	24	3	45	-0.557	ppb	-0.557	-105.67	140	400000	
Al	27	3	45	-1.836	ppb	-1.836	-44.61	93	400000	
K	39	3	45	-70.544	ppb	-70.544	-32.76	23503	400000	
Ca	40	2	45	-7.131	ppb	-7.131	-6.42	7433	400000	
V	51	3	72	-0.718	ppb	-0.718	-11.37	225	2000	
Cr	52	3	72	-0.947	ppb	-0.947	-18.84	1693	5000	
Mn	55	3	72	0.027	ppb	0.027	414.14	173	10000	
Fe	56	2	72	-8.185	ppb	-8.185	-14.03	34404	10000	
Co	59	3	72	-0.016	ppb	-0.016	-102.18	38	2000	
Ni	60	3	72	-0.138	ppb	-0.138	-111.96	446	5000	
Cu	63	3	72	-0.077	ppb	-0.077	-75.14	238	5000	
Zn	66	3	72	-0.333	ppb	-0.333	-34.44	97	5000	
As	75	3	72	-0.177	ppb	-0.177	-17.41	13	2000	
Se	78	2	72	0.042	ppb	0.042	152.29	3	2000	
Sr	88	3	72	0.022	ppb	0.022	103.29	35	4000	
Mo	95	3	115	-0.025	ppb	-0.025	-66.99	18	2000	
Ag	107	3	115	0.002	ppb	0.002	145.04	20	100	
Cd	111	3	115	0.000	ppb	0.000	-2955.06	2	2000	
Sn	120	3	115	-0.664	ppb	-0.664	-5.92	148	2000	
Sb	121	3	115	-0.026	ppb	-0.026	-44.21	18	1000	
Ba	137	3	115	-0.086	ppb	-0.086	-41.60	17	5000	
Tl	205	3	193	0.007	ppb	0.007	197.32	130	2000	
(Pb)	206	3	193	-0.103	ppb	-0.103	-6.02	135	100	
(Pb)	207	3	193	-0.053	ppb	-0.053	-156.38	303	100	
Pb	208	3	193	-0.079	ppb	-0.079	-28.13	736	5000	
Th	232	3	193	-0.566	ppb	-0.566	-4.07	4085	2000	
U	238	3	193	0.022	ppb	0.022	69.33	1446	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3848602	1.61	3535116	108.87	60	120	
Sc (IS)	45	3	HMI He	555943	0.34	505423	110.00	60	120	
Ge Internal standard	72	2	HMI H2	2329975	1.16	2359166	98.76	60	120	
Ge Internal standard	72	3	HMI He	684858	0.75	680743	100.60	60	120	
In Internal Standard	115	3	HMI He	2563587	1.97	2361818	108.54	60	120	
Ir (IS)	193	3	HMI He	5399902	1.61	5045699	107.02	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	339SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:42:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.046	ppb	0.046	174.15	3	2000	
Na	23	3	45	-10.440	ppb	-10.440	-48.24	13290	400000	
Mg	24	3	45	0.356	ppb	0.356	291.93	184	400000	
Al	27	3	45	-3.001	ppb	-3.001	-31.49	70	400000	
K	39	3	45	-48.934	ppb	-48.934	-112.26	24021	400000	
Ca	40	2	45	-6.731	ppb	-6.731	-9.53	7510	400000	
V	51	3	72	-0.677	ppb	-0.677	-15.47	245	2000	
Cr	52	3	72	-0.947	ppb	-0.947	-9.90	1689	5000	
Mn	55	3	72	-0.042	ppb	-0.042	-173.40	150	10000	
Fe	56	2	72	-8.029	ppb	-8.029	-30.79	34906	10000	
Co	59	3	72	-0.025	ppb	-0.025	-28.72	28	2000	
Ni	60	3	72	-0.285	ppb	-0.285	-71.61	401	5000	
Cu	63	3	72	-0.134	ppb	-0.134	-23.03	192	5000	
Zn	66	3	72	-0.173	ppb	-0.173	-96.37	117	5000	
As	75	3	72	-0.106	ppb	-0.106	-131.94	20	2000	
Se	78	2	72	0.000	ppb	0.000	10604.11	1	2000	
Sr	88	3	72	0.018	ppb	0.018	126.82	33	4000	
Mo	95	3	115	-0.021	ppb	-0.021	-107.25	20	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-187.61	13	100	
Cd	111	3	115	0.007	ppb	0.007	379.75	3	2000	
Sn	120	3	115	-0.651	ppb	-0.651	-7.43	157	2000	
Sb	121	3	115	-0.024	ppb	-0.024	-31.10	20	1000	
Ba	137	3	115	-0.064	ppb	-0.064	-40.26	22	5000	
Tl	205	3	193	0.005	ppb	0.005	201.30	122	2000	
(Pb)	206	3	193	-0.093	ppb	-0.093	-24.41	143	100	
(Pb)	207	3	193	-0.025	ppb	-0.025	-167.99	327	100	
Pb	208	3	193	-0.069	ppb	-0.069	-17.67	770	5000	
Th	232	3	193	-0.573	ppb	-0.573	-5.09	4010	2000	
U	238	3	193	0.009	ppb	0.009	352.13	1371	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3785607	0.48	3535116	107.09	60	120	
Sc (IS)	45	3	HMI He	547295	0.68	505423	108.28	60	120	
Ge Internal standard	72	2	HMI H2	2350047	0.81	2359166	99.61	60	120	
Ge Internal standard	72	3	HMI He	683098	0.53	680743	100.35	60	120	
In Internal Standard	115	3	HMI He	2569814	0.33	2361818	108.81	60	120	
Ir (IS)	193	3	HMI He	5337440	0.65	5045699	105.78	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	340SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:44:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-15.664	ppb	-15.664	-20.26	12926	400000	
Mg	24	3	45	0.249	ppb	0.249	479.97	180	400000	
Al	27	3	45	-4.627	ppb	-4.627	-19.58	40	400000	
K	39	3	45	-63.196	ppb	-63.196	-61.73	23664	400000	
Ca	40	2	45	-7.309	ppb	-7.309	-6.04	7263	400000	
V	51	3	72	-0.732	ppb	-0.732	-12.97	220	2000	
Cr	52	3	72	-0.826	ppb	-0.826	-21.69	1789	5000	
Mn	55	3	72	-0.063	ppb	-0.063	-99.48	145	10000	
Fe	56	2	72	-7.348	ppb	-7.348	-43.65	35535	10000	
Co	59	3	72	-0.024	ppb	-0.024	-38.99	30	2000	
Ni	60	3	72	-0.238	ppb	-0.238	-24.98	421	5000	
Cu	63	3	72	-0.091	ppb	-0.091	-22.29	230	5000	
Zn	66	3	72	-0.392	ppb	-0.392	-26.91	90	5000	
As	75	3	72	-0.179	ppb	-0.179	-17.23	13	2000	
Se	78	2	72	0.097	ppb	0.097	23.43	5	2000	
Sr	88	3	72	0.032	ppb	0.032	119.29	40	4000	
Mo	95	3	115	-0.036	ppb	-0.036	-67.28	13	2000	
Ag	107	3	115	0.002	ppb	0.002	126.49	20	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.648	ppb	-0.648	-9.41	158	2000	
Sb	121	3	115	-0.029	ppb	-0.029	-51.33	17	1000	
Ba	137	3	115	-0.026	ppb	-0.026	-155.86	30	5000	
Tl	205	3	193	0.002	ppb	0.002	209.05	113	2000	
(Pb)	206	3	193	-0.105	ppb	-0.105	-7.73	133	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-55.95	300	100	
Pb	208	3	193	-0.081	ppb	-0.081	-13.01	735	5000	
Th	232	3	193	-0.593	ppb	-0.593	-7.11	4005	2000	
U	238	3	193	0.006	ppb	0.006	398.73	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3805921	1.18	3535116	107.66	60	120	
Sc (IS)	45	3	HMI He	552690	0.34	505423	109.35	60	120	
Ge Internal standard	72	2	HMI H2	2334660	1.31	2359166	98.96	60	120	
Ge Internal standard	72	3	HMI He	692445	0.68	680743	101.72	60	120	
In Internal Standard	115	3	HMI He	2565285	2.70	2361818	108.61	60	120	
Ir (IS)	193	3	HMI He	5449448	1.24	5045699	108.00	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	341SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:47:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-9.391	ppb	-9.391	-64.39	13564	400000	
Mg	24	3	45	0.039	ppb	0.039	3644.51	170	400000	
Al	27	3	45	-3.937	ppb	-3.937	-32.79	53	400000	
K	39	3	45	-56.036	ppb	-56.036	-52.87	24021	400000	
Ca	40	2	45	-7.167	ppb	-7.167	-9.44	7419	400000	
V	51	3	72	-0.820	ppb	-0.820	-5.11	178	2000	
Cr	52	3	72	-0.461	ppb	-0.461	-53.74	2059	5000	
Mn	55	3	72	0.016	ppb	0.016	570.63	175	10000	
Fe	56	2	72	-1.964	ppb	-1.964	-146.35	43489	10000	
Co	59	3	72	-0.007	ppb	-0.007	-180.66	50	2000	
Ni	60	3	72	-0.156	ppb	-0.156	-80.88	455	5000	
Cu	63	3	72	-0.102	ppb	-0.102	-17.26	225	5000	
Zn	66	3	72	-0.305	ppb	-0.305	-48.14	103	5000	
As	75	3	72	-0.164	ppb	-0.164	-55.07	15	2000	
Se	78	2	72	0.027	ppb	0.027	149.81	2	2000	
Sr	88	3	72	0.009	ppb	0.009	246.74	30	4000	
Mo	95	3	115	-0.018	ppb	-0.018	-94.45	22	2000	
Ag	107	3	115	0.007	ppb	0.007	121.47	27	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.647	ppb	-0.647	-2.14	160	2000	
Sb	121	3	115	-0.024	ppb	-0.024	-31.72	20	1000	
Ba	137	3	115	-0.057	ppb	-0.057	-60.45	23	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-318.90	102	2000	
(Pb)	206	3	193	-0.116	ppb	-0.116	-9.62	123	100	
(Pb)	207	3	193	-0.069	ppb	-0.069	-28.52	295	100	
Pb	208	3	193	-0.083	ppb	-0.083	-14.27	738	5000	
Th	232	3	193	-0.594	ppb	-0.594	-4.03	4054	2000	
U	238	3	193	0.008	ppb	0.008	163.58	1413	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3851813	1.51	3535116	108.96	60	120	
Sc (IS)	45	3	HMI He	554184	1.24	505423	109.65	60	120	
Ge Internal standard	72	2	HMI H2	2377937	0.33	2359166	100.80	60	120	
Ge Internal standard	72	3	HMI He	706006	0.96	680743	103.71	60	120	
In Internal Standard	115	3	HMI He	2581239	1.04	2361818	109.29	60	120	
Ir (IS)	193	3	HMI He	5521502	0.74	5045699	109.43	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	342CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T10:49:28-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	13537	0.02
Mg	24	45	3	HMI He	133	17.17
Al	27	45	3	HMI He	80	94.95
K	39	45	3	HMI He	23062	0.02
Ca	40	45	2	HMI H2	9519	0.02
V	51	72	3	HMI He	633	2.56
Cr	52	72	3	HMI He	2137	0.35
Mn	55	72	3	HMI He	183	13.51
Fe	56	72	2	HMI H2	34036	0.03
Co	59	72	3	HMI He	32	160.36
Ni	60	72	3	HMI He	421	2.11
Cu	63	72	3	HMI He	252	1.21
Zn	66	72	3	HMI He	132	9.28
As	75	72	3	HMI He	60	100.19
Se	78	72	2	HMI H2	1	6495.19
(Se)	78	72	3	HMI He	33	93.70
Sr	88	72	3	HMI He	15	384.99
Mo	95	115	3	HMI He	27	226.17
Ag	107	115	3	HMI He	15	0.00
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	506	3.03
Sb	121	115	3	HMI He	27	107.43
Ba	137	115	3	HMI He	40	54.18
Tl	205	193	3	HMI He	100	18.04
(Pb)	206	193	3	HMI He	172	10.78
(Pb)	207	193	3	HMI He	282	5.25
Pb	208	193	3	HMI He	851	0.85
Th	232	193	3	HMI He	6263	0.09
U	238	193	3	HMI He	1218	0.37

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3473788	3.33
Sc (IS)	45	3	HMI He	498630	0.87
Ge Internal standard	72	2	HMI H2	2241871	1.81
Ge Internal standard	72	3	HMI He	647352	0.70
In Internal Standard	115	3	HMI He	2356036	1.72
Ir (IS)	193	3	HMI He	4999588	0.98

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	343CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T10:51:15-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	342CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	8693007	0.00
Mg	24	45	3	HMI He	928288	0.00
Al	27	45	3	HMI He	157	35.09
K	39	45	3	HMI He	772526	0.00
V	51	72	3	HMI He	620	1.17
Cr	52	72	3	HMI He	2432	0.17
Mn	55	72	3	HMI He	280	4.47
Co	59	72	3	HMI He	68	40.57
Ni	60	72	3	HMI He	560	0.97
Cu	63	72	3	HMI He	347	0.64
Zn	66	72	3	HMI He	257	2.19
As	75	72	3	HMI He	45	74.09
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	22	325.48
Sr	88	72	3	HMI He	238	3.09
Mo	95	115	3	HMI He	48	24.71
Ag	107	115	3	HMI He	27	177.05
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	661	2.60
Sb	121	115	3	HMI He	33	113.31
Ba	137	115	3	HMI He	138	18.36
Tl	205	193	3	HMI He	130	7.83
(Pb)	206	193	3	HMI He	242	2.16
(Pb)	207	193	3	HMI He	376	1.47
Pb	208	193	3	HMI He	1091	0.09
Th	232	193	3	HMI He	5192	0.16
U	238	193	3	HMI He	1361	0.12

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3414129	0.37	3473788	98.28	60	120	
Sc (IS)	45	3	HMI He	503279	0.64	498630	100.93	60	120	
Ge Internal standard	72	2	HMI H2	2085309	2.25	2241871	93.02	60	120	
Ge Internal standard	72	3	HMI He	612711	1.17	647352	94.65	60	120	
In Internal Standard	115	3	HMI He	2393601	2.81	2356036	101.59	60	120	
Ir (IS)	193	3	HMI He	5033952	1.74	4999588	100.69	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	344CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T10:53:03-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	342CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3545	0.02
Na	23	45	3	HMI He	187074	0.00
Mg	24	45	3	HMI He	90081	0.00
Al	27	45	3	HMI He	34560	0.00
K	39	45	3	HMI He	96187	0.00
V	51	72	3	HMI He	50132	0.00
Cr	52	72	3	HMI He	64021	0.00
Mn	55	72	3	HMI He	32544	0.01
Co	59	72	3	HMI He	105629	0.00
Ni	60	72	3	HMI He	29919	0.01
Cu	63	72	3	HMI He	79384	0.00
Zn	66	72	3	HMI He	12920	0.02
As	75	72	3	HMI He	9334	0.04
Se	78	72	2	HMI H2	4743	0.01
(Se)	78	72	3	HMI He	593	0.50
Sr	88	72	3	HMI He	88301	0.00
Mo	95	115	3	HMI He	39969	0.00
Ag	107	115	3	HMI He	136047	0.00
Cd	111	115	3	HMI He	19710	0.01
Sn	120	115	3	HMI He	63402	0.00
Sb	121	115	3	HMI He	62224	0.00
Ba	137	115	3	HMI He	20180	0.01
Tl	205	193	3	HMI He	306600	0.00
(Pb)	206	193	3	HMI He	103769	0.00
(Pb)	207	193	3	HMI He	89872	0.00
Pb	208	193	3	HMI He	414964	0.00
Th	232	193	3	HMI He	420230	0.00
U	238	193	3	HMI He	429581	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3480266	1.17	3473788	100.19	60	120	
Sc (IS)	45	3	HMI He	504412	0.09	498630	101.16	60	120	
Ge Internal standard	72	2	HMI H2	2242215	2.27	2241871	100.02	60	120	
Ge Internal standard	72	3	HMI He	649916	1.04	647352	100.40	60	120	
In Internal Standard	115	3	HMI He	2372947	2.94	2356036	100.72	60	120	
Ir (IS)	193	3	HMI He	5069595	1.85	4999588	101.40	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	345_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:54:50-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.484	ppb	2.917	1458	40	103.7	90	110	
Na	23	3	45	12909.197	ppb	2.551	1137641	12800	100.9	90	110	
Mg	24	3	45	4618.014	ppb	0.637	215176	4800	96.2	90	110	
Al	27	3	45	822.352	ppb	1.609	14272	800	102.8	90	110	
K	39	3	45	4655.089	ppb	1.708	198352	4800	97.0	90	110	
Ca	40	2	45	4709.401	ppb	1.416	2226359	4800	98.1	90	110	
V	51	3	72	42.066	ppb	2.040	20837	40	105.2	90	110	
Cr	52	3	72	42.074	ppb	3.134	27362	40	105.2	90	110	
Mn	55	3	72	43.065	ppb	4.336	13708	40	107.7	90	110	
Fe	56	2	72	821.974	ppb	2.155	1097251	800	102.7	90	110	
Co	59	3	72	40.742	ppb	1.152	41817	40	101.9	90	110	
Ni	60	3	72	40.805	ppb	2.749	12096	40	102.0	90	110	
Cu	63	3	72	43.576	ppb	2.532	33733	40	108.9	90	110	
Zn	66	3	72	82.154	ppb	1.848	10330	80	102.7	90	110	
As	75	3	72	38.578	ppb	5.399	3532	40	96.4	90	110	
Se	78	2	72	42.293	ppb	2.035	1967	40	105.7	90	110	
Sr	88	3	72	123.523	ppb	3.430	52961	120	102.9	90	110	
Mo	95	3	115	40.524	ppb	1.235	16055	40	101.3	90	110	
Ag	107	3	115	82.659	ppb	1.882	111347	80	103.3	90	110	
Cd	111	3	115	39.675	ppb	3.190	7743	40	99.2	90	110	
Sn	120	3	115	40.434	ppb	1.093	25689	40	101.1	90	110	
Sb	121	3	115	41.010	ppb	0.451	25275	40	102.5	90	110	
Ba	137	3	115	40.112	ppb	0.694	8042	40	100.3	90	110	
Tl	205	3	193	40.599	ppb	2.474	123694	40	101.5	90	110	
(Pb)	206	3	193	41.032	ppb	3.365	42386	40	102.6	90	110	
(Pb)	207	3	193	41.014	ppb	2.299	36778	40	102.5	90	110	
Pb	208	3	193	41.074	ppb	3.449	169760	40	102.7	90	110	
Th	232	3	193	82.088	ppb	2.226	343738	80	102.6	90	110	
U	238	3	193	44.049	ppb	3.397	188631	40	110.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508656	1.01	3473788	101.00	60	120	
Sc (IS)	45	3	HMI He	504927	1.13	498630	101.26	60	120	
Ge Internal standard	72	2	HMI H2	2196933	0.58	2241871	98.00	60	120	
Ge Internal standard	72	3	HMI He	631209	1.83	647352	97.51	60	120	
In Internal Standard	115	3	HMI He	2348519	2.06	2356036	99.68	60	120	
Ir (IS)	193	3	HMI He	5036455	3.30	4999588	100.74	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	346_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:56:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.493	ppb	2.210	1683	50	95.0	90	110	
Na	23	3	45	49891.766	ppb	2.101	4292460	51000	97.8	90	110	
Mg	24	3	45	10528.717	ppb	1.078	482959	11000	95.7	90	110	
Al	27	3	45	1035.871	ppb	1.149	17686	1000	103.6	90	110	
K	39	3	45	10644.494	ppb	1.963	416994	11000	96.8	90	110	
Ca	40	2	45	10462.540	ppb	0.428	4890440	11000	95.1	90	110	
V	51	3	72	53.802	ppb	1.421	26330	50	107.6	90	110	
Cr	52	3	72	52.350	ppb	1.358	33352	50	104.7	90	110	
Mn	55	3	72	52.786	ppb	1.779	16673	50	105.6	90	110	
Fe	56	2	72	1053.226	ppb	2.714	1361550	1000	105.3	90	110	
Co	59	3	72	51.737	ppb	1.563	52792	50	103.5	90	110	
Ni	60	3	72	53.289	ppb	1.888	15584	50	106.6	90	110	
Cu	63	3	72	53.477	ppb	0.592	41114	50	107.0	90	110	
Zn	66	3	72	53.111	ppb	2.775	6685	50	106.2	90	110	
As	75	3	72	54.409	ppb	2.021	4930	50	108.8	90	110	
Se	78	2	72	53.686	ppb	0.814	2434	50	107.4	90	110	
Sr	88	3	72	106.256	ppb	2.789	45306	100	106.3	90	110	
Mo	95	3	115	53.109	ppb	2.353	21229	50	106.2	90	110	
Ag	107	3	115	51.023	ppb	2.143	69392	50	102.0	90	110	
Cd	111	3	115	52.246	ppb	1.932	10294	50	104.5	90	110	
Sn	120	3	115	49.458	ppb	0.591	31603	50	98.9	90	110	
Sb	121	3	115	51.096	ppb	1.187	31782	50	102.2	90	110	
Ba	137	3	115	50.503	ppb	3.473	10209	50	101.0	90	110	
Tl	205	3	193	50.389	ppb	3.406	157073	50	100.8	90	110	
(Pb)	206	3	193	49.254	ppb	1.003	52051	50	98.5	90	110	
(Pb)	207	3	193	50.922	ppb	2.255	46651	50	101.8	90	110	
Pb	208	3	193	49.899	ppb	0.343	210923	50	99.8	90	110	
Th	232	3	193	52.397	ppb	1.324	226865	50	104.8	90	110	
U	238	3	193	50.099	ppb	0.849	219429	50	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3477165	0.46	3473788	100.10	60	120	
Sc (IS)	45	3	HMI He	497336	1.96	498630	99.74	60	120	
Ge Internal standard	72	2	HMI H2	2142171	0.63	2241871	95.55	60	120	
Ge Internal standard	72	3	HMI He	627603	1.26	647352	96.95	60	120	
In Internal Standard	115	3	HMI He	2370598	0.84	2356036	100.62	60	120	
Ir (IS)	193	3	HMI He	5152062	1.18	4999588	103.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	347_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:58:26-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.142	ppb	98.6	5	0.5	
Na	23	3	45	28.259	ppb	38.0	16012	25	>RL
Mg	24	3	45	2.305	ppb	39.6	240	25	
Al	27	3	45	-0.411	ppb	-228.0	73	15	
K	39	3	45	0.058	ppb	44172.5	23136	50	
V	51	3	72	0.157	ppb	109.5	686	1	
Cr	52	3	72	0.151	ppb	38.1	2154	1	
Mn	55	3	72	0.154	ppb	90.9	225	0.5	
Co	59	3	72	0.022	ppb	45.5	53	0.5	
Ni	60	3	72	0.133	ppb	107.1	445	1	
Cu	63	3	72	0.038	ppb	9.2	272	1	
Zn	66	3	72	0.253	ppb	79.1	158	5	
As	75	3	72	-0.237	ppb	-27.4	37	1	
Se	78	2	72	0.001	ppb	5501.4	1	1	
Sr	88	3	72	0.064	ppb	56.3	42	0.5	
Mo	95	3	115	0.064	ppb	41.8	52	0.5	
Ag	107	3	115	0.018	ppb	101.3	38	1	
Cd	111	3	115	0.026	ppb	152.3	7	0.5	
Sn	120	3	115	0.395	ppb	22.9	746	1	
Sb	121	3	115	0.038	ppb	0.9	50	0.6	
Ba	137	3	115	0.094	ppb	41.4	58	0.5	
Tl	205	3	193	0.038	ppb	18.1	218	0.1	
(Pb)	206	3	193	-0.002	ppb	-537.7	172	1	
(Pb)	207	3	193	0.038	ppb	41.9	318	1	
Pb	208	3	193	0.001	ppb	2040.5	863	0.5	
Th	232	3	193	1.679	ppb	15.7	13255	1	>RL
U	238	3	193	0.032	ppb	109.5	1368	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3492159	1.36	3473788	100.53	60	120	
Sc (IS)	45	3	HMI He	500112	0.97	498630	100.30	60	120	
Ge Internal standard	72	2	HMI H2	2148438	0.46	2241871	95.83	60	120	
Ge Internal standard	72	3	HMI He	625308	0.13	647352	96.59	60	120	
In Internal Standard	115	3	HMI He	2337987	0.42	2356036	99.23	60	120	
Ir (IS)	193	3	HMI He	5050924	0.46	4999588	101.03	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	348LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:00:14-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.089	ppb	6.436	38	1	108.9	70	130	
Na	23	3	45	279.281	ppb	1.679	38287	300	93.1	70	130	
Mg	24	3	45	42.154	ppb	0.804	2112	50	84.3	70	130	
Al	27	3	45	42.915	ppb	4.862	828	50	85.8	70	130	
K	39	3	45	99.900	ppb	20.872	27297	120	83.2	70	130	
Ca	40	2	45	190.277	ppb	2.423	98640	200	95.1	70	130	
V	51	3	72	4.860	ppb	8.579	2966	5	97.2	70	130	
Cr	52	3	72	2.006	ppb	12.384	3302	2	100.3	70	130	
Mn	55	3	72	0.904	ppb	22.545	465	1	90.4	70	130	
Fe	56	2	72	48.534	ppb	6.278	94572	50	97.1	70	130	
Co	59	3	72	0.916	ppb	3.363	975	1	91.6	70	130	
Ni	60	3	72	1.740	ppb	12.001	913	2	87.0	70	130	
Cu	63	3	72	2.049	ppb	1.312	1828	2	102.5	70	130	
Zn	66	3	72	9.014	ppb	5.881	1253	10	90.1	70	130	
As	75	3	72	4.695	ppb	1.452	483	5	93.9	70	130	
Se	78	2	72	4.615	ppb	12.263	213	5	92.3	70	130	
Sr	88	3	72	4.552	ppb	1.011	1974	5	91.0	70	130	
Mo	95	3	115	1.831	ppb	7.624	763	2	91.6	70	130	
Ag	107	3	115	0.936	ppb	9.828	1296	1	93.6	70	130	
Cd	111	3	115	0.972	ppb	30.273	195	1	97.2	70	130	
Sn	120	3	115	8.236	ppb	1.497	5722	10	82.4	70	130	
Sb	121	3	115	1.877	ppb	7.779	1201	2	93.8	70	130	
Ba	137	3	115	0.778	ppb	13.728	198	1	77.8	70	130	
Tl	205	3	193	0.897	ppb	5.384	2891	1	89.7	70	130	
(Pb)	206	3	193	0.864	ppb	6.794	1085	1	86.4	70	130	
(Pb)	207	3	193	0.966	ppb	0.981	1168	1	96.6	70	130	
Pb	208	3	193	0.884	ppb	3.072	4590	1	88.4	70	130	
Th	232	3	193	1.356	ppb	25.078	12128	1	135.6	70	130	>+/-30%
U	238	3	193	0.942	ppb	6.537	5344	1	94.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3489651	1.02	3473788	100.46	60	120	
Sc (IS)	45	3	HMI He	508372	1.06	498630	101.95	60	120	
Ge Internal standard	72	2	HMI H2	2161929	1.79	2241871	96.43	60	120	
Ge Internal standard	72	3	HMI He	633715	0.13	647352	97.89	60	120	
In Internal Standard	115	3	HMI He	2385291	1.23	2356036	101.24	60	120	
Ir (IS)	193	3	HMI He	5141959	1.12	4999588	102.85	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-
Data File Name	349LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:02:03-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	28.720	ppb	14.485	16386	300	9.6	70	130	>+/-30%
Mg	24	3	45	1.496	ppb	41.687	207	50	3.0	70	130	>+/-30%
Al	27	3	45	1.834	ppb	209.543	113	50	3.7	70	130	>+/-30%
K	39	3	45	-12.738	ppb	-105.515	23139	120	-10.6	70	130	>+/-30%
Ca	40	2	45	13.993	ppb	2.332	16142	200	7.0	70	130	>+/-30%
V	51	3	72	-0.035	ppb	-309.222	610	5	-0.7	70	130	>+/-30%
Cr	52	3	72	0.005	ppb	5367.617	2121	2	0.2	70	130	>+/-30%
Mn	55	3	72	0.146	ppb	105.184	228	1	14.6	70	130	>+/-30%
Fe	56	2	72	3.243	ppb	67.449	36856	50	6.5	70	130	>+/-30%
Co	59	3	72	0.016	ppb	105.628	48	1	1.6	70	130	>+/-30%
Ni	60	3	72	0.202	ppb	56.442	476	2	10.1	70	130	>+/-30%
Cu	63	3	72	0.137	ppb	43.578	356	2	6.9	70	130	>+/-30%
Zn	66	3	72	1.028	ppb	40.659	260	10	10.3	70	130	>+/-30%
As	75	3	72	-0.138	ppb	-48.940	47	5	-2.8	70	130	>+/-30%
Se	78	2	72	0.031	ppb	167.029	3	5	0.6	70	130	>+/-30%
Sr	88	3	72	0.119	ppb	30.419	67	5	2.4	70	130	>+/-30%
Mo	95	3	115	0.017	ppb	92.746	33	2	0.9	70	130	>+/-30%
Ag	107	3	115	0.014	ppb	40.185	33	1	1.4	70	130	>+/-30%
Cd	111	3	115	0.009	ppb	172.167	3	1	0.9	70	130	>+/-30%
Sn	120	3	115	0.262	ppb	53.190	670	10	2.6	70	130	>+/-30%
Sb	121	3	115	0.040	ppb	69.908	52	2	2.0	70	130	>+/-30%
Ba	137	3	115	0.000	ppb	-66641.315	40	1	0.0	70	130	>+/-30%
Tl	205	3	193	0.009	ppb	80.691	133	1	0.9	70	130	>+/-30%
(Pb)	206	3	193	0.034	ppb	37.050	215	1	3.4	70	130	>+/-30%
(Pb)	207	3	193	0.062	ppb	84.894	350	1	6.2	70	130	>+/-30%
Pb	208	3	193	0.027	ppb	81.613	1001	1	2.7	70	130	>+/-30%
Th	232	3	193	3.115	ppb	3.124	19766	1	311.5	70	130	>+/-30%
U	238	3	193	0.022	ppb	131.233	1368	1	2.2	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3495425	1.73	3473788	100.62	60	120	
Sc (IS)	45	3	HMI He	510446	1.70	498630	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2156743	2.14	2241871	96.20	60	120	
Ge Internal standard	72	3	HMI He	641199	1.20	647352	99.05	60	120	
In Internal Standard	115	3	HMI He	2356977	1.88	2356036	100.04	60	120	
Ir (IS)	193	3	HMI He	5207217	2.29	4999588	104.15	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-1-A@10
Data File Name	350SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:03:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	15349.017	ppb	15349.017	1.14	1344754	400000	
Mg	24	3	45	2364.896	ppb	2364.896	1.10	109792	400000	
Al	27	3	45	4.816	ppb	4.816	50.76	163	400000	
K	39	3	45	545.655	ppb	545.655	5.30	43702	400000	
Ca	40	2	45	23163.276	ppb	23163.276	1.00	11053254	400000	
V	51	3	72	-0.030	ppb	-0.030	-368.25	615	2000	
Cr	52	3	72	-0.111	ppb	-0.111	-66.68	2056	5000	
Mn	55	3	72	23.910	ppb	23.910	2.56	7842	10000	
Fe	56	2	72	15.208	ppb	15.208	12.14	52753	10000	
Co	59	3	72	1.254	ppb	1.254	5.53	1343	2000	
Ni	60	3	72	1.369	ppb	1.369	36.34	818	5000	
Cu	63	3	72	0.083	ppb	0.083	38.45	315	5000	
Zn	66	3	72	5.822	ppb	5.822	3.66	868	5000	
As	75	3	72	-0.085	ppb	-0.085	-325.05	52	2000	
Se	78	2	72	7.363	ppb	7.363	2.34	342	2000	
Sr	88	3	72	470.202	ppb	470.202	1.18	205511	4000	
Mo	95	3	115	825.993	ppb	825.993	2.69	331876	2000	
Ag	107	3	115	0.013	ppb	0.013	12.66	33	100	
Cd	111	3	115	0.134	ppb	0.134	41.97	28	2000	
Sn	120	3	115	0.339	ppb	0.339	30.95	728	2000	
Sb	121	3	115	0.002	ppb	0.002	621.26	28	1000	
Ba	137	3	115	3.028	ppb	3.028	4.78	655	5000	
Tl	205	3	193	0.013	ppb	0.013	64.88	143	2000	
(Pb)	206	3	193	0.540	ppb	0.540	5.42	750	100	
(Pb)	207	3	193	0.495	ppb	0.495	6.22	745	100	
Pb	208	3	193	0.482	ppb	0.482	4.04	2924	5000	
Th	232	3	193	-0.245	ppb	-0.245	-13.73	5455	2000	
U	238	3	193	8.434	ppb	8.434	2.18	38181	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3553238	1.40	3473788	102.29	60	120	
Sc (IS)	45	3	HMI He	502853	1.66	498630	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2186889	1.62	2241871	97.55	60	120	
Ge Internal standard	72	3	HMI He	643394	0.99	647352	99.39	60	120	
In Internal Standard	115	3	HMI He	2386278	2.37	2356036	101.28	60	120	
Ir (IS)	193	3	HMI He	5179302	0.67	4999588	103.59	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A@50
Data File Name	351SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:05:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.445	ppb	1.445	19.65	52	2000	
Na	23	3	45	716.104	ppb	716.104	2.26	76552	400000	
Mg	24	3	45	4281.973	ppb	4281.973	1.68	200794	400000	
Al	27	3	45	4739.155	ppb	4739.155	2.32	82384	400000	
K	39	3	45	142.777	ppb	142.777	24.53	28909	400000	
Ca	40	2	45	8638.941	ppb	8638.941	3.34	4034775	400000	
V	51	3	72	1.156	ppb	1.156	7.87	1203	2000	
Cr	52	3	72	0.191	ppb	0.191	97.71	2254	5000	
Mn	55	3	72	252.311	ppb	252.311	0.92	81497	10000	
Fe	56	2	72	22.725	ppb	22.725	12.81	62798	10000	
Co	59	3	72	11.904	ppb	11.904	1.81	12551	2000	
Ni	60	3	72	11.465	ppb	11.465	4.11	3789	5000	
Cu	63	3	72	0.273	ppb	0.273	15.91	466	5000	
Zn	66	3	72	61.426	ppb	61.426	1.85	7953	5000	
As	75	3	72	-0.089	ppb	-0.089	-70.60	52	2000	
Se	78	2	72	0.455	ppb	0.455	48.97	23	2000	
Sr	88	3	72	64.787	ppb	64.787	0.44	28497	4000	
Mo	95	3	115	0.871	ppb	0.871	19.88	376	2000	
Ag	107	3	115	0.008	ppb	0.008	95.95	27	100	
Cd	111	3	115	0.203	ppb	0.203	26.25	42	2000	
Sn	120	3	115	0.303	ppb	0.303	26.09	700	2000	
Sb	121	3	115	0.016	ppb	0.016	65.94	37	1000	
Ba	137	3	115	0.330	ppb	0.330	23.22	107	5000	
Tl	205	3	193	0.043	ppb	0.043	29.59	235	2000	
(Pb)	206	3	193	0.729	ppb	0.729	17.32	938	100	
(Pb)	207	3	193	0.806	ppb	0.806	14.59	1018	100	
Pb	208	3	193	0.734	ppb	0.734	9.00	3943	5000	
Th	232	3	193	-0.360	ppb	-0.360	-10.09	4915	2000	
U	238	3	193	1.967	ppb	1.967	2.05	9761	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3475746	3.72	3473788	100.06	60	120	
Sc (IS)	45	3	HMI He	508185	0.75	498630	101.92	60	120	
Ge Internal standard	72	2	HMI H2	2201351	2.82	2241871	98.19	60	120	
Ge Internal standard	72	3	HMI He	647166	0.27	647352	99.97	60	120	
In Internal Standard	115	3	HMI He	2375625	2.86	2356036	100.83	60	120	
Ir (IS)	193	3	HMI He	5121991	1.29	4999588	102.45	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A@50
Data File Name	352SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:07:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.355	ppb	1.355	13.63	47	2000	
Na	23	3	45	1258.387	ppb	1258.387	1.00	125042	400000	
Mg	24	3	45	6238.150	ppb	6238.150	1.20	294728	400000	
Al	27	3	45	1833.126	ppb	1833.126	3.23	32169	400000	
K	39	3	45	277.651	ppb	277.651	18.03	34286	400000	
Ca	40	2	45	8941.626	ppb	8941.626	0.74	4270587	400000	
V	51	3	72	0.190	ppb	0.190	98.59	723	2000	
Cr	52	3	72	0.245	ppb	0.245	82.29	2276	5000	
Mn	55	3	72	327.321	ppb	327.321	1.56	105128	10000	
Fe	56	2	72	12.153	ppb	12.153	16.79	48423	10000	
Co	59	3	72	15.274	ppb	15.274	1.04	16013	2000	
Ni	60	3	72	13.830	ppb	13.830	0.90	4460	5000	
Cu	63	3	72	0.238	ppb	0.238	30.79	436	5000	
Zn	66	3	72	77.415	ppb	77.415	1.43	9939	5000	
As	75	3	72	-0.013	ppb	-0.013	-823.14	58	2000	
Se	78	2	72	0.349	ppb	0.349	24.22	17	2000	
Sr	88	3	72	85.979	ppb	85.979	1.68	37620	4000	
Mo	95	3	115	0.151	ppb	0.151	50.47	88	2000	
Ag	107	3	115	0.017	ppb	0.017	86.39	38	100	
Cd	111	3	115	0.201	ppb	0.201	32.86	42	2000	
Sn	120	3	115	0.137	ppb	0.137	76.99	603	2000	
Sb	121	3	115	-0.009	ppb	-0.009	-299.97	22	1000	
Ba	137	3	115	0.166	ppb	0.166	118.52	75	5000	
Tl	205	3	193	0.039	ppb	0.039	43.13	225	2000	
(Pb)	206	3	193	0.758	ppb	0.758	7.27	980	100	
(Pb)	207	3	193	0.768	ppb	0.768	8.03	995	100	
Pb	208	3	193	0.703	ppb	0.703	2.89	3857	5000	
Th	232	3	193	-0.469	ppb	-0.469	-8.50	4504	2000	
U	238	3	193	3.556	ppb	3.556	2.29	16813	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3551695	0.11	3473788	102.24	60	120	
Sc (IS)	45	3	HMI He	512085	0.79	498630	102.70	60	120	
Ge Internal standard	72	2	HMI H2	2167304	1.67	2241871	96.67	60	120	
Ge Internal standard	72	3	HMI He	643857	0.37	647352	99.46	60	120	
In Internal Standard	115	3	HMI He	2403088	1.32	2356036	102.00	60	120	
Ir (IS)	193	3	HMI He	5175721	1.67	4999588	103.52	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A@50
Data File Name	353SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:09:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.211	ppb	1.211	17.16	42	2000	
Na	23	3	45	742.395	ppb	742.395	2.93	79900	400000	
Mg	24	3	45	4399.171	ppb	4399.171	2.55	209019	400000	
Al	27	3	45	4826.085	ppb	4826.085	2.97	85006	400000	
K	39	3	45	131.474	ppb	131.474	24.45	28859	400000	
Ca	40	2	45	8849.345	ppb	8849.345	1.33	4268379	400000	
V	51	3	72	1.153	ppb	1.153	3.25	1216	2000	
Cr	52	3	72	-0.055	ppb	-0.055	-238.45	2129	5000	
Mn	55	3	72	259.575	ppb	259.575	1.37	84884	10000	
Fe	56	2	72	23.437	ppb	23.437	7.01	63847	10000	
Co	59	3	72	12.623	ppb	12.623	2.00	13473	2000	
Ni	60	3	72	11.923	ppb	11.923	3.66	3972	5000	
Cu	63	3	72	0.305	ppb	0.305	16.94	498	5000	
Zn	66	3	72	63.591	ppb	63.591	1.88	8332	5000	
As	75	3	72	-0.096	ppb	-0.096	-305.92	52	2000	
Se	78	2	72	0.444	ppb	0.444	34.95	22	2000	
Sr	88	3	72	67.078	ppb	67.078	0.51	29873	4000	
Mo	95	3	115	0.061	ppb	0.061	21.59	52	2000	
Ag	107	3	115	0.008	ppb	0.008	144.03	27	100	
Cd	111	3	115	0.158	ppb	0.158	14.87	33	2000	
Sn	120	3	115	0.278	ppb	0.278	24.09	691	2000	
Sb	121	3	115	0.031	ppb	0.031	86.37	47	1000	
Ba	137	3	115	0.382	ppb	0.382	16.63	118	5000	
Tl	205	3	193	0.024	ppb	0.024	37.07	178	2000	
(Pb)	206	3	193	0.799	ppb	0.799	9.07	1018	100	
(Pb)	207	3	193	0.768	ppb	0.768	6.00	990	100	
Pb	208	3	193	0.769	ppb	0.769	3.49	4110	5000	
Th	232	3	193	-0.454	ppb	-0.454	-11.88	4542	2000	
U	238	3	193	2.058	ppb	2.058	4.41	10211	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3587210	1.30	3473788	103.27	60	120	
Sc (IS)	45	3	HMI He	515033	1.98	498630	103.29	60	120	
Ge Internal standard	72	2	HMI H2	2203341	0.31	2241871	98.28	60	120	
Ge Internal standard	72	3	HMI He	655255	0.28	647352	101.22	60	120	
In Internal Standard	115	3	HMI He	2398268	3.00	2356036	101.79	60	120	
Ir (IS)	193	3	HMI He	5148208	0.65	4999588	102.97	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608911/1-A
Data File Name	354_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:11:15-06:00
Sample Type	Blank
Dilution	1
Comment	608911 6020a
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5
Na	23	3	45	40.437	ppb	20.64133431	16827	25
Mg	24	3	45	4.660	ppb	8.780518785	344	25
Al	27	3	45	2.420	ppb	107.4491378	120	15
K	39	3	45	13.323	ppb	236.5352786	23313	50
Ca	40	2	45	15.415	ppb	5.402050742	16583	200
V	51	3	72	0.087	ppb	162.9532908	648	1
Cr	52	3	72	0.929	ppb	49.4483936	2602	1
Mn	55	3	72	0.357	ppb	19.6560088	287	0.5
Fe	56	2	72	5.111	ppb	42.38813449	37515	50
Co	59	3	72	0.036	ppb	53.164863	67	0.5
Ni	60	3	72	0.013	ppb	916.5315212	408	1
Cu	63	3	72	0.062	ppb	91.53498698	288	1
Zn	66	3	72	1.104	ppb	45.02423846	262	5
As	75	3	72	-0.160	ppb	-52.34701567	43	1
(Se)	78	3	72	-2.841	ppb	-101.3383529	17	1
Sr	88	3	72	0.152	ppb	32.81966272	78	0.5
Mo	95	3	115	0.132	ppb	20.13916644	77	0.5
Ag	107	3	115	0.009	ppb	48.04210485	27	1
Cd	111	3	115	0.009	ppb	335.397613	3	0.5
Sn	120	3	115	0.098	ppb	61.72807631	551	1
Sb	121	3	115	0.015	ppb	56.54409414	35	0.6
Ba	137	3	115	0.057	ppb	163.0090434	50	0.5
Tl	205	3	193	0.016	ppb	26.79545598	150	0.1
(Pb)	206	3	193	-0.018	ppb	-213.2659241	155	1
(Pb)	207	3	193	0.019	ppb	129.0148589	303	1
Pb	208	3	193	0.006	ppb	186.8353461	890	0.5
Th	232	3	193	-0.507	ppb	-18.24446952	4249	1
U	238	3	193	0.039	ppb	29.47320768	1401	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3448693	1.08	3473788	99.28	60	120	
Sc (IS)	45	3	HMI He	493176	1.03	498630	98.91	60	120	
Ge Internal standard	72	2	HMI H2	2065363	2.16	2241871	92.13	60	120	
Ge Internal standard	72	3	HMI He	621277	1.01	647352	95.97	60	120	
In Internal Standard	115	3	HMI He	2291880	0.25	2356036	97.28	60	120	
Ir (IS)	193	3	HMI He	5068499	2.48	4999588	101.38	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608911/24-A
Data File Name	355_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:13:05-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608911 6020a
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.709	39.709	ppb	5.755	1403	40	99.3	80	120	
Na	23	3	45	797.819	797.819	ppb	0.778	83807	40	1994.5	80	120	>+/-20%
Mg	24	3	45	696.917	696.917	ppb	0.850	32831	40	1742.3	80	120	>+/-20%
Al	27	3	45	792.385	792.385	ppb	3.271	13857	40	1981.0	80	120	>+/-20%
K	39	3	45	766.059	766.059	ppb	4.038	52544	40	1915.1	80	120	>+/-20%
Ca	40	2	45	799.011	799.011	ppb	2.685	389519	40	1997.5	80	120	>+/-20%
V	51	3	72	40.713	40.713	ppb	0.216	20877	40	101.8	80	120	
Cr	52	3	72	39.838	39.838	ppb	1.178	26913	40	99.6	80	120	
Mn	55	3	72	40.580	40.580	ppb	0.865	13375	40	101.5	80	120	
Fe	56	2	72	800.600	800.600	ppb	3.143	1075400	40	2001.5	80	120	>+/-20%
(Fe)	56	3	72	775.934	775.934	ppb	0.714	419771	40	1939.8	80	120	>+/-20%
Co	59	3	72	39.175	39.175	ppb	1.131	41583	40	97.9	80	120	
Ni	60	3	72	38.711	38.711	ppb	2.859	11891	40	96.8	80	120	
Cu	63	3	72	41.621	41.621	ppb	0.165	33333	40	104.1	80	120	
Zn	66	3	72	42.273	42.273	ppb	1.178	5562	40	105.7	80	120	
As	75	3	72	39.189	39.189	ppb	1.400	3710	40	98.0	80	120	
Se	78	2	72	41.587	41.587	ppb	3.873	1946	40	104.0	80	120	
(Se)	78	3	72	30.771	30.771	ppb	25.989	207	40	76.9	80	120	>+/-20%
Sr	88	3	72	79.086	79.086	ppb	2.552	35079	40	197.7	80	120	>+/-20%
Mo	95	3	115	39.802	39.802	ppb	1.628	16083	40	99.5	80	120	
Ag	107	3	115	40.057	40.057	ppb	1.389	55033	40	100.1	80	120	
Cd	111	3	115	39.423	39.423	ppb	0.828	7847	40	98.6	80	120	
Sn	120	3	115	36.533	36.533	ppb	4.429	23704	40	91.3	80	120	
Sb	121	3	115	39.446	39.446	ppb	2.124	24791	40	98.6	80	120	
Ba	137	3	115	40.498	40.498	ppb	2.689	8277	40	101.2	80	120	
Tl	205	3	193	39.826	39.826	ppb	2.520	124222	40	99.6	80	120	
(Pb)	206	3	193	39.646	39.646	ppb	2.938	41942	40	99.1	80	120	
(Pb)	207	3	193	39.673	39.673	ppb	2.632	36424	40	99.2	80	120	
Pb	208	3	193	39.908	39.908	ppb	3.025	168898	40	99.8	80	120	
Th	232	3	193	36.367	36.367	ppb	1.083	159516	40	90.9	80	120	
U	238	3	193	39.943	39.943	ppb	3.189	175233	40	99.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3544446	2.41	3473788	102.03	60	120	
Sc (IS)	45	3	HMI He	508708	0.43	498630	102.02	60	120	
Ge Internal standard	72	2	HMI H2	2209734	1.80	2241871	98.57	60	120	
Ge Internal standard	72	3	HMI He	652696	0.35	647352	100.83	60	120	
In Internal Standard	115	3	HMI He	2394637	1.70	2356036	101.64	60	120	
Ir (IS)	193	3	HMI He	5154912	1.93	4999588	103.11	60	120	

Sample Report

Sample Table

Sample Name	280-174977-C-12-A
Data File Name	356SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:15:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.048	ppb	0.048	173.21	2	2000	
Na	23	3	45	559.330	ppb	559.330	2.31	63197	400000	
Mg	24	3	45	85.372	ppb	85.372	2.87	4161	400000	
Al	27	3	45	488.591	ppb	488.591	4.29	8618	400000	
K	39	3	45	135.575	ppb	135.575	27.89	28809	400000	
Ca	40	2	45	244.189	ppb	244.189	0.30	125506	400000	
V	51	3	72	0.810	ppb	0.810	12.83	1038	2000	
Cr	52	3	72	1.595	ppb	1.595	9.64	3137	5000	
Mn	55	3	72	8.349	ppb	8.349	7.28	2891	10000	
Fe	56	2	72	440.606	ppb	440.606	2.37	602436	10000	
Co	59	3	72	0.139	ppb	0.139	14.52	178	2000	
Ni	60	3	72	0.556	ppb	0.556	31.40	588	5000	
Cu	63	3	72	0.467	ppb	0.467	7.29	623	5000	
Zn	66	3	72	3.171	ppb	3.171	11.00	538	5000	
As	75	3	72	-0.163	ppb	-0.163	-1.77	45	2000	
Se	78	2	72	0.058	ppb	0.058	73.63	4	2000	
Sr	88	3	72	1.156	ppb	1.156	13.67	526	4000	
Mo	95	3	115	8.681	ppb	8.681	3.44	3564	2000	
Ag	107	3	115	0.008	ppb	0.008	94.04	27	100	
Cd	111	3	115	0.025	ppb	0.025	59.31	7	2000	
Sn	120	3	115	0.313	ppb	0.313	31.80	720	2000	
Sb	121	3	115	0.149	ppb	0.149	26.25	122	1000	
Ba	137	3	115	3.143	ppb	3.143	12.46	686	5000	
Tl	205	3	193	0.018	ppb	0.018	58.69	160	2000	
(Pb)	206	3	193	0.216	ppb	0.216	20.01	405	100	
(Pb)	207	3	193	0.263	ppb	0.263	21.42	530	100	
Pb	208	3	193	0.234	ppb	0.234	11.93	1862	5000	
Th	232	3	193	0.984	ppb	0.984	18.24	10601	2000	
U	238	3	193	0.035	ppb	0.035	17.42	1411	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3535102	0.32	3473788	101.77	60	120	
Sc (IS)	45	3	HMI He	511291	0.94	498630	102.54	60	120	
Ge Internal standard	72	2	HMI H2	2193188	1.61	2241871	97.83	60	120	
Ge Internal standard	72	3	HMI He	650777	0.59	647352	100.53	60	120	
In Internal Standard	115	3	HMI He	2418954	1.19	2356036	102.67	60	120	
Ir (IS)	193	3	HMI He	5157287	1.32	4999588	103.15	60	120	

Sample Report

Sample Table

Sample Name	174894-2
Data File Name	357SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:16:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	62948.894	ppb	62948.894	1.02	6633286	400000	
Mg	24	3	45	13563.478	ppb	13563.478	0.88	762533	400000	
Al	27	3	45	4.666	ppb	4.666	134.38	197	400000	
K	39	3	45	1608.507	ppb	1608.507	0.64	101184	400000	
Ca	40	2	45	34551.559	ppb	34551.559	1.96	19942962	400000	
V	51	3	72	-0.857	ppb	-0.857	-4.40	250	2000	
Cr	52	3	72	-0.665	ppb	-0.665	-19.71	2051	5000	
Mn	55	3	72	511.045	ppb	511.045	3.16	195808	10000	
Fe	56	2	72	-8.440	ppb	-8.440	-18.37	27187	10000	
Co	59	3	72	0.155	ppb	0.155	14.33	232	2000	
Ni	60	3	72	0.342	ppb	0.342	19.17	620	5000	
Cu	63	3	72	0.124	ppb	0.124	35.44	415	5000	
Zn	66	3	72	0.630	ppb	0.630	28.24	252	5000	
As	75	3	72	16.061	ppb	16.061	2.24	1833	2000	
Se	78	2	72	0.019	ppb	0.019	217.92	3	2000	
Sr	88	3	72	263.447	ppb	263.447	0.81	137578	4000	
Mo	95	3	115	4.968	ppb	4.968	9.47	2461	2000	
Ag	107	3	115	0.008	ppb	0.008	209.63	32	100	
Cd	111	3	115	-0.002	ppb	-0.002	-752.67	2	2000	
Sn	120	3	115	-0.628	ppb	-0.628	-4.49	140	2000	
Sb	121	3	115	0.016	ppb	0.016	154.27	45	1000	
Ba	137	3	115	334.947	ppb	334.947	1.78	82651	5000	
Tl	205	3	193	0.008	ppb	0.008	39.39	152	2000	
(Pb)	206	3	193	-0.014	ppb	-0.014	-176.38	192	100	
(Pb)	207	3	193	0.014	ppb	0.014	177.34	358	100	
Pb	208	3	193	-0.020	ppb	-0.020	-73.68	938	5000	
Th	232	3	193	-0.630	ppb	-0.630	-9.03	4487	2000	
U	238	3	193	0.026	ppb	0.026	10.07	1614	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4300040	1.20	3473788	123.79	60	120	IS Failed
Sc (IS)	45	3	HMI He	609537	1.74	498630	122.24	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2664767	0.84	2241871	118.86	60	120	
Ge Internal standard	72	3	HMI He	768667	0.71	647352	118.74	60	120	
In Internal Standard	115	3	HMI He	2903289	1.57	2356036	123.23	60	120	IS Failed
Ir (IS)	193	3	HMI He	6076046	1.55	4999588	121.53	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	358_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:18:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
Na	23	3	45	-63.184	ppb	-8.625	14689	51000	-0.1	90	110	>+\-10%
Mg	24	3	45	-0.131	ppb	-740.638	230	11000	0.0	90	110	>+\-10%
Al	27	3	45	-2.433	ppb	-26.198	70	1000	-0.2	90	110	>+\-10%
K	39	3	45	-305.327	ppb	-6.449	21271	11000	-2.8	90	110	>+\-10%
Ca	40	2	45	-8.144	ppb	-6.370	9686	11000	-0.1	90	110	>+\-10%
V	51	3	72	-1.072	ppb	-2.015	183	50	-2.1	90	110	>+\-10%
Cr	52	3	72	-2.785	ppb	-3.286	740	50	-5.6	90	110	>+\-10%
Mn	55	3	72	-0.388	ppb	-10.498	103	50	-0.8	90	110	>+\-10%
Fe	56	2	72	-20.192	ppb	-1.960	11620	1000	-2.0	90	110	>+\-10%
Co	59	3	72	-0.018	ppb	-46.918	22	50	0.0	90	110	>+\-10%
Ni	60	3	72	-1.243	ppb	-2.228	98	50	-2.5	90	110	>+\-10%
Cu	63	3	72	-0.130	ppb	-25.108	262	50	-0.3	90	110	>+\-10%
Zn	66	3	72	-0.489	ppb	-13.643	122	50	-1.0	90	110	>+\-10%
As	75	3	72	-0.501	ppb	-22.789	23	50	-1.0	90	110	>+\-10%
Se	78	2	72	-0.001	ppb	-1817.518	2	50	0.0	90	110	>+\-10%
Sr	88	3	72	0.001	ppb	2250.974	27	100	0.0	90	110	>+\-10%
Mo	95	3	115	-0.045	ppb	-27.002	15	50	-0.1	90	110	>+\-10%
Ag	107	3	115	-0.001	ppb	-448.581	23	50	0.0	90	110	>+\-10%
Cd	111	3	115	-0.008	ppb	0.000	0	50	0.0	90	110	>+\-10%
Sn	120	3	115	-0.638	ppb	-1.841	188	50	-1.3	90	110	>+\-10%
Sb	121	3	115	-0.019	ppb	-51.889	27	50	0.0	90	110	>+\-10%
Ba	137	3	115	-0.100	ppb	-28.062	35	50	-0.2	90	110	>+\-10%
Tl	205	3	193	-0.009	ppb	-16.003	130	50	0.0	90	110	>+\-10%
(Pb)	206	3	193	-0.064	ppb	-9.276	192	50	-0.1	90	110	>+\-10%
(Pb)	207	3	193	-0.050	ppb	-62.433	428	50	-0.1	90	110	>+\-10%
Pb	208	3	193	-0.069	ppb	-10.295	1023	50	-0.1	90	110	>+\-10%
Th	232	3	193	-0.637	ppb	-5.679	6592	50	-1.3	90	110	>+\-10%
U	238	3	193	0.032	ppb	63.314	2434	50	0.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	5875479	1.13	3473788	169.14	60	120	IS Failed
Sc (IS)	45	3	HMI He	905025	3.95	498630	181.50	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3552600	3.34	2241871	158.47	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1139526	4.43	647352	176.03	60	120	IS Failed
In Internal Standard	115	3	HMI He	4133853	1.63	2356036	175.46	60	120	IS Failed
Ir (IS)	193	3	HMI He	8994679	2.28	4999588	179.91	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	359_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:20:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.047	ppb	173.2	2	0.5	
Na	23	3	45	66.102	ppb	7.1	18985	25	>RL
Mg	24	3	45	9.300	ppb	14.6	554	25	
Al	27	3	45	-1.337	ppb	-113.1	57	15	
K	39	3	45	8.330	ppb	200.0	23092	50	
V	51	3	72	0.182	ppb	74.7	701	1	
Cr	52	3	72	0.422	ppb	28.8	2326	1	
Mn	55	3	72	0.645	ppb	29.3	380	0.5	>RL
Co	59	3	72	0.022	ppb	63.6	53	0.5	
Ni	60	3	72	0.290	ppb	128.9	491	1	
Cu	63	3	72	-0.032	ppb	-109.5	220	1	
Zn	66	3	72	0.100	ppb	288.3	140	5	
As	75	3	72	-0.108	ppb	-109.7	48	1	
Se	78	2	72	0.001	ppb	4883.5	1	1	
Sr	88	3	72	0.219	ppb	38.0	108	0.5	
Mo	95	3	115	0.067	ppb	27.4	53	0.5	
Ag	107	3	115	-0.006	ppb	-34.3	7	1	
Cd	111	3	115	0.000	ppb	102379.6	2	0.5	
Sn	120	3	115	0.140	ppb	59.8	595	1	
Sb	121	3	115	0.019	ppb	68.0	38	0.6	
Ba	137	3	115	0.232	ppb	33.3	87	0.5	
Tl	205	3	193	0.013	ppb	44.2	137	0.1	
(Pb)	206	3	193	0.008	ppb	452.0	178	1	
(Pb)	207	3	193	0.067	ppb	91.3	338	1	
Pb	208	3	193	0.010	ppb	190.9	886	0.5	
Th	232	3	193	0.287	ppb	63.9	7357	1	
U	238	3	193	0.036	ppb	64.9	1356	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3441292	2.36	3473788	99.06	60	120	
Sc (IS)	45	3	HMI He	492503	0.49	498630	98.77	60	120	
Ge Internal standard	72	2	HMI H2	2146543	1.72	2241871	95.75	60	120	
Ge Internal standard	72	3	HMI He	628060	0.58	647352	97.02	60	120	
In Internal Standard	115	3	HMI He	2363188	0.80	2356036	100.30	60	120	
Ir (IS)	193	3	HMI He	4951375	2.17	4999588	99.04	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	360_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:23:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	46.261	ppb	8.273	1636	50	92.5	90	110	
Na	23	3	45	49524.871	ppb	1.663	4287731	51000	97.1	90	110	
Mg	24	3	45	10510.389	ppb	0.900	485168	11000	95.5	90	110	
Al	27	3	45	1035.059	ppb	3.692	17782	1000	103.5	90	110	
K	39	3	45	10677.234	ppb	1.975	420883	11000	97.1	90	110	
Ca	40	2	45	10311.240	ppb	5.485	4806207	11000	93.7	90	110	
V	51	3	72	53.459	ppb	0.951	25920	50	106.9	90	110	
Cr	52	3	72	53.471	ppb	1.577	33701	50	106.9	90	110	
Mn	55	3	72	53.834	ppb	1.281	16842	50	107.7	90	110	
Fe	56	2	72	1071.515	ppb	4.096	1358426	1000	107.2	90	110	
Co	59	3	72	52.421	ppb	1.242	52986	50	104.8	90	110	
Ni	60	3	72	53.654	ppb	0.960	15541	50	107.3	90	110	
Cu	63	3	72	53.714	ppb	1.662	40900	50	107.4	90	110	
Zn	66	3	72	56.395	ppb	1.826	7025	50	112.8	90	110	>+\-10%
As	75	3	72	53.332	ppb	2.908	4788	50	106.7	90	110	
Se	78	2	72	55.964	ppb	4.036	2489	50	111.9	90	110	>+\-10%
Sr	88	3	72	107.479	ppb	1.888	45401	100	107.5	90	110	
Mo	95	3	115	52.612	ppb	2.033	20444	50	105.2	90	110	
Ag	107	3	115	52.762	ppb	1.880	69752	50	105.5	90	110	
Cd	111	3	115	52.244	ppb	0.574	10007	50	104.5	90	110	
Sn	120	3	115	51.217	ppb	1.591	31794	50	102.4	90	110	
Sb	121	3	115	51.864	ppb	3.720	31353	50	103.7	90	110	
Ba	137	3	115	53.316	ppb	2.718	10474	50	106.6	90	110	
Tl	205	3	193	51.263	ppb	1.974	157223	50	102.5	90	110	
(Pb)	206	3	193	50.856	ppb	1.979	52860	50	101.7	90	110	
(Pb)	207	3	193	52.141	ppb	0.727	47000	50	104.3	90	110	
Pb	208	3	193	50.957	ppb	1.677	211876	50	101.9	90	110	
Th	232	3	193	50.537	ppb	2.694	215465	50	101.1	90	110	
U	238	3	193	51.124	ppb	0.937	220289	50	102.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3473182	4.66	3473788	99.98	60	120	
Sc (IS)	45	3	HMI He	500408	0.14	498630	100.36	60	120	
Ge Internal standard	72	2	HMI H2	2102404	2.20	2241871	93.78	60	120	
Ge Internal standard	72	3	HMI He	621657	0.59	647352	96.03	60	120	
In Internal Standard	115	3	HMI He	2304539	1.60	2356036	97.81	60	120	
Ir (IS)	193	3	HMI He	5069760	2.66	4999588	101.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	361_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:25:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	28.091	ppb	27.1	16102	25	>RL
Mg	24	3	45	2.422	ppb	28.5	247	25	
Al	27	3	45	0.138	ppb	882.9	83	15	
K	39	3	45	0.008	ppb	521420.4	23286	50	
V	51	3	72	-0.024	ppb	-419.4	615	1	
Cr	52	3	72	0.186	ppb	80.7	2229	1	
Mn	55	3	72	0.178	ppb	31.7	238	0.5	
Co	59	3	72	0.015	ppb	134.4	47	0.5	
Ni	60	3	72	0.646	ppb	19.2	605	1	
Cu	63	3	72	0.053	ppb	108.4	290	1	
Zn	66	3	72	0.195	ppb	120.4	155	5	
As	75	3	72	-0.320	ppb	-45.5	30	1	
Se	78	2	72	0.104	ppb	72.7	6	1	
Sr	88	3	72	0.035	ppb	87.0	30	0.5	
Mo	95	3	115	0.126	ppb	38.4	78	0.5	
Ag	107	3	115	0.002	ppb	192.8	18	1	
Cd	111	3	115	0.008	ppb	354.0	3	0.5	
Sn	120	3	115	0.312	ppb	40.0	715	1	
Sb	121	3	115	0.039	ppb	48.1	52	0.6	
Ba	137	3	115	0.037	ppb	203.9	48	0.5	
Tl	205	3	193	0.034	ppb	23.6	212	0.1	
(Pb)	206	3	193	0.009	ppb	130.2	190	1	
(Pb)	207	3	193	0.009	ppb	636.6	303	1	
Pb	208	3	193	-0.014	ppb	-122.6	833	0.5	
Th	232	3	193	1.172	ppb	16.6	11566	1	>RL
U	238	3	193	0.027	ppb	39.0	1393	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3514954	2.47	3473788	101.19	60	120	
Sc (IS)	45	3	HMI He	503353	0.63	498630	100.95	60	120	
Ge Internal standard	72	2	HMI H2	2143158	0.60	2241871	95.60	60	120	
Ge Internal standard	72	3	HMI He	640786	0.58	647352	98.99	60	120	
In Internal Standard	115	3	HMI He	2404117	0.72	2356036	102.04	60	120	
Ir (IS)	193	3	HMI He	5233634	0.08	4999588	104.68	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	362LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:27:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.735	ppb	56.252	27	1	73.5	70	130	
Na	23	3	45	291.626	ppb	2.905	39364	300	97.2	70	130	
Mg	24	3	45	44.492	ppb	6.813	2222	50	89.0	70	130	
Al	27	3	45	43.316	ppb	7.559	834	50	86.6	70	130	
K	39	3	45	113.419	ppb	34.459	27819	120	94.5	70	130	
Ca	40	2	45	183.551	ppb	2.262	97575	200	91.8	70	130	
V	51	3	72	5.139	ppb	5.836	3150	5	102.8	70	130	
Cr	52	3	72	2.140	ppb	11.549	3437	2	107.0	70	130	
Mn	55	3	72	0.916	ppb	18.722	476	1	91.6	70	130	
Fe	56	2	72	49.969	ppb	8.831	97666	50	99.9	70	130	
Co	59	3	72	0.958	ppb	6.101	1033	1	95.8	70	130	
Ni	60	3	72	1.979	ppb	19.354	996	2	99.0	70	130	
Cu	63	3	72	1.936	ppb	4.789	1768	2	96.8	70	130	
Zn	66	3	72	10.445	ppb	6.368	1454	10	104.4	70	130	
As	75	3	72	4.903	ppb	11.294	510	5	98.1	70	130	
Se	78	2	72	4.302	ppb	4.850	201	5	86.0	70	130	
Sr	88	3	72	4.594	ppb	3.028	2024	5	91.9	70	130	
Mo	95	3	115	1.695	ppb	1.970	715	2	84.8	70	130	
Ag	107	3	115	0.971	ppb	6.711	1356	1	97.1	70	130	
Cd	111	3	115	0.791	ppb	12.531	160	1	79.1	70	130	
Sn	120	3	115	8.880	ppb	4.821	6187	10	88.8	70	130	
Sb	121	3	115	1.898	ppb	6.352	1226	2	94.9	70	130	
Ba	137	3	115	1.061	ppb	22.114	258	1	106.1	70	130	
Tl	205	3	193	0.914	ppb	4.862	2932	1	91.4	70	130	
(Pb)	206	3	193	0.893	ppb	11.712	1110	1	89.3	70	130	
(Pb)	207	3	193	0.868	ppb	10.258	1075	1	86.8	70	130	
Pb	208	3	193	0.909	ppb	3.273	4673	1	90.9	70	130	
Th	232	3	193	1.173	ppb	16.852	11321	1	117.3	70	130	
U	238	3	193	0.983	ppb	1.229	5500	1	98.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3565931	1.54	3473788	102.65	60	120	
Sc (IS)	45	3	HMI He	508281	1.10	498630	101.94	60	120	
Ge Internal standard	72	2	HMI H2	2190963	1.89	2241871	97.73	60	120	
Ge Internal standard	72	3	HMI He	643918	1.81	647352	99.47	60	120	
In Internal Standard	115	3	HMI He	2408073	0.78	2356036	102.21	60	120	
Ir (IS)	193	3	HMI He	5118118	0.88	4999588	102.37	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A
Data File Name	363SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:29:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	60.581	ppb	60.581	6.11	2037	2000	
Na	23	3	45	35840.265	ppb	35840.265	2.12	3123381	400000	
Mg	24	3	45	212863.531	ppb	212863.531	1.01	9876113	400000	
Al	27	3	45	239670.632	ppb	239670.632	1.02	4121102	400000	
K	39	3	45	6901.004	ppb	6901.004	1.43	281731	400000	
Ca	40	2	45	424239.762	ppb	424239.762	2.16	194494464	400000	
V	51	3	72	59.108	ppb	59.108	2.27	28747	2000	
Cr	52	3	72	6.899	ppb	6.899	4.42	6170	5000	
Mn	55	3	72	12685.926	ppb	12685.926	1.47	3949278	10000	
Fe	56	2	72	813.299	ppb	813.299	2.40	1039931	10000	
Co	59	3	72	612.104	ppb	612.104	1.55	621764	2000	
Ni	60	3	72	564.723	ppb	564.723	1.33	160596	5000	
Cu	63	3	72	7.342	ppb	7.342	5.98	5828	5000	
Zn	66	3	72	2864.956	ppb	2864.956	1.63	352465	5000	
As	75	3	72	3.595	ppb	3.595	13.41	378	2000	
Se	78	2	72	14.366	ppb	14.366	7.92	641	2000	
Sr	88	3	72	3485.993	ppb	3485.993	2.58	1480189	4000	
Mo	95	3	115	0.162	ppb	0.162	35.29	90	2000	
Ag	107	3	115	0.024	ppb	0.024	32.01	47	100	
Cd	111	3	115	8.440	ppb	8.440	0.98	1643	2000	
Sn	120	3	115	0.251	ppb	0.251	31.97	658	2000	
Sb	121	3	115	0.052	ppb	0.052	56.20	58	1000	
Ba	137	3	115	10.428	ppb	10.428	2.47	2112	5000	
Tl	205	3	193	0.719	ppb	0.719	4.93	2261	2000	
(Pb)	206	3	193	10.411	ppb	10.411	3.17	10736	100	
(Pb)	207	3	193	9.608	ppb	9.608	0.93	8714	100	
Pb	208	3	193	9.842	ppb	9.842	2.47	40770	5000	
Th	232	3	193	2.471	ppb	2.471	2.35	16246	2000	
U	238	3	193	102.308	ppb	102.308	1.70	430618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3418181	2.68	3473788	98.40	60	120	
Sc (IS)	45	3	HMI He	503103	0.22	498630	100.90	60	120	
Ge Internal standard	72	2	HMI H2	2104222	1.70	2241871	93.86	60	120	
Ge Internal standard	72	3	HMI He	625147	1.87	647352	96.57	60	120	
In Internal Standard	115	3	HMI He	2339653	0.73	2356036	99.30	60	120	
Ir (IS)	193	3	HMI He	4966703	2.34	4999588	99.34	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A
Data File Name	364SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:31:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	73.276	ppb	73.276	1.34	2422	2000	
Na	23	3	45	62093.367	ppb	62093.367	1.41	5377585	400000	
Mg	24	3	45	306187.371	ppb	306187.371	1.76	14143200	400000	
Al	27	3	45	91226.880	ppb	91226.880	2.76	1561643	400000	
K	39	3	45	14917.053	ppb	14917.053	2.19	579343	400000	
Ca	40	2	45	441552.111	ppb	441552.111	0.70	202504125	400000	
V	51	3	72	4.300	ppb	4.300	3.60	2697	2000	
Cr	52	3	72	3.024	ppb	3.024	6.03	3920	5000	
Mn	55	3	72	16023.426	ppb	16023.426	0.92	5061298	10000	
Fe	56	2	72	279.809	ppb	279.809	0.54	377439	10000	
Co	59	3	72	743.454	ppb	743.454	0.03	766373	2000	
Ni	60	3	72	624.357	ppb	624.357	0.36	180138	5000	
Cu	63	3	72	5.203	ppb	5.203	2.42	4265	5000	
Zn	66	3	72	3518.706	ppb	3518.706	0.34	439287	5000	
As	75	3	72	2.777	ppb	2.777	19.61	310	2000	
Se	78	2	72	18.727	ppb	18.727	6.12	832	2000	
Sr	88	3	72	4367.568	ppb	4367.568	3.12	1882131	4000	
Mo	95	3	115	0.090	ppb	0.090	10.17	62	2000	
Ag	107	3	115	0.019	ppb	0.019	19.76	40	100	
Cd	111	3	115	10.743	ppb	10.743	4.39	2084	2000	
Sn	120	3	115	-0.026	ppb	-0.026	-418.25	485	2000	
Sb	121	3	115	0.063	ppb	0.063	37.47	65	1000	
Ba	137	3	115	8.697	ppb	8.697	2.35	1763	5000	
Tl	205	3	193	1.987	ppb	1.987	2.36	6165	2000	
(Pb)	206	3	193	10.489	ppb	10.489	3.15	10994	100	
(Pb)	207	3	193	9.425	ppb	9.425	2.02	8692	100	
Pb	208	3	193	9.838	ppb	9.838	2.51	41431	5000	
Th	232	3	193	0.297	ppb	0.297	9.60	7550	2000	
U	238	3	193	178.748	ppb	178.748	0.36	763922	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3418263	1.18	3473788	98.40	60	120	
Sc (IS)	45	3	HMI He	500941	1.13	498630	100.46	60	120	
Ge Internal standard	72	2	HMI H2	2096795	1.22	2241871	93.53	60	120	
Ge Internal standard	72	3	HMI He	634296	0.48	647352	97.98	60	120	
In Internal Standard	115	3	HMI He	2332431	1.12	2356036	99.00	60	120	
Ir (IS)	193	3	HMI He	5047763	0.79	4999588	100.96	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-3-A
Data File Name	365SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:32:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.047	ppb	0.047	173.21	2	2000	
Na	23	3	45	2063.597	ppb	2063.597	2.02	197694	400000	
Mg	24	3	45	7142.523	ppb	7142.523	0.80	340122	400000	
Al	27	3	45	1104.902	ppb	1104.902	3.83	19577	400000	
K	39	3	45	20614.237	ppb	20614.237	0.87	815926	400000	
Ca	40	2	45	42922.982	ppb	42922.982	1.91	20641832	400000	
V	51	3	72	3.410	ppb	3.410	11.09	2349	2000	
Cr	52	3	72	1.196	ppb	1.196	28.01	2917	5000	
Mn	55	3	72	26.936	ppb	26.936	3.24	8998	10000	
Fe	56	2	72	783.898	ppb	783.898	1.42	1073723	10000	
Co	59	3	72	0.979	ppb	0.979	6.63	1078	2000	
Ni	60	3	72	1.600	ppb	1.600	13.91	905	5000	
Cu	63	3	72	5.112	ppb	5.112	0.77	4345	5000	
Zn	66	3	72	5.024	ppb	5.024	11.65	783	5000	
As	75	3	72	1.129	ppb	1.129	28.37	167	2000	
Se	78	2	72	0.503	ppb	0.503	30.90	25	2000	
Sr	88	3	72	284.589	ppb	284.589	1.38	127030	4000	
Mo	95	3	115	2.512	ppb	2.512	2.06	1048	2000	
Ag	107	3	115	0.015	ppb	0.015	49.29	37	100	
Cd	111	3	115	0.025	ppb	0.025	115.99	7	2000	
Sn	120	3	115	-0.012	ppb	-0.012	-381.48	510	2000	
Sb	121	3	115	0.349	ppb	0.349	12.05	248	1000	
Ba	137	3	115	66.333	ppb	66.333	3.58	13630	5000	
Tl	205	3	193	0.038	ppb	0.038	22.79	225	2000	
(Pb)	206	3	193	0.977	ppb	0.977	6.08	1233	100	
(Pb)	207	3	193	1.027	ppb	1.027	5.31	1253	100	
Pb	208	3	193	0.984	ppb	0.984	5.87	5131	5000	
Th	232	3	193	0.024	ppb	0.024	88.62	6704	2000	
U	238	3	193	4.474	ppb	4.474	1.24	21202	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3582855	0.40	3473788	103.14	60	120	
Sc (IS)	45	3	HMI He	516188	1.29	498630	103.52	60	120	
Ge Internal standard	72	2	HMI H2	2250849	1.04	2241871	100.40	60	120	
Ge Internal standard	72	3	HMI He	657005	0.15	647352	101.49	60	120	
In Internal Standard	115	3	HMI He	2412251	1.39	2356036	102.39	60	120	
Ir (IS)	193	3	HMI He	5267286	0.51	4999588	105.35	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A
Data File Name	366SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:34:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	59.376	ppb	59.376	5.51	2056	2000	
Na	23	3	45	35708.041	ppb	35708.041	3.09	3201498	400000	
Mg	24	3	45	209813.921	ppb	209813.921	0.95	10015900	400000	
Al	27	3	45	230532.171	ppb	230532.171	2.12	4078719	400000	
K	39	3	45	6698.976	ppb	6698.976	2.17	282068	400000	
Ca	40	2	45	412764.710	ppb	412764.710	0.32	197451903	400000	
V	51	3	72	58.530	ppb	58.530	0.85	29497	2000	
Cr	52	3	72	6.527	ppb	6.527	4.46	6162	5000	
Mn	55	3	72	12531.776	ppb	12531.776	2.22	4040779	10000	
Fe	56	2	72	761.786	ppb	761.786	2.94	1023517	10000	
Co	59	3	72	601.626	ppb	601.626	0.98	633050	2000	
Ni	60	3	72	558.455	ppb	558.455	0.90	164511	5000	
Cu	63	3	72	7.219	ppb	7.219	1.42	5943	5000	
Zn	66	3	72	2855.269	ppb	2855.269	0.20	363886	5000	
As	75	3	72	3.842	ppb	3.842	9.86	415	2000	
Se	78	2	72	14.522	ppb	14.522	3.37	679	2000	
Sr	88	3	72	3447.605	ppb	3447.605	1.03	1516412	4000	
Mo	95	3	115	0.089	ppb	0.089	48.17	63	2000	
Ag	107	3	115	0.006	ppb	0.006	41.93	23	100	
Cd	111	3	115	8.115	ppb	8.115	7.27	1624	2000	
Sn	120	3	115	-0.029	ppb	-0.029	-300.72	498	2000	
Sb	121	3	115	0.065	ppb	0.065	16.53	68	1000	
Ba	137	3	115	10.981	ppb	10.981	1.06	2287	5000	
Tl	205	3	193	0.722	ppb	0.722	3.90	2351	2000	
(Pb)	206	3	193	10.044	ppb	10.044	3.05	10744	100	
(Pb)	207	3	193	9.491	ppb	9.491	2.84	8925	100	
Pb	208	3	193	9.693	ppb	9.693	0.47	41639	5000	
Th	232	3	193	1.984	ppb	1.984	2.67	14786	2000	
U	238	3	193	100.626	ppb	100.626	0.42	439082	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3565435	2.16	3473788	102.64	60	120	
Sc (IS)	45	3	HMI He	517666	0.96	498630	103.82	60	120	
Ge Internal standard	72	2	HMI H2	2206977	2.44	2241871	98.44	60	120	
Ge Internal standard	72	3	HMI He	647471	0.51	647352	100.02	60	120	
In Internal Standard	115	3	HMI He	2408459	2.31	2356036	102.23	60	120	
Ir (IS)	193	3	HMI He	5147276	0.70	4999588	102.95	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	367SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:36:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	19267.134	ppb	19267.134	1.72	1690099	400000	
Mg	24	3	45	12942.004	ppb	12942.004	2.84	602164	400000	
Al	27	3	45	29.271	ppb	29.271	30.20	584	400000	
K	39	3	45	7408.323	ppb	7408.323	2.03	301574	400000	
Ca	40	2	45	50349.201	ppb	50349.201	1.35	23860298	400000	
V	51	3	72	23.841	ppb	23.841	2.95	12373	2000	
Cr	52	3	72	1.595	ppb	1.595	21.10	3115	5000	
Mn	55	3	72	5.948	ppb	5.948	8.52	2097	10000	
Fe	56	2	72	8.448	ppb	8.448	21.54	44419	10000	
Co	59	3	72	0.167	ppb	0.167	9.14	207	2000	
Ni	60	3	72	0.582	ppb	0.582	17.24	591	5000	
Cu	63	3	72	0.512	ppb	0.512	19.41	655	5000	
Zn	66	3	72	2.661	ppb	2.661	9.01	470	5000	
As	75	3	72	13.469	ppb	13.469	5.74	1303	2000	
Se	78	2	72	4.035	ppb	4.035	14.43	189	2000	
Sr	88	3	72	264.582	ppb	264.582	1.59	116218	4000	
Mo	95	3	115	9.930	ppb	9.930	3.45	4024	2000	
Ag	107	3	115	0.002	ppb	0.002	453.02	18	100	
Cd	111	3	115	0.026	ppb	0.026	152.96	7	2000	
Sn	120	3	115	-0.121	ppb	-0.121	-60.53	436	2000	
Sb	121	3	115	0.281	ppb	0.281	12.37	203	1000	
Ba	137	3	115	43.073	ppb	43.073	3.71	8782	5000	
Tl	205	3	193	0.002	ppb	0.002	224.14	110	2000	
(Pb)	206	3	193	0.035	ppb	0.035	106.64	213	100	
(Pb)	207	3	193	0.044	ppb	0.044	96.52	330	100	
Pb	208	3	193	0.018	ppb	0.018	84.10	950	5000	
Th	232	3	193	-0.543	ppb	-0.543	-4.83	4164	2000	
U	238	3	193	1.779	ppb	1.779	1.59	8982	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3530609	1.34	3473788	101.64	60	120	
Sc (IS)	45	3	HMI He	504644	2.45	498630	101.21	60	120	
Ge Internal standard	72	2	HMI H2	2204814	1.51	2241871	98.35	60	120	
Ge Internal standard	72	3	HMI He	646574	0.76	647352	99.88	60	120	
In Internal Standard	115	3	HMI He	2390053	2.25	2356036	101.44	60	120	
Ir (IS)	193	3	HMI He	5140772	1.24	4999588	102.82	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	368SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:38:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	3632.102	ppb	3632.102	0.90	326817	400000	
Mg	24	3	45	2560.339	ppb	2560.339	2.47	118197	400000	
Al	27	3	45	17.356	ppb	17.356	14.06	377	400000	
K	39	3	45	1482.202	ppb	1482.202	4.64	78306	400000	
Ca	40	2	45	10086.417	ppb	10086.417	2.00	4720660	400000	
V	51	3	72	4.338	ppb	4.338	1.66	2764	2000	
Cr	52	3	72	0.204	ppb	0.204	73.02	2256	5000	
Mn	55	3	72	3.423	ppb	3.423	4.20	1283	10000	
Fe	56	2	72	9.520	ppb	9.520	21.43	45647	10000	
Co	59	3	72	0.060	ppb	0.060	12.94	95	2000	
Ni	60	3	72	0.449	ppb	0.449	75.48	551	5000	
Cu	63	3	72	0.217	ppb	0.217	31.51	421	5000	
Zn	66	3	72	4.174	ppb	4.174	6.49	661	5000	
As	75	3	72	2.319	ppb	2.319	12.51	273	2000	
Se	78	2	72	0.888	ppb	0.888	18.97	43	2000	
Sr	88	3	72	51.727	ppb	51.727	1.73	22694	4000	
Mo	95	3	115	1.841	ppb	1.841	7.21	768	2000	
Ag	107	3	115	0.006	ppb	0.006	233.87	23	100	
Cd	111	3	115	0.008	ppb	0.008	175.35	3	2000	
Sn	120	3	115	0.082	ppb	0.082	37.17	565	2000	
Sb	121	3	115	0.082	ppb	0.082	22.48	78	1000	
Ba	137	3	115	8.595	ppb	8.595	0.72	1784	5000	
Tl	205	3	193	0.003	ppb	0.003	211.42	113	2000	
(Pb)	206	3	193	0.342	ppb	0.342	4.51	536	100	
(Pb)	207	3	193	0.333	ppb	0.333	14.84	593	100	
Pb	208	3	193	0.321	ppb	0.321	7.90	2227	5000	
Th	232	3	193	-0.589	ppb	-0.589	-2.83	3970	2000	
U	238	3	193	0.392	ppb	0.392	1.03	2956	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3482209	1.93	3473788	100.24	60	120	
Sc (IS)	45	3	HMI He	500075	0.62	498630	100.29	60	120	
Ge Internal standard	72	2	HMI H2	2196510	1.26	2241871	97.98	60	120	
Ge Internal standard	72	3	HMI He	645469	0.66	647352	99.71	60	120	
In Internal Standard	115	3	HMI He	2388062	1.61	2356036	101.36	60	120	
Ir (IS)	193	3	HMI He	5143275	1.20	4999588	102.87	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	369SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:40:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.025	ppb	38.025	12.16	1343	2000	
Na	23	3	45	20018.373	ppb	20018.373	1.20	1764345	400000	
Mg	24	3	45	13697.995	ppb	13697.995	1.77	640650	400000	
Al	27	3	45	769.296	ppb	769.296	1.32	13413	400000	
K	39	3	45	8199.277	ppb	8199.277	2.16	332917	400000	
Ca	40	2	45	51593.393	ppb	51593.393	1.01	24292644	400000	
V	51	3	72	62.052	ppb	62.052	1.52	31435	2000	
Cr	52	3	72	39.875	ppb	39.875	0.35	26891	5000	
Mn	55	3	72	44.350	ppb	44.350	0.76	14575	10000	
Fe	56	2	72	791.203	ppb	791.203	3.96	1055648	10000	
Co	59	3	72	38.137	ppb	38.137	3.15	40407	2000	
Ni	60	3	72	37.374	ppb	37.374	2.66	11477	5000	
Cu	63	3	72	39.687	ppb	39.687	1.37	31741	5000	
Zn	66	3	72	40.789	ppb	40.789	3.72	5363	5000	
As	75	3	72	49.864	ppb	49.864	3.69	4697	2000	
Se	78	2	72	45.396	ppb	45.396	2.67	2108	2000	
Sr	88	3	72	342.967	ppb	342.967	0.96	151819	4000	
Mo	95	3	115	48.787	ppb	48.787	2.39	19564	2000	
Ag	107	3	115	39.367	ppb	39.367	1.16	53703	100	
Cd	111	3	115	38.123	ppb	38.123	1.76	7535	2000	
Sn	120	3	115	37.283	ppb	37.283	1.10	24018	2000	
Sb	121	3	115	38.915	ppb	38.915	1.36	24283	1000	
Ba	137	3	115	83.671	ppb	83.671	2.58	16937	5000	
Tl	205	3	193	38.678	ppb	38.678	2.49	120936	2000	
(Pb)	206	3	193	38.624	ppb	38.624	4.12	40954	100	
(Pb)	207	3	193	38.712	ppb	38.712	1.55	35646	100	
Pb	208	3	193	38.988	ppb	38.988	2.56	165433	5000	
Th	232	3	193	36.339	ppb	36.339	0.19	159815	2000	
U	238	3	193	41.121	ppb	41.121	2.75	180806	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508049	0.26	3473788	100.99	60	120	
Sc (IS)	45	3	HMI He	507106	1.38	498630	101.70	60	120	
Ge Internal standard	72	2	HMI H2	2194708	2.41	2241871	97.90	60	120	
Ge Internal standard	72	3	HMI He	651605	1.08	647352	100.66	60	120	
In Internal Standard	115	3	HMI He	2377573	0.96	2356036	100.91	60	120	
Ir (IS)	193	3	HMI He	5167774	2.42	4999588	103.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	370SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:41:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	37.140	ppb	37.140	7.15	1309	2000	
Na	23	3	45	19361.507	ppb	19361.507	2.22	1696531	400000	
Mg	24	3	45	13167.113	ppb	13167.113	1.26	612109	400000	
Al	27	3	45	756.336	ppb	756.336	4.94	13109	400000	
K	39	3	45	7929.399	ppb	7929.399	0.95	320798	400000	
Ca	40	2	45	50131.320	ppb	50131.320	1.81	23606942	400000	
V	51	3	72	61.711	ppb	61.711	0.66	31069	2000	
Cr	52	3	72	40.085	ppb	40.085	0.76	26854	5000	
Mn	55	3	72	42.302	ppb	42.302	3.25	13823	10000	
Fe	56	2	72	755.198	ppb	755.198	3.12	1020924	10000	
Co	59	3	72	37.944	ppb	37.944	1.50	39963	2000	
Ni	60	3	72	36.876	ppb	36.876	3.24	11259	5000	
Cu	63	3	72	40.004	ppb	40.004	1.21	31796	5000	
Zn	66	3	72	40.031	ppb	40.031	3.03	5232	5000	
As	75	3	72	50.844	ppb	50.844	4.67	4758	2000	
Se	78	2	72	43.756	ppb	43.756	5.02	2056	2000	
Sr	88	3	72	335.133	ppb	335.133	0.55	147442	4000	
Mo	95	3	115	48.815	ppb	48.815	3.62	19394	2000	
Ag	107	3	115	39.183	ppb	39.183	0.66	52967	100	
Cd	111	3	115	39.458	ppb	39.458	6.42	7722	2000	
Sn	120	3	115	37.725	ppb	37.725	5.19	24065	2000	
Sb	121	3	115	38.553	ppb	38.553	1.81	23836	1000	
Ba	137	3	115	81.022	ppb	81.022	4.57	16250	5000	
Tl	205	3	193	38.361	ppb	38.361	3.10	120949	2000	
(Pb)	206	3	193	37.938	ppb	37.938	2.15	40581	100	
(Pb)	207	3	193	38.684	ppb	38.684	2.72	35910	100	
Pb	208	3	193	38.430	ppb	38.430	3.18	164437	5000	
Th	232	3	193	37.011	ppb	37.011	1.83	163991	2000	
U	238	3	193	40.651	ppb	40.651	3.86	180234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508559	0.58	3473788	101.00	60	120	
Sc (IS)	45	3	HMI He	503980	0.10	498630	101.07	60	120	
Ge Internal standard	72	2	HMI H2	2219935	2.13	2241871	99.02	60	120	
Ge Internal standard	72	3	HMI He	647563	0.46	647352	100.03	60	120	
In Internal Standard	115	3	HMI He	2355962	1.69	2356036	100.00	60	120	
Ir (IS)	193	3	HMI He	5211565	2.54	4999588	104.24	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D pds
Data File Name	371SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:43:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	100.856	ppb	100.856	3.57	3515	2000	
Na	23	3	45	23209.530	ppb	23209.530	3.00	2036898	400000	
Mg	24	3	45	14657.546	ppb	14657.546	4.59	683158	400000	
Al	27	3	45	2003.283	ppb	2003.283	2.37	34691	400000	
K	39	3	45	9096.044	ppb	9096.044	2.55	365656	400000	
Ca	40	2	45	50896.223	ppb	50896.223	1.12	24093219	400000	
V	51	3	72	120.869	ppb	120.869	1.15	60308	2000	
Cr	52	3	72	97.307	ppb	97.307	1.78	62199	5000	
Mn	55	3	72	101.465	ppb	101.465	0.97	32938	10000	
Fe	56	2	72	1031.252	ppb	1031.252	2.79	1355643	10000	
Co	59	3	72	96.061	ppb	96.061	1.21	101225	2000	
Ni	60	3	72	96.032	ppb	96.032	1.04	28674	5000	
Cu	63	3	72	100.295	ppb	100.295	1.46	79419	5000	
Zn	66	3	72	201.921	ppb	201.921	1.59	25886	5000	
As	75	3	72	115.644	ppb	115.644	0.64	10757	2000	
Se	78	2	72	108.244	ppb	108.244	2.17	4987	2000	
Sr	88	3	72	350.993	ppb	350.993	1.81	154577	4000	
Mo	95	3	115	106.714	ppb	106.714	2.12	43072	2000	
Ag	107	3	115	26.151	ppb	26.151	1.74	35942	100	
Cd	111	3	115	94.122	ppb	94.122	4.46	18729	2000	
Sn	120	3	115	97.404	ppb	97.404	3.73	62368	2000	
Sb	121	3	115	93.266	ppb	93.266	2.91	58577	1000	
Ba	137	3	115	139.610	ppb	139.610	1.69	28445	5000	
Tl	205	3	193	97.060	ppb	97.060	1.96	307095	2000	
(Pb)	206	3	193	94.907	ppb	94.907	1.29	101646	100	
(Pb)	207	3	193	96.957	ppb	96.957	1.68	89914	100	
Pb	208	3	193	95.548	ppb	95.548	1.33	409180	5000	
Th	232	3	193	104.423	ppb	104.423	0.50	452549	2000	
U	238	3	193	202.315	ppb	202.315	0.78	895733	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3526792	0.41	3473788	101.53	60	120	
Sc (IS)	45	3	HMI He	505704	2.74	498630	101.42	60	120	
Ge Internal standard	72	2	HMI H2	2177551	2.07	2241871	97.13	60	120	
Ge Internal standard	72	3	HMI He	648252	0.42	647352	100.14	60	120	
In Internal Standard	115	3	HMI He	2395399	1.79	2356036	101.67	60	120	
Ir (IS)	193	3	HMI He	5230638	1.42	4999588	104.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	372_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:45:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
Na	23	3	45	-75.894	ppb	-1.418	14245	51000	-0.1	90	110	>+\-10%
Mg	24	3	45	1.461	ppb	38.566	407	11000	0.0	90	110	>+\-10%
Al	27	3	45	-1.246	ppb	-90.685	120	1000	-0.1	90	110	>+\-10%
K	39	3	45	-344.027	ppb	-7.705	20907	11000	-3.1	90	110	>+\-10%
Ca	40	2	45	-1.876	ppb	-40.641	14956	11000	0.0	90	110	>+\-10%
V	51	3	72	-1.078	ppb	-2.208	197	50	-2.2	90	110	>+\-10%
Cr	52	3	72	-2.852	ppb	-0.408	731	50	-5.7	90	110	>+\-10%
Mn	55	3	72	-0.156	ppb	-24.378	257	50	-0.3	90	110	>+\-10%
Fe	56	2	72	-11.840	ppb	-23.644	30502	1000	-1.2	90	110	>+\-10%
Co	59	3	72	-0.005	ppb	-190.004	52	50	0.0	90	110	>+\-10%
Ni	60	3	72	-1.311	ppb	-3.680	70	50	-2.6	90	110	>+\-10%
Cu	63	3	72	-0.124	ppb	-31.016	297	50	-0.2	90	110	>+\-10%
Zn	66	3	72	-0.403	ppb	-21.571	155	50	-0.8	90	110	>+\-10%
As	75	3	72	-0.451	ppb	-6.395	35	50	-0.9	90	110	>+\-10%
Se	78	2	72	0.031	ppb	263.977	5	50	0.1	90	110	>+\-10%
Sr	88	3	72	0.040	ppb	70.586	63	100	0.0	90	110	>+\-10%
Mo	95	3	115	-0.049	ppb	-14.819	13	50	-0.1	90	110	>+\-10%
Ag	107	3	115	0.007	ppb	37.909	47	50	0.0	90	110	>+\-10%
Cd	111	3	115	0.000	ppb	3511.370	3	50	0.0	90	110	>+\-10%
Sn	120	3	115	-0.627	ppb	-4.690	217	50	-1.3	90	110	>+\-10%
Sb	121	3	115	-0.010	ppb	-231.344	40	50	0.0	90	110	>+\-10%
Ba	137	3	115	-0.078	ppb	-18.639	47	50	-0.2	90	110	>+\-10%
Tl	205	3	193	0.002	ppb	212.715	210	50	0.0	90	110	>+\-10%
(Pb)	206	3	193	-0.049	ppb	-35.187	243	50	-0.1	90	110	>+\-10%
(Pb)	207	3	193	-0.042	ppb	-112.604	488	50	-0.1	90	110	>+\-10%
Pb	208	3	193	-0.069	ppb	-27.363	1136	50	-0.1	90	110	>+\-10%
Th	232	3	193	-0.617	ppb	-3.454	7479	50	-1.2	90	110	>+\-10%
U	238	3	193	0.034	ppb	47.808	2717	50	0.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6011818	2.26	3473788	173.06	60	120	IS Failed
Sc (IS)	45	3	HMI He	1013190	1.86	498630	203.19	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3726272	1.26	2241871	166.21	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1249194	1.31	647352	192.97	60	120	IS Failed
In Internal Standard	115	3	HMI He	4500401	5.11	2356036	191.02	60	120	IS Failed
Ir (IS)	193	3	HMI He	9984157	3.69	4999588	199.70	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	373_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:47:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.096	ppb	86.6	3	0.5	
Na	23	3	45	28.084	ppb	17.8	16052	25	>RL
Mg	24	3	45	11.151	ppb	16.4	651	25	
Al	27	3	45	5.204	ppb	28.3	170	15	
K	39	3	45	5.426	ppb	482.4	23413	50	
V	51	3	72	0.089	ppb	219.2	656	1	
Cr	52	3	72	0.300	ppb	131.1	2251	1	
Mn	55	3	72	0.877	ppb	21.4	451	0.5	>RL
Co	59	3	72	0.060	ppb	32.4	92	0.5	
Ni	60	3	72	0.268	ppb	31.9	485	1	
Cu	63	3	72	0.071	ppb	67.5	298	1	
Zn	66	3	72	0.371	ppb	36.1	173	5	
As	75	3	72	-0.294	ppb	-47.5	32	1	
Se	78	2	72	0.017	ppb	272.9	2	1	
Sr	88	3	72	0.220	ppb	39.6	108	0.5	
Mo	95	3	115	0.094	ppb	31.2	63	0.5	
Ag	107	3	115	0.014	ppb	69.3	33	1	
Cd	111	3	115	0.060	ppb	107.5	13	0.5	
Sn	120	3	115	0.123	ppb	101.4	580	1	
Sb	121	3	115	0.033	ppb	62.5	47	0.6	
Ba	137	3	115	0.060	ppb	48.3	52	0.5	
Tl	205	3	193	0.037	ppb	21.3	220	0.1	
(Pb)	206	3	193	0.010	ppb	293.2	188	1	
(Pb)	207	3	193	0.068	ppb	38.2	353	1	
Pb	208	3	193	0.019	ppb	74.4	961	0.5	
Th	232	3	193	2.965	ppb	9.7	18982	1	>RL
U	238	3	193	0.054	ppb	18.3	1494	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3520563	0.32	3473788	101.35	60	120	
Sc (IS)	45	3	HMI He	501777	0.90	498630	100.63	60	120	
Ge Internal standard	72	2	HMI H2	2094429	1.25	2241871	93.42	60	120	
Ge Internal standard	72	3	HMI He	627386	0.77	647352	96.92	60	120	
In Internal Standard	115	3	HMI He	2343737	0.66	2356036	99.48	60	120	
Ir (IS)	193	3	HMI He	5164412	1.02	4999588	103.30	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	374LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:49:12-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.654	ppb	24.589	23	1	65.4	70	130	>+/-30%
Na	23	3	45	280.488	ppb	2.579	38461	300	93.5	70	130	
Mg	24	3	45	47.332	ppb	7.845	2359	50	94.7	70	130	
Al	27	3	45	44.535	ppb	16.213	858	50	89.1	70	130	
K	39	3	45	87.238	ppb	33.804	26866	120	72.7	70	130	
Ca	40	2	45	186.694	ppb	1.971	99846	200	93.3	70	130	
V	51	3	72	4.442	ppb	5.748	2774	5	88.8	70	130	
Cr	52	3	72	2.041	ppb	11.706	3334	2	102.1	70	130	
Mn	55	3	72	1.540	ppb	12.893	668	1	154.0	70	130	>+/-30%
Fe	56	2	72	48.919	ppb	7.375	97044	50	97.8	70	130	
Co	59	3	72	0.975	ppb	8.688	1038	1	97.5	70	130	
Ni	60	3	72	2.268	ppb	8.617	1068	2	113.4	70	130	
Cu	63	3	72	1.922	ppb	9.697	1734	2	96.1	70	130	
Zn	66	3	72	9.308	ppb	12.063	1293	10	93.1	70	130	
As	75	3	72	3.924	ppb	3.020	415	5	78.5	70	130	
Se	78	2	72	4.878	ppb	7.896	229	5	97.6	70	130	
Sr	88	3	72	4.330	ppb	8.167	1886	5	86.6	70	130	
Mo	95	3	115	1.781	ppb	4.062	746	2	89.0	70	130	
Ag	107	3	115	0.898	ppb	9.070	1249	1	89.8	70	130	
Cd	111	3	115	0.896	ppb	19.735	180	1	89.6	70	130	
Sn	120	3	115	7.938	ppb	8.495	5560	10	79.4	70	130	
Sb	121	3	115	1.811	ppb	3.975	1166	2	90.5	70	130	
Ba	137	3	115	0.816	ppb	29.405	207	1	81.6	70	130	
Tl	205	3	193	0.926	ppb	3.111	3019	1	92.6	70	130	
(Pb)	206	3	193	0.920	ppb	7.732	1156	1	92.0	70	130	
(Pb)	207	3	193	0.885	ppb	15.253	1108	1	88.5	70	130	
Pb	208	3	193	0.860	ppb	3.372	4543	1	86.0	70	130	
Th	232	3	193	1.841	ppb	11.517	14341	1	184.1	70	130	>+/-30%
U	238	3	193	0.891	ppb	8.594	5187	1	89.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3593149	0.62	3473788	103.44	60	120	
Sc (IS)	45	3	HMI He	509299	1.09	498630	102.14	60	120	
Ge Internal standard	72	2	HMI H2	2207384	1.95	2241871	98.46	60	120	
Ge Internal standard	72	3	HMI He	635847	1.12	647352	98.22	60	120	
In Internal Standard	115	3	HMI He	2398472	1.66	2356036	101.80	60	120	
Ir (IS)	193	3	HMI He	5202905	1.34	4999588	104.07	60	120	

Sample Report

Sample Table

Sample Name	174894-2
Data File Name	375SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:51:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	59568.772	ppb	59568.772	2.86	6500553	400000	
Mg	24	3	45	12898.859	ppb	12898.859	1.91	750853	400000	
Al	27	3	45	8.966	ppb	8.966	87.05	297	400000	
K	39	3	45	1497.502	ppb	1497.502	1.35	99557	400000	
Ca	40	2	45	33469.326	ppb	33469.326	1.30	19677215	400000	
V	51	3	72	-0.875	ppb	-0.875	-8.19	243	2000	
Cr	52	3	72	-0.410	ppb	-0.410	-63.40	2277	5000	
Mn	55	3	72	495.457	ppb	495.457	2.18	193127	10000	
Fe	56	2	72	-2.827	ppb	-2.827	-68.58	36668	10000	
Co	59	3	72	0.188	ppb	0.188	3.58	277	2000	
Ni	60	3	72	0.603	ppb	0.603	5.01	723	5000	
Cu	63	3	72	0.137	ppb	0.137	41.76	435	5000	
Zn	66	3	72	0.668	ppb	0.668	17.08	262	5000	
As	75	3	72	15.553	ppb	15.553	2.53	1808	2000	
Se	78	2	72	0.018	ppb	0.018	223.26	3	2000	
Sr	88	3	72	253.776	ppb	253.776	2.58	134795	4000	
Mo	95	3	115	3.480	ppb	3.480	12.07	1746	2000	
Ag	107	3	115	0.007	ppb	0.007	40.92	30	100	
Cd	111	3	115	0.012	ppb	0.012	170.92	5	2000	
Sn	120	3	115	-0.639	ppb	-0.639	-5.23	132	2000	
Sb	121	3	115	-0.011	ppb	-0.011	-106.30	25	1000	
Ba	137	3	115	328.908	ppb	328.908	2.12	81759	5000	
Tl	205	3	193	0.014	ppb	0.014	58.84	177	2000	
(Pb)	206	3	193	-0.040	ppb	-0.040	-47.93	162	100	
(Pb)	207	3	193	0.018	ppb	0.018	141.66	366	100	
Pb	208	3	193	-0.034	ppb	-0.034	-47.36	876	5000	
Th	232	3	193	-0.601	ppb	-0.601	-8.22	4684	2000	
U	238	3	193	0.052	ppb	0.052	29.34	1768	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4378746	2.12	3473788	126.05	60	120	IS Failed
Sc (IS)	45	3	HMI He	631209	1.71	498630	126.59	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2713356	1.65	2241871	121.03	60	120	IS Failed
Ge Internal standard	72	3	HMI He	781959	1.43	647352	120.79	60	120	IS Failed
In Internal Standard	115	3	HMI He	2924749	1.19	2356036	124.14	60	120	IS Failed
Ir (IS)	193	3	HMI He	6151132	2.15	4999588	123.03	60	120	IS Failed

Sample Report

Sample Table

Sample Name	07658979@10
Data File Name	376SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:52:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.076	ppb	1.076	20.84	38	2000	
Na	23	3	45	157.687	ppb	157.687	5.12	27454	400000	
Mg	24	3	45	5457.613	ppb	5457.613	1.93	254390	400000	
Al	27	3	45	32029.811	ppb	32029.811	2.09	553086	400000	
K	39	3	45	6217.242	ppb	6217.242	2.45	257171	400000	
Ca	40	2	45	110603.204	ppb	110603.204	0.91	53155880	400000	
V	51	3	72	44.820	ppb	44.820	0.58	21636	2000	
Cr	52	3	72	27.341	ppb	27.341	2.96	18071	5000	
Mn	55	3	72	710.618	ppb	710.618	0.92	218211	10000	
Fe	56	2	72	21427.131	ppb	21427.131	1.40	26999714	10000	
Co	59	3	72	8.803	ppb	8.803	2.13	8843	2000	
Ni	60	3	72	22.966	ppb	22.966	4.44	6822	5000	
Cu	63	3	72	29.212	ppb	29.212	1.69	22155	5000	
Zn	66	3	72	55.625	ppb	55.625	4.11	6867	5000	
As	75	3	72	8.473	ppb	8.473	13.28	803	2000	
Se	78	2	72	0.355	ppb	0.355	15.61	17	2000	
Sr	88	3	72	71.018	ppb	71.018	1.43	29741	4000	
Mo	95	3	115	0.978	ppb	0.978	6.64	418	2000	
Ag	107	3	115	0.077	ppb	0.077	2.08	120	100	
Cd	111	3	115	0.395	ppb	0.395	26.51	80	2000	
Sn	120	3	115	2.667	ppb	2.667	5.05	2191	2000	
Sb	121	3	115	0.742	ppb	0.742	2.19	490	1000	
Ba	137	3	115	96.907	ppb	96.907	3.70	19606	5000	
Tl	205	3	193	0.384	ppb	0.384	7.76	1328	2000	
(Pb)	206	3	193	30.552	ppb	30.552	1.14	33097	100	
(Pb)	207	3	193	29.159	ppb	29.159	1.86	27456	100	
Pb	208	3	193	29.681	ppb	29.681	1.49	128701	5000	
Th	232	3	193	4.876	ppb	4.876	0.78	27588	2000	
U	238	3	193	0.834	ppb	0.834	4.84	5000	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3581311	1.01	3473788	103.10	60	120	
Sc (IS)	45	3	HMI He	505173	0.11	498630	101.31	60	120	
Ge Internal standard	72	2	HMI H2	2136342	1.14	2241871	95.29	60	120	
Ge Internal standard	72	3	HMI He	616183	1.48	647352	95.19	60	120	
In Internal Standard	115	3	HMI He	2377873	2.38	2356036	100.93	60	120	
Ir (IS)	193	3	HMI He	5270995	1.78	4999588	105.43	60	120	

Sample Report

Sample Table

Sample Name	07658982@10
Data File Name	377SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:54:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.785	ppb	1.785	37.20	63	2000	
Na	23	3	45	108.564	ppb	108.564	4.83	23764	400000	
Mg	24	3	45	5818.665	ppb	5818.665	0.44	278104	400000	
Al	27	3	45	40555.270	ppb	40555.270	1.38	718076	400000	
K	39	3	45	7358.744	ppb	7358.744	2.37	307735	400000	
Ca	40	2	45	124701.357	ppb	124701.357	1.57	59848466	400000	
V	51	3	72	63.541	ppb	63.541	0.68	30715	2000	
Cr	52	3	72	35.075	ppb	35.075	2.87	22827	5000	
Mn	55	3	72	763.170	ppb	763.170	1.30	236616	10000	
Fe	56	2	72	27427.001	ppb	27427.001	3.03	34104781	10000	
Co	59	3	72	11.378	ppb	11.378	5.31	11529	2000	
Ni	60	3	72	27.861	ppb	27.861	2.61	8270	5000	
Cu	63	3	72	21.261	ppb	21.261	1.25	16348	5000	
Zn	66	3	72	65.009	ppb	65.009	1.88	8083	5000	
As	75	3	72	10.527	ppb	10.527	13.20	991	2000	
Se	78	2	72	0.523	ppb	0.523	33.05	25	2000	
Sr	88	3	72	63.756	ppb	63.756	3.91	26955	4000	
Mo	95	3	115	1.071	ppb	1.071	9.00	461	2000	
Ag	107	3	115	0.089	ppb	0.089	12.46	138	100	
Cd	111	3	115	0.408	ppb	0.408	31.25	83	2000	
Sn	120	3	115	2.352	ppb	2.352	8.51	2016	2000	
Sb	121	3	115	1.158	ppb	1.158	11.18	756	1000	
Ba	137	3	115	132.249	ppb	132.249	0.90	27071	5000	
Tl	205	3	193	0.506	ppb	0.506	4.72	1719	2000	
(Pb)	206	3	193	76.282	ppb	76.282	2.40	82345	100	
(Pb)	207	3	193	72.057	ppb	72.057	0.56	67407	100	
Pb	208	3	193	73.383	ppb	73.383	1.76	316809	5000	
Th	232	3	193	7.225	ppb	7.225	1.89	37691	2000	
U	238	3	193	1.000	ppb	1.000	7.09	5735	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3577080	1.43	3473788	102.97	60	120	
Sc (IS)	45	3	HMI He	518006	0.51	498630	103.89	60	120	
Ge Internal standard	72	2	HMI H2	2109377	1.81	2241871	94.09	60	120	
Ge Internal standard	72	3	HMI He	622147	1.16	647352	96.11	60	120	
In Internal Standard	115	3	HMI He	2406144	2.41	2356036	102.13	60	120	
Ir (IS)	193	3	HMI He	5269387	0.81	4999588	105.40	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	378SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:56:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	60.591	ppb	60.591	7.42	2136	2000	
Na	23	3	45	34643.453	ppb	34643.453	0.38	3107872	400000	
Mg	24	3	45	207046.997	ppb	207046.997	0.76	9887953	400000	
Al	27	3	45	231244.994	ppb	231244.994	0.63	4092790	400000	
K	39	3	45	6520.176	ppb	6520.176	1.40	275273	400000	
Ca	40	2	45	394018.760	ppb	394018.760	2.95	191935744	400000	
V	51	3	72	56.383	ppb	56.383	3.20	28393	2000	
Cr	52	3	72	6.104	ppb	6.104	8.53	5890	5000	
Mn	55	3	72	12377.250	ppb	12377.250	2.15	3984930	10000	
Fe	56	2	72	746.264	ppb	746.264	1.39	1026846	10000	
Co	59	3	72	586.160	ppb	586.160	2.03	615844	2000	
Ni	60	3	72	542.118	ppb	542.118	1.29	159482	5000	
Cu	63	3	72	7.374	ppb	7.374	1.88	6057	5000	
Zn	66	3	72	2788.753	ppb	2788.753	0.16	354922	5000	
As	75	3	72	3.625	ppb	3.625	20.95	395	2000	
Se	78	2	72	13.637	ppb	13.637	5.12	653	2000	
Sr	88	3	72	3282.901	ppb	3282.901	0.70	1441930	4000	
Mo	95	3	115	0.098	ppb	0.098	77.53	67	2000	
Ag	107	3	115	0.011	ppb	0.011	35.91	30	100	
Cd	111	3	115	7.588	ppb	7.588	6.74	1519	2000	
Sn	120	3	115	0.036	ppb	0.036	206.21	540	2000	
Sb	121	3	115	0.081	ppb	0.081	13.28	78	1000	
Ba	137	3	115	10.012	ppb	10.012	8.52	2086	5000	
Tl	205	3	193	0.686	ppb	0.686	2.15	2249	2000	
(Pb)	206	3	193	9.862	ppb	9.862	2.34	10599	100	
(Pb)	207	3	193	9.075	ppb	9.075	1.84	8580	100	
Pb	208	3	193	9.485	ppb	9.485	2.08	40931	5000	
Th	232	3	193	2.697	ppb	2.697	5.51	17859	2000	
U	238	3	193	98.602	ppb	98.602	1.45	432005	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3631462	1.57	3473788	104.54	60	120	
Sc (IS)	45	3	HMI He	517828	0.90	498630	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2257743	1.14	2241871	100.71	60	120	
Ge Internal standard	72	3	HMI He	646584	1.37	647352	99.88	60	120	
In Internal Standard	115	3	HMI He	2406178	1.35	2356036	102.13	60	120	
Ir (IS)	193	3	HMI He	5168742	1.79	4999588	103.38	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	379SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:58:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	75.451	ppb	75.451	4.39	2584	2000	
Na	23	3	45	61901.829	ppb	61901.829	1.96	5512402	400000	
Mg	24	3	45	307183.068	ppb	307183.068	1.11	14591471	400000	
Al	27	3	45	90289.260	ppb	90289.260	3.83	1589329	400000	
K	39	3	45	14838.349	ppb	14838.349	0.94	592777	400000	
Ca	40	2	45	438462.668	ppb	438462.668	1.34	205412328	400000	
V	51	3	72	3.932	ppb	3.932	6.19	2582	2000	
Cr	52	3	72	1.752	ppb	1.752	21.51	3230	5000	
Mn	55	3	72	16087.149	ppb	16087.149	0.88	5207711	10000	
Fe	56	2	72	216.687	ppb	216.687	2.13	312316	10000	
Co	59	3	72	742.370	ppb	742.370	0.98	784222	2000	
Ni	60	3	72	621.961	ppb	621.961	0.77	183898	5000	
Cu	63	3	72	5.123	ppb	5.123	5.94	4309	5000	
Zn	66	3	72	3498.551	ppb	3498.551	0.35	447608	5000	
As	75	3	72	2.514	ppb	2.514	14.88	293	2000	
Se	78	2	72	17.469	ppb	17.469	3.90	809	2000	
Sr	88	3	72	4348.358	ppb	4348.358	0.22	1920162	4000	
Mo	95	3	115	0.071	ppb	0.071	78.76	55	2000	
Ag	107	3	115	0.026	ppb	0.026	37.28	50	100	
Cd	111	3	115	11.214	ppb	11.214	6.19	2214	2000	
Sn	120	3	115	-0.068	ppb	-0.068	-56.31	466	2000	
Sb	121	3	115	0.045	ppb	0.045	83.03	55	1000	
Ba	137	3	115	8.186	ppb	8.186	3.67	1691	5000	
Tl	205	3	193	1.955	ppb	1.955	1.25	6197	2000	
(Pb)	206	3	193	10.203	ppb	10.203	1.75	10929	100	
(Pb)	207	3	193	9.242	ppb	9.242	2.14	8710	100	
Pb	208	3	193	9.644	ppb	9.644	2.77	41489	5000	
Th	232	3	193	0.524	ppb	0.524	13.33	8665	2000	
U	238	3	193	178.046	ppb	178.046	1.94	777040	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3492159	1.63	3473788	100.53	60	120	
Sc (IS)	45	3	HMI He	515116	1.18	498630	103.31	60	120	
Ge Internal standard	72	2	HMI H2	2186905	1.86	2241871	97.55	60	120	
Ge Internal standard	72	3	HMI He	650040	0.55	647352	100.42	60	120	
In Internal Standard	115	3	HMI He	2373516	1.15	2356036	100.74	60	120	
Ir (IS)	193	3	HMI He	5155515	1.36	4999588	103.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	380_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:00:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.061	ppb	86.871	3	50	0.1	90	110	>+\-10%
Na	23	3	45	-0.158	ppb	-44349.447	30251	51000	0.0	90	110	>+\-10%
Mg	24	3	45	33.977	ppb	64.386	3798	11000	0.3	90	110	>+\-10%
Al	27	3	45	7.447	ppb	85.032	464	1000	0.7	90	110	>+\-10%
K	39	3	45	-327.261	ppb	-1.035	24329	11000	-3.0	90	110	>+\-10%
Ca	40	2	45	23.894	ppb	4.892	31229	11000	0.2	90	110	>+\-10%
V	51	3	72	-1.053	ppb	-5.496	243	50	-2.1	90	110	>+\-10%
Cr	52	3	72	0.672	ppb	129.424	5475	50	1.3	90	110	>+\-10%
Mn	55	3	72	2.017	ppb	36.491	1788	50	4.0	90	110	>+\-10%
Fe	56	2	72	-7.744	ppb	-25.444	33782	1000	-0.8	90	110	>+\-10%
Co	59	3	72	0.165	ppb	70.152	440	50	0.3	90	110	>+\-10%
Ni	60	3	72	1.383	ppb	38.224	1774	50	2.8	90	110	>+\-10%
Cu	63	3	72	-0.064	ppb	-72.589	431	50	-0.1	90	110	>+\-10%
Zn	66	3	72	0.018	ppb	955.368	287	50	0.0	90	110	>+\-10%
As	75	3	72	-0.395	ppb	-11.890	50	50	-0.8	90	110	>+\-10%
Se	78	2	72	0.040	ppb	28.381	5	50	0.1	90	110	>+\-10%
Sr	88	3	72	0.468	ppb	48.263	473	100	0.5	90	110	>+\-10%
Mo	95	3	115	0.116	ppb	92.756	153	50	0.2	90	110	>+\-10%
Ag	107	3	115	0.083	ppb	99.523	268	50	0.2	90	110	>+\-10%
Cd	111	3	115	0.072	ppb	61.887	33	50	0.1	90	110	>+\-10%
Sn	120	3	115	-0.567	ppb	-14.607	318	50	-1.1	90	110	>+\-10%
Sb	121	3	115	0.041	ppb	185.526	110	50	0.1	90	110	>+\-10%
Ba	137	3	115	-0.046	ppb	-218.608	65	50	-0.1	90	110	>+\-10%
Tl	205	3	193	0.081	ppb	108.472	738	50	0.2	90	110	>+\-10%
(Pb)	206	3	193	0.025	ppb	361.353	423	50	0.0	90	110	>+\-10%
(Pb)	207	3	193	0.030	ppb	236.804	660	50	0.1	90	110	>+\-10%
Pb	208	3	193	-0.001	ppb	-10814.341	1819	50	0.0	90	110	>+\-10%
Th	232	3	193	-0.530	ppb	-12.941	8779	50	-1.1	90	110	>+\-10%
U	238	3	193	0.109	ppb	66.136	3599	50	0.2	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	5256541	8.97	3473788	151.32	60	120	IS Failed
Sc (IS)	45	3	HMI He	1110560	1.46	498630	222.72	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3181551	9.57	2241871	141.92	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1387585	1.45	647352	214.35	60	120	IS Failed
In Internal Standard	115	3	HMI He	4948464	1.28	2356036	210.03	60	120	IS Failed
Ir (IS)	193	3	HMI He	10699689	1.37	4999588	214.01	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	381_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:02:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.188	ppb	1.466	1768	50	102.4	90	110	
Na	23	3	45	48973.563	ppb	2.116	4185683	51000	96.0	90	110	
Mg	24	3	45	10336.371	ppb	1.262	471048	11000	94.0	90	110	
Al	27	3	45	1026.144	ppb	1.509	17405	1000	102.6	90	110	
K	39	3	45	10323.915	ppb	0.853	402505	11000	93.9	90	110	
Ca	40	2	45	10352.476	ppb	4.052	4784867	11000	94.1	90	110	
V	51	3	72	52.052	ppb	0.938	25088	50	104.1	90	110	
Cr	52	3	72	52.055	ppb	0.561	32650	50	104.1	90	110	
Mn	55	3	72	54.234	ppb	2.289	16854	50	108.5	90	110	
Fe	56	2	72	1079.312	ppb	1.681	1337792	1000	107.9	90	110	
Co	59	3	72	51.734	ppb	3.046	51949	50	103.5	90	110	
Ni	60	3	72	51.178	ppb	0.897	14747	50	102.4	90	110	
Cu	63	3	72	51.808	ppb	1.460	39201	50	103.6	90	110	
Zn	66	3	72	52.070	ppb	0.703	6453	50	104.1	90	110	
As	75	3	72	50.241	ppb	1.801	4485	50	100.5	90	110	
Se	78	2	72	53.745	ppb	3.888	2338	50	107.5	90	110	
Sr	88	3	72	104.882	ppb	1.306	44019	100	104.9	90	110	
Mo	95	3	115	50.439	ppb	3.155	19851	50	100.9	90	110	
Ag	107	3	115	49.890	ppb	1.126	66814	50	99.8	90	110	
Cd	111	3	115	50.017	ppb	3.107	9704	50	100.0	90	110	
Sn	120	3	115	48.484	ppb	2.319	30513	50	97.0	90	110	
Sb	121	3	115	50.600	ppb	3.319	30982	50	101.2	90	110	
Ba	137	3	115	51.331	ppb	0.725	10219	50	102.7	90	110	
Tl	205	3	193	48.335	ppb	1.378	153319	50	96.7	90	110	
(Pb)	206	3	193	47.337	ppb	3.170	50888	50	94.7	90	110	
(Pb)	207	3	193	48.518	ppb	4.345	45225	50	97.0	90	110	
Pb	208	3	193	47.683	ppb	2.646	205060	50	95.4	90	110	
Th	232	3	193	48.221	ppb	2.627	212905	50	96.4	90	110	
U	238	3	193	48.753	ppb	2.267	217267	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3440437	2.55	3473788	99.04	60	120	
Sc (IS)	45	3	HMI He	494022	0.62	498630	99.08	60	120	
Ge Internal standard	72	2	HMI H2	2054881	0.11	2241871	91.66	60	120	
Ge Internal standard	72	3	HMI He	617617	0.63	647352	95.41	60	120	
In Internal Standard	115	3	HMI He	2334237	1.39	2356036	99.07	60	120	
Ir (IS)	193	3	HMI He	5241709	1.50	4999588	104.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	382_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:04:28-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	51.074	ppb	5.0	17869	25	>RL
Mg	24	3	45	9.566	ppb	18.5	571	25	
Al	27	3	45	4.129	ppb	24.4	150	15	
K	39	3	45	-5.571	ppb	-284.9	22795	50	
V	51	3	72	-0.198	ppb	-16.9	511	1	
Cr	52	3	72	0.386	ppb	11.1	2269	1	
Mn	55	3	72	0.936	ppb	29.2	463	0.5	>RL
Co	59	3	72	0.060	ppb	22.8	90	0.5	
Ni	60	3	72	0.661	ppb	19.6	588	1	
Cu	63	3	72	0.001	ppb	8107.6	242	1	
Zn	66	3	72	0.609	ppb	12.7	200	5	
As	75	3	72	-0.142	ppb	-215.7	45	1	
Se	78	2	72	0.045	ppb	114.3	3	1	
Sr	88	3	72	0.137	ppb	37.5	72	0.5	
Mo	95	3	115	0.077	ppb	49.4	57	0.5	
Ag	107	3	115	0.011	ppb	69.3	30	1	
Cd	111	3	115	0.009	ppb	168.3	3	0.5	
Sn	120	3	115	0.422	ppb	25.1	761	1	
Sb	121	3	115	0.052	ppb	41.3	58	0.6	
Ba	137	3	115	0.011	ppb	287.6	42	0.5	
Tl	205	3	193	0.039	ppb	14.0	223	0.1	
(Pb)	206	3	193	-0.010	ppb	-277.1	167	1	
(Pb)	207	3	193	0.026	ppb	191.7	313	1	
Pb	208	3	193	-0.004	ppb	-373.0	861	0.5	
Th	232	3	193	1.119	ppb	19.7	11154	1	>RL
U	238	3	193	0.039	ppb	27.9	1423	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3495508	5.71	3473788	100.63	60	120	
Sc (IS)	45	3	HMI He	496974	2.19	498630	99.67	60	120	
Ge Internal standard	72	2	HMI H2	2145320	2.50	2241871	95.69	60	120	
Ge Internal standard	72	3	HMI He	618498	2.13	647352	95.54	60	120	
In Internal Standard	115	3	HMI He	2327851	2.06	2356036	98.80	60	120	
Ir (IS)	193	3	HMI He	5149267	2.39	4999588	102.99	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	383LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:06:17-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.057	ppb	20.698	37	1	105.7	70	130	
Na	23	3	45	303.035	ppb	2.514	39495	300	101.0	70	130	
Mg	24	3	45	51.897	ppb	3.850	2513	50	103.8	70	130	
Al	27	3	45	49.085	ppb	3.054	914	50	98.2	70	130	
K	39	3	45	118.687	ppb	42.223	27394	120	98.9	70	130	
Ca	40	2	45	193.872	ppb	1.482	97750	200	96.9	70	130	
V	51	3	72	4.638	ppb	6.166	2816	5	92.8	70	130	
Cr	52	3	72	1.933	ppb	14.519	3207	2	96.7	70	130	
Mn	55	3	72	1.797	ppb	7.567	735	1	179.7	70	130	>+/-30%
Fe	56	2	72	51.960	ppb	10.187	95368	50	103.9	70	130	
Co	59	3	72	0.994	ppb	6.057	1038	1	99.4	70	130	
Ni	60	3	72	2.097	ppb	6.890	1000	2	104.8	70	130	
Cu	63	3	72	2.003	ppb	6.606	1764	2	100.2	70	130	
Zn	66	3	72	10.089	ppb	10.012	1364	10	100.9	70	130	
As	75	3	72	4.505	ppb	18.191	458	5	90.1	70	130	
Se	78	2	72	5.019	ppb	9.176	223	5	100.4	70	130	
Sr	88	3	72	4.688	ppb	4.681	2002	5	93.8	70	130	
Mo	95	3	115	1.843	ppb	13.336	756	2	92.1	70	130	
Ag	107	3	115	0.937	ppb	7.936	1279	1	93.7	70	130	
Cd	111	3	115	0.987	ppb	12.944	195	1	98.7	70	130	
Sn	120	3	115	8.151	ppb	3.293	5592	10	81.5	70	130	
Sb	121	3	115	1.674	ppb	7.605	1060	2	83.7	70	130	
Ba	137	3	115	0.908	ppb	19.379	222	1	90.8	70	130	
Tl	205	3	193	0.882	ppb	7.585	2856	1	88.2	70	130	
(Pb)	206	3	193	0.867	ppb	11.213	1093	1	86.7	70	130	
(Pb)	207	3	193	0.961	ppb	20.480	1166	1	96.1	70	130	
Pb	208	3	193	0.883	ppb	3.186	4603	1	88.3	70	130	
Th	232	3	193	1.191	ppb	22.052	11486	1	119.1	70	130	
U	238	3	193	0.976	ppb	2.602	5515	1	97.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3399465	0.97	3473788	97.86	60	120	
Sc (IS)	45	3	HMI He	497320	0.78	498630	99.74	60	120	
Ge Internal standard	72	2	HMI H2	2084448	1.47	2241871	92.98	60	120	
Ge Internal standard	72	3	HMI He	624012	1.63	647352	96.39	60	120	
In Internal Standard	115	3	HMI He	2353594	1.10	2356036	99.90	60	120	
Ir (IS)	193	3	HMI He	5161562	1.60	4999588	103.24	60	120	

Sample Report

Sample Table

Sample Name	07658979@10
Data File Name	384SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:08:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.928	ppb	0.928	48.13	33	2000	
Na	23	3	45	125.357	ppb	125.357	5.79	24696	400000	
Mg	24	3	45	5366.143	ppb	5366.143	1.22	250745	400000	
Al	27	3	45	31241.548	ppb	31241.548	0.68	540800	400000	
K	39	3	45	6095.922	ppb	6095.922	1.32	253226	400000	
Ca	40	2	45	111941.197	ppb	111941.197	0.13	53548925	400000	
V	51	3	72	45.515	ppb	45.515	1.33	21634	2000	
Cr	52	3	72	28.168	ppb	28.168	1.02	18285	5000	
Mn	55	3	72	707.646	ppb	707.646	0.86	214068	10000	
Fe	56	2	72	22405.948	ppb	22405.948	1.37	27620391	10000	
Co	59	3	72	8.731	ppb	8.731	4.06	8642	2000	
Ni	60	3	72	22.527	ppb	22.527	2.30	6600	5000	
Cu	63	3	72	29.295	ppb	29.295	1.65	21888	5000	
Zn	66	3	72	56.907	ppb	56.907	2.70	6920	5000	
As	75	3	72	9.104	ppb	9.104	2.64	845	2000	
Se	78	2	72	0.453	ppb	0.453	19.51	21	2000	
Sr	88	3	72	69.963	ppb	69.963	0.72	28863	4000	
Mo	95	3	115	0.915	ppb	0.915	7.94	388	2000	
Ag	107	3	115	0.097	ppb	0.097	47.50	145	100	
Cd	111	3	115	0.342	ppb	0.342	16.04	68	2000	
Sn	120	3	115	2.910	ppb	2.910	6.87	2314	2000	
Sb	121	3	115	0.849	ppb	0.849	11.30	550	1000	
Ba	137	3	115	96.196	ppb	96.196	2.42	19218	5000	
Tl	205	3	193	0.379	ppb	0.379	6.94	1286	2000	
(Pb)	206	3	193	31.175	ppb	31.175	1.56	33077	100	
(Pb)	207	3	193	29.329	ppb	29.329	2.10	27050	100	
Pb	208	3	193	30.021	ppb	30.021	1.58	127509	5000	
Th	232	3	193	4.716	ppb	4.716	1.68	26350	2000	
U	238	3	193	0.845	ppb	0.845	3.76	4944	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3564856	1.17	3473788	102.62	60	120	
Sc (IS)	45	3	HMI He	506412	0.31	498630	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2090245	1.07	2241871	93.24	60	120	
Ge Internal standard	72	3	HMI He	607004	0.75	647352	93.77	60	120	
In Internal Standard	115	3	HMI He	2347148	1.26	2356036	99.62	60	120	
Ir (IS)	193	3	HMI He	5162549	0.54	4999588	103.26	60	120	

Sample Report

Sample Table

Sample Name	07658982@10
Data File Name	385SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:09:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.797	ppb	1.797	42.39	63	2000	
Na	23	3	45	95.296	ppb	95.296	9.31	22323	400000	
Mg	24	3	45	5543.565	ppb	5543.565	2.50	261933	400000	
Al	27	3	45	38000.245	ppb	38000.245	2.17	665085	400000	
K	39	3	45	6975.166	ppb	6975.166	2.27	289554	400000	
Ca	40	2	45	117897.215	ppb	117897.215	0.75	56773553	400000	
V	51	3	72	58.506	ppb	58.506	0.49	28276	2000	
Cr	52	3	72	31.908	ppb	31.908	0.73	20917	5000	
Mn	55	3	72	709.731	ppb	709.731	0.91	219633	10000	
Fe	56	2	72	25350.285	ppb	25350.285	2.08	31812106	10000	
Co	59	3	72	10.531	ppb	10.531	2.05	10655	2000	
Ni	60	3	72	25.756	ppb	25.756	3.25	7660	5000	
Cu	63	3	72	19.638	ppb	19.638	3.37	15086	5000	
Zn	66	3	72	60.884	ppb	60.884	2.66	7563	5000	
As	75	3	72	9.691	ppb	9.691	3.66	916	2000	
Se	78	2	72	0.550	ppb	0.550	30.17	26	2000	
Sr	88	3	72	58.086	ppb	58.086	1.34	24515	4000	
Mo	95	3	115	1.066	ppb	1.066	0.83	458	2000	
Ag	107	3	115	0.100	ppb	0.100	20.76	153	100	
Cd	111	3	115	0.434	ppb	0.434	19.28	88	2000	
Sn	120	3	115	2.334	ppb	2.334	2.59	2001	2000	
Sb	121	3	115	1.213	ppb	1.213	9.84	791	1000	
Ba	137	3	115	121.199	ppb	121.199	2.15	24751	5000	
Tl	205	3	193	0.516	ppb	0.516	7.22	1746	2000	
(Pb)	206	3	193	70.392	ppb	70.392	2.02	75808	100	
(Pb)	207	3	193	66.784	ppb	66.784	0.86	62337	100	
Pb	208	3	193	67.837	ppb	67.837	1.68	292203	5000	
Th	232	3	193	6.659	ppb	6.659	1.11	35164	2000	
U	238	3	193	0.877	ppb	0.877	2.24	5175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588726	1.03	3473788	103.31	60	120	
Sc (IS)	45	3	HMI He	512117	1.23	498630	102.70	60	120	
Ge Internal standard	72	2	HMI H2	2128320	1.32	2241871	94.93	60	120	
Ge Internal standard	72	3	HMI He	620978	1.59	647352	95.93	60	120	
In Internal Standard	115	3	HMI He	2400312	1.06	2356036	101.88	60	120	
Ir (IS)	193	3	HMI He	5256105	0.47	4999588	105.13	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	386SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:27:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	57.494	ppb	57.494	3.68	2022	2000	
Na	23	3	45	33695.150	ppb	33695.150	1.95	3019880	400000	
Mg	24	3	45	201865.456	ppb	201865.456	0.39	9629284	400000	
Al	27	3	45	222653.489	ppb	222653.489	2.14	3936088	400000	
K	39	3	45	6468.337	ppb	6468.337	2.15	272980	400000	
Ca	40	2	45	391851.335	ppb	391851.335	0.88	188680956	400000	
V	51	3	72	53.966	ppb	53.966	3.54	27473	2000	
Cr	52	3	72	5.818	ppb	5.818	6.51	5772	5000	
Mn	55	3	72	11960.918	ppb	11960.918	0.30	3890175	10000	
Fe	56	2	72	739.362	ppb	739.362	1.54	997861	10000	
Co	59	3	72	560.252	ppb	560.252	1.69	594563	2000	
Ni	60	3	72	510.876	ppb	510.876	2.15	151814	5000	
Cu	63	3	72	7.058	ppb	7.058	5.39	5868	5000	
Zn	66	3	72	2624.572	ppb	2624.572	1.73	337356	5000	
As	75	3	72	4.006	ppb	4.006	17.49	433	2000	
Se	78	2	72	13.462	ppb	13.462	1.81	632	2000	
Sr	88	3	72	3220.101	ppb	3220.101	2.22	1428358	4000	
Mo	95	3	115	0.033	ppb	0.033	228.31	40	2000	
Ag	107	3	115	0.024	ppb	0.024	45.94	48	100	
Cd	111	3	115	7.012	ppb	7.012	8.75	1383	2000	
Sn	120	3	115	-0.025	ppb	-0.025	-143.50	493	2000	
Sb	121	3	115	0.061	ppb	0.061	34.83	65	1000	
Ba	137	3	115	9.500	ppb	9.500	7.20	1953	5000	
Tl	205	3	193	0.638	ppb	0.638	7.02	2062	2000	
(Pb)	206	3	193	9.523	ppb	9.523	3.81	10062	100	
(Pb)	207	3	193	9.012	ppb	9.012	2.17	8377	100	
Pb	208	3	193	9.097	ppb	9.097	1.20	38622	5000	
Th	232	3	193	2.333	ppb	2.333	0.96	16044	2000	
U	238	3	193	94.374	ppb	94.374	1.80	406476	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588657	0.80	3473788	103.31	60	120	
Sc (IS)	45	3	HMI He	517252	0.38	498630	103.73	60	120	
Ge Internal standard	72	2	HMI H2	2214043	1.23	2241871	98.76	60	120	
Ge Internal standard	72	3	HMI He	653108	1.47	647352	100.89	60	120	
In Internal Standard	115	3	HMI He	2369554	0.18	2356036	100.57	60	120	
Ir (IS)	193	3	HMI He	5080191	0.81	4999588	101.61	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	387SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:29:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	70.254	ppb	70.254	9.39	2431	2000	
Na	23	3	45	59394.392	ppb	59394.392	2.74	5307639	400000	
Mg	24	3	45	292349.259	ppb	292349.259	2.98	13932331	400000	
Al	27	3	45	87785.857	ppb	87785.857	1.43	1550652	400000	
K	39	3	45	14421.623	ppb	14421.623	1.24	578698	400000	
Ca	40	2	45	412226.099	ppb	412226.099	1.81	194088031	400000	
V	51	3	72	3.770	ppb	3.770	3.02	2496	2000	
Cr	52	3	72	1.269	ppb	1.269	7.66	2924	5000	
Mn	55	3	72	15561.500	ppb	15561.500	1.87	5023625	10000	
Fe	56	2	72	204.667	ppb	204.667	3.68	292333	10000	
Co	59	3	72	713.830	ppb	713.830	1.32	752015	2000	
Ni	60	3	72	604.005	ppb	604.005	2.34	178100	5000	
Cu	63	3	72	4.909	ppb	4.909	8.77	4125	5000	
Zn	66	3	72	3397.456	ppb	3397.456	1.24	433480	5000	
As	75	3	72	2.577	ppb	2.577	16.46	298	2000	
Se	78	2	72	17.438	ppb	17.438	3.59	796	2000	
Sr	88	3	72	4244.391	ppb	4244.391	1.73	1869027	4000	
Mo	95	3	115	0.047	ppb	0.047	92.22	45	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-176.09	13	100	
Cd	111	3	115	10.937	ppb	10.937	3.83	2131	2000	
Sn	120	3	115	-0.117	ppb	-0.117	-71.14	430	2000	
Sb	121	3	115	0.054	ppb	0.054	52.54	60	1000	
Ba	137	3	115	8.439	ppb	8.439	3.09	1719	5000	
Tl	205	3	193	1.916	ppb	1.916	2.82	5982	2000	
(Pb)	206	3	193	9.939	ppb	9.939	3.16	10487	100	
(Pb)	207	3	193	8.851	ppb	8.851	2.54	8227	100	
Pb	208	3	193	9.361	ppb	9.361	1.63	39688	5000	
Th	232	3	193	0.315	ppb	0.315	11.96	7667	2000	
U	238	3	193	172.348	ppb	172.348	1.44	740683	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3510089	2.28	3473788	101.04	60	120	
Sc (IS)	45	3	HMI He	516800	0.45	498630	103.64	60	120	
Ge Internal standard	72	2	HMI H2	2155035	3.24	2241871	96.13	60	120	
Ge Internal standard	72	3	HMI He	648293	0.97	647352	100.15	60	120	
In Internal Standard	115	3	HMI He	2342897	0.67	2356036	99.44	60	120	
Ir (IS)	193	3	HMI He	5075752	0.75	4999588	101.52	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-3-A
Data File Name	388SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:31:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.191	ppb	0.191	115.44	7	2000	
Na	23	3	45	2049.486	ppb	2049.486	1.44	192947	400000	
Mg	24	3	45	7046.825	ppb	7046.825	1.05	329578	400000	
Al	27	3	45	1100.042	ppb	1100.042	5.05	19143	400000	
K	39	3	45	20499.145	ppb	20499.145	0.76	797048	400000	
Ca	40	2	45	43549.435	ppb	43549.435	0.99	20019285	400000	
V	51	3	72	3.339	ppb	3.339	9.79	2264	2000	
Cr	52	3	72	0.941	ppb	0.941	19.91	2699	5000	
Mn	55	3	72	25.635	ppb	25.635	1.30	8392	10000	
Fe	56	2	72	784.525	ppb	784.525	2.21	1032656	10000	
Co	59	3	72	0.907	ppb	0.907	17.31	980	2000	
Ni	60	3	72	1.563	ppb	1.563	8.76	875	5000	
Cu	63	3	72	4.970	ppb	4.970	4.63	4142	5000	
Zn	66	3	72	4.588	ppb	4.588	11.22	711	5000	
As	75	3	72	1.221	ppb	1.221	25.70	172	2000	
Se	78	2	72	0.525	ppb	0.525	23.30	25	2000	
Sr	88	3	72	284.564	ppb	284.564	1.24	124333	4000	
Mo	95	3	115	2.563	ppb	2.563	6.63	1061	2000	
Ag	107	3	115	0.013	ppb	0.013	16.24	33	100	
Cd	111	3	115	0.025	ppb	0.025	58.46	7	2000	
Sn	120	3	115	-0.065	ppb	-0.065	-58.31	473	2000	
Sb	121	3	115	0.312	ppb	0.312	24.93	223	1000	
Ba	137	3	115	62.305	ppb	62.305	0.89	12723	5000	
Tl	205	3	193	0.030	ppb	0.030	42.58	193	2000	
(Pb)	206	3	193	0.928	ppb	0.928	11.23	1133	100	
(Pb)	207	3	193	0.928	ppb	0.928	15.80	1115	100	
Pb	208	3	193	0.910	ppb	0.910	5.95	4625	5000	
Th	232	3	193	0.062	ppb	0.062	44.53	6598	2000	
U	238	3	193	4.331	ppb	4.331	4.48	19756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3425126	2.07	3473788	98.60	60	120	
Sc (IS)	45	3	HMI He	506961	0.48	498630	101.67	60	120	
Ge Internal standard	72	2	HMI H2	2163433	0.85	2241871	96.50	60	120	
Ge Internal standard	72	3	HMI He	643106	0.28	647352	99.34	60	120	
In Internal Standard	115	3	HMI He	2396124	0.37	2356036	101.70	60	120	
Ir (IS)	193	3	HMI He	5061867	1.54	4999588	101.25	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-4-A
Data File Name	389SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:33:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	61.536	ppb	61.536	5.77	2137	2000	
Na	23	3	45	35887.234	ppb	35887.234	2.77	3143321	400000	
Mg	24	3	45	214042.979	ppb	214042.979	1.99	9981178	400000	
Al	27	3	45	236919.724	ppb	236919.724	1.33	4095022	400000	
K	39	3	45	6820.722	ppb	6820.722	1.95	280145	400000	
Ca	40	2	45	426366.865	ppb	426366.865	0.97	196522913	400000	
V	51	3	72	59.057	ppb	59.057	3.89	29004	2000	
Cr	52	3	72	5.974	ppb	5.974	3.39	5675	5000	
Mn	55	3	72	12978.212	ppb	12978.212	0.35	4080146	10000	
Fe	56	2	72	786.997	ppb	786.997	1.86	1024467	10000	
Co	59	3	72	609.090	ppb	609.090	1.60	624816	2000	
Ni	60	3	72	554.486	ppb	554.486	0.17	159263	5000	
Cu	63	3	72	7.296	ppb	7.296	2.16	5853	5000	
Zn	66	3	72	2857.333	ppb	2857.333	1.01	355021	5000	
As	75	3	72	3.699	ppb	3.699	16.87	391	2000	
Se	78	2	72	15.036	ppb	15.036	0.88	682	2000	
Sr	88	3	72	3468.778	ppb	3468.778	1.97	1487373	4000	
Mo	95	3	115	0.098	ppb	0.098	12.61	65	2000	
Ag	107	3	115	0.020	ppb	0.020	10.69	42	100	
Cd	111	3	115	8.386	ppb	8.386	3.28	1629	2000	
Sn	120	3	115	0.062	ppb	0.062	99.53	540	2000	
Sb	121	3	115	0.052	ppb	0.052	18.04	58	1000	
Ba	137	3	115	10.568	ppb	10.568	3.55	2136	5000	
Tl	205	3	193	0.675	ppb	0.675	2.63	2129	2000	
(Pb)	206	3	193	10.122	ppb	10.122	2.80	10457	100	
(Pb)	207	3	193	9.504	ppb	9.504	3.49	8630	100	
Pb	208	3	193	9.742	ppb	9.742	2.08	40417	5000	
Th	232	3	193	2.064	ppb	2.064	6.25	14605	2000	
U	238	3	193	101.861	ppb	101.861	2.01	429270	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3435380	0.58	3473788	98.89	60	120	
Sc (IS)	45	3	HMI He	505726	1.29	498630	101.42	60	120	
Ge Internal standard	72	2	HMI H2	2139445	1.02	2241871	95.43	60	120	
Ge Internal standard	72	3	HMI He	631279	1.04	647352	97.52	60	120	
In Internal Standard	115	3	HMI He	2335127	0.50	2356036	99.11	60	120	
Ir (IS)	193	3	HMI He	4972439	1.44	4999588	99.46	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	390SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:34:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	18419.688	ppb	18419.688	2.28	1615246	400000	
Mg	24	3	45	12309.509	ppb	12309.509	2.34	572438	400000	
Al	27	3	45	45.650	ppb	45.650	12.02	868	400000	
K	39	3	45	7216.587	ppb	7216.587	2.20	294166	400000	
Ca	40	2	45	49091.953	ppb	49091.953	0.87	22809741	400000	
V	51	3	72	22.839	ppb	22.839	4.47	11781	2000	
Cr	52	3	72	1.153	ppb	1.153	18.15	2821	5000	
Mn	55	3	72	6.432	ppb	6.432	6.10	2236	10000	
Fe	56	2	72	7.855	ppb	7.855	22.15	41431	10000	
Co	59	3	72	0.178	ppb	0.178	24.95	217	2000	
Ni	60	3	72	0.443	ppb	0.443	12.50	546	5000	
Cu	63	3	72	0.447	ppb	0.447	14.73	598	5000	
Zn	66	3	72	2.466	ppb	2.466	5.18	441	5000	
As	75	3	72	14.009	ppb	14.009	4.38	1341	2000	
Se	78	2	72	4.047	ppb	4.047	5.74	181	2000	
Sr	88	3	72	257.823	ppb	257.823	2.23	112334	4000	
Mo	95	3	115	9.181	ppb	9.181	7.10	3709	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-183.27	13	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.121	ppb	-0.121	-85.10	436	2000	
Sb	121	3	115	0.293	ppb	0.293	2.00	210	1000	
Ba	137	3	115	40.398	ppb	40.398	2.17	8220	5000	
Tl	205	3	193	0.002	ppb	0.002	151.82	103	2000	
(Pb)	206	3	193	0.069	ppb	0.069	58.51	240	100	
(Pb)	207	3	193	0.053	ppb	0.053	35.96	325	100	
Pb	208	3	193	0.019	ppb	0.019	119.97	920	5000	
Th	232	3	193	-0.485	ppb	-0.485	-13.85	4227	2000	
U	238	3	193	1.795	ppb	1.795	2.44	8684	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3461661	0.15	3473788	99.65	60	120	
Sc (IS)	45	3	HMI He	504276	1.61	498630	101.13	60	120	
Ge Internal standard	72	2	HMI H2	2093081	2.55	2241871	93.36	60	120	
Ge Internal standard	72	3	HMI He	641400	1.03	647352	99.08	60	120	
In Internal Standard	115	3	HMI He	2384445	3.25	2356036	101.21	60	120	
Ir (IS)	193	3	HMI He	4932886	1.56	4999588	98.67	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	391SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:36:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	3541.552	ppb	3541.552	1.00	314209	400000	
Mg	24	3	45	2505.806	ppb	2505.806	1.21	113943	400000	
Al	27	3	45	20.696	ppb	20.696	25.33	427	400000	
K	39	3	45	1435.278	ppb	1435.278	3.79	75414	400000	
Ca	40	2	45	10061.356	ppb	10061.356	1.51	4609923	400000	
V	51	3	72	4.424	ppb	4.424	0.74	2754	2000	
Cr	52	3	72	0.080	ppb	0.080	582.26	2139	5000	
Mn	55	3	72	3.862	ppb	3.862	8.14	1398	10000	
Fe	56	2	72	6.634	ppb	6.634	33.38	40778	10000	
Co	59	3	72	0.052	ppb	0.052	69.22	85	2000	
Ni	60	3	72	0.264	ppb	0.264	35.75	488	5000	
Cu	63	3	72	0.208	ppb	0.208	17.54	406	5000	
Zn	66	3	72	4.381	ppb	4.381	4.53	675	5000	
As	75	3	72	2.448	ppb	2.448	1.88	280	2000	
Se	78	2	72	0.799	ppb	0.799	21.16	37	2000	
Sr	88	3	72	52.251	ppb	52.251	0.65	22499	4000	
Mo	95	3	115	1.831	ppb	1.831	4.96	745	2000	
Ag	107	3	115	0.010	ppb	0.010	53.36	28	100	
Cd	111	3	115	0.009	ppb	0.009	167.98	3	2000	
Sn	120	3	115	0.194	ppb	0.194	31.93	620	2000	
Sb	121	3	115	0.112	ppb	0.112	19.16	95	1000	
Ba	137	3	115	8.706	ppb	8.706	3.23	1764	5000	
Tl	205	3	193	0.004	ppb	0.004	217.27	113	2000	
(Pb)	206	3	193	0.468	ppb	0.468	14.11	651	100	
(Pb)	207	3	193	0.363	ppb	0.363	17.62	603	100	
Pb	208	3	193	0.416	ppb	0.416	4.23	2554	5000	
Th	232	3	193	-0.537	ppb	-0.537	-8.34	4082	2000	
U	238	3	193	0.368	ppb	0.368	5.28	2779	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3408161	2.36	3473788	98.11	60	120	
Sc (IS)	45	3	HMI He	492547	1.10	498630	98.78	60	120	
Ge Internal standard	72	2	HMI H2	2136703	1.92	2241871	95.31	60	120	
Ge Internal standard	72	3	HMI He	633440	0.45	647352	97.85	60	120	
In Internal Standard	115	3	HMI He	2330819	2.35	2356036	98.93	60	120	
Ir (IS)	193	3	HMI He	5009270	1.36	4999588	100.19	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	392SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:38:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.207	ppb	39.207	7.78	1378	2000	
Na	23	3	45	19480.306	ppb	19480.306	1.33	1728598	400000	
Mg	24	3	45	13388.974	ppb	13388.974	1.63	630430	400000	
Al	27	3	45	765.165	ppb	765.165	0.89	13430	400000	
K	39	3	45	7945.808	ppb	7945.808	0.99	325515	400000	
Ca	40	2	45	51131.967	ppb	51131.967	3.26	23882414	400000	
V	51	3	72	62.212	ppb	62.212	2.50	31224	2000	
Cr	52	3	72	38.609	ppb	38.609	3.21	25868	5000	
Mn	55	3	72	43.238	ppb	43.238	4.31	14083	10000	
Fe	56	2	72	766.595	ppb	766.595	3.16	1023389	10000	
Co	59	3	72	37.254	ppb	37.254	0.87	39126	2000	
Ni	60	3	72	37.572	ppb	37.572	5.04	11429	5000	
Cu	63	3	72	39.360	ppb	39.360	1.70	31198	5000	
Zn	66	3	72	39.679	ppb	39.679	3.54	5173	5000	
As	75	3	72	49.640	ppb	49.640	1.52	4633	2000	
Se	78	2	72	43.010	ppb	43.010	0.78	1997	2000	
Sr	88	3	72	333.804	ppb	333.804	1.06	146438	4000	
Mo	95	3	115	47.154	ppb	47.154	1.83	19022	2000	
Ag	107	3	115	37.646	ppb	37.646	3.22	51651	100	
Cd	111	3	115	36.478	ppb	36.478	0.97	7252	2000	
Sn	120	3	115	36.118	ppb	36.118	1.80	23421	2000	
Sb	121	3	115	37.368	ppb	37.368	1.09	23456	1000	
Ba	137	3	115	79.975	ppb	79.975	2.04	16289	5000	
Tl	205	3	193	36.763	ppb	36.763	3.16	115919	2000	
(Pb)	206	3	193	37.213	ppb	37.213	2.32	39813	100	
(Pb)	207	3	193	36.573	ppb	36.573	3.51	33965	100	
Pb	208	3	193	37.184	ppb	37.184	2.60	159155	5000	
Th	232	3	193	33.844	ppb	33.844	0.10	150532	2000	
U	238	3	193	39.208	ppb	39.208	3.14	173917	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3481658	2.44	3473788	100.23	60	120	
Sc (IS)	45	3	HMI He	510434	1.16	498630	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2193078	1.58	2241871	97.82	60	120	
Ge Internal standard	72	3	HMI He	645747	0.79	647352	99.75	60	120	
In Internal Standard	115	3	HMI He	2391645	1.14	2356036	101.51	60	120	
Ir (IS)	193	3	HMI He	5210834	1.64	4999588	104.23	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	393SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:40:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	36.759	ppb	36.759	4.99	1293	2000	
Na	23	3	45	19113.012	ppb	19113.012	2.74	1669742	400000	
Mg	24	3	45	13348.269	ppb	13348.269	0.66	618719	400000	
Al	27	3	45	806.758	ppb	806.758	1.97	13938	400000	
K	39	3	45	7942.091	ppb	7942.091	2.52	320317	400000	
Ca	40	2	45	47753.423	ppb	47753.423	0.66	23027642	400000	
V	51	3	72	60.549	ppb	60.549	1.49	30857	2000	
Cr	52	3	72	38.913	ppb	38.913	3.25	26440	5000	
Mn	55	3	72	41.943	ppb	41.943	1.46	13872	10000	
Fe	56	2	72	766.921	ppb	766.921	0.85	1028950	10000	
Co	59	3	72	37.122	ppb	37.122	0.59	39562	2000	
Ni	60	3	72	37.699	ppb	37.699	0.71	11637	5000	
Cu	63	3	72	39.056	ppb	39.056	0.51	31418	5000	
Zn	66	3	72	54.369	ppb	54.369	0.41	7143	5000	
As	75	3	72	49.786	ppb	49.786	3.15	4715	2000	
Se	78	2	72	42.982	ppb	42.982	1.30	2005	2000	
Sr	88	3	72	327.212	ppb	327.212	0.64	145669	4000	
Mo	95	3	115	46.842	ppb	46.842	2.87	18819	2000	
Ag	107	3	115	37.928	ppb	37.928	3.12	51834	100	
Cd	111	3	115	37.242	ppb	37.242	2.43	7373	2000	
Sn	120	3	115	36.609	ppb	36.609	2.99	23636	2000	
Sb	121	3	115	37.620	ppb	37.620	2.47	23517	1000	
Ba	137	3	115	78.288	ppb	78.288	1.49	15883	5000	
Tl	205	3	193	38.074	ppb	38.074	1.69	119846	2000	
(Pb)	206	3	193	37.098	ppb	37.098	0.96	39615	100	
(Pb)	207	3	193	37.752	ppb	37.752	2.29	34991	100	
Pb	208	3	193	37.163	ppb	37.163	1.50	158788	5000	
Th	232	3	193	36.607	ppb	36.607	1.63	161964	2000	
U	238	3	193	39.369	ppb	39.369	1.19	174328	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3592736	0.76	3473788	103.42	60	120	
Sc (IS)	45	3	HMI He	502539	1.38	498630	100.78	60	120	
Ge Internal standard	72	2	HMI H2	2203451	1.02	2241871	98.29	60	120	
Ge Internal standard	72	3	HMI He	655287	0.87	647352	101.23	60	120	
In Internal Standard	115	3	HMI He	2382269	1.27	2356036	101.11	60	120	
Ir (IS)	193	3	HMI He	5200403	0.17	4999588	104.02	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	394_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:42:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.456	ppb	7.297	1758	50	98.9	90	110	
Na	23	3	45	48700.813	ppb	0.971	4233139	51000	95.5	90	110	
Mg	24	3	45	10225.766	ppb	1.644	473810	11000	93.0	90	110	
Al	27	3	45	1014.723	ppb	3.033	17498	1000	101.5	90	110	
K	39	3	45	10413.195	ppb	2.610	412564	11000	94.7	90	110	
Ca	40	2	45	10254.651	ppb	3.577	4822449	11000	93.2	90	110	
V	51	3	72	53.251	ppb	1.868	25614	50	106.5	90	110	
Cr	52	3	72	53.333	ppb	0.553	33347	50	106.7	90	110	
Mn	55	3	72	53.530	ppb	1.920	16613	50	107.1	90	110	
Fe	56	2	72	1054.357	ppb	2.710	1335865	1000	105.4	90	110	
Co	59	3	72	51.470	ppb	1.996	51597	50	102.9	90	110	
Ni	60	3	72	51.848	ppb	1.567	14911	50	103.7	90	110	
Cu	63	3	72	52.815	ppb	1.203	39893	50	105.6	90	110	
Zn	66	3	72	53.560	ppb	3.368	6623	50	107.1	90	110	
As	75	3	72	50.679	ppb	2.866	4517	50	101.4	90	110	
Se	78	2	72	54.931	ppb	3.605	2441	50	109.9	90	110	
Sr	88	3	72	105.285	ppb	1.661	44109	100	105.3	90	110	
Mo	95	3	115	49.917	ppb	0.658	20282	50	99.8	90	110	
Ag	107	3	115	49.180	ppb	3.617	67970	50	98.4	90	110	
Cd	111	3	115	48.955	ppb	3.140	9804	50	97.9	90	110	
Sn	120	3	115	47.171	ppb	3.740	30652	50	94.3	90	110	
Sb	121	3	115	49.597	ppb	1.236	31351	50	99.2	90	110	
Ba	137	3	115	48.447	ppb	1.341	9955	50	96.9	90	110	
Tl	205	3	193	50.129	ppb	0.673	154308	50	100.3	90	110	
(Pb)	206	3	193	49.211	ppb	0.806	51341	50	98.4	90	110	
(Pb)	207	3	193	50.439	ppb	1.556	45633	50	100.9	90	110	
Pb	208	3	193	49.603	ppb	0.795	207004	50	99.2	90	110	
Th	232	3	193	51.032	ppb	1.911	218342	50	102.1	90	110	
U	238	3	193	50.551	ppb	0.720	218575	50	101.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3500221	2.68	3473788	100.76	60	120	
Sc (IS)	45	3	HMI He	502384	1.62	498630	100.75	60	120	
Ge Internal standard	72	2	HMI H2	2099975	1.87	2241871	93.67	60	120	
Ge Internal standard	72	3	HMI He	616598	1.20	647352	95.25	60	120	
In Internal Standard	115	3	HMI He	2409117	0.63	2356036	102.25	60	120	
Ir (IS)	193	3	HMI He	5086348	0.73	4999588	101.74	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	395_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:44:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	40.231	ppb	8.5	17234	25	>RL
Mg	24	3	45	5.742	ppb	36.8	404	25	
Al	27	3	45	4.197	ppb	65.4	153	15	
K	39	3	45	-1.082	ppb	-2842.9	23360	50	
V	51	3	72	-0.061	ppb	-483.0	596	1	
Cr	52	3	72	-0.123	ppb	-103.7	2041	1	
Mn	55	3	72	0.759	ppb	23.6	423	0.5	>RL
Co	59	3	72	0.044	ppb	44.5	77	0.5	
Ni	60	3	72	0.342	ppb	14.9	516	1	
Cu	63	3	72	0.059	ppb	74.5	295	1	
Zn	66	3	72	0.882	ppb	25.4	242	5	
As	75	3	72	-0.192	ppb	-195.9	42	1	
Se	78	2	72	0.043	ppb	150.4	3	1	
Sr	88	3	72	0.084	ppb	27.4	52	0.5	
Mo	95	3	115	0.013	ppb	109.8	32	0.5	
Ag	107	3	115	0.011	ppb	116.1	30	1	
Cd	111	3	115	0.009	ppb	170.8	3	0.5	
Sn	120	3	115	0.198	ppb	42.4	628	1	
Sb	121	3	115	0.048	ppb	140.8	57	0.6	
Ba	137	3	115	0.034	ppb	308.6	47	0.5	
Tl	205	3	193	0.036	ppb	16.9	217	0.1	
(Pb)	206	3	193	-0.005	ppb	-769.3	173	1	
(Pb)	207	3	193	-0.002	ppb	-2319.7	292	1	
Pb	208	3	193	-0.019	ppb	-45.1	805	0.5	
Th	232	3	193	1.368	ppb	16.6	12295	1	>RL
U	238	3	193	0.034	ppb	103.4	1411	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3540753	0.45	3473788	101.93	60	120	
Sc (IS)	45	3	HMI He	505641	1.51	498630	101.41	60	120	
Ge Internal standard	72	2	HMI H2	2166207	2.15	2241871	96.62	60	120	
Ge Internal standard	72	3	HMI He	640795	0.97	647352	98.99	60	120	
In Internal Standard	115	3	HMI He	2351369	0.83	2356036	99.80	60	120	
Ir (IS)	193	3	HMI He	5189898	1.86	4999588	103.81	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	396LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:45:49-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	-73.618	ppb	-1.424	14282	300	-24.5	70	130	>+/-30%
Mg	24	3	45	1.241	ppb	80.699	377	50	2.5	70	130	>+/-30%
Al	27	3	45	0.121	ppb	420.408	163	50	0.2	70	130	>+/-30%
K	39	3	45	-324.308	ppb	-3.422	21869	120	-270.3	70	130	>+/-30%
Ca	40	2	45	-1.466	ppb	-85.353	15822	200	-0.7	70	130	>+/-30%
V	51	3	72	-1.079	ppb	-2.722	187	5	-21.6	70	130	>+/-30%
Cr	52	3	72	-2.851	ppb	-1.383	700	2	-142.5	70	130	>+/-30%
Mn	55	3	72	-0.004	ppb	-2999.456	335	1	-0.4	70	130	>+/-30%
Fe	56	2	72	-19.070	ppb	-9.233	14753	50	-38.1	70	130	>+/-30%
Co	59	3	72	-0.013	ppb	-45.522	33	1	-1.3	70	130	>+/-30%
Ni	60	3	72	-1.302	ppb	-1.975	72	2	-65.1	70	130	>+/-30%
Cu	63	3	72	-0.135	ppb	-25.834	268	2	-6.7	70	130	>+/-30%
Zn	66	3	72	-0.253	ppb	-13.329	183	10	-2.5	70	130	>+/-30%
As	75	3	72	-0.490	ppb	-16.201	27	5	-9.8	70	130	>+/-30%
Se	78	2	72	0.006	ppb	276.431	3	5	0.1	70	130	>+/-30%
Sr	88	3	72	0.041	ppb	83.538	60	5	0.8	70	130	>+/-30%
Mo	95	3	115	-0.051	ppb	-21.298	12	2	-2.5	70	130	>+/-30%
Ag	107	3	115	0.000	ppb	1117.419	28	1	0.0	70	130	>+/-30%
Cd	111	3	115	-0.004	ppb	-207.644	2	1	-0.4	70	130	>+/-30%
Sn	120	3	115	-0.628	ppb	-0.265	207	10	-6.3	70	130	>+/-30%
Sb	121	3	115	-0.018	ppb	-49.144	28	2	-0.9	70	130	>+/-30%
Ba	137	3	115	-0.122	ppb	-32.170	28	1	-12.2	70	130	>+/-30%
Tl	205	3	193	-0.007	ppb	-26.182	152	1	-0.7	70	130	>+/-30%
(Pb)	206	3	193	-0.061	ppb	-36.572	213	1	-6.1	70	130	>+/-30%
(Pb)	207	3	193	-0.066	ppb	-52.992	436	1	-6.6	70	130	>+/-30%
Pb	208	3	193	-0.076	ppb	-15.571	1054	1	-7.6	70	130	>+/-30%
Th	232	3	193	-0.660	ppb	-4.678	6952	1	-66.0	70	130	>+/-30%
U	238	3	193	0.011	ppb	206.313	2466	1	1.1	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6227566	3.45	3473788	179.27	60	120	IS Failed
Sc (IS)	45	3	HMI He	988217	2.41	498630	198.19	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3733041	2.35	2241871	166.51	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1194015	3.57	647352	184.45	60	120	IS Failed
In Internal Standard	115	3	HMI He	4299938	1.36	2356036	182.51	60	120	IS Failed
Ir (IS)	193	3	HMI He	9741451	2.37	4999588	194.85	60	120	IS Failed

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-
Data File Name	397LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:47:37-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	39.475	ppb	8.819	17245	300	13.2	70	130	>+/-30%
Mg	24	3	45	9.855	ppb	14.760	597	50	19.7	70	130	>+/-30%
Al	27	3	45	12.603	ppb	17.622	300	50	25.2	70	130	>+/-30%
K	39	3	45	-14.193	ppb	-66.082	22962	120	-11.8	70	130	>+/-30%
Ca	40	2	45	20.616	ppb	1.619	19259	200	10.3	70	130	>+/-30%
V	51	3	72	-0.105	ppb	-93.513	573	5	-2.1	70	130	>+/-30%
Cr	52	3	72	-0.019	ppb	-1576.937	2096	2	-0.9	70	130	>+/-30%
Mn	55	3	72	1.498	ppb	11.233	656	1	149.8	70	130	>+/-30%
Fe	56	2	72	2.378	ppb	68.794	35722	50	4.8	70	130	>+/-30%
Co	59	3	72	0.071	ppb	7.904	105	1	7.1	70	130	>+/-30%
Ni	60	3	72	0.315	ppb	14.502	506	2	15.7	70	130	>+/-30%
Cu	63	3	72	0.101	ppb	32.870	327	2	5.1	70	130	>+/-30%
Zn	66	3	72	1.277	ppb	17.080	290	10	12.8	70	130	>+/-30%
As	75	3	72	-0.245	ppb	-46.442	37	5	-4.9	70	130	>+/-30%
Se	78	2	72	0.074	ppb	35.140	5	5	1.5	70	130	>+/-30%
Sr	88	3	72	0.323	ppb	6.721	155	5	6.5	70	130	>+/-30%
Mo	95	3	115	0.093	ppb	50.985	63	2	4.6	70	130	>+/-30%
Ag	107	3	115	0.011	ppb	36.391	30	1	1.1	70	130	>+/-30%
Cd	111	3	115	0.017	ppb	148.114	5	1	1.7	70	130	>+/-30%
Sn	120	3	115	0.278	ppb	41.460	683	10	2.8	70	130	>+/-30%
Sb	121	3	115	0.029	ppb	25.903	45	2	1.5	70	130	>+/-30%
Ba	137	3	115	0.158	ppb	62.332	72	1	15.8	70	130	>+/-30%
Tl	205	3	193	0.002	ppb	326.361	108	1	0.2	70	130	>+/-30%
(Pb)	206	3	193	0.053	ppb	81.745	230	1	5.3	70	130	>+/-30%
(Pb)	207	3	193	0.041	ppb	154.180	323	1	4.1	70	130	>+/-30%
Pb	208	3	193	0.034	ppb	56.298	1008	1	3.4	70	130	>+/-30%
Th	232	3	193	3.298	ppb	2.429	20054	1	329.8	70	130	>+/-30%
U	238	3	193	0.018	ppb	134.345	1314	1	1.8	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3497024	1.74	3473788	100.67	60	120	
Sc (IS)	45	3	HMI He	507869	0.92	498630	101.85	60	120	
Ge Internal standard	72	2	HMI H2	2156273	0.85	2241871	96.18	60	120	
Ge Internal standard	72	3	HMI He	638056	0.95	647352	98.56	60	120	
In Internal Standard	115	3	HMI He	2365538	2.05	2356036	100.40	60	120	
Ir (IS)	193	3	HMI He	5081653	1.35	4999588	101.64	60	120	

Sample Report

Sample Table

Sample Name	174893-2
Data File Name	398SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:49:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	92563.341	ppb	92563.341	2.29	9995057	400000	
Mg	24	3	45	33494.216	ppb	33494.216	2.03	1930933	400000	
Al	27	3	45	9.324	ppb	9.324	33.48	300	400000	
K	39	3	45	1271.894	ppb	1271.894	4.68	88093	400000	
Ca	40	2	45	52750.583	ppb	52750.583	0.95	31463243	400000	
V	51	3	72	-1.009	ppb	-1.009	-10.90	163	2000	
Cr	52	3	72	-0.637	ppb	-0.637	-33.72	2106	5000	
Mn	55	3	72	694.239	ppb	694.239	2.64	270383	10000	
Fe	56	2	72	-4.512	ppb	-4.512	-181.09	33754	10000	
Co	59	3	72	1.971	ppb	1.971	6.16	2541	2000	
Ni	60	3	72	1.376	ppb	1.376	17.44	996	5000	
Cu	63	3	72	0.595	ppb	0.595	24.57	870	5000	
Zn	66	3	72	2.597	ppb	2.597	6.92	558	5000	
As	75	3	72	1.952	ppb	1.952	27.93	290	2000	
Se	78	2	72	0.134	ppb	0.134	52.82	9	2000	
Sr	88	3	72	460.103	ppb	460.103	0.93	244282	4000	
Mo	95	3	115	1.761	ppb	1.761	14.91	891	2000	
Ag	107	3	115	0.003	ppb	0.003	254.77	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.618	ppb	-0.618	-6.06	147	2000	
Sb	121	3	115	0.005	ppb	0.005	525.86	37	1000	
Ba	137	3	115	269.881	ppb	269.881	2.06	66343	5000	
Tl	205	3	193	0.015	ppb	0.015	134.47	178	2000	
(Pb)	206	3	193	-0.052	ppb	-0.052	-40.38	147	100	
(Pb)	207	3	193	-0.030	ppb	-0.030	-88.61	317	100	
Pb	208	3	193	-0.055	ppb	-0.055	-10.39	778	5000	
Th	232	3	193	-0.645	ppb	-0.645	-8.56	4494	2000	
U	238	3	193	0.100	ppb	0.100	7.14	2032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4443960	0.30	3473788	127.93	60	120	IS Failed
Sc (IS)	45	3	HMI He	625140	1.01	498630	125.37	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2705005	1.12	2241871	120.66	60	120	IS Failed
Ge Internal standard	72	3	HMI He	781543	0.92	647352	120.73	60	120	IS Failed
In Internal Standard	115	3	HMI He	2891916	0.97	2356036	122.75	60	120	IS Failed
Ir (IS)	193	3	HMI He	6189589	1.55	4999588	123.80	60	120	IS Failed

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	399SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:52:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	2.163	ppb	2.163	147.80	15521	400000	
Mg	24	3	45	7.217	ppb	7.217	145.85	527	400000	
Al	27	3	45	3.421	ppb	3.421	100.35	157	400000	
K	39	3	45	-45.867	ppb	-45.867	-13.34	24165	400000	
Ca	40	2	45	-1.732	ppb	-1.732	-55.91	9950	400000	
V	51	3	72	-0.928	ppb	-0.928	-3.83	192	2000	
Cr	52	3	72	-0.537	ppb	-0.537	-23.68	1969	5000	
Mn	55	3	72	0.540	ppb	0.540	36.15	390	10000	
Fe	56	2	72	7.029	ppb	7.029	47.56	45548	10000	
Co	59	3	72	0.030	ppb	0.030	46.03	68	2000	
Ni	60	3	72	0.095	ppb	0.095	223.80	490	5000	
Cu	63	3	72	-0.100	ppb	-0.100	-49.54	188	5000	
Zn	66	3	72	-0.025	ppb	-0.025	-747.66	140	5000	
As	75	3	72	-0.499	ppb	-0.499	-9.84	15	2000	
Se	78	2	72	0.012	ppb	0.012	585.99	2	2000	
Sr	88	3	72	0.115	ppb	0.115	72.12	72	4000	
Mo	95	3	115	-0.010	ppb	-0.010	-95.93	25	2000	
Ag	107	3	115	0.004	ppb	0.004	112.24	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.517	ppb	-0.517	-6.84	203	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-19.22	17	1000	
Ba	137	3	115	-0.043	ppb	-0.043	-173.14	35	5000	
Tl	205	3	193	0.002	ppb	0.002	99.04	118	2000	
(Pb)	206	3	193	-0.050	ppb	-0.050	-33.34	135	100	
(Pb)	207	3	193	0.021	ppb	0.021	363.29	335	100	
Pb	208	3	193	-0.044	ppb	-0.044	-44.39	751	5000	
Th	232	3	193	-0.661	ppb	-0.661	-2.82	3989	2000	
U	238	3	193	0.011	ppb	0.011	265.60	1414	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3966819	1.05	3473788	114.19	60	120	
Sc (IS)	45	3	HMI He	563892	0.40	498630	113.09	60	120	
Ge Internal standard	72	2	HMI H2	2357552	0.68	2241871	105.16	60	120	
Ge Internal standard	72	3	HMI He	705615	0.58	647352	109.00	60	120	
In Internal Standard	115	3	HMI He	2618086	2.56	2356036	111.12	60	120	
Ir (IS)	193	3	HMI He	5590669	1.64	4999588	111.82	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	400SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:54:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.046	ppb	0.046	173.21	2	2000	
Na	23	3	45	-4.869	ppb	-4.869	-92.13	14692	400000	
Mg	24	3	45	2.732	ppb	2.732	36.49	290	400000	
Al	27	3	45	1.751	ppb	1.751	42.00	123	400000	
K	39	3	45	-40.425	ppb	-40.425	-33.27	24165	400000	
Ca	40	2	45	-0.980	ppb	-0.980	-18.72	10291	400000	
V	51	3	72	-0.876	ppb	-0.876	-5.61	218	2000	
Cr	52	3	72	-0.561	ppb	-0.561	-27.88	1944	5000	
Mn	55	3	72	0.532	ppb	0.532	5.19	385	10000	
Fe	56	2	72	2.515	ppb	2.515	71.30	39449	10000	
Co	59	3	72	0.006	ppb	0.006	143.51	42	2000	
Ni	60	3	72	-0.087	ppb	-0.087	-287.87	430	5000	
Cu	63	3	72	-0.054	ppb	-0.054	-52.49	227	5000	
Zn	66	3	72	-0.358	ppb	-0.358	-31.60	93	5000	
As	75	3	72	-0.415	ppb	-0.415	-13.97	23	2000	
Se	78	2	72	-0.002	ppb	-0.002	-1455.33	1	2000	
Sr	88	3	72	0.085	ppb	0.085	52.24	57	4000	
Mo	95	3	115	0.090	ppb	0.090	204.75	68	2000	
Ag	107	3	115	0.000	ppb	0.000	1431.34	17	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.564	ppb	-0.564	-11.84	168	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-81.95	17	1000	
Ba	137	3	115	-0.048	ppb	-0.048	-138.17	33	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-510.26	107	2000	
(Pb)	206	3	193	-0.027	ppb	-0.027	-139.03	162	100	
(Pb)	207	3	193	-0.031	ppb	-0.031	-21.89	285	100	
Pb	208	3	193	-0.044	ppb	-0.044	-37.00	753	5000	
Th	232	3	193	-0.655	ppb	-0.655	-6.07	4022	2000	
U	238	3	193	0.004	ppb	0.004	332.58	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3943350	0.35	3473788	113.52	60	120	
Sc (IS)	45	3	HMI He	558532	0.99	498630	112.01	60	120	
Ge Internal standard	72	2	HMI H2	2367361	1.70	2241871	105.60	60	120	
Ge Internal standard	72	3	HMI He	702394	0.59	647352	108.50	60	120	
In Internal Standard	115	3	HMI He	2585407	0.39	2356036	109.74	60	120	
Ir (IS)	193	3	HMI He	5599036	1.15	4999588	111.99	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	401SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:56:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	-7.750	ppb	-7.750	-91.28	14586	400000	
Mg	24	3	45	2.228	ppb	2.228	71.13	267	400000	
Al	27	3	45	1.348	ppb	1.348	281.41	117	400000	
K	39	3	45	-51.495	ppb	-51.495	-42.39	23978	400000	
Ca	40	2	45	-1.079	ppb	-1.079	-101.32	10070	400000	
V	51	3	72	-0.905	ppb	-0.905	-8.26	203	2000	
Cr	52	3	72	-0.578	ppb	-0.578	-4.41	1938	5000	
Mn	55	3	72	0.386	ppb	0.386	63.12	335	10000	
Fe	56	2	72	2.135	ppb	2.135	120.75	39355	10000	
Co	59	3	72	0.012	ppb	0.012	101.78	48	2000	
Ni	60	3	72	0.217	ppb	0.217	79.34	528	5000	
Cu	63	3	72	-0.067	ppb	-0.067	-35.07	217	5000	
Zn	66	3	72	-0.263	ppb	-0.263	-37.06	107	5000	
As	75	3	72	-0.449	ppb	-0.449	-21.87	20	2000	
Se	78	2	72	-0.002	ppb	-0.002	-989.43	1	2000	
Sr	88	3	72	0.112	ppb	0.112	66.55	70	4000	
Mo	95	3	115	0.001	ppb	0.001	3396.36	30	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-311.70	15	100	
Cd	111	3	115	-0.001	ppb	-0.001	-1970.04	2	2000	
Sn	120	3	115	-0.524	ppb	-0.524	-11.56	198	2000	
Sb	121	3	115	0.003	ppb	0.003	729.89	32	1000	
Ba	137	3	115	-0.140	ppb	-0.140	-8.77	13	5000	
Tl	205	3	193	0.005	ppb	0.005	102.40	130	2000	
(Pb)	206	3	193	-0.042	ppb	-0.042	-60.21	145	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-14.82	258	100	
Pb	208	3	193	-0.059	ppb	-0.059	-17.53	686	5000	
Th	232	3	193	-0.615	ppb	-0.615	-5.86	4212	2000	
U	238	3	193	0.027	ppb	0.027	44.68	1493	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3877667	0.76	3473788	111.63	60	120	
Sc (IS)	45	3	HMI He	565139	0.61	498630	113.34	60	120	
Ge Internal standard	72	2	HMI H2	2396270	1.30	2241871	106.89	60	120	
Ge Internal standard	72	3	HMI He	704309	0.92	647352	108.80	60	120	
In Internal Standard	115	3	HMI He	2620830	1.43	2356036	111.24	60	120	
Ir (IS)	193	3	HMI He	5605741	0.81	4999588	112.12	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	402SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:58:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	-12.538	ppb	-12.538	-58.65	14235	400000	
Mg	24	3	45	2.500	ppb	2.500	31.41	284	400000	
Al	27	3	45	1.970	ppb	1.970	43.94	130	400000	
K	39	3	45	-46.022	ppb	-46.022	-64.64	24409	400000	
Ca	40	2	45	0.287	ppb	0.287	206.32	11042	400000	
V	51	3	72	-0.966	ppb	-0.966	-9.52	172	2000	
Cr	52	3	72	-0.684	ppb	-0.684	-31.43	1878	5000	
Mn	55	3	72	0.358	ppb	0.358	47.88	327	10000	
Fe	56	2	72	2.229	ppb	2.229	91.65	39322	10000	
Co	59	3	72	0.016	ppb	0.016	30.64	53	2000	
Ni	60	3	72	0.105	ppb	0.105	25.15	495	5000	
Cu	63	3	72	-0.068	ppb	-0.068	-40.00	217	5000	
Zn	66	3	72	-0.114	ppb	-0.114	-389.09	128	5000	
As	75	3	72	-0.533	ppb	-0.533	-19.28	12	2000	
Se	78	2	72	0.024	ppb	0.024	90.94	3	2000	
Sr	88	3	72	0.073	ppb	0.073	35.90	52	4000	
Mo	95	3	115	-0.029	ppb	-0.029	-121.97	17	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-28.18	7	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.593	ppb	-0.593	-1.57	152	2000	
Sb	121	3	115	-0.026	ppb	-0.026	-31.77	12	1000	
Ba	137	3	115	-0.096	ppb	-0.096	-35.74	23	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-285.93	107	2000	
(Pb)	206	3	193	-0.056	ppb	-0.056	-43.58	128	100	
(Pb)	207	3	193	-0.047	ppb	-0.047	-86.00	268	100	
Pb	208	3	193	-0.061	ppb	-0.061	-20.50	673	5000	
Th	232	3	193	-0.635	ppb	-0.635	-4.31	4104	2000	
U	238	3	193	0.007	ppb	0.007	42.11	1393	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3971822	1.27	3473788	114.34	60	120	
Sc (IS)	45	3	HMI He	569684	0.36	498630	114.25	60	120	
Ge Internal standard	72	2	HMI H2	2386069	1.30	2241871	106.43	60	120	
Ge Internal standard	72	3	HMI He	708232	0.68	647352	109.40	60	120	
In Internal Standard	115	3	HMI He	2638465	0.82	2356036	111.99	60	120	
Ir (IS)	193	3	HMI He	5585791	0.18	4999588	111.73	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	403SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:59:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	-5.421	ppb	-5.421	-92.91	14662	400000	
Mg	24	3	45	4.402	ppb	4.402	90.07	377	400000	
Al	27	3	45	4.881	ppb	4.881	121.75	184	400000	
K	39	3	45	-24.444	ppb	-24.444	-99.64	24860	400000	
Ca	40	2	45	0.033	ppb	0.033	1015.79	10755	400000	
V	51	3	72	-0.935	ppb	-0.935	-2.99	187	2000	
Cr	52	3	72	-0.606	ppb	-0.606	-7.11	1914	5000	
Mn	55	3	72	0.559	ppb	0.559	51.11	395	10000	
Fe	56	2	72	4.478	ppb	4.478	45.51	42317	10000	
Co	59	3	72	0.015	ppb	0.015	169.82	52	2000	
Ni	60	3	72	0.075	ppb	0.075	300.29	481	5000	
Cu	63	3	72	-0.087	ppb	-0.087	-39.30	198	5000	
Zn	66	3	72	-0.165	ppb	-0.165	-114.82	120	5000	
As	75	3	72	-0.449	ppb	-0.449	-11.06	20	2000	
Se	78	2	72	0.051	ppb	0.051	77.87	4	2000	
Sr	88	3	72	0.119	ppb	0.119	51.50	73	4000	
Mo	95	3	115	0.006	ppb	0.006	323.05	32	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-243.96	12	100	
Cd	111	3	115	-0.001	ppb	-0.001	-2097.85	2	2000	
Sn	120	3	115	-0.603	ppb	-0.603	-6.04	142	2000	
Sb	121	3	115	-0.031	ppb	-0.031	-14.35	8	1000	
Ba	137	3	115	-0.041	ppb	-0.041	-57.08	35	5000	
Tl	205	3	193	-0.004	ppb	-0.004	-149.92	98	2000	
(Pb)	206	3	193	-0.058	ppb	-0.058	-39.49	127	100	
(Pb)	207	3	193	-0.030	ppb	-0.030	-46.30	287	100	
Pb	208	3	193	-0.051	ppb	-0.051	-15.47	723	5000	
Th	232	3	193	-0.647	ppb	-0.647	-3.79	4060	2000	
U	238	3	193	0.025	ppb	0.025	93.24	1483	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3917564	0.77	3473788	112.77	60	120	
Sc (IS)	45	3	HMI He	559324	0.51	498630	112.17	60	120	
Ge Internal standard	72	2	HMI H2	2376386	0.25	2241871	106.00	60	120	
Ge Internal standard	72	3	HMI He	702732	0.48	647352	108.55	60	120	
In Internal Standard	115	3	HMI He	2597449	2.16	2356036	110.25	60	120	
Ir (IS)	193	3	HMI He	5602069	0.40	4999588	112.05	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	404CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T13:01:42-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	15651	0.01
Mg	24	45	3	HMI He	397	16.18
Al	27	45	3	HMI He	127	21.87
K	39	45	3	HMI He	23597	0.03
Ca	40	45	2	HMI H2	12278	0.01
V	51	72	3	HMI He	583	3.06
Cr	52	72	3	HMI He	2041	0.32
Mn	55	72	3	HMI He	443	1.28
Fe	56	72	2	HMI H2	35959	0.02
Co	59	72	3	HMI He	60	97.27
Ni	60	72	3	HMI He	348	1.26
Cu	63	72	3	HMI He	295	1.52
Zn	66	72	3	HMI He	152	10.04
As	75	72	3	HMI He	40	82.71
Se	78	72	2	HMI H2	4	2165.06
(Se)	78	72	3	HMI He	18	374.49
Sr	88	72	3	HMI He	63	47.21
Mo	95	115	3	HMI He	37	140.88
Ag	107	115	3	HMI He	17	207.80
Cd	111	115	3	HMI He	0	#VALUE!
Sn	120	115	3	HMI He	481	3.27
Sb	121	115	3	HMI He	28	95.18
Ba	137	115	3	HMI He	42	158.67
Tl	205	193	3	HMI He	90	16.34
(Pb)	206	193	3	HMI He	178	7.76
(Pb)	207	193	3	HMI He	270	1.19
Pb	208	193	3	HMI He	820	0.78
Th	232	193	3	HMI He	5647	0.14
U	238	193	3	HMI He	1351	0.43

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3460228	0.59
Sc (IS)	45	3	HMI He	505695	0.71
Ge Internal standard	72	2	HMI H2	2187657	2.33
Ge Internal standard	72	3	HMI He	654972	0.70
In Internal Standard	115	3	HMI He	2371544	1.25
Ir (IS)	193	3	HMI He	5024616	0.81

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	405CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T13:03:31-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	404CALB.d
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	2246946	0.01
Mg	24	45	3	HMI He	228150	0.06
Al	27	45	3	HMI He	113	27.31
K	39	45	3	HMI He	206298	0.06
V	51	72	3	HMI He	245	13.41
Cr	52	72	3	HMI He	3766	2.74
Mn	55	72	3	HMI He	528	15.10
Co	59	72	3	HMI He	100	101.17
Ni	60	72	3	HMI He	1113	11.67
Cu	63	72	3	HMI He	310	3.12
Zn	66	72	3	HMI He	175	11.78
As	75	72	3	HMI He	40	205.00
Se	78	72	2	HMI H2	3	1623.80
(Se)	78	72	3	HMI He	43	15.39
Sr	88	72	3	HMI He	90	52.76
Mo	95	115	3	HMI He	80	131.49
Ag	107	115	3	HMI He	22	268.08
Cd	111	115	3	HMI He	3	2598.08
Sn	120	115	3	HMI He	345	10.57
Sb	121	115	3	HMI He	23	140.40
Ba	137	115	3	HMI He	62	114.92
Tl	205	193	3	HMI He	152	13.11
(Pb)	206	193	3	HMI He	202	4.32
(Pb)	207	193	3	HMI He	448	2.26
Pb	208	193	3	HMI He	1035	0.40
Th	232	193	3	HMI He	9317	0.28
U	238	193	3	HMI He	2102	1.21

QC ISTD Table

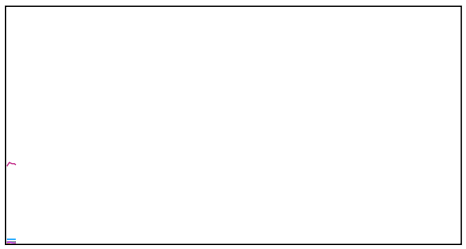
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6261358	4.80	3460228	180.95	60	120	IS Failed
Sc (IS)	45	3	HMI He	863843	26.82	505695	170.82	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3791234	4.78	2187657	173.30	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1057661	28.04	654972	161.48	60	120	IS Failed
In Internal Standard	115	3	HMI He	3913234	25.35	2371544	165.01	60	120	IS Failed
Ir (IS)	193	3	HMI He	8492440	25.47	5024616	169.02	60	120	IS Failed

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/20/2023 2:54:01 PM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_042023.b

[No Gas]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	200000	3249	3236	2.521
2	59	100000	3816	3756	2 921
3	63	100000	69	73	12.536
4	70	500000	247	265	8.526
5	80	1000000	987539	985317	0.411
6	89	100000	5717	5758	1.333
7	115	2000000	6462	6574	2.409
8	118	100000	70	73	18.982
9	137	50000	753	782	4.333
10	140	20000	6653	6675	1.489
11	205	2000000	5248	5290	0.968
12	6	5000000	7180	7162	0.989
13	70/140	1000	3.713 %	3.973 %	8.163
14	156/140	500	0 346 %	0 347 %	18.335

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-50 V
Extract 2	200 0 V	Q1 Exit		Def ect	12 4 V
Omega Bias	100 V	Cel Focus		P ate Bias	35 V
Omega Lens	10 3 V	Cel Entrance	30 V		

Cell Parameters

Use Gas	No	3rd Gas F ow		Axia Acce eration	
He F ow	0.0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0 0 mL/min	OctP Bias	8 0 V	Energy Discrimination	5 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	-3 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Current Signal

Torch H	0 4 mm	Torch V	0 3 mm		

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

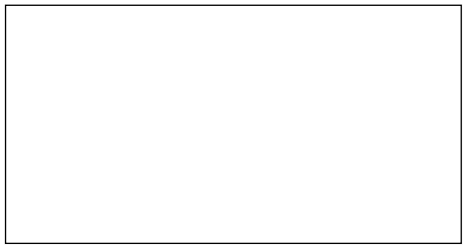
Name	Value	Unit
F/BK Press	2.15E+2	Pa
Ana yzer Press	8 38E 5	Pa
Reflected Power	0	W
Forward Power	1600	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/20/2023 2:54:26 PM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_042023.b

[HMI H2]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	100	73	73	0.000
2	9	200	144	144	0 000
3	59	1000	532	532	0 000
4	63	20	8	8	0.000
5	70	100	123	123	0.000
6	78	20	0	0	0.000
7	89	5000	4467	4467	0.000
8	115	10000	5833	5833	0 000
9	118	100	54	54	0.000
10	137	1000	794	794	0.000
11	140	5000	4494	4494	0.000
12	205	10000	5083	5083	0.000
13	238	10000	6458	6458	0.000
14	70/140	2	2 737 %	2 737 %	0 000
15	156/140	1	0.445 %	0.445 %	0.000

Integration Time [sec] 0 1

Tune Parameters

Plasma Parameters

P asma Mode		Nebulizer Gas	0.64 L/min	Dilution Gas	0.26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1 40 V	Nebulizer Pump	0 10 rps	P asma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance		Cel Exit	60 V
Extract 2	195 0 V	Q1 Exit		Def ect	1 6 V
Omega Bias	90 V	Cel Focus		P ate Bias	60 V
Omega Lens	10.6 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	0 0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	5 0 mL/min	OctP Bias	18.0 V	Energy Discrimination	3 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Current Signal

Torch

Torch H	0 4 mm	Torch V	-0 3 mm		

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

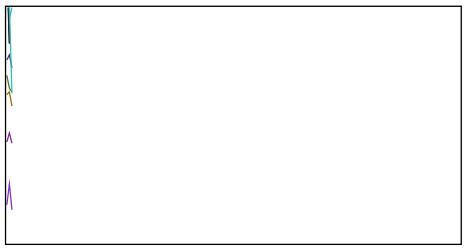
Name	Value	Unit
F/BK Press	2.24E+2	Pa
Ana yzer Press	3.65E 4	Pa
Reflected Power	0	W
Forward Power	1599	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/20/2023 2:54:37 PM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_042023.b

[HMI He]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	53	20	20	20	5.000
2	59	2000	1036	1112	7 291
3	66	50	30	28	24.603
4	70	50	37	60	34 035
5	78	20	1	1	86 603
6	115	2000	1486	1545	3.618
7	118	20	35	26	35 137
8	137	500	211	220	5 335
9	140	5000	2917	3084	4.761
10	205	5000	3202	3351	5.555
11	51/59	1	1.930 %	1.747 %	9.882
12	70/140	2	1.268 %	1.929 %	30 827
13	156/140	1	0.137 %	0.182 %	32 937

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas	---	Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-60 V
Extract 2	200 0 V	Q1 Exit		Def ect	0 8 V
Omega Bias	95 V	Cel Focus		P ate Bias	55 V
Omega Lens	10 7 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	4.3 mL/min	4th Gas F ow		OctP RF	190 V
H2 F ow	0.0 mL/min	OctP Bias	18 0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Torch H	0.4 mm	Torch V	0.3 mm		

Current Signal

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

Name	Value	Unit
F/BK Press	2 17E+2	Pa
Ana yzer Press	2 74E-4	Pa
Reflected Power	0	W
Forward Power	1600	W
Tune/ISTD Va ve		

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 042023.b
Acq. Date-Time	4/20/2023 3:02:15 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

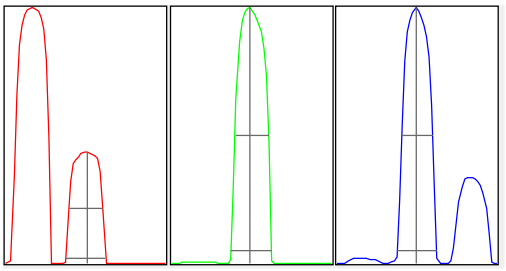
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		1828	18276 80	0.499	5 000	
89		3164	31638 46	0.583	5 000	
205		2690	26895 05	0.443	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	1831	1834	1830	1812	1832
89	3187	3178	3141	3156	3156
205	2695	2696	2670	2687	2699

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	2960.65	7.05	6 90 7 10	
89	5364.28	89.00	88 90 89.10	
205	4850 59	205 00	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.63	0.740	0.900	
89	0.61	0.740	0.900	
205	0.58	0.739	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	10 3 V	Def ect	12 4 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	100 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

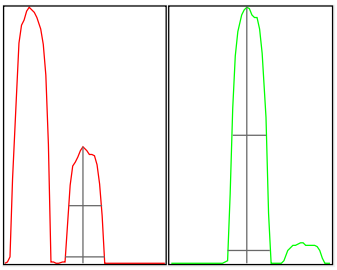
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		50	495 11	2 795	5.000	
9		89	888.54	2.944	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	51	51	48	49	49
9	89	87	93	89	87

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	85 95	7 00	6.90 - 7.10	
9	148 36	8 95	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.61	0.738	0.900	
9	0.62	0.779	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	10 6 V	Def ect	-1 6 V
Extract 2	-195 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	90 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		129	1285.59	1 385	5.000	
25		19	193 60	7 043	5.000	Fai
26		24	239.80	4.328	5 000	
59		644	6442 69	0.967	5 000	
103		1862	18620.22	0 329	5.000	
115		895	8954.35	1 283	5.000	
205		1905	19046.90	0 945	5.000	
206		623	6226 56	0.698	5 000	
207		536	5362 65	0.811	5 000	

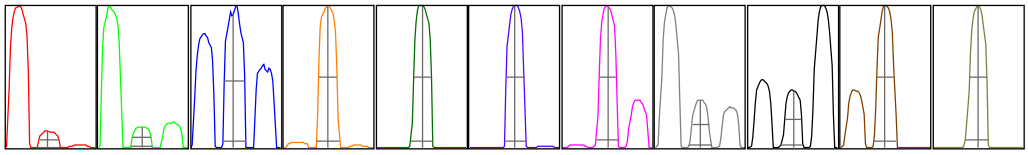
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1330	13298.93	0 375	5.000	
238		2690	26901.91	1 213	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	131	129	127	128	127
25	21	19	19	18	20
26	24	24	25	24	22
59	654	645	642	637	643
103	1867	1870	1860	1859	1855
115	914	894	884	888	896
205	1887	1908	1901	1934	1894
206	623	625	618	629	619
207	529	538	539	540	536
208	1331	1331	1326	1337	1324
238	2649	2713	2725	2700	2664

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	214.72	23.95	23 90 24.10	
25	32.15	25.00	24 90 25.10	
26	37 70	25 95	25.90 - 26 10	
59	1073 57	59 00	58.90 - 59 10	
103	3239.58	103.05	102.90 103.10	
115	1567.52	115.05	114.90 115.10	
205	3389.32	205.05	204.90 205.10	
206	1143 92	206 05	205 90 - 206 10	
207	965 22	207 05	206 90 - 207 10	
208	2403.03	208.00	207.90 208.10	
238	4869.35	238.00	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 739	0 900	
25	0.63	0.743	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.65	0.744	0.900	
59	0.62	0.778	0.900	
103	0 60	0 734	0 900	
115	0 59	0 691	0 900	
205	0.58	0.736	0.900	
206	0.56	0.735	0.900	
207	0.56	0.708	0.900	
208	0 57	0 763	0 900	
238	0 57	0 750	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.7 V	Def ect	0.8 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	190 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 042023.b
Acq. Date-Time	4/20/2023 3:11:29 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

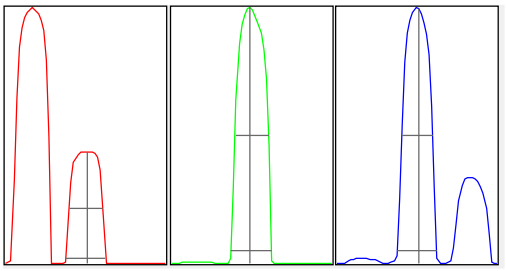
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		1808	18081 20	0.485	5 000	
89		3162	31615 26	0.537	5 000	
205		2660	26600 73	0.571	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	1816	1819	1802	1806	1798
89	3183	3147	3148	3154	3177
205	2679	2660	2661	2665	2637

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	2898.88	7.05	6 90 7 10	
89	5392.04	89.00	88 90 89.10	
205	4766 68	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.63	0.740	0.900	
89	0.61	0.740	0.900	
205	0.58	0.740	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	10 3 V	Def ect	12 4 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	100 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

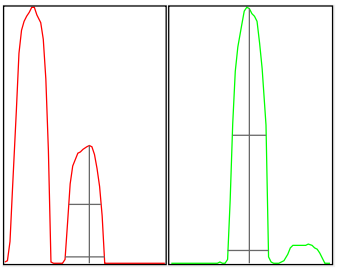
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		52	516 02	3 136	5.000	
9		89	887.84	3.164	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	51	49	54	51	53
9	86	90	92	86	90

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	89 20	7 10	6.90 - 7.10	
9	152 31	9 00	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.61	0.740	0.900	
9	0.61	0.740	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	10 6 V	Def ect	-1 6 V
Extract 2	-195 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	90 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		135	1353.80	3 490	5.000	
25		20	198 10	4 863	5.000	
26		25	250.20	7.594	5 000	Fai
59		639	6393 76	1.594	5 000	
103		1849	18491.34	0 814	5.000	
115		905	9054.89	2 857	5.000	
205		1886	18860.10	0 777	5.000	
206		612	6123 48	1.014	5 000	
207		531	5306 32	1.537	5 000	

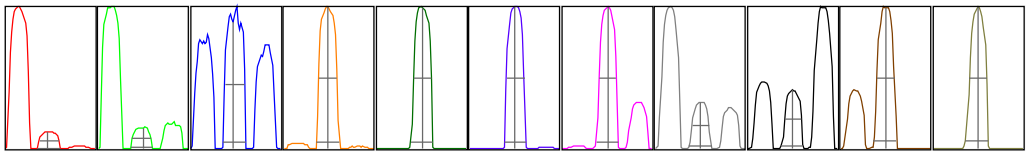
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1316	13156.41	1 339	5.000	
238		2664	26639.53	0 782	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	138	141	134	129	134
25	21	21	19	20	19
26	28	26	23	24	24
59	646	651	637	637	625
103	1849	1866	1860	1828	1843
115	915	946	895	884	886
205	1882	1875	1875	1911	1887
206	608	621	616	607	608
207	523	540	539	525	526
208	1287	1314	1331	1329	1317
238	2631	2670	2687	2671	2661

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	220.52	23.95	23 90 24.10	
25	31.55	25.05	24 90 25.10	
26	37 85	25 95	25.90 - 26 10	
59	1074 42	59 00	58.90 - 59 10	
103	3204.90	103.05	102.90 103.10	
115	1582.79	115.05	114.90 115.10	
205	3391.53	205.05	204.90 205.10	
206	1118 85	206 05	205 90 - 206 10	
207	980 53	207 00	206 90 - 207 10	
208	2363.51	208.05	207.90 208.10	
238	4850.67	238.00	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.65	0.743	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.65	0.742	0.900	
59	0.62	0.777	0.900	
103	0 60	0 733	0 900	
115	0 59	0 692	0 900	
205	0.57	0.736	0.900	
206	0.56	0.736	0.900	
207	0.56	0.706	0.900	
208	0 57	0 763	0 900	
238	0 57	0 751	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.7 V	Def ect	0.8 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	190 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 042023.b
Acq. Date-Time	4/20/2023 3:24:07 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

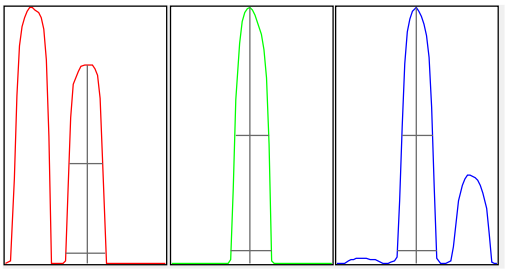
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		3345	33449 29	0.587	5 000	
89		6312	63120 49	0.520	5 000	
205		5231	52309 70	0.714	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	3356	3357	3346	3311	3354
89	6351	6326	6277	6279	6327
205	5183	5207	5237	5249	5279

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	5397.26	7.05	6 90 7 10	
89	10746.24	89.00	88 90 89.10	
205	9448 88	205 00	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.63	0.740	0.900	
89	0.61	0.739	0.900	
205	0.57	0.739	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	10 3 V	Def ect	12 4 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	100 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

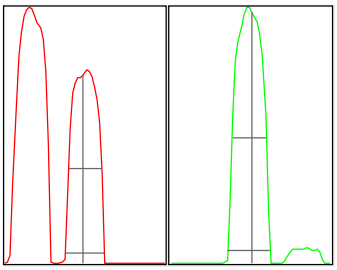
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		89	888 04	2 697	5.000	
9		175	1754 07	0.951	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	93	87	87	88	89
9	176	177	174	174	177

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	145 91	7 00	6.90 - 7.10	
9	290 83	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.740	0.900	
9	0.62	0.779	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	10 6 V	Def ect	-1 6 V
Extract 2	-195 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	90 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		248	2475.33	1 685	5.000	
25		37	368 71	4 617	5.000	
26		46	457.91	3.586	5 000	
59		1271	12711 45	0.838	5 000	
103		3677	36765.51	0 441	5.000	
115		1784	17839.64	1 075	5.000	
205		3673	36731.54	0 843	5.000	
206		1211	12106 16	0.844	5 000	
207		1042	10415 87	0.628	5 000	

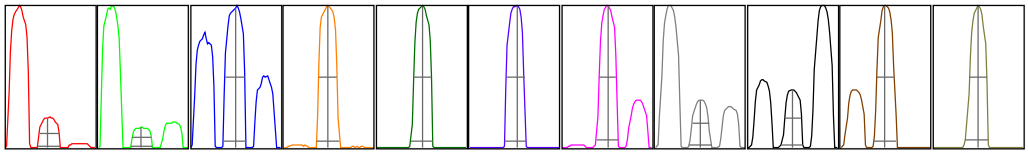
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		2574	25742.43	0 565	5.000	
238		5215	52147.79	0 607	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	253	247	250	243	245
25	39	38	36	35	37
26	49	45	45	45	45
59	1286	1275	1267	1272	1257
103	3671	3683	3675	3699	3655
115	1807	1761	1779	1772	1800
205	3632	3700	3697	3648	3689
206	1217	1218	1200	1218	1199
207	1039	1038	1053	1041	1036
208	2564	2570	2592	2558	2587
238	5165	5228	5246	5203	5232

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	402.31	23.95	23 90 24.10	
25	59.70	24.95	24 90 25.10	
26	74 40	26 00	25.90 - 26 10	
59	2115 31	59 00	58.90 - 59 10	
103	6456.17	103.05	102.90 103.10	
115	3121.28	115.10	114.90 115.10	
205	6630.90	205.05	204.90 205.10	
206	2233 52	206 05	205 90 - 206 10	
207	1915 20	207 00	206 90 - 207 10	
208	4654.78	208.00	207.90 208.10	
238	9498.78	238.00	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.65	0.743	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.63	0.740	0.900	
59	0.62	0.778	0.900	
103	0 59	0 733	0 900	
115	0 59	0 691	0 900	
205	0.57	0.736	0.900	
206	0.56	0.736	0.900	
207	0.56	0.696	0.900	
208	0 57	0 762	0 900	
238	0 57	0 749	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.7 V	Def ect	0.8 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	190 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
6		0.094386	☑
9		0.104094	☑
23		0.106090	☑
24		0.110928	☑
27		0.115559	☑
39		0.121068	☑
45		0.122224	☑
48		0.123530	☑
51		0.126648	☑
52		0.127798	☑
55		0.130696	☑
59		0.135208	☑
60		0.137362	☑
63		0.140621	☑
66		0.140114	☑
72		0.137498	☑
75		0.136894	☑
88		0.140059	☑
98		0.137266	☑
102		0.141600	☑
106		0.145732	☑
114		0.150339	☑
115		0.150262	☑

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
118		0.146921	☑
121		0.148259	☑
138		0.150497	☑
175		0.157853	☑
193		0.159093	☑
205		0.164148	☑
208		0.163632	☑
209		0.163314	☑
232		0.156360	☑
238		0.162288	☑

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	001SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:34:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	002SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:36:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	003SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:38:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	004SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:40:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	005SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:41:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	006SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:43:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	007SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:45:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	008SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:47:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	009SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:49:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	010SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:51:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	011SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:52:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	012SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:54:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	013SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:56:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	014SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T15:58:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	015SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:00:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	016SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:01:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	017SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:03:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	018SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:05:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	020SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:13:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	021SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:15:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	022SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:17:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	023SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:19:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	024SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:20:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:22:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	026SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:25:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	027SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:27:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	028SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:29:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7695087
Data File Name	029CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Method	
Acq Date Time	2023-04-20T16:31:03-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	18187	0.01
Mg	24	45	3	HMI He	197	5.38
Al	27	45	3	HMI He	87	38.39
K	39	45	3	HMI He	22320	0.03
Ca	40	45	2	HMI H2	10581	0.02
V	51	72	3	HMI He	568	1.49
Cr	52	72	3	HMI He	1849	0.41
Mn	55	72	3	HMI He	167	10.55
Fe	56	72	2	HMI H2	27886	0.03
Co	59	72	3	HMI He	42	129.93
Ni	60	72	3	HMI He	388	4.71
Cu	63	72	3	HMI He	380	1.39
Zn	66	72	3	HMI He	198	11.40
As	75	72	3	HMI He	30	111.15
Se	78	72	2	HMI H2	1	6495.19
(Se)	78	72	3	HMI He	22	123.10
Sr	88	72	3	HMI He	15	222.20
Mo	95	115	3	HMI He	30	111.15
Ag	107	115	3	HMI He	3	5196.15
Cd	111	115	3	HMI He	17	104.05
Sn	120	115	3	HMI He	490	1.82
Sb	121	115	3	HMI He	50	52.95
Ba	137	115	3	HMI He	43	93.54
Tl	205	193	3	HMI He	1248	0.41
(Pb)	206	193	3	HMI He	263	1.67
(Pb)	207	193	3	HMI He	338	1.40
Pb	208	193	3	HMI He	1079	0.37
Th	232	193	3	HMI He	3319	0.06
U	238	193	3	HMI He	1229	0.82

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	2887817	1.20
Sc (IS)	45	3	HMI He	423271	0.56
Ge Internal standard	72	2	HMI H2	1759716	1.14
Ge Internal standard	72	3	HMI He	532081	0.80
In Internal Standard	115	3	HMI He	2003241	1.98
Ir (IS)	193	3	HMI He	4481285	2.07

Calibration Standard Report

Sample Table

Sample Name	ic-7695091
Data File Name	030CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
method	
Acq Date Time	2023-04-20T16:32:51-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	029CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	7644410	0.00
Mg	24	45	3	HMI He	832459	0.00
Al	27	45	3	HMI He	190	5.53
K	39	45	3	HMI He	685842	0.00
V	51	72	3	HMI He	581	2.52
Cr	52	72	3	HMI He	2106	0.39
Mn	55	72	3	HMI He	193	3.37
Co	59	72	3	HMI He	57	17.98
Ni	60	72	3	HMI He	445	2.56
Cu	63	72	3	HMI He	376	2.01
Zn	66	72	3	HMI He	282	4.05
As	75	72	3	HMI He	57	64.85
Se	78	72	2	HMI H2	3	1623.80
(Se)	78	72	3	HMI He	25	160.09
Sr	88	72	3	HMI He	178	5.53
Mo	95	115	3	HMI He	50	124.96
Ag	107	115	3	HMI He	33	158.15
Cd	111	115	3	HMI He	12	211.78
Sn	120	115	3	HMI He	595	2.50
Sb	121	115	3	HMI He	50	103.99
Ba	137	115	3	HMI He	107	26.50
Tl	205	193	3	HMI He	976	0.68
(Pb)	206	193	3	HMI He	262	5.48
(Pb)	207	193	3	HMI He	455	3.27
Pb	208	193	3	HMI He	1318	0.25
Th	232	193	3	HMI He	3502	0.17
U	238	193	3	HMI He	1163	0.17

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2910333	1.17	2887817	100.78	60	120	
Sc (IS)	45	3	HMI He	427806	0.75	423271	101.07	60	120	
Ge Internal standard	72	2	HMI H2	1683450	1.50	1759716	95.67	60	120	
Ge Internal standard	72	3	HMI He	516089	1.63	532081	96.99	60	120	
In Internal Standard	115	3	HMI He	2028400	0.86	2003241	101.26	60	120	
Ir (IS)	193	3	HMI He	4491927	0.96	4481285	100.24	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7695089
Data File Name	031CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
method	
Acq Date Time	2023-04-20T16:34:37-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	029CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3165	0.05
Na	23	45	3	HMI He	176479	0.00
Mg	24	45	3	HMI He	83827	0.00
Al	27	45	3	HMI He	33316	0.01
K	39	45	3	HMI He	90870	0.00
V	51	72	3	HMI He	45341	0.00
Cr	52	72	3	HMI He	58309	0.00
Mn	55	72	3	HMI He	30692	0.01
Co	59	72	3	HMI He	95368	0.00
Ni	60	72	3	HMI He	27650	0.00
Cu	63	72	3	HMI He	73653	0.00
Zn	66	72	3	HMI He	12518	0.01
As	75	72	3	HMI He	8710	0.00
Se	78	72	2	HMI H2	4471	0.02
(Se)	78	72	3	HMI He	546	1.46
Sr	88	72	3	HMI He	84167	0.00
Mo	95	115	3	HMI He	37181	0.00
Ag	107	115	3	HMI He	127420	0.00
Cd	111	115	3	HMI He	18734	0.01
Sn	120	115	3	HMI He	60078	0.00
Sb	121	115	3	HMI He	60078	0.00
Ba	137	115	3	HMI He	19523	0.01
Tl	205	193	3	HMI He	305339	0.00
(Pb)	206	193	3	HMI He	103279	0.00
(Pb)	207	193	3	HMI He	90099	0.00
Pb	208	193	3	HMI He	414354	0.00
Th	232	193	3	HMI He	408022	0.00
U	238	193	3	HMI He	434744	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2942695	0.89	2887817	101.90	60	120	
Sc (IS)	45	3	HMI He	430043	0.24	423271	101.60	60	120	
Ge Internal standard	72	2	HMI H2	1833155	2.36	1759716	104.17	60	120	
Ge Internal standard	72	3	HMI He	547352	1.56	532081	102.87	60	120	
In Internal Standard	115	3	HMI He	2064891	2.38	2003241	103.08	60	120	
Ir (IS)	193	3	HMI He	4559771	3.09	4481285	101.75	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7695095
Data File Name	032_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:36:25-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	029CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.378	ppb	9.050	1284	40	100.9	90	110	
Na	23	3	45	5023.668	ppb	1.037	400734	12800	39.2	90	110	>+\-10%
Mg	24	3	45	4690.194	ppb	0.590	195015	4800	97.7	90	110	
Al	27	3	45	772.921	ppb	2.840	12839	800	96.6	90	110	
K	39	3	45	4820.044	ppb	1.083	182077	4800	100.4	90	110	
Ca	40	2	45	4911.921	ppb	2.023	2051094	4800	102.3	90	110	
V	51	3	72	40.060	ppb	0.950	18243	40	100.2	90	110	
Cr	52	3	72	39.783	ppb	2.097	23984	40	99.5	90	110	
Mn	55	3	72	39.973	ppb	1.646	12188	40	99.9	90	110	
Fe	56	2	72	799.842	ppb	1.920	949608	800	100.0	90	110	
Co	59	3	72	39.438	ppb	1.797	37083	40	98.6	90	110	
Ni	60	3	72	37.796	ppb	3.767	10539	40	94.5	90	110	
Cu	63	3	72	40.034	ppb	2.612	29280	40	100.1	90	110	
Zn	66	3	72	76.989	ppb	1.991	9542	80	96.2	90	110	
As	75	3	72	38.691	ppb	3.080	3339	40	96.7	90	110	
Se	78	2	72	41.582	ppb	3.793	1830	40	104.0	90	110	
Sr	88	3	72	120.391	ppb	1.465	49930	120	100.3	90	110	
Mo	95	3	115	40.269	ppb	0.956	15228	40	100.7	90	110	
Ag	107	3	115	78.015	ppb	0.912	100990	80	97.5	90	110	
Cd	111	3	115	38.849	ppb	0.607	7402	40	97.1	90	110	
Sn	120	3	115	37.715	ppb	2.413	23339	40	94.3	90	110	
Sb	121	3	115	38.890	ppb	0.243	23768	40	97.2	90	110	
Ba	137	3	115	37.348	ppb	1.776	7435	40	93.4	90	110	
Tl	205	3	193	39.923	ppb	1.200	121272	40	99.8	90	110	
(Pb)	206	3	193	39.945	ppb	1.150	40949	40	99.9	90	110	
(Pb)	207	3	193	39.435	ppb	1.831	35330	40	98.6	90	110	
Pb	208	3	193	39.691	ppb	1.869	163265	40	99.2	90	110	
Th	232	3	193	83.179	ppb	0.722	336149	80	104.0	90	110	
U	238	3	193	43.345	ppb	1.766	187006	40	108.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2932415	2.01	2887817	101.54	60	120	
Sc (IS)	45	3	HMI He	427033	0.34	423271	100.89	60	120	
Ge Internal standard	72	2	HMI H2	1802997	0.83	1759716	102.46	60	120	
Ge Internal standard	72	3	HMI He	539248	1.04	532081	101.35	60	120	
In Internal Standard	115	3	HMI He	2096869	0.32	2003241	104.67	60	120	
Ir (IS)	193	3	HMI He	4506210	1.01	4481285	100.56	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7695087
Data File Name	033_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:42:15-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	029CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.159	ppb	113.9	8	0.5	
Na	23	3	1.020	ppb	457.4	18253	25	
Mg	24	3	-0.648	ppb	-131.9	170	25	
Al	27	3	-0.188	ppb	-780.4	83	15	
K	39	3	13.498	ppb	280.3	22745	50	
V	51	3	-0.053	ppb	-182.9	543	1	
Cr	52	3	0.534	ppb	78.4	2137	1	
Mn	55	3	0.013	ppb	372.0	170	0.5	
Co	59	3	0.002	ppb	439.3	43	0.5	
Ni	60	3	0.137	ppb	186.2	423	1	
Cu	63	3	-0.088	ppb	-74.2	317	1	
Zn	66	3	0.325	ppb	95.5	237	5	
As	75	3	0.100	ppb	209.3	38	1	
Se	78	2	0.077	ppb	35.3	5	1	
Sr	88	3	0.037	ppb	56.0	30	0.5	
Mo	95	3	-0.005	ppb	-139.2	28	0.5	
Ag	107	3	0.008	ppb	28.5	13	1	
Cd	111	3	0.026	ppb	260.5	22	0.5	
Sn	120	3	0.111	ppb	152.1	561	1	
Sb	121	3	-0.026	ppb	-116.8	35	0.6	
Ba	137	3	-0.021	ppb	-250.4	40	0.5	
Tl	205	3	-0.133	ppb	-14.3	861	0.1	
(Pb)	206	3	-0.035	ppb	-78.3	230	1	
(Pb)	207	3	0.055	ppb	28.9	391	1	
Pb	208	3	0.020	ppb	149.4	1173	0.5	
Th	232	3	3.783	ppb	11.2	18580	1	>RL
U	238	3	-0.019	ppb	-75.7	1166	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2874874	1.88	2887817	99.55	60	120	
Sc (IS)	45	3	HMI He	423004	1.22	423271	99.94	60	120	
Ge Internal standard	72	2	HMI H2	1763765	1.34	1759716	100.23	60	120	
Ge Internal standard	72	3	HMI He	530455	0.80	532081	99.69	60	120	
In Internal Standard	115	3	HMI He	2028384	0.73	2003241	101.26	60	120	
Ir (IS)	193	3	HMI He	4534387	1.10	4481285	101.18	60	120	

CRI Report

Sample Table

Sample Name	cri-7695100
Data File Name	034LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:44:02-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	029CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.992	ppb	31.869	35	1	99.2	80	120	
Na	23	3	45	295.911	ppb	2.035	40806	300	98.6	80	120	
Mg	24	3	45	45.668	ppb	4.006	2092	50	91.3	80	120	
Al	27	3	45	49.607	ppb	8.499	904	50	99.2	80	120	
K	39	3	45	121.708	ppb	19.633	26502	120	101.4	80	120	
Ca	40	2	45	201.016	ppb	2.898	92966	200	100.5	80	120	
V	51	3	72	4.830	ppb	3.931	2664	5	96.6	80	120	
Cr	52	3	72	2.112	ppb	6.286	3002	2	105.6	80	120	
Mn	55	3	72	0.858	ppb	28.173	420	1	85.8	80	120	
Fe	56	2	72	47.203	ppb	5.564	82443	50	94.4	80	120	
Co	59	3	72	0.866	ppb	3.909	843	1	86.6	80	120	
Ni	60	3	72	2.016	ppb	14.898	921	2	100.8	80	120	
Cu	63	3	72	1.858	ppb	7.439	1699	2	92.9	80	120	
Zn	66	3	72	9.197	ppb	6.869	1296	10	92.0	80	120	
As	75	3	72	5.632	ppb	20.594	505	5	112.6	80	120	
Se	78	2	72	4.726	ppb	3.234	208	5	94.5	80	120	
Sr	88	3	72	4.895	ppb	4.105	2014	5	97.9	80	120	
Mo	95	3	115	1.817	ppb	13.805	700	2	90.9	80	120	
Ag	107	3	115	0.925	ppb	8.639	1169	1	92.5	80	120	
Cd	111	3	115	0.905	ppb	22.620	185	1	90.5	80	120	
Sn	120	3	115	8.884	ppb	1.654	5740	10	88.8	80	120	
Sb	121	3	115	1.936	ppb	8.213	1201	2	96.8	80	120	
Ba	137	3	115	0.927	ppb	10.787	223	1	92.7	80	120	
Tl	205	3	193	0.776	ppb	3.152	3617	1	77.6	80	120	>+/-30%
(Pb)	206	3	193	0.808	ppb	7.061	1096	1	80.8	80	120	
(Pb)	207	3	193	1.047	ppb	6.335	1279	1	104.7	80	120	
Pb	208	3	193	0.922	ppb	1.657	4890	1	92.2	80	120	
Th	232	3	193	3.568	ppb	14.005	17744	1	356.8	80	120	>+/-30%
U	238	3	193	0.955	ppb	2.934	5374	1	95.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2892651	1.37	2887817	100.17	60	120	
Sc (IS)	45	3	HMI He	426342	0.60	423271	100.73	60	120	
Ge Internal standard	72	2	HMI H2	1792425	0.72	1759716	101.86	60	120	
Ge Internal standard	72	3	HMI He	531001	1.13	532081	99.80	60	120	
In Internal Standard	115	3	HMI He	2043669	1.28	2003241	102.02	60	120	
Ir (IS)	193	3	HMI He	4542218	1.19	4481285	101.36	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	035SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:46:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	029CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	0.00	0	2000	
Na	23	3	45	-41.115	ppb	-41.115	-17.64	16530	400000	
Mg	24	3	45	0.031	ppb	0.031	1997.52	217	400000	
Al	27	3	45	0.090	ppb	0.090	1844.58	97	400000	
K	39	3	45	-37.922	ppb	-37.922	-40.28	23096	400000	
Ca	40	2	45	-13.629	ppb	-13.629	-3.91	5650	400000	
V	51	3	72	-0.947	ppb	-0.947	-3.70	168	2000	
Cr	52	3	72	-0.628	ppb	-0.628	-12.48	1628	5000	
Mn	55	3	72	-0.016	ppb	-0.016	-939.53	175	10000	
Fe	56	2	72	-0.747	ppb	-0.747	-289.79	30243	10000	
Co	59	3	72	-0.005	ppb	-0.005	-163.32	40	2000	
Ni	60	3	72	0.127	ppb	0.127	41.02	456	5000	
Cu	63	3	72	-0.200	ppb	-0.200	-20.58	257	5000	
Zn	66	3	72	-1.025	ppb	-1.025	-6.05	82	5000	
As	75	3	72	-0.228	ppb	-0.228	-36.14	12	2000	
Se	78	2	72	-0.003	ppb	-0.003	-786.55	1	2000	
Sr	88	3	72	0.009	ppb	0.009	227.46	20	4000	
Mo	95	3	115	-0.058	ppb	-0.058	-37.28	10	2000	
Ag	107	3	115	0.006	ppb	0.006	34.91	12	100	
Cd	111	3	115	-0.009	ppb	-0.009	-446.06	17	2000	
Sn	120	3	115	-0.591	ppb	-0.591	-5.78	165	2000	
Sb	121	3	115	-0.045	ppb	-0.045	-10.36	27	1000	
Ba	137	3	115	-0.143	ppb	-0.143	-19.65	18	5000	
Tl	205	3	193	-0.264	ppb	-0.264	-7.39	500	2000	
(Pb)	206	3	193	-0.078	ppb	-0.078	-26.38	200	100	
(Pb)	207	3	193	-0.045	ppb	-0.045	-91.21	325	100	
Pb	208	3	193	-0.063	ppb	-0.063	-23.17	893	5000	
Th	232	3	193	0.009	ppb	0.009	291.29	3642	2000	
U	238	3	193	0.018	ppb	0.018	137.95	1421	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3261225	1.09	2887817	112.93	60	120	
Sc (IS)	45	3	HMI He	463838	1.15	423271	109.58	60	120	
Ge Internal standard	72	2	HMI H2	1967292	2.35	1759716	111.80	60	120	
Ge Internal standard	72	3	HMI He	575287	0.70	532081	108.12	60	120	
In Internal Standard	115	3	HMI He	2218386	0.77	2003241	110.74	60	120	
Ir (IS)	193	3	HMI He	4867015	0.90	4481285	108.61	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	036SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:48:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	029CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.059	ppb	-0.059	-145.61	2	2000	
Na	23	3	45	-37.896	ppb	-37.896	-18.28	16713	400000	
Mg	24	3	45	-0.318	ppb	-0.318	-288.57	200	400000	
Al	27	3	45	-3.610	ppb	-3.610	-27.28	30	400000	
K	39	3	45	-45.749	ppb	-45.749	-58.12	22691	400000	
Ca	40	2	45	-13.899	ppb	-13.899	-1.64	5453	400000	
V	51	3	72	-0.936	ppb	-0.936	-10.34	172	2000	
Cr	52	3	72	-0.453	ppb	-0.453	-20.10	1713	5000	
Mn	55	3	72	-0.079	ppb	-0.079	-152.68	153	10000	
Fe	56	2	72	-2.274	ppb	-2.274	-68.95	28036	10000	
Co	59	3	72	-0.005	ppb	-0.005	-300.69	40	2000	
Ni	60	3	72	-0.061	ppb	-0.061	-178.40	398	5000	
Cu	63	3	72	-0.188	ppb	-0.188	-11.52	263	5000	
Zn	66	3	72	-0.913	ppb	-0.913	-23.11	95	5000	
As	75	3	72	-0.134	ppb	-0.134	-70.96	20	2000	
Se	78	2	72	0.025	ppb	0.025	386.56	3	2000	
Sr	88	3	72	0.013	ppb	0.013	182.87	22	4000	
Mo	95	3	115	-0.026	ppb	-0.026	-53.85	23	2000	
Ag	107	3	115	0.001	ppb	0.001	406.63	5	100	
Cd	111	3	115	-0.075	ppb	-0.075	-18.88	3	2000	
Sn	120	3	115	-0.610	ppb	-0.610	-3.36	155	2000	
Sb	121	3	115	-0.060	ppb	-0.060	-26.23	17	1000	
Ba	137	3	115	-0.121	ppb	-0.121	-39.83	23	5000	
Tl	205	3	193	-0.294	ppb	-0.294	-2.05	401	2000	
(Pb)	206	3	193	-0.104	ppb	-0.104	-16.14	172	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-54.42	310	100	
Pb	208	3	193	-0.078	ppb	-0.078	-28.45	828	5000	
Th	232	3	193	-0.016	ppb	-0.016	-84.87	3539	2000	
U	238	3	193	-0.002	ppb	-0.002	-474.51	1329	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3217998	1.27	2887817	111.43	60	120	
Sc (IS)	45	3	HMI He	461516	1.19	423271	109.04	60	120	
Ge Internal standard	72	2	HMI H2	1948593	1.59	1759716	110.73	60	120	
Ge Internal standard	72	3	HMI He	568903	1.40	532081	106.92	60	120	
In Internal Standard	115	3	HMI He	2253214	1.21	2003241	112.48	60	120	
Ir (IS)	193	3	HMI He	4872336	2.14	4481285	108.73	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7695087
Data File Name	037CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Method	
Acq Date Time	2023-04-20T16:50:23-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	2598.08
Na	23	45	3	HMI He	18320	0.02
Mg	24	45	3	HMI He	210	2.27
Al	27	45	3	HMI He	77	19.63
K	39	45	3	HMI He	22812	0.01
Ca	40	45	2	HMI H2	10354	0.01
V	51	72	3	HMI He	556	1.86
Cr	52	72	3	HMI He	1863	0.58
Mn	55	72	3	HMI He	153	5.36
Fe	56	72	2	HMI H2	25703	0.02
Co	59	72	3	HMI He	45	42.78
Ni	60	72	3	HMI He	363	5.05
Cu	63	72	3	HMI He	318	2.06
Zn	66	72	3	HMI He	208	5.45
As	75	72	3	HMI He	33	51.95
Se	78	72	2	HMI H2	3	1623.80
(Se)	78	72	3	HMI He	30	200.42
Sr	88	72	3	HMI He	25	80.06
Mo	95	115	3	HMI He	28	190.39
Ag	107	115	3	HMI He	8	1100.07
Cd	111	115	3	HMI He	12	211.78
Sn	120	115	3	HMI He	486	0.65
Sb	121	115	3	HMI He	45	65.34
Ba	137	115	3	HMI He	60	36.76
Tl	205	193	3	HMI He	748	1.61
(Pb)	206	193	3	HMI He	198	5.30
(Pb)	207	193	3	HMI He	307	5.83
Pb	208	193	3	HMI He	1011	0.76
Th	232	193	3	HMI He	5227	0.11
U	238	193	3	HMI He	1173	1.04

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	2925299	2.26
Sc (IS)	45	3	HMI He	417057	1.01
Ge Internal standard	72	2	HMI H2	1785948	0.16
Ge Internal standard	72	3	HMI He	524949	0.53
In Internal Standard	115	3	HMI He	1995627	0.56
Ir (IS)	193	3	HMI He	4490230	0.90

Calibration Standard Report

Sample Table

Sample Name	ic-7695091
Data File Name	038CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
method	
Acq Date Time	2023-04-20T16:52:09-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	037CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	2598.08
Na	23	45	3	HMI He	7664531	0.00
Mg	24	45	3	HMI He	825182	0.00
Al	27	45	3	HMI He	123	16.53
K	39	45	3	HMI He	672931	0.00
V	51	72	3	HMI He	598	0.66
Cr	52	72	3	HMI He	1976	0.34
Mn	55	72	3	HMI He	178	7.43
Co	59	72	3	HMI He	40	156.34
Ni	60	72	3	HMI He	481	2.38
Cu	63	72	3	HMI He	332	0.69
Zn	66	72	3	HMI He	253	4.00
As	75	72	3	HMI He	52	70.93
Se	78	72	2	HMI H2	1	6495.19
(Se)	78	72	3	HMI He	22	61.55
Sr	88	72	3	HMI He	188	13.70
Mo	95	115	3	HMI He	38	70.87
Ag	107	115	3	HMI He	33	103.98
Cd	111	115	3	HMI He	18	374.49
Sn	120	115	3	HMI He	588	1.37
Sb	121	115	3	HMI He	37	93.64
Ba	137	115	3	HMI He	140	6.75
Tl	205	193	3	HMI He	588	0.68
(Pb)	206	193	3	HMI He	268	4.63
(Pb)	207	193	3	HMI He	368	6.00
Pb	208	193	3	HMI He	1224	0.20
Th	232	193	3	HMI He	4875	0.26
U	238	193	3	HMI He	1293	0.79

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2923560	0.85	2925299	99.94	60	120	
Sc (IS)	45	3	HMI He	423411	1.10	417057	101.52	60	120	
Ge Internal standard	72	2	HMI H2	1681113	1.76	1785948	94.13	60	120	
Ge Internal standard	72	3	HMI He	508120	1.02	524949	96.79	60	120	
In Internal Standard	115	3	HMI He	2052759	1.84	1995627	102.86	60	120	
Ir (IS)	193	3	HMI He	4487613	1.06	4490230	99.94	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7695089
Data File Name	039CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
method	
Acq Date Time	2023-04-20T16:53:57-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	037CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3275	0.02
Na	23	45	3	HMI He	175503	0.00
Mg	24	45	3	HMI He	83797	0.00
Al	27	45	3	HMI He	33022	0.00
K	39	45	3	HMI He	90437	0.00
V	51	72	3	HMI He	45827	0.00
Cr	52	72	3	HMI He	58199	0.00
Mn	55	72	3	HMI He	30989	0.00
Co	59	72	3	HMI He	95140	0.00
Ni	60	72	3	HMI He	26724	0.00
Cu	63	72	3	HMI He	73303	0.00
Zn	66	72	3	HMI He	12424	0.00
As	75	72	3	HMI He	8733	0.03
Se	78	72	2	HMI H2	4391	0.03
(Se)	78	72	3	HMI He	535	1.26
Sr	88	72	3	HMI He	84192	0.00
Mo	95	115	3	HMI He	37263	0.01
Ag	107	115	3	HMI He	128095	0.00
Cd	111	115	3	HMI He	18896	0.01
Sn	120	115	3	HMI He	60003	0.00
Sb	121	115	3	HMI He	59668	0.00
Ba	137	115	3	HMI He	19483	0.01
Tl	205	193	3	HMI He	301347	0.00
(Pb)	206	193	3	HMI He	101888	0.00
(Pb)	207	193	3	HMI He	89302	0.00
Pb	208	193	3	HMI He	409383	0.00
Th	232	193	3	HMI He	406658	0.00
U	238	193	3	HMI He	431778	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2945045	1.47	2925299	100.68	60	120	
Sc (IS)	45	3	HMI He	430347	0.51	417057	103.19	60	120	
Ge Internal standard	72	2	HMI H2	1827686	1.81	1785948	102.34	60	120	
Ge Internal standard	72	3	HMI He	543450	1.31	524949	103.52	60	120	
In Internal Standard	115	3	HMI He	2029473	0.76	1995627	101.70	60	120	
Ir (IS)	193	3	HMI He	4603663	1.08	4490230	102.53	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7695095
Data File Name	040_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:55:45-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	037CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.513	ppb	5.399	1289	40	98.8	90	110	
Na	23	3	45	4948.292	ppb	0.138	396329	12800	38.7	90	110	>+\-10%
Mg	24	3	45	4724.447	ppb	0.864	194784	4800	98.4	90	110	
Al	27	3	45	783.550	ppb	1.885	12755	800	97.9	90	110	
K	39	3	45	4810.033	ppb	1.177	179158	4800	100.2	90	110	
Ca	40	2	45	5106.391	ppb	2.083	2049942	4800	106.4	90	110	
V	51	3	72	39.189	ppb	1.221	17772	40	98.0	90	110	
Cr	52	3	72	40.384	ppb	1.509	23932	40	101.0	90	110	
Mn	55	3	72	40.286	ppb	3.593	12211	40	100.7	90	110	
Fe	56	2	72	826.129	ppb	2.854	967661	800	103.3	90	110	
Co	59	3	72	39.238	ppb	1.398	36266	40	98.1	90	110	
Ni	60	3	72	40.489	ppb	4.346	10720	40	101.2	90	110	
Cu	63	3	72	40.409	ppb	1.143	28943	40	101.0	90	110	
Zn	66	3	72	79.674	ppb	4.180	9652	80	99.6	90	110	
As	75	3	72	38.004	ppb	4.901	3242	40	95.0	90	110	
Se	78	2	72	39.328	ppb	0.908	1692	40	98.3	90	110	
Sr	88	3	72	119.025	ppb	1.212	48647	120	99.2	90	110	
Mo	95	3	115	39.591	ppb	3.740	14779	40	99.0	90	110	
Ag	107	3	115	77.759	ppb	3.538	99669	80	97.2	90	110	
Cd	111	3	115	39.358	ppb	3.501	7450	40	98.4	90	110	
Sn	120	3	115	37.131	ppb	2.085	22611	40	92.8	90	110	
Sb	121	3	115	39.042	ppb	3.059	23340	40	97.6	90	110	
Ba	137	3	115	39.017	ppb	5.277	7642	40	97.5	90	110	
Tl	205	3	193	40.356	ppb	0.946	119074	40	100.9	90	110	
(Pb)	206	3	193	39.832	ppb	1.029	39711	40	99.6	90	110	
(Pb)	207	3	193	40.519	ppb	0.644	35482	40	101.3	90	110	
Pb	208	3	193	40.339	ppb	0.937	161704	40	100.8	90	110	
Th	232	3	193	82.889	ppb	0.853	329720	80	103.6	90	110	
U	238	3	193	43.740	ppb	1.641	184895	40	109.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2889623	1.39	2925299	98.78	60	120	
Sc (IS)	45	3	HMI He	422757	0.41	417057	101.37	60	120	
Ge Internal standard	72	2	HMI H2	1788438	1.35	1785948	100.14	60	120	
Ge Internal standard	72	3	HMI He	527468	0.28	524949	100.48	60	120	
In Internal Standard	115	3	HMI He	2032112	3.24	1995627	101.83	60	120	
Ir (IS)	193	3	HMI He	4490883	0.62	4490230	100.01	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7695087
Data File Name	041_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:57:31-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	037CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	-0.052	ppb	-165.0	2	0.5	
Na	23	3	0.656	ppb	1602.9	18537	25	
Mg	24	3	1.090	ppb	44.5	257	25	
Al	27	3	0.576	ppb	218.3	87	15	
K	39	3	-1.909	ppb	-1043.0	22962	50	
V	51	3	0.224	ppb	36.5	663	1	
Cr	52	3	-0.040	ppb	-474.7	1864	1	
Mn	55	3	0.109	ppb	121.8	188	0.5	
Co	59	3	-0.004	ppb	-428.7	42	0.5	
Ni	60	3	0.202	ppb	106.4	420	1	
Cu	63	3	0.032	ppb	388.9	345	1	
Zn	66	3	-0.162	ppb	-45.7	192	5	
As	75	3	0.014	ppb	691.6	35	1	
Se	78	2	-0.016	ppb	-519.8	2	1	
Sr	88	3	-0.017	ppb	-111.0	18	0.5	
Mo	95	3	0.026	ppb	123.0	38	0.5	
Ag	107	3	0.017	ppb	63.4	30	1	
Cd	111	3	-0.001	ppb	-2184.5	12	0.5	
Sn	120	3	0.161	ppb	109.4	590	1	
Sb	121	3	0.021	ppb	160.3	58	0.6	
Ba	137	3	-0.076	ppb	-179.7	47	0.5	
Tl	205	3	0.004	ppb	585.6	765	0.1	
(Pb)	206	3	0.032	ppb	57.1	232	1	
(Pb)	207	3	0.056	ppb	41.0	356	1	
Pb	208	3	0.015	ppb	138.1	1074	0.5	
Th	232	3	4.120	ppb	11.9	21443	1	>RL
U	238	3	0.042	ppb	17.5	1358	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2892502	2.10	2925299	98.88	60	120	
Sc (IS)	45	3	HMI He	420928	0.77	417057	100.93	60	120	
Ge Internal standard	72	2	HMI H2	1782250	0.45	1785948	99.79	60	120	
Ge Internal standard	72	3	HMI He	531595	0.87	524949	101.27	60	120	
In Internal Standard	115	3	HMI He	2029384	2.42	1995627	101.69	60	120	
Ir (IS)	193	3	HMI He	4511088	0.93	4490230	100.46	60	120	

CRI Report

Sample Table

Sample Name	cri-7695100
Data File Name	042LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T16:59:45-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	037CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.558	ppb	16.409	22	1	55.8	80	120	>+/-30%
Na	23	3	45	295.210	ppb	3.917	40572	300	98.4	80	120	
Mg	24	3	45	47.271	ppb	11.971	2132	50	94.5	80	120	
Al	27	3	45	48.688	ppb	14.279	854	50	97.4	80	120	
K	39	3	45	112.103	ppb	12.428	26411	120	93.4	80	120	
Ca	40	2	45	201.787	ppb	0.710	91166	200	100.9	80	120	
V	51	3	72	4.781	ppb	9.464	2611	5	95.6	80	120	
Cr	52	3	72	2.064	ppb	11.862	2946	2	103.2	80	120	
Mn	55	3	72	1.169	ppb	4.650	495	1	116.9	80	120	
Fe	56	2	72	54.697	ppb	5.022	87320	50	109.4	80	120	
Co	59	3	72	0.929	ppb	4.253	886	1	92.9	80	120	
Ni	60	3	72	2.088	ppb	2.350	883	2	104.4	80	120	
Cu	63	3	72	1.958	ppb	10.195	1676	2	97.9	80	120	
Zn	66	3	72	9.328	ppb	3.110	1291	10	93.3	80	120	
As	75	3	72	4.485	ppb	4.112	405	5	89.7	80	120	
Se	78	2	72	4.826	ppb	6.194	208	5	96.5	80	120	
Sr	88	3	72	4.855	ppb	4.540	1973	5	97.1	80	120	
Mo	95	3	115	1.784	ppb	14.199	678	2	89.2	80	120	
Ag	107	3	115	0.969	ppb	7.487	1223	1	96.9	80	120	
Cd	111	3	115	0.857	ppb	7.979	170	1	85.7	80	120	
Sn	120	3	115	8.662	ppb	4.299	5528	10	86.6	80	120	
Sb	121	3	115	1.950	ppb	5.344	1183	2	97.5	80	120	
Ba	137	3	115	0.755	ppb	10.713	203	1	75.5	80	120	>+/-30%
Tl	205	3	193	0.946	ppb	10.179	3457	1	94.6	80	120	
(Pb)	206	3	193	0.999	ppb	7.481	1168	1	99.9	80	120	
(Pb)	207	3	193	0.980	ppb	4.421	1136	1	98.0	80	120	
Pb	208	3	193	0.972	ppb	2.644	4795	1	97.2	80	120	
Th	232	3	193	3.391	ppb	18.966	18166	1	339.1	80	120	>+/-30%
U	238	3	193	1.007	ppb	6.731	5304	1	100.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2899659	1.17	2925299	99.12	60	120	
Sc (IS)	45	3	HMI He	417292	0.30	417057	100.06	60	120	
Ge Internal standard	72	2	HMI H2	1772672	1.68	1785948	99.26	60	120	
Ge Internal standard	72	3	HMI He	518018	0.55	524949	98.68	60	120	
In Internal Standard	115	3	HMI He	1985921	0.40	1995627	99.51	60	120	
Ir (IS)	193	3	HMI He	4409658	1.50	4490230	98.21	60	120	

CRI Report

Sample Table

Sample Name	cri-7695100
Data File Name	043LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:02:49-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	037CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	1.567	ppb	11.329	53	1	156.7	80	120	>+/-30%
Na	23	3	45	286.379	ppb	1.981	39832	300	95.5	80	120	
Mg	24	3	45	48.461	ppb	11.391	2176	50	96.9	80	120	
Al	27	3	45	51.936	ppb	15.368	904	50	103.9	80	120	
K	39	3	45	119.831	ppb	31.703	26612	120	99.9	80	120	
Ca	40	2	45	196.988	ppb	3.132	89799	200	98.5	80	120	
V	51	3	72	4.753	ppb	3.922	2647	5	95.1	80	120	
Cr	52	3	72	2.121	ppb	16.446	3030	2	106.1	80	120	
Mn	55	3	72	1.044	ppb	3.508	466	1	104.4	80	120	
Fe	56	2	72	55.054	ppb	5.750	86330	50	110.1	80	120	
Co	59	3	72	0.945	ppb	6.221	918	1	94.5	80	120	
Ni	60	3	72	2.292	ppb	12.636	951	2	114.6	80	120	
Cu	63	3	72	1.879	ppb	7.141	1651	2	94.0	80	120	
Zn	66	3	72	8.748	ppb	7.333	1246	10	87.5	80	120	
As	75	3	72	5.188	ppb	11.852	471	5	103.8	80	120	
Se	78	2	72	4.521	ppb	8.380	192	5	90.4	80	120	
Sr	88	3	72	5.007	ppb	4.089	2071	5	100.1	80	120	
Mo	95	3	115	1.742	ppb	5.523	668	2	87.1	80	120	
Ag	107	3	115	0.943	ppb	2.841	1199	1	94.3	80	120	
Cd	111	3	115	0.929	ppb	14.865	185	1	92.9	80	120	
Sn	120	3	115	8.994	ppb	1.622	5768	10	89.9	80	120	
Sb	121	3	115	1.874	ppb	10.499	1146	2	93.7	80	120	
Ba	137	3	115	0.896	ppb	17.132	232	1	89.6	80	120	
Tl	205	3	193	0.915	ppb	10.883	3427	1	91.5	80	120	
(Pb)	206	3	193	0.946	ppb	6.706	1136	1	94.6	80	120	
(Pb)	207	3	193	0.957	ppb	16.474	1136	1	95.7	80	120	
Pb	208	3	193	0.918	ppb	3.181	4666	1	91.8	80	120	
Th	232	3	193	1.526	ppb	12.529	11210	1	152.6	80	120	>+/-30%
U	238	3	193	1.030	ppb	5.714	5495	1	103.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2918155	0.86	2925299	99.76	60	120	
Sc (IS)	45	3	HMI He	416512	0.46	417057	99.87	60	120	
Ge Internal standard	72	2	HMI H2	1744072	1.60	1785948	97.66	60	120	
Ge Internal standard	72	3	HMI He	527521	0.14	524949	100.49	60	120	
In Internal Standard	115	3	HMI He	2002296	1.88	1995627	100.33	60	120	
Ir (IS)	193	3	HMI He	4489964	2.08	4490230	99.99	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	044SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:05:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	037CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.102	ppb	-0.102	0.00	0	2000	
Na	23	3	45	-35.506	ppb	-35.506	-2.89	17248	400000	
Mg	24	3	45	-0.419	ppb	-0.419	-289.02	214	400000	
Al	27	3	45	0.134	ppb	0.134	1252.95	87	400000	
K	39	3	45	-64.659	ppb	-64.659	-38.00	22875	400000	
Ca	40	2	45	-13.268	ppb	-13.268	-3.54	5470	400000	
V	51	3	72	-0.894	ppb	-0.894	-2.47	180	2000	
Cr	52	3	72	-0.513	ppb	-0.513	-32.39	1719	5000	
Mn	55	3	72	-0.004	ppb	-0.004	-1661.89	165	10000	
Fe	56	2	72	2.919	ppb	2.919	81.25	32267	10000	
Co	59	3	72	-0.001	ppb	-0.001	-3050.66	48	2000	
Ni	60	3	72	0.303	ppb	0.303	66.77	478	5000	
Cu	63	3	72	-0.110	ppb	-0.110	-14.41	262	5000	
Zn	66	3	72	-1.102	ppb	-1.102	-10.49	85	5000	
As	75	3	72	-0.159	ppb	-0.159	-19.85	22	2000	
Se	78	2	72	-0.048	ppb	-0.048	-49.54	1	2000	
Sr	88	3	72	0.003	ppb	0.003	1295.32	28	4000	
Mo	95	3	115	-0.016	ppb	-0.016	-9.05	25	2000	
Ag	107	3	115	0.002	ppb	0.002	484.72	12	100	
Cd	111	3	115	-0.030	ppb	-0.030	-93.33	7	2000	
Sn	120	3	115	-0.583	ppb	-0.583	-4.87	162	2000	
Sb	121	3	115	-0.043	ppb	-0.043	-44.12	22	1000	
Ba	137	3	115	-0.252	ppb	-0.252	-4.90	13	5000	
Tl	205	3	193	-0.132	ppb	-0.132	-6.16	391	2000	
(Pb)	206	3	193	-0.074	ppb	-0.074	-43.09	135	100	
(Pb)	207	3	193	-0.009	ppb	-0.009	-163.33	323	100	
Pb	208	3	193	-0.066	ppb	-0.066	-5.13	808	5000	
Th	232	3	193	-0.472	ppb	-0.472	-8.05	3655	2000	
U	238	3	193	0.025	ppb	0.025	48.02	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3205341	1.43	2925299	109.57	60	120	
Sc (IS)	45	3	HMI He	459814	1.45	417057	110.25	60	120	
Ge Internal standard	72	2	HMI H2	1984098	1.06	1785948	111.09	60	120	
Ge Internal standard	72	3	HMI He	569771	0.44	524949	108.54	60	120	
In Internal Standard	115	3	HMI He	2222126	2.33	1995627	111.35	60	120	
Ir (IS)	193	3	HMI He	4857858	1.96	4490230	108.19	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	045SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:06:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	037CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.008	ppb	-0.008	-978.60	3	2000	
Na	23	3	45	-38.873	ppb	-38.873	-6.05	16870	400000	
Mg	24	3	45	-0.824	ppb	-0.824	-161.58	194	400000	
Al	27	3	45	0.162	ppb	0.162	1450.75	87	400000	
K	39	3	45	-60.246	ppb	-60.246	-50.86	22895	400000	
Ca	40	2	45	-12.817	ppb	-12.817	-5.10	5580	400000	
V	51	3	72	-0.900	ppb	-0.900	-3.52	175	2000	
Cr	52	3	72	-0.542	ppb	-0.542	-13.97	1683	5000	
Mn	55	3	72	-0.030	ppb	-0.030	-295.28	155	10000	
Fe	56	2	72	1.365	ppb	1.365	188.17	29551	10000	
Co	59	3	72	-0.005	ppb	-0.005	-210.27	43	2000	
Ni	60	3	72	0.116	ppb	0.116	65.33	421	5000	
Cu	63	3	72	-0.143	ppb	-0.143	-29.47	233	5000	
Zn	66	3	72	-1.120	ppb	-1.120	-20.11	82	5000	
As	75	3	72	-0.156	ppb	-0.156	-108.50	22	2000	
Se	78	2	72	0.024	ppb	0.024	314.73	4	2000	
Sr	88	3	72	-0.016	ppb	-0.016	-73.69	20	4000	
Mo	95	3	115	-0.027	ppb	-0.027	-3.57	20	2000	
Ag	107	3	115	0.003	ppb	0.003	290.33	13	100	
Cd	111	3	115	-0.055	ppb	-0.055	-26.41	2	2000	
Sn	120	3	115	-0.581	ppb	-0.581	-6.55	158	2000	
Sb	121	3	115	-0.048	ppb	-0.048	-24.09	18	1000	
Ba	137	3	115	-0.242	ppb	-0.242	-9.85	15	5000	
Tl	205	3	193	-0.153	ppb	-0.153	-3.46	322	2000	
(Pb)	206	3	193	-0.036	ppb	-0.036	-57.62	175	100	
(Pb)	207	3	193	-0.040	ppb	-0.040	-26.32	292	100	
Pb	208	3	193	-0.066	ppb	-0.066	-10.19	803	5000	
Th	232	3	193	-0.481	ppb	-0.481	-7.81	3589	2000	
U	238	3	193	0.017	ppb	0.017	78.69	1334	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3154836	1.26	2925299	107.85	60	120	
Sc (IS)	45	3	HMI He	457193	0.75	417057	109.62	60	120	
Ge Internal standard	72	2	HMI H2	1937348	0.86	1785948	108.48	60	120	
Ge Internal standard	72	3	HMI He	563174	0.12	524949	107.28	60	120	
In Internal Standard	115	3	HMI He	2157864	1.90	1995627	108.13	60	120	
Ir (IS)	193	3	HMI He	4819853	0.64	4490230	107.34	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7695087
Data File Name	046CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Method	
Acq Date Time	2023-04-20T17:08:45-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	2000.00
Na	23	45	3	HMI He	18454	0.00
Mg	24	45	3	HMI He	230	5.00
Al	27	45	3	HMI He	63	51.85
K	39	45	3	HMI He	23309	0.01
Ca	40	45	2	HMI H2	10565	0.03
V	51	72	3	HMI He	586	2.10
Cr	52	72	3	HMI He	1946	0.23
Mn	55	72	3	HMI He	195	4.74
Fe	56	72	2	HMI H2	27709	0.02
Co	59	72	3	HMI He	30	0.00
Ni	60	72	3	HMI He	421	2.61
Cu	63	72	3	HMI He	293	11.07
Zn	66	72	3	HMI He	183	7.34
As	75	72	3	HMI He	38	51.98
Se	78	72	2	HMI H2	1	25980.76
(Se)	78	72	3	HMI He	45	123.52
Sr	88	72	3	HMI He	23	140.40
Mo	95	115	3	HMI He	27	214.83
Ag	107	115	3	HMI He	22	61.55
Cd	111	115	3	HMI He	10	1000.17
Sn	120	115	3	HMI He	481	0.50
Sb	121	115	3	HMI He	40	62.52
Ba	137	115	3	HMI He	48	61.82
Tl	205	193	3	HMI He	540	0.59
(Pb)	206	193	3	HMI He	208	1.33
(Pb)	207	193	3	HMI He	312	4.38
Pb	208	193	3	HMI He	898	1.02
Th	232	193	3	HMI He	4380	0.13
U	238	193	3	HMI He	1119	0.17

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	2822685	0.51
Sc (IS)	45	3	HMI He	416560	1.11
Ge Internal standard	72	2	HMI H2	1735883	2.19
Ge Internal standard	72	3	HMI He	517264	0.63
In Internal Standard	115	3	HMI He	1949413	2.28
Ir (IS)	193	3	HMI He	4364581	0.78

Calibration Standard Report

Sample Table

Sample Name	ic-7695091
Data File Name	047CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
method	
Acq Date Time	2023-04-20T17:10:32-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	046CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	2598.08
Na	23	45	3	HMI He	7574497	0.00
Mg	24	45	3	HMI He	814405	0.00
Al	27	45	3	HMI He	167	9.05
K	39	45	3	HMI He	671748	0.00
V	51	72	3	HMI He	693	0.78
Cr	52	72	3	HMI He	2139	0.22
Mn	55	72	3	HMI He	190	5.00
Co	59	72	3	HMI He	52	39.01
Ni	60	72	3	HMI He	435	2.60
Cu	63	72	3	HMI He	300	1.47
Zn	66	72	3	HMI He	247	10.41
As	75	72	3	HMI He	48	75.18
Se	78	72	2	HMI H2	3	1039.23
(Se)	78	72	3	HMI He	30	55.55
Sr	88	72	3	HMI He	172	5.19
Mo	95	115	3	HMI He	35	147.26
Ag	107	115	3	HMI He	23	347.82
Cd	111	115	3	HMI He	5	2000.00
Sn	120	115	3	HMI He	620	0.98
Sb	121	115	3	HMI He	37	93.64
Ba	137	115	3	HMI He	118	2.06
Tl	205	193	3	HMI He	473	1.87
(Pb)	206	193	3	HMI He	265	2.57
(Pb)	207	193	3	HMI He	398	5.03
Pb	208	193	3	HMI He	1171	0.36
Th	232	193	3	HMI He	4227	0.15
U	238	193	3	HMI He	1199	0.45

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2866726	2.43	2822685	101.56	60	120	
Sc (IS)	45	3	HMI He	421642	0.48	416560	101.22	60	120	
Ge Internal standard	72	2	HMI H2	1675980	2.18	1735883	96.55	60	120	
Ge Internal standard	72	3	HMI He	499555	0.62	517264	96.58	60	120	
In Internal Standard	115	3	HMI He	2012422	0.48	1949413	103.23	60	120	
Ir (IS)	193	3	HMI He	4406051	1.12	4364581	100.95	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7695089
Data File Name	048CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
method	
Acq Date Time	2023-04-20T17:12:19-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	046CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3182	0.11
Na	23	45	3	HMI He	173291	0.00
Mg	24	45	3	HMI He	81364	0.00
Al	27	45	3	HMI He	32122	0.00
K	39	45	3	HMI He	88929	0.00
V	51	72	3	HMI He	44793	0.00
Cr	52	72	3	HMI He	56065	0.00
Mn	55	72	3	HMI He	30173	0.00
Co	59	72	3	HMI He	93133	0.00
Ni	60	72	3	HMI He	26257	0.00
Cu	63	72	3	HMI He	71558	0.00
Zn	66	72	3	HMI He	11986	0.01
As	75	72	3	HMI He	8477	0.03
Se	78	72	2	HMI H2	4332	0.04
(Se)	78	72	3	HMI He	565	0.68
Sr	88	72	3	HMI He	82640	0.00
Mo	95	115	3	HMI He	36807	0.00
Ag	107	115	3	HMI He	125689	0.00
Cd	111	115	3	HMI He	18143	0.01
Sn	120	115	3	HMI He	58072	0.00
Sb	121	115	3	HMI He	58895	0.00
Ba	137	115	3	HMI He	19093	0.01
Tl	205	193	3	HMI He	298320	0.00
(Pb)	206	193	3	HMI He	100279	0.00
(Pb)	207	193	3	HMI He	88319	0.00
Pb	208	193	3	HMI He	402531	0.00
Th	232	193	3	HMI He	395258	0.00
U	238	193	3	HMI He	426456	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2854042	1.12	2822685	101.11	60	120	
Sc (IS)	45	3	HMI He	421069	0.06	416560	101.08	60	120	
Ge Internal standard	72	2	HMI H2	1794717	0.44	1735883	103.39	60	120	
Ge Internal standard	72	3	HMI He	537758	0.77	517264	103.96	60	120	
In Internal Standard	115	3	HMI He	2029075	2.23	1949413	104.09	60	120	
Ir (IS)	193	3	HMI He	4452153	2.20	4364581	102.01	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7695095
Data File Name	049_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:14:07-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.058	ppb	10.698	1268	40	100.1	90	110	
Na	23	3	45	5008.733	ppb	1.678	394736	12800	39.1	90	110	>+\-10%
Mg	24	3	45	4763.026	ppb	0.229	192979	4800	99.2	90	110	
Al	27	3	45	795.768	ppb	2.088	12762	800	99.5	90	110	
K	39	3	45	4824.377	ppb	1.160	178877	4800	100.5	90	110	
Ca	40	2	45	4945.581	ppb	2.695	2031635	4800	103.0	90	110	
V	51	3	72	39.356	ppb	1.847	17551	40	98.4	90	110	
Cr	52	3	72	41.447	ppb	3.260	23814	40	103.6	90	110	
Mn	55	3	72	40.835	ppb	2.436	12131	40	102.1	90	110	
Fe	56	2	72	821.684	ppb	3.730	928234	800	102.7	90	110	
Co	59	3	72	39.509	ppb	0.269	35900	40	98.8	90	110	
Ni	60	3	72	39.455	ppb	5.033	10359	40	98.6	90	110	
Cu	63	3	72	41.252	ppb	1.379	28961	40	103.1	90	110	
Zn	66	3	72	80.719	ppb	1.056	9470	80	100.9	90	110	
As	75	3	72	37.953	ppb	3.413	3162	40	94.9	90	110	
Se	78	2	72	40.857	ppb	4.453	1721	40	102.1	90	110	
Sr	88	3	72	119.693	ppb	0.289	48240	120	99.7	90	110	
Mo	95	3	115	40.922	ppb	3.203	14917	40	102.3	90	110	
Ag	107	3	115	78.530	ppb	2.741	97674	80	98.2	90	110	
Cd	111	3	115	39.680	ppb	3.552	7133	40	99.2	90	110	
Sn	120	3	115	39.025	ppb	3.721	22723	40	97.6	90	110	
Sb	121	3	115	39.848	ppb	2.090	23250	40	99.6	90	110	
Ba	137	3	115	39.810	ppb	1.966	7553	40	99.5	90	110	
Tl	205	3	193	39.820	ppb	0.498	118120	40	99.6	90	110	
(Pb)	206	3	193	39.678	ppb	2.682	39584	40	99.2	90	110	
(Pb)	207	3	193	39.258	ppb	0.704	34567	40	98.1	90	110	
Pb	208	3	193	39.676	ppb	1.163	158930	40	99.2	90	110	
Th	232	3	193	82.821	ppb	0.990	325413	80	103.5	90	110	
U	238	3	193	43.256	ppb	1.900	183561	40	108.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2908771	3.60	2822685	103.05	60	120	
Sc (IS)	45	3	HMI He	419131	0.85	416560	100.62	60	120	
Ge Internal standard	72	2	HMI H2	1745798	1.80	1735883	100.57	60	120	
Ge Internal standard	72	3	HMI He	524382	0.62	517264	101.38	60	120	
In Internal Standard	115	3	HMI He	2007620	1.85	1949413	102.99	60	120	
Ir (IS)	193	3	HMI He	4414094	0.92	4364581	101.13	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7695087
Data File Name	050_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:15:54-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.001	ppb	14391.5	5	0.5	
Na	23	3	13.726	ppb	53.8	19777	25	
Mg	24	3	-0.085	ppb	-1417.8	230	25	
Al	27	3	0.968	ppb	61.4	80	15	
K	39	3	-23.248	ppb	-58.1	22905	50	
V	51	3	0.151	ppb	69.4	660	1	
Cr	52	3	-0.061	ppb	-266.1	1943	1	
Mn	55	3	-0.050	ppb	-31.6	183	0.5	
Co	59	3	0.005	ppb	479.1	35	0.5	
Ni	60	3	-0.058	ppb	-286.5	413	1	
Cu	63	3	0.029	ppb	164.0	318	1	
Zn	66	3	0.134	ppb	265.5	202	5	
As	75	3	0.114	ppb	169.2	48	1	
Se	78	2	0.139	ppb	50.5	7	1	
Sr	88	3	0.020	ppb	129.6	32	0.5	
Mo	95	3	0.011	ppb	627.3	32	0.5	
Ag	107	3	0.003	ppb	416.3	27	1	
Cd	111	3	0.007	ppb	855.8	12	0.5	
Sn	120	3	0.108	ppb	180.4	560	1	
Sb	121	3	-0.002	ppb	-588.2	40	0.6	
Ba	137	3	-0.020	ppb	-372.9	47	0.5	
Tl	205	3	0.030	ppb	65.2	643	0.1	
(Pb)	206	3	-0.009	ppb	-551.5	205	1	
(Pb)	207	3	0.001	ppb	1880.1	322	1	
Pb	208	3	0.001	ppb	1602.6	928	0.5	
Th	232	3	4.072	ppb	11.7	20543	1	>RL
U	238	3	0.010	ppb	173.0	1194	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2878161	1.06	2822685	101.97	60	120	
Sc (IS)	45	3	HMI He	422819	0.92	416560	101.50	60	120	
Ge Internal standard	72	2	HMI H2	1778003	1.31	1735883	102.43	60	120	
Ge Internal standard	72	3	HMI He	524901	0.69	517264	101.48	60	120	
In Internal Standard	115	3	HMI He	2016679	1.77	1949413	103.45	60	120	
Ir (IS)	193	3	HMI He	4486464	0.97	4364581	102.79	60	120	

CRI Report

Sample Table

Sample Name	cri-7695100
Data File Name	051LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:17:41-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.622	ppb	51.119	25	1	62.2	80	120	>+/-30%
Na	23	3	45	291.613	ppb	3.268	40451	300	97.2	80	120	
Mg	24	3	45	52.636	ppb	12.291	2359	50	105.3	80	120	
Al	27	3	45	53.089	ppb	14.506	911	50	106.2	80	120	
K	39	3	45	100.784	ppb	36.306	26689	120	84.0	80	120	
Ca	40	2	45	199.333	ppb	0.838	91676	200	99.7	80	120	
V	51	3	72	5.142	ppb	3.223	2807	5	102.8	80	120	
Cr	52	3	72	1.816	ppb	4.367	2927	2	90.8	80	120	
Mn	55	3	72	0.961	ppb	1.398	478	1	96.1	80	120	
Fe	56	2	72	49.488	ppb	6.747	82751	50	99.0	80	120	
Co	59	3	72	1.010	ppb	12.433	946	1	101.0	80	120	
Ni	60	3	72	1.866	ppb	13.883	896	2	93.3	80	120	
Cu	63	3	72	1.995	ppb	2.905	1683	2	99.8	80	120	
Zn	66	3	72	9.270	ppb	4.363	1251	10	92.7	80	120	
As	75	3	72	5.325	ppb	10.109	476	5	106.5	80	120	
Se	78	2	72	5.295	ppb	17.243	225	5	105.9	80	120	
Sr	88	3	72	4.333	ppb	1.873	1768	5	86.7	80	120	
Mo	95	3	115	1.742	ppb	12.942	661	2	87.1	80	120	
Ag	107	3	115	0.954	ppb	5.501	1209	1	95.4	80	120	
Cd	111	3	115	1.130	ppb	32.245	213	1	113.0	80	120	
Sn	120	3	115	8.926	ppb	5.187	5583	10	89.3	80	120	
Sb	121	3	115	1.990	ppb	11.124	1201	2	99.5	80	120	
Ba	137	3	115	0.715	ppb	11.993	185	1	71.5	80	120	>+/-30%
Tl	205	3	193	0.945	ppb	4.209	3330	1	94.5	80	120	
(Pb)	206	3	193	0.943	ppb	9.309	1144	1	94.3	80	120	
(Pb)	207	3	193	0.985	ppb	1.449	1173	1	98.5	80	120	
Pb	208	3	193	0.971	ppb	2.547	4770	1	97.1	80	120	
Th	232	3	193	3.597	ppb	17.766	18366	1	359.7	80	120	>+/-30%
U	238	3	193	0.981	ppb	0.994	5262	1	98.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2886296	0.56	2822685	102.25	60	120	
Sc (IS)	45	3	HMI He	418910	0.64	416560	100.56	60	120	
Ge Internal standard	72	2	HMI H2	1759762	2.05	1735883	101.38	60	120	
Ge Internal standard	72	3	HMI He	523966	0.50	517264	101.30	60	120	
In Internal Standard	115	3	HMI He	2008526	0.65	1949413	103.03	60	120	
Ir (IS)	193	3	HMI He	4407024	1.58	4364581	100.97	60	120	

CRI Report

Sample Table

Sample Name	cri-7695100
Data File Name	052LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:19:43-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.994	ppb	54.791	37	1	99.4	80	120	
Na	23	3	45	287.524	ppb	3.180	39488	300	95.8	80	120	
Mg	24	3	45	50.330	ppb	7.227	2229	50	100.7	80	120	
Al	27	3	45	44.900	ppb	7.169	767	50	89.8	80	120	
K	39	3	45	133.951	ppb	24.487	27297	120	111.6	80	120	
Ca	40	2	45	195.896	ppb	1.570	89859	200	97.9	80	120	
V	51	3	72	4.501	ppb	3.482	2499	5	90.0	80	120	
Cr	52	3	72	2.050	ppb	21.213	3012	2	102.5	80	120	
Mn	55	3	72	0.831	ppb	17.772	435	1	83.1	80	120	
Fe	56	2	72	50.687	ppb	5.802	82410	50	101.4	80	120	
Co	59	3	72	0.887	ppb	8.865	825	1	88.7	80	120	
Ni	60	3	72	2.034	ppb	18.901	926	2	101.7	80	120	
Cu	63	3	72	1.955	ppb	7.937	1633	2	97.7	80	120	
Zn	66	3	72	9.119	ppb	1.593	1218	10	91.2	80	120	
As	75	3	72	4.943	ppb	15.184	440	5	98.9	80	120	
Se	78	2	72	5.417	ppb	5.230	226	5	108.3	80	120	
Sr	88	3	72	4.624	ppb	3.198	1861	5	92.5	80	120	
Mo	95	3	115	1.981	ppb	8.418	731	2	99.1	80	120	
Ag	107	3	115	0.929	ppb	11.622	1149	1	92.9	80	120	
Cd	111	3	115	1.159	ppb	7.590	213	1	115.9	80	120	
Sn	120	3	115	9.190	ppb	3.042	5600	10	91.9	80	120	
Sb	121	3	115	1.988	ppb	7.435	1171	2	99.4	80	120	
Ba	137	3	115	1.001	ppb	24.729	233	1	100.1	80	120	
Tl	205	3	193	0.947	ppb	4.432	3364	1	94.7	80	120	
(Pb)	206	3	193	0.904	ppb	11.534	1115	1	90.4	80	120	
(Pb)	207	3	193	0.893	ppb	2.424	1101	1	89.3	80	120	
Pb	208	3	193	0.932	ppb	3.210	4650	1	93.2	80	120	
Th	232	3	193	1.650	ppb	17.962	10893	1	165.0	80	120	>+/-30%
U	238	3	193	0.947	ppb	4.992	5159	1	94.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2872932	0.30	2822685	101.78	60	120	
Sc (IS)	45	3	HMI He	412039	1.10	416560	98.91	60	120	
Ge Internal standard	72	2	HMI H2	1724639	2.42	1735883	99.35	60	120	
Ge Internal standard	72	3	HMI He	517218	1.27	517264	99.99	60	120	
In Internal Standard	115	3	HMI He	1961513	1.17	1949413	100.62	60	120	
Ir (IS)	193	3	HMI He	4441653	0.52	4364581	101.77	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	053ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:21:32-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.108	ppb	223.8	8	0.5	
Na	23	3	45	96857.194	ppb	1.3	7256582	100000	
Mg	24	3	45	96606.215	ppb	0.5	3890010	100000	
Al	27	3	45	97756.771	ppb	0.6	1552001	100000	
K	39	3	45	96338.346	ppb	1.0	3111307	100000	
Ca	40	2	45	95193.202	ppb	1.0	38870369	100000	
V	51	3	72	0.103	ppb	208.5	641	1	
Cr	52	3	72	1.280	ppb	25.5	2659	1	>RL or LOD
Mn	55	3	72	1.039	ppb	14.9	503	0.95	>RL or LOD
Fe	56	2	72	95244.567	ppb	0.7	105964135	100000	
Co	59	3	72	0.244	ppb	19.6	253	0.5	
Ni	60	3	72	0.484	ppb	22.1	551	1	
Cu	63	3	72	0.326	ppb	35.6	526	1	
Zn	66	3	72	0.779	ppb	36.5	277	1	
As	75	3	72	0.132	ppb	156.4	50	1	
Se	78	2	72	0.155	ppb	46.1	7	1	
(Se)	78	3	72	-3.749	ppb	-41.0	27	1	
Sr	88	3	72	0.877	ppb	21.2	378	1	
Mo	95	3	115	1930.099	ppb	0.9	691034	2000	
Ag	107	3	115	0.022	ppb	41.1	48	1	
Cd	111	3	115	0.197	ppb	61.6	45	1	
Sn	120	3	115	0.719	ppb	15.5	891	1	
Sb	121	3	115	0.147	ppb	24.7	125	1	
Ba	137	3	115	1.262	ppb	6.0	283	0.95	>RL or LOD
Tl	205	3	193	-0.009	ppb	-85.6	520	1	
(Pb)	206	3	193	0.109	ppb	41.7	320	1	
(Pb)	207	3	193	0.143	ppb	25.1	441	1	
Pb	208	3	193	0.145	ppb	12.4	1488	1	
Th	232	3	193	0.170	ppb	62.8	5097	1	
U	238	3	193	0.057	ppb	64.1	1376	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2904412	1.20	2822685	102.90	60	120	
Sc (IS)	45	3	HMI He	417033	0.63	416560	100.11	60	120	
Ge Internal standard	72	2	HMI H2	1771419	0.53	1735883	102.05	60	120	
Ge Internal standard	72	3	HMI He	526596	0.56	517264	101.80	60	120	
In Internal Standard	115	3	HMI He	1974818	0.90	1949413	101.30	60	120	
Ir (IS)	193	3	HMI He	4423499	2.16	4364581	101.35	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	054ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:23:19-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	96.217	ppb	3.865	3074	100	96.2	80	120	
Na	23	3	45	101384.831	ppb	0.363	7604862	100	101384.8	80	120	>+\-20%
Mg	24	3	45	100291.731	ppb	1.121	4043436	100	100291.7	80	120	>+\-20%
Al	27	3	45	96417.600	ppb	1.621	1532639	100	96417.6	80	120	>+\-20%
K	39	3	45	100796.295	ppb	1.214	3258284	100	100796.3	80	120	>+\-20%
Ca	40	2	45	100931.616	ppb	1.815	41799305	100	100931.6	80	120	>+\-20%
V	51	3	72	97.877	ppb	1.928	42403	100	97.9	80	120	
Cr	52	3	72	102.061	ppb	0.799	55292	100	102.1	80	120	
Mn	55	3	72	98.646	ppb	2.118	28785	100	98.6	80	120	
Fe	56	2	72	94151.958	ppb	0.690	105389711	100	94152.0	80	120	>+\-20%
Co	59	3	72	98.469	ppb	1.118	88673	100	98.5	80	120	
Ni	60	3	72	97.354	ppb	1.215	24728	100	97.4	80	120	
Cu	63	3	72	99.347	ppb	0.651	68744	100	99.3	80	120	
Zn	66	3	72	94.481	ppb	2.346	10961	100	94.5	80	120	
As	75	3	72	95.962	ppb	1.220	7868	100	96.0	80	120	
Se	78	2	72	97.819	ppb	3.308	4208	100	97.8	80	120	
(Se)	78	3	72	91.476	ppb	12.270	503	100	91.5	80	120	
Sr	88	3	72	196.444	ppb	0.949	78488	100	196.4	80	120	>+\-20%
Mo	95	3	115	2011.772	ppb	0.498	713940	100	2011.8	80	120	
Ag	107	3	115	98.060	ppb	0.832	118938	100	98.1	80	120	
Cd	111	3	115	97.701	ppb	2.058	17104	100	97.7	80	120	
Sn	120	3	115	99.130	ppb	1.357	55558	100	99.1	80	120	
Sb	121	3	115	99.770	ppb	1.807	56705	100	99.8	80	120	
Ba	137	3	115	98.687	ppb	1.503	18187	100	98.7	80	120	
Tl	205	3	193	97.324	ppb	0.974	287698	100	97.3	80	120	
(Pb)	206	3	193	97.312	ppb	2.038	96700	100	97.3	80	120	
(Pb)	207	3	193	95.633	ppb	1.609	83687	100	95.6	80	120	
Pb	208	3	193	97.211	ppb	1.875	387754	100	97.2	80	120	
Th	232	3	193	99.980	ppb	2.582	391544	100	100.0	80	120	
U	238	3	193	104.936	ppb	1.035	443391	100	104.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2945764	1.95	2822685	104.36	60	120	
Sc (IS)	45	3	HMI He	417557	0.66	416560	100.24	60	120	
Ge Internal standard	72	2	HMI H2	1782312	0.46	1735883	102.67	60	120	
Ge Internal standard	72	3	HMI He	519975	0.95	517264	100.52	60	120	
In Internal Standard	115	3	HMI He	1957443	1.23	1949413	100.41	60	120	
Ir (IS)	193	3	HMI He	4411390	2.25	4364581	101.07	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	055SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:25:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.156	ppb	-0.156	0.00	0	2000	
Na	23	3	45	46.129	ppb	46.129	12.39	21655	400000	
Mg	24	3	45	12.466	ppb	12.466	24.22	724	400000	
Al	27	3	45	12.396	ppb	12.396	30.27	257	400000	
K	39	3	45	29.229	ppb	29.229	133.78	23971	400000	
Ca	40	2	45	10.199	ppb	10.199	6.73	14829	400000	
V	51	3	72	0.248	ppb	0.248	38.60	675	2000	
Cr	52	3	72	0.047	ppb	0.047	361.96	1923	5000	
Mn	55	3	72	-0.107	ppb	-0.107	-92.43	160	10000	
Fe	56	2	72	22.845	ppb	22.845	11.31	51360	10000	
Co	59	3	72	0.028	ppb	0.028	23.36	53	2000	
Ni	60	3	72	0.262	ppb	0.262	41.28	475	5000	
Cu	63	3	72	0.005	ppb	0.005	650.26	290	5000	
Zn	66	3	72	-0.291	ppb	-0.291	-60.52	147	5000	
As	75	3	72	0.137	ppb	0.137	129.01	48	2000	
Se	78	2	72	0.098	ppb	0.098	77.89	5	2000	
Sr	88	3	72	0.001	ppb	0.001	1407.55	23	4000	
Mo	95	3	115	5.296	ppb	5.296	17.79	1923	2000	
Ag	107	3	115	0.008	ppb	0.008	303.44	32	100	
Cd	111	3	115	-0.010	ppb	-0.010	-166.86	8	2000	
Sn	120	3	115	0.066	ppb	0.066	122.14	525	2000	
Sb	121	3	115	0.005	ppb	0.005	347.74	43	1000	
Ba	137	3	115	-0.049	ppb	-0.049	-96.83	40	5000	
Tl	205	3	193	0.011	ppb	0.011	372.60	585	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-695.84	210	100	
(Pb)	207	3	193	-0.014	ppb	-0.014	-159.00	307	100	
Pb	208	3	193	-0.002	ppb	-0.002	-801.31	910	5000	
Th	232	3	193	3.012	ppb	3.012	9.52	16266	2000	
U	238	3	193	0.038	ppb	0.038	21.48	1308	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2864241	1.38	2822685	101.47	60	120	
Sc (IS)	45	3	HMI He	411953	0.95	416560	98.89	60	120	
Ge Internal standard	72	2	HMI H2	1694389	1.67	1735883	97.61	60	120	
Ge Internal standard	72	3	HMI He	504715	1.03	517264	97.57	60	120	
In Internal Standard	115	3	HMI He	1972619	0.76	1949413	101.19	60	120	
Ir (IS)	193	3	HMI He	4462441	1.82	4364581	102.24	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-7616617
Data File Name	056_LR.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:26:51-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1971.798	ppb	2.362	67950	2000	98.6	90	110	
Na	23	3	45	195862.530	ppb	1.412	15862693	200000	97.9	90	110	
Mg	24	3	45	195128.527	ppb	0.998	8504012	200000	97.6	90	110	
Al	27	3	45	298043.063	ppb	3.204	5120669	300000	99.3	90	110	
V	51	3	72	2037.901	ppb	0.258	924323	2000	101.9	90	110	
Cr	52	3	72	5111.992	ppb	0.884	2836236	5000	102.2	90	110	
Mn	55	3	72	10058.794	ppb	1.100	3092956	10000	100.6	90	110	
Fe	56	2	72	201798.998	ppb	0.953	237885988	200000	100.9	90	110	
Co	59	3	72	2019.554	ppb	0.505	1928932	2000	101.0	90	110	
Ni	60	3	72	4935.652	ppb	1.721	1307638	5000	98.7	90	110	
Cu	63	3	72	5073.508	ppb	0.840	3709105	5000	101.5	90	110	
Zn	66	3	72	4985.040	ppb	0.846	603416	5000	99.7	90	110	
As	75	3	72	2037.962	ppb	1.127	176449	2000	101.9	90	110	
Se	78	2	72	2047.871	ppb	1.904	92763	2000	102.4	90	110	
(Se)	78	3	72	1974.725	ppb	3.110	10544	2000	98.7	90	110	
Sr	88	3	72	5211.588	ppb	2.710	2208406	5000	104.2	90	110	
Mo	95	3	115	1936.466	ppb	0.970	754529	2000	96.8	90	110	
Cd	111	3	115	1954.590	ppb	0.611	375469	2000	97.7	90	110	
Sn	120	3	115	2052.651	ppb	3.056	1252492	2000	102.6	90	110	
Sb	121	3	115	991.081	ppb	1.286	618130	1000	99.1	90	110	
Ba	137	3	115	4943.412	ppb	0.635	997597	5000	98.9	90	110	
Tl	205	3	193	1011.870	ppb	2.880	3230551	1000	101.2	90	110	
(Pb)	206	3	193	4989.728	ppb	3.435	5352937	5000	99.8	90	110	
(Pb)	207	3	193	4981.934	ppb	1.444	4700853	5000	99.6	90	110	
Pb	208	3	193	4957.725	ppb	2.525	21351136	5000	99.2	90	110	
Th	232	3	193	955.796	ppb	2.837	4010186	1000	95.6	90	110	
U	238	3	193	2015.370	ppb	2.695	9191714	2000	100.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3209660	1.04	2822685	113.71	60	120	
Sc (IS)	45	3	HMI He	451386	0.63	416560	108.36	60	120	
Ge Internal standard	72	2	HMI H2	1877414	1.66	1735883	108.15	60	120	
Ge Internal standard	72	3	HMI He	551657	0.48	517264	106.65	60	120	
In Internal Standard	115	3	HMI He	2149192	0.67	1949413	110.25	60	120	
Ir (IS)	193	3	HMI He	4774034	2.36	4364581	109.38	60	120	

Sample Report

Sample Table

Sample Name	rinse-
Data File Name	057SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:28:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.057	ppb	0.057	164.13	7	2000	
Na	23	3	45	97.081	ppb	97.081	18.32	25094	400000	
Mg	24	3	45	41.522	ppb	41.522	2.36	1855	400000	
Al	27	3	45	65.630	ppb	65.630	14.62	1078	400000	
K	39	3	45	136.163	ppb	136.163	41.53	27013	400000	
Ca	40	2	45	35.519	ppb	35.519	5.81	24145	400000	
V	51	3	72	0.356	ppb	0.356	20.51	715	2000	
Cr	52	3	72	1.770	ppb	1.770	22.04	2777	5000	
Mn	55	3	72	1.966	ppb	1.966	13.69	738	10000	
Fe	56	2	72	55.024	ppb	55.024	5.75	84289	10000	
Co	59	3	72	0.356	ppb	0.356	14.64	338	2000	
Ni	60	3	72	1.611	ppb	1.611	21.08	796	5000	
Cu	63	3	72	1.267	ppb	1.267	10.01	1126	5000	
Zn	66	3	72	1.384	ppb	1.384	27.52	330	5000	
As	75	3	72	0.863	ppb	0.863	22.59	105	2000	
Se	78	2	72	0.695	ppb	0.695	21.06	29	2000	
Sr	88	3	72	0.962	ppb	0.962	11.70	393	4000	
Mo	95	3	115	13.174	ppb	13.174	19.56	4654	2000	
Ag	107	3	115	-0.004	ppb	-0.004	-234.85	17	100	
Cd	111	3	115	0.520	ppb	0.520	10.94	100	2000	
Sn	120	3	115	13.903	ppb	13.903	9.86	8122	2000	
Sb	121	3	115	1.456	ppb	1.456	18.09	858	1000	
Ba	137	3	115	0.899	ppb	0.899	23.67	212	5000	
Tl	205	3	193	0.492	ppb	0.492	16.99	1944	2000	
(Pb)	206	3	193	1.071	ppb	1.071	3.33	1239	100	
(Pb)	207	3	193	1.017	ppb	1.017	18.98	1169	100	
Pb	208	3	193	1.068	ppb	1.068	5.70	5023	5000	
Th	232	3	193	56.583	ppb	56.583	12.41	217581	2000	
U	238	3	193	1.130	ppb	1.130	10.37	5735	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2764139	0.60	2822685	97.93	60	120	
Sc (IS)	45	3	HMI He	406746	0.43	416560	97.64	60	120	
Ge Internal standard	72	2	HMI H2	1668555	0.82	1735883	96.12	60	120	
Ge Internal standard	72	3	HMI He	501360	0.42	517264	96.93	60	120	
In Internal Standard	115	3	HMI He	1936594	0.40	1949413	99.34	60	120	
Ir (IS)	193	3	HMI He	4296595	1.33	4364581	98.44	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	058_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:30:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	45.629	ppb	6.517	1468	50	91.3	90	110	
Na	23	3	45	50343.917	ppb	0.393	3750406	51000	98.7	90	110	
Mg	24	3	45	10637.074	ppb	0.943	425079	11000	96.7	90	110	
Al	27	3	45	1042.186	ppb	4.070	16476	1000	104.2	90	110	
K	39	3	45	10802.738	ppb	0.199	366643	11000	98.2	90	110	
Ca	40	2	45	10795.388	ppb	2.319	4347638	11000	98.1	90	110	
V	51	3	72	52.713	ppb	1.116	22402	50	105.4	90	110	
Cr	52	3	72	54.477	ppb	2.889	29492	50	109.0	90	110	
Mn	55	3	72	51.872	ppb	2.312	14762	50	103.7	90	110	
Fe	56	2	72	1088.590	ppb	1.248	1181060	1000	108.9	90	110	
Co	59	3	72	52.355	ppb	2.508	45717	50	104.7	90	110	
Ni	60	3	72	52.714	ppb	3.815	13166	50	105.4	90	110	
Cu	63	3	72	52.766	ppb	2.907	35530	50	105.5	90	110	
Zn	66	3	72	53.673	ppb	3.456	6113	50	107.3	90	110	
As	75	3	72	53.007	ppb	2.516	4230	50	106.0	90	110	
Se	78	2	72	50.936	ppb	1.768	2076	50	101.9	90	110	
Sr	88	3	72	105.246	ppb	2.470	40774	100	105.2	90	110	
Mo	95	3	115	48.980	ppb	1.801	17771	50	98.0	90	110	
Ag	107	3	115	49.808	ppb	2.140	61683	50	99.6	90	110	
Cd	111	3	115	51.158	ppb	3.316	9145	50	102.3	90	110	
Sn	120	3	115	50.934	ppb	2.492	29376	50	101.9	90	110	
Sb	121	3	115	49.802	ppb	1.707	28919	50	99.6	90	110	
Ba	137	3	115	48.981	ppb	2.244	9240	50	98.0	90	110	
Tl	205	3	193	50.642	ppb	0.758	149026	50	101.3	90	110	
(Pb)	206	3	193	49.679	ppb	2.172	49162	50	99.4	90	110	
(Pb)	207	3	193	49.937	ppb	1.277	43576	50	99.9	90	110	
Pb	208	3	193	49.892	ppb	1.417	198231	50	99.8	90	110	
Th	232	3	193	65.538	ppb	3.476	256627	50	131.1	90	110	>+\-10%
U	238	3	193	50.096	ppb	1.631	210944	50	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2858456	1.05	2822685	101.27	60	120	
Sc (IS)	45	3	HMI He	413681	0.34	416560	99.31	60	120	
Ge Internal standard	72	2	HMI H2	1688568	1.36	1735883	97.27	60	120	
Ge Internal standard	72	3	HMI He	504062	0.57	517264	97.45	60	120	
In Internal Standard	115	3	HMI He	1998273	1.07	1949413	102.51	60	120	
Ir (IS)	193	3	HMI He	4383336	1.07	4364581	100.43	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	059_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:32:09-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.156	ppb	0.0	0	0.5	
Na	23	3	45	67.636	ppb	47.9	23253	25	>RL
Mg	24	3	45	10.934	ppb	101.7	661	25	
Al	27	3	45	13.301	ppb	118.0	270	15	
K	39	3	45	49.158	ppb	70.5	24630	50	
V	51	3	72	0.241	ppb	31.5	671	1	
Cr	52	3	72	0.428	ppb	72.9	2114	1	
Mn	55	3	72	0.376	ppb	80.6	295	0.5	
Co	59	3	72	0.077	ppb	40.3	97	0.5	
Ni	60	3	72	0.196	ppb	65.9	458	1	
Cu	63	3	72	0.261	ppb	47.1	460	1	
Zn	66	3	72	-0.334	ppb	-21.2	142	5	
As	75	3	72	0.139	ppb	29.1	48	1	
Se	78	2	72	0.168	ppb	70.1	7	1	
Sr	88	3	72	0.139	ppb	20.2	77	0.5	
Mo	95	3	115	0.320	ppb	41.6	138	0.5	
Ag	107	3	115	0.018	ppb	36.0	43	1	
Cd	111	3	115	0.145	ppb	52.1	35	0.5	
Sn	120	3	115	0.730	ppb	17.7	878	1	
Sb	121	3	115	0.159	ppb	32.2	128	0.6	
Ba	137	3	115	0.029	ppb	48.2	53	0.5	
Tl	205	3	193	0.074	ppb	25.7	771	0.1	
(Pb)	206	3	193	0.123	ppb	70.2	335	1	
(Pb)	207	3	193	0.108	ppb	76.1	413	1	
Pb	208	3	193	0.156	ppb	45.2	1543	0.5	
Th	232	3	193	4.480	ppb	18.7	21975	1	>RL
U	238	3	193	0.093	ppb	47.0	1539	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2848637	1.00	2822685	100.92	60	120	
Sc (IS)	45	3	HMI He	412309	0.85	416560	98.98	60	120	
Ge Internal standard	72	2	HMI H2	1667684	2.65	1735883	96.07	60	120	
Ge Internal standard	72	3	HMI He	504232	1.50	517264	97.48	60	120	
In Internal Standard	115	3	HMI He	1932228	0.76	1949413	99.12	60	120	
Ir (IS)	193	3	HMI He	4459595	1.98	4364581	102.18	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7695100
Data File Name	060LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:33:57-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.130	ppb	24.005	40	1	113.0	70	130	
Na	23	3	45	310.444	ppb	4.418	41184	300	103.5	70	130	
Mg	24	3	45	51.073	ppb	7.255	2259	50	102.1	70	130	
Al	27	3	45	48.107	ppb	15.860	818	50	96.2	70	130	
K	39	3	45	166.643	ppb	13.169	28340	120	138.9	70	130	>+/-30%
Ca	40	2	45	223.852	ppb	11.607	99020	200	111.9	70	130	
V	51	3	72	5.091	ppb	10.844	2671	5	101.8	70	130	
Cr	52	3	72	2.413	ppb	3.904	3109	2	120.6	70	130	
Mn	55	3	72	1.121	ppb	4.985	503	1	112.1	70	130	
Fe	56	2	72	66.483	ppb	15.590	98923	50	133.0	70	130	>+/-30%
Co	59	3	72	1.081	ppb	11.759	970	1	108.1	70	130	
Ni	60	3	72	2.039	ppb	5.845	901	2	102.0	70	130	
Cu	63	3	72	2.334	ppb	1.407	1839	2	116.7	70	130	
Zn	66	3	72	9.678	ppb	6.299	1244	10	96.8	70	130	
As	75	3	72	4.788	ppb	9.959	415	5	95.8	70	130	
Se	78	2	72	5.189	ppb	17.266	215	5	103.8	70	130	
Sr	88	3	72	5.354	ppb	3.657	2089	5	107.1	70	130	
Mo	95	3	115	2.015	ppb	19.140	736	2	100.8	70	130	
Ag	107	3	115	1.011	ppb	3.779	1238	1	101.1	70	130	
Cd	111	3	115	1.076	ppb	8.806	197	1	107.6	70	130	
Sn	120	3	115	9.152	ppb	4.552	5520	10	91.5	70	130	
Sb	121	3	115	2.071	ppb	6.749	1206	2	103.5	70	130	
Ba	137	3	115	0.868	ppb	9.331	207	1	86.8	70	130	
Tl	205	3	193	0.973	ppb	5.098	3412	1	97.3	70	130	
(Pb)	206	3	193	0.973	ppb	5.306	1174	1	97.3	70	130	
(Pb)	207	3	193	0.947	ppb	3.697	1139	1	94.7	70	130	
Pb	208	3	193	0.953	ppb	3.190	4700	1	95.3	70	130	
Th	232	3	193	4.677	ppb	20.338	22513	1	467.7	70	130	>+/-30%
U	238	3	193	1.039	ppb	5.851	5505	1	103.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2819928	3.96	2822685	99.90	60	120	
Sc (IS)	45	3	HMI He	412109	0.78	416560	98.93	60	120	
Ge Internal standard	72	2	HMI H2	1713425	0.36	1735883	98.71	60	120	
Ge Internal standard	72	3	HMI He	502455	0.52	517264	97.14	60	120	
In Internal Standard	115	3	HMI He	1940857	0.57	1949413	99.56	60	120	
Ir (IS)	193	3	HMI He	4407607	0.84	4364581	100.99	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-F MS
Data File Name	061SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:35:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	36.474	ppb	36.474	7.69	1213	2000	
Na	23	3	45	32609.308	ppb	32609.308	3.73	2434754	400000	
Mg	24	3	45	4416.698	ppb	4416.698	2.93	176582	400000	
Al	27	3	45	815.712	ppb	815.712	0.97	12909	400000	
K	39	3	45	11140.107	ppb	11140.107	0.89	377354	400000	
Ca	40	2	45	14945.340	ppb	14945.340	0.94	6033411	400000	
V	51	3	72	41.038	ppb	41.038	0.89	18396	2000	
Cr	52	3	72	40.258	ppb	40.258	3.01	23338	5000	
Mn	55	3	72	45.938	ppb	45.938	2.67	13712	10000	
Fe	56	2	72	895.919	ppb	895.919	5.13	1035271	10000	
Co	59	3	72	39.293	ppb	39.293	2.48	35944	2000	
Ni	60	3	72	39.872	ppb	39.872	4.34	10532	5000	
Cu	63	3	72	40.556	ppb	40.556	1.03	28670	5000	
Zn	66	3	72	40.209	ppb	40.209	3.52	4843	5000	
As	75	3	72	39.058	ppb	39.058	2.77	3274	2000	
Se	78	2	72	39.306	ppb	39.306	5.06	1698	2000	
Sr	88	3	72	243.680	ppb	243.680	1.53	98826	4000	
Mo	95	3	115	47.153	ppb	47.153	2.22	16769	2000	
Ag	107	3	115	40.416	ppb	40.416	1.99	49063	100	
Cd	111	3	115	40.416	ppb	40.416	1.66	7085	2000	
Sn	120	3	115	39.995	ppb	39.995	2.34	22715	2000	
Sb	121	3	115	39.623	ppb	39.623	0.93	22561	1000	
Ba	137	3	115	83.064	ppb	83.064	4.66	15320	5000	
Tl	205	3	193	40.512	ppb	40.512	2.15	118440	2000	
(Pb)	206	3	193	40.121	ppb	40.121	3.17	39450	100	
(Pb)	207	3	193	39.868	ppb	39.868	1.95	34597	100	
Pb	208	3	193	40.257	ppb	40.257	2.88	158926	5000	
Th	232	3	193	39.847	ppb	39.847	1.45	156607	2000	
U	238	3	193	40.605	ppb	40.605	2.28	169917	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2867025	0.52	2822685	101.57	60	120	
Sc (IS)	45	3	HMI He	413698	1.86	416560	99.31	60	120	
Ge Internal standard	72	2	HMI H2	1790959	2.39	1735883	103.17	60	120	
Ge Internal standard	72	3	HMI He	527881	1.43	517264	102.05	60	120	
In Internal Standard	115	3	HMI He	1958816	1.40	1949413	100.48	60	120	
Ir (IS)	193	3	HMI He	4351500	1.35	4364581	99.70	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-1-A@10
Data File Name	062SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:37:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.059	ppb	0.059	413.51	7	2000	
Na	23	3	45	10948.940	ppb	10948.940	1.04	803678	400000	
Mg	24	3	45	7859.843	ppb	7859.843	1.37	304180	400000	
Al	27	3	45	22.063	ppb	22.063	28.48	397	400000	
K	39	3	45	529.511	ppb	529.511	4.78	38715	400000	
Ca	40	2	45	21320.503	ppb	21320.503	1.53	8306509	400000	
V	51	3	72	0.813	ppb	0.813	6.49	895	2000	
Cr	52	3	72	0.369	ppb	0.369	50.46	2054	5000	
Mn	55	3	72	41.296	ppb	41.296	5.91	11619	10000	
Fe	56	2	72	36.083	ppb	36.083	59.59	66507	10000	
Co	59	3	72	0.065	ppb	0.065	38.06	85	2000	
Ni	60	3	72	1.331	ppb	1.331	37.31	723	5000	
Cu	63	3	72	0.379	ppb	0.379	25.15	531	5000	
Zn	66	3	72	4.419	ppb	4.419	15.33	658	5000	
As	75	3	72	-0.023	ppb	-0.023	-18.32	35	2000	
Se	78	2	72	0.304	ppb	0.304	56.67	13	2000	
Sr	88	3	72	81.543	ppb	81.543	1.30	31148	4000	
Mo	95	3	115	0.232	ppb	0.232	62.85	107	2000	
Ag	107	3	115	0.033	ppb	0.033	21.61	60	100	
Cd	111	3	115	0.099	ppb	0.099	61.69	27	2000	
Sn	120	3	115	0.516	ppb	0.516	28.17	751	2000	
Sb	121	3	115	0.125	ppb	0.125	23.80	108	1000	
Ba	137	3	115	33.186	ppb	33.186	2.25	6000	5000	
Tl	205	3	193	0.024	ppb	0.024	83.73	595	2000	
(Pb)	206	3	193	0.594	ppb	0.594	5.50	771	100	
(Pb)	207	3	193	0.575	ppb	0.575	6.25	788	100	
Pb	208	3	193	0.601	ppb	0.601	2.43	3185	5000	
Th	232	3	193	2.481	ppb	2.481	11.99	13542	2000	
U	238	3	193	0.487	ppb	0.487	17.43	3071	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2768146	1.05	2822685	98.07	60	120	
Sc (IS)	45	3	HMI He	400564	0.75	416560	96.16	60	120	
Ge Internal standard	72	2	HMI H2	1710492	2.78	1735883	98.54	60	120	
Ge Internal standard	72	3	HMI He	496863	0.95	517264	96.06	60	120	
In Internal Standard	115	3	HMI He	1910593	1.05	1949413	98.01	60	120	
Ir (IS)	193	3	HMI He	4257229	1.67	4364581	97.54	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-2-A@10
Data File Name	063SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:39:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-228.58	3	2000	
Na	23	3	45	9163.447	ppb	9163.447	0.53	646680	400000	
Mg	24	3	45	7293.976	ppb	7293.976	1.30	270265	400000	
Al	27	3	45	9.476	ppb	9.476	29.80	197	400000	
K	39	3	45	526.978	ppb	526.978	2.44	36989	400000	
Ca	40	2	45	20885.985	ppb	20885.985	3.81	7913509	400000	
V	51	3	72	0.747	ppb	0.747	13.27	846	2000	
Cr	52	3	72	0.283	ppb	0.283	103.38	1961	5000	
Mn	55	3	72	2.297	ppb	2.297	7.49	803	10000	
Fe	56	2	72	13.489	ppb	13.489	11.32	41222	10000	
Co	59	3	72	0.042	ppb	0.042	6.95	63	2000	
Ni	60	3	72	0.694	ppb	0.694	35.35	556	5000	
Cu	63	3	72	0.443	ppb	0.443	15.08	560	5000	
Zn	66	3	72	4.840	ppb	4.840	13.75	686	5000	
As	75	3	72	0.339	ppb	0.339	22.62	62	2000	
Se	78	2	72	0.066	ppb	0.066	42.35	3	2000	
Sr	88	3	72	75.763	ppb	75.763	1.65	28218	4000	
Mo	95	3	115	0.086	ppb	0.086	57.91	53	2000	
Ag	107	3	115	0.019	ppb	0.019	75.04	42	100	
Cd	111	3	115	0.064	ppb	0.064	90.55	20	2000	
Sn	120	3	115	0.493	ppb	0.493	22.04	708	2000	
Sb	121	3	115	0.049	ppb	0.049	28.02	63	1000	
Ba	137	3	115	37.630	ppb	37.630	3.25	6515	5000	
Tl	205	3	193	-0.028	ppb	-0.028	-35.12	436	2000	
(Pb)	206	3	193	0.561	ppb	0.561	13.37	723	100	
(Pb)	207	3	193	0.493	ppb	0.493	3.88	703	100	
Pb	208	3	193	0.543	ppb	0.543	6.25	2895	5000	
Th	232	3	193	0.864	ppb	0.864	23.87	7330	2000	
U	238	3	193	0.485	ppb	0.485	1.92	2997	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2693032	1.69	2822685	95.41	60	120	
Sc (IS)	45	3	HMI He	383462	0.28	416560	92.05	60	120	
Ge Internal standard	72	2	HMI H2	1686093	0.95	1735883	97.13	60	120	
Ge Internal standard	72	3	HMI He	484513	0.82	517264	93.67	60	120	
In Internal Standard	115	3	HMI He	1830053	2.49	1949413	93.88	60	120	
Ir (IS)	193	3	HMI He	4160977	1.29	4364581	95.34	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-3-A@10
Data File Name	064SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:41:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.047	ppb	-0.047	-399.64	3	2000	
Na	23	3	45	18331.756	ppb	18331.756	0.67	1333309	400000	
Mg	24	3	45	10277.873	ppb	10277.873	0.68	397623	400000	
Al	27	3	45	6.054	ppb	6.054	69.34	153	400000	
K	39	3	45	645.461	ppb	645.461	3.10	42276	400000	
Ca	40	2	45	27425.656	ppb	27425.656	0.57	10670322	400000	
V	51	3	72	0.617	ppb	0.617	25.15	851	2000	
Cr	52	3	72	0.149	ppb	0.149	111.76	2031	5000	
Mn	55	3	72	4.052	ppb	4.052	8.87	1368	10000	
Fe	56	2	72	15.683	ppb	15.683	19.99	43057	10000	
Co	59	3	72	0.380	ppb	0.380	10.15	371	2000	
Ni	60	3	72	8.062	ppb	8.062	7.29	2432	5000	
Cu	63	3	72	0.618	ppb	0.618	10.29	720	5000	
Zn	66	3	72	4.545	ppb	4.545	10.71	701	5000	
As	75	3	72	0.060	ppb	0.060	313.06	43	2000	
Se	78	2	72	0.166	ppb	0.166	61.96	7	2000	
Sr	88	3	72	97.317	ppb	97.317	0.44	38834	4000	
Mo	95	3	115	0.146	ppb	0.146	27.37	78	2000	
Ag	107	3	115	0.007	ppb	0.007	178.15	30	100	
Cd	111	3	115	-0.018	ppb	-0.018	-245.30	7	2000	
Sn	120	3	115	0.370	ppb	0.370	28.60	685	2000	
Sb	121	3	115	0.074	ppb	0.074	21.97	82	1000	
Ba	137	3	115	53.418	ppb	53.418	2.38	9797	5000	
Tl	205	3	193	-0.037	ppb	-0.037	-48.57	441	2000	
(Pb)	206	3	193	0.839	ppb	0.839	10.27	1056	100	
(Pb)	207	3	193	0.794	ppb	0.794	14.07	1020	100	
Pb	208	3	193	0.816	ppb	0.816	2.43	4208	5000	
Th	232	3	193	0.374	ppb	0.374	21.53	5950	2000	
U	238	3	193	0.564	ppb	0.564	4.37	3550	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2765334	1.07	2822685	97.97	60	120	
Sc (IS)	45	3	HMI He	400471	0.30	416560	96.14	60	120	
Ge Internal standard	72	2	HMI H2	1668662	1.68	1735883	96.13	60	120	
Ge Internal standard	72	3	HMI He	519151	0.26	517264	100.36	60	120	
In Internal Standard	115	3	HMI He	1944202	1.88	1949413	99.73	60	120	
Ir (IS)	193	3	HMI He	4465923	2.30	4364581	102.32	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A@50
Data File Name	065SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:42:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.514	ppb	1.514	24.24	52	2000	
Na	23	3	45	788.957	ppb	788.957	1.19	74506	400000	
Mg	24	3	45	4622.204	ppb	4622.204	0.56	179285	400000	
Al	27	3	45	4894.869	ppb	4894.869	0.55	74825	400000	
K	39	3	45	186.012	ppb	186.012	29.99	28193	400000	
Ca	40	2	45	9454.950	ppb	9454.950	1.04	3659978	400000	
V	51	3	72	1.837	ppb	1.837	11.26	1338	2000	
Cr	52	3	72	0.239	ppb	0.239	78.51	2026	5000	
Mn	55	3	72	256.415	ppb	256.415	0.63	72530	10000	
Fe	56	2	72	26.260	ppb	26.260	10.34	56220	10000	
Co	59	3	72	12.563	ppb	12.563	0.55	11039	2000	
Ni	60	3	72	11.829	ppb	11.829	4.87	3287	5000	
Cu	63	3	72	0.337	ppb	0.337	20.12	513	5000	
Zn	66	3	72	64.222	ppb	64.222	2.98	7310	5000	
As	75	3	72	0.178	ppb	0.178	73.22	52	2000	
Se	78	2	72	0.398	ppb	0.398	53.79	17	2000	
Sr	88	3	72	66.460	ppb	66.460	1.23	25865	4000	
Mo	95	3	115	0.048	ppb	0.048	57.99	43	2000	
Ag	107	3	115	0.006	ppb	0.006	109.45	28	100	
Cd	111	3	115	0.166	ppb	0.166	56.37	38	2000	
Sn	120	3	115	0.333	ppb	0.333	10.75	658	2000	
Sb	121	3	115	0.031	ppb	0.031	51.02	57	1000	
Ba	137	3	115	0.097	ppb	0.097	227.38	65	5000	
Tl	205	3	193	-0.021	ppb	-0.021	-165.70	468	2000	
(Pb)	206	3	193	0.767	ppb	0.767	12.11	941	100	
(Pb)	207	3	193	0.726	ppb	0.726	5.18	918	100	
Pb	208	3	193	0.767	ppb	0.767	4.00	3835	5000	
Th	232	3	193	0.292	ppb	0.292	29.17	5380	2000	
U	238	3	193	2.140	ppb	2.140	5.28	9826	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2746390	1.31	2822685	97.30	60	120	
Sc (IS)	45	3	HMI He	401229	0.52	416560	96.32	60	120	
Ge Internal standard	72	2	HMI H2	1731407	0.44	1735883	99.74	60	120	
Ge Internal standard	72	3	HMI He	506174	0.16	517264	97.86	60	120	
In Internal Standard	115	3	HMI He	1925837	2.34	1949413	98.79	60	120	
Ir (IS)	193	3	HMI He	4271317	1.21	4364581	97.86	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A@50
Data File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:44:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.751	ppb	1.751	49.71	58	2000	
Na	23	3	45	1394.301	ppb	1394.301	0.74	117938	400000	
Mg	24	3	45	6835.384	ppb	6835.384	0.27	264811	400000	
Al	27	3	45	1906.617	ppb	1906.617	0.89	29159	400000	
K	39	3	45	368.811	ppb	368.811	9.58	33801	400000	
Ca	40	2	45	9691.083	ppb	9691.083	1.46	3764352	400000	
V	51	3	72	0.739	ppb	0.739	25.52	878	2000	
Cr	52	3	72	0.096	ppb	0.096	117.94	1946	5000	
Mn	55	3	72	340.497	ppb	340.497	1.06	95896	10000	
Fe	56	2	72	17.225	ppb	17.225	20.00	44737	10000	
Co	59	3	72	16.203	ppb	16.203	0.51	14177	2000	
Ni	60	3	72	14.161	ppb	14.161	2.73	3840	5000	
Cu	63	3	72	0.329	ppb	0.329	6.43	506	5000	
Zn	66	3	72	80.058	ppb	80.058	0.40	9035	5000	
As	75	3	72	0.053	ppb	0.053	486.24	42	2000	
Se	78	2	72	0.414	ppb	0.414	25.32	17	2000	
Sr	88	3	72	88.087	ppb	88.087	0.89	34149	4000	
Mo	95	3	115	0.079	ppb	0.079	86.94	53	2000	
Ag	107	3	115	0.009	ppb	0.009	259.22	32	100	
Cd	111	3	115	0.186	ppb	0.186	16.66	42	2000	
Sn	120	3	115	0.397	ppb	0.397	16.44	690	2000	
Sb	121	3	115	0.044	ppb	0.044	29.75	63	1000	
Ba	137	3	115	0.048	ppb	0.048	215.85	57	5000	
Tl	205	3	193	-0.026	ppb	-0.026	-54.38	456	2000	
(Pb)	206	3	193	0.748	ppb	0.748	6.51	928	100	
(Pb)	207	3	193	0.700	ppb	0.700	7.53	901	100	
Pb	208	3	193	0.756	ppb	0.756	2.22	3817	5000	
Th	232	3	193	0.134	ppb	0.134	41.28	4817	2000	
U	238	3	193	3.756	ppb	3.756	3.74	16529	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2756276	1.49	2822685	97.65	60	120	
Sc (IS)	45	3	HMI He	400916	0.34	416560	96.24	60	120	
Ge Internal standard	72	2	HMI H2	1670480	1.19	1735883	96.23	60	120	
Ge Internal standard	72	3	HMI He	504316	0.89	517264	97.50	60	120	
In Internal Standard	115	3	HMI He	1914984	3.60	1949413	98.23	60	120	
Ir (IS)	193	3	HMI He	4298115	0.40	4364581	98.48	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-3-A
Data File Name	067SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:46:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.102	ppb	-0.102	-91.40	2	2000	
Na	23	3	45	2203.236	ppb	2203.236	2.04	176855	400000	
Mg	24	3	45	7582.252	ppb	7582.252	1.18	295072	400000	
Al	27	3	45	1343.214	ppb	1343.214	7.87	20651	400000	
K	39	3	45	22122.535	ppb	22122.535	0.44	707383	400000	
Ca	40	2	45	46843.229	ppb	46843.229	1.29	18137855	400000	
V	51	3	72	4.582	ppb	4.582	3.37	2509	2000	
Cr	52	3	72	1.082	ppb	1.082	16.53	2484	5000	
Mn	55	3	72	23.862	ppb	23.862	2.70	7007	10000	
Fe	56	2	72	823.305	ppb	823.305	0.88	913913	10000	
Co	59	3	72	0.821	ppb	0.821	11.48	758	2000	
Ni	60	3	72	1.703	ppb	1.703	5.57	836	5000	
Cu	63	3	72	5.126	ppb	5.126	3.29	3770	5000	
Zn	66	3	72	5.116	ppb	5.116	15.41	756	5000	
As	75	3	72	1.372	ppb	1.372	6.59	148	2000	
Se	78	2	72	0.419	ppb	0.419	30.80	18	2000	
Sr	88	3	72	294.266	ppb	294.266	1.28	115828	4000	
Mo	95	3	115	2.624	ppb	2.624	1.04	933	2000	
Ag	107	3	115	0.010	ppb	0.010	66.80	33	100	
Cd	111	3	115	0.031	ppb	0.031	192.63	15	2000	
Sn	120	3	115	0.073	ppb	0.073	140.92	511	2000	
Sb	121	3	115	0.406	ppb	0.406	9.39	263	1000	
Ba	137	3	115	68.385	ppb	68.385	1.97	12286	5000	
Tl	205	3	193	-0.015	ppb	-0.015	-168.00	495	2000	
(Pb)	206	3	193	0.964	ppb	0.964	13.43	1148	100	
(Pb)	207	3	193	0.837	ppb	0.837	8.09	1030	100	
Pb	208	3	193	0.952	ppb	0.952	2.19	4628	5000	
Th	232	3	193	0.593	ppb	0.593	12.75	6620	2000	
U	238	3	193	4.452	ppb	4.452	0.46	19599	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2753302	0.83	2822685	97.54	60	120	
Sc (IS)	45	3	HMI He	402745	0.63	416560	96.68	60	120	
Ge Internal standard	72	2	HMI H2	1714922	0.50	1735883	98.79	60	120	
Ge Internal standard	72	3	HMI He	512290	0.38	517264	99.04	60	120	
In Internal Standard	115	3	HMI He	1906003	1.78	1949413	97.77	60	120	
Ir (IS)	193	3	HMI He	4344818	1.39	4364581	99.55	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-4-A@50
Data File Name	068SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:48:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.301	ppb	1.301	14.63	45	2000	
Na	23	3	45	826.903	ppb	826.903	2.09	77341	400000	
Mg	24	3	45	4851.080	ppb	4851.080	0.52	188434	400000	
Al	27	3	45	5153.367	ppb	5153.367	1.50	78885	400000	
K	39	3	45	209.655	ppb	209.655	16.82	28956	400000	
Ca	40	2	45	9831.038	ppb	9831.038	0.21	3753917	400000	
V	51	3	72	1.787	ppb	1.787	5.22	1321	2000	
Cr	52	3	72	0.658	ppb	0.658	87.43	2246	5000	
Mn	55	3	72	270.532	ppb	270.532	0.85	76774	10000	
Fe	56	2	72	31.466	ppb	31.466	6.54	61253	10000	
Co	59	3	72	13.110	ppb	13.110	0.65	11557	2000	
Ni	60	3	72	12.463	ppb	12.463	6.33	3454	5000	
Cu	63	3	72	0.599	ppb	0.599	6.34	691	5000	
Zn	66	3	72	67.508	ppb	67.508	3.72	7700	5000	
As	75	3	72	0.135	ppb	0.135	74.00	48	2000	
Se	78	2	72	0.306	ppb	0.306	17.83	13	2000	
Sr	88	3	72	69.410	ppb	69.410	0.56	27105	4000	
Mo	95	3	115	0.023	ppb	0.023	183.85	35	2000	
Ag	107	3	115	0.001	ppb	0.001	177.87	23	100	
Cd	111	3	115	0.153	ppb	0.153	38.30	37	2000	
Sn	120	3	115	0.227	ppb	0.227	71.88	608	2000	
Sb	121	3	115	0.029	ppb	0.029	33.55	57	1000	
Ba	137	3	115	0.234	ppb	0.234	35.30	92	5000	
Tl	205	3	193	-0.027	ppb	-0.027	-74.24	453	2000	
(Pb)	206	3	193	0.766	ppb	0.766	4.33	943	100	
(Pb)	207	3	193	0.752	ppb	0.752	13.60	943	100	
Pb	208	3	193	0.772	ppb	0.772	2.12	3867	5000	
Th	232	3	193	0.022	ppb	0.022	303.30	4385	2000	
U	238	3	193	2.193	ppb	2.193	3.17	10081	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2709247	1.35	2822685	95.98	60	120	
Sc (IS)	45	3	HMI He	401829	0.86	416560	96.46	60	120	
Ge Internal standard	72	2	HMI H2	1714464	2.36	1735883	98.77	60	120	
Ge Internal standard	72	3	HMI He	507904	0.69	517264	98.19	60	120	
In Internal Standard	115	3	HMI He	1952634	0.80	1949413	100.17	60	120	
Ir (IS)	193	3	HMI He	4286961	0.52	4364581	98.22	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	069_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:49:58-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	46.612	ppb	9.228	1431	50	93.2	90	110	
Na	23	3	45	49796.539	ppb	1.411	3592038	51000	97.6	90	110	
Mg	24	3	45	10519.825	ppb	1.628	407057	11000	95.6	90	110	
Al	27	3	45	995.290	ppb	2.061	15237	1000	99.5	90	110	
K	39	3	45	10832.330	ppb	2.076	355894	11000	98.5	90	110	
Ca	40	2	45	10492.117	ppb	2.132	4187439	11000	95.4	90	110	
V	51	3	72	51.552	ppb	0.520	21579	50	103.1	90	110	
Cr	52	3	72	52.834	ppb	1.521	28213	50	105.7	90	110	
Mn	55	3	72	51.834	ppb	2.378	14522	50	103.7	90	110	
Fe	56	2	72	1068.952	ppb	1.293	1147990	1000	106.9	90	110	
Co	59	3	72	51.936	ppb	0.387	44644	50	103.9	90	110	
Ni	60	3	72	52.770	ppb	2.801	12975	50	105.5	90	110	
Cu	63	3	72	51.967	ppb	0.501	34449	50	103.9	90	110	
Zn	66	3	72	52.941	ppb	4.145	5938	50	105.9	90	110	
As	75	3	72	52.923	ppb	3.438	4157	50	105.8	90	110	
Se	78	2	72	52.314	ppb	3.691	2109	50	104.6	90	110	
Sr	88	3	72	104.107	ppb	1.310	39705	100	104.1	90	110	
Mo	95	3	115	51.180	ppb	2.153	17981	50	102.4	90	110	
Ag	107	3	115	49.465	ppb	0.601	59334	50	98.9	90	110	
Cd	111	3	115	51.657	ppb	2.947	8944	50	103.3	90	110	
Sn	120	3	115	49.236	ppb	2.055	27520	50	98.5	90	110	
Sb	121	3	115	49.474	ppb	1.996	27822	50	98.9	90	110	
Ba	137	3	115	48.550	ppb	2.320	8870	50	97.1	90	110	
Tl	205	3	193	50.264	ppb	1.969	145004	50	100.5	90	110	
(Pb)	206	3	193	49.443	ppb	3.145	47962	50	98.9	90	110	
(Pb)	207	3	193	50.104	ppb	1.545	42866	50	100.2	90	110	
Pb	208	3	193	50.185	ppb	2.785	195443	50	100.4	90	110	
Th	232	3	193	49.650	ppb	1.737	191646	50	99.3	90	110	
U	238	3	193	50.272	ppb	2.862	207487	50	100.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2832232	0.19	2822685	100.34	60	120	
Sc (IS)	45	3	HMI He	400538	0.53	416560	96.15	60	120	
Ge Internal standard	72	2	HMI H2	1670877	2.04	1735883	96.26	60	120	
Ge Internal standard	72	3	HMI He	496180	0.34	517264	95.92	60	120	
In Internal Standard	115	3	HMI He	1935384	1.26	1949413	99.28	60	120	
Ir (IS)	193	3	HMI He	4298045	2.00	4364581	98.48	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	070_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:51:45-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.102	ppb	-91.1	2	0.5	
Na	23	3	45	27.703	ppb	13.9	19784	25	>RL
Mg	24	3	45	-0.812	ppb	-114.4	190	25	
Al	27	3	45	-0.736	ppb	-84.8	50	15	
K	39	3	45	36.995	ppb	74.8	23617	50	
V	51	3	72	0.621	ppb	39.9	821	1	
Cr	52	3	72	0.218	ppb	165.1	1987	1	
Mn	55	3	72	0.014	ppb	1389.3	192	0.5	
Co	59	3	72	0.011	ppb	85.1	38	0.5	
Ni	60	3	72	-0.079	ppb	-117.1	388	1	
Cu	63	3	72	0.005	ppb	1564.3	287	1	
Zn	66	3	72	-0.170	ppb	-71.4	158	5	
As	75	3	72	0.018	ppb	921.4	38	1	
Se	78	2	72	0.081	ppb	59.1	4	1	
Sr	88	3	72	0.002	ppb	1279.9	23	0.5	
Mo	95	3	115	0.020	ppb	82.3	33	0.5	
Ag	107	3	115	-0.004	ppb	-256.0	17	1	
Cd	111	3	115	0.001	ppb	102.3	10	0.5	
Sn	120	3	115	0.091	ppb	43.0	525	1	
Sb	121	3	115	0.028	ppb	140.7	55	0.6	
Ba	137	3	115	-0.145	ppb	-12.4	22	0.5	
Tl	205	3	193	-0.037	ppb	-57.5	423	0.1	
(Pb)	206	3	193	-0.046	ppb	-84.0	160	1	
(Pb)	207	3	193	0.018	ppb	390.9	322	1	
Pb	208	3	193	-0.007	ppb	-121.8	853	0.5	
Th	232	3	193	1.816	ppb	7.5	11133	1	>RL
U	238	3	193	0.028	ppb	204.4	1213	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2775669	0.60	2822685	98.33	60	120	
Sc (IS)	45	3	HMI He	401565	0.98	416560	96.40	60	120	
Ge Internal standard	72	2	HMI H2	1698682	1.86	1735883	97.86	60	120	
Ge Internal standard	72	3	HMI He	499458	1.10	517264	96.56	60	120	
In Internal Standard	115	3	HMI He	1922999	1.67	1949413	98.65	60	120	
Ir (IS)	193	3	HMI He	4284982	1.45	4364581	98.18	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7695100
Data File Name	071LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:53:35-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.874	ppb	53.724	32	1	87.4	70	130	
Na	23	3	45	322.907	ppb	2.680	41131	300	107.6	70	130	
Mg	24	3	45	49.051	ppb	4.324	2129	50	98.1	70	130	
Al	27	3	45	50.868	ppb	11.484	841	50	101.7	70	130	
K	39	3	45	119.047	ppb	17.929	26211	120	99.2	70	130	
Ca	40	2	45	200.578	ppb	2.667	89080	200	100.3	70	130	
V	51	3	72	5.158	ppb	5.435	2712	5	103.2	70	130	
Cr	52	3	72	2.208	ppb	4.355	3021	2	110.4	70	130	
Mn	55	3	72	0.815	ppb	35.325	420	1	81.5	70	130	
Fe	56	2	72	54.684	ppb	5.240	83520	50	109.4	70	130	
Co	59	3	72	0.999	ppb	12.200	903	1	99.9	70	130	
Ni	60	3	72	1.999	ppb	9.167	896	2	100.0	70	130	
Cu	63	3	72	1.937	ppb	4.888	1583	2	96.9	70	130	
Zn	66	3	72	9.258	ppb	2.295	1204	10	92.6	70	130	
As	75	3	72	5.099	ppb	6.707	441	5	102.0	70	130	
Se	78	2	72	4.694	ppb	5.405	189	5	93.9	70	130	
Sr	88	3	72	5.018	ppb	5.088	1969	5	100.4	70	130	
Mo	95	3	115	2.079	ppb	8.300	755	2	104.0	70	130	
Ag	107	3	115	1.063	ppb	9.103	1294	1	106.3	70	130	
Cd	111	3	115	0.927	ppb	21.047	170	1	92.7	70	130	
Sn	120	3	115	8.735	ppb	4.191	5267	10	87.3	70	130	
Sb	121	3	115	1.780	ppb	14.773	1038	2	89.0	70	130	
Ba	137	3	115	0.644	ppb	17.171	165	1	64.4	70	130	>+/-30%
Tl	205	3	193	0.930	ppb	2.393	3195	1	93.0	70	130	
(Pb)	206	3	193	0.926	ppb	15.514	1096	1	92.6	70	130	
(Pb)	207	3	193	1.029	ppb	12.220	1178	1	102.9	70	130	
Pb	208	3	193	0.980	ppb	5.383	4671	1	98.0	70	130	
Th	232	3	193	1.921	ppb	15.031	11528	1	192.1	70	130	>+/-30%
U	238	3	193	0.975	ppb	5.437	5092	1	97.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2790309	2.33	2822685	98.85	60	120	
Sc (IS)	45	3	HMI He	402569	0.26	416560	96.64	60	120	
Ge Internal standard	72	2	HMI H2	1660122	1.04	1735883	95.64	60	120	
Ge Internal standard	72	3	HMI He	504981	0.42	517264	97.63	60	120	
In Internal Standard	115	3	HMI He	1932114	0.53	1949413	99.11	60	120	
Ir (IS)	193	3	HMI He	4284999	0.30	4364581	98.18	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609331/1-A
Data File Name	072_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:55:25-06:00
Sample Type	Blank
Dilution	1
Comment	609331 6020a
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.050	ppb	-182.6349503	3	0.5
Na	23	3	45	76.212	ppb	20.77109417	23573	25
Mg	24	3	45	0.737	ppb	76.19010197	254	25
Al	27	3	45	4.181	ppb	84.9886898	127	15
K	39	3	45	-7.112	ppb	-337.0980046	22541	50
Ca	40	2	45	0.997	ppb	56.31798813	10995	200
V	51	3	72	0.608	ppb	21.2753141	823	1
Cr	52	3	72	0.102	ppb	284.9344377	1948	1
Mn	55	3	72	0.522	ppb	3.844809162	337	0.5
Fe	56	2	72	3.687	ppb	53.87298946	31431	50
Co	59	3	72	0.010	ppb	83.72943382	38	0.5
Ni	60	3	72	0.079	ppb	317.692829	430	1
Cu	63	3	72	0.043	ppb	45.3397273	315	1
Zn	66	3	72	-0.213	ppb	-97.34985781	155	5
As	75	3	72	0.223	ppb	74.75853492	55	1
(Se)	78	3	72	-4.548	ppb	-56.96513906	22	1
Sr	88	3	72	0.010	ppb	319.6594019	27	0.5
Mo	95	3	115	0.036	ppb	146.2379167	38	0.5
Ag	107	3	115	-0.002	ppb	-287.1478144	18	1
Cd	111	3	115	0.002	ppb	1696.631081	10	0.5
Sn	120	3	115	0.104	ppb	76.82929521	528	1
Sb	121	3	115	-0.022	ppb	-122.4494963	27	0.6
Ba	137	3	115	-0.013	ppb	-466.4088873	45	0.5
Tl	205	3	193	-0.070	ppb	-2.459608917	337	0.1
(Pb)	206	3	193	-0.046	ppb	-63.17073298	163	1
(Pb)	207	3	193	-0.060	ppb	-96.95268116	260	1
Pb	208	3	193	-0.032	ppb	-41.20089161	776	0.5
Th	232	3	193	-0.033	ppb	-117.6639841	4265	1
U	238	3	193	0.020	ppb	119.674889	1208	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2832001	1.58	2822685	100.33	60	120	
Sc (IS)	45	3	HMI He	406744	0.74	416560	97.64	60	120	
Ge Internal standard	72	2	HMI H2	1718635	2.19	1735883	99.01	60	120	
Ge Internal standard	72	3	HMI He	504006	0.06	517264	97.44	60	120	
In Internal Standard	115	3	HMI He	1907238	2.39	1949413	97.84	60	120	
Ir (IS)	193	3	HMI He	4378245	1.62	4364581	100.31	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609331/2-A
Data File Name	073_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:57:14-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609331 6020a
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	35.965	35.965	ppb	3.722	1131	40	89.9	80	120	
Na	23	3	45	944.671	944.671	ppb	2.056	86345	40	2361.7	80	120	>+/-20%
Mg	24	3	45	740.309	740.309	ppb	1.312	29119	40	1850.8	80	120	>+/-20%
Al	27	3	45	795.746	795.746	ppb	3.567	12311	40	1989.4	80	120	>+/-20%
K	39	3	45	812.307	812.307	ppb	6.028	47853	40	2030.8	80	120	>+/-20%
Ca	40	2	45	845.495	845.495	ppb	2.113	344035	40	2113.7	80	120	>+/-20%
V	51	3	72	40.247	40.247	ppb	3.245	17446	40	100.6	80	120	
Cr	52	3	72	41.126	41.126	ppb	0.832	22999	40	102.8	80	120	
Mn	55	3	72	41.338	41.338	ppb	1.951	11943	40	103.3	80	120	
Fe	56	2	72	812.932	812.932	ppb	1.722	895075	40	2032.3	80	120	>+/-20%
(Fe)	56	3	72	792.207	792.207	ppb	0.228	363706	40	1980.5	80	120	>+/-20%
Co	59	3	72	39.553	39.553	ppb	0.521	34957	40	98.9	80	120	
Ni	60	3	72	39.577	39.577	ppb	1.867	10107	40	98.9	80	120	
Cu	63	3	72	41.234	41.234	ppb	1.308	28156	40	103.1	80	120	
Zn	66	3	72	41.062	41.062	ppb	4.198	4775	40	102.7	80	120	
As	75	3	72	40.623	40.623	ppb	1.818	3289	40	101.6	80	120	
Se	78	2	72	42.686	42.686	ppb	1.531	1752	40	106.7	80	120	
(Se)	78	3	72	34.391	34.391	ppb	12.397	213	40	86.0	80	120	
Sr	88	3	72	79.682	79.682	ppb	2.382	31240	40	199.2	80	120	>+/-20%
Mo	95	3	115	38.409	38.409	ppb	1.328	13712	40	96.0	80	120	
Ag	107	3	115	39.461	39.461	ppb	0.854	48055	40	98.7	80	120	
Cd	111	3	115	39.207	39.207	ppb	6.073	6890	40	98.0	80	120	
Sn	120	3	115	37.315	37.315	ppb	2.927	21288	40	93.3	80	120	
Sb	121	3	115	38.690	38.690	ppb	1.529	22099	40	96.7	80	120	
Ba	137	3	115	39.126	39.126	ppb	2.497	7267	40	97.8	80	120	
Tl	205	3	193	39.300	39.300	ppb	0.959	114444	40	98.2	80	120	
(Pb)	206	3	193	39.605	39.605	ppb	0.750	38788	40	99.0	80	120	
(Pb)	207	3	193	39.179	39.179	ppb	0.619	33867	40	97.9	80	120	
Pb	208	3	193	39.541	39.541	ppb	0.386	155493	40	98.9	80	120	
Th	232	3	193	37.698	37.698	ppb	0.503	147776	40	94.2	80	120	
U	238	3	193	39.754	39.754	ppb	0.618	165706	40	99.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2806646	1.09	2822685	99.43	60	120	
Sc (IS)	45	3	HMI He	404272	1.18	416560	97.05	60	120	
Ge Internal standard	72	2	HMI H2	1700806	2.26	1735883	97.98	60	120	
Ge Internal standard	72	3	HMI He	510027	0.47	517264	98.60	60	120	
In Internal Standard	115	3	HMI He	1964881	2.21	1949413	100.79	60	120	
Ir (IS)	193	3	HMI He	4333028	0.51	4364581	99.28	60	120	

Sample Report

Sample Table

Sample Name	280-174490-A-16-C
Data File Name	074SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T17:59:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.005	ppb	0.005	3029.89	5	2000	
Na	23	3	45	16630.321	ppb	16630.321	1.58	1220077	400000	
Mg	24	3	45	27134.319	ppb	27134.319	3.76	1057085	400000	
Al	27	3	45	880.441	ppb	880.441	2.69	13584	400000	
K	39	3	45	1610.887	ppb	1610.887	1.21	72529	400000	
Ca	40	2	45	44489.344	ppb	44489.344	0.37	17519082	400000	
V	51	3	72	2.080	ppb	2.080	7.97	1453	2000	
Cr	52	3	72	1.508	ppb	1.508	25.82	2697	5000	
Mn	55	3	72	1145.675	ppb	1145.675	0.37	326570	10000	
Fe	56	2	72	8754.869	ppb	8754.869	3.74	9609475	10000	
Co	59	3	72	2.141	ppb	2.141	2.89	1924	2000	
Ni	60	3	72	22.799	ppb	22.799	4.91	6012	5000	
Cu	63	3	72	0.971	ppb	0.971	2.95	948	5000	
Zn	66	3	72	4.938	ppb	4.938	14.99	735	5000	
As	75	3	72	1.813	ppb	1.813	18.80	183	2000	
Se	78	2	72	0.111	ppb	0.111	25.43	5	2000	
Sr	88	3	72	54.351	ppb	54.351	2.12	21363	4000	
Mo	95	3	115	1.307	ppb	1.307	8.00	478	2000	
Ag	107	3	115	0.000	ppb	0.000	3495.48	22	100	
Cd	111	3	115	0.060	ppb	0.060	128.72	20	2000	
Sn	120	3	115	0.242	ppb	0.242	27.03	603	2000	
Sb	121	3	115	0.116	ppb	0.116	16.23	103	1000	
Ba	137	3	115	100.473	ppb	100.473	0.47	18052	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-13.77	353	2000	
(Pb)	206	3	193	0.448	ppb	0.448	16.47	645	100	
(Pb)	207	3	193	0.358	ppb	0.358	11.47	618	100	
Pb	208	3	193	0.433	ppb	0.433	6.59	2590	5000	
Th	232	3	193	2.229	ppb	2.229	11.55	12857	2000	
U	238	3	193	0.173	ppb	0.173	17.42	1831	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2799924	1.66	2822685	99.19	60	120	
Sc (IS)	45	3	HMI He	403425	0.88	416560	96.85	60	120	
Ge Internal standard	72	2	HMI H2	1743186	1.66	1735883	100.42	60	120	
Ge Internal standard	72	3	HMI He	511123	0.25	517264	98.81	60	120	
In Internal Standard	115	3	HMI He	1908539	1.50	1949413	97.90	60	120	
Ir (IS)	193	3	HMI He	4343828	0.80	4364581	99.52	60	120	

Sample Report

Sample Table

Sample Name	280-174490-A-16-Csd@5
Data File Name	075SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:00:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.008	ppb	0.008	3627.33	5	2000	
Na	23	3	45	3195.147	ppb	3195.147	0.40	248883	400000	
Mg	24	3	45	5443.409	ppb	5443.409	0.79	212273	400000	
Al	27	3	45	198.463	ppb	198.463	4.36	3110	400000	
K	39	3	45	331.880	ppb	331.880	12.28	32875	400000	
Ca	40	2	45	9378.012	ppb	9378.012	1.39	3681741	400000	
V	51	3	72	0.915	ppb	0.915	12.46	956	2000	
Cr	52	3	72	0.298	ppb	0.298	98.44	2061	5000	
Mn	55	3	72	236.745	ppb	236.745	0.90	67135	10000	
Fe	56	2	72	1828.156	ppb	1828.156	2.45	1985548	10000	
Co	59	3	72	0.393	ppb	0.393	11.51	375	2000	
Ni	60	3	72	5.245	ppb	5.245	5.54	1691	5000	
Cu	63	3	72	0.285	ppb	0.285	14.36	480	5000	
Zn	66	3	72	4.867	ppb	4.867	3.84	721	5000	
As	75	3	72	0.511	ppb	0.511	30.36	78	2000	
Se	78	2	72	0.112	ppb	0.112	64.22	5	2000	
Sr	88	3	72	10.955	ppb	10.955	3.85	4292	4000	
Mo	95	3	115	0.274	ppb	0.274	29.98	123	2000	
Ag	107	3	115	0.004	ppb	0.004	122.97	27	100	
Cd	111	3	115	0.010	ppb	0.010	605.94	12	2000	
Sn	120	3	115	0.200	ppb	0.200	18.74	590	2000	
Sb	121	3	115	-0.008	ppb	-0.008	-206.83	35	1000	
Ba	137	3	115	21.459	ppb	21.459	3.62	3955	5000	
Tl	205	3	193	-0.064	ppb	-0.064	-19.76	345	2000	
(Pb)	206	3	193	0.558	ppb	0.558	5.92	740	100	
(Pb)	207	3	193	0.580	ppb	0.580	3.14	795	100	
Pb	208	3	193	0.533	ppb	0.533	6.17	2930	5000	
Th	232	3	193	0.702	ppb	0.702	17.86	6917	2000	
U	238	3	193	0.054	ppb	0.054	24.30	1316	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2785406	1.58	2822685	98.68	60	120	
Sc (IS)	45	3	HMI He	403455	0.89	416560	96.85	60	120	
Ge Internal standard	72	2	HMI H2	1706596	1.99	1735883	98.31	60	120	
Ge Internal standard	72	3	HMI He	507342	0.40	517264	98.08	60	120	
In Internal Standard	115	3	HMI He	1939677	2.54	1949413	99.50	60	120	
Ir (IS)	193	3	HMI He	4269567	0.54	4364581	97.82	60	120	

Sample Report

Sample Table

Sample Name	280-174490-A-16-D MS
Data File Name	076SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:02:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.027	ppb	40.027	3.55	1243	2000	
Na	23	3	45	16962.471	ppb	16962.471	3.26	1242120	400000	
Mg	24	3	45	27882.998	ppb	27882.998	1.94	1084955	400000	
Al	27	3	45	1733.329	ppb	1733.329	3.05	26639	400000	
K	39	3	45	2415.401	ppb	2415.401	1.27	97340	400000	
Ca	40	2	45	45102.488	ppb	45102.488	2.60	17538554	400000	
V	51	3	72	42.266	ppb	42.266	0.56	18500	2000	
Cr	52	3	72	42.702	ppb	42.702	1.89	24079	5000	
Mn	55	3	72	1170.183	ppb	1170.183	0.65	336645	10000	
Fe	56	2	72	9248.087	ppb	9248.087	2.16	9901859	10000	
Co	59	3	72	41.835	ppb	41.835	1.24	37393	2000	
Ni	60	3	72	61.848	ppb	61.848	2.98	15739	5000	
Cu	63	3	72	42.732	ppb	42.732	0.29	29503	5000	
Zn	66	3	72	46.734	ppb	46.734	3.34	5472	5000	
As	75	3	72	41.802	ppb	41.802	1.92	3422	2000	
Se	78	2	72	43.526	ppb	43.526	1.36	1787	2000	
Sr	88	3	72	133.738	ppb	133.738	1.09	53021	4000	
Mo	95	3	115	41.787	ppb	41.787	2.06	14390	2000	
Ag	107	3	115	41.937	ppb	41.937	1.13	49289	100	
Cd	111	3	115	41.349	ppb	41.349	2.03	7018	2000	
Sn	120	3	115	40.586	ppb	40.586	2.66	22311	2000	
Sb	121	3	115	40.852	ppb	40.852	0.36	22519	1000	
Ba	137	3	115	141.610	ppb	141.610	1.93	25258	5000	
Tl	205	3	193	40.978	ppb	40.978	1.91	117805	2000	
(Pb)	206	3	193	41.309	ppb	41.309	2.64	39946	100	
(Pb)	207	3	193	40.931	ppb	40.931	1.81	34921	100	
Pb	208	3	193	41.548	ppb	41.548	2.08	161274	5000	
Th	232	3	193	39.913	ppb	39.913	1.76	154236	2000	
U	238	3	193	41.067	ppb	41.067	1.13	168995	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2765864	2.24	2822685	97.99	60	120	
Sc (IS)	45	3	HMI He	402883	1.56	416560	96.72	60	120	
Ge Internal standard	72	2	HMI H2	1701004	1.70	1735883	97.99	60	120	
Ge Internal standard	72	3	HMI He	515875	0.47	517264	99.73	60	120	
In Internal Standard	115	3	HMI He	1896275	0.89	1949413	97.27	60	120	
Ir (IS)	193	3	HMI He	4279166	1.62	4364581	98.04	60	120	

Sample Report

Sample Table

Sample Name	280-174490-A-16-E MSD
Data File Name	077SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:04:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	43.535	ppb	43.535	13.04	1348	2000	
Na	23	3	45	16541.614	ppb	16541.614	3.38	1209515	400000	
Mg	24	3	45	27338.525	ppb	27338.525	2.41	1061297	400000	
Al	27	3	45	1731.316	ppb	1731.316	3.89	26552	400000	
K	39	3	45	2350.004	ppb	2350.004	1.85	95109	400000	
Ca	40	2	45	43955.109	ppb	43955.109	0.62	17252957	400000	
V	51	3	72	41.163	ppb	41.163	2.52	17833	2000	
Cr	52	3	72	42.502	ppb	42.502	0.77	23712	5000	
Mn	55	3	72	1142.747	ppb	1142.747	0.69	325130	10000	
Fe	56	2	72	9177.974	ppb	9177.974	2.24	9927409	10000	
Co	59	3	72	41.859	ppb	41.859	1.40	37003	2000	
Ni	60	3	72	61.608	ppb	61.608	2.97	15506	5000	
Cu	63	3	72	40.860	ppb	40.860	2.48	27911	5000	
Zn	66	3	72	46.134	ppb	46.134	4.54	5343	5000	
As	75	3	72	40.862	ppb	40.862	2.72	3309	2000	
Se	78	2	72	41.442	ppb	41.442	1.49	1719	2000	
Sr	88	3	72	131.681	ppb	131.681	0.11	51630	4000	
Mo	95	3	115	40.773	ppb	40.773	4.46	14105	2000	
Ag	107	3	115	40.368	ppb	40.368	5.12	47649	100	
Cd	111	3	115	40.373	ppb	40.373	4.96	6882	2000	
Sn	120	3	115	39.024	ppb	39.024	3.38	21573	2000	
Sb	121	3	115	40.014	ppb	40.014	4.93	22152	1000	
Ba	137	3	115	138.628	ppb	138.628	3.25	24848	5000	
Tl	205	3	193	40.083	ppb	40.083	0.74	115142	2000	
(Pb)	206	3	193	40.897	ppb	40.897	1.31	39507	100	
(Pb)	207	3	193	40.073	ppb	40.073	0.51	34166	100	
Pb	208	3	193	40.641	ppb	40.641	1.41	157638	5000	
Th	232	3	193	40.934	ppb	40.934	1.70	157927	2000	
U	238	3	193	40.264	ppb	40.264	1.31	165556	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2790771	0.44	2822685	98.87	60	120	
Sc (IS)	45	3	HMI He	401994	0.65	416560	96.50	60	120	
Ge Internal standard	72	2	HMI H2	1718085	1.03	1735883	98.97	60	120	
Ge Internal standard	72	3	HMI He	510171	0.27	517264	98.63	60	120	
In Internal Standard	115	3	HMI He	1906911	4.07	1949413	97.82	60	120	
Ir (IS)	193	3	HMI He	4274835	0.72	4364581	97.94	60	120	

Sample Report

Sample Table

Sample Name	280-174490-A-16-C pds
Data File Name	078SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:06:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	94.194	ppb	94.194	5.91	2892	2000	
Na	23	3	45	21513.656	ppb	21513.656	1.61	1564031	400000	
Mg	24	3	45	28711.045	ppb	28711.045	1.08	1112052	400000	
Al	27	3	45	2926.448	ppb	2926.448	1.50	44743	400000	
K	39	3	45	3734.743	ppb	3734.743	2.04	137583	400000	
Ca	40	2	45	45665.406	ppb	45665.406	0.88	18055024	400000	
V	51	3	72	99.790	ppb	99.790	1.18	42388	2000	
Cr	52	3	72	102.502	ppb	102.502	1.75	54451	5000	
Mn	55	3	72	1232.257	ppb	1232.257	0.69	350424	10000	
Fe	56	2	72	9622.737	ppb	9622.737	1.80	10267676	10000	
Co	59	3	72	100.363	ppb	100.363	0.62	88639	2000	
Ni	60	3	72	120.201	ppb	120.201	1.88	29846	5000	
Cu	63	3	72	101.677	ppb	101.677	1.31	68994	5000	
Zn	66	3	72	209.206	ppb	209.206	1.01	23582	5000	
As	75	3	72	102.564	ppb	102.564	2.59	8245	2000	
Se	78	2	72	101.371	ppb	101.371	2.52	4148	2000	
Sr	88	3	72	151.539	ppb	151.539	0.95	59386	4000	
Mo	95	3	115	101.740	ppb	101.740	2.79	35350	2000	
Ag	107	3	115	26.720	ppb	26.720	1.71	31727	100	
Cd	111	3	115	100.821	ppb	100.821	1.63	17269	2000	
Sn	120	3	115	98.252	ppb	98.252	1.58	53880	2000	
Sb	121	3	115	95.861	ppb	95.861	3.14	53310	1000	
Ba	137	3	115	198.765	ppb	198.765	0.88	35794	5000	
Tl	205	3	193	96.582	ppb	96.582	2.88	283569	2000	
(Pb)	206	3	193	96.059	ppb	96.059	2.75	94822	100	
(Pb)	207	3	193	95.087	ppb	95.087	1.30	82676	100	
Pb	208	3	193	96.061	ppb	96.061	2.22	380678	5000	
Th	232	3	193	107.145	ppb	107.145	2.48	416581	2000	
U	238	3	193	200.138	ppb	200.138	2.18	839017	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2811359	1.02	2822685	99.60	60	120	
Sc (IS)	45	3	HMI He	401083	0.40	416560	96.28	60	120	
Ge Internal standard	72	2	HMI H2	1695291	1.90	1735883	97.66	60	120	
Ge Internal standard	72	3	HMI He	509942	0.27	517264	98.58	60	120	
In Internal Standard	115	3	HMI He	1915564	2.05	1949413	98.26	60	120	
Ir (IS)	193	3	HMI He	4382948	2.47	4364581	100.42	60	120	

Sample Report

Sample Table

Sample Name	280-175202-A-1-A
Data File Name	079SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:08:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.100	ppb	-0.100	-96.43	2	2000	
Na	23	3	45	9816.569	ppb	9816.569	1.04	719638	400000	
Mg	24	3	45	4598.386	ppb	4598.386	3.08	177356	400000	
Al	27	3	45	21.901	ppb	21.901	26.91	394	400000	
K	39	3	45	2024.557	ppb	2024.557	3.52	84414	400000	
Ca	40	2	45	17510.448	ppb	17510.448	1.46	6792185	400000	
V	51	3	72	1.886	ppb	1.886	18.88	1368	2000	
Cr	52	3	72	0.453	ppb	0.453	49.38	2151	5000	
Mn	55	3	72	5.670	ppb	5.670	4.00	1804	10000	
Fe	56	2	72	97.800	ppb	97.800	2.33	133424	10000	
Co	59	3	72	0.076	ppb	0.076	31.46	97	2000	
Ni	60	3	72	0.405	ppb	0.405	4.87	515	5000	
Cu	63	3	72	0.757	ppb	0.757	6.79	801	5000	
Zn	66	3	72	1.633	ppb	1.633	15.95	363	5000	
As	75	3	72	36.339	ppb	36.339	2.34	2946	2000	
Se	78	2	72	0.096	ppb	0.096	28.98	5	2000	
Sr	88	3	72	125.019	ppb	125.019	0.12	49002	4000	
Mo	95	3	115	3.804	ppb	3.804	6.92	1354	2000	
Ag	107	3	115	0.011	ppb	0.011	35.75	35	100	
Cd	111	3	115	0.020	ppb	0.020	332.08	13	2000	
Sn	120	3	115	0.599	ppb	0.599	14.08	803	2000	
Sb	121	3	115	0.481	ppb	0.481	8.27	308	1000	
Ba	137	3	115	54.922	ppb	54.922	2.33	9975	5000	
Tl	205	3	193	-0.022	ppb	-0.022	-33.65	466	2000	
(Pb)	206	3	193	0.077	ppb	0.077	45.56	278	100	
(Pb)	207	3	193	0.089	ppb	0.089	44.22	381	100	
Pb	208	3	193	0.098	ppb	0.098	10.25	1261	5000	
Th	232	3	193	3.374	ppb	3.374	6.70	17000	2000	
U	238	3	193	0.207	ppb	0.207	6.60	1944	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2755299	0.71	2822685	97.61	60	120	
Sc (IS)	45	3	HMI He	399065	1.15	416560	95.80	60	120	
Ge Internal standard	72	2	HMI H2	1724089	0.41	1735883	99.32	60	120	
Ge Internal standard	72	3	HMI He	509986	1.00	517264	98.59	60	120	
In Internal Standard	115	3	HMI He	1925183	0.45	1949413	98.76	60	120	
Ir (IS)	193	3	HMI He	4284805	2.67	4364581	98.17	60	120	

Sample Report

Sample Table

Sample Name	280-175202-A-4-A
Data File Name	080SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:09:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.050	ppb	-0.050	-185.36	3	2000	
Na	23	3	45	16094.155	ppb	16094.155	1.06	1175743	400000	
Mg	24	3	45	3972.526	ppb	3972.526	1.71	154184	400000	
Al	27	3	45	15.439	ppb	15.439	14.68	297	400000	
K	39	3	45	1196.083	ppb	1196.083	1.11	59374	400000	
Ca	40	2	45	15892.967	ppb	15892.967	2.17	6233989	400000	
V	51	3	72	6.923	ppb	6.923	7.54	3439	2000	
Cr	52	3	72	1.797	ppb	1.797	13.00	2807	5000	
Mn	55	3	72	0.574	ppb	0.574	42.76	352	10000	
Fe	56	2	72	20.151	ppb	20.151	15.24	49384	10000	
Co	59	3	72	0.062	ppb	0.062	30.59	83	2000	
Ni	60	3	72	5.324	ppb	5.324	11.18	1699	5000	
Cu	63	3	72	0.916	ppb	0.916	16.06	898	5000	
Zn	66	3	72	0.690	ppb	0.690	4.91	255	5000	
As	75	3	72	5.469	ppb	5.469	14.71	470	2000	
Se	78	2	72	0.414	ppb	0.414	37.55	18	2000	
Sr	88	3	72	123.392	ppb	123.392	1.52	47815	4000	
Mo	95	3	115	1.568	ppb	1.568	10.52	570	2000	
Ag	107	3	115	-0.008	ppb	-0.008	-108.94	12	100	
Cd	111	3	115	-0.047	ppb	-0.047	-35.73	2	2000	
Sn	120	3	115	0.066	ppb	0.066	208.58	508	2000	
Sb	121	3	115	0.137	ppb	0.137	17.81	115	1000	
Ba	137	3	115	60.367	ppb	60.367	2.46	10879	5000	
Tl	205	3	193	-0.075	ppb	-0.075	-4.29	317	2000	
(Pb)	206	3	193	0.242	ppb	0.242	13.55	440	100	
(Pb)	207	3	193	0.318	ppb	0.318	13.01	578	100	
Pb	208	3	193	0.275	ppb	0.275	8.44	1952	5000	
Th	232	3	193	1.166	ppb	1.166	18.67	8740	2000	
U	238	3	193	1.358	ppb	1.358	5.88	6688	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2786927	2.58	2822685	98.73	60	120	
Sc (IS)	45	3	HMI He	401468	1.23	416560	96.38	60	120	
Ge Internal standard	72	2	HMI H2	1726503	2.10	1735883	99.46	60	120	
Ge Internal standard	72	3	HMI He	504226	0.67	517264	97.48	60	120	
In Internal Standard	115	3	HMI He	1911129	0.57	1949413	98.04	60	120	
Ir (IS)	193	3	HMI He	4305558	2.22	4364581	98.65	60	120	

Sample Report

Sample Table

Sample Name	280-175202-A-5-A
Data File Name	081SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:11:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.047	ppb	-0.047	-199.13	3	2000	
Na	23	3	45	15435.298	ppb	15435.298	2.35	1128420	400000	
Mg	24	3	45	5693.918	ppb	5693.918	1.18	221001	400000	
Al	27	3	45	71.968	ppb	71.968	11.98	1161	400000	
K	39	3	45	1366.189	ppb	1366.189	2.69	64640	400000	
Ca	40	2	45	21488.276	ppb	21488.276	2.56	8406248	400000	
V	51	3	72	7.762	ppb	7.762	6.48	3834	2000	
Cr	52	3	72	8.852	ppb	8.852	7.00	6462	5000	
Mn	55	3	72	3.684	ppb	3.684	15.63	1239	10000	
Fe	56	2	72	127.972	ppb	127.972	2.28	165554	10000	
Co	59	3	72	0.078	ppb	0.078	60.57	98	2000	
Ni	60	3	72	1.028	ppb	1.028	1.75	668	5000	
Cu	63	3	72	1.387	ppb	1.387	9.84	1228	5000	
Zn	66	3	72	4.532	ppb	4.532	11.79	688	5000	
As	75	3	72	4.598	ppb	4.598	12.91	406	2000	
Se	78	2	72	0.290	ppb	0.290	36.01	13	2000	
Sr	88	3	72	167.014	ppb	167.014	1.57	65538	4000	
Mo	95	3	115	0.488	ppb	0.488	30.15	195	2000	
Ag	107	3	115	0.002	ppb	0.002	690.66	23	100	
Cd	111	3	115	0.021	ppb	0.021	161.59	13	2000	
Sn	120	3	115	0.045	ppb	0.045	196.14	495	2000	
Sb	121	3	115	0.119	ppb	0.119	69.51	105	1000	
Ba	137	3	115	75.998	ppb	75.998	3.42	13634	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-13.33	348	2000	
(Pb)	206	3	193	0.198	ppb	0.198	35.88	395	100	
(Pb)	207	3	193	0.200	ppb	0.200	15.20	473	100	
Pb	208	3	193	0.224	ppb	0.224	10.43	1744	5000	
Th	232	3	193	0.594	ppb	0.594	21.45	6513	2000	
U	238	3	193	5.736	ppb	5.736	3.27	24489	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2780449	1.59	2822685	98.50	60	120	
Sc (IS)	45	3	HMI He	401571	0.95	416560	96.40	60	120	
Ge Internal standard	72	2	HMI H2	1719001	1.64	1735883	99.03	60	120	
Ge Internal standard	72	3	HMI He	510716	1.47	517264	98.73	60	120	
In Internal Standard	115	3	HMI He	1903917	0.60	1949413	97.67	60	120	
Ir (IS)	193	3	HMI He	4269974	1.74	4364581	97.83	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	082_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:13:26-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.457	ppb	9.359	1479	50	96.9	90	110	
Na	23	3	45	49823.422	ppb	0.667	3590989	51000	97.7	90	110	
Mg	24	3	45	10549.280	ppb	1.641	407851	11000	95.9	90	110	
Al	27	3	45	991.760	ppb	3.405	15170	1000	99.2	90	110	
K	39	3	45	10715.881	ppb	0.488	352033	11000	97.4	90	110	
Ca	40	2	45	10744.442	ppb	0.463	4198004	11000	97.7	90	110	
V	51	3	72	53.355	ppb	4.309	21970	50	106.7	90	110	
Cr	52	3	72	54.001	ppb	3.050	28358	50	108.0	90	110	
Mn	55	3	72	51.562	ppb	2.988	14227	50	103.1	90	110	
Fe	56	2	72	1067.805	ppb	2.366	1123620	1000	106.8	90	110	
Co	59	3	72	52.093	ppb	2.541	44098	50	104.2	90	110	
Ni	60	3	72	51.810	ppb	3.597	12551	50	103.6	90	110	
Cu	63	3	72	52.672	ppb	2.936	34382	50	105.3	90	110	
Zn	66	3	72	53.334	ppb	2.591	5890	50	106.7	90	110	
As	75	3	72	53.035	ppb	3.787	4102	50	106.1	90	110	
Se	78	2	72	51.259	ppb	4.627	2025	50	102.5	90	110	
Sr	88	3	72	105.575	ppb	1.035	39656	100	105.6	90	110	
Mo	95	3	115	50.723	ppb	0.776	17699	50	101.4	90	110	
Ag	107	3	115	50.024	ppb	3.348	59560	50	100.0	90	110	
Cd	111	3	115	50.880	ppb	0.481	8750	50	101.8	90	110	
Sn	120	3	115	49.851	ppb	1.669	27663	50	99.7	90	110	
Sb	121	3	115	49.588	ppb	1.838	27690	50	99.2	90	110	
Ba	137	3	115	48.784	ppb	3.654	8847	50	97.6	90	110	
Tl	205	3	193	50.137	ppb	2.882	143984	50	100.3	90	110	
(Pb)	206	3	193	49.932	ppb	3.444	48214	50	99.9	90	110	
(Pb)	207	3	193	49.602	ppb	2.170	42246	50	99.2	90	110	
Pb	208	3	193	49.998	ppb	2.980	193833	50	100.0	90	110	
Th	232	3	193	50.071	ppb	2.042	192363	50	100.1	90	110	
U	238	3	193	49.994	ppb	2.827	205458	50	100.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2772885	1.07	2822685	98.24	60	120	
Sc (IS)	45	3	HMI He	400210	0.08	416560	96.07	60	120	
Ge Internal standard	72	2	HMI H2	1637389	1.91	1735883	94.33	60	120	
Ge Internal standard	72	3	HMI He	488751	1.69	517264	94.49	60	120	
In Internal Standard	115	3	HMI He	1922058	2.45	1949413	98.60	60	120	
Ir (IS)	193	3	HMI He	4279166	2.66	4364581	98.04	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	083_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:15:15-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.156	ppb	0.0	0	0.5	
Na	23	3	45	43.505	ppb	21.5	20679	25	>RL
Mg	24	3	45	0.461	ppb	164.5	237	25	
Al	27	3	45	4.390	ppb	38.4	127	15	
K	39	3	45	17.740	ppb	239.7	22748	50	
V	51	3	72	1.575	ppb	10.7	1199	1	>RL
Cr	52	3	72	0.340	ppb	112.6	2027	1	
Mn	55	3	72	-0.041	ppb	-340.9	175	0.5	
Co	59	3	72	0.023	ppb	96.6	48	0.5	
Ni	60	3	72	0.269	ppb	78.7	466	1	
Cu	63	3	72	0.004	ppb	816.9	283	1	
Zn	66	3	72	-0.754	ppb	-12.4	93	5	
As	75	3	72	0.259	ppb	80.4	57	1	
Se	78	2	72	0.101	ppb	29.0	5	1	
Sr	88	3	72	0.016	ppb	265.8	28	0.5	
Mo	95	3	115	0.038	ppb	4.2	40	0.5	
Ag	107	3	115	0.011	ppb	34.3	35	1	
Cd	111	3	115	0.020	ppb	85.9	13	0.5	
Sn	120	3	115	0.050	ppb	200.8	505	1	
Sb	121	3	115	0.001	ppb	3872.8	40	0.6	
Ba	137	3	115	-0.091	ppb	-74.1	32	0.5	
Tl	205	3	193	-0.059	ppb	-22.4	365	0.1	
(Pb)	206	3	193	-0.036	ppb	-65.0	172	1	
(Pb)	207	3	193	-0.088	ppb	-72.4	233	1	
Pb	208	3	193	-0.025	ppb	-79.9	793	0.5	
Th	232	3	193	1.952	ppb	8.9	11748	1	>RL
U	238	3	193	0.005	ppb	74.7	1129	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2725652	2.56	2822685	96.56	60	120	
Sc (IS)	45	3	HMI He	396869	0.36	416560	95.27	60	120	
Ge Internal standard	72	2	HMI H2	1653247	0.72	1735883	95.24	60	120	
Ge Internal standard	72	3	HMI He	494204	0.26	517264	95.54	60	120	
In Internal Standard	115	3	HMI He	1932198	1.39	1949413	99.12	60	120	
Ir (IS)	193	3	HMI He	4323093	0.61	4364581	99.05	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7695100
Data File Name	084LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:17:03-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.901	ppb	29.808	32	1	90.1	70	130	
Na	23	3	45	322.101	ppb	2.265	40793	300	107.4	70	130	
Mg	24	3	45	49.338	ppb	8.199	2126	50	98.7	70	130	
Al	27	3	45	48.180	ppb	9.804	794	50	96.4	70	130	
K	39	3	45	115.352	ppb	41.448	25917	120	96.1	70	130	
Ca	40	2	45	198.720	ppb	1.989	86539	200	99.4	70	130	
V	51	3	72	6.236	ppb	3.575	3109	5	124.7	70	130	
Cr	52	3	72	2.133	ppb	5.777	2934	2	106.6	70	130	
Mn	55	3	72	0.984	ppb	2.453	460	1	98.4	70	130	
Fe	56	2	72	55.152	ppb	2.452	83843	50	110.3	70	130	
Co	59	3	72	1.030	ppb	11.304	915	1	103.0	70	130	
Ni	60	3	72	2.117	ppb	17.179	910	2	105.9	70	130	
Cu	63	3	72	2.004	ppb	8.434	1601	2	100.2	70	130	
Zn	66	3	72	9.208	ppb	4.033	1179	10	92.1	70	130	
As	75	3	72	5.145	ppb	14.851	438	5	102.9	70	130	
Se	78	2	72	5.417	ppb	9.694	217	5	108.3	70	130	
Sr	88	3	72	4.896	ppb	6.636	1891	5	97.9	70	130	
Mo	95	3	115	2.015	ppb	5.634	735	2	100.8	70	130	
Ag	107	3	115	0.905	ppb	11.671	1108	1	90.5	70	130	
Cd	111	3	115	0.732	ppb	36.730	137	1	73.2	70	130	
Sn	120	3	115	8.758	ppb	4.291	5295	10	87.6	70	130	
Sb	121	3	115	1.962	ppb	8.556	1143	2	98.1	70	130	
Ba	137	3	115	0.925	ppb	15.437	217	1	92.5	70	130	
Tl	205	3	193	0.883	ppb	3.686	3019	1	88.3	70	130	
(Pb)	206	3	193	0.964	ppb	1.447	1118	1	96.4	70	130	
(Pb)	207	3	193	0.879	ppb	11.913	1036	1	87.9	70	130	
Pb	208	3	193	0.901	ppb	4.962	4305	1	90.1	70	130	
Th	232	3	193	2.573	ppb	12.065	13794	1	257.3	70	130	>+/-30%
U	238	3	193	1.003	ppb	2.525	5134	1	100.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2732239	1.38	2822685	96.80	60	120	
Sc (IS)	45	3	HMI He	399813	0.24	416560	95.98	60	120	
Ge Internal standard	72	2	HMI H2	1656669	0.99	1735883	95.44	60	120	
Ge Internal standard	72	3	HMI He	496853	0.68	517264	96.05	60	120	
In Internal Standard	115	3	HMI He	1937721	0.45	1949413	99.40	60	120	
Ir (IS)	193	3	HMI He	4226099	0.67	4364581	96.83	60	120	

Sample Report

Sample Table

Sample Name	280-175202-A-6-A
Data File Name	085SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:18:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.102	ppb	-0.102	-91.49	2	2000	
Na	23	3	45	15737.059	ppb	15737.059	1.73	1150258	400000	
Mg	24	3	45	5861.741	ppb	5861.741	1.20	227484	400000	
Al	27	3	45	23.284	ppb	23.284	14.44	417	400000	
K	39	3	45	2155.107	ppb	2155.107	1.79	88993	400000	
Ca	40	2	45	22166.819	ppb	22166.819	0.71	8727357	400000	
V	51	3	72	3.994	ppb	3.994	11.48	2272	2000	
Cr	52	3	72	0.940	ppb	0.940	21.96	2422	5000	
Mn	55	3	72	2.141	ppb	2.141	7.22	808	10000	
Fe	56	2	72	31.975	ppb	31.975	6.95	60854	10000	
Co	59	3	72	0.045	ppb	0.045	25.72	70	2000	
Ni	60	3	72	0.237	ppb	0.237	63.62	478	5000	
Cu	63	3	72	0.539	ppb	0.539	13.14	660	5000	
Zn	66	3	72	0.879	ppb	0.879	37.01	282	5000	
As	75	3	72	4.356	ppb	4.356	7.76	390	2000	
Se	78	2	72	0.248	ppb	0.248	76.28	11	2000	
Sr	88	3	72	148.922	ppb	148.922	2.29	58906	4000	
Mo	95	3	115	0.753	ppb	0.753	6.30	297	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-20.55	20	100	
Cd	111	3	115	-0.019	ppb	-0.019	-169.04	7	2000	
Sn	120	3	115	0.067	ppb	0.067	107.44	525	2000	
Sb	121	3	115	0.054	ppb	0.054	47.71	72	1000	
Ba	137	3	115	83.025	ppb	83.025	2.32	15428	5000	
Tl	205	3	193	-0.080	ppb	-0.080	-8.33	295	2000	
(Pb)	206	3	193	0.128	ppb	0.128	20.63	323	100	
(Pb)	207	3	193	0.106	ppb	0.106	43.88	390	100	
Pb	208	3	193	0.120	ppb	0.120	19.50	1324	5000	
Th	232	3	193	0.076	ppb	0.076	96.29	4517	2000	
U	238	3	193	3.551	ppb	3.551	4.04	15397	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2797575	1.92	2822685	99.11	60	120	
Sc (IS)	45	3	HMI He	401571	0.62	416560	96.40	60	120	
Ge Internal standard	72	2	HMI H2	1688599	2.32	1735883	97.28	60	120	
Ge Internal standard	72	3	HMI He	514782	1.17	517264	99.52	60	120	
In Internal Standard	115	3	HMI He	1973253	2.03	1949413	101.22	60	120	
Ir (IS)	193	3	HMI He	4220354	1.40	4364581	96.70	60	120	

Sample Report

Sample Table

Sample Name	280-175202-A-7-A
Data File Name	086SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:20:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.101	ppb	-0.101	-94.12	2	2000	
Na	23	3	45	13070.641	ppb	13070.641	0.89	960038	400000	
Mg	24	3	45	3851.786	ppb	3851.786	0.71	149811	400000	
Al	27	3	45	4.056	ppb	4.056	24.37	123	400000	
K	39	3	45	1803.828	ppb	1803.828	5.17	78269	400000	
Ca	40	2	45	13886.482	ppb	13886.482	1.03	5464871	400000	
V	51	3	72	6.101	ppb	6.101	5.98	3160	2000	
Cr	52	3	72	1.171	ppb	1.171	24.66	2541	5000	
Mn	55	3	72	0.312	ppb	0.312	16.58	283	10000	
Fe	56	2	72	4.365	ppb	4.365	28.50	32772	10000	
Co	59	3	72	0.004	ppb	0.004	435.58	33	2000	
Ni	60	3	72	0.247	ppb	0.247	133.19	480	5000	
Cu	63	3	72	0.405	ppb	0.405	37.30	568	5000	
Zn	66	3	72	1.513	ppb	1.513	19.62	353	5000	
As	75	3	72	9.322	ppb	9.322	10.85	791	2000	
Se	78	2	72	0.491	ppb	0.491	48.42	21	2000	
Sr	88	3	72	100.413	ppb	100.413	0.49	39705	4000	
Mo	95	3	115	2.144	ppb	2.144	5.52	780	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-139.95	13	100	
Cd	111	3	115	0.001	ppb	0.001	5104.82	10	2000	
Sn	120	3	115	0.141	ppb	0.141	73.34	556	2000	
Sb	121	3	115	0.087	ppb	0.087	16.22	88	1000	
Ba	137	3	115	43.424	ppb	43.424	2.16	7945	5000	
Tl	205	3	193	-0.100	ppb	-0.100	-0.88	242	2000	
(Pb)	206	3	193	0.046	ppb	0.046	62.20	248	100	
(Pb)	207	3	193	0.017	ppb	0.017	418.24	320	100	
Pb	208	3	193	0.049	ppb	0.049	34.81	1069	5000	
Th	232	3	193	-0.033	ppb	-0.033	-164.44	4165	2000	
U	238	3	193	1.104	ppb	1.104	0.93	5605	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2794682	2.91	2822685	99.01	60	120	
Sc (IS)	45	3	HMI He	402248	0.72	416560	96.56	60	120	
Ge Internal standard	72	2	HMI H2	1750152	1.57	1735883	100.82	60	120	
Ge Internal standard	72	3	HMI He	514450	1.33	517264	99.46	60	120	
In Internal Standard	115	3	HMI He	1936775	0.31	1949413	99.35	60	120	
Ir (IS)	193	3	HMI He	4273067	0.16	4364581	97.90	60	120	

Sample Report

Sample Table

Sample Name	280-175202-A-8-A
Data File Name	087SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:22:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.048	ppb	-0.048	-382.96	3	2000	
Na	23	3	45	13028.151	ppb	13028.151	1.50	969146	400000	
Mg	24	3	45	3797.473	ppb	3797.473	2.00	149565	400000	
Al	27	3	45	12.373	ppb	12.373	44.86	254	400000	
K	39	3	45	1769.407	ppb	1769.407	1.67	78201	400000	
Ca	40	2	45	14142.211	ppb	14142.211	1.07	5506325	400000	
V	51	3	72	5.983	ppb	5.983	2.53	3087	2000	
Cr	52	3	72	1.314	ppb	1.314	9.76	2594	5000	
Mn	55	3	72	1.377	ppb	1.377	18.39	583	10000	
Fe	56	2	72	9.594	ppb	9.594	21.42	37502	10000	
Co	59	3	72	0.019	ppb	0.019	110.22	47	2000	
Ni	60	3	72	0.437	ppb	0.437	43.27	523	5000	
Cu	63	3	72	0.399	ppb	0.399	26.58	560	5000	
Zn	66	3	72	8.707	ppb	8.707	18.03	1154	5000	
As	75	3	72	8.724	ppb	8.724	2.39	736	2000	
Se	78	2	72	0.631	ppb	0.631	57.51	27	2000	
Sr	88	3	72	101.277	ppb	101.277	1.57	39716	4000	
Mo	95	3	115	2.496	ppb	2.496	5.61	905	2000	
Ag	107	3	115	-0.004	ppb	-0.004	-45.77	17	100	
Cd	111	3	115	0.000	ppb	0.000	13368.42	10	2000	
Sn	120	3	115	-0.067	ppb	-0.067	-154.71	441	2000	
Sb	121	3	115	0.121	ppb	0.121	46.29	108	1000	
Ba	137	3	115	44.790	ppb	44.790	2.06	8213	5000	
Tl	205	3	193	-0.094	ppb	-0.094	-6.43	262	2000	
(Pb)	206	3	193	0.050	ppb	0.050	66.83	253	100	
(Pb)	207	3	193	0.091	ppb	0.091	30.02	383	100	
Pb	208	3	193	0.073	ppb	0.073	25.55	1168	5000	
Th	232	3	193	-0.097	ppb	-0.097	-73.42	3940	2000	
U	238	3	193	1.057	ppb	1.057	3.95	5432	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2764805	0.94	2822685	97.95	60	120	
Sc (IS)	45	3	HMI He	407357	0.92	416560	97.79	60	120	
Ge Internal standard	72	2	HMI H2	1704702	0.85	1735883	98.20	60	120	
Ge Internal standard	72	3	HMI He	510246	1.47	517264	98.64	60	120	
In Internal Standard	115	3	HMI He	1942116	3.43	1949413	99.63	60	120	
Ir (IS)	193	3	HMI He	4289365	2.36	4364581	98.28	60	120	

Sample Report

Sample Table

Sample Name	280-175202-A-9-A
Data File Name	088SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:24:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.047	ppb	-0.047	-201.16	3	2000	
Na	23	3	45	32366.593	ppb	32366.593	0.76	2342999	400000	
Mg	24	3	45	15039.645	ppb	15039.645	1.43	582254	400000	
Al	27	3	45	13.280	ppb	13.280	9.47	264	400000	
K	39	3	45	1862.213	ppb	1862.213	2.92	79799	400000	
Ca	40	2	45	52912.100	ppb	52912.100	0.87	20307809	400000	
V	51	3	72	5.585	ppb	5.585	3.14	2937	2000	
Cr	52	3	72	16.259	ppb	16.259	1.13	10319	5000	
Mn	55	3	72	106.534	ppb	106.534	1.76	30672	10000	
Fe	56	2	72	1847.126	ppb	1847.126	1.63	2003213	10000	
Co	59	3	72	2.675	ppb	2.675	3.76	2407	2000	
Ni	60	3	72	82.205	ppb	82.205	1.56	20678	5000	
Cu	63	3	72	9.892	ppb	9.892	2.45	7020	5000	
Zn	66	3	72	9.499	ppb	9.499	9.34	1251	5000	
As	75	3	72	5.878	ppb	5.878	10.04	511	2000	
Se	78	2	72	0.487	ppb	0.487	30.82	21	2000	
Sr	88	3	72	391.696	ppb	391.696	0.96	154479	4000	
Mo	95	3	115	1.033	ppb	1.033	2.68	386	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-641.23	20	100	
Cd	111	3	115	0.021	ppb	0.021	326.71	13	2000	
Sn	120	3	115	0.209	ppb	0.209	31.98	590	2000	
Sb	121	3	115	0.231	ppb	0.231	10.10	168	1000	
Ba	137	3	115	163.124	ppb	163.124	1.46	29507	5000	
Tl	205	3	193	-0.106	ppb	-0.106	-7.96	228	2000	
(Pb)	206	3	193	0.232	ppb	0.232	21.52	430	100	
(Pb)	207	3	193	0.183	ppb	0.183	36.60	461	100	
Pb	208	3	193	0.235	ppb	0.235	12.88	1794	5000	
Th	232	3	193	-0.141	ppb	-0.141	-42.75	3774	2000	
U	238	3	193	60.995	ppb	60.995	4.05	251327	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2729238	0.70	2822685	96.69	60	120	
Sc (IS)	45	3	HMI He	400877	1.54	416560	96.23	60	120	
Ge Internal standard	72	2	HMI H2	1703907	0.67	1735883	98.16	60	120	
Ge Internal standard	72	3	HMI He	513317	0.35	517264	99.24	60	120	
In Internal Standard	115	3	HMI He	1923600	1.73	1949413	98.68	60	120	
Ir (IS)	193	3	HMI He	4296313	2.59	4364581	98.44	60	120	

Sample Report

Sample Table

Sample Name	280-175202-A-14-A
Data File Name	089SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:26:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.048	ppb	-0.048	-196.74	3	2000	
Na	23	3	45	32126.922	ppb	32126.922	0.51	2351851	400000	
Mg	24	3	45	17117.314	ppb	17117.314	0.98	670170	400000	
Al	27	3	45	6.594	ppb	6.594	16.29	163	400000	
K	39	3	45	8489.344	ppb	8489.344	1.48	287188	400000	
Ca	40	2	45	58413.031	ppb	58413.031	1.58	22918418	400000	
V	51	3	72	1.963	ppb	1.963	10.42	1399	2000	
Cr	52	3	72	0.749	ppb	0.749	33.97	2301	5000	
Mn	55	3	72	2407.975	ppb	2407.975	0.62	684115	10000	
Fe	56	2	72	9738.429	ppb	9738.429	0.92	10418206	10000	
Co	59	3	72	10.653	ppb	10.653	2.97	9429	2000	
Ni	60	3	72	7.693	ppb	7.693	1.52	2297	5000	
Cu	63	3	72	0.763	ppb	0.763	8.65	805	5000	
Zn	66	3	72	2.945	ppb	2.945	10.65	510	5000	
As	75	3	72	26.449	ppb	26.449	4.25	2152	2000	
Se	78	2	72	0.162	ppb	0.162	74.90	7	2000	
Sr	88	3	72	435.127	ppb	435.127	0.87	170358	4000	
Mo	95	3	115	1.927	ppb	1.927	1.66	713	2000	
Ag	107	3	115	-0.011	ppb	-0.011	-76.11	8	100	
Cd	111	3	115	-0.001	ppb	-0.001	-4450.90	10	2000	
Sn	120	3	115	-0.111	ppb	-0.111	-156.27	423	2000	
Sb	121	3	115	0.031	ppb	0.031	108.66	58	1000	
Ba	137	3	115	344.219	ppb	344.219	2.38	63514	5000	
Tl	205	3	193	-0.090	ppb	-0.090	-18.61	272	2000	
(Pb)	206	3	193	0.087	ppb	0.087	81.17	288	100	
(Pb)	207	3	193	0.064	ppb	0.064	54.58	361	100	
Pb	208	3	193	0.075	ppb	0.075	34.55	1174	5000	
Th	232	3	193	-0.153	ppb	-0.153	-57.09	3732	2000	
U	238	3	193	0.298	ppb	0.298	5.64	2327	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2790119	0.40	2822685	98.85	60	120	
Sc (IS)	45	3	HMI He	405393	1.18	416560	97.32	60	120	
Ge Internal standard	72	2	HMI H2	1699507	1.33	1735883	97.90	60	120	
Ge Internal standard	72	3	HMI He	509596	0.42	517264	98.52	60	120	
In Internal Standard	115	3	HMI He	1964373	2.66	1949413	100.77	60	120	
Ir (IS)	193	3	HMI He	4297020	1.29	4364581	98.45	60	120	

Sample Report

Sample Table

Sample Name	280-175202-B-1-A
Data File Name	090SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:27:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.156	ppb	-0.156	0.00	0	2000	
Na	23	3	45	9935.926	ppb	9935.926	2.83	737203	400000	
Mg	24	3	45	4612.643	ppb	4612.643	0.53	180133	400000	
Al	27	3	45	3.372	ppb	3.372	11.81	113	400000	
K	39	3	45	2020.691	ppb	2020.691	2.59	85347	400000	
Ca	40	2	45	17881.864	ppb	17881.864	0.92	6937754	400000	
V	51	3	72	2.471	ppb	2.471	7.08	1613	2000	
Cr	52	3	72	0.392	ppb	0.392	58.91	2119	5000	
Mn	55	3	72	1.112	ppb	1.112	15.47	508	10000	
Fe	56	2	72	22.228	ppb	22.228	15.25	50328	10000	
Co	59	3	72	0.025	ppb	0.025	26.24	52	2000	
Ni	60	3	72	0.535	ppb	0.535	73.93	546	5000	
Cu	63	3	72	0.741	ppb	0.741	8.71	790	5000	
Zn	66	3	72	0.874	ppb	0.874	17.17	278	5000	
As	75	3	72	37.582	ppb	37.582	4.06	3044	2000	
Se	78	2	72	0.115	ppb	0.115	23.38	5	2000	
Sr	88	3	72	128.114	ppb	128.114	0.41	50194	4000	
Mo	95	3	115	3.618	ppb	3.618	5.87	1298	2000	
Ag	107	3	115	-0.011	ppb	-0.011	-43.69	8	100	
Cd	111	3	115	0.010	ppb	0.010	160.84	12	2000	
Sn	120	3	115	-0.093	ppb	-0.093	-196.99	428	2000	
Sb	121	3	115	0.220	ppb	0.220	23.25	163	1000	
Ba	137	3	115	53.944	ppb	53.944	1.54	9865	5000	
Tl	205	3	193	-0.103	ppb	-0.103	-4.42	232	2000	
(Pb)	206	3	193	0.043	ppb	0.043	20.82	242	100	
(Pb)	207	3	193	-0.039	ppb	-0.039	-101.36	268	100	
Pb	208	3	193	0.002	ppb	0.002	1082.20	875	5000	
Th	232	3	193	-0.193	ppb	-0.193	-8.21	3512	2000	
U	238	3	193	0.239	ppb	0.239	5.88	2044	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2756168	2.11	2822685	97.64	60	120	
Sc (IS)	45	3	HMI He	403971	0.30	416560	96.98	60	120	
Ge Internal standard	72	2	HMI H2	1681953	1.45	1735883	96.89	60	120	
Ge Internal standard	72	3	HMI He	509784	0.37	517264	98.55	60	120	
In Internal Standard	115	3	HMI He	1938327	0.72	1949413	99.43	60	120	
Ir (IS)	193	3	HMI He	4211763	0.86	4364581	96.50	60	120	

Sample Report

Sample Table

Sample Name	280-175202-B-4-A
Data File Name	091SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:29:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.156	ppb	-0.156	0.00	0	2000	
Na	23	3	45	15670.798	ppb	15670.798	3.15	1152887	400000	
Mg	24	3	45	3887.854	ppb	3887.854	1.38	151946	400000	
Al	27	3	45	2.066	ppb	2.066	78.69	93	400000	
K	39	3	45	1238.285	ppb	1238.285	2.29	61087	400000	
Ca	40	2	45	16267.781	ppb	16267.781	1.58	6255998	400000	
V	51	3	72	7.378	ppb	7.378	3.15	3667	2000	
Cr	52	3	72	1.659	ppb	1.659	13.30	2766	5000	
Mn	55	3	72	0.175	ppb	0.175	110.64	242	10000	
Fe	56	2	72	5.408	ppb	5.408	40.89	33073	10000	
Co	59	3	72	0.038	ppb	0.038	6.07	63	2000	
Ni	60	3	72	5.431	ppb	5.431	4.67	1744	5000	
Cu	63	3	72	0.536	ppb	0.536	13.40	651	5000	
Zn	66	3	72	0.489	ppb	0.489	83.71	235	5000	
As	75	3	72	5.146	ppb	5.146	16.26	450	2000	
Se	78	2	72	0.533	ppb	0.533	13.25	23	2000	
Sr	88	3	72	122.095	ppb	122.095	1.34	47812	4000	
Mo	95	3	115	1.520	ppb	1.520	4.26	565	2000	
Ag	107	3	115	-0.008	ppb	-0.008	-58.27	12	100	
Cd	111	3	115	-0.019	ppb	-0.019	-236.12	7	2000	
Sn	120	3	115	-0.174	ppb	-0.174	-30.37	386	2000	
Sb	121	3	115	0.089	ppb	0.089	42.02	90	1000	
Ba	137	3	115	57.693	ppb	57.693	2.30	10626	5000	
Tl	205	3	193	-0.103	ppb	-0.103	-10.57	233	2000	
(Pb)	206	3	193	0.023	ppb	0.023	111.05	225	100	
(Pb)	207	3	193	-0.002	ppb	-0.002	-61.24	302	100	
Pb	208	3	193	0.028	ppb	0.028	49.35	981	5000	
Th	232	3	193	-0.174	ppb	-0.174	-17.95	3604	2000	
U	238	3	193	1.408	ppb	1.408	4.98	6788	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2731288	0.55	2822685	96.76	60	120	
Sc (IS)	45	3	HMI He	404164	0.74	416560	97.02	60	120	
Ge Internal standard	72	2	HMI H2	1707971	1.11	1735883	98.39	60	120	
Ge Internal standard	72	3	HMI He	509555	1.39	517264	98.51	60	120	
In Internal Standard	115	3	HMI He	1952352	1.21	1949413	100.15	60	120	
Ir (IS)	193	3	HMI He	4240082	2.75	4364581	97.15	60	120	

Sample Report

Sample Table

Sample Name	280-175202-B-5-A
Data File Name	092SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:31:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.156	ppb	-0.156	0.00	0	2000	
Na	23	3	45	16089.610	ppb	16089.610	1.07	1164203	400000	
Mg	24	3	45	5913.928	ppb	5913.928	1.61	227283	400000	
Al	27	3	45	5.474	ppb	5.474	57.52	143	400000	
K	39	3	45	1418.164	ppb	1418.164	3.27	65598	400000	
Ca	40	2	45	21818.945	ppb	21818.945	1.27	8598372	400000	
V	51	3	72	7.979	ppb	7.979	4.41	3944	2000	
Cr	52	3	72	1.129	ppb	1.129	10.29	2512	5000	
Mn	55	3	72	0.436	ppb	0.436	17.56	318	10000	
Fe	56	2	72	8.321	ppb	8.321	29.21	36040	10000	
Co	59	3	72	0.013	ppb	0.013	89.33	42	2000	
Ni	60	3	72	-0.001	ppb	-0.001	-23632.90	418	5000	
Cu	63	3	72	0.229	ppb	0.229	14.65	446	5000	
Zn	66	3	72	0.461	ppb	0.461	92.93	233	5000	
As	75	3	72	4.227	ppb	4.227	6.64	378	2000	
Se	78	2	72	0.407	ppb	0.407	31.60	17	2000	
Sr	88	3	72	170.536	ppb	170.536	1.14	67227	4000	
Mo	95	3	115	0.335	ppb	0.335	30.25	142	2000	
Ag	107	3	115	-0.011	ppb	-0.011	-114.07	8	100	
Cd	111	3	115	-0.038	ppb	-0.038	-45.13	3	2000	
Sn	120	3	115	-0.069	ppb	-0.069	-97.08	431	2000	
Sb	121	3	115	0.111	ppb	0.111	54.50	100	1000	
Ba	137	3	115	76.314	ppb	76.314	3.38	13634	5000	
Tl	205	3	193	-0.104	ppb	-0.104	-6.54	237	2000	
(Pb)	206	3	193	-0.054	ppb	-0.054	-34.81	157	100	
(Pb)	207	3	193	-0.033	ppb	-0.033	-241.23	285	100	
Pb	208	3	193	-0.021	ppb	-0.021	-110.34	821	5000	
Th	232	3	193	-0.232	ppb	-0.232	-24.24	3514	2000	
U	238	3	193	5.653	ppb	5.653	3.37	24876	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2800114	1.43	2822685	99.20	60	120	
Sc (IS)	45	3	HMI He	397705	1.40	416560	95.47	60	120	
Ge Internal standard	72	2	HMI H2	1700745	1.91	1735883	97.98	60	120	
Ge Internal standard	72	3	HMI He	513023	1.06	517264	99.18	60	120	
In Internal Standard	115	3	HMI He	1896820	1.98	1949413	97.30	60	120	
Ir (IS)	193	3	HMI He	4397743	2.13	4364581	100.76	60	120	

Sample Report

Sample Table

Sample Name	280-175202-B-6-A
Data File Name	093SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:33:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.044	ppb	-0.044	-217.97	3	2000	
Na	23	3	45	16183.156	ppb	16183.156	0.65	1203126	400000	
Mg	24	3	45	5907.267	ppb	5907.267	0.69	233281	400000	
Al	27	3	45	2.431	ppb	2.431	70.47	100	400000	
K	39	3	45	2133.371	ppb	2133.371	1.13	89869	400000	
Ca	40	2	45	23209.473	ppb	23209.473	2.19	8986323	400000	
V	51	3	72	4.093	ppb	4.093	4.08	2302	2000	
Cr	52	3	72	0.624	ppb	0.624	49.73	2247	5000	
Mn	55	3	72	0.246	ppb	0.246	21.29	263	10000	
Fe	56	2	72	6.430	ppb	6.430	31.25	34531	10000	
Co	59	3	72	0.015	ppb	0.015	37.04	43	2000	
Ni	60	3	72	0.284	ppb	0.284	106.98	486	5000	
Cu	63	3	72	0.319	ppb	0.319	26.62	508	5000	
Zn	66	3	72	0.879	ppb	0.879	30.69	280	5000	
As	75	3	72	4.390	ppb	4.390	20.22	391	2000	
Se	78	2	72	0.144	ppb	0.144	49.91	7	2000	
Sr	88	3	72	152.963	ppb	152.963	1.72	60211	4000	
Mo	95	3	115	0.750	ppb	0.750	1.79	292	2000	
Ag	107	3	115	-0.008	ppb	-0.008	-30.23	12	100	
Cd	111	3	115	-0.019	ppb	-0.019	-235.50	7	2000	
Sn	120	3	115	-0.174	ppb	-0.174	-34.01	385	2000	
Sb	121	3	115	0.083	ppb	0.083	29.23	87	1000	
Ba	137	3	115	84.211	ppb	84.211	2.07	15438	5000	
Tl	205	3	193	-0.098	ppb	-0.098	-4.40	250	2000	
(Pb)	206	3	193	-0.013	ppb	-0.013	-118.37	193	100	
(Pb)	207	3	193	0.018	ppb	0.018	232.76	323	100	
Pb	208	3	193	0.009	ppb	0.009	62.78	921	5000	
Th	232	3	193	-0.260	ppb	-0.260	-8.39	3337	2000	
U	238	3	193	3.472	ppb	3.472	0.30	15394	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2752596	3.24	2822685	97.52	60	120	
Sc (IS)	45	3	HMI He	408628	0.66	416560	98.10	60	120	
Ge Internal standard	72	2	HMI H2	1724578	0.99	1735883	99.35	60	120	
Ge Internal standard	72	3	HMI He	512309	1.70	517264	99.04	60	120	
In Internal Standard	115	3	HMI He	1946710	1.46	1949413	99.86	60	120	
Ir (IS)	193	3	HMI He	4306866	0.41	4364581	98.68	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	094_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:35:16-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.545	ppb	3.344	1551	50	103.1	90	110	
Na	23	3	45	50238.338	ppb	2.501	3621307	51000	98.5	90	110	
Mg	24	3	45	10517.049	ppb	2.693	406671	11000	95.6	90	110	
Al	27	3	45	1009.789	ppb	3.181	15447	1000	101.0	90	110	
K	39	3	45	10693.029	ppb	1.651	351414	11000	97.2	90	110	
Ca	40	2	45	10864.492	ppb	1.253	4214873	11000	98.8	90	110	
V	51	3	72	53.858	ppb	2.266	22340	50	107.7	90	110	
Cr	52	3	72	53.838	ppb	1.534	28482	50	107.7	90	110	
Mn	55	3	72	52.357	ppb	2.649	14549	50	104.7	90	110	
Fe	56	2	72	1065.304	ppb	1.253	1116823	1000	106.5	90	110	
Co	59	3	72	52.015	ppb	2.355	44347	50	104.0	90	110	
Ni	60	3	72	53.003	ppb	0.310	12926	50	106.0	90	110	
Cu	63	3	72	51.664	ppb	0.568	33975	50	103.3	90	110	
Zn	66	3	72	52.514	ppb	2.348	5843	50	105.0	90	110	
As	75	3	72	54.955	ppb	2.327	4280	50	109.9	90	110	
Se	78	2	72	51.770	ppb	6.384	2038	50	103.5	90	110	
Sr	88	3	72	104.544	ppb	1.199	39548	100	104.5	90	110	
Mo	95	3	115	50.447	ppb	2.937	17608	50	100.9	90	110	
Ag	107	3	115	50.001	ppb	2.174	59577	50	100.0	90	110	
Cd	111	3	115	50.643	ppb	2.781	8712	50	101.3	90	110	
Sn	120	3	115	49.877	ppb	1.003	27693	50	99.8	90	110	
Sb	121	3	115	50.752	ppb	2.769	28351	50	101.5	90	110	
Ba	137	3	115	50.018	ppb	5.163	9074	50	100.0	90	110	
Tl	205	3	193	50.129	ppb	2.113	142564	50	100.3	90	110	
(Pb)	206	3	193	49.738	ppb	2.848	47567	50	99.5	90	110	
(Pb)	207	3	193	49.936	ppb	0.749	42117	50	99.9	90	110	
Pb	208	3	193	49.898	ppb	1.796	191594	50	99.8	90	110	
Th	232	3	193	49.630	ppb	0.888	188856	50	99.3	90	110	
U	238	3	193	49.757	ppb	1.962	202481	50	99.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2753465	1.08	2822685	97.55	60	120	
Sc (IS)	45	3	HMI He	400336	0.95	416560	96.11	60	120	
Ge Internal standard	72	2	HMI H2	1630972	1.70	1735883	93.96	60	120	
Ge Internal standard	72	3	HMI He	492200	1.01	517264	95.15	60	120	
In Internal Standard	115	3	HMI He	1922936	1.81	1949413	98.64	60	120	
Ir (IS)	193	3	HMI He	4236440	1.12	4364581	97.06	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	095_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:37:05-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.045	ppb	-210.4	3	0.5	
Na	23	3	45	39.041	ppb	21.6	20542	25	>RL
Mg	24	3	45	-0.369	ppb	-229.5	207	25	
Al	27	3	45	0.589	ppb	189.9	70	15	
K	39	3	45	-1.474	ppb	-2181.8	22360	50	
V	51	3	72	1.734	ppb	13.3	1271	1	>RL
Cr	52	3	72	0.322	ppb	30.6	2031	1	
Mn	55	3	72	-0.014	ppb	-850.3	183	0.5	
Co	59	3	72	0.005	ppb	356.6	33	0.5	
Ni	60	3	72	0.369	ppb	17.2	493	1	
Cu	63	3	72	-0.003	ppb	-2452.0	280	1	
Zn	66	3	72	-0.300	ppb	-70.8	143	5	
As	75	3	72	0.148	ppb	92.3	48	1	
Se	78	2	72	0.017	ppb	169.4	1	1	
Sr	88	3	72	0.002	ppb	841.6	23	0.5	
Mo	95	3	115	0.057	ppb	33.7	47	0.5	
Ag	107	3	115	-0.007	ppb	-89.8	13	1	
Cd	111	3	115	-0.028	ppb	-106.7	5	0.5	
Sn	120	3	115	0.012	ppb	968.0	483	1	
Sb	121	3	115	0.046	ppb	140.7	65	0.6	
Ba	137	3	115	-0.173	ppb	-8.4	17	0.5	
Tl	205	3	193	-0.091	ppb	-6.3	267	0.1	
(Pb)	206	3	193	-0.058	ppb	-8.4	148	1	
(Pb)	207	3	193	-0.021	ppb	-193.9	287	1	
Pb	208	3	193	-0.030	ppb	-57.0	763	0.5	
Th	232	3	193	1.909	ppb	5.8	11440	1	>RL
U	238	3	193	0.015	ppb	118.0	1154	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2744461	1.95	2822685	97.23	60	120	
Sc (IS)	45	3	HMI He	400385	0.56	416560	96.12	60	120	
Ge Internal standard	72	2	HMI H2	1664491	0.81	1735883	95.89	60	120	
Ge Internal standard	72	3	HMI He	497051	0.47	517264	96.09	60	120	
In Internal Standard	115	3	HMI He	1931550	2.31	1949413	99.08	60	120	
Ir (IS)	193	3	HMI He	4268118	3.18	4364581	97.79	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7695100
Data File Name	096LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:38:54-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.503	ppb	57.393	20	1	50.3	70	130	>+/-30%
Na	23	3	45	332.586	ppb	2.507	41365	300	110.9	70	130	
Mg	24	3	45	42.202	ppb	2.949	1842	50	84.4	70	130	
Al	27	3	45	48.127	ppb	29.041	791	50	96.3	70	130	
K	39	3	45	146.316	ppb	20.097	26759	120	121.9	70	130	
Ca	40	2	45	203.500	ppb	2.587	87496	200	101.7	70	130	
V	51	3	72	5.993	ppb	2.967	3009	5	119.9	70	130	
Cr	52	3	72	2.190	ppb	7.355	2962	2	109.5	70	130	
Mn	55	3	72	1.268	ppb	9.916	538	1	126.8	70	130	
Fe	56	2	72	53.642	ppb	4.387	82332	50	107.3	70	130	
Co	59	3	72	0.999	ppb	10.609	888	1	99.9	70	130	
Ni	60	3	72	2.152	ppb	5.526	918	2	107.6	70	130	
Cu	63	3	72	2.156	ppb	2.172	1701	2	107.8	70	130	
Zn	66	3	72	9.211	ppb	4.620	1179	10	92.1	70	130	
As	75	3	72	4.956	ppb	12.545	423	5	99.1	70	130	
Se	78	2	72	4.944	ppb	14.075	199	5	98.9	70	130	
Sr	88	3	72	4.783	ppb	3.607	1848	5	95.7	70	130	
Mo	95	3	115	2.040	ppb	10.847	740	2	102.0	70	130	
Ag	107	3	115	0.967	ppb	4.702	1178	1	96.7	70	130	
Cd	111	3	115	0.888	ppb	21.284	163	1	88.8	70	130	
Sn	120	3	115	8.610	ppb	2.874	5190	10	86.1	70	130	
Sb	121	3	115	1.906	ppb	11.338	1106	2	95.3	70	130	
Ba	137	3	115	0.900	ppb	29.530	212	1	90.0	70	130	
Tl	205	3	193	0.870	ppb	3.959	2997	1	87.0	70	130	
(Pb)	206	3	193	0.897	ppb	2.662	1060	1	89.7	70	130	
(Pb)	207	3	193	0.917	ppb	17.135	1073	1	91.7	70	130	
Pb	208	3	193	0.907	ppb	5.052	4350	1	90.7	70	130	
Th	232	3	193	2.353	ppb	12.411	13030	1	235.3	70	130	>+/-30%
U	238	3	193	0.949	ppb	5.871	4944	1	94.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2704657	0.88	2822685	95.82	60	120	
Sc (IS)	45	3	HMI He	398126	0.71	416560	95.57	60	120	
Ge Internal standard	72	2	HMI H2	1658441	1.50	1735883	95.54	60	120	
Ge Internal standard	72	3	HMI He	496740	0.31	517264	96.03	60	120	
In Internal Standard	115	3	HMI He	1928155	1.63	1949413	98.91	60	120	
Ir (IS)	193	3	HMI He	4250016	1.98	4364581	97.38	60	120	

Sample Report

Sample Table

Sample Name	280-175202-B-7-A
Data File Name	097SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:40:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	-207.81	3	2000	
Na	23	3	45	13436.291	ppb	13436.291	2.11	982325	400000	
Mg	24	3	45	3884.700	ppb	3884.700	0.91	150479	400000	
Al	27	3	45	3.849	ppb	3.849	41.52	120	400000	
K	39	3	45	1836.322	ppb	1836.322	4.87	78930	400000	
Ca	40	2	45	14027.441	ppb	14027.441	3.53	5472095	400000	
V	51	3	72	5.832	ppb	5.832	6.02	3064	2000	
Cr	52	3	72	1.228	ppb	1.228	14.02	2584	5000	
Mn	55	3	72	0.218	ppb	0.218	100.47	258	10000	
Fe	56	2	72	6.820	ppb	6.820	36.21	35163	10000	
Co	59	3	72	0.022	ppb	0.022	72.61	50	2000	
Ni	60	3	72	0.274	ppb	0.274	82.29	490	5000	
Cu	63	3	72	0.272	ppb	0.272	17.61	480	5000	
Zn	66	3	72	2.557	ppb	2.557	26.84	473	5000	
As	75	3	72	9.161	ppb	9.161	9.50	781	2000	
Se	78	2	72	0.540	ppb	0.540	3.12	23	2000	
Sr	88	3	72	102.346	ppb	102.346	1.19	40689	4000	
Mo	95	3	115	2.201	ppb	2.201	12.45	805	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-86.06	13	100	
Cd	111	3	115	-0.028	ppb	-0.028	-3.19	5	2000	
Sn	120	3	115	0.185	ppb	0.185	111.50	581	2000	
Sb	121	3	115	0.104	ppb	0.104	16.69	98	1000	
Ba	137	3	115	44.539	ppb	44.539	3.36	8177	5000	
Tl	205	3	193	-0.100	ppb	-0.100	-11.86	242	2000	
(Pb)	206	3	193	-0.029	ppb	-0.029	-125.19	175	100	
(Pb)	207	3	193	-0.018	ppb	-0.018	-141.30	288	100	
Pb	208	3	193	-0.012	ppb	-0.012	-161.70	830	5000	
Th	232	3	193	0.000	ppb	0.000	24228.80	4260	2000	
U	238	3	193	1.078	ppb	1.078	7.79	5463	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2771690	3.16	2822685	98.19	60	120	
Sc (IS)	45	3	HMI He	400649	2.43	416560	96.18	60	120	
Ge Internal standard	72	2	HMI H2	1737487	2.18	1735883	100.09	60	120	
Ge Internal standard	72	3	HMI He	517272	1.15	517264	100.00	60	120	
In Internal Standard	115	3	HMI He	1944938	3.11	1949413	99.77	60	120	
Ir (IS)	193	3	HMI He	4245933	0.59	4364581	97.28	60	120	

Sample Report

Sample Table

Sample Name	280-175202-B-8-A
Data File Name	098SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:42:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.102	ppb	-0.102	-92.21	2	2000	
Na	23	3	45	12968.917	ppb	12968.917	2.39	951501	400000	
Mg	24	3	45	3798.023	ppb	3798.023	1.29	147532	400000	
Al	27	3	45	3.630	ppb	3.630	20.41	117	400000	
K	39	3	45	1839.717	ppb	1839.717	4.54	79279	400000	
Ca	40	2	45	13664.659	ppb	13664.659	2.64	5359695	400000	
V	51	3	72	5.783	ppb	5.783	6.69	3032	2000	
Cr	52	3	72	1.314	ppb	1.314	11.92	2617	5000	
Mn	55	3	72	0.630	ppb	0.630	2.42	375	10000	
Fe	56	2	72	5.268	ppb	5.268	30.52	33390	10000	
Co	59	3	72	0.030	ppb	0.030	46.69	57	2000	
Ni	60	3	72	0.150	ppb	0.150	170.80	456	5000	
Cu	63	3	72	0.385	ppb	0.385	4.62	555	5000	
Zn	66	3	72	11.423	ppb	11.423	3.68	1473	5000	
As	75	3	72	8.419	ppb	8.419	11.12	718	2000	
Se	78	2	72	0.462	ppb	0.462	26.84	20	2000	
Sr	88	3	72	99.110	ppb	99.110	2.49	39230	4000	
Mo	95	3	115	2.222	ppb	2.222	11.56	796	2000	
Ag	107	3	115	-0.008	ppb	-0.008	-59.65	12	100	
Cd	111	3	115	-0.038	ppb	-0.038	-44.64	3	2000	
Sn	120	3	115	-0.125	ppb	-0.125	-29.10	405	2000	
Sb	121	3	115	0.092	ppb	0.092	18.93	90	1000	
Ba	137	3	115	43.810	ppb	43.810	2.46	7913	5000	
Tl	205	3	193	-0.108	ppb	-0.108	-6.14	222	2000	
(Pb)	206	3	193	-0.018	ppb	-0.018	-132.75	188	100	
(Pb)	207	3	193	0.047	ppb	0.047	107.46	347	100	
Pb	208	3	193	0.003	ppb	0.003	491.90	896	5000	
Th	232	3	193	-0.091	ppb	-0.091	-78.35	3969	2000	
U	238	3	193	0.968	ppb	0.968	1.85	5082	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2785841	1.69	2822685	98.69	60	120	
Sc (IS)	45	3	HMI He	401745	1.15	416560	96.44	60	120	
Ge Internal standard	72	2	HMI H2	1731132	0.48	1735883	99.73	60	120	
Ge Internal standard	72	3	HMI He	515067	1.32	517264	99.58	60	120	
In Internal Standard	115	3	HMI He	1912298	0.50	1949413	98.10	60	120	
Ir (IS)	193	3	HMI He	4300219	0.87	4364581	98.53	60	120	

Sample Report

Sample Table

Sample Name	280-175202-B-9-A
Data File Name	099SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:44:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.012	ppb	0.012	2354.11	5	2000	
Na	23	3	45	29992.453	ppb	29992.453	0.38	2215574	400000	
Mg	24	3	45	14004.460	ppb	14004.460	0.66	553060	400000	
Al	27	3	45	9.500	ppb	9.500	35.88	210	400000	
K	39	3	45	1767.591	ppb	1767.591	0.13	78427	400000	
Ca	40	2	45	50686.454	ppb	50686.454	2.43	19737094	400000	
V	51	3	72	3.904	ppb	3.904	7.41	2252	2000	
Cr	52	3	72	1.976	ppb	1.976	9.50	2984	5000	
Mn	55	3	72	34.203	ppb	34.203	1.38	10092	10000	
Fe	56	2	72	157.463	ppb	157.463	2.44	197835	10000	
Co	59	3	72	0.795	ppb	0.795	7.85	745	2000	
Ni	60	3	72	63.813	ppb	63.813	2.18	16325	5000	
Cu	63	3	72	0.760	ppb	0.760	15.57	818	5000	
Zn	66	3	72	11.231	ppb	11.231	7.15	1463	5000	
As	75	3	72	3.557	ppb	3.557	2.96	328	2000	
Se	78	2	72	0.288	ppb	0.288	33.85	13	2000	
Sr	88	3	72	374.067	ppb	374.067	0.98	149180	4000	
Mo	95	3	115	1.929	ppb	1.929	7.14	711	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-65.72	13	100	
Cd	111	3	115	-0.029	ppb	-0.029	-101.28	5	2000	
Sn	120	3	115	0.020	ppb	0.020	329.76	495	2000	
Sb	121	3	115	0.135	ppb	0.135	32.42	117	1000	
Ba	137	3	115	140.645	ppb	140.645	4.20	25894	5000	
Tl	205	3	193	-0.113	ppb	-0.113	-8.98	208	2000	
(Pb)	206	3	193	-0.050	ppb	-0.050	-61.42	157	100	
(Pb)	207	3	193	-0.001	ppb	-0.001	-4022.24	307	100	
Pb	208	3	193	-0.004	ppb	-0.004	-908.59	871	5000	
Th	232	3	193	-0.161	ppb	-0.161	-43.68	3712	2000	
U	238	3	193	55.664	ppb	55.664	4.62	230165	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2770074	2.76	2822685	98.14	60	120	
Sc (IS)	45	3	HMI He	408855	0.61	416560	98.15	60	120	
Ge Internal standard	72	2	HMI H2	1722928	1.27	1735883	99.25	60	120	
Ge Internal standard	72	3	HMI He	519093	0.91	517264	100.35	60	120	
In Internal Standard	115	3	HMI He	1957778	1.20	1949413	100.43	60	120	
Ir (IS)	193	3	HMI He	4309500	2.36	4364581	98.74	60	120	

Sample Report

Sample Table

Sample Name	280-175202-B-14-A
Data File Name	100SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:46:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.101	ppb	-0.101	-94.53	2	2000	
Na	23	3	45	31905.813	ppb	31905.813	0.53	2325070	400000	
Mg	24	3	45	16881.806	ppb	16881.806	0.89	657932	400000	
Al	27	3	45	3.375	ppb	3.375	94.69	113	400000	
K	39	3	45	8456.057	ppb	8456.057	1.41	284843	400000	
Ca	40	2	45	57801.050	ppb	57801.050	1.62	22226215	400000	
V	51	3	72	1.997	ppb	1.997	15.04	1423	2000	
Cr	52	3	72	0.553	ppb	0.553	21.45	2214	5000	
Mn	55	3	72	2334.408	ppb	2334.408	0.30	667377	10000	
Fe	56	2	72	6980.933	ppb	6980.933	1.69	7668048	10000	
Co	59	3	72	10.220	ppb	10.220	2.91	9103	2000	
Ni	60	3	72	7.730	ppb	7.730	2.60	2321	5000	
Cu	63	3	72	0.243	ppb	0.243	23.10	456	5000	
Zn	66	3	72	3.214	ppb	3.214	8.60	543	5000	
As	75	3	72	20.603	ppb	20.603	5.05	1696	2000	
Se	78	2	72	0.079	ppb	0.079	105.39	4	2000	
Sr	88	3	72	418.704	ppb	418.704	1.11	164957	4000	
Mo	95	3	115	1.947	ppb	1.947	10.72	708	2000	
Ag	107	3	115	-0.005	ppb	-0.005	-161.17	15	100	
Cd	111	3	115	0.000	ppb	0.000	6155.95	10	2000	
Sn	120	3	115	-0.095	ppb	-0.095	-24.50	425	2000	
Sb	121	3	115	0.057	ppb	0.057	44.20	72	1000	
Ba	137	3	115	255.725	ppb	255.725	0.49	46348	5000	
Tl	205	3	193	-0.098	ppb	-0.098	-8.68	247	2000	
(Pb)	206	3	193	-0.017	ppb	-0.017	-454.82	185	100	
(Pb)	207	3	193	-0.065	ppb	-0.065	-88.54	250	100	
Pb	208	3	193	-0.020	ppb	-0.020	-99.24	796	5000	
Th	232	3	193	-0.188	ppb	-0.188	-13.29	3570	2000	
U	238	3	193	0.279	ppb	0.279	9.26	2227	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2734982	2.00	2822685	96.89	60	120	
Sc (IS)	45	3	HMI He	403520	0.47	416560	96.87	60	120	
Ge Internal standard	72	2	HMI H2	1743140	0.93	1735883	100.42	60	120	
Ge Internal standard	72	3	HMI He	512791	0.31	517264	99.14	60	120	
In Internal Standard	115	3	HMI He	1928344	1.66	1949413	98.92	60	120	
Ir (IS)	193	3	HMI He	4257476	3.26	4364581	97.55	60	120	

Sample Report

Sample Table

Sample Name	280-175192-A-1-A
Data File Name	101SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:47:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.101	ppb	-0.101	-93.88	2	2000	
Na	23	3	45	59467.304	ppb	59467.304	1.07	4350472	400000	
Mg	24	3	45	43617.399	ppb	43617.399	2.76	1712339	400000	
Al	27	3	45	6.128	ppb	6.128	22.08	157	400000	
K	39	3	45	6915.191	ppb	6915.191	0.64	238841	400000	
Ca	40	2	45	87585.477	ppb	87585.477	2.70	34078230	400000	
V	51	3	72	1.982	ppb	1.982	13.33	1414	2000	
Cr	52	3	72	1.688	ppb	1.688	17.12	2796	5000	
Mn	55	3	72	1.817	ppb	1.817	14.66	711	10000	
Fe	56	2	72	9.464	ppb	9.464	32.47	37190	10000	
Co	59	3	72	0.021	ppb	0.021	30.31	48	2000	
Ni	60	3	72	3.649	ppb	3.649	2.06	1314	5000	
Cu	63	3	72	0.630	ppb	0.630	14.18	718	5000	
Zn	66	3	72	5.191	ppb	5.191	16.40	765	5000	
As	75	3	72	0.689	ppb	0.689	58.77	93	2000	
Se	78	2	72	0.079	ppb	0.079	119.87	4	2000	
Sr	88	3	72	327.557	ppb	327.557	1.07	128881	4000	
Mo	95	3	115	2.776	ppb	2.776	18.19	986	2000	
Ag	107	3	115	-0.004	ppb	-0.004	-172.91	17	100	
Cd	111	3	115	-0.047	ppb	-0.047	-36.23	2	2000	
Sn	120	3	115	-0.144	ppb	-0.144	-5.28	393	2000	
Sb	121	3	115	0.096	ppb	0.096	38.29	92	1000	
Ba	137	3	115	193.797	ppb	193.797	2.74	34713	5000	
Tl	205	3	193	-0.107	ppb	-0.107	-3.37	222	2000	
(Pb)	206	3	193	-0.008	ppb	-0.008	-229.50	197	100	
(Pb)	207	3	193	-0.079	ppb	-0.079	-33.03	238	100	
Pb	208	3	193	-0.031	ppb	-0.031	-17.54	760	5000	
Th	232	3	193	-0.223	ppb	-0.223	-16.55	3449	2000	
U	238	3	193	3.968	ppb	3.968	3.54	17302	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2767779	1.14	2822685	98.05	60	120	
Sc (IS)	45	3	HMI He	406550	0.26	416560	97.60	60	120	
Ge Internal standard	72	2	HMI H2	1699263	3.13	1735883	97.89	60	120	
Ge Internal standard	72	3	HMI He	512104	0.34	517264	99.00	60	120	
In Internal Standard	115	3	HMI He	1905637	1.63	1949413	97.75	60	120	
Ir (IS)	193	3	HMI He	4274216	1.26	4364581	97.93	60	120	

Sample Report

Sample Table

Sample Name	280-175192-A-2-A
Data File Name	102SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:49:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.011	ppb	0.011	2570.54	5	2000	
Na	23	3	45	110085.676	ppb	110085.676	0.28	7991959	400000	
Mg	24	3	45	44444.967	ppb	44444.967	1.45	1734882	400000	
Al	27	3	45	9.443	ppb	9.443	11.31	207	400000	
K	39	3	45	5677.132	ppb	5677.132	0.84	199007	400000	
Ca	40	2	45	92023.236	ppb	92023.236	1.49	35945111	400000	
V	51	3	72	1.830	ppb	1.830	7.22	1349	2000	
Cr	52	3	72	1.373	ppb	1.373	11.88	2632	5000	
Mn	55	3	72	16.616	ppb	16.616	1.80	4933	10000	
Fe	56	2	72	78.676	ppb	78.676	14.71	113698	10000	
Co	59	3	72	0.154	ppb	0.154	11.18	167	2000	
Ni	60	3	72	0.655	ppb	0.655	32.22	578	5000	
Cu	63	3	72	0.767	ppb	0.767	13.60	811	5000	
Zn	66	3	72	5.212	ppb	5.212	13.20	766	5000	
As	75	3	72	0.358	ppb	0.358	41.59	67	2000	
Se	78	2	72	0.477	ppb	0.477	32.80	21	2000	
Sr	88	3	72	341.573	ppb	341.573	1.64	134329	4000	
Mo	95	3	115	1.928	ppb	1.928	4.33	711	2000	
Ag	107	3	115	-0.006	ppb	-0.006	-76.84	15	100	
Cd	111	3	115	-0.009	ppb	-0.009	-920.25	8	2000	
Sn	120	3	115	-0.044	ppb	-0.044	-100.55	460	2000	
Sb	121	3	115	0.618	ppb	0.618	3.70	391	1000	
Ba	137	3	115	168.192	ppb	168.192	3.24	30968	5000	
Tl	205	3	193	-0.102	ppb	-0.102	-16.38	235	2000	
(Pb)	206	3	193	-0.029	ppb	-0.029	-133.32	175	100	
(Pb)	207	3	193	-0.065	ppb	-0.065	-55.61	248	100	
Pb	208	3	193	-0.017	ppb	-0.017	-159.55	808	5000	
Th	232	3	193	-0.190	ppb	-0.190	-9.73	3547	2000	
U	238	3	193	3.972	ppb	3.972	3.66	17168	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2778575	1.75	2822685	98.44	60	120	
Sc (IS)	45	3	HMI He	404211	0.60	416560	97.04	60	120	
Ge Internal standard	72	2	HMI H2	1739855	0.96	1735883	100.23	60	120	
Ge Internal standard	72	3	HMI He	511857	0.59	517264	98.95	60	120	
In Internal Standard	115	3	HMI He	1958211	1.47	1949413	100.45	60	120	
Ir (IS)	193	3	HMI He	4240241	2.76	4364581	97.15	60	120	

Sample Report

Sample Table

Sample Name	280-175209-D-1-A
Data File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:51:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609331 6020a
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.100	ppb	-0.100	-95.85	2	2000	
Na	23	3	45	19011.431	ppb	19011.431	0.97	1381557	400000	
Mg	24	3	45	111986.455	ppb	111986.455	1.01	4328362	400000	
Al	27	3	45	6.063	ppb	6.063	49.78	153	400000	
K	39	3	45	368.287	ppb	368.287	12.16	33728	400000	
Ca	40	2	45	288187.885	ppb	288187.885	2.57	111008188	400000	
V	51	3	72	0.479	ppb	0.479	43.78	778	2000	
Cr	52	3	72	0.650	ppb	0.650	14.51	2249	5000	
Mn	55	3	72	9415.607	ppb	9415.607	0.62	2673275	10000	
Fe	56	2	72	9590.599	ppb	9590.599	2.66	10221760	10000	
Co	59	3	72	1.616	ppb	1.616	5.44	1454	2000	
Ni	60	3	72	2.159	ppb	2.159	13.53	943	5000	
Cu	63	3	72	0.117	ppb	0.117	20.19	368	5000	
Zn	66	3	72	-0.078	ppb	-0.078	-329.64	172	5000	
As	75	3	72	17.476	ppb	17.476	1.55	1434	2000	
Se	78	2	72	0.098	ppb	0.098	77.19	5	2000	
Sr	88	3	72	382.776	ppb	382.776	0.41	149794	4000	
Mo	95	3	115	0.537	ppb	0.537	25.68	212	2000	
Ag	107	3	115	-0.008	ppb	-0.008	-80.29	12	100	
Cd	111	3	115	-0.009	ppb	-0.009	-505.92	8	2000	
Sn	120	3	115	-0.003	ppb	-0.003	-4208.18	470	2000	
Sb	121	3	115	-0.010	ppb	-0.010	-50.22	33	1000	
Ba	137	3	115	68.159	ppb	68.159	2.66	12255	5000	
Tl	205	3	193	-0.119	ppb	-0.119	-10.37	192	2000	
(Pb)	206	3	193	-0.087	ppb	-0.087	-30.90	122	100	
(Pb)	207	3	193	-0.037	ppb	-0.037	-112.64	277	100	
Pb	208	3	193	-0.032	ppb	-0.032	-42.87	761	5000	
Th	232	3	193	-0.202	ppb	-0.202	-12.83	3560	2000	
U	238	3	193	0.775	ppb	0.775	0.43	4297	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2740795	1.42	2822685	97.10	60	120	
Sc (IS)	45	3	HMI He	400305	0.49	416560	96.10	60	120	
Ge Internal standard	72	2	HMI H2	1693274	1.00	1735883	97.55	60	120	
Ge Internal standard	72	3	HMI He	509358	0.94	517264	98.47	60	120	
In Internal Standard	115	3	HMI He	1907840	1.29	1949413	97.87	60	120	
Ir (IS)	193	3	HMI He	4309959	1.67	4364581	98.75	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	104_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:53:18-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.378	ppb	4.331	1549	50	102.8	90	110	
Na	23	3	45	49804.173	ppb	2.187	3618796	51000	97.7	90	110	
Mg	24	3	45	10447.623	ppb	0.366	407209	11000	95.0	90	110	
Al	27	3	45	968.727	ppb	1.667	14940	1000	96.9	90	110	
K	39	3	45	10691.033	ppb	0.941	354134	11000	97.2	90	110	
Ca	40	2	45	10722.974	ppb	1.133	4216090	11000	97.5	90	110	
V	51	3	72	52.678	ppb	1.914	21766	50	105.4	90	110	
Cr	52	3	72	53.374	ppb	1.819	28131	50	106.7	90	110	
Mn	55	3	72	53.426	ppb	2.604	14776	50	106.9	90	110	
Fe	56	2	72	1042.516	ppb	1.096	1136163	1000	104.3	90	110	
Co	59	3	72	52.584	ppb	2.383	44648	50	105.2	90	110	
Ni	60	3	72	51.719	ppb	2.132	12569	50	103.4	90	110	
Cu	63	3	72	52.067	ppb	1.122	34088	50	104.1	90	110	
Zn	66	3	72	51.812	ppb	5.237	5742	50	103.6	90	110	
As	75	3	72	52.218	ppb	0.147	4052	50	104.4	90	110	
Se	78	2	72	52.369	ppb	4.957	2141	50	104.7	90	110	
Sr	88	3	72	105.594	ppb	2.752	39772	100	105.6	90	110	
Mo	95	3	115	50.027	ppb	1.303	17796	50	100.1	90	110	
Ag	107	3	115	49.219	ppb	1.855	59759	50	98.4	90	110	
Cd	111	3	115	51.255	ppb	0.269	8985	50	102.5	90	110	
Sn	120	3	115	47.978	ppb	2.136	27164	50	96.0	90	110	
Sb	121	3	115	48.744	ppb	1.085	27752	50	97.5	90	110	
Ba	137	3	115	48.634	ppb	2.920	8994	50	97.3	90	110	
Tl	205	3	193	50.808	ppb	2.270	141199	50	101.6	90	110	
(Pb)	206	3	193	50.954	ppb	2.139	47619	50	101.9	90	110	
(Pb)	207	3	193	51.406	ppb	1.192	42365	50	102.8	90	110	
Pb	208	3	193	51.445	ppb	2.309	193012	50	102.9	90	110	
Th	232	3	193	50.470	ppb	0.909	187629	50	100.9	90	110	
U	238	3	193	51.283	ppb	1.380	203929	50	102.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2790404	1.45	2822685	98.86	60	120	
Sc (IS)	45	3	HMI He	403469	0.64	416560	96.86	60	120	
Ge Internal standard	72	2	HMI H2	1694404	1.32	1735883	97.61	60	120	
Ge Internal standard	72	3	HMI He	490080	0.92	517264	94.74	60	120	
In Internal Standard	115	3	HMI He	1959186	1.07	1949413	100.50	60	120	
Ir (IS)	193	3	HMI He	4140525	1.60	4364581	94.87	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	105_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:55:07-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.041	ppb	-243.9	3	0.5	
Na	23	3	45	73.882	ppb	11.6	21531	25	>RL
Mg	24	3	45	2.670	ppb	44.0	304	25	
Al	27	3	45	0.875	ppb	336.2	70	15	
K	39	3	45	55.226	ppb	80.9	22541	50	>RL
V	51	3	72	1.462	ppb	13.1	1101	1	>RL
Cr	52	3	72	0.210	ppb	29.4	1874	1	
Mn	55	3	72	0.167	ppb	121.5	222	0.5	
Co	59	3	72	0.028	ppb	21.5	50	0.5	
Ni	60	3	72	0.377	ppb	40.8	470	1	
Cu	63	3	72	0.009	ppb	972.4	273	1	
Zn	66	3	72	-0.826	ppb	-18.9	82	5	
As	75	3	72	0.023	ppb	161.8	37	1	
Se	78	2	72	0.019	ppb	161.7	1	1	
Sr	88	3	72	0.015	ppb	283.4	27	0.5	
Mo	95	3	115	0.071	ppb	74.1	48	0.5	
Ag	107	3	115	-0.005	ppb	-91.7	15	1	
Cd	111	3	115	-0.047	ppb	-38.1	2	0.5	
Sn	120	3	115	0.052	ppb	143.9	473	1	
Sb	121	3	115	-0.013	ppb	-117.9	30	0.6	
Ba	137	3	115	-0.148	ppb	-18.7	20	0.5	
Tl	205	3	193	-0.082	ppb	-25.5	270	0.1	
(Pb)	206	3	193	-0.039	ppb	-41.8	153	1	
(Pb)	207	3	193	-0.038	ppb	-106.5	252	1	
Pb	208	3	193	-0.023	ppb	-52.7	730	0.5	
Th	232	3	193	1.746	ppb	7.3	9989	1	>RL
U	238	3	193	0.016	ppb	55.3	1070	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2607978	3.70	2822685	92.39	60	120	
Sc (IS)	45	3	HMI He	374280	1.93	416560	89.85	60	120	
Ge Internal standard	72	2	HMI H2	1590517	1.67	1735883	91.63	60	120	
Ge Internal standard	72	3	HMI He	471701	0.28	517264	91.19	60	120	
In Internal Standard	115	3	HMI He	1808484	1.53	1949413	92.77	60	120	
Ir (IS)	193	3	HMI He	3939572	1.13	4364581	90.26	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7695100
Data File Name	106LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:56:55-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.544	ppb	32.024	20	1	54.4	70	130	>+/-30%
Na	23	3	45	458.067	ppb	30.570	51898	300	152.7	70	130	>+/-30%
Mg	24	3	45	120.563	ppb	63.126	4936	50	241.1	70	130	>+/-30%
Al	27	3	45	84.627	ppb	39.455	1378	50	169.3	70	130	>+/-30%
K	39	3	45	149.697	ppb	65.679	27826	120	124.7	70	130	
Ca	40	2	45	232.676	ppb	7.326	95305	200	116.3	70	130	
V	51	3	72	6.263	ppb	2.846	3345	5	125.3	70	130	
Cr	52	3	72	2.127	ppb	25.617	3134	2	106.4	70	130	
Mn	55	3	72	3.210	ppb	73.117	1133	1	321.0	70	130	>+/-30%
Fe	56	2	72	51.142	ppb	7.986	78701	50	102.3	70	130	
Co	59	3	72	1.057	ppb	6.838	1005	1	105.7	70	130	
Ni	60	3	72	2.092	ppb	9.288	968	2	104.6	70	130	
Cu	63	3	72	1.976	ppb	8.453	1694	2	98.8	70	130	
Zn	66	3	72	9.174	ppb	4.104	1259	10	91.7	70	130	
As	75	3	72	4.513	ppb	9.867	416	5	90.3	70	130	
Se	78	2	72	4.416	ppb	2.340	175	5	88.3	70	130	
Sr	88	3	72	5.862	ppb	21.607	2412	5	117.2	70	130	
Mo	95	3	115	2.212	ppb	15.270	820	2	110.6	70	130	
Ag	107	3	115	1.292	ppb	23.375	1601	1	129.2	70	130	
Cd	111	3	115	1.084	ppb	19.313	202	1	108.4	70	130	
Sn	120	3	115	8.785	ppb	1.568	5448	10	87.8	70	130	
Sb	121	3	115	2.012	ppb	6.301	1198	2	100.6	70	130	
Ba	137	3	115	0.965	ppb	41.875	227	1	96.5	70	130	
Tl	205	3	193	0.903	ppb	7.907	3260	1	90.3	70	130	
(Pb)	206	3	193	0.966	ppb	13.142	1184	1	96.6	70	130	
(Pb)	207	3	193	0.902	ppb	5.017	1123	1	90.2	70	130	
Pb	208	3	193	1.016	ppb	9.017	5026	1	101.6	70	130	
Th	232	3	193	1.874	ppb	11.681	11927	1	187.4	70	130	>+/-30%
U	238	3	193	1.100	ppb	10.216	5857	1	110.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2614293	1.83	2822685	92.62	60	120	
Sc (IS)	45	3	HMI He	414119	6.72	416560	99.41	60	120	
Ge Internal standard	72	2	HMI H2	1638382	3.22	1735883	94.38	60	120	
Ge Internal standard	72	3	HMI He	532811	5.38	517264	103.01	60	120	
In Internal Standard	115	3	HMI He	1987393	6.60	1949413	101.95	60	120	
Ir (IS)	193	3	HMI He	4492563	6.41	4364581	102.93	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609310/1-A
Data File Name	107_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T18:58:44-06:00
Sample Type	Blank
Dilution	1
Comment	609310 6020b
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.018	ppb	-769.0644876	5	0.5
Na	23	3	45	-8.761	ppb	-54.05249679	23623	25
Mg	24	3	45	3.957	ppb	48.48754584	517	25
Al	27	3	45	3.124	ppb	23.51198582	150	15
K	39	3	45	-113.465	ppb	-26.44922818	26111	50
Ca	40	2	45	7.327	ppb	21.10972496	15989	200
V	51	3	72	1.713	ppb	13.98921066	1731	1
Cr	52	3	72	0.038	ppb	564.1662654	2589	1
Mn	55	3	72	0.272	ppb	39.45906094	360	0.5
Fe	56	2	72	4.940	ppb	45.59429692	39590	50
Co	59	3	72	0.060	ppb	25.76636812	110	0.5
Ni	60	3	72	0.045	ppb	567.8344779	570	1
Cu	63	3	72	0.044	ppb	29.06329274	426	1
Zn	66	3	72	-0.143	ppb	-76.69440371	220	5
As	75	3	72	0.370	ppb	34.16157128	90	1
(Se)	78	3	72	-4.944	ppb	-32.28166442	27	1
Sr	88	3	72	0.107	ppb	53.87528323	87	0.5
Mo	95	3	115	0.020	ppb	49.42349941	45	0.5
Ag	107	3	115	0.003	ppb	341.5205309	33	1
Cd	111	3	115	0.051	ppb	74.75983355	25	0.5
Sn	120	3	115	-0.044	ppb	-242.3939595	608	1
Sb	121	3	115	-0.017	ppb	-79.44672484	40	0.6
Ba	137	3	115	-0.012	ppb	-514.9646433	62	0.5
Tl	205	3	193	-0.047	ppb	-44.44847349	523	0.1
(Pb)	206	3	193	0.000	ppb	3351.126872	272	1
(Pb)	207	3	193	0.027	ppb	201.2708375	436	1
Pb	208	3	193	0.035	ppb	78.45261411	1349	0.5
Th	232	3	193	-0.055	ppb	-72.4684657	5427	1
U	238	3	193	0.012	ppb	111.312772	1521	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3352852	3.14	2822685	118.78	60	120	
Sc (IS)	45	3	HMI He	552806	1.18	416560	132.71	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2075534	0.64	1735883	119.57	60	120	
Ge Internal standard	72	3	HMI He	681165	0.43	517264	131.69	60	120	IS Failed
In Internal Standard	115	3	HMI He	2591298	0.79	1949413	132.93	60	120	IS Failed
Ir (IS)	193	3	HMI He	5679398	2.22	4364581	130.12	60	120	IS Failed

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609310/18-A
Data File Name	108_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:00:33-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609310 6020b
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.436	39.436	ppb	9.355	1583	40	98.6	80	120	
Na	23	3	45	797.136	797.136	ppb	0.932	103700	40	1992.8	80	120	>+/-20%
Mg	24	3	45	732.920	732.920	ppb	2.596	39515	40	1832.3	80	120	>+/-20%
Al	27	3	45	768.421	768.421	ppb	0.768	16292	40	1921.1	80	120	>+/-20%
K	39	3	45	675.137	675.137	ppb	4.699	59757	40	1687.8	80	120	>+/-20%
Ca	40	2	45	848.601	848.601	ppb	0.654	461982	40	2121.5	80	120	>+/-20%
V	51	3	72	42.314	42.314	ppb	0.891	24509	40	105.8	80	120	
Cr	52	3	72	42.475	42.475	ppb	2.387	31712	40	106.2	80	120	
Mn	55	3	72	41.280	41.280	ppb	1.434	15965	40	103.2	80	120	
Fe	56	2	72	835.909	835.909	ppb	3.388	1207871	40	2089.8	80	120	>+/-20%
(Fe)	56	3	72	807.602	807.602	ppb	0.415	496115	40	2019.0	80	120	>+/-20%
Co	59	3	72	40.792	40.792	ppb	1.775	48256	40	102.0	80	120	
Ni	60	3	72	41.596	41.596	ppb	2.385	14190	40	104.0	80	120	
Cu	63	3	72	41.774	41.774	ppb	0.421	38178	40	104.4	80	120	
Zn	66	3	72	42.079	42.079	ppb	1.644	6543	40	105.2	80	120	
As	75	3	72	40.930	40.930	ppb	3.133	4435	40	102.3	80	120	
Se	78	2	72	43.161	43.161	ppb	1.351	2326	40	107.9	80	120	
(Se)	78	3	72	36.838	36.838	ppb	24.835	302	40	92.1	80	120	
Sr	88	3	72	82.773	82.773	ppb	1.112	43441	40	206.9	80	120	>+/-20%
Mo	95	3	115	39.294	39.294	ppb	4.574	18822	40	98.2	80	120	
Ag	107	3	115	39.982	39.982	ppb	1.631	65377	40	100.0	80	120	
Cd	111	3	115	40.762	40.762	ppb	6.404	9619	40	101.9	80	120	
Sn	120	3	115	38.076	38.076	ppb	2.681	29159	40	95.2	80	120	
Sb	121	3	115	39.557	39.557	ppb	2.068	30336	40	98.9	80	120	
Ba	137	3	115	41.316	41.316	ppb	0.992	10301	40	103.3	80	120	
Tl	205	3	193	41.201	41.201	ppb	0.982	155076	40	103.0	80	120	
(Pb)	206	3	193	40.453	40.453	ppb	1.488	51214	40	101.1	80	120	
(Pb)	207	3	193	40.238	40.238	ppb	1.450	44961	40	100.6	80	120	
Pb	208	3	193	40.762	40.762	ppb	0.169	207203	40	101.9	80	120	
Th	232	3	193	39.035	39.035	ppb	2.150	197605	40	97.6	80	120	
U	238	3	193	41.104	41.104	ppb	1.584	221451	40	102.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3755160	1.87	2822685	133.04	60	120	IS Failed
Sc (IS)	45	3	HMI He	554086	0.17	416560	133.01	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2232954	2.12	1735883	128.64	60	120	IS Failed
Ge Internal standard	72	3	HMI He	682707	0.21	517264	131.98	60	120	IS Failed
In Internal Standard	115	3	HMI He	2638673	2.26	1949413	135.36	60	120	IS Failed
Ir (IS)	193	3	HMI He	5602167	1.21	4364581	128.36	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-1-A
Data File Name	109SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:02:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.113	ppb	-0.113	-65.25	2	2000	
Na	23	3	45	61834.594	ppb	61834.594	0.93	6159062	400000	
Mg	24	3	45	6332.659	ppb	6332.659	0.51	338800	400000	
Al	27	3	45	144.941	ppb	144.941	15.27	3140	400000	
K	39	3	45	1245.816	ppb	1245.816	3.48	83984	400000	
Ca	40	2	45	44536.557	ppb	44536.557	2.53	23306395	400000	
V	51	3	72	2.877	ppb	2.877	8.27	2436	2000	
Cr	52	3	72	0.960	ppb	0.960	21.53	3292	5000	
Mn	55	3	72	23.743	ppb	23.743	0.97	9479	10000	
Fe	56	2	72	128.336	ppb	128.336	1.87	220174	10000	
Co	59	3	72	0.305	ppb	0.305	12.78	408	2000	
Ni	60	3	72	1.064	ppb	1.064	15.79	923	5000	
Cu	63	3	72	0.922	ppb	0.922	8.72	1246	5000	
Zn	66	3	72	3.294	ppb	3.294	13.93	750	5000	
As	75	3	72	1.815	ppb	1.815	2.88	250	2000	
Se	78	2	72	0.311	ppb	0.311	0.87	18	2000	
Sr	88	3	72	208.475	ppb	208.475	1.44	111563	4000	
Mo	95	3	115	6.131	ppb	6.131	4.29	2932	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-141.94	23	100	
Cd	111	3	115	0.050	ppb	0.050	47.41	25	2000	
Sn	120	3	115	0.131	ppb	0.131	98.57	740	2000	
Sb	121	3	115	0.696	ppb	0.696	4.63	580	1000	
Ba	137	3	115	16.748	ppb	16.748	3.05	4164	5000	
Tl	205	3	193	-0.098	ppb	-0.098	-14.69	325	2000	
(Pb)	206	3	193	0.162	ppb	0.162	2.67	473	100	
(Pb)	207	3	193	0.189	ppb	0.189	55.05	610	100	
Pb	208	3	193	0.185	ppb	0.185	17.24	2096	5000	
Th	232	3	193	1.968	ppb	1.968	5.06	15387	2000	
U	238	3	193	2.048	ppb	2.048	4.22	12452	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3721018	0.44	2822685	131.83	60	120	IS Failed
Sc (IS)	45	3	HMI He	553606	0.49	416560	132.90	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2280269	0.82	1735883	131.36	60	120	IS Failed
Ge Internal standard	72	3	HMI He	696464	0.70	517264	134.64	60	120	IS Failed
In Internal Standard	115	3	HMI He	2606725	2.33	1949413	133.72	60	120	IS Failed
Ir (IS)	193	3	HMI He	5629443	3.45	4364581	128.98	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-2-A
Data File Name	110SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:04:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.156	ppb	-0.156	0.00	0	2000	
Na	23	3	45	52057.769	ppb	52057.769	0.63	5160972	400000	
Mg	24	3	45	24829.870	ppb	24829.870	2.03	1320257	400000	
Al	27	3	45	3.636	ppb	3.636	126.83	160	400000	
K	39	3	45	1128.300	ppb	1128.300	2.57	78564	400000	
Ca	40	2	45	172608.881	ppb	172608.881	2.27	91390496	400000	
V	51	3	72	0.406	ppb	0.406	33.51	1006	2000	
Cr	52	3	72	0.177	ppb	0.177	40.02	2704	5000	
Mn	55	3	72	7096.370	ppb	7096.370	3.32	2714169	10000	
Fe	56	2	72	12.615	ppb	12.615	20.02	54086	10000	
Co	59	3	72	3.625	ppb	3.625	0.58	4347	2000	
Ni	60	3	72	6.287	ppb	6.287	5.50	2631	5000	
Cu	63	3	72	16.111	ppb	16.111	2.85	15039	5000	
Zn	66	3	72	32.373	ppb	32.373	5.26	5117	5000	
As	75	3	72	0.178	ppb	0.178	115.13	70	2000	
Se	78	2	72	0.045	ppb	0.045	92.99	3	2000	
Sr	88	3	72	570.407	ppb	570.407	0.83	300717	4000	
Mo	95	3	115	0.412	ppb	0.412	14.84	228	2000	
Ag	107	3	115	-0.004	ppb	-0.004	-84.92	22	100	
Cd	111	3	115	0.311	ppb	0.311	12.48	85	2000	
Sn	120	3	115	-0.030	ppb	-0.030	-42.90	616	2000	
Sb	121	3	115	0.058	ppb	0.058	15.81	97	1000	
Ba	137	3	115	52.393	ppb	52.393	2.16	12777	5000	
Tl	205	3	193	-0.109	ppb	-0.109	-4.85	293	2000	
(Pb)	206	3	193	-0.036	ppb	-0.036	-98.18	228	100	
(Pb)	207	3	193	-0.020	ppb	-0.020	-69.22	388	100	
Pb	208	3	193	-0.019	ppb	-0.019	-49.00	1088	5000	
Th	232	3	193	0.489	ppb	0.489	26.08	8239	2000	
U	238	3	193	1.778	ppb	1.778	3.58	11244	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3767233	2.24	2822685	133.46	60	120	IS Failed
Sc (IS)	45	3	HMI He	550608	0.49	416560	132.18	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2263647	2.05	1735883	130.40	60	120	IS Failed
Ge Internal standard	72	3	HMI He	686226	0.43	517264	132.66	60	120	IS Failed
In Internal Standard	115	3	HMI He	2583785	1.30	1949413	132.54	60	120	IS Failed
Ir (IS)	193	3	HMI He	5751962	1.46	4364581	131.79	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-3-A
Data File Name	111SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:05:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.115	ppb	-0.115	-62.01	2	2000	
Na	23	3	45	35223.476	ppb	35223.476	1.78	3499763	400000	
Mg	24	3	45	18416.829	ppb	18416.829	0.14	979272	400000	
Al	27	3	45	12.096	ppb	12.096	36.52	337	400000	
K	39	3	45	421.947	ppb	421.947	8.67	48663	400000	
Ca	40	2	45	145701.591	ppb	145701.591	0.78	76414576	400000	
V	51	3	72	0.452	ppb	0.452	9.65	1030	2000	
Cr	52	3	72	0.191	ppb	0.191	110.90	2707	5000	
Mn	55	3	72	2.656	ppb	2.656	7.50	1271	10000	
Fe	56	2	72	16.152	ppb	16.152	9.30	59376	10000	
Co	59	3	72	0.045	ppb	0.045	45.47	93	2000	
Ni	60	3	72	0.585	ppb	0.585	61.45	750	5000	
Cu	63	3	72	0.496	ppb	0.496	8.44	838	5000	
Zn	66	3	72	0.259	ppb	0.259	84.18	282	5000	
As	75	3	72	0.070	ppb	0.070	129.35	58	2000	
Se	78	2	72	0.166	ppb	0.166	21.38	10	2000	
Sr	88	3	72	364.263	ppb	364.263	0.57	191585	4000	
Mo	95	3	115	0.144	ppb	0.144	7.07	105	2000	
Ag	107	3	115	0.006	ppb	0.006	60.52	38	100	
Cd	111	3	115	-0.015	ppb	-0.015	-2.42	10	2000	
Sn	120	3	115	-0.139	ppb	-0.139	-39.93	546	2000	
Sb	121	3	115	0.056	ppb	0.056	33.35	97	1000	
Ba	137	3	115	33.908	ppb	33.908	1.51	8442	5000	
Tl	205	3	193	-0.115	ppb	-0.115	-6.67	267	2000	
(Pb)	206	3	193	-0.044	ppb	-0.044	-50.75	217	100	
(Pb)	207	3	193	-0.049	ppb	-0.049	-109.00	353	100	
Pb	208	3	193	-0.028	ppb	-0.028	-77.32	1035	5000	
Th	232	3	193	0.243	ppb	0.243	38.27	6974	2000	
U	238	3	193	4.308	ppb	4.308	2.26	25034	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3730538	1.84	2822685	132.16	60	120	IS Failed
Sc (IS)	45	3	HMI He	550552	0.79	416560	132.17	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2272630	1.19	1735883	130.92	60	120	IS Failed
Ge Internal standard	72	3	HMI He	684539	1.06	517264	132.34	60	120	IS Failed
In Internal Standard	115	3	HMI He	2631135	0.84	1949413	134.97	60	120	IS Failed
Ir (IS)	193	3	HMI He	5726843	1.94	4364581	131.21	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-4-D
Data File Name	112SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:07:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.114	ppb	-0.114	-63.55	2	2000	
Na	23	3	45	61379.892	ppb	61379.892	1.54	6071314	400000	
Mg	24	3	45	28421.423	ppb	28421.423	1.27	1508736	400000	
Al	27	3	45	41.263	ppb	41.263	13.00	948	400000	
K	39	3	45	1587.178	ppb	1587.178	2.95	97830	400000	
Ca	40	2	45	193467.449	ppb	193467.449	1.92	100716923	400000	
V	51	3	72	0.196	ppb	0.196	26.79	886	2000	
Cr	52	3	72	0.378	ppb	0.378	36.06	2836	5000	
Mn	55	3	72	7215.735	ppb	7215.735	3.01	2753262	10000	
Fe	56	2	72	62.291	ppb	62.291	5.50	123850	10000	
Co	59	3	72	2.488	ppb	2.488	4.11	2989	2000	
Ni	60	3	72	3.427	ppb	3.427	3.54	1684	5000	
Cu	63	3	72	0.633	ppb	0.633	6.35	963	5000	
Zn	66	3	72	1.546	ppb	1.546	20.65	475	5000	
As	75	3	72	0.118	ppb	0.118	179.16	63	2000	
Se	78	2	72	0.095	ppb	0.095	67.91	6	2000	
Sr	88	3	72	629.456	ppb	629.456	0.90	331045	4000	
Mo	95	3	115	0.490	ppb	0.490	14.36	270	2000	
Ag	107	3	115	-0.012	ppb	-0.012	-50.24	10	100	
Cd	111	3	115	0.129	ppb	0.129	83.65	43	2000	
Sn	120	3	115	-0.154	ppb	-0.154	-11.75	535	2000	
Sb	121	3	115	0.004	ppb	0.004	593.76	57	1000	
Ba	137	3	115	24.300	ppb	24.300	3.20	6058	5000	
Tl	205	3	193	-0.087	ppb	-0.087	-9.34	368	2000	
(Pb)	206	3	193	0.039	ppb	0.039	182.83	318	100	
(Pb)	207	3	193	-0.001	ppb	-0.001	-2033.18	401	100	
Pb	208	3	193	0.041	ppb	0.041	66.19	1369	5000	
Th	232	3	193	0.076	ppb	0.076	121.55	6040	2000	
U	238	3	193	3.457	ppb	3.457	1.86	20088	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3703568	0.94	2822685	131.21	60	120	IS Failed
Sc (IS)	45	3	HMI He	549723	0.58	416560	131.97	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2247865	0.60	1735883	129.49	60	120	IS Failed
Ge Internal standard	72	3	HMI He	684585	0.75	517264	132.35	60	120	IS Failed
In Internal Standard	115	3	HMI He	2627562	2.36	1949413	134.79	60	120	IS Failed
Ir (IS)	193	3	HMI He	5643054	0.22	4364581	129.29	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-4-E MS
Data File Name	113SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:09:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.703	ppb	38.703	9.60	1553	2000	
Na	23	3	45	62690.190	ppb	62690.190	1.02	6198516	400000	
Mg	24	3	45	29505.627	ppb	29505.627	0.20	1565951	400000	
Al	27	3	45	816.780	ppb	816.780	1.67	17171	400000	
K	39	3	45	2349.564	ppb	2349.564	2.16	130007	400000	
Ca	40	2	45	191223.489	ppb	191223.489	1.65	99765882	400000	
V	51	3	72	40.775	ppb	40.775	0.41	23750	2000	
Cr	52	3	72	41.198	ppb	41.198	2.12	30972	5000	
Mn	55	3	72	7184.975	ppb	7184.975	1.69	2746320	10000	
Fe	56	2	72	888.490	ppb	888.490	1.22	1285166	10000	
Co	59	3	72	42.188	ppb	42.188	1.52	50125	2000	
Ni	60	3	72	42.717	ppb	42.717	0.09	14622	5000	
Cu	63	3	72	40.054	ppb	40.054	0.29	36784	5000	
Zn	66	3	72	41.639	ppb	41.639	6.91	6507	5000	
As	75	3	72	40.375	ppb	40.375	1.85	4395	2000	
Se	78	2	72	42.482	ppb	42.482	4.72	2296	2000	
Sr	88	3	72	707.352	ppb	707.352	1.11	372631	4000	
Mo	95	3	115	38.919	ppb	38.919	2.29	18729	2000	
Ag	107	3	115	39.675	ppb	39.675	1.55	65153	100	
Cd	111	3	115	39.799	ppb	39.799	2.87	9437	2000	
Sn	120	3	115	38.275	ppb	38.275	0.56	29438	2000	
Sb	121	3	115	38.738	ppb	38.738	1.86	29837	1000	
Ba	137	3	115	63.046	ppb	63.046	2.88	15748	5000	
Tl	205	3	193	39.084	ppb	39.084	1.85	152665	2000	
(Pb)	206	3	193	39.637	ppb	39.637	1.73	52069	100	
(Pb)	207	3	193	38.533	ppb	38.533	1.62	44686	100	
Pb	208	3	193	39.448	ppb	39.448	1.85	208073	5000	
Th	232	3	193	38.307	ppb	38.307	2.96	201300	2000	
U	238	3	193	43.211	ppb	43.211	1.07	241480	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3711838	1.91	2822685	131.50	60	120	IS Failed
Sc (IS)	45	3	HMI He	549578	0.30	416560	131.93	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2239905	2.13	1735883	129.04	60	120	IS Failed
Ge Internal standard	72	3	HMI He	685714	0.25	517264	132.57	60	120	IS Failed
In Internal Standard	115	3	HMI He	2649499	0.87	1949413	135.91	60	120	IS Failed
Ir (IS)	193	3	HMI He	5813143	1.82	4364581	133.19	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-4-F MSD
Data File Name	114SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:11:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.347	ppb	38.347	5.53	1538	2000	
Na	23	3	45	61861.067	ppb	61861.067	1.11	6183027	400000	
Mg	24	3	45	29695.770	ppb	29695.770	3.21	1593103	400000	
Al	27	3	45	806.847	ppb	806.847	1.10	17148	400000	
K	39	3	45	2351.755	ppb	2351.755	3.33	131511	400000	
Ca	40	2	45	186058.046	ppb	186058.046	1.72	98131351	400000	
V	51	3	72	39.462	ppb	39.462	2.77	23269	2000	
Cr	52	3	72	40.760	ppb	40.760	0.80	31016	5000	
Mn	55	3	72	7201.527	ppb	7201.527	0.40	2783583	10000	
Fe	56	2	72	855.951	ppb	855.951	0.95	1283898	10000	
Co	59	3	72	41.182	ppb	41.182	1.07	49482	2000	
Ni	60	3	72	42.372	ppb	42.372	2.75	14672	5000	
Cu	63	3	72	40.080	ppb	40.080	0.58	37221	5000	
Zn	66	3	72	41.466	ppb	41.466	3.32	6553	5000	
As	75	3	72	39.894	ppb	39.894	5.27	4392	2000	
Se	78	2	72	39.728	ppb	39.728	4.92	2225	2000	
Sr	88	3	72	697.814	ppb	697.814	0.40	371754	4000	
Mo	95	3	115	40.033	ppb	40.033	1.79	19054	2000	
Ag	107	3	115	39.645	ppb	39.645	2.30	64385	100	
Cd	111	3	115	40.240	ppb	40.240	2.20	9437	2000	
Sn	120	3	115	37.876	ppb	37.876	2.97	28812	2000	
Sb	121	3	115	39.485	ppb	39.485	2.49	30074	1000	
Ba	137	3	115	64.132	ppb	64.132	1.99	15843	5000	
Tl	205	3	193	40.070	ppb	40.070	2.03	151489	2000	
(Pb)	206	3	193	40.604	ppb	40.604	2.85	51619	100	
(Pb)	207	3	193	39.534	ppb	39.534	3.21	44357	100	
Pb	208	3	193	40.495	ppb	40.495	2.98	206697	5000	
Th	232	3	193	41.519	ppb	41.519	3.29	210699	2000	
U	238	3	193	44.305	ppb	44.305	2.38	239598	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3752036	0.79	2822685	132.92	60	120	IS Failed
Sc (IS)	45	3	HMI He	555555	0.64	416560	133.37	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2320174	1.41	1735883	133.66	60	120	IS Failed
Ge Internal standard	72	3	HMI He	693443	0.31	517264	134.06	60	120	IS Failed
In Internal Standard	115	3	HMI He	2620979	2.43	1949413	134.45	60	120	IS Failed
Ir (IS)	193	3	HMI He	5627781	2.56	4364581	128.94	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-5-A
Data File Name	115SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:13:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-101.34	3	2000	
Na	23	3	45	53050.036	ppb	53050.036	0.89	5135251	400000	
Mg	24	3	45	45903.923	ppb	45903.923	2.64	2382889	400000	
Al	27	3	45	15.522	ppb	15.522	22.63	400	400000	
K	39	3	45	1733.708	ppb	1733.708	2.60	101731	400000	
Ca	40	2	45	242898.440	ppb	242898.440	0.74	127090144	400000	
V	51	3	72	-0.483	ppb	-0.483	-16.53	496	2000	
Cr	52	3	72	2.935	ppb	2.935	4.57	4525	5000	
Mn	55	3	72	1009.192	ppb	1009.192	0.54	379449	10000	
Fe	56	2	72	36603.153	ppb	36603.153	0.89	52207936	10000	
Co	59	3	72	0.342	ppb	0.342	15.72	438	2000	
Ni	60	3	72	1.992	ppb	1.992	9.54	1194	5000	
Cu	63	3	72	2.152	ppb	2.152	8.62	2304	5000	
Zn	66	3	72	0.851	ppb	0.851	33.37	365	5000	
As	75	3	72	0.678	ppb	0.678	24.09	122	2000	
Se	78	2	72	0.032	ppb	0.032	129.93	3	2000	
Sr	88	3	72	822.390	ppb	822.390	1.31	425908	4000	
Mo	95	3	115	0.312	ppb	0.312	12.04	180	2000	
Ag	107	3	115	-0.006	ppb	-0.006	-29.86	18	100	
Cd	111	3	115	0.008	ppb	0.008	259.49	15	2000	
Sn	120	3	115	0.301	ppb	0.301	33.79	851	2000	
Sb	121	3	115	0.084	ppb	0.084	16.96	115	1000	
Ba	137	3	115	256.581	ppb	256.581	1.50	61718	5000	
Tl	205	3	193	-0.105	ppb	-0.105	-7.43	303	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-79.04	223	100	
(Pb)	207	3	193	-0.024	ppb	-0.024	-64.43	376	100	
Pb	208	3	193	-0.020	ppb	-0.020	-54.92	1059	5000	
Th	232	3	193	2.646	ppb	2.646	6.40	18803	2000	
U	238	3	193	0.303	ppb	0.303	5.98	3089	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3722146	1.12	2822685	131.87	60	120	IS Failed
Sc (IS)	45	3	HMI He	537714	1.46	416560	129.08	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2270079	0.42	1735883	130.77	60	120	IS Failed
Ge Internal standard	72	3	HMI He	674170	0.92	517264	130.33	60	120	IS Failed
In Internal Standard	115	3	HMI He	2559390	0.97	1949413	131.29	60	120	IS Failed
Ir (IS)	193	3	HMI He	5652493	0.38	4364581	129.51	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	116_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:14:58-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	50.924	ppb	3.141	2006	50	101.8	90	110	
Na	23	3	45	50211.565	ppb	2.439	4870570	51000	98.5	90	110	
Mg	24	3	45	10421.659	ppb	2.173	542306	11000	94.7	90	110	
Al	27	3	45	1006.799	ppb	2.285	20726	1000	100.7	90	110	
K	39	3	45	10608.053	ppb	0.779	469380	11000	96.4	90	110	
Ca	40	2	45	10874.562	ppb	0.368	5592250	11000	98.9	90	110	
V	51	3	72	51.193	ppb	0.451	28435	50	102.4	90	110	
Cr	52	3	72	54.002	ppb	0.645	38203	50	108.0	90	110	
Mn	55	3	72	53.007	ppb	1.789	19696	50	106.0	90	110	
Fe	56	2	72	1082.841	ppb	0.231	1508482	1000	108.3	90	110	
Co	59	3	72	51.906	ppb	0.899	59193	50	103.8	90	110	
Ni	60	3	72	51.934	ppb	0.955	16950	50	103.9	90	110	
Cu	63	3	72	52.015	ppb	2.306	45743	50	104.0	90	110	
Zn	66	3	72	53.497	ppb	1.641	7958	50	107.0	90	110	
As	75	3	72	53.310	ppb	2.269	5555	50	106.6	90	110	
Se	78	2	72	53.694	ppb	3.353	2810	50	107.4	90	110	
Sr	88	3	72	105.359	ppb	1.296	53307	100	105.4	90	110	
Mo	95	3	115	49.879	ppb	5.071	23562	50	99.8	90	110	
Ag	107	3	115	49.893	ppb	4.177	80466	50	99.8	90	110	
Cd	111	3	115	50.803	ppb	4.831	11828	50	101.6	90	110	
Sn	120	3	115	49.410	ppb	4.470	37133	50	98.8	90	110	
Sb	121	3	115	50.201	ppb	4.537	37958	50	100.4	90	110	
Ba	137	3	115	50.897	ppb	5.172	12498	50	101.8	90	110	
Tl	205	3	193	50.540	ppb	1.008	192401	50	101.1	90	110	
(Pb)	206	3	193	49.943	ppb	1.599	63937	50	99.9	90	110	
(Pb)	207	3	193	50.330	ppb	1.698	56814	50	100.7	90	110	
Pb	208	3	193	50.243	ppb	2.709	258215	50	100.5	90	110	
Th	232	3	193	51.623	ppb	1.818	262732	50	103.2	90	110	
U	238	3	193	51.129	ppb	1.887	278477	50	102.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3649572	0.92	2822685	129.29	60	120	IS Failed
Sc (IS)	45	3	HMI He	538680	0.54	416560	129.32	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2167780	0.57	1735883	124.88	60	120	IS Failed
Ge Internal standard	72	3	HMI He	658273	0.52	517264	127.26	60	120	IS Failed
In Internal Standard	115	3	HMI He	2604637	3.47	1949413	133.61	60	120	IS Failed
Ir (IS)	193	3	HMI He	5670825	1.20	4364581	129.93	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	117_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:16:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	046CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.156	ppb	0.0	0	0.5	
Na	23	3	45	-6.992	ppb	-46.7	23376	25	
Mg	24	3	45	0.197	ppb	250.1	310	25	
Al	27	3	45	0.027	ppb	7491.1	83	15	
K	39	3	45	-109.402	ppb	-23.8	25816	50	
V	51	3	72	-0.079	ppb	-82.8	716	1	
Cr	52	3	72	0.218	ppb	107.6	2669	1	
Mn	55	3	72	0.207	ppb	33.7	330	0.5	
Co	59	3	72	-0.006	ppb	-108.2	32	0.5	
Ni	60	3	72	0.300	ppb	62.2	643	1	
Cu	63	3	72	-0.010	ppb	-320.7	371	1	
Zn	66	3	72	-0.573	ppb	-33.5	153	5	
As	75	3	72	0.003	ppb	7129.4	50	1	
Se	78	2	72	0.046	ppb	124.7	3	1	
Sr	88	3	72	0.022	ppb	183.6	42	0.5	
Mo	95	3	115	0.075	ppb	29.7	72	0.5	
Ag	107	3	115	-0.004	ppb	-44.4	23	1	
Cd	111	3	115	-0.029	ppb	-41.0	7	0.5	
Sn	120	3	115	-0.086	ppb	-95.6	585	1	
Sb	121	3	115	0.017	ppb	247.1	67	0.6	
Ba	137	3	115	-0.109	ppb	-77.5	38	0.5	
Tl	205	3	193	-0.096	ppb	-9.3	337	0.1	
(Pb)	206	3	193	-0.067	ppb	-61.8	185	1	
(Pb)	207	3	193	-0.058	ppb	-80.6	338	1	
Pb	208	3	193	-0.040	ppb	-29.4	961	0.5	
Th	232	3	193	2.124	ppb	5.3	16218	1	>RL
U	238	3	193	0.031	ppb	16.7	1618	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3664890	0.85	2822685	129.84	60	120	IS Failed
Sc (IS)	45	3	HMI He	542941	0.28	416560	130.34	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2243434	1.44	1735883	129.24	60	120	IS Failed
Ge Internal standard	72	3	HMI He	670285	0.90	517264	129.58	60	120	IS Failed
In Internal Standard	115	3	HMI He	2624004	1.46	1949413	134.60	60	120	IS Failed
Ir (IS)	193	3	HMI He	5652671	1.63	4364581	129.51	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-6-A
Data File Name	118SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:18:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-100.52	3	2000	
Na	23	3	45	57868.672	ppb	57868.672	1.66	5690217	400000	
Mg	24	3	45	36093.618	ppb	36093.618	0.61	1904319	400000	
Al	27	3	45	64.322	ppb	64.322	47.85	1422	400000	
K	39	3	45	1274.957	ppb	1274.957	3.14	84112	400000	
Ca	40	2	45	250195.492	ppb	250195.492	3.87	127278295	400000	
V	51	3	72	-0.188	ppb	-0.188	-45.42	658	2000	
Cr	52	3	72	0.318	ppb	0.318	75.38	2746	5000	
Mn	55	3	72	10719.820	ppb	10719.820	0.45	4019766	10000	
Fe	56	2	72	60.452	ppb	60.452	5.49	120036	10000	
Co	59	3	72	1.721	ppb	1.721	7.91	2042	2000	
Ni	60	3	72	1.940	ppb	1.940	10.78	1174	5000	
Cu	63	3	72	0.773	ppb	0.773	5.47	1071	5000	
Zn	66	3	72	2.493	ppb	2.493	14.46	606	5000	
As	75	3	72	0.128	ppb	0.128	56.32	63	2000	
Se	78	2	72	0.095	ppb	0.095	102.67	6	2000	
Sr	88	3	72	736.677	ppb	736.677	0.55	380756	4000	
Mo	95	3	115	0.329	ppb	0.329	36.50	188	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-138.77	23	100	
Cd	111	3	115	0.290	ppb	0.290	29.33	80	2000	
Sn	120	3	115	-0.008	ppb	-0.008	-1062.98	630	2000	
Sb	121	3	115	0.034	ppb	0.034	13.43	78	1000	
Ba	137	3	115	36.882	ppb	36.882	1.91	8970	5000	
Tl	205	3	193	-0.114	ppb	-0.114	-5.25	273	2000	
(Pb)	206	3	193	0.076	ppb	0.076	34.29	371	100	
(Pb)	207	3	193	0.024	ppb	0.024	98.26	436	100	
Pb	208	3	193	0.063	ppb	0.063	33.85	1504	5000	
Th	232	3	193	0.660	ppb	0.660	19.98	9077	2000	
U	238	3	193	2.153	ppb	2.153	5.55	13265	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3620876	2.25	2822685	128.28	60	120	IS Failed
Sc (IS)	45	3	HMI He	546371	0.65	416560	131.16	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2225407	0.50	1735883	128.20	60	120	IS Failed
Ge Internal standard	72	3	HMI He	672763	0.59	517264	130.06	60	120	IS Failed
In Internal Standard	115	3	HMI He	2572031	0.93	1949413	131.94	60	120	IS Failed
Ir (IS)	193	3	HMI He	5733066	0.33	4364581	131.35	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-7-A
Data File Name	119SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:20:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.114	ppb	-0.114	-63.89	2	2000	
Na	23	3	45	26589.093	ppb	26589.093	2.23	2644010	400000	
Mg	24	3	45	11545.653	ppb	11545.653	3.02	613150	400000	
Al	27	3	45	33.303	ppb	33.303	4.42	781	400000	
K	39	3	45	334.853	ppb	334.853	13.44	44917	400000	
Ca	40	2	45	76786.794	ppb	76786.794	1.17	40803858	400000	
V	51	3	72	-0.175	ppb	-0.175	-18.89	685	2000	
Cr	52	3	72	0.160	ppb	0.160	48.66	2714	5000	
Mn	55	3	72	2.404	ppb	2.404	3.46	1188	10000	
Fe	56	2	72	37.292	ppb	37.292	4.73	90371	10000	
Co	59	3	72	0.137	ppb	0.137	20.45	205	2000	
Ni	60	3	72	0.389	ppb	0.389	6.37	693	5000	
Cu	63	3	72	0.278	ppb	0.278	23.12	648	5000	
Zn	66	3	72	-0.002	ppb	-0.002	-6105.71	245	5000	
As	75	3	72	0.204	ppb	0.204	58.91	73	2000	
Se	78	2	72	0.104	ppb	0.104	21.62	7	2000	
Sr	88	3	72	208.296	ppb	208.296	0.85	110726	4000	
Mo	95	3	115	0.098	ppb	0.098	25.02	83	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-26.79	18	100	
Cd	111	3	115	-0.029	ppb	-0.029	-44.01	7	2000	
Sn	120	3	115	-0.124	ppb	-0.124	-12.93	560	2000	
Sb	121	3	115	0.014	ppb	0.014	198.97	65	1000	
Ba	137	3	115	13.138	ppb	13.138	2.24	3322	5000	
Tl	205	3	193	-0.114	ppb	-0.114	-6.16	268	2000	
(Pb)	206	3	193	-0.041	ppb	-0.041	-71.23	218	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-1600.00	400	100	
Pb	208	3	193	-0.009	ppb	-0.009	-38.99	1118	5000	
Th	232	3	193	0.305	ppb	0.305	31.23	7197	2000	
U	238	3	193	0.822	ppb	0.822	7.14	5895	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3779455	2.06	2822685	133.90	60	120	IS Failed
Sc (IS)	45	3	HMI He	549871	0.98	416560	132.00	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2294553	1.29	1735883	132.18	60	120	IS Failed
Ge Internal standard	72	3	HMI He	691843	1.39	517264	133.75	60	120	IS Failed
In Internal Standard	115	3	HMI He	2640216	1.37	1949413	135.44	60	120	IS Failed
Ir (IS)	193	3	HMI He	5663294	2.40	4364581	129.76	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-8-A
Data File Name	120SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:22:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.113	ppb	-0.113	-64.64	2	2000	
Na	23	3	45	53149.058	ppb	53149.058	2.00	5278272	400000	
Mg	24	3	45	25681.613	ppb	25681.613	2.69	1368091	400000	
Al	27	3	45	3.463	ppb	3.463	28.69	157	400000	
K	39	3	45	1182.588	ppb	1182.588	2.75	81007	400000	
Ca	40	2	45	178755.253	ppb	178755.253	1.60	93643053	400000	
V	51	3	72	-0.304	ppb	-0.304	-7.07	608	2000	
Cr	52	3	72	0.158	ppb	0.158	87.61	2701	5000	
Mn	55	3	72	7290.973	ppb	7290.973	1.04	2798817	10000	
Fe	56	2	72	13.519	ppb	13.519	24.56	55513	10000	
Co	59	3	72	3.439	ppb	3.439	4.53	4140	2000	
Ni	60	3	72	6.319	ppb	6.319	10.51	2651	5000	
Cu	63	3	72	14.807	ppb	14.807	2.87	13903	5000	
Zn	66	3	72	34.459	ppb	34.459	2.00	5450	5000	
As	75	3	72	0.007	ppb	0.007	2968.66	52	2000	
Se	78	2	72	0.081	ppb	0.081	51.10	5	2000	
Sr	88	3	72	574.359	ppb	574.359	1.12	303886	4000	
Mo	95	3	115	0.397	ppb	0.397	30.81	225	2000	
Ag	107	3	115	-0.004	ppb	-0.004	-126.76	23	100	
Cd	111	3	115	0.350	ppb	0.350	38.35	95	2000	
Sn	120	3	115	-0.077	ppb	-0.077	-121.02	590	2000	
Sb	121	3	115	0.057	ppb	0.057	25.44	97	1000	
Ba	137	3	115	54.751	ppb	54.751	1.80	13527	5000	
Tl	205	3	193	-0.105	ppb	-0.105	-23.21	310	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-7.67	187	100	
(Pb)	207	3	193	-0.014	ppb	-0.014	-251.37	396	100	
Pb	208	3	193	-0.028	ppb	-0.028	-31.06	1043	5000	
Th	232	3	193	0.089	ppb	0.089	103.45	6258	2000	
U	238	3	193	1.766	ppb	1.766	4.02	11245	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3726125	0.76	2822685	132.01	60	120	IS Failed
Sc (IS)	45	3	HMI He	551617	0.04	416560	132.42	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2270919	3.02	1735883	130.82	60	120	IS Failed
Ge Internal standard	72	3	HMI He	688709	0.76	517264	133.14	60	120	IS Failed
In Internal Standard	115	3	HMI He	2619013	1.46	1949413	134.35	60	120	IS Failed
Ir (IS)	193	3	HMI He	5785672	0.96	4364581	132.56	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175205-A-9-A
Data File Name	121SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:24:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-106.44	3	2000	
Na	23	3	45	403.377	ppb	403.377	4.07	64373	400000	
Mg	24	3	45	8.290	ppb	8.290	33.28	747	400000	
Al	27	3	45	7.107	ppb	7.107	16.95	234	400000	
K	39	3	45	-128.469	ppb	-128.469	-14.69	25442	400000	
Ca	40	2	45	98.961	ppb	98.961	2.80	65820	400000	
V	51	3	72	-0.329	ppb	-0.329	-39.07	595	2000	
Cr	52	3	72	0.361	ppb	0.361	13.30	2846	5000	
Mn	55	3	72	1.266	ppb	1.266	7.37	746	10000	
Fe	56	2	72	8.017	ppb	8.017	48.14	46696	10000	
Co	59	3	72	0.028	ppb	0.028	84.06	73	2000	
Ni	60	3	72	0.215	ppb	0.215	60.28	633	5000	
Cu	63	3	72	0.078	ppb	0.078	30.23	463	5000	
Zn	66	3	72	2.326	ppb	2.326	12.84	596	5000	
As	75	3	72	0.066	ppb	0.066	207.21	58	2000	
Se	78	2	72	0.059	ppb	0.059	64.85	4	2000	
Sr	88	3	72	0.315	ppb	0.315	3.52	198	4000	
Mo	95	3	115	0.052	ppb	0.052	95.00	60	2000	
Ag	107	3	115	0.002	ppb	0.002	533.05	32	100	
Cd	111	3	115	-0.036	ppb	-0.036	-59.75	5	2000	
Sn	120	3	115	0.645	ppb	0.645	31.16	1116	2000	
Sb	121	3	115	0.060	ppb	0.060	15.16	98	1000	
Ba	137	3	115	0.384	ppb	0.384	42.07	158	5000	
Tl	205	3	193	-0.122	ppb	-0.122	-5.23	245	2000	
(Pb)	206	3	193	-0.024	ppb	-0.024	-50.08	245	100	
(Pb)	207	3	193	0.031	ppb	0.031	91.98	450	100	
Pb	208	3	193	-0.002	ppb	-0.002	-630.60	1181	5000	
Th	232	3	193	-0.024	ppb	-0.024	-184.60	5698	2000	
U	238	3	193	0.015	ppb	0.015	182.24	1569	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3728990	1.25	2822685	132.11	60	120	IS Failed
Sc (IS)	45	3	HMI He	552162	0.43	416560	132.55	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2225224	2.23	1735883	128.19	60	120	IS Failed
Ge Internal standard	72	3	HMI He	689820	0.93	517264	133.36	60	120	IS Failed
In Internal Standard	115	3	HMI He	2595700	0.82	1949413	133.15	60	120	IS Failed
Ir (IS)	193	3	HMI He	5797905	1.61	4364581	132.84	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175172-A-5-B
Data File Name	122SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:25:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.156	ppb	-0.156	0.00	0	2000	
Na	23	3	45	19666.623	ppb	19666.623	2.15	1983308	400000	
Mg	24	3	45	20121.112	ppb	20121.112	2.14	1079998	400000	
Al	27	3	45	4.819	ppb	4.819	38.64	187	400000	
K	39	3	45	8094.466	ppb	8094.466	0.98	376891	400000	
Ca	40	2	45	107442.485	ppb	107442.485	0.04	56623780	400000	
V	51	3	72	7.208	ppb	7.208	3.43	4977	2000	
Cr	52	3	72	5.312	ppb	5.312	3.13	6418	5000	
Mn	55	3	72	1.045	ppb	1.045	9.67	676	10000	
Fe	56	2	72	31.870	ppb	31.870	5.08	83325	10000	
Co	59	3	72	0.042	ppb	0.042	11.34	92	2000	
Ni	60	3	72	1.947	ppb	1.947	19.42	1234	5000	
Cu	63	3	72	0.513	ppb	0.513	12.69	880	5000	
Zn	66	3	72	1.324	ppb	1.324	18.50	455	5000	
As	75	3	72	1.499	ppb	1.499	20.97	218	2000	
Se	78	2	72	2.715	ppb	2.715	14.75	153	2000	
Sr	88	3	72	454.935	ppb	454.935	1.40	246504	4000	
Mo	95	3	115	1.771	ppb	1.771	5.04	876	2000	
Ag	107	3	115	0.012	ppb	0.012	42.22	48	100	
Cd	111	3	115	-0.036	ppb	-0.036	-0.64	5	2000	
Sn	120	3	115	-0.231	ppb	-0.231	-19.80	475	2000	
Sb	121	3	115	0.112	ppb	0.112	10.71	138	1000	
Ba	137	3	115	124.211	ppb	124.211	2.42	30573	5000	
Tl	205	3	193	-0.129	ppb	-0.129	-3.84	217	2000	
(Pb)	206	3	193	-0.019	ppb	-0.019	-95.57	252	100	
(Pb)	207	3	193	-0.055	ppb	-0.055	-65.94	350	100	
Pb	208	3	193	-0.020	ppb	-0.020	-42.95	1086	5000	
Th	232	3	193	-0.078	ppb	-0.078	-67.00	5414	2000	
U	238	3	193	7.476	ppb	7.476	2.26	42804	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3748410	1.98	2822685	132.80	60	120	IS Failed
Sc (IS)	45	3	HMI He	555803	0.60	416560	133.43	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2315361	0.11	1735883	133.38	60	120	IS Failed
Ge Internal standard	72	3	HMI He	705297	0.62	517264	136.35	60	120	IS Failed
In Internal Standard	115	3	HMI He	2616325	1.08	1949413	134.21	60	120	IS Failed
Ir (IS)	193	3	HMI He	5785690	2.32	4364581	132.56	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175172-A-4-D
Data File Name	123SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:27:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.114	ppb	-0.114	-62.43	2	2000	
Na	23	3	45	20156.637	ppb	20156.637	1.56	2051500	400000	
Mg	24	3	45	20922.746	ppb	20922.746	2.05	1133759	400000	
Al	27	3	45	3.810	ppb	3.810	20.99	167	400000	
K	39	3	45	8394.987	ppb	8394.987	1.06	393440	400000	
Ca	40	2	45	109755.590	ppb	109755.590	3.06	58313697	400000	
V	51	3	72	7.717	ppb	7.717	5.31	5257	2000	
Cr	52	3	72	2.581	ppb	2.581	16.41	4470	5000	
Mn	55	3	72	0.590	ppb	0.590	21.33	496	10000	
Fe	56	2	72	18.721	ppb	18.721	8.83	63924	10000	
Co	59	3	72	0.044	ppb	0.044	14.98	95	2000	
Ni	60	3	72	1.569	ppb	1.569	7.41	1103	5000	
Cu	63	3	72	0.226	ppb	0.226	16.51	610	5000	
Zn	66	3	72	0.501	ppb	0.501	49.24	327	5000	
As	75	3	72	1.822	ppb	1.822	3.65	253	2000	
Se	78	2	72	2.601	ppb	2.601	12.69	145	2000	
Sr	88	3	72	473.184	ppb	473.184	0.93	255756	4000	
Mo	95	3	115	1.827	ppb	1.827	8.11	916	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-233.87	27	100	
Cd	111	3	115	-0.015	ppb	-0.015	-6.63	10	2000	
Sn	120	3	115	-0.052	ppb	-0.052	-120.54	616	2000	
Sb	121	3	115	0.147	ppb	0.147	65.72	167	1000	
Ba	137	3	115	127.054	ppb	127.054	2.64	31707	5000	
Tl	205	3	193	-0.133	ppb	-0.133	-5.65	193	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-10.10	222	100	
(Pb)	207	3	193	-0.014	ppb	-0.014	-196.20	386	100	
Pb	208	3	193	-0.008	ppb	-0.008	-76.77	1116	5000	
Th	232	3	193	-0.060	ppb	-0.060	-105.35	5349	2000	
U	238	3	193	7.914	ppb	7.914	1.38	43979	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3779537	0.99	2822685	133.90	60	120	IS Failed
Sc (IS)	45	3	HMI He	561118	1.26	416560	134.70	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2303750	2.43	1735883	132.71	60	120	IS Failed
Ge Internal standard	72	3	HMI He	703503	0.65	517264	136.00	60	120	IS Failed
In Internal Standard	115	3	HMI He	2653021	2.39	1949413	136.09	60	120	IS Failed
Ir (IS)	193	3	HMI He	5624493	0.50	4364581	128.87	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175172-A-4-Dsd@5
Data File Name	124SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_042023.b
Acq Date Time	2023-04-20T19:29:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	046CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.156	ppb	-0.156	0.00	0	2000	
Na	23	3	45	4024.232	ppb	4024.232	1.05	425496	400000	
Mg	24	3	45	4245.236	ppb	4245.236	1.45	228139	400000	
Al	27	3	45	5.784	ppb	5.784	26.12	207	400000	
K	39	3	45	1652.471	ppb	1652.471	3.11	101704	400000	
Ca	40	2	45	22863.433	ppb	22863.433	1.76	11921007	400000	
V	51	3	72	1.552	ppb	1.552	1.23	1694	2000	
Cr	52	3	72	0.561	ppb	0.561	37.12	3044	5000	
Mn	55	3	72	2.051	ppb	2.051	2.70	1070	10000	
Fe	56	2	72	15.385	ppb	15.385	16.65	59014	10000	
Co	59	3	72	0.034	ppb	0.034	28.66	82	2000	
Ni	60	3	72	0.655	ppb	0.655	23.27	795	5000	
Cu	63	3	72	0.138	ppb	0.138	41.85	528	5000	
Zn	66	3	72	3.414	ppb	3.414	15.44	776	5000	
As	75	3	72	0.071	ppb	0.071	111.30	60	2000	
Se	78	2	72	0.559	ppb	0.559	16.69	32	2000	
Sr	88	3	72	96.457	ppb	96.457	0.22	52167	4000	
Mo	95	3	115	0.392	ppb	0.392	8.47	223	2000	
Ag	107	3	115	0.017	ppb	0.017	40.17	57	100	
Cd	111	3	115	-0.015	ppb	-0.015	-3.37	10	2000	
Sn	120	3	115	0.052	ppb	0.052	115.48	690	2000	
Sb	121	3	115	0.073	ppb	0.073	33.14	110	1000	
Ba	137	3	115	25.495	ppb	25.495	0.79	6373	5000	
Tl	205	3	193	-0.126	ppb	-0.126	-1.84	223	2000	
(Pb)	206	3	193	0.417	ppb	0.417	15.22	805	100	
(Pb)	207	3	193	0.392	ppb	0.392	18.91	848	100	
Pb	208	3	193	0.423	ppb	0.423	7.33	3344	5000	
Th	232	3	193	-0.104	ppb	-0.104	-41.72	5194	2000	
U	238	3	193	1.578	ppb	1.578	2.73	10042	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3705632	1.27	2822685	131.28	60	120	IS Failed
Sc (IS)	45	3	HMI He	555920	1.36	416560	133.45	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2303414	1.65	1735883	132.69	60	120	IS Failed
Ge Internal standard	72	3	HMI He	703597	0.47	517264	136.02	60	120	IS Failed
In Internal Standard	115	3	HMI He	2635123	1.18	1949413	135.18	60	120	IS Failed
Ir (IS)	193	3	HMI He	5692621	1.59	4364581	130.43	60	120	IS Failed

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	126SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T19:50:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	127SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T19:52:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	128SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T19:53:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	129SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T19:56:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	130SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T19:58:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	131SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T19:59:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	132SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:01:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7695087
Data File Name	133CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T20:03:29-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	3466.41
Na	23	45	3	HMI He	19934	0.01
Mg	24	45	3	HMI He	190	13.84
Al	27	45	3	HMI He	87	46.71
K	39	45	3	HMI He	25746	0.01
Ca	40	45	2	HMI H2	9286	0.02
V	51	72	3	HMI He	795	0.55
Cr	52	72	3	HMI He	2491	0.25
Mn	55	72	3	HMI He	260	6.41
Fe	56	72	2	HMI H2	39483	0.03
Co	59	72	3	HMI He	38	19.67
Ni	60	72	3	HMI He	591	1.70
Cu	63	72	3	HMI He	323	1.54
Zn	66	72	3	HMI He	165	4.86
As	75	72	3	HMI He	38	157.22
Se	78	72	2	HMI H2	2	0.00
(Se)	78	72	3	HMI He	28	287.87
Sr	88	72	3	HMI He	20	0.00
Mo	95	115	3	HMI He	28	129.71
Ag	107	115	3	HMI He	25	138.62
Cd	111	115	3	HMI He	5	2000.00
Sn	120	115	3	HMI He	523	2.13
Sb	121	115	3	HMI He	30	294.07
Ba	137	115	3	HMI He	27	81.25
Tl	205	193	3	HMI He	277	5.71
(Pb)	206	193	3	HMI He	218	6.15
(Pb)	207	193	3	HMI He	385	1.55
Pb	208	193	3	HMI He	1081	0.90
Th	232	193	3	HMI He	12467	0.04
U	238	193	3	HMI He	1496	0.19

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3707811	1.17
Sc (IS)	45	3	HMI He	545003	0.42
Ge Internal standard	72	2	HMI H2	2275339	2.98
Ge Internal standard	72	3	HMI He	672584	0.64
In Internal Standard	115	3	HMI He	2611031	1.61
Ir (IS)	193	3	HMI He	5805625	1.62

Calibration Standard Report

Sample Table

Sample Name	ic-7695091
Data File Name	134CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T20:05:16-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	133CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	9780073	0.00
Mg	24	45	3	HMI He	1051879	0.00
Al	27	45	3	HMI He	190	16.83
K	39	45	3	HMI He	865526	0.00
V	51	72	3	HMI He	800	0.83
Cr	52	72	3	HMI He	2814	0.19
Mn	55	72	3	HMI He	305	4.40
Co	59	72	3	HMI He	78	20.52
Ni	60	72	3	HMI He	666	1.08
Cu	63	72	3	HMI He	416	3.24
Zn	66	72	3	HMI He	290	4.29
As	75	72	3	HMI He	50	34.65
Se	78	72	2	HMI H2	7	1132.48
(Se)	78	72	3	HMI He	25	0.00
Sr	88	72	3	HMI He	283	2.59
Mo	95	115	3	HMI He	73	23.41
Ag	107	115	3	HMI He	55	59.62
Cd	111	115	3	HMI He	8	415.69
Sn	120	115	3	HMI He	563	2.15
Sb	121	115	3	HMI He	38	39.33
Ba	137	115	3	HMI He	155	12.67
Tl	205	193	3	HMI He	187	2.99
(Pb)	206	193	3	HMI He	288	6.84
(Pb)	207	193	3	HMI He	445	2.27
Pb	208	193	3	HMI He	1328	0.48
Th	232	193	3	HMI He	8624	0.08
U	238	193	3	HMI He	1591	0.23

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3777076	1.62	3707811	101.87	60	120	
Sc (IS)	45	3	HMI He	545532	1.05	545003	100.10	60	120	
Ge Internal standard	72	2	HMI H2	2213197	2.27	2275339	97.27	60	120	
Ge Internal standard	72	3	HMI He	654263	0.32	672584	97.28	60	120	
In Internal Standard	115	3	HMI He	2656455	1.47	2611031	101.74	60	120	
Ir (IS)	193	3	HMI He	5751310	0.33	5805625	99.06	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7695089
Data File Name	135CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T20:07:02-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	133CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3842	0.09
Na	23	45	3	HMI He	221747	0.00
Mg	24	45	3	HMI He	105505	0.00
Al	27	45	3	HMI He	42148	0.00
K	39	45	3	HMI He	111858	0.00
V	51	72	3	HMI He	57443	0.00
Cr	52	72	3	HMI He	73099	0.00
Mn	55	72	3	HMI He	38953	0.00
Co	59	72	3	HMI He	119833	0.00
Ni	60	72	3	HMI He	34285	0.00
Cu	63	72	3	HMI He	91858	0.00
Zn	66	72	3	HMI He	15676	0.01
As	75	72	3	HMI He	11109	0.02
Se	78	72	2	HMI H2	5627	0.01
(Se)	78	72	3	HMI He	675	1.10
Sr	88	72	3	HMI He	108529	0.00
Mo	95	115	3	HMI He	47122	0.00
Ag	107	115	3	HMI He	161652	0.00
Cd	111	115	3	HMI He	24529	0.01
Sn	120	115	3	HMI He	75755	0.00
Sb	121	115	3	HMI He	76493	0.00
Ba	137	115	3	HMI He	24345	0.01
Tl	205	193	3	HMI He	383713	0.00
(Pb)	206	193	3	HMI He	129280	0.00
(Pb)	207	193	3	HMI He	111537	0.00
Pb	208	193	3	HMI He	516519	0.00
Th	232	193	3	HMI He	509609	0.00
U	238	193	3	HMI He	541737	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3799471	0.11	3707811	102.47	60	120	
Sc (IS)	45	3	HMI He	543325	0.69	545003	99.69	60	120	
Ge Internal standard	72	2	HMI H2	2303824	0.33	2275339	101.25	60	120	
Ge Internal standard	72	3	HMI He	689674	2.30	672584	102.54	60	120	
In Internal Standard	115	3	HMI He	2714711	2.58	2611031	103.97	60	120	
Ir (IS)	193	3	HMI He	5822085	1.55	5805625	100.28	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7695095
Data File Name	136_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:08:48-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.506	ppb	0.878	1574	40	103.8	90	110	
Na	23	3	45	5027.321	ppb	0.333	507166	12800	39.3	90	110	>+\-10%
Mg	24	3	45	4738.222	ppb	0.335	247631	4800	98.7	90	110	
Al	27	3	45	773.432	ppb	2.100	16309	800	96.7	90	110	
K	39	3	45	4895.624	ppb	0.748	229746	4800	102.0	90	110	
Ca	40	2	45	4988.994	ppb	3.160	2601583	4800	103.9	90	110	
V	51	3	72	40.237	ppb	2.020	22921	40	100.6	90	110	
Cr	52	3	72	40.874	ppb	1.058	30490	40	102.2	90	110	
Mn	55	3	72	41.135	ppb	0.127	15714	40	102.8	90	110	
Fe	56	2	72	794.480	ppb	1.927	1226815	800	99.3	90	110	
Co	59	3	72	40.056	ppb	1.081	46650	40	100.1	90	110	
Ni	60	3	72	40.293	ppb	1.325	13770	40	100.7	90	110	
Cu	63	3	72	40.601	ppb	0.455	36410	40	101.5	90	110	
Zn	66	3	72	79.341	ppb	2.375	12114	80	99.2	90	110	
As	75	3	72	40.175	ppb	0.827	4359	40	100.4	90	110	
Se	78	2	72	39.829	ppb	2.893	2251	40	99.6	90	110	
Sr	88	3	72	119.469	ppb	1.391	62965	120	99.6	90	110	
Mo	95	3	115	41.119	ppb	2.101	18832	40	102.8	90	110	
Ag	107	3	115	80.928	ppb	1.195	127032	80	101.2	90	110	
Cd	111	3	115	38.844	ppb	4.117	9254	40	97.1	90	110	
Sn	120	3	115	39.879	ppb	0.830	29653	40	99.7	90	110	
Sb	121	3	115	40.495	ppb	1.078	30094	40	101.2	90	110	
Ba	137	3	115	41.913	ppb	4.309	9922	40	104.8	90	110	
Tl	205	3	193	39.633	ppb	1.123	150412	40	99.1	90	110	
(Pb)	206	3	193	39.555	ppb	1.162	50659	40	98.9	90	110	
(Pb)	207	3	193	40.094	ppb	1.637	44416	40	100.2	90	110	
Pb	208	3	193	39.982	ppb	0.766	204708	40	100.0	90	110	
Th	232	3	193	82.109	ppb	1.364	415687	80	102.6	90	110	
U	238	3	193	43.587	ppb	1.020	234148	40	109.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3731226	1.74	3707811	100.63	60	120	
Sc (IS)	45	3	HMI He	541807	0.76	545003	99.41	60	120	
Ge Internal standard	72	2	HMI H2	2313069	1.63	2275339	101.66	60	120	
Ge Internal standard	72	3	HMI He	669651	0.16	672584	99.56	60	120	
In Internal Standard	115	3	HMI He	2635348	1.05	2611031	100.93	60	120	
Ir (IS)	193	3	HMI He	5752260	0.68	5805625	99.08	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	137_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:10:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.809	ppb	0.893	1994	50	105.6	90	110	
Na	23	3	45	49746.415	ppb	1.027	4864641	51000	97.5	90	110	
Mg	24	3	45	10398.558	ppb	0.108	545775	11000	94.5	90	110	
Al	27	3	45	980.326	ppb	1.030	20743	1000	98.0	90	110	
K	39	3	45	10801.423	ppb	1.071	478231	11000	98.2	90	110	
Ca	40	2	45	11122.839	ppb	0.994	5684764	11000	101.1	90	110	
V	51	3	72	51.672	ppb	1.413	29109	50	103.3	90	110	
Cr	52	3	72	52.874	ppb	1.564	38579	50	105.7	90	110	
Mn	55	3	72	51.695	ppb	2.596	19612	50	103.4	90	110	
Fe	56	2	72	1048.492	ppb	2.039	1559367	1000	104.8	90	110	
Co	59	3	72	51.830	ppb	0.981	60145	50	103.7	90	110	
Ni	60	3	72	50.741	ppb	2.816	17127	50	101.5	90	110	
Cu	63	3	72	51.776	ppb	0.691	46189	50	103.6	90	110	
Zn	66	3	72	51.490	ppb	2.008	7893	50	103.0	90	110	
As	75	3	72	54.972	ppb	2.067	5930	50	109.9	90	110	
Se	78	2	72	49.894	ppb	4.026	2738	50	99.8	90	110	
Sr	88	3	72	102.936	ppb	0.946	54070	100	102.9	90	110	
Mo	95	3	115	52.266	ppb	2.025	24396	50	104.5	90	110	
Ag	107	3	115	49.913	ppb	2.727	79876	50	99.8	90	110	
Cd	111	3	115	49.910	ppb	3.037	12119	50	99.8	90	110	
Sn	120	3	115	49.584	ppb	2.470	37457	50	99.2	90	110	
Sb	121	3	115	49.893	ppb	1.789	37793	50	99.8	90	110	
Ba	137	3	115	51.012	ppb	1.102	12311	50	102.0	90	110	
Tl	205	3	193	50.278	ppb	1.165	192099	50	100.6	90	110	
(Pb)	206	3	193	49.406	ppb	1.158	63669	50	98.8	90	110	
(Pb)	207	3	193	50.534	ppb	1.871	56272	50	101.1	90	110	
Pb	208	3	193	50.005	ppb	1.663	257565	50	100.0	90	110	
Th	232	3	193	53.289	ppb	1.176	276065	50	106.6	90	110	
U	238	3	193	51.004	ppb	2.005	275678	50	102.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3663076	1.40	3707811	98.79	60	120	
Sc (IS)	45	3	HMI He	544348	1.21	545003	99.88	60	120	
Ge Internal standard	72	2	HMI H2	2245960	0.69	2275339	98.71	60	120	
Ge Internal standard	72	3	HMI He	667404	1.16	672584	99.23	60	120	
In Internal Standard	115	3	HMI He	2687249	2.29	2611031	102.92	60	120	
Ir (IS)	193	3	HMI He	5793768	1.49	5805625	99.80	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	138_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:12:23-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.085	ppb	-89.7	2	0.5	
Na	23	3	45	17.978	ppb	6.3	21658	25	
Mg	24	3	45	-0.691	ppb	-166.6	153	25	
Al	27	3	45	-0.312	ppb	-696.3	80	15	
K	39	3	45	5.389	ppb	587.6	25940	50	
V	51	3	72	0.110	ppb	177.4	858	1	
Cr	52	3	72	0.119	ppb	153.4	2579	1	
Mn	55	3	72	-0.001	ppb	-17561.6	260	0.5	
Co	59	3	72	0.004	ppb	234.4	43	0.5	
Ni	60	3	72	-0.028	ppb	-474.2	583	1	
Cu	63	3	72	0.029	ppb	98.4	350	1	
Zn	66	3	72	0.097	ppb	388.8	180	5	
As	75	3	72	0.170	ppb	115.2	57	1	
Se	78	2	72	0.129	ppb	56.2	9	1	
Sr	88	3	72	0.003	ppb	472.7	22	0.5	
Mo	95	3	115	0.034	ppb	92.4	45	0.5	
Ag	107	3	115	0.006	ppb	194.4	35	1	
Cd	111	3	115	0.013	ppb	325.6	8	0.5	
Sn	120	3	115	0.184	ppb	39.2	675	1	
Sb	121	3	115	0.059	ppb	93.5	75	0.6	
Ba	137	3	115	0.122	ppb	65.2	57	0.5	
Tl	205	3	193	0.006	ppb	181.7	302	0.1	
(Pb)	206	3	193	0.021	ppb	45.2	248	1	
(Pb)	207	3	193	0.003	ppb	801.6	393	1	
Pb	208	3	193	0.003	ppb	227.2	1111	0.5	
Th	232	3	193	1.523	ppb	21.6	20251	1	>RL
U	238	3	193	0.011	ppb	166.6	1578	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3693203	1.98	3707811	99.61	60	120	
Sc (IS)	45	3	HMI He	544295	0.34	545003	99.87	60	120	
Ge Internal standard	72	2	HMI H2	2306676	1.52	2275339	101.38	60	120	
Ge Internal standard	72	3	HMI He	674109	0.68	672584	100.23	60	120	
In Internal Standard	115	3	HMI He	2682288	1.05	2611031	102.73	60	120	
Ir (IS)	193	3	HMI He	5880620	2.24	5805625	101.29	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7695100
Data File Name	139LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:14:11-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.796	ppb	44.298	35	1	79.6	70	130	
Na	23	3	45	293.526	ppb	2.130	48320	300	97.8	70	130	
Mg	24	3	45	48.260	ppb	10.426	2713	50	96.5	70	130	
Al	27	3	45	50.438	ppb	16.734	1145	50	100.9	70	130	
K	39	3	45	121.255	ppb	32.108	30678	120	101.0	70	130	
Ca	40	2	45	215.818	ppb	2.350	119438	200	107.9	70	130	
V	51	3	72	5.097	ppb	3.044	3592	5	101.9	70	130	
Cr	52	3	72	2.335	ppb	4.610	4077	2	116.8	70	130	
Mn	55	3	72	0.940	ppb	5.793	611	1	94.0	70	130	
Fe	56	2	72	49.485	ppb	4.638	113534	50	99.0	70	130	
Co	59	3	72	1.040	ppb	5.034	1248	1	104.0	70	130	
Ni	60	3	72	1.676	ppb	4.559	1136	2	83.8	70	130	
Cu	63	3	72	1.964	ppb	5.190	2066	2	98.2	70	130	
Zn	66	3	72	9.339	ppb	10.454	1569	10	93.4	70	130	
As	75	3	72	4.963	ppb	17.554	571	5	99.3	70	130	
Se	78	2	72	5.121	ppb	7.906	290	5	102.4	70	130	
Sr	88	3	72	4.747	ppb	2.888	2519	5	94.9	70	130	
Mo	95	3	115	1.977	ppb	9.305	933	2	98.9	70	130	
Ag	107	3	115	0.971	ppb	2.616	1549	1	97.1	70	130	
Cd	111	3	115	0.923	ppb	1.610	225	1	92.3	70	130	
Sn	120	3	115	9.351	ppb	1.780	7357	10	93.5	70	130	
Sb	121	3	115	2.042	ppb	5.424	1546	2	102.1	70	130	
Ba	137	3	115	1.114	ppb	4.639	290	1	111.4	70	130	
Tl	205	3	193	0.949	ppb	6.328	3899	1	94.9	70	130	
(Pb)	206	3	193	0.901	ppb	8.839	1376	1	90.1	70	130	
(Pb)	207	3	193	0.961	ppb	11.982	1448	1	96.1	70	130	
Pb	208	3	193	0.919	ppb	2.430	5796	1	91.9	70	130	
Th	232	3	193	1.611	ppb	26.743	20450	1	161.1	70	130	>+/-30%
U	238	3	193	0.981	ppb	6.321	6773	1	98.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3667762	1.31	3707811	98.92	60	120	
Sc (IS)	45	3	HMI He	542387	0.66	545003	99.52	60	120	
Ge Internal standard	72	2	HMI H2	2302775	0.78	2275339	101.21	60	120	
Ge Internal standard	72	3	HMI He	669182	0.64	672584	99.49	60	120	
In Internal Standard	115	3	HMI He	2634682	0.69	2611031	100.91	60	120	
Ir (IS)	193	3	HMI He	5798244	2.01	5805625	99.87	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609000/1-A
Data File Name	140_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:18:58-06:00
Sample Type	Blank
Dilution	1
Comment	609000 soil 6020a
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.037	ppb	-419.9016069	3	0.5
Na	23	3	45	93.042	ppb	4.431769655	28330	25
Mg	24	3	45	20.638	ppb	9.823235302	1245	25
Al	27	3	45	14.187	ppb	25.87537717	377	15
K	39	3	45	33.989	ppb	105.9615291	26532	50
Ca	40	2	45	162.401	ppb	0.679155176	89846	200
V	51	3	72	0.081	ppb	153.5871372	825	1
Cr	52	3	72	2.201	ppb	9.170447369	3934	1
Mn	55	3	72	1.267	ppb	5.367785578	725	0.5
Fe	56	2	72	28.075	ppb	10.03049968	78396	50
Co	59	3	72	0.034	ppb	15.17721363	77	0.5
Ni	60	3	72	0.364	ppb	4.103389188	698	1
Cu	63	3	72	1.461	ppb	13.97263882	1599	1
Zn	66	3	72	2.254	ppb	32.4258707	496	5
As	75	3	72	0.086	ppb	88.53794659	47	1
(Se)	78	3	72	-0.174	ppb	-727.2544747	27	1
Sr	88	3	72	0.731	ppb	15.2034678	400	0.5
Mo	95	3	115	0.311	ppb	22.58324915	168	0.5
Ag	107	3	115	-0.001	ppb	-1384.689042	23	1
Cd	111	3	115	0.021	ppb	262.3589583	10	0.5
Sn	120	3	115	11.233	ppb	0.687239049	8607	1
Sb	121	3	115	-0.006	ppb	-196.9695374	25	0.6
Ba	137	3	115	0.673	ppb	9.234128151	183	0.5
Tl	205	3	193	0.000	ppb	-45063.27497	272	0.1
(Pb)	206	3	193	0.576	ppb	9.997677916	945	1
(Pb)	207	3	193	0.665	ppb	6.545983632	1105	1
Pb	208	3	193	0.603	ppb	4.667533391	4118	0.5
Th	232	3	193	-0.692	ppb	-36.9328028	8880	1
U	238	3	193	0.052	ppb	41.16307496	1748	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3575840	1.18	3707811	96.44	60	120	
Sc (IS)	45	3	HMI He	532292	0.69	545003	97.67	60	120	
Ge Internal standard	72	2	HMI H2	2208951	0.51	2275339	97.08	60	120	
Ge Internal standard	72	3	HMI He	660589	0.86	672584	98.22	60	120	
In Internal Standard	115	3	HMI He	2597284	0.93	2611031	99.47	60	120	
Ir (IS)	193	3	HMI He	5714589	1.38	5805625	98.43	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609310/1-A
Data File Name	141_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:21:02-06:00
Sample Type	Blank
Dilution	1
Comment	609310 6020b
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.002	ppb	51.37659849	5	0.5
Na	23	3	45	14.118	ppb	3.888671001	21535	25
Mg	24	3	45	3.547	ppb	37.98553364	380	25
Al	27	3	45	2.144	ppb	75.24335853	133	15
K	39	3	45	1.168	ppb	2886.960883	26060	50
Ca	40	2	45	10.552	ppb	7.407304173	14809	200
V	51	3	72	0.061	ppb	113.5907089	848	1
Cr	52	3	72	-0.010	ppb	-2896.7499	2542	1
Mn	55	3	72	0.092	ppb	58.45755132	302	0.5
Fe	56	2	72	1.656	ppb	169.7614716	42515	50
Co	59	3	72	0.059	ppb	6.781055571	110	0.5
Ni	60	3	72	-0.209	ppb	-38.48694413	535	1
Cu	63	3	72	0.099	ppb	70.65357509	421	1
Zn	66	3	72	0.233	ppb	100.0771957	205	5
As	75	3	72	0.204	ppb	143.1858526	62	1
(Se)	78	3	72	-0.354	ppb	-455.6532423	27	1
Sr	88	3	72	0.058	ppb	64.46096694	52	0.5
Mo	95	3	115	0.004	ppb	343.6848218	32	0.5
Ag	107	3	115	-0.003	ppb	-166.3760548	22	1
Cd	111	3	115	0.054	ppb	46.07698532	18	0.5
Sn	120	3	115	0.064	ppb	97.54523385	591	1
Sb	121	3	115	-0.006	ppb	-455.6821974	27	0.6
Ba	137	3	115	0.112	ppb	16.25564289	55	0.5
Tl	205	3	193	0.044	ppb	25.6992975	455	0.1
(Pb)	206	3	193	0.051	ppb	67.10860811	290	1
(Pb)	207	3	193	0.054	ppb	48.17576903	455	1
Pb	208	3	193	0.060	ppb	37.53265556	1419	0.5
Th	232	3	193	-1.490	ppb	-4.553289641	5189	1
U	238	3	193	-0.004	ppb	-362.0749322	1506	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3726416	0.63	3707811	100.50	60	120	
Sc (IS)	45	3	HMI He	550750	0.99	545003	101.05	60	120	
Ge Internal standard	72	2	HMI H2	2306692	0.14	2275339	101.38	60	120	
Ge Internal standard	72	3	HMI He	688401	0.25	672584	102.35	60	120	
In Internal Standard	115	3	HMI He	2712822	1.42	2611031	103.90	60	120	
Ir (IS)	193	3	HMI He	5930312	0.18	5805625	102.15	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609310/18-A
Data File Name	142_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:22:50-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609310 6020b
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.325	41.325	ppb	3.755	1571	40	103.3	80	120	
Na	23	3	45	832.523	832.523	ppb	1.500	102131	40	2081.3	80	120	>+/-20%
Mg	24	3	45	731.721	731.721	ppb	3.338	39016	40	1829.3	80	120	>+/-20%
Al	27	3	45	779.302	779.302	ppb	1.445	16693	40	1948.3	80	120	>+/-20%
K	39	3	45	797.104	797.104	ppb	6.939	59777	40	1992.8	80	120	>+/-20%
Ca	40	2	45	851.660	851.660	ppb	0.518	453391	40	2129.2	80	120	>+/-20%
V	51	3	72	40.739	40.739	ppb	1.981	23533	40	101.8	80	120	
Cr	52	3	72	41.248	41.248	ppb	1.878	31191	40	103.1	80	120	
Mn	55	3	72	40.978	40.978	ppb	1.936	15881	40	102.4	80	120	
Fe	56	2	72	788.082	788.082	ppb	1.862	1215274	40	1970.2	80	120	>+/-20%
(Fe)	56	3	72	775.857	775.857	ppb	1.150	490965	40	1939.6	80	120	>+/-20%
Co	59	3	72	40.585	40.585	ppb	1.410	47950	40	101.5	80	120	
Ni	60	3	72	39.626	39.626	ppb	2.256	13748	40	99.1	80	120	
Cu	63	3	72	41.139	41.139	ppb	0.787	37422	40	102.8	80	120	
Zn	66	3	72	41.233	41.233	ppb	1.782	6467	40	103.1	80	120	
As	75	3	72	39.886	39.886	ppb	2.893	4390	40	99.7	80	120	
Se	78	2	72	39.969	39.969	ppb	4.240	2256	40	99.9	80	120	
(Se)	78	3	72	43.684	43.684	ppb	11.415	307	40	109.2	80	120	
Sr	88	3	72	79.428	79.428	ppb	1.213	42473	40	198.6	80	120	>+/-20%
Mo	95	3	115	39.637	39.637	ppb	1.675	18432	40	99.1	80	120	
Ag	107	3	115	40.934	40.934	ppb	0.629	65247	40	102.3	80	120	
Cd	111	3	115	38.959	38.959	ppb	2.408	9425	40	97.4	80	120	
Sn	120	3	115	37.752	37.752	ppb	1.415	28526	40	94.4	80	120	
Sb	121	3	115	39.494	39.494	ppb	1.533	29797	40	98.7	80	120	
Ba	137	3	115	40.295	40.295	ppb	2.446	9689	40	100.7	80	120	
Tl	205	3	193	38.823	38.823	ppb	2.242	153147	40	97.1	80	120	
(Pb)	206	3	193	38.398	38.398	ppb	1.839	51121	40	96.0	80	120	
(Pb)	207	3	193	38.973	38.973	ppb	1.000	44887	40	97.4	80	120	
Pb	208	3	193	38.727	38.727	ppb	1.190	206141	40	96.8	80	120	
Th	232	3	193	35.914	35.914	ppb	0.952	196214	40	89.8	80	120	
U	238	3	193	39.367	39.367	ppb	1.585	219983	40	98.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3742816	0.51	3707811	100.94	60	120	
Sc (IS)	45	3	HMI He	550487	0.40	545003	101.01	60	120	
Ge Internal standard	72	2	HMI H2	2309638	1.30	2275339	101.51	60	120	
Ge Internal standard	72	3	HMI He	679339	0.31	672584	101.00	60	120	
In Internal Standard	115	3	HMI He	2675418	0.88	2611031	102.47	60	120	
Ir (IS)	193	3	HMI He	5979511	0.80	5805625	103.00	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-1-A
Data File Name	143SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:24:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-89.15	2	2000	
Na	23	3	45	62254.618	ppb	62254.618	1.44	6147525	400000	
Mg	24	3	45	6270.579	ppb	6270.579	1.32	332658	400000	
Al	27	3	45	173.660	ppb	173.660	9.83	3785	400000	
K	39	3	45	1349.392	ppb	1349.392	1.79	83125	400000	
Ca	40	2	45	44368.333	ppb	44368.333	1.67	23064791	400000	
V	51	3	72	1.738	ppb	1.738	13.80	1813	2000	
Cr	52	3	72	0.914	ppb	0.914	35.08	3222	5000	
Mn	55	3	72	23.777	ppb	23.777	2.05	9535	10000	
Fe	56	2	72	112.566	ppb	112.566	5.27	211259	10000	
Co	59	3	72	0.286	ppb	0.286	10.99	385	2000	
Ni	60	3	72	0.715	ppb	0.715	25.91	853	5000	
Cu	63	3	72	1.067	ppb	1.067	11.84	1318	5000	
Zn	66	3	72	3.856	ppb	3.856	9.18	773	5000	
As	75	3	72	1.826	ppb	1.826	16.95	243	2000	
Se	78	2	72	0.327	ppb	0.327	65.39	21	2000	
Sr	88	3	72	201.278	ppb	201.278	1.10	110024	4000	
Mo	95	3	115	6.197	ppb	6.197	4.96	2956	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-66.27	22	100	
Cd	111	3	115	0.060	ppb	0.060	54.87	20	2000	
Sn	120	3	115	0.295	ppb	0.295	28.15	768	2000	
Sb	121	3	115	0.732	ppb	0.732	18.91	590	1000	
Ba	137	3	115	16.982	ppb	16.982	5.04	4160	5000	
Tl	205	3	193	-0.004	ppb	-0.004	-221.32	262	2000	
(Pb)	206	3	193	0.190	ppb	0.190	10.01	465	100	
(Pb)	207	3	193	0.201	ppb	0.201	1.59	610	100	
Pb	208	3	193	0.194	ppb	0.194	3.70	2084	5000	
Th	232	3	193	0.660	ppb	0.660	8.55	15782	2000	
U	238	3	193	2.109	ppb	2.109	7.41	12872	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3730399	1.06	3707811	100.61	60	120	
Sc (IS)	45	3	HMI He	550107	0.65	545003	100.94	60	120	
Ge Internal standard	72	2	HMI H2	2348026	2.52	2275339	103.19	60	120	
Ge Internal standard	72	3	HMI He	694670	0.83	672584	103.28	60	120	
In Internal Standard	115	3	HMI He	2718413	2.92	2611031	104.11	60	120	
Ir (IS)	193	3	HMI He	5820752	3.95	5805625	100.26	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-2-A
Data File Name	144SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:26:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	51668.767	ppb	51668.767	2.13	5101971	400000	
Mg	24	3	45	25100.435	ppb	25100.435	0.05	1330184	400000	
Al	27	3	45	-0.502	ppb	-0.502	-198.83	77	400000	
K	39	3	45	1246.175	ppb	1246.175	4.26	78698	400000	
Ca	40	2	45	174175.530	ppb	174175.530	1.86	90829914	400000	
V	51	3	72	-0.158	ppb	-0.158	-50.71	716	2000	
Cr	52	3	72	0.180	ppb	0.180	119.29	2646	5000	
Mn	55	3	72	7292.093	ppb	7292.093	2.25	2785378	10000	
Fe	56	2	72	9.589	ppb	9.589	24.54	54766	10000	
Co	59	3	72	3.547	ppb	3.547	3.65	4235	2000	
Ni	60	3	72	6.032	ppb	6.032	6.80	2604	5000	
Cu	63	3	72	15.944	ppb	15.944	2.68	14734	5000	
Zn	66	3	72	32.371	ppb	32.371	1.20	5123	5000	
As	75	3	72	0.179	ppb	0.179	63.70	58	2000	
Se	78	2	72	0.069	ppb	0.069	48.52	6	2000	
Sr	88	3	72	551.518	ppb	551.518	0.96	295396	4000	
Mo	95	3	115	0.355	ppb	0.355	24.80	195	2000	
Ag	107	3	115	0.001	ppb	0.001	1775.29	27	100	
Cd	111	3	115	0.417	ppb	0.417	8.15	107	2000	
Sn	120	3	115	0.147	ppb	0.147	58.75	650	2000	
Sb	121	3	115	0.063	ppb	0.063	43.00	78	1000	
Ba	137	3	115	52.018	ppb	52.018	4.05	12578	5000	
Tl	205	3	193	-0.010	ppb	-0.010	-123.02	242	2000	
(Pb)	206	3	193	-0.041	ppb	-0.041	-60.71	168	100	
(Pb)	207	3	193	-0.009	ppb	-0.009	-258.34	380	100	
Pb	208	3	193	-0.016	ppb	-0.016	-26.86	1016	5000	
Th	232	3	193	-0.805	ppb	-0.805	-12.25	8597	2000	
U	238	3	193	1.685	ppb	1.685	3.98	10729	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3744470	2.60	3707811	100.99	60	120	
Sc (IS)	45	3	HMI He	549734	0.57	545003	100.87	60	120	
Ge Internal standard	72	2	HMI H2	2324006	1.48	2275339	102.14	60	120	
Ge Internal standard	72	3	HMI He	680736	0.66	672584	101.21	60	120	
In Internal Standard	115	3	HMI He	2694278	2.50	2611031	103.19	60	120	
Ir (IS)	193	3	HMI He	5891417	1.50	5805625	101.48	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-3-A
Data File Name	145SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:28:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	35966.398	ppb	35966.398	1.70	3517064	400000	
Mg	24	3	45	19175.783	ppb	19175.783	0.94	1004750	400000	
Al	27	3	45	12.725	ppb	12.725	25.46	354	400000	
K	39	3	45	531.355	ppb	531.355	1.29	47906	400000	
Ca	40	2	45	141937.274	ppb	141937.274	1.37	74863358	400000	
V	51	3	72	-0.287	ppb	-0.287	-27.30	645	2000	
Cr	52	3	72	0.201	ppb	0.201	192.37	2662	5000	
Mn	55	3	72	1.986	ppb	1.986	8.64	1023	10000	
Fe	56	2	72	16.206	ppb	16.206	18.16	64323	10000	
Co	59	3	72	0.042	ppb	0.042	36.27	88	2000	
Ni	60	3	72	0.212	ppb	0.212	32.18	670	5000	
Cu	63	3	72	0.540	ppb	0.540	12.91	816	5000	
Zn	66	3	72	0.767	ppb	0.767	8.71	285	5000	
As	75	3	72	0.256	ppb	0.256	110.83	67	2000	
Se	78	2	72	0.141	ppb	0.141	23.60	10	2000	
Sr	88	3	72	350.271	ppb	350.271	1.25	187831	4000	
Mo	95	3	115	0.126	ppb	0.126	43.16	87	2000	
Ag	107	3	115	0.002	ppb	0.002	190.95	28	100	
Cd	111	3	115	0.014	ppb	0.014	177.56	8	2000	
Sn	120	3	115	0.065	ppb	0.065	269.23	576	2000	
Sb	121	3	115	0.031	ppb	0.031	79.64	53	1000	
Ba	137	3	115	34.648	ppb	34.648	5.88	8228	5000	
Tl	205	3	193	-0.028	ppb	-0.028	-9.25	170	2000	
(Pb)	206	3	193	-0.016	ppb	-0.016	-72.92	202	100	
(Pb)	207	3	193	-0.005	ppb	-0.005	-942.61	385	100	
Pb	208	3	193	-0.007	ppb	-0.007	-201.60	1061	5000	
Th	232	3	193	-1.121	ppb	-1.121	-3.18	7014	2000	
U	238	3	193	4.325	ppb	4.325	1.90	25166	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3786200	0.71	3707811	102.11	60	120	
Sc (IS)	45	3	HMI He	543524	1.21	545003	99.73	60	120	
Ge Internal standard	72	2	HMI H2	2310484	1.34	2275339	101.54	60	120	
Ge Internal standard	72	3	HMI He	681555	1.06	672584	101.33	60	120	
In Internal Standard	115	3	HMI He	2642663	1.23	2611031	101.21	60	120	
Ir (IS)	193	3	HMI He	5892970	2.14	5805625	101.50	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-4-D
Data File Name	146SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:30:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	62730.492	ppb	62730.492	1.32	6135899	400000	
Mg	24	3	45	29373.069	ppb	29373.069	1.35	1542891	400000	
Al	27	3	45	33.843	ppb	33.843	10.59	801	400000	
K	39	3	45	1676.818	ppb	1676.818	3.27	96073	400000	
Ca	40	2	45	194146.364	ppb	194146.364	2.16	100407008	400000	
V	51	3	72	-0.212	ppb	-0.212	-60.71	683	2000	
Cr	52	3	72	0.492	ppb	0.492	51.28	2852	5000	
Mn	55	3	72	7316.485	ppb	7316.485	0.83	2784115	10000	
Fe	56	2	72	55.368	ppb	55.368	6.57	123048	10000	
Co	59	3	72	2.551	ppb	2.551	4.68	3045	2000	
Ni	60	3	72	3.282	ppb	3.282	10.17	1683	5000	
Cu	63	3	72	0.680	ppb	0.680	18.37	938	5000	
Zn	66	3	72	2.000	ppb	2.000	3.15	471	5000	
As	75	3	72	0.197	ppb	0.197	63.66	60	2000	
Se	78	2	72	0.094	ppb	0.094	87.39	7	2000	
Sr	88	3	72	609.361	ppb	609.361	0.42	325119	4000	
Mo	95	3	115	0.444	ppb	0.444	16.06	237	2000	
Ag	107	3	115	-0.004	ppb	-0.004	-170.92	20	100	
Cd	111	3	115	0.177	ppb	0.177	6.68	48	2000	
Sn	120	3	115	0.043	ppb	0.043	59.67	571	2000	
Sb	121	3	115	0.050	ppb	0.050	15.31	68	1000	
Ba	137	3	115	24.117	ppb	24.117	3.88	5847	5000	
Tl	205	3	193	-0.012	ppb	-0.012	-24.43	237	2000	
(Pb)	206	3	193	0.029	ppb	0.029	98.30	263	100	
(Pb)	207	3	193	0.016	ppb	0.016	202.58	415	100	
Pb	208	3	193	0.038	ppb	0.038	31.00	1318	5000	
Th	232	3	193	-1.261	ppb	-1.261	-5.84	6407	2000	
U	238	3	193	3.351	ppb	3.351	1.46	20151	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3713765	2.58	3707811	100.16	60	120	
Sc (IS)	45	3	HMI He	544921	0.46	545003	99.99	60	120	
Ge Internal standard	72	2	HMI H2	2317989	1.53	2275339	101.87	60	120	
Ge Internal standard	72	3	HMI He	678107	1.04	672584	100.82	60	120	
In Internal Standard	115	3	HMI He	2692889	0.01	2611031	103.14	60	120	
Ir (IS)	193	3	HMI He	5984353	0.80	5805625	103.08	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-4-E MS
Data File Name	147SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:31:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.613	ppb	42.613	5.57	1619	2000	
Na	23	3	45	62253.926	ppb	62253.926	0.27	6168656	400000	
Mg	24	3	45	29512.512	ppb	29512.512	0.91	1570386	400000	
Al	27	3	45	781.115	ppb	781.115	4.10	16780	400000	
K	39	3	45	2447.749	ppb	2447.749	1.03	130078	400000	
Ca	40	2	45	189762.440	ppb	189762.440	1.83	99660460	400000	
V	51	3	72	39.357	ppb	39.357	3.27	22766	2000	
Cr	52	3	72	40.861	ppb	40.861	1.84	30929	5000	
Mn	55	3	72	7337.441	ppb	7337.441	1.19	2797876	10000	
Fe	56	2	72	830.987	ppb	830.987	2.06	1305711	10000	
Co	59	3	72	42.241	ppb	42.241	1.96	49920	2000	
Ni	60	3	72	42.258	ppb	42.258	3.51	14624	5000	
Cu	63	3	72	40.780	ppb	40.780	2.00	37106	5000	
Zn	66	3	72	43.033	ppb	43.033	1.90	6743	5000	
As	75	3	72	39.465	ppb	39.465	0.59	4345	2000	
Se	78	2	72	38.783	ppb	38.783	2.30	2234	2000	
Sr	88	3	72	693.275	ppb	693.275	1.46	370654	4000	
Mo	95	3	115	41.079	ppb	41.079	1.74	18955	2000	
Ag	107	3	115	40.837	ppb	40.837	1.84	64585	100	
Cd	111	3	115	39.079	ppb	39.079	0.07	9382	2000	
Sn	120	3	115	38.546	ppb	38.546	3.37	28885	2000	
Sb	121	3	115	39.315	ppb	39.315	2.15	29431	1000	
Ba	137	3	115	65.766	ppb	65.766	1.87	15672	5000	
Tl	205	3	193	38.218	ppb	38.218	0.89	152034	2000	
(Pb)	206	3	193	37.918	ppb	37.918	1.80	50910	100	
(Pb)	207	3	193	38.545	ppb	38.545	1.47	44770	100	
Pb	208	3	193	38.453	ppb	38.453	1.12	206412	5000	
Th	232	3	193	36.444	ppb	36.444	2.33	200560	2000	
U	238	3	193	42.643	ppb	42.643	1.20	240149	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3770461	1.23	3707811	101.69	60	120	
Sc (IS)	45	3	HMI He	552003	0.66	545003	101.28	60	120	
Ge Internal standard	72	2	HMI H2	2357411	0.25	2275339	103.61	60	120	
Ge Internal standard	72	3	HMI He	679521	0.48	672584	101.03	60	120	
In Internal Standard	115	3	HMI He	2655291	2.37	2611031	101.70	60	120	
Ir (IS)	193	3	HMI He	6029788	1.42	5805625	103.86	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-4-F MSD
Data File Name	148SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:33:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.571	ppb	41.571	6.36	1566	2000	
Na	23	3	45	63210.164	ppb	63210.164	0.76	6224224	400000	
Mg	24	3	45	29612.802	ppb	29612.802	4.12	1565460	400000	
Al	27	3	45	798.713	ppb	798.713	2.35	17044	400000	
K	39	3	45	2418.408	ppb	2418.408	1.61	128013	400000	
Ca	40	2	45	187177.989	ppb	187177.989	2.43	99616849	400000	
V	51	3	72	39.423	ppb	39.423	1.87	23239	2000	
Cr	52	3	72	39.839	ppb	39.839	2.00	30795	5000	
Mn	55	3	72	7082.658	ppb	7082.658	0.96	2752208	10000	
Fe	56	2	72	871.465	ppb	871.465	0.81	1330150	10000	
Co	59	3	72	41.125	ppb	41.125	0.88	49527	2000	
Ni	60	3	72	42.129	ppb	42.129	1.18	14861	5000	
Cu	63	3	72	39.659	ppb	39.659	0.58	36786	5000	
Zn	66	3	72	41.947	ppb	41.947	2.40	6703	5000	
As	75	3	72	38.495	ppb	38.495	2.38	4320	2000	
Se	78	2	72	39.738	ppb	39.738	6.16	2226	2000	
Sr	88	3	72	678.178	ppb	678.178	0.43	369521	4000	
Mo	95	3	115	40.249	ppb	40.249	2.67	18950	2000	
Ag	107	3	115	39.796	ppb	39.796	2.19	64232	100	
Cd	111	3	115	38.191	ppb	38.191	4.53	9354	2000	
Sn	120	3	115	38.125	ppb	38.125	2.51	29167	2000	
Sb	121	3	115	38.746	ppb	38.746	4.79	29593	1000	
Ba	137	3	115	64.931	ppb	64.931	1.82	15790	5000	
Tl	205	3	193	38.324	ppb	38.324	1.61	149858	2000	
(Pb)	206	3	193	38.983	ppb	38.983	1.93	51437	100	
(Pb)	207	3	193	39.151	ppb	39.151	1.03	44688	100	
Pb	208	3	193	39.010	ppb	39.010	1.30	205802	5000	
Th	232	3	193	38.568	ppb	38.568	1.54	207901	2000	
U	238	3	193	42.857	ppb	42.857	1.24	237219	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3821756	2.44	3707811	103.07	60	120	
Sc (IS)	45	3	HMI He	548560	1.47	545003	100.65	60	120	
Ge Internal standard	72	2	HMI H2	2293389	1.41	2275339	100.79	60	120	
Ge Internal standard	72	3	HMI He	692496	0.25	672584	102.96	60	120	
In Internal Standard	115	3	HMI He	2709712	1.78	2611031	103.78	60	120	
Ir (IS)	193	3	HMI He	5926366	0.48	5805625	102.08	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-5-A
Data File Name	149SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:35:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.092	ppb	0.092	164.38	8	2000	
Na	23	3	45	51339.959	ppb	51339.959	1.69	5060304	400000	
Mg	24	3	45	44908.936	ppb	44908.936	1.52	2375615	400000	
Al	27	3	45	13.648	ppb	13.648	22.95	377	400000	
K	39	3	45	1787.380	ppb	1787.380	1.26	101409	400000	
Ca	40	2	45	243144.017	ppb	243144.017	2.44	125606000	400000	
V	51	3	72	-0.543	ppb	-0.543	-18.33	498	2000	
Cr	52	3	72	2.881	ppb	2.881	0.61	4503	5000	
Mn	55	3	72	989.402	ppb	989.402	0.72	376135	10000	
Fe	56	2	72	34950.080	ppb	34950.080	0.30	52440633	10000	
Co	59	3	72	0.314	ppb	0.314	9.99	408	2000	
Ni	60	3	72	1.938	ppb	1.938	8.24	1236	5000	
Cu	63	3	72	2.213	ppb	2.213	6.17	2314	5000	
Zn	66	3	72	1.371	ppb	1.371	5.21	375	5000	
As	75	3	72	0.519	ppb	0.519	17.37	95	2000	
Se	78	2	72	0.046	ppb	0.046	115.19	5	2000	
Sr	88	3	72	782.405	ppb	782.405	0.92	416819	4000	
Mo	95	3	115	0.434	ppb	0.434	9.30	228	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-951.52	23	100	
Cd	111	3	115	-0.007	ppb	-0.007	-163.28	3	2000	
Sn	120	3	115	0.452	ppb	0.452	3.83	863	2000	
Sb	121	3	115	0.121	ppb	0.121	13.94	120	1000	
Ba	137	3	115	261.491	ppb	261.491	2.66	62064	5000	
Tl	205	3	193	-0.010	ppb	-0.010	-103.97	245	2000	
(Pb)	206	3	193	-0.007	ppb	-0.007	-359.13	217	100	
(Pb)	207	3	193	0.003	ppb	0.003	1236.49	401	100	
Pb	208	3	193	-0.006	ppb	-0.006	-262.42	1088	5000	
Th	232	3	193	1.222	ppb	1.222	25.58	19135	2000	
U	238	3	193	0.256	ppb	0.256	15.39	2974	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3709148	2.24	3707811	100.04	60	120	
Sc (IS)	45	3	HMI He	548747	0.89	545003	100.69	60	120	
Ge Internal standard	72	2	HMI H2	2322188	0.90	2275339	102.06	60	120	
Ge Internal standard	72	3	HMI He	677090	0.57	672584	100.67	60	120	
In Internal Standard	115	3	HMI He	2648716	2.28	2611031	101.44	60	120	
Ir (IS)	193	3	HMI He	6003279	1.61	5805625	103.40	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	150_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:37:13-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.890	ppb	0.937	1828	50	97.8	90	110	
Na	23	3	45	49855.563	ppb	2.777	4864153	51000	97.8	90	110	
Mg	24	3	45	10271.595	ppb	0.946	537851	11000	93.4	90	110	
Al	27	3	45	984.495	ppb	3.252	20783	1000	98.4	90	110	
K	39	3	45	10663.732	ppb	1.443	471388	11000	96.9	90	110	
Ca	40	2	45	10738.072	ppb	2.180	5606484	11000	97.6	90	110	
V	51	3	72	51.040	ppb	0.654	28497	50	102.1	90	110	
Cr	52	3	72	52.615	ppb	2.450	38038	50	105.2	90	110	
Mn	55	3	72	51.625	ppb	3.335	19401	50	103.3	90	110	
Fe	56	2	72	1038.723	ppb	3.406	1526045	1000	103.9	90	110	
Co	59	3	72	52.136	ppb	3.858	59909	50	104.3	90	110	
Ni	60	3	72	50.439	ppb	2.866	16869	50	100.9	90	110	
Cu	63	3	72	52.077	ppb	3.816	46003	50	104.2	90	110	
Zn	66	3	72	52.090	ppb	2.139	7907	50	104.2	90	110	
As	75	3	72	52.824	ppb	5.032	5643	50	105.6	90	110	
Se	78	2	72	52.551	ppb	2.091	2848	50	105.1	90	110	
Sr	88	3	72	103.698	ppb	3.793	53938	100	103.7	90	110	
Mo	95	3	115	51.037	ppb	3.102	23981	50	102.1	90	110	
Ag	107	3	115	49.436	ppb	1.869	79643	50	98.9	90	110	
Cd	111	3	115	47.748	ppb	2.884	11674	50	95.5	90	110	
Sn	120	3	115	48.786	ppb	2.017	37103	50	97.6	90	110	
Sb	121	3	115	49.326	ppb	2.604	37606	50	98.7	90	110	
Ba	137	3	115	50.477	ppb	3.493	12256	50	101.0	90	110	
Tl	205	3	193	50.571	ppb	2.469	194928	50	101.1	90	110	
(Pb)	206	3	193	49.437	ppb	1.431	64277	50	98.9	90	110	
(Pb)	207	3	193	50.073	ppb	1.947	56260	50	100.1	90	110	
Pb	208	3	193	49.759	ppb	0.275	258587	50	99.5	90	110	
Th	232	3	193	50.013	ppb	0.697	262148	50	100.0	90	110	
U	238	3	193	50.906	ppb	1.009	277598	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3743257	2.44	3707811	100.96	60	120	
Sc (IS)	45	3	HMI He	543067	0.10	545003	99.64	60	120	
Ge Internal standard	72	2	HMI H2	2218430	0.68	2275339	97.50	60	120	
Ge Internal standard	72	3	HMI He	661219	2.17	672584	98.31	60	120	
In Internal Standard	115	3	HMI He	2704445	1.30	2611031	103.58	60	120	
Ir (IS)	193	3	HMI He	5844483	0.51	5805625	100.67	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	151_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:39:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.128	ppb	0.0	0	0.5	
Na	23	3	45	42.899	ppb	16.9	23747	25	>RL
Mg	24	3	45	1.154	ppb	76.7	247	25	
Al	27	3	45	-0.262	ppb	-356.6	80	15	
K	39	3	45	-1.346	ppb	-1664.1	25302	50	
V	51	3	72	-0.337	ppb	-43.8	603	1	
Cr	52	3	72	0.309	ppb	186.9	2679	1	
Mn	55	3	72	0.238	ppb	50.7	346	0.5	
Co	59	3	72	0.013	ppb	65.8	53	0.5	
Ni	60	3	72	0.149	ppb	155.1	635	1	
Cu	63	3	72	0.054	ppb	66.4	368	1	
Zn	66	3	72	-0.003	ppb	-1391.0	163	5	
As	75	3	72	-0.043	ppb	-234.7	33	1	
Se	78	2	72	0.048	ppb	115.5	5	1	
Sr	88	3	72	0.039	ppb	75.8	40	0.5	
Mo	95	3	115	0.093	ppb	76.5	72	0.5	
Ag	107	3	115	-0.003	ppb	-257.2	20	1	
Cd	111	3	115	0.006	ppb	482.8	7	0.5	
Sn	120	3	115	3.403	ppb	2.2	3057	1	>RL
Sb	121	3	115	0.035	ppb	26.1	57	0.6	
Ba	137	3	115	0.046	ppb	75.0	38	0.5	
Tl	205	3	193	-0.014	ppb	-14.5	227	0.1	
(Pb)	206	3	193	-0.037	ppb	-101.8	173	1	
(Pb)	207	3	193	-0.026	ppb	-221.2	360	1	
Pb	208	3	193	-0.031	ppb	-35.4	936	0.5	
Th	232	3	193	0.694	ppb	35.3	16092	1	
U	238	3	193	0.013	ppb	152.9	1586	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3742540	0.07	3707811	100.94	60	120	
Sc (IS)	45	3	HMI He	536729	0.77	545003	98.48	60	120	
Ge Internal standard	72	2	HMI H2	2285477	0.45	2275339	100.45	60	120	
Ge Internal standard	72	3	HMI He	667101	0.89	672584	99.18	60	120	
In Internal Standard	115	3	HMI He	2673973	2.68	2611031	102.41	60	120	
Ir (IS)	193	3	HMI He	5874883	0.24	5805625	101.19	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7695100
Data File Name	152LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:40:48-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.951	ppb	14.292	40	1	95.1	70	130	
Na	23	3	45	314.428	ppb	1.824	49877	300	104.8	70	130	
Mg	24	3	45	49.541	ppb	2.143	2753	50	99.1	70	130	
Al	27	3	45	48.824	ppb	10.035	1101	50	97.6	70	130	
K	39	3	45	116.596	ppb	30.303	30196	120	97.2	70	130	
Ca	40	2	45	222.094	ppb	1.524	121255	200	111.0	70	130	
V	51	3	72	4.463	ppb	5.620	3255	5	89.3	70	130	
Cr	52	3	72	2.251	ppb	2.844	4034	2	112.5	70	130	
Mn	55	3	72	1.147	ppb	1.507	691	1	114.7	70	130	
Fe	56	2	72	53.843	ppb	8.317	117264	50	107.7	70	130	
Co	59	3	72	1.027	ppb	9.621	1236	1	102.7	70	130	
Ni	60	3	72	1.917	ppb	8.903	1219	2	95.9	70	130	
Cu	63	3	72	2.122	ppb	5.434	2214	2	106.1	70	130	
Zn	66	3	72	10.061	ppb	2.211	1684	10	100.6	70	130	
As	75	3	72	5.052	ppb	9.471	583	5	101.0	70	130	
Se	78	2	72	5.115	ppb	7.792	283	5	102.3	70	130	
Sr	88	3	72	4.748	ppb	5.139	2529	5	95.0	70	130	
Mo	95	3	115	2.074	ppb	3.113	968	2	103.7	70	130	
Ag	107	3	115	1.024	ppb	3.608	1618	1	102.4	70	130	
Cd	111	3	115	0.925	ppb	11.376	223	1	92.5	70	130	
Sn	120	3	115	9.357	ppb	4.078	7292	10	93.6	70	130	
Sb	121	3	115	2.027	ppb	9.057	1519	2	101.3	70	130	
Ba	137	3	115	1.139	ppb	7.736	293	1	113.9	70	130	
Tl	205	3	193	0.935	ppb	1.506	3937	1	93.5	70	130	
(Pb)	206	3	193	0.873	ppb	6.803	1373	1	87.3	70	130	
(Pb)	207	3	193	0.825	ppb	14.806	1328	1	82.5	70	130	
Pb	208	3	193	0.851	ppb	3.821	5578	1	85.1	70	130	
Th	232	3	193	1.146	ppb	34.445	18548	1	114.6	70	130	
U	238	3	193	0.955	ppb	4.734	6788	1	95.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3626115	1.33	3707811	97.80	60	120	
Sc (IS)	45	3	HMI He	537262	0.60	545003	98.58	60	120	
Ge Internal standard	72	2	HMI H2	2250567	2.54	2275339	98.91	60	120	
Ge Internal standard	72	3	HMI He	671555	0.52	672584	99.85	60	120	
In Internal Standard	115	3	HMI He	2610699	1.18	2611031	99.99	60	120	
Ir (IS)	193	3	HMI He	5935190	0.24	5805625	102.23	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-6-A
Data File Name	153SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:42:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	59126.171	ppb	59126.171	0.78	5780071	400000	
Mg	24	3	45	37289.920	ppb	37289.920	1.90	1957178	400000	
Al	27	3	45	49.726	ppb	49.726	19.36	1135	400000	
K	39	3	45	1374.699	ppb	1374.699	1.86	83333	400000	
Ca	40	2	45	257026.026	ppb	257026.026	3.01	131625251	400000	
V	51	3	72	-0.403	ppb	-0.403	-12.35	571	2000	
Cr	52	3	72	0.264	ppb	0.264	111.84	2671	5000	
Mn	55	3	72	10873.030	ppb	10873.030	1.14	4099941	10000	
Fe	56	2	72	57.528	ppb	57.528	3.46	126034	10000	
Co	59	3	72	1.655	ppb	1.655	6.72	1971	2000	
Ni	60	3	72	1.926	ppb	1.926	9.26	1223	5000	
Cu	63	3	72	0.766	ppb	0.766	4.89	1006	5000	
Zn	66	3	72	2.481	ppb	2.481	11.94	540	5000	
As	75	3	72	0.371	ppb	0.371	88.32	78	2000	
Se	78	2	72	0.000	ppb	0.000	-11024.69	2	2000	
Sr	88	3	72	721.960	ppb	721.960	0.19	381728	4000	
Mo	95	3	115	0.381	ppb	0.381	6.35	205	2000	
Ag	107	3	115	-0.006	ppb	-0.006	-136.76	17	100	
Cd	111	3	115	0.470	ppb	0.470	20.82	118	2000	
Sn	120	3	115	0.142	ppb	0.142	27.90	638	2000	
Sb	121	3	115	0.062	ppb	0.062	34.79	77	1000	
Ba	137	3	115	37.832	ppb	37.832	3.24	9047	5000	
Tl	205	3	193	-0.024	ppb	-0.024	-25.04	188	2000	
(Pb)	206	3	193	0.074	ppb	0.074	34.18	320	100	
(Pb)	207	3	193	0.052	ppb	0.052	106.98	451	100	
Pb	208	3	193	0.072	ppb	0.072	37.64	1484	5000	
Th	232	3	193	-1.366	ppb	-1.366	-9.48	5802	2000	
U	238	3	193	2.109	ppb	2.109	2.70	13117	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3676954	1.33	3707811	99.17	60	120	
Sc (IS)	45	3	HMI He	544489	0.16	545003	99.91	60	120	
Ge Internal standard	72	2	HMI H2	2312348	1.43	2275339	101.63	60	120	
Ge Internal standard	72	3	HMI He	671988	0.49	672584	99.91	60	120	
In Internal Standard	115	3	HMI He	2661464	1.55	2611031	101.93	60	120	
Ir (IS)	193	3	HMI He	5922585	0.72	5805625	102.01	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-7-A
Data File Name	154SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:44:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-183.84	3	2000	
Na	23	3	45	27788.064	ppb	27788.064	1.10	2762586	400000	
Mg	24	3	45	11566.621	ppb	11566.621	0.85	615104	400000	
Al	27	3	45	38.562	ppb	38.562	22.85	911	400000	
K	39	3	45	419.897	ppb	419.897	4.67	43879	400000	
Ca	40	2	45	78355.799	ppb	78355.799	2.10	41310391	400000	
V	51	3	72	-0.468	ppb	-0.468	-6.18	550	2000	
Cr	52	3	72	0.326	ppb	0.326	33.53	2782	5000	
Mn	55	3	72	1.992	ppb	1.992	4.24	1036	10000	
Fe	56	2	72	39.587	ppb	39.587	6.19	100072	10000	
Co	59	3	72	0.135	ppb	0.135	8.20	202	2000	
Ni	60	3	72	0.111	ppb	0.111	189.52	643	5000	
Cu	63	3	72	0.302	ppb	0.302	29.96	608	5000	
Zn	66	3	72	0.488	ppb	0.488	43.20	245	5000	
As	75	3	72	0.158	ppb	0.158	45.25	57	2000	
Se	78	2	72	0.046	ppb	0.046	87.95	5	2000	
Sr	88	3	72	203.729	ppb	203.729	0.53	110494	4000	
Mo	95	3	115	0.109	ppb	0.109	50.11	82	2000	
Ag	107	3	115	0.000	ppb	0.000	2000.13	27	100	
Cd	111	3	115	0.013	ppb	0.013	330.05	8	2000	
Sn	120	3	115	0.089	ppb	0.089	134.91	616	2000	
Sb	121	3	115	0.039	ppb	0.039	37.92	62	1000	
Ba	137	3	115	14.041	ppb	14.041	6.18	3480	5000	
Tl	205	3	193	-0.030	ppb	-0.030	-45.49	167	2000	
(Pb)	206	3	193	-0.022	ppb	-0.022	-198.53	195	100	
(Pb)	207	3	193	-0.012	ppb	-0.012	-262.47	381	100	
Pb	208	3	193	-0.004	ppb	-0.004	-220.24	1088	5000	
Th	232	3	193	-1.404	ppb	-1.404	-2.44	5640	2000	
U	238	3	193	0.794	ppb	0.794	3.47	5918	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3785483	3.18	3707811	102.09	60	120	
Sc (IS)	45	3	HMI He	551566	0.44	545003	101.20	60	120	
Ge Internal standard	72	2	HMI H2	2331730	0.87	2275339	102.48	60	120	
Ge Internal standard	72	3	HMI He	689230	0.99	672584	102.47	60	120	
In Internal Standard	115	3	HMI He	2745706	2.07	2611031	105.16	60	120	
Ir (IS)	193	3	HMI He	5950792	1.20	5805625	102.50	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-8-A
Data File Name	155SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:46:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	54202.578	ppb	54202.578	0.36	5308377	400000	
Mg	24	3	45	26258.923	ppb	26258.923	1.11	1380322	400000	
Al	27	3	45	1.896	ppb	1.896	15.71	127	400000	
K	39	3	45	1281.537	ppb	1281.537	3.41	79534	400000	
Ca	40	2	45	177460.671	ppb	177460.671	0.70	93253256	400000	
V	51	3	72	-0.588	ppb	-0.588	-6.63	478	2000	
Cr	52	3	72	0.092	ppb	0.092	272.88	2597	5000	
Mn	55	3	72	7294.217	ppb	7294.217	2.07	2800090	10000	
Fe	56	2	72	11.977	ppb	11.977	18.73	58810	10000	
Co	59	3	72	3.542	ppb	3.542	7.34	4250	2000	
Ni	60	3	72	6.141	ppb	6.141	4.70	2654	5000	
Cu	63	3	72	15.303	ppb	15.303	2.68	14224	5000	
Zn	66	3	72	32.743	ppb	32.743	0.65	5207	5000	
As	75	3	72	0.040	ppb	0.040	470.38	43	2000	
Se	78	2	72	-0.002	ppb	-0.002	-2064.30	2	2000	
Sr	88	3	72	566.651	ppb	566.651	0.82	305036	4000	
Mo	95	3	115	0.430	ppb	0.430	22.44	232	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-453.92	23	100	
Cd	111	3	115	0.373	ppb	0.373	1.94	97	2000	
Sn	120	3	115	0.186	ppb	0.186	44.32	683	2000	
Sb	121	3	115	0.073	ppb	0.073	22.46	87	1000	
Ba	137	3	115	54.369	ppb	54.369	2.37	13230	5000	
Tl	205	3	193	-0.019	ppb	-0.019	-29.67	208	2000	
(Pb)	206	3	193	0.002	ppb	0.002	1801.41	227	100	
(Pb)	207	3	193	-0.006	ppb	-0.006	-565.89	388	100	
Pb	208	3	193	-0.008	ppb	-0.008	-266.07	1068	5000	
Th	232	3	193	-1.459	ppb	-1.459	-4.07	5374	2000	
U	238	3	193	1.755	ppb	1.755	0.88	11238	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3772267	1.41	3707811	101.74	60	120	
Sc (IS)	45	3	HMI He	545319	1.28	545003	100.06	60	120	
Ge Internal standard	72	2	HMI H2	2343701	2.57	2275339	103.00	60	120	
Ge Internal standard	72	3	HMI He	684186	0.99	672584	101.73	60	120	
In Internal Standard	115	3	HMI He	2711158	3.57	2611031	103.83	60	120	
Ir (IS)	193	3	HMI He	5957077	2.28	5805625	102.61	60	120	

Sample Report

Sample Table

Sample Name	280-175205-A-9-A
Data File Name	156SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:47:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	447.355	ppb	447.355	0.63	64461	400000	
Mg	24	3	45	9.790	ppb	9.790	10.12	714	400000	
Al	27	3	45	7.574	ppb	7.574	16.84	250	400000	
K	39	3	45	-13.003	ppb	-13.003	-304.88	25552	400000	
Ca	40	2	45	101.060	ppb	101.060	1.94	62039	400000	
V	51	3	72	-0.537	ppb	-0.537	-31.23	506	2000	
Cr	52	3	72	0.477	ppb	0.477	45.61	2866	5000	
Mn	55	3	72	1.144	ppb	1.144	21.15	703	10000	
Fe	56	2	72	6.643	ppb	6.643	58.64	50593	10000	
Co	59	3	72	0.033	ppb	0.033	72.33	78	2000	
Ni	60	3	72	0.165	ppb	0.165	125.77	656	5000	
Cu	63	3	72	0.157	ppb	0.157	22.77	471	5000	
Zn	66	3	72	2.874	ppb	2.874	21.69	610	5000	
As	75	3	72	-0.021	ppb	-0.021	-338.37	37	2000	
Se	78	2	72	-0.013	ppb	-0.013	-155.37	1	2000	
Sr	88	3	72	0.303	ppb	0.303	7.63	183	4000	
Mo	95	3	115	-0.010	ppb	-0.010	-188.86	25	2000	
Ag	107	3	115	-0.004	ppb	-0.004	-159.95	20	100	
Cd	111	3	115	-0.014	ppb	-0.014	-84.91	2	2000	
Sn	120	3	115	0.673	ppb	0.673	15.94	1046	2000	
Sb	121	3	115	0.041	ppb	0.041	36.35	62	1000	
Ba	137	3	115	0.441	ppb	0.441	24.22	135	5000	
Tl	205	3	193	-0.027	ppb	-0.027	-22.98	175	2000	
(Pb)	206	3	193	0.020	ppb	0.020	14.26	250	100	
(Pb)	207	3	193	-0.016	ppb	-0.016	-59.47	375	100	
Pb	208	3	193	0.002	ppb	0.002	112.69	1114	5000	
Th	232	3	193	-1.517	ppb	-1.517	-2.68	5047	2000	
U	238	3	193	0.002	ppb	0.002	1076.09	1534	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3741383	0.41	3707811	100.91	60	120	
Sc (IS)	45	3	HMI He	552764	1.11	545003	101.42	60	120	
Ge Internal standard	72	2	HMI H2	2340599	2.11	2275339	102.87	60	120	
Ge Internal standard	72	3	HMI He	683764	0.09	672584	101.66	60	120	
In Internal Standard	115	3	HMI He	2706317	1.75	2611031	103.65	60	120	
Ir (IS)	193	3	HMI He	5926275	1.52	5805625	102.08	60	120	

Sample Report

Sample Table

Sample Name	280-175172-A-5-B
Data File Name	157SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:49:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.039	ppb	-0.039	-197.25	3	2000	
Na	23	3	45	19607.302	ppb	19607.302	0.65	1958483	400000	
Mg	24	3	45	20810.525	ppb	20810.525	0.64	1108431	400000	
Al	27	3	45	4.935	ppb	4.935	30.09	194	400000	
K	39	3	45	8244.914	ppb	8244.914	1.56	376709	400000	
Ca	40	2	45	107261.632	ppb	107261.632	2.45	56233279	400000	
V	51	3	72	7.058	ppb	7.058	2.42	4882	2000	
Cr	52	3	72	5.372	ppb	5.372	2.98	6437	5000	
Mn	55	3	72	0.887	ppb	0.887	12.03	618	10000	
Fe	56	2	72	32.846	ppb	32.846	5.01	89799	10000	
Co	59	3	72	0.051	ppb	0.051	75.22	102	2000	
Ni	60	3	72	1.914	ppb	1.914	8.70	1269	5000	
Cu	63	3	72	0.531	ppb	0.531	20.46	830	5000	
Zn	66	3	72	1.738	ppb	1.738	16.41	445	5000	
As	75	3	72	1.602	ppb	1.602	16.19	220	2000	
Se	78	2	72	2.750	ppb	2.750	22.09	158	2000	
Sr	88	3	72	448.994	ppb	448.994	1.32	247146	4000	
Mo	95	3	115	1.768	ppb	1.768	8.63	856	2000	
Ag	107	3	115	0.012	ppb	0.012	94.66	45	100	
Cd	111	3	115	0.006	ppb	0.006	186.49	7	2000	
Sn	120	3	115	-0.074	ppb	-0.074	-66.51	485	2000	
Sb	121	3	115	0.116	ppb	0.116	36.19	118	1000	
Ba	137	3	115	127.828	ppb	127.828	2.20	30892	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-13.28	152	2000	
(Pb)	206	3	193	0.010	ppb	0.010	334.43	235	100	
(Pb)	207	3	193	-0.018	ppb	-0.018	-89.77	371	100	
Pb	208	3	193	-0.005	ppb	-0.005	-249.34	1076	5000	
Th	232	3	193	-1.535	ppb	-1.535	-3.86	4940	2000	
U	238	3	193	7.626	ppb	7.626	1.15	43359	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3763116	0.90	3707811	101.49	60	120	
Sc (IS)	45	3	HMI He	552508	0.37	545003	101.38	60	120	
Ge Internal standard	72	2	HMI H2	2327923	1.68	2275339	102.31	60	120	
Ge Internal standard	72	3	HMI He	699612	1.08	672584	104.02	60	120	
In Internal Standard	115	3	HMI He	2695035	1.19	2611031	103.22	60	120	
Ir (IS)	193	3	HMI He	5911769	1.35	5805625	101.83	60	120	

Sample Report

Sample Table

Sample Name	280-175172-A-4-D
Data File Name	158SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:51:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	20504.131	ppb	20504.131	1.20	2042675	400000	
Mg	24	3	45	21618.530	ppb	21618.530	1.17	1148935	400000	
Al	27	3	45	4.344	ppb	4.344	58.91	180	400000	
K	39	3	45	8534.842	ppb	8534.842	0.37	388202	400000	
Ca	40	2	45	111913.839	ppb	111913.839	1.04	59489526	400000	
V	51	3	72	7.410	ppb	7.410	3.34	5027	2000	
Cr	52	3	72	2.916	ppb	2.916	15.29	4625	5000	
Mn	55	3	72	0.964	ppb	0.964	13.72	641	10000	
Fe	56	2	72	20.362	ppb	20.362	19.26	71915	10000	
Co	59	3	72	0.031	ppb	0.031	27.85	77	2000	
Ni	60	3	72	1.405	ppb	1.405	22.98	1083	5000	
Cu	63	3	72	0.211	ppb	0.211	14.21	526	5000	
Zn	66	3	72	1.222	ppb	1.222	23.53	360	5000	
As	75	3	72	1.670	ppb	1.670	31.13	225	2000	
Se	78	2	72	2.523	ppb	2.523	6.87	147	2000	
Sr	88	3	72	465.967	ppb	465.967	1.18	253605	4000	
Mo	95	3	115	1.771	ppb	1.771	3.67	868	2000	
Ag	107	3	115	0.005	ppb	0.005	100.02	35	100	
Cd	111	3	115	0.006	ppb	0.006	202.17	7	2000	
Sn	120	3	115	0.028	ppb	0.028	470.79	566	2000	
Sb	121	3	115	0.144	ppb	0.144	7.17	142	1000	
Ba	137	3	115	127.596	ppb	127.596	3.57	31185	5000	
Tl	205	3	193	-0.038	ppb	-0.038	-8.68	133	2000	
(Pb)	206	3	193	0.005	ppb	0.005	445.49	228	100	
(Pb)	207	3	193	-0.024	ppb	-0.024	-132.75	363	100	
Pb	208	3	193	-0.013	ppb	-0.013	-52.34	1028	5000	
Th	232	3	193	-1.516	ppb	-1.516	-1.62	5019	2000	
U	238	3	193	7.706	ppb	7.706	1.57	43611	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3815306	0.71	3707811	102.90	60	120	
Sc (IS)	45	3	HMI He	551309	0.79	545003	101.16	60	120	
Ge Internal standard	72	2	HMI H2	2358179	0.78	2275339	103.64	60	120	
Ge Internal standard	72	3	HMI He	691695	0.07	672584	102.84	60	120	
In Internal Standard	115	3	HMI He	2726357	1.98	2611031	104.42	60	120	
Ir (IS)	193	3	HMI He	5886959	0.97	5805625	101.40	60	120	

Sample Report

Sample Table

Sample Name	280-175172-A-4-Dsd@5
Data File Name	159SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:53:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-90.38	2	2000	
Na	23	3	45	4053.866	ppb	4053.866	1.47	421168	400000	
Mg	24	3	45	4192.641	ppb	4192.641	0.70	223589	400000	
Al	27	3	45	6.639	ppb	6.639	38.55	230	400000	
K	39	3	45	1740.800	ppb	1740.800	2.13	100179	400000	
Ca	40	2	45	22922.548	ppb	22922.548	1.08	11970761	400000	
V	51	3	72	1.109	ppb	1.109	6.86	1451	2000	
Cr	52	3	72	1.038	ppb	1.038	30.13	3305	5000	
Mn	55	3	72	2.150	ppb	2.150	7.04	1104	10000	
Fe	56	2	72	14.423	ppb	14.423	18.74	64571	10000	
Co	59	3	72	0.023	ppb	0.023	78.38	67	2000	
Ni	60	3	72	0.615	ppb	0.615	27.89	818	5000	
Cu	63	3	72	0.199	ppb	0.199	25.16	516	5000	
Zn	66	3	72	3.919	ppb	3.919	19.13	781	5000	
As	75	3	72	0.274	ppb	0.274	29.05	70	2000	
Se	78	2	72	0.483	ppb	0.483	23.32	31	2000	
Sr	88	3	72	94.485	ppb	94.485	0.33	51583	4000	
Mo	95	3	115	0.419	ppb	0.419	7.98	227	2000	
Ag	107	3	115	0.010	ppb	0.010	38.09	42	100	
Cd	111	3	115	0.006	ppb	0.006	818.15	7	2000	
Sn	120	3	115	0.110	ppb	0.110	69.61	626	2000	
Sb	121	3	115	0.062	ppb	0.062	60.23	78	1000	
Ba	137	3	115	26.632	ppb	26.632	1.69	6495	5000	
Tl	205	3	193	-0.032	ppb	-0.032	-3.95	153	2000	
(Pb)	206	3	193	0.471	ppb	0.471	6.67	823	100	
(Pb)	207	3	193	0.374	ppb	0.374	15.97	798	100	
Pb	208	3	193	0.442	ppb	0.442	5.78	3345	5000	
Th	232	3	193	-1.521	ppb	-1.521	-3.82	4910	2000	
U	238	3	193	1.640	ppb	1.640	1.74	10304	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3746192	2.92	3707811	101.04	60	120	
Sc (IS)	45	3	HMI He	552822	0.69	545003	101.43	60	120	
Ge Internal standard	72	2	HMI H2	2421527	1.68	2275339	106.42	60	120	
Ge Internal standard	72	3	HMI He	693608	0.69	672584	103.13	60	120	
In Internal Standard	115	3	HMI He	2710506	1.68	2611031	103.81	60	120	
Ir (IS)	193	3	HMI He	5790023	0.87	5805625	99.73	60	120	

Sample Report

Sample Table

Sample Name	280-175172-A-4-E MS
Data File Name	160SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:55:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.196	ppb	1.196	181.19	85	2000	
Na	23	3	45	4702.829	ppb	4702.829	111.84	670754	400000	
Mg	24	3	45	4714.200	ppb	4714.200	109.88	346192	400000	
Al	27	3	45	164.556	ppb	164.556	109.62	4990	400000	
K	39	3	45	1833.263	ppb	1833.263	126.68	146189	400000	
Ca	40	2	45	3566.125	ppb	3566.125	170.90	3126864	400000	
V	51	3	72	9.548	ppb	9.548	120.40	8693	2000	
Cr	52	3	72	9.560	ppb	9.560	131.56	13159	5000	
Mn	55	3	72	9.127	ppb	9.127	110.92	5316	10000	
Fe	56	2	72	11.106	ppb	11.106	515.16	96370	10000	
Co	59	3	72	8.805	ppb	8.805	106.14	14773	2000	
Ni	60	3	72	9.237	ppb	9.237	120.61	5221	5000	
Cu	63	3	72	8.998	ppb	8.998	107.09	11997	5000	
Zn	66	3	72	8.223	ppb	8.223	113.80	2029	5000	
As	75	3	72	8.784	ppb	8.784	107.54	1416	2000	
Se	78	2	72	1.348	ppb	1.348	171.64	132	2000	
Sr	88	3	72	123.972	ppb	123.972	102.78	94253	4000	
Mo	95	3	115	9.459	ppb	9.459	98.30	6168	2000	
Ag	107	3	115	9.284	ppb	9.284	100.03	20620	100	
Cd	111	3	115	8.370	ppb	8.370	98.26	2829	2000	
Sn	120	3	115	8.273	ppb	8.273	105.83	9311	2000	
Sb	121	3	115	9.086	ppb	9.086	99.39	9583	1000	
Ba	137	3	115	39.080	ppb	39.080	98.01	13109	5000	
Tl	205	3	193	8.753	ppb	8.753	97.52	48671	2000	
(Pb)	206	3	193	8.754	ppb	8.754	96.46	16613	100	
(Pb)	207	3	193	8.854	ppb	8.854	98.17	14750	100	
Pb	208	3	193	8.750	ppb	8.750	97.43	66578	5000	
Th	232	3	193	3.922	ppb	3.922	135.42	46791	2000	
U	238	3	193	10.458	ppb	10.458	94.58	83922	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6722361	6.27	3707811	181.30	60	120	IS Failed
Sc (IS)	45	3	HMI He	869453	17.12	545003	159.53	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4129990	4.87	2275339	181.51	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1097334	17.50	672584	163.15	60	120	IS Failed
In Internal Standard	115	3	HMI He	4163550	15.90	2611031	159.46	60	120	IS Failed
Ir (IS)	193	3	HMI He	9310882	15.62	5805625	160.38	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-175172-A-4-F MSD
Data File Name	161SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:57:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.465	ppb	42.465	4.98	1588	2000	
Na	23	3	45	21881.107	ppb	21881.107	2.15	2165211	400000	
Mg	24	3	45	22439.178	ppb	22439.178	1.49	1185166	400000	
Al	27	3	45	780.402	ppb	780.402	3.48	16640	400000	
K	39	3	45	9537.604	ppb	9537.604	1.32	428078	400000	
Ca	40	2	45	113056.227	ppb	113056.227	1.76	60708365	400000	
V	51	3	72	47.524	ppb	47.524	0.31	27760	2000	
Cr	52	3	72	43.339	ppb	43.339	0.72	33173	5000	
Mn	55	3	72	40.989	ppb	40.989	3.27	16141	10000	
Fe	56	2	72	799.948	ppb	799.948	3.42	1261791	10000	
Co	59	3	72	39.474	ppb	39.474	0.89	47394	2000	
Ni	60	3	72	39.688	ppb	39.688	1.36	13992	5000	
Cu	63	3	72	40.149	ppb	40.149	1.51	37118	5000	
Zn	66	3	72	42.478	ppb	42.478	6.91	6763	5000	
As	75	3	72	41.890	ppb	41.890	2.64	4683	2000	
Se	78	2	72	41.362	ppb	41.362	4.12	2391	2000	
Sr	88	3	72	551.139	ppb	551.139	1.23	299350	4000	
Mo	95	3	115	41.688	ppb	41.688	1.80	19504	2000	
Ag	107	3	115	41.076	ppb	41.076	1.15	65878	100	
Cd	111	3	115	39.089	ppb	39.089	2.68	9514	2000	
Sn	120	3	115	38.515	ppb	38.515	0.78	29274	2000	
Sb	121	3	115	39.336	ppb	39.336	0.33	29864	1000	
Ba	137	3	115	172.501	ppb	172.501	0.76	41636	5000	
Tl	205	3	193	39.733	ppb	39.733	2.64	152573	2000	
(Pb)	206	3	193	40.023	ppb	40.023	0.78	51872	100	
(Pb)	207	3	193	40.443	ppb	40.443	1.58	45332	100	
Pb	208	3	193	39.998	ppb	39.998	1.35	207239	5000	
Th	232	3	193	39.505	ppb	39.505	2.09	208854	2000	
U	238	3	193	48.762	ppb	48.762	1.79	264896	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3854266	0.79	3707811	103.95	60	120	
Sc (IS)	45	3	HMI He	547917	0.83	545003	100.53	60	120	
Ge Internal standard	72	2	HMI H2	2364807	2.32	2275339	103.93	60	120	
Ge Internal standard	72	3	HMI He	690332	0.68	672584	102.64	60	120	
In Internal Standard	115	3	HMI He	2691950	0.33	2611031	103.10	60	120	
Ir (IS)	193	3	HMI He	5821628	1.34	5805625	100.28	60	120	

Sample Report

Sample Table

Sample Name	280-175172-A-4-D pds
Data File Name	162SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T20:58:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609310 6020b
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	109.920	ppb	109.920	1.84	4117	2000	
Na	23	3	45	24869.313	ppb	24869.313	1.31	2467496	400000	
Mg	24	3	45	22912.311	ppb	22912.311	1.32	1214852	400000	
Al	27	3	45	1946.929	ppb	1946.929	2.90	41539	400000	
K	39	3	45	10446.975	ppb	10446.975	0.82	468249	400000	
Ca	40	2	45	112167.298	ppb	112167.298	0.75	59254293	400000	
V	51	3	72	106.139	ppb	106.139	0.66	60951	2000	
Cr	52	3	72	101.580	ppb	101.580	1.30	74267	5000	
Mn	55	3	72	97.275	ppb	97.275	0.40	37918	10000	
Fe	56	2	72	1038.386	ppb	1038.386	1.72	1626556	10000	
Co	59	3	72	96.723	ppb	96.723	0.84	115984	2000	
Ni	60	3	72	97.295	ppb	97.295	2.53	33392	5000	
Cu	63	3	72	98.402	ppb	98.402	0.36	90432	5000	
Zn	66	3	72	199.053	ppb	199.053	2.30	31053	5000	
As	75	3	72	103.379	ppb	103.379	2.48	11491	2000	
Se	78	2	72	99.083	ppb	99.083	3.13	5724	2000	
Sr	88	3	72	553.388	ppb	553.388	1.48	300362	4000	
Mo	95	3	115	101.498	ppb	101.498	3.03	47026	2000	
Ag	107	3	115	26.672	ppb	26.672	1.76	42412	100	
Cd	111	3	115	95.391	ppb	95.391	0.18	23010	2000	
Sn	120	3	115	99.010	ppb	99.010	1.58	73758	2000	
Sb	121	3	115	94.781	ppb	94.781	1.16	71288	1000	
Ba	137	3	115	227.620	ppb	227.620	0.40	54461	5000	
Tl	205	3	193	98.114	ppb	98.114	0.98	375317	2000	
(Pb)	206	3	193	97.294	ppb	97.294	1.70	125408	100	
(Pb)	207	3	193	98.843	ppb	98.843	1.86	109911	100	
Pb	208	3	193	97.908	ppb	97.908	1.50	504252	5000	
Th	232	3	193	107.185	ppb	107.185	1.61	543721	2000	
U	238	3	193	226.477	ppb	226.477	1.57	1221489	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3791699	0.58	3707811	102.26	60	120	
Sc (IS)	45	3	HMI He	550041	0.72	545003	100.92	60	120	
Ge Internal standard	72	2	HMI H2	2364979	0.41	2275339	103.94	60	120	
Ge Internal standard	72	3	HMI He	689845	0.50	672584	102.57	60	120	
In Internal Standard	115	3	HMI He	2668827	1.35	2611031	102.21	60	120	
Ir (IS)	193	3	HMI He	5804675	0.82	5805625	99.98	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	163_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:00:42-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	55.198	ppb	8.086	2076	50	110.4	90	110	>+\-10%
Na	23	3	45	50541.839	ppb	0.430	4915123	51000	99.1	90	110	
Mg	24	3	45	10439.824	ppb	2.088	544908	11000	94.9	90	110	
Al	27	3	45	987.136	ppb	2.447	20770	1000	98.7	90	110	
K	39	3	45	10816.971	ppb	0.508	476260	11000	98.3	90	110	
Ca	40	2	45	11080.364	ppb	1.108	5863808	11000	100.7	90	110	
V	51	3	72	51.768	ppb	0.848	29173	50	103.5	90	110	
Cr	52	3	72	52.634	ppb	0.120	38430	50	105.3	90	110	
Mn	55	3	72	52.005	ppb	0.862	19738	50	104.0	90	110	
Fe	56	2	72	1032.146	ppb	1.659	1570959	1000	103.2	90	110	
Co	59	3	72	51.326	ppb	1.279	59579	50	102.7	90	110	
Ni	60	3	72	50.557	ppb	3.110	17075	50	101.1	90	110	
Cu	63	3	72	50.960	ppb	0.964	45477	50	101.9	90	110	
Zn	66	3	72	51.588	ppb	1.222	7910	50	103.2	90	110	
As	75	3	72	50.388	ppb	1.011	5440	50	100.8	90	110	
Se	78	2	72	50.542	ppb	3.684	2838	50	101.1	90	110	
Sr	88	3	72	101.488	ppb	1.829	53326	100	101.5	90	110	
Mo	95	3	115	52.414	ppb	4.324	24311	50	104.8	90	110	
Ag	107	3	115	50.833	ppb	2.210	80853	50	101.7	90	110	
Cd	111	3	115	49.726	ppb	3.395	12006	50	99.5	90	110	
Sn	120	3	115	50.537	ppb	1.660	37933	50	101.1	90	110	
Sb	121	3	115	50.328	ppb	3.280	37883	50	100.7	90	110	
Ba	137	3	115	50.291	ppb	3.161	12060	50	100.6	90	110	
Tl	205	3	193	49.832	ppb	2.508	192514	50	99.7	90	110	
(Pb)	206	3	193	48.613	ppb	3.375	63335	50	97.2	90	110	
(Pb)	207	3	193	50.414	ppb	3.515	56755	50	100.8	90	110	
Pb	208	3	193	49.138	ppb	2.407	255937	50	98.3	90	110	
Th	232	3	193	53.417	ppb	2.401	279769	50	106.8	90	110	
U	238	3	193	50.000	ppb	2.860	273288	50	100.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3793366	2.14	3707811	102.31	60	120	
Sc (IS)	45	3	HMI He	541328	0.59	545003	99.33	60	120	
Ge Internal standard	72	2	HMI H2	2298011	1.85	2275339	101.00	60	120	
Ge Internal standard	72	3	HMI He	667598	0.19	672584	99.26	60	120	
In Internal Standard	115	3	HMI He	2670728	2.13	2611031	102.29	60	120	
Ir (IS)	193	3	HMI He	5859976	2.73	5805625	100.94	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	164_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:02:29-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.047	ppb	649.9	7	0.5	
Na	23	3	45	31.174	ppb	16.5	22938	25	>RL
Mg	24	3	45	0.707	ppb	40.8	227	25	
Al	27	3	45	0.325	ppb	473.9	93	15	
K	39	3	45	7.600	ppb	219.8	26024	50	
V	51	3	72	-0.378	ppb	-22.7	586	1	
Cr	52	3	72	0.375	ppb	35.1	2751	1	
Mn	55	3	72	0.181	ppb	89.9	328	0.5	
Co	59	3	72	0.009	ppb	104.2	48	0.5	
Ni	60	3	72	0.262	ppb	76.7	678	1	
Cu	63	3	72	0.044	ppb	16.2	363	1	
Zn	66	3	72	-0.078	ppb	-100.3	153	5	
As	75	3	72	0.031	ppb	225.8	42	1	
Se	78	2	72	0.034	ppb	178.3	4	1	
Sr	88	3	72	0.025	ppb	114.3	33	0.5	
Mo	95	3	115	0.082	ppb	9.9	67	0.5	
Ag	107	3	115	0.000	ppb	-1315.8	25	1	
Cd	111	3	115	0.014	ppb	90.0	8	0.5	
Sn	120	3	115	3.622	ppb	5.1	3207	1	>RL
Sb	121	3	115	0.042	ppb	35.6	62	0.6	
Ba	137	3	115	0.081	ppb	88.5	47	0.5	
Tl	205	3	193	0.004	ppb	494.5	292	0.1	
(Pb)	206	3	193	-0.010	ppb	-267.1	207	1	
(Pb)	207	3	193	-0.031	ppb	-151.1	352	1	
Pb	208	3	193	-0.021	ppb	-54.9	976	0.5	
Th	232	3	193	1.298	ppb	22.2	18962	1	>RL
U	238	3	193	0.013	ppb	242.5	1569	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3751691	1.76	3707811	101.18	60	120	
Sc (IS)	45	3	HMI He	544212	0.54	545003	99.85	60	120	
Ge Internal standard	72	2	HMI H2	2307099	2.38	2275339	101.40	60	120	
Ge Internal standard	72	3	HMI He	673110	0.34	672584	100.08	60	120	
In Internal Standard	115	3	HMI He	2663852	1.22	2611031	102.02	60	120	
Ir (IS)	193	3	HMI He	5822743	1.04	5805625	100.29	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609000/2-A
Data File Name	165_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:04:18-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609000 soil 6020a
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	197.690	197.690	ppb	0.666	7322	40	494.2	80	120	>+/-20%
Na	23	3	45	3871.955	3871.955	ppb	0.064	379963	40	9679.9	80	120	>+/-20%
Mg	24	3	45	3565.324	3565.324	ppb	2.685	179207	40	8913.3	80	120	>+/-20%
Al	27	3	45	3683.671	3683.671	ppb	1.752	74362	40	9209.2	80	120	>+/-20%
K	39	3	45	3887.720	3887.720	ppb	1.680	180499	40	9719.3	80	120	>+/-20%
Ca	40	2	45	4184.456	4184.456	ppb	2.446	2106738	40	10461.1	80	120	>+/-20%
V	51	3	72	185.983	185.983	ppb	0.313	102582	40	465.0	80	120	>+/-20%
Cr	52	3	72	192.096	192.096	ppb	1.081	133471	40	480.2	80	120	>+/-20%
Mn	55	3	72	192.272	192.272	ppb	1.016	72152	40	480.7	80	120	>+/-20%
Fe	56	2	72	3706.706	3706.706	ppb	2.791	5462592	40	9266.8	80	120	>+/-20%
(Fe)	56	3	72	3728.444	3728.444	ppb	1.800	2277534	40	9321.1	80	120	>+/-20%
Co	59	3	72	188.313	188.313	ppb	1.088	218113	40	470.8	80	120	>+/-20%
Ni	60	3	72	185.661	185.661	ppb	0.612	61028	40	464.2	80	120	>+/-20%
Cu	63	3	72	194.083	194.083	ppb	0.312	171999	40	485.2	80	120	>+/-20%
Zn	66	3	72	187.000	187.000	ppb	0.474	28193	40	467.5	80	120	>+/-20%
As	75	3	72	181.426	181.426	ppb	0.577	19454	40	453.6	80	120	>+/-20%
Se	78	2	72	185.357	185.357	ppb	3.671	10256	40	463.4	80	120	>+/-20%
(Se)	78	3	72	177.540	177.540	ppb	7.876	1136	40	443.8	80	120	>+/-20%
Sr	88	3	72	372.594	372.594	ppb	0.974	195381	40	931.5	80	120	>+/-20%
Mo	95	3	115	187.577	187.577	ppb	1.627	85050	40	468.9	80	120	>+/-20%
Ag	107	3	115	190.608	190.608	ppb	0.958	296495	40	476.5	80	120	>+/-20%
Cd	111	3	115	181.988	181.988	ppb	0.339	42955	40	455.0	80	120	>+/-20%
Sn	120	3	115	190.377	190.377	ppb	1.259	138317	40	475.9	80	120	>+/-20%
Sb	121	3	115	184.182	184.182	ppb	1.379	135544	40	460.5	80	120	>+/-20%
Ba	137	3	115	192.520	192.520	ppb	1.455	45079	40	481.3	80	120	>+/-20%
Tl	205	3	193	187.539	187.539	ppb	1.668	712056	40	468.8	80	120	>+/-20%
(Pb)	206	3	193	184.722	184.722	ppb	2.025	236248	40	461.8	80	120	>+/-20%
(Pb)	207	3	193	187.598	187.598	ppb	2.552	206774	40	469.0	80	120	>+/-20%
Pb	208	3	193	186.237	186.237	ppb	1.691	951443	40	465.6	80	120	>+/-20%
Th	232	3	193	189.914	189.914	ppb	1.916	947000	40	474.8	80	120	>+/-20%
U	238	3	193	188.154	188.154	ppb	2.883	1007760	40	470.4	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3600330	2.53	3707811	97.10	60	120	
Sc (IS)	45	3	HMI He	520959	0.75	545003	95.59	60	120	
Ge Internal standard	72	2	HMI H2	2267473	3.17	2275339	99.65	60	120	
Ge Internal standard	72	3	HMI He	666424	0.14	672584	99.08	60	120	
In Internal Standard	115	3	HMI He	2611735	0.62	2611031	100.03	60	120	
Ir (IS)	193	3	HMI He	5764355	1.80	5805625	99.29	60	120	

Sample Report

Sample Table

Sample Name	280-174408-A-1-Z
Data File Name	166SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:06:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609000 soil 6020a
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	14.468	ppb	14.468	8.39	528	2000	
Na	23	3	45	1016.991	ppb	1016.991	1.52	118884	400000	
Mg	24	3	45	27909.216	ppb	27909.216	1.46	1463407	400000	
Al	27	3	45	391816.474	ppb	391816.474	1.26	8250218	400000	
K	39	3	45	5274.763	ppb	5274.763	1.04	246550	400000	
Ca	40	2	45	1700221.569	ppb	1700221.569	1.76	865560677	400000	
V	51	3	72	330.214	ppb	330.214	1.02	177244	2000	
Cr	52	3	72	2906.521	ppb	2906.521	0.60	1937882	5000	
Mn	55	3	72	23688.749	ppb	23688.749	1.49	8649717	10000	
Fe	56	2	72	438453.796	ppb	438453.796	1.56	614173472	10000	>LDR
Co	59	3	72	72.865	ppb	72.865	2.12	82426	2000	
Ni	60	3	72	285.887	ppb	285.887	0.42	91453	5000	
Cu	63	3	72	1233.596	ppb	1233.596	0.40	1065788	5000	
Zn	66	3	72	2985.537	ppb	2985.537	0.61	437122	5000	
As	75	3	72	152.401	ppb	152.401	0.52	15963	2000	
Se	78	2	72	7.812	ppb	7.812	4.86	416	2000	
Sr	88	3	72	7093.981	ppb	7093.981	2.56	3632233	4000	
Mo	95	3	115	9.999	ppb	9.999	3.46	4454	2000	
Ag	107	3	115	0.767	ppb	0.767	6.42	1189	100	
Cd	111	3	115	191.536	ppb	191.536	1.25	44152	2000	
Sn	120	3	115	76.939	ppb	76.939	0.48	54902	2000	
Sb	121	3	115	8.321	ppb	8.321	1.41	6008	1000	
Ba	137	3	115	253.100	ppb	253.100	1.33	57874	5000	
Tl	205	3	193	8.220	ppb	8.220	1.61	31205	2000	
(Pb)	206	3	193	662.415	ppb	662.415	1.66	839337	100	>LDR
(Pb)	207	3	193	649.055	ppb	649.055	1.47	708470	100	>LDR
Pb	208	3	193	676.899	ppb	676.899	1.11	3426365	5000	
Th	232	3	193	20.941	ppb	20.941	4.00	114454	2000	
U	238	3	193	16.010	ppb	16.010	2.39	86360	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3655731	2.77	3707811	98.60	60	120	
Sc (IS)	45	3	HMI He	543968	0.69	545003	99.81	60	120	
Ge Internal standard	72	2	HMI H2	2169811	1.41	2275339	95.36	60	120	
Ge Internal standard	72	3	HMI He	650726	0.42	672584	96.75	60	120	
In Internal Standard	115	3	HMI He	2550829	0.67	2611031	97.69	60	120	
Ir (IS)	193	3	HMI He	5715064	1.75	5805625	98.44	60	120	

Sample Report

Sample Table

Sample Name	280-174408-A-1-Z@10
Data File Name	167SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:07:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609000 soil 6020a
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.051	ppb	0.051	146.74	7	2000	
Na	23	3	45	59.678	ppb	59.678	14.18	25204	400000	
Mg	24	3	45	589.259	ppb	589.259	2.45	30483	400000	
Al	27	3	45	8315.081	ppb	8315.081	1.86	171808	400000	
K	39	3	45	129.602	ppb	129.602	26.03	30517	400000	
Ca	40	2	45	36475.560	ppb	36475.560	1.50	18639616	400000	
V	51	3	72	6.074	ppb	6.074	4.99	4025	2000	
Cr	52	3	72	59.926	ppb	59.926	2.03	42430	5000	
Mn	55	3	72	491.805	ppb	491.805	1.79	180305	10000	
Fe	56	2	72	9527.338	ppb	9527.338	1.85	13524164	10000	
Co	59	3	72	1.572	ppb	1.572	4.32	1821	2000	
Ni	60	3	72	7.612	ppb	7.612	5.44	2999	5000	
Cu	63	3	72	27.406	ppb	27.406	1.34	24049	5000	
Zn	66	3	72	75.944	ppb	75.944	1.57	11306	5000	
As	75	3	72	3.573	ppb	3.573	1.42	411	2000	
Se	78	2	72	0.213	ppb	0.213	44.46	13	2000	
Sr	88	3	72	142.271	ppb	142.271	3.07	73047	4000	
Mo	95	3	115	0.309	ppb	0.309	28.34	175	2000	
Ag	107	3	115	0.242	ppb	0.242	10.19	416	100	
Cd	111	3	115	3.995	ppb	3.995	7.79	985	2000	
Sn	120	3	115	2.352	ppb	2.352	2.77	2312	2000	
Sb	121	3	115	0.223	ppb	0.223	10.62	202	1000	
Ba	137	3	115	5.316	ppb	5.316	8.20	1319	5000	
Tl	205	3	193	0.192	ppb	0.192	15.77	1030	2000	
(Pb)	206	3	193	14.225	ppb	14.225	4.10	18848	100	
(Pb)	207	3	193	13.721	ppb	13.721	3.05	15865	100	
Pb	208	3	193	14.075	ppb	14.075	1.79	74708	5000	
Th	232	3	193	-0.542	ppb	-0.542	-25.86	9947	2000	
U	238	3	193	0.368	ppb	0.368	11.38	3539	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3666687	0.21	3707811	98.89	60	120	
Sc (IS)	45	3	HMI He	533550	1.36	545003	97.90	60	120	
Ge Internal standard	72	2	HMI H2	2192546	0.34	2275339	96.36	60	120	
Ge Internal standard	72	3	HMI He	652549	1.41	672584	97.02	60	120	
In Internal Standard	115	3	HMI He	2712769	0.85	2611031	103.90	60	120	
Ir (IS)	193	3	HMI He	5907074	0.85	5805625	101.75	60	120	

Sample Report

Sample Table

Sample Name	280-174408-A-2-X
Data File Name	168SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:09:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609000 soil 6020a
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	8.445	ppb	8.445	2.02	307	2000	
Na	23	3	45	1110.186	ppb	1110.186	1.98	125819	400000	
Mg	24	3	45	37672.742	ppb	37672.742	3.27	1942361	400000	
Al	27	3	45	250185.055	ppb	250185.055	0.99	5181311	400000	
K	39	3	45	3808.796	ppb	3808.796	0.80	182104	400000	
Ca	40	2	45	2982932.375	ppb	2982932.375	0.95	1484615069	400000	>LDR
V	51	3	72	236.237	ppb	236.237	0.57	126305	2000	
Cr	52	3	72	2054.659	ppb	2054.659	2.40	1362975	5000	
Mn	55	3	72	16530.229	ppb	16530.229	0.96	6001463	10000	
Fe	56	2	72	408177.673	ppb	408177.673	0.58	554443984	10000	>LDR
Co	59	3	72	53.260	ppb	53.260	1.15	59919	2000	
Ni	60	3	72	184.165	ppb	184.165	0.37	58782	5000	
Cu	63	3	72	565.581	ppb	565.581	0.63	486050	5000	
Zn	66	3	72	5523.900	ppb	5523.900	1.21	804045	5000	
As	75	3	72	115.323	ppb	115.323	2.35	12019	2000	
Se	78	2	72	4.999	ppb	4.999	4.09	259	2000	
Sr	88	3	72	9527.132	ppb	9527.132	2.77	4849820	4000	
Mo	95	3	115	7.707	ppb	7.707	0.57	3364	2000	
Ag	107	3	115	0.450	ppb	0.450	6.36	693	100	
Cd	111	3	115	133.599	ppb	133.599	0.95	30120	2000	
Sn	120	3	115	50.432	ppb	50.432	2.17	35361	2000	
Sb	121	3	115	5.593	ppb	5.593	1.71	3959	1000	
Ba	137	3	115	181.271	ppb	181.271	0.55	40542	5000	
Tl	205	3	193	5.630	ppb	5.630	1.26	20972	2000	
(Pb)	206	3	193	410.476	ppb	410.476	1.93	508375	100	
(Pb)	207	3	193	402.936	ppb	402.936	2.04	429944	100	
Pb	208	3	193	405.244	ppb	405.244	1.73	2004843	5000	
Th	232	3	193	10.662	ppb	10.662	0.46	62857	2000	
U	238	3	193	18.525	ppb	18.525	2.10	97441	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3573015	0.47	3707811	96.36	60	120	
Sc (IS)	45	3	HMI He	535007	1.45	545003	98.17	60	120	
Ge Internal standard	72	2	HMI H2	2103799	0.54	2275339	92.46	60	120	
Ge Internal standard	72	3	HMI He	647058	0.62	672584	96.20	60	120	
In Internal Standard	115	3	HMI He	2494477	0.89	2611031	95.54	60	120	
Ir (IS)	193	3	HMI He	5586029	2.42	5805625	96.22	60	120	

Sample Report

Sample Table

Sample Name	280-174408-A-2-Xsd@5
Data File Name	169SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:11:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609000 soil 6020a
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.433	ppb	2.433	21.41	98	2000	
Na	23	3	45	234.695	ppb	234.695	3.81	43751	400000	
Mg	24	3	45	7346.357	ppb	7346.357	2.40	394440	400000	
Al	27	3	45	52455.497	ppb	52455.497	2.09	1130712	400000	
K	39	3	45	769.694	ppb	769.694	4.34	59284	400000	
Ca	40	2	45	593817.111	ppb	593817.111	0.95	320337263	400000	
V	51	3	72	46.858	ppb	46.858	0.87	26582	2000	
Cr	52	3	72	403.418	ppb	403.418	2.23	279108	5000	
Mn	55	3	72	3509.481	ppb	3509.481	1.50	1319750	10000	
Fe	56	2	72	82200.161	ppb	82200.161	2.13	120360213	10000	>LDR
Co	59	3	72	10.983	ppb	10.983	2.57	12826	2000	
Ni	60	3	72	37.578	ppb	37.578	1.22	12891	5000	
Cu	63	3	72	118.309	ppb	118.309	0.61	105553	5000	
Zn	66	3	72	1192.552	ppb	1192.552	1.35	179902	5000	
As	75	3	72	23.302	ppb	23.302	6.98	2546	2000	
Se	78	2	72	1.024	ppb	1.024	10.22	59	2000	
Sr	88	3	72	1986.795	ppb	1986.795	0.81	1047575	4000	
Mo	95	3	115	1.369	ppb	1.369	17.15	665	2000	
Ag	107	3	115	0.085	ppb	0.085	39.93	162	100	
Cd	111	3	115	26.809	ppb	26.809	1.58	6478	2000	
Sn	120	3	115	10.472	ppb	10.472	0.19	8290	2000	
Sb	121	3	115	1.102	ppb	1.102	10.08	860	1000	
Ba	137	3	115	35.824	ppb	35.824	2.19	8604	5000	
Tl	205	3	193	1.126	ppb	1.126	6.14	4707	2000	
(Pb)	206	3	193	81.423	ppb	81.423	0.99	107862	100	
(Pb)	207	3	193	80.502	ppb	80.502	1.24	92040	100	
Pb	208	3	193	80.846	ppb	80.846	1.50	427957	5000	
Th	232	3	193	0.909	ppb	0.909	24.44	17430	2000	
U	238	3	193	3.586	ppb	3.586	3.73	21378	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3872857	1.38	3707811	104.45	60	120	
Sc (IS)	45	3	HMI He	556883	1.44	545003	102.18	60	120	
Ge Internal standard	72	2	HMI H2	2267661	1.61	2275339	99.66	60	120	
Ge Internal standard	72	3	HMI He	670136	0.77	672584	99.64	60	120	
In Internal Standard	115	3	HMI He	2671947	1.02	2611031	102.33	60	120	
Ir (IS)	193	3	HMI He	5963306	0.75	5805625	102.72	60	120	

Sample Report

Sample Table

Sample Name	280-174408-A-2-Y MS
Data File Name	170SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:13:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609000 soil 6020a
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	131.537	ppb	131.537	3.54	4815	2000	
Na	23	3	45	3052.509	ppb	3052.509	1.12	323824	400000	
Mg	24	3	45	31156.085	ppb	31156.085	3.09	1669125	400000	
Al	27	3	45	216310.538	ppb	216310.538	0.06	4653406	400000	
K	39	3	45	6119.449	ppb	6119.449	1.63	287980	400000	
Ca	40	2	45	2273514.510	ppb	2273514.510	0.22	1177124563	400000	>LDR
V	51	3	72	330.096	ppb	330.096	0.14	180661	2000	
Cr	52	3	72	1899.369	ppb	1899.369	1.46	1292145	5000	
Mn	55	3	72	14583.932	ppb	14583.932	1.90	5429664	10000	
Fe	56	2	72	293609.001	ppb	293609.001	0.77	414637560	10000	>LDR
Co	59	3	72	163.149	ppb	163.149	0.21	188142	2000	
Ni	60	3	72	295.125	ppb	295.125	0.41	96239	5000	
Cu	63	3	72	806.076	ppb	806.076	0.38	710214	5000	
Zn	66	3	72	1220.810	ppb	1220.810	0.62	182350	5000	
As	75	3	72	212.346	ppb	212.346	1.43	22664	2000	
Se	78	2	72	122.096	ppb	122.096	0.95	6522	2000	
Sr	88	3	72	7388.997	ppb	7388.997	1.37	3857124	4000	
Mo	95	3	115	126.749	ppb	126.749	0.81	56779	2000	
Ag	107	3	115	101.298	ppb	101.298	1.38	155672	100	
Cd	111	3	115	211.571	ppb	211.571	1.01	49331	2000	
Sn	120	3	115	165.769	ppb	165.769	1.07	119046	2000	
Sb	121	3	115	114.811	ppb	114.811	0.44	83480	1000	
Ba	137	3	115	292.686	ppb	292.686	0.45	67689	5000	
Tl	205	3	193	121.531	ppb	121.531	1.52	463976	2000	
(Pb)	206	3	193	474.204	ppb	474.204	1.89	609276	100	
(Pb)	207	3	193	463.986	ppb	463.986	2.53	513562	100	
Pb	208	3	193	487.122	ppb	487.122	3.54	2499466	5000	
Th	232	3	193	44.619	ppb	44.619	2.82	233168	2000	
U	238	3	193	131.826	ppb	131.826	1.15	710275	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3716907	0.87	3707811	100.25	60	120	
Sc (IS)	45	3	HMI He	555729	0.82	545003	101.97	60	120	
Ge Internal standard	72	2	HMI H2	2187250	0.96	2275339	96.13	60	120	
Ge Internal standard	72	3	HMI He	663493	0.56	672584	98.65	60	120	
In Internal Standard	115	3	HMI He	2579972	0.30	2611031	98.81	60	120	
Ir (IS)	193	3	HMI He	5794334	1.39	5805625	99.81	60	120	

Sample Report

Sample Table

Sample Name	280-174408-A-2-Z MSD
Data File Name	171SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:15:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609000 soil 6020a
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	129.991	ppb	129.991	1.76	4822	2000	
Na	23	3	45	3295.571	ppb	3295.571	1.10	345998	400000	
Mg	24	3	45	33226.426	ppb	33226.426	2.62	1769677	400000	
Al	27	3	45	199381.773	ppb	199381.773	1.04	4264607	400000	
K	39	3	45	6262.614	ppb	6262.614	0.08	292436	400000	
Ca	40	2	45	2450151.833	ppb	2450151.833	1.58	1280014823	400000	>LDR
V	51	3	72	320.589	ppb	320.589	0.55	174497	2000	
Cr	52	3	72	1799.998	ppb	1799.998	1.09	1217785	5000	
Mn	55	3	72	14350.053	ppb	14350.053	1.12	5312349	10000	
Fe	56	2	72	300650.006	ppb	300650.006	3.04	419888744	10000	>LDR
Co	59	3	72	162.119	ppb	162.119	1.27	185901	2000	
Ni	60	3	72	283.270	ppb	283.270	0.21	91879	5000	
Cu	63	3	72	639.115	ppb	639.115	0.54	559997	5000	
Zn	66	3	72	6016.481	ppb	6016.481	0.69	892960	5000	
As	75	3	72	209.348	ppb	209.348	0.91	22219	2000	
Se	78	2	72	120.780	ppb	120.780	2.41	6381	2000	
Sr	88	3	72	8219.455	ppb	8219.455	1.77	4266778	4000	
Mo	95	3	115	128.692	ppb	128.692	1.50	57735	2000	
Ag	107	3	115	113.417	ppb	113.417	1.30	174557	100	
Cd	111	3	115	212.798	ppb	212.798	2.85	49684	2000	
Sn	120	3	115	151.964	ppb	151.964	1.66	109337	2000	
Sb	121	3	115	122.267	ppb	122.267	1.98	89029	1000	
Ba	137	3	115	292.105	ppb	292.105	1.80	67655	5000	
Tl	205	3	193	122.303	ppb	122.303	2.88	465229	2000	
(Pb)	206	3	193	432.866	ppb	432.866	2.32	554251	100	
(Pb)	207	3	193	425.502	ppb	425.502	2.23	469379	100	
Pb	208	3	193	444.630	ppb	444.630	1.72	2274207	5000	
Th	232	3	193	50.110	ppb	50.110	2.28	259448	2000	
U	238	3	193	133.362	ppb	133.362	2.49	715991	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3750368	0.76	3707811	101.15	60	120	
Sc (IS)	45	3	HMI He	552531	0.83	545003	101.38	60	120	
Ge Internal standard	72	2	HMI H2	2163590	1.64	2275339	95.09	60	120	
Ge Internal standard	72	3	HMI He	659769	0.52	672584	98.09	60	120	
In Internal Standard	115	3	HMI He	2584234	1.51	2611031	98.97	60	120	
Ir (IS)	193	3	HMI He	5775536	2.52	5805625	99.48	60	120	

Sample Report

Sample Table

Sample Name	280-174408-A-2-AA DU
Data File Name	172SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:16:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609000 soil 6020a
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	7.077	ppb	7.077	4.45	267	2000	
Na	23	3	45	771.469	ppb	771.469	1.60	97033	400000	
Mg	24	3	45	25419.338	ppb	25419.338	1.79	1361705	400000	
Al	27	3	45	172145.440	ppb	172145.440	0.57	3703025	400000	
K	39	3	45	2513.060	ppb	2513.060	1.33	133729	400000	
Ca	40	2	45	2038976.512	ppb	2038976.512	2.38	1078229565	400000	>LDR
V	51	3	72	156.965	ppb	156.965	0.58	88457	2000	
Cr	52	3	72	1398.903	ppb	1398.903	0.37	975898	5000	
Mn	55	3	72	11428.719	ppb	11428.719	1.60	4360355	10000	
Fe	56	2	72	250247.723	ppb	250247.723	1.92	364832309	10000	>LDR
Co	59	3	72	37.228	ppb	37.228	0.87	44024	2000	
Ni	60	3	72	142.850	ppb	142.850	1.64	48049	5000	
Cu	63	3	72	434.420	ppb	434.420	0.73	392399	5000	
Zn	66	3	72	7987.771	ppb	7987.771	1.11	1221693	5000	
As	75	3	72	80.358	ppb	80.358	1.17	8813	2000	
Se	78	2	72	3.699	ppb	3.699	5.29	206	2000	
Sr	88	3	72	6600.574	ppb	6600.574	0.90	3531020	4000	
Mo	95	3	115	9.896	ppb	9.896	1.92	4590	2000	
Ag	107	3	115	0.384	ppb	0.384	13.27	633	100	
Cd	111	3	115	82.668	ppb	82.668	2.18	19845	2000	
Sn	120	3	115	126.040	ppb	126.040	0.72	93342	2000	
Sb	121	3	115	8.952	ppb	8.952	5.94	6725	1000	
Ba	137	3	115	123.289	ppb	123.289	2.89	29366	5000	
Tl	205	3	193	3.973	ppb	3.973	1.40	15508	2000	
(Pb)	206	3	193	721.911	ppb	721.911	0.56	932004	100	>LDR
(Pb)	207	3	193	711.348	ppb	711.348	0.43	791074	100	>LDR
Pb	208	3	193	743.651	ppb	743.651	1.17	3834540	5000	
Th	232	3	193	8.772	ppb	8.772	4.36	56118	2000	
U	238	3	193	12.245	ppb	12.245	0.21	67660	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3797570	2.84	3707811	102.42	60	120	
Sc (IS)	45	3	HMI He	555697	0.91	545003	101.96	60	120	
Ge Internal standard	72	2	HMI H2	2258276	1.60	2275339	99.25	60	120	
Ge Internal standard	72	3	HMI He	679940	0.65	672584	101.09	60	120	
In Internal Standard	115	3	HMI He	2656613	2.18	2611031	101.75	60	120	
Ir (IS)	193	3	HMI He	5822067	0.59	5805625	100.28	60	120	

Sample Report

Sample Table

Sample Name	280-174408-A-2-X pds
Data File Name	173SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:18:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609000 soil 6020a
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	119.006	ppb	119.006	4.73	4315	2000	
Na	23	3	45	5970.478	ppb	5970.478	2.50	607188	400000	
Mg	24	3	45	38521.682	ppb	38521.682	2.58	2040738	400000	
Al	27	3	45	251145.119	ppb	251145.119	2.18	5343104	400000	
K	39	3	45	5764.403	ppb	5764.403	2.49	269800	400000	
Ca	40	2	45	2921110.509	ppb	2921110.509	0.92	1504099954	400000	>LDR
V	51	3	72	330.839	ppb	330.839	1.13	180658	2000	
Cr	52	3	72	2135.869	ppb	2135.869	3.31	1449300	5000	
Mn	55	3	72	16751.372	ppb	16751.372	0.65	6222524	10000	
Fe	56	2	72	402238.870	ppb	402238.870	2.14	569116690	10000	>LDR
Co	59	3	72	149.378	ppb	149.378	1.35	171874	2000	
Ni	60	3	72	274.457	ppb	274.457	1.30	89340	5000	
Cu	63	3	72	652.280	ppb	652.280	0.26	573489	5000	
Zn	66	3	72	5639.240	ppb	5639.240	0.08	839864	5000	
As	75	3	72	214.593	ppb	214.593	1.52	22851	2000	
Se	78	2	72	104.871	ppb	104.871	2.61	5612	2000	
Sr	88	3	72	9777.607	ppb	9777.607	1.00	5092887	4000	
Mo	95	3	115	109.256	ppb	109.256	2.25	48675	2000	
Ag	107	3	115	26.669	ppb	26.669	2.20	40775	100	
Cd	111	3	115	221.142	ppb	221.142	2.84	51270	2000	
Sn	120	3	115	146.345	ppb	146.345	1.71	104582	2000	
Sb	121	3	115	99.609	ppb	99.609	3.80	72013	1000	
Ba	137	3	115	278.243	ppb	278.243	1.64	63999	5000	
Tl	205	3	193	104.951	ppb	104.951	0.57	384107	2000	
(Pb)	206	3	193	507.392	ppb	507.392	1.21	624869	100	>LDR
(Pb)	207	3	193	501.089	ppb	501.089	1.51	531618	100	>LDR
Pb	208	3	193	524.056	ppb	524.056	0.82	2577926	5000	
Th	232	3	193	120.981	ppb	120.981	1.06	585641	2000	
U	238	3	193	247.208	ppb	247.208	1.55	1275397	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3696207	1.74	3707811	99.69	60	120	
Sc (IS)	45	3	HMI He	549648	0.90	545003	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2192013	3.02	2275339	96.34	60	120	
Ge Internal standard	72	3	HMI He	662029	0.70	672584	98.43	60	120	
In Internal Standard	115	3	HMI He	2566512	2.28	2611031	98.29	60	120	
Ir (IS)	193	3	HMI He	5553784	1.14	5805625	95.66	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	174_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:20:22-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.679	ppb	6.392	1982	50	103.4	90	110	
Na	23	3	45	50252.965	ppb	2.241	5161029	51000	98.5	90	110	
Mg	24	3	45	10385.769	ppb	0.258	572459	11000	94.4	90	110	
Al	27	3	45	963.838	ppb	3.772	21421	1000	96.4	90	110	
K	39	3	45	10689.934	ppb	1.110	497359	11000	97.2	90	110	
Ca	40	2	45	11241.457	ppb	0.227	6197901	11000	102.2	90	110	
V	51	3	72	52.310	ppb	1.032	30592	50	104.6	90	110	
Cr	52	3	72	53.337	ppb	0.673	40393	50	106.7	90	110	
Mn	55	3	72	52.520	ppb	2.793	20685	50	105.0	90	110	
Fe	56	2	72	1127.182	ppb	1.000	1760156	1000	112.7	90	110	>+\-10%
Co	59	3	72	51.474	ppb	2.973	62009	50	102.9	90	110	
Ni	60	3	72	52.047	ppb	1.535	18231	50	104.1	90	110	
Cu	63	3	72	51.601	ppb	1.147	47793	50	103.2	90	110	
Zn	66	3	72	55.291	ppb	2.332	8788	50	110.6	90	110	>+\-10%
As	75	3	72	51.923	ppb	0.854	5818	50	103.8	90	110	
Se	78	2	72	50.945	ppb	3.073	2941	50	101.9	90	110	
Sr	88	3	72	103.007	ppb	0.271	56183	100	103.0	90	110	
Mo	95	3	115	51.339	ppb	1.038	25022	50	102.7	90	110	
Ag	107	3	115	50.526	ppb	1.639	84420	50	101.1	90	110	
Cd	111	3	115	47.508	ppb	1.453	12046	50	95.0	90	110	
Sn	120	3	115	50.660	ppb	1.794	39941	50	101.3	90	110	
Sb	121	3	115	50.452	ppb	1.861	39895	50	100.9	90	110	
Ba	137	3	115	50.375	ppb	1.546	12688	50	100.8	90	110	
Tl	205	3	193	50.424	ppb	2.403	195150	50	100.8	90	110	
(Pb)	206	3	193	50.625	ppb	3.513	66072	50	101.2	90	110	
(Pb)	207	3	193	50.974	ppb	0.192	57516	50	101.9	90	110	
Pb	208	3	193	50.841	ppb	2.532	265260	50	101.7	90	110	
Th	232	3	193	50.380	ppb	2.471	265062	50	100.8	90	110	
U	238	3	193	50.864	ppb	2.444	278506	50	101.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3951660	2.12	3707811	106.58	60	120	
Sc (IS)	45	3	HMI He	571662	0.35	545003	104.89	60	120	
Ge Internal standard	72	2	HMI H2	2362175	1.00	2275339	103.82	60	120	
Ge Internal standard	72	3	HMI He	693001	1.50	672584	103.04	60	120	
In Internal Standard	115	3	HMI He	2804905	1.27	2611031	107.43	60	120	
Ir (IS)	193	3	HMI He	5870353	2.26	5805625	101.11	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	175_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:22:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.085	ppb	-89.6	2	0.5	
Na	23	3	45	22.086	ppb	13.3	23202	25	
Mg	24	3	45	1.097	ppb	91.2	260	25	
Al	27	3	45	12.299	ppb	1.9	364	15	
K	39	3	45	-23.600	ppb	-115.4	26007	50	
V	51	3	72	-0.953	ppb	-0.5	282	1	
Cr	52	3	72	0.297	ppb	93.5	2829	1	
Mn	55	3	72	0.885	ppb	22.7	623	0.5	>RL
Co	59	3	72	0.022	ppb	55.0	67	0.5	
Ni	60	3	72	0.142	ppb	126.2	670	1	
Cu	63	3	72	0.152	ppb	29.8	481	1	
Zn	66	3	72	1.270	ppb	8.4	375	5	
As	75	3	72	0.145	ppb	93.5	57	1	
Se	78	2	72	0.009	ppb	440.1	3	1	
Sr	88	3	72	0.502	ppb	18.4	300	0.5	>RL
Mo	95	3	115	0.085	ppb	71.7	72	0.5	
Ag	107	3	115	-0.001	ppb	-569.7	25	1	
Cd	111	3	115	0.052	ppb	59.2	18	0.5	
Sn	120	3	115	3.707	ppb	5.0	3410	1	>RL
Sb	121	3	115	0.073	ppb	30.7	88	0.6	
Ba	137	3	115	0.140	ppb	48.7	63	0.5	
Tl	205	3	193	0.015	ppb	95.0	345	0.1	
(Pb)	206	3	193	0.043	ppb	80.3	283	1	
(Pb)	207	3	193	0.011	ppb	608.7	411	1	
Pb	208	3	193	0.032	ppb	41.4	1294	0.5	
Th	232	3	193	0.158	ppb	120.3	13721	1	
U	238	3	193	0.019	ppb	77.4	1656	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3885729	1.16	3707811	104.80	60	120	
Sc (IS)	45	3	HMI He	572533	0.24	545003	105.05	60	120	
Ge Internal standard	72	2	HMI H2	2420086	1.29	2275339	106.36	60	120	
Ge Internal standard	72	3	HMI He	706066	0.31	672584	104.98	60	120	
In Internal Standard	115	3	HMI He	2777703	1.83	2611031	106.38	60	120	
Ir (IS)	193	3	HMI He	6014186	0.58	5805625	103.59	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7695100
Data File Name	176LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:23:59-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	-0.079	ppb	-54.096	3	1	-7.9	70	130	>+/-30%
Na	23	3	45	-104.291	ppb	-0.818	19717	300	-34.8	70	130	>+/-30%
Mg	24	3	45	-2.581	ppb	-10.811	110	50	-5.2	70	130	>+/-30%
Al	27	3	45	-0.284	ppb	-522.321	163	50	-0.6	70	130	>+/-30%
K	39	3	45	-333.977	ppb	-3.847	23707	120	-278.3	70	130	>+/-30%
Ca	40	2	45	20.808	ppb	61.896	37365	200	10.4	70	130	>+/-30%
V	51	3	72	-1.339	ppb	-1.245	112	5	-26.8	70	130	>+/-30%
Cr	52	3	72	-3.039	ppb	-0.239	805	2	-152.0	70	130	>+/-30%
Mn	55	3	72	-0.446	ppb	-12.864	185	1	-44.6	70	130	>+/-30%
Fe	56	2	72	-20.247	ppb	-5.989	17963	50	-40.5	70	130	>+/-30%
Co	59	3	72	-0.021	ppb	-12.281	27	1	-2.1	70	130	>+/-30%
Ni	60	3	72	-1.634	ppb	-1.468	110	2	-81.7	70	130	>+/-30%
Cu	63	3	72	-0.166	ppb	-10.336	353	2	-8.3	70	130	>+/-30%
Zn	66	3	72	-0.441	ppb	-20.653	198	10	-4.4	70	130	>+/-30%
As	75	3	72	-0.256	ppb	-21.741	22	5	-5.1	70	130	>+/-30%
Se	78	2	72	-0.009	ppb	-327.799	3	5	-0.2	70	130	>+/-30%
Sr	88	3	72	0.041	ppb	70.199	85	5	0.8	70	130	>+/-30%
Mo	95	3	115	-0.048	ppb	-24.341	13	2	-2.4	70	130	>+/-30%
Ag	107	3	115	-0.007	ppb	-11.705	27	1	-0.7	70	130	>+/-30%
Cd	111	3	115	-0.007	ppb	-184.896	7	1	-0.7	70	130	>+/-30%
Sn	120	3	115	-0.531	ppb	-3.854	268	10	-5.3	70	130	>+/-30%
Sb	121	3	115	-0.016	ppb	-87.413	35	2	-0.8	70	130	>+/-30%
Ba	137	3	115	-0.058	ppb	-21.292	25	1	-5.8	70	130	>+/-30%
Tl	205	3	193	-0.032	ppb	-19.102	297	1	-3.2	70	130	>+/-30%
(Pb)	206	3	193	-0.070	ppb	-12.388	247	1	-7.0	70	130	>+/-30%
(Pb)	207	3	193	-0.100	ppb	-6.733	525	1	-10.0	70	130	>+/-30%
Pb	208	3	193	-0.078	ppb	-10.844	1299	1	-7.8	70	130	>+/-30%
Th	232	3	193	-1.659	ppb	-2.547	8105	1	-165.9	70	130	>+/-30%
U	238	3	193	0.000	ppb	7382.100	2862	1	0.0	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6912931	2.06	3707811	186.44	60	120	IS Failed
Sc (IS)	45	3	HMI He	1100534	1.41	545003	201.93	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4193809	3.24	2275339	184.32	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1357269	1.90	672584	201.80	60	120	IS Failed
In Internal Standard	115	3	HMI He	5048781	2.58	2611031	193.36	60	120	IS Failed
Ir (IS)	193	3	HMI He	11102562	0.36	5805625	191.24	60	120	IS Failed

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-
Data File Name	177LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T21:25:46-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	-0.128	ppb	0.000	0	1	-12.8	70	130	>+/-30%
Na	23	3	45	23.907	ppb	30.929	23166	300	8.0	70	130	>+/-30%
Mg	24	3	45	1.145	ppb	43.626	260	50	2.3	70	130	>+/-30%
Al	27	3	45	10.329	ppb	28.443	317	50	20.7	70	130	>+/-30%
K	39	3	45	-16.745	ppb	-159.413	26054	120	-14.0	70	130	>+/-30%
Ca	40	2	45	69.213	ppb	8.381	47243	200	34.6	70	130	>+/-30%
V	51	3	72	-0.949	ppb	-4.735	280	5	-19.0	70	130	>+/-30%
Cr	52	3	72	0.345	ppb	92.014	2821	2	17.2	70	130	>+/-30%
Mn	55	3	72	0.840	ppb	8.525	596	1	84.0	70	130	
Fe	56	2	72	18.493	ppb	18.198	69218	50	37.0	70	130	>+/-30%
Co	59	3	72	0.035	ppb	7.200	82	1	3.5	70	130	>+/-30%
Ni	60	3	72	0.471	ppb	48.675	771	2	23.5	70	130	>+/-30%
Cu	63	3	72	0.228	ppb	8.853	545	2	11.4	70	130	>+/-30%
Zn	66	3	72	2.476	ppb	5.511	558	10	24.8	70	130	>+/-30%
As	75	3	72	0.034	ppb	506.104	43	5	0.7	70	130	>+/-30%
Se	78	2	72	0.103	ppb	102.249	8	5	2.1	70	130	>+/-30%
Sr	88	3	72	0.352	ppb	19.918	213	5	7.0	70	130	>+/-30%
Mo	95	3	115	0.036	ppb	136.369	47	2	1.8	70	130	>+/-30%
Ag	107	3	115	0.015	ppb	66.252	50	1	1.5	70	130	>+/-30%
Cd	111	3	115	0.054	ppb	180.161	18	1	5.4	70	130	>+/-30%
Sn	120	3	115	0.723	ppb	7.566	1100	10	7.2	70	130	>+/-30%
Sb	121	3	115	0.037	ppb	19.110	60	2	1.9	70	130	>+/-30%
Ba	137	3	115	0.097	ppb	124.445	52	1	9.7	70	130	>+/-30%
Tl	205	3	193	0.005	ppb	188.087	300	1	0.5	70	130	>+/-30%
(Pb)	206	3	193	0.084	ppb	30.167	335	1	8.4	70	130	>+/-30%
(Pb)	207	3	193	0.052	ppb	52.453	451	1	5.2	70	130	>+/-30%
Pb	208	3	193	0.065	ppb	15.848	1446	1	6.5	70	130	>+/-30%
Th	232	3	193	3.043	ppb	6.248	28118	1	304.3	70	130	>+/-30%
U	238	3	193	0.003	ppb	125.092	1544	1	0.3	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3893254	2.74	3707811	105.00	60	120	
Sc (IS)	45	3	HMI He	567071	0.38	545003	104.05	60	120	
Ge Internal standard	72	2	HMI H2	2362754	1.80	2275339	103.84	60	120	
Ge Internal standard	72	3	HMI He	695556	0.27	672584	103.42	60	120	
In Internal Standard	115	3	HMI He	2743678	1.62	2611031	105.08	60	120	
Ir (IS)	193	3	HMI He	5928723	2.91	5805625	102.12	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	178SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:14:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	-33.766	ppb	-33.766	-15.53	18624	400000	
Mg	24	3	45	-0.325	ppb	-0.325	-238.35	194	400000	
Al	27	3	45	0.688	ppb	0.688	151.78	113	400000	
K	39	3	45	-31.508	ppb	-31.508	-78.31	27334	400000	
Ca	40	2	45	20.761	ppb	20.761	5.69	22942	400000	
V	51	3	72	-1.290	ppb	-1.290	-3.47	93	2000	
Cr	52	3	72	-0.974	ppb	-0.974	-11.53	2064	5000	
Mn	55	3	72	-0.132	ppb	-0.132	-29.24	238	10000	
Fe	56	2	72	-0.384	ppb	-0.384	-767.95	44352	10000	
Co	59	3	72	-0.006	ppb	-0.006	-117.45	35	2000	
Ni	60	3	72	-0.722	ppb	-0.722	-14.74	401	5000	
Cu	63	3	72	-0.086	ppb	-0.086	-61.61	280	5000	
Zn	66	3	72	-0.421	ppb	-0.421	-13.90	115	5000	
As	75	3	72	-0.245	ppb	-0.245	-38.45	13	2000	
Se	78	2	72	0.006	ppb	0.006	639.23	3	2000	
Sr	88	3	72	0.098	ppb	0.098	29.58	82	4000	
Mo	95	3	115	-0.014	ppb	-0.014	-136.31	25	2000	
Ag	107	3	115	-0.009	ppb	-0.009	-18.12	13	100	
Cd	111	3	115	-0.015	ppb	-0.015	-71.27	2	2000	
Sn	120	3	115	-0.493	ppb	-0.493	-6.41	190	2000	
Sb	121	3	115	-0.001	ppb	-0.001	-1021.66	33	1000	
Ba	137	3	115	-0.014	ppb	-0.014	-307.45	27	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-11.14	128	2000	
(Pb)	206	3	193	-0.035	ppb	-0.035	-41.41	187	100	
(Pb)	207	3	193	0.056	ppb	0.056	24.70	480	100	
Pb	208	3	193	-0.019	ppb	-0.019	-15.21	1058	5000	
Th	232	3	193	-1.658	ppb	-1.658	-1.44	4554	2000	
U	238	3	193	0.003	ppb	0.003	1134.18	1621	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4251061	0.38	3707811	114.65	60	120	
Sc (IS)	45	3	HMI He	610096	1.08	545003	111.94	60	120	
Ge Internal standard	72	2	HMI H2	2595340	1.89	2275339	114.06	60	120	
Ge Internal standard	72	3	HMI He	762717	0.50	672584	113.40	60	120	
In Internal Standard	115	3	HMI He	2971647	1.07	2611031	113.81	60	120	
Ir (IS)	193	3	HMI He	6229525	1.90	5805625	107.30	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	179SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:15:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	-33.506	ppb	-33.506	-25.14	18795	400000	
Mg	24	3	45	-0.690	ppb	-0.690	-25.96	174	400000	
Al	27	3	45	-0.184	ppb	-0.184	-360.76	93	400000	
K	39	3	45	-33.793	ppb	-33.793	-90.61	27431	400000	
Ca	40	2	45	16.615	ppb	16.615	3.06	20359	400000	
V	51	3	72	-1.321	ppb	-1.321	-2.13	73	2000	
Cr	52	3	72	-1.201	ppb	-1.201	-15.21	1879	5000	
Mn	55	3	72	-0.211	ppb	-0.211	-40.66	203	10000	
Fe	56	2	72	-5.529	ppb	-5.529	-19.24	36408	10000	
Co	59	3	72	-0.010	ppb	-0.010	-37.54	30	2000	
Ni	60	3	72	-0.807	ppb	-0.807	-3.87	368	5000	
Cu	63	3	72	-0.061	ppb	-0.061	-117.67	303	5000	
Zn	66	3	72	-0.349	ppb	-0.349	-26.04	127	5000	
As	75	3	72	-0.245	ppb	-0.245	-9.70	13	2000	
Se	78	2	72	-0.015	ppb	-0.015	-243.34	1	2000	
Sr	88	3	72	0.104	ppb	0.104	21.61	85	4000	
Mo	95	3	115	-0.017	ppb	-0.017	-31.62	23	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-48.93	17	100	
Cd	111	3	115	-0.009	ppb	-0.009	-123.05	3	2000	
Sn	120	3	115	-0.508	ppb	-0.508	-5.51	177	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-67.10	18	1000	
Ba	137	3	115	-0.032	ppb	-0.032	-121.34	22	5000	
Tl	205	3	193	-0.036	ppb	-0.036	-20.42	148	2000	
(Pb)	206	3	193	-0.047	ppb	-0.047	-59.29	170	100	
(Pb)	207	3	193	-0.013	ppb	-0.013	-144.22	398	100	
Pb	208	3	193	-0.044	ppb	-0.044	-7.65	918	5000	
Th	232	3	193	-1.635	ppb	-1.635	-0.45	4675	2000	
U	238	3	193	-0.005	ppb	-0.005	-221.52	1574	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4224477	0.57	3707811	113.93	60	120	
Sc (IS)	45	3	HMI He	614680	0.68	545003	112.78	60	120	
Ge Internal standard	72	2	HMI H2	2639760	1.48	2275339	116.02	60	120	
Ge Internal standard	72	3	HMI He	759607	0.29	672584	112.94	60	120	
In Internal Standard	115	3	HMI He	2967942	0.28	2611031	113.67	60	120	
Ir (IS)	193	3	HMI He	6228794	1.85	5805625	107.29	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	180SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:17:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.088	ppb	-0.088	-78.59	2	2000	
Na	23	3	45	-34.709	ppb	-34.709	-12.08	18738	400000	
Mg	24	3	45	0.868	ppb	0.868	57.45	267	400000	
Al	27	3	45	1.049	ppb	1.049	320.03	123	400000	
K	39	3	45	-40.462	ppb	-40.462	-83.17	27234	400000	
Ca	40	2	45	14.312	ppb	14.312	1.49	19109	400000	
V	51	3	72	-1.339	ppb	-1.339	-2.74	63	2000	
Cr	52	3	72	-0.898	ppb	-0.898	-32.03	2144	5000	
Mn	55	3	72	-0.098	ppb	-0.098	-91.55	255	10000	
Fe	56	2	72	-0.524	ppb	-0.524	-285.44	44278	10000	
Co	59	3	72	-0.007	ppb	-0.007	-58.73	35	2000	
Ni	60	3	72	-0.458	ppb	-0.458	-25.33	505	5000	
Cu	63	3	72	-0.080	ppb	-0.080	-78.18	288	5000	
Zn	66	3	72	-0.369	ppb	-0.369	-21.37	125	5000	
As	75	3	72	-0.274	ppb	-0.274	-14.52	10	2000	
Se	78	2	72	-0.015	ppb	-0.015	-120.14	1	2000	
Sr	88	3	72	0.058	ppb	0.058	42.90	58	4000	
Mo	95	3	115	-0.001	ppb	-0.001	-884.10	32	2000	
Ag	107	3	115	-0.009	ppb	-0.009	-37.55	13	100	
Cd	111	3	115	-0.009	ppb	-0.009	-122.27	3	2000	
Sn	120	3	115	-0.492	ppb	-0.492	-6.63	190	2000	
Sb	121	3	115	-0.013	ppb	-0.013	-56.08	23	1000	
Ba	137	3	115	-0.039	ppb	-0.039	-83.91	20	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-10.12	118	2000	
(Pb)	206	3	193	-0.012	ppb	-0.012	-5.15	215	100	
(Pb)	207	3	193	-0.034	ppb	-0.034	-25.05	368	100	
Pb	208	3	193	-0.034	ppb	-0.034	-21.82	958	5000	
Th	232	3	193	-1.669	ppb	-1.669	-2.01	4434	2000	
U	238	3	193	-0.003	ppb	-0.003	-305.52	1564	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4247864	1.24	3707811	114.57	60	120	
Sc (IS)	45	3	HMI He	617160	0.70	545003	113.24	60	120	
Ge Internal standard	72	2	HMI H2	2601106	0.76	2275339	114.32	60	120	
Ge Internal standard	72	3	HMI He	769556	1.09	672584	114.42	60	120	
In Internal Standard	115	3	HMI He	2972711	0.48	2611031	113.85	60	120	
Ir (IS)	193	3	HMI He	6144062	1.93	5805625	105.83	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	181SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:19:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	-34.487	ppb	-34.487	-21.30	18644	400000	
Mg	24	3	45	0.560	ppb	0.560	95.61	247	400000	
Al	27	3	45	-0.034	ppb	-0.034	-1970.66	97	400000	
K	39	3	45	-34.576	ppb	-34.576	-109.16	27334	400000	
Ca	40	2	45	9.951	ppb	9.951	12.14	16373	400000	
V	51	3	72	-1.293	ppb	-1.293	-1.34	92	2000	
Cr	52	3	72	-0.633	ppb	-0.633	-33.88	2342	5000	
Mn	55	3	72	-0.080	ppb	-0.080	-26.49	262	10000	
Fe	56	2	72	2.712	ppb	2.712	97.66	49974	10000	
Co	59	3	72	0.010	ppb	0.010	245.94	57	2000	
Ni	60	3	72	-0.363	ppb	-0.363	-4.70	538	5000	
Cu	63	3	72	-0.089	ppb	-0.089	-30.81	278	5000	
Zn	66	3	72	-0.404	ppb	-0.404	-41.74	118	5000	
As	75	3	72	-0.206	ppb	-0.206	-11.75	18	2000	
Se	78	2	72	-0.026	ppb	-0.026	-69.16	1	2000	
Sr	88	3	72	0.056	ppb	0.056	51.22	57	4000	
Mo	95	3	115	0.000	ppb	0.000	19213.93	32	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-67.77	15	100	
Cd	111	3	115	-0.008	ppb	-0.008	-262.55	3	2000	
Sn	120	3	115	-0.495	ppb	-0.495	-2.14	183	2000	
Sb	121	3	115	-0.012	ppb	-0.012	-119.75	23	1000	
Ba	137	3	115	0.008	ppb	0.008	147.27	32	5000	
Tl	205	3	193	-0.036	ppb	-0.036	-18.52	150	2000	
(Pb)	206	3	193	-0.020	ppb	-0.020	-47.58	208	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-582.34	411	100	
Pb	208	3	193	-0.027	ppb	-0.027	-20.63	1016	5000	
Th	232	3	193	-1.678	ppb	-1.678	-1.76	4465	2000	
U	238	3	193	-0.008	ppb	-0.008	-277.39	1566	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4208132	0.34	3707811	113.49	60	120	
Sc (IS)	45	3	HMI He	613316	0.61	545003	112.53	60	120	
Ge Internal standard	72	2	HMI H2	2613108	1.79	2275339	114.84	60	120	
Ge Internal standard	72	3	HMI He	767003	0.64	672584	114.04	60	120	
In Internal Standard	115	3	HMI He	2904678	0.53	2611031	111.25	60	120	
Ir (IS)	193	3	HMI He	6258299	0.92	5805625	107.80	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	182SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:21:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.048	ppb	-0.048	-144.39	3	2000	
Na	23	3	45	-30.235	ppb	-30.235	-8.11	19196	400000	
Mg	24	3	45	0.489	ppb	0.489	194.51	244	400000	
Al	27	3	45	-0.614	ppb	-0.614	-102.87	83	400000	
K	39	3	45	-31.255	ppb	-31.255	-114.92	27612	400000	
Ca	40	2	45	15.890	ppb	15.890	6.51	19804	400000	
V	51	3	72	-1.305	ppb	-1.305	-1.91	83	2000	
Cr	52	3	72	-0.549	ppb	-0.549	-27.21	2389	5000	
Mn	55	3	72	-0.052	ppb	-0.052	-175.10	272	10000	
Fe	56	2	72	7.422	ppb	7.422	45.92	57863	10000	
Co	59	3	72	0.004	ppb	0.004	707.23	48	2000	
Ni	60	3	72	-0.298	ppb	-0.298	-71.17	558	5000	
Cu	63	3	72	-0.078	ppb	-0.078	-35.84	287	5000	
Zn	66	3	72	-0.331	ppb	-0.331	-48.25	130	5000	
As	75	3	72	-0.204	ppb	-0.204	-41.42	18	2000	
Se	78	2	72	-0.026	ppb	-0.026	-71.27	1	2000	
Sr	88	3	72	0.068	ppb	0.068	6.55	63	4000	
Mo	95	3	115	-0.027	ppb	-0.027	-40.71	18	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-408.12	23	100	
Cd	111	3	115	-0.009	ppb	-0.009	-126.33	3	2000	
Sn	120	3	115	-0.466	ppb	-0.466	-16.45	208	2000	
Sb	121	3	115	-0.016	ppb	-0.016	-72.61	20	1000	
Ba	137	3	115	-0.050	ppb	-0.050	-58.37	17	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-21.54	130	2000	
(Pb)	206	3	193	-0.053	ppb	-0.053	-24.70	162	100	
(Pb)	207	3	193	0.018	ppb	0.018	58.50	436	100	
Pb	208	3	193	-0.037	ppb	-0.037	-25.65	960	5000	
Th	232	3	193	-1.667	ppb	-1.667	-3.59	4519	2000	
U	238	3	193	0.005	ppb	0.005	258.94	1643	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4198733	1.64	3707811	113.24	60	120	
Sc (IS)	45	3	HMI He	615913	0.91	545003	113.01	60	120	
Ge Internal standard	72	2	HMI H2	2610225	1.59	2275339	114.72	60	120	
Ge Internal standard	72	3	HMI He	760526	0.38	672584	113.08	60	120	
In Internal Standard	115	3	HMI He	2934681	1.09	2611031	112.40	60	120	
Ir (IS)	193	3	HMI He	6251321	1.24	5805625	107.68	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	183SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:23:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	-33.375	ppb	-33.375	-8.09	18681	400000	
Mg	24	3	45	0.695	ppb	0.695	75.14	254	400000	
Al	27	3	45	2.244	ppb	2.244	20.16	150	400000	
K	39	3	45	-22.651	ppb	-22.651	-178.21	27789	400000	
Ca	40	2	45	14.722	ppb	14.722	2.77	19323	400000	
V	51	3	72	-1.306	ppb	-1.306	-1.59	83	2000	
Cr	52	3	72	-0.414	ppb	-0.414	-19.84	2511	5000	
Mn	55	3	72	-0.052	ppb	-0.052	-175.54	273	10000	
Fe	56	2	72	8.317	ppb	8.317	31.74	60191	10000	
Co	59	3	72	-0.014	ppb	-0.014	-26.06	25	2000	
Ni	60	3	72	-0.213	ppb	-0.213	-44.89	593	5000	
Cu	63	3	72	-0.108	ppb	-0.108	-15.36	258	5000	
Zn	66	3	72	-0.269	ppb	-0.269	-96.78	142	5000	
As	75	3	72	-0.191	ppb	-0.191	-37.08	20	2000	
Se	78	2	72	0.015	ppb	0.015	227.32	3	2000	
Sr	88	3	72	0.076	ppb	0.076	16.46	68	4000	
Mo	95	3	115	0.031	ppb	0.031	73.56	48	2000	
Ag	107	3	115	-0.008	ppb	-0.008	-61.90	15	100	
Cd	111	3	115	-0.003	ppb	-0.003	-667.54	5	2000	
Sn	120	3	115	-0.459	ppb	-0.459	-3.56	218	2000	
Sb	121	3	115	-0.007	ppb	-0.007	-195.98	28	1000	
Ba	137	3	115	0.017	ppb	0.017	481.17	35	5000	
Tl	205	3	193	-0.038	ppb	-0.038	-3.67	138	2000	
(Pb)	206	3	193	-0.021	ppb	-0.021	-152.54	205	100	
(Pb)	207	3	193	-0.046	ppb	-0.046	-147.23	356	100	
Pb	208	3	193	-0.037	ppb	-0.037	-42.65	951	5000	
Th	232	3	193	-1.634	ppb	-1.634	-1.29	4669	2000	
U	238	3	193	-0.004	ppb	-0.004	-382.25	1578	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4241662	0.07	3707811	114.40	60	120	
Sc (IS)	45	3	HMI He	610444	1.77	545003	112.01	60	120	
Ge Internal standard	72	2	HMI H2	2645668	1.88	2275339	116.28	60	120	
Ge Internal standard	72	3	HMI He	765599	0.56	672584	113.83	60	120	
In Internal Standard	115	3	HMI He	2981906	1.38	2611031	114.20	60	120	
Ir (IS)	193	3	HMI He	6209922	1.08	5805625	106.96	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	184SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:25:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	-27.965	ppb	-27.965	-5.21	19216	400000	
Mg	24	3	45	-0.374	ppb	-0.374	-128.87	190	400000	
Al	27	3	45	-0.001	ppb	-0.001	-118813.12	97	400000	
K	39	3	45	-40.698	ppb	-40.698	-57.91	26853	400000	
Ca	40	2	45	6.499	ppb	6.499	2.32	14532	400000	
V	51	3	72	-1.308	ppb	-1.308	-1.97	82	2000	
Cr	52	3	72	-0.353	ppb	-0.353	-44.31	2549	5000	
Mn	55	3	72	-0.057	ppb	-0.057	-222.81	270	10000	
Fe	56	2	72	6.023	ppb	6.023	41.81	56039	10000	
Co	59	3	72	0.010	ppb	0.010	110.56	57	2000	
Ni	60	3	72	-0.163	ppb	-0.163	-161.21	610	5000	
Cu	63	3	72	-0.089	ppb	-0.089	-13.77	277	5000	
Zn	66	3	72	-0.314	ppb	-0.314	-27.60	133	5000	
As	75	3	72	-0.191	ppb	-0.191	-74.27	20	2000	
Se	78	2	72	0.016	ppb	0.016	298.38	3	2000	
Sr	88	3	72	0.076	ppb	0.076	32.10	68	4000	
Mo	95	3	115	0.035	ppb	0.035	58.45	50	2000	
Ag	107	3	115	-0.008	ppb	-0.008	-70.18	13	100	
Cd	111	3	115	-0.008	ppb	-0.008	-258.76	3	2000	
Sn	120	3	115	-0.473	ppb	-0.473	-9.84	205	2000	
Sb	121	3	115	-0.025	ppb	-0.025	-110.45	13	1000	
Ba	137	3	115	-0.051	ppb	-0.051	-19.30	17	5000	
Tl	205	3	193	-0.038	ppb	-0.038	-9.31	138	2000	
(Pb)	206	3	193	-0.050	ppb	-0.050	-47.71	165	100	
(Pb)	207	3	193	-0.045	ppb	-0.045	-79.30	358	100	
Pb	208	3	193	-0.051	ppb	-0.051	-13.57	878	5000	
Th	232	3	193	-1.686	ppb	-1.686	-0.53	4380	2000	
U	238	3	193	-0.003	ppb	-0.003	-506.39	1579	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4261824	1.00	3707811	114.94	60	120	
Sc (IS)	45	3	HMI He	608662	1.02	545003	111.68	60	120	
Ge Internal standard	72	2	HMI H2	2637520	1.53	2275339	115.92	60	120	
Ge Internal standard	72	3	HMI He	762765	0.40	672584	113.41	60	120	
In Internal Standard	115	3	HMI He	2951835	1.62	2611031	113.05	60	120	
Ir (IS)	193	3	HMI He	6195800	0.81	5805625	106.72	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	185_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:26:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	50.030	ppb	3.742	1914	50	100.1	90	110	
Na	23	3	45	50053.968	ppb	1.302	4931704	51000	98.1	90	110	
Mg	24	3	45	10327.444	ppb	0.222	546108	11000	93.9	90	110	
Al	27	3	45	923.237	ppb	0.942	19687	1000	92.3	90	110	
K	39	3	45	10556.731	ppb	0.758	471528	11000	96.0	90	110	
Ca	40	2	45	10613.427	ppb	2.323	5663844	11000	96.5	90	110	
V	51	3	72	50.132	ppb	1.850	28647	50	100.3	90	110	
Cr	52	3	72	50.650	ppb	2.497	37555	50	101.3	90	110	
Mn	55	3	72	50.354	ppb	1.775	19367	50	100.7	90	110	
Fe	56	2	72	1029.935	ppb	1.494	1558648	1000	103.0	90	110	
Co	59	3	72	49.957	ppb	2.488	58740	50	99.9	90	110	
Ni	60	3	72	49.466	ppb	3.203	16940	50	98.9	90	110	
Cu	63	3	72	49.327	ppb	2.565	44599	50	98.7	90	110	
Zn	66	3	72	50.107	ppb	2.275	7788	50	100.2	90	110	
As	75	3	72	51.825	ppb	2.052	5667	50	103.6	90	110	
Se	78	2	72	50.702	ppb	2.783	2830	50	101.4	90	110	
Sr	88	3	72	99.261	ppb	0.610	52836	100	99.3	90	110	
Mo	95	3	115	50.443	ppb	4.749	23412	50	100.9	90	110	
Ag	107	3	115	50.807	ppb	5.319	80840	50	101.6	90	110	
Cd	111	3	115	47.593	ppb	4.771	11493	50	95.2	90	110	
Sn	120	3	115	48.958	ppb	3.319	36794	50	97.9	90	110	
Sb	121	3	115	49.981	ppb	3.661	37653	50	100.0	90	110	
Ba	137	3	115	51.169	ppb	3.782	12281	50	102.3	90	110	
Tl	205	3	193	48.203	ppb	1.057	183419	50	96.4	90	110	
(Pb)	206	3	193	48.809	ppb	1.464	62643	50	97.6	90	110	
(Pb)	207	3	193	48.733	ppb	0.854	54060	50	97.5	90	110	
Pb	208	3	193	48.385	ppb	1.465	248240	50	96.8	90	110	
Th	232	3	193	47.544	ppb	1.046	246644	50	95.1	90	110	
U	238	3	193	48.027	ppb	1.529	258620	50	96.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3824416	0.21	3707811	103.14	60	120	
Sc (IS)	45	3	HMI He	548425	0.31	545003	100.63	60	120	
Ge Internal standard	72	2	HMI H2	2284677	1.47	2275339	100.41	60	120	
Ge Internal standard	72	3	HMI He	676316	1.16	672584	100.55	60	120	
In Internal Standard	115	3	HMI He	2674073	3.57	2611031	102.41	60	120	
Ir (IS)	193	3	HMI He	5769598	0.77	5805625	99.38	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	186_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:28:41-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.085	ppb	-89.3	2	0.5	
Na	23	3	45	1.897	ppb	209.7	20124	25	
Mg	24	3	45	-0.250	ppb	-914.7	177	25	
Al	27	3	45	-0.793	ppb	-119.8	70	15	
K	39	3	45	2.996	ppb	1069.0	25877	50	
V	51	3	72	-0.991	ppb	-4.4	250	1	
Cr	52	3	72	0.382	ppb	85.0	2786	1	
Mn	55	3	72	-0.112	ppb	-28.1	220	0.5	
Co	59	3	72	0.015	ppb	106.3	57	0.5	
Ni	60	3	72	0.366	ppb	36.2	720	1	
Cu	63	3	72	-0.012	ppb	-182.1	317	1	
Zn	66	3	72	0.161	ppb	77.8	192	5	
As	75	3	72	-0.126	ppb	-108.3	25	1	
Se	78	2	72	-0.001	ppb	-5213.8	2	1	
Sr	88	3	72	0.037	ppb	110.5	40	0.5	
Mo	95	3	115	0.120	ppb	46.4	85	0.5	
Ag	107	3	115	0.001	ppb	1595.2	27	1	
Cd	111	3	115	0.013	ppb	236.0	8	0.5	
Sn	120	3	115	0.159	ppb	59.0	656	1	
Sb	121	3	115	0.017	ppb	112.2	43	0.6	
Ba	137	3	115	0.045	ppb	22.3	38	0.5	
Tl	205	3	193	-0.017	ppb	-38.9	212	0.1	
(Pb)	206	3	193	0.020	ppb	162.1	247	1	
(Pb)	207	3	193	-0.030	ppb	-299.1	353	1	
Pb	208	3	193	-0.005	ppb	-146.6	1064	0.5	
Th	232	3	193	0.362	ppb	43.1	14370	1	
U	238	3	193	0.023	ppb	89.0	1631	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3783457	2.19	3707811	102.04	60	120	
Sc (IS)	45	3	HMI He	545229	1.27	545003	100.04	60	120	
Ge Internal standard	72	2	HMI H2	2339784	0.80	2275339	102.83	60	120	
Ge Internal standard	72	3	HMI He	680376	0.56	672584	101.16	60	120	
In Internal Standard	115	3	HMI He	2684622	1.30	2611031	102.82	60	120	
Ir (IS)	193	3	HMI He	5847790	1.40	5805625	100.73	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609365/1-B
Data File Name	187_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:30:30-06:00
Sample Type	Blank
Dilution	1
Comment	609378 200.8
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.128	ppb	-1.45159E-06	0	0.5
Na	23	3	45	9.663	ppb	21.02238373	21164	25
Mg	24	3	45	-1.236	ppb	-32.57737071	127	25
Al	27	3	45	-0.831	ppb	-100.189353	70	15
K	39	3	45	-20.629	ppb	-155.7558449	25218	50
Ca	40	2	45	8.489	ppb	5.491309911	14115	200
V	51	3	72	-1.023	ppb	-5.469941557	235	1
Cr	52	3	72	0.379	ppb	34.92850139	2812	1
Mn	55	3	72	0.059	ppb	158.7393587	288	0.5
Fe	56	2	72	5.479	ppb	53.60638371	48617	50
Co	59	3	72	0.005	ppb	373.4753597	45	0.5
Ni	60	3	72	0.035	ppb	692.3649619	616	1
Cu	63	3	72	0.007	ppb	1458.414287	337	1
Zn	66	3	72	0.806	ppb	17.14402773	293	5
As	75	3	72	0.053	ppb	443.6819924	45	1
(Se)	78	3	72	2.495	ppb	52.87171389	45	1
Sr	88	3	72	0.039	ppb	14.93575333	42	0.5
Mo	95	3	115	0.039	ppb	66.33900938	48	0.5
Ag	107	3	115	-0.010	ppb	-30.89089058	10	1
Cd	111	3	115	-0.008	ppb	-154.5550425	3	0.5
Sn	120	3	115	0.623	ppb	22.14689168	1018	1
Sb	121	3	115	0.018	ppb	71.22000094	45	0.6
Ba	137	3	115	0.158	ppb	53.02916225	67	0.5
Tl	205	3	193	-0.026	ppb	-41.55380397	180	0.1
(Pb)	206	3	193	0.021	ppb	72.36330461	250	1
(Pb)	207	3	193	-0.017	ppb	-203.3904489	371	1
Pb	208	3	193	0.002	ppb	91.80654375	1111	0.5
Th	232	3	193	-0.847	ppb	-13.50678463	8390	1
U	238	3	193	-0.016	ppb	-64.49945801	1431	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3828247	0.51	3707811	103.25	60	120	
Sc (IS)	45	3	HMI He	552502	0.80	545003	101.38	60	120	
Ge Internal standard	72	2	HMI H2	2328283	1.40	2275339	102.33	60	120	
Ge Internal standard	72	3	HMI He	687414	0.65	672584	102.20	60	120	
In Internal Standard	115	3	HMI He	2728616	0.51	2611031	104.50	60	120	
Ir (IS)	193	3	HMI He	5894011	1.25	5805625	101.52	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609365/2-B
Data File Name	188_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:32:19-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609378 200.8
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.046	40.046	ppb	4.124	1519	40	100.1	80	120	
Na	23	3	45	758.876	758.876	ppb	2.439	94917	40	1897.2	80	120	>+/-20%
Mg	24	3	45	707.202	707.202	ppb	3.534	37731	40	1768.0	80	120	>+/-20%
Al	27	3	45	725.687	725.687	ppb	2.171	15558	40	1814.2	80	120	>+/-20%
K	39	3	45	766.144	766.144	ppb	2.011	58490	40	1915.4	80	120	>+/-20%
Ca	40	2	45	825.728	825.728	ppb	2.830	442606	40	2064.3	80	120	>+/-20%
V	51	3	72	37.175	37.175	ppb	1.587	21791	40	92.9	80	120	
Cr	52	3	72	38.963	38.963	ppb	1.766	29941	40	97.4	80	120	
Mn	55	3	72	38.782	38.782	ppb	1.898	15217	40	97.0	80	120	
Fe	56	2	72	778.709	778.709	ppb	3.381	1205770	40	1946.8	80	120	>+/-20%
(Fe)	56	3	72	739.491	739.491	ppb	0.471	473780	40	1848.7	80	120	>+/-20%
Co	59	3	72	38.388	38.388	ppb	0.590	45876	40	96.0	80	120	
Ni	60	3	72	37.731	37.731	ppb	1.169	13270	40	94.3	80	120	
Cu	63	3	72	39.201	39.201	ppb	1.735	36084	40	98.0	80	120	
Zn	66	3	72	38.073	38.073	ppb	2.896	6053	40	95.2	80	120	
As	75	3	72	37.077	37.077	ppb	1.740	4130	40	92.7	80	120	
Se	78	2	72	39.907	39.907	ppb	0.910	2262	40	99.8	80	120	
(Se)	78	3	72	39.514	39.514	ppb	3.546	283	40	98.8	80	120	
Sr	88	3	72	74.883	74.883	ppb	2.230	40500	40	187.2	80	120	>+/-20%
Mo	95	3	115	38.882	38.882	ppb	2.138	18093	40	97.2	80	120	
Ag	107	3	115	39.369	39.369	ppb	1.502	62803	40	98.4	80	120	
Cd	111	3	115	37.721	37.721	ppb	1.494	9134	40	94.3	80	120	
Sn	120	3	115	36.602	36.602	ppb	1.370	27697	40	91.5	80	120	
Sb	121	3	115	37.977	37.977	ppb	1.207	28683	40	94.9	80	120	
Ba	137	3	115	39.111	39.111	ppb	1.503	9410	40	97.8	80	120	
Tl	205	3	193	37.126	37.126	ppb	0.496	144867	40	92.8	80	120	
(Pb)	206	3	193	37.403	37.403	ppb	0.585	49258	40	93.5	80	120	
(Pb)	207	3	193	37.414	37.414	ppb	0.862	42632	40	93.5	80	120	
Pb	208	3	193	37.379	37.379	ppb	0.577	196823	40	93.4	80	120	
Th	232	3	193	34.592	34.592	ppb	0.598	187388	40	86.5	80	120	
U	238	3	193	37.359	37.359	ppb	0.661	206548	40	93.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3767223	1.92	3707811	101.60	60	120	
Sc (IS)	45	3	HMI He	550734	0.43	545003	101.05	60	120	
Ge Internal standard	72	2	HMI H2	2318866	1.62	2275339	101.91	60	120	
Ge Internal standard	72	3	HMI He	687130	0.64	672584	102.16	60	120	
In Internal Standard	115	3	HMI He	2677777	1.86	2611031	102.56	60	120	
Ir (IS)	193	3	HMI He	5913925	1.16	5805625	101.87	60	120	

Sample Report

Sample Table

Sample Name	280-174578-B-1-B
Data File Name	189SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:34:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	565.564	ppb	565.564	3.38	75496	400000	
Mg	24	3	45	96.787	ppb	96.787	2.80	5303	400000	
Al	27	3	45	24.216	ppb	24.216	10.76	601	400000	
K	39	3	45	691.822	ppb	691.822	4.17	55073	400000	
Ca	40	2	45	1352.908	ppb	1352.908	1.00	716366	400000	
V	51	3	72	-0.717	ppb	-0.717	-15.50	405	2000	
Cr	52	3	72	0.489	ppb	0.489	46.15	2872	5000	
Mn	55	3	72	2.222	ppb	2.222	14.04	1116	10000	
Fe	56	2	72	17.864	ppb	17.864	17.96	65815	10000	
Co	59	3	72	0.036	ppb	0.036	13.95	82	2000	
Ni	60	3	72	0.007	ppb	0.007	1483.23	603	5000	
Cu	63	3	72	1.359	ppb	1.359	9.66	1561	5000	
Zn	66	3	72	43.006	ppb	43.006	1.13	6778	5000	
As	75	3	72	-0.005	ppb	-0.005	-1354.80	38	2000	
Se	78	2	72	0.025	ppb	0.025	226.43	3	2000	
Sr	88	3	72	5.440	ppb	5.440	4.49	2946	4000	
Mo	95	3	115	0.082	ppb	0.082	65.37	67	2000	
Ag	107	3	115	0.037	ppb	0.037	37.12	83	100	
Cd	111	3	115	0.062	ppb	0.062	87.80	20	2000	
Sn	120	3	115	0.268	ppb	0.268	9.92	725	2000	
Sb	121	3	115	1.331	ppb	1.331	2.78	1020	1000	
Ba	137	3	115	4.890	ppb	4.890	6.21	1183	5000	
Tl	205	3	193	-0.016	ppb	-0.016	-102.55	217	2000	
(Pb)	206	3	193	0.048	ppb	0.048	4.57	282	100	
(Pb)	207	3	193	0.028	ppb	0.028	177.21	418	100	
Pb	208	3	193	0.038	ppb	0.038	29.80	1283	5000	
Th	232	3	193	1.085	ppb	1.085	20.59	17937	2000	
U	238	3	193	0.017	ppb	0.017	65.66	1598	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3751388	0.54	3707811	101.18	60	120	
Sc (IS)	45	3	HMI He	548027	0.96	545003	100.55	60	120	
Ge Internal standard	72	2	HMI H2	2276044	1.70	2275339	100.03	60	120	
Ge Internal standard	72	3	HMI He	683419	0.28	672584	101.61	60	120	
In Internal Standard	115	3	HMI He	2638596	1.37	2611031	101.06	60	120	
Ir (IS)	193	3	HMI He	5836737	0.17	5805625	100.54	60	120	

Sample Report

Sample Table

Sample Name	280-174578-A-6-D
Data File Name	190SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:35:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	365.759	ppb	365.759	1.45	55517	400000	
Mg	24	3	45	169.034	ppb	169.034	3.91	9055	400000	
Al	27	3	45	18.864	ppb	18.864	15.73	484	400000	
K	39	3	45	130.848	ppb	130.848	9.69	31189	400000	
Ca	40	2	45	1174.571	ppb	1174.571	1.80	622000	400000	
V	51	3	72	-0.750	ppb	-0.750	-4.42	385	2000	
Cr	52	3	72	0.510	ppb	0.510	29.65	2872	5000	
Mn	55	3	72	9.581	ppb	9.581	0.44	3917	10000	
Fe	56	2	72	30.869	ppb	30.869	10.27	84450	10000	
Co	59	3	72	0.046	ppb	0.046	11.15	93	2000	
Ni	60	3	72	0.207	ppb	0.207	14.05	666	5000	
Cu	63	3	72	0.835	ppb	0.835	9.79	1080	5000	
Zn	66	3	72	21.030	ppb	21.030	0.63	3382	5000	
As	75	3	72	0.119	ppb	0.119	44.99	52	2000	
Se	78	2	72	0.036	ppb	0.036	197.51	4	2000	
Sr	88	3	72	3.641	ppb	3.641	2.62	1968	4000	
Mo	95	3	115	0.025	ppb	0.025	132.54	40	2000	
Ag	107	3	115	0.005	ppb	0.005	139.50	33	100	
Cd	111	3	115	0.000	ppb	0.000	-696.27	5	2000	
Sn	120	3	115	0.209	ppb	0.209	26.36	678	2000	
Sb	121	3	115	18.398	ppb	18.398	3.05	13625	1000	
Ba	137	3	115	6.239	ppb	6.239	7.88	1493	5000	
Tl	205	3	193	-0.032	ppb	-0.032	-24.04	155	2000	
(Pb)	206	3	193	0.602	ppb	0.602	9.70	1010	100	
(Pb)	207	3	193	0.560	ppb	0.560	14.16	1023	100	
Pb	208	3	193	0.567	ppb	0.567	7.73	4065	5000	
Th	232	3	193	-0.637	ppb	-0.637	-31.02	9461	2000	
U	238	3	193	0.011	ppb	0.011	201.82	1581	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3744731	0.97	3707811	101.00	60	120	
Sc (IS)	45	3	HMI He	544199	0.47	545003	99.85	60	120	
Ge Internal standard	72	2	HMI H2	2265530	1.85	2275339	99.57	60	120	
Ge Internal standard	72	3	HMI He	679779	0.33	672584	101.07	60	120	
In Internal Standard	115	3	HMI He	2623861	1.67	2611031	100.49	60	120	
Ir (IS)	193	3	HMI He	5902908	0.66	5805625	101.68	60	120	

Sample Report

Sample Table

Sample Name	280-174578-A-6-E MS
Data File Name	191SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:37:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.683	ppb	40.683	1.96	1531	2000	
Na	23	3	45	1208.745	ppb	1208.745	1.52	138149	400000	
Mg	24	3	45	897.771	ppb	897.771	2.18	47474	400000	
Al	27	3	45	768.391	ppb	768.391	0.30	16339	400000	
K	39	3	45	943.683	ppb	943.683	2.83	65498	400000	
Ca	40	2	45	2003.651	ppb	2003.651	1.56	1039304	400000	
V	51	3	72	37.703	ppb	37.703	0.44	21988	2000	
Cr	52	3	72	39.576	ppb	39.576	1.11	30234	5000	
Mn	55	3	72	49.026	ppb	49.026	1.71	19079	10000	
Fe	56	2	72	840.585	ppb	840.585	5.63	1270157	10000	
Co	59	3	72	39.093	ppb	39.093	1.94	46501	2000	
Ni	60	3	72	38.938	ppb	38.938	0.70	13612	5000	
Cu	63	3	72	40.961	ppb	40.961	0.75	37515	5000	
Zn	66	3	72	60.824	ppb	60.824	1.22	9525	5000	
As	75	3	72	39.814	ppb	39.814	3.48	4412	2000	
Se	78	2	72	42.145	ppb	42.145	1.86	2337	2000	
Sr	88	3	72	79.869	ppb	79.869	0.38	43001	4000	
Mo	95	3	115	39.104	ppb	39.104	1.60	18298	2000	
Ag	107	3	115	39.396	ppb	39.396	1.30	63190	100	
Cd	111	3	115	38.118	ppb	38.118	1.87	9279	2000	
Sn	120	3	115	37.792	ppb	37.792	0.45	28737	2000	
Sb	121	3	115	55.243	ppb	55.243	1.03	41932	1000	
Ba	137	3	115	44.999	ppb	44.999	1.21	10882	5000	
Tl	205	3	193	38.099	ppb	38.099	0.94	148723	2000	
(Pb)	206	3	193	38.042	ppb	38.042	1.40	50115	100	
(Pb)	207	3	193	39.412	ppb	39.412	2.29	44904	100	
Pb	208	3	193	38.921	ppb	38.921	1.57	204979	5000	
Th	232	3	193	35.200	ppb	35.200	1.10	190542	2000	
U	238	3	193	38.068	ppb	38.068	0.95	210546	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3690350	0.78	3707811	99.53	60	120	
Sc (IS)	45	3	HMI He	546404	0.63	545003	100.26	60	120	
Ge Internal standard	72	2	HMI H2	2269635	2.18	2275339	99.75	60	120	
Ge Internal standard	72	3	HMI He	683981	0.29	672584	101.69	60	120	
In Internal Standard	115	3	HMI He	2692172	0.43	2611031	103.11	60	120	
Ir (IS)	193	3	HMI He	5916446	0.83	5805625	101.91	60	120	

Sample Report

Sample Table

Sample Name	280-174578-A-6-F MSD
Data File Name	192SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:39:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.661	ppb	40.661	6.01	1516	2000	
Na	23	3	45	1152.692	ppb	1152.692	1.02	131850	400000	
Mg	24	3	45	873.930	ppb	873.930	2.63	45930	400000	
Al	27	3	45	735.384	ppb	735.384	1.46	15544	400000	
K	39	3	45	928.641	ppb	928.641	1.50	64462	400000	
Ca	40	2	45	1935.702	ppb	1935.702	3.70	1030574	400000	
V	51	3	72	38.494	ppb	38.494	1.04	22310	2000	
Cr	52	3	72	39.818	ppb	39.818	0.60	30238	5000	
Mn	55	3	72	47.509	ppb	47.509	0.70	18396	10000	
Fe	56	2	72	804.187	ppb	804.187	0.44	1252324	10000	
Co	59	3	72	38.831	ppb	38.831	0.63	45940	2000	
Ni	60	3	72	38.376	ppb	38.376	1.68	13351	5000	
Cu	63	3	72	40.370	ppb	40.370	0.83	36779	5000	
Zn	66	3	72	59.913	ppb	59.913	2.18	9334	5000	
As	75	3	72	37.683	ppb	37.683	1.34	4155	2000	
Se	78	2	72	37.561	ppb	37.561	3.68	2143	2000	
Sr	88	3	72	78.895	ppb	78.895	2.01	42244	4000	
Mo	95	3	115	38.717	ppb	38.717	3.49	17786	2000	
Ag	107	3	115	39.862	ppb	39.862	2.22	62776	100	
Cd	111	3	115	38.927	ppb	38.927	4.62	9304	2000	
Sn	120	3	115	37.489	ppb	37.489	3.74	27995	2000	
Sb	121	3	115	55.862	ppb	55.862	0.68	41637	1000	
Ba	137	3	115	44.947	ppb	44.947	1.11	10674	5000	
Tl	205	3	193	38.095	ppb	38.095	1.26	146438	2000	
(Pb)	206	3	193	38.435	ppb	38.435	1.44	49861	100	
(Pb)	207	3	193	39.028	ppb	39.028	0.67	43797	100	
Pb	208	3	193	38.865	ppb	38.865	1.25	201570	5000	
Th	232	3	193	37.802	ppb	37.802	1.56	200573	2000	
U	238	3	193	38.327	ppb	38.327	1.97	208714	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3787909	1.11	3707811	102.16	60	120	
Sc (IS)	45	3	HMI He	543007	0.18	545003	99.63	60	120	
Ge Internal standard	72	2	HMI H2	2334018	0.89	2275339	102.58	60	120	
Ge Internal standard	72	3	HMI He	680262	0.37	672584	101.14	60	120	
In Internal Standard	115	3	HMI He	2643867	1.65	2611031	101.26	60	120	
Ir (IS)	193	3	HMI He	5826141	0.38	5805625	100.35	60	120	

Sample Report

Sample Table

Sample Name	280-175005-A-1-B
Data File Name	193SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:41:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.007	ppb	0.007	1873.34	5	2000	
Na	23	3	45	234779.215	ppb	234779.215	1.83	22571735	400000	
Mg	24	3	45	28436.996	ppb	28436.996	3.80	1471897	400000	
Al	27	3	45	4.713	ppb	4.713	28.43	184	400000	
K	39	3	45	12568.859	ppb	12568.859	0.35	544692	400000	
Ca	40	2	45	121549.241	ppb	121549.241	2.09	62710595	400000	
V	51	3	72	-0.109	ppb	-0.109	-49.83	731	2000	
Cr	52	3	72	0.361	ppb	0.361	102.70	2727	5000	
Mn	55	3	72	308.232	ppb	308.232	0.56	116077	10000	
Fe	56	2	72	33.651	ppb	33.651	8.04	88819	10000	
Co	59	3	72	1.097	ppb	1.097	3.07	1314	2000	
Ni	60	3	72	3.242	ppb	3.242	4.81	1649	5000	
Cu	63	3	72	1.045	ppb	1.045	8.88	1251	5000	
Zn	66	3	72	9.637	ppb	9.637	3.82	1616	5000	
As	75	3	72	0.637	ppb	0.637	39.98	107	2000	
Se	78	2	72	1.274	ppb	1.274	14.61	73	2000	
Sr	88	3	72	1400.016	ppb	1400.016	1.06	737671	4000	
Mo	95	3	115	2.980	ppb	2.980	4.78	1393	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-342.90	20	100	
Cd	111	3	115	0.014	ppb	0.014	176.29	8	2000	
Sn	120	3	115	0.232	ppb	0.232	17.89	698	2000	
Sb	121	3	115	0.677	ppb	0.677	11.10	533	1000	
Ba	137	3	115	77.032	ppb	77.032	2.45	18235	5000	
Tl	205	3	193	-0.015	ppb	-0.015	-45.42	217	2000	
(Pb)	206	3	193	0.211	ppb	0.211	11.24	490	100	
(Pb)	207	3	193	0.176	ppb	0.176	12.67	580	100	
Pb	208	3	193	0.193	ppb	0.193	7.82	2074	5000	
Th	232	3	193	1.287	ppb	1.287	25.50	18830	2000	
U	238	3	193	36.007	ppb	36.007	0.62	195296	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3703236	0.72	3707811	99.88	60	120	
Sc (IS)	45	3	HMI He	536837	0.81	545003	98.50	60	120	
Ge Internal standard	72	2	HMI H2	2272362	2.46	2275339	99.87	60	120	
Ge Internal standard	72	3	HMI He	669686	0.27	672584	99.57	60	120	
In Internal Standard	115	3	HMI He	2638528	1.91	2611031	101.05	60	120	
Ir (IS)	193	3	HMI He	5800089	0.96	5805625	99.90	60	120	

Sample Report

Sample Table

Sample Name	280-175005-A-2-B
Data File Name	194SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:43:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-92.77	2	2000	
Na	23	3	45	138512.183	ppb	138512.183	1.73	13384534	400000	
Mg	24	3	45	13824.887	ppb	13824.887	1.96	718801	400000	
Al	27	3	45	6.435	ppb	6.435	19.30	220	400000	
K	39	3	45	15099.105	ppb	15099.105	0.84	652213	400000	
Ca	40	2	45	77021.406	ppb	77021.406	0.30	40316971	400000	
V	51	3	72	0.601	ppb	0.601	24.09	1141	2000	
Cr	52	3	72	0.252	ppb	0.252	139.15	2696	5000	
Mn	55	3	72	8.312	ppb	8.312	2.04	3439	10000	
Fe	56	2	72	14.983	ppb	14.983	21.90	63991	10000	
Co	59	3	72	0.360	ppb	0.360	12.01	465	2000	
Ni	60	3	72	1.615	ppb	1.615	8.51	1136	5000	
Cu	63	3	72	1.270	ppb	1.270	16.29	1474	5000	
Zn	66	3	72	24.065	ppb	24.065	4.13	3852	5000	
As	75	3	72	0.271	ppb	0.271	93.93	68	2000	
Se	78	2	72	0.517	ppb	0.517	35.30	32	2000	
Sr	88	3	72	691.308	ppb	691.308	1.92	370334	4000	
Mo	95	3	115	3.319	ppb	3.319	7.08	1548	2000	
Ag	107	3	115	0.004	ppb	0.004	36.99	32	100	
Cd	111	3	115	-0.014	ppb	-0.014	-82.68	2	2000	
Sn	120	3	115	0.197	ppb	0.197	1.03	673	2000	
Sb	121	3	115	0.552	ppb	0.552	11.88	441	1000	
Ba	137	3	115	65.776	ppb	65.776	3.19	15581	5000	
Tl	205	3	193	-0.030	ppb	-0.030	-28.41	165	2000	
(Pb)	206	3	193	0.147	ppb	0.147	12.39	413	100	
(Pb)	207	3	193	0.138	ppb	0.138	23.11	545	100	
Pb	208	3	193	0.122	ppb	0.122	26.95	1731	5000	
Th	232	3	193	-0.485	ppb	-0.485	-34.98	10214	2000	
U	238	3	193	17.563	ppb	17.563	2.70	97370	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3756928	1.32	3707811	101.32	60	120	
Sc (IS)	45	3	HMI He	539286	0.47	545003	98.95	60	120	
Ge Internal standard	72	2	HMI H2	2367784	0.77	2275339	104.06	60	120	
Ge Internal standard	72	3	HMI He	680932	1.08	672584	101.24	60	120	
In Internal Standard	115	3	HMI He	2640689	2.89	2611031	101.14	60	120	
Ir (IS)	193	3	HMI He	5884402	3.07	5805625	101.36	60	120	

Sample Report

Sample Table

Sample Name	280-175005-A-3-B
Data File Name	195SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:45:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	139128.893	ppb	139128.893	1.46	13251278	400000	
Mg	24	3	45	14032.506	ppb	14032.506	2.96	719093	400000	
Al	27	3	45	55.915	ppb	55.915	10.47	1235	400000	
K	39	3	45	16164.454	ppb	16164.454	0.75	686496	400000	
Ca	40	2	45	82747.672	ppb	82747.672	1.30	42907306	400000	
V	51	3	72	-0.427	ppb	-0.427	-6.32	565	2000	
Cr	52	3	72	0.296	ppb	0.296	71.25	2724	5000	
Mn	55	3	72	19.961	ppb	19.961	1.69	7873	10000	
Fe	56	2	72	17.240	ppb	17.240	19.62	65503	10000	
Co	59	3	72	0.225	ppb	0.225	15.42	305	2000	
Ni	60	3	72	1.351	ppb	1.351	10.60	1046	5000	
Cu	63	3	72	1.631	ppb	1.631	8.59	1798	5000	
Zn	66	3	72	33.845	ppb	33.845	2.76	5342	5000	
As	75	3	72	0.393	ppb	0.393	64.39	82	2000	
Se	78	2	72	0.272	ppb	0.272	31.65	17	2000	
Sr	88	3	72	705.199	ppb	705.199	2.84	377021	4000	
Mo	95	3	115	3.106	ppb	3.106	3.55	1439	2000	
Ag	107	3	115	0.001	ppb	0.001	1344.63	27	100	
Cd	111	3	115	0.021	ppb	0.021	2.46	10	2000	
Sn	120	3	115	0.505	ppb	0.505	11.35	891	2000	
Sb	121	3	115	0.574	ppb	0.574	5.22	453	1000	
Ba	137	3	115	66.142	ppb	66.142	1.96	15543	5000	
Tl	205	3	193	-0.034	ppb	-0.034	-13.38	148	2000	
(Pb)	206	3	193	0.157	ppb	0.157	21.81	421	100	
(Pb)	207	3	193	0.150	ppb	0.150	18.13	553	100	
Pb	208	3	193	0.148	ppb	0.148	1.89	1852	5000	
Th	232	3	193	-0.925	ppb	-0.925	-12.23	7912	2000	
U	238	3	193	16.654	ppb	16.654	3.21	91561	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3721854	0.54	3707811	100.38	60	120	
Sc (IS)	45	3	HMI He	531630	1.67	545003	97.55	60	120	
Ge Internal standard	72	2	HMI H2	2299469	1.26	2275339	101.06	60	120	
Ge Internal standard	72	3	HMI He	679648	1.69	672584	101.05	60	120	
In Internal Standard	115	3	HMI He	2618454	1.23	2611031	100.28	60	120	
Ir (IS)	193	3	HMI He	5828973	1.87	5805625	100.40	60	120	

Sample Report

Sample Table

Sample Name	280-175005-A-4-B
Data File Name	196SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:46:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.082	ppb	-0.082	-98.15	2	2000	
Na	23	3	45	389722.942	ppb	389722.942	2.40	36862611	400000	
Mg	24	3	45	65699.787	ppb	65699.787	2.21	3346615	400000	
Al	27	3	45	1.924	ppb	1.924	29.86	123	400000	
K	39	3	45	6811.999	ppb	6811.999	1.61	302016	400000	
Ca	40	2	45	265148.518	ppb	265148.518	1.00	134426624	400000	
V	51	3	72	-0.122	ppb	-0.122	-79.79	708	2000	
Cr	52	3	72	0.251	ppb	0.251	86.02	2592	5000	
Mn	55	3	72	1057.235	ppb	1057.235	0.95	388662	10000	
Fe	56	2	72	38.562	ppb	38.562	5.88	93238	10000	
Co	59	3	72	0.974	ppb	0.974	14.66	1146	2000	
Ni	60	3	72	2.269	ppb	2.269	12.73	1301	5000	
Cu	63	3	72	1.030	ppb	1.030	17.00	1209	5000	
Zn	66	3	72	5.098	ppb	5.098	11.19	911	5000	
As	75	3	72	0.501	ppb	0.501	8.33	90	2000	
Se	78	2	72	7.459	ppb	7.459	7.78	404	2000	
Sr	88	3	72	3620.666	ppb	3620.666	1.80	1865315	4000	
Mo	95	3	115	2.338	ppb	2.338	2.47	1051	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-395.03	22	100	
Cd	111	3	115	-0.007	ppb	-0.007	-191.54	3	2000	
Sn	120	3	115	0.061	ppb	0.061	165.46	548	2000	
Sb	121	3	115	0.339	ppb	0.339	6.64	270	1000	
Ba	137	3	115	99.630	ppb	99.630	1.30	22550	5000	
Tl	205	3	193	-0.040	ppb	-0.040	-2.05	125	2000	
(Pb)	206	3	193	0.010	ppb	0.010	28.08	232	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-1086.53	381	100	
Pb	208	3	193	-0.005	ppb	-0.005	-409.60	1058	5000	
Th	232	3	193	-1.192	ppb	-1.192	-9.34	6573	2000	
U	238	3	193	104.418	ppb	104.418	0.15	565241	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3639758	1.83	3707811	98.16	60	120	
Sc (IS)	45	3	HMI He	528402	0.76	545003	96.95	60	120	
Ge Internal standard	72	2	HMI H2	2205770	1.46	2275339	96.94	60	120	
Ge Internal standard	72	3	HMI He	654778	0.73	672584	97.35	60	120	
In Internal Standard	115	3	HMI He	2523167	0.73	2611031	96.63	60	120	
Ir (IS)	193	3	HMI He	5817756	1.82	5805625	100.21	60	120	

Sample Report

Sample Table

Sample Name	280-175005-A-5-B
Data File Name	197SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:48:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	289704.165	ppb	289704.165	2.15	27156152	400000	
Mg	24	3	45	83687.888	ppb	83687.888	3.28	4222963	400000	
Al	27	3	45	2.153	ppb	2.153	75.63	127	400000	
K	39	3	45	4658.470	ppb	4658.470	0.78	212420	400000	
Ca	40	2	45	308626.214	ppb	308626.214	0.99	155102290	400000	
V	51	3	72	-0.342	ppb	-0.342	-16.66	583	2000	
Cr	52	3	72	0.308	ppb	0.308	26.89	2602	5000	
Mn	55	3	72	12.859	ppb	12.859	6.26	4922	10000	
Fe	56	2	72	30.242	ppb	30.242	10.98	81379	10000	
Co	59	3	72	0.280	ppb	0.280	12.63	352	2000	
Ni	60	3	72	1.412	ppb	1.412	20.05	1016	5000	
Cu	63	3	72	0.597	ppb	0.597	9.29	825	5000	
Zn	66	3	72	1.412	ppb	1.412	8.72	365	5000	
As	75	3	72	0.624	ppb	0.624	25.59	102	2000	
Se	78	2	72	12.009	ppb	12.009	4.34	649	2000	
Sr	88	3	72	4840.807	ppb	4840.807	0.24	2467237	4000	
Mo	95	3	115	0.777	ppb	0.777	12.37	380	2000	
Ag	107	3	115	0.002	ppb	0.002	180.29	28	100	
Cd	111	3	115	0.007	ppb	0.007	341.44	7	2000	
Sn	120	3	115	0.067	ppb	0.067	263.61	570	2000	
Sb	121	3	115	0.187	ppb	0.187	28.43	167	1000	
Ba	137	3	115	46.042	ppb	46.042	1.35	10781	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-9.70	143	2000	
(Pb)	206	3	193	0.071	ppb	0.071	46.59	298	100	
(Pb)	207	3	193	0.044	ppb	0.044	35.65	418	100	
Pb	208	3	193	0.059	ppb	0.059	13.04	1334	5000	
Th	232	3	193	-1.306	ppb	-1.306	-7.28	5770	2000	
U	238	3	193	491.318	ppb	491.318	1.10	2551019	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3607620	0.84	3707811	97.30	60	120	
Sc (IS)	45	3	HMI He	523482	0.75	545003	96.05	60	120	
Ge Internal standard	72	2	HMI H2	2206898	1.22	2275339	96.99	60	120	
Ge Internal standard	72	3	HMI He	647804	1.48	672584	96.32	60	120	
In Internal Standard	115	3	HMI He	2606485	0.87	2611031	99.83	60	120	
Ir (IS)	193	3	HMI He	5591638	0.48	5805625	96.31	60	120	

Sample Report

Sample Table

Sample Name	280-175005-A-6-B
Data File Name	198SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:50:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	237794.278	ppb	237794.278	1.84	22268081	400000	
Mg	24	3	45	66955.409	ppb	66955.409	1.70	3374985	400000	
Al	27	3	45	3.319	ppb	3.319	84.49	150	400000	
K	39	3	45	5896.360	ppb	5896.360	1.26	262038	400000	
Ca	40	2	45	254635.694	ppb	254635.694	1.03	127722671	400000	
V	51	3	72	0.441	ppb	0.441	4.61	1018	2000	
Cr	52	3	72	0.320	ppb	0.320	86.81	2656	5000	
Mn	55	3	72	21.162	ppb	21.162	4.03	8082	10000	
Fe	56	2	72	16.817	ppb	16.817	13.94	63344	10000	
Co	59	3	72	0.322	ppb	0.322	7.64	406	2000	
Ni	60	3	72	1.493	ppb	1.493	18.87	1060	5000	
Cu	63	3	72	0.479	ppb	0.479	2.80	736	5000	
Zn	66	3	72	2.336	ppb	2.336	7.30	508	5000	
As	75	3	72	0.986	ppb	0.986	28.08	142	2000	
Se	78	2	72	7.101	ppb	7.101	4.14	391	2000	
Sr	88	3	72	3784.796	ppb	3784.796	1.49	1963169	4000	
Mo	95	3	115	0.850	ppb	0.850	11.92	410	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-301.33	20	100	
Cd	111	3	115	-0.014	ppb	-0.014	-86.94	2	2000	
Sn	120	3	115	0.004	ppb	0.004	1079.53	521	2000	
Sb	121	3	115	0.143	ppb	0.143	24.30	133	1000	
Ba	137	3	115	63.090	ppb	63.090	5.17	14654	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-11.34	112	2000	
(Pb)	206	3	193	0.009	ppb	0.009	185.64	228	100	
(Pb)	207	3	193	-0.054	ppb	-0.054	-104.69	322	100	
Pb	208	3	193	-0.018	ppb	-0.018	-107.36	980	5000	
Th	232	3	193	-1.395	ppb	-1.395	-5.51	5492	2000	
U	238	3	193	651.717	ppb	651.717	2.96	3474888	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3600716	1.63	3707811	97.11	60	120	
Sc (IS)	45	3	HMI He	522977	0.76	545003	95.96	60	120	
Ge Internal standard	72	2	HMI H2	2244503	1.25	2275339	98.64	60	120	
Ge Internal standard	72	3	HMI He	659225	1.47	672584	98.01	60	120	
In Internal Standard	115	3	HMI He	2589382	2.15	2611031	99.17	60	120	
Ir (IS)	193	3	HMI He	5745008	2.06	5805625	98.96	60	120	

Sample Report

Sample Table

Sample Name	280-175005-A-7-B
Data File Name	199SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:52:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.082	ppb	-0.082	-98.35	2	2000	
Na	23	3	45	279443.753	ppb	279443.753	1.47	25699666	400000	
Mg	24	3	45	52485.100	ppb	52485.100	0.52	2598588	400000	
Al	27	3	45	1.426	ppb	1.426	2.44	110	400000	
K	39	3	45	5497.237	ppb	5497.237	2.52	241577	400000	
Ca	40	2	45	253677.033	ppb	253677.033	2.74	124864081	400000	
V	51	3	72	-0.739	ppb	-0.739	-4.59	371	2000	
Cr	52	3	72	0.317	ppb	0.317	49.55	2604	5000	
Mn	55	3	72	1029.818	ppb	1029.818	0.56	373792	10000	
Fe	56	2	72	15.893	ppb	15.893	13.04	61186	10000	
Co	59	3	72	0.698	ppb	0.698	13.24	821	2000	
Ni	60	3	72	2.525	ppb	2.525	11.84	1366	5000	
Cu	63	3	72	0.422	ppb	0.422	7.74	673	5000	
Zn	66	3	72	3.712	ppb	3.712	11.41	698	5000	
As	75	3	72	0.431	ppb	0.431	24.19	82	2000	
Se	78	2	72	0.459	ppb	0.459	23.56	27	2000	
Sr	88	3	72	3228.439	ppb	3228.439	1.31	1642089	4000	
Mo	95	3	115	8.024	ppb	8.024	2.24	3550	2000	
Ag	107	3	115	-0.005	ppb	-0.005	-192.79	17	100	
Cd	111	3	115	0.030	ppb	0.030	113.79	12	2000	
Sn	120	3	115	0.052	ppb	0.052	157.72	543	2000	
Sb	121	3	115	0.112	ppb	0.112	4.83	108	1000	
Ba	137	3	115	87.551	ppb	87.551	1.39	19875	5000	
Tl	205	3	193	-0.035	ppb	-0.035	-25.99	138	2000	
(Pb)	206	3	193	-0.022	ppb	-0.022	-118.09	185	100	
(Pb)	207	3	193	-0.013	ppb	-0.013	-275.29	360	100	
Pb	208	3	193	-0.020	ppb	-0.020	-51.05	955	5000	
Th	232	3	193	-1.494	ppb	-1.494	-4.91	4917	2000	
U	238	3	193	86.962	ppb	86.962	2.15	456946	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3534082	1.20	3707811	95.31	60	120	
Sc (IS)	45	3	HMI He	513637	0.63	545003	94.24	60	120	
Ge Internal standard	72	2	HMI H2	2213636	2.90	2275339	97.29	60	120	
Ge Internal standard	72	3	HMI He	646476	0.84	672584	96.12	60	120	
In Internal Standard	115	3	HMI He	2530357	1.52	2611031	96.91	60	120	
Ir (IS)	193	3	HMI He	5644965	1.07	5805625	97.23	60	120	

Sample Report

Sample Table

Sample Name	280-175005-A-8-B
Data File Name	200SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:54:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	242532.253	ppb	242532.253	0.77	22726839	400000	
Mg	24	3	45	52127.053	ppb	52127.053	2.07	2629159	400000	
Al	27	3	45	2.303	ppb	2.303	72.49	130	400000	
K	39	3	45	5158.068	ppb	5158.068	2.20	232470	400000	
Ca	40	2	45	240812.305	ppb	240812.305	2.02	120742261	400000	
V	51	3	72	0.207	ppb	0.207	73.02	881	2000	
Cr	52	3	72	0.446	ppb	0.446	68.82	2712	5000	
Mn	55	3	72	62.598	ppb	62.598	3.68	23158	10000	
Fe	56	2	72	17.560	ppb	17.560	19.88	64428	10000	
Co	59	3	72	0.226	ppb	0.226	26.37	293	2000	
Ni	60	3	72	1.442	ppb	1.442	7.63	1033	5000	
Cu	63	3	72	1.597	ppb	1.597	1.53	1696	5000	
Zn	66	3	72	5.701	ppb	5.701	1.41	996	5000	
As	75	3	72	0.648	ppb	0.648	13.02	105	2000	
Se	78	2	72	4.709	ppb	4.709	5.28	260	2000	
Sr	88	3	72	3185.153	ppb	3185.153	2.30	1634393	4000	
Mo	95	3	115	6.389	ppb	6.389	7.51	2849	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-566.63	23	100	
Cd	111	3	115	0.001	ppb	0.001	3283.79	5	2000	
Sn	120	3	115	-0.024	ppb	-0.024	-55.17	493	2000	
Sb	121	3	115	0.139	ppb	0.139	21.83	128	1000	
Ba	137	3	115	67.126	ppb	67.126	2.06	15336	5000	
Tl	205	3	193	-0.039	ppb	-0.039	-10.57	127	2000	
(Pb)	206	3	193	-0.015	ppb	-0.015	-89.24	197	100	
(Pb)	207	3	193	-0.044	ppb	-0.044	-60.81	332	100	
Pb	208	3	193	-0.017	ppb	-0.017	-65.23	983	5000	
Th	232	3	193	-1.499	ppb	-1.499	-2.09	4965	2000	
U	238	3	193	120.800	ppb	120.800	0.96	643754	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3599861	1.36	3707811	97.09	60	120	
Sc (IS)	45	3	HMI He	523313	0.93	545003	96.02	60	120	
Ge Internal standard	72	2	HMI H2	2243829	1.10	2275339	98.62	60	120	
Ge Internal standard	72	3	HMI He	652209	0.30	672584	96.97	60	120	
In Internal Standard	115	3	HMI He	2545812	1.19	2611031	97.50	60	120	
Ir (IS)	193	3	HMI He	5729351	0.54	5805625	98.69	60	120	

Sample Report

Sample Table

Sample Name	280-175150-B-1-D
Data File Name	201SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:55:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	10176.260	ppb	10176.260	2.53	963524	400000	
Mg	24	3	45	6434.128	ppb	6434.128	0.45	321964	400000	
Al	27	3	45	80.117	ppb	80.117	7.12	1692	400000	
K	39	3	45	1167.810	ppb	1167.810	3.37	71137	400000	
Ca	40	2	45	13286.889	ppb	13286.889	0.50	6610444	400000	
V	51	3	72	-0.468	ppb	-0.468	-22.70	525	2000	
Cr	52	3	72	0.243	ppb	0.243	55.89	2601	5000	
Mn	55	3	72	10.801	ppb	10.801	4.63	4244	10000	
Fe	56	2	72	124.021	ppb	124.021	3.96	216240	10000	
Co	59	3	72	0.078	ppb	0.078	23.90	127	2000	
Ni	60	3	72	0.061	ppb	0.061	445.70	598	5000	
Cu	63	3	72	0.803	ppb	0.803	5.05	1018	5000	
Zn	66	3	72	1.036	ppb	1.036	21.80	315	5000	
As	75	3	72	0.277	ppb	0.277	79.69	67	2000	
Se	78	2	72	0.358	ppb	0.358	12.67	21	2000	
Sr	88	3	72	90.080	ppb	90.080	2.97	46665	4000	
Mo	95	3	115	0.595	ppb	0.595	6.73	292	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-243.69	23	100	
Cd	111	3	115	-0.021	ppb	-0.021	0.00	0	2000	
Sn	120	3	115	-0.097	ppb	-0.097	-18.47	443	2000	
Sb	121	3	115	0.194	ppb	0.194	35.33	168	1000	
Ba	137	3	115	43.462	ppb	43.462	2.61	9972	5000	
Tl	205	3	193	-0.038	ppb	-0.038	-9.53	128	2000	
(Pb)	206	3	193	0.103	ppb	0.103	35.15	347	100	
(Pb)	207	3	193	0.084	ppb	0.084	58.81	471	100	
Pb	208	3	193	0.095	ppb	0.095	18.65	1548	5000	
Th	232	3	193	-1.454	ppb	-1.454	-1.67	5184	2000	
U	238	3	193	0.242	ppb	0.242	7.69	2761	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3566937	1.18	3707811	96.20	60	120	
Sc (IS)	45	3	HMI He	518850	1.18	545003	95.20	60	120	
Ge Internal standard	72	2	HMI H2	2219418	0.68	2275339	97.54	60	120	
Ge Internal standard	72	3	HMI He	658205	0.48	672584	97.86	60	120	
In Internal Standard	115	3	HMI He	2553480	1.14	2611031	97.80	60	120	
Ir (IS)	193	3	HMI He	5722993	1.43	5805625	98.58	60	120	

Sample Report

Sample Table

Sample Name	280-175150-B-1-E MS
Data File Name	202SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:57:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.722	ppb	39.722	4.58	1458	2000	
Na	23	3	45	11279.747	ppb	11279.747	3.79	1072391	400000	
Mg	24	3	45	7188.178	ppb	7188.178	1.44	361890	400000	
Al	27	3	45	822.447	ppb	822.447	7.05	16693	400000	
K	39	3	45	1974.056	ppb	1974.056	3.73	103994	400000	
Ca	40	2	45	14137.185	ppb	14137.185	1.33	7170703	400000	
V	51	3	72	38.639	ppb	38.639	3.40	21841	2000	
Cr	52	3	72	39.215	ppb	39.215	1.81	29086	5000	
Mn	55	3	72	49.371	ppb	49.371	2.42	18637	10000	
Fe	56	2	72	874.366	ppb	874.366	1.98	1322286	10000	
Co	59	3	72	38.032	ppb	38.032	2.06	43891	2000	
Ni	60	3	72	36.977	ppb	36.977	2.50	12569	5000	
Cu	63	3	72	39.496	ppb	39.496	1.16	35107	5000	
Zn	66	3	72	39.811	ppb	39.811	1.11	6105	5000	
As	75	3	72	37.164	ppb	37.164	5.02	3997	2000	
Se	78	2	72	38.843	ppb	38.843	3.06	2157	2000	
Sr	88	3	72	166.571	ppb	166.571	1.60	86983	4000	
Mo	95	3	115	39.256	ppb	39.256	1.44	17644	2000	
Ag	107	3	115	40.032	ppb	40.032	0.82	61678	100	
Cd	111	3	115	37.044	ppb	37.044	2.00	8662	2000	
Sn	120	3	115	36.580	ppb	36.580	1.68	26733	2000	
Sb	121	3	115	38.221	ppb	38.221	0.82	27875	1000	
Ba	137	3	115	83.095	ppb	83.095	1.58	19283	5000	
Tl	205	3	193	37.813	ppb	37.813	1.20	143229	2000	
(Pb)	206	3	193	38.495	ppb	38.495	2.68	49204	100	
(Pb)	207	3	193	37.971	ppb	37.971	0.68	41999	100	
Pb	208	3	193	38.373	ppb	38.373	1.90	196112	5000	
Th	232	3	193	35.220	ppb	35.220	0.35	184997	2000	
U	238	3	193	38.829	ppb	38.829	3.06	208311	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3636768	0.69	3707811	98.08	60	120	
Sc (IS)	45	3	HMI He	522160	2.37	545003	95.81	60	120	
Ge Internal standard	72	2	HMI H2	2272848	1.37	2275339	99.89	60	120	
Ge Internal standard	72	3	HMI He	663638	1.18	672584	98.67	60	120	
In Internal Standard	115	3	HMI He	2586015	0.75	2611031	99.04	60	120	
Ir (IS)	193	3	HMI He	5741372	1.28	5805625	98.89	60	120	

Sample Report

Sample Table

Sample Name	280-175150-B-1-F MSD
Data File Name	203SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T22:59:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609378 200.8
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.125	ppb	38.125	5.34	1378	2000	
Na	23	3	45	10842.820	ppb	10842.820	1.82	1042118	400000	
Mg	24	3	45	7082.995	ppb	7082.995	1.37	360065	400000	
Al	27	3	45	779.141	ppb	779.141	1.50	15985	400000	
K	39	3	45	1938.913	ppb	1938.913	2.61	103567	400000	
Ca	40	2	45	14061.917	ppb	14061.917	0.45	7128350	400000	
V	51	3	72	37.450	ppb	37.450	1.58	21221	2000	
Cr	52	3	72	37.458	ppb	37.458	0.92	27926	5000	
Mn	55	3	72	48.536	ppb	48.536	1.10	18348	10000	
Fe	56	2	72	876.528	ppb	876.528	3.29	1317333	10000	
Co	59	3	72	37.270	ppb	37.270	2.20	43060	2000	
Ni	60	3	72	38.008	ppb	38.008	1.72	12920	5000	
Cu	63	3	72	38.381	ppb	38.381	1.49	34162	5000	
Zn	66	3	72	38.853	ppb	38.853	1.79	5968	5000	
As	75	3	72	38.482	ppb	38.482	3.01	4144	2000	
Se	78	2	72	37.358	ppb	37.358	2.85	2062	2000	
Sr	88	3	72	163.161	ppb	163.161	0.09	85305	4000	
Mo	95	3	115	39.322	ppb	39.322	0.39	17434	2000	
Ag	107	3	115	39.399	ppb	39.399	1.49	59876	100	
Cd	111	3	115	36.971	ppb	36.971	0.25	8527	2000	
Sn	120	3	115	36.740	ppb	36.740	1.92	26483	2000	
Sb	121	3	115	38.469	ppb	38.469	3.53	27672	1000	
Ba	137	3	115	82.845	ppb	82.845	2.30	18961	5000	
Tl	205	3	193	37.167	ppb	37.167	2.67	139881	2000	
(Pb)	206	3	193	37.702	ppb	37.702	3.81	47876	100	
(Pb)	207	3	193	38.102	ppb	38.102	2.76	41868	100	
Pb	208	3	193	37.873	ppb	37.873	3.21	192313	5000	
Th	232	3	193	37.489	ppb	37.489	2.15	194872	2000	
U	238	3	193	38.363	ppb	38.363	4.06	204470	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3634549	0.36	3707811	98.02	60	120	
Sc (IS)	45	3	HMI He	527178	0.83	545003	96.73	60	120	
Ge Internal standard	72	2	HMI H2	2259952	3.06	2275339	99.32	60	120	
Ge Internal standard	72	3	HMI He	664358	0.76	672584	98.78	60	120	
In Internal Standard	115	3	HMI He	2550808	0.46	2611031	97.69	60	120	
Ir (IS)	193	3	HMI He	5707044	3.24	5805625	98.30	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	204_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:01:13-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.469	ppb	1.262	1724	50	94.9	90	110	
Na	23	3	45	48672.175	ppb	1.765	4539247	51000	95.4	90	110	
Mg	24	3	45	10251.787	ppb	0.388	513104	11000	93.2	90	110	
Al	27	3	45	933.946	ppb	2.748	18848	1000	93.4	90	110	
K	39	3	45	10572.966	ppb	0.108	446951	11000	96.1	90	110	
Ca	40	2	45	10632.011	ppb	3.031	5335993	11000	96.7	90	110	
V	51	3	72	49.972	ppb	2.138	27275	50	99.9	90	110	
Cr	52	3	72	50.181	ppb	1.720	35566	50	100.4	90	110	
Mn	55	3	72	49.368	ppb	1.740	18143	50	98.7	90	110	
Fe	56	2	72	1042.729	ppb	1.980	1488584	1000	104.3	90	110	
Co	59	3	72	49.734	ppb	0.949	55869	50	99.5	90	110	
Ni	60	3	72	49.246	ppb	1.097	16108	50	98.5	90	110	
Cu	63	3	72	50.561	ppb	0.981	43662	50	101.1	90	110	
Zn	66	3	72	50.403	ppb	0.594	7482	50	100.8	90	110	
As	75	3	72	50.501	ppb	2.112	5275	50	101.0	90	110	
Se	78	2	72	48.903	ppb	2.109	2576	50	97.8	90	110	
Sr	88	3	72	98.765	ppb	0.172	50217	100	98.8	90	110	
Mo	95	3	115	49.905	ppb	1.261	22651	50	99.8	90	110	
Ag	107	3	115	48.910	ppb	1.288	76111	50	97.8	90	110	
Cd	111	3	115	48.222	ppb	3.553	11388	50	96.4	90	110	
Sn	120	3	115	48.304	ppb	1.514	35491	50	96.6	90	110	
Sb	121	3	115	49.124	ppb	1.761	36181	50	98.2	90	110	
Ba	137	3	115	49.857	ppb	2.992	11696	50	99.7	90	110	
Tl	205	3	193	47.911	ppb	1.199	184603	50	95.8	90	110	
(Pb)	206	3	193	46.901	ppb	1.086	60967	50	93.8	90	110	
(Pb)	207	3	193	48.550	ppb	1.414	54538	50	97.1	90	110	
Pb	208	3	193	47.416	ppb	0.490	246373	50	94.8	90	110	
Th	232	3	193	49.348	ppb	1.943	258713	50	98.7	90	110	
U	238	3	193	47.431	ppb	1.452	258646	50	94.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3597091	1.06	3707811	97.01	60	120	
Sc (IS)	45	3	HMI He	519091	0.83	545003	95.25	60	120	
Ge Internal standard	72	2	HMI H2	2155536	0.34	2275339	94.73	60	120	
Ge Internal standard	72	3	HMI He	645999	0.92	672584	96.05	60	120	
In Internal Standard	115	3	HMI He	2612096	0.22	2611031	100.04	60	120	
Ir (IS)	193	3	HMI He	5842455	1.08	5805625	100.63	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	205_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:03:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.083	ppb	-95.1	2	0.5	
Na	23	3	45	56.431	ppb	10.0	24365	25	>RL
Mg	24	3	45	1.813	ppb	100.0	274	25	
Al	27	3	45	0.681	ppb	225.3	97	15	
K	39	3	45	-2.515	ppb	-1330.7	24563	50	
V	51	3	72	-0.905	ppb	-9.3	285	1	
Cr	52	3	72	0.176	ppb	97.6	2521	1	
Mn	55	3	72	-0.048	ppb	-192.9	233	0.5	
Co	59	3	72	0.011	ppb	35.6	50	0.5	
Ni	60	3	72	0.191	ppb	36.8	631	1	
Cu	63	3	72	0.044	ppb	211.1	350	1	
Zn	66	3	72	-0.006	ppb	-1403.4	158	5	
As	75	3	72	-0.099	ppb	-29.6	27	1	
Se	78	2	72	0.026	ppb	300.4	3	1	
Sr	88	3	72	0.148	ppb	45.3	95	0.5	
Mo	95	3	115	0.042	ppb	81.9	47	0.5	
Ag	107	3	115	0.005	ppb	201.2	33	1	
Cd	111	3	115	0.029	ppb	37.7	12	0.5	
Sn	120	3	115	0.209	ppb	36.2	666	1	
Sb	121	3	115	0.040	ppb	40.7	58	0.6	
Ba	137	3	115	0.029	ppb	171.5	33	0.5	
Tl	205	3	193	-0.011	ppb	-55.0	237	0.1	
(Pb)	206	3	193	-0.042	ppb	-40.8	167	1	
(Pb)	207	3	193	-0.029	ppb	-105.4	356	1	
Pb	208	3	193	-0.035	ppb	-22.6	913	0.5	
Th	232	3	193	0.877	ppb	37.0	16975	1	
U	238	3	193	0.006	ppb	93.7	1548	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3580126	1.78	3707811	96.56	60	120	
Sc (IS)	45	3	HMI He	522044	0.57	545003	95.79	60	120	
Ge Internal standard	72	2	HMI H2	2209750	1.31	2275339	97.12	60	120	
Ge Internal standard	72	3	HMI He	649277	0.94	672584	96.53	60	120	
In Internal Standard	115	3	HMI He	2577734	3.05	2611031	98.72	60	120	
Ir (IS)	193	3	HMI He	5869439	1.94	5805625	101.10	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609400/1-A
Data File Name	206_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:04:49-06:00
Sample Type	Blank
Dilution	1
Comment	609400 200.8/6020
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.082	ppb	-97.09934209	2	0.5
Na	23	3	45	52.690	ppb	7.056639925	24115	25
Mg	24	3	45	1.204	ppb	67.12875776	244	25
Al	27	3	45	-0.168	ppb	-1054.569551	80	15
K	39	3	45	4.974	ppb	839.3066829	24961	50
Ca	40	2	45	19.942	ppb	3.011839623	19299	200
V	51	3	72	-0.838	ppb	-1.147144702	325	1
Cr	52	3	72	0.077	ppb	393.2911807	2491	1
Mn	55	3	72	-0.039	ppb	-184.2377715	240	0.5
Fe	56	2	72	4.132	ppb	84.25855027	45340	50
Co	59	3	72	0.021	ppb	84.56344868	62	0.5
Ni	60	3	72	-0.334	ppb	-60.77729893	471	1
Cu	63	3	72	0.031	ppb	92.28265717	343	1
Zn	66	3	72	0.283	ppb	75.7792864	203	5
As	75	3	72	-0.087	ppb	-135.0812212	28	1
(Se)	78	3	72	-1.507	ppb	-165.4559103	18	1
Sr	88	3	72	0.133	ppb	31.0455984	88	0.5
Mo	95	3	115	0.029	ppb	110.0947867	42	0.5
Ag	107	3	115	0.002	ppb	344.0367156	28	1
Cd	111	3	115	-0.007	ppb	-174.5831035	3	0.5
Sn	120	3	115	0.062	ppb	58.32857247	566	1
Sb	121	3	115	0.035	ppb	43.10347509	55	0.6
Ba	137	3	115	0.295	ppb	34.84045108	95	0.5
Tl	205	3	193	-0.033	ppb	-23.24312895	152	0.1
(Pb)	206	3	193	-0.043	ppb	-58.50608656	165	1
(Pb)	207	3	193	-0.038	ppb	-127.1380085	348	1
Pb	208	3	193	-0.046	ppb	-49.22986706	858	0.5
Th	232	3	193	-0.689	ppb	-21.93458715	9194	1
U	238	3	193	0.008	ppb	196.5283601	1564	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3653567	1.29	3707811	98.54	60	120	
Sc (IS)	45	3	HMI He	524203	0.23	545003	96.18	60	120	
Ge Internal standard	72	2	HMI H2	2264622	0.59	2275339	99.53	60	120	
Ge Internal standard	72	3	HMI He	658475	0.72	672584	97.90	60	120	
In Internal Standard	115	3	HMI He	2600429	2.67	2611031	99.59	60	120	
Ir (IS)	193	3	HMI He	5898524	2.00	5805625	101.60	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609400/2-A
Data File Name	207_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:06:38-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609400 200.8/6020
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.081	40.081	ppb	4.701	1476	40	100.2	80	120	
Na	23	3	45	854.040	854.040	ppb	2.133	98972	40	2135.1	80	120	>+/-20%
Mg	24	3	45	710.147	710.147	ppb	0.798	35958	40	1775.4	80	120	>+/-20%
Al	27	3	45	721.603	721.603	ppb	3.610	14679	40	1804.0	80	120	>+/-20%
K	39	3	45	784.432	784.432	ppb	4.213	56259	40	1961.1	80	120	>+/-20%
Ca	40	2	45	819.722	819.722	ppb	2.074	424913	40	2049.3	80	120	>+/-20%
V	51	3	72	36.428	36.428	ppb	0.573	20560	40	91.1	80	120	
Cr	52	3	72	38.613	38.613	ppb	3.828	28563	40	96.5	80	120	
Mn	55	3	72	38.251	38.251	ppb	2.638	14442	40	95.6	80	120	
Fe	56	2	72	795.133	795.133	ppb	5.087	1189413	40	1987.8	80	120	>+/-20%
(Fe)	56	3	72	730.795	730.795	ppb	1.699	450543	40	1827.0	80	120	>+/-20%
Co	59	3	72	38.061	38.061	ppb	0.904	43762	40	95.2	80	120	
Ni	60	3	72	37.715	37.715	ppb	2.299	12760	40	94.3	80	120	
Cu	63	3	72	39.375	39.375	ppb	1.110	34867	40	98.4	80	120	
Zn	66	3	72	42.065	42.065	ppb	1.181	6417	40	105.2	80	120	
As	75	3	72	36.251	36.251	ppb	2.529	3887	40	90.6	80	120	
Se	78	2	72	38.123	38.123	ppb	5.384	2088	40	95.3	80	120	
(Se)	78	3	72	38.542	38.542	ppb	6.875	267	40	96.4	80	120	
Sr	88	3	72	75.081	75.081	ppb	2.166	39066	40	187.7	80	120	>+/-20%
Mo	95	3	115	38.256	38.256	ppb	2.798	17212	40	95.6	80	120	
Ag	107	3	115	39.584	39.584	ppb	3.371	61038	40	99.0	80	120	
Cd	111	3	115	37.805	37.805	ppb	1.314	8850	40	94.5	80	120	
Sn	120	3	115	37.180	37.180	ppb	2.773	27191	40	93.0	80	120	
Sb	121	3	115	37.985	37.985	ppb	3.931	27722	40	95.0	80	120	
Ba	137	3	115	39.577	39.577	ppb	2.048	9207	40	98.9	80	120	
Tl	205	3	193	37.695	37.695	ppb	1.399	143253	40	94.2	80	120	
(Pb)	206	3	193	37.373	37.373	ppb	1.341	47938	40	93.4	80	120	
(Pb)	207	3	193	37.966	37.966	ppb	1.855	42132	40	94.9	80	120	
Pb	208	3	193	37.950	37.950	ppb	1.503	194616	40	94.9	80	120	
Th	232	3	193	35.295	35.295	ppb	0.595	185974	40	88.2	80	120	
U	238	3	193	38.202	38.202	ppb	1.282	205678	40	95.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3641853	0.95	3707811	98.22	60	120	
Sc (IS)	45	3	HMI He	522682	1.31	545003	95.90	60	120	
Ge Internal standard	72	2	HMI H2	2242623	2.08	2275339	98.56	60	120	
Ge Internal standard	72	3	HMI He	661114	1.20	672584	98.29	60	120	
In Internal Standard	115	3	HMI He	2589969	3.43	2611031	99.19	60	120	
Ir (IS)	193	3	HMI He	5760043	0.76	5805625	99.21	60	120	

Sample Report

Sample Table

Sample Name	280-175261-A-1-A
Data File Name	208SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:08:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609400 200.8/6020
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.082	ppb	-0.082	-96.44	2	2000	
Na	23	3	45	222739.872	ppb	222739.872	1.03	21137335	400000	
Mg	24	3	45	30463.919	ppb	30463.919	1.51	1556045	400000	
Al	27	3	45	812.652	ppb	812.652	4.09	16751	400000	
K	39	3	45	24017.834	ppb	24017.834	0.75	1004663	400000	
Ca	40	2	45	100252.667	ppb	100252.667	1.79	50947249	400000	
V	51	3	72	9.260	ppb	9.260	2.32	5903	2000	
Cr	52	3	72	7.716	ppb	7.716	2.29	7793	5000	
Mn	55	3	72	263.105	ppb	263.105	0.43	99437	10000	
Fe	56	2	72	2523.146	ppb	2523.146	1.77	3732824	10000	
Co	59	3	72	4.563	ppb	4.563	1.80	5365	2000	
Ni	60	3	72	9.287	ppb	9.287	2.46	3639	5000	
Cu	63	3	72	32.017	ppb	32.017	0.66	28872	5000	
Zn	66	3	72	191.736	ppb	191.736	2.63	29135	5000	
As	75	3	72	3.074	ppb	3.074	3.24	370	2000	
Se	78	2	72	0.832	ppb	0.832	17.38	48	2000	
Sr	88	3	72	662.167	ppb	662.167	0.97	350017	4000	
Mo	95	3	115	13.074	ppb	13.074	2.71	5917	2000	
Ag	107	3	115	0.078	ppb	0.078	20.95	145	100	
Cd	111	3	115	2.226	ppb	2.226	11.08	526	2000	
Sn	120	3	115	1.123	ppb	1.123	23.31	1326	2000	
Sb	121	3	115	4.328	ppb	4.328	4.76	3194	1000	
Ba	137	3	115	110.795	ppb	110.795	3.27	25779	5000	
Tl	205	3	193	0.013	ppb	0.013	114.29	327	2000	
(Pb)	206	3	193	4.024	ppb	4.024	0.69	5407	100	
(Pb)	207	3	193	3.941	ppb	3.941	2.30	4760	100	
Pb	208	3	193	3.996	ppb	3.996	1.89	21655	5000	
Th	232	3	193	1.412	ppb	1.412	23.70	19486	2000	
U	238	3	193	1.820	ppb	1.820	2.17	11320	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3647600	0.07	3707811	98.38	60	120	
Sc (IS)	45	3	HMI He	529918	0.92	545003	97.23	60	120	
Ge Internal standard	72	2	HMI H2	2268006	2.67	2275339	99.68	60	120	
Ge Internal standard	72	3	HMI He	671824	0.54	672584	99.89	60	120	
In Internal Standard	115	3	HMI He	2594709	1.40	2611031	99.37	60	120	
Ir (IS)	193	3	HMI He	5814960	1.28	5805625	100.16	60	120	

Sample Report

Sample Table

Sample Name	280-175253-A-5-A
Data File Name	209SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:10:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609400 200.8/6020
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	66591.584	ppb	66591.584	1.17	6321794	400000	
Mg	24	3	45	1944.278	ppb	1944.278	1.32	99312	400000	
Al	27	3	45	72.320	ppb	72.320	5.71	1565	400000	
K	39	3	45	216505.189	ppb	216505.189	0.55	8839696	400000	
Ca	40	2	45	8759.407	ppb	8759.407	0.11	4500420	400000	
V	51	3	72	-0.638	ppb	-0.638	-8.27	443	2000	
Cr	52	3	72	21.842	ppb	21.842	2.10	17556	5000	
Mn	55	3	72	4.475	ppb	4.475	5.26	1953	10000	
Fe	56	2	72	354.962	ppb	354.962	2.50	561289	10000	
Co	59	3	72	0.522	ppb	0.522	3.70	650	2000	
Ni	60	3	72	687.941	ppb	687.941	1.48	226993	5000	
Cu	63	3	72	19.741	ppb	19.741	1.55	17976	5000	
Zn	66	3	72	27.157	ppb	27.157	1.97	4280	5000	
As	75	3	72	0.016	ppb	0.016	882.24	40	2000	
Se	78	2	72	0.132	ppb	0.132	87.42	9	2000	
Sr	88	3	72	53.238	ppb	53.238	1.16	28239	4000	
Mo	95	3	115	1.227	ppb	1.227	12.31	576	2000	
Ag	107	3	115	1.342	ppb	1.342	8.83	2084	100	
Cd	111	3	115	0.022	ppb	0.022	96.93	10	2000	
Sn	120	3	115	0.994	ppb	0.994	13.08	1226	2000	
Sb	121	3	115	0.278	ppb	0.278	2.50	232	1000	
Ba	137	3	115	15.341	ppb	15.341	2.14	3572	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-10.24	147	2000	
(Pb)	206	3	193	0.200	ppb	0.200	19.11	468	100	
(Pb)	207	3	193	0.173	ppb	0.173	5.55	566	100	
Pb	208	3	193	0.163	ppb	0.163	8.53	1887	5000	
Th	232	3	193	-0.756	ppb	-0.756	-16.05	8570	2000	
U	238	3	193	0.175	ppb	0.175	3.04	2397	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3680896	2.88	3707811	99.27	60	120	
Sc (IS)	45	3	HMI He	528963	0.21	545003	97.06	60	120	
Ge Internal standard	72	2	HMI H2	2277110	1.17	2275339	100.08	60	120	
Ge Internal standard	72	3	HMI He	673743	1.01	672584	100.17	60	120	
In Internal Standard	115	3	HMI He	2579460	2.38	2611031	98.79	60	120	
Ir (IS)	193	3	HMI He	5705510	0.90	5805625	98.28	60	120	

Sample Report

Sample Table

Sample Name	280-175253-A-5-B MS
Data File Name	210SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:12:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609400 200.8/6020
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	37.523	ppb	37.523	6.85	1379	2000	
Na	23	3	45	64135.409	ppb	64135.409	0.79	6024024	400000	
Mg	24	3	45	2567.604	ppb	2567.604	0.88	129691	400000	
Al	27	3	45	803.954	ppb	803.954	3.93	16369	400000	
K	39	3	45	205481.008	ppb	205481.008	1.52	8300871	400000	
Ca	40	2	45	9096.520	ppb	9096.520	1.94	4625153	400000	
V	51	3	72	38.020	ppb	38.020	0.93	21533	2000	
Cr	52	3	72	60.110	ppb	60.110	0.41	43332	5000	
Mn	55	3	72	43.399	ppb	43.399	1.23	16435	10000	
Fe	56	2	72	1128.052	ppb	1128.052	2.94	1662814	10000	
Co	59	3	72	38.123	ppb	38.123	1.66	44051	2000	
Ni	60	3	72	696.804	ppb	696.804	0.94	226745	5000	
Cu	63	3	72	58.244	ppb	58.244	1.40	51686	5000	
Zn	66	3	72	64.399	ppb	64.399	3.25	9785	5000	
As	75	3	72	37.676	ppb	37.676	4.00	4059	2000	
Se	78	2	72	36.437	ppb	36.437	4.10	1986	2000	
Sr	88	3	72	126.744	ppb	126.744	0.90	66279	4000	
Mo	95	3	115	40.308	ppb	40.308	2.60	18218	2000	
Ag	107	3	115	40.047	ppb	40.047	1.09	62048	100	
Cd	111	3	115	37.122	ppb	37.122	1.49	8729	2000	
Sn	120	3	115	38.954	ppb	38.954	1.81	28596	2000	
Sb	121	3	115	38.508	ppb	38.508	1.07	28243	1000	
Ba	137	3	115	53.360	ppb	53.360	3.59	12460	5000	
Tl	205	3	193	34.878	ppb	34.878	1.76	131003	2000	
(Pb)	206	3	193	38.681	ppb	38.681	0.60	49023	100	
(Pb)	207	3	193	38.951	ppb	38.951	1.11	42707	100	
Pb	208	3	193	38.643	ppb	38.643	1.01	195817	5000	
Th	232	3	193	36.163	ppb	36.163	0.76	187993	2000	
U	238	3	193	39.033	ppb	39.033	1.76	207641	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3643576	1.36	3707811	98.27	60	120	
Sc (IS)	45	3	HMI He	523306	0.54	545003	96.02	60	120	
Ge Internal standard	72	2	HMI H2	2230715	1.74	2275339	98.04	60	120	
Ge Internal standard	72	3	HMI He	664433	0.79	672584	98.79	60	120	
In Internal Standard	115	3	HMI He	2600492	0.29	2611031	99.60	60	120	
Ir (IS)	193	3	HMI He	5692064	0.62	5805625	98.04	60	120	

Sample Report

Sample Table

Sample Name	280-175253-A-5-C MSD
Data File Name	211SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:13:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609400 200.8/6020
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	37.997	ppb	37.997	7.66	1366	2000	
Na	23	3	45	64139.051	ppb	64139.051	2.01	6012112	400000	
Mg	24	3	45	2556.956	ppb	2556.956	1.29	128890	400000	
Al	27	3	45	799.671	ppb	799.671	1.65	16249	400000	
K	39	3	45	206072.702	ppb	206072.702	1.72	8307826	400000	
Ca	40	2	45	9054.695	ppb	9054.695	1.20	4578608	400000	
V	51	3	72	37.349	ppb	37.349	0.72	21197	2000	
Cr	52	3	72	60.908	ppb	60.908	0.68	43939	5000	
Mn	55	3	72	42.185	ppb	42.185	1.91	16008	10000	
Fe	56	2	72	1129.754	ppb	1129.754	2.29	1699541	10000	
Co	59	3	72	38.413	ppb	38.413	1.31	44452	2000	
Ni	60	3	72	689.840	ppb	689.840	0.73	224819	5000	
Cu	63	3	72	56.212	ppb	56.212	0.94	49967	5000	
Zn	66	3	72	62.739	ppb	62.739	4.48	9552	5000	
As	75	3	72	38.231	ppb	38.231	3.29	4124	2000	
Se	78	2	72	35.733	ppb	35.733	4.58	1988	2000	
Sr	88	3	72	125.668	ppb	125.668	0.10	65811	4000	
Mo	95	3	115	39.428	ppb	39.428	2.71	17756	2000	
Ag	107	3	115	40.141	ppb	40.141	1.95	61963	100	
Cd	111	3	115	36.371	ppb	36.371	1.97	8520	2000	
Sn	120	3	115	39.171	ppb	39.171	1.54	28646	2000	
Sb	121	3	115	38.715	ppb	38.715	0.70	28291	1000	
Ba	137	3	115	54.268	ppb	54.268	2.33	12625	5000	
Tl	205	3	193	34.550	ppb	34.550	0.89	130902	2000	
(Pb)	206	3	193	37.326	ppb	37.326	2.31	47716	100	
(Pb)	207	3	193	37.700	ppb	37.700	1.70	41698	100	
Pb	208	3	193	37.613	ppb	37.613	1.68	192251	5000	
Th	232	3	193	37.411	ppb	37.411	1.94	195712	2000	
U	238	3	193	38.599	ppb	38.599	1.45	207126	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3623455	1.95	3707811	97.72	60	120	
Sc (IS)	45	3	HMI He	522232	0.13	545003	95.82	60	120	
Ge Internal standard	72	2	HMI H2	2276310	1.71	2275339	100.04	60	120	
Ge Internal standard	72	3	HMI He	665406	0.61	672584	98.93	60	120	
In Internal Standard	115	3	HMI He	2591063	0.70	2611031	99.24	60	120	
Ir (IS)	193	3	HMI He	5741774	2.05	5805625	98.90	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	212_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:15:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.719	ppb	10.168	1734	50	99.4	90	110	
Na	23	3	45	49019.611	ppb	3.947	4545870	51000	96.1	90	110	
Mg	24	3	45	10077.576	ppb	0.837	501664	11000	91.6	90	110	
Al	27	3	45	938.102	ppb	1.613	18832	1000	93.8	90	110	
K	39	3	45	10588.834	ppb	0.629	445171	11000	96.3	90	110	
Ca	40	2	45	10512.777	ppb	1.286	5304376	11000	95.6	90	110	
V	51	3	72	50.142	ppb	0.367	26786	50	100.3	90	110	
Cr	52	3	72	50.461	ppb	2.731	34991	50	100.9	90	110	
Mn	55	3	72	50.386	ppb	1.072	18119	50	100.8	90	110	
Fe	56	2	72	1037.558	ppb	2.149	1454072	1000	103.8	90	110	
Co	59	3	72	50.116	ppb	0.489	55100	50	100.2	90	110	
Ni	60	3	72	49.881	ppb	1.609	15963	50	99.8	90	110	
Cu	63	3	72	50.118	ppb	0.852	42365	50	100.2	90	110	
Zn	66	3	72	49.644	ppb	2.417	7215	50	99.3	90	110	
As	75	3	72	52.451	ppb	1.151	5362	50	104.9	90	110	
Se	78	2	72	49.262	ppb	1.974	2547	50	98.5	90	110	
Sr	88	3	72	99.191	ppb	0.298	49363	100	99.2	90	110	
Mo	95	3	115	49.424	ppb	4.121	22215	50	98.8	90	110	
Ag	107	3	115	48.565	ppb	3.351	74855	50	97.1	90	110	
Cd	111	3	115	46.707	ppb	4.362	10924	50	93.4	90	110	
Sn	120	3	115	48.447	ppb	3.668	35257	50	96.9	90	110	
Sb	121	3	115	48.687	ppb	2.902	35521	50	97.4	90	110	
Ba	137	3	115	51.806	ppb	5.386	12036	50	103.6	90	110	
Tl	205	3	193	48.884	ppb	1.310	179105	50	97.8	90	110	
(Pb)	206	3	193	49.377	ppb	0.355	61018	50	98.8	90	110	
(Pb)	207	3	193	49.819	ppb	0.952	53206	50	99.6	90	110	
Pb	208	3	193	49.692	ppb	0.441	245461	50	99.4	90	110	
Th	232	3	193	51.404	ppb	1.571	255795	50	102.8	90	110	
U	238	3	193	50.110	ppb	0.637	259752	50	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3616082	0.15	3707811	97.53	60	120	
Sc (IS)	45	3	HMI He	516313	1.20	545003	94.74	60	120	
Ge Internal standard	72	2	HMI H2	2115769	0.86	2275339	92.99	60	120	
Ge Internal standard	72	3	HMI He	632282	0.08	672584	94.01	60	120	
In Internal Standard	115	3	HMI He	2589097	3.32	2611031	99.16	60	120	
Ir (IS)	193	3	HMI He	5555172	0.79	5805625	95.69	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	213_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:17:24-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.128	ppb	0.0	0	0.5	
Na	23	3	45	44.980	ppb	16.7	23112	25	>RL
Mg	24	3	45	0.523	ppb	252.9	207	25	
Al	27	3	45	-1.285	ppb	-58.7	57	15	
K	39	3	45	65.297	ppb	44.7	27067	50	>RL
V	51	3	72	-0.766	ppb	-12.2	355	1	
Cr	52	3	72	0.093	ppb	192.3	2437	1	
Mn	55	3	72	-0.100	ppb	-46.3	212	0.5	
Co	59	3	72	0.008	ppb	62.4	45	0.5	
Ni	60	3	72	0.338	ppb	70.0	670	1	
Cu	63	3	72	-0.010	ppb	-453.4	300	1	
Zn	66	3	72	-0.076	ppb	-203.1	147	5	
As	75	3	72	-0.160	ppb	-62.1	20	1	
Se	78	2	72	0.116	ppb	87.2	8	1	
Sr	88	3	72	0.065	ppb	9.2	52	0.5	
Mo	95	3	115	0.105	ppb	29.0	75	0.5	
Ag	107	3	115	0.005	ppb	107.6	32	1	
Cd	111	3	115	0.007	ppb	163.4	7	0.5	
Sn	120	3	115	0.187	ppb	9.8	650	1	
Sb	121	3	115	0.091	ppb	38.6	95	0.6	
Ba	137	3	115	0.117	ppb	57.4	53	0.5	
Tl	205	3	193	-0.016	ppb	-39.3	212	0.1	
(Pb)	206	3	193	-0.021	ppb	-115.5	188	1	
(Pb)	207	3	193	-0.064	ppb	-24.8	310	1	
Pb	208	3	193	-0.041	ppb	-15.6	860	0.5	
Th	232	3	193	1.013	ppb	17.8	17255	1	>RL
U	238	3	193	0.010	ppb	161.6	1529	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3579478	1.23	3707811	96.54	60	120	
Sc (IS)	45	3	HMI He	517935	0.37	545003	95.03	60	120	
Ge Internal standard	72	2	HMI H2	2159031	1.20	2275339	94.89	60	120	
Ge Internal standard	72	3	HMI He	641698	1.09	672584	95.41	60	120	
In Internal Standard	115	3	HMI He	2576088	0.73	2611031	98.66	60	120	
Ir (IS)	193	3	HMI He	5725350	1.94	5805625	98.62	60	120	

Blank Report

Sample Table

Sample Name	lb 280-609220/1-c
Data File Name	214_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:19:13-06:00
Sample Type	Blank
Dilution	1
Comment	609474 6020B
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.128	ppb	-1.45159E-06	0	0.5
Na	23	3	45	351826.078	ppb	0.829463844	33292028	25
Mg	24	3	45	7.470	ppb	31.84264069	564	25
Al	27	3	45	4.384	ppb	47.59989491	174	15
K	39	3	45	159.880	ppb	13.88298769	31477	50
Ca	40	2	45	100.174	ppb	2.129535361	60048	200
V	51	3	72	-0.880	ppb	-10.91541268	292	1
Cr	52	3	72	1.136	ppb	26.14390689	3089	1
Mn	55	3	72	0.392	ppb	26.35698278	385	0.5
Fe	56	2	72	15.239	ppb	13.30780465	58797	50
Co	59	3	72	0.031	ppb	26.15660496	70	0.5
Ni	60	3	72	0.322	ppb	29.40972596	658	1
Cu	63	3	72	1.154	ppb	8.503850246	1278	1
Zn	66	3	72	1.623	ppb	17.66961819	388	5
As	75	3	72	0.037	ppb	212.3998513	40	1
(Se)	78	3	72	1.131	ppb	234.2469311	33	1
Sr	88	3	72	0.441	ppb	21.88072212	240	0.5
Mo	95	3	115	0.126	ppb	32.70262746	85	0.5
Ag	107	3	115	0.029	ppb	39.29332432	70	1
Cd	111	3	115	0.014	ppb	228.0264387	8	0.5
Sn	120	3	115	0.052	ppb	88.69215039	558	1
Sb	121	3	115	0.087	ppb	12.12586114	93	0.6
Ba	137	3	115	0.931	ppb	3.687381541	243	0.5
Tl	205	3	193	-0.033	ppb	-17.57835916	148	0.1
(Pb)	206	3	193	5.639	ppb	1.152374666	7479	1
(Pb)	207	3	193	5.595	ppb	2.634764124	6590	1
Pb	208	3	193	5.538	ppb	1.870996823	29557	0.5
Th	232	3	193	-0.609	ppb	-12.65248351	9457	1
U	238	3	193	0.026	ppb	105.0328747	1633	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3648868	0.96	3707811	98.41	60	120	
Sc (IS)	45	3	HMI He	528568	1.22	545003	96.98	60	120	
Ge Internal standard	72	2	HMI H2	2161772	1.74	2275339	95.01	60	120	
Ge Internal standard	72	3	HMI He	635153	1.70	672584	94.43	60	120	
In Internal Standard	115	3	HMI He	2598954	0.60	2611031	99.54	60	120	
Ir (IS)	193	3	HMI He	5808621	3.05	5805625	100.05	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-609220/2-c
Data File Name	215_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:21:03-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609474 6020B
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.566	41.566	ppb	7.866	1496	40	103.9	80	120	
Na	23	3	45	363407.569	363407.569	ppb	1.184	33300950	40	908518.9	80	120	>+/-20%
Mg	24	3	45	698.668	698.668	ppb	0.462	34647	40	1746.7	80	120	>+/-20%
Al	27	3	45	726.351	726.351	ppb	1.256	14472	40	1815.9	80	120	>+/-20%
K	39	3	45	915.648	915.648	ppb	3.341	60256	40	2289.1	80	120	>+/-20%
Ca	40	2	45	885.299	885.299	ppb	2.388	459167	40	2213.2	80	120	>+/-20%
V	51	3	72	38.934	38.934	ppb	0.392	20443	40	97.3	80	120	
Cr	52	3	72	1009.585	1009.585	ppb	0.941	639256	40	2524.0	80	120	>+/-20%
Mn	55	3	72	40.859	40.859	ppb	2.992	14372	40	102.1	80	120	
Fe	56	2	72	792.392	792.392	ppb	2.111	1137744	40	1981.0	80	120	>+/-20%
(Fe)	56	3	72	754.833	754.833	ppb	0.167	433745	40	1887.1	80	120	>+/-20%
Co	59	3	72	39.625	39.625	ppb	2.665	42492	40	99.1	80	120	
Ni	60	3	72	38.605	38.605	ppb	1.381	12169	40	96.5	80	120	
Cu	63	3	72	432.129	432.129	ppb	0.521	353916	40	1080.3	80	120	>+/-20%
Zn	66	3	72	39.760	39.760	ppb	1.650	5665	40	99.4	80	120	
As	75	3	72	627.985	627.985	ppb	0.953	62208	40	1570.0	80	120	>+/-20%
Se	78	2	72	236.236	236.236	ppb	1.732	12408	40	590.6	80	120	>+/-20%
(Se)	78	3	72	229.575	229.575	ppb	7.354	1351	40	573.9	80	120	>+/-20%
Sr	88	3	72	79.034	79.034	ppb	0.756	38356	40	197.6	80	120	>+/-20%
Mo	95	3	115	38.156	38.156	ppb	0.919	16817	40	95.4	80	120	
Ag	107	3	115	224.536	224.536	ppb	1.082	339074	40	561.3	80	120	>+/-20%
Cd	111	3	115	215.229	215.229	ppb	2.729	49309	40	538.1	80	120	>+/-20%
Sn	120	3	115	37.069	37.069	ppb	2.247	26553	40	92.7	80	120	
Sb	121	3	115	37.215	37.215	ppb	1.333	26612	40	93.0	80	120	
Ba	137	3	115	1948.813	1948.813	ppb	1.862	442742	40	4872.0	80	120	>+/-20%
Tl	205	3	193	36.337	36.337	ppb	0.255	134725	40	90.8	80	120	
(Pb)	206	3	193	1011.362	1011.362	ppb	2.766	1259979	40	2528.4	80	120	>+/-20%
(Pb)	207	3	193	943.378	943.378	ppb	1.366	1012335	40	2358.4	80	120	>+/-20%
Pb	208	3	193	993.985	993.985	ppb	1.090	4946230	40	2485.0	80	120	>+/-20%
Th	232	3	193	35.069	35.069	ppb	0.330	180335	40	87.7	80	120	
U	238	3	193	37.511	37.511	ppb	0.745	197053	40	93.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3650356	1.92	3707811	98.45	60	120	
Sc (IS)	45	3	HMI He	511835	0.81	545003	93.91	60	120	
Ge Internal standard	72	2	HMI H2	2151306	2.63	2275339	94.55	60	120	
Ge Internal standard	72	3	HMI He	616535	0.78	672584	91.67	60	120	
In Internal Standard	115	3	HMI He	2535714	1.50	2611031	97.12	60	120	
Ir (IS)	193	3	HMI He	5618968	0.47	5805625	96.78	60	120	

Sample Report

Sample Table

Sample Name	160-49412-a-1-e
Data File Name	216SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:22:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609474 6020B
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.034	ppb	-0.034	-241.16	3	2000	
Na	23	3	45	311559.631	ppb	311559.631	0.70	28251413	400000	
Mg	24	3	45	2522.729	ppb	2522.729	0.69	123325	400000	
Al	27	3	45	85.034	ppb	85.034	15.85	1749	400000	
K	39	3	45	1910.021	ppb	1910.021	0.94	98378	400000	
Ca	40	2	45	13446.943	ppb	13446.943	1.77	6618841	400000	
V	51	3	72	-0.611	ppb	-0.611	-23.84	420	2000	
Cr	52	3	72	0.848	ppb	0.848	9.51	2822	5000	
Mn	55	3	72	48.242	ppb	48.242	2.38	16949	10000	
Fe	56	2	72	92.939	ppb	92.939	5.39	161978	10000	
Co	59	3	72	0.073	ppb	0.073	3.31	113	2000	
Ni	60	3	72	0.355	ppb	0.355	40.91	650	5000	
Cu	63	3	72	6.527	ppb	6.527	2.33	5645	5000	
Zn	66	3	72	110.112	ppb	110.112	1.71	15441	5000	
As	75	3	72	0.049	ppb	0.049	533.10	40	2000	
Se	78	2	72	0.211	ppb	0.211	44.44	13	2000	
Sr	88	3	72	44.738	ppb	44.738	2.30	21748	4000	
Mo	95	3	115	0.058	ppb	0.058	43.44	53	2000	
Ag	107	3	115	0.022	ppb	0.022	18.87	58	100	
Cd	111	3	115	0.804	ppb	0.804	18.10	190	2000	
Sn	120	3	115	0.123	ppb	0.123	89.15	596	2000	
Sb	121	3	115	0.113	ppb	0.113	3.69	110	1000	
Ba	137	3	115	71.123	ppb	71.123	2.62	16244	5000	
Tl	205	3	193	-0.015	ppb	-0.015	-109.33	207	2000	
(Pb)	206	3	193	14.939	ppb	14.939	3.09	18434	100	
(Pb)	207	3	193	15.035	ppb	15.035	1.56	16167	100	
Pb	208	3	193	14.993	ppb	14.993	2.03	74097	5000	
Th	232	3	193	0.975	ppb	0.975	29.40	16404	2000	
U	238	3	193	0.180	ppb	0.180	16.06	2334	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3529286	1.93	3707811	95.19	60	120	
Sc (IS)	45	3	HMI He	506458	0.54	545003	92.93	60	120	
Ge Internal standard	72	2	HMI H2	2093661	2.01	2275339	92.02	60	120	
Ge Internal standard	72	3	HMI He	617369	0.30	672584	91.79	60	120	
In Internal Standard	115	3	HMI He	2545708	2.93	2611031	97.50	60	120	
Ir (IS)	193	3	HMI He	5504603	1.33	5805625	94.81	60	120	

Sample Report

Sample Table

Sample Name	160-49412-a-1-eSD@5
Data File Name	217SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:24:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609474 6020B
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.080	ppb	-0.080	-106.00	2	2000	
Na	23	3	45	62959.695	ppb	62959.695	2.98	5763573	400000	
Mg	24	3	45	516.631	ppb	516.631	1.77	25579	400000	
Al	27	3	45	23.614	ppb	23.614	6.01	547	400000	
K	39	3	45	401.083	ppb	401.083	4.15	39843	400000	
Ca	40	2	45	2880.495	ppb	2880.495	1.79	1420458	400000	
V	51	3	72	-0.788	ppb	-0.788	-10.88	328	2000	
Cr	52	3	72	0.617	ppb	0.617	25.75	2661	5000	
Mn	55	3	72	11.534	ppb	11.534	4.84	4209	10000	
Fe	56	2	72	33.143	ppb	33.143	10.85	81437	10000	
Co	59	3	72	0.034	ppb	0.034	56.81	72	2000	
Ni	60	3	72	0.723	ppb	0.723	15.09	756	5000	
Cu	63	3	72	1.570	ppb	1.570	4.95	1574	5000	
Zn	66	3	72	27.098	ppb	27.098	3.45	3892	5000	
As	75	3	72	0.068	ppb	0.068	237.40	42	2000	
Se	78	2	72	0.055	ppb	0.055	39.42	5	2000	
Sr	88	3	72	9.223	ppb	9.223	3.21	4474	4000	
Mo	95	3	115	0.063	ppb	0.063	49.34	55	2000	
Ag	107	3	115	0.013	ppb	0.013	73.23	43	100	
Cd	111	3	115	0.214	ppb	0.214	29.81	53	2000	
Sn	120	3	115	2.493	ppb	2.493	149.24	2263	2000	
Sb	121	3	115	0.057	ppb	0.057	53.29	68	1000	
Ba	137	3	115	14.736	ppb	14.736	3.95	3327	5000	
Tl	205	3	193	-0.030	ppb	-0.030	-28.79	153	2000	
(Pb)	206	3	193	3.630	ppb	3.630	2.34	4644	100	
(Pb)	207	3	193	3.393	ppb	3.393	5.00	3939	100	
Pb	208	3	193	3.486	ppb	3.486	1.31	18046	5000	
Th	232	3	193	-0.308	ppb	-0.308	-61.77	10394	2000	
U	238	3	193	0.043	ppb	0.043	53.63	1643	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3518096	0.57	3707811	94.88	60	120	
Sc (IS)	45	3	HMI He	510108	1.47	545003	93.60	60	120	
Ge Internal standard	72	2	HMI H2	2100257	1.05	2275339	92.31	60	120	
Ge Internal standard	72	3	HMI He	613921	1.12	672584	91.28	60	120	
In Internal Standard	115	3	HMI He	2501107	2.73	2611031	95.79	60	120	
Ir (IS)	193	3	HMI He	5513062	1.77	5805625	94.96	60	120	

Sample Report

Sample Table

Sample Name	160-49412-a-1-f ms
Data File Name	218SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:26:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609474 6020B
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.078	ppb	38.078	2.76	1363	2000	
Na	23	3	45	292586.873	ppb	292586.873	1.39	27562927	400000	
Mg	24	3	45	3098.073	ppb	3098.073	2.74	157251	400000	
Al	27	3	45	830.446	ppb	830.446	1.62	16997	400000	
K	39	3	45	2543.858	ppb	2543.858	2.17	127852	400000	
Ca	40	2	45	13801.648	ppb	13801.648	1.00	6822642	400000	
V	51	3	72	38.848	ppb	38.848	1.75	21226	2000	
Cr	52	3	72	1001.836	ppb	1001.836	1.16	660046	5000	
Mn	55	3	72	85.075	ppb	85.075	2.41	30869	10000	
Fe	56	2	72	854.266	ppb	854.266	2.28	1231528	10000	
Co	59	3	72	38.726	ppb	38.726	2.90	43201	2000	
Ni	60	3	72	38.920	ppb	38.920	2.53	12760	5000	
Cu	63	3	72	437.407	ppb	437.407	1.32	372743	5000	
Zn	66	3	72	144.619	ppb	144.619	1.75	21024	5000	
As	75	3	72	625.008	ppb	625.008	1.01	64423	2000	
Se	78	2	72	230.531	ppb	230.531	1.85	12186	2000	
Sr	88	3	72	120.028	ppb	120.028	0.74	60601	4000	
Mo	95	3	115	38.343	ppb	38.343	3.55	17076	2000	
Ag	107	3	115	229.694	ppb	229.694	1.94	350522	100	
Cd	111	3	115	218.594	ppb	218.594	2.78	50612	2000	
Sn	120	3	115	37.579	ppb	37.579	2.29	27197	2000	
Sb	121	3	115	38.324	ppb	38.324	2.46	27693	1000	
Ba	137	3	115	2051.822	ppb	2051.822	1.93	471101	5000	
Tl	205	3	193	37.915	ppb	37.915	0.93	140176	2000	
(Pb)	206	3	193	1055.670	ppb	1055.670	2.30	1311397	100	>LDR
(Pb)	207	3	193	984.571	ppb	984.571	1.25	1053630	100	>LDR
Pb	208	3	193	1051.583	ppb	1051.583	2.12	5217815	5000	
Th	232	3	193	35.771	ppb	35.771	1.71	183180	2000	
U	238	3	193	38.724	ppb	38.724	0.72	202809	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3544377	1.67	3707811	95.59	60	120	
Sc (IS)	45	3	HMI He	526096	1.11	545003	96.53	60	120	
Ge Internal standard	72	2	HMI H2	2164671	0.70	2275339	95.14	60	120	
Ge Internal standard	72	3	HMI He	641545	1.03	672584	95.39	60	120	
In Internal Standard	115	3	HMI He	2562815	1.85	2611031	98.15	60	120	
Ir (IS)	193	3	HMI He	5603841	1.63	5805625	96.52	60	120	

Sample Report

Sample Table

Sample Name	160-49412-a-1-g msd
Data File Name	219SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:28:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609474 6020B
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.217	ppb	39.217	5.91	1421	2000	
Na	23	3	45	334006.093	ppb	334006.093	1.93	31600748	400000	
Mg	24	3	45	3394.943	ppb	3394.943	0.89	173103	400000	
Al	27	3	45	831.369	ppb	831.369	3.38	17091	400000	
K	39	3	45	2820.733	ppb	2820.733	1.41	139685	400000	
Ca	40	2	45	15598.646	ppb	15598.646	1.79	7811490	400000	
V	51	3	72	39.542	ppb	39.542	1.64	21744	2000	
Cr	52	3	72	1020.848	ppb	1020.848	0.52	677341	5000	
Mn	55	3	72	91.612	ppb	91.612	0.48	33460	10000	
Fe	56	2	72	893.030	ppb	893.030	2.18	1299824	10000	
Co	59	3	72	38.914	ppb	38.914	2.58	43730	2000	
Ni	60	3	72	39.229	ppb	39.229	2.19	12950	5000	
Cu	63	3	72	444.413	ppb	444.413	0.85	381414	5000	
Zn	66	3	72	158.266	ppb	158.266	1.62	23156	5000	
As	75	3	72	637.026	ppb	637.026	0.93	66132	2000	
Se	78	2	72	231.215	ppb	231.215	1.26	12357	2000	
Sr	88	3	72	128.352	ppb	128.352	0.19	65265	4000	
Mo	95	3	115	38.768	ppb	38.768	2.83	17378	2000	
Ag	107	3	115	230.358	ppb	230.358	1.52	353806	100	
Cd	111	3	115	221.963	ppb	221.963	2.71	51727	2000	
Sn	120	3	115	38.486	ppb	38.486	1.92	28022	2000	
Sb	121	3	115	38.849	ppb	38.849	2.47	28252	1000	
Ba	137	3	115	2092.493	ppb	2092.493	1.00	483550	5000	
Tl	205	3	193	36.947	ppb	36.947	1.12	140868	2000	
(Pb)	206	3	193	1034.980	ppb	1034.980	2.51	1325817	100	>LDR
(Pb)	207	3	193	974.855	ppb	974.855	0.97	1075770	100	>LDR
Pb	208	3	193	1026.320	ppb	1026.320	0.45	5252282	5000	
Th	232	3	193	37.194	ppb	37.194	0.74	195929	2000	
U	238	3	193	38.215	ppb	38.215	1.16	206404	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3591344	1.01	3707811	96.86	60	120	
Sc (IS)	45	3	HMI He	528428	0.62	545003	96.96	60	120	
Ge Internal standard	72	2	HMI H2	2188205	1.37	2275339	96.17	60	120	
Ge Internal standard	72	3	HMI He	646089	0.53	672584	96.06	60	120	
In Internal Standard	115	3	HMI He	2578860	0.43	2611031	98.77	60	120	
Ir (IS)	193	3	HMI He	5778605	1.40	5805625	99.53	60	120	

Sample Report

Sample Table

Sample Name	160-49412-a-1-ePDS
Data File Name	220SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:30:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609474 6020B
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	100.582	ppb	100.582	0.61	3685	2000	
Na	23	3	45	304269.212	ppb	304269.212	1.02	28887073	400000	
Mg	24	3	45	4390.180	ppb	4390.180	0.72	224568	400000	
Al	27	3	45	1947.082	ppb	1947.082	2.30	40050	400000	
K	39	3	45	3857.455	ppb	3857.455	1.69	182486	400000	
Ca	40	2	45	15016.588	ppb	15016.588	0.74	7772015	400000	
V	51	3	72	93.426	ppb	93.426	1.17	52581	2000	
Cr	52	3	72	94.980	ppb	94.980	1.68	68093	5000	
Mn	55	3	72	136.233	ppb	136.233	1.55	51847	10000	
Fe	56	2	72	1071.935	ppb	1071.935	2.02	1602213	10000	
Co	59	3	72	93.061	ppb	93.061	0.75	109177	2000	
Ni	60	3	72	91.324	ppb	91.324	2.41	30700	5000	
Cu	63	3	72	101.577	ppb	101.577	0.92	91319	5000	
Zn	66	3	72	293.764	ppb	293.764	1.12	44757	5000	
As	75	3	72	97.798	ppb	97.798	2.63	10637	2000	
Se	78	2	72	96.527	ppb	96.527	5.10	5325	2000	
Sr	88	3	72	138.750	ppb	138.750	1.49	73693	4000	
Mo	95	3	115	94.325	ppb	94.325	1.33	43488	2000	
Ag	107	3	115	24.438	ppb	24.438	1.08	38668	100	
Cd	111	3	115	91.669	ppb	91.669	0.54	22000	2000	
Sn	120	3	115	94.227	ppb	94.227	1.43	69864	2000	
Sb	121	3	115	90.789	ppb	90.789	1.30	67937	1000	
Ba	137	3	115	164.854	ppb	164.854	2.38	39242	5000	
Tl	205	3	193	91.470	ppb	91.470	1.08	352768	2000	
(Pb)	206	3	193	102.791	ppb	102.791	1.31	133565	100	
(Pb)	207	3	193	106.760	ppb	106.760	1.95	119658	100	
Pb	208	3	193	104.136	ppb	104.136	0.61	540646	5000	
Th	232	3	193	101.132	ppb	101.132	1.17	517919	2000	
U	238	3	193	189.184	ppb	189.184	1.01	1028867	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3711243	1.52	3707811	100.09	60	120	
Sc (IS)	45	3	HMI He	530273	0.38	545003	97.30	60	120	
Ge Internal standard	72	2	HMI H2	2258495	1.10	2275339	99.26	60	120	
Ge Internal standard	72	3	HMI He	674896	0.46	672584	100.34	60	120	
In Internal Standard	115	3	HMI He	2655167	1.20	2611031	101.69	60	120	
Ir (IS)	193	3	HMI He	5851809	0.44	5805625	100.80	60	120	

Sample Report

Sample Table

Sample Name	160-49412-a-2-d
Data File Name	221SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:31:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609474 6020B
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.083	ppb	-0.083	-96.16	2	2000	
Na	23	3	45	328317.652	ppb	328317.652	1.55	31478857	400000	
Mg	24	3	45	9959.752	ppb	9959.752	1.37	514318	400000	
Al	27	3	45	21.768	ppb	21.768	12.48	537	400000	
K	39	3	45	491.233	ppb	491.233	7.61	45539	400000	
Ca	40	2	45	37412.880	ppb	37412.880	0.94	19192056	400000	
V	51	3	72	-0.771	ppb	-0.771	-9.68	356	2000	
Cr	52	3	72	1.075	ppb	1.075	13.77	3124	5000	
Mn	55	3	72	141.711	ppb	141.711	1.50	51951	10000	
Fe	56	2	72	40.493	ppb	40.493	9.19	95902	10000	
Co	59	3	72	0.864	ppb	0.864	5.03	1013	2000	
Ni	60	3	72	3.363	ppb	3.363	9.15	1639	5000	
Cu	63	3	72	3.713	ppb	3.713	1.12	3517	5000	
Zn	66	3	72	160.334	ppb	160.334	1.86	23608	5000	
As	75	3	72	0.203	ppb	0.203	93.89	58	2000	
Se	78	2	72	0.236	ppb	0.236	22.56	15	2000	
Sr	88	3	72	46.579	ppb	46.579	2.29	23852	4000	
Mo	95	3	115	0.235	ppb	0.235	38.69	133	2000	
Ag	107	3	115	0.031	ppb	0.031	60.13	72	100	
Cd	111	3	115	1.717	ppb	1.717	18.73	403	2000	
Sn	120	3	115	0.344	ppb	0.344	14.77	760	2000	
Sb	121	3	115	0.473	ppb	0.473	8.53	371	1000	
Ba	137	3	115	134.861	ppb	134.861	1.96	31086	5000	
Tl	205	3	193	0.003	ppb	0.003	109.76	285	2000	
(Pb)	206	3	193	160.925	ppb	160.925	1.50	205649	100	
(Pb)	207	3	193	146.681	ppb	146.681	1.33	161625	100	
Pb	208	3	193	150.799	ppb	150.799	1.38	769865	5000	
Th	232	3	193	2.089	ppb	2.089	13.57	22651	2000	
U	238	3	193	0.106	ppb	0.106	16.04	2051	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3681089	0.98	3707811	99.28	60	120	
Sc (IS)	45	3	HMI He	535631	1.67	545003	98.28	60	120	
Ge Internal standard	72	2	HMI H2	2205535	1.35	2275339	96.93	60	120	
Ge Internal standard	72	3	HMI He	650266	0.99	672584	96.68	60	120	
In Internal Standard	115	3	HMI He	2570562	1.59	2611031	98.45	60	120	
Ir (IS)	193	3	HMI He	5758600	1.61	5805625	99.19	60	120	

Sample Report

Sample Table

Sample Name	160-49412-a-3-d
Data File Name	222SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:33:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609474 6020B
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.083	ppb	-0.083	-94.04	2	2000	
Na	23	3	45	327043.088	ppb	327043.088	1.57	31457772	400000	
Mg	24	3	45	1317.642	ppb	1317.642	2.74	68413	400000	
Al	27	3	45	347.390	ppb	347.390	14.44	7299	400000	
K	39	3	45	1440.568	ppb	1440.568	2.25	84981	400000	
Ca	40	2	45	12102.610	ppb	12102.610	0.40	6287771	400000	
V	51	3	72	-0.015	ppb	-0.015	-73.48	771	2000	
Cr	52	3	72	1.096	ppb	1.096	29.77	3180	5000	
Mn	55	3	72	99.926	ppb	99.926	1.70	37221	10000	
Fe	56	2	72	375.009	ppb	375.009	0.74	595236	10000	
Co	59	3	72	0.409	ppb	0.409	1.79	506	2000	
Ni	60	3	72	2.080	ppb	2.080	12.62	1249	5000	
Cu	63	3	72	7.313	ppb	7.313	1.08	6718	5000	
Zn	66	3	72	64.160	ppb	64.160	0.87	9677	5000	
As	75	3	72	0.951	ppb	0.951	6.59	138	2000	
Se	78	2	72	0.023	ppb	0.023	234.24	3	2000	
Sr	88	3	72	29.021	ppb	29.021	3.78	15073	4000	
Mo	95	3	115	0.055	ppb	0.055	119.20	53	2000	
Ag	107	3	115	0.015	ppb	0.015	44.97	48	100	
Cd	111	3	115	1.028	ppb	1.028	23.67	248	2000	
Sn	120	3	115	0.105	ppb	0.105	78.58	601	2000	
Sb	121	3	115	0.248	ppb	0.248	10.41	213	1000	
Ba	137	3	115	51.214	ppb	51.214	1.34	12066	5000	
Tl	205	3	193	-0.026	ppb	-0.026	-11.79	178	2000	
(Pb)	206	3	193	28.518	ppb	28.518	1.89	36838	100	
(Pb)	207	3	193	28.638	ppb	28.638	0.57	32058	100	
Pb	208	3	193	28.490	ppb	28.490	2.16	147195	5000	
Th	232	3	193	-0.077	ppb	-0.077	-196.73	12058	2000	
U	238	3	193	0.100	ppb	0.100	3.71	2032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3724266	0.82	3707811	100.44	60	120	
Sc (IS)	45	3	HMI He	537358	1.77	545003	98.60	60	120	
Ge Internal standard	72	2	HMI H2	2294063	0.99	2275339	100.82	60	120	
Ge Internal standard	72	3	HMI He	659397	0.98	672584	98.04	60	120	
In Internal Standard	115	3	HMI He	2623810	1.62	2611031	100.49	60	120	
Ir (IS)	193	3	HMI He	5793531	1.57	5805625	99.79	60	120	

Sample Report

Sample Table

Sample Name	160-49412-a-4-d
Data File Name	223SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:35:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609474 6020B
ISTD Ref FileName	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.128	ppb	-0.128	0.00	0	2000	
Na	23	3	45	299764.931	ppb	299764.931	1.60	29083105	400000	
Mg	24	3	45	1092.114	ppb	1092.114	0.82	57232	400000	
Al	27	3	45	76.382	ppb	76.382	5.49	1688	400000	
K	39	3	45	999.887	ppb	999.887	5.34	67305	400000	
Ca	40	2	45	12808.500	ppb	12808.500	2.78	6608998	400000	
V	51	3	72	-0.534	ppb	-0.534	-7.83	486	2000	
Cr	52	3	72	0.798	ppb	0.798	25.15	2959	5000	
Mn	55	3	72	78.134	ppb	78.134	2.26	28954	10000	
Fe	56	2	72	173.739	ppb	173.739	2.23	290877	10000	
Co	59	3	72	0.320	ppb	0.320	8.18	401	2000	
Ni	60	3	72	1.191	ppb	1.191	14.97	956	5000	
Cu	63	3	72	5.922	ppb	5.922	0.87	5462	5000	
Zn	66	3	72	71.511	ppb	71.511	2.80	10691	5000	
As	75	3	72	0.468	ppb	0.468	72.44	87	2000	
Se	78	2	72	0.086	ppb	0.086	24.81	7	2000	
Sr	88	3	72	30.037	ppb	30.037	1.86	15491	4000	
Mo	95	3	115	0.055	ppb	0.055	100.03	55	2000	
Ag	107	3	115	0.018	ppb	0.018	16.63	55	100	
Cd	111	3	115	0.920	ppb	0.920	22.71	228	2000	
Sn	120	3	115	0.133	ppb	0.133	53.81	636	2000	
Sb	121	3	115	0.167	ppb	0.167	20.09	157	1000	
Ba	137	3	115	48.665	ppb	48.665	0.28	11731	5000	
Tl	205	3	193	-0.027	ppb	-0.027	-51.31	170	2000	
(Pb)	206	3	193	65.967	ppb	65.967	1.28	83596	100	
(Pb)	207	3	193	63.838	ppb	63.838	1.02	69869	100	
Pb	208	3	193	65.007	ppb	65.007	1.53	329235	5000	
Th	232	3	193	-0.624	ppb	-0.624	-21.70	9209	2000	
U	238	3	193	0.087	ppb	0.087	12.67	1928	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3700176	2.17	3707811	99.79	60	120	
Sc (IS)	45	3	HMI He	541928	0.87	545003	99.44	60	120	
Ge Internal standard	72	2	HMI H2	2246133	2.06	2275339	98.72	60	120	
Ge Internal standard	72	3	HMI He	654741	0.88	672584	97.35	60	120	
In Internal Standard	115	3	HMI He	2683900	0.41	2611031	102.79	60	120	
Ir (IS)	193	3	HMI He	5702751	2.61	5805625	98.23	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7695093
Data File Name	224_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:37:18-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.881	ppb	8.550	1914	50	105.8	90	110	
Na	23	3	45	48483.102	ppb	0.851	4679222	51000	95.1	90	110	
Mg	24	3	45	10193.268	ppb	0.117	527926	11000	92.7	90	110	
Al	27	3	45	969.230	ppb	2.475	20238	1000	96.9	90	110	
K	39	3	45	10460.724	ppb	1.758	457817	11000	95.1	90	110	
Ca	40	2	45	10776.255	ppb	1.270	5560241	11000	98.0	90	110	
V	51	3	72	48.655	ppb	0.786	27216	50	97.3	90	110	
Cr	52	3	72	50.421	ppb	2.147	36580	50	100.8	90	110	
Mn	55	3	72	48.992	ppb	3.505	18436	50	98.0	90	110	
Fe	56	2	72	1003.153	ppb	3.526	1512310	1000	100.3	90	110	
Co	59	3	72	49.578	ppb	2.452	57022	50	99.2	90	110	
Ni	60	3	72	49.279	ppb	2.003	16505	50	98.6	90	110	
Cu	63	3	72	49.112	ppb	1.133	43440	50	98.2	90	110	
Zn	66	3	72	47.942	ppb	4.679	7293	50	95.9	90	110	
As	75	3	72	51.111	ppb	2.028	5468	50	102.2	90	110	
Se	78	2	72	49.209	ppb	1.328	2735	50	98.4	90	110	
Sr	88	3	72	99.850	ppb	1.439	51986	100	99.9	90	110	
Mo	95	3	115	48.560	ppb	3.542	22648	50	97.1	90	110	
Ag	107	3	115	48.449	ppb	1.112	77480	50	96.9	90	110	
Cd	111	3	115	46.624	ppb	1.794	11314	50	93.2	90	110	
Sn	120	3	115	47.849	ppb	1.547	36133	50	95.7	90	110	
Sb	121	3	115	48.396	ppb	0.666	36629	50	96.8	90	110	
Ba	137	3	115	49.328	ppb	2.116	11891	50	98.7	90	110	
Tl	205	3	193	49.109	ppb	1.285	184708	50	98.2	90	110	
(Pb)	206	3	193	49.366	ppb	2.999	62618	50	98.7	90	110	
(Pb)	207	3	193	49.027	ppb	2.647	53750	50	98.1	90	110	
Pb	208	3	193	48.931	ppb	2.485	248110	50	97.9	90	110	
Th	232	3	193	48.531	ppb	1.289	248577	50	97.1	90	110	
U	238	3	193	49.429	ppb	0.979	263056	50	98.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3698357	1.33	3707811	99.75	60	120	
Sc (IS)	45	3	HMI He	537142	0.72	545003	98.56	60	120	
Ge Internal standard	72	2	HMI H2	2274649	1.52	2275339	99.97	60	120	
Ge Internal standard	72	3	HMI He	661561	1.24	672584	98.36	60	120	
In Internal Standard	115	3	HMI He	2684239	0.47	2611031	102.80	60	120	
Ir (IS)	193	3	HMI He	5703007	0.88	5805625	98.23	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7695087
Data File Name	225_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T23:39:05-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	133CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.082	ppb	-97.1	2	0.5	
Na	23	3	45	98.998	ppb	3.9	29470	25	>RL
Mg	24	3	45	-0.364	ppb	-144.7	170	25	
Al	27	3	45	0.649	ppb	123.5	100	15	
K	39	3	45	-6.673	ppb	-439.0	25369	50	
V	51	3	72	-0.967	ppb	-7.3	262	1	
Cr	52	3	72	0.286	ppb	92.7	2697	1	
Mn	55	3	72	-0.064	ppb	-89.6	237	0.5	
Co	59	3	72	0.014	ppb	91.8	55	0.5	
Ni	60	3	72	-0.042	ppb	-666.8	580	1	
Cu	63	3	72	-0.033	ppb	-190.5	295	1	
Zn	66	3	72	0.039	ppb	625.6	172	5	
As	75	3	72	-0.016	ppb	-324.2	37	1	
Se	78	2	72	0.142	ppb	74.6	10	1	
Sr	88	3	72	0.016	ppb	34.7	28	0.5	
Mo	95	3	115	0.073	ppb	19.7	63	0.5	
Ag	107	3	115	0.007	ppb	97.0	37	1	
Cd	111	3	115	0.006	ppb	509.9	7	0.5	
Sn	120	3	115	0.100	ppb	66.1	611	1	
Sb	121	3	115	0.043	ppb	35.4	63	0.6	
Ba	137	3	115	0.136	ppb	40.8	60	0.5	
Tl	205	3	193	-0.023	ppb	-32.9	188	0.1	
(Pb)	206	3	193	-0.005	ppb	-111.1	213	1	
(Pb)	207	3	193	-0.032	ppb	-229.4	350	1	
Pb	208	3	193	-0.007	ppb	-242.8	1046	0.5	
Th	232	3	193	0.710	ppb	26.0	16026	1	
U	238	3	193	0.009	ppb	338.6	1546	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3688242	0.77	3707811	99.47	60	120	
Sc (IS)	45	3	HMI He	542853	0.58	545003	99.61	60	120	
Ge Internal standard	72	2	HMI H2	2296021	1.57	2275339	100.91	60	120	
Ge Internal standard	72	3	HMI He	675138	0.36	672584	100.38	60	120	
In Internal Standard	115	3	HMI He	2678394	1.48	2611031	102.58	60	120	
Ir (IS)	193	3	HMI He	5821610	2.14	5805625	100.28	60	120	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG No.:

Project: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID	Lab Sample ID
RW-1-20230413	280-175122-1
MP-2-20230411	280-175122-2
MW-118D-20230412	280-175122-3

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: RW-1-20230413 Lab Sample ID: 280-175122-1

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG ID.:

Matrix: Water Date Sampled: 04/13/2023 15:20

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	2.8	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	2.3	0.50	0.090	mg/L		H H3	1	9056A
16887-00-6	Chloride	350	60	20	mg/L			20	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L		H H3	1	9056A
14808-79-8	Sulfate	110	100	21	mg/L			20	9056A
7440-44-0	Total Organic Carbon - Duplicates	5.1	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MP-2-20230411 Lab Sample ID: 280-175122-2

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG ID.:

Matrix: Water Date Sampled: 04/11/2023 14:40

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	2.1	0.50	0.23	mg/L		F1	1	9056A
14797-55-8	Nitrate as N	2.2	0.50	0.090	mg/L		H H3	1	9056A
16887-00-6	Chloride	310	30	10	mg/L			10	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L		H H3	1	9056A
14808-79-8	Sulfate	120	50	10	mg/L			10	9056A
7440-44-0	Total Organic Carbon - Duplicates	3.9	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-118D-20230412 Lab Sample ID: 280-175122-3

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG ID.:

Matrix: Water Date Sampled: 04/12/2023 17:05

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	3.8	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	2.2	0.50	0.090	mg/L		H H3	1	9056A
16887-00-6	Chloride	640	60	20	mg/L			20	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L		H H3	1	9056A
14808-79-8	Sulfate	80	5.0	1.0	mg/L			1	9056A
7440-44-0	Total Organic Carbon - Duplicates	11	1.0	0.35	mg/L			1	9060A

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Analyst: EJS Batch Start Date: 04/03/2023

Reporting Units: mg/L Analytical Batch No.: 607366

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	17:54	Bromide	1.92	2.00	96	90-110		IC ICV 5_00402
			Chloride	84.5	80.0	106	90-110		Cl ICV Std_00006
			Sulfate	85.7	80.0	107	90-110		IC SO4 ICV_00024
8	ICB	18:06	Bromide	ND					
			Chloride	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Analyst: EJS Batch Start Date: 04/12/2023

Reporting Units: mg/L Analytical Batch No.: 608435

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	15:34	Nitrate as N	2.15	2.00	107	90-110		IC ICV 5_00403
			Nitrite as N	2.12	2.00	106	90-110		IC ICV 5_00403
8	ICB	15:49	Nitrate as N	ND					
			Nitrite as N	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Analyst: EJS Batch Start Date: 04/12/2023

Reporting Units: mg/L Analytical Batch No.: 608436

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	15:34	Bromide	2.01	2.00	101	90-110		IC ICV 5_00403
			Chloride	85.7	80.0	107	90-110		Cl ICV Std_00006
			Sulfate	86.9	80.0	109	90-110		IC SO4 ICV_00024
8	ICB	15:49	Bromide	ND					
			Chloride	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Analyst: MEC Batch Start Date: 04/17/2023

Reporting Units: mg/L Analytical Batch No.: 608955

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	12:13	Nitrate as N	2.39	2.50	96	90-110		IC LCS_01947
			Nitrite as N	2.43	2.50	97	90-110		IC LCS_01947
2	CCB	12:28	Nitrate as N	ND					
			Nitrite as N	ND					
17	CCV	16:13	Nitrate as N	2.41	2.50	96	90-110		IC LCS_01947
			Nitrite as N	2.42	2.50	97	90-110		IC LCS_01947
18	CCB	16:28	Nitrate as N	ND					
			Nitrite as N	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Analyst: MEC Batch Start Date: 04/17/2023

Reporting Units: mg/L Analytical Batch No.: 608956

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	12:13	Chloride	50.5	50.0	101	90-110		IC LCS_01947
			Sulfate	50.2	50.0	100	90-110		IC LCS_01947
2	CCB	12:28	Chloride	ND					
			Sulfate	ND					
17	CCV	16:13	Chloride	51.1	50.0	102	90-110		IC LCS_01947
			Sulfate	50.7	50.0	101	90-110		IC LCS_01947
18	CCB	16:28	Chloride	ND					
			Sulfate	ND					
29	CCV	19:14	Chloride	50.8	50.0	102	90-110		IC LCS_01947
			Sulfate	49.9	50.0	100	90-110		IC LCS_01947
30	CCB	19:29	Chloride	ND					
			Sulfate	ND					
41	CCV	22:14	Chloride	51.0	50.0	102	90-110		IC LCS_01947
			Sulfate	50.1	50.0	100	90-110		IC LCS_01947
42	CCB	22:29	Chloride	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Analyst: EJS Batch Start Date: 04/29/2023

Reporting Units: mg/L Analytical Batch No.: 610654

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
41	CCV	21:22	Bromide	2.38	2.50	95	90-110		IC LCS_01950
42	CCB	21:34	Bromide	ND					
53	CCV	23:46	Bromide	2.27	2.50	91	90-110		IC LCS_01950
54	CCB	23:58	Bromide	ND					
65	CCV	02:09	Bromide	2.30	2.50	92	90-110		IC LCS_01950
66	CCB	02:21	Bromide	ND					
77	CCV	04:33	Bromide	2.32	2.50	93	90-110		IC LCS_01950
78	CCB	04:44	Bromide	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Analyst: ABW Batch Start Date: 04/21/2023

Reporting Units: mg/L Analytical Batch No.: 609838

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	15:01	Total Organic Carbon - Duplicates	19.7	20.0	98	90-110		TOC ICV Std_00051
2	ICB	15:16	Total Organic Carbon - Duplicates	ND					
15	CCV	18:27	Total Organic Carbon - Duplicates	24.3	25.0	97	90-110		TOC LCS Std_00057
16	CCB	18:43	Total Organic Carbon - Duplicates	ND					
27	CCV	21:27	Total Organic Carbon - Duplicates	24.2	25.0	97	90-110		TOC LCS Std_00057
28	CCB	21:43	Total Organic Carbon - Duplicates	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 608955 Date: 04/17/2023 13:28							
9056A	MB 280-608955/6	Nitrate as N	ND		mg/L	0.50	1
9056A	MB 280-608955/6	Nitrite as N	ND		mg/L	0.50	1
Batch ID: 608956 Date: 04/17/2023 13:28							
9056A	MB 280-608956/6	Chloride	ND		mg/L	3.0	1
9056A	MB 280-608956/6	Sulfate	ND		mg/L	5.0	1
Batch ID: 610654 Date: 04/29/2023 22:58							
9056A	MB 280-610654/49	Bromide	ND		mg/L	0.50	1
Batch ID: 609838 Date: 04/21/2023 15:46							
9060A	MB 280-609838/4	Total Organic Carbon - Duplicates	ND		mg/L	1.0	1
9060A	MB 280-609838/4	TOC Result 2	ND		mg/L	1.0	1
9060A	MB 280-609838/4	TOC Result 1	ND		mg/L	1.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 610654 Date: 04/30/2023 02:57											
9056A	280-175122-2	Bromide	2.1		mg/L						F1
9056A	280-175122-2 MS	Bromide	5.27		mg/L	5.00	63	80-120			E F1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 610654 Date: 04/30/2023 03:09											
9056A	280-175122-2 MSD	Bromide	5.20		mg/L	5.00	61	80-120	1	20	E F1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 610654 Date: 04/30/2023 02:45								
9056A	MP-2-20230411	280-175122-2	Bromide	2.1	mg/L			
9056A	MP-2-20230411	280-175122-2 DU	Bromide	2.31	mg/L	8	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608955	Date: 04/17/2023 12:58										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608955/4	Nitrate as N	2.39		mg/L	2.50	96	90-110	0	10	
9056A	LCS 280-608955/4	Nitrite as N	2.44		mg/L	2.50	97	90-110	1	10	
Batch ID: 608956	Date: 04/17/2023 12:58										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608956/4	Chloride	50.4		mg/L	50.0	101	90-110	0	10	
9056A	LCS 280-608956/4	Sulfate	49.8		mg/L	50.0	100	90-110	0	10	
Batch ID: 610654	Date: 04/29/2023 22:34										
						LCS Source: IC LCS_01950					
9056A	LCS 280-610654/47	Bromide	2.37		mg/L	2.50	95	90-110	3	10	
Batch ID: 609838	Date: 04/21/2023 15:30										
						LCS Source: TOC LCS Std_00057					
9060A	LCS 280-609838/3	Total Organic Carbon - Duplicates	24.5		mg/L	25.0	98	88-112			
9060A	LCS 280-609838/3	TOC Result 2	24.8		mg/L	25.0	99	88-112			
9060A	LCS 280-609838/3	TOC Result 1	24.2		mg/L	25.0	97	88-112			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608955	Date: 04/17/2023 13:13										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608955/5	Nitrate as N	2.39		mg/L	2.50	95	90-110	0	10	
9056A	LCSD 280-608955/5	Nitrite as N	2.42		mg/L	2.50	97	90-110	1	10	
Batch ID: 608956	Date: 04/17/2023 13:13										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608956/5	Chloride	50.4		mg/L	50.0	101	90-110	0	10	
9056A	LCSD 280-608956/5	Sulfate	49.9		mg/L	50.0	100	90-110	0	10	
Batch ID: 610654	Date: 04/29/2023 22:46										
						LCSD Source: IC LCS_01950					
9056A	LCSD 280-610654/48	Bromide	2.29		mg/L	2.50	92	90-110	3	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608955	Date: 04/17/2023 12:43										
						LCS Source: IC Cal low_00703					
9056A	MRL 280-608955/3	Nitrate as N	0.233	J	mg/L	0.250	93	50-150			
9056A	MRL 280-608955/3	Nitrite as N	0.236	J	mg/L	0.250	94	50-150			
Batch ID: 608956	Date: 04/17/2023 12:43										
						LCS Source: IC CAL cl/so4_00475					
9056A	MRL 280-608956/3	Chloride	2.40	J	mg/L	2.50	96	50-150			
9056A	MRL 280-608956/3	Sulfate	2.39	J	mg/L	2.50	95	50-150			
Batch ID: 610654	Date: 04/29/2023 13:48										
						LCS Source: IC Cal low_00706					
9056A	MRL 280-610654/3	Bromide	ND		mg/L	0.250	86	50-150			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

16A-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.: Analysis Batch No.: 607366

Instrument ID: WC_IonChrom15 Calibration ID: 78779

Start Date: 04/03/2023 16:42 End Date: 04/03/2023 17:42

Analytical Method: 9056A

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Bromide	1.0000	1120000	-10600	WLR	Inverse Conc

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.: Analysis Batch No.: 607366

Instrument ID: WC_IonChrom15 Calibration ID: 78779

Start Date: 04/03/2023 16:42 End Date: 04/03/2023 17:42

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Bromide				0.20	0.21	3	0.50	0.50	-1

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.: Analysis Batch No.: 607366

Instrument ID: WC_IonChrom15 Calibration ID: 78779

Start Date: 04/03/2023 16:42 End Date: 04/03/2023 17:42

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Bromide	1.0	0.98	-2	2.5	2.5	-2	5.0	5.1	1

16A-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.: Analysis Batch No.: 608435

Instrument ID: WC_IonChrom10 Calibration ID: 79245

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Nitrate as N	0.9995	45900000	-1630000	WLR	Inverse Conc
Nitrite as N	1.0000	46400000	-1280000	WLR	Inverse Conc

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.: Analysis Batch No.: 608435

Instrument ID: WC_IonChrom10 Calibration ID: 79245

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Nitrate as N				0.20	0.22	10	0.50	0.47	-6
Nitrite as N				0.20	0.20	1	0.50	0.49	-1

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.: Analysis Batch No.: 608435

Instrument ID: WC_IonChrom10 Calibration ID: 79245

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Nitrate as N	1.0	0.95	-5	2.5	2.5	0	5.0	5.1	1
Nitrite as N	1.0	0.99	-1	2.5	2.5	1	5.0	5.0	0

16A-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.: Analysis Batch No.: 608436

Instrument ID: WC_IonChrom10 Calibration ID: 79246

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Chloride	1.0000	19200000	-2630000	WLR	Inverse Conc
Sulfate	1.0000	13800000	-1280000	WLR	Inverse Conc

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.: Analysis Batch No.: 608436

Instrument ID: WC_IonChrom10 Calibration ID: 79246

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Chloride	0.50	0.53	5	1.3	1.2	-3	2.5	2.4	-3
Sulfate	0.50	0.60	20	1.3	1.1	-9	2.5	2.2	-11

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175122-1

SDG No.: Analysis Batch No.: 608436

Instrument ID: WC_IonChrom10 Calibration ID: 79246

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Chloride	30.0	30.1	0	60.0	60.0	0	100	100	0
Sulfate	30.0	29.8	-1	60.0	60.1	0	100	100	0

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A MDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		3	1.02
Nitrate as N		0.5	0.0901
Nitrite as N		0.5	0.049
Sulfate		5	1.03

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		3	1.02
Nitrate as N		0.5	0.0901
Nitrite as N		0.5	0.0494
Sulfate		5	1.03

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom15

Method: 9056A MDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.233

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom15

Method: 9056A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.233

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI7

Method: 9060A MDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Organic Carbon - Duplicates		1	0.345

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175122-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI7

Method: 9060A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Organic Carbon - Duplicates		1	0.345

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/12/2023 14:04 End Date: 04/13/2023 17:51

Lab Sample Id	D/F	Type	Time	Analytes																										
				NO2-N	NO3																									
STD 280-608435/1 IC	1		14:04	X	X																									
STD 280-608435/2 IC	1		14:19	X	X																									
STD 280-608435/3 IC	1		14:34	X	X																									
STD 280-608435/4 IC	1		14:49	X	X																									
STD 280-608435/5 IC	1		15:04	X	X																									
STD 280-608435/6 IC	1		15:19	X	X																									
ICV 280-608435/7	1		15:34	X	X																									
ICB 280-608435/8	1		15:49	X	X																									
RTC 280-608435/9			16:04																											
ZZZZZZ			16:19																											
ZZZZZZ			16:34																											
ZZZZZZ			16:49																											
ZZZZZZ			17:04																											
ZZZZZZ			17:20																											
ZZZZZZ			17:36																											
ZZZZZZ			13:39																											
ZZZZZZ			13:54																											
ZZZZZZ			14:09																											
ZZZZZZ			14:24																											
ZZZZZZ			14:39																											
ZZZZZZ			14:54																											
ZZZZZZ			15:09																											
ZZZZZZ			15:24																											
CCV 280-608435/24			15:54																											
CCB 280-608435/25			17:51																											

Prep Types:
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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/12/2023 14:04 End Date: 04/13/2023 17:51

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
STD 280-608436/1 IC	1		14:04	X	X	X																								
STD 280-608436/2 IC	1		14:19	X	X	X																								
STD 280-608436/3 IC	1		14:34	X	X	X																								
STD 280-608436/4 IC	1		14:49	X	X	X																								
STD 280-608436/5 IC	1		15:04	X	X	X																								
STD 280-608436/6 IC	1		15:19	X	X	X																								
ICV 280-608436/7	1		15:34	X	X	X																								
ICB 280-608436/8	1		15:49	X	X	X																								
RTC 280-608436/9			16:04																											
ZZZZZZ			16:19																											
ZZZZZZ			16:34																											
ZZZZZZ			16:49																											
ZZZZZZ			17:04																											
ZZZZZZ			17:20																											
ZZZZZZ			17:36																											
ZZZZZZ			13:39																											
ZZZZZZ			13:54																											
ZZZZZZ			14:09																											
ZZZZZZ			14:24																											
ZZZZZZ			14:39																											
ZZZZZZ			14:54																											
ZZZZZZ			15:09																											
ZZZZZZ			15:24																											
CCV 280-608436/24			15:54																											
CCB 280-608436/25			17:51																											

Prep Types:
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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																										
				NO2-N	NO3																										
CCV 280-608955/1	1		12:13	X	X																										
CCB 280-608955/2	1		12:28	X	X																										
MRL 280-608955/3	1	T	12:43	X	X																										
LCS 280-608955/4	1	T	12:58	X	X																										
LCSD 280-608955/5	1	T	13:13	X	X																										
MB 280-608955/6	1	T	13:28	X	X																										
280-175122-1	1	T	13:43	X	X																										
ZZZZZZ			13:58																												
280-175122-2	1	T	14:13	X	X																										
ZZZZZZ			14:28																												
280-175122-3	1	T	14:43	X	X																										
ZZZZZZ			14:58																												
ZZZZZZ			15:13																												
ZZZZZZ			15:28																												
ZZZZZZ			15:43																												
ZZZZZZ			15:58																												
CCV 280-608955/17	1		16:13	X	X																										
CCB 280-608955/18	1		16:28	X	X																										
ZZZZZZ			16:43																												
ZZZZZZ			16:58																												
ZZZZZZ			17:13																												
ZZZZZZ			17:29																												
ZZZZZZ			17:44																												
ZZZZZZ			17:59																												
ZZZZZZ			18:14																												
ZZZZZZ			18:29																												
ZZZZZZ			18:44																												
ZZZZZZ			18:59																												
CCV 280-608955/29			19:14																												
CCB 280-608955/30			19:29																												
ZZZZZZ			19:44																												
ZZZZZZ			19:59																												
ZZZZZZ			20:14																												
ZZZZZZ			20:29																												
ZZZZZZ			20:59																												
ZZZZZZ			21:59																												
CCV 280-608955/41			22:14																												
CCB 280-608955/42			22:29																												
ZZZZZZ			23:29																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																									
				NO2-N	NO3																								
ZZZZZZ			23:44																										
ZZZZZZ			23:59																										
ZZZZZZ			00:14																										
CCV 280-608955/53			01:14																										
CCB 280-608955/54			01:29																										
ZZZZZZ			03:14																										
ZZZZZZ			03:29																										
ZZZZZZ			03:44																										
CCV 280-608955/65			04:14																										
CCB 280-608955/66			04:29																										
ZZZZZZ			06:30																										
ZZZZZZ			06:45																										
ZZZZZZ			07:00																										
CCV 280-608955/77			07:15																										
CCB 280-608955/78			07:30																										
ZZZZZZ			07:45																										
CCV 280-608955/84			09:00																										
CCB 280-608955/85			09:15																										

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																										
				Cl-	SO4																									
CCV 280-608956/1	1		12:13	X	X																									
CCB 280-608956/2	1		12:28	X	X																									
MRL 280-608956/3	1	T	12:43	X	X																									
LCS 280-608956/4	1	T	12:58	X	X																									
LCSD 280-608956/5	1	T	13:13	X	X																									
MB 280-608956/6	1	T	13:28	X	X																									
ZZZZZZ			13:43																											
280-175122-1	20	T	13:58	X	X																									
ZZZZZZ			14:13																											
280-175122-2	10	T	14:28	X	X																									
280-175122-3	1	T	14:43		X																									
280-175122-3	20	T	14:58	X																										
ZZZZZZ			15:13																											
ZZZZZZ			15:28																											
ZZZZZZ			15:43																											
ZZZZZZ			15:58																											
CCV 280-608956/17	1		16:13	X	X																									
CCB 280-608956/18	1		16:28	X	X																									
ZZZZZZ			16:43																											
ZZZZZZ			16:58																											
ZZZZZZ			17:13																											
ZZZZZZ			17:29																											
ZZZZZZ			17:44																											
ZZZZZZ			17:59																											
ZZZZZZ			18:14																											
ZZZZZZ			18:29																											
ZZZZZZ			18:44																											
ZZZZZZ			18:59																											
CCV 280-608956/29	1		19:14	X	X																									
CCB 280-608956/30	1		19:29	X	X																									
ZZZZZZ			19:44																											
ZZZZZZ			19:59																											
ZZZZZZ			20:14																											
ZZZZZZ			20:29																											
ZZZZZZ			20:44																											
ZZZZZZ			20:59																											
ZZZZZZ			21:14																											
ZZZZZZ			21:29																											
ZZZZZZ			21:44																											
ZZZZZZ			21:59																											
CCV 280-608956/41	1		22:14	X	X																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																									
				CL-	SO4																								
CCB 280-608956/42	1		22:29	X	X																								
ZZZZZZ			22:44																										
ZZZZZZ			22:59																										
ZZZZZZ			23:14																										
ZZZZZZ			23:29																										
ZZZZZZ			23:44																										
ZZZZZZ			23:59																										
ZZZZZZ			00:14																										
ZZZZZZ			00:29																										
ZZZZZZ			00:44																										
ZZZZZZ			00:59																										
CCV 280-608956/53			01:14																										
CCB 280-608956/54			01:29																										
ZZZZZZ			01:44																										
ZZZZZZ			01:59																										
ZZZZZZ			02:14																										
ZZZZZZ			02:29																										
ZZZZZZ			02:44																										
ZZZZZZ			02:59																										
ZZZZZZ			03:14																										
ZZZZZZ			03:29																										
ZZZZZZ			03:44																										
ZZZZZZ			03:59																										
CCV 280-608956/65			04:14																										
CCB 280-608956/66			04:29																										
ZZZZZZ			04:44																										
ZZZZZZ			04:59																										
ZZZZZZ			05:14																										
ZZZZZZ			05:29																										
ZZZZZZ			05:45																										
ZZZZZZ			06:00																										
ZZZZZZ			06:15																										
ZZZZZZ			06:30																										
ZZZZZZ			06:45																										
ZZZZZZ			07:00																										
CCV 280-608956/77			07:15																										
CCB 280-608956/78			07:30																										
ZZZZZZ			07:45																										
ZZZZZZ			08:00																										
ZZZZZZ			08:15																										
ZZZZZZ			08:30																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				CL-	SO4																							
ZZZZZZ			08:45																									
CCV 280-608956/84			09:00																									
CCB 280-608956/85			09:15																									

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom15 | Analysis Method: 9056A

Start Date: 04/03/2023 16:42 | End Date: 04/04/2023 19:35

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
STD 280-607366/1 IC	1		16:42	X	X	X																								
STD 280-607366/2 IC	1		16:54	X	X	X																								
STD 280-607366/3 IC	1		17:06	X	X	X																								
STD 280-607366/4 IC	1		17:18	X	X	X																								
STD 280-607366/5 IC	1		17:30	X	X	X																								
STD 280-607366/6 IC	1		17:42	X	X	X																								
ICV 280-607366/7	1		17:54	X	X	X																								
ICB 280-607366/8	1		18:06	X	X	X																								
RTC 280-607366/9			18:18																											
ZZZZZZ			18:30																											
ZZZZZZ			18:42																											
ZZZZZZ			18:54																											
ZZZZZZ			19:06																											
ZZZZZZ			19:17																											
ZZZZZZ			19:29																											
ZZZZZZ			19:41																											
ZZZZZZ			19:54																											
ZZZZZZ			20:05																											
ZZZZZZ			20:17																											
ZZZZZZ			20:29																											
ZZZZZZ			20:41																											
ZZZZZZ			20:53																											
ZZZZZZ			21:05																											
CCV 280-607366/24			21:17																											
CCB 280-607366/25			21:29																											
ZZZZZZ			21:41																											
ZZZZZZ			21:53																											
ZZZZZZ			22:05																											
ZZZZZZ			22:17																											
ZZZZZZ			22:29																											
ZZZZZZ			22:41																											
ZZZZZZ			22:53																											
ZZZZZZ			23:05																											
ZZZZZZ			23:17																											
ZZZZZZ			23:28																											
CCV 280-607366/36			23:40																											
CCB 280-607366/37			23:52																											
ZZZZZZ			00:04																											
ZZZZZZ			00:16																											
ZZZZZZ			00:28																											
ZZZZZZ			00:40																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver | Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom15 | Analysis Method: 9056A

Start Date: 04/03/2023 16:42 | End Date: 04/04/2023 19:35

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
ZZZZZZ			00:52																											
ZZZZZZ			01:04																											
ZZZZZZ			01:16																											
ZZZZZZ			01:28																											
ZZZZZZ			01:40																											
ZZZZZZ			01:52																											
CCV 280-607366/48			02:04																											
CCB 280-607366/49			02:16																											
ZZZZZZ			02:28																											
ZZZZZZ			02:40																											
ZZZZZZ			02:52																											
ZZZZZZ			03:03																											
ZZZZZZ			03:15																											
ZZZZZZ			03:27																											
ZZZZZZ			03:39																											
ZZZZZZ			03:51																											
ZZZZZZ			04:03																											
ZZZZZZ			04:15																											
CCV 280-607366/60			04:27																											
CCB 280-607366/61			04:39																											
ZZZZZZ			04:51																											
ZZZZZZ			05:03																											
ZZZZZZ			05:15																											
ZZZZZZ			05:27																											
ZZZZZZ			05:39																											
ZZZZZZ			05:51																											
ZZZZZZ			06:03																											
ZZZZZZ			06:14																											
ZZZZZZ			06:26																											
ZZZZZZ			09:25																											
CCV 280-607366/72			10:25																											
CCB 280-607366/73			10:37																											
ZZZZZZ			10:49																											
ZZZZZZ			11:01																											
ZZZZZZ			11:13																											
ZZZZZZ			11:25																											
ZZZZZZ			11:37																											
ZZZZZZ			11:49																											
ZZZZZZ			12:01																											
ZZZZZZ			12:13																											
ZZZZZZ			12:25																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/03/2023 16:42 End Date: 04/04/2023 19:35

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
ZZZZZZ			12:37																											
CCV 280-607366/84			12:49																											
CCB 280-607366/85			13:00																											
ZZZZZZ			13:12																											
ZZZZZZ			13:24																											
ZZZZZZ			13:36																											
ZZZZZZ			13:48																											
ZZZZZZ			14:00																											
ZZZZZZ			14:12																											
ZZZZZZ			14:24																											
ZZZZZZ			14:36																											
ZZZZZZ			14:48																											
ZZZZZZ			15:00																											
CCV 280-607366/96			15:12																											
CCB 280-607366/97			15:24																											
ZZZZZZ			15:36																											
ZZZZZZ			15:48																											
ZZZZZZ			16:00																											
ZZZZZZ			16:12																											
ZZZZZZ			16:24																											
ZZZZZZ			16:36																											
ZZZZZZ			16:48																											
ZZZZZZ			17:00																											
ZZZZZZ			17:12																											
ZZZZZZ			17:24																											
CCV 280-607366/108			17:36																											
CCB 280-607366/109			17:48																											
ZZZZZZ			18:00																											
ZZZZZZ			18:12																											
ZZZZZZ			18:24																											
ZZZZZZ			18:35																											
ZZZZZZ			18:47																											
ZZZZZZ			18:59																											
ZZZZZZ			19:11																											
CCV 280-607366/117			19:23																											
CCB 280-607366/118			19:35																											

Prep Types:
=

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/29/2023 13:25 End Date: 04/30/2023 07:44

Lab Sample Id	D/F	Type	Time	Analytes
				Br
CCV 280-610654/1			13:25	
CCB 280-610654/2			13:37	
MRL 280-610654/3	1	T	13:48	X
ZZZZZZ			14:00	
ZZZZZZ			14:12	
ZZZZZZ			14:24	
ZZZZZZ			14:36	
ZZZZZZ			14:48	
ZZZZZZ			15:00	
ZZZZZZ			15:12	
ZZZZZZ			15:24	
ZZZZZZ			15:36	
ZZZZZZ			15:48	
ZZZZZZ			16:00	
ZZZZZZ			16:12	
ZZZZZZ			16:24	
CCV 280-610654/17			16:36	
CCB 280-610654/18			16:48	
ZZZZZZ			17:00	
ZZZZZZ			17:12	
ZZZZZZ			17:23	
ZZZZZZ			17:35	
ZZZZZZ			17:47	
ZZZZZZ			17:59	
ZZZZZZ			18:11	
ZZZZZZ			18:23	
ZZZZZZ			18:35	
ZZZZZZ			18:47	
CCV 280-610654/29			18:59	
CCB 280-610654/30			19:11	
ZZZZZZ			19:23	
ZZZZZZ			19:35	
ZZZZZZ			19:47	
ZZZZZZ			19:59	
ZZZZZZ			20:11	
ZZZZZZ			20:23	
ZZZZZZ			20:34	
ZZZZZZ			20:46	
ZZZZZZ			20:58	
ZZZZZZ			21:10	
CCV 280-610654/41	1		21:22	X

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/29/2023 13:25 End Date: 04/30/2023 07:44

Lab Sample Id	D/F	Type	Time	Analytes
				Br
CCB 280-610654/42	1		21:34	X
ZZZZZZ			21:46	
ZZZZZZ			21:58	
ZZZZZZ			22:10	
ZZZZZZ			22:22	
LCS 280-610654/47	1	T	22:34	X
LCSD 280-610654/48	1	T	22:46	X
MB 280-610654/49	1	T	22:58	X
ZZZZZZ			23:10	
ZZZZZZ			23:22	
ZZZZZZ			23:34	
CCV 280-610654/53	1		23:46	X
CCB 280-610654/54	1		23:58	X
ZZZZZZ			00:10	
ZZZZZZ			00:22	
ZZZZZZ			00:34	
ZZZZZZ			00:46	
ZZZZZZ			00:58	
ZZZZZZ			01:10	
ZZZZZZ			01:22	
ZZZZZZ			01:33	
ZZZZZZ			01:45	
280-175122-3	1	T	01:57	X
CCV 280-610654/65	1		02:09	X
CCB 280-610654/66	1		02:21	X
280-175122-2	1	T	02:33	X
280-175122-2 DU	1	T	02:45	X
280-175122-2 MS	1	T	02:57	X
280-175122-2 MSD	1	T	03:09	X
280-175122-1	1	T	03:21	X
ZZZZZZ			03:33	
ZZZZZZ			03:45	
ZZZZZZ			03:57	
ZZZZZZ			04:09	
ZZZZZZ			04:21	
CCV 280-610654/77	1		04:33	X
CCB 280-610654/78	1		04:44	X
ZZZZZZ			04:56	
ZZZZZZ			05:08	
ZZZZZZ			05:20	
ZZZZZZ			05:32	

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/29/2023 13:25 End Date: 04/30/2023 07:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br																								
ZZZZZZ			05:44																									
ZZZZZZ			05:56																									
ZZZZZZ			06:08																									
ZZZZZZ			06:20																									
ZZZZZZ			06:32																									
ZZZZZZ			06:44																									
CCV 280-610654/89			06:56																									
CCB 280-610654/90			07:08																									
ZZZZZZ			07:20																									
CCV 280-610654/92			07:32																									
CCB 280-610654/93			07:44																									

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_SHI7 Analysis Method: 9060A

Start Date: 04/21/2023 15:01 End Date: 04/22/2023 13:54

Lab Sample Id	D/F	Type	Time	Analytes																										
				TOC1	TOC2	TOCD																								
ICV 280-609838/1	1		15:01	X	X	X																								
ICB 280-609838/2	1		15:16			X																								
LCS 280-609838/3	1	T	15:30	X	X	X																								
MB 280-609838/4	1	T	15:46			X																								
ZZZZZZ			16:00																											
ZZZZZZ			16:15																											
ZZZZZZ			16:29																											
ZZZZZZ			16:45																											
ZZZZZZ			17:00																											
ZZZZZZ			17:14																											
ZZZZZZ			17:29																											
ZZZZZZ			17:43																											
280-175122-1	1	T	17:58			X																								
280-175122-2	1	T	18:12			X																								
CCV 280-609838/15	1		18:27	X	X	X																								
CCB 280-609838/16	1		18:43			X																								
280-175122-3	1	T	18:57			X																								
ZZZZZZ			19:12																											
ZZZZZZ			19:26																											
ZZZZZZ			19:42																											
ZZZZZZ			19:57																											
ZZZZZZ			20:12																											
ZZZZZZ			20:28																											
ZZZZZZ			20:43																											
ZZZZZZ			20:58																											
ZZZZZZ			21:13																											
CCV 280-609838/27	1		21:27	X	X	X																								
CCB 280-609838/28	1		21:43			X																								
ZZZZZZ			21:57																											
ZZZZZZ			22:12																											
ZZZZZZ			22:28																											
ZZZZZZ			22:43																											
ZZZZZZ			22:58																											
ZZZZZZ			23:13																											
ZZZZZZ			23:28																											
ZZZZZZ			23:43																											
ZZZZZZ			23:57																											
ZZZZZZ			00:12																											
CCV 280-609838/39			00:28																											
CCB 280-609838/40			00:44																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_SHI7 Analysis Method: 9060A

Start Date: 04/21/2023 15:01 End Date: 04/22/2023 13:54

Lab Sample Id	D/F	Type	Time	Analytes																									
				TOC1	TOC2	TOCD																							
ZZZZZZ			00:59																										
ZZZZZZ			01:14																										
ZZZZZZ			01:28																										
ZZZZZZ			01:42																										
ZZZZZZ			01:56																										
ZZZZZZ			02:11																										
ZZZZZZ			02:25																										
ZZZZZZ			02:39																										
ZZZZZZ			02:54																										
ZZZZZZ			03:09																										
CCV 280-609838/51			03:25																										
CCB 280-609838/52			03:40																										
ZZZZZZ			03:55																										
ZZZZZZ			04:09																										
ZZZZZZ			04:25																										
ZZZZZZ			04:40																										
ZZZZZZ			04:55																										
ZZZZZZ			05:09																										
ZZZZZZ			05:24																										
ZZZZZZ			05:38																										
ZZZZZZ			05:52																										
ZZZZZZ			06:06																										
CCV 280-609838/63			06:21																										
CCB 280-609838/64			06:36																										
ZZZZZZ			06:51																										
ZZZZZZ			07:05																										
ZZZZZZ			07:20																										
ZZZZZZ			07:35																										
ZZZZZZ			07:50																										
ZZZZZZ			08:05																										
ZZZZZZ			08:21																										
ZZZZZZ			08:36																										
ZZZZZZ			08:51																										
ZZZZZZ			09:07																										
CCV 280-609838/75			09:22																										
CCB 280-609838/76			09:37																										
ZZZZZZ			09:52																										
ZZZZZZ			10:07																										
ZZZZZZ			10:21																										
ZZZZZZ			10:36																										

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Instrument ID: WC_SHI7 Analysis Method: 9060A

Start Date: 04/21/2023 15:01 End Date: 04/22/2023 13:54

Lab Sample Id	D/F	Type	Time	Analytes																										
				TOC1	TOC2	TOCD																								
ZZZZZZ			10:51																											
ZZZZZZ			11:06																											
ZZZZZZ			11:21																											
ZZZZZZ			11:37																											
ZZZZZZ			11:52																											
ZZZZZZ			12:08																											
CCV 280-609838/86			12:23																											
CCB 280-609838/87			12:39																											
ZZZZZZ			12:53																											
ZZZZZZ			13:08																											
ZZZZZZ			13:23																											
CCV 280-609838/91			13:38																											
CCB 280-609838/92			13:54																											

Prep Types:
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 607366 Batch Start Date: 04/03/23 16:42 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cl ICV Std 00006	IC CAL cl/so4 00473	IC Cal low 00701	IC ICV 5 00402
STD 280-607366/1 IC		9056A		10 mL	10 mL		0.04 mL		
STD 280-607366/2 IC		9056A		10 mL	10 mL		0.1 mL	0.08 mL	
STD 280-607366/3 IC		9056A		10 mL	10 mL		0.2 mL	0.2 mL	
STD 280-607366/4 IC		9056A		10 mL	10 mL		2.4 mL	0.4 mL	
STD 280-607366/5 IC		9056A		10 mL	10 mL		4.8 mL	1 mL	
STD 280-607366/6 IC		9056A		10 mL	10 mL		8 mL	2 mL	
ICV 280-607366/7		9056A		10 mL	10 mL	0.8 mL			0.8 mL
ICB 280-607366/8		9056A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00024					
STD 280-607366/1 IC		9056A							
STD 280-607366/2 IC		9056A							
STD 280-607366/3 IC		9056A							
STD 280-607366/4 IC		9056A							
STD 280-607366/5 IC		9056A							
STD 280-607366/6 IC		9056A							
ICV 280-607366/7		9056A		0.8 mL					
ICB 280-607366/8		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 607366 Batch Start Date: 04/03/23 16:42 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00004
Batch Comment	EJS

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608435 Batch Start Date: 04/12/23 14:04 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cl ICV Std 00006	IC CAL cl/so4 00475	IC Cal low 00703	IC ICV 5 00403
STD 280-608435/1 IC		9056A		10 mL	10 mL		0.04 mL		
STD 280-608435/2 IC		9056A		10 mL	10 mL		0.1 mL	0.08 mL	
STD 280-608435/3 IC		9056A		10 mL	10 mL		0.2 mL	0.2 mL	
STD 280-608435/4 IC		9056A		10 mL	10 mL		2.4 mL	0.4 mL	
STD 280-608435/5 IC		9056A		10 mL	10 mL		4.8 mL	1 mL	
STD 280-608435/6 IC		9056A		10 mL	10 mL		8 mL	2 mL	
ICV 280-608435/7		9056A		10 mL	10 mL	0.8 mL			0.8 mL
ICB 280-608435/8		9056A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00024					
STD 280-608435/1 IC		9056A							
STD 280-608435/2 IC		9056A							
STD 280-608435/3 IC		9056A							
STD 280-608435/4 IC		9056A							
STD 280-608435/5 IC		9056A							
STD 280-608435/6 IC		9056A							
ICV 280-608435/7		9056A		0.8 mL					
ICB 280-608435/8		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608435 Batch Start Date: 04/12/23 14:04 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	IC10 ELUENT_00006
Batch Comment	EJS

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608436 Batch Start Date: 04/12/23 14:04 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cl ICV Std 00006	IC CAL cl/so4 00475	IC Cal low 00703	IC ICV 5 00403
STD 280-608436/1 IC		9056A		10 mL	10 mL		0.04 mL		
STD 280-608436/2 IC		9056A		10 mL	10 mL		0.1 mL	0.08 mL	
STD 280-608436/3 IC		9056A		10 mL	10 mL		0.2 mL	0.2 mL	
STD 280-608436/4 IC		9056A		10 mL	10 mL		2.4 mL	0.4 mL	
STD 280-608436/5 IC		9056A		10 mL	10 mL		4.8 mL	1 mL	
STD 280-608436/6 IC		9056A		10 mL	10 mL		8 mL	2 mL	
ICV 280-608436/7		9056A		10 mL	10 mL	0.8 mL			0.8 mL
ICB 280-608436/8		9056A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00024					
STD 280-608436/1 IC		9056A							
STD 280-608436/2 IC		9056A							
STD 280-608436/3 IC		9056A							
STD 280-608436/4 IC		9056A							
STD 280-608436/5 IC		9056A							
STD 280-608436/6 IC		9056A							
ICV 280-608436/7		9056A		0.8 mL					
ICB 280-608436/8		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608436 Batch Start Date: 04/12/23 14:04 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	IC10 ELUENT_00006
Batch Comment	EJS

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608955 Batch Start Date: 04/17/23 12:13 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	
CCV 280-608955/1		9056A		10 mL	10 mL			10 mL	
CCB 280-608955/2		9056A		10 mL	10 mL				
MRL 280-608955/3		9056A		10 mL	10 mL	0.2 mL	0.1 mL		
LCS 280-608955/4		9056A		10 mL	10 mL			10 mL	
LCSD 280-608955/5		9056A		10 mL	10 mL			10 mL	
MB 280-608955/6		9056A		10 mL	10 mL				
280-175122-C-1	RW-1-20230413	9056A	T	10 mL	10 mL				
280-175122-C-1	RW-1-20230413	9056A	T	10 mL	10 mL				
280-175122-C-2	MP-2-20230411	9056A	T	10 mL	10 mL				
280-175122-C-2	MP-2-20230411	9056A	T	10 mL	10 mL				
280-175122-C-3	MW-118D-20230412	9056A	T	10 mL	10 mL				
280-175122-C-3	MW-118D-20230412	9056A	T	10 mL	10 mL				
CCV 280-608955/17		9056A		10 mL	10 mL			10 mL	
CCB 280-608955/18		9056A		10 mL	10 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, 100IC
Sufficient Volume for Batch QC	yes
Eluent 1 ID	IC10 Eluent_00006
Batch Comment	MEC

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608956 Batch Start Date: 04/17/23 12:13 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	
CCV 280-608956/1		9056A		10 mL	10 mL			10 mL	
CCB 280-608956/2		9056A		10 mL	10 mL				
MRL 280-608956/3		9056A		10 mL	10 mL	0.2 mL	0.1 mL		
LCS 280-608956/4		9056A		10 mL	10 mL			10 mL	
LCSD 280-608956/5		9056A		10 mL	10 mL			10 mL	
MB 280-608956/6		9056A		10 mL	10 mL				
280-175122-C-1	RW-1-20230413	9056A	T	10 mL	10 mL				
280-175122-C-1	RW-1-20230413	9056A	T	10 mL	10 mL				
280-175122-C-2	MP-2-20230411	9056A	T	10 mL	10 mL				
280-175122-C-2	MP-2-20230411	9056A	T	10 mL	10 mL				
280-175122-C-3	MW-118D-20230412	9056A	T	10 mL	10 mL				
280-175122-C-3	MW-118D-20230412	9056A	T	10 mL	10 mL				
CCV 280-608956/17		9056A		10 mL	10 mL			10 mL	
CCB 280-608956/18		9056A		10 mL	10 mL				
CCV 280-608956/29		9056A		10 mL	10 mL			10 mL	
CCB 280-608956/30		9056A		10 mL	10 mL				
CCV 280-608956/41		9056A		10 mL	10 mL			10 mL	
CCB 280-608956/42		9056A		10 mL	10 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, 100IC
Sufficient Volume for Batch QC	yes
Eluent 1 ID	IC10 Eluent_00006
Batch Comment	MEC

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 608956 Batch Start Date: 04/17/23 12:13 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610654 Batch Start Date: 04/29/23 13:25 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00477	IC Cal low 00706	IC LCS 01950	ICMS/MSD WEEK 00816
MRL 280-610654/3		9056A		5 mL	5 mL	0.2 mL	0.1 mL		
CCV 280-610654/41		9056A		5 mL	5 mL			10 mL	
CCB 280-610654/42		9056A		5 mL	5 mL				
LCS 280-610654/47		9056A		5 mL	5 mL			10 mL	
LCSD 280-610654/48		9056A		5 mL	5 mL			10 mL	
MB 280-610654/49		9056A		5 mL	5 mL				
CCV 280-610654/53		9056A		5 mL	5 mL			10 mL	
CCB 280-610654/54		9056A		5 mL	5 mL				
280-175122-C-3	MW-118D-20230412	9056A	T	5 mL	5 mL				
CCV 280-610654/65		9056A		5 mL	5 mL			10 mL	
CCB 280-610654/66		9056A		5 mL	5 mL				
280-175122-C-2	MP-2-20230411	9056A	T	5 mL	5 mL				
280-175122-C-2 DU	MP-2-20230411	9056A	T	5 mL	5 mL				
280-175122-C-2 MS	MP-2-20230411	9056A	T	5 mL	5 mL				0.1 mL
280-175122-C-2 MSD	MP-2-20230411	9056A	T	5 mL	5 mL				0.1 mL
280-175122-C-1	RW-1-20230413	9056A	T	5 mL	5 mL				
CCV 280-610654/77		9056A		5 mL	5 mL			10 mL	
CCB 280-610654/78		9056A		5 mL	5 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 610654 Batch Start Date: 04/29/23 13:25 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00007
Batch Comment	EJS

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 609838 Batch Start Date: 04/21/23 15:01 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	TOC ICV Std 00051	TOC LCS Std 00057
ICV 280-609838/1		9060A		50 mL	50 mL	<2 SU	<2 SU	1 mL	
ICB 280-609838/2		9060A		20 mL	20 mL	<2 SU	<2 SU		
LCS 280-609838/3		9060A		200 mL	200 mL	<2 SU	<2 SU		5 mL
MB 280-609838/4		9060A		20 mL	20 mL	<2 SU	<2 SU		
280-175122-B-1	RW-1-20230413	9060A	T	20 mL	20 mL	<2 SU	<2 SU		
280-175122-B-2	MP-2-20230411	9060A	T	20 mL	20 mL	<2 SU	<2 SU		
CCV 280-609838/15		9060A		200 mL	200 mL	<2 SU	<2 SU		5 mL
CCB 280-609838/16		9060A		20 mL	20 mL	<2 SU	<2 SU		
280-175122-B-3	MW-118D-20230412	9060A	T	20 mL	20 mL	<2 SU	<2 SU		
CCV 280-609838/27		9060A		200 mL	200 mL	<2 SU	<2 SU		5 mL
CCB 280-609838/28		9060A		20 mL	20 mL	<2 SU	<2 SU		

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment					
ICV 280-609838/1		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
ICB 280-609838/2		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
LCS 280-609838/3		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 609838 Batch Start Date: 04/21/23 15:01 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment					
MB 280-609838/4		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
280-175122-B-1	RW-1-20230413	9060A	T	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
280-175122-B-2	MP-2-20230411	9060A	T	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
CCV 280-609838/15		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
CCB 280-609838/16		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
280-175122-B-3	MW-118D-20230412	9060A	T	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
CCV 280-609838/27		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175122-1

SDG No.:

Batch Number: 609838 Batch Start Date: 04/21/23 15:01 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment					
CCB 280-609838/28		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					

Batch Notes	
Acid ID	0.2% H2SO4_00457, H2SO4_00214
Combustion Catylyst ID	S638-92069-02
Pipette/Syringe/Dispenser ID	BWH 5000,1000 MS
pH Paper ID	HC205981
Vial Lot Number	705212201761
Batch Comment	Run and reviewed by ABW

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14				
Lims ID:	STD L1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	12-Apr-2023 14:04:00	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-001				
Misc. Info.:	280-0120345-001				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC10*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 14:03:48	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
First Level Reviewer: LVW8		Date:	12-Apr-2023 15:40:32		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.175				ND	
2 Chloride	4.383	4.383	0.000	7464190	NC	NC	M
3 Nitrite as N		5.103				ND	
4 Bromide		6.292				ND	U
5 Nitrate as N		7.057				ND	
6 Orthophosphate as P	9.447	9.447	0.000	3338493		-0.3613	M
7 Sulfate	10.645	10.645	0.000	7022789	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

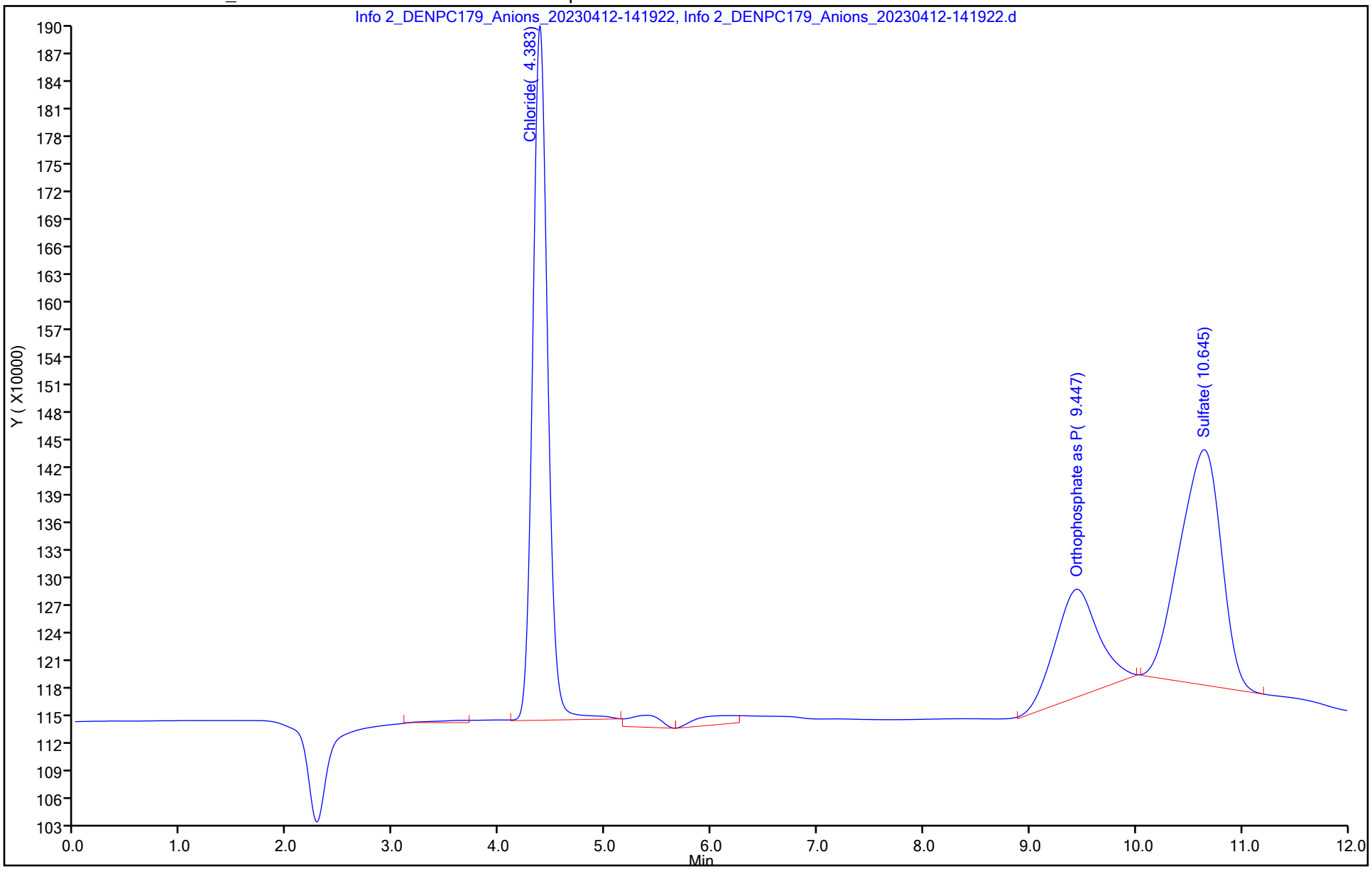
IC CAL cl/so4_00475	Amount Added:	0.04	Units: mL
IC Cal low_00703	Amount Added:	0.00	Units: mL

Report Date: 14-Apr-2023 14:03:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-141922.d

Injection Date:	12-Apr-2023 14:04:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L1			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

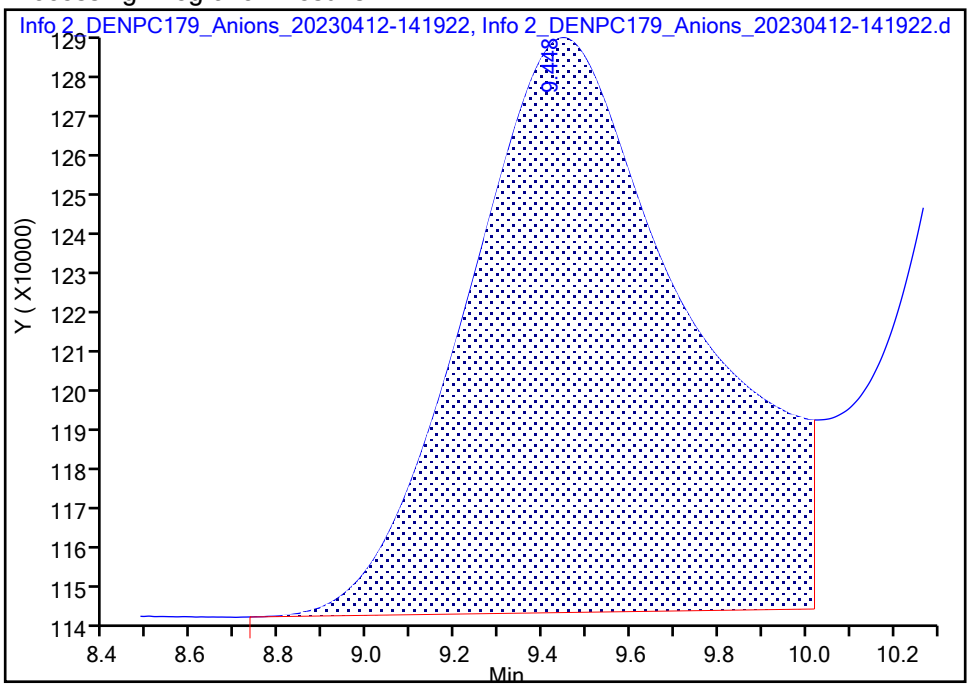
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14				
Injection Date:	12-Apr-2023 14:04:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L1				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions		
Column:		Detector	Info 2_091554_1		

6 Orthophosphate as P, CAS: STL00599

Signal: 1

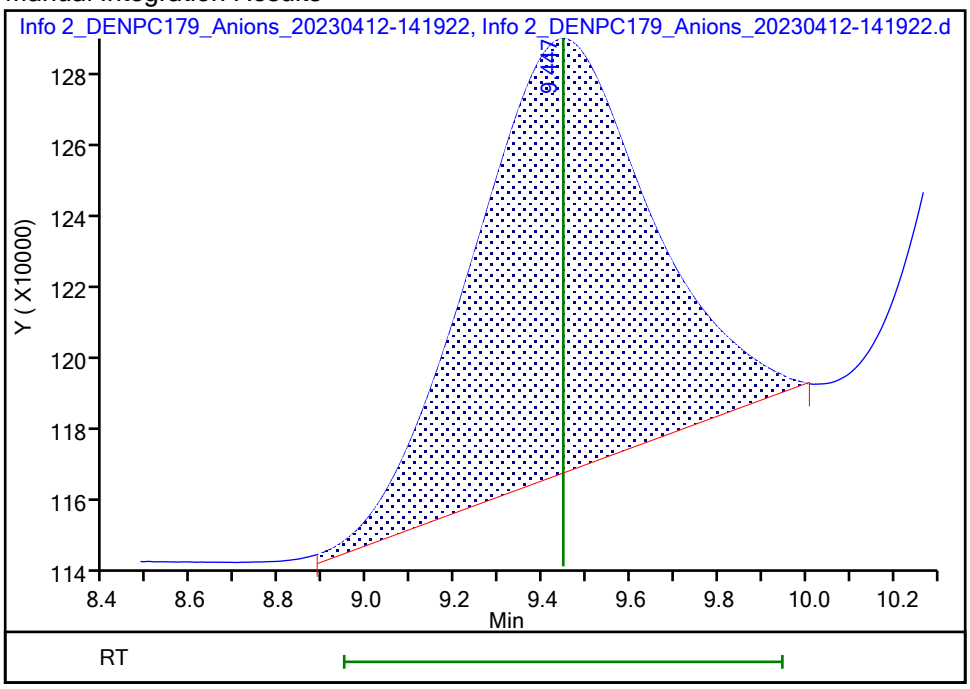
Processing Integration Results

RT: 9.45
Area: 4931641
Amount: -0.506480
Amount Units: ug/ml



Manual Integration Results

RT: 9.45
Area: 3338493
Amount: -0.361342
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:40:49

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Apr-2023 14:19:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-002
Misc. Info.: 280-0120345-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:03:50 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:41:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.163	3.163	0.000	6262507	NC	NC	Ma
2 Chloride	4.380	4.380	0.000	20679388	NC	NC	M
3 Nitrite as N	5.115	5.115	0.000	8087413	0.2000	0.2019	M
4 Bromide	6.352	6.352	0.000	2964734	NC	NC	
5 Nitrate as N	7.383	7.383	0.000	8434441	0.2000	0.2195	a
6 Orthophosphate as P	9.813	9.813	0.000	13953811	0.2000	0.1404	M
7 Sulfate	11.045	11.045	0.000	14421328	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

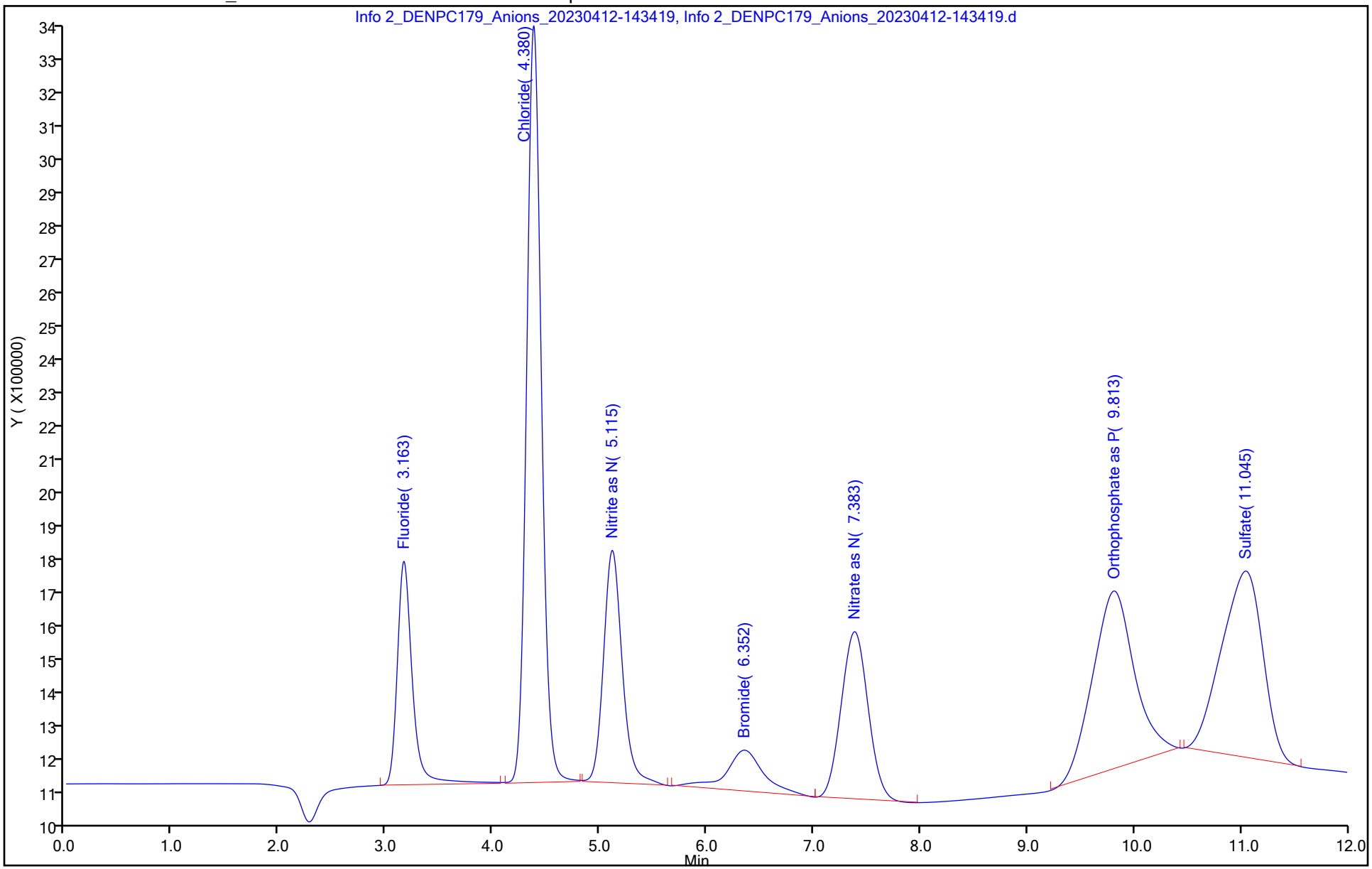
Reagents:

IC CAL cl/so4_00475 Amount Added: 0.10 Units: mL
IC Cal low_00703 Amount Added: 0.08 Units: mL

Report Date: 14-Apr-2023 14:03:51 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143419.d				
Injection Date:	12-Apr-2023 14:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

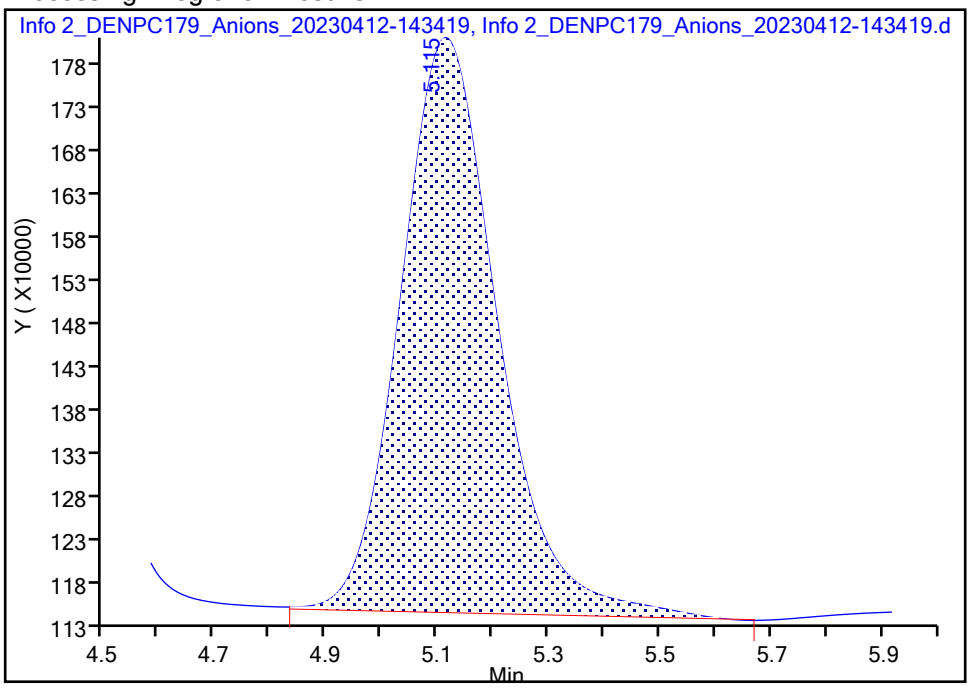
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

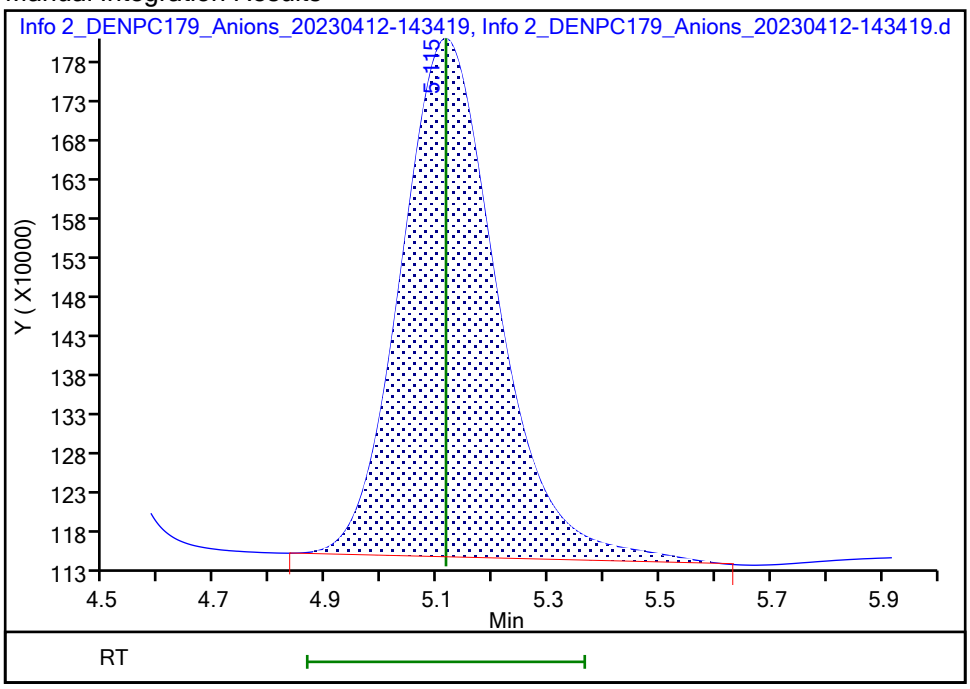
Processing Integration Results

RT: 5.12
Area: 8151496
Amount: 0.199877
Amount Units: ug/ml



Manual Integration Results

RT: 5.12
Area: 8087413
Amount: 0.201920
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:06

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

Column: Detector Info 2_091554_1

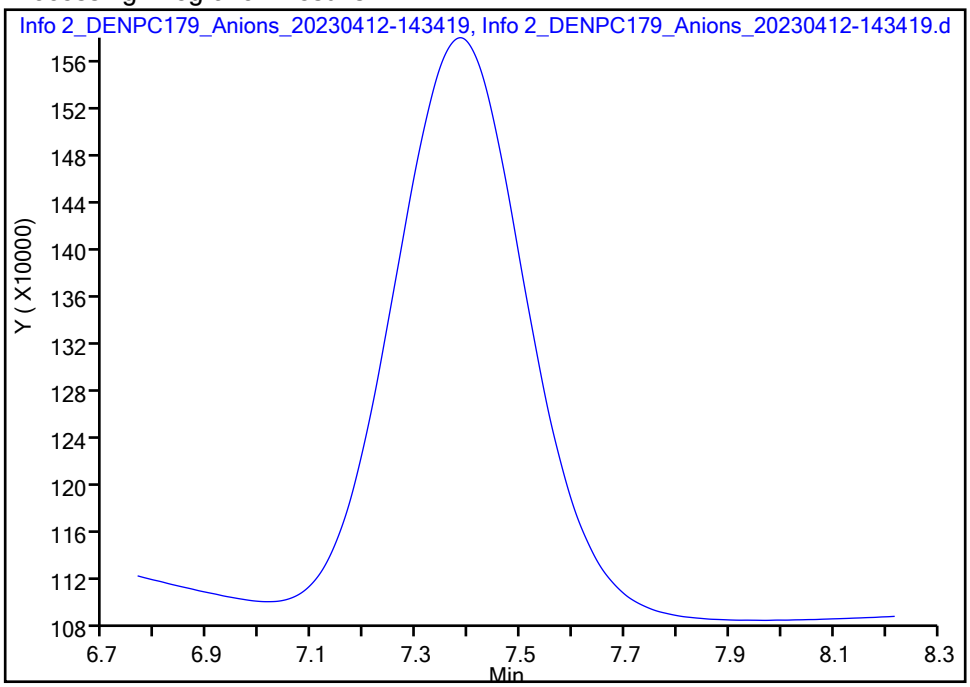
5 Nitrate as N, CAS: 14797-55-8

Signal: 1

Not Detected

Expected RT: 7.38

Processing Integration Results



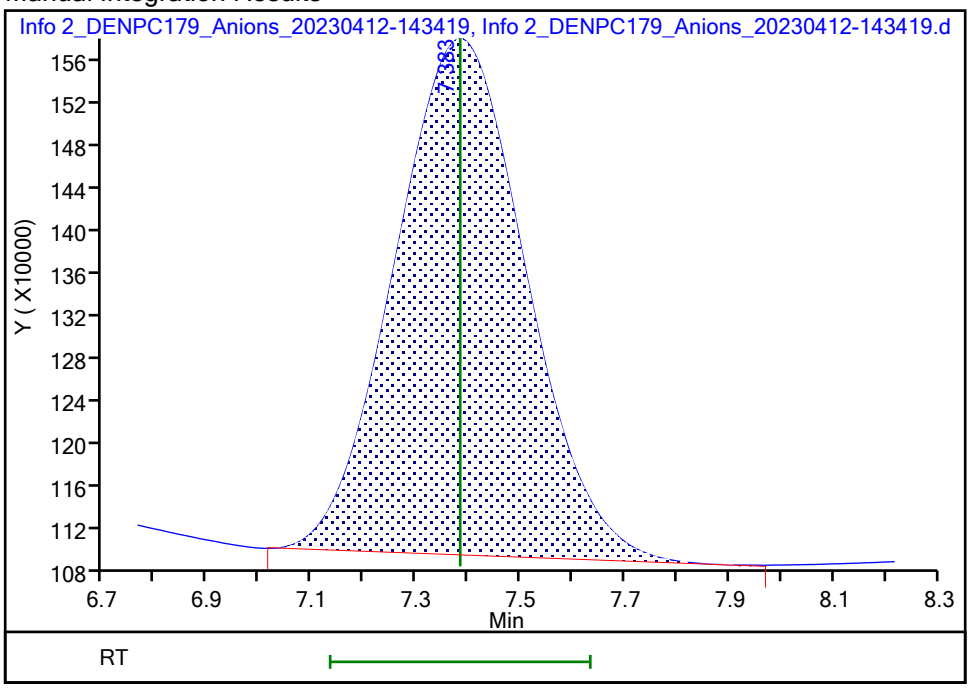
Manual Integration Results

RT: 7.38

Area: 8434441

Amount: 0.219511

Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:22

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

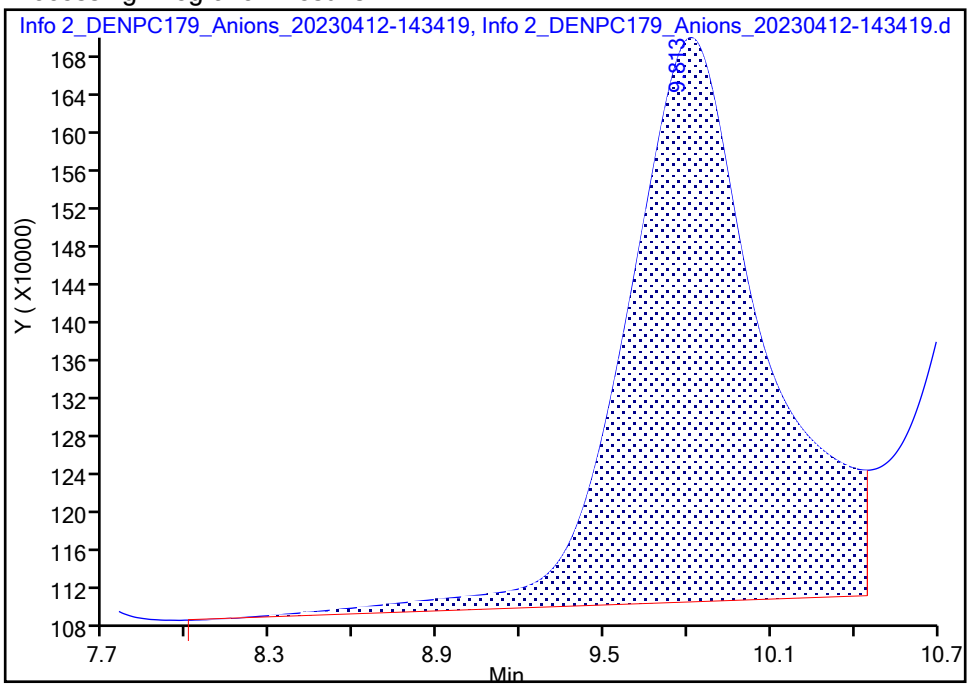
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

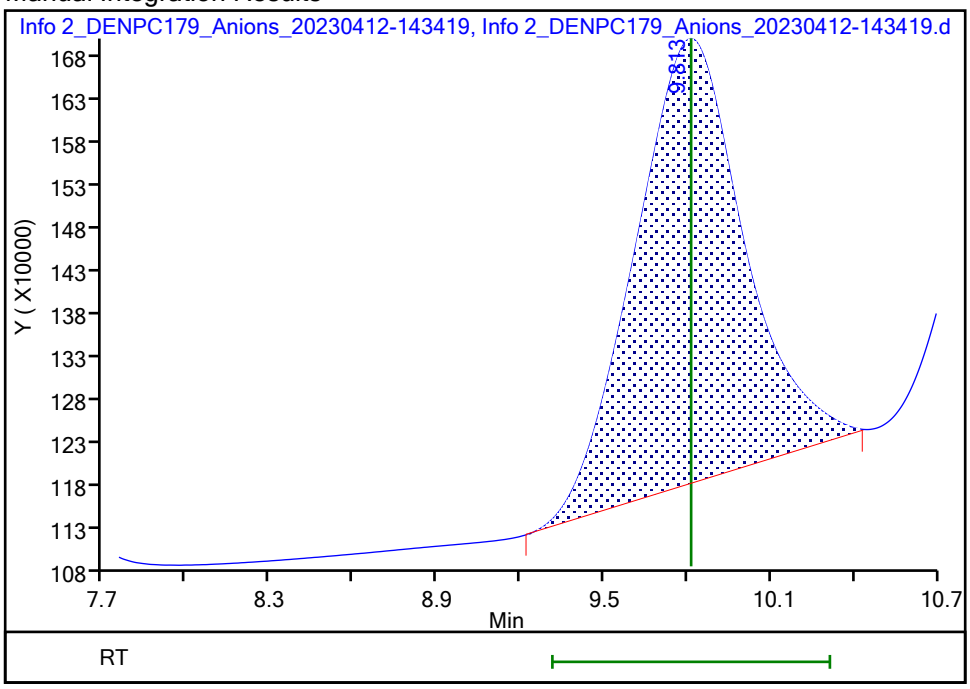
Processing Integration Results

RT: 9.81
Area: 20197362
Amount: 0.155449
Amount Units: ug/ml



Manual Integration Results

RT: 9.81
Area: 13953811
Amount: 0.140386
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:19

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Apr-2023 14:34:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-003
Misc. Info.: 280-0120345-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:03:53 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:42:15

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.168	3.168	0.000	16995372	NC	NC	Ma
2 Chloride	4.383	4.383	0.000	43975181	NC	NC	M
3 Nitrite as N	5.118	5.118	0.000	21615246	0.5000	0.4936	M
4 Bromide	6.317	6.317	0.000	3222251	NC	NC	M
5 Nitrate as N	7.123	7.123	0.000	19909305	0.5000	0.4697	M
6 Orthophosphate as P	9.405	9.405	0.000	23629516	0.5000	0.5977	M
7 Sulfate	10.647	10.647	0.000	29311364	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

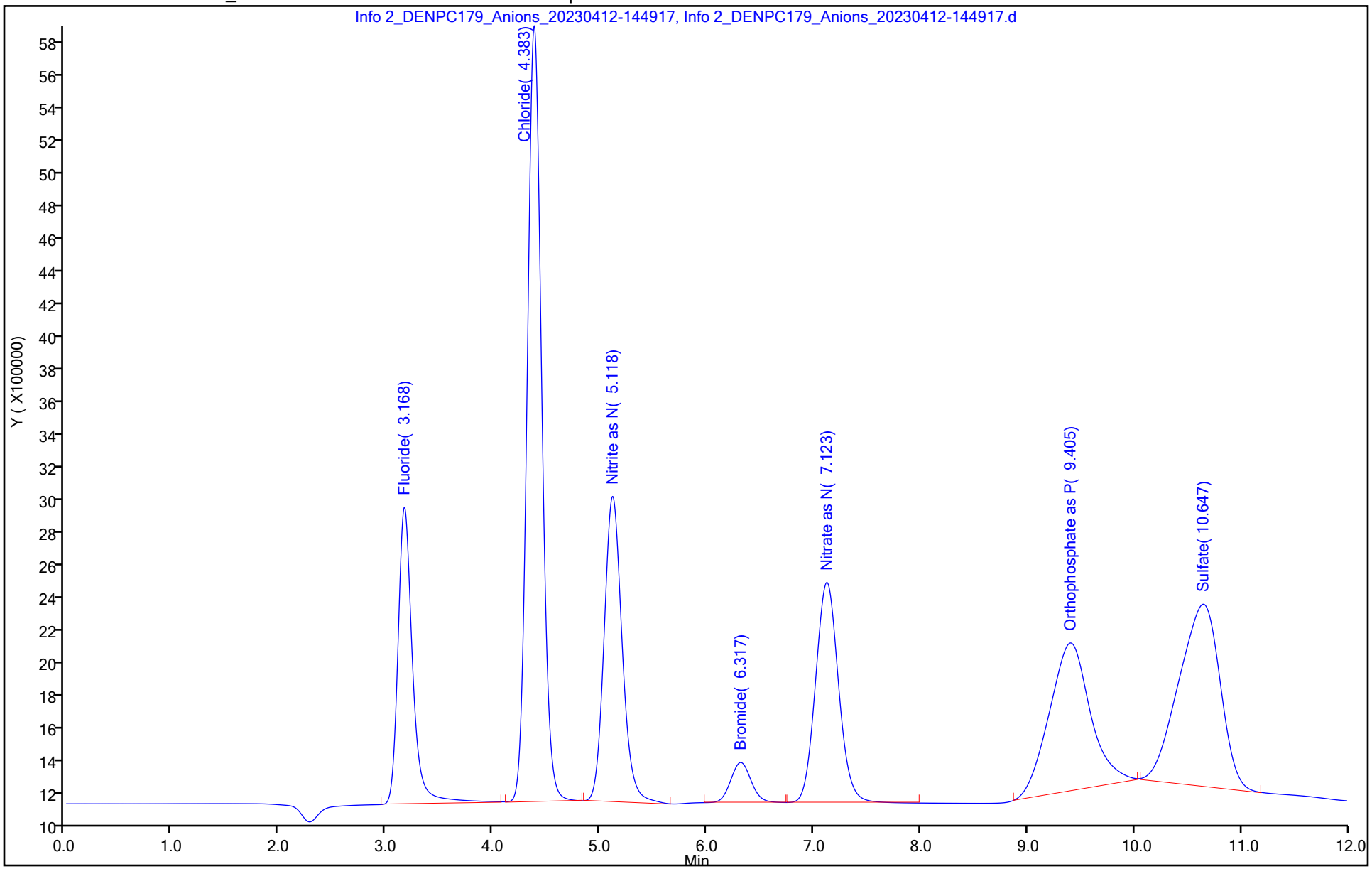
Reagents:

IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL
IC Cal low_00703 Amount Added: 0.20 Units: mL

Report Date: 14-Apr-2023 14:03:53 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144917.d				
Injection Date:	12-Apr-2023 14:34:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

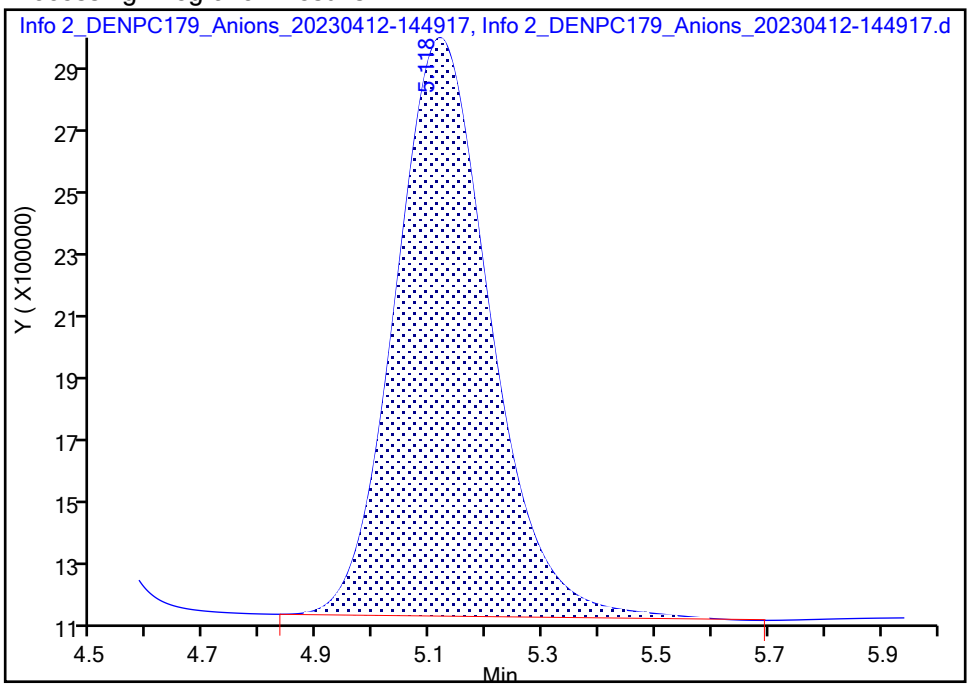
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

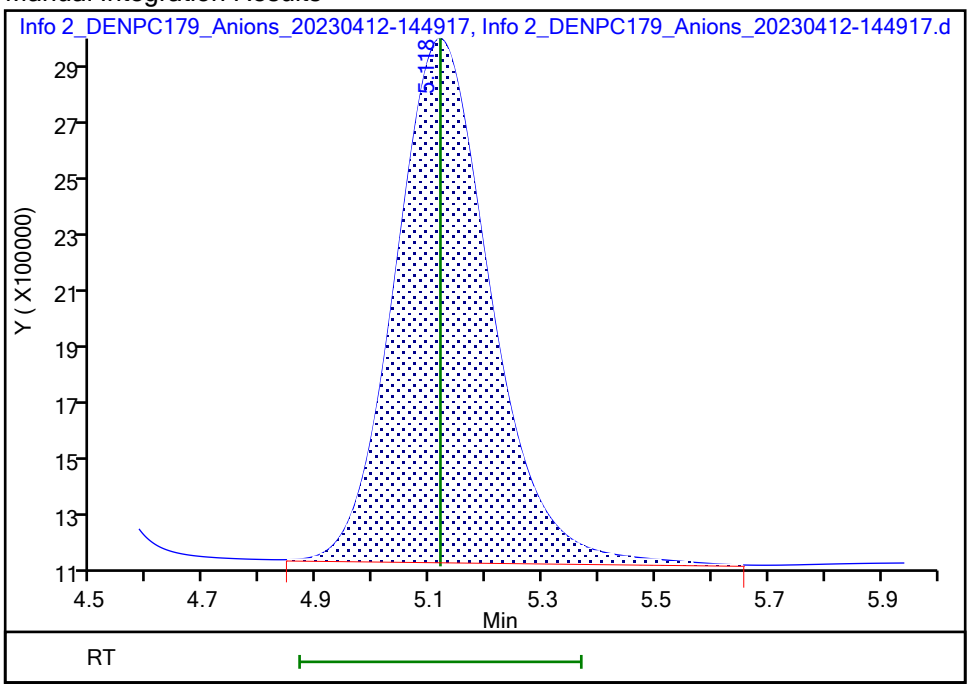
Processing Integration Results

RT: 5.12
Area: 21704269
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.12
Area: 21615246
Amount: 0.493602
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:46

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

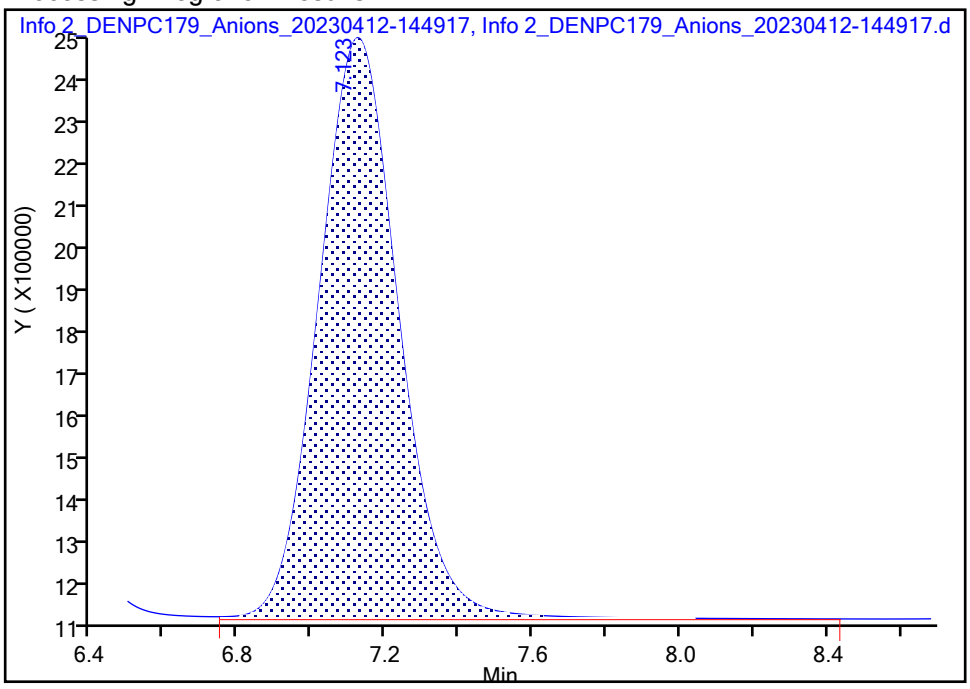
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144
Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10
Lims ID: STD L3
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

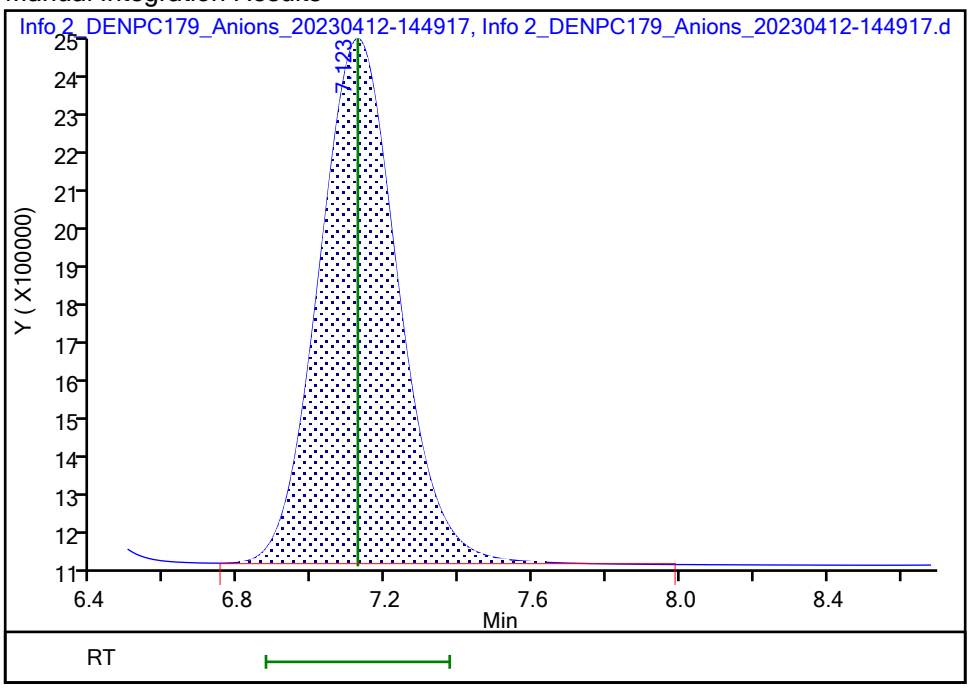
Processing Integration Results

RT: 7.12
Area: 20406914
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.12
Area: 19909305
Amount: 0.469685
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:55
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver

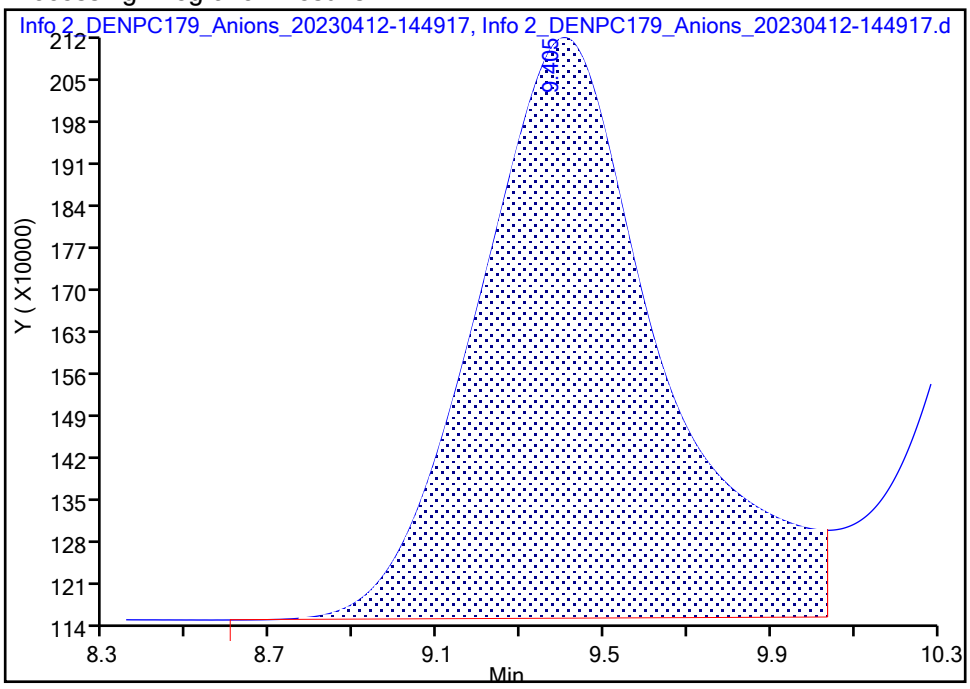
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144
Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10
Lims ID: STD L3
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

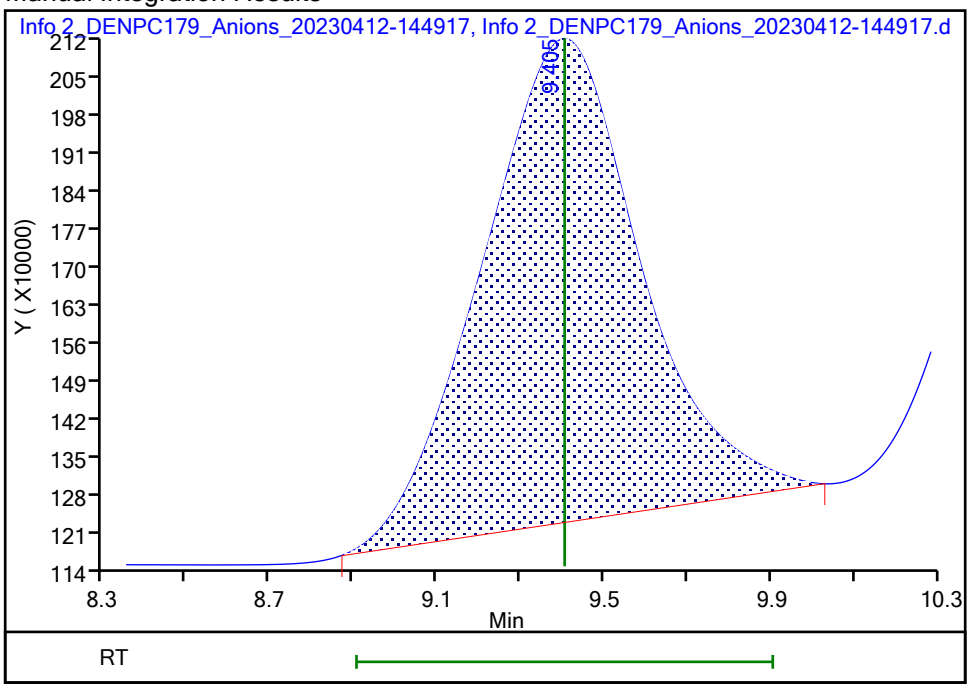
RT: 9.41
Area: 29322324
Amount: 0
Amount Units: ug/ml

Processing Integration Results



RT: 9.41
Area: 23629516
Amount: 0.597704
Amount Units: ug/ml

Manual Integration Results



Reviewer: LVW8, 12-Apr-2023 15:42:10
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Apr-2023 14:49:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-004
Misc. Info.: 280-0120345-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:03:55 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:42:52

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.168	3.168	0.000	37412858	NC	NC	Ma
2 Chloride	4.390	4.390	0.000	575824993	NC	NC	M
3 Nitrite as N	5.113	5.113	0.000	44844044	1.00	0.99	M
4 Bromide	6.308	6.308	0.000	6583592	NC	NC	M
5 Nitrate as N	7.103	7.103	0.000	42066844	1.00	0.9528	M
6 Orthophosphate as P	9.388	9.388	0.000	34760084	1.00	1.12	M
7 Sulfate	10.628	10.628	0.000	410479688	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

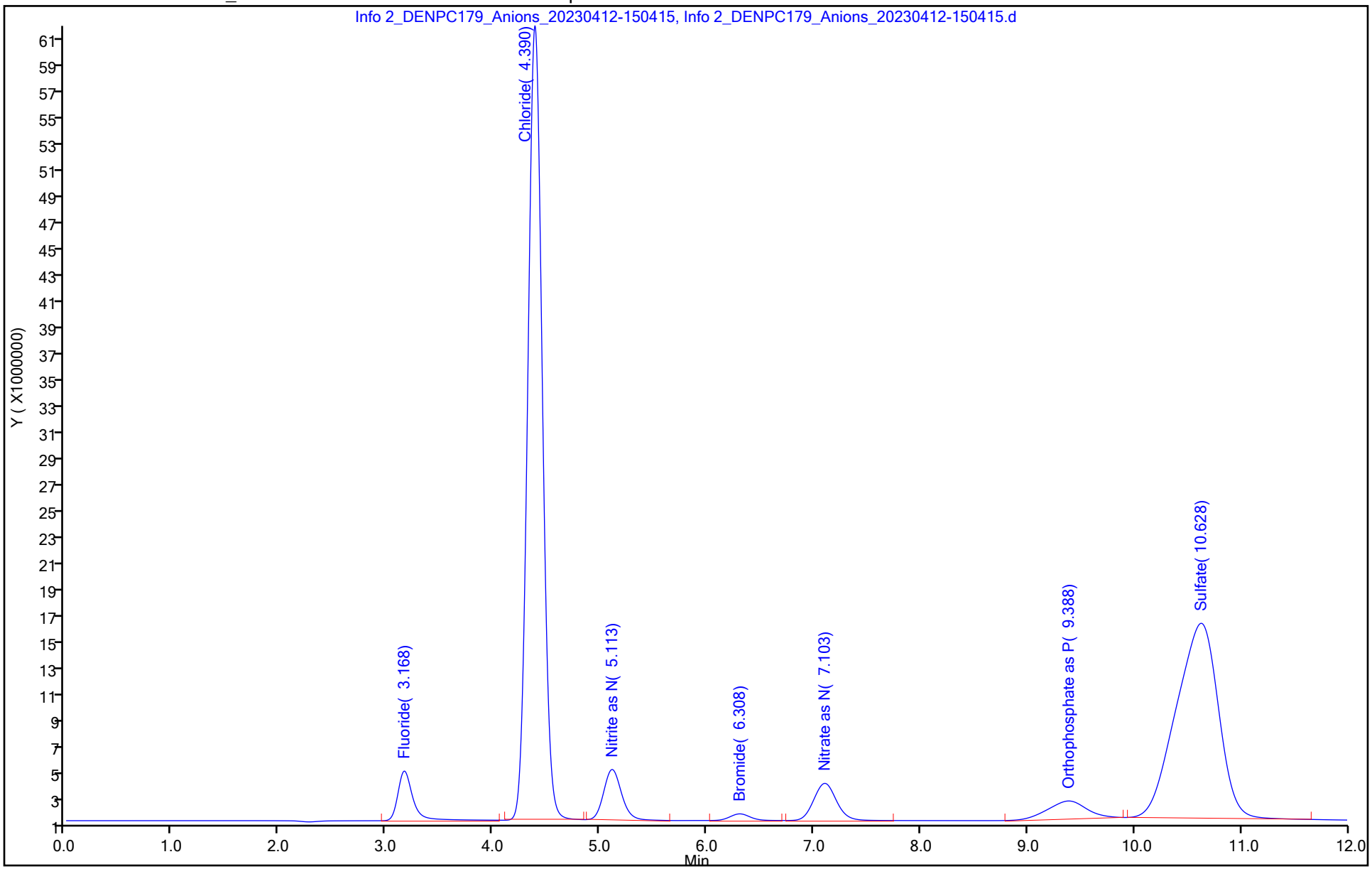
Reagents:

IC CAL cl/so4_00475 Amount Added: 2.40 Units: mL
IC Cal low_00703 Amount Added: 0.40 Units: mL

Report Date: 14-Apr-2023 14:03:55 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150415.d				
Injection Date:	12-Apr-2023 14:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

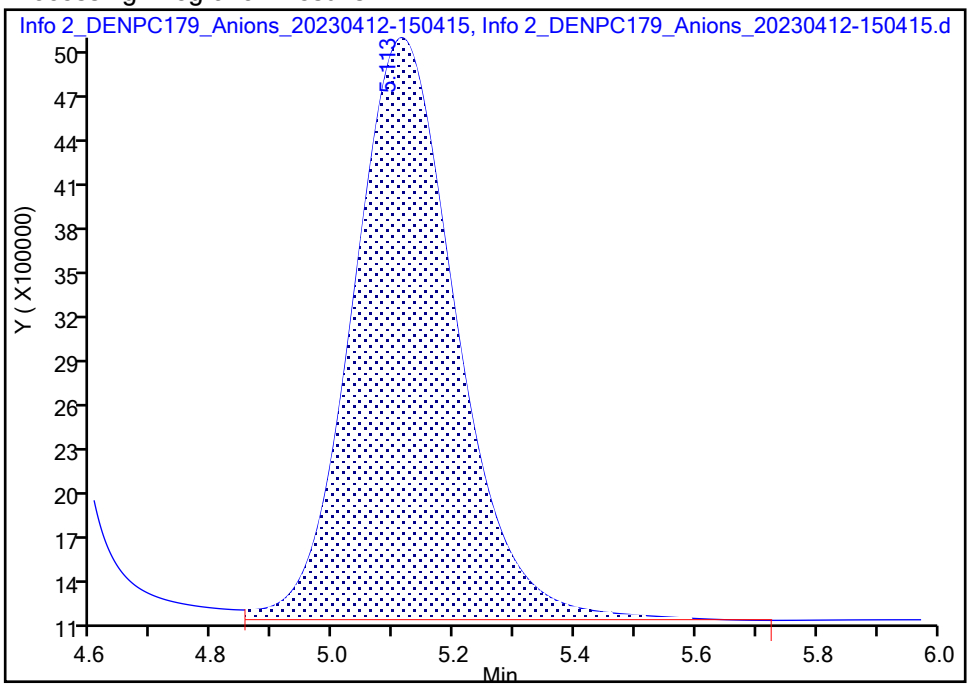
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

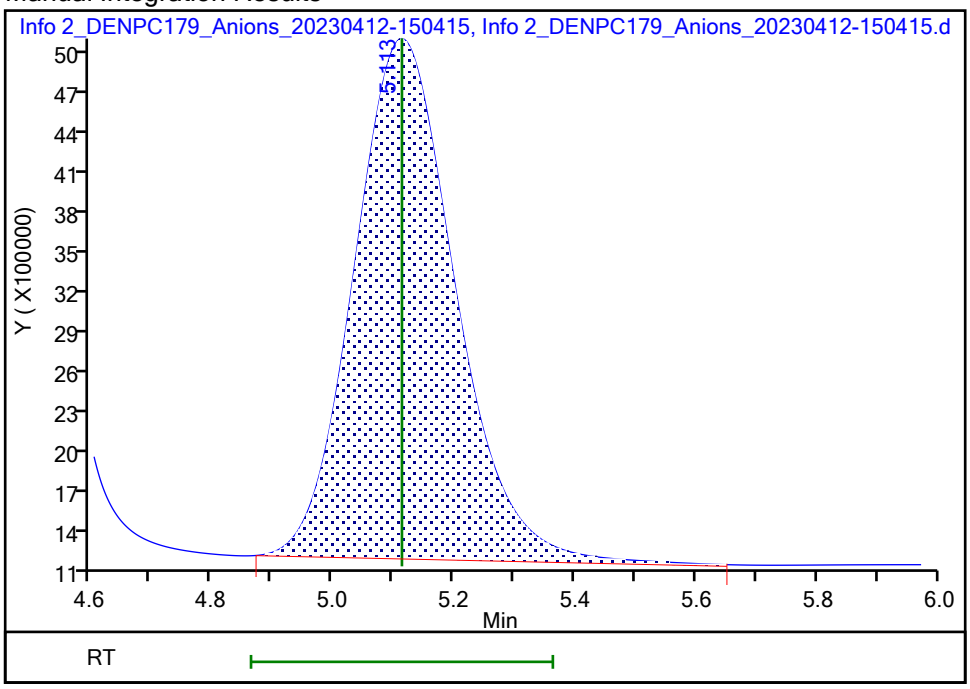
Processing Integration Results

RT: 5.11
Area: 46326440
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.11
Area: 44844044
Amount: 0.994454
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:27
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

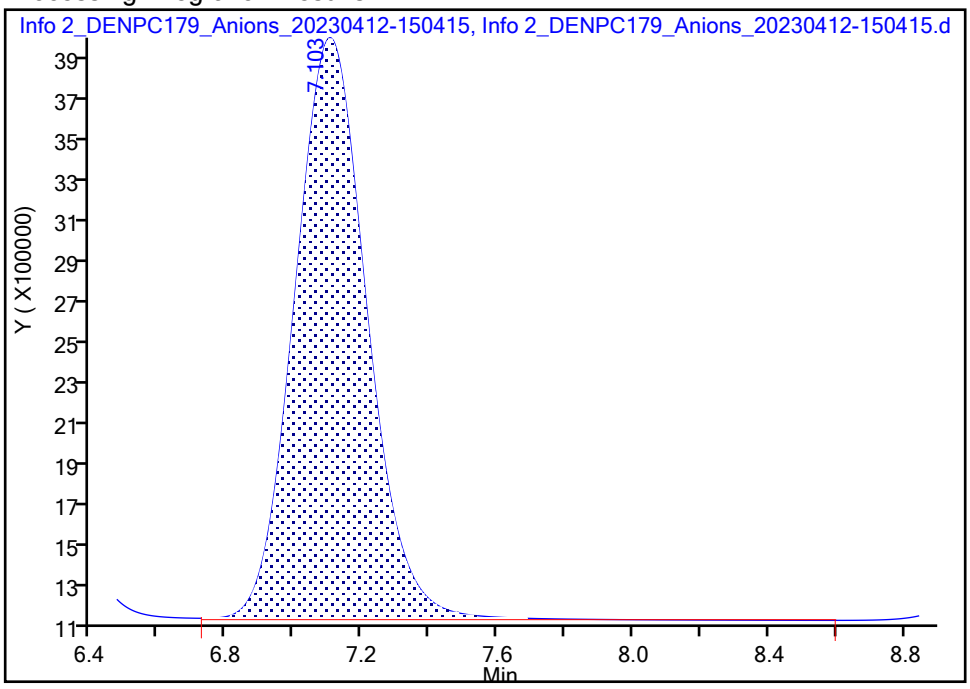
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

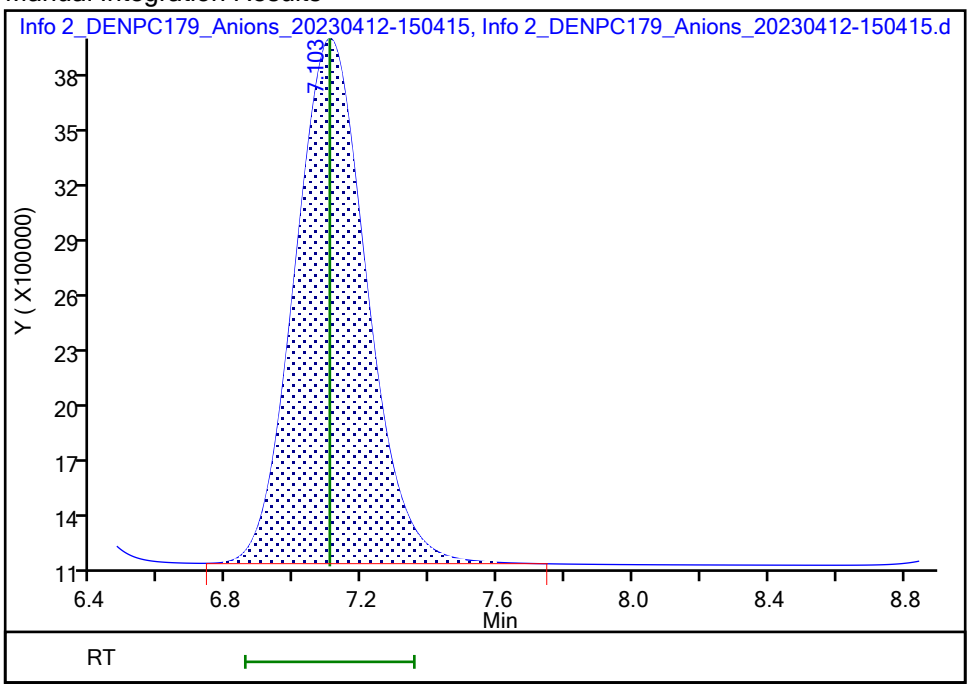
Processing Integration Results

RT: 7.10
Area: 42281044
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.10
Area: 42066844
Amount: 0.952760
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:36
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

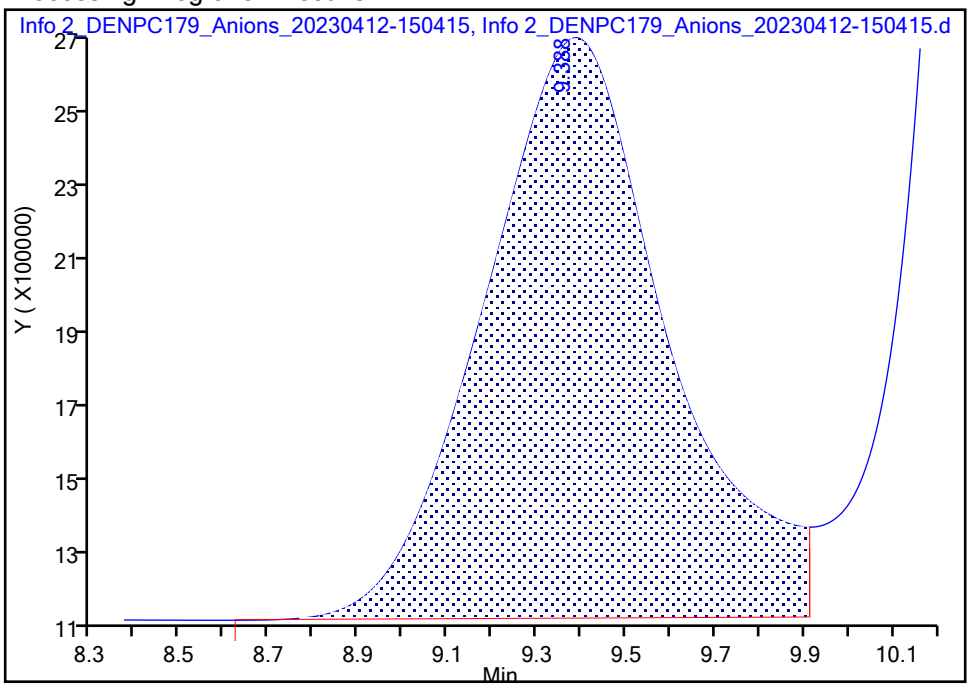
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

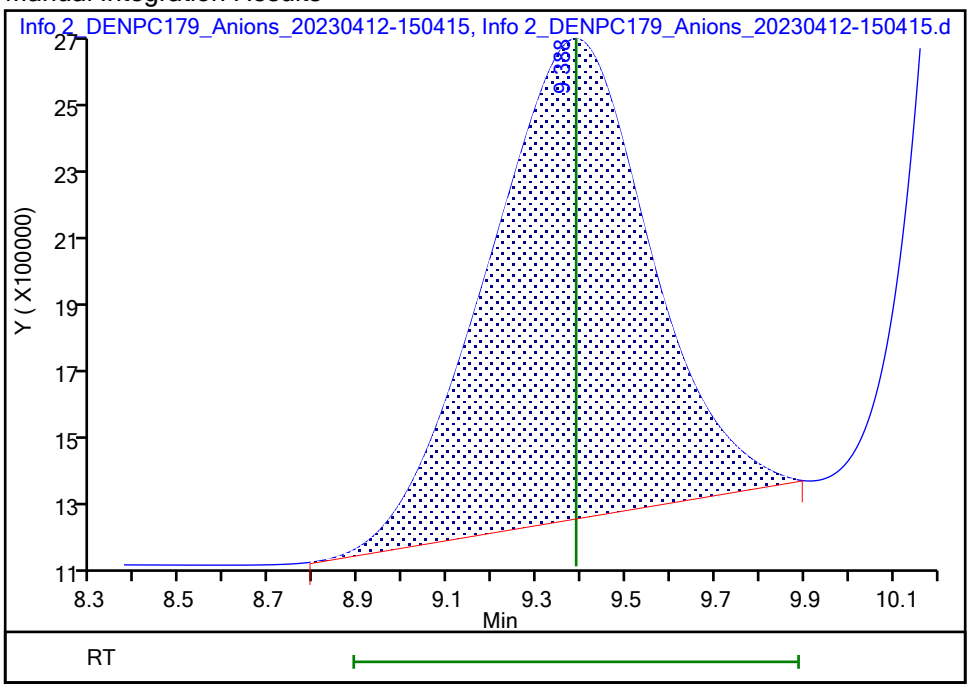
Processing Integration Results

RT: 9.39
Area: 42806166
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 9.39
Area: 34760084
Amount: 1.123785
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:46
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 12-Apr-2023 15:04:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-005
Misc. Info.: 280-0120345-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:03:57 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:43:24

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.170	3.170	0.000	96629288	NC	NC	Ma
2 Chloride	4.405	4.405	0.000	1149686166	NC	NC	M
3 Nitrite as N	5.107	5.107	0.000	116231748	2.50	2.53	M
4 Bromide	6.298	6.298	0.000	17672625	NC	NC	
5 Nitrate as N	7.078	7.078	0.000	112738215	2.50	2.49	M
6 Orthophosphate as P	9.368	9.368	0.000	65067694	2.50	2.56	M
7 Sulfate	10.610	10.610	0.000	828007497	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

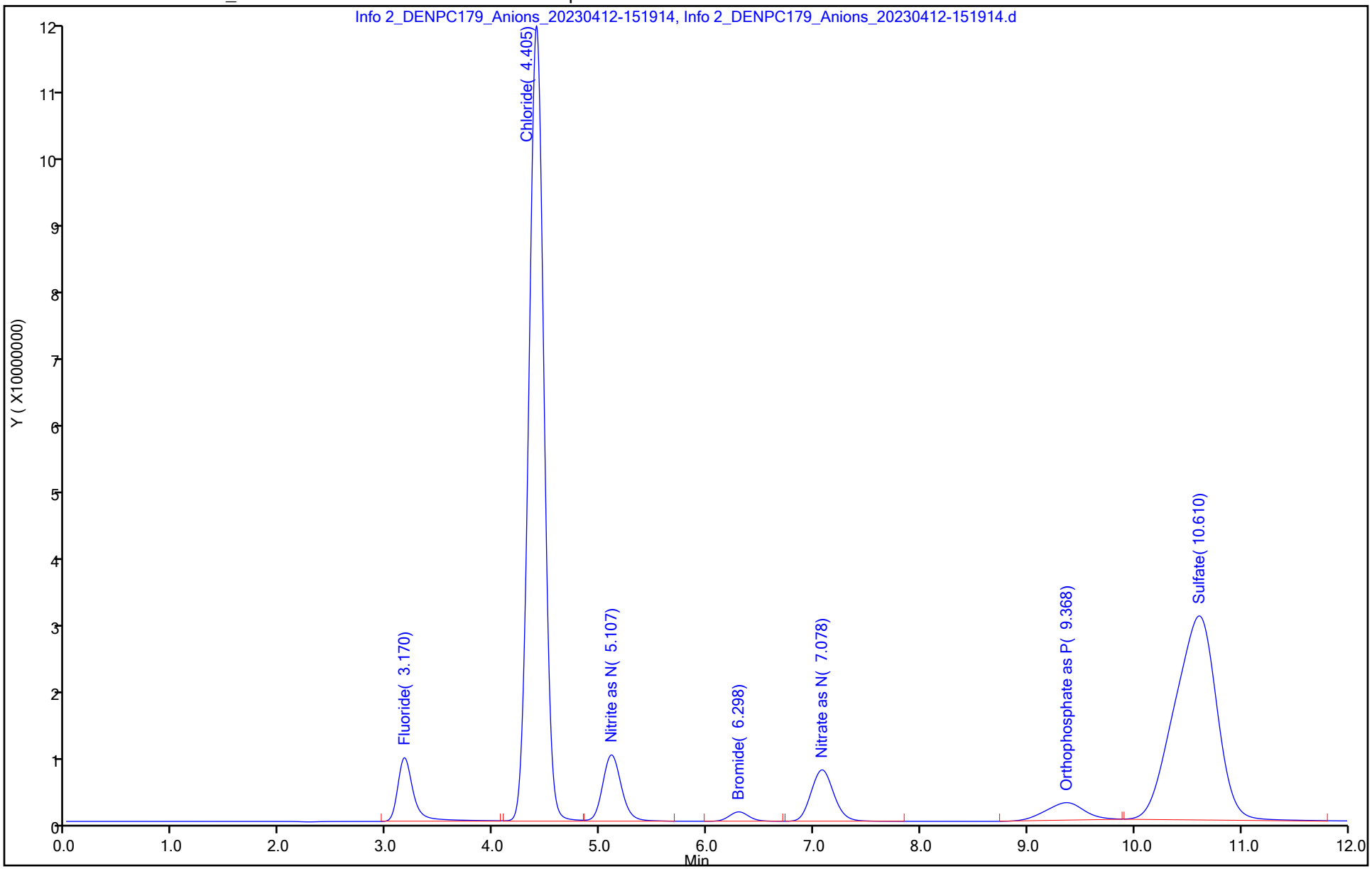
Reagents:

IC CAL cl/so4_00475 Amount Added: 4.80 Units: mL
IC Cal low_00703 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2023 14:03:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151914.d				
Injection Date:	12-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151

Injection Date: 12-Apr-2023 15:04:00 Instrument ID: WC_IonChrom10

Lims ID: STD L5

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

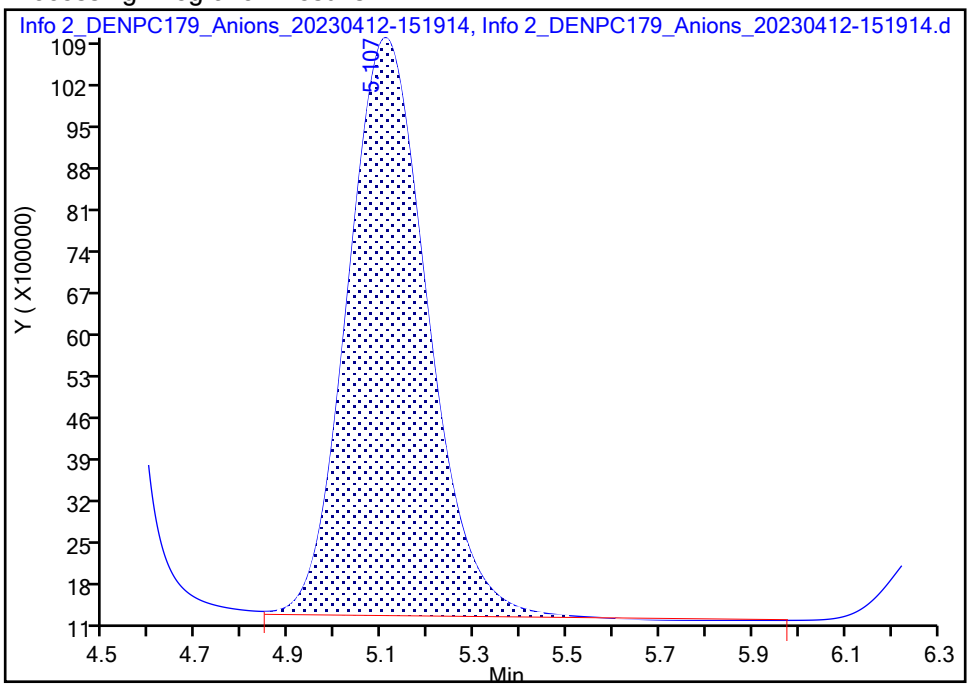
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

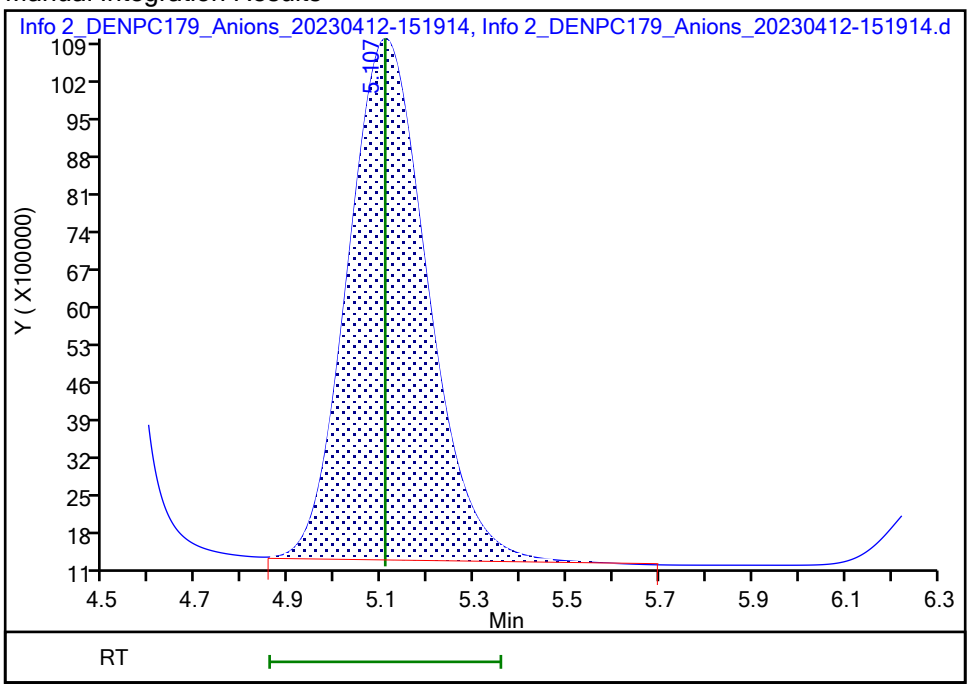
Processing Integration Results

RT: 5.11
Area: 117216841
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.11
Area: 116231748
Amount: 2.533691
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:01

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

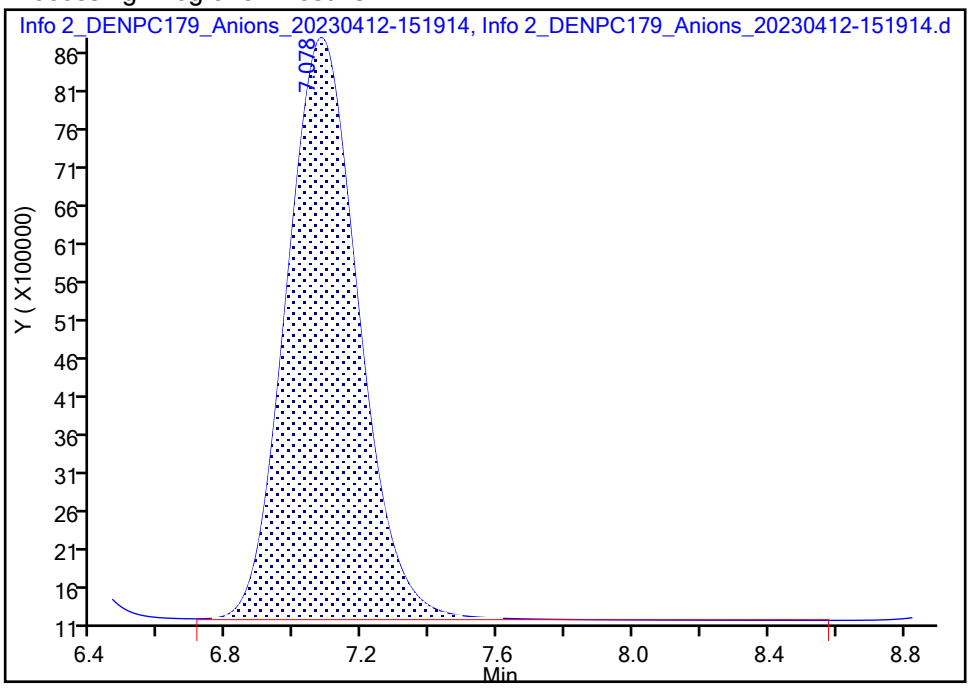
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151
Injection Date: 12-Apr-2023 15:04:00 Instrument ID: WC_IonChrom10
Lims ID: STD L5
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

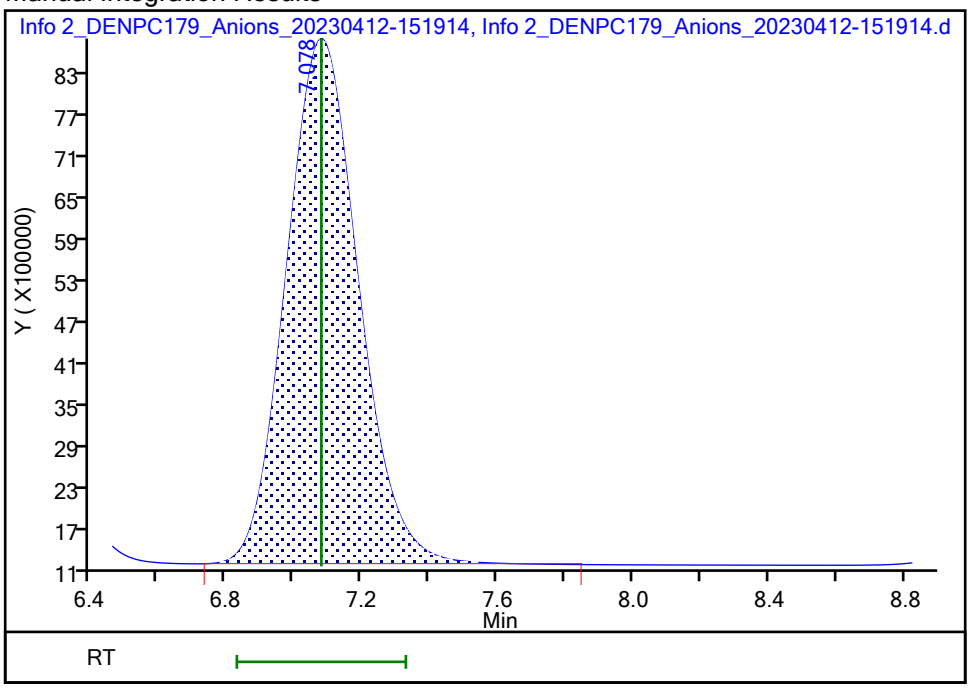
Processing Integration Results

RT: 7.08
Area: 112804805
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.08
Area: 112738215
Amount: 2.493526
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:10
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151

Injection Date: 12-Apr-2023 15:04:00 Instrument ID: WC_IonChrom10

Lims ID: STD L5

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

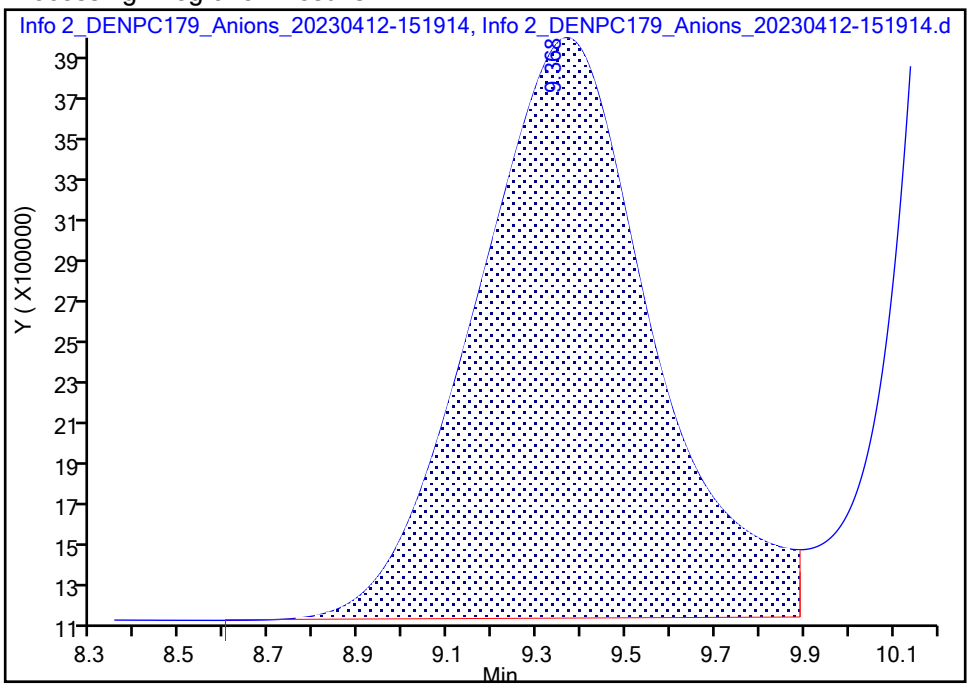
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

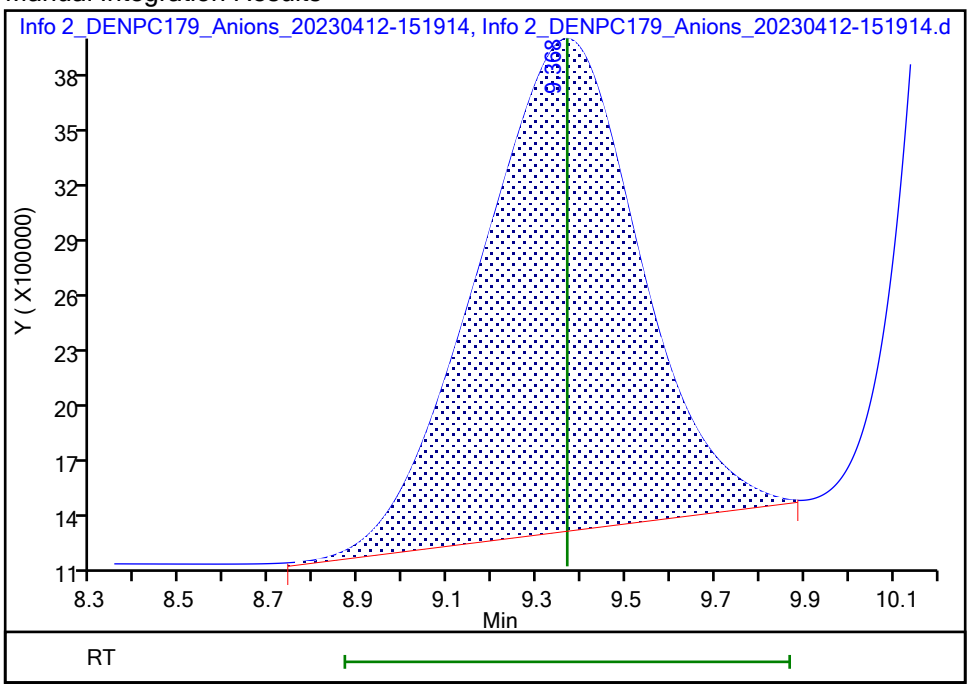
RT: 9.37
Area: 75792721
Amount: 0
Amount Units: ug/ml

Processing Integration Results



RT: 9.37
Area: 65067694
Amount: 2.556261
Amount Units: ug/ml

Manual Integration Results



Reviewer: LVW8, 12-Apr-2023 15:43:19

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Apr-2023 15:19:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-006
Misc. Info.: 280-0120345-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:04:00 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 17:08:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.175	3.175	0.000	190381963	NC	NC	Ma
2 Chloride	4.428	4.428	0.000	1914243902	NC	NC	M
3 Nitrite as N	5.103	5.103	0.000	229518060	5.00	4.98	M
4 Bromide	6.292	6.292	0.000	37078318	NC	NC	
5 Nitrate as N	7.057	7.057	0.000	230663663	5.00	5.06	M
6 Orthophosphate as P	9.353	9.353	0.000	112155923	5.00	4.78	M
7 Sulfate	10.592	10.592	0.000	1384314036	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

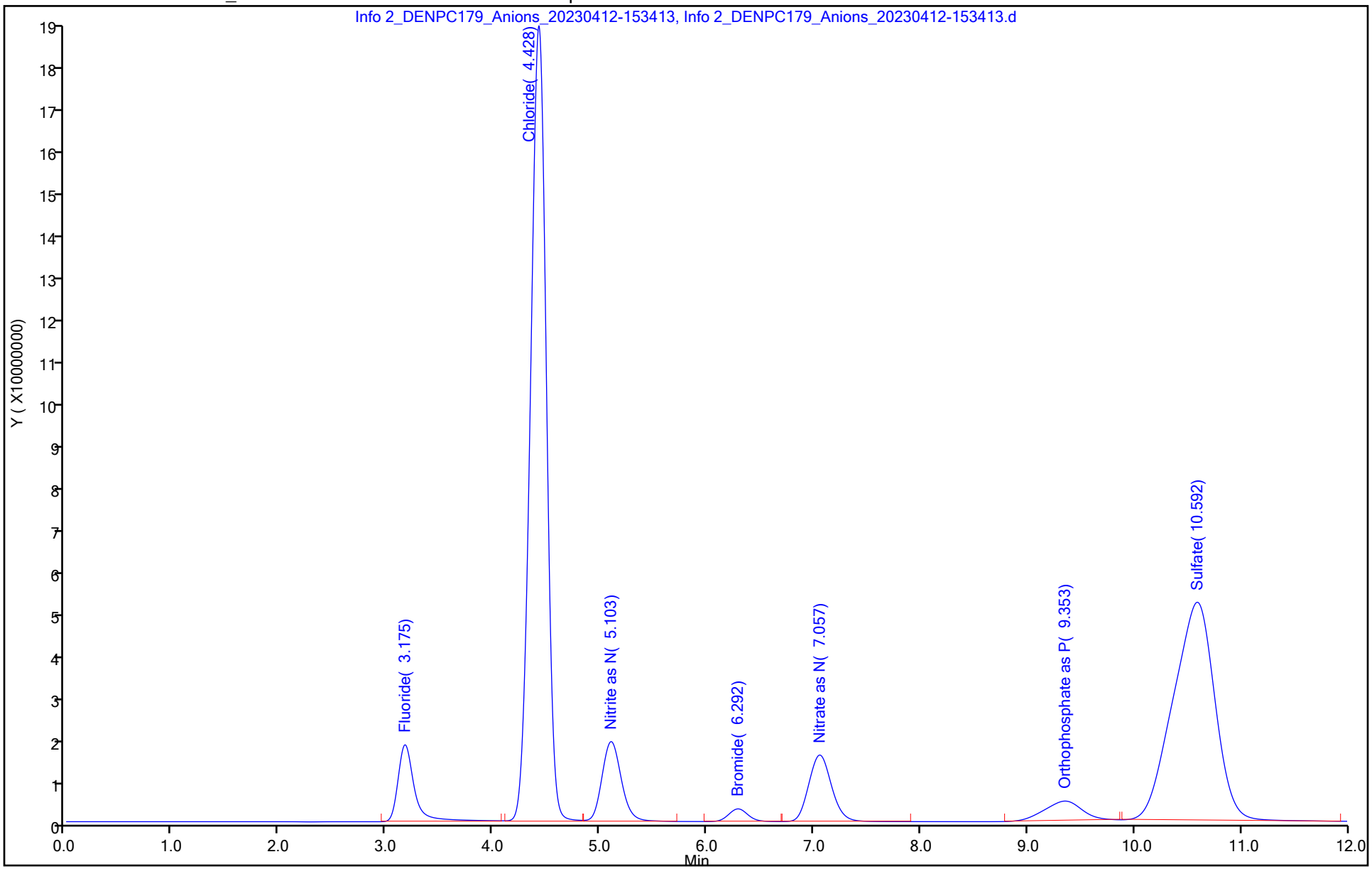
Reagents:

IC CAL cl/so4_00475 Amount Added: 8.00 Units: mL
IC Cal low_00703 Amount Added: 2.00 Units: mL

Report Date: 14-Apr-2023 14:04:00 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153413.d				
Injection Date:	12-Apr-2023 15:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

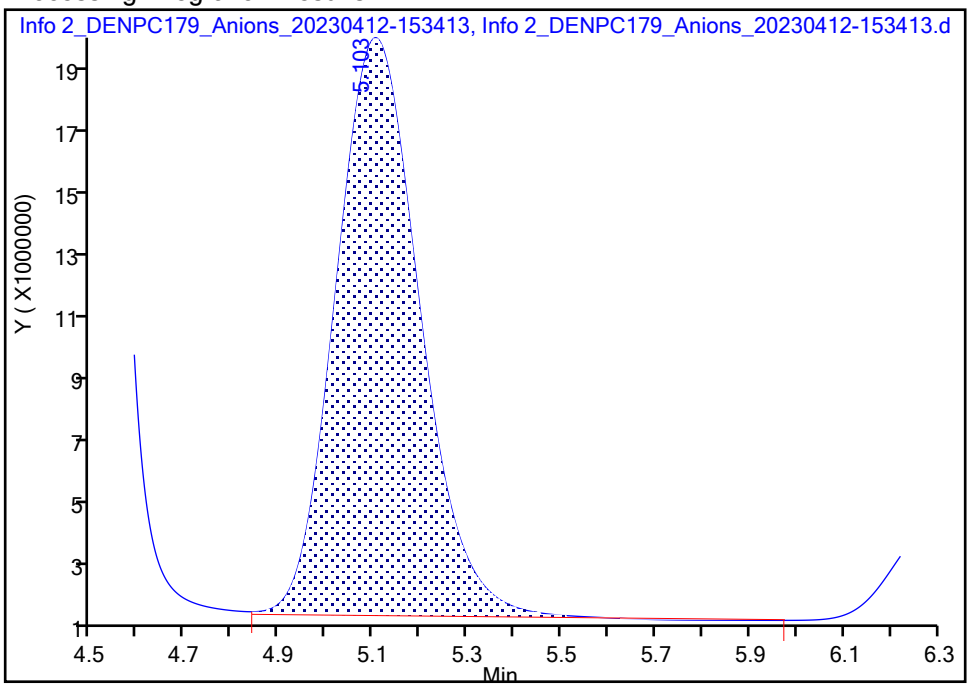
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Injection Date: 12-Apr-2023 15:19:00 Instrument ID: WC_IonChrom10
Lims ID: STD L6
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

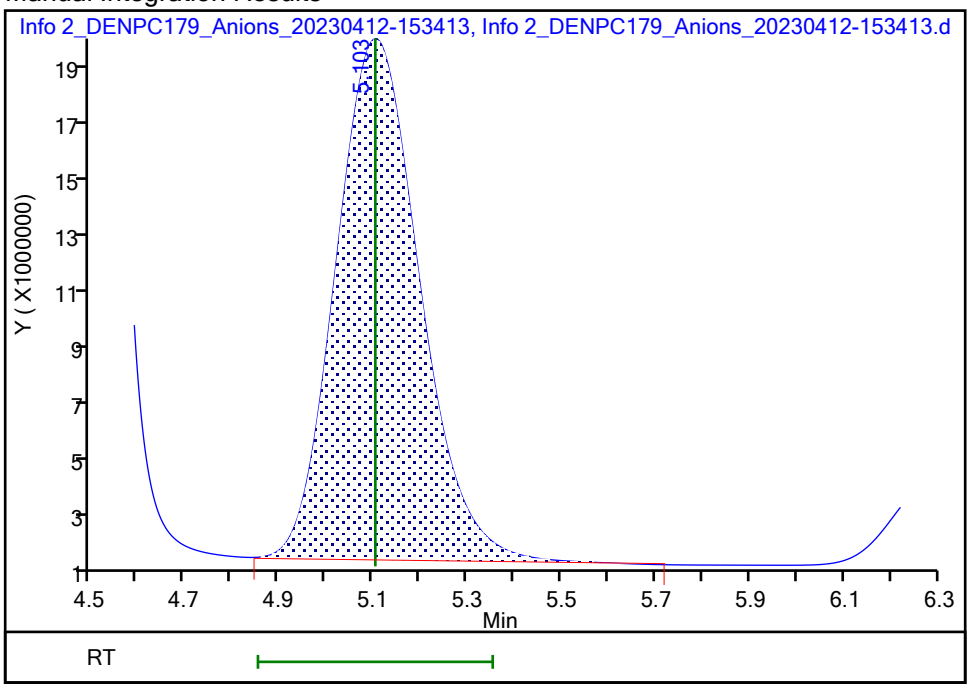
Processing Integration Results

RT: 5.10
Area: 230908651
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.10
Area: 229518060
Amount: 4.976333
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:38
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

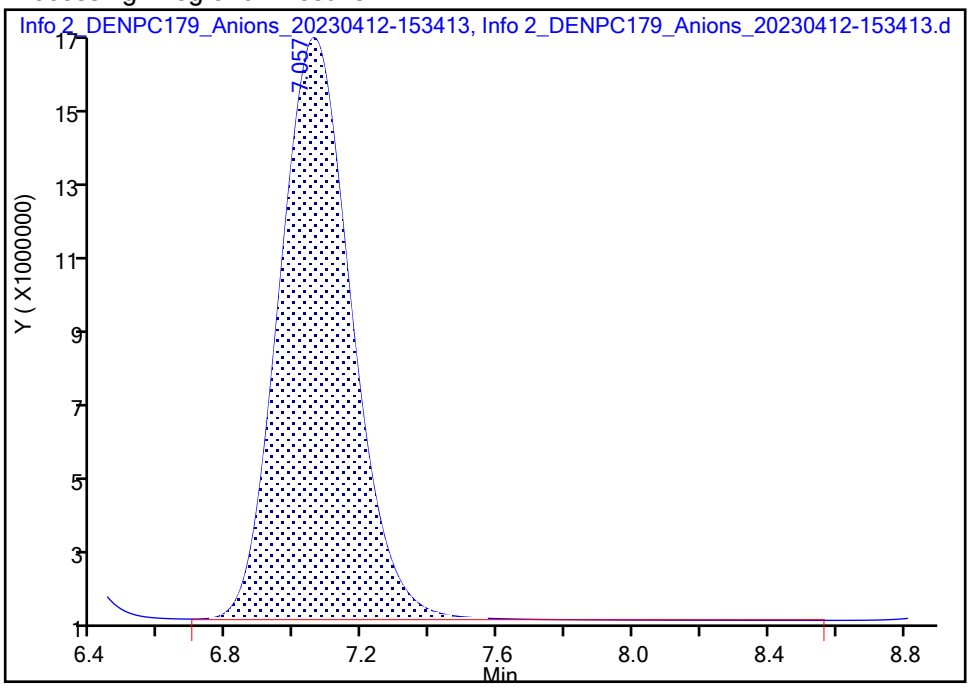
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153				
Injection Date:	12-Apr-2023 15:19:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L6				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions		
Column:		Detector	Info 2_091554_1		

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

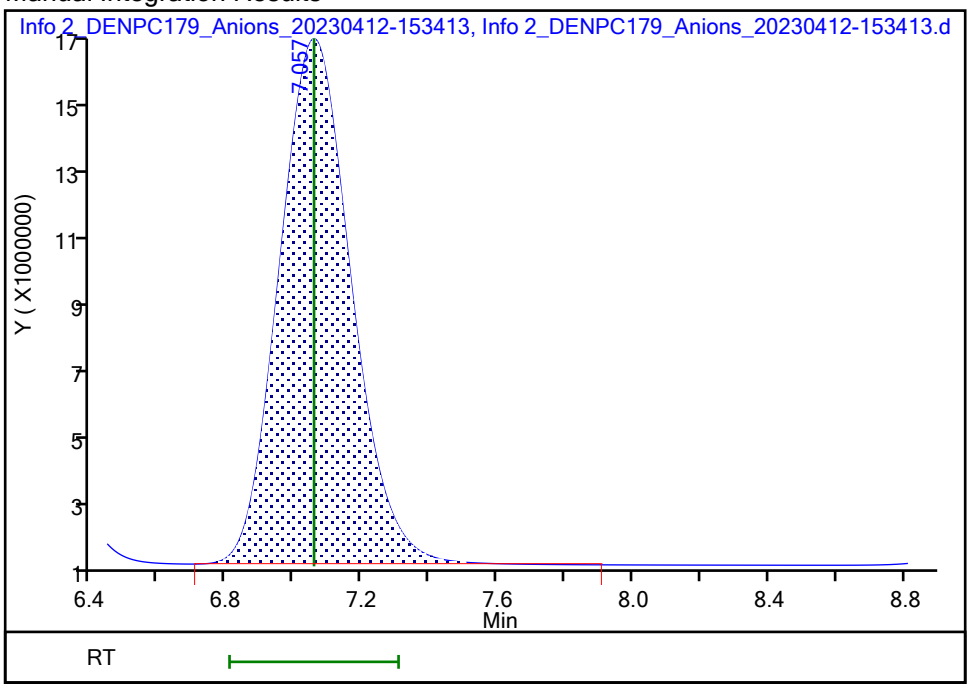
Processing Integration Results

RT: 7.06
Area: 230797057
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.06
Area: 230663663
Amount: 5.064518
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:47
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

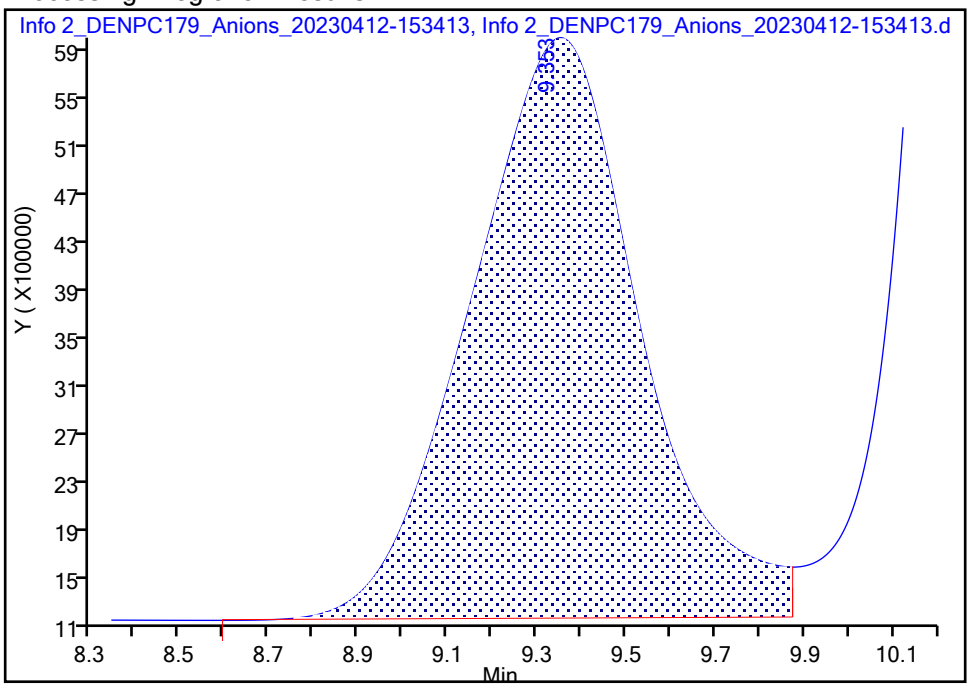
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Injection Date: 12-Apr-2023 15:19:00 Instrument ID: WC_IonChrom10
Lims ID: STD L6
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

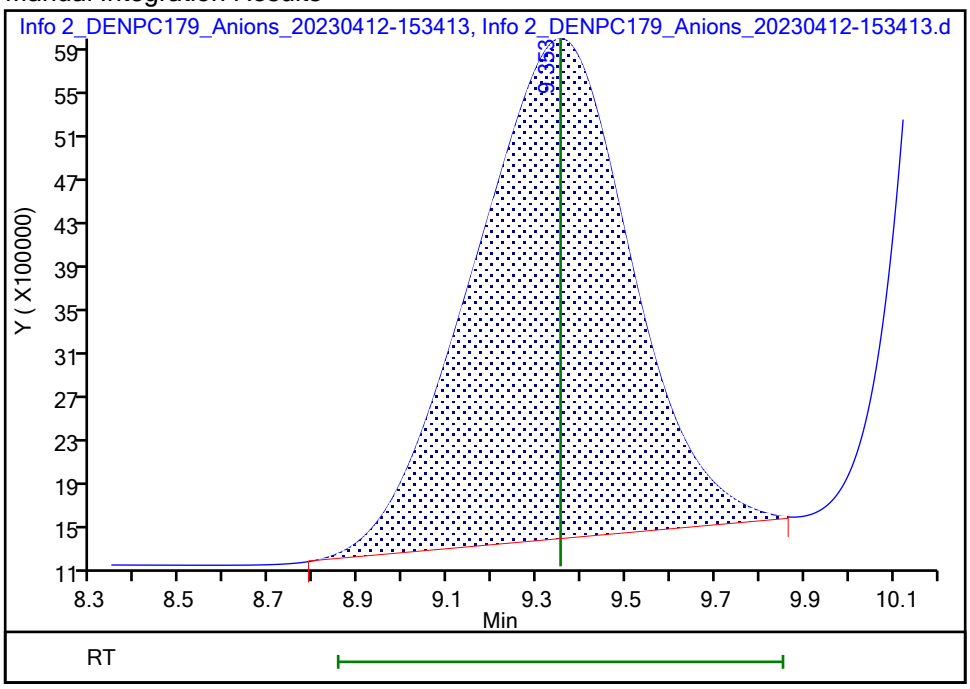
Processing Integration Results

RT: 9.35
Area: 127117672
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 9.35
Area: 112155923
Amount: 4.781864
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:56
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

IC Instrument Information

WL: 120345 **Inst ID:** IC16 **Analysis Date:** 04/12/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	174903	7	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
40437065	43230492	44844044	46492699	45903612		-1277342			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			46378611		
M8087413	M21615246	M44844044	M116231748	M229518060					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
5 Nitrate as N				Signal: 1					
42172205	39818610	42066844	45095286	46132733		-1634037			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			45867680		
M8434441	M19909305	M42066844	M112738215	M230663663					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
6 Orthophosphate as P				Signal: 1			R1		
69769055	47259032	34760084	26027078	22431185		10983593			*0.990
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			21157507		
M13953811	M23629516	M34760084	M65067694	M112155923					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

Report Date: 14-Apr-2023 13:55:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 13:55:16	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 17.1	10.0	117.1	
2 Chloride	80.0	85.7	7.1	10.0	107.1	
4 Bromide	2.00	2.01	0.6	10.0	100.6	
7 Sulfate	80.0	86.9	8.7	10.0	108.7	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 13:56:07	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.12	6.0	10.0	106.0	
5 Nitrate as N	2.00	2.15	7.4	10.0	107.4	
6 Orthophosphate as	2.00	2.84	*41.9	10.0	141.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Apr-2023 15:34:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-007
Misc. Info.: 280-0120345-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:06:59 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 13-Apr-2023 12:05:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.172	3.172	0.000	88983337	NC	NC	Ma
2 Chloride	4.423	4.423	0.000	1641996046	NC	NC	
3 Nitrite as N	5.112	5.112	0.000	97019728	2.00	2.12	M
4 Bromide	6.305	6.305	0.000	14681577	NC	NC	
5 Nitrate as N	7.087	7.087	0.000	96882220	2.00	2.15	
6 Orthophosphate as P	9.373	9.373	0.000	71034633	2.00	2.84	
7 Sulfate	10.593	10.593	0.000	1198792597	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

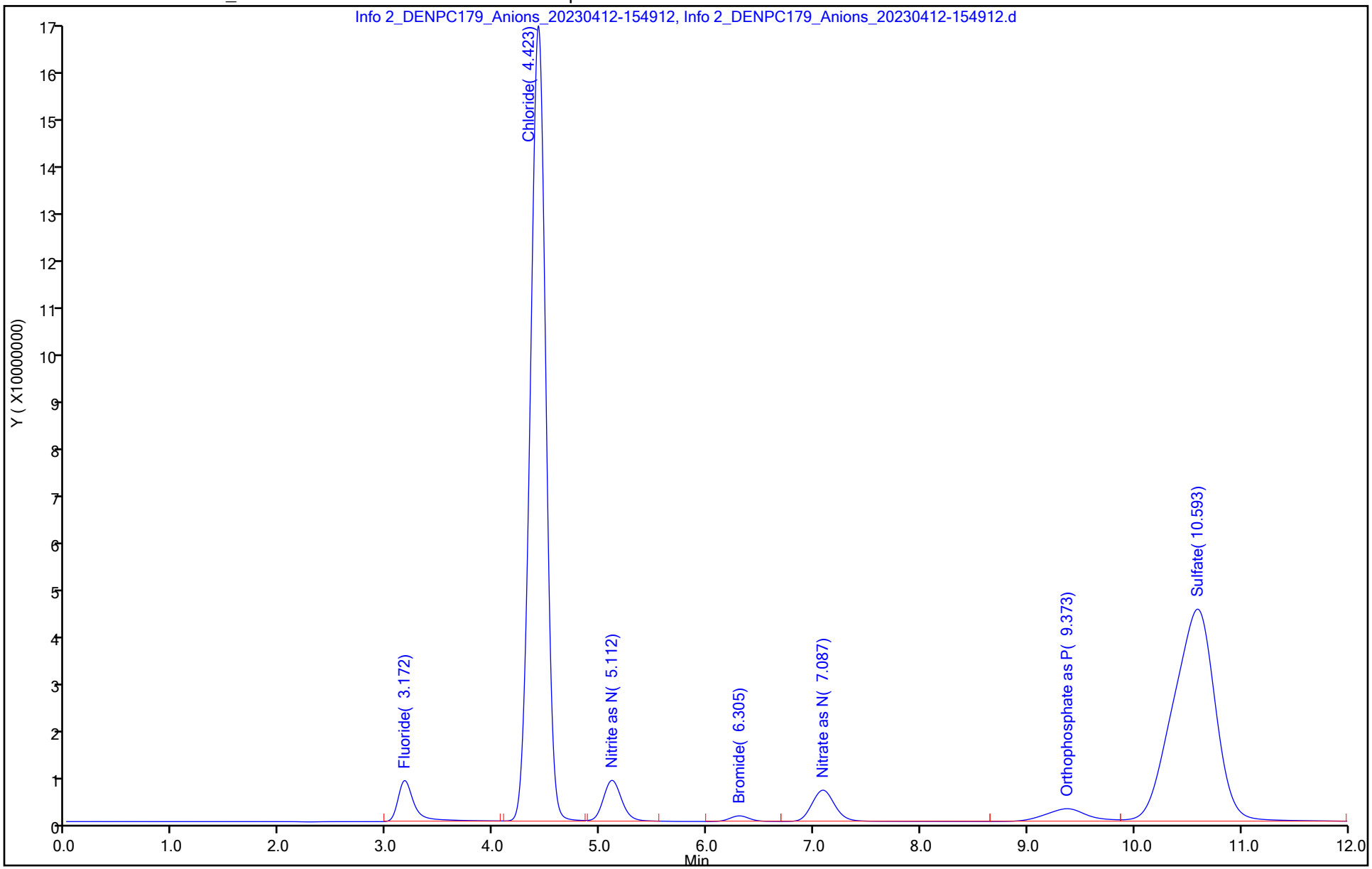
Reagents:

IC SO4 ICV_00024	Amount Added:	0.80	Units: mL
Cl ICV Std_00006	Amount Added:	0.80	Units: mL
IC ICV 5_00403	Amount Added:	0.80	Units: mL

Report Date: 14-Apr-2023 14:06:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154912.d				
Injection Date:	12-Apr-2023 15:34:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154

Injection Date: 12-Apr-2023 15:34:00 Instrument ID: WC_IonChrom10

Lims ID: ICV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 7

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

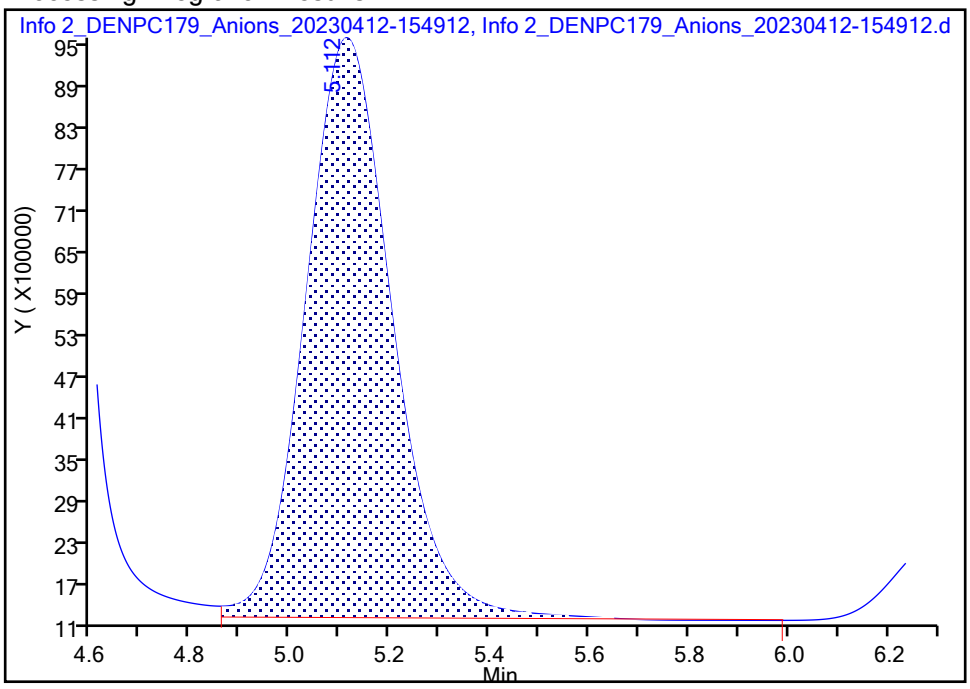
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

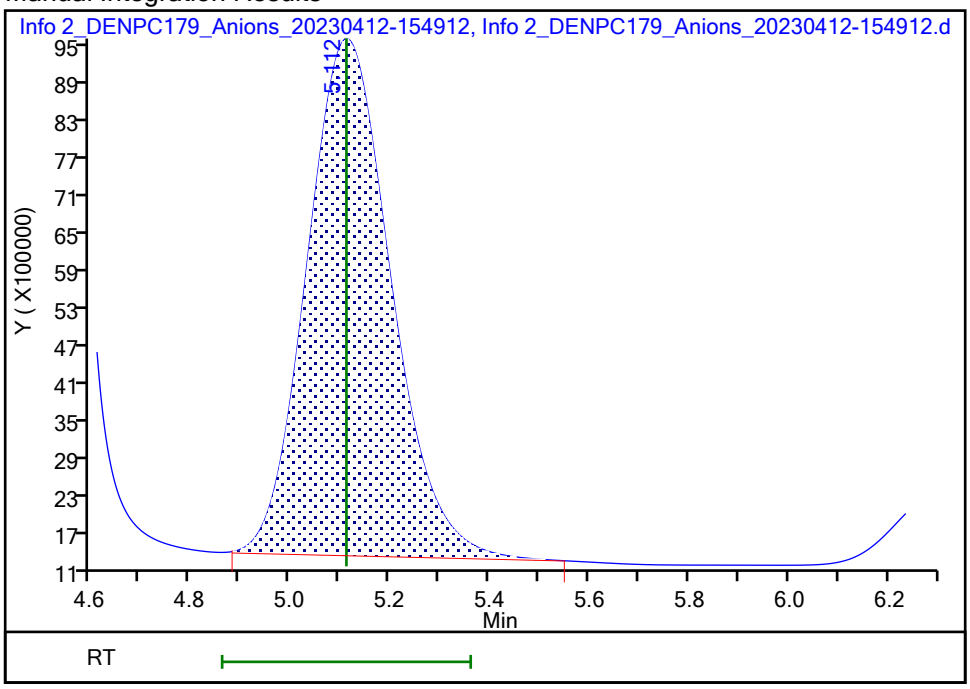
Processing Integration Results

RT: 5.11
Area: 101247304
Amount: 2.210602
Amount Units: ug/ml



Manual Integration Results

RT: 5.11
Area: 97019728
Amount: 2.119448
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 13:56:04

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 12-Apr-2023 15:49:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-008
Misc. Info.: 280-0120345-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:07:08 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 14:07:17

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.172				ND	U
2 Chloride		4.397				ND	U
3 Nitrite as N		5.103				ND	
4 Bromide		6.293				ND	U
5 Nitrate as N		7.072				ND	
6 Orthophosphate as P	9.417	9.418	-0.001	14030813		0.1440	
7 Sulfate	10.600	10.602	-0.002	368472		NC	M

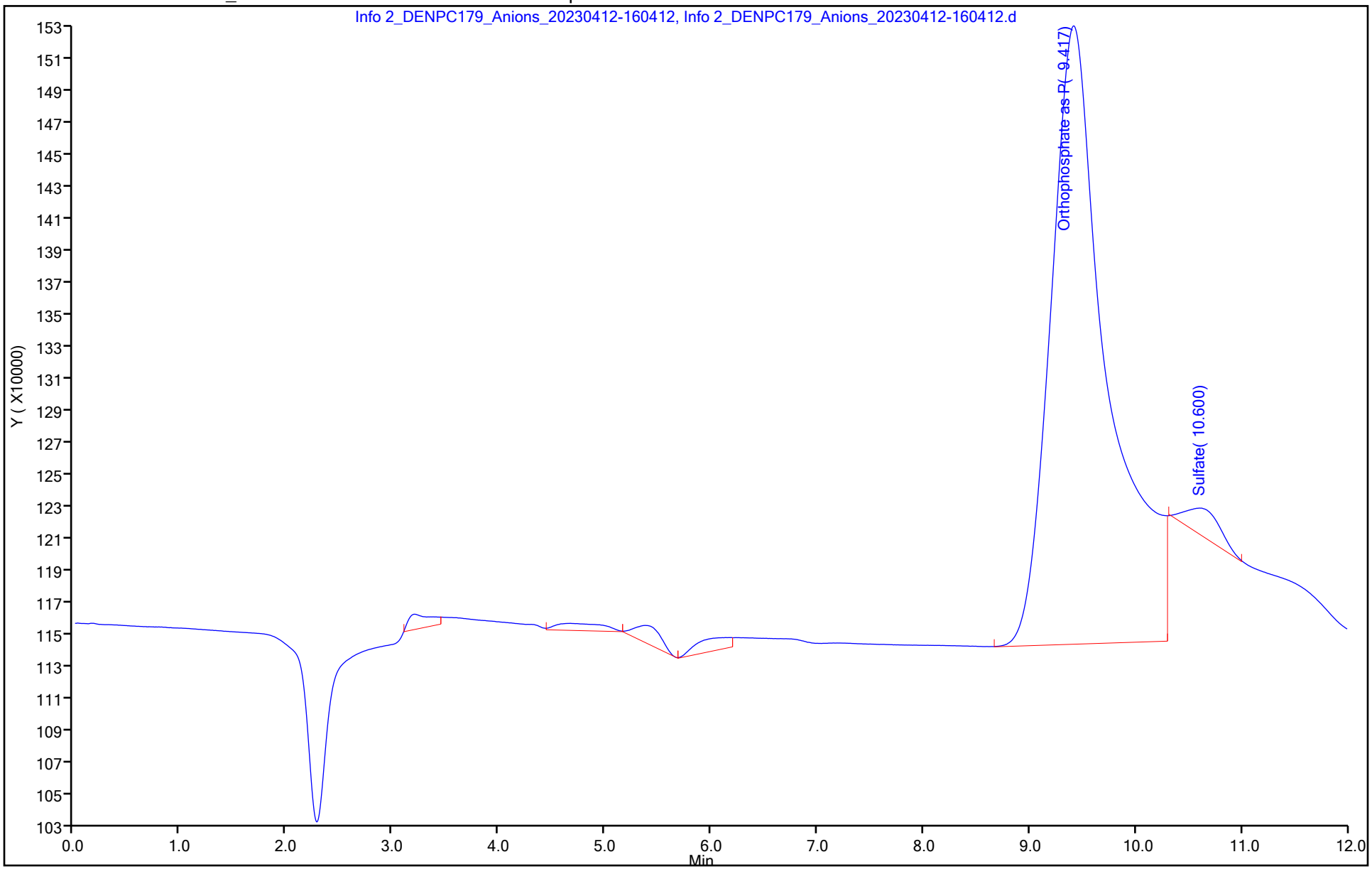
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 14-Apr-2023 14:07:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160412.d				
Injection Date:	12-Apr-2023 15:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14
Lims ID: STD L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Apr-2023 14:04:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-001
Misc. Info.: 280-0120345-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:48 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:40:32

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.175				ND	
2 Chloride	4.383	4.383	0.000	7464190	0.5000	0.5261	M
3 Nitrite as N		5.103				ND	
4 Bromide		6.292				ND	U
5 Nitrate as N		7.057				ND	
6 Orthophosphate as P	9.447	9.447	0.000	3338493		NC	M
7 Sulfate	10.645	10.645	0.000	7022789	0.5000	0.6018	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

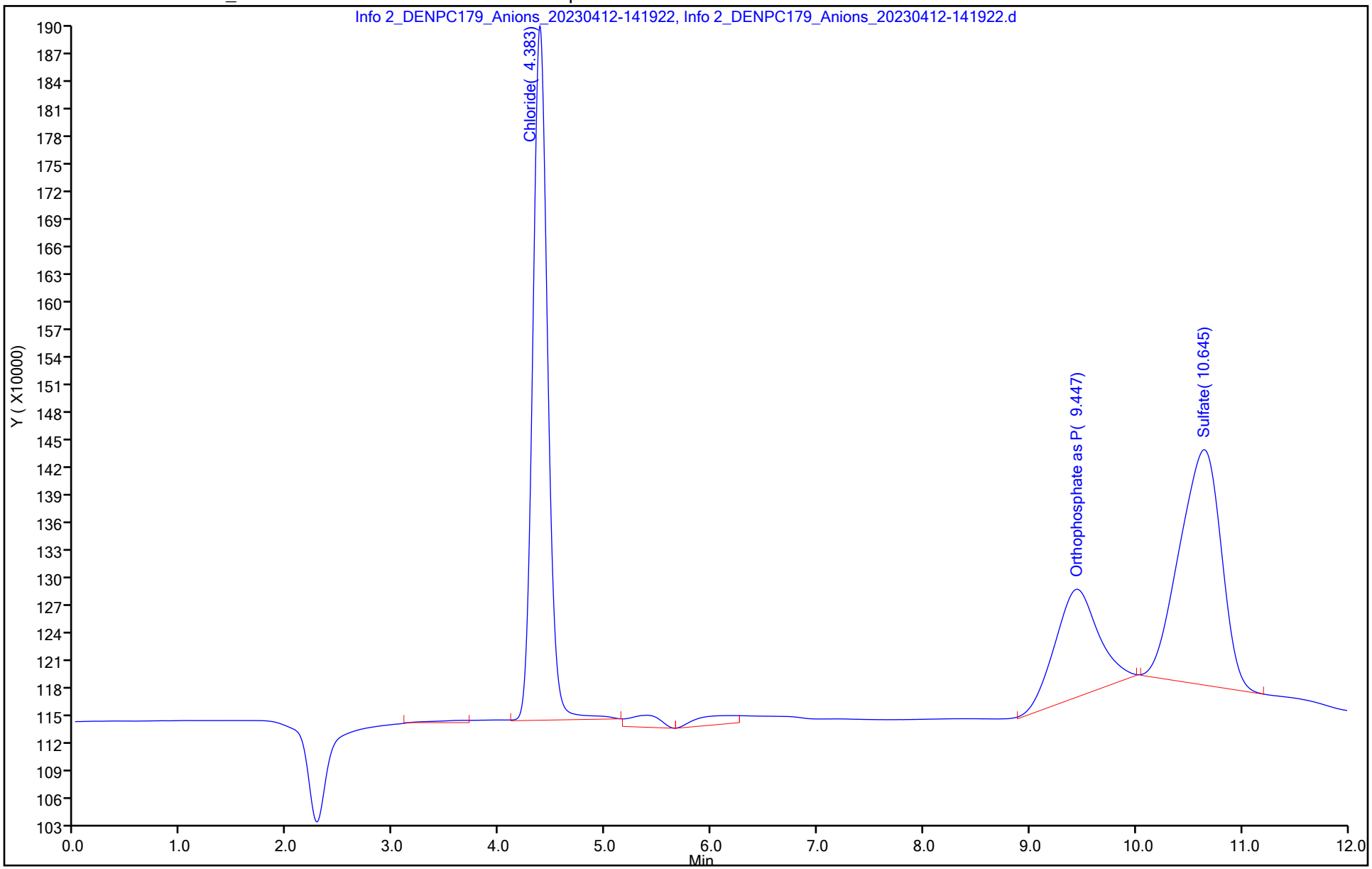
IC CAL cl/so4_00475 Amount Added: 0.04 Units: mL
IC Cal low_00703 Amount Added: 0.00 Units: mL

Report Date: 14-Apr-2023 14:03:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-141922.d

Injection Date:	12-Apr-2023 14:04:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L1			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

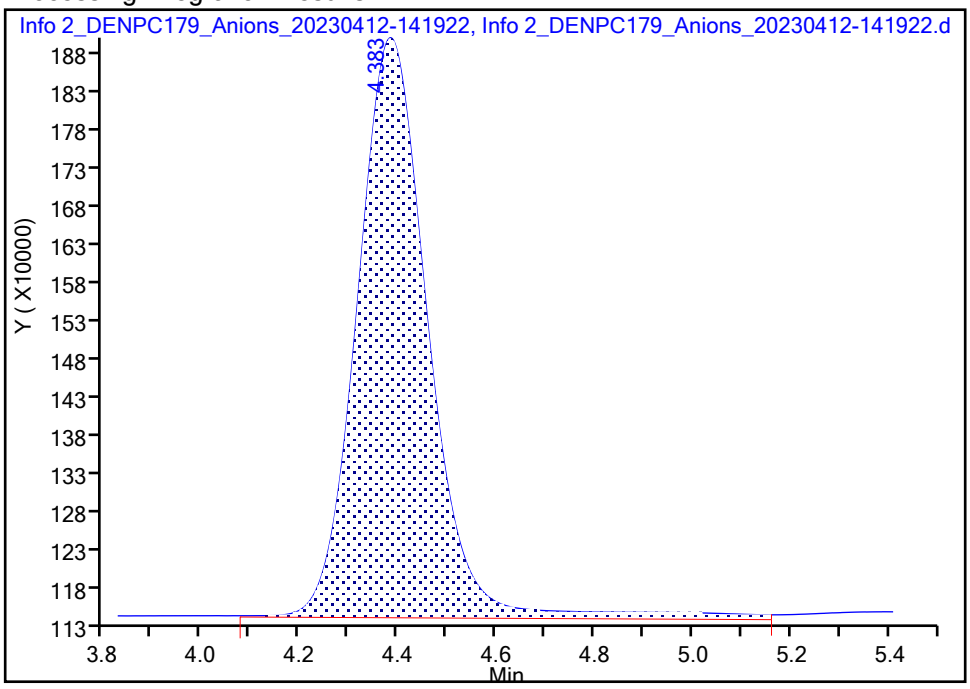
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14
Injection Date: 12-Apr-2023 14:04:00 Instrument ID: WC_IonChrom10
Lims ID: STD L1
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

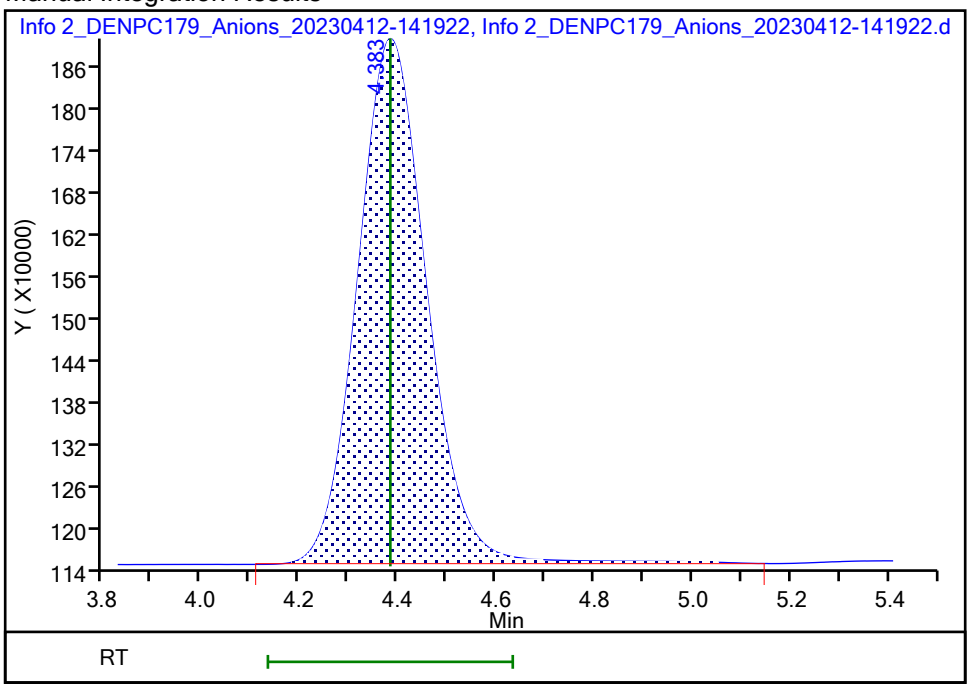
Processing Integration Results

RT: 4.38
Area: 7801695
Amount: 0.531210
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 7464190
Amount: 0.526115
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:40:25
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

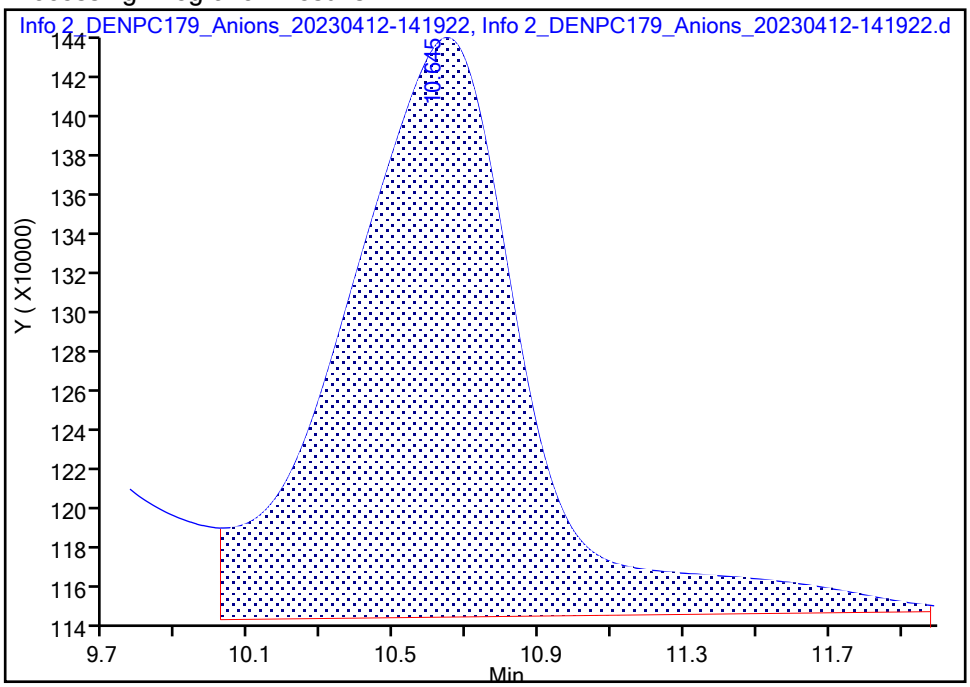
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14
Injection Date: 12-Apr-2023 14:04:00 Instrument ID: WC_IonChrom10
Lims ID: STD L1
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

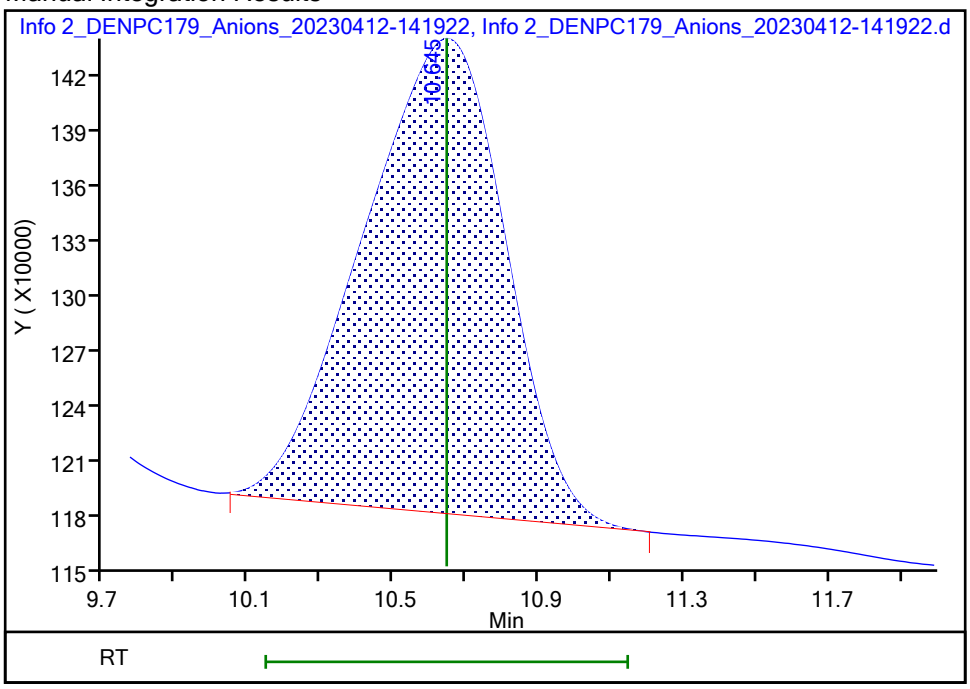
RT: 10.65
Area: 10125141
Amount: 0.498424
Amount Units: ug/ml

Processing Integration Results



RT: 10.65
Area: 7022789
Amount: 0.601802
Amount Units: ug/ml

Manual Integration Results



Reviewer: LVW8, 12-Apr-2023 15:40:28
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Apr-2023 14:19:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-002
Misc. Info.: 280-0120345-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:50 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:41:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.163	3.163	0.000	6262507	0.2000	0.2038	Ma
2 Chloride	4.380	4.380	0.000	20679388	1.25	1.21	M
3 Nitrite as N	5.115	5.115	0.000	8087413	NC	NC	M
4 Bromide	6.352	6.352	0.000	2964734	0.2000	0.2942	
5 Nitrate as N	7.383	7.383	0.000	8434441	NC	NC	a
6 Orthophosphate as P	9.813	9.813	0.000	13953811	NC	NC	M
7 Sulfate	11.045	11.045	0.000	14421328	1.25	1.14	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

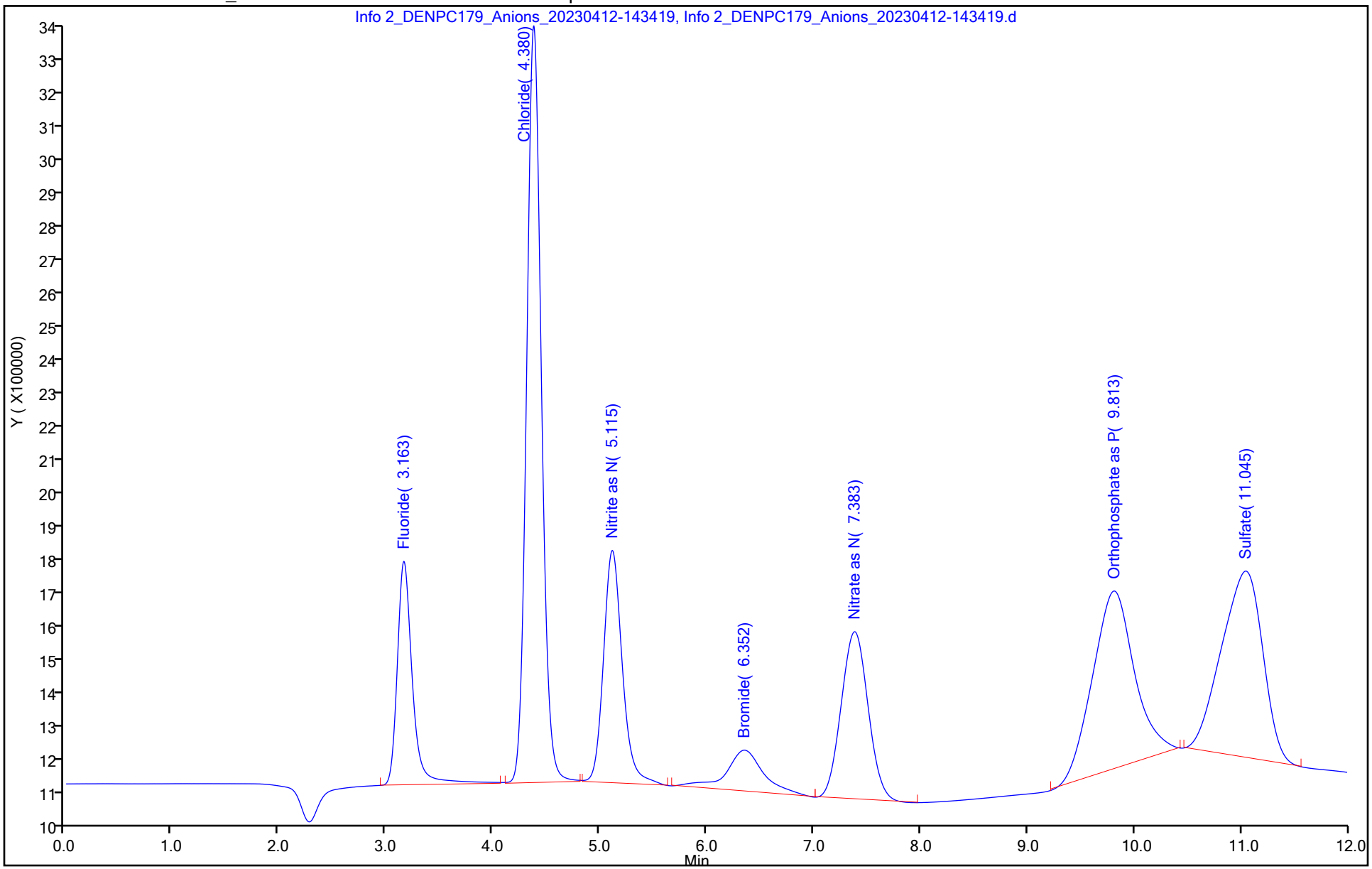
Reagents:

IC CAL cl/so4_00475 Amount Added: 0.10 Units: mL
IC Cal low_00703 Amount Added: 0.08 Units: mL

Report Date: 14-Apr-2023 14:03:51 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143419.d				
Injection Date:	12-Apr-2023 14:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

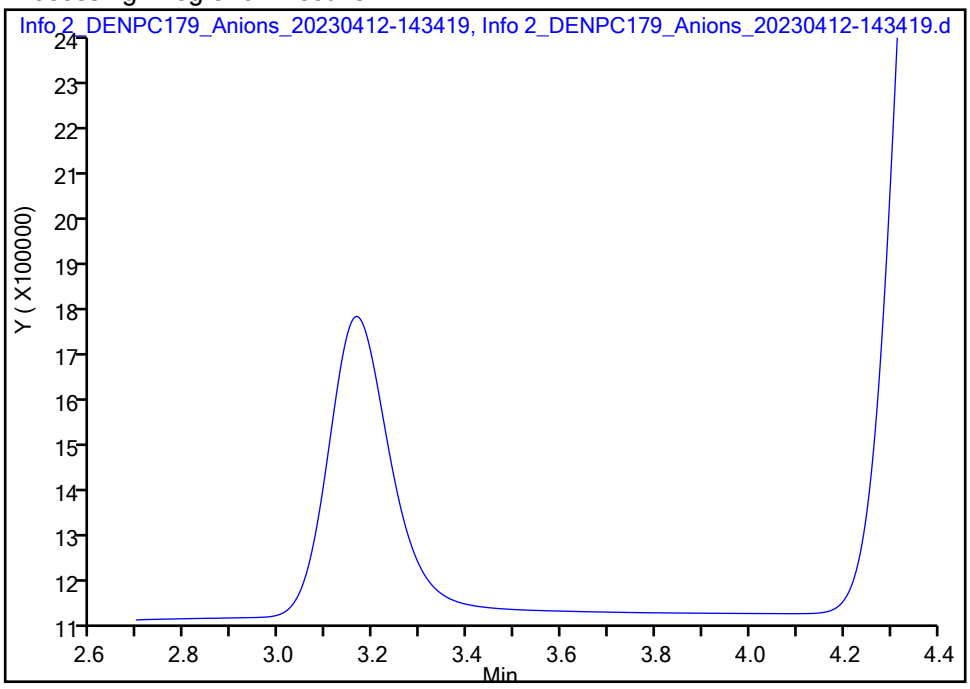
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143				
Injection Date:	12-Apr-2023 14:19:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L2				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

1 Fluoride, CAS: 16984-48-8

Signal: 1

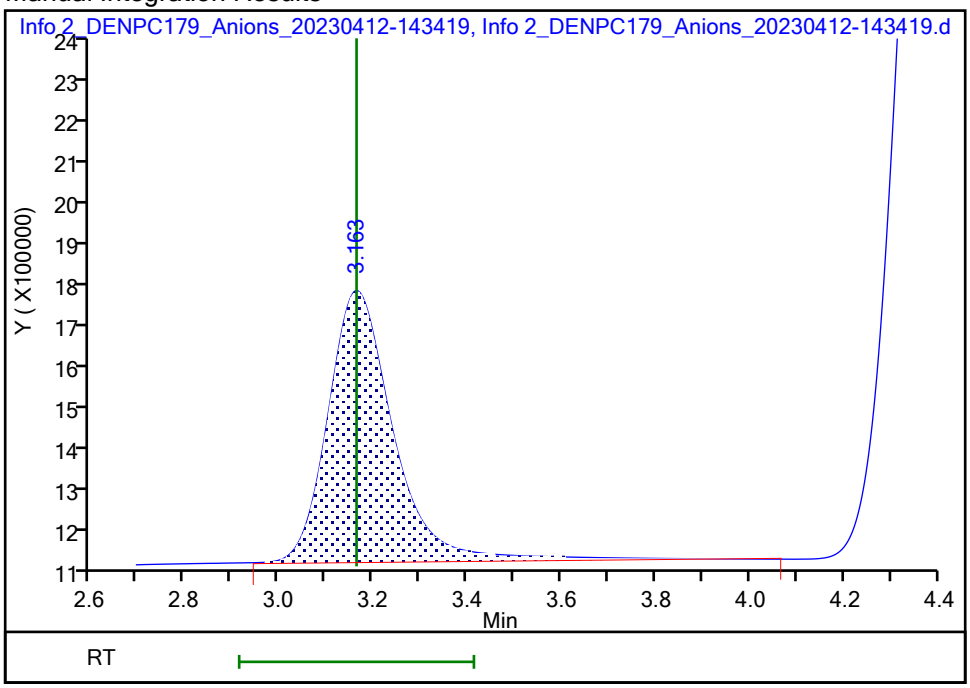
Not Detected
Expected RT: 3.16

Processing Integration Results



Manual Integration Results

RT: 3.16
Area: 6262507
Amount: 0.203766
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:29
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

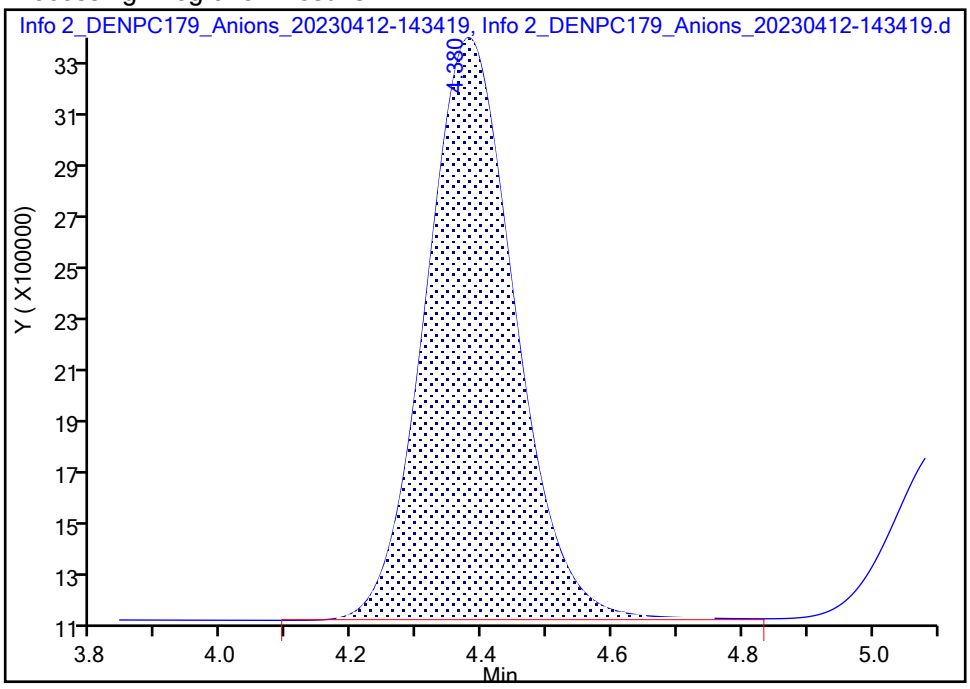
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

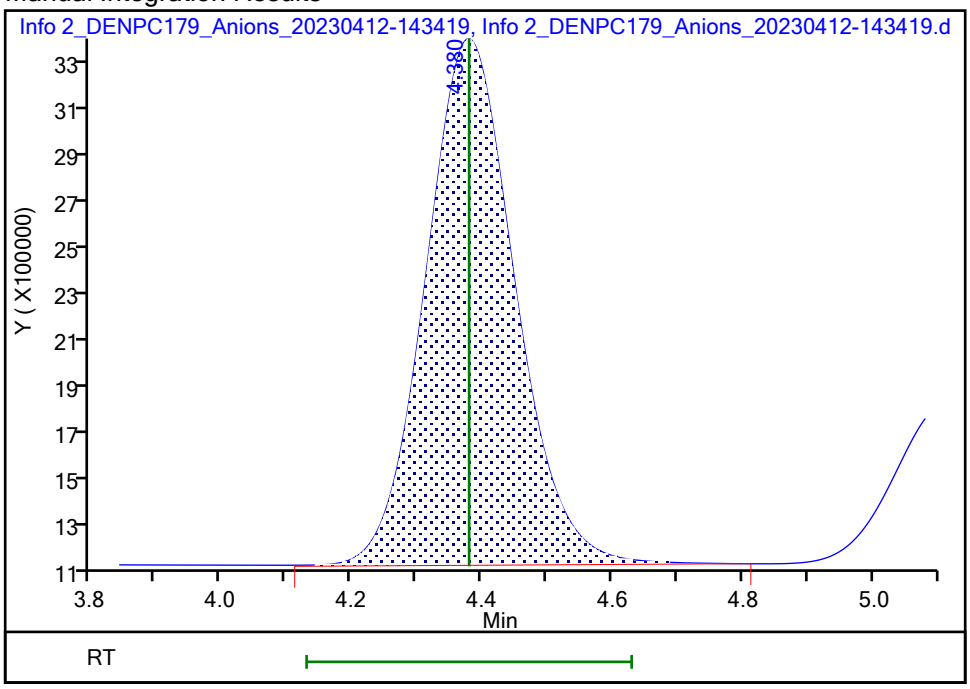
Processing Integration Results

RT: 4.38
Area: 20754406
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 20679388
Amount: 1.214764
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:02

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

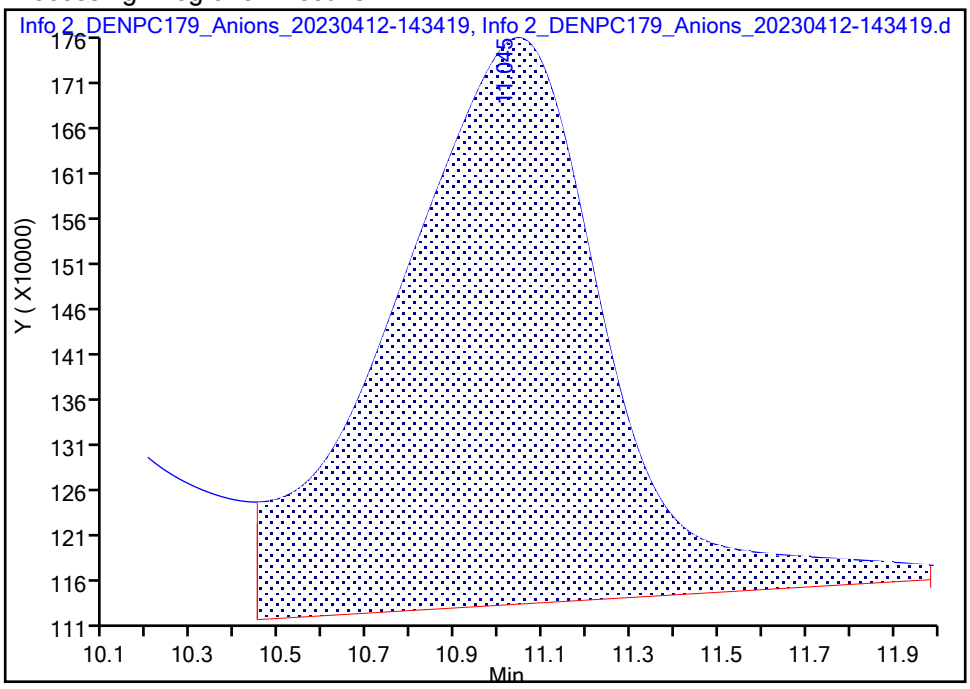
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

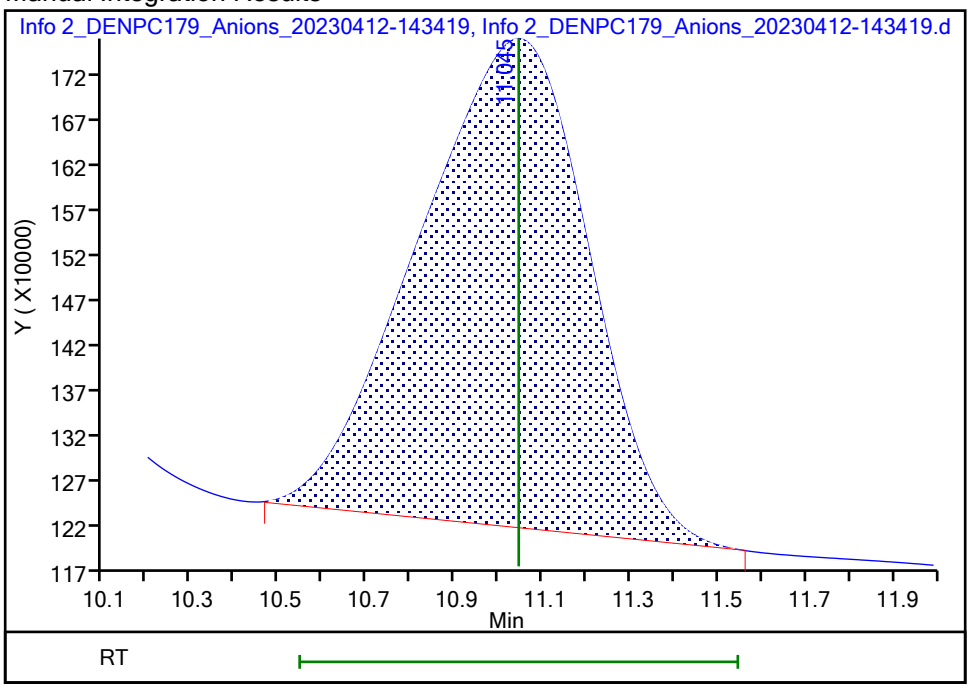
Processing Integration Results

RT: 11.05
Area: 21000030
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 11.05
Area: 14421328
Amount: 1.137806
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:15

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Apr-2023 14:34:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-003
Misc. Info.: 280-0120345-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:53 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:42:15

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.168	3.168	0.000	16995372	0.5000	0.4813	Ma
2 Chloride	4.383	4.383	0.000	43975181	2.50	2.43	M
3 Nitrite as N	5.118	5.118	0.000	21615246	NC	NC	M
4 Bromide	6.317	6.317	0.000	3222251	0.5000	0.3320	M
5 Nitrate as N	7.123	7.123	0.000	19909305	NC	NC	M
6 Orthophosphate as P	9.405	9.405	0.000	23629516	NC	NC	M
7 Sulfate	10.647	10.647	0.000	29311364	2.50	2.22	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

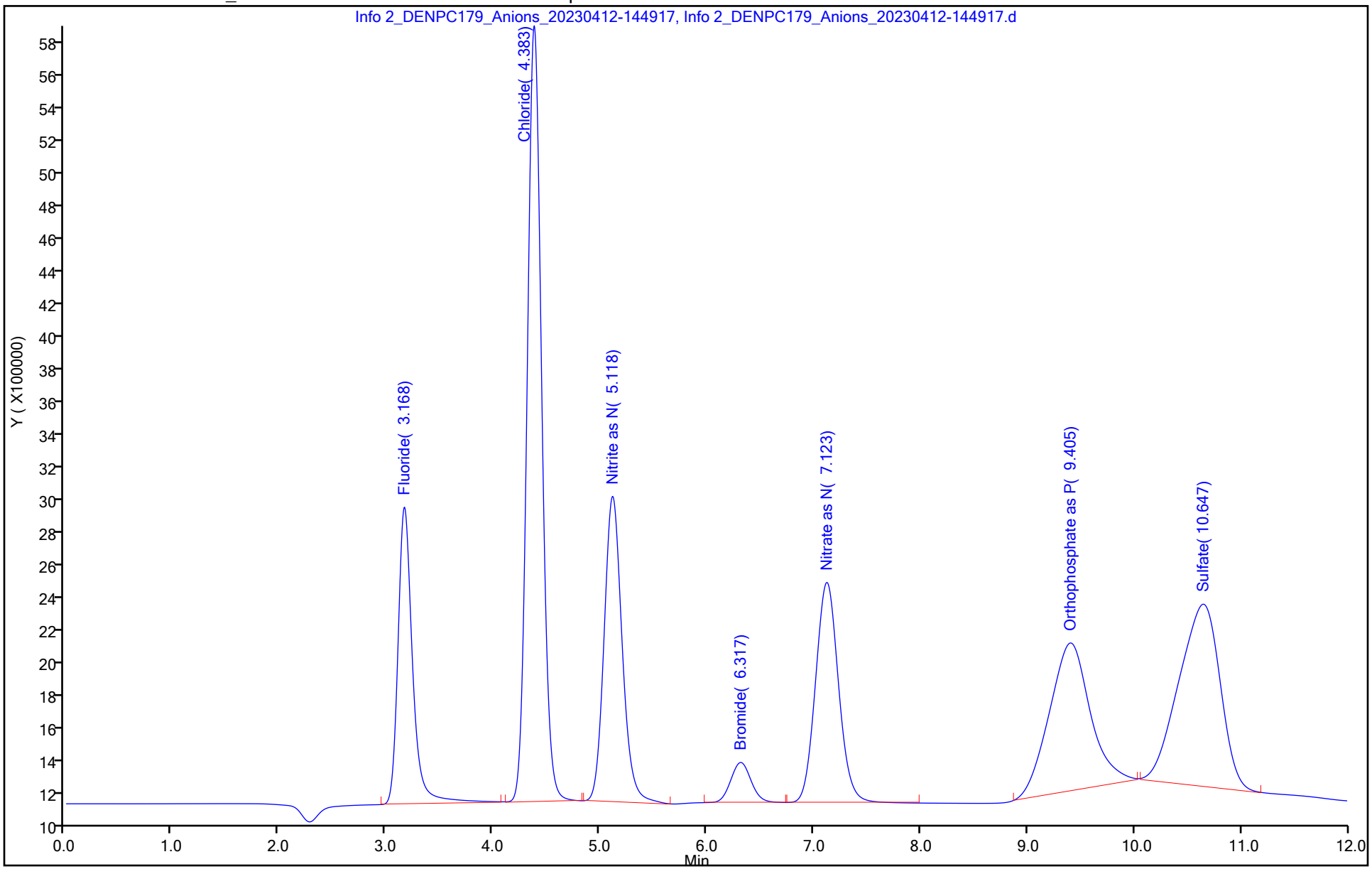
Reagents:

IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL
IC Cal low_00703 Amount Added: 0.20 Units: mL

Report Date: 14-Apr-2023 14:03:54 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144917.d				
Injection Date:	12-Apr-2023 14:34:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

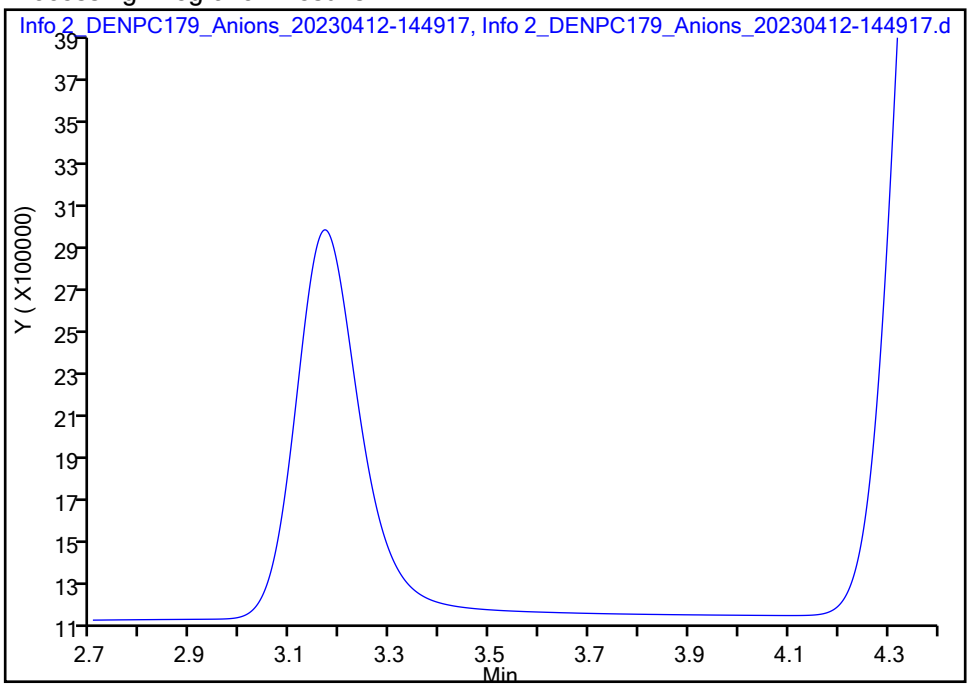
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144				
Injection Date:	12-Apr-2023 14:34:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L3				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

1 Fluoride, CAS: 16984-48-8

Signal: 1

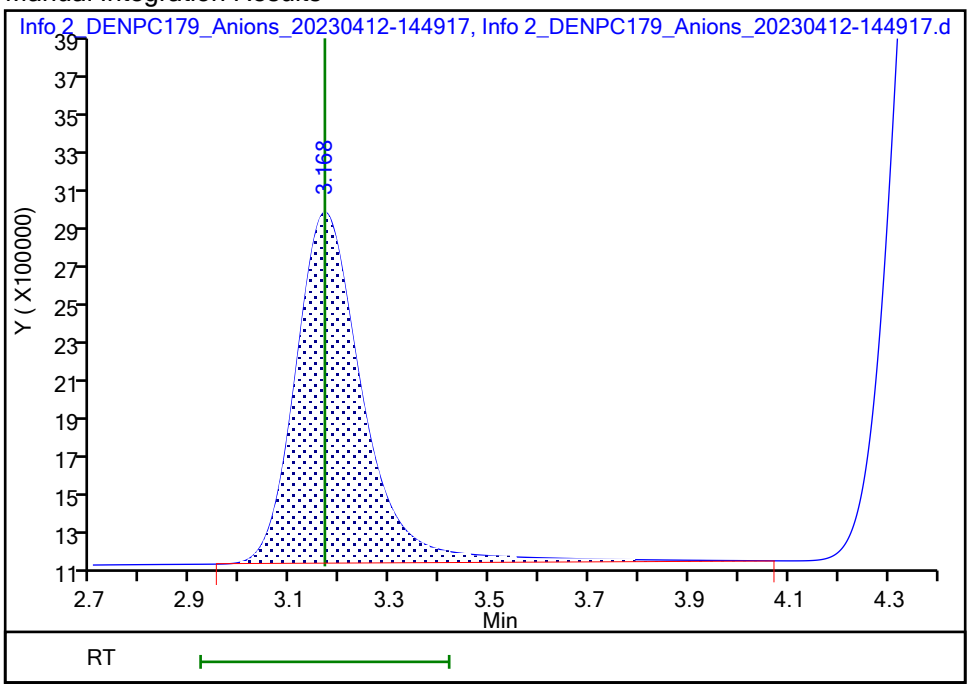
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.17
Area: 16995372
Amount: 0.481313
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:12
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

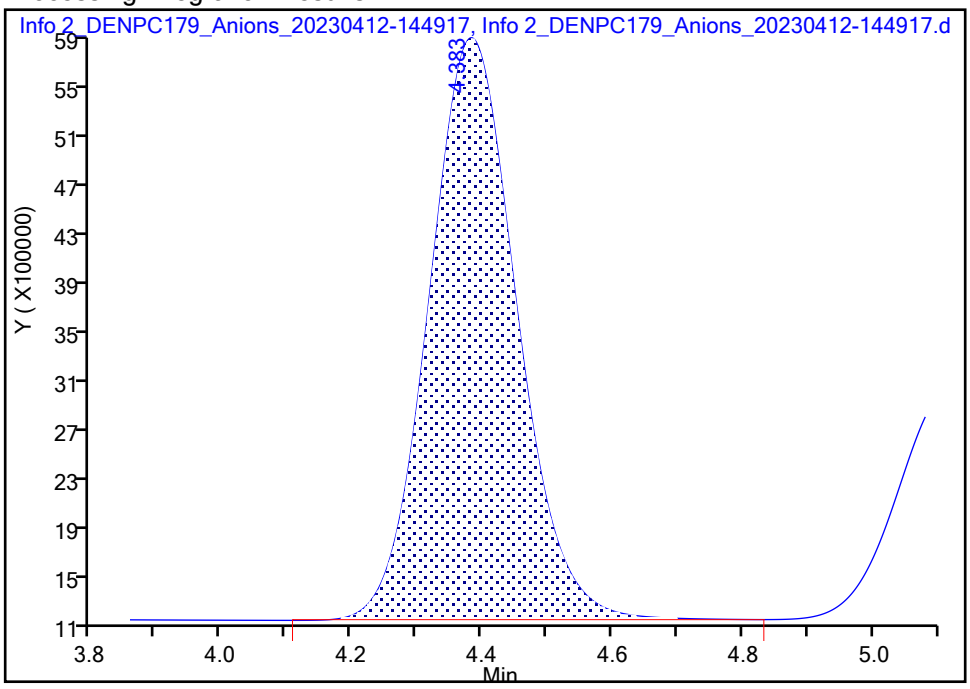
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

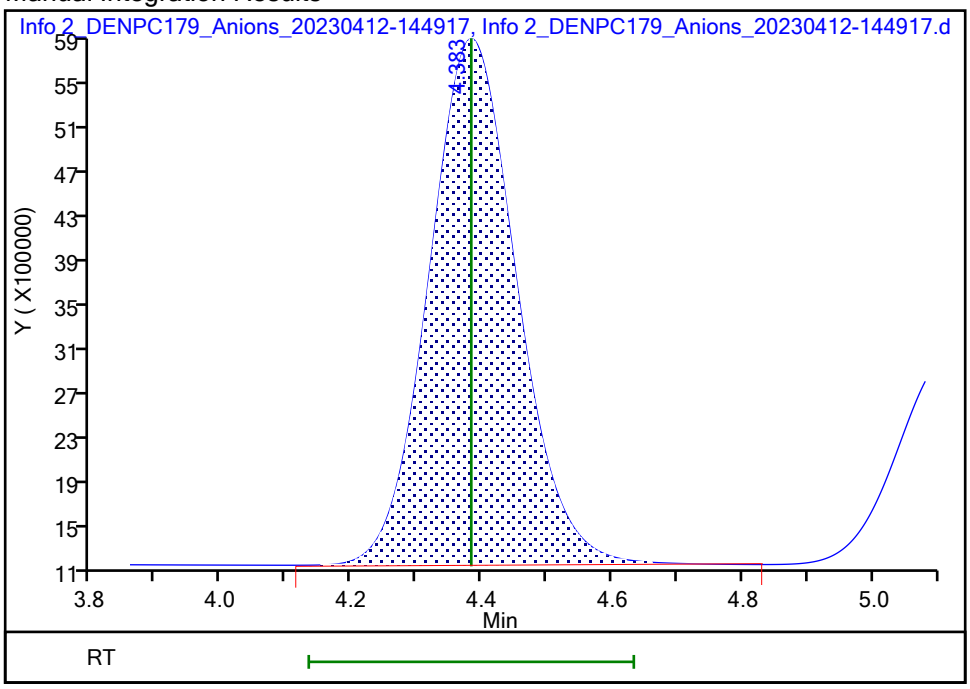
Processing Integration Results

RT: 4.38
Area: 44047360
Amount: 2.430258
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 43975181
Amount: 2.428716
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:50

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

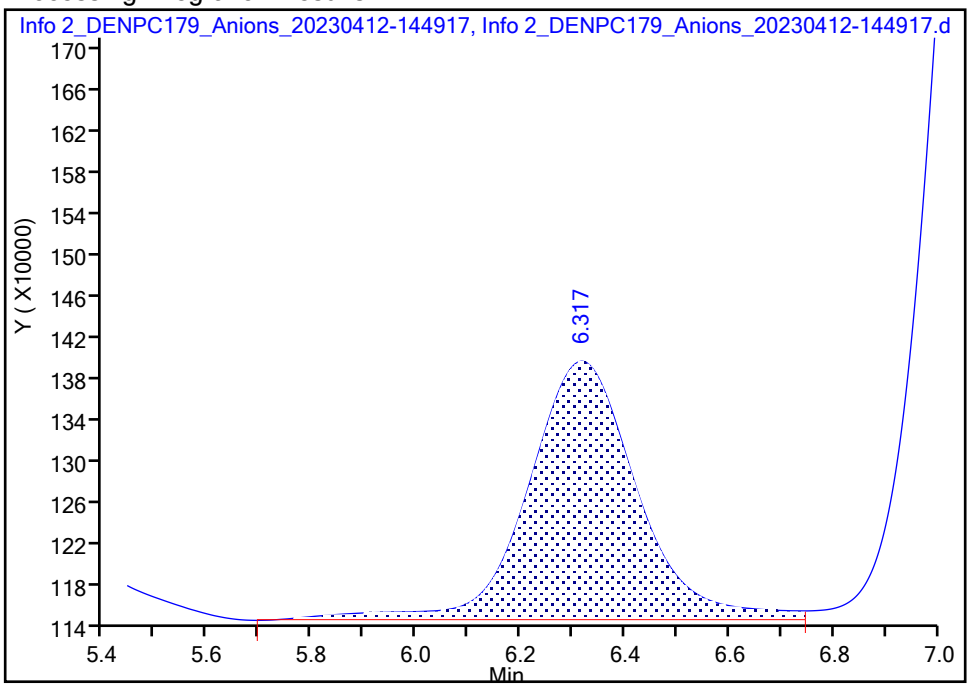
Column: Detector Info 2_091554_1

4 Bromide, CAS: 24959-67-9

Signal: 1

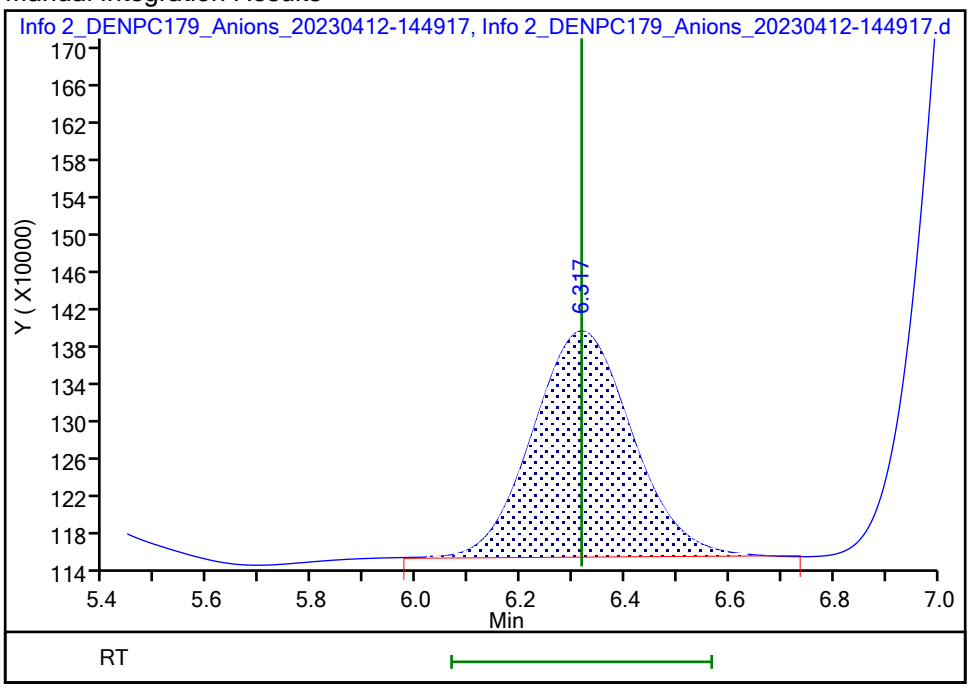
Processing Integration Results

RT: 6.32
Area: 3677937
Amount: 0.379796
Amount Units: ug/ml



Manual Integration Results

RT: 6.32
Area: 3222251
Amount: 0.331977
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:59

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

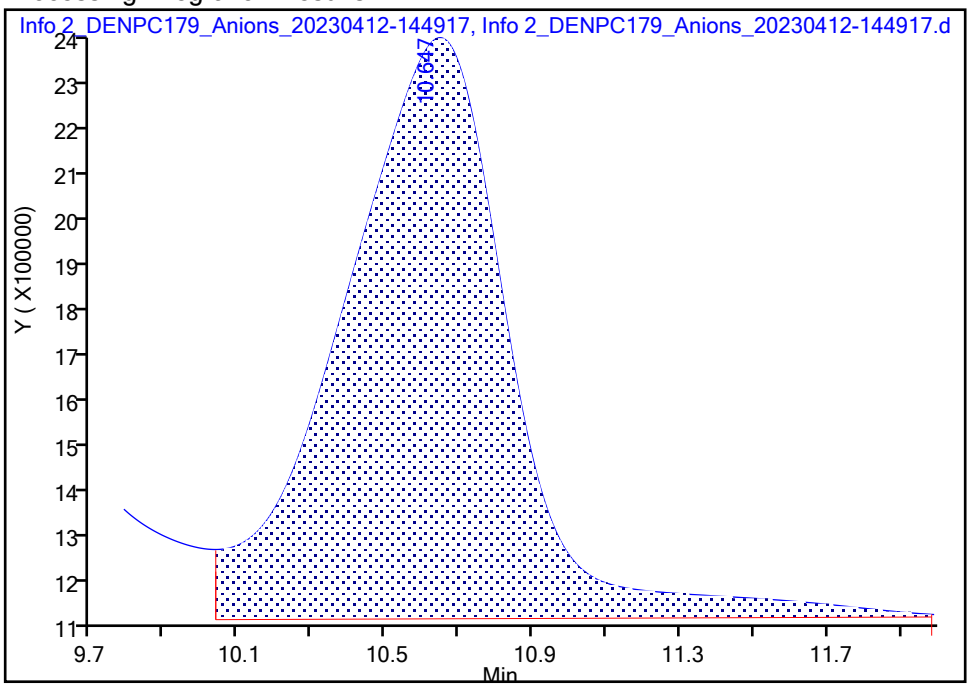
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

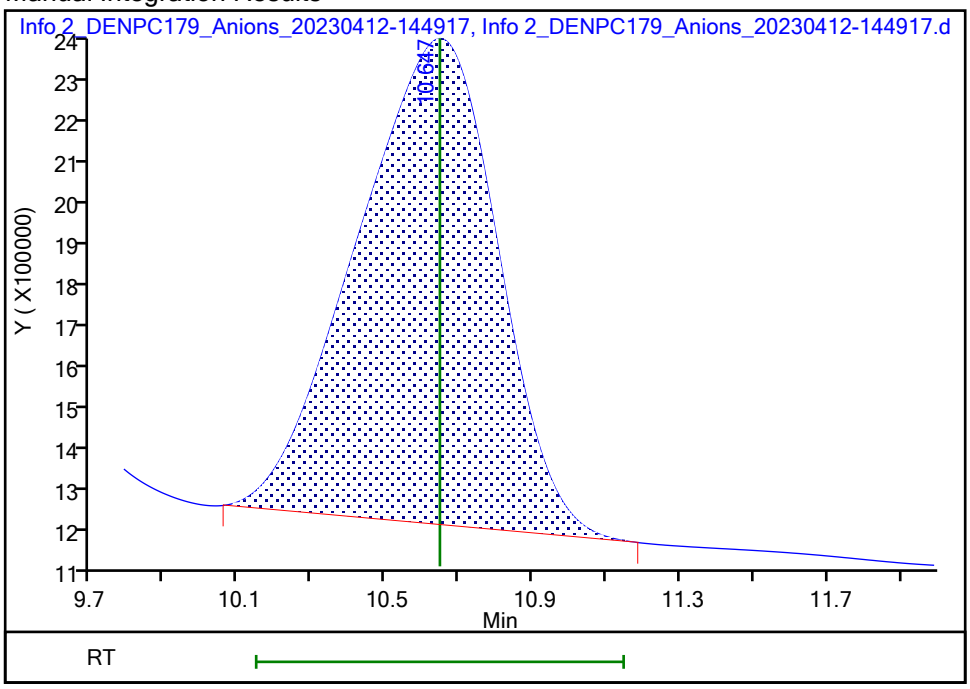
Processing Integration Results

RT: 10.65
Area: 37890185
Amount: 2.712749
Amount Units: ug/ml



Manual Integration Results

RT: 10.65
Area: 29311364
Amount: 2.216549
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:07

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Apr-2023 14:49:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-004
Misc. Info.: 280-0120345-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:55 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:42:52

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.168	3.168	0.000	37412858	1.00	1.01	Ma
2 Chloride	4.390	4.390	0.000	575824993	30.0	30.1	M
3 Nitrite as N	5.113	5.113	0.000	44844044	NC	NC	M
4 Bromide	6.308	6.308	0.000	6583592	1.00	0.8250	M
5 Nitrate as N	7.103	7.103	0.000	42066844	NC	NC	M
6 Orthophosphate as P	9.388	9.388	0.000	34760084	NC	NC	M
7 Sulfate	10.628	10.628	0.000	410479688	30.0	29.8	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

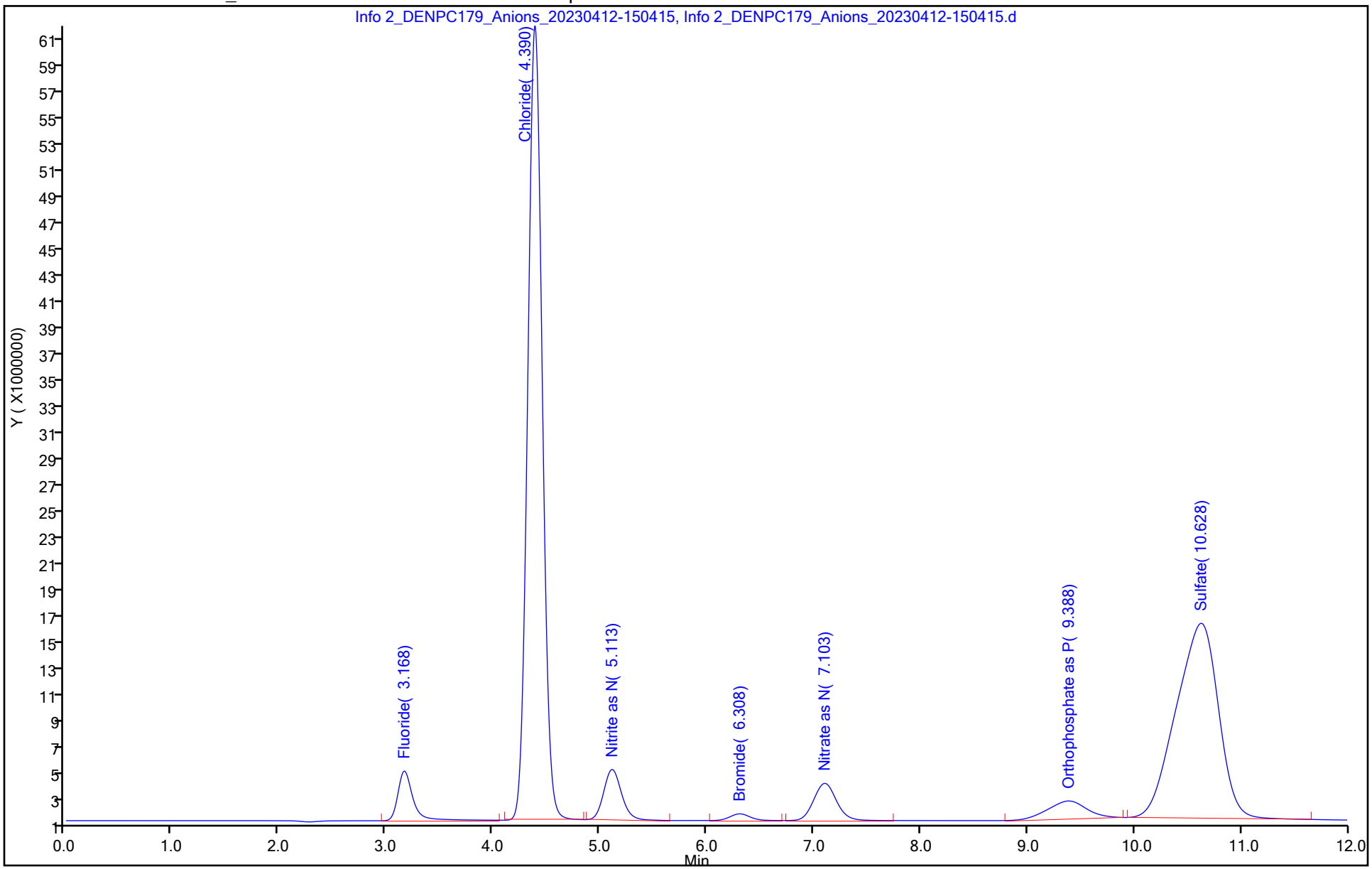
IC CAL cl/so4_00475 Amount Added: 2.40 Units: mL
IC Cal low_00703 Amount Added: 0.40 Units: mL

Report Date: 14-Apr-2023 14:03:55 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150415.d

Injection Date:	12-Apr-2023 14:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

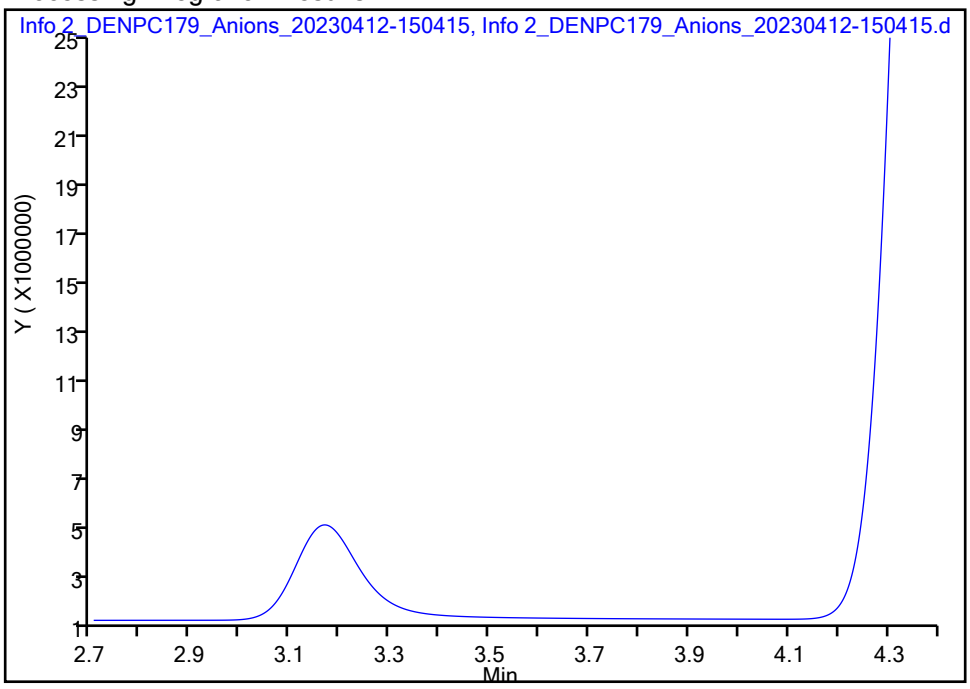
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150				
Injection Date:	12-Apr-2023 14:49:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L4				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

1 Fluoride, CAS: 16984-48-8

Signal: 1

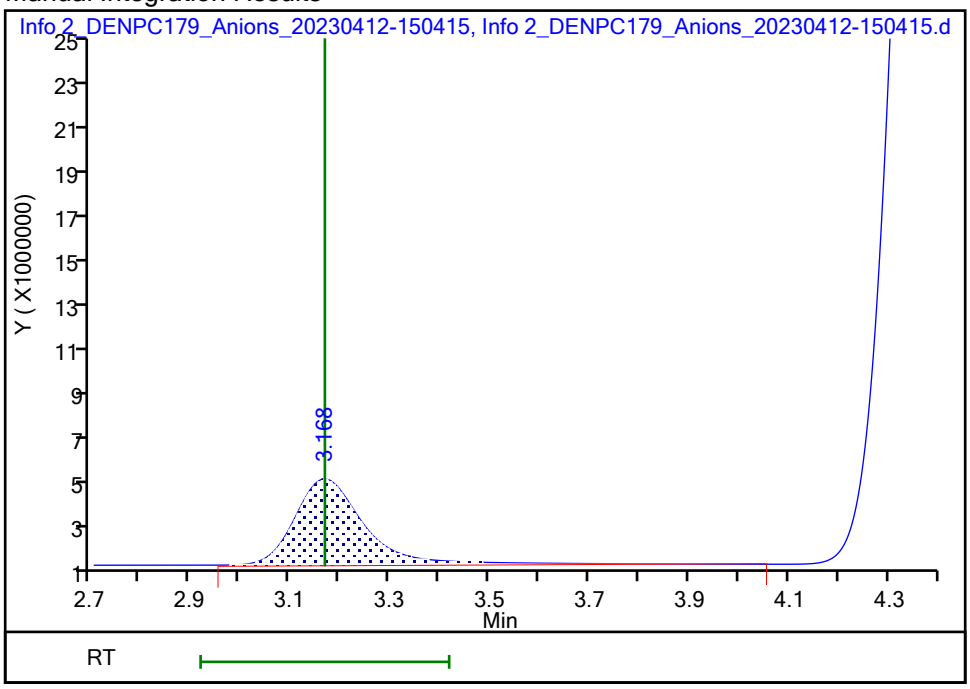
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.17
Area: 37412858
Amount: 1.009300
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:48
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

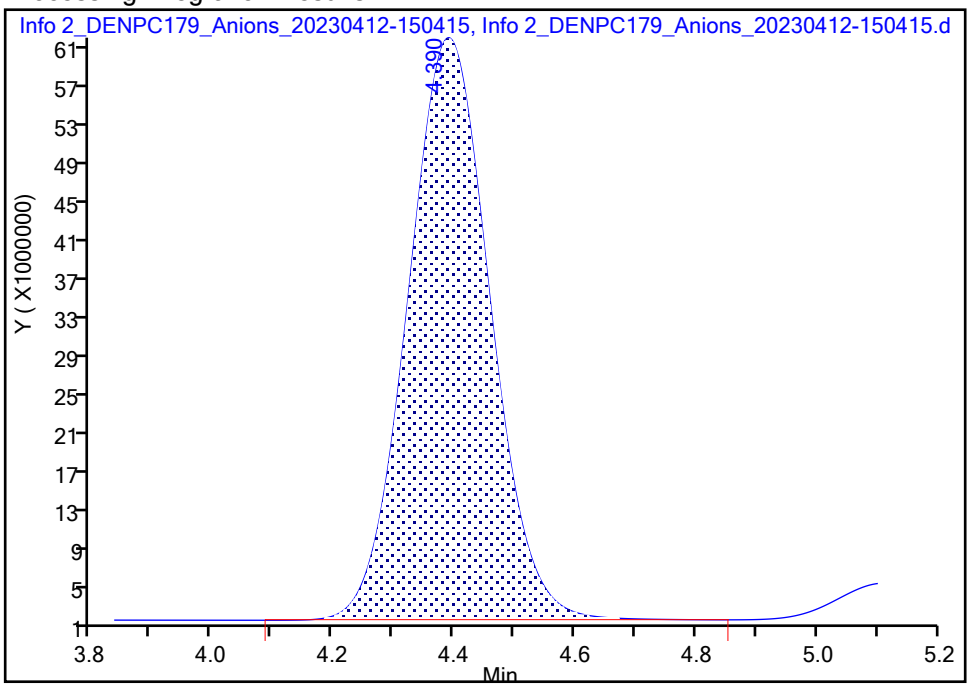
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150				
Injection Date:	12-Apr-2023 14:49:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L4				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

2 Chloride, CAS: 16887-00-6

Signal: 1

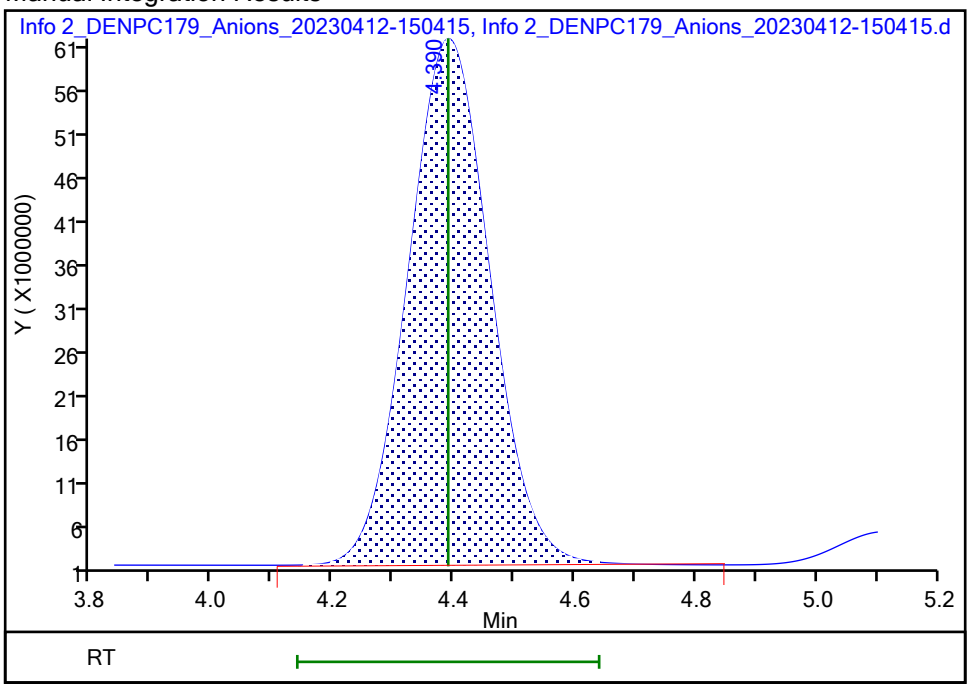
Processing Integration Results

RT: 4.39
Area: 577275465
Amount: 30.190881
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 575824993
Amount: 30.143601
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:25

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

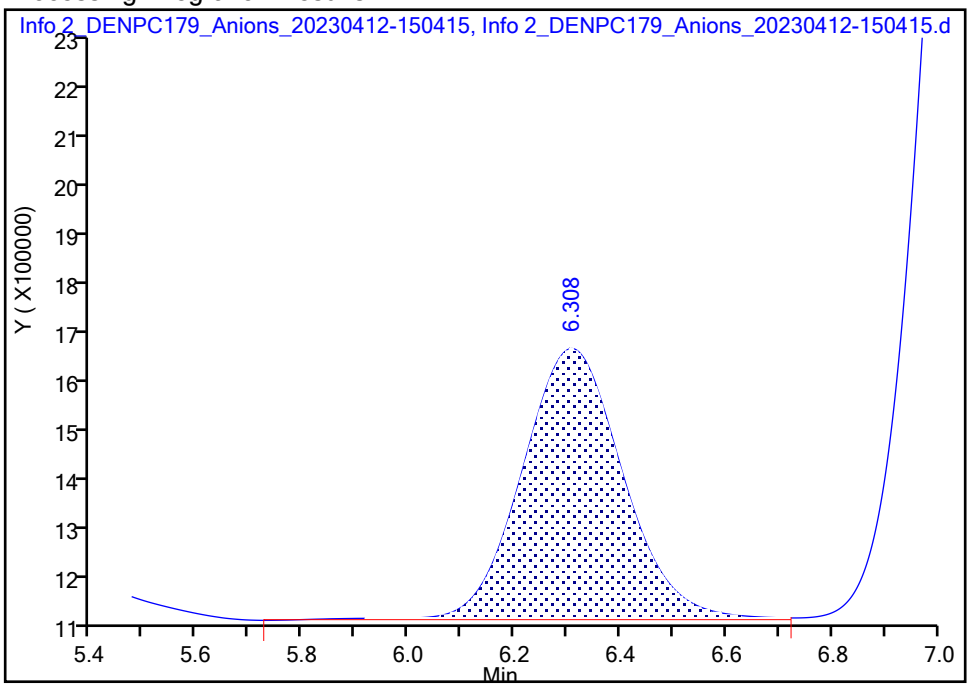
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

4 Bromide, CAS: 24959-67-9

Signal: 1

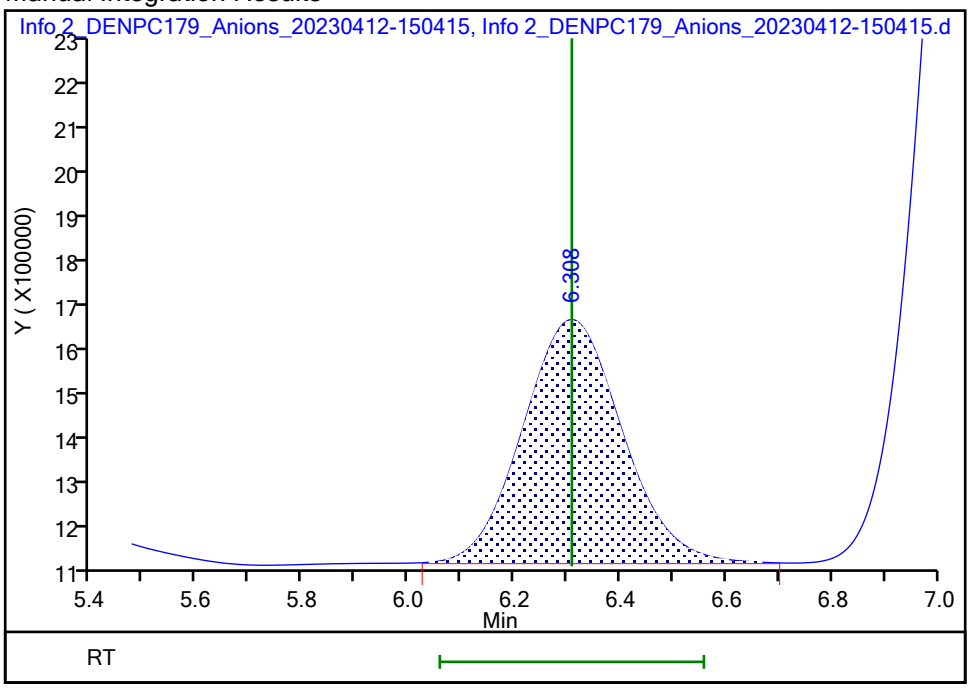
Processing Integration Results

RT: 6.31
Area: 6790567
Amount: 0.851251
Amount Units: ug/ml



Manual Integration Results

RT: 6.31
Area: 6583592
Amount: 0.824970
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:31
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

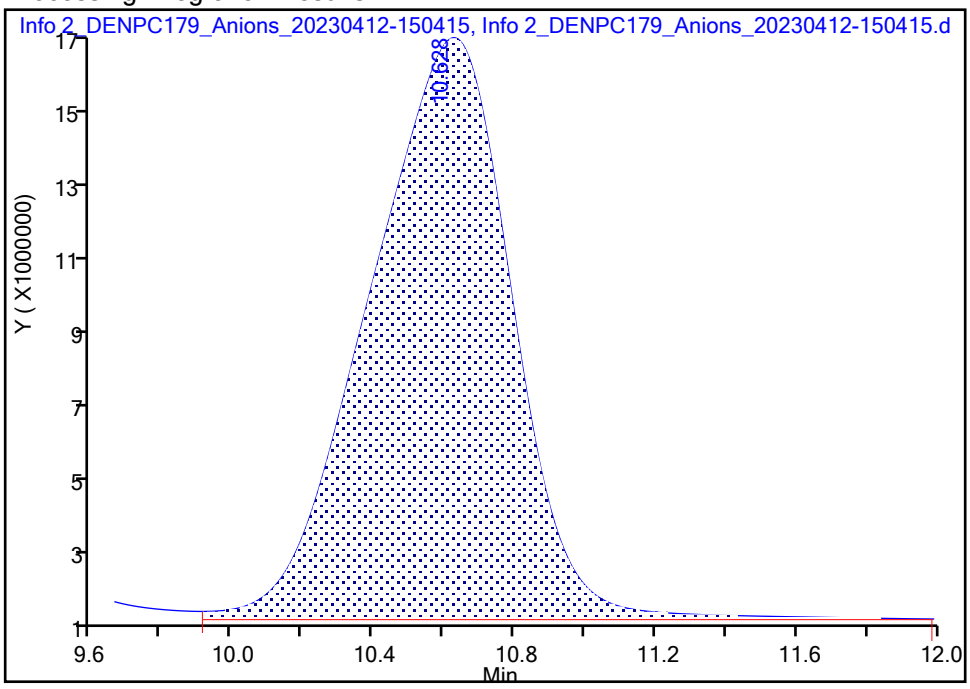
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

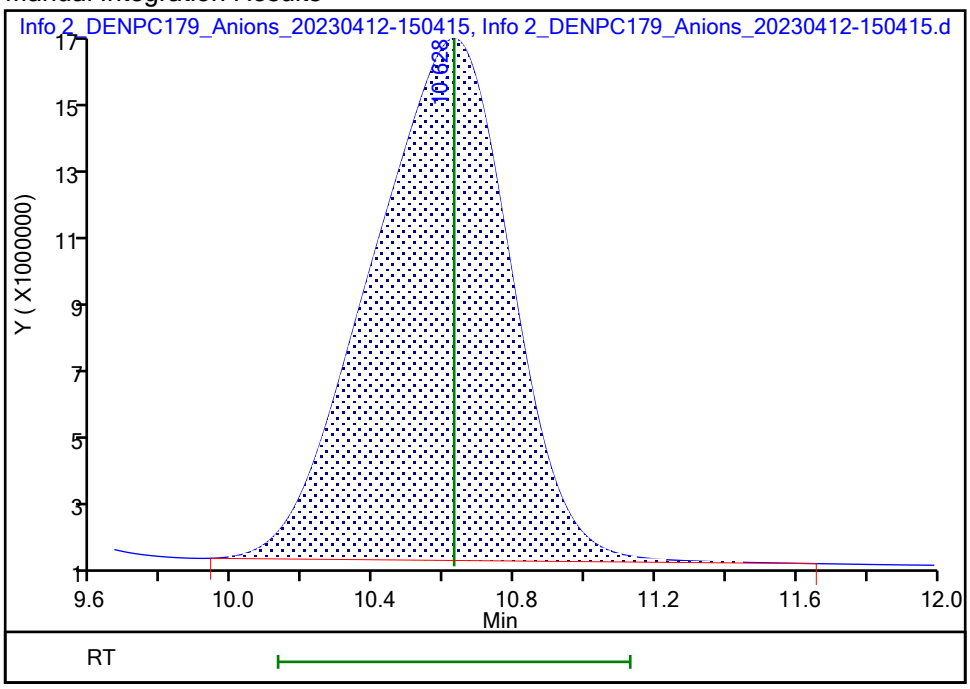
Processing Integration Results

RT: 10.63
Area: 426510642
Amount: 30.246646
Amount Units: ug/ml



Manual Integration Results

RT: 10.63
Area: 410479688
Amount: 29.831152
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:42
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 12-Apr-2023 15:04:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-005
Misc. Info.: 280-0120345-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:57 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:43:24

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.170	3.170	0.000	96629288	2.50	2.54	Ma
2 Chloride	4.405	4.405	0.000	1149686166	60.0	60.0	M
3 Nitrite as N	5.107	5.107	0.000	116231748	NC	NC	M
4 Bromide	6.298	6.298	0.000	17672625	2.50	2.45	
5 Nitrate as N	7.078	7.078	0.000	112738215	NC	NC	M
6 Orthophosphate as P	9.368	9.368	0.000	65067694	NC	NC	M
7 Sulfate	10.610	10.610	0.000	828007497	60.0	60.1	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

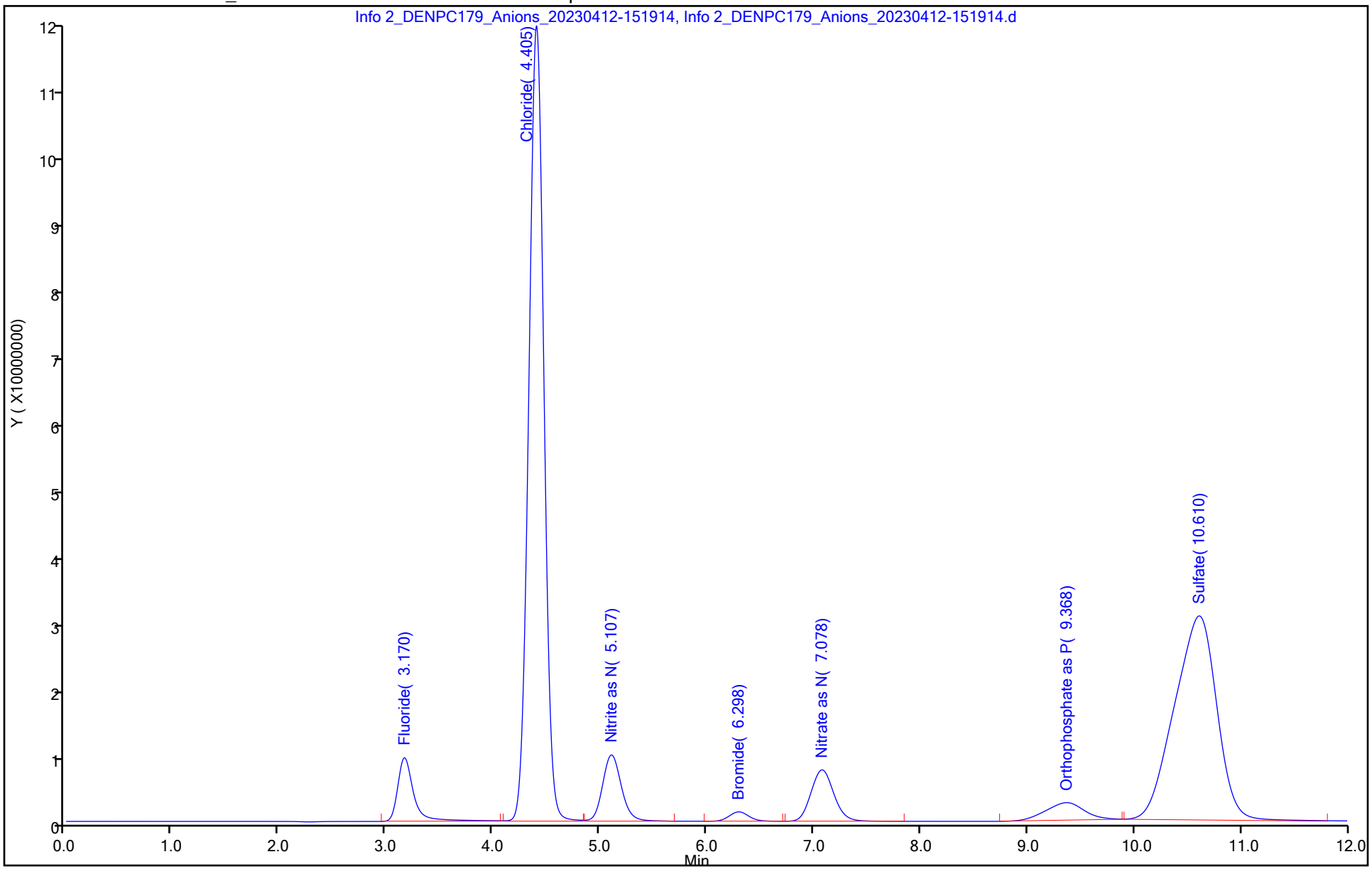
Reagents:

IC CAL cl/so4_00475 Amount Added: 4.80 Units: mL
IC Cal low_00703 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2023 14:03:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151914.d				
Injection Date:	12-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

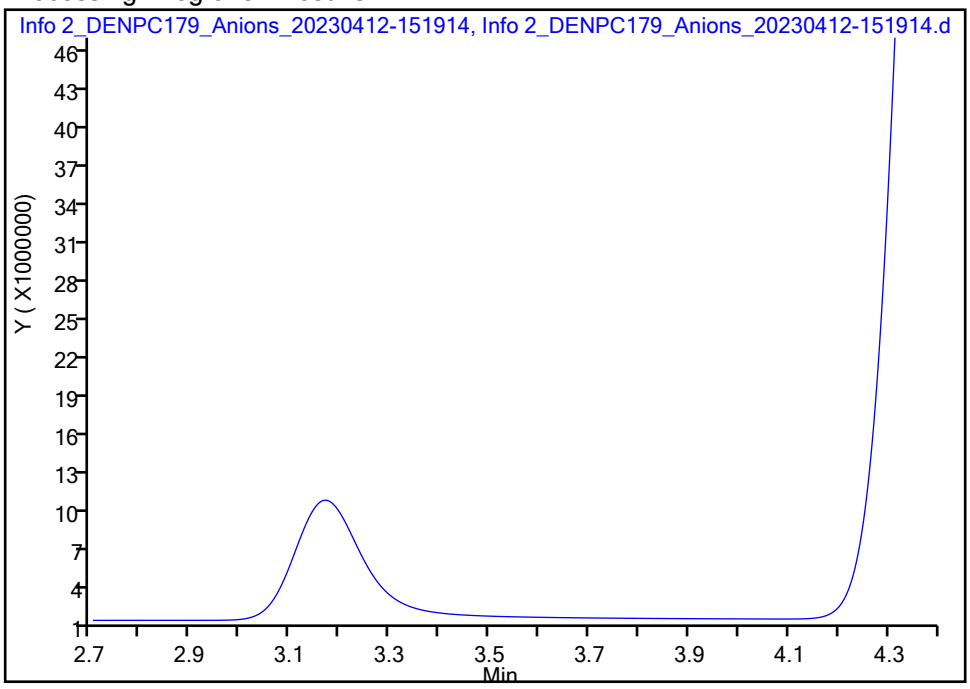
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151				
Injection Date:	12-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L5				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

1 Fluoride, CAS: 16984-48-8

Signal: 1

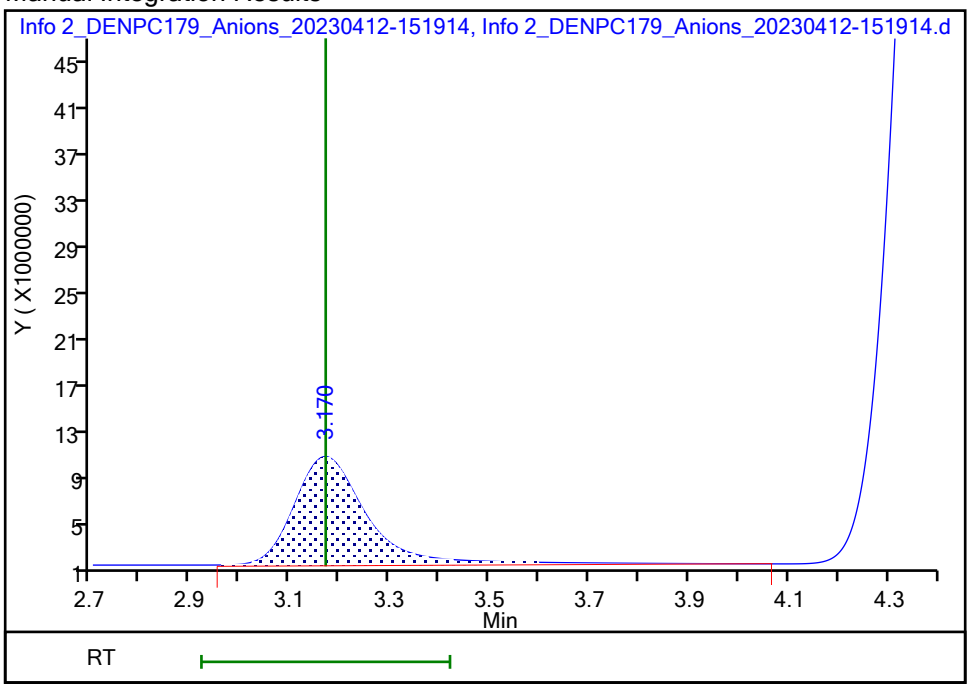
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.17
Area: 96629288
Amount: 2.540610
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:20
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

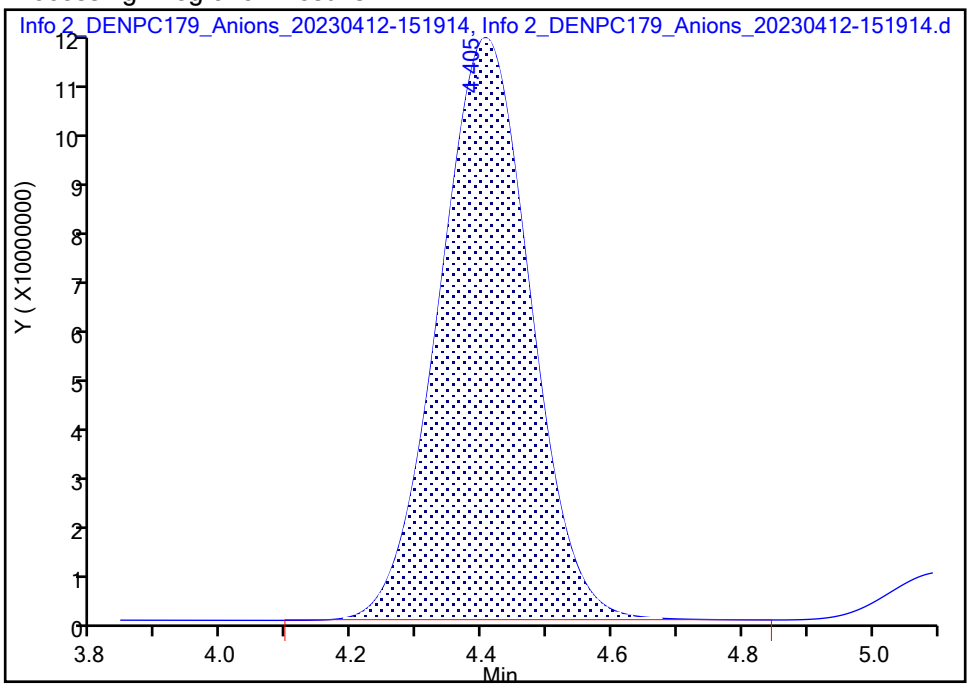
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151
Injection Date: 12-Apr-2023 15:04:00 Instrument ID: WC_IonChrom10
Lims ID: STD L5
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

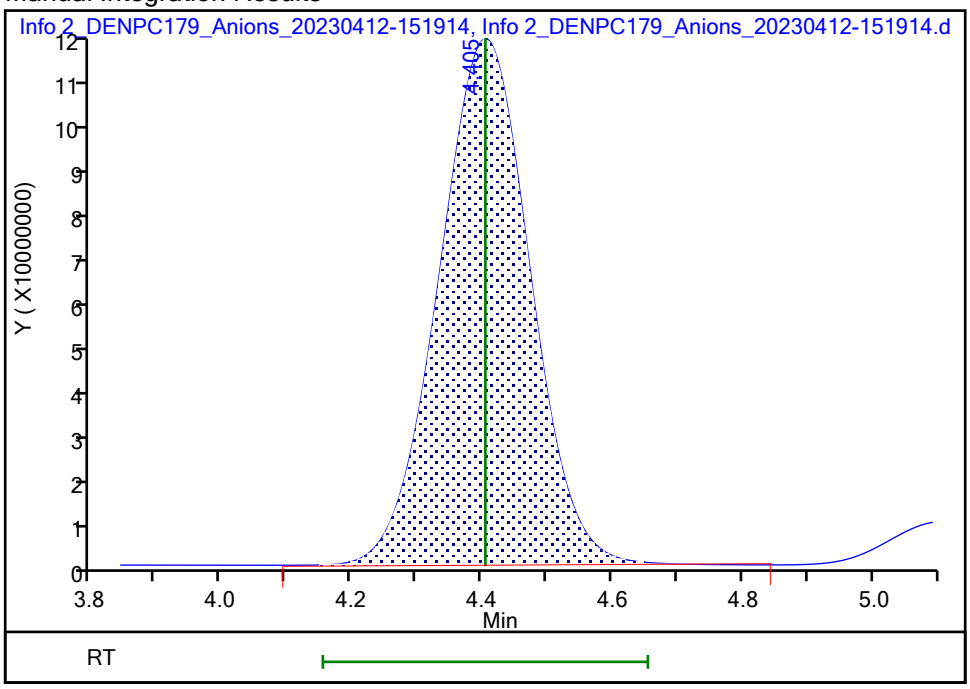
Processing Integration Results

RT: 4.41
Area: 1150534467
Amount: 60.058368
Amount Units: ug/ml



Manual Integration Results

RT: 4.41
Area: 1149686166
Amount: 60.047713
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:05
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

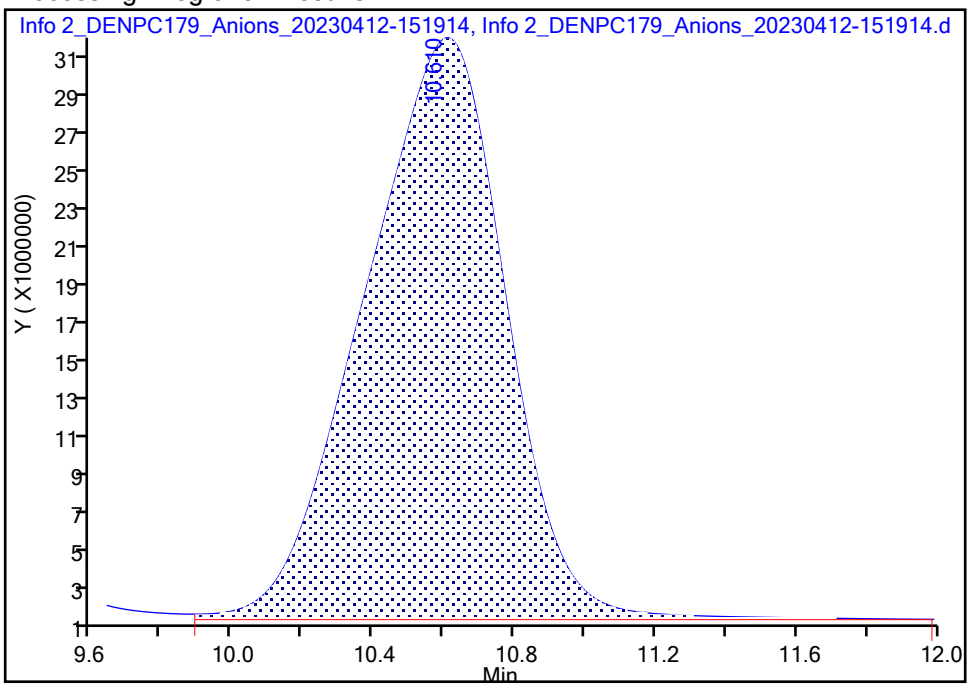
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151
Injection Date: 12-Apr-2023 15:04:00 Instrument ID: WC_IonChrom10
Lims ID: STD L5
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

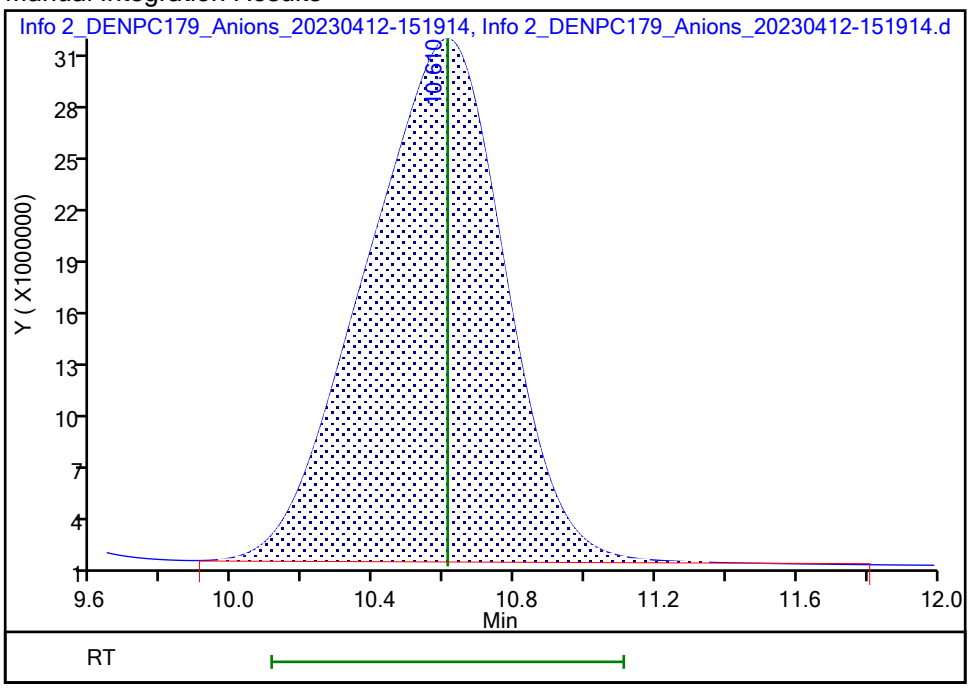
Processing Integration Results

RT: 10.61
Area: 849186271
Amount: 60.463432
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 828007497
Amount: 60.079901
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:15
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Apr-2023 15:19:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-006
Misc. Info.: 280-0120345-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:04:00 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 17:08:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.175	3.175	0.000	190381963	5.00	4.97	Ma
2 Chloride	4.428	4.428	0.000	1914243902	100.0	99.9	M
3 Nitrite as N	5.103	5.103	0.000	229518060	NC	NC	M
4 Bromide	6.292	6.292	0.000	37078318	5.00	5.30	
5 Nitrate as N	7.057	7.057	0.000	230663663	NC	NC	M
6 Orthophosphate as P	9.353	9.353	0.000	112155923	NC	NC	M
7 Sulfate	10.592	10.592	0.000	1384314036	100.0	100.4	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

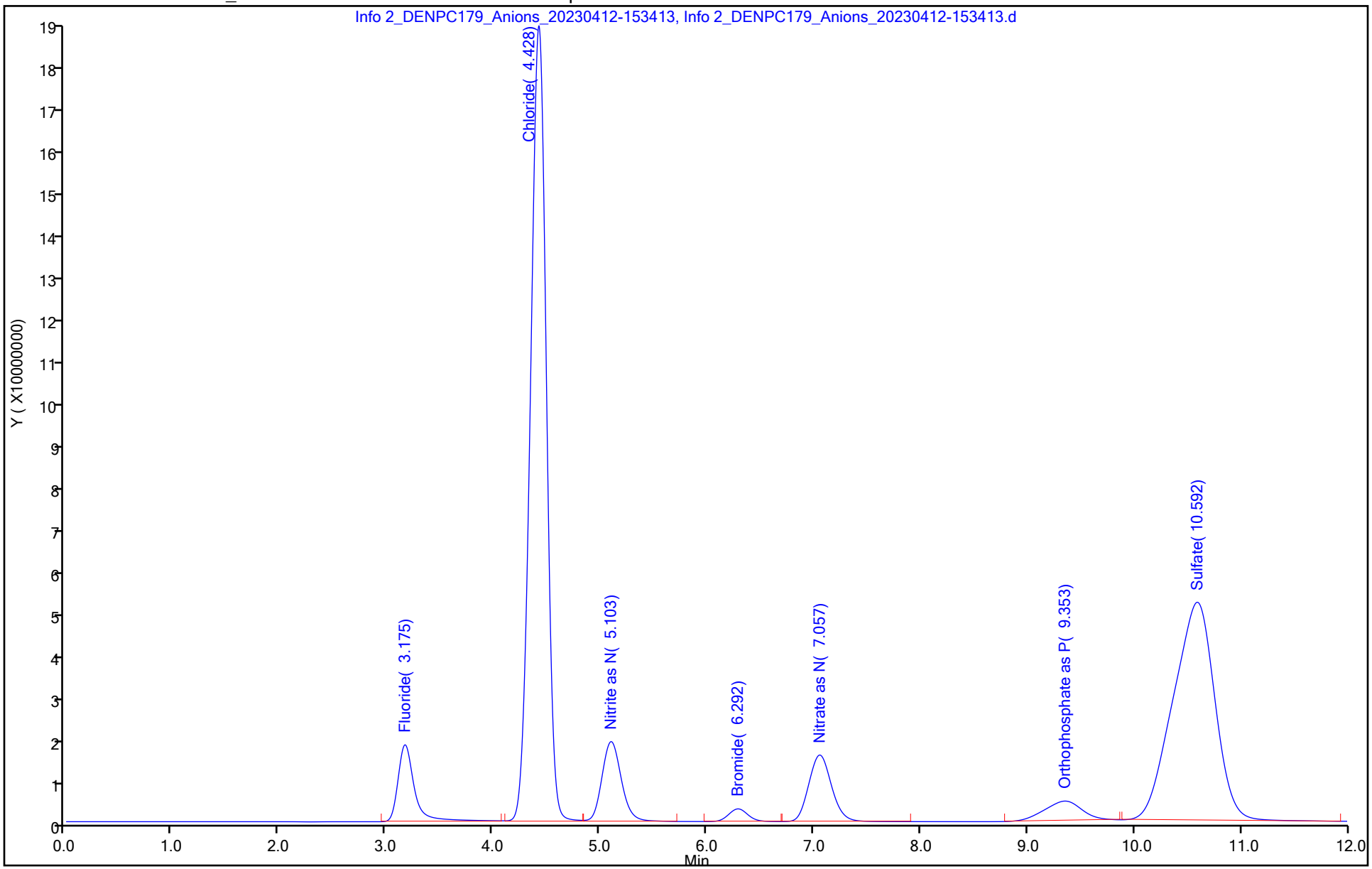
Reagents:

IC CAL cl/so4_00475 Amount Added: 8.00 Units: mL
IC Cal low_00703 Amount Added: 2.00 Units: mL

Report Date: 14-Apr-2023 14:04:01 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153413.d				
Injection Date:	12-Apr-2023 15:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

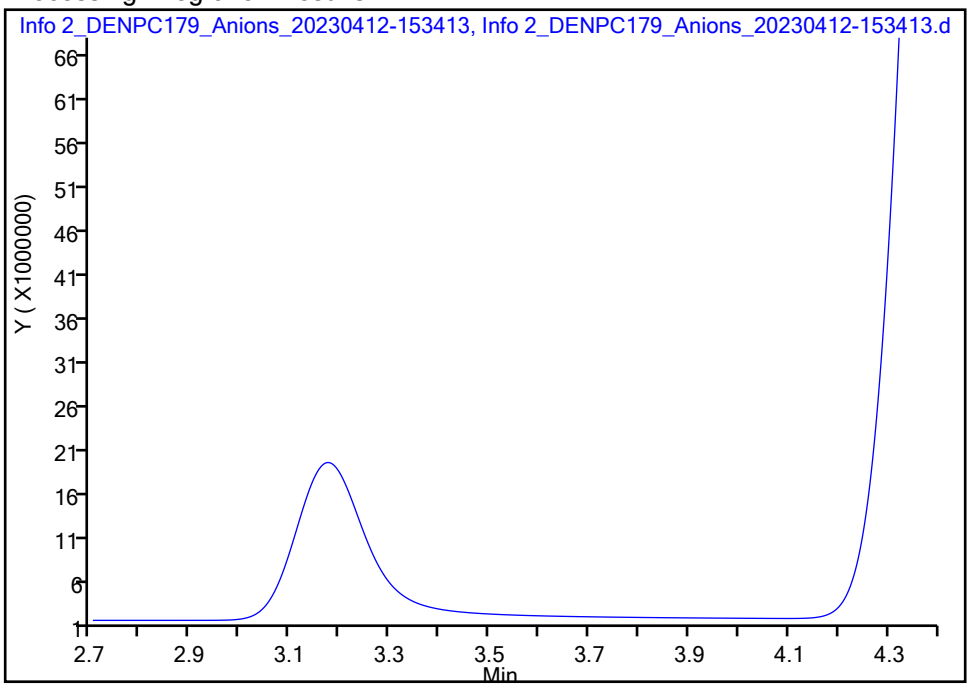
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153				
Injection Date:	12-Apr-2023 15:19:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L6				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

1 Fluoride, CAS: 16984-48-8

Signal: 1

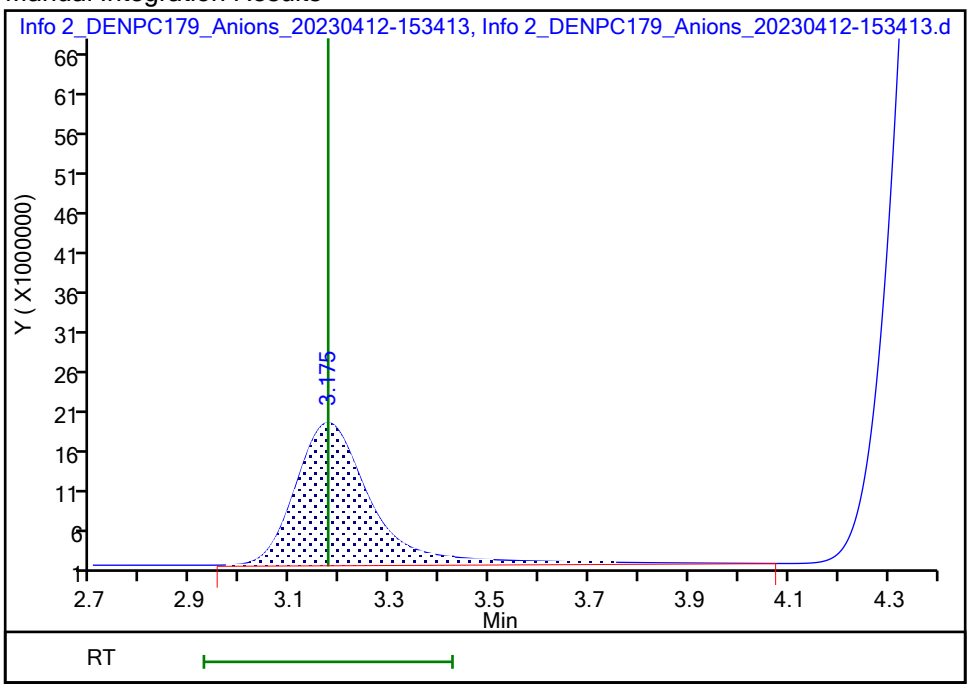
Not Detected
Expected RT: 3.18

Processing Integration Results



Manual Integration Results

RT: 3.18
Area: 190381963
Amount: 4.965012
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:58
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

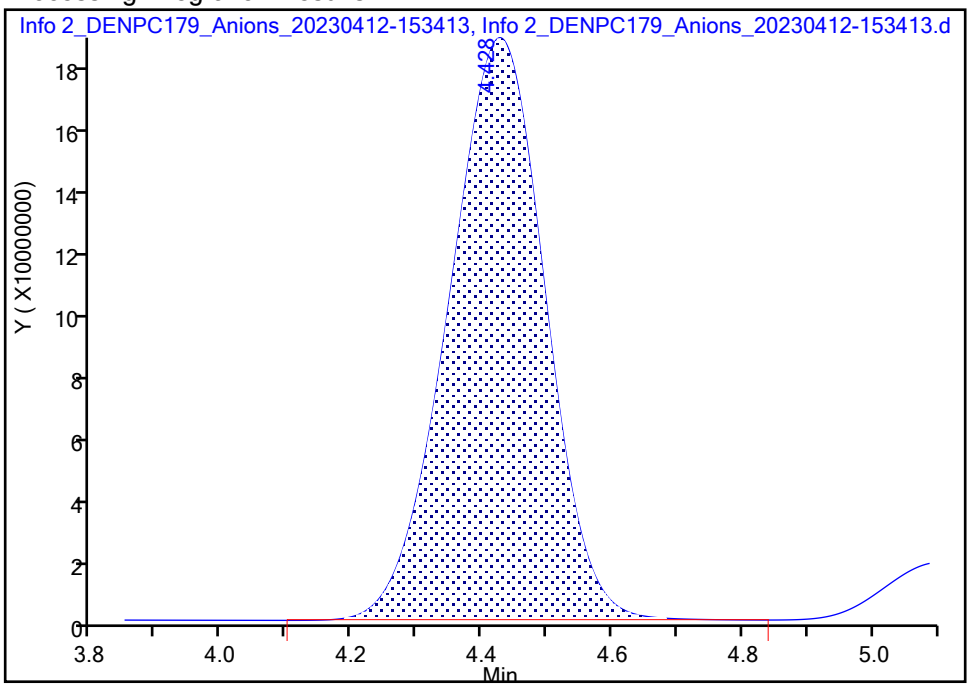
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Injection Date: 12-Apr-2023 15:19:00 Instrument ID: WC_IonChrom10
Lims ID: STD L6
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

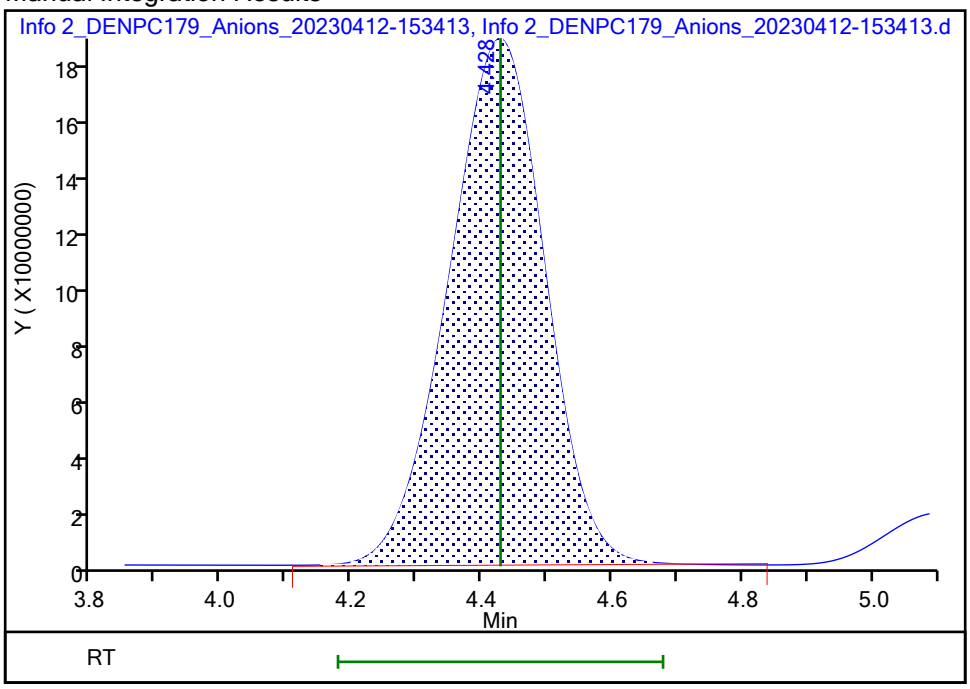
Processing Integration Results

RT: 4.43
Area: 1915444596
Amount: 99.918589
Amount Units: ug/ml



Manual Integration Results

RT: 4.43
Area: 1914243902
Amount: 99.889092
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:42
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Injection Date: 12-Apr-2023 15:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L6

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

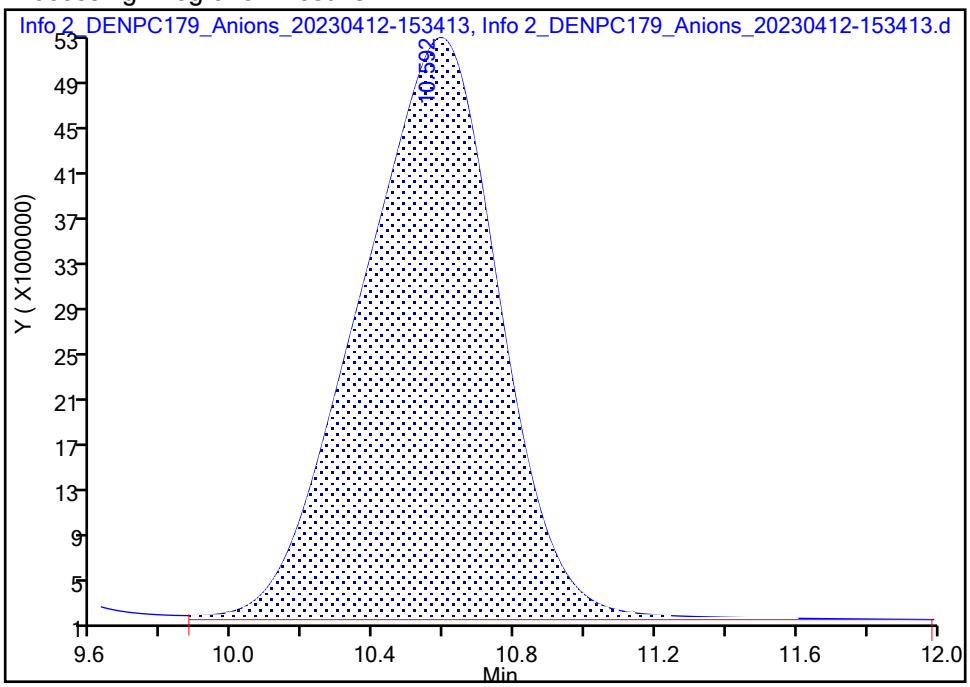
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

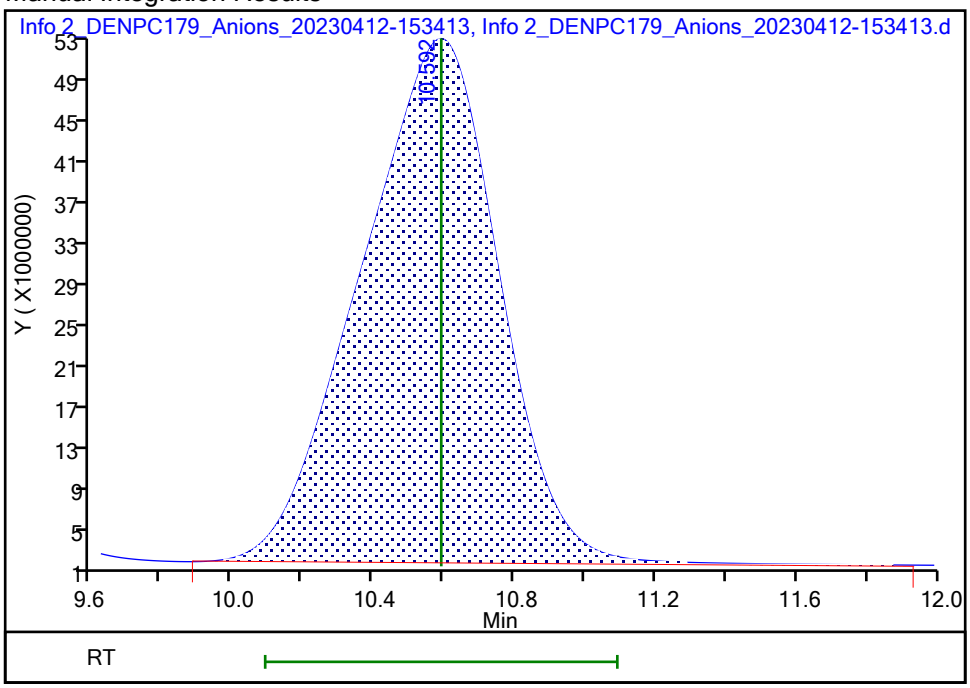
Processing Integration Results

RT: 10.59
Area: 1413345488
Amount: 101.3581
Amount Units: ug/ml



Manual Integration Results

RT: 10.59
Area: 1384314036
Amount: 100.3828
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:52

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

IC Instrument Information

WL: 120345 **Inst ID:** IC16 **Analysis Date:** 04/12/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	174903	7	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
40437065	43230492	44844044	46492699	45903612		-1277342			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			46378611		
M8087413	M21615246	M44844044	M116231748	M229518060					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
5 Nitrate as N				Signal: 1					
42172205	39818610	42066844	45095286	46132733		-1634037			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			45867680		
M8434441	M19909305	M42066844	M112738215	M230663663					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
6 Orthophosphate as P				Signal: 1			R1		
69769055	47259032	34760084	26027078	22431185		10983593			*0.990
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			21157507		
M13953811	M23629516	M34760084	M65067694	M112155923					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

Report Date: 14-Apr-2023 13:55:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 13:55:16	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 17.1	10.0	117.1	
2 Chloride	80.0	85.7	7.1	10.0	107.1	
4 Bromide	2.00	2.01	0.6	10.0	100.6	
7 Sulfate	80.0	86.9	8.7	10.0	108.7	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 13:56:07	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.12	6.0	10.0	106.0	
5 Nitrate as N	2.00	2.15	7.4	10.0	107.4	
6 Orthophosphate as	2.00	2.84	* 41.9	10.0	141.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Apr-2023 15:34:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-007
Misc. Info.: 280-0120345-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:06:59 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 13-Apr-2023 12:05:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.172	3.172	0.000	88983337	2.00	2.34	Ma
2 Chloride	4.423	4.423	0.000	1641996046	80.0	85.7	
3 Nitrite as N	5.112	5.112	0.000	97019728	NC	NC	M
4 Bromide	6.305	6.305	0.000	14681577	2.00	2.01	
5 Nitrate as N	7.087	7.087	0.000	96882220	NC	NC	
6 Orthophosphate as P	9.373	9.373	0.000	71034633	NC	NC	
7 Sulfate	10.593	10.593	0.000	1198792597	80.0	86.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

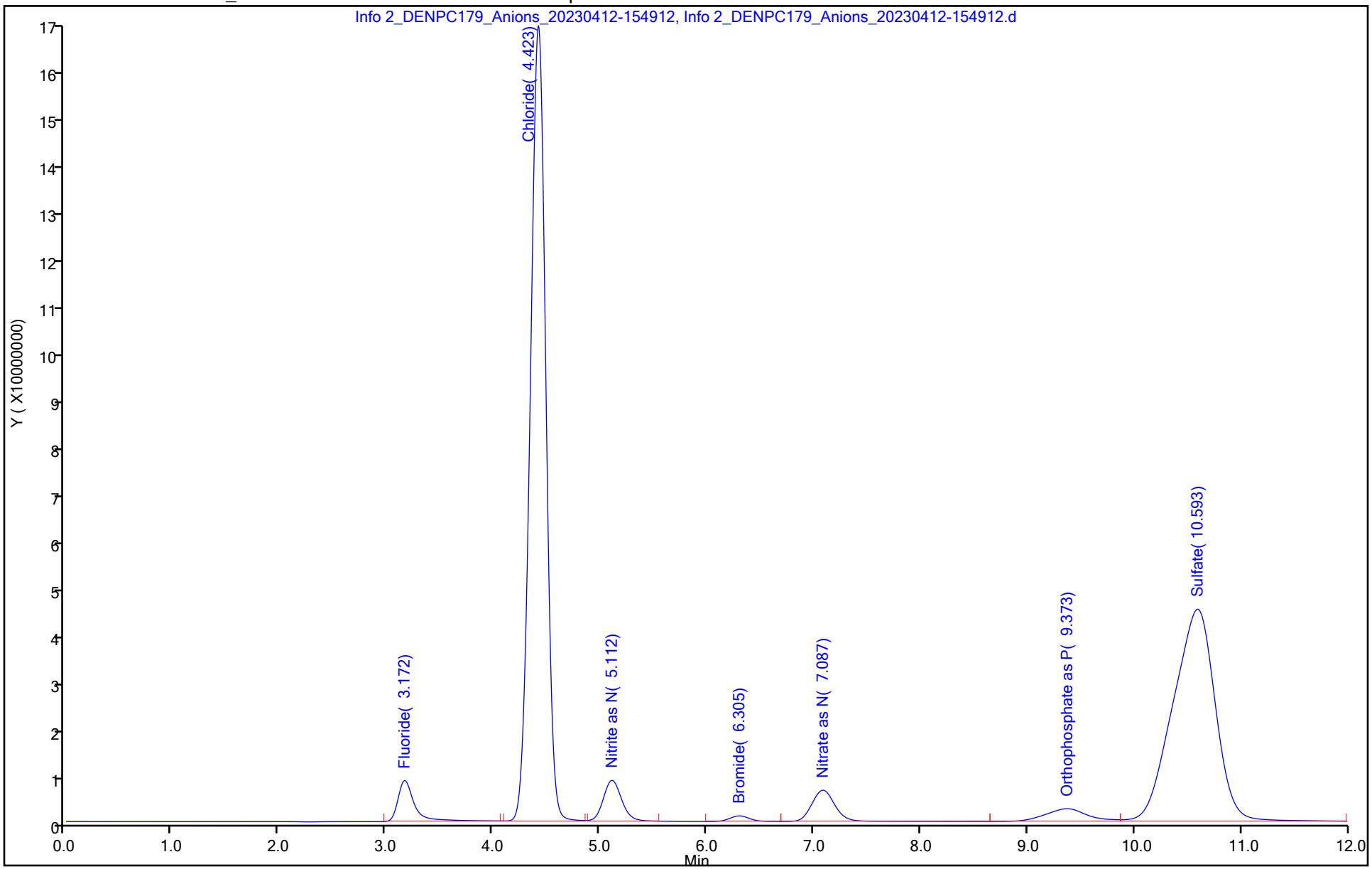
Reagents:

IC SO4 ICV_00024	Amount Added:	0.80	Units: mL
Cl ICV Std_00006	Amount Added:	0.80	Units: mL
IC ICV 5_00403	Amount Added:	0.80	Units: mL

Report Date: 14-Apr-2023 14:06:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154912.d				
Injection Date:	12-Apr-2023 15:34:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 12-Apr-2023 15:49:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-008
Misc. Info.: 280-0120345-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:07:08 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 14:07:17

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.172				ND	U
2 Chloride		4.397				ND	U
3 Nitrite as N		5.103				ND	
4 Bromide		6.293				ND	U
5 Nitrate as N		7.072				ND	
6 Orthophosphate as P	9.417	9.418	-0.001	14030813		NC	
7 Sulfate	10.600	10.602	-0.002	368472		0.1197	M

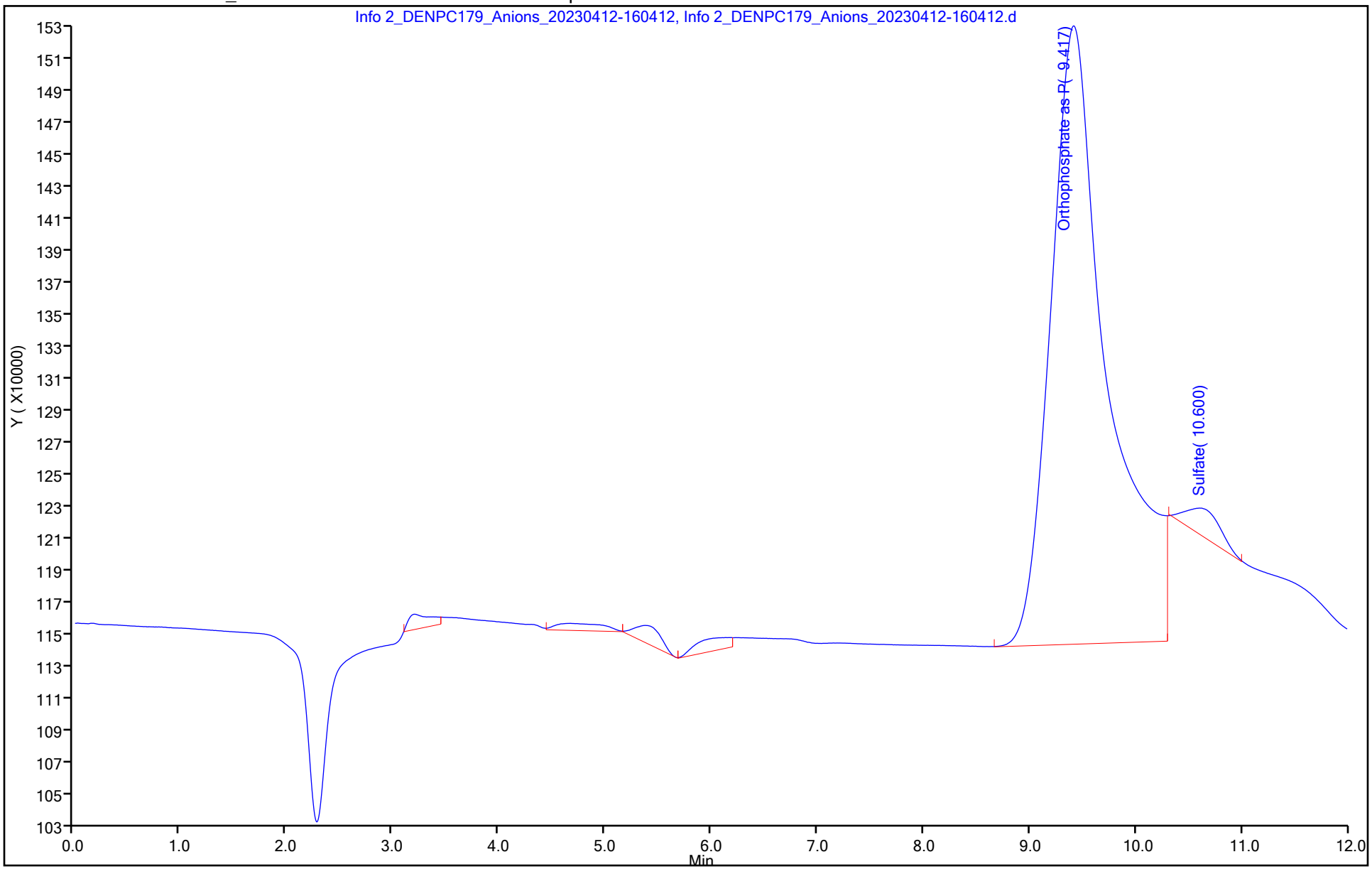
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 14-Apr-2023 14:07:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160412.d				
Injection Date:	12-Apr-2023 15:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:27 PM

User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160

Injection Date: 12-Apr-2023 15:49:00 Instrument ID: WC_IonChrom10

Lims ID: ICB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

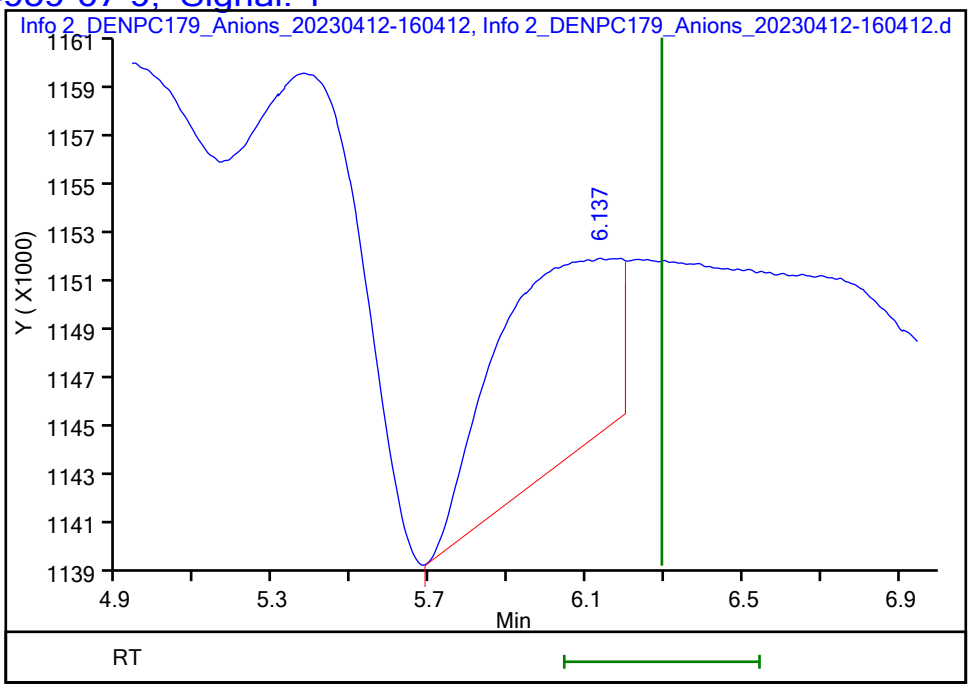
Column: Detector Info 2_091554_1

4 Bromide, CAS: 24959-67-9, Signal: 1

RT: 6.14

Response: 177191

Amount: 0



Reviewer: XAY4, 14-Apr-2023 14:01:41

Audit Action: Manually Integrated Audit Reason:

User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160

Injection Date: 12-Apr-2023 15:49:00 Instrument ID: WC_IonChrom10

Lims ID: ICB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

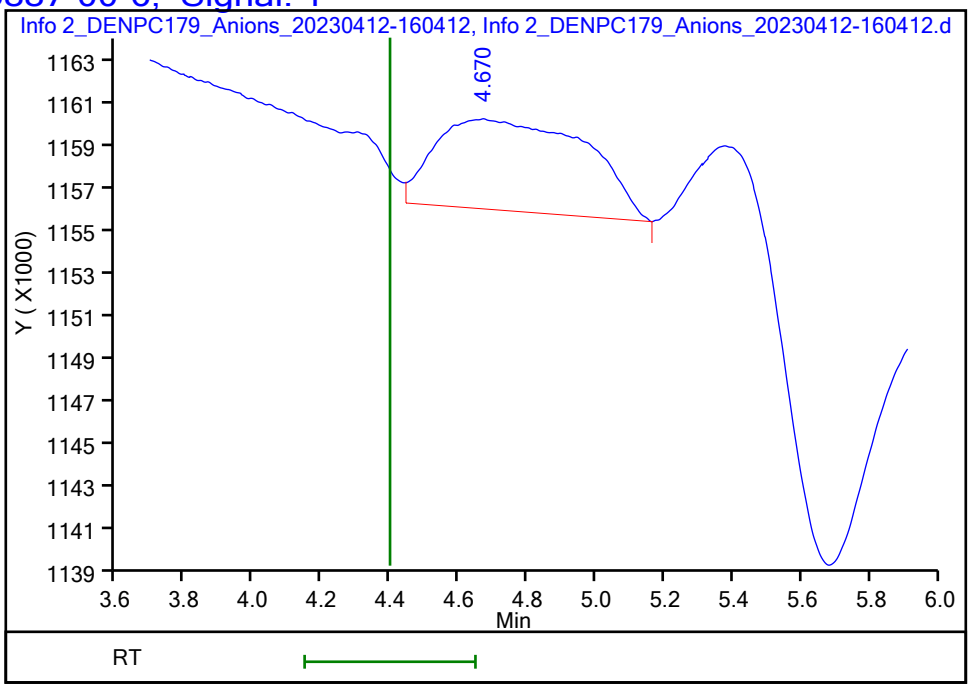
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.67

Response: 130526

Amount: 0



Reviewer: XAY4, 14-Apr-2023 14:01:41

Audit Action: Manually Integrated Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160

Injection Date: 12-Apr-2023 15:49:00 Instrument ID: WC_IonChrom10

Lims ID: ICB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

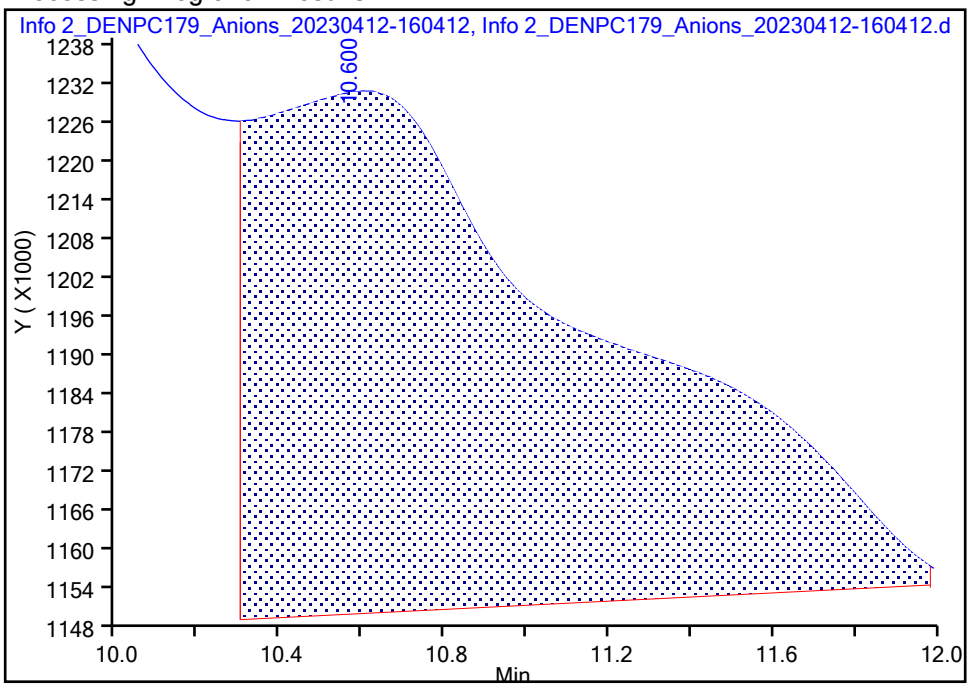
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

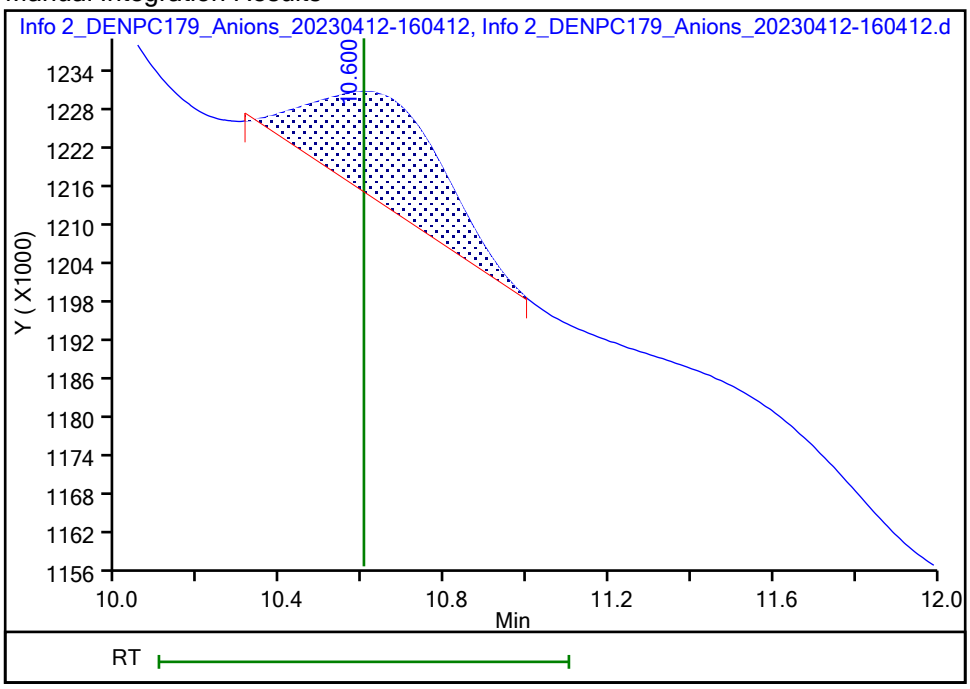
Processing Integration Results

RT: 10.60
Area: 4676250
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.60
Area: 368472
Amount: 0.119715
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 14:01:28

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 170473 **Inst ID:** IC10 **Analysis Date:** 4/17/23 **Analyst:** MEC

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	175122	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175123	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175121	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174751	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174752	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174755	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174764	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174847	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174869	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174554	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174585	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174728	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174807	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
40437065	43230492	44844044	46492699	45903612		-1277342			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			46378611		
M8087413	M21615246	M44844044	M116231748	M229518060					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
5 Nitrate as N				Signal: 1					
42172205	39818610	42066844	45095286	46132733		-1634037			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			45867680		
M8434441	M19909305	M42066844	M112738215	M230663663					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
6 Orthophosphate as P				Signal: 1			R1		
69769055	47259032	34760084	26027078	22431185		10983593			*0.990
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			21157507		
M13953811	M23629516	M34760084	M65067694	M112155923					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 13:55:16	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 17.1	10.0	117.1	
2 Chloride	80.0	85.7	7.1	10.0	107.1	
4 Bromide	2.00	2.01	0.6	10.0	100.6	
7 Sulfate	80.0	86.9	8.7	10.0	108.7	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 13:56:07	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.12	6.0	10.0	106.0	
5 Nitrate as N	2.00	2.15	7.4	10.0	107.4	
6 Orthophosphate as	2.00	2.84	*41.9	10.0	141.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 12:13:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-001
Misc. Info.: 280-0120473-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:34 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 17-Apr-2023 12:30:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			NC	ND	
2 Chloride	4.392	4.392	0.000	965656060	NC	NC	M
3 Nitrite as N	5.092	5.092	0.000	111266176	2.50	2.43	M
4 Bromide	6.270	6.270	0.000	17057754	NC	NC	
5 Nitrate as N	7.045	7.045	0.000	108180494	2.50	2.39	M
6 Orthophosphate as P	9.338	9.338	0.000	67394238	2.50	2.67	
7 Sulfate	10.613	10.613	0.000	691020270	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

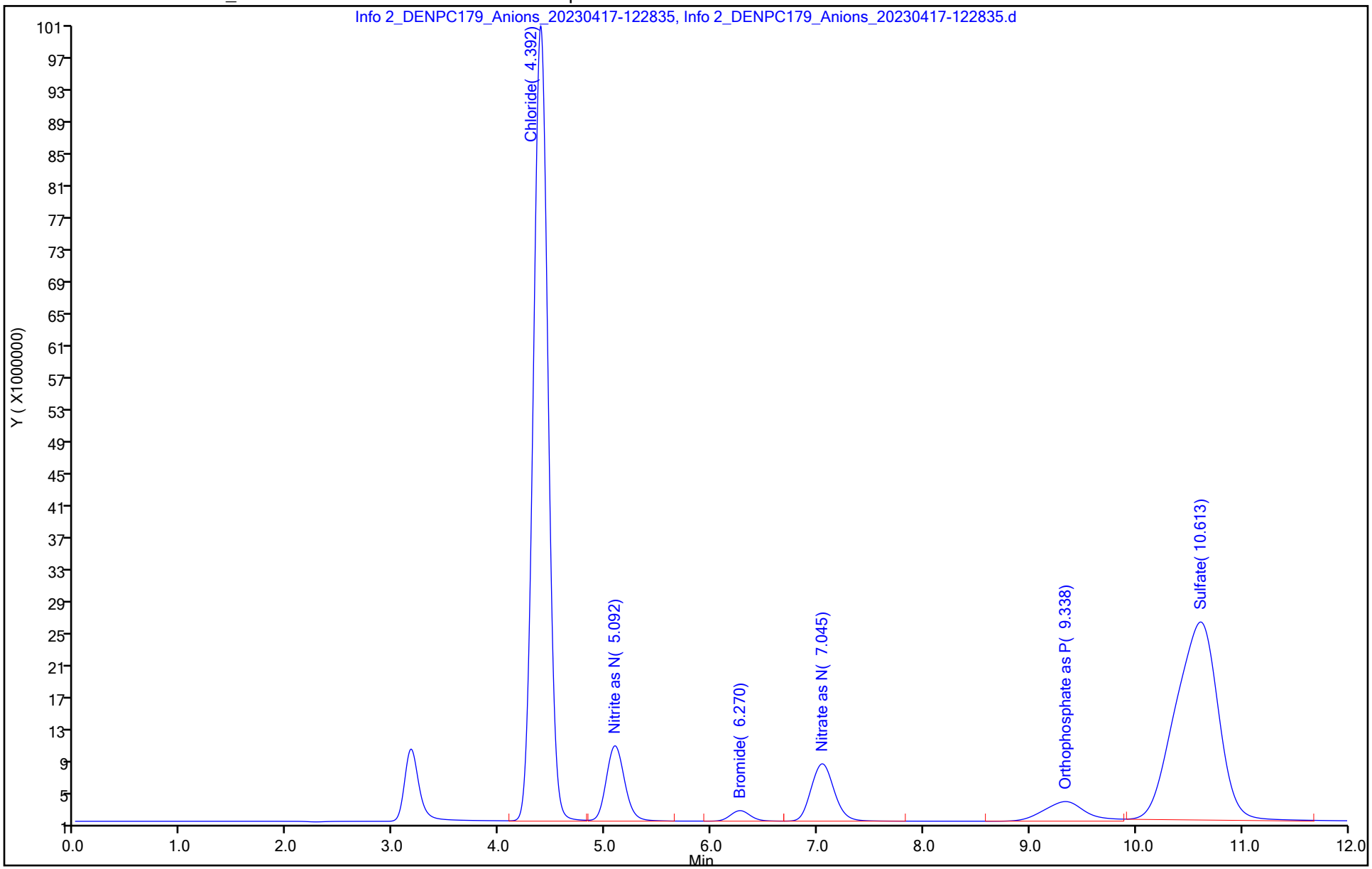
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:34 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122835.d				
Injection Date:	17-Apr-2023 12:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122

Injection Date: 17-Apr-2023 12:13:00 Instrument ID: WC_IonChrom10

Lims ID: ccv

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

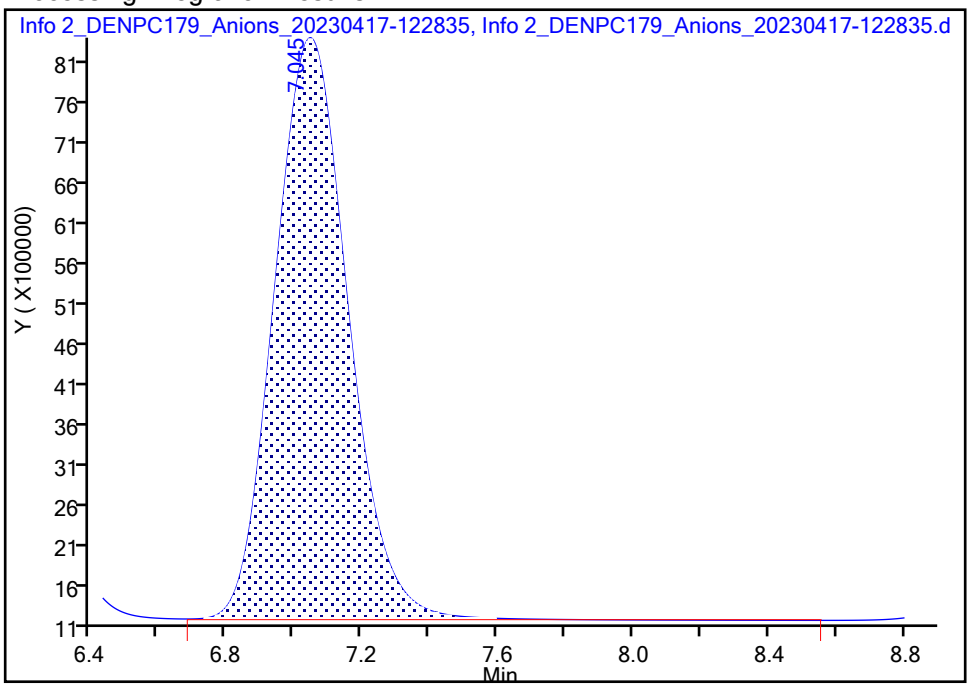
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

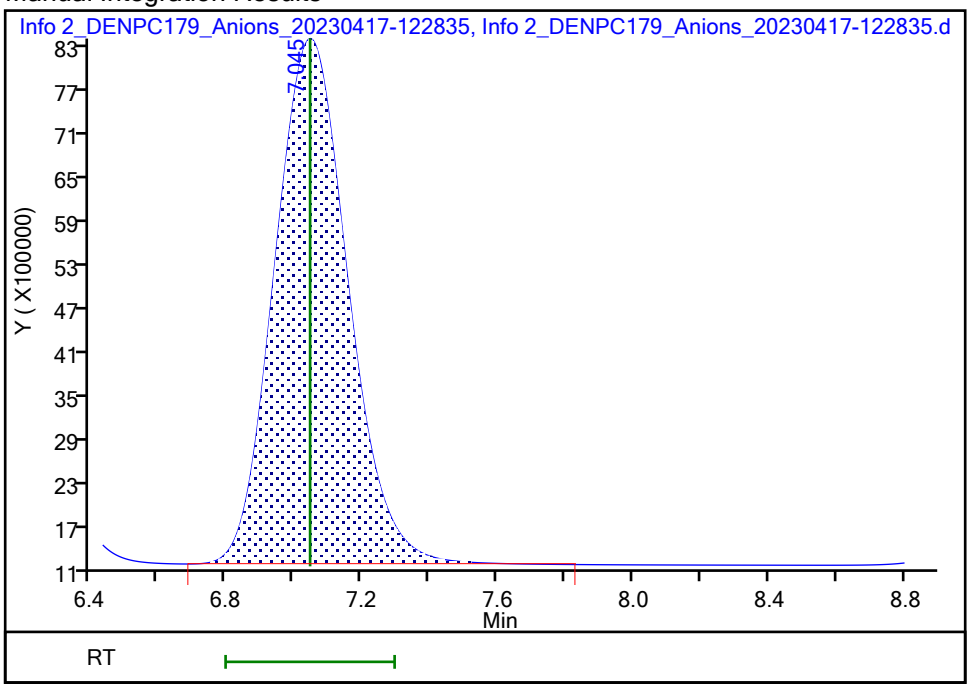
Processing Integration Results

RT: 7.05
Area: 108389646
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.05
Area: 108180494
Amount: 2.394159
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:30

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122

Injection Date: 17-Apr-2023 12:13:00 Instrument ID: WC_IonChrom10

Lims ID: ccv

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

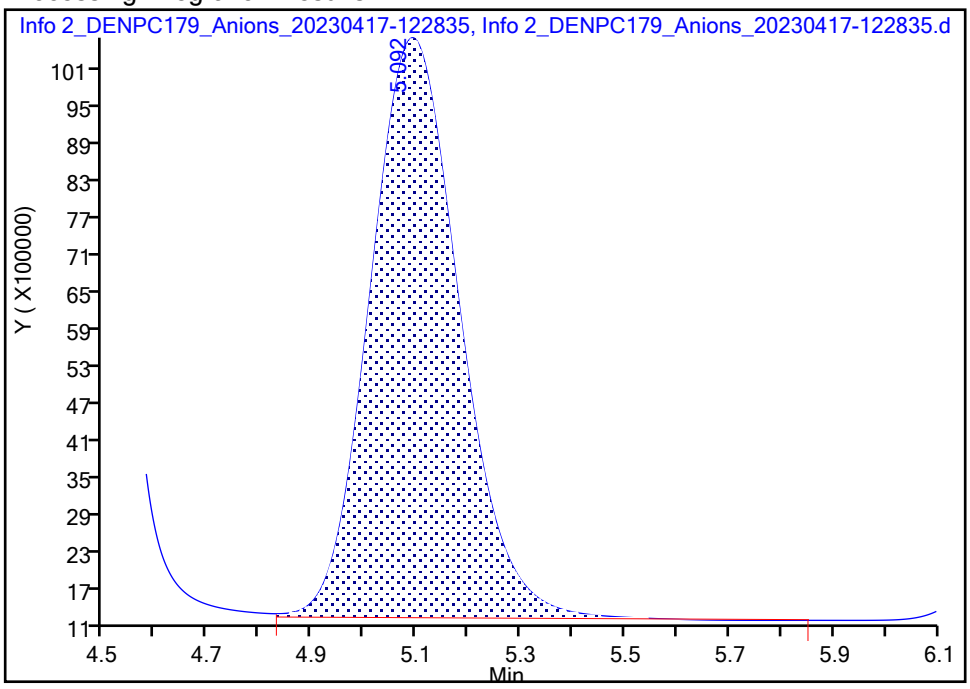
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

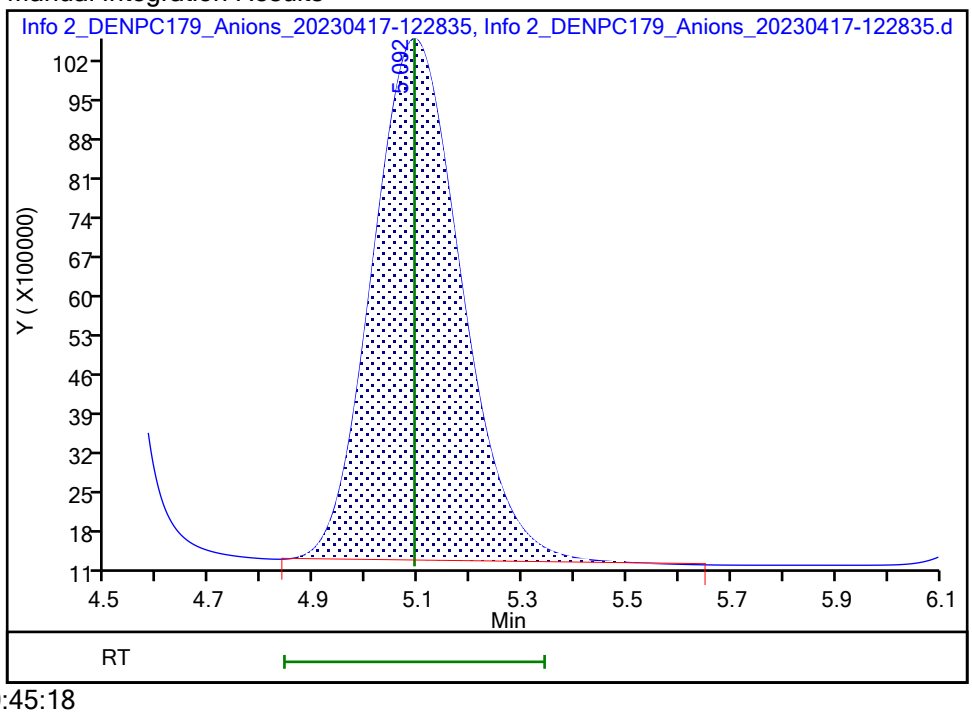
Processing Integration Results

RT: 5.09
Area: 112119308
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.09
Area: 111266176
Amount: 2.426625
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:18

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 12:28:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-002
Misc. Info.: 280-0120473-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:35 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:45:51

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.392				ND	
3 Nitrite as N		5.092				ND	
4 Bromide	6.092	6.092	0.000	135061		NC	
5 Nitrate as N		7.045				ND	
6 Orthophosphate as P	9.407	9.407	0.000	6308047		-0.2210	
7 Sulfate	10.633	10.633	0.000	492097		NC	M

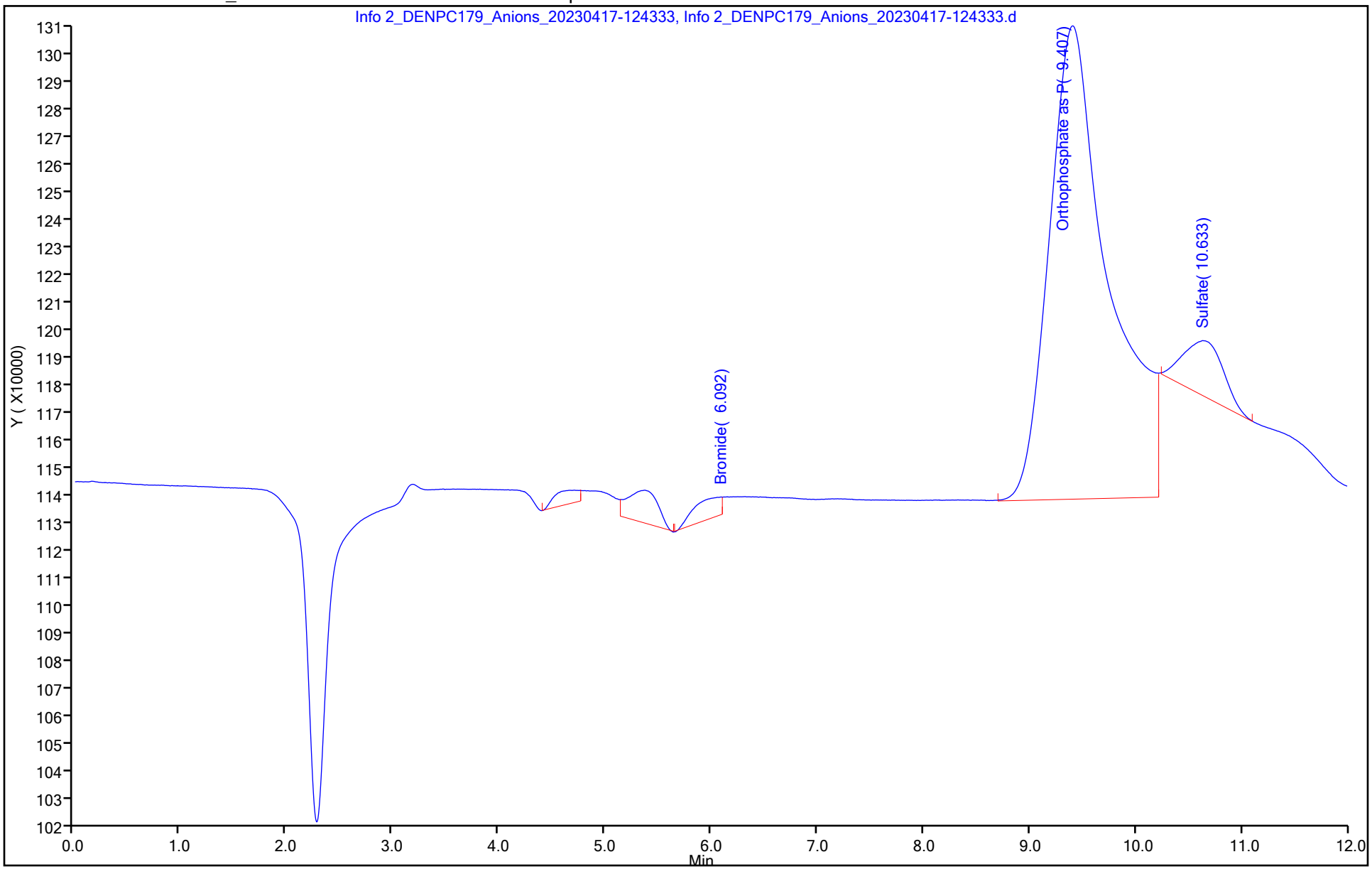
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124333.d				
Injection Date:	17-Apr-2023 12:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 17-Apr-2023 12:43:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-003
Misc. Info.: 280-0120473-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:36 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:46:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			NC	ND	
2 Chloride	4.373	4.373	0.000	43365025	NC	NC	M
3 Nitrite as N	5.100	5.100	0.000	9679058	0.2500	0.2362	M
4 Bromide	6.292	6.292	0.000	1517948	NC	NC	M
5 Nitrate as N	7.098	7.098	0.000	9034958	0.2500	0.2326	M
6 Orthophosphate as P	9.373	9.373	0.000	16271405	0.2500	0.2499	
7 Sulfate	10.637	10.637	0.000	31642899	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

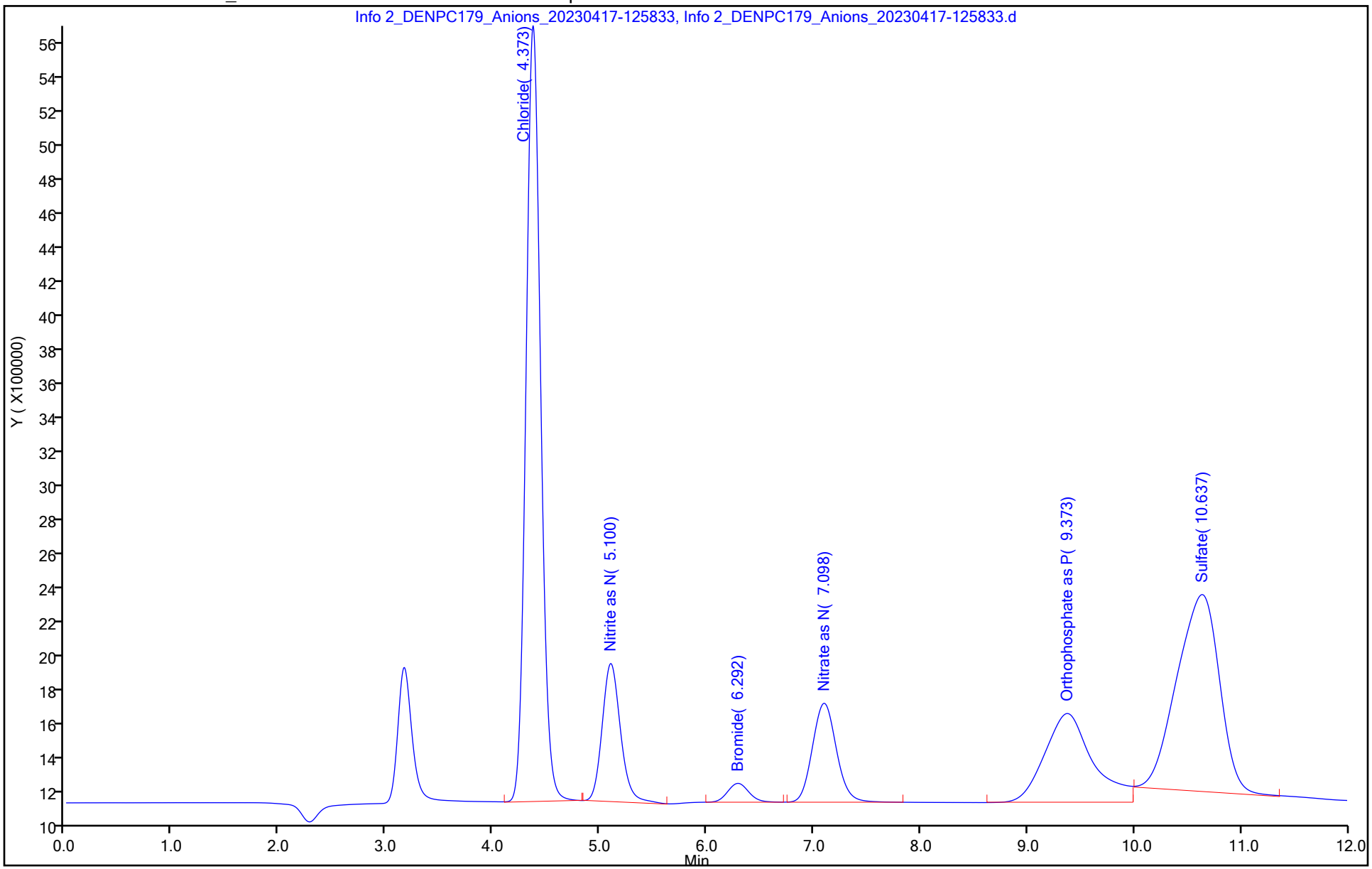
IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL
IC Cal low_00703 Amount Added: 0.10 Units: mL

Report Date: 18-Apr-2023 11:36:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125833.d

Injection Date:	17-Apr-2023 12:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

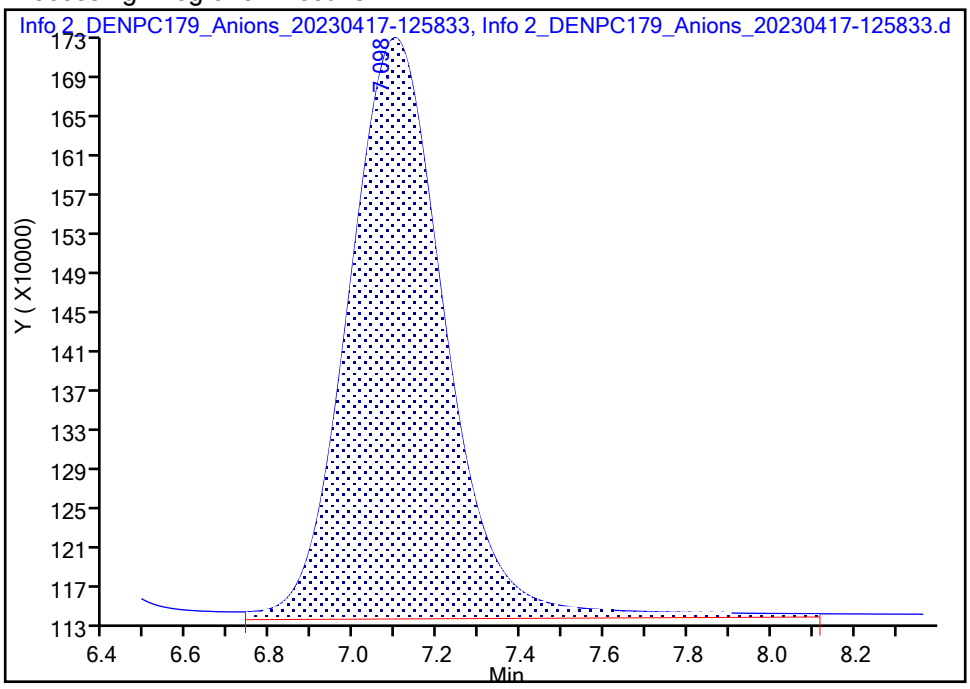
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125
Injection Date: 17-Apr-2023 12:43:00 Instrument ID: WC_IonChrom10
Lims ID: mrl
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

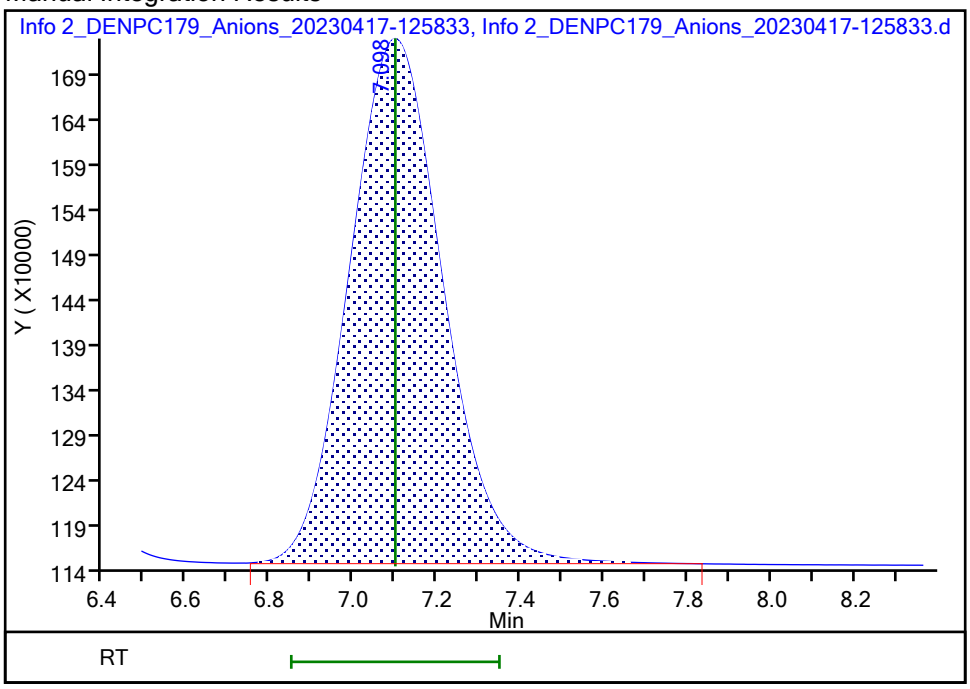
Processing Integration Results

RT: 7.10
Area: 9520802
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.10
Area: 9034958
Amount: 0.232604
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:03
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

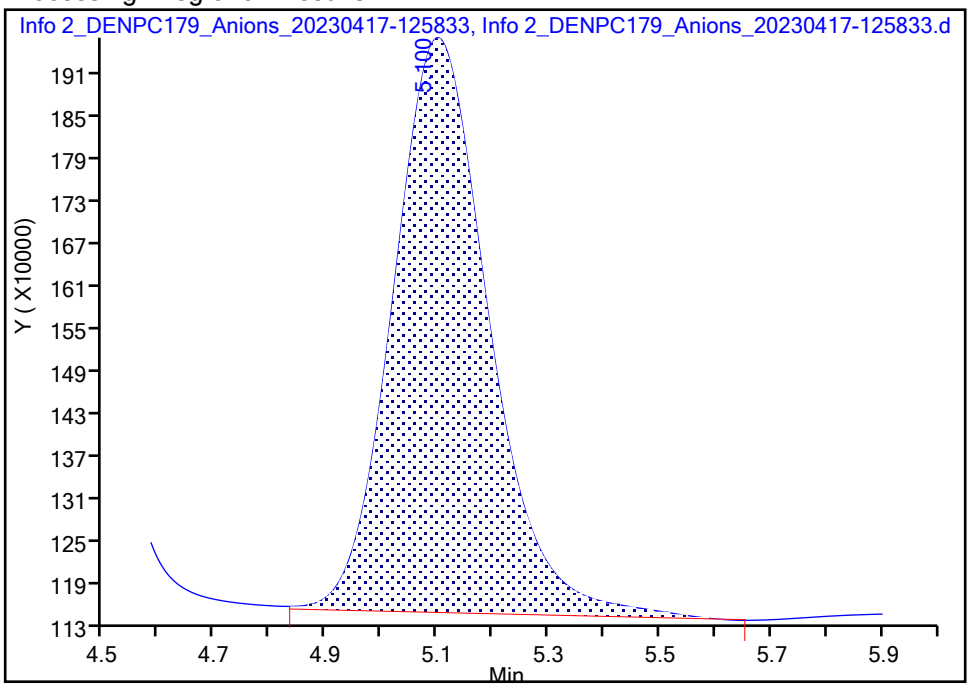
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125
Injection Date: 17-Apr-2023 12:43:00 Instrument ID: WC_IonChrom10
Lims ID: mrl
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

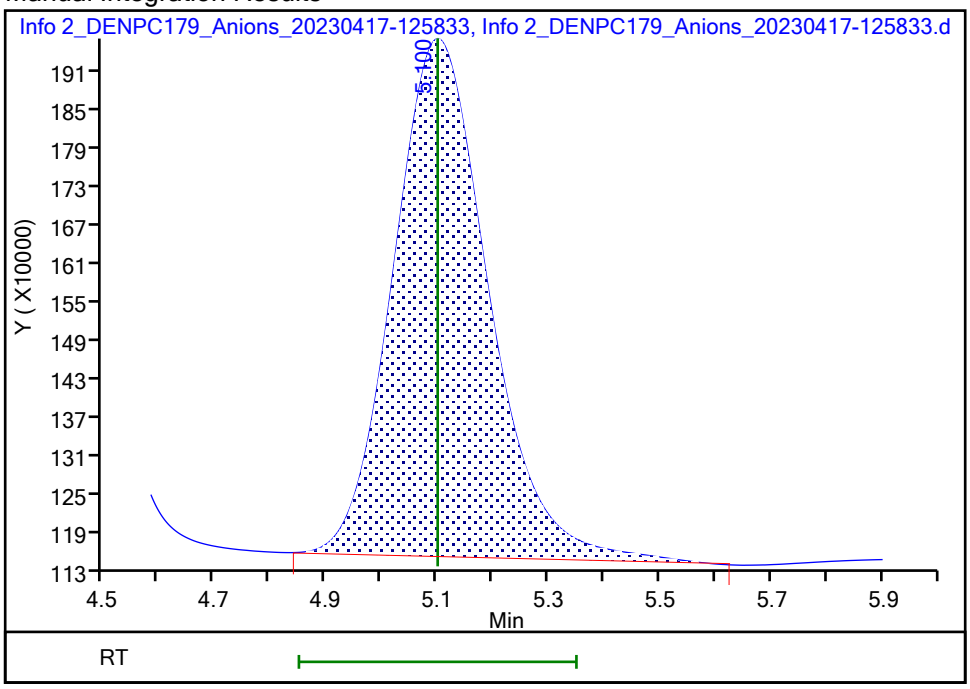
Processing Integration Results

RT: 5.10
Area: 9781958
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.10
Area: 9679058
Amount: 0.236238
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:56
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 17-Apr-2023 12:58:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-004
Misc. Info.: 280-0120473-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:37 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 17-Apr-2023 13:33:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			NC	ND	
2 Chloride	4.388	4.388	0.000	964877890	NC	NC	M
3 Nitrite as N	5.088	5.088	0.000	111656489	2.50	2.44	M
4 Bromide	6.268	6.268	0.000	17046566	NC	NC	
5 Nitrate as N	7.042	7.042	0.000	108151002	2.50	2.39	M
6 Orthophosphate as P	9.335	9.335	0.000	69309307	2.50	2.76	
7 Sulfate	10.605	10.605	0.000	686690141	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

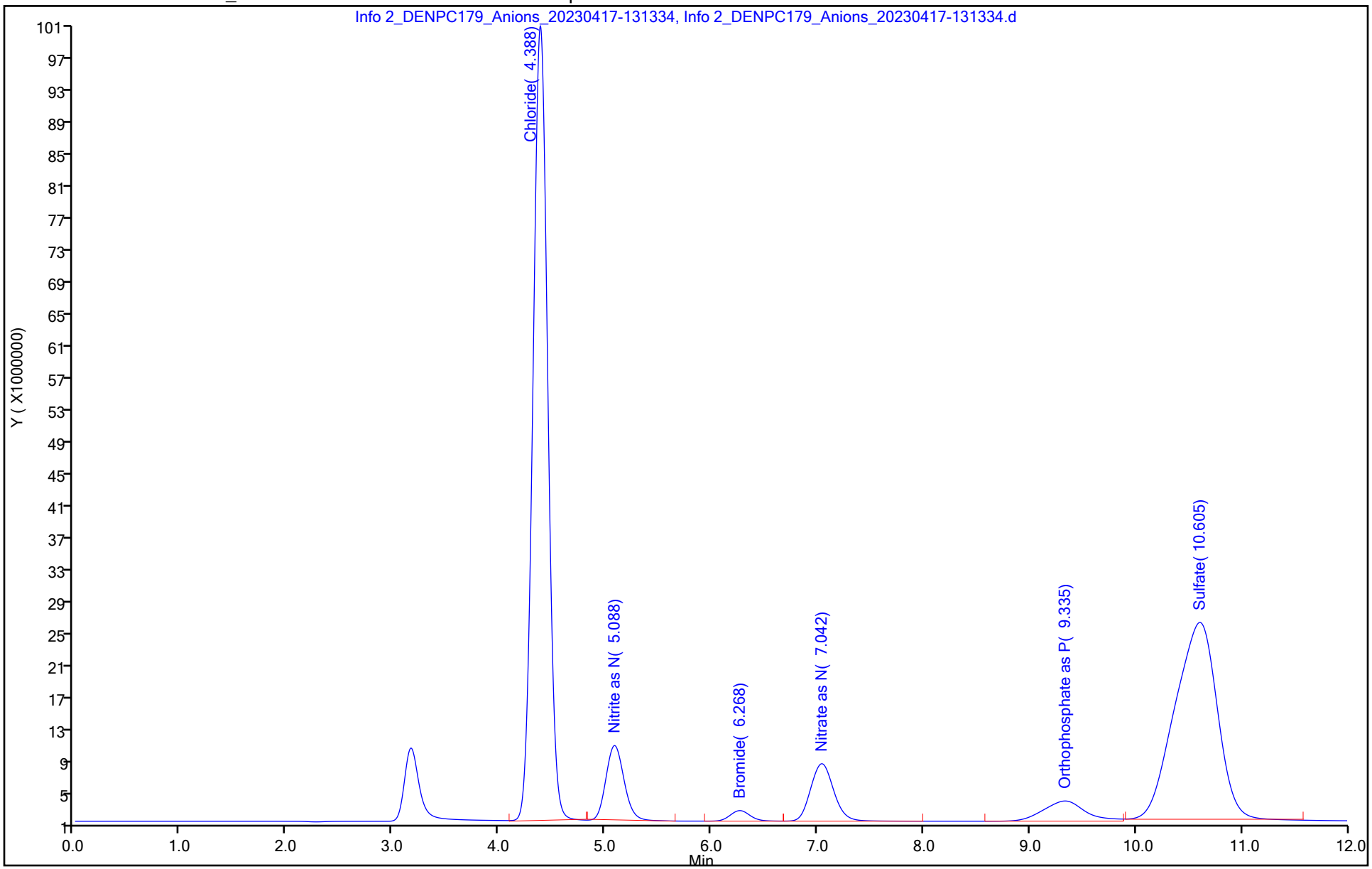
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:37 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131334.d				
Injection Date:	17-Apr-2023 12:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131

Injection Date: 17-Apr-2023 12:58:00 Instrument ID: WC_IonChrom10

Lims ID: lcs

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

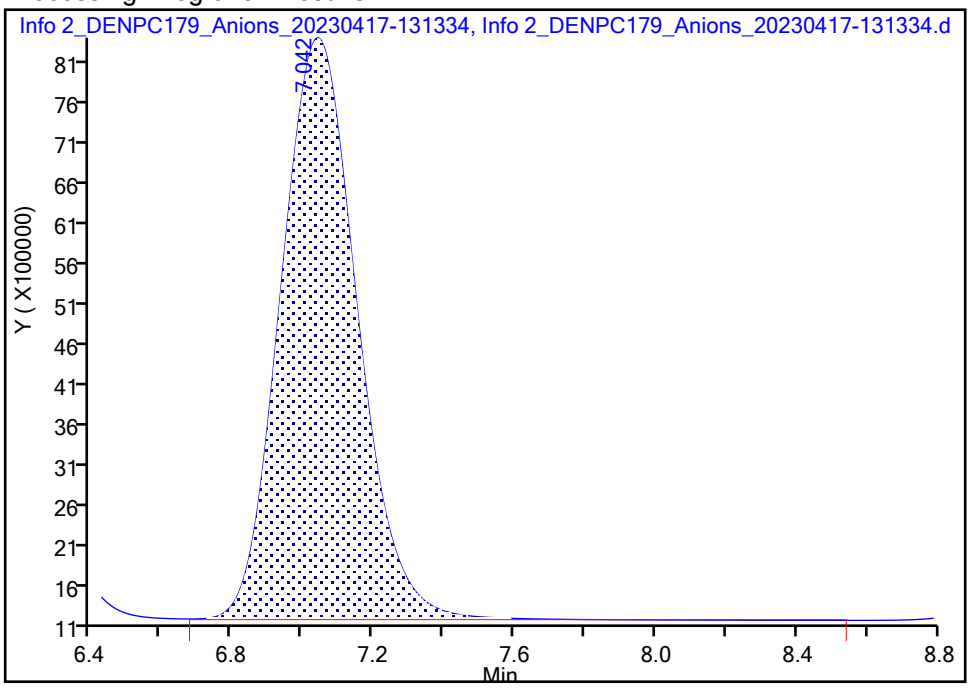
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

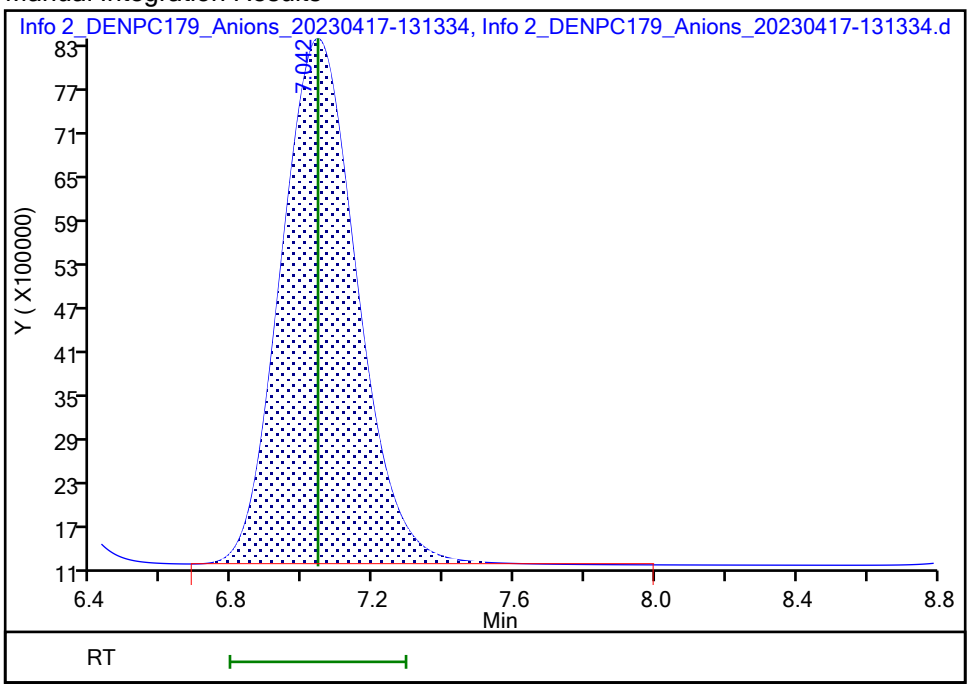
Processing Integration Results

RT: 7.04
Area: 108285388
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.04
Area: 108151002
Amount: 2.393516
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:30

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

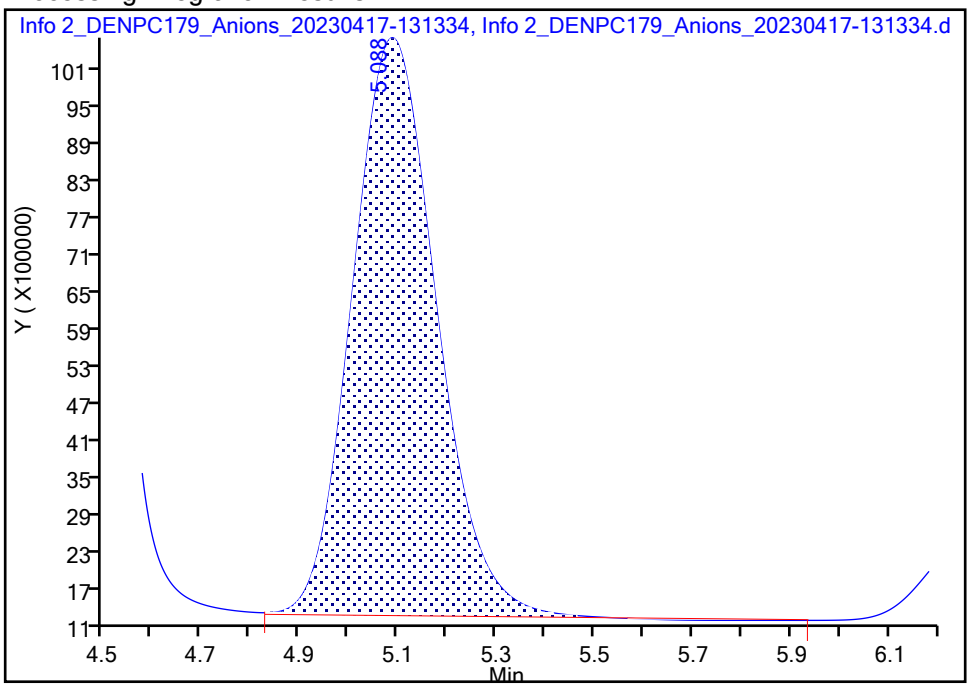
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-13
Injection Date: 17-Apr-2023 12:58:00 Instrument ID: WC_IonChrom10
Lims ID: lcs
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

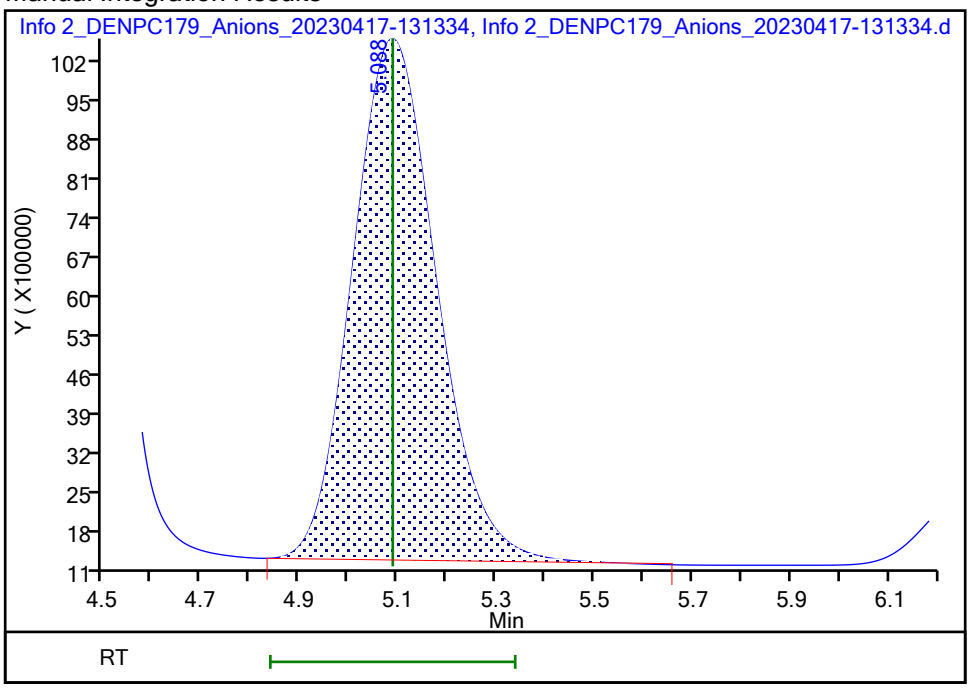
Processing Integration Results

RT: 5.09
Area: 112402585
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.09
Area: 111656489
Amount: 2.435041
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:22
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 17-Apr-2023 13:13:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-005
Misc. Info.: 280-0120473-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:37 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:46:58

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			NC	ND	
2 Chloride	4.388	4.388	0.000	964113552	NC	NC	M
3 Nitrite as N	5.088	5.088	0.000	110818321	2.50	2.42	M
4 Bromide	6.272	6.272	0.000	17020706	NC	NC	
5 Nitrate as N	7.043	7.043	0.000	107794212	2.50	2.39	M
6 Orthophosphate as P	9.337	9.337	0.000	69452215	2.50	2.76	
7 Sulfate	10.610	10.610	0.000	687195393	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

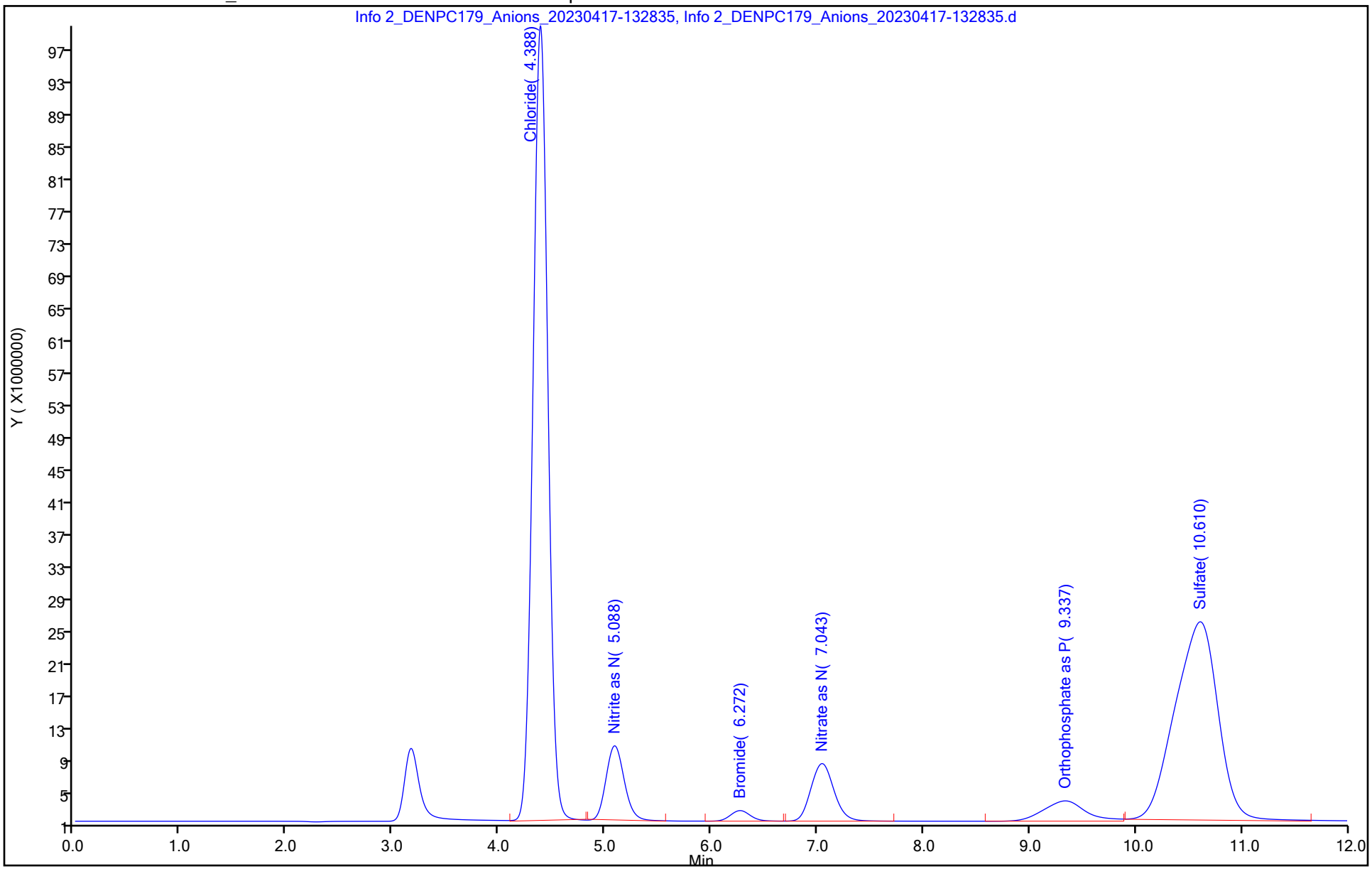
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132835.d

Injection Date:	17-Apr-2023 13:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132

Injection Date: 17-Apr-2023 13:13:00 Instrument ID: WC_IonChrom10

Lims ID: lcsd

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

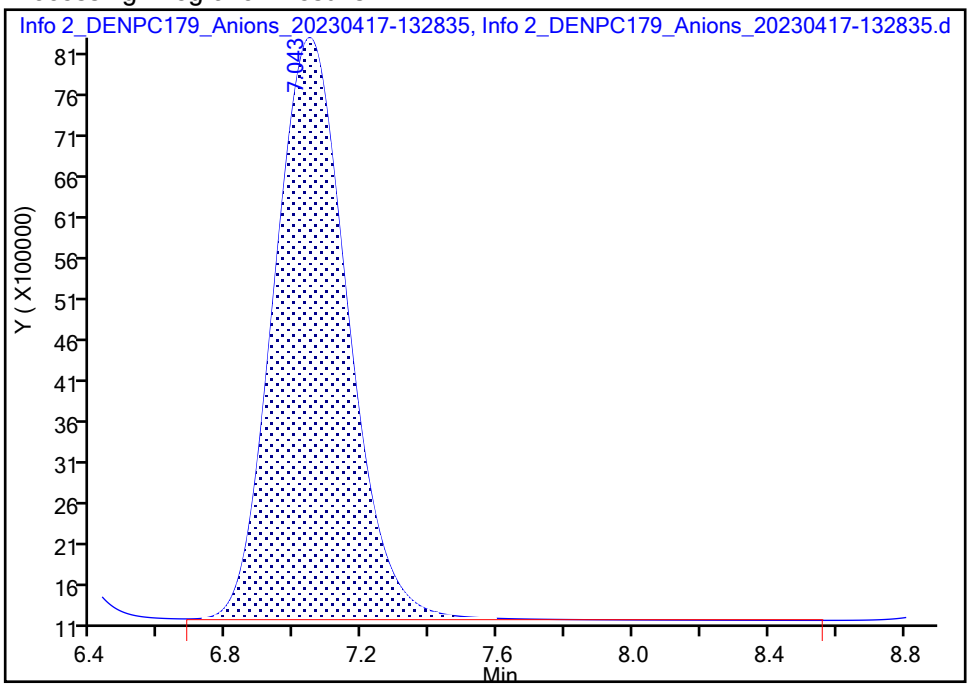
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

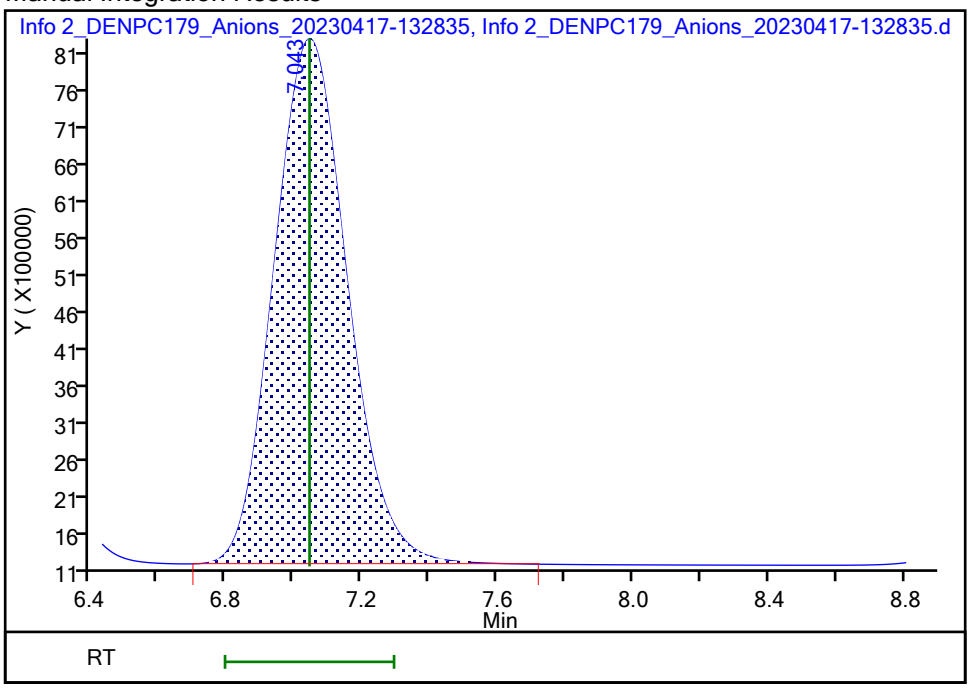
Processing Integration Results

RT: 7.04
Area: 108139251
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.04
Area: 107794212
Amount: 2.385738
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:51

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132

Injection Date: 17-Apr-2023 13:13:00 Instrument ID: WC_IonChrom10

Lims ID: lcsd

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

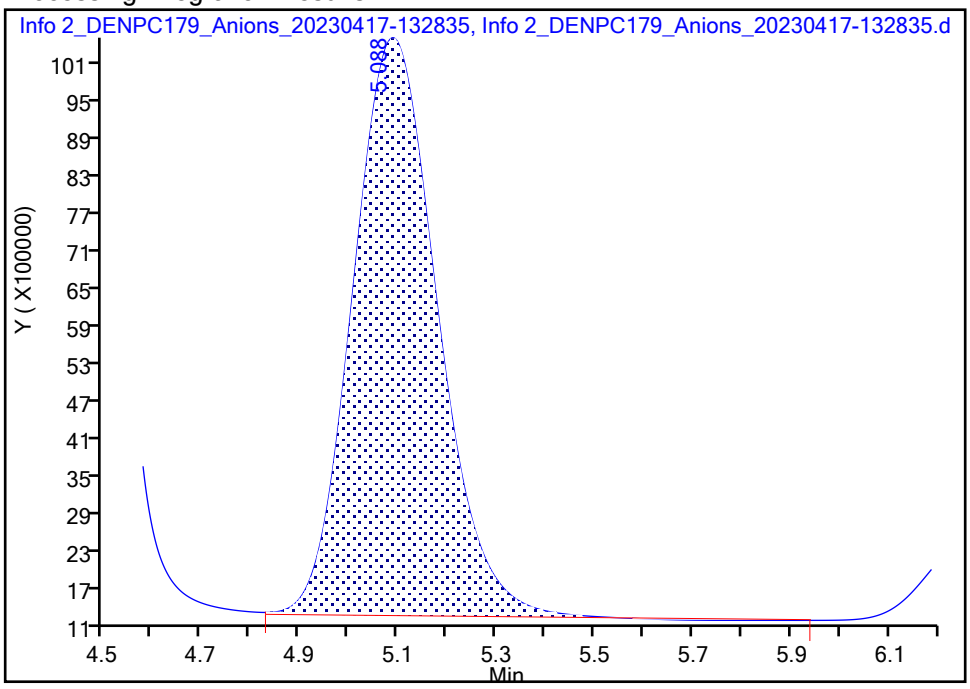
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

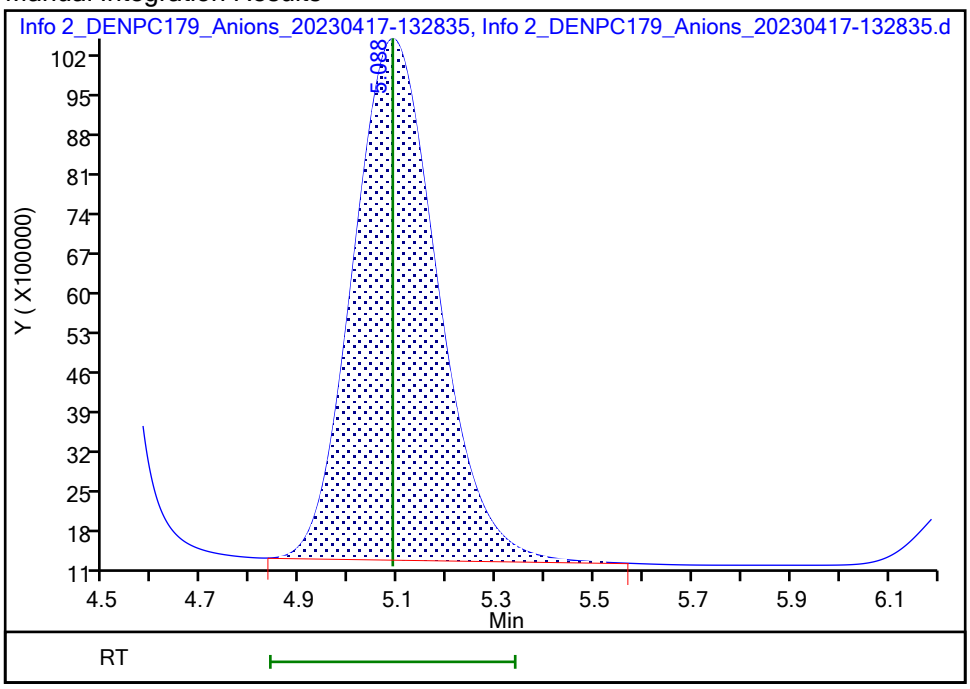
Processing Integration Results

RT: 5.09
Area: 111796582
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.09
Area: 110818321
Amount: 2.416969
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:44

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 17-Apr-2023 13:28:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-006
Misc. Info.: 280-0120473-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:47:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.075	6.075	0.000	130913		NC	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.402	9.402	0.000	8300787		-0.1268	
7 Sulfate	10.633	10.633	0.000	456822		NC	M

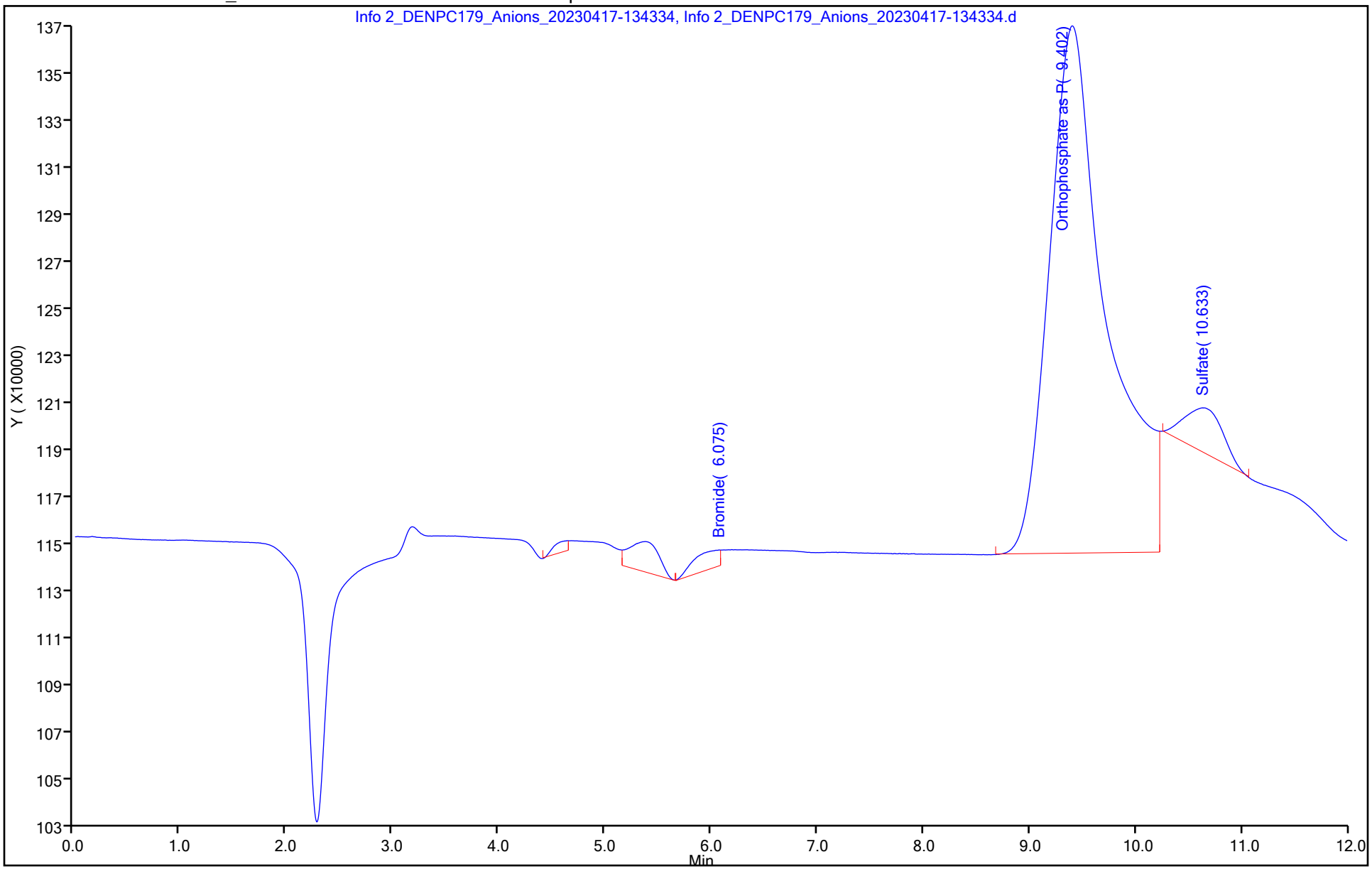
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134334.d				
Injection Date:	17-Apr-2023 13:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-135
Lims ID: 280-175122-C-1
Client ID: RW-1-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 13:43:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-007
Misc. Info.: 280-0120473-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 17-Apr-2023 14:05:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.570	4.388	0.182	6325825728	NC	M
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.150	7.043	0.107	103244742	2.29	
7 Sulfate	10.625	10.633	-0.008	1569817945	NC	M

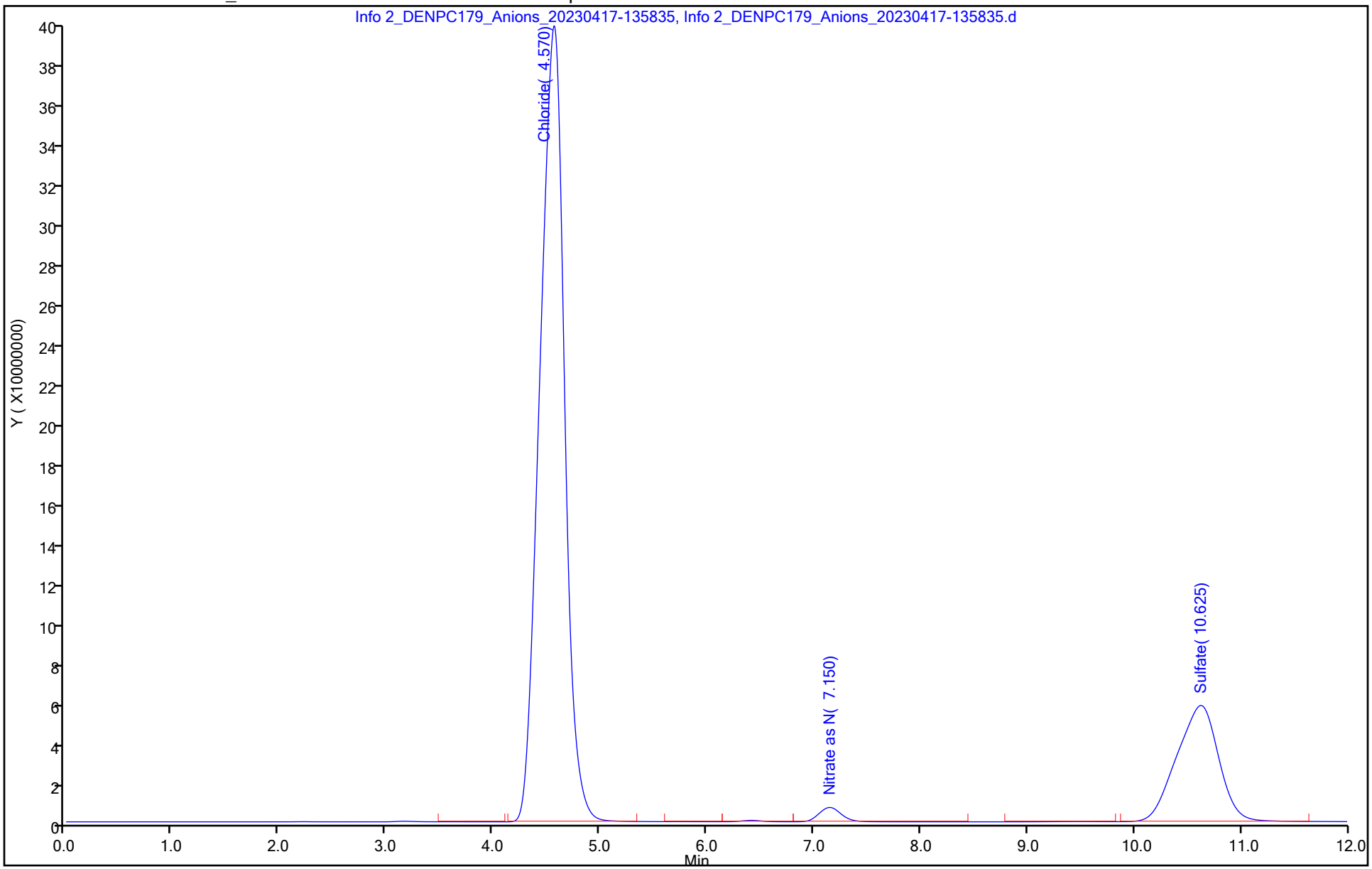
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-135835.d				
Injection Date:	17-Apr-2023 13:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175122-C-1	Lab Sample ID:	280-175122-1	Worklist Smp#:	7
Client ID:	RW-1-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-142
Lims ID: 280-175122-C-2
Client ID: MP-2-20230411
Sample Type: Client
Inject. Date: 17-Apr-2023 14:13:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-009
Misc. Info.: 280-0120473-009
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:48:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.558	4.388	0.170	5277592485	NC	M
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.145	7.043	0.102	101233464	2.24	M
7 Sulfate	10.625	10.633	-0.008	1425596721	NC	M

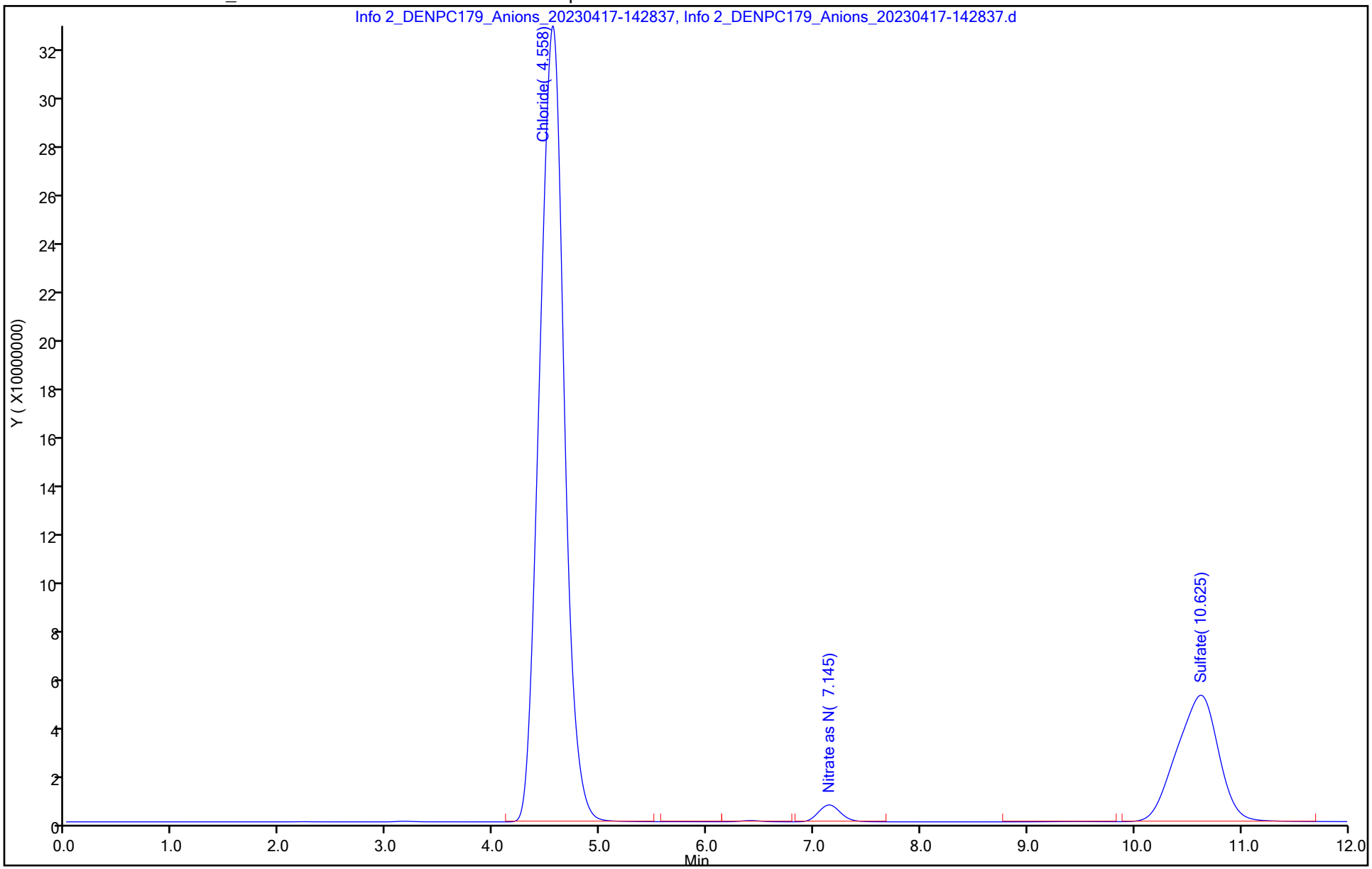
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:40 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-142837.d				
Injection Date:	17-Apr-2023 14:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175122-C-2	Lab Sample ID:	280-175122-2	Worklist Smp#:	9
Client ID:	MP-2-20230411				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

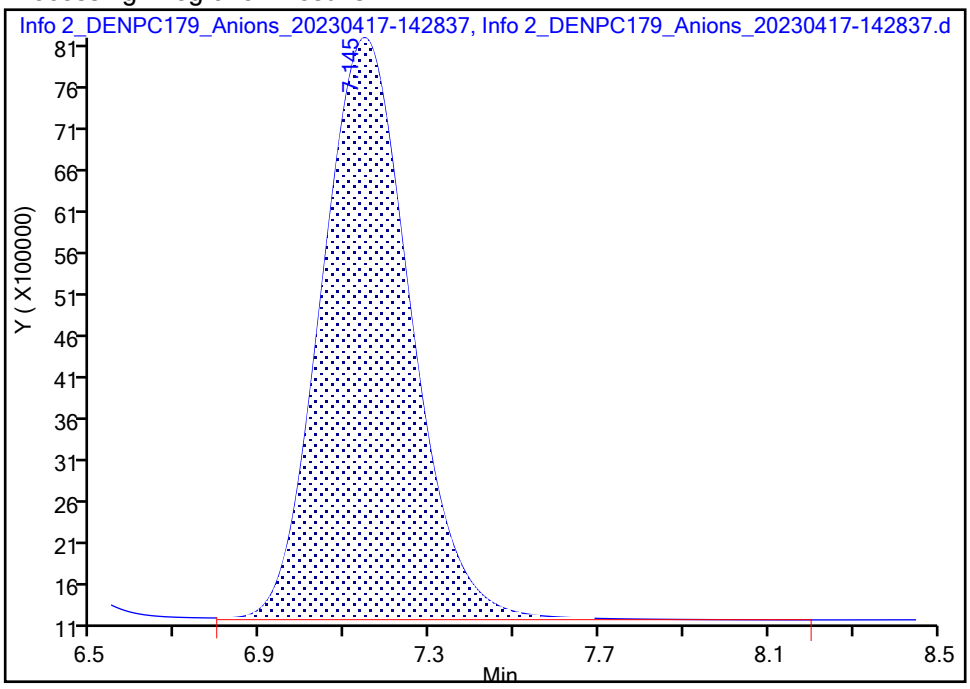
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-142				
Injection Date:	17-Apr-2023 14:13:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175122-C-2	Lab Sample ID:	280-175122-2		
Client ID:	MP-2-20230411				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions		
Column:		Detector	Info 2_091554_1		

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

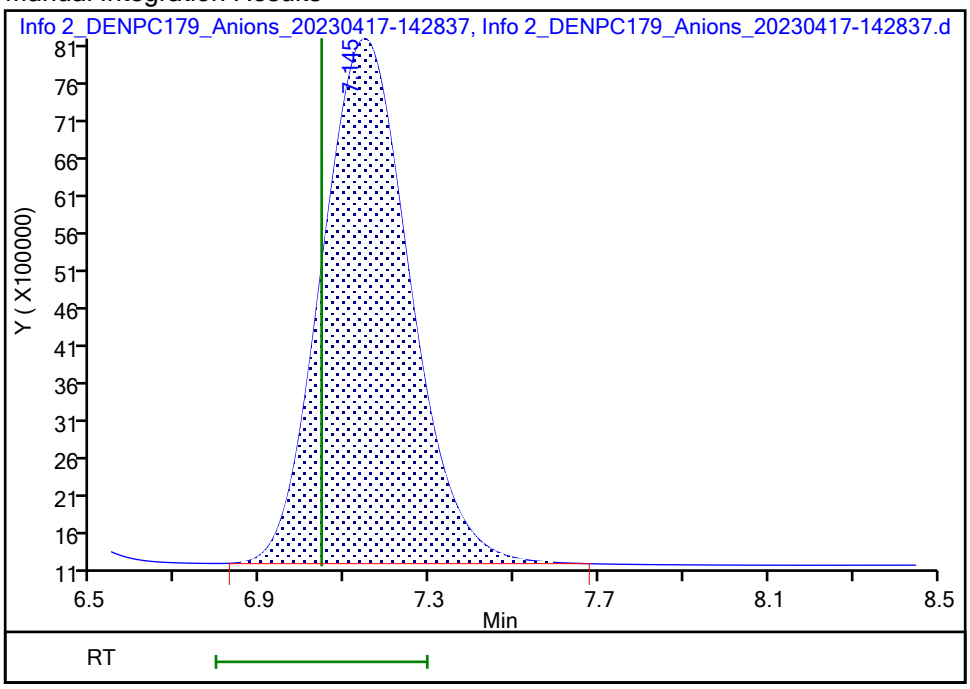
Processing Integration Results

RT: 7.15
Area: 103116267
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.15
Area: 101233464
Amount: 2.242701
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:48:40

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-145
Lims ID: 280-175122-C-3
Client ID: MW-118D-20230412
Sample Type: Client
Inject. Date: 17-Apr-2023 14:43:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-011
Misc. Info.: 280-0120473-011
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:49:54

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.713	4.388	0.325	11439539670	NC	Ma
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.162	7.043	0.119	99684695	2.21	M
7 Sulfate	10.633	10.633	0.000	1098017342	NC	M

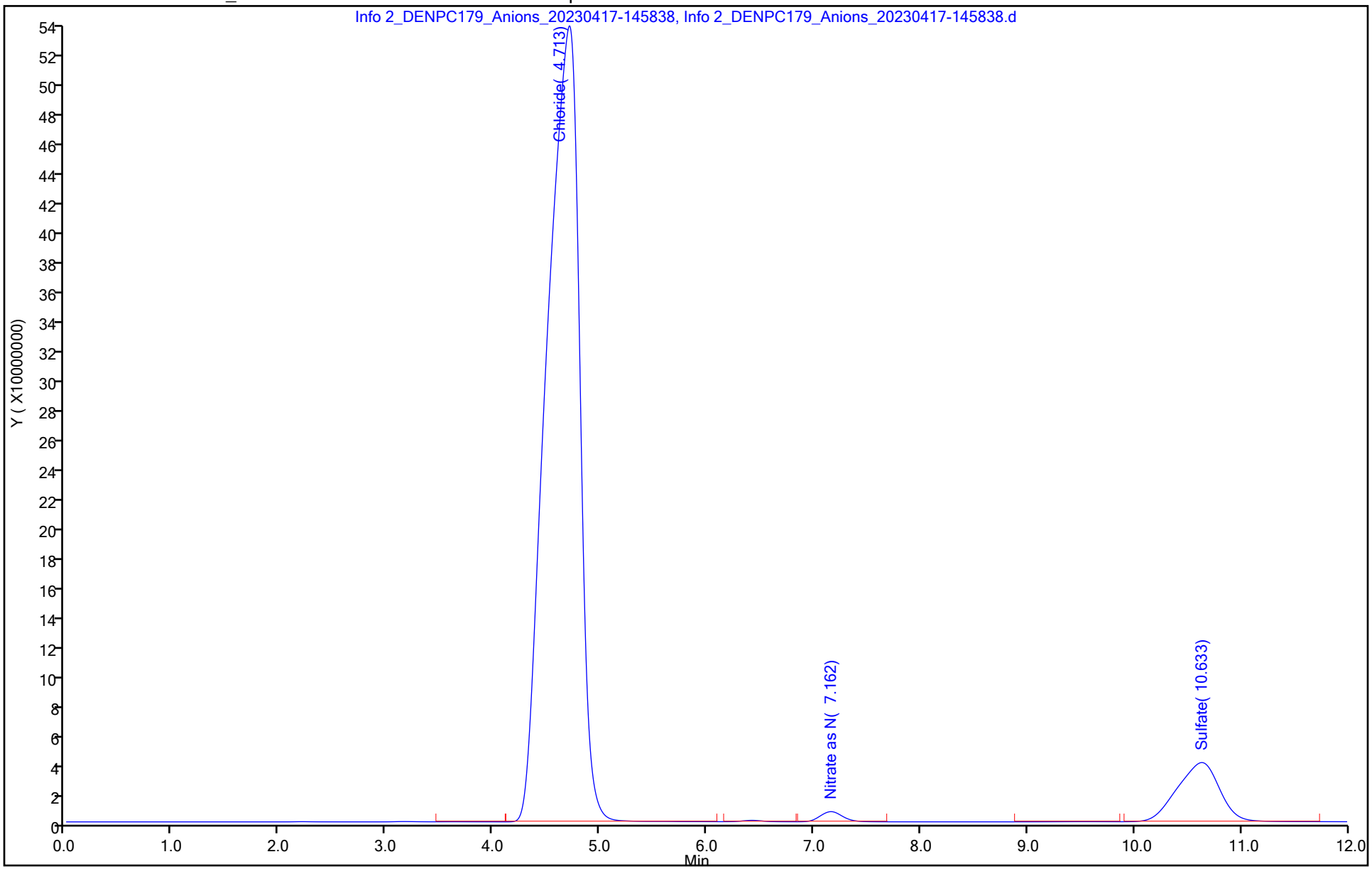
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Apr-2023 11:36:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-145838.d				
Injection Date:	17-Apr-2023 14:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175122-C-3	Lab Sample ID:	280-175122-3	Worklist Smp#:	11
Client ID:	MW-118D-20230412				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

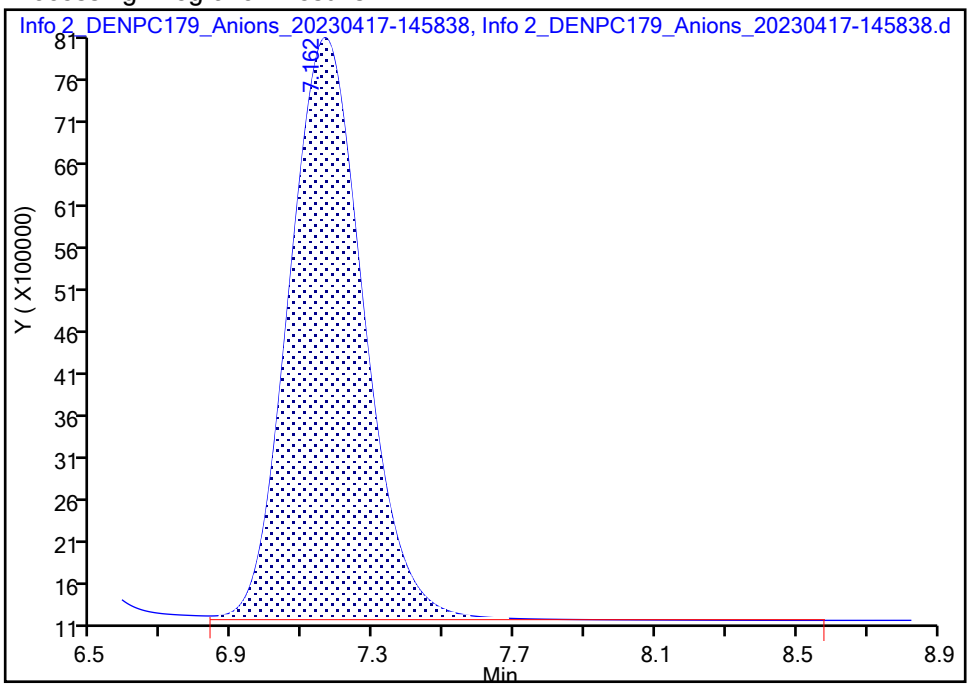
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-145				
Injection Date:	17-Apr-2023 14:43:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175122-C-3	Lab Sample ID:	280-175122-3		
Client ID:	MW-118D-20230412				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions		
Column:		Detector	Info 2_091554_1		

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

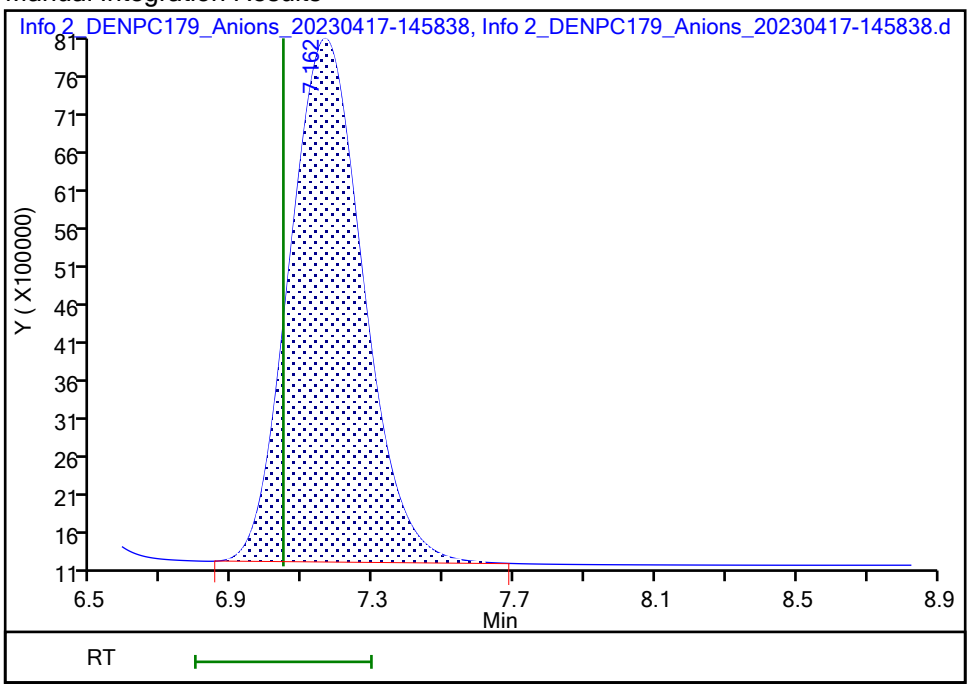
Processing Integration Results

RT: 7.16
Area: 101447965
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.16
Area: 99684695
Amount: 2.208935
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:49:36

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 16:13:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-017
Misc. Info.: 280-0120473-017
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:13:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			ND	ND	
2 Chloride	4.392	4.388	0.004	977790198	NC	NC	M
3 Nitrite as N	5.092	5.088	0.004	110879515	2.50	2.42	M
4 Bromide	6.270	6.075	0.195	17147164	NC	NC	
5 Nitrate as N	7.050	7.043	0.007	108729132	2.50	2.41	M
6 Orthophosphate as P	9.333	9.402	-0.069	66031793	2.50	2.60	
7 Sulfate	10.610	10.633	-0.023	698664535	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

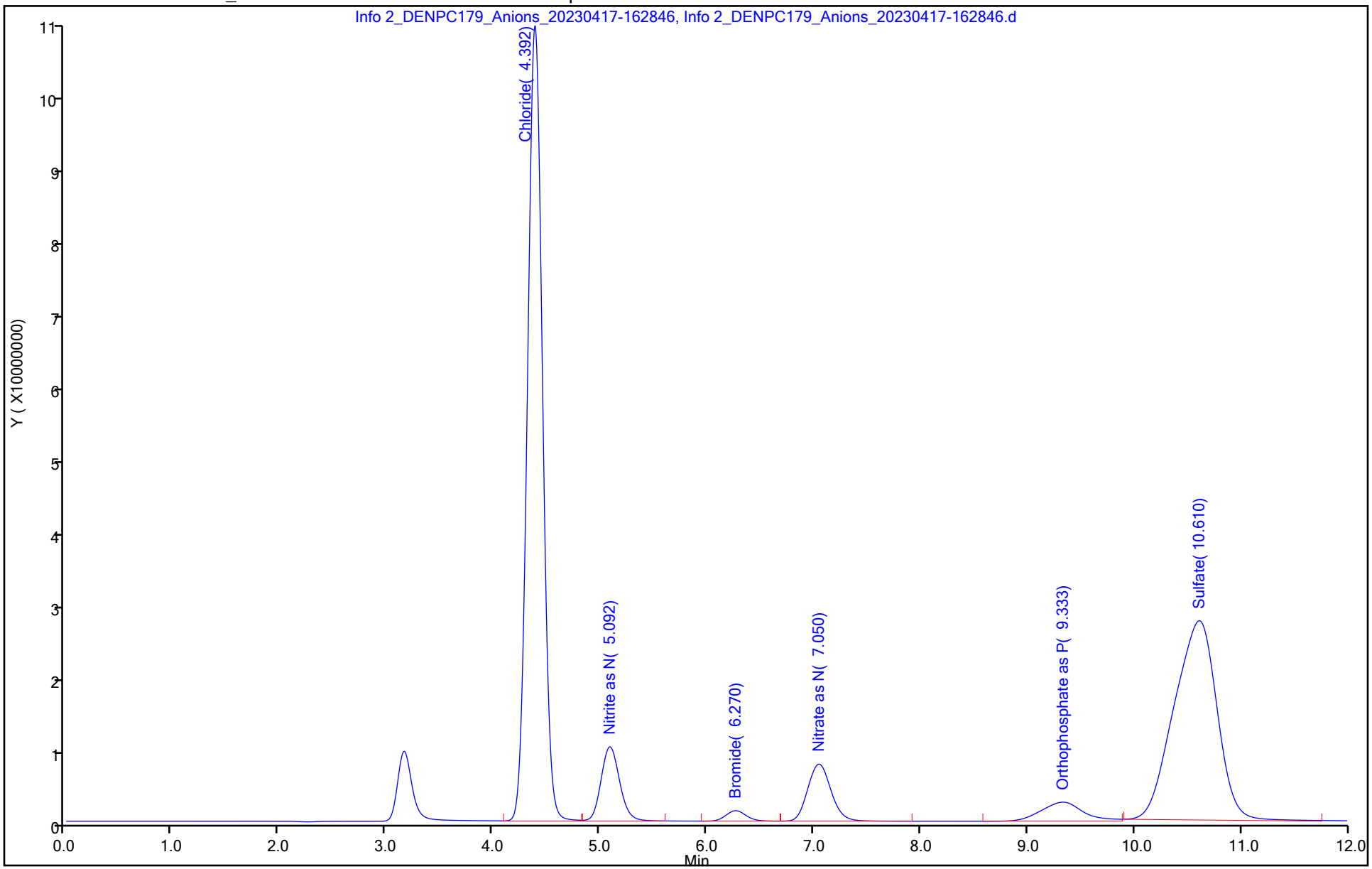
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:46 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162846.d				
Injection Date:	17-Apr-2023 16:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

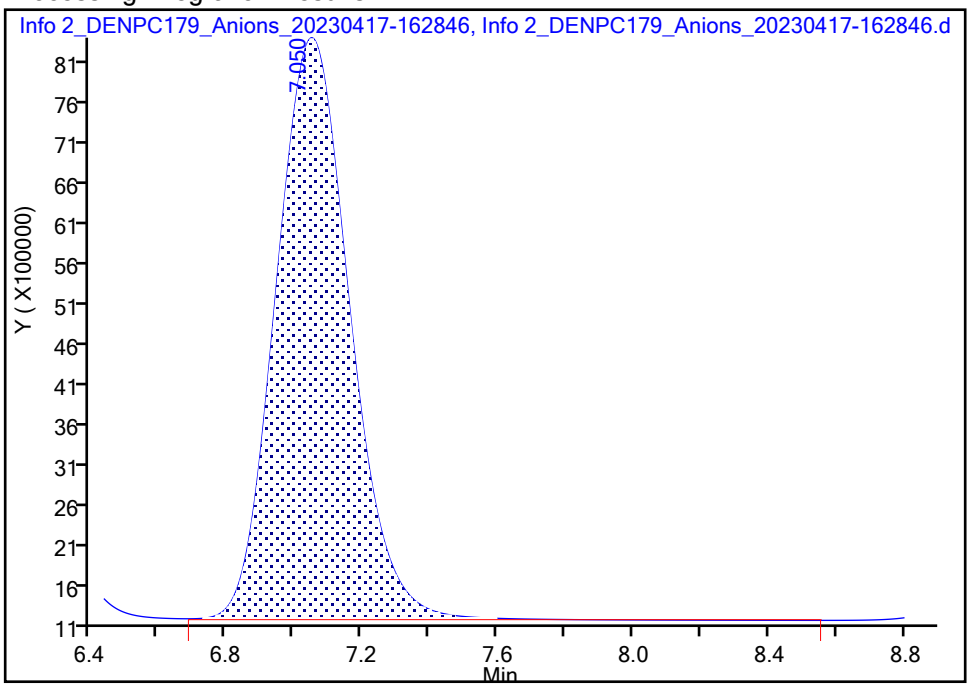
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162
Injection Date: 17-Apr-2023 16:13:00 Instrument ID: WC_IonChrom10
Lims ID: CCV
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

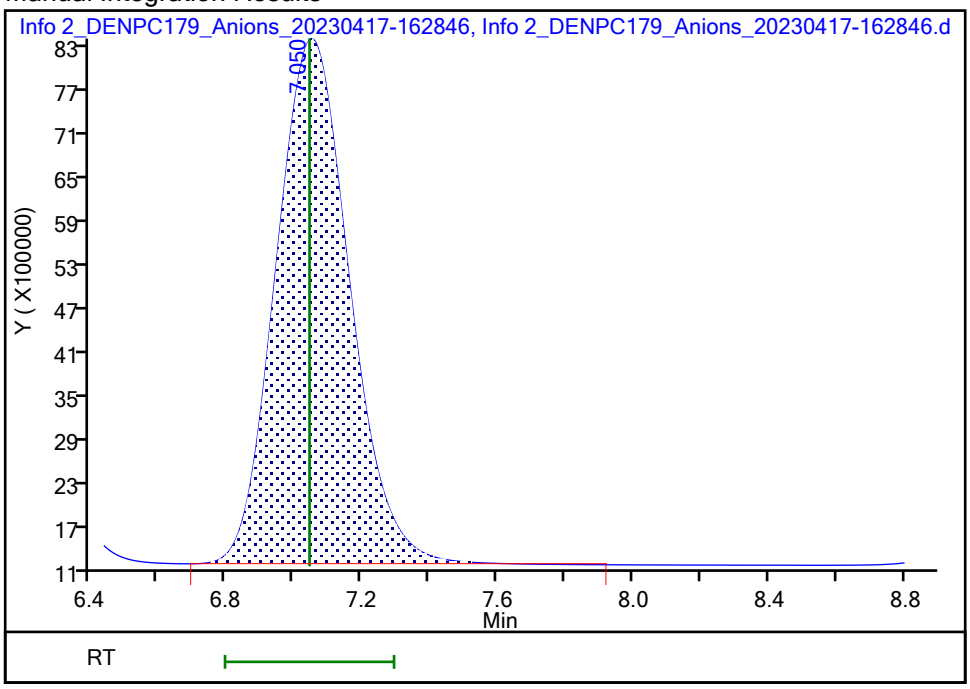
Processing Integration Results

RT: 7.05
Area: 108803145
Amount: 2.407734
Amount Units: ug/ml



Manual Integration Results

RT: 7.05
Area: 108729132
Amount: 2.406121
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:52
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162

Injection Date: 17-Apr-2023 16:13:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

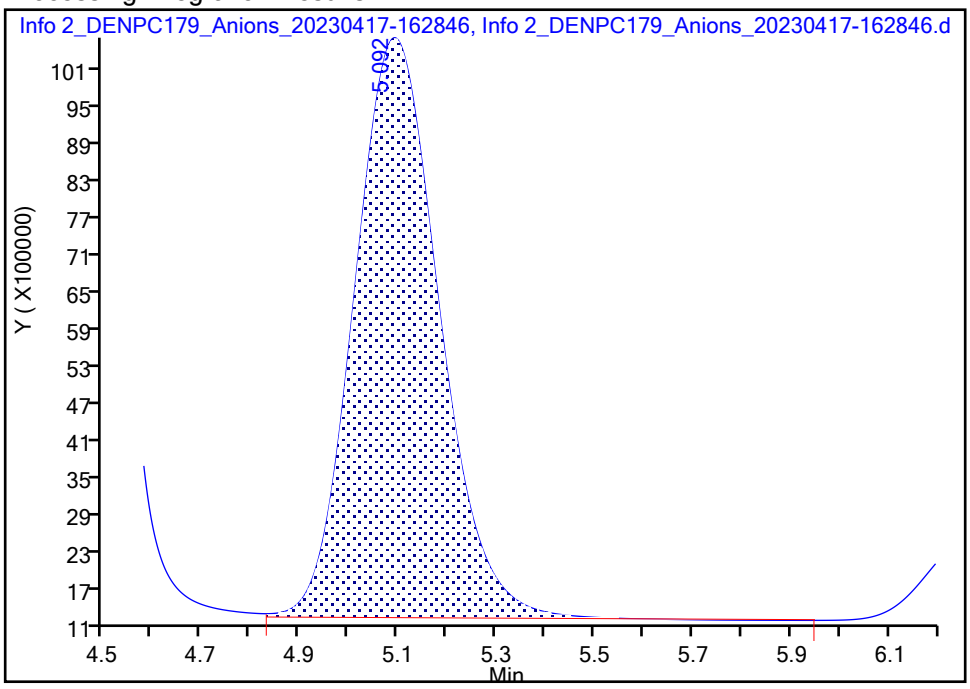
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

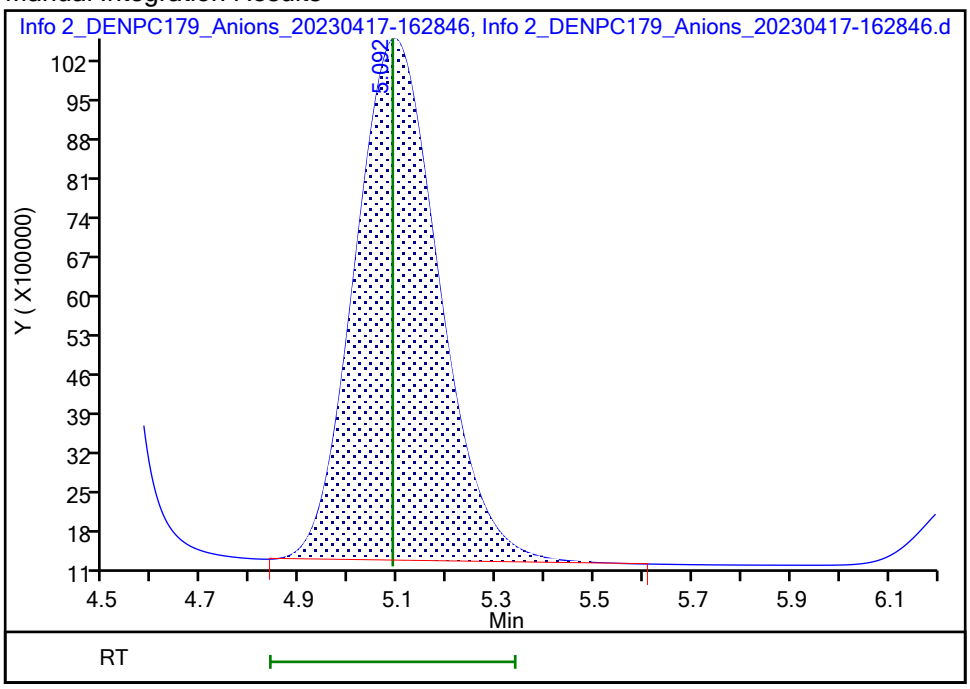
Processing Integration Results

RT: 5.09
Area: 111964988
Amount: 2.441693
Amount Units: ug/ml



Manual Integration Results

RT: 5.09
Area: 110879515
Amount: 2.418288
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:45

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 16:28:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-018
Misc. Info.: 280-0120473-018
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:52:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.042	6.075	-0.033	105239		NC	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.405	9.402	0.003	5901360		-0.2402	
7 Sulfate	10.647	10.633	0.014	439227		NC	M

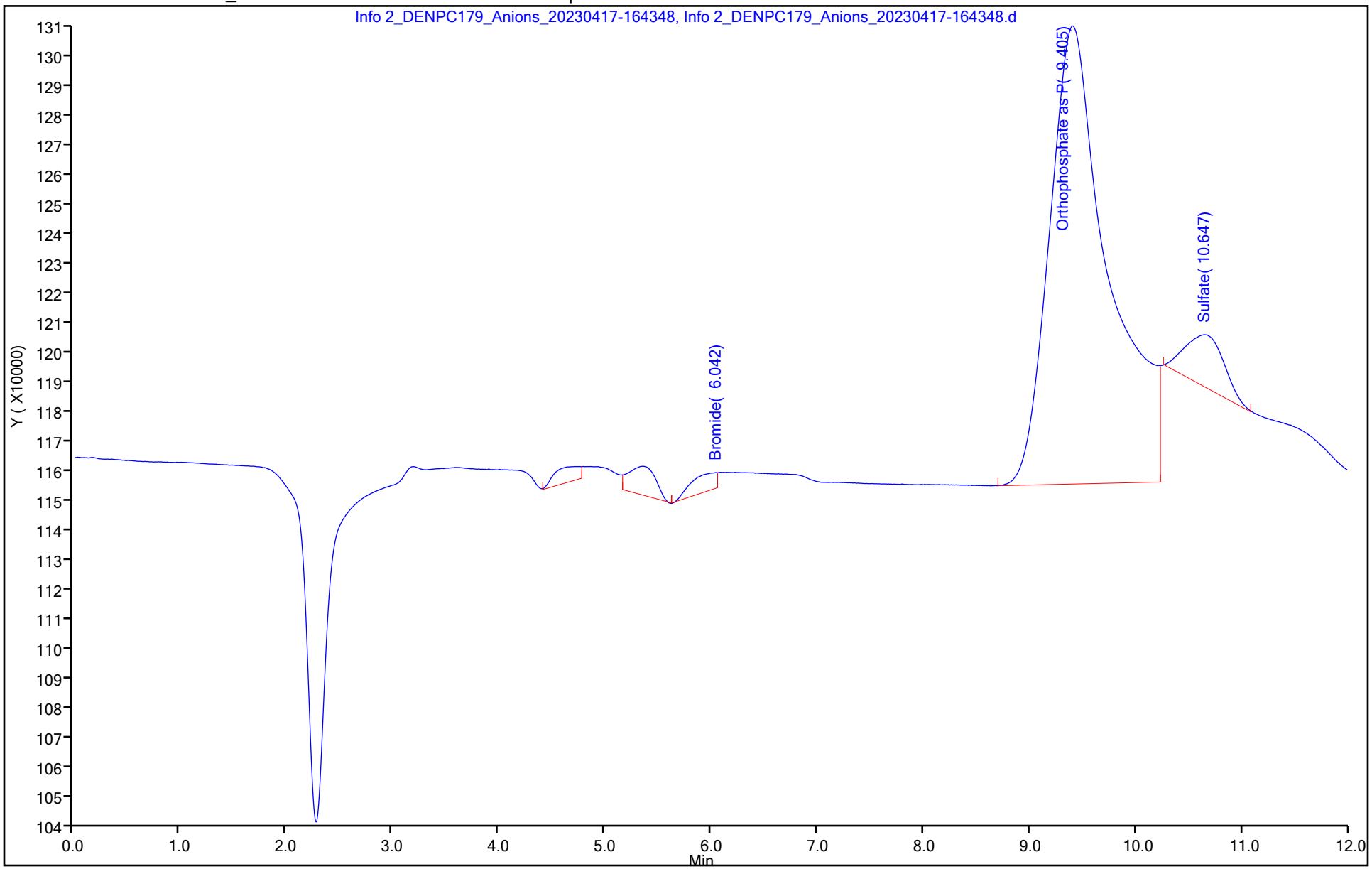
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:47 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164348.d				
Injection Date:	17-Apr-2023 16:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	18
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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IC Instrument Information

WL: 170473 **Inst ID:** IC10 **Analysis Date:** 4/17/23 **Analyst:** MEC

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	175122	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175123	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175121	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174751	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174752	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174755	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174764	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174847	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174869	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174554	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174585	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174728	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174807	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
40437065	43230492	44844044	46492699	45903612		-1277342			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			46378611		
M8087413	M21615246	M44844044	M116231748	M229518060					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
5 Nitrate as N				Signal: 1					
42172205	39818610	42066844	45095286	46132733		-1634037			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			45867680		
M8434441	M19909305	M42066844	M112738215	M230663663					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
6 Orthophosphate as P				Signal: 1			R1		
69769055	47259032	34760084	26027078	22431185		10983593			*0.990
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			21157507		
M13953811	M23629516	M34760084	M65067694	M112155923					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

Report Date: 14-Apr-2023 13:55:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 13:55:16	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 17.1	10.0	117.1	
2 Chloride	80.0	85.7	7.1	10.0	107.1	
4 Bromide	2.00	2.01	0.6	10.0	100.6	
7 Sulfate	80.0	86.9	8.7	10.0	108.7	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 13:56:07	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.12	6.0	10.0	106.0	
5 Nitrate as N	2.00	2.15	7.4	10.0	107.4	
6 Orthophosphate as	2.00	2.84	* 41.9	10.0	141.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 12:13:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-001
Misc. Info.: 280-0120473-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:34 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 17-Apr-2023 12:30:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			2.50	ND	
2 Chloride	4.392	4.392	0.000	965656060	50.0	50.5	M
3 Nitrite as N	5.092	5.092	0.000	111266176	NC	NC	M
4 Bromide	6.270	6.270	0.000	17057754	2.50	2.36	
5 Nitrate as N	7.045	7.045	0.000	108180494	NC	NC	M
6 Orthophosphate as P	9.338	9.338	0.000	67394238	NC	NC	
7 Sulfate	10.613	10.613	0.000	691020270	50.0	50.2	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

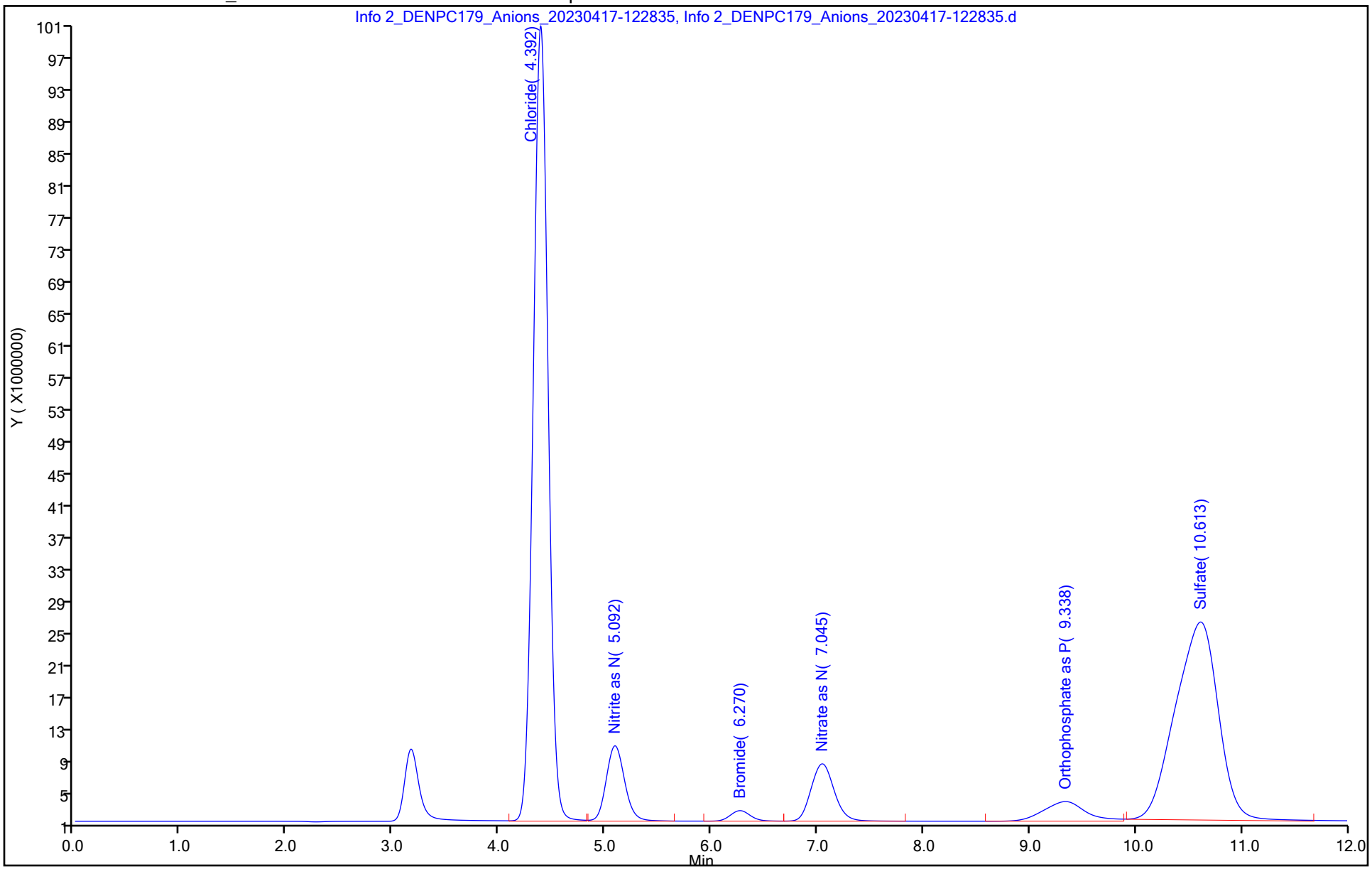
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122835.d				
Injection Date:	17-Apr-2023 12:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122

Injection Date: 17-Apr-2023 12:13:00 Instrument ID: WC_IonChrom10

Lims ID: ccv

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

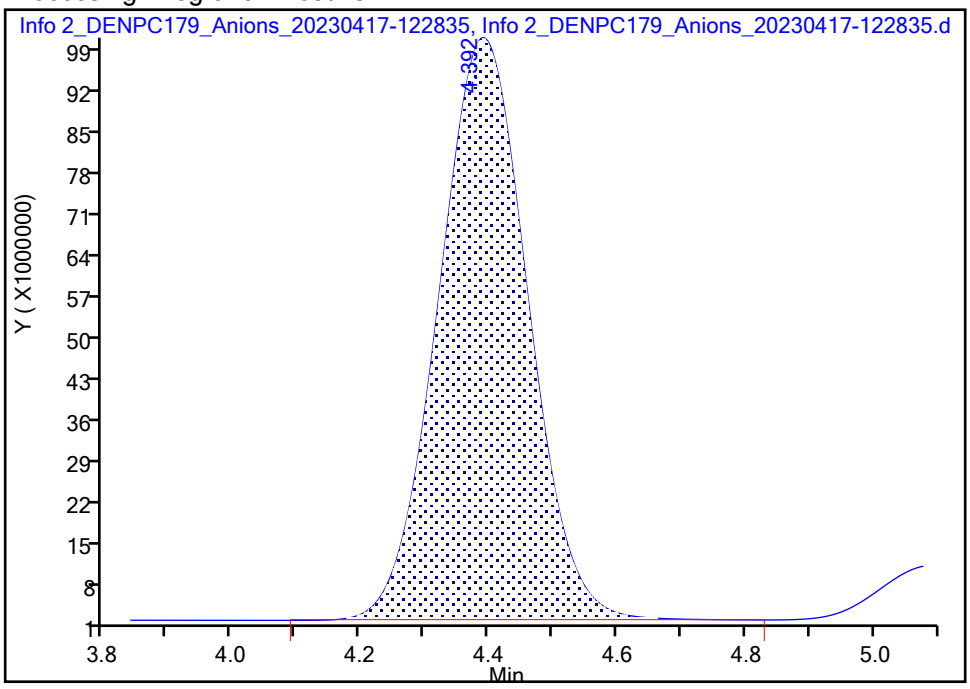
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

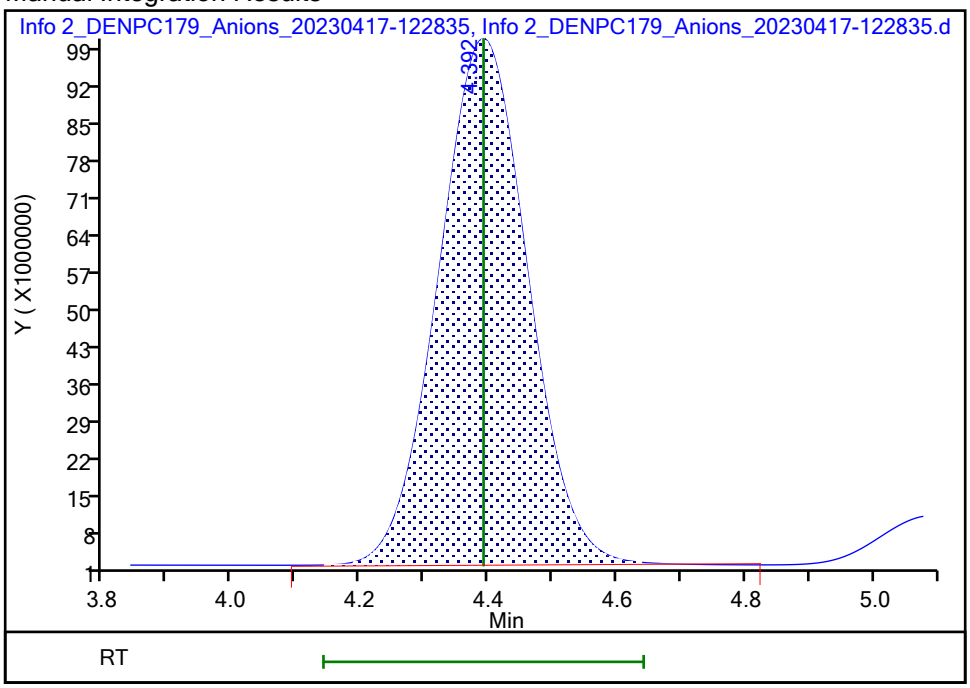
Processing Integration Results

RT: 4.39
Area: 966443190
Amount: 50.498856
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 965656060
Amount: 50.457838
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:15

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

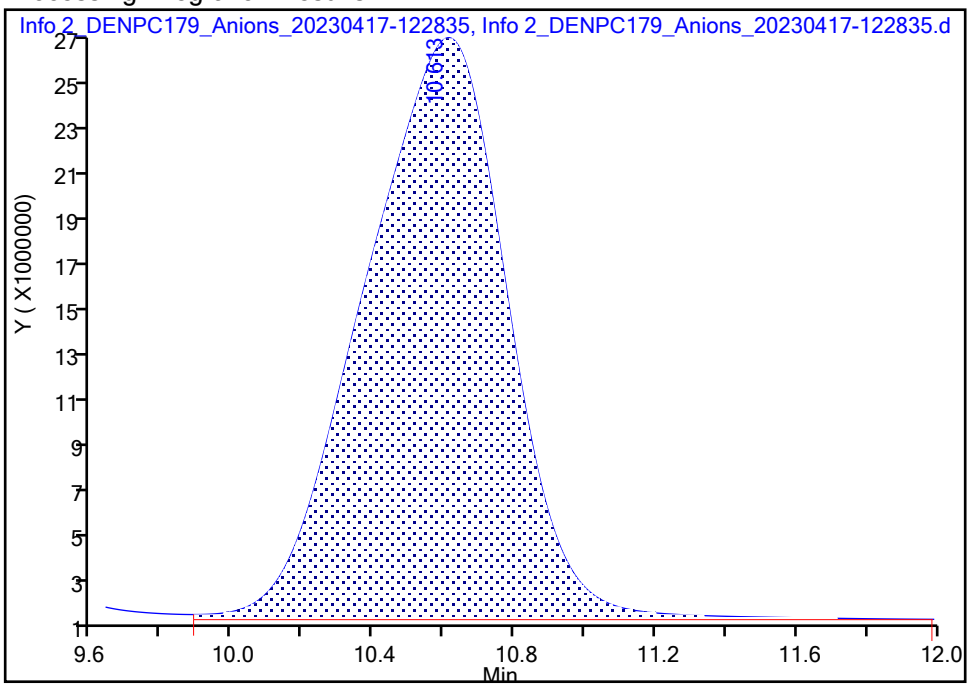
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122
Injection Date: 17-Apr-2023 12:13:00 Instrument ID: WC_IonChrom10
Lims ID: ccv
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

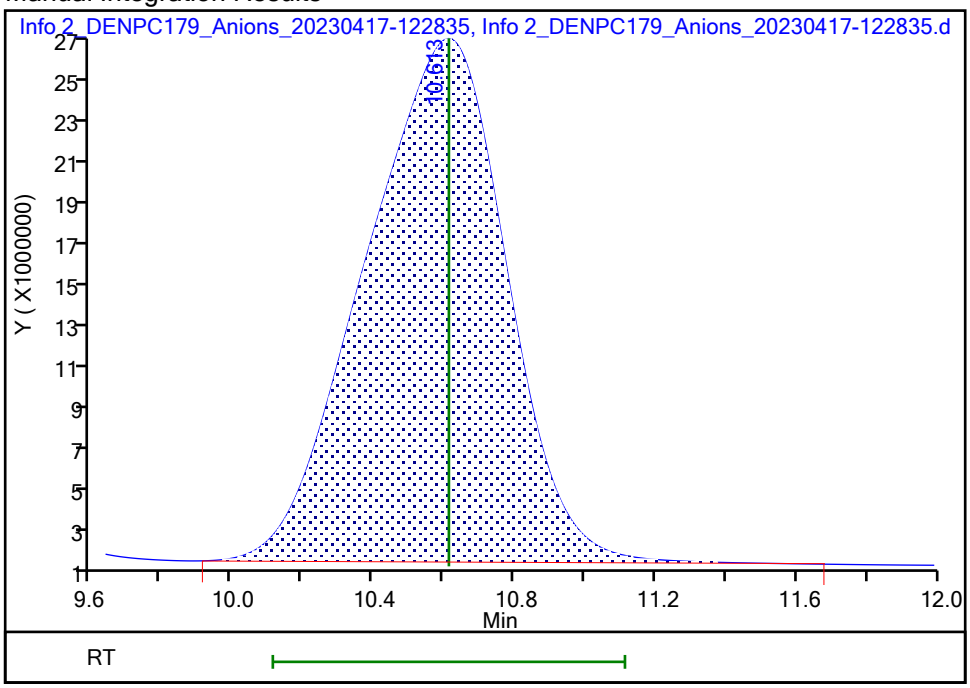
Processing Integration Results

RT: 10.61
Area: 708653349
Amount: 51.433019
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 691020270
Amount: 50.155551
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:36
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 12:28:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-002
Misc. Info.: 280-0120473-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:35 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:45:51

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.392				ND	
3 Nitrite as N		5.092				ND	
4 Bromide	6.092	6.092	0.000	135061		-0.1208	
5 Nitrate as N		7.045				ND	
6 Orthophosphate as P	9.407	9.407	0.000	6308047		NC	
7 Sulfate	10.633	10.633	0.000	492097		0.1287	M

QC Flag Legend

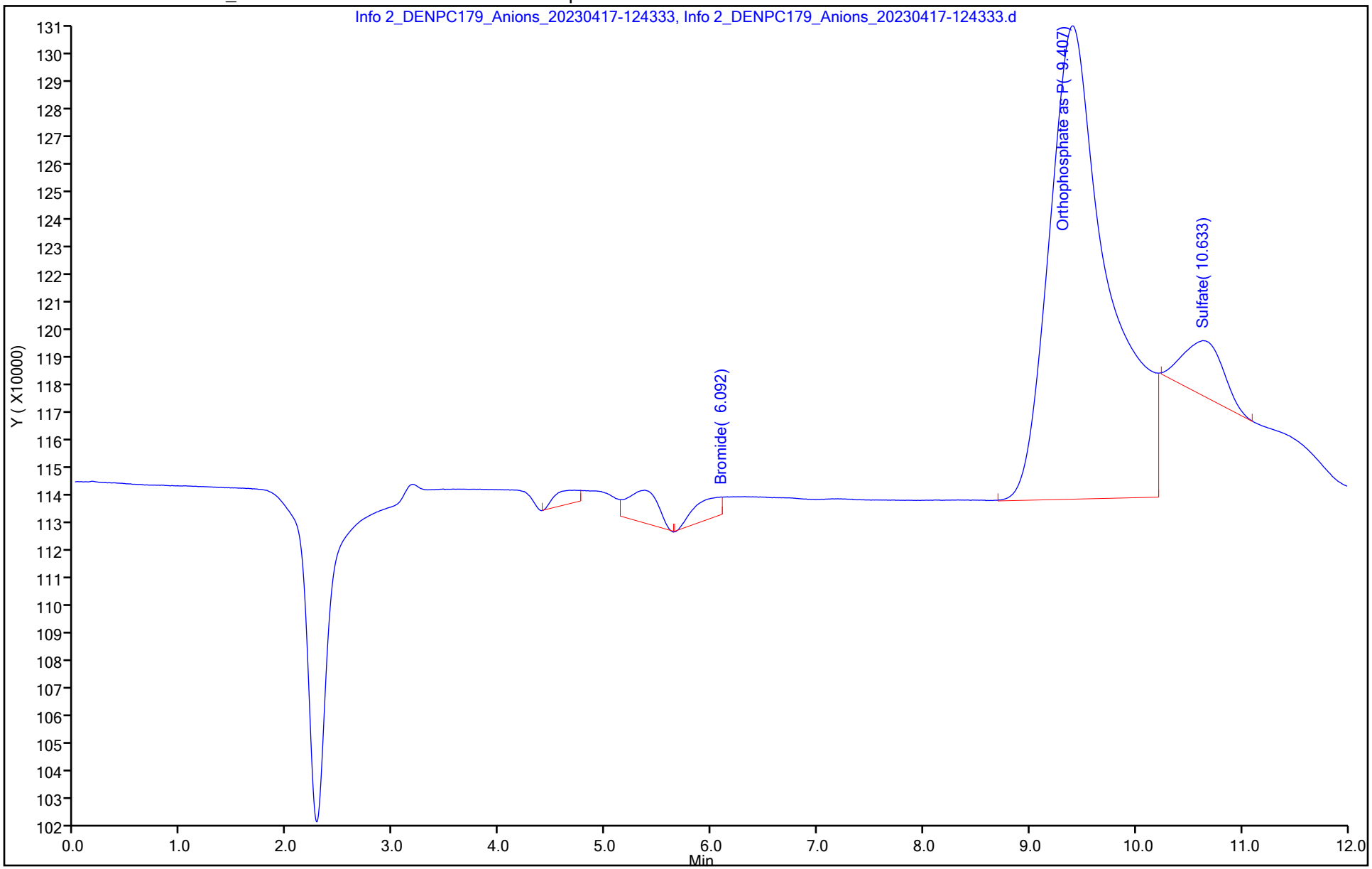
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124333.d

Injection Date:	17-Apr-2023 12:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124

Injection Date: 17-Apr-2023 12:28:00 Instrument ID: WC_IonChrom10

Lims ID: ccb

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

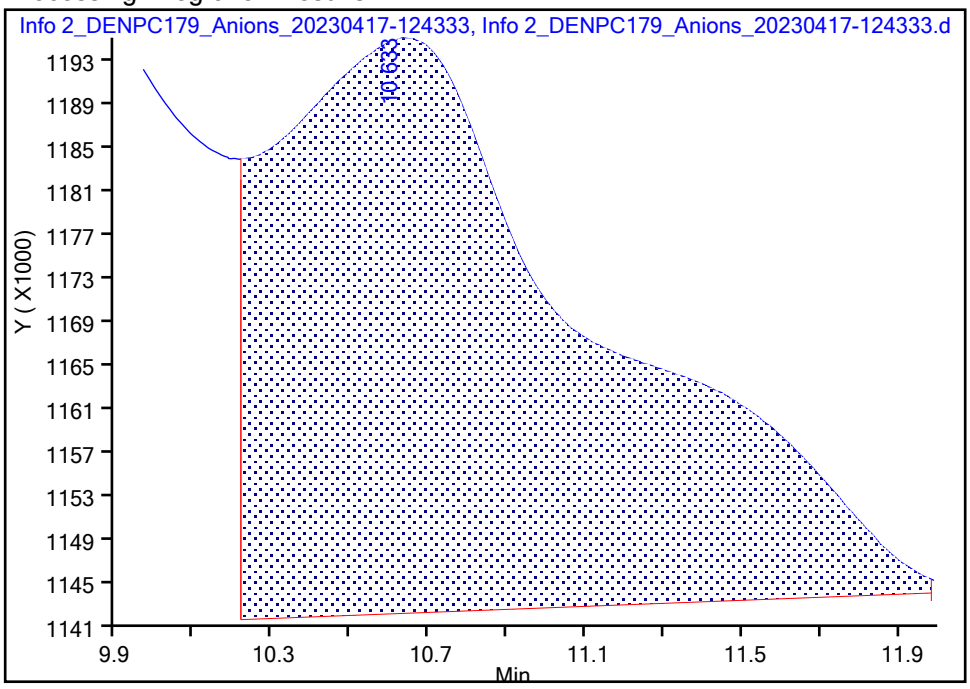
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

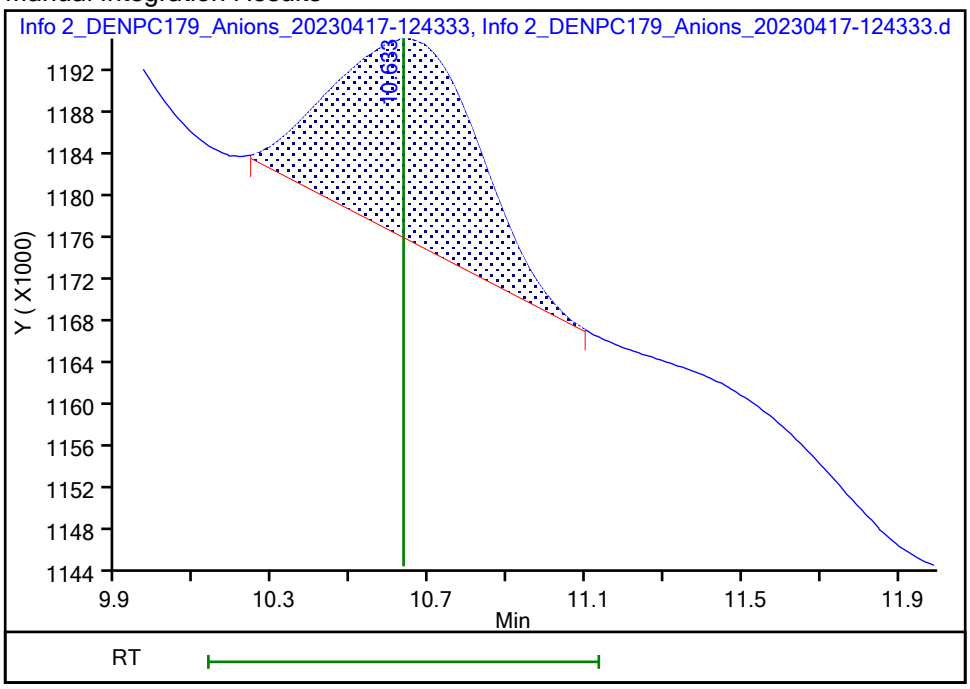
Processing Integration Results

RT: 10.63
Area: 3065604
Amount: 0.315115
Amount Units: ug/ml



Manual Integration Results

RT: 10.63
Area: 492097
Amount: 0.128671
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:49

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 17-Apr-2023 12:43:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-003
Misc. Info.: 280-0120473-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:36 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:46:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			0.2500	ND	
2 Chloride	4.373	4.373	0.000	43365025	2.50	2.40	M
3 Nitrite as N	5.100	5.100	0.000	9679058	NC	NC	M
4 Bromide	6.292	6.292	0.000	1517948	0.2500	0.0820	M
5 Nitrate as N	7.098	7.098	0.000	9034958	NC	NC	M
6 Orthophosphate as P	9.373	9.373	0.000	16271405	NC	NC	
7 Sulfate	10.637	10.637	0.000	31642899	2.50	2.39	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

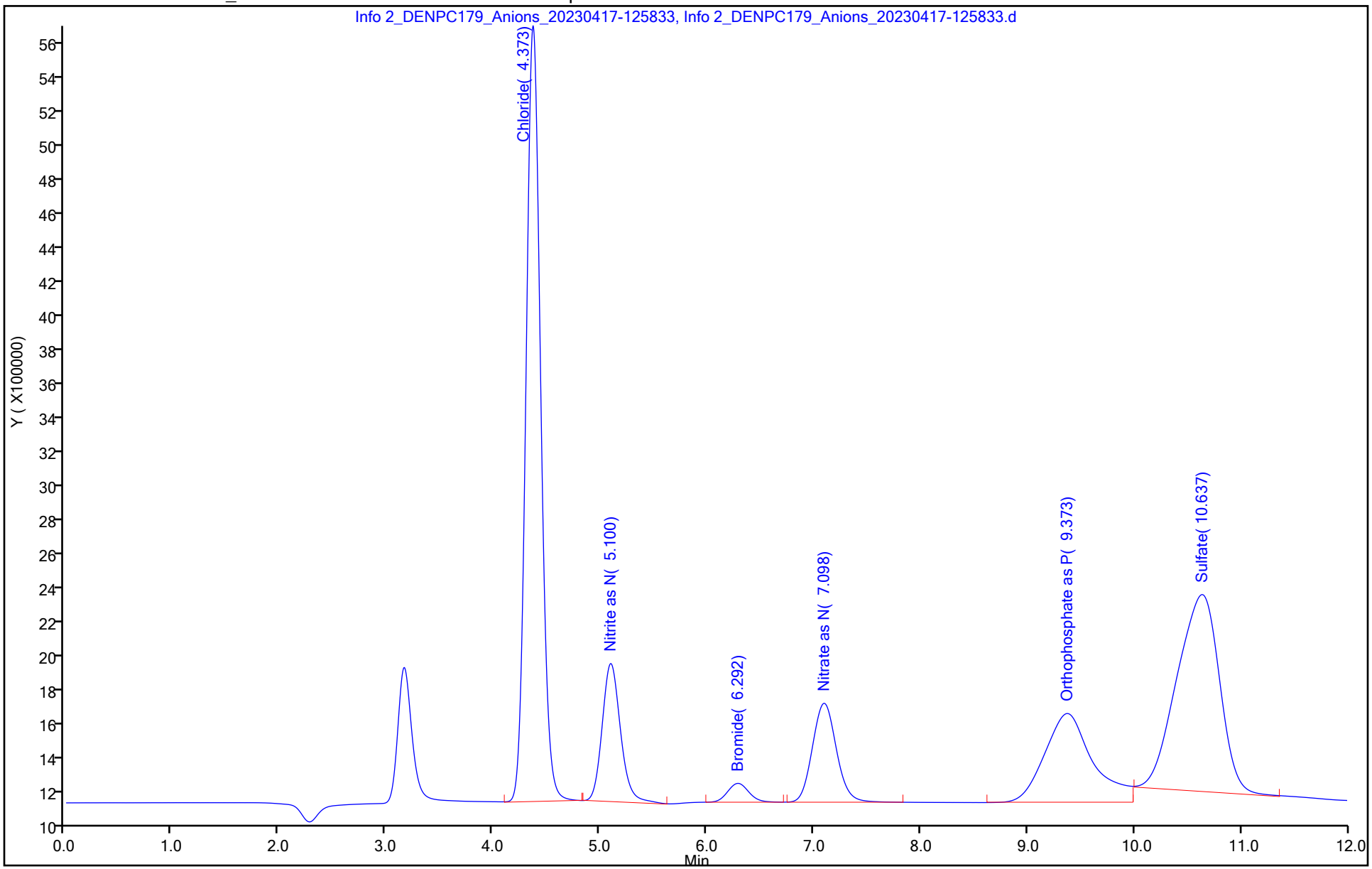
Reagents:

IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL
IC Cal low_00703 Amount Added: 0.10 Units: mL

Report Date: 18-Apr-2023 11:36:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125833.d				
Injection Date:	17-Apr-2023 12:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125

Injection Date: 17-Apr-2023 12:43:00 Instrument ID: WC_IonChrom10

Lims ID: mrl

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

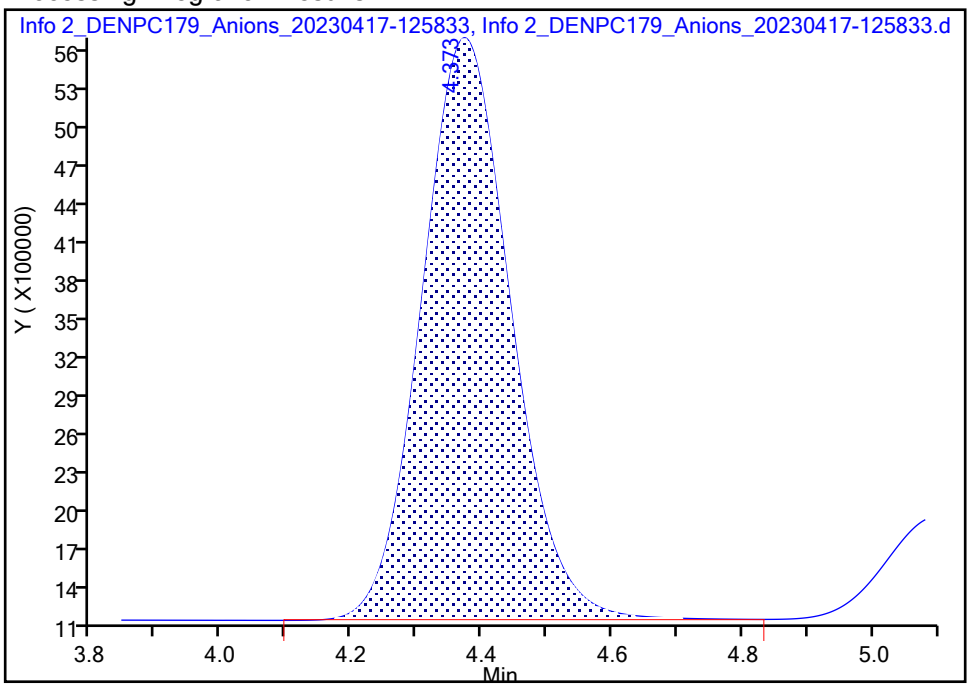
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

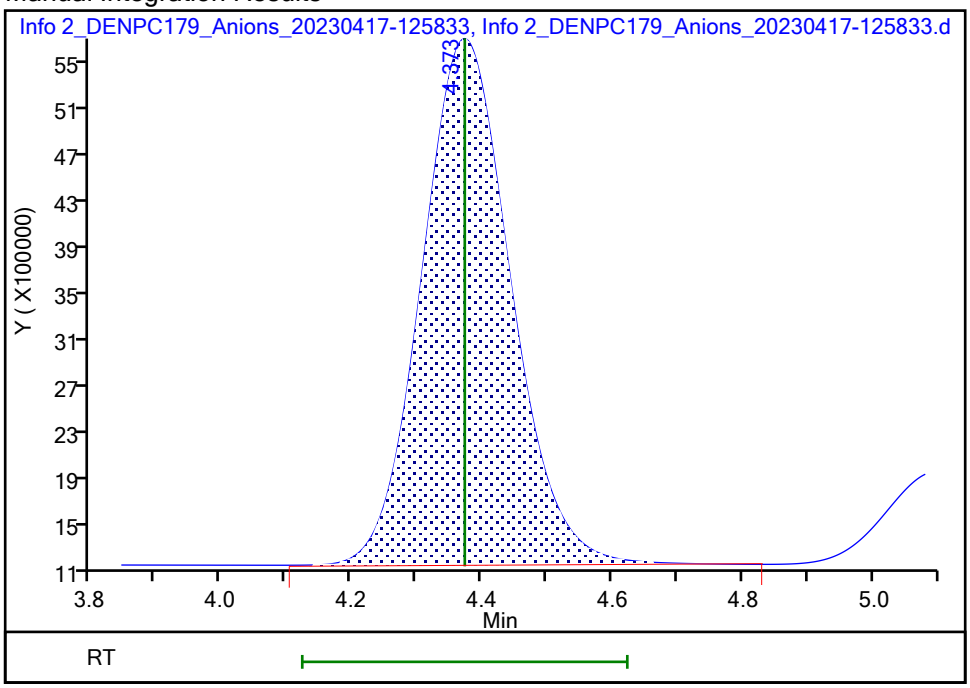
Processing Integration Results

RT: 4.37
Area: 43446307
Amount: 2.401156
Amount Units: ug/ml



Manual Integration Results

RT: 4.37
Area: 43365025
Amount: 2.396920
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:59

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

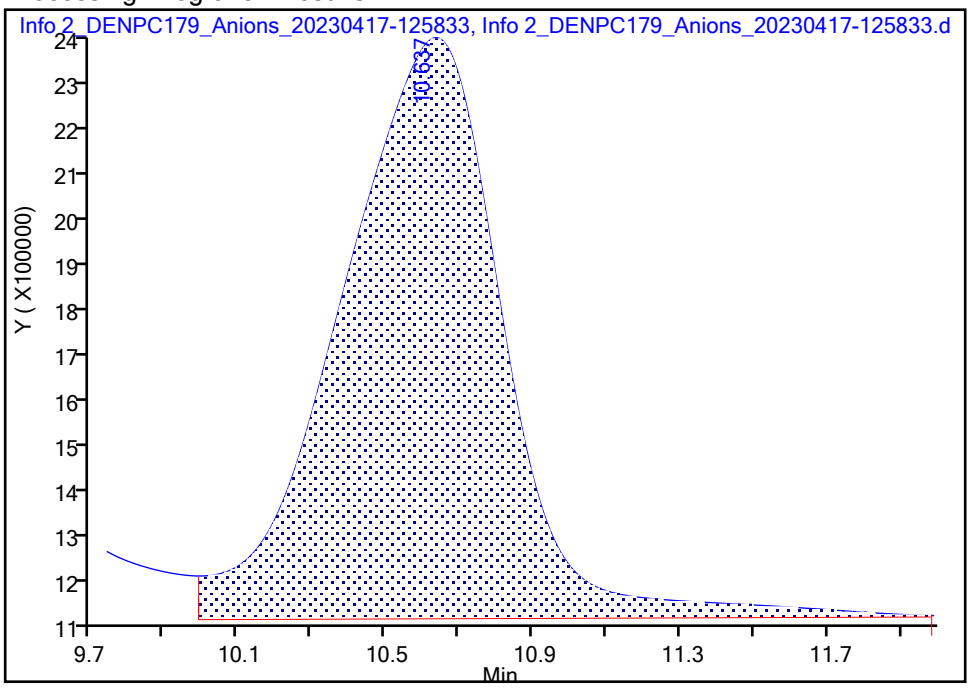
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125
Injection Date: 17-Apr-2023 12:43:00 Instrument ID: WC_IonChrom10
Lims ID: mrl
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

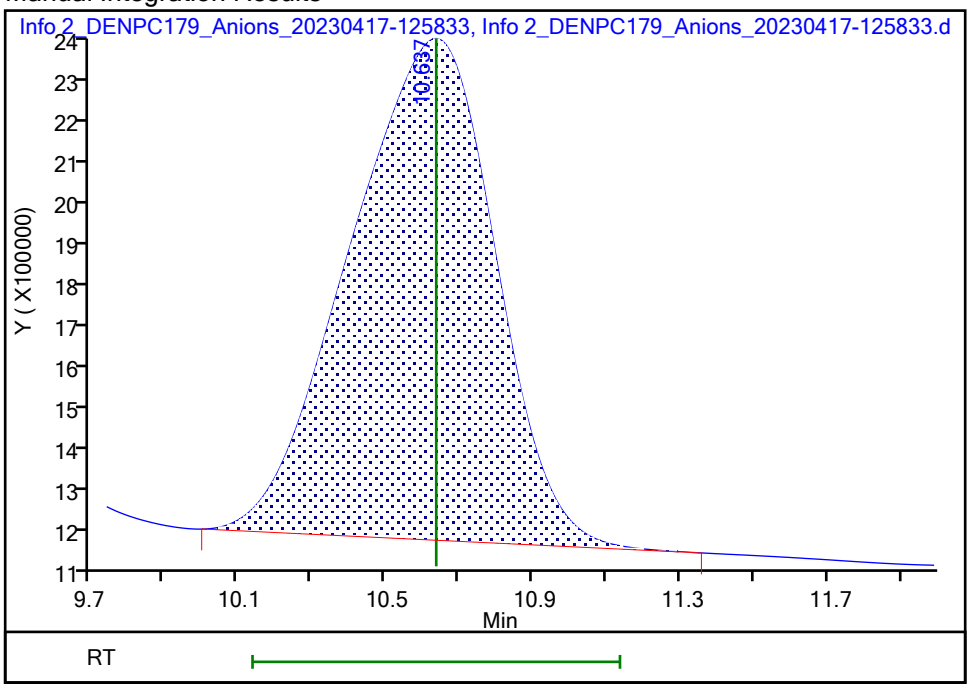
Processing Integration Results

RT: 10.64
Area: 37513872
Amount: 2.810798
Amount Units: ug/ml



Manual Integration Results

RT: 10.64
Area: 31642899
Amount: 2.385462
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:12
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 17-Apr-2023 12:58:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-004
Misc. Info.: 280-0120473-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:37 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 17-Apr-2023 13:33:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			2.50	ND	
2 Chloride	4.388	4.388	0.000	964877890	50.0	50.4	M
3 Nitrite as N	5.088	5.088	0.000	111656489	NC	NC	M
4 Bromide	6.268	6.268	0.000	17046566	2.50	2.36	
5 Nitrate as N	7.042	7.042	0.000	108151002	NC	NC	M
6 Orthophosphate as P	9.335	9.335	0.000	69309307	NC	NC	
7 Sulfate	10.605	10.605	0.000	686690141	50.0	49.8	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

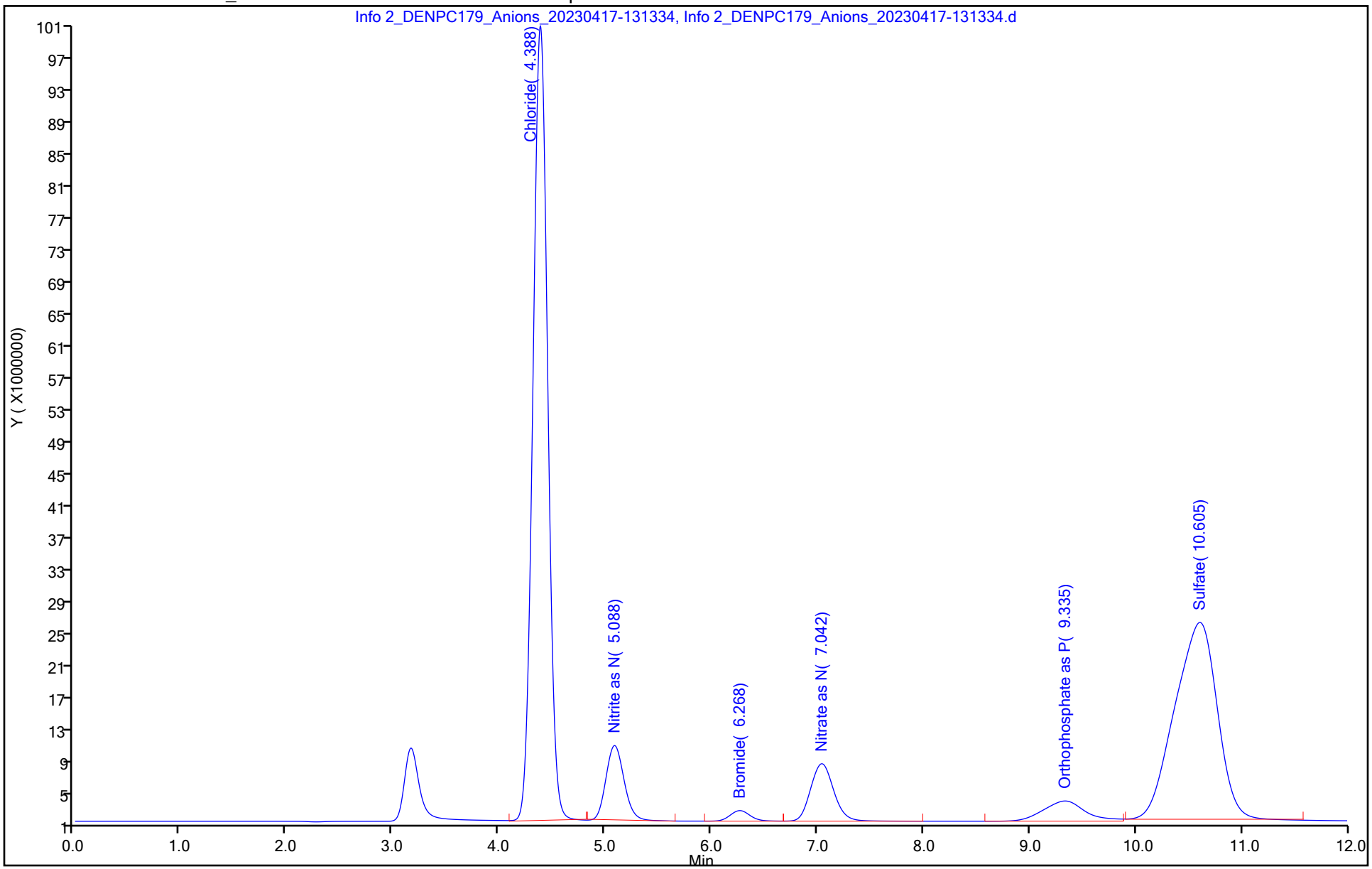
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:37 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131334.d

Injection Date:	17-Apr-2023 12:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131

Injection Date: 17-Apr-2023 12:58:00 Instrument ID: WC_IonChrom10

Lims ID: lcs

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

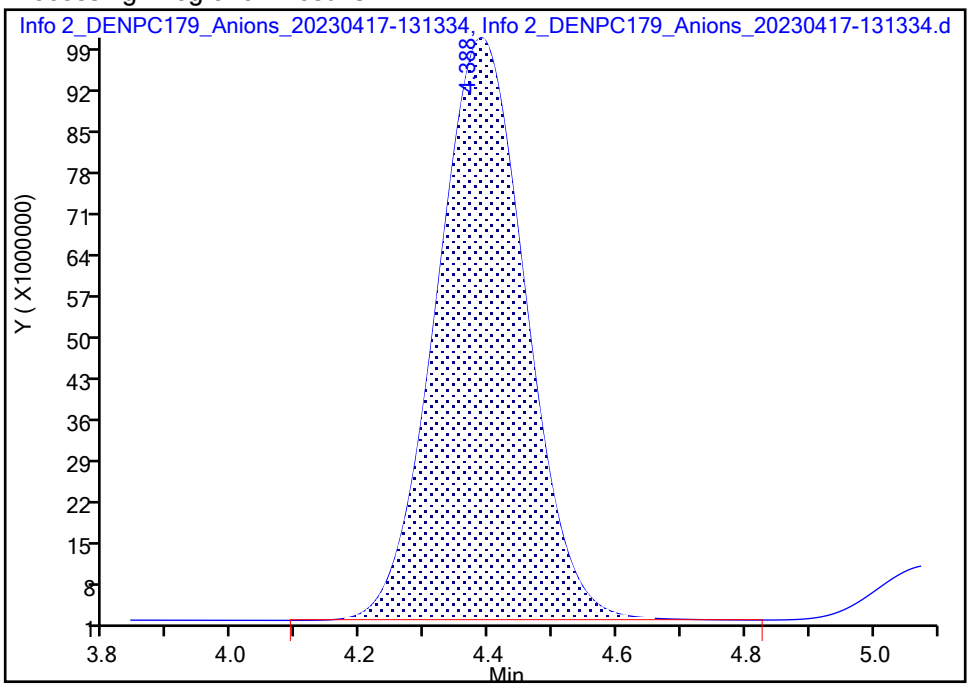
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

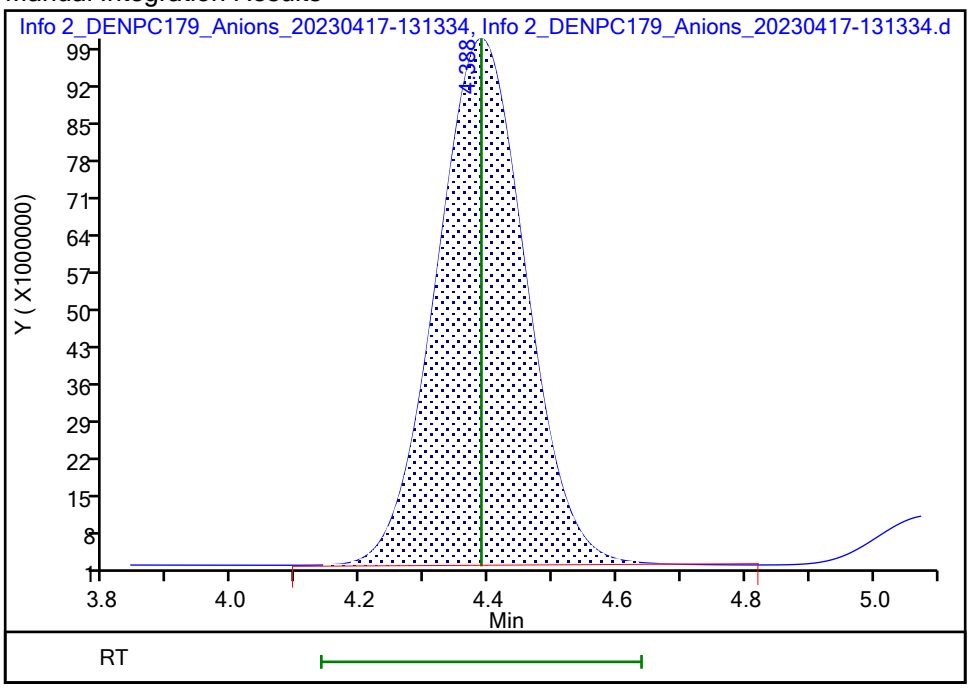
Processing Integration Results

RT: 4.39
Area: 965518345
Amount: 50.450662
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 964877890
Amount: 50.417287
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:25

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131

Injection Date: 17-Apr-2023 12:58:00 Instrument ID: WC_IonChrom10

Lims ID: lcs

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

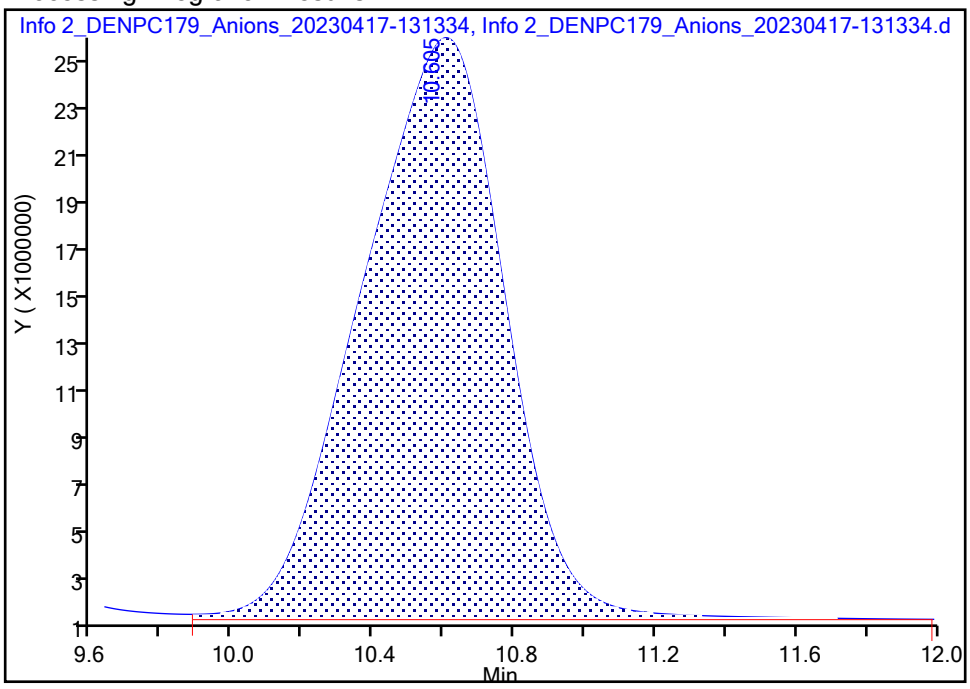
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

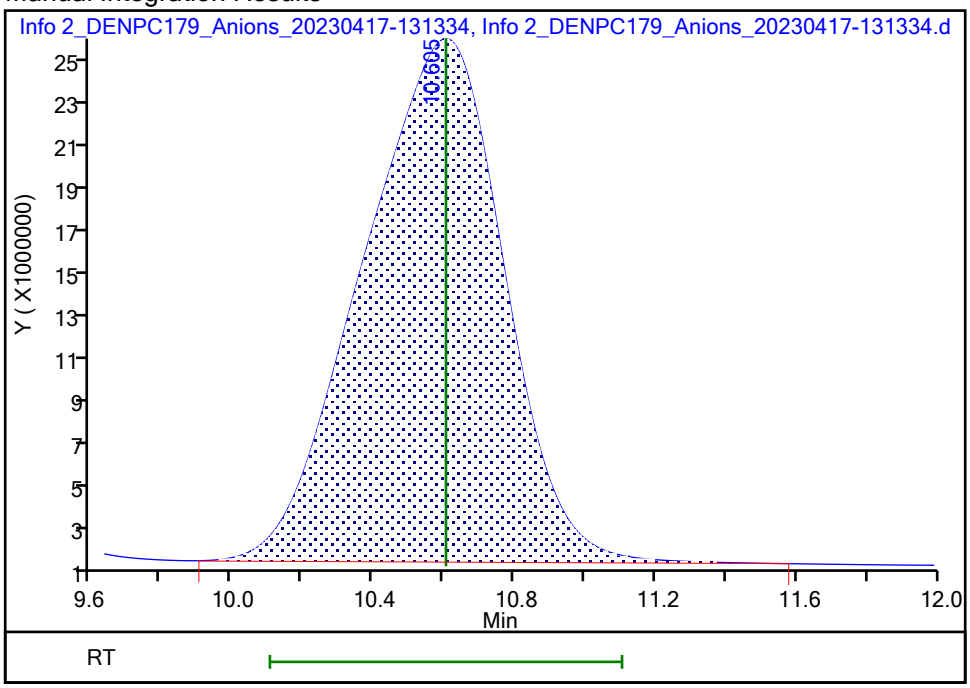
Processing Integration Results

RT: 10.61
Area: 705744294
Amount: 51.222266
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 686690141
Amount: 49.841845
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:35

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 17-Apr-2023 13:13:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-005
Misc. Info.: 280-0120473-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:37 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:46:58

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			2.50	ND	
2 Chloride	4.388	4.388	0.000	964113552	50.0	50.4	M
3 Nitrite as N	5.088	5.088	0.000	110818321	NC	NC	M
4 Bromide	6.272	6.272	0.000	17020706	2.50	2.36	
5 Nitrate as N	7.043	7.043	0.000	107794212	NC	NC	M
6 Orthophosphate as P	9.337	9.337	0.000	69452215	NC	NC	
7 Sulfate	10.610	10.610	0.000	687195393	50.0	49.9	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

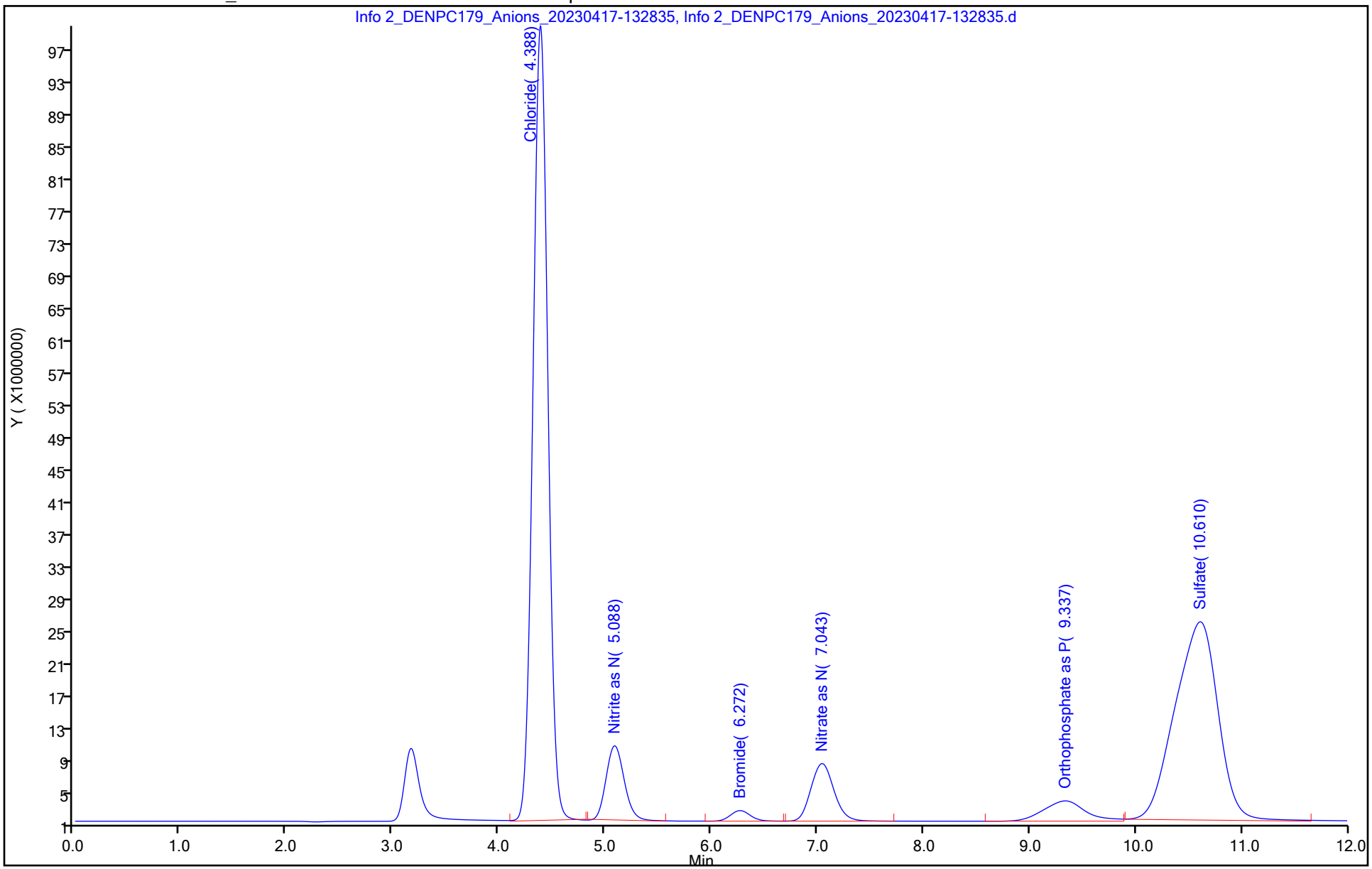
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132835.d

Injection Date:	17-Apr-2023 13:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132

Injection Date: 17-Apr-2023 13:13:00 Instrument ID: WC_IonChrom10

Lims ID: lcsd

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

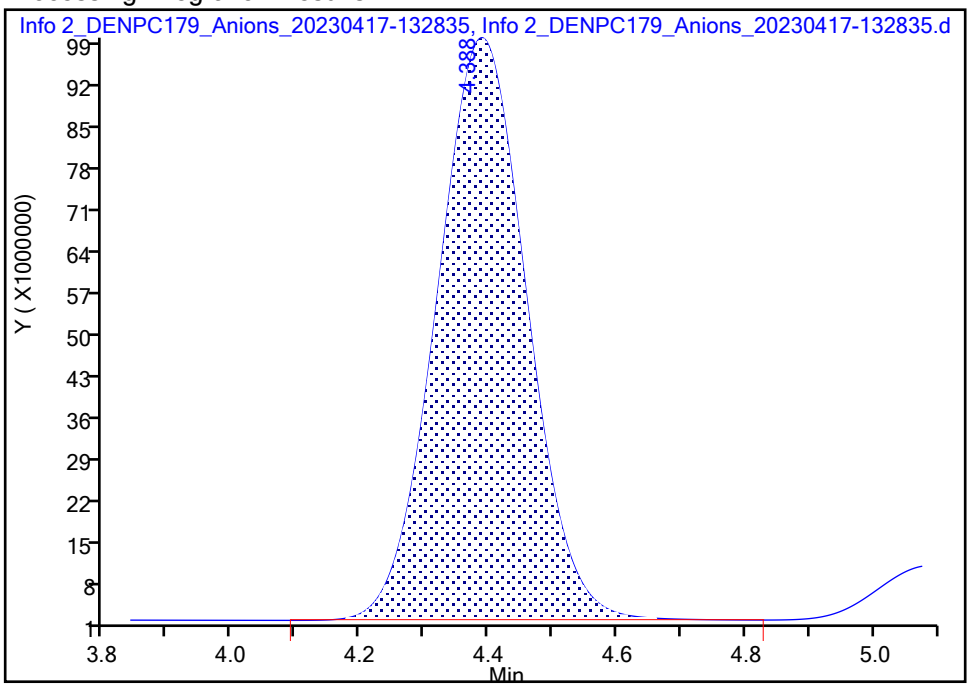
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

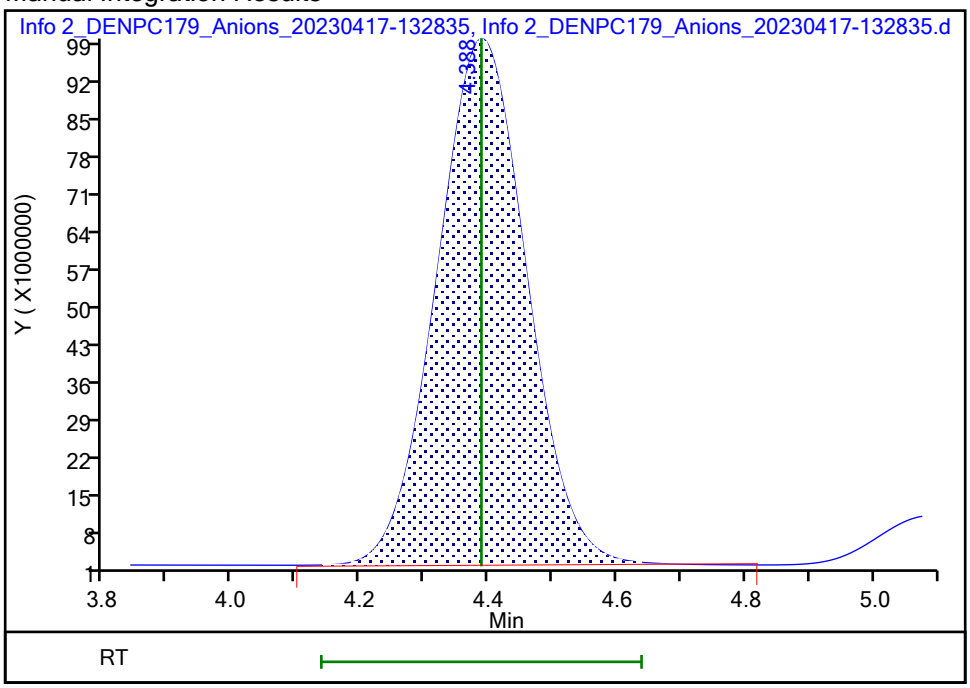
Processing Integration Results

RT: 4.39
Area: 964653754
Amount: 50.405607
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 964113552
Amount: 50.377457
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:47

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132

Injection Date: 17-Apr-2023 13:13:00 Instrument ID: WC_IonChrom10

Lims ID: lcsd

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

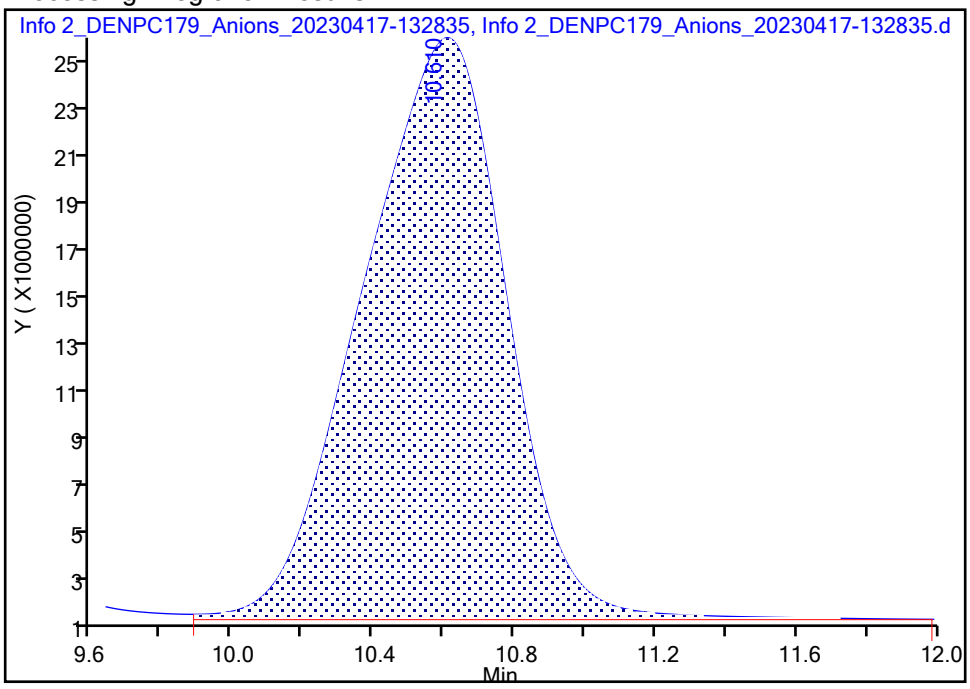
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

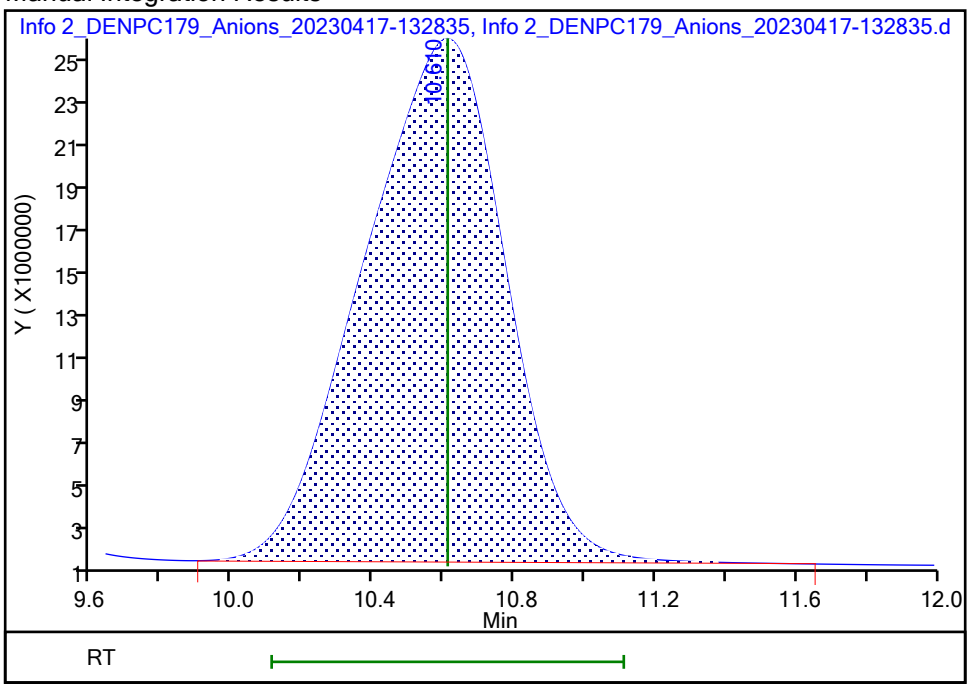
Processing Integration Results

RT: 10.61
Area: 704927694
Amount: 51.163106
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 687195393
Amount: 49.878449
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:56

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 17-Apr-2023 13:28:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-006
Misc. Info.: 280-0120473-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:47:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.075	6.075	0.000	130913		-0.1214	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.402	9.402	0.000	8300787		NC	
7 Sulfate	10.633	10.633	0.000	456822		0.1261	M

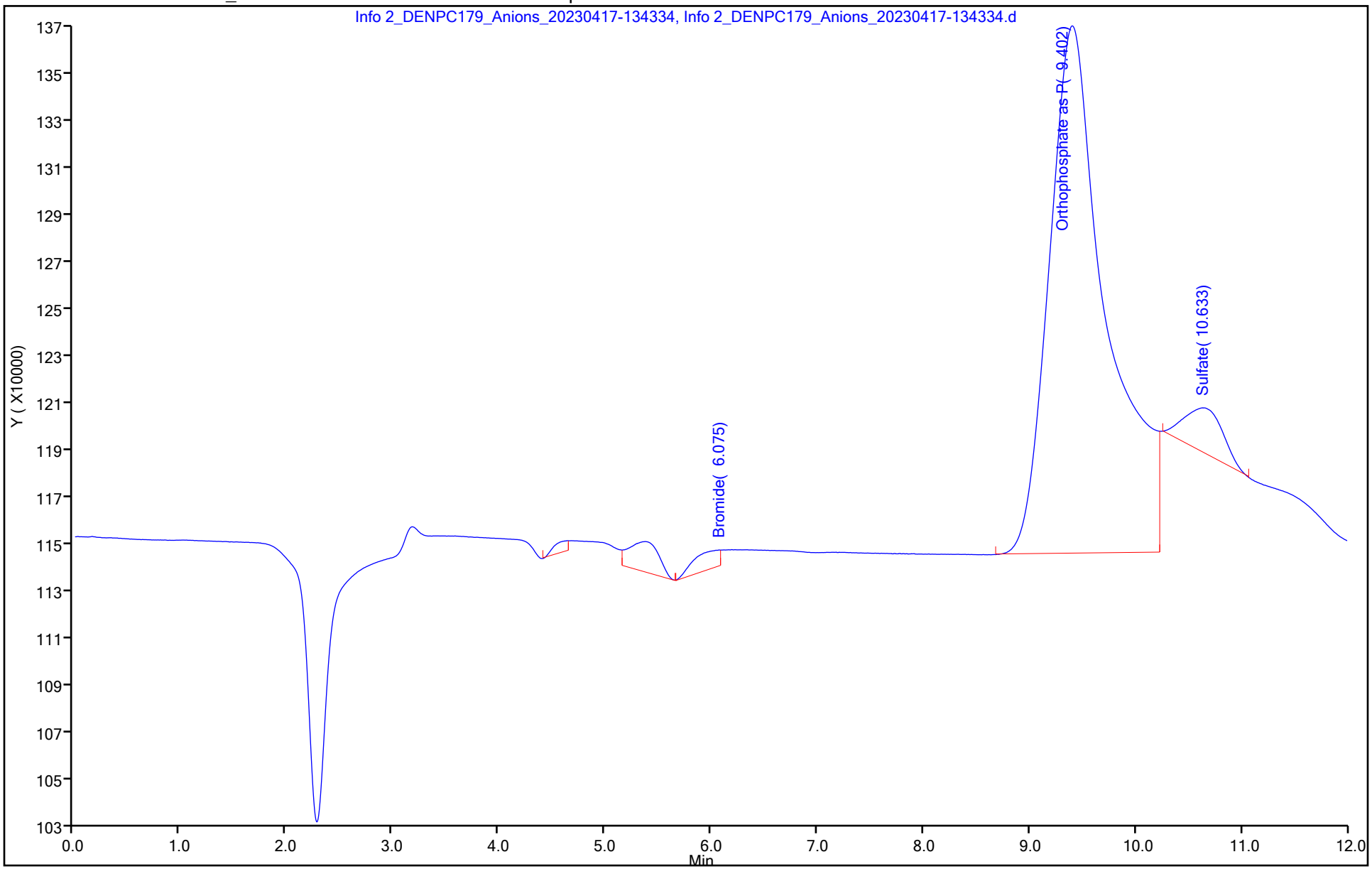
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134334.d				
Injection Date:	17-Apr-2023 13:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134

Injection Date: 17-Apr-2023 13:28:00 Instrument ID: WC_IonChrom10

Lims ID: mb

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

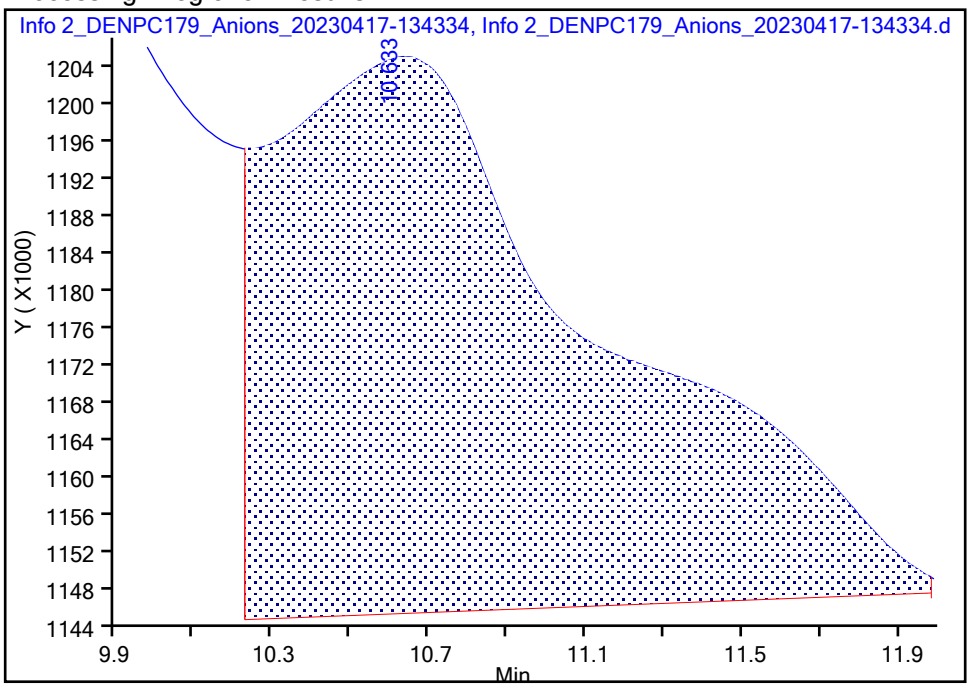
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

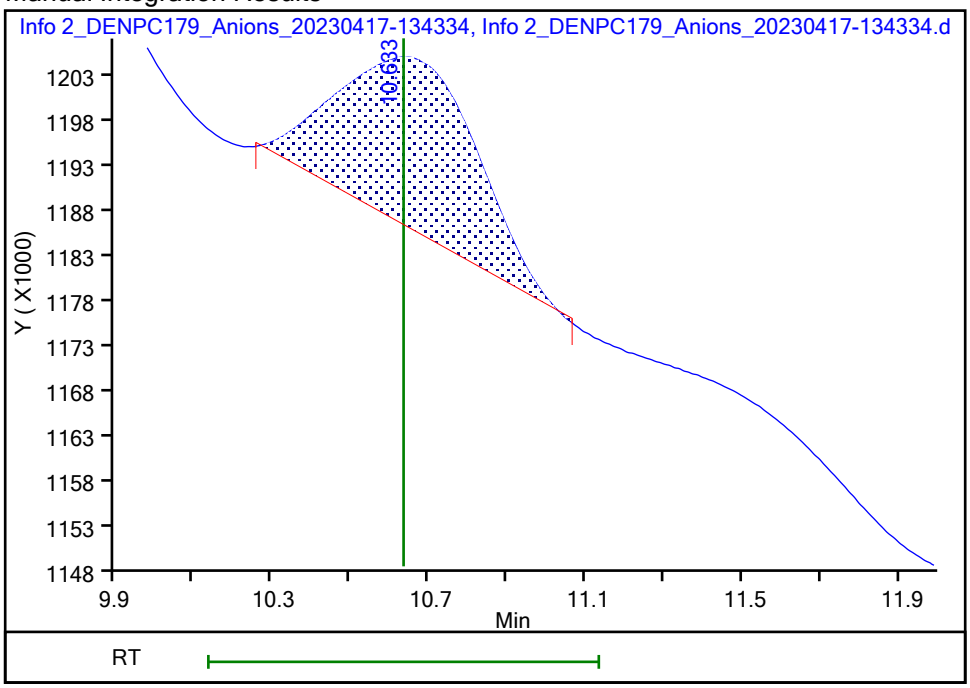
RT: 10.63
Area: 3480682
Amount: 0.345186
Amount Units: ug/ml

Processing Integration Results



RT: 10.63
Area: 456822
Amount: 0.126116
Amount Units: ug/ml

Manual Integration Results



Reviewer: LVW8, 18-Apr-2023 10:47:02

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-141
Lims ID: 280-175122-C-1
Client ID: RW-1-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 13:58:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 20.0000
Sample Info: 280-0120473-008
Misc. Info.: 280-0120473-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:48:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.377	4.388	-0.011	330091745	17.3	M
3 Nitrite as N	5.327	5.088	0.239	247987	NC	
4 Bromide	6.310	6.075	0.235	1068862	0.0161	
5 Nitrate as N	7.120	7.043	0.077	4307001	NC	M
7 Sulfate	10.640	10.633	0.007	77706055	5.72	M

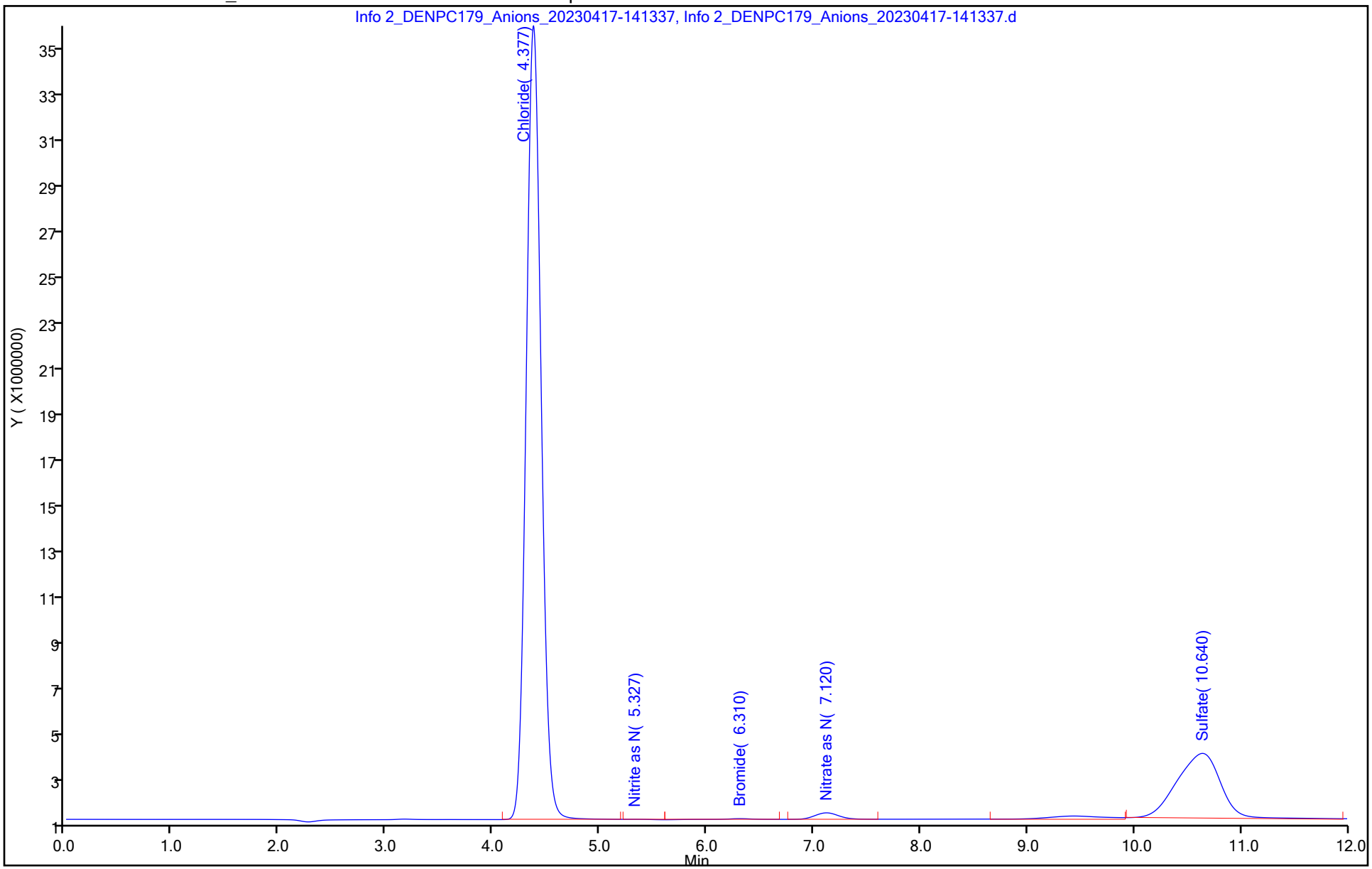
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:40 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-141337.d				
Injection Date:	17-Apr-2023 13:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175122-C-1	Lab Sample ID:	280-175122-1	Worklist Smp#:	8
Client ID:	RW-1-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

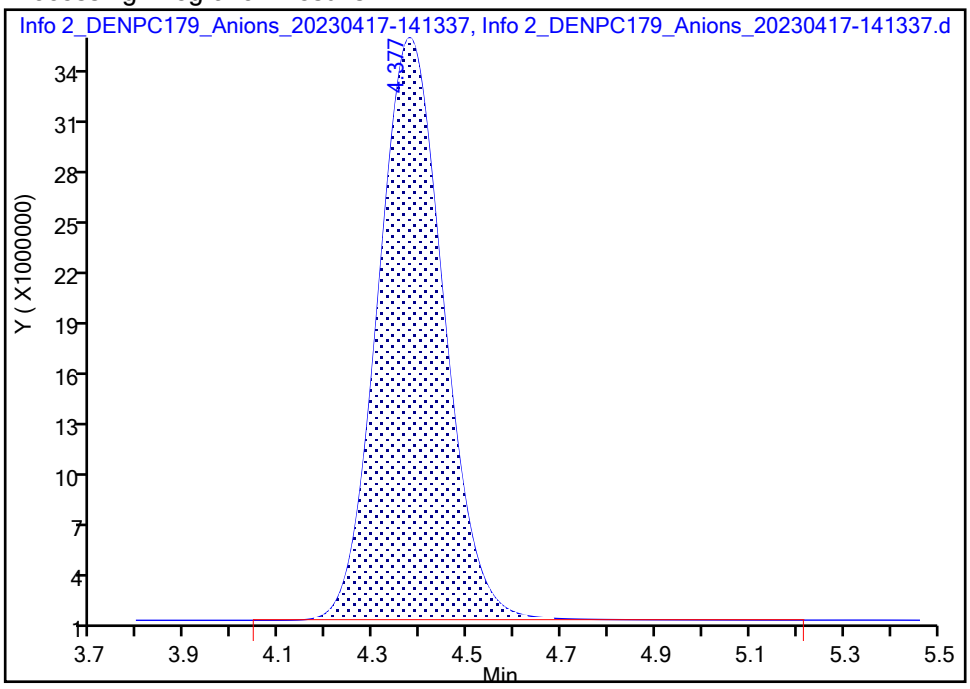
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-141				
Injection Date:	17-Apr-2023 13:58:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175122-C-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	20.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

2 Chloride, CAS: 16887-00-6

Signal: 1

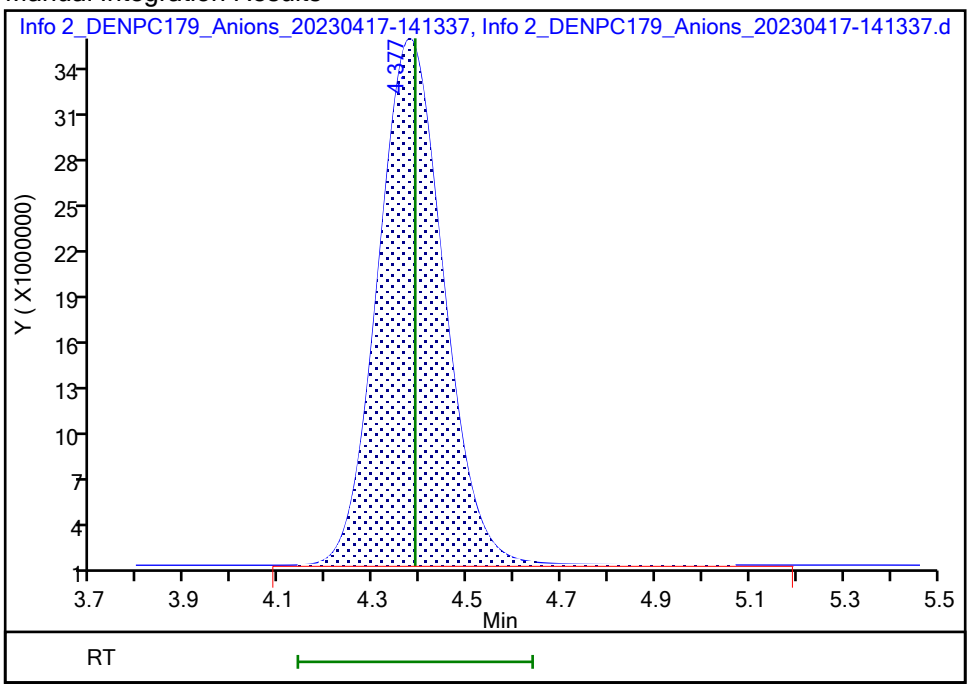
Processing Integration Results

RT: 4.38
Area: 330673429
Amount: 17.368665
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 330091745
Amount: 17.338353
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:47:52

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

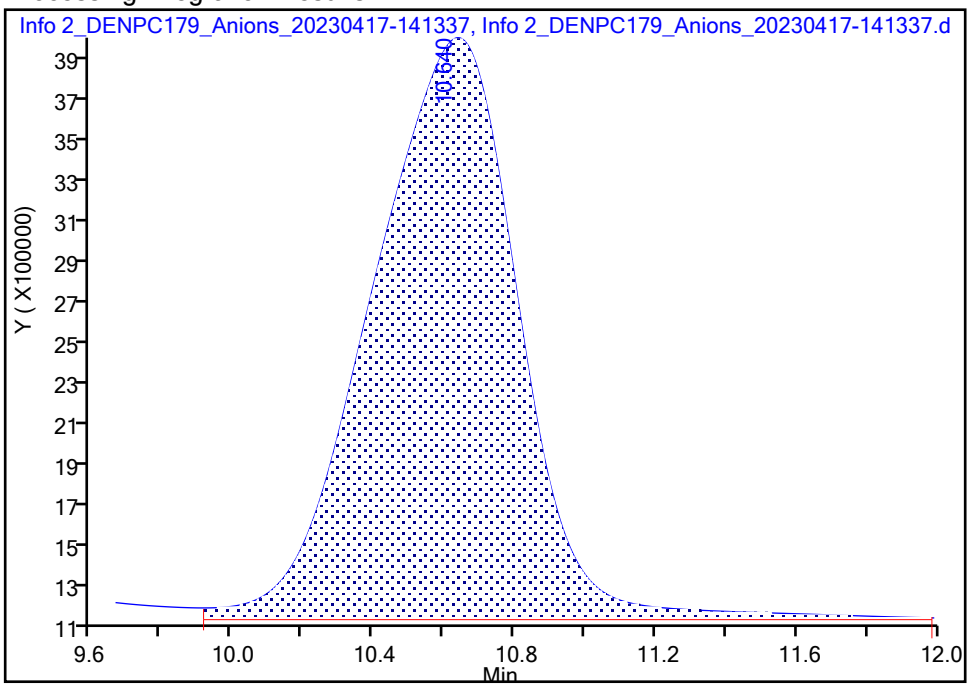
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-14				
Injection Date:	17-Apr-2023 13:58:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175122-C-1	Lab Sample ID:	280-175122-1		
Client ID:	RW-1-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	20.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

7 Sulfate, CAS: 14808-79-8

Signal: 1

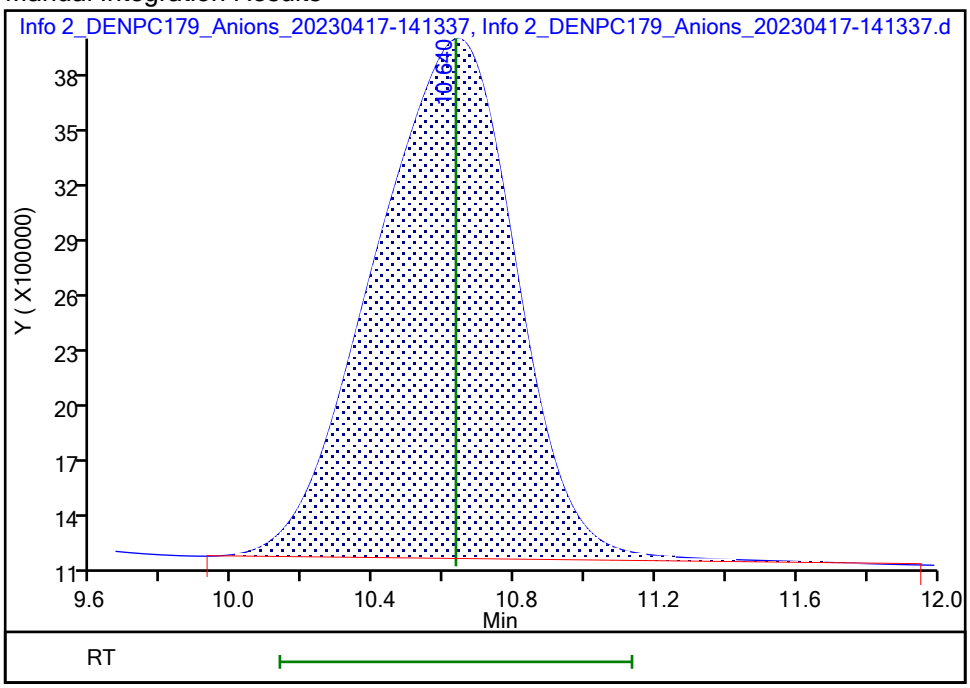
Processing Integration Results

RT: 10.64
Area: 81737221
Amount: 6.014659
Amount Units: ug/ml



Manual Integration Results

RT: 10.64
Area: 77706055
Amount: 5.722612
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:48:00

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-144
Lims ID: 280-175122-C-2
Client ID: MP-2-20230411
Sample Type: Client
Inject. Date: 17-Apr-2023 14:28:00 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 5.0 ul Dil. Factor: 10.0000
Sample Info: 280-0120473-010
Misc. Info.: 280-0120473-010
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:49:23

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.390	4.388	0.002	601506251	31.5	M
3 Nitrite as N		5.088			ND	
4 Bromide	5.983	6.075	-0.092	155933	-0.1177	
5 Nitrate as N	7.120	7.043	0.077	9792045	NC	M
7 Sulfate	10.647	10.633	0.014	157724011	11.5	M

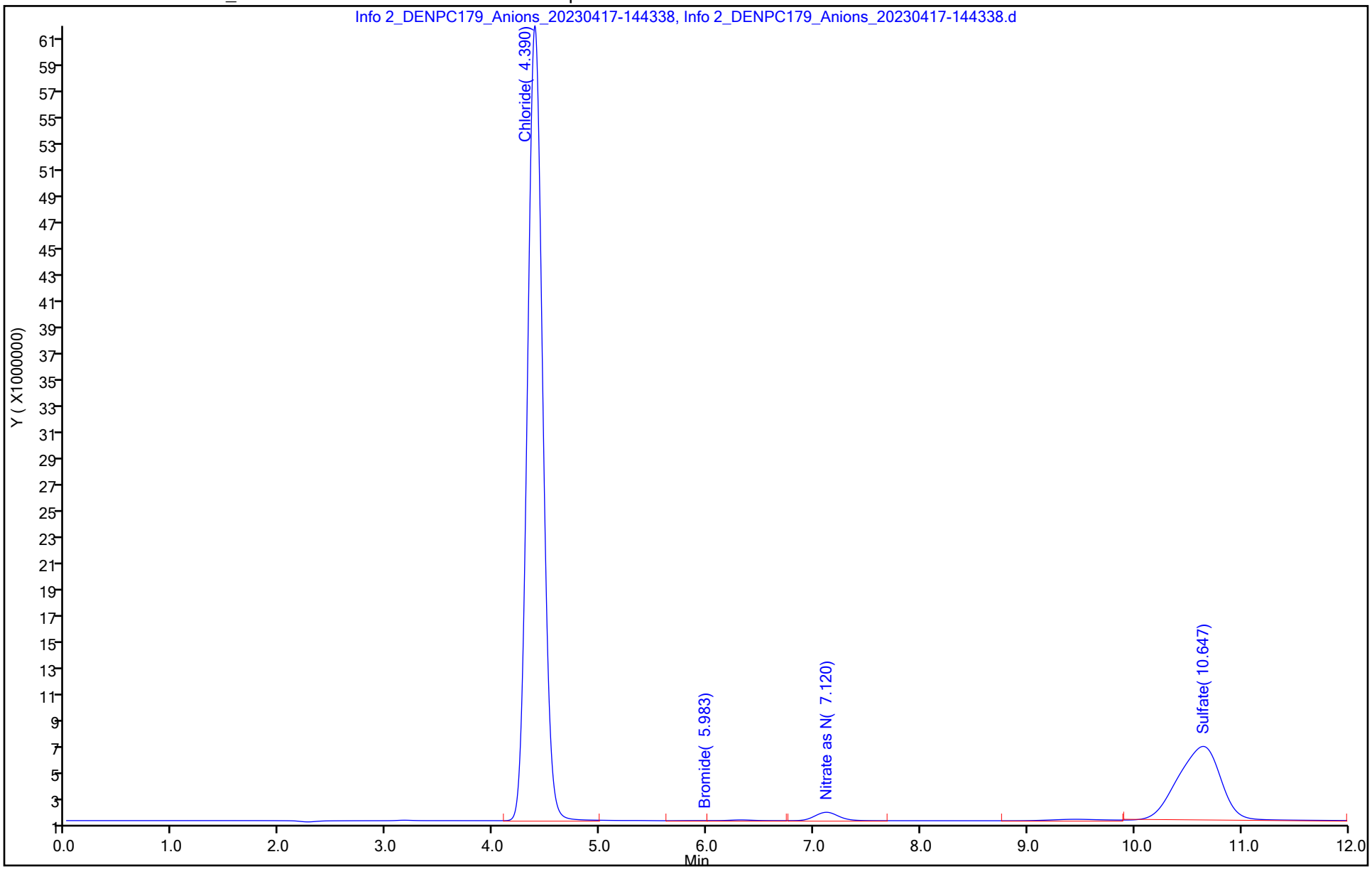
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:41 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-144338.d				
Injection Date:	17-Apr-2023 14:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175122-C-2	Lab Sample ID:	280-175122-2	Worklist Smp#:	10
Client ID:	MP-2-20230411				
Injection Vol:	5.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

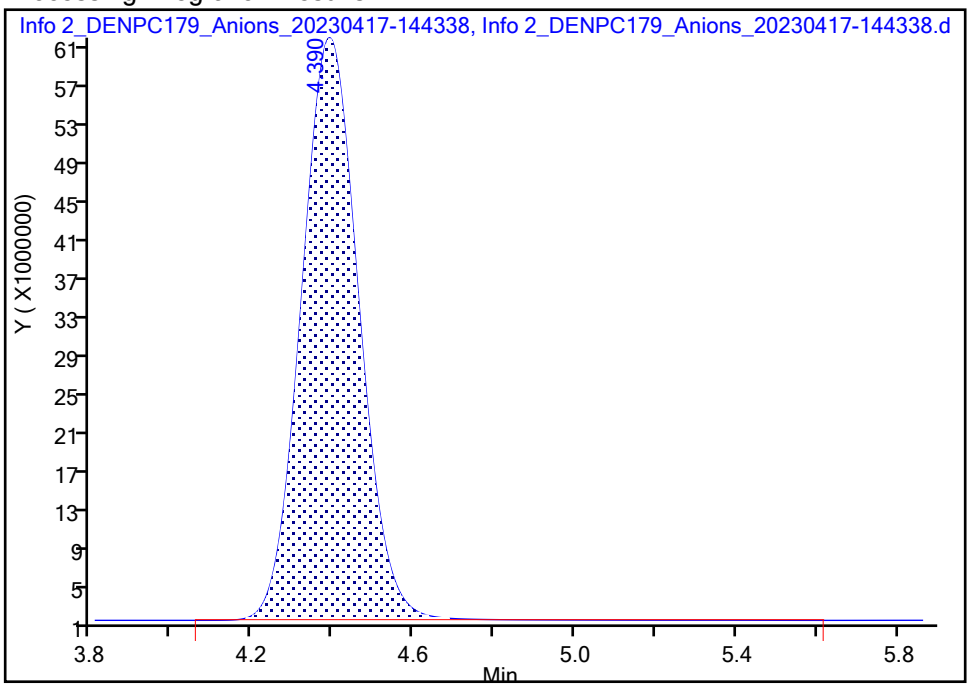
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-144				
Injection Date:	17-Apr-2023 14:28:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175122-C-2	Lab Sample ID:	280-175122-2		
Client ID:	MP-2-20230411				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	10.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

2 Chloride, CAS: 16887-00-6

Signal: 1

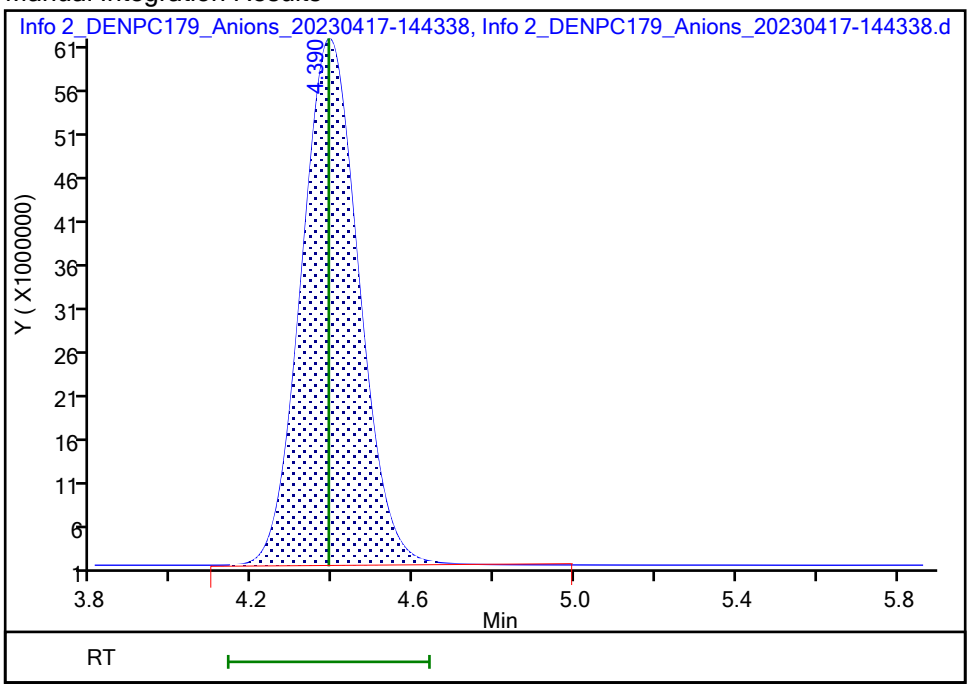
Processing Integration Results

RT: 4.39
Area: 602957092
Amount: 31.557464
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 601506251
Amount: 31.481860
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:49:08

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

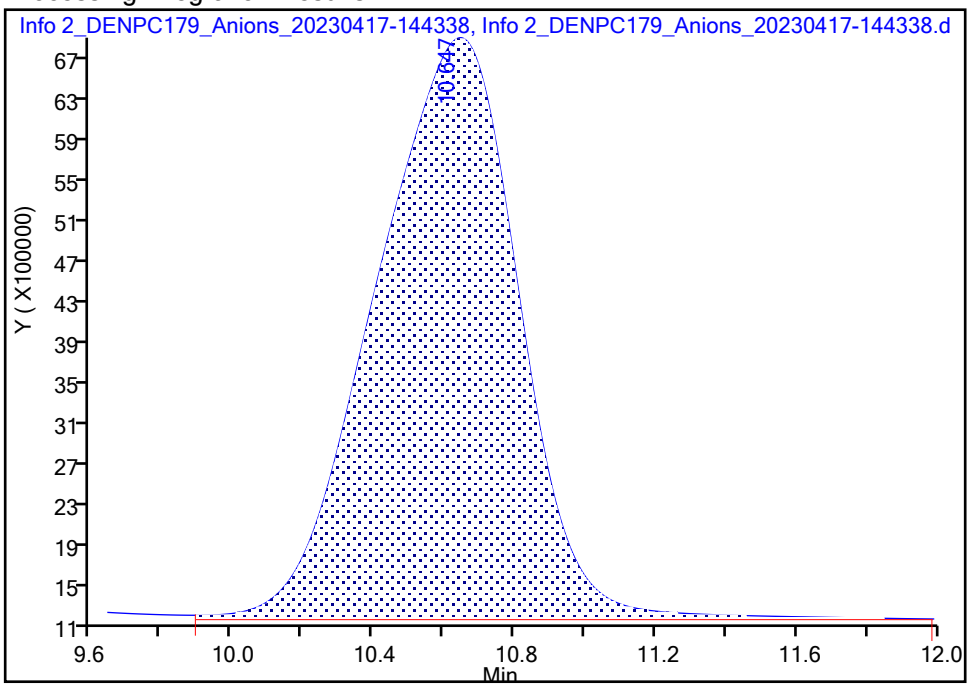
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-144				
Injection Date:	17-Apr-2023 14:28:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175122-C-2	Lab Sample ID:	280-175122-2		
Client ID:	MP-2-20230411				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	10.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

7 Sulfate, CAS: 14808-79-8

Signal: 1

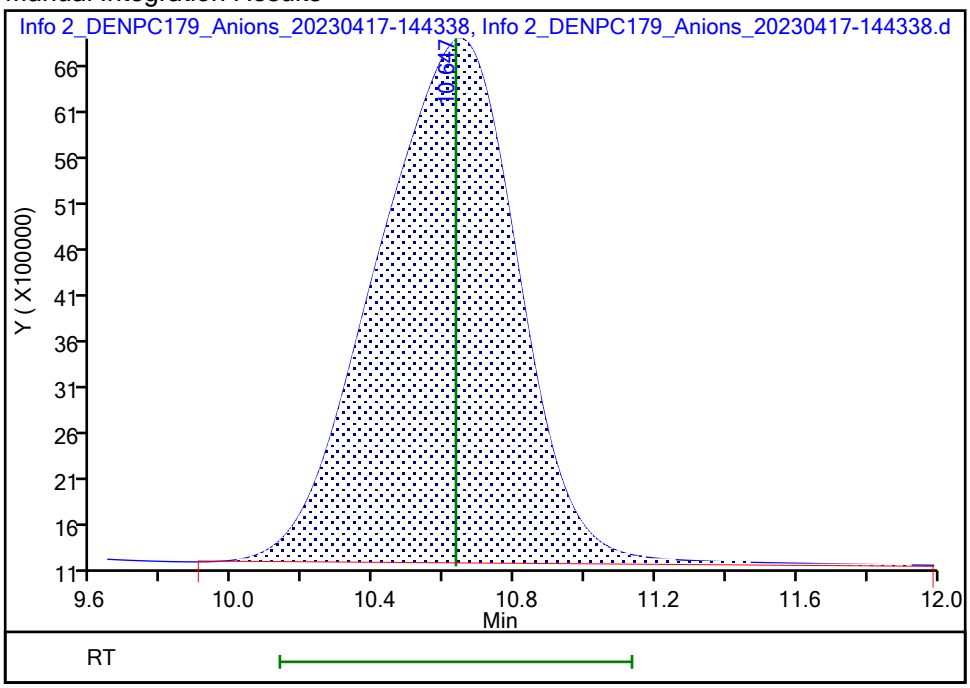
Processing Integration Results

RT: 10.65
Area: 161200422
Amount: 11.771550
Amount Units: ug/ml



Manual Integration Results

RT: 10.65
Area: 157724011
Amount: 11.519694
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:49:22

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-145
Lims ID: 280-175122-C-3
Client ID: MW-118D-20230412
Sample Type: Client
Inject. Date: 17-Apr-2023 14:43:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-011
Misc. Info.: 280-0120473-011
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:49:54

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.713	4.388	0.325	11439539670	596.3	EMa
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.162	7.043	0.119	99684695	NC	M
7 Sulfate	10.633	10.633	0.000	1098017342	79.6	M

QC Flag Legend

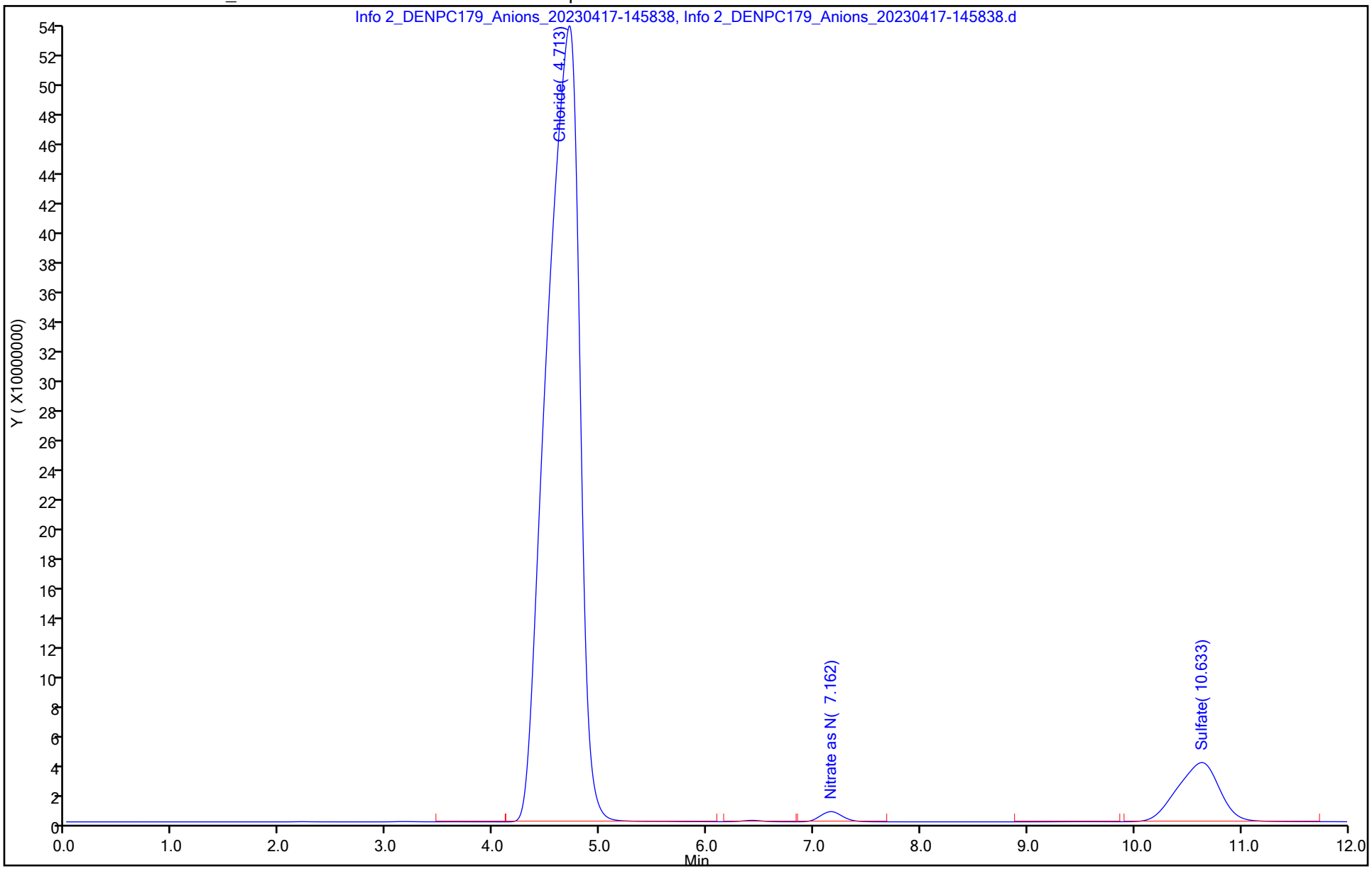
Processing Flags
- NC - Not Calibrated
- E - Exceeded Maximum Amount

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Apr-2023 11:36:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-145838.d				
Injection Date:	17-Apr-2023 14:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175122-C-3	Lab Sample ID:	280-175122-3	Worklist Smp#:	11
Client ID:	MW-118D-20230412				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-145

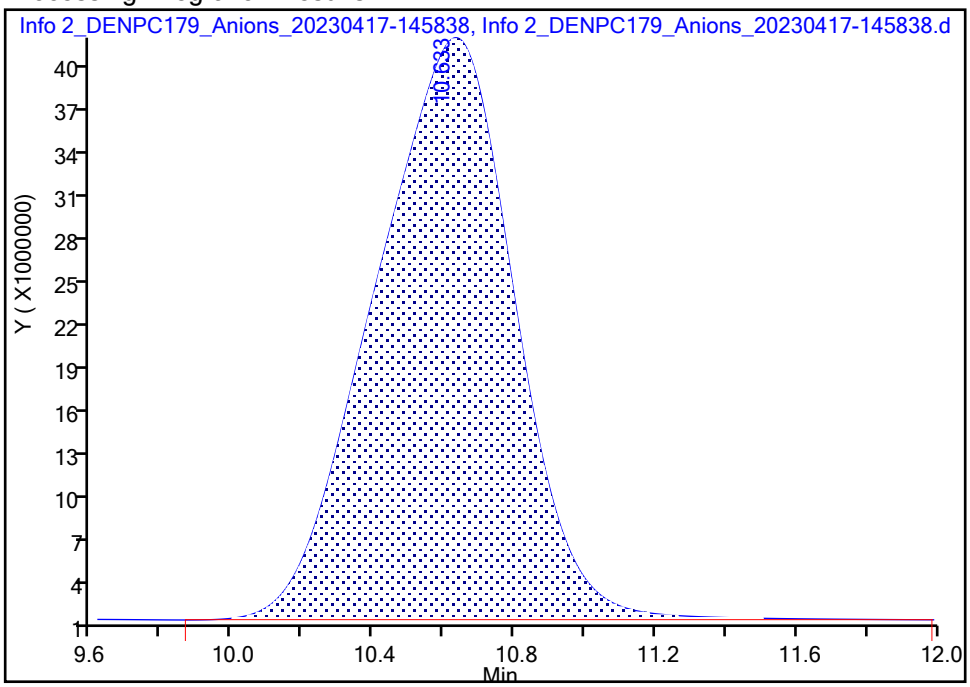
Injection Date:	17-Apr-2023 14:43:00	Instrument ID:	WC_IonChrom10
Lims ID:	280-175122-C-3	Lab Sample ID:	280-175122-3
Client ID:	MW-118D-20230412		
Operator ID:	wetchemd	ALS Bottle#:	0 Worklist Smp#: 11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D
Column:		Detector	Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

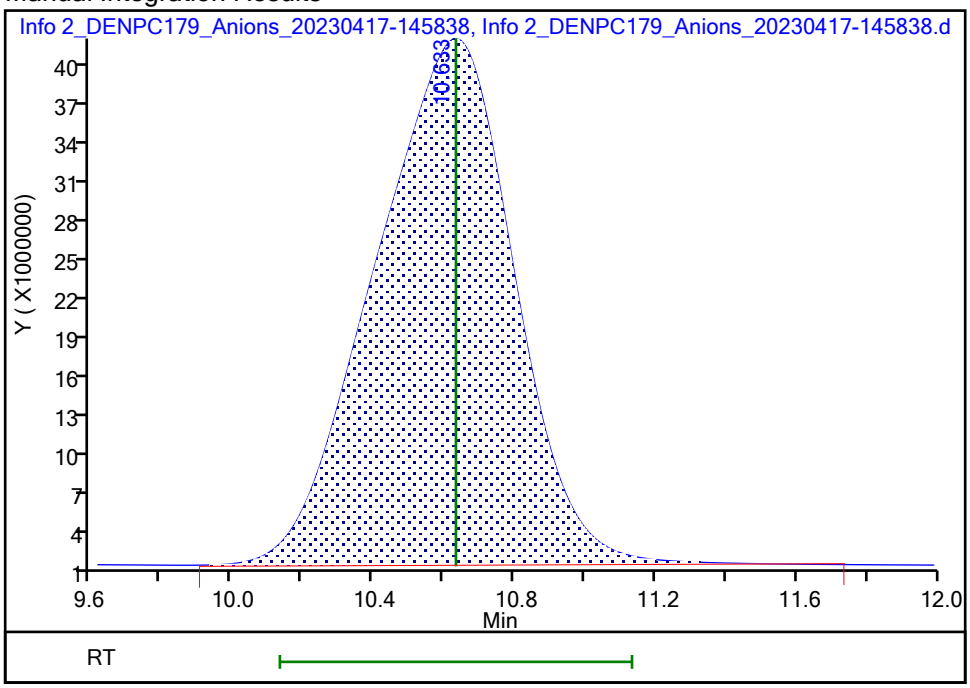
Processing Integration Results

RT: 10.63
Area: 1103138010
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.63
Area: 1098017342
Amount: 79.641377
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:49:53

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-151
Lims ID: 280-175122-C-3
Client ID: MW-118D-20230412
Sample Type: Client
Inject. Date: 17-Apr-2023 14:58:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 20.0000
Sample Info: 280-0120473-012
Misc. Info.: 280-0120473-012
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:50:19

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.385	4.388	-0.003	611458734	32.0	
3 Nitrite as N		5.088			ND	
4 Bromide	5.922	6.075	-0.153	154222	-0.1180	
5 Nitrate as N	7.120	7.043	0.077	4206594	NC	M
7 Sulfate	10.638	10.633	0.005	54221187	4.02	M

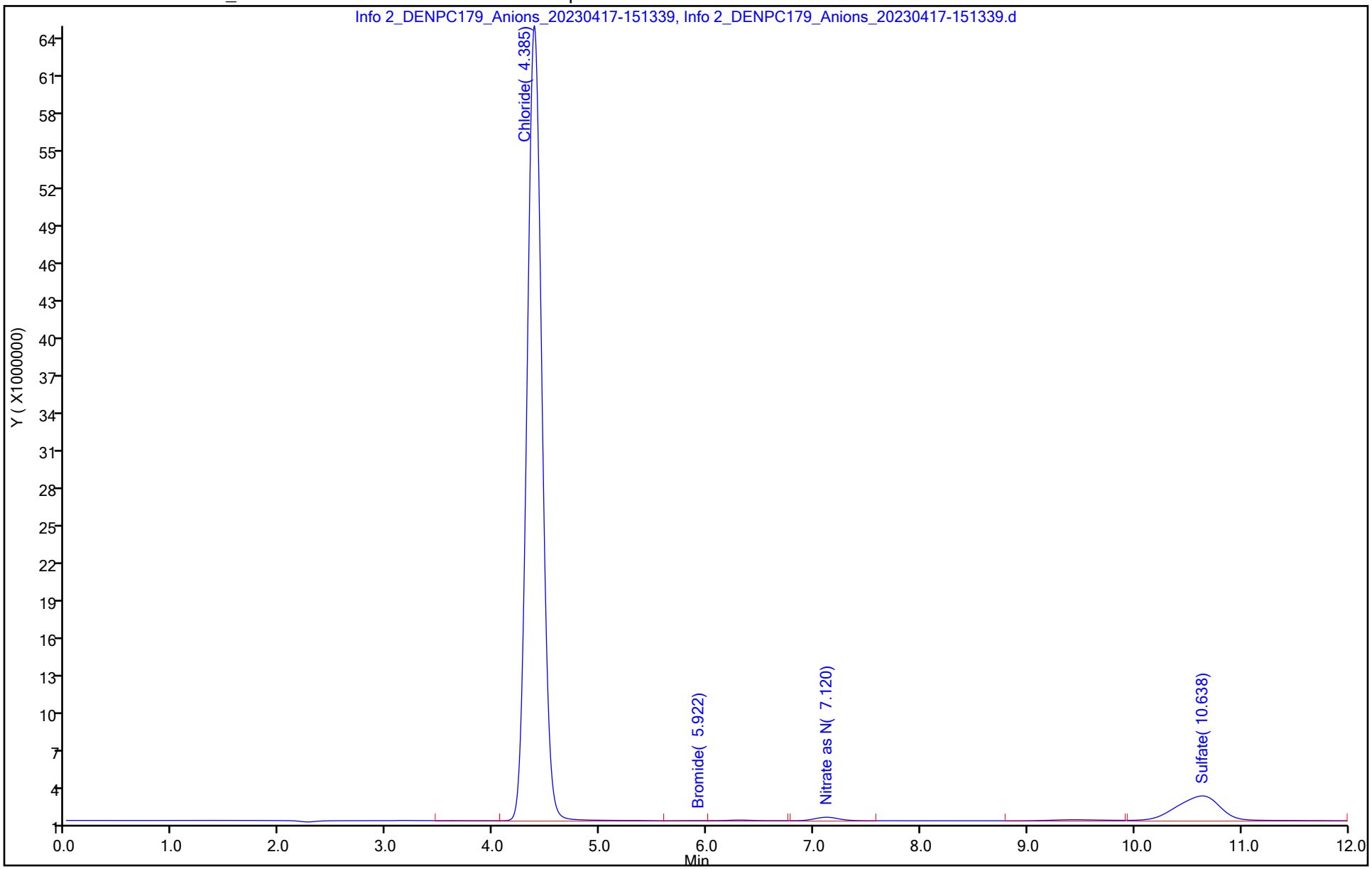
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:43 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-151339.d				
Injection Date:	17-Apr-2023 14:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175122-C-3	Lab Sample ID:	280-175122-3	Worklist Smp#:	12
Client ID:	MW-118D-20230412				
Injection Vol:	5.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 16:13:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-017
Misc. Info.: 280-0120473-017
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:13:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			ND	ND	
2 Chloride	4.392	4.388	0.004	977790198	50.0	51.1	M
3 Nitrite as N	5.092	5.088	0.004	110879515	NC	NC	M
4 Bromide	6.270	6.075	0.195	17147164	2.50	2.37	
5 Nitrate as N	7.050	7.043	0.007	108729132	NC	NC	M
6 Orthophosphate as P	9.333	9.402	-0.069	66031793	NC	NC	
7 Sulfate	10.610	10.633	-0.023	698664535	50.0	50.7	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

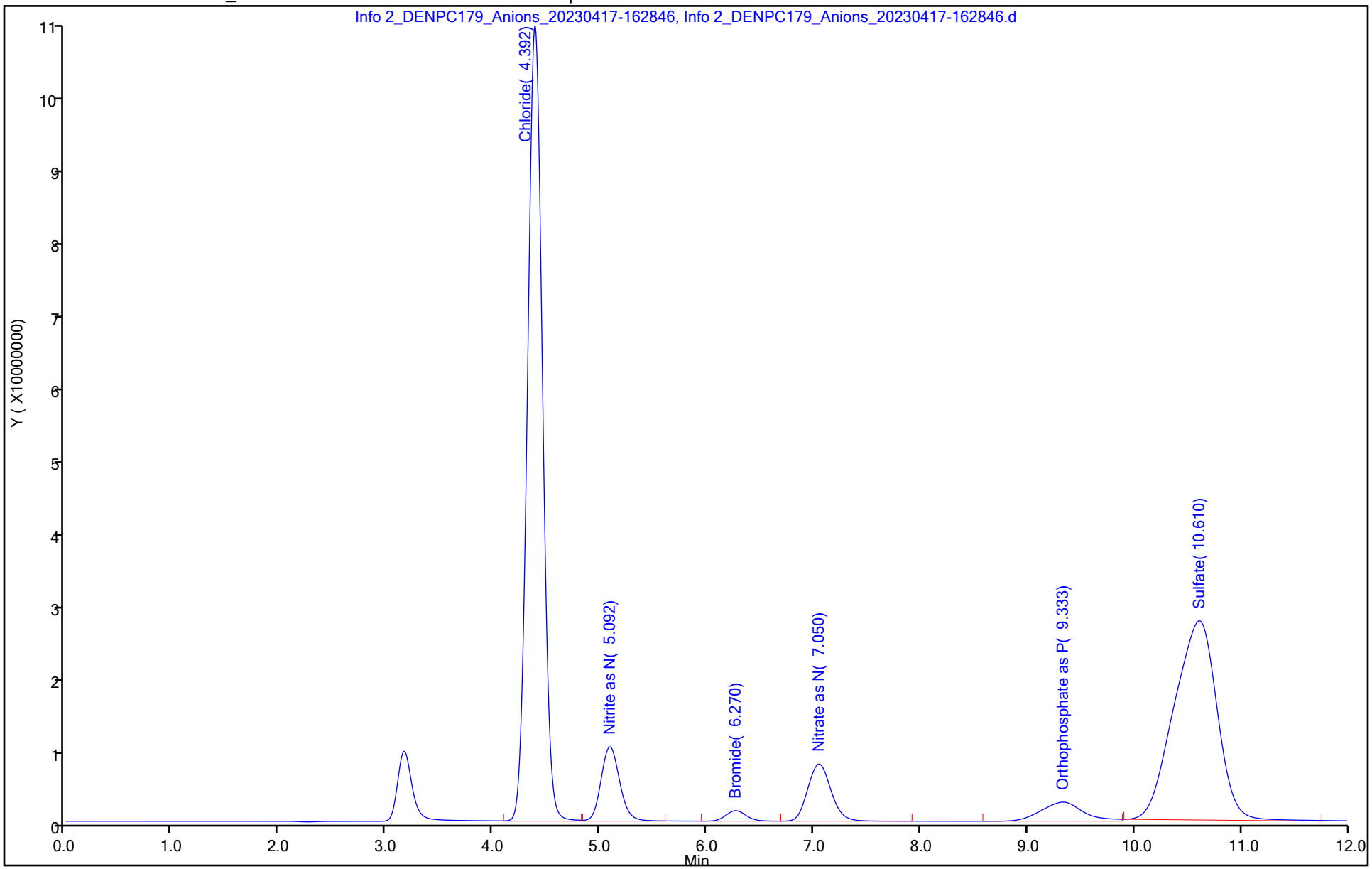
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:46 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162846.d				
Injection Date:	17-Apr-2023 16:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162

Injection Date: 17-Apr-2023 16:13:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

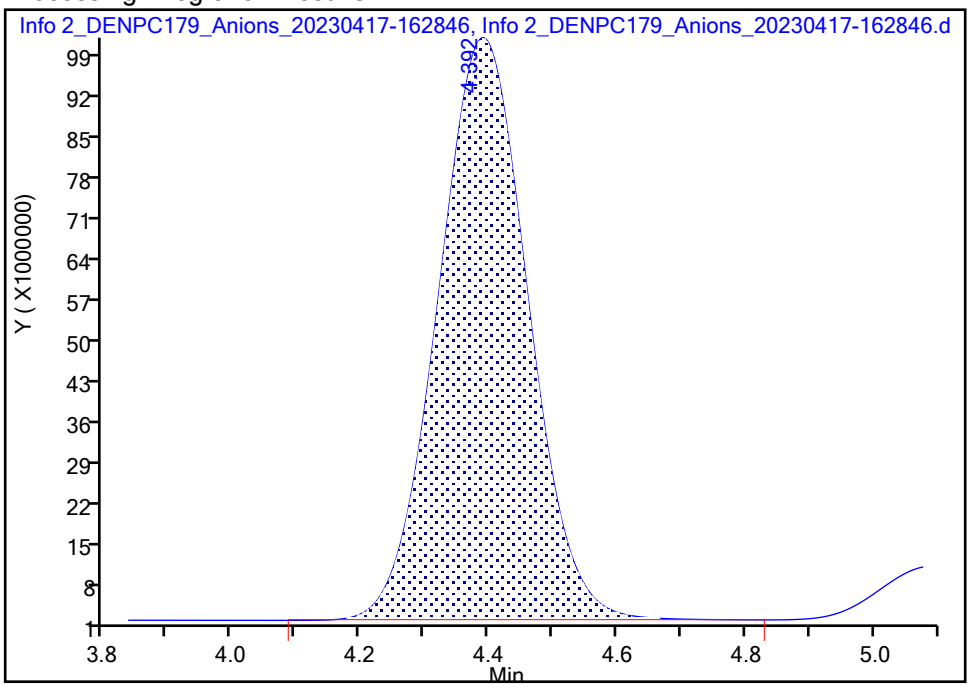
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

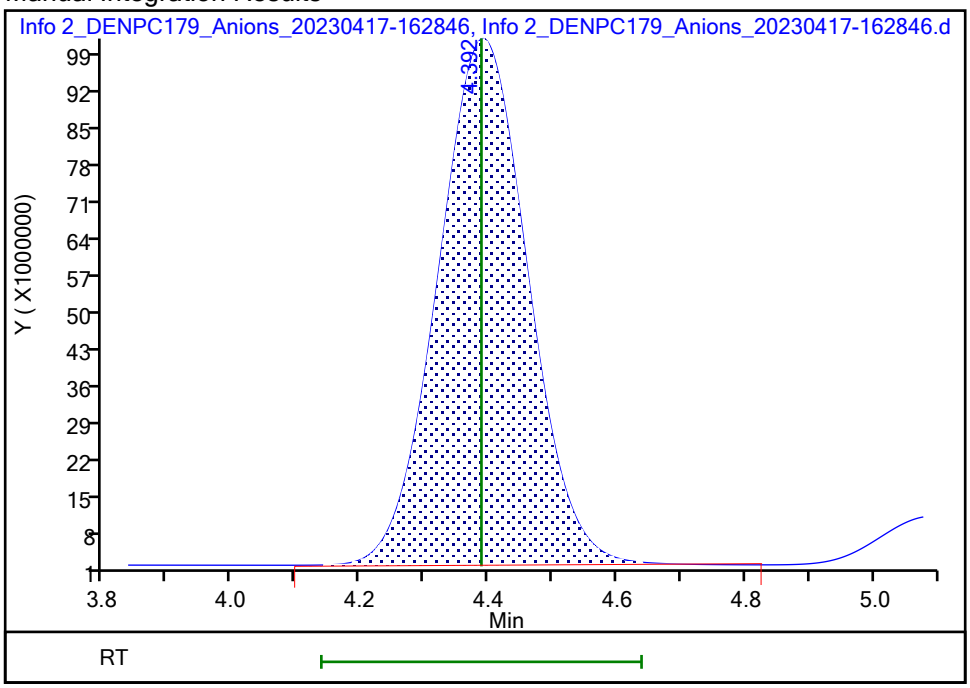
Processing Integration Results

RT: 4.39
Area: 978719860
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 977790198
Amount: 51.090152
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:48

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

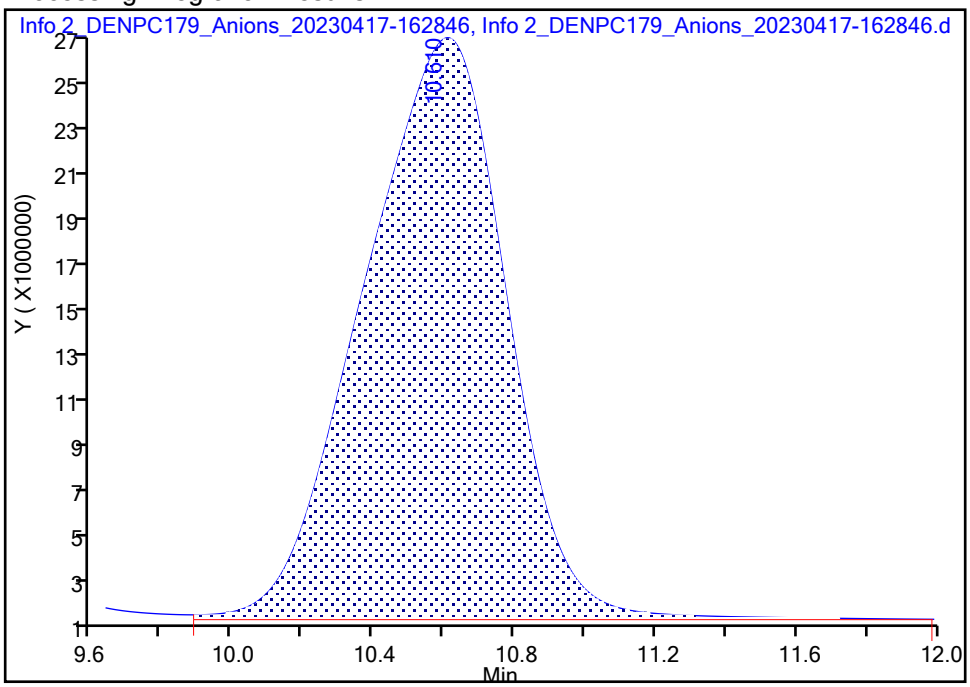
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162
Injection Date: 17-Apr-2023 16:13:00 Instrument ID: WC_IonChrom10
Lims ID: CCV
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

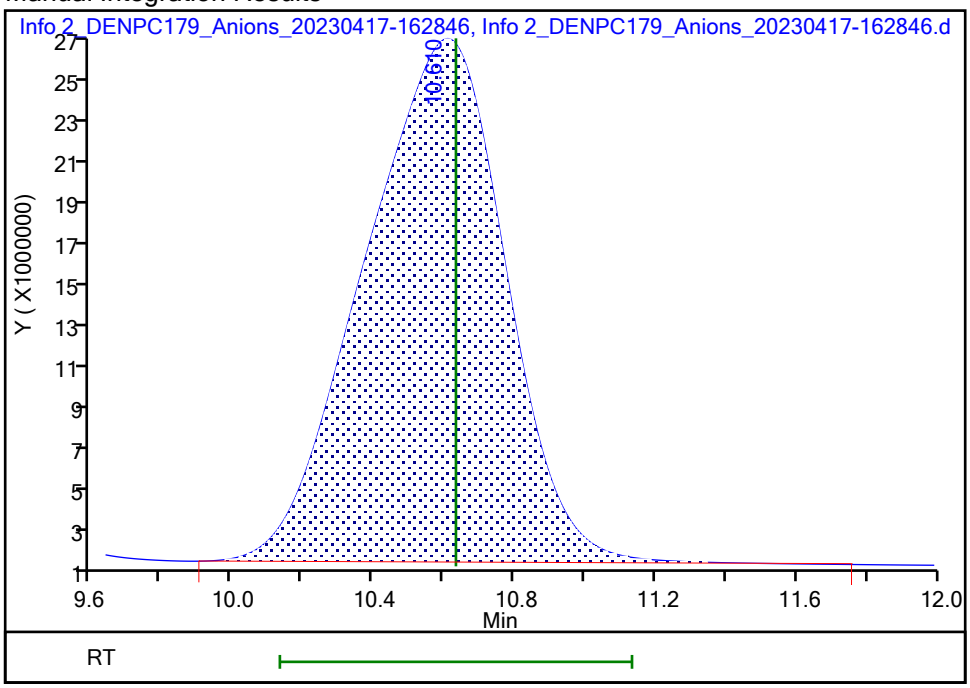
Processing Integration Results

RT: 10.61
Area: 715627003
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 698664535
Amount: 50.709357
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:56
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 16:28:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-018
Misc. Info.: 280-0120473-018
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:52:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.042	6.075	-0.033	105239		-0.1252	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.405	9.402	0.003	5901360		NC	
7 Sulfate	10.647	10.633	0.014	439227		0.1248	M

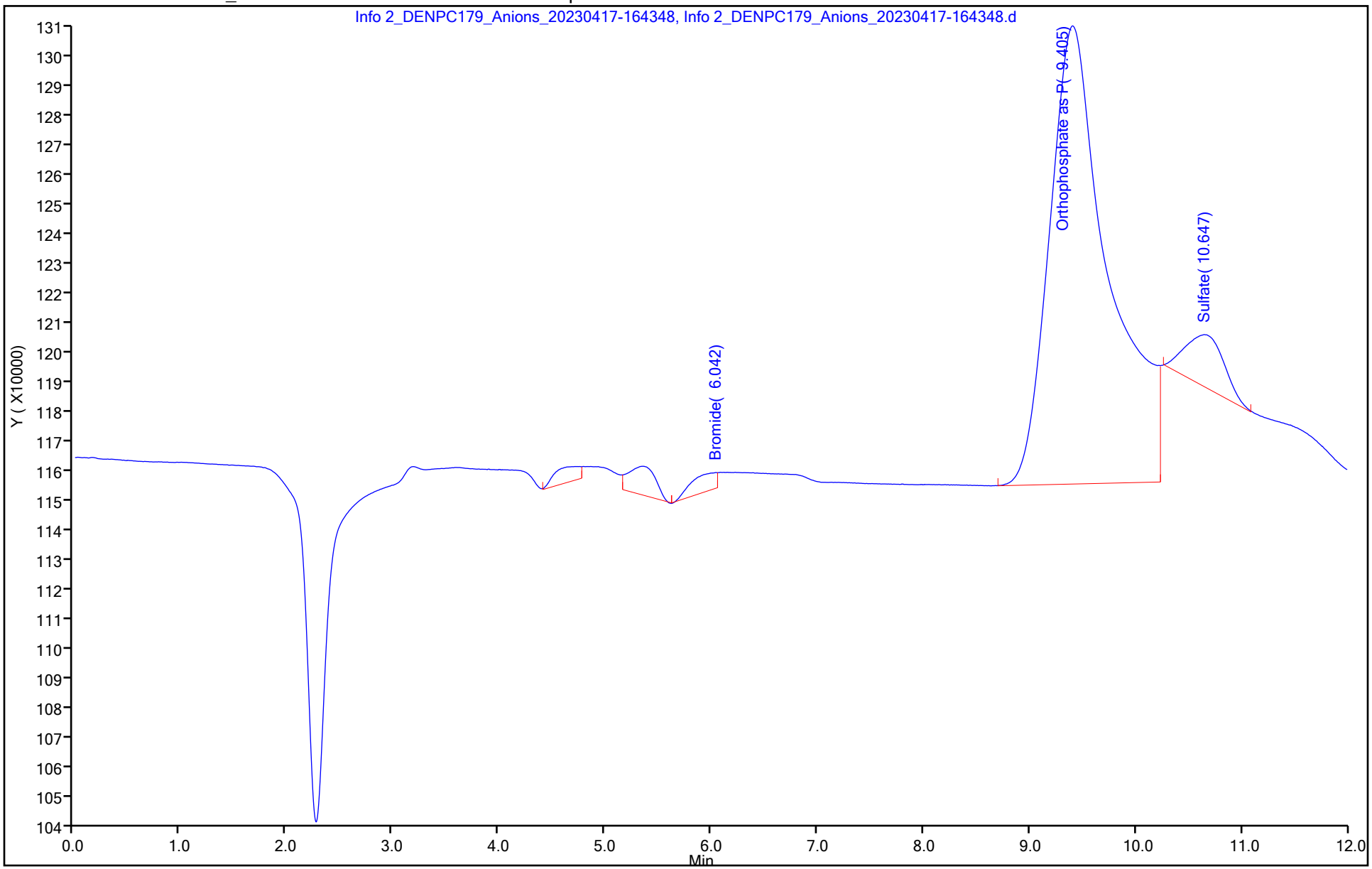
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:47 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164348.d				
Injection Date:	17-Apr-2023 16:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	18
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164

Injection Date: 17-Apr-2023 16:28:00 Instrument ID: WC_IonChrom10

Lims ID: CCB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 18

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

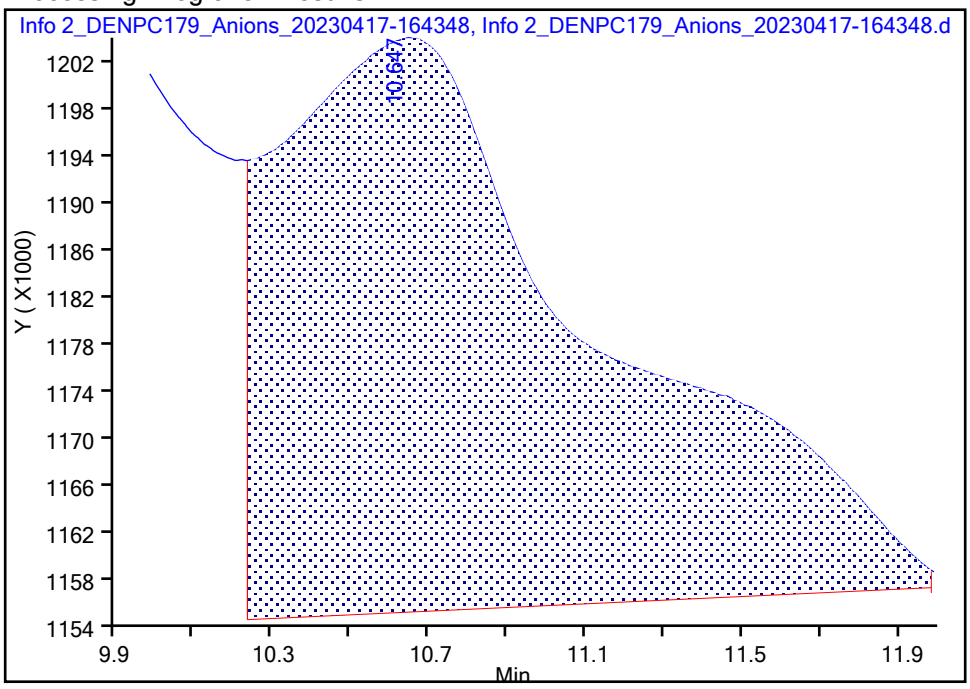
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

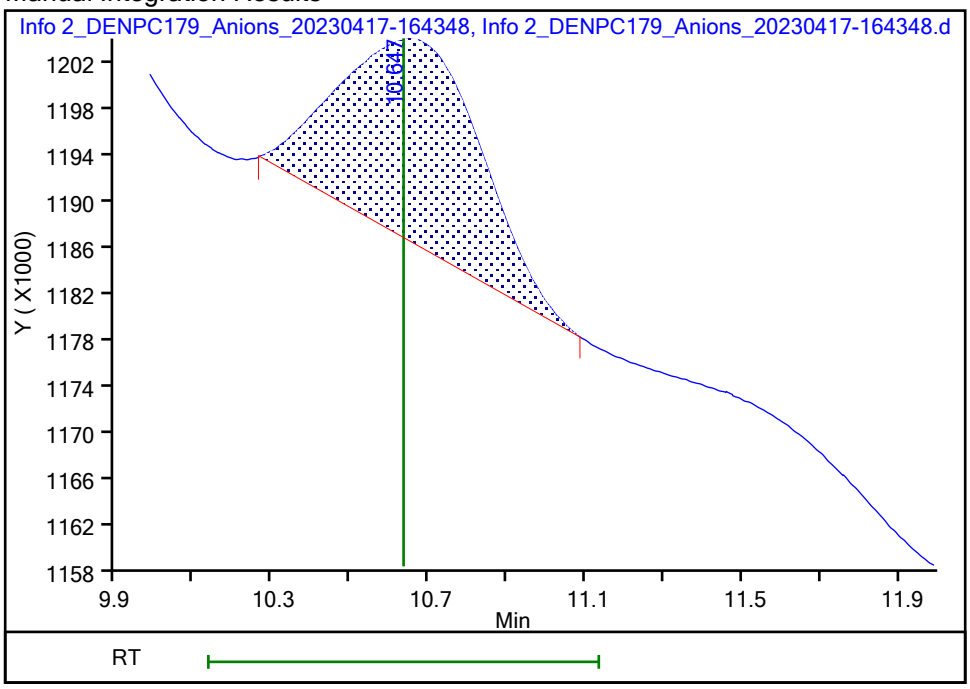
Processing Integration Results

RT: 10.65
Area: 2749315
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.65
Area: 439227
Amount: 0.124841
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:52:03

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 19:14:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-029
Misc. Info.: 280-0120473-029
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:56 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:56:42

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			ND	ND	
2 Chloride	4.397	4.388	0.009	972805619	50.0	50.8	M
3 Nitrite as N	5.100	5.088	0.012	111586446	NC	NC	M
4 Bromide	6.278	6.075	0.203	17126988	2.50	2.37	
5 Nitrate as N	7.062	7.043	0.019	108815721	NC	NC	M
6 Orthophosphate as P	9.380	9.402	-0.022	63493313	NC	NC	
7 Sulfate	10.627	10.633	-0.006	688051501	50.0	49.9	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

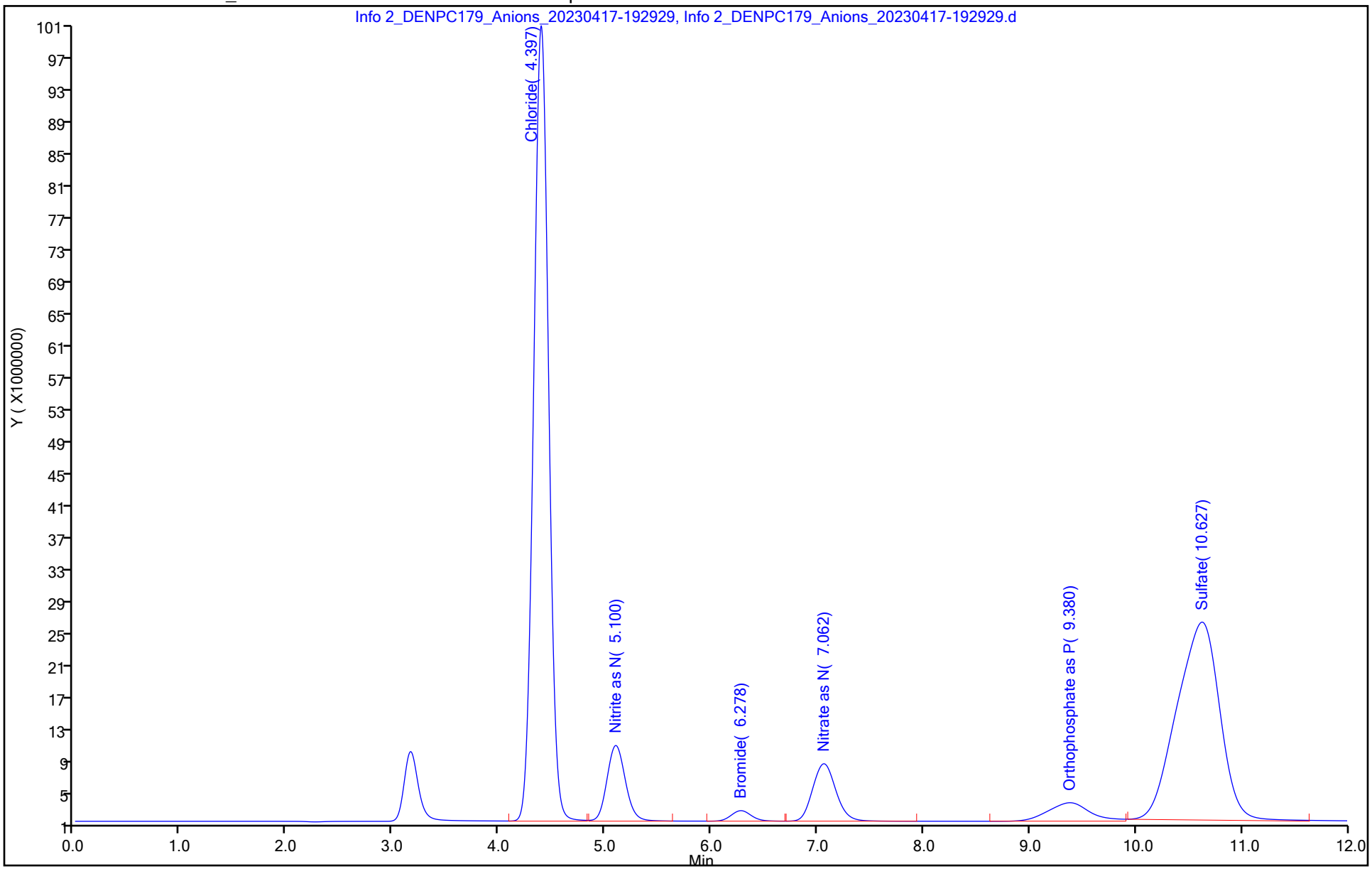
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:56 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192929.d

Injection Date:	17-Apr-2023 19:14:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	29
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192

Injection Date: 17-Apr-2023 19:14:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 29

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

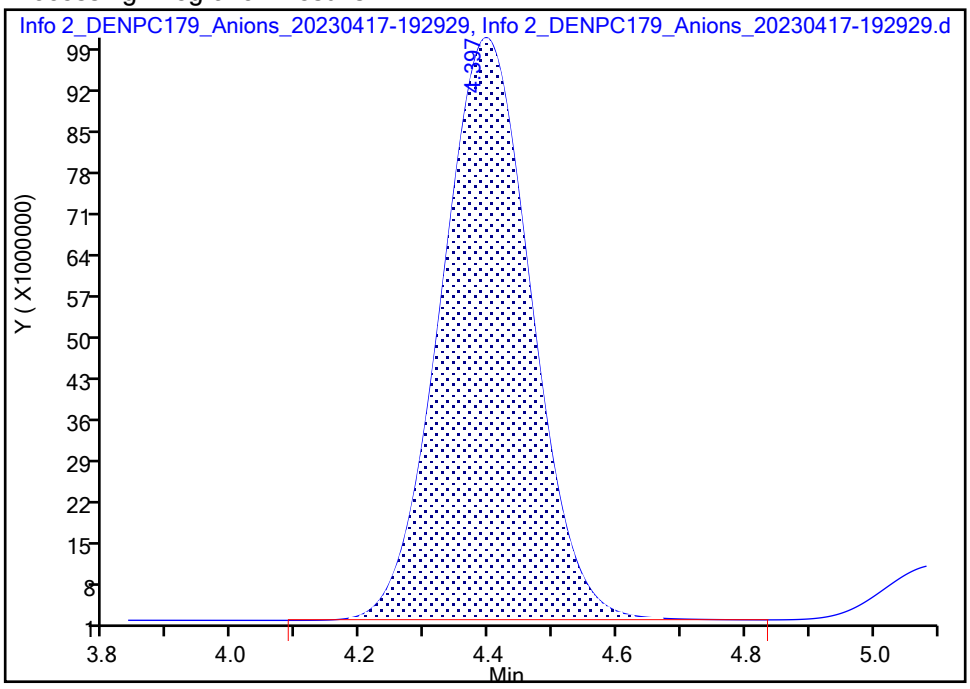
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

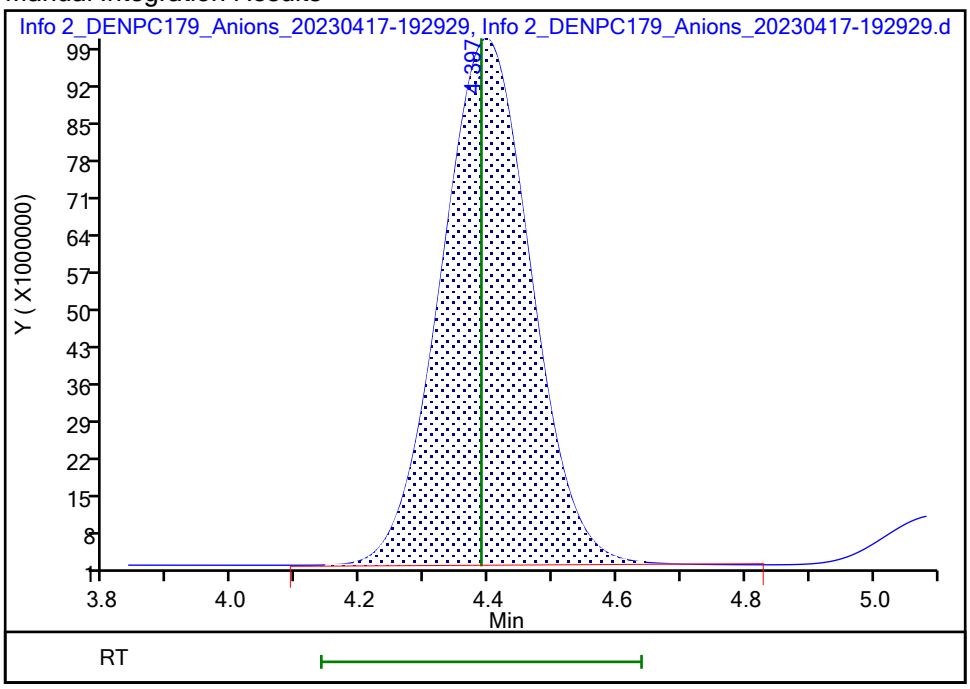
Processing Integration Results

RT: 4.40
Area: 973745942
Amount: 50.879405
Amount Units: ug/ml



Manual Integration Results

RT: 4.40
Area: 972805619
Amount: 50.830404
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:56:29

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192

Injection Date: 17-Apr-2023 19:14:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 29

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

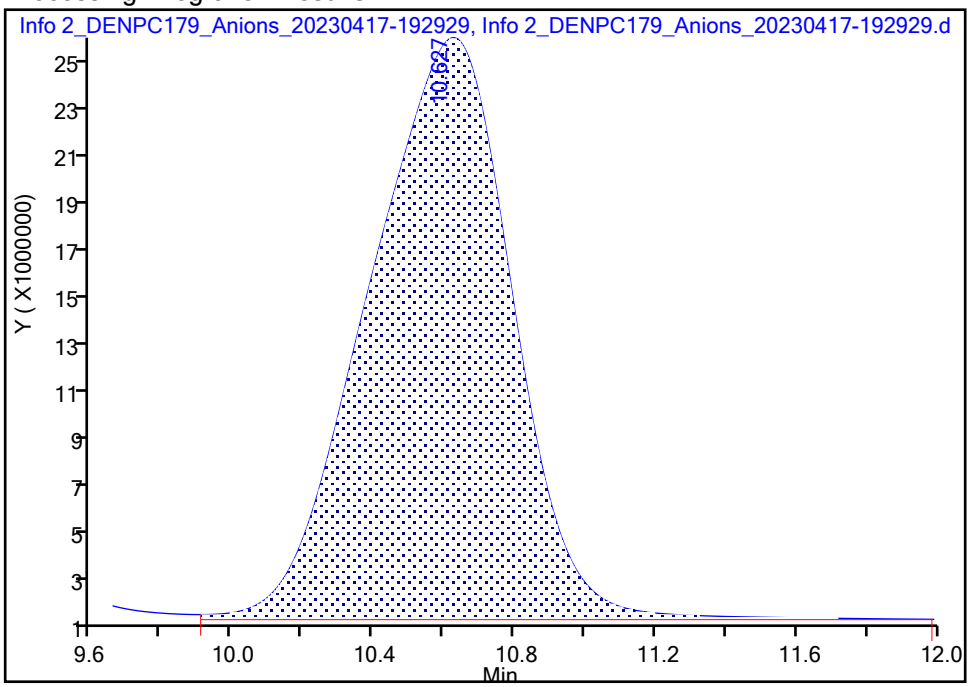
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

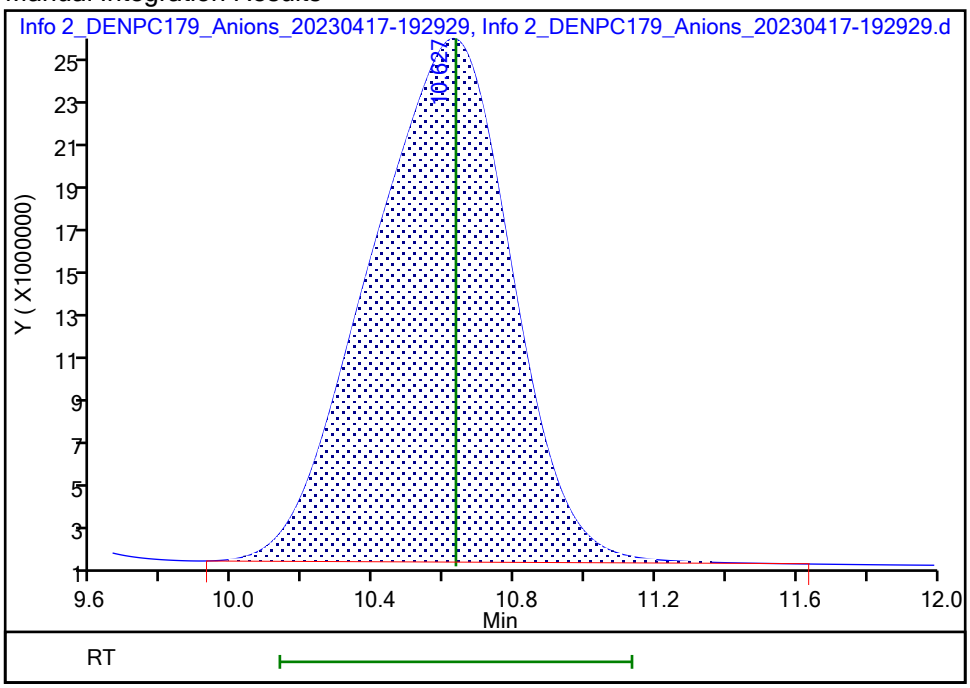
Processing Integration Results

RT: 10.63
Area: 706244174
Amount: 51.258481
Amount Units: ug/ml



Manual Integration Results

RT: 10.63
Area: 688051501
Amount: 49.940472
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:56:41

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-194
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 19:29:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-030
Misc. Info.: 280-0120473-030
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:56 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:56:53

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.150	6.075	0.075	152131		-0.1183	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.455	9.402	0.053	4591295		NC	
7 Sulfate	10.660	10.633	0.027	412660		0.1229	M

QC Flag Legend

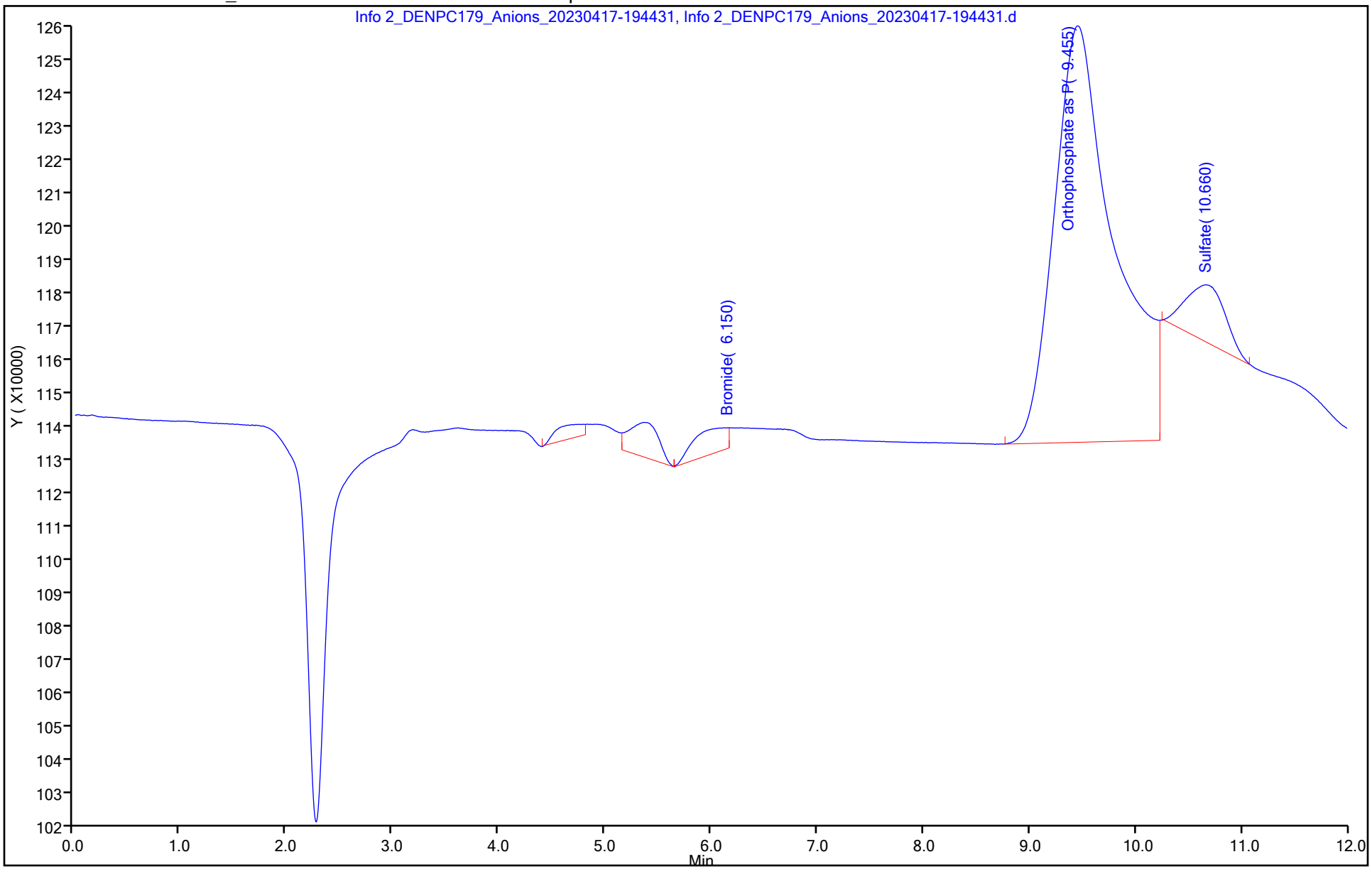
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-194431.d

Injection Date:	17-Apr-2023 19:29:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	30
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-194

Injection Date: 17-Apr-2023 19:29:00 Instrument ID: WC_IonChrom10

Lims ID: CCB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 30

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

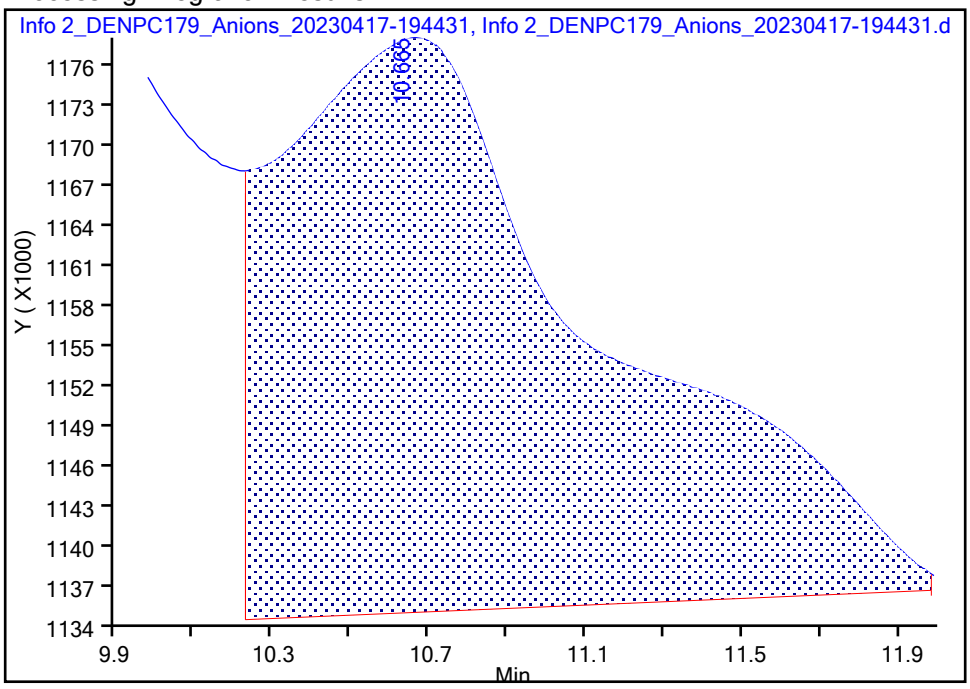
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

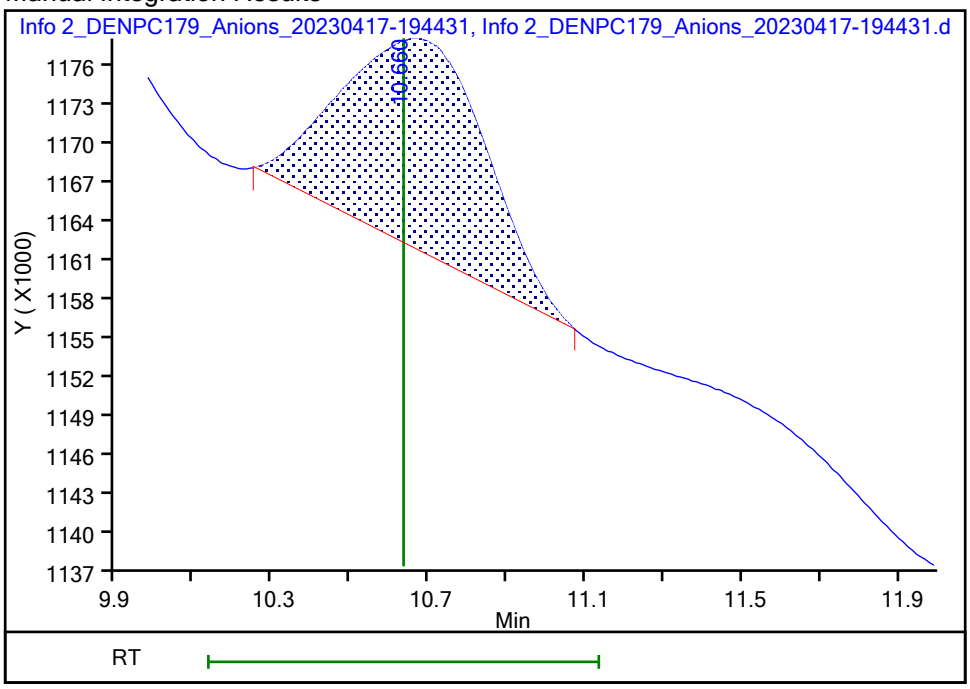
Processing Integration Results

RT: 10.67
Area: 2468107
Amount: 0.271828
Amount Units: ug/ml



Manual Integration Results

RT: 10.66
Area: 412660
Amount: 0.122916
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:56:49

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-222
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 22:14:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-041
Misc. Info.: 280-0120473-041
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:37:06 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 11:01:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			2.50	ND	
2 Chloride	4.395	4.388	0.007	975732916	50.0	51.0	M
3 Nitrite as N	5.098	5.088	0.010	112375865	NC	NC	M
4 Bromide	6.280	6.075	0.205	17242112	2.50	2.39	
5 Nitrate as N	7.062	7.043	0.019	108702390	NC	NC	M
6 Orthophosphate as P	9.375	9.402	-0.027	67066091	NC	NC	
7 Sulfate	10.618	10.633	-0.015	690036701	50.0	50.1	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

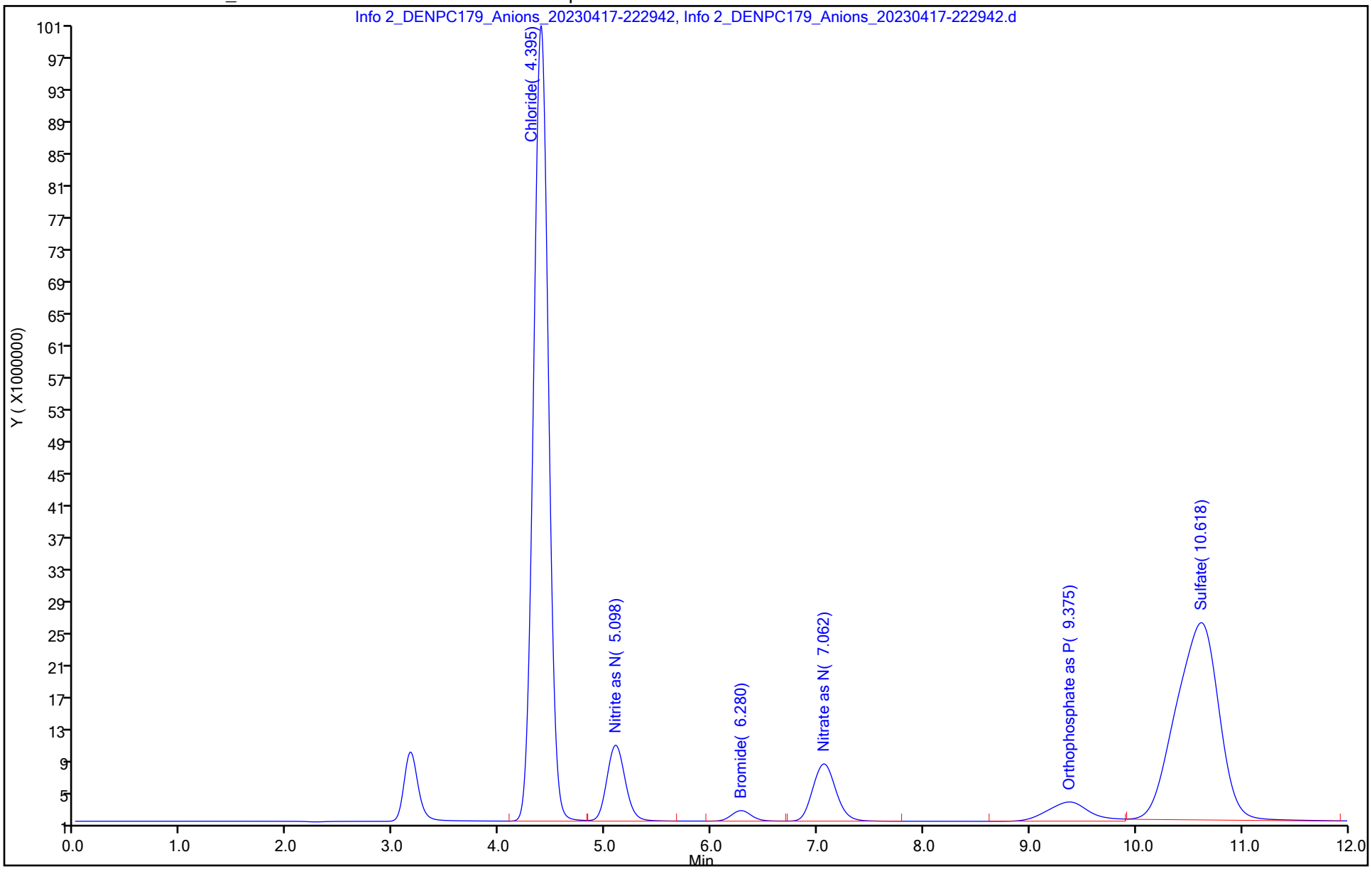
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:37:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-222942.d				
Injection Date:	17-Apr-2023 22:14:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	41
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-222

Injection Date: 17-Apr-2023 22:14:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 41

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

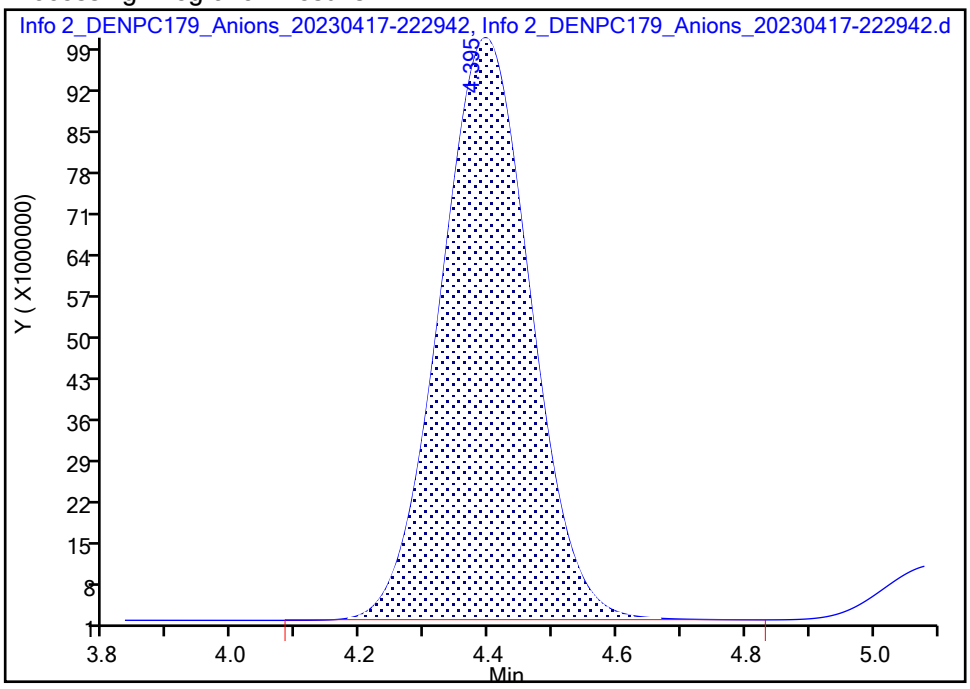
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

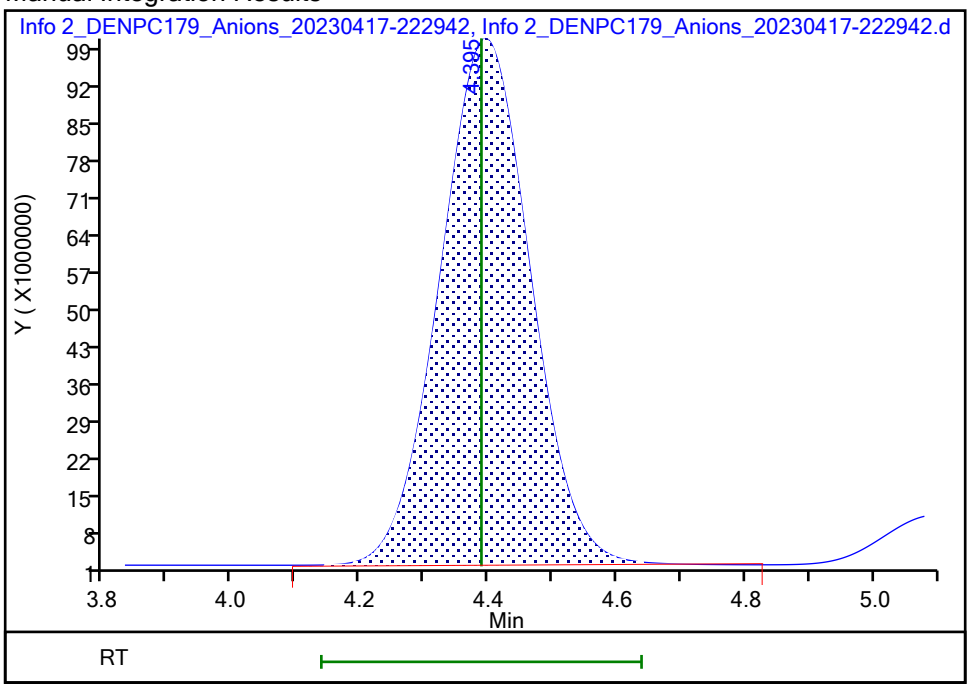
Processing Integration Results

RT: 4.40
Area: 976679795
Amount: 51.032289
Amount Units: ug/ml



Manual Integration Results

RT: 4.40
Area: 975732916
Amount: 50.982947
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 11:01:25

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-222

Injection Date: 17-Apr-2023 22:14:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 41

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

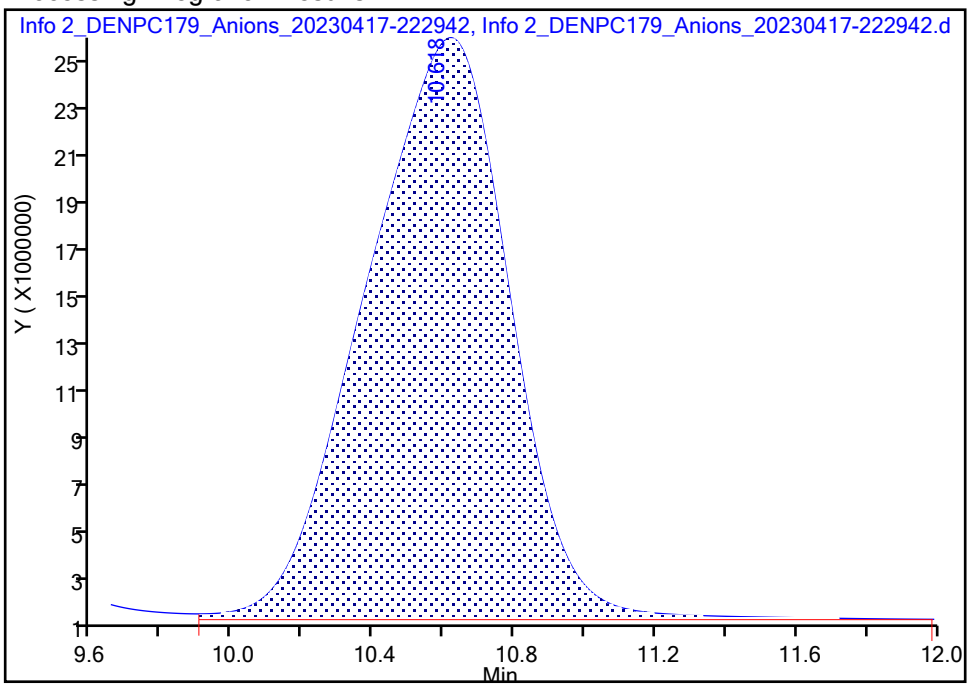
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

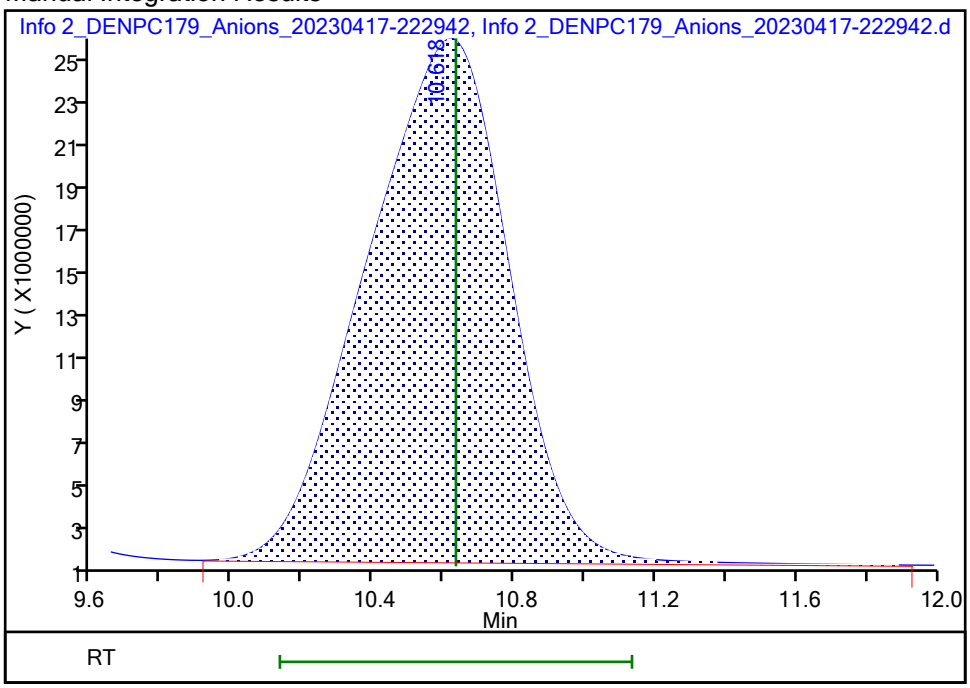
Processing Integration Results

RT: 10.62
Area: 708350670
Amount: 51.411091
Amount Units: ug/ml



Manual Integration Results

RT: 10.62
Area: 690036701
Amount: 50.084294
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 11:01:35

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-224
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 22:29:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-042
Misc. Info.: 280-0120473-042
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:37:06 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 11:01:46

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	U
4 Bromide	6.065	6.075	-0.010	104470		-0.1253	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.455	9.402	0.053	7029760		NC	
7 Sulfate	10.665	10.633	0.032	375509		0.1202	M

QC Flag Legend

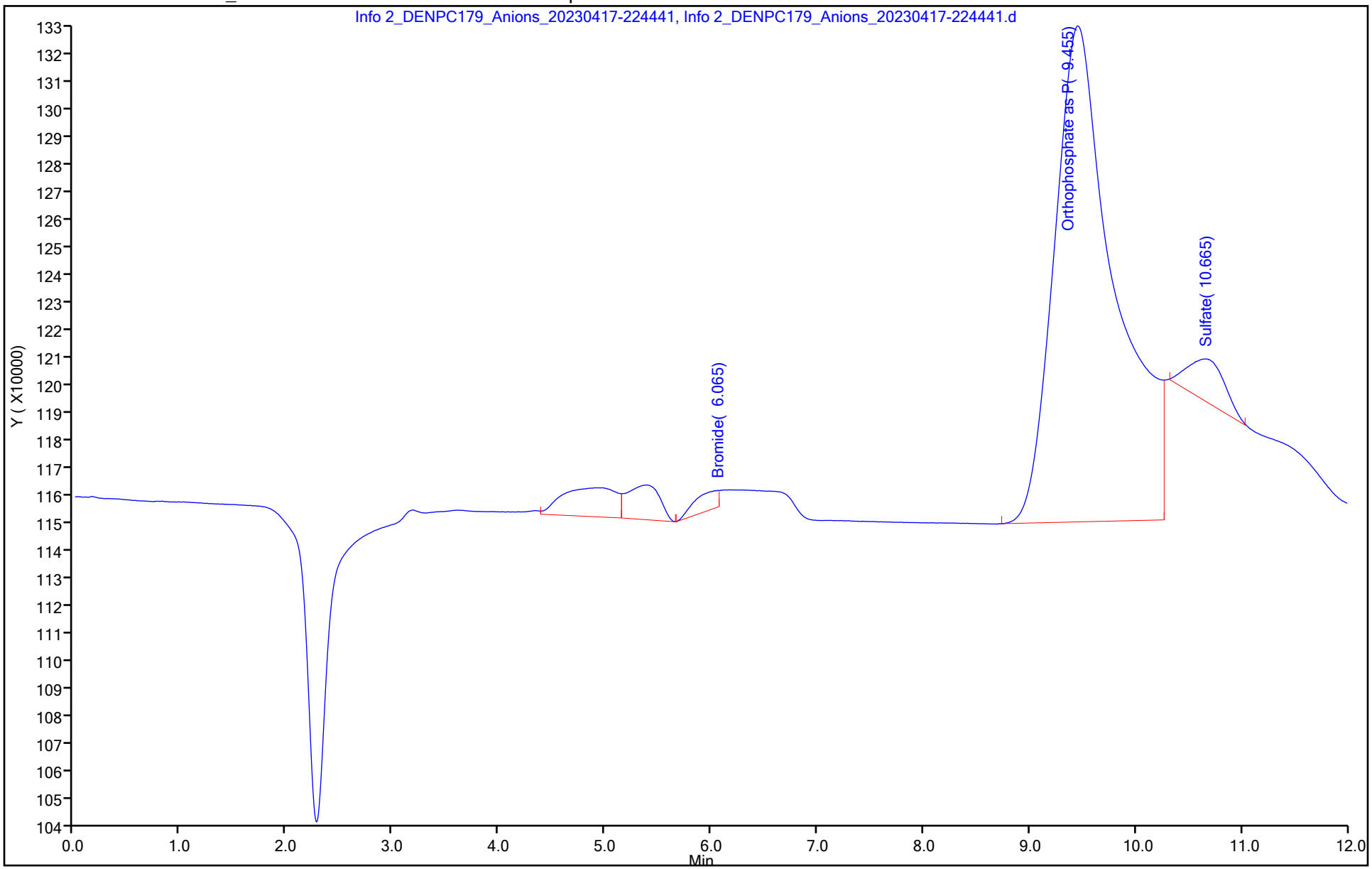
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 18-Apr-2023 11:37:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-224441.d

Injection Date:	17-Apr-2023 22:29:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	42
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

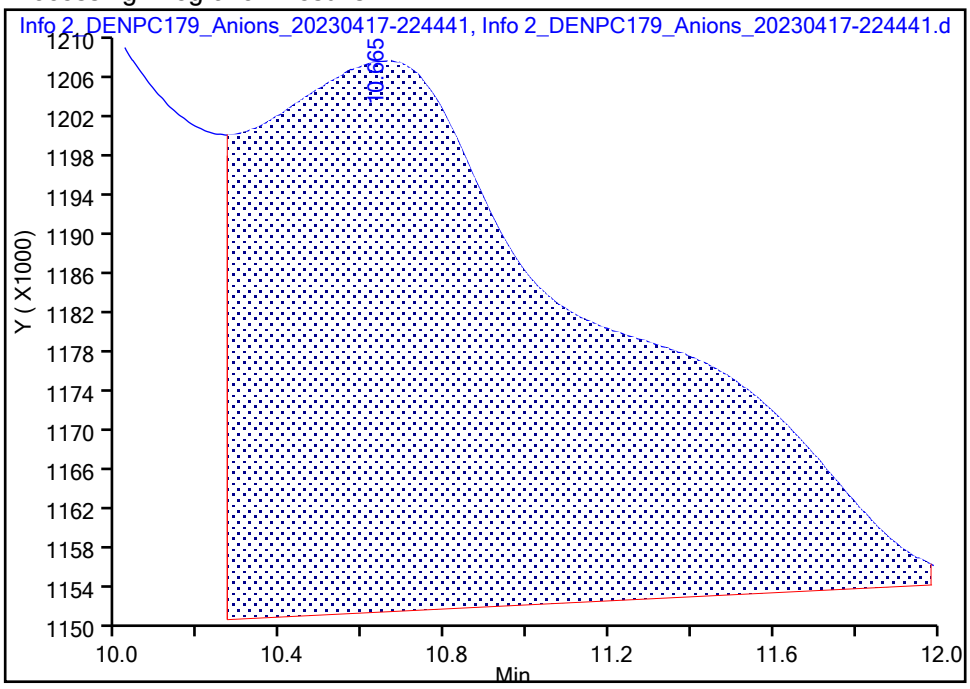
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-224
Injection Date: 17-Apr-2023 22:29:00 Instrument ID: WC_IonChrom10
Lims ID: CCB
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

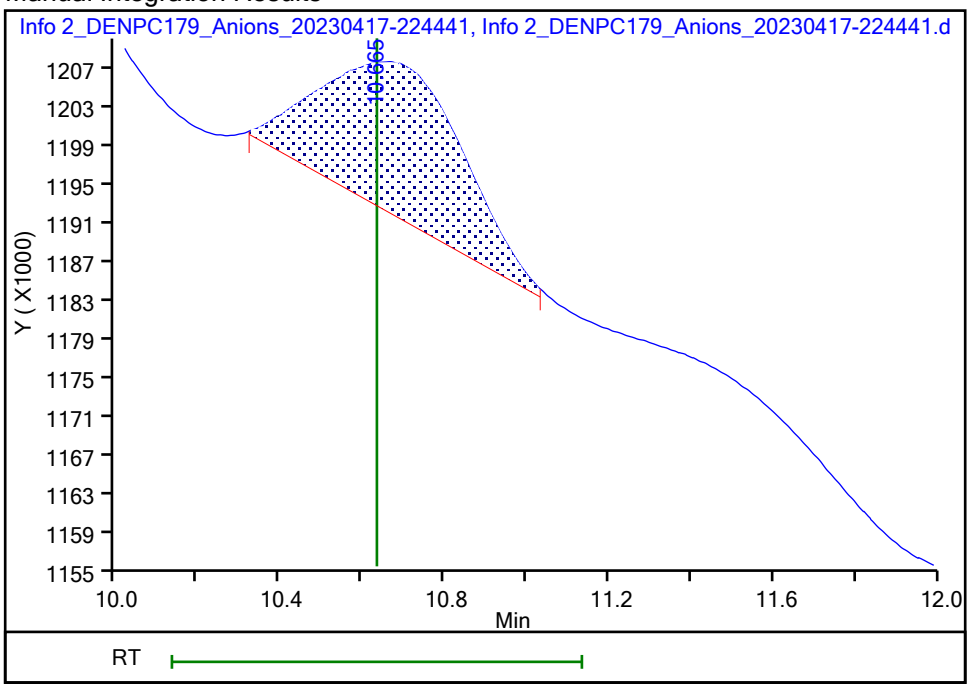
RT: 10.67
Area: 3333445
Amount: 0.334519
Amount Units: ug/ml

Processing Integration Results



RT: 10.67
Area: 375509
Amount: 0.120225
Amount Units: ug/ml

Manual Integration Results



Reviewer: LVW8, 18-Apr-2023 11:01:39
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_E
Lims ID: STD L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 03-Apr-2023 16:42:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120028-002280-0120083-001
Misc. Info.: STD L1
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:57 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride	2.700	2.700	0.000	1651846	0.5000	0.6109	M
3 Nitrite as N		3.230				ND	M
4 Bromide		3.823				ND	U
5 Nitrate as N		4.297				ND	U
7 Orthophosphate as P		5.763				ND	U
6 Sulfate	6.540	6.540	0.000	1025703	0.5000	0.6073	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.04 Units: mL
IC Cal low_00701 Amount Added: 0.00 Units: mL

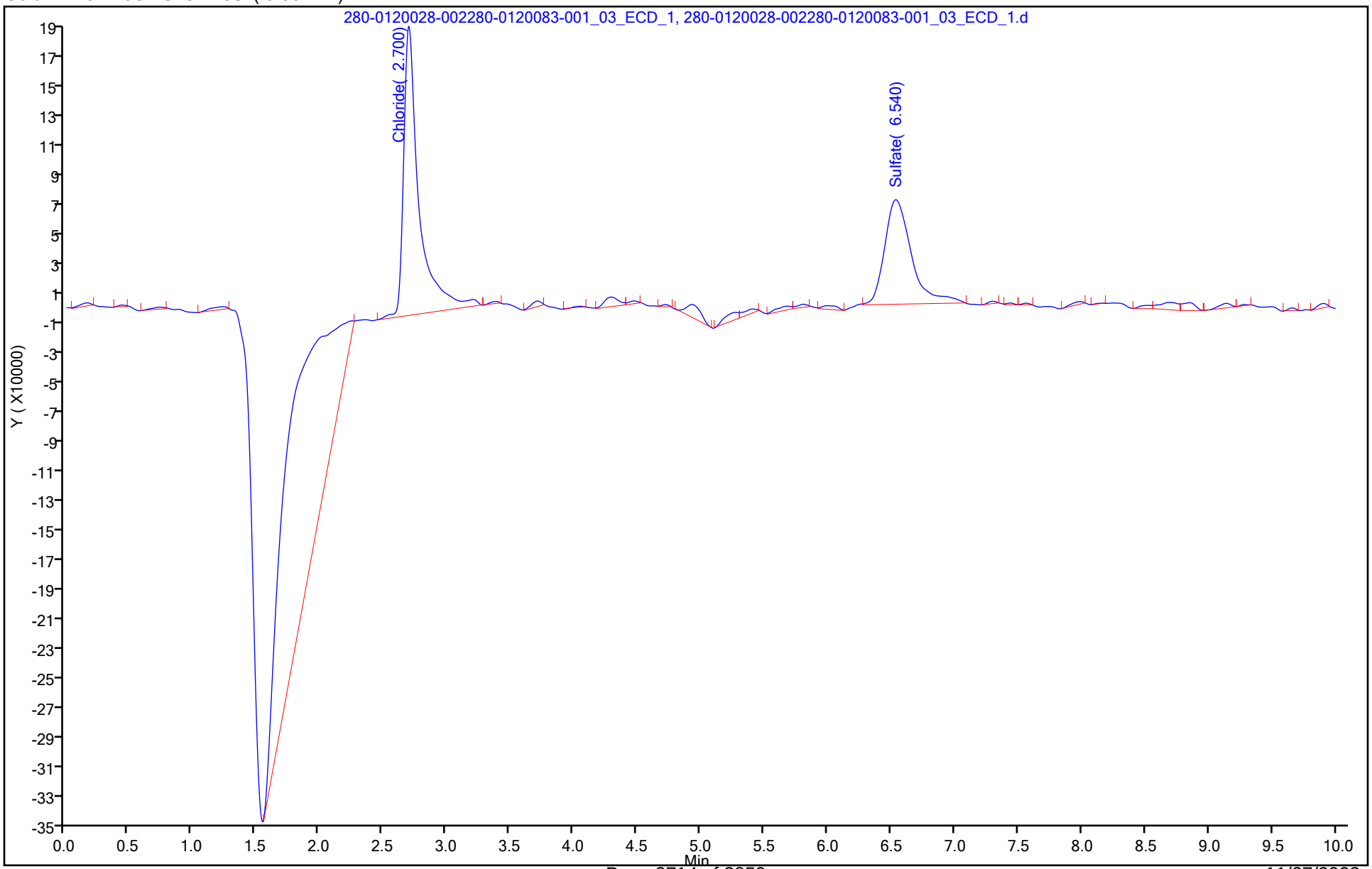
Report Date: 04-Apr-2023 11:17:57 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD_1.d

Injection Date:	03-Apr-2023 16:42:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L1			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver

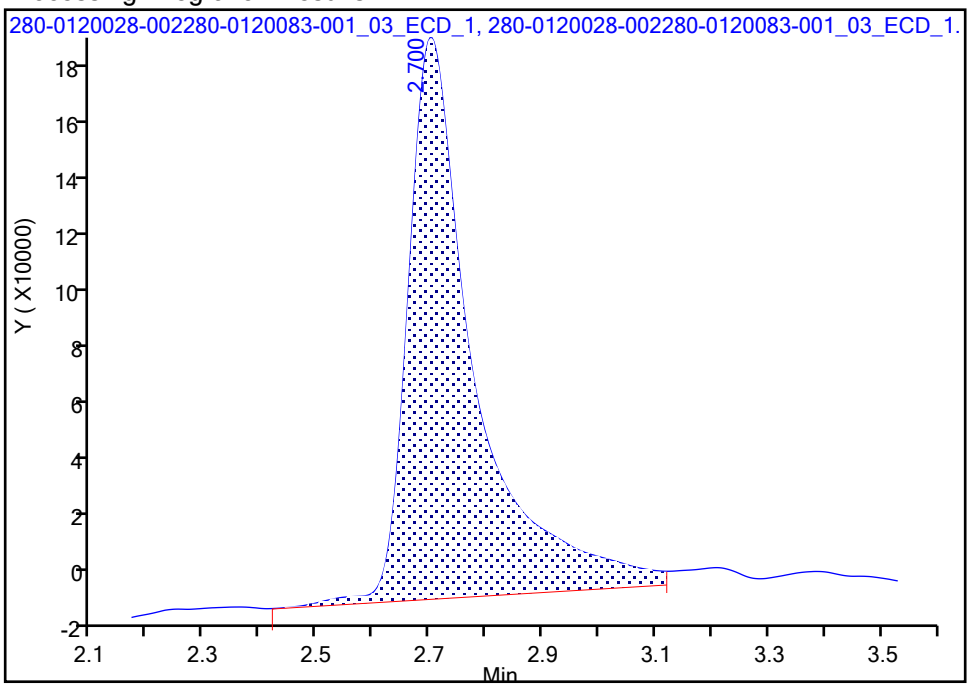
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_E
Injection Date: 03-Apr-2023 16:42:00 Instrument ID: WC_IonChrom15
Lims ID: STD L1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6

Signal: 1

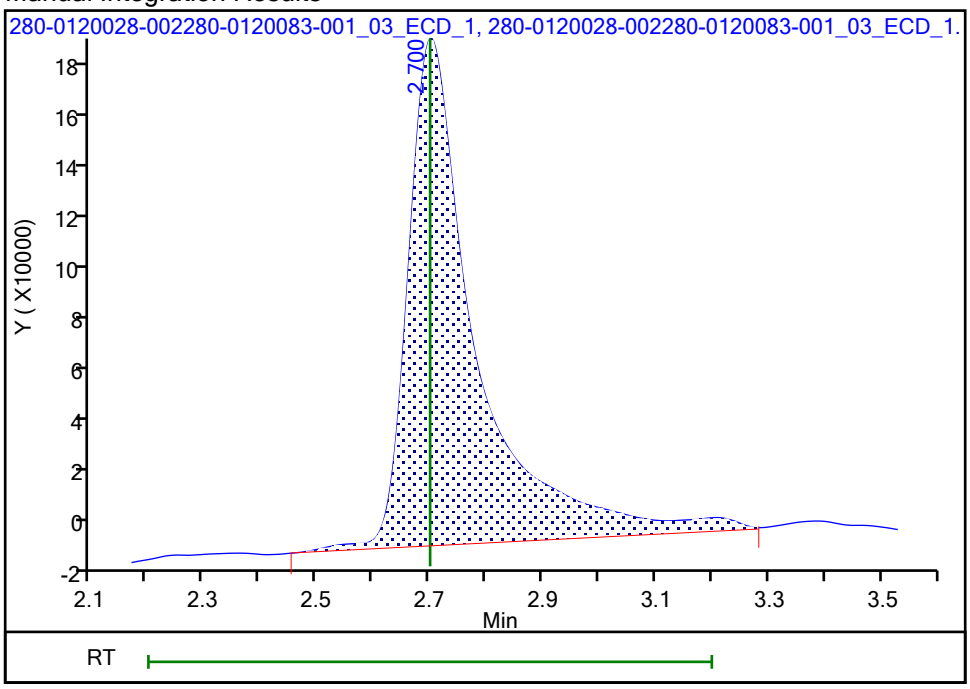
Processing Integration Results

RT: 2.70
Area: 1622548
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 1651846
Amount: 0.610935
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:06:44
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

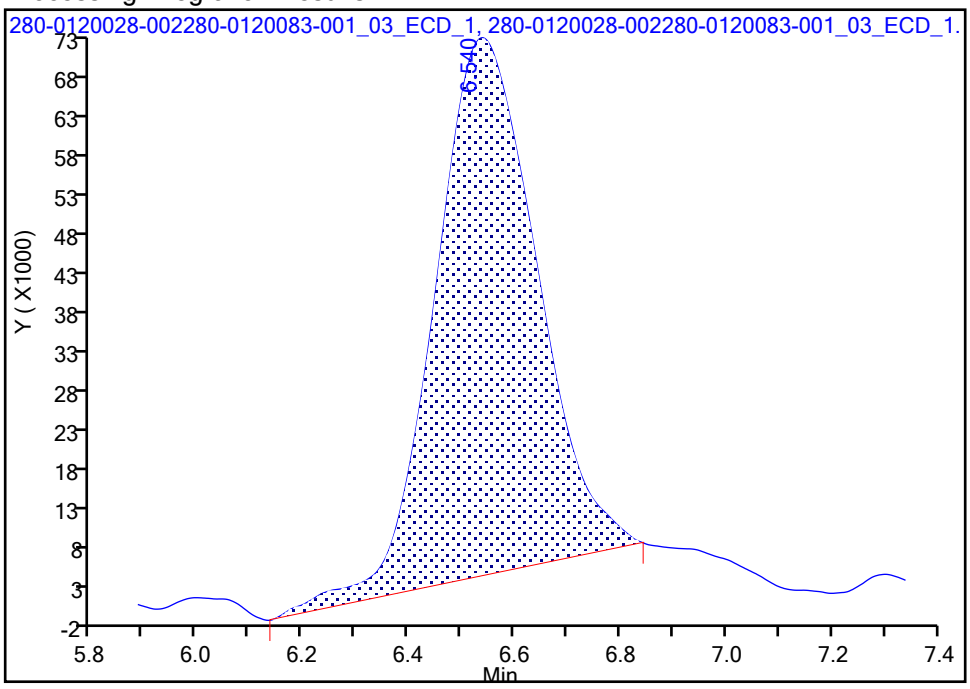
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_E
Injection Date: 03-Apr-2023 16:42:00 Instrument ID: WC_IonChrom15
Lims ID: STD L1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

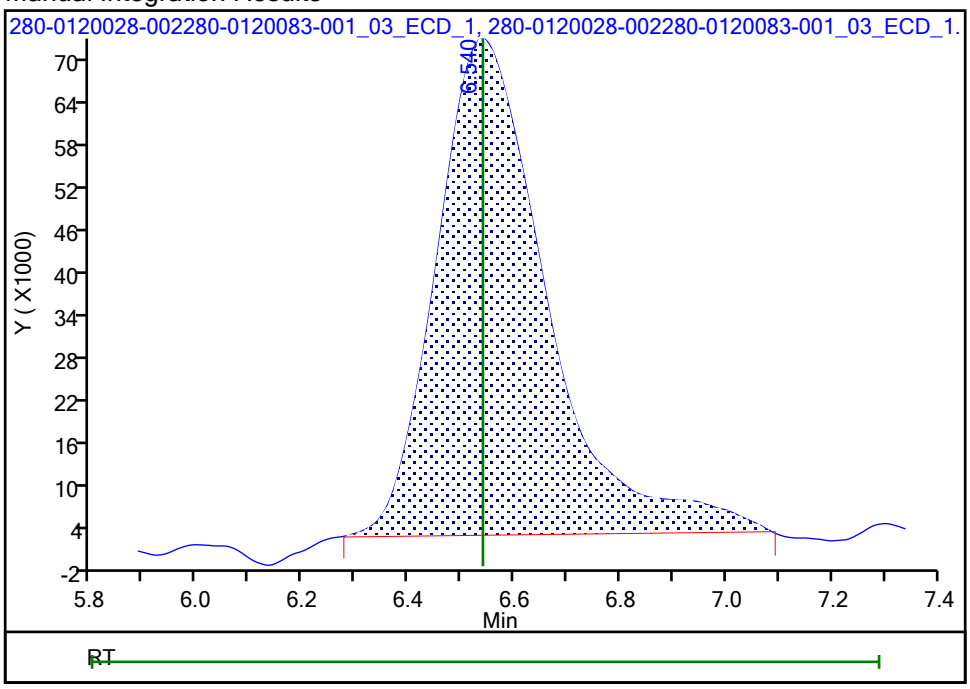
Processing Integration Results

RT: 6.54
Area: 926322
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 6.54
Area: 1025703
Amount: 0.607346
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:07:02
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 03-Apr-2023 16:54:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-002
Misc. Info.: STD L2
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:57 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.927	1.927	0.000	514755	0.2000	0.2028	Ma
2 Chloride	2.700	2.700	0.000	4009670	1.25	1.22	M
3 Nitrite as N	3.230	3.230	0.000	1566723	NC	NC	M
4 Bromide	3.833	3.833	0.000	220121	0.2000	0.2066	
5 Nitrate as N	4.303	4.303	0.000	1304923	NC	NC	
7 Orthophosphate as P	5.760	5.760	0.000	446882	NC	NC	
6 Sulfate	6.540	6.540	0.000	2443469	1.25	1.14	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.10 Units: mL
IC Cal low_00701 Amount Added: 0.08 Units: mL

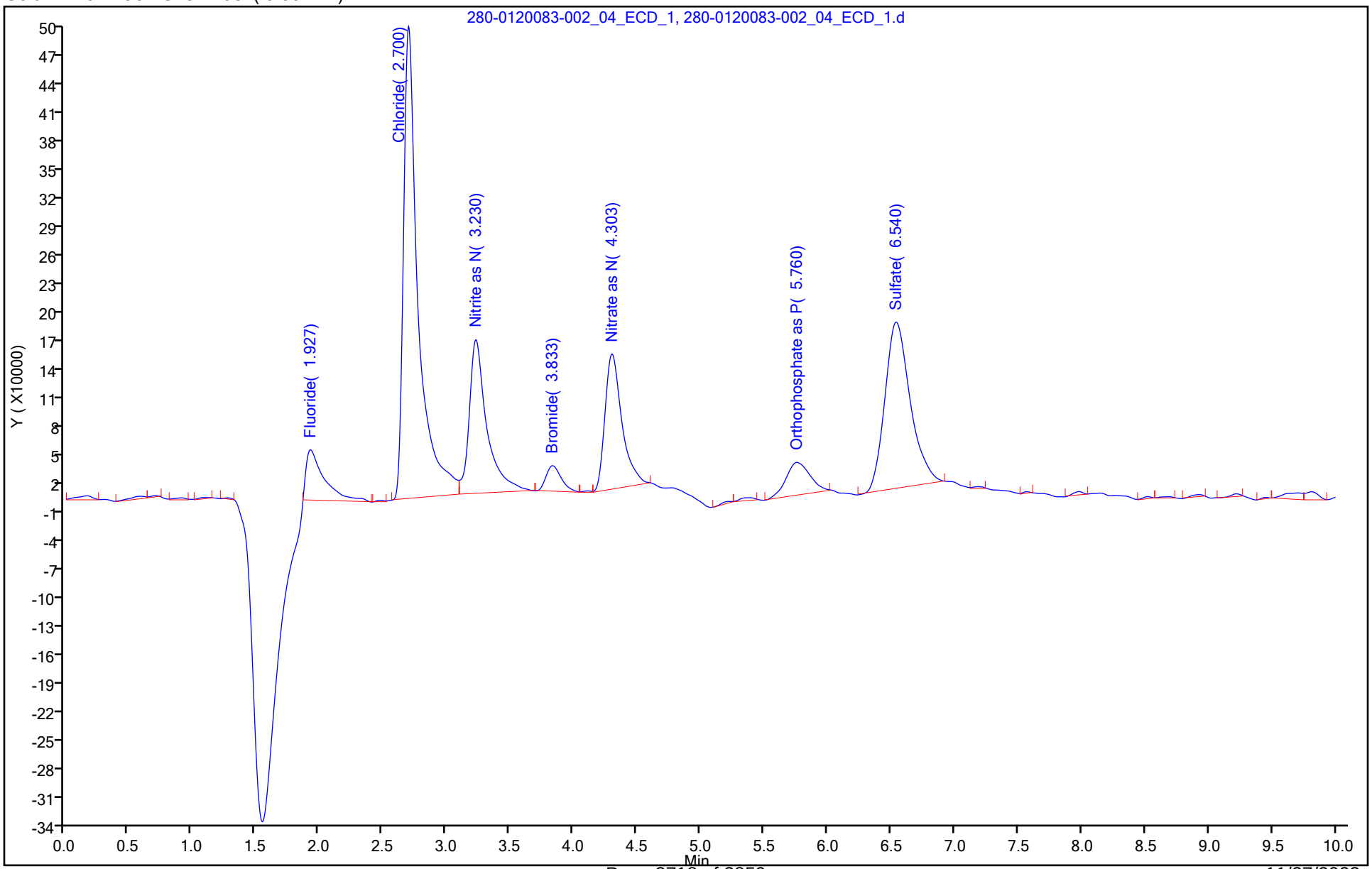
Report Date: 04-Apr-2023 11:17:58 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d

Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

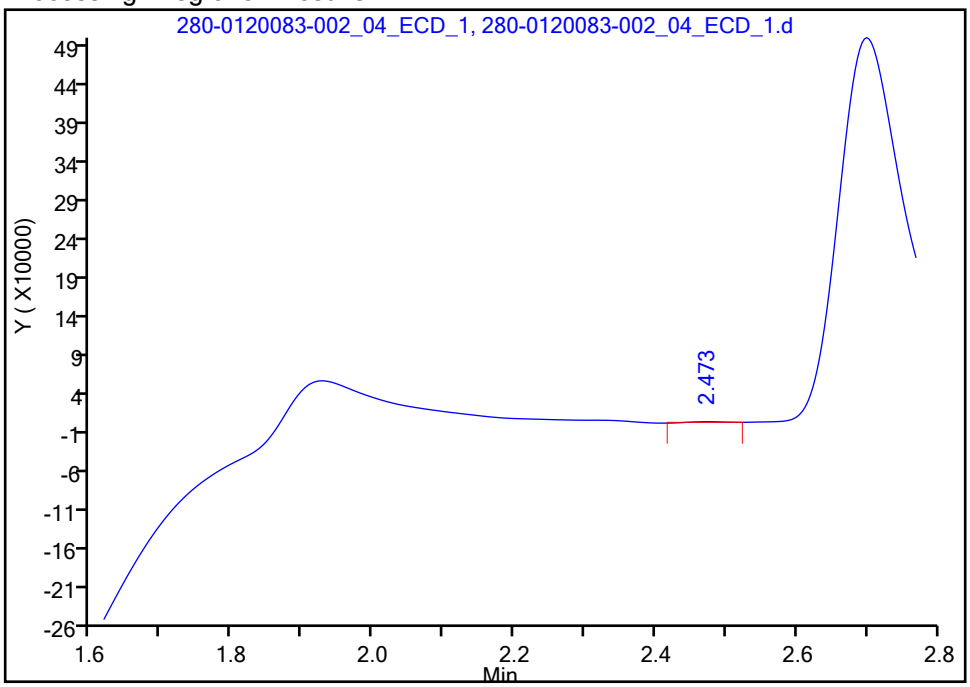
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d				
Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

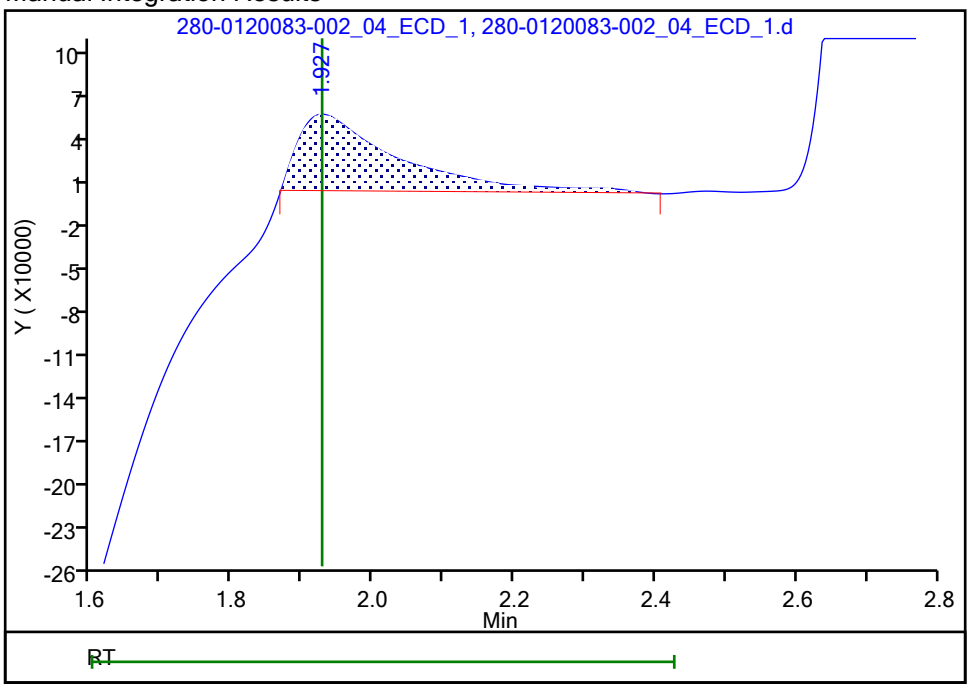
RT: 2.47
Area: 4318
Amount: 0
Amount Units: ug/ml

Processing Integration Results



RT: 1.93
Area: 514755
Amount: 0.202821
Amount Units: ug/ml

Manual Integration Results



Reviewer: XAY4, 04-Apr-2023 10:07:17
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

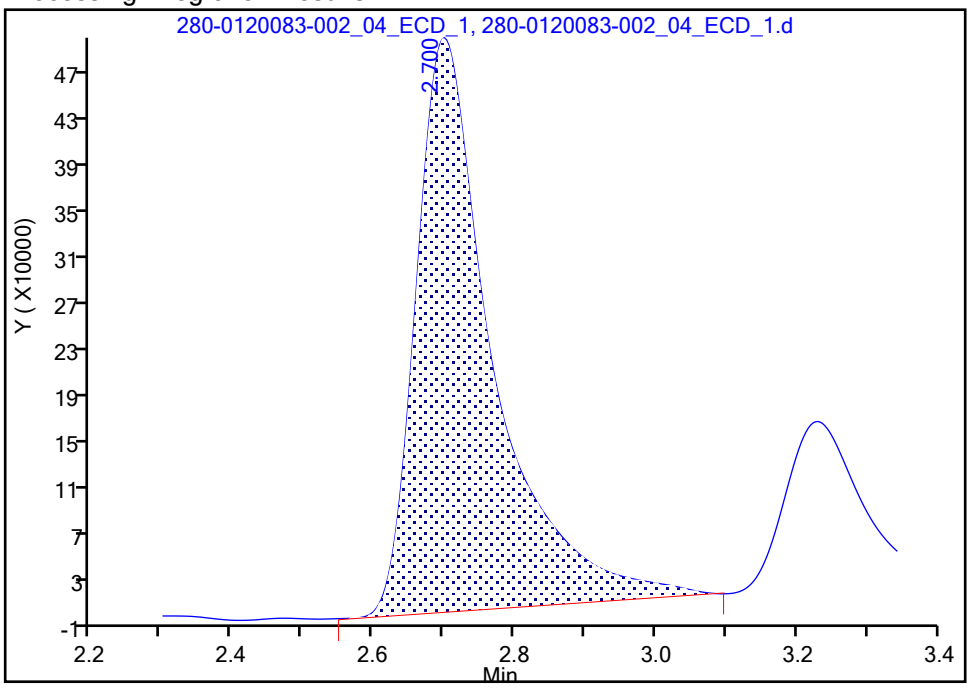
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d				
Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

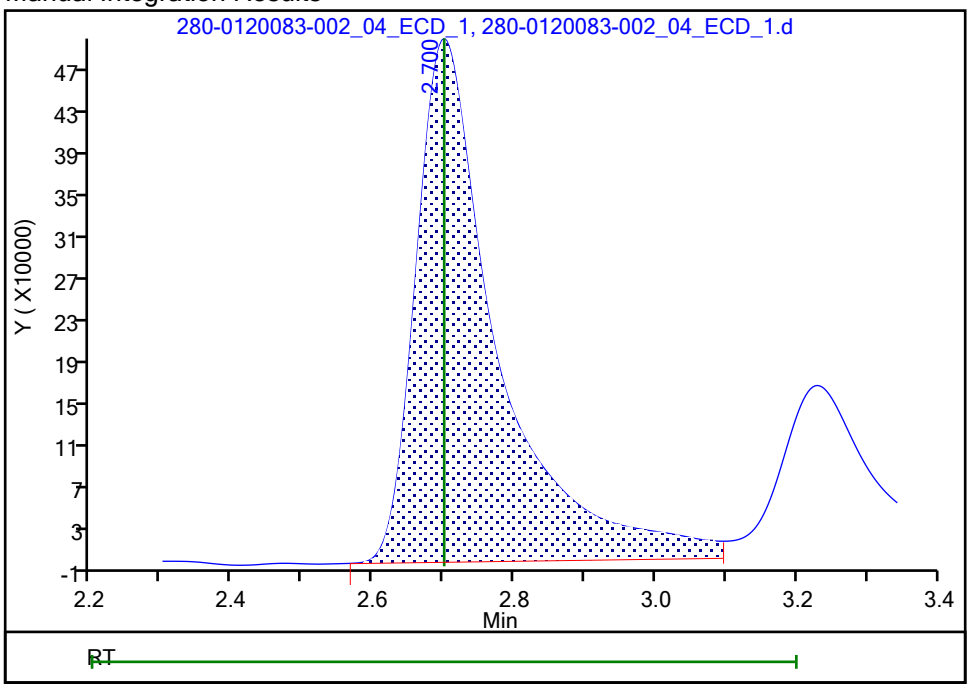
Processing Integration Results

RT: 2.70
Area: 3768322
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 4009670
Amount: 1.216005
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:09:23

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 03-Apr-2023 17:06:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-003
Misc. Info.: STD L3
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:58 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:49

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.923	1.923	0.000	1716859	0.5000	0.4463	M
2 Chloride	2.700	2.700	0.000	7890362	2.50	2.21	M
3 Nitrite as N	3.230	3.230	0.000	3703597	NC	NC	M
4 Bromide	3.830	3.830	0.000	543772	0.5000	0.4965	
5 Nitrate as N	4.303	4.303	0.000	3752523	NC	NC	
7 Orthophosphate as P	5.767	5.767	0.000	1406263	NC	NC	
6 Sulfate	6.543	6.543	0.000	5485179	2.50	2.29	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.20 Units: mL
IC Cal low_00701 Amount Added: 0.20 Units: mL

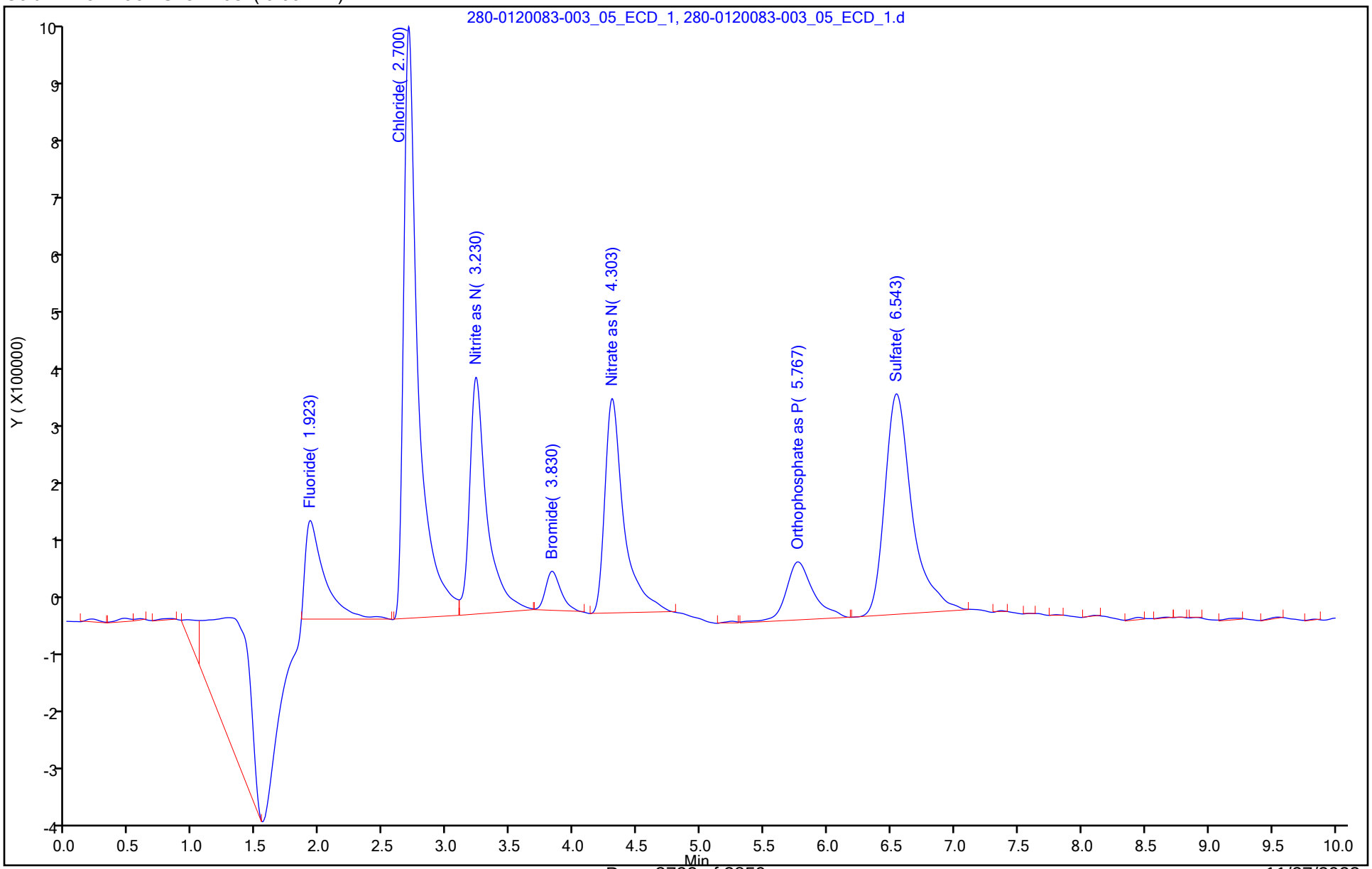
Report Date: 04-Apr-2023 11:17:58 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d

Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

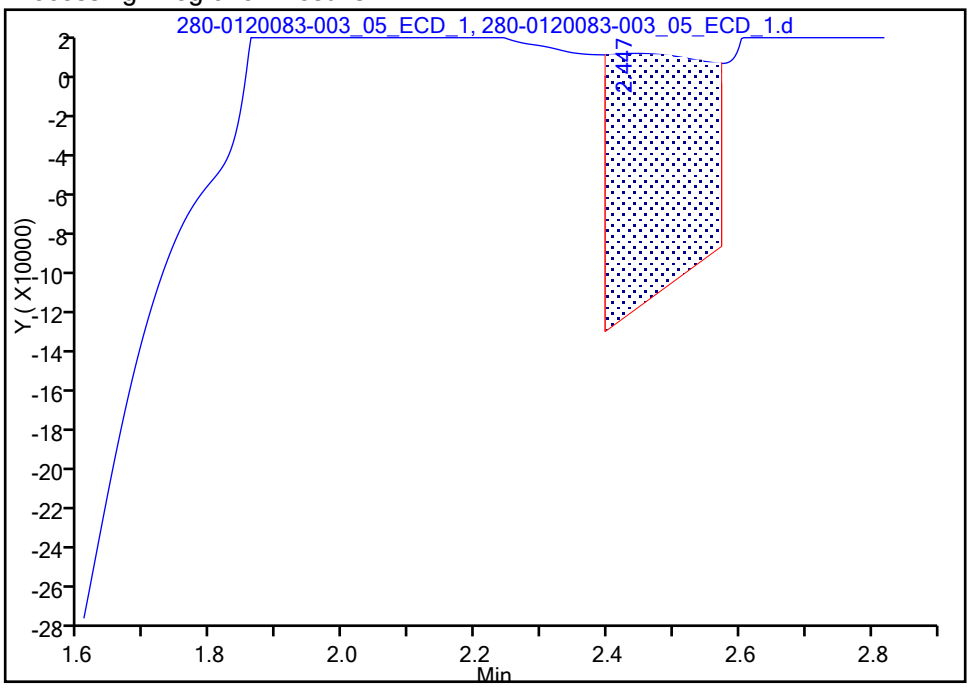
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d				
Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

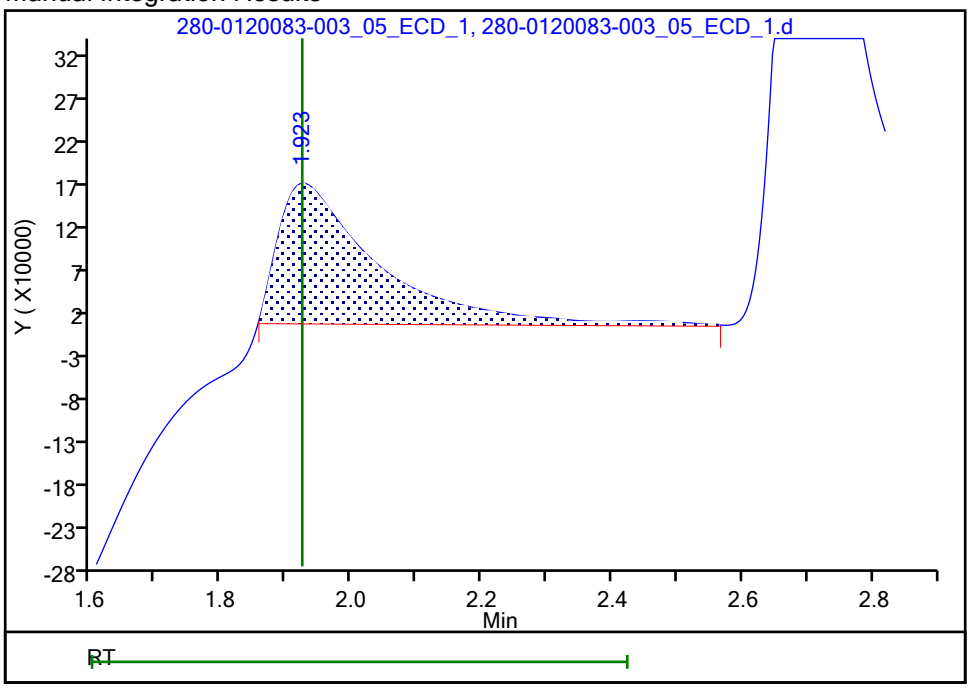
Processing Integration Results

RT: 2.45
Area: 1236234
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 1.92
Area: 1716859
Amount: 0.446324
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:07:36

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

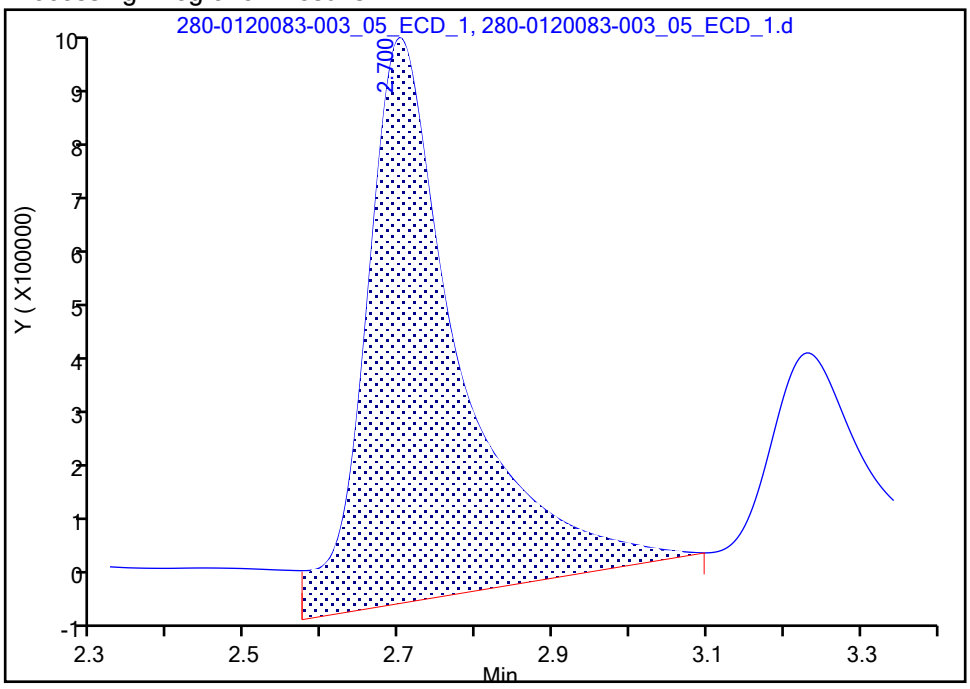
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d				
Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

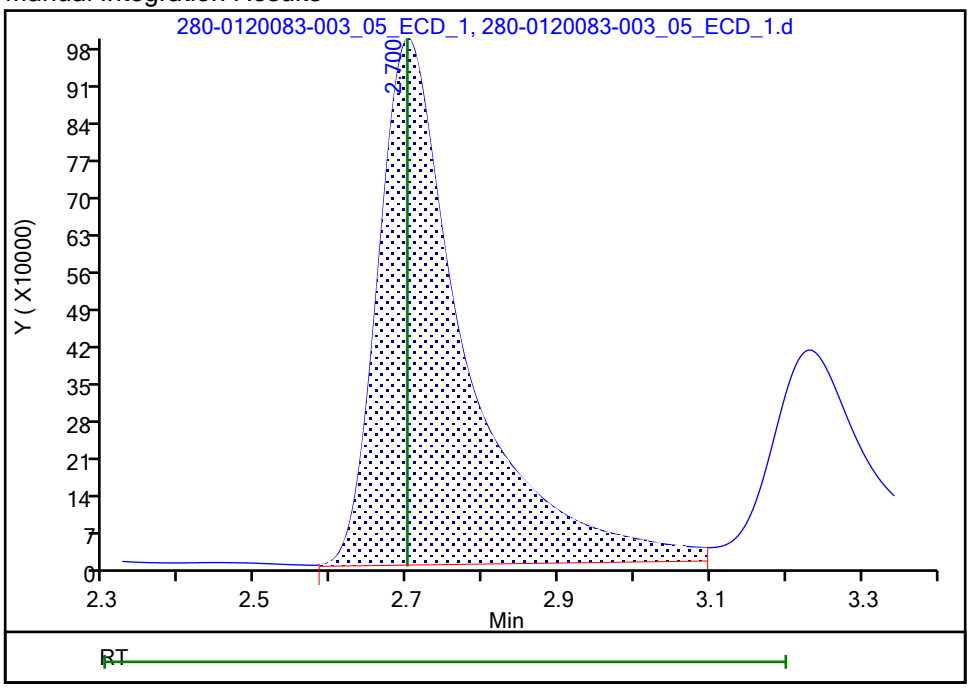
Processing Integration Results

RT: 2.70
Area: 8952138
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 7890362
Amount: 2.211878
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:09:49

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 03-Apr-2023 17:18:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-004
Misc. Info.: STD L4
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	5002458	1.00	1.11	Ma
2 Chloride	2.703	2.703	0.000	104633916	30.0	27.0	M
3 Nitrite as N	3.227	3.227	0.000	9946553	NC	NC	Ma
4 Bromide	3.827	3.827	0.000	1082846	1.00	0.9794	
5 Nitrate as N	4.300	4.300	0.000	7262541	NC	NC	
7 Orthophosphate as P	5.763	5.763	0.000	2563153	NC	NC	
6 Sulfate	6.550	6.550	0.000	75166700	30.0	28.5	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 2.40 Units: mL
IC Cal low_00701 Amount Added: 0.40 Units: mL

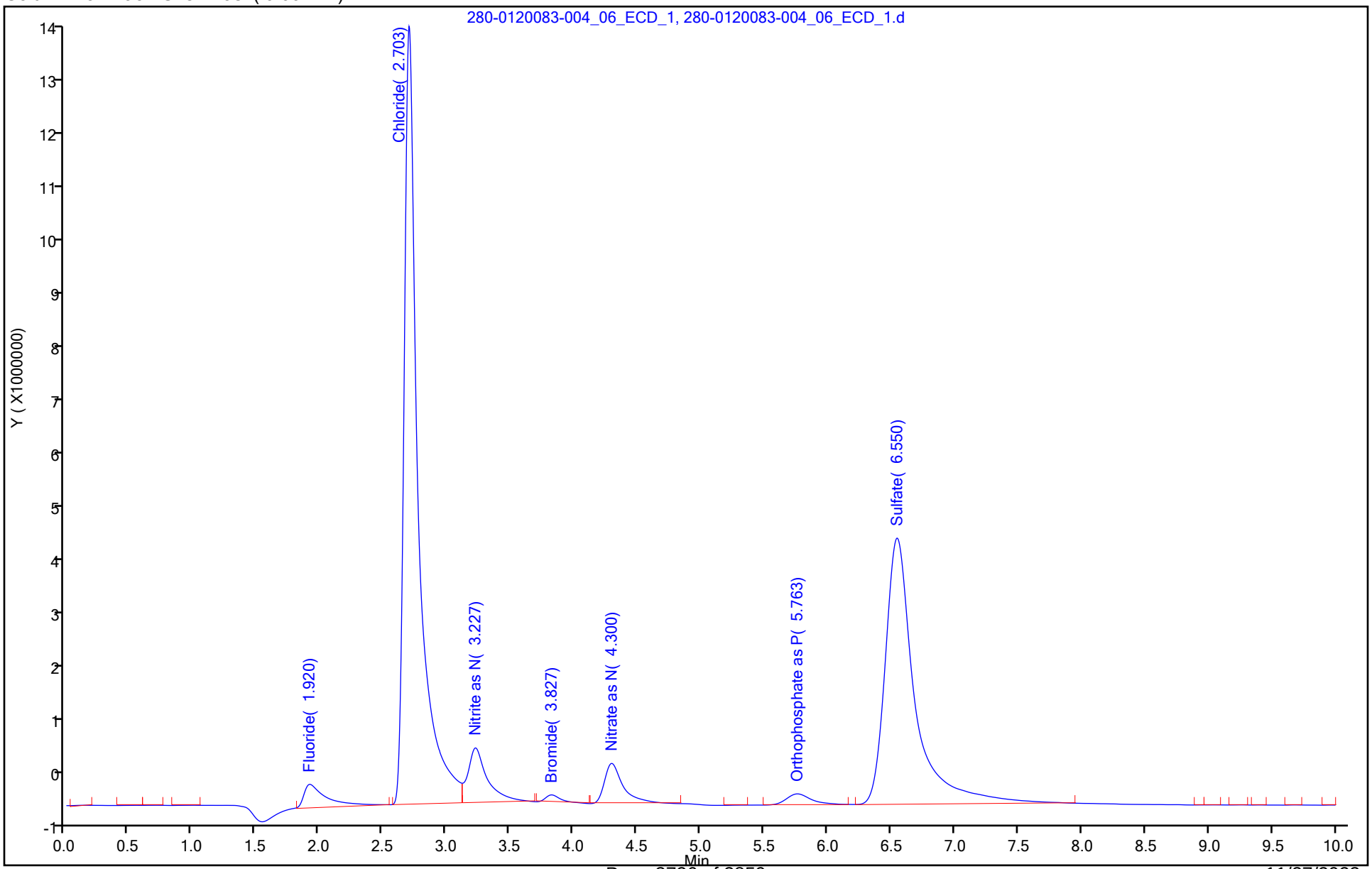
Report Date: 04-Apr-2023 11:17:59 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d

Injection Date:	03-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

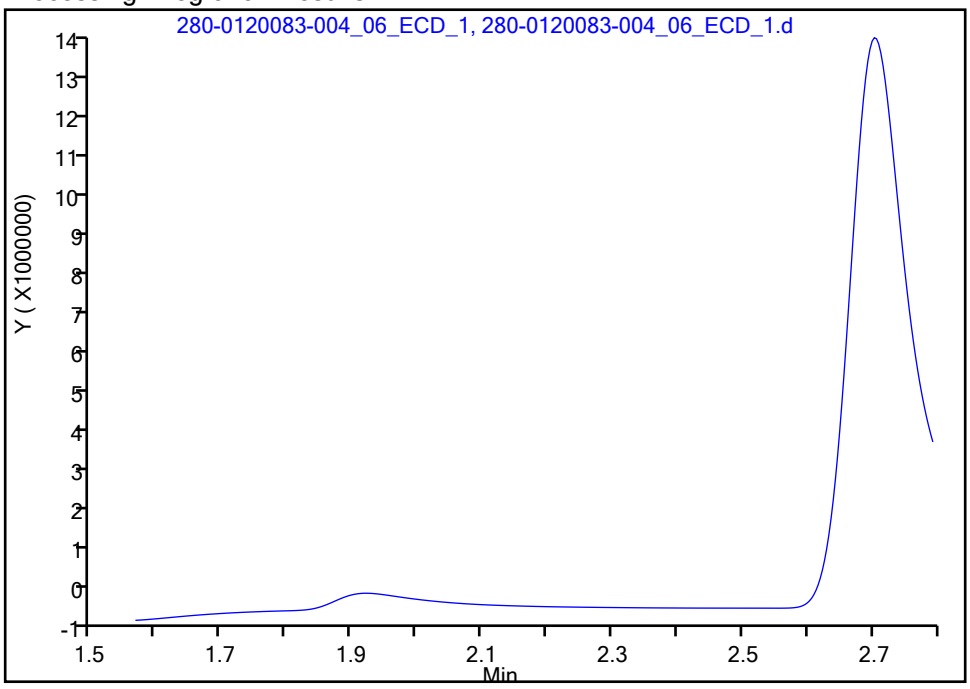
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d				
Injection Date:	03-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L4				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

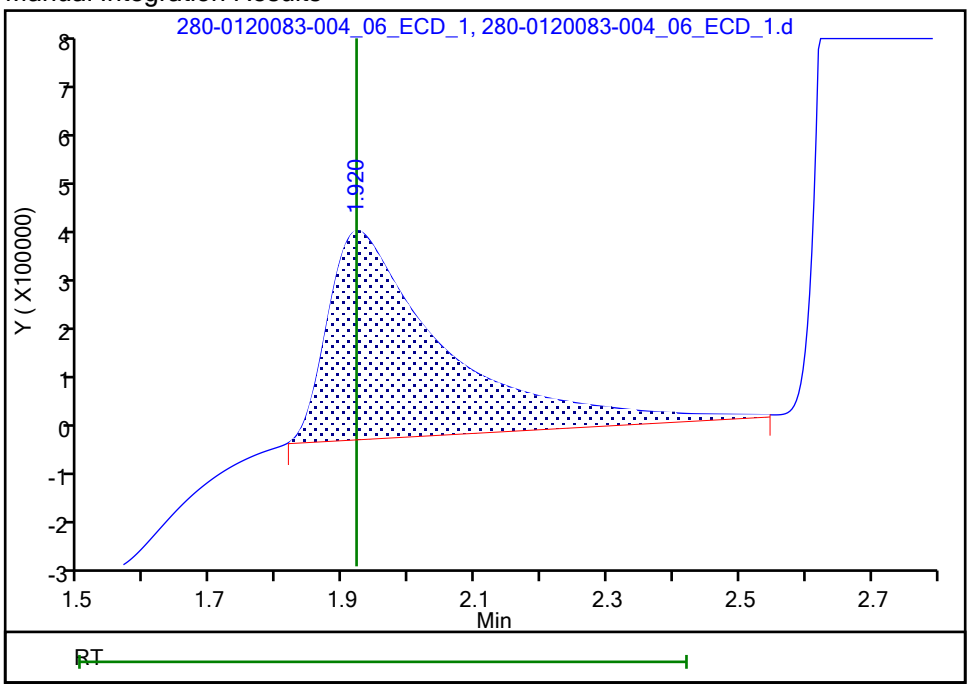
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 5002458
Amount: 1.111870
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:07:59
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

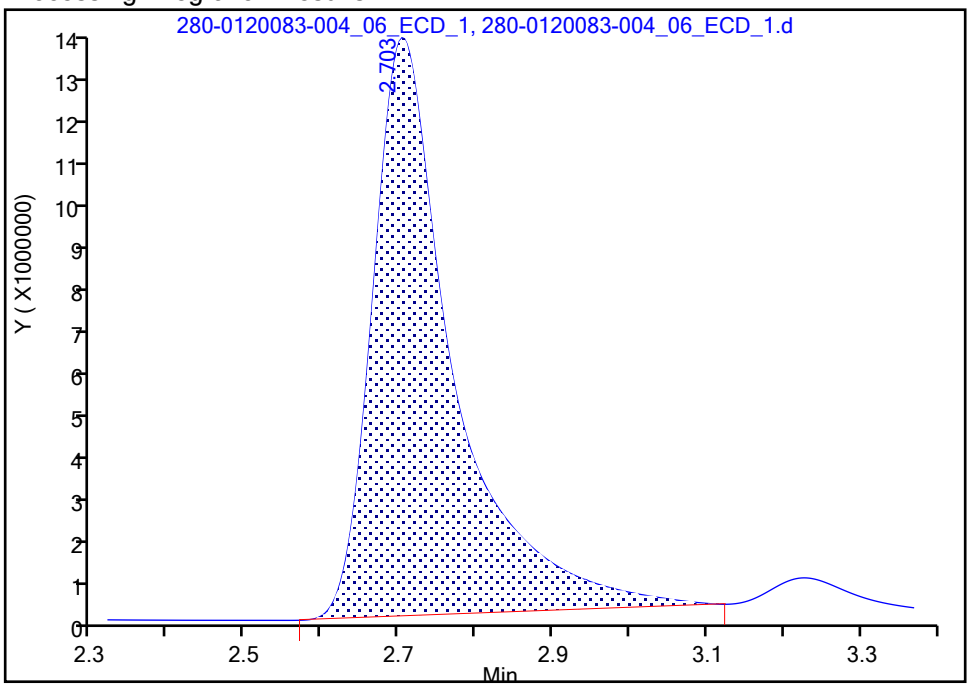
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d				
Injection Date:	03-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L4				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

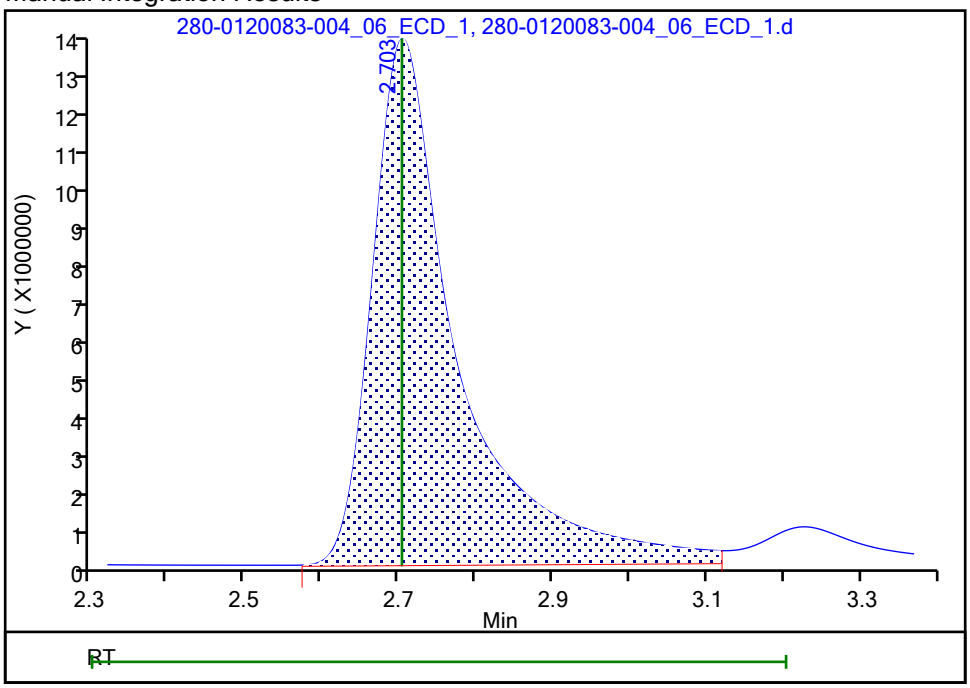
Processing Integration Results

RT: 2.70
Area: 99363161
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 104633916
Amount: 27.038454
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:01
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 03-Apr-2023 17:30:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-005
Misc. Info.: STD L5
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	11696825	2.50	2.47	Ma
2 Chloride	2.710	2.710	0.000	225809574	60.0	58.1	M
3 Nitrite as N	3.230	3.230	0.000	22727090	NC	NC	Ma
4 Bromide	3.827	3.827	0.000	2730351	2.50	2.46	
5 Nitrate as N	4.300	4.300	0.000	19732616	NC	NC	
7 Orthophosphate as P	5.763	5.763	0.000	6654551	NC	NC	
6 Sulfate	6.557	6.557	0.000	155347554	60.0	58.7	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 4.80 Units: mL
IC Cal low_00701 Amount Added: 1.00 Units: mL

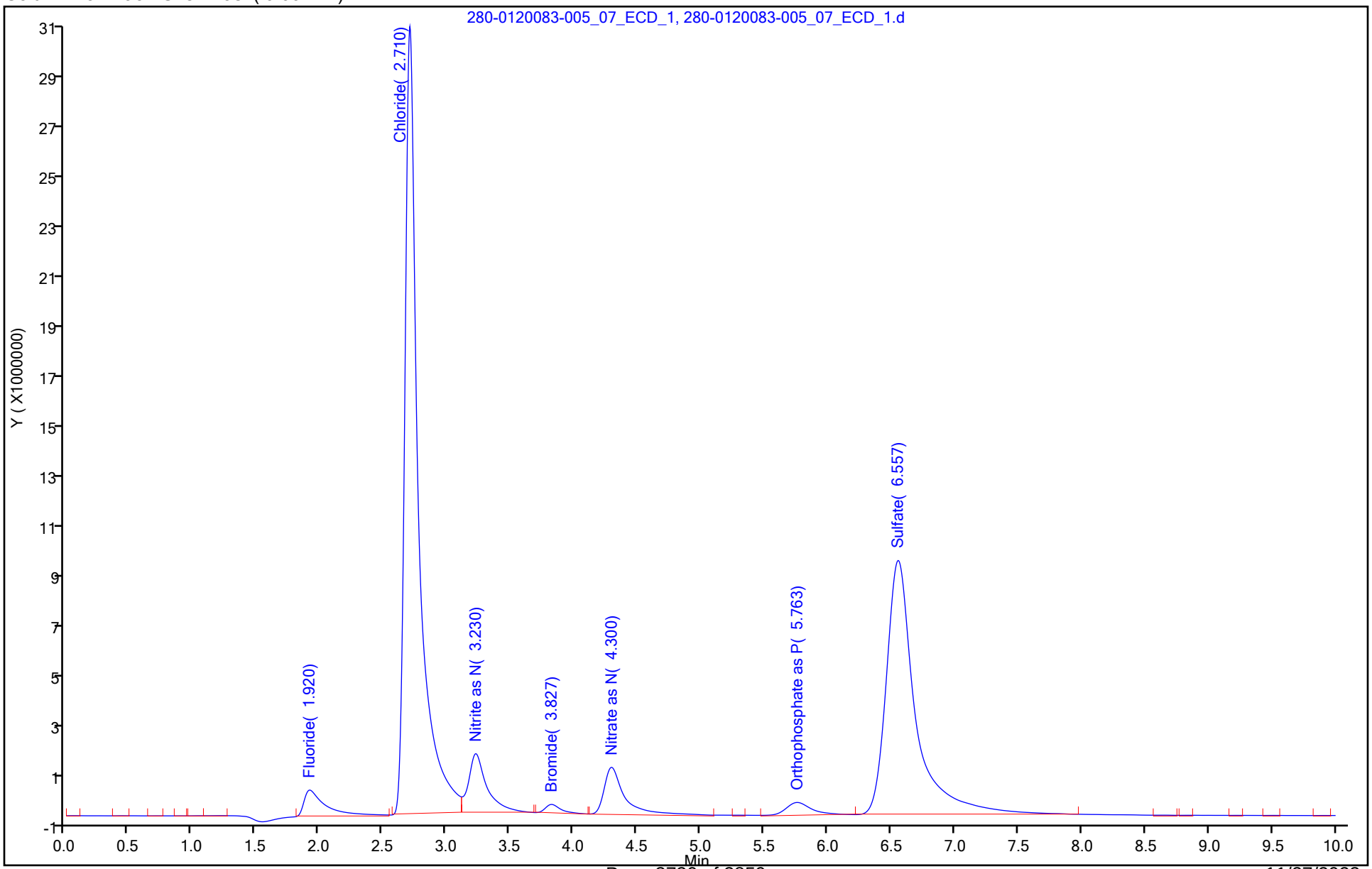
Report Date: 04-Apr-2023 11:17:59 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d

Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

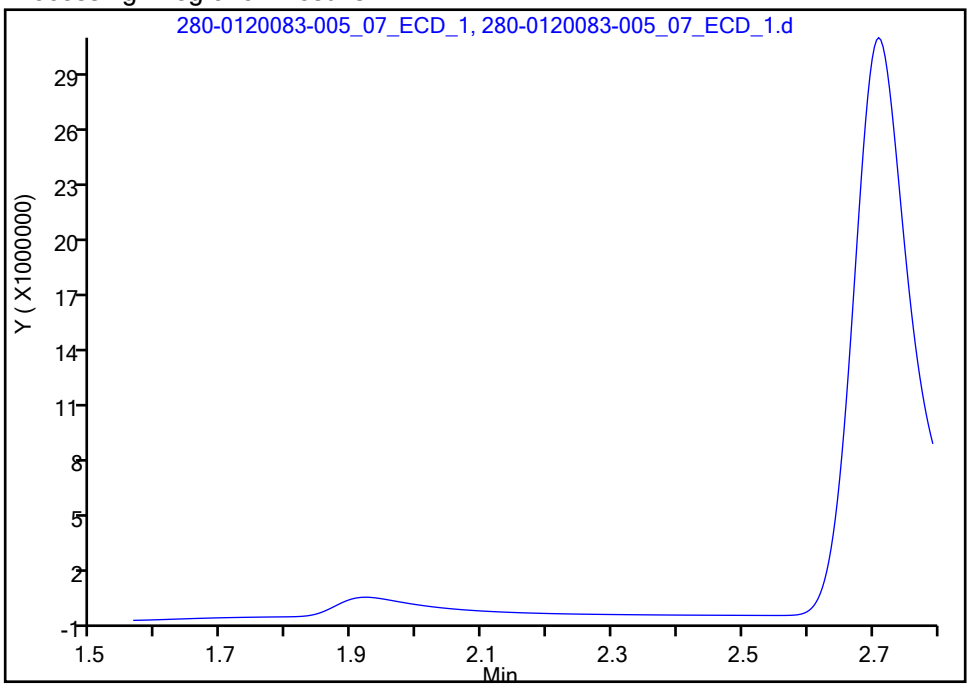
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d				
Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L5				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

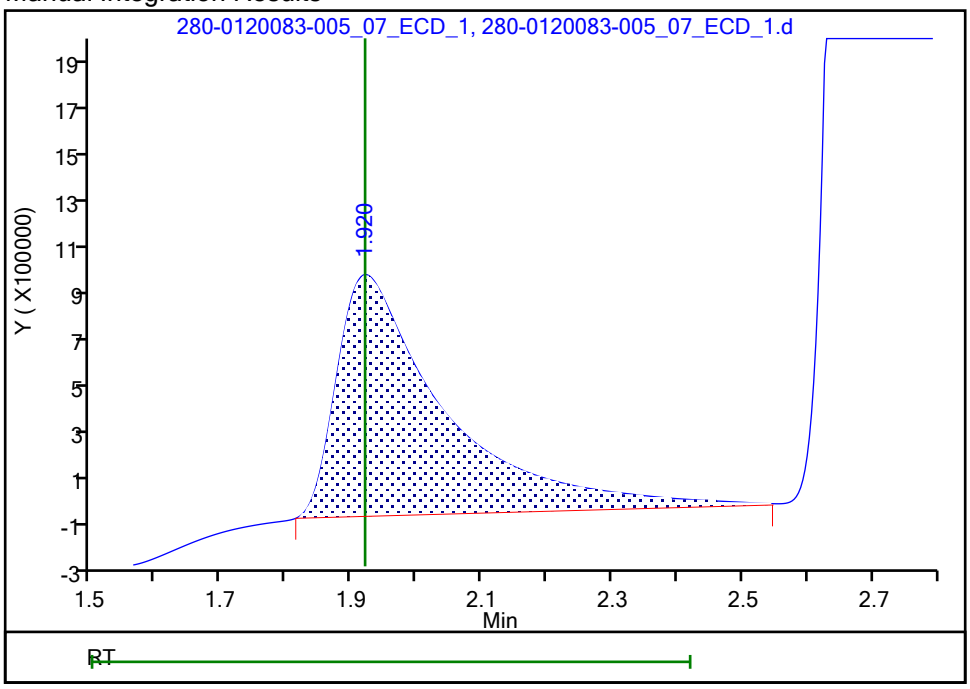
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 11696825
Amount: 2.467911
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:08:15
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

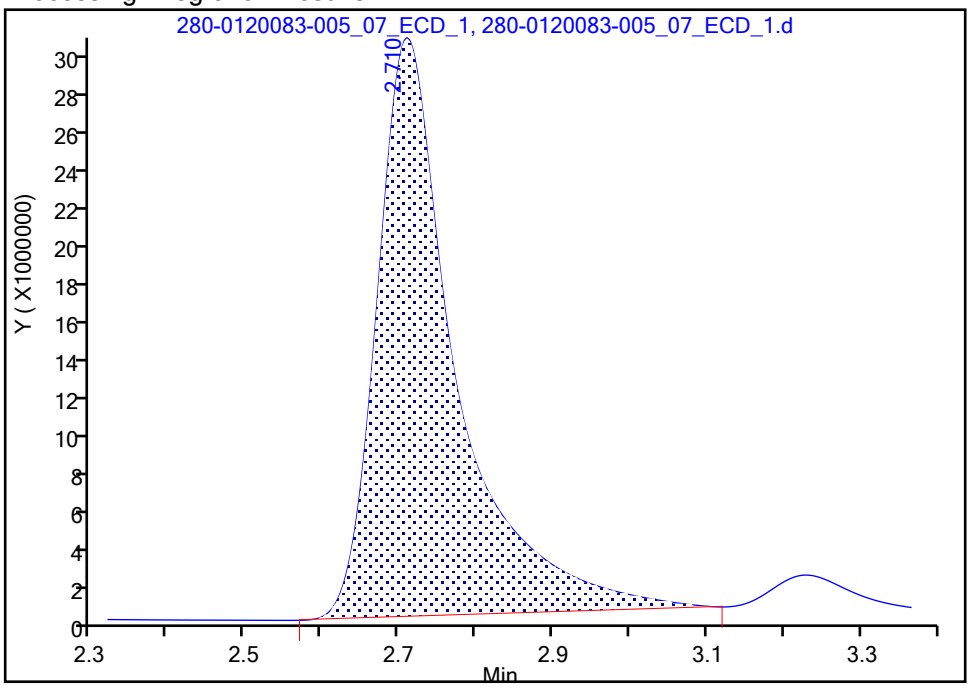
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d				
Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L5				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

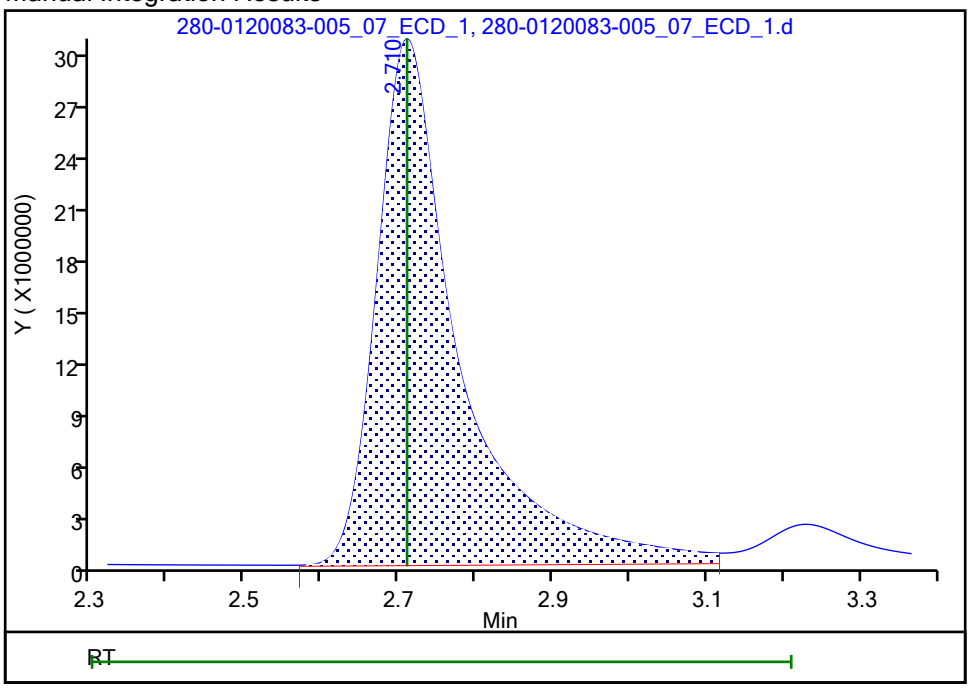
Processing Integration Results

RT: 2.71
Area: 216176281
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.71
Area: 225809574
Amount: 58.134858
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:25
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 03-Apr-2023 17:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-006
Misc. Info.: STD L6
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:18:00 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	24054194	5.00	4.97	Ma
2 Chloride	2.717	2.717	0.000	408580005	100.0	105.0	M
3 Nitrite as N	3.230	3.230	0.000	45521852	NC	NC	Ma
4 Bromide	3.823	3.823	0.000	5641478	5.00	5.06	
5 Nitrate as N	4.293	4.293	0.000	41136324	NC	NC	
7 Orthophosphate as P	5.757	5.757	0.000	13790470	NC	NC	
6 Sulfate	6.563	6.563	0.000	273226252	100.0	103.0	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 8.00 Units: mL
IC Cal low_00701 Amount Added: 2.00 Units: mL

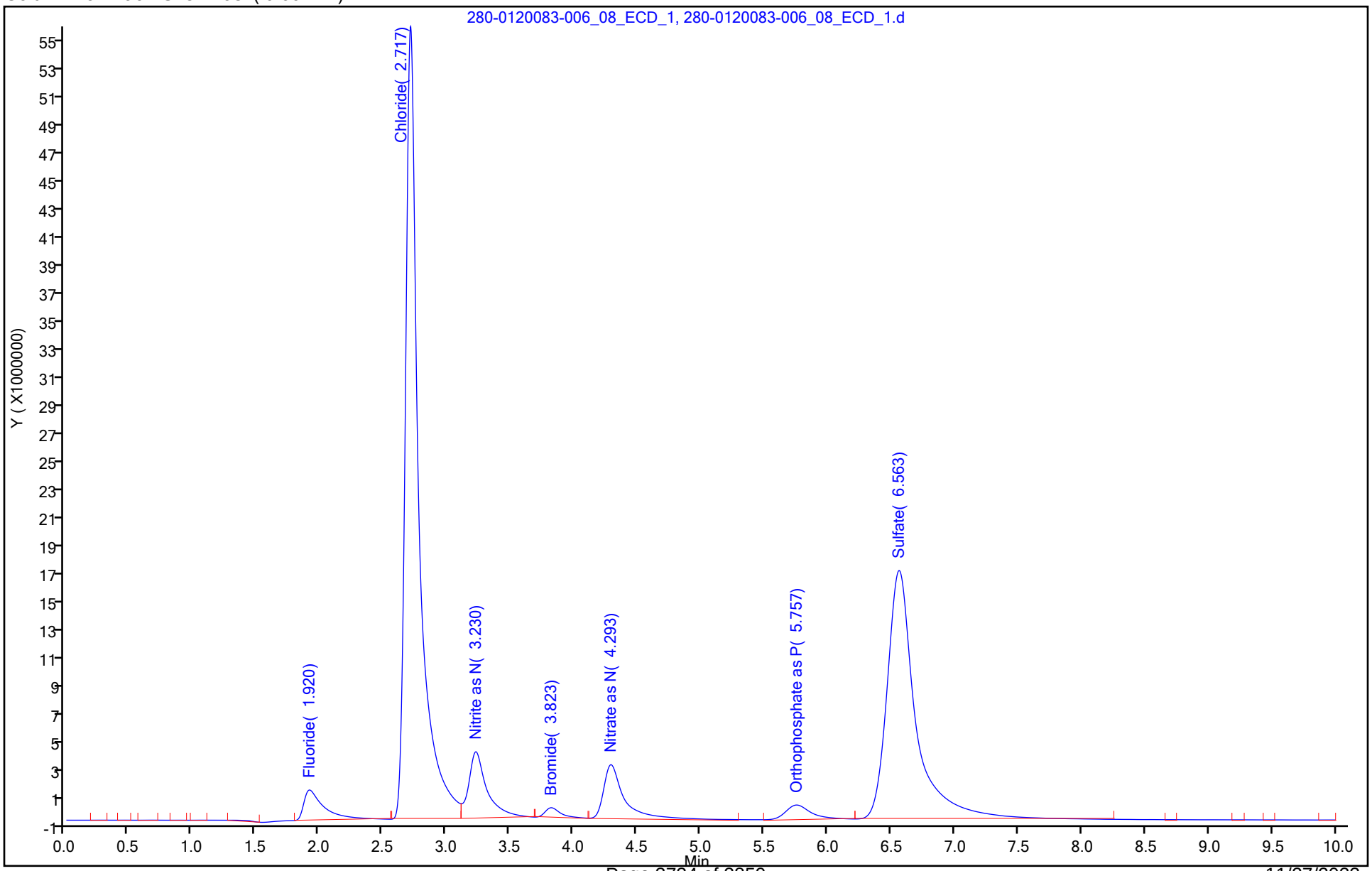
Report Date: 04-Apr-2023 11:18:00 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Injection Date:	03-Apr-2023 17:42:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

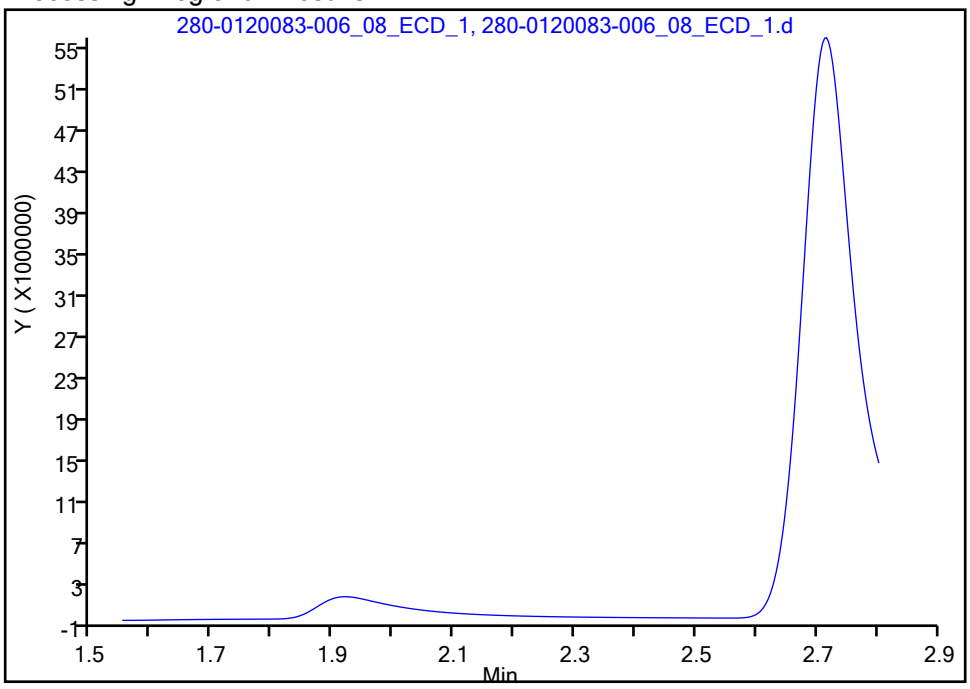
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Injection Date: 03-Apr-2023 17:42:00 Instrument ID: WC_IonChrom15
Lims ID: STD L6
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

1 Fluoride, CAS: 16984-48-8

Signal: 1

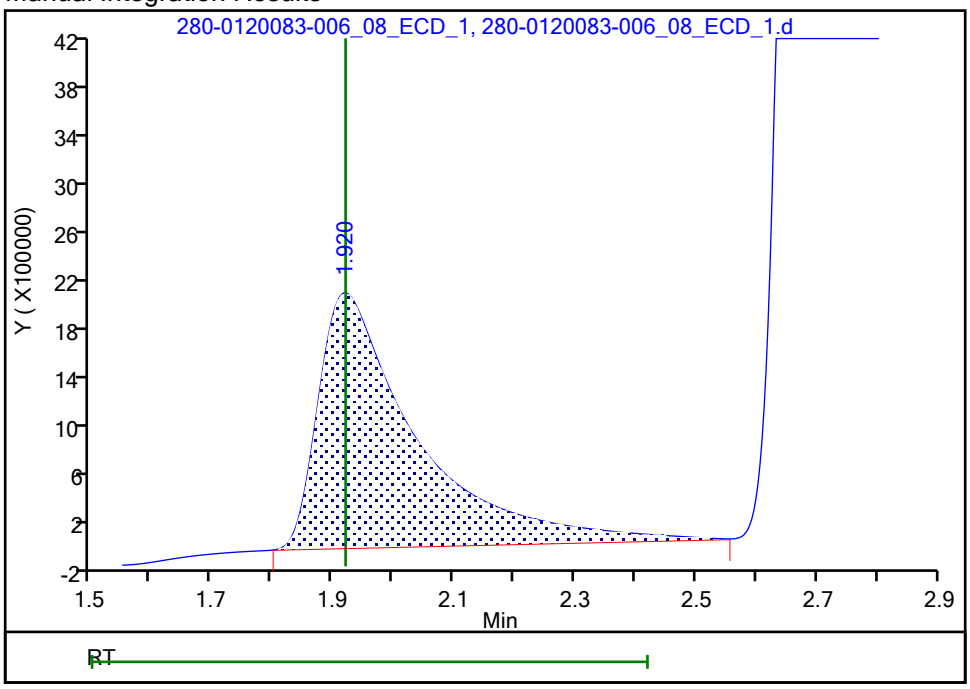
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 24054194
Amount: 4.971075
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:08:29
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

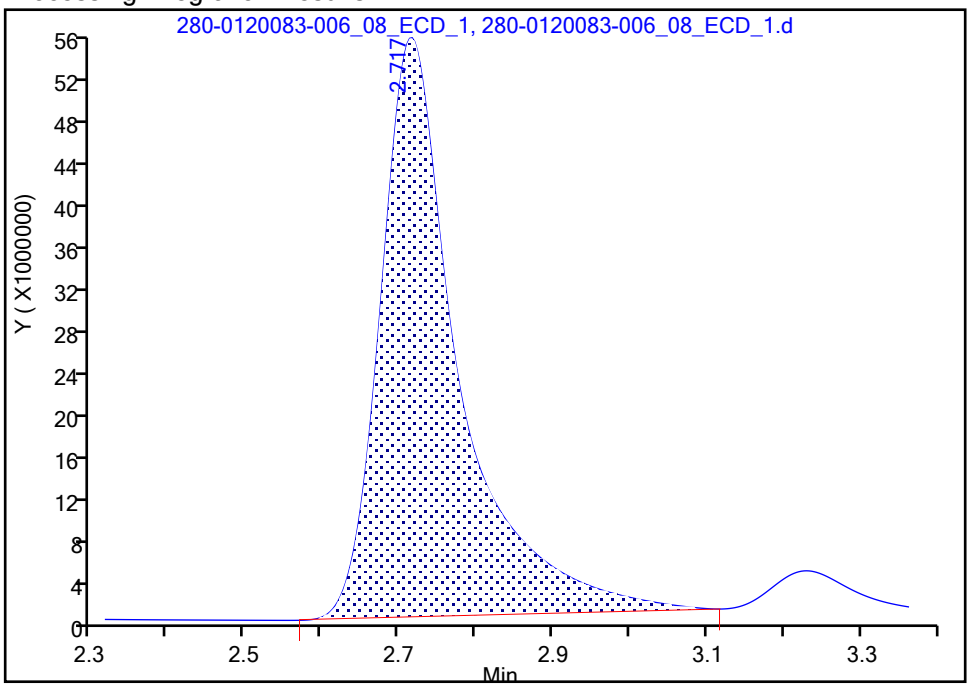
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Injection Date:	03-Apr-2023 17:42:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

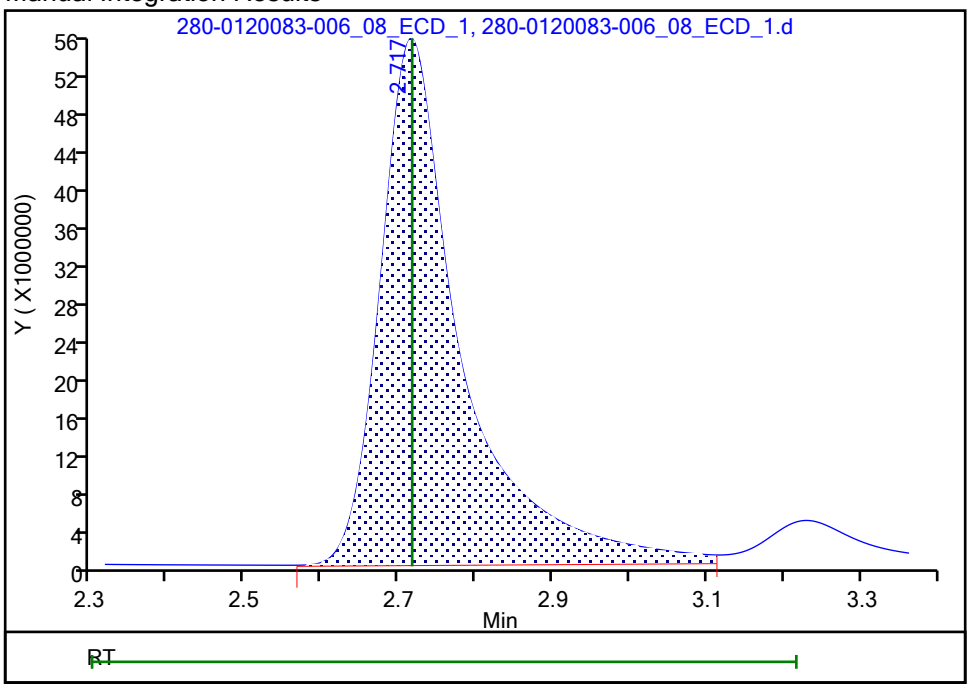
Processing Integration Results

RT: 2.72
Area: 393078326
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.72
Area: 408580005
Amount: 105.0379
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:51
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 120083 **Inst ID:** IC15 **Analysis Date:** 4/4/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	173969	1	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	173607	15	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	173854	21	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	173760	1	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	49218	8	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	173855	2	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	49222	2	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	49221	1	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174060	7	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	~~173607~~ EJS 4/4		F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason	
969	1	(F) (Cl) NO2 Br NO3 PO4 (SO4)	200x	rerun	
607	15	(F) (Cl) NO2 Br NO3 PO4 (SO4)	5,500,200x	rerun	
~~854~~ EJS 4/4	~~21~~	F Cl NO2 Br NO3 PO4 SO4	~~100x~~	~~reran~~	EJS 4/4
855	2	(F) (Cl) NO2 Br NO3 PO4 (SO4)	100x	rerun	
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	03-Apr-2023 17:54:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120083-007				
Misc. Info.:	ICV				
Operator ID:		Instrument ID:	WC_IonChrom15		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	04-Apr-2023 11:53:33	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1646				
First Level Reviewer: XAY4		Date:	04-Apr-2023 10:06:27		
Start Cal Date:	03-Apr-2023 16:42:00				
End Cal Date:	03-Apr-2023 17:42:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	9279739	2.00	1.98	M
2 Chloride	2.717	2.717	0.000	328549047	80.0	84.5	M
3 Nitrite as N	3.227	3.227	0.000	20889847	NC	NC	Ma
4 Bromide	3.827	3.827	0.000	2137744	2.00	1.92	
5 Nitrate as N	4.300	4.300	0.000	15854770	NC	NC	
7 Orthophosphate as P	5.763	5.763	0.000	5351617	NC	NC	
6 Sulfate	6.563	6.563	0.000	227136614	80.0	85.7	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC SO4 ICV_00024	Amount Added:	0.80	Units: mL
Cl ICV Std_00006	Amount Added:	0.80	Units: mL
IC ICV 5_00402	Amount Added:	0.80	Units: mL

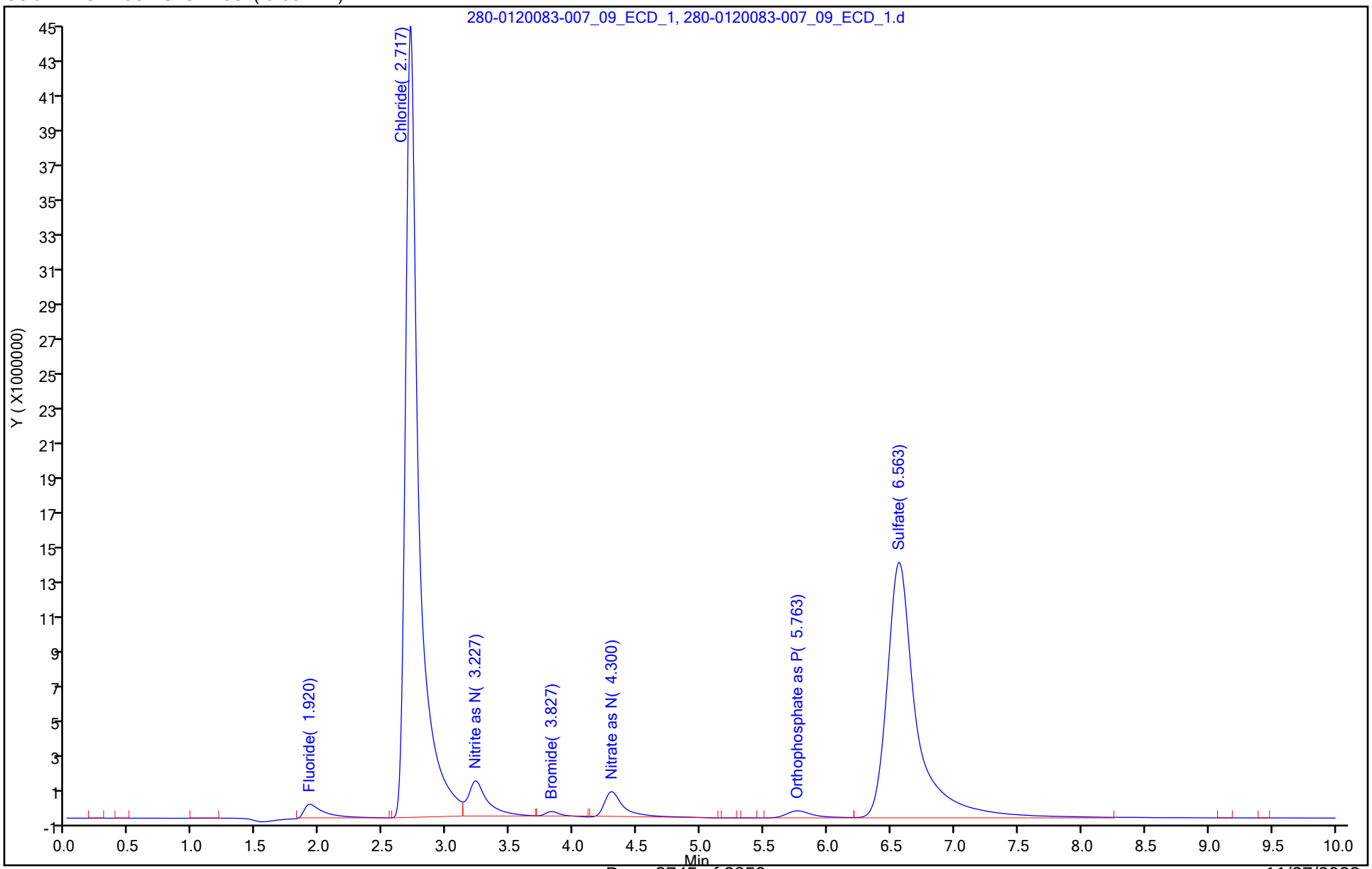
Report Date: 04-Apr-2023 11:53:49 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d

Injection Date:	03-Apr-2023 17:54:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

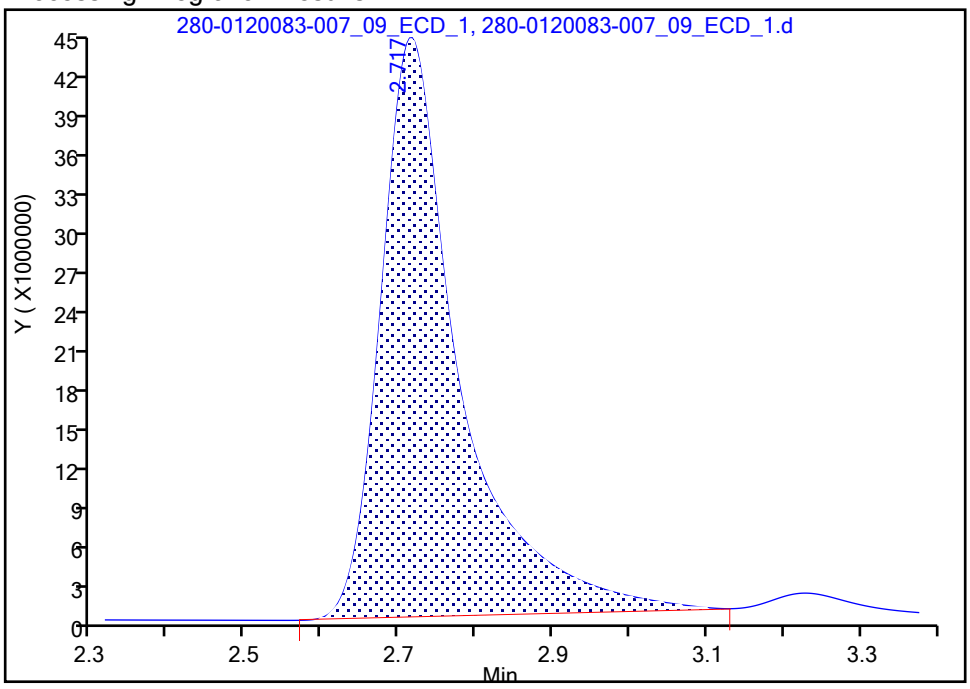
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Injection Date: 03-Apr-2023 17:54:00 Instrument ID: WC_IonChrom15
Lims ID: ICV
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6

Signal: 1

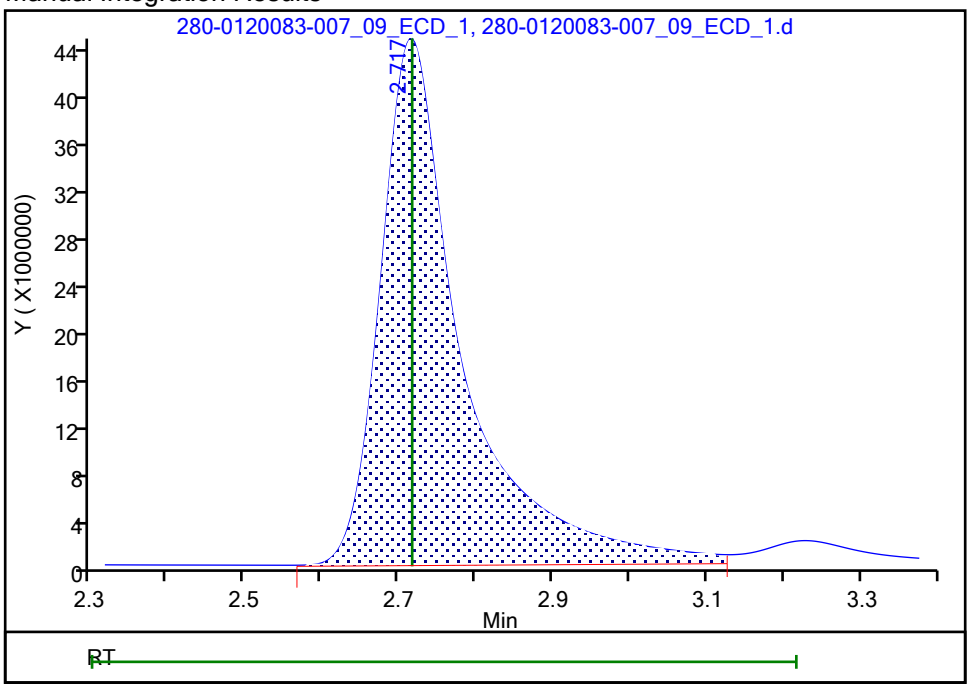
Processing Integration Results

RT: 2.72
Area: 315873449
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.72
Area: 328549047
Amount: 84.500122
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:13:57
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-008_10_ECD_1.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 03-Apr-2023 18:06:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-008
Misc. Info.: ICB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:52:16 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 11:51:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride	2.707	2.707	0.000	90380		0.2102	M
3 Nitrite as N	3.270	3.230	0.040	16278		NC	
4 Bromide	3.710	3.823	-0.113	7406		0.0161	
5 Nitrate as N	4.310	4.297	0.013	15246		NC	
7 Orthophosphate as P	5.837	5.763	0.074	23300		NC	
6 Sulfate	6.507	6.557	-0.050	10924		0.2255	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

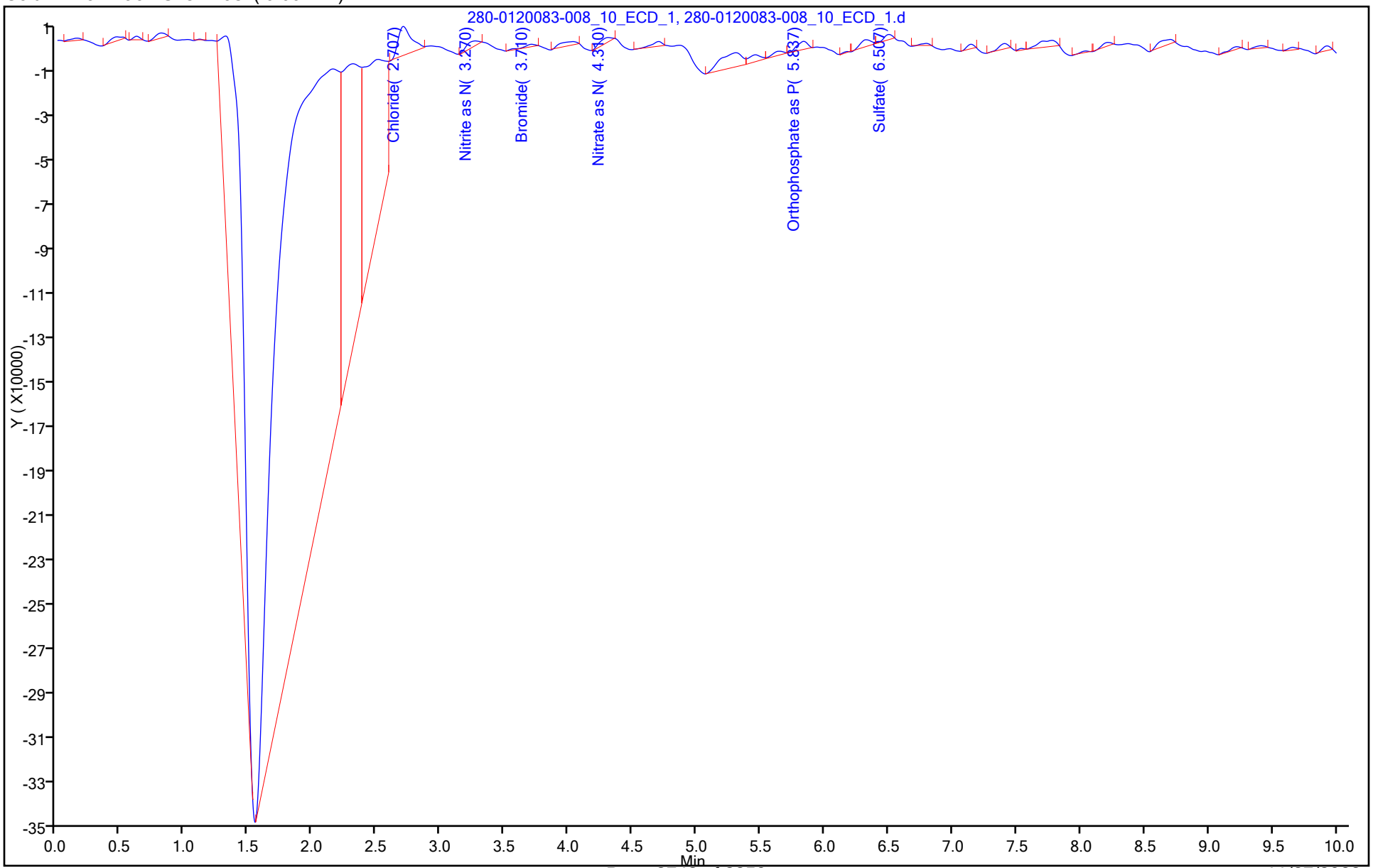
Report Date: 04-Apr-2023 11:52:18 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-008_10_ECD_1.d

Injection Date:	03-Apr-2023 18:06:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:27 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

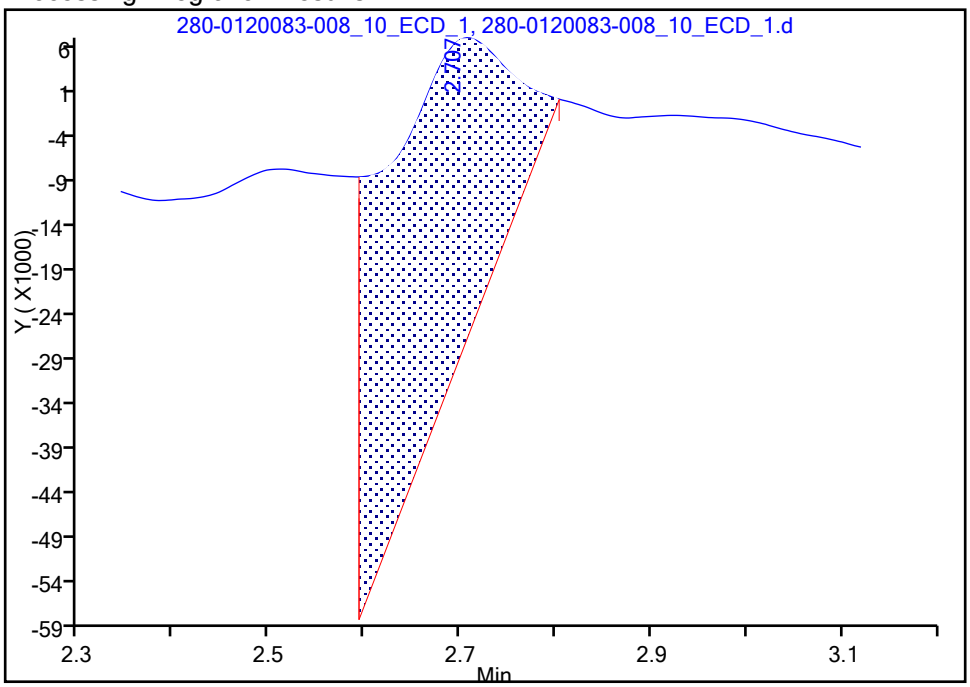
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-008_10_ECD_1.d				
Injection Date:	03-Apr-2023 18:06:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ICB				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

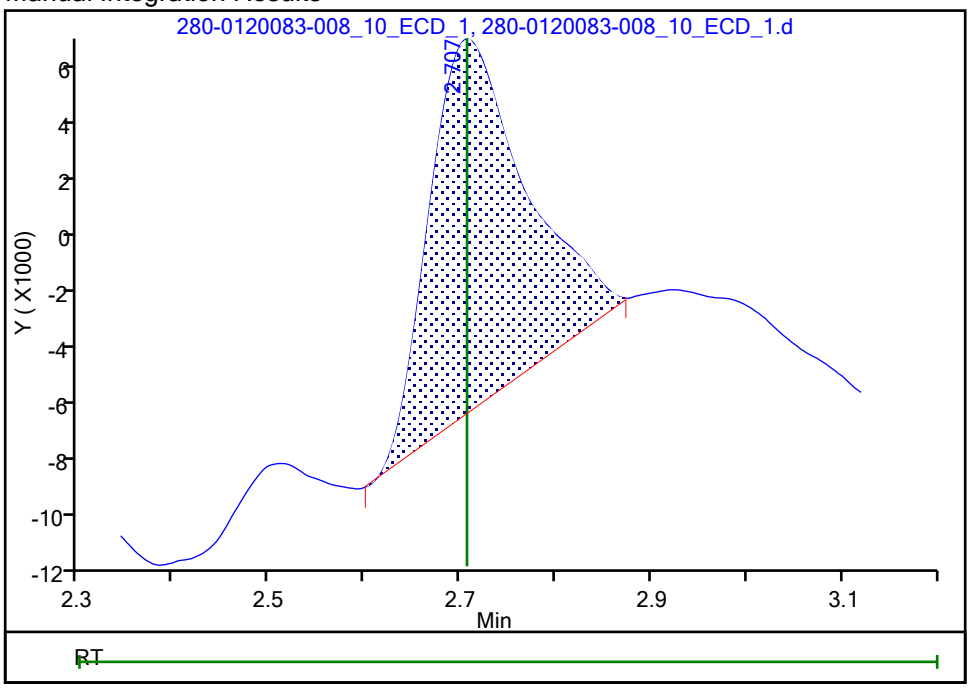
Processing Integration Results

RT: 2.71
Area: 368023
Amount: 0.281477
Amount Units: ug/ml



Manual Integration Results

RT: 2.71
Area: 90380
Amount: 0.210227
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 11:51:01

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 120908 **Inst ID:** DIS **Analysis Date:** 4/29/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	175294	3	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	175071	4	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	175104	3	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175348	6	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175038	10	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	175121	3	F Cl NO2 (Br) NO3 PO4 SO4	MS/D	
☐	175122	3	F Cl NO2 (Br) NO3 PO4 SO4	MS/D	
175123	EJS 4/29 ~~175123~~	3	F Cl NO2 (Br) NO3 PO4 SO4	MS/D	
☐	175128	2	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175106	5	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
294	3	(F) (Cl) NO2 Br NO3 PO4 (SO4)	10/50	test
071	4	(F) (Cl) NO2 Br NO3 PO4 (SO4)	10/50	test
EJS 4/29 ~~348~~		F Cl NO2 Br NO3 PO4 SO4		
106	5	F (Cl) NO2 Br NO3 PO4 (SO4)	5/10	test
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:53:33 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-003_04_ECD_1.d
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 29-Apr-2023 13:48:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-003
Misc. Info.: MRL
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:41:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:28:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.917	1.917	0.000	676943	0.2500	0.2357	M
2 Chloride	2.670	2.670	0.000	7917239	2.50	2.22	M
3 Nitrite as N		3.153			NC	ND	M
4 Bromide	3.767	3.767	0.000	229294	0.2500	0.2148	
5 Nitrate as N	4.213	4.213	0.000	1658548	NC	NC	
7 Orthophosphate as P	5.607	5.607	0.000	618678	NC	NC	
6 Sulfate	6.327	6.327	0.000	5600360	2.50	2.33	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC Cal low_00706 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00477 Amount Added: 0.20 Units: mL

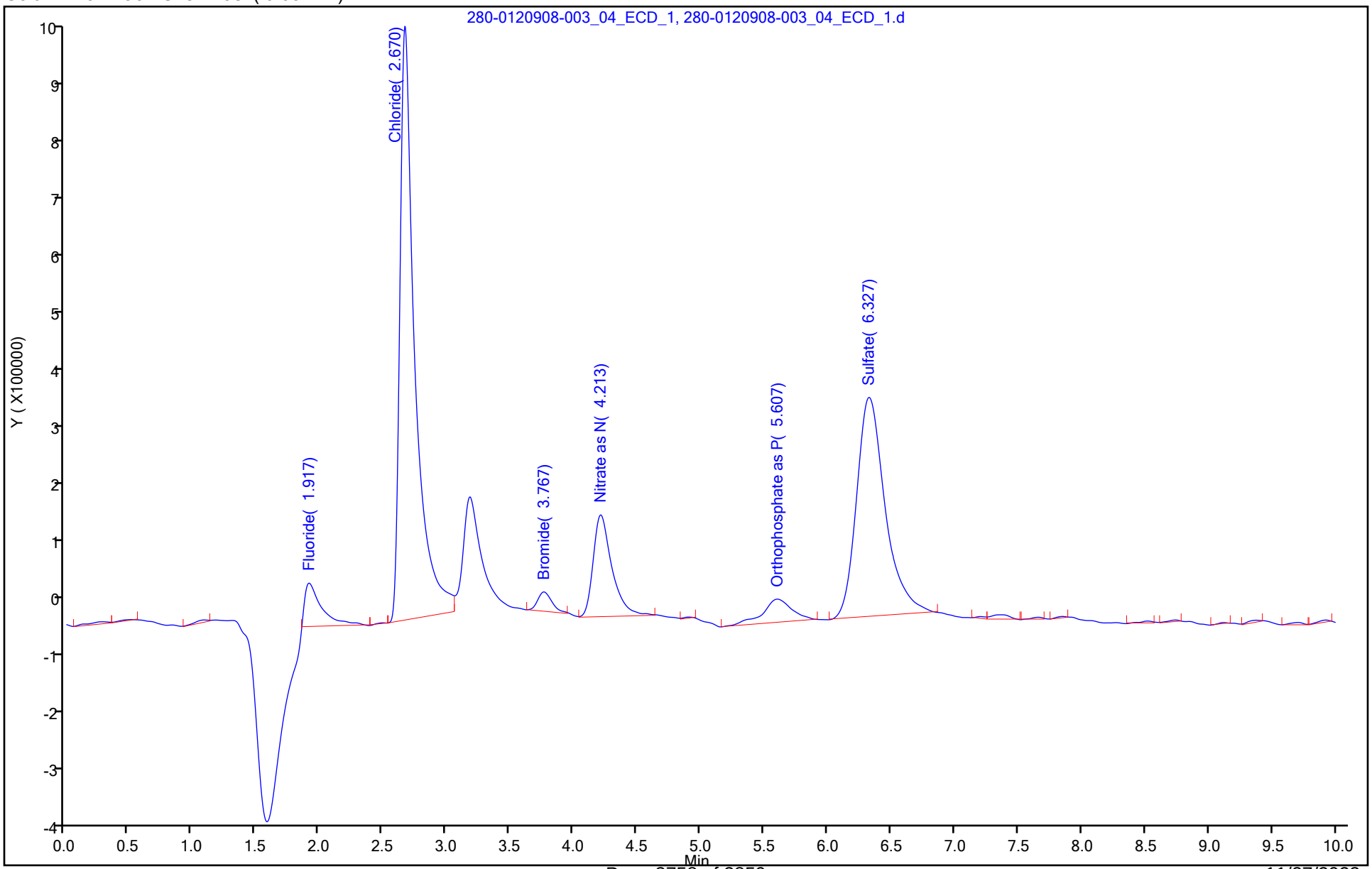
Report Date: 01-May-2023 11:41:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-003_04_ECD_1.d

Injection Date:	29-Apr-2023 13:48:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-041_42_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 29-Apr-2023 21:22:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-041
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:32:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	12030516	2.50	2.54	M
2 Chloride	2.673	2.757	-0.084	174412799	50.0	44.9	
3 Nitrite as N	3.173	3.120	0.053	12601648	NC	NC	
4 Bromide	3.747	3.813	-0.066	2642966	2.50	2.38	
5 Nitrate as N	4.193	4.087	0.106	19871478	NC	NC	
7 Orthophosphate as P	5.587	5.640	-0.053	6433698	NC	NC	
6 Sulfate	6.313	6.430	-0.117	128997072	50.0	48.8	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

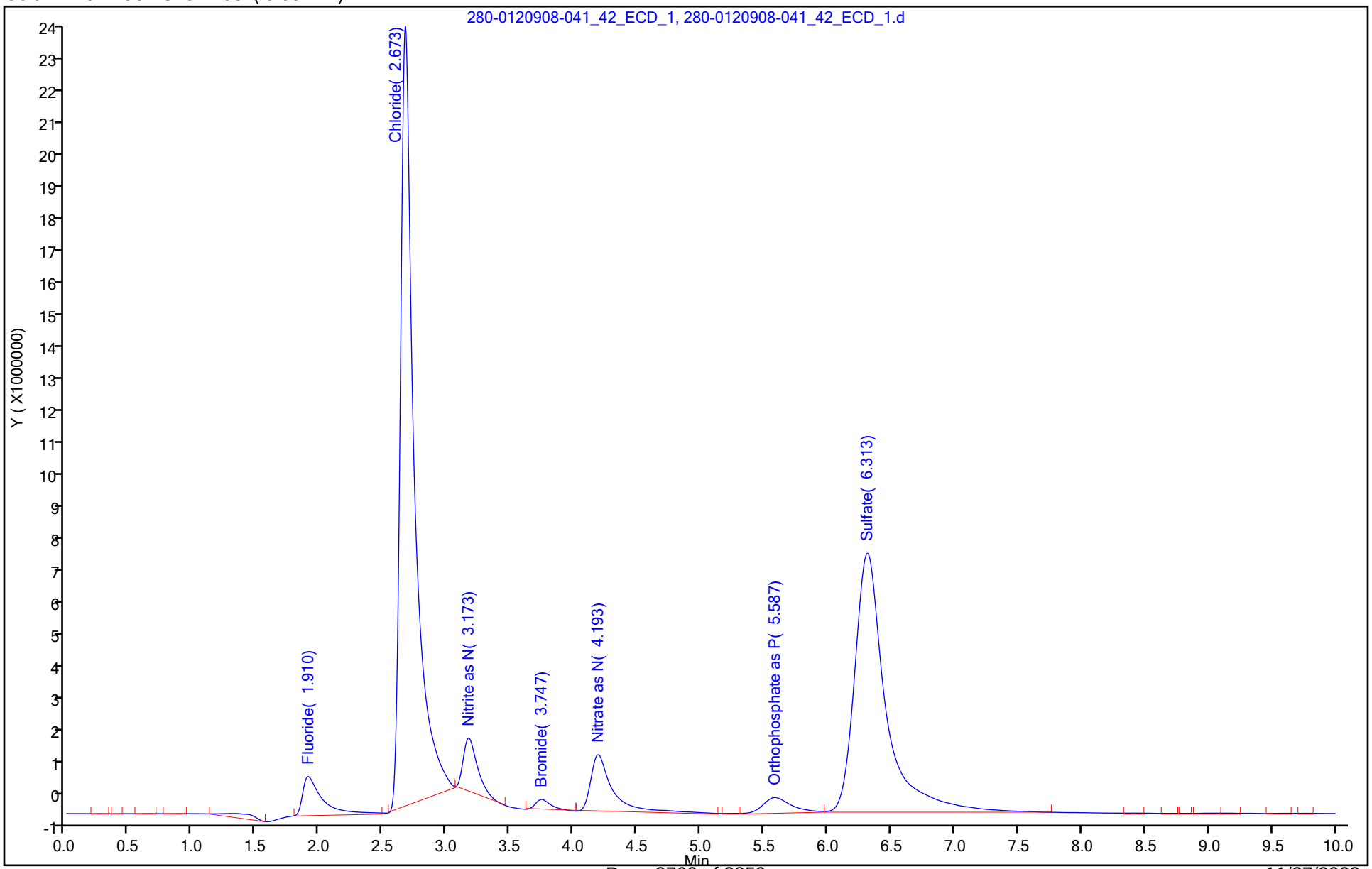
Report Date: 01-May-2023 11:42:20 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-041_42_ECD_1.d

Injection Date:	29-Apr-2023 21:22:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	41
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-042_43_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 29-Apr-2023 21:34:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-042
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:32:51

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.787	2.757	0.030	11609		0.1900	
3 Nitrite as N	3.113	3.120	-0.007	37662		NC	
4 Bromide	3.737	3.813	-0.076	17515		0.0251	
5 Nitrate as N	4.157	4.087	0.070	54477		NC	
7 Orthophosphate as P	5.547	5.640	-0.093	27098		NC	
6 Sulfate	6.473	6.430	0.043	4148		0.2229	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

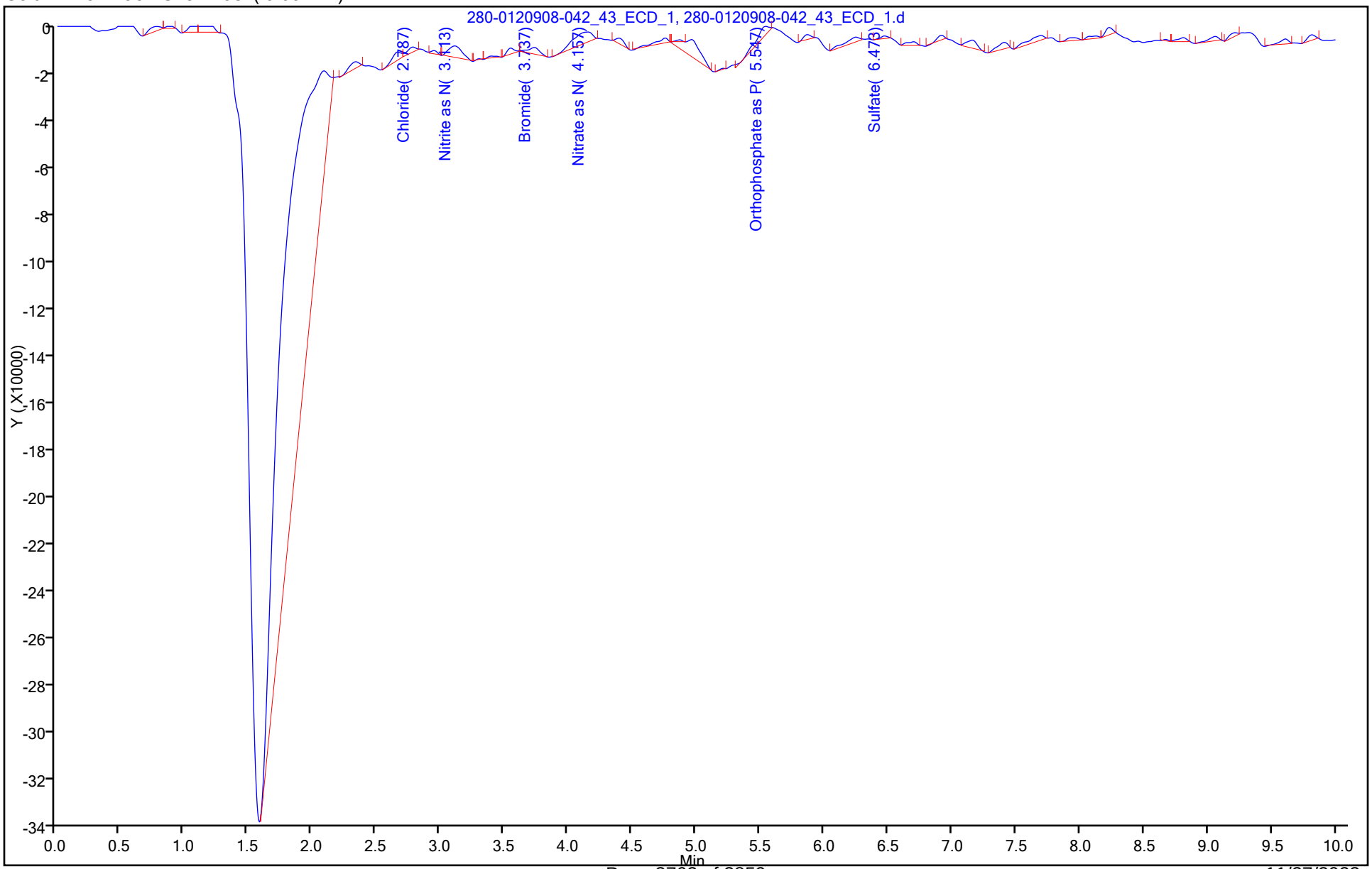
Report Date: 01-May-2023 11:42:21 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-042_43_ECD_1.d

Injection Date:	29-Apr-2023 21:34:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	42
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:27 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-047_48_ECD_1.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 29-Apr-2023 22:34:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-047
Misc. Info.: LCS
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:33:55

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.907	1.910	-0.003	11718961	2.50	2.47	M
2 Chloride	2.673	2.757	-0.084	184356888	50.0	47.5	Ma
3 Nitrite as N		3.120			NC	ND	Ma
4 Bromide	3.750	3.813	-0.063	2634159	2.50	2.37	
5 Nitrate as N	4.193	4.087	0.106	20128673	NC	NC	
7 Orthophosphate as P	5.587	5.640	-0.053	6292660	NC	NC	
6 Sulfate	6.313	6.430	-0.117	128609801	50.0	48.6	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

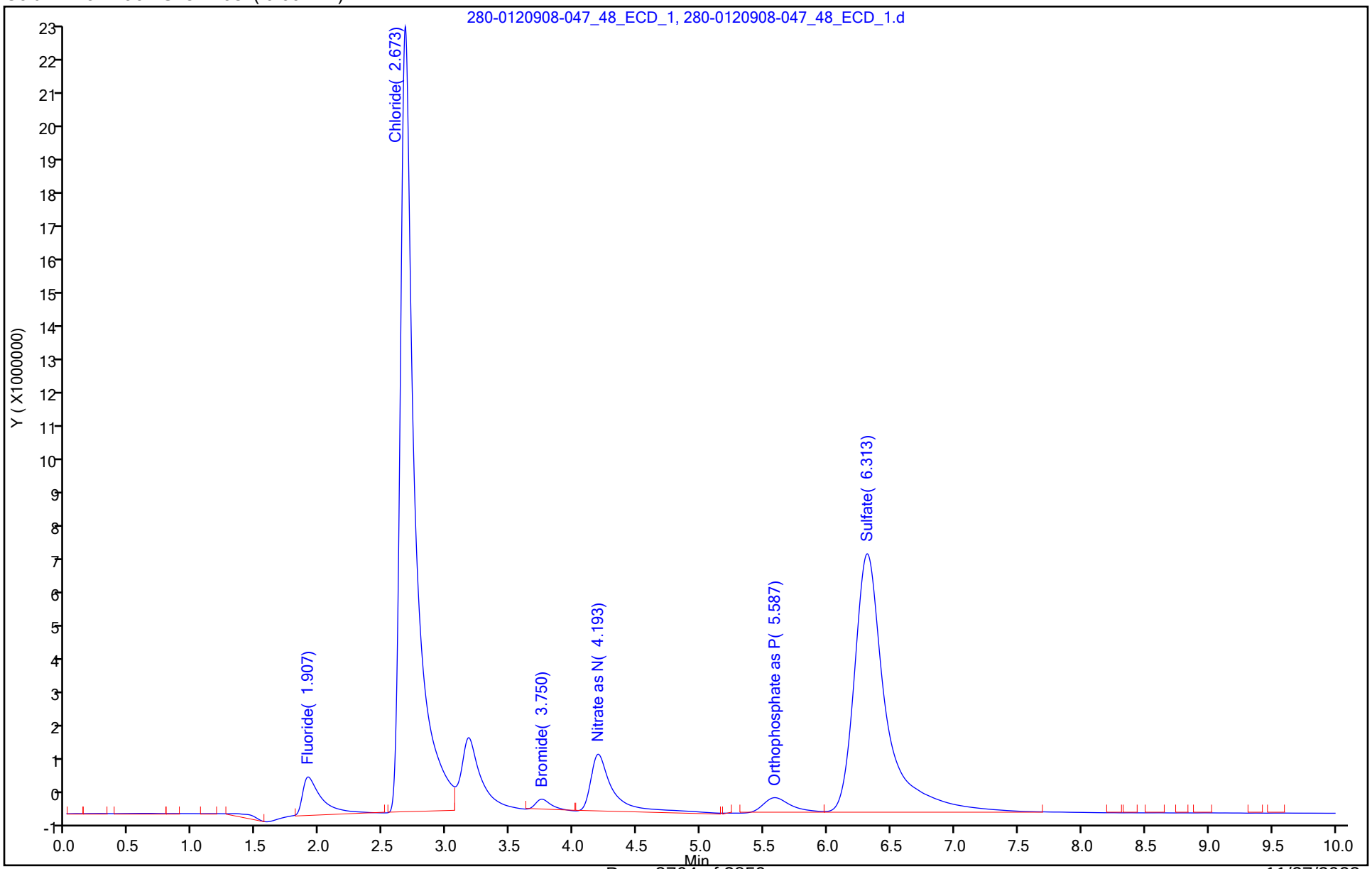
Report Date: 01-May-2023 11:42:23 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-047_48_ECD_1.d

Injection Date:	29-Apr-2023 22:34:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcs			Worklist Smp#:	47
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-048_49_ECD_1.d
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 29-Apr-2023 22:46:00 ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-048
Misc. Info.: LCSD
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:34:17

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	12045798	2.50	2.54	M
2 Chloride	2.673	2.757	-0.084	184641880	50.0	47.6	Ma
3 Nitrite as N		3.120			NC	ND	Ma
4 Bromide	3.750	3.813	-0.063	2547665	2.50	2.29	
5 Nitrate as N	4.197	4.087	0.110	19691878	NC	NC	
7 Orthophosphate as P	5.587	5.640	-0.053	6268850	NC	NC	
6 Sulfate	6.313	6.430	-0.117	129055879	50.0	48.8	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

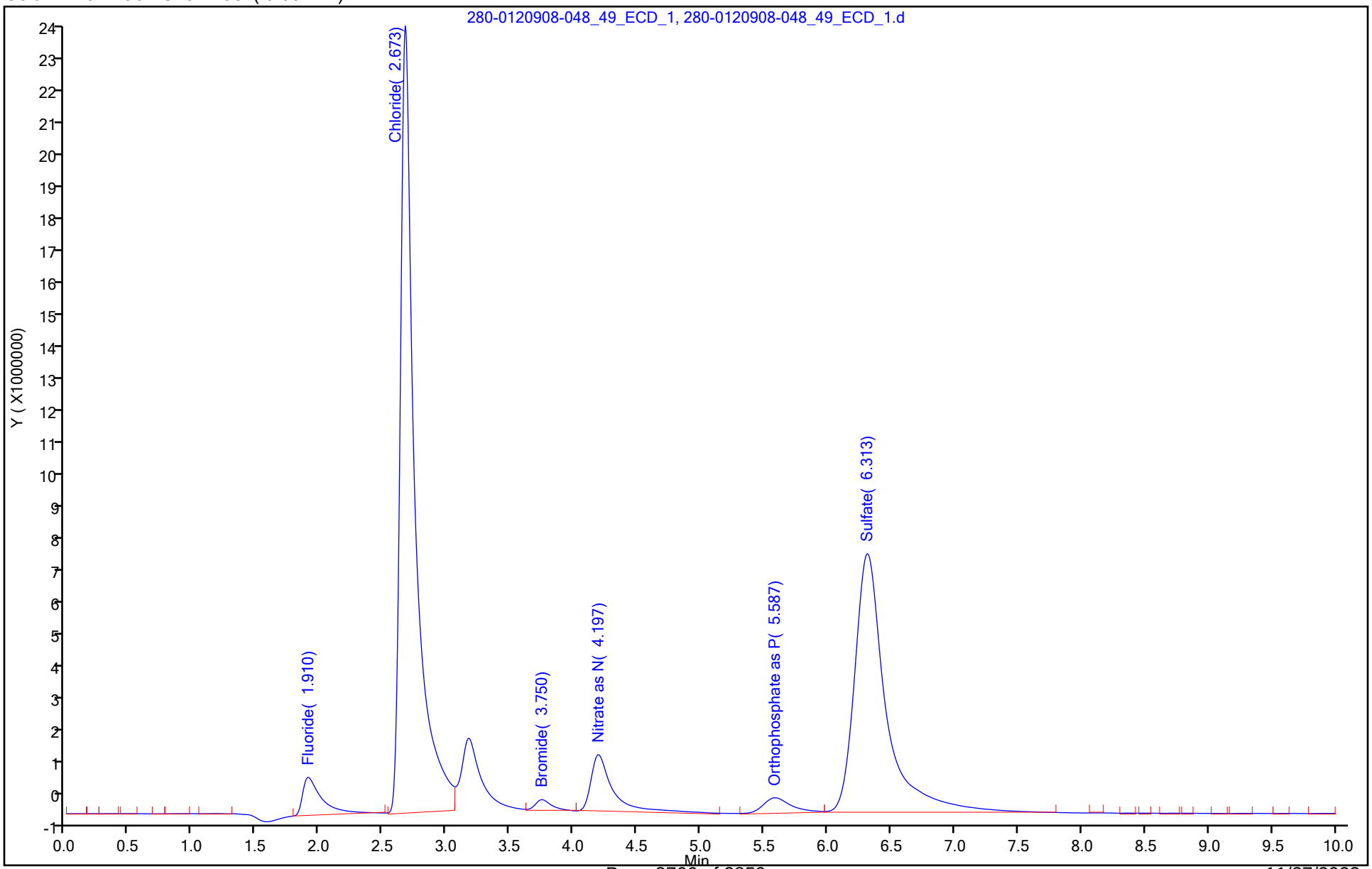
Report Date: 01-May-2023 11:42:23 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-048_49_ECD_1.d

Injection Date:	29-Apr-2023 22:46:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	48
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-049_50_ECD_1.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 29-Apr-2023 22:58:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-049
Misc. Info.: MB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:34:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.667	2.757	-0.090	23642		0.1931	
3 Nitrite as N	3.120	3.120	0.000	15079		NC	
4 Bromide	3.773	3.813	-0.040	5068		0.0140	
5 Nitrate as N	4.043	4.087	-0.044	9010		NC	
7 Orthophosphate as P	5.700	5.640	0.060	161323		NC	
6 Sulfate	6.420	6.430	-0.010	52321		0.2411	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

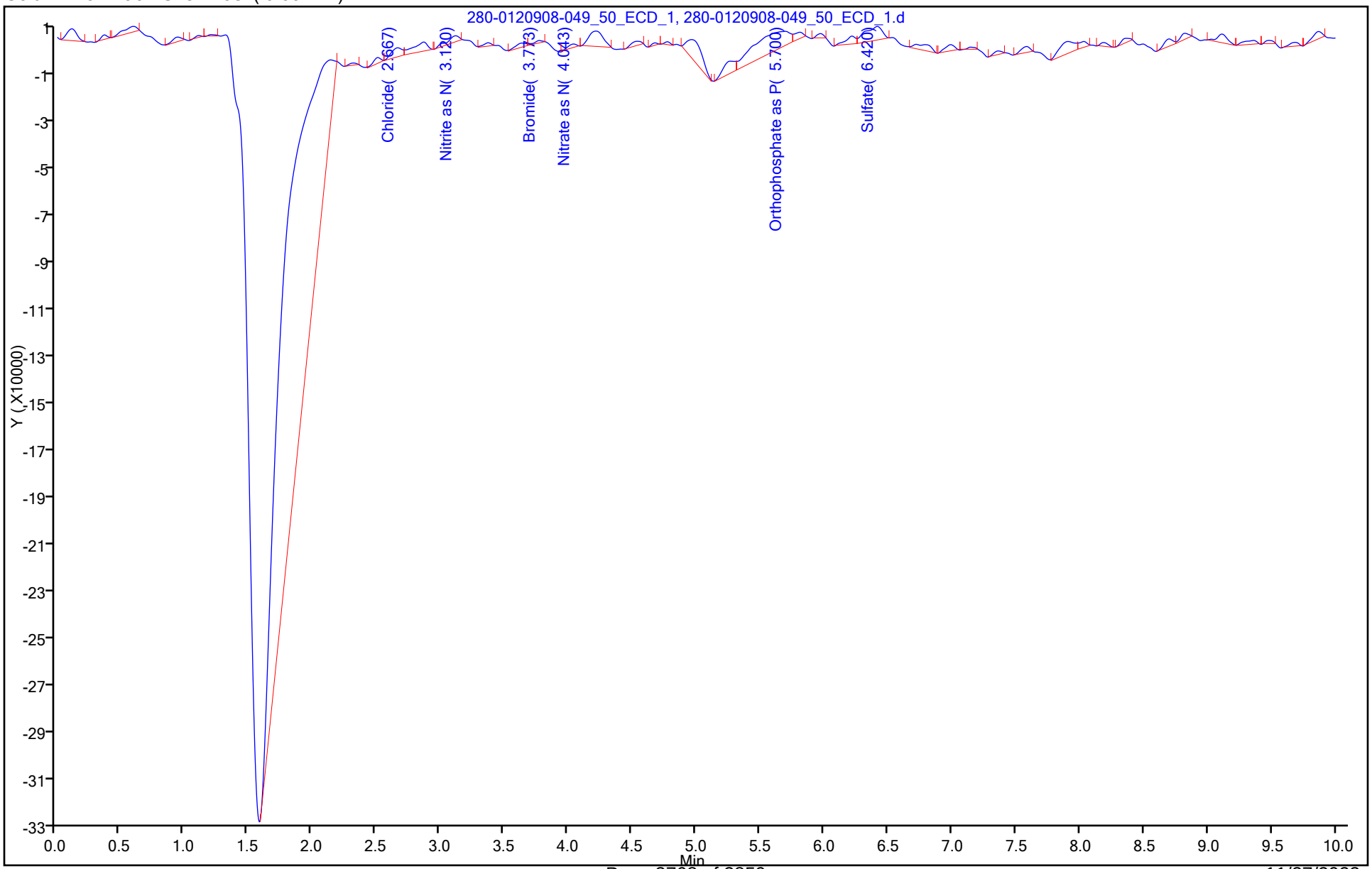
Report Date: 01-May-2023 11:42:24 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-049_50_ECD_1.d

Injection Date:	29-Apr-2023 22:58:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mb			Worklist Smp#:	49
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-053_54_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 29-Apr-2023 23:46:00 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-053
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:26 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:35:15

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	12143045	2.50	2.56	M
2 Chloride	2.677	2.757	-0.080	185530604	50.0	47.8	M
3 Nitrite as N	3.177	3.120	0.057	12714023	NC	NC	
4 Bromide	3.753	3.813	-0.060	2528063	2.50	2.27	
5 Nitrate as N	4.200	4.087	0.113	19556528	NC	NC	
7 Orthophosphate as P	5.590	5.640	-0.050	6187828	NC	NC	
6 Sulfate	6.317	6.430	-0.113	128722027	50.0	48.7	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

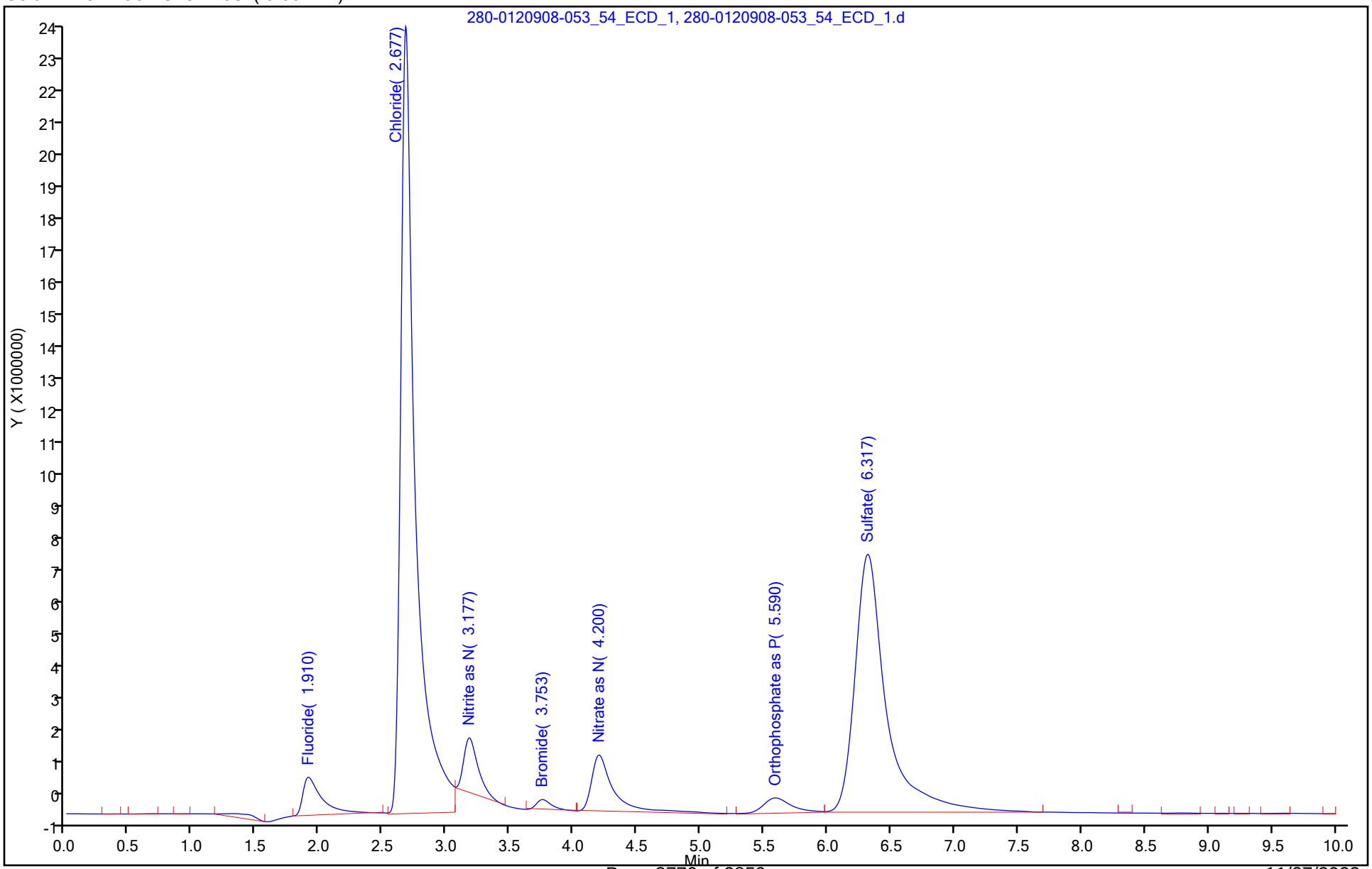
Report Date: 01-May-2023 11:42:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-053_54_ECD_1.d

Injection Date:	29-Apr-2023 23:46:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	53
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-054_55_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 29-Apr-2023 23:58:00 ALS Bottle#: 0 Worklist Smp#: 54
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-054
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:26 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:35:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.800	2.757	0.043	7966		0.1891	
3 Nitrite as N	3.070	3.120	-0.050	7429		NC	
4 Bromide	3.640	3.813	-0.173	12954		0.0211	
5 Nitrate as N	4.170	4.087	0.083	53318		NC	
7 Orthophosphate as P	5.623	5.640	-0.017	44454		NC	
6 Sulfate	6.483	6.430	0.053	4262		0.2230	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

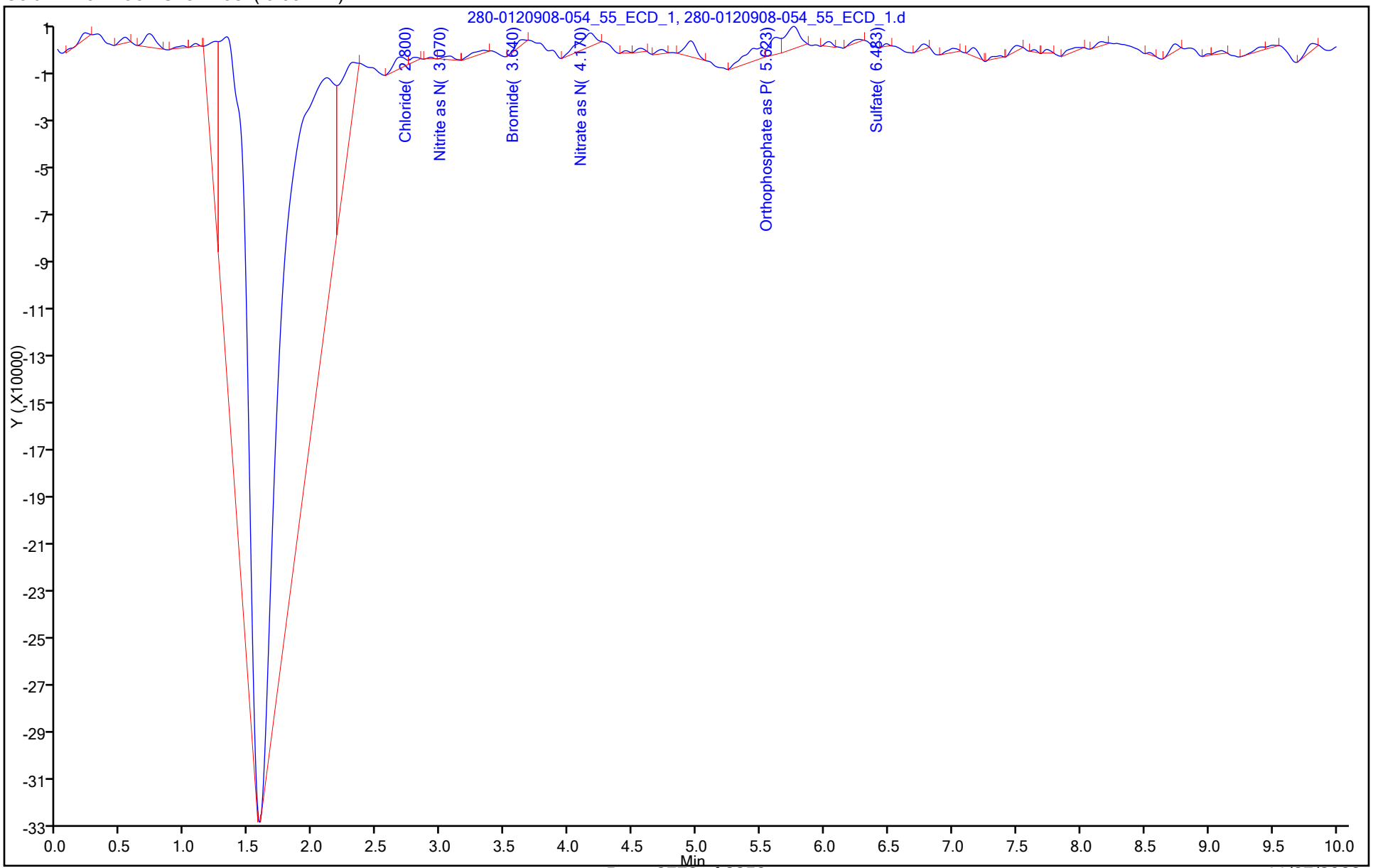
Report Date: 01-May-2023 11:42:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-054_55_ECD_1.d

Injection Date:	29-Apr-2023 23:58:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	54
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-064_65_ECD_1.d				
Lims ID:	280-175122-C-3				
Client ID:	MW-118D-20230412				
Sample Type:	Client				
Inject. Date:	30-Apr-2023 01:57:00	ALS Bottle#:	0	Worklist Smp#:	64
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120908-064				
Misc. Info.:	280-175122-C-3				
Operator ID:		Instrument ID:	WC_IonChrom15		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	01-May-2023 11:42:26	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1628				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.173	1.910	0.263	1129326	0.3273	
2 Chloride	2.770	2.757	0.013	3265835236	838.3	E
3 Nitrite as N		3.120			ND	
4 Bromide	3.817	3.813	0.004	4275551	3.84	
5 Nitrate as N	4.297	4.087	0.210	15645471	NC	
7 Orthophosphate as P	5.903	5.640	0.263	42447	NC	
6 Sulfate	6.360	6.430	-0.070	228467562	86.2	

QC Flag Legend

Processing Flags

NC - Not Calibrated

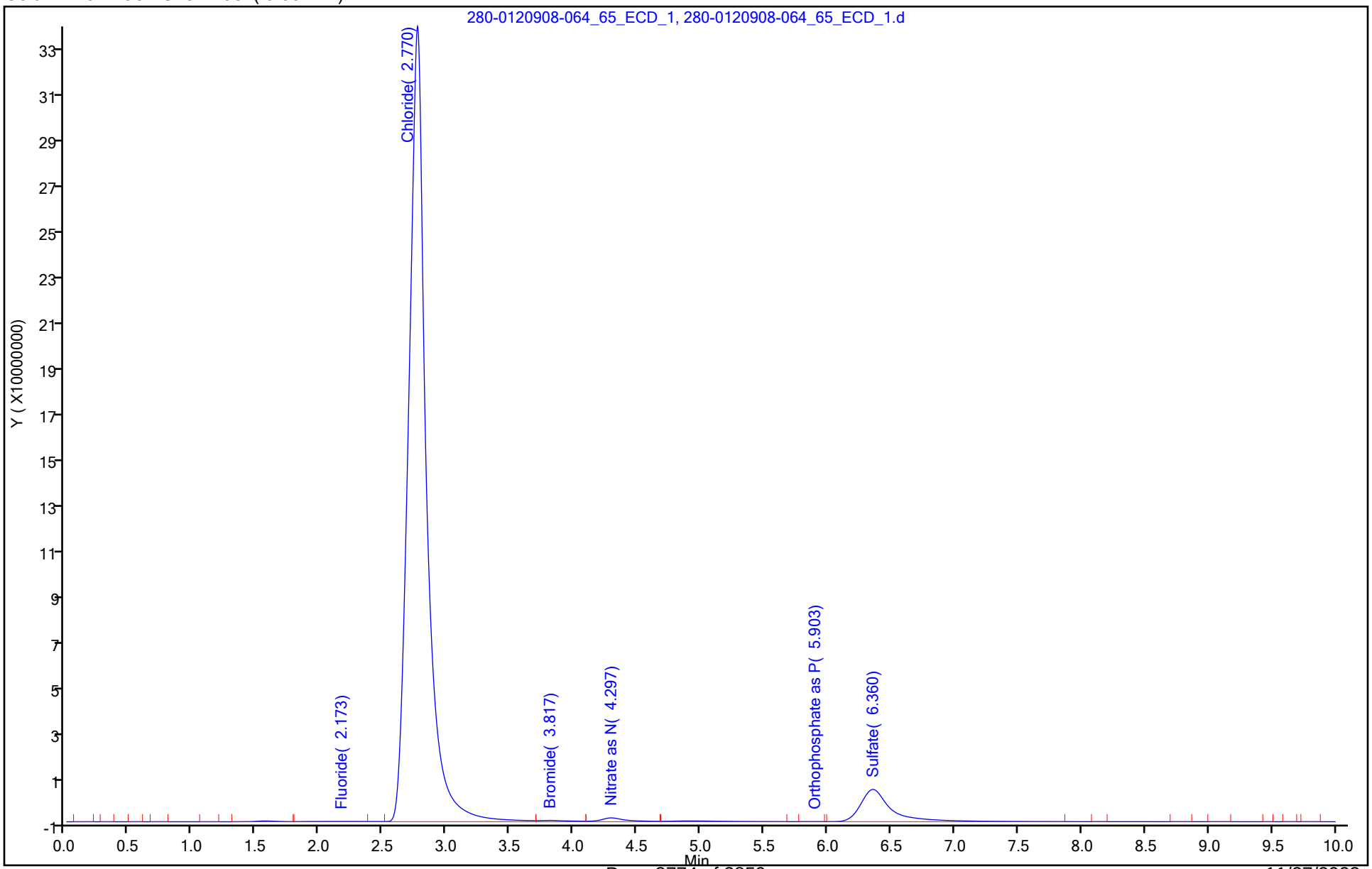
E - Exceeded Maximum Amount

Report Date: 01-May-2023 11:42:31 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-064_65_ECD_1.d				
Injection Date:	30-Apr-2023 01:57:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-175122-C-3	Lab Sample ID:	280-175122-3	Worklist Smp#:	64
Client ID:	MW-118D-20230412				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-065_66_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 30-Apr-2023 02:09:00 ALS Bottle#: 0 Worklist Smp#: 65
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-065
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:37:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	11864367	2.50	2.50	M
2 Chloride	2.680	2.757	-0.077	184772855	50.0	47.6	Ma
3 Nitrite as N		3.120			NC	ND	Ma
4 Bromide	3.760	3.813	-0.053	2559217	2.50	2.30	
5 Nitrate as N	4.207	4.087	0.120	20006071	NC	NC	
7 Orthophosphate as P	5.587	5.640	-0.053	6244826	NC	NC	
6 Sulfate	6.313	6.430	-0.117	129249143	50.0	48.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

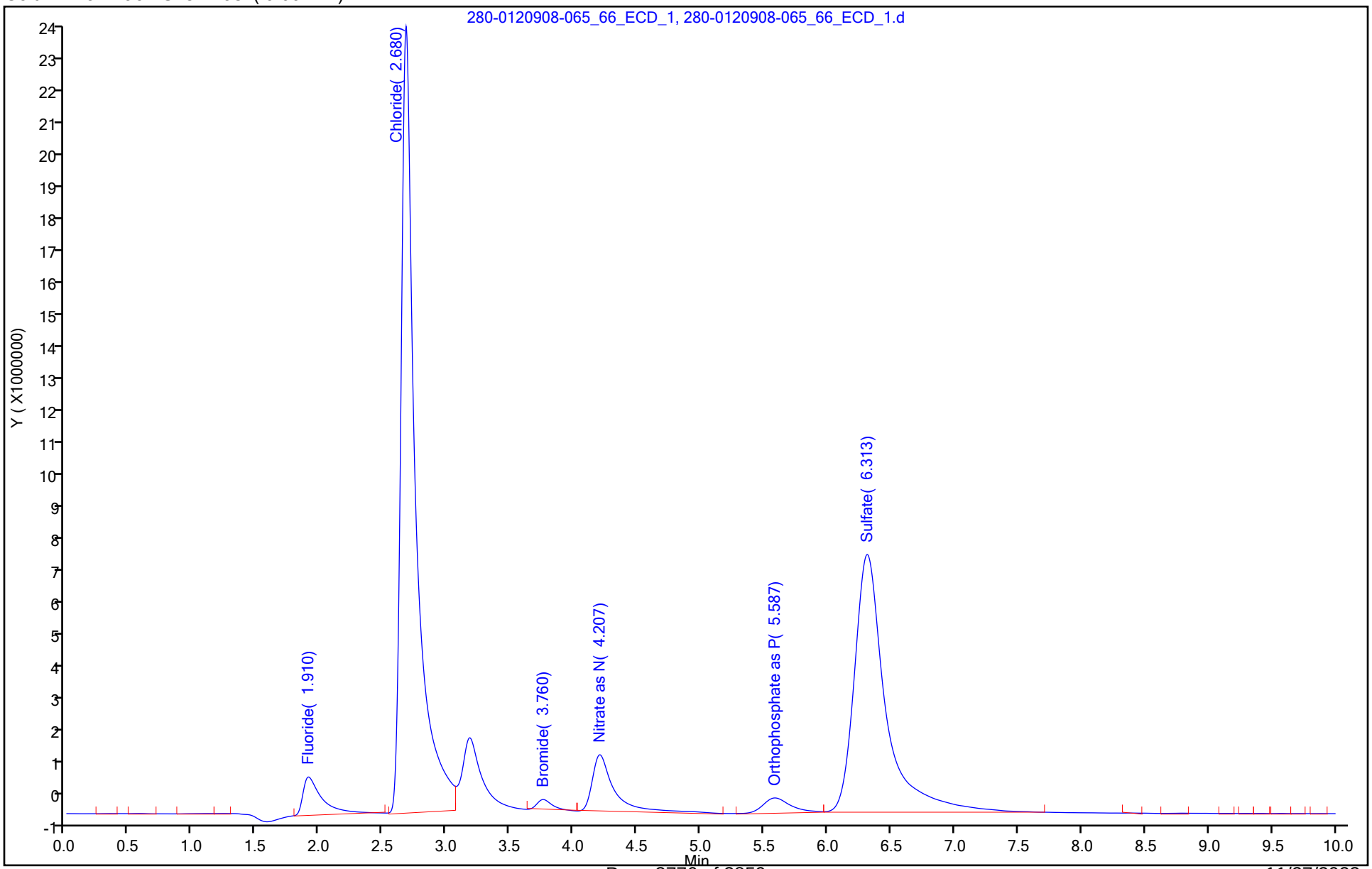
Report Date: 01-May-2023 11:42:32 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-065_66_ECD_1.d

Injection Date:	30-Apr-2023 02:09:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	65
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-066_67_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 30-Apr-2023 02:21:00 ALS Bottle#: 0 Worklist Smp#: 66
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-066
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:37:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.797	2.757	0.040	11058		0.1899	
3 Nitrite as N	3.097	3.120	-0.023	13292		NC	
4 Bromide	3.803	3.813	-0.010	2874		0.0120	
5 Nitrate as N	4.173	4.087	0.086	7901		NC	
7 Orthophosphate as P	5.563	5.640	-0.077	32493		NC	
6 Sulfate	6.440	6.430	0.010	41663		0.2371	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

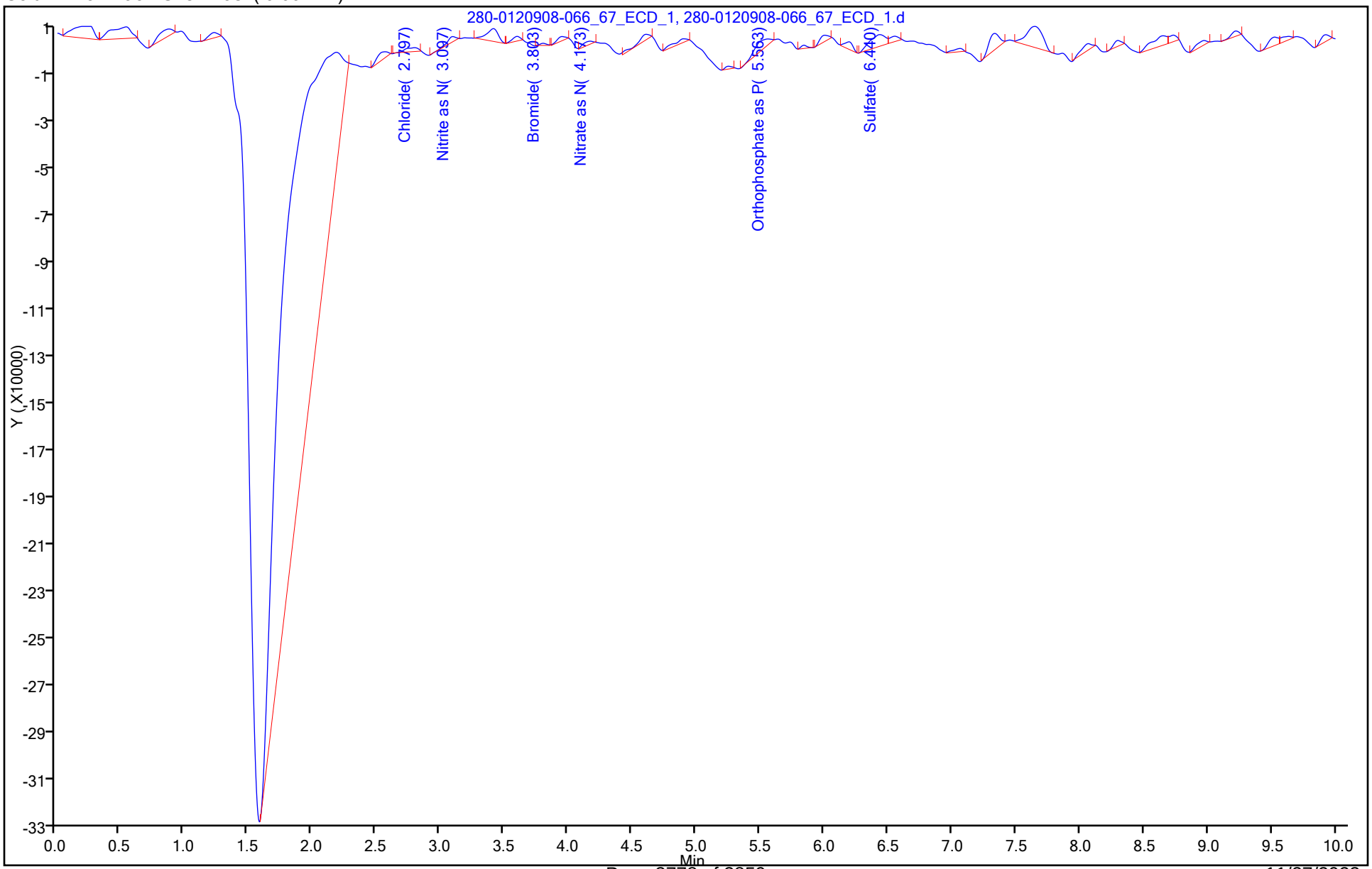
Report Date: 01-May-2023 11:42:33 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-066_67_ECD_1.d

Injection Date:	30-Apr-2023 02:21:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	66
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-067_68_ECD_1.d
Lims ID: 280-175122-C-2
Client ID: MP-2-20230411
Sample Type: Client
Inject. Date: 30-Apr-2023 02:33:00 ALS Bottle#: 0 Worklist Smp#: 67
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-067
Misc. Info.: 280-175122-C-2
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	1.903	1.910	-0.007	108153	0.1205	
2 Chloride	2.720	2.757	-0.037	1387138779	356.2	E
3 Nitrite as N		3.120			ND	
4 Bromide	3.807	3.813	-0.006	2367702	2.13	
5 Nitrate as N	4.290	4.087	0.203	15883413	NC	
7 Orthophosphate as P		5.640			ND	
6 Sulfate	6.367	6.430	-0.063	302794905	114.2	E

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

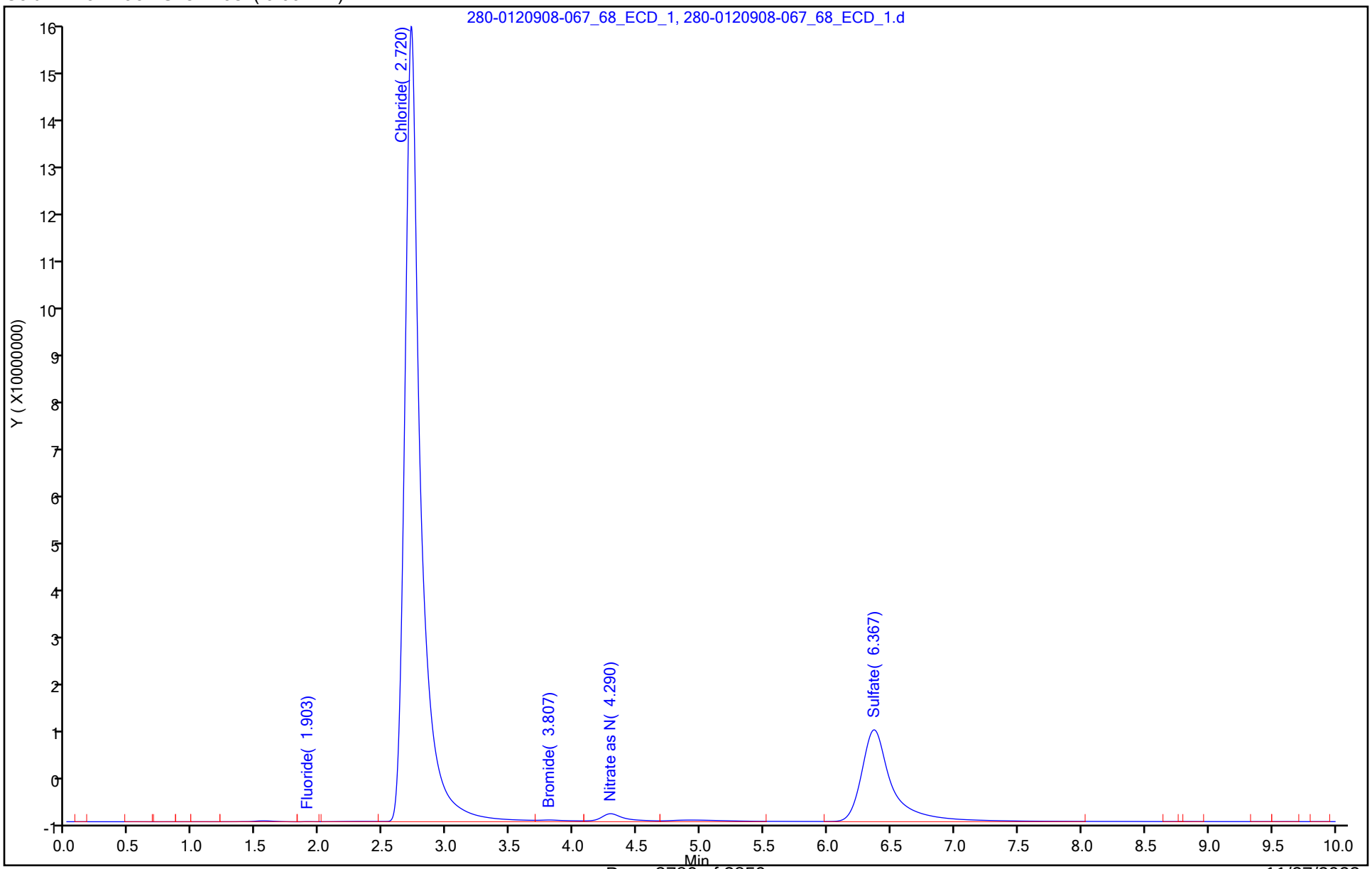
Report Date: 01-May-2023 11:42:33 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-067_68_ECD_1.d

Injection Date:	30-Apr-2023 02:33:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-175122-C-2	Lab Sample ID:	280-175122-2	Worklist Smp#:	67
Client ID:	MP-2-20230411				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-068_69_ECD_1.d
Lims ID: 280-175122-C-2 DU
Client ID:
Sample Type: DU
Inject. Date: 30-Apr-2023 02:45:00 ALS Bottle#: 0 Worklist Smp#: 68
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-068
Misc. Info.: 280-175122-C-2 DU
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.923	1.910	0.013	252162		0.1496	
2 Chloride	2.720	2.757	-0.037	1388050988		356.4	E
3 Nitrite as N		3.120				ND	
4 Bromide	3.800	3.813	-0.013	2563651		2.31	
5 Nitrate as N	4.283	4.087	0.196	16062762		NC	
7 Orthophosphate as P	5.850	5.640	0.210	4181		NC	
6 Sulfate	6.363	6.430	-0.067	303163165		114.3	E

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

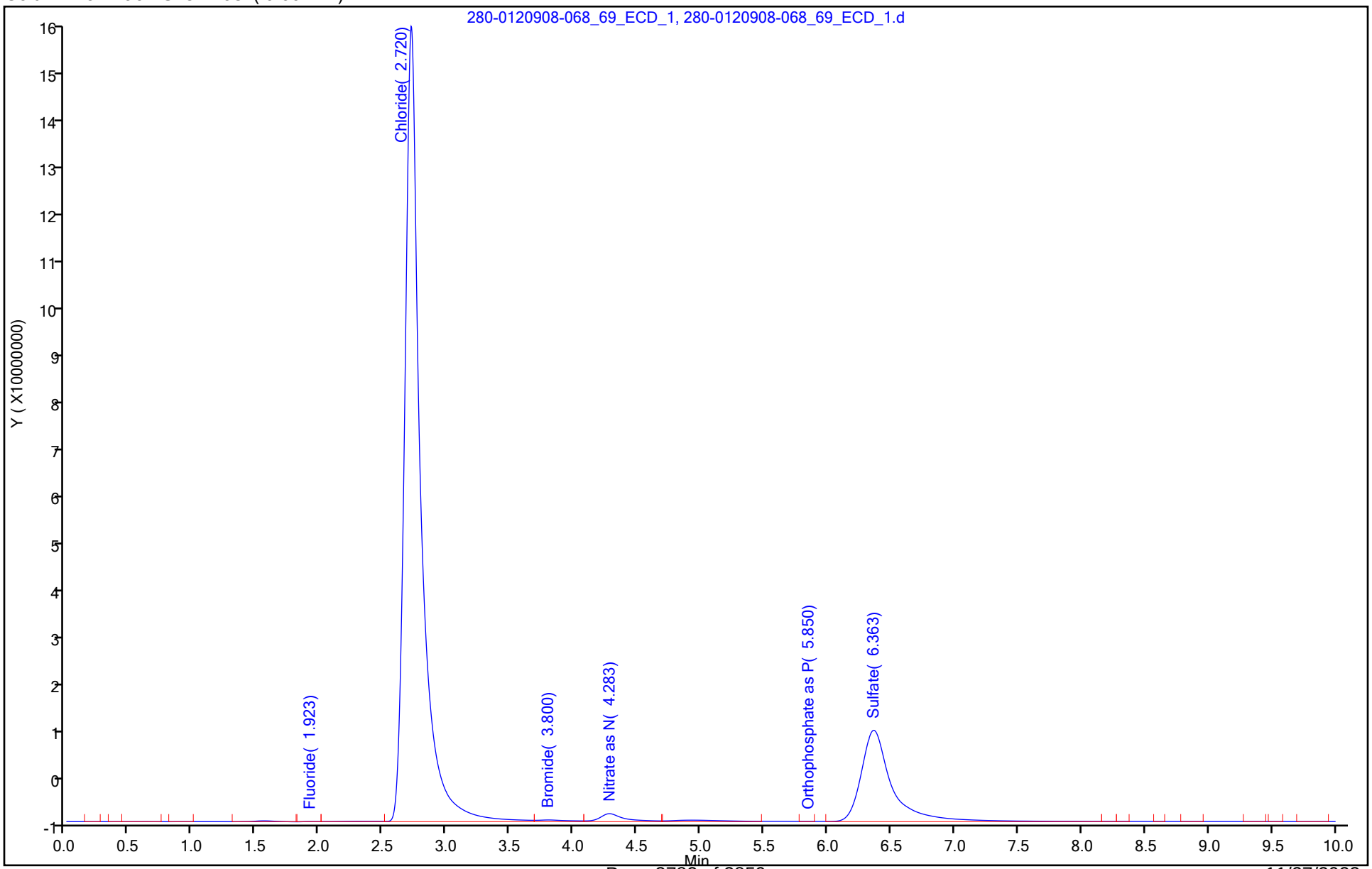
Report Date: 01-May-2023 11:42:34 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-068_69_ECD_1.d

Injection Date:	30-Apr-2023 02:45:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-175122-C-2 DU			Worklist Smp#:	68
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-069_70_ECD_1.d
Lims ID: 280-175122-C-2 MS
Client ID:
Sample Type: MS
Inject. Date: 30-Apr-2023 02:57:00 ALS Bottle#: 0 Worklist Smp#: 69
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-069
Misc. Info.: 280-175122-C-2 MS
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	22130435	5.00	4.58	
2 Chloride	2.727	2.757	-0.030	1563942853	50.0	401.5	E
3 Nitrite as N	3.193	3.120	0.073	18138301	NC	NC	
4 Bromide	3.807	3.813	-0.006	5878563	5.00	5.27	E
5 Nitrate as N	4.283	4.087	0.196	53374146	NC	NC	
7 Orthophosphate as P	5.627	5.640	-0.013	10305845	NC	NC	
6 Sulfate	6.383	6.430	-0.047	463820380	50.0	174.8	E

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Reagents:

ICMS/MSD WEEK_00816 Amount Added: 0.10 Units: mL

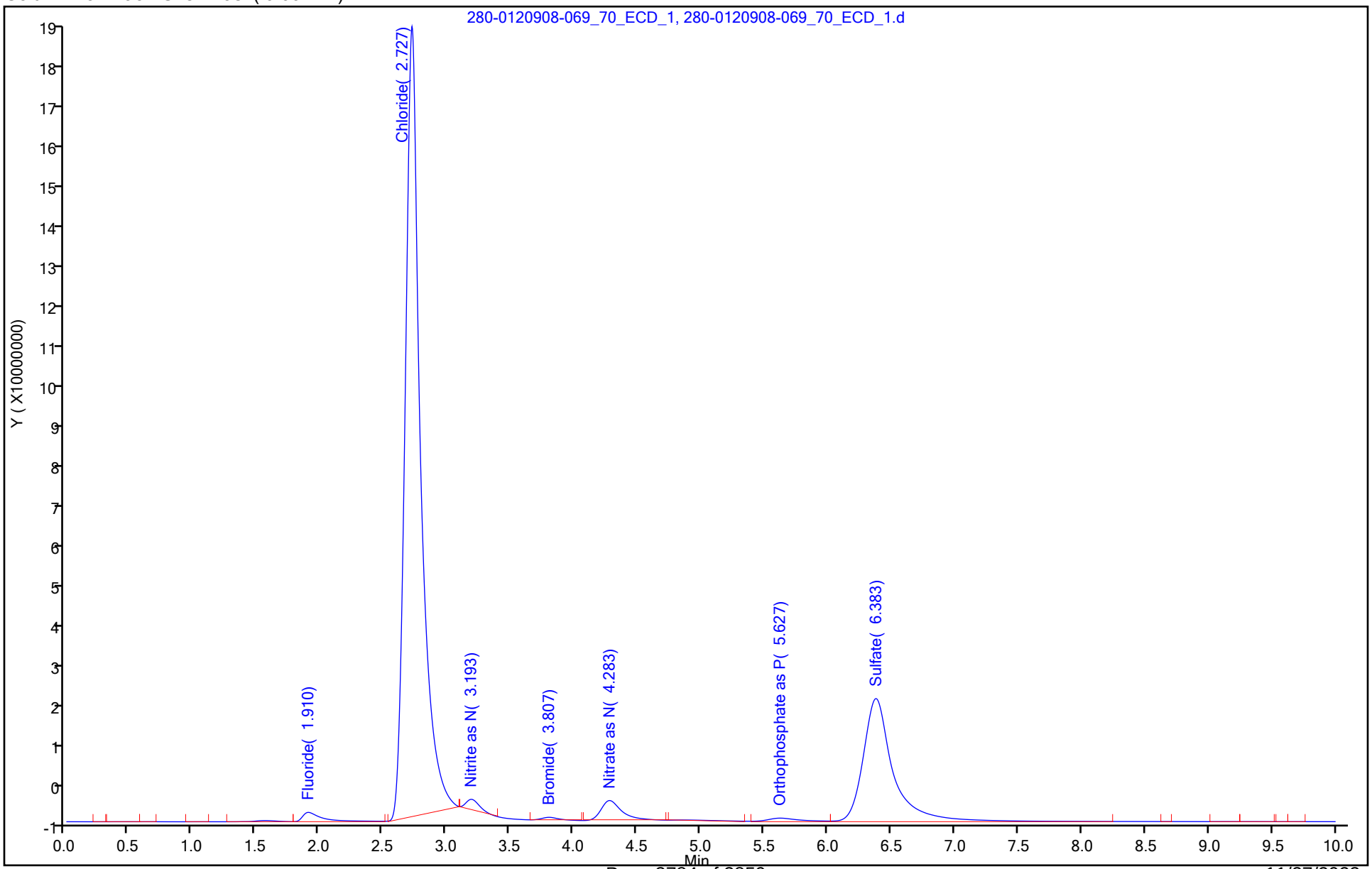
Report Date: 01-May-2023 11:42:34 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-069_70_ECD_1.d

Injection Date:	30-Apr-2023 02:57:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-175122-C-2 MS			Worklist Smp#:	69
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-070_71_ECD_1.d
Lims ID: 280-175122-C-2 MSD
Client ID:
Sample Type: MSD
Inject. Date: 30-Apr-2023 03:09:00 ALS Bottle#: 0 Worklist Smp#: 70
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-070
Misc. Info.: 280-175122-C-2 MSD
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	22152552	5.00	4.59	
2 Chloride	2.727	2.757	-0.030	1563499636	50.0	401.4	E
3 Nitrite as N	3.193	3.120	0.073	17845976	NC	NC	
4 Bromide	3.807	3.813	-0.006	5795623	5.00	5.20	E
5 Nitrate as N	4.283	4.087	0.196	53762234	NC	NC	
7 Orthophosphate as P	5.627	5.640	-0.013	10440465	NC	NC	
6 Sulfate	6.383	6.430	-0.047	463030694	50.0	174.5	E

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

Reagents:

ICMS/MSD WEEK_00816 Amount Added: 0.10 Units: mL

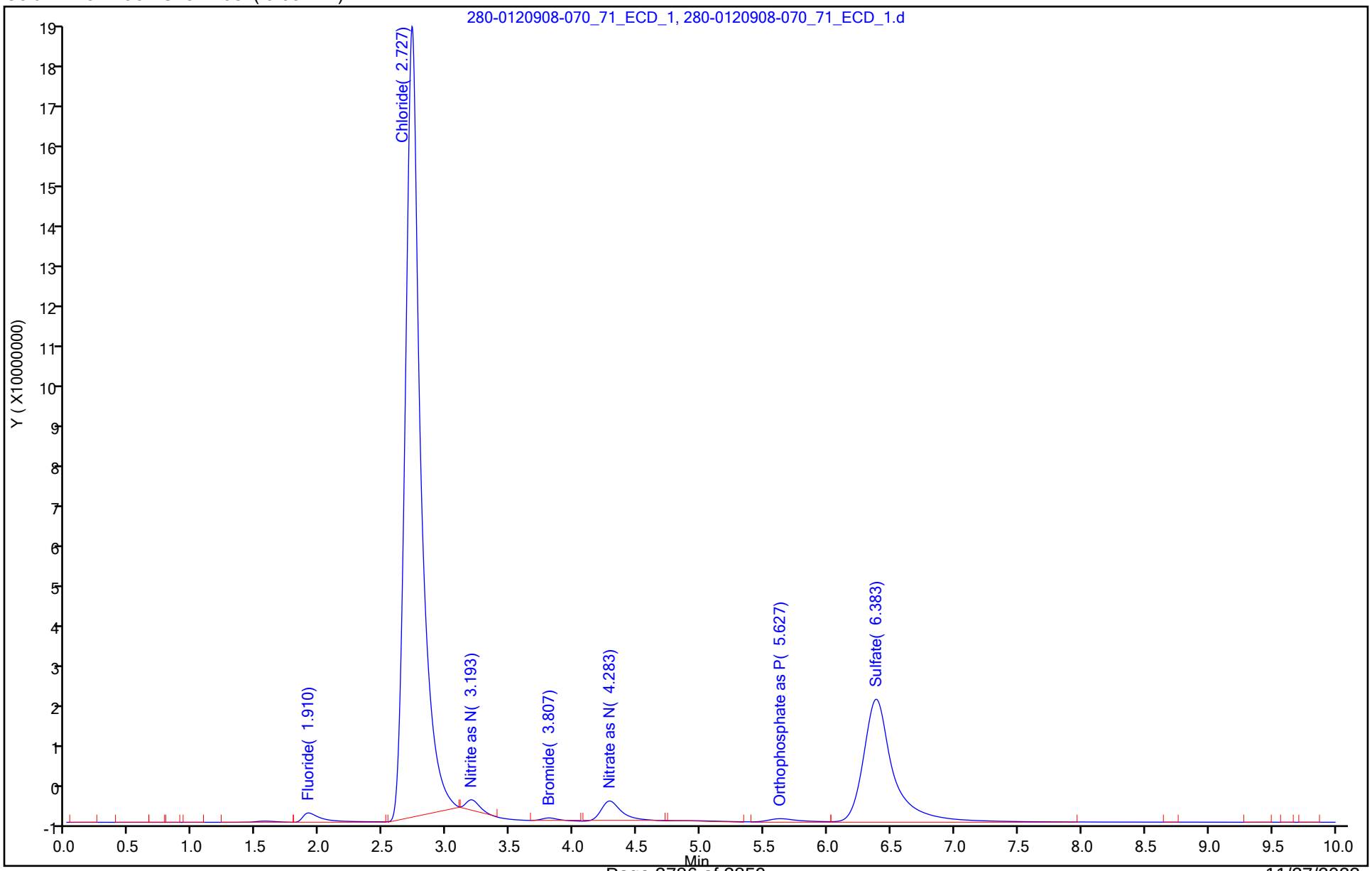
Report Date: 01-May-2023 11:42:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-070_71_ECD_1.d

Injection Date:	30-Apr-2023 03:09:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-175122-C-2 MSD			Worklist Smp#:	70
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-071_72_ECD_1.d
Lims ID: 280-175122-C-1
Client ID: RW-1-20230413
Sample Type: Client
Inject. Date: 30-Apr-2023 03:21:00 ALS Bottle#: 0 Worklist Smp#: 71
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-071
Misc. Info.: 280-175122-C-1
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	1.923	1.910	0.013	269690	0.1532	
2 Chloride	2.730	2.757	-0.027	1705524596	437.9	E
3 Nitrite as N		3.120			ND	
4 Bromide	3.807	3.813	-0.006	3110504	2.80	
5 Nitrate as N	4.287	4.087	0.200	16278269	NC	
7 Orthophosphate as P		5.640			ND	
6 Sulfate	6.377	6.430	-0.053	337667578	127.3	E

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount

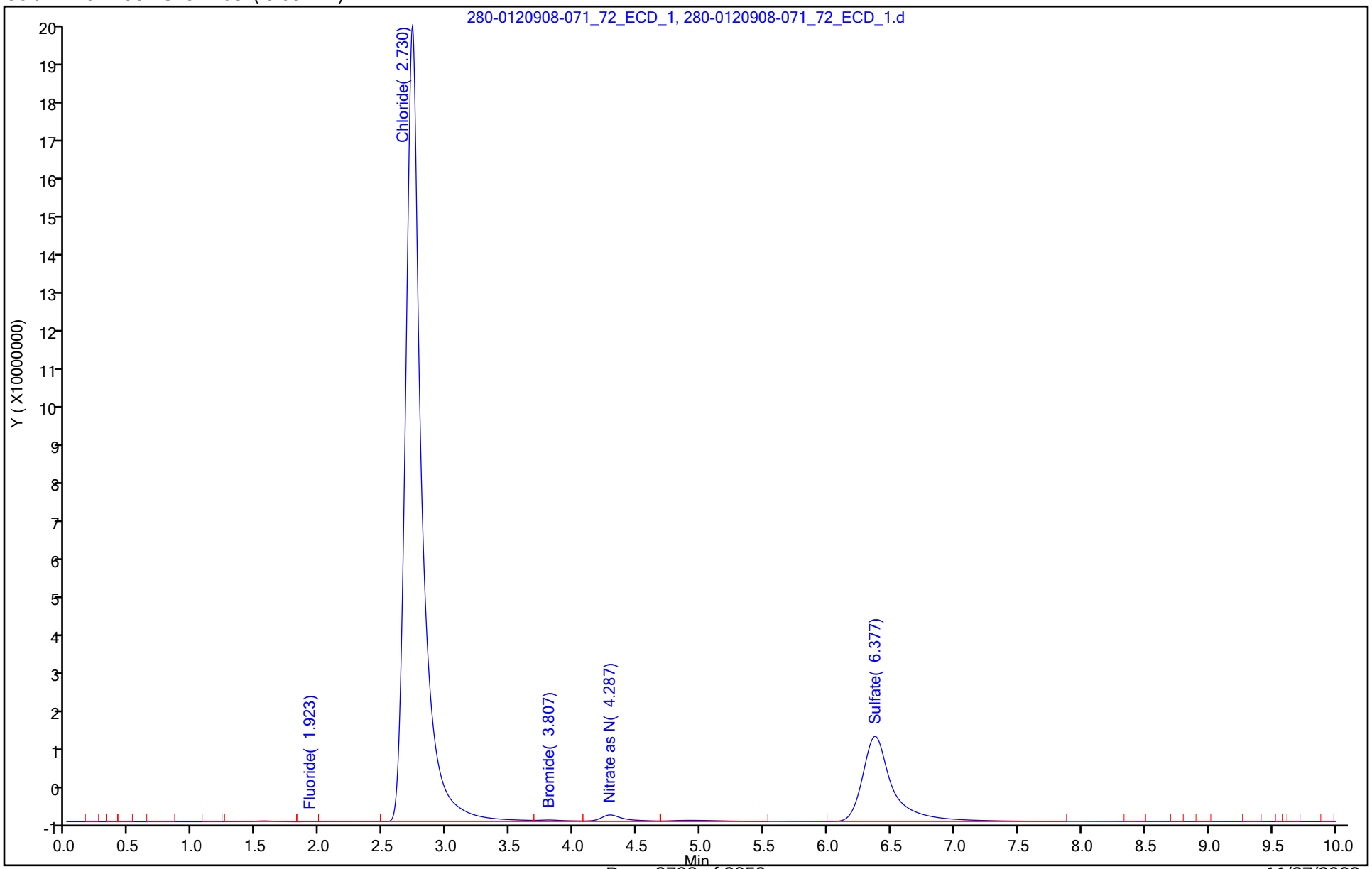
Report Date: 01-May-2023 11:42:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-071_72_ECD_1.d

Injection Date:	30-Apr-2023 03:21:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-175122-C-1	Lab Sample ID:	280-175122-1	Worklist Smp#:	71
Client ID:	RW-1-20230413				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-077_78_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 30-Apr-2023 04:33:00 ALS Bottle#: 0 Worklist Smp#: 77
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-077
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:38 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:38:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	11975149	2.50	2.52	M
2 Chloride	2.677	2.757	-0.080	184625889	50.0	47.6	Ma
3 Nitrite as N		3.120			NC	ND	Ma
4 Bromide	3.750	3.813	-0.063	2582089	2.50	2.32	
5 Nitrate as N	4.197	4.087	0.110	19721473	NC	NC	
7 Orthophosphate as P	5.583	5.640	-0.057	6224514	NC	NC	
6 Sulfate	6.317	6.430	-0.113	129250879	50.0	48.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

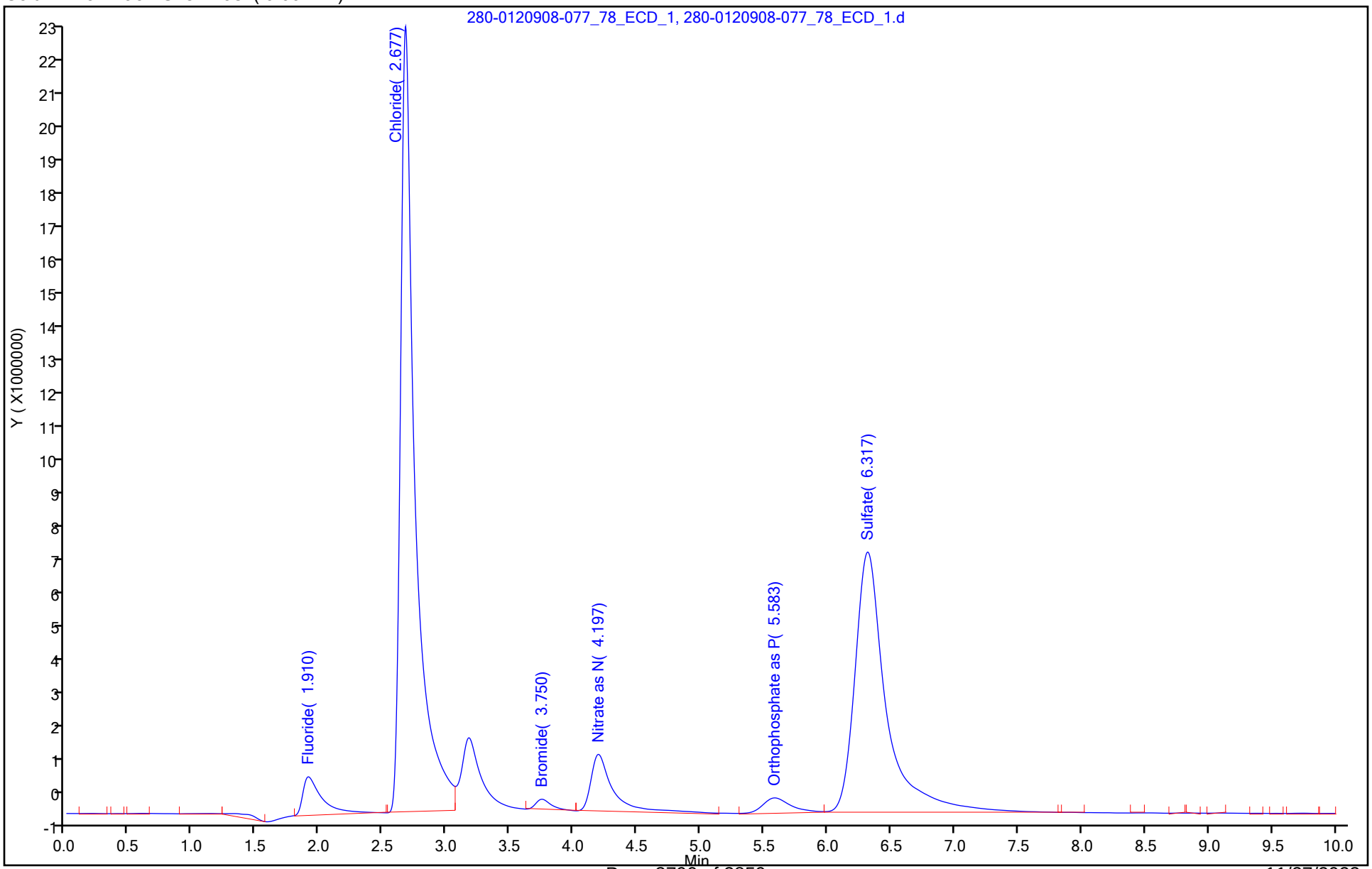
Report Date: 01-May-2023 11:42:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-077_78_ECD_1.d

Injection Date:	30-Apr-2023 04:33:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	77
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-078_79_ECD_1.d				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	30-Apr-2023 04:44:00	ALS Bottle#:	0	Worklist Smp#:	78
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120908-078				
Misc. Info.:	CCB				
Operator ID:		Instrument ID:	WC_IonChrom15		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	01-May-2023 11:42:38	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1628				
First Level Reviewer: XAY4		Date:	01-May-2023 11:38:16		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride		2.757				ND	U
3 Nitrite as N	2.993	3.120	-0.127	325309		NC	
4 Bromide	3.797	3.813	-0.016	9024		0.0175	
5 Nitrate as N	4.033	4.087	-0.054	27256		NC	
7 Orthophosphate as P	5.677	5.640	0.037	19317		NC	
6 Sulfate	6.370	6.430	-0.060	4509		0.2231	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

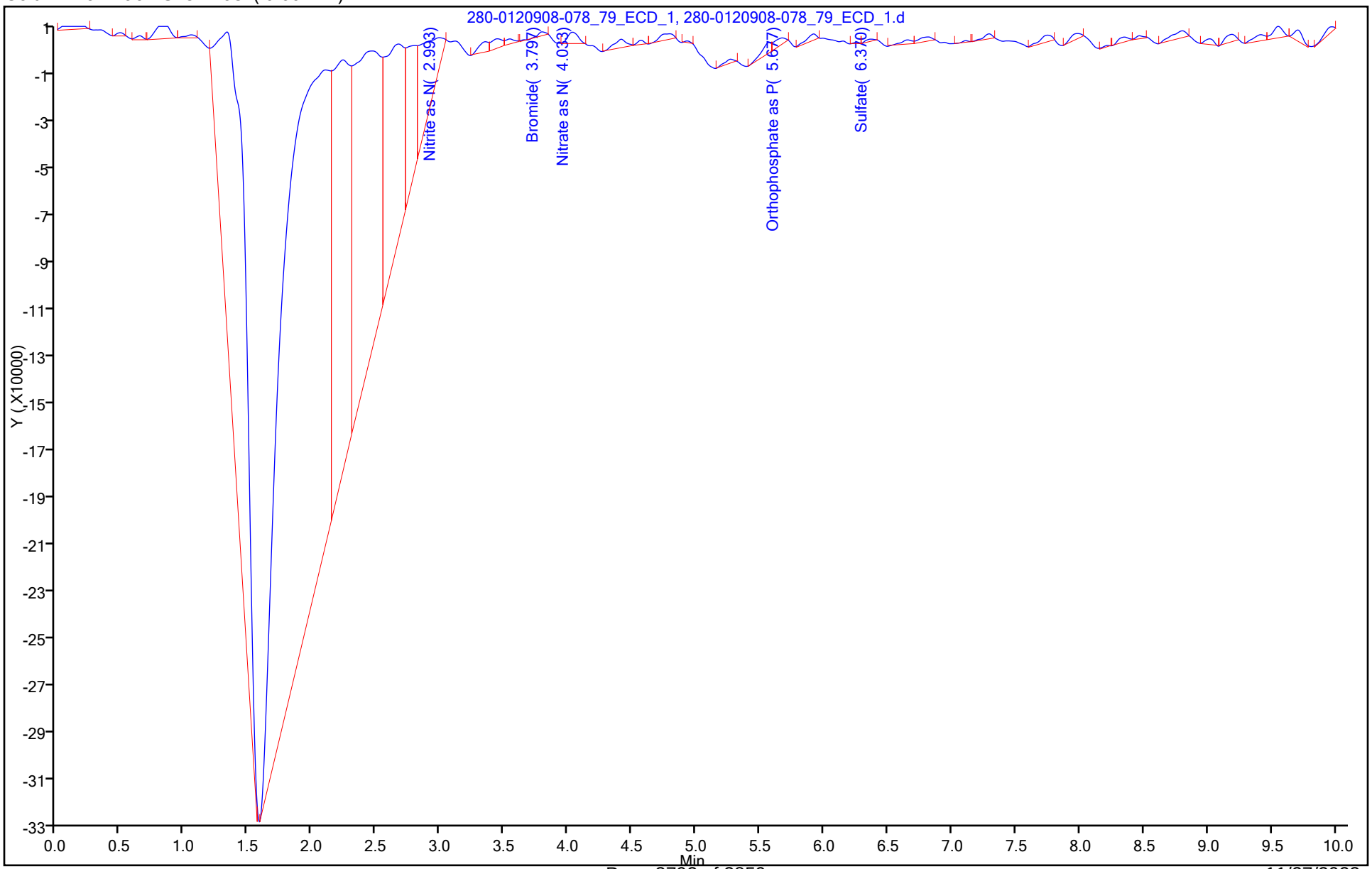
Report Date: 01-May-2023 11:42:40 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-078_79_ECD_1.d

Injection Date:	30-Apr-2023 04:44:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	78
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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	Analysis	Sample Name	Sample I	ObjectID
1	NPOC	ICV		0L-10900100866-10101000-134B1151D7E4-000
2	NPOC	ICB		0L-10900100866-10101000-134B1151D7E4-000
3	NPOC	LCS		0L-10900100866-10101000-134B1151D7E4-000
4	NPOC	MB		0L-10900100866-10101000-134B1151D7E4-000
5	NPOC	TIC		0L-10900100866-10101000-134B1151D7E4-000
6	NPOC	280-175051-a-6		0L-10900100866-10101000-134B1151D7E4-000
7	NPOC	MS 280-175051-a-6		0L-10900100866-10101000-134B1151D7E4-000
8	NPOC	MSD 280-175051-a-6		0L-10900100866-10101000-134B1151D7E4-000
9	NPOC	280-175051-a-7		0L-10900100866-10101000-134B1151D7E4-000
10	NPOC	280-175121-b-2		0L-10900100866-10101000-134B1151D7E4-000
11	NPOC	280-175121-b-3		0L-10900100866-10101000-134B1151D7E4-000
12	NPOC	280-175121-b-4		0L-10900100866-10101000-134B1151D7E4-000
13	NPOC	280-175122-b-1		0L-10900100866-10101000-134B1151D7E4-000
14	NPOC	280-175122-b-2		0L-10900100866-10101000-134B1151D7E4-000
15	NPOC	CCV		0L-10900100866-10101000-134B1151D7E4-000
16	NPOC	CCB		0L-10900100866-10101000-134B1151D7E4-000
17	NPOC	280-175122-b-3		0L-10900100866-10101000-134B1151D7E4-001
18	NPOC	280-175123-b-1		0L-10900100866-10101000-134B1151D7E4-001
19	NPOC	280-175301-a-4		0L-10900100866-10101000-134B1151D7E4-001
20	NPOC	280-175042-I-1		0L-10900100866-10101000-134B1151D7E4-001
21	NPOC	MS 280-175042-I-1		0L-10900100866-10101000-134B1151D7E4-001
22	NPOC	MSD 280-175042-I-1		0L-10900100866-10101000-134B1151D7E4-001
23	NPOC	280-175042-k-2		0L-10900100866-10101000-134B1151D7E4-001
24	NPOC	280-175042-I-3		0L-10900100866-10101000-134B1151D7E4-001
25	NPOC	280-175042-I-4		0L-10900100866-10101000-134B1151D7E4-001
26	NPOC	280-175042-k-5		0L-10900100866-10101000-134B1151D7E4-001
27	NPOC	CCV		0L-10900100866-10101000-134B1151D7E4-001
28	NPOC	CCB		0L-10900100866-10101000-134B1151D7E4-001
29	NPOC	280-175042-I-6		0L-10900100866-10101000-134B1151D7E4-001
30	NPOC	280-175042-k-7		0L-10900100866-10101000-134B1151D7E4-001
31	NPOC	280-175042-k-8		0L-10900100866-10101000-134B1151D7E4-001
32	NPOC	280-175042-k-9		0L-10900100866-10101000-134B1151D7E4-001
33	NPOC	280-175042-k-10		0L-10900100866-10101000-134B1151D7E4-002
34	NPOC	LCS		0L-10900100866-10101000-134B1151D7E4-002
35	NPOC	MB		0L-10900100866-10101000-134B1151D7E4-002
36	NPOC	TIC		0L-10900100866-10101000-134B1151D7E4-002
37	NPOC	280-175042-I-11		0L-10900100866-10101000-134B1151D7E4-002
38	NPOC	MS 280-175042-I-11		0L-10900100866-10101000-134B1151D7E4-002
39	NPOC	CCV		0L-10900100866-10101000-134B1151D7E4-002
40	NPOC	CCB		0L-10900100866-10101000-134B1151D7E4-002
41	NPOC	MSD 280-175042-I-11		0L-10900100866-10101000-134B1151D7E4-002
42	NPOC	280-175042-I-12		0L-10900100866-10101000-134B1151D7E4-002
43	NPOC	280-175042-k-13		0L-10900100866-10101000-134B1151D7E4-002
44	NPOC	280-175046-b-1		0L-10900100866-10101000-134B1151D7E4-002
45	NPOC	280-175046-b-2		0L-10900100866-10101000-134B1151D7E4-002
46	NPOC	280-175046-d-3		0L-10900100866-10101000-134B1151D7E4-002
47	NPOC	280-175046-b-4		0L-10900100866-10101000-134B1151D7E4-002
48	NPOC	280-175046-b-5		0L-10900100866-10101000-134B1151D7E4-002
49	NPOC	280-175070-b-2		0L-10900100866-10101000-134B1151D7E4-003
50	NPOC	280-175070-a-3		0L-10900100866-10101000-134B1151D7E4-003
51	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-000
52	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-000
53	NPOC	280-175104-c-1		0L-10900100866-10101000-134B1151D7E5-000

	Origin	Manual Dilution	Result	Notes	Comment	Status
1	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:19.88mg/L			Completed
2	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1408mg/L			Completed
3	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.51mg/L			Completed
4	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1171mg/L			Completed
5	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1769mg/L			Completed
6	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.227mg/L			Completed
7	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:25.25mg/L			Completed
8	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:25.16mg/L			Completed
9	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.247mg/L			Completed
10	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.485mg/L			Completed
11	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:4.569mg/L			Completed
12	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:4.942mg/L			Completed
13	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:5.082mg/L			Completed
14	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:3.829mg/L			Completed
15	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.36mg/L			Completed
16	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.2307mg/L			Completed
17	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:10.67mg/L			Completed
18	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.658mg/L			Completed
19	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:34.86mg/L			Completed
20	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.806mg/L			Completed
21	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:26.72mg/L			Completed
22	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:26.47mg/L			Completed
23	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:11.54mg/L			Completed
24	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:5.856mg/L			Completed
25	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.751mg/L			Completed
26	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.061mg/L			Completed
27	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.30mg/L			Completed
28	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1292mg/L			Completed
29	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:5.893mg/L			Completed
30	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:13.36mg/L			Completed
31	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.550mg/L			Completed
32	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.739mg/L			Completed
33	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:5.095mg/L			Completed
34	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.70mg/L			Completed
35	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1194mg/L			Completed
36	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1885mg/L			Completed
37	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:3.839mg/L			Completed
38	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:27.55mg/L			Completed
39	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.41mg/L			Completed
40	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1938mg/L			Completed
41	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:27.60mg/L			Completed
42	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.776mg/L			Completed
43	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.479mg/L			Completed
44	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.9111mg/L			Completed
45	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.333mg/L			Completed
46	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.5932mg/L			Completed
47	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.6405mg/L			Completed
48	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.4453mg/L			Completed
49	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	50.00	NPOC:1732mg/L			Completed
50	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	5.000	NPOC:104.1mg/L			Completed
51	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.17mg/L			Completed
52	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1796mg/L			Completed
53	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7654mg/L			Completed

	Action	Date / Time	Vial
1		4/21/2023 3:08:50 PM	1
2		4/21/2023 3:22:55 PM	2
3		4/21/2023 3:38:26 PM	3
4		4/21/2023 3:52:45 PM	4
5		4/21/2023 4:07:14 PM	5
6		4/21/2023 4:21:31 PM	6
7		4/21/2023 4:37:05 PM	7
8		4/21/2023 4:52:44 PM	8
9		4/21/2023 5:06:53 PM	9
10		4/21/2023 5:21:13 PM	10
11		4/21/2023 5:35:47 PM	11
12		4/21/2023 5:50:13 PM	12
13		4/21/2023 6:05:05 PM	13
14		4/21/2023 6:19:28 PM	14
15		4/21/2023 6:35:18 PM	15
16		4/21/2023 6:49:29 PM	16
17		4/21/2023 7:04:33 PM	17
18		4/21/2023 7:18:38 PM	18
19		4/21/2023 7:34:23 PM	19
20		4/21/2023 7:48:53 PM	20
21		4/21/2023 8:04:52 PM	21
22		4/21/2023 8:20:28 PM	22
23		4/21/2023 8:35:51 PM	23
24		4/21/2023 8:50:37 PM	24
25		4/21/2023 9:05:16 PM	25
26		4/21/2023 9:19:21 PM	26
27		4/21/2023 9:35:29 PM	27
28		4/21/2023 9:49:38 PM	28
29		4/21/2023 10:04:50 PM	29
30		4/21/2023 10:20:21 PM	30
31		4/21/2023 10:35:13 PM	31
32		4/21/2023 10:50:13 PM	32
33		4/21/2023 11:05:13 PM	33
34		4/21/2023 11:21:02 PM	34
35		4/21/2023 11:35:20 PM	35
36		4/21/2023 11:50:02 PM	36
37		4/22/2023 12:04:42 AM	37
38		4/22/2023 12:20:23 AM	38
39		4/22/2023 12:36:31 AM	39
40		4/22/2023 12:50:52 AM	40
41		4/22/2023 1:06:24 AM	41
42		4/22/2023 1:20:46 AM	42
43		4/22/2023 1:34:55 AM	43
44		4/22/2023 1:49:01 AM	44
45		4/22/2023 2:03:11 AM	45
46		4/22/2023 2:17:17 AM	46
47		4/22/2023 2:31:24 AM	47
48		4/22/2023 2:45:49 AM	48
49		4/22/2023 3:01:32 AM	49
50		4/22/2023 3:17:05 AM	50
51		4/22/2023 3:33:00 AM	51
52		4/22/2023 3:47:15 AM	52
53		4/22/2023 4:01:26 AM	53

	Analysis	Sample Name	Sample I	ObjectID
54	NPOC	MS 280-175104-c-1		0L-10900100866-10101000-134B1151D7E5-000
55	NPOC	MSD 280-175104-c-1		0L-10900100866-10101000-134B1151D7E5-000
56	NPOC	280-175104-c-2		0L-10900100866-10101000-134B1151D7E5-000
57	NPOC	280-175104-c-3		0L-10900100866-10101000-134B1151D7E5-000
58	NPOC	280-175074-d-1		0L-10900100866-10101000-134B1151D7E5-000
59	NPOC	280-175074-e-3		0L-10900100866-10101000-134B1151D7E5-000
60	NPOC	280-175074-d-5		0L-10900100866-10101000-134B1151D7E5-000
61	NPOC	280-175074-d-7		0L-10900100866-10101000-134B1151D7E5-000
62	NPOC	280-175078-e-1		0L-10900100866-10101000-134B1151D7E5-000
63	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-000
64	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-000
65	NPOC	280-175105-d-1		0L-10900100866-10101000-134B1151D7E5-000
66	NPOC	280-175108-d-1		0L-10900100866-10101000-134B1151D7E5-000
67	NPOC	LCS		0L-10900100866-10101000-134B1151D7E5-001
68	NPOC	MB		0L-10900100866-10101000-134B1151D7E5-001
69	NPOC	280-175112-n-1		0L-10900100866-10101000-134B1151D7E5-001
70	NPOC	MS 280-175112-n-1		0L-10900100866-10101000-134B1151D7E5-001
71	NPOC	MSD 280-175112-n-1		0L-10900100866-10101000-134B1151D7E5-001
72	NPOC	280-175112-m-2		0L-10900100866-10101000-134B1151D7E5-001
73	NPOC	280-175112-m-3		0L-10900100866-10101000-134B1151D7E5-001
74	NPOC	280-175112-m-4		0L-10900100866-10101000-134B1151D7E5-001
75	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-001
76	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-001
77	NPOC	280-175112-k-5		0L-10900100866-10101000-134B1151D7E5-001
78	NPOC	280-175112-l-6		0L-10900100866-10101000-134B1151D7E5-001
79	NPOC	280-175112-l-7		0L-10900100866-10101000-134B1151D7E5-001
80	NPOC	280-175112-k-8		0L-10900100866-10101000-134B1151D7E5-001
81	NPOC	280-175112-l-9		0L-10900100866-10101000-134B1151D7E5-001
82	NPOC	280-175112-m-10		0L-10900100866-10101000-134B1151D7E5-001
83	NPOC	280-175112-l-11		0L-10900100866-10101000-134B1151D7E5-002
84	NPOC	MS 280-175112-l-11		0L-10900100866-10101000-134B1151D7E5-002
85	NPOC	MSD 280-175112-l-11		0L-10900100866-10101000-134B1151D7E5-002
86	NPOC	280-175112-k-12		0L-10900100866-10101000-134B1151D7E5-002
87	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-002
88	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-002
89	NPOC	280-175301-a-1		0L-10900100866-10101000-134B1151D7E5-002
90	NPOC	280-175301-a-2		0L-10900100866-10101000-134B1151D7E5-002
91	NPOC	280-175301-a-3		0L-10900100866-10101000-134B1151D7E5-002
92	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-002
93	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-002

	Origin	Manual Dilution	Result	Notes	Comment	Status
54	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.65mg/L			Completed
55	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.60mg/L			Completed
56	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7287mg/L			Completed
57	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.444mg/L			Completed
58	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7511mg/L			Completed
59	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.704mg/L			Completed
60	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7224mg/L			Completed
61	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7489mg/L			Completed
62	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:3.573mg/L			Completed
63	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:23.89mg/L			Completed
64	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1369mg/L			Completed
65	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.410mg/L			Completed
66	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.6721mg/L			Completed
67	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.63mg/L			Completed
68	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1878mg/L			Completed
69	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.253mg/L			Completed
70	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:30.32mg/L			Completed
71	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:29.96mg/L			Completed
72	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:4.987mg/L			Completed
73	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:18.50mg/L			Completed
74	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.581mg/L			Completed
75	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.29mg/L			Completed
76	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1805mg/L			Completed
77	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:11.90mg/L			Completed
78	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.648mg/L			Completed
79	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:13.95mg/L			Completed
80	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.451mg/L			Completed
81	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:9.448mg/L			Completed
82	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:13.90mg/L			Completed
83	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.718mg/L			Completed
84	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:30.85mg/L			Completed
85	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:30.89mg/L			Completed
86	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:7.922mg/L			Completed
87	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.25mg/L			Completed
88	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1463mg/L			Completed
89	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.616mg/L			Completed
90	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:34.65mg/L			Completed
91	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.767mg/L			Completed
92	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.16mg/L			Completed
93	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.2098mg/L			Completed

	Action	Date / Time	Vial
54		4/22/2023 4:16:59 AM	54
55		4/22/2023 4:33:06 AM	55
56		4/22/2023 4:47:51 AM	56
57		4/22/2023 5:02:06 AM	57
58		4/22/2023 5:16:18 AM	58
59		4/22/2023 5:30:25 AM	59
60		4/22/2023 5:44:32 AM	60
61		4/22/2023 5:58:39 AM	61
62		4/22/2023 6:13:14 AM	62
63		4/22/2023 6:29:06 AM	63
64		4/22/2023 6:43:19 AM	64
65		4/22/2023 6:58:00 AM	65
66		4/22/2023 7:12:07 AM	66
67		4/22/2023 7:27:57 AM	67
68		4/22/2023 7:42:05 AM	68
69		4/22/2023 7:57:06 AM	69
70		4/22/2023 8:12:57 AM	70
71		4/22/2023 8:28:40 AM	71
72		4/22/2023 8:43:23 AM	72
73		4/22/2023 8:59:16 AM	73
74		4/22/2023 9:13:42 AM	74
75		4/22/2023 9:29:31 AM	75
76		4/22/2023 9:43:59 AM	76
77		4/22/2023 9:59:14 AM	77
78		4/22/2023 10:13:28 AM	78
79		4/22/2023 10:28:49 AM	79
80		4/22/2023 10:43:01 AM	80
81		4/22/2023 10:58:04 AM	81
82		4/22/2023 11:13:53 AM	82
83		4/22/2023 11:28:50 AM	83
84		4/22/2023 11:44:40 AM	84
85		4/22/2023 12:00:18 PM	85
86		4/22/2023 12:15:24 PM	86
87		4/22/2023 12:31:27 PM	87
88		4/22/2023 12:45:36 PM	88
89		4/22/2023 12:59:58 PM	89
90		4/22/2023 1:15:58 PM	90
91		4/22/2023 1:30:20 PM	91
92		4/22/2023 1:46:06 PM	92
93		4/22/2023 2:00:33 PM	93

TOC-L Cal Curve Information
C:\TOC-L\CalCurves\NPOC Calibration 10 31 2022.2023 03 20 14 43 51.cal

Date of Creation	3/20/2023 4:26:03 PM
User	abw
System	TOC-LCSN

Cal. Curve

Sample Name:	NPOC Calibration_AutoDilution_Calibration_03_20_2023
Sample ID:	Auto Dilution Calibration 03 20 2023
Object ID	0L-10900100866-10101000-134B0B02249E-0000
Cal. Curve:	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status	Completed
Comment:	

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.1980	50uL	1.000	*******		3/20/2023 2:51:43 PM
2	0.2915	50uL	1.000	*******		3/20/2023 2:54:03 PM
3	0.3385	50uL	1.000	*******		3/20/2023 2:56:12 PM
4	0.000	50uL	1.000	*******		3/20/2023 2:58:17 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	0.2070
SD Area	0.1498
CV Area	72.39%
Vial	88
No Washes	2

Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.039	50uL	50.00	*******		3/20/2023 3:07:14 PM
2	2.505	50uL	50.00	*******		3/20/2023 3:09:43 PM
3	2.186	50uL	50.00	*******		3/20/2023 3:12:14 PM
4	2.514	50uL	50.00	*******		3/20/2023 3:14:59 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	2.311
SD Area	0.2370
CV Area	10.25%
Vial	89
No Washes	2

Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	12.32	50uL	10.00	*******		3/20/2023 3:23:17 PM
2	13.04	50uL	10.00	*******		3/20/2023 3:26:06 PM
3	12.48	50uL	10.00	*******		3/20/2023 3:28:50 PM
4	12.86	50uL	10.00	*******		3/20/2023 3:31:49 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	12.68
SD Area	0.3324
CV Area	2.62%
Vial	89
No Washes	2

Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	24.07	50uL	5.000	*******		3/20/2023 3:40:19 PM
2	25.15	50uL	5.000	*******		3/20/2023 3:43:35 PM
3	24.82	50uL	5.000	*******		3/20/2023 3:46:37 PM
4	25.03	50uL	5.000	*******		3/20/2023 3:49:45 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	24.77
SD Area	0.4846
CV Area	1.96%
Vial	89
No Washes	2

Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	61.40	50uL	2.000	*******		3/20/2023 3:58:15 PM
2	61.02	50uL	2.000	*******		3/20/2023 4:01:24 PM
3	62.07	50uL	2.000	*******		3/20/2023 4:04:31 PM
4	62.38	50uL	2.000	*******		3/20/2023 4:07:56 PM

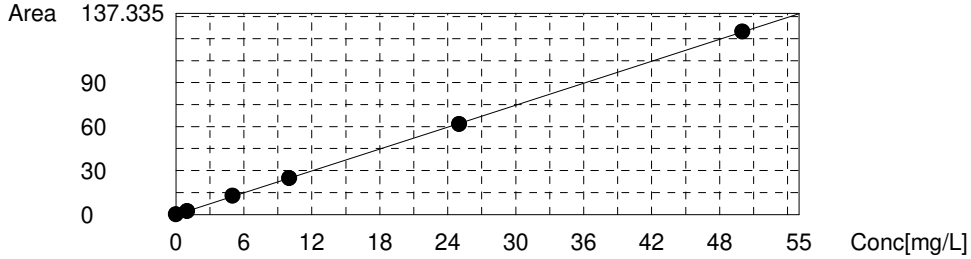
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	61.72
SD Area	0.6193
CV Area	1.00%
Vial	89
No Washes	2

Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	123.1	50uL	1.000	*******		3/20/2023 4:15:57 PM
2	124.0	50uL	1.000	*******		3/20/2023 4:19:27 PM
3	124.6	50uL	1.000	*******		3/20/2023 4:22:39 PM
4	127.7	50uL	1.000	*******		3/20/2023 4:26:03 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	124.9
SD Area	1.997
CV Area	1.60%
Vial	89
No Washes	2

Slope:	2.493
Intercept	-0.04883
r^2	1.0000
r	1.0000
RSE(%)	N/A
Zero Shift	No



TOC-Control L Report

ABW
2023_04_21_001.tlx

Instr.Information

Instrument Options TOC/ASI/
Catalyst Regular Sensitivity

Sample

Sample Name: ICV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

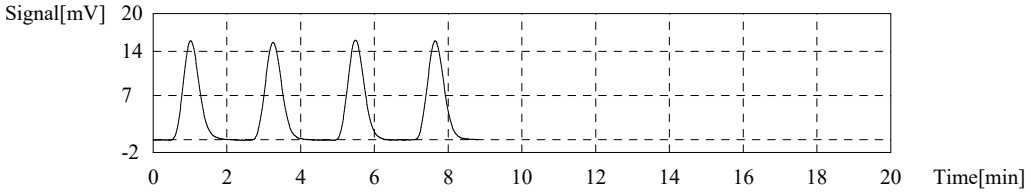
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:19.88mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	48.66	19.54mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:01:41 PM
2	49.21	19.76mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:04:08 PM
3	49.88	20.03mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:06:29 PM
4	50.22	20.17mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:08:50 PM

Mean Area 49.49
Mean Conc. 19.88mg/L



Sample

Sample Name: ICB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

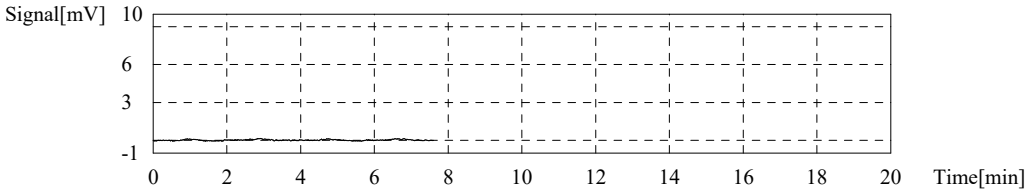
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1408mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3219	0.1487mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:16:40 PM
2	0.4017	0.1808mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:18:45 PM
3	0.1515	0.08037mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:20:50 PM
4	0.3331	0.1532mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:22:55 PM

Mean Area 0.3020
Mean Conc. 0.1408mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

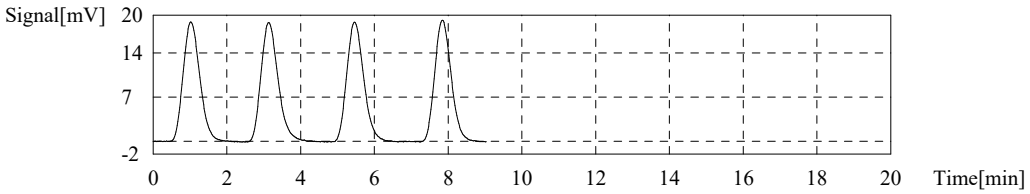
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.51mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.38	24.24mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:30:58 PM
2	61.68	24.77mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:33:27 PM
3	61.56	24.72mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:36:01 PM
4	60.56	24.32mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:38:26 PM

Mean Area 61.05
Mean Conc. 24.51mg/L



Sample

Sample Name: MB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

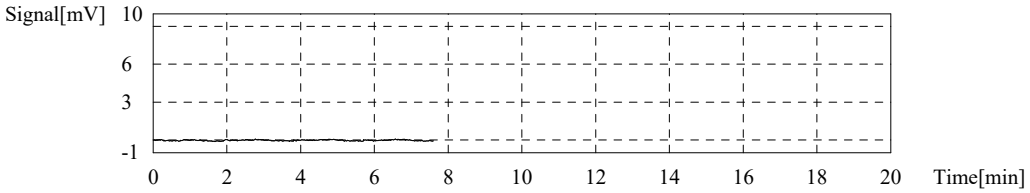
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1171mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1855	0.09401mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:46:16 PM
2	0.05930	0.04338mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:48:25 PM
3	0.4254	0.1903mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:50:34 PM
4	0.3018	0.1407mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:52:45 PM

Mean Area 0.2430
Mean Conc. 0.1171mg/L



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

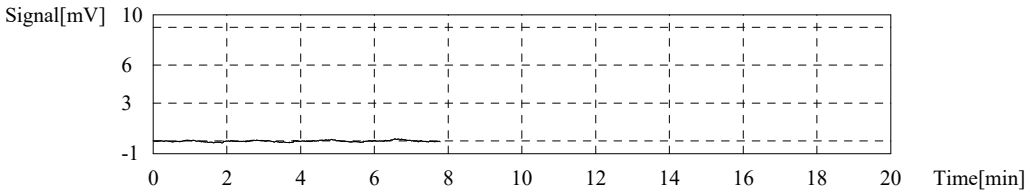
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1769mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3542	0.1617mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:00:35 PM
2	0.3835	0.1735mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:02:44 PM
3	0.1459	0.07813mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:04:53 PM
4	0.6847	0.2943mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:07:14 PM

Mean Area 0.3921
Mean Conc. 0.1769mg/L



Sample

Sample Name: 280-175051-a-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

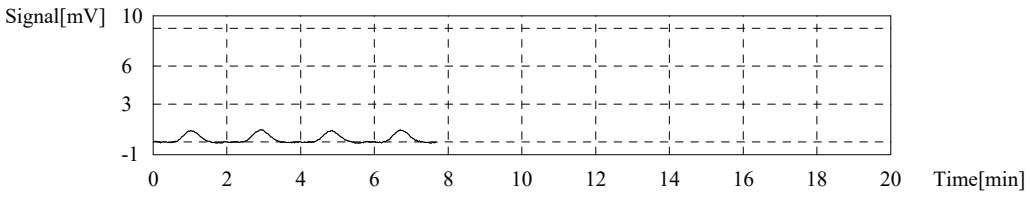
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.227mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.946	1.202mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:15:04 PM
2	3.072	1.252mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:17:13 PM
3	3.087	1.258mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:19:18 PM
4	2.935	1.197mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:21:31 PM

Mean Area 3.010
Mean Conc. 1.227mg/L



Sample

Sample Name: MS 280-175051-a-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

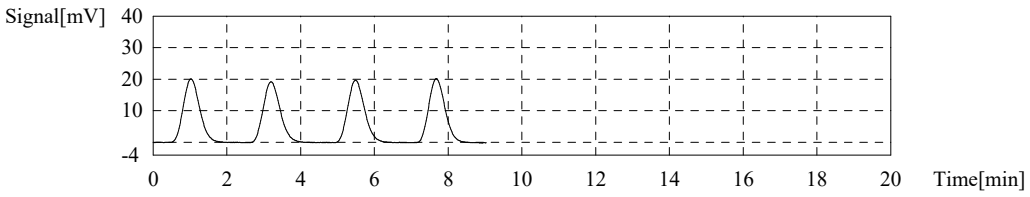
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.25mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.94	25.27mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:29:37 PM
2	62.39	25.05mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:32:08 PM
3	63.23	25.39mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:34:32 PM
4	63.02	25.30mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:37:05 PM

Mean Area 62.90
Mean Conc. 25.25mg/L



Sample

Sample Name: MSD 280-175051-a-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

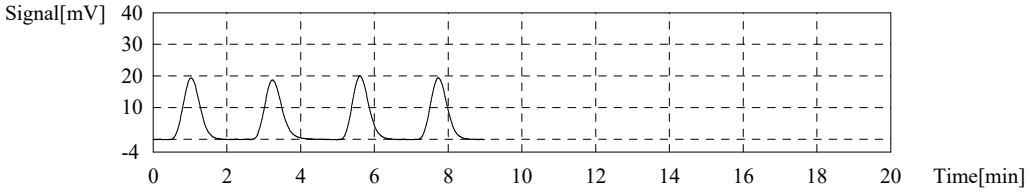
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.16mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.48	25.09mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:45:21 PM
2	62.00	24.89mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:47:54 PM
3	63.76	25.60mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:50:13 PM
4	62.40	25.05mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:52:44 PM

Mean Area 62.66
Mean Conc. 25.16mg/L



Sample

Sample Name: 280-175051-a-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

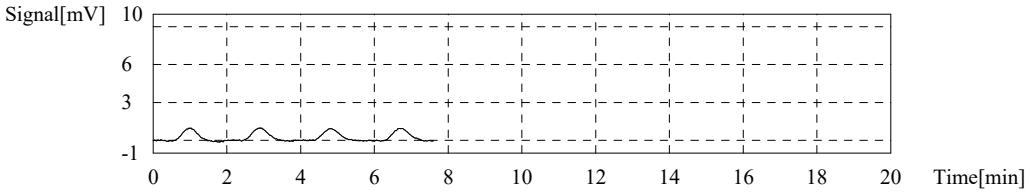
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.247mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.142	1.280mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:00:34 PM
2	3.190	1.299mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:02:43 PM
3	2.884	1.177mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:04:48 PM
4	3.020	1.231mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:06:53 PM

Mean Area 3.059
Mean Conc. 1.247mg/L



Sample

Sample Name: 280-175121-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

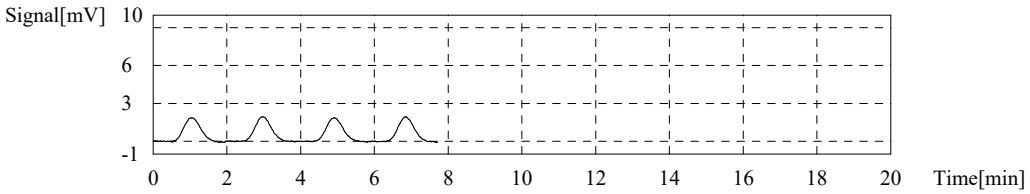
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.485mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.123	2.476mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:14:46 PM
2	6.219	2.515mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:16:56 PM
3	6.228	2.518mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:19:04 PM
4	6.015	2.433mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:21:13 PM

Mean Area 6.146
Mean Conc. 2.485mg/L



Sample

Sample Name: 280-175121-b-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

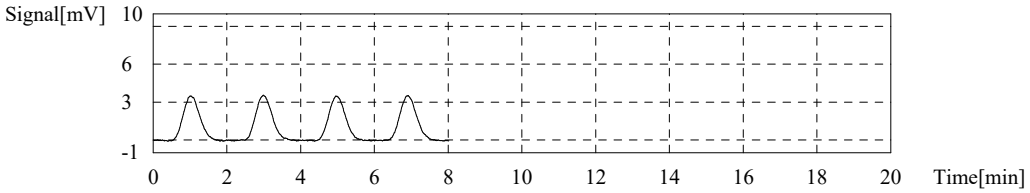
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.569mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.31	4.557mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:29:07 PM
2	11.34	4.569mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:31:16 PM
3	11.26	4.537mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:33:23 PM
4	11.45	4.613mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:35:47 PM

Mean Area 11.34
Mean Conc. 4.569mg/L



Sample

Sample Name: 280-175121-b-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

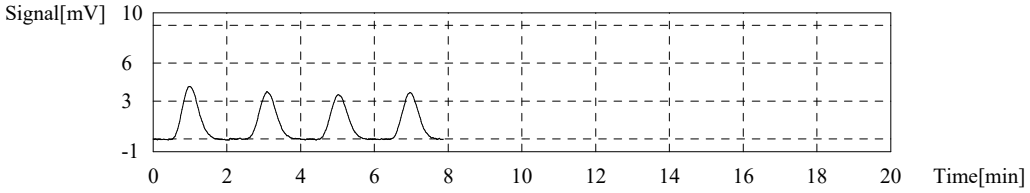
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.942mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.56	5.460mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:43:47 PM
2	12.17	4.902mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:45:58 PM
3	11.69	4.710mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:48:06 PM
4	11.66	4.698mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:50:13 PM

Mean Area 12.27
Mean Conc. 4.942mg/L



Sample

Sample Name: 280-175122-b-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

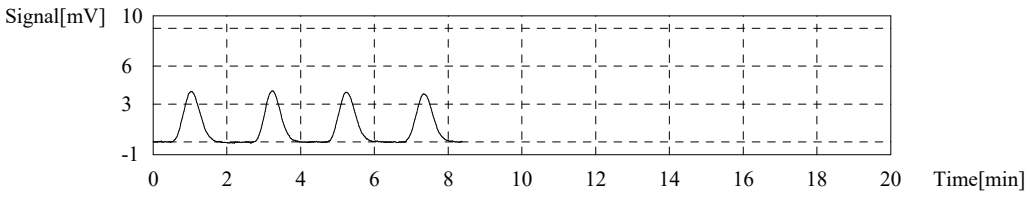
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.082mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.93	5.207mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:58:22 PM
2	12.63	5.087mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:00:34 PM
3	12.75	5.135mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:02:49 PM
4	12.16	4.898mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:05:05 PM

Mean Area 12.62
Mean Conc. 5.082mg/L



Sample

Sample Name: 280-175122-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

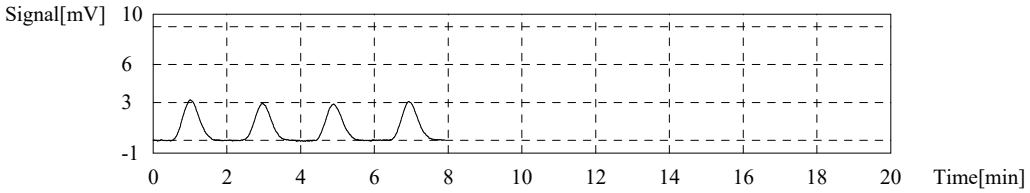
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.829mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.07	4.060mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:12:56 PM
2	9.135	3.685mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:15:03 PM
3	9.300	3.751mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:17:18 PM
4	9.473	3.820mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:19:28 PM

Mean Area 9.495
Mean Conc. 3.829mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

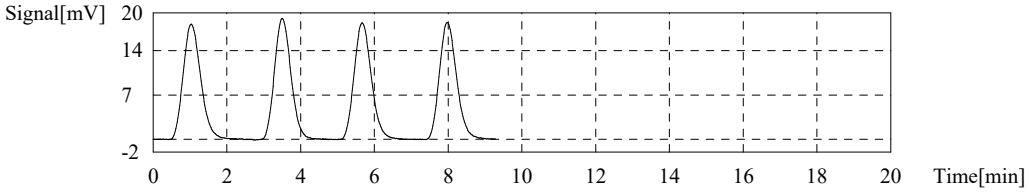
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.36mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.97	24.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:27:51 PM
2	60.22	24.18mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:30:16 PM
3	60.61	24.34mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:32:46 PM
4	60.87	24.44mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:35:18 PM

Mean Area 60.67
Mean Conc. 24.36mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

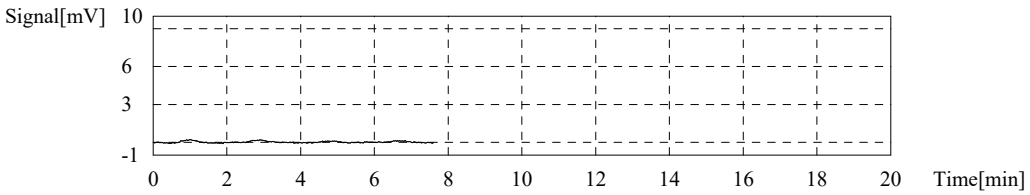
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2307mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6751	0.2904mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:43:08 PM
2	0.5055	0.2224mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:45:19 PM
3	0.4707	0.2084mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:47:24 PM
4	0.4537	0.2016mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:49:29 PM

Mean Area 0.5263
Mean Conc. 0.2307mg/L



Sample

Sample Name: 280-175122-b-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

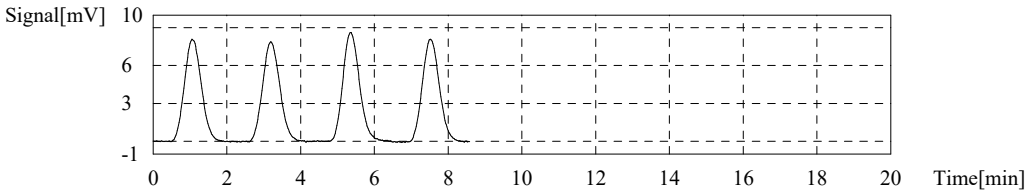
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.67mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	26.20	10.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:57:32 PM
2	26.08	10.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:59:55 PM
3	27.38	11.00mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:02:14 PM
4	26.57	10.68mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:04:33 PM

Mean Area 26.56
Mean Conc. 10.67mg/L



Sample

Sample Name: 280-175123-b-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

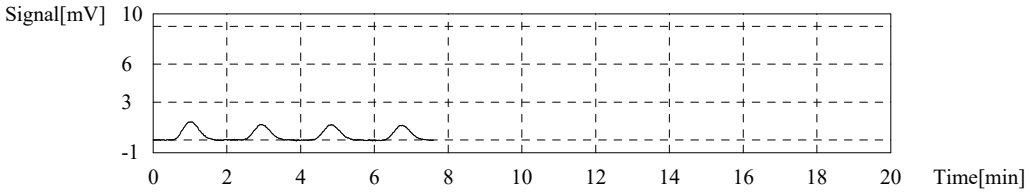
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.658mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.679	1.897mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:12:23 PM
2	3.800	1.544mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:14:28 PM
3	3.954	1.606mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:16:33 PM
4	3.903	1.585mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:18:38 PM

Mean Area 4.084
Mean Conc. 1.658mg/L



Sample

Sample Name: 280-175301-a-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

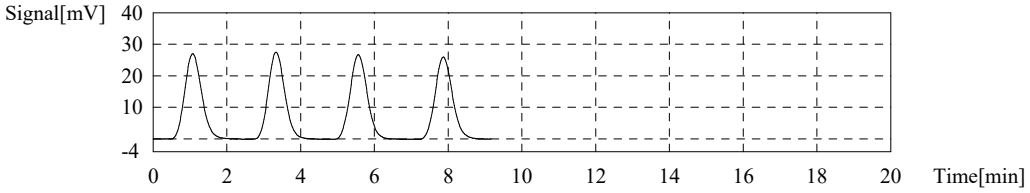
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:34.86mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	86.93	34.90mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:26:52 PM
2	86.77	34.83mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:29:19 PM
3	87.37	35.07mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:31:48 PM
4	86.29	34.64mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:34:23 PM

Mean Area 86.84
Mean Conc. 34.86mg/L



Sample

Sample Name: 280-175042-l-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

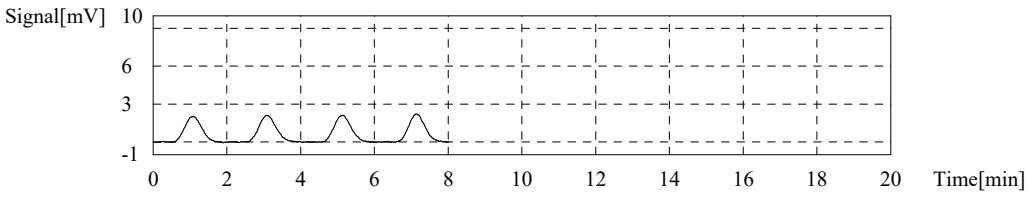
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.806mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.752	2.728mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:42:21 PM
2	6.898	2.787mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:44:34 PM
3	6.974	2.818mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:46:45 PM
4	7.153	2.889mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:48:53 PM

Mean Area 6.944
Mean Conc. 2.806mg/L



Sample

Sample Name: MS 280-175042-l-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

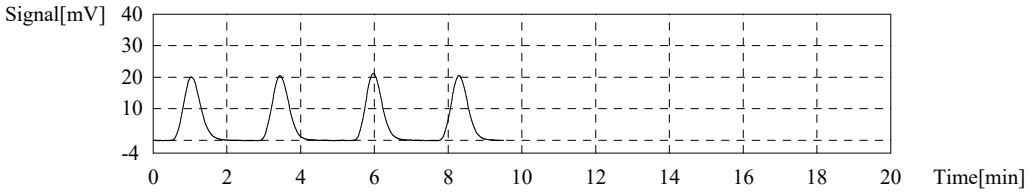
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.72mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	66.07	26.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:57:13 PM
2	66.76	26.80mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:59:57 PM
3	67.29	27.02mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:02:26 PM
4	66.09	26.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:04:52 PM

Mean Area 66.55
Mean Conc. 26.72mg/L



Sample

Sample Name: MSD 280-175042-l-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

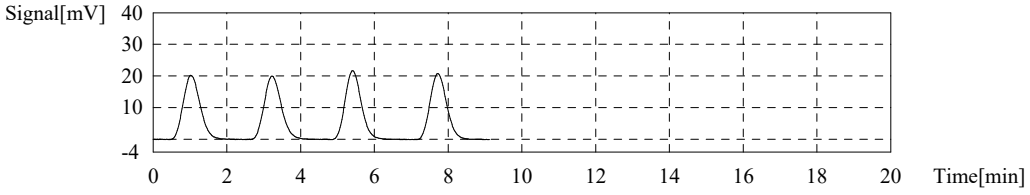
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.47mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	65.29	26.21mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:12:59 PM
2	65.22	26.19mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:15:22 PM
3	67.02	26.91mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:17:51 PM
4	66.20	26.58mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:20:28 PM

Mean Area 65.93
Mean Conc. 26.47mg/L



Sample

Sample Name: 280-175042-k-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

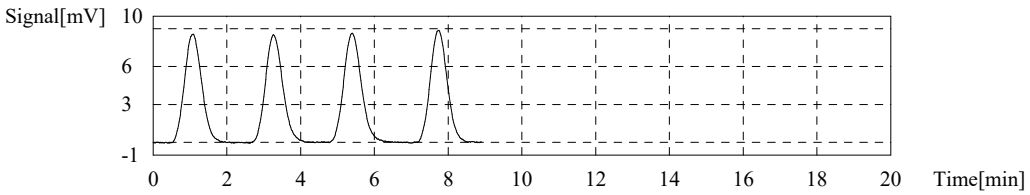
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.54mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	28.50	11.45mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:28:35 PM
2	28.13	11.31mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:30:53 PM
3	29.35	11.79mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:33:25 PM
4	28.92	11.62mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:35:51 PM

Mean Area 28.73
Mean Conc. 11.54mg/L



Sample

Sample Name: 280-175042-l-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

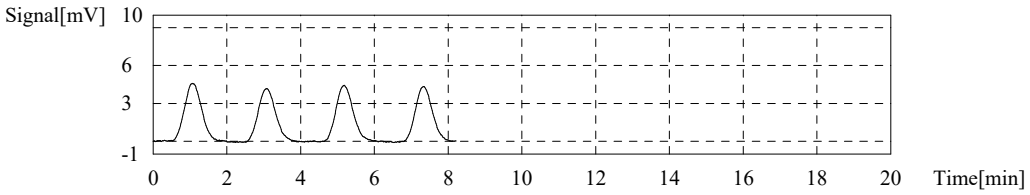
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.856mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.08	6.070mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:43:46 PM
2	14.19	5.713mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:46:05 PM
3	14.69	5.913mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:48:28 PM
4	14.23	5.729mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:50:37 PM

Mean Area 14.55
Mean Conc. 5.856mg/L



Sample

Sample Name: 280-175042-l-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

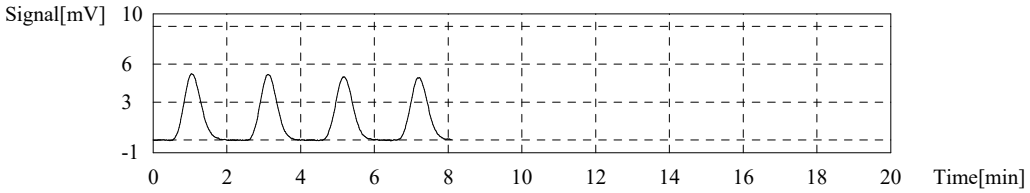
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.751mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	17.38	6.992mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:58:36 PM
2	16.78	6.752mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:00:50 PM
3	16.64	6.696mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:03:08 PM
4	16.31	6.563mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:05:16 PM

Mean Area 16.78
Mean Conc. 6.751mg/L



Sample

Sample Name: 280-175042-k-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

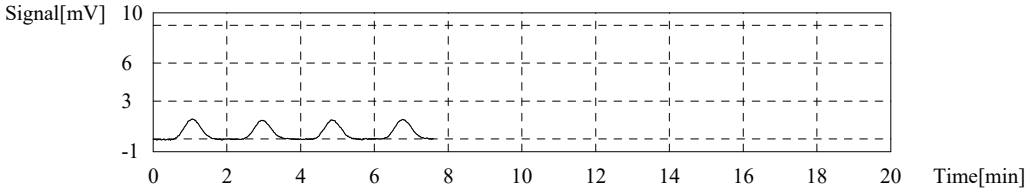
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.061mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.433	2.199mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:13:06 PM
2	4.886	1.980mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:15:11 PM
3	4.952	2.006mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:17:16 PM
4	5.081	2.058mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:19:21 PM

Mean Area 5.088
Mean Conc. 2.061mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

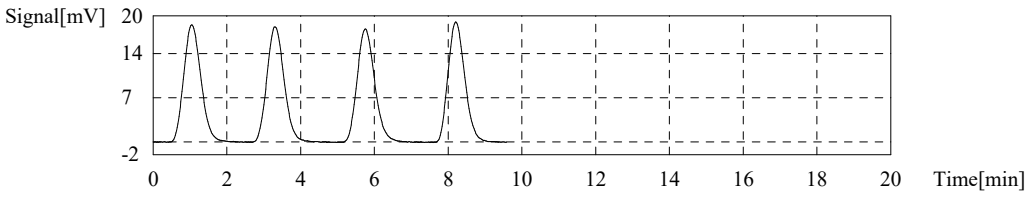
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.30mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.74	24.39mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:27:31 PM
2	59.94	24.07mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:30:13 PM
3	60.30	24.21mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:32:54 PM
4	61.10	24.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:35:29 PM

Mean Area 60.52
Mean Conc. 24.30mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

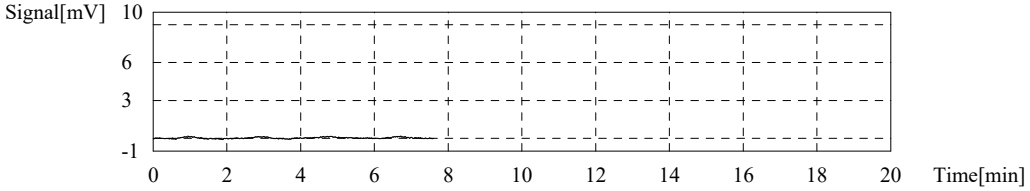
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1292mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3801	0.1721mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:43:19 PM
2	0.3135	0.1454mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:45:27 PM
3	0.03770	0.03472mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:47:32 PM
4	0.3619	0.1648mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:49:38 PM

Mean Area 0.2733
Mean Conc. 0.1292mg/L



Sample

Sample Name: 280-175042-l-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

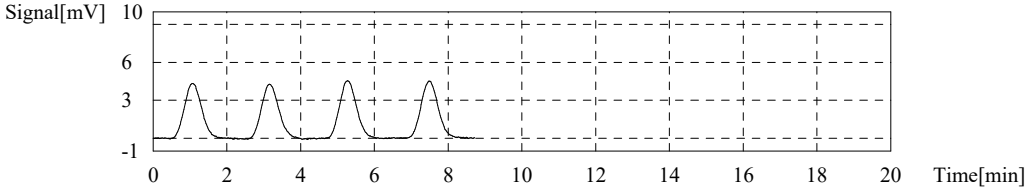
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.893mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	14.34	5.773mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:57:39 PM
2	14.64	5.893mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:59:57 PM
3	14.71	5.921mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:02:20 PM
4	14.87	5.985mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:04:50 PM

Mean Area 14.64
Mean Conc. 5.893mg/L



Sample

Sample Name: 280-175042-k-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

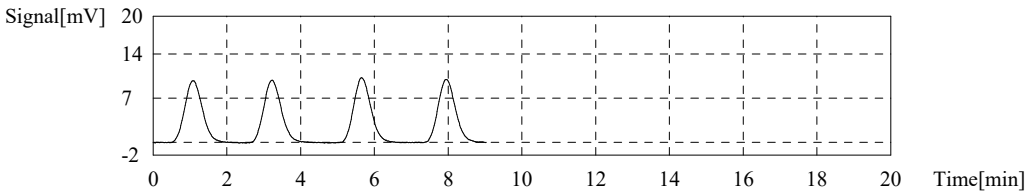
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:13.36mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.91	13.22mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:12:54 PM
2	33.20	13.34mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:15:32 PM
3	33.67	13.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:18:00 PM
4	33.23	13.35mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:20:21 PM

Mean Area 33.25
Mean Conc. 13.36mg/L



Sample

Sample Name: 280-175042-k-8
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

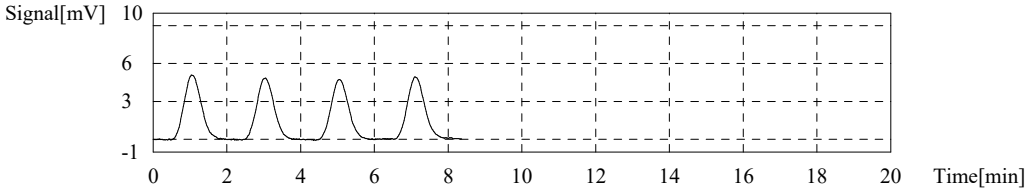
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.550mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.70	6.720mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:28:15 PM
2	15.95	6.419mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:30:27 PM
3	15.94	6.415mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:32:42 PM
4	16.52	6.647mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:35:13 PM

Mean Area 16.28
Mean Conc. 6.550mg/L



Sample

Sample Name: 280-175042-k-9
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

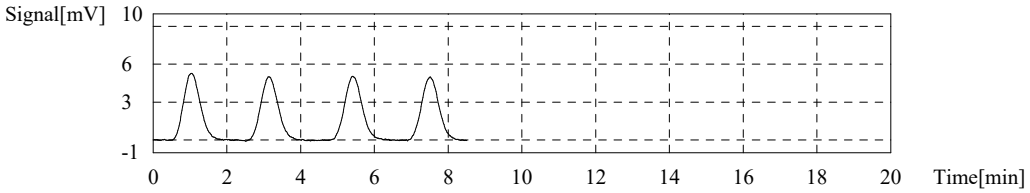
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.739mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.89	6.796mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:43:14 PM
2	16.83	6.772mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:45:40 PM
3	16.68	6.712mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:47:56 PM
4	16.59	6.675mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:50:13 PM

Mean Area 16.75
Mean Conc. 6.739mg/L



Sample

Sample Name: 280-175042-k-10
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

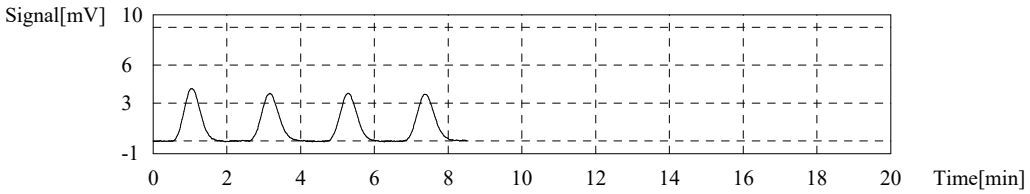
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.095mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.17	5.303mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:58:15 PM
2	12.46	5.019mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:00:32 PM
3	12.55	5.055mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:02:50 PM
4	12.42	5.002mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:05:13 PM

Mean Area 12.65
Mean Conc. 5.095mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

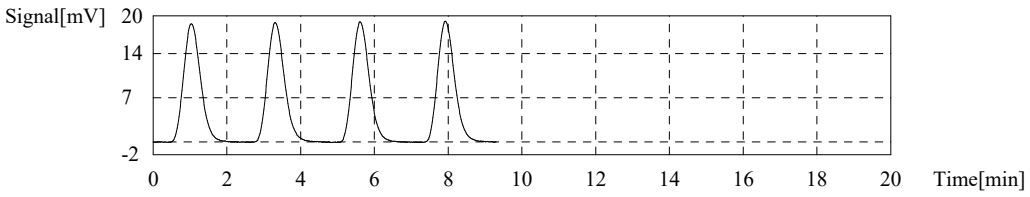
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.70mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.74	24.39mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:13:28 PM
2	61.32	24.62mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:15:57 PM
3	61.64	24.75mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:18:27 PM
4	62.38	25.05mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:21:02 PM

Mean Area 61.52
Mean Conc. 24.70mg/L



Sample

Sample Name: MB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

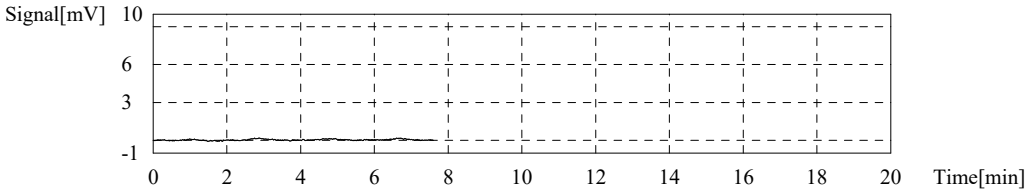
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1194mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2149	0.1058mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:28:53 PM
2	0.3975	0.1791mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:31:02 PM
3	0.000	0.01959mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:33:07 PM
4	0.3824	0.1730mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:35:20 PM

Mean Area 0.2487
Mean Conc. 0.1194mg/L



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

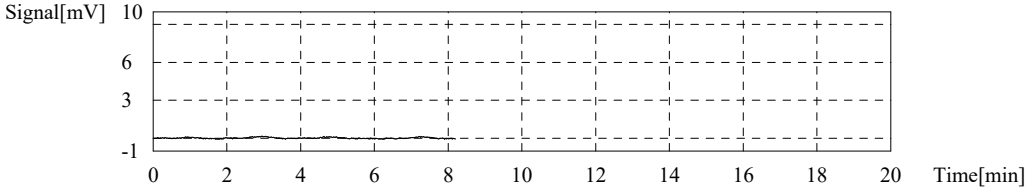
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1885mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2992	0.1396mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:43:11 PM
2	0.3630	0.1652mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:45:16 PM
3	0.6648	0.2863mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:47:57 PM
4	0.3575	0.1630mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:50:02 PM

Mean Area 0.4211
Mean Conc. 0.1885mg/L



Sample

Sample Name: 280-175042-I-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

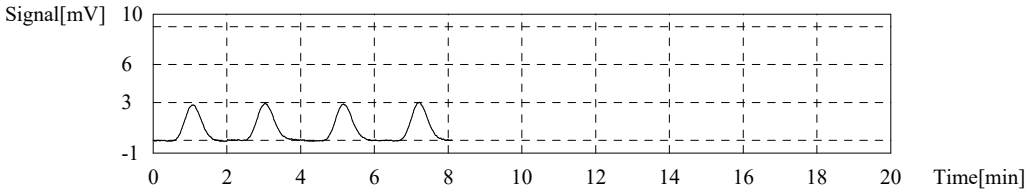
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.839mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.205	3.713mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:57:59 PM
2	9.517	3.838mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:00:21 AM
3	9.711	3.916mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:02:36 AM
4	9.650	3.891mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:04:42 AM

Mean Area 9.521
Mean Conc. 3.839mg/L



Sample

Sample Name: MS 280-175042-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

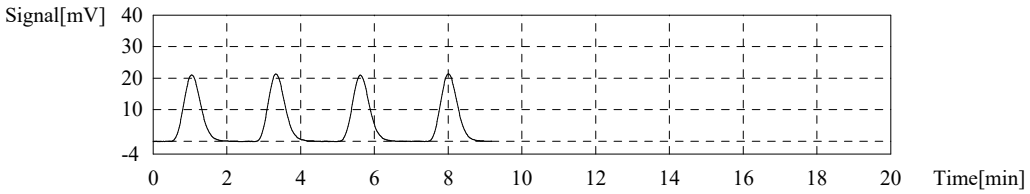
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.55mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	68.51	27.51mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:12:57 AM
2	68.47	27.49mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:15:23 AM
3	68.62	27.55mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:17:59 AM
4	68.92	27.67mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:20:23 AM

Mean Area 68.63
Mean Conc. 27.55mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

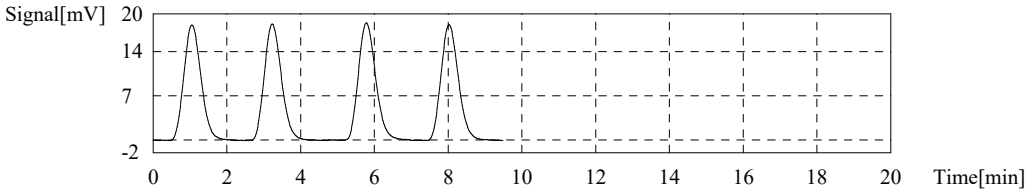
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.41mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.99	24.09mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:28:31 AM
2	60.97	24.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:31:20 AM
3	61.11	24.54mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:33:49 AM
4	61.09	24.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:36:31 AM

Mean Area 60.79
Mean Conc. 24.41mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

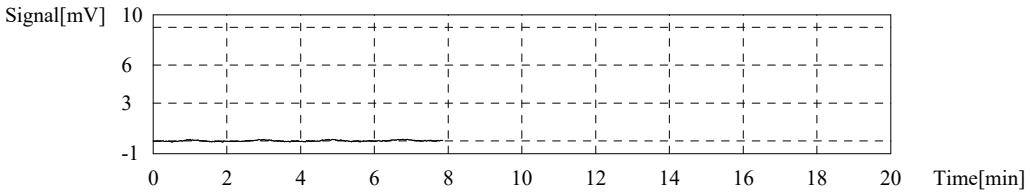
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1938mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4307	0.1924mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:44:22 AM
2	0.2949	0.1379mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:46:27 AM
3	0.5862	0.2548mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:48:32 AM
4	0.4246	0.1899mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:50:52 AM

Mean Area 0.4341
Mean Conc. 0.1938mg/L



Sample

Sample Name: MSD 280-175042-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

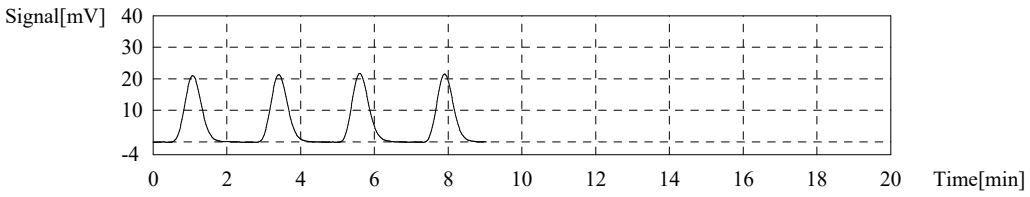
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.60mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	67.26	27.00mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:59:10 AM
2	68.93	27.67mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:01:34 AM
3	70.45	28.28mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:04:02 AM
4	68.36	27.45mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:06:24 AM

Mean Area 68.75
Mean Conc. 27.60mg/L



Sample

Sample Name: 280-175042-l-12
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

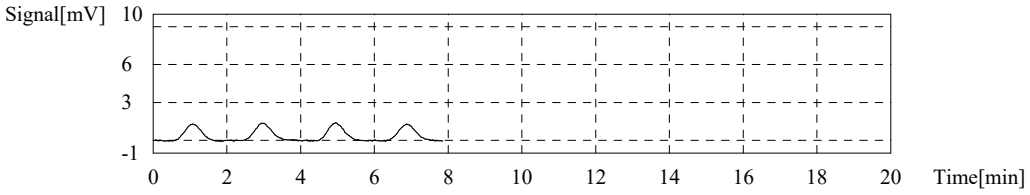
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.776mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.245	1.723mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:14:15 AM
2	4.417	1.792mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:16:26 AM
3	4.491	1.821mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:18:32 AM
4	4.361	1.769mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:20:46 AM

Mean Area 4.378
Mean Conc. 1.776mg/L



Sample

Sample Name: 280-175042-k-13
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

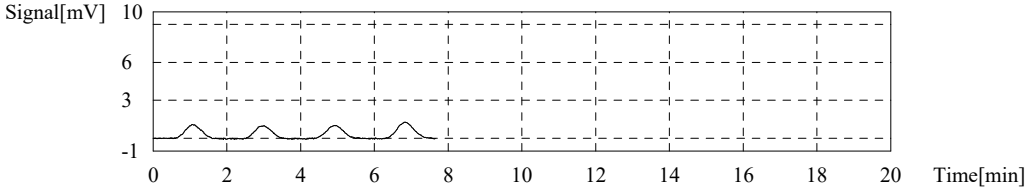
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.479mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.377	1.374mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:28:37 AM
2	3.438	1.399mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:30:44 AM
3	3.350	1.364mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:32:49 AM
4	4.382	1.778mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:34:55 AM

Mean Area 3.637
Mean Conc. 1.479mg/L



Sample

Sample Name: 280-175046-b-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

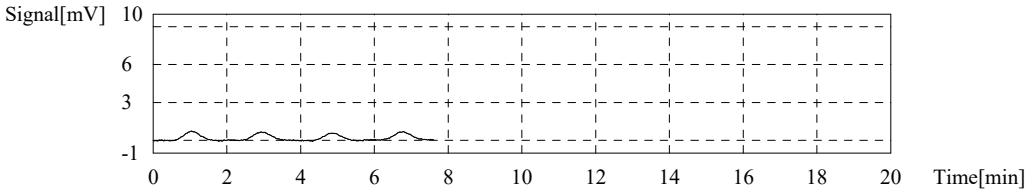
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9111mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.509	1.026mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:42:46 AM
2	2.241	0.9187mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:44:51 AM
3	2.084	0.8557mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:46:56 AM
4	2.054	0.8437mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:49:01 AM

Mean Area 2.222
Mean Conc. 0.9111mg/L



Sample

Sample Name: 280-175046-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

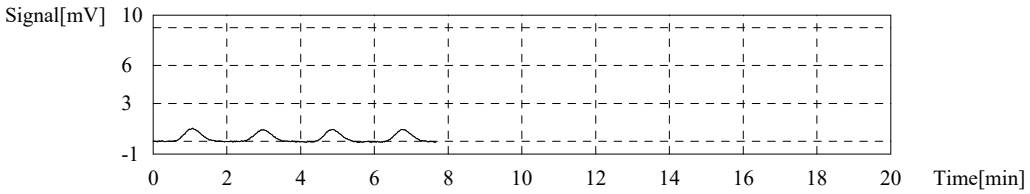
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.333mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.255	1.325mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:56:52 AM
2	3.292	1.340mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:58:57 AM
3	3.225	1.313mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:01:02 AM
4	3.318	1.351mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:03:11 AM

Mean Area 3.273
Mean Conc. 1.333mg/L



Sample

Sample Name: 280-175046-d-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

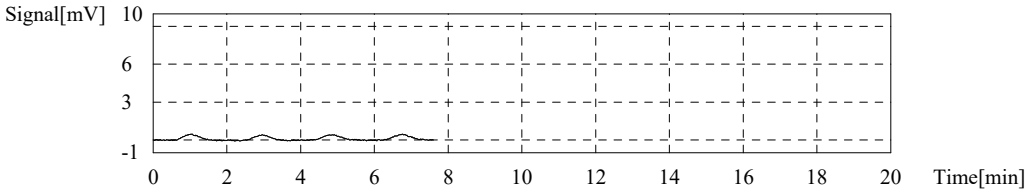
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5932mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.398	0.5805mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:11:02 AM
2	1.480	0.6134mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:13:07 AM
3	1.289	0.5367mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:15:12 AM
4	1.552	0.6422mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:17:17 AM

Mean Area 1.430
Mean Conc. 0.5932mg/L



Sample

Sample Name: 280-175046-b-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

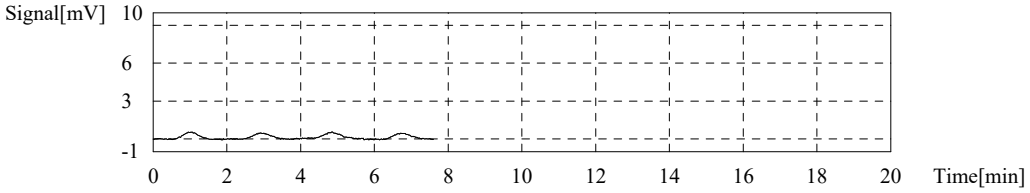
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6405mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.667	0.6884mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:25:08 AM
2	1.624	0.6711mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:27:14 AM
3	1.422	0.5901mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:29:19 AM
4	1.478	0.6126mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:31:24 AM

Mean Area 1.548
Mean Conc. 0.6405mg/L



Sample

Sample Name: 280-175046-b-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

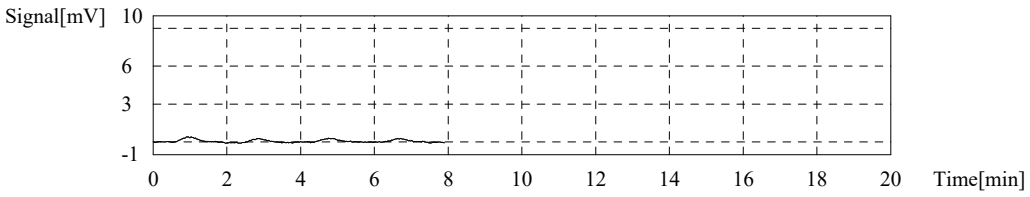
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4453mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.227	0.5119mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:39:15 AM
2	0.9957	0.4191mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:41:21 AM
3	0.9964	0.4193mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:43:26 AM
4	1.025	0.4308mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:45:49 AM

Mean Area 1.061
Mean Conc. 0.4453mg/L



Sample

Sample Name: 280-175070-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

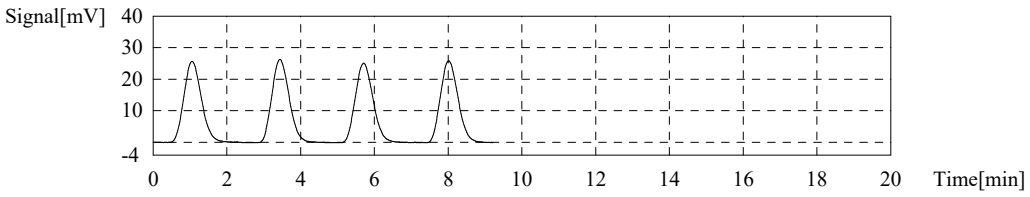
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	50.00	NPOC:1732mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	86.08	1728mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:54:10 AM
2	86.72	1741mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:56:36 AM
3	85.38	1714mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:59:06 AM
4	86.90	1744mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:01:32 AM

Mean Area 86.27
Mean Conc. 1732mg/L



Sample

Sample Name: 280-175070-a-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

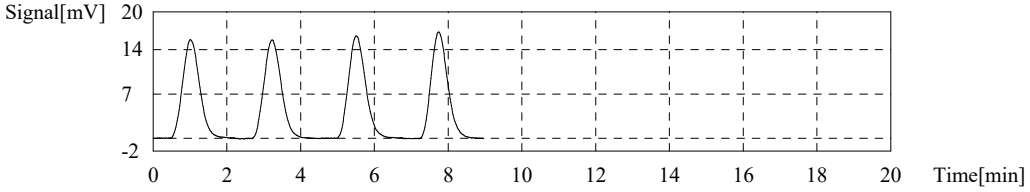
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	5.000	NPOC:104.1mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	50.22	100.8mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:09:42 AM
2	51.78	104.0mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:12:11 AM
3	52.19	104.8mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:14:37 AM
4	53.29	107.0mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:17:05 AM

Mean Area 51.87
Mean Conc. 104.1mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

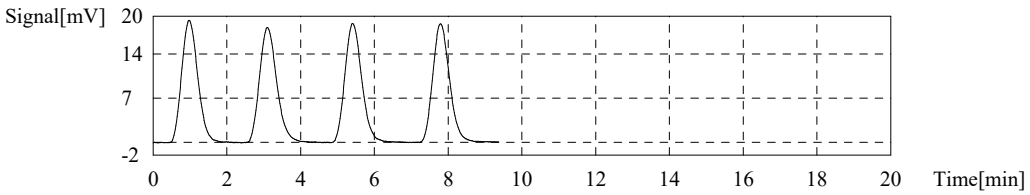
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.17mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.75	23.99mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:25:07 AM
2	59.94	24.07mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:27:37 AM
3	60.71	24.38mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:30:13 AM
4	60.35	24.23mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:33:00 AM

Mean Area 60.19
Mean Conc. 24.17mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

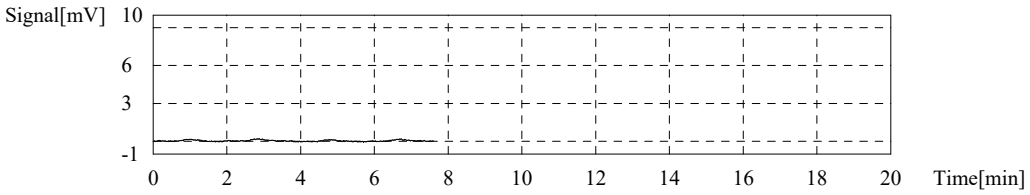
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1796mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3940	0.1777mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:40:51 AM
2	0.5323	0.2331mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:43:04 AM
3	0.2300	0.1119mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:45:09 AM
4	0.4393	0.1958mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:47:15 AM

Mean Area 0.3989
Mean Conc. 0.1796mg/L



Sample

Sample Name: 280-175104-c-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

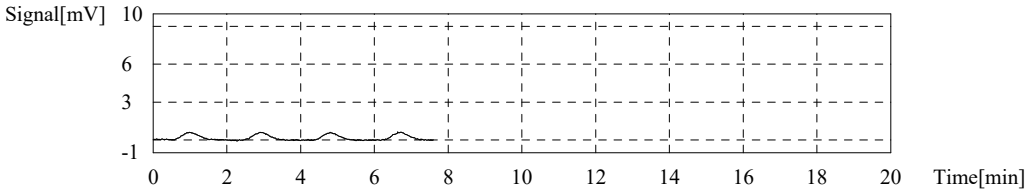
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7654mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.767	0.7285mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:55:06 AM
2	2.014	0.8276mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:57:11 AM
3	1.774	0.7313mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:59:18 AM
4	1.881	0.7742mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:01:26 AM

Mean Area 1.859
Mean Conc. 0.7654mg/L



Sample

Sample Name: MS 280-175104-c-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

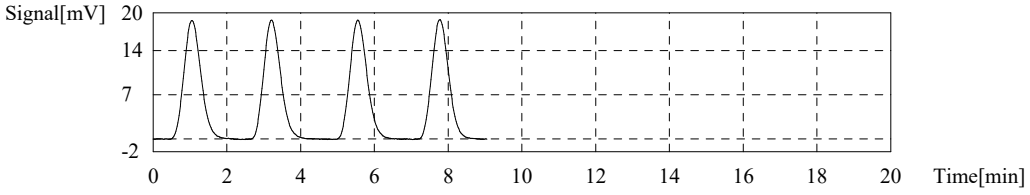
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.65mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	61.07	24.52mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:09:34 AM
2	61.31	24.62mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:12:04 AM
3	61.87	24.84mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:14:28 AM
4	61.30	24.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:16:59 AM

Mean Area 61.39
Mean Conc. 24.65mg/L



Sample

Sample Name: MSD 280-175104-c-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

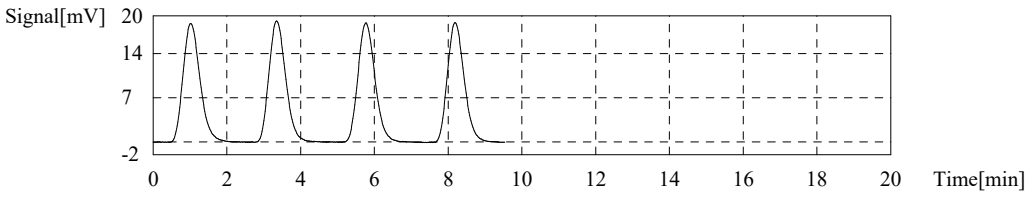
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.60mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	61.01	24.50mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:25:17 AM
2	61.28	24.60mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:27:50 AM
3	61.82	24.82mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:30:29 AM
4	60.93	24.46mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:33:06 AM

Mean Area 61.26
Mean Conc. 24.60mg/L



Sample

Sample Name: 280-175104-c-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

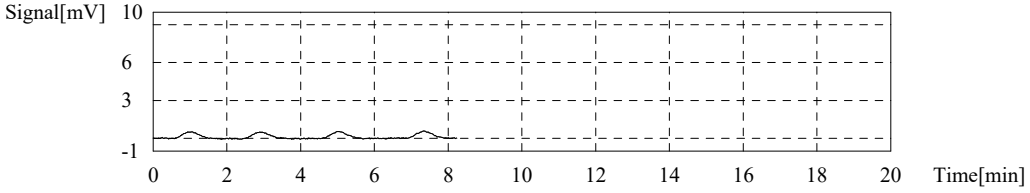
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7287mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.638	0.6768mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:40:58 AM
2	1.880	0.7738mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:43:16 AM
3	1.864	0.7674mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:45:46 AM
4	1.688	0.6968mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:47:51 AM

Mean Area 1.768
Mean Conc. 0.7287mg/L



Sample

Sample Name: 280-175104-c-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

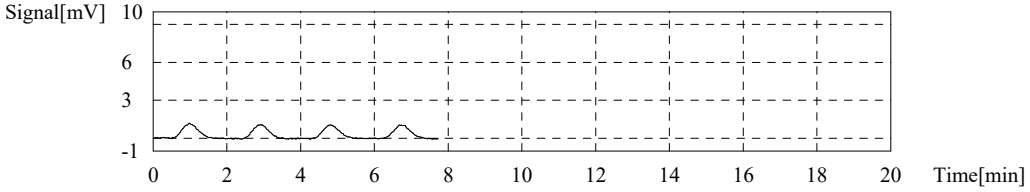
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.444mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.584	1.457mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:55:43 AM
2	3.518	1.431mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:57:48 AM
3	3.526	1.434mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:59:53 AM
4	3.572	1.453mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:02:06 AM

Mean Area 3.550
Mean Conc. 1.444mg/L



Sample

Sample Name: 280-175074-d-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

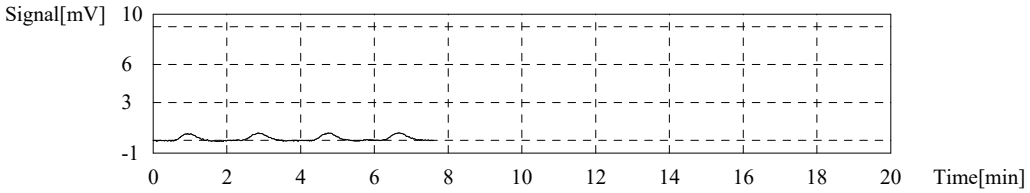
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7511mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.775	0.7317mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:09:58 AM
2	1.773	0.7309mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:12:03 AM
3	1.927	0.7927mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:14:13 AM
4	1.818	0.7490mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:16:18 AM

Mean Area 1.823
Mean Conc. 0.7511mg/L



Sample

Sample Name: 280-175074-e-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

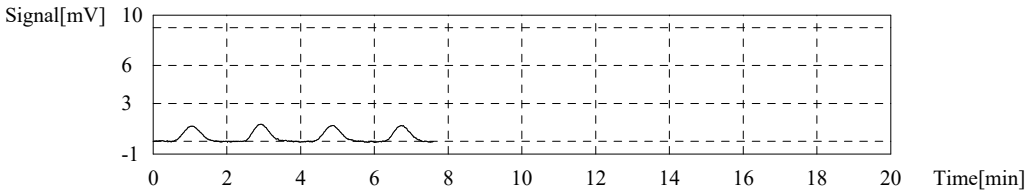
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.704mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.168	1.692mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:24:10 AM
2	4.194	1.702mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:26:15 AM
3	4.213	1.710mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:28:20 AM
4	4.219	1.712mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:30:25 AM

Mean Area 4.199
Mean Conc. 1.704mg/L



Sample

Sample Name: 280-175074-d-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

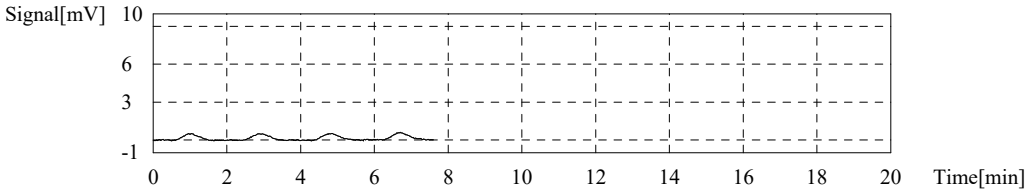
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7224mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.802	0.7425mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:38:17 AM
2	1.690	0.6976mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:40:22 AM
3	1.846	0.7602mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:42:27 AM
4	1.669	0.6892mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:44:32 AM

Mean Area 1.752
Mean Conc. 0.7224mg/L



Sample

Sample Name: 280-175074-d-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

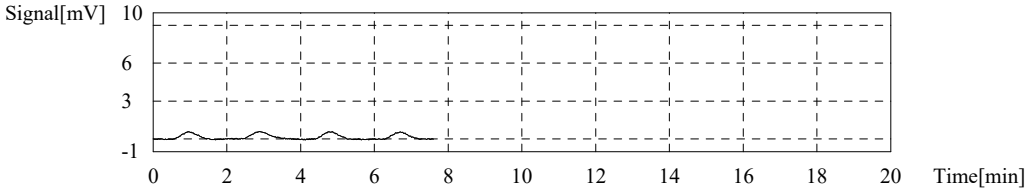
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7489mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.838	0.7570mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:52:24 AM
2	1.962	0.8067mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:54:29 AM
3	1.784	0.7353mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:56:34 AM
4	1.687	0.6964mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:58:39 AM

Mean Area 1.818
Mean Conc. 0.7489mg/L



Sample

Sample Name: 280-175078-e-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

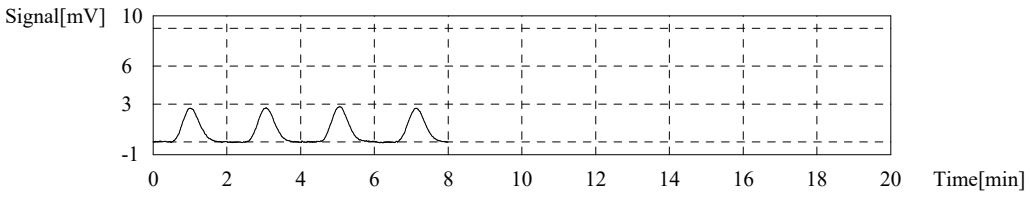
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.573mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.596	3.468mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:06:38 AM
2	8.917	3.597mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:08:53 AM
3	8.991	3.627mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:11:07 AM
4	8.929	3.602mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:13:14 AM

Mean Area 8.858
Mean Conc. 3.573mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

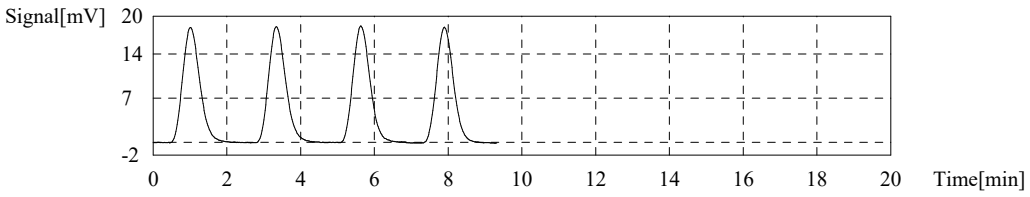
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.89mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.41	23.85mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:21:33 AM
2	59.88	24.04mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:24:01 AM
3	59.13	23.74mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:26:26 AM
4	59.61	23.93mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:29:06 AM

Mean Area 59.51
Mean Conc. 23.89mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

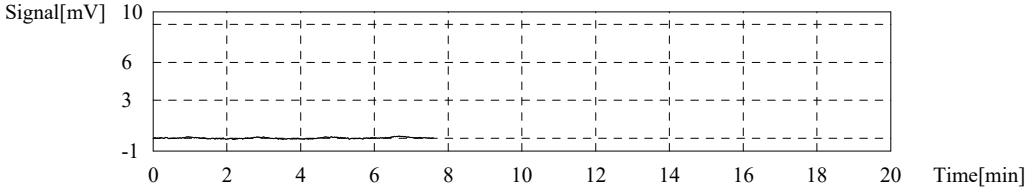
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1369mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1897	0.09570mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:36:58 AM
2	0.2451	0.1179mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:39:09 AM
3	0.2663	0.1264mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:41:14 AM
4	0.4686	0.2076mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:43:19 AM

Mean Area 0.2924
Mean Conc. 0.1369mg/L



Sample

Sample Name: 280-175105-d-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

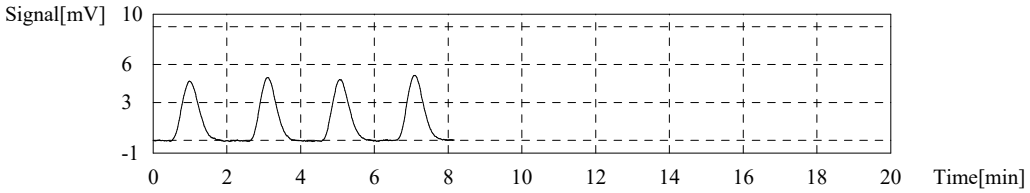
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.410mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.65	6.298mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:51:24 AM
2	15.81	6.363mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:53:33 AM
3	15.95	6.419mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:55:46 AM
4	16.30	6.559mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:58:00 AM

Mean Area 15.93
Mean Conc. 6.410mg/L



Sample

Sample Name: 280-175108-d-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

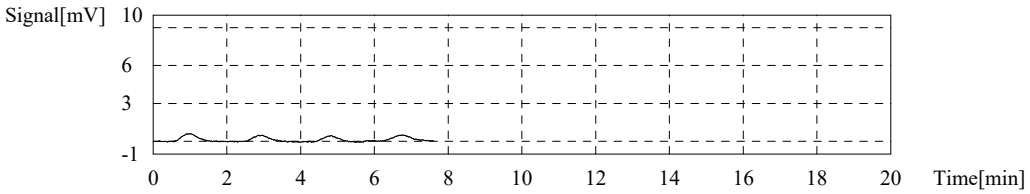
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6721mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.862	0.7666mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:05:52 AM
2	1.552	0.6422mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:07:57 AM
3	1.572	0.6503mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:10:02 AM
4	1.520	0.6294mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:12:07 AM

Mean Area 1.627
Mean Conc. 0.6721mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

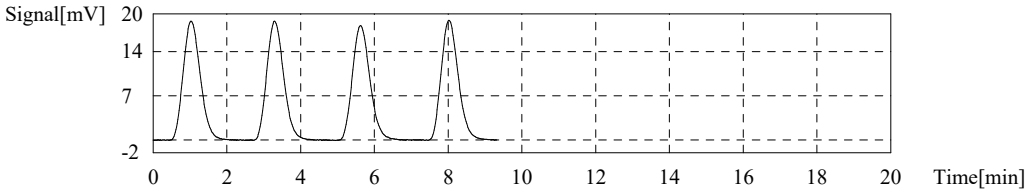
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.63mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	61.63	24.75mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:20:20 AM
2	60.97	24.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:22:49 AM
3	60.89	24.45mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:25:27 AM
4	61.90	24.85mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:27:57 AM

Mean Area 61.35
Mean Conc. 24.63mg/L



Sample

Sample Name: MB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

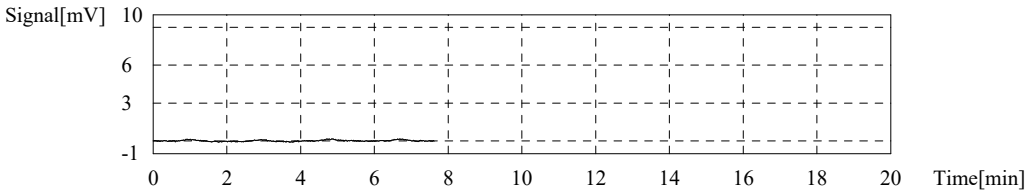
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1878mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4554	0.2023mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:35:50 AM
2	0.4135	0.1855mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:37:55 AM
3	0.4125	0.1851mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:40:00 AM
4	0.3953	0.1782mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:42:05 AM

Mean Area 0.4192
Mean Conc. 0.1878mg/L



Sample

Sample Name: 280-175112-n-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

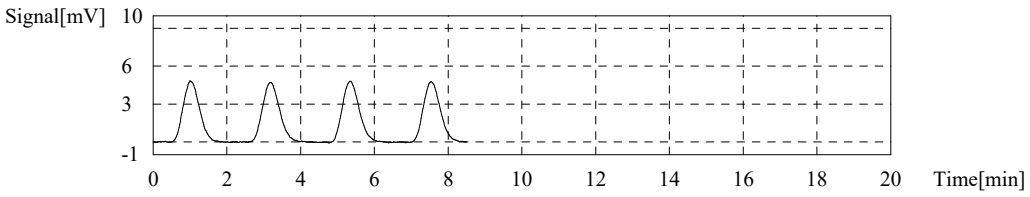
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.253mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.40	6.198mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:50:11 AM
2	15.33	6.170mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:52:33 AM
3	15.88	6.391mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:54:56 AM
4	15.54	6.254mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:57:06 AM

Mean Area 15.54
Mean Conc. 6.253mg/L



Sample

Sample Name: MS 280-175112-n-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

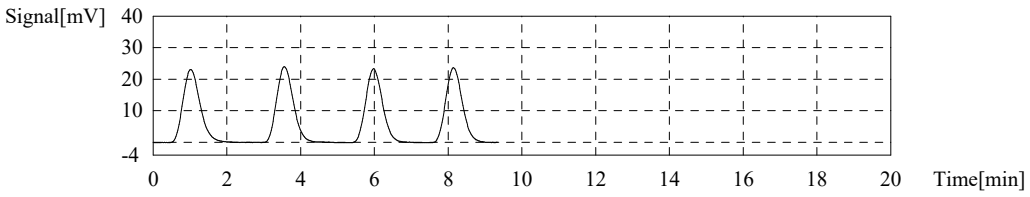
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:30.32mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.87	30.46mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:05:35 AM
2	76.54	30.73mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:08:09 AM
3	74.38	29.86mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:10:30 AM
4	75.30	30.23mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:12:57 AM

Mean Area 75.52
Mean Conc. 30.32mg/L



Sample

Sample Name: MSD 280-175112-n-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

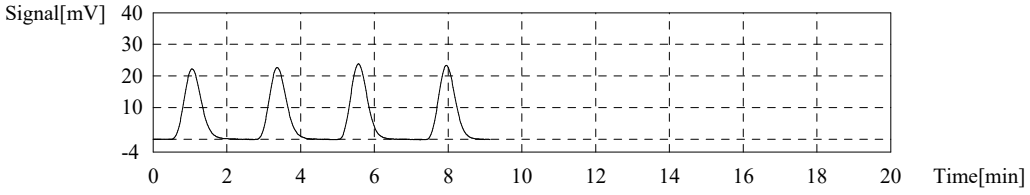
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:29.96mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	73.15	29.37mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:21:14 AM
2	74.18	29.78mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:23:42 AM
3	76.24	30.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:26:16 AM
4	74.91	30.07mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:28:40 AM

Mean Area 74.62
Mean Conc. 29.96mg/L



Sample

Sample Name: 280-175112-m-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

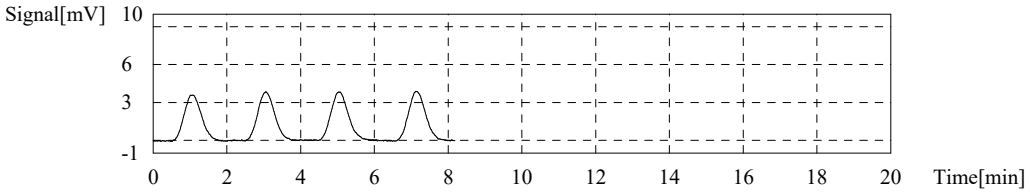
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.987mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.91	4.798mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:36:38 AM
2	12.49	5.031mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:38:48 AM
3	12.50	5.035mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:41:05 AM
4	12.63	5.087mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:43:23 AM

Mean Area 12.38
Mean Conc. 4.987mg/L



Sample

Sample Name: 280-175112-m-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

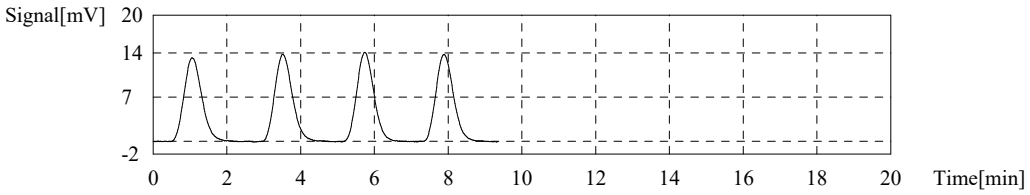
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:18.50mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	45.17	18.14mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:51:50 AM
2	46.25	18.57mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:54:13 AM
3	46.20	18.55mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:56:34 AM
4	46.68	18.75mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:59:16 AM

Mean Area 46.08
Mean Conc. 18.50mg/L



Sample

Sample Name: 280-175112-m-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

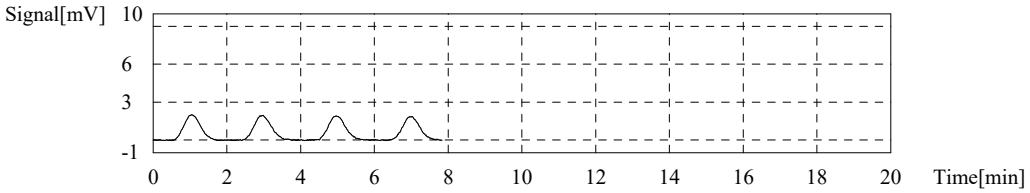
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.581mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.427	2.598mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:07:10 AM
2	6.417	2.594mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:09:25 AM
3	6.346	2.566mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:11:35 AM
4	6.350	2.567mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:13:42 AM

Mean Area 6.385
Mean Conc. 2.581mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

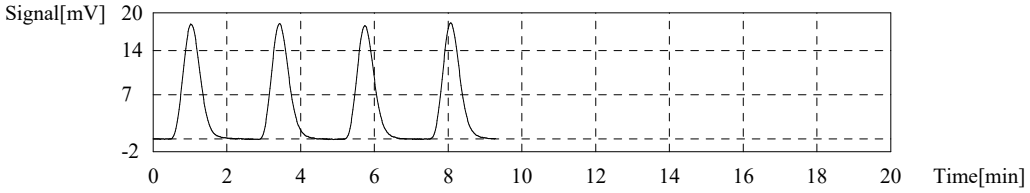
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.29mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.35	24.23mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:22:05 AM
2	60.95	24.47mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:24:34 AM
3	59.82	24.02mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:27:04 AM
4	60.84	24.43mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:29:31 AM

Mean Area 60.49
Mean Conc. 24.29mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

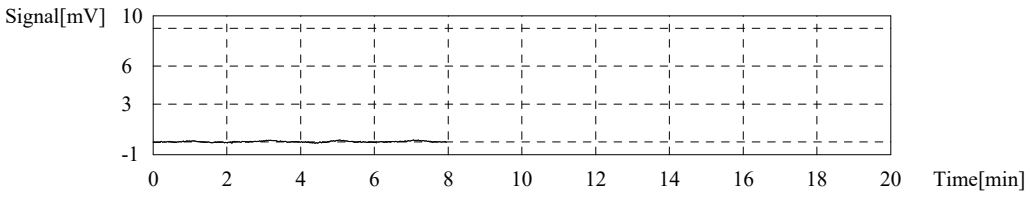
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1805mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3881	0.1753mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:37:38 AM
2	0.1615	0.08438mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:39:43 AM
3	0.7196	0.3083mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:41:54 AM
4	0.3350	0.1540mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:43:59 AM

Mean Area 0.4011
Mean Conc. 0.1805mg/L



Sample

Sample Name: 280-175112-k-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

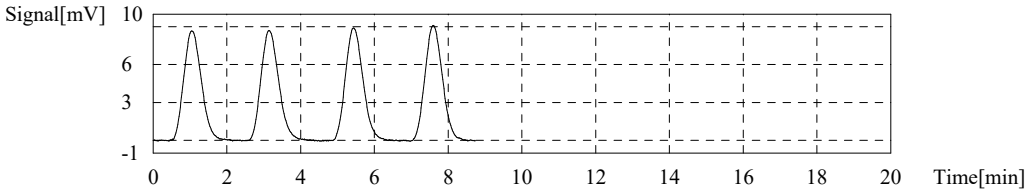
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.90mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	28.84	11.59mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:52:02 AM
2	29.62	11.90mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:54:29 AM
3	29.64	11.91mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:56:49 AM
4	30.33	12.19mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:59:14 AM

Mean Area 29.61
Mean Conc. 11.90mg/L



Sample

Sample Name: 280-175112-l-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

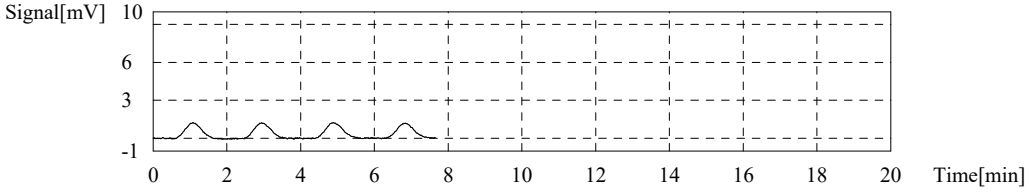
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.648mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.109	1.668mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:07:06 AM
2	4.089	1.660mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:09:18 AM
3	4.177	1.695mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:11:23 AM
4	3.864	1.570mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:13:28 AM

Mean Area 4.060
Mean Conc. 1.648mg/L



Sample

Sample Name: 280-175112-l-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

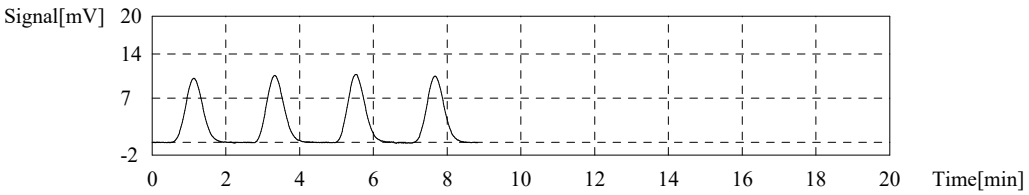
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:13.95mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.86	13.60mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:21:42 AM
2	35.16	14.13mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:24:04 AM
3	35.11	14.11mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:26:21 AM
4	34.75	13.96mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:28:49 AM

Mean Area 34.72
Mean Conc. 13.95mg/L



Sample

Sample Name: 280-175112-k-8
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

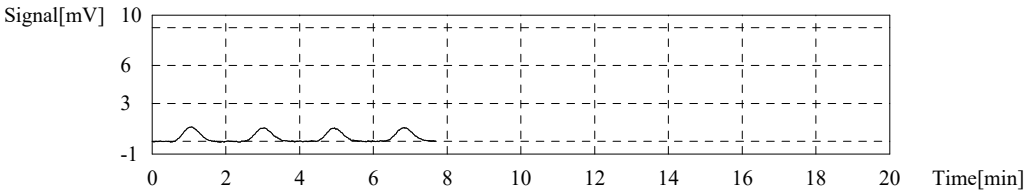
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.451mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.873	1.573mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:36:45 AM
2	3.712	1.509mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:38:51 AM
3	3.289	1.339mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:40:56 AM
4	3.398	1.383mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:43:01 AM

Mean Area 3.568
Mean Conc. 1.451mg/L



Sample

Sample Name: 280-175112-l-9
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

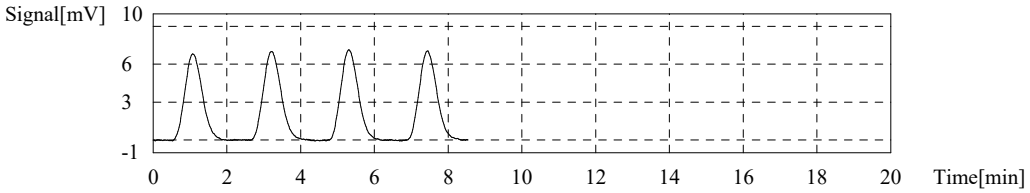
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.448mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.91	9.211mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:51:08 AM
2	23.56	9.472mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:53:25 AM
3	23.73	9.540mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:55:44 AM
4	23.80	9.568mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:58:04 AM

Mean Area 23.50
Mean Conc. 9.448mg/L



Sample

Sample Name: 280-175112-m-10
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

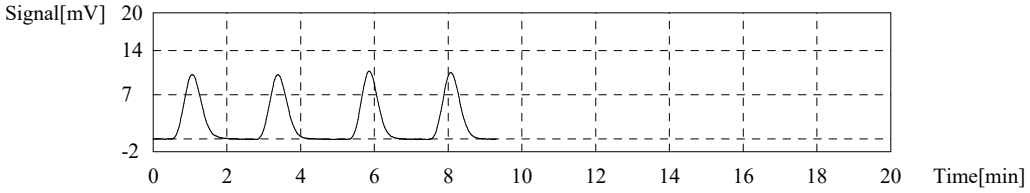
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:13.90mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	34.38	13.81mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:06:21 AM
2	34.45	13.84mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:09:01 AM
3	34.39	13.82mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:11:24 AM
4	35.16	14.13mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:13:53 AM

Mean Area 34.60
Mean Conc. 13.90mg/L



Sample

Sample Name: 280-175112-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

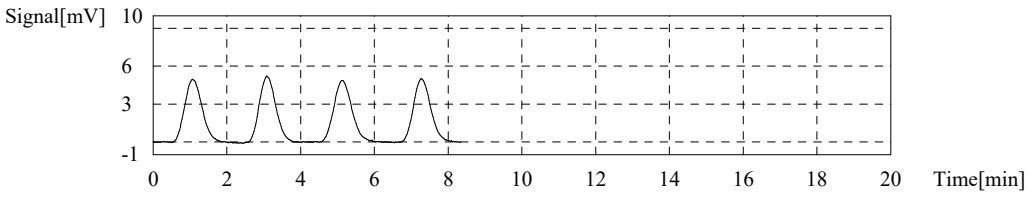
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.718mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.62	6.687mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:21:53 AM
2	16.84	6.776mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:24:04 AM
3	16.77	6.748mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:26:28 AM
4	16.55	6.659mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:28:50 AM

Mean Area 16.70
Mean Conc. 6.718mg/L



Sample

Sample Name: MS 280-175112-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

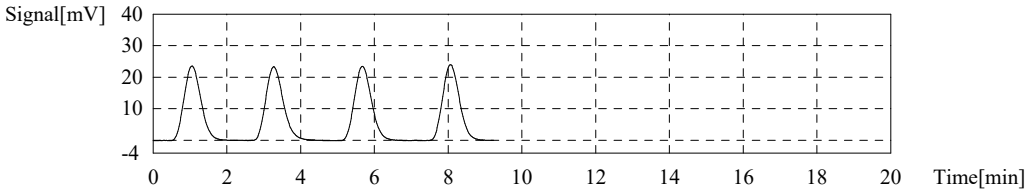
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:30.85mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.96	30.49mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:37:02 AM
2	77.49	31.11mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:39:40 AM
3	76.79	30.83mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:42:15 AM
4	77.19	30.99mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:44:40 AM

Mean Area 76.86
Mean Conc. 30.85mg/L



Sample

Sample Name: MSD 280-175112-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

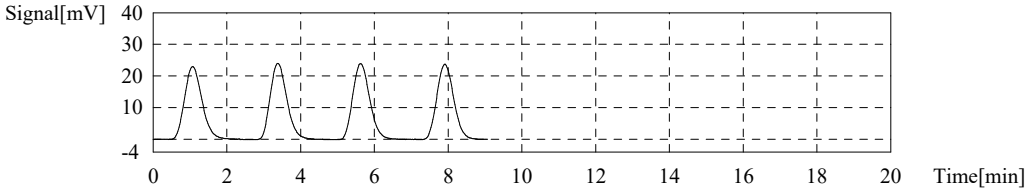
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:30.89mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.26	30.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:52:59 AM
2	76.51	30.72mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:55:27 AM
3	78.03	31.33mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:57:53 AM
4	77.02	30.92mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:00:18 PM

Mean Area 76.96
Mean Conc. 30.89mg/L



Sample

Sample Name: 280-175112-k-12
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

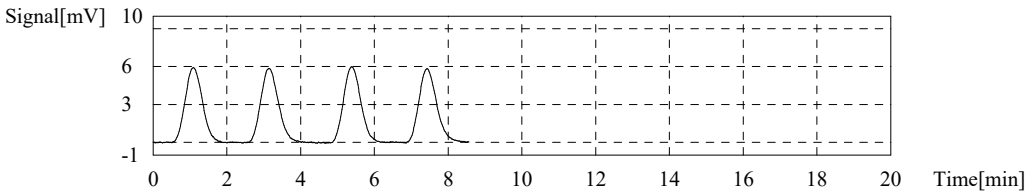
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.922mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	19.46	7.827mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:08:21 PM
2	19.81	7.967mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:10:46 PM
3	19.70	7.923mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:13:01 PM
4	19.82	7.971mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:15:24 PM

Mean Area 19.70
Mean Conc. 7.922mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

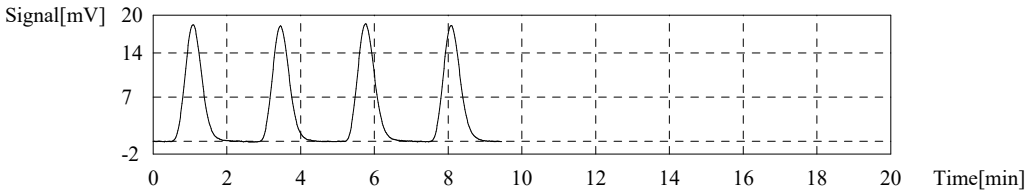
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.25mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.78	24.00mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:23:46 PM
2	59.79	24.01mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:26:17 PM
3	61.45	24.67mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:28:47 PM
4	60.61	24.34mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:31:27 PM

Mean Area 60.41
Mean Conc. 24.25mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

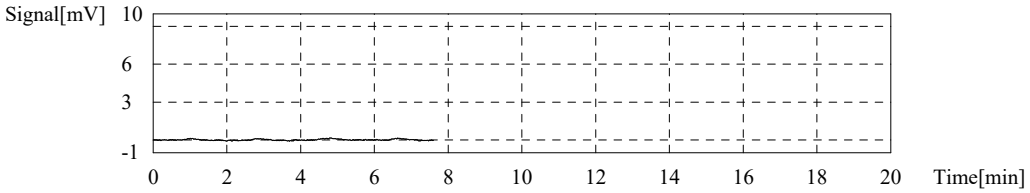
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1463mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1502	0.07985mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:39:20 PM
2	0.5309	0.2326mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:41:26 PM
3	0.3264	0.1505mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:43:31 PM
4	0.2562	0.1224mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:45:36 PM

Mean Area 0.3159
Mean Conc. 0.1463mg/L



Sample

Sample Name: 280-175301-a-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

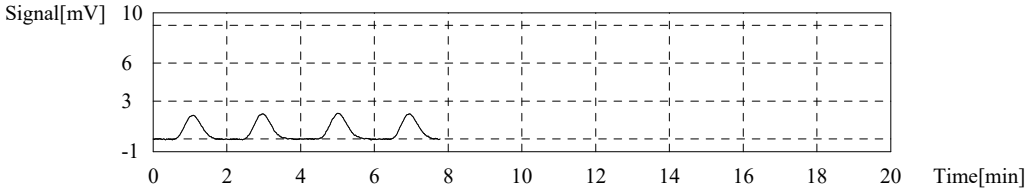
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.616mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.116	2.473mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:53:29 PM
2	6.564	2.653mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:55:44 PM
3	6.577	2.658mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:57:53 PM
4	6.633	2.681mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:59:58 PM

Mean Area 6.472
Mean Conc. 2.616mg/L



Sample

Sample Name: 280-175301-a-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

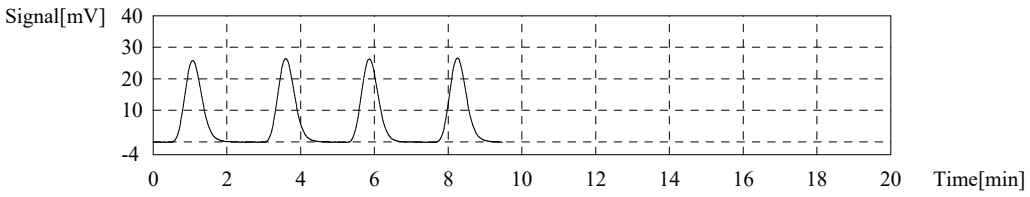
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:34.65mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	85.69	34.40mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:08:28 PM
2	86.23	34.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:10:55 PM
3	86.01	34.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:13:29 PM
4	87.35	35.06mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:15:58 PM

Mean Area 86.32
Mean Conc. 34.65mg/L



Sample

Sample Name: 280-175301-a-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

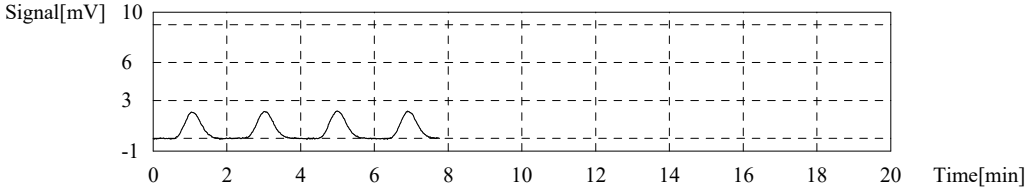
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.767mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.620	2.676mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:23:54 PM
2	7.072	2.857mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:26:06 PM
3	6.892	2.785mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:28:15 PM
4	6.805	2.750mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:30:20 PM

Mean Area 6.847
Mean Conc. 2.767mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

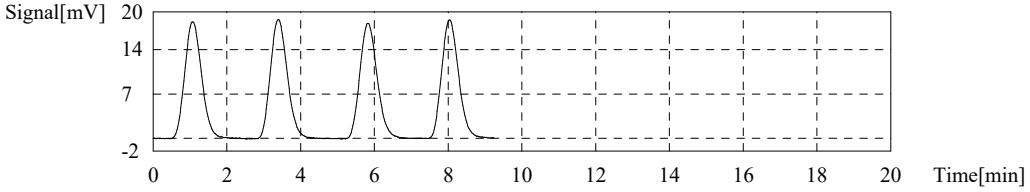
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.16mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.41	23.85mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:38:40 PM
2	60.96	24.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:41:15 PM
3	60.20	24.17mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:43:41 PM
4	60.12	24.14mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:46:06 PM

Mean Area 60.17
Mean Conc. 24.16mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2098mg/L

1. Det

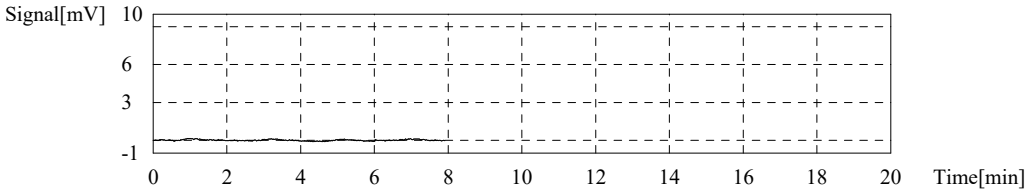
Anal.: NPOC

TOC-Control L Report

ABW
2023_04_21_001.tlx

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6319	0.2731mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:54:18 PM
2	0.4040	0.1817mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:56:23 PM
3	0.3157	0.1462mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:58:28 PM
4	0.5447	0.2381mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:00:33 PM

Mean Area 0.4741
Mean Conc. 0.2098mg/L



Shi 7 TOC

9060

5310

	Analysis	Sample Name	Result	Notes	Vial
1*	NPOC	ICV			1
2*	NPOC	ICB			2
3*	NPOC	LCS			3
4*	NPOC	MB			4
5*	NPOC	TIC			5
6*	NPOC	280-175051-a-6			6
7*	NPOC	MS 280-175051-a-6			7
8*	NPOC	MSD 280-175051-a-6			8
9*	NPOC	280-175051-a-7			9
10*	NPOC	280-175121-b-2			10
11*	NPOC	280-175121-b-3			11
12*	NPOC	280-175121-b-4			12
13*	NPOC	280-175122-b-1			13
14*	NPOC	280-175122-b-2			14
15*	NPOC	CCV			15
16*	NPOC	CCB			16
17*	NPOC	280-175122-b-3			17
18*	NPOC	280-175123-b-1			18
19*	NPOC	280-175301-a-4		5310	19
20*	NPOC	280-175042-l-1			20
21*	NPOC	MS 280-175042-l-1			21
22*	NPOC	MSD 280-175042-l-1			22
23*	NPOC	280-175042-k-2			23
24*	NPOC	280-175042-l-3			24
25*	NPOC	280-175042-l-4			25
26*	NPOC	280-175042-k-5			26
27*	NPOC	CCV			27
28*	NPOC	CCB			28
29*	NPOC	280-175042-l-6			29
30*	NPOC	280-175042-k-7			30
31*	NPOC	280-175042-k-8			31
32*	NPOC	280-175042-k-9			32
33*	NPOC	280-175042-k-10			33
34*	NPOC	LCS			34
35*	NPOC	MB			35
36*	NPOC	TIC			36
37*	NPOC	280-175042-l-11			37
38*	NPOC	MS 280-175042-l-11			38
39*	NPOC	CCV			39
40*	NPOC	CCB			40
41*	NPOC	MSD 280-175042-l-11			41
42*	NPOC	280-175042-l-12			42
43*	NPOC	280-175042-k-13			43
44*	NPOC	280-175046-b-1			44
45*	NPOC	280-175046-b-2			45
46*	NPOC	280-175046-~~c~~-3 d-3			46
47*	NPOC	280-175046-b-4			47
48*	NPOC	280-175046-b-5			48
49*	NPOC	280-175070-b-2	22	50x color	49
50*	NPOC	280-175070-a-3		5x odor	50
51*	NPOC	CCV			51
52*	NPOC	CCB			52
53*	NPOC	280-175104-c-1			53

Shi7 TOC

5310

	Analysis	Sample Name	Result	Notes	Vial
54*	NPOC	MS 280-175104-c-1	PH<2		54
55*	NPOC	MSD 280-175104-c-1			55
56*	NPOC	280-175104-c-2			56
57*	NPOC	280-175104-c-3			57
58*	NPOC	280-175074-d-1			58
59*	NPOC	280-175074-e-3			59
60*	NPOC	280-175074-d-5			60
61*	NPOC	280-175074-d-7			61
62*	NPOC	280-175078-e-1			62
63*	NPOC	CCV			63
64*	NPOC	CCB			64
65*	NPOC	280-175105-d-1			65
66*	NPOC	280-175108-d-1			66
67*	NPOC	LCS			67
68*	NPOC	MB			68
69*	NPOC	280-175112-n-1			69
70*	NPOC	MS 280-175112-n-1			70
71*	NPOC	MSD 280-175112-n-1			71
72*	NPOC	280-175112-m-2			72
73*	NPOC	280-175112-m-3			73
74*	NPOC	280-175112-m-4			74
75*	NPOC	CCV			75
76*	NPOC	CCB			76
77*	NPOC	280-175112-k-5			77
78*	NPOC	280-175112-l-6			78
79*	NPOC	280-175112-l-7			79
80*	NPOC	280-175112-k-8			80
81*	NPOC	280-175112-l-9			81
82*	NPOC	280-175112-m-10			82
83*	NPOC	280-175112-l-11			83
84*	NPOC	MSD 280-175112-l-11			84
85*	NPOC	MSD 280-175112-l-11			85
86*	NPOC	280-175112-k-12			86
87*	NPOC	CCV			87
88*	NPOC	CCB			88
89*	NPOC	280-175301-a-1			89
90*	NPOC	280-175301-a-2			90
91*	NPOC	280-175301-a-3			91
92*	NPOC	CCV			92
93*	NPOC	CCB			93

BWH 5000, 1000 MS

Shipping and Receiving Documents

Eurofins TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Bieniulis, Dylan T.	Carrier Tracking No(s):	COC No:
Client Contact: Mary Lou Fox	Phone:	E-Mail: Dylan.Bieniulis@et.eurofinsus.com		Page:
Company: CDM Smith, Inc.				Job #:
Address: 14432 S.E. Eastgate Way Suite 100	Due Date Requested:			
City: Bellvue	TAT Requested (days): 15 business days			
State, Zip: WA, 98007				
Phone: 425-519-8300	PO #: 98961			
Email: FoxML@cdmsmith.com	WO #:			
Project Name: Bannock Ft. Hall Mine LF, Idaho	Project #: 28018772			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D - VOCs	8011 - EDB, DBCP, and 1,2,3-TCP	6020B - Total Metals	6020B - Dissolved Metals (Field Filtered)	7470A - Total Mercury	8270E - SVOCs	8321A - Herbicides and Pentachlorophenol	8270E_SIM - Benzo[a]pyrene	8081B - OC Pesticides and 8082A - PCBs	8141B OP Pesticides	8290 - 2,3,7,8-TCDD (ETA SACRAMENTO)	4500_CN_E - Total Cyanide	SM4500_S2_D - Total Sulfide	9056A - Anions (NO3, NO2, Cl, SO4, and Br)	9060A - TOC	RSK-175 - Dissolved Gases (MEEA)	2320B - Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	A	D	D	D	N	N	N	N	N	N	B	C/B	N	S	A	N		
RW-1-20230413	4/13/23	1520	G	W			X			X										X	X			6	
MP-2-20230411	4/11/23	1440	G	W			X			X										X	X			6	
MW-118D-20230412	4/12/23	1705	G	W			X			X										X	X			6	
~~MP-3-HR~~ MP-4-20230413	4/13/23	1626	G	W			X																	3	
MW-111D-20230414	4/14/23	1530	G	W			X																	3 HR / 6	3 w/ pres, 3 w/o pres
MW-123-20230415	4/15/23	1455	G	W			X																	3	
MW-102S-20230414	4/14/23	1430	G	W			X																		
MW-115S-20230415	4/15/23	1030	G	W			X																		
TB-07-20230416	4/16/23	1040	G	W			X																		

280-175122 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	4/16/23 1040		[signature]	4/17/23 0900	[signature]
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.7 IR14 C30.1

11/27/2023 7:27 PM

Login Sample Receipt Checklist

Client: CDM Smith Inc

Job Number: 280-175122-1

Login Number: 175122
List Number: 1
Creator: Held, Wesley

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mary Lou Fox
CDM Smith Inc
14432 S.E. Eastgate Way
Suite 100
Bellevue WA 98007-6493

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JOB DESCRIPTION

Bannock Ft. Hall Mine LF, Idaho

JOB NUMBER

280-175123-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

Eurofins Denver

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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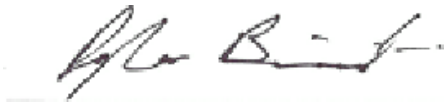

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303 736-0138

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Definitions/Glossary

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: CDM Smith Inc

Project: Bannock Ft. Hall Mine LF, Idaho

Report Number: 280-175123-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

REVISION - 1

Following an internal data quality review it was determined that due to analyst error cis-1,2-dichloroethene detections were improperly reported as non-detect due to improperly defining peaks related to co-elution of cis-1,2-dichloroethene and ethyl acetate for samples MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2), and RW-3-20230413 (280-175123-3). The issue has been corrected and revised results are reported for cis-1,2-dichloroethene for the impacted samples. Note that the corrected result for cis-1,2-dichloroethene is still below the method detection limit for the analysis of sample RW-3-20230413 (280-175123-3); therefore the corrected result for this sample still appears as "ND" for non-detect in the result summary pages of this report.

RECEIPT

The samples were received on 04/17/2023; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.4 C.

The following samples were received outside of holding time for the requested 9056A Nitrite/Nitrate analysis: MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2) and RW-3-20230413 (280-175123-3).

VOLATILE ORGANIC COMPOUNDS BY GC/MS

Samples MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2), RW-3-20230413 (280-175123-3), MW-113D-20230414 (280-175123-4), MW-113S-20230414 (280-175123-5), MW-112M-20230415 (280-175123-6), MW-112D-20230415 (280-175123-7), EB-04-20230414 (280-175123-8), EB-03-20230413 (280-175123-9), MW-109D-20230415 (280-175123-10) and TB-05-20230416 (280-175123-11) were analyzed for Volatile Organic Compounds by GC/MS in accordance with SW-846 8260D. The samples were analyzed on 04/26/2023 and 04/27/2023.

The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 280-610121: Allyl chloride, Dichlorodifluoromethane and Iodomethane. These compounds are not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. The associated samples were non-detect for the affected analytes and the LCS/LCSD pair recovered within acceptable limits; therefore, the data have been reported.

A continuing calibration verification (CCV) associated with batch 280-610347 recovered above the upper control limit for 3-Chloro-1-propene(28.5%D, limit 20%D) , 4-Methyl-2-pentanone (MIBK) (22.3%D, limit 20%D), Acrylonitrile (21.1%D, limit 20%D), Vinyl Acetate (21.5%D, limit 20%D), and Propionitrile (22.1%D, limit 20%D). These analytes are poor performing compounds that recovered within control limits in both the LCS/LCSD. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 280-610464: bromoform (-24%D, limit 20%D), dichlorodifluoromethane (-25%D, limit 20%D), iodomethane (-30%D, limit 20%D) and trans-1,4-dichloro-2-butene (-22%D, limit 20%D). These are all considered poor performers and all are within control limits in the LCS and LCSD.

The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 280-610347: Dichlorodifluoromethane (-28.3%D, limit 20%D). This is a poor performing analyte that recovered within control limits in both the LCS/LCSD. The associated samples were non-detect for the affected analytes.; therefore, the data have been reported.

The method requirement for no headspace was not met. The following volatile sample in batch 280-610464 were analyzed with significant headspace in the sample containers: MW-112D-20230415 (280-175123-7). Significant headspace is defined as a bubble greater than 6 mm in diameter.

After a re-review of raw data due to an error in spectral data interpretation by a lab analyst, the following sample results for the analyte cis-1,2-Dichloroethene have been determined to have changed from a ND result to a detected concentration: MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2) and RW-3-20230413 (280-175123-3). Note that the corrected result for cis-1,2-dichloroethene is still below the method detection limit for the analysis of sample RW-3-20230413 (280-175123-3); therefore the corrected result for this sample still appears as "ND" for non-detect in the result summary pages of this report.

After a re-review of raw data due to an error in spectral data interpretation by a lab analyst, the following sample results for the analyte cis-1,2-Dichloroethene have been determined to have changed from a ND result to a detected concentration: MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2) and RW-3-20230413 (280-175123-3)

Samples MW-119S-20230413 (280-175123-2)[2X] and RW-3-20230413 (280-175123-3)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP/MS)

Samples MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2) and RW-3-20230413 (280-175123-3) were analyzed for Dissolved Metals (ICP/MS) in accordance with SW846 6020B. The samples were prepared on 04/18/2023 and analyzed on 04/18/2023, 04/19/2023 and 04/20/2023.

Zinc was detected in method blank MB 280-608984/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (28 DAYS)

Samples MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2) and RW-3-20230413 (280-175123-3) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A (28 Days). The samples were analyzed on 04/17/2023 and 04/30/2023.

Samples MW-119D-20230413 (280-175123-1)[20X], MW-119S-20230413 (280-175123-2)[2X], MW-119S-20230413 (280-175123-2)[20X] and RW-3-20230413 (280-175123-3)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (48 HOURS)

Samples MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2) and RW-3-20230413 (280-175123-3) were analyzed for anions (48 hours) in accordance with EPA SW-846 Method 9056A (48 Hours). The samples were analyzed on 04/17/2023.

The following samples were received and analyzed outside of holding time: MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2) and RW-3-20230413 (280-175123-3).

Sample RW-3-20230413 (280-175123-3)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL ORGANIC CARBON

Samples MW-119D-20230413 (280-175123-1), MW-119S-20230413 (280-175123-2) and RW-3-20230413 (280-175123-3) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 04/21/2023 and 04/24/2023.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID: MW-119D-20230413
Lab Sample ID: 280-175123-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.3		1.0	0.36	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	3.6		1.0	0.32	ug/L	1		8260D	Total/NA
Tetrachloroethene	22		1.0	0.40	ug/L	1		8260D	Total/NA
Trichloroethene	120		1.0	0.30	ug/L	1		8260D	Total/NA
Barium	220		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	120000		200	32	ug/L	1		6020B	Dissolved
Iron	9.9	J	200	8.7	ug/L	1		6020B	Dissolved
Potassium	3500		1000	52	ug/L	1		6020B	Dissolved
Magnesium	54000		200	4.2	ug/L	1		6020B	Dissolved
Manganese	0.52	J	3.0	0.51	ug/L	1		6020B	Dissolved
Sodium	68000		1000	73	ug/L	1		6020B	Dissolved
Bromide	1.2		0.50	0.23	mg/L	1		9056A	Total/NA
Nitrate as N	2.5	H H3	0.50	0.090	mg/L	1		9056A	Total/NA
Chloride	210		60	20	mg/L	20		9056A	Total/NA
Sulfate	100		100	21	mg/L	20		9056A	Total/NA
Total Organic Carbon - Duplicates	1.7		1.0	0.35	mg/L	1		9060A	Total/NA

Client Sample ID: MW-119S-20230413
Lab Sample ID: 280-175123-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.8	J	2.0	0.72	ug/L	2		8260D	Total/NA
cis-1,2-Dichloroethene	4.5		2.0	0.64	ug/L	2		8260D	Total/NA
Tetrachloroethene	29		2.0	0.81	ug/L	2		8260D	Total/NA
Trichloroethene	130		2.0	0.60	ug/L	2		8260D	Total/NA
Arsenic	0.58	J	5.0	0.50	ug/L	1		6020B	Dissolved
Barium	250		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	140000		200	32	ug/L	1		6020B	Dissolved
Copper	0.96	J	2.0	0.71	ug/L	1		6020B	Dissolved
Potassium	4400		1000	52	ug/L	1		6020B	Dissolved
Magnesium	63000		200	4.2	ug/L	1		6020B	Dissolved
Sodium	78000		1000	73	ug/L	1		6020B	Dissolved
Bromide	1.3		0.50	0.23	mg/L	1		9056A	Total/NA
Nitrate as N	4.1	H H3	0.50	0.090	mg/L	1		9056A	Total/NA
Chloride	270		60	20	mg/L	20		9056A	Total/NA
Sulfate	110		10	2.1	mg/L	2		9056A	Total/NA
Total Organic Carbon - Duplicates	2.2		1.0	0.35	mg/L	1		9060A	Total/NA

Client Sample ID: RW-3-20230413
Lab Sample ID: 280-175123-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	4.4		2.0	0.81	ug/L	2		8260D	Total/NA
Trichloroethene	7.2		2.0	0.60	ug/L	2		8260D	Total/NA
Arsenic	1.4	J	5.0	0.50	ug/L	1		6020B	Dissolved
Barium	410		3.0	0.38	ug/L	1		6020B	Dissolved
Calcium	210000		2000	320	ug/L	10		6020B	Dissolved
Co	1.6		1.0	0.33	ug/L	1		6020B	Dissolved
Chromium	0.80	J	3.0	0.50	ug/L	1		6020B	Dissolved
Copper	1.2	J	2.0	0.71	ug/L	1		6020B	Dissolved
Iron	52	J	200	8.7	ug/L	1		6020B	Dissolved
Potassium	4800		1000	52	ug/L	1		6020B	Dissolved
Magnesium	60000		2000	42	ug/L	10		6020B	Dissolved
Manganese	280		3.0	0.51	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: RW-3-20230413 (Continued) — Lab Sample ID: 280-175123-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	160000		10000	730	ug/L	10		6020B	Dissolved
Nickel	39		3.0	0.83	ug/L	1		6020B	Dissolved
Vanadium	2.9	J	5.0	1.1	ug/L	1		6020B	Dissolved
Zinc	8.4	J B	10	2.0	ug/L	1		6020B	Dissolved
Nitrate as N	5.6	H H3	1.0	0.18	mg/L	2		9056A	Total/NA
Chloride	340		60	20	mg/L	20		9056A	Total/NA
Sulfate	49		5.0	1.0	mg/L	1		9056A	Total/NA
Total Organic Carbon - Duplicates	3.8		1.0	0.35	mg/L	1		9060A	Total/NA

Client Sample ID: MW-113D-20230414 — Lab Sample ID: 280-175123-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.41	J	1.0	0.22	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.46	J	1.0	0.32	ug/L	1		8260D	Total/NA
Dichlorodifluoromethane	1.1	J	3.0	0.96	ug/L	1		8260D	Total/NA
Tetrachloroethene	1.1		1.0	0.40	ug/L	1		8260D	Total/NA
Trichloroethene	0.31	J	1.0	0.30	ug/L	1		8260D	Total/NA

Client Sample ID: MW-113S-20230414 — Lab Sample ID: 280-175123-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	26		1.0	0.22	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	0.82	J	1.0	0.23	ug/L	1		8260D	Total/NA
1,2-Dichlorobenzene	11		1.0	0.37	ug/L	1		8260D	Total/NA
1,2-Dichloroethane	3.9		1.0	0.54	ug/L	1		8260D	Total/NA
1,2-Dichloropropane	5.0		1.0	0.52	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	5.8		1.0	0.39	ug/L	1		8260D	Total/NA
Benzene	7.3		1.0	0.31	ug/L	1		8260D	Total/NA
Chlorobenzene	0.46	J	1.0	0.42	ug/L	1		8260D	Total/NA
Chloroform	1.4		1.0	0.36	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	29		1.0	0.32	ug/L	1		8260D	Total/NA
Dichlorodifluoromethane	24		3.0	0.96	ug/L	1		8260D	Total/NA
Methylene Chloride	1.1	J	2.0	0.94	ug/L	1		8260D	Total/NA
o-Xylene	1.0		1.0	0.33	ug/L	1		8260D	Total/NA
Tetrachloroethene	22		1.0	0.40	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	1.5		1.0	0.37	ug/L	1		8260D	Total/NA
Trichloroethene	16		1.0	0.30	ug/L	1		8260D	Total/NA
Trichlorofluoromethane	2.6		2.0	0.57	ug/L	1		8260D	Total/NA
Vinyl chloride	92		2.0	0.51	ug/L	1		8260D	Total/NA
Xylenes, Total	1.0		1.0	0.33	ug/L	1		8260D	Total/NA

Client Sample ID: MW-112M-20230415 — Lab Sample ID: 280-175123-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.79	J	1.0	0.22	ug/L	1		8260D	Total/NA
Chloroform	1.2		1.0	0.36	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.40	J	1.0	0.32	ug/L	1		8260D	Total/NA
Tetrachloroethene	14		1.0	0.40	ug/L	1		8260D	Total/NA
Trichloroethene	190		1.0	0.30	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID: MW-112D-20230415 — Lab Sample ID: 280-175123-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.58	J	1.0	0.39	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	0.48	J	1.0	0.22	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	1.1		1.0	0.23	ug/L	1		8260D	Total/NA
Dichlorodifluoromethane	2.8	J	3.0	0.96	ug/L	1		8260D	Total/NA
Tetrachloroethene	12		1.0	0.40	ug/L	1		8260D	Total/NA
Trichloroethene	190		1.0	0.30	ug/L	1		8260D	Total/NA
Trichlorofluoromethane	2.0		2.0	0.57	ug/L	1		8260D	Total/NA

Client Sample ID: EB-04-20230414 — Lab Sample ID: 280-175123-8

No Detections.

Client Sample ID: EB-03-20230413 — Lab Sample ID: 280-175123-9

No Detections.

Client Sample ID: MW-109D-20230415 — Lab Sample ID: 280-175123-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.55	J	1.0	0.36	ug/L	1		8260D	Total/NA
Tetrachloroethene	20		1.0	0.40	ug/L	1		8260D	Total/NA
Trichloroethene	66		1.0	0.30	ug/L	1		8260D	Total/NA

Client Sample ID: TB-05-20230416 — Lab Sample ID: 280-175123-11

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-119D-20230413
Lab Sample ID: 280-175123-1

Date Collected: 04/13/23 10:55
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/26/23 16:24	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/26/23 16:24	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/26/23 16:24	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/26/23 16:24	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/26/23 16:24	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/26/23 16:24	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/26/23 16:24	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/26/23 16:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/26/23 16:24	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/26/23 16:24	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/26/23 16:24	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/26/23 16:24	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/26/23 16:24	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/26/23 16:24	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/26/23 16:24	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 16:24	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/26/23 16:24	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 16:24	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/26/23 16:24	1
2-Hexanone	ND		5.0	1.7	ug/L			04/26/23 16:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/26/23 16:24	1
Acetone	ND		15	6.6	ug/L			04/26/23 16:24	1
Acetonitrile	ND		30	9.6	ug/L			04/26/23 16:24	1
Acrolein	ND		20	4.9	ug/L			04/26/23 16:24	1
Acrylonitrile	ND		20	4.5	ug/L			04/26/23 16:24	1
Allyl chloride	ND		2.0	0.17	ug/L			04/26/23 16:24	1
Benzene	ND		1.0	0.31	ug/L			04/26/23 16:24	1
Bromoform	ND		2.0	1.2	ug/L			04/26/23 16:24	1
Bromomethane	ND		5.0	2.4	ug/L			04/26/23 16:24	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/26/23 16:24	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/26/23 16:24	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/26/23 16:24	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/26/23 16:24	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/26/23 16:24	1
Chloroethane	ND		4.0	1.4	ug/L			04/26/23 16:24	1
Chloroform	**1.3**		1.0	0.36	ug/L			04/26/23 16:24	1
Chloromethane	ND		2.0	0.75	ug/L			04/26/23 16:24	1
Chloroprene	ND		3.0	1.2	ug/L			04/26/23 16:24	1
cis-1,2-Dichloroethene	**3.6**		1.0	0.32	ug/L			04/26/23 16:24	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/26/23 16:24	1
Dibromomethane	ND		1.0	0.34	ug/L			04/26/23 16:24	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/26/23 16:24	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/26/23 16:24	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/26/23 16:24	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/26/23 16:24	1
Iodomethane	ND		5.0	2.6	ug/L			04/26/23 16:24	1
Isobutyl alcohol	ND		110	37	ug/L			04/26/23 16:24	1
Methacrylonitrile	ND		15	5.3	ug/L			04/26/23 16:24	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/26/23 16:24	1

Client Sample ID: MW-119D-20230413
Lab Sample ID: 280-175123-1

Date Collected: 04/13/23 10:55
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.94	ug/L			04/26/23 16:24	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/26/23 16:24	1
o-Xylene	ND		1.0	0.33	ug/L			04/26/23 16:24	1
Propionitrile	ND		20	3.7	ug/L			04/26/23 16:24	1
Styrene	ND		1.0	0.36	ug/L			04/26/23 16:24	1
Tetrachloroethene	**22**		1.0	0.40	ug/L			04/26/23 16:24	1
Toluene	ND		1.0	0.32	ug/L			04/26/23 16:24	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/26/23 16:24	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/26/23 16:24	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/26/23 16:24	1
Trichloroethene	**120**		1.0	0.30	ug/L			04/26/23 16:24	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/26/23 16:24	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/26/23 16:24	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/26/23 16:24	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/26/23 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 127*		*04/26/23 16:24*	*1*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*		*04/26/23 16:24*	*1*
Dibromofluoromethane (Surr)	*104*		*77 - 120*		*04/26/23 16:24*	*1*
Toluene-d8 (Surr)	*99*		*80 - 125*		*04/26/23 16:24*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/18/23 07:56	04/18/23 18:56	1
Arsenic	ND		5.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:56	1
Barium	**220**		3.0	0.38	ug/L		04/18/23 07:56	04/18/23 18:56	1
Beryllium	ND		1.0	0.30	ug/L		04/18/23 07:56	04/19/23 16:27	1
Calcium	**120000**		200	32	ug/L		04/18/23 07:56	04/18/23 18:56	1
Cadmium	ND		1.0	0.19	ug/L		04/18/23 07:56	04/18/23 18:56	1
Co	ND		1.0	0.33	ug/L		04/18/23 07:56	04/18/23 18:56	1
Chromium	ND		3.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:56	1
Copper	ND		2.0	0.71	ug/L		04/18/23 07:56	04/18/23 18:56	1
Iron	**9.9**	**J**	200	8.7	ug/L		04/18/23 07:56	04/18/23 18:56	1
Potassium	**3500**		1000	52	ug/L		04/18/23 07:56	04/18/23 18:56	1
Magnesium	**54000**		200	4.2	ug/L		04/18/23 07:56	04/19/23 16:27	1
Manganese	**0.52**	**J**	3.0	0.51	ug/L		04/18/23 07:56	04/19/23 16:27	1
Sodium	**68000**		1000	73	ug/L		04/18/23 07:56	04/19/23 16:27	1
Nickel	ND		3.0	0.83	ug/L		04/18/23 07:56	04/18/23 18:56	1
Lead	ND		1.0	0.23	ug/L		04/18/23 07:56	04/18/23 18:56	1
Antimony	ND		2.0	0.40	ug/L		04/18/23 07:56	04/18/23 18:56	1
Selenium	ND		5.0	1.0	ug/L		04/18/23 07:56	04/18/23 18:56	1
Tin	ND		10	0.58	ug/L		04/18/23 07:56	04/18/23 18:56	1
Thallium	ND		1.0	0.21	ug/L		04/18/23 07:56	04/18/23 18:56	1
Vanadium	ND		5.0	1.1	ug/L		04/18/23 07:56	04/18/23 18:56	1
Zinc	ND		10	2.0	ug/L		04/18/23 07:56	04/18/23 18:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**1.2**		0.50	0.23	mg/L			04/30/23 03:57	1

Client Sample ID: MW-119D-20230413
Lab Sample ID: 280-175123-1

Date Collected: 04/13/23 10:55
Matrix: Water
Date Received: 04/17/23 09:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (SW846 9056A)	**2.5**	**H H3**	0.50	0.090	mg/L			04/17/23 15:13	1
Chloride (SW846 9056A)	**210**		60	20	mg/L			04/17/23 15:28	20
Nitrite as N (SW846 9056A)	ND	H H3	0.50	0.049	mg/L			04/17/23 15:13	1
Sulfate (SW846 9056A)	**100**		100	21	mg/L			04/17/23 15:28	20
Total Organic Carbon - Duplicates (SW846 9060A)	**1.7**		1.0	0.35	mg/L			04/21/23 19:12	1

Client Sample ID: MW-119S-20230413
Lab Sample ID: 280-175123-2

Date Collected: 04/13/23 09:15
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0	1.2	ug/L			04/26/23 16:45	2
1,1,1-Trichloroethane	ND		2.0	0.78	ug/L			04/26/23 16:45	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			04/26/23 16:45	2
1,1,2-Trichloroethane	ND		2.0	0.54	ug/L			04/26/23 16:45	2
1,1-Dichloroethane	ND		2.0	0.44	ug/L			04/26/23 16:45	2
1,1-Dichloroethene	ND		2.0	0.46	ug/L			04/26/23 16:45	2
1,1-Dichloropropene	ND		2.0	0.83	ug/L			04/26/23 16:45	2
1,2,3-Trichloropropane	ND		5.0	1.7	ug/L			04/26/23 16:45	2
1,2,4-Trichlorobenzene	ND		2.0	1.2	ug/L			04/26/23 16:45	2
1,2-Dibromo-3-Chloropropane	ND		10	3.5	ug/L			04/26/23 16:45	2
1,2-Dibromoethane	ND		2.0	0.81	ug/L			04/26/23 16:45	2
1,2-Dichlorobenzene	ND		2.0	0.74	ug/L			04/26/23 16:45	2
1,2-Dichloroethane	ND		2.0	1.1	ug/L			04/26/23 16:45	2
1,2-Dichloropropane	ND		2.0	1.0	ug/L			04/26/23 16:45	2
1,3-Dichlorobenzene	ND		2.0	0.67	ug/L			04/26/23 16:45	2
1,3-Dichloropropane	ND		2.0	0.76	ug/L			04/26/23 16:45	2
1,4-Dichlorobenzene	ND		2.0	0.78	ug/L			04/26/23 16:45	2
2,2-Dichloropropane	ND		2.0	0.76	ug/L			04/26/23 16:45	2
2-Butanone (MEK)	ND		30	12	ug/L			04/26/23 16:45	2
2-Hexanone	ND		10	3.4	ug/L			04/26/23 16:45	2
4-Methyl-2-pentanone (MIBK)	ND		10	2.0	ug/L			04/26/23 16:45	2
Acetone	ND		30	13	ug/L			04/26/23 16:45	2
Acetonitrile	ND		60	19	ug/L			04/26/23 16:45	2
Acrolein	ND		40	9.7	ug/L			04/26/23 16:45	2
Acrylonitrile	ND		40	8.9	ug/L			04/26/23 16:45	2
Allyl chloride	ND		4.0	0.34	ug/L			04/26/23 16:45	2
Benzene	ND		2.0	0.62	ug/L			04/26/23 16:45	2
Bromoform	ND		4.0	2.4	ug/L			04/26/23 16:45	2
Bromomethane	ND		10	4.7	ug/L			04/26/23 16:45	2
Carbon disulfide	ND		4.0	1.3	ug/L			04/26/23 16:45	2
Carbon tetrachloride	ND		2.0	1.1	ug/L			04/26/23 16:45	2
Chlorobenzene	ND		2.0	0.84	ug/L			04/26/23 16:45	2
Chlorobromomethane	ND		2.0	0.81	ug/L			04/26/23 16:45	2
Chlorodibromomethane	ND		4.0	1.2	ug/L			04/26/23 16:45	2
Chloroethane	ND		8.0	2.7	ug/L			04/26/23 16:45	2
Chloroform	**1.8**	**J**	2.0	0.72	ug/L			04/26/23 16:45	2
Chloromethane	ND		4.0	1.5	ug/L			04/26/23 16:45	2

Client Sample ID: MW-119S-20230413
Lab Sample ID: 280-175123-2

Date Collected: 04/13/23 09:15
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroprene	ND		6.0	2.3	ug/L			04/26/23 16:45	2
cis-1,2-Dichloroethene	**4.5**		2.0	0.64	ug/L			04/26/23 16:45	2
cis-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/26/23 16:45	2
Dibromomethane	ND		2.0	0.69	ug/L			04/26/23 16:45	2
Dichlorobromomethane	ND		2.0	0.77	ug/L			04/26/23 16:45	2
Dichlorodifluoromethane	ND		6.0	1.9	ug/L			04/26/23 16:45	2
Ethyl methacrylate	ND		6.0	1.7	ug/L			04/26/23 16:45	2
Ethylbenzene	ND		2.0	0.61	ug/L			04/26/23 16:45	2
Iodomethane	ND		10	5.2	ug/L			04/26/23 16:45	2
Isobutyl alcohol	ND		220	73	ug/L			04/26/23 16:45	2
Methacrylonitrile	ND		30	11	ug/L			04/26/23 16:45	2
Methyl methacrylate	ND		8.0	2.2	ug/L			04/26/23 16:45	2
Methylene Chloride	ND		4.0	1.9	ug/L			04/26/23 16:45	2
m-Xylene & p-Xylene	ND		4.0	0.71	ug/L			04/26/23 16:45	2
o-Xylene	ND		2.0	0.66	ug/L			04/26/23 16:45	2
Propionitrile	ND		40	7.4	ug/L			04/26/23 16:45	2
Styrene	ND		2.0	0.71	ug/L			04/26/23 16:45	2
Tetrachloroethene	**29**		2.0	0.81	ug/L			04/26/23 16:45	2
Toluene	ND		2.0	0.64	ug/L			04/26/23 16:45	2
trans-1,2-Dichloroethene	ND		2.0	0.74	ug/L			04/26/23 16:45	2
trans-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/26/23 16:45	2
trans-1,4-Dichloro-2-butene	ND		6.0	2.8	ug/L			04/26/23 16:45	2
Trichloroethene	**130**		2.0	0.60	ug/L			04/26/23 16:45	2
Trichlorofluoromethane	ND		4.0	1.1	ug/L			04/26/23 16:45	2
Vinyl acetate	ND		6.0	1.9	ug/L			04/26/23 16:45	2
Vinyl chloride	ND		4.0	1.0	ug/L			04/26/23 16:45	2
Xylenes, Total	ND		2.0	0.66	ug/L			04/26/23 16:45	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*		*04/26/23 16:45*	*2*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/26/23 16:45*	*2*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*04/26/23 16:45*	*2*
Toluene-d8 (Surr)	*101*		*80 - 125*		*04/26/23 16:45*	*2*

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/18/23 07:56	04/18/23 18:58	1
Arsenic	**0.58**	**J**	5.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:58	1
Barium	**250**		3.0	0.38	ug/L		04/18/23 07:56	04/18/23 18:58	1
Beryllium	ND		1.0	0.30	ug/L		04/18/23 07:56	04/19/23 16:29	1
Calcium	**140000**		200	32	ug/L		04/18/23 07:56	04/18/23 18:58	1
Cadmium	ND		1.0	0.19	ug/L		04/18/23 07:56	04/18/23 18:58	1
Co	ND		1.0	0.33	ug/L		04/18/23 07:56	04/18/23 18:58	1
Chromium	ND		3.0	0.50	ug/L		04/18/23 07:56	04/18/23 18:58	1
Copper	**0.96**	**J**	2.0	0.71	ug/L		04/18/23 07:56	04/18/23 18:58	1
Iron	ND		200	8.7	ug/L		04/18/23 07:56	04/18/23 18:58	1
Potassium	**4400**		1000	52	ug/L		04/18/23 07:56	04/18/23 18:58	1
Magnesium	**63000**		200	4.2	ug/L		04/18/23 07:56	04/19/23 16:29	1
Manganese	ND		3.0	0.51	ug/L		04/18/23 07:56	04/19/23 16:29	1
Sodium	**78000**		1000	73	ug/L		04/18/23 07:56	04/19/23 16:29	1

Client Sample ID: MW-119S-20230413
Lab Sample ID: 280-175123-2

Date Collected: 04/13/23 09:15
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	ND		3.0	0.83	ug/L		04/18/23 07:56	04/18/23 18:58	1
Lead	ND		1.0	0.23	ug/L		04/18/23 07:56	04/18/23 18:58	1
Antimony	ND		2.0	0.40	ug/L		04/18/23 07:56	04/18/23 18:58	1
Selenium	ND		5.0	1.0	ug/L		04/18/23 07:56	04/18/23 18:58	1
Tin	ND		10	0.58	ug/L		04/18/23 07:56	04/18/23 18:58	1
Thallium	ND		1.0	0.21	ug/L		04/18/23 07:56	04/18/23 18:58	1
Vanadium	ND		5.0	1.1	ug/L		04/18/23 07:56	04/18/23 18:58	1
Zinc	ND		10	2.0	ug/L		04/18/23 07:56	04/18/23 18:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	**1.3**		0.50	0.23	mg/L			04/30/23 03:45	1
Nitrate as N (SW846 9056A)	**4.1**	**H H3**	0.50	0.090	mg/L			04/17/23 15:43	1
Chloride (SW846 9056A)	**270**		60	20	mg/L			04/17/23 16:43	20
Nitrite as N (SW846 9056A)	ND	H H3	0.50	0.049	mg/L			04/17/23 15:43	1
Sulfate (SW846 9056A)	**110**		10	2.1	mg/L			04/17/23 15:58	2
Total Organic Carbon - Duplicates (SW846 9060A)	**2.2**		1.0	0.35	mg/L			04/24/23 19:26	1

Client Sample ID: RW-3-20230413
Lab Sample ID: 280-175123-3

Date Collected: 04/13/23 12:45
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0	1.2	ug/L			04/26/23 17:06	2
1,1,1-Trichloroethane	ND		2.0	0.78	ug/L			04/26/23 17:06	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			04/26/23 17:06	2
1,1,2-Trichloroethane	ND		2.0	0.54	ug/L			04/26/23 17:06	2
1,1-Dichloroethane	ND		2.0	0.44	ug/L			04/26/23 17:06	2
1,1-Dichloroethene	ND		2.0	0.46	ug/L			04/26/23 17:06	2
1,1-Dichloropropene	ND		2.0	0.83	ug/L			04/26/23 17:06	2
1,2,3-Trichloropropane	ND		5.0	1.7	ug/L			04/26/23 17:06	2
1,2,4-Trichlorobenzene	ND		2.0	1.2	ug/L			04/26/23 17:06	2
1,2-Dibromo-3-Chloropropane	ND		10	3.5	ug/L			04/26/23 17:06	2
1,2-Dibromoethane	ND		2.0	0.81	ug/L			04/26/23 17:06	2
1,2-Dichlorobenzene	ND		2.0	0.74	ug/L			04/26/23 17:06	2
1,2-Dichloroethane	ND		2.0	1.1	ug/L			04/26/23 17:06	2
1,2-Dichloropropane	ND		2.0	1.0	ug/L			04/26/23 17:06	2
1,3-Dichlorobenzene	ND		2.0	0.67	ug/L			04/26/23 17:06	2
1,3-Dichloropropane	ND		2.0	0.76	ug/L			04/26/23 17:06	2
1,4-Dichlorobenzene	ND		2.0	0.78	ug/L			04/26/23 17:06	2
2,2-Dichloropropane	ND		2.0	0.76	ug/L			04/26/23 17:06	2
2-Butanone (MEK)	ND		30	12	ug/L			04/26/23 17:06	2
2-Hexanone	ND		10	3.4	ug/L			04/26/23 17:06	2
4-Methyl-2-pentanone (MIBK)	ND		10	2.0	ug/L			04/26/23 17:06	2
Acetone	ND		30	13	ug/L			04/26/23 17:06	2
Acetonitrile	ND		60	19	ug/L			04/26/23 17:06	2
Acrolein	ND		40	9.7	ug/L			04/26/23 17:06	2
Acrylonitrile	ND		40	8.9	ug/L			04/26/23 17:06	2

Client Sample ID: RW-3-20230413
Date Collected: 04/13/23 12:45
Date Received: 04/17/23 09:00

Lab Sample ID: 280-175123-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		4.0	0.34	ug/L			04/26/23 17:06	2
Benzene	ND		2.0	0.62	ug/L			04/26/23 17:06	2
Bromoform	ND		4.0	2.4	ug/L			04/26/23 17:06	2
Bromomethane	ND		10	4.7	ug/L			04/26/23 17:06	2
Carbon disulfide	ND		4.0	1.3	ug/L			04/26/23 17:06	2
Carbon tetrachloride	ND		2.0	1.1	ug/L			04/26/23 17:06	2
Chlorobenzene	ND		2.0	0.84	ug/L			04/26/23 17:06	2
Chlorobromomethane	ND		2.0	0.81	ug/L			04/26/23 17:06	2
Chlorodibromomethane	ND		4.0	1.2	ug/L			04/26/23 17:06	2
Chloroethane	ND		8.0	2.7	ug/L			04/26/23 17:06	2
Chloroform	ND		2.0	0.72	ug/L			04/26/23 17:06	2
Chloromethane	ND		4.0	1.5	ug/L			04/26/23 17:06	2
Chloroprene	ND		6.0	2.3	ug/L			04/26/23 17:06	2
cis-1,2-Dichloroethene	ND		2.0	0.64	ug/L			04/26/23 17:06	2
cis-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/26/23 17:06	2
Dibromomethane	ND		2.0	0.69	ug/L			04/26/23 17:06	2
Dichlorobromomethane	ND		2.0	0.77	ug/L			04/26/23 17:06	2
Dichlorodifluoromethane	ND		6.0	1.9	ug/L			04/26/23 17:06	2
Ethyl methacrylate	ND		6.0	1.7	ug/L			04/26/23 17:06	2
Ethylbenzene	ND		2.0	0.61	ug/L			04/26/23 17:06	2
Iodomethane	ND		10	5.2	ug/L			04/26/23 17:06	2
Isobutyl alcohol	ND		220	73	ug/L			04/26/23 17:06	2
Methacrylonitrile	ND		30	11	ug/L			04/26/23 17:06	2
Methyl methacrylate	ND		8.0	2.2	ug/L			04/26/23 17:06	2
Methylene Chloride	ND		4.0	1.9	ug/L			04/26/23 17:06	2
m-Xylene & p-Xylene	ND		4.0	0.71	ug/L			04/26/23 17:06	2
o-Xylene	ND		2.0	0.66	ug/L			04/26/23 17:06	2
Propionitrile	ND		40	7.4	ug/L			04/26/23 17:06	2
Styrene	ND		2.0	0.71	ug/L			04/26/23 17:06	2
Tetrachloroethene	**4.4**		2.0	0.81	ug/L			04/26/23 17:06	2
Toluene	ND		2.0	0.64	ug/L			04/26/23 17:06	2
trans-1,2-Dichloroethene	ND		2.0	0.74	ug/L			04/26/23 17:06	2
trans-1,3-Dichloropropene	ND		4.0	1.3	ug/L			04/26/23 17:06	2
trans-1,4-Dichloro-2-butene	ND		6.0	2.8	ug/L			04/26/23 17:06	2
Trichloroethene	**7.2**		2.0	0.60	ug/L			04/26/23 17:06	2
Trichlorofluoromethane	ND		4.0	1.1	ug/L			04/26/23 17:06	2
Vinyl acetate	ND		6.0	1.9	ug/L			04/26/23 17:06	2
Vinyl chloride	ND		4.0	1.0	ug/L			04/26/23 17:06	2
Xylenes, Total	ND		2.0	0.66	ug/L			04/26/23 17:06	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 127*		*04/26/23 17:06*	*2*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*		*04/26/23 17:06*	*2*
Dibromofluoromethane (Surr)	*103*		*77 - 120*		*04/26/23 17:06*	*2*
Toluene-d8 (Surr)	*103*		*80 - 125*		*04/26/23 17:06*	*2*

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/18/23 07:56	04/18/23 19:00	1
Arsenic	**1.4**	**J**	5.0	0.50	ug/L		04/18/23 07:56	04/18/23 19:00	1

Client Sample ID: RW-3-20230413
Lab Sample ID: 280-175123-3
Date Collected: 04/13/23 12:45
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**410**		3.0	0.38	ug/L		04/18/23 07:56	04/18/23 19:00	1
Beryllium	ND		1.0	0.30	ug/L		04/18/23 07:56	04/19/23 16:30	1
Calcium	**210000**		2000	320	ug/L		04/18/23 07:56	04/20/23 09:34	10
Cadmium	ND		1.0	0.19	ug/L		04/18/23 07:56	04/18/23 19:00	1
Co	**1.6**		1.0	0.33	ug/L		04/18/23 07:56	04/18/23 19:00	1
Chromium	**0.80**	**J**	3.0	0.50	ug/L		04/18/23 07:56	04/18/23 19:00	1
Copper	**1.2**	**J**	2.0	0.71	ug/L		04/18/23 07:56	04/18/23 19:00	1
Iron	**52**	**J**	200	8.7	ug/L		04/18/23 07:56	04/18/23 19:00	1
Potassium	**4800**		1000	52	ug/L		04/18/23 07:56	04/18/23 19:00	1
Magnesium	**60000**		2000	42	ug/L		04/18/23 07:56	04/19/23 16:00	10
Manganese	**280**		3.0	0.51	ug/L		04/18/23 07:56	04/19/23 16:30	1
Sodium	**160000**		10000	730	ug/L		04/18/23 07:56	04/19/23 16:00	10
Nickel	**39**		3.0	0.83	ug/L		04/18/23 07:56	04/18/23 19:00	1
Lead	ND		1.0	0.23	ug/L		04/18/23 07:56	04/18/23 19:00	1
Antimony	ND		2.0	0.40	ug/L		04/18/23 07:56	04/18/23 19:00	1
Selenium	ND		5.0	1.0	ug/L		04/18/23 07:56	04/18/23 19:00	1
Tin	ND		10	0.58	ug/L		04/18/23 07:56	04/18/23 19:00	1
Thallium	ND		1.0	0.21	ug/L		04/18/23 07:56	04/18/23 19:00	1
Vanadium	**2.9**	**J**	5.0	1.1	ug/L		04/18/23 07:56	04/18/23 19:00	1
Zinc	**8.4**	**J B**	10	2.0	ug/L		04/18/23 07:56	04/19/23 16:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (SW846 9056A)	ND		0.50	0.23	mg/L			04/30/23 03:33	1
Nitrate as N (SW846 9056A)	**5.6**	**H H3**	1.0	0.18	mg/L			04/17/23 17:13	2
Chloride (SW846 9056A)	**340**		60	20	mg/L			04/17/23 17:29	20
Nitrite as N (SW846 9056A)	ND	H H3	0.50	0.049	mg/L			04/17/23 16:58	1
Sulfate (SW846 9056A)	**49**		5.0	1.0	mg/L			04/17/23 16:58	1
Total Organic Carbon - Duplicates (SW846 9060A)	**3.8**		1.0	0.35	mg/L			04/24/23 20:12	1

Client Sample ID: MW-113D-20230414
Lab Sample ID: 280-175123-4
Date Collected: 04/14/23 12:55
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 16:04	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 16:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 16:04	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 16:04	1
1,1-Dichloroethane	**0.41**	**J**	1.0	0.22	ug/L			04/27/23 16:04	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 16:04	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 16:04	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 16:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 16:04	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 16:04	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 16:04	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 16:04	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 16:04	1

Client Sample ID: MW-113D-20230414
Lab Sample ID: 280-175123-4

Date Collected: 04/14/23 12:55
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 16:04	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 16:04	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 16:04	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 16:04	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 16:04	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 16:04	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 16:04	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 16:04	1
Acetone	ND		15	6.6	ug/L			04/27/23 16:04	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 16:04	1
Acrolein	ND		20	4.9	ug/L			04/27/23 16:04	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 16:04	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 16:04	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 16:04	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 16:04	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 16:04	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 16:04	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 16:04	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 16:04	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 16:04	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 16:04	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 16:04	1
Chloroform	ND		1.0	0.36	ug/L			04/27/23 16:04	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 16:04	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 16:04	1
cis-1,2-Dichloroethene	**0.46**	**J**	1.0	0.32	ug/L			04/27/23 16:04	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 16:04	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 16:04	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 16:04	1
Dichlorodifluoromethane	**1.1**	**J**	3.0	0.96	ug/L			04/27/23 16:04	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 16:04	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 16:04	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 16:04	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 16:04	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 16:04	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 16:04	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 16:04	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 16:04	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 16:04	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 16:04	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 16:04	1
Tetrachloroethene	**1.1**		1.0	0.40	ug/L			04/27/23 16:04	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 16:04	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 16:04	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 16:04	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 16:04	1
Trichloroethene	**0.31**	**J**	1.0	0.30	ug/L			04/27/23 16:04	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 16:04	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 16:04	1

Client Sample ID: MW-113D-20230414
Lab Sample ID: 280-175123-4

Date Collected: 04/14/23 12:55
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 16:04	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 127*		*04/27/23 16:04*	*1*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*		*04/27/23 16:04*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/27/23 16:04*	*1*
Toluene-d8 (Surr)	*100*		*80 - 125*		*04/27/23 16:04*	*1*

Client Sample ID: MW-113S-20230414
Lab Sample ID: 280-175123-5

Date Collected: 04/14/23 09:25
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 16:25	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 16:25	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 16:25	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 16:25	1
1,1-Dichloroethane	**26**		1.0	0.22	ug/L			04/27/23 16:25	1
1,1-Dichloroethene	**0.82**	**J**	1.0	0.23	ug/L			04/27/23 16:25	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 16:25	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 16:25	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 16:25	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 16:25	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 16:25	1
1,2-Dichlorobenzene	**11**		1.0	0.37	ug/L			04/27/23 16:25	1
1,2-Dichloroethane	**3.9**		1.0	0.54	ug/L			04/27/23 16:25	1
1,2-Dichloropropane	**5.0**		1.0	0.52	ug/L			04/27/23 16:25	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 16:25	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 16:25	1
1,4-Dichlorobenzene	**5.8**		1.0	0.39	ug/L			04/27/23 16:25	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 16:25	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 16:25	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 16:25	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 16:25	1
Acetone	ND		15	6.6	ug/L			04/27/23 16:25	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 16:25	1
Acrolein	ND		20	4.9	ug/L			04/27/23 16:25	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 16:25	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 16:25	1
Benzene	**7.3**		1.0	0.31	ug/L			04/27/23 16:25	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 16:25	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 16:25	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 16:25	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 16:25	1
Chlorobenzene	**0.46**	**J**	1.0	0.42	ug/L			04/27/23 16:25	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 16:25	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 16:25	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 16:25	1

Client Sample ID: MW-113S-20230414
Lab Sample ID: 280-175123-5

Date Collected: 04/14/23 09:25
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	**1.4**		1.0	0.36	ug/L			04/27/23 16:25	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 16:25	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 16:25	1
cis-1,2-Dichloroethene	**29**		1.0	0.32	ug/L			04/27/23 16:25	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 16:25	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 16:25	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 16:25	1
Dichlorodifluoromethane	**24**		3.0	0.96	ug/L			04/27/23 16:25	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 16:25	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 16:25	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 16:25	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 16:25	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 16:25	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 16:25	1
Methylene Chloride	**1.1**	**J**	2.0	0.94	ug/L			04/27/23 16:25	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 16:25	1
o-Xylene	**1.0**		1.0	0.33	ug/L			04/27/23 16:25	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 16:25	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 16:25	1
Tetrachloroethene	**22**		1.0	0.40	ug/L			04/27/23 16:25	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 16:25	1
trans-1,2-Dichloroethene	**1.5**		1.0	0.37	ug/L			04/27/23 16:25	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 16:25	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 16:25	1
Trichloroethene	**16**		1.0	0.30	ug/L			04/27/23 16:25	1
Trichlorofluoromethane	**2.6**		2.0	0.57	ug/L			04/27/23 16:25	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 16:25	1
Vinyl chloride	**92**		2.0	0.51	ug/L			04/27/23 16:25	1
Xylenes, Total	**1.0**		1.0	0.33	ug/L			04/27/23 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 127*		*04/27/23 16:25*	*1*
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*		*04/27/23 16:25*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/27/23 16:25*	*1*
Toluene-d8 (Surr)	*103*		*80 - 125*		*04/27/23 16:25*	*1*

Client Sample ID: MW-112M-20230415
Lab Sample ID: 280-175123-6

Date Collected: 04/15/23 12:45
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 20:31	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 20:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 20:31	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 20:31	1
1,1-Dichloroethane	**0.79**	**J**	1.0	0.22	ug/L			04/27/23 20:31	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 20:31	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 20:31	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 20:31	1

Client Sample ID: MW-112M-20230415
Lab Sample ID: 280-175123-6

Date Collected: 04/15/23 12:45
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 20:31	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 20:31	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 20:31	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 20:31	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 20:31	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 20:31	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 20:31	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 20:31	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 20:31	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 20:31	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 20:31	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 20:31	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 20:31	1
Acetone	ND		15	6.6	ug/L			04/27/23 20:31	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 20:31	1
Acrolein	ND		20	4.9	ug/L			04/27/23 20:31	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 20:31	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 20:31	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 20:31	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 20:31	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 20:31	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 20:31	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 20:31	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 20:31	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 20:31	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 20:31	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 20:31	1
Chloroform	**1.2**		1.0	0.36	ug/L			04/27/23 20:31	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 20:31	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 20:31	1
cis-1,2-Dichloroethene	**0.40**	**J**	1.0	0.32	ug/L			04/27/23 20:31	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 20:31	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 20:31	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 20:31	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/27/23 20:31	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 20:31	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 20:31	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 20:31	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 20:31	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 20:31	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 20:31	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 20:31	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 20:31	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 20:31	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 20:31	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 20:31	1
Tetrachloroethene	**14**		1.0	0.40	ug/L			04/27/23 20:31	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 20:31	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 20:31	1

Client Sample ID: MW-112M-20230415
Lab Sample ID: 280-175123-6

Date Collected: 04/15/23 12:45
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 20:31	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 20:31	1
Trichloroethene	**190**		1.0	0.30	ug/L			04/27/23 20:31	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 20:31	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 20:31	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 20:31	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 127*		*04/27/23 20:31*	*1*
4-Bromofluorobenzene (Surr)	*105*		*78 - 120*		*04/27/23 20:31*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*04/27/23 20:31*	*1*
Toluene-d8 (Surr)	*106*		*80 - 125*		*04/27/23 20:31*	*1*

Client Sample ID: MW-112D-20230415
Lab Sample ID: 280-175123-7

Date Collected: 04/15/23 14:05
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 20:52	1
1,1,1-Trichloroethane	**0.58**	**J**	1.0	0.39	ug/L			04/27/23 20:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 20:52	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 20:52	1
1,1-Dichloroethane	**0.48**	**J**	1.0	0.22	ug/L			04/27/23 20:52	1
1,1-Dichloroethene	**1.1**		1.0	0.23	ug/L			04/27/23 20:52	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 20:52	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 20:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 20:52	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 20:52	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 20:52	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 20:52	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 20:52	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 20:52	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 20:52	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 20:52	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 20:52	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 20:52	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 20:52	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 20:52	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 20:52	1
Acetone	ND		15	6.6	ug/L			04/27/23 20:52	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 20:52	1
Acrolein	ND		20	4.9	ug/L			04/27/23 20:52	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 20:52	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 20:52	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 20:52	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 20:52	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 20:52	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 20:52	1

Client Sample ID: MW-112D-20230415
Lab Sample ID: 280-175123-7

Date Collected: 04/15/23 14:05
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 20:52	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 20:52	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 20:52	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 20:52	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 20:52	1
Chloroform	ND		1.0	0.36	ug/L			04/27/23 20:52	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 20:52	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 20:52	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/27/23 20:52	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 20:52	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 20:52	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 20:52	1
Dichlorodifluoromethane	**2.8**	**J**	3.0	0.96	ug/L			04/27/23 20:52	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 20:52	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 20:52	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 20:52	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 20:52	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 20:52	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 20:52	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 20:52	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 20:52	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 20:52	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 20:52	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 20:52	1
Tetrachloroethene	**12**		1.0	0.40	ug/L			04/27/23 20:52	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 20:52	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 20:52	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 20:52	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 20:52	1
Trichloroethene	**190**		1.0	0.30	ug/L			04/27/23 20:52	1
Trichlorofluoromethane	**2.0**		2.0	0.57	ug/L			04/27/23 20:52	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 20:52	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 20:52	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 127*		*04/27/23 20:52*	*1*
4-Bromofluorobenzene (Surr)	*104*		*78 - 120*		*04/27/23 20:52*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*04/27/23 20:52*	*1*
Toluene-d8 (Surr)	*106*		*80 - 125*		*04/27/23 20:52*	*1*

Client Sample ID: EB-04-20230414
Lab Sample ID: 280-175123-8

Date Collected: 04/14/23 10:10
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 14:01	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 14:01	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 14:01	1

Client Sample ID: EB-04-20230414
Lab Sample ID: 280-175123-8

Date Collected: 04/14/23 10:10
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 14:01	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/27/23 14:01	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 14:01	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 14:01	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 14:01	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 14:01	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 14:01	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 14:01	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 14:01	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 14:01	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 14:01	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 14:01	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 14:01	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 14:01	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 14:01	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 14:01	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 14:01	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 14:01	1
Acetone	ND		15	6.6	ug/L			04/27/23 14:01	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 14:01	1
Acrolein	ND		20	4.9	ug/L			04/27/23 14:01	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 14:01	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 14:01	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 14:01	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 14:01	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 14:01	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 14:01	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 14:01	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 14:01	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 14:01	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 14:01	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 14:01	1
Chloroform	ND		1.0	0.36	ug/L			04/27/23 14:01	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 14:01	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 14:01	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/27/23 14:01	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 14:01	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 14:01	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 14:01	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/27/23 14:01	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 14:01	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 14:01	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 14:01	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 14:01	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 14:01	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 14:01	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 14:01	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 14:01	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 14:01	1

Client Sample ID: EB-04-20230414
Lab Sample ID: 280-175123-8

Date Collected: 04/14/23 10:10
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		20	3.7	ug/L			04/27/23 14:01	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 14:01	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/27/23 14:01	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 14:01	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 14:01	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 14:01	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 14:01	1
Trichloroethene	ND		1.0	0.30	ug/L			04/27/23 14:01	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 14:01	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 14:01	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 14:01	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*		*04/27/23 14:01*	*1*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*		*04/27/23 14:01*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/27/23 14:01*	*1*
Toluene-d8 (Surr)	*103*		*80 - 125*		*04/27/23 14:01*	*1*

Client Sample ID: EB-03-20230413
Lab Sample ID: 280-175123-9

Date Collected: 04/13/23 14:15
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/26/23 13:40	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/26/23 13:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/26/23 13:40	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/26/23 13:40	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/26/23 13:40	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/26/23 13:40	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/26/23 13:40	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/26/23 13:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/26/23 13:40	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/26/23 13:40	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/26/23 13:40	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/26/23 13:40	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/26/23 13:40	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/26/23 13:40	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/26/23 13:40	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 13:40	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/26/23 13:40	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 13:40	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/26/23 13:40	1
2-Hexanone	ND		5.0	1.7	ug/L			04/26/23 13:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/26/23 13:40	1
Acetone	ND		15	6.6	ug/L			04/26/23 13:40	1
Acetonitrile	ND		30	9.6	ug/L			04/26/23 13:40	1
Acrolein	ND		20	4.9	ug/L			04/26/23 13:40	1
Acrylonitrile	ND		20	4.5	ug/L			04/26/23 13:40	1

Client Sample ID: EB-03-20230413
Lab Sample ID: 280-175123-9

Date Collected: 04/13/23 14:15
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		2.0	0.17	ug/L			04/26/23 13:40	1
Benzene	ND		1.0	0.31	ug/L			04/26/23 13:40	1
Bromoform	ND		2.0	1.2	ug/L			04/26/23 13:40	1
Bromomethane	ND		5.0	2.4	ug/L			04/26/23 13:40	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/26/23 13:40	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/26/23 13:40	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/26/23 13:40	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/26/23 13:40	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/26/23 13:40	1
Chloroethane	ND		4.0	1.4	ug/L			04/26/23 13:40	1
Chloroform	ND		1.0	0.36	ug/L			04/26/23 13:40	1
Chloromethane	ND		2.0	0.75	ug/L			04/26/23 13:40	1
Chloroprene	ND		3.0	1.2	ug/L			04/26/23 13:40	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/26/23 13:40	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/26/23 13:40	1
Dibromomethane	ND		1.0	0.34	ug/L			04/26/23 13:40	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/26/23 13:40	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/26/23 13:40	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/26/23 13:40	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/26/23 13:40	1
Iodomethane	ND		5.0	2.6	ug/L			04/26/23 13:40	1
Isobutyl alcohol	ND		110	37	ug/L			04/26/23 13:40	1
Methacrylonitrile	ND		15	5.3	ug/L			04/26/23 13:40	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/26/23 13:40	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/26/23 13:40	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/26/23 13:40	1
o-Xylene	ND		1.0	0.33	ug/L			04/26/23 13:40	1
Propionitrile	ND		20	3.7	ug/L			04/26/23 13:40	1
Styrene	ND		1.0	0.36	ug/L			04/26/23 13:40	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/26/23 13:40	1
Toluene	ND		1.0	0.32	ug/L			04/26/23 13:40	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/26/23 13:40	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/26/23 13:40	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/26/23 13:40	1
Trichloroethene	ND		1.0	0.30	ug/L			04/26/23 13:40	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/26/23 13:40	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/26/23 13:40	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/26/23 13:40	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/26/23 13:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*		*04/26/23 13:40*	*1*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*		*04/26/23 13:40*	*1*
Dibromofluoromethane (Surr)	*100*		*77 - 120*		*04/26/23 13:40*	*1*
Toluene-d8 (Surr)	*102*		*80 - 125*		*04/26/23 13:40*	*1*

Client Sample ID: MW-109D-20230415
Lab Sample ID: 280-175123-10

Date Collected: 04/15/23 18:00
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 21:13	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 21:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 21:13	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 21:13	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/27/23 21:13	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 21:13	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 21:13	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 21:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 21:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 21:13	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 21:13	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 21:13	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 21:13	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 21:13	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 21:13	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 21:13	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 21:13	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 21:13	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 21:13	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 21:13	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 21:13	1
Acetone	ND		15	6.6	ug/L			04/27/23 21:13	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 21:13	1
Acrolein	ND		20	4.9	ug/L			04/27/23 21:13	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 21:13	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 21:13	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 21:13	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 21:13	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 21:13	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 21:13	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 21:13	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 21:13	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 21:13	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 21:13	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 21:13	1
Chloroform	**0.55**	**J**	1.0	0.36	ug/L			04/27/23 21:13	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 21:13	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 21:13	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/27/23 21:13	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 21:13	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 21:13	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 21:13	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/27/23 21:13	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 21:13	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 21:13	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 21:13	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 21:13	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 21:13	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 21:13	1

Client Sample ID: MW-109D-20230415
Lab Sample ID: 280-175123-10

Date Collected: 04/15/23 18:00
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 21:13	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 21:13	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 21:13	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 21:13	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 21:13	1
Tetrachloroethene	**20**		1.0	0.40	ug/L			04/27/23 21:13	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 21:13	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 21:13	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 21:13	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 21:13	1
Trichloroethene	**66**		1.0	0.30	ug/L			04/27/23 21:13	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 21:13	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 21:13	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 21:13	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 127*		*04/27/23 21:13*	*1*
4-Bromofluorobenzene (Surr)	*105*		*78 - 120*		*04/27/23 21:13*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*04/27/23 21:13*	*1*
Toluene-d8 (Surr)	*105*		*80 - 125*		*04/27/23 21:13*	*1*

Client Sample ID: TB-05-20230416
Lab Sample ID: 280-175123-11

Date Collected: 04/16/23 09:40
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 19:27	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 19:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 19:27	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 19:27	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/27/23 19:27	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 19:27	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 19:27	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 19:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 19:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 19:27	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 19:27	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 19:27	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 19:27	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 19:27	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 19:27	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 19:27	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 19:27	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 19:27	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 19:27	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 19:27	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 19:27	1
Acetone	ND		15	6.6	ug/L			04/27/23 19:27	1

Client Sample ID: TB-05-20230416
Lab Sample ID: 280-175123-11

Date Collected: 04/16/23 09:40
Matrix: Water
Date Received: 04/17/23 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	ND		30	9.6	ug/L			04/27/23 19:27	1
Acrolein	ND		20	4.9	ug/L			04/27/23 19:27	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 19:27	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 19:27	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 19:27	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 19:27	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 19:27	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 19:27	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 19:27	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 19:27	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 19:27	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 19:27	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 19:27	1
Chloroform	ND		1.0	0.36	ug/L			04/27/23 19:27	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 19:27	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 19:27	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/27/23 19:27	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 19:27	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 19:27	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 19:27	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/27/23 19:27	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 19:27	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 19:27	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 19:27	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 19:27	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 19:27	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 19:27	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 19:27	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 19:27	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 19:27	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 19:27	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 19:27	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/27/23 19:27	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 19:27	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 19:27	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 19:27	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 19:27	1
Trichloroethene	ND		1.0	0.30	ug/L			04/27/23 19:27	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 19:27	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 19:27	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 19:27	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*		*04/27/23 19:27*	*1*
4-Bromofluorobenzene (Surr)	*105*		*78 - 120*		*04/27/23 19:27*	*1*
Dibromofluoromethane (Surr)	*106*		*77 - 120*		*04/27/23 19:27*	*1*
Toluene-d8 (Surr)	*105*		*80 - 125*		*04/27/23 19:27*	*1*

Default Detection Limits

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units
1,1,1,2-Tetrachloroethane	1.0	0.58	ug/L
1,1,1-Trichloroethane	1.0	0.39	ug/L
1,1,2,2-Tetrachloroethane	1.0	0.21	ug/L
1,1,2-Trichloroethane	1.0	0.27	ug/L
1,1-Dichloroethane	1.0	0.22	ug/L
1,1-Dichloroethene	1.0	0.23	ug/L
1,1-Dichloropropene	1.0	0.42	ug/L
1,2,3-Trichloropropane	2.5	0.86	ug/L
1,2,4-Trichlorobenzene	1.0	0.58	ug/L
1,2-Dibromo-3-Chloropropane	5.0	1.8	ug/L
1,2-Dibromoethane	1.0	0.40	ug/L
1,2-Dichlorobenzene	1.0	0.37	ug/L
1,2-Dichloroethane	1.0	0.54	ug/L
1,2-Dichloropropane	1.0	0.52	ug/L
1,3-Dichlorobenzene	1.0	0.33	ug/L
1,3-Dichloropropane	1.0	0.38	ug/L
1,4-Dichlorobenzene	1.0	0.39	ug/L
2,2-Dichloropropane	1.0	0.38	ug/L
2-Butanone (MEK)	15	6.0	ug/L
2-Hexanone	5.0	1.7	ug/L
4-Methyl-2-pentanone (MIBK)	5.0	0.98	ug/L
Acetone	15	6.6	ug/L
Acetonitrile	30	9.6	ug/L
Acrolein	20	4.9	ug/L
Acrylonitrile	20	4.5	ug/L
Allyl chloride	2.0	0.17	ug/L
Benzene	1.0	0.31	ug/L
Bromoform	2.0	1.2	ug/L
Bromomethane	5.0	2.4	ug/L
Carbon disulfide	2.0	0.63	ug/L
Carbon tetrachloride	1.0	0.57	ug/L
Chlorobenzene	1.0	0.42	ug/L
Chlorobromomethane	1.0	0.40	ug/L
Chlorodibromomethane	2.0	0.62	ug/L
Chloroethane	4.0	1.4	ug/L
Chloroform	1.0	0.36	ug/L
Chloromethane	2.0	0.75	ug/L
Chloroprene	3.0	1.2	ug/L
cis-1,2-Dichloroethene	1.0	0.32	ug/L
cis-1,3-Dichloropropene	2.0	0.63	ug/L
Dibromomethane	1.0	0.34	ug/L
Dichlorobromomethane	1.0	0.39	ug/L
Dichlorodifluoromethane	3.0	0.96	ug/L
Ethyl methacrylate	3.0	0.86	ug/L
Ethylbenzene	1.0	0.30	ug/L
Iodomethane	5.0	2.6	ug/L
Isobutyl alcohol	110	37	ug/L
Methacrylonitrile	15	5.3	ug/L
Methyl methacrylate	4.0	1.1	ug/L
Methylene Chloride	2.0	0.94	ug/L
m-Xylene & p-Xylene	2.0	0.36	ug/L
o-Xylene	1.0	0.33	ug/L
Propionitrile	20	3.7	ug/L

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	RL	MDL	Units
Styrene	1.0	0.36	ug/L
Tetrachloroethene	1.0	0.40	ug/L
Toluene	1.0	0.32	ug/L
trans-1,2-Dichloroethene	1.0	0.37	ug/L
trans-1,3-Dichloropropene	2.0	0.65	ug/L
trans-1,4-Dichloro-2-butene	3.0	1.4	ug/L
Trichloroethene	1.0	0.30	ug/L
Trichlorofluoromethane	2.0	0.57	ug/L
Vinyl acetate	3.0	0.94	ug/L
Vinyl chloride	2.0	0.51	ug/L
Xylenes, Total	1.0	0.33	ug/L

Method: 6020B - Metals (ICP/MS) - Dissolved

Prep: 3005A

Analyte	RL	MDL	Units
Antimony	2.0	0.40	ug/L
Arsenic	5.0	0.50	ug/L
Barium	3.0	0.38	ug/L
Beryllium	1.0	0.30	ug/L
Cadmium	1.0	0.19	ug/L
Calcium	200	32	ug/L
Chromium	3.0	0.50	ug/L
Co	1.0	0.33	ug/L
Copper	2.0	0.71	ug/L
Iron	200	8.7	ug/L
Lead	1.0	0.23	ug/L
Magnesium	200	4.2	ug/L
Manganese	3.0	0.51	ug/L
Nickel	3.0	0.83	ug/L
Potassium	1000	52	ug/L
Selenium	5.0	1.0	ug/L
Silver	1.0	0.045	ug/L
Sodium	1000	73	ug/L
Thallium	1.0	0.21	ug/L
Tin	10	0.58	ug/L
Vanadium	5.0	1.1	ug/L
Zinc	10	2.0	ug/L

General Chemistry

Analyte	RL	MDL	Units
Bromide	0.50	0.23	mg/L
Chloride	3.0	1.0	mg/L
Nitrate as N	0.50	0.090	mg/L
Nitrite as N	0.50	0.049	mg/L
Sulfate	5.0	1.0	mg/L
Total Organic Carbon - Duplicates	1.0	0.35	mg/L

Surrogate Summary

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-127)	(78-120)	(77-120)	(80-125)
280-175123-1	MW-119D-20230413	99	100	104	99
280-175123-2	MW-119S-20230413	94	102	101	101
280-175123-3	RW-3-20230413	95	100	103	103
280-175123-4	MW-113D-20230414	93	100	102	100
280-175123-5	MW-113S-20230414	92	101	102	103
280-175123-6	MW-112M-20230415	98	105	101	106
280-175123-7	MW-112D-20230415	99	104	101	106
280-175123-8	EB-04-20230414	94	100	102	103
280-175123-9	EB-03-20230413	94	102	100	102
280-175123-10	MW-109D-20230415	100	105	101	105
280-175123-11	TB-05-20230416	103	105	106	105
LCS 280-610121/1002	Lab Control Sample	97	102	104	101
LCS 280-610121/1003	Lab Control Sample	99	100	106	100
LCS 280-610347/1002	Lab Control Sample	94	102	102	102
LCS 280-610347/1003	Lab Control Sample	95	101	101	101
LCS 280-610464/1002	Lab Control Sample	102	105	104	106
LCS 280-610464/1003	Lab Control Sample	103	105	103	106
LCSD 280-610121/4	Lab Control Sample Dup	96	104	103	101
LCSD 280-610121/5	Lab Control Sample Dup	98	103	103	99
LCSD 280-610347/4	Lab Control Sample Dup	97	102	102	101
LCSD 280-610347/5	Lab Control Sample Dup	96	100	103	100
LCSD 280-610464/4	Lab Control Sample Dup	101	103	104	105
LCSD 280-610464/5	Lab Control Sample Dup	103	104	103	105
MB 280-610121/7	Method Blank	94	98	103	102
MB 280-610347/7	Method Blank	97	99	102	100
MB 280-610464/7	Method Blank	102	103	101	105

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 280-610121/7
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/26/23 11:43	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/26/23 11:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/26/23 11:43	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/26/23 11:43	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/26/23 11:43	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/26/23 11:43	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/26/23 11:43	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/26/23 11:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/26/23 11:43	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/26/23 11:43	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/26/23 11:43	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/26/23 11:43	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/26/23 11:43	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/26/23 11:43	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/26/23 11:43	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 11:43	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/26/23 11:43	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/26/23 11:43	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/26/23 11:43	1
2-Hexanone	ND		5.0	1.7	ug/L			04/26/23 11:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/26/23 11:43	1
Acetone	ND		15	6.6	ug/L			04/26/23 11:43	1
Acetonitrile	ND		30	9.6	ug/L			04/26/23 11:43	1
Acrolein	ND		20	4.9	ug/L			04/26/23 11:43	1
Acrylonitrile	ND		20	4.5	ug/L			04/26/23 11:43	1
Allyl chloride	ND		2.0	0.17	ug/L			04/26/23 11:43	1
Benzene	ND		1.0	0.31	ug/L			04/26/23 11:43	1
Bromoform	ND		2.0	1.2	ug/L			04/26/23 11:43	1
Bromomethane	ND		5.0	2.4	ug/L			04/26/23 11:43	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/26/23 11:43	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/26/23 11:43	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/26/23 11:43	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/26/23 11:43	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/26/23 11:43	1
Chloroethane	ND		4.0	1.4	ug/L			04/26/23 11:43	1
Chloroform	ND		1.0	0.36	ug/L			04/26/23 11:43	1
Chloromethane	ND		2.0	0.75	ug/L			04/26/23 11:43	1
Chloroprene	ND		3.0	1.2	ug/L			04/26/23 11:43	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/26/23 11:43	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/26/23 11:43	1
Dibromomethane	ND		1.0	0.34	ug/L			04/26/23 11:43	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/26/23 11:43	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/26/23 11:43	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/26/23 11:43	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/26/23 11:43	1
Iodomethane	ND		5.0	2.6	ug/L			04/26/23 11:43	1
Isobutyl alcohol	ND		110	37	ug/L			04/26/23 11:43	1
Methacrylonitrile	ND		15	5.3	ug/L			04/26/23 11:43	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610121/7
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl methacrylate	ND		4.0	1.1	ug/L			04/26/23 11:43	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/26/23 11:43	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/26/23 11:43	1
o-Xylene	ND		1.0	0.33	ug/L			04/26/23 11:43	1
Propionitrile	ND		20	3.7	ug/L			04/26/23 11:43	1
Styrene	ND		1.0	0.36	ug/L			04/26/23 11:43	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/26/23 11:43	1
Toluene	ND		1.0	0.32	ug/L			04/26/23 11:43	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/26/23 11:43	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/26/23 11:43	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/26/23 11:43	1
Trichloroethene	ND		1.0	0.30	ug/L			04/26/23 11:43	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/26/23 11:43	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/26/23 11:43	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/26/23 11:43	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/26/23 11:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*		*04/26/23 11:43*	*1*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*		*04/26/23 11:43*	*1*
Dibromofluoromethane (Surr)	*103*		*77 - 120*		*04/26/23 11:43*	*1*
Toluene-d8 (Surr)	*102*		*80 - 125*		*04/26/23 11:43*	*1*

Lab Sample ID: LCS 280-610121/1002
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	25.0	24.4		ug/L		98	74 - 121
1,1,1-Trichloroethane	25.0	25.7		ug/L		103	62 - 132
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		98	72 - 122
1,1,2-Trichloroethane	25.0	26.7		ug/L		107	72 - 128
1,1-Dichloroethane	25.0	28.6		ug/L		115	66 - 130
1,1-Dichloroethene	25.0	26.5		ug/L		106	62 - 130
1,1-Dichloropropene	25.0	26.4		ug/L		106	64 - 133
1,2,3-Trichloropropane	25.0	23.4		ug/L		93	74 - 123
1,2,4-Trichlorobenzene	25.0	25.3		ug/L		101	73 - 124
1,2-Dibromo-3-Chloropropane	25.0	22.9		ug/L		91	58 - 122
1,2-Dibromoethane	25.0	24.9		ug/L		100	81 - 118
1,2-Dichlorobenzene	25.0	24.8		ug/L		99	77 - 121
1,2-Dichloroethane	25.0	24.4		ug/L		98	61 - 130
1,2-Dichloropropane	25.0	27.9		ug/L		112	68 - 127
1,3-Dichlorobenzene	25.0	25.3		ug/L		101	76 - 121
1,3-Dichloropropane	25.0	25.8		ug/L		103	80 - 118
1,4-Dichlorobenzene	25.0	24.2		ug/L		97	76 - 119
2,2-Dichloropropane	25.0	26.9		ug/L		108	57 - 140
2-Butanone (MEK)	100	114		ug/L		114	53 - 135
2-Hexanone	100	110		ug/L		110	58 - 134

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610121/1002
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Methyl-2-pentanone (MIBK)	100	117		ug/L		117	56 - 135
Acetone	100	100		ug/L		100	50 - 137
Acrolein	247	244		ug/L		99	10 - 207
Acrylonitrile	250	299		ug/L		120	65 - 133
Allyl chloride	25.0	32.2		ug/L		129	57 - 136
Benzene	25.0	27.5		ug/L		110	69 - 126
Bromoform	25.0	25.2		ug/L		101	57 - 125
Bromomethane	25.0	22.2		ug/L		89	25 - 163
Carbon disulfide	25.0	27.5		ug/L		110	56 - 128
Carbon tetrachloride	25.0	25.4		ug/L		101	60 - 133
Chlorobenzene	25.0	25.2		ug/L		101	78 - 118
Chlorobromomethane	25.0	26.2		ug/L		105	71 - 130
Chlorodibromomethane	25.0	24.5		ug/L		98	71 - 122
Chloroethane	25.0	26.6		ug/L		107	52 - 144
Chloroform	25.0	26.5		ug/L		106	68 - 128
Chloromethane	25.0	23.0		ug/L		92	43 - 142
cis-1,2-Dichloroethene	25.0	26.9		ug/L		108	69 - 126
cis-1,3-Dichloropropene	25.0	26.7		ug/L		107	75 - 120
Dibromomethane	25.0	26.1		ug/L		104	68 - 129
Dichlorobromomethane	25.0	25.7		ug/L		103	67 - 126
Dichlorodifluoromethane	25.0	17.7		ug/L		71	26 - 152
Ethyl methacrylate	25.0	28.2		ug/L		113	69 - 126
Ethylbenzene	25.0	25.6		ug/L		102	76 - 121
Iodomethane	25.0	18.9		ug/L		76	37 - 145
Isobutyl alcohol	625	538		ug/L		86	46 - 132
Methylene Chloride	25.0	25.6		ug/L		102	64 - 128
m-Xylene & p-Xylene	25.0	26.5		ug/L		106	76 - 122
o-Xylene	25.0	26.0		ug/L		104	77 - 120
Styrene	25.0	26.7		ug/L		107	79 - 120
Tetrachloroethene	25.0	25.2		ug/L		101	72 - 127
Toluene	25.0	26.9		ug/L		108	68 - 127
trans-1,2-Dichloroethene	25.0	28.0		ug/L		112	66 - 129
trans-1,3-Dichloropropene	25.0	27.5		ug/L		110	66 - 127
trans-1,4-Dichloro-2-butene	25.0	22.5		ug/L		90	44 - 131
Trichloroethene	25.0	25.9		ug/L		104	70 - 125
Trichlorofluoromethane	25.0	20.9		ug/L		84	57 - 144
Vinyl acetate	50.0	58.3		ug/L		117	61 - 139
Vinyl chloride	25.0	27.5		ug/L		110	53 - 141
Xylenes, Total	50.0	52.5		ug/L		105	77 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610121/1003
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			250	254		ug/L		102	45 - 142		
Chloroprene			25.0	26.0		ug/L		104	53 - 147		
Methacrylonitrile			250	243		ug/L		97	47 - 142		
Methyl methacrylate			50.0	43.0		ug/L		86	60 - 131		
Propionitrile			250	248		ug/L		99	52 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 127*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*
Dibromofluoromethane (Surr)	*106*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Lab Sample ID: LCSD 280-610121/4
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			25.0	24.9		ug/L		99	74 - 121	2	20
1,1,1-Trichloroethane			25.0	25.4		ug/L		102	62 - 132	1	20
1,1,2,2-Tetrachloroethane			25.0	24.4		ug/L		98	72 - 122	0	20
1,1,2-Trichloroethane			25.0	26.0		ug/L		104	72 - 128	3	20
1,1-Dichloroethane			25.0	27.4		ug/L		110	66 - 130	4	20
1,1-Dichloroethene			25.0	26.5		ug/L		106	62 - 130	0	21
1,1-Dichloropropene			25.0	25.6		ug/L		103	64 - 133	3	20
1,2,3-Trichloropropane			25.0	23.9		ug/L		95	74 - 123	2	20
1,2,4-Trichlorobenzene			25.0	26.7		ug/L		107	73 - 124	5	20
1,2-Dibromo-3-Chloropropane			25.0	22.8		ug/L		91	58 - 122	0	21
1,2-Dibromoethane			25.0	25.3		ug/L		101	81 - 118	2	20
1,2-Dichlorobenzene			25.0	24.4		ug/L		98	77 - 121	2	20
1,2-Dichloroethane			25.0	23.8		ug/L		95	61 - 130	2	20
1,2-Dichloropropane			25.0	27.4		ug/L		110	68 - 127	2	20
1,3-Dichlorobenzene			25.0	25.4		ug/L		102	76 - 121	0	20
1,3-Dichloropropane			25.0	25.7		ug/L		103	80 - 118	0	20
1,4-Dichlorobenzene			25.0	24.3		ug/L		97	76 - 119	1	20
2,2-Dichloropropane			25.0	26.3		ug/L		105	57 - 140	2	22
2-Butanone (MEK)			100	108		ug/L		108	53 - 135	6	20
2-Hexanone			100	104		ug/L		104	58 - 134	6	21
4-Methyl-2-pentanone (MIBK)			100	110		ug/L		110	56 - 135	6	20
Acetone			100	96.2		ug/L		96	50 - 137	4	21
Acrolein			247	247		ug/L		100	10 - 207	1	23
Acrylonitrile			250	286		ug/L		114	65 - 133	5	20
Allyl chloride			25.0	30.3		ug/L		121	57 - 136	6	20
Benzene			25.0	27.8		ug/L		111	69 - 126	1	20
Bromoform			25.0	24.8		ug/L		99	57 - 125	2	20
Bromomethane			25.0	22.4		ug/L		90	25 - 163	1	40
Carbon disulfide			25.0	27.8		ug/L		111	56 - 128	1	20
Carbon tetrachloride			25.0	25.7		ug/L		103	60 - 133	1	20
Chlorobenzene			25.0	25.5		ug/L		102	78 - 118	1	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610121/4
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorobromomethane	25.0	27.1		ug/L		108	71 - 130	3	20
Chlorodibromomethane	25.0	24.1		ug/L		96	71 - 122	2	20
Chloroethane	25.0	26.1		ug/L		105	52 - 144	2	30
Chloroform	25.0	26.2		ug/L		105	68 - 128	1	20
Chloromethane	25.0	23.0		ug/L		92	43 - 142	0	20
cis-1,2-Dichloroethene	25.0	27.0		ug/L		108	69 - 126	0	20
cis-1,3-Dichloropropene	25.0	26.9		ug/L		107	75 - 120	1	20
Dibromomethane	25.0	25.7		ug/L		103	68 - 129	2	20
Dichlorobromomethane	25.0	25.9		ug/L		104	67 - 126	1	20
Dichlorodifluoromethane	25.0	17.3		ug/L		69	26 - 152	2	21
Ethyl methacrylate	25.0	27.4		ug/L		109	69 - 126	3	20
Ethylbenzene	25.0	25.6		ug/L		103	76 - 121	0	20
Iodomethane	25.0	21.1		ug/L		84	37 - 145	11	38
Isobutyl alcohol	625	568		ug/L		91	46 - 132	6	30
Methylene Chloride	25.0	26.2		ug/L		105	64 - 128	2	20
m-Xylene & p-Xylene	25.0	26.4		ug/L		105	76 - 122	1	20
o-Xylene	25.0	25.6		ug/L		102	77 - 120	2	20
Styrene	25.0	26.8		ug/L		107	79 - 120	0	20
Tetrachloroethene	25.0	26.0		ug/L		104	72 - 127	3	20
Toluene	25.0	27.1		ug/L		108	68 - 127	1	20
trans-1,2-Dichloroethene	25.0	28.0		ug/L		112	66 - 129	0	20
trans-1,3-Dichloropropene	25.0	27.6		ug/L		110	66 - 127	0	20
trans-1,4-Dichloro-2-butene	25.0	22.4		ug/L		89	44 - 131	1	24
Trichloroethene	25.0	26.4		ug/L		106	70 - 125	2	20
Trichlorofluoromethane	25.0	20.8		ug/L		83	57 - 144	0	28
Vinyl acetate	50.0	60.0		ug/L		120	61 - 139	3	23
Vinyl chloride	25.0	27.8		ug/L		111	53 - 141	1	25
Xylenes, Total	50.0	52.0		ug/L		104	77 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 127*
4-Bromofluorobenzene (Surr)	*104*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Lab Sample ID: LCSD 280-610121/5
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile	250	265		ug/L		106	45 - 142	4	20
Chloroprene	25.0	27.1		ug/L		108	53 - 147	4	20
Methacrylonitrile	250	260		ug/L		104	47 - 142	7	20
Methyl methacrylate	50.0	47.7		ug/L		95	60 - 131	10	20
Propionitrile	250	278		ug/L		111	52 - 138	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 127*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610121/5
Matrix: Water
Analysis Batch: 610121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*99*		*80 - 125*

Lab Sample ID: MB 280-610347/7
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 12:59	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 12:59	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 12:59	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 12:59	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/27/23 12:59	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 12:59	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 12:59	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 12:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 12:59	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 12:59	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 12:59	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 12:59	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 12:59	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 12:59	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 12:59	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 12:59	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 12:59	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 12:59	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 12:59	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 12:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 12:59	1
Acetone	ND		15	6.6	ug/L			04/27/23 12:59	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 12:59	1
Acrolein	ND		20	4.9	ug/L			04/27/23 12:59	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 12:59	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 12:59	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 12:59	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 12:59	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 12:59	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 12:59	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 12:59	1
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 12:59	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 12:59	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 12:59	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 12:59	1
Chloroform	ND		1.0	0.36	ug/L			04/27/23 12:59	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 12:59	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 12:59	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/27/23 12:59	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610347/7
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 12:59	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 12:59	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 12:59	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/27/23 12:59	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 12:59	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 12:59	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 12:59	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 12:59	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 12:59	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 12:59	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 12:59	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 12:59	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 12:59	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 12:59	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 12:59	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/27/23 12:59	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 12:59	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 12:59	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 12:59	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 12:59	1
Trichloroethene	ND		1.0	0.30	ug/L			04/27/23 12:59	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 12:59	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 12:59	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 12:59	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 127*		*04/27/23 12:59*	*1*
4-Bromofluorobenzene (Surr)	*99*		*78 - 120*		*04/27/23 12:59*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 120*		*04/27/23 12:59*	*1*
Toluene-d8 (Surr)	*100*		*80 - 125*		*04/27/23 12:59*	*1*

Lab Sample ID: LCS 280-610347/1002
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	25.0	26.6		ug/L		106	74 - 121
1,1,1-Trichloroethane	25.0	25.2		ug/L		101	62 - 132
1,1,2,2-Tetrachloroethane	25.0	28.1		ug/L		112	72 - 122
1,1,2-Trichloroethane	25.0	27.7		ug/L		111	72 - 128
1,1-Dichloroethane	25.0	27.9		ug/L		112	66 - 130
1,1-Dichloroethene	25.0	26.6		ug/L		106	62 - 130
1,1-Dichloropropene	25.0	25.7		ug/L		103	64 - 133
1,2,3-Trichloropropane	25.0	25.2		ug/L		101	74 - 123
1,2,4-Trichlorobenzene	25.0	28.9		ug/L		115	73 - 124
1,2-Dibromo-3-Chloropropane	25.0	23.4		ug/L		94	58 - 122
1,2-Dibromoethane	25.0	26.0		ug/L		104	81 - 118

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610347/1002
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	25.0	26.3		ug/L		105	77 - 121
1,2-Dichloroethane	25.0	23.9		ug/L		95	61 - 130
1,2-Dichloropropane	25.0	27.7		ug/L		111	68 - 127
1,3-Dichlorobenzene	25.0	26.3		ug/L		105	76 - 121
1,3-Dichloropropane	25.0	26.8		ug/L		107	80 - 118
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	76 - 119
2,2-Dichloropropane	25.0	26.7		ug/L		107	57 - 140
2-Butanone (MEK)	100	118		ug/L		118	53 - 135
2-Hexanone	100	117		ug/L		117	58 - 134
4-Methyl-2-pentanone (MIBK)	100	122		ug/L		122	56 - 135
Acetone	100	98.5		ug/L		98	50 - 137
Acrolein	247	238		ug/L		96	10 - 207
Acrylonitrile	250	303		ug/L		121	65 - 133
Allyl chloride	25.0	32.1		ug/L		129	57 - 136
Benzene	25.0	28.1		ug/L		112	69 - 126
Bromoform	25.0	26.0		ug/L		104	57 - 125
Bromomethane	25.0	25.7		ug/L		103	25 - 163
Carbon disulfide	25.0	27.7		ug/L		111	56 - 128
Carbon tetrachloride	25.0	25.4		ug/L		102	60 - 133
Chlorobenzene	25.0	26.5		ug/L		106	78 - 118
Chlorobromomethane	25.0	26.9		ug/L		108	71 - 130
Chlorodibromomethane	25.0	25.2		ug/L		101	71 - 122
Chloroethane	25.0	27.5		ug/L		110	52 - 144
Chloroform	25.0	25.5		ug/L		102	68 - 128
Chloromethane	25.0	24.7		ug/L		99	43 - 142
cis-1,2-Dichloroethene	25.0	26.4		ug/L		105	69 - 126
cis-1,3-Dichloropropene	25.0	26.8		ug/L		107	75 - 120
Dibromomethane	25.0	25.5		ug/L		102	68 - 129
Dichlorobromomethane	25.0	25.6		ug/L		102	67 - 126
Dichlorodifluoromethane	25.0	17.9		ug/L		72	26 - 152
Ethyl methacrylate	25.0	29.0		ug/L		116	69 - 126
Ethylbenzene	25.0	26.3		ug/L		105	76 - 121
Iodomethane	25.0	20.0		ug/L		80	37 - 145
Isobutyl alcohol	625	651		ug/L		104	46 - 132
Methylene Chloride	25.0	26.0		ug/L		104	64 - 128
m-Xylene & p-Xylene	25.0	26.8		ug/L		107	76 - 122
o-Xylene	25.0	25.9		ug/L		104	77 - 120
Styrene	25.0	27.0		ug/L		108	79 - 120
Tetrachloroethene	25.0	27.2		ug/L		109	72 - 127
Toluene	25.0	27.3		ug/L		109	68 - 127
trans-1,2-Dichloroethene	25.0	28.3		ug/L		113	66 - 129
trans-1,3-Dichloropropene	25.0	28.4		ug/L		114	66 - 127
trans-1,4-Dichloro-2-butene	25.0	24.7		ug/L		99	44 - 131
Trichloroethene	25.0	26.9		ug/L		108	70 - 125
Trichlorofluoromethane	25.0	21.6		ug/L		86	57 - 144
Vinyl acetate	50.0	60.7		ug/L		121	61 - 139
Vinyl chloride	25.0	26.7		ug/L		107	53 - 141
Xylenes, Total	50.0	52.7		ug/L		105	77 - 120

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610347/1002
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*102*		*77 - 120*
Toluene-d8 (Surr)	*102*		*80 - 125*

Lab Sample ID: LCS 280-610347/1003
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			250	300		ug/L		120	45 - 142		
Chloroprene			25.0	28.2		ug/L		113	53 - 147		
Methacrylonitrile			250	286		ug/L		114	47 - 142		
Methyl methacrylate			50.0	53.6		ug/L		107	60 - 131		
Propionitrile			250	305		ug/L		122	52 - 138		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 127*
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*
Dibromofluoromethane (Surr)	*101*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Lab Sample ID: LCSD 280-610347/4
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			25.0	22.7		ug/L		91	74 - 121	16	20
1,1,1-Trichloroethane			25.0	22.8		ug/L		91	62 - 132	10	20
1,1,2,2-Tetrachloroethane			25.0	25.1		ug/L		100	72 - 122	11	20
1,1,2-Trichloroethane			25.0	25.0		ug/L		100	72 - 128	10	20
1,1-Dichloroethane			25.0	24.4		ug/L		97	66 - 130	14	20
1,1-Dichloroethene			25.0	24.2		ug/L		97	62 - 130	10	21
1,1-Dichloropropene			25.0	23.1		ug/L		92	64 - 133	11	20
1,2,3-Trichloropropane			25.0	22.5		ug/L		90	74 - 123	11	20
1,2,4-Trichlorobenzene			25.0	24.7		ug/L		99	73 - 124	16	20
1,2-Dibromo-3-Chloropropane			25.0	21.8		ug/L		87	58 - 122	7	21
1,2-Dibromoethane			25.0	23.3		ug/L		93	81 - 118	11	20
1,2-Dichlorobenzene			25.0	22.9		ug/L		92	77 - 121	14	20
1,2-Dichloroethane			25.0	21.4		ug/L		86	61 - 130	11	20
1,2-Dichloropropane			25.0	24.8		ug/L		99	68 - 127	11	20
1,3-Dichlorobenzene			25.0	22.9		ug/L		92	76 - 121	14	20
1,3-Dichloropropane			25.0	23.9		ug/L		96	80 - 118	11	20
1,4-Dichlorobenzene			25.0	22.0		ug/L		88	76 - 119	16	20
2,2-Dichloropropane			25.0	22.5		ug/L		90	57 - 140	17	22
2-Butanone (MEK)			100	113		ug/L		113	53 - 135	4	20
2-Hexanone			100	108		ug/L		108	58 - 134	7	21
4-Methyl-2-pentanone (MIBK)			100	114		ug/L		114	56 - 135	7	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610347/4
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone			100	93.4		ug/L		93	50 - 137	5	21
Acrolein			247	223		ug/L		90	10 - 207	7	23
Acrylonitrile			250	281		ug/L		112	65 - 133	8	20
Allyl chloride			25.0	28.5		ug/L		114	57 - 136	12	20
Benzene			25.0	24.5		ug/L		98	69 - 126	14	20
Bromoform			25.0	22.4		ug/L		90	57 - 125	15	20
Bromomethane			25.0	21.0		ug/L		84	25 - 163	20	40
Carbon disulfide			25.0	23.6		ug/L		95	56 - 128	16	20
Carbon tetrachloride			25.0	22.2		ug/L		89	60 - 133	13	20
Chlorobenzene			25.0	22.6		ug/L		91	78 - 118	16	20
Chlorobromomethane			25.0	23.0		ug/L		92	71 - 130	16	20
Chlorodibromomethane			25.0	21.7		ug/L		87	71 - 122	15	20
Chloroethane			25.0	23.6		ug/L		94	52 - 144	16	30
Chloroform			25.0	22.9		ug/L		91	68 - 128	11	20
Chloromethane			25.0	21.9		ug/L		88	43 - 142	12	20
cis-1,2-Dichloroethene			25.0	24.0		ug/L		96	69 - 126	9	20
cis-1,3-Dichloropropene			25.0	23.5		ug/L		94	75 - 120	13	20
Dibromomethane			25.0	23.3		ug/L		93	68 - 129	9	20
Dichlorobromomethane			25.0	22.7		ug/L		91	67 - 126	12	20
Dichlorodifluoromethane			25.0	15.6		ug/L		62	26 - 152	14	21
Ethyl methacrylate			25.0	25.8		ug/L		103	69 - 126	12	20
Ethylbenzene			25.0	22.5		ug/L		90	76 - 121	16	20
Iodomethane			25.0	16.5		ug/L		66	37 - 145	20	38
Isobutyl alcohol			625	627		ug/L		100	46 - 132	4	30
Methylene Chloride			25.0	23.0		ug/L		92	64 - 128	12	20
m-Xylene & p-Xylene			25.0	23.0		ug/L		92	76 - 122	15	20
o-Xylene			25.0	22.2		ug/L		89	77 - 120	15	20
Styrene			25.0	23.5		ug/L		94	79 - 120	14	20
Tetrachloroethene			25.0	22.5		ug/L		90	72 - 127	19	20
Toluene			25.0	24.2		ug/L		97	68 - 127	12	20
trans-1,2-Dichloroethene			25.0	24.4		ug/L		98	66 - 129	15	20
trans-1,3-Dichloropropene			25.0	24.5		ug/L		98	66 - 127	15	20
trans-1,4-Dichloro-2-butene			25.0	23.0		ug/L		92	44 - 131	7	24
Trichloroethene			25.0	22.9		ug/L		92	70 - 125	16	20
Trichlorofluoromethane			25.0	18.9		ug/L		76	57 - 144	13	28
Vinyl acetate			50.0	55.6		ug/L		111	61 - 139	9	23
Vinyl chloride			25.0	23.6		ug/L		94	53 - 141	12	25
Xylenes, Total			50.0	45.2		ug/L		90	77 - 120	15	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 127*
4-Bromofluorobenzene (Surr)	*102*		*78 - 120*
Dibromofluoromethane (Surr)	*102*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 125*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610347/5
Matrix: Water
Analysis Batch: 610347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	280		ug/L		112	45 - 142	7	20
Chloroprene			25.0	25.1		ug/L		100	53 - 147	12	20
Methacrylonitrile			250	270		ug/L		108	47 - 142	6	20
Methyl methacrylate			50.0	49.3		ug/L		99	60 - 131	8	20
Propionitrile			250	290		ug/L		116	52 - 138	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 127*
4-Bromofluorobenzene (Surr)	*100*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Lab Sample ID: MB 280-610464/7
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			04/27/23 18:43	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			04/27/23 18:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/27/23 18:43	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			04/27/23 18:43	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			04/27/23 18:43	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			04/27/23 18:43	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			04/27/23 18:43	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			04/27/23 18:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			04/27/23 18:43	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			04/27/23 18:43	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			04/27/23 18:43	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			04/27/23 18:43	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			04/27/23 18:43	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			04/27/23 18:43	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			04/27/23 18:43	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 18:43	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			04/27/23 18:43	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			04/27/23 18:43	1
2-Butanone (MEK)	ND		15	6.0	ug/L			04/27/23 18:43	1
2-Hexanone	ND		5.0	1.7	ug/L			04/27/23 18:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			04/27/23 18:43	1
Acetone	ND		15	6.6	ug/L			04/27/23 18:43	1
Acetonitrile	ND		30	9.6	ug/L			04/27/23 18:43	1
Acrolein	ND		20	4.9	ug/L			04/27/23 18:43	1
Acrylonitrile	ND		20	4.5	ug/L			04/27/23 18:43	1
Allyl chloride	ND		2.0	0.17	ug/L			04/27/23 18:43	1
Benzene	ND		1.0	0.31	ug/L			04/27/23 18:43	1
Bromoform	ND		2.0	1.2	ug/L			04/27/23 18:43	1
Bromomethane	ND		5.0	2.4	ug/L			04/27/23 18:43	1
Carbon disulfide	ND		2.0	0.63	ug/L			04/27/23 18:43	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			04/27/23 18:43	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-610464/7
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	0.42	ug/L			04/27/23 18:43	1
Chlorobromomethane	ND		1.0	0.40	ug/L			04/27/23 18:43	1
Chlorodibromomethane	ND		2.0	0.62	ug/L			04/27/23 18:43	1
Chloroethane	ND		4.0	1.4	ug/L			04/27/23 18:43	1
Chloroform	ND		1.0	0.36	ug/L			04/27/23 18:43	1
Chloromethane	ND		2.0	0.75	ug/L			04/27/23 18:43	1
Chloroprene	ND		3.0	1.2	ug/L			04/27/23 18:43	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			04/27/23 18:43	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			04/27/23 18:43	1
Dibromomethane	ND		1.0	0.34	ug/L			04/27/23 18:43	1
Dichlorobromomethane	ND		1.0	0.39	ug/L			04/27/23 18:43	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			04/27/23 18:43	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			04/27/23 18:43	1
Ethylbenzene	ND		1.0	0.30	ug/L			04/27/23 18:43	1
Iodomethane	ND		5.0	2.6	ug/L			04/27/23 18:43	1
Isobutyl alcohol	ND		110	37	ug/L			04/27/23 18:43	1
Methacrylonitrile	ND		15	5.3	ug/L			04/27/23 18:43	1
Methyl methacrylate	ND		4.0	1.1	ug/L			04/27/23 18:43	1
Methylene Chloride	ND		2.0	0.94	ug/L			04/27/23 18:43	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			04/27/23 18:43	1
o-Xylene	ND		1.0	0.33	ug/L			04/27/23 18:43	1
Propionitrile	ND		20	3.7	ug/L			04/27/23 18:43	1
Styrene	ND		1.0	0.36	ug/L			04/27/23 18:43	1
Tetrachloroethene	ND		1.0	0.40	ug/L			04/27/23 18:43	1
Toluene	ND		1.0	0.32	ug/L			04/27/23 18:43	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			04/27/23 18:43	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			04/27/23 18:43	1
trans-1,4-Dichloro-2-butene	ND		3.0	1.4	ug/L			04/27/23 18:43	1
Trichloroethene	ND		1.0	0.30	ug/L			04/27/23 18:43	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			04/27/23 18:43	1
Vinyl acetate	ND		3.0	0.94	ug/L			04/27/23 18:43	1
Vinyl chloride	ND		2.0	0.51	ug/L			04/27/23 18:43	1
Xylenes, Total	ND		1.0	0.33	ug/L			04/27/23 18:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 127*		*04/27/23 18:43*	*1*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*		*04/27/23 18:43*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*04/27/23 18:43*	*1*
Toluene-d8 (Surr)	*105*		*80 - 125*		*04/27/23 18:43*	*1*

Lab Sample ID: LCS 280-610464/1002
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	43.6		ug/L		87	74 - 121
1,1,1-Trichloroethane	50.0	48.1		ug/L		96	62 - 132
1,1,2,2-Tetrachloroethane	50.0	48.2		ug/L		96	72 - 122

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610464/1002
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,2-Trichloroethane	50.0	50.3		ug/L		101	72 - 128
1,1-Dichloroethane	50.0	51.9		ug/L		104	66 - 130
1,1-Dichloroethene	50.0	51.0		ug/L		102	62 - 130
1,1-Dichloropropene	50.0	52.0		ug/L		104	64 - 133
1,2,3-Trichloropropane	50.0	46.2		ug/L		92	74 - 123
1,2,4-Trichlorobenzene	50.0	47.1		ug/L		94	73 - 124
1,2-Dibromo-3-Chloropropane	50.0	40.9		ug/L		82	58 - 122
1,2-Dibromoethane	50.0	46.3		ug/L		93	81 - 118
1,2-Dichlorobenzene	50.0	49.0		ug/L		98	77 - 121
1,2-Dichloroethane	50.0	45.8		ug/L		92	61 - 130
1,2-Dichloropropane	50.0	51.7		ug/L		103	68 - 127
1,3-Dichlorobenzene	50.0	49.1		ug/L		98	76 - 121
1,3-Dichloropropane	50.0	50.4		ug/L		101	80 - 118
1,4-Dichlorobenzene	50.0	47.3		ug/L		95	76 - 119
2,2-Dichloropropane	50.0	40.4		ug/L		81	57 - 140
2-Butanone (MEK)	200	189		ug/L		94	53 - 135
2-Hexanone	200	186		ug/L		93	58 - 134
4-Methyl-2-pentanone (MIBK)	200	195		ug/L		98	56 - 135
Acetone	200	181		ug/L		90	50 - 137
Acrolein	494	463		ug/L		94	10 - 207
Acrylonitrile	500	525		ug/L		105	65 - 133
Allyl chloride	50.0	46.7		ug/L		93	57 - 136
Benzene	50.0	52.3		ug/L		105	69 - 126
Bromoform	50.0	38.1		ug/L		76	57 - 125
Bromomethane	50.0	42.1		ug/L		84	25 - 163
Carbon disulfide	50.0	49.0		ug/L		98	56 - 128
Carbon tetrachloride	50.0	43.8		ug/L		88	60 - 133
Chlorobenzene	50.0	49.3		ug/L		99	78 - 118
Chlorobromomethane	50.0	46.0		ug/L		92	71 - 130
Chlorodibromomethane	50.0	42.1		ug/L		84	71 - 122
Chloroethane	50.0	48.3		ug/L		97	52 - 144
Chloroform	50.0	49.0		ug/L		98	68 - 128
Chloromethane	50.0	48.4		ug/L		97	43 - 142
cis-1,2-Dichloroethene	50.0	51.3		ug/L		103	69 - 126
cis-1,3-Dichloropropene	50.0	45.7		ug/L		91	75 - 120
Dibromomethane	50.0	48.2		ug/L		96	68 - 129
Dichlorobromomethane	50.0	45.6		ug/L		91	67 - 126
Dichlorodifluoromethane	50.0	37.6		ug/L		75	26 - 152
Ethyl methacrylate	50.0	47.3		ug/L		95	69 - 126
Ethylbenzene	50.0	47.8		ug/L		96	76 - 121
Iodomethane	50.0	35.2		ug/L		70	37 - 145
Isobutyl alcohol	1250	1170		ug/L		94	46 - 132
Methylene Chloride	50.0	50.2		ug/L		100	64 - 128
m-Xylene & p-Xylene	50.0	48.7		ug/L		97	76 - 122
o-Xylene	50.0	48.1		ug/L		96	77 - 120
Styrene	50.0	48.8		ug/L		98	79 - 120
Tetrachloroethene	50.0	48.9		ug/L		98	72 - 127
Toluene	50.0	51.3		ug/L		103	68 - 127
trans-1,2-Dichloroethene	50.0	49.6		ug/L		99	66 - 129

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-610464/1002
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
trans-1,3-Dichloropropene			50.0	44.6		ug/L		89	66 - 127		
trans-1,4-Dichloro-2-butene			50.0	39.1		ug/L		78	44 - 131		
Trichloroethene			50.0	48.7		ug/L		97	70 - 125		
Trichlorofluoromethane			50.0	41.8		ug/L		84	57 - 144		
Vinyl acetate			100	89.4		ug/L		89	61 - 139		
Vinyl chloride			50.0	48.3		ug/L		97	53 - 141		
Xylenes, Total			100	96.8		ug/L		97	77 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 127*
4-Bromofluorobenzene (Surr)	*105*		*78 - 120*
Dibromofluoromethane (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*106*		*80 - 125*

Lab Sample ID: LCS 280-610464/1003
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			250	228		ug/L		91	45 - 142		
Chloroprene			25.0	26.1		ug/L		105	53 - 147		
Methacrylonitrile			250	230		ug/L		92	47 - 142		
Methyl methacrylate			50.0	40.5		ug/L		81	60 - 131		
Propionitrile			250	218		ug/L		87	52 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*
4-Bromofluorobenzene (Surr)	*105*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*106*		*80 - 125*

Lab Sample ID: LCSD 280-610464/4
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			50.0	43.8		ug/L		88	74 - 121	1	20
1,1,1-Trichloroethane			50.0	46.3		ug/L		93	62 - 132	4	20
1,1,2,2-Tetrachloroethane			50.0	46.0		ug/L		92	72 - 122	5	20
1,1,2-Trichloroethane			50.0	49.7		ug/L		99	72 - 128	1	20
1,1-Dichloroethane			50.0	52.0		ug/L		104	66 - 130	0	20
1,1-Dichloroethene			50.0	49.0		ug/L		98	62 - 130	4	21
1,1-Dichloropropene			50.0	50.2		ug/L		100	64 - 133	4	20
1,2,3-Trichloropropane			50.0	44.2		ug/L		88	74 - 123	4	20
1,2,4-Trichlorobenzene			50.0	45.7		ug/L		91	73 - 124	3	20
1,2-Dibromo-3-Chloropropane			50.0	35.6		ug/L		71	58 - 122	14	21
1,2-Dibromoethane			50.0	45.7		ug/L		91	81 - 118	1	20
1,2-Dichlorobenzene			50.0	48.0		ug/L		96	77 - 121	2	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610464/4
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane			50.0	46.3		ug/L		93	61 - 130	1	20
1,2-Dichloropropane			50.0	51.1		ug/L		102	68 - 127	1	20
1,3-Dichlorobenzene			50.0	48.9		ug/L		98	76 - 121	0	20
1,3-Dichloropropane			50.0	50.3		ug/L		101	80 - 118	0	20
1,4-Dichlorobenzene			50.0	47.0		ug/L		94	76 - 119	1	20
2,2-Dichloropropane			50.0	47.9		ug/L		96	57 - 140	17	22
2-Butanone (MEK)			200	163		ug/L		81	53 - 135	15	20
2-Hexanone			200	161		ug/L		80	58 - 134	14	21
4-Methyl-2-pentanone (MIBK)			200	172		ug/L		86	56 - 135	13	20
Acetone			200	162		ug/L		81	50 - 137	11	21
Acrolein			494	475		ug/L		96	10 - 207	3	23
Acrylonitrile			500	480		ug/L		96	65 - 133	9	20
Allyl chloride			50.0	50.3		ug/L		101	57 - 136	7	20
Benzene			50.0	51.6		ug/L		103	69 - 126	1	20
Bromoform			50.0	37.2		ug/L		74	57 - 125	2	20
Bromomethane			50.0	43.0		ug/L		86	25 - 163	2	40
Carbon disulfide			50.0	48.5		ug/L		97	56 - 128	1	20
Carbon tetrachloride			50.0	42.1		ug/L		84	60 - 133	4	20
Chlorobenzene			50.0	49.9		ug/L		100	78 - 118	1	20
Chlorobromomethane			50.0	47.0		ug/L		94	71 - 130	2	20
Chlorodibromomethane			50.0	42.0		ug/L		84	71 - 122	0	20
Chloroethane			50.0	49.1		ug/L		98	52 - 144	2	30
Chloroform			50.0	48.9		ug/L		98	68 - 128	0	20
Chloromethane			50.0	51.0		ug/L		102	43 - 142	5	20
cis-1,2-Dichloroethene			50.0	50.8		ug/L		102	69 - 126	1	20
cis-1,3-Dichloropropene			50.0	47.9		ug/L		96	75 - 120	5	20
Dibromomethane			50.0	48.0		ug/L		96	68 - 129	0	20
Dichlorobromomethane			50.0	45.1		ug/L		90	67 - 126	1	20
Dichlorodifluoromethane			50.0	40.0		ug/L		80	26 - 152	6	21
Ethyl methacrylate			50.0	44.9		ug/L		90	69 - 126	5	20
Ethylbenzene			50.0	48.0		ug/L		96	76 - 121	0	20
Iodomethane			50.0	35.4		ug/L		71	37 - 145	0	38
Isobutyl alcohol			1250	937		ug/L		75	46 - 132	22	30
Methylene Chloride			50.0	50.8		ug/L		102	64 - 128	1	20
m-Xylene & p-Xylene			50.0	48.4		ug/L		97	76 - 122	1	20
o-Xylene			50.0	48.0		ug/L		96	77 - 120	0	20
Styrene			50.0	50.0		ug/L		100	79 - 120	2	20
Tetrachloroethene			50.0	48.0		ug/L		96	72 - 127	2	20
Toluene			50.0	50.4		ug/L		101	68 - 127	2	20
trans-1,2-Dichloroethene			50.0	48.6		ug/L		97	66 - 129	2	20
trans-1,3-Dichloropropene			50.0	45.7		ug/L		91	66 - 127	2	20
trans-1,4-Dichloro-2-butene			50.0	37.5		ug/L		75	44 - 131	4	24
Trichloroethene			50.0	47.1		ug/L		94	70 - 125	3	20
Trichlorofluoromethane			50.0	41.8		ug/L		84	57 - 144	0	28
Vinyl acetate			100	102		ug/L		102	61 - 139	13	23
Vinyl chloride			50.0	49.3		ug/L		99	53 - 141	2	25
Xylenes, Total			100	96.4		ug/L		96	77 - 120	0	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-610464/4
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 127*
4-Bromofluorobenzene (Surr)	*103*		*78 - 120*
Dibromofluoromethane (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*105*		*80 - 125*

Lab Sample ID: LCSD 280-610464/5
Matrix: Water
Analysis Batch: 610464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile			250	255		ug/L		102	45 - 142	11	20
Chloroprene			25.0	26.1		ug/L		104	53 - 147	0	20
Methacrylonitrile			250	249		ug/L		100	47 - 142	8	20
Methyl methacrylate			50.0	43.2		ug/L		86	60 - 131	6	20
Propionitrile			250	244		ug/L		97	52 - 138	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 127*
4-Bromofluorobenzene (Surr)	*104*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*105*		*80 - 125*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-608984/1-A
Matrix: Water
Analysis Batch: 609240

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.045	ug/L		04/18/23 07:56	04/18/23 17:58	1
Arsenic	ND		5.0	0.50	ug/L		04/18/23 07:56	04/18/23 17:58	1
Barium	ND		3.0	0.38	ug/L		04/18/23 07:56	04/18/23 17:58	1
Calcium	ND		200	32	ug/L		04/18/23 07:56	04/18/23 17:58	1
Cadmium	ND		1.0	0.19	ug/L		04/18/23 07:56	04/18/23 17:58	1
Co	ND		1.0	0.33	ug/L		04/18/23 07:56	04/18/23 17:58	1
Chromium	ND		3.0	0.50	ug/L		04/18/23 07:56	04/18/23 17:58	1
Copper	ND		2.0	0.71	ug/L		04/18/23 07:56	04/18/23 17:58	1
Iron	ND		200	8.7	ug/L		04/18/23 07:56	04/18/23 17:58	1
Potassium	ND		1000	52	ug/L		04/18/23 07:56	04/18/23 17:58	1
Magnesium	ND		200	4.2	ug/L		04/18/23 07:56	04/18/23 17:58	1
Sodium	ND		1000	73	ug/L		04/18/23 07:56	04/18/23 17:58	1
Nickel	ND		3.0	0.83	ug/L		04/18/23 07:56	04/18/23 17:58	1
Lead	ND		1.0	0.23	ug/L		04/18/23 07:56	04/18/23 17:58	1
Antimony	ND		2.0	0.40	ug/L		04/18/23 07:56	04/18/23 17:58	1
Selenium	ND		5.0	1.0	ug/L		04/18/23 07:56	04/18/23 17:58	1
Tin	ND		10	0.58	ug/L		04/18/23 07:56	04/18/23 17:58	1
Thallium	ND		1.0	0.21	ug/L		04/18/23 07:56	04/18/23 17:58	1
Vanadium	ND		5.0	1.1	ug/L		04/18/23 07:56	04/18/23 17:58	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-608984/1-A
Matrix: Water
Analysis Batch: 609240

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	5.19	J	10	2.0	ug/L		04/18/23 07:56	04/18/23 17:58	1

Lab Sample ID: MB 280-608984/1-A
Matrix: Water
Analysis Batch: 609488

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		1.0	0.30	ug/L		04/18/23 07:56	04/20/23 09:29	1
Manganese	ND		3.0	0.51	ug/L		04/18/23 07:56	04/20/23 09:29	1

Lab Sample ID: LCS 280-608984/2-A
Matrix: Water
Analysis Batch: 609240

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	40.0	39.9		ug/L		100	85 - 115
Arsenic	40.0	40.6		ug/L		101	85 - 117
Barium	40.0	40.9		ug/L		102	85 - 118
Calcium	800	849		ug/L		106	80 - 120
Cadmium	40.0	39.3		ug/L		98	85 - 115
Co	40.0	40.0		ug/L		100	85 - 120
Chromium	40.0	40.5		ug/L		101	84 - 121
Copper	40.0	41.1		ug/L		103	85 - 119
Iron	800	830		ug/L		104	80 - 120
Potassium	800	767	J	ug/L		96	80 - 120
Magnesium	800	724		ug/L		90	80 - 120
Sodium	800	886	J	ug/L		111	80 - 120
Nickel	40.0	39.2		ug/L		98	85 - 119
Lead	40.0	38.7		ug/L		97	85 - 118
Antimony	40.0	39.1		ug/L		98	85 - 115
Selenium	40.0	42.1		ug/L		105	77 - 122
Tin	40.0	37.1		ug/L		93	77 - 115
Thallium	40.0	38.6		ug/L		97	85 - 118
Vanadium	40.0	39.3		ug/L		98	85 - 120
Zinc	40.0	39.2		ug/L		98	83 - 122

Lab Sample ID: LCS 280-608984/2-A
Matrix: Water
Analysis Batch: 609394

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 608984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	40.0	39.1		ug/L		98	80 - 125
Manganese	40.0	41.3		ug/L		103	85 - 117

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-608955/6
Matrix: Water
Analysis Batch: 608955

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.090	mg/L			04/17/23 13:28	1
Nitrite as N	ND		0.50	0.049	mg/L			04/17/23 13:28	1

Lab Sample ID: LCS 280-608955/4
Matrix: Water
Analysis Batch: 608955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.39		mg/L		96	90 - 110
Nitrite as N	2.50	2.44		mg/L		97	90 - 110

Lab Sample ID: LCSD 280-608955/5
Matrix: Water
Analysis Batch: 608955

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	2.50	2.39		mg/L		95	90 - 110	0	10
Nitrite as N	2.50	2.42		mg/L		97	90 - 110	1	10

Lab Sample ID: MRL 280-608955/3
Matrix: Water
Analysis Batch: 608955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.250	0.233	J	mg/L		93	50 - 150
Nitrite as N	0.250	0.236	J	mg/L		94	50 - 150

Lab Sample ID: MB 280-608956/6
Matrix: Water
Analysis Batch: 608956

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			04/17/23 13:28	1
Sulfate	ND		5.0	1.0	mg/L			04/17/23 13:28	1

Lab Sample ID: LCS 280-608956/4
Matrix: Water
Analysis Batch: 608956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.4		mg/L		101	90 - 110
Sulfate	50.0	49.8		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-608956/5
Matrix: Water
Analysis Batch: 608956

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	50.0	50.4		mg/L		101	90 - 110	0	10
Sulfate	50.0	49.9		mg/L		100	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MRL 280-608956/3
Matrix: Water
Analysis Batch: 608956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2.50	2.40	J	mg/L		96	50 - 150
Sulfate	2.50	2.39	J	mg/L		95	50 - 150

Lab Sample ID: MB 280-610654/49
Matrix: Water
Analysis Batch: 610654

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.23	mg/L			04/29/23 22:58	1

Lab Sample ID: LCS 280-610654/47
Matrix: Water
Analysis Batch: 610654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	2.50	2.37		mg/L		95	90 - 110

Lab Sample ID: LCSD 280-610654/48
Matrix: Water
Analysis Batch: 610654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	2.50	2.29		mg/L		92	90 - 110	3	10

Lab Sample ID: MRL 280-610654/3
Matrix: Water
Analysis Batch: 610654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.250	ND		mg/L		86	50 - 150

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-609838/4
Matrix: Water
Analysis Batch: 609838

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1.0	0.35	mg/L			04/21/23 15:46	1

Lab Sample ID: LCS 280-609838/3
Matrix: Water
Analysis Batch: 609838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Duplicates	25.0	24.5		mg/L		98	88 - 112
TOC Result 2	25.0	24.8		mg/L		99	88 - 112
TOC Result 1	25.0	24.2		mg/L		97	88 - 112

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 280-610099/4
Matrix: Water
Analysis Batch: 610099

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1.0	0.35	mg/L			04/24/23 18:57	1

Lab Sample ID: LCS 280-610099/3
Matrix: Water
Analysis Batch: 610099

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates			25.0	24.8		mg/L		99	88 - 112		
TOC Result 2			25.0	24.7		mg/L		99	88 - 112		
TOC Result 1			25.0	24.9		mg/L		100	88 - 112		

Lab Sample ID: 280-175123-2 MS
Matrix: Water
Analysis Batch: 610099

Client Sample ID: MW-119S-20230413
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates	2.2		25.0	26.3		mg/L		96	88 - 112		
TOC Result 2	2.3		25.0	25.9		mg/L		94	88 - 112		
TOC Result 1	2.2		25.0	26.8		mg/L		98	88 - 112		

Lab Sample ID: 280-175123-2 MSD
Matrix: Water
Analysis Batch: 610099

Client Sample ID: MW-119S-20230413
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	2.2		25.0	26.2		mg/L		96	88 - 112	1	15
TOC Result 2	2.3		25.0	26.2		mg/L		96	88 - 112	1	15
TOC Result 1	2.2		25.0	26.2		mg/L		96	88 - 112	2	15

QC Association Summary

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

GC/MS VOA

Analysis Batch: 610121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-1	MW-119D-20230413	Total/NA	Water	8260D	
280-175123-2	MW-119S-20230413	Total/NA	Water	8260D	
280-175123-3	RW-3-20230413	Total/NA	Water	8260D	
280-175123-9	EB-03-20230413	Total/NA	Water	8260D	
MB 280-610121/7	Method Blank	Total/NA	Water	8260D	
LCS 280-610121/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-610121/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-610121/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-610121/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 610347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-4	MW-113D-20230414	Total/NA	Water	8260D	
280-175123-5	MW-113S-20230414	Total/NA	Water	8260D	
280-175123-8	EB-04-20230414	Total/NA	Water	8260D	
MB 280-610347/7	Method Blank	Total/NA	Water	8260D	
LCS 280-610347/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-610347/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-610347/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-610347/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 610464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-6	MW-112M-20230415	Total/NA	Water	8260D	
280-175123-7	MW-112D-20230415	Total/NA	Water	8260D	
280-175123-10	MW-109D-20230415	Total/NA	Water	8260D	
280-175123-11	TB-05-20230416	Total/NA	Water	8260D	
MB 280-610464/7	Method Blank	Total/NA	Water	8260D	
LCS 280-610464/1002	Lab Control Sample	Total/NA	Water	8260D	
LCS 280-610464/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-610464/4	Lab Control Sample Dup	Total/NA	Water	8260D	
LCSD 280-610464/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Metals

Prep Batch: 608984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-1	MW-119D-20230413	Dissolved	Water	3005A	
280-175123-2	MW-119S-20230413	Dissolved	Water	3005A	
280-175123-3	RW-3-20230413	Dissolved	Water	3005A	
MB 280-608984/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-608984/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 609240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-1	MW-119D-20230413	Dissolved	Water	6020B	608984
280-175123-2	MW-119S-20230413	Dissolved	Water	6020B	608984
280-175123-3	RW-3-20230413	Dissolved	Water	6020B	608984
MB 280-608984/1-A	Method Blank	Total Recoverable	Water	6020B	608984
LCS 280-608984/2-A	Lab Control Sample	Total Recoverable	Water	6020B	608984

Metals

Analysis Batch: 609394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-1	MW-119D-20230413	Dissolved	Water	6020B	608984
280-175123-2	MW-119S-20230413	Dissolved	Water	6020B	608984
280-175123-3	RW-3-20230413	Dissolved	Water	6020B	608984
280-175123-3	RW-3-20230413	Dissolved	Water	6020B	608984
LCS 280-608984/2-A	Lab Control Sample	Total Recoverable	Water	6020B	608984

Analysis Batch: 609488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-3	RW-3-20230413	Dissolved	Water	6020B	608984
MB 280-608984/1-A	Method Blank	Total Recoverable	Water	6020B	608984

General Chemistry

Analysis Batch: 608955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-1	MW-119D-20230413	Total/NA	Water	9056A	
280-175123-2	MW-119S-20230413	Total/NA	Water	9056A	
280-175123-3	RW-3-20230413	Total/NA	Water	9056A	
280-175123-3	RW-3-20230413	Total/NA	Water	9056A	
MB 280-608955/6	Method Blank	Total/NA	Water	9056A	
LCS 280-608955/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-608955/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-608955/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 608956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-1	MW-119D-20230413	Total/NA	Water	9056A	
280-175123-2	MW-119S-20230413	Total/NA	Water	9056A	
280-175123-2	MW-119S-20230413	Total/NA	Water	9056A	
280-175123-3	RW-3-20230413	Total/NA	Water	9056A	
280-175123-3	RW-3-20230413	Total/NA	Water	9056A	
MB 280-608956/6	Method Blank	Total/NA	Water	9056A	
LCS 280-608956/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-608956/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-608956/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 609838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-1	MW-119D-20230413	Total/NA	Water	9060A	
MB 280-609838/4	Method Blank	Total/NA	Water	9060A	
LCS 280-609838/3	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 610099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-2	MW-119S-20230413	Total/NA	Water	9060A	
280-175123-3	RW-3-20230413	Total/NA	Water	9060A	
MB 280-610099/4	Method Blank	Total/NA	Water	9060A	
LCS 280-610099/3	Lab Control Sample	Total/NA	Water	9060A	
280-175123-2 MS	MW-119S-20230413	Total/NA	Water	9060A	
280-175123-2 MSD	MW-119S-20230413	Total/NA	Water	9060A	

QC Association Summary

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

General Chemistry

Analysis Batch: 610654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-175123-1	MW-119D-20230413	Total/NA	Water	9056A	
280-175123-2	MW-119S-20230413	Total/NA	Water	9056A	
280-175123-3	RW-3-20230413	Total/NA	Water	9056A	
MB 280-610654/49	Method Blank	Total/NA	Water	9056A	
LCS 280-610654/47	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-610654/48	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-610654/3	Lab Control Sample	Total/NA	Water	9056A	

Client Sample ID: MW-119D-20230413
Lab Sample ID: 280-175123-1

Date Collected: 04/13/23 10:55
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610121	04/26/23 16:24	MD	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609240	04/18/23 18:56	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609394	04/19/23 16:27	LMT	EET DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	608955	04/17/23 15:13	MEC	EET DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	608956	04/17/23 15:28	MEC	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	610654	04/30/23 03:57	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	609838	04/21/23 19:12	ABW	EET DEN

Client Sample ID: MW-119S-20230413
Lab Sample ID: 280-175123-2

Date Collected: 04/13/23 09:15
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		2	5 mL	5 mL	610121	04/26/23 16:45	MD	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609240	04/18/23 18:58	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609394	04/19/23 16:29	LMT	EET DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	608955	04/17/23 15:43	MEC	EET DEN
Total/NA	Analysis	9056A		2	10 mL	10 mL	608956	04/17/23 15:58	MEC	EET DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	608956	04/17/23 16:43	MEC	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	610654	04/30/23 03:45	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	610099	04/24/23 19:26	ABW	EET DEN

Client Sample ID: RW-3-20230413
Lab Sample ID: 280-175123-3

Date Collected: 04/13/23 12:45
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		2	5 mL	5 mL	610121	04/26/23 17:06	MD	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609240	04/18/23 19:00	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		10			609394	04/19/23 16:00	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		1			609394	04/19/23 16:30	LMT	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	608984	04/18/23 07:56	LJS	EET DEN
Dissolved	Analysis	6020B		10			609488	04/20/23 09:34	LMT	EET DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	608955	04/17/23 16:58	MEC	EET DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	608956	04/17/23 16:58	MEC	EET DEN
Total/NA	Analysis	9056A		2	10 mL	10 mL	608955	04/17/23 17:13	MEC	EET DEN

Client Sample ID: RW-3-20230413
Lab Sample ID: 280-175123-3
Date Collected: 04/13/23 12:45
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	10 mL	10 mL	608956	04/17/23 17:29	MEC	EET DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	610654	04/30/23 03:33	EJS	EET DEN
Total/NA	Analysis	9060A		1	20 mL	20 mL	610099	04/24/23 20:12	ABW	EET DEN

Client Sample ID: MW-113D-20230414
Lab Sample ID: 280-175123-4
Date Collected: 04/14/23 12:55
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610347	04/27/23 16:04	MD	EET DEN

Client Sample ID: MW-113S-20230414
Lab Sample ID: 280-175123-5
Date Collected: 04/14/23 09:25
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610347	04/27/23 16:25	MD	EET DEN

Client Sample ID: MW-112M-20230415
Lab Sample ID: 280-175123-6
Date Collected: 04/15/23 12:45
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610464	04/27/23 20:31	CCF	EET DEN

Client Sample ID: MW-112D-20230415
Lab Sample ID: 280-175123-7
Date Collected: 04/15/23 14:05
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610464	04/27/23 20:52	CCF	EET DEN

Client Sample ID: EB-04-20230414
Lab Sample ID: 280-175123-8
Date Collected: 04/14/23 10:10
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610347	04/27/23 14:01	MD	EET DEN

Client Sample ID: EB-03-20230413
Lab Sample ID: 280-175123-9
Date Collected: 04/13/23 14:15
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610121	04/26/23 13:40	MD	EET DEN

Lab Chronicle

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID: MW-109D-20230415
Lab Sample ID: 280-175123-10
Date Collected: 04/15/23 18:00
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610464	04/27/23 21:13	CCF	EET DEN

Client Sample ID: TB-05-20230416
Lab Sample ID: 280-175123-11
Date Collected: 04/16/23 09:40
Matrix: Water
Date Received: 04/17/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	610464	04/27/23 19:27	CCF	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Laboratory: Eurofins Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4025-019	06-26-23

Method Summary

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET DEN
6020B	Metals (ICP/MS)	SW846	EET DEN
9056A	Anions, Ion Chromatography	SW846	EET DEN
9060A	Organic Carbon, Total (TOC)	SW846	EET DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET DEN
5030C	Purge and Trap	SW846	EET DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: CDM Smith Inc
Job ID: 280-175123-1
Project/Site: Bannock Ft. Hall Mine LF, Idaho

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-175123-1	MW-119D-20230413	Water	04/13/23 10:55	04/17/23 09:00
280-175123-2	MW-119S-20230413	Water	04/13/23 09:15	04/17/23 09:00
280-175123-3	RW-3-20230413	Water	04/13/23 12:45	04/17/23 09:00
280-175123-4	MW-113D-20230414	Water	04/14/23 12:55	04/17/23 09:00
280-175123-5	MW-113S-20230414	Water	04/14/23 09:25	04/17/23 09:00
280-175123-6	MW-112M-20230415	Water	04/15/23 12:45	04/17/23 09:00
280-175123-7	MW-112D-20230415	Water	04/15/23 14:05	04/17/23 09:00
280-175123-8	EB-04-20230414	Water	04/14/23 10:10	04/17/23 09:00
280-175123-9	EB-03-20230413	Water	04/13/23 14:15	04/17/23 09:00
280-175123-10	MW-109D-20230415	Water	04/15/23 18:00	04/17/23 09:00
280-175123-11	TB-05-20230416	Water	04/16/23 09:40	04/17/23 09:00

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_MS1 Analysis Batch Number: 609046

Lab Sample ID: IC 280-609046/42 Client Sample ID:

Date Analyzed: 04/18/23 18:15 Lab File ID: MS1_8195.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.81	Assign Peak	AF7X	04/19/23 06:11
Bromomethane	2.50	Baseline	AF7X	04/19/23 06:11
Chloroethane	2.62	Assign Peak	AF7X	04/19/23 06:12
Acrolein	3.32	Baseline	AF7X	04/19/23 06:12
1,2-Dichloroethane	5.82	Assign Peak	AF7X	04/19/23 06:12
Bromoform	9.58	Assign Peak	AF7X	04/19/23 06:13
trans-1,4-Dichloro-2-butene	10.05	Assign Peak	AF7X	04/19/23 06:13
1,2-Dibromo-3-Chloropropane	12.23	Assign Peak	AF7X	04/19/23 06:13

Lab Sample ID: IC 280-609046/41 Client Sample ID:

Date Analyzed: 04/18/23 18:36 Lab File ID: MS1_8196.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane	5.82	Assign Peak	AF7X	04/19/23 06:10
Bromoform	9.58	Assign Peak	AF7X	04/19/23 06:10
1,2-Dibromo-3-Chloropropane	12.23	Assign Peak	AF7X	04/19/23 06:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_MS1 Analysis Batch Number: 610464

Lab Sample ID: 280-175123-11 Client Sample ID: TB-05-20230416

Date Analyzed: 04/27/23 19:27 Lab File ID: MS1_8608.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene		Invalid Compound ID	AK2J	04/27/23 20:36

Lab Sample ID: 280-175123-10 Client Sample ID: MW-109D-20230415

Date Analyzed: 04/27/23 21:13 Lab File ID: MS1_8613.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol		Invalid Compound ID	AF7X	04/28/23 06:15

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 590907

Lab Sample ID: STD010 280-590907/23 IC Client Sample ID:

Date Analyzed: 10/22/22 15:19 Lab File ID: X43673.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD020 280-590907/24 IC Client Sample ID:

Date Analyzed: 10/22/22 15:40 Lab File ID: X43674.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD050 280-590907/25 IC Client Sample ID:

Date Analyzed: 10/22/22 16:01 Lab File ID: X43675.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD10 280-590907/26 IC Client Sample ID:

Date Analyzed: 10/22/22 16:21 Lab File ID: X43676.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.55	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD50 280-590907/27 IC Client Sample ID:

Date Analyzed: 10/22/22 16:42 Lab File ID: X43677.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.54	Peak assignment corrected	V1QB	10/23/22 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 590907

Lab Sample ID: STD100 280-590907/28 IC Client Sample ID:

Date Analyzed: 10/22/22 17:02 Lab File ID: X43678.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.54	Peak assignment corrected	V1QB	10/23/22 12:11

Lab Sample ID: STD200 280-590907/29 IC Client Sample ID:

Date Analyzed: 10/22/22 17:23 Lab File ID: X43679.D GC Column: DB-624 (60.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,4-Dichloro-2-butene	8.54	Peak assignment corrected	V1QB	10/23/22 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 607881

Lab Sample ID: STD 280-607881/19 IC Client Sample ID:

Date Analyzed: 04/07/23 03:14 Lab File ID: X502127.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Iodomethane	3.06	Assign Peak	BX8N	04/10/23 10:13
Toluene	6.37	Assign Peak	BX8N	04/10/23 10:14
trans-1,3-Dichloropropene	6.54	Assign Peak	BX8N	04/10/23 10:14

Lab Sample ID: STD 280-607881/18 IC Client Sample ID:

Date Analyzed: 04/07/23 03:34 Lab File ID: X502128.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	5.59	Assign Peak	BX8N	04/10/23 10:15

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 610121

Lab Sample ID: MB 280-610121/7 Client Sample ID:

Date Analyzed: 04/26/23 11:43 Lab File ID: X502851.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane		Invalid Compound ID	BX8N	04/26/23 12:15
Chloroethane		Invalid Compound ID	BX8N	04/26/23 12:15
Isobutyl alcohol		Invalid Compound ID	BX8N	04/26/23 12:15

Lab Sample ID: 280-175123-9 Client Sample ID: EB-03-20230413

Date Analyzed: 04/26/23 13:40 Lab File ID: X502856.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroethane		Invalid Compound ID	AK2J	04/27/23 01:47
Isobutyl alcohol		Invalid Compound ID	AK2J	04/27/23 01:47

Lab Sample ID: 280-175123-1 Client Sample ID: MW-119D-20230413

Date Analyzed: 04/26/23 16:24 Lab File ID: X502864.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	4.21	Invalid Compound ID	AK2J	04/27/23 01:51
1,1-Dichloroethane		Invalid Compound ID	AK2J	04/27/23 01:51
Chloroethane		Invalid Compound ID	AK2J	04/27/23 01:51
Isobutyl alcohol		Invalid Compound ID	AK2J	04/27/23 01:51

Lab Sample ID: 280-175123-2 Client Sample ID: MW-119S-20230413

Date Analyzed: 04/26/23 16:45 Lab File ID: X502865.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	4.21	Invalid Compound ID	AK2J	04/27/23 01:52
Bromomethane		Invalid Compound ID	AK2J	04/27/23 01:51
Isobutyl alcohol		Invalid Compound ID	AK2J	04/27/23 01:52

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 610121

Lab Sample ID: 280-175123-3 Client Sample ID: RW-3-20230413

Date Analyzed: 04/26/23 17:06 Lab File ID: X502866.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	4.21	Invalid Compound ID	AK2J	04/27/23 01:52
Isobutyl alcohol		Invalid Compound ID	AK2J	04/27/23 01:53

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Analysis Batch Number: 610347

Lab Sample ID: MB 280-610347/7 Client Sample ID:

Date Analyzed: 04/27/23 12:59 Lab File ID: X502915.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane		Invalid Compound ID	BX8N	04/27/23 13:57
Isobutyl alcohol		Invalid Compound ID	BX8N	04/27/23 13:57

Lab Sample ID: 280-175123-8 Client Sample ID: EB-04-20230414

Date Analyzed: 04/27/23 14:01 Lab File ID: X502918.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol		Invalid Compound ID	V8PV	04/28/23 02:38

Lab Sample ID: 280-175123-4 Client Sample ID: MW-113D-20230414

Date Analyzed: 04/27/23 16:04 Lab File ID: X502924.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane		Invalid Compound ID	V8PV	04/28/23 02:35
Bromomethane		Invalid Compound ID	V8PV	04/28/23 02:34
Isobutyl alcohol		Invalid Compound ID	V8PV	04/28/23 02:35
Trichlorofluoromethane		Invalid Compound ID	V8PV	04/28/23 02:34

Lab Sample ID: 280-175123-5 Client Sample ID: MW-113S-20230414

Date Analyzed: 04/27/23 16:25 Lab File ID: X502925.D GC Column: RXI-624SilMS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2-Trichloroethane		Invalid Compound ID	V8PV	04/28/23 02:33
Acetonitrile		Invalid Compound ID	V8PV	04/28/23 02:34
Bromomethane		Invalid Compound ID	V8PV	04/28/23 02:34
Isobutyl alcohol		Invalid Compound ID	V8PV	04/28/23 02:33
Vinyl acetate		Invalid Compound ID	V8PV	04/28/23 02:34

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608435

Lab Sample ID: STD 280-608435/1 IC Client Sample ID:

Date Analyzed: 04/12/23 14:04 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Orthophosphate as P	9.45	Baseline Smoothing	LVW8	04/12/23 15:40

Lab Sample ID: STD 280-608435/2 IC Client Sample ID:

Date Analyzed: 04/12/23 14:19 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.12	Baseline Smoothing	LVW8	04/12/23 15:41
Nitrate as N	7.38	Baseline Smoothing	LVW8	04/12/23 15:41
Orthophosphate as P	9.81	Baseline Smoothing	LVW8	04/12/23 15:41

Lab Sample ID: STD 280-608435/3 IC Client Sample ID:

Date Analyzed: 04/12/23 14:34 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.12	Baseline Smoothing	LVW8	04/12/23 15:41
Nitrate as N	7.12	Baseline Smoothing	LVW8	04/12/23 15:41
Orthophosphate as P	9.41	Baseline Smoothing	LVW8	04/12/23 15:42

Lab Sample ID: STD 280-608435/4 IC Client Sample ID:

Date Analyzed: 04/12/23 14:49 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.11	Baseline Smoothing	LVW8	04/12/23 15:42
Nitrate as N	7.10	Baseline Smoothing	LVW8	04/12/23 15:42
Orthophosphate as P	9.39	Baseline Smoothing	LVW8	04/12/23 15:42

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608435

Lab Sample ID: STD 280-608435/5 IC Client Sample ID:

Date Analyzed: 04/12/23 15:04 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.11	Baseline Smoothing	LVW8	04/12/23 15:43
Nitrate as N	7.08	Baseline Smoothing	LVW8	04/12/23 15:43
Orthophosphate as P	9.37	Baseline Smoothing	LVW8	04/12/23 15:43

Lab Sample ID: STD 280-608435/6 IC Client Sample ID:

Date Analyzed: 04/12/23 15:19 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.10	Baseline Smoothing	LVW8	04/12/23 15:43
Nitrate as N	7.06	Baseline Smoothing	LVW8	04/12/23 15:43
Orthophosphate as P	9.35	Baseline Smoothing	LVW8	04/12/23 15:43

Lab Sample ID: ICV 280-608435/7 Client Sample ID:

Date Analyzed: 04/12/23 15:34 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.11	Baseline Smoothing	XAY4	04/14/23 13:56

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608436

Lab Sample ID: STD 280-608436/1 IC Client Sample ID:

Date Analyzed: 04/12/23 14:04 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.38	Baseline Smoothing	LVW8	04/12/23 15:40
Sulfate	10.65	Baseline Smoothing	LVW8	04/12/23 15:40

Lab Sample ID: STD 280-608436/2 IC Client Sample ID:

Date Analyzed: 04/12/23 14:19 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.16	Baseline Smoothing	LVW8	04/12/23 15:41
Chloride	4.38	Baseline Smoothing	LVW8	04/12/23 15:41
Sulfate	11.05	Baseline Smoothing	LVW8	04/12/23 15:41

Lab Sample ID: STD 280-608436/3 IC Client Sample ID:

Date Analyzed: 04/12/23 14:34 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.17	Baseline Smoothing	LVW8	04/12/23 15:42
Chloride	4.38	Baseline Smoothing	LVW8	04/12/23 15:41
Bromide	6.32	Baseline Smoothing	LVW8	04/12/23 15:41
Sulfate	10.65	Baseline Smoothing	LVW8	04/12/23 15:42

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608436

Lab Sample ID: STD 280-608436/4 IC Client Sample ID:

Date Analyzed: 04/12/23 14:49 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.17	Baseline Smoothing	LVW8	04/12/23 15:42
Chloride	4.39	Baseline Smoothing	LVW8	04/12/23 15:42
Bromide	6.31	Baseline Smoothing	LVW8	04/12/23 15:42
Sulfate	10.63	Baseline Smoothing	LVW8	04/12/23 15:42

Lab Sample ID: STD 280-608436/5 IC Client Sample ID:

Date Analyzed: 04/12/23 15:04 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.17	Baseline Smoothing	LVW8	04/12/23 15:43
Chloride	4.41	Baseline Smoothing	LVW8	04/12/23 15:43
Sulfate	10.61	Baseline Smoothing	LVW8	04/12/23 15:43

Lab Sample ID: STD 280-608436/6 IC Client Sample ID:

Date Analyzed: 04/12/23 15:19 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.18	Baseline Smoothing	LVW8	04/12/23 15:43
Chloride	4.43	Baseline Smoothing	LVW8	04/12/23 15:43
Sulfate	10.59	Baseline Smoothing	LVW8	04/12/23 15:43

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608436

Lab Sample ID: ICB 280-608436/8 Client Sample ID:

Date Analyzed: 04/12/23 15:49 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide		Unspecified		
Chloride		Unspecified		
Sulfate	10.60	Baseline Smoothing	XAY4	04/14/23 14:01

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608955

Lab Sample ID: CCV 280-608955/1 Client Sample ID:

Date Analyzed: 04/17/23 12:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.09	Baseline Smoothing	LVW8	04/18/23 10:45
Nitrate as N	7.05	Baseline Smoothing	LVW8	04/18/23 10:45

Lab Sample ID: MRL 280-608955/3 Client Sample ID:

Date Analyzed: 04/17/23 12:43 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.10	Baseline Smoothing	LVW8	04/18/23 10:45
Nitrate as N	7.10	Baseline Smoothing	LVW8	04/18/23 10:46

Lab Sample ID: LCS 280-608955/4 Client Sample ID:

Date Analyzed: 04/17/23 12:58 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.09	Baseline Smoothing	LVW8	04/18/23 10:46
Nitrate as N	7.04	Baseline Smoothing	LVW8	04/18/23 10:46

Lab Sample ID: LCSD 280-608955/5 Client Sample ID:

Date Analyzed: 04/17/23 13:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.09	Baseline Smoothing	LVW8	04/18/23 10:46
Nitrate as N	7.04	Baseline Smoothing	LVW8	04/18/23 10:46

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608955

Lab Sample ID: 280-175123-1 Client Sample ID: MW-119D-20230413

Date Analyzed: 04/17/23 15:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrate as N	7.10	Baseline Smoothing	LVW8	04/18/23 10:50

Lab Sample ID: 280-175123-2 Client Sample ID: MW-119S-20230413

Date Analyzed: 04/17/23 15:43 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrate as N	7.09	Baseline Smoothing	LVW8	04/18/23 10:51

Lab Sample ID: CCV 280-608955/17 Client Sample ID:

Date Analyzed: 04/17/23 16:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.09	Baseline Smoothing	LVW8	04/18/23 10:51
Nitrate as N	7.05	Baseline Smoothing	LVW8	04/18/23 10:51

Lab Sample ID: 280-175123-3 Client Sample ID: RW-3-20230413

Date Analyzed: 04/17/23 17:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrate as N	7.10	Baseline Smoothing	LVW8	04/18/23 10:53

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608955

Lab Sample ID: CCV 280-608955/29 Client Sample ID:

Date Analyzed: 04/17/23 19:14 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrite as N	5.10	Baseline Smoothing	LVW8	04/18/23 10:56
Nitrate as N	7.06	Baseline Smoothing	LVW8	04/18/23 10:56

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608956

Lab Sample ID: CCV 280-608956/1 Client Sample ID:

Date Analyzed: 04/17/23 12:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.39	Baseline Smoothing	LVW8	04/18/23 10:45
Sulfate	10.61	Baseline Smoothing	LVW8	04/18/23 10:45

Lab Sample ID: CCB 280-608956/2 Client Sample ID:

Date Analyzed: 04/17/23 12:28 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.63	Baseline Smoothing	LVW8	04/18/23 10:45

Lab Sample ID: MRL 280-608956/3 Client Sample ID:

Date Analyzed: 04/17/23 12:43 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.37	Baseline Smoothing	LVW8	04/18/23 10:45
Sulfate	10.64	Baseline Smoothing	LVW8	04/18/23 10:46

Lab Sample ID: LCS 280-608956/4 Client Sample ID:

Date Analyzed: 04/17/23 12:58 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.39	Baseline Smoothing	LVW8	04/18/23 10:46
Sulfate	10.61	Baseline Smoothing	LVW8	04/18/23 10:46

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608956

Lab Sample ID: LCSD 280-608956/5 Client Sample ID:

Date Analyzed: 04/17/23 13:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.39	Baseline Smoothing	LVW8	04/18/23 10:46
Sulfate	10.61	Baseline Smoothing	LVW8	04/18/23 10:46

Lab Sample ID: MB 280-608956/6 Client Sample ID:

Date Analyzed: 04/17/23 13:28 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.63	Baseline Smoothing	LVW8	04/18/23 10:47

Lab Sample ID: 280-175123-1 Client Sample ID: MW-119D-20230413

Date Analyzed: 04/17/23 15:28 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.38	Baseline Smoothing	LVW8	04/18/23 10:50
Sulfate	10.64	Baseline Smoothing	LVW8	04/18/23 10:50

Lab Sample ID: 280-175123-2 Client Sample ID: MW-119S-20230413

Date Analyzed: 04/17/23 15:58 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.63	Baseline Smoothing	LVW8	04/18/23 10:51

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608956

Lab Sample ID: CCV 280-608956/17 Client Sample ID:

Date Analyzed: 04/17/23 16:13 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.39	Baseline Smoothing	LVW8	04/18/23 10:51
Sulfate	10.61	Baseline Smoothing	LVW8	04/18/23 10:51

Lab Sample ID: CCB 280-608956/18 Client Sample ID:

Date Analyzed: 04/17/23 16:28 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.65	Baseline Smoothing	LVW8	04/18/23 10:52

Lab Sample ID: 280-175123-2 Client Sample ID: MW-119S-20230413

Date Analyzed: 04/17/23 16:43 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.38	Baseline Smoothing	LVW8	04/18/23 10:52

Lab Sample ID: 280-175123-3 Client Sample ID: RW-3-20230413

Date Analyzed: 04/17/23 16:58 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.67	Baseline Smoothing	LVW8	04/18/23 10:53

Lab Sample ID: 280-175123-3 Client Sample ID: RW-3-20230413

Date Analyzed: 04/17/23 17:29 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.38	Baseline Smoothing	LVW8	04/18/23 10:54

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 608956

Lab Sample ID: CCV 280-608956/29 Client Sample ID:

Date Analyzed: 04/17/23 19:14 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.40	Baseline Smoothing	LVW8	04/18/23 10:56
Sulfate	10.63	Baseline Smoothing	LVW8	04/18/23 10:56

Lab Sample ID: CCB 280-608956/30 Client Sample ID:

Date Analyzed: 04/17/23 19:29 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.66	Baseline Smoothing	LVW8	04/18/23 10:56

Lab Sample ID: CCV 280-608956/41 Client Sample ID:

Date Analyzed: 04/17/23 22:14 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.40	Baseline Smoothing	LVW8	04/18/23 11:01
Sulfate	10.62	Baseline Smoothing	LVW8	04/18/23 11:01

Lab Sample ID: CCB 280-608956/42 Client Sample ID:

Date Analyzed: 04/17/23 22:29 Lab File ID: Info 2_DENPC179_Anions_2 GC Column: Metrosepp A ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.67	Baseline Smoothing	LVW8	04/18/23 11:01

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 607366

Lab Sample ID: STD 280-607366/1 IC Client Sample ID:

Date Analyzed: 04/03/23 16:42 Lab File ID: 280-0120028-002280-01200 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:06
Sulfate	6.54	Baseline Smoothing	XAY4	04/04/23 10:07

Lab Sample ID: STD 280-607366/2 IC Client Sample ID:

Date Analyzed: 04/03/23 16:54 Lab File ID: 280-0120083-002_04_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.93	Baseline Smoothing	XAY4	04/04/23 10:07
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:09

Lab Sample ID: STD 280-607366/3 IC Client Sample ID:

Date Analyzed: 04/03/23 17:06 Lab File ID: 280-0120083-003_05_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:07
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:09

Lab Sample ID: STD 280-607366/4 IC Client Sample ID:

Date Analyzed: 04/03/23 17:18 Lab File ID: 280-0120083-004_06_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:07
Chloride	2.70	Baseline Smoothing	XAY4	04/04/23 10:10

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 607366

Lab Sample ID: STD 280-607366/5 IC Client Sample ID:

Date Analyzed: 04/03/23 17:30 Lab File ID: 280-0120083-005_07_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:08
Chloride	2.71	Baseline Smoothing	XAY4	04/04/23 10:10

Lab Sample ID: STD 280-607366/6 IC Client Sample ID:

Date Analyzed: 04/03/23 17:42 Lab File ID: 280-0120083-006_08_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:08
Chloride	2.72	Baseline Smoothing	XAY4	04/04/23 10:10

Lab Sample ID: ICV 280-607366/7 Client Sample ID:

Date Analyzed: 04/03/23 17:54 Lab File ID: 280-0120083-007_09_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.92	Baseline Smoothing	XAY4	04/04/23 10:08
Chloride	2.72	Baseline Smoothing	XAY4	04/04/23 10:13

Lab Sample ID: ICB 280-607366/8 Client Sample ID:

Date Analyzed: 04/03/23 18:06 Lab File ID: 280-0120083-008_10_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	2.71	Baseline Smoothing	XAY4	04/04/23 11:51

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Batch Number: 610654

Lab Sample ID: CCV 280-610654/41 Client Sample ID:

Date Analyzed: 04/29/23 21:22 Lab File ID: 280-0120908-041_42_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 11:32

Lab Sample ID: CCV 280-610654/53 Client Sample ID:

Date Analyzed: 04/29/23 23:46 Lab File ID: 280-0120908-053_54_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 11:35
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 11:35

Lab Sample ID: CCV 280-610654/65 Client Sample ID:

Date Analyzed: 04/30/23 02:09 Lab File ID: 280-0120908-065_66_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 11:36
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 11:37

Lab Sample ID: CCV 280-610654/77 Client Sample ID:

Date Analyzed: 04/30/23 04:33 Lab File ID: 280-0120908-077_78_ECD_1 GC Column: Ion Pac AS18 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.91	Baseline Smoothing	XAY4	05/01/23 11:37
Chloride	2.68	Baseline Smoothing	XAY4	05/01/23 11:38

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
Cal Dil Std_00162	04/17/23	04/07/23	P&T Methanol, Lot ED137-US	100 uL	MV-Gas A_00149	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL
							2-Chloroethyl vinyl ether	5 ug/mL
					MV-MegaMainA_00086	5 uL	Acrolein	49.375 ug/mL
							2-Butanone (MEK)	20 ug/mL
							2-Hexanone	20 ug/mL
							4-Methyl-2-pentanone (MIBK)	20 ug/mL
							Acetone	20 ug/mL
							Vinyl acetate	10 ug/mL
							Cyclohexanone	150 ug/mL
							1,1,1,2-Tetrachloroethane	5 ug/mL
							1,1,1-Trichloroethane	5 ug/mL
							1,1,2,2-Tetrachloroethane	5 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	5 ug/mL
							1,1,2-Trichloroethane	5 ug/mL
							1,1-Dichloroethane	5 ug/mL
							1,1-Dichloroethene	5 ug/mL
							1,1-Dichloropropene	5 ug/mL
							1,2,3-Trichlorobenzene	5 ug/mL
							1,2,3-Trichloropropane	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2,4-Trimethylbenzene	5 ug/mL
							1,2-Dibromo-3-Chloropropane	5 ug/mL
							1,2-Dibromoethane	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Dichloroethane	5 ug/mL
							1,2-Dichloropropane	5 ug/mL
							1,3,5-Trimethylbenzene	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dichloropropane	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	100 ug/mL
							2,2-Dichloropropane	5 ug/mL
							2-Chlorotoluene	5 ug/mL
							2-Methyl-2-propanol	50 ug/mL
							4-Chlorotoluene	5 ug/mL
							4-Isopropyltoluene	5 ug/mL
							Acrylonitrile	50 ug/mL
							Allyl chloride	5 ug/mL
							Benzene	5 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromobenzene	5 ug/mL
							Bromoform	5 ug/mL
							Carbon disulfide	5 ug/mL
							Carbon tetrachloride	5 ug/mL
							Chlorobenzene	5 ug/mL
							Chlorobromomethane	5 ug/mL
							Chlorodibromomethane	5 ug/mL
							Chloroform	5 ug/mL
							cis-1,2-Dichloroethene	5 ug/mL
							cis-1,3-Dichloropropene	5 ug/mL
							Cyclohexane	5 ug/mL
							Dibromomethane	5 ug/mL
							Dichlorobromomethane	5 ug/mL
							Ethyl ether	5 ug/mL
							Ethyl methacrylate	5 ug/mL
							Ethylbenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexane	5 ug/mL
							Iodomethane	5 ug/mL
							Isobutyl alcohol	125 ug/mL
							Isopropylbenzene	5 ug/mL
							m-Xylene & p-Xylene	5 ug/mL
							Methyl acetate	10 ug/mL
							Methyl tert-butyl ether	5 ug/mL
							Methylcyclohexane	5 ug/mL
							Methylene Chloride	5 ug/mL
							n-Butylbenzene	5 ug/mL
							n-Heptane	5 ug/mL
							N-Propylbenzene	5 ug/mL
							Naphthalene	5 ug/mL
							o-Xylene	5 ug/mL
							sec-Butylbenzene	5 ug/mL
							Styrene	5 ug/mL
							tert-Butylbenzene	5 ug/mL
							Tetrachloroethene	5 ug/mL
							Tetrahydrofuran	10 ug/mL
							Toluene	5 ug/mL
							trans-1,2-Dichloroethene	5 ug/mL
							trans-1,3-Dichloropropene	5 ug/mL
							trans-1,4-Dichloro-2-butene	5 ug/mL
							Trichloroethene	5 ug/mL
							1-Chlorohexane	4 ug/mL
							2-Pentanone	16 ug/mL
							sec-Butyl Alcohol	120 ug/mL
.MV-Gas A_00149	04/25/23	03/25/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722_00021	05/31/25		RESTEK, Lot A0184726		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
..MV-569723_00017	06/30/25		RESTEK, Lot A0186788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-MegaMainA_00086	04/24/23	03/23/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butyl Alcohol	2400 ug/mL
..MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
..MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
Cal Dil Std_00169	04/21/23	04/18/23	P&T Methanol, Lot ED137-US	100 uL	MV-Gas A_00151	2 uL	Bromomethane	5 ug/mL
							Chloroethane	5 ug/mL
							Chloromethane	5 ug/mL
							Dichlorodifluoromethane	5 ug/mL
							Dichlorofluoromethane	5 ug/mL
							Trichlorofluoromethane	5 ug/mL
							Vinyl chloride	5 ug/mL
							2-Chloroethyl vinyl ether	5 ug/mL
					MV-MegaMainA_00087	5 uL	Acrolein	49.375 ug/mL
							2-Butanone (MEK)	20 ug/mL
							2-Hexanone	20 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Methyl-2-pentanone (MIBK)	20 ug/mL
							Acetone	20 ug/mL
							Vinyl acetate	10 ug/mL
							Cyclohexanone	150 ug/mL
							1,1,1,2-Tetrachloroethane	5 ug/mL
							1,1,1-Trichloroethane	5 ug/mL
							1,1,2,2-Tetrachloroethane	5 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	5 ug/mL
							1,1,2-Trichloroethane	5 ug/mL
							1,1-Dichloroethane	5 ug/mL
							1,1-Dichloroethene	5 ug/mL
							1,1-Dichloropropene	5 ug/mL
							1,2,3-Trichlorobenzene	5 ug/mL
							1,2,3-Trichloropropane	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2,4-Trimethylbenzene	5 ug/mL
							1,2-Dibromo-3-Chloropropane	5 ug/mL
							1,2-Dibromoethane	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Dichloroethane	5 ug/mL
							1,2-Dichloropropane	5 ug/mL
							1,3,5-Trimethylbenzene	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dichloropropane	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	100 ug/mL
							2,2-Dichloropropane	5 ug/mL
							2-Chlorotoluene	5 ug/mL
							2-Methyl-2-propanol	50 ug/mL
							4-Chlorotoluene	5 ug/mL
							4-Isopropyltoluene	5 ug/mL
							Acrylonitrile	50 ug/mL
							Allyl chloride	5 ug/mL
							Benzene	5 ug/mL
							Bromobenzene	5 ug/mL
							Bromoform	5 ug/mL
							Carbon disulfide	5 ug/mL
							Carbon tetrachloride	5 ug/mL
							Chlorobenzene	5 ug/mL
							Chlorobromomethane	5 ug/mL
							Chlorodibromomethane	5 ug/mL
							Chloroform	5 ug/mL
							cis-1,2-Dichloroethene	5 ug/mL
							cis-1,3-Dichloropropene	5 ug/mL
							Cyclohexane	5 ug/mL
							Dibromomethane	5 ug/mL
							Dichlorobromomethane	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethyl ether	5 ug/mL
							Ethyl methacrylate	5 ug/mL
							Ethylbenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexane	5 ug/mL
							Iodomethane	5 ug/mL
							Isobutyl alcohol	125 ug/mL
							Isopropylbenzene	5 ug/mL
							m-Xylene & p-Xylene	5 ug/mL
							Methyl acetate	10 ug/mL
							Methyl tert-butyl ether	5 ug/mL
							Methylcyclohexane	5 ug/mL
							Methylene Chloride	5 ug/mL
							n-Butylbenzene	5 ug/mL
							n-Heptane	5 ug/mL
							N-Propylbenzene	5 ug/mL
							Naphthalene	5 ug/mL
							o-Xylene	5 ug/mL
							sec-Butylbenzene	5 ug/mL
							Styrene	5 ug/mL
							tert-Butylbenzene	5 ug/mL
							Tetrachloroethene	5 ug/mL
							Tetrahydrofuran	10 ug/mL
							Toluene	5 ug/mL
							trans-1,2-Dichloroethene	5 ug/mL
							trans-1,3-Dichloropropene	5 ug/mL
							trans-1,4-Dichloro-2-butene	5 ug/mL
							Trichloroethene	5 ug/mL
							1-Chlorohexane	4 ug/mL
							2-Pentanone	16 ug/mL
							sec-Butyl Alcohol	120 ug/mL
.MV-Gas A_00151	05/17/23	04/17/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
..MV-569722_00021	05/31/25	RESTEK, Lot A0184726			(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
..MV-569723_00017	06/30/25	RESTEK, Lot A0186788			(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MV-MegaMainA_00087	05/11/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
..MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
..MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
Cl ICV Std_00006	10/29/23	ERA, Lot 601021m			(Purchased Reagent)		Chloride	1000 mg/L
IC CAL cl/so4_00473	04/05/23	03/29/23	Di Water, Lot na	100 mL	IC CL cal_00076	12.5 mL	Chloride	125 mg/L
					IC SO4 Cal_00008	12.5 mL	Sulfate	125 mg/L
.IC CL cal_00076	11/30/23	SPEX CertiPrep, Lot 5-146CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23	SPEX CertiPrep, Lot 5-160SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00475	04/19/23	04/12/23	Di Water, Lot na	100 mL	IC CL cal_00076	12.5 mL	Chloride	125 mg/L
					IC SO4 Cal_00008	12.5 mL	Sulfate	125 mg/L
.IC CL cal_00076	11/30/23	SPEX CertiPrep, Lot 5-146CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23	SPEX CertiPrep, Lot 5-160SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC Cal low_00701	04/05/23	03/29/23	Di Water, Lot NA	100 mL	IC BR ICV_00026	2.5 mL	Bromide	25 mg/L
					IC FL cal_00023	2.5 mL	Fluoride	25 mg/L
.IC BR ICV_00026	04/30/23	RICCA, Lot 4110L50			(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00023	01/31/24	Ricca, Lot 2207H13			(Purchased Reagent)		Fluoride	1000 mg/L
IC Cal low_00703	04/19/23	04/12/23	Di Water, Lot NA	100 mL	IC BR ICV_00026	2.5 mL	Bromide	25 mg/L
					IC FL cal_00023	2.5 mL	Fluoride	25 mg/L
					IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
					IC NO2 Cal_00007	2.5 mL	Nitrite as N	25 mg/L
					IC P04 cal_00030	2.5 mL	Orthophosphate as P	25 mg/L
.IC BR ICV_00026	04/30/23	RICCA, Lot 4110L50			(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00023	01/31/24	Ricca, Lot 2207H13			(Purchased Reagent)		Fluoride	1000 mg/L
.IC N03 cal_00028	11/30/23	Ricca, Lot 2205B73			(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC NO2 Cal_00007	06/30/23	Ricca, Lot 2212826			(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC P04 cal_00030	07/31/24	RICCA, Lot 4208152			(Purchased Reagent)		Orthophosphate as P	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC Cal low_00706	05/03/23	04/26/23	Di Water, Lot NA	100 mL	IC BR ICV_00024	2.5 mL	Bromide	25 mg/L
.IC BR ICV_00024	10/31/23		ricca, Lot 1204B86		(Purchased Reagent)		Bromide	1000 mg/L
IC ICV 5_00402	04/05/23	03/29/23	Di Water, Lot na	100 mL	IC BR ICV_00028	2.5 mL	Bromide	25 mg/L
.IC BR ICV_00028	04/07/24		ERA, Lot 110422m		(Purchased Reagent)		Bromide	1000 mg/L
IC ICV 5_00403	04/19/23	04/12/23	Di Water, Lot na	100 mL	IC BR ICV_00028	2.5 mL	Bromide	25 mg/L
					IC NO2 ICV_00022	2.5 mL	Nitrite as N	25 mg/L
					IC NO3 ICV_00019	2.5 mL	Nitrate as N	25 mg/L
.IC BR ICV_00028	04/07/24		ERA, Lot 110422m		(Purchased Reagent)		Bromide	1000 mg/L
.IC NO2 ICV_00022	12/14/23		ERA, Lot 261221m		(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC NO3 ICV_00019	12/01/23		ERA, Lot 011221m		(Purchased Reagent)		Nitrate as N	1000 mg/L
IC LCS_01947	04/19/23	04/12/23	Di Water, Lot 27	200 mL	IC Cal low_00703	20 mL	Nitrate as N	2.5 mg/L
							Nitrite as N	2.5 mg/L
					IC CL cal_00076	10 mL	Chloride	50 mg/L
					IC SO4 Cal_00008	10 mL	Sulfate	50 mg/L
.IC Cal low_00703	04/19/23	04/12/23	Di Water, Lot NA	100 mL	IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
					IC NO2 Cal_00007	2.5 mL	Nitrite as N	25 mg/L
..IC N03 cal_00028	11/30/23		Ricca, Lot 2205B73		(Purchased Reagent)		Nitrate as N	1000 mg/L
..IC NO2 Cal_00007	06/30/23		Ricca, Lot 2212826		(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC CL cal_00076	11/30/23		SPEX CertiPrep, Lot 5-146CL-2X		(Purchased Reagent)		Chloride	1000 mg/L
.IC SO4 Cal_00008	07/30/23		SPEX CertiPrep, Lot 5-160SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC LCS_01950	05/03/23	04/26/23	Di Water, Lot 27	200 mL	IC Cal low_00706	20 mL	Bromide	2.5 mg/L
.IC Cal low_00706	05/03/23	04/26/23	Di Water, Lot NA	100 mL	IC BR ICV_00024	2.5 mL	Bromide	25 mg/L
..IC BR ICV_00024	10/31/23		ricca, Lot 1204B86		(Purchased Reagent)		Bromide	1000 mg/L
IC SO4 ICV_00024	12/01/23		ERA, Lot 021221m		(Purchased Reagent)		Sulfate	1000 mg/L
ms 77 cal std_02955	04/19/23	04/18/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
.CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
.MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
ms 77 cal std_02956	04/20/23	04/19/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
.MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
ms 77 ccv_02963	04/19/23	04/18/23	5%HNO3/5% HCl, Lot 2225038/222836	200 mL	ms 77 cal std_02955	100 mL	Antimony	50 ug/L
							Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Co	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Manganese	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L
							Thallium	50 ug/L
							Tin	50 ug/L
							Vanadium	50 ug/L
							Calcium	11000 ug/L
							Iron	1000 ug/L
							Magnesium	11000 ug/L
							Potassium	11000 ug/L
							Sodium	51000 ug/L
							Silver	50 ug/L
							Zinc	50 ug/L
					MS Cal 4_00418	100 mL	Calcium	11000 ug/L
							Potassium	11000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Magnesium	11000 ug/L
							Sodium	51000 ug/L
.ms 77 cal std_02955	04/19/23	04/18/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
..CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
..MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
..MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS Cal 4_00418	09/15/23	04/18/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L
							Sodium	100 mg/L
..MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
...10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L
...10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
...10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
...10000 Na_00090	08/28/24		CPI, Lot 1263195-2		(Purchased Reagent)		Sodium	10000 mg/L
ms 77 ccv_02964	04/20/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	200 mL	ms 77 cal std_02956	100 mL	Antimony	50 ug/L
							Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Co	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Manganese	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L
							Thallium	50 ug/L
							Tin	50 ug/L
							Vanadium	50 ug/L
							Calcium	11000 ug/L
							Iron	1000 ug/L
							Magnesium	11000 ug/L
							Potassium	11000 ug/L
							Sodium	51000 ug/L
							Silver	50 ug/L
							Zinc	50 ug/L
					MS Cal 4_00419	100 mL	Calcium	11000 ug/L
							Potassium	11000 ug/L
							Magnesium	11000 ug/L
							Sodium	51000 ug/L
.ms 77 cal std_02956	04/20/23	04/19/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	CAL STD 1_00002	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Co	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Tin	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-2_00103	0.25 mL	Calcium	2000 ug/L
							Iron	2000 ug/L
							Magnesium	2000 ug/L
							Potassium	2000 ug/L
							Sodium	2000 ug/L
					MS CALSTD-5a_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
..CAL STD 1_00002	06/27/23		CPI, Lot 1148545-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
..MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
..MS CALSTD-5a_00001	12/31/23		CPI, Lot 220527		(Purchased Reagent)		Silver	100 mg/L
							Zinc	100 mg/L
.MS Cal 4_00419	09/15/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L
							Sodium	100 mg/L
..MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
...10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
...10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
...10000 Na_00090	08/28/24		CPI, Lot 1263195-2		(Purchased Reagent)		Sodium	10000 mg/L
ms 77 icsa_00677	04/24/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS ICSA STOCK_00051	5 mL	Al	100 mg/L
							Calcium	100 mg/L
							Iron	100 mg/L
							Magnesium	100 mg/L
							Mo	2 mg/L
							Potassium	100 mg/L
							Sodium	100 mg/L
					MS ICSA STOCK_00052	5 mL	Al	100 mg/L
							Calcium	100 mg/L
							Iron	100 mg/L
							Magnesium	100 mg/L
							Mo	2 mg/L
							Potassium	100 mg/L
							Sodium	100 mg/L
.MS ICSA STOCK_00051	04/20/24		CPI, Lot 1267033-1		(Purchased Reagent)		Al	1000 mg/L
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Magnesium	1000 mg/L
							Mo	20 mg/L
							Potassium	1000 mg/L
							Sodium	1000 mg/L
.MS ICSA STOCK_00052	03/27/24		IV, Lot s2-meb706044		(Purchased Reagent)		Al	1000 mg/L
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Magnesium	1000 mg/L
							Mo	20 mg/L
							Potassium	1000 mg/L
							Sodium	1000 mg/L
ms 77 icsab_00672	04/24/23	04/17/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	CALSTD-3_00001	0.1 mL	U	0.1 mg/L
					ICV MIX-1a_00001	0.1 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Co	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Sr	0.2 mg/L
							Thallium	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vanadium	0.1 mg/L
					ICV MIX-1B_00001	0.1 mL	Antimony	0.1 mg/L
							Mo	2.1 mg/L
							Tin	0.1 mg/L
					MS ICSA STOCK_00049	10 mL	Al	102 mg/L
							Calcium	107 mg/L
							Iron	102 mg/L
							Magnesium	107 mg/L
							Mo	2.1 mg/L
							Potassium	107 mg/L
							Sodium	107 mg/L
					MS ICVMIX--5_00002	0.1 mL	Calcium	107 mg/L
							Magnesium	107 mg/L
							Potassium	107 mg/L
							Silver	0.1 mg/L
							Sodium	107 mg/L
							Sr	0.2 mg/L
							Th	0.1 mg/L
							Zinc	0.1 mg/L
					MS ICVMIX-2_00005	0.1 mL	Al	102 mg/L
							Calcium	107 mg/L
							Iron	102 mg/L
							Magnesium	107 mg/L
							Potassium	107 mg/L
							Sodium	107 mg/L
.CALSTD-3_00001	05/30/24		CPI, Lot 1285834-1		(Purchased Reagent)		U	100 mg/L
.ICV MIX-1a_00001	08/09/23		IV, Lot t2-meb722098		(Purchased Reagent)		Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Sr	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.ICV MIX-1B_00001	08/05/23		IV, Lot t2-meb722099		(Purchased Reagent)		Antimony	100 mg/L
							Mo	100 mg/L
							Tin	100 mg/L
.MS ICSA STOCK_00049	12/13/23		CPI, Lot 1208135-1		(Purchased Reagent)		Al	1000 mg/L
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Magnesium	1000 mg/L

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Mo	20 mg/L
							Potassium	1000 mg/L
							Sodium	1000 mg/L
.MS ICVMIX--5_00002	08/01/23	IV, Lot t2-meb721663			(Purchased Reagent)		Calcium	5000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Silver	100 mg/L
							Sodium	5000 mg/L
							Sr	100 mg/L
							Th	100 mg/L
							Zinc	100 mg/L
.MS ICVMIX-2_00005	05/16/23	CPI, Lot 1146029-1			(Purchased Reagent)		Al	2000 mg/L
							Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
ms 77 icv_02965	04/19/23	04/18/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	10000 Na SS_00006	0.2 mL	Sodium	12800 ug/L
					ICV MIX-1a_00001	0.1 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Co	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
					ICV MIX-1B_00001	0.1 mL	Antimony	40 ug/L
							Tin	40 ug/L
					MS ICVMIX--5_00002	0.2 mL	Calcium	4800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Silver	80 ug/L
							Sodium	12800 ug/L
							Zinc	80 ug/L
					MS ICVMIX-2_00005	0.1 mL	Calcium	4800 ug/L
							Iron	800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Sodium	12800 ug/L
.10000 Na SS_00006	04/30/24	Elemental Scientific, Lot 2209019-100ESI			(Purchased Reagent)		Sodium	10000 mg/L
.ICV MIX-1a_00001	08/09/23	IV, Lot t2-meb722098			(Purchased Reagent)		Arsenic	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.ICV MIX-1B_00001	08/05/23		IV, Lot t2-meb722099		(Purchased Reagent)		Antimony	100 mg/L
							Tin	100 mg/L
.MS ICVMIX--5_00002	08/01/23		IV, Lot t2-meb721663		(Purchased Reagent)		Calcium	5000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Silver	100 mg/L
							Sodium	5000 mg/L
							Zinc	100 mg/L
.MS ICVMIX-2_00005	05/16/23		CPI, Lot 1146029-1		(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
ms 77 icv_02966	04/20/23	04/19/23	2%HNO3/0.5% HCl, Lot 2225038/222836	250 mL	10000 Na SS_00006	0.2 mL	Sodium	12800 ug/L
					ICV MIX-1a_00001	0.1 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Co	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
					ICV MIX-1B_00001	0.1 mL	Antimony	40 ug/L
							Tin	40 ug/L
					MS ICVMIX--5_00002	0.2 mL	Calcium	4800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Silver	80 ug/L
							Sodium	12800 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Zinc	80 ug/L
					MS ICVMIX-2_00005	0.1 mL	Calcium	4800 ug/L
							Iron	800 ug/L
							Magnesium	4800 ug/L
							Potassium	4800 ug/L
							Sodium	12800 ug/L
.10000 Na SS_00006	04/30/24	Elemental Scientific, Lot 2209019-100ESI			(Purchased Reagent)		Sodium	10000 mg/L
.ICV MIX-1a_00001	08/09/23	IV, Lot t2-meb722098			(Purchased Reagent)		Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.ICV MIX-1B_00001	08/05/23	IV, Lot t2-meb722099			(Purchased Reagent)		Antimony	100 mg/L
							Tin	100 mg/L
.MS ICVMIX--5_00002	08/01/23	IV, Lot t2-meb721663			(Purchased Reagent)		Calcium	5000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Silver	100 mg/L
							Sodium	5000 mg/L
							Zinc	100 mg/L
.MS ICVMIX-2_00005	05/16/23	CPI, Lot 1146029-1			(Purchased Reagent)		Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
MS 77 LLCCV_02785	04/19/23	04/18/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS LLCCV_00009	1 mL	Antimony	0.002 mg/L
							Arsenic	0.005 mg/L
							Cadmium	0.001 mg/L
							Calcium	0.2 mg/L
							Chromium	0.002 mg/L
							Co	0.001 mg/L
							Copper	0.002 mg/L
							Iron	0.05 mg/L
							Lead	0.001 mg/L
							Magnesium	0.05 mg/L
							Nickel	0.002 mg/L
							Potassium	0.12 mg/L
							Selenium	0.005 mg/L

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Silver	0.001 mg/L
							Sodium	0.3 mg/L
							Thallium	0.001 mg/L
							Tin	0.01 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L
.MS LLCCV_00009	03/22/24		IV, Lot t2-meb722097		(Purchased Reagent)		Antimony	0.2 mg/L
							Arsenic	0.5 mg/L
							Cadmium	0.1 mg/L
							Calcium	20 mg/L
							Chromium	0.2 mg/L
							Co	0.1 mg/L
							Copper	0.2 mg/L
							Iron	5 mg/L
							Lead	0.1 mg/L
							Magnesium	5 mg/L
							Nickel	0.2 mg/L
							Potassium	12 mg/L
							Selenium	0.5 mg/L
							Silver	0.1 mg/L
							Sodium	30 mg/L
							Thallium	0.1 mg/L
							Tin	1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS 77 LLCCV_02786	04/20/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS LLCCV_00009	1 mL	Antimony	0.002 mg/L
							Arsenic	0.005 mg/L
							Barium	0.001 mg/L
							Beryllium	0.001 mg/L
							Cadmium	0.001 mg/L
							Calcium	0.2 mg/L
							Chromium	0.002 mg/L
							Co	0.001 mg/L
							Copper	0.002 mg/L
							Iron	0.05 mg/L
							Lead	0.001 mg/L
							Magnesium	0.05 mg/L
							Manganese	0.001 mg/L
							Nickel	0.002 mg/L
							Selenium	0.005 mg/L
							Silver	0.001 mg/L
							Sodium	0.3 mg/L
							Thallium	0.001 mg/L
							Tin	0.01 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS LLCCV_00009	03/22/24		IV, Lot t2-meb722097		(Purchased Reagent)		Antimony	0.2 mg/L
							Arsenic	0.5 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Calcium	20 mg/L
							Chromium	0.2 mg/L
							Co	0.1 mg/L
							Copper	0.2 mg/L
							Iron	5 mg/L
							Lead	0.1 mg/L
							Magnesium	5 mg/L
							Manganese	0.1 mg/L
							Nickel	0.2 mg/L
							Selenium	0.5 mg/L
							Silver	0.1 mg/L
							Sodium	30 mg/L
							Thallium	0.1 mg/L
							Tin	1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS 79 alt cri_00013	04/19/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	50 mL	1 ppm Ba_00023	0.1 mL	Barium	0.002 mg/L
.1 ppm Ba_00023	09/16/23	03/22/23	1% HNO3, Lot 22A2562002	50 mL	1000 Ba_00021	0.05 mL	Barium	1 mg/L
..1000 Ba_00021	01/19/24		CPI, Lot 1112442-75		(Purchased Reagent)		Barium	1000 mg/L
MS 79 alt cri_00014	04/20/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	50 mL	50 K_00003	0.5 mL	Potassium	0.5 mg/L
.50 K_00003	10/03/23	04/03/23	5%HNO3/5% HCl, Lot see log book	50 mL	10000 K_00018	0.25 mL	Potassium	50 mg/L
..10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
MS Cal 4_00418	09/15/23	04/18/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L
							Sodium	100 mg/L
.MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
..10000 Ca_00027	08/28/24		CPI, Lot 1268108-19		(Purchased Reagent)		Calcium	10000 mg/L
..10000 K_00018	08/28/24		CPI, Lot 1137797-60		(Purchased Reagent)		Potassium	10000 mg/L
..10000 Mg_00025	08/28/24		CPI, Lot 1303817-6		(Purchased Reagent)		Magnesium	10000 mg/L
..10000 Na_00090	08/28/24		CPI, Lot 1263195-2		(Purchased Reagent)		Sodium	10000 mg/L
MS Cal 4_00419	09/15/23	04/19/23	5%HNO3/5% HCl, Lot 2225038/222836	100 mL	MS Cal 4_00413	10 mL	Calcium	20 mg/L
							Potassium	20 mg/L
							Magnesium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Sodium	100 mg/L
.MS Cal 4_00413	09/15/23	04/12/23	1% HNO3, Lot 222846	100 mL	10000 Ca_00027	2 mL	Calcium	200 mg/L
					10000 K_00018	2 mL	Potassium	200 mg/L
					10000 Mg_00025	2 mL	Magnesium	200 mg/L
					10000 Na_00090	10 mL	Sodium	1000 mg/L
..10000 Ca_00027	08/28/24	CPI, Lot 1268108-19			(Purchased Reagent)		Calcium	10000 mg/L
..10000 K_00018	08/28/24	CPI, Lot 1137797-60			(Purchased Reagent)		Potassium	10000 mg/L
..10000 Mg_00025	08/28/24	CPI, Lot 1303817-6			(Purchased Reagent)		Magnesium	10000 mg/L
..10000 Na_00090	08/28/24	CPI, Lot 1263195-2			(Purchased Reagent)		Sodium	10000 mg/L
ms spike 1_00017	07/10/23	01/10/23	1% HNO3, Lot 215109	500 mL	CALSTD-1_00002	100 mL	Antimony	20000 ug/L
							Arsenic	20000 ug/L
							Barium	20000 ug/L
							Beryllium	20000 ug/L
							Cadmium	20000 ug/L
							Chromium	20000 ug/L
							Co	20000 ug/L
							Copper	20000 ug/L
							Lead	20000 ug/L
							Li	20000 ug/L
							Manganese	20000 ug/L
							Mo	20000 ug/L
							Nickel	20000 ug/L
							Selenium	20000 ug/L
							Si	200000 ug/L
							SiO2	428000 ug/L
							Sr	20000 ug/L
							Thallium	20000 ug/L
							Tin	20000 ug/L
							Vanadium	20000 ug/L
					MS CALSTD-2_00103	100 mL	Al	400000 ug/L
							Calcium	400000 ug/L
							Iron	400000 ug/L
							Magnesium	400000 ug/L
							Potassium	400000 ug/L
							Sodium	400000 ug/L
.CALSTD-1_00002	08/08/23	CPI, Lot 1148545-1			(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Li	100 mg/L
							Manganese	100 mg/L
							Mo	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nickel	100 mg/L
							Selenium	100 mg/L
							Si	1000 mg/L
							SiO2	2140 mg/L
							Sr	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-2_00103	01/26/24		CPI, Lot 1208136-1		(Purchased Reagent)		Al	2000 mg/L
							Calcium	2000 mg/L
							Iron	2000 mg/L
							Magnesium	2000 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
MS spike 2_00106	09/07/23	03/07/23	1% HNO3, Lot 275002	500 mL	1000 Ag_00018	10 mL	Silver	20 mg/L
					1000 Sr_00016	10 mL	Sr	20 mg/L
					1000 U_00045	10 mL	U	20 mg/L
					1000 Zn_00028	10 mL	Zinc	20 mg/L
					10000 Th_00027	1 mL	Th	20 mg/L
.1000 Ag_00018	03/27/24		CPI, Lot 1211976-35		(Purchased Reagent)		Silver	1000 mg/L
.1000 Sr_00016	11/26/23		CPI, Lot 1194650-4		(Purchased Reagent)		Sr	1000 mg/L
.1000 U_00045	07/03/24		CPI, Lot 1249254-2		(Purchased Reagent)		U	1000 mg/L
.1000 Zn_00028	09/24/23		CPI, Lot 1095528-109		(Purchased Reagent)		Zinc	1000 mg/L
.10000 Th_00027	09/24/23		CPI, Lot 1161822-1		(Purchased Reagent)		Th	10000 mg/L
mv-Cent BFB_00004							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
					mv-IS/SS Tune_00001	10 mL	BFB	50 ug/mL
.mv-IS/SS Tune_00001	11/30/23		Restek, Lot A0143593		(Purchased Reagent)		BFB	250 ug/mL
mv-Cent BFB_00005							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
					mv-IS/SS Tune_00001	10 mL	BFB	50 ug/mL
.mv-IS/SS Tune_00001	11/30/23		Restek, Lot A0143593		(Purchased Reagent)		BFB	250 ug/mL
mv-Cent IS_00007	07/31/23	05/20/22	P&T Methanol, Lot 1996628	5 mL	mv-30241_00010	0.1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.mv-30241_00010	01/31/27		Restek, Lot A0180349		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
MV-Gas A_00150	05/08/23	04/05/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
.MV-569722_00021	05/31/25		RESTEK, Lot A0184726		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00017	06/30/25		RESTEK, Lot A0186788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
MV-Gas A_00151	05/17/23	04/17/23	P&T Methanol, Lot 198123	12.5 mL	MV-569722_00021	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Dichlorofluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
					MV-569723_00017	1250 uL	2-Chloroethyl vinyl ether	250 ug/mL
.MV-569722_00021	05/31/25		RESTEK, Lot A0184726		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00017	06/30/25		RESTEK, Lot A0186788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
MV-Gas B_00131	04/17/23	03/16/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
.MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
MV-Gas B_00133	05/11/23	04/12/23	P&T Methanol, Lot ea1899-us	12.5 mL	MV-569722.sec_00016	1250 uL	Bromomethane	250 ug/mL
							Chloroethane	250 ug/mL
							Chloromethane	250 ug/mL
							Dichlorodifluoromethane	250 ug/mL
							Trichlorofluoromethane	250 ug/mL
							Vinyl chloride	250 ug/mL
.MV-569722.sec_00016	06/30/25		RESTEK, Lot A0186584		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
mv-IS_SS_00057	04/27/23	03/15/23	P&T Methanol, Lot 198123	50 mL	mv-30241_00012	1000 uL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
					MV-567650_00030	1000 uL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.mv-30241_00012	05/31/27		Restek, Lot A0185733		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
.MV-567650_00030	05/31/26		Restek, Lot A0172587		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
mv-IS_SS_00058	05/01/23	03/29/23	P&T Methanol, Lot 198123	50 mL	mv-30241_00012	1000 uL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
					MV-567650_00030	1000 uL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.mv-30241_00012	05/31/27		Restek, Lot A0185733		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
.MV-567650_00030	05/31/26		Restek, Lot A0172587		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
mv-IS_SS_00059	05/19/23	04/19/23	P&T Methanol, Lot 198123	50 mL	mv-30241_00012	1000 uL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
.mv-30241_00012	05/31/27		Restek, Lot A0185733		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
mv-IS_SS_00059	05/19/23	04/19/23	P&T Methanol, Lot 198123	50 mL	MV-567650_00030	1000 uL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.MV-567650_00030	05/31/26		Restek, Lot A0172587		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-MegaMain B_00082	04/17/23	03/17/23	P&T Methanol, Lot 181124	25 mL	MV-568720.sec_00038	1250 uL	Acrolein	987.5 ug/mL
					MV-569721.sec_00009	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724.sec_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-571992.sec_00007	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							2,2-Dichloropropane	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	100 ug/mL
							o-Xylene	100 ug/mL
							Styrene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
							Xylenes, Total	200 ug/mL
.MV-568720.sec_00038	08/31/23		RESTEK, Lot A0181935		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721.sec_00009	11/30/24		RESTEK, Lot A0178490		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724.sec_00035	01/31/24		RESTEK, Lot A0187085		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992.sec_00007	06/30/23		RESTEK, Lot A0167172		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							o-Xylene	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMain B_00083	05/17/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-568720.sec_00038	1250 uL	Acrolein	987.5 ug/mL
					MV-569721.sec_00009	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724.sec_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-571992.sec_00007	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							2,2-Dichloropropane	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	100 ug/mL
							o-Xylene	100 ug/mL
							Styrene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
							Xylenes, Total	200 ug/mL
.MV-568720.sec_00038	08/31/23		RESTEK, Lot A0181935		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721.sec_00009	11/30/24		RESTEK, Lot A0178490		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724.sec_00035	01/31/24		RESTEK, Lot A0187085		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992.sec_00007	06/30/23		RESTEK, Lot A0167172		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							o-Xylene	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00086	04/24/23	03/23/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
.MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00086	04/24/23	03/23/23	P&T Methanol, Lot 181124	25 mL	MV-571992_00015	1000 uL	Xylenes, Total	200 ug/mL
.MV-571992_00015	09/30/24	RESTEK, Lot A0183568			(Purchased Reagent)		Xylenes, Total	5000 ug/mL
MV-MegaMainA_00087	05/11/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-568720_00045	1250 uL	Acrolein	987.5 ug/mL
					MV-569721_00014	800 uL	2-Butanone (MEK)	400 ug/mL
							2-Hexanone	400 ug/mL
							4-Methyl-2-pentanone (MIBK)	400 ug/mL
							Acetone	400 ug/mL
					MV-569724_00035	1000 uL	Vinyl acetate	200 ug/mL
					MV-569727_00020	3000 uL	Cyclohexanone	3000 ug/mL
					MV-571992_00015	1000 uL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	2000 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Acrylonitrile	1000 ug/mL
							Allyl chloride	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromoform	100 ug/mL
							Carbon disulfide	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chlorodibromomethane	100 ug/mL
							Chloroform	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Cyclohexane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorobromomethane	100 ug/mL
							Ethyl ether	100 ug/mL
							Ethyl methacrylate	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexane	100 ug/mL
							Iodomethane	100 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropylbenzene	100 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	100 ug/mL
							Methylcyclohexane	100 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							n-Heptane	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrahydrofuran	200 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							trans-1,4-Dichloro-2-butene	100 ug/mL
							Trichloroethene	100 ug/mL
					MV-CUS17739.s_00011	2000 uL	1-Chlorohexane	80 ug/mL
							2-Pentanone	320 ug/mL
							sec-Butyl Alcohol	2400 ug/mL
.MV-568720_00045	01/31/24		RESTEK, Lot A0187378		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00014	06/30/25		RESTEK, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724_00035	01/31/24		RESTEK, Lot A0187365		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00020	03/31/25		RESTEK, Lot A0182677		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00015	09/30/24		RESTEK, Lot A0183568		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Allyl chloride	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739.s_00011	05/31/24	Agilent, Lot 6676357.sec			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00087	05/11/23	04/11/23	P&T Methanol, Lot 181124	25 mL	MV-571992_00015	1000 uL	Xylenes, Total	200 ug/mL
.MV-571992_00015	09/30/24	RESTEK, Lot A0183568			(Purchased Reagent)		Xylenes, Total	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MV-Supp A_00073	10/31/22	09/27/22	P&T Methanol, Lot 199628	20 mL	mv-570808_00013	400 uL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Chloroprene	50 ug/mL
							Isopropyl alcohol	500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					mv-570809_00011	400 uL	Ethyl acetate	100 ug/mL
							Methyl methacrylate	100 ug/mL
					mv-571993_00007	400 uL	Acetonitrile	500 ug/mL
							Isopropyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
					mv-571994_00005	600 uL	Ethanol	3000 ug/mL
.mv-570808_00013	04/30/23		Restek, Lot A0177095		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Chloroprene	2500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809_00011	12/31/22		Restek, Lot A0173205		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00007	06/30/23		RESTEK, Lot A0172903		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00005	03/31/24		RESTEK, Lot A0169978		(Purchased Reagent)		Ethanol	100000 ug/mL
MV-Supp A_00076	01/16/23	12/13/22	P&T Methanol, Lot 199628	20 mL	mv-570808_00014	400 uL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Chloroprene	50 ug/mL
							Isopropyl alcohol	500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					mv-570809_00012	400 uL	Ethyl acetate	100 ug/mL
							Methyl methacrylate	100 ug/mL
					mv-571993_00008	400 uL	Acetonitrile	500 ug/mL
							Isopropyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
					mv-571994_00005	600 uL	Ethanol	3000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					Z-020209-01_00001	2000 uL	cis-1,4-Dichloro-2-butene	100 ug/mL
.mv-570808_00014	11/30/23		Restek, Lot A0184916		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Chloroprene	2500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809_00012	07/31/23		Restek, Lot A0180509		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00008	03/31/24		RESTEK, Lot A0183035		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00005	03/31/24		RESTEK, Lot A0169978		(Purchased Reagent)		Ethanol	100000 ug/mL
.Z-020209-01_00001	08/30/24		CPI, Lot 488066		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
MV-Supp A_00080	05/01/23	03/29/23	P&T Methanol, Lot 199628	20 mL	mv-570808_00014	400 uL	Chloroprene	50 ug/mL
							Methacrylonitrile	500 ug/mL
					mv-570809_00012	400 uL	Methyl methacrylate	100 ug/mL
					mv-571993_00008	400 uL	Acetonitrile	500 ug/mL
							Propionitrile	500 ug/mL
.mv-570808_00014	11/30/23		Restek, Lot A0184916		(Purchased Reagent)		Chloroprene	2500 ug/mL
							Methacrylonitrile	25000 ug/mL
.mv-570809_00012	07/31/23		Restek, Lot A0180509		(Purchased Reagent)		Methyl methacrylate	5000 ug/mL
.mv-571993_00008	03/31/24		RESTEK, Lot A0183035		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Propionitrile	25000 ug/mL
MV-Supp B_00062	10/31/23	03/23/23	P&T Methanol, Lot 127999	20 mL	mv-570808.sec_00008	400 uL	Chloroprene	50 ug/mL
							Methacrylonitrile	500 ug/mL
					mv-570809.sec_00010	400 uL	Methyl methacrylate	100 ug/mL
					mv-571993.sec_00008	400 uL	Acetonitrile	500 ug/mL
							Propionitrile	500 ug/mL
.mv-570808.sec_00008	10/31/23		Restek, Lot A0183834		(Purchased Reagent)		Chloroprene	2500 ug/mL
							Methacrylonitrile	25000 ug/mL
.mv-570809.sec_00010	10/31/23		Restek, Lot A0183813		(Purchased Reagent)		Methyl methacrylate	5000 ug/mL
.mv-571993.sec_00008	09/30/24		RESTEK, Lot A0189867		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Propionitrile	25000 ug/mL
MV-TAOH_CUST_00004	02/08/23	09/27/22	P&T Methanol, Lot 199628	20 mL	mv-VO-TAOH-5_00015	2000 uL	cis-1,4-Dichloro-2-butene	100 ug/mL
.mv-VO-TAOH-5_00015	02/08/23		SPEX, Lot CP220812003		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
TOC ICV Std_00051	07/01/23		Ricca, Lot 2208C86		(Purchased Reagent)		TOC Result 1	1000 ppm
							TOC Result 2	1000 ppm
							Total Organic Carbon - Duplicates	1000 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
TOC LCS Std_00057	01/31/25	Agilent Technologies, Lot 0006719669			(Purchased Reagent)		TOC Result 1	1001 ppm
							TOC Result 2	1001 ppm
							Total Organic Carbon - Duplicates	1001 ppm

Reagent

1000 Ag_00018

CPI INTERNATIONAL

7396303
ID: 1000 Ag_00018
Exp:03/27/24 Prpd:LRD Opn:10/06/22
1000 Ag CPI

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000511

SE Std Silver (Ag) – 1000 µg/mL

Product Lot #: 1211976-35

Matrix: 5% HNO_3

Source Material Lot #: X24E070

Element	Certified Concentration & Uncertainty
Ag	1006 ± 2 µg/mL (w/v)
	999.0 ± 2.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.999% pure silver (Ag) dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3151, lot #160729**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	MAJOR	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	0.6	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	0.6	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

September 27, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

1000 Ba_00021

CPI INTERNATIONAL

7307329
ID: 1000 Ba_00021
Exp:01/19/23 Prpd:LMT Opn:08/01/22
1000 Ba

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-100041

SE Std Barium (Ba) – 1000 µg/mL

Product Lot #: 1112442-75

Matrix: 5% HNO_3

Source Material Lot #: R18E042/W21E066

Element	Certified Concentration & Uncertainty
Ba	**996.0 ± 5.0 µg/mL (w/v)**
	983.0 ± 5.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.999% pure barium nitrate [$Ba(NO_3)_2$] dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3104a, lot #140909**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	MAJOR	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	11	Y	<5
Ca	<250	Fe	<100	La	13	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<2
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

July 19, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 7, July 24, 2019

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

1000 Sr_00016

CPI INTERNATIONAL

7288163
ID: 1000 Sr_00016
Exp:11/26/23 Prpd:LMT Opn:07/18/22
1000 Sr CPI

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000531

SE Std Strontium (Sr) – 1000 µg/mL

Lot #: 1194650-4

Matrix: 5% HNO_3

Source Material Lot #: SRZ082018A1/SRE082017A2

Element	Certified Concentration & Uncertainty
Sr	997.0 ± 6.0 µg/mL (w/v)
	992.0 ± 6.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.9965% pure strontium nitrate [$Sr(NO_3)_2$] dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3153a, lot #990906**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	64	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	MAJOR	Y	1
Ca	277	Fe	<10	La	<0.5	Ni	<2	Rh	0.8	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	4
Ce	0.4	Gd	<0.2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

May 26, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

1000 u_00045

CPI INTERNATIONAL

7546096
ID: 1000 U_00045
Exp:07/03/24 Prj d:LRD Opn:01/11/23
1000 U CPI

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000641

SE Std Uranium (U) – 1000 µg/mL

Product Lot #: 1249254-2

Matrix: 5% HNO_3

Source Material Lot #: 12030222-100

Element	Certified Concentration & Uncertainty
U	995.0 ± 5.0 µg/mL (w/v)
	990.0 ± 5.0 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.99% pure uranyl nitrate hexahydrate [$UO_2(NO_3)_2{\cdot}6H_2O$] dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3164, lot #080521**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	4	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	3	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

January 3, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

1000 Zn_00028

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

SE Std Zinc (Zn) – 1000 µg/mL

Matrix: 5% HNO_3

7084653
ID: 1000 Zn_00028
Exp:09/24/23 Prpd:LRD Opn:03/07/22
1000 Zn CPI

Product #: TA-1000681

Lot #: 1095528-109

Source Material Lot #: L17Y005/Y28D045

Element	Certified Concentration & Uncertainty
Zn	998 ± 2 µg/mL (w/v)
	989 ± 2 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.9999% pure zinc (Zn) metal dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3168a, lot #120629**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1		
Al	3	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2		
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5		
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2		
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1		
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	3	W	<0.5		
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5		
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2		
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	MAJOR		
Ce	<0.2	Gd	<0.2												

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 24, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 7, July 24, 2019

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br-	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl-	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

10000 Ca_00027

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M91-500

Calcium (Ca) – 10,000 µg/mL

Lot #: 1268108-19

Matrix: 4% HNO_3

Element	Certified Concentration & Uncertainty
Ca	9998 ± 23 µg/mL (w/v)
	9633 ± 22 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure calcium carbonate ($CaCO_3$). The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3109a, lot #130213**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	175	Pb	<10	Sc	<50	Tl	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	234	Y	<5
Ca	MAJOR	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 K_00018

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M411-500

Potassium (K) – 10,000 µg/mL

Lot #: 1137797-60

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty
K	10,092 ± 47 µg/mL (w/v)
	9893 ± 46 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.997% pure potassium nitrate (KNO_3). The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3141a, lot #140813**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	MAJOR	Nd	<2	Re	<2	Sr	<10	Y	<5
Ca	<250	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	394	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 7, July 24, 2019

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 Mg_00025

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M311-500

Magnesium (Mg) – 10,000 µg/mL

Lot #: 1303817-6

Matrix: 4% HNO_3

Element	Certified Concentration & Uncertainty
Mg	10,060 ± 21 µg/mL (w/v)
	9544 ± 20 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure magnesium nitrate [$Mg(NO_3)_2$]. The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3131a, lot #140110**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	9	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	MAJOR	Pb	11	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	11	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	7	Pr	<2	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	232	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	7	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	<10	Y	<5
Ca	568	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	9	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 Na SS_00006

Certificate of Analysis

Product Description: Sodium

Product Number: **S1-Na-10000x100**

Lot Number: **2209019-100ESI**

Matrix: 1% HNO3

Density: 1.028 g/mL ± 0.002 g/mL @ 21.5°C ± 0.3°C

Certified Value:

Element	µg/mL	SRM ID
Na	10000 ± 30	3152a

The Certified Value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.
* Refer to Traceability Information, Section 4

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot via ICP-OES/ICP-MS analysis. The values are reported in µg/L.

Ag	<0.1	Cu	<2	Li	<2	Rb	<0.1	Th	<0.1
Al	<10	Dy	<0.1	Lu	<0.1	Re	<0.1	Ti	<0.1
As	<0.3	Er	<0.1	Mg	<0.5	Rh	<0.1	Tl	<0.1
Au	<0.1	Eu	<0.1	Mn	<0.3	Ru	<0.1	Tm	<0.1
B	75	Fe	<5	Mo	<2	Sb	<0.1	U	<0.3
Ba	<0.1	Ga	<0.1	Na	M	Sc	<0.1	V	<0.3
Be	<0.1	Gd	<0.1	Nb	<0.1	Se	<0.5	W	<0.1
Bi	<0.1	Ge	<0.1	Nd	<0.1	Si	<350	Y	<0.1
Ca	<5	Hf	<0.1	Ni	<0.1	Sm	<0.1	Yb	<0.1
Cd	<0.1	Ho	<0.1	Os	<0.1	Sn	<3	Zn	<0.1
Ce	<0.1	In	<0.1	Pb	<3	Sr	<0.1	Zr	<0.1
Co	<0.3	Ir	<0.1	Pd	<0.1	Ta	<0.1		
Cr	<0.3	K	<5	Pr	<0.1	Tb	<0.1		
Cs	<2	La	<0.1	Pt	<0.1	Te	<0.1		

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: October 2022

Expiration Date: April 30, 2024

Certificate Issue Date: April 25, 2022

Chris Ramsgard, Product Manager Standard Solutions

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Email: esi@icpms.com | Web: www.icpms.com

11/27/2023
7:19 PM

Preparation Information:

This standard is prepared using **99.999%** pure **Sodium Carbonate** which was purchased from a qualified vendor per ISO 9001 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. Stability of this product is based upon rigorous short-term and long-term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If, during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO 17034 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

1. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in 'NIST Weights and Measures Measurement Assurance Program' with a certificate of measurement traceability to NIST primary standards. The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.
2. **Volumetric Device**
   The calibrations of volumetric vessels are verified using the ASTM method E542.
3. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.
4. **Calibration Standards**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not available, a second source standard or independent lot is used.

Accreditation:

This product has been manufactured by an ISO 9001 registered and ISO/IEC 17025 and ISO 17034 accredited laboratory

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: ESI products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from ESI.

Reagent

10000 Na_00090

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: 4400-10M521-500

Sodium (Na) – 10,000 µg/mL

Lot #: 1263195-2

Matrix: 3% HNO_3

Element	Certified Concentration & Uncertainty
Na	10,055 ± 29 µg/mL (w/v)
	9763 ± 28 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.997% pure sodium carbonate (Na_2CO_3). The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3152a, lot #200413**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	<5	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	<2	Si	<1000	Tm	<2
B	57	Dy	<2	In	nd	Na	MAJOR	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	8	W	<5
Bi	<2	Eu	<2	K	<250	Nd	<2	Re	<2	Sr	<10	Y	80
Ca	<250	Fe	<100	La	<5	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	36	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	<2	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

February 28, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

10000 Th_00027

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous RM

Thorium (Th) – 10,000 µg/mL

Matrix: 3% HNO_3

7084654
ID: 10000 Th_00027
Exp:09/24/23 Prpd:LRD Opn:03/07/22
10,000 Th CPI

Product #: S4400-10M591

Lot #: 1161822-1

Element	Certified Concentration & Uncertainty
Th	9971 ± 49 µg/mL (w/v)
	9064 ± 44 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (RM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to, **ISO 17034**, **ISO/IEC 17025** and **ISO 9001**. This RM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using pure thorium nitrate [$Th(NO_3)_4$]. The solution was diluted with filtered (0.22um), 18 M-ohm water and stabilized with the appropriate high-purity acid as indicated in the listed matrix. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable method against an alternate lot as NIST SRM is not available. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Co	<10	Ge	<5	Lu	<2	P	<1000	Sb	<5	Te	<10
Al	<20	Cs	<5	Hf	<2	Mg	<50	Pb	<10	Sc	<50	Ti	<20
As	<20	Cr	7	Hg	<5	Mn	<10	Pd	<5	Se	<20	Tl	<5
Au	<5	Cu	<10	Ho	<2	Mo	<5	Pr	5	Si	<1000	Tm	<2
B	<50	Dy	<2	In	nd	Na	<250	Pt	<5	Sm	<2	V	<10
Ba	<10	Er	<2	Ir	<2	Nb	<5	Rb	<5	Sn	<5	W	<5
Bi	<2	Eu	<2	K	<250	Nd	15	Re	<2	Sr	<10	Y	<5
Ca	<250	Fe	<100	La	17	Ni	<20	Rh	<5	Ta	<5	Yb	<2
Cd	<5	Ga	<5	Li	<20	Os	<5	Ru	<5	Tb	<5	Zn	<20
Ce	31	Gd	<2										

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 24, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034:2016 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025:2017 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001:2015 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

Reagent

CAL STD 1_00002

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

ICP ICPMS CAL Mix # 1

7043158
ID: ICP CAL STD 1_00013
Exp: 06/27/23 Prpd: LRD
ICP CAL STD 1 PRIMARY

Product #: TA-CAL1

Lot #: 1148545-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	99.98 ± 0.50 mg/L	Li	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.1 ± 0.5 mg/L	Sn	100.1 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	99.98 ± 0.50 mg/L
Cd	100.1 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.1 ± 0.5 mg/L
Co	99.96 ± 0.50 mg/L	Pb	99.96 ± 0.50 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	99.91 ± 0.50 mg/L	Sb	100.1 ± 0.5 mg/L	V	99.98 ± 0.50 mg/L
Cu	99.96 ± 0.50 mg/L	Se	99.97 ± 0.50 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
As	992330R	Li	170238	Si	1004988
Ba	994427	Mn	985946	Sn	1031164
Be	992601	Mo	1086465	Sr	1051374
Cd	173172	Ni	1070210R	Ti	984754
Co	983064	Pb	983061	Tl	1059794
Cr	1099019	Sb	660984R	V	154977
Cu	1140336R	Se	993619		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

December 27, 2021
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Safety Data Sheet (SDS).

:o be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35.
ɜ analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of
ɲeity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing
:ainties.

rnational for further information about this material.

ɔared under a quality management system that is registered/accredited to the following:
Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of

ıdditional requirements specified in ISO Guide 31 and ISO Guide 35
ɜl Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and

ment Systems, Certificate Registration No. 56 100 19560101 – Requirements

T SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Hf	3122	-	S	3154	2770
Hg	3133	3133	Sb	3102a	3102a
Ho	3123a	-	Sc	3148a	3148a
In	3124a	3124a	Se	3149	3149
K	3141a	3141a	Si	3150	-
La	3127a	3127a	Sm	3147a	-
Li	3129a	3129a	Sn	3161a	-
Lu	3130a	-	SO_4^{-2}	3181	-
Mg	3131a	3131a	Sr	3153a	3153a
Mn	3132	3132	Ta	3155	-
Mo	3134	3134	Tb	3157a	-
Na	3152a	-	Te	3156	-
Nb	3137	-	Th	-	-
Nd	3135a	-	Ti	3162a	3162a
Ni	3136	-	Tl	3158	3158
NO_3^-	3185	-	Tm	3160a	-
P	3139a	3139a	U	3164	-
Pb	3128	-	V	3165	-
Pd	3138	-	W	3163	3163

Reagent

CALSTD-1_00002

CPI INTERNATIONAL

7150070
ID: CALSTD-1_00002
Exp:08/08/23 Prpd:LMT Opn:04/18/22
ICP-MS Cal Std 1 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1

ICP ICPMS CAL Mix # 1

Lot #: 1148545-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	99.98 ± 0.50 mg/L	Li	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.1 ± 0.5 mg/L	Sn	100.1 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	99.98 ± 0.50 mg/L
Cd	100.1 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.1 ± 0.5 mg/L
Co	99.96 ± 0.50 mg/L	Pb	99.96 ± 0.50 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	99.91 ± 0.50 mg/L	Sb	100.1 ± 0.5 mg/L	V	99.98 ± 0.50 mg/L
Cu	99.96 ± 0.50 mg/L	Se	99.97 ± 0.50 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
As	992330R	Li	170238	Si	1004988
Ba	994427	Mn	985946	Sn	1031164
Be	992601	Mo	1086465	Sr	1051374
Cd	173172	Ni	1070210R	Ti	984754
Co	983064	Pb	983061	Tl	1059794
Cr	1099019	Sb	660984R	V	154977
Cu	1140336R	Se	993619		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

February 8, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br-	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl-	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

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Reagent

CALSTD-3_00001

7544723
ID: CALSTD-3_00001
Exp:05/30/24 Prpd:LMT Opn:01/10/23
ICP-MS Cal Std 3 CPI rev

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL3

ICP ICPMS CAL Mix # 3

Lot #: 1285834-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
P	1000 ± 5 mg/L	U	100.0 ± 0.5 mg/L
S	1000 ± 5 mg/L	W	100.0 ± 0.5 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #
P	1225600	U	AR19-22UX
S	1207779	W	1130700

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 30, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Santa Rosa, CA 95403 P: 800.878.7654
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Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

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Ag	3151	-	Hf	3122	-	S	3154	2770
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As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

Cl ICV Std_00006

ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Chloride
Catalog Number:	047-125mL, 988-500mL
Lot No.	601021m
Starting Material:	Sodium Chloride (NaCl)
Matrix:	18 megohm deionized water
Density:	1.0005 ± 0.0003 g/mL 19.9 °C and 750 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	November 20, 2021
Expiration Date:	October 29, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Chloride	1000	1.20	3182	95.3

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1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.02

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Reagent

IC BR ICV_00024

RICCA CHEMICAL COMPANY®

448 West Fork Dr
Arlington, TX 76012
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 1204B86 **Product Number:** 1180

Manufacture Date: APR 26, 2022

Expiration Date: OCT 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Bromide	7647-15-6	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br^-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br^-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1180-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Jason Thomas (04/26/2022)

Operations Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

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Batesville, IN 47006
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Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 4110L50 **Product Number:** 1180

Manufacture Date: OCT 22, 2021
Expiration Date: APR 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Bromide	7647-15-6	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1180-16	500 mL natural poly	18 months
1180-4	120 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Brandy Bates

Brandy Bates (10/22/2021)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

Reagent

IC BR ICV_00028

ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Bromide
Catalog Number:	046-125mL, 987-500mL
Lot No.	110422m
Starting Material:	Potassium Bromide (KBr)
Matrix:	18 megohm deionized water
Density:	0.9997 ± 0.0005 g/mL 21.9 °C and 753 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	April 26, 2022
Expiration Date:	April 7, 2024
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Bromide	1000	0.927	3184	98.2

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1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size:** ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.02

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Reagent

IC CL cal_00076

spex certiprep

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: AS-CL9-2X **Lot No.** 5-146CL-2X

Description: 1000 µg/mL Chloride

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3182*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Sodium Chloride, Lot# 09141H. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 999 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 1000 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.01	NO_3^-	<0.06
F^-	<0.05	$PO4^{-3}$	<0.03
NO_2^-	<0.05	$SO4^{-2}$	<0.08

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: Nov--2022 Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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11/27/2023
7:19 PM

Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO/IEC 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
- ISO Guide 35: Reference Materials – Guidance for characterization and assessment of homogeneity and stability
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:
All analytes and matrix materials are obtained and verified by Spex CertiPrep from pre-qualified vendors as per ISO 9001, ISO/IEC 17025 and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of Spex CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report, Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Legal Notice:
Spex CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against Spex CertiPrep, LLC. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall Spex CertiPrep, LLC. be liable for any loss of profits or any incidental, special, or consequential damages.

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Accredited to 17025 & 17034 ISO Certified to 9001

Reagent

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Certificate of Analysis

Fluoride Standard, 1000 ppm F⁻

Lot Number: 2207H13 **Product Number:** 3173

Manufacture Date: JUL 29, 2022
Expiration Date: JAN 2024

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.
The concentration is confirmed by Fluoride ISE and is certified traceable to NIST SRM 2203.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Fluoride	7681-49-4	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Fluoride (F)	995-1005 ppm	1005 ppm

Specification	Reference
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5542)
Fluoride Stock Solution (1.00 mL = 1.00 mg F-)	EPA (SW-846) (9056)
Fluoride Calibration Stock Solution (1,000 mg/L F-)	EPA (SW-846) (9214)
Stock Solution, 1.0 mL = 1.0 mg F	EPA (340.3)
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5996)
Fluoride Stock Solution (1.00 mL = 1.00 mg F?)	ASTM (D 4327)
Fluoride Stock Standard Solution (1 mg of F in 1 mL)	ACS (N/A)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
3173-16	500 mL natural poly	18 months
3173-32	1 L natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (07/29/2022)
Quality Control
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Reagent

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Certificate of Analysis

Nitrate Nitrogen Standard, 1000 ppm N (4427 ppm NO_3^-)

Lot Number: 2205B73 **Product Number:** 5459

Manufacture Date: MAY 11, 2022
Expiration Date: NOV 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrate	7757-79-1	High Purity
Chloroform	67-66-3	

Test	Specification	Result
Appearance	Colorless liquid	Passed
Nitrogen (N)	995-1005 ppm	1000 ppm

Specification	Reference
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 A)
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 B)
Stock Nitrate Solution: 1 mL = 1.0 mg NO3-N	EPA (353.2)
Stock Nitrate Solution: 1.0 mL = 1.00 mg NO3-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5459-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (05/11/2022)
Quality Control

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Reagent

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Certificate of Analysis

Nitrite Nitrogen Standard, 1000 ppm N (3285 ppm NO_2^-)

Lot Number: 2212826 **Product Number:** 5461

Manufacture Date: DEC 08, 2022
Expiration Date: JUN 2023

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrite	7758-09-0	ACS
Chloroform	67-66-3	

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Permanganate)	995-1005 ppm N	1005 ppm N	8040

Specification	Reference
Nitrite Solution, Stock (1.0 mL = 1.0 mg NO2-N)	ASTM (D 3867 A)
Nitrite Solution, Stock (1.0 mL = 1.0 mg NO2-N)	ASTM (D 3867 B)
Stock Nitrite Solution: 1 mL = 1.0 mg NO2-N	EPA (353.2)
Stock Nitrite Solution: 1.0 mL = 1.00 mg NO2-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5461-16	500 mL natural poly	6 months
5461-4	120 mL natural poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Myrlande Gilles (12/08/2022)
Quality Control
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Reagent

IC NO2 ICV_00022

ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Nitrite as N (NO_2-N)
Catalog Number:	053-125mL, 990-500mL
Lot No.	261221m
Starting Material:	Sodium Nitrite ($NaNO_2$)
Matrix:	18 megohm deionized water
Density:	1.0022 ± 0.0005 g/mL 21.3 °C and 740 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	December 21, 2021
Expiration Date:	December 14, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Nitrite as N (NO_2-N)	1000	0.948	-	-

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Certified Reference Material

▪ Certificate of Analysis ▪

1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.02

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Reagent

IC NO3 ICV_00019

ERA
A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Nitrate as N (NO_3-N)
Catalog Number:	052-125mL, 991-500mL
Lot No.	011221m
Starting Material:	Potassium Nitrate (KNO_3)
Matrix:	18 megohm deionized water
Density:	1.0029 ± 0.0005 g/mL 20.2 °C and 749 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	December 21, 2021
Expiration Date:	December 1, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Nitrate as N (NO_3-N)	1000	1.57	3185	101

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1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability.** This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #15290

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #15390

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Reagent

IC P04 cal_00030

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Certificate of Analysis

Phosphorus AA Standard, 1000 ppm P in H_2O

Lot Number: 4208152 **Product Number:** AP1KW

Manufacture Date: AUG 02, 2022
Expiration Date: JUL 2024

This is a single element solution that was prepared volumetrically to contain the certified value reported. The uncertainty associated with the certified value is the sum of the estimated errors due to the purity of the raw material, the volumetric preparation of the solution, and transpiration of the solution through the container wall.
The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3139.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Ammonium Dihydrogen Phosphate	7722-76-1	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Phosphorus (P)	995-1005 ppm	1000 ppm	3139

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
AP1KW-500	500 mL natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Paul Brandon (08/02/2022)
Production Manager
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Reagent

IC SO4 Cal_00008

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Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: AS-SO49-2X **Lot No.** 5-160SO4-2X

Description: 1000 µg/mL Sulfate

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3181*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Potassium Sulfate, Lot# AN07201A. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 999 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as BaSO4.

Instrumental Analysis by Ion Chromatography: 1000 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.01	NO_2^-	<0.01
Cl^-	<0.03	NO_3^-	<0.02
F^-	<0.003	$PO4^{-3}$	<0.08

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: JUL -- 2022 Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO/IEC 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
- ISO Guide 35: Reference Materials – Guidance for characterization and assessment of homogeneity and stability
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:
All analytes and matrix materials are obtained and verified by Spex CertiPrep from pre-qualified vendors as per ISO 9001, ISO/IEC 17025 and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of Spex CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:
- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report, Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Legal Notice:
Spex CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against Spex CertiPrep, LLC. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall Spex CertiPrep, LLC. be liable for any loss of profits or any incidental, special, or consequential damages.

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Reagent

IC SO4 ICV_00024

ERA
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Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Sulfate
Catalog Number:	062-125mL, 995-500mL
Lot No.	021221m
Starting Material:	Potassium Sulfate (K_2SO_4)
Matrix:	18 megohm deionized water
Density:	1.0002 ± 0.0005 g/mL 20.4 °C and 748 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	December 22, 2021
Expiration Date:	December 1, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Sulfate	1000	0.994	3181	97.5

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1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability.** This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #539.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #539.02

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-67795-A
Lot Number:	T2-MEB722098
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea:

Arsenic, Barium,
Beryllium, Cadmium,
Cobalt, Chromium,
Copper, Lithium,
Manganese, Nickel,
Lead, Selenium,
Strontium, Thallium,
Vanadium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**100.0 ± 0.6 µg/mL**	**Barium, Ba**	**100.0 ± 0.4 µg/mL**
Beryllium, Be	**100.1 ± 0.5 µg/mL**	**Cadmium, Cd**	**100.0 ± 0.4 µg/mL**
Chromium, Cr	**100.0 ± 0.5 µg/mL**	**Cobalt, Co**	**100.0 ± 0.4 µg/mL**
Copper, Cu	**100.0 ± 0.4 µg/mL**	**Lead, Pb**	**100.0 ± 0.6 µg/mL**
Lithium, Li	**100.0 ± 0.4 µg/mL**	**Manganese, Mn**	**100.0 ± 0.5 µg/mL**
Nickel, Ni	**100.0 ± 0.6 µg/mL**	**Selenium, Se**	**100.0 ± 0.7 µg/mL**
Strontium, Sr	**100.0 ± 0.4 µg/mL**	**Thallium, Tl**	**100.0 ± 0.6 µg/mL**
Vanadium, V	**100.0 ± 0.4 µg/mL**		

Density: 1.031 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	traceable to 3103a	R2-AS691113
Ba	ICP Assay	3104a	140909
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
V	IC Assay	3165	160906
V	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 28, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 28, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

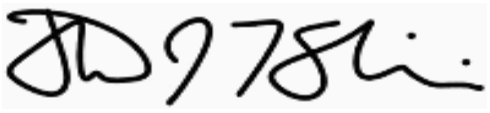
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-5065
Lot Number:	T2-MEB722099
Matrix:	5% (v/v) HNO3 0.4% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon, 100 µg/mL ea: Tin, Titanium, Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**100.0 ± 0.8 µg/mL**	**Molybdenum, Mo**	**100.0 ± 0.7 µg/mL**
Silicon, Si	**1 000 ± 6 µg/mL**	**Tin, Sn**	**100.0 ± 0.7 µg/mL**
Titanium, Ti	**100.0 ± 0.7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 28, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 28, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

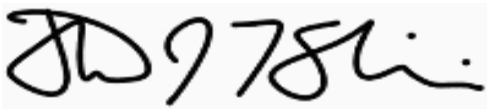
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MS CALSTD-2_00103

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL2

ICP ICPMS CAL Mix # 2

7361018
ID: MS CALSTD-2_00103
Exp:01/26/24 Prpd: Opn:09/12/22
MS CAL STD 2

Lot #: 1208136-1

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	2000 ± 10 mg/L	Fe	2000 ± 10 mg/L	Mg	2000 ± 10 mg/L
Ca	2000 ± 10 mg/L	K	2000 ± 10 mg/L	Na	2000 ± 10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1077624	Fe	1114543	Mg	1075231
Ca	1121798	K	1156013	Na	1122654

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

July 26, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br^-	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl^-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F^-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

MS CALSTD-5a_00001

CPI INTERNATIONAL

Certificate of Analysis

Custom Standard

Catalog Number: TA-CM-NOV21-DEN2 (Soln A)
Lot Number: 220527
Manufacture Date: 06/10/22

Expiration: 12/31/2023
Matrix: 2% HNO3
Hazards: Irritant, Corrosive

Analyte	Certified Concentration (ppm)
Boron (B)	1000 ± 5.75
Lithium (Li)	100 ± 0.575
Phosphorus (P)	4000 ± 23.0
Silver (Ag)	100 ± 0.575
Strontium (Sr)	100 ± 0.575
Zinc (Zn)	100 ± 0.575

Catalog Number: TA-CM-NOV21-DEN2 (Soln B)
Lot Number: 220527
Manufacture Date: 06/10/22

Expiration: 12/31/2023
Matrix: 2% HNO3
Hazards: Irritant, Corrosive

Analyte	Certified Concentration (ppm)
Thorium (Th)	100 ± 0.575

Packaging, Storage, Instructions For Use

Store at room temperature (15-30°C).

This certified reference material (CRM) is packaged in HDPE as a whole volume ready to use sample. No secondary preparative steps are necessary. Allow to equilibrate to room temperature before use. Small aliquots should be poured out of the bottle rather than directly pipetted out of bottle in order to prevent contamination or premature degradation. This CRM was manufactured by NSI Lab Solutions following quality procedures meeting the requirements of ISO 9001, ISO 17025, and ISO 17034.

Traceability Information

Analyte Source Materials: The highest purity analyte source materials are used in the manufacture of this CRM.

Method: This CRM was verified by ICP.

CPI INTERNATIONAL

Catalog Number: 4400-100113DF06
Lot Number: 220527

Balance: All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.
All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

Thermometer: All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

Glassware: All glassware used in the manufacture of our CRMs is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

Intended Uses

- Calibration of analytical instruments
- Validation of analytical methods
- Preparation of working level reference materials, i.e. "check standards"
- Detection limit studies

Uncertainty

The ± uncertainty associated with the concentration is the expanded manufacturing uncertainty at 95% confidence interval (CI) with K=2.

Homogeneity

This CRM was thoroughly mixed in production and is guaranteed homogeneous.

Ewart Morris

Ewart Morris, Inorganics Technical Manager

Mark Hammersla

Mark Hammersla, President

Reagent

MS ICSA STOCK_00049

CPI INTERNATIONAL

7284249
ID: MS ICSA STOCK_00049
Exp:12/13/23 Prpd:LMT Opn:07/14/22
ICP-MS ICS-0A STOCK SOLU

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICPMS-ICSA

ICPMS ICSA Mix

Lot #: 1208135-1

Matrix: 2% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Na	1000 ± 5 mg/L
C	1997 ± 10 mg/L	K	1000 ± 5 mg/L	P	1000 ± 5 mg/L
Ca	999.6 ± 5.0 mg/L	Mg	1000 ± 5 mg/L	S	1000 ± 5 mg/L
Cl	9999 ± 50 mg/L	Mo	20.01 ± 0.10 mg/L	Ti	19.98 ± 0.10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1077624	Fe	1114543	Na	1122654
C	P12G045	K	1156013	P	1107349
Ca	1121798	Mg	1075231	S	1154886
Cl	213900	Mo	1053794	Ti	1095555

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Trace Concentrations (µg/L)

Ag	<0.5	Co	2	Ge	<0.5	Lu	<0.2	P	MAJOR	Sb	21	Te	<1
Al	MAJOR	Cs	<0.5	Hf	<0.2	Mg	MAJOR	Pb	71	Sc	<5	Ti	MAJOR
As	<2	Cr	3	Hg	<0.5	Mn	<1	Pd	2	Se	38	Tl	<0.5
Au	44	Cu	<1	Ho	<0.2	Mo	MAJOR	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	MAJOR	Pt	<0.5	Sm	<0.2	V	<1
Ba	27	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	10	Sn	4	W	2
Bi	2	Eu	<0.2	K	MAJOR	Nd	<0.2	Re	8	Sr	21	Y	7
Ca	MAJOR	Fe	MAJOR	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	10	Ga	33	Li	18	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

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F: 707.545.7901

Europe
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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

June 13, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

MS ICSA STOCK_00051

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

ICPMS ICSA Mix

7510937

ID: MS ICSA STOCK_00051
Exp:04/20/24 Prpd:LRD Opn:12/13/22
ICP-MS ICS-0A STOCK SOLUT

Product #: TA-ICPMS-ICSA

Lot #: 1267033-1

Matrix: 2% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Na	1000 ± 5 mg/L
C	2000 ± 10 mg/L	K	1000 ± 5 mg/L	P	1000 ± 5 mg/L
Ca	1000 ± 5 mg/L	Mg	1000 ± 5 mg/L	S	1000 ± 5 mg/L
Cl	10,000 ± 50 mg/L	Mo	19.99 ± 0.10 mg/L	Ti	20.00 ± 0.10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1249289	Fe	1249266	Na	1245609
C	R11H037	K	1156013	P	1225600
Ca	1232112	Mg	1075231	S	1207779
Cl	220348	Mo	1207790	Ti	1094307

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	MAJOR	Sb	<0.5	Te	<1
Al	MAJOR	Cs	<0.5	Hf	<0.2	Mg	MAJOR	Pb	<1	Sc	<5	Ti	MAJOR
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	3	Cu	<1	Ho	<0.2	Mo	MAJOR	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	MAJOR	Pt	<0.5	Sm	<0.2	V	<1
Ba	22	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	3	W	<0.5
Bi	<0.2	Eu	<0.2	K	MAJOR	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	MAJOR	Fe	MAJOR	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	18	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

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Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

October 20, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

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    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

MS ICSA STOCK_00052

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	S2-MEB706044
Matrix:	1% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chloride,
	2 000 µg/mL ea: Carbon,
	1 000 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	20 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 3 µg/mL**	**Calcium, Ca**	**1 000 ± 4 µg/mL**
Carbon, C	**2 001 ± 4 µg/mL**	**Chloride, Cl**	**10 000.0 ± 50.0 µg/mL**
Iron, Fe	**1 000 ± 4 µg/mL**	**Magnesium, Mg**	**1 000 ± 4 µg/mL**
Molybdenum, Mo	**20.01 ± 0.12 µg/mL**	**Phosphorus, P**	**1 000 ± 6 µg/mL**
Potassium, K	**1 000 ± 4 µg/mL**	**Sodium, Na**	**1 000 ± 4 µg/mL**
Sulfur, S	**1 000 ± 4 µg/mL**	**Titanium, Ti**	**20.01 ± 0.14 µg/mL**

Density: 1.031 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000260	O	Cu	<	0.007300	M	La	<	0.000120	M	Pr	<	0.000010	M	Ta		0.000230
s	Al	<		M	Dy	<	0.000360	O	Li		0.002200	M	Pt	<	0.000120	M	Tb	<	0.000040
O	As	<	0.029000	M	Er	<	0.000040	M	Lu	<	0.000010	M	Rb		0.052000	M	Te	<	0.000860
M	Au	<	0.000240	M	Eu	<	0.000010	s	Mg	<		M	Re	<	0.000040	M	Th	<	0.000060
M	B	<	0.007400	s	Fe	<		M	Mn		0.002400	M	Rh	<	0.000080	s	Ti	<	
M	Ba		0.004600	M	Ga		0.026000	s	Mo	<		M	Ru	<	0.000290	M	Tl	<	0.000050
M	Be	<	0.000070	M	Gd	<	0.000100	s	Na	<		s	S	<		M	Tm	<	0.000010
M	Bi	<	0.000220	M	Ge	<	0.003100	M	Nb	<	0.000100	M	Sb		0.000540	M	U		0.000180
s	Ca	<		M	Hf	<	0.000100	M	Nd	<	0.000040	O	Sc	<	0.000520	O	V	<	0.002900
O	Cd	<	0.001100	M	Hg	<	0.000260	O	Ni		0.002500	M	Se	<	0.002400	M	W		0.001600
M	Ce	<	0.000220	M	Ho	<	0.000100	M	Os	<	0.000020	M	Si	<	0.024000	M	Y	<	0.000120
M	Co		0.002200	M	In	<	0.000260	s	P	<		M	Sm	<	0.000080	M	Yb	<	0.000020
M	Cr		0.020000	M	Ir	<	0.000010	M	Pb		0.000480	M	Sn		0.000430	M	Zn		0.005600
M	Cs		0.000700	s	K	<		M	Pd	<	0.000060	O	Sr		0.005800	M	Zr		0.000960

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 06, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 06, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

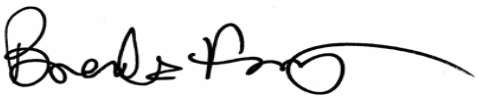
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician



Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MS ICVMIX--5_00002

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-67385
Lot Number:	T2-MEB721663
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 000 µg/mL ea: Phosphorus, Boron, 100 µg/mL ea: Silver, Lithium, Strontium, Thorium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 6 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Lithium, Li	**100.0 ± 0.4 µg/mL**	**Magnesium, Mg**	**5 000 ± 21 µg/mL**
Phosphorus, P	**1 000 ± 5 µg/mL**	**Potassium, K**	**5 000 ± 22 µg/mL**
Silver, Ag	**100.0 ± 0.4 µg/mL**	**Sodium, Na**	**5 000 ± 22 µg/mL**
Strontium, Sr	**100.0 ± 0.4 µg/mL**	**Thorium, Th**	**100.0 ± 0.5 µg/mL**
Zinc, Zn	**100.0 ± 0.4 µg/mL**		

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
B	ICP Assay	3107	190605
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 19, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 19, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

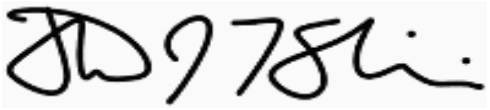
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MS ICVMIX-2_00005

CPI INTERNATIONAL

7129049
ID: MS ICVMIX-2_00005
Exp:05/16/23 Prpd:LMT Opn:04/06/22
ICP-MS ICV Std 2 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL2-SS

ICP ICPMS CAL Mix # 2

Lot #: 1146029-1

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	2000 ± 10 mg/L	Fe	2000 ± 10 mg/L	Mg	2000 ± 10 mg/L
Ca	2000 ± 10 mg/L	K	2000 ± 10 mg/L	Na	2000 ± 10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	AP18-72ALX	Fe	AR18-89FEX	Mg	AQ18-136MGX
Ca	AZ18-49CAX	K	AY18-96KX	Na	AT18-84NAX

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 16, 2021
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
    - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM
Ag	3151	-
Al	3101a	-
As	3103a	3103a
Au	3121	-
B	3107	3107
Ba	3104a	-
Be	3105a	3105a
Bi	3106	3106
Br-	3184	-
Ca	3109a	3109a
Cd	3108	-
Ce	3110	3110
Cl-	3182	1818a
Co	3113	3113
Cr	3112a	-
Cs	3111a	-
Cu	3114	-
Dy	3115a	-
Er	3116a	-
Eu	3117a	-
F-	3183	-
Fe	3126a	-
Ga	3119a	-
Gd	3118a	-
Ge	3120a	-

Analyte	Aq. SRM	MO SRM
Hf	3122	-
Hg	3133	3133
Ho	3123a	-
In	3124a	3124a
K	3141a	3141a
La	3127a	3127a
Li	3129a	3129a
Lu	3130a	-
Mg	3131a	3131a
Mn	3132	3132
Mo	3134	3134
Na	3152a	-
Nb	3137	-
Nd	3135a	-
Ni	3136	-
NO_3^-	3185	-
P	3139a	3139a
Pb	3128	-
Pd	3138	-
PO_4^{-3}	3186	-
Pr	3142a	-
Pt	3140	3140
Rb	3145a	-
Re	3143	-
Rh	3144	3144

Analyte	Aq. SRM	MO SRM
S	3154	2770
Sb	3102a	3102a
Sc	3148a	3148a
Se	3149	3149
Si	3150	-
Sm	3147a	-
Sn	3161a	-
SO_4^{-2}	3181	-
Sr	3153a	3153a
Ta	3155	-
Tb	3157a	-
Te	3156	-
Th	-	-
Ti	3162a	3162a
Tl	3158	3158
Tm	3160a	-
U	3164	-
V	3165	-
W	3163	3163
Y	3167a	3167a
Yb	3166a	-
Zn	3168a	3168a
Zr	3169	3169

Reagent

MS LLCCV_00009

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-67794
Lot Number:	T2-MEB722097
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	30 µg/mL ea: Sodium,
	20 µg/mL ea: Calcium,
	12 µg/mL ea: Potassium,
	10 µg/mL ea: Boron, Phosphorus,
	5 µg/mL ea: Aluminum, Iron, Magnesium,
	1 µg/mL ea: Lithium, Tin, Zinc,
	0.5 µg/mL ea: Selenium, Vanadium, Strontium, Titanium, Arsenic,
	0.2 µg/mL ea: Chromium, Copper, Nickel, Molybdenum, Antimony,
	0.1 µg/mL ea: Lead, Thallium, Uranium, Thorium, Manganese, Silver, Cadmium, Cobalt, Barium, Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	4.997 ± 0.025 µg/mL	Antimony, Sb	0.2001 ± 0.0017 µg/mL
Arsenic, As	0.5003 ± 0.0030 µg/mL	Barium, Ba	0.1000 ± 0.0006 µg/mL
Beryllium, Be	0.1000 ± 0.0008 µg/mL	Boron, B	10.00 ± 0.06 µg/mL
Cadmium, Cd	0.1000 ± 0.0007 µg/mL	Calcium, Ca	20.00 ± 0.09 µg/mL
Chromium, Cr	0.2000 ± 0.0013 µg/mL	Cobalt, Co	0.1000 ± 0.0008 µg/mL
Copper, Cu	0.1998 ± 0.0009 µg/mL	Iron, Fe	4.995 ± 0.026 µg/mL
Lead, Pb	0.1000 ± 0.0007 µg/mL	Lithium, Li	1.000 ± 0.006 µg/mL
Magnesium, Mg	4.998 ± 0.026 µg/mL	Manganese, Mn	0.1000 ± 0.0008 µg/mL
Molybdenum, Mo	0.1998 ± 0.0013 µg/mL	Nickel, Ni	0.2002 ± 0.0010 µg/mL
Phosphorus, P	10.00 ± 0.05 µg/mL	Potassium, K	12.00 ± 0.06 µg/mL
Selenium, Se	0.5001 ± 0.0041 µg/mL	Silver, Ag	0.1000 ± 0.0009 µg/mL
Sodium, Na	29.98 ± 0.13 µg/mL	Strontium, Sr	0.4999 ± 0.0030 µg/mL
Thallium, Tl	0.1000 ± 0.0008 µg/mL	Thorium, Th	0.1000 ± 0.0006 µg/mL
Tin, Sn	1.000 ± 0.007 µg/mL	Titanium, Ti	0.4998 ± 0.0042 µg/mL
Uranium, U	0.1000 ± 0.0008 µg/mL	Vanadium, V	0.4996 ± 0.0029 µg/mL
Zinc, Zn	1.000 ± 0.006 µg/mL		

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Al	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Ba	Calculated		See Sec. 4.2
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Ca	Calculated		See Sec. 4.2
Cd	Calculated		See Sec. 4.2
Co	Calculated		See Sec. 4.2
Cr	Calculated		See Sec. 4.2
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
K	ICP Assay	3141a	140813
K	Calculated		See Sec. 4.2
K	Gravimetric		See Sec. 4.2
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mg	Calculated		See Sec. 4.2
Mn	Calculated		See Sec. 4.2
Mo	Calculated		See Sec. 4.2
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Calculated		See Sec. 4.2
Na	Gravimetric		See Sec. 4.2
Ni	Calculated		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
P	Calculated		See Sec. 4.2
Pb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Se	Calculated		See Sec. 4.2
Sn	Calculated		See Sec. 4.2
Sr	Calculated		See Sec. 4.2
Th	Calculated		See Sec. 4.2
Ti	Calculated		See Sec. 4.2
Tl	Calculated		See Sec. 4.2
U	Calculated		See Sec. 4.2
V	Calculated		See Sec. 4.2
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.24 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 29, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 29, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

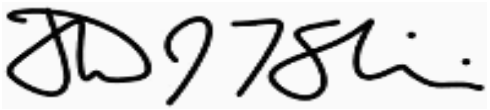
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

mv-30241_00010

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 **Lot No.:** A0180349

Description : 8260A Internal Standard Mix

8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Fluorobenzene **CAS #** 462-06-6 (Lot BCBZ5549) **Purity** 99%	2,500.6 µg/mL	+/- 14.5387 µg/mL +/- 140.2062 µg/mL +/- 143.4868 µg/mL	Gravimetric Unstressed Stressed
2	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-29571) **Purity** 99%	2,500.8 µg/mL	+/- 14.5399 µg/mL +/- 140.2174 µg/mL +/- 143.4983 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-30447) **Purity** 99%	2,500.2 µg/mL	+/- 14.5364 µg/mL +/- 140.1837 µg/mL +/- 143.4639 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Revd 4/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

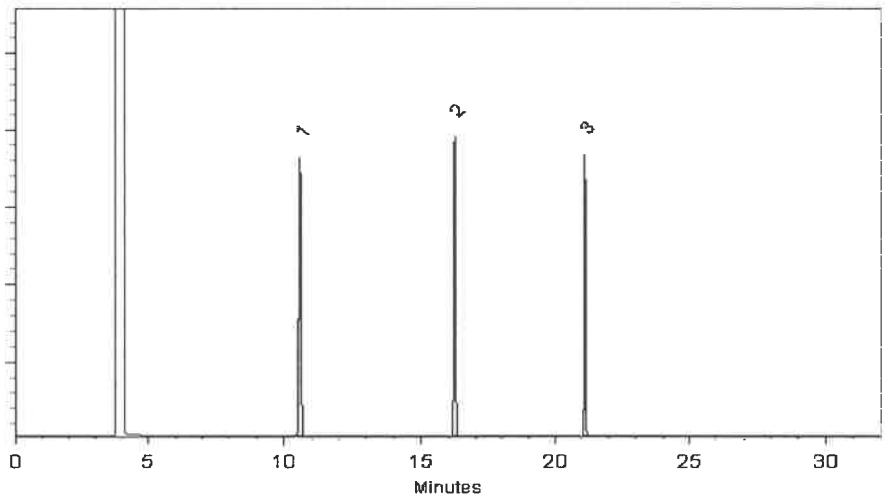
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Riglin - Operations Tech I

Date Mixed: 06-Jan-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 10-Jan-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-30241_00012

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 **Lot No.:** A0185733

Description : 8260A Internal Standard Mix

8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Fluorobenzene **CAS #** 462-06-6 (Lot BCBZ5549) **Purity** 99%	2,504.0 µg/mL	+/- 14.5585 µg/mL +/- 140.3968 µg/mL +/- 143.6819 µg/mL	Gravimetric Unstressed Stressed
2	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-29571) **Purity** 99%	2,508.0 µg/mL	+/- 14.5817 µg/mL +/- 140.6211 µg/mL +/- 143.9114 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-30447) **Purity** 99%	2,500.6 µg/mL	+/- 14.5387 µg/mL +/- 140.2062 µg/mL +/- 143.4868 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Rcvd 8/11/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

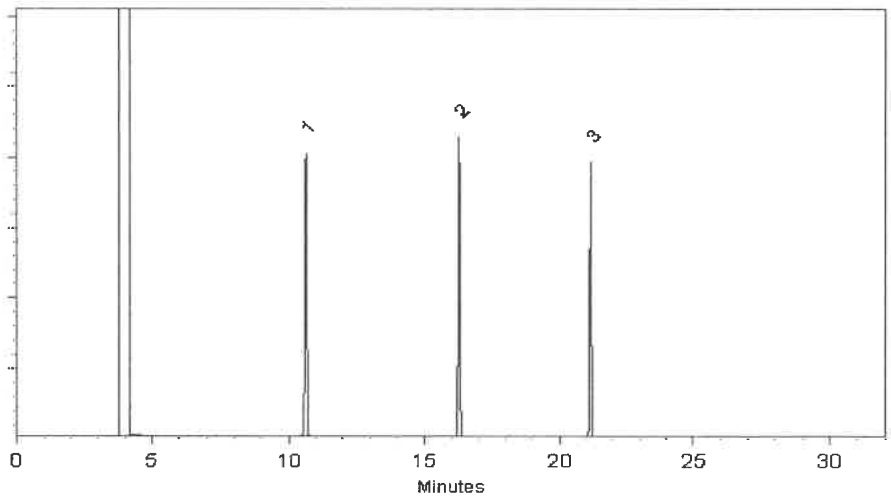
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Josh McCloskey - Operations Technician I

Date Mixed: 26-May-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 31-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-567650_00030

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0172587

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500µg/mL, P&T Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2026 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 012021) **Purity** 99%	2,510.9 µg/mL	+/- 14.5983 µg/mL +/- 140.7809 µg/mL +/- 144.0750 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-29377) **Purity** 99%	2,518.0 µg/mL	+/- 14.6399 µg/mL +/- 141.1818 µg/mL +/- 144.4852 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-31750) **Purity** 99%	2,500.4 µg/mL	+/- 14.5375 µg/mL +/- 140.1949 µg/mL +/- 143.4753 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KO) **Purity** 99%	2,520.9 µg/mL	+/- 14.6567 µg/mL +/- 141.3444 µg/mL +/- 144.6516 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Rcvd 4/5/23

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

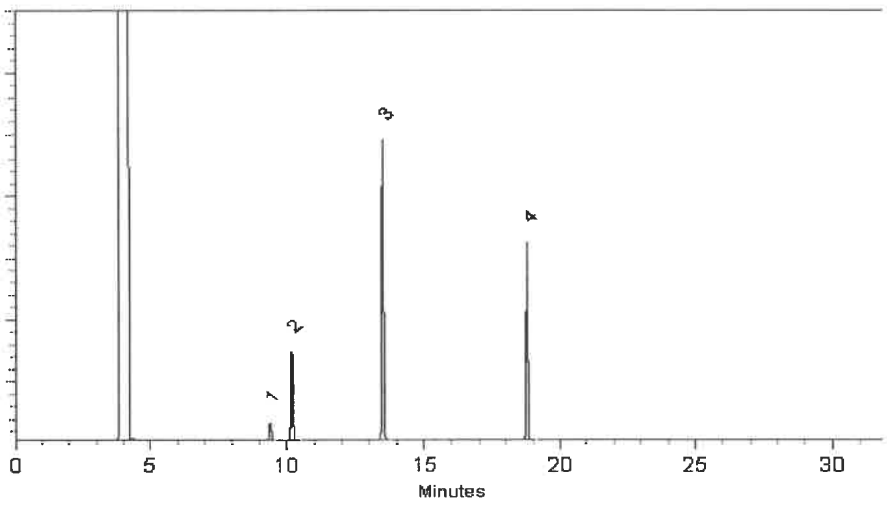
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Sam Moodler - Operations Tech I

Date Mixed: 19-May-2021 **Balance:** B707717271

Alexis Shelow - Operations Tech I

Date Passed: 21-May-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

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MV-568720.sec_00038

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720.SEC **Lot No.:** A0181935

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2023 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acrolein		19,756.8 µg/mL	+/- 115.6804	µg/mL	Gravimetric
	CAS # 107-02-8.SEC	(Lot D8402600-1024)		+/- 394.6881	µg/mL	Unstressed
	Purity 98%			+/- 885.4724	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Rcvd 6/13/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

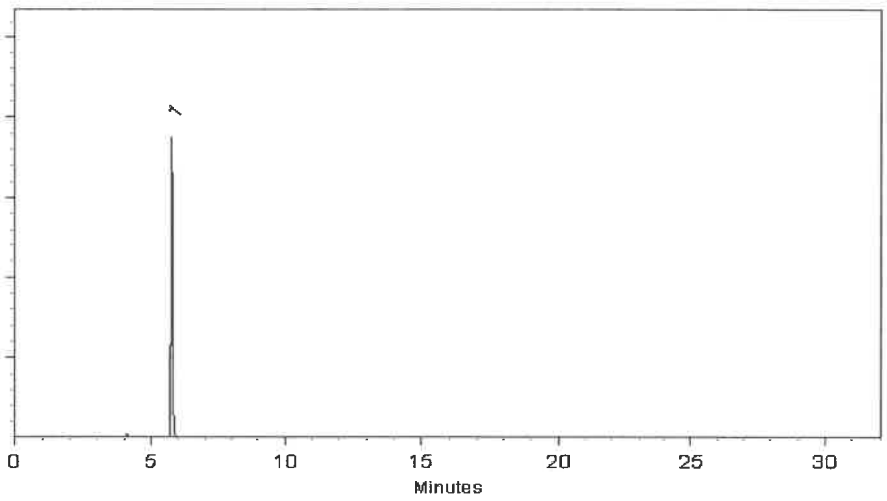
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 16-Feb-2022 **Balance:** 1128342314

Feng-Yun Lo - QC Analyst

Date Passed: 24-Feb-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-568720_00045

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0187378

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acrolein	19,750.7 µg/mL	+/- 115.6445 µg/mL	Gravimetric
	CAS # 107-02-8 (Lot RD220420)		+/- 394.5655 µg/mL	Unstressed
	Purity 99%		+/- 885.1975 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

11/1/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

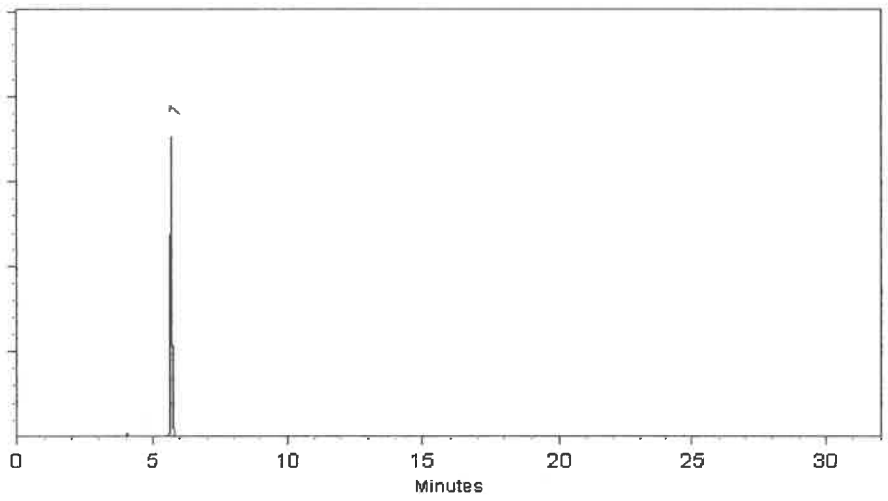
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brittany Federinko - Operations Tech I

Date Mixed: 15-Jul-2022 **Balance:** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 26-Jul-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

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MV-569721.sec_00009

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Recd 5/3/22

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.SEC **Lot No.:** A0178490

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot S25F025)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%		+/- 756.2625 µg/mL	Stressed
2	2-Butanone (MEK)	12,502.0 µg/mL	+/- 73.2020 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RGZ2A)		+/- 754.3508 µg/mL	Unstressed
	Purity 99%		+/- 756.1415 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,508.7 µg/mL	+/- 73.2410 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 754.7530 µg/mL	Unstressed
	Purity 99%		+/- 756.5447 µg/mL	Stressed
4	2-Hexanone	12,507.3 µg/mL	+/- 73.2332 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot Y3TUO)		+/- 754.6726 µg/mL	Unstressed
	Purity 99%		+/- 756.4641 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

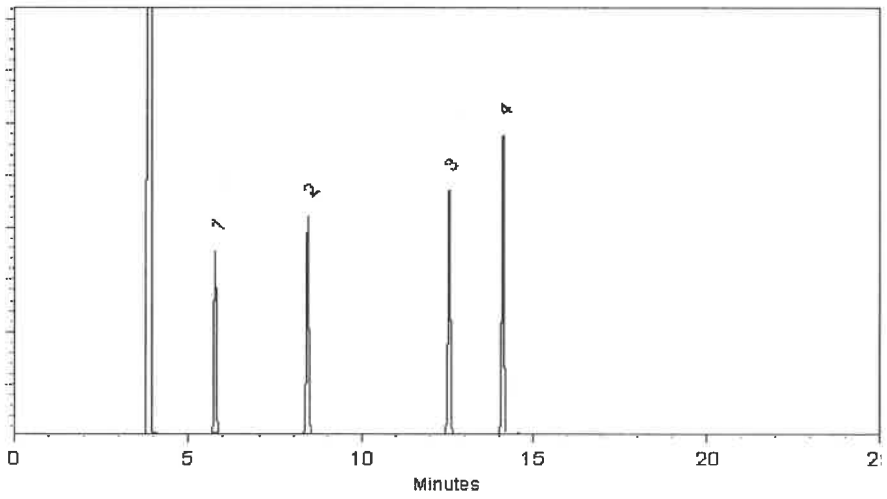
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jeff Rhoades - Mix Technician

Date Mixed: 15-Nov-2021 **Balance:** 1127510105

Clara Windle - Operations Technician I

Date Passed: 16-Nov-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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Testing Laboratory
Certificate #3222.02

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0186508

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,514.5 µg/mL	+/- 73.2751 µg/mL	Gravimetric
	CAS # 67-64-1 (Lot MKCQ7914)		+/- 755.1050 µg/mL	Unstressed
	Purity 99%		+/- 756.8975 µg/mL	Stressed
2	2-Butanone (MEK)	12,543.5 µg/mL	+/- 73.4450 µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBN2844)		+/- 756.8548 µg/mL	Unstressed
	Purity 99%		+/- 758.6515 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,528.5 µg/mL	+/- 73.3571 µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBN3601)		+/- 755.9498 µg/mL	Unstressed
	Purity 99%		+/- 757.7443 µg/mL	Stressed
4	2-Hexanone	12,528.0 µg/mL	+/- 73.3542 µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKCQ6663)		+/- 755.9196 µg/mL	Unstressed
	Purity 99%		+/- 757.7140 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

12/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

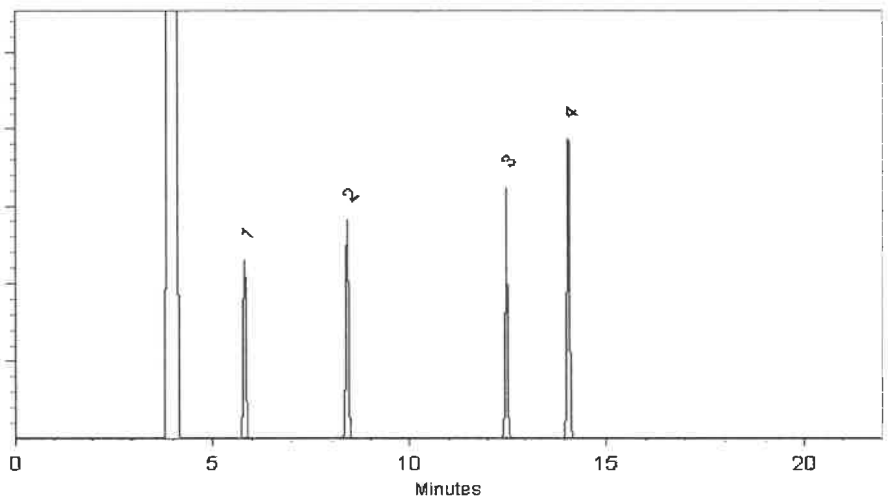
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 21-Jun-2022 **Balance:** B707717271

Marlina Cowan – Operations Tech II ARM QC

Date Passed: 23-Jun-2022

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MV-569722.sec_00016

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0186584

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,496.8 µg/mL	+/- 18.9786 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 27545)		+/- 140.5231 µg/mL	Unstressed
	Purity 99%		+/- 143.7866 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.1 µg/mL	+/- 22.2077 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.3425 µg/mL	Unstressed
	Purity 99%		+/- 144.6037 µg/mL	Stressed
3	Vinyl chloride	2,500.0 µg/mL	+/- 23.4271 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.3687 µg/mL	Unstressed
	Purity 99%		+/- 144.6213 µg/mL	Stressed
4	1,3-Butadiene	2,496.8 µg/mL	+/- 21.9304 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 26996)		+/- 140.9532 µg/mL	Unstressed
	Purity 99%		+/- 144.2070 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,506.4 µg/mL	+/- 22.1918 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot 00017022)		+/- 141.5223 µg/mL	Unstressed
	Purity 99%		+/- 144.7879 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,503.4 µg/mL	+/- 22.5874 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 141.4203 µg/mL	Unstressed
	Purity 98%		+/- 144.6805 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.0 µg/mL	+/- 14.6714 µg/mL	Gravimetric
	CAS # 75-43-4 * (Lot 12841600)		+/- 140.1867 µg/mL	Unstressed
	Purity 99%		+/- 143.4662 µg/mL	Stressed

11/1/22

8	Trichlorofluoromethane (CFC-11)		2,497.2	µg/mL	+/-	20.5278	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 00010739)			+/-	140.7628	µg/mL	Unstressed
	Purity 99%				+/-	144.0218	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

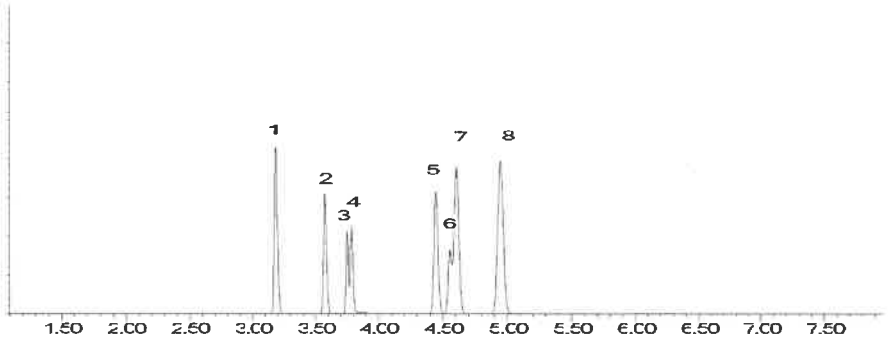
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician **Date Mixed:** 23-Jun-2022 **Balance:** 1127510105

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 27-Jun-2022

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0184726

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot 00012554) **Purity** 99%	2,500.0 µg/mL	+/- 20.3317 µg/mL +/- 140.8938 µg/mL +/- 144.1574 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBK6571) **Purity** 99%	2,500.5 µg/mL	+/- 22.8144 µg/mL +/- 141.3009 µg/mL +/- 144.5566 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 00015559) **Purity** 99%	2,500.7 µg/mL	+/- 23.2251 µg/mL +/- 141.3788 µg/mL +/- 144.6333 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot 00019375) **Purity** 99%	2,500.4 µg/mL	+/- 17.6053 µg/mL +/- 140.5467 µg/mL +/- 143.8191 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,500.2 µg/mL	+/- 24.0992 µg/mL +/- 141.4970 µg/mL +/- 144.7475 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot 107-401039114-1) **Purity** 99%	2,500.1 µg/mL	+/- 23.0388 µg/mL +/- 141.3109 µg/mL +/- 144.5651 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot 12841600) **Purity** 99%	2,500.0 µg/mL	+/- 14.5352 µg/mL +/- 140.1725 µg/mL +/- 143.4524 µg/mL	Gravimetric Unstressed Stressed

Rev'd 8/22/22

8	Trichlorofluoromethane (CFC-11)		2,500.7	µg/mL	+/-	25.4684	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot MKCL8411)			+/-	141.7630	µg/mL	Unstressed
	Purity 99%				+/-	145.0087	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

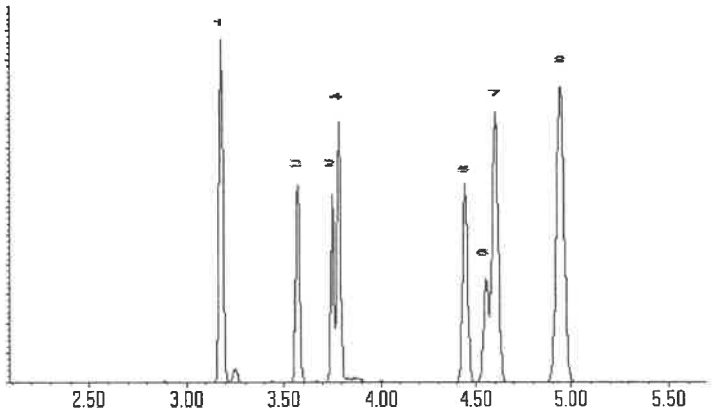
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 01-May-2022 **Balance:** B251644995

Christie Mills - Operations Technician II

Date Passed: 12-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723 **Lot No.:** A0186788

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether	2,502.7 µg/mL	+/- 14.6871	µg/mL	Gravimetric
	CAS # 110-75-8 (Lot MKCK6742)		+/- 53.6196	µg/mL	Unstressed
	Purity 99%		+/- 55.1763	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

11/1/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

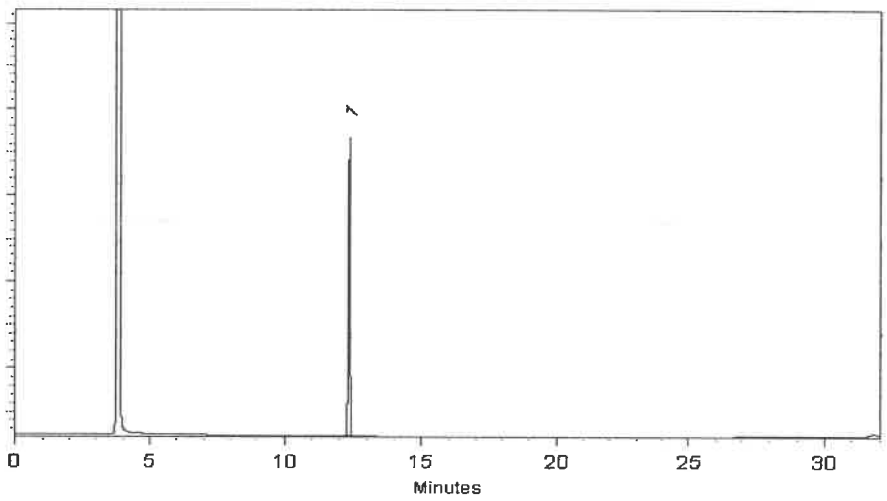
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Josh McCloskey - Operations Technician I

Date Mixed: 28-Jun-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 05-Jul-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-569724.sec_00035

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Catalog No. : 569724.SEC **Lot No.:** A0187085

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,012.0 µg/mL	+/- 29.4132	µg/mL	Gravimetric
	CAS # 108-05-4.SEC (Lot 190320CGKJ)		+/- 302.4226	µg/mL	Unstressed
	Purity 99%		+/- 303.1405	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Rcvd 12/30/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

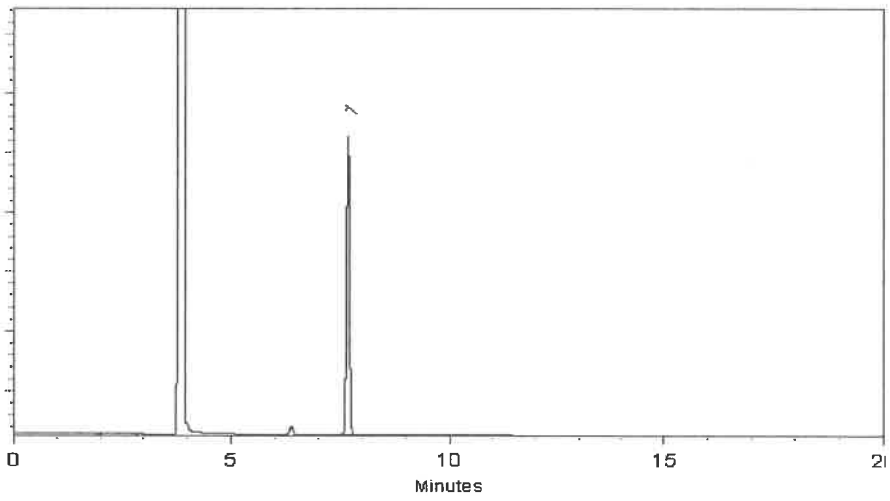
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Katelyn McGinni - Operations Tech I

Date Mixed: 08-Jul-2022 **Balance:** 1128342314

Christie Mills - Operations Tech II - ARM QC

Date Passed: 12-Jul-2022

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Catalog No. : 569724 **Lot No.:** A0187365

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl acetate	5,022.0 µg/mL	+/- 29.4049 µg/mL	Gravimetric
	CAS # 108-05-4 (Lot RD220630)		+/- 303.0195 µg/mL	Unstressed
	Purity 99%		+/- 303.7388 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Rcvd 12/30/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

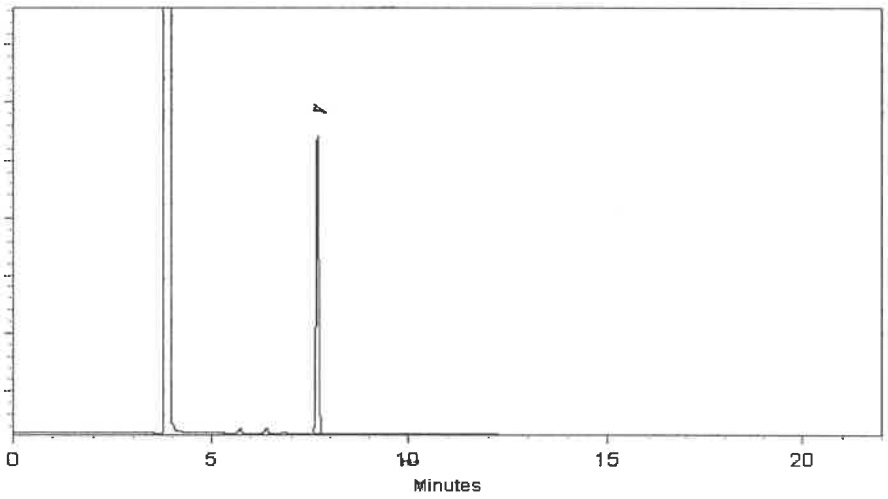
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 15-Jul-2022 **Balance:** B707717271

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 21-Jul-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-569727_00020

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 **Lot No.:** A0182677

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Cyclohexanone	25,249.5 µg/mL	+/- 147.8414	µg/mL	Gravimetric
	CAS # 108-94-1 (Lot 10211916)		+/- 1,523.5147	µg/mL	Unstressed
	Purity 99%		+/- 1,527.1313	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Revd 4/26/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

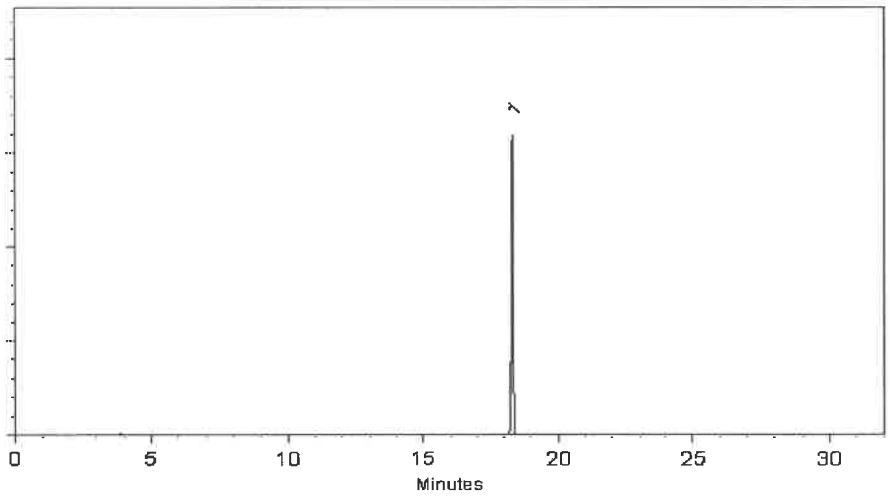
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brittany Federinko - Operations Tech I

Date Mixed: 08-Mar-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 10-Mar-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-570808.sec_00008

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808.SEC **Lot No.:** A0183834

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0.SEC (Lot G6HNF) **Purity** 99%	25,061.5 µg/mL	+/- 146.7406 µg/mL +/- 1,239.8601 µg/mL +/- 1,270.6843 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 * (Lot 220304JEAN) **Purity** 99%	2,518.0 µg/mL	+/- 14.7770 µg/mL +/- 124.5762 µg/mL +/- 127.6731 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 * (Lot 1012020) **Purity** 99%	25,079.5 µg/mL	+/- 146.8460 µg/mL +/- 1,240.7506 µg/mL +/- 1,271.5969 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (Isooctane) **CAS #** 540-84-1.SEC (Lot 11566800) **Purity** 99%	2,509.5 µg/mL	+/- 14.7272 µg/mL +/- 124.1557 µg/mL +/- 127.2422 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3.SEC (Lot RSHAH) **Purity** 99%	62,722.5 µg/mL	+/- 367.2351 µg/mL +/- 3,103.0492 µg/mL +/- 3,180.1943 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9.SEC (Lot F43IA) **Purity** 99%	5,021.5 µg/mL	+/- 29.4020 µg/mL +/- 248.4272 µg/mL +/- 254.6033 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5.SEC (Lot 13075400) **Purity** 99%	2,515.5 µg/mL	+/- 14.7624 µg/mL +/- 124.4526 µg/mL +/- 127.5464 µg/mL	Gravimetric Unstressed Stressed

10/31/22

8	1,2,3-Trimethylbenzene		2,514.0	µg/mL	+/-	14.7536	µg/mL	Gravimetric
	CAS # 526-73-8.SEC	(Lot 12203300)			+/-	124.3783	µg/mL	Unstressed
	Purity 99%				+/-	127.4703	µg/mL	Stressed
9	Benzyl chloride		2,513.5	µg/mL	+/-	14.7506	µg/mL	Gravimetric
	CAS # 100-44-7.SEC	(Lot H29N03)			+/-	124.3536	µg/mL	Unstressed
	Purity 99%				+/-	127.4450	µg/mL	Stressed
10	1,3,5-Trichlorobenzene		2,516.5	µg/mL	+/-	14.7682	µg/mL	Gravimetric
	CAS # 108-70-3.SEC	(Lot I28U021)			+/-	124.5020	µg/mL	Unstressed
	Purity 99%				+/-	127.5971	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

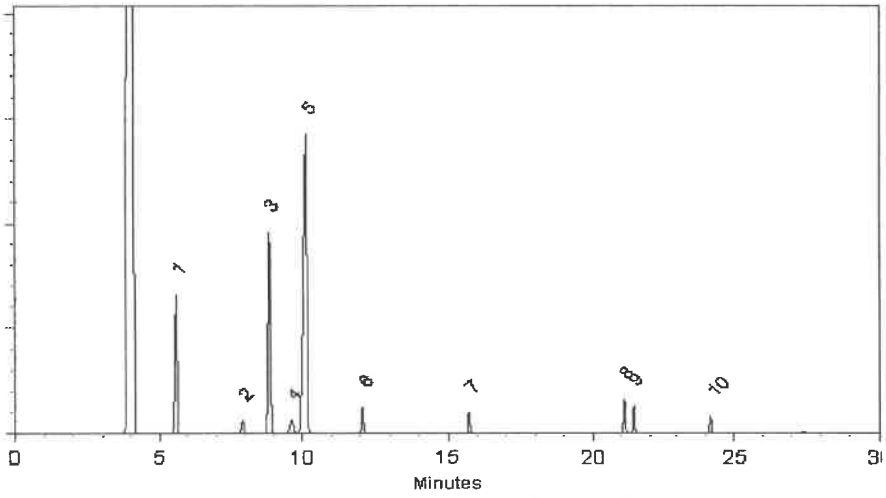
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Katelyn McGinni - Operations Tech I

Date Mixed: 07-Apr-2022 **Balance:** 1127510105

Clara Windle - Operations Technician I

Date Passed: 12-Apr-2022

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808 **Lot No.:** A0177095

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0 (Lot SHBH7211) **Purity** 99%	25,197.0 µg/mL	+/- 147.5340 µg/mL +/- 1,246.5636 µg/mL +/- 1,277.5545 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 (Lot 210413JLM) **Purity** 99%	2,522.5 µg/mL	+/- 14.8034 µg/mL +/- 124.7989 µg/mL +/- 127.9013 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 (Lot 1012020) **Purity** 99%	25,122.5 µg/mL	+/- 147.0978 µg/mL +/- 1,242.8779 µg/mL +/- 1,273.7771 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (isooctane) **CAS #** 540-84-1 (Lot MKCF8045) **Purity** 99%	2,522.5 µg/mL	+/- 14.8034 µg/mL +/- 124.7989 µg/mL +/- 127.9013 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3 (Lot SHBM5061) **Purity** 99%	62,707.0 µg/mL	+/- 367.1443 µg/mL +/- 3,102.2823 µg/mL +/- 3,179.4084 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9 (Lot BCCB9352) **Purity** 97%	5,025.1 µg/mL	+/- 29.4230 µg/mL +/- 248.6045 µg/mL +/- 254.7851 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5 (Lot BCBS3368V) **Purity** 98%	2,523.0 µg/mL	+/- 14.8064 µg/mL +/- 124.8241 µg/mL +/- 127.9272 µg/mL	Gravimetric Unstressed Stressed

2/13/20

8	1,2,3-Trimethylbenzene **CAS #** 526-73-8 **Purity** 99%	(Lot 8776.10-14)	2,508.0	µg/mL	+/- 14.7183 +/- 124.0815 +/- 127.1661	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Benzyl chloride **CAS #** 100-44-7 **Purity** 99%	(Lot SHBH2102V)	2,519.0	µg/mL	+/- 14.7829 +/- 124.6257 +/- 127.7238	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3,5-Trichlorobenzene **CAS #** 108-70-3 **Purity** 99%	(Lot 11319AS)	2,512.0	µg/mL	+/- 14.7418 +/- 124.2794 +/- 127.3689	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

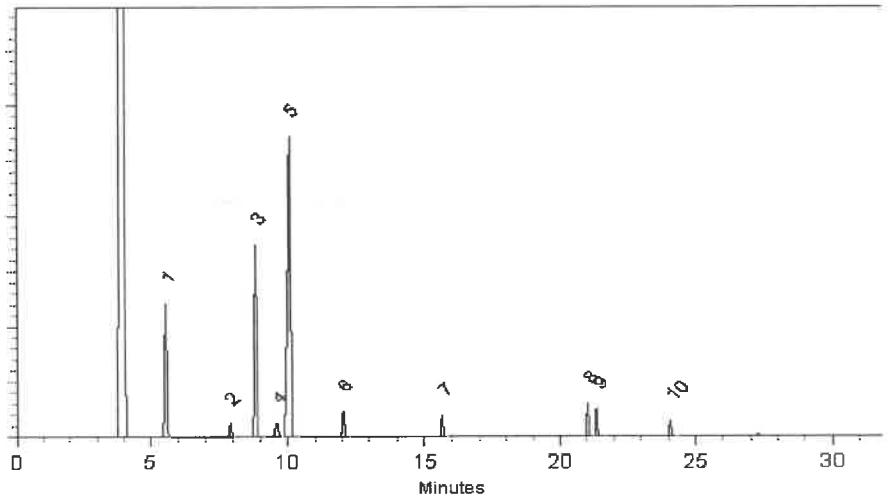
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 04-Oct-2021 **Balance:** B707717271

Alexis Shelow - Operations Tech I

Date Passed: 06-Oct-2021

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808 **Lot No.:** A0184916

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0 (Lot SHBN1353) **Purity** 99%	25,010.5 µg/mL	+/- 146.4420 µg/mL +/- 1,237.3370 µg/mL +/- 1,268.0985 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 (Lot 220304JEAN) **Purity** 99%	2,514.0 µg/mL	+/- 14.7536 µg/mL +/- 124.3783 µg/mL +/- 127.4703 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 (Lot 1012020) **Purity** 99%	25,025.5 µg/mL	+/- 146.5298 µg/mL +/- 1,238.0790 µg/mL +/- 1,268.8590 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (isooctane) **CAS #** 540-84-1 (Lot MKCM6627) **Purity** 99%	2,504.0 µg/mL	+/- 14.6949 µg/mL +/- 123.8836 µg/mL +/- 126.9633 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3 (Lot SHBN6854) **Purity** 99%	62,503.0 µg/mL	+/- 365.9499 µg/mL +/- 3,092.1899 µg/mL +/- 3,169.0651 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9 (Lot BCCB9352) **Purity** 97%	5,008.6 µg/mL	+/- 29.3264 µg/mL +/- 247.7887 µg/mL +/- 253.9490 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5 (Lot BCBS3368V) **Purity** 98%	2,504.9 µg/mL	+/- 14.7000 µg/mL +/- 123.9271 µg/mL +/- 127.0079 µg/mL	Gravimetric Unstressed Stressed

12/5/22

8	1,2,3-Trimethylbenzene		2,505.4	µg/mL	+/-	14.7029	µg/mL	Gravimetric
	CAS # 526-73-8	(Lot 8776.10-36)			+/-	123.9514	µg/mL	Unstressed
	Purity 98%				+/-	127.0327	µg/mL	Stressed
9	Benzyl chloride		2,503.0	µg/mL	+/-	14.6890	µg/mL	Gravimetric
	CAS # 100-44-7	(Lot SHBH2102V)			+/-	123.8341	µg/mL	Unstressed
	Purity 99%				+/-	126.9126	µg/mL	Stressed
10	1,3,5-Trichlorobenzene		2,507.5	µg/mL	+/-	14.7154	µg/mL	Gravimetric
	CAS # 108-70-3	(Lot 11319AS)			+/-	124.0568	µg/mL	Unstressed
	Purity 99%				+/-	127.1407	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

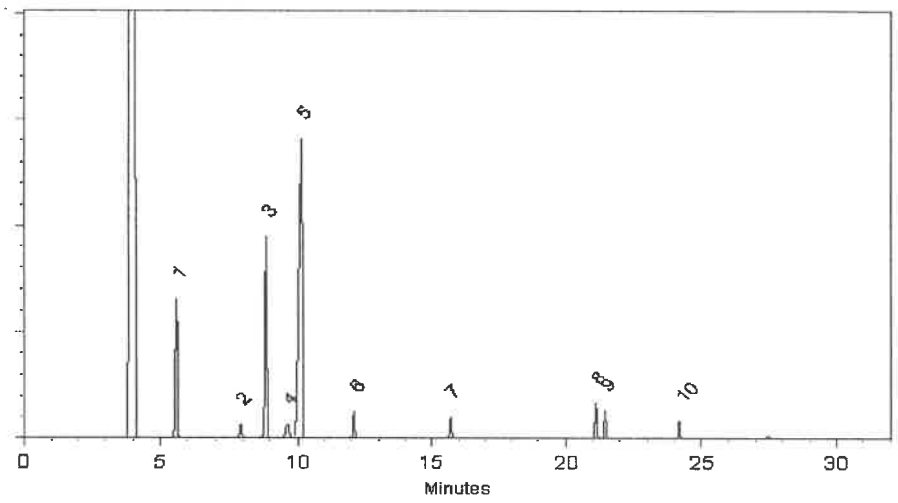
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 04-May-2022 **Balance:** B251644995

Christie Mills - Operations Technician II

Date Passed: 17-May-2022

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809.SEC **Lot No.:** A0183813

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6.SEC (Lot C386A-GG) **Purity** 99%	5,040.0 µg/mL	+/- 29.5103 µg/mL +/- 304.1056 µg/mL +/- 304.8275 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5.SEC (Lot YIFAM-TG) **Purity** 99%	2,510.0 µg/mL	+/- 14.7301 µg/mL +/- 151.4527 µg/mL +/- 151.8122 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6.SEC (Lot G01X021) **Purity** 99%	5,035.0 µg/mL	+/- 29.4810 µg/mL +/- 303.8039 µg/mL +/- 304.5251 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4.SEC (Lot V2L2G-GT) **Purity** 99%	2,500.0 µg/mL	+/- 14.6714 µg/mL +/- 150.8493 µg/mL +/- 151.2073 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

12/5/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

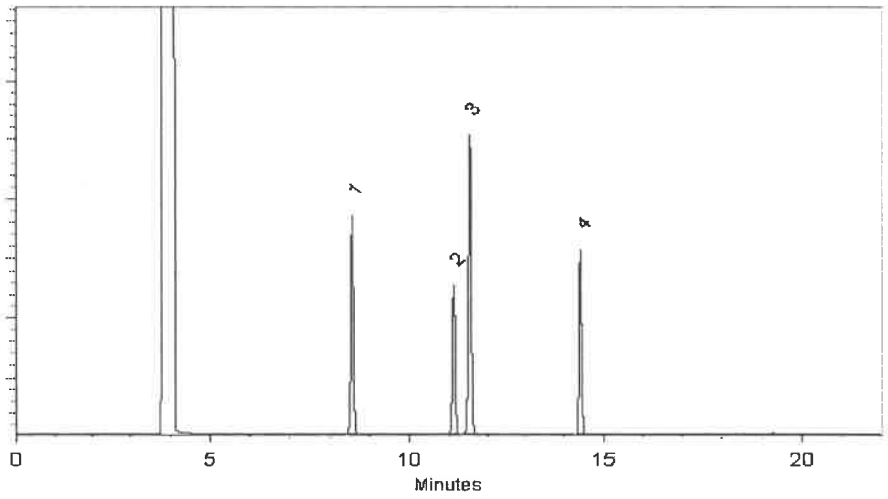
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jess Hoy - Operations Tech I

Date Mixed: 07-Apr-2022 **Balance:** 1127510105

Marlina Cowan - Operations Tech I

Date Passed: 13-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809 **Lot No.:** A0173205

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Rec'd 12/13/21 GM

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2022 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6 (Lot SHBM3421) **Purity** 99%	5,011.0 µg/mL	+/- 29.3405 µg/mL +/- 302.3558 µg/mL +/- 303.0735 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5 (Lot 10129902) **Purity** 99%	2,505.5 µg/mL	+/- 14.7037 µg/mL +/- 151.1811 µg/mL +/- 151.5400 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6 (Lot MKCN3027) **Purity** 99%	5,010.5 µg/mL	+/- 29.3376 µg/mL +/- 302.3256 µg/mL +/- 303.0433 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4 (Lot SHBM7214) **Purity** 99%	2,507.5 µg/mL	+/- 14.7154 µg/mL +/- 151.3018 µg/mL +/- 151.6610 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

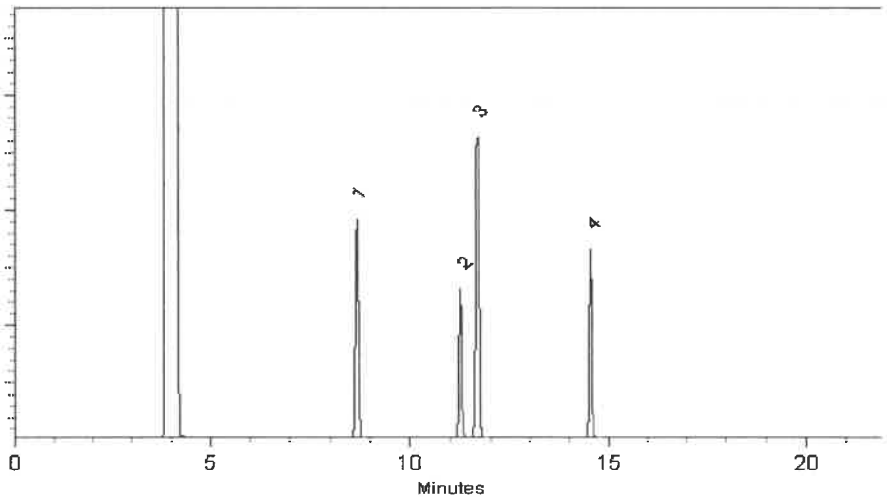
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 09-Jun-2021 **Balance:** B251644995

Alexis Shelow - Operations Tech I

Date Passed: 11-Jun-2021

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809 **Lot No.:** A0180509

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6 (Lot SHBN3179) **Purity** 98%	5,000.5 µg/mL	+/- 29.2787 µg/mL +/- 301.7192 µg/mL +/- 302.4354 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5 (Lot 10129902) **Purity** 99%	2,508.0 µg/mL	+/- 14.7183 µg/mL +/- 151.3320 µg/mL +/- 151.6912 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6 (Lot MKCN3027) **Purity** 99%	5,009.0 µg/mL	+/- 29.3288 µg/mL +/- 302.2351 µg/mL +/- 302.9526 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4 (Lot SHBM7214) **Purity** 99%	2,513.5 µg/mL	+/- 14.7506 µg/mL +/- 151.6638 µg/mL +/- 152.0239 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

10/31/22

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

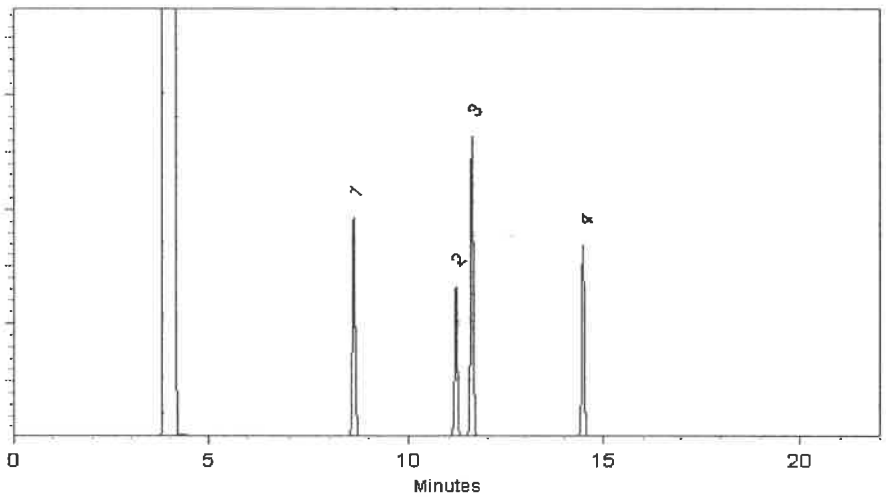
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Morgan Craighead - Mix Technician

Date Mixed: 11-Jan-2022 **Balance:** B442140311

Clara Windle - Operations Technician I

Date Passed: 13-Jan-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-571992.sec_00007

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992.SEC **Lot No.:** A0167172

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC (Lot F23X068) **Purity** 99%	2,501.7 µg/mL	+/- 14.5449 µg/mL +/- 150.9366 µg/mL +/- 151.2950 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,500.8 µg/mL	+/- 14.5401 µg/mL +/- 150.8864 µg/mL +/- 151.2446 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 7692300) **Purity** 99%	2,501.2 µg/mL	+/- 14.5420 µg/mL +/- 150.9065 µg/mL +/- 151.2647 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot HGCHN) **Purity** 99%	25,001.2 µg/mL	+/- 145.3513 µg/mL +/- 1,508.4304 µg/mL +/- 1,512.0117 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9.SEC (Lot UCNEL) **Purity** 99%	5,000.2 µg/mL	+/- 29.0714 µg/mL +/- 301.6822 µg/mL +/- 302.3985 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot Y25A027) **Purity** 99%	2,501.0 µg/mL	+/- 14.5410 µg/mL +/- 150.8964 µg/mL +/- 151.2547 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot H3HGC) **Purity** 99%	2,501.7 µg/mL	+/- 14.5449 µg/mL +/- 150.9366 µg/mL +/- 151.2950 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 75-09-2.SEC	(Lot FGM02)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
9	Carbon disulfide		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 75-15-0.SEC	(Lot MKBL1376V)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
10	Acrylonitrile		25,000.7	µg/mL	+/-	145.3484	µg/mL	Gravimetric
	CAS # 107-13-1.SEC	(Lot V54AD)			+/-	1,508.4003	µg/mL	Unstressed
	Purity 99%				+/-	1,511.9815	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC	(Lot ZHKYA)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
12	cis-1,2-Dichloroethene		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 156-59-2.SEC	(Lot YZO5O)			+/-	150.8461	µg/mL	Unstressed
	Purity 99%				+/-	151.2043	µg/mL	Stressed
13	n-Hexane (C6)		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot 10188491)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
14	1,1-Dichloroethane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 75-34-3.SEC	(Lot 1026.30-2)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
15	2,2-Dichloropropane		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 594-20-7.SEC	(Lot I7E8E)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
16	trans-1,2-Dichloroethene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 156-60-5.SEC	(Lot L5QOH)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,500.7	µg/mL	+/-	363.3653	µg/mL	Gravimetric
	CAS # 78-83-1.SEC	(Lot YNG3K)			+/-	3,770.9403	µg/mL	Unstressed
	Purity 99%				+/-	3,779.8932	µg/mL	Stressed
18	Chloroform		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
19	Bromochloromethane		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 8529200)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
20	Tetrahydrofuran		5,001.5	µg/mL	+/-	29.0792	µg/mL	Gravimetric
	CAS # 109-99-9.SEC	(Lot 8DAOJ)			+/-	301.7627	µg/mL	Unstressed
	Purity 99%				+/-	302.4791	µg/mL	Stressed
21	1,1,1-Trichloroethane		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 71-55-6.SEC	(Lot 7998000)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
22	Cyclohexane		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed
23	1,1-Dichloropropene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 556500)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed

24	Carbon tetrachloride		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
25	n-Heptane (C7)		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 142-82-5.SEC	(Lot TFHUC)			+/-	150.8461	µg/mL	Unstressed
	Purity 99%				+/-	151.2043	µg/mL	Stressed
26	1,2-Dichloroethane		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 107-06-2.SEC	(Lot 00016165)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
27	Benzene		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 71-43-2.SEC	(Lot B28Y008)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
28	Trichloroethene		2,501.3	µg/mL	+/-	14.5430	µg/mL	Gravimetric
	CAS # 79-01-6.SEC	(Lot H04X050)			+/-	150.9165	µg/mL	Unstressed
	Purity 99%				+/-	151.2748	µg/mL	Stressed
29	Methylcyclohexane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 108-87-2.SEC	(Lot 24MSD-CD)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
30	1,2-Dichloropropane		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 78-87-5.SEC	(Lot ERRBI-RH)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed
31	1,4-Dioxane		50,000.7	µg/mL	+/-	290.6930	µg/mL	Gravimetric
	CAS # 123-91-1.SEC	(Lot 8CALO)			+/-	3,016.7603	µg/mL	Unstressed
	Purity 99%				+/-	3,023.9226	µg/mL	Stressed
32	Dibromomethane		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 74-95-3.SEC	(Lot MOKKJ)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 10061-01-5.SEC	(Lot 7ZLXJ-TJ)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed
34	Toluene		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 108-88-3.SEC	(Lot YND2B-BD)			+/-	150.8461	µg/mL	Unstressed
	Purity 99%				+/-	151.2043	µg/mL	Stressed
35	Ethyl methacrylate		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 97-63-2.SEC	(Lot AQSPO)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 10061-02-6.SEC	(Lot ZDMSL)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 79-00-5.SEC	(Lot 9245400)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed
38	1,3-Dichloropropane		2,501.8	µg/mL	+/-	14.5459	µg/mL	Gravimetric
	CAS # 142-28-9.SEC	(Lot IQCON)			+/-	150.9467	µg/mL	Unstressed
	Purity 99%				+/-	151.3051	µg/mL	Stressed
39	Tetrachloroethene		2,501.7	µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 127-18-4.SEC	(Lot F09W014)			+/-	150.9366	µg/mL	Unstressed
	Purity 99%				+/-	151.2950	µg/mL	Stressed

40	Dibromochloromethane		2,502.8	µg/mL	+/-	14.5513	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10206360)			+/-	151.0027	µg/mL	Unstressed
	Purity 97%				+/-	151.3612	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,500.3	µg/mL	+/-	14.5372	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 8529900)			+/-	150.8562	µg/mL	Unstressed
	Purity 99%				+/-	151.2143	µg/mL	Stressed
42	Chlorobenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
43	m-Xylene		1,251.3	µg/mL	+/-	7.2922	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	75.5001	µg/mL	Unstressed
	Purity 99%				+/-	75.6793	µg/mL	Stressed
44	p-Xylene		1,250.3	µg/mL	+/-	7.2863	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot D6UOA)			+/-	75.4398	µg/mL	Unstressed
	Purity 99%				+/-	75.6189	µg/mL	Stressed
45	Ethylbenzene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
46	1,1,1,2-Tetrachloroethane		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot 9366000)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
47	o-Xylene		2,501.8	µg/mL	+/-	14.5459	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01)			+/-	150.9467	µg/mL	Unstressed
	Purity 99%				+/-	151.3051	µg/mL	Stressed
48	Styrene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot QGQ7F)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot WVREC)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed
50	Bromoform		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 9170700)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
51	Bromodichloromethane		2,501.2	µg/mL	+/-	14.5420	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 13780)			+/-	150.9065	µg/mL	Unstressed
	Purity 99%				+/-	151.2647	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane		2,500.5	µg/mL	+/-	14.5379	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot BCCB0724)			+/-	150.8644	µg/mL	Unstressed
	Purity 98%				+/-	151.2226	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot GUHZN)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-3)			+/-	150.8661	µg/mL	Unstressed
	Purity 97%				+/-	151.2243	µg/mL	Stressed
55	n-Propylbenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed

56	Bromobenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 8DKWJ)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot TOOOF)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
58	2-Chlorotoluene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
59	4-Chlorotoluene		2,501.3	µg/mL	+/-	14.5430	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot S5SKD)			+/-	150.9165	µg/mL	Unstressed
	Purity 99%				+/-	151.2748	µg/mL	Stressed
60	tert-Butylbenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot D6OHC)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot JMIYD)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
62	sec-Butylbenzene		2,501.3	µg/mL	+/-	14.5430	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot O4HRF)			+/-	150.9165	µg/mL	Unstressed
	Purity 99%				+/-	151.2748	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 5221800)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,500.3	µg/mL	+/-	14.5372	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	150.8562	µg/mL	Unstressed
	Purity 99%				+/-	151.2143	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
66	n-Butylbenzene		2,500.3	µg/mL	+/-	14.5372	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot MMPGA)			+/-	150.8562	µg/mL	Unstressed
	Purity 99%				+/-	151.2143	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot R6QDM)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot Q135-105)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot IGLFA)			+/-	150.8864	µg/mL	Unstressed
	Purity 99%				+/-	151.2446	µg/mL	Stressed
70	Hexachlorobutadiene		2,501.5	µg/mL	+/-	14.5438	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 10550800)			+/-	150.9247	µg/mL	Unstressed
	Purity 97%				+/-	151.2830	µg/mL	Stressed
71	Naphthalene		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot AM5NG)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,501.7 µg/mL	+/-	14.5449	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)		+/-	150.9366	µg/mL	Unstressed
	Purity 99%			+/-	151.2950	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

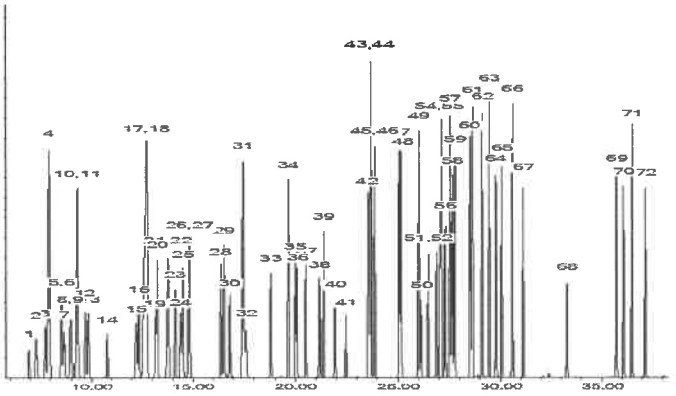
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 13-Dec-2020 **Balance:** 1127510105

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Dec-2020

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-571992_00015

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992 **Lot No.:** A0183568

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7 (Lot SHBN4280) **Purity** 99%	2,506.6 µg/mL	+/- 14.5737 µg/mL +/- 151.2358 µg/mL +/- 151.5949 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00016133) **Purity** 99%	2,514.5 µg/mL	+/- 14.6195 µg/mL +/- 151.7109 µg/mL +/- 152.0711 µg/mL	Gravimetric Unstressed Stressed
3	1,1-dichloroethene **CAS #** 75-35-4 (Lot SHBG8609V) **Purity** 99%	2,515.1 µg/mL	+/- 14.6232 µg/mL +/- 151.7486 µg/mL +/- 152.1089 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot 101619K21F-1) **Purity** 99%	25,080.8 µg/mL	+/- 145.8140 µg/mL +/- 1,513.2321 µg/mL +/- 1,516.8247 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9 (Lot SHBM1320) **Purity** 99%	5,026.6 µg/mL	+/- 29.2252 µg/mL +/- 303.2786 µg/mL +/- 303.9986 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot RD220125) **Purity** 99%	2,505.3 µg/mL	+/- 14.5657 µg/mL +/- 151.1528 µg/mL +/- 151.5117 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot RD211021) **Purity** 99%	2,509.1 µg/mL	+/- 14.5883 µg/mL +/- 151.3866 µg/mL +/- 151.7460 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,513.3	µg/mL	+/-	14.6123	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBP1417)			+/-	151.6355	µg/mL	Unstressed
	Purity 99%				+/-	151.9955	µg/mL	Stressed
9	Carbon disulfide		2,510.1	µg/mL	+/-	14.5941	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot N28F701)			+/-	151.4470	µg/mL	Unstressed
	Purity 99%				+/-	151.8065	µg/mL	Stressed
10	Acrylonitrile		25,102.9	µg/mL	+/-	145.9426	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot SHBK4954)			+/-	1,514.5670	µg/mL	Unstressed
	Purity 99%				+/-	1,518.1628	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)		2,513.8	µg/mL	+/-	14.6152	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBN6497)			+/-	151.6657	µg/mL	Unstressed
	Purity 99%				+/-	152.0258	µg/mL	Stressed
12	cis-1,2-Dichloroethene		2,515.1	µg/mL	+/-	14.6232	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKCP7830)			+/-	151.7486	µg/mL	Unstressed
	Purity 99%				+/-	152.1089	µg/mL	Stressed
13	n-Hexane (C6)		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBL9879)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
14	1,1-Dichloroethane		2,517.9	µg/mL	+/-	14.6391	µg/mL	Gravimetric
	CAS # 75-34-3	(Lot 760200)			+/-	151.9146	µg/mL	Unstressed
	Purity 99%				+/-	152.2752	µg/mL	Stressed
15	2,2-Dichloropropane		2,517.9	µg/mL	+/-	14.6391	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot RD211103)			+/-	151.9146	µg/mL	Unstressed
	Purity 99%				+/-	152.2752	µg/mL	Stressed
16	trans-1,2-Dichloroethene		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot MKBH9850V)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,633.1	µg/mL	+/-	364.1354	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot 098794J01H)			+/-	3,778.9321	µg/mL	Unstressed
	Purity 99%				+/-	3,787.9040	µg/mL	Stressed
18	chloroform		2,510.9	µg/mL	+/-	14.5984	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBN8469)			+/-	151.4922	µg/mL	Unstressed
	Purity 99%				+/-	151.8519	µg/mL	Stressed
19	Bromochloromethane		2,517.0	µg/mL	+/-	14.6341	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00008541)			+/-	151.8618	µg/mL	Unstressed
	Purity 99%				+/-	152.2223	µg/mL	Stressed
20	Tetrahydrofuran		5,036.1	µg/mL	+/-	29.2805	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBN3757)			+/-	303.8517	µg/mL	Unstressed
	Purity 99%				+/-	304.5731	µg/mL	Stressed
21	1,1,1-trichloroethane		2,509.6	µg/mL	+/-	14.5912	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot RD220215)			+/-	151.4168	µg/mL	Unstressed
	Purity 99%				+/-	151.7763	µg/mL	Stressed
22	Cyclohexane		2,510.0	µg/mL	+/-	14.5934	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot EA003-US)			+/-	151.4394	µg/mL	Unstressed
	Purity 99%				+/-	151.7990	µg/mL	Stressed
23	1,1-Dichloropropene		2,513.8	µg/mL	+/-	14.6152	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot 220217JLM)			+/-	151.6657	µg/mL	Unstressed
	Purity 99%				+/-	152.0258	µg/mL	Stressed

24	carbon tetrachloride		2,513.5	µg/mL	+/-	14.6137	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBL8097)			+/-	151.6506	µg/mL	Unstressed
	Purity 99%				+/-	152.0106	µg/mL	Stressed
25	n-Heptane (C7)		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 142-82-5	(Lot SGBL9221)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
26	1,2-Dichloroethane		2,514.4	µg/mL	+/-	14.6188	µg/mL	Gravimetric
	CAS # 107-06-2	(Lot MKCN9758)			+/-	151.7034	µg/mL	Unstressed
	Purity 99%				+/-	152.0636	µg/mL	Stressed
27	Benzene		2,509.3	µg/mL	+/-	14.5890	µg/mL	Gravimetric
	CAS # 71-43-2	(Lot MKCM9242)			+/-	151.3942	µg/mL	Unstressed
	Purity 99%				+/-	151.7536	µg/mL	Stressed
28	Trichloroethene		2,507.5	µg/mL	+/-	14.5788	µg/mL	Gravimetric
	CAS # 79-01-6	(Lot SHBL5816)			+/-	151.2886	µg/mL	Unstressed
	Purity 99%				+/-	151.6478	µg/mL	Stressed
29	Methylcyclohexane		2,510.3	µg/mL	+/-	14.5948	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBL0078)			+/-	151.4545	µg/mL	Unstressed
	Purity 99%				+/-	151.8141	µg/mL	Stressed
30	1,2-Dichloropropane		2,510.9	µg/mL	+/-	14.5984	µg/mL	Gravimetric
	CAS # 78-87-5	(Lot BCBR0882V)			+/-	151.4922	µg/mL	Unstressed
	Purity 99%				+/-	151.8519	µg/mL	Stressed
31	1,4-Dioxane		50,187.5	µg/mL	+/-	291.7792	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBM9675)			+/-	3,028.0328	µg/mL	Unstressed
	Purity 99%				+/-	3,035.2219	µg/mL	Stressed
32	Dibromomethane		2,511.0	µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 74-95-3	(Lot 10201030)			+/-	151.4998	µg/mL	Unstressed
	Purity 99%				+/-	151.8594	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,513.8	µg/mL	+/-	14.6152	µg/mL	Gravimetric
	CAS # 10061-01-5	(Lot RD220311)			+/-	151.6657	µg/mL	Unstressed
	Purity 99%				+/-	152.0258	µg/mL	Stressed
34	Toluene		2,518.4	µg/mL	+/-	14.6420	µg/mL	Gravimetric
	CAS # 108-88-3	(Lot MKCQ2779)			+/-	151.9447	µg/mL	Unstressed
	Purity 99%				+/-	152.3055	µg/mL	Stressed
35	Ethyl methacrylate		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 97-63-2	(Lot MKCL0907)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,504.5	µg/mL	+/-	14.5615	µg/mL	Gravimetric
	CAS # 10061-02-6	(Lot RD211104)			+/-	151.1083	µg/mL	Unstressed
	Purity 98%				+/-	151.4671	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,513.6	µg/mL	+/-	14.6144	µg/mL	Gravimetric
	CAS # 79-00-5	(Lot FGB01)			+/-	151.6581	µg/mL	Unstressed
	Purity 99%				+/-	152.0182	µg/mL	Stressed
38	1,3-Dichloropropane		2,513.6	µg/mL	+/-	14.6144	µg/mL	Gravimetric
	CAS # 142-28-9	(Lot BCBC6265)			+/-	151.6581	µg/mL	Unstressed
	Purity 99%				+/-	152.0182	µg/mL	Stressed
39	Tetrachloroethene		2,507.5	µg/mL	+/-	14.5788	µg/mL	Gravimetric
	CAS # 127-18-4	(Lot SHBJ7422)			+/-	151.2886	µg/mL	Unstressed
	Purity 99%				+/-	151.6478	µg/mL	Stressed

40	dibromochloromethane		2,514.8	µg/mL	+/-	14.6210	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKCM8659)			+/-	151.7260	µg/mL	Unstressed
	Purity 99%				+/-	152.0862	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,513.9	µg/mL	+/-	14.6159	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCCF5058)			+/-	151.6732	µg/mL	Unstressed
	Purity 99%				+/-	152.0333	µg/mL	Stressed
42	Chlorobenzene		2,507.9	µg/mL	+/-	14.5810	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBL8110)			+/-	151.3112	µg/mL	Unstressed
	Purity 99%				+/-	151.6704	µg/mL	Stressed
43	m-Xylene		1,260.0	µg/mL	+/-	7.3257	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot Q13G020)			+/-	76.0214	µg/mL	Unstressed
	Purity 99%				+/-	76.2019	µg/mL	Stressed
44	p-Xylene		1,258.6	µg/mL	+/-	7.3178	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot 10234437)			+/-	75.9384	µg/mL	Unstressed
	Purity 99%				+/-	76.1187	µg/mL	Stressed
45	Ethylbenzene		2,516.0	µg/mL	+/-	14.6282	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBM4308)			+/-	151.8014	µg/mL	Unstressed
	Purity 99%				+/-	152.1618	µg/mL	Stressed
46	1,1,1,2-Tetrachloroethane		2,519.1	µg/mL	+/-	14.6464	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot TMWGK)			+/-	151.9900	µg/mL	Unstressed
	Purity 99%				+/-	152.3508	µg/mL	Stressed
47	o-Xylene		2,513.5	µg/mL	+/-	14.6134	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBN5105)			+/-	151.6479	µg/mL	Unstressed
	Purity 98%				+/-	152.0079	µg/mL	Stressed
48	Styrene		2,509.1	µg/mL	+/-	14.5883	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot MKCP3941)			+/-	151.3866	µg/mL	Unstressed
	Purity 99%				+/-	151.7460	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,518.5	µg/mL	+/-	14.6428	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot Z20D022)			+/-	151.9523	µg/mL	Unstressed
	Purity 99%				+/-	152.3130	µg/mL	Stressed
50	bromoform		2,511.0	µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBK4455)			+/-	151.5001	µg/mL	Unstressed
	Purity 98%				+/-	151.8597	µg/mL	Stressed
51	bromodichloromethane		2,518.1	µg/mL	+/-	14.6406	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKCM7156)			+/-	151.9296	µg/mL	Unstressed
	Purity 99%				+/-	152.2903	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,512.5	µg/mL	+/-	14.6079	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot 332900)			+/-	151.5903	µg/mL	Unstressed
	Purity 99%				+/-	151.9502	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,511.8	µg/mL	+/-	14.6038	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot RD220405A)			+/-	151.5480	µg/mL	Unstressed
	Purity 95%				+/-	151.9078	µg/mL	Stressed
55	n-Propylbenzene		2,515.6	µg/mL	+/-	14.6261	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKCN1126)			+/-	151.7788	µg/mL	Unstressed
	Purity 99%				+/-	152.1392	µg/mL	Stressed

56	Bromobenzene		2,516.9	µg/mL	+/-	14.6333	µg/mL	Gravimetric
	CAS # 108-86-1	(Lot MKBD4032V)			+/-	151.8542	µg/mL	Unstressed
	Purity 99%				+/-	152.2147	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,512.3	µg/mL	+/-	14.6064	µg/mL	Gravimetric
	CAS # 108-67-8	(Lot BCCD0427)			+/-	151.5752	µg/mL	Unstressed
	Purity 99%				+/-	151.9350	µg/mL	Stressed
58	2-Chlorotoluene		2,510.9	µg/mL	+/-	14.5984	µg/mL	Gravimetric
	CAS # 95-49-8	(Lot MKCF5243)			+/-	151.4922	µg/mL	Unstressed
	Purity 99%				+/-	151.8519	µg/mL	Stressed
59	4-Chlorotoluene		2,513.1	µg/mL	+/-	14.6115	µg/mL	Gravimetric
	CAS # 106-43-4	(Lot MKCC8496)			+/-	151.6280	µg/mL	Unstressed
	Purity 99%				+/-	151.9880	µg/mL	Stressed
60	tert-Butylbenzene		2,514.6	µg/mL	+/-	14.6202	µg/mL	Gravimetric
	CAS # 98-06-6	(Lot STBD6954V)			+/-	151.7185	µg/mL	Unstressed
	Purity 99%				+/-	152.0787	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,517.1	µg/mL	+/-	14.6348	µg/mL	Gravimetric
	CAS # 95-63-6	(Lot WXBC9428V)			+/-	151.8696	µg/mL	Unstressed
	Purity 98%				+/-	152.2302	µg/mL	Stressed
62	sec-Butylbenzene		2,519.3	µg/mL	+/-	14.6471	µg/mL	Gravimetric
	CAS # 135-98-8	(Lot MKCN2920)			+/-	151.9975	µg/mL	Unstressed
	Purity 99%				+/-	152.3584	µg/mL	Stressed
63	p-Isopropyltoluene (p-Cymene)		2,512.0	µg/mL	+/-	14.6050	µg/mL	Gravimetric
	CAS # 99-87-6	(Lot MKCP6638)			+/-	151.5601	µg/mL	Unstressed
	Purity 99%				+/-	151.9199	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBZ7498)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,513.4	µg/mL	+/-	14.6130	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	151.6431	µg/mL	Unstressed
	Purity 99%				+/-	152.0031	µg/mL	Stressed
66	n-Butylbenzene		2,511.0	µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 104-51-8	(Lot 09418JJ)			+/-	151.4998	µg/mL	Unstressed
	Purity 99%				+/-	151.8594	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,511.4	µg/mL	+/-	14.6014	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBN3835)			+/-	151.5224	µg/mL	Unstressed
	Purity 99%				+/-	151.8821	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,512.4	µg/mL	+/-	14.6074	µg/mL	Gravimetric
	CAS # 96-12-8	(Lot HBMVB)			+/-	151.5855	µg/mL	Unstressed
	Purity 97%				+/-	151.9454	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,510.4	µg/mL	+/-	14.5955	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBM0526)			+/-	151.4620	µg/mL	Unstressed
	Purity 99%				+/-	151.8216	µg/mL	Stressed
70	Hexachlorobutadiene		2,509.3	µg/mL	+/-	14.5890	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot X05J)			+/-	151.3942	µg/mL	Unstressed
	Purity 99%				+/-	151.7536	µg/mL	Stressed
71	Naphthalene		2,520.6	µg/mL	+/-	14.6551	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKCH0219)			+/-	152.0805	µg/mL	Unstressed
	Purity 99%				+/-	152.4415	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,513.0	µg/mL	+/-	14.6108	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot MKBX7627V)			+/-	151.6204	µg/mL	Unstressed
	Purity 99%				+/-	151.9804	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

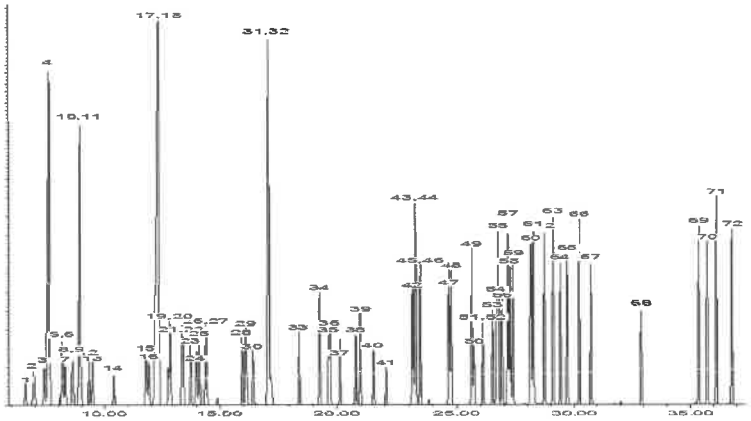
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 31-Mar-2022 **Balance:** B707717271

Feng-Yun Lo - QC Analyst

Date Passed: 21-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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mv-571993.sec_00008

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993.SEC **Lot No.:** A0189867

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8.SEC (Lot 3ZDOE) **Purity** 99%	25,064.5 µg/mL	+/- 146.7582 µg/mL +/- 1,240.0085 µg/mL +/- 1,270.8364 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3.SEC (Lot LL7TN-SH) **Purity** 99%	2,511.0 µg/mL	+/- 14.7360 µg/mL +/- 124.2299 µg/mL +/- 127.3182 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3.SEC (Lot UCI5B) **Purity** 98%	2,499.2 µg/mL	+/- 14.6667 µg/mL +/- 123.6459 µg/mL +/- 126.7197 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0.SEC (Lot N44LF) **Purity** 99%	25,000.9 µg/mL	+/- 146.3858 µg/mL +/- 1,236.8620 µg/mL +/- 1,267.6117 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4.SEC (Lot REJPI) **Purity** 99%	25,023.6 µg/mL	+/- 146.5187 µg/mL +/- 1,237.9850 µg/mL +/- 1,268.7627 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8.SEC (Lot 12075100) **Purity** 98%	2,504.0 µg/mL	+/- 14.6949 µg/mL +/- 123.8835 µg/mL +/- 126.9632 µg/mL	Gravimetric Unstressed Stressed

12/5/22

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

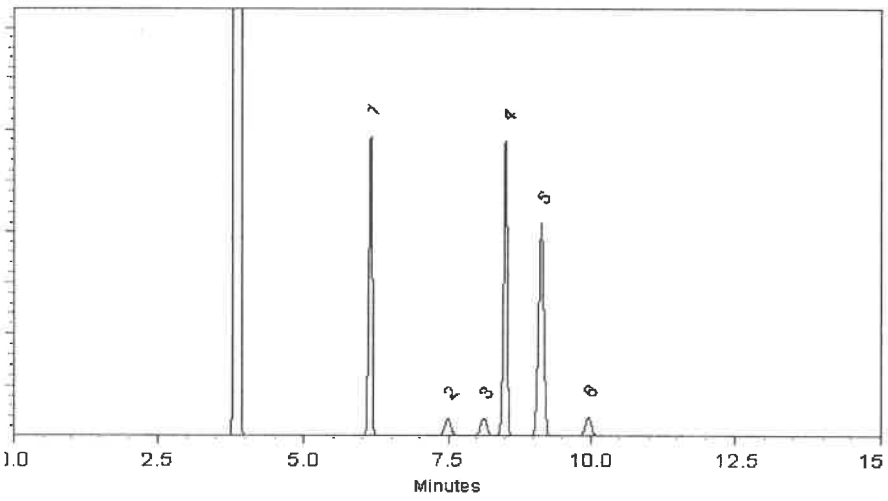
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Daniel Wasson - Operations Tech I **Date Mixed:** 22-Sep-2022 **Balance:** 1128342314

Marlina Cowan – Operations Tech II ARM QC **Date Passed:** 26-Sep-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993 **Lot No.:** A0172903

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2023 **Storage:** 0°C or colder

Ship: Ambient

Rec'd 12/13/21 GM

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile	25,165.0 µg/mL	+/- 147.3466 µg/mL	Gravimetric
	CAS # 75-05-8 (Lot SHBH6233)		+/- 1,244.9805 µg/mL	Unstressed
	Purity 99%		+/- 1,275.9320 µg/mL	Stressed
2	Diisopropyl ether (DIPE)	2,519.5 µg/mL	+/- 14.7858 µg/mL	Gravimetric
	CAS # 108-20-3 (Lot SHBH1927V)		+/- 124.6504 µg/mL	Unstressed
	Purity 99%		+/- 127.7492 µg/mL	Stressed
3	Ethyl-tert-butyl ether (ETBE)	2,510.5 µg/mL	+/- 14.7330 µg/mL	Gravimetric
	CAS # 637-92-3 (Lot MKCM3774)		+/- 124.2052 µg/mL	Unstressed
	Purity 99%		+/- 127.2929 µg/mL	Stressed
4	Propionitrile	25,132.5 µg/mL	+/- 147.1563 µg/mL	Gravimetric
	CAS # 107-12-0 (Lot BCCB0845)		+/- 1,243.3726 µg/mL	Unstressed
	Purity 99%		+/- 1,274.2842 µg/mL	Stressed
5	tert-Amyl alcohol	25,074.0 µg/mL	+/- 146.8138 µg/mL	Gravimetric
	CAS # 75-85-4 (Lot STBB1898V)		+/- 1,240.4785 µg/mL	Unstressed
	Purity 99%		+/- 1,271.3181 µg/mL	Stressed
6	tert-Amyl methyl ether (TAME)	2,509.0 µg/mL	+/- 14.7242 µg/mL	Gravimetric
	CAS # 994-05-8 (Lot HMBG7745V)		+/- 124.1310 µg/mL	Unstressed
	Purity 99%		+/- 127.2168 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

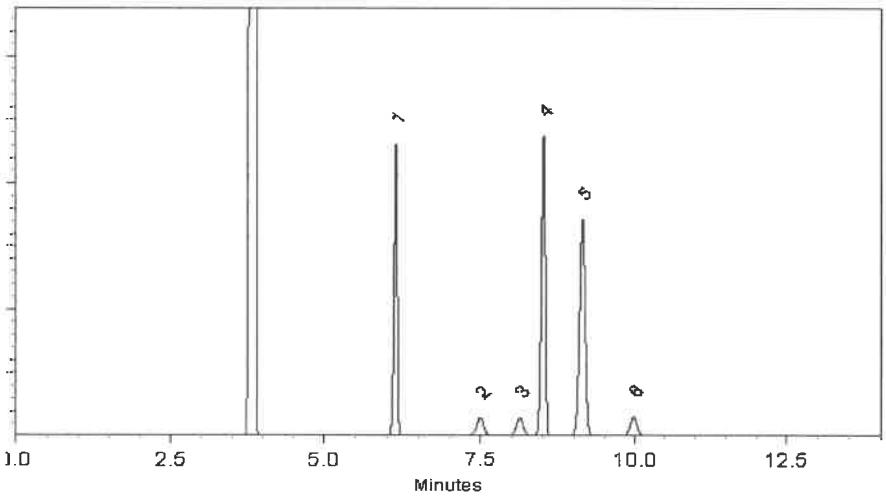
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 01-Jun-2021 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 03-Jun-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

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Certificate #3222.02

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993 **Lot No.:** A0183035

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8 (Lot SHBH6233) **Purity** 99%	25,214.8 µg/mL	+/- 147.6382 µg/mL +/- 1,247.4442 µg/mL +/- 1,278.4570 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3 (Lot STBK3450) **Purity** 99%	2,501.6 µg/mL	+/- 14.6808 µg/mL +/- 123.7649 µg/mL +/- 126.8416 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3 (Lot MKCN9957) **Purity** 99%	2,516.8 µg/mL	+/- 14.7700 µg/mL +/- 124.5169 µg/mL +/- 127.6123 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0 (Lot BCCB0845) **Purity** 99%	25,121.6 µg/mL	+/- 147.0925 µg/mL +/- 1,242.8334 µg/mL +/- 1,273.7315 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4 (Lot STBB1898V) **Purity** 99%	25,096.0 µg/mL	+/- 146.9426 µg/mL +/- 1,241.5669 µg/mL +/- 1,272.4335 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8 (Lot HMBG7745V) **Purity** 99%	2,518.0 µg/mL	+/- 14.7770 µg/mL +/- 124.5762 µg/mL +/- 127.6731 µg/mL	Gravimetric Unstressed Stressed

10/31/22

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

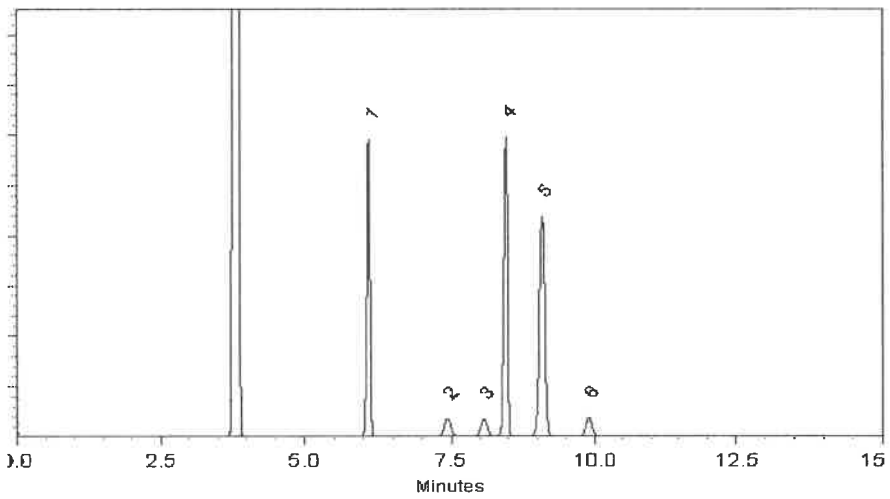
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Bethany Lowery - Operations Tech I

Date Mixed: 18-Mar-2022 **Balance:** B707717271

Fang-Yun Lo - QC Analyst

Date Passed: 22-Mar-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

mv-571994_00005

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571994 **Lot No.:** A0169978

Description : 8260 Ethanol Standard

8260 Ethanol Standard 100,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 0°C or colder

Ship: Ambient

REC'D 12/2/21 GM

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethanol		100,586.0 µg/mL	+/- 588.9228 µg/mL	Gravimetric
	CAS # 64-17-5	(Lot SHBM3719)		+/- 2,154.6772 µg/mL	Unstressed
	Purity 99%			+/- 2,217.2533 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.# 10910)

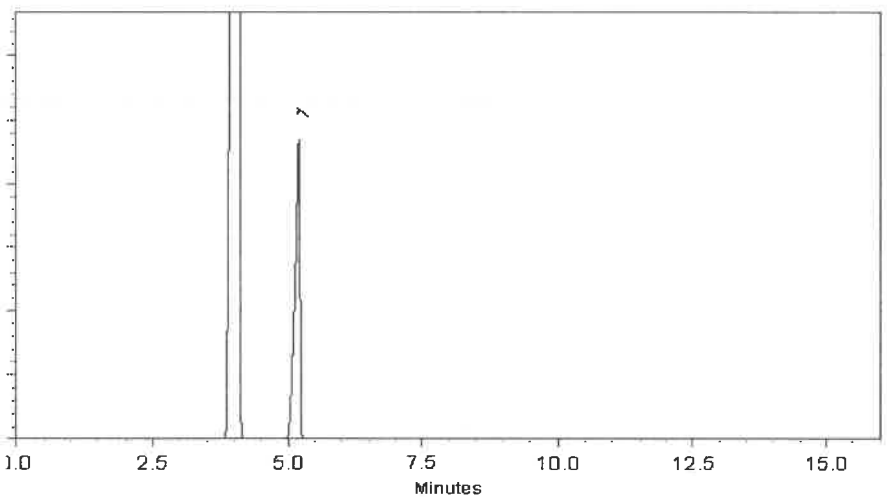
Carrier Gas:
hydrogen-constant pressure 11 psi.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Sam Moodler - Operations Tech I

Date Mixed: 10-Mar-2021 **Balance:** B707717271

Alexis Sheiow - Operations Tech I

Date Passed: 16-Mar-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MV-CUS17739.s_00011

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: Custom Standard
Product Number: CUS-17739
Storage Conditions: Store Frozen (-25° to -10°C).

Lot Number: 0006676357
Lot Issue Date: 15-Apr-2022
Expiration Date: 31-May-2024

Component Name	CERTIFIED VALUES Concentration		Expanded Uncertainty	CAS#	Analyte Lot
1-chlorohexane	1004	±	5 µg/mL	000544-10-5	RM15291
2-pentanone	4019	±	20 µg/mL	000107-87-9	RM13478
sec-butanol	30105	±	151 µg/mL	000078-92-2	RM01299

Matrix: methanol (purge & trap grade)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:

Rcvd 7/4/22

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

Reagent

mv-IS/SS Tune_00001

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570812 **Lot No.:** A0143593

Description : 8260 IS/Surrogate Mix (2016)

8260 IS/Surrogate Mix (2016) 250-5,000µg/mL, P&T Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2023 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol		5,000.1 µg/mL	+/- 29.0694 µg/mL	Gravimetric
	CAS # 25725-11-5	(Lot CD-107)		+/- 107.0521 µg/mL	Unstressed
	Purity 98%			+/- 110.1643 µg/mL	Stressed
2	Dibromofluoromethane		250.2 µg/mL	+/- 1.4580 µg/mL	Gravimetric
	CAS # 1868-53-7	(Lot 0012017)		+/- 5.3577 µg/mL	Unstressed
	Purity 99%			+/- 5.5134 µg/mL	Stressed
3	1,2-Dichloroethane-d4		250.3 µg/mL	+/- 1.4584 µg/mL	Gravimetric
	CAS # 17060-07-0	(Lot PR-29377)		+/- 5.3592 µg/mL	Unstressed
	Purity 99%			+/- 5.5149 µg/mL	Stressed
4	1,4-Dioxane-d8		5,000.5 µg/mL	+/- 29.0716 µg/mL	Gravimetric
	CAS # 17647-74-4	(Lot I-19942)		+/- 107.0602 µg/mL	Unstressed
	Purity 99%			+/- 110.1726 µg/mL	Stressed
5	Fluorobenzene		250.1 µg/mL	+/- 1.4573 µg/mL	Gravimetric
	CAS # 462-06-6	(Lot BCBK8171V)		+/- 5.3549 µg/mL	Unstressed
	Purity 99%			+/- 5.5105 µg/mL	Stressed
6	Toluene-d8		250.1 µg/mL	+/- 1.4575 µg/mL	Gravimetric
	CAS # 2037-26-5	(Lot PR-27311)		+/- 5.3556 µg/mL	Unstressed
	Purity 99%			+/- 5.5112 µg/mL	Stressed
7	Chlorobenzene-d5		250.5 µg/mL	+/- 1.4600 µg/mL	Gravimetric
	CAS # 3114-55-4	(Lot PR-23926)		+/- 5.3649 µg/mL	Unstressed
	Purity 99%			+/- 5.5208 µg/mL	Stressed

8	1-Bromo-4-fluorobenzene (BFB)		250.1	µg/mL	+/-	1.4575	µg/mL	Gravimetric
	CAS # 460-00-4	(Lot 20401KO)			+/-	5.3556	µg/mL	Unstressed
	Purity 99%				+/-	5.5112	µg/mL	Stressed
9	1,4-Dichlorobenzene-d4		250.2	µg/mL	+/-	1.4580	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)			+/-	5.3577	µg/mL	Unstressed
	Purity 99%				+/-	5.5134	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

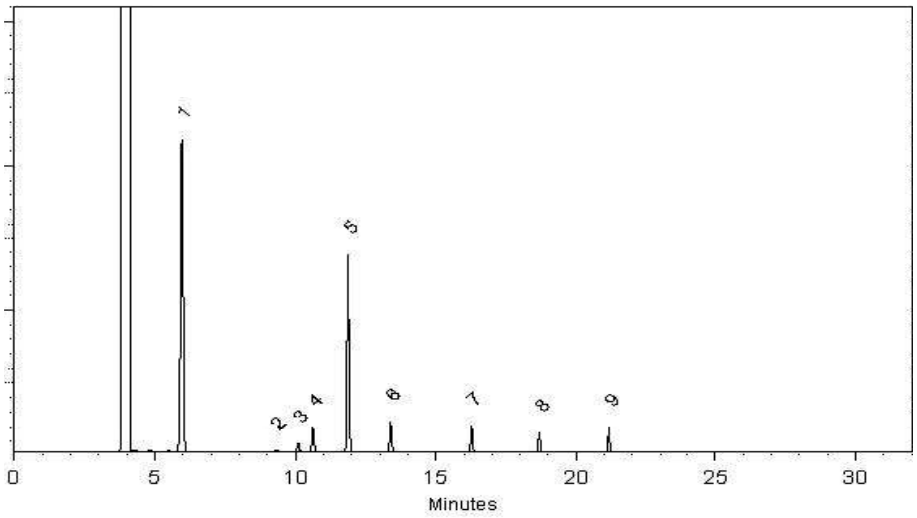
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 29-Nov-2018 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 18-Dec-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

mv-VO-TAOH-5_00015

spex certiprep

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEXertificate®
Certificate of Reference Material

ILAC-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: VO-TAOH-5
Description: Custom Organic Standard
Matrix: Methanol (Purge & Trap Grade)

Lot No. CP220812003
Manufactured Date: August 12, 2022
Expiration Date: February 8, 2023

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
Ethylene oxide	75-21-8	50000 µg/mL	99.8%	49980 µg/mL	± 1799 µg/mL
cis-1,4-Dichloro-2-butene	1476-11-5	1000 µg/mL	95%	980 µg/mL	± 35 µg/mL
Propylene oxide	75-56-9	50000 µg/mL	99%	49944 µg/mL	± 1798 µg/mL
Tetrahydrothiophene	110-01-0	1000 µg/mL	99%	998 µg/mL	± 36 µg/mL

* - Isomer ratios (when applicable) are an uncertified parameter.

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: August 12, 2022

Certifying Officer: Shannon Mara
Shannon Macieira, Operations Manager

Rec'd 8/25/22

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Report of Certification

Catalog Number: VO-TAOH-5 **Lot No.** CP220812003

Description: Custom Organic Standard

Matrix: Methanol (Purge & Trap Grade)

Manufactured Date: August 12, 2022

Expiration Date: February 8, 2023

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS) and ISO 17025 (accredited by A2LA), and ISO 17034 (accredited by A2LA) quality system consistent with the following standards:

- ISO 9001: Quality management systems - Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials - Selected terms and definitions
- ISO Guide 31: Reference Materials - Contents of certificates and lables
- ISO Guide 35: Refernece Materials - General and Statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement - Third Edition
- NIST Technical Note 1297

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a freezer (-35°C to -10°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and applicable only if the product is stored under the laboratory specified conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bo ttle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

SPEX CertiPrep.
Your Science is Our Passion.®

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www.spexcertiprep.com • E-mail: crmsales@spexcsp.com
Phone: 1-732-549-7144 • Fax 1-732-603-9647

Reagent

TOC ICV Std_00051

RICCA CHEMICAL COMPANY®

1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Organic Carbon Standard, 1000 ppm C

Lot Number: 2208C86 **Product Number:** 1847

Manufacture Date: AUG 08, 2022
Expiration Date: JUL 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Phosphoric Acid	7664-38-2	ACS
Potassium Acid Phthalate	877-24-7	ACS Acidimetric

Test	Specification	Result
Appearance	Colorless liquid	Passed
Carbon (C)	995-1005 ppm	1000 ppm

Specification	Reference
Organic Carbon Stock Solution	APHA (5310 B)
Potassium Hydrogen Phthalate, Stock Solution	EPA (SW-846) (9060)
Potassium Hydrogen Phthalate, Stock Solution, 1000 mg Carbon/liter	EPA (415.1)
Organic Carbon Solution, Standard (1 mL = 1 mg C)	ASTM (D 2579)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1847-16	500 mL amber glass	12 months
1847-32	1 L amber glass	12 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (08/08/2022)
Quality Control
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

RICCA CHEMICAL COMPANY®

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Organic Carbon Standard, 1000 ppm C

Product Number: 1847

Other Identifying Product Numbers: 1847-1, 1847-16, 1847-2.5, 1847-32, 1847-4, 1847-5, 1847-8

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company
Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)	800-424-9300
CHEMTREC (International)	1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Hazardous to the Aquatic Environment (Acute)	Category 3	H402	P273, P501

2.2. GHS Label Elements

Pictograms:

Signal Word:

Hazard Statements:

Hazard Number	Hazard Statement
H402	Harmful to aquatic life.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P273	Avoid release to the environment.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H_2O	18.01 g/mol	7732-18-5	99.39
Phosphoric Acid	H_3PO_4	97.99 g/mol	7664-38-2	0.40
Potassium Acid Phthalate	$HOCOC_6H_4COOK$	204.22 g/mol	877-24-7	0.21

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: May cause irritation, redness, pain, and tearing.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: May cause slight irritation.

Ingestion: Dilute with water or milk. Call a physician if necessary.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Does not present any significant health hazards. Wash areas of contact with water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause slight irritation.

4.3. Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

6.2. Cleanup and Containment Methods and Materials

Collect liquid and dilute with water. Neutralize with dilute base solutions. Resulting solution may be flushed to the sewer with excess water. For larger spills, absorb with suitable material and dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Keep tightly capped. Store in the refrigerator.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Phosphoric Acid (7664-38-2)	TWA	USA	1 mg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Phosphoric Acid (7664-38-2)	TLV-STEL	USA	3 mg/m³ STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Phosphoric Acid (7664-38-2)	TLV-TWA	USA	1 mg/m³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

8.3. Personal Protective Equipment

Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: < 2

Melting/Freezing Point: 0.0°C

Initial Boiling Point/Range: 100°C - 100°C

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.00

Solubility: Miscible

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

Safety Data Sheet

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Nitric Acid.

10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral, Rat: >3200 mg/kg (Potassium Acid Phthalate), details of toxic effects not reported other than lethal dose value. LD50, Oral, Rat: (Phosphoric Acid) 1530 mg/kg, behavioral, kidney, bladder, hair effects noted. LD50, Dermal, Rat: 2740 mg/kg (Phosphoric Acid), behavioral effects noted.

Skin Corrosion and Irritation:

Not applicable.

Serious Eye Damage and Irritation:

Not applicable.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

Safety Data Sheet

SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.

14.2. Transportation by Air - International Air Transport Association (IATA)

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG Regulations.

Safety Data Sheet

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Phosphoric Acid (CAS # 7664-38-2): 5000 lb final RQ; 2270 kg final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Not listed.

15.5. Massachusetts Right-to-Know Substance List

Phosphoric Acid (CAS # 7664-38-2): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

Phosphoric Acid (CAS # 7664-38-2): Environmental hazard
Phosphoric Acid (CAS # 7664-38-2): Present
Water (CAS # 7732-18-5): Present

15.7. New Jersey Worker and Community Right-to-Know Components

Phosphoric Acid (CAS # 7664-38-2): corrosive
Phosphoric Acid (CAS # 7664-38-2): sn 1516

15.8. California Proposition 65

Not listed.

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Phosphoric Acid (CAS # 7664-38-2): Present (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Potassium Acid Phthalate (CAS # 877-24-7): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Phosphoric Acid (CAS # 7664-38-2): Present
Water (CAS # 7732-18-5): Present
Potassium Acid Phthalate (CAS # 877-24-7): Present

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Phosphoric Acid (CAS # 7664-38-2): 231-633-2
Water (CAS # 7732-18-5): 231-791-2
Water (CAS # 7732-18-5): 232-148-9
Potassium Acid Phthalate (CAS # 877-24-7): 212-889-4

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Harmful to aquatic life.

Avoid release to the environment.

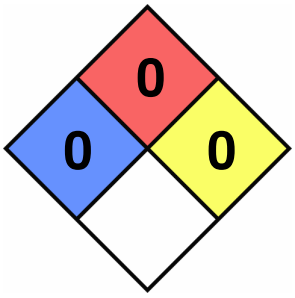
Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.
Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.
Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 0
Flammability: 0
Reactivity: 0
Special Hazard:



16.4. Document Revision

Last Revision Date: 2023-02-14

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.

Reagent

TOC LCS Std_00057

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Total Organic Carbon (TOC) Standard

Product Number: IOC-106

Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006719669

Lot Issue Date: 28-Dec-2022

Expiration Date: 31-Jan-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
potassium hydrogen phthalate (KHP) (as TOC)	1001	±	5 mg/L	000877-24-7	RM19275

Matrix: water (low TOC, < 50 ppb)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system. The analyte concentration(s) were prepared and verified by an ISO 17034 / ISO 17025 accredited laboratory and compared to calibration standards independently prepared using NIST SRM(s) when available. The certified value and uncertainty value at the 95% confidence level for each analyte is determined gravimetrically.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Agilent

Trusted Answers

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois

QMS Representative

ANAB

ANSI National Accreditation Board

ACCREDITED

ISO 17034

REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

www.agilent.com/quality/

CSD-QA-040.1

ISO 17025

Reagent

Z-020209-01_00001

CPI INTERNATIONAL

5580 Skylane Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received:_____

Certificate of Analysis

Rev 0

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
Z-020209-01	488066	-18°C +/- 4°C	P/T Methanol	8/30/2024	cis-1,4-Dichloro-2-butene Solution, 1000 mg/L, 1 ml

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
cis-1,4-dichloro-2-butene	1476-11-5	96.2	209.1.4.1P	1003 ± 12.64

*Not a certified value

Revd 9/2022

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

Certified By: _____

Sanquetta Coakley
Chemist

8260D

Volatile Organic Compounds by GC/MS

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-624SilM ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
MW-119D-20230413	280-175123-1	104	99	99	100
MW-119S-20230413	280-175123-2	101	94	101	102
RW-3-20230413	280-175123-3	103	95	103	100
MW-113D-20230414	280-175123-4	102	93	100	100
MW-113S-20230414	280-175123-5	102	92	103	101
MW-112M-20230415	280-175123-6	101	98	106	105
MW-112D-20230415	280-175123-7	101	99	106	104
EB-04-20230414	280-175123-8	102	94	103	100
EB-03-20230413	280-175123-9	100	94	102	102
MW-109D-20230415	280-175123-10	101	100	105	105
TB-05-20230416	280-175123-11	106	103	105	105
	MB 280-610121/7	103	94	102	98
	MB 280-610347/7	102	97	100	99
	MB 280-610464/7	101	102	105	103
	LCS 280-610121/1002	104	97	101	102
	LCS 280-610121/1003	106	99	100	100
	LCS 280-610347/1002	102	94	102	102
	LCS 280-610347/1003	101	95	101	101
	LCS 280-610464/1002	104	102	106	105
	LCS 280-610464/1003	103	103	106	105
	LCSD 280-610121/4	103	96	101	104
	LCSD 280-610121/5	103	98	99	103
	LCSD 280-610347/4	102	97	101	102
	LCSD 280-610347/5	103	96	100	100
	LCSD 280-610464/4	104	101	105	103
	LCSD 280-610464/5	103	103	105	104

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	77-120
DCA = 1,2-Dichloroethane-d4 (Surr)	70-127
TOL = Toluene-d8 (Surr)	80-125
BFB = 4-Bromofluorobenzene (Surr)	78-120

Column to be used to flag recovery values

FORM II 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502847-LCS.d

Lab ID: LCS 280-610121/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	24.4	98	74-121	
1,1,1-Trichloroethane	25.0	25.7	103	62-132	
1,1,2,2-Tetrachloroethane	25.0	24.4	98	72-122	
1,1,2-Trichloroethane	25.0	26.7	107	72-128	
1,1-Dichloroethane	25.0	28.6	115	66-130	
1,1-Dichloroethene	25.0	26.5	106	62-130	
1,1-Dichloropropene	25.0	26.4	106	64-133	
1,2,3-Trichloropropane	25.0	23.4	93	74-123	
1,2,4-Trichlorobenzene	25.0	25.3	101	73-124	
1,2-Dibromo-3-Chloropropane	25.0	22.9	91	58-122	
1,2-Dibromoethane	25.0	24.9	100	81-118	
1,2-Dichlorobenzene	25.0	24.8	99	77-121	
1,2-Dichloroethane	25.0	24.4	98	61-130	
1,2-Dichloropropane	25.0	27.9	112	68-127	
1,3-Dichlorobenzene	25.0	25.3	101	76-121	
1,3-Dichloropropane	25.0	25.8	103	80-118	
1,4-Dichlorobenzene	25.0	24.2	97	76-119	
2,2-Dichloropropane	25.0	26.9	108	57-140	
2-Butanone (MEK)	100	114	114	53-135	
2-Hexanone	100	110	110	58-134	
4-Methyl-2-pentanone (MIBK)	100	117	117	56-135	
Acetone	100	100	100	50-137	
Acrolein	247	244	99	10-207	
Acrylonitrile	250	299	120	65-133	
Allyl chloride	25.0	32.2	129	57-136	
Benzene	25.0	27.5	110	69-126	
Bromoform	25.0	25.2	101	57-125	
Bromomethane	25.0	22.2	89	25-163	
Carbon disulfide	25.0	27.5	110	56-128	
Carbon tetrachloride	25.0	25.4	101	60-133	
Chlorobenzene	25.0	25.2	101	78-118	
Chlorobromomethane	25.0	26.2	105	71-130	
Chlorodibromomethane	25.0	24.5	98	71-122	
Chloroethane	25.0	26.6	107	52-144	
Chloroform	25.0	26.5	106	68-128	
Chloromethane	25.0	23.0	92	43-142	
cis-1,2-Dichloroethene	25.0	26.9	108	69-126	
cis-1,3-Dichloropropene	25.0	26.7	107	75-120	
Dibromomethane	25.0	26.1	104	68-129	
Dichlorobromomethane	25.0	25.7	103	67-126	
Dichlorodifluoromethane	25.0	17.7	71	26-152	
Ethyl methacrylate	25.0	28.2	113	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502847-LCS.d

Lab ID: LCS 280-610121/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	25.0	25.6	102	76-121	
Iodomethane	25.0	18.9	76	37-145	
Isobutyl alcohol	625	538	86	46-132	
Methylene Chloride	25.0	25.6	102	64-128	
m-Xylene & p-Xylene	25.0	26.5	106	76-122	
o-Xylene	25.0	26.0	104	77-120	
Styrene	25.0	26.7	107	79-120	
Tetrachloroethene	25.0	25.2	101	72-127	
Toluene	25.0	26.9	108	68-127	
trans-1,2-Dichloroethene	25.0	28.0	112	66-129	
trans-1,3-Dichloropropene	25.0	27.5	110	66-127	
trans-1,4-Dichloro-2-butene	25.0	22.5	90	44-131	
Trichloroethene	25.0	25.9	104	70-125	
Trichlorofluoromethane	25.0	20.9	84	57-144	
Vinyl acetate	50.0	58.3	117	61-139	
Vinyl chloride	25.0	27.5	110	53-141	
Xylenes, Total	50.0	52.5	105	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502846-LCS.d

Lab ID: LCS 280-610121/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	254	102	45-142	
Chloroprene	25.0	26.0	104	53-147	
Methacrylonitrile	250	243	97	47-142	
Methyl methacrylate	50.0	43.0	86	60-131	
Propionitrile	250	248	99	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502910-LCS.d

Lab ID: LCS 280-610347/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	26.6	106	74-121	
1,1,1-Trichloroethane	25.0	25.2	101	62-132	
1,1,2,2-Tetrachloroethane	25.0	28.1	112	72-122	
1,1,2-Trichloroethane	25.0	27.7	111	72-128	
1,1-Dichloroethane	25.0	27.9	112	66-130	
1,1-Dichloroethene	25.0	26.6	106	62-130	
1,1-Dichloropropene	25.0	25.7	103	64-133	
1,2,3-Trichloropropane	25.0	25.2	101	74-123	
1,2,4-Trichlorobenzene	25.0	28.9	115	73-124	
1,2-Dibromo-3-Chloropropane	25.0	23.4	94	58-122	
1,2-Dibromoethane	25.0	26.0	104	81-118	
1,2-Dichlorobenzene	25.0	26.3	105	77-121	
1,2-Dichloroethane	25.0	23.9	95	61-130	
1,2-Dichloropropane	25.0	27.7	111	68-127	
1,3-Dichlorobenzene	25.0	26.3	105	76-121	
1,3-Dichloropropane	25.0	26.8	107	80-118	
1,4-Dichlorobenzene	25.0	25.7	103	76-119	
2,2-Dichloropropane	25.0	26.7	107	57-140	
2-Butanone (MEK)	100	118	118	53-135	
2-Hexanone	100	117	117	58-134	
4-Methyl-2-pentanone (MIBK)	100	122	122	56-135	
Acetone	100	98.5	98	50-137	
Acrolein	247	238	96	10-207	
Acrylonitrile	250	303	121	65-133	
Allyl chloride	25.0	32.1	129	57-136	
Benzene	25.0	28.1	112	69-126	
Bromoform	25.0	26.0	104	57-125	
Bromomethane	25.0	25.7	103	25-163	
Carbon disulfide	25.0	27.7	111	56-128	
Carbon tetrachloride	25.0	25.4	102	60-133	
Chlorobenzene	25.0	26.5	106	78-118	
Chlorobromomethane	25.0	26.9	108	71-130	
Chlorodibromomethane	25.0	25.2	101	71-122	
Chloroethane	25.0	27.5	110	52-144	
Chloroform	25.0	25.5	102	68-128	
Chloromethane	25.0	24.7	99	43-142	
cis-1,2-Dichloroethene	25.0	26.4	105	69-126	
cis-1,3-Dichloropropene	25.0	26.8	107	75-120	
Dibromomethane	25.0	25.5	102	68-129	
Dichlorobromomethane	25.0	25.6	102	67-126	
Dichlorodifluoromethane	25.0	17.9	72	26-152	
Ethyl methacrylate	25.0	29.0	116	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502910-LCS.d

Lab ID: LCS 280-610347/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	25.0	26.3	105	76-121	
Iodomethane	25.0	20.0	80	37-145	
Isobutyl alcohol	625	651	104	46-132	
Methylene Chloride	25.0	26.0	104	64-128	
m-Xylene & p-Xylene	25.0	26.8	107	76-122	
o-Xylene	25.0	25.9	104	77-120	
Styrene	25.0	27.0	108	79-120	
Tetrachloroethene	25.0	27.2	109	72-127	
Toluene	25.0	27.3	109	68-127	
trans-1,2-Dichloroethene	25.0	28.3	113	66-129	
trans-1,3-Dichloropropene	25.0	28.4	114	66-127	
trans-1,4-Dichloro-2-butene	25.0	24.7	99	44-131	
Trichloroethene	25.0	26.9	108	70-125	
Trichlorofluoromethane	25.0	21.6	86	57-144	
Vinyl acetate	50.0	60.7	121	61-139	
Vinyl chloride	25.0	26.7	107	53-141	
Xylenes, Total	50.0	52.7	105	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -X502911-LCS.d

Lab ID: LCS 280-610347/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	300	120	45-142	
Chloroprene	25.0	28.2	113	53-147	
Methacrylonitrile	250	286	114	47-142	
Methyl methacrylate	50.0	53.6	107	60-131	
Propionitrile	250	305	122	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -MS1_8602b-LCS.d

Lab ID: LCS 280-610464/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	43.6	87	74-121	
1,1,1-Trichloroethane	50.0	48.1	96	62-132	
1,1,2,2-Tetrachloroethane	50.0	48.2	96	72-122	
1,1,2-Trichloroethane	50.0	50.3	101	72-128	
1,1-Dichloroethane	50.0	51.9	104	66-130	
1,1-Dichloroethene	50.0	51.0	102	62-130	
1,1-Dichloropropene	50.0	52.0	104	64-133	
1,2,3-Trichloropropane	50.0	46.2	92	74-123	
1,2,4-Trichlorobenzene	50.0	47.1	94	73-124	
1,2-Dibromo-3-Chloropropane	50.0	40.9	82	58-122	
1,2-Dibromoethane	50.0	46.3	93	81-118	
1,2-Dichlorobenzene	50.0	49.0	98	77-121	
1,2-Dichloroethane	50.0	45.8	92	61-130	
1,2-Dichloropropane	50.0	51.7	103	68-127	
1,3-Dichlorobenzene	50.0	49.1	98	76-121	
1,3-Dichloropropane	50.0	50.4	101	80-118	
1,4-Dichlorobenzene	50.0	47.3	95	76-119	
2,2-Dichloropropane	50.0	40.4	81	57-140	
2-Butanone (MEK)	200	189	94	53-135	
2-Hexanone	200	186	93	58-134	
4-Methyl-2-pentanone (MIBK)	200	195	98	56-135	
Acetone	200	181	90	50-137	
Acrolein	494	463	94	10-207	
Acrylonitrile	500	525	105	65-133	
Allyl chloride	50.0	46.7	93	57-136	
Benzene	50.0	52.3	105	69-126	
Bromoform	50.0	38.1	76	57-125	
Bromomethane	50.0	42.1	84	25-163	
Carbon disulfide	50.0	49.0	98	56-128	
Carbon tetrachloride	50.0	43.8	88	60-133	
Chlorobenzene	50.0	49.3	99	78-118	
Chlorobromomethane	50.0	46.0	92	71-130	
Chlorodibromomethane	50.0	42.1	84	71-122	
Chloroethane	50.0	48.3	97	52-144	
Chloroform	50.0	49.0	98	68-128	
Chloromethane	50.0	48.4	97	43-142	
cis-1,2-Dichloroethene	50.0	51.3	103	69-126	
cis-1,3-Dichloropropene	50.0	45.7	91	75-120	
Dibromomethane	50.0	48.2	96	68-129	
Dichlorobromomethane	50.0	45.6	91	67-126	
Dichlorodifluoromethane	50.0	37.6	75	26-152	
Ethyl methacrylate	50.0	47.3	95	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -MS1_8602b-LCS.d

Lab ID: LCS 280-610464/1002 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	50.0	47.8	96	76-121	
Iodomethane	50.0	35.2	70	37-145	
Isobutyl alcohol	1250	1170	94	46-132	
Methylene Chloride	50.0	50.2	100	64-128	
m-Xylene & p-Xylene	50.0	48.7	97	76-122	
o-Xylene	50.0	48.1	96	77-120	
Styrene	50.0	48.8	98	79-120	
Tetrachloroethene	50.0	48.9	98	72-127	
Toluene	50.0	51.3	103	68-127	
trans-1,2-Dichloroethene	50.0	49.6	99	66-129	
trans-1,3-Dichloropropene	50.0	44.6	89	66-127	
trans-1,4-Dichloro-2-butene	50.0	39.1	78	44-131	
Trichloroethene	50.0	48.7	97	70-125	
Trichlorofluoromethane	50.0	41.8	84	57-144	
Vinyl acetate	100	89.4	89	61-139	
Vinyl chloride	50.0	48.3	97	53-141	
Xylenes, Total	100	96.8	97	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -MS1_8603a-LCS.d

Lab ID: LCS 280-610464/1003 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetonitrile	250	228	91	45-142	
Chloroprene	25.0	26.1	105	53-147	
Methacrylonitrile	250	230	92	47-142	
Methyl methacrylate	50.0	40.5	81	60-131	
Propionitrile	250	218	87	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502848.D

Lab ID: LCSD 280-610121/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	24.9	99	2	20	74-121	
1,1,1-Trichloroethane	25.0	25.4	102	1	20	62-132	
1,1,2,2-Tetrachloroethane	25.0	24.4	98	0	20	72-122	
1,1,2-Trichloroethane	25.0	26.0	104	3	20	72-128	
1,1-Dichloroethane	25.0	27.4	110	4	20	66-130	
1,1-Dichloroethene	25.0	26.5	106	0	21	62-130	
1,1-Dichloropropene	25.0	25.6	103	3	20	64-133	
1,2,3-Trichloropropane	25.0	23.9	95	2	20	74-123	
1,2,4-Trichlorobenzene	25.0	26.7	107	5	20	73-124	
1,2-Dibromo-3-Chloropropane	25.0	22.8	91	0	21	58-122	
1,2-Dibromoethane	25.0	25.3	101	2	20	81-118	
1,2-Dichlorobenzene	25.0	24.4	98	2	20	77-121	
1,2-Dichloroethane	25.0	23.8	95	2	20	61-130	
1,2-Dichloropropane	25.0	27.4	110	2	20	68-127	
1,3-Dichlorobenzene	25.0	25.4	102	0	20	76-121	
1,3-Dichloropropane	25.0	25.7	103	0	20	80-118	
1,4-Dichlorobenzene	25.0	24.3	97	1	20	76-119	
2,2-Dichloropropane	25.0	26.3	105	2	22	57-140	
2-Butanone (MEK)	100	108	108	6	20	53-135	
2-Hexanone	100	104	104	6	21	58-134	
4-Methyl-2-pentanone (MIBK)	100	110	110	6	20	56-135	
Acetone	100	96.2	96	4	21	50-137	
Acrolein	247	247	100	1	23	10-207	
Acrylonitrile	250	286	114	5	20	65-133	
Allyl chloride	25.0	30.3	121	6	20	57-136	
Benzene	25.0	27.8	111	1	20	69-126	
Bromoform	25.0	24.8	99	2	20	57-125	
Bromomethane	25.0	22.4	90	1	40	25-163	
Carbon disulfide	25.0	27.8	111	1	20	56-128	
Carbon tetrachloride	25.0	25.7	103	1	20	60-133	
Chlorobenzene	25.0	25.5	102	1	20	78-118	
Chlorobromomethane	25.0	27.1	108	3	20	71-130	
Chlorodibromomethane	25.0	24.1	96	2	20	71-122	
Chloroethane	25.0	26.1	105	2	30	52-144	
Chloroform	25.0	26.2	105	1	20	68-128	
Chloromethane	25.0	23.0	92	0	20	43-142	
cis-1,2-Dichloroethene	25.0	27.0	108	0	20	69-126	
cis-1,3-Dichloropropene	25.0	26.9	107	1	20	75-120	
Dibromomethane	25.0	25.7	103	2	20	68-129	
Dichlorobromomethane	25.0	25.9	104	1	20	67-126	
Dichlorodifluoromethane	25.0	17.3	69	2	21	26-152	
Ethyl methacrylate	25.0	27.4	109	3	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502848.D

Lab ID: LCSD 280-610121/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	25.0	25.6	103	0	20	76-121	
Iodomethane	25.0	21.1	84	11	38	37-145	
Isobutyl alcohol	625	568	91	6	30	46-132	
Methylene Chloride	25.0	26.2	105	2	20	64-128	
m-Xylene & p-Xylene	25.0	26.4	105	1	20	76-122	
o-Xylene	25.0	25.6	102	2	20	77-120	
Styrene	25.0	26.8	107	0	20	79-120	
Tetrachloroethene	25.0	26.0	104	3	20	72-127	
Toluene	25.0	27.1	108	1	20	68-127	
trans-1,2-Dichloroethene	25.0	28.0	112	0	20	66-129	
trans-1,3-Dichloropropene	25.0	27.6	110	0	20	66-127	
trans-1,4-Dichloro-2-butene	25.0	22.4	89	1	24	44-131	
Trichloroethene	25.0	26.4	106	2	20	70-125	
Trichlorofluoromethane	25.0	20.8	83	0	28	57-144	
Vinyl acetate	50.0	60.0	120	3	23	61-139	
Vinyl chloride	25.0	27.8	111	1	25	53-141	
Xylenes, Total	50.0	52.0	104	1	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502849.D

Lab ID: LCSD 280-610121/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	265	106	4	20	45-142	
Chloroprene	25.0	27.1	108	4	20	53-147	
Methacrylonitrile	250	260	104	7	20	47-142	
Methyl methacrylate	50.0	47.7	95	10	20	60-131	
Propionitrile	250	278	111	11	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502912.D

Lab ID: LCSD 280-610347/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	22.7	91	16	20	74-121	
1,1,1-Trichloroethane	25.0	22.8	91	10	20	62-132	
1,1,2,2-Tetrachloroethane	25.0	25.1	100	11	20	72-122	
1,1,2-Trichloroethane	25.0	25.0	100	10	20	72-128	
1,1-Dichloroethane	25.0	24.4	97	14	20	66-130	
1,1-Dichloroethene	25.0	24.2	97	10	21	62-130	
1,1-Dichloropropene	25.0	23.1	92	11	20	64-133	
1,2,3-Trichloropropane	25.0	22.5	90	11	20	74-123	
1,2,4-Trichlorobenzene	25.0	24.7	99	16	20	73-124	
1,2-Dibromo-3-Chloropropane	25.0	21.8	87	7	21	58-122	
1,2-Dibromoethane	25.0	23.3	93	11	20	81-118	
1,2-Dichlorobenzene	25.0	22.9	92	14	20	77-121	
1,2-Dichloroethane	25.0	21.4	86	11	20	61-130	
1,2-Dichloropropane	25.0	24.8	99	11	20	68-127	
1,3-Dichlorobenzene	25.0	22.9	92	14	20	76-121	
1,3-Dichloropropane	25.0	23.9	96	11	20	80-118	
1,4-Dichlorobenzene	25.0	22.0	88	16	20	76-119	
2,2-Dichloropropane	25.0	22.5	90	17	22	57-140	
2-Butanone (MEK)	100	113	113	4	20	53-135	
2-Hexanone	100	108	108	7	21	58-134	
4-Methyl-2-pentanone (MIBK)	100	114	114	7	20	56-135	
Acetone	100	93.4	93	5	21	50-137	
Acrolein	247	223	90	7	23	10-207	
Acrylonitrile	250	281	112	8	20	65-133	
Allyl chloride	25.0	28.5	114	12	20	57-136	
Benzene	25.0	24.5	98	14	20	69-126	
Bromoform	25.0	22.4	90	15	20	57-125	
Bromomethane	25.0	21.0	84	20	40	25-163	
Carbon disulfide	25.0	23.6	95	16	20	56-128	
Carbon tetrachloride	25.0	22.2	89	13	20	60-133	
Chlorobenzene	25.0	22.6	91	16	20	78-118	
Chlorobromomethane	25.0	23.0	92	16	20	71-130	
Chlorodibromomethane	25.0	21.7	87	15	20	71-122	
Chloroethane	25.0	23.6	94	16	30	52-144	
Chloroform	25.0	22.9	91	11	20	68-128	
Chloromethane	25.0	21.9	88	12	20	43-142	
cis-1,2-Dichloroethene	25.0	24.0	96	9	20	69-126	
cis-1,3-Dichloropropene	25.0	23.5	94	13	20	75-120	
Dibromomethane	25.0	23.3	93	9	20	68-129	
Dichlorobromomethane	25.0	22.7	91	12	20	67-126	
Dichlorodifluoromethane	25.0	15.6	62	14	21	26-152	
Ethyl methacrylate	25.0	25.8	103	12	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502912.D

Lab ID: LCSD 280-610347/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	25.0	22.5	90	16	20	76-121	
Iodomethane	25.0	16.5	66	20	38	37-145	
Isobutyl alcohol	625	627	100	4	30	46-132	
Methylene Chloride	25.0	23.0	92	12	20	64-128	
m-Xylene & p-Xylene	25.0	23.0	92	15	20	76-122	
o-Xylene	25.0	22.2	89	15	20	77-120	
Styrene	25.0	23.5	94	14	20	79-120	
Tetrachloroethene	25.0	22.5	90	19	20	72-127	
Toluene	25.0	24.2	97	12	20	68-127	
trans-1,2-Dichloroethene	25.0	24.4	98	15	20	66-129	
trans-1,3-Dichloropropene	25.0	24.5	98	15	20	66-127	
trans-1,4-Dichloro-2-butene	25.0	23.0	92	7	24	44-131	
Trichloroethene	25.0	22.9	92	16	20	70-125	
Trichlorofluoromethane	25.0	18.9	76	13	28	57-144	
Vinyl acetate	50.0	55.6	111	9	23	61-139	
Vinyl chloride	25.0	23.6	94	12	25	53-141	
Xylenes, Total	50.0	45.2	90	15	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X502913.D

Lab ID: LCSD 280-610347/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	280	112	7	20	45-142	
Chloroprene	25.0	25.1	100	12	20	53-147	
Methacrylonitrile	250	270	108	6	20	47-142	
Methyl methacrylate	50.0	49.3	99	8	20	60-131	
Propionitrile	250	290	116	5	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_8604.D

Lab ID: LCSD 280-610464/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	43.8	88	1	20	74-121	
1,1,1-Trichloroethane	50.0	46.3	93	4	20	62-132	
1,1,2,2-Tetrachloroethane	50.0	46.0	92	5	20	72-122	
1,1,2-Trichloroethane	50.0	49.7	99	1	20	72-128	
1,1-Dichloroethane	50.0	52.0	104	0	20	66-130	
1,1-Dichloroethene	50.0	49.0	98	4	21	62-130	
1,1-Dichloropropene	50.0	50.2	100	4	20	64-133	
1,2,3-Trichloropropane	50.0	44.2	88	4	20	74-123	
1,2,4-Trichlorobenzene	50.0	45.7	91	3	20	73-124	
1,2-Dibromo-3-Chloropropane	50.0	35.6	71	14	21	58-122	
1,2-Dibromoethane	50.0	45.7	91	1	20	81-118	
1,2-Dichlorobenzene	50.0	48.0	96	2	20	77-121	
1,2-Dichloroethane	50.0	46.3	93	1	20	61-130	
1,2-Dichloropropane	50.0	51.1	102	1	20	68-127	
1,3-Dichlorobenzene	50.0	48.9	98	0	20	76-121	
1,3-Dichloropropane	50.0	50.3	101	0	20	80-118	
1,4-Dichlorobenzene	50.0	47.0	94	1	20	76-119	
2,2-Dichloropropane	50.0	47.9	96	17	22	57-140	
2-Butanone (MEK)	200	163	81	15	20	53-135	
2-Hexanone	200	161	80	14	21	58-134	
4-Methyl-2-pentanone (MIBK)	200	172	86	13	20	56-135	
Acetone	200	162	81	11	21	50-137	
Acrolein	494	475	96	3	23	10-207	
Acrylonitrile	500	480	96	9	20	65-133	
Allyl chloride	50.0	50.3	101	7	20	57-136	
Benzene	50.0	51.6	103	1	20	69-126	
Bromoform	50.0	37.2	74	2	20	57-125	
Bromomethane	50.0	43.0	86	2	40	25-163	
Carbon disulfide	50.0	48.5	97	1	20	56-128	
Carbon tetrachloride	50.0	42.1	84	4	20	60-133	
Chlorobenzene	50.0	49.9	100	1	20	78-118	
Chlorobromomethane	50.0	47.0	94	2	20	71-130	
Chlorodibromomethane	50.0	42.0	84	0	20	71-122	
Chloroethane	50.0	49.1	98	2	30	52-144	
Chloroform	50.0	48.9	98	0	20	68-128	
Chloromethane	50.0	51.0	102	5	20	43-142	
cis-1,2-Dichloroethene	50.0	50.8	102	1	20	69-126	
cis-1,3-Dichloropropene	50.0	47.9	96	5	20	75-120	
Dibromomethane	50.0	48.0	96	0	20	68-129	
Dichlorobromomethane	50.0	45.1	90	1	20	67-126	
Dichlorodifluoromethane	50.0	40.0	80	6	21	26-152	
Ethyl methacrylate	50.0	44.9	90	5	20	69-126	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_8604.D

Lab ID: LCSD 280-610464/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	50.0	48.0	96	0	20	76-121	
Iodomethane	50.0	35.4	71	0	38	37-145	
Isobutyl alcohol	1250	937	75	22	30	46-132	
Methylene Chloride	50.0	50.8	102	1	20	64-128	
m-Xylene & p-Xylene	50.0	48.4	97	1	20	76-122	
o-Xylene	50.0	48.0	96	0	20	77-120	
Styrene	50.0	50.0	100	2	20	79-120	
Tetrachloroethene	50.0	48.0	96	2	20	72-127	
Toluene	50.0	50.4	101	2	20	68-127	
trans-1,2-Dichloroethene	50.0	48.6	97	2	20	66-129	
trans-1,3-Dichloropropene	50.0	45.7	91	2	20	66-127	
trans-1,4-Dichloro-2-butene	50.0	37.5	75	4	24	44-131	
Trichloroethene	50.0	47.1	94	3	20	70-125	
Trichlorofluoromethane	50.0	41.8	84	0	28	57-144	
Vinyl acetate	100	102	102	13	23	61-139	
Vinyl chloride	50.0	49.3	99	2	25	53-141	
Xylenes, Total	100	96.4	96	0	20	77-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_8605.D

Lab ID: LCSD 280-610464/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetonitrile	250	255	102	11	20	45-142	
Chloroprene	25.0	26.1	104	0	20	53-147	
Methacrylonitrile	250	249	100	8	20	47-142	
Methyl methacrylate	50.0	43.2	86	6	20	60-131	
Propionitrile	250	244	97	11	20	52-138	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: X502851.D Lab Sample ID: MB 280-610121/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_X4 Date Analyzed: 04/26/2023 11:43

GC Column: RXI-624SilMS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-610121/1003	-X502846-LCS.d	04/26/2023 09:51
	LCS 280-610121/1002	-X502847-LCS.d	04/26/2023 10:19
	LCSD 280-610121/4	X502848.D	04/26/2023 10:41
	LCSD 280-610121/5	X502849.D	04/26/2023 11:02
EB-03-20230413	280-175123-9	X502856.D	04/26/2023 13:40
MW-119D-20230413	280-175123-1	X502864.D	04/26/2023 16:24
MW-119S-20230413	280-175123-2	X502865.D	04/26/2023 16:45
RW-3-20230413	280-175123-3	X502866.D	04/26/2023 17:06

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: X502915.D Lab Sample ID: MB 280-610347/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_X4 Date Analyzed: 04/27/2023 12:59

GC Column: RXI-624SilMS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-610347/1002	-X502910-LCS.d	04/27/2023 11:12
	LCS 280-610347/1003	-X502911-LCS.d	04/27/2023 11:36
	LCSD 280-610347/4	X502912.D	04/27/2023 11:57
	LCSD 280-610347/5	X502913.D	04/27/2023 12:18
EB-04-20230414	280-175123-8	X502918.D	04/27/2023 14:01
MW-113D-20230414	280-175123-4	X502924.D	04/27/2023 16:04
MW-113S-20230414	280-175123-5	X502925.D	04/27/2023 16:25

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: MS1_8607.D Lab Sample ID: MB 280-610464/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_MS1 Date Analyzed: 04/27/2023 18:43

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-610464/1002	-MS1_8602b-LCS.d	04/27/2023 16:12
	LCS 280-610464/1003	-MS1_8603a-LCS.d	04/27/2023 16:34
	LCSD 280-610464/4	MS1_8604.D	04/27/2023 17:40
	LCSD 280-610464/5	MS1_8605.D	04/27/2023 18:01
TB-05-20230416	280-175123-11	MS1_8608.D	04/27/2023 19:27
MW-112M-20230415	280-175123-6	MS1_8611.D	04/27/2023 20:31
MW-112D-20230415	280-175123-7	MS1_8612.D	04/27/2023 20:52
MW-109D-20230415	280-175123-10	MS1_8613.D	04/27/2023 21:13

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: MS1_4145.D BFB Injection Date: 12/28/2022

Instrument ID: VMS_MS1 BFB Injection Time: 07:14

Analysis Batch No.: 597846

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	22.4
75	30.0 - 60.0 % of mass 95	54.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	Greater than 50% of mass 95	72.3
175	5.0 - 9.0 % of mass 174	5.9 (8.1) 1
176	95.0 - 101.0 % of mass 174	71.1 (98.4) 1
177	5.0 - 9.0 % of mass 176	4.7 (6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 280-597846/12	MS1_4150.D	12/28/2022	11:59
	STD2 280-597846/13	MS1_4151.D	12/28/2022	12:21
	STD5 280-597846/14	MS1_4152.D	12/28/2022	12:43
	STD10 280-597846/15	MS1_4153.D	12/28/2022	13:05
	STD50 280-597846/16	MS1_4154.D	12/28/2022	13:27
	STD75 280-597846/17	MS1_4155.D	12/28/2022	13:49
	STD100 280-597846/18	MS1_4156.D	12/28/2022	14:11
	STD200 280-597846/19	MS1_4157.D	12/28/2022	14:33

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: MS1_8181.D BFB Injection Date: 04/18/2023

Instrument ID: VMS_MS1 BFB Injection Time: 09:29

Analysis Batch No.: 609046

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.3	
75	30.0 - 60.0 % of mass 95	54.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	70.0	
175	5.0 - 9.0 % of mass 174	6.1	(8.8) 1
176	95.0 - 101.0 % of mass 174	68.3	(97.5) 1
177	5.0 - 9.0 % of mass 176	4.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-609046/34	MS1_8185.D	04/18/2023	11:03
	IC 280-609046/35	MS1_8186.D	04/18/2023	11:24
	IC 280-609046/36	MS1_8187.D	04/18/2023	11:45
	ICIS 280-609046/37	MS1_8188.D	04/18/2023	12:06
	IC 280-609046/38	MS1_8189.D	04/18/2023	12:27
	IC 280-609046/39	MS1_8190.D	04/18/2023	12:49
	IC 280-609046/42	MS1_8195.D	04/18/2023	18:15
	IC 280-609046/41	MS1_8196.D	04/18/2023	18:36
	IC 280-609046/40	MS1_8197.D	04/18/2023	18:58
	ICV 280-609046/43	MS1_8198.D	04/18/2023	19:19

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: MS1_8602a.D BFB Injection Date: 04/27/2023

Instrument ID: VMS_MS1 BFB Injection Time: 16:12

Analysis Batch No.: 610464

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.6	
75	30.0 - 60.0 % of mass 95	51.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	66.2	
175	5.0 - 9.0 % of mass 174	5.3	(8.0) 1
176	95.0 - 101.0 % of mass 174	64.7	(97.8) 1
177	5.0 - 9.0 % of mass 176	4.2	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-610464/2	MS1_8602b.D	04/27/2023	16:12
	LCS 280-610464/1002	-MS1_8602b-LC	04/27/2023	16:12
	CCV 280-610464/3	MS1_8603a.D	04/27/2023	16:34
	LCS 280-610464/1003	-MS1_8603a-LC	04/27/2023	16:34
	LCSD 280-610464/4	MS1_8604.D	04/27/2023	17:40
	LCSD 280-610464/5	MS1_8605.D	04/27/2023	18:01
	MB 280-610464/7	MS1_8607.D	04/27/2023	18:43
TB-05-20230416	280-175123-11	MS1_8608.D	04/27/2023	19:27
MW-112M-20230415	280-175123-6	MS1_8611.D	04/27/2023	20:31
MW-112D-20230415	280-175123-7	MS1_8612.D	04/27/2023	20:52
MW-109D-20230415	280-175123-10	MS1_8613.D	04/27/2023	21:13

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: X43661.D BFB Injection Date: 10/22/2022

Instrument ID: VMS_X4 BFB Injection Time: 11:07

Analysis Batch No.: 590907

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.0	
75	30.0 - 60.0 % of mass 95	50.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	73.1	
175	5.0 - 9.0 % of mass 174	6.1	(8.4) 1
176	95.0 - 101.0 % of mass 174	70.6	(96.6) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD010 280-590907/23	X43673.D	10/22/2022	15:19
	STD020 280-590907/24	X43674.D	10/22/2022	15:40
	STD050 280-590907/25	X43675.D	10/22/2022	16:01
	STD10 280-590907/26	X43676.D	10/22/2022	16:21
	STD50 280-590907/27	X43677.D	10/22/2022	16:42
	STD100 280-590907/28	X43678.D	10/22/2022	17:02
	STD200 280-590907/29	X43679.D	10/22/2022	17:23

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: X502125.D BFB Injection Date: 04/07/2023

Instrument ID: VMS_X4 BFB Injection Time: 02:33

Analysis Batch No.: 607881

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.3	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.4	(0.4) 1
174	Greater than 50% of mass 95	82.2	
175	5.0 - 9.0 % of mass 174	6.4	(7.8) 1
176	95.0 - 101.0 % of mass 174	78.2	(95.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD 280-607881/19	X502127.D	04/07/2023	3:14
	STD 280-607881/18	X502128.D	04/07/2023	3:34
	STD 280-607881/16	X502129.D	04/07/2023	3:55
	STD 280-607881/17	X502130.D	04/07/2023	4:15
	STD 280-607881/15	X502131.D	04/07/2023	4:36
	ICIS 280-607881/14	X502132.D	04/07/2023	4:56
	STD 280-607881/13	X502133.D	04/07/2023	5:17
	STD 280-607881/12	X502134.D	04/07/2023	5:38
	STD 280-607881/11	X502135.D	04/07/2023	5:58

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: X502169.D BFB Injection Date: 04/10/2023

Instrument ID: VMS_X4 BFB Injection Time: 21:51

Analysis Batch No.: 608203

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.6	
75	30.0 - 60.0 % of mass 95	50.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	81.7	
175	5.0 - 9.0 % of mass 174	6.5	(7.9) 1
176	95.0 - 101.0 % of mass 174	79.9	(97.7) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 280-608203/8	X502177.D	04/11/2023	0:52

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: X502846A.D BFB Injection Date: 04/26/2023

Instrument ID: VMS_X4 BFB Injection Time: 09:51

Analysis Batch No.: 610121

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.9	
75	30.0 - 60.0 % of mass 95	46.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.1	(0.2) 1
174	Greater than 50% of mass 95	76.8	
175	5.0 - 9.0 % of mass 174	5.9	(7.7) 1
176	95.0 - 101.0 % of mass 174	75.6	(98.3) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-610121/3	X502846.D	04/26/2023	9:51
	LCS 280-610121/1003	-X502846-LCS.	04/26/2023	9:51
	CCV 280-610121/2	X502847.D	04/26/2023	10:19
	LCS 280-610121/1002	-X502847-LCS.	04/26/2023	10:19
	LCSD 280-610121/4	X502848.D	04/26/2023	10:41
	LCSD 280-610121/5	X502849.D	04/26/2023	11:02
	MB 280-610121/7	X502851.D	04/26/2023	11:43
EB-03-20230413	280-175123-9	X502856.D	04/26/2023	13:40
MW-119D-20230413	280-175123-1	X502864.D	04/26/2023	16:24
MW-119S-20230413	280-175123-2	X502865.D	04/26/2023	16:45
RW-3-20230413	280-175123-3	X502866.D	04/26/2023	17:06

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab File ID: X502909.D BFB Injection Date: 04/27/2023

Instrument ID: VMS_X4 BFB Injection Time: 10:51

Analysis Batch No.: 610347

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.1	
75	30.0 - 60.0 % of mass 95	45.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	5.9	
173	Less than 2.0 % of mass 174	0.2	(0.3) 1
174	Greater than 50% of mass 95	74.5	
175	5.0 - 9.0 % of mass 174	5.8	(7.8) 1
176	95.0 - 101.0 % of mass 174	71.8	(96.4) 1
177	5.0 - 9.0 % of mass 176	5.1	(7.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-610347/2	X502910.D	04/27/2023	11:12
	LCS 280-610347/1002	-X502910-LCS.	04/27/2023	11:12
	CCV 280-610347/3	X502911.D	04/27/2023	11:36
	LCS 280-610347/1003	-X502911-LCS.	04/27/2023	11:36
	LCSD 280-610347/4	X502912.D	04/27/2023	11:57
	LCSD 280-610347/5	X502913.D	04/27/2023	12:18
	MB 280-610347/7	X502915.D	04/27/2023	12:59
EB-04-20230414	280-175123-8	X502918.D	04/27/2023	14:01
MW-113D-20230414	280-175123-4	X502924.D	04/27/2023	16:04
MW-113S-20230414	280-175123-5	X502925.D	04/27/2023	16:25

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Sample No.: ICIS 280-609046/37 Date Analyzed: 04/18/2023 12:06

Instrument ID: VMS_MS1 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): MS1_8188.D Heated Purge: (Y/N) N

Calibration ID: 79362

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1247062	6.03	293780	8.77	475448	11.06
UPPER LIMIT		2494124	6.53	587560	9.27	950896	11.56
LOWER LIMIT		623531	5.53	146890	8.27	237724	10.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-609046/43		1180704	6.03	275927	8.77	454451	11.06
CCV 280-610464/2		1286498	6.03	310409	8.77	484361	11.06
LCS 280-610464/1002		1286498	6.03	310409	8.77	484361	11.06
LCS 280-610464/1003		1273999	6.03	301529	8.77	475598	11.06
CCV 280-610464/3		1273999	6.03	301529	8.77	475598	11.06
LCSD 280-610464/4		1287518	6.03	306035	8.77	486416	11.06
LCSD 280-610464/5		1274423	6.03	303452	8.77	477579	11.06
MB 280-610464/7		1258766	6.03	297736	8.77	465850	11.06
280-175123-11	TB-05-20230416	1237188	6.03	296314	8.77	468508	11.06
280-175123-6	MW-112M-20230415	1219271	6.03	282467	8.77	442503	11.06
280-175123-7	MW-112D-20230415	1259263	6.03	295522	8.77	467527	11.06
280-175123-10	MW-109D-20230415	1271151	6.03	299842	8.77	469570	11.06

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Sample No.: ICIS 280-607881/14 Date Analyzed: 04/07/2023 04:56

Instrument ID: VMS_X4 GC Column: RXI-624SilMS ID: 0.25(mm)

Lab File ID (Standard): X502132.D Heated Purge: (Y/N) N

Calibration ID: 79019

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1433467	5.06	327912	7.57	509618	9.79
UPPER LIMIT		2866934	5.56	655824	8.07	1019236	10.29
LOWER LIMIT		716734	4.56	163956	7.07	254809	9.29
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-608203/8		1472574	5.06	356963	7.57	549141	9.79
CCV 280-610121/3		2035170	5.06	505460	7.57	795445	9.79
LCS 280-610121/1003		2035170	5.06	505460	7.57	795445	9.79
CCV 280-610121/2		2064544	5.06	504405	7.57	799833	9.79
LCS 280-610121/1002		2064544	5.06	504405	7.57	799833	9.79
LCSD 280-610121/4		2094082	5.06	509073	7.57	797999	9.79
LCSD 280-610121/5		2049501	5.06	510941	7.57	790900	9.79
MB 280-610121/7		2025881	5.06	487961	7.57	789543	9.79
280-175123-9	EB-03-20230413	2001658	5.06	482302	7.57	753707	9.79
280-175123-1	MW-119D-20230413	2041420	5.06	506053	7.57	795924	9.79
280-175123-2	MW-119S-20230413	1985219	5.06	473885	7.57	741288	9.79
LCS 280-610347/1002		2075744	5.06	498852	7.57	782929	9.79
CCV 280-610347/2		2075744	5.06	498852	7.57	782929	9.79
CCV 280-610347/3		2059516	5.06	497540	7.57	790650	9.79
LCS 280-610347/1003		2059516	5.06	497540	7.57	790650	9.79
LCSD 280-610347/4		2083610	5.06	508261	7.57	794649	9.79
LCSD 280-610347/5		2066644	5.06	511317	7.57	795555	9.79
MB 280-610347/7		2037332	5.06	495922	7.57	787571	9.79
280-175123-8	EB-04-20230414	1999128	5.06	476906	7.57	759147	9.79
280-175123-4	MW-113D-20230414	2008693	5.06	486818	7.57	754080	9.79
280-175123-5	MW-113S-20230414	2018409	5.06	479641	7.57	748608	9.79

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-119D-20230413 | Lab Sample ID: 280-175123-1

Matrix: Water | Lab File ID: X502864.D

Analysis Method: 8260D | Date Collected: 04/13/2023 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 16:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-119D-20230413 | Lab Sample ID: 280-175123-1

Matrix: Water | Lab File ID: X502864.D

Analysis Method: 8260D | Date Collected: 04/13/2023 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 16:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	1.3		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	3.6		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	22		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	120		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-119D-20230413 | Lab Sample ID: 280-175123-1

Matrix: Water | Lab File ID: X502864.D

Analysis Method: 8260D | Date Collected: 04/13/2023 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 16:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	99		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D
Lims ID: 280-175123-F-1
Client ID: MW-119D-20230413
Sample Type: Client
Inject. Date: 26-Apr-2023 16:24:30 ALS Bottle#: 20 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-F-1
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 08:25:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: sangkuas Date: 21-Nov-2023 08:25:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2041420	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	506053	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	795924	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	510563	52.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	507948	49.3	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	93	2140726	49.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	90	713660	50.2	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	90	713660	NR	
10 Dichlorodifluoromethane	85	1.695	1.696	-0.001	32	2482	0.2771	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94		2.239				ND	7
15 Chloroethane	64		2.332				ND	U
16 Dichlorofluoromethane	67		2.504				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.654				ND	
19 Ethyl ether	59	2.747	2.747	0.000	89	3892	0.5650	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96		2.933				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.033				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.119				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.197				ND	
31 Methylene Chloride	84		3.297				ND	
32 2-Methyl-2-propanol	59		3.333				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85	3.805	3.733	0.072	39	664	NC	
39 Vinyl acetate	43		3.784				ND	
40 1,1-Dichloroethane	63		3.805				ND	U
41 Isopropyl ether	87		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.855				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	77	37768	3.62	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.398				ND	
54 Chloroform	83	4.448	4.441	0.007	91	20410	1.26	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	7
63 1,2-Dichloroethane	62		4.878				ND	7
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	98	1115553	115.2	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.543				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.893				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	7
83 Tetrachloroethene	164	6.808	6.801	0.007	97	159740	21.7	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	
89 1-Chlorohexane	91		7.559				ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
90 Chlorobenzene	112		7.602			ND		
91 1,1,1,2-Tetrachloroethane	131		7.673			ND		
92 Ethylbenzene	106		7.673			ND		
93 m-Xylene & p-Xylene	106		7.795			ND		7
94 o-Xylene	106		8.152			ND		
95 Styrene	104		8.167			ND		
96 Bromoform	173		8.353			ND		
97 Isopropylbenzene	105		8.488			ND		
98 cis-1,4-Dichloro-2-butene	53		8.538			ND		
99 Cyclohexanone	55		8.589			ND		U
100 1,1,2,2-Tetrachloroethane	83		8.774			ND		
101 Bromobenzene	156		8.810			ND		
102 trans-1,4-Dichloro-2-butene	53		8.810			ND		
103 1,2,3-Trichloropropane	110		8.839			ND		
104 N-Propylbenzene	120		8.889			ND		
105 2-Chlorotoluene	126		8.982			ND		
106 1,3,5-Trimethylbenzene	105		9.060			ND		
107 4-Chlorotoluene	126		9.103			ND		
108 tert-Butylbenzene	119		9.368			ND		
109 Pentachloroethane	167		9.403			ND		
110 1,2,4-Trimethylbenzene	105		9.425			ND		
111 sec-Butylbenzene	134		9.590			ND		
112 1,3-Dichlorobenzene	146		9.711			ND		
113 4-Isopropyltoluene	119		9.733			ND		
114 1,4-Dichlorobenzene	146		9.811			ND		
115 1,2,3-Trimethylbenzene	105		9.833			ND		
116 n-Butylbenzene	91		10.140			ND		
117 1,2-Dichlorobenzene	146		10.169			ND		7
118 1,2-Dibromo-3-Chloropropane	157		10.948			ND		
119 1,3,5-Trichlorobenzene	180		11.134			ND		
120 1,2,4-Trichlorobenzene	180		11.770			ND		
121 Hexachlorobutadiene	225		11.906			ND		
122 Naphthalene	128		12.035			ND		
123 1,2,3-Trichlorobenzene	180		12.257			ND		
171 4-Bromofluorobenzene	95		0.000			ND		
165 t-Amyl alcohol	1		0.000			ND		
127 n-Nonyl Aldehyde	1		0.000			ND		
166 Ethyl acrylate	55		0.000			ND		
167 1-Chloro-1-fluoroethane TIC	1		0.000			ND		
134 Propene oxide TIC	58		5.334			ND		
S 136 1,3-Dichloropropene, Total	1		0.000			ND		7
S 138 Xylenes, Total	106		0.000			ND		7
S 137 Total BTEX	1		0.000			ND		7
S 140 Trihalomethanes, Total	1				0		1.26	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		3.62	
T 152 Methyl cyclohexane TIC	1		0.000			ND		
T 148 Dicyclopentadiene TIC	1		0.000			ND		
T 150 4-Ethyltoluene TIC	1		0.000			ND		
T 153 Cyclohexane TIC	1		0.000			ND		
T 144 1,3-Butadiene TIC	1		0.000			ND		
T 146 Propene TIC	1		0.000			ND		

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

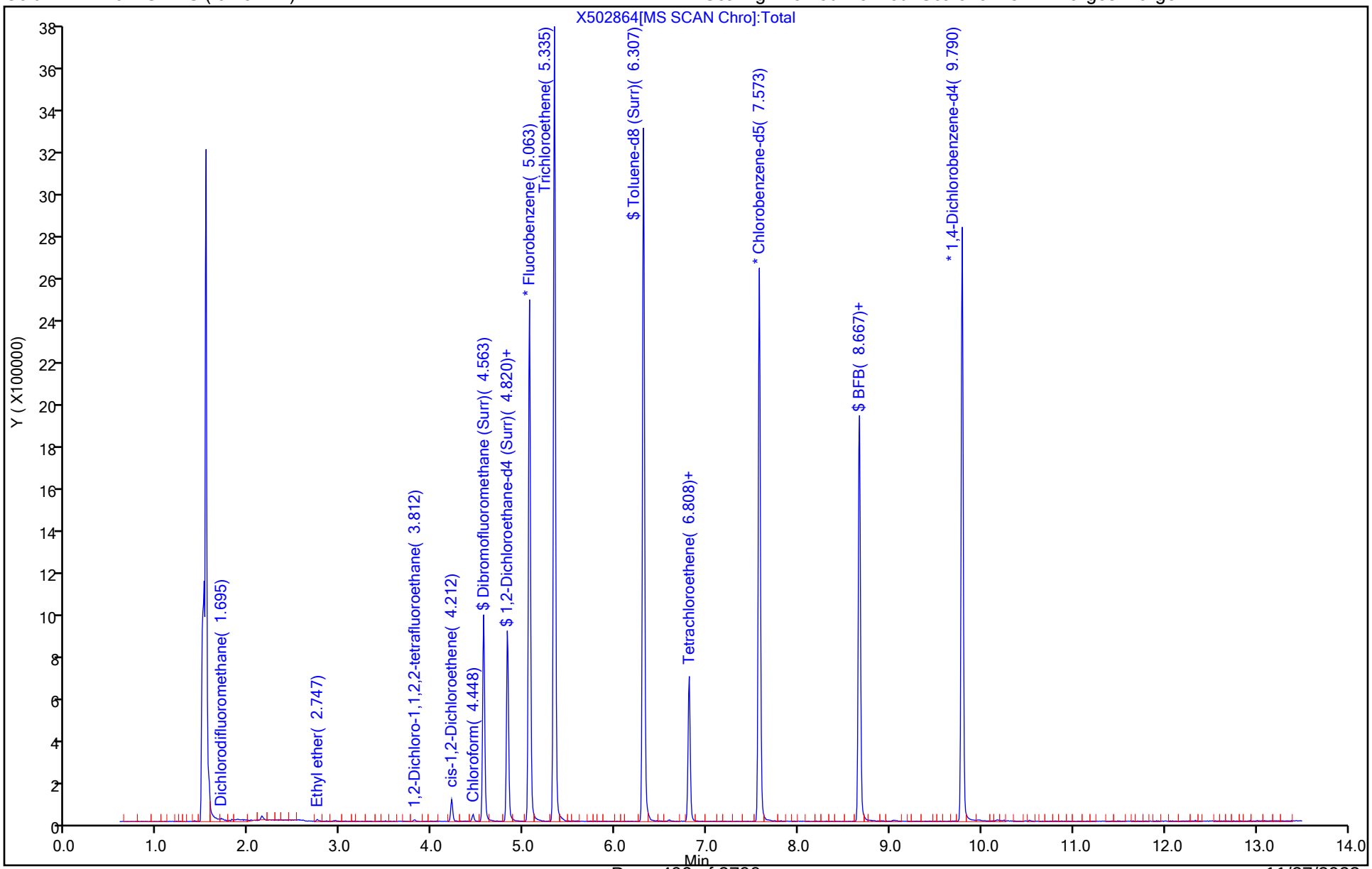
Report Date: 21-Nov-2023 08:25:03 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D

Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1	Worklist Smp#:	23
Client ID:	MW-119D-20230413				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D
Lims ID: 280-175123-F-1
Client ID: MW-119D-20230413
Sample Type: Client
Inject. Date: 26-Apr-2023 16:24:30 ALS Bottle#: 20 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-F-1
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 08:25:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

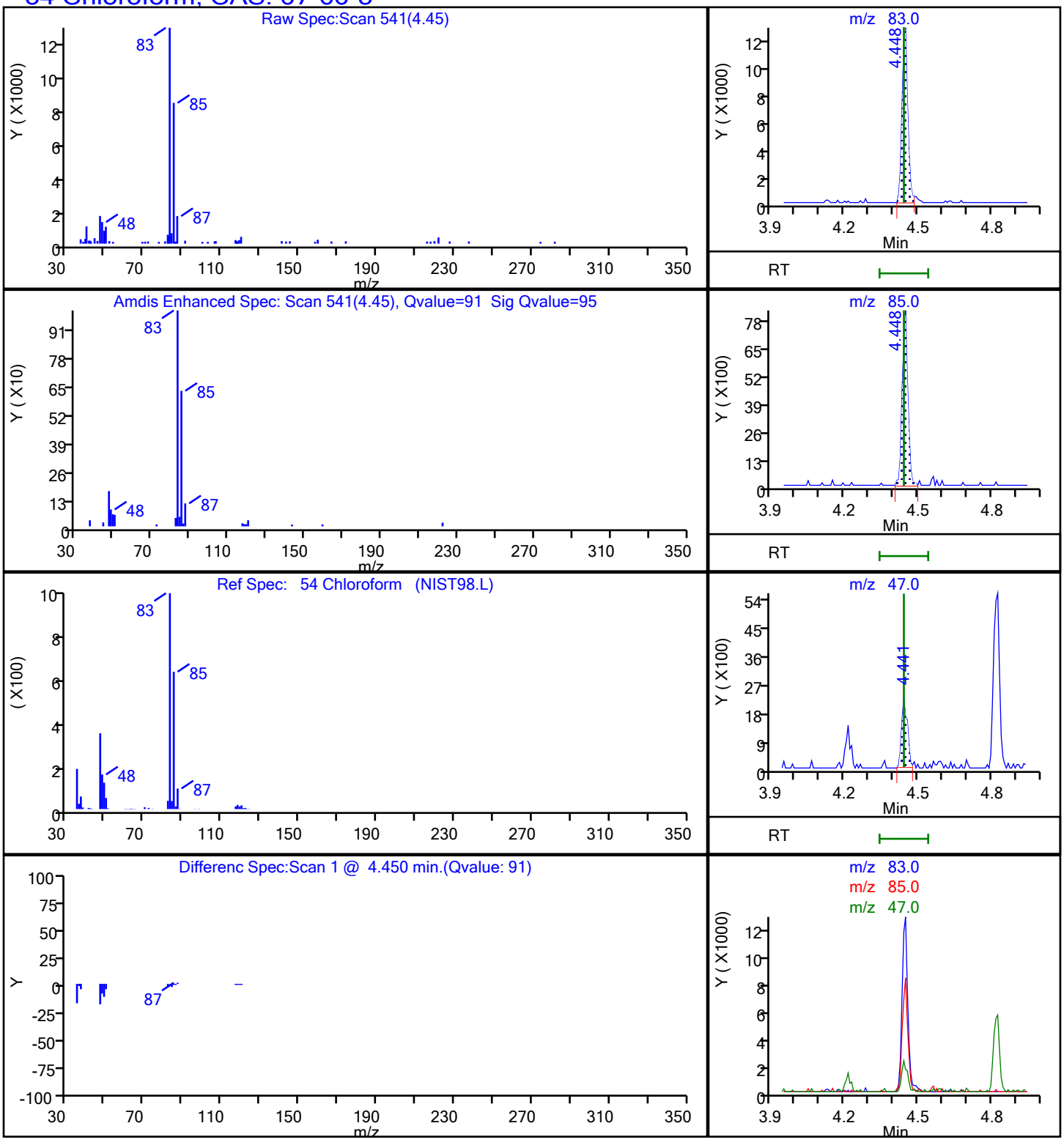
First Level Reviewer: sangkuas Date: 21-Nov-2023 08:25:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.0	103.99
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	49.3	98.50
$ 6 Toluene-d8 (Surr)	50.0	49.7	99.32
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.2	100.35

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D		
Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1
Client ID:	MW-119D-20230413		
Operator ID:	MED	ALS Bottle#:	20 Worklist Smp#: 23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

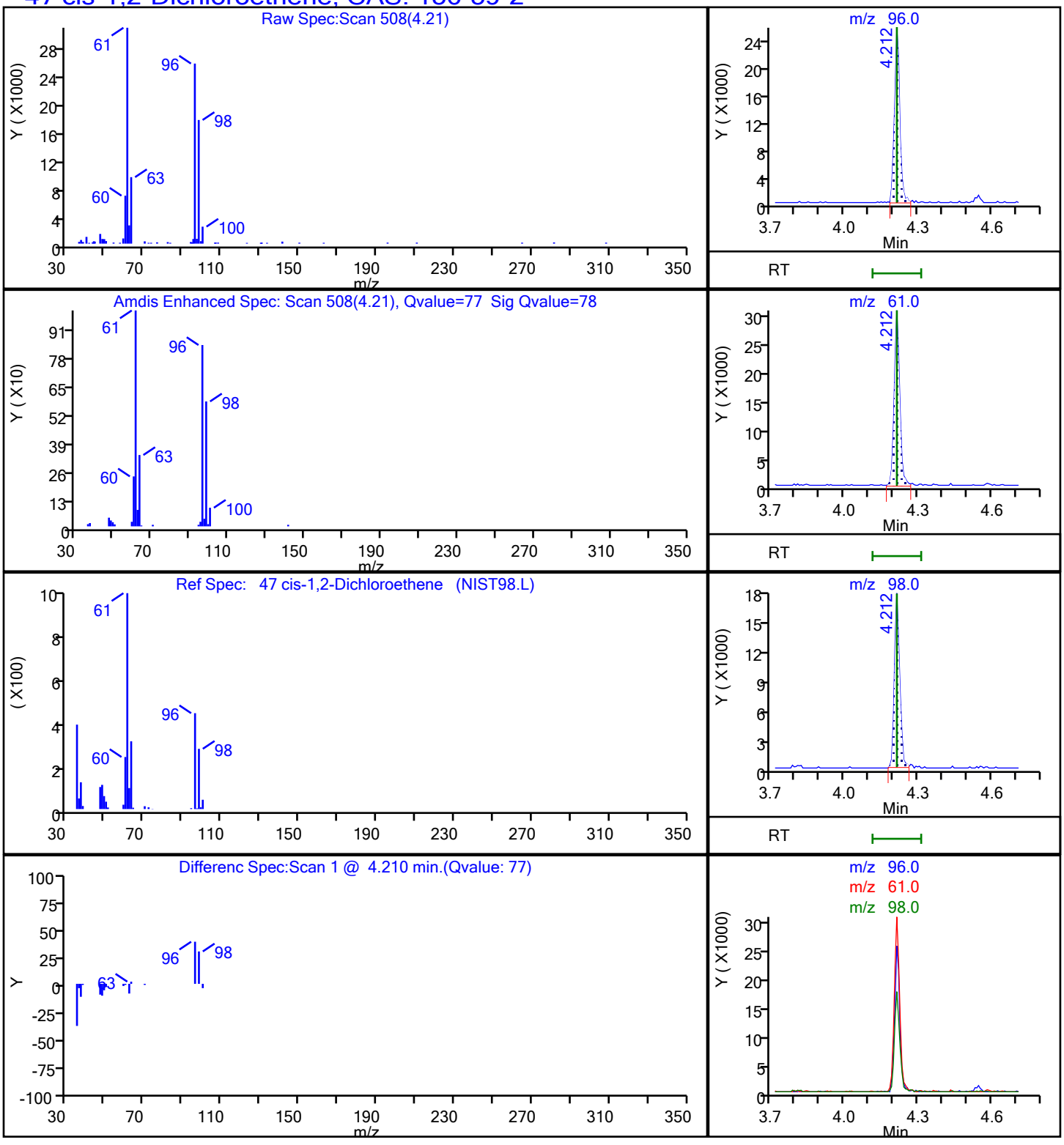
54 Chloroform, CAS: 67-66-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D		
Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1
Client ID:	MW-119D-20230413		
Operator ID:	MED	ALS Bottle#:	20 Worklist Smp#: 23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

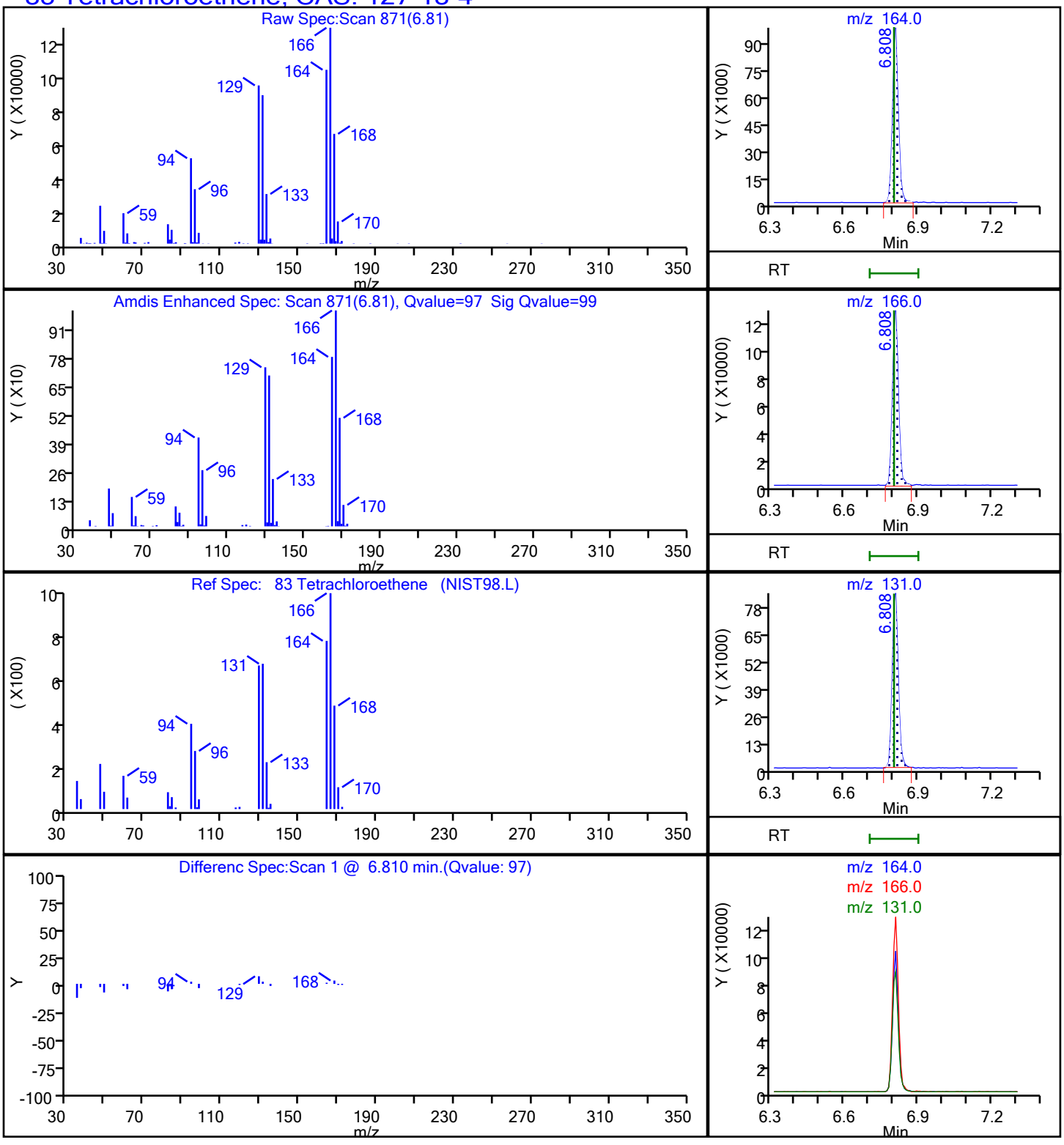
47 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D		
Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1
Client ID:	MW-119D-20230413		
Operator ID:	MED	ALS Bottle#:	20 Worklist Smp#: 23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

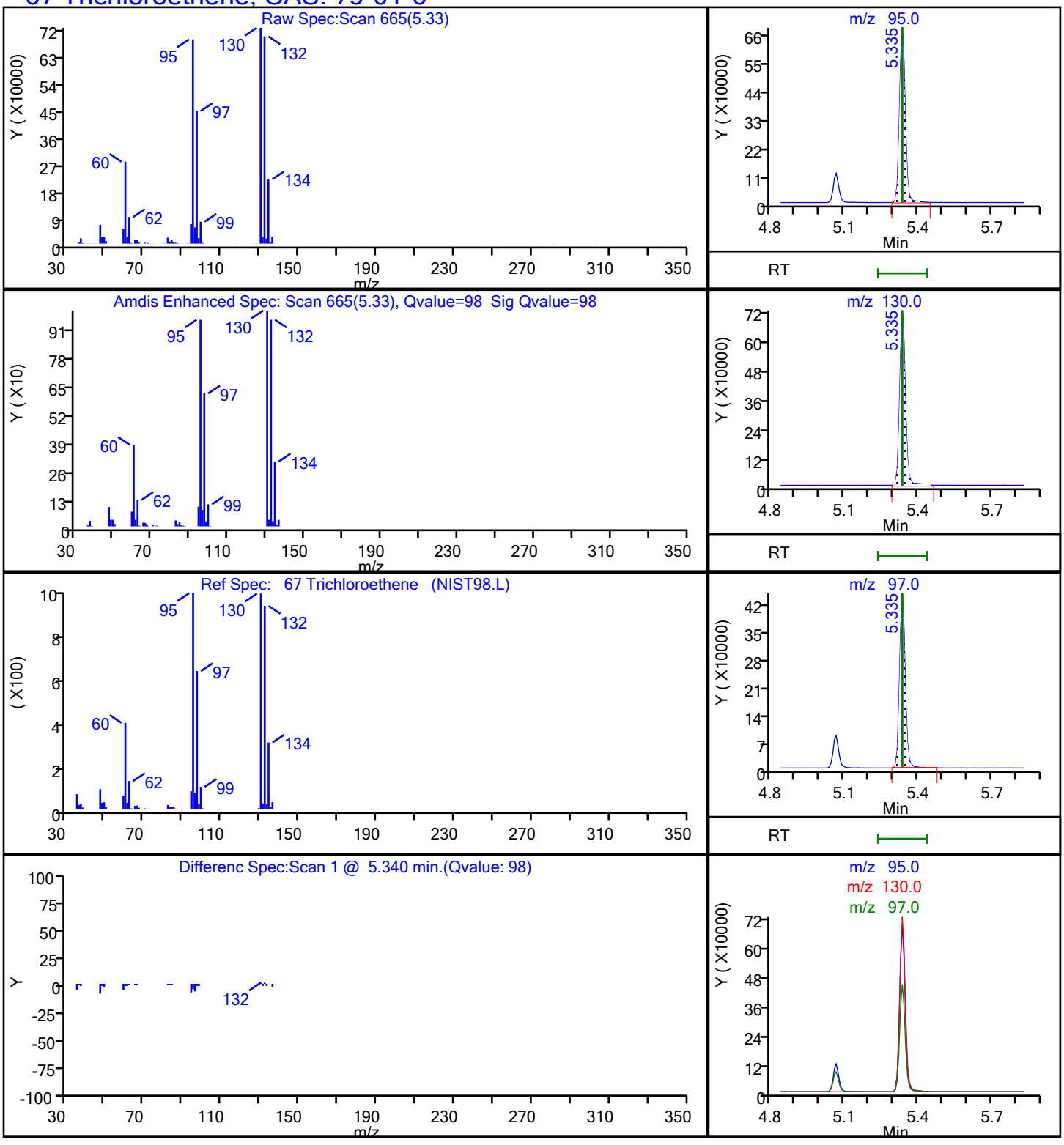
83 Tetrachloroethene, CAS: 127-18-4



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D		
Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1
Client ID:	MW-119D-20230413		
Operator ID:	MED	ALS Bottle#:	20 Worklist Smp#: 23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

67 Trichloroethene, CAS: 79-01-6



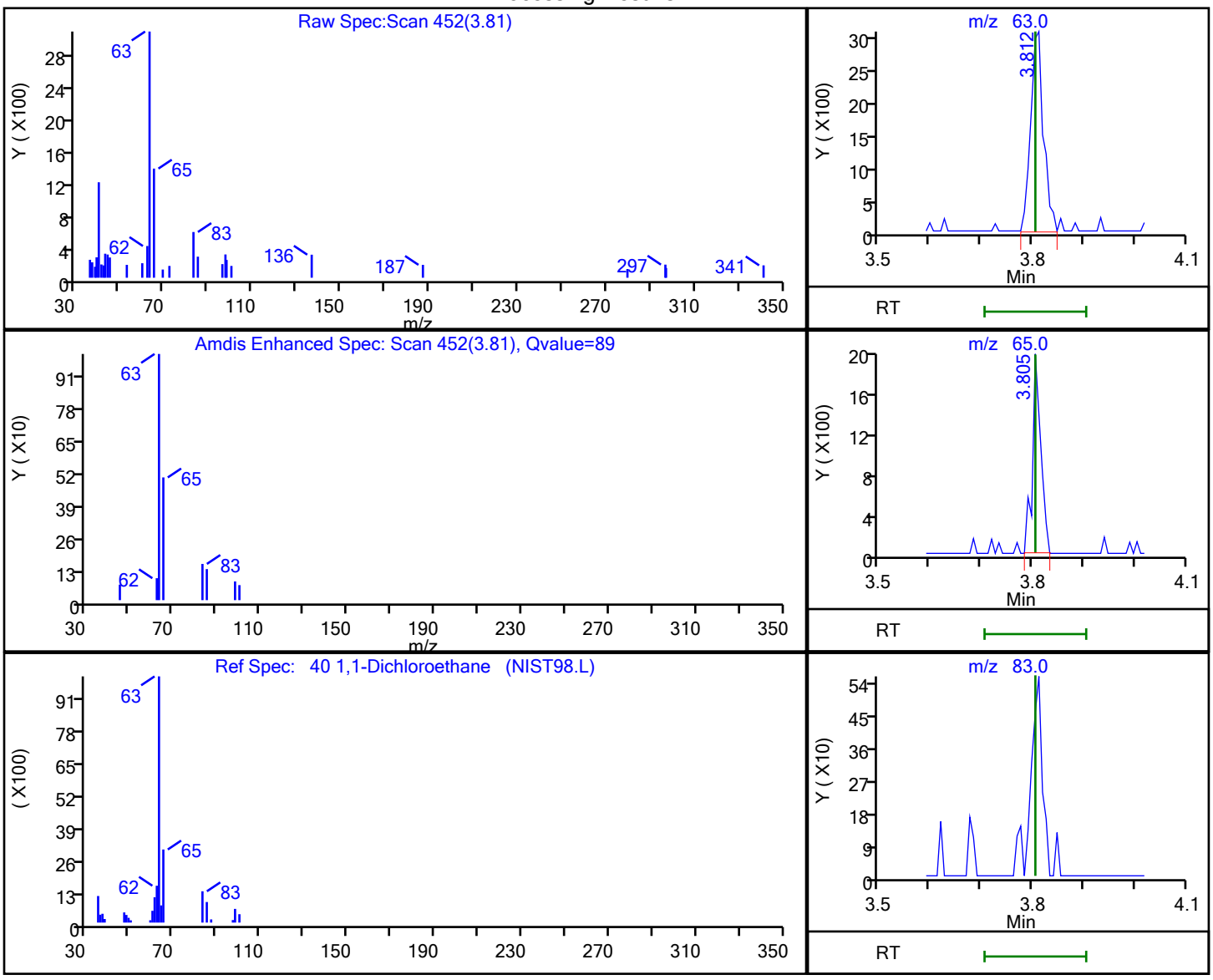
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D				
Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1		
Client ID:	MW-119D-20230413				
Operator ID:	MED	ALS Bottle#:	20	Worklist Smp#:	23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

40 1,1-Dichloroethane, CAS: 75-34-3

Processing Results



RT	Mass	Response	Amount
3.81	63.00	5261	0.331236
3.80	65.00	2227	
3.80	83.00	0	

Reviewer: AK2J, 27-Apr-2023 01:51:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

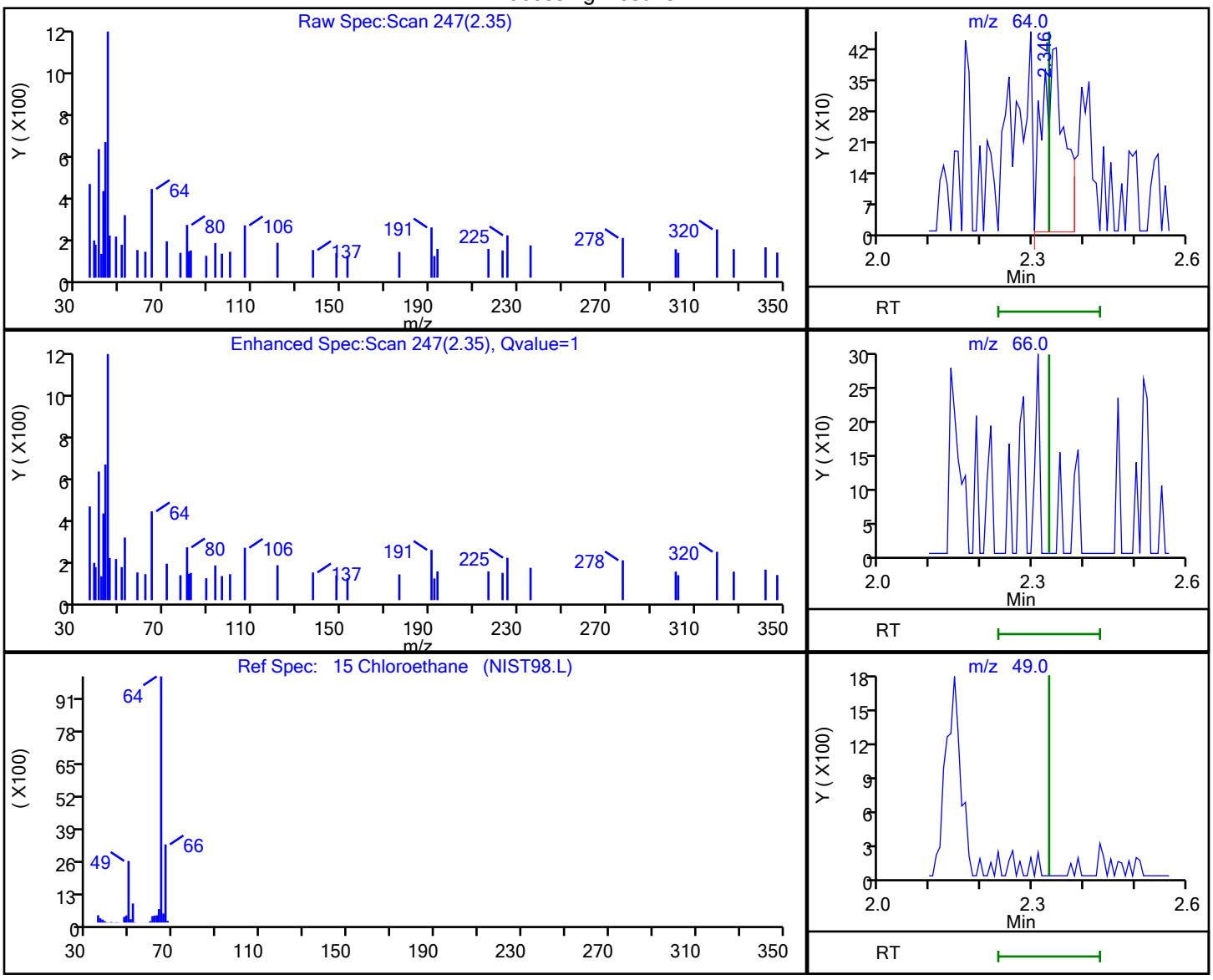
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D				
Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1		
Client ID:	MW-119D-20230413				
Operator ID:	MED	ALS Bottle#:	20	Worklist Smp#:	23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

15 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.35	64.00	1252	0.201827
2.33	66.00	0	
2.33	49.00	0	

Reviewer: AK2J, 27-Apr-2023 01:51:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins Denver

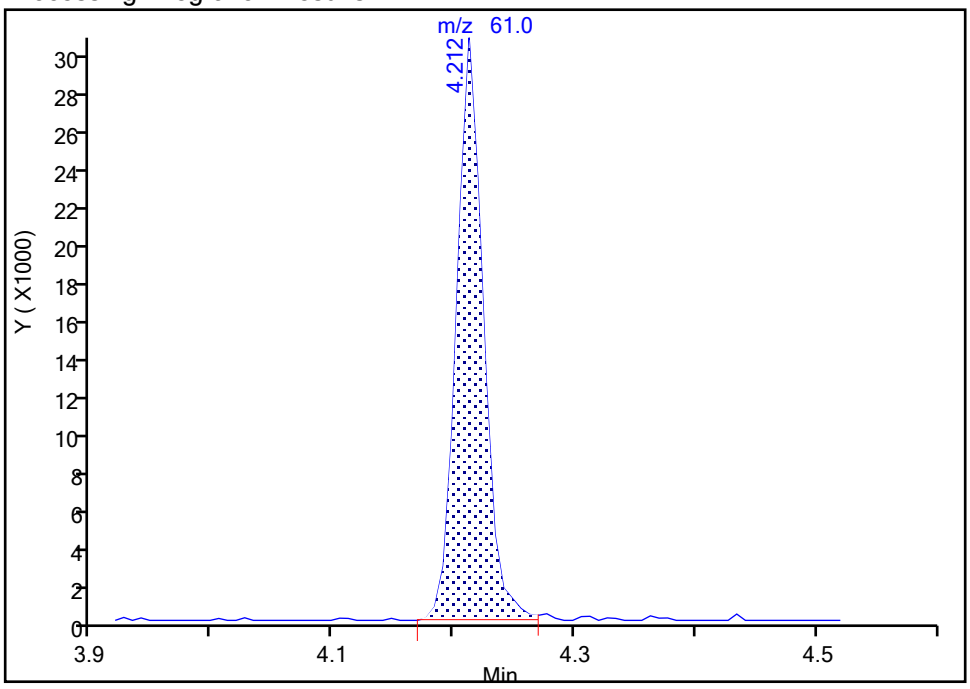
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D				
Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1		
Client ID:	MW-119D-20230413				
Operator ID:	MED	ALS Bottle#:	20	Worklist Smp#:	23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 2

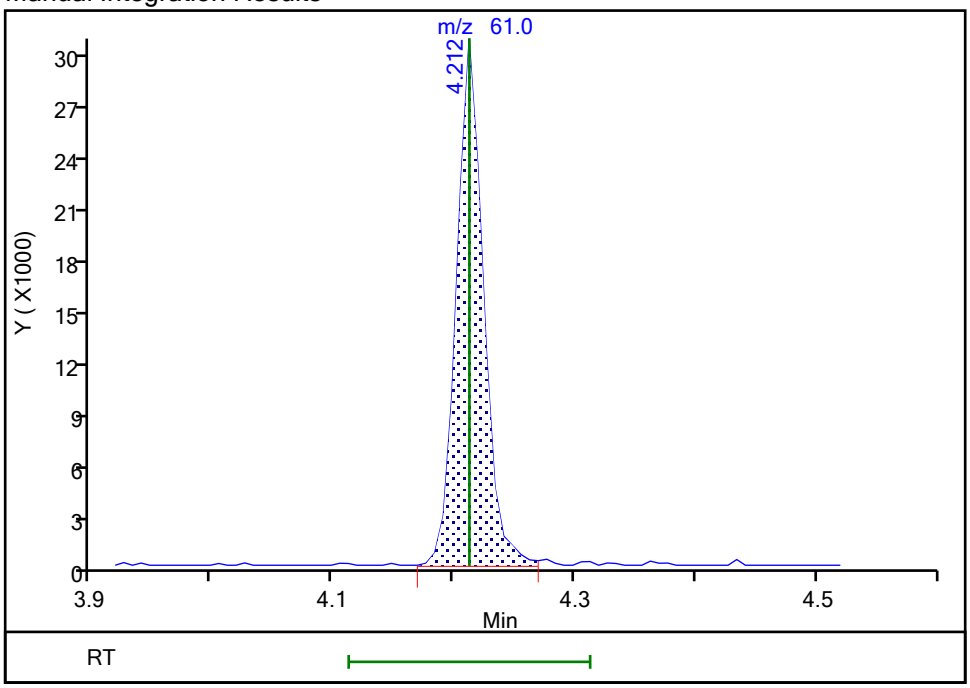
Processing Integration Results

RT: 4.21
Area: 46958
Amount: 3.621306
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 46958
Amount: 3.621306
Amount Units: ug/l



Reviewer: AK2J, 27-Apr-2023 01:51:17
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

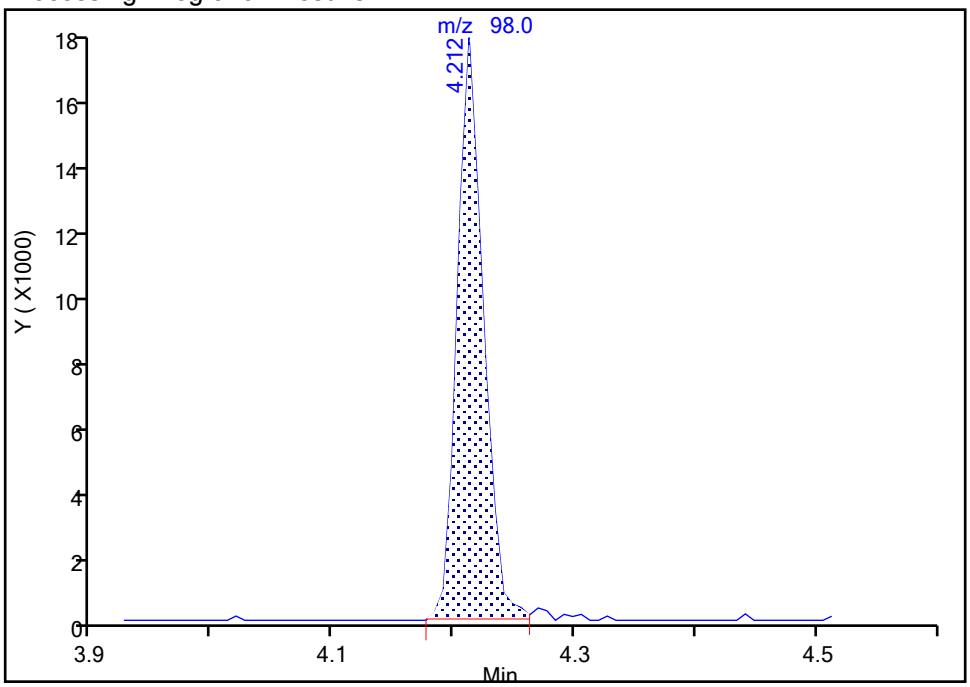
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D				
Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1		
Client ID:	MW-119D-20230413				
Operator ID:	MED	ALS Bottle#:	20	Worklist Smp#:	23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 3

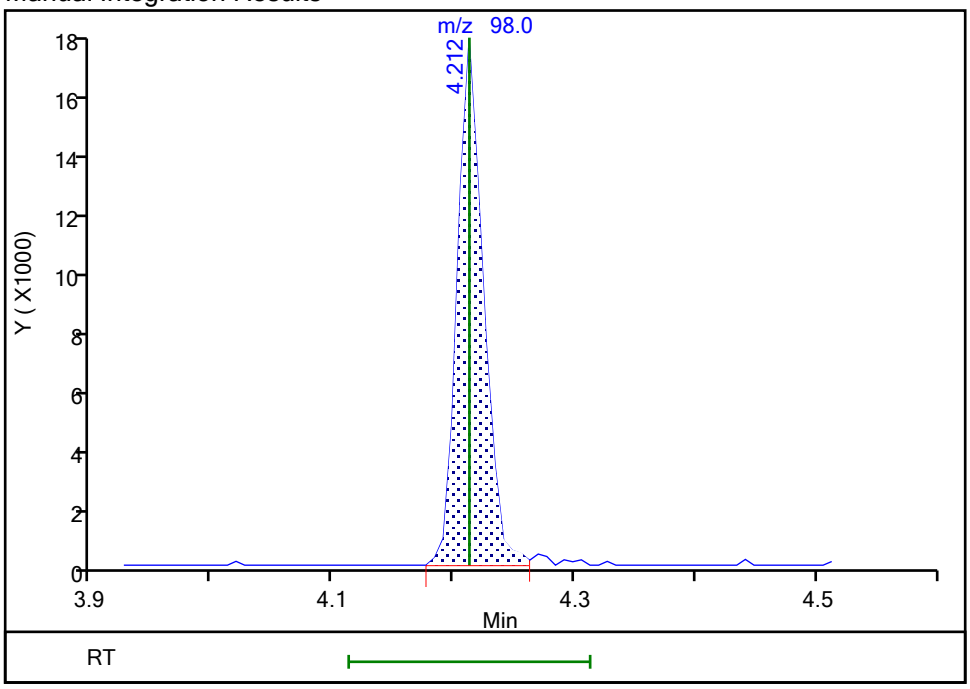
Processing Integration Results

RT: 4.21
Area: 26144
Amount: 3.621306
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 26144
Amount: 3.621306
Amount Units: ug/l



Reviewer: AK2J, 27-Apr-2023 01:51:17
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

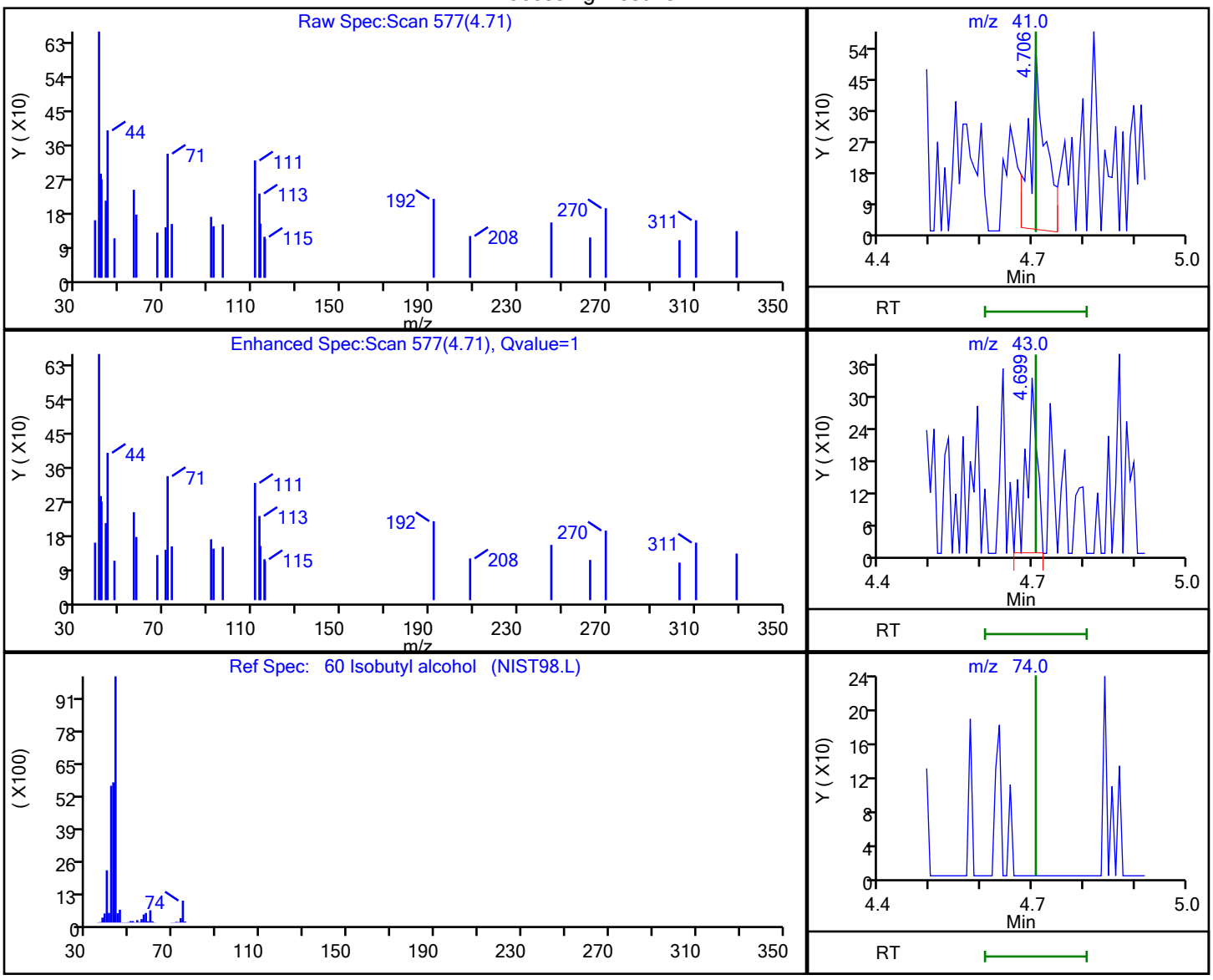
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502864.D				
Injection Date:	26-Apr-2023 16:24:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-1	Lab Sample ID:	280-175123-1		
Client ID:	MW-119D-20230413				
Operator ID:	MED	ALS Bottle#:	20	Worklist Smp#:	23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.71	41.00	1093	15.579149
4.70	43.00	476	
4.71	74.00	0	

Reviewer: AK2J, 27-Apr-2023 01:51:25

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-119S-20230413 | Lab Sample ID: 280-175123-2

Matrix: Water | Lab File ID: X502865.D

Analysis Method: 8260D | Date Collected: 04/13/2023 09:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 16:45

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		2.0	1.2
71-55-6	1,1,1-Trichloroethane	ND		2.0	0.78
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.54
75-34-3	1,1-Dichloroethane	ND		2.0	0.44
75-35-4	1,1-Dichloroethene	ND		2.0	0.46
563-58-6	1,1-Dichloropropene	ND		2.0	0.83
96-18-4	1,2,3-Trichloropropane	ND		5.0	1.7
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	ND		10	3.5
106-93-4	1,2-Dibromoethane	ND		2.0	0.81
95-50-1	1,2-Dichlorobenzene	ND		2.0	0.74
107-06-2	1,2-Dichloroethane	ND		2.0	1.1
78-87-5	1,2-Dichloropropane	ND		2.0	1.0
541-73-1	1,3-Dichlorobenzene	ND		2.0	0.67
142-28-9	1,3-Dichloropropane	ND		2.0	0.76
106-46-7	1,4-Dichlorobenzene	ND		2.0	0.78
594-20-7	2,2-Dichloropropane	ND		2.0	0.76
78-93-3	2-Butanone (MEK)	ND		30	12
591-78-6	2-Hexanone	ND		10	3.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	2.0
67-64-1	Acetone	ND		30	13
75-05-8	Acetonitrile	ND		60	19
107-02-8	Acrolein	ND		40	9.7
107-13-1	Acrylonitrile	ND		40	8.9
107-05-1	Allyl chloride	ND		4.0	0.34
71-43-2	Benzene	ND		2.0	0.62
75-25-2	Bromoform	ND		4.0	2.4
74-83-9	Bromomethane	ND		10	4.7
75-15-0	Carbon disulfide	ND		4.0	1.3
56-23-5	Carbon tetrachloride	ND		2.0	1.1
108-90-7	Chlorobenzene	ND		2.0	0.84
74-97-5	Chlorobromomethane	ND		2.0	0.81
124-48-1	Chlorodibromomethane	ND		4.0	1.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-119S-20230413 | Lab Sample ID: 280-175123-2

Matrix: Water | Lab File ID: X502865.D

Analysis Method: 8260D | Date Collected: 04/13/2023 09:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 16:45

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		8.0	2.7
67-66-3	Chloroform	1.8	J	2.0	0.72
74-87-3	Chloromethane	ND		4.0	1.5
126-99-8	Chloroprene	ND		6.0	2.3
156-59-2	cis-1,2-Dichloroethene	4.5		2.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		4.0	1.3
74-95-3	Dibromomethane	ND		2.0	0.69
75-27-4	Dichlorobromomethane	ND		2.0	0.77
75-71-8	Dichlorodifluoromethane	ND		6.0	1.9
97-63-2	Ethyl methacrylate	ND		6.0	1.7
100-41-4	Ethylbenzene	ND		2.0	0.61
74-88-4	Iodomethane	ND		10	5.2
78-83-1	Isobutyl alcohol	ND		220	73
126-98-7	Methacrylonitrile	ND		30	11
80-62-6	Methyl methacrylate	ND		8.0	2.2
75-09-2	Methylene Chloride	ND		4.0	1.9
179601-23-1	m-Xylene & p-Xylene	ND		4.0	0.71
95-47-6	o-Xylene	ND		2.0	0.66
107-12-0	Propionitrile	ND		40	7.4
100-42-5	Styrene	ND		2.0	0.71
127-18-4	Tetrachloroethene	29		2.0	0.81
108-88-3	Toluene	ND		2.0	0.64
156-60-5	trans-1,2-Dichloroethene	ND		2.0	0.74
10061-02-6	trans-1,3-Dichloropropene	ND		4.0	1.3
110-57-6	trans-1,4-Dichloro-2-butene	ND		6.0	2.8
79-01-6	Trichloroethene	130		2.0	0.60
75-69-4	Trichlorofluoromethane	ND		4.0	1.1
108-05-4	Vinyl acetate	ND		6.0	1.9
75-01-4	Vinyl chloride	ND		4.0	1.0
1330-20-7	Xylenes, Total	ND		2.0	0.66

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-119S-20230413 | Lab Sample ID: 280-175123-2

Matrix: Water | Lab File ID: X502865.D

Analysis Method: 8260D | Date Collected: 04/13/2023 09:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 16:45

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D
Lims ID: 280-175123-F-2
Client ID: MW-119S-20230413
Sample Type: Client
Inject. Date: 26-Apr-2023 16:45:30 ALS Bottle#: 21 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Sample Info: 280-175123-F-2 2x
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 08:26:02 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: AK2J Date: 27-Apr-2023 01:52:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1985219	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	473885	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	741288	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	482531	50.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	473552	47.2	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	92	2041030	50.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	89	675542	51.0	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	89	675542	NR	
10 Dichlorodifluoromethane	85		1.696				ND	7
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94		2.239				ND	U
15 Chloroethane	64		2.332				ND	
16 Dichlorofluoromethane	67		2.504				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.654				ND	
19 Ethyl ether	59	2.747	2.747	0.000	60	1235	0.1844	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96		2.933				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.033				ND	U
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.119				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.197				ND	
31 Methylene Chloride	84		3.297				ND	
32 2-Methyl-2-propanol	59		3.333				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85	3.812	3.733	0.079	40	408	NC	
39 Vinyl acetate	43		3.784				ND	
40 1,1-Dichloroethane	63		3.805				ND	
41 Isopropyl ether	87		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.855				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	78	22602	2.23	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.398				ND	
54 Chloroform	83	4.448	4.441	0.007	91	14275	0.9083	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	
63 1,2-Dichloroethane	62		4.878				ND	7
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	98	592080	65.3	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.543				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.893				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164	6.808	6.801	0.007	95	98182	14.3	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	
89 1-Chlorohexane	91		7.559				ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
90 Chlorobenzene	112		7.602				ND	7
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.353				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.589				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.590				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.733				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146		10.169				ND	7
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.257				ND	
166 Ethyl acrylate	55		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1				0		0.9083	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		2.23	
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

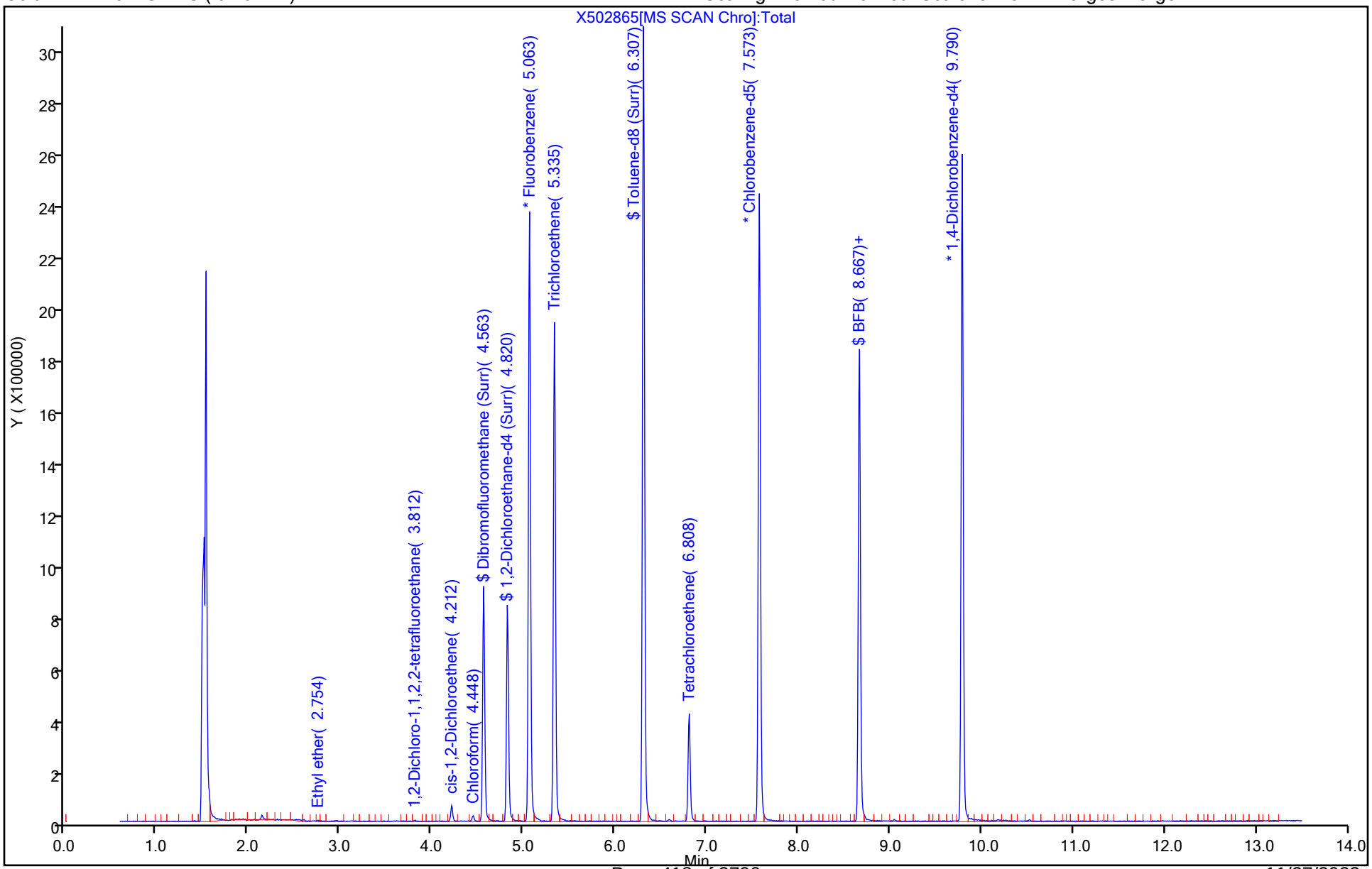
Report Date: 21-Nov-2023 08:26:03 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D

Injection Date:	26-Apr-2023 16:45:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175123-F-2	Lab Sample ID:	280-175123-2	Worklist Smp#:	24
Client ID:	MW-119S-20230413				
Purge Vol:	5.000 mL	Dil. Factor:	2.0000	ALS Bottle#:	21
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D
Lims ID: 280-175123-F-2
Client ID: MW-119S-20230413
Sample Type: Client
Inject. Date: 26-Apr-2023 16:45:30 ALS Bottle#: 21 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Sample Info: 280-175123-F-2 2x
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 08:26:02 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

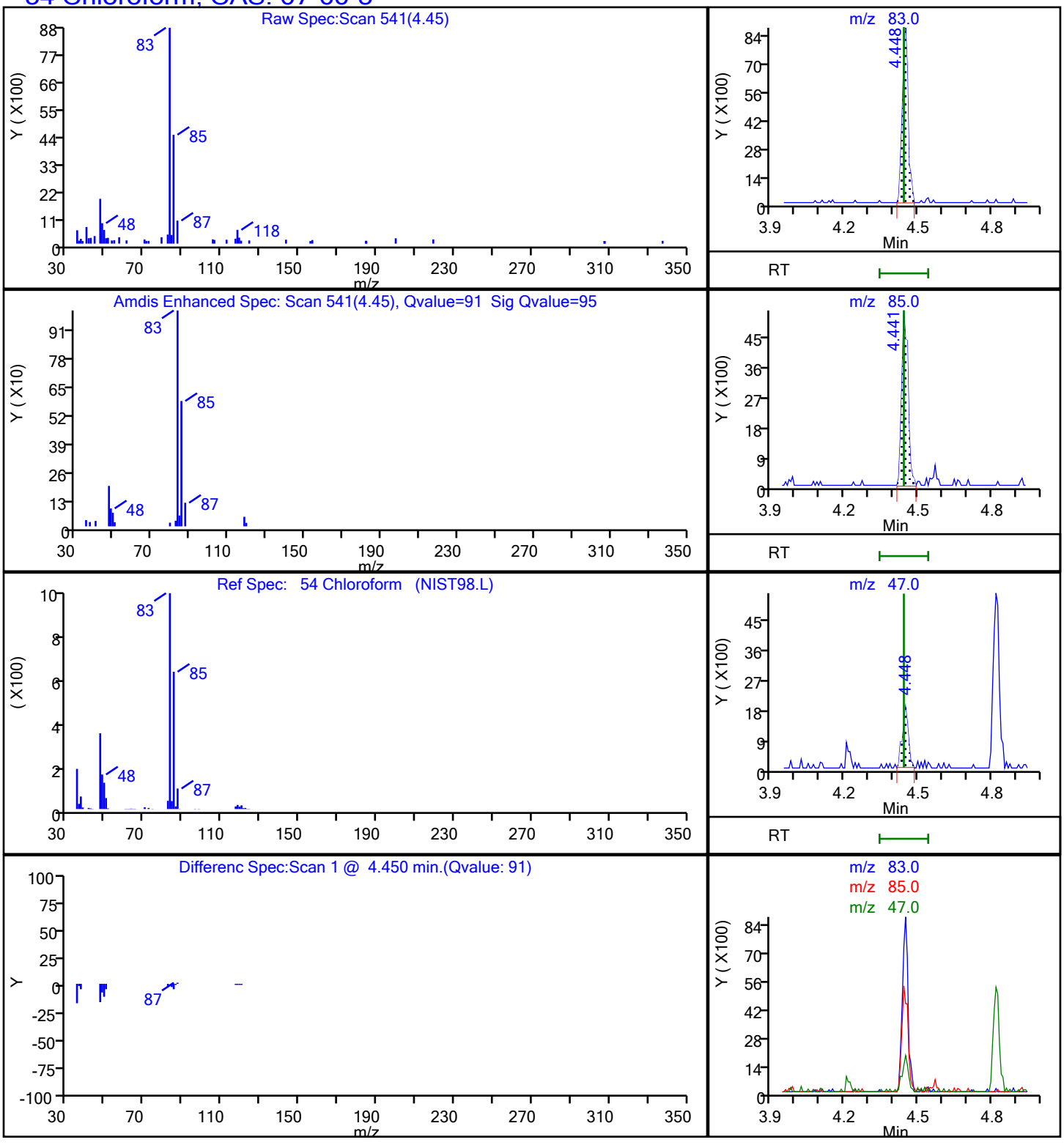
First Level Reviewer: AK2J Date: 27-Apr-2023 01:52:42

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	50.5	101.06
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.2	94.43
$ 6 Toluene-d8 (Surr)	50.0	50.6	101.12
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.0	101.99

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D		
Injection Date:	26-Apr-2023 16:45:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-F-2	Lab Sample ID:	280-175123-2
Client ID:	MW-119S-20230413		
Operator ID:	MED	ALS Bottle#:	21 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

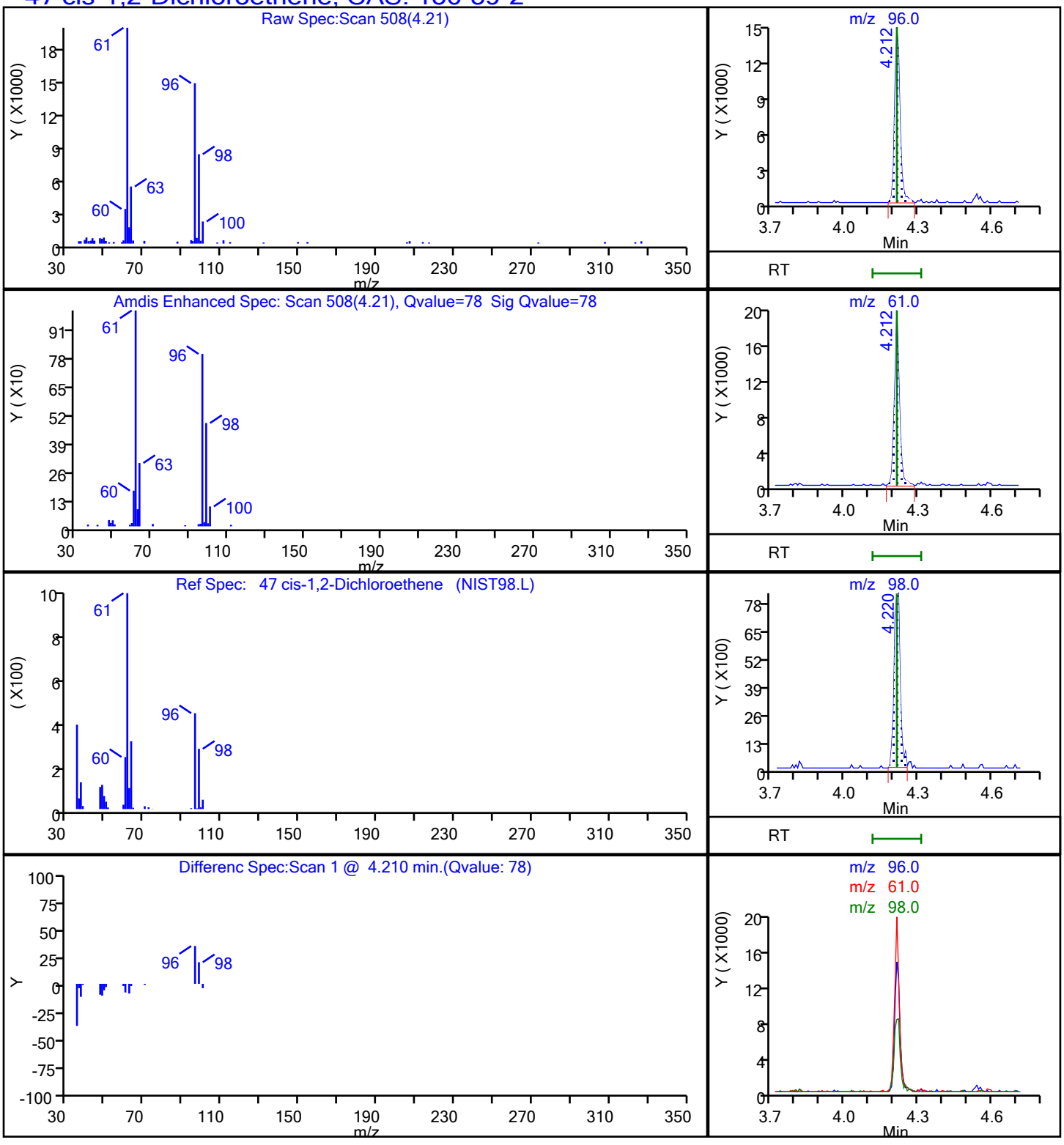
54 Chloroform, CAS: 67-66-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D		
Injection Date:	26-Apr-2023 16:45:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-F-2	Lab Sample ID:	280-175123-2
Client ID:	MW-119S-20230413		
Operator ID:	MED	ALS Bottle#:	21 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

47 cis-1,2-Dichloroethene, CAS: 156-59-2

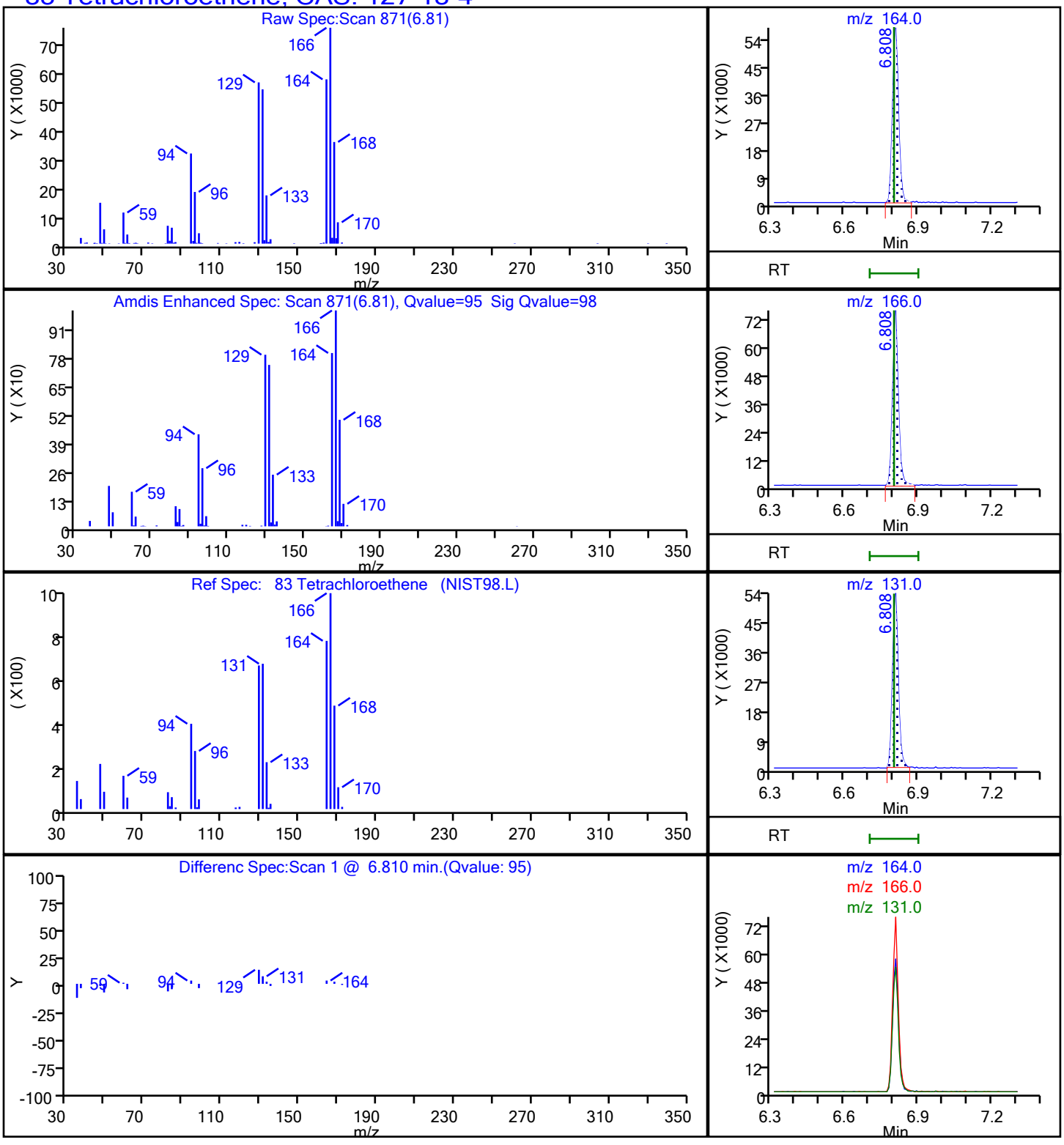


Report Date: 21-Nov-2023 08:26:03 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D				
Injection Date:	26-Apr-2023 16:45:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-2	Lab Sample ID:	280-175123-2		
Client ID:	MW-119S-20230413				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

83 Tetrachloroethene, CAS: 127-18-4



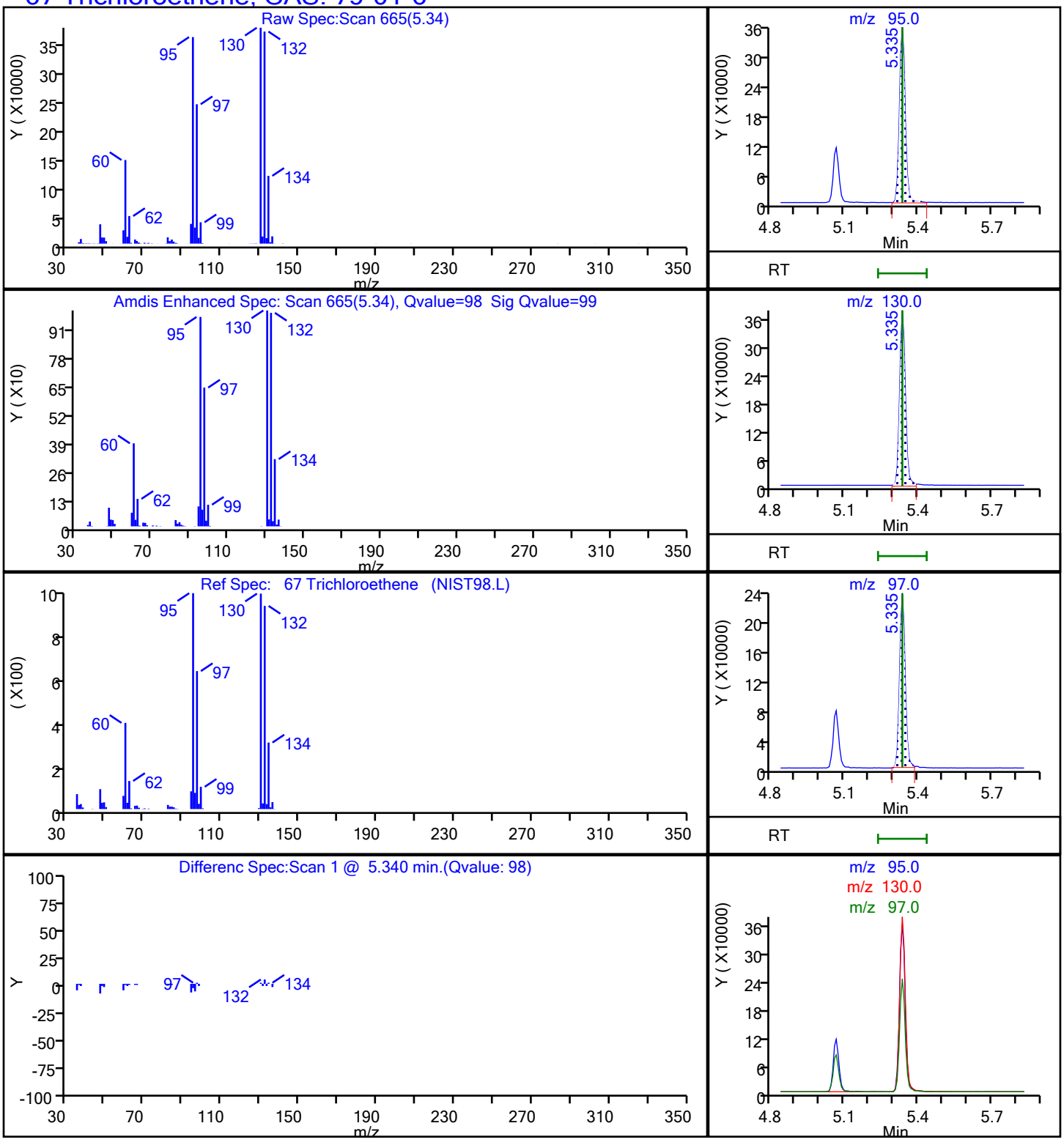
11/27/2023
7:19 PM

Report Date: 21-Nov-2023 08:26:03 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D		
Injection Date:	26-Apr-2023 16:45:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-F-2	Lab Sample ID:	280-175123-2
Client ID:	MW-119S-20230413		
Operator ID:	MED	ALS Bottle#:	21 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

67 Trichloroethene, CAS: 79-01-6



11/27/2023
7:19 PM

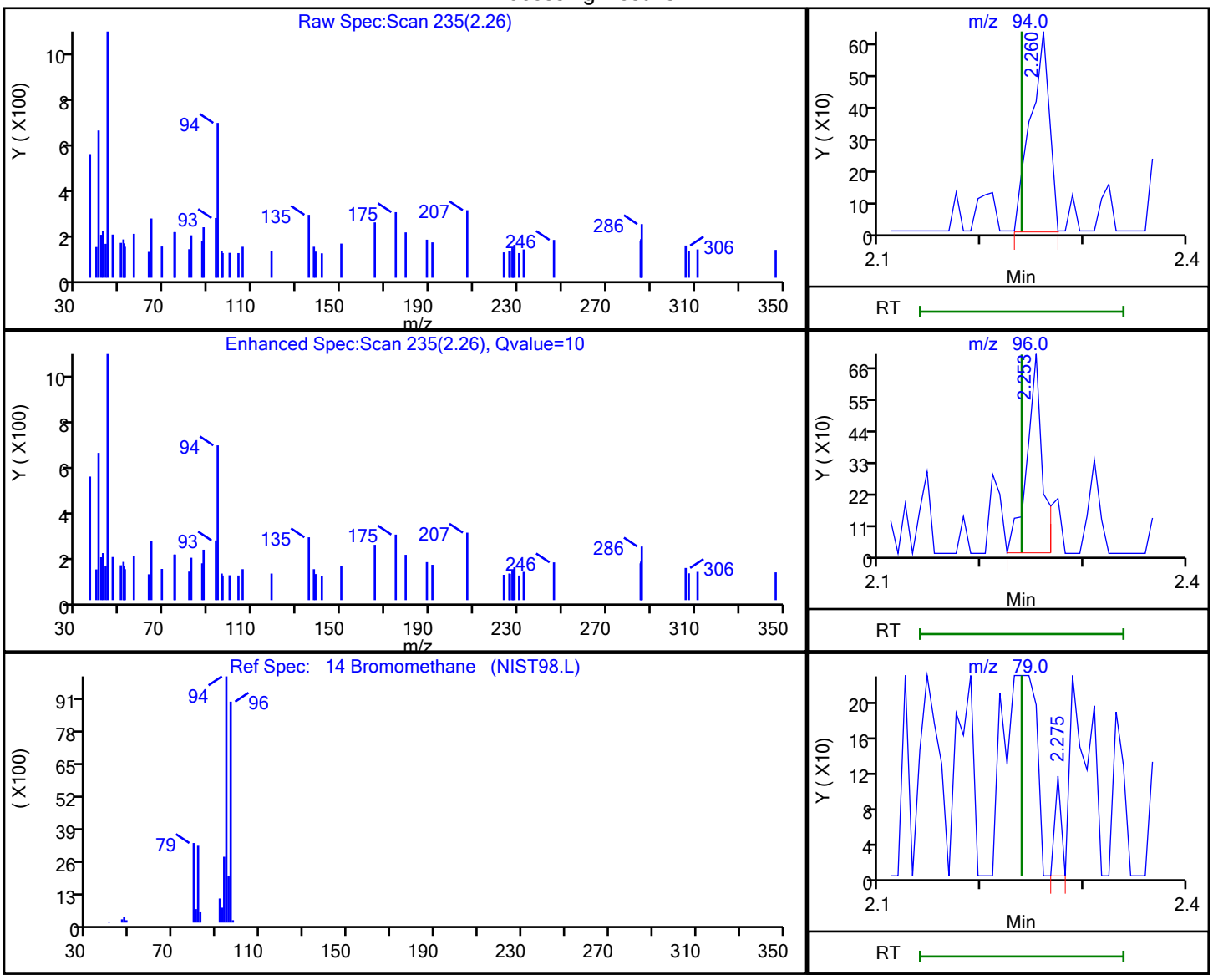
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D				
Injection Date:	26-Apr-2023 16:45:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-2	Lab Sample ID:	280-175123-2		
Client ID:	MW-119S-20230413				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.26	94.00	814	0.169236
2.25	96.00	744	
2.27	79.00	48	

Reviewer: AK2J, 27-Apr-2023 01:51:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

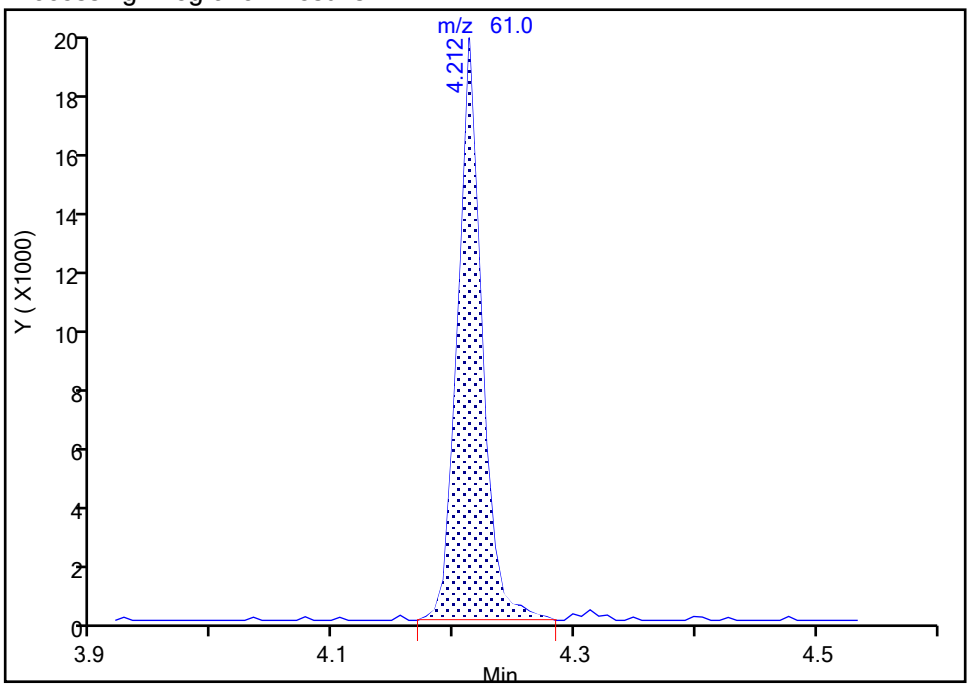
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D				
Injection Date:	26-Apr-2023 16:45:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-2	Lab Sample ID:	280-175123-2		
Client ID:	MW-119S-20230413				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 2

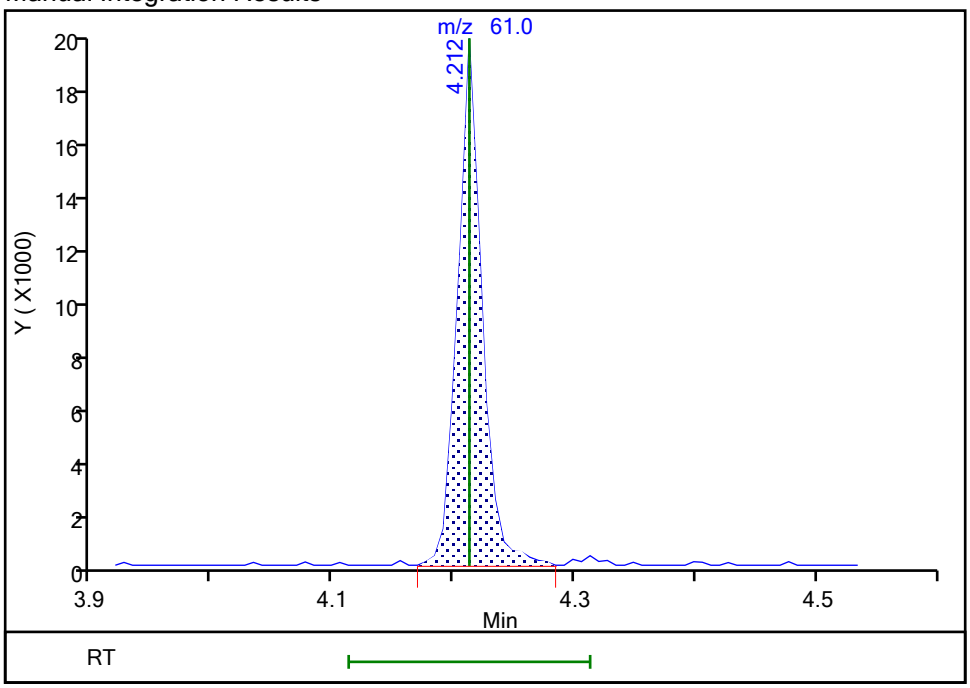
Processing Integration Results

RT: 4.21
Area: 27664
Amount: 2.228497
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 27664
Amount: 2.228497
Amount Units: ug/l



Reviewer: AK2J, 27-Apr-2023 01:52:11

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

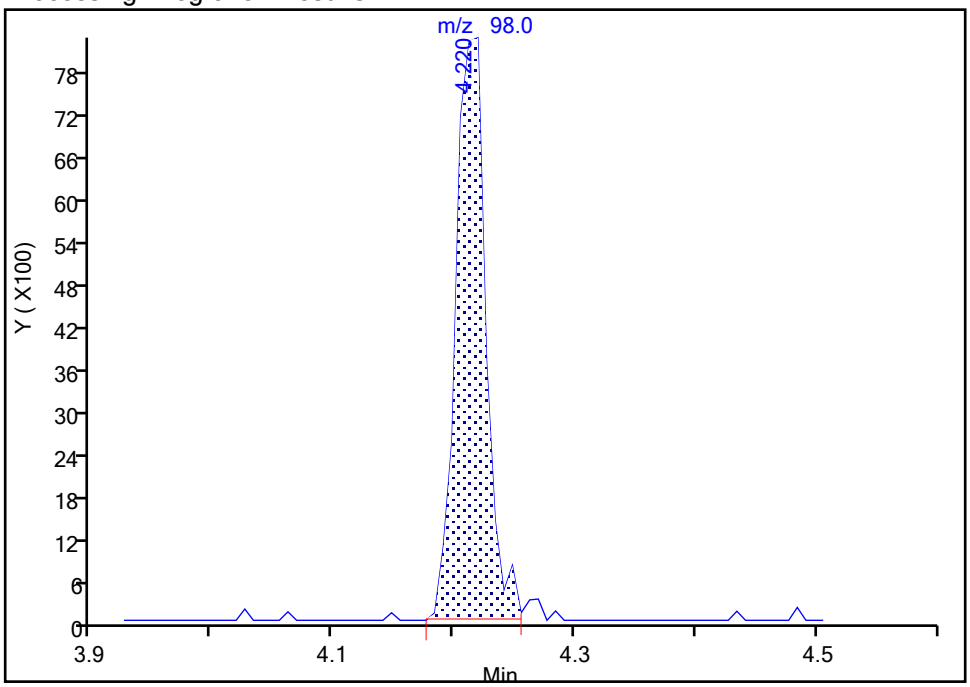
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D				
Injection Date:	26-Apr-2023 16:45:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-2	Lab Sample ID:	280-175123-2		
Client ID:	MW-119S-20230413				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 3

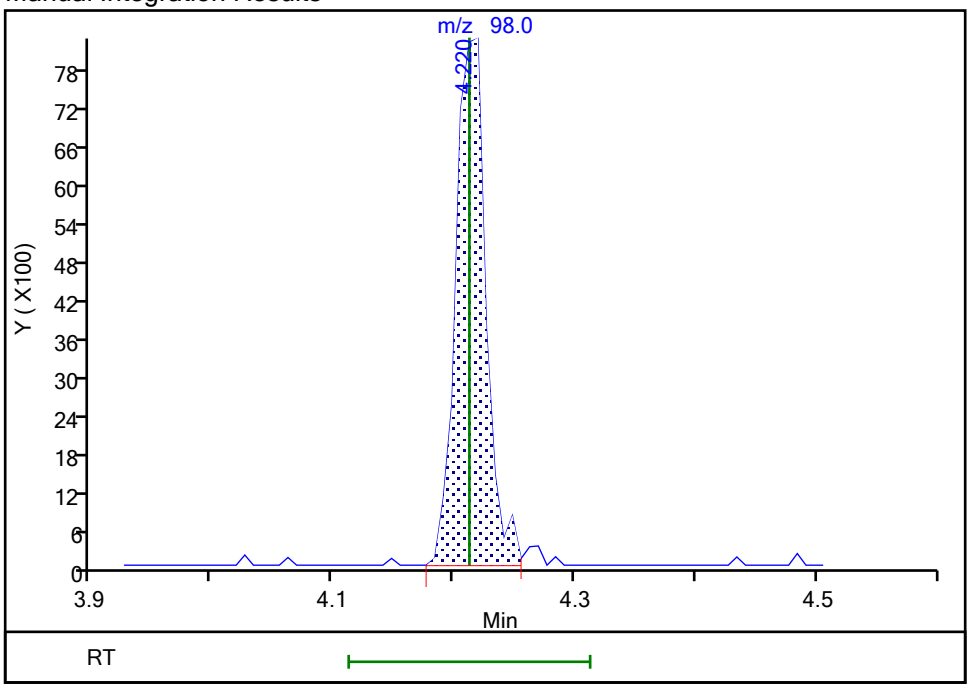
Processing Integration Results

RT: 4.22
Area: 14491
Amount: 2.228497
Amount Units: ug/l



Manual Integration Results

RT: 4.22
Area: 14491
Amount: 2.228497
Amount Units: ug/l



Reviewer: AK2J, 27-Apr-2023 01:52:11
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

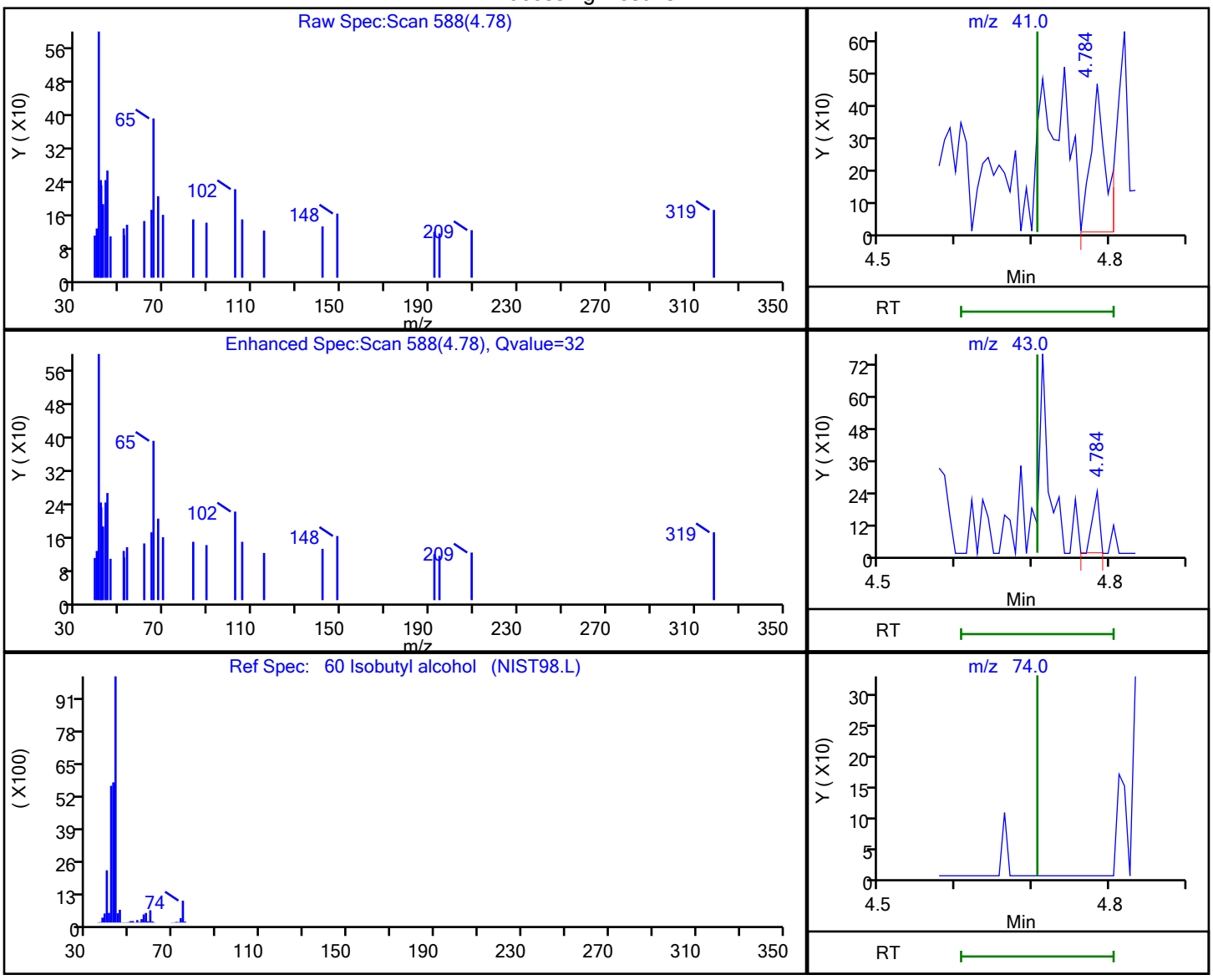
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502865.D				
Injection Date:	26-Apr-2023 16:45:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-F-2	Lab Sample ID:	280-175123-2		
Client ID:	MW-119S-20230413				
Operator ID:	MED	ALS Bottle#:	21	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.78	41.00	616	13.790201
4.78	43.00	152	
4.71	74.00	0	

Reviewer: AK2J, 27-Apr-2023 01:52:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: RW-3-20230413 | Lab Sample ID: 280-175123-3

Matrix: Water | Lab File ID: X502866.D

Analysis Method: 8260D | Date Collected: 04/13/2023 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 17:06

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		2.0	1.2
71-55-6	1,1,1-Trichloroethane	ND		2.0	0.78
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.54
75-34-3	1,1-Dichloroethane	ND		2.0	0.44
75-35-4	1,1-Dichloroethene	ND		2.0	0.46
563-58-6	1,1-Dichloropropene	ND		2.0	0.83
96-18-4	1,2,3-Trichloropropane	ND		5.0	1.7
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	ND		10	3.5
106-93-4	1,2-Dibromoethane	ND		2.0	0.81
95-50-1	1,2-Dichlorobenzene	ND		2.0	0.74
107-06-2	1,2-Dichloroethane	ND		2.0	1.1
78-87-5	1,2-Dichloropropane	ND		2.0	1.0
541-73-1	1,3-Dichlorobenzene	ND		2.0	0.67
142-28-9	1,3-Dichloropropane	ND		2.0	0.76
106-46-7	1,4-Dichlorobenzene	ND		2.0	0.78
594-20-7	2,2-Dichloropropane	ND		2.0	0.76
78-93-3	2-Butanone (MEK)	ND		30	12
591-78-6	2-Hexanone	ND		10	3.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	2.0
67-64-1	Acetone	ND		30	13
75-05-8	Acetonitrile	ND		60	19
107-02-8	Acrolein	ND		40	9.7
107-13-1	Acrylonitrile	ND		40	8.9
107-05-1	Allyl chloride	ND		4.0	0.34
71-43-2	Benzene	ND		2.0	0.62
75-25-2	Bromoform	ND		4.0	2.4
74-83-9	Bromomethane	ND		10	4.7
75-15-0	Carbon disulfide	ND		4.0	1.3
56-23-5	Carbon tetrachloride	ND		2.0	1.1
108-90-7	Chlorobenzene	ND		2.0	0.84
74-97-5	Chlorobromomethane	ND		2.0	0.81
124-48-1	Chlorodibromomethane	ND		4.0	1.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: RW-3-20230413 | Lab Sample ID: 280-175123-3

Matrix: Water | Lab File ID: X502866.D

Analysis Method: 8260D | Date Collected: 04/13/2023 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 17:06

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		8.0	2.7
67-66-3	Chloroform	ND		2.0	0.72
74-87-3	Chloromethane	ND		4.0	1.5
126-99-8	Chloroprene	ND		6.0	2.3
156-59-2	cis-1,2-Dichloroethene	ND		2.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		4.0	1.3
74-95-3	Dibromomethane	ND		2.0	0.69
75-27-4	Dichlorobromomethane	ND		2.0	0.77
75-71-8	Dichlorodifluoromethane	ND		6.0	1.9
97-63-2	Ethyl methacrylate	ND		6.0	1.7
100-41-4	Ethylbenzene	ND		2.0	0.61
74-88-4	Iodomethane	ND		10	5.2
78-83-1	Isobutyl alcohol	ND		220	73
126-98-7	Methacrylonitrile	ND		30	11
80-62-6	Methyl methacrylate	ND		8.0	2.2
75-09-2	Methylene Chloride	ND		4.0	1.9
179601-23-1	m-Xylene & p-Xylene	ND		4.0	0.71
95-47-6	o-Xylene	ND		2.0	0.66
107-12-0	Propionitrile	ND		40	7.4
100-42-5	Styrene	ND		2.0	0.71
127-18-4	Tetrachloroethene	4.4		2.0	0.81
108-88-3	Toluene	ND		2.0	0.64
156-60-5	trans-1,2-Dichloroethene	ND		2.0	0.74
10061-02-6	trans-1,3-Dichloropropene	ND		4.0	1.3
110-57-6	trans-1,4-Dichloro-2-butene	ND		6.0	2.8
79-01-6	Trichloroethene	7.2		2.0	0.60
75-69-4	Trichlorofluoromethane	ND		4.0	1.1
108-05-4	Vinyl acetate	ND		6.0	1.9
75-01-4	Vinyl chloride	ND		4.0	1.0
1330-20-7	Xylenes, Total	ND		2.0	0.66

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: RW-3-20230413 | Lab Sample ID: 280-175123-3

Matrix: Water | Lab File ID: X502866.D

Analysis Method: 8260D | Date Collected: 04/13/2023 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 17:06

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	103		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502866.D
Lims ID: 280-175123-D-3
Client ID: RW-3-20230413
Sample Type: Client
Inject. Date: 26-Apr-2023 17:06:30 ALS Bottle#: 22 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Sample Info: 280-175123-D-3 2x
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 11:09:22 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1670

First Level Reviewer: AK2J Date: 27-Apr-2023 01:53:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96	4.849	4.942	-0.093	1	106	0	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1966653	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	470889	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	754044	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	486024	51.4	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	473972	47.7	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	93	2066626	51.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	90	672576	49.9	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	90	672576	NR	
10 Dichlorodifluoromethane	85	1.695	1.696	-0.001	96	3594	0.4165	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	7
14 Bromomethane	94		2.239				ND	7
15 Chloroethane	64		2.332				ND	
16 Dichlorofluoromethane	67		2.504				ND	U
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.654				ND	
19 Ethyl ether	59	2.747	2.747	0.000	84	5909	0.8904	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96		2.933				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.033				ND	U
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.119				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.197				ND	
31 Methylene Chloride	84		3.297				ND	
32 2-Methyl-2-propanol	59		3.333				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85	3.805	3.733	0.072	1	456	NC	
39 Vinyl acetate	43		3.784				ND	
40 1,1-Dichloroethane	63		3.805				ND	
41 Isopropyl ether	87		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.855				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	54	1724	0.1716	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.398				ND	
54 Chloroform	83	4.441	4.441	0.000	91	2819	0.1811	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	7
63 1,2-Dichloroethane	62		4.878				ND	7
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.035				ND	U
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	93	32648	3.62	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.543				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.893				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164	6.815	6.801	0.014	94	14942	2.19	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	
89 1-Chlorohexane	91		7.559				ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
90 Chlorobenzene	112		7.602				ND	7
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.353				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.589				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.590				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.733				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146		10.169				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.257				ND	
166 Ethyl acrylate	55		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1				0		0.1811	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		0.1716	
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

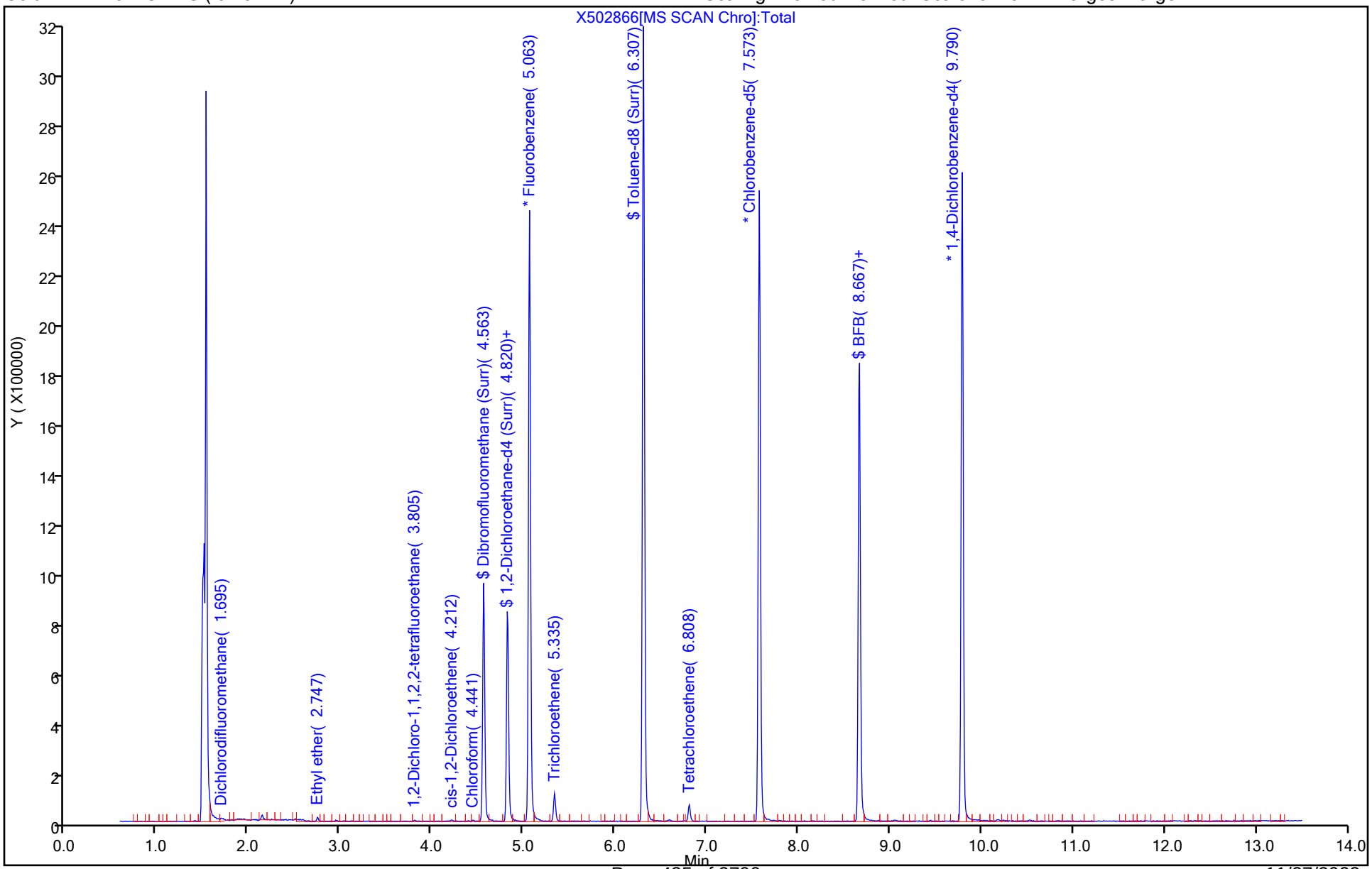
Report Date: 21-Nov-2023 11:09:37 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502866.D

Injection Date:	26-Apr-2023 17:06:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175123-D-3	Lab Sample ID:	280-175123-3	Worklist Smp#:	25
Client ID:	RW-3-20230413				
Purge Vol:	5.000 mL	Dil. Factor:	2.0000	ALS Bottle#:	22
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502866.D
Lims ID: 280-175123-D-3
Client ID: RW-3-20230413
Sample Type: Client
Inject. Date: 26-Apr-2023 17:06:30 ALS Bottle#: 22 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Sample Info: 280-175123-D-3 2x
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Nov-2023 11:09:22 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1670

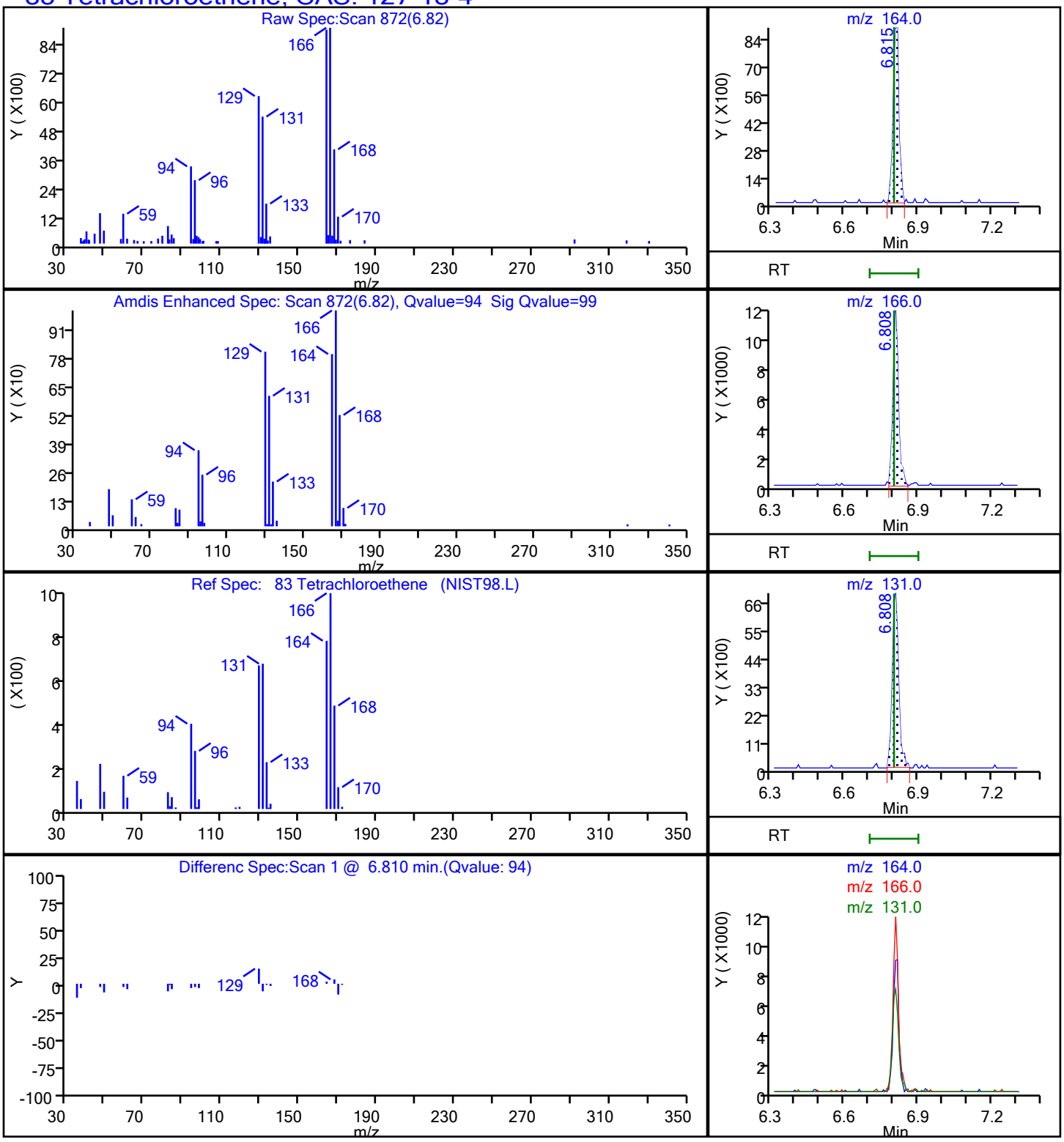
First Level Reviewer: AK2J Date: 27-Apr-2023 01:53:28

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.4	102.75
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.7	95.41
$ 6 Toluene-d8 (Surr)	50.0	51.5	103.04
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.9	99.82

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502866.D		
Injection Date:	26-Apr-2023 17:06:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-D-3	Lab Sample ID:	280-175123-3
Client ID:	RW-3-20230413		
Operator ID:	MED	ALS Bottle#:	22 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

83 Tetrachloroethene, CAS: 127-18-4



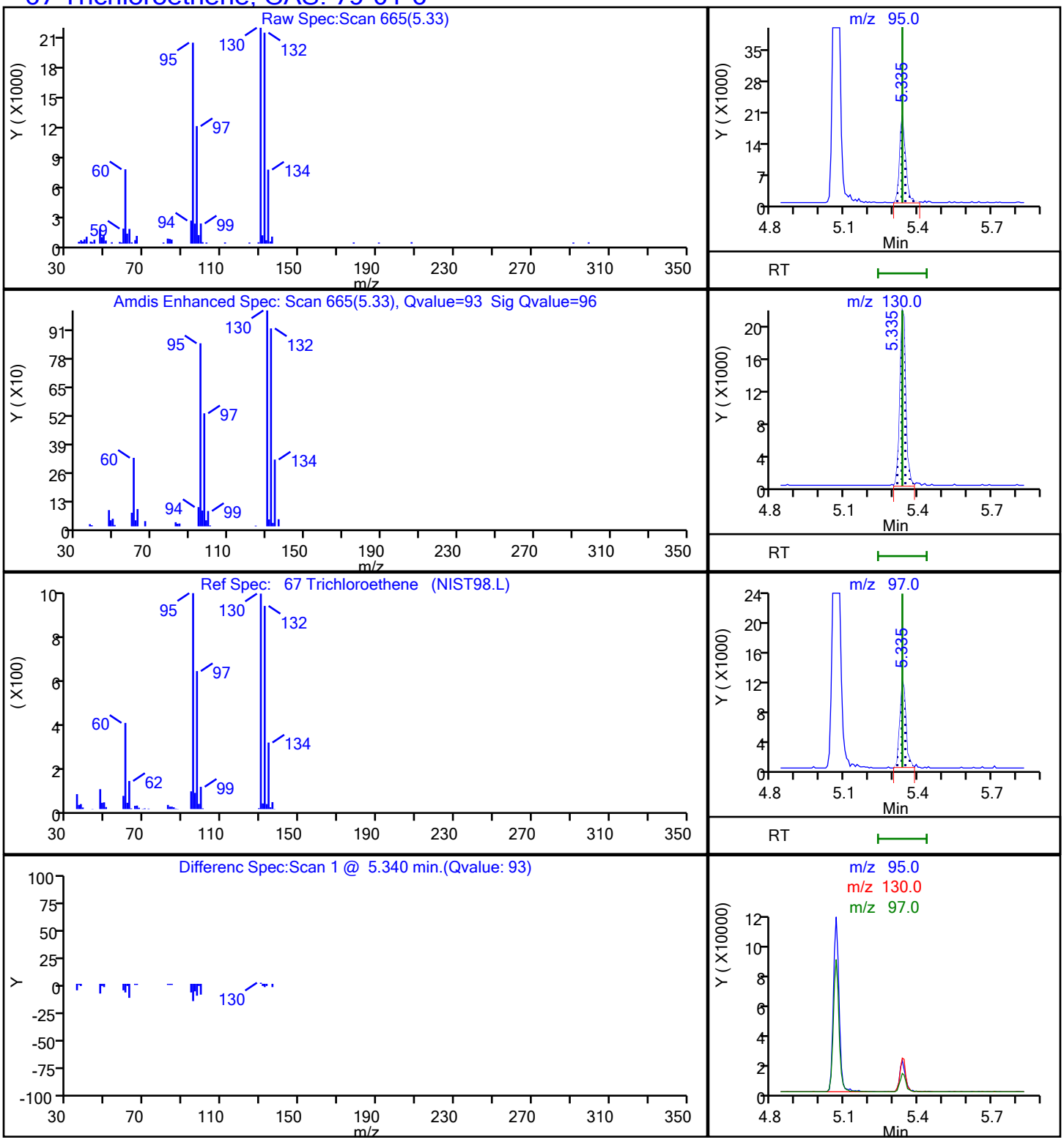
Report Date: 21-Nov-2023 11:09:37 Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502866.D

Injection Date:	26-Apr-2023 17:06:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-D-3	Lab Sample ID:	280-175123-3
Client ID:	RW-3-20230413		
Operator ID:	MED	ALS Bottle#:	22 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

67 Trichloroethene, CAS: 79-01-6



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

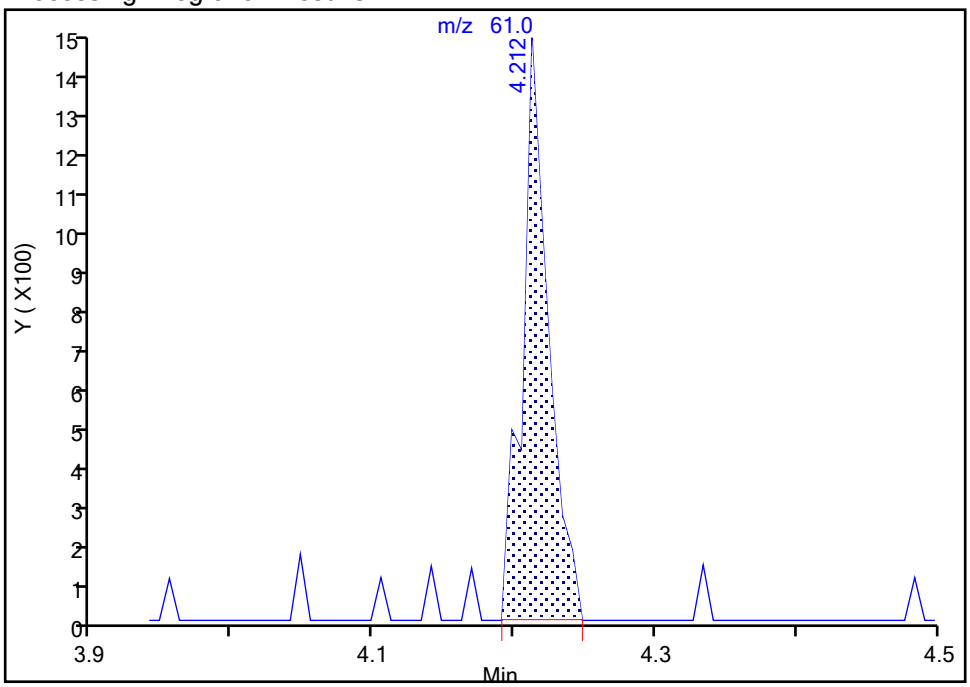
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502866.D				
Injection Date:	26-Apr-2023 17:06:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-D-3	Lab Sample ID:	280-175123-3		
Client ID:	RW-3-20230413				
Operator ID:	MED	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 2

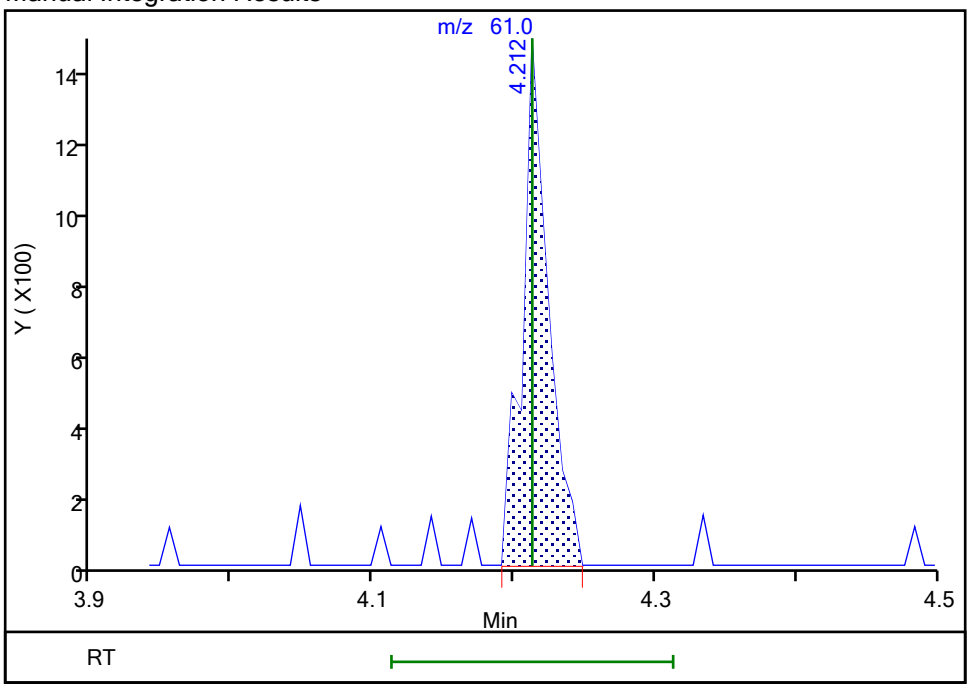
Processing Integration Results

RT: 4.21
Area: 1822
Amount: 0.171587
Amount Units: ug/l



Manual Integration Results

RT: 4.21
Area: 1822
Amount: 0.171587
Amount Units: ug/l



Reviewer: AK2J, 27-Apr-2023 01:52:57
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

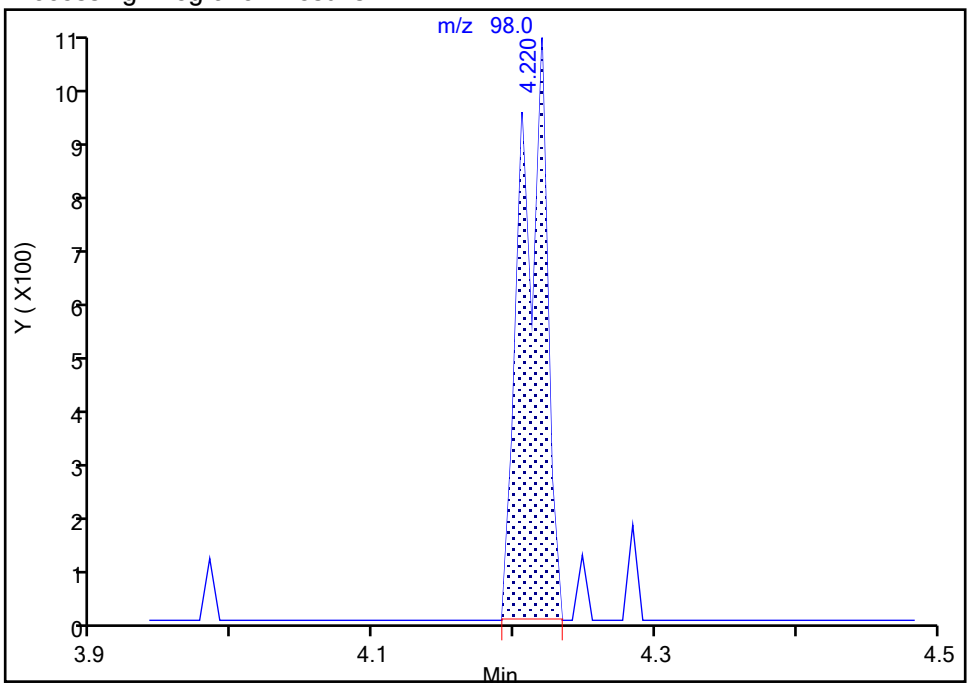
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502866.D				
Injection Date:	26-Apr-2023 17:06:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-D-3	Lab Sample ID:	280-175123-3		
Client ID:	RW-3-20230413				
Operator ID:	MED	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 3

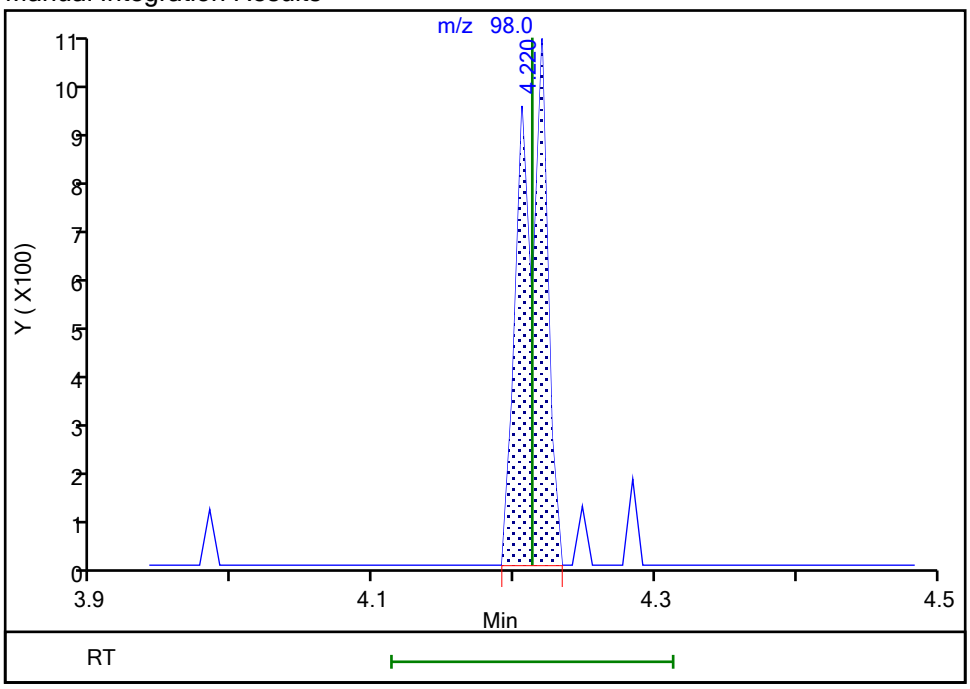
Processing Integration Results

RT: 4.22
Area: 1263
Amount: 0.171587
Amount Units: ug/l



Manual Integration Results

RT: 4.22
Area: 1263
Amount: 0.171587
Amount Units: ug/l



Reviewer: AK2J, 27-Apr-2023 01:52:57
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

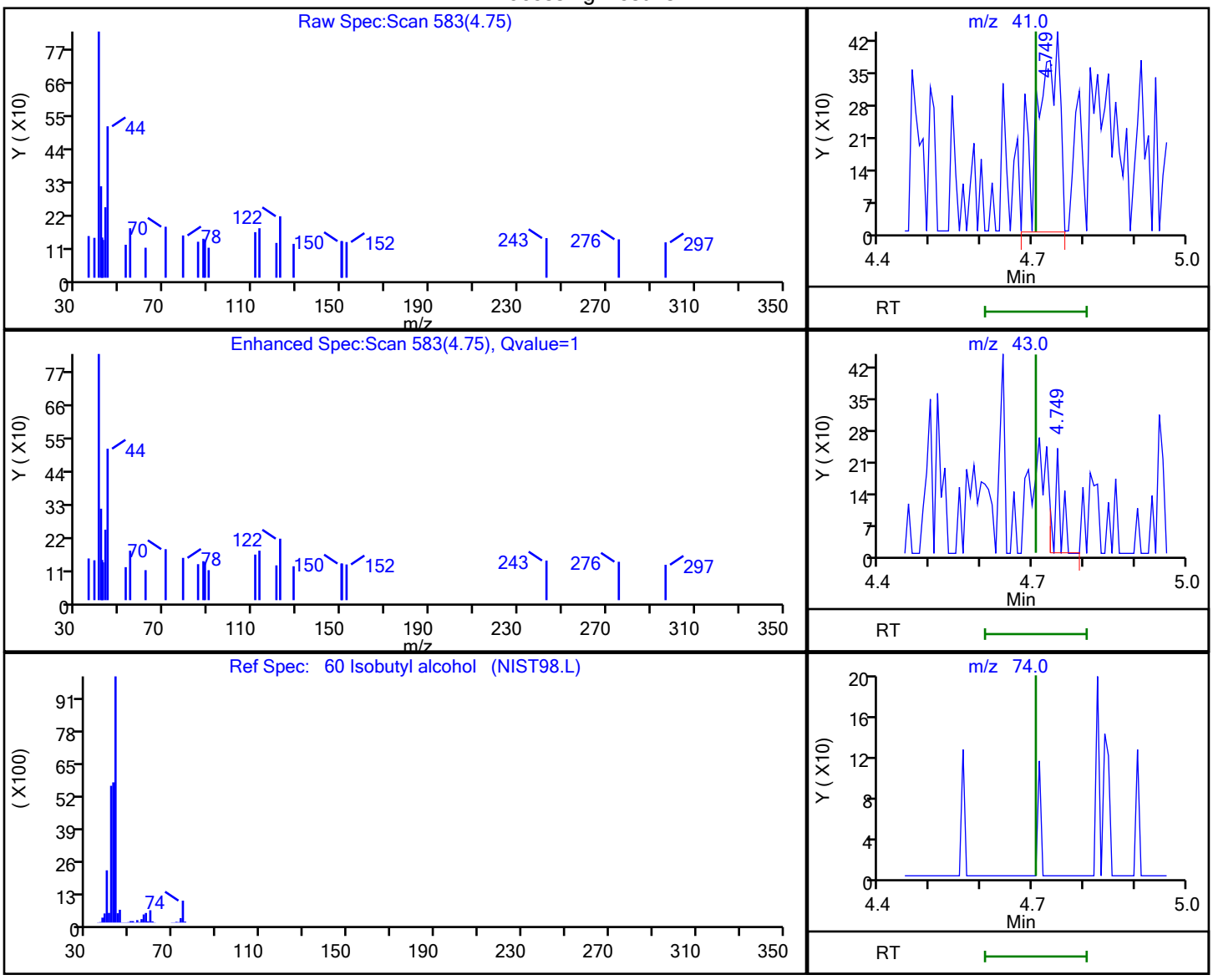
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502866.D				
Injection Date:	26-Apr-2023 17:06:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-D-3	Lab Sample ID:	280-175123-3		
Client ID:	RW-3-20230413				
Operator ID:	MED	ALS Bottle#:	22	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	2.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.75	41.00	1332	16.706636
4.75	43.00	204	
4.71	74.00	0	

Reviewer: AK2J, 27-Apr-2023 01:53:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-113D-20230414 | Lab Sample ID: 280-175123-4

Matrix: Water | Lab File ID: X502924.D

Analysis Method: 8260D | Date Collected: 04/14/2023 12:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 16:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	0.41	J	1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-113D-20230414 | Lab Sample ID: 280-175123-4

Matrix: Water | Lab File ID: X502924.D

Analysis Method: 8260D | Date Collected: 04/14/2023 12:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 16:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	0.46	J	1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	1.1	J	3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	1.1		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	0.31	J	1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-113D-20230414 | Lab Sample ID: 280-175123-4

Matrix: Water | Lab File ID: X502924.D

Analysis Method: 8260D | Date Collected: 04/14/2023 12:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 16:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D
Lims ID: 280-175123-B-4
Client ID: MW-113D-20230414
Sample Type: Client
Inject. Date: 27-Apr-2023 16:04:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-B-4 HS
Misc. Info.: 280-0120830-019
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:39:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: V8PV Date: 28-Apr-2023 02:35:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2008693	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	486818	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	754080	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	491245	50.8	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	469680	46.3	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	92	2072353	50.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	91	676611	50.2	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	91	676611	NR	
10 Dichlorodifluoromethane	85	1.695	1.695	0.000	97	10029	1.14	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	7
14 Bromomethane	94		2.246				ND	U
15 Chloroethane	64		2.339				ND	
16 Dichlorofluoromethane	67	2.503	2.503	0.000	95	13925	0.9142	
17 Trichlorofluoromethane	101		2.539				ND	U
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59	2.754	2.747	0.007	82	3113	0.4593	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.932				ND	
23 1,1-Dichloroethene	96		2.940				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.040				ND	U
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.183				ND	
30 3-Chloro-1-propene	41		3.204				ND	
31 Methylene Chloride	84		3.297				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.454				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85	3.798	3.733	0.065	36	470	NC	
39 Vinyl acetate	43		3.783				ND	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	90	6365	0.4073	
41 Isopropyl ether	87		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	7
47 cis-1,2-Dichloroethene	96	4.220	4.212	0.008	78	4755	0.4634	
48 2,2-Dichloropropane	77		4.227				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.398				ND	
54 Chloroform	83		4.441				ND	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.648				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	
63 1,2-Dichloroethane	62		4.877				ND	U
64 Tert-amyl methyl ether	73		4.920				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.342	5.335	0.007	93	2906	0.3121	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.542				ND	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.614				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.936				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164	6.801	6.808	-0.007	91	8082	1.14	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.559				ND	U
90 Chlorobenzene	112		7.602				ND	
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.166				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.588				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.817				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.589				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.732				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146		10.168				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.256				ND	
165 t-Amyl alcohol	1		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1		0.000				ND	7
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		0.4634	
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

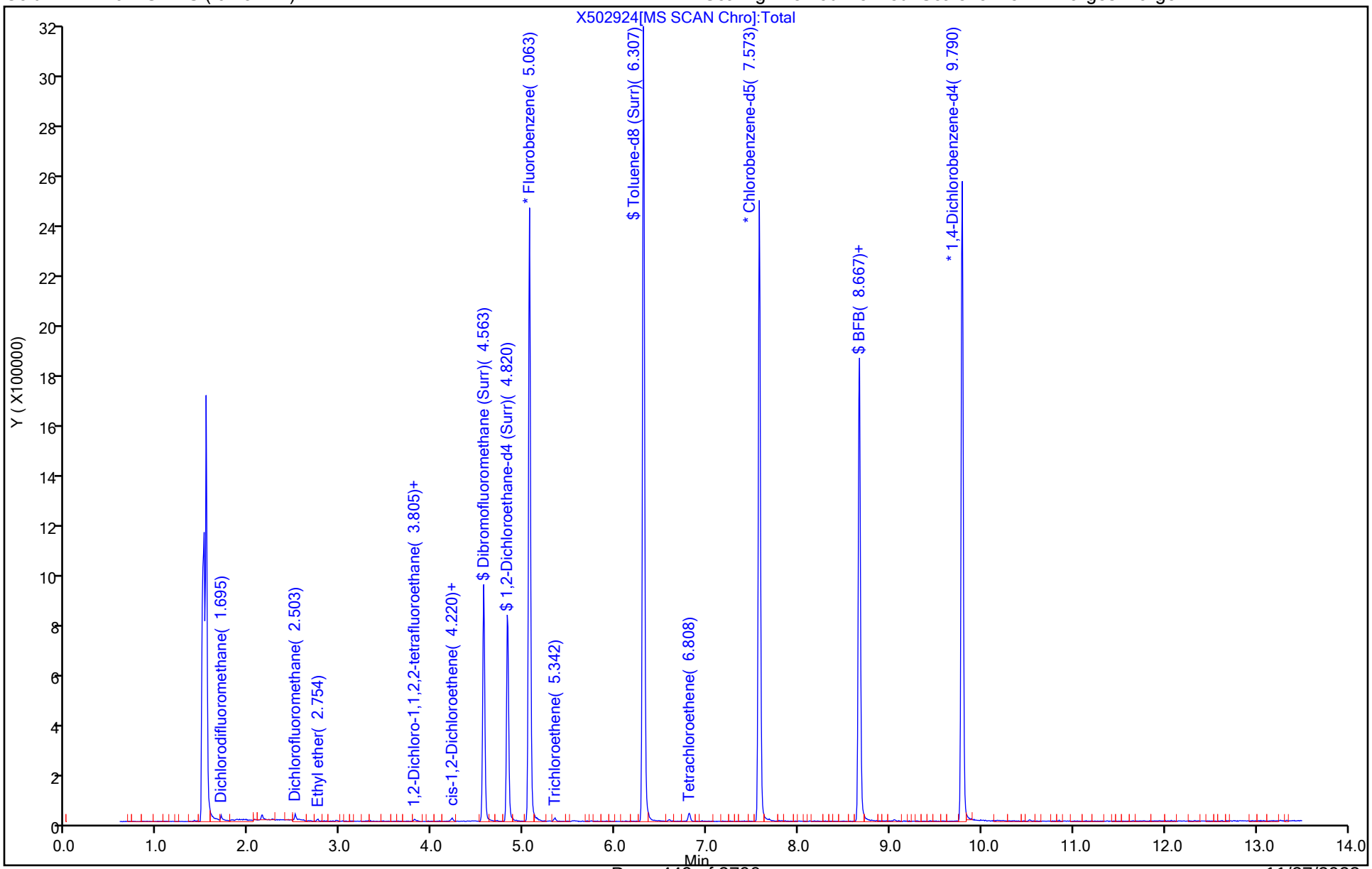
Report Date: 28-Apr-2023 02:39:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D

Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4	Worklist Smp#:	19
Client ID:	MW-113D-20230414				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D				
Lims ID:	280-175123-B-4				
Client ID:	MW-113D-20230414				
Sample Type:	Client				
Inject. Date:	27-Apr-2023 16:04:30	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175123-B-4 HS				
Misc. Info.:	280-0120830-019				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 02:39:26	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1608				
First Level Reviewer: V8PV		Date:	28-Apr-2023 02:35:33		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	50.8	101.68
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.3	92.57
$ 6 Toluene-d8 (Surr)	50.0	50.0	99.94
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.2	100.42

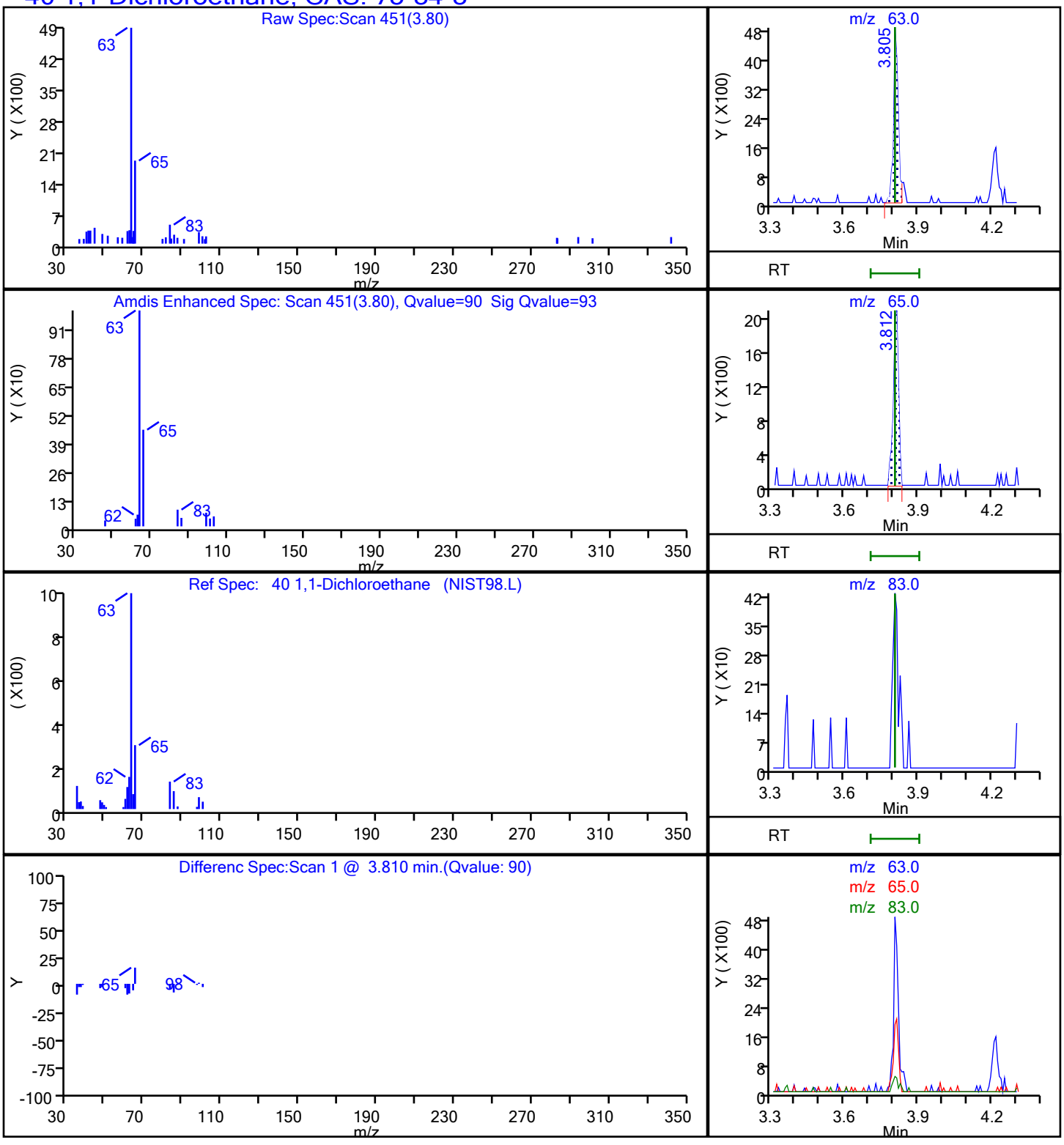
Report Date: 28-Apr-2023 02:39:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D

Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4		
Client ID:	MW-113D-20230414				
Operator ID:	MED	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

40 1,1-Dichloroethane, CAS: 75-34-3

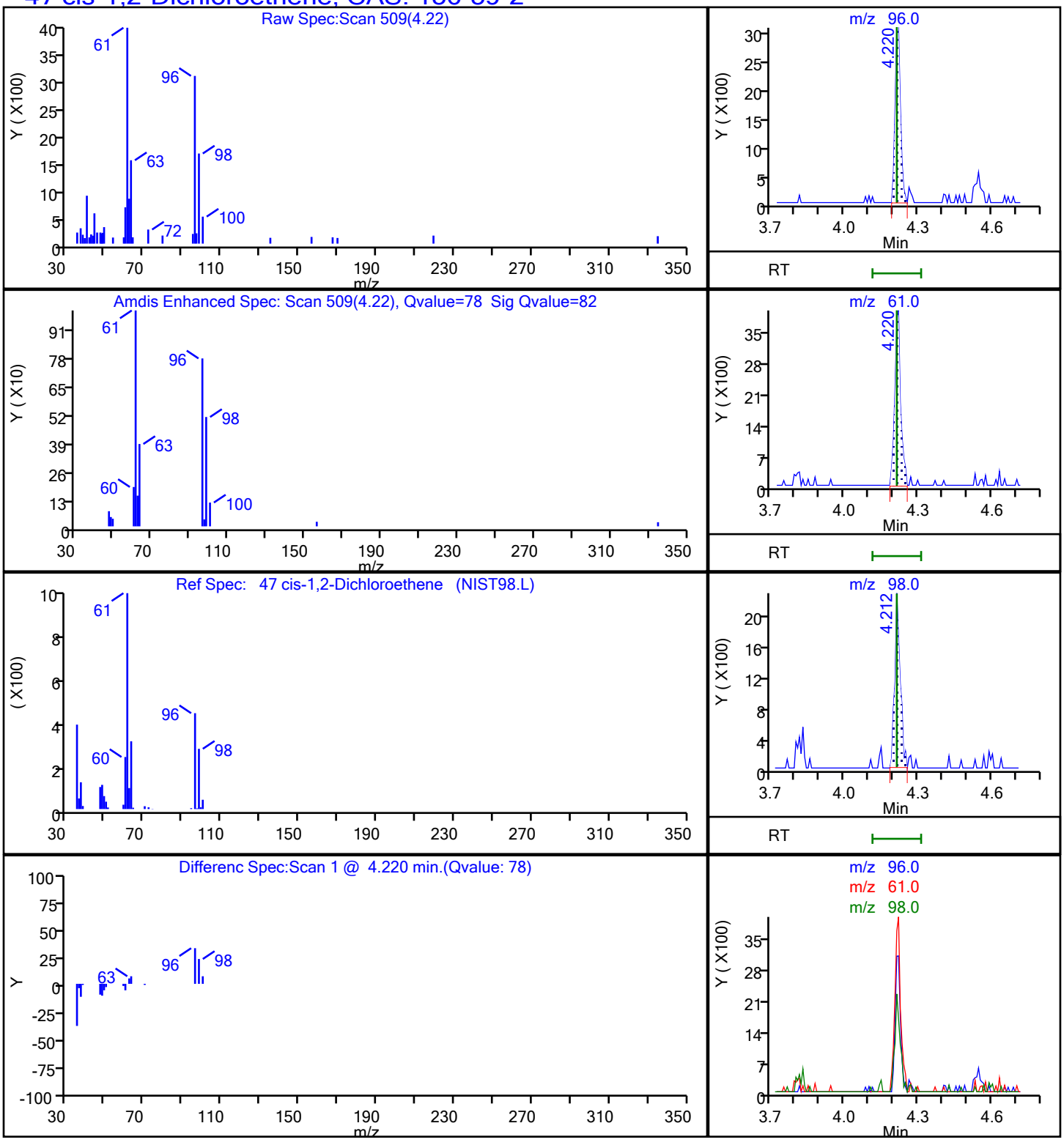


11/27/2023
7:19 PM

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D				
Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4		
Client ID:	MW-113D-20230414				
Operator ID:	MED	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

47 cis-1,2-Dichloroethene, CAS: 156-59-2



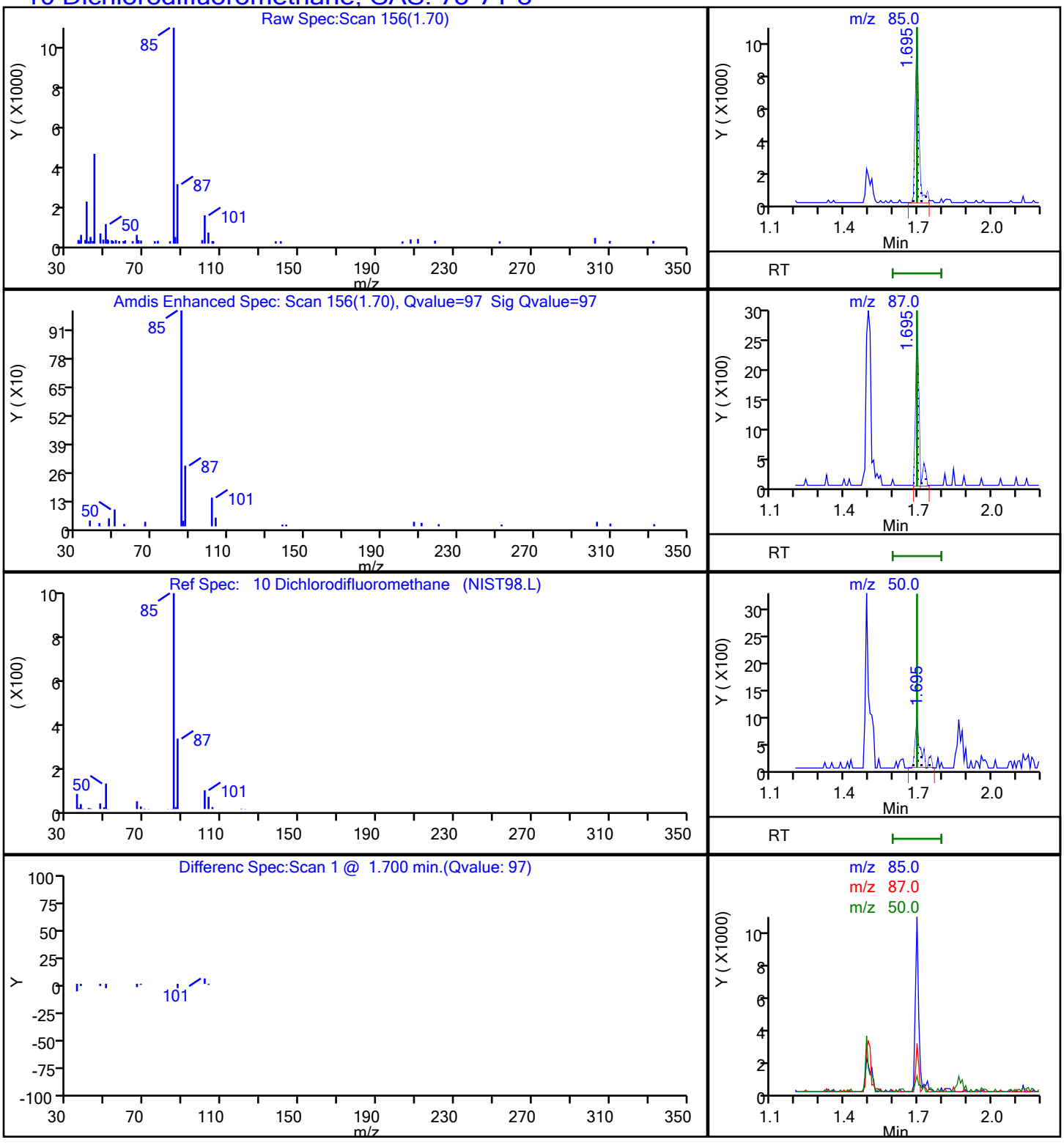
Report Date: 28-Apr-2023 02:39:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D

Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4		
Client ID:	MW-113D-20230414				
Operator ID:	MED	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

10 Dichlorodifluoromethane, CAS: 75-71-8

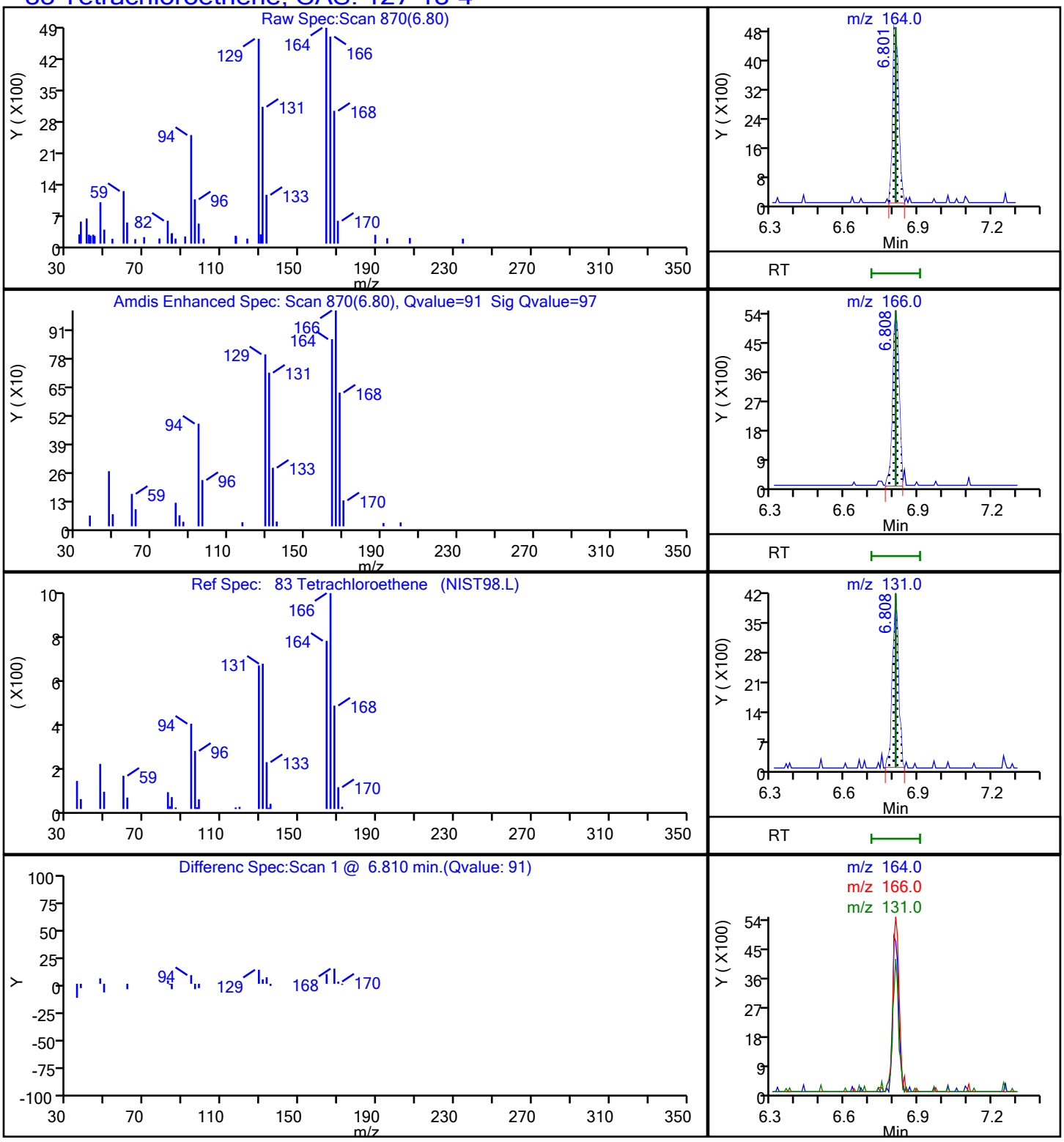


11/27/2023
7:19 PM

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D		
Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4
Client ID:	MW-113D-20230414		
Operator ID:	MED	ALS Bottle#:	18 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

83 Tetrachloroethene, CAS: 127-18-4



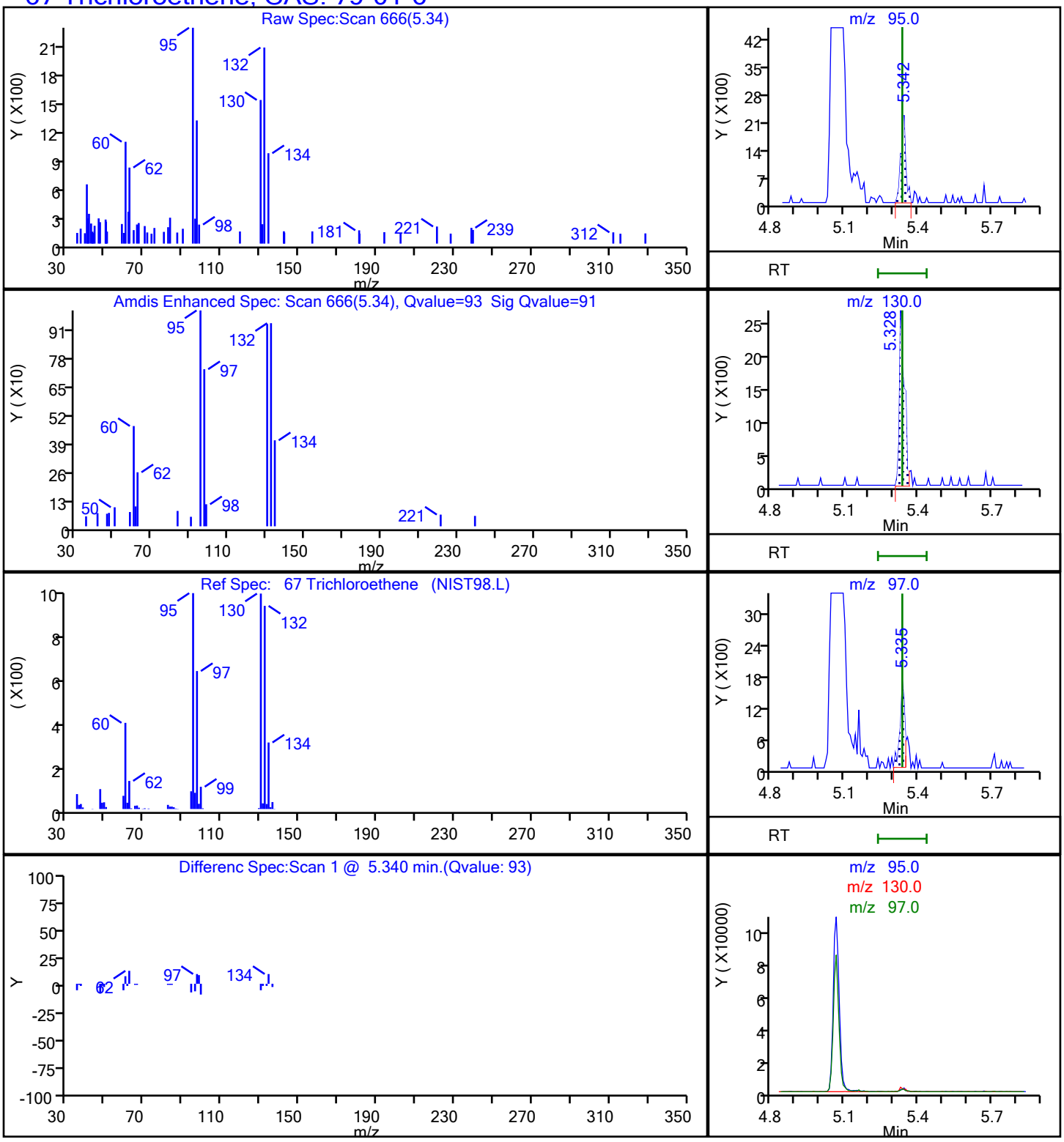
Report Date: 28-Apr-2023 02:39:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D

Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4		
Client ID:	MW-113D-20230414				
Operator ID:	MED	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

67 Trichloroethene, CAS: 79-01-6



11/27/2023
7:19 PM

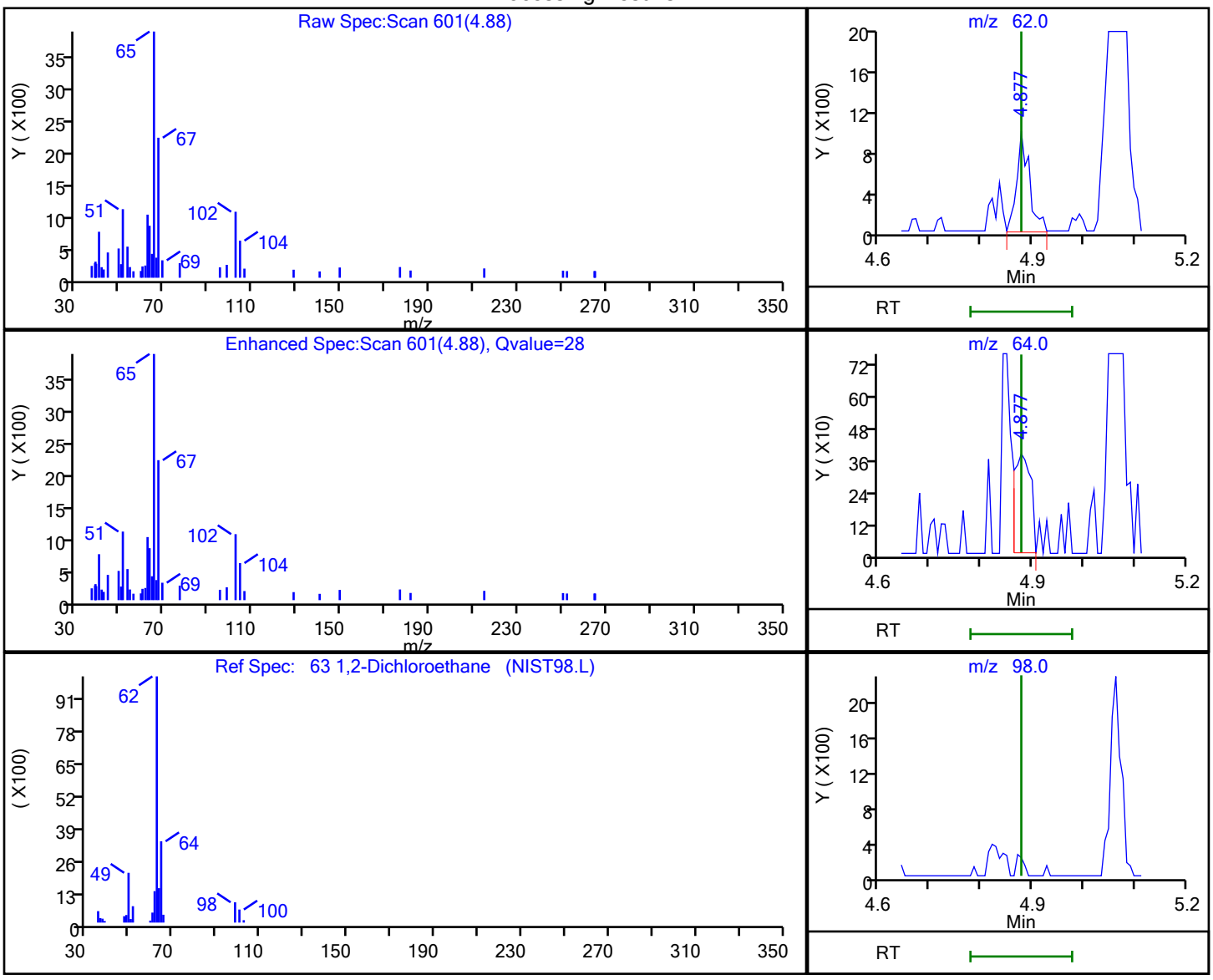
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D				
Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4		
Client ID:	MW-113D-20230414				
Operator ID:	MED	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

63 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
4.88	62.00	1703	0.143971
4.88	64.00	844	
4.88	98.00	0	

Reviewer: V8PV, 28-Apr-2023 02:35:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

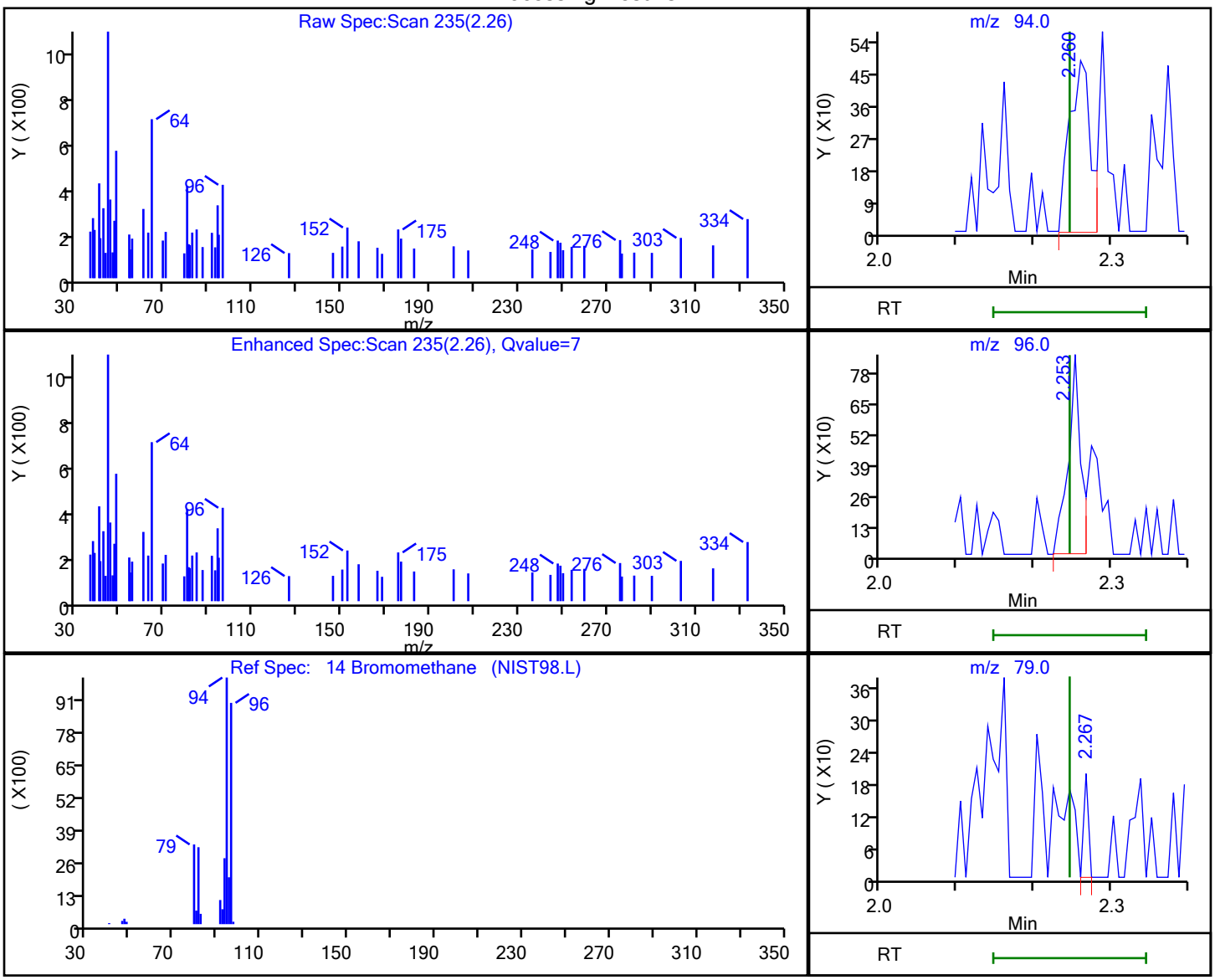
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D				
Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4		
Client ID:	MW-113D-20230414				
Operator ID:	MED	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.26	94.00	922	0.189450
2.25	96.00	995	
2.27	79.00	83	

Reviewer: V8PV, 28-Apr-2023 02:34:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

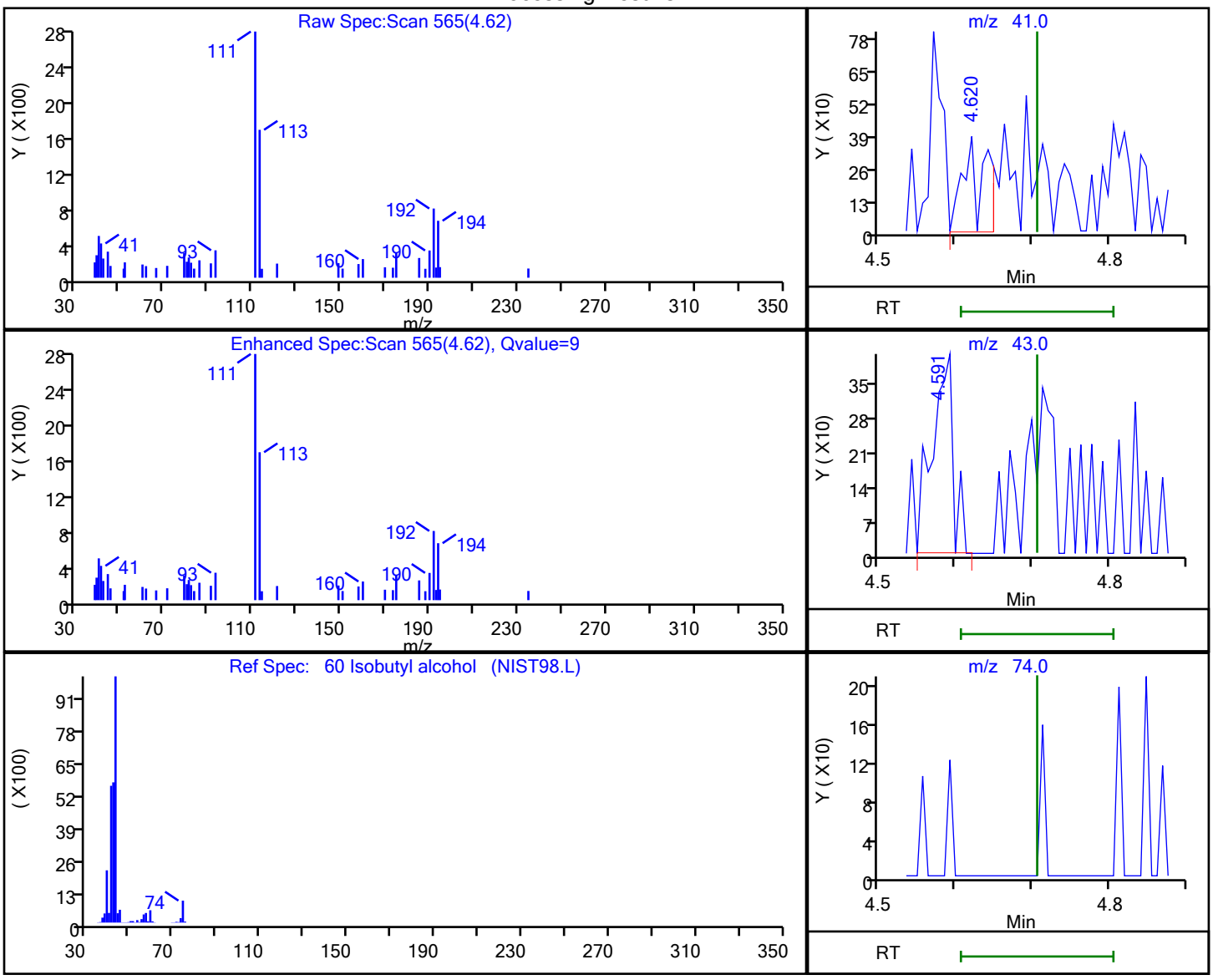
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D				
Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4		
Client ID:	MW-113D-20230414				
Operator ID:	MED	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.62	41.00	781	14.414150
4.59	43.00	791	
4.71	74.00	0	

Reviewer: V8PV, 28-Apr-2023 02:35:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

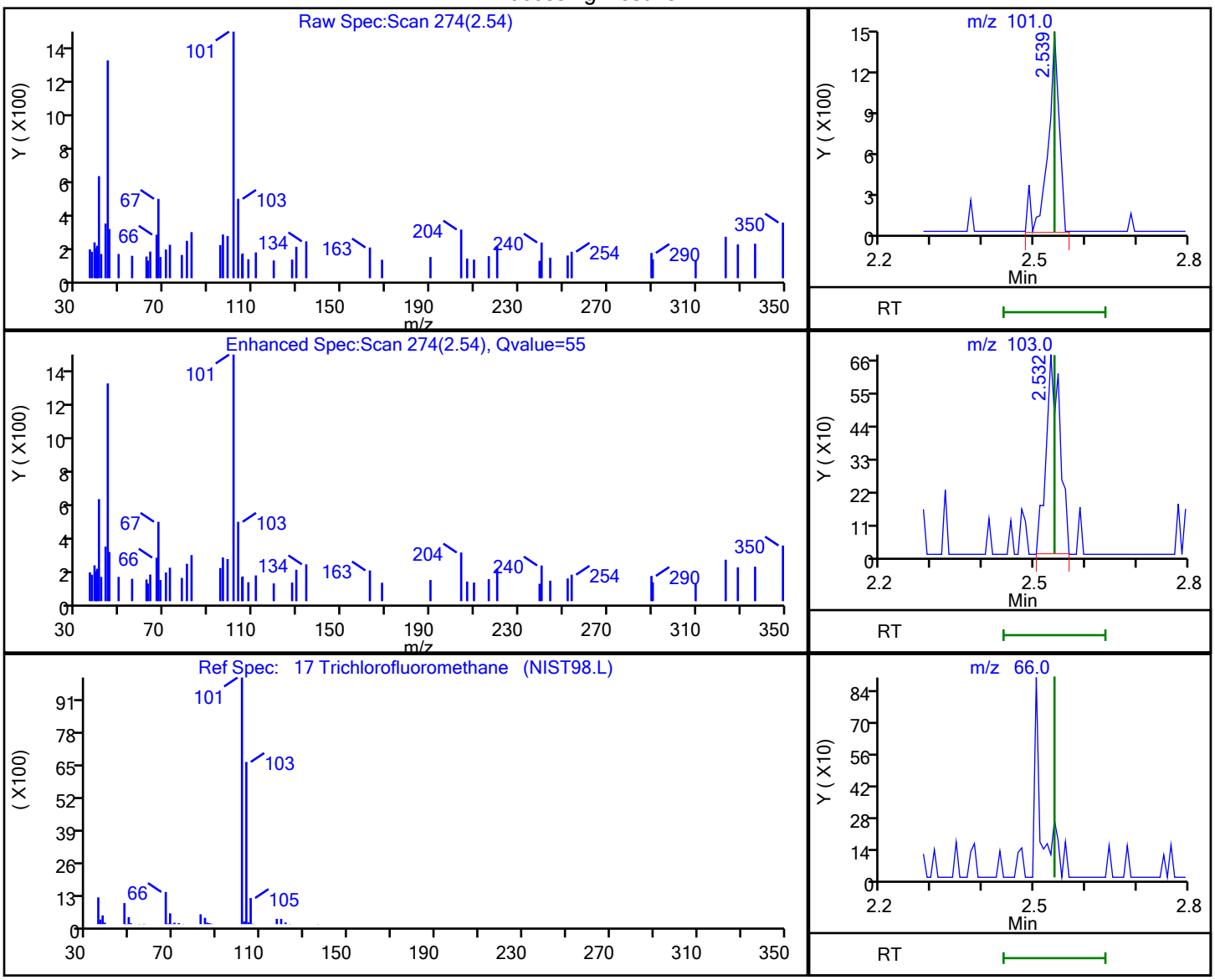
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502924.D				
Injection Date:	27-Apr-2023 16:04:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-4	Lab Sample ID:	280-175123-4		
Client ID:	MW-113D-20230414				
Operator ID:	MED	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

17 Trichlorofluoromethane, CAS: 75-69-4

Processing Results



RT	Mass	Response	Amount
2.54	101.00	2176	0.185152
2.53	103.00	1271	
2.54	66.00	0	

Reviewer: V8PV, 28-Apr-2023 02:34:46

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-113S-20230414 | Lab Sample ID: 280-175123-5

Matrix: Water | Lab File ID: X502925.D

Analysis Method: 8260D | Date Collected: 04/14/2023 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 16:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	26		1.0	0.22
75-35-4	1,1-Dichloroethene	0.82	J	1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	11		1.0	0.37
107-06-2	1,2-Dichloroethane	3.9		1.0	0.54
78-87-5	1,2-Dichloropropane	5.0		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	5.8		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	7.3		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	0.46	J	1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-113S-20230414 | Lab Sample ID: 280-175123-5

Matrix: Water | Lab File ID: X502925.D

Analysis Method: 8260D | Date Collected: 04/14/2023 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 16:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	1.4		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	29		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	24		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	1.1	J	2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	1.0		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	22		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	1.5		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	16		1.0	0.30
75-69-4	Trichlorofluoromethane	2.6		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	92		2.0	0.51
1330-20-7	Xylenes, Total	1.0		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-113S-20230414 | Lab Sample ID: 280-175123-5

Matrix: Water | Lab File ID: X502925.D

Analysis Method: 8260D | Date Collected: 04/14/2023 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 16:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	103		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D
Lims ID: 280-175123-B-5
Client ID: MW-113S-20230414
Sample Type: Client
Inject. Date: 27-Apr-2023 16:25:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-B-5
Misc. Info.: 280-0120830-020
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:39:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: V8PV Date: 28-Apr-2023 02:34:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2018409	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	479641	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	748608	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	495531	51.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	469360	46.0	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	93	2109567	51.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	89	678362	50.7	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	89	678362	NR	
10 Dichlorodifluoromethane	85	1.696	1.695	0.001	98	214077	24.2	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62	1.967	1.960	0.007	97	840869	91.7	
13 Ethylene oxide	43		2.225				ND	7
14 Bromomethane	94		2.246				ND	U
15 Chloroethane	64	2.339	2.339	0.000	97	6036	0.9841	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	96	864484	56.5	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	95	30776	2.61	
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59	2.747	2.747	0.000	89	1146724	168.4	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.932				ND	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	95	6393	0.8246	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.040				ND	U
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	7
28 Acetonitrile	41		3.161				ND	U
29 Methyl acetate	43		3.183				ND	
30 3-Chloro-1-propene	41		3.204				ND	7
31 Methylene Chloride	84	3.290	3.297	-0.007	87	10862	1.09	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	95	17214	24.8	
33 Acrylonitrile	53		3.454				ND	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	91	15837	0.6491	
35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	97	12757	1.48	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.783				ND	U
40 1,1-Dichloroethane	63	3.812	3.805	0.007	96	407449	25.9	
41 Isopropyl ether	87		3.805				ND	U
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	U
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	77	297293	28.8	
48 2,2-Dichloropropane	77		4.227				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42	4.398	4.398	0.000	92	86547	38.5	
54 Chloroform	83	4.448	4.441	0.007	93	22906	1.43	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56	4.649	4.648	0.001	85	8902	0.6667	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78	4.849	4.849	0.000	95	274085	7.31	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	95	46847	3.94	
64 Tert-amyl methyl ether	73		4.920				ND	
65 n-Heptane	43		5.035				ND	7
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95	5.335	5.335	0.000	98	151032	16.5	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	95	47899	5.02	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.614				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.936				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	U
83 Tetrachloroethene	164	6.808	6.808	0.000	97	153733	22.1	
84 1,3-Dichloropropane	76		6.858				ND	7
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.559				ND	U
90 Chlorobenzene	112	7.602	7.602	0.000	83	12217	0.4572	
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106	8.159	8.152	0.007	96	18139	1.01	
95 Styrene	104		8.166				ND	7
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	7
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.588				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.817				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126	8.989	8.982	0.007	97	18867	1.80	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134	9.582	9.589	-0.007	92	2178	0.2428	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	87	2855	0.1445	
113 4-Isopropyltoluene	119		9.732				ND	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	121687	5.80	
115 1,2,3-Trimethylbenzene	105		9.833				ND	7
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146	10.169	10.168	0.001	98	216891	11.4	
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.256				ND	
165 t-Amyl alcohol	1		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106				0		1.01	
S 137 Total BTEX	1				0		8.32	
S 140 Trihalomethanes, Total	1				0		1.43	
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1				0		30.3	
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

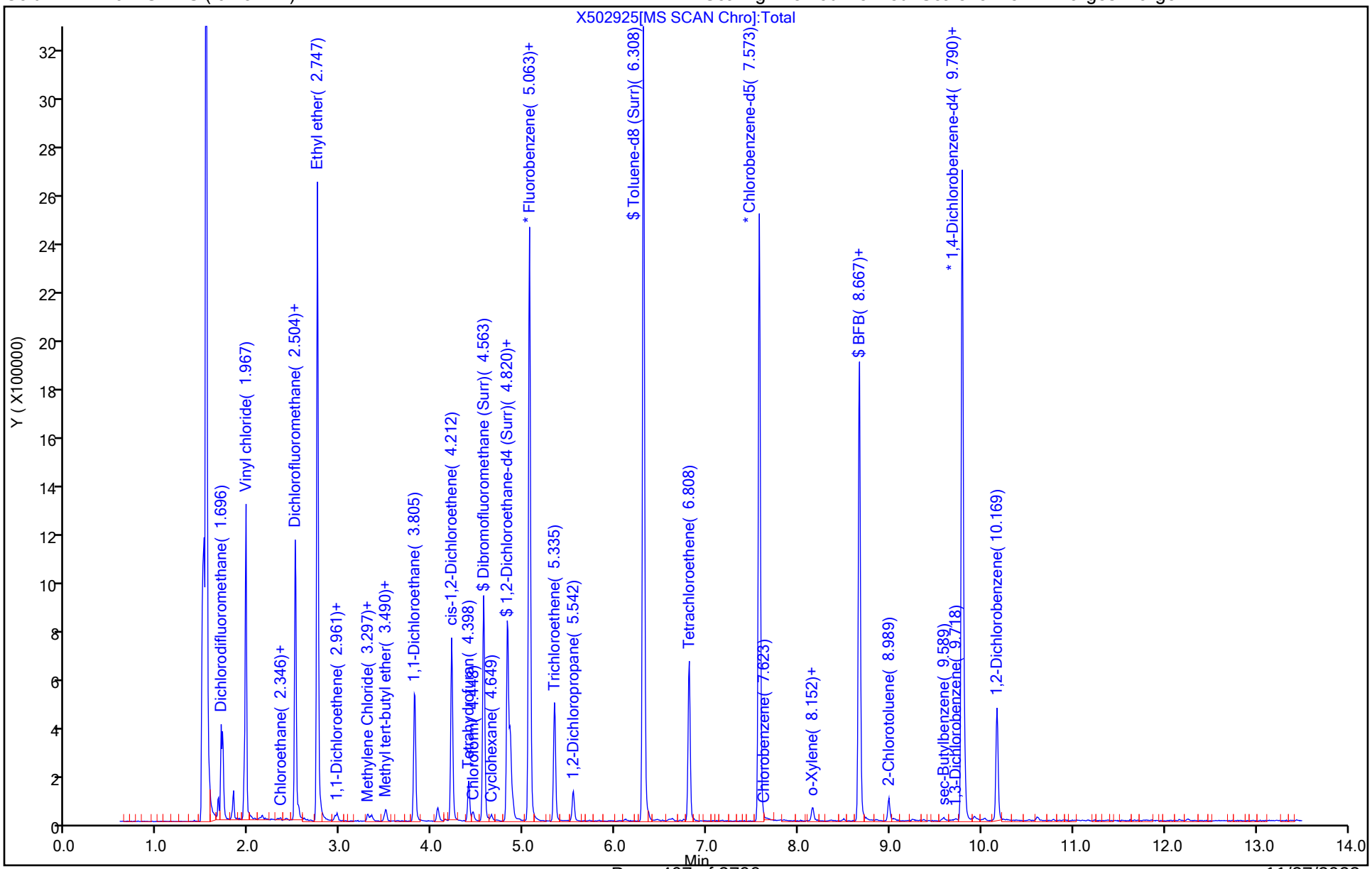
Report Date: 28-Apr-2023 02:39:44 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D

Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5	Worklist Smp#:	20
Client ID:	MW-113S-20230414				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D				
Lims ID:	280-175123-B-5				
Client ID:	MW-113S-20230414				
Sample Type:	Client				
Inject. Date:	27-Apr-2023 16:25:30	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175123-B-5				
Misc. Info.:	280-0120830-020				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 02:39:26	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1608				

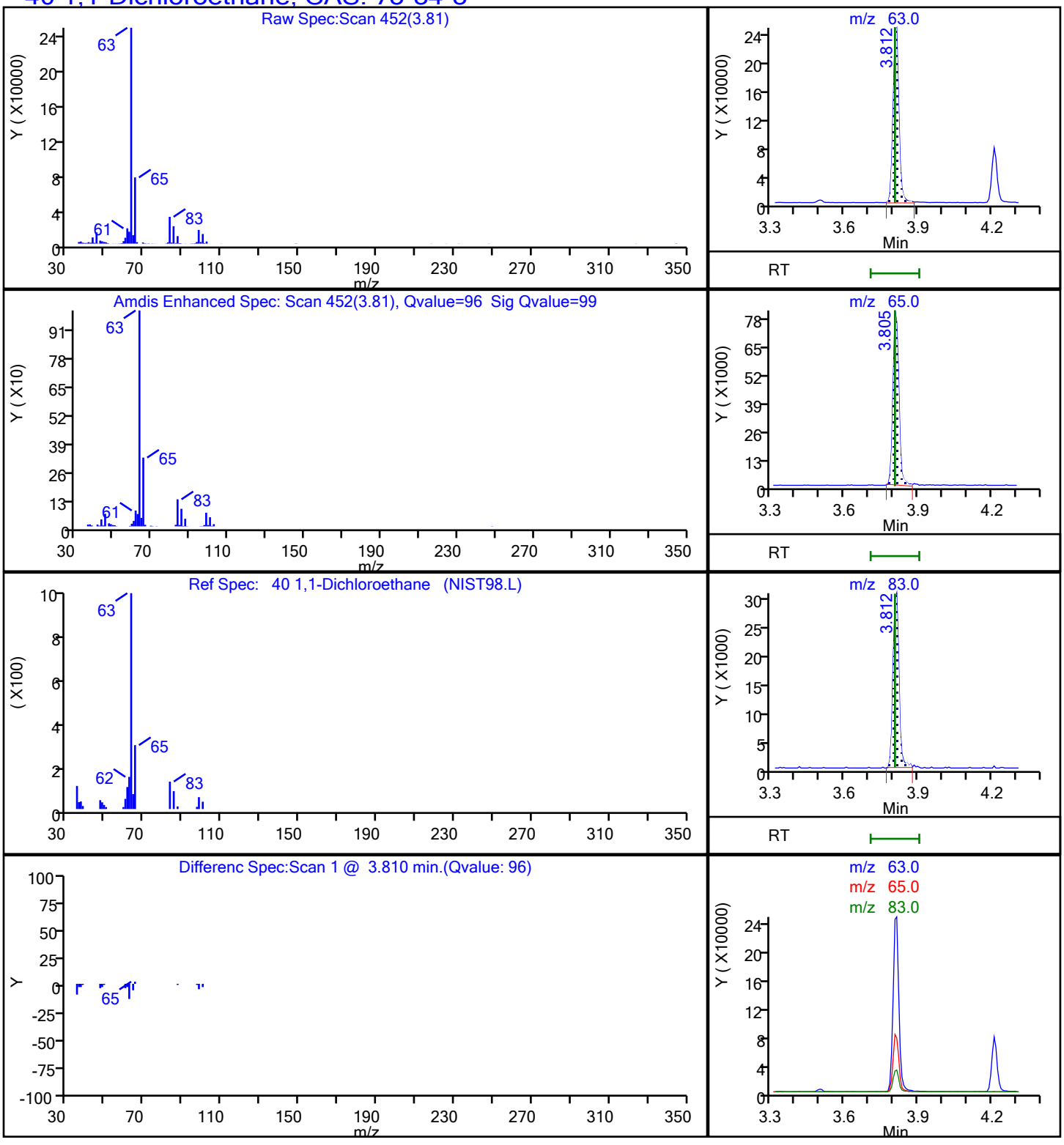
First Level Reviewer: V8PV Date: 28-Apr-2023 02:34:35

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.0	102.08
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.0	92.06
$ 6 Toluene-d8 (Surr)	50.0	51.6	103.26
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.7	101.41

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D		
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5
Client ID:	MW-113S-20230414		
Operator ID:	MED	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

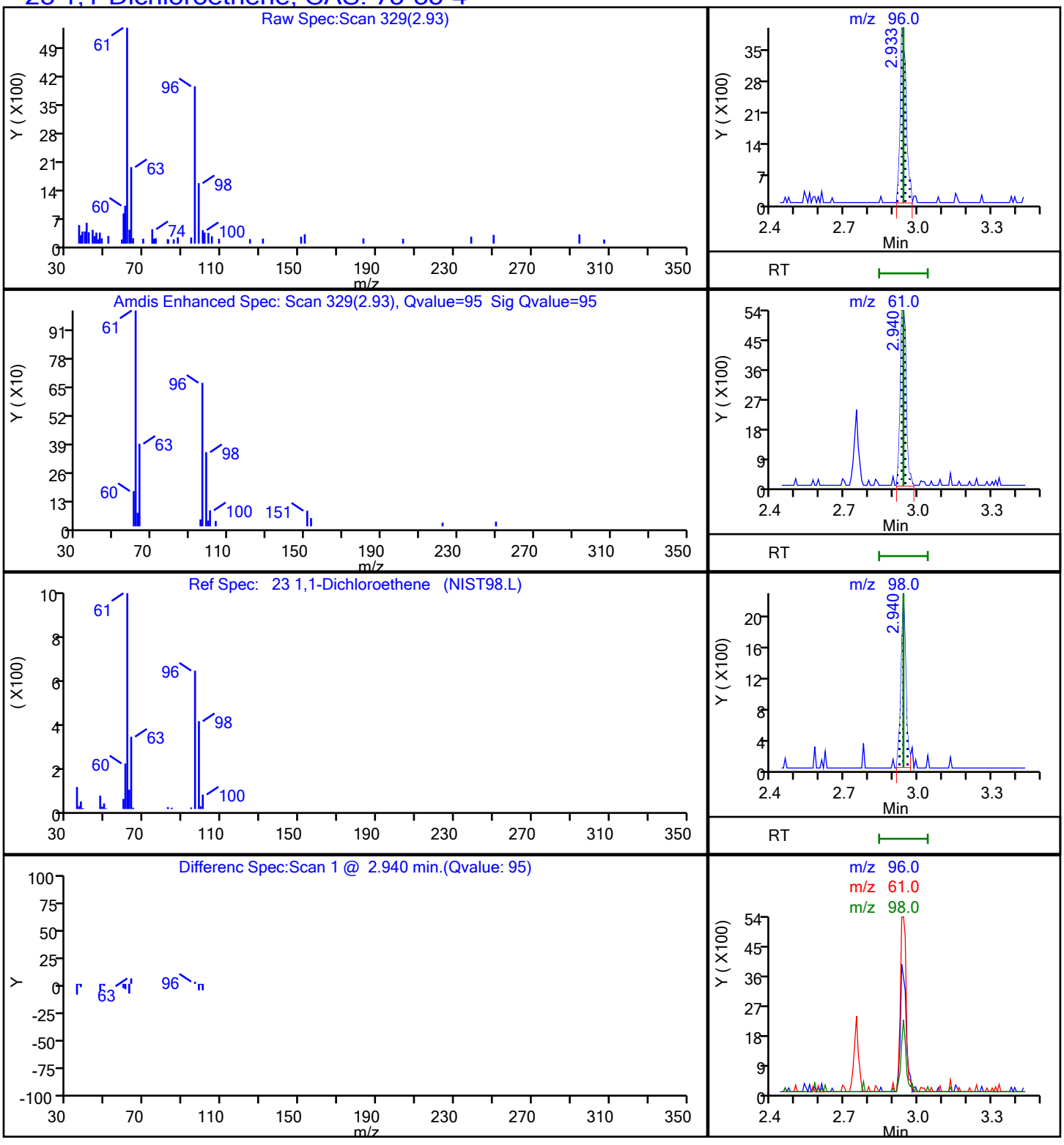
40 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D
Injection Date: 27-Apr-2023 16:25:30 Instrument ID: VMS_X4
Lims ID: 280-175123-B-5 Lab Sample ID: 280-175123-5
Client ID: MW-113S-20230414
Operator ID: MED ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

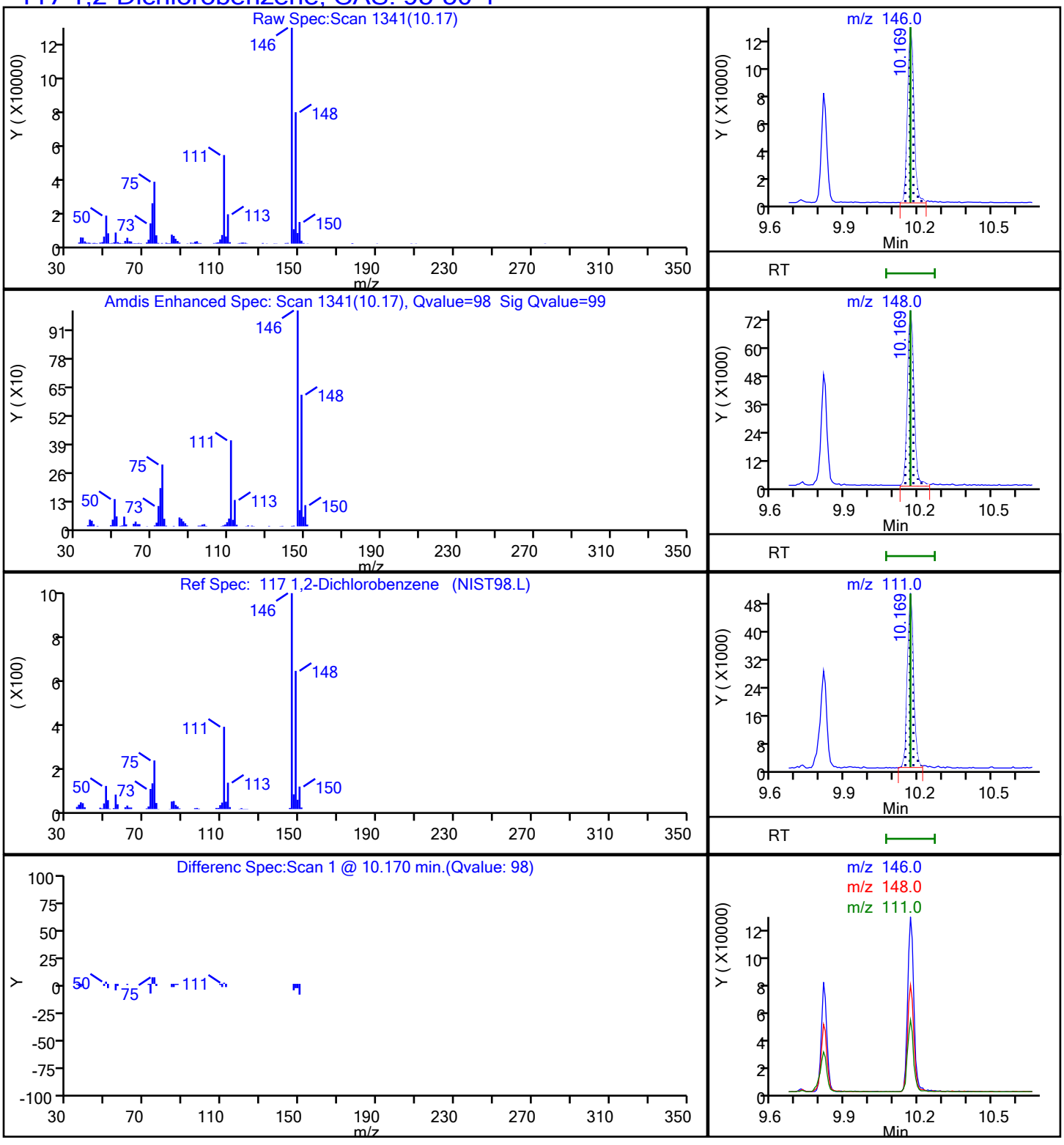
23 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D				
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

117 1,2-Dichlorobenzene, CAS: 95-50-1



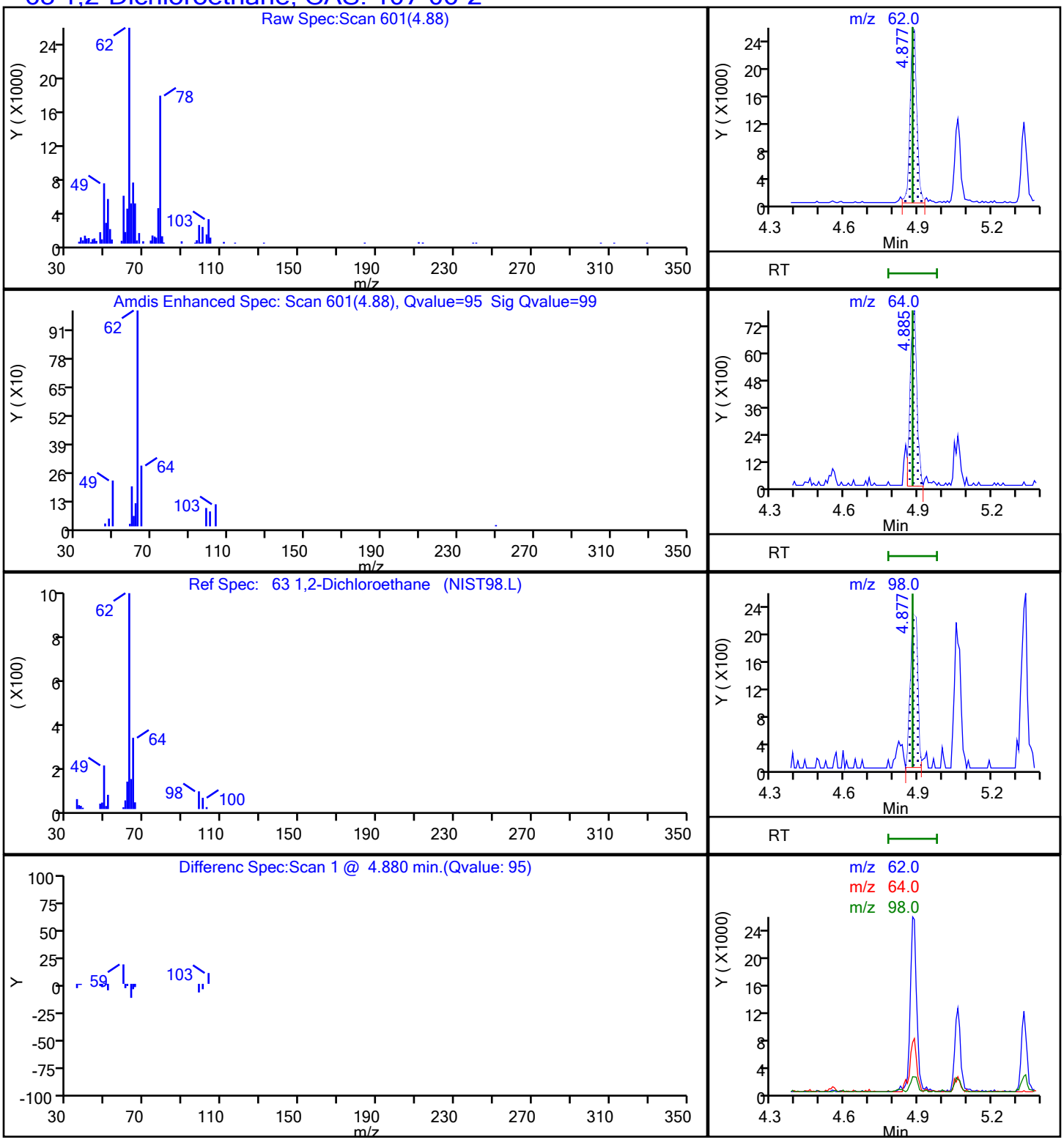
Report Date: 28-Apr-2023 02:39:44 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D

Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

63 1,2-Dichloroethane, CAS: 107-06-2



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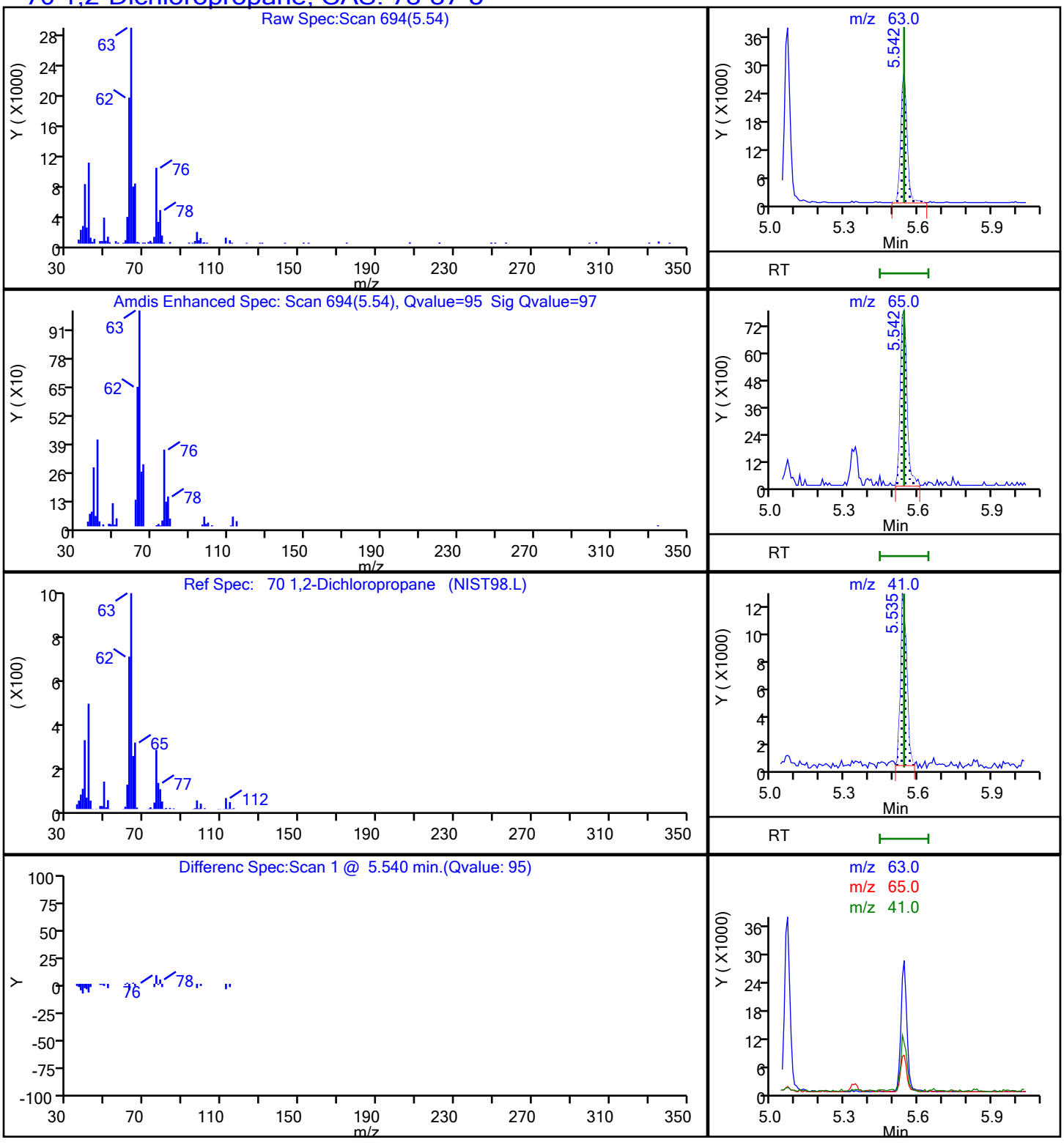
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D
Injection Date: 27-Apr-2023 16:25:30 Instrument ID: VMS_X4
Lims ID: 280-175123-B-5 Lab Sample ID: 280-175123-5
Client ID: MW-113S-20230414
Operator ID: MED ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

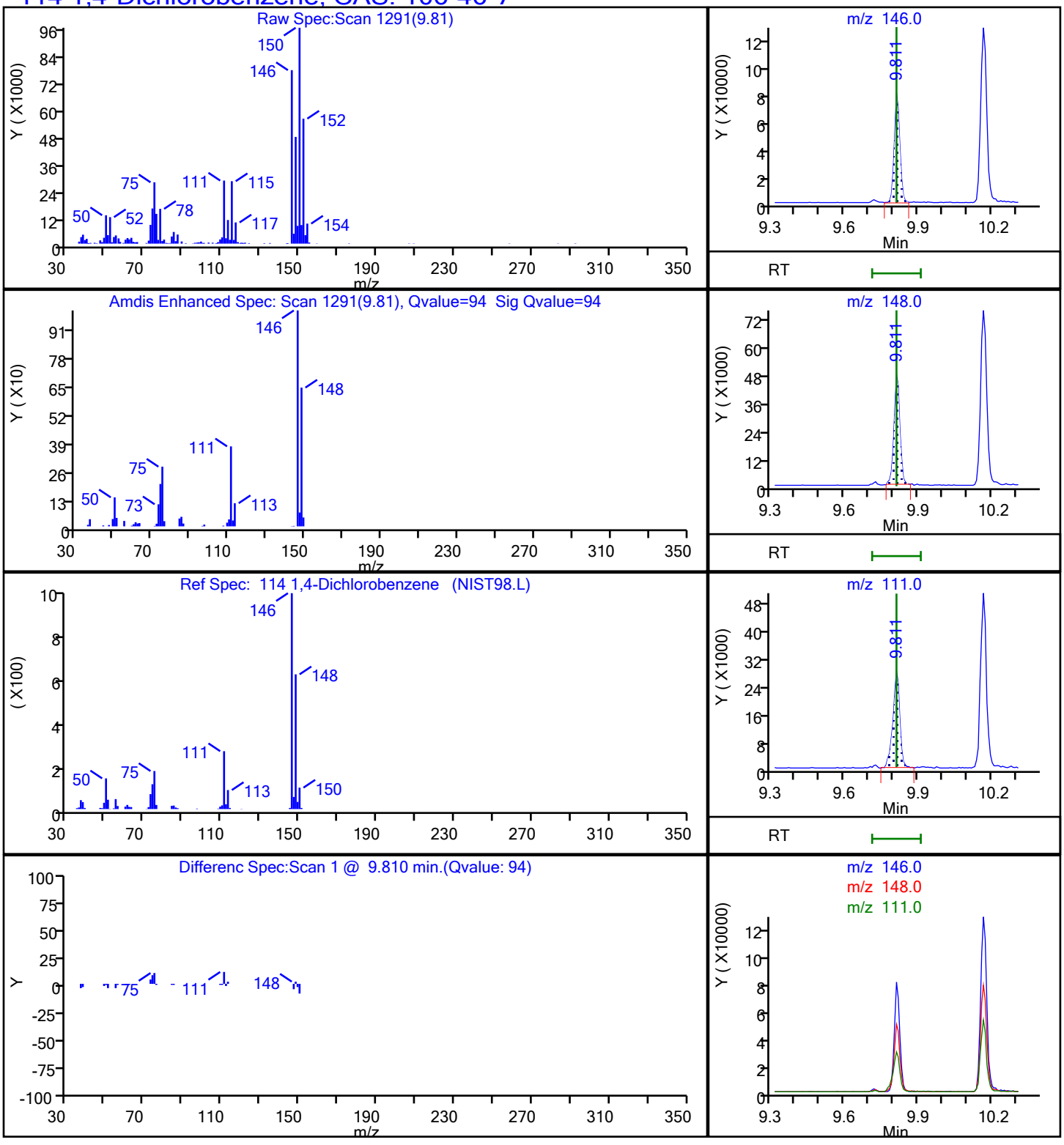
70 1,2-Dichloropropane, CAS: 78-87-5



Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D
Injection Date: 27-Apr-2023 16:25:30 Instrument ID: VMS_X4
Lims ID: 280-175123-B-5 Lab Sample ID: 280-175123-5
Client ID: MW-113S-20230414
Operator ID: MED ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

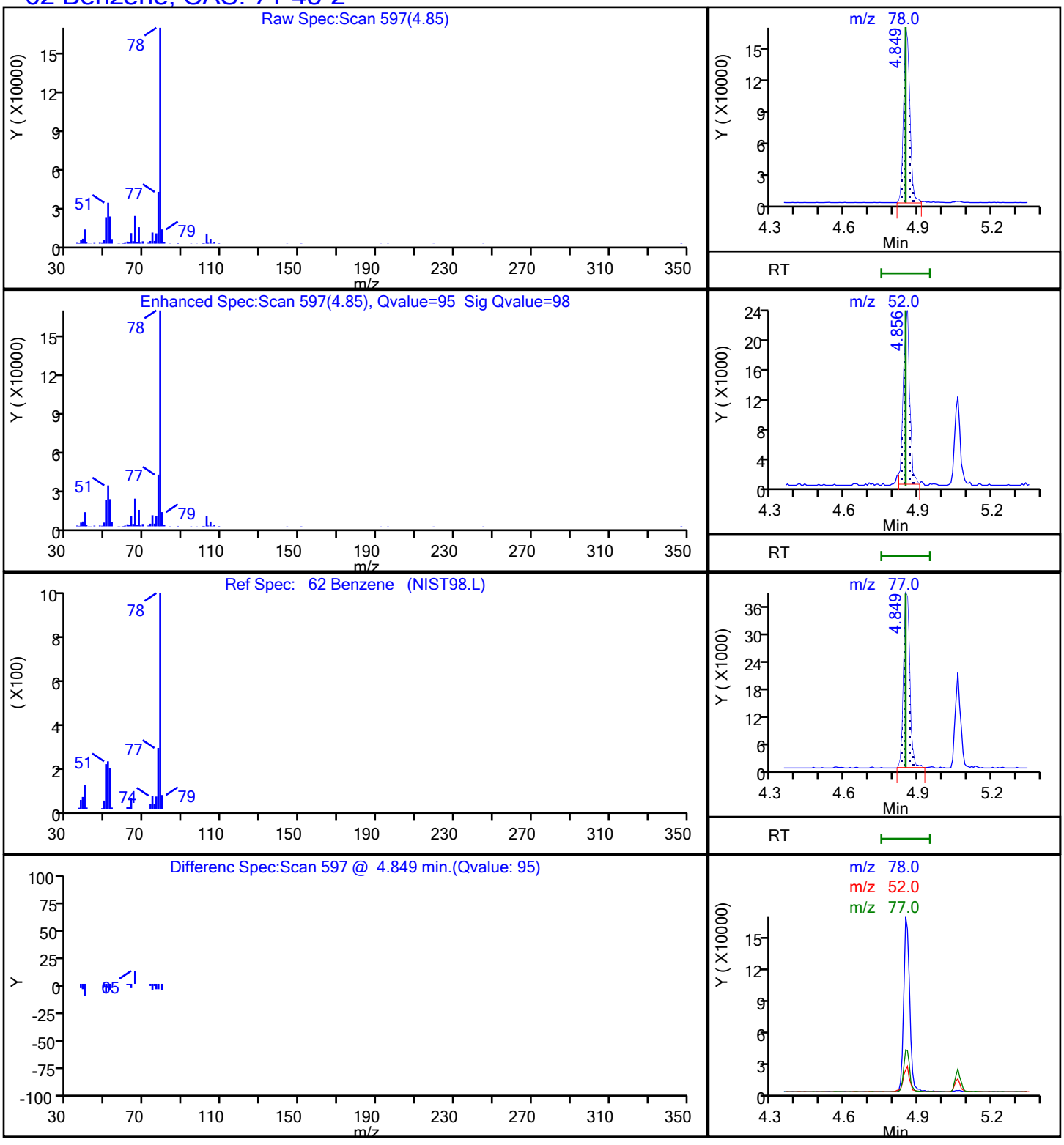
114 1,4-Dichlorobenzene, CAS: 106-46-7



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D		
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5
Client ID:	MW-113S-20230414		
Operator ID:	MED	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

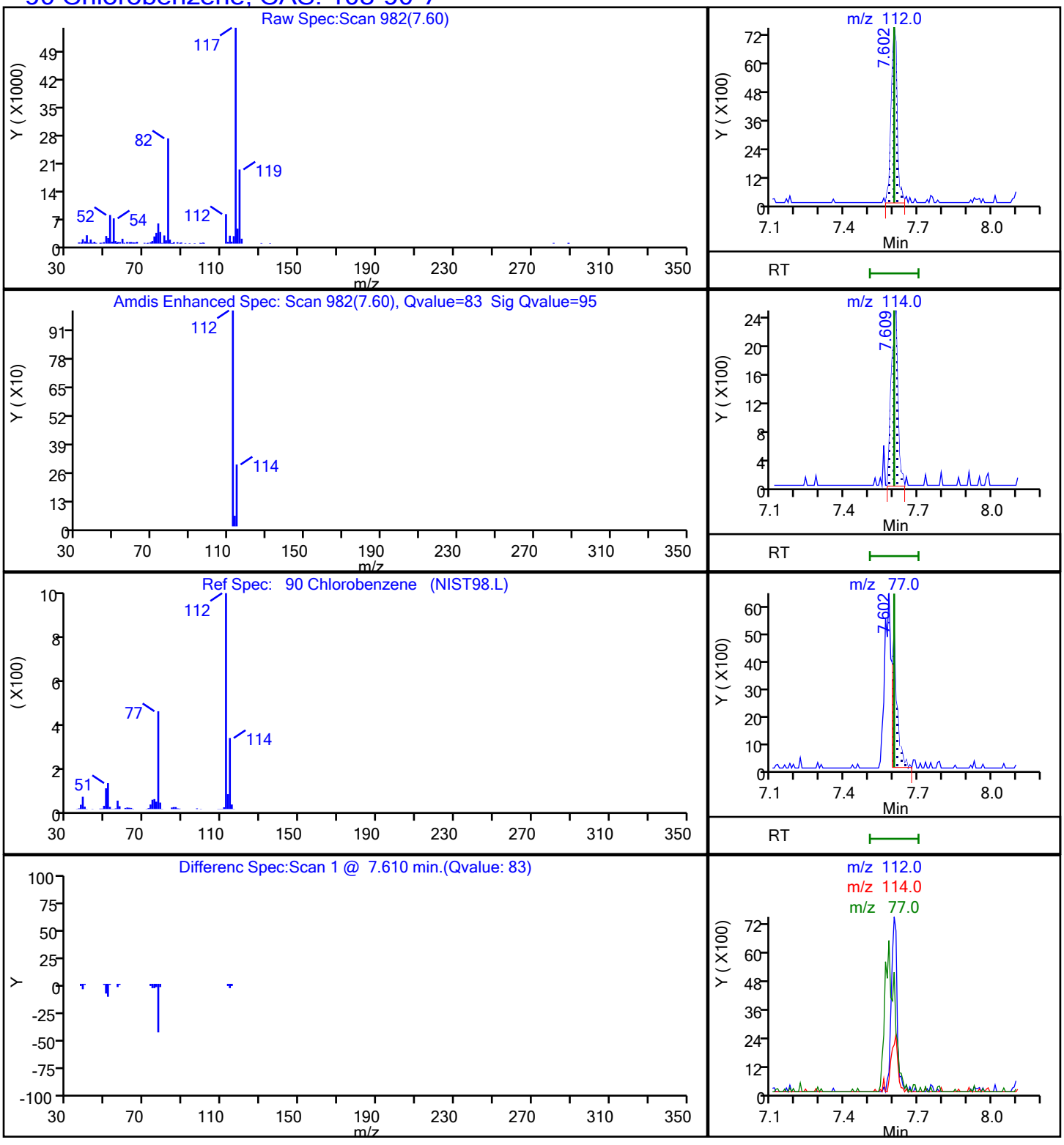
62 Benzene, CAS: 71-43-2



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D		
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5
Client ID:	MW-113S-20230414		
Operator ID:	MED	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

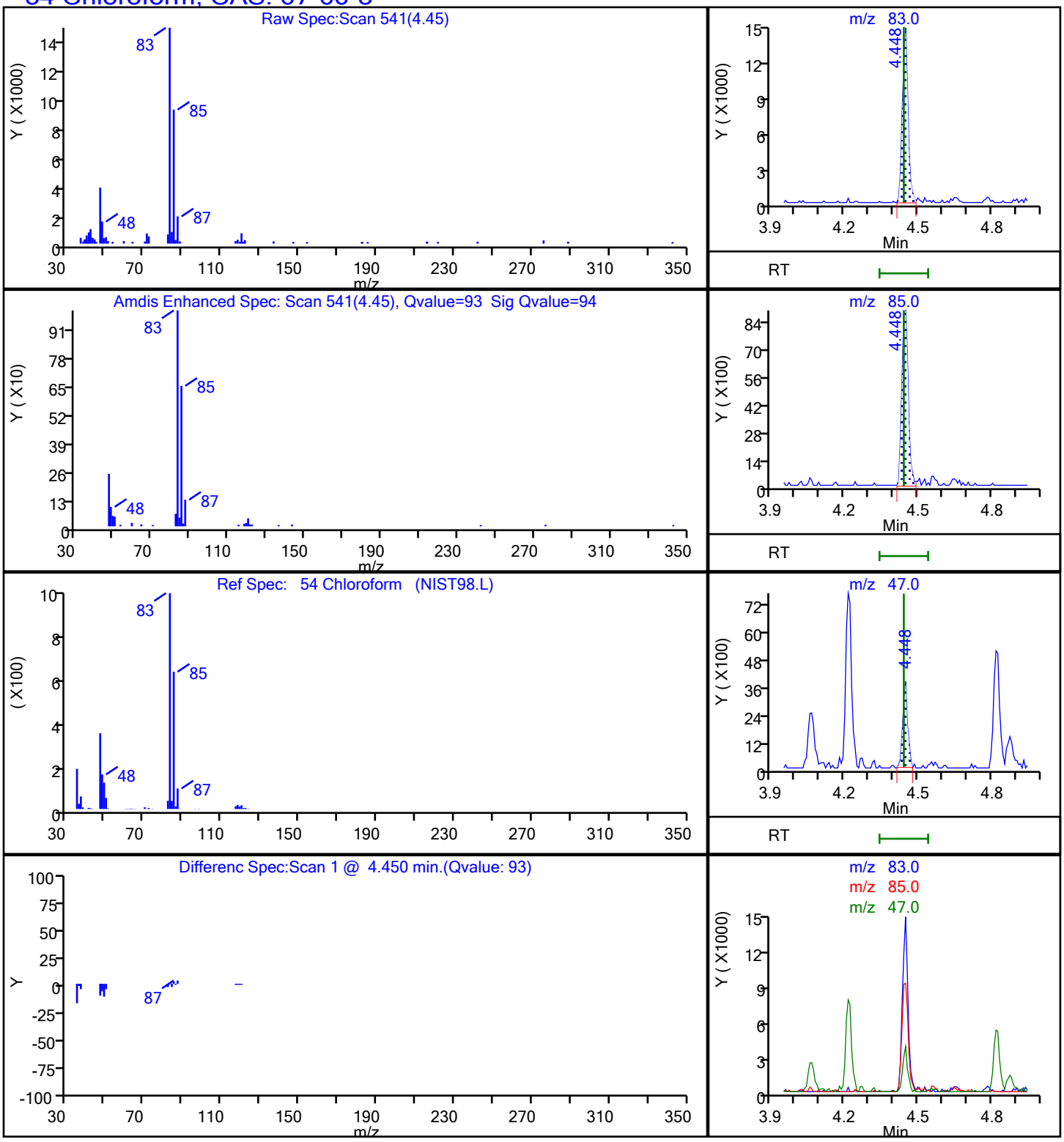
90 Chlorobenzene, CAS: 108-90-7



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D		
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5
Client ID:	MW-113S-20230414		
Operator ID:	MED	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

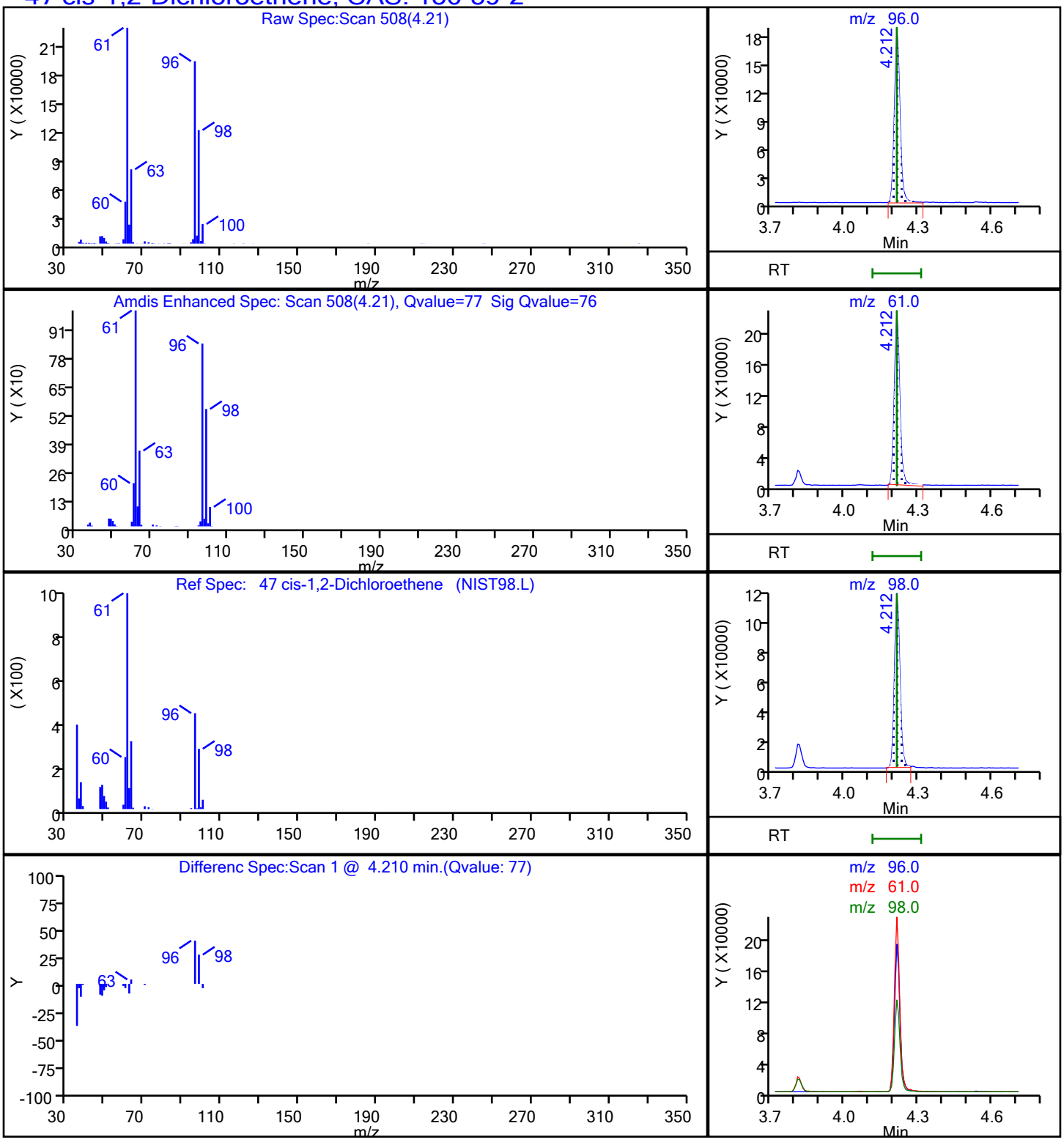
54 Chloroform, CAS: 67-66-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D		
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5
Client ID:	MW-113S-20230414		
Operator ID:	MED	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

47 cis-1,2-Dichloroethene, CAS: 156-59-2



Report Date: 28-Apr-2023 02:39:44 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D

Injection Date: 27-Apr-2023 16:25:30 Instrument ID: VMS_X4

Lims ID: 280-175123-B-5 Lab Sample ID: 280-175123-5

Client ID: MW-113S-20230414

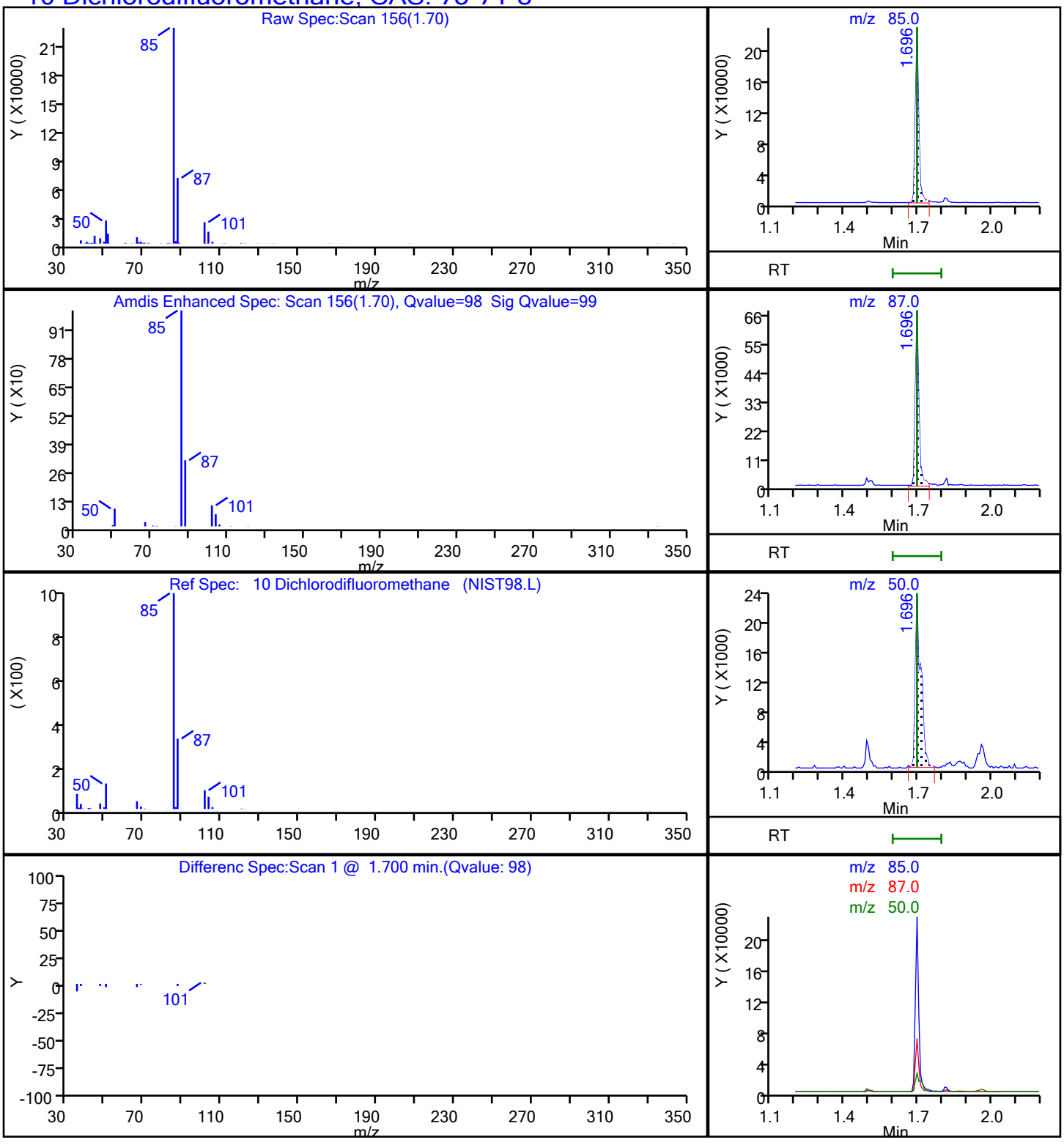
Operator ID: MED ALS Bottle#: 19 Worklist Smp#: 20

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

10 Dichlorodifluoromethane, CAS: 75-71-8



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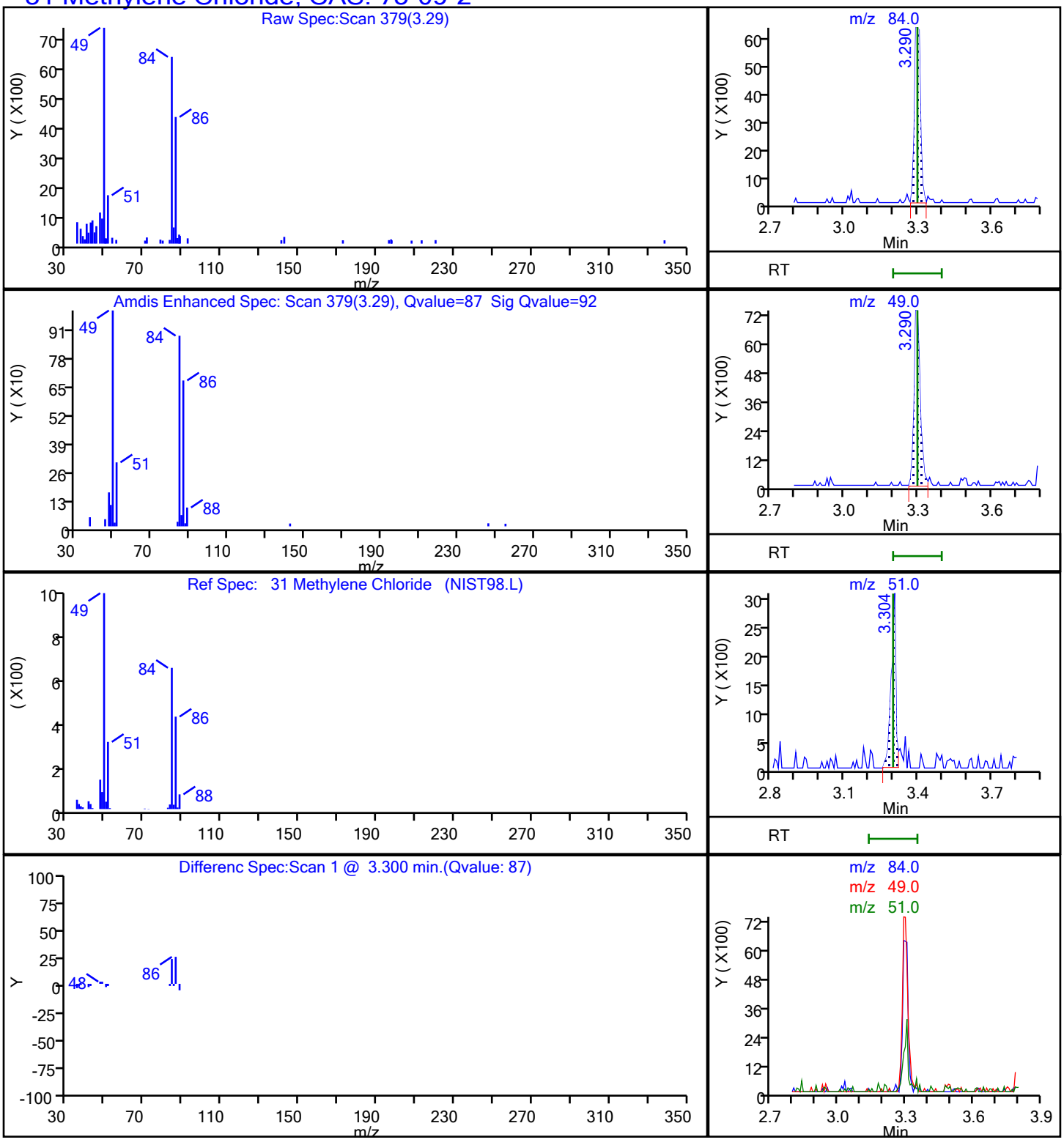
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D
Injection Date: 27-Apr-2023 16:25:30 Instrument ID: VMS_X4
Lims ID: 280-175123-B-5 Lab Sample ID: 280-175123-5
Client ID: MW-113S-20230414
Operator ID: MED ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

31 Methylene Chloride, CAS: 75-09-2



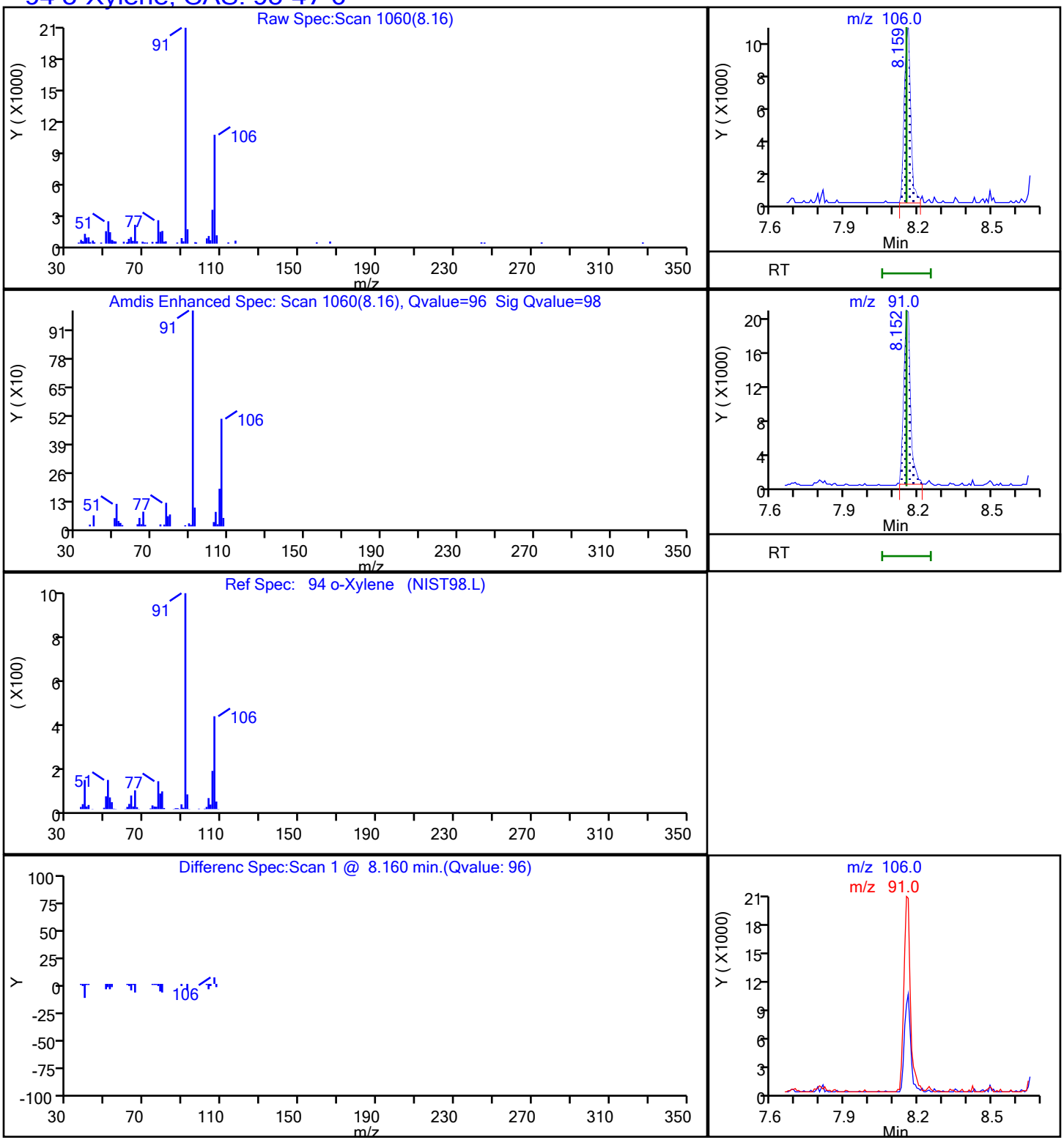
Report Date: 28-Apr-2023 02:39:44 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D

Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

94 o-Xylene, CAS: 95-47-6



11/27/2023
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Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D		
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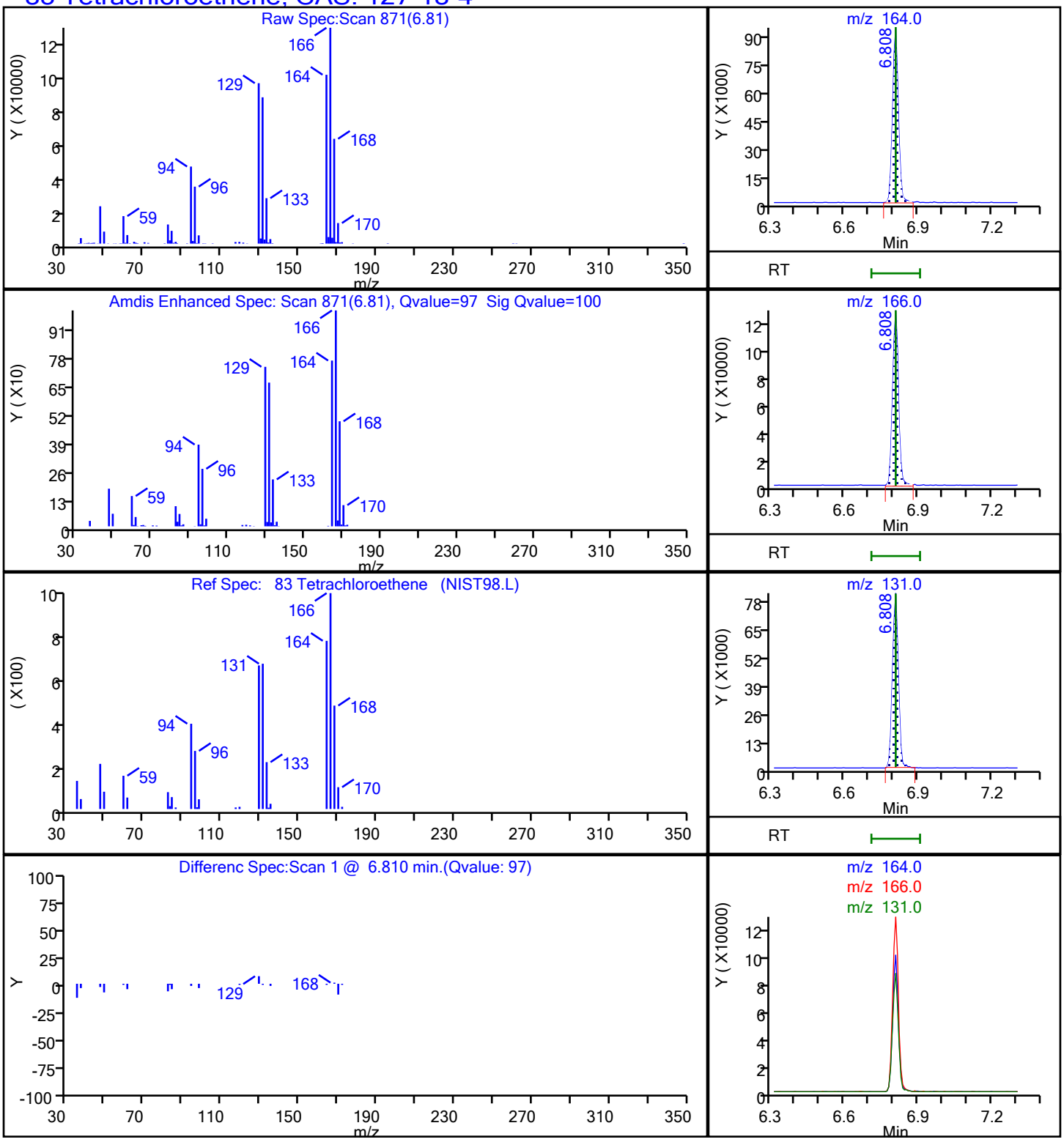
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5
Client ID:	MW-113S-20230414		
Operator ID:	MED	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

83 Tetrachloroethene, CAS: 127-18-4



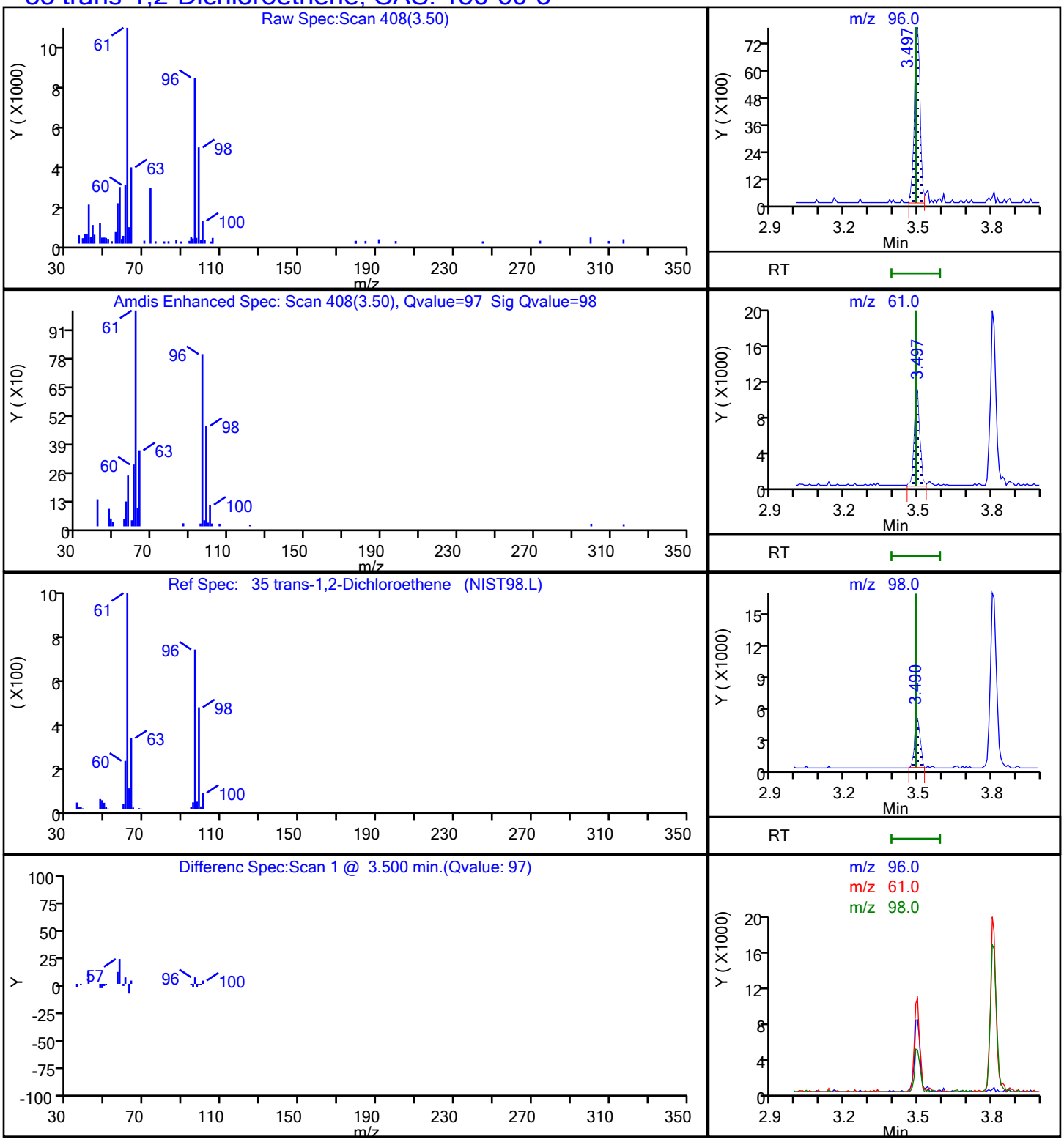
Report Date: 28-Apr-2023 02:39:44 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D

Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

35 trans-1,2-Dichloroethene, CAS: 156-60-5



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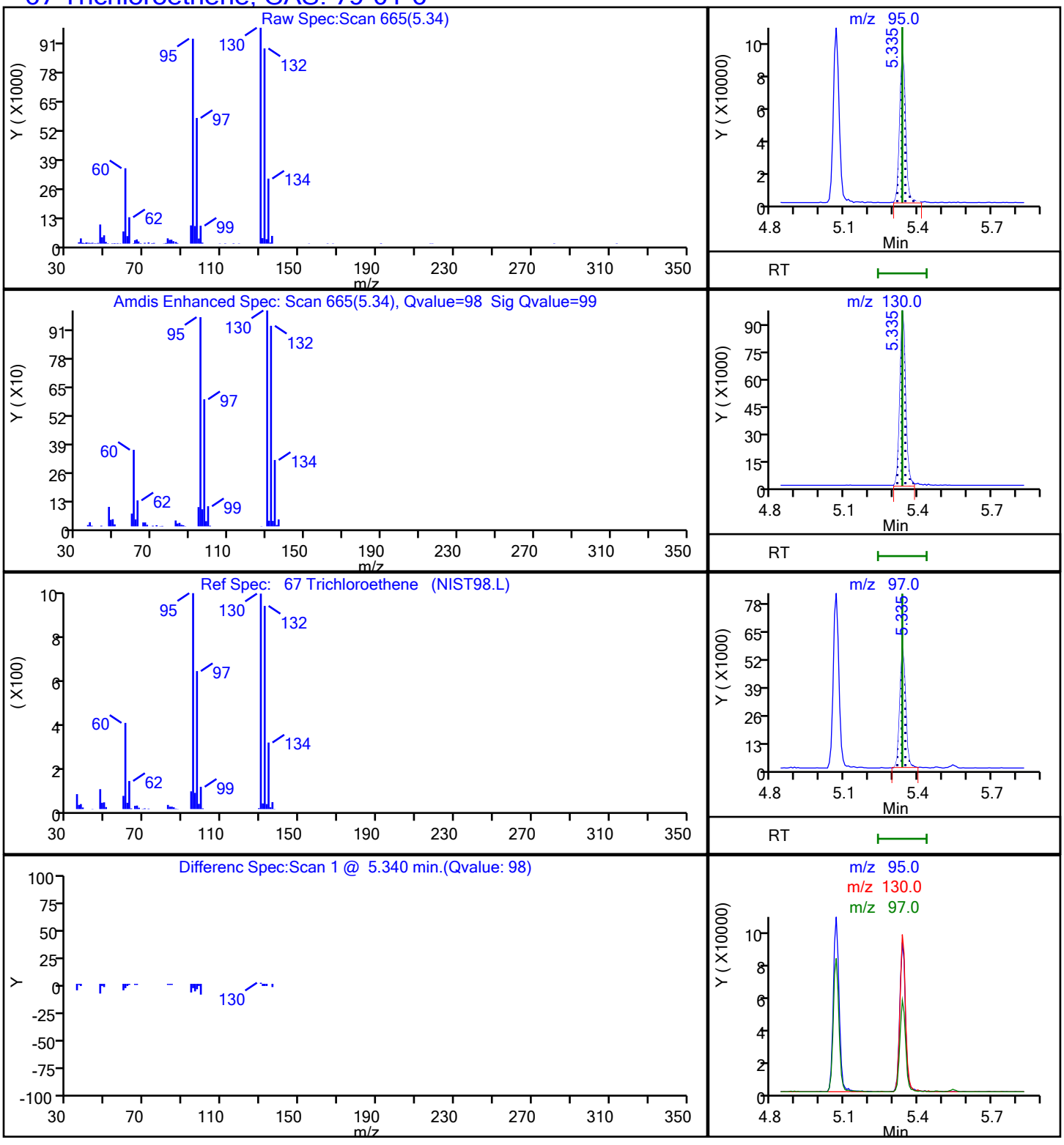
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D
Injection Date: 27-Apr-2023 16:25:30 Instrument ID: VMS_X4
Lims ID: 280-175123-B-5 Lab Sample ID: 280-175123-5
Client ID: MW-113S-20230414
Operator ID: MED ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

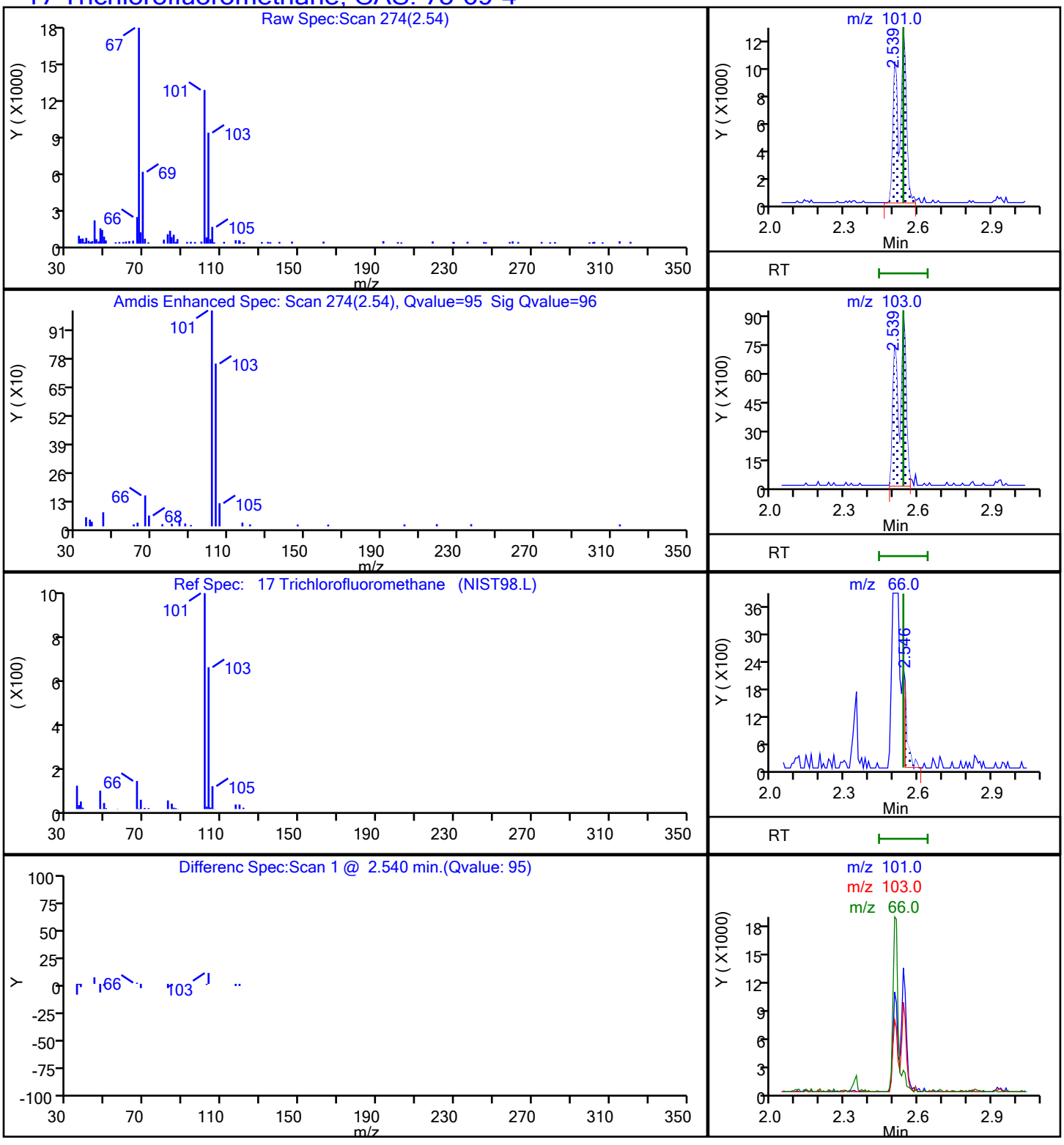
67 Trichloroethene, CAS: 79-01-6



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D		
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5
Client ID:	MW-113S-20230414		
Operator ID:	MED	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN

17 Trichlorofluoromethane, CAS: 75-69-4



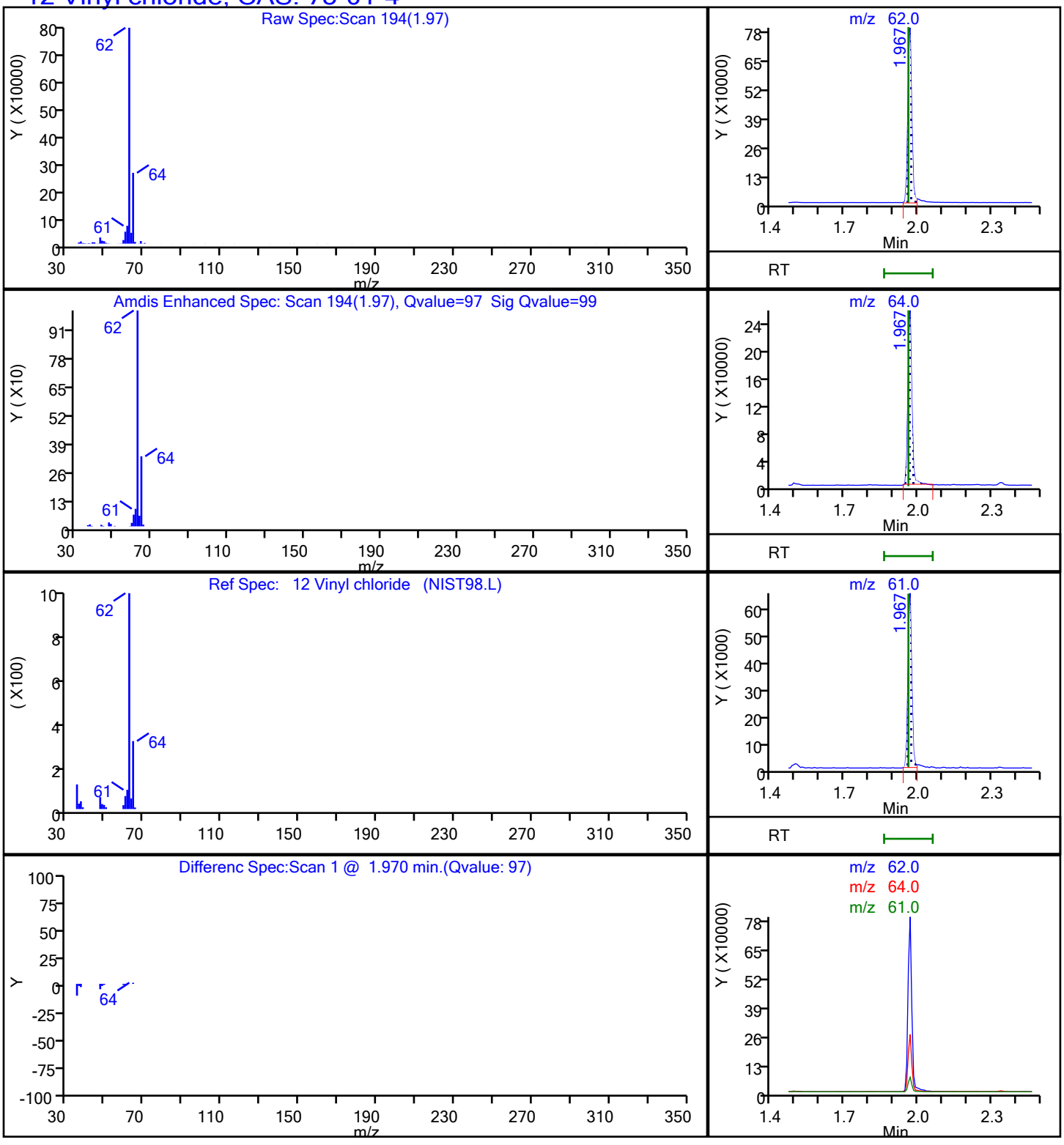
Report Date: 28-Apr-2023 02:39:44 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D

Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

12 Vinyl chloride, CAS: 75-01-4



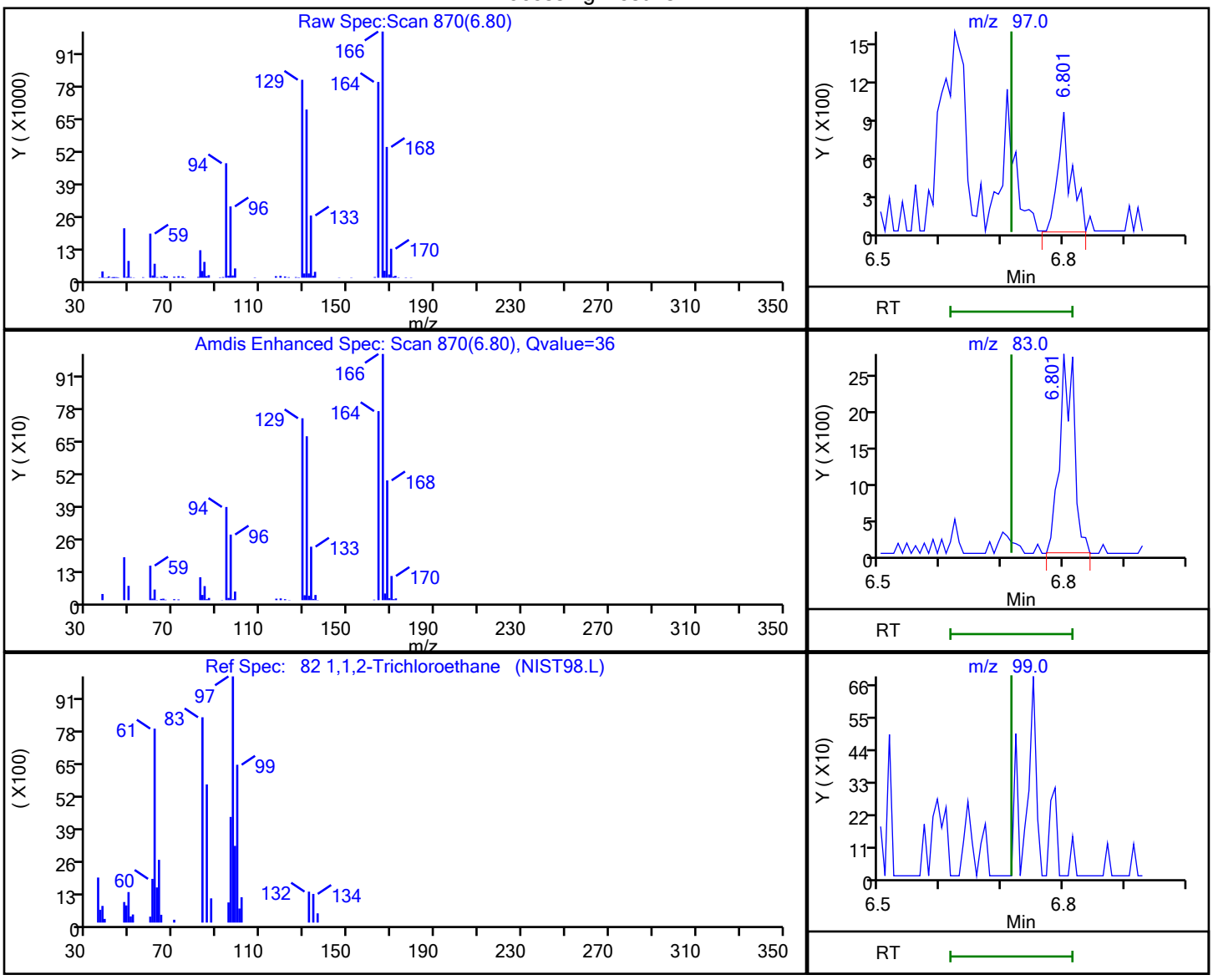
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D				
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

82 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
6.80	97.00	1374	0.170190
6.80	83.00	4501	
6.71	99.00	0	

Reviewer: V8PV, 28-Apr-2023 02:33:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

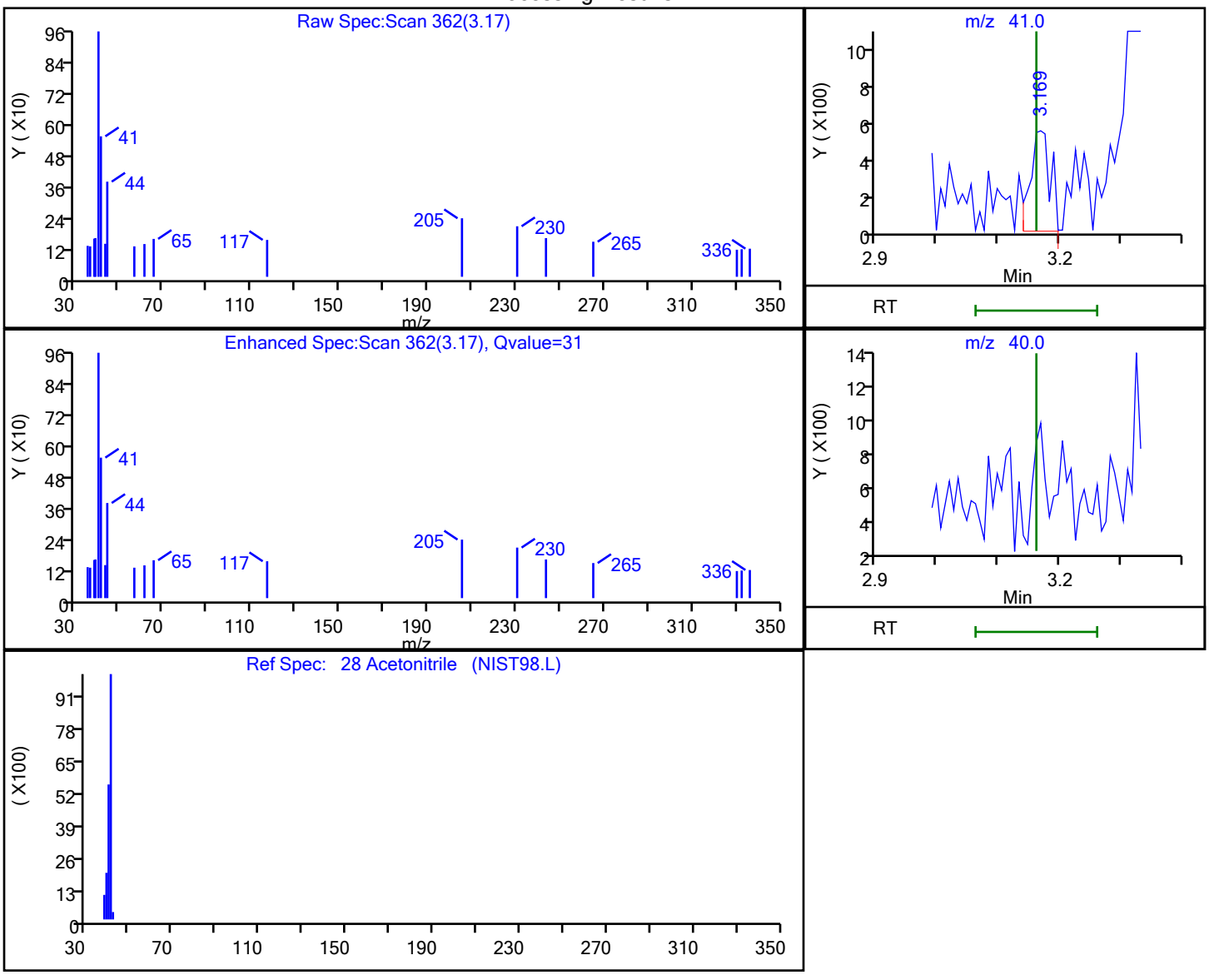
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D				
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

28 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
3.17	41.00	1223	1.084863
3.16	40.00	0	

Reviewer: V8PV, 28-Apr-2023 02:34:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

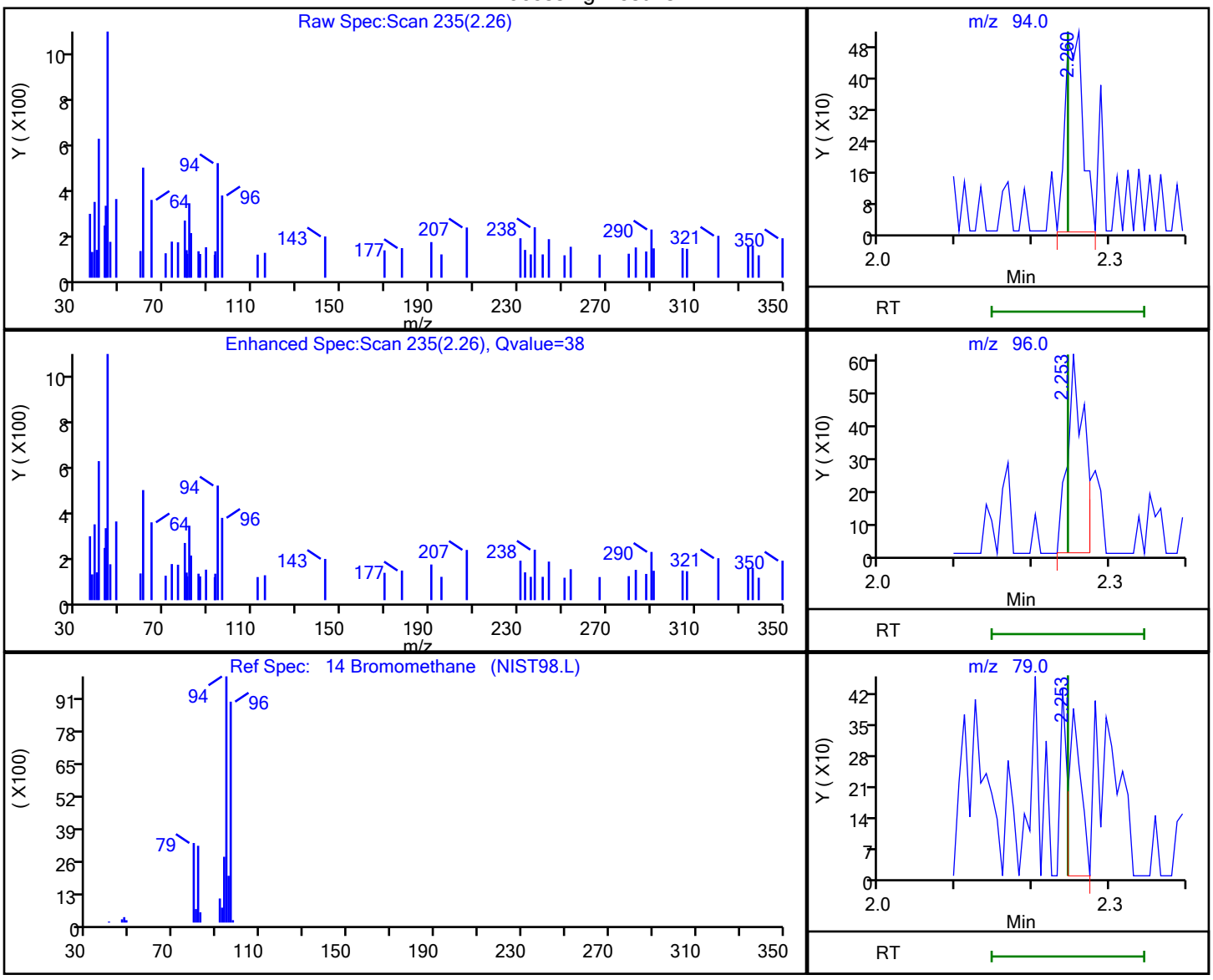
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D				
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.26	94.00	818	0.167271
2.25	96.00	933	
2.25	79.00	421	

Reviewer: V8PV, 28-Apr-2023 02:34:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

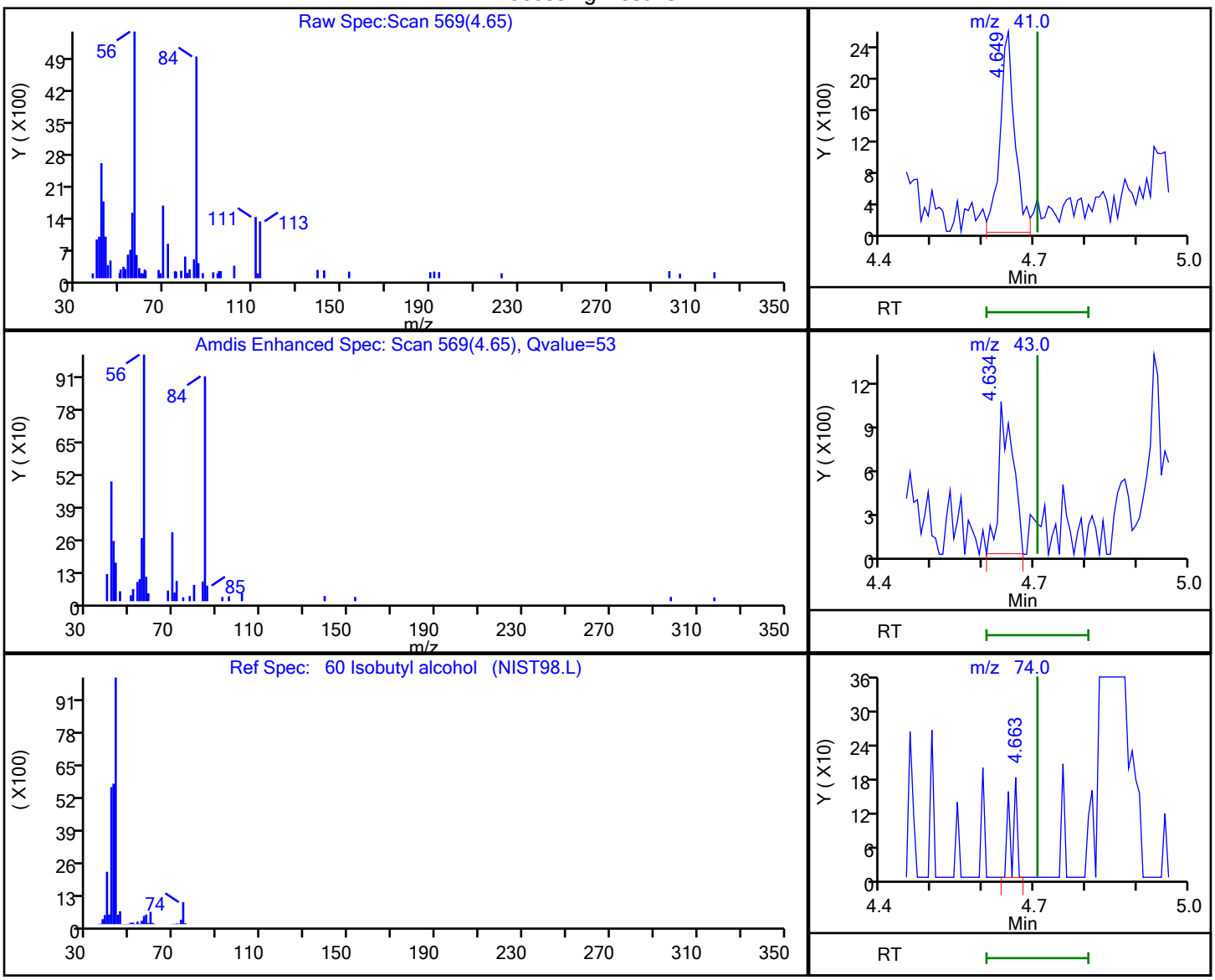
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D				
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.65	41.00	5069	31.281606
4.63	43.00	2073	
4.66	74.00	141	

Reviewer: V8PV, 28-Apr-2023 02:33:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

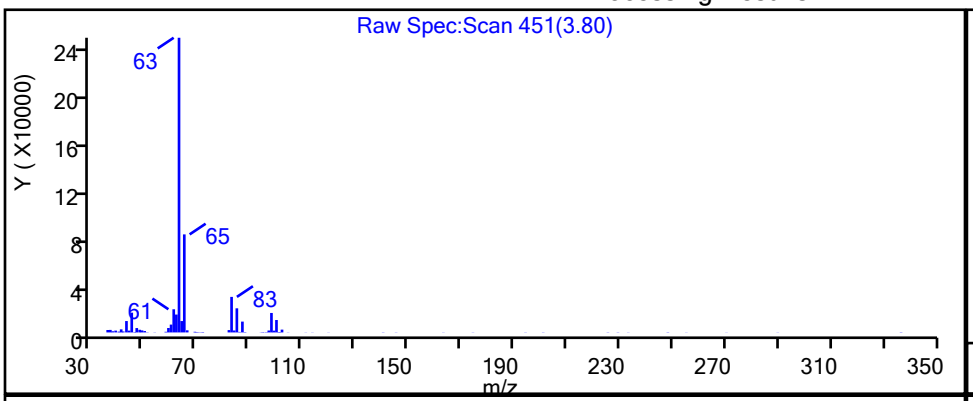
User Disabled Compound Report

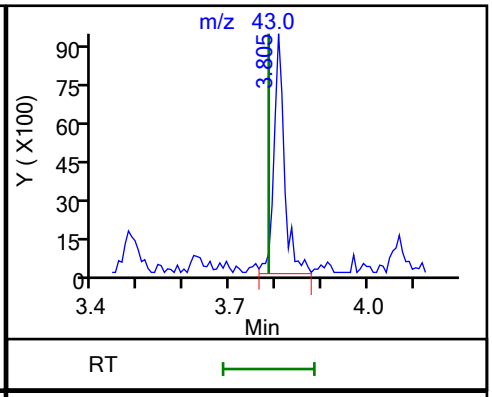
Eurofins Denver

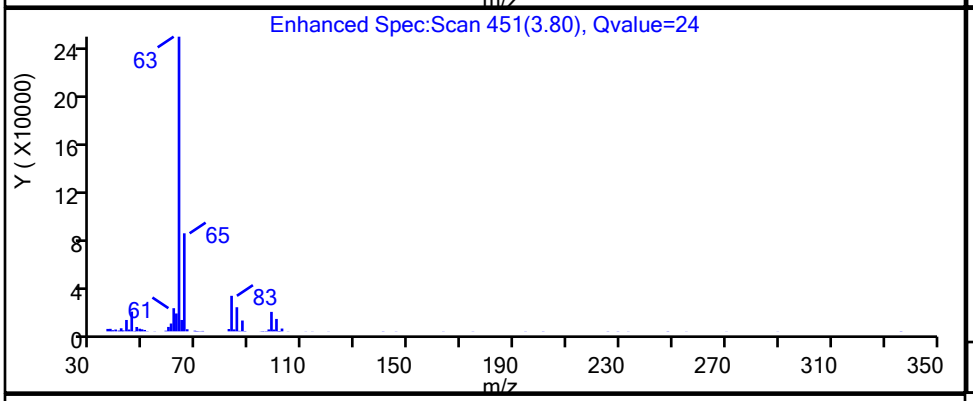
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502925.D				
Injection Date:	27-Apr-2023 16:25:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-5	Lab Sample ID:	280-175123-5		
Client ID:	MW-113S-20230414				
Operator ID:	MED	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

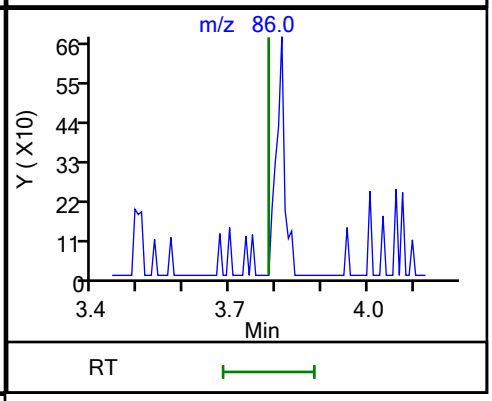
39 Vinyl acetate, CAS: 108-05-4

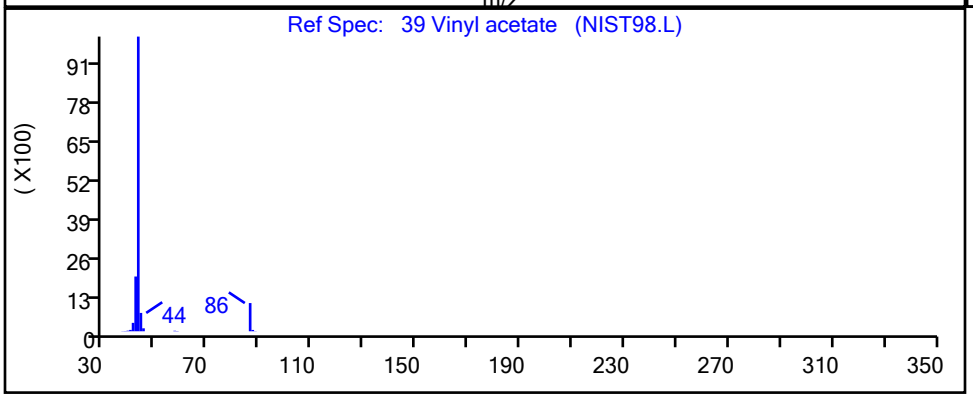
Processing Results











RT	Mass	Response	Amount
3.80	43.00	14883	1.090776
3.78	86.00	0	

Reviewer: V8PV, 28-Apr-2023 02:34:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-112M-20230415 | Lab Sample ID: 280-175123-6

Matrix: Water | Lab File ID: MS1_8611.D

Analysis Method: 8260D | Date Collected: 04/15/2023 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 20:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	0.79	J	1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-112M-20230415 | Lab Sample ID: 280-175123-6

Matrix: Water | Lab File ID: MS1_8611.D

Analysis Method: 8260D | Date Collected: 04/15/2023 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 20:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	1.2		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	0.40	J	1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	14		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	190		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-112M-20230415 | Lab Sample ID: 280-175123-6

Matrix: Water | Lab File ID: MS1_8611.D

Analysis Method: 8260D | Date Collected: 04/15/2023 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 20:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-127
460-00-4	4-Bromofluorobenzene (Surr)	105		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	106		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8611.D
Lims ID: 280-175123-B-6
Client ID: MW-112M-20230415
Sample Type: Client
Inject. Date: 27-Apr-2023 20:31:30 ALS Bottle#: 8 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-B-6
Misc. Info.: 280-0120856-014
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AF7X Date: 28-Apr-2023 06:14:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1219271	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	282467	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	442503	50.0	
* 4 Fluorobenzene (IS)	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	293978	50.7	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	384807	48.9	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1290833	53.2	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	454311	52.3	
$ 9 Trifluorotoluene (Surr)	1		3.543				ND	
$ 10 BFB	95	9.900	9.900	0.000	78	454311	NR	
11 Dichlorodifluoromethane	85		1.813				ND	
12 Chloromethane	50		2.009				ND	
13 Vinyl chloride	62		2.135				ND	
14 Ethylene oxide	43		2.260				ND	7
15 Bromomethane	94		2.498				ND	
16 Chloroethane	64		2.623				ND	
17 Dichlorofluoromethane	67		2.861				ND	
18 Trichlorofluoromethane	101		2.889				ND	
19 Ethanol	45		3.071				ND	
20 Ethyl ether	59		3.182				ND	
21 Propene oxide	58		3.238				ND	
22 Acrolein	56		3.322				ND	
23 1,1-Dichloroethene	96		3.419				ND	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.419				ND	
25 Acetone	43		3.447				ND	
26 Iodomethane	142		3.559				ND	
27 Isopropyl alcohol	45		3.587				ND	
28 Carbon disulfide	76		3.629				ND	7
29 Acetonitrile	41		3.727				ND	
30 Methyl acetate	43		3.755				ND	
31 3-Chloro-1-propene	41		3.769				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 Methylene Chloride	84		3.894				ND	
33 2-Methyl-2-propanol	59		3.964				ND	
34 Acrylonitrile	53		4.104				ND	
35 Methyl tert-butyl ether	73		4.132				ND	
36 trans-1,2-Dichloroethene	96		4.146				ND	
38 Chlorotrifluoroethene	116		4.248				ND	
37 Hexane	57		4.383				ND	
43 1,2-Dichloro-1,1,2,2-tetrafluoro	85		4.472				ND	
39 Vinyl acetate	43		4.523				ND	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	95	6859	0.7879	
41 Isopropyl ether	87		4.551				ND	
42 2-Chloro-1,3-butadiene	53		4.607				ND	
45 2-Chloro-1,1,1-Trifluoroethane	118		4.737				ND	
44 Tert-butyl ethyl ether	59		4.872				ND	
46 2-Butanone (MEK)	43		5.012				ND	
49 2,2-Dichloropropane	77		5.040				ND	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	78	1875	0.3972	
47 Ethyl acetate	43		5.040				ND	7
50 Propionitrile	54		5.082				ND	
51 sec-Butyl Alcohol	45		5.165				ND	
52 Methacrylonitrile	41		5.207				ND	
53 Chlorobromomethane	128		5.249				ND	
54 Tetrahydrofuran	42		5.249				ND	
55 Chloroform	83	5.319	5.319	0.000	94	9618	1.21	
56 1,1,1-Trichloroethane	97	5.487	5.473	0.014	35	2465	0.3736	
61 1,2-Dichloro-1,1,2-trifluoroetha	117		5.505				ND	
62 1,1,1-Trifluoro-2,2-dichloroetha	83		5.533				ND	
57 Cyclohexane	56		5.542				ND	
58 1,1-Dichloropropene	75		5.612				ND	
59 Carbon tetrachloride	117		5.612				ND	
60 Isobutyl alcohol	41		5.654				ND	
63 Benzene	78		5.780				ND	7
64 1,2-Dichloroethane	62		5.822				ND	
65 Tert-amyl methyl ether	73		5.878				ND	
66 n-Heptane	43		6.003				ND	U
67 n-Butanol	56		6.227				ND	
68 Trichloroethene	95	6.353	6.352	0.001	97	873749	192.6	
69 2-Pentanone	43		6.478				ND	
70 Methylcyclohexane	55		6.548				ND	
71 1,2-Dichloropropane	63		6.576				ND	
72 Methyl methacrylate	100		6.590				ND	
73 1,4-Dioxane	88		6.632				ND	
74 Dibromomethane	93		6.660				ND	
75 Dichlorobromomethane	83		6.799				ND	
76 2-Nitropropane	41		6.995				ND	
77 2-Chloroethyl vinyl ether	63		7.023				ND	
78 cis-1,3-Dichloropropene	75		7.176				ND	
80 2,2-Dimethylpentane	57		7.278				ND	
81 2,4-Dimethylpentane	43		7.292				ND	
79 4-Methyl-2-pentanone (MIBK)	43		7.302				ND	
82 Toluene	91		7.484				ND	
83 2,2,3-Trimethylbutane	57		7.502				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
84 trans-1,3-Dichloropropene	75		7.679				ND	
86 3,3-Dimethylpentane	43		7.682				ND	
85 Ethyl methacrylate	69		7.707				ND	
88 2-Methylhexane	43		7.810				ND	
87 1,1,2-Trichloroethane	97		7.861				ND	
92 3-Methylhexane	43		7.903				ND	
93 2,3-Dimethylpentane	56		7.949				ND	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	43085	13.9	
90 1,3-Dichloropropane	76		8.014				ND	
91 2-Hexanone	43		8.042				ND	
97 3-Ethylpentane	43		8.214				ND	
95 Chlorodibromomethane	129		8.224				ND	
94 Tetrahydrothiophene	60		8.224				ND	
96 Ethylene Dibromide	107		8.350				ND	
98 1-Chlorohexane	91		8.755				ND	
99 Chlorobenzene	112		8.796				ND	
100 1,1,1,2-Tetrachloroethane	131		8.880				ND	
101 Ethylbenzene	106		8.880				ND	
102 m-Xylene & p-Xylene	106		9.006				ND	
103 o-Xylene	106		9.369				ND	
105 Dimethyl disulfide	94		9.388				ND	
104 Styrene	104		9.397				ND	
106 Bromoform	173		9.579				ND	
107 Isopropylbenzene	105		9.718				ND	
108 cis-1,4-Dichloro-2-butene	53		9.774				ND	
109 Cyclohexanone	55		9.830				ND	U
110 1,1,2,2-Tetrachloroethane	83		10.026				ND	
111 Bromobenzene	156		10.053				ND	
112 trans-1,4-Dichloro-2-butene	53		10.053				ND	
113 1,2,3-Trichloropropane	110		10.081				ND	
114 N-Propylbenzene	120		10.137				ND	
115 2-Chlorotoluene	126		10.235				ND	
116 1,3,5-Trimethylbenzene	105		10.305				ND	
117 4-Chlorotoluene	126		10.347				ND	
118 tert-Butylbenzene	119		10.626				ND	
119 1,2,4-Trimethylbenzene	105		10.682				ND	
120 sec-Butylbenzene	134		10.850				ND	
121 1,3-Dichlorobenzene	146		10.975				ND	
122 4-Isopropyltoluene	119		10.989				ND	
123 1,4-Dichlorobenzene	146		11.073				ND	7
124 1,2,3-Trimethylbenzene	105		11.101				ND	
126 Pentachloroethane	167		11.283				ND	
125 n-Butylbenzene	91		11.408				ND	
127 1,2-Dichlorobenzene	146		11.436				ND	
128 1,2-Dibromo-3-Chloropropane	157		12.232				ND	
129 1,3,5-Trichlorobenzene	180		12.414				ND	
130 1,2,4-Trichlorobenzene	180		13.056				ND	
131 Hexachlorobutadiene	225		13.196				ND	
132 Naphthalene	128		13.336				ND	
133 n-Nonyl Aldehyde	57		13.340				ND	
134 1,2,3-Trichlorobenzene	180		13.559				ND	
141 4-Chlorobenzotrifluoride	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
138 1,4-Dibromobenzene	1		0.000				ND	
148 1-Bromo-2-chloroethane	1		0.000				ND	
146 t-Amyl alcohol	1		0.000				ND	
139 1,3-Dibromobenzene	1		0.000				ND	
137 1,2-dichloro-4-(trifluoromethyl)	1		0.000				ND	
143 Benzene, 1-bromo-3-fluoro-	1		0.000				ND	
140 4-Bromofluorobenzene	95		0.000				ND	
136 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
142 Benzene, 1-bromo-4-ethyl-	1		0.000				ND	
135 Pentachloroethane TIC	1		0.000				ND	
145 Ethyl acrylate	55		0.000				ND	
147 n-Nonane TIC	1		0.000				ND	
S 149 1,2-Dichloroethene, Total (URS)	96				0		0.3972	
S 151 Trihalomethanes, Total	1				0		1.21	
S 150 1,2-Dichloroethene, Total	1				0		0.3972	
S 156 1,3-Dichloropropene, Total	1		0.000				ND	7
S 155 Xylenes, Total	106		0.000				ND	7
S 154 TAH	1				0		0	
S 153 Xylenes, Total (URS)	1		0.000				ND	7
S 152 Total BTEX	1		0.000				ND	7
T 157 Dichloroacetonitrile TIC	74		1.000				ND	
T 158 2,3-dichloro-1-propene TIC	75		1.000				ND	
T 159 Propene oxide TIC	58		5.334				ND	
T 160 Cyclohexane TIC	1		0.000				ND	
T 165 Dicyclopentadiene TIC	1		0.000				ND	
T 163 2-Butoxyethanol TIC	1		0.000				ND	
T 164 1,3-Butadiene TIC	1		0.000				ND	
T 162 4-Ethyltoluene TIC	1		0.000				ND	
T 166 Propene TIC	1		0.000				ND	
T 161 Methyl cyclohexane TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00059 Amount Added: 5.00 Units: uL Run Reagent

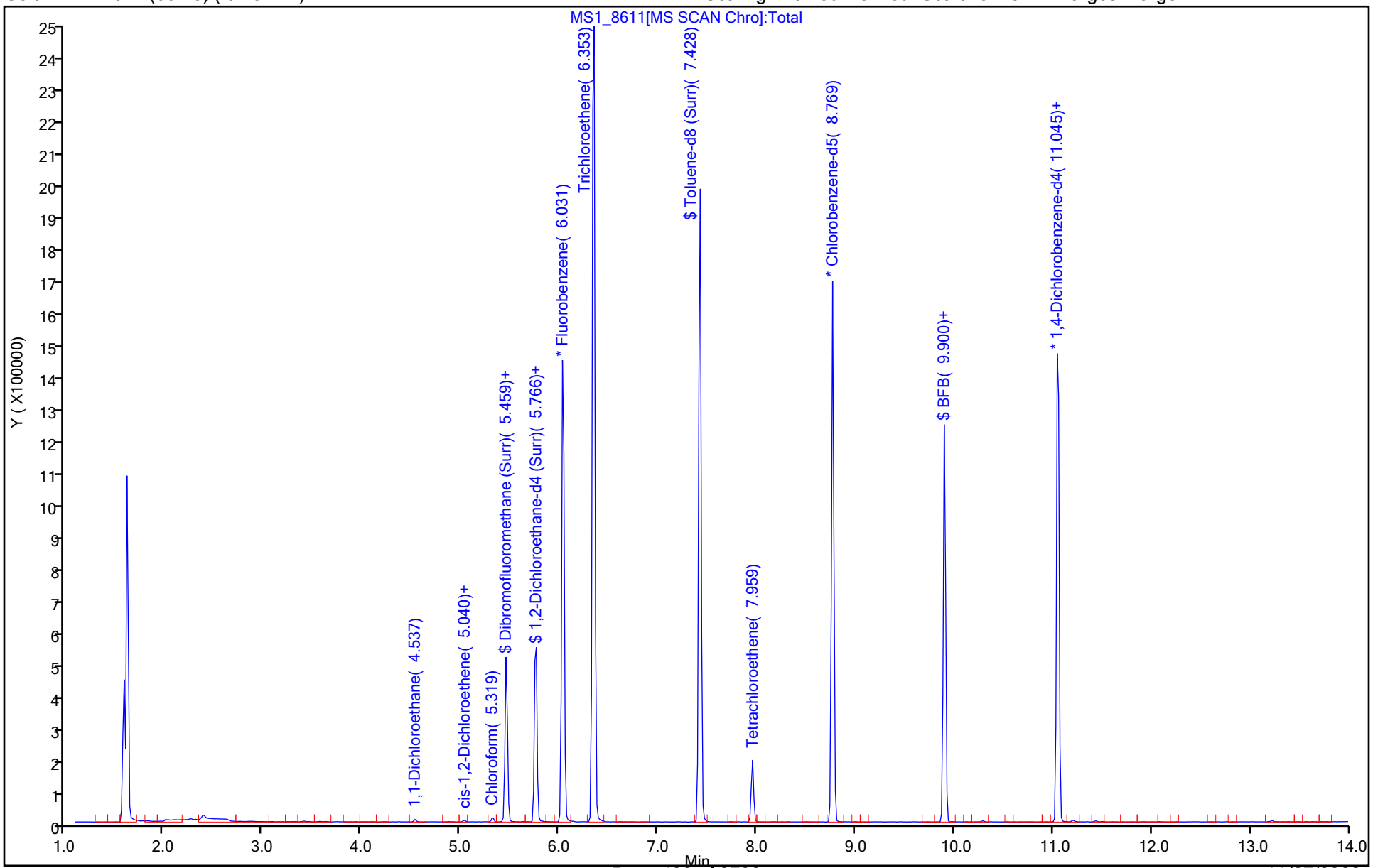
Report Date: 28-Apr-2023 11:01:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8611.D

Injection Date:	27-Apr-2023 20:31:30	Instrument ID:	VMS_MS1	Operator ID:	CCF
Lims ID:	280-175123-B-6	Lab Sample ID:	280-175123-6	Worklist Smp#:	14
Client ID:	MW-112M-20230415				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8611.D				
Lims ID:	280-175123-B-6				
Client ID:	MW-112M-20230415				
Sample Type:	Client				
Inject. Date:	27-Apr-2023 20:31:30	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175123-B-6				
Misc. Info.:	280-0120856-014				
Operator ID:	CCF	Instrument ID:	VMS_MS1		
Method:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 09:53:21	Calib Date:	18-Apr-2023 18:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1608				
First Level Reviewer: AF7X		Date:	28-Apr-2023 06:14:48		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	50.7	101.33
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.9	97.86
$ 7 Toluene-d8 (Surr)	50.0	53.2	106.49
$ 8 4-Bromofluorobenzene (Surr)	50.0	52.3	104.53

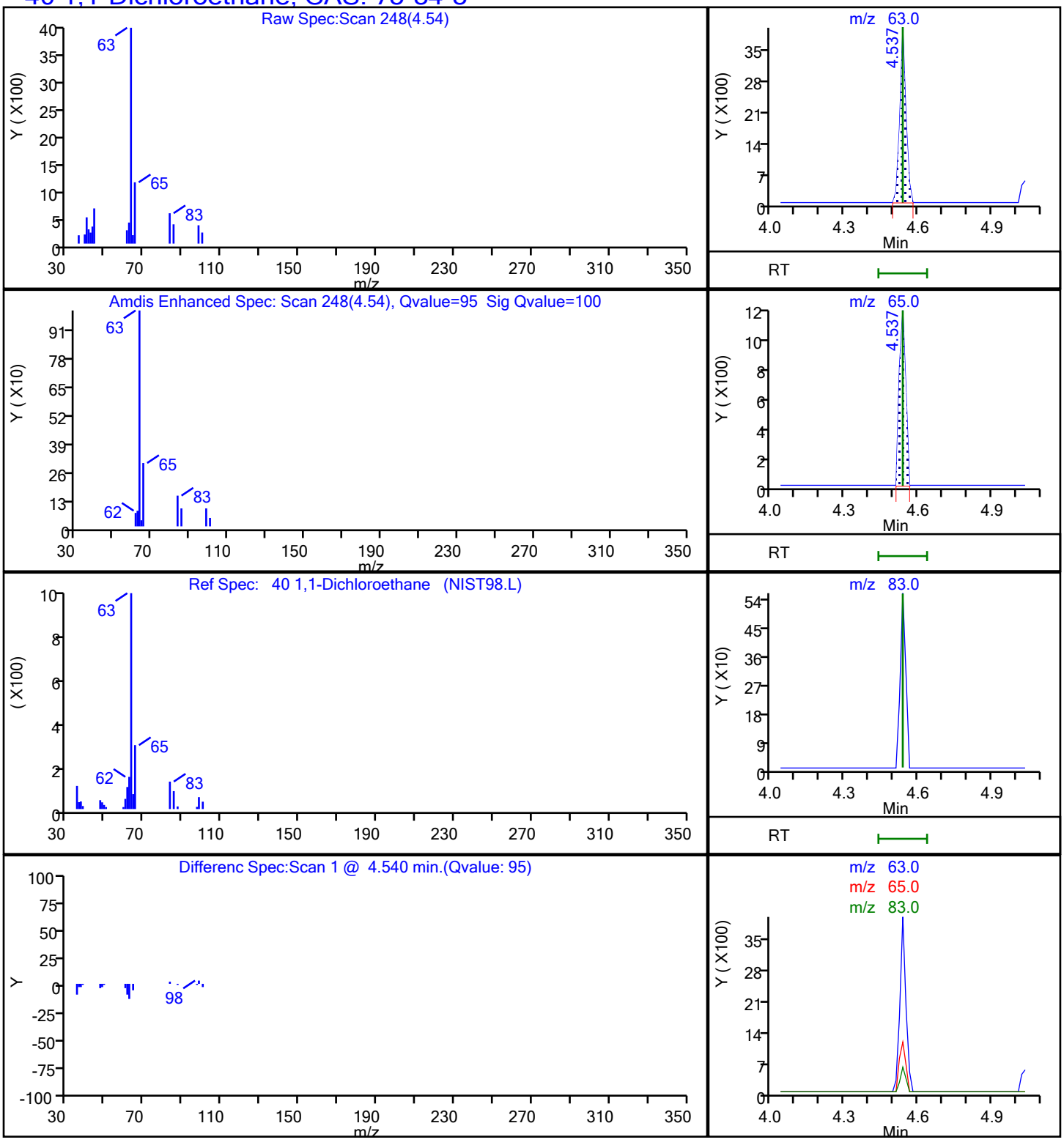
Report Date: 28-Apr-2023 11:01:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8611.D

Injection Date:	27-Apr-2023 20:31:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-B-6	Lab Sample ID:	280-175123-6
Client ID:	MW-112M-20230415		
Operator ID:	CCF	ALS Bottle#:	8 Worklist Smp#: 14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

40 1,1-Dichloroethane, CAS: 75-34-3

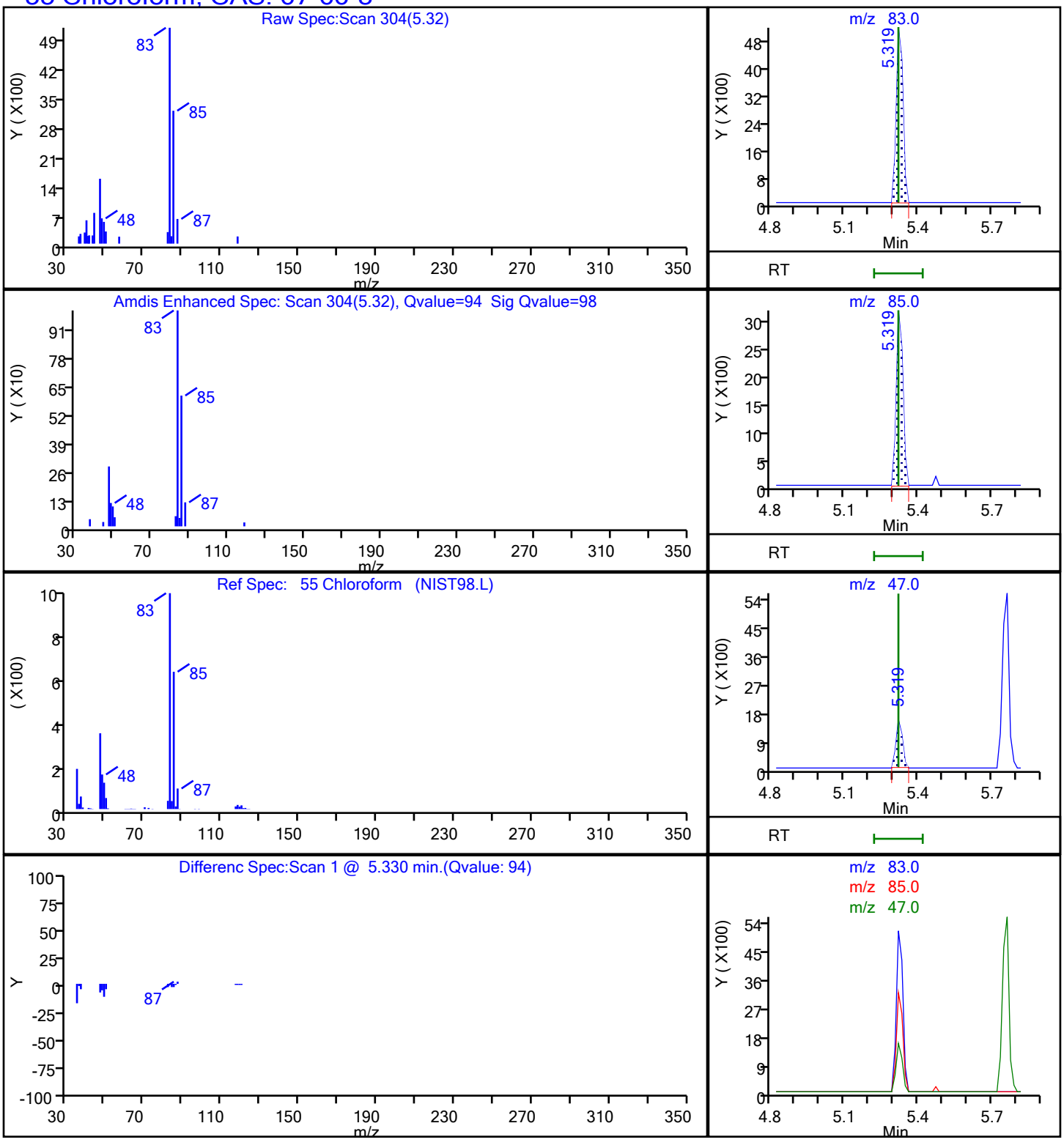


11/27/2023
7:19 PM

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8611.D		
Injection Date:	27-Apr-2023 20:31:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-B-6	Lab Sample ID:	280-175123-6
Client ID:	MW-112M-20230415		
Operator ID:	CCF	ALS Bottle#:	8 Worklist Smp#: 14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

55 Chloroform, CAS: 67-66-3



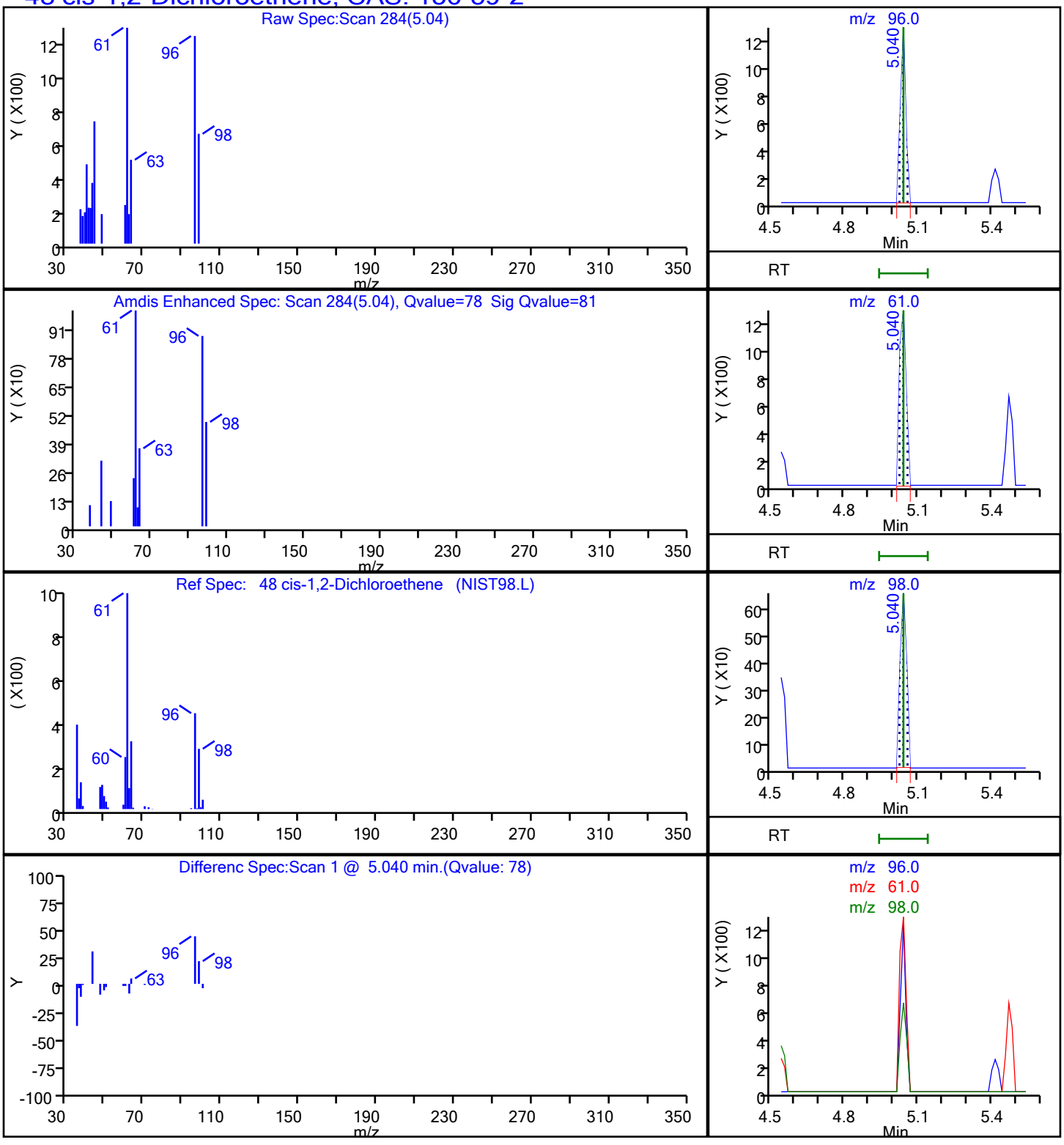
Report Date: 28-Apr-2023 11:01:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8611.D

Injection Date:	27-Apr-2023 20:31:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175123-B-6	Lab Sample ID:	280-175123-6		
Client ID:	MW-112M-20230415				
Operator ID:	CCF	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

48 cis-1,2-Dichloroethene, CAS: 156-59-2

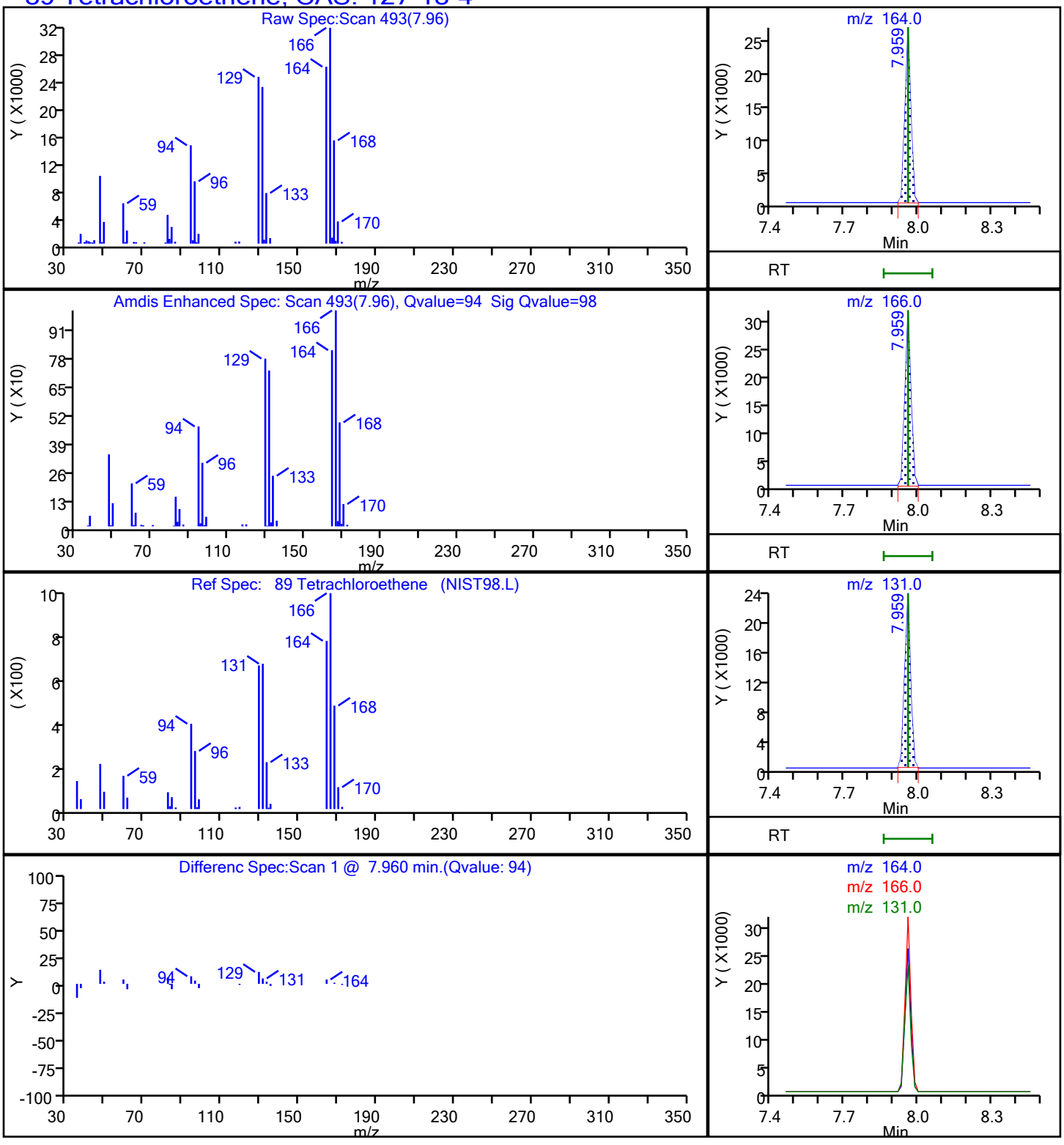


11/27/2023
7:19 PM

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8611.D		
Injection Date:	27-Apr-2023 20:31:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-B-6	Lab Sample ID:	280-175123-6
Client ID:	MW-112M-20230415		
Operator ID:	CCF	ALS Bottle#:	8 Worklist Smp#: 14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

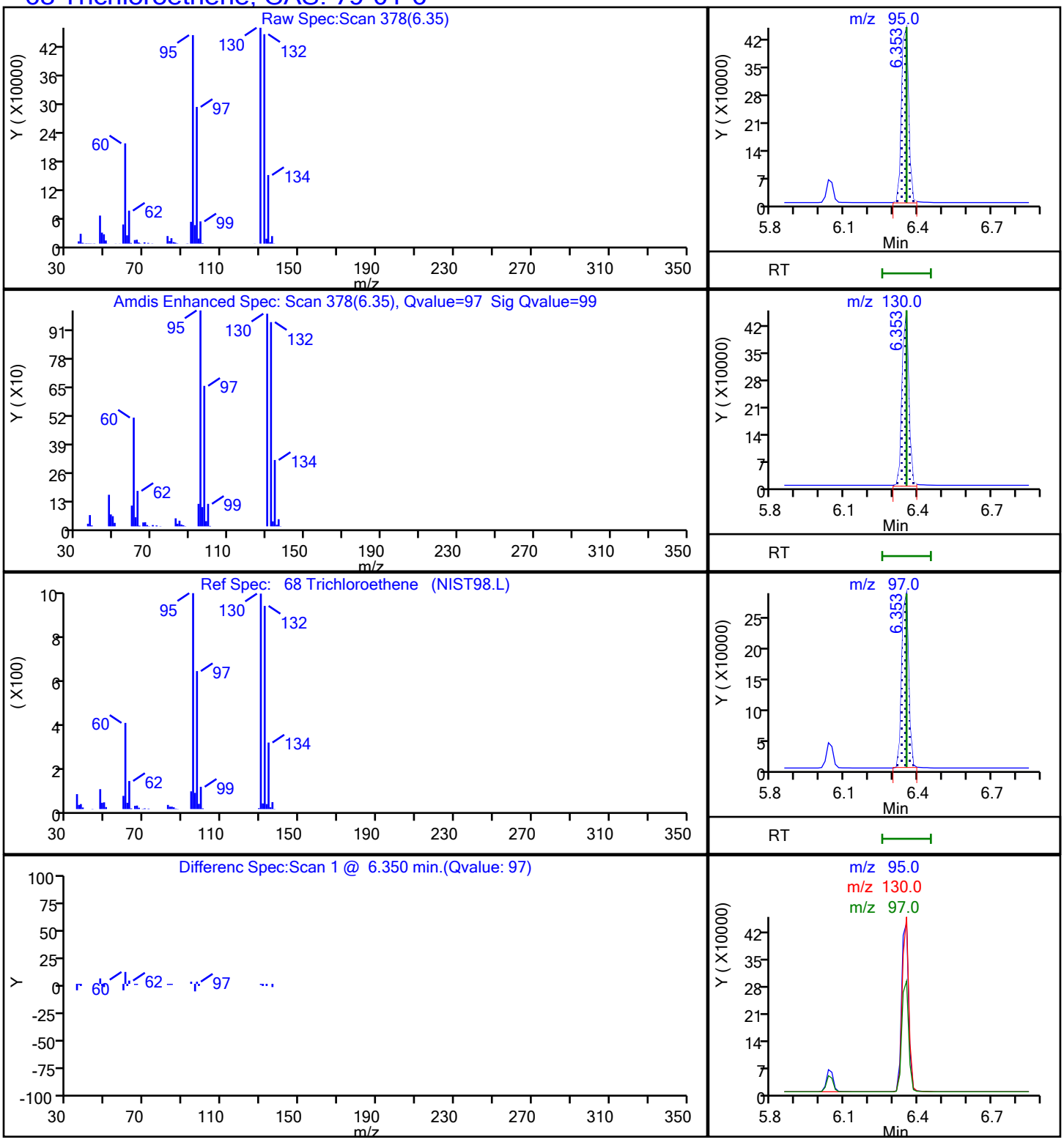
89 Tetrachloroethene, CAS: 127-18-4



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8611.D		
Injection Date:	27-Apr-2023 20:31:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-B-6	Lab Sample ID:	280-175123-6
Client ID:	MW-112M-20230415		
Operator ID:	CCF	ALS Bottle#:	8 Worklist Smp#: 14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

68 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-112D-20230415 | Lab Sample ID: 280-175123-7

Matrix: Water | Lab File ID: MS1_8612.D

Analysis Method: 8260D | Date Collected: 04/15/2023 14:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 20:52

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	0.58	J	1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	0.48	J	1.0	0.22
75-35-4	1,1-Dichloroethene	1.1		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-112D-20230415 | Lab Sample ID: 280-175123-7

Matrix: Water | Lab File ID: MS1_8612.D

Analysis Method: 8260D | Date Collected: 04/15/2023 14:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 20:52

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	2.8	J	3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	12		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	190		1.0	0.30
75-69-4	Trichlorofluoromethane	2.0		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-112D-20230415 | Lab Sample ID: 280-175123-7

Matrix: Water | Lab File ID: MS1_8612.D

Analysis Method: 8260D | Date Collected: 04/15/2023 14:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 20:52

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-127
460-00-4	4-Bromofluorobenzene (Surr)	104		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	106		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D
Lims ID: 280-175123-C-7
Client ID: MW-112D-20230415
Sample Type: Client
Inject. Date: 27-Apr-2023 20:52:30 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-C-7
Misc. Info.: 280-0120856-015
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AF7X Date: 28-Apr-2023 06:15:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1259263	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	295522	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	467527	50.0	
* 4 Fluorobenzene (IS)	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	302077	50.4	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	402910	49.6	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1341573	52.9	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	80	479623	52.2	
$ 9 Trifluorotoluene (Surr)	1		3.543				ND	
$ 10 BFB	95	9.900	9.900	0.000	77	479623	NR	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	98	8379	2.85	
12 Chloromethane	50		2.009				ND	
13 Vinyl chloride	62		2.135				ND	
14 Ethylene oxide	43		2.260				ND	7
15 Bromomethane	94		2.498				ND	
16 Chloroethane	64		2.623				ND	
17 Dichlorofluoromethane	67		2.861				ND	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	96	5294	2.01	
19 Ethanol	45		3.071				ND	
20 Ethyl ether	59		3.182				ND	
21 Propene oxide	58		3.238				ND	
22 Acrolein	56		3.322				ND	
23 1,1-Dichloroethene	96	3.420	3.419	0.001	95	4321	1.11	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.419				ND	
25 Acetone	43	3.461	3.447	0.014	98	5150	0.4606	
26 Iodomethane	142		3.559				ND	
27 Isopropyl alcohol	45		3.587				ND	
28 Carbon disulfide	76		3.629				ND	7
29 Acetonitrile	41		3.727				ND	
30 Methyl acetate	43		3.755				ND	
31 3-Chloro-1-propene	41		3.769				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 Methylene Chloride	84		3.894				ND	
33 2-Methyl-2-propanol	59		3.964				ND	
34 Acrylonitrile	53		4.104				ND	
35 Methyl tert-butyl ether	73		4.132				ND	
36 trans-1,2-Dichloroethene	96		4.146				ND	
38 Chlorotrifluoroethene	116		4.248				ND	
37 Hexane	57		4.383				ND	
43 1,2-Dichloro-1,1,2,2-tetrafluoro	85		4.472				ND	
39 Vinyl acetate	43		4.523				ND	7
40 1,1-Dichloroethane	63	4.537	4.537	0.000	94	4279	0.4759	
41 Isopropyl ether	87		4.551				ND	
42 2-Chloro-1,3-butadiene	53		4.607				ND	
45 2-Chloro-1,1,1-Trifluoroethane	118		4.737				ND	
44 Tert-butyl ethyl ether	59		4.872				ND	
46 2-Butanone (MEK)	43		5.012				ND	
49 2,2-Dichloropropane	77		5.040				ND	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	74	1447	0.2968	
47 Ethyl acetate	43		5.040				ND	7
50 Propionitrile	54		5.082				ND	
51 sec-Butyl Alcohol	45		5.165				ND	
52 Methacrylonitrile	41		5.207				ND	
53 Chlorobromomethane	128		5.249				ND	
54 Tetrahydrofuran	42		5.249				ND	
55 Chloroform	83	5.333	5.319	0.014	95	2730	0.3333	
56 1,1,1-Trichloroethane	97	5.487	5.473	0.014	95	3927	0.5763	
61 1,2-Dichloro-1,1,2-trifluoroetha	117		5.505				ND	
62 1,1,1-Trifluoro-2,2-dichloroetha	83		5.533				ND	
57 Cyclohexane	56		5.542				ND	
58 1,1-Dichloropropene	75		5.612				ND	
59 Carbon tetrachloride	117		5.612				ND	
60 Isobutyl alcohol	41		5.654				ND	
63 Benzene	78		5.780				ND	7
64 1,2-Dichloroethane	62		5.822				ND	
65 Tert-amyl methyl ether	73		5.878				ND	
66 n-Heptane	43		6.003				ND	U
67 n-Butanol	56		6.227				ND	
68 Trichloroethene	95	6.352	6.352	0.000	98	915705	192.9	
69 2-Pentanone	43		6.478				ND	
70 Methylcyclohexane	55		6.548				ND	
71 1,2-Dichloropropane	63		6.576				ND	
72 Methyl methacrylate	100		6.590				ND	
73 1,4-Dioxane	88		6.632				ND	
74 Dibromomethane	93		6.660				ND	
75 Dichlorobromomethane	83		6.799				ND	
76 2-Nitropropane	41		6.995				ND	
77 2-Chloroethyl vinyl ether	63		7.023				ND	
78 cis-1,3-Dichloropropene	75		7.176				ND	
80 2,2-Dimethylpentane	57		7.278				ND	
81 2,4-Dimethylpentane	43		7.292				ND	
79 4-Methyl-2-pentanone (MIBK)	43		7.302				ND	
82 Toluene	91		7.484				ND	
83 2,2,3-Trimethylbutane	57		7.502				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
84 trans-1,3-Dichloropropene	75		7.679				ND	
86 3,3-Dimethylpentane	43		7.682				ND	
85 Ethyl methacrylate	69		7.707				ND	
88 2-Methylhexane	43		7.810				ND	
87 1,1,2-Trichloroethane	97		7.861				ND	
92 3-Methylhexane	43		7.903				ND	
93 2,3-Dimethylpentane	56		7.949				ND	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	39849	12.2	
90 1,3-Dichloropropane	76		8.014				ND	
91 2-Hexanone	43		8.042				ND	
97 3-Ethylpentane	43		8.214				ND	
95 Chlorodibromomethane	129		8.224				ND	
94 Tetrahydrothiophene	60		8.224				ND	
96 Ethylene Dibromide	107		8.350				ND	
98 1-Chlorohexane	91		8.755				ND	7
99 Chlorobenzene	112		8.796				ND	
100 1,1,1,2-Tetrachloroethane	131		8.880				ND	
101 Ethylbenzene	106		8.880				ND	
102 m-Xylene & p-Xylene	106		9.006				ND	
103 o-Xylene	106		9.369				ND	
105 Dimethyl disulfide	94		9.388				ND	
104 Styrene	104		9.397				ND	
106 Bromoform	173		9.579				ND	
107 Isopropylbenzene	105		9.718				ND	
108 cis-1,4-Dichloro-2-butene	53		9.774				ND	
109 Cyclohexanone	55		9.830				ND	U
110 1,1,2,2-Tetrachloroethane	83		10.026				ND	
111 Bromobenzene	156		10.053				ND	
112 trans-1,4-Dichloro-2-butene	53		10.053				ND	
113 1,2,3-Trichloropropane	110		10.081				ND	
114 N-Propylbenzene	120		10.137				ND	
115 2-Chlorotoluene	126		10.235				ND	
116 1,3,5-Trimethylbenzene	105		10.305				ND	
117 4-Chlorotoluene	126		10.347				ND	
118 tert-Butylbenzene	119		10.626				ND	
119 1,2,4-Trimethylbenzene	105		10.682				ND	
120 sec-Butylbenzene	134		10.850				ND	
121 1,3-Dichlorobenzene	146		10.975				ND	
122 4-Isopropyltoluene	119		10.989				ND	
123 1,4-Dichlorobenzene	146		11.073				ND	
124 1,2,3-Trimethylbenzene	105		11.101				ND	
126 Pentachloroethane	167		11.283				ND	
125 n-Butylbenzene	91		11.408				ND	
127 1,2-Dichlorobenzene	146		11.436				ND	
128 1,2-Dibromo-3-Chloropropane	157		12.232				ND	
129 1,3,5-Trichlorobenzene	180		12.414				ND	
130 1,2,4-Trichlorobenzene	180		13.056				ND	
131 Hexachlorobutadiene	225		13.196				ND	
132 Naphthalene	128		13.336				ND	
133 n-Nonyl Aldehyde	57		13.340				ND	
134 1,2,3-Trichlorobenzene	180		13.559				ND	
141 4-Chlorobenzotrifluoride	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
138 1,4-Dibromobenzene	1		0.000				ND	
148 1-Bromo-2-chloroethane	1		0.000				ND	
146 t-Amyl alcohol	1		0.000				ND	
139 1,3-Dibromobenzene	1		0.000				ND	
137 1,2-dichloro-4-(trifluoromethyl)	1		0.000				ND	
143 Benzene, 1-bromo-3-fluoro-	1		0.000				ND	
140 4-Bromofluorobenzene	95		0.000				ND	
136 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
142 Benzene, 1-bromo-4-ethyl-	1		0.000				ND	
135 Pentachloroethane TIC	1		0.000				ND	
145 Ethyl acrylate	55		0.000				ND	
147 n-Nonane TIC	1		0.000				ND	
S 149 1,2-Dichloroethene, Total (URS)	96				0		0.2968	
S 151 Trihalomethanes, Total	1				0		0.3333	
S 150 1,2-Dichloroethene, Total	1				0		0.2968	
S 156 1,3-Dichloropropene, Total	1		0.000				ND	7
S 155 Xylenes, Total	106		0.000				ND	7
S 154 TAH	1				0		0	
S 153 Xylenes, Total (URS)	1		0.000				ND	7
S 152 Total BTEX	1		0.000				ND	7
T 157 Dichloroacetonitrile TIC	74		1.000				ND	
T 158 2,3-dichloro-1-propene TIC	75		1.000				ND	
T 159 Propene oxide TIC	58		5.334				ND	
T 160 Cyclohexane TIC	1		0.000				ND	
T 165 Dicyclopentadiene TIC	1		0.000				ND	
T 163 2-Butoxyethanol TIC	1		0.000				ND	
T 164 1,3-Butadiene TIC	1		0.000				ND	
T 162 4-Ethyltoluene TIC	1		0.000				ND	
T 166 Propene TIC	1		0.000				ND	
T 161 Methyl cyclohexane TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00059 Amount Added: 5.00 Units: uL Run Reagent

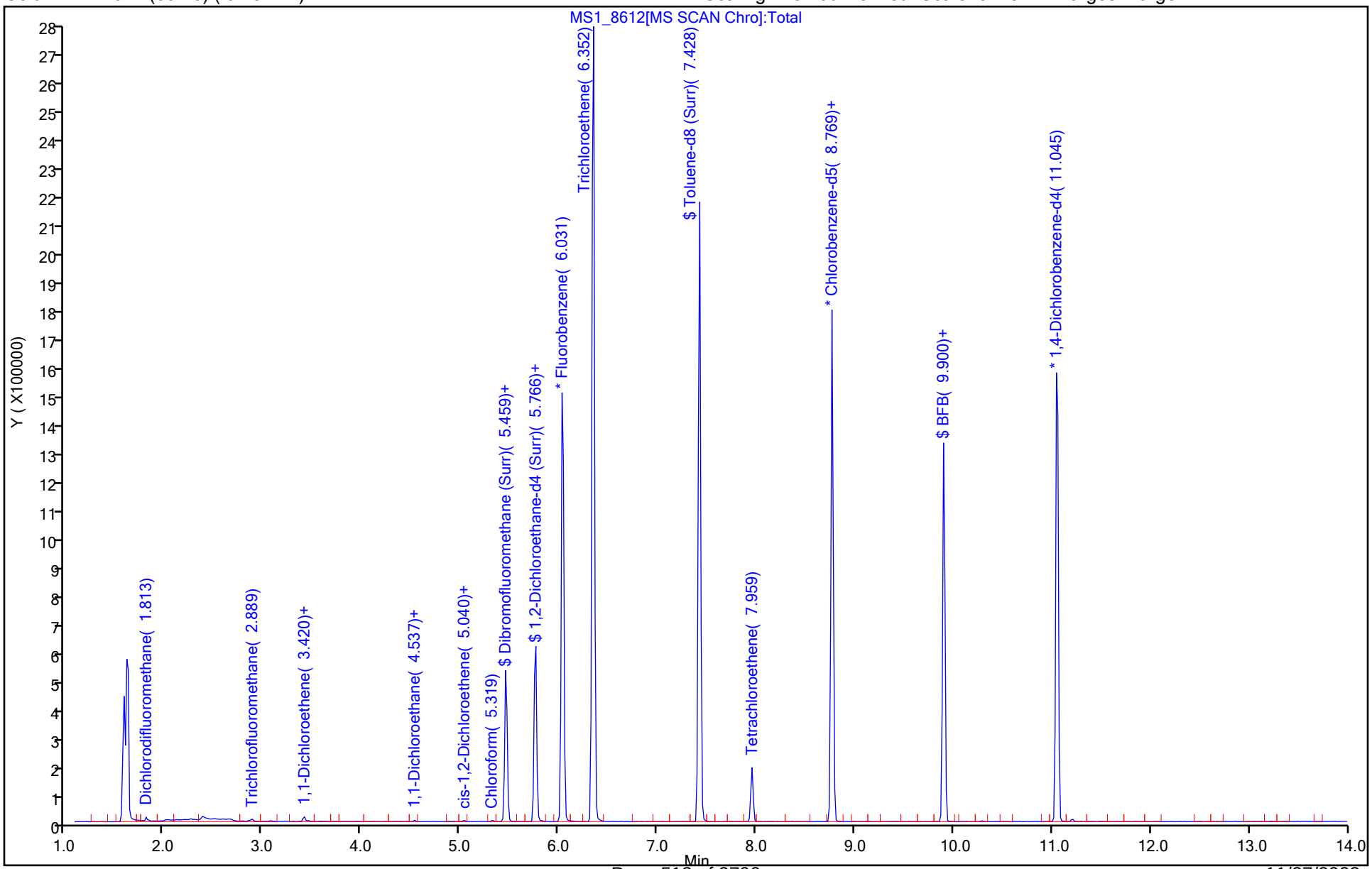
Report Date: 28-Apr-2023 11:01:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D

Injection Date:	27-Apr-2023 20:52:30	Instrument ID:	VMS_MS1	Operator ID:	CCF
Lims ID:	280-175123-C-7	Lab Sample ID:	280-175123-7	Worklist Smp#:	15
Client ID:	MW-112D-20230415				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D
Lims ID: 280-175123-C-7
Client ID: MW-112D-20230415
Sample Type: Client
Inject. Date: 27-Apr-2023 20:52:30 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-C-7
Misc. Info.: 280-0120856-015
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AF7X Date: 28-Apr-2023 06:15:20

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	50.4	100.81
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	49.6	99.21
$ 7 Toluene-d8 (Surr)	50.0	52.9	105.78
$ 8 4-Bromofluorobenzene (Surr)	50.0	52.2	104.44

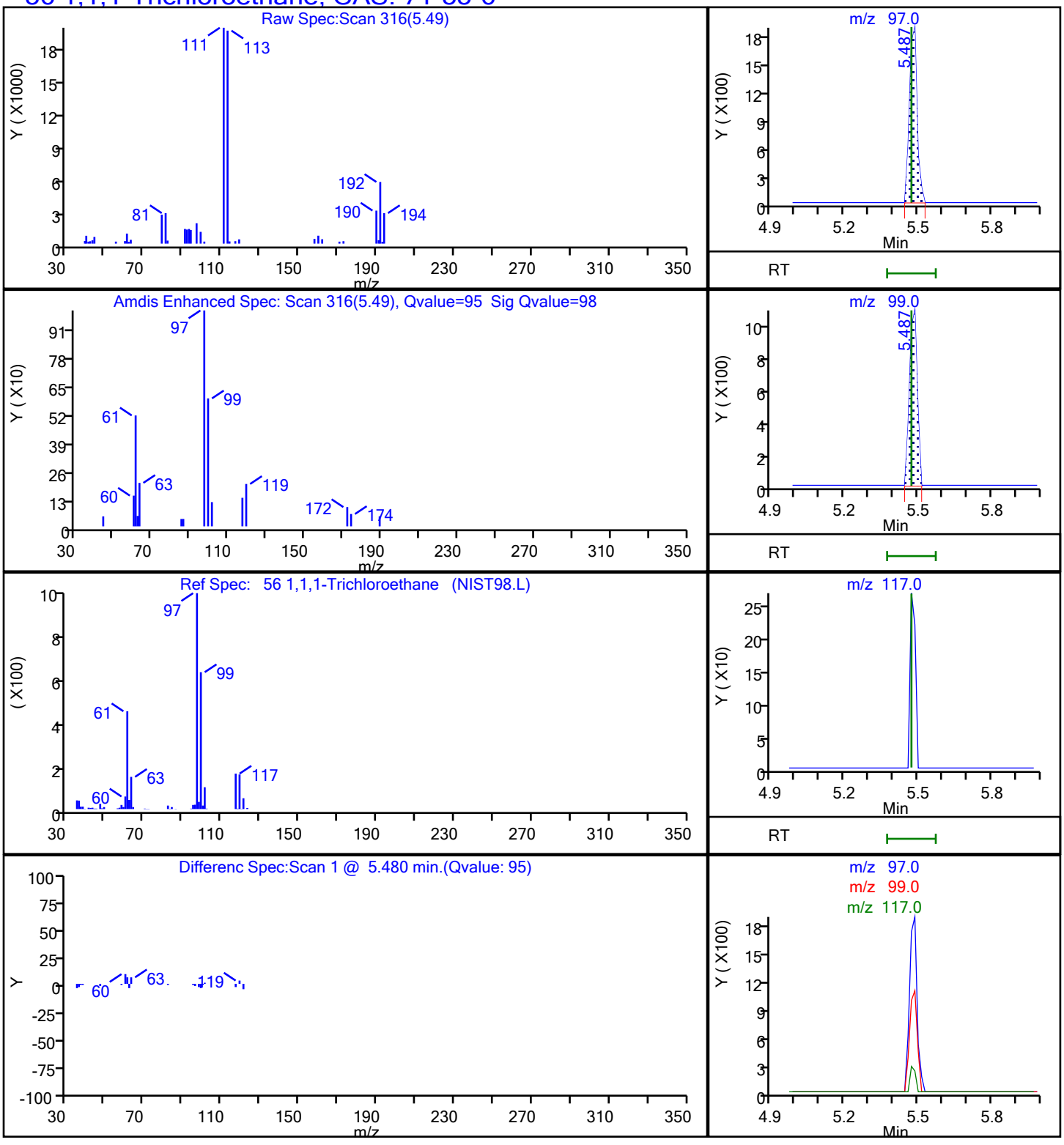
Report Date: 28-Apr-2023 11:01:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D

Injection Date:	27-Apr-2023 20:52:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175123-C-7	Lab Sample ID:	280-175123-7		
Client ID:	MW-112D-20230415				
Operator ID:	CCF	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

56 1,1,1-Trichloroethane, CAS: 71-55-6



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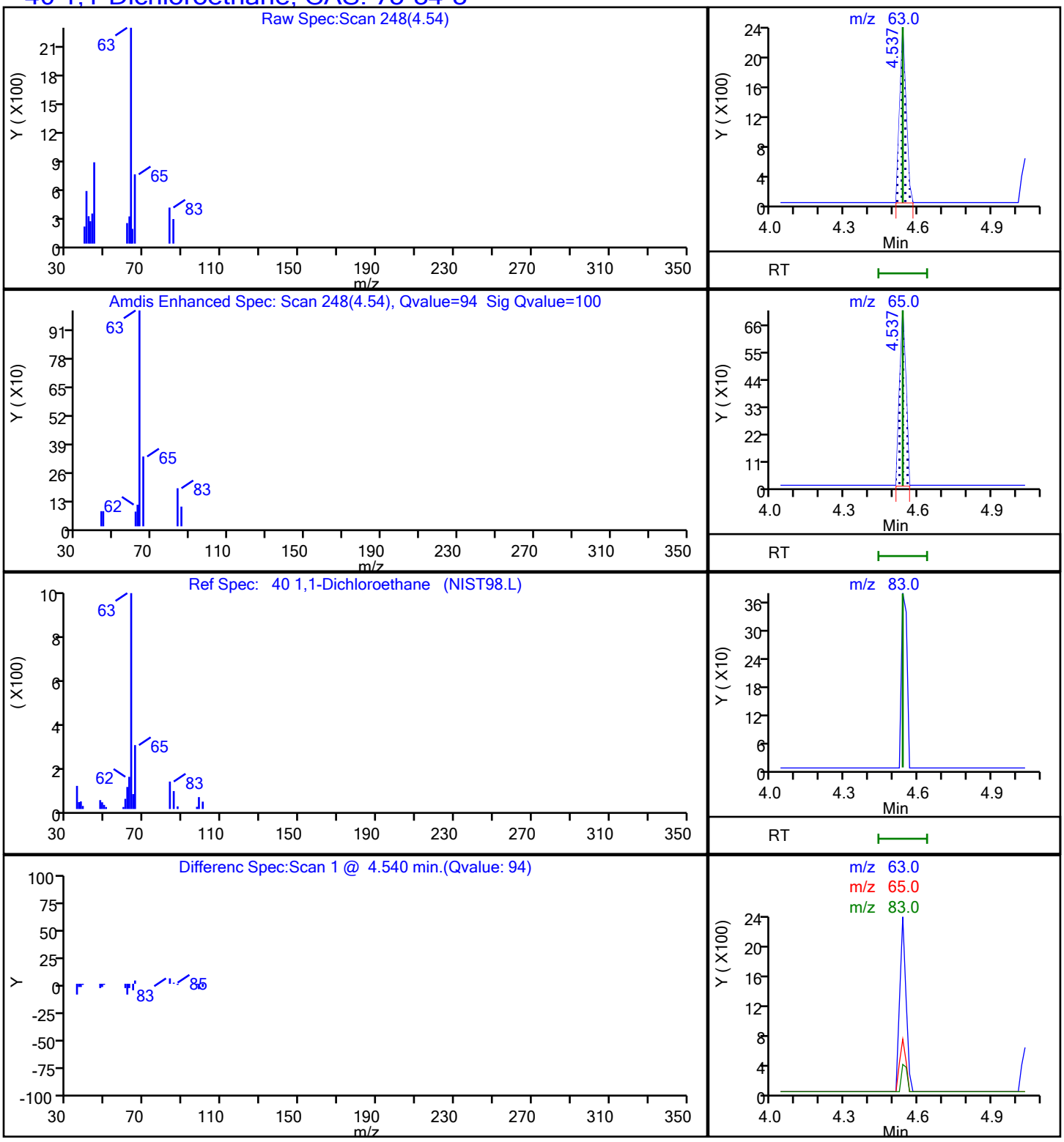
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D
Injection Date: 27-Apr-2023 20:52:30 Instrument ID: VMS_MS1
Lims ID: 280-175123-C-7 Lab Sample ID: 280-175123-7
Client ID: MW-112D-20230415
Operator ID: CCF ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

40 1,1-Dichloroethane, CAS: 75-34-3



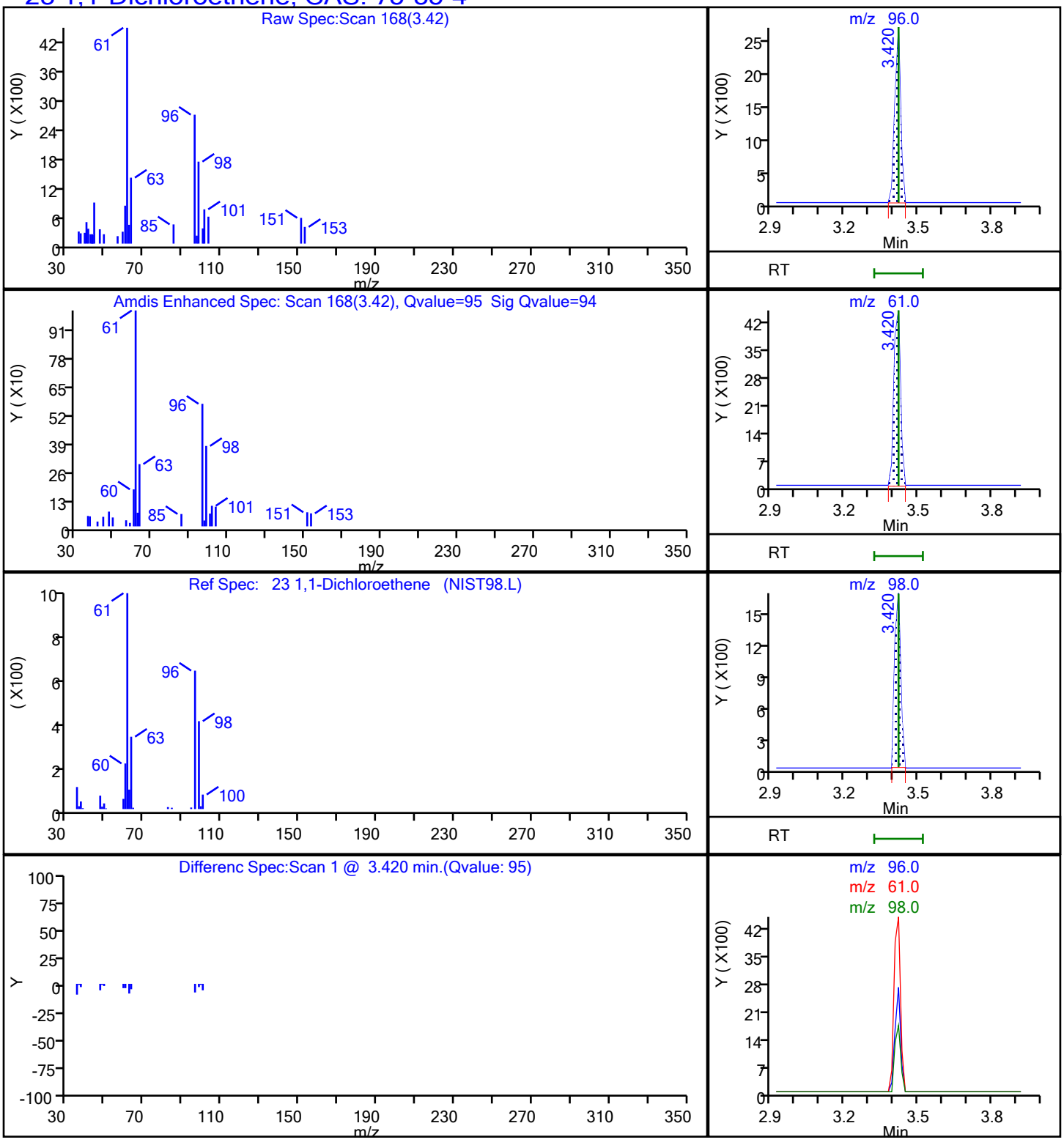
Report Date: 28-Apr-2023 11:01:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D

Injection Date:	27-Apr-2023 20:52:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-C-7	Lab Sample ID:	280-175123-7
Client ID:	MW-112D-20230415		
Operator ID:	CCF	ALS Bottle#:	9 Worklist Smp#: 15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

23 1,1-Dichloroethene, CAS: 75-35-4



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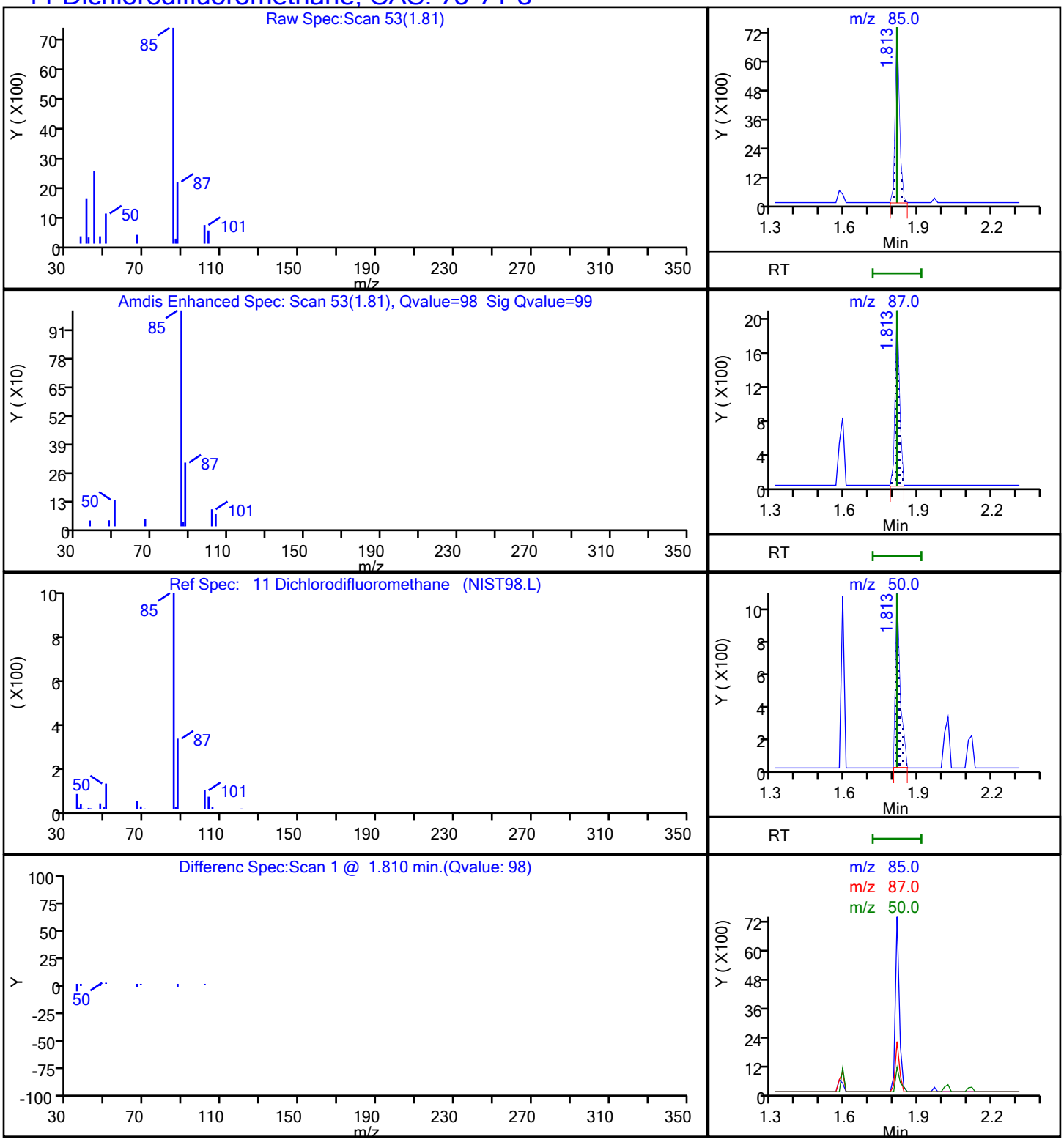
Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D		
Injection Date:	27-Apr-2023 20:52:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-C-7	Lab Sample ID:	280-175123-7
Client ID:	MW-112D-20230415		
Operator ID:	CCF	ALS Bottle#:	9 Worklist Smp#: 15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

11 Dichlorodifluoromethane, CAS: 75-71-8

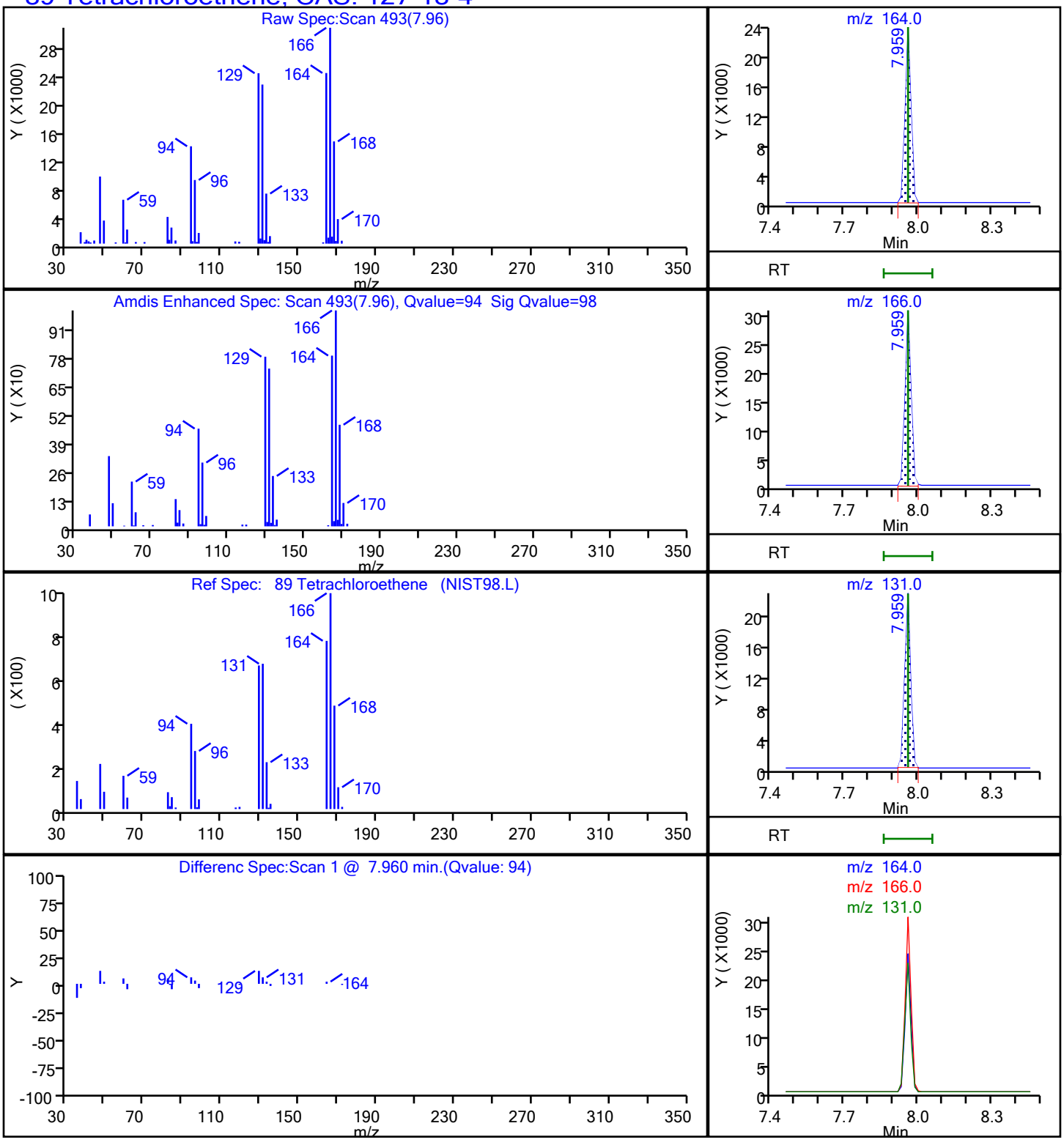


Report Date: 28-Apr-2023 11:01:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D		
Injection Date:	27-Apr-2023 20:52:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-C-7	Lab Sample ID:	280-175123-7
Client ID:	MW-112D-20230415		
Operator ID:	CCF	ALS Bottle#:	9 Worklist Smp#: 15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

89 Tetrachloroethene, CAS: 127-18-4



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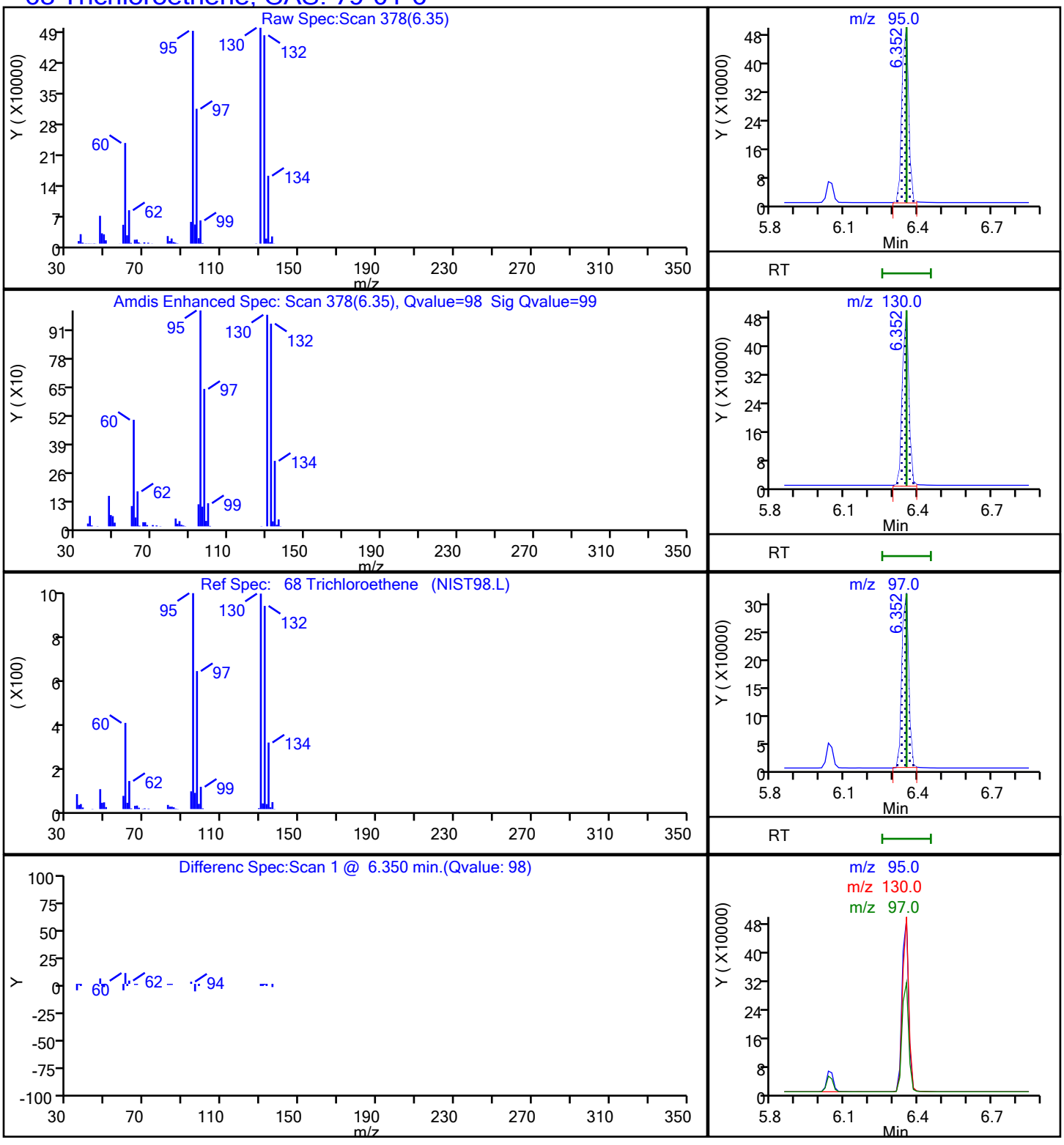
Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D		
Injection Date:	27-Apr-2023 20:52:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-C-7	Lab Sample ID:	280-175123-7
Client ID:	MW-112D-20230415		
Operator ID:	CCF	ALS Bottle#:	9 Worklist Smp#: 15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

68 Trichloroethene, CAS: 79-01-6



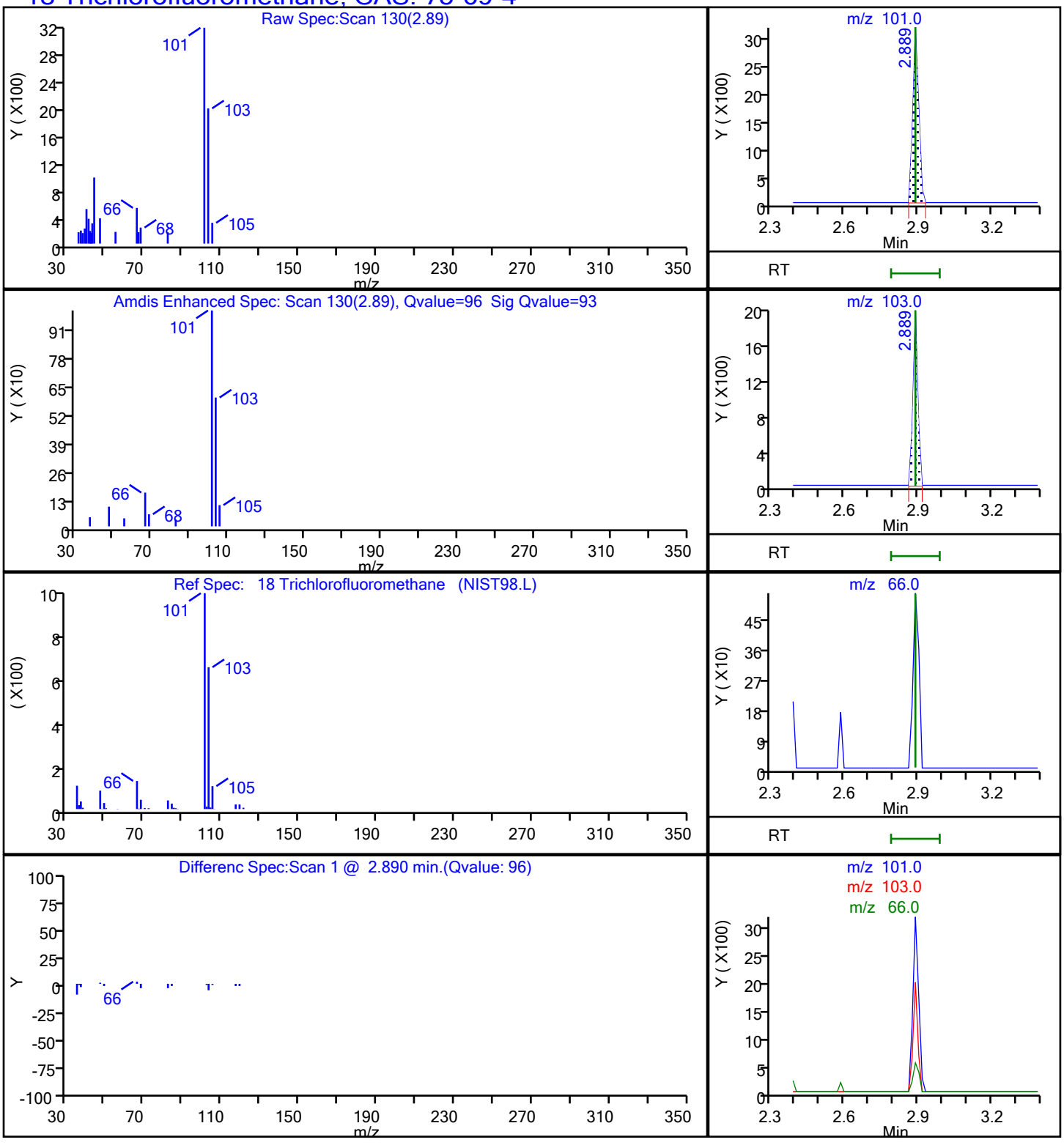
Report Date: 28-Apr-2023 11:01:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8612.D

Injection Date:	27-Apr-2023 20:52:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175123-C-7	Lab Sample ID:	280-175123-7		
Client ID:	MW-112D-20230415				
Operator ID:	CCF	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

18 Trichlorofluoromethane, CAS: 75-69-4



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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: EB-04-20230414 | Lab Sample ID: 280-175123-8

Matrix: Water | Lab File ID: X502918.D

Analysis Method: 8260D | Date Collected: 04/14/2023 10:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 14:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: EB-04-20230414 | Lab Sample ID: 280-175123-8

Matrix: Water | Lab File ID: X502918.D

Analysis Method: 8260D | Date Collected: 04/14/2023 10:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 14:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: EB-04-20230414 | Lab Sample ID: 280-175123-8

Matrix: Water | Lab File ID: X502918.D

Analysis Method: 8260D | Date Collected: 04/14/2023 10:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 14:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	103		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502918.D
Lims ID: 280-175123-B-8
Client ID: EB-04-20230414
Sample Type: Client
Inject. Date: 27-Apr-2023 14:01:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-B-8
Misc. Info.: 280-0120830-013
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 02:39:26 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: V8PV Date: 28-Apr-2023 02:38:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942				ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1999128	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	476906	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	759147	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	94	490271	51.0	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	474850	47.0	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	93	2090524	51.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	90	676539	49.9	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	90	676539	NR	
10 Dichlorodifluoromethane	85		1.695				ND	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	7
14 Bromomethane	94		2.246				ND	7
15 Chloroethane	64		2.339				ND	
16 Dichlorofluoromethane	67		2.503				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.647				ND	
19 Ethyl ether	59		2.747				ND	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.932				ND	
23 1,1-Dichloroethene	96		2.940				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.040				ND	U
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.118				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.183				ND	
30 3-Chloro-1-propene	41		3.204				ND	
31 Methylene Chloride	84		3.297				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333				ND	
33 Acrylonitrile	53		3.454				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.783				ND	
40 1,1-Dichloroethane	63		3.805				ND	
41 Isopropyl ether	87		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.862				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96		4.212				ND	
48 2,2-Dichloropropane	77		4.227				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	U
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.398				ND	
54 Chloroform	83		4.441				ND	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.648				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	
63 1,2-Dichloroethane	62		4.877				ND	7
64 Tert-amyl methyl ether	73		4.920				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95		5.335				ND	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.542				ND	
71 Methyl methacrylate	100		5.542				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.614				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.900				ND	
76 2-Chloroethyl vinyl ether	63		5.936				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164		6.808				ND	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
89 1-Chlorohexane	91		7.559				ND	U
90 Chlorobenzene	112		7.602				ND	
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.166				ND	
96 Bromoform	173		8.345				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.588				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.817				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.589				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.732				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146		10.168				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	7
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.256				ND	
165 t-Amyl alcohol	1		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
166 Ethyl acrylate	55		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1		0.000				ND	7
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND	7
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

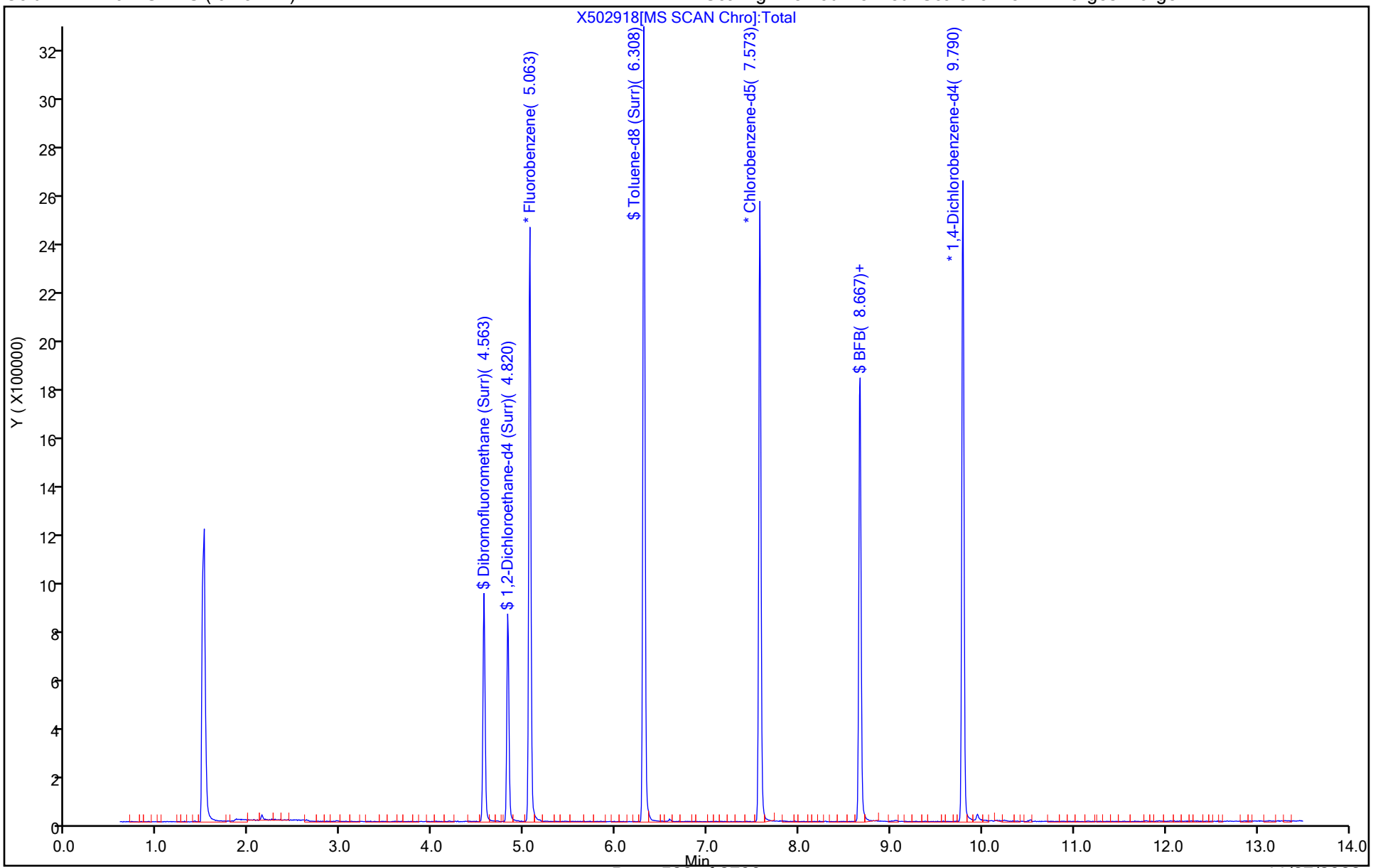
Report Date: 28-Apr-2023 02:39:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502918.D

Injection Date:	27-Apr-2023 14:01:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175123-B-8	Lab Sample ID:	280-175123-8	Worklist Smp#:	13
Client ID:	EB-04-20230414				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502918.D				
Lims ID:	280-175123-B-8				
Client ID:	EB-04-20230414				
Sample Type:	Client				
Inject. Date:	27-Apr-2023 14:01:30	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175123-B-8				
Misc. Info.:	280-0120830-013				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 02:39:26	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1608				

First Level Reviewer: V8PV Date: 28-Apr-2023 02:38:46

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.0	101.97
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.0	94.03
$ 6 Toluene-d8 (Surr)	50.0	51.5	102.92
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.9	99.74

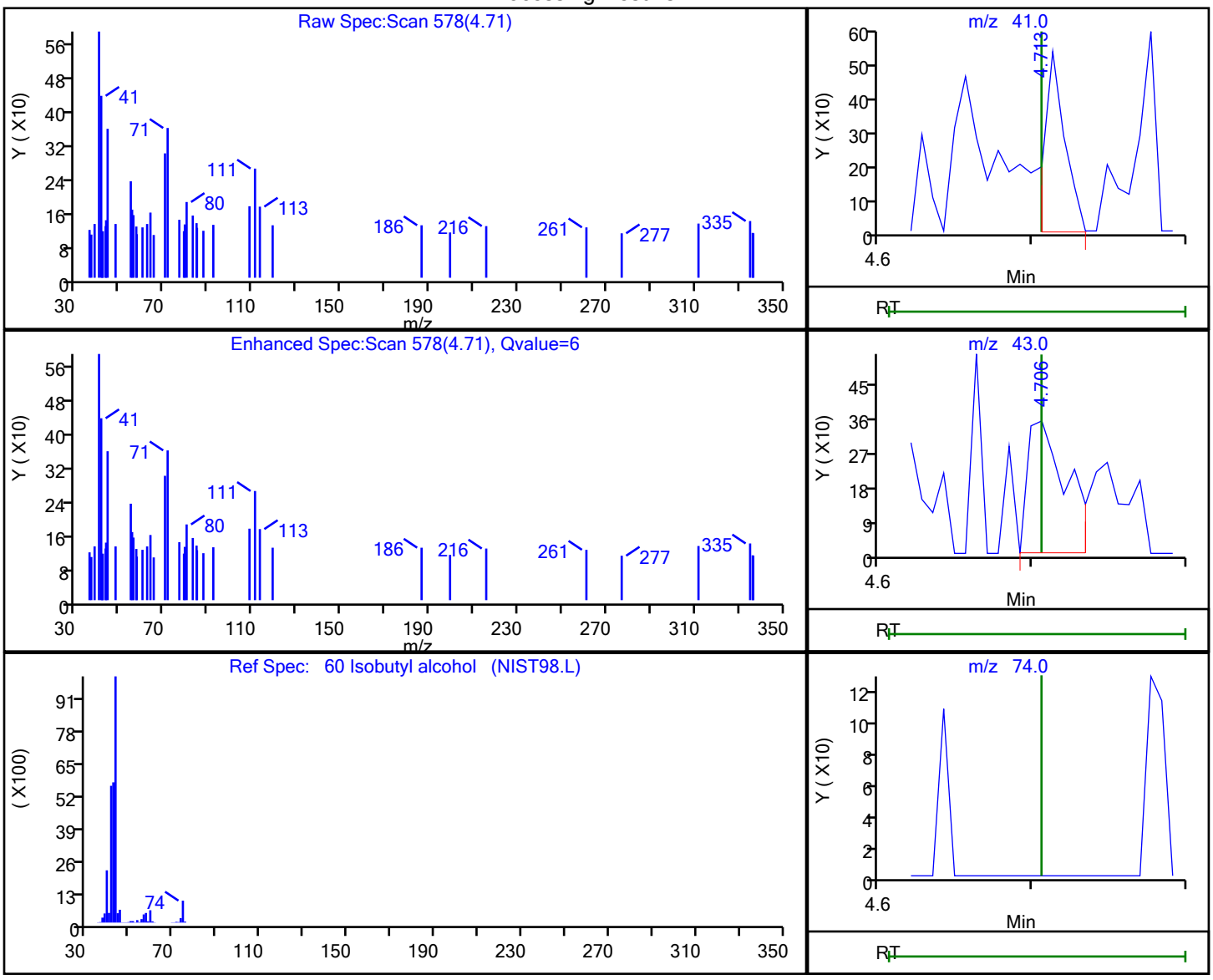
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502918.D				
Injection Date:	27-Apr-2023 14:01:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-8	Lab Sample ID:	280-175123-8		
Client ID:	EB-04-20230414				
Operator ID:	MED	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.71	41.00	493	13.284109
4.71	43.00	620	
4.71	74.00	0	

Reviewer: V8PV, 28-Apr-2023 02:38:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: EB-03-20230413 | Lab Sample ID: 280-175123-9

Matrix: Water | Lab File ID: X502856.D

Analysis Method: 8260D | Date Collected: 04/13/2023 14:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: EB-03-20230413 | Lab Sample ID: 280-175123-9

Matrix: Water | Lab File ID: X502856.D

Analysis Method: 8260D | Date Collected: 04/13/2023 14:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: EB-03-20230413 | Lab Sample ID: 280-175123-9

Matrix: Water | Lab File ID: X502856.D

Analysis Method: 8260D | Date Collected: 04/13/2023 14:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	100		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502856.D
Lims ID: 280-175123-B-9
Client ID: EB-03-20230413
Sample Type: Client
Inject. Date: 26-Apr-2023 13:40:30 ALS Bottle#: 12 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-B-9
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 01:58:24 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1623

First Level Reviewer: AK2J Date: 27-Apr-2023 01:48:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96	4.856	4.942	-0.086	1	63	0	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2001658	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	482302	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	753707	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	483106	50.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	475106	47.0	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	93	2087163	50.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	90	684609	50.8	
$ 8 Trifluorotoluene (Surr)	1		0.000				ND	
$ 9 BFB	95	8.667	8.660	0.007	90	684609	NR	
10 Dichlorodifluoromethane	85		1.696				ND	
11 Chloromethane	50		1.867				ND	
12 Vinyl chloride	62		1.960				ND	
13 Ethylene oxide	43		2.225				ND	
14 Bromomethane	94		2.239				ND	7
15 Chloroethane	64		2.332				ND	U
16 Dichlorofluoromethane	67		2.504				ND	
17 Trichlorofluoromethane	101		2.539				ND	
18 Ethanol	45		2.654				ND	U
19 Ethyl ether	59		2.747				ND	
21 Acrolein	56		2.854				ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933				ND	
23 1,1-Dichloroethene	96		2.933				ND	
24 Acetone	43		2.954				ND	7
25 Isopropyl alcohol	45		3.033				ND	
26 Iodomethane	142		3.054				ND	
27 Carbon disulfide	76		3.119				ND	7
28 Acetonitrile	41		3.161				ND	
29 Methyl acetate	43		3.176				ND	
30 3-Chloro-1-propene	41		3.197				ND	
31 Methylene Chloride	84		3.297				ND	
32 2-Methyl-2-propanol	59		3.333				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
33 Acrylonitrile	53		3.455				ND	
34 Methyl tert-butyl ether	73		3.476				ND	
35 trans-1,2-Dichloroethene	96		3.490				ND	
37 Hexane	57		3.683				ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733				ND	
39 Vinyl acetate	43		3.784				ND	
40 1,1-Dichloroethane	63		3.805				ND	
41 Isopropyl ether	87		3.805				ND	
42 2-Chloro-1,3-butadiene	53		3.855				ND	
44 Tert-butyl ethyl ether	59		4.062				ND	
45 2-Butanone (MEK)	43		4.184				ND	
46 Ethyl acetate	43		4.198				ND	U
47 cis-1,2-Dichloroethene	96		4.213				ND	
48 2,2-Dichloropropane	77		4.220				ND	
49 Propionitrile	54		4.234				ND	
50 sec-Butyl Alcohol	45		4.291				ND	
51 Methacrylonitrile	41		4.348				ND	
52 Chlorobromomethane	128		4.384				ND	
53 Tetrahydrofuran	42		4.398				ND	
54 Chloroform	83		4.441				ND	
55 1,1,1-Trichloroethane	97		4.584				ND	
56 Cyclohexane	56		4.649				ND	
57 1,1-Dichloropropene	75		4.699				ND	
60 Isobutyl alcohol	41		4.706				ND	U
59 Carbon tetrachloride	117		4.706				ND	
62 Benzene	78		4.849				ND	
63 1,2-Dichloroethane	62		4.878				ND	7
64 Tert-amyl methyl ether	73		4.913				ND	
65 n-Heptane	43		5.035				ND	
66 n-Butanol	56		5.199				ND	
67 Trichloroethene	95		5.335				ND	
68 2-Pentanone	43		5.435				ND	
69 Methylcyclohexane	55		5.528				ND	
70 1,2-Dichloropropane	63		5.535				ND	
71 Methyl methacrylate	100		5.543				ND	
72 1,4-Dioxane	88		5.578				ND	
73 Dibromomethane	93		5.607				ND	
74 Dichlorobromomethane	83		5.728				ND	
75 2-Nitropropane	41		5.893				ND	
76 2-Chloroethyl vinyl ether	63		5.929				ND	
77 cis-1,3-Dichloropropene	75		6.079				ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179				ND	
79 Toluene	91		6.365				ND	
80 trans-1,3-Dichloropropene	75		6.536				ND	
81 Ethyl methacrylate	69		6.558				ND	
82 1,1,2-Trichloroethane	97		6.715				ND	
83 Tetrachloroethene	164		6.801				ND	
84 1,3-Dichloropropane	76		6.858				ND	
85 2-Hexanone	43		6.872				ND	
87 Chlorodibromomethane	129		7.051				ND	
88 Ethylene Dibromide	107		7.173				ND	
89 1-Chlorohexane	91		7.559				ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
90 Chlorobenzene	112		7.602				ND	
91 1,1,1,2-Tetrachloroethane	131		7.673				ND	
92 Ethylbenzene	106		7.673				ND	
93 m-Xylene & p-Xylene	106		7.795				ND	7
94 o-Xylene	106		8.152				ND	
95 Styrene	104		8.167				ND	
96 Bromoform	173		8.353				ND	
97 Isopropylbenzene	105		8.488				ND	
98 cis-1,4-Dichloro-2-butene	53		8.538				ND	
99 Cyclohexanone	55		8.589				ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774				ND	
101 Bromobenzene	156		8.810				ND	
102 trans-1,4-Dichloro-2-butene	53		8.810				ND	
103 1,2,3-Trichloropropane	110		8.839				ND	
104 N-Propylbenzene	120		8.889				ND	
105 2-Chlorotoluene	126		8.982				ND	
106 1,3,5-Trimethylbenzene	105		9.060				ND	
107 4-Chlorotoluene	126		9.103				ND	
108 tert-Butylbenzene	119		9.368				ND	
109 Pentachloroethane	167		9.403				ND	
110 1,2,4-Trimethylbenzene	105		9.425				ND	
111 sec-Butylbenzene	134		9.590				ND	
112 1,3-Dichlorobenzene	146		9.711				ND	
113 4-Isopropyltoluene	119		9.733				ND	
114 1,4-Dichlorobenzene	146		9.811				ND	
115 1,2,3-Trimethylbenzene	105		9.833				ND	
116 n-Butylbenzene	91		10.140				ND	
117 1,2-Dichlorobenzene	146		10.169				ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948				ND	
119 1,3,5-Trichlorobenzene	180		11.134				ND	
120 1,2,4-Trichlorobenzene	180		11.770				ND	
121 Hexachlorobutadiene	225		11.906				ND	
122 Naphthalene	128		12.035				ND	
123 1,2,3-Trichlorobenzene	180		12.257				ND	
166 Ethyl acrylate	55		0.000				ND	
165 t-Amyl alcohol	1		0.000				ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
127 n-Nonyl Aldehyde	1		0.000				ND	
171 4-Bromofluorobenzene	95		0.000				ND	
134 Propene oxide TIC	58		5.334				ND	
S 136 1,3-Dichloropropene, Total	1		0.000				ND	7
S 138 Xylenes, Total	106		0.000				ND	7
S 137 Total BTEX	1		0.000				ND	7
S 140 Trihalomethanes, Total	1		0.000				ND	7
S 142 TAH	1				0		0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND	7
T 152 Methyl cyclohexane TIC	1		0.000				ND	
T 148 Dicyclopentadiene TIC	1		0.000				ND	
T 150 4-Ethyltoluene TIC	1		0.000				ND	
T 153 Cyclohexane TIC	1		0.000				ND	
T 144 1,3-Butadiene TIC	1		0.000				ND	
T 146 Propene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

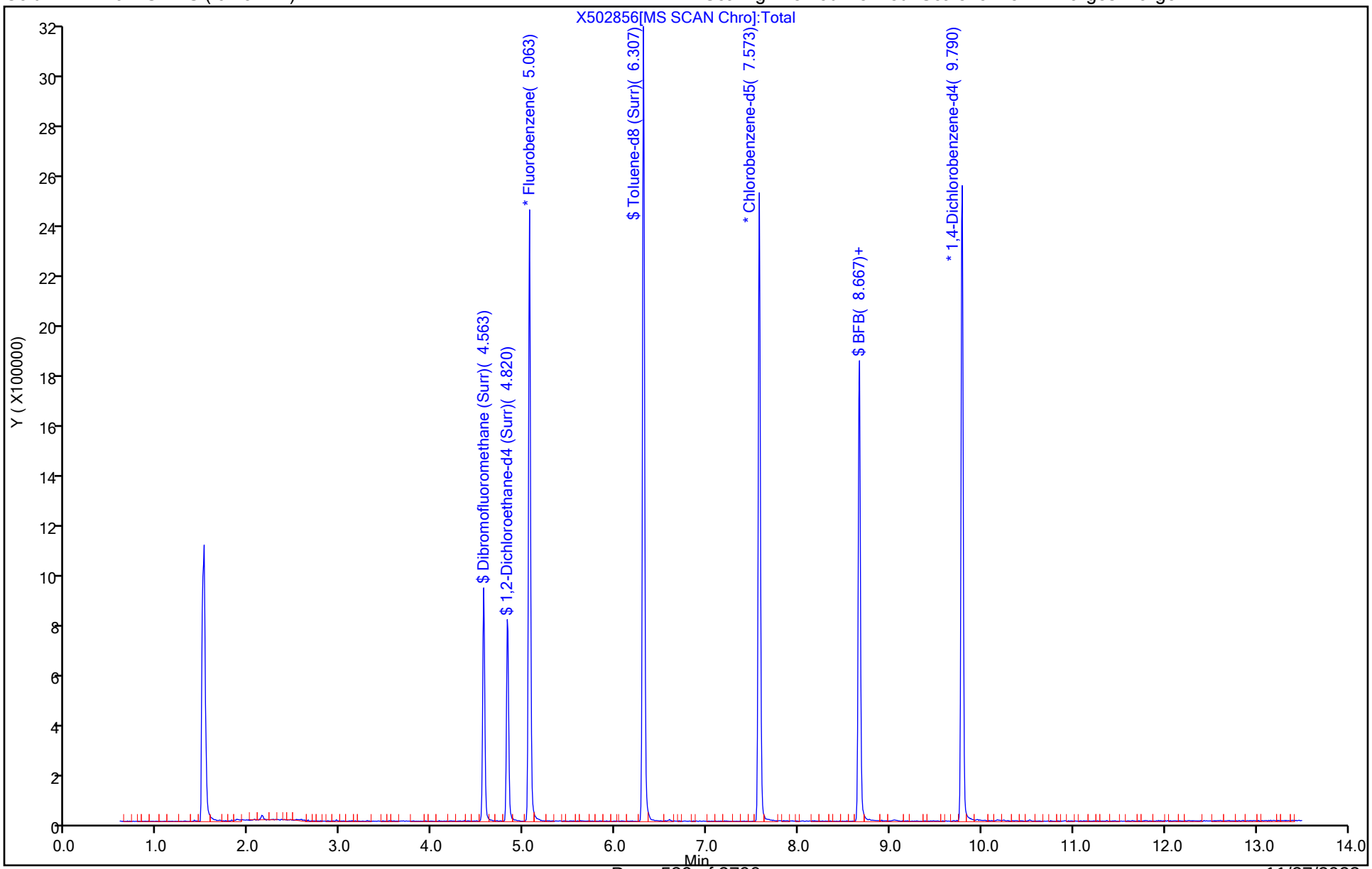
Report Date: 27-Apr-2023 01:58:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502856.D

Injection Date:	26-Apr-2023 13:40:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	280-175123-B-9	Lab Sample ID:	280-175123-9	Worklist Smp#:	15
Client ID:	EB-03-20230413				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502856.D				
Lims ID:	280-175123-B-9				
Client ID:	EB-03-20230413				
Sample Type:	Client				
Inject. Date:	26-Apr-2023 13:40:30	ALS Bottle#:	12	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175123-B-9				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	27-Apr-2023 01:58:24	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1623				

First Level Reviewer: AK2J Date: 27-Apr-2023 01:48:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	50.2	100.35
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.0	93.96
$ 6 Toluene-d8 (Surr)	50.0	50.8	101.60
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.8	101.65

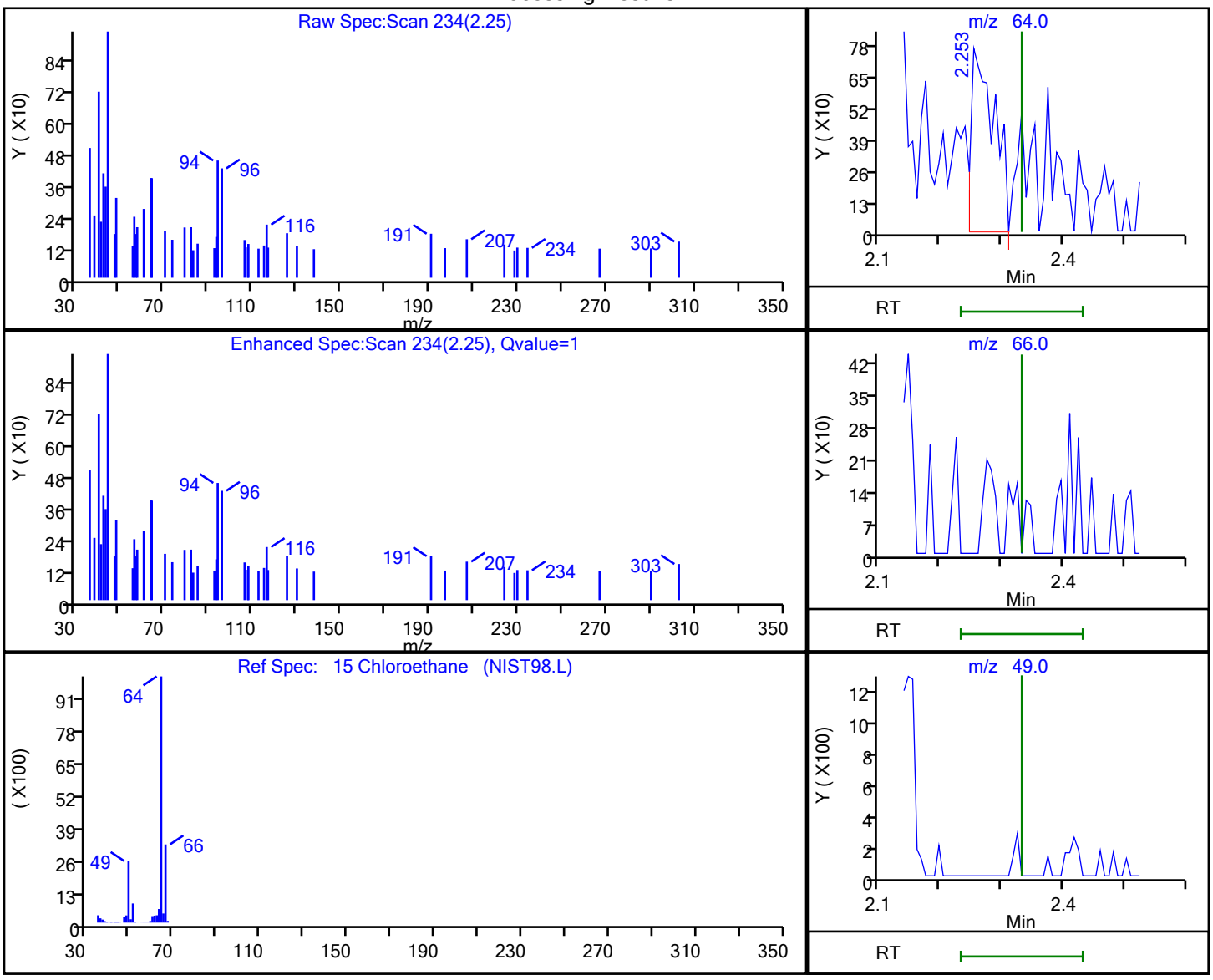
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502856.D				
Injection Date:	26-Apr-2023 13:40:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-9	Lab Sample ID:	280-175123-9		
Client ID:	EB-03-20230413				
Operator ID:	MED	ALS Bottle#:	12	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

15 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.25	64.00	1984	0.326182
2.33	66.00	0	
2.33	49.00	0	

Reviewer: AK2J, 27-Apr-2023 01:47:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

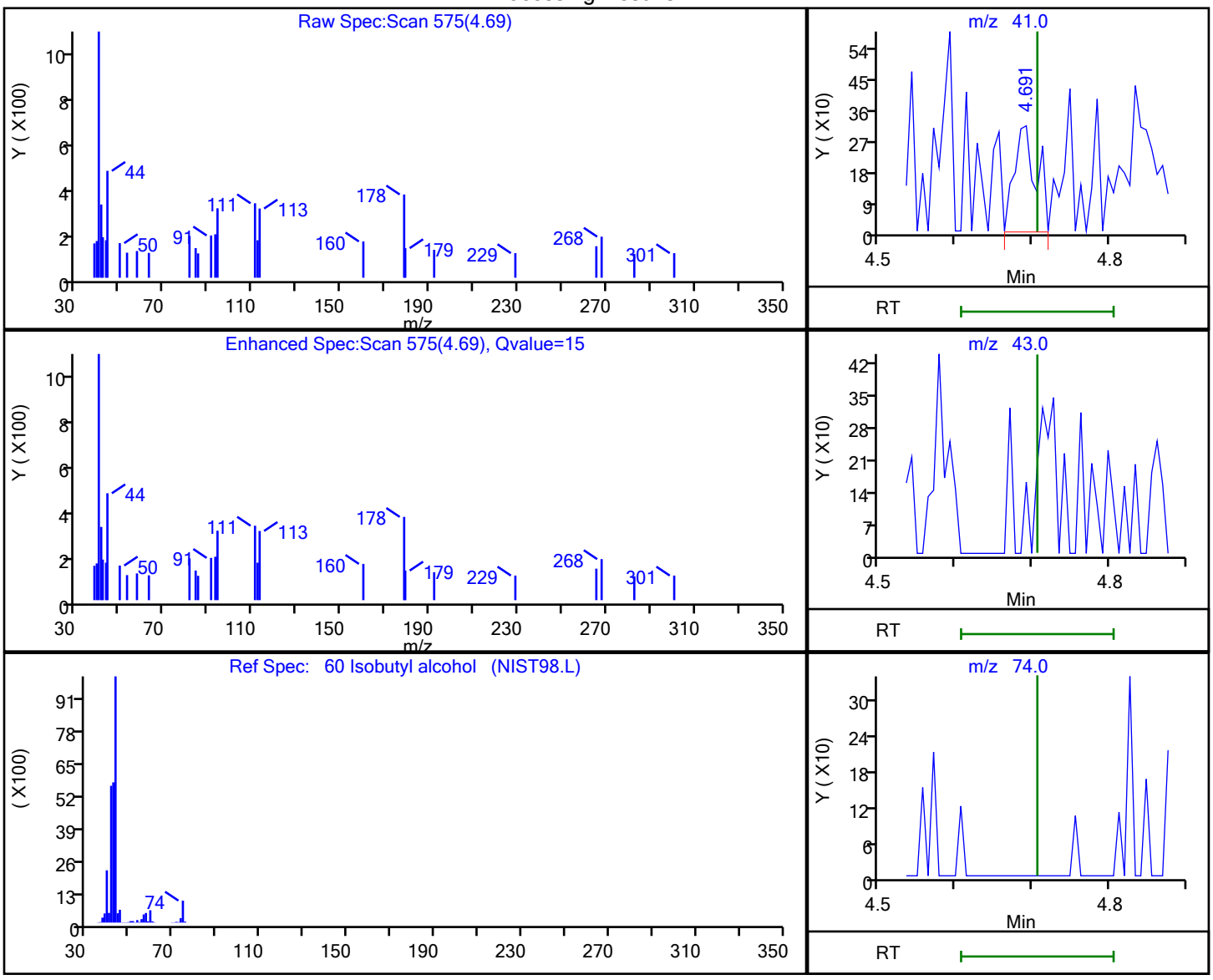
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502856.D				
Injection Date:	26-Apr-2023 13:40:30	Instrument ID:	VMS_X4		
Lims ID:	280-175123-B-9	Lab Sample ID:	280-175123-9		
Client ID:	EB-03-20230413				
Operator ID:	MED	ALS Bottle#:	12	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.69	41.00	610	13.746129
4.71	43.00	0	
4.71	74.00	0	

Reviewer: AK2J, 27-Apr-2023 01:47:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-109D-20230415 | Lab Sample ID: 280-175123-10

Matrix: Water | Lab File ID: MS1_8613.D

Analysis Method: 8260D | Date Collected: 04/15/2023 18:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 21:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-109D-20230415 | Lab Sample ID: 280-175123-10

Matrix: Water | Lab File ID: MS1_8613.D

Analysis Method: 8260D | Date Collected: 04/15/2023 18:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 21:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	0.55	J	1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	20		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	66		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: MW-109D-20230415 | Lab Sample ID: 280-175123-10

Matrix: Water | Lab File ID: MS1_8613.D

Analysis Method: 8260D | Date Collected: 04/15/2023 18:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 21:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		70-127
460-00-4	4-Bromofluorobenzene (Surr)	105		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	105		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8613.D
Lims ID: 280-175123-C-10
Client ID: MW-109D-20230415
Sample Type: Client
Inject. Date: 27-Apr-2023 21:13:30 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-C-10
Misc. Info.: 280-0120856-016
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AF7X Date: 28-Apr-2023 06:15:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1271151	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	299842	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	469570	50.0	
* 4 Fluorobenzene (IS)	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	305580	50.5	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	410064	50.0	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1349734	52.4	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	483813	52.4	
$ 9 Trifluorotoluene (Surr)	1		3.543				ND	
$ 10 BFB	95	9.900	9.900	0.000	78	483813	NR	
11 Dichlorodifluoromethane	85		1.813				ND	
12 Chloromethane	50		2.009				ND	
13 Vinyl chloride	62		2.135				ND	
14 Ethylene oxide	43		2.260				ND	7
15 Bromomethane	94		2.498				ND	
16 Chloroethane	64		2.623				ND	
17 Dichlorofluoromethane	67		2.861				ND	
18 Trichlorofluoromethane	101		2.889				ND	
19 Ethanol	45		3.071				ND	
20 Ethyl ether	59		3.182				ND	
21 Propene oxide	58		3.238				ND	
22 Acrolein	56		3.322				ND	
23 1,1-Dichloroethene	96		3.419				ND	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.419				ND	
25 Acetone	43		3.447				ND	
26 Iodomethane	142		3.559				ND	
27 Isopropyl alcohol	45		3.587				ND	
28 Carbon disulfide	76		3.629				ND	7
29 Acetonitrile	41		3.727				ND	
30 Methyl acetate	43		3.755				ND	
31 3-Chloro-1-propene	41		3.769				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 Methylene Chloride	84		3.894				ND	
33 2-Methyl-2-propanol	59		3.964				ND	
34 Acrylonitrile	53		4.104				ND	
35 Methyl tert-butyl ether	73		4.132				ND	
36 trans-1,2-Dichloroethene	96		4.146				ND	
38 Chlorotrifluoroethene	116		4.248				ND	
37 Hexane	57		4.383				ND	
43 1,2-Dichloro-1,1,2,2-tetrafluoro	85		4.472				ND	
39 Vinyl acetate	43		4.523				ND	
40 1,1-Dichloroethane	63		4.537				ND	
41 Isopropyl ether	87		4.551				ND	
42 2-Chloro-1,3-butadiene	53		4.607				ND	
45 2-Chloro-1,1,1-Trifluoroethane	118		4.737				ND	
44 Tert-butyl ethyl ether	59		4.872				ND	
46 2-Butanone (MEK)	43		5.012				ND	
49 2,2-Dichloropropane	77		5.040				ND	
48 cis-1,2-Dichloroethene	96		5.040				ND	
47 Ethyl acetate	43		5.040				ND	7
50 Propionitrile	54		5.082				ND	
51 sec-Butyl Alcohol	45		5.165				ND	
52 Methacrylonitrile	41		5.207				ND	
53 Chlorobromomethane	128		5.249				ND	
54 Tetrahydrofuran	42		5.249				ND	
55 Chloroform	83	5.319	5.319	0.000	94	4588	0.5548	
56 1,1,1-Trichloroethane	97		5.473				ND	
61 1,2-Dichloro-1,1,2-trifluoroetha	117		5.505				ND	
62 1,1,1-Trifluoro-2,2-dichloroetha	83		5.533				ND	
57 Cyclohexane	56		5.542				ND	
58 1,1-Dichloropropene	75		5.612				ND	
59 Carbon tetrachloride	117		5.612				ND	
60 Isobutyl alcohol	41		5.654				ND	U
63 Benzene	78		5.780				ND	
64 1,2-Dichloroethane	62		5.822				ND	
65 Tert-amyl methyl ether	73		5.878				ND	
66 n-Heptane	43		6.003				ND	U
67 n-Butanol	56		6.227				ND	
68 Trichloroethene	95	6.353	6.352	0.001	97	317818	66.0	
69 2-Pentanone	43		6.478				ND	
70 Methylcyclohexane	55		6.548				ND	
71 1,2-Dichloropropane	63		6.576				ND	
72 Methyl methacrylate	100		6.590				ND	
73 1,4-Dioxane	88		6.632				ND	
74 Dibromomethane	93		6.660				ND	
75 Dichlorobromomethane	83		6.799				ND	
76 2-Nitropropane	41		6.995				ND	
77 2-Chloroethyl vinyl ether	63		7.023				ND	
78 cis-1,3-Dichloropropene	75		7.176				ND	
80 2,2-Dimethylpentane	57		7.278				ND	
81 2,4-Dimethylpentane	43		7.292				ND	
79 4-Methyl-2-pentanone (MIBK)	43		7.302				ND	
82 Toluene	91		7.484				ND	
83 2,2,3-Trimethylbutane	57		7.502				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
84 trans-1,3-Dichloropropene	75		7.679				ND	
86 3,3-Dimethylpentane	43		7.682				ND	
85 Ethyl methacrylate	69		7.707				ND	
88 2-Methylhexane	43		7.810				ND	
87 1,1,2-Trichloroethane	97		7.861				ND	
92 3-Methylhexane	43		7.903				ND	
93 2,3-Dimethylpentane	56		7.949				ND	
89 Tetrachloroethene	164	7.959	7.959	0.000	95	64578	19.6	
90 1,3-Dichloropropane	76		8.014				ND	
91 2-Hexanone	43		8.042				ND	
97 3-Ethylpentane	43		8.214				ND	
95 Chlorodibromomethane	129		8.224				ND	
94 Tetrahydrothiophene	60		8.224				ND	
96 Ethylene Dibromide	107		8.350				ND	
98 1-Chlorohexane	91		8.755				ND	7
99 Chlorobenzene	112		8.796				ND	
100 1,1,1,2-Tetrachloroethane	131		8.880				ND	
101 Ethylbenzene	106		8.880				ND	
102 m-Xylene & p-Xylene	106		9.006				ND	
103 o-Xylene	106		9.369				ND	
105 Dimethyl disulfide	94		9.388				ND	
104 Styrene	104		9.397				ND	
106 Bromoform	173		9.579				ND	
107 Isopropylbenzene	105		9.718				ND	
108 cis-1,4-Dichloro-2-butene	53		9.774				ND	
109 Cyclohexanone	55		9.830				ND	U
110 1,1,2,2-Tetrachloroethane	83		10.026				ND	
111 Bromobenzene	156		10.053				ND	
112 trans-1,4-Dichloro-2-butene	53		10.053				ND	
113 1,2,3-Trichloropropane	110		10.081				ND	
114 N-Propylbenzene	120		10.137				ND	
115 2-Chlorotoluene	126		10.235				ND	
116 1,3,5-Trimethylbenzene	105		10.305				ND	
117 4-Chlorotoluene	126		10.347				ND	
118 tert-Butylbenzene	119		10.626				ND	
119 1,2,4-Trimethylbenzene	105		10.682				ND	
120 sec-Butylbenzene	134		10.850				ND	
121 1,3-Dichlorobenzene	146		10.975				ND	
122 4-Isopropyltoluene	119		10.989				ND	
123 1,4-Dichlorobenzene	146		11.073				ND	
124 1,2,3-Trimethylbenzene	105		11.101				ND	
126 Pentachloroethane	167		11.283				ND	
125 n-Butylbenzene	91		11.408				ND	
127 1,2-Dichlorobenzene	146		11.436				ND	
128 1,2-Dibromo-3-Chloropropane	157		12.232				ND	
129 1,3,5-Trichlorobenzene	180		12.414				ND	
130 1,2,4-Trichlorobenzene	180		13.056				ND	
131 Hexachlorobutadiene	225		13.196				ND	
132 Naphthalene	128		13.336				ND	
133 n-Nonyl Aldehyde	57		13.340				ND	
134 1,2,3-Trichlorobenzene	180		13.559				ND	
141 4-Chlorobenzotrifluoride	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
138 1,4-Dibromobenzene	1		0.000				ND	
148 1-Bromo-2-chloroethane	1		0.000				ND	
146 t-Amyl alcohol	1		0.000				ND	
139 1,3-Dibromobenzene	1		0.000				ND	
137 1,2-dichloro-4-(trifluoromethyl)	1		0.000				ND	
143 Benzene, 1-bromo-3-fluoro-	1		0.000				ND	
140 4-Bromofluorobenzene	95		0.000				ND	
136 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
142 Benzene, 1-bromo-4-ethyl-	1		0.000				ND	
135 Pentachloroethane TIC	1		0.000				ND	
145 Ethyl acrylate	55		0.000				ND	
147 n-Nonane TIC	1		0.000				ND	
S 149 1,2-Dichloroethene, Total (URS)	96		2.000				ND	7
S 151 Trihalomethanes, Total	1				0		0.5548	
S 150 1,2-Dichloroethene, Total	1		0.000				ND	7
S 156 1,3-Dichloropropene, Total	1		0.000				ND	7
S 155 Xylenes, Total	106		0.000				ND	7
S 154 TAH	1				0		0	
S 153 Xylenes, Total (URS)	1		0.000				ND	7
S 152 Total BTEX	1		0.000				ND	7
T 157 Dichloroacetonitrile TIC	74		1.000				ND	
T 158 2,3-dichloro-1-propene TIC	75		1.000				ND	
T 159 Propene oxide TIC	58		5.334				ND	
T 160 Cyclohexane TIC	1		0.000				ND	
T 165 Dicyclopentadiene TIC	1		0.000				ND	
T 163 2-Butoxyethanol TIC	1		0.000				ND	
T 164 1,3-Butadiene TIC	1		0.000				ND	
T 162 4-Ethyltoluene TIC	1		0.000				ND	
T 166 Propene TIC	1		0.000				ND	
T 161 Methyl cyclohexane TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00059 Amount Added: 5.00 Units: uL Run Reagent

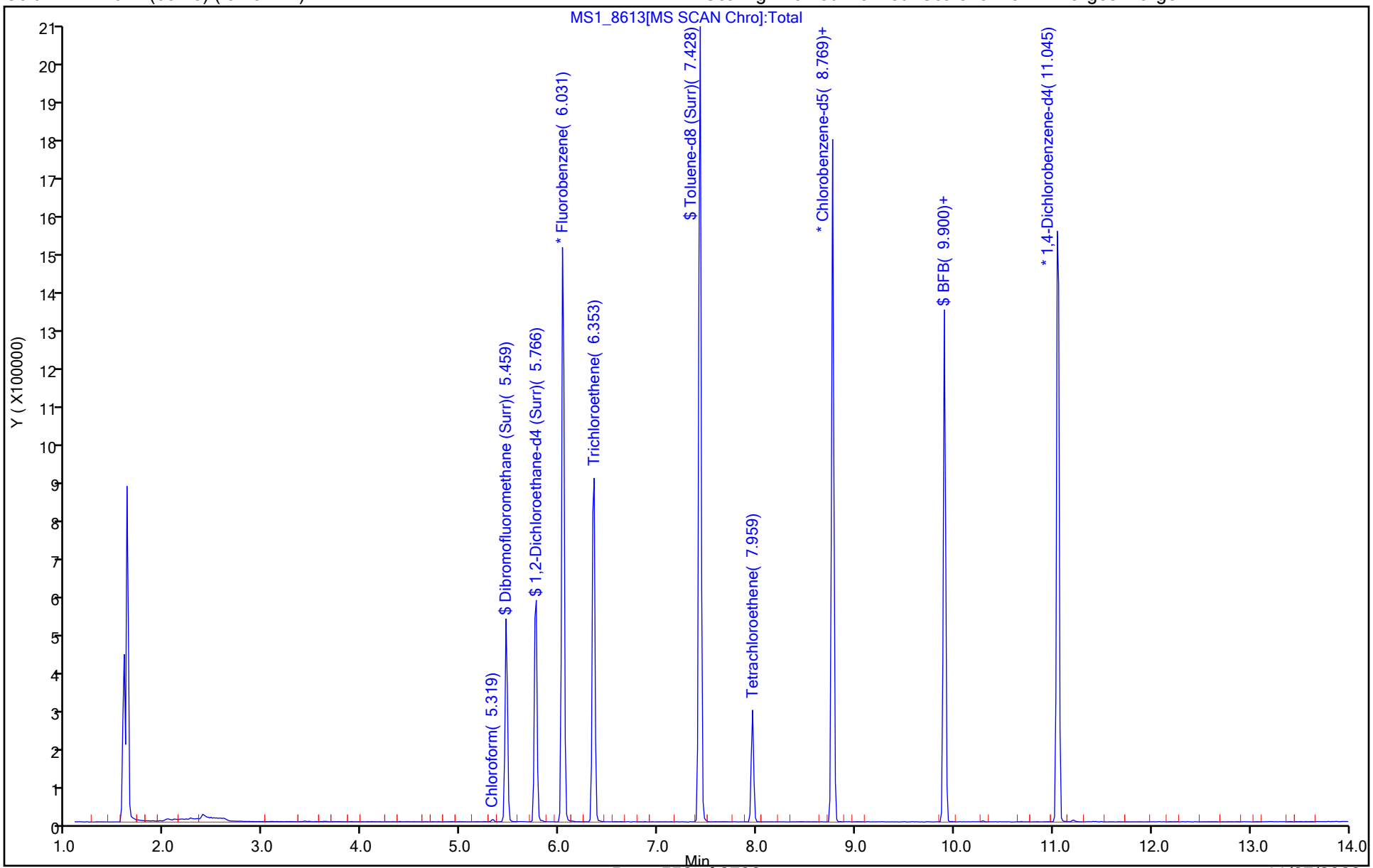
Report Date: 28-Apr-2023 11:01:12 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8613.D

Injection Date:	27-Apr-2023 21:13:30	Instrument ID:	VMS_MS1	Operator ID:	CCF
Lims ID:	280-175123-C-10	Lab Sample ID:	280-175123-10	Worklist Smp#:	16
Client ID:	MW-109D-20230415				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Recovery Report

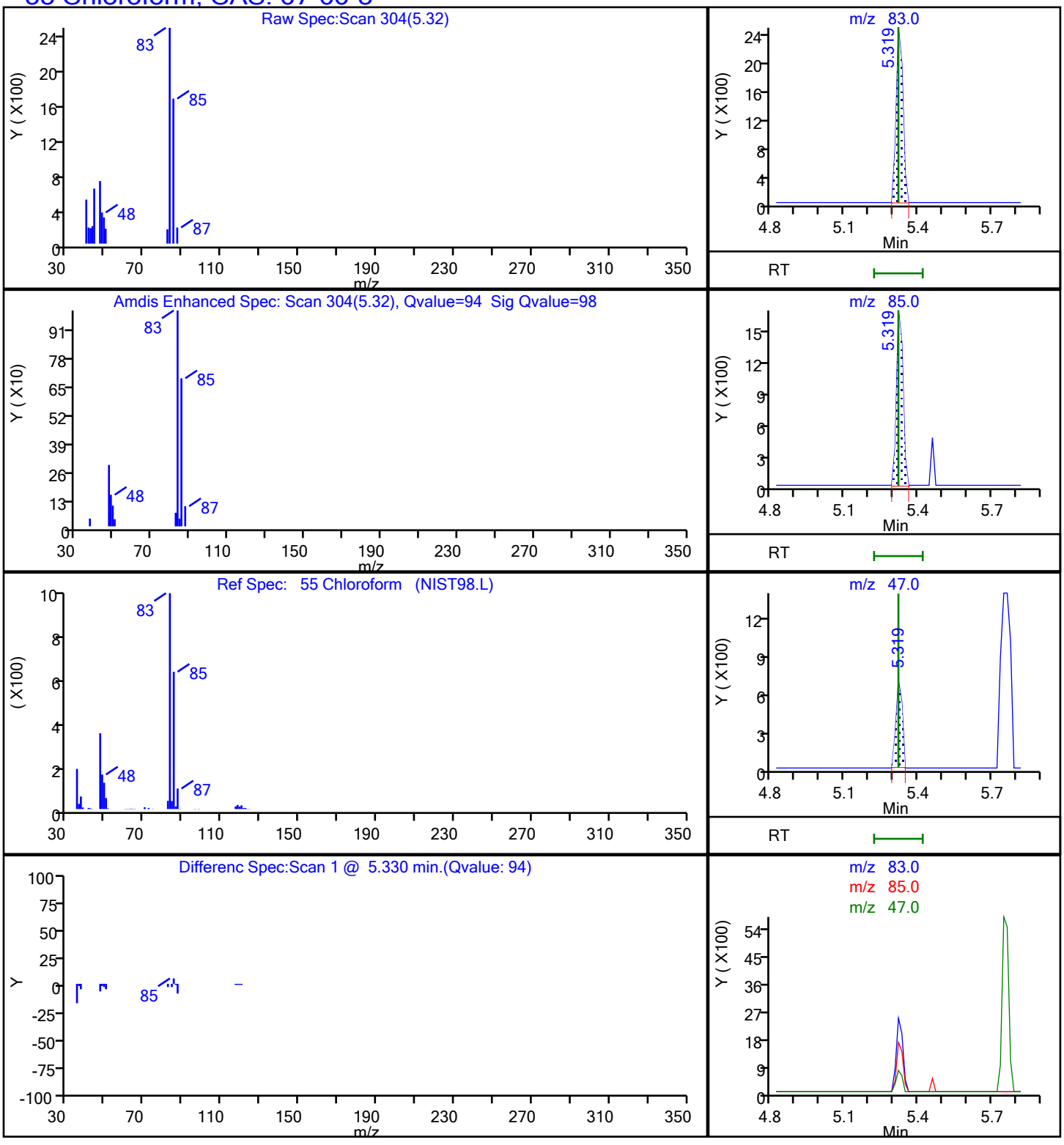
Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8613.D				
Lims ID:	280-175123-C-10				
Client ID:	MW-109D-20230415				
Sample Type:	Client				
Inject. Date:	27-Apr-2023 21:13:30	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-175123-C-10				
Misc. Info.:	280-0120856-016				
Operator ID:	CCF	Instrument ID:	VMS_MS1		
Method:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 09:53:21	Calib Date:	18-Apr-2023 18:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1608				
First Level Reviewer: AF7X		Date:	28-Apr-2023 06:15:58		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	50.5	101.03
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	50.0	100.03
$ 7 Toluene-d8 (Surr)	50.0	52.4	104.89
$ 8 4-Bromofluorobenzene (Surr)	50.0	52.4	104.90

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8613.D		
Injection Date:	27-Apr-2023 21:13:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-C-10	Lab Sample ID:	280-175123-10
Client ID:	MW-109D-20230415		
Operator ID:	CCF	ALS Bottle#:	10 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

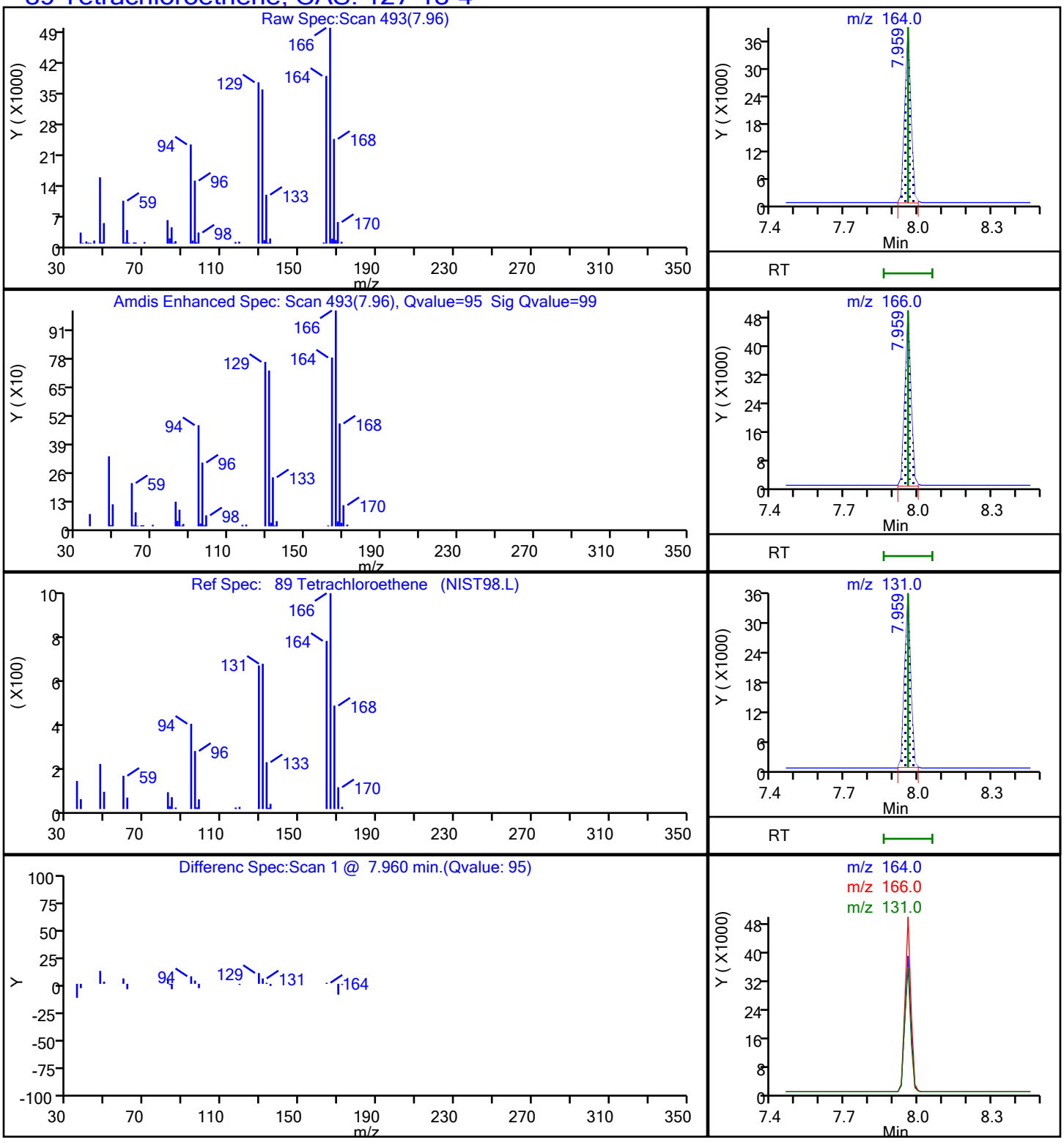
55 Chloroform, CAS: 67-66-3



Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8613.D		
Injection Date:	27-Apr-2023 21:13:30	Instrument ID:	VMS_MS1
Lims ID:	280-175123-C-10	Lab Sample ID:	280-175123-10
Client ID:	MW-109D-20230415		
Operator ID:	CCF	ALS Bottle#:	10 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

89 Tetrachloroethene, CAS: 127-18-4



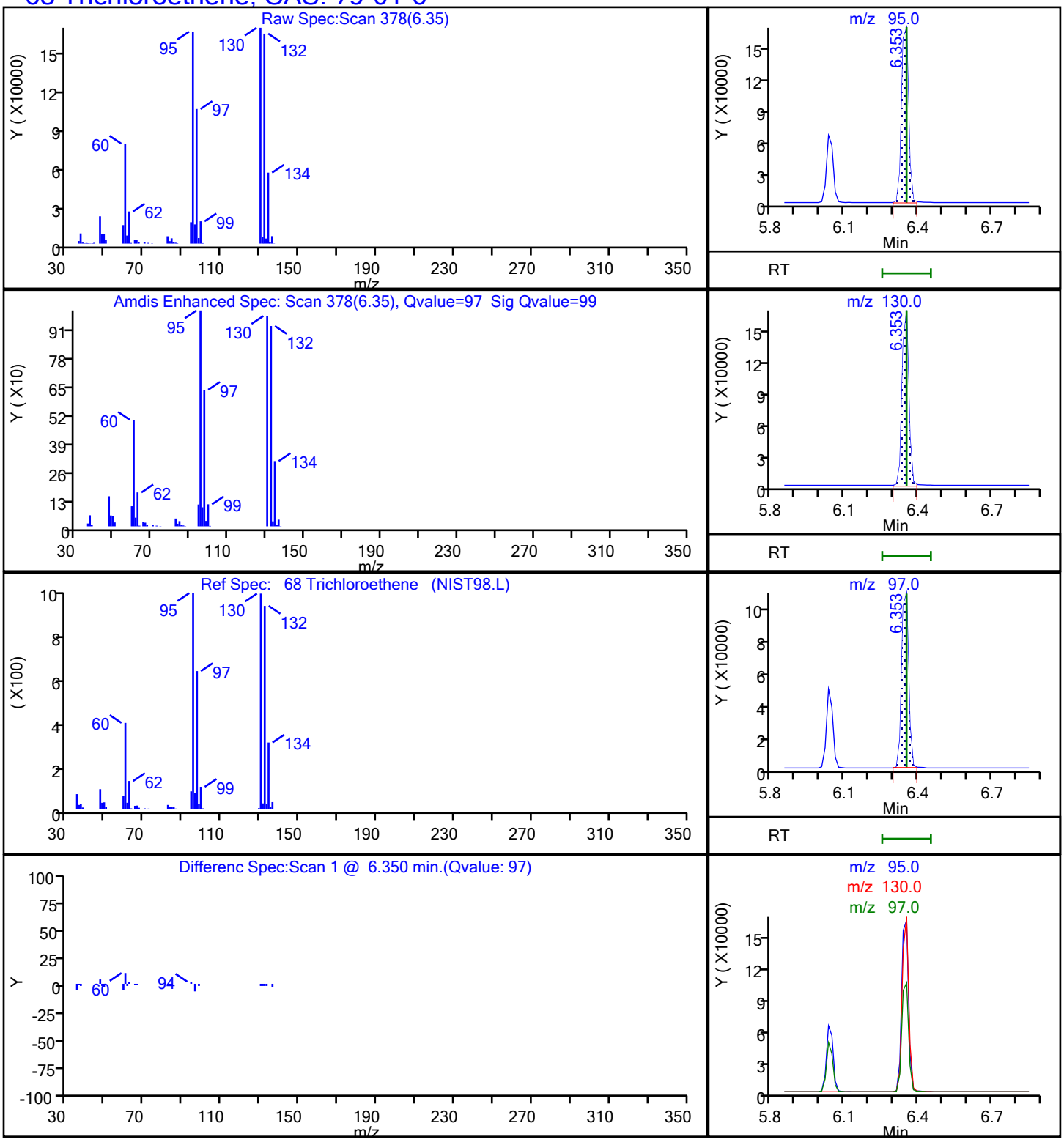
Report Date: 28-Apr-2023 11:01:13 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8613.D

Injection Date:	27-Apr-2023 21:13:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175123-C-10	Lab Sample ID:	280-175123-10		
Client ID:	MW-109D-20230415				
Operator ID:	CCF	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

68 Trichloroethene, CAS: 79-01-6



11/27/2023
7:19 PM

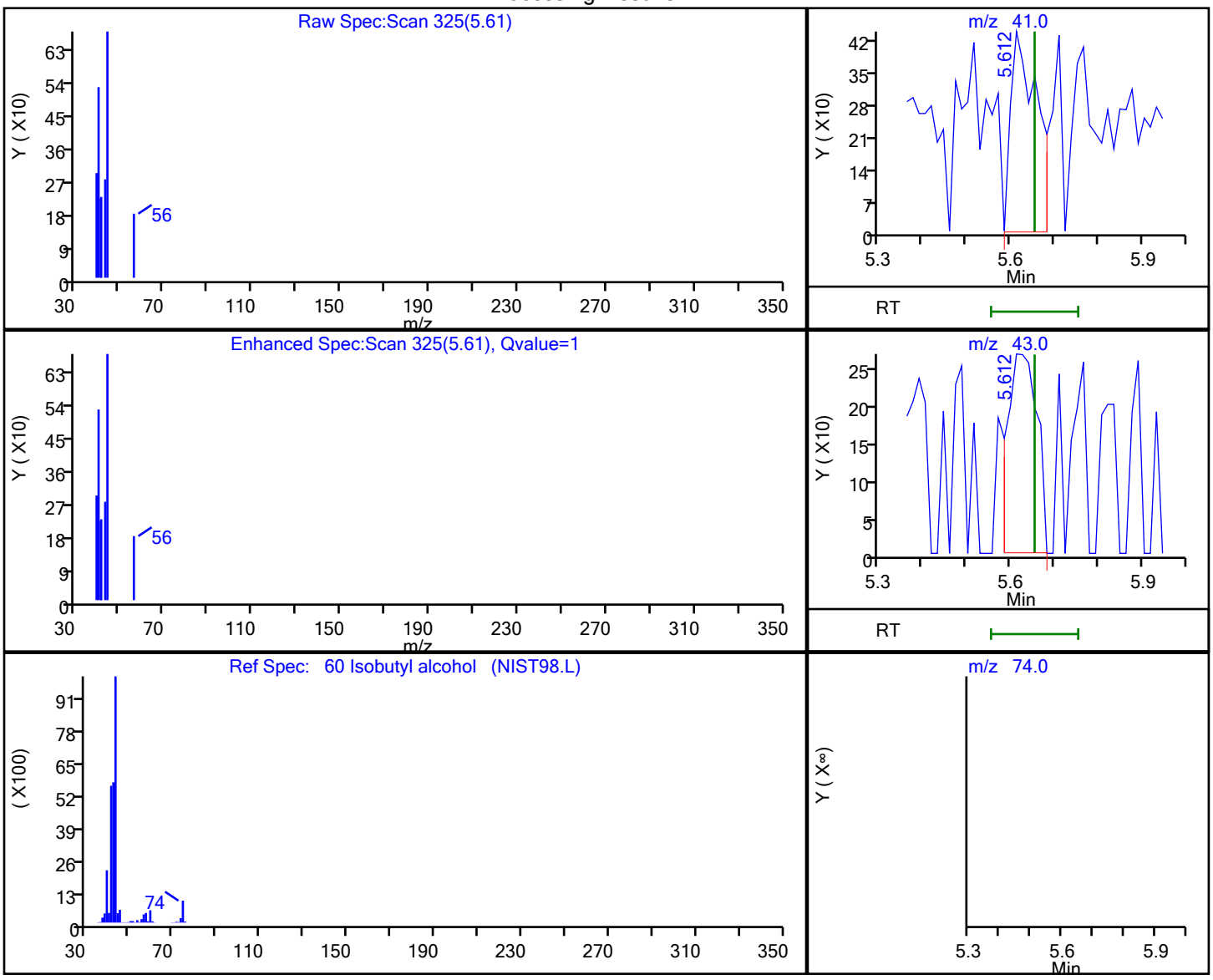
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8613.D				
Injection Date:	27-Apr-2023 21:13:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175123-C-10	Lab Sample ID:	280-175123-10		
Client ID:	MW-109D-20230415				
Operator ID:	CCF	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
5.61	41.00	1826	7.212825
5.61	43.00	1271	
5.65	74.00	0	

Reviewer: AF7X, 28-Apr-2023 06:15:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: TB-05-20230416 | Lab Sample ID: 280-175123-11

Matrix: Water | Lab File ID: MS1_8608.D

Analysis Method: 8260D | Date Collected: 04/16/2023 09:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 19:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: TB-05-20230416 | Lab Sample ID: 280-175123-11

Matrix: Water | Lab File ID: MS1_8608.D

Analysis Method: 8260D | Date Collected: 04/16/2023 09:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 19:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: TB-05-20230416 | Lab Sample ID: 280-175123-11

Matrix: Water | Lab File ID: MS1_8608.D

Analysis Method: 8260D | Date Collected: 04/16/2023 09:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 19:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	105		78-120
1868-53-7	Dibromofluoromethane (Surr)	106		77-120
2037-26-5	Toluene-d8 (Surr)	105		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8608.D
Lims ID: 280-175123-A-11
Client ID: TB-05-20230416
Sample Type: Client
Inject. Date: 27-Apr-2023 19:27:30 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-A-11
Misc. Info.: 280-0120856-011
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 20:37:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1237188	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	296314	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	468508	50.0	
* 4 Fluorobenzene (IS)	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	312896	53.1	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	409064	51.3	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	93	1330320	52.3	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	482505	52.4	
$ 9 Trifluorotoluene (Surr)	1		3.543				ND	
$ 10 BFB	95	9.900	9.900	0.000	76	482505	NR	
11 Dichlorodifluoromethane	85		1.813				ND	
12 Chloromethane	50		2.009				ND	
13 Vinyl chloride	62		2.135				ND	
14 Ethylene oxide	43		2.260				ND	7
15 Bromomethane	94		2.498				ND	
16 Chloroethane	64		2.623				ND	
17 Dichlorofluoromethane	67		2.861				ND	
18 Trichlorofluoromethane	101		2.889				ND	
19 Ethanol	45	3.071	3.071	0.000	97	4226	48.6	
20 Ethyl ether	59		3.182				ND	
21 Propene oxide	58		3.238				ND	
22 Acrolein	56		3.322				ND	
23 1,1-Dichloroethene	96		3.419				ND	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.419				ND	
25 Acetone	43		3.447				ND	
26 Iodomethane	142		3.559				ND	
27 Isopropyl alcohol	45		3.587				ND	
28 Carbon disulfide	76	3.629	3.629	0.000	98	3766	0.2734	
29 Acetonitrile	41		3.727				ND	
30 Methyl acetate	43		3.755				ND	
31 3-Chloro-1-propene	41		3.769				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 Methylene Chloride	84		3.894				ND	
33 2-Methyl-2-propanol	59		3.964				ND	
34 Acrylonitrile	53	4.104	4.104	0.000	96	1356	0.5993	
35 Methyl tert-butyl ether	73		4.132				ND	
36 trans-1,2-Dichloroethene	96		4.146				ND	
38 Chlorotrifluoroethene	116		4.248				ND	
37 Hexane	57		4.383				ND	
43 1,2-Dichloro-1,1,2,2-tetrafluoro	85		4.472				ND	
39 Vinyl acetate	43		4.523				ND	
40 1,1-Dichloroethane	63		4.537				ND	
41 Isopropyl ether	87		4.551				ND	
42 2-Chloro-1,3-butadiene	53		4.607				ND	
45 2-Chloro-1,1,1-Trifluoroethane	118		4.737				ND	
44 Tert-butyl ethyl ether	59		4.872				ND	
46 2-Butanone (MEK)	43		5.012				ND	
49 2,2-Dichloropropane	77		5.040				ND	
48 cis-1,2-Dichloroethene	96		5.040				ND	
47 Ethyl acetate	43		5.040				ND	7
50 Propionitrile	54		5.082				ND	
51 sec-Butyl Alcohol	45		5.165				ND	
52 Methacrylonitrile	41		5.207				ND	
53 Chlorobromomethane	128		5.249				ND	
54 Tetrahydrofuran	42		5.249				ND	
55 Chloroform	83		5.319				ND	
56 1,1,1-Trichloroethane	97		5.473				ND	
61 1,2-Dichloro-1,1,2-trifluoroetha	117		5.505				ND	
62 1,1,1-Trifluoro-2,2-dichloroetha	83		5.533				ND	
57 Cyclohexane	56		5.542				ND	
58 1,1-Dichloropropene	75		5.612				ND	
59 Carbon tetrachloride	117		5.612				ND	
60 Isobutyl alcohol	41		5.654				ND	
63 Benzene	78		5.780				ND	7
64 1,2-Dichloroethane	62		5.822				ND	
65 Tert-amyl methyl ether	73		5.878				ND	
66 n-Heptane	43		6.003				ND	U
67 n-Butanol	56		6.227				ND	
68 Trichloroethene	95		6.352				ND	
69 2-Pentanone	43		6.478				ND	
70 Methylcyclohexane	55		6.548				ND	
71 1,2-Dichloropropane	63		6.576				ND	
72 Methyl methacrylate	100		6.590				ND	
73 1,4-Dioxane	88		6.632				ND	
74 Dibromomethane	93		6.660				ND	
75 Dichlorobromomethane	83		6.799				ND	
76 2-Nitropropane	41		6.995				ND	
77 2-Chloroethyl vinyl ether	63		7.023				ND	
78 cis-1,3-Dichloropropene	75		7.176				ND	
80 2,2-Dimethylpentane	57		7.278				ND	
81 2,4-Dimethylpentane	43		7.292				ND	
79 4-Methyl-2-pentanone (MIBK)	43		7.302				ND	
82 Toluene	91		7.484				ND	
83 2,2,3-Trimethylbutane	57		7.502				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
84 trans-1,3-Dichloropropene	75		7.679				ND	
86 3,3-Dimethylpentane	43		7.682				ND	
85 Ethyl methacrylate	69		7.707				ND	
88 2-Methylhexane	43		7.810				ND	
87 1,1,2-Trichloroethane	97		7.861				ND	
92 3-Methylhexane	43		7.903				ND	
93 2,3-Dimethylpentane	56		7.949				ND	
89 Tetrachloroethene	164		7.959				ND	
90 1,3-Dichloropropane	76		8.014				ND	
91 2-Hexanone	43		8.042				ND	
97 3-Ethylpentane	43		8.214				ND	
95 Chlorodibromomethane	129		8.224				ND	
94 Tetrahydrothiophene	60		8.224				ND	
96 Ethylene Dibromide	107		8.350				ND	
98 1-Chlorohexane	91		8.755				ND	7
99 Chlorobenzene	112		8.796				ND	
100 1,1,1,2-Tetrachloroethane	131		8.880				ND	
101 Ethylbenzene	106		8.880				ND	
102 m-Xylene & p-Xylene	106		9.006				ND	
103 o-Xylene	106		9.369				ND	
105 Dimethyl disulfide	94		9.388				ND	
104 Styrene	104		9.397				ND	
106 Bromoform	173		9.579				ND	
107 Isopropylbenzene	105		9.718				ND	
108 cis-1,4-Dichloro-2-butene	53		9.774				ND	
109 Cyclohexanone	55		9.830				ND	U
110 1,1,2,2-Tetrachloroethane	83		10.026				ND	
111 Bromobenzene	156		10.053				ND	
112 trans-1,4-Dichloro-2-butene	53		10.053				ND	
113 1,2,3-Trichloropropane	110		10.081				ND	
114 N-Propylbenzene	120		10.137				ND	
115 2-Chlorotoluene	126		10.235				ND	
116 1,3,5-Trimethylbenzene	105		10.305				ND	
117 4-Chlorotoluene	126		10.347				ND	
118 tert-Butylbenzene	119		10.626				ND	
119 1,2,4-Trimethylbenzene	105		10.682				ND	
120 sec-Butylbenzene	134		10.850				ND	
121 1,3-Dichlorobenzene	146		10.975				ND	
122 4-Isopropyltoluene	119		10.989				ND	
123 1,4-Dichlorobenzene	146		11.073				ND	U
124 1,2,3-Trimethylbenzene	105		11.101				ND	
126 Pentachloroethane	167		11.283				ND	
125 n-Butylbenzene	91		11.408				ND	
127 1,2-Dichlorobenzene	146		11.436				ND	
128 1,2-Dibromo-3-Chloropropane	157		12.232				ND	
129 1,3,5-Trichlorobenzene	180		12.414				ND	
130 1,2,4-Trichlorobenzene	180		13.056				ND	
131 Hexachlorobutadiene	225		13.196				ND	
132 Naphthalene	128		13.336				ND	
133 n-Nonyl Aldehyde	57		13.340				ND	
134 1,2,3-Trichlorobenzene	180		13.559				ND	
141 4-Chlorobenzotrifluoride	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
138 1,4-Dibromobenzene	1		0.000				ND	
148 1-Bromo-2-chloroethane	1		0.000				ND	
146 t-Amyl alcohol	1		0.000				ND	
139 1,3-Dibromobenzene	1		0.000				ND	
137 1,2-dichloro-4-(trifluoromethyl)	1		0.000				ND	
143 Benzene, 1-bromo-3-fluoro-	1		0.000				ND	
140 4-Bromofluorobenzene	95		0.000				ND	
136 1-Chloro-1-fluoroethane TIC	1		0.000				ND	
142 Benzene, 1-bromo-4-ethyl-	1		0.000				ND	
135 Pentachloroethane TIC	1		0.000				ND	
145 Ethyl acrylate	55		0.000				ND	
147 n-Nonane TIC	1		0.000				ND	
S 149 1,2-Dichloroethene, Total (URS)	96		2.000				ND	7
S 151 Trihalomethanes, Total	1		0.000				ND	7
S 150 1,2-Dichloroethene, Total	1		0.000				ND	7
S 156 1,3-Dichloropropene, Total	1		0.000				ND	7
S 155 Xylenes, Total	106		0.000				ND	7
S 154 TAH	1				0		0	
S 153 Xylenes, Total (URS)	1		0.000				ND	7
S 152 Total BTEX	1		0.000				ND	7
T 157 Dichloroacetonitrile TIC	74		1.000				ND	
T 158 2,3-dichloro-1-propene TIC	75		1.000				ND	
T 159 Propene oxide TIC	58		5.334				ND	
T 160 Cyclohexane TIC	1		0.000				ND	
T 165 Dicyclopentadiene TIC	1		0.000				ND	
T 163 2-Butoxyethanol TIC	1		0.000				ND	
T 164 1,3-Butadiene TIC	1		0.000				ND	
T 162 4-Ethyltoluene TIC	1		0.000				ND	
T 166 Propene TIC	1		0.000				ND	
T 161 Methyl cyclohexane TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00059 Amount Added: 5.00 Units: uL Run Reagent

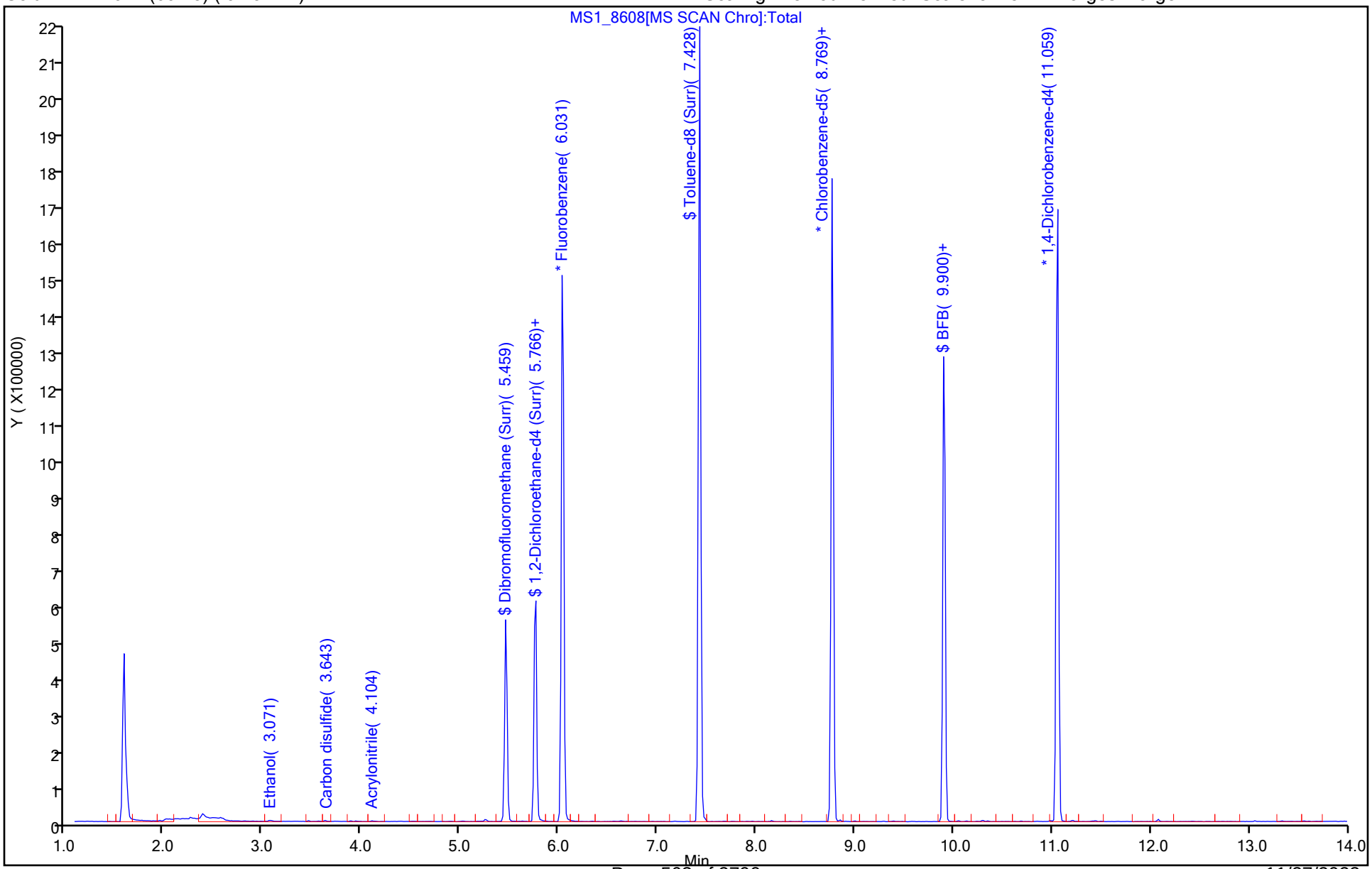
Report Date: 28-Apr-2023 11:01:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8608.D

Injection Date:	27-Apr-2023 19:27:30	Instrument ID:	VMS_MS1	Operator ID:	CCF
Lims ID:	280-175123-A-11	Lab Sample ID:	280-175123-11	Worklist Smp#:	11
Client ID:	TB-05-20230416				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8608.D
Lims ID: 280-175123-A-11
Client ID: TB-05-20230416
Sample Type: Client
Inject. Date: 27-Apr-2023 19:27:30 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-175123-A-11
Misc. Info.: 280-0120856-011
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 20:37:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	53.1	106.28
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.3	102.53
$ 7 Toluene-d8 (Surr)	50.0	52.3	104.62
$ 8 4-Bromofluorobenzene (Surr)	50.0	52.4	104.85

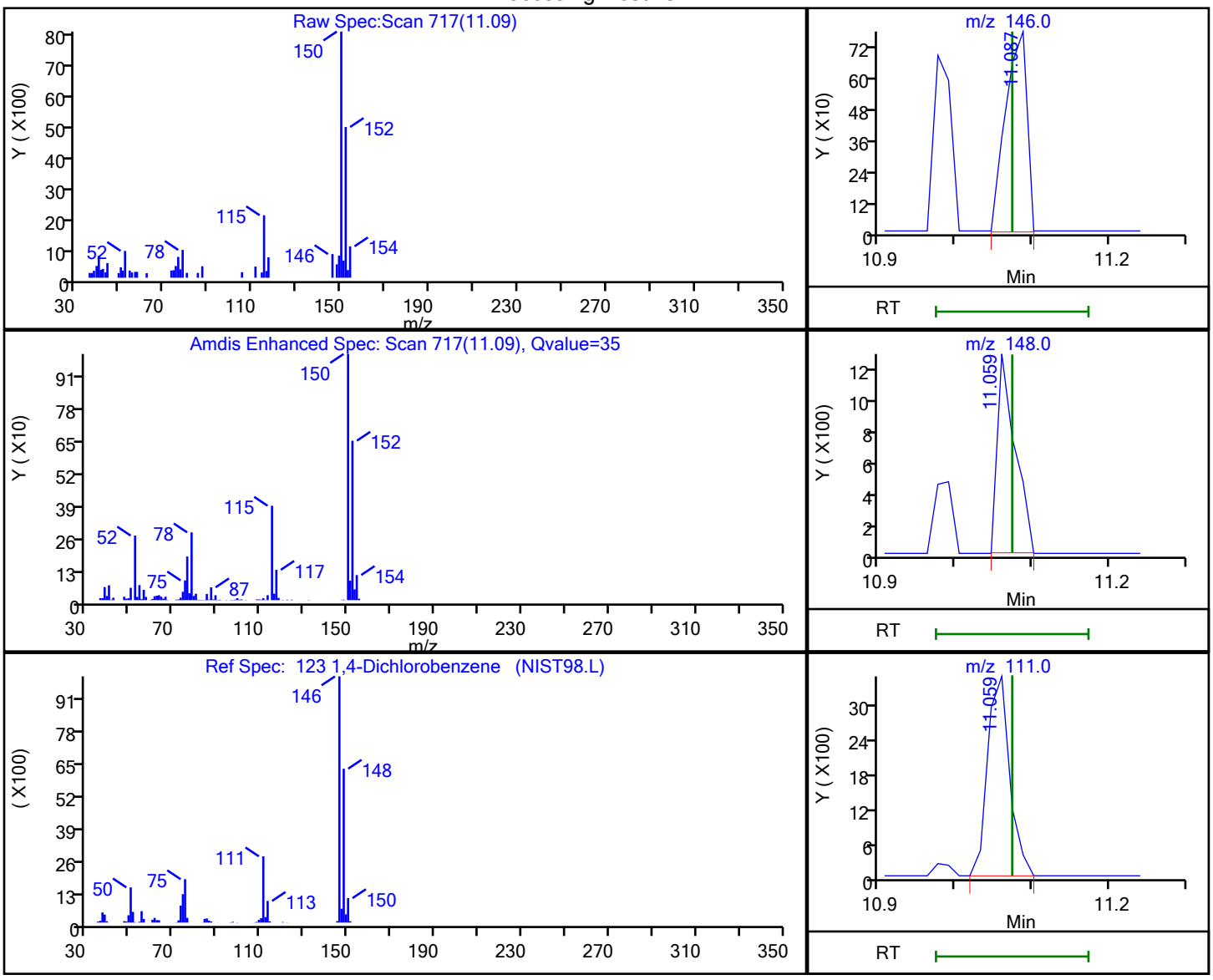
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8608.D				
Injection Date:	27-Apr-2023 19:27:30	Instrument ID:	VMS_MS1		
Lims ID:	280-175123-A-11	Lab Sample ID:	280-175123-11		
Client ID:	TB-05-20230416				
Operator ID:	CCF	ALS Bottle#:	5	Worklist Smp#:	11
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

123 1,4-Dichlorobenzene, CAS: 106-46-7

Processing Results



RT	Mass	Response	Amount
11.09	146.00	1505	0.160645
11.06	148.00	1987	
11.06	111.00	7047	

Reviewer: AK2J, 27-Apr-2023 20:36:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 597846

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/28/2022 11:59 Calibration End Date: 12/28/2022 14:33 Calibration ID: 75254

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-597846/12	MS1_4150.D
Level 2	STD2 280-597846/13	MS1_4151.D
Level 3	STD5 280-597846/14	MS1_4152.D
Level 4	STD10 280-597846/15	MS1_4153.D
Level 5	STD50 280-597846/16	MS1_4154.D
Level 6	STD75 280-597846/17	MS1_4155.D
Level 7	STD100 280-597846/18	MS1_4156.D
Level 8	STD200 280-597846/19	MS1_4157.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Ethanol	+++++ 0.0034	0.0042 0.0033	0.0034 +++++	0.0034	0.0034	Ave		0.0035				10.0		15.0			
Isopropyl alcohol	+++++ 0.0169	0.0166 0.0166	0.0173 +++++	0.0174	0.0161	Ave		0.0168				2.9		15.0			
Acetonitrile	+++++ 0.0367	0.0477 0.0358	0.0439 +++++	0.0395	0.0366	Ave		0.0400				12.0		15.0			
Isopropyl ether	0.1915 0.1657	0.1427 0.1715	0.1496 +++++	0.1702	0.1558	Ave		0.1639				9.9		15.0			
Chloroprene	0.3296 0.3209	0.3147 0.3290	0.2830 +++++	0.3069	0.3003	Ave		0.3120				5.4		15.0			
Tert-butyl ethyl ether	0.6592 0.6173	0.5778 0.6391	0.5939 +++++	0.6206	0.5974	Ave		0.6150				4.6		15.0			
Ethyl acetate	0.3426 0.2460	0.2599 0.2479	0.2633 +++++	0.2491	0.2438	Lin2	0.1790	0.2411							0.9970		0.9900
Propionitrile	0.0464 0.0394	0.0403 0.0386	0.0388 +++++	0.0401	0.0391	Ave		0.0404				6.7		15.0			
Methacrylonitrile	0.1823 0.1525	0.1457 0.1523	0.1567 +++++	0.1571	0.1509	Ave		0.1568				7.6		15.0			
Tert-amyl methyl ether	0.6391 0.5735	0.5357 0.5852	0.5479 +++++	0.5433	0.5526	Ave		0.5682				6.3		15.0			
n-Butanol	0.0063 0.0067	0.0050 0.0069	0.0054 +++++	0.0054	0.0064	Ave		0.0060				12.2		15.0			
Methyl methacrylate	0.0795 0.0622	0.0597 0.0636	0.0590 +++++	0.0596	0.0605	Ave		0.0634				11.4		15.0			
2-Nitropropane	0.0690 0.0550	0.0523 0.0563	0.0442 +++++	0.0432	0.0509	Lin1	-0.009	0.0542							0.9950		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 597846

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/28/2022 11:59 Calibration End Date: 12/28/2022 14:33 Calibration ID: 75254

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
cis-1,4-Dichloro-2-butene	0.2277 0.1836	0.1741 0.1878	0.1789 +++++	0.1687	0.1818	Ave		0.1861				10.4		15.0			
1,2,3-Trimethylbenzene	+++++ 2.0851	2.0001 2.1451	2.0876 +++++	2.1769	2.0768	Ave		2.0953				2.9		15.0			
1,3,5-Trichlorobenzene	+++++ 0.6840	0.6605 0.7132	0.6572 +++++	0.7022	0.6815	Ave		0.6831				3.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 597846

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 12/28/2022 11:59 | Calibration End Date: 12/28/2022 14:33 | Calibration ID: 75254

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-597846/12	MS1_4150.D
Level 2	STD2 280-597846/13	MS1_4151.D
Level 3	STD5 280-597846/14	MS1_4152.D
Level 4	STD10 280-597846/15	MS1_4153.D
Level 5	STD50 280-597846/16	MS1_4154.D
Level 6	STD75 280-597846/17	MS1_4155.D
Level 7	STD100 280-597846/18	MS1_4156.D
Level 8	STD200 280-597846/19	MS1_4157.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Ethanol	FB	Ave	+++++ 525295	16838 699579	34363 +++++	67025	344891	+++++ 4500	120 6000	300 +++++	600	3000
Isopropyl alcohol	FB	Ave	+++++ 436215	11014 587065	29048 +++++	58137	273321	+++++ 750	20.0 1000	50.0 +++++	100	500
Acetonitrile	FB	Ave	+++++ 946507	31715 1264946	73561 +++++	131529	619753	+++++ 750	20.0 1000	50.0 +++++	100	500
Isopropyl ether	FB	Ave	6491 427749	9484 605197	25057 +++++	56708	264023	1.00 75.0	2.00 100	5.00 +++++	10.0	50.0
Chloroprene	FB	Ave	11169 828424	20908 1161144	47410 +++++	102243	508709	1.00 75.0	2.00 100	5.00 +++++	10.0	50.0
Tert-butyl ethyl ether	FB	Ave	22342 1593718	38394 2255355	99500 +++++	206759	1012144	1.00 75.0	2.00 100	5.00 +++++	10.0	50.0
Ethyl acetate	FB	Lin2	23225 1270077	34539 1749485	88229 +++++	165987	826062	2.00 150	4.00 200	10.0 +++++	20.0	100
Propionitrile	FB	Ave	15718 1016428	26792 1362592	65036 +++++	133723	661883	10.0 750	20.0 1000	50.0 +++++	100	500
Methacrylonitrile	FB	Ave	61798 3936223	96781 5376077	262455 +++++	523336	2556941	10.0 750	20.0 1000	50.0 +++++	100	500
Tert-amyl methyl ether	FB	Ave	21660 1480658	35592 2065396	91801 +++++	181024	936157	1.00 75.0	2.00 100	5.00 +++++	10.0	50.0
n-Butanol	FB	Ave	5369 431191	8295 611017	22686 +++++	45281	270310	25.0 1875	50.0 2500	125 +++++	250	1250
Methyl methacrylate	FB	Ave	5388 320989	7929 448949	19778 +++++	39696	205154	2.00 150	4.00 200	10.0 +++++	20.0	100
2-Nitropropane	FB	Lin1	4678 284013	6956 397485	14807 +++++	28794	172456	2.00 150	4.00 200	10.0 +++++	20.0	100
cis-1,4-Dichloro-2-butene	DCBd4	Ave	6011 350008	8859 490419	22325 +++++	42020	224325	2.00 150	4.00 200	10.0 +++++	20.0	100
1,2,3-Trimethylbenzene	DCBd4	Ave	+++++ 1987881	50883 2801548	130272 +++++	271119	1281572	+++++ 75.0	2.00 100	5.00 +++++	10.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 597846

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/28/2022 11:59 Calibration End Date: 12/28/2022 14:33 Calibration ID: 75254

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,3,5-Trichlorobenzene	DCBd4	Ave	+++++ 652054	16804 931398	41012 +++++	87460	420533	+++++ 75.0	2.00 100	5.00 +++++	10.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4150.D
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 28-Dec-2022 11:59:30 ALS Bottle#: 1 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:05:58 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:10:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1694553	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	391772	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	659913	50.0	50.0	
19 Ethanol	45	3.071	3.071	0.000	95	9981	60.0	83.8	
27 Isopropyl alcohol	45	3.587	3.587	0.000	94	9415	10.0	16.5	
29 Acetonitrile	41	3.727	3.727	0.000	97	20977	10.0	15.5	
41 Isopropyl ether	87	4.551	4.551	0.000	94	6491	1.00	1.17	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	96	11169	1.00	1.06	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	22342	1.00	1.07	
47 Ethyl acetate	43	5.040	5.040	0.000	99	23225	2.00	2.10	
50 Propionitrile	54	5.082	5.082	0.000	96	15718	10.0	11.5	
52 Methacrylonitrile	41	5.207	5.207	0.000	92	61798	10.0	11.6	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	85	21660	1.00	1.12	
67 n-Butanol	56	6.227	6.227	0.000	87	5369	25.0	26.3	
72 Methyl methacrylate	100	6.590	6.590	0.000	93	5388	2.00	2.51	
76 2-Nitropropane	41	6.995	6.995	0.000	86	4678	2.00	2.71	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	6011	2.00	2.45	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	40124	1.00	1.45	
129 1,3,5-Trichlorobenzene	180	12.428	12.414	0.014	96	13949	1.00	1.55	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added:	1.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

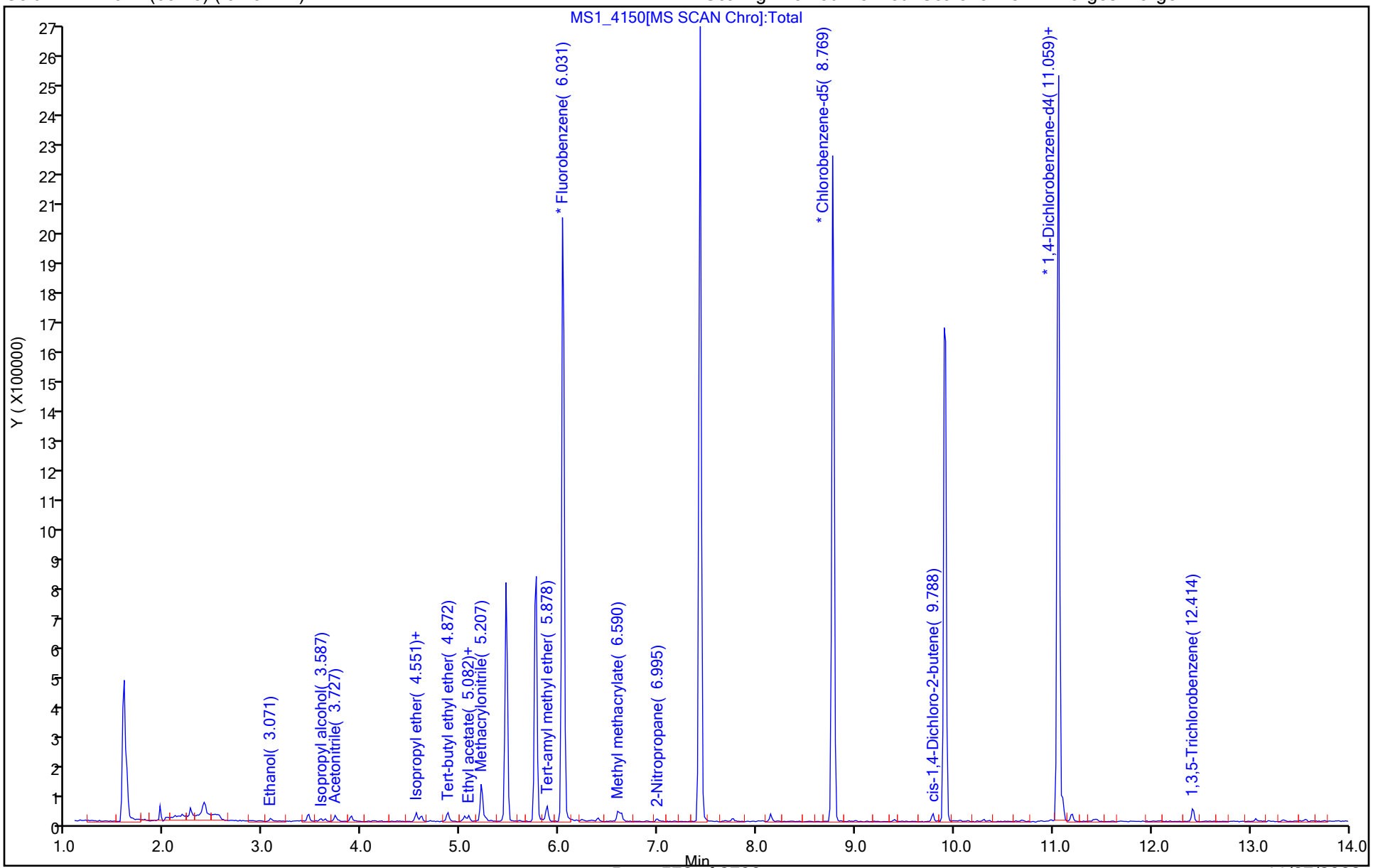
Report Date: 29-Dec-2022 11:05:59 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4150.D

Injection Date:	28-Dec-2022 11:59:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD1			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4151.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 28-Dec-2022 12:21:30 ALS Bottle#: 2 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:05:59 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:11:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1661104	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	88	397548	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	636006	50.0	50.0	
19 Ethanol	45	3.070	3.071	-0.001	99	16838	120.0	144.2	
27 Isopropyl alcohol	45	3.587	3.587	0.000	96	11014	20.0	19.7	
29 Acetonitrile	41	3.727	3.727	0.000	97	31715	20.0	23.8	
41 Isopropyl ether	87	4.551	4.551	0.000	92	9484	2.00	1.74	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	20908	2.00	2.02	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	38394	2.00	1.88	
47 Ethyl acetate	43	5.040	5.040	0.000	99	34539	4.00	3.57	
50 Propionitrile	54	5.082	5.082	0.000	99	26792	20.0	20.0	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	96781	20.0	18.6	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	85	35592	2.00	1.89	
67 n-Butanol	56	6.227	6.227	0.000	89	8295	50.0	41.4	
72 Methyl methacrylate	100	6.604	6.590	0.014	89	7929	4.00	3.76	
76 2-Nitropropane	41	6.981	6.995	-0.014	95	6956	4.00	4.03	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	8859	4.00	3.74	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	50883	2.00	1.91	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	94	16804	2.00	1.93	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added:	2.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

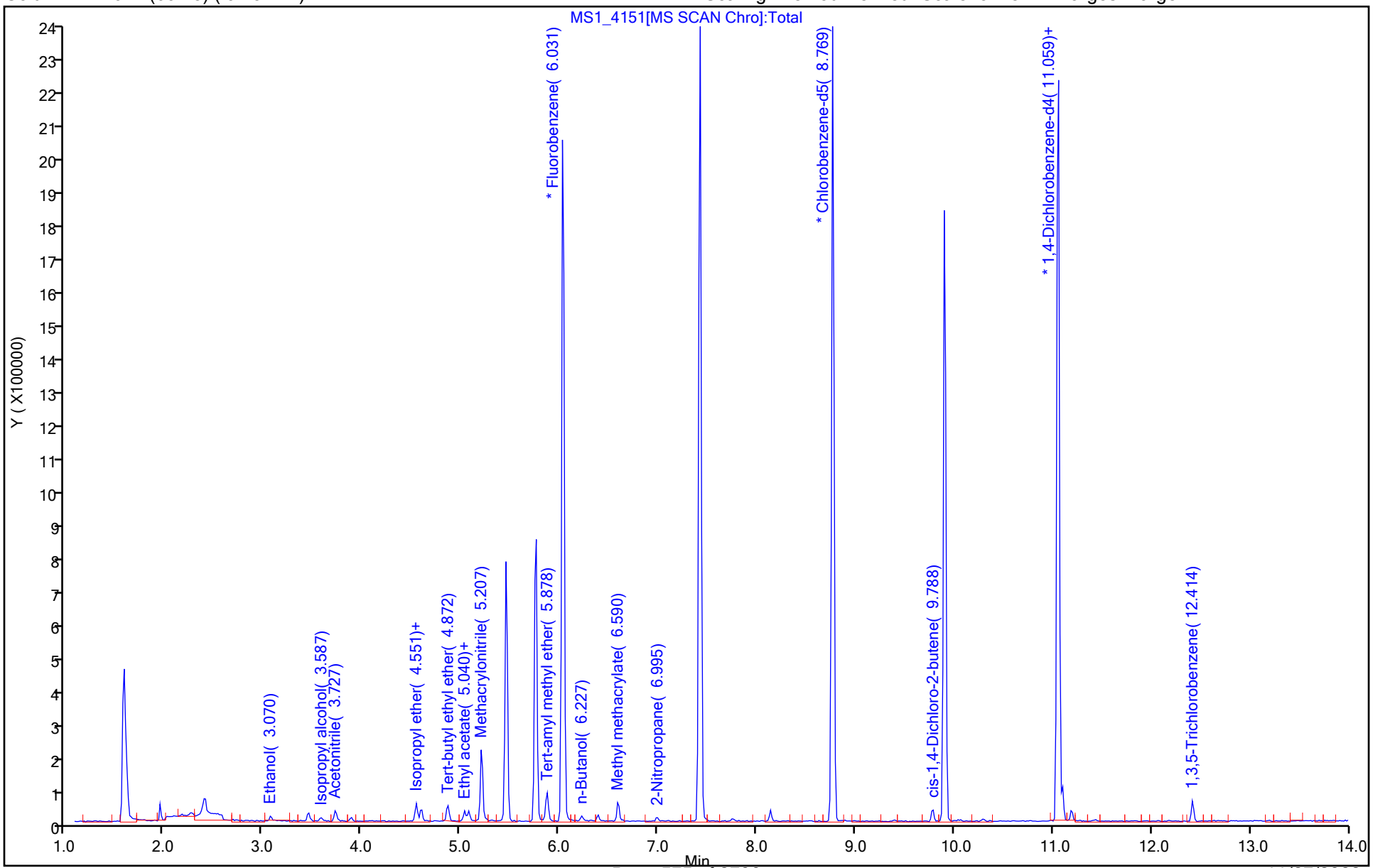
Report Date: 29-Dec-2022 11:06:00 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4151.D

Injection Date:	28-Dec-2022 12:21:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD2			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4152.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 28-Dec-2022 12:43:30 ALS Bottle#: 3 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:01 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:11:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1675413	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	392167	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	98	624037	50.0	50.0	
19 Ethanol	45	3.071	3.071	0.000	96	34363	300.0	291.9	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	29048	50.0	51.5	
29 Acetonitrile	41	3.727	3.727	0.000	99	73561	50.0	54.8	
41 Isopropyl ether	87	4.551	4.551	0.000	90	25057	5.00	4.56	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	47410	5.00	4.53	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	99500	5.00	4.83	
47 Ethyl acetate	43	5.040	5.040	0.000	100	88229	10.0	10.2	
50 Propionitrile	54	5.082	5.082	0.000	97	65036	50.0	48.1	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	262455	50.0	50.0	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	93	91801	5.00	4.82	
67 n-Butanol	56	6.227	6.227	0.000	92	22686	125.0	112.4	
72 Methyl methacrylate	100	6.590	6.590	0.000	89	19778	10.0	9.30	
76 2-Nitropropane	41	6.995	6.995	0.000	93	14807	10.0	8.32	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	22325	10.0	9.61	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	130272	5.00	4.98	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	94	41012	5.00	4.81	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added:	5.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

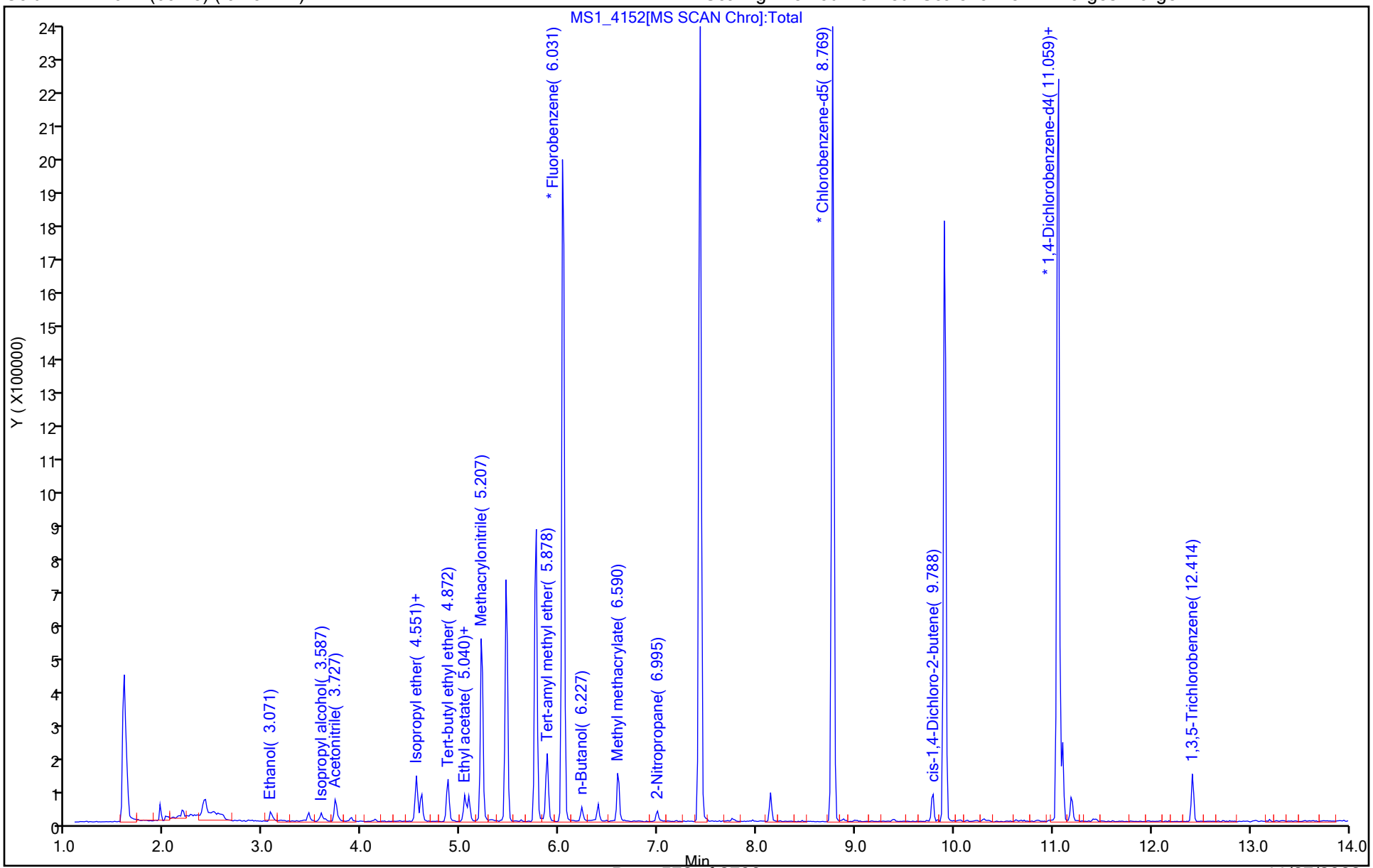
Report Date: 29-Dec-2022 11:06:01 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4152.D

Injection Date:	28-Dec-2022 12:43:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD5			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4153.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 28-Dec-2022 13:05:30 ALS Bottle#: 4 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:02 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:11:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1665925	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	383949	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	622730	50.0	50.0	
19 Ethanol	45	3.071	3.071	0.000	99	67025	600.0	572.5	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	58137	100.0	103.6	
29 Acetonitrile	41	3.727	3.727	0.000	99	131529	100.0	98.6	
41 Isopropyl ether	87	4.551	4.551	0.000	91	56708	10.0	10.4	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	102243	10.0	9.83	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	206759	10.0	10.1	
47 Ethyl acetate	43	5.040	5.040	0.000	100	165987	20.0	19.9	
50 Propionitrile	54	5.082	5.082	0.000	99	133723	100.0	99.4	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	523336	100.0	100.2	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	86	181024	10.0	9.56	
67 n-Butanol	56	6.227	6.227	0.000	93	45281	250.0	225.6	
72 Methyl methacrylate	100	6.604	6.590	0.014	91	39696	20.0	18.8	
76 2-Nitropropane	41	6.995	6.995	0.000	91	28794	20.0	16.1	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	42020	20.0	18.1	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	271119	10.0	10.4	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	87460	10.0	10.3	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added: 10.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

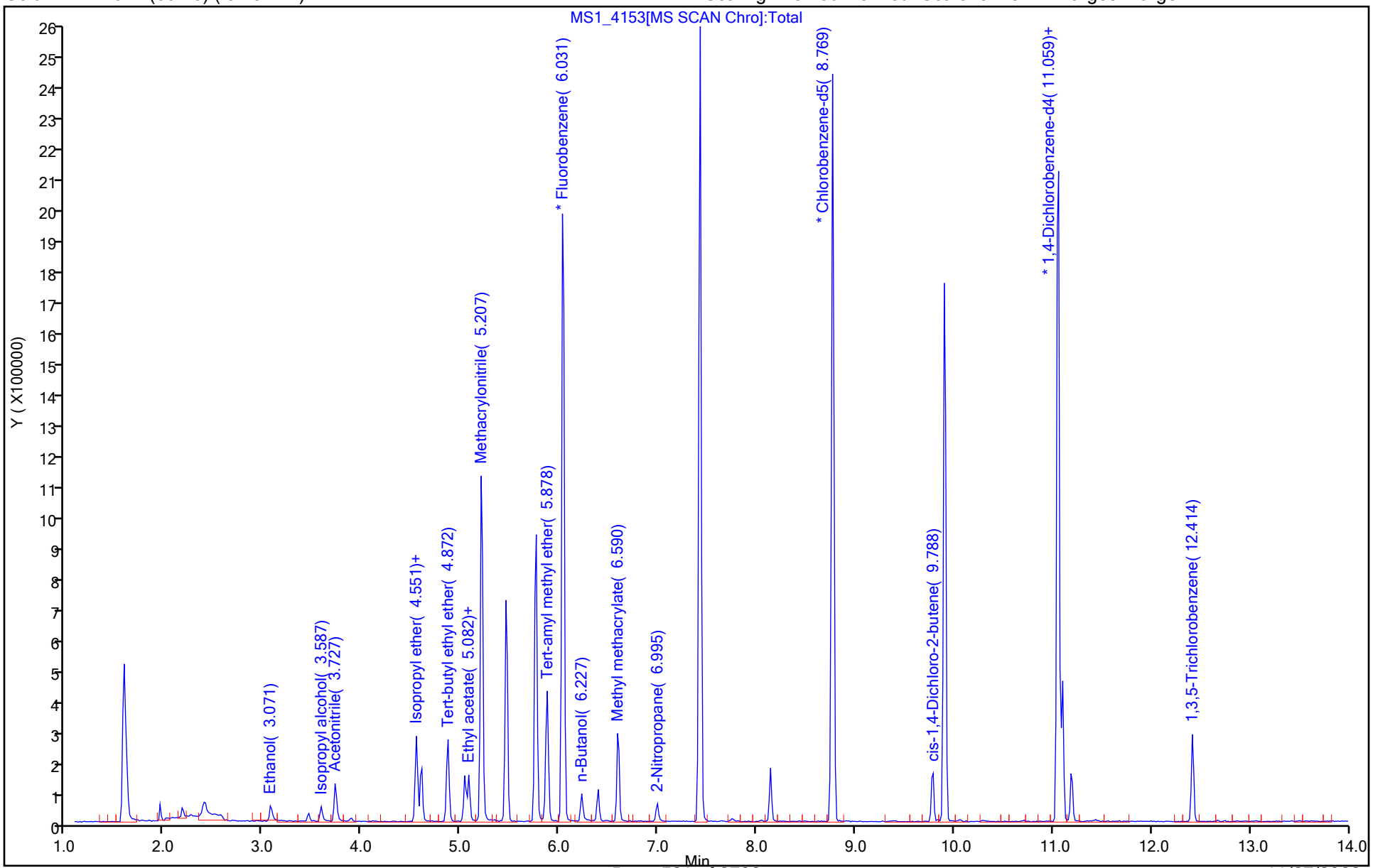
Report Date: 29-Dec-2022 11:06:02 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4153.D

Injection Date:	28-Dec-2022 13:05:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD10			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4154.D
Lims ID: STD50
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 28-Dec-2022 13:27:30 ALS Bottle#: 5 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD50
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:03 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:11:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1694109	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	387166	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	617083	50.0	50.0	
19 Ethanol	45	3.070	3.071	-0.001	100	344891	3000.0	2896.9	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	273321	500.0	479.1	
29 Acetonitrile	41	3.727	3.727	0.000	99	619753	500.0	456.9	
41 Isopropyl ether	87	4.551	4.551	0.000	92	264023	50.0	47.6	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	508709	50.0	48.1	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	1012144	50.0	48.6	
47 Ethyl acetate	43	5.040	5.040	0.000	100	826062	100.0	100.4	
50 Propionitrile	54	5.082	5.082	0.000	98	661883	500.0	483.7	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	2556941	500.0	481.4	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	88	936157	50.0	48.6	
67 n-Butanol	56	6.227	6.227	0.000	92	270310	1250.0	1324.3	
72 Methyl methacrylate	100	6.590	6.590	0.000	91	205154	100.0	95.4	
76 2-Nitropropane	41	6.995	6.995	0.000	96	172456	100.0	94.2	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	224325	100.0	97.7	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	1281572	50.0	49.6	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	420533	50.0	49.9	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added: 50.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

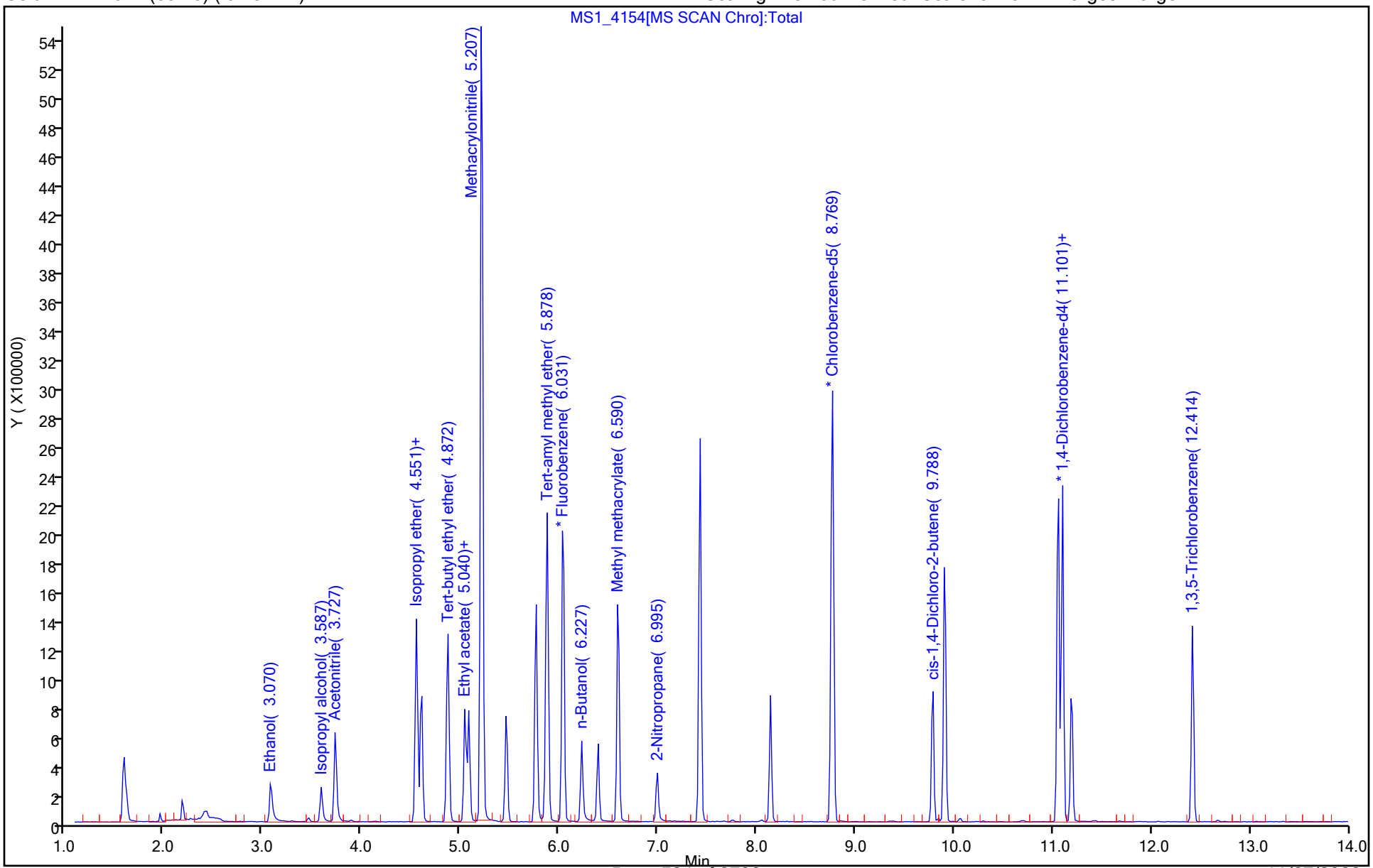
Report Date: 29-Dec-2022 11:06:03 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4154.D

Injection Date:	28-Dec-2022 13:27:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD50			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4155.D
Lims ID: STD75
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 28-Dec-2022 13:49:30 ALS Bottle#: 6 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD75
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:03 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:12:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1721115	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	399511	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	635571	50.0	50.0	
19 Ethanol	45	3.071	3.071	0.000	99	525295	4500.0	4343.0	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	436215	750.0	752.6	
29 Acetonitrile	41	3.727	3.727	0.000	99	946507	750.0	686.8	
41 Isopropyl ether	87	4.551	4.551	0.000	92	427749	75.0	75.8	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	828424	75.0	77.1	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	1593718	75.0	75.3	
47 Ethyl acetate	43	5.040	5.040	0.000	100	1270077	150.0	152.3	
50 Propionitrile	54	5.082	5.082	0.000	98	1016428	750.0	731.1	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	3936223	750.0	729.4	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	87	1480658	75.0	75.7	
67 n-Butanol	56	6.227	6.227	0.000	92	431191	1875.0	2079.3	
72 Methyl methacrylate	100	6.590	6.590	0.000	92	320989	150.0	147.0	
76 2-Nitropropane	41	6.995	6.995	0.000	98	284013	150.0	152.5	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	350008	150.0	148.0	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	1987881	75.0	74.6	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	96	652054	75.0	75.1	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added: 75.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

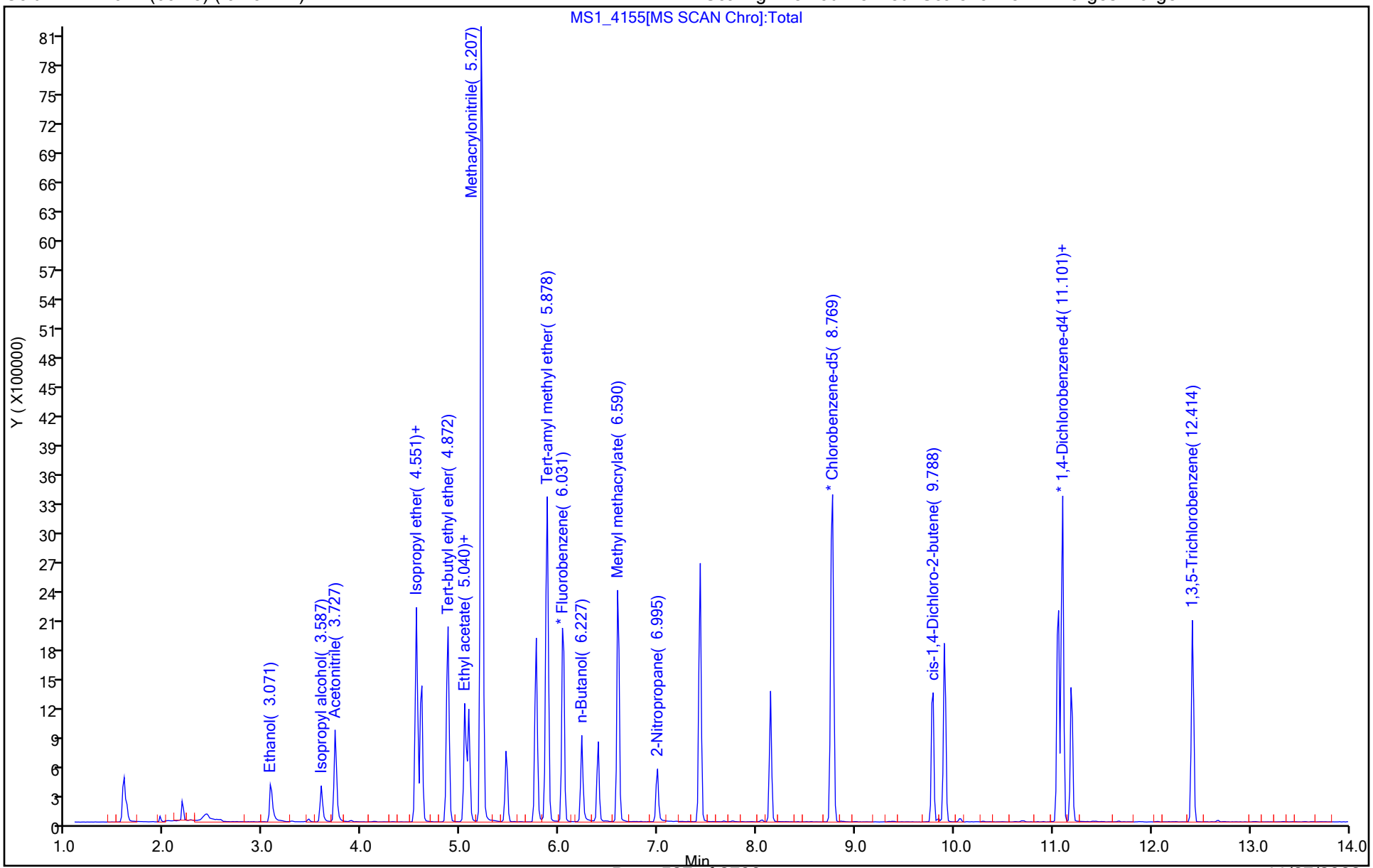
Report Date: 29-Dec-2022 11:06:04 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4155.D

Injection Date:	28-Dec-2022 13:49:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD75			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4156.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 28-Dec-2022 14:11:30 ALS Bottle#: 7 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:04 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:13:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1764613	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	414547	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	653011	50.0	50.0	
19 Ethanol	45	3.070	3.071	-0.001	99	699579	6000.0	5641.4	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	587065	1000.0	987.9	
29 Acetonitrile	41	3.727	3.727	0.000	99	1264946	1000.0	895.3	
41 Isopropyl ether	87	4.551	4.551	0.000	92	605197	100.0	104.6	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	1161144	100.0	105.4	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	2255355	100.0	103.9	
47 Ethyl acetate	43	5.040	5.040	0.000	100	1749485	200.0	204.9	
50 Propionitrile	54	5.082	5.082	0.000	98	1362592	1000.0	956.0	
52 Methacrylonitrile	41	5.207	5.207	0.000	94	5376077	1000.0	971.6	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	88	2065396	100.0	103.0	
67 n-Butanol	56	6.227	6.227	0.000	93	611017	2500.0	2873.8	
72 Methyl methacrylate	100	6.590	6.590	0.000	91	448949	200.0	200.5	
76 2-Nitropropane	41	6.995	6.995	0.000	97	397485	200.0	208.1	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	490419	200.0	201.8	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	2801548	100.0	102.4	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	96	931398	100.0	104.4	
145 Ethyl acrylate	55		0.000				ND	ND	
146 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added: 100.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

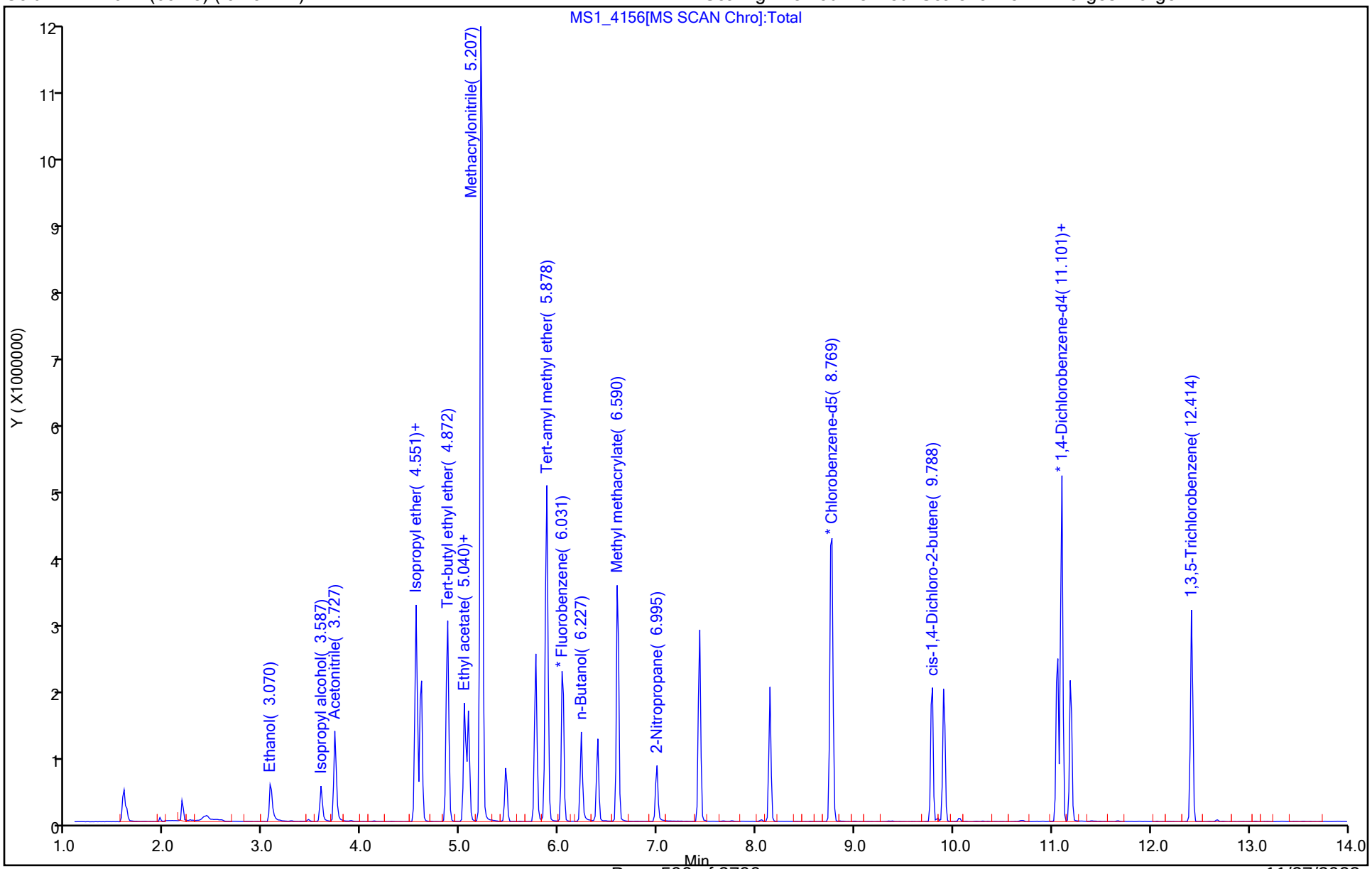
Report Date: 29-Dec-2022 11:06:05 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4156.D

Injection Date:	28-Dec-2022 14:11:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD100			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 28-Dec-2022 14:33:30 ALS Bottle#: 8 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: SUNLEEC Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub194

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:06:05 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 29-Dec-2022 10:13:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1818385	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	422708	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	682088	50.0	50.0	
19 Ethanol	45	3.084	3.071	0.013	100	1456995	6000.0	11402	
27 Isopropyl alcohol	45	3.587	3.587	0.000	97	1224003	1000.0	1998.8	
29 Acetonitrile	41	3.727	3.727	0.000	99	2537526	1000.0	1742.9	
41 Isopropyl ether	87	4.551	4.551	0.000	92	1112718	100.0	186.7	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	95	2290784	100.0	201.9	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	97	4343521	100.0	194.2	
47 Ethyl acetate	43	5.040	5.040	0.000	100	3504759	200.0	399.0	
50 Propionitrile	54	5.081	5.082	-0.001	98	2734341	1000.0	1861.7	
52 Methacrylonitrile	41	5.207	5.207	0.000	93	10534335	1000.0	1847.6	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	94	4118930	100.0	199.3	
67 n-Butanol	56	6.227	6.227	0.000	93	1326272	2500.0	6053.4	
72 Methyl methacrylate	100	6.590	6.590	0.000	91	919424	200.0	398.5	
76 2-Nitropropane	41	6.995	6.995	0.000	98	888741	200.0	451.4	
108 cis-1,4-Dichloro-2-butene	53	9.788	9.774	0.014	0	1011425	200.0	398.5	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	99	5426476	100.0	189.8	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	96	1833082	100.0	196.7	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00076	Amount Added: 100.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

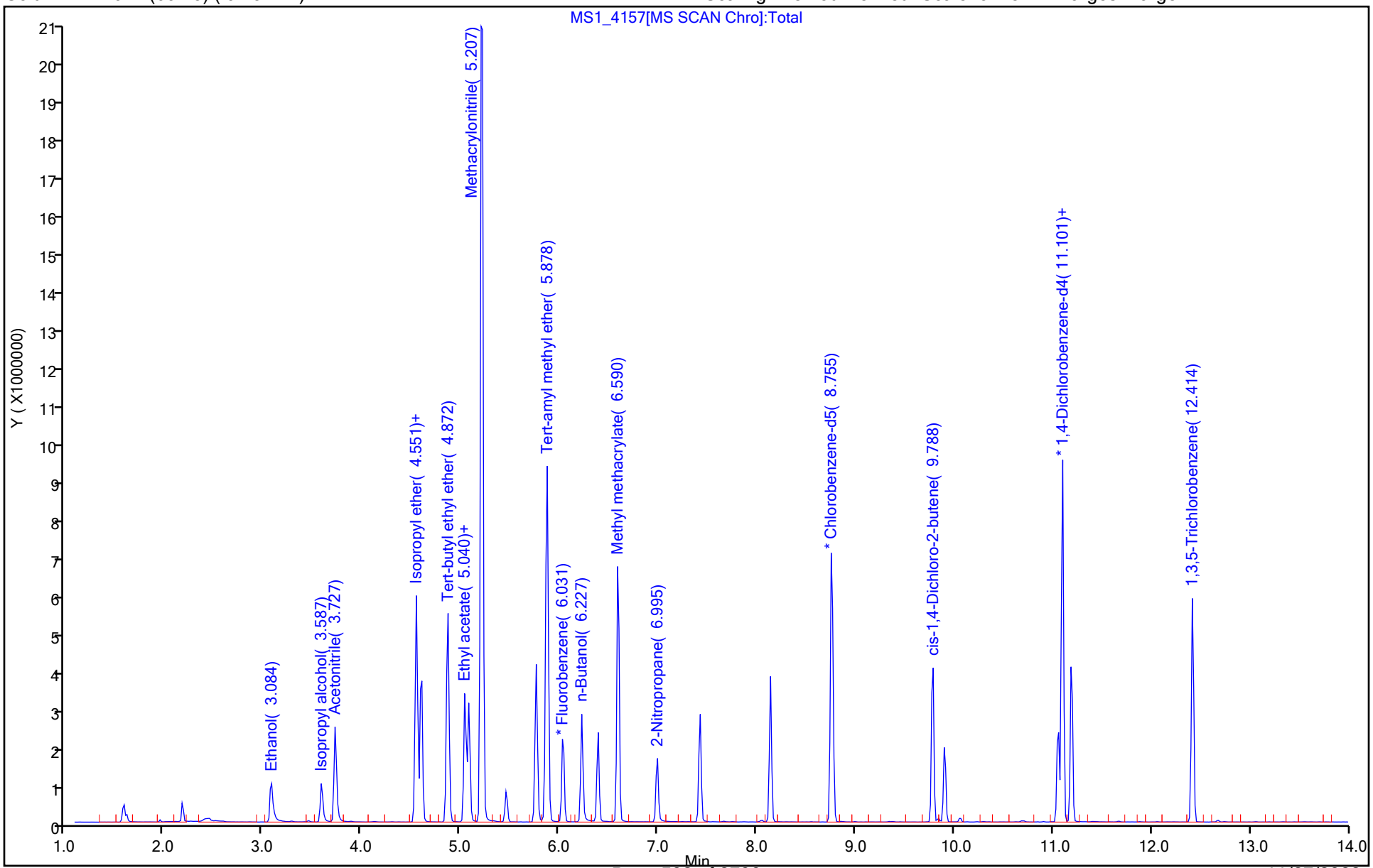
Report Date: 29-Dec-2022 11:06:06 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Injection Date:	28-Dec-2022 14:33:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	STD200			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Calibration / Ethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

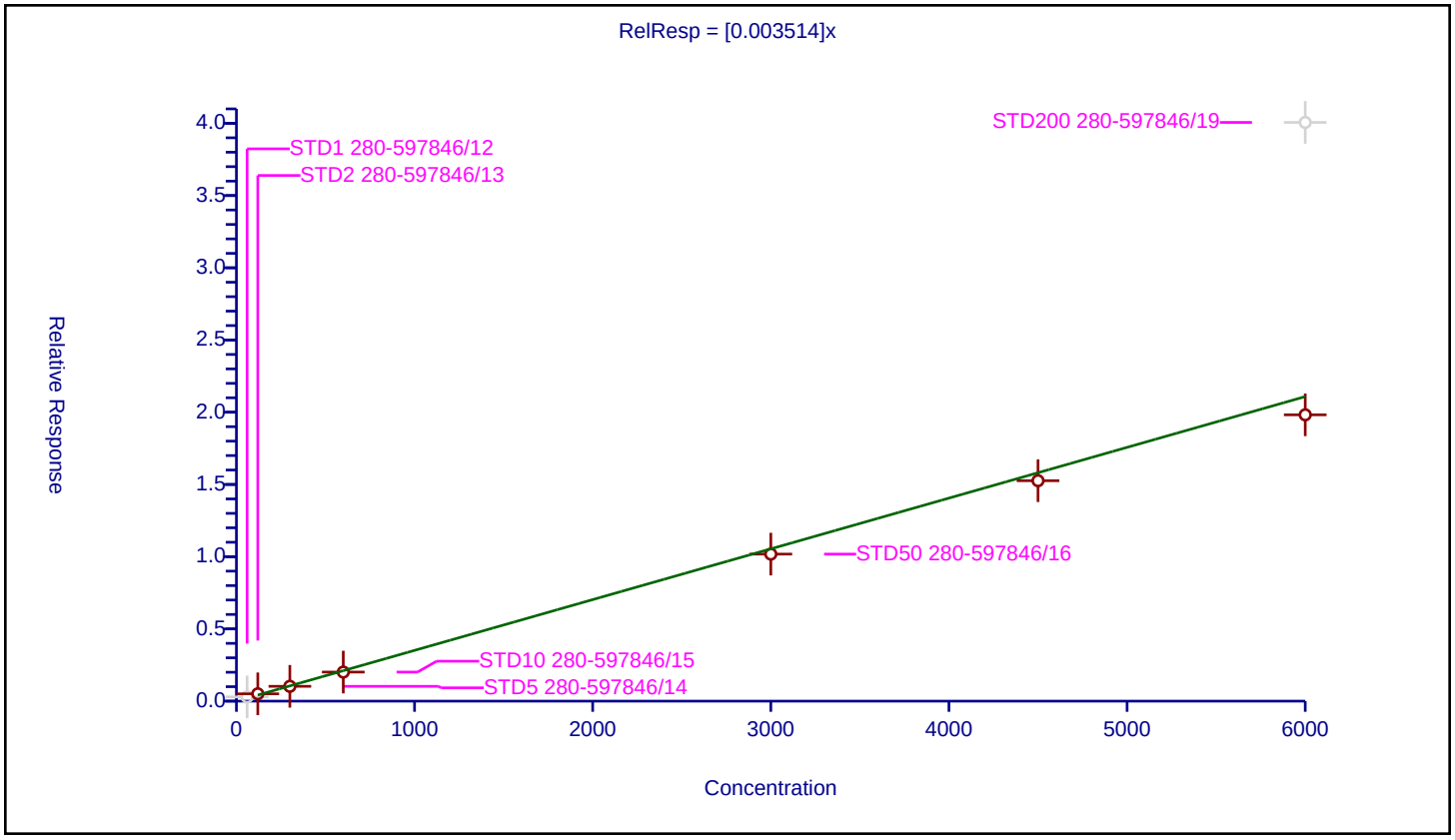
Curve Coefficients

Intercept:	0
Slope:	0.003514

Error Coefficients

Standard Error:	422000
Relative Standard Error:	10.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	60.0	0.294502	50.0	1694553.0	0.004908	N
2	STD2 280-597846/13	120.0	0.506832	50.0	1661104.0	0.004224	Y
3	STD5 280-597846/14	300.0	1.025508	50.0	1675413.0	0.003418	Y
4	STD10 280-597846/15	600.0	2.011645	50.0	1665925.0	0.003353	Y
5	STD50 280-597846/16	3000.0	10.179127	50.0	1694109.0	0.003393	Y
6	STD75 280-597846/17	4500.0	15.260311	50.0	1721115.0	0.003391	Y
7	STD100 280-597846/18	6000.0	19.822448	50.0	1764613.0	0.003304	Y
8	STD200 280-597846/19	6000.0	40.062885	50.0	1818385.0	0.006677	N



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Calibration / Isopropyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

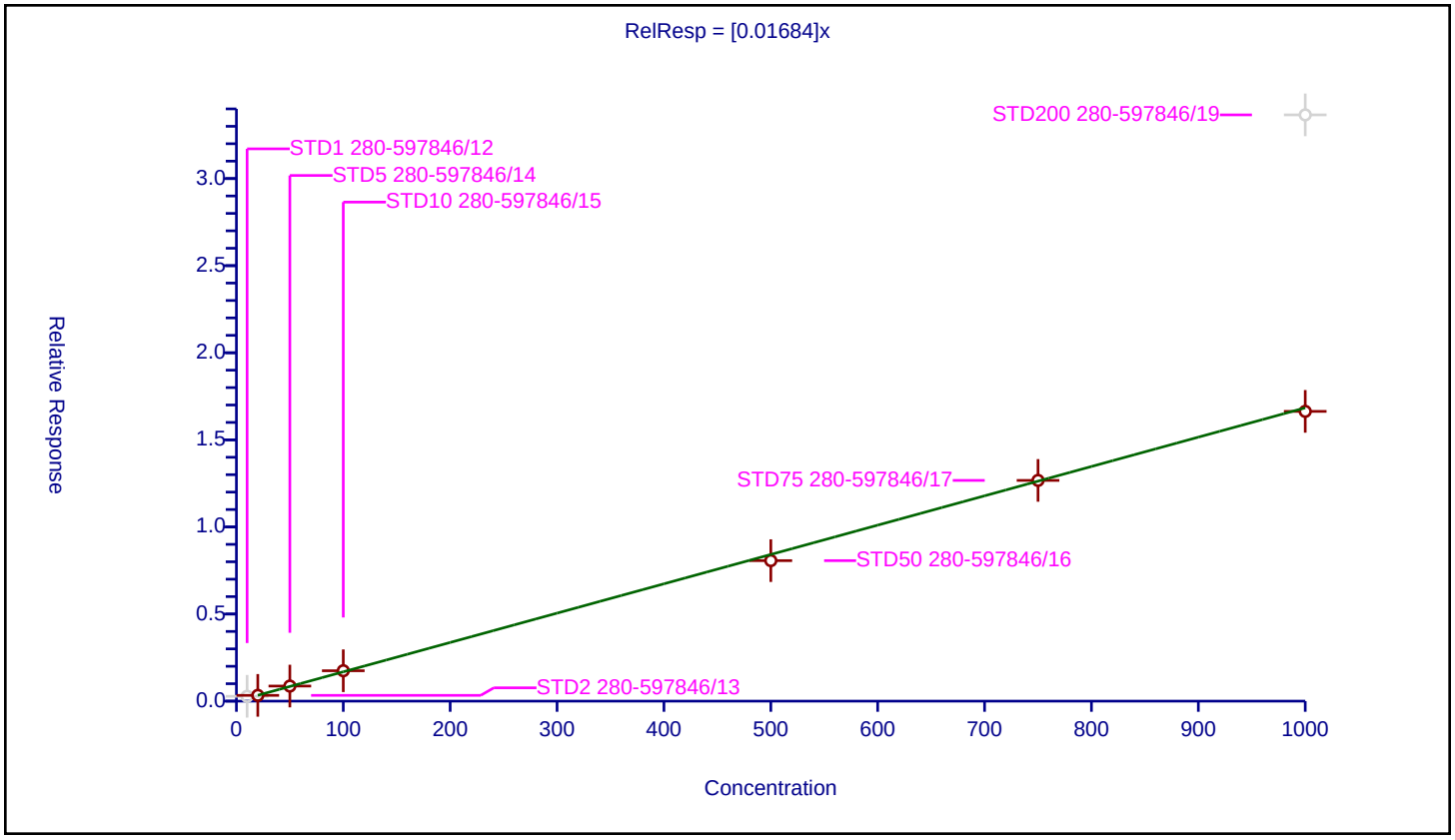
Curve Coefficients

Intercept:	0
Slope:	0.01684

Error Coefficients

Standard Error:	350000
Relative Standard Error:	2.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	10.0	0.277802	50.0	1694553.0	0.02778	N
2	STD2 280-597846/13	20.0	0.331527	50.0	1661104.0	0.016576	Y
3	STD5 280-597846/14	50.0	0.866891	50.0	1675413.0	0.017338	Y
4	STD10 280-597846/15	100.0	1.744886	50.0	1665925.0	0.017449	Y
5	STD50 280-597846/16	500.0	8.066807	50.0	1694109.0	0.016134	Y
6	STD75 280-597846/17	750.0	12.672454	50.0	1721115.0	0.016897	Y
7	STD100 280-597846/18	1000.0	16.634384	50.0	1764613.0	0.016634	Y
8	STD200 280-597846/19	1000.0	33.656321	50.0	1818385.0	0.033656	N



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Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

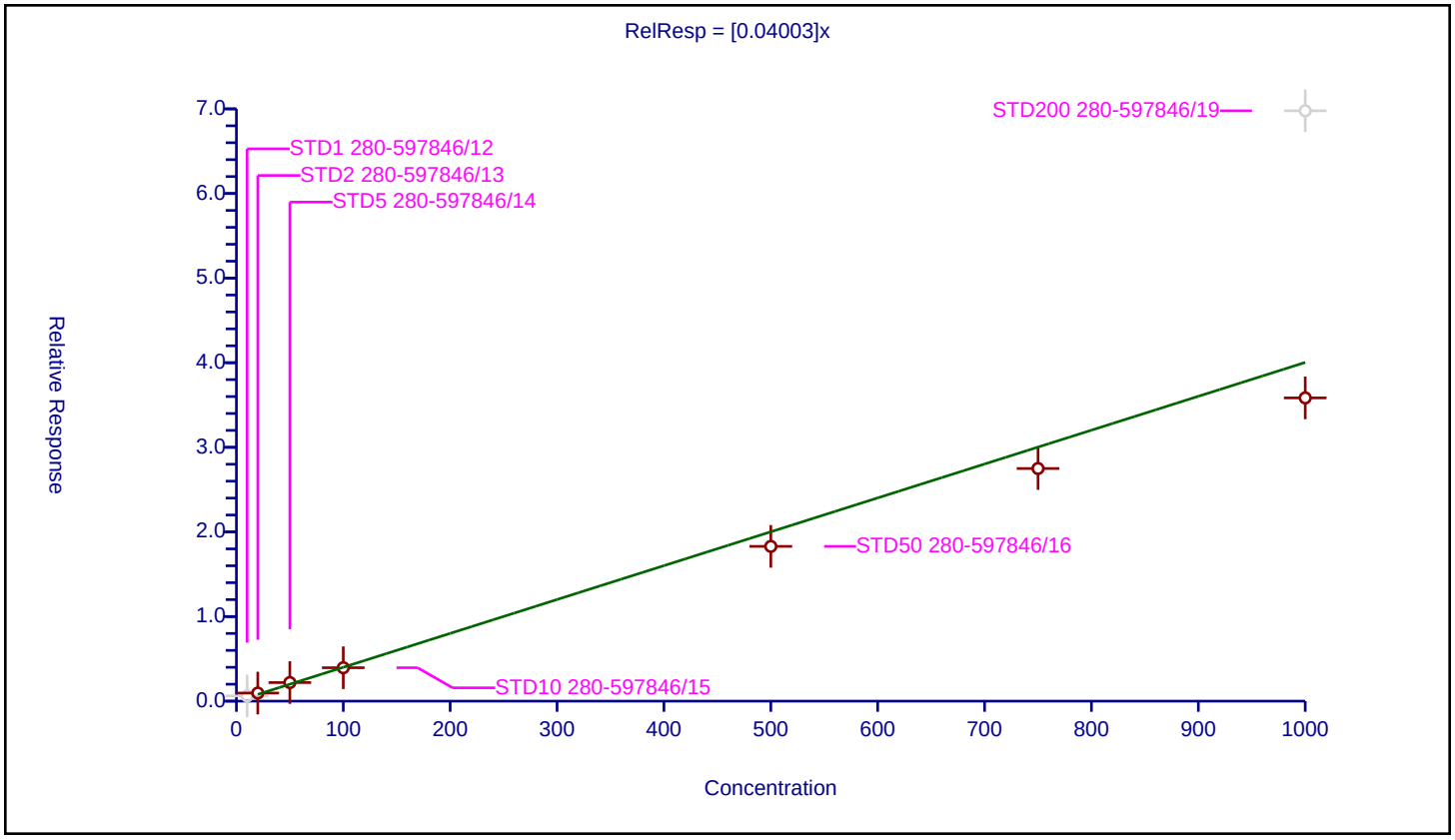
Curve Coefficients

Intercept:	0
Slope:	0.04003

Error Coefficients

Standard Error:	762000
Relative Standard Error:	12.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	10.0	0.618954	50.0	1694553.0	0.061895	N
2	STD2 280-597846/13	20.0	0.954636	50.0	1661104.0	0.047732	Y
3	STD5 280-597846/14	50.0	2.195309	50.0	1675413.0	0.043906	Y
4	STD10 280-597846/15	100.0	3.947627	50.0	1665925.0	0.039476	Y
5	STD50 280-597846/16	500.0	18.291415	50.0	1694109.0	0.036583	Y
6	STD75 280-597846/17	750.0	27.496913	50.0	1721115.0	0.036663	Y
7	STD100 280-597846/18	1000.0	35.842023	50.0	1764613.0	0.035842	Y
8	STD200 280-597846/19	1000.0	69.774168	50.0	1818385.0	0.069774	N



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

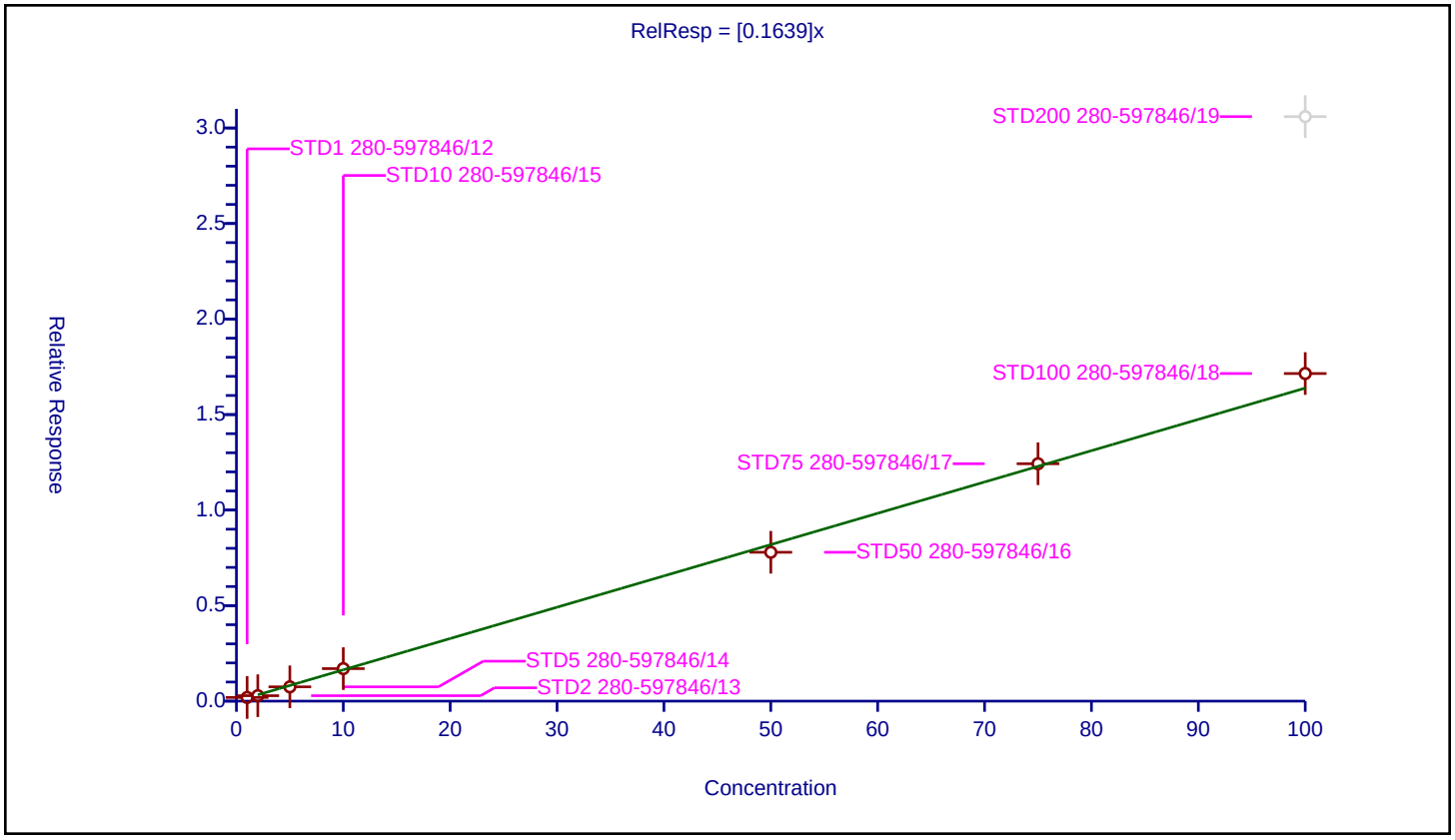
Curve Coefficients

Intercept:	0
Slope:	0.1639

Error Coefficients

Standard Error:	322000
Relative Standard Error:	9.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	0.191525	50.0	1694553.0	0.191525	Y
2	STD2 280-597846/13	2.0	0.285473	50.0	1661104.0	0.142736	Y
3	STD5 280-597846/14	5.0	0.747786	50.0	1675413.0	0.149557	Y
4	STD10 280-597846/15	10.0	1.701997	50.0	1665925.0	0.1702	Y
5	STD50 280-597846/16	50.0	7.792385	50.0	1694109.0	0.155848	Y
6	STD75 280-597846/17	75.0	12.426508	50.0	1721115.0	0.165687	Y
7	STD100 280-597846/18	100.0	17.148151	50.0	1764613.0	0.171482	Y
8	STD200 280-597846/19	100.0	30.596326	50.0	1818385.0	0.305963	N



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Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

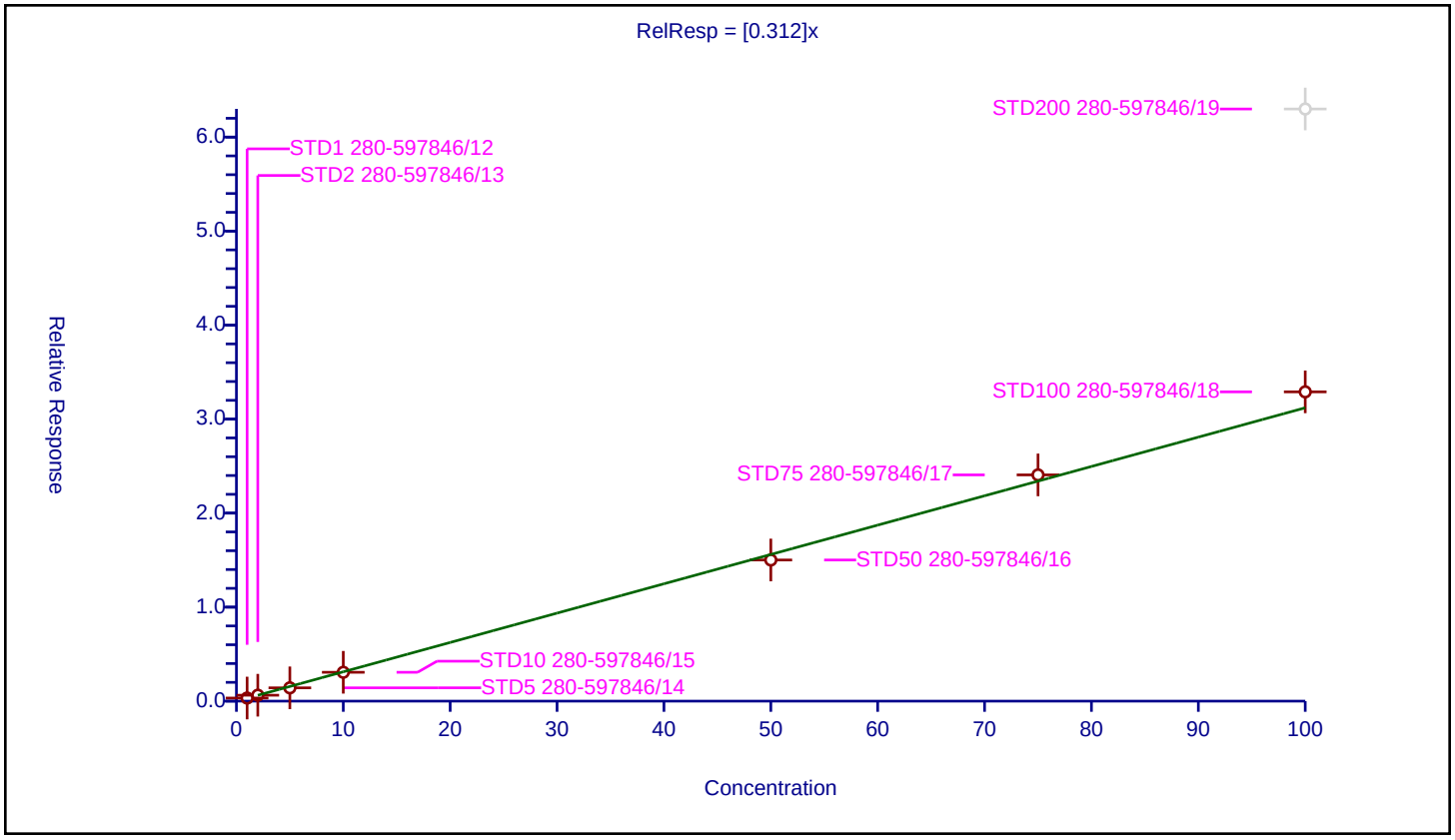
Curve Coefficients

Intercept:	0
Slope:	0.312

Error Coefficients

Standard Error:	620000
Relative Standard Error:	5.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	0.329556	50.0	1694553.0	0.329556	Y
2	STD2 280-597846/13	2.0	0.62934	50.0	1661104.0	0.31467	Y
3	STD5 280-597846/14	5.0	1.414875	50.0	1675413.0	0.282975	Y
4	STD10 280-597846/15	10.0	3.068656	50.0	1665925.0	0.306866	Y
5	STD50 280-597846/16	50.0	15.014058	50.0	1694109.0	0.300281	Y
6	STD75 280-597846/17	75.0	24.066492	50.0	1721115.0	0.320887	Y
7	STD100 280-597846/18	100.0	32.900812	50.0	1764613.0	0.329008	Y
8	STD200 280-597846/19	100.0	62.989521	50.0	1818385.0	0.629895	N



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Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

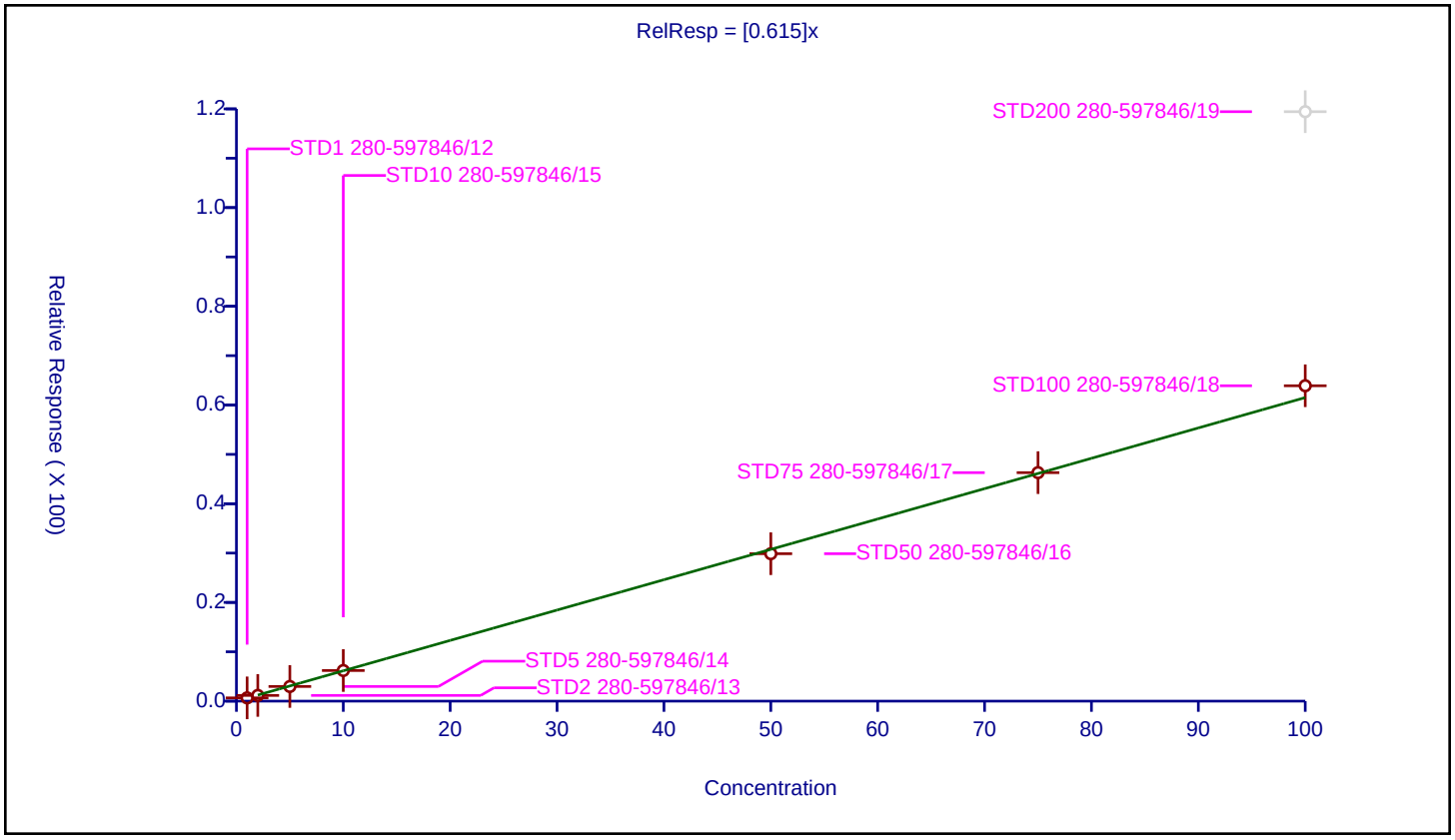
Curve Coefficients

Intercept:	0
Slope:	0.615

Error Coefficients

Standard Error:	1200000
Relative Standard Error:	4.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	0.65923	50.0	1694553.0	0.65923	Y
2	STD2 280-597846/13	2.0	1.155677	50.0	1661104.0	0.577839	Y
3	STD5 280-597846/14	5.0	2.969417	50.0	1675413.0	0.593883	Y
4	STD10 280-597846/15	10.0	6.205531	50.0	1665925.0	0.620553	Y
5	STD50 280-597846/16	50.0	29.872458	50.0	1694109.0	0.597449	Y
6	STD75 280-597846/17	75.0	46.298998	50.0	1721115.0	0.61732	Y
7	STD100 280-597846/18	100.0	63.905089	50.0	1764613.0	0.639051	Y
8	STD200 280-597846/19	100.0	119.433481	50.0	1818385.0	1.194335	N



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Calibration / Ethyl acetate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

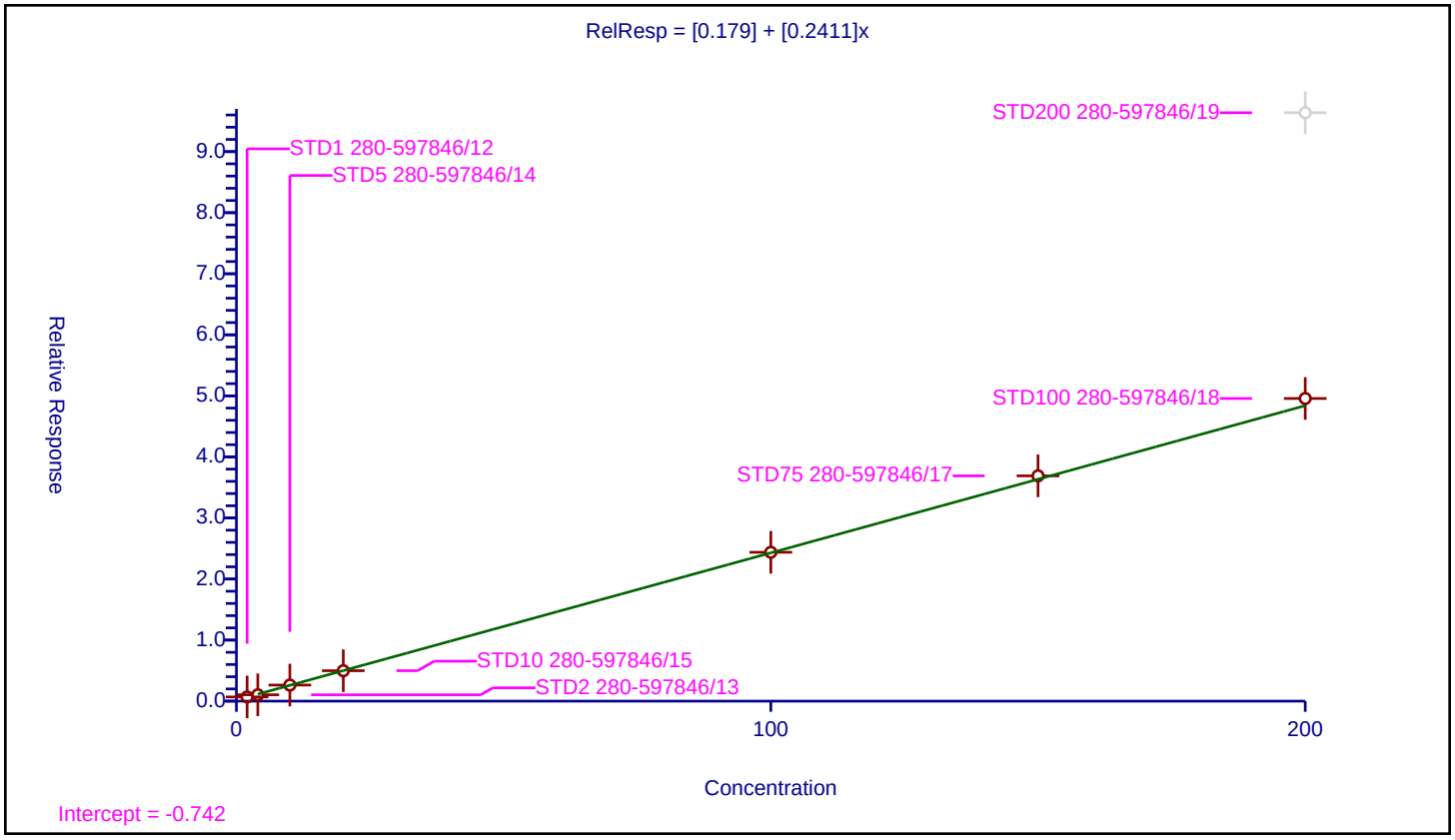
Curve Coefficients

Intercept:	0.179
Slope:	0.2411

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	2.0	0.685284	50.0	1694553.0	0.342642	Y
2	STD2 280-597846/13	4.0	1.03964	50.0	1661104.0	0.25991	Y
3	STD5 280-597846/14	10.0	2.633052	50.0	1675413.0	0.263305	Y
4	STD10 280-597846/15	20.0	4.981827	50.0	1665925.0	0.249091	Y
5	STD50 280-597846/16	100.0	24.380427	50.0	1694109.0	0.243804	Y
6	STD75 280-597846/17	150.0	36.896924	50.0	1721115.0	0.245979	Y
7	STD100 280-597846/18	200.0	49.571351	50.0	1764613.0	0.247857	Y
8	STD200 280-597846/19	200.0	96.370103	50.0	1818385.0	0.481851	N



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Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

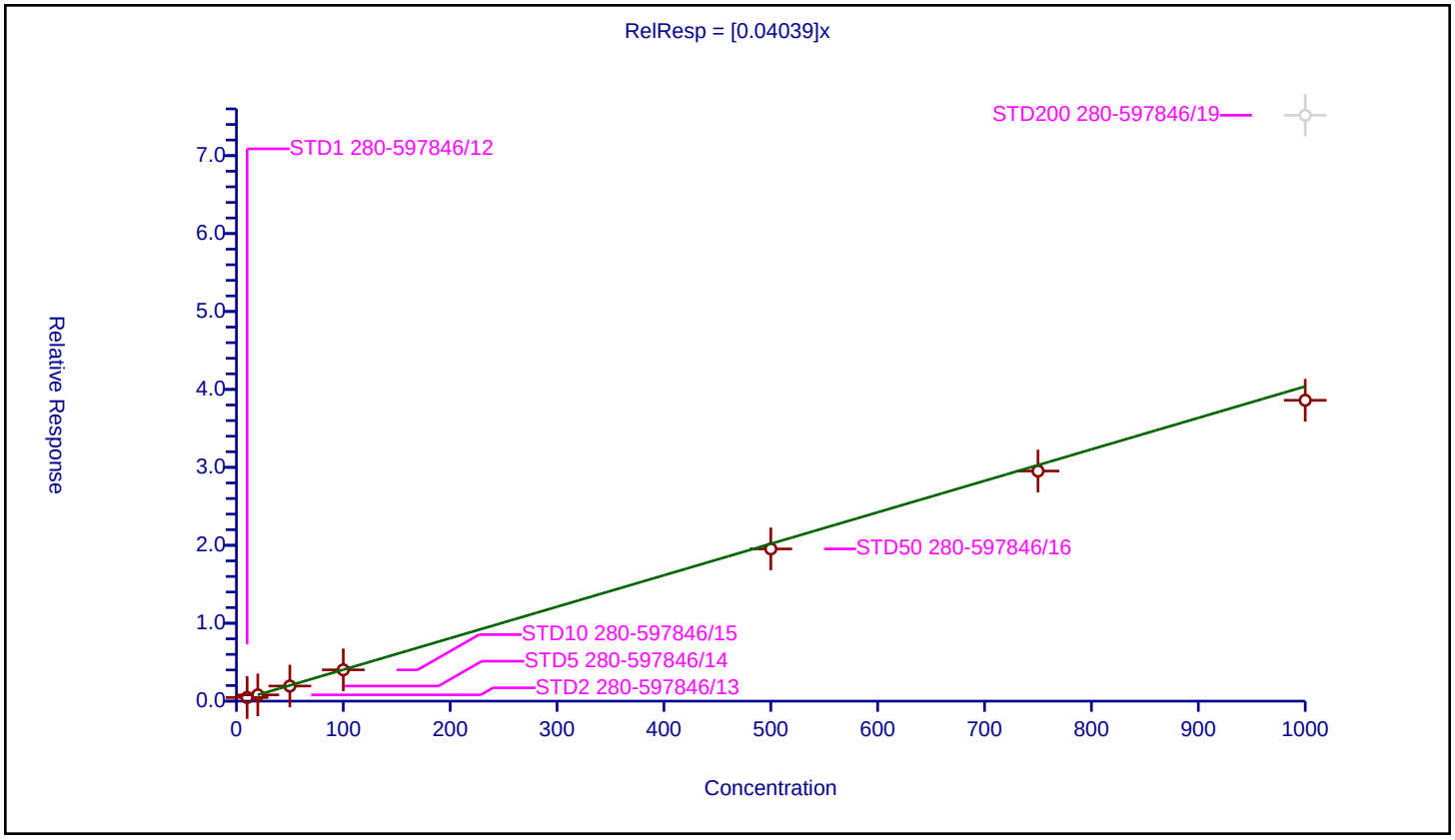
Curve Coefficients

Intercept:	0
Slope:	0.04039

Error Coefficients

Standard Error:	747000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	10.0	0.46378	50.0	1694553.0	0.046378	Y
2	STD2 280-597846/13	20.0	0.806452	50.0	1661104.0	0.040323	Y
3	STD5 280-597846/14	50.0	1.940895	50.0	1675413.0	0.038818	Y
4	STD10 280-597846/15	100.0	4.013476	50.0	1665925.0	0.040135	Y
5	STD50 280-597846/16	500.0	19.534841	50.0	1694109.0	0.03907	Y
6	STD75 280-597846/17	750.0	29.528184	50.0	1721115.0	0.039371	Y
7	STD100 280-597846/18	1000.0	38.608805	50.0	1764613.0	0.038609	Y
8	STD200 280-597846/19	1000.0	75.185975	50.0	1818385.0	0.075186	N



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Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

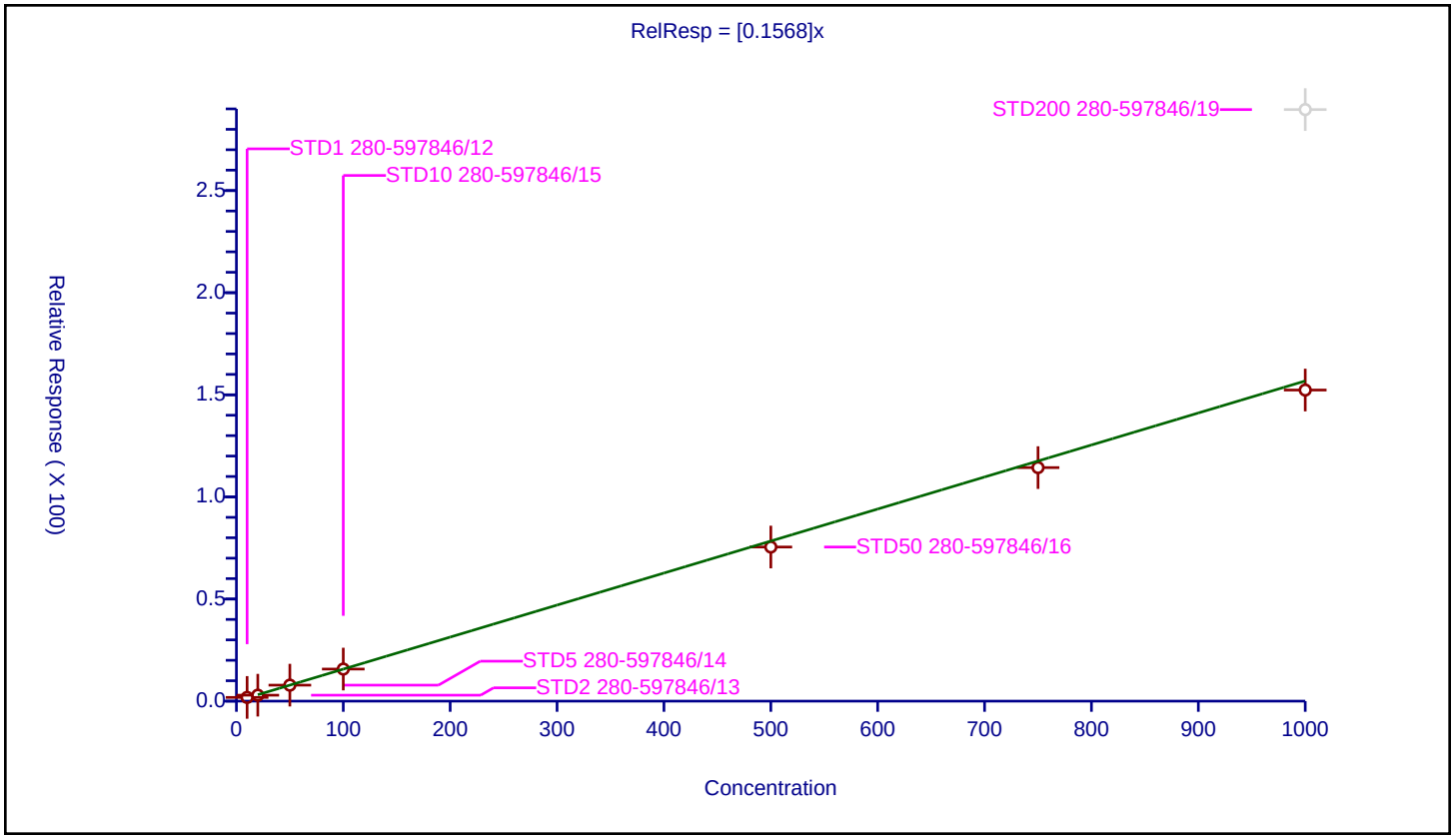
Curve Coefficients

Intercept:	0
Slope:	0.1568

Error Coefficients

Standard Error:	2920000
Relative Standard Error:	7.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	10.0	1.823431	50.0	1694553.0	0.182343	Y
2	STD2 280-597846/13	20.0	2.913153	50.0	1661104.0	0.145658	Y
3	STD5 280-597846/14	50.0	7.832546	50.0	1675413.0	0.156651	Y
4	STD10 280-597846/15	100.0	15.70707	50.0	1665925.0	0.157071	Y
5	STD50 280-597846/16	500.0	75.465658	50.0	1694109.0	0.150931	Y
6	STD75 280-597846/17	750.0	114.350959	50.0	1721115.0	0.152468	Y
7	STD100 280-597846/18	1000.0	152.330199	50.0	1764613.0	0.15233	Y
8	STD200 280-597846/19	1000.0	289.661843	50.0	1818385.0	0.289662	N



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Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

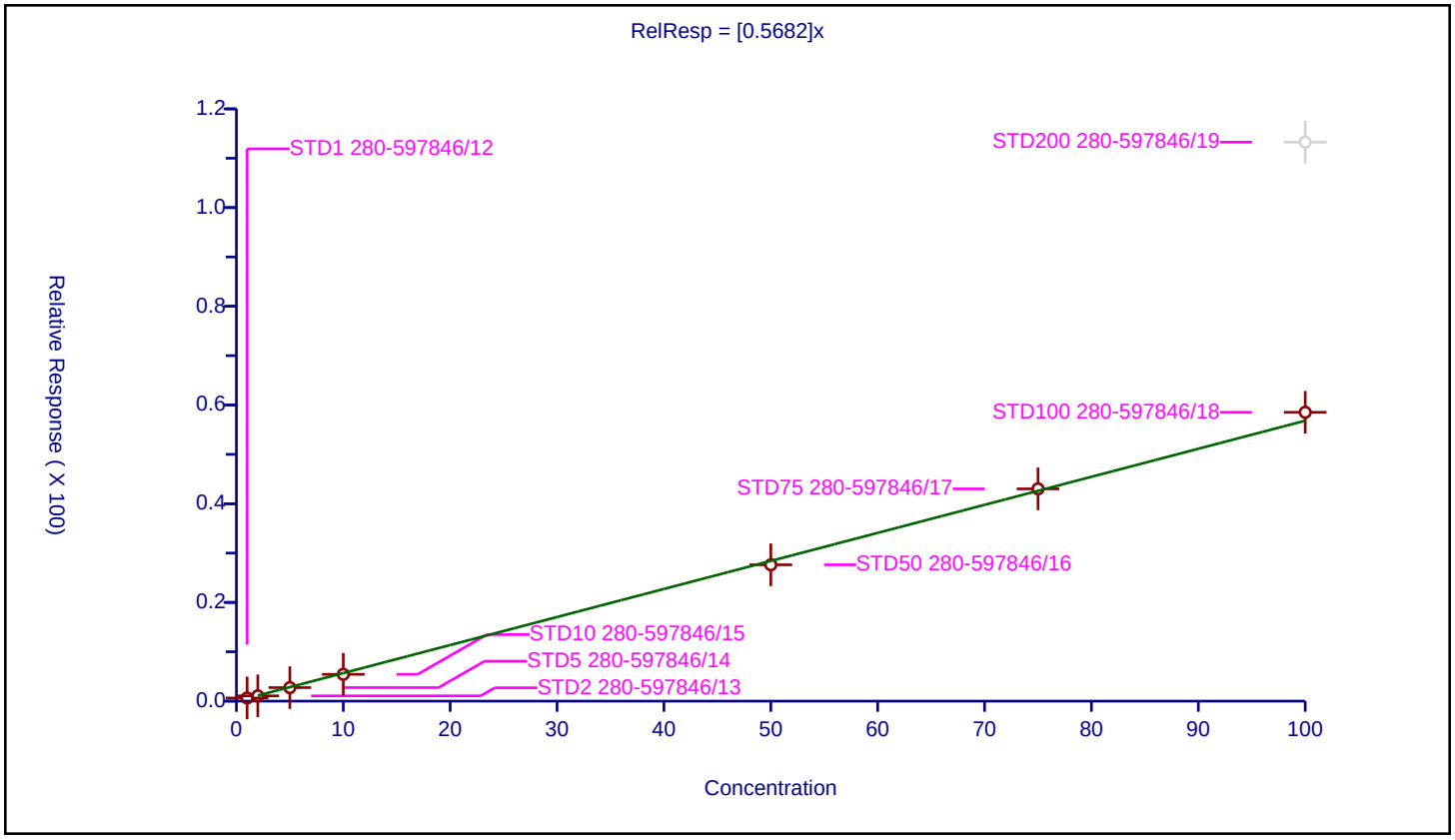
Curve Coefficients

Intercept:	0
Slope:	0.5682

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	6.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	0.639107	50.0	1694553.0	0.639107	Y
2	STD2 280-597846/13	2.0	1.071336	50.0	1661104.0	0.535668	Y
3	STD5 280-597846/14	5.0	2.739653	50.0	1675413.0	0.547931	Y
4	STD10 280-597846/15	10.0	5.433138	50.0	1665925.0	0.543314	Y
5	STD50 280-597846/16	50.0	27.629775	50.0	1694109.0	0.552595	Y
6	STD75 280-597846/17	75.0	43.014499	50.0	1721115.0	0.573527	Y
7	STD100 280-597846/18	100.0	58.522634	50.0	1764613.0	0.585226	Y
8	STD200 280-597846/19	100.0	113.257918	50.0	1818385.0	1.132579	N



Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

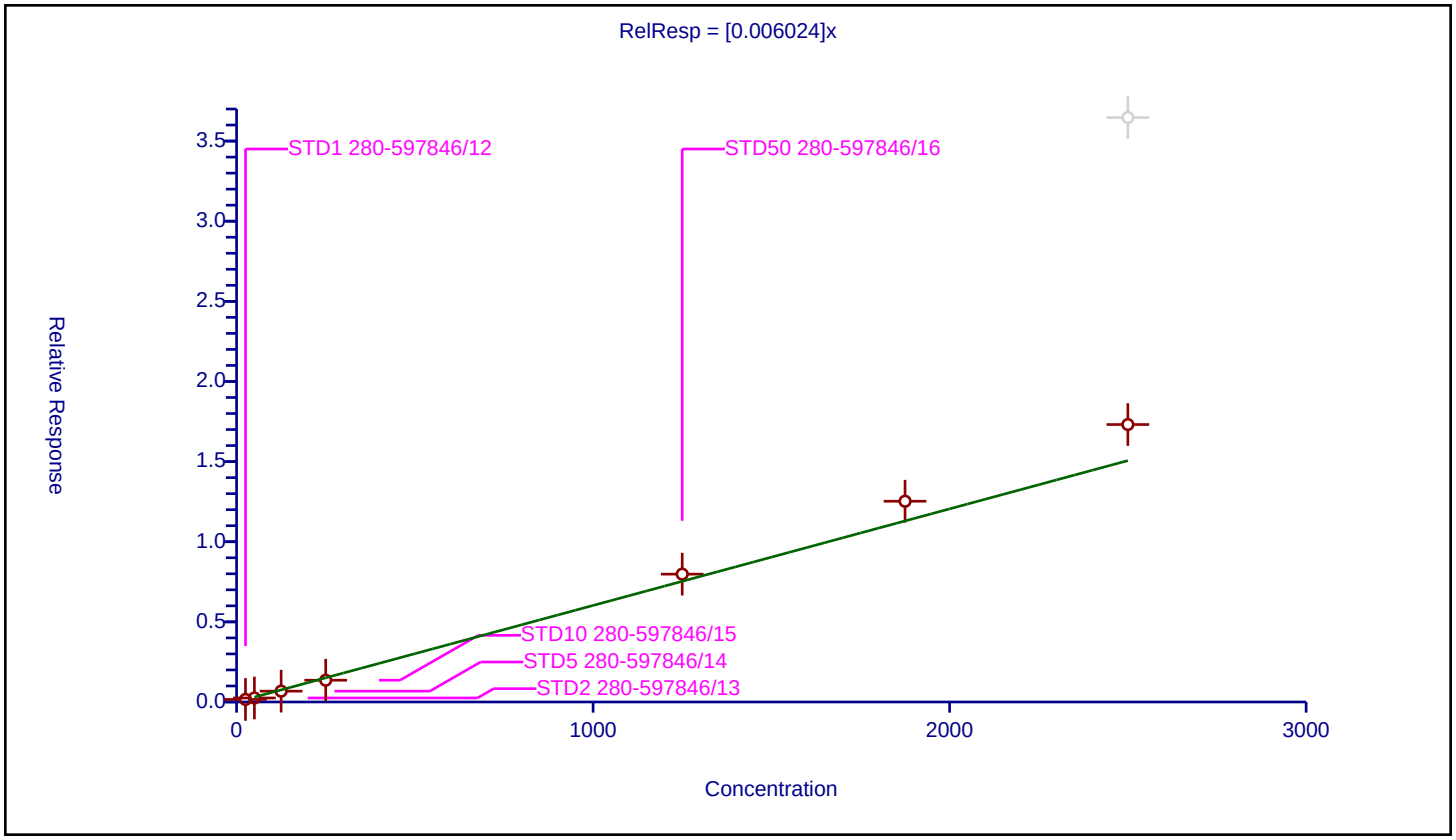
Curve Coefficients

Intercept:	0
Slope:	0.006024

Error Coefficients

Standard Error:	325000
Relative Standard Error:	12.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	25.0	0.158419	50.0	1694553.0	0.006337	Y
2	STD2 280-597846/13	50.0	0.249683	50.0	1661104.0	0.004994	Y
3	STD5 280-597846/14	125.0	0.677027	50.0	1675413.0	0.005416	Y
4	STD10 280-597846/15	250.0	1.359035	50.0	1665925.0	0.005436	Y
5	STD50 280-597846/16	1250.0	7.97794	50.0	1694109.0	0.006382	Y
6	STD75 280-597846/17	1875.0	12.526502	50.0	1721115.0	0.006681	Y
7	STD100 280-597846/18	2500.0	17.31306	50.0	1764613.0	0.006925	Y
8	STD200 280-597846/19	2500.0	36.468405	50.0	1818385.0	0.014587	N



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Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

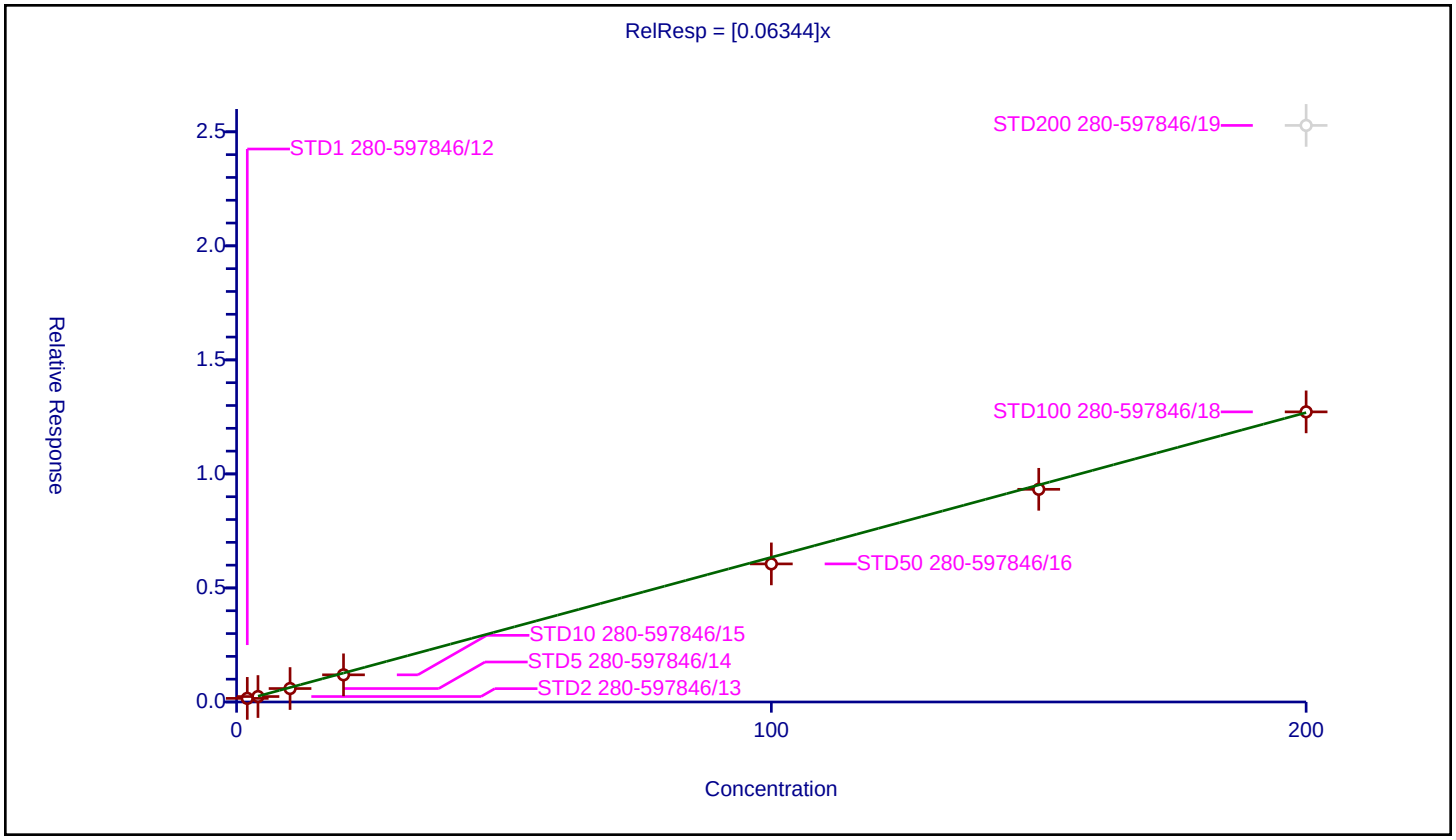
Curve Coefficients

Intercept:	0
Slope:	0.06344

Error Coefficients

Standard Error:	241000
Relative Standard Error:	11.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	2.0	0.15898	50.0	1694553.0	0.07949	Y
2	STD2 280-597846/13	4.0	0.238667	50.0	1661104.0	0.059667	Y
3	STD5 280-597846/14	10.0	0.590243	50.0	1675413.0	0.059024	Y
4	STD10 280-597846/15	20.0	1.19141	50.0	1665925.0	0.059571	Y
5	STD50 280-597846/16	100.0	6.054923	50.0	1694109.0	0.060549	Y
6	STD75 280-597846/17	150.0	9.325031	50.0	1721115.0	0.062167	Y
7	STD100 280-597846/18	200.0	12.720891	50.0	1764613.0	0.063604	Y
8	STD200 280-597846/19	200.0	25.281335	50.0	1818385.0	0.126407	N



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Calibration / 2-Nitropropane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

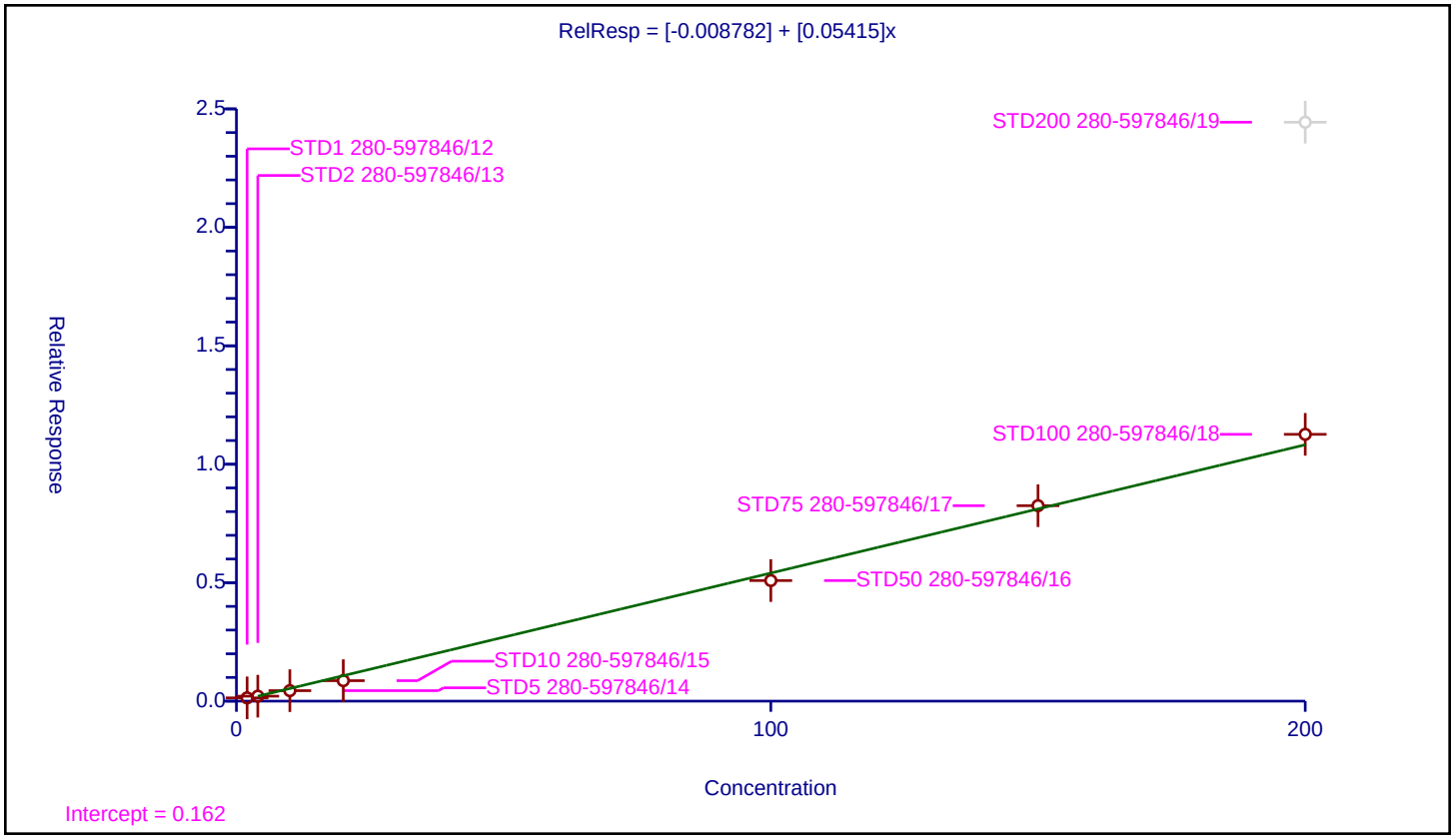
Curve Coefficients

Intercept:	-0.008782
Slope:	0.05415

Error Coefficients

Standard Error:	232000
Relative Standard Error:	19.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	2.0	0.138031	50.0	1694553.0	0.069015	Y
2	STD2 280-597846/13	4.0	0.209379	50.0	1661104.0	0.052345	Y
3	STD5 280-597846/14	10.0	0.441891	50.0	1675413.0	0.044189	Y
4	STD10 280-597846/15	20.0	0.864205	50.0	1665925.0	0.04321	Y
5	STD50 280-597846/16	100.0	5.089873	50.0	1694109.0	0.050899	Y
6	STD75 280-597846/17	150.0	8.250843	50.0	1721115.0	0.055006	Y
7	STD100 280-597846/18	200.0	11.262668	50.0	1764613.0	0.056313	Y
8	STD200 280-597846/19	200.0	24.437647	50.0	1818385.0	0.122188	N



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Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

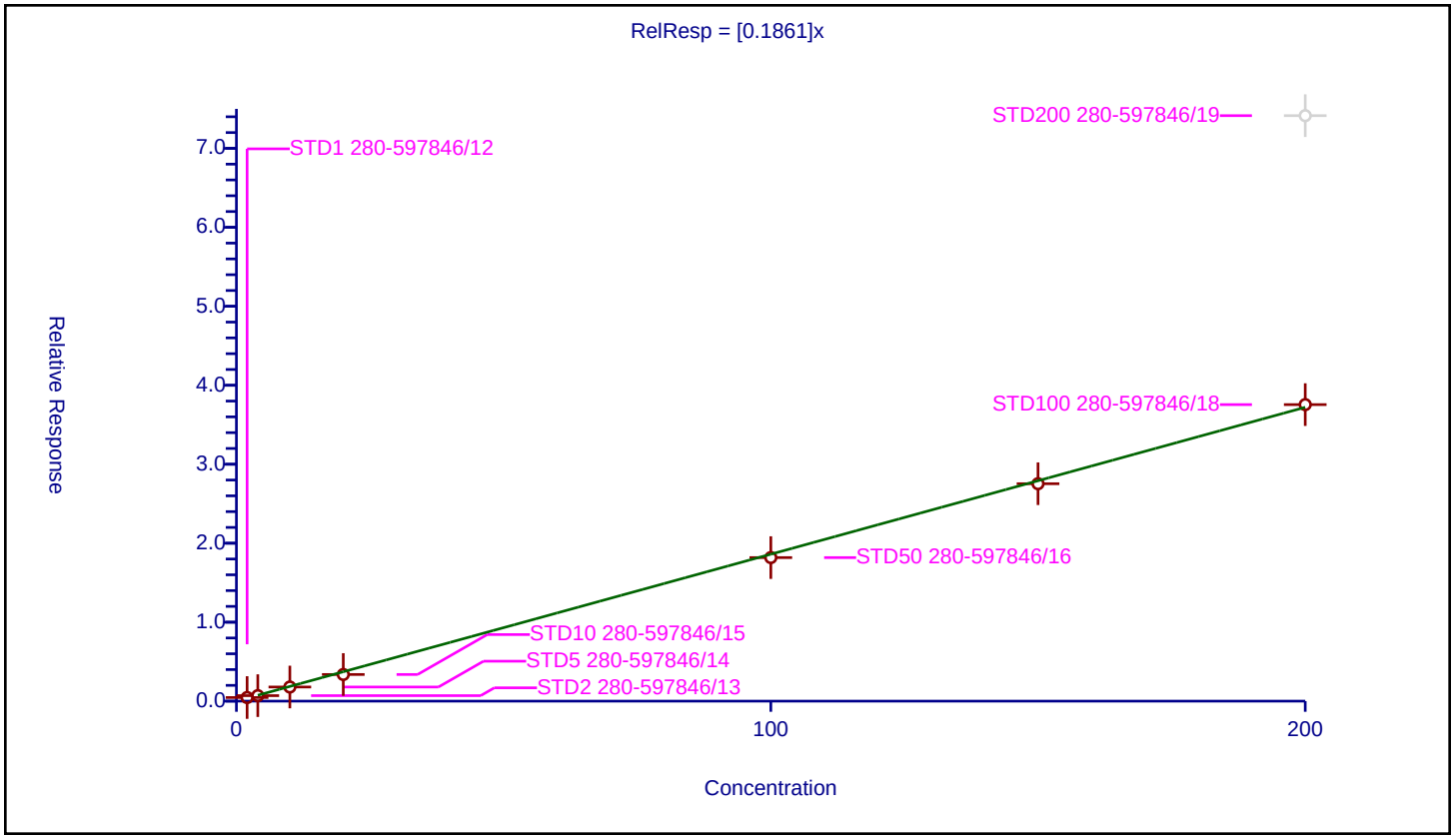
Curve Coefficients

Intercept:	0
Slope:	0.1861

Error Coefficients

Standard Error:	263000
Relative Standard Error:	10.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	2.0	0.455439	50.0	659913.0	0.227719	Y
2	STD2 280-597846/13	4.0	0.696456	50.0	636006.0	0.174114	Y
3	STD5 280-597846/14	10.0	1.788756	50.0	624037.0	0.178876	Y
4	STD10 280-597846/15	20.0	3.373854	50.0	622730.0	0.168693	Y
5	STD50 280-597846/16	100.0	18.176242	50.0	617083.0	0.181762	Y
6	STD75 280-597846/17	150.0	27.534925	50.0	635571.0	0.183566	Y
7	STD100 280-597846/18	200.0	37.550593	50.0	653011.0	0.187753	Y
8	STD200 280-597846/19	200.0	74.141826	50.0	682088.0	0.370709	N



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Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

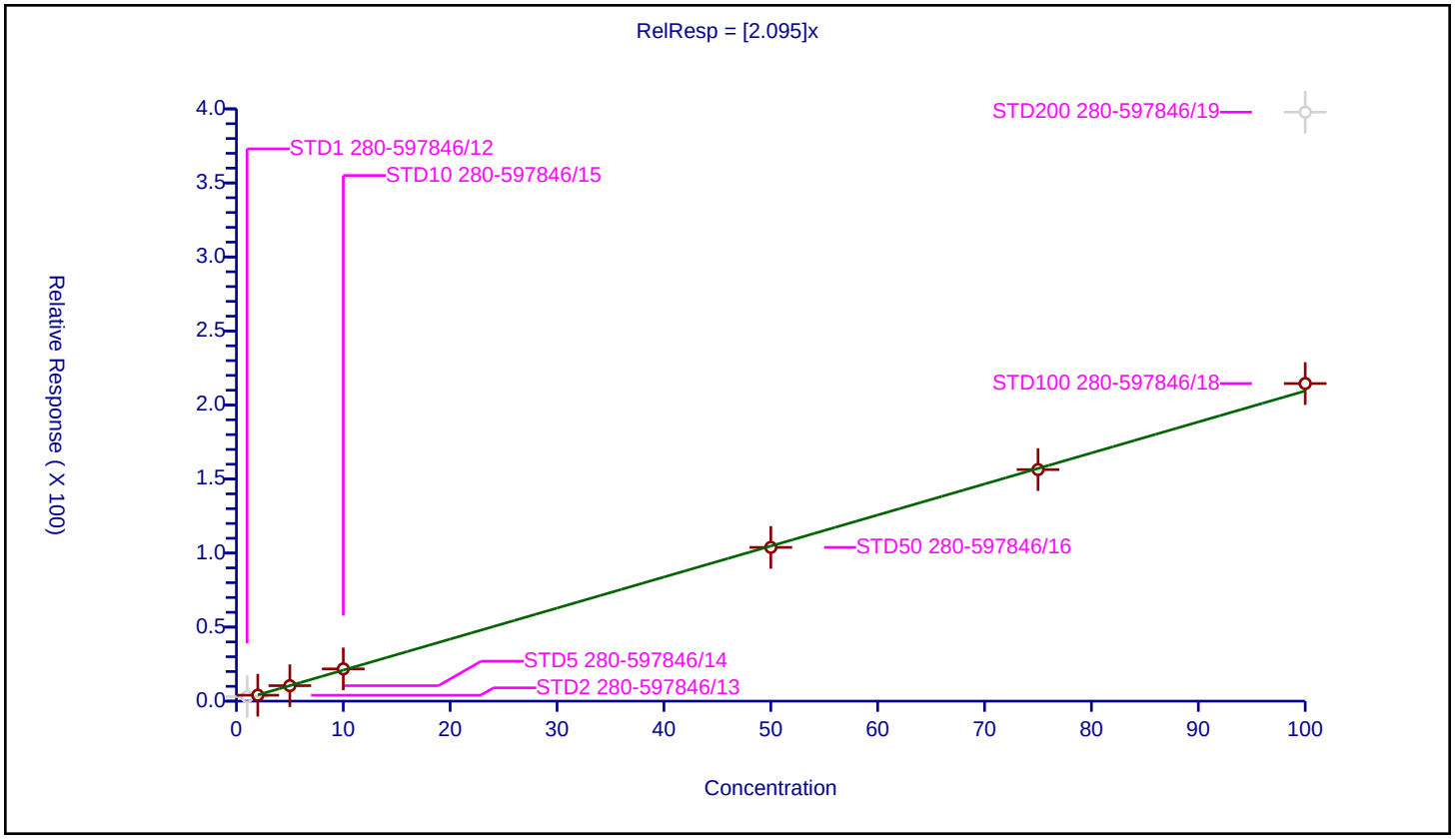
Curve Coefficients

Intercept:	0
Slope:	2.095

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	2.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	3.040098	50.0	659913.0	3.040098	N
2	STD2 280-597846/13	2.0	4.000198	50.0	636006.0	2.000099	Y
3	STD5 280-597846/14	5.0	10.437843	50.0	624037.0	2.087569	Y
4	STD10 280-597846/15	10.0	21.768583	50.0	622730.0	2.176858	Y
5	STD50 280-597846/16	50.0	103.841136	50.0	617083.0	2.076823	Y
6	STD75 280-597846/17	75.0	156.385439	50.0	635571.0	2.085139	Y
7	STD100 280-597846/18	100.0	214.510016	50.0	653011.0	2.1451	Y
8	STD200 280-597846/19	100.0	397.784157	50.0	682088.0	3.977842	N



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Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

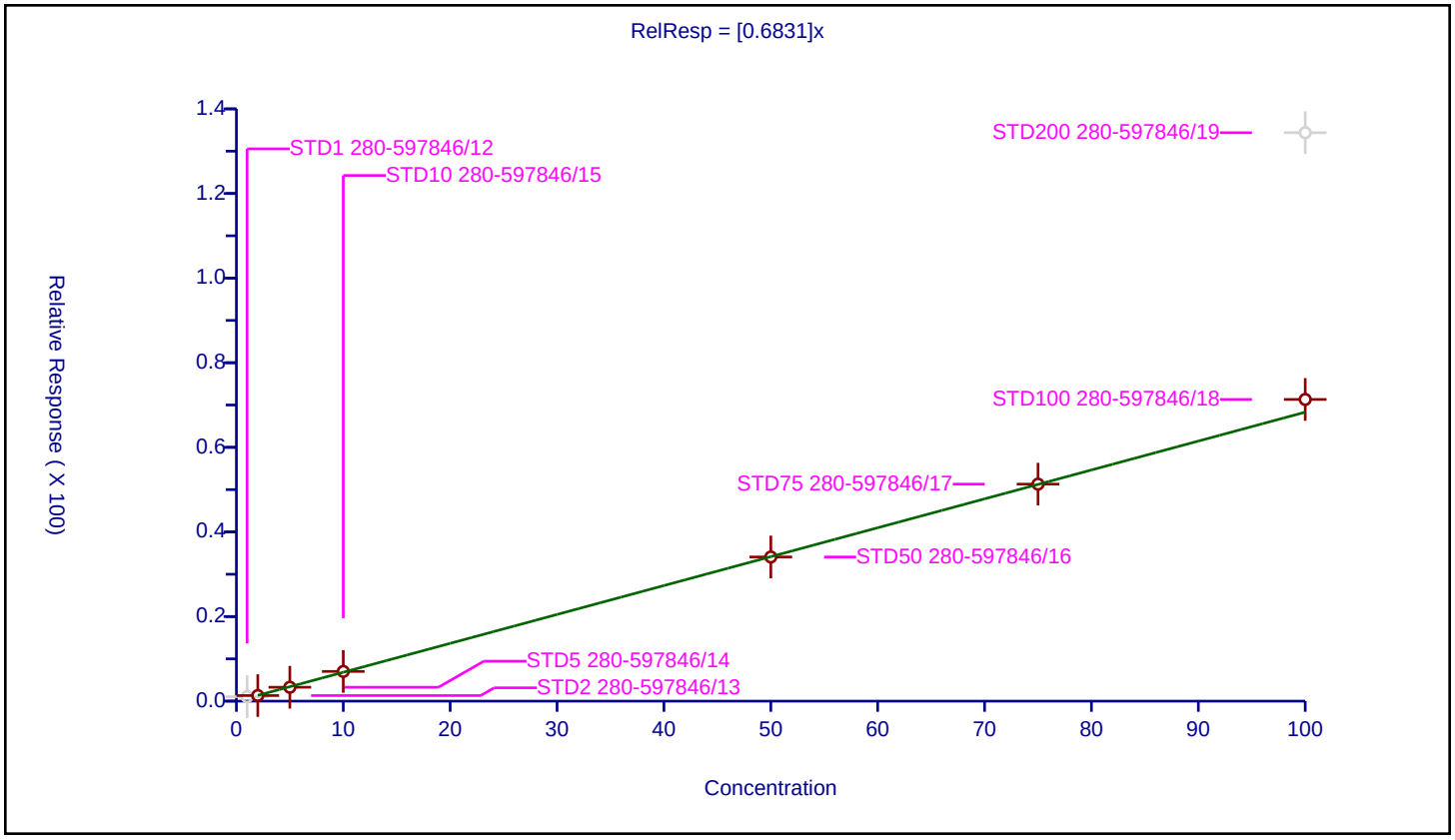
Curve Coefficients

Intercept:	0
Slope:	0.6831

Error Coefficients

Standard Error:	544000
Relative Standard Error:	3.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 280-597846/12	1.0	1.056882	50.0	659913.0	1.056882	N
2	STD2 280-597846/13	2.0	1.321057	50.0	636006.0	0.660528	Y
3	STD5 280-597846/14	5.0	3.286023	50.0	624037.0	0.657205	Y
4	STD10 280-597846/15	10.0	7.022305	50.0	622730.0	0.702231	Y
5	STD50 280-597846/16	50.0	34.074266	50.0	617083.0	0.681485	Y
6	STD75 280-597846/17	75.0	51.296708	50.0	635571.0	0.683956	Y
7	STD100 280-597846/18	100.0	71.315644	50.0	653011.0	0.713156	Y
8	STD200 280-597846/19	100.0	134.372838	50.0	682088.0	1.343728	N



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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-609046/42	MS1_8195.D
Level 2	IC 280-609046/41	MS1_8196.D
Level 3	IC 280-609046/40	MS1_8197.D
Level 4	IC 280-609046/39	MS1_8190.D
Level 5	IC 280-609046/38	MS1_8189.D
Level 6	ICIS 280-609046/37	MS1_8188.D
Level 7	IC 280-609046/36	MS1_8187.D
Level 8	IC 280-609046/35	MS1_8186.D
Level 9	IC 280-609046/34	MS1_8185.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	+++++ 0.2353	+++++ 0.2562	0.1794 0.2474	0.1271 +++++	0.1323	Lin1	-0.376	0.2491							0.9910		0.9900
Chloromethane	+++++ 0.2399	0.2478 0.2627	0.2329 0.2608	0.1945 0.2261	0.1828	Ave		0.2309			0.1000	12.6		15.0			
Vinyl chloride	+++++ 0.2381	0.2339 0.2642	0.2138 0.2592	0.1678 0.2241	0.1634	Lin1	-0.084	0.2399							0.9910		0.9900
Bromomethane	+++++ 0.1335	0.1805 0.1385	0.1604 0.1332	0.1187 0.1147	0.1165	Lin1	0.0542	0.1245							0.9930		0.9900
Chloroethane	+++++ 0.1410	0.1466 0.1589	0.1474 0.1552	0.1073 0.1425	0.0994	Lin1	-0.044	0.1475							0.9940		0.9900
Dichlorofluoromethane	+++++ 0.3336	0.4060 0.3639	0.3139 0.3573	0.2495 0.3175	0.2410	Lin1	-0.052	0.3348							0.9940		0.9900
Trichlorofluoromethane	+++++ 0.2692	+++++ 0.2994	0.2398 0.2881	0.1525 +++++	0.1721	Lin1	-0.370	0.2889							0.9910		0.9900
Ethyl ether	+++++ 0.1849	0.1914 0.1854	0.1869 0.1733	0.1568 0.1756	0.1647	Ave		0.1774				6.8		15.0			
Acrolein	+++++ 0.0283	0.0286 0.0299	0.0256 0.0266	0.0239 0.0276	0.0260	Ave		0.0271				7.1		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 0.1230	0.1113 0.1242	0.1140 0.1196	0.0882 0.1204	0.1060	Ave		0.1133				10.5		15.0			
1,1-Dichloroethene	+++++ 0.1598	0.1791 0.1615	0.1609 0.1556	0.1196 0.1589	0.1444	Ave		0.1550				11.1		30.0			
Acetone	+++++ 0.0876	0.1457 0.0920	0.1001 0.0819	0.0832 0.0856	0.0838	Lin1	0.1651	0.0855							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	+++++ 0.2230	0.2336 0.2359	0.1799 0.2229	0.1627 0.2223	0.1767	Ave		0.2071				14.0		15.0			
Carbon disulfide	+++++ 0.5691	0.6052 0.5766	0.5476 0.5643	0.5000 0.5586	0.5322	Ave		0.5567				5.6		15.0			
Methyl acetate	+++++ 0.2004	0.2304 0.2086	0.2016 0.1885	0.1630 0.1965	0.1812	Ave		0.1963				10.1		15.0			
Allyl chloride	+++++ 0.3788	0.5654 0.3796	0.4181 0.3644	0.3749 0.3380	0.3678	Lin2	0.1921	0.3540							0.9950		0.9900
Methylene Chloride	+++++ 0.1932	0.2157 0.1921	0.2236 0.1832	0.1656 0.1848	0.1854	Ave		0.1929				9.6		15.0			
2-Methyl-2-propanol	+++++ 0.0291	0.0280 0.0324	0.0258 0.0292	0.0239 0.0314	0.0267	Ave		0.0283				10.1		15.0			
Acrylonitrile	+++++ 0.0962	0.0947 0.1008	0.0840 0.0921	0.0794 0.0949	0.0893	Ave		0.0914				7.6		15.0			
Methyl tert-butyl ether	+++++ 0.6452	0.6028 0.6519	0.5693 0.6052	0.5114 0.6241	0.5892	Ave		0.5999				7.5		15.0			
trans-1,2-Dichloroethene	+++++ 0.1828	0.2020 0.1831	0.1902 0.1759	0.1614 0.1777	0.1655	Ave		0.1798				7.2		15.0			
Hexane	+++++ 1.2133	0.9396 1.2220	0.9924 1.2035	0.8422 1.1947	1.0499	Ave		1.0822				13.6		15.0			
Vinyl acetate	+++++ 0.5095	0.4705 0.5093	0.4562 0.4752	0.4044 0.4549	0.4683	Ave		0.4685				7.1		15.0			
1,1-Dichloroethane	+++++ 0.3748	0.3804 0.3713	0.3570 0.3586	0.3115 0.3642	0.3380	Ave		0.3570			0.1000	6.3		15.0			
2-Butanone (MEK)	+++++ 0.1320	0.1545 0.1410	0.1407 0.1268	0.1195 0.1354	0.1222	Ave		0.1340				8.6		15.0			
2,2-Dichloropropane	+++++ 0.3133	0.3481 0.3168	0.3022 0.3078	0.2487 0.3131	0.2748	Ave		0.3031				9.8		15.0			
cis-1,2-Dichloroethene	+++++ 0.1997	0.2203 0.2000	0.1874 0.1928	0.1619 0.1961	0.1902	Ave		0.1936				8.4		15.0			
sec-Butyl Alcohol	+++++ 0.0243	0.0213 0.0274	0.0223 0.0248	0.0211 0.0263	0.0228	Ave		0.0238				9.7		15.0			
Chlorobromomethane	+++++ 0.0900	0.1028 0.0889	0.0899 0.0838	0.0787 0.0865	0.0877	Ave		0.0885				7.8		15.0			
Tetrahydrofuran	+++++ 0.0872	0.0778 0.0935	0.0858 0.0857	0.0745 0.0903	0.0783	Ave		0.0841				7.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chloroform	+++++ 0.3366	0.3365 0.3355	0.3267 0.3231	0.3006 0.3285	0.3145	Ave		0.3253				3.9		30.0			
1,1,1-Trichloroethane	+++++ 0.2948	0.2428 0.2943	0.2694 0.2878	0.2303 0.2880	0.2572	Ave		0.2706				9.2		15.0			
Cyclohexane	+++++ 0.3832	0.3438 0.3826	0.3517 0.3693	0.2624 0.3736	0.3260	Ave		0.3491				11.5		15.0			
1,1-Dichloropropene	+++++ 0.2913	0.2495 0.2874	0.2480 0.2797	0.2238 0.2843	0.2556	Ave		0.2649				9.1		15.0			
Carbon tetrachloride	+++++ 0.2449	0.2319 0.2437	0.2339 0.2395	0.1824 0.2385	0.2143	Ave		0.2286				9.2		15.0			
Isobutyl alcohol	+++++ 0.0102	0.0096 0.0112	0.0096 0.0102	0.0087 0.0110	0.0092	Ave		0.0100				8.6		15.0			
Benzene	+++++ 0.8137	0.7733 0.8038	0.7920 0.7752	0.6949 0.7821	0.7473	Ave		0.7728				4.8		15.0			
1,2-Dichloroethane	+++++ 0.3018	0.3586 0.3035	0.3125 0.2836	0.2638 0.2903	0.2994	Ave		0.3017				9.1		15.0			
n-Heptane	+++++ 0.2402	0.3144 0.2430	0.2388 0.2417	0.1959 0.2451	0.2042	Ave		0.2404				14.8		15.0			
Trichloroethene	+++++ 0.8197	0.9334 0.8181	0.8269 0.7860	0.6838 0.7932	0.7639	Ave		0.8031				8.7		15.0			
2-Pentanone	+++++ 0.2117	0.2097 0.2254	0.1940 0.2023	0.1802 0.2150	0.1962	Ave		0.2043				6.9		15.0			
Methylcyclohexane	+++++ 0.2725	0.2620 0.2738	0.2641 0.2653	0.1900 0.2706	0.2267	Ave		0.2531				11.7		15.0			
1,2-Dichloropropane	+++++ 0.2195	0.2432 0.2226	0.2128 0.2087	0.1862 0.2149	0.1957	Ave		0.2130				8.1		30.0			
1,4-Dioxane	+++++ 0.0033	0.0045 0.0035	0.0033 0.0031	0.0032 0.0032	0.0034	Ave		0.0034				12.9		15.0			
Dibromomethane	+++++ 0.1209	0.1224 0.1208	0.1213 0.1120	0.1050 0.1166	0.1149	Ave		0.1167				5.1		15.0			
Dichlorobromomethane	+++++ 0.2702	0.2809 0.2666	0.2514 0.2524	0.2130 0.2615	0.2380	Ave		0.2543				8.3		15.0			
2-Chloroethyl vinyl ether	+++++ 0.1555	0.1512 0.1672	0.1295 0.1558	0.1118 0.1474	0.1017	Lin1	-0.057	0.1531							0.9950		0.9900
cis-1,3-Dichloropropene	+++++ 1.5057	1.5304 1.4900	1.4729 1.4109	1.2127 1.4288	1.4107	Ave		1.4327				6.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Methyl-2-pentanone (MIBK)	+++++ 0.2691	0.2441 0.2847	0.2511 0.2556	0.2239 0.2690	0.2489	Ave		0.2558				7.3		15.0			
Toluene	+++++ 0.8372	0.8264 0.8420	0.7962 0.8097	0.6894 0.8252	0.7703	Ave		0.7996				6.3		30.0			
trans-1,3-Dichloropropene	+++++ 0.3308	0.3371 0.3343	0.3150 0.3134	0.2667 0.3221	0.3049	Ave		0.3155				7.2		15.0			
Ethyl methacrylate	+++++ 1.2568	1.3398 1.2776	1.1917 1.1766	1.0632 1.2260	1.2074	Ave		1.2174				6.7		15.0			
1,1,2-Trichloroethane	+++++ 0.1766	0.1861 0.1783	0.1601 0.1650	0.1429 0.1708	0.1598	Ave		0.1674				8.1		15.0			
Tetrachloroethene	+++++ 0.5906	0.5306 0.5832	0.5602 0.5745	0.4554 0.5735	0.5370	Ave		0.5506				8.0		15.0			
1,3-Dichloropropane	+++++ 1.4087	1.3886 1.4138	1.3509 1.3130	1.1641 1.3412	1.3210	Ave		1.3377				6.0		15.0			
2-Hexanone	+++++ 0.8130	0.8447 0.8516	0.7605 0.7715	0.6888 0.8101	0.7760	Ave		0.7895				6.7		15.0			
Chlorodibromomethane	+++++ 0.7710	0.7739 0.7781	0.6969 0.7239	0.6608 0.7472	0.7290	Ave		0.7351				5.6		15.0			
1,2-Dibromoethane	+++++ 0.7690	0.7844 0.7764	0.7785 0.7078	0.6335 0.7303	0.7326	Ave		0.7391				6.9		15.0			
1-Chlorohexane	+++++ 1.0856	1.6826 1.0737	1.1653 1.0668	0.9984 1.0573	1.0266	Lin2	0.4616	1.0112							0.9900		0.9900
Chlorobenzene	+++++ 2.1481	2.1224 2.1503	2.2146 2.0526	1.8848 2.0930	2.0232	Ave		2.0861			0.3000	4.8		15.0			
1,1,1,2-Tetrachloroethane	+++++ 0.7345	0.7806 0.7377	0.7422 0.7086	0.6234 0.7169	0.6804	Ave		0.7155				6.6		15.0			
Ethylbenzene	+++++ 1.2062	1.3491 1.2059	1.2218 1.1726	1.0156 1.2004	1.1402	Ave		1.1890				7.8		30.0			
m-Xylene & p-Xylene	+++++ 1.4938	1.4911 1.4838	1.5639 1.4364	1.3015 1.4504	1.3929	Ave		1.4517				5.4		15.0			
o-Xylene	+++++ 1.4714	1.7037 1.4627	1.5426 1.4038	1.2093 1.4231	1.3850	Ave		1.4502				9.7		15.0			
Styrene	+++++ 2.5421	2.5780 2.5041	2.5084 2.4062	2.1417 2.4547	2.3169	Ave		2.4315				5.9		15.0			
Bromoform	+++++ 0.4889	0.5108 0.4887	0.4225 0.4522	0.3890 0.4761	0.4373	Ave		0.4582			0.1000	8.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Isopropylbenzene	+++++ 2.2400	2.1089 2.2734	2.1625 2.1563	1.8352 2.2362	2.0581	Ave		2.1338				6.6		15.0			
Cyclohexanone	+++++ 0.0498	0.0583 0.0535	0.0501 0.0475	0.0456 0.0487	0.0491	Ave		0.0503				7.8		15.0			
1,1,2,2-Tetrachloroethane	+++++ 0.6745	0.6543 0.6919	0.6159 0.6303	0.5404 0.6630	0.6118	Ave		0.6353			0.3000	7.5		15.0			
Bromobenzene	+++++ 0.5237	0.5316 0.5258	0.4967 0.4882	0.4284 0.5183	0.4905	Ave		0.5004				6.7		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1822	0.2775 0.2047	0.1639 0.1720	0.1203 0.1926	0.1404	Lin1	-0.024	0.1873							0.9930		0.9900
1,2,3-Trichloropropane	+++++ 0.1990	0.2000 0.2051	0.1957 0.1882	0.1754 0.1984	0.1912	Ave		0.1941				4.7		15.0			
N-Propylbenzene	+++++ 0.6135	0.5780 0.6260	0.5685 0.5887	0.4788 0.6095	0.5505	Ave		0.5767				8.1		15.0			
2-Chlorotoluene	+++++ 0.5131	0.5038 0.5131	0.5044 0.4931	0.4468 0.5051	0.4655	Ave		0.4931				4.9		15.0			
1,3,5-Trimethylbenzene	+++++ 1.8427	1.8308 1.8793	1.7978 1.7975	1.5296 1.8270	1.6896	Ave		1.7743				6.4		15.0			
4-Chlorotoluene	+++++ 0.5384	0.5922 0.5387	0.5320 0.5117	0.4552 0.5343	0.4958	Ave		0.5248				7.5		15.0			
tert-Butylbenzene	+++++ 1.5033	1.4874 1.5371	1.3829 1.4655	1.2503 1.4877	1.3711	Ave		1.4357				6.6		15.0			
1,2,4-Trimethylbenzene	+++++ 1.9481	1.9454 1.9573	1.9349 1.8459	1.6495 1.8946	1.7821	Ave		1.8697				5.8		15.0			
sec-Butylbenzene	+++++ 0.4171	0.4185 0.4333	0.3879 0.4079	0.3181 0.4130	0.3877	Ave		0.3979				9.0		15.0			
1,3-Dichlorobenzene	+++++ 0.9749	0.9359 0.9808	0.9647 0.9256	0.8324 0.9562	0.9217	Ave		0.9365				5.1		15.0			
4-Isopropyltoluene	+++++ 1.8780	1.8432 1.8803	1.7977 1.8023	1.5032 1.8120	1.6891	Ave		1.7757				7.1		15.0			
1,4-Dichlorobenzene	+++++ 1.0048	1.2325 1.0093	1.0360 0.9562	0.8474 0.9839	0.9285	Ave		0.9998				11.1		15.0			
n-Butylbenzene	+++++ 1.6744	1.8374 1.6786	1.6020 1.6127	1.3797 1.6109	1.5391	Ave		1.6169				8.0		15.0			
1,2-Dichlorobenzene	+++++ 0.9430	0.9467 0.9323	0.8739 0.8832	0.7732 0.9081	0.8960	Ave		0.8946				6.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 Calibration End Date: 04/18/2023 18:58 Calibration ID: 79362

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dibromo-3-Chloropropane	+++++ 0.1345	0.1346 0.1388	0.1277 0.1254	0.1128 0.1338	0.1226	Ave		0.1288				6.6		15.0			
1,2,4-Trichlorobenzene	+++++ 0.5129	0.5450 0.5170	0.5062 0.4849	0.4466 0.4800	0.5174	Ave		0.5013				6.0		15.0			
Hexachlorobutadiene	+++++ 0.1933	0.2536 0.1942	0.1864 0.1847	0.1678 0.1811	0.1884	Ave		0.1937				13.2		15.0			
Naphthalene	+++++ 1.6469	1.9880 1.7193	1.5643 1.5563	1.5690 1.5566	1.7197	Ave		1.6650				8.9		15.0			
1,2,3-Trichlorobenzene	+++++ 0.4265	0.4806 0.4309	0.4286 0.4020	0.3932 0.4016	0.4402	Ave		0.4254				6.6		15.0			
Dibromofluoromethane (Surr)	+++++ 0.2377	0.2416 0.2394	0.2393 0.2358	0.2365 0.2362	0.2372	Ave		0.2380				0.8		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.3240	0.3166 0.3279	0.3157 0.3229	0.3207 0.3255	0.3269	Ave		0.3225				1.4		15.0			
Toluene-d8 (Surr)	+++++ 4.2424	4.3382 4.2182	4.3702 4.2720	4.3070 4.2521	4.3319	Ave		4.2915				1.2		15.0			
4-Bromofluorobenzene (Surr)	+++++ 0.9660	0.9742 0.9852	0.9857 0.9863	0.9623 1.0080	0.9899	Ave		0.9822				1.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-609046/42	MS1_8195.D
Level 2	IC 280-609046/41	MS1_8196.D
Level 3	IC 280-609046/40	MS1_8197.D
Level 4	IC 280-609046/39	MS1_8190.D
Level 5	IC 280-609046/38	MS1_8189.D
Level 6	ICIS 280-609046/37	MS1_8188.D
Level 7	IC 280-609046/36	MS1_8187.D
Level 8	IC 280-609046/35	MS1_8186.D
Level 9	IC 280-609046/34	MS1_8185.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Lin1	+++++ 293377	+++++ 480016	8280 624434	15343 +++++	32552	+++++ 50.0	+++++ 75.0	2.00 100	5.00 +++++	10.0
Chloromethane	FB	Ave	+++++ 299134	5627 492119	10752 658315	23489 1146568	44978	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Lin1	+++++ 296881	5313 494925	9868 654278	20261 1136394	40198	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Lin1	+++++ 166480	4100 259446	7404 336200	14338 581648	28670	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloroethane	FB	Lin1	+++++ 175894	3329 297738	6805 391825	12957 722868	24445	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Lin1	+++++ 416020	9220 681672	14487 901882	30123 1610413	59297	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Lin1	+++++ 335760	+++++ 560896	11067 727237	18418 +++++	42332	+++++ 50.0	+++++ 75.0	2.00 100	5.00 +++++	10.0
Ethyl ether	FB	Ave	+++++ 230588	4346 347375	8628 437510	18938 890512	40526	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acrolein	FB	Ave	+++++ 348281	6422 553565	11662 662586	28549 1384162	63138	+++++ 494	9.88 741	19.8 988	49.4 1975	98.8
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	+++++ 153448	2527 232637	5260 301893	10656 610734	26071	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloroethene	FB	Ave	+++++ 199289	4067 302486	7427 392812	14443 806070	35523	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acetone	FB	Lin1	+++++ 436906	13236 688997	18485 827295	40209 1736182	82478	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Iodomethane	FB	Ave	+++++ 278094	5306 441872	8303 562717	19647 1127329	43480	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Carbon disulfide	FB	Ave	+++++ 709748	13744 1080063	25274 1424326	60376 2833171	130932	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methyl acetate	FB	Ave	+++++ 499906	10464 781474	18609 951369	39369 1992761	89165	+++++ 100	2.00 150	4.00 200	10.0 400	20.0
Allyl chloride	FB	Lin2	+++++ 472342	12841 711089	19300 919740	45273 1714057	90496	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Methylene Chloride	FB	Ave	+++++ 240886	4898 359908	10321 462506	19995 937129	45615	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Methyl-2-propanol	FB	Ave	+++++ 362373	6364 607099	11894 737662	28800 1593872	65730	+++++ 500	10.0 750	20.0 1000	50.0 2000	100
Acrylonitrile	FB	Ave	+++++ 1200193	21519 1888831	38749 2325742	95937 4814243	219595	+++++ 500	10.0 750	20.0 1000	50.0 2000	100
Methyl tert-butyl ether	FB	Ave	+++++ 804663	13691 1221109	26279 1527672	61754 3165217	144967	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,2-Dichloroethene	FB	Ave	+++++ 227940	4587 343029	8777 444118	19488 901347	40722	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexane	CBNZd 5	Ave	+++++ 356437	4950 542255	10578 717563	23943 1445532	59887	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl acetate	FB	Ave	+++++ 1270879	21370 1908000	42115 2398752	97660 4614048	230408	+++++ 100	2.00 150	4.00 200	10.0 400	20.0
1,1-Dichloroethane	FB	Ave	+++++ 467391	8640 695507	16478 905104	37614 1846919	83166	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Butanone (MEK)	FB	Ave	+++++ 658252	14037 1056420	25986 1280198	57722 2747075	120299	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
2,2-Dichloropropane	FB	Ave	+++++ 390647	7905 593403	13947 776875	30032 1587863	67595	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,2-Dichloroethene	FB	Ave	+++++ 249081	5004 374608	8648 486761	19553 994482	46801	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butyl Alcohol	FB	Ave	+++++ 728372	11620 1231361	24716 1502733	61078 3200417	134443	+++++ 1200	24.0 1800	48.0 2400	120 4800	240
Chlorobromomethane	FB	Ave	+++++ 112253	2335 166451	4150 211633	9505 438618	21570	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Tetrahydrofuran	FB	Ave	+++++ 217418	3532 350157	7924 432625	17999 915618	38533	+++++ 100	2.00 150	4.00 200	10.0 400	20.0
Chloroform	FB	Ave	+++++ 419777	7643 628477	15079 815661	36302 1666168	77366	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1-Trichloroethane	FB	Ave	+++++ 367595	5514 551341	12435 726429	27811 1460386	63268	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexane	FB	Ave	+++++ 477853	7808 716636	16235 932276	31689 1894971	80200	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloropropene	FB	Ave	+++++ 363275	5667 538388	11445 706003	27026 1441748	62881	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon tetrachloride	FB	Ave	+++++ 305444	5266 456501	10794 604516	22022 1209462	52733	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isobutyl alcohol	FB	Ave	+++++ 317663	5442 523741	11065 645356	26236 1393943	56617	+++++ 1250	25.0 1875	50.0 2500	125 5000	250
Benzene	FB	Ave	+++++ 1014686	17562 1505800	36558 1956686	83917 3966484	183845	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloroethane	FB	Ave	+++++ 376358	8144 568512	14424 715722	31852 1472151	73647	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Heptane	FB	Ave	+++++ 299484	7141 455187	11022 609990	23653 1243067	50231	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichloroethene	CBNZd5	Ave	+++++ 240807	4917 363010	8814 468609	19439 959750	43575	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Pentanone	FB	Ave	+++++ 844947	15244 1351049	28660 1633837	69645 3489604	154490	+++++ 160	3.20 240	6.40 320	16.0 640	32.0
Methylcyclohexane	FB	Ave	+++++ 339853	5951 512848	12191 669742	22939 1372603	55764	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloropropane	FB	Ave	+++++ 273773	5523 417006	9824 526844	22487 1089915	48139	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dioxane	FB	Ave	+++++ 82023	2043 131201	3018 157931	7731 329229	16688	+++++ 1000	20.0 1500	40.0 2000	100 4000	200
Dibromomethane	FB	Ave	+++++ 150760	2780 226292	5598 282677	12684 591313	28268	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorobromomethane	FB	Ave	+++++ 336974	6380 499439	11605 637135	25716 1326209	58554	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Lin1	+++++ 193886	3433 313234	5975 393276	13496 747736	25014	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,3-Dichloropropene	CBNZd5	Ave	+++++ 442345	8062 661164	15699 841189	34476 1728698	80466	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	+++++ 1342534	22176 2133286	46353 2581099	108161 5457686	244936	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Toluene	FB	Ave	+++++ 1044024	18770 1577223	36750 2043863	83254 4184914	189507	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,3-Dichloropropene	FB	Ave	+++++ 412532	7656 626283	14538 791020	32204 1633783	75016	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl methacrylate	CBNZd5	Ave	+++++ 369224	7058 566907	12702 701509	30227 1483361	68874	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloroethane	FB	Ave	+++++ 220185	4227 333962	7390 416554	17253 866237	39321	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Tetrachloroethene	CBNZd5	Ave	+++++ 173498	2795 258786	5971 342499	12946 693849	30631	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichloropropane	CBNZd5	Ave	+++++ 413861	7315 627334	14399 782841	33095 1622717	75352	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Hexanone	CBNZd5	Ave	+++++ 955404	17800 1511600	32424 1839952	78327 3920584	177057	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Chlorodibromomethane	CBNZd5	Ave	+++++ 226494	4077 345253	7428 431605	18786 903998	41585	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromoethane	CBNZd5	Ave	+++++ 225917	4132 344536	8298 422018	18011 883541	41788	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1-Chlorohexane	CBNZd5	Lin2	+++++ 255150	7091 381148	9937 508830	22708 1023341	46847	+++++ 40.0	0.800 60.0	1.60 80.0	4.00 160	8.00
Chlorobenzene	CBNZd5	Ave	+++++ 631063	11181 954178	23605 1223778	53582 2532349	115405	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1,2-Tetrachloroethane	CBNZd5	Ave	+++++ 215783	4112 327342	7911 422458	17724 867353	38809	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethylbenzene	CBNZd5	Ave	+++++ 354343	7107 535084	13023 699138	28872 1452410	65038	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
m-Xylene & p-Xylene	CBNZd5	Ave	+++++ 438839	7855 658394	16669 856401	37001 1754854	79452	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
o-Xylene	CBNZd5	Ave	+++++ 432263	8975 649040	16442 836959	34379 1721808	79005	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Styrene	CBNZd5	Ave	+++++ 746806	13581 1111148	26737 1434598	60888 2970001	132159	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromoform	CBNZd5	Ave	+++++ 143633	2691 216846	4503 269605	11060 576090	24943	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isopropylbenzene	DCBd4	Ave	+++++ 1064981	18155 1607141	37534 2079344	84155 4237189	193439	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexanone	CBNZd5	Ave	+++++	9218	16010	38876	84088	+++++	30.0	60.0	150	300

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			439304	712016	849071	1768516		1500	2250	3000	6000	
1,1,2,2-Tetrachloroethane	DCBd4	Ave	+++++ 320698	5633 489139	10690 607831	24783 1256198	57506	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromobenzene	DCBd4	Ave	+++++ 248981	4576 371717	8621 470790	19645 982020	46102	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,4-Dichloro-2-butene	DCBd4	Lin1	+++++ 86613	2389 144742	2844 165837	5517 364909	13199	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichloropropane	DCBd4	Ave	+++++ 94619	1722 144995	3397 181461	8043 375927	17975	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
N-Propylbenzene	DCBd4	Ave	+++++ 291700	4976 442577	9868 567636	21958 1154805	51743	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chlorotoluene	DCBd4	Ave	+++++ 243950	4337 362739	8754 475481	20491 957039	43750	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3,5-Trimethylbenzene	DCBd4	Ave	+++++ 876117	15761 1328526	31204 1733333	70142 3461717	158804	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Chlorotoluene	DCBd4	Ave	+++++ 255964	5098 380842	9233 493473	20876 1012452	46597	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
tert-Butylbenzene	DCBd4	Ave	+++++ 714737	12805 1086646	24002 1413171	57337 2818928	128871	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trimethylbenzene	DCBd4	Ave	+++++ 926204	16747 1383717	33584 1780039	75639 3589915	167498	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butylbenzene	DCBd4	Ave	+++++ 198299	3603 306348	6733 393358	14585 782540	36444	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichlorobenzene	DCBd4	Ave	+++++ 463519	8057 693390	16744 892582	38173 1811855	86629	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Isopropyltoluene	DCBd4	Ave	+++++ 892902	15868 1329261	31202 1737983	68934 3433281	158755	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dichlorobenzene	DCBd4	Ave	+++++ 477730	10610 713513	17981 922076	38861 1864279	87268	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Butylbenzene	DCBd4	Ave	+++++ 796092	15818 1186682	27805 1555156	63269 3052291	144659	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichlorobenzene	DCBd4	Ave	+++++ 448355	8150 659084	15168 851704	35458 1720754	84218	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromo-3-Chloropropane	DCBd4	Ave	+++++ 63963	1159 98157	2217 120903	5172 253472	11521	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trichlorobenzene	DCBd4	Ave	+++++ 243849	4692 365523	8786 467570	20481 909583	48632	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexachlorobutadiene	DCBd4	Ave	+++++ 91889	2183 137292	3236 178061	7695 343191	17705	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Naphthalene	DCBd4	Ave	+++++ 783012	17114 1215428	27151 1500699	71950 2949448	161630	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 609046

SDG No.:

Instrument ID: VMS_MS1 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/18/2023 11:03 | Calibration End Date: 04/18/2023 18:58 | Calibration ID: 79362

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trichlorobenzene	DCBd4	Ave	+++++ 202794	4137 304589	7439 387611	18032 761002	41374	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 296375	274378 298917	276082 297535	285621 299531	291815	+++++ 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	+++++ 404022	359476 409440	364248 407462	387212 412664	402143	+++++ 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	+++++ 1246321	1142694 1247847	1164538 1273520	1224432 1286162	1235474	+++++ 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	+++++ 459278	419344 464331	427731 475550	441292 477484	465202	+++++ 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8185.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 18-Apr-2023 11:03:30 ALS Bottle#: 3 Worklist Smp#: 34
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:27 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 18-Apr-2023 11:39:13

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	98	1267906	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	302477	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	473698	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	299531	50.0	49.6	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	412664	50.0	50.5	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1286162	50.0	49.5	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	477484	50.0	51.3	
	11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	1063793	200.0	169.9	
	12 Chloromethane	50	2.009	2.009	0.000	99	1146568	200.0	195.8	
	13 Vinyl chloride	62	2.135	2.135	0.000	98	1136394	200.0	187.2	
	15 Bromomethane	94	2.498	2.498	0.000	91	581648	200.0	183.8	
	16 Chloroethane	64	2.624	2.623	0.001	99	722868	200.0	193.6	
	17 Dichlorofluoromethane	67	2.861	2.861	0.000	98	1610413	200.0	189.8	
	18 Trichlorofluoromethane	101	2.889	2.889	0.000	97	1221427	200.0	168.0	
	20 Ethyl ether	59	3.182	3.182	0.000	94	890512	200.0	198.0	
	22 Acrolein	56	3.322	3.322	0.000	99	1384162	1975.0	2016.3	
	24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	96	610734	200.0	212.5	
	23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	806070	200.0	205.1	
	25 Acetone	43	3.448	3.447	0.001	98	1736182	800.0	799.3	
	26 Iodomethane	142	3.559	3.559	0.000	100	1127329	200.0	214.6	
	28 Carbon disulfide	76	3.629	3.629	0.000	100	2833171	200.0	200.7	
	30 Methyl acetate	43	3.755	3.755	0.000	98	1992761	400.0	400.4	
	31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	1714057	200.0	190.4	
	32 Methylene Chloride	84	3.894	3.894	0.000	98	937129	200.0	191.5	
	33 2-Methyl-2-propanol	59	3.978	3.964	0.014	98	1593872	2000.0	2220.3	
	34 Acrylonitrile	53	4.104	4.104	0.000	97	4814243	2000.0	2076.2	
	35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	3165217	200.0	208.1	
	36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	94	901347	200.0	197.7	
	37 Hexane	57	4.383	4.383	0.000	96	1445532	200.0	220.8	
	39 Vinyl acetate	43	4.523	4.523	0.000	97	4614048	400.0	388.4	
	40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	1846919	200.0	204.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	2747075	800.0	808.3	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	994482	200.0	202.6	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	1587863	200.0	206.6	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	3200417	4800.0	5305.7	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	915618	400.0	429.2	
53 Chlorobromomethane	128	5.249	5.249	0.000	94	438618	200.0	195.4	
55 Chloroform	83	5.319	5.319	0.000	96	1666168	200.0	202.0	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	1460386	200.0	212.9	
57 Cyclohexane	56	5.542	5.542	0.000	95	1894971	200.0	214.1	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	1441748	200.0	214.6	
59 Carbon tetrachloride	117	5.612	5.612	0.000	84	1209462	200.0	208.6	
60 Isobutyl alcohol	41	5.668	5.654	0.014	93	1393943	5000.0	5520.3	
63 Benzene	78	5.780	5.794	-0.014	99	3966484	200.0	202.4	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	1472151	200.0	192.4	
66 n-Heptane	43	6.003	6.003	0.000	96	1243067	200.0	203.9	
68 Trichloroethene	95	6.353	6.352	0.001	96	959750	200.0	197.5	
69 2-Pentanone	43	6.478	6.478	0.000	98	3489604	640.0	673.5	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	1372603	200.0	213.8	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	94	1089915	200.0	201.8	
73 1,4-Dioxane	88	6.632	6.632	0.000	97	329229	4000.0	3773.6	
74 Dibromomethane	93	6.660	6.660	0.000	93	591313	200.0	199.8	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	1326209	200.0	205.7	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	747736	200.0	193.0	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	90	1728698	200.0	199.4	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	98	5457686	800.0	841.3	
82 Toluene	91	7.484	7.484	0.000	97	4184914	200.0	206.4	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	1633783	200.0	204.2	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	1483361	200.0	201.4	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	866237	200.0	204.0	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	693849	200.0	208.3	
90 1,3-Dichloropropane	76	8.015	8.014	0.000	97	1622717	200.0	200.5	
91 2-Hexanone	43	8.042	8.042	0.000	98	3920584	800.0	820.8	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	903998	200.0	203.3	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	883541	200.0	197.6	
98 1-Chlorohexane	91	8.755	8.755	0.000	90	1023341	160.0	166.8	
99 Chlorobenzene	112	8.797	8.797	0.000	91	2532349	200.0	200.7	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	867353	200.0	200.4	
101 Ethylbenzene	106	8.880	8.880	0.000	99	1452410	200.0	201.9	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	1754854	200.0	199.8	
103 o-Xylene	106	9.369	9.369	0.000	98	1721808	200.0	196.3	
104 Styrene	104	9.397	9.397	0.000	96	2970001	200.0	201.9	
106 Bromoform	173	9.579	9.579	0.000	94	576090	200.0	207.8	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	4237189	200.0	209.6	
109 Cyclohexanone	55	9.830	9.830	0.000	95	1768516	6000.0	5808.4	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	1256198	200.0	208.7	
111 Bromobenzene	156	10.054	10.053	0.001	98	982020	200.0	207.1	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	85	364909	200.0	205.7	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	375927	200.0	204.4	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	1154805	200.0	211.4	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	957039	200.0	204.9	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	3461717	200.0	205.9	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	1012452	200.0	203.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	2818928	200.0	207.3	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	3589915	200.0	202.7	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	782540	200.0	207.6	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	1811855	200.0	204.2	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	3433281	200.0	204.1	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	1864279	200.0	196.8	
125 n-Butylbenzene	91	11.408	11.408	0.000	99	3052291	200.0	199.3	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	97	1720754	200.0	203.0	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	76	253472	200.0	207.8	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	909583	200.0	191.5	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	343191	200.0	187.0	
132 Naphthalene	128	13.336	13.336	0.000	98	2949448	200.0	187.0	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	761002	200.0	188.8	
S 149 1,2-Dichloroethene, Total (URS)	96				0		400.0	400.3	
S 151 Trihalomethanes, Total	1				0		800.0	818.8	
S 150 1,2-Dichloroethene, Total	1				0		400.0	400.3	
S 156 1,3-Dichloropropene, Total	1				0		400.0	403.6	
S 155 Xylenes, Total	106				0		400.0	396.1	
S 153 Xylenes, Total (URS)	1				0		400.0	396.1	
S 152 Total BTEX	1				0			1006.8	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added: 100.00	Units: uL	
MV-Gas A_00151	Amount Added: 40.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

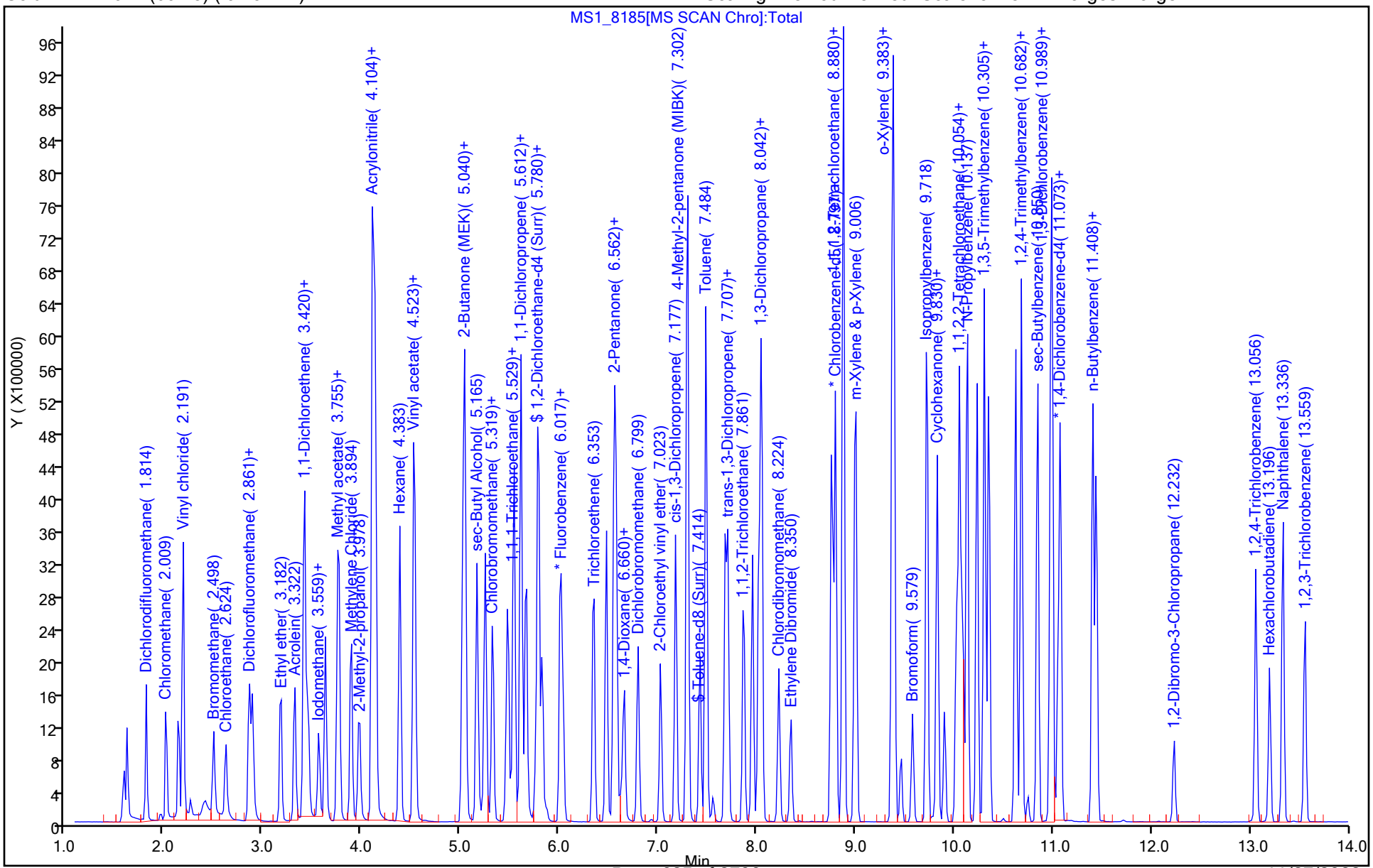
Report Date: 19-Apr-2023 07:39:28 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8185.D

Injection Date:	18-Apr-2023 11:03:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	34
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8186.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 18-Apr-2023 11:24:30 ALS Bottle#: 4 Worklist Smp#: 35
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:30 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 11:52:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1262070	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	298110	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	482150	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	297535	50.0	49.5	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	407462	50.0	50.1	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1273520	50.0	49.8	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	475550	50.0	50.2	
11 Dichlorodifluoromethane	85	1.814	1.813	0.001	98	624434	100.0	100.8	
12 Chloromethane	50	2.009	2.009	0.000	99	658315	100.0	112.9	
13 Vinyl chloride	62	2.135	2.135	0.000	98	654278	100.0	108.4	
15 Bromomethane	94	2.498	2.498	0.000	92	336200	100.0	106.6	
16 Chloroethane	64	2.624	2.623	0.001	99	391825	100.0	105.6	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	98	901882	100.0	106.9	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	727237	100.0	101.0	
20 Ethyl ether	59	3.182	3.182	0.000	94	437510	100.0	97.7	
22 Acrolein	56	3.322	3.322	0.000	99	662586	987.5	969.6	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	392812	100.0	100.4	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	94	301893	100.0	105.5	
25 Acetone	43	3.448	3.447	0.001	98	827295	400.0	381.6	
26 Iodomethane	142	3.559	3.559	0.000	100	562717	100.0	107.6	
28 Carbon disulfide	76	3.629	3.629	0.000	100	1424326	100.0	101.4	
30 Methyl acetate	43	3.755	3.755	0.000	98	951369	200.0	192.0	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	919740	100.0	102.4	
32 Methylene Chloride	84	3.895	3.894	0.001	97	462506	100.0	95.0	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	737662	1000.0	1032.3	
34 Acrylonitrile	53	4.104	4.104	0.000	98	2325742	1000.0	1007.6	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	1527672	100.0	100.9	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	444118	100.0	97.8	
37 Hexane	57	4.383	4.383	0.000	96	717563	100.0	111.2	
39 Vinyl acetate	43	4.523	4.523	0.000	97	2398752	200.0	202.8	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	905104	100.0	100.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	1280198	400.0	378.4	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	486761	100.0	99.6	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	776875	100.0	101.6	
51 sec-Butyl Alcohol	45	5.166	5.165	0.001	100	1502733	2400.0	2502.8	
54 Tetrahydrofuran	42	5.249	5.249	0.000	90	432625	200.0	203.7	
53 Chlorobromomethane	128	5.249	5.249	0.000	94	211633	100.0	94.7	
55 Chloroform	83	5.319	5.319	0.000	96	815661	100.0	99.3	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	98	726429	100.0	106.4	
57 Cyclohexane	56	5.543	5.542	0.001	95	932276	100.0	105.8	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	706003	100.0	105.6	
59 Carbon tetrachloride	117	5.612	5.612	0.000	84	604516	100.0	104.8	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	645356	2500.0	2567.5	
63 Benzene	78	5.794	5.794	0.000	98	1956686	100.0	100.3	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	715722	100.0	94.0	
66 n-Heptane	43	6.004	6.003	0.001	97	609990	100.0	100.5	
68 Trichloroethene	95	6.353	6.352	0.001	97	468609	100.0	97.9	
69 2-Pentanone	43	6.478	6.478	0.000	98	1633837	320.0	316.8	
70 Methylcyclohexane	55	6.562	6.548	0.014	95	669742	100.0	104.8	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	93	526844	100.0	98.0	
73 1,4-Dioxane	88	6.632	6.632	0.000	97	157931	2000.0	1818.5	
74 Dibromomethane	93	6.660	6.660	0.000	94	282677	100.0	95.9	
75 Dichlorobromomethane	83	6.800	6.799	0.001	98	637135	100.0	99.3	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	393276	100.0	102.1	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	90	841189	100.0	98.5	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	2581099	400.0	399.7	
82 Toluene	91	7.484	7.484	0.000	97	2043863	100.0	101.3	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	791020	100.0	99.3	
85 Ethyl methacrylate	69	7.707	7.707	0.000	92	701509	100.0	96.6	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	416554	100.0	98.6	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	342499	100.0	104.3	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	98	782841	100.0	98.2	
91 2-Hexanone	43	8.043	8.042	0.001	97	1839952	400.0	390.9	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	431605	100.0	98.5	
96 Ethylene Dibromide	107	8.350	8.350	0.000	97	422018	100.0	95.8	
98 1-Chlorohexane	91	8.755	8.755	0.000	91	508830	80.0	83.9	
99 Chlorobenzene	112	8.797	8.797	0.000	91	1223778	100.0	98.4	
100 1,1,1,2-Tetrachloroethane	131	8.881	8.880	0.001	43	422458	100.0	99.0	
101 Ethylbenzene	106	8.881	8.880	0.001	99	699138	100.0	98.6	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	856401	100.0	98.9	
103 o-Xylene	106	9.369	9.369	0.000	97	836959	100.0	96.8	
104 Styrene	104	9.397	9.397	0.000	96	1434598	100.0	99.0	
106 Bromoform	173	9.579	9.579	0.000	94	269605	100.0	98.7	
107 Isopropylbenzene	105	9.719	9.718	0.001	97	2079344	100.0	101.1	
109 Cyclohexanone	55	9.830	9.830	0.000	96	849071	3000.0	2829.5	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	607831	100.0	99.2	
111 Bromobenzene	156	10.054	10.053	0.001	99	470790	100.0	97.6	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	75	165837	100.0	91.9	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	181461	100.0	96.9	
114 N-Propylbenzene	120	10.138	10.137	0.001	99	567636	100.0	102.1	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	475481	100.0	100.0	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	1733333	100.0	101.3	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	493473	100.0	97.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	1413171	100.0	102.1	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	1780039	100.0	98.7	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	393358	100.0	102.5	
121 1,3-Dichlorobenzene	146	10.976	10.975	0.001	96	892582	100.0	98.8	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	1737983	100.0	101.5	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	922076	100.0	95.6	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	1555156	100.0	99.7	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	851704	100.0	98.7	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	77	120903	100.0	97.4	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	467570	100.0	96.7	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	178061	100.0	95.3	
132 Naphthalene	128	13.336	13.336	0.000	98	1500699	100.0	93.5	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	387611	100.0	94.5	
S 149 1,2-Dichloroethene, Total (URS)	96				0		200.0	197.5	
S 151 Trihalomethanes, Total	1				0		400.0	395.8	
S 150 1,2-Dichloroethene, Total	1				0		200.0	197.5	
S 156 1,3-Dichloropropene, Total	1				0		200.0	197.8	
S 155 Xylenes, Total	106				0		200.0	195.7	
S 153 Xylenes, Total (URS)	1				0		200.0	195.7	
S 152 Total BTEX	1				0			496.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added:	50.00	Units: uL	
MV-Gas A_00151	Amount Added:	20.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 19-Apr-2023 07:39:30 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8186.D

Injection Date: 18-Apr-2023 11:24:30 Instrument ID: VMS_MS1 Operator ID: wickhamt/bustillose

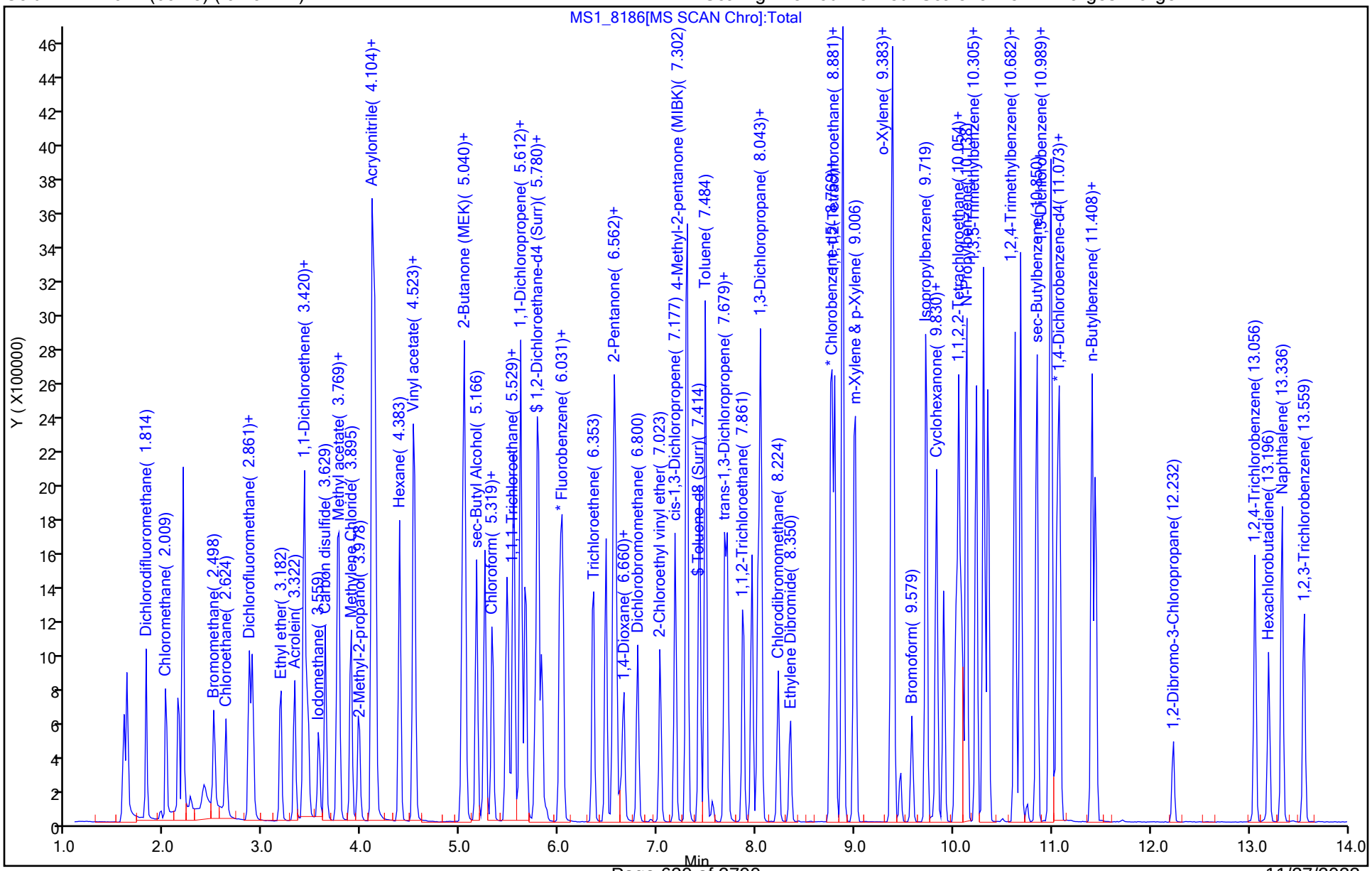
Lims ID: ic Worklist Smp#: 35

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 4

Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8187.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-Apr-2023 11:45:30 ALS Bottle#: 5 Worklist Smp#: 36
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:32 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 12:22:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1248840	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	92	295823	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	471295	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	298917	50.0	50.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	409440	50.0	50.8	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1247847	50.0	49.1	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	464331	50.0	50.2	
11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	480016	75.0	78.6	
12 Chloromethane	50	2.009	2.009	0.000	99	492119	75.0	85.3	
13 Vinyl chloride	62	2.135	2.135	0.000	98	494925	75.0	83.0	
15 Bromomethane	94	2.498	2.498	0.000	93	259446	75.0	83.0	
16 Chloroethane	64	2.624	2.623	0.001	99	297738	75.0	81.1	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	681672	75.0	81.7	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	560896	75.0	79.0	
20 Ethyl ether	59	3.182	3.182	0.000	94	347375	75.0	78.4	
22 Acrolein	56	3.322	3.322	0.000	99	553565	740.6	818.7	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	95	232637	75.0	82.2	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	302486	75.0	78.1	
25 Acetone	43	3.448	3.447	0.001	98	688997	300.0	320.9	
26 Iodomethane	142	3.559	3.559	0.000	100	441872	75.0	85.4	
28 Carbon disulfide	76	3.629	3.629	0.000	100	1080063	75.0	77.7	
30 Methyl acetate	43	3.755	3.755	0.000	99	781474	150.0	159.4	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	711089	75.0	79.9	
32 Methylene Chloride	84	3.895	3.894	0.001	98	359908	75.0	74.7	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	607099	750.0	858.6	
34 Acrylonitrile	53	4.104	4.104	0.000	97	1888831	750.0	827.0	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	1221109	75.0	81.5	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	343029	75.0	76.4	
37 Hexane	57	4.383	4.383	0.000	95	542255	75.0	84.7	
39 Vinyl acetate	43	4.523	4.523	0.000	97	1908000	150.0	163.0	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	695507	75.0	78.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	1056420	300.0	315.6	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	374608	75.0	77.5	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	593403	75.0	78.4	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	1231361	1800.0	2072.5	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	350157	150.0	166.6	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	166451	75.0	75.3	
55 Chloroform	83	5.319	5.319	0.000	96	628477	75.0	77.4	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	551341	75.0	81.6	
57 Cyclohexane	56	5.543	5.542	0.001	95	716636	75.0	82.2	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	538388	75.0	81.4	
59 Carbon tetrachloride	117	5.612	5.612	0.000	83	456501	75.0	79.9	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	523741	1875.0	2105.8	
63 Benzene	78	5.780	5.794	-0.014	99	1505800	75.0	78.0	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	568512	75.0	75.5	
66 n-Heptane	43	6.003	6.003	0.000	97	455187	75.0	75.8	
68 Trichloroethene	95	6.353	6.352	0.001	96	363010	75.0	76.4	
69 2-Pentanone	43	6.478	6.478	0.000	98	1351049	240.0	264.7	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	512848	75.0	81.1	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	93	417006	75.0	78.4	
73 1,4-Dioxane	88	6.632	6.632	0.000	96	131201	1500.0	1526.8	
74 Dibromomethane	93	6.660	6.660	0.000	94	226292	75.0	77.6	
75 Dichlorobromomethane	83	6.800	6.799	0.001	98	499439	75.0	78.6	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	94	313234	75.0	82.3	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	91	661164	75.0	78.0	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	2133286	300.0	333.9	
82 Toluene	91	7.484	7.484	0.000	97	1577223	75.0	79.0	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	626283	75.0	79.5	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	566907	75.0	78.7	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	333962	75.0	79.9	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	258786	75.0	79.4	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	97	627334	75.0	79.3	
91 2-Hexanone	43	8.043	8.042	0.000	97	1511600	300.0	323.6	
95 Chlorodibromomethane	129	8.224	8.224	0.000	91	345253	75.0	79.4	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	344536	75.0	78.8	
98 1-Chlorohexane	91	8.755	8.755	0.000	91	381148	60.0	63.2	
99 Chlorobenzene	112	8.797	8.797	0.000	91	954178	75.0	77.3	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	327342	75.0	77.3	
101 Ethylbenzene	106	8.880	8.880	0.000	99	535084	75.0	76.1	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	658394	75.0	76.7	
103 o-Xylene	106	9.369	9.369	0.000	97	649040	75.0	75.6	
104 Styrene	104	9.397	9.397	0.000	95	1111148	75.0	77.2	
106 Bromoform	173	9.579	9.579	0.000	94	216846	75.0	80.0	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	1607141	75.0	79.9	
109 Cyclohexanone	55	9.830	9.830	0.000	95	712016	2250.0	2391.1	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	489139	75.0	81.7	
111 Bromobenzene	156	10.054	10.053	0.001	98	371717	75.0	78.8	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	94	144742	75.0	82.1	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	144995	75.0	79.2	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	442577	75.0	81.4	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	362739	75.0	78.0	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	1328526	75.0	79.4	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	380842	75.0	77.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	1086646	75.0	80.3	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	1383717	75.0	78.5	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	306348	75.0	81.7	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	693390	75.0	78.5	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	1329261	75.0	79.4	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	713513	75.0	75.7	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	1186682	75.0	77.9	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	659084	75.0	78.2	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	76	98157	75.0	80.9	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	365523	75.0	77.4	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	137292	75.0	75.2	
132 Naphthalene	128	13.336	13.336	0.000	98	1215428	75.0	77.4	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	304589	75.0	76.0	
S 149 1,2-Dichloroethene, Total (URS)	96				0		150.0	153.9	
S 151 Trihalomethanes, Total	1				0		300.0	315.4	
S 150 1,2-Dichloroethene, Total	1				0		150.0	153.9	
S 156 1,3-Dichloropropene, Total	1				0		150.0	157.5	
S 155 Xylenes, Total	106				0		150.0	152.3	
S 153 Xylenes, Total (URS)	1				0		150.0	152.3	
S 152 Total BTEX	1				0			385.4	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added: 37.50	Units: uL	
MV-Gas A_00151	Amount Added: 15.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

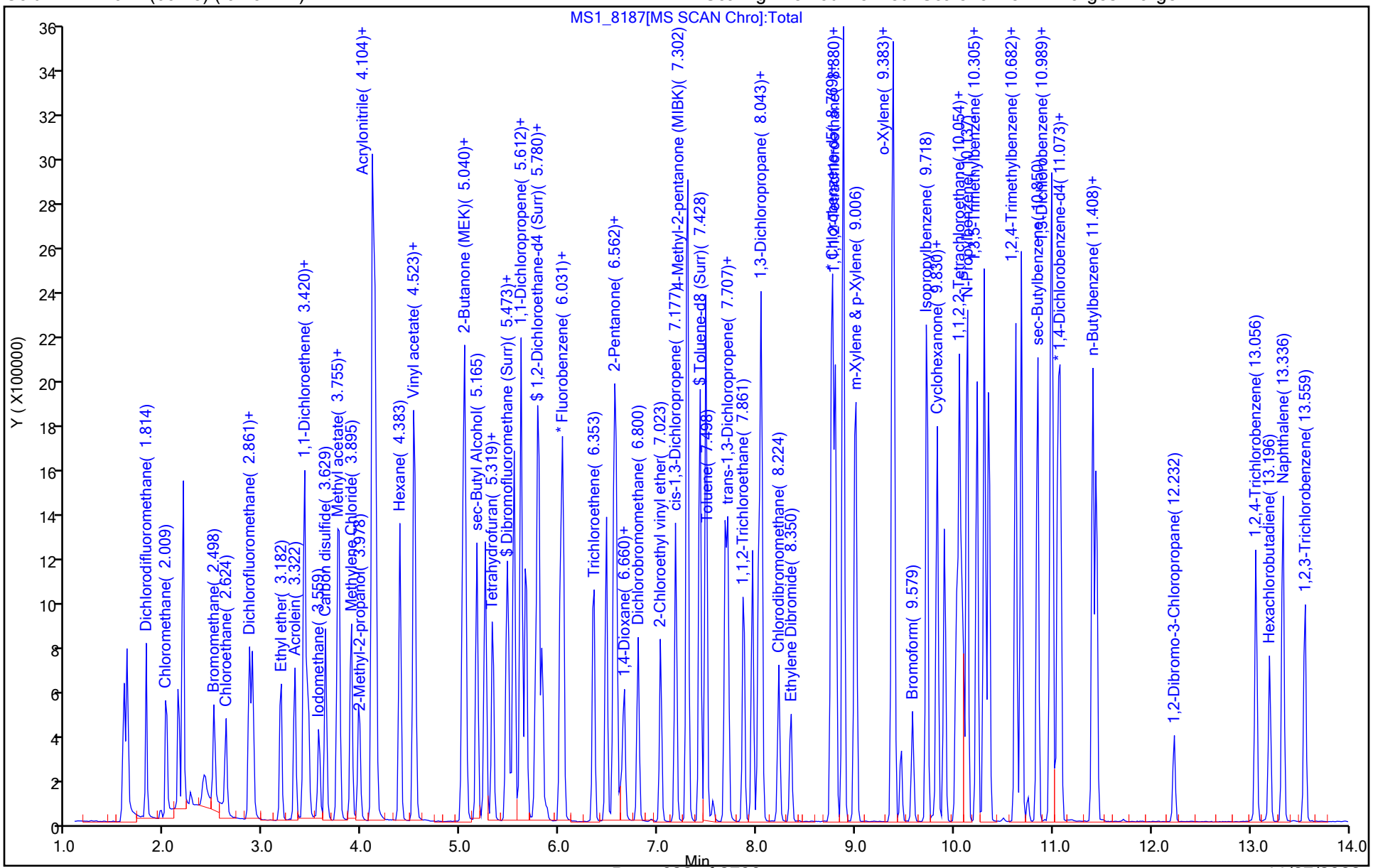
Report Date: 19-Apr-2023 07:39:33 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8187.D

Injection Date:	18-Apr-2023 11:45:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	36
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8188.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 18-Apr-2023 12:06:30 ALS Bottle#: 6 Worklist Smp#: 37
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icis
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:35 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 12:49:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1247062	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	293780	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	475448	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	296375	50.0	49.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	404022	50.0	50.2	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1246321	50.0	49.4	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	459278	50.0	49.2	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	293377	50.0	48.7	
12 Chloromethane	50	2.009	2.009	0.000	99	299134	50.0	51.9	
13 Vinyl chloride	62	2.135	2.135	0.000	98	296881	50.0	50.0	
15 Bromomethane	94	2.498	2.498	0.000	92	166480	50.0	53.2	
16 Chloroethane	64	2.623	2.623	0.000	100	175894	50.0	48.1	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	416020	50.0	50.0	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	335760	50.0	47.9	
20 Ethyl ether	59	3.182	3.182	0.000	95	230588	50.0	52.1	
22 Acrolein	56	3.322	3.322	0.000	99	348281	493.8	515.8	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	94	199289	50.0	51.6	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	95	153448	50.0	54.3	
25 Acetone	43	3.447	3.447	0.000	98	436906	200.0	203.1	
26 Iodomethane	142	3.559	3.559	0.000	100	278094	50.0	53.8	
28 Carbon disulfide	76	3.629	3.629	0.000	100	709748	50.0	51.1	
30 Methyl acetate	43	3.755	3.755	0.000	98	499906	100.0	102.1	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	87	472342	50.0	53.0	
32 Methylene Chloride	84	3.894	3.894	0.000	98	240886	50.0	50.1	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	362373	500.0	513.2	
34 Acrylonitrile	53	4.104	4.104	0.000	98	1200193	500.0	526.2	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	804663	50.0	53.8	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	227940	50.0	50.8	
37 Hexane	57	4.383	4.383	0.000	96	356437	50.0	56.1	
39 Vinyl acetate	43	4.523	4.523	0.000	97	1270879	100.0	108.8	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	467391	50.0	52.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	658252	200.0	196.9	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	249081	50.0	51.6	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	390647	50.0	51.7	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	728372	1200.0	1227.7	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	217418	100.0	103.6	
53 Chlorobromomethane	128	5.249	5.249	0.000	94	112253	50.0	50.8	
55 Chloroform	83	5.319	5.319	0.000	96	419777	50.0	51.7	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	367595	50.0	54.5	
57 Cyclohexane	56	5.542	5.542	0.000	96	477853	50.0	54.9	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	363275	50.0	55.0	
59 Carbon tetrachloride	117	5.612	5.612	0.000	84	305444	50.0	53.6	
60 Isobutyl alcohol	41	5.654	5.654	0.000	93	317663	1250.0	1279.0	
63 Benzene	78	5.794	5.794	0.000	97	1014686	50.0	52.6	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	376358	50.0	50.0	
66 n-Heptane	43	6.003	6.003	0.000	96	299484	50.0	49.9	
68 Trichloroethene	95	6.352	6.352	0.000	96	240807	50.0	51.0	
69 2-Pentanone	43	6.478	6.478	0.000	98	844947	160.0	165.8	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	339853	50.0	53.8	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	92	273773	50.0	51.5	
73 1,4-Dioxane	88	6.632	6.632	0.000	96	82023	1000.0	955.8	
74 Dibromomethane	93	6.660	6.660	0.000	94	150760	50.0	51.8	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	336974	50.0	53.1	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	193886	50.0	51.1	
78 cis-1,3-Dichloropropene	75	7.176	7.176	0.000	91	442345	50.0	52.5	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	1342534	200.0	210.4	
82 Toluene	91	7.484	7.484	0.000	97	1044024	50.0	52.4	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	412532	50.0	52.4	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	369224	50.0	51.6	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	220185	50.0	52.7	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	173498	50.0	53.6	
90 1,3-Dichloropropane	76	8.014	8.014	0.000	97	413861	50.0	52.7	
91 2-Hexanone	43	8.042	8.042	0.000	98	955404	200.0	206.0	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	226494	50.0	52.4	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	225917	50.0	52.0	
98 1-Chlorohexane	91	8.755	8.755	0.000	90	255150	40.0	42.5	
99 Chlorobenzene	112	8.797	8.797	0.000	91	631063	50.0	51.5	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	215783	50.0	51.3	
101 Ethylbenzene	106	8.880	8.880	0.000	99	354343	50.0	50.7	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	438839	50.0	51.4	
103 o-Xylene	106	9.369	9.369	0.000	98	432263	50.0	50.7	
104 Styrene	104	9.397	9.397	0.000	95	746806	50.0	52.3	
106 Bromoform	173	9.579	9.579	0.000	93	143633	50.0	53.4	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	1064981	50.0	52.5	
109 Cyclohexanone	55	9.830	9.830	0.000	95	439304	1500.0	1485.5	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	320698	50.0	53.1	
111 Bromobenzene	156	10.053	10.053	0.000	98	248981	50.0	52.3	
112 trans-1,4-Dichloro-2-butene	53	10.053	10.053	0.000	82	86613	50.0	48.8	
113 1,2,3-Trichloropropane	110	10.095	10.095	0.000	86	94619	50.0	51.3	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	291700	50.0	53.2	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	243950	50.0	52.0	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	876117	50.0	51.9	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	255964	50.0	51.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	714737	50.0	52.4	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	926204	50.0	52.1	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	198299	50.0	52.4	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	463519	50.0	52.0	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	892902	50.0	52.9	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	95	477730	50.0	50.2	
125 n-Butylbenzene	91	11.408	11.408	0.000	99	796092	50.0	51.8	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	448355	50.0	52.7	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	77	63963	50.0	52.2	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	94	243849	50.0	51.2	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	91889	50.0	49.9	
132 Naphthalene	128	13.336	13.336	0.000	98	783012	50.0	49.5	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	202794	50.0	50.1	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	102.4	
S 151 Trihalomethanes, Total	1				0		200.0	210.7	
S 150 1,2-Dichloroethene, Total	1				0		100.0	102.4	
S 156 1,3-Dichloropropene, Total	1				0		100.0	105.0	
S 155 Xylenes, Total	106				0		100.0	102.2	
S 153 Xylenes, Total (URS)	1				0		100.0	102.2	

Reagents:

MV-MegaMainA_00087	Amount Added: 25.00	Units: uL	
MV-Gas A_00151	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

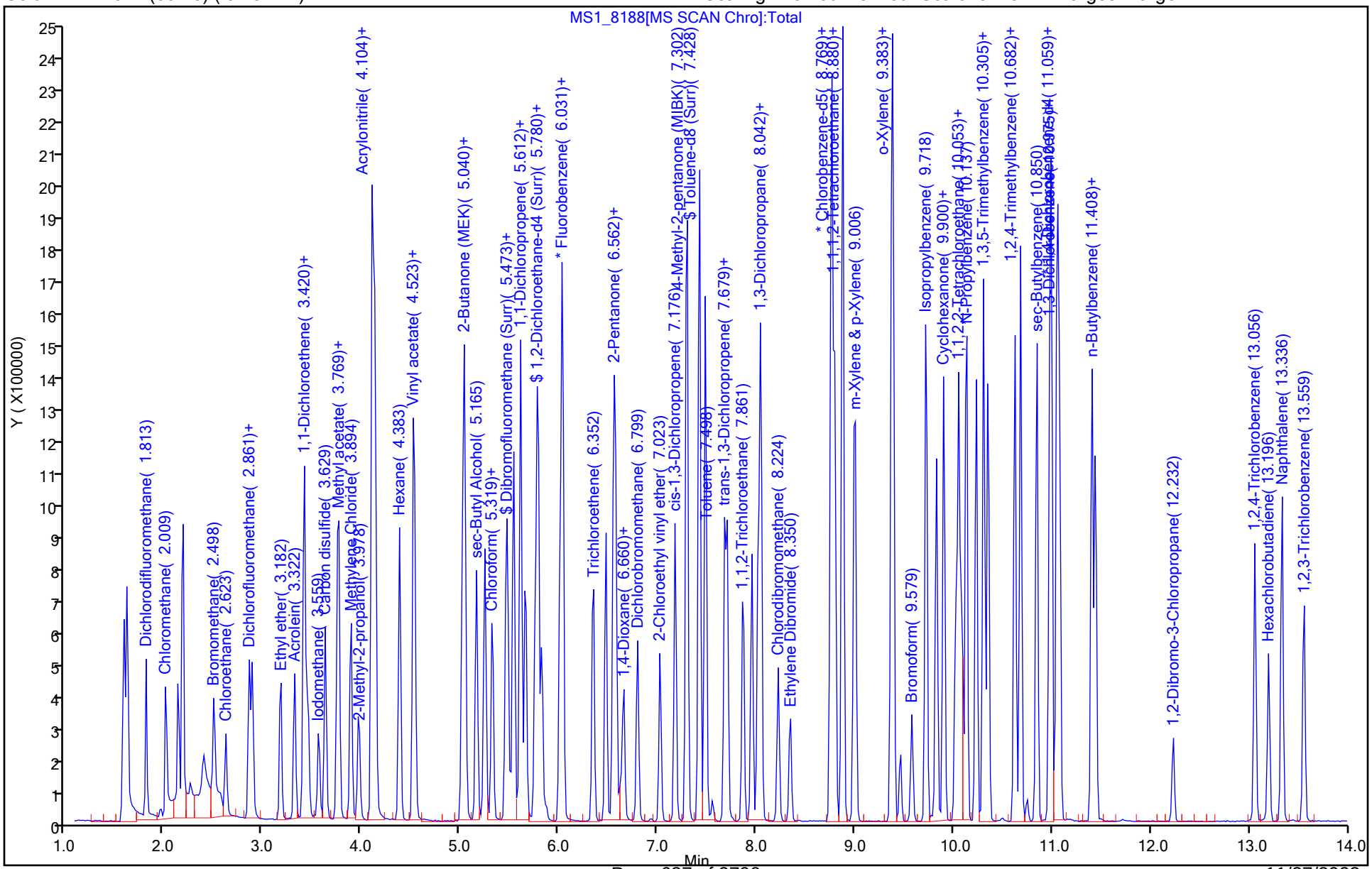
Report Date: 19-Apr-2023 07:39:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8188.D

Injection Date:	18-Apr-2023 12:06:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	icis			Worklist Smp#:	37
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8189.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Apr-2023 12:27:30 ALS Bottle#: 7 Worklist Smp#: 38
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:37 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 13:08:19

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	98	1230102	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	285207	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	469942	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	291815	50.0	49.8	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	402143	50.0	50.7	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1235474	50.0	50.5	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	465202	50.0	50.4	
	11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	32552	10.0	6.82	
	12 Chloromethane	50	2.009	2.009	0.000	99	44978	10.0	7.92	
	13 Vinyl chloride	62	2.135	2.135	0.000	98	40198	10.0	7.16	
	15 Bromomethane	94	2.498	2.498	0.000	95	28670	10.0	8.93	
	16 Chloroethane	64	2.624	2.623	0.001	99	24445	10.0	7.04	
	17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	59297	10.0	7.35	
	18 Trichlorofluoromethane	101	2.889	2.889	0.000	96	42332	10.0	7.24	
	20 Ethyl ether	59	3.182	3.182	0.000	94	40526	10.0	9.29	
	22 Acrolein	56	3.322	3.322	0.000	99	63138	98.8	94.8	
	24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	93	26071	10.0	9.35	
	23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	35523	10.0	9.32	
	25 Acetone	43	3.448	3.447	0.001	98	82478	40.0	37.3	
	26 Iodomethane	142	3.559	3.559	0.000	99	43480	10.0	8.53	
	28 Carbon disulfide	76	3.629	3.629	0.000	100	130932	10.0	9.56	
	30 Methyl acetate	43	3.755	3.755	0.000	99	89165	20.0	18.5	
	31 3-Chloro-1-propene	41	3.769	3.769	0.000	87	90496	10.0	9.85	
	32 Methylene Chloride	84	3.895	3.894	0.001	97	45615	10.0	9.61	
	33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	65730	100.0	94.4	
	34 Acrylonitrile	53	4.104	4.104	0.000	99	219595	100.0	97.6	
	35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	144967	10.0	9.82	
	36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	96	40722	10.0	9.20	
	37 Hexane	57	4.383	4.383	0.000	94	59887	10.0	9.70	
	39 Vinyl acetate	43	4.523	4.523	0.000	98	230408	20.0	20.0	
	40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	83166	10.0	9.47	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	100	120299	40.0	36.5	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	87	46801	10.0	9.83	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	67595	10.0	9.07	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	100	134443	240.0	229.7	
54 Tetrahydrofuran	42	5.249	5.249	0.000	87	38533	20.0	18.6	
53 Chlorobromomethane	128	5.249	5.249	0.000	94	21570	10.0	9.90	
55 Chloroform	83	5.319	5.319	0.000	95	77366	10.0	9.67	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	98	63268	10.0	9.50	
57 Cyclohexane	56	5.543	5.542	0.001	96	80200	10.0	9.34	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	62881	10.0	9.65	
59 Carbon tetrachloride	117	5.612	5.612	0.000	85	52733	10.0	9.38	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	56617	250.0	231.1	
63 Benzene	78	5.780	5.794	-0.014	96	183845	10.0	9.67	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	73647	10.0	9.92	
66 n-Heptane	43	6.003	6.003	0.000	96	50231	10.0	8.49	
68 Trichloroethene	95	6.353	6.352	0.001	96	43575	10.0	9.51	
69 2-Pentanone	43	6.478	6.478	0.000	98	154490	32.0	30.7	
70 Methylcyclohexane	55	6.548	6.548	0.000	94	55764	10.0	8.95	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	93	48139	10.0	9.19	
73 1,4-Dioxane	88	6.632	6.632	0.000	97	16688	200.0	197.2	
74 Dibromomethane	93	6.660	6.660	0.000	93	28268	10.0	9.84	
75 Dichlorobromomethane	83	6.800	6.799	0.001	98	58554	10.0	9.36	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	25014	10.0	7.01	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	90	80466	10.0	9.85	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	244936	40.0	38.9	
82 Toluene	91	7.484	7.484	0.000	97	189507	10.0	9.63	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	98	75016	10.0	9.66	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	68874	10.0	9.92	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	39321	10.0	9.54	
89 Tetrachloroethene	164	7.959	7.959	0.000	93	30631	10.0	9.75	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	98	75352	10.0	9.88	
91 2-Hexanone	43	8.043	8.042	0.000	98	177057	40.0	39.3	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	41585	10.0	9.92	
96 Ethylene Dibromide	107	8.350	8.350	0.000	95	41788	10.0	9.91	
98 1-Chlorohexane	91	8.755	8.755	0.000	87	46847	8.00	7.67	
99 Chlorobenzene	112	8.797	8.797	0.000	93	115405	10.0	9.70	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	38809	10.0	9.51	
101 Ethylbenzene	106	8.880	8.880	0.000	99	65038	10.0	9.59	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	79452	10.0	9.59	
103 o-Xylene	106	9.369	9.369	0.000	97	79005	10.0	9.55	
104 Styrene	104	9.397	9.397	0.000	95	132159	10.0	9.53	
106 Bromoform	173	9.579	9.579	0.000	93	24943	10.0	9.54	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	193439	10.0	9.65	
109 Cyclohexanone	55	9.830	9.830	0.000	96	84088	300.0	292.9	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	57506	10.0	9.63	
111 Bromobenzene	156	10.054	10.053	0.001	97	46102	10.0	9.80	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	72	13199	10.0	7.63	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	88	17975	10.0	9.85	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	51743	10.0	9.55	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	43750	10.0	9.44	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	158804	10.0	9.52	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	46597	10.0	9.45	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	128871	10.0	9.55	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	167498	10.0	9.53	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	36444	10.0	9.74	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	86629	10.0	9.84	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	158755	10.0	9.51	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	91	87268	10.0	9.29	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	144659	10.0	9.52	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	84218	10.0	10.0	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	73	11521	10.0	9.52	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	48632	10.0	10.3	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	94	17705	10.0	9.73	
132 Naphthalene	128	13.336	13.336	0.000	98	161630	10.0	10.3	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	93	41374	10.0	10.3	
S 149 1,2-Dichloroethene, Total (URS)	96				0		20.0	19.0	
S 151 Trihalomethanes, Total	1				0		40.0	38.5	
S 150 1,2-Dichloroethene, Total	1				0		20.0	19.0	
S 156 1,3-Dichloropropene, Total	1				0		20.0	19.5	
S 155 Xylenes, Total	106				0		20.0	19.1	
S 153 Xylenes, Total (URS)	1				0		20.0	19.1	
S 152 Total BTEX	1				0			48.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added:	5.00	Units: uL	
MV-Gas A_00151	Amount Added:	2.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

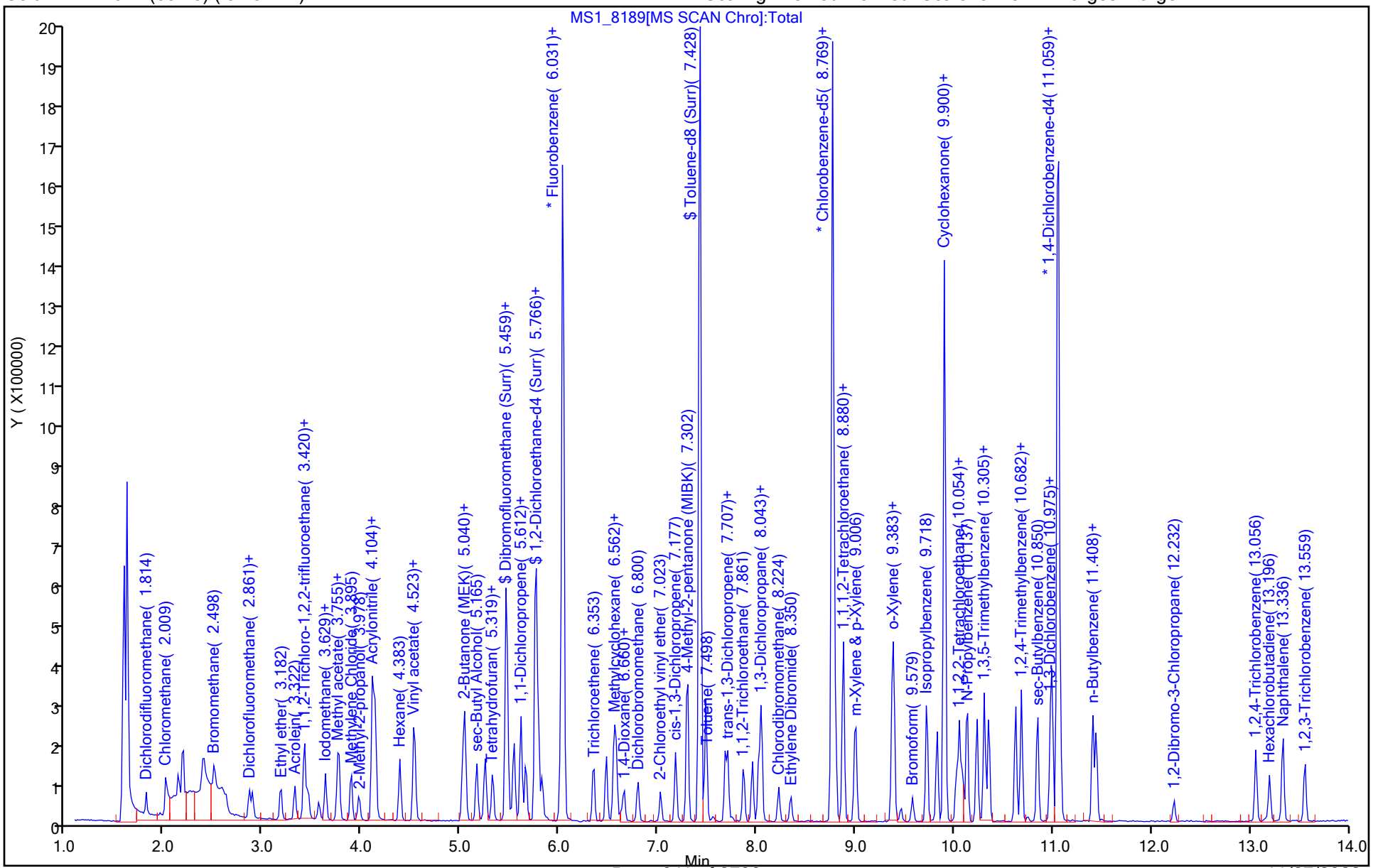
Report Date: 19-Apr-2023 07:39:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8189.D

Injection Date:	18-Apr-2023 12:27:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	38
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8190.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Apr-2023 12:49:30 ALS Bottle#: 8 Worklist Smp#: 39
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:40 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: LP8K Date: 18-Apr-2023 13:23:07

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.031	6.031	0.000	98	1207547	50.0	50.0	
*	2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	284291	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	458568	50.0	50.0	
$	5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	285621	50.0	49.7	
$	6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.766	-0.014	0	387212	50.0	49.7	
$	7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1224432	50.0	50.2	
$	8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	441292	50.0	49.0	
	11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	15343	5.00	4.06	
	12 Chloromethane	50	2.009	2.009	0.000	98	23489	5.00	4.21	
	13 Vinyl chloride	62	2.135	2.135	0.000	97	20261	5.00	3.85	
	15 Bromomethane	94	2.498	2.498	0.000	91	14338	5.00	4.33	
	16 Chloroethane	64	2.624	2.623	0.001	98	12957	5.00	3.94	
	17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	30123	5.00	3.88	
	18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	18418	5.00	3.92	
	20 Ethyl ether	59	3.182	3.182	0.000	95	18938	5.00	4.42	
	22 Acrolein	56	3.322	3.322	0.000	99	28549	49.4	43.7	
	23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	14443	5.00	3.86	
	24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	92	10656	5.00	3.89	
	25 Acetone	43	3.462	3.447	0.015	99	40209	20.0	17.6	
	26 Iodomethane	142	3.559	3.559	0.000	100	19647	5.00	3.93	
	28 Carbon disulfide	76	3.629	3.629	0.000	100	60376	5.00	4.49	
	30 Methyl acetate	43	3.755	3.755	0.000	98	39369	10.0	8.31	
	31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	45273	5.00	4.75	
	32 Methylene Chloride	84	3.894	3.894	0.000	98	19995	5.00	4.29	
	33 2-Methyl-2-propanol	59	3.964	3.964	0.000	99	28800	50.0	42.1	
	34 Acrylonitrile	53	4.104	4.104	0.000	98	95937	50.0	43.4	
	35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	61754	5.00	4.26	
	36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	95	19488	5.00	4.49	
	37 Hexane	57	4.383	4.383	0.000	95	23943	5.00	3.89	
	39 Vinyl acetate	43	4.523	4.523	0.000	98	97660	10.0	8.63	
	40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	37614	5.00	4.36	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	57722	20.0	17.8	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	19553	5.00	4.18	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	89	30032	5.00	4.10	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	61078	120.0	106.3	
54 Tetrahydrofuran	42	5.249	5.249	0.000	90	17999	10.0	8.86	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	9505	5.00	4.45	
55 Chloroform	83	5.319	5.319	0.000	96	36302	5.00	4.62	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	96	27811	5.00	4.26	
57 Cyclohexane	56	5.542	5.542	0.000	96	31689	5.00	3.76	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	89	27026	5.00	4.22	
59 Carbon tetrachloride	117	5.612	5.612	0.000	81	22022	5.00	3.99	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	26236	125.0	109.1	
63 Benzene	78	5.780	5.794	-0.014	93	83917	5.00	4.50	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	31852	5.00	4.37	
66 n-Heptane	43	6.003	6.003	0.000	96	23653	5.00	4.07	
68 Trichloroethene	95	6.339	6.352	-0.013	97	19439	5.00	4.26	
69 2-Pentanone	43	6.478	6.478	0.000	98	69645	16.0	14.1	
70 Methylcyclohexane	55	6.562	6.548	0.014	92	22939	5.00	3.75	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	88	22487	5.00	4.37	
73 1,4-Dioxane	88	6.632	6.632	0.000	94	7731	100.0	93.0	
74 Dibromomethane	93	6.660	6.660	0.000	92	12684	5.00	4.50	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	25716	5.00	4.19	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	13496	5.00	4.02	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	90	34476	5.00	4.23	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	108161	20.0	17.5	
82 Toluene	91	7.484	7.484	0.000	98	83254	5.00	4.31	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	32204	5.00	4.23	
85 Ethyl methacrylate	69	7.707	7.707	0.000	94	30227	5.00	4.37	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	17253	5.00	4.27	
89 Tetrachloroethene	164	7.959	7.959	0.000	89	12946	5.00	4.14	
90 1,3-Dichloropropane	76	8.015	8.014	0.000	96	33095	5.00	4.35	
91 2-Hexanone	43	8.042	8.042	0.000	99	78327	20.0	17.4	
95 Chlorodibromomethane	129	8.224	8.224	0.000	90	18786	5.00	4.49	
96 Ethylene Dibromide	107	8.350	8.350	0.000	99	18011	5.00	4.29	
98 1-Chlorohexane	91	8.755	8.755	0.000	89	22708	4.00	3.49	
99 Chlorobenzene	112	8.797	8.797	0.000	92	53582	5.00	4.52	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	17724	5.00	4.36	
101 Ethylbenzene	106	8.880	8.880	0.000	99	28872	5.00	4.27	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	37001	5.00	4.48	
103 o-Xylene	106	9.369	9.369	0.000	98	34379	5.00	4.17	
104 Styrene	104	9.397	9.397	0.000	95	60888	5.00	4.40	
106 Bromoform	173	9.579	9.579	0.000	93	11060	5.00	4.25	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	84155	5.00	4.30	
109 Cyclohexanone	55	9.830	9.830	0.000	95	38876	150.0	135.9	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	95	24783	5.00	4.25	
111 Bromobenzene	156	10.054	10.053	0.001	97	19645	5.00	4.28	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	73	5517	5.00	3.34	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	88	8043	5.00	4.52	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	21958	5.00	4.15	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	20491	5.00	4.53	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	95	70142	5.00	4.31	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	20876	5.00	4.34	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	57337	5.00	4.35	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	97	75639	5.00	4.41	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	14585	5.00	4.00	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	38173	5.00	4.44	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	68934	5.00	4.23	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	94	38861	5.00	4.24	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	63269	5.00	4.27	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	93	35458	5.00	4.32	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	78	5172	5.00	4.38	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	94	20481	5.00	4.45	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	95	7695	5.00	4.33	
132 Naphthalene	128	13.336	13.336	0.000	97	71950	5.00	4.71	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	18032	5.00	4.62	
S 149 1,2-Dichloroethene, Total (URS)	96				0		10.0	8.67	
S 151 Trihalomethanes, Total	1				0		20.0	17.5	
S 150 1,2-Dichloroethene, Total	1				0		10.0	8.67	
S 156 1,3-Dichloropropene, Total	1				0		10.0	8.46	
S 155 Xylenes, Total	106				0		10.0	8.65	
S 153 Xylenes, Total (URS)	1				0		10.0	8.65	
S 152 Total BTEX	1				0			21.7	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00087	Amount Added:	2.50	Units: uL	
MV-Gas A_00151	Amount Added:	1.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

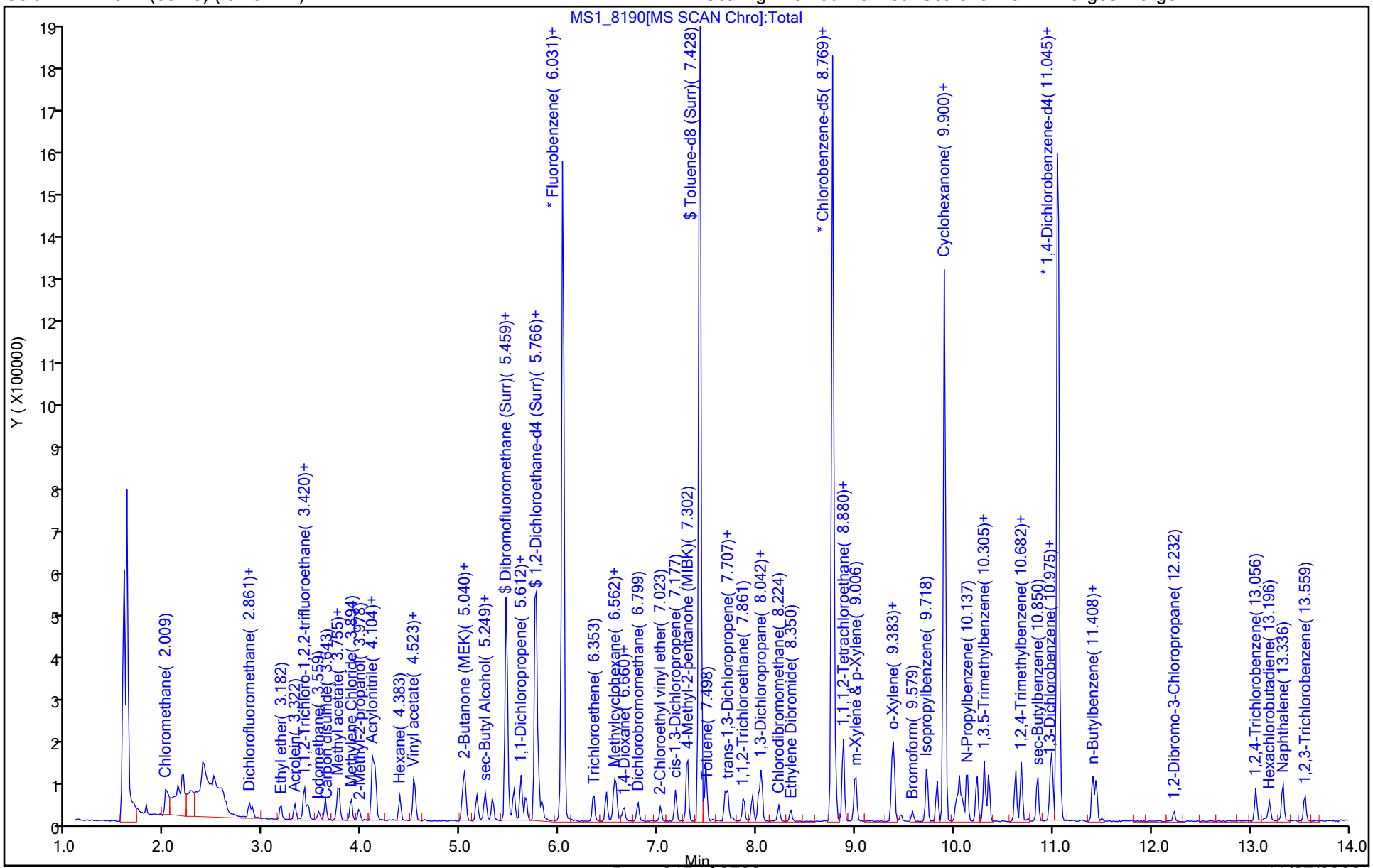
Report Date: 19-Apr-2023 07:39:40 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8190.D

Injection Date:	18-Apr-2023 12:49:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	39
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Apr-2023 18:58:30 ALS Bottle#: 15 Worklist Smp#: 40
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:42 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 19-Apr-2023 06:09:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1153908	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	266472	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	433915	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	276082	50.0	50.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.766	-0.014	0	364248	50.0	48.9	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1164538	50.0	50.9	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	427731	50.0	50.2	
11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	8280	2.00	2.95	
12 Chloromethane	50	2.009	2.009	0.000	99	10752	2.00	2.02	
13 Vinyl chloride	62	2.135	2.135	0.000	98	9868	2.00	2.13	
15 Bromomethane	94	2.498	2.498	0.000	89	7404	2.00	2.14	
16 Chloroethane	64	2.624	2.623	0.001	98	6805	2.00	2.30	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	14487	2.00	2.03	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	11067	2.00	2.94	
20 Ethyl ether	59	3.182	3.182	0.000	94	8628	2.00	2.11	
22 Acrolein	56	3.322	3.322	0.000	98	11662	19.8	18.7	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	92	5260	2.00	2.01	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	96	7427	2.00	2.08	
25 Acetone	43	3.462	3.447	0.015	99	18485	8.00	7.44	
26 Iodomethane	142	3.559	3.559	0.000	99	8303	2.00	1.74	
28 Carbon disulfide	76	3.629	3.629	0.000	99	25274	2.00	1.97	
30 Methyl acetate	43	3.755	3.755	0.000	98	18609	4.00	4.11	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	89	19300	2.00	1.82	
32 Methylene Chloride	84	3.895	3.894	0.001	93	10321	2.00	2.32	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	97	11894	20.0	18.2	
34 Acrylonitrile	53	4.104	4.104	0.000	95	38749	20.0	18.4	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	99	26279	2.00	1.90	
36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	95	8777	2.00	2.11	
37 Hexane	57	4.383	4.383	0.000	96	10578	2.00	1.83	
39 Vinyl acetate	43	4.523	4.523	0.000	98	42115	4.00	3.89	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	16478	2.00	2.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	100	25986	8.00	8.40	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	8648	2.00	1.94	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	13947	2.00	1.99	
51 sec-Butyl Alcohol	45	5.166	5.165	0.001	99	24716	48.0	45.0	
54 Tetrahydrofuran	42	5.263	5.249	0.014	88	7924	4.00	4.08	
53 Chlorobromomethane	128	5.249	5.249	0.000	92	4150	2.00	2.03	
55 Chloroform	83	5.319	5.319	0.000	96	15079	2.00	2.01	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	12435	2.00	1.99	
57 Cyclohexane	56	5.543	5.542	0.001	94	16235	2.00	2.02	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	11445	2.00	1.87	
59 Carbon tetrachloride	117	5.612	5.612	0.000	83	10794	2.00	2.05	
60 Isobutyl alcohol	41	5.654	5.654	0.000	90	11065	50.0	48.1	
63 Benzene	78	5.780	5.794	-0.014	98	36558	2.00	2.05	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	95	14424	2.00	2.07	
66 n-Heptane	43	6.003	6.003	0.000	91	11022	2.00	1.99	
68 Trichloroethene	95	6.339	6.352	-0.013	94	8814	2.00	2.06	
69 2-Pentanone	43	6.478	6.478	0.000	98	28660	6.40	6.08	
70 Methylcyclohexane	55	6.562	6.548	0.014	92	12191	2.00	2.09	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	91	9824	2.00	2.00	
73 1,4-Dioxane	88	6.632	6.632	0.000	92	3018	40.0	38.0	
74 Dibromomethane	93	6.660	6.660	0.000	93	5598	2.00	2.08	
75 Dichlorobromomethane	83	6.800	6.799	0.001	96	11605	2.00	1.98	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	5975	2.00	2.06	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	89	15699	2.00	2.06	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	46353	8.00	7.85	
82 Toluene	91	7.484	7.484	0.000	99	36750	2.00	1.99	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	98	14538	2.00	2.00	
85 Ethyl methacrylate	69	7.707	7.707	0.000	92	12702	2.00	1.96	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	92	7390	2.00	1.91	
89 Tetrachloroethene	164	7.959	7.959	0.000	90	5971	2.00	2.03	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	96	14399	2.00	2.02	
91 2-Hexanone	43	8.043	8.042	0.001	99	32424	8.00	7.71	
95 Chlorodibromomethane	129	8.224	8.224	0.000	88	7428	2.00	1.90	
96 Ethylene Dibromide	107	8.350	8.350	0.000	96	8298	2.00	2.11	
98 1-Chlorohexane	91	8.755	8.755	0.000	85	9937	1.60	1.39	
99 Chlorobenzene	112	8.797	8.797	0.000	96	23605	2.00	2.12	
100 1,1,1,2-Tetrachloroethane	131	8.881	8.880	0.001	44	7911	2.00	2.07	
101 Ethylbenzene	106	8.881	8.880	0.001	99	13023	2.00	2.06	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	16669	2.00	2.15	
103 o-Xylene	106	9.369	9.369	0.000	97	16442	2.00	2.13	
104 Styrene	104	9.397	9.397	0.000	94	26737	2.00	2.06	
106 Bromoform	173	9.579	9.579	0.000	91	4503	2.00	1.84	
107 Isopropylbenzene	105	9.719	9.718	0.000	96	37534	2.00	2.03	
109 Cyclohexanone	55	9.830	9.830	0.000	93	16010	60.0	59.7	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	93	10690	2.00	1.94	
111 Bromobenzene	156	10.054	10.053	0.001	97	8621	2.00	1.99	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	61	2844	2.00	1.88	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	3397	2.00	2.02	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	9868	2.00	1.97	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	8754	2.00	2.05	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	31204	2.00	2.03	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	9233	2.00	2.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	24002	2.00	1.93	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	97	33584	2.00	2.07	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	6733	2.00	1.95	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	97	16744	2.00	2.06	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	31202	2.00	2.02	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	93	17981	2.00	2.07	
125 n-Butylbenzene	91	11.408	11.408	0.000	97	27805	2.00	1.98	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	94	15168	2.00	1.95	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	74	2217	2.00	1.98	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	92	8786	2.00	2.02	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	94	3236	2.00	1.93	
132 Naphthalene	128	13.336	13.336	0.000	98	27151	2.00	1.88	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	90	7439	2.00	2.01	
S 149 1,2-Dichloroethene, Total (URS)	96				0		4.00	4.05	
S 151 Trihalomethanes, Total	1				0		8.00	7.73	
S 150 1,2-Dichloroethene, Total	1				0		4.00	4.05	
S 156 1,3-Dichloropropene, Total	1				0		4.00	4.05	
S 155 Xylenes, Total	106				0		4.00	4.28	
S 153 Xylenes, Total (URS)	1				0		4.00	4.28	
S 152 Total BTEX	1				0			10.4	

QC Flag Legend

Processing Flags

Reagents:

Cal Dil Std_00169	Amount Added: 20.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 19-Apr-2023 07:39:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Injection Date:	18-Apr-2023 18:58:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	40
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Apr-2023 18:36:30 ALS Bottle#: 14 Worklist Smp#: 41
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:44 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 19-Apr-2023 06:11:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1135581	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	263402	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	430436	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	274378	50.0	50.8	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.766	-0.014	0	359476	50.0	49.1	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1142694	50.0	50.5	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	419344	50.0	49.6	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	96	3358	1.00	2.10	
12 Chloromethane	50	2.023	2.009	0.014	96	5627	1.00	1.07	
13 Vinyl chloride	62	2.135	2.135	0.000	96	5313	1.00	1.32	
15 Bromomethane	94	2.498	2.498	0.000	82	4100	1.00	1.01	
16 Chloroethane	64	2.624	2.623	0.001	98	3329	1.00	1.29	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	9220	1.00	1.37	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	96	5763	1.00	2.16	
20 Ethyl ether	59	3.182	3.182	0.000	94	4346	1.00	1.08	
22 Acrolein	56	3.322	3.322	0.000	93	6422	9.88	10.4	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	4067	1.00	1.16	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	66	2527	1.00	0.9817	
25 Acetone	43	3.448	3.447	0.001	96	13236	4.00	4.89	
26 Iodomethane	142	3.559	3.559	0.000	99	5306	1.00	1.13	
28 Carbon disulfide	76	3.629	3.629	0.000	98	13744	1.00	1.09	
30 Methyl acetate	43	3.755	3.755	0.000	99	10464	2.00	2.35	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	90	12841	1.00	1.05	
32 Methylene Chloride	84	3.894	3.894	0.000	97	4898	1.00	1.12	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	97	6364	10.0	9.90	
34 Acrylonitrile	53	4.104	4.104	0.000	98	21519	10.0	10.4	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	13691	1.00	1.00	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	4587	1.00	1.12	
37 Hexane	57	4.383	4.383	0.000	95	4950	1.00	0.8682	
39 Vinyl acetate	43	4.523	4.523	0.000	96	21370	2.00	2.01	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	8640	1.00	1.07	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	99	14037	4.00	4.61	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	5004	1.00	1.14	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	76	7905	1.00	1.15	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	97	11620	24.0	21.5	
54 Tetrahydrofuran	42	5.263	5.249	0.014	69	3532	2.00	1.85	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	2335	1.00	1.16	
55 Chloroform	83	5.319	5.319	0.000	94	7643	1.00	1.03	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	93	5514	1.00	0.8973	
57 Cyclohexane	56	5.542	5.542	0.000	94	7808	1.00	0.9848	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	88	5667	1.00	0.9418	
59 Carbon tetrachloride	117	5.612	5.612	0.000	79	5266	1.00	1.01	
60 Isobutyl alcohol	41	5.654	5.654	0.000	82	5442	25.0	24.1	
63 Benzene	78	5.780	5.794	-0.014	94	17562	1.00	1.00	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	95	8144	1.00	1.19	M
66 n-Heptane	43	6.003	6.003	0.000	83	7141	1.00	1.31	
68 Trichloroethene	95	6.353	6.352	0.001	93	4917	1.00	1.16	
69 2-Pentanone	43	6.478	6.478	0.000	97	15244	3.20	3.28	
70 Methylcyclohexane	55	6.548	6.548	0.000	94	5951	1.00	1.04	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	89	5523	1.00	1.14	
73 1,4-Dioxane	88	6.632	6.632	0.000	27	2043	20.0	26.1	
74 Dibromomethane	93	6.660	6.660	0.000	96	2780	1.00	1.05	
75 Dichlorobromomethane	83	6.799	6.799	0.000	96	6380	1.00	1.10	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	89	3433	1.00	1.36	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	89	8062	1.00	1.07	
79 4-Methyl-2-pentanone (MIBK)	43	7.288	7.302	-0.014	97	22176	4.00	3.82	
82 Toluene	91	7.484	7.484	0.000	97	18770	1.00	1.03	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	97	7656	1.00	1.07	
85 Ethyl methacrylate	69	7.707	7.707	0.000	95	7058	1.00	1.10	
87 1,1,2-Trichloroethane	97	7.875	7.861	0.014	92	4227	1.00	1.11	
89 Tetrachloroethene	164	7.959	7.959	0.000	90	2795	1.00	0.9636	
90 1,3-Dichloropropane	76	8.015	8.014	0.000	95	7315	1.00	1.04	
91 2-Hexanone	43	8.042	8.042	0.000	97	17800	4.00	4.28	
95 Chlorodibromomethane	129	8.224	8.224	0.000	87	4077	1.00	1.05	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	4132	1.00	1.06	
98 1-Chlorohexane	91	8.769	8.755	0.014	33	7091	0.8000	0.8746	
99 Chlorobenzene	112	8.797	8.797	0.000	92	11181	1.00	1.02	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	44	4112	1.00	1.09	
101 Ethylbenzene	106	8.880	8.880	0.000	99	7107	1.00	1.13	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	7855	1.00	1.03	
103 o-Xylene	106	9.369	9.369	0.000	96	8975	1.00	1.17	
104 Styrene	104	9.397	9.397	0.000	95	13581	1.00	1.06	
106 Bromoform	173	9.579	9.579	0.000	50	2691	1.00	1.11	M
107 Isopropylbenzene	105	9.718	9.718	0.000	96	18155	1.00	0.9883	
109 Cyclohexanone	55	9.830	9.830	0.000	91	9218	30.0	34.8	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	95	5633	1.00	1.03	
111 Bromobenzene	156	10.054	10.053	0.001	96	4576	1.00	1.06	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	42	2389	1.00	1.61	
113 1,2,3-Trichloropropane	110	10.095	10.095	0.000	85	1722	1.00	1.03	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	4976	1.00	1.00	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	4337	1.00	1.02	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	15761	1.00	1.03	
117 4-Chlorotoluene	126	10.361	10.347	0.014	98	5098	1.00	1.13	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	12805	1.00	1.04	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	16747	1.00	1.04	
120 sec-Butylbenzene	134	10.850	10.850	0.000	94	3603	1.00	1.05	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	94	8057	1.00	1.00	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	96	15868	1.00	1.04	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	92	10610	1.00	1.23	
125 n-Butylbenzene	91	11.408	11.408	0.000	96	15818	1.00	1.14	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	8150	1.00	1.06	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	72	1159	1.00	1.05	M
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	91	4692	1.00	1.09	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	90	2183	1.00	1.31	
132 Naphthalene	128	13.336	13.336	0.000	97	17114	1.00	1.19	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	91	4137	1.00	1.13	
S 149 1,2-Dichloroethene, Total (URS)	96				0		2.00	2.26	
S 151 Trihalomethanes, Total	1				0		4.00	4.31	
S 150 1,2-Dichloroethene, Total	1				0		2.00	2.26	
S 156 1,3-Dichloropropene, Total	1				0		2.00	2.14	
S 155 Xylenes, Total	106				0		2.00	2.20	
S 153 Xylenes, Total (URS)	1				0		2.00	2.20	
S 152 Total BTEX	1				0			5.37	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

Cal Dil Std_00169	Amount Added:	10.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 19-Apr-2023 07:39:45 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D

Injection Date:	18-Apr-2023 18:36:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	41
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

Manual Integration/User Assign Peak Report

Eurofins Denver

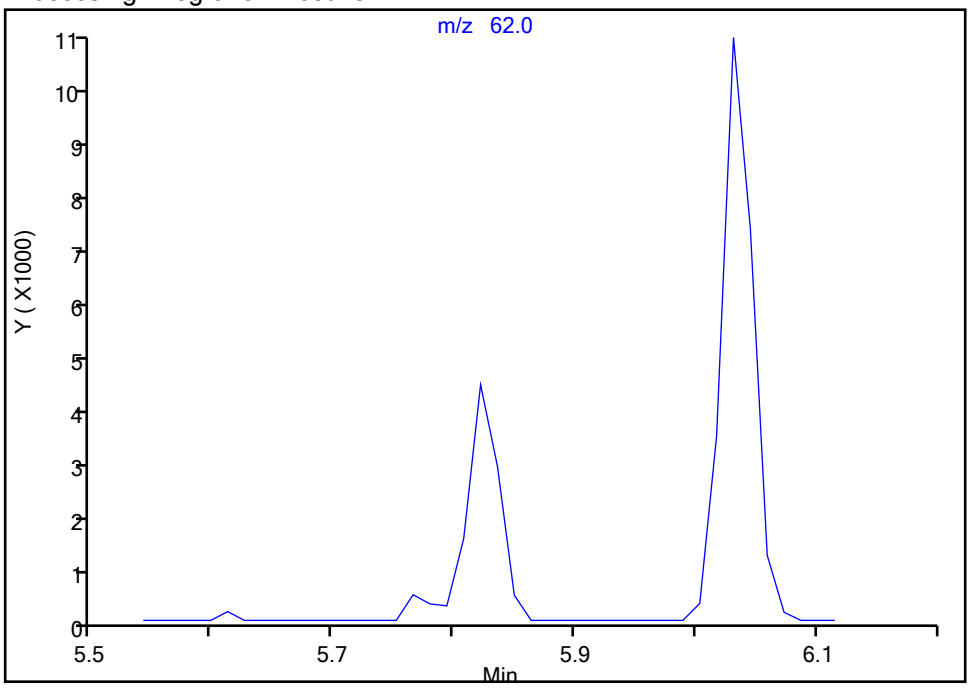
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D
Injection Date: 18-Apr-2023 18:36:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 14 Worklist Smp#: 41
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

64 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

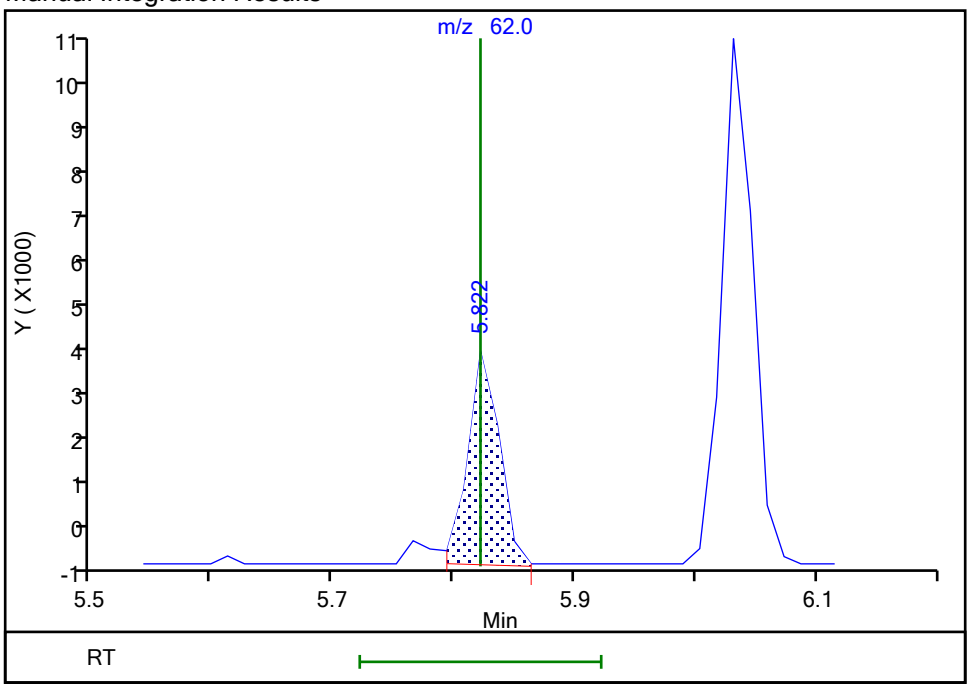
Not Detected
Expected RT: 5.82

Processing Integration Results



Manual Integration Results

RT: 5.82
Area: 8144
Amount: 1.188679
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:10:17
Audit Action: Assigned New Baseline Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

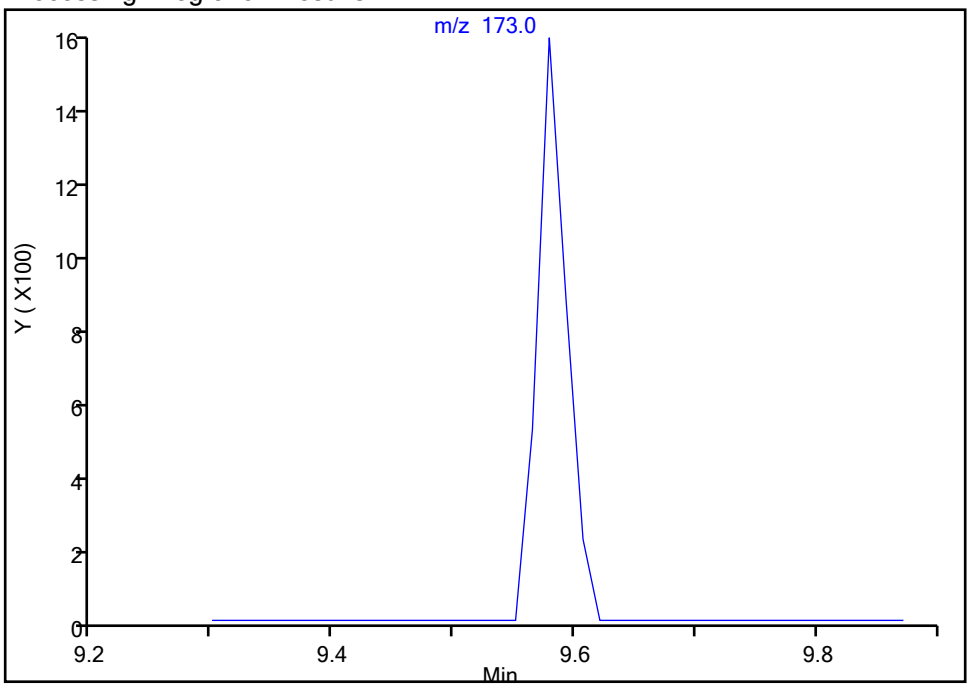
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D
Injection Date: 18-Apr-2023 18:36:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 14 Worklist Smp#: 41
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

106 Bromoform, CAS: 75-25-2

Signal: 1

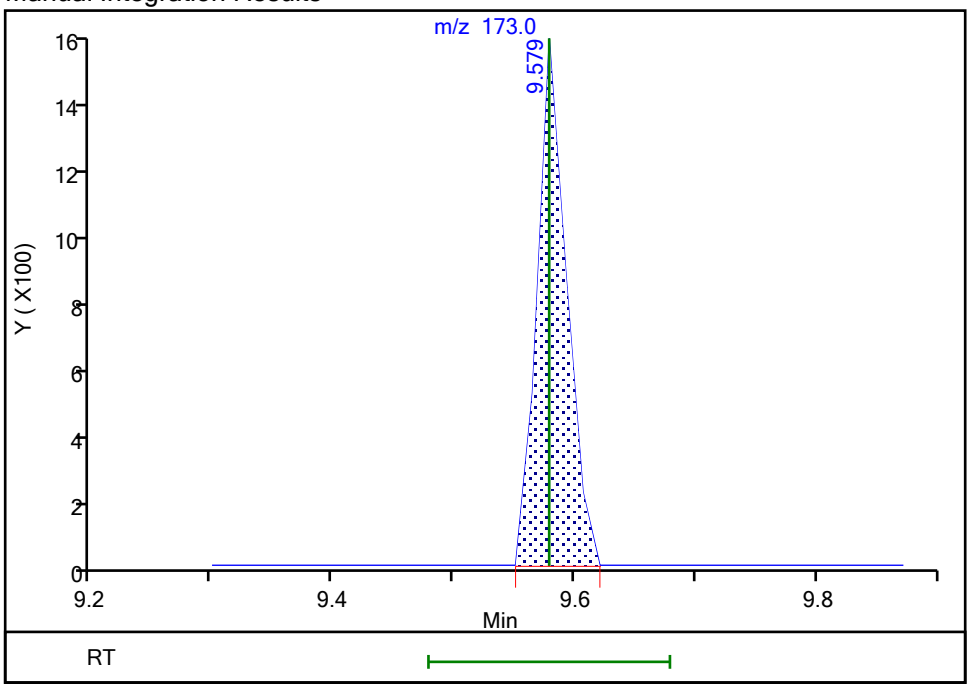
Not Detected
Expected RT: 9.58

Processing Integration Results



Manual Integration Results

RT: 9.58
Area: 2691
Amount: 1.114854
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:10:45
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

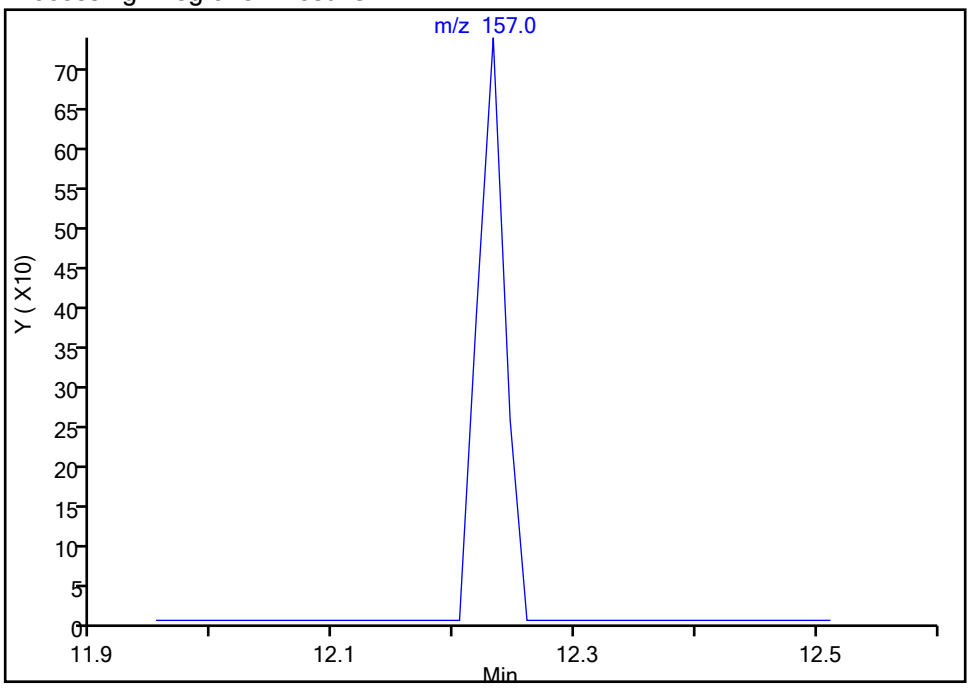
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8196.D
Injection Date: 18-Apr-2023 18:36:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 14 Worklist Smp#: 41
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

128 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Signal: 1

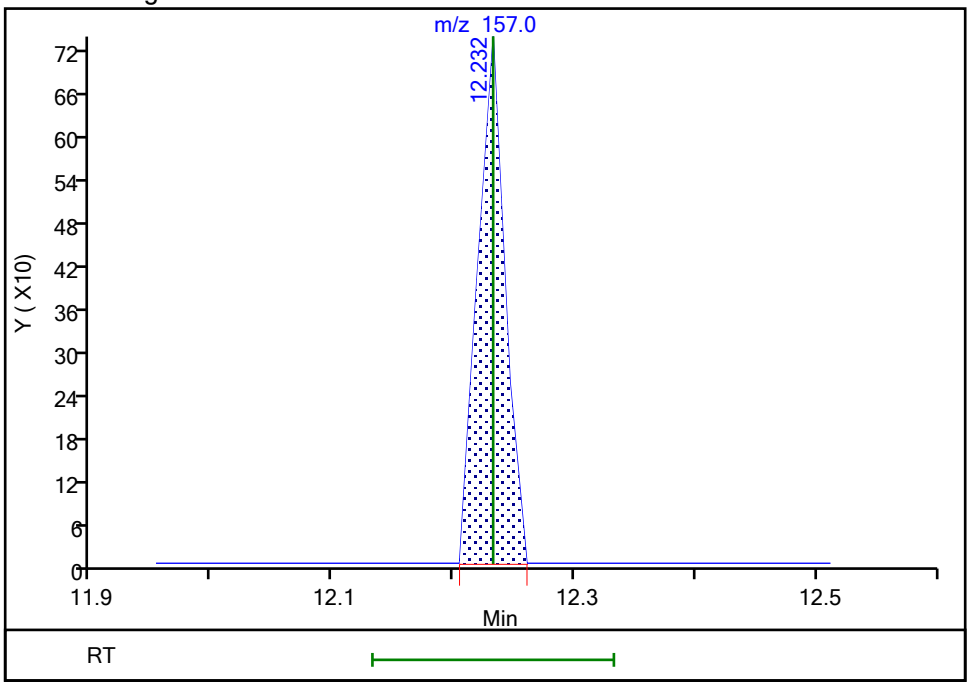
Not Detected
Expected RT: 12.23

Processing Integration Results



Manual Integration Results

RT: 12.23
Area: 1159
Amount: 1.045414
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:11:10
Audit Action: Manually Integrated Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Apr-2023 18:15:30 ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: .5
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 07:39:46 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 19-Apr-2023 06:13:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1123724	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	266567	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	427119	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	276619	50.0	51.7	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.766	-0.014	0	358198	50.0	49.4	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1129686	50.0	49.4	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	84	426658	50.0	50.9	
11 Dichlorodifluoromethane	85	1.814	1.813	0.001	30	1371	0.5000	1.75	M
12 Chloromethane	50	2.009	2.009	0.000	83	4861	0.5000	0.9366	
13 Vinyl chloride	62	2.135	2.135	0.000	97	4771	0.5000	1.23	
15 Bromomethane	94	2.498	2.498	0.000	75	3186	0.5000	0.7032	M
16 Chloroethane	64	2.624	2.623	0.001	55	701	0.5000	0.5097	M
17 Dichlorofluoromethane	67	2.861	2.861	0.000	96	5788	0.5000	0.9239	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	91	3751	0.5000	1.86	
20 Ethyl ether	59	3.168	3.182	-0.014	85	2599	0.5000	0.6519	
22 Acrolein	56	3.322	3.322	0.000	97	4017	4.94	6.60	M
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	73	1500	0.5000	0.5889	
23 1,1-Dichloroethene	96	3.406	3.420	-0.014	93	2749	0.5000	0.7893	
25 Acetone	43	3.462	3.447	0.015	98	11890	2.00	4.26	
26 Iodomethane	142	3.559	3.559	0.000	97	4526	0.5000	0.9723	
28 Carbon disulfide	76	3.629	3.629	0.000	99	17963	0.5000	1.44	
30 Methyl acetate	43	3.755	3.755	0.000	96	7622	1.00	1.73	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	87	9100	0.5000	0.6010	
32 Methylene Chloride	84	3.895	3.894	0.001	95	5180	0.5000	1.19	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	91	3480	5.00	5.47	
34 Acrylonitrile	53	4.104	4.104	0.000	98	16602	5.00	8.08	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	64	7267	0.5000	0.5390	
36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	94	3106	0.5000	0.7685	
37 Hexane	57	4.383	4.383	0.000	89	5294	0.5000	0.9176	
39 Vinyl acetate	43	4.523	4.523	0.000	99	14546	1.00	1.38	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	4.537	4.537	0.000	56	5185	0.5000	0.6463	
46 2-Butanone (MEK)	43	5.012	5.012	0.000	98	11243	2.00	3.73	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	3670	0.5000	0.8436	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	60	3886	0.5000	0.5705	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	92	7801	12.0	14.6	
54 Tetrahydrofuran	42	5.249	5.249	0.000	68	3207	1.00	1.70	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	1806	0.5000	0.9076	
55 Chloroform	83	5.319	5.319	0.000	92	4634	0.5000	0.6339	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	35	3937	0.5000	0.6475	
57 Cyclohexane	56	5.543	5.542	0.001	87	6382	0.5000	0.8135	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	90	4466	0.5000	0.7500	
59 Carbon tetrachloride	117	5.612	5.612	0.000	70	3697	0.5000	0.7195	
60 Isobutyl alcohol	41	5.640	5.654	-0.014	80	9804	12.5	43.8	
63 Benzene	78	5.780	5.794	-0.014	93	11905	0.5000	0.6855	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	82	6257	0.5000	0.9229	M
66 n-Heptane	43	6.003	6.003	0.000	97	23115	0.5000	4.28	
68 Trichloroethene	95	6.353	6.352	0.001	93	4277	0.5000	1.00	
69 2-Pentanone	43	6.478	6.478	0.000	97	9818	1.60	2.14	
70 Methylcyclohexane	55	6.562	6.548	0.014	91	5726	0.5000	1.01	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	84	3071	0.5000	0.6416	
73 1,4-Dioxane	88	6.632	6.632	0.000	92	6470	10.0	83.7	
74 Dibromomethane	93	6.660	6.660	0.000	83	2686	0.5000	1.02	
75 Dichlorobromomethane	83	6.800	6.799	0.001	95	4614	0.5000	0.8075	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	86	2163	0.5000	1.00	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	91	5754	0.5000	0.7533	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	98	13036	2.00	2.27	
82 Toluene	91	7.484	7.484	0.000	96	13242	0.5000	0.7369	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	96	5504	0.5000	0.7761	
85 Ethyl methacrylate	69	7.707	7.707	0.000	85	4586	0.5000	0.7066	
87 1,1,2-Trichloroethane	97	7.875	7.861	0.014	91	2679	0.5000	0.7119	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	2140	0.5000	0.7290	
90 1,3-Dichloropropane	76	8.029	8.014	0.015	94	4941	0.5000	0.6928	
91 2-Hexanone	43	8.043	8.042	0.001	97	10043	2.00	2.39	
95 Chlorodibromomethane	129	8.224	8.224	0.000	93	2825	0.5000	0.7208	
96 Ethylene Dibromide	107	8.350	8.350	0.000	96	3763	0.5000	0.9550	
98 1-Chlorohexane	91	8.769	8.755	0.014	33	5619	0.4000	0.5858	
99 Chlorobenzene	112	8.797	8.797	0.000	96	8507	0.5000	0.7649	
100 1,1,1,2-Tetrachloroethane	131	8.881	8.880	0.000	41	2322	0.5000	0.6087	
101 Ethylbenzene	106	8.881	8.880	0.000	98	4690	0.5000	0.7399	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	6401	0.5000	0.8271	
103 o-Xylene	106	9.383	9.369	0.014	95	5841	0.5000	0.7555	
104 Styrene	104	9.397	9.397	0.000	94	10671	0.5000	0.8232	
106 Bromoform	173	9.579	9.579	0.000	28	1405	0.5000	0.5752	M
107 Isopropylbenzene	105	9.732	9.718	0.014	95	13405	0.5000	0.7354	
109 Cyclohexanone	55	9.830	9.830	0.000	93	7277	15.0	27.1	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	93	3904	0.5000	0.7194	
111 Bromobenzene	156	10.054	10.053	0.001	94	3576	0.5000	0.8366	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	22	641	0.5000	0.5306	M
113 1,2,3-Trichloropropane	110	10.096	10.095	0.001	92	1336	0.5000	0.8056	
114 N-Propylbenzene	120	10.137	10.137	0.000	98	3692	0.5000	0.7494	
115 2-Chlorotoluene	126	10.235	10.235	0.000	94	3424	0.5000	0.8129	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	12147	0.5000	0.8014	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
117 4-Chlorotoluene	126	10.361	10.347	0.014	98	3727	0.5000	0.8314	
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	10864	0.5000	0.8858	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	96	13140	0.5000	0.8227	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	3024	0.5000	0.8896	
121 1,3-Dichlorobenzene	146	10.989	10.975	0.014	95	8248	0.5000	1.03	
122 4-Isopropyltoluene	119	11.003	10.989	0.014	97	15442	0.5000	1.02	
123 1,4-Dichlorobenzene	146	11.087	11.073	0.014	89	9732	0.5000	1.14	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	15648	0.5000	1.13	
127 1,2-Dichlorobenzene	146	11.450	11.436	0.014	91	7794	0.5000	1.02	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	21	892	0.5000	0.8108	M
130 1,2,4-Trichlorobenzene	180	13.070	13.056	0.014	91	7205	0.5000	1.68	
131 Hexachlorobutadiene	225	13.210	13.196	0.014	91	3253	0.5000	1.97	
132 Naphthalene	128	13.336	13.336	0.000	97	24636	0.5000	1.73	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	89	6692	0.5000	1.84	
S 149 1,2-Dichloroethene, Total (URS)	96				0		1.00	1.61	
S 151 Trihalomethanes, Total	1				0		2.00	2.74	
S 150 1,2-Dichloroethene, Total	1				0		1.00	1.61	
S 156 1,3-Dichloropropene, Total	1				0		1.00	1.53	
S 155 Xylenes, Total	106				0		1.00	1.58	
S 153 Xylenes, Total (URS)	1				0		1.00	1.58	
S 152 Total BTEX	1				0			3.74	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

Cal Dil Std_00169	Amount Added:	5.00	Units: uL	
mv-IS_SS_00057	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 19-Apr-2023 07:39:47 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D

Injection Date:	18-Apr-2023 18:15:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	ic			Worklist Smp#:	42
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

Manual Integration/User Assign Peak Report

Eurofins Denver

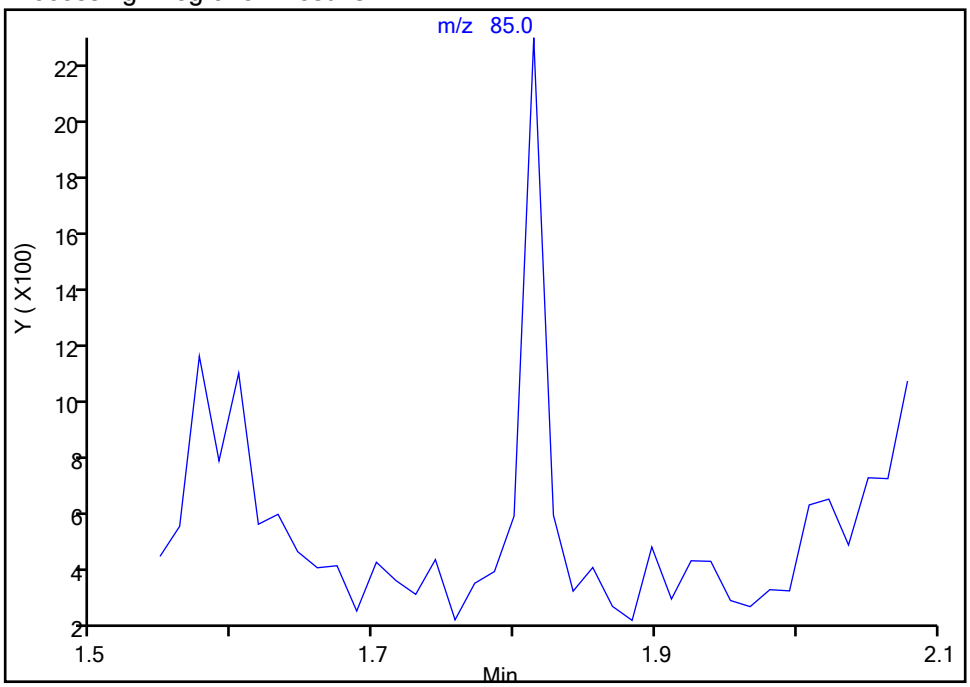
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

11 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

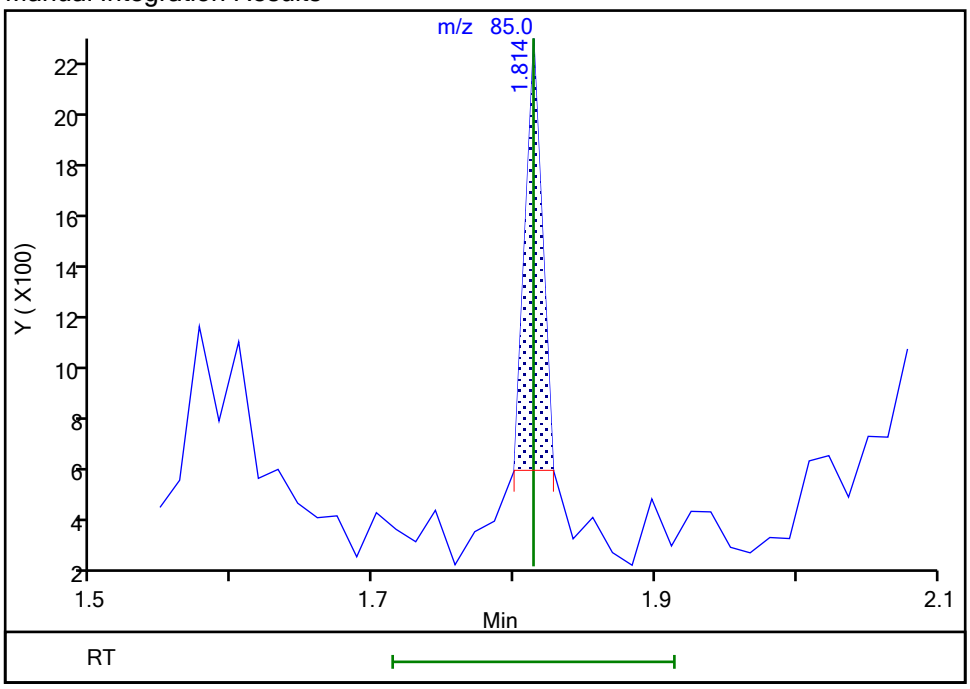
Not Detected
Expected RT: 1.81

Processing Integration Results



Manual Integration Results

RT: 1.81
Area: 1371
Amount: 1.754691
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:11:39
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

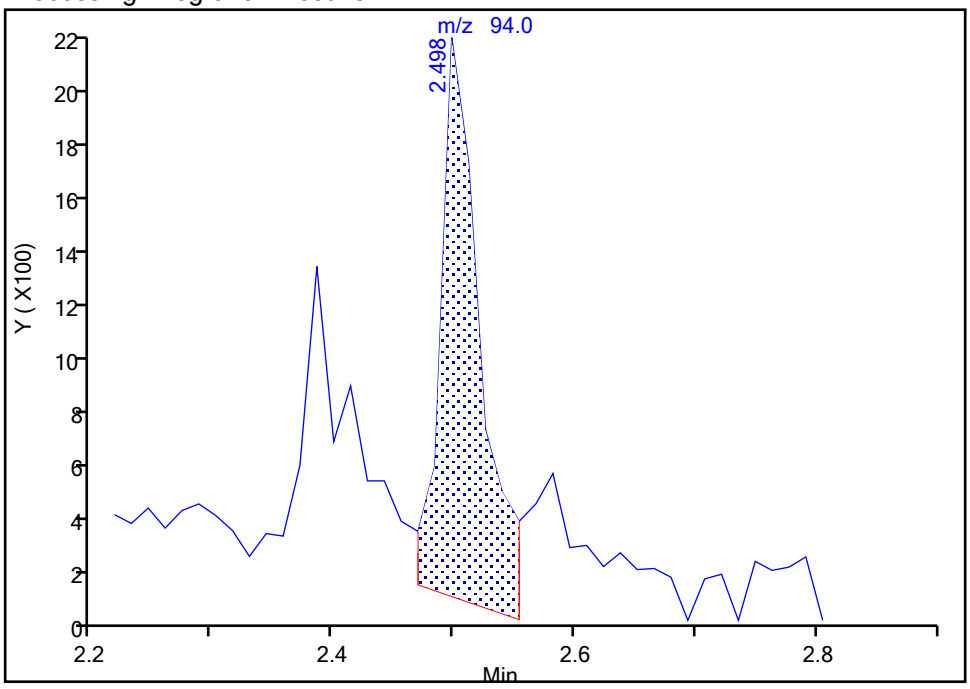
Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D				
Injection Date:	18-Apr-2023 18:15:30	Instrument ID:	VMS_MS1		
Lims ID:	ic				
Client ID:					
Operator ID:	wickhamt/bustillose	ALS Bottle#:	13	Worklist Smp#:	42
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

Signal: 1

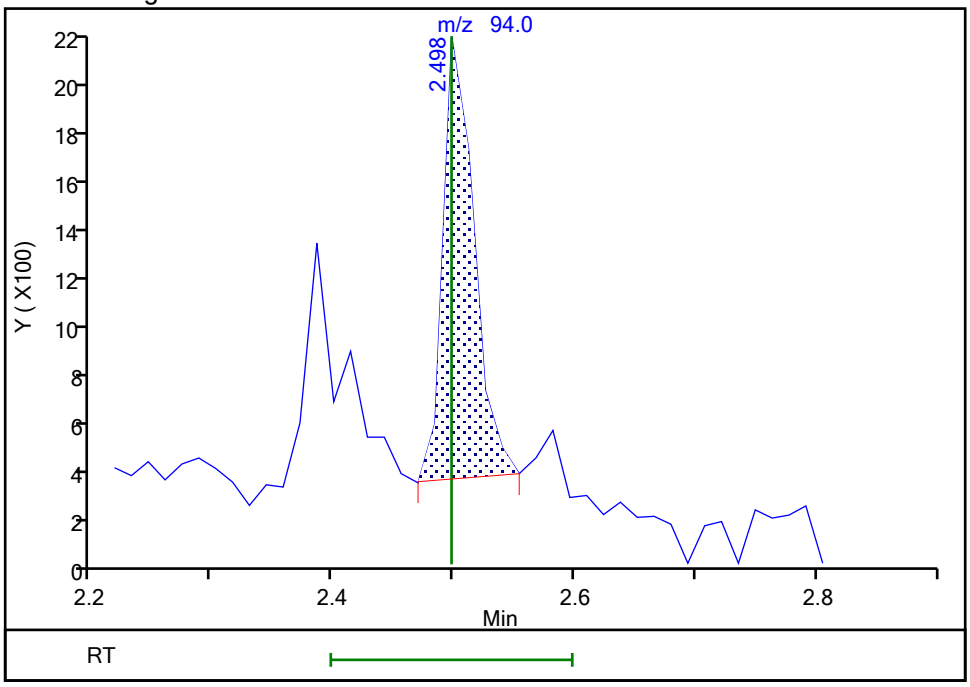
Processing Integration Results

RT: 2.50
Area: 4811
Amount: 1.263985
Amount Units: ug/l



Manual Integration Results

RT: 2.50
Area: 3186
Amount: 0.703195
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:11:53

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

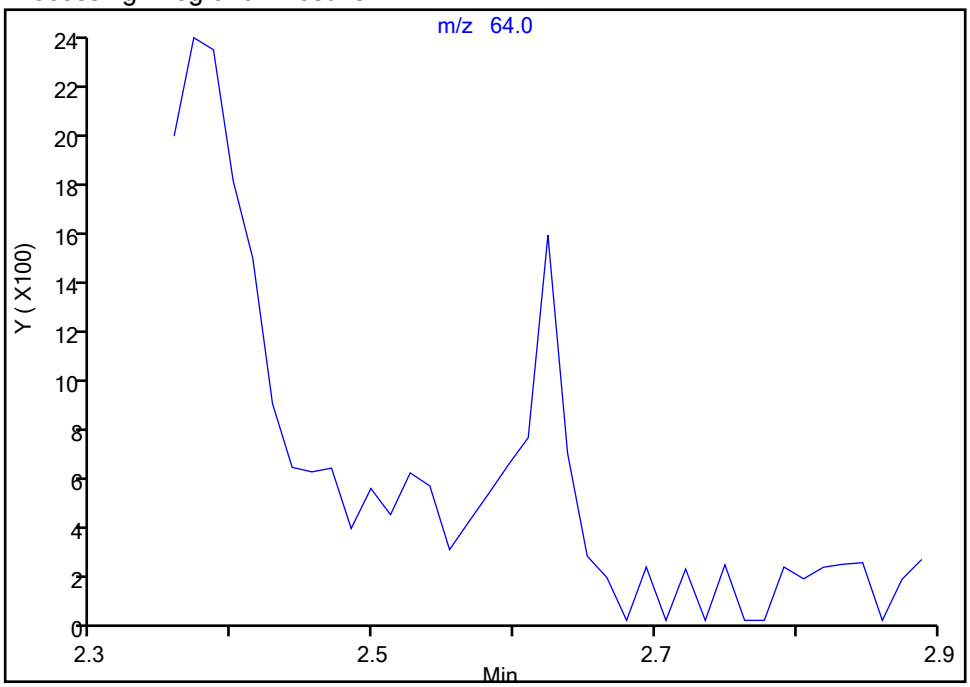
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

16 Chloroethane, CAS: 75-00-3

Signal: 1

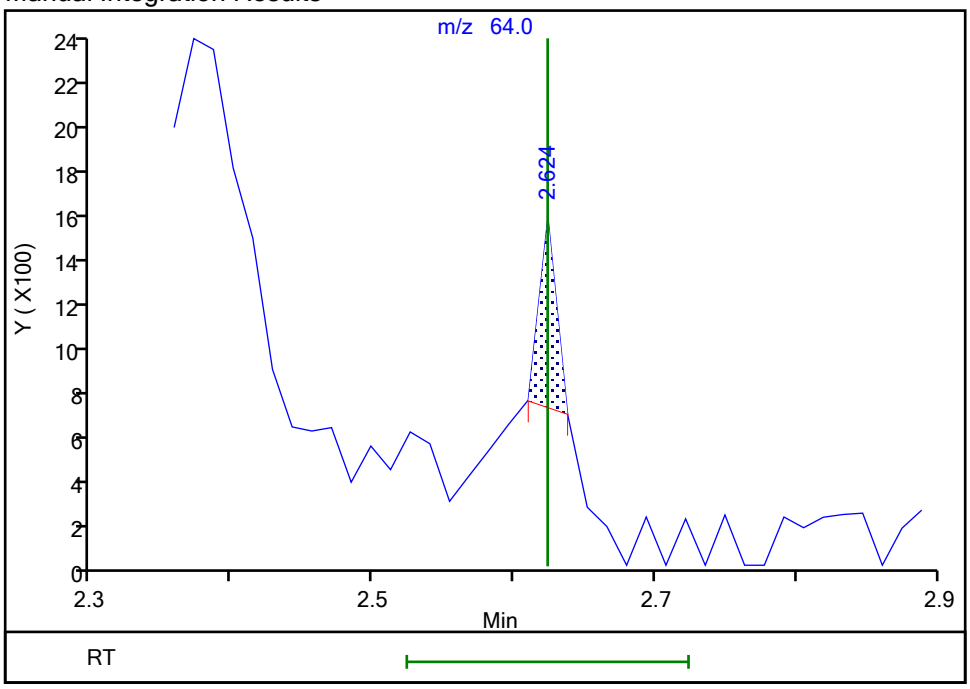
Not Detected
Expected RT: 2.62

Processing Integration Results



Manual Integration Results

RT: 2.62
Area: 701
Amount: 0.509706
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:12:06
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

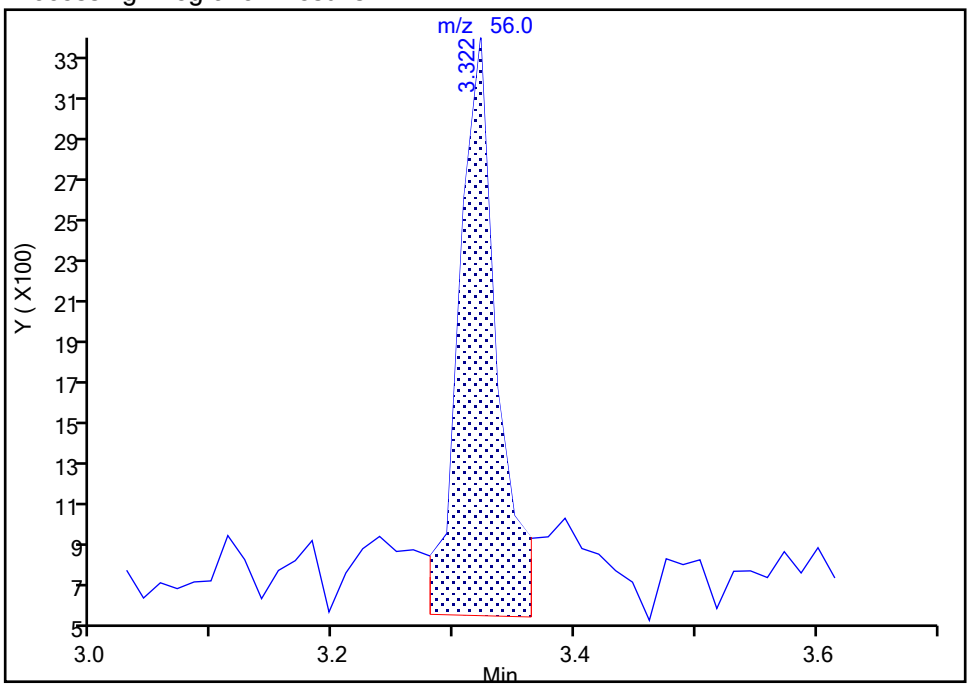
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

22 Acrolein, CAS: 107-02-8

Signal: 1

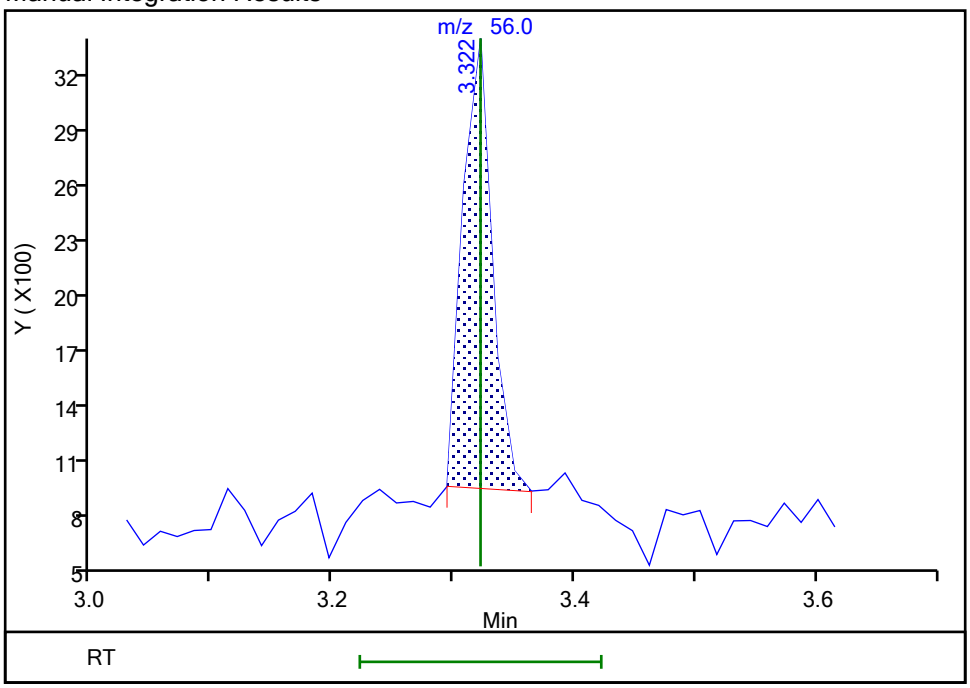
Processing Integration Results

RT: 3.32
Area: 6190
Amount: 7.797360
Amount Units: ug/l



Manual Integration Results

RT: 3.32
Area: 4017
Amount: 6.602220
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:12:21
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

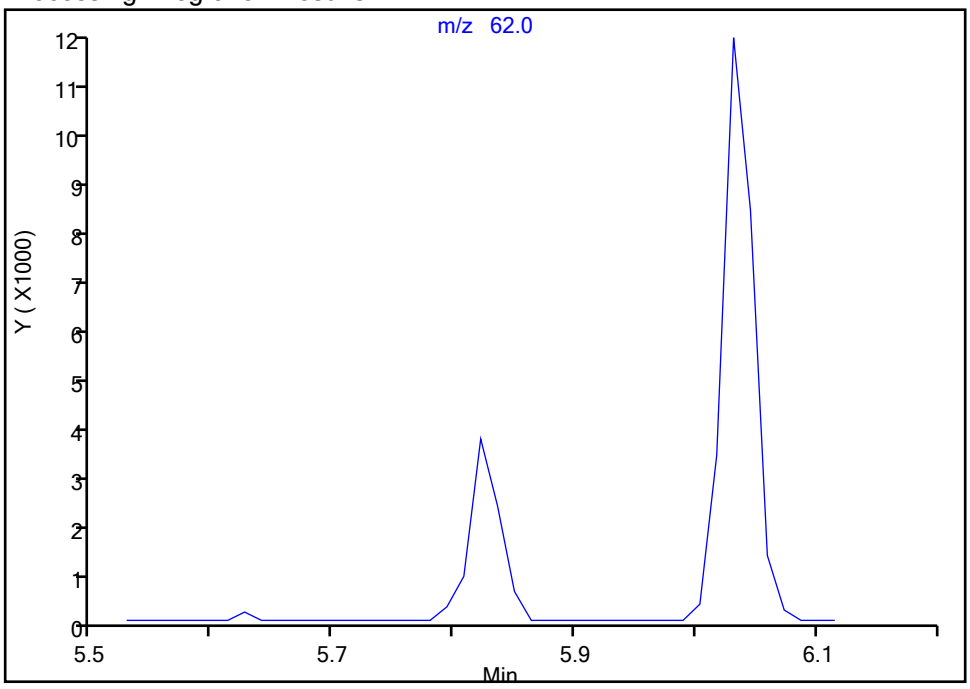
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

64 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

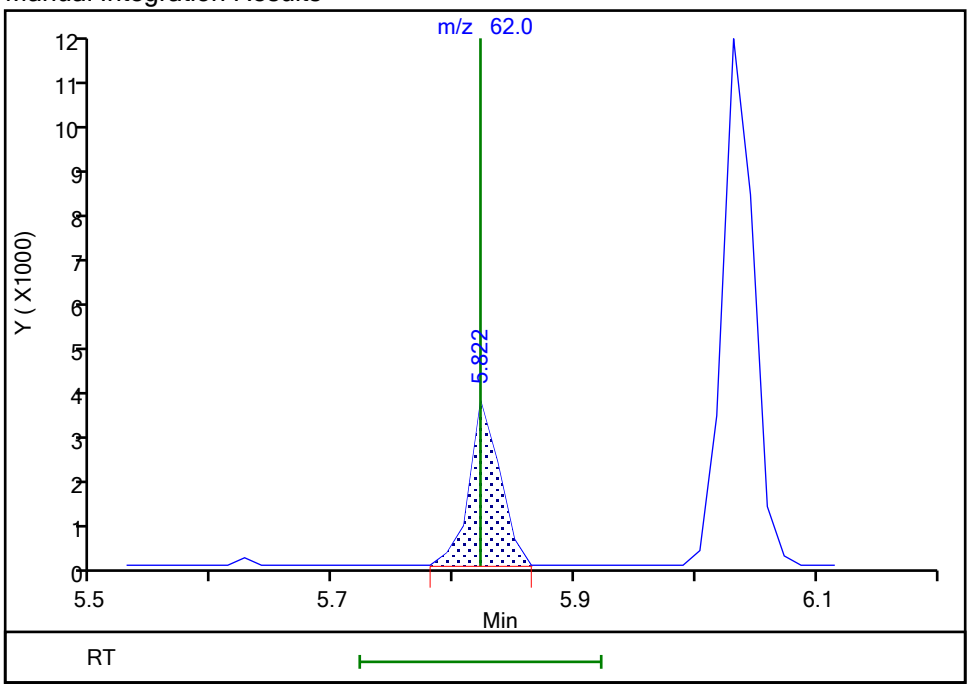
Not Detected
Expected RT: 5.82

Processing Integration Results



Manual Integration Results

RT: 5.82
Area: 6257
Amount: 0.922893
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:12:49
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

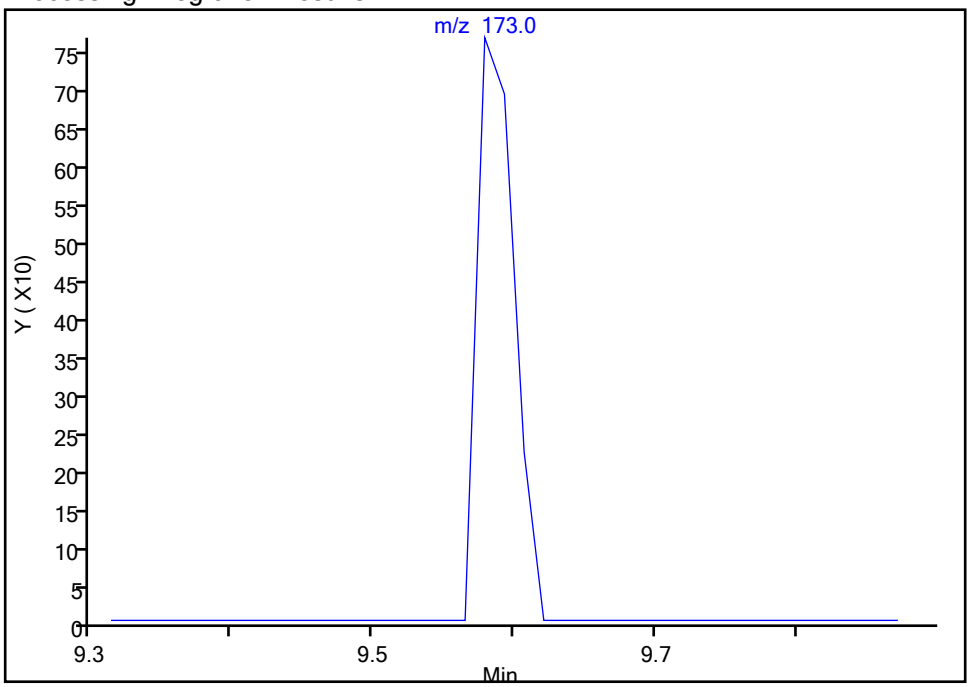
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

106 Bromoform, CAS: 75-25-2

Signal: 1

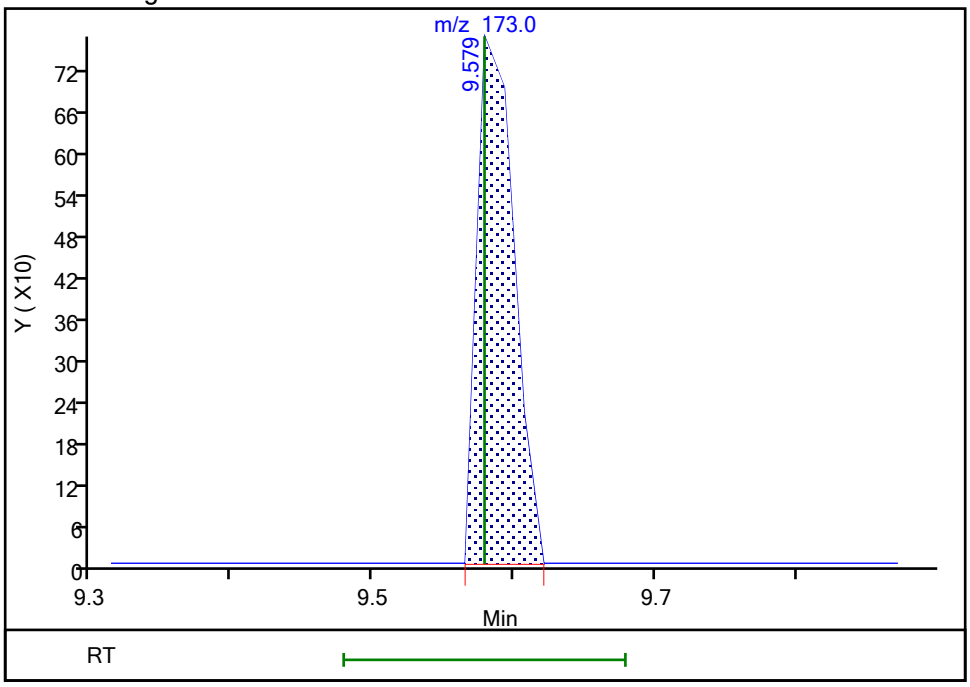
Not Detected
Expected RT: 9.58

Processing Integration Results



Manual Integration Results

RT: 9.58
Area: 1405
Amount: 0.575166
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:13:13
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

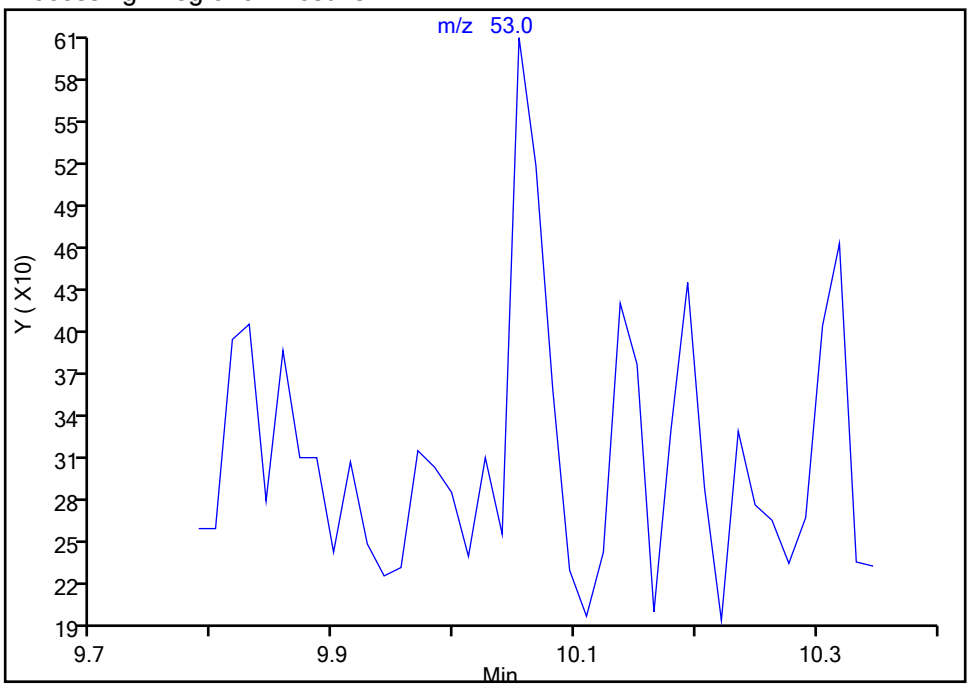
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

112 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Signal: 1

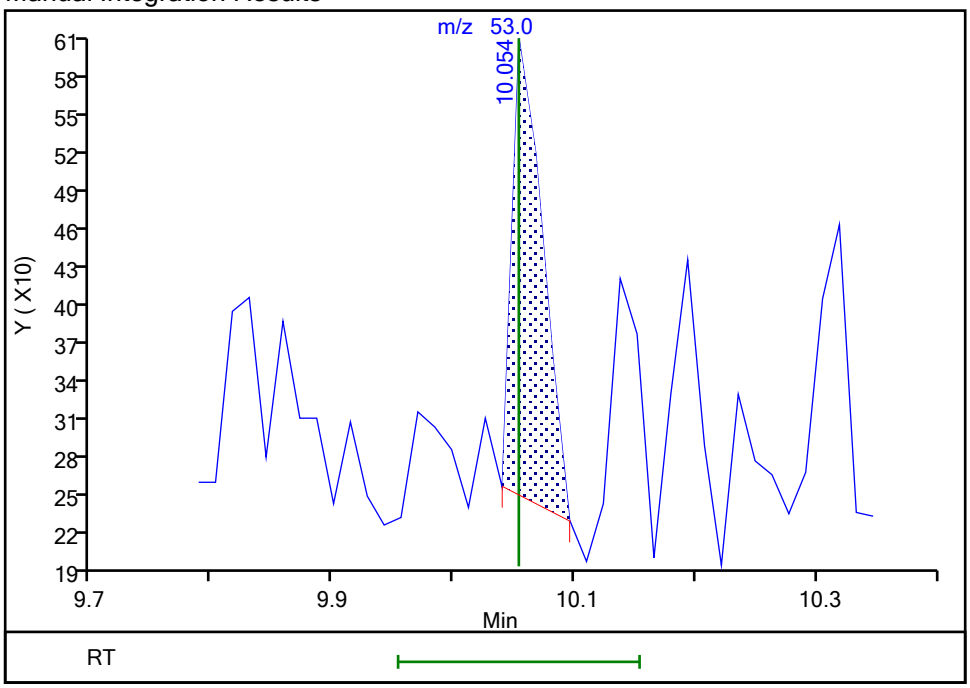
Not Detected
Expected RT: 10.05

Processing Integration Results



Manual Integration Results

RT: 10.05
Area: 641
Amount: 0.530587
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:13:25
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

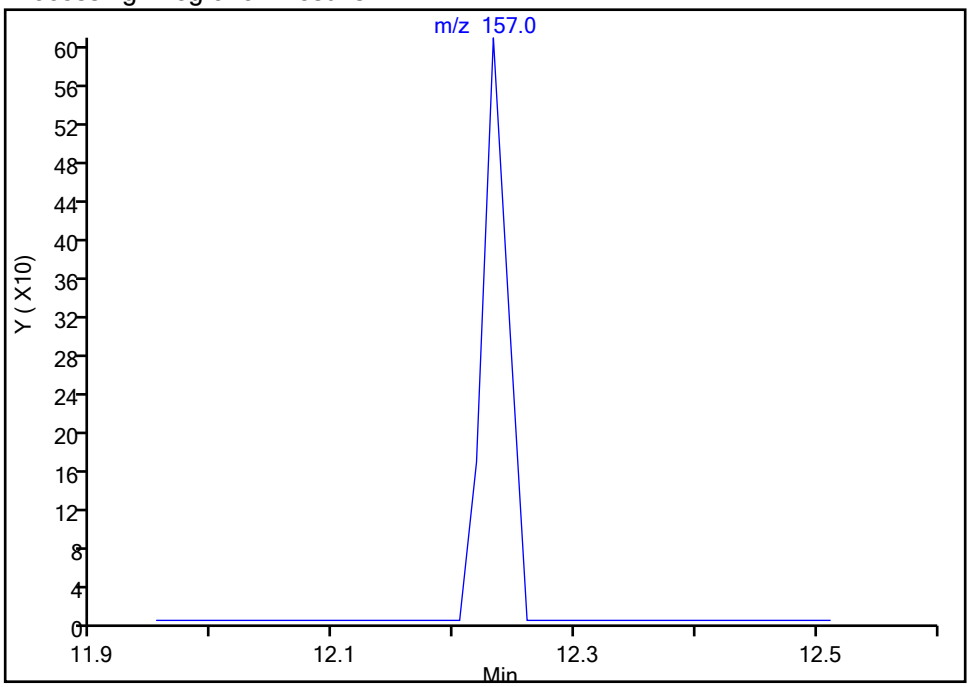
Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8195.D
Injection Date: 18-Apr-2023 18:15:30 Instrument ID: VMS_MS1
Lims ID: ic
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 13 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

128 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Signal: 1

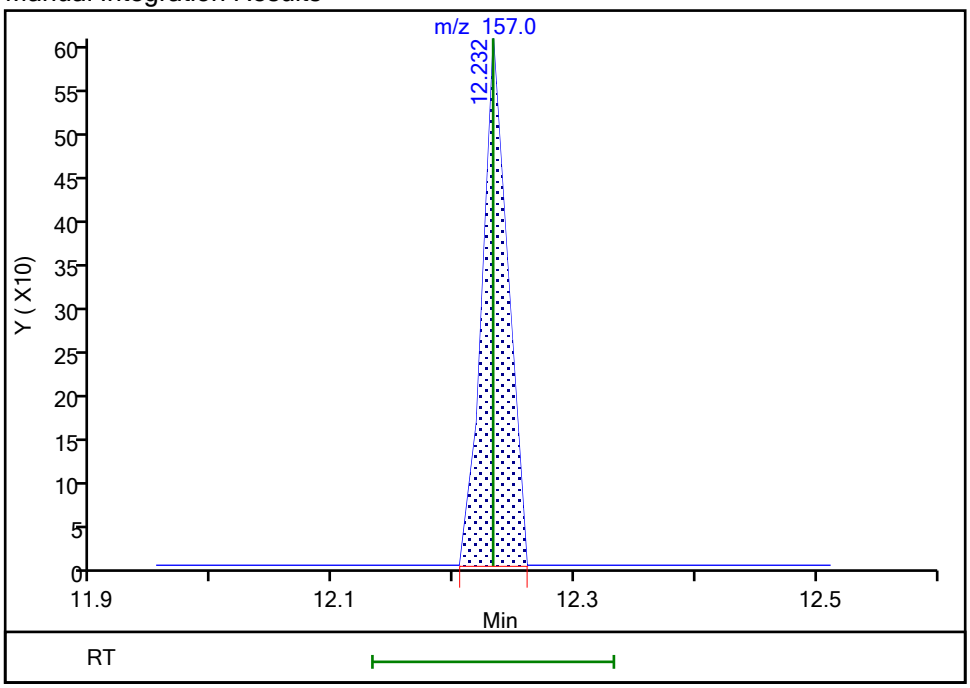
Not Detected
Expected RT: 12.23

Processing Integration Results



Manual Integration Results

RT: 12.23
Area: 892
Amount: 0.810829
Amount Units: ug/l



Reviewer: AF7X, 19-Apr-2023 06:13:44
Audit Action: Manually Integrated Audit Reason: Assign Peak

Calibration / Dichlorodifluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

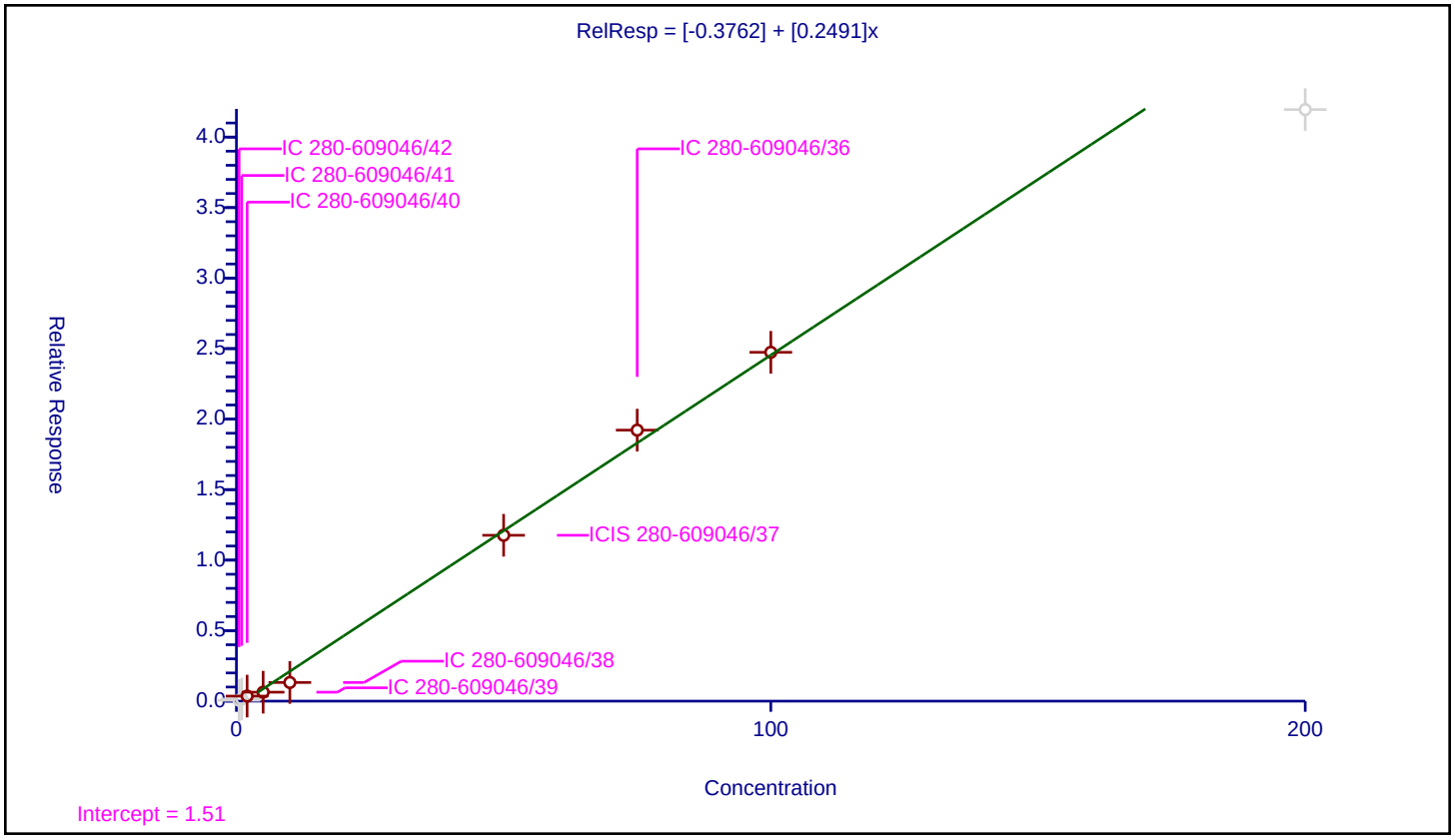
Curve Coefficients

Intercept:	-0.3762
Slope:	0.2491

Error Coefficients

Standard Error:	421000
Relative Standard Error:	30.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.061003	50.0	1123724.0	0.122005	N
2	IC 280-609046/41	1.0	0.147854	50.0	1135581.0	0.147854	N
3	IC 280-609046/40	2.0	0.358781	50.0	1153908.0	0.17939	Y
4	IC 280-609046/39	5.0	0.635296	50.0	1207547.0	0.127059	Y
5	IC 280-609046/38	10.0	1.323142	50.0	1230102.0	0.132314	Y
6	ICIS 280-609046/37	50.0	11.762727	50.0	1247062.0	0.235255	Y
7	IC 280-609046/36	75.0	19.218475	50.0	1248840.0	0.256246	Y
8	IC 280-609046/35	100.0	24.738485	50.0	1262070.0	0.247385	Y
9	IC 280-609046/34	200.0	41.950783	50.0	1267906.0	0.209754	N



11/27/2023
7:19 PM

Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

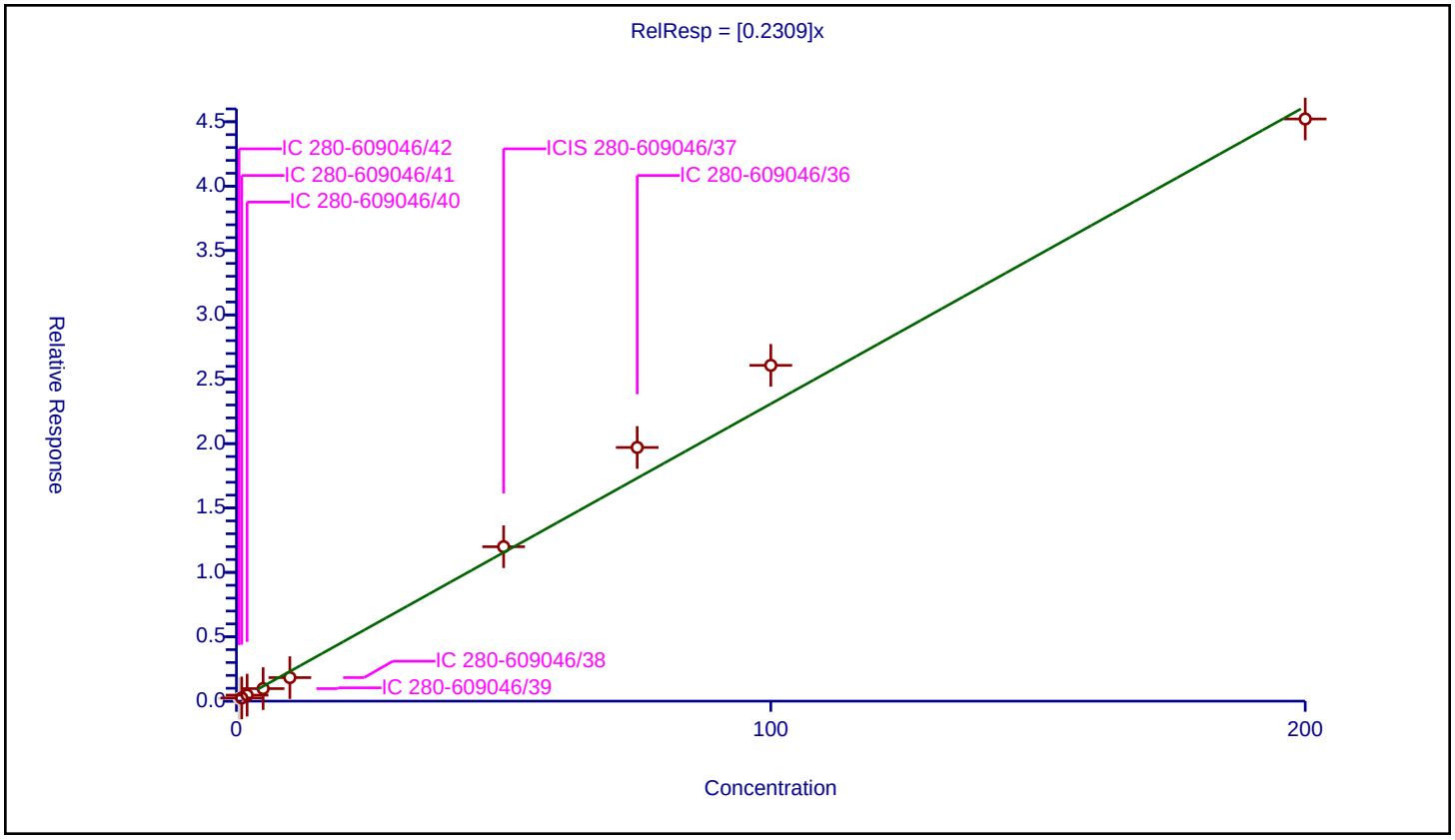
Curve Coefficients

Intercept:	0
Slope:	0.2309

Error Coefficients

Standard Error:	545000
Relative Standard Error:	12.6
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.21629	50.0	1123724.0	0.43258	N
2	IC 280-609046/41	1.0	0.247759	50.0	1135581.0	0.247759	Y
3	IC 280-609046/40	2.0	0.465895	50.0	1153908.0	0.232948	Y
4	IC 280-609046/39	5.0	0.972592	50.0	1207547.0	0.194518	Y
5	IC 280-609046/38	10.0	1.828222	50.0	1230102.0	0.182822	Y
6	ICIS 280-609046/37	50.0	11.99355	50.0	1247062.0	0.239871	Y
7	IC 280-609046/36	75.0	19.703044	50.0	1248840.0	0.262707	Y
8	IC 280-609046/35	100.0	26.080764	50.0	1262070.0	0.260808	Y
9	IC 280-609046/34	200.0	45.215024	50.0	1267906.0	0.226075	Y



11/27/2023
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Calibration / Vinyl chloride

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

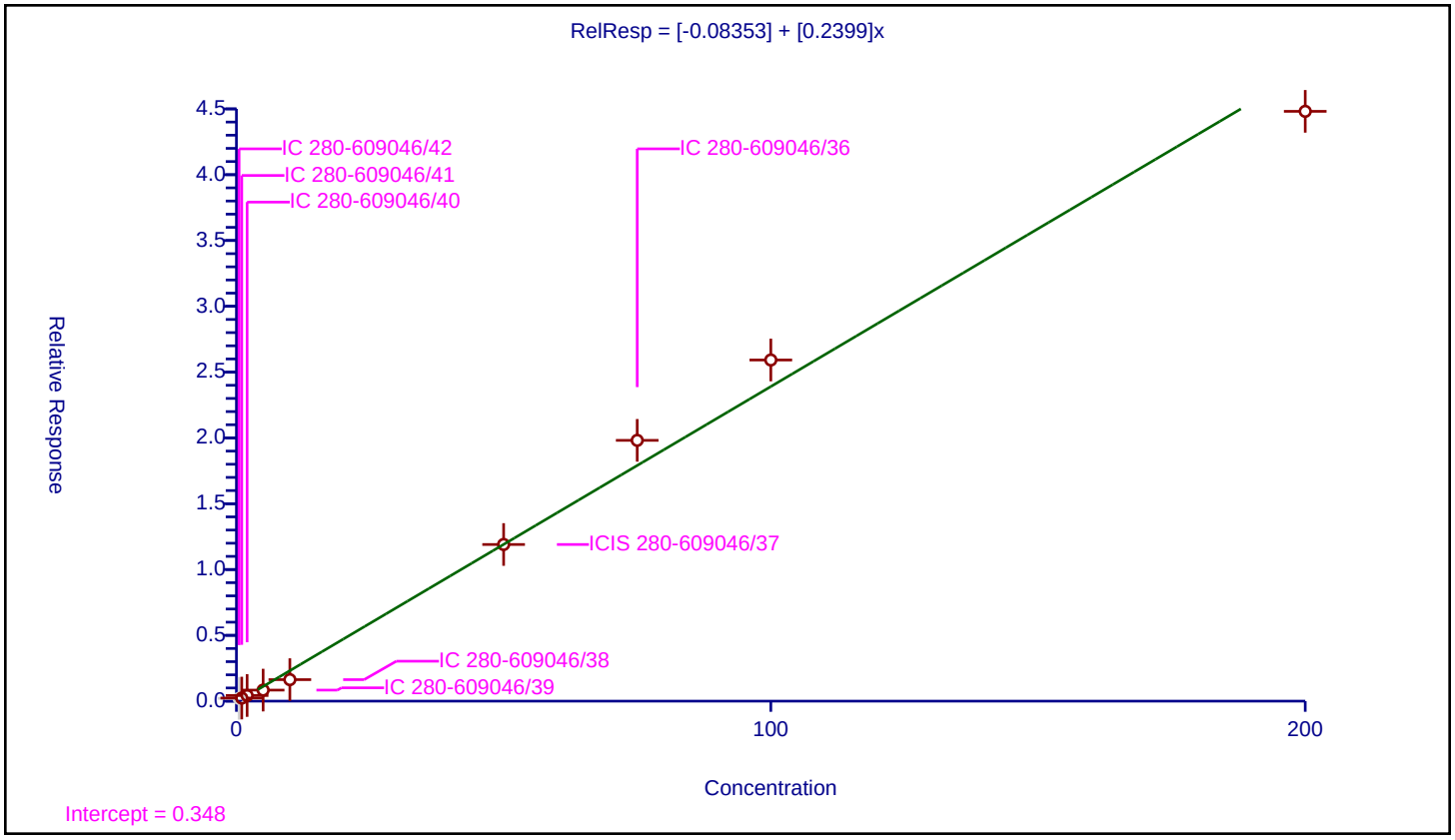
Curve Coefficients

Intercept:	-0.08353
Slope:	0.2399

Error Coefficients

Standard Error:	585000
Relative Standard Error:	21.0
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.212285	50.0	1123724.0	0.42457	N
2	IC 280-609046/41	1.0	0.233933	50.0	1135581.0	0.233933	Y
3	IC 280-609046/40	2.0	0.42759	50.0	1153908.0	0.213795	Y
4	IC 280-609046/39	5.0	0.838932	50.0	1207547.0	0.167786	Y
5	IC 280-609046/38	10.0	1.63393	50.0	1230102.0	0.163393	Y
6	ICIS 280-609046/37	50.0	11.903217	50.0	1247062.0	0.238064	Y
7	IC 280-609046/36	75.0	19.815389	50.0	1248840.0	0.264205	Y
8	IC 280-609046/35	100.0	25.920828	50.0	1262070.0	0.259208	Y
9	IC 280-609046/34	200.0	44.813811	50.0	1267906.0	0.224069	Y



11/27/2023
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Calibration / Bromomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

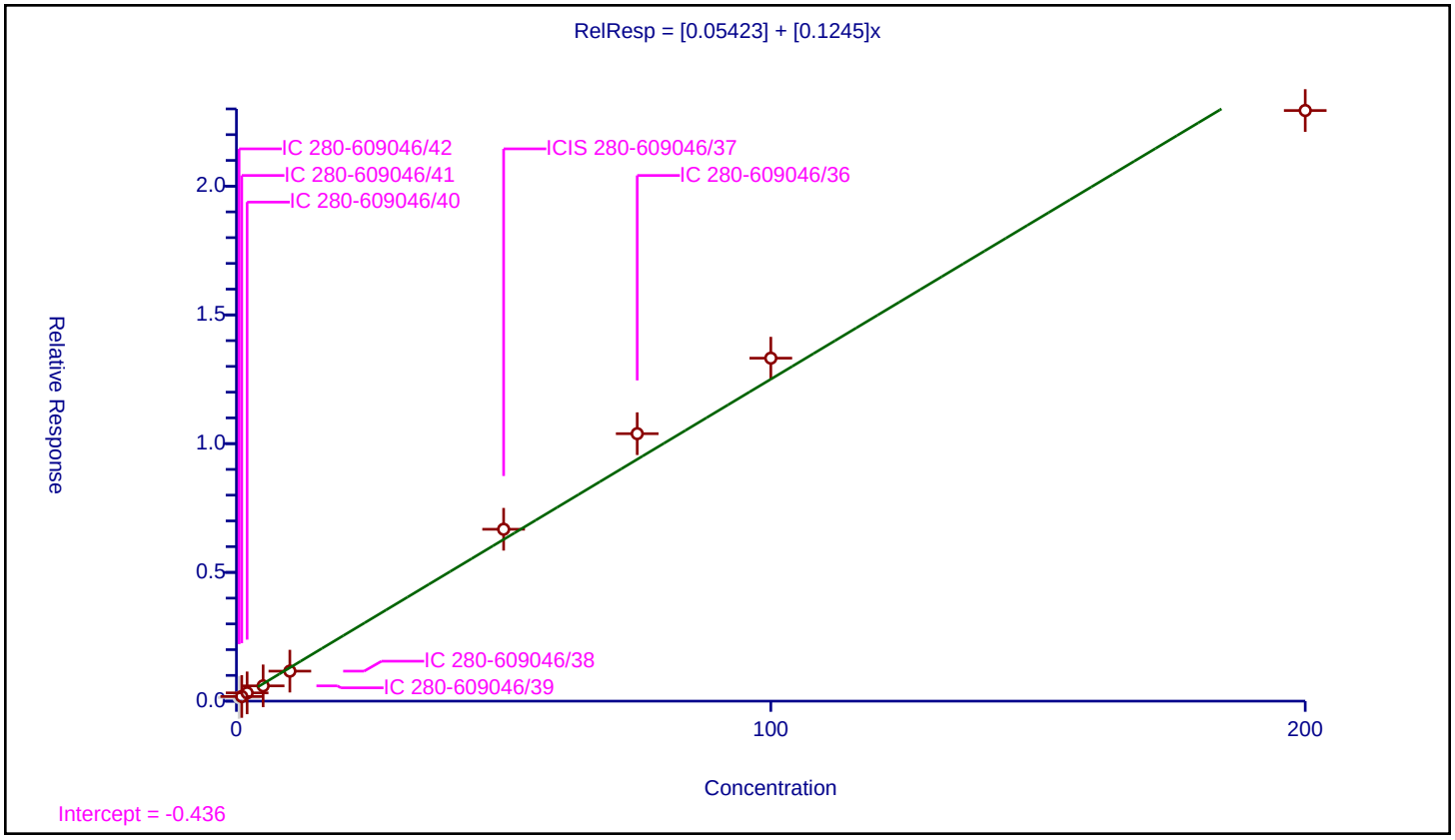
Curve Coefficients

Intercept:	0.05423
Slope:	0.1245

Error Coefficients

Standard Error:	302000
Relative Standard Error:	10.1
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.141761	50.0	1123724.0	0.283522	N
2	IC 280-609046/41	1.0	0.180524	50.0	1135581.0	0.180524	Y
3	IC 280-609046/40	2.0	0.320823	50.0	1153908.0	0.160411	Y
4	IC 280-609046/39	5.0	0.593683	50.0	1207547.0	0.118737	Y
5	IC 280-609046/38	10.0	1.165351	50.0	1230102.0	0.116535	Y
6	ICIS 280-609046/37	50.0	6.674889	50.0	1247062.0	0.133498	Y
7	IC 280-609046/36	75.0	10.38748	50.0	1248840.0	0.1385	Y
8	IC 280-609046/35	100.0	13.319388	50.0	1262070.0	0.133194	Y
9	IC 280-609046/34	200.0	22.937347	50.0	1267906.0	0.114687	Y



11/27/2023
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Calibration / Chloroethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

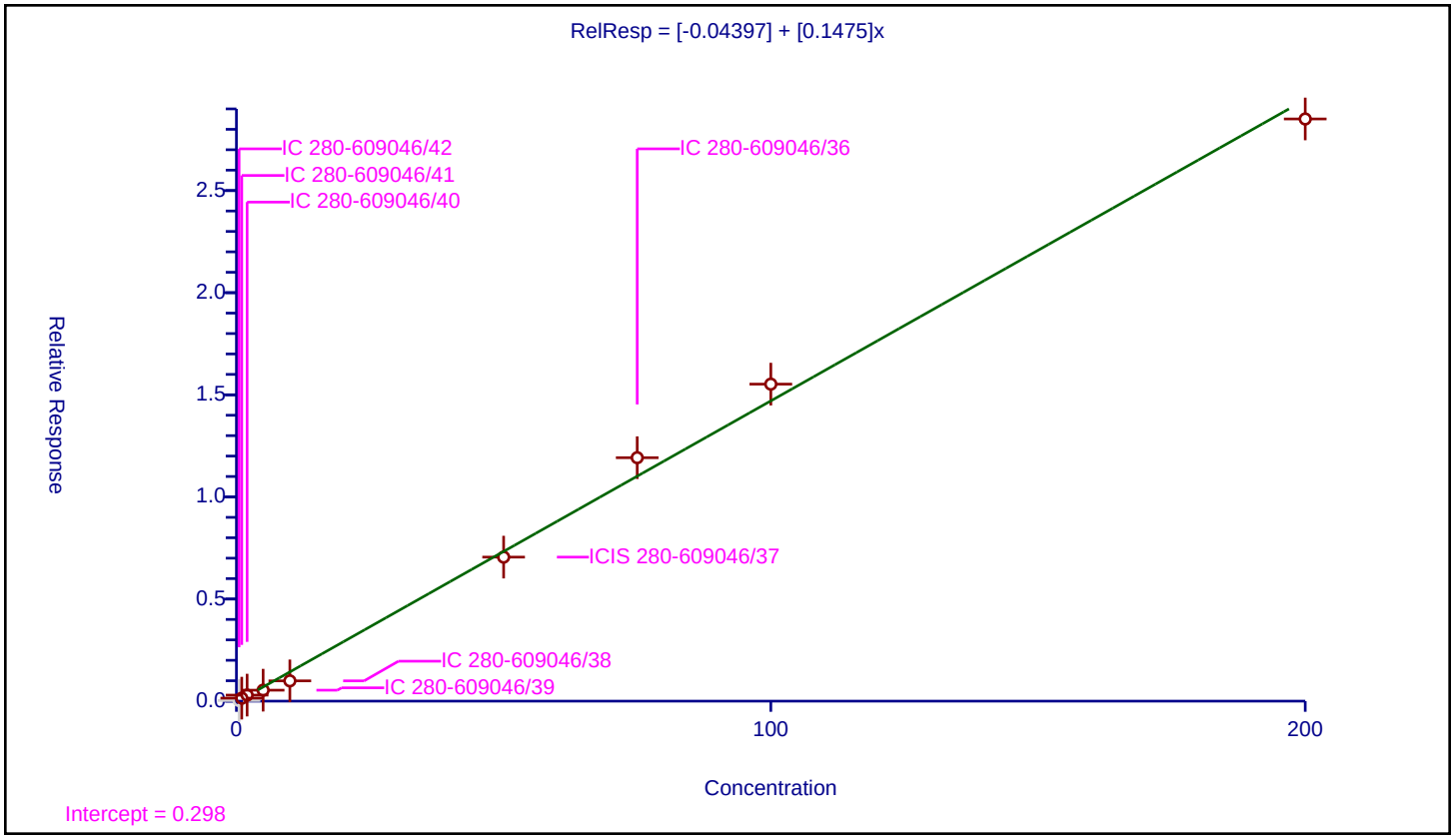
Curve Coefficients

Intercept:	-0.04397
Slope:	0.1475

Error Coefficients

Standard Error:	364000
Relative Standard Error:	20.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.031191	50.0	1123724.0	0.062382	N
2	IC 280-609046/41	1.0	0.146577	50.0	1135581.0	0.146577	Y
3	IC 280-609046/40	2.0	0.294868	50.0	1153908.0	0.147434	Y
4	IC 280-609046/39	5.0	0.536501	50.0	1207547.0	0.1073	Y
5	IC 280-609046/38	10.0	0.993617	50.0	1230102.0	0.099362	Y
6	ICIS 280-609046/37	50.0	7.052336	50.0	1247062.0	0.141047	Y
7	IC 280-609046/36	75.0	11.920582	50.0	1248840.0	0.158941	Y
8	IC 280-609046/35	100.0	15.523109	50.0	1262070.0	0.155231	Y
9	IC 280-609046/34	200.0	28.506372	50.0	1267906.0	0.142532	Y



11/27/2023
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Calibration / Dichlorofluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

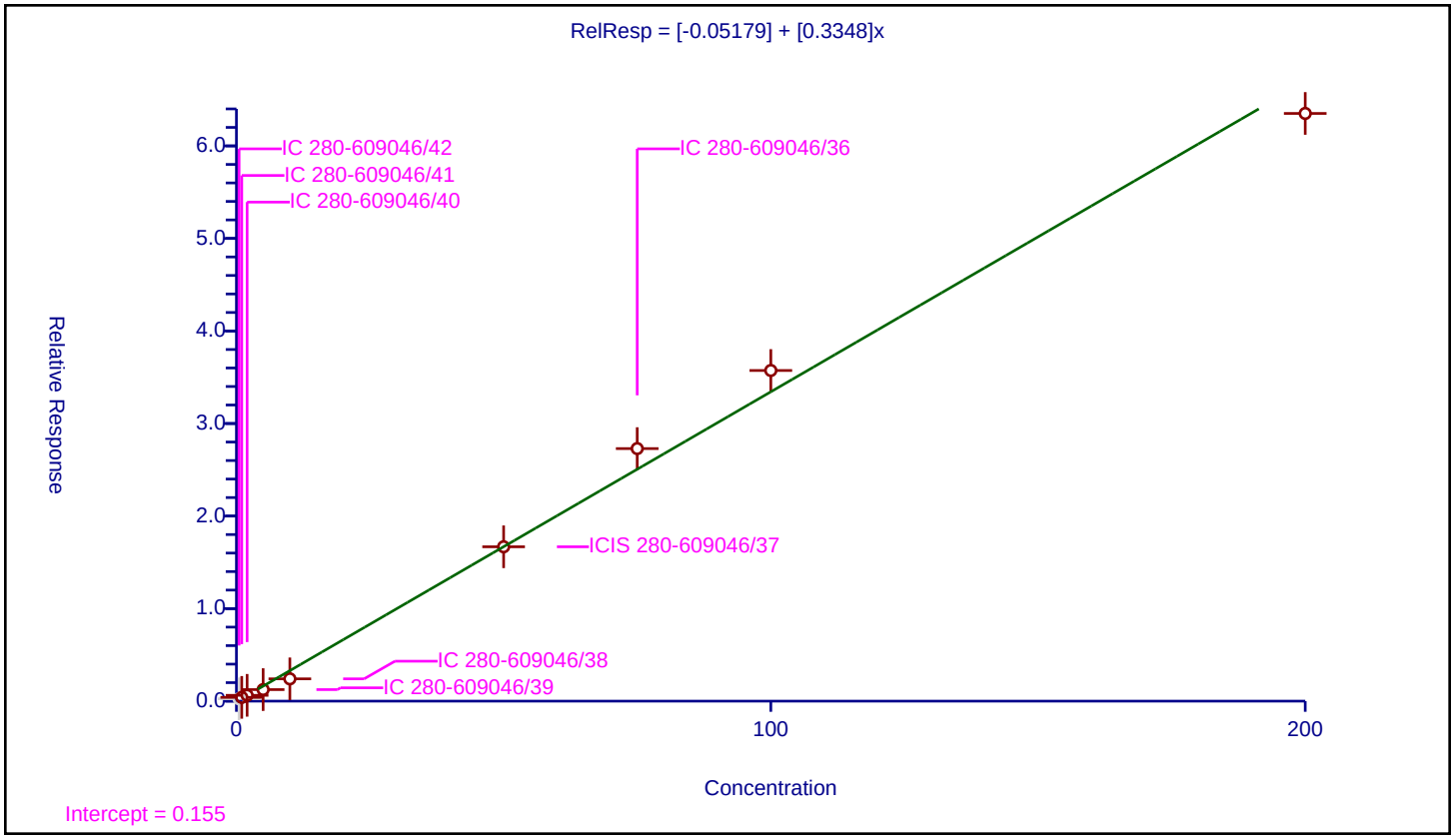
Curve Coefficients

Intercept:	-0.05179
Slope:	0.3348

Error Coefficients

Standard Error:	821000
Relative Standard Error:	21.2
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.257537	50.0	1123724.0	0.515073	N
2	IC 280-609046/41	1.0	0.40596	50.0	1135581.0	0.40596	Y
3	IC 280-609046/40	2.0	0.627736	50.0	1153908.0	0.313868	Y
4	IC 280-609046/39	5.0	1.247281	50.0	1207547.0	0.249456	Y
5	IC 280-609046/38	10.0	2.410247	50.0	1230102.0	0.241025	Y
6	ICIS 280-609046/37	50.0	16.680005	50.0	1247062.0	0.3336	Y
7	IC 280-609046/36	75.0	27.292207	50.0	1248840.0	0.363896	Y
8	IC 280-609046/35	100.0	35.730269	50.0	1262070.0	0.357303	Y
9	IC 280-609046/34	200.0	63.506798	50.0	1267906.0	0.317534	Y



11/27/2023
7:19 PM

Calibration / Trichlorofluoromethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

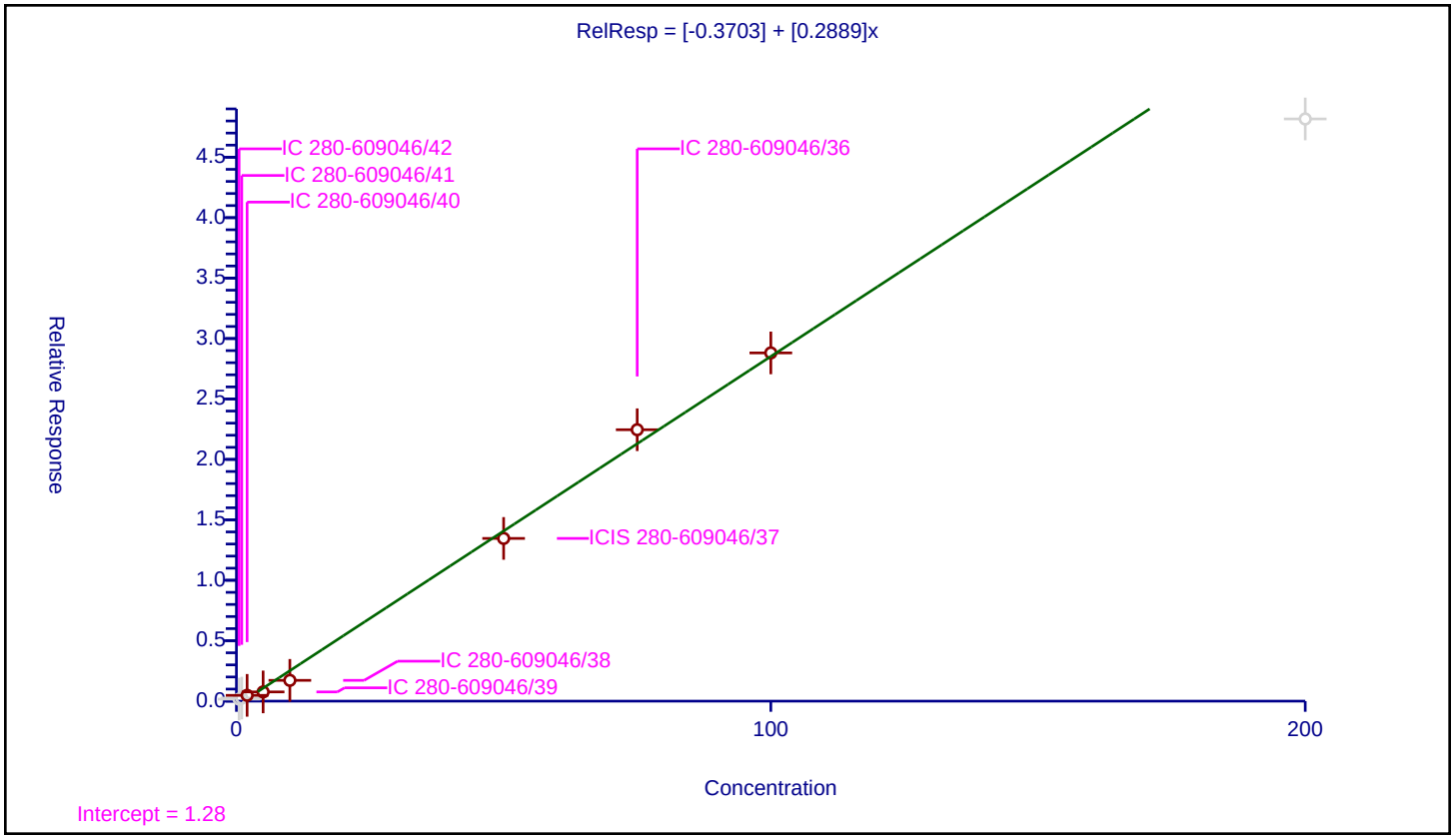
Curve Coefficients

Intercept:	-0.3703
Slope:	0.2889

Error Coefficients

Standard Error:	489000
Relative Standard Error:	29.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.1669	50.0	1123724.0	0.333801	N
2	IC 280-609046/41	1.0	0.253747	50.0	1135581.0	0.253747	N
3	IC 280-609046/40	2.0	0.479544	50.0	1153908.0	0.239772	Y
4	IC 280-609046/39	5.0	0.76262	50.0	1207547.0	0.152524	Y
5	IC 280-609046/38	10.0	1.72067	50.0	1230102.0	0.172067	Y
6	ICIS 280-609046/37	50.0	13.462041	50.0	1247062.0	0.269241	Y
7	IC 280-609046/36	75.0	22.45668	50.0	1248840.0	0.299422	Y
8	IC 280-609046/35	100.0	28.811278	50.0	1262070.0	0.288113	Y
9	IC 280-609046/34	200.0	48.167096	50.0	1267906.0	0.240835	N



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Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

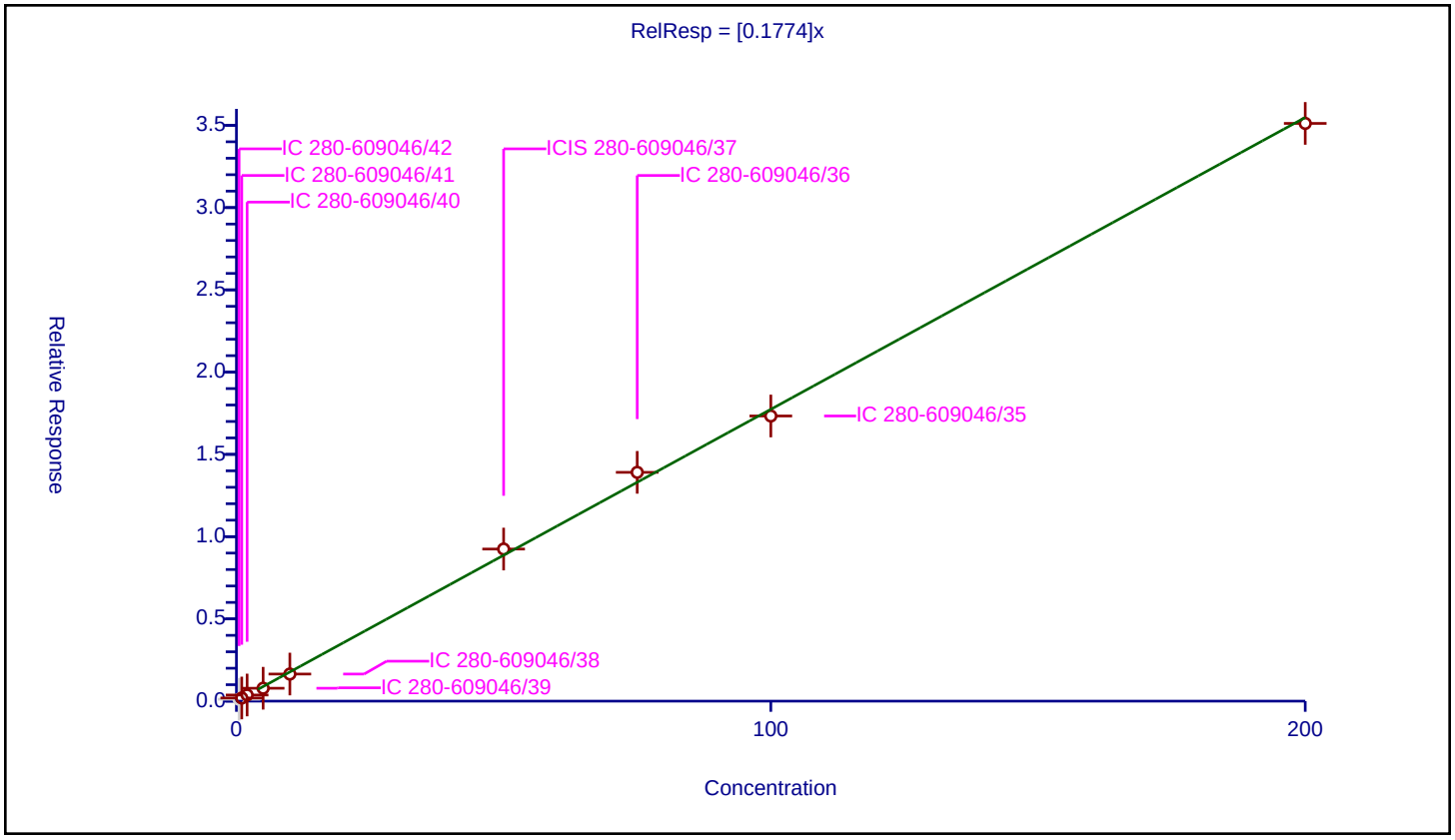
Curve Coefficients

Intercept:	0
Slope:	0.1774

Error Coefficients

Standard Error:	407000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.115642	50.0	1123724.0	0.231285	N
2	IC 280-609046/41	1.0	0.191356	50.0	1135581.0	0.191356	Y
3	IC 280-609046/40	2.0	0.37386	50.0	1153908.0	0.18693	Y
4	IC 280-609046/39	5.0	0.784152	50.0	1207547.0	0.15683	Y
5	IC 280-609046/38	10.0	1.647262	50.0	1230102.0	0.164726	Y
6	ICIS 280-609046/37	50.0	9.24525	50.0	1247062.0	0.184905	Y
7	IC 280-609046/36	75.0	13.907907	50.0	1248840.0	0.185439	Y
8	IC 280-609046/35	100.0	17.333032	50.0	1262070.0	0.17333	Y
9	IC 280-609046/34	200.0	35.11743	50.0	1267906.0	0.175587	Y



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Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

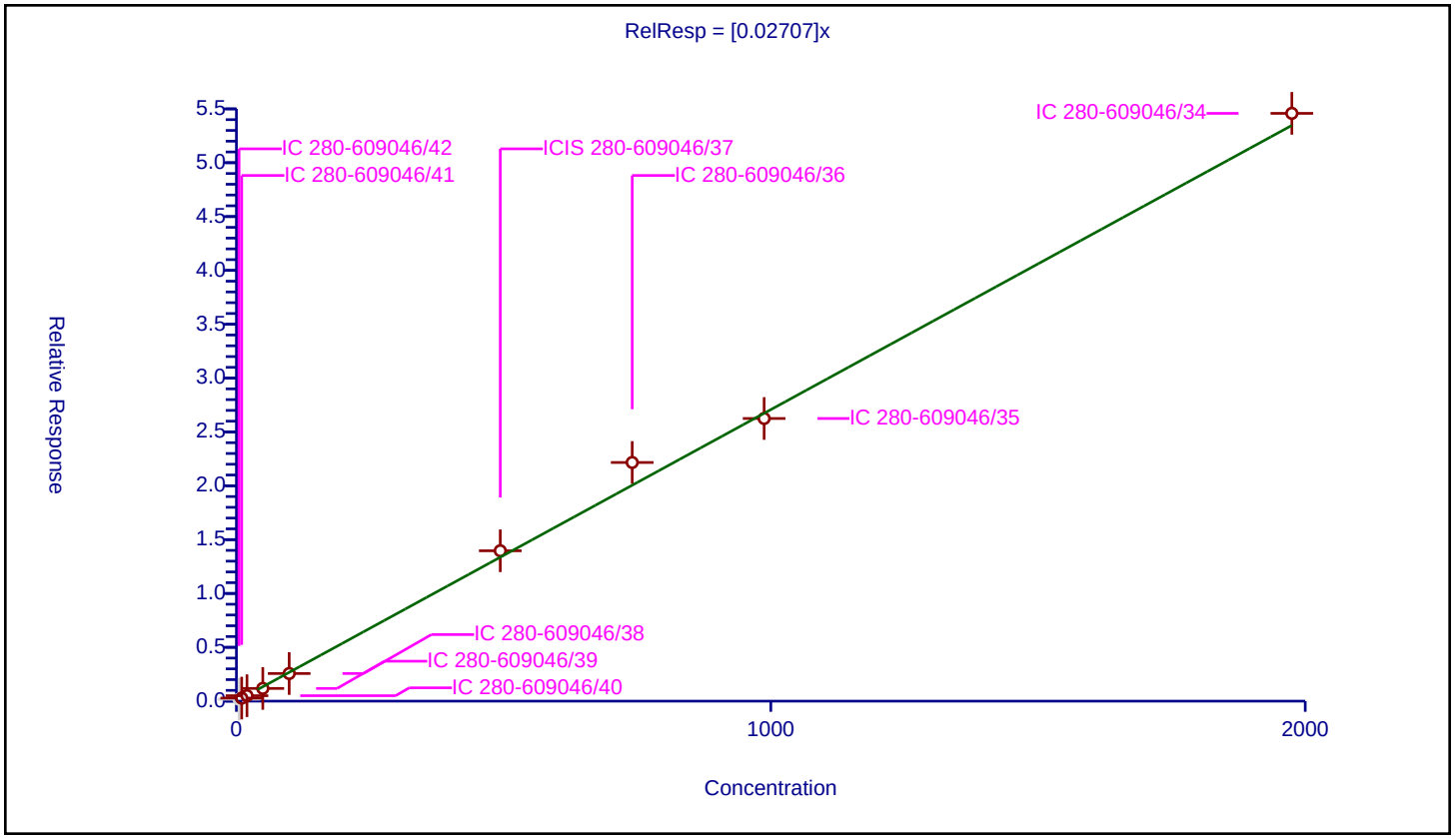
Curve Coefficients

Intercept:	0
Slope:	0.02707

Error Coefficients

Standard Error:	631000
Relative Standard Error:	7.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	4.9375	0.178736	50.0	1123724.0	0.0362	N
2	IC 280-609046/41	9.875	0.282763	50.0	1135581.0	0.028634	Y
3	IC 280-609046/40	19.75	0.505326	50.0	1153908.0	0.025586	Y
4	IC 280-609046/39	49.375	1.182107	50.0	1207547.0	0.023941	Y
5	IC 280-609046/38	98.75	2.566373	50.0	1230102.0	0.025989	Y
6	ICIS 280-609046/37	493.75	13.964061	50.0	1247062.0	0.028282	Y
7	IC 280-609046/36	740.625	22.163167	50.0	1248840.0	0.029925	Y
8	IC 280-609046/35	987.5	26.24997	50.0	1262070.0	0.026582	Y
9	IC 280-609046/34	1975.0	54.584567	50.0	1267906.0	0.027638	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

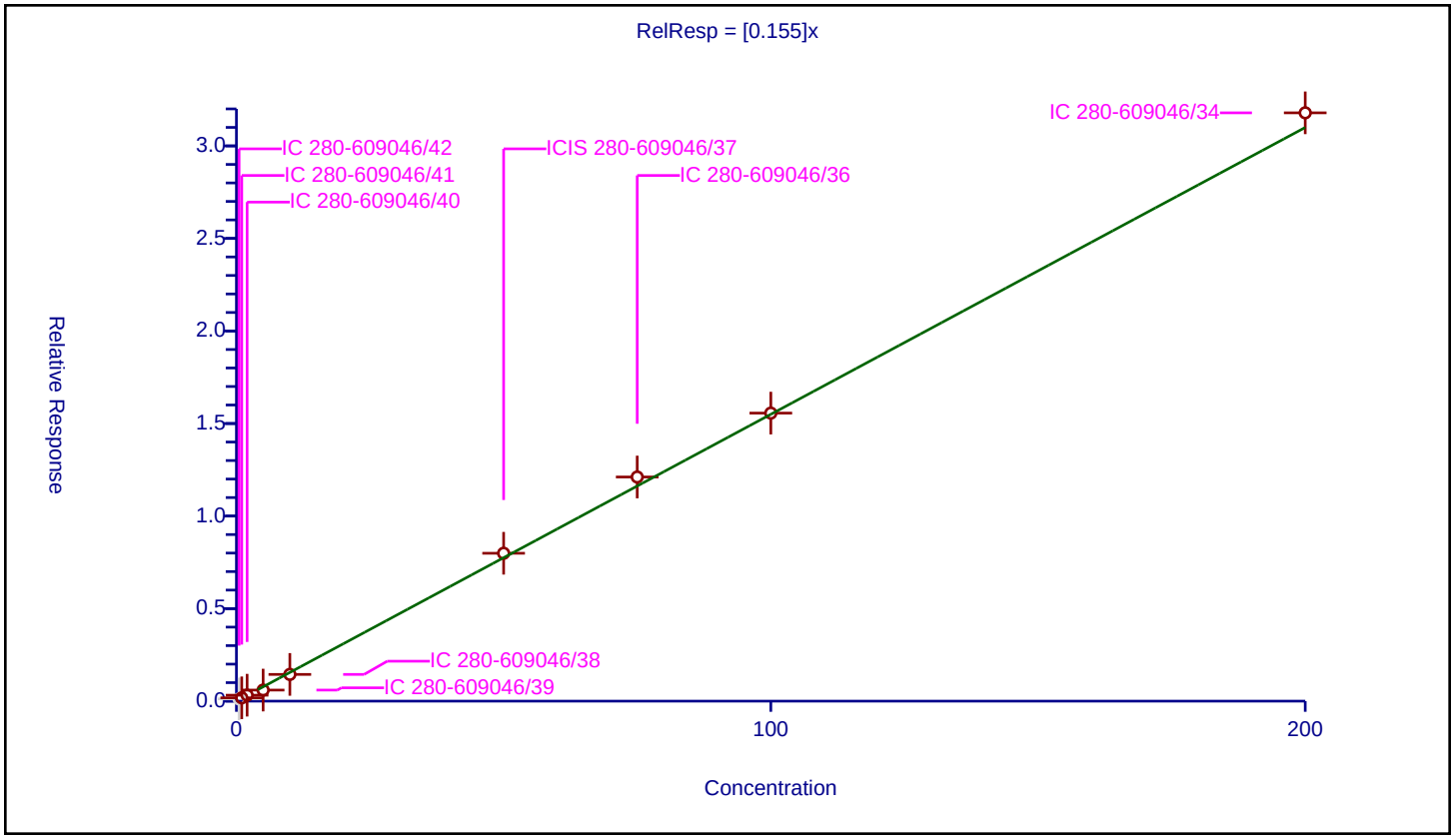
Curve Coefficients

Intercept:	0
Slope:	0.155

Error Coefficients

Standard Error:	366000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.122317	50.0	1123724.0	0.244633	N
2	IC 280-609046/41	1.0	0.179071	50.0	1135581.0	0.179071	Y
3	IC 280-609046/40	2.0	0.321819	50.0	1153908.0	0.16091	Y
4	IC 280-609046/39	5.0	0.598031	50.0	1207547.0	0.119606	Y
5	IC 280-609046/38	10.0	1.443905	50.0	1230102.0	0.14439	Y
6	ICIS 280-609046/37	50.0	7.99034	50.0	1247062.0	0.159807	Y
7	IC 280-609046/36	75.0	12.110679	50.0	1248840.0	0.161476	Y
8	IC 280-609046/35	100.0	15.562211	50.0	1262070.0	0.155622	Y
9	IC 280-609046/34	200.0	31.787451	50.0	1267906.0	0.158937	Y



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Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

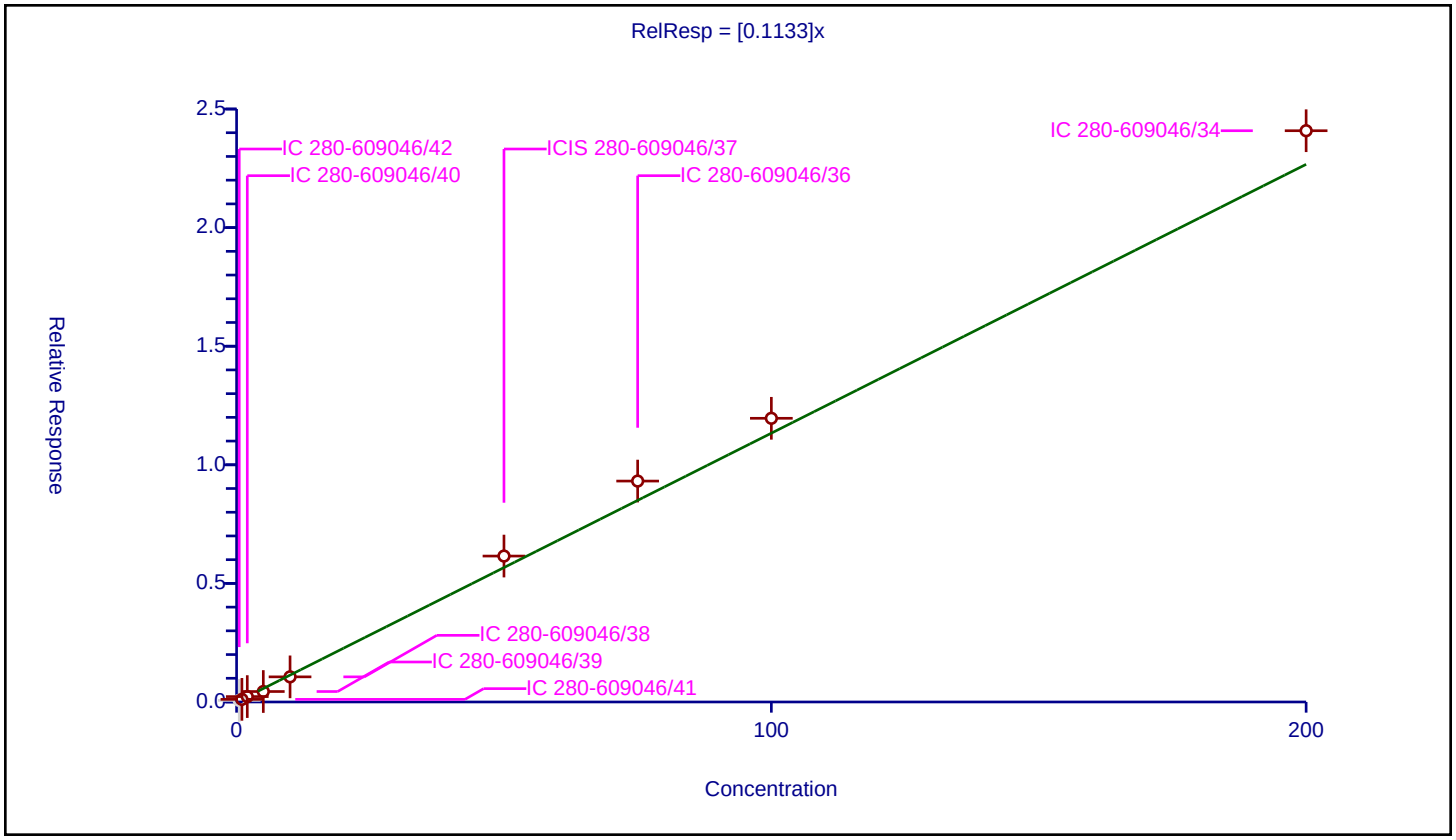
Curve Coefficients

Intercept:	0
Slope:	0.1133

Error Coefficients

Standard Error:	278000
Relative Standard Error:	10.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.066742	50.0	1123724.0	0.133485	N
2	IC 280-609046/41	1.0	0.111265	50.0	1135581.0	0.111265	Y
3	IC 280-609046/40	2.0	0.227921	50.0	1153908.0	0.113961	Y
4	IC 280-609046/39	5.0	0.441225	50.0	1207547.0	0.088245	Y
5	IC 280-609046/38	10.0	1.059709	50.0	1230102.0	0.105971	Y
6	ICIS 280-609046/37	50.0	6.152381	50.0	1247062.0	0.123048	Y
7	IC 280-609046/36	75.0	9.314124	50.0	1248840.0	0.124188	Y
8	IC 280-609046/35	100.0	11.960232	50.0	1262070.0	0.119602	Y
9	IC 280-609046/34	200.0	24.084356	50.0	1267906.0	0.120422	Y



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Calibration / Acetone

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

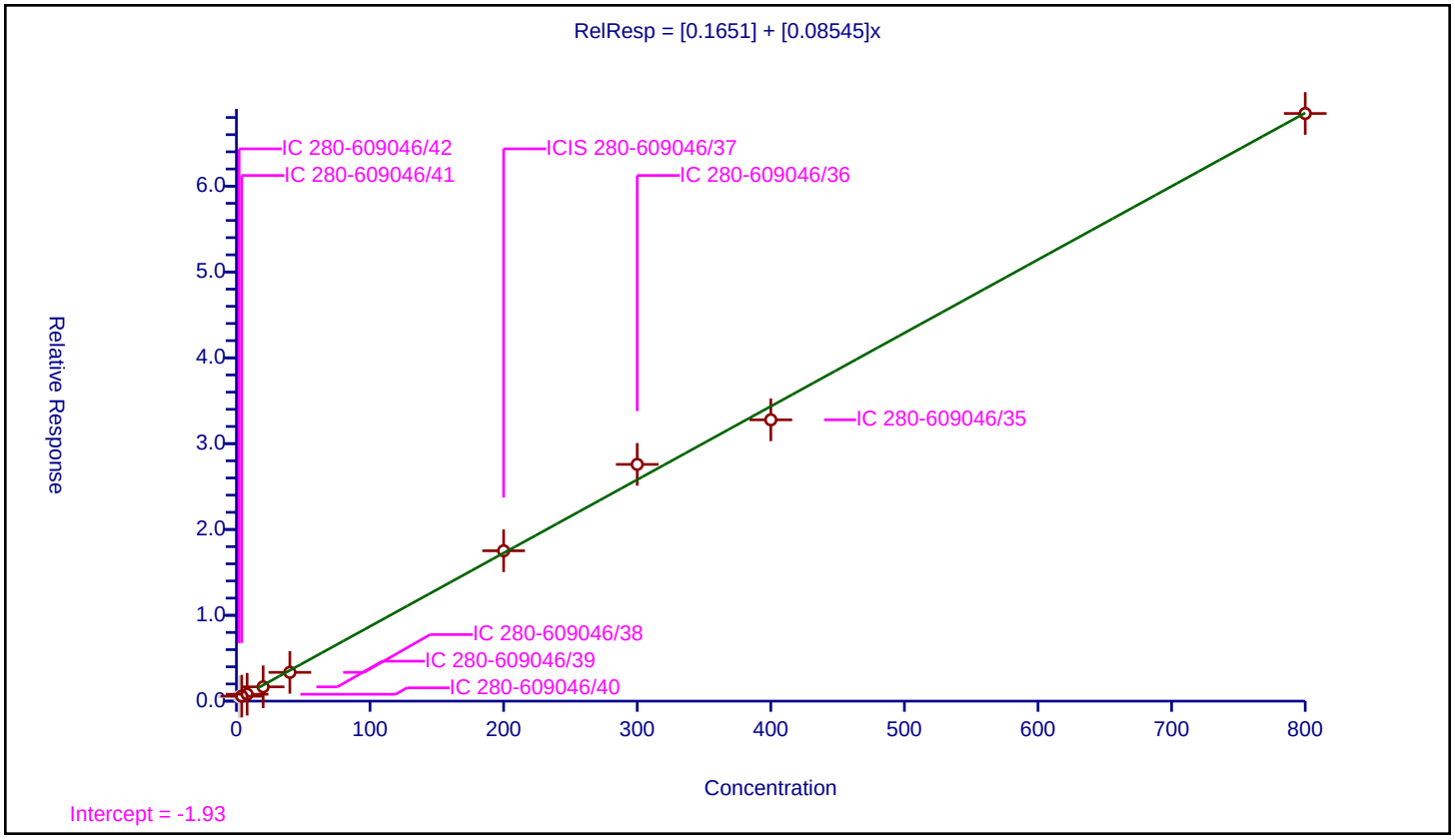
Curve Coefficients

Intercept:	0.1651
Slope:	0.08545

Error Coefficients

Standard Error:	854000
Relative Standard Error:	11.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	2.0	0.529044	50.0	1123724.0	0.264522	N
2	IC 280-609046/41	4.0	0.582785	50.0	1135581.0	0.145696	Y
3	IC 280-609046/40	8.0	0.800974	50.0	1153908.0	0.100122	Y
4	IC 280-609046/39	20.0	1.664904	50.0	1207547.0	0.083245	Y
5	IC 280-609046/38	40.0	3.352486	50.0	1230102.0	0.083812	Y
6	ICIS 280-609046/37	200.0	17.517413	50.0	1247062.0	0.087587	Y
7	IC 280-609046/36	300.0	27.585479	50.0	1248840.0	0.091952	Y
8	IC 280-609046/35	400.0	32.775321	50.0	1262070.0	0.081938	Y
9	IC 280-609046/34	800.0	68.466511	50.0	1267906.0	0.085583	Y



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Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

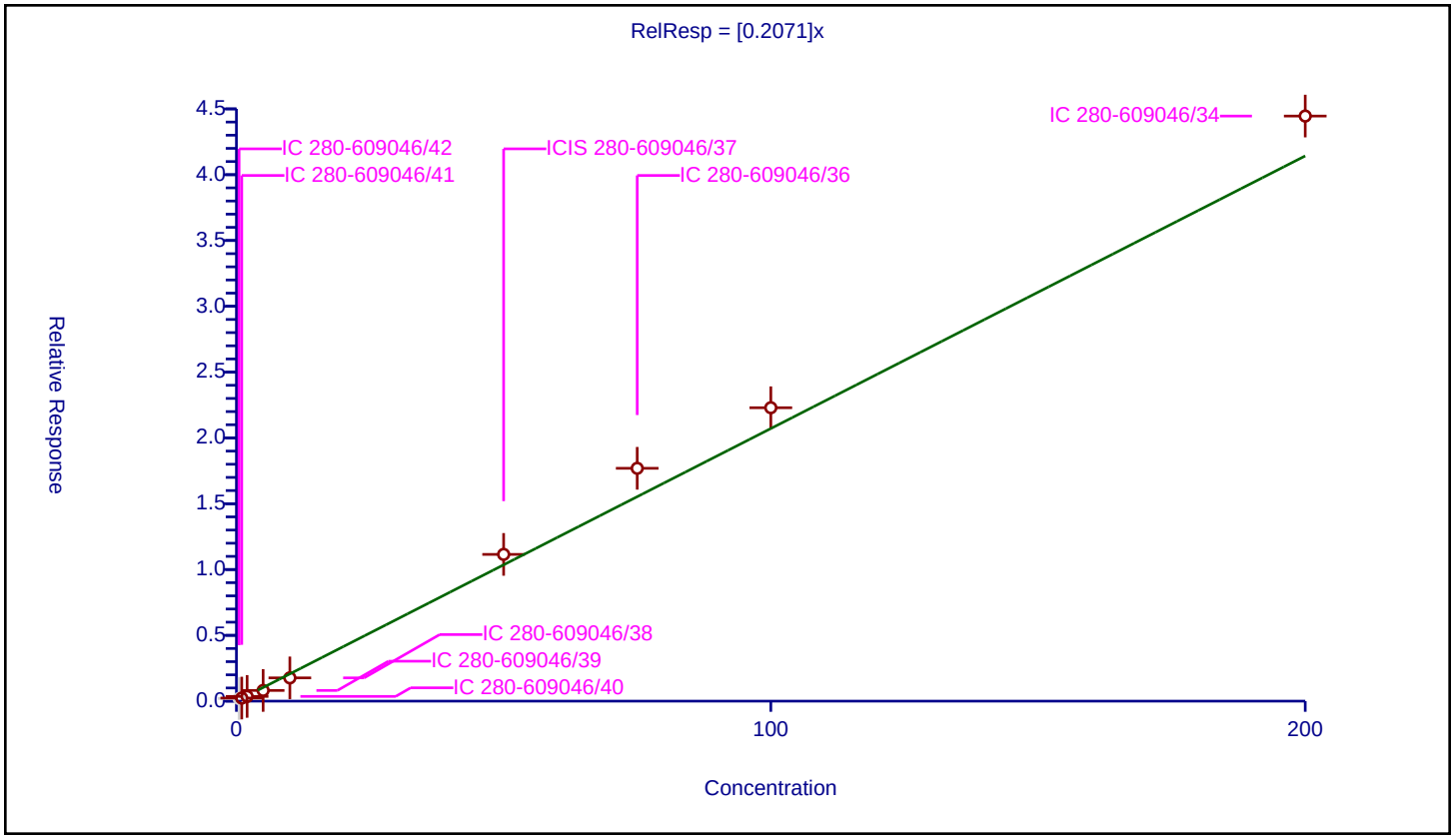
Curve Coefficients

Intercept:	0
Slope:	0.2071

Error Coefficients

Standard Error:	516000
Relative Standard Error:	14.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.201384	50.0	1123724.0	0.402768	N
2	IC 280-609046/41	1.0	0.233625	50.0	1135581.0	0.233625	Y
3	IC 280-609046/40	2.0	0.359777	50.0	1153908.0	0.179889	Y
4	IC 280-609046/39	5.0	0.813509	50.0	1207547.0	0.162702	Y
5	IC 280-609046/38	10.0	1.767333	50.0	1230102.0	0.176733	Y
6	ICIS 280-609046/37	50.0	11.149967	50.0	1247062.0	0.222999	Y
7	IC 280-609046/36	75.0	17.691298	50.0	1248840.0	0.235884	Y
8	IC 280-609046/35	100.0	22.293415	50.0	1262070.0	0.222934	Y
9	IC 280-609046/34	200.0	44.456332	50.0	1267906.0	0.222282	Y



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Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

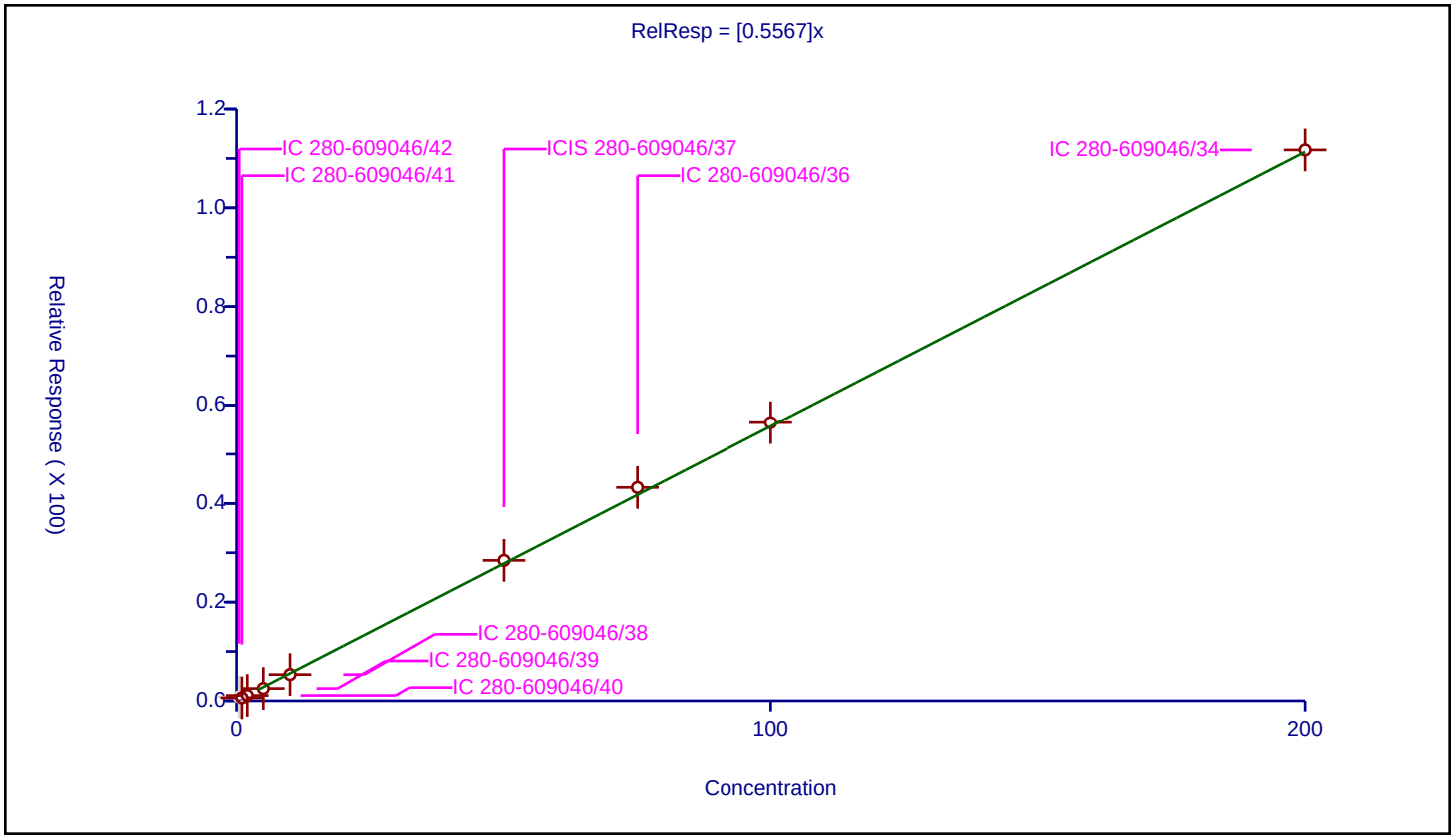
Curve Coefficients

Intercept:	0
Slope:	0.5567

Error Coefficients

Standard Error:	1300000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.799262	50.0	1123724.0	1.598524	N
2	IC 280-609046/41	1.0	0.605153	50.0	1135581.0	0.605153	Y
3	IC 280-609046/40	2.0	1.095148	50.0	1153908.0	0.547574	Y
4	IC 280-609046/39	5.0	2.499944	50.0	1207547.0	0.499989	Y
5	IC 280-609046/38	10.0	5.321998	50.0	1230102.0	0.5322	Y
6	ICIS 280-609046/37	50.0	28.456805	50.0	1247062.0	0.569136	Y
7	IC 280-609046/36	75.0	43.242649	50.0	1248840.0	0.576569	Y
8	IC 280-609046/35	100.0	56.42817	50.0	1262070.0	0.564282	Y
9	IC 280-609046/34	200.0	111.726382	50.0	1267906.0	0.558632	Y



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Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

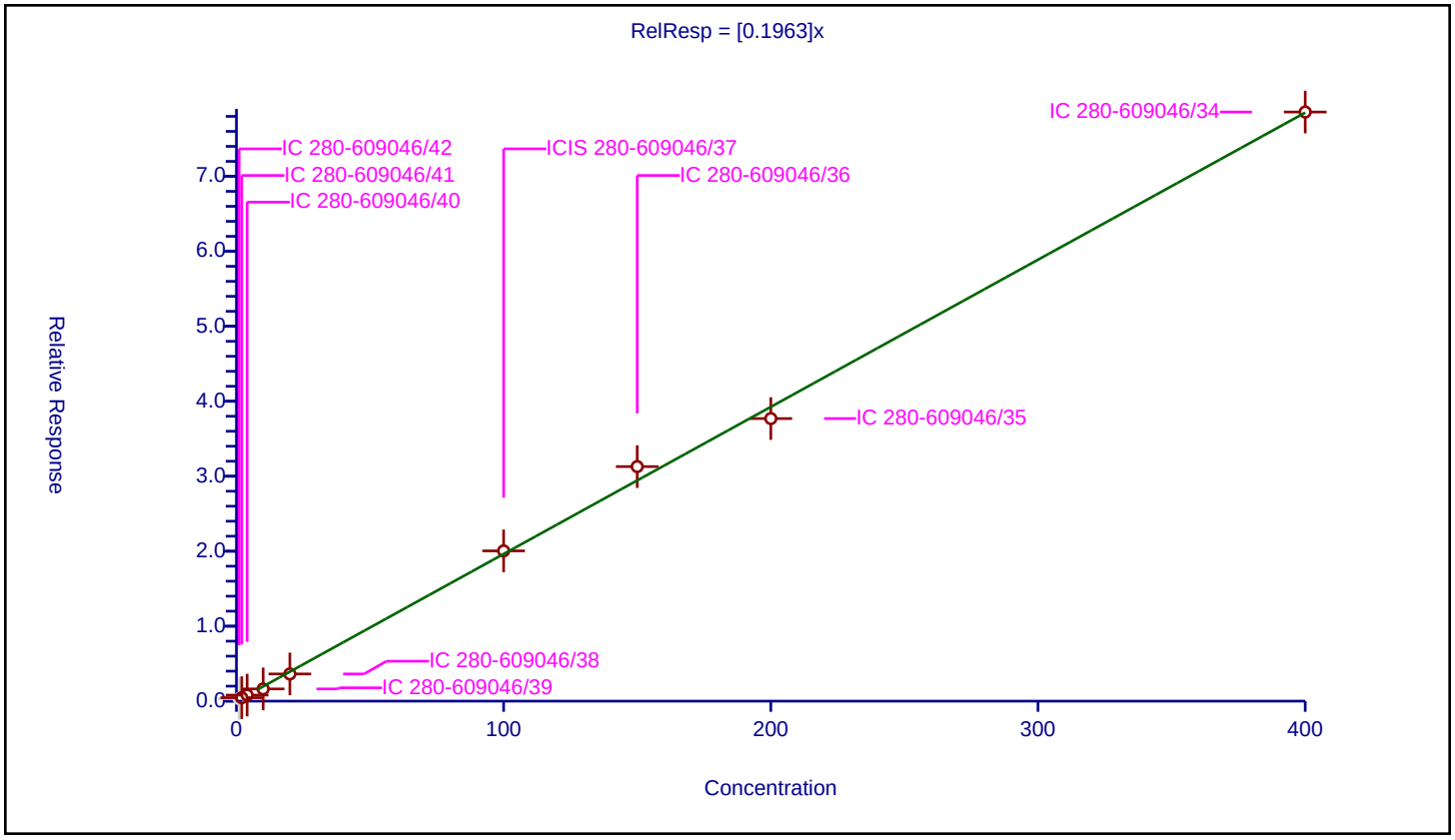
Curve Coefficients

Intercept:	0
Slope:	0.1963

Error Coefficients

Standard Error:	906000
Relative Standard Error:	10.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	1.0	0.33914	50.0	1123724.0	0.33914	N
2	IC 280-609046/41	2.0	0.460733	50.0	1135581.0	0.230367	Y
3	IC 280-609046/40	4.0	0.806347	50.0	1153908.0	0.201587	Y
4	IC 280-609046/39	10.0	1.630123	50.0	1207547.0	0.163012	Y
5	IC 280-609046/38	20.0	3.624293	50.0	1230102.0	0.181215	Y
6	ICIS 280-609046/37	100.0	20.04335	50.0	1247062.0	0.200433	Y
7	IC 280-609046/36	150.0	31.287995	50.0	1248840.0	0.208587	Y
8	IC 280-609046/35	200.0	37.690817	50.0	1262070.0	0.188454	Y
9	IC 280-609046/34	400.0	78.584729	50.0	1267906.0	0.196462	Y



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Calibration / 3-Chloro-1-propene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

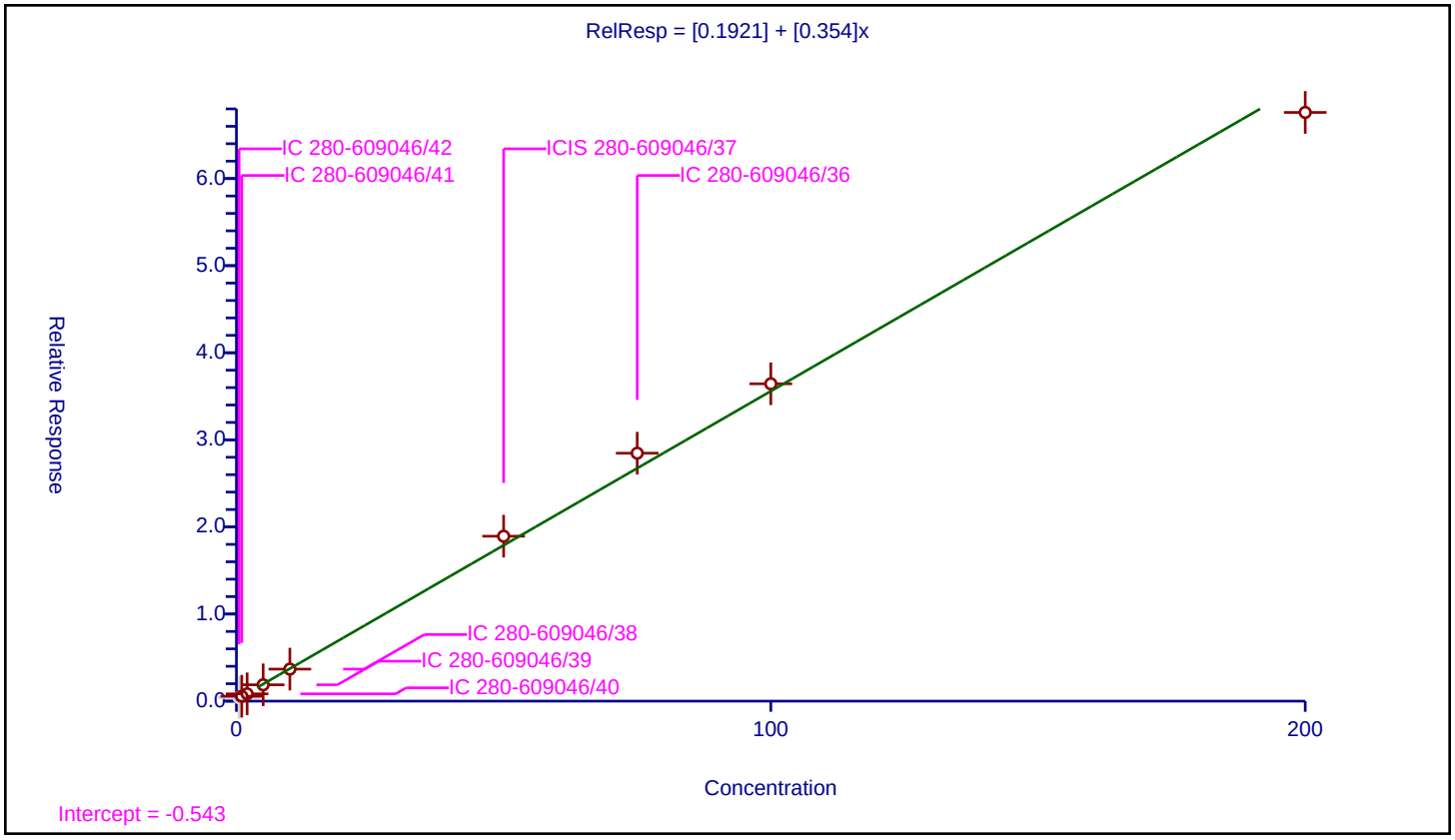
Curve Coefficients

Intercept:	0.1921
Slope:	0.354

Error Coefficients

Standard Error:	868000
Relative Standard Error:	6.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.404904	50.0	1123724.0	0.809807	N
2	IC 280-609046/41	1.0	0.565393	50.0	1135581.0	0.565393	Y
3	IC 280-609046/40	2.0	0.836289	50.0	1153908.0	0.418144	Y
4	IC 280-609046/39	5.0	1.874585	50.0	1207547.0	0.374917	Y
5	IC 280-609046/38	10.0	3.678394	50.0	1230102.0	0.367839	Y
6	ICIS 280-609046/37	50.0	18.938192	50.0	1247062.0	0.378764	Y
7	IC 280-609046/36	75.0	28.46998	50.0	1248840.0	0.3796	Y
8	IC 280-609046/35	100.0	36.437757	50.0	1262070.0	0.364378	Y
9	IC 280-609046/34	200.0	67.594009	50.0	1267906.0	0.33797	Y



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Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

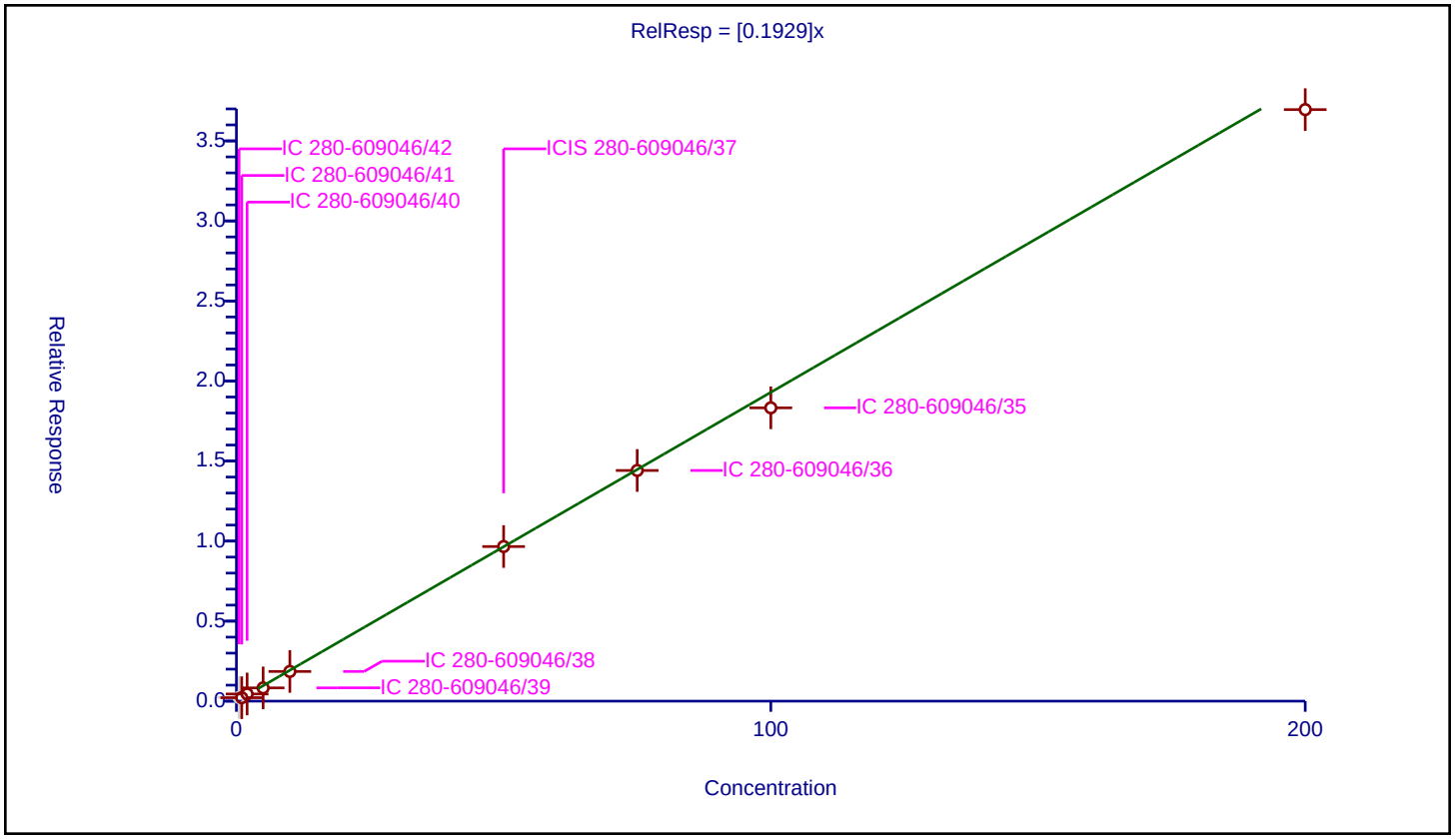
Curve Coefficients

Intercept:	0
Slope:	0.1929

Error Coefficients

Standard Error:	428000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.230484	50.0	1123724.0	0.460967	N
2	IC 280-609046/41	1.0	0.215661	50.0	1135581.0	0.215661	Y
3	IC 280-609046/40	2.0	0.447219	50.0	1153908.0	0.22361	Y
4	IC 280-609046/39	5.0	0.827918	50.0	1207547.0	0.165584	Y
5	IC 280-609046/38	10.0	1.854115	50.0	1230102.0	0.185411	Y
6	ICIS 280-609046/37	50.0	9.65814	50.0	1247062.0	0.193163	Y
7	IC 280-609046/36	75.0	14.409692	50.0	1248840.0	0.192129	Y
8	IC 280-609046/35	100.0	18.32331	50.0	1262070.0	0.183233	Y
9	IC 280-609046/34	200.0	36.955776	50.0	1267906.0	0.184779	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

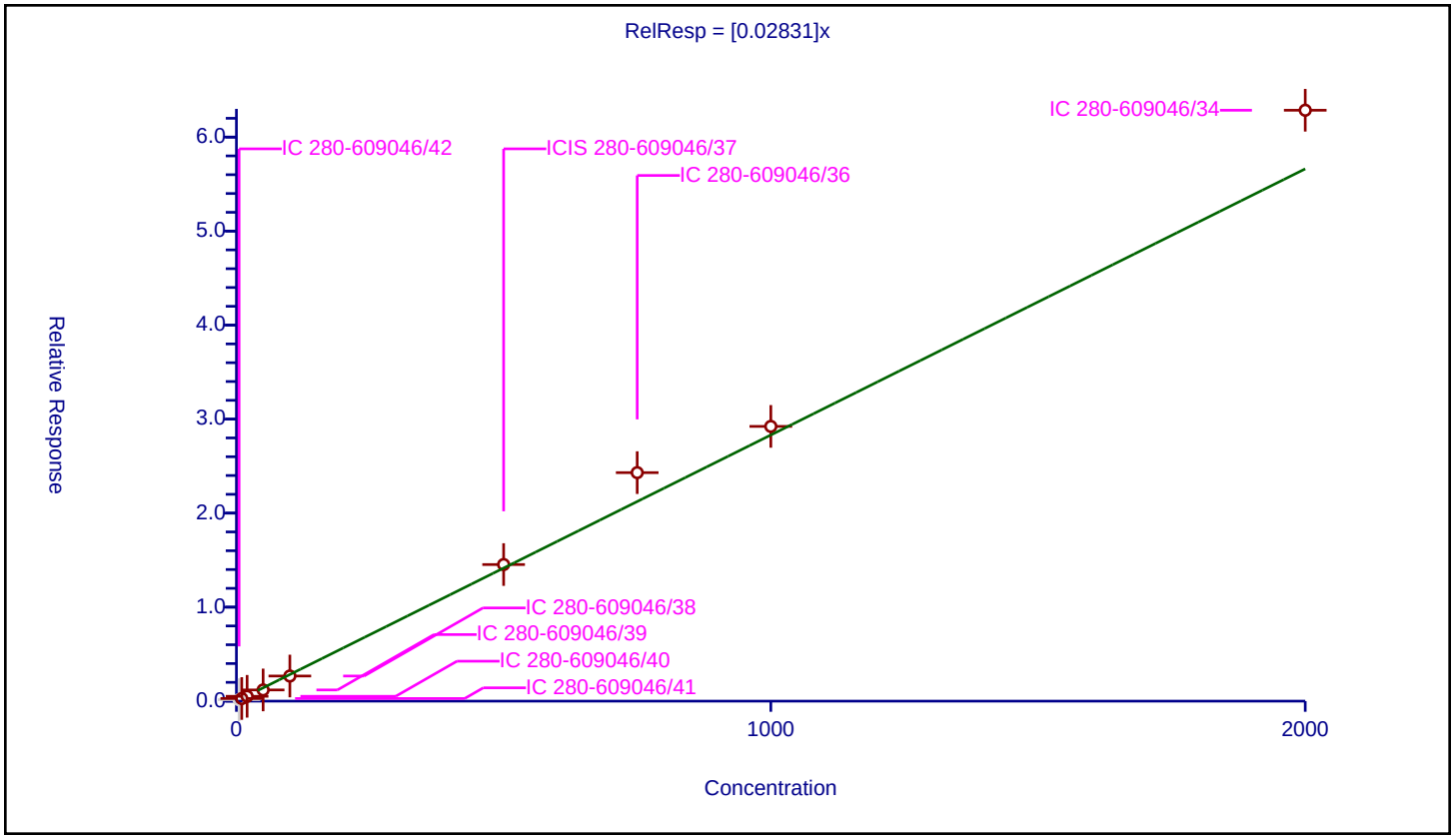
Curve Coefficients

Intercept:	0
Slope:	0.02831

Error Coefficients

Standard Error:	716000
Relative Standard Error:	10.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	5.0	0.154842	50.0	1123724.0	0.030968	N
2	IC 280-609046/41	10.0	0.280209	50.0	1135581.0	0.028021	Y
3	IC 280-609046/40	20.0	0.515379	50.0	1153908.0	0.025769	Y
4	IC 280-609046/39	50.0	1.1925	50.0	1207547.0	0.02385	Y
5	IC 280-609046/38	100.0	2.67173	50.0	1230102.0	0.026717	Y
6	ICIS 280-609046/37	500.0	14.529069	50.0	1247062.0	0.029058	Y
7	IC 280-609046/36	750.0	24.306516	50.0	1248840.0	0.032409	Y
8	IC 280-609046/35	1000.0	29.22429	50.0	1262070.0	0.029224	Y
9	IC 280-609046/34	2000.0	62.854502	50.0	1267906.0	0.031427	Y



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Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

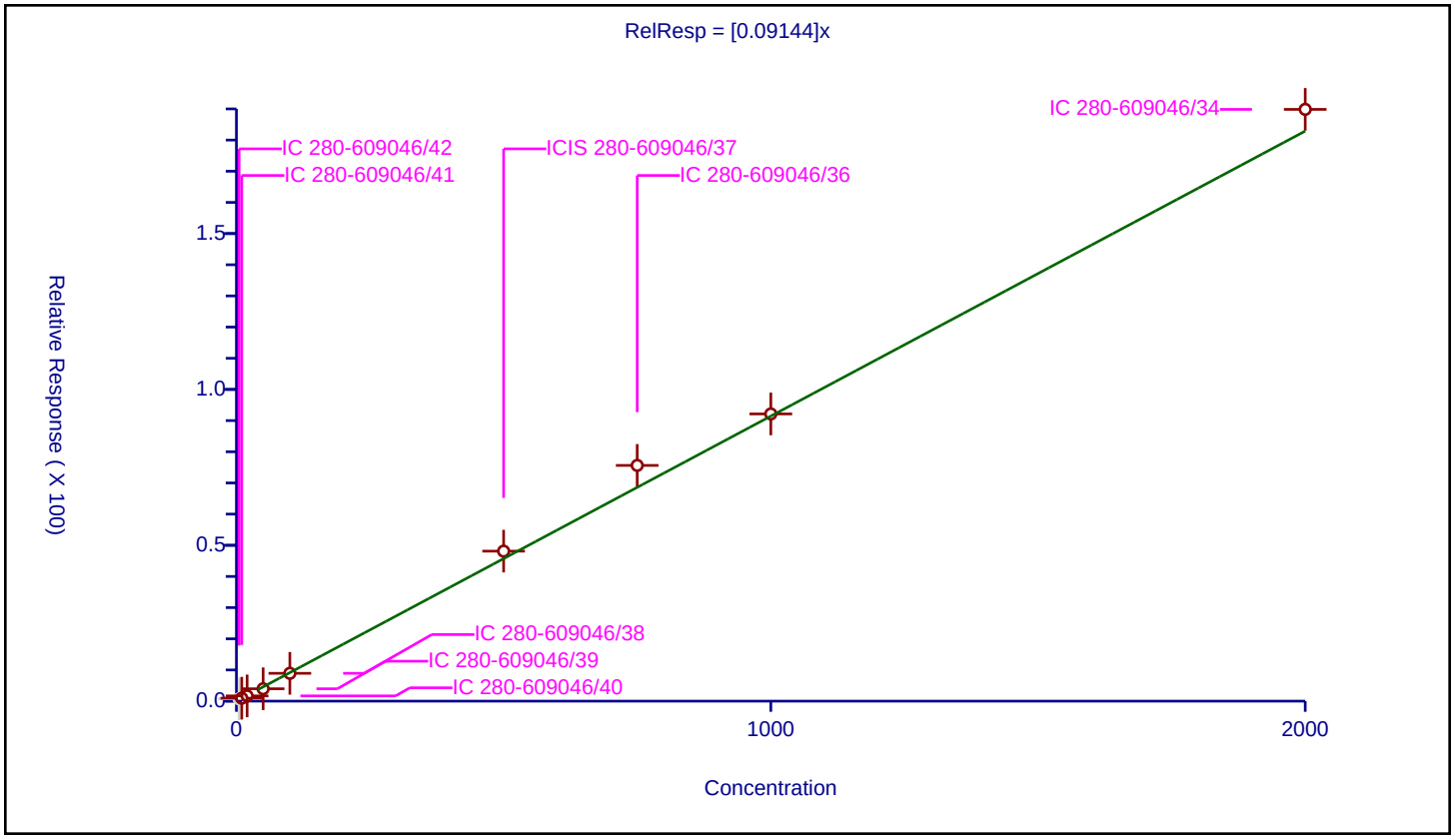
Curve Coefficients

Intercept:	0
Slope:	0.09144

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	7.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	5.0	0.738705	50.0	1123724.0	0.147741	N
2	IC 280-609046/41	10.0	0.947489	50.0	1135581.0	0.094749	Y
3	IC 280-609046/40	20.0	1.679033	50.0	1153908.0	0.083952	Y
4	IC 280-609046/39	50.0	3.972392	50.0	1207547.0	0.079448	Y
5	IC 280-609046/38	100.0	8.925886	50.0	1230102.0	0.089259	Y
6	ICIS 280-609046/37	500.0	48.120823	50.0	1247062.0	0.096242	Y
7	IC 280-609046/36	750.0	75.623419	50.0	1248840.0	0.100831	Y
8	IC 280-609046/35	1000.0	92.139976	50.0	1262070.0	0.09214	Y
9	IC 280-609046/34	2000.0	189.850155	50.0	1267906.0	0.094925	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

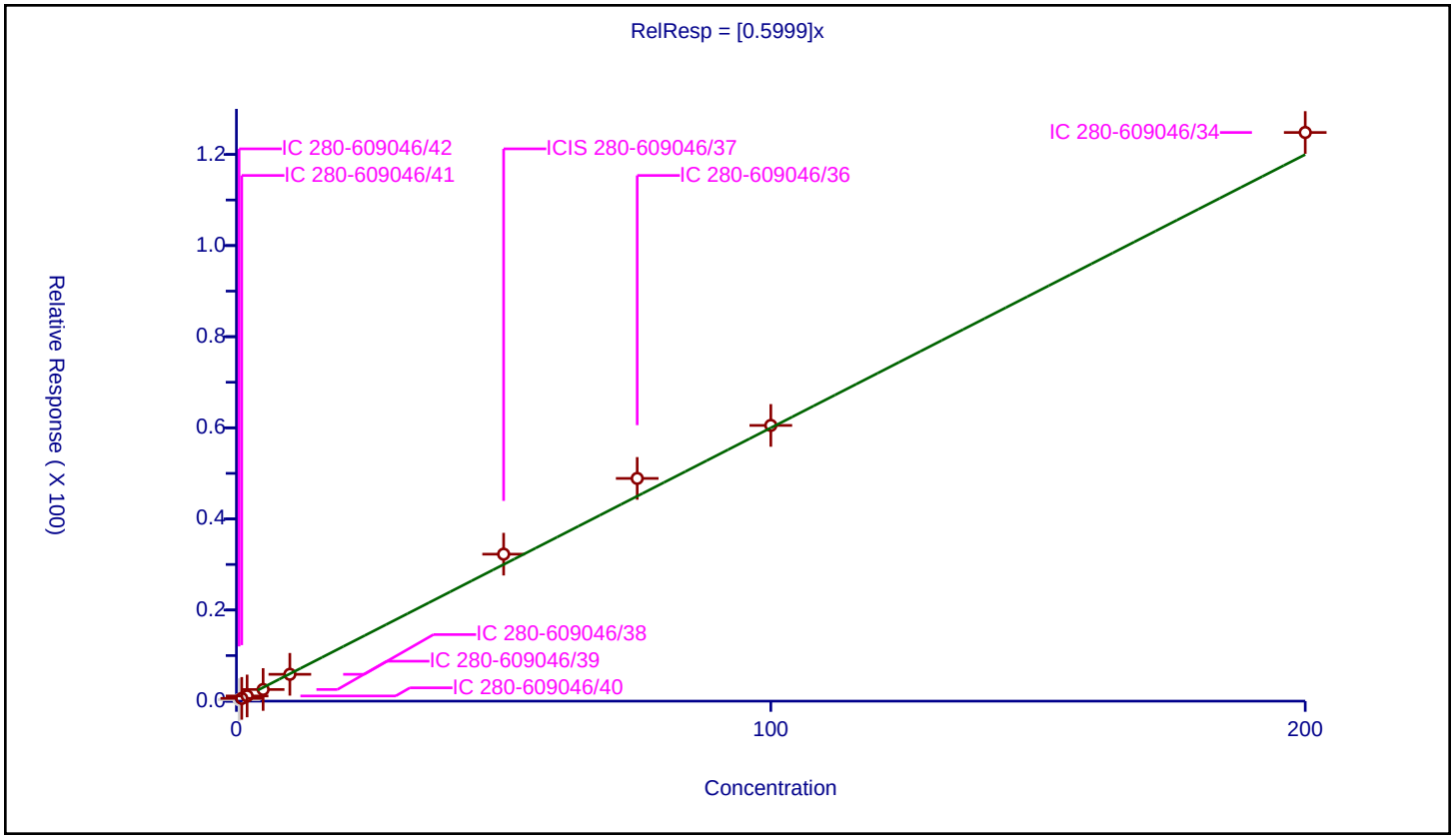
Curve Coefficients

Intercept:	0
Slope:	0.5999

Error Coefficients

Standard Error:	1440000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.323345	50.0	1123724.0	0.646689	N
2	IC 280-609046/41	1.0	0.602819	50.0	1135581.0	0.602819	Y
3	IC 280-609046/40	2.0	1.138696	50.0	1153908.0	0.569348	Y
4	IC 280-609046/39	5.0	2.557002	50.0	1207547.0	0.5114	Y
5	IC 280-609046/38	10.0	5.892479	50.0	1230102.0	0.589248	Y
6	ICIS 280-609046/37	50.0	32.262349	50.0	1247062.0	0.645247	Y
7	IC 280-609046/36	75.0	48.88973	50.0	1248840.0	0.651863	Y
8	IC 280-609046/35	100.0	60.522475	50.0	1262070.0	0.605225	Y
9	IC 280-609046/34	200.0	124.820649	50.0	1267906.0	0.624103	Y



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Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

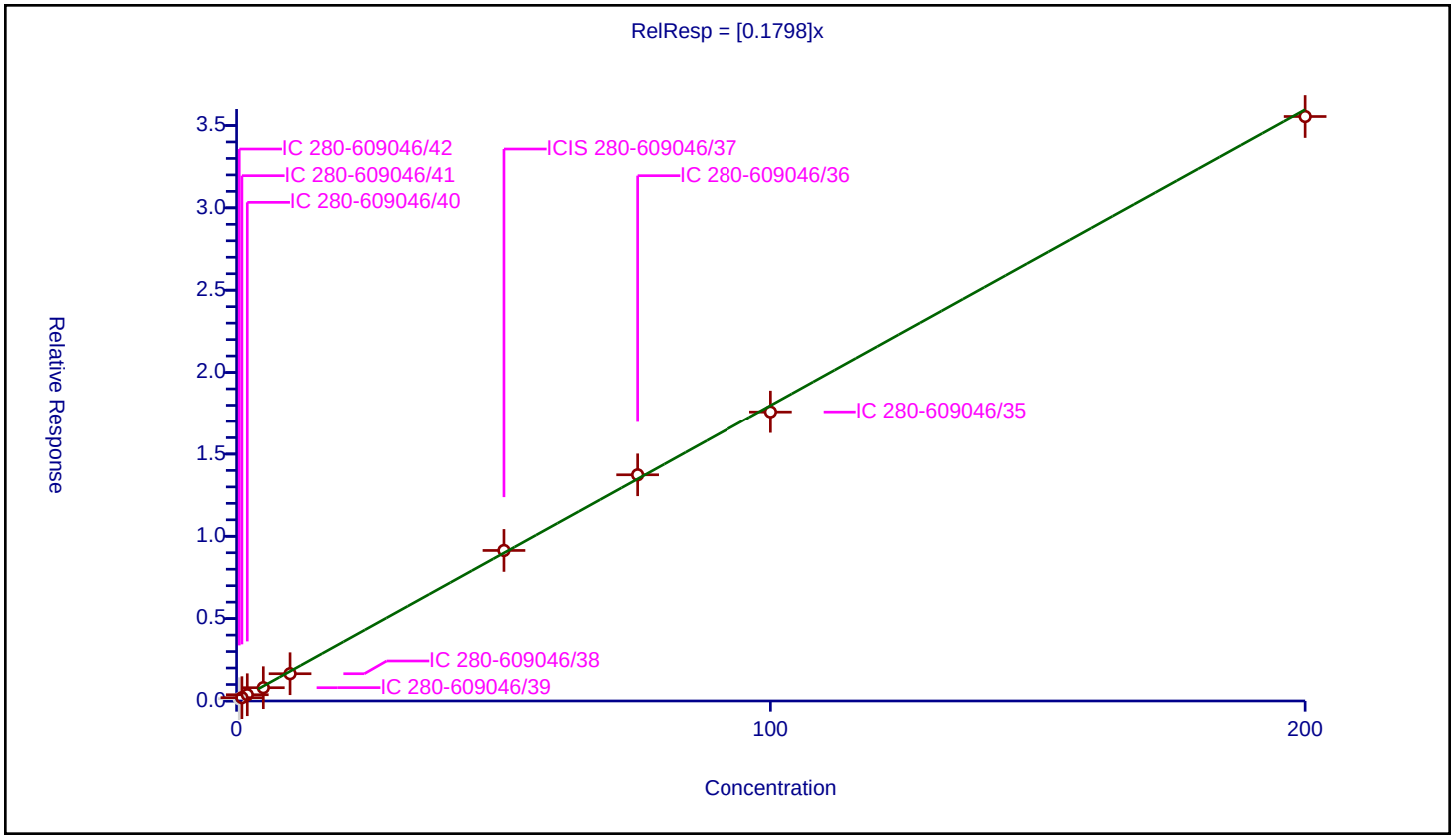
Curve Coefficients

Intercept:	0
Slope:	0.1798

Error Coefficients

Standard Error:	411000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.138201	50.0	1123724.0	0.276402	N
2	IC 280-609046/41	1.0	0.201967	50.0	1135581.0	0.201967	Y
3	IC 280-609046/40	2.0	0.380316	50.0	1153908.0	0.190158	Y
4	IC 280-609046/39	5.0	0.806925	50.0	1207547.0	0.161385	Y
5	IC 280-609046/38	10.0	1.655229	50.0	1230102.0	0.165523	Y
6	ICIS 280-609046/37	50.0	9.13908	50.0	1247062.0	0.182782	Y
7	IC 280-609046/36	75.0	13.733905	50.0	1248840.0	0.183119	Y
8	IC 280-609046/35	100.0	17.594824	50.0	1262070.0	0.175948	Y
9	IC 280-609046/34	200.0	35.544709	50.0	1267906.0	0.177724	Y



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Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

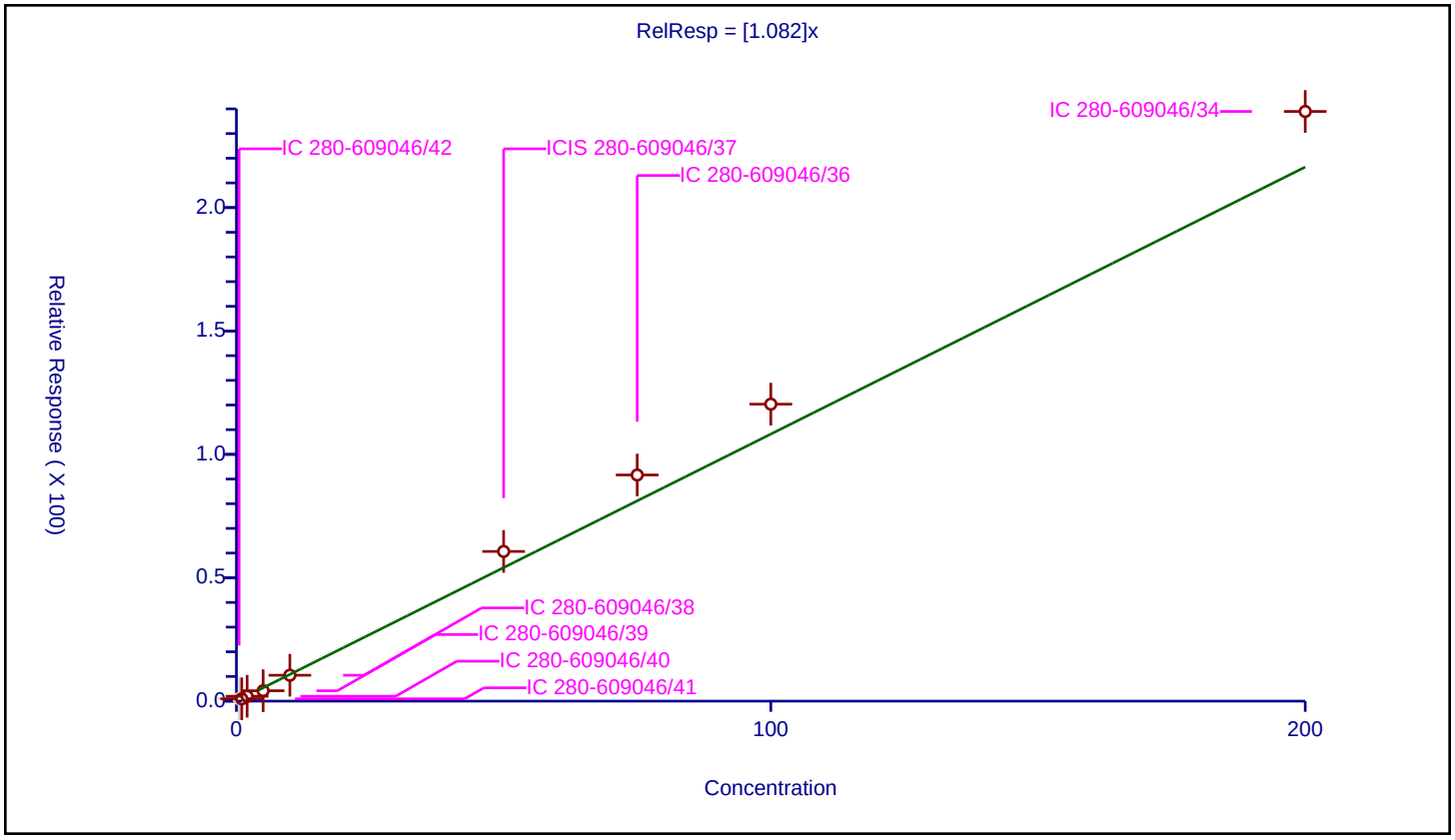
Curve Coefficients

Intercept:	0
Slope:	1.082

Error Coefficients

Standard Error:	658000
Relative Standard Error:	13.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.992996	50.0	266567.0	1.985992	N
2	IC 280-609046/41	1.0	0.939628	50.0	263402.0	0.939628	Y
3	IC 280-609046/40	2.0	1.984824	50.0	266472.0	0.992412	Y
4	IC 280-609046/39	5.0	4.211002	50.0	284291.0	0.8422	Y
5	IC 280-609046/38	10.0	10.498866	50.0	285207.0	1.049887	Y
6	ICIS 280-609046/37	50.0	60.663932	50.0	293780.0	1.213279	Y
7	IC 280-609046/36	75.0	91.651934	50.0	295823.0	1.222026	Y
8	IC 280-609046/35	100.0	120.352051	50.0	298110.0	1.203521	Y
9	IC 280-609046/34	200.0	238.949077	50.0	302477.0	1.194745	Y



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Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

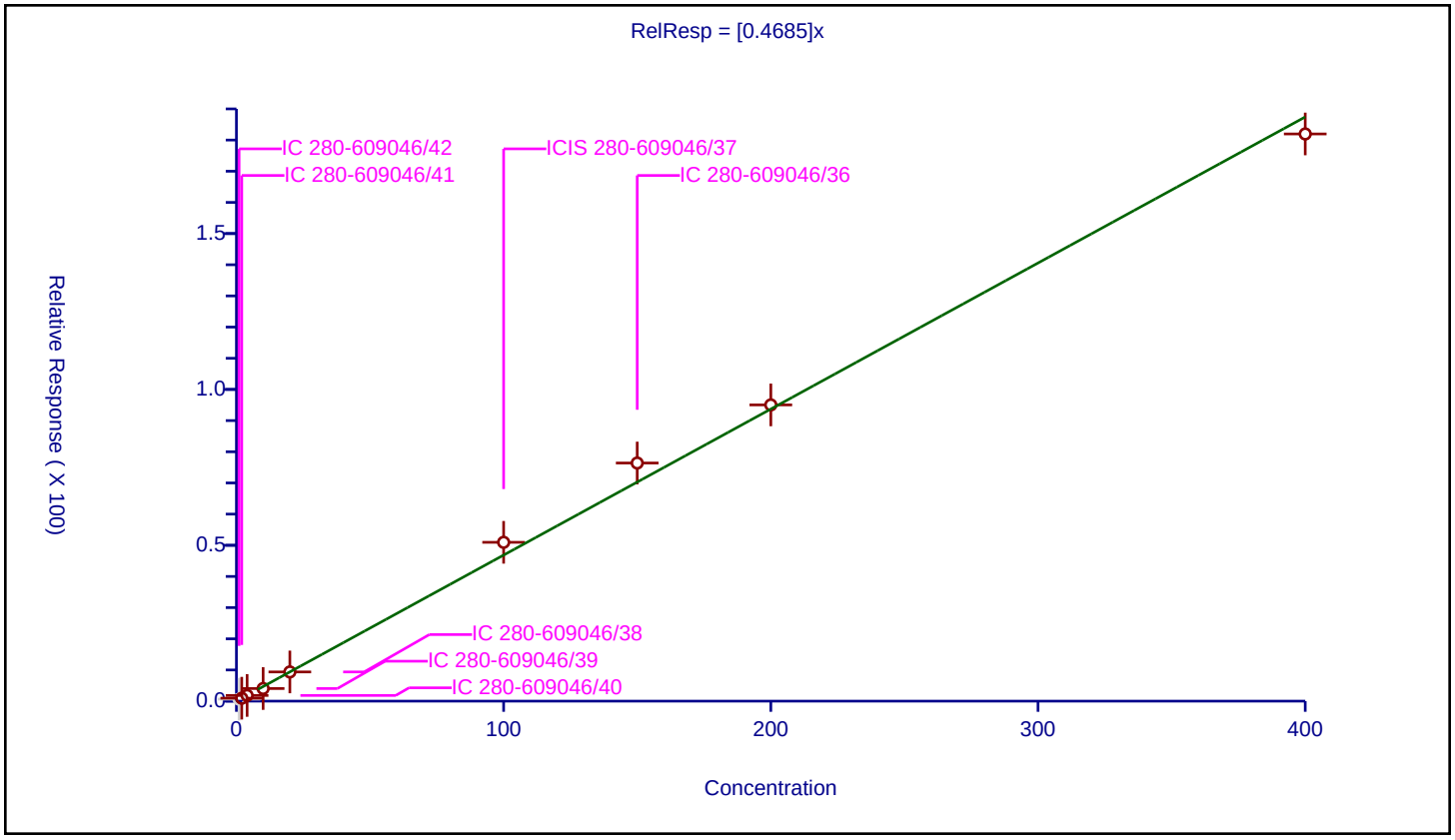
Curve Coefficients

Intercept:	0
Slope:	0.4685

Error Coefficients

Standard Error:	2150000
Relative Standard Error:	7.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	1.0	0.647223	50.0	1123724.0	0.647223	N
2	IC 280-609046/41	2.0	0.940928	50.0	1135581.0	0.470464	Y
3	IC 280-609046/40	4.0	1.824886	50.0	1153908.0	0.456221	Y
4	IC 280-609046/39	10.0	4.043735	50.0	1207547.0	0.404373	Y
5	IC 280-609046/38	20.0	9.365402	50.0	1230102.0	0.46827	Y
6	ICIS 280-609046/37	100.0	50.954924	50.0	1247062.0	0.509549	Y
7	IC 280-609046/36	150.0	76.390891	50.0	1248840.0	0.509273	Y
8	IC 280-609046/35	200.0	95.032447	50.0	1262070.0	0.475162	Y
9	IC 280-609046/34	400.0	181.955445	50.0	1267906.0	0.454889	Y



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Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

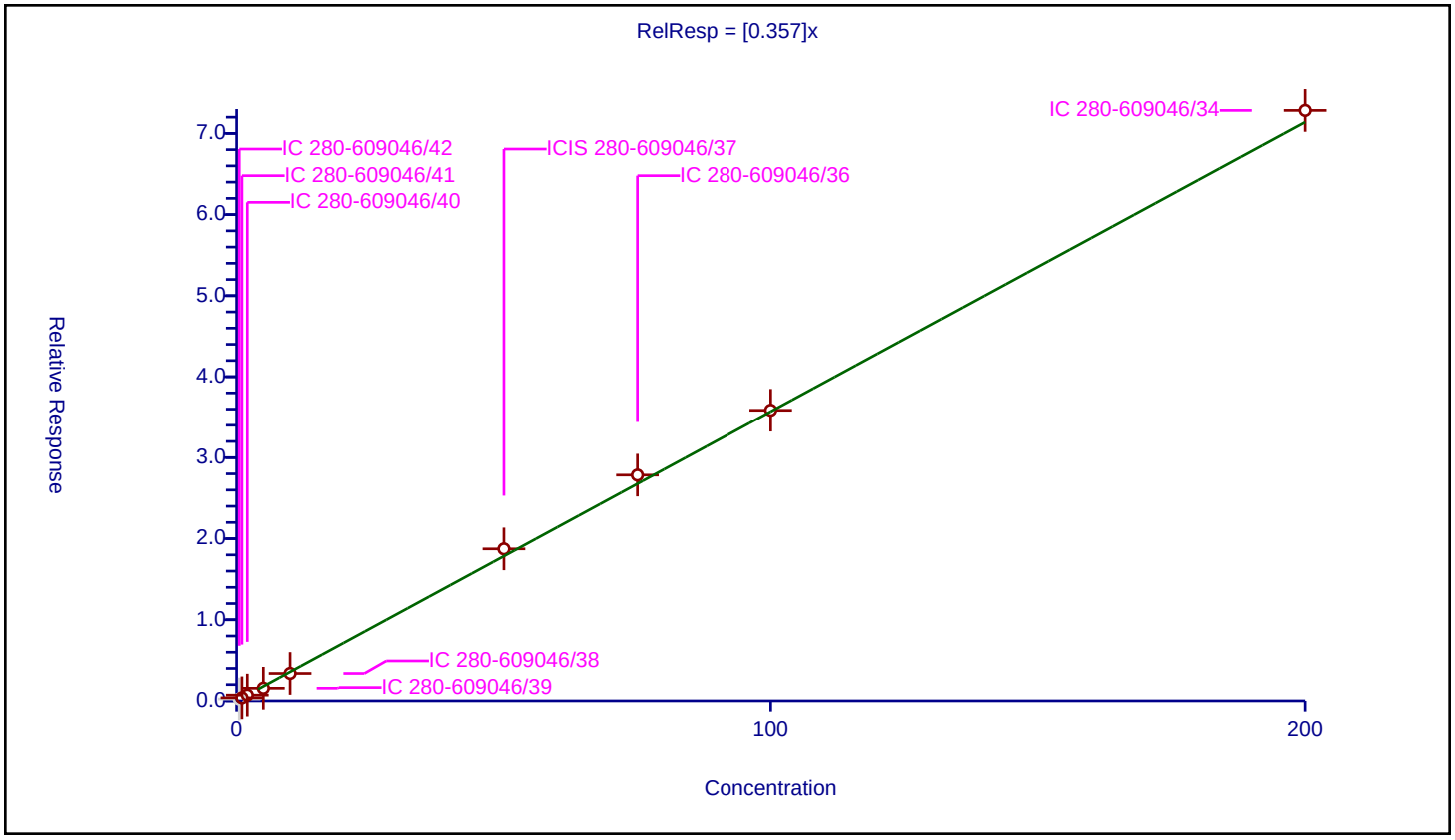
Curve Coefficients

Intercept:	0
Slope:	0.357

Error Coefficients

Standard Error:	840000
Relative Standard Error:	6.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.230706	50.0	1123724.0	0.461412	N
2	IC 280-609046/41	1.0	0.380422	50.0	1135581.0	0.380422	Y
3	IC 280-609046/40	2.0	0.714008	50.0	1153908.0	0.357004	Y
4	IC 280-609046/39	5.0	1.557455	50.0	1207547.0	0.311491	Y
5	IC 280-609046/38	10.0	3.380451	50.0	1230102.0	0.338045	Y
6	ICIS 280-609046/37	50.0	18.739686	50.0	1247062.0	0.374794	Y
7	IC 280-609046/36	75.0	27.846121	50.0	1248840.0	0.371282	Y
8	IC 280-609046/35	100.0	35.857916	50.0	1262070.0	0.358579	Y
9	IC 280-609046/34	200.0	72.833436	50.0	1267906.0	0.364167	Y



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Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

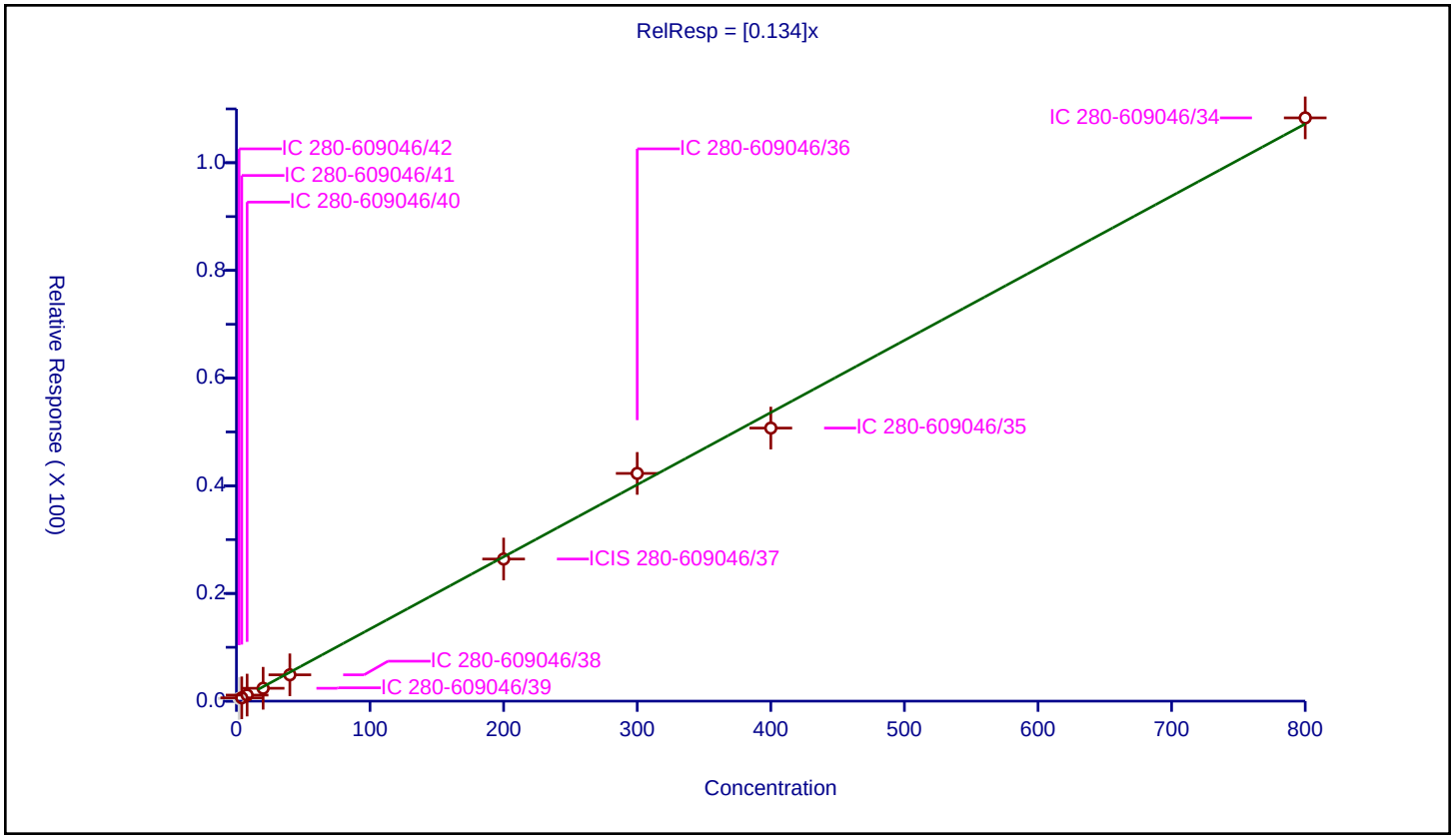
Curve Coefficients

Intercept:	0
Slope:	0.134

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	8.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	2.0	0.500256	50.0	1123724.0	0.250128	N
2	IC 280-609046/41	4.0	0.618054	50.0	1135581.0	0.154513	Y
3	IC 280-609046/40	8.0	1.126	50.0	1153908.0	0.14075	Y
4	IC 280-609046/39	20.0	2.390052	50.0	1207547.0	0.119503	Y
5	IC 280-609046/38	40.0	4.889798	50.0	1230102.0	0.122245	Y
6	ICIS 280-609046/37	200.0	26.392112	50.0	1247062.0	0.131961	Y
7	IC 280-609046/36	300.0	42.296051	50.0	1248840.0	0.140987	Y
8	IC 280-609046/35	400.0	50.718185	50.0	1262070.0	0.126795	Y
9	IC 280-609046/34	800.0	108.331178	50.0	1267906.0	0.135414	Y



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Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

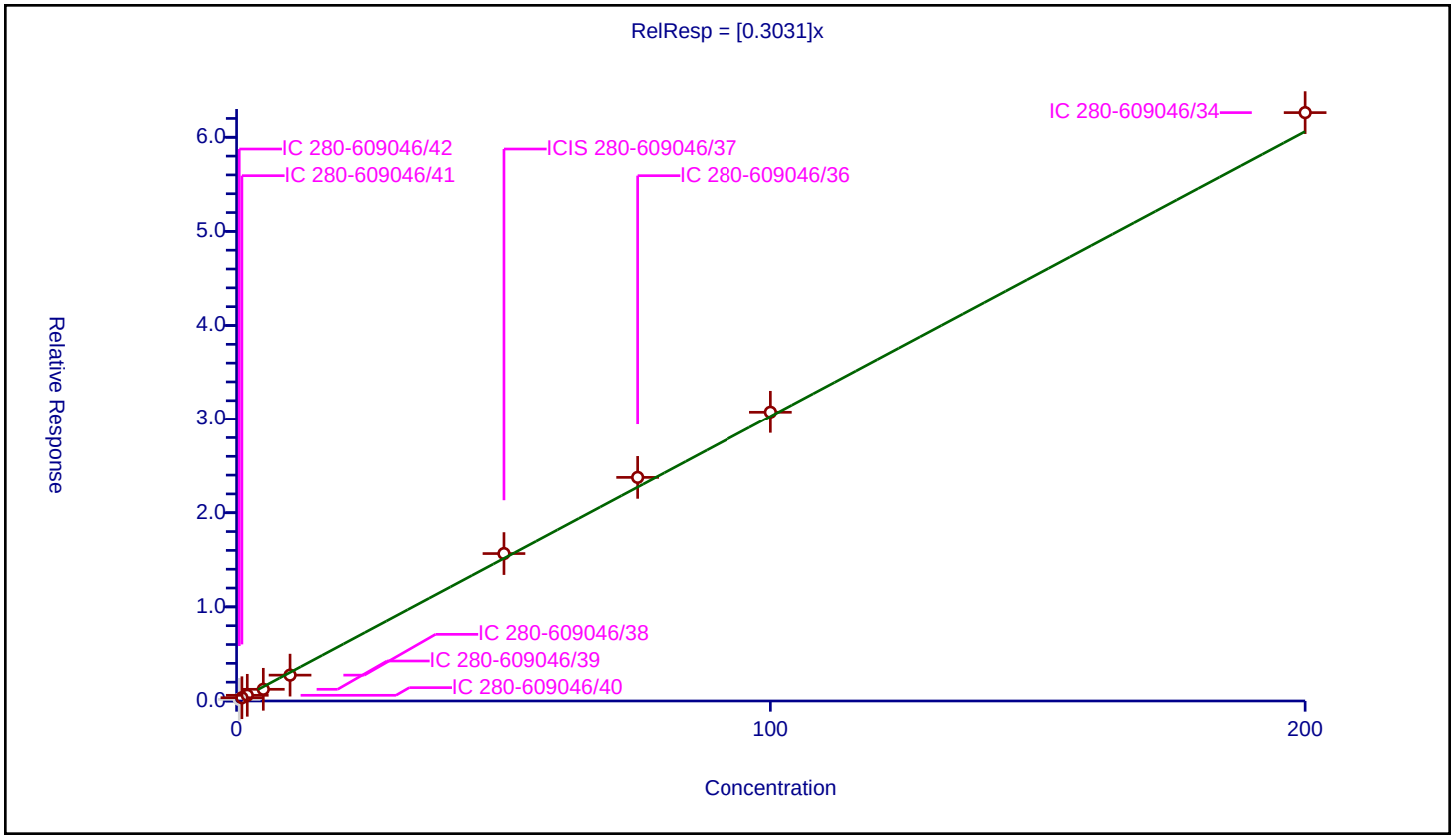
Curve Coefficients

Intercept:	0
Slope:	0.3031

Error Coefficients

Standard Error:	721000
Relative Standard Error:	9.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.172907	50.0	1123724.0	0.345814	N
2	IC 280-609046/41	1.0	0.34806	50.0	1135581.0	0.34806	Y
3	IC 280-609046/40	2.0	0.604338	50.0	1153908.0	0.302169	Y
4	IC 280-609046/39	5.0	1.243513	50.0	1207547.0	0.248703	Y
5	IC 280-609046/38	10.0	2.747536	50.0	1230102.0	0.274754	Y
6	ICIS 280-609046/37	50.0	15.662694	50.0	1247062.0	0.313254	Y
7	IC 280-609046/36	75.0	23.758168	50.0	1248840.0	0.316776	Y
8	IC 280-609046/35	100.0	30.777809	50.0	1262070.0	0.307778	Y
9	IC 280-609046/34	200.0	62.617536	50.0	1267906.0	0.313088	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

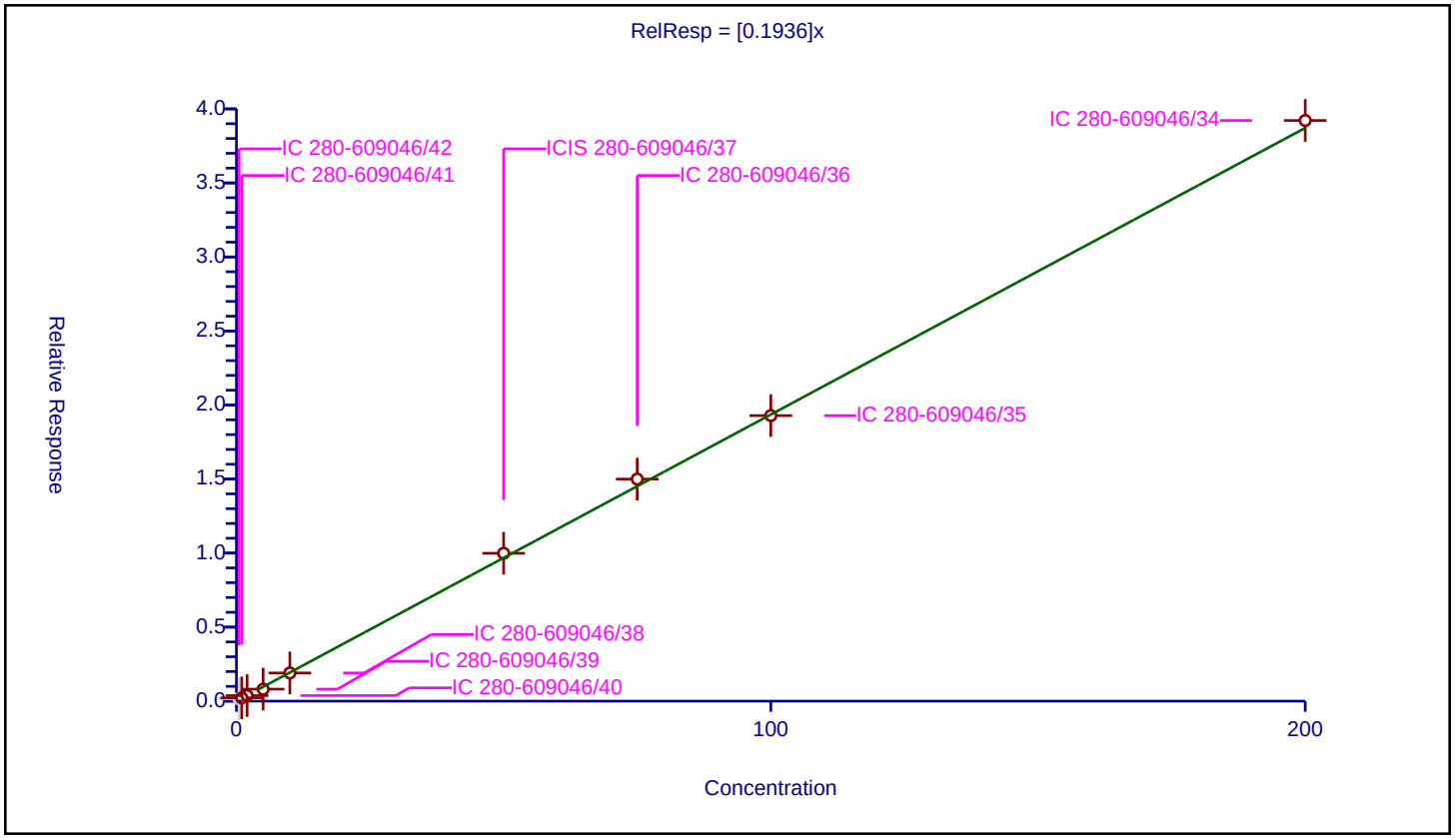
Curve Coefficients

Intercept:	0
Slope:	0.1936

Error Coefficients

Standard Error:	452000
Relative Standard Error:	8.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.163296	50.0	1123724.0	0.326593	N
2	IC 280-609046/41	1.0	0.220328	50.0	1135581.0	0.220328	Y
3	IC 280-609046/40	2.0	0.374727	50.0	1153908.0	0.187363	Y
4	IC 280-609046/39	5.0	0.809617	50.0	1207547.0	0.161923	Y
5	IC 280-609046/38	10.0	1.902322	50.0	1230102.0	0.190232	Y
6	ICIS 280-609046/37	50.0	9.986713	50.0	1247062.0	0.199734	Y
7	IC 280-609046/36	75.0	14.998238	50.0	1248840.0	0.199977	Y
8	IC 280-609046/35	100.0	19.284231	50.0	1262070.0	0.192842	Y
9	IC 280-609046/34	200.0	39.217497	50.0	1267906.0	0.196087	Y



Calibration / sec-Butyl Alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

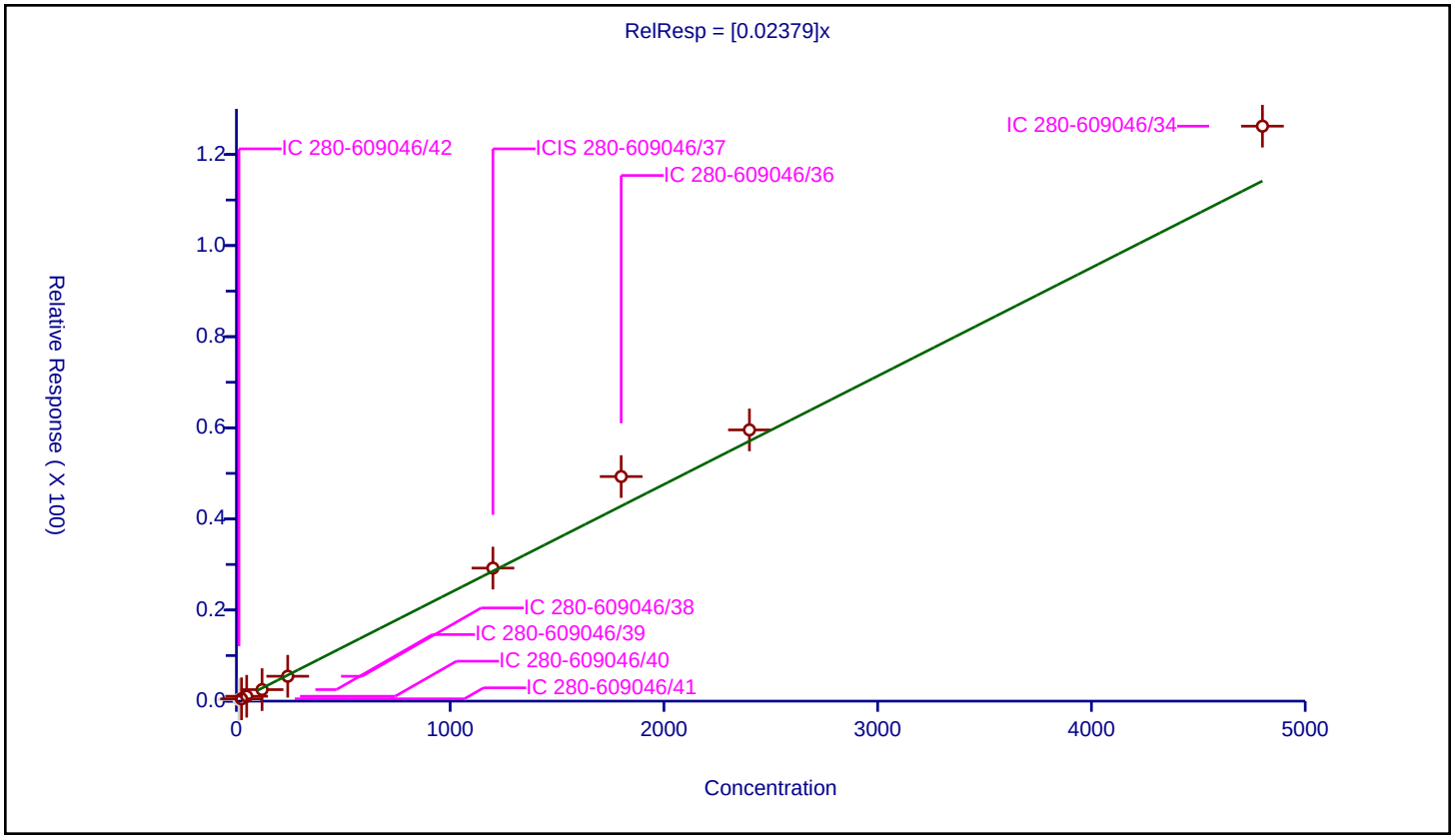
Curve Coefficients

Intercept:	0
Slope:	0.02379

Error Coefficients

Standard Error:	1440000
Relative Standard Error:	9.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	12.0	0.347105	50.0	1123724.0	0.028925	N
2	IC 280-609046/41	24.0	0.511632	50.0	1135581.0	0.021318	Y
3	IC 280-609046/40	48.0	1.070969	50.0	1153908.0	0.022312	Y
4	IC 280-609046/39	120.0	2.529011	50.0	1207547.0	0.021075	Y
5	IC 280-609046/38	240.0	5.464709	50.0	1230102.0	0.02277	Y
6	ICIS 280-609046/37	1200.0	29.20352	50.0	1247062.0	0.024336	Y
7	IC 280-609046/36	1800.0	49.300191	50.0	1248840.0	0.027389	Y
8	IC 280-609046/35	2400.0	59.534455	50.0	1262070.0	0.024806	Y
9	IC 280-609046/34	4800.0	126.208765	50.0	1267906.0	0.026293	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

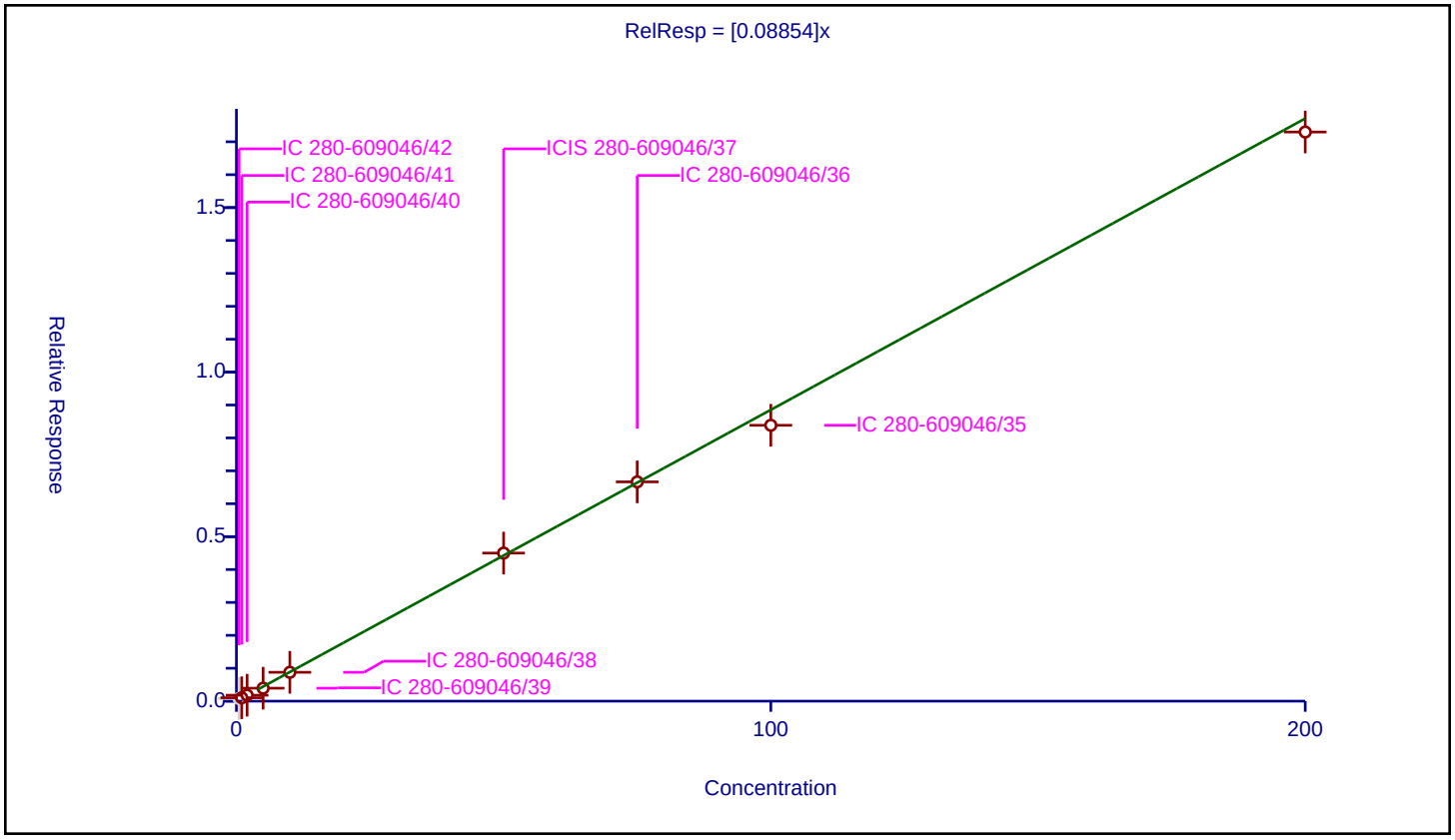
Curve Coefficients

Intercept:	0
Slope:	0.08854

Error Coefficients

Standard Error:	199000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.080358	50.0	1123724.0	0.160716	N
2	IC 280-609046/41	1.0	0.102811	50.0	1135581.0	0.102811	Y
3	IC 280-609046/40	2.0	0.179824	50.0	1153908.0	0.089912	Y
4	IC 280-609046/39	5.0	0.393566	50.0	1207547.0	0.078713	Y
5	IC 280-609046/38	10.0	0.876757	50.0	1230102.0	0.087676	Y
6	ICIS 280-609046/37	50.0	4.500698	50.0	1247062.0	0.090014	Y
7	IC 280-609046/36	75.0	6.664224	50.0	1248840.0	0.088856	Y
8	IC 280-609046/35	100.0	8.384361	50.0	1262070.0	0.083844	Y
9	IC 280-609046/34	200.0	17.296945	50.0	1267906.0	0.086485	Y



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Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

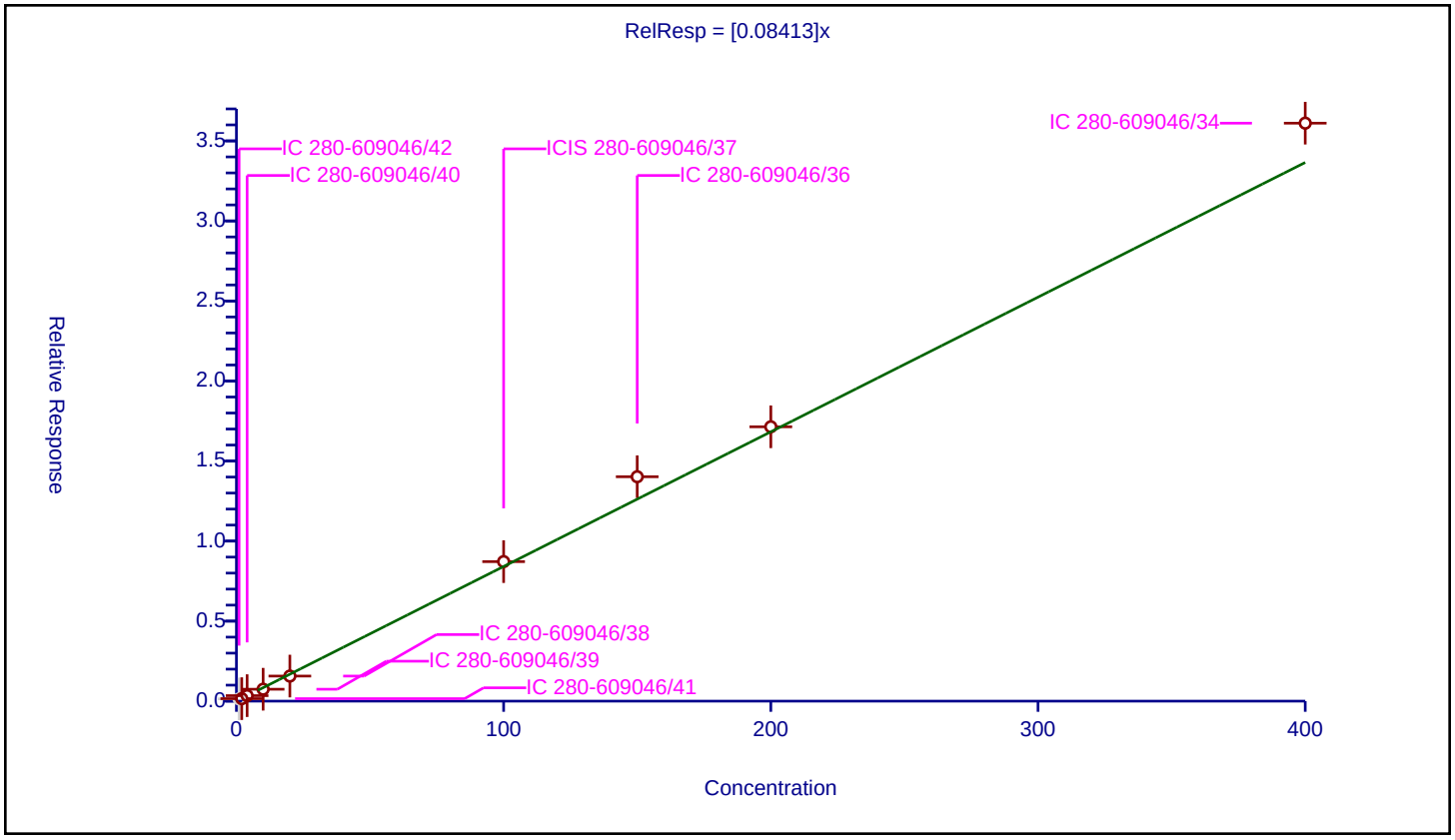
Curve Coefficients

Intercept:	0
Slope:	0.08413

Error Coefficients

Standard Error:	414000
Relative Standard Error:	7.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	1.0	0.142695	50.0	1123724.0	0.142695	N
2	IC 280-609046/41	2.0	0.155515	50.0	1135581.0	0.077758	Y
3	IC 280-609046/40	4.0	0.343355	50.0	1153908.0	0.085839	Y
4	IC 280-609046/39	10.0	0.745271	50.0	1207547.0	0.074527	Y
5	IC 280-609046/38	20.0	1.566252	50.0	1230102.0	0.078313	Y
6	ICIS 280-609046/37	100.0	8.717209	50.0	1247062.0	0.087172	Y
7	IC 280-609046/36	150.0	14.01929	50.0	1248840.0	0.093462	Y
8	IC 280-609046/35	200.0	17.139501	50.0	1262070.0	0.085698	Y
9	IC 280-609046/34	400.0	36.107487	50.0	1267906.0	0.090269	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

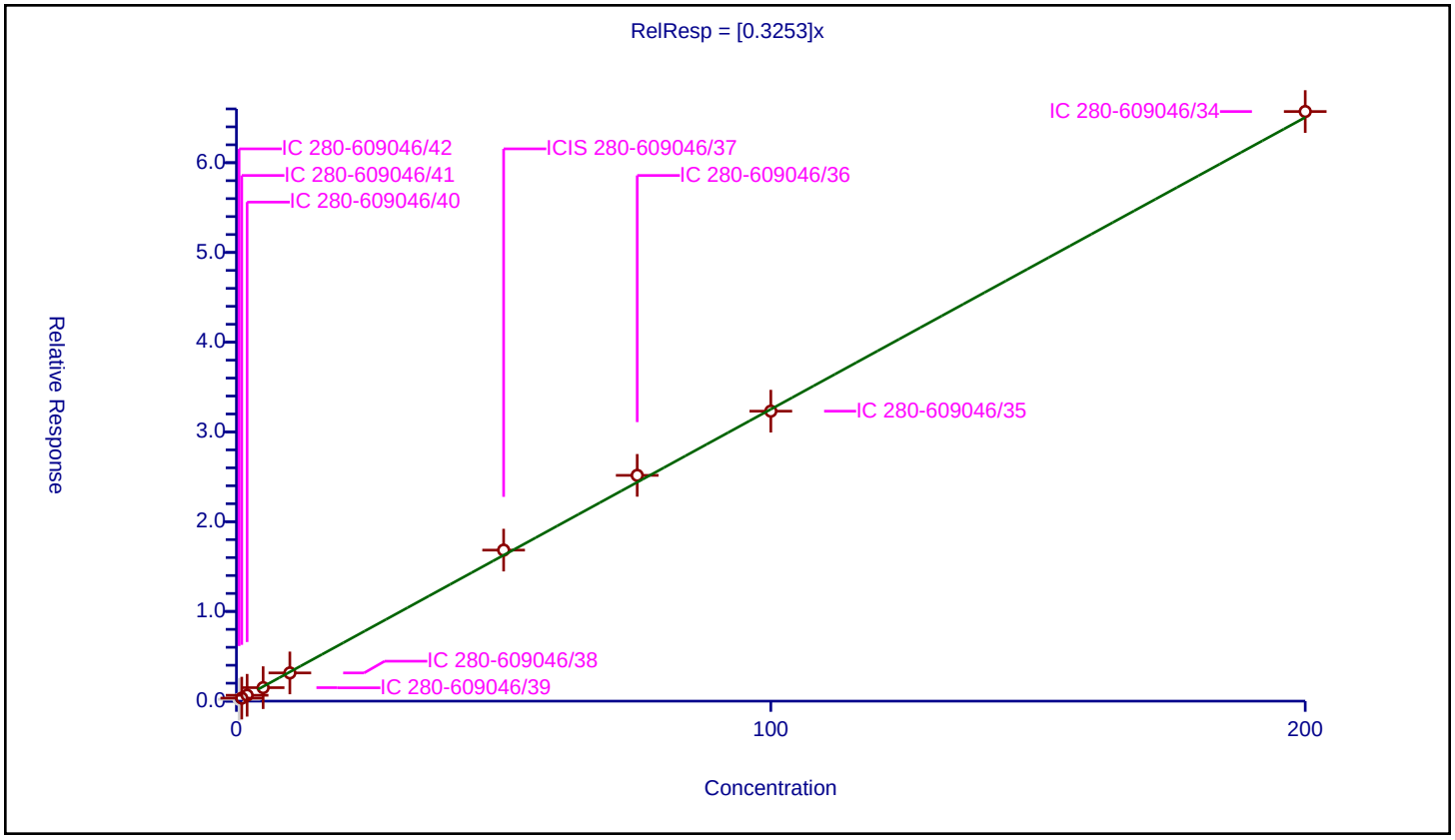
Curve Coefficients

Intercept:	0
Slope:	0.3253

Error Coefficients

Standard Error:	758000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.206189	50.0	1123724.0	0.412379	N
2	IC 280-609046/41	1.0	0.336524	50.0	1135581.0	0.336524	Y
3	IC 280-609046/40	2.0	0.653388	50.0	1153908.0	0.326694	Y
4	IC 280-609046/39	5.0	1.50313	50.0	1207547.0	0.300626	Y
5	IC 280-609046/38	10.0	3.144699	50.0	1230102.0	0.31447	Y
6	ICIS 280-609046/37	50.0	16.830639	50.0	1247062.0	0.336613	Y
7	IC 280-609046/36	75.0	25.162431	50.0	1248840.0	0.335499	Y
8	IC 280-609046/35	100.0	32.314412	50.0	1262070.0	0.323144	Y
9	IC 280-609046/34	200.0	65.705502	50.0	1267906.0	0.328528	Y



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Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

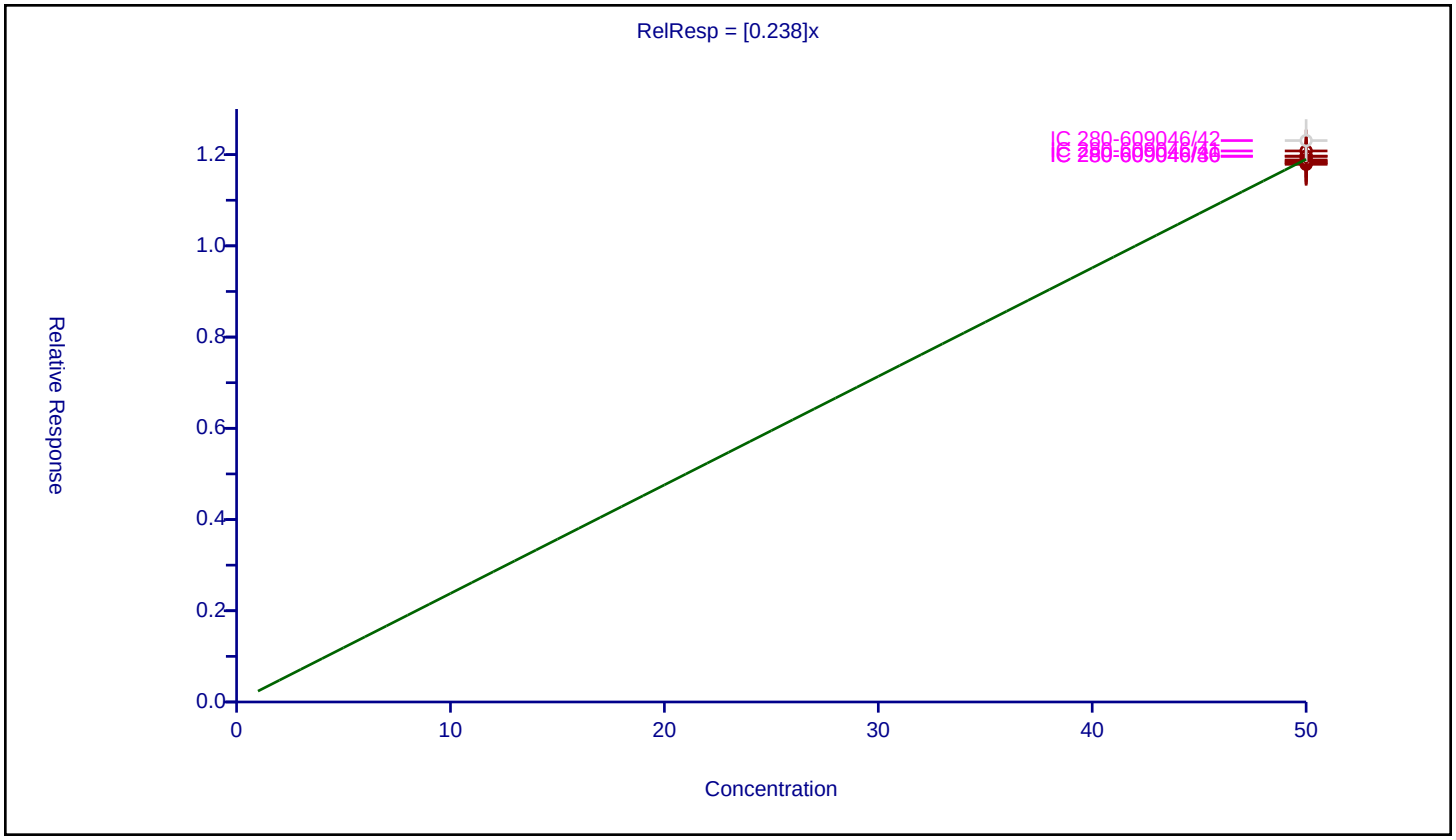
Curve Coefficients

Intercept:	0
Slope:	0.238

Error Coefficients

Standard Error:	310000
Relative Standard Error:	0.8
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/34	50.0	11.812035	50.0	1267906.0	0.236241	Y
2	IC 280-609046/35	50.0	11.787579	50.0	1262070.0	0.235752	Y
3	IC 280-609046/36	50.0	11.967786	50.0	1248840.0	0.239356	Y
4	ICIS 280-609046/37	50.0	11.88293	50.0	1247062.0	0.237659	Y
5	IC 280-609046/38	50.0	11.861415	50.0	1230102.0	0.237228	Y
6	IC 280-609046/39	50.0	11.826496	50.0	1207547.0	0.23653	Y
7	IC 280-609046/40	50.0	11.962912	50.0	1153908.0	0.239258	Y
8	IC 280-609046/41	50.0	12.080952	50.0	1135581.0	0.241619	Y
9	IC 280-609046/42	50.0	12.308138	50.0	1123724.0	0.246163	N



Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

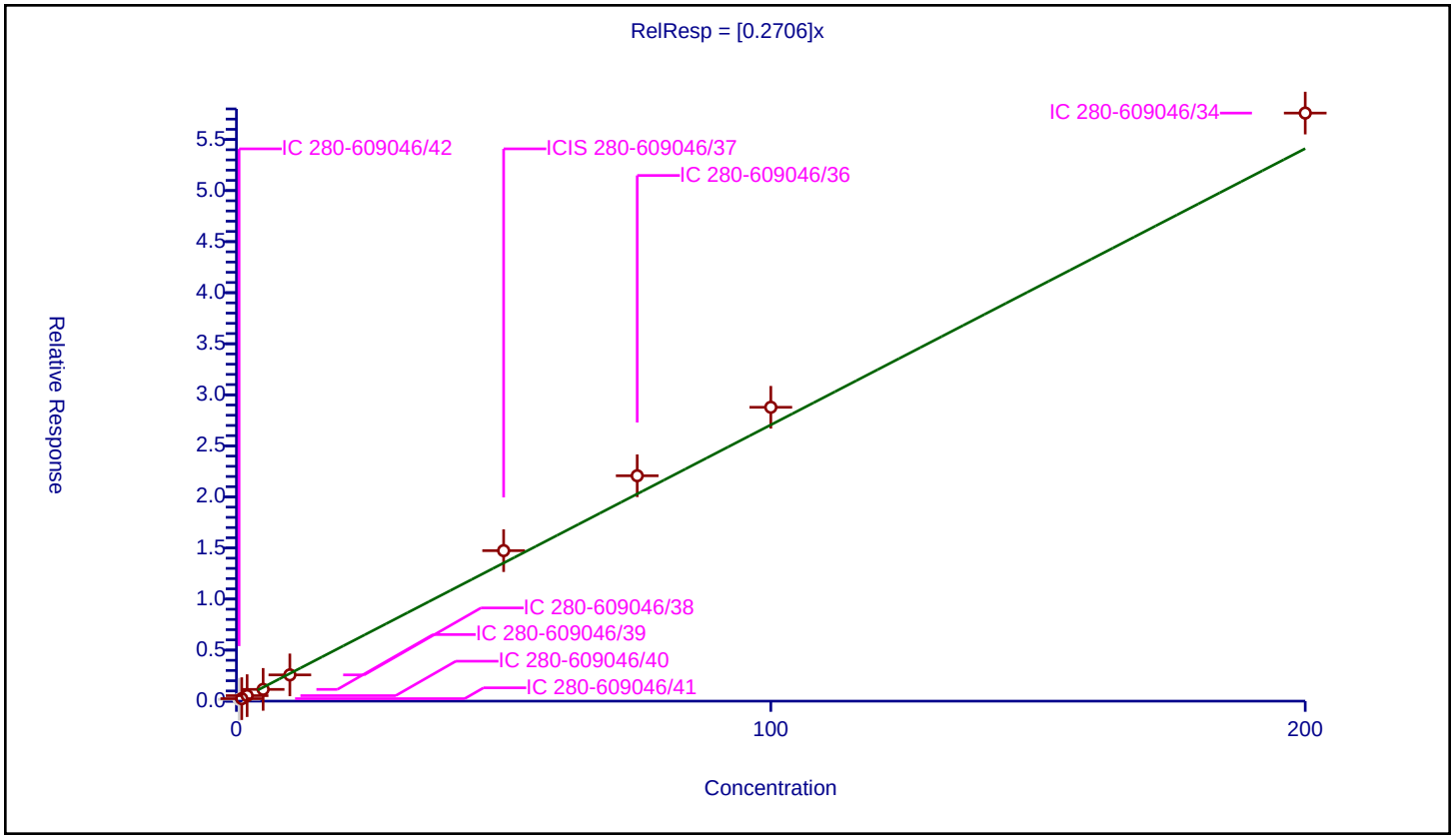
Curve Coefficients

Intercept:	0
Slope:	0.2706

Error Coefficients

Standard Error:	666000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.175176	50.0	1123724.0	0.350353	N
2	IC 280-609046/41	1.0	0.242783	50.0	1135581.0	0.242783	Y
3	IC 280-609046/40	2.0	0.538821	50.0	1153908.0	0.269411	Y
4	IC 280-609046/39	5.0	1.151549	50.0	1207547.0	0.23031	Y
5	IC 280-609046/38	10.0	2.571657	50.0	1230102.0	0.257166	Y
6	ICIS 280-609046/37	50.0	14.738441	50.0	1247062.0	0.294769	Y
7	IC 280-609046/36	75.0	22.074125	50.0	1248840.0	0.294322	Y
8	IC 280-609046/35	100.0	28.779267	50.0	1262070.0	0.287793	Y
9	IC 280-609046/34	200.0	57.590468	50.0	1267906.0	0.287952	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

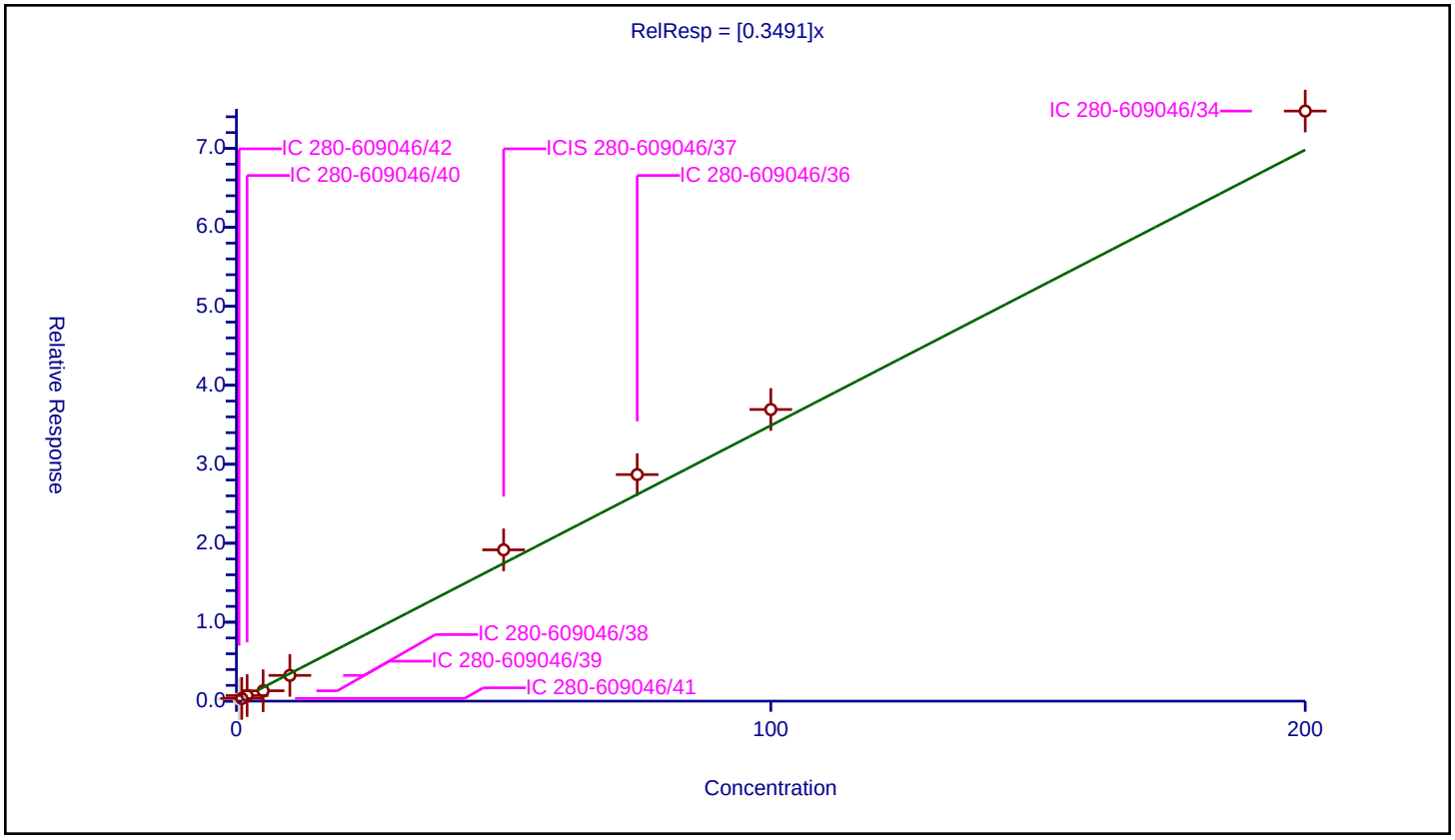
Curve Coefficients

Intercept:	0
Slope:	0.3491

Error Coefficients

Standard Error:	863000
Relative Standard Error:	11.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.283967	50.0	1123724.0	0.567933	N
2	IC 280-609046/41	1.0	0.343789	50.0	1135581.0	0.343789	Y
3	IC 280-609046/40	2.0	0.703479	50.0	1153908.0	0.351739	Y
4	IC 280-609046/39	5.0	1.312123	50.0	1207547.0	0.262425	Y
5	IC 280-609046/38	10.0	3.259892	50.0	1230102.0	0.325989	Y
6	ICIS 280-609046/37	50.0	19.159152	50.0	1247062.0	0.383183	Y
7	IC 280-609046/36	75.0	28.692066	50.0	1248840.0	0.382561	Y
8	IC 280-609046/35	100.0	36.934401	50.0	1262070.0	0.369344	Y
9	IC 280-609046/34	200.0	74.728371	50.0	1267906.0	0.373642	Y



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Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

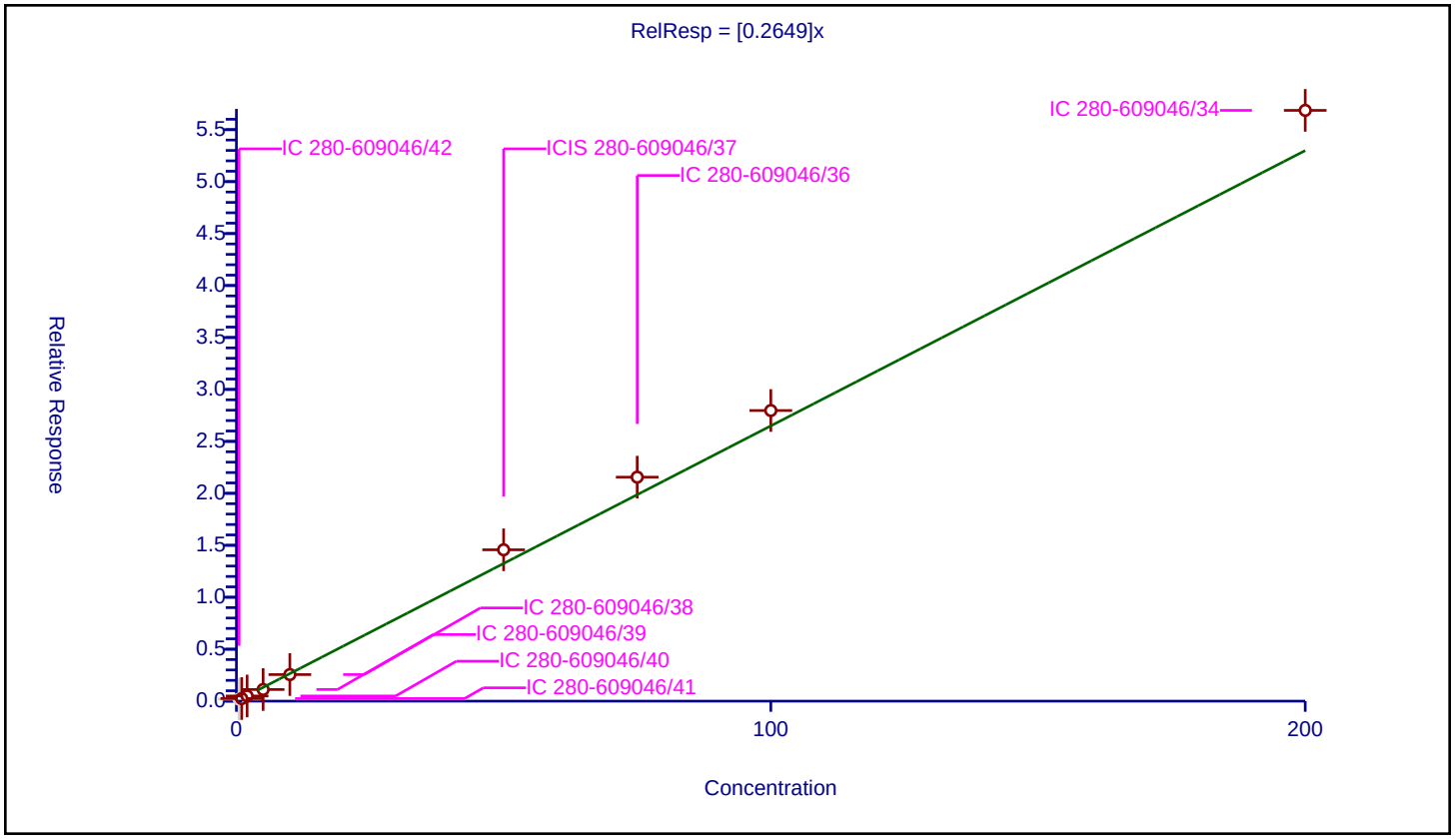
Curve Coefficients

Intercept:	0
Slope:	0.2649

Error Coefficients

Standard Error:	655000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.198714	50.0	1123724.0	0.397429	N
2	IC 280-609046/41	1.0	0.24952	50.0	1135581.0	0.24952	Y
3	IC 280-609046/40	2.0	0.495923	50.0	1153908.0	0.247962	Y
4	IC 280-609046/39	5.0	1.119045	50.0	1207547.0	0.223809	Y
5	IC 280-609046/38	10.0	2.555926	50.0	1230102.0	0.255593	Y
6	ICIS 280-609046/37	50.0	14.565234	50.0	1247062.0	0.291305	Y
7	IC 280-609046/36	75.0	21.555524	50.0	1248840.0	0.287407	Y
8	IC 280-609046/35	100.0	27.970041	50.0	1262070.0	0.2797	Y
9	IC 280-609046/34	200.0	56.855477	50.0	1267906.0	0.284277	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

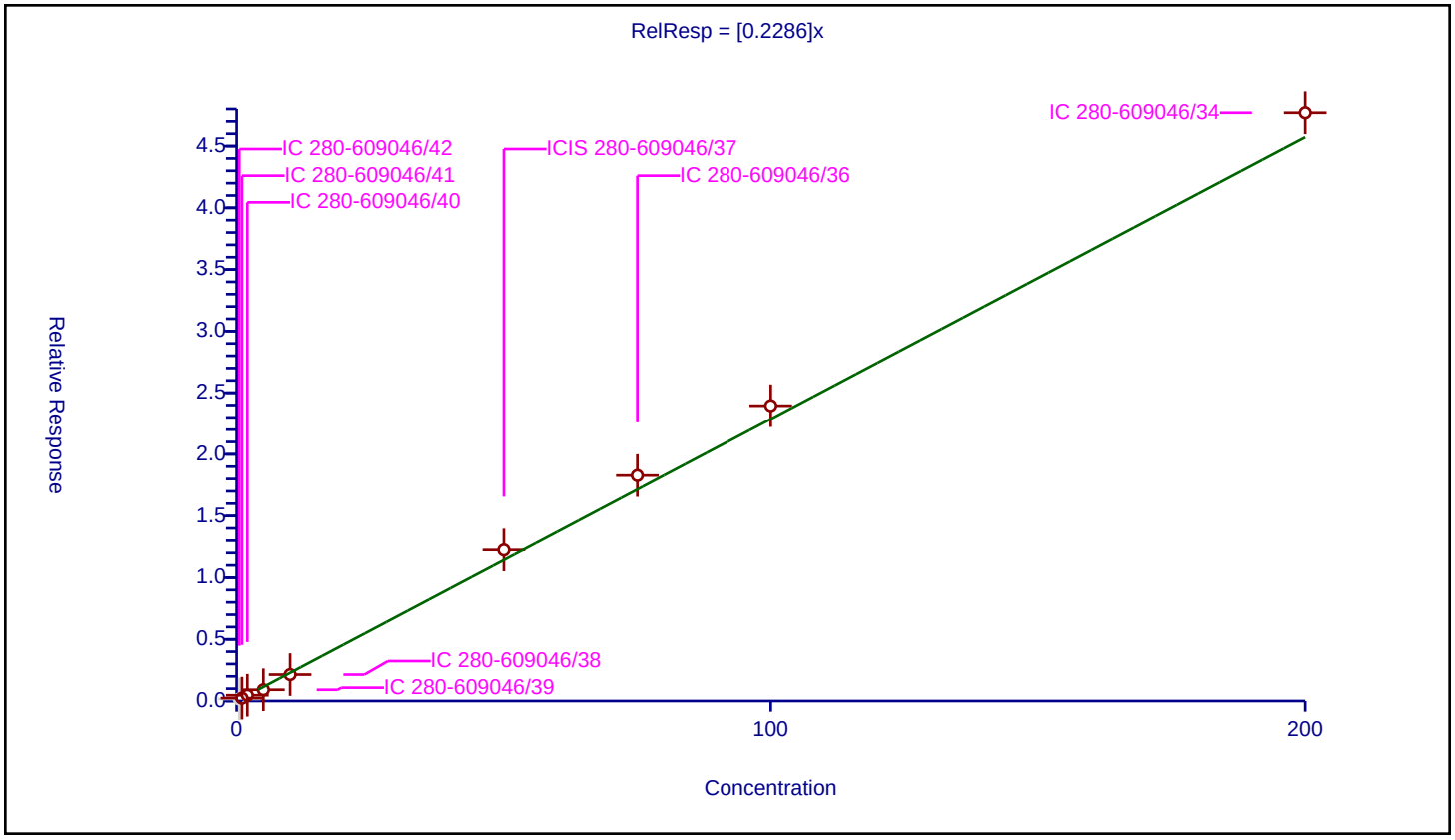
Curve Coefficients

Intercept:	0
Slope:	0.2286

Error Coefficients

Standard Error:	552000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.164498	50.0	1123724.0	0.328995	N
2	IC 280-609046/41	1.0	0.231864	50.0	1135581.0	0.231864	Y
3	IC 280-609046/40	2.0	0.467715	50.0	1153908.0	0.233857	Y
4	IC 280-609046/39	5.0	0.911849	50.0	1207547.0	0.18237	Y
5	IC 280-609046/38	10.0	2.14344	50.0	1230102.0	0.214344	Y
6	ICIS 280-609046/37	50.0	12.246544	50.0	1247062.0	0.244931	Y
7	IC 280-609046/36	75.0	18.277001	50.0	1248840.0	0.243693	Y
8	IC 280-609046/35	100.0	23.949385	50.0	1262070.0	0.239494	Y
9	IC 280-609046/34	200.0	47.695255	50.0	1267906.0	0.238476	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

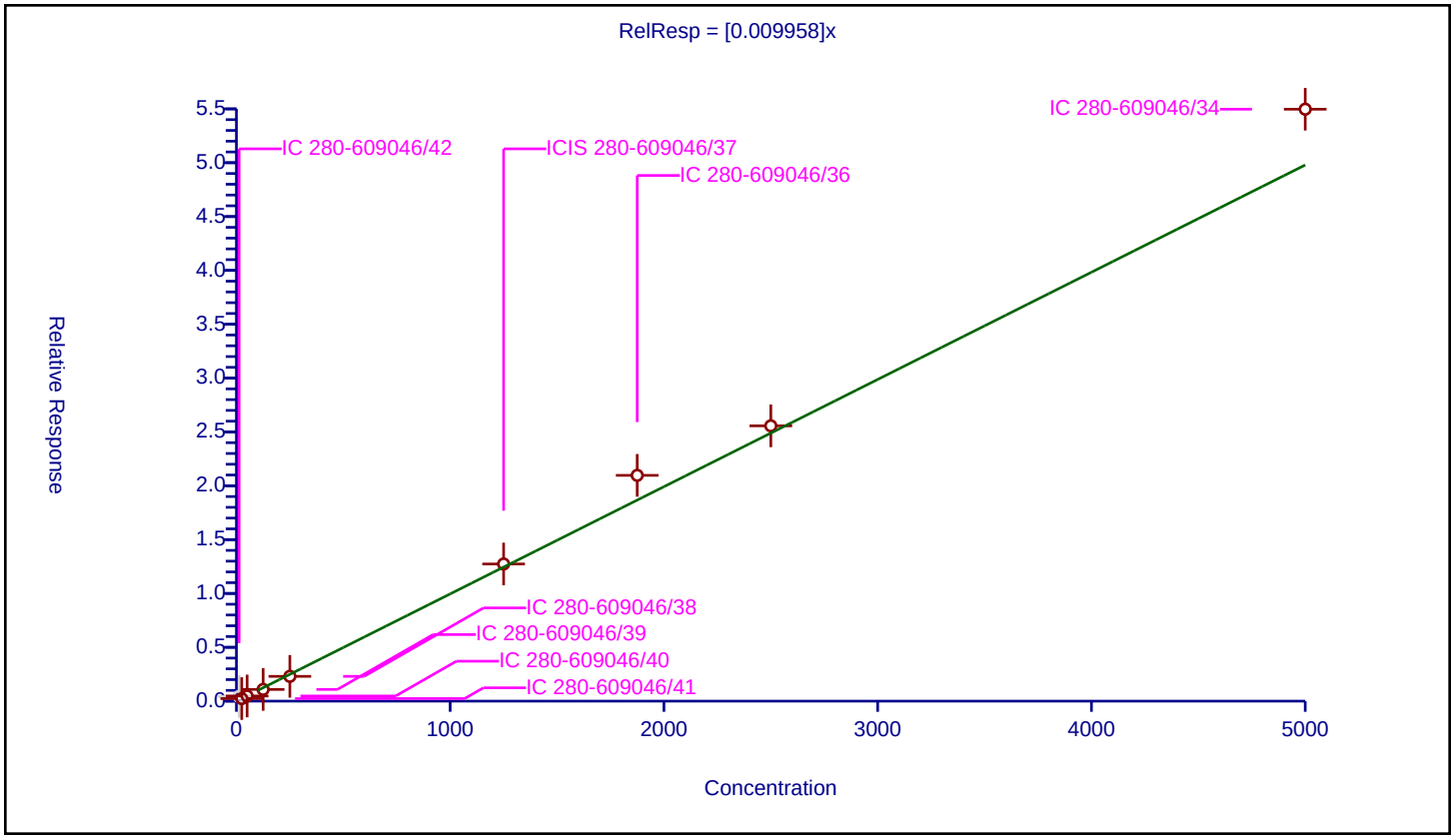
Curve Coefficients

Intercept:	0
Slope:	0.009958

Error Coefficients

Standard Error:	625000
Relative Standard Error:	8.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	12.5	0.436228	50.0	1123724.0	0.034898	N
2	IC 280-609046/41	25.0	0.239613	50.0	1135581.0	0.009585	Y
3	IC 280-609046/40	50.0	0.479458	50.0	1153908.0	0.009589	Y
4	IC 280-609046/39	125.0	1.086335	50.0	1207547.0	0.008691	Y
5	IC 280-609046/38	250.0	2.301313	50.0	1230102.0	0.009205	Y
6	ICIS 280-609046/37	1250.0	12.736456	50.0	1247062.0	0.010189	Y
7	IC 280-609046/36	1875.0	20.969099	50.0	1248840.0	0.011184	Y
8	IC 280-609046/35	2500.0	25.567362	50.0	1262070.0	0.010227	Y
9	IC 280-609046/34	5000.0	54.970282	50.0	1267906.0	0.010994	Y



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Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

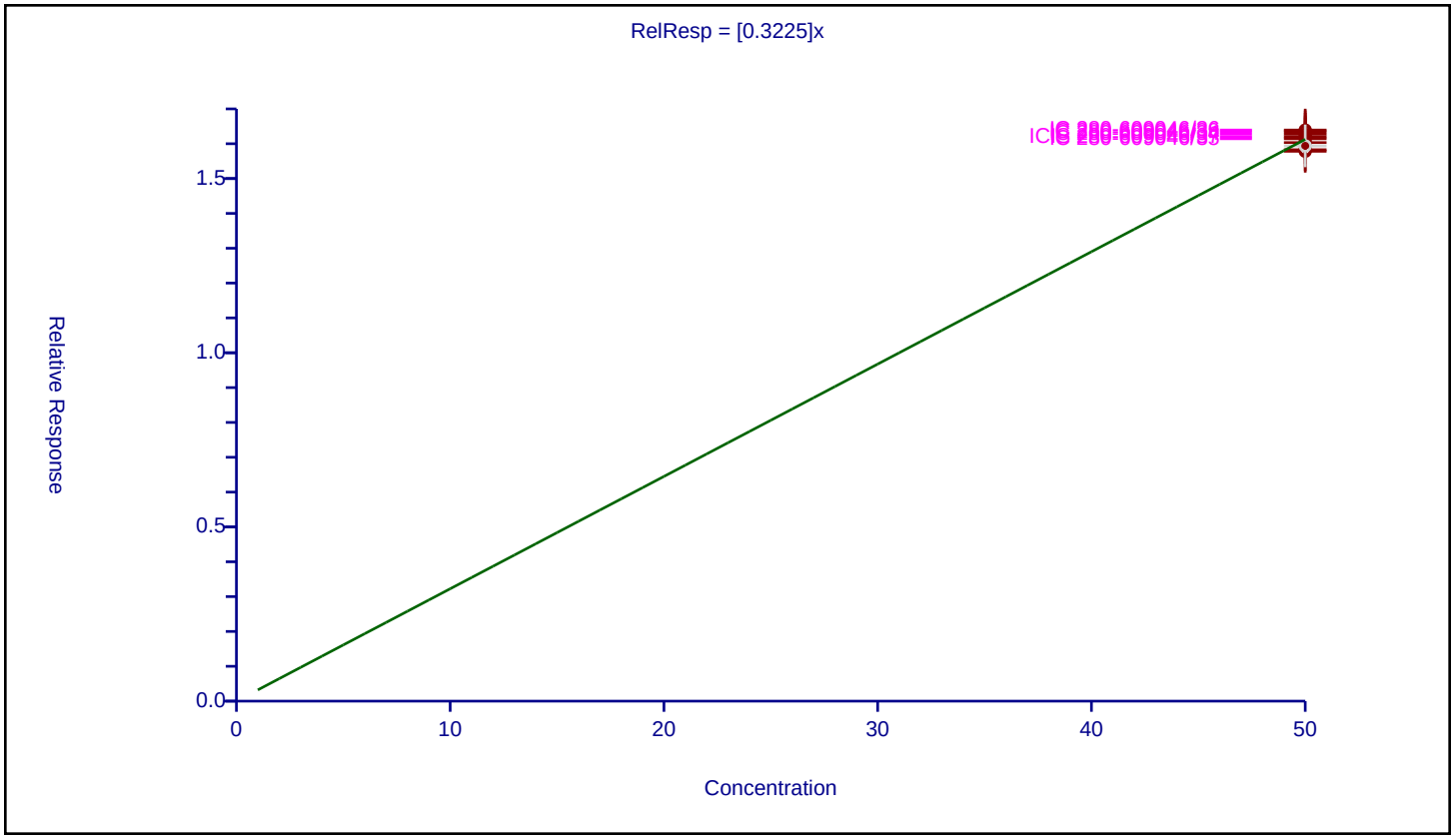
Curve Coefficients

Intercept:	0
Slope:	0.3225

Error Coefficients

Standard Error:	421000
Relative Standard Error:	1.4
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/34	50.0	16.273446	50.0	1267906.0	0.325469	Y
2	IC 280-609046/35	50.0	16.142607	50.0	1262070.0	0.322852	Y
3	IC 280-609046/36	50.0	16.392813	50.0	1248840.0	0.327856	Y
4	ICIS 280-609046/37	50.0	16.198954	50.0	1247062.0	0.323979	Y
5	IC 280-609046/38	50.0	16.345921	50.0	1230102.0	0.326918	Y
6	IC 280-609046/39	50.0	16.032999	50.0	1207547.0	0.32066	Y
7	IC 280-609046/40	50.0	15.783234	50.0	1153908.0	0.315665	Y
8	IC 280-609046/41	50.0	15.827845	50.0	1135581.0	0.316557	Y
9	IC 280-609046/42	50.0	15.937988	50.0	1123724.0	0.31876	N



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

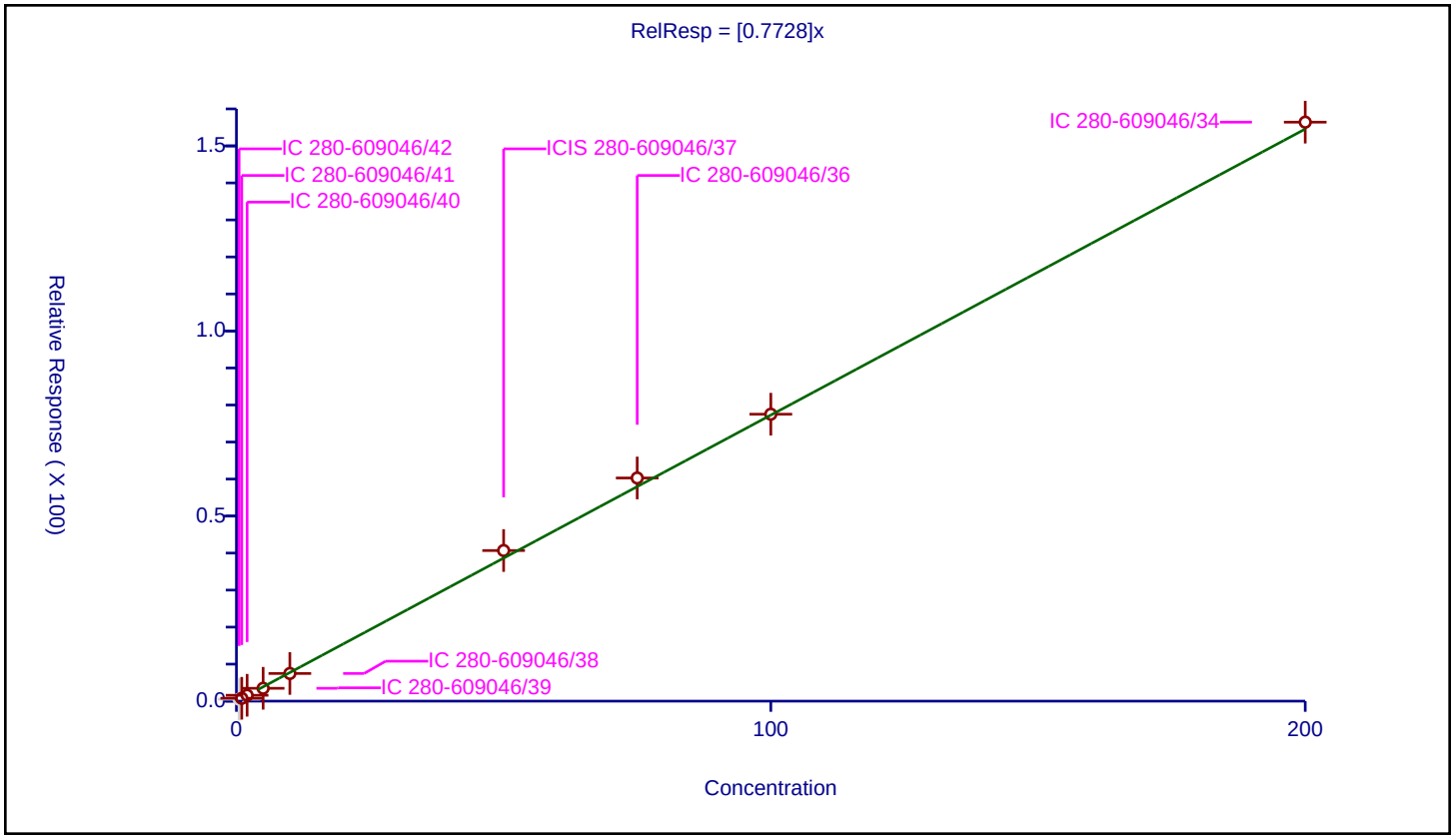
Curve Coefficients

Intercept:	0
Slope:	0.7728

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.529712	50.0	1123724.0	1.059424	N
2	IC 280-609046/41	1.0	0.773261	50.0	1135581.0	0.773261	Y
3	IC 280-609046/40	2.0	1.584095	50.0	1153908.0	0.792048	Y
4	IC 280-609046/39	5.0	3.474689	50.0	1207547.0	0.694938	Y
5	IC 280-609046/38	10.0	7.472754	50.0	1230102.0	0.747275	Y
6	ICIS 280-609046/37	50.0	40.683061	50.0	1247062.0	0.813661	Y
7	IC 280-609046/36	75.0	60.287947	50.0	1248840.0	0.803839	Y
8	IC 280-609046/35	100.0	77.518917	50.0	1262070.0	0.775189	Y
9	IC 280-609046/34	200.0	156.418693	50.0	1267906.0	0.782093	Y



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Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

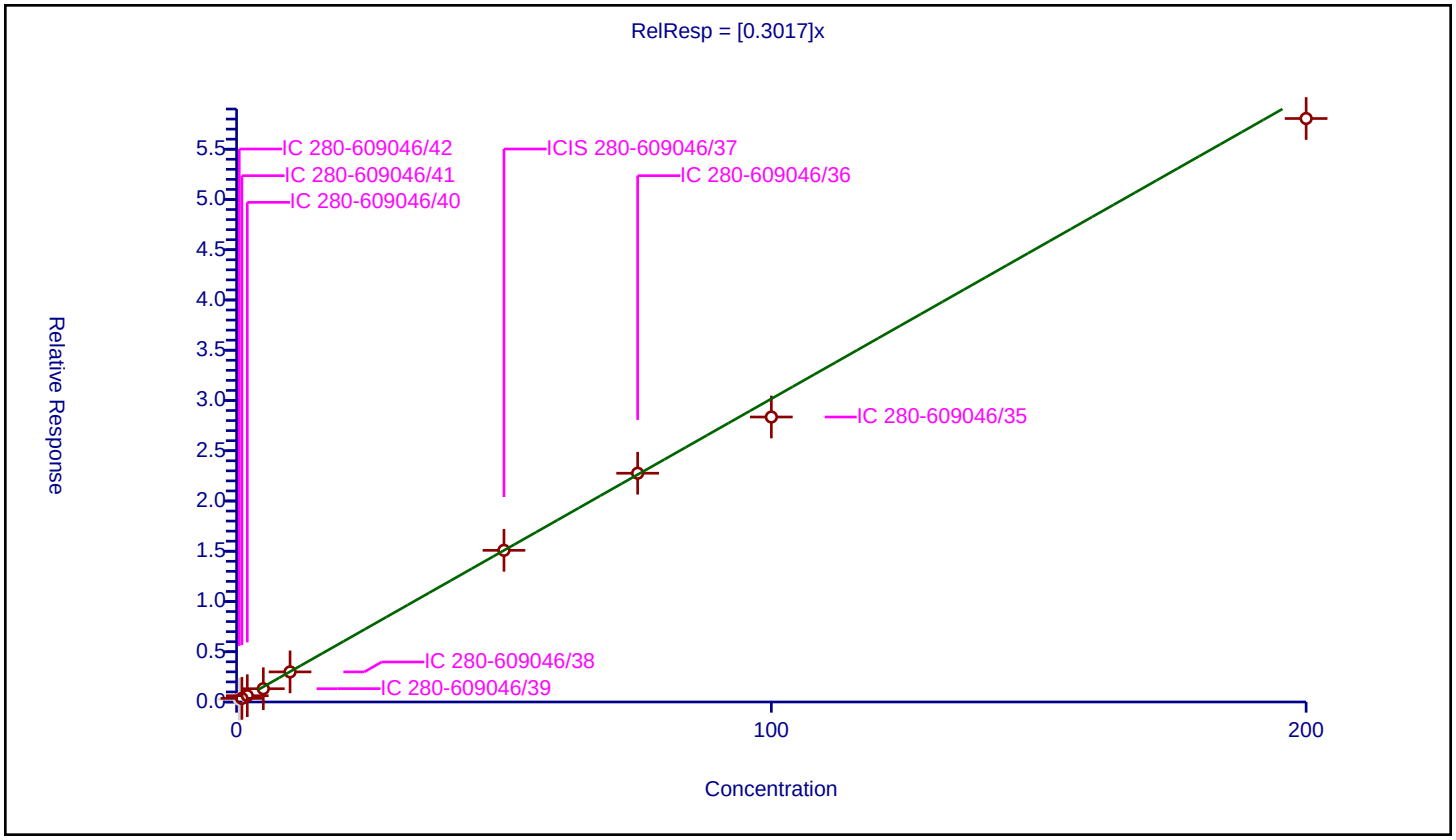
Curve Coefficients

Intercept:	0
Slope:	0.3017

Error Coefficients

Standard Error:	671000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.278405	50.0	1123724.0	0.556809	N
2	IC 280-609046/41	1.0	0.358583	50.0	1135581.0	0.358583	Y
3	IC 280-609046/40	2.0	0.625006	50.0	1153908.0	0.312503	Y
4	IC 280-609046/39	5.0	1.318872	50.0	1207547.0	0.263774	Y
5	IC 280-609046/38	10.0	2.993532	50.0	1230102.0	0.299353	Y
6	ICIS 280-609046/37	50.0	15.089787	50.0	1247062.0	0.301796	Y
7	IC 280-609046/36	75.0	22.761603	50.0	1248840.0	0.303488	Y
8	IC 280-609046/35	100.0	28.355083	50.0	1262070.0	0.283551	Y
9	IC 280-609046/34	200.0	58.054422	50.0	1267906.0	0.290272	Y



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Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

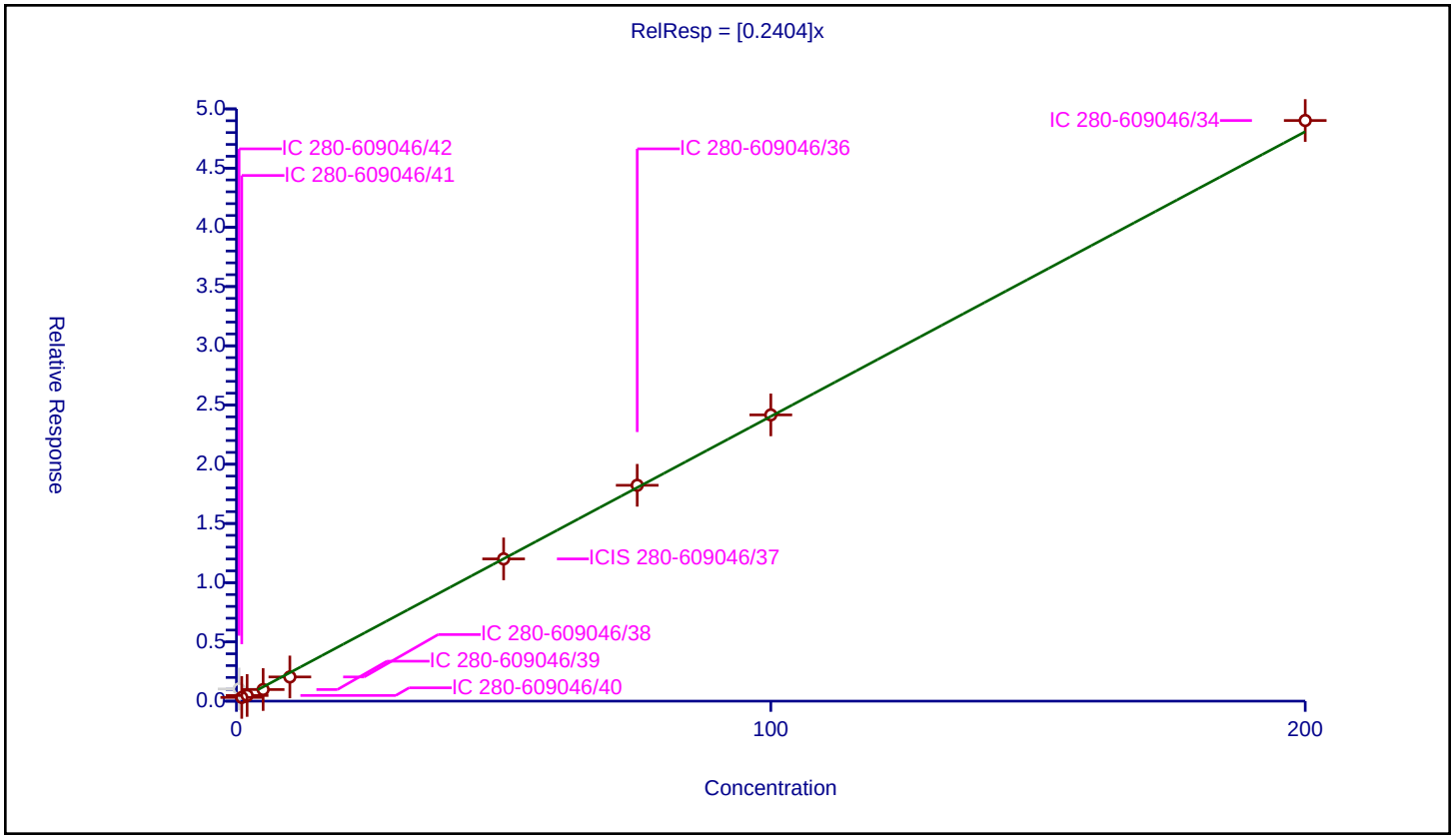
Curve Coefficients

Intercept:	0
Slope:	0.2404

Error Coefficients

Standard Error:	563000
Relative Standard Error:	14.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.968

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.0285	50.0	1123724.0	2.057	N
2	IC 280-609046/41	1.0	0.314421	50.0	1135581.0	0.314421	Y
3	IC 280-609046/40	2.0	0.477594	50.0	1153908.0	0.238797	Y
4	IC 280-609046/39	5.0	0.979382	50.0	1207547.0	0.195876	Y
5	IC 280-609046/38	10.0	2.041741	50.0	1230102.0	0.204174	Y
6	ICIS 280-609046/37	50.0	12.007583	50.0	1247062.0	0.240152	Y
7	IC 280-609046/36	75.0	18.224392	50.0	1248840.0	0.242992	Y
8	IC 280-609046/35	100.0	24.166251	50.0	1262070.0	0.241663	Y
9	IC 280-609046/34	200.0	49.020472	50.0	1267906.0	0.245102	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

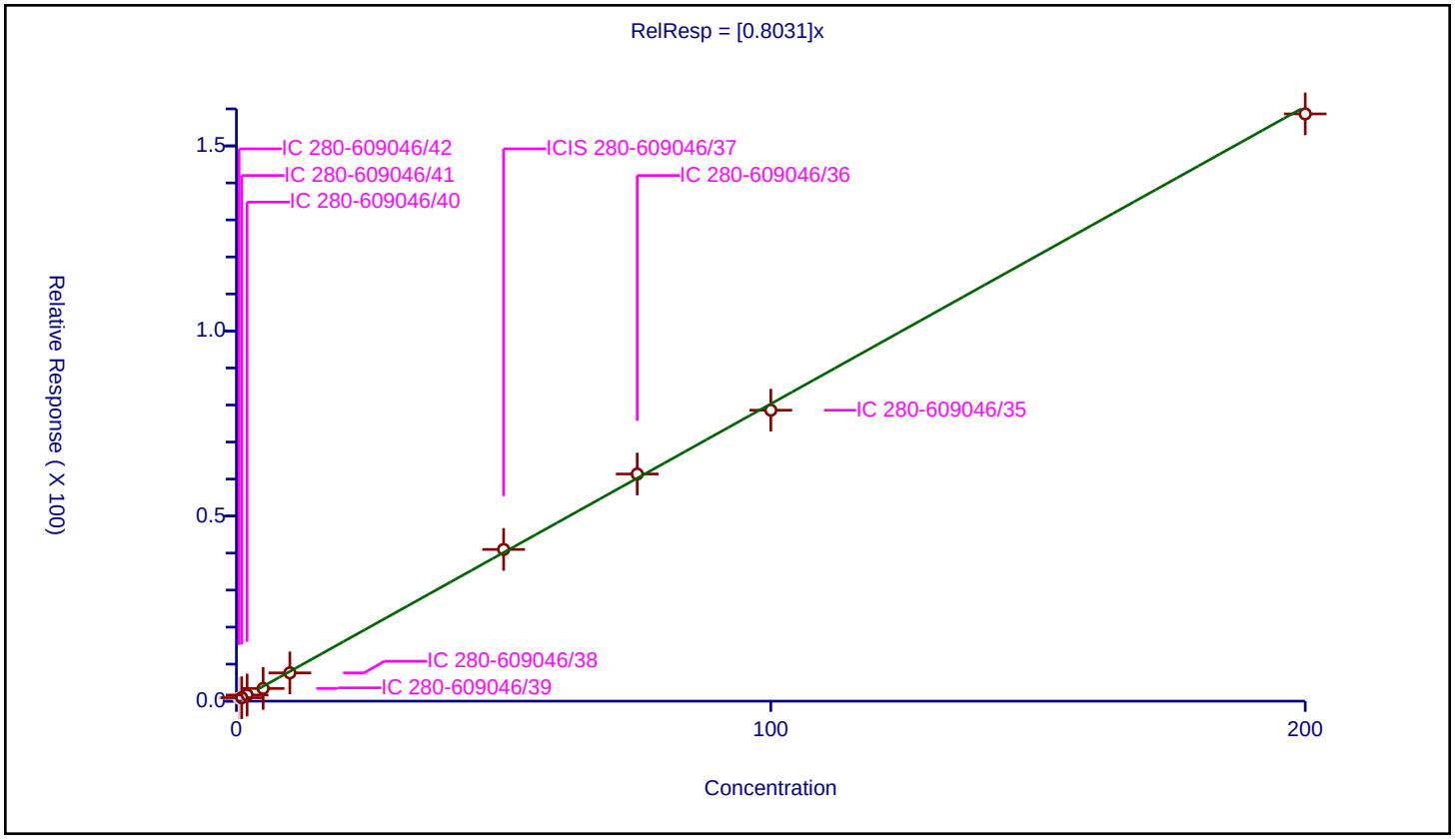
Curve Coefficients

Intercept:	0
Slope:	0.8031

Error Coefficients

Standard Error:	436000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.802237	50.0	266567.0	1.604475	N
2	IC 280-609046/41	1.0	0.933364	50.0	263402.0	0.933364	Y
3	IC 280-609046/40	2.0	1.653832	50.0	266472.0	0.826916	Y
4	IC 280-609046/39	5.0	3.418856	50.0	284291.0	0.683771	Y
5	IC 280-609046/38	10.0	7.639188	50.0	285207.0	0.763919	Y
6	ICIS 280-609046/37	50.0	40.98424	50.0	293780.0	0.819685	Y
7	IC 280-609046/36	75.0	61.355946	50.0	295823.0	0.818079	Y
8	IC 280-609046/35	100.0	78.596659	50.0	298110.0	0.785967	Y
9	IC 280-609046/34	200.0	158.648426	50.0	302477.0	0.793242	Y



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Calibration / 2-Pentanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

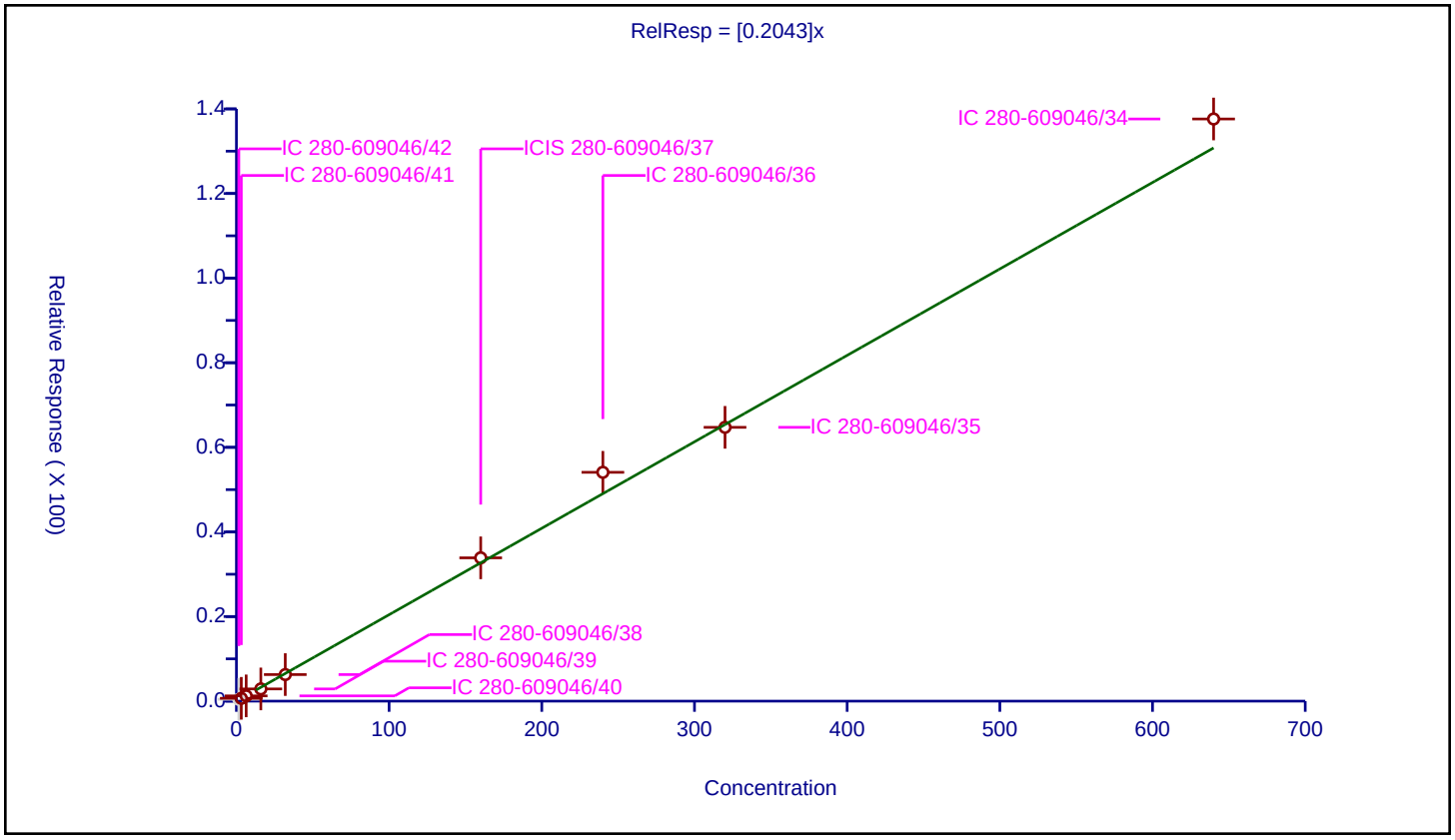
Curve Coefficients

Intercept:	0
Slope:	0.2043

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	6.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	1.6	0.436851	50.0	1123724.0	0.273032	N
2	IC 280-609046/41	3.2	0.671198	50.0	1135581.0	0.209749	Y
3	IC 280-609046/40	6.4	1.241867	50.0	1153908.0	0.194042	Y
4	IC 280-609046/39	16.0	2.883739	50.0	1207547.0	0.180234	Y
5	IC 280-609046/38	32.0	6.279561	50.0	1230102.0	0.196236	Y
6	ICIS 280-609046/37	160.0	33.877506	50.0	1247062.0	0.211734	Y
7	IC 280-609046/36	240.0	54.092158	50.0	1248840.0	0.225384	Y
8	IC 280-609046/35	320.0	64.728462	50.0	1262070.0	0.202276	Y
9	IC 280-609046/34	640.0	137.612883	50.0	1267906.0	0.21502	Y



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Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

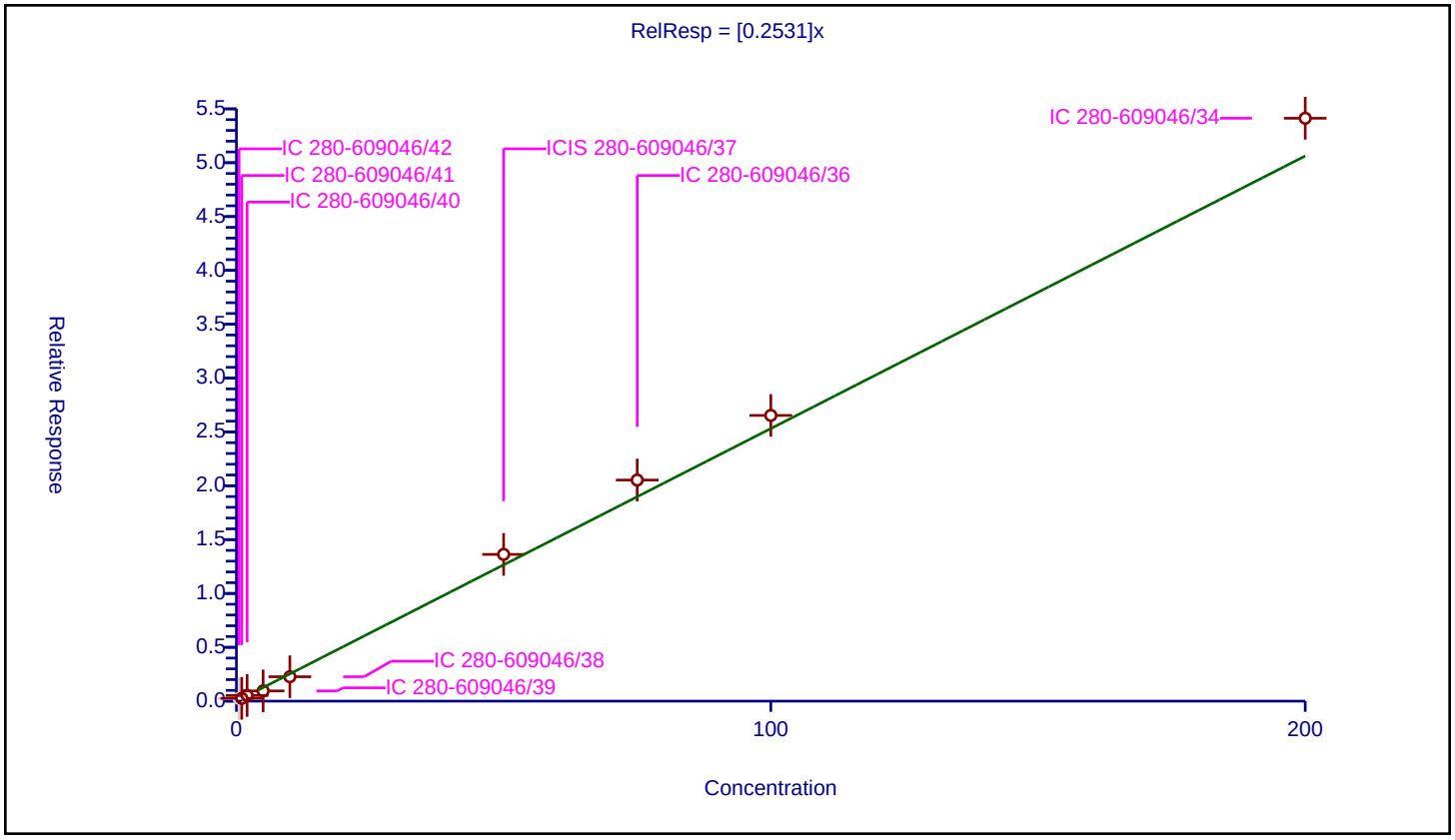
Curve Coefficients

Intercept:	0
Slope:	0.2531

Error Coefficients

Standard Error:	623000
Relative Standard Error:	11.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.254778	50.0	1123724.0	0.509556	N
2	IC 280-609046/41	1.0	0.262024	50.0	1135581.0	0.262024	Y
3	IC 280-609046/40	2.0	0.528248	50.0	1153908.0	0.264124	Y
4	IC 280-609046/39	5.0	0.949818	50.0	1207547.0	0.189964	Y
5	IC 280-609046/38	10.0	2.266641	50.0	1230102.0	0.226664	Y
6	ICIS 280-609046/37	50.0	13.626147	50.0	1247062.0	0.272523	Y
7	IC 280-609046/36	75.0	20.532975	50.0	1248840.0	0.273773	Y
8	IC 280-609046/35	100.0	26.533473	50.0	1262070.0	0.265335	Y
9	IC 280-609046/34	200.0	54.128737	50.0	1267906.0	0.270644	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

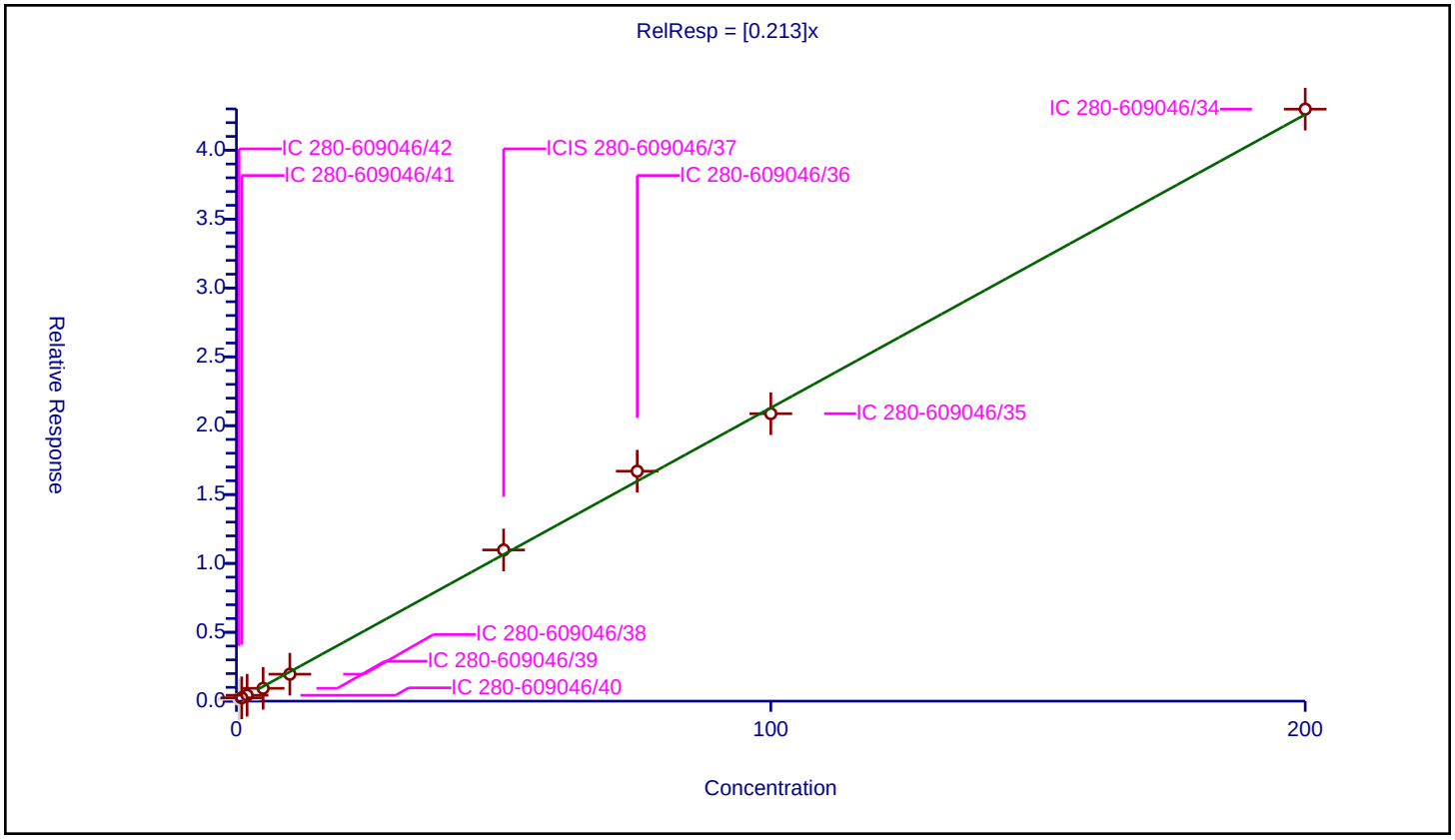
Curve Coefficients

Intercept:	0
Slope:	0.213

Error Coefficients

Standard Error:	495000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.136644	50.0	1123724.0	0.273288	N
2	IC 280-609046/41	1.0	0.243179	50.0	1135581.0	0.243179	Y
3	IC 280-609046/40	2.0	0.425684	50.0	1153908.0	0.212842	Y
4	IC 280-609046/39	5.0	0.931102	50.0	1207547.0	0.18622	Y
5	IC 280-609046/38	10.0	1.956708	50.0	1230102.0	0.195671	Y
6	ICIS 280-609046/37	50.0	10.97672	50.0	1247062.0	0.219534	Y
7	IC 280-609046/36	75.0	16.695734	50.0	1248840.0	0.22261	Y
8	IC 280-609046/35	100.0	20.872218	50.0	1262070.0	0.208722	Y
9	IC 280-609046/34	200.0	42.980907	50.0	1267906.0	0.214905	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

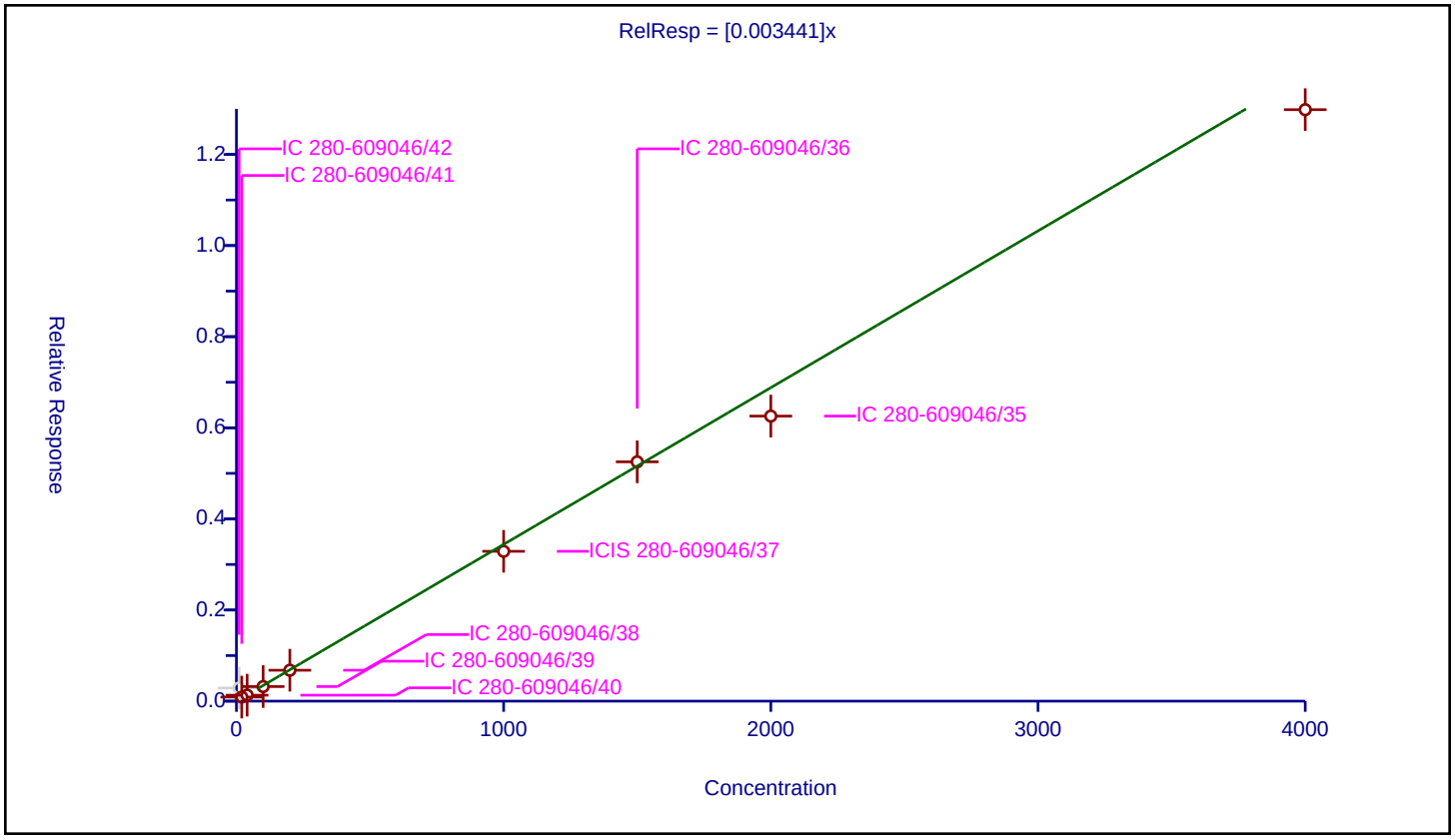
Curve Coefficients

Intercept:	0
Slope:	0.003441

Error Coefficients

Standard Error:	150000
Relative Standard Error:	12.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	10.0	0.287882	50.0	1123724.0	0.028788	N
2	IC 280-609046/41	20.0	0.089954	50.0	1135581.0	0.004498	Y
3	IC 280-609046/40	40.0	0.130773	50.0	1153908.0	0.003269	Y
4	IC 280-609046/39	100.0	0.320112	50.0	1207547.0	0.003201	Y
5	IC 280-609046/38	200.0	0.678318	50.0	1230102.0	0.003392	Y
6	ICIS 280-609046/37	1000.0	3.28865	50.0	1247062.0	0.003289	Y
7	IC 280-609046/36	1500.0	5.252915	50.0	1248840.0	0.003502	Y
8	IC 280-609046/35	2000.0	6.256824	50.0	1262070.0	0.003128	Y
9	IC 280-609046/34	4000.0	12.983179	50.0	1267906.0	0.003246	Y



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Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

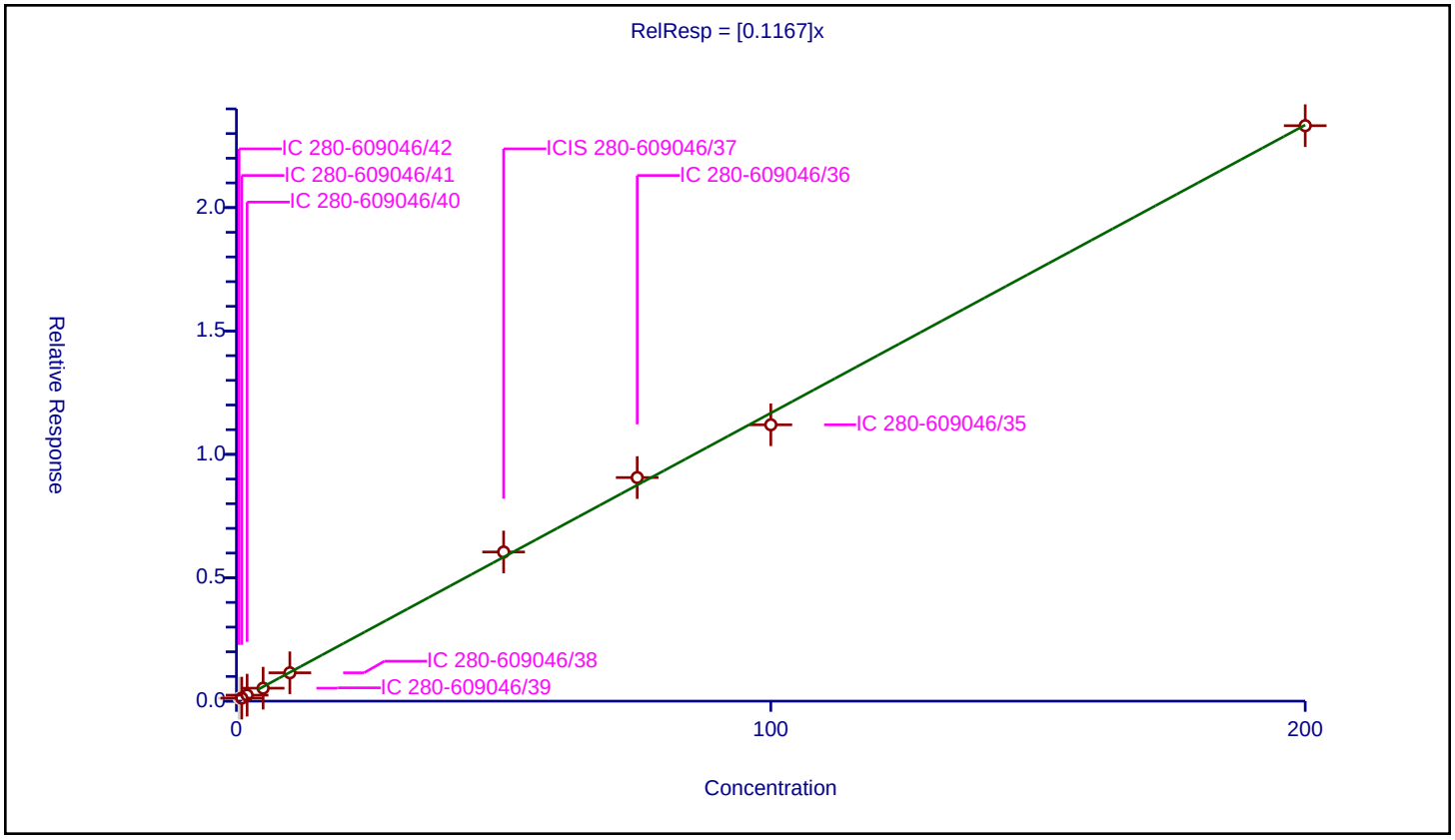
Curve Coefficients

Intercept:	0
Slope:	0.1167

Error Coefficients

Standard Error:	268000
Relative Standard Error:	5.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.119513	50.0	1123724.0	0.239027	N
2	IC 280-609046/41	1.0	0.122404	50.0	1135581.0	0.122404	Y
3	IC 280-609046/40	2.0	0.242567	50.0	1153908.0	0.121283	Y
4	IC 280-609046/39	5.0	0.525197	50.0	1207547.0	0.105039	Y
5	IC 280-609046/38	10.0	1.14901	50.0	1230102.0	0.114901	Y
6	ICIS 280-609046/37	50.0	6.044607	50.0	1247062.0	0.120892	Y
7	IC 280-609046/36	75.0	9.060088	50.0	1248840.0	0.120801	Y
8	IC 280-609046/35	100.0	11.198943	50.0	1262070.0	0.111989	Y
9	IC 280-609046/34	200.0	23.318487	50.0	1267906.0	0.116592	Y



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Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

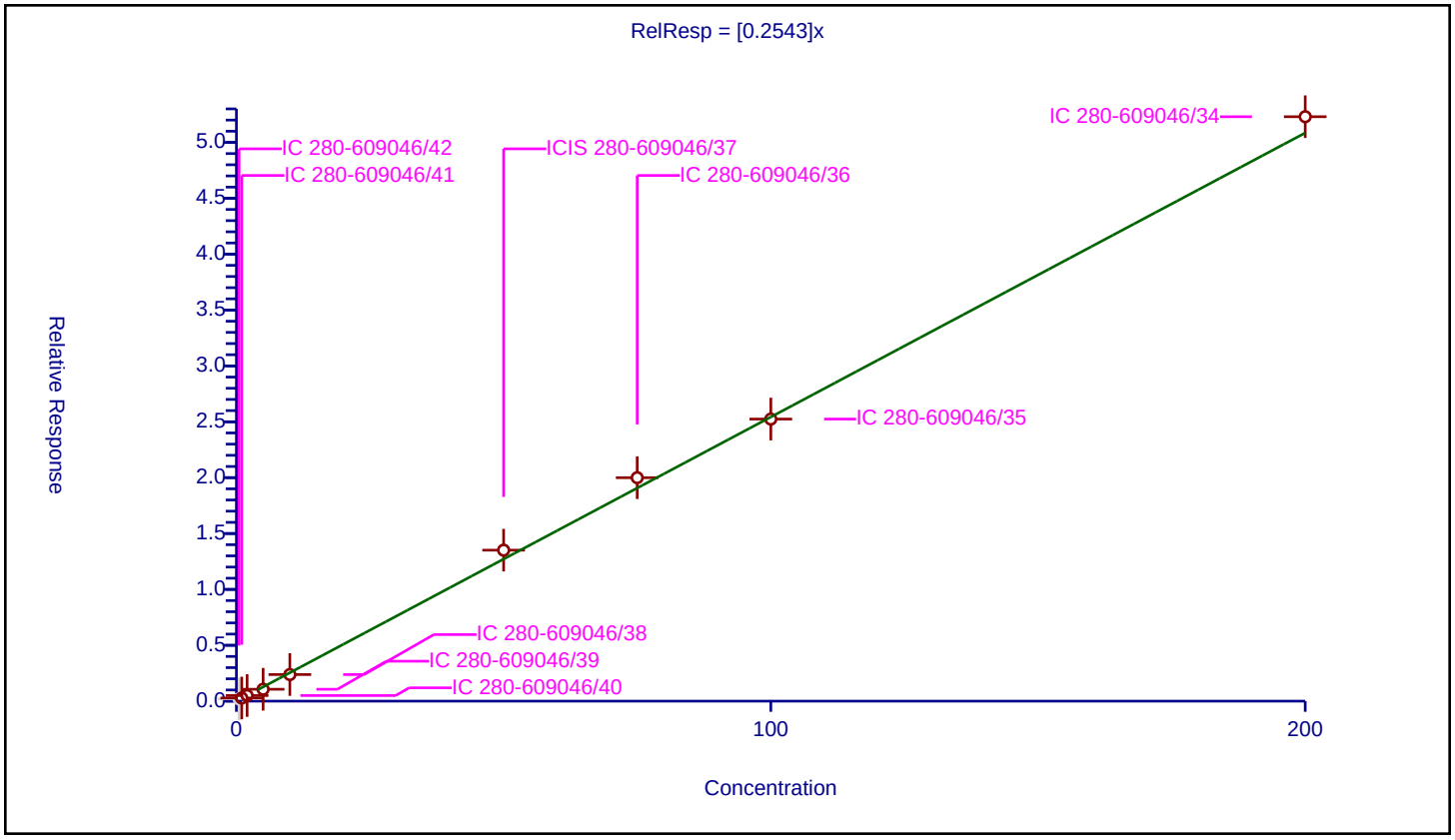
Curve Coefficients

Intercept:	0
Slope:	0.2543

Error Coefficients

Standard Error:	601000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.2053	50.0	1123724.0	0.410599	N
2	IC 280-609046/41	1.0	0.280913	50.0	1135581.0	0.280913	Y
3	IC 280-609046/40	2.0	0.502856	50.0	1153908.0	0.251428	Y
4	IC 280-609046/39	5.0	1.064803	50.0	1207547.0	0.212961	Y
5	IC 280-609046/38	10.0	2.380047	50.0	1230102.0	0.238005	Y
6	ICIS 280-609046/37	50.0	13.510716	50.0	1247062.0	0.270214	Y
7	IC 280-609046/36	75.0	19.996116	50.0	1248840.0	0.266615	Y
8	IC 280-609046/35	100.0	25.241666	50.0	1262070.0	0.252417	Y
9	IC 280-609046/34	200.0	52.299185	50.0	1267906.0	0.261496	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

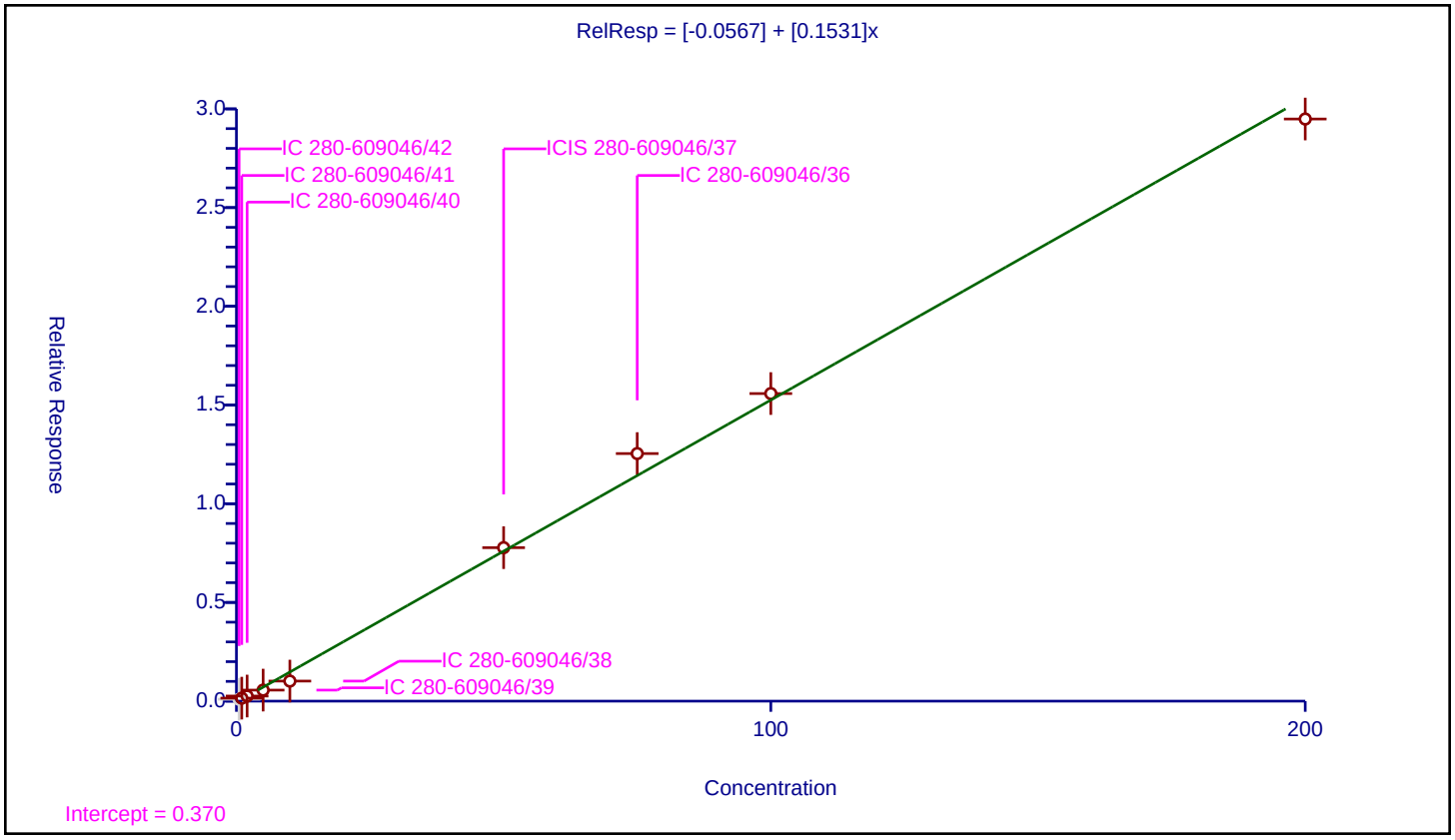
Curve Coefficients

Intercept:	-0.0567
Slope:	0.1531

Error Coefficients

Standard Error:	376000
Relative Standard Error:	21.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.096242	50.0	1123724.0	0.192485	N
2	IC 280-609046/41	1.0	0.151156	50.0	1135581.0	0.151156	Y
3	IC 280-609046/40	2.0	0.258903	50.0	1153908.0	0.129451	Y
4	IC 280-609046/39	5.0	0.558819	50.0	1207547.0	0.111764	Y
5	IC 280-609046/38	10.0	1.016745	50.0	1230102.0	0.101674	Y
6	ICIS 280-609046/37	50.0	7.773711	50.0	1247062.0	0.155474	Y
7	IC 280-609046/36	75.0	12.540998	50.0	1248840.0	0.167213	Y
8	IC 280-609046/35	100.0	15.580594	50.0	1262070.0	0.155806	Y
9	IC 280-609046/34	200.0	29.487044	50.0	1267906.0	0.147435	Y



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Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

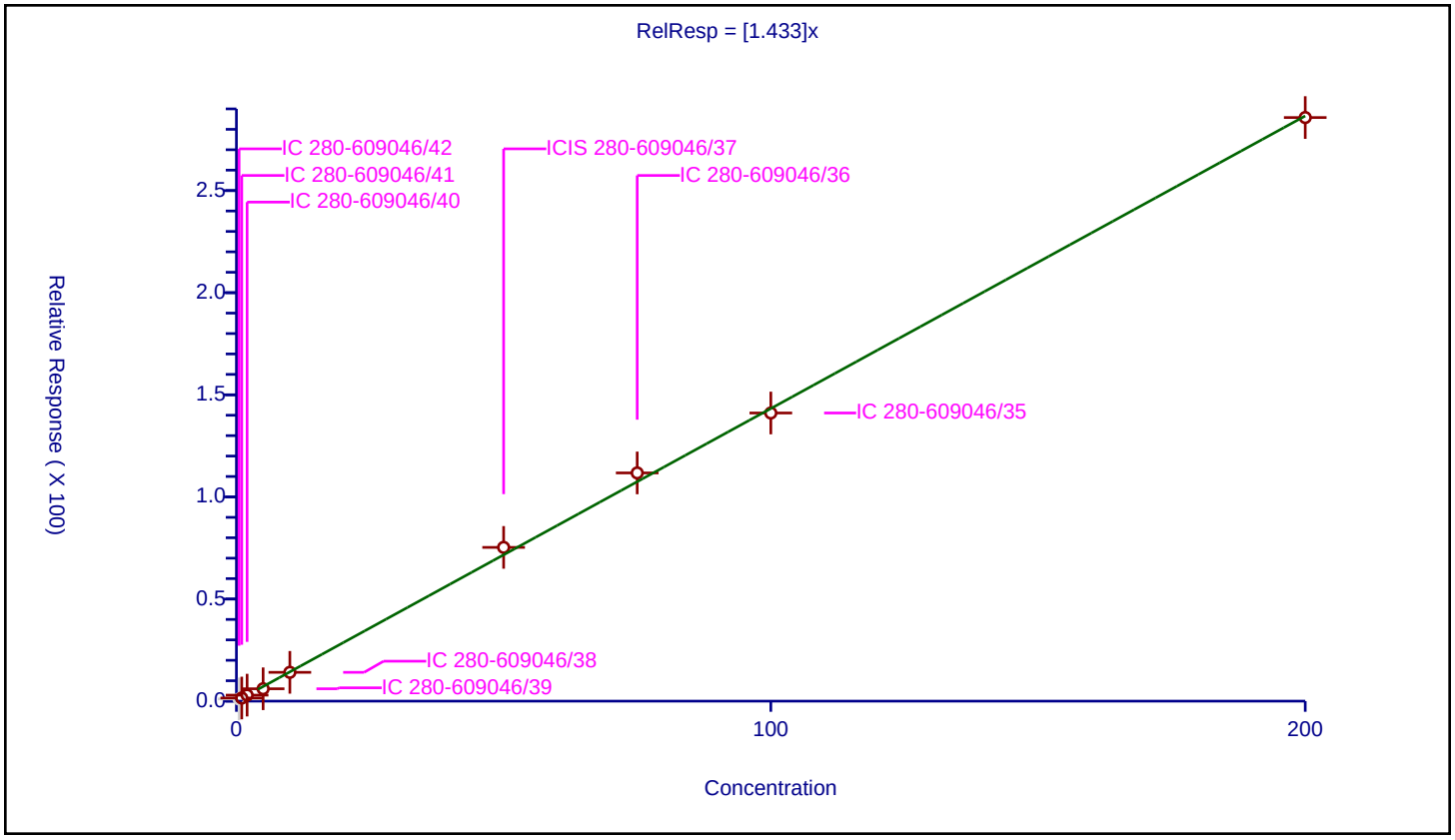
Curve Coefficients

Intercept:	0
Slope:	1.433

Error Coefficients

Standard Error:	787000
Relative Standard Error:	6.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.079278	50.0	266567.0	2.158557	N
2	IC 280-609046/41	1.0	1.53036	50.0	263402.0	1.53036	Y
3	IC 280-609046/40	2.0	2.945713	50.0	266472.0	1.472856	Y
4	IC 280-609046/39	5.0	6.063505	50.0	284291.0	1.212701	Y
5	IC 280-609046/38	10.0	14.106596	50.0	285207.0	1.41066	Y
6	ICIS 280-609046/37	50.0	75.285077	50.0	293780.0	1.505702	Y
7	IC 280-609046/36	75.0	111.749932	50.0	295823.0	1.489999	Y
8	IC 280-609046/35	100.0	141.087015	50.0	298110.0	1.41087	Y
9	IC 280-609046/34	200.0	285.756934	50.0	302477.0	1.428785	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

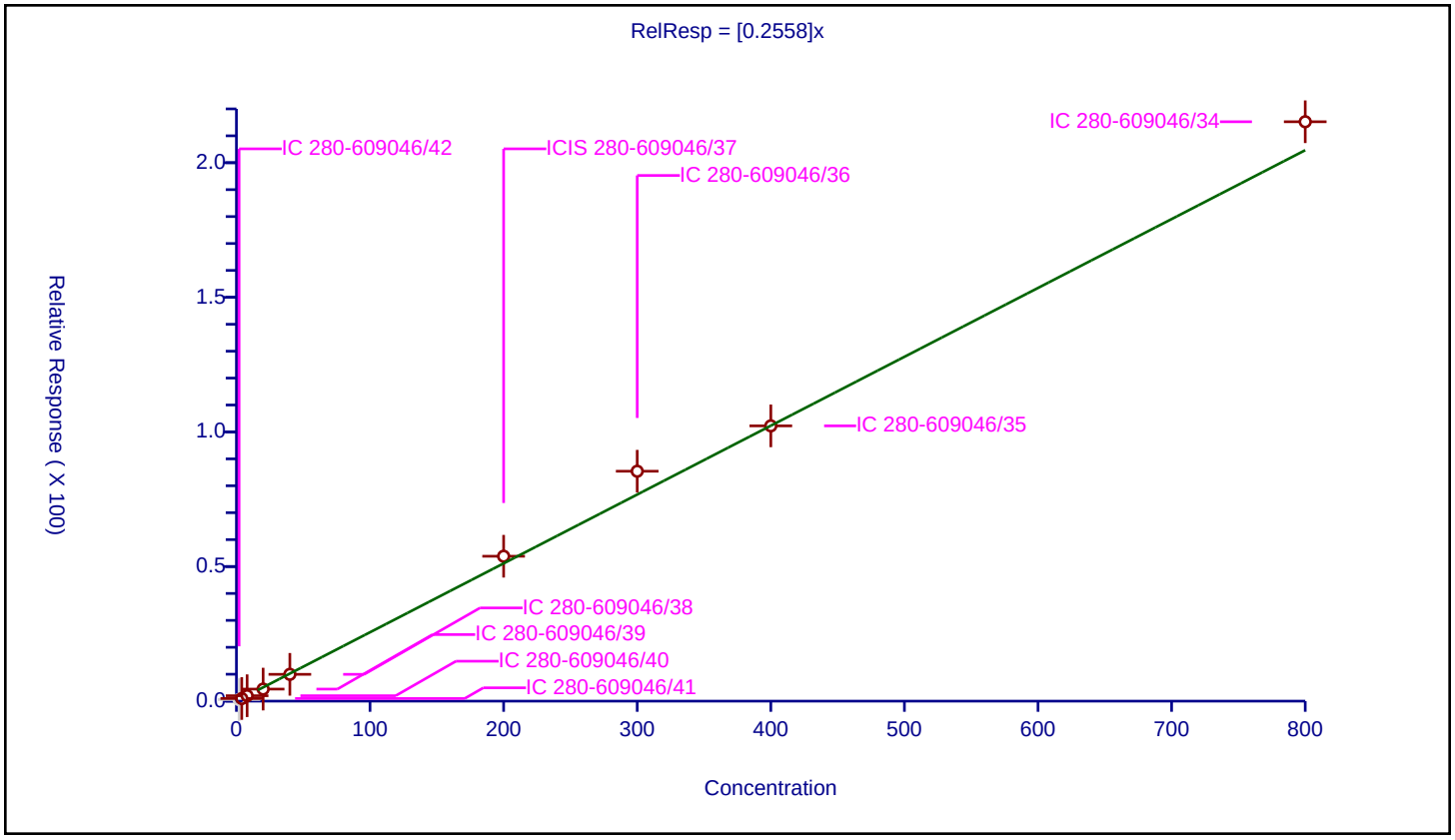
Curve Coefficients

Intercept:	0
Slope:	0.2558

Error Coefficients

Standard Error:	2470000
Relative Standard Error:	7.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	2.0	0.580036	50.0	1123724.0	0.290018	N
2	IC 280-609046/41	4.0	0.976416	50.0	1135581.0	0.244104	Y
3	IC 280-609046/40	8.0	2.008522	50.0	1153908.0	0.251065	Y
4	IC 280-609046/39	20.0	4.478542	50.0	1207547.0	0.223927	Y
5	IC 280-609046/38	40.0	9.955922	50.0	1230102.0	0.248898	Y
6	ICIS 280-609046/37	200.0	53.827877	50.0	1247062.0	0.269139	Y
7	IC 280-609046/36	300.0	85.410701	50.0	1248840.0	0.284702	Y
8	IC 280-609046/35	400.0	102.256571	50.0	1262070.0	0.255641	Y
9	IC 280-609046/34	800.0	215.224394	50.0	1267906.0	0.26903	Y



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Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

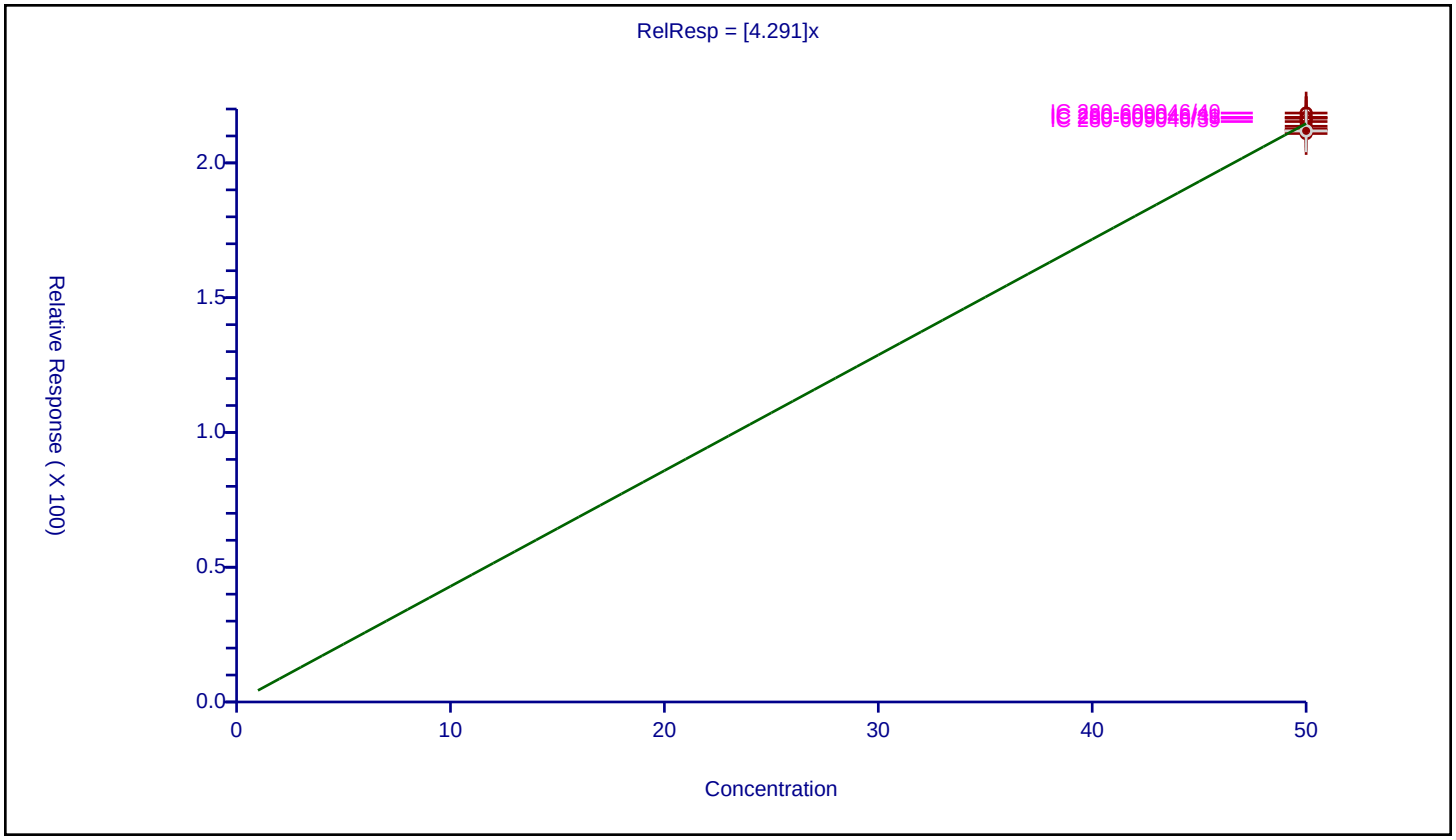
Curve Coefficients

Intercept:	0
Slope:	4.291

Error Coefficients

Standard Error:	1310000
Relative Standard Error:	1.2
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/34	50.0	212.604925	50.0	302477.0	4.252099	Y
2	IC 280-609046/35	50.0	213.599007	50.0	298110.0	4.27198	Y
3	IC 280-609046/36	50.0	210.911085	50.0	295823.0	4.218222	Y
4	ICIS 280-609046/37	50.0	212.118082	50.0	293780.0	4.242362	Y
5	IC 280-609046/38	50.0	216.59251	50.0	285207.0	4.33185	Y
6	IC 280-609046/39	50.0	215.348358	50.0	284291.0	4.306967	Y
7	IC 280-609046/40	50.0	218.510388	50.0	266472.0	4.370208	Y
8	IC 280-609046/41	50.0	216.910654	50.0	263402.0	4.338213	Y
9	IC 280-609046/42	50.0	211.895321	50.0	266567.0	4.237906	N



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

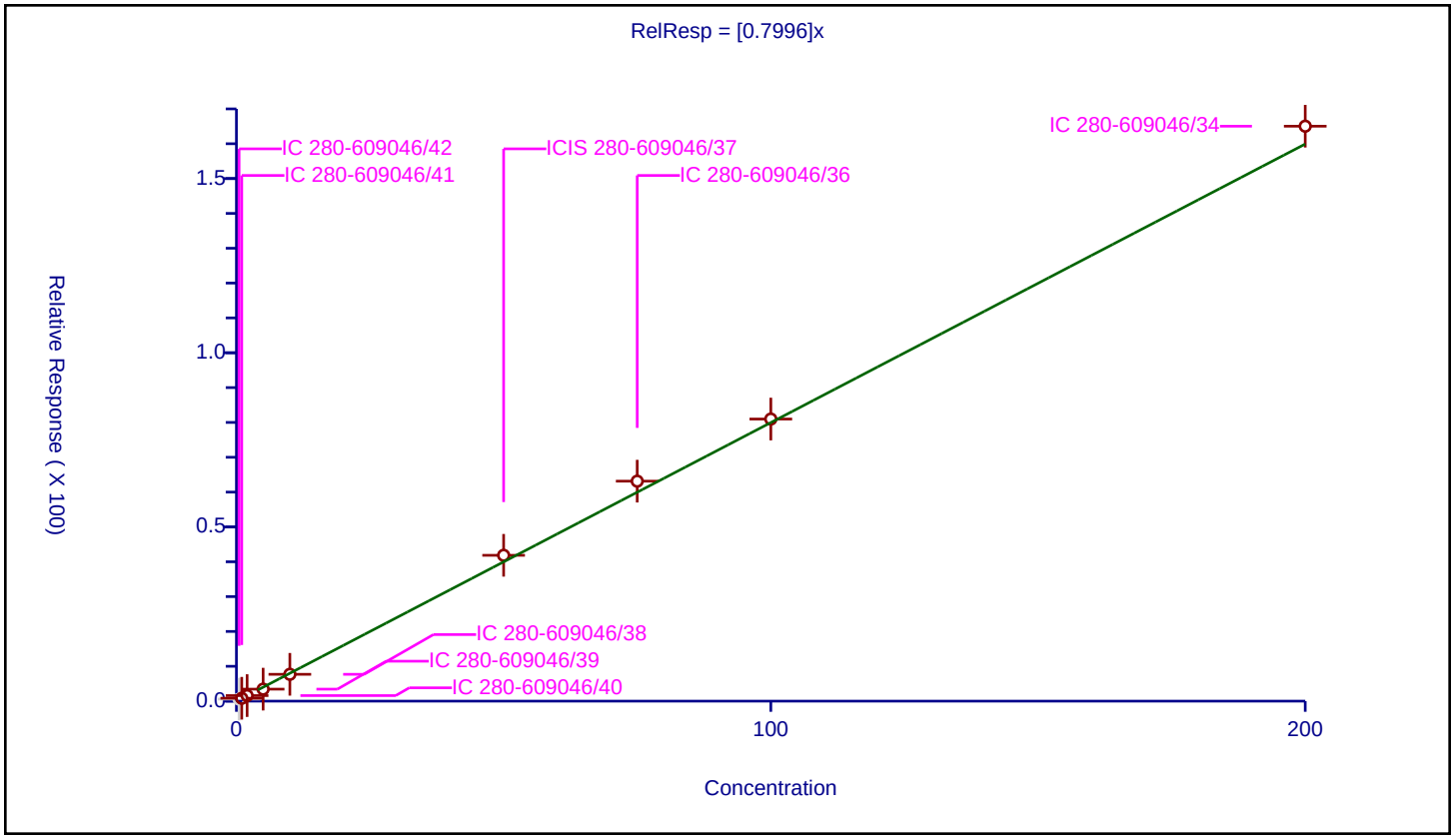
Curve Coefficients

Intercept:	0
Slope:	0.7996

Error Coefficients

Standard Error:	1900000
Relative Standard Error:	6.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.589202	50.0	1123724.0	1.178403	N
2	IC 280-609046/41	1.0	0.826449	50.0	1135581.0	0.826449	Y
3	IC 280-609046/40	2.0	1.592415	50.0	1153908.0	0.796207	Y
4	IC 280-609046/39	5.0	3.447236	50.0	1207547.0	0.689447	Y
5	IC 280-609046/38	10.0	7.702898	50.0	1230102.0	0.77029	Y
6	ICIS 280-609046/37	50.0	41.859346	50.0	1247062.0	0.837187	Y
7	IC 280-609046/36	75.0	63.147521	50.0	1248840.0	0.841967	Y
8	IC 280-609046/35	100.0	80.972648	50.0	1262070.0	0.809726	Y
9	IC 280-609046/34	200.0	165.032502	50.0	1267906.0	0.825163	Y



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Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

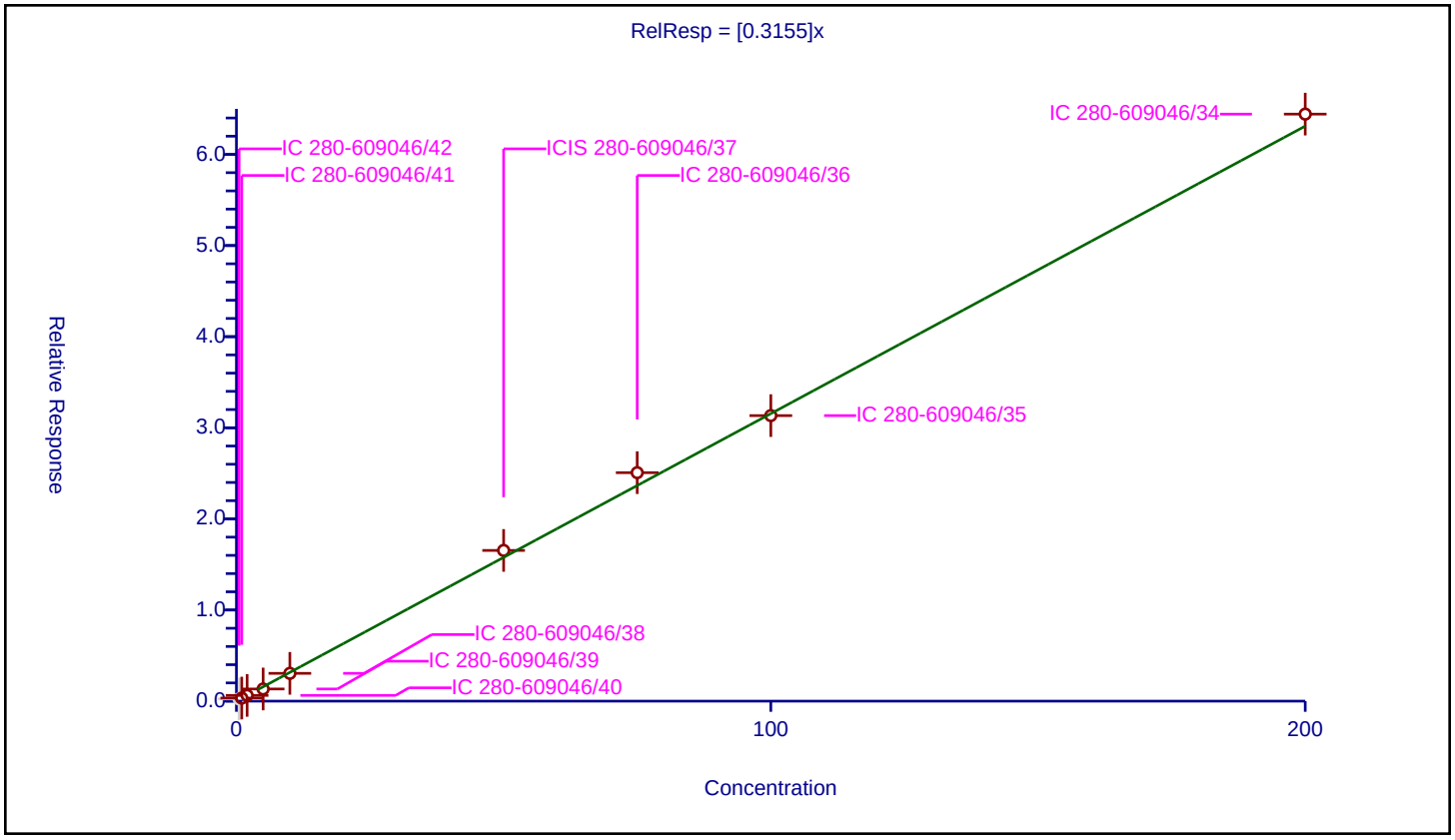
Curve Coefficients

Intercept:	0
Slope:	0.3155

Error Coefficients

Standard Error:	743000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.2449	50.0	1123724.0	0.4898	N
2	IC 280-609046/41	1.0	0.337096	50.0	1135581.0	0.337096	Y
3	IC 280-609046/40	2.0	0.629946	50.0	1153908.0	0.314973	Y
4	IC 280-609046/39	5.0	1.333447	50.0	1207547.0	0.266689	Y
5	IC 280-609046/38	10.0	3.049178	50.0	1230102.0	0.304918	Y
6	ICIS 280-609046/37	50.0	16.540156	50.0	1247062.0	0.330803	Y
7	IC 280-609046/36	75.0	25.074589	50.0	1248840.0	0.334328	Y
8	IC 280-609046/35	100.0	31.338198	50.0	1262070.0	0.313382	Y
9	IC 280-609046/34	200.0	64.428396	50.0	1267906.0	0.322142	Y



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Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

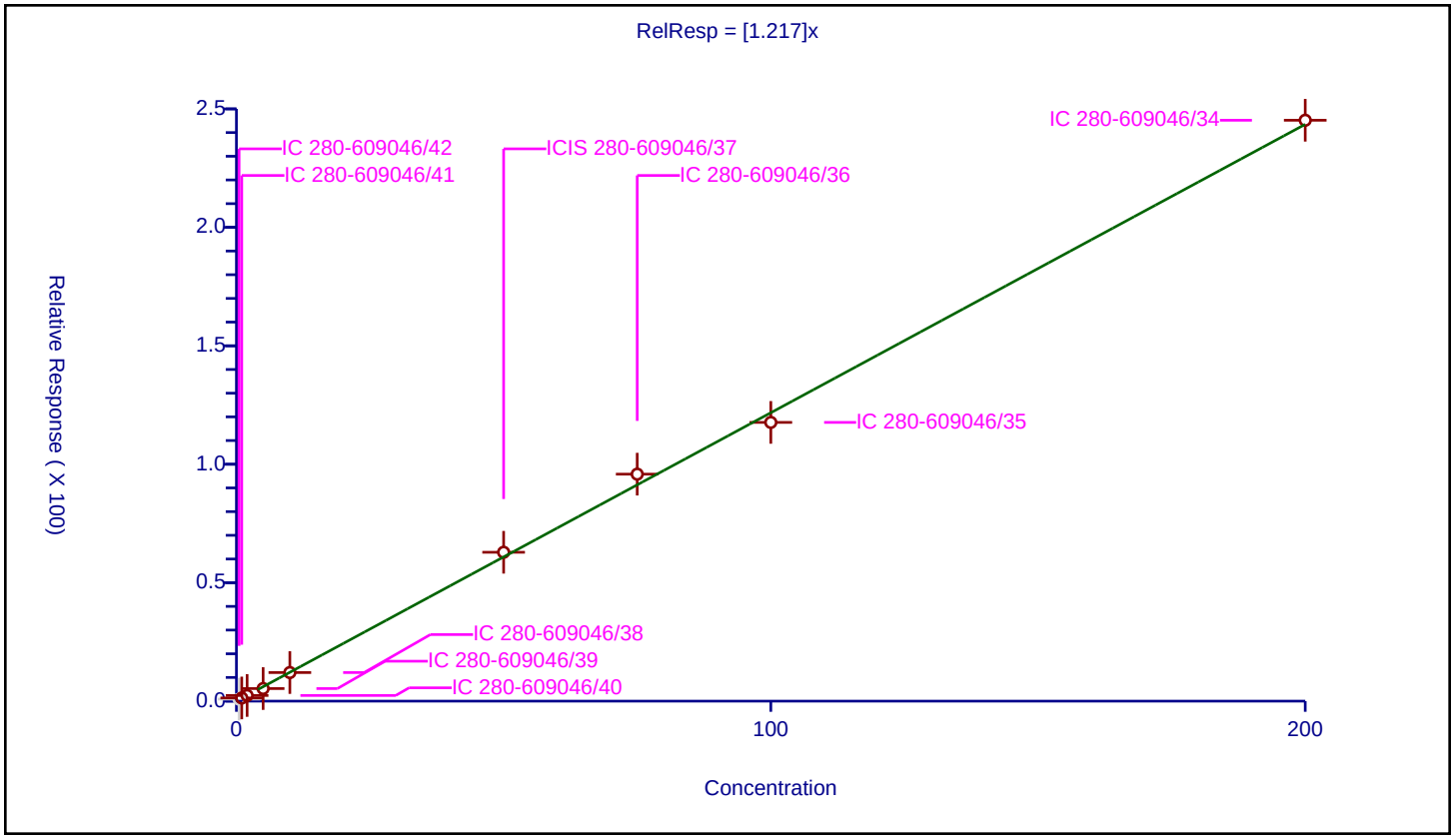
Curve Coefficients

Intercept:	0
Slope:	1.217

Error Coefficients

Standard Error:	671000
Relative Standard Error:	6.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.860196	50.0	266567.0	1.720393	N
2	IC 280-609046/41	1.0	1.339777	50.0	263402.0	1.339777	Y
3	IC 280-609046/40	2.0	2.383365	50.0	266472.0	1.191682	Y
4	IC 280-609046/39	5.0	5.316208	50.0	284291.0	1.063242	Y
5	IC 280-609046/38	10.0	12.074388	50.0	285207.0	1.207439	Y
6	ICIS 280-609046/37	50.0	62.840221	50.0	293780.0	1.256804	Y
7	IC 280-609046/36	75.0	95.818615	50.0	295823.0	1.277582	Y
8	IC 280-609046/35	100.0	117.659421	50.0	298110.0	1.176594	Y
9	IC 280-609046/34	200.0	245.20228	50.0	302477.0	1.226011	Y



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Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

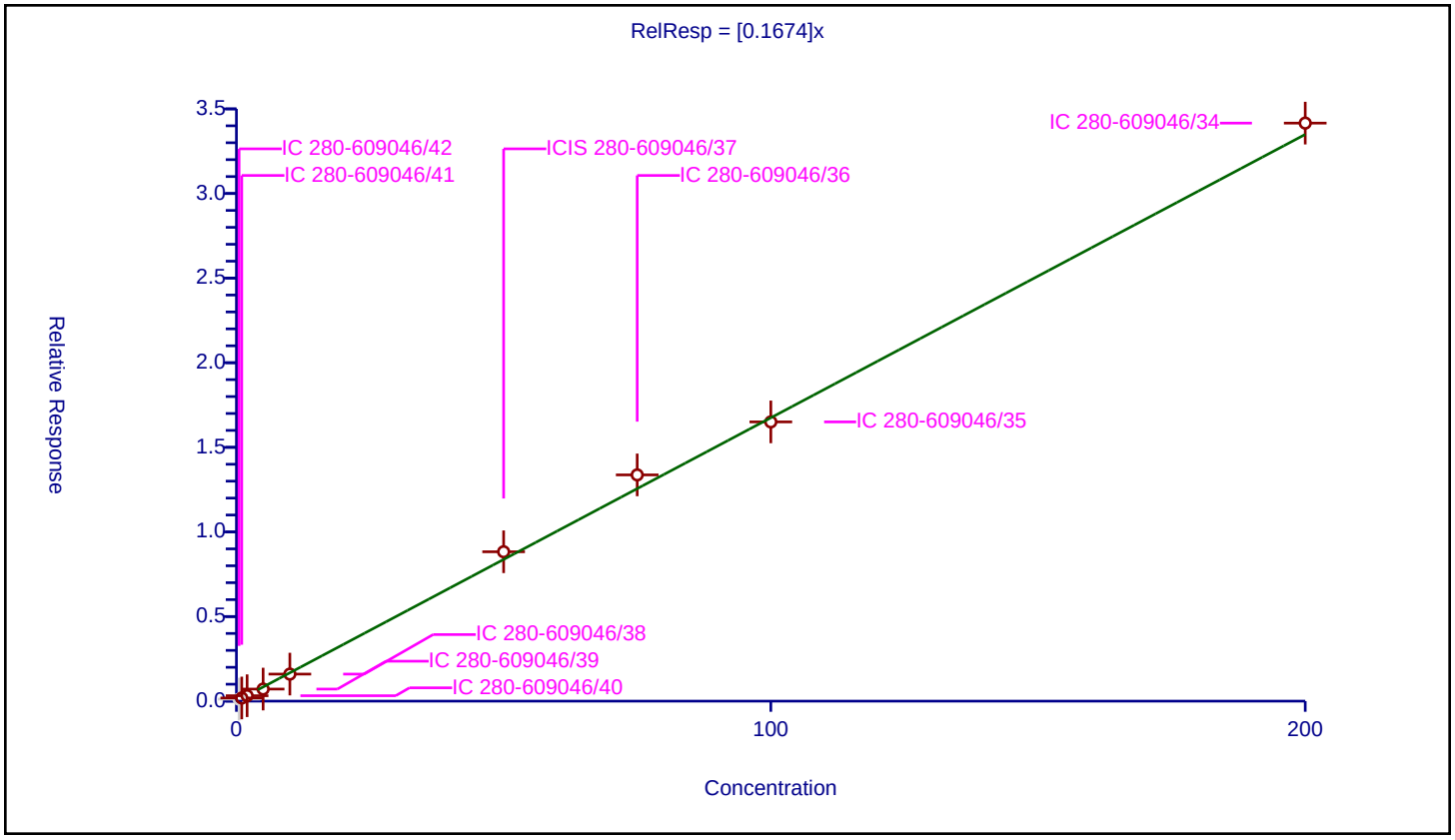
Curve Coefficients

Intercept:	0
Slope:	0.1674

Error Coefficients

Standard Error:	394000
Relative Standard Error:	8.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.119202	50.0	1123724.0	0.238404	N
2	IC 280-609046/41	1.0	0.186116	50.0	1135581.0	0.186116	Y
3	IC 280-609046/40	2.0	0.320216	50.0	1153908.0	0.160108	Y
4	IC 280-609046/39	5.0	0.714382	50.0	1207547.0	0.142876	Y
5	IC 280-609046/38	10.0	1.598282	50.0	1230102.0	0.159828	Y
6	ICIS 280-609046/37	50.0	8.82815	50.0	1247062.0	0.176563	Y
7	IC 280-609046/36	75.0	13.370888	50.0	1248840.0	0.178279	Y
8	IC 280-609046/35	100.0	16.502809	50.0	1262070.0	0.165028	Y
9	IC 280-609046/34	200.0	34.160143	50.0	1267906.0	0.170801	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

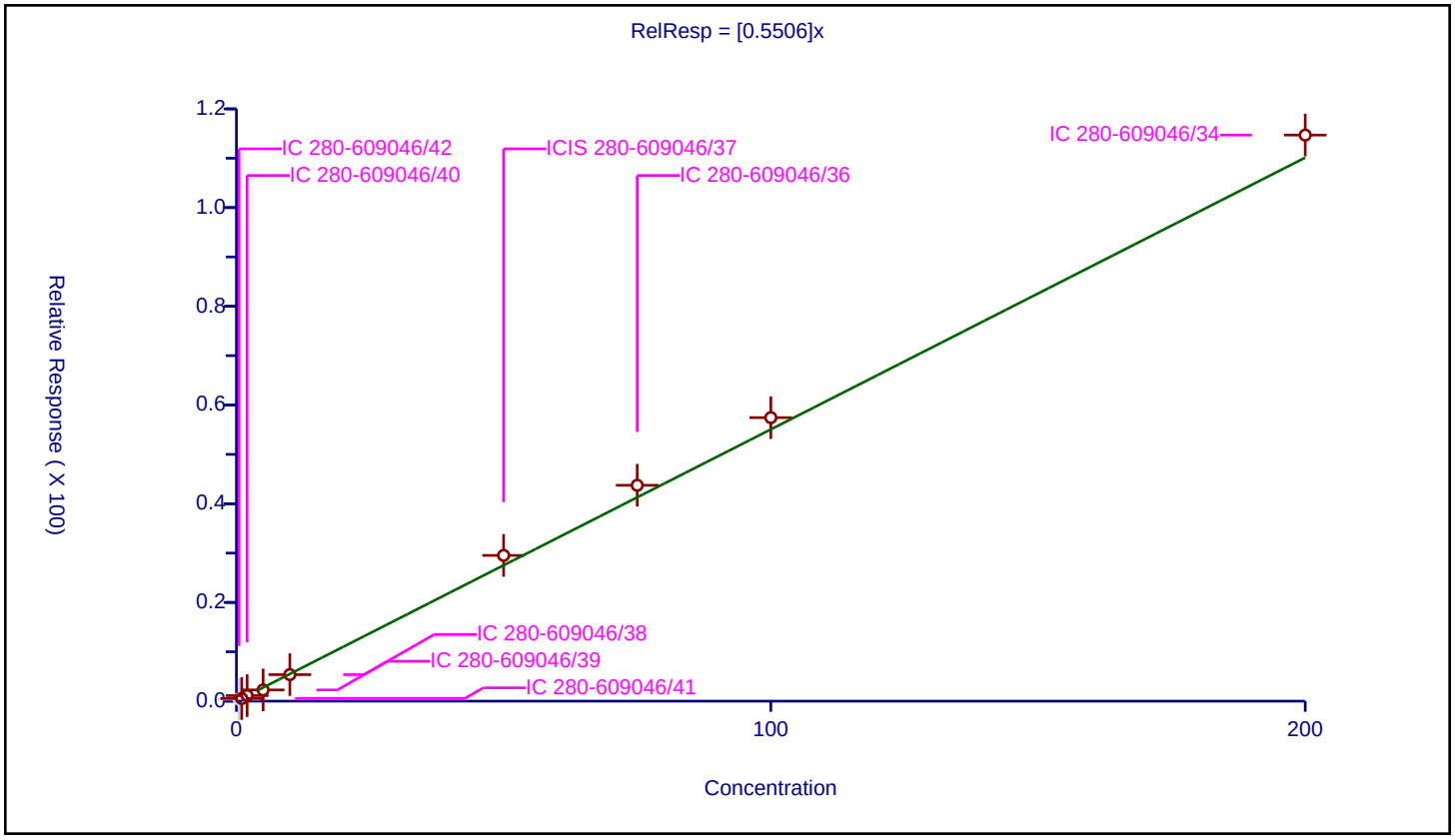
Curve Coefficients

Intercept:	0
Slope:	0.5506

Error Coefficients

Standard Error:	315000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.4014	50.0	266567.0	0.8028	N
2	IC 280-609046/41	1.0	0.530558	50.0	263402.0	0.530558	Y
3	IC 280-609046/40	2.0	1.12038	50.0	266472.0	0.56019	Y
4	IC 280-609046/39	5.0	2.276892	50.0	284291.0	0.455378	Y
5	IC 280-609046/38	10.0	5.369959	50.0	285207.0	0.536996	Y
6	ICIS 280-609046/37	50.0	29.528559	50.0	293780.0	0.590571	Y
7	IC 280-609046/36	75.0	43.740007	50.0	295823.0	0.5832	Y
8	IC 280-609046/35	100.0	57.445071	50.0	298110.0	0.574451	Y
9	IC 280-609046/34	200.0	114.694506	50.0	302477.0	0.573473	Y



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Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

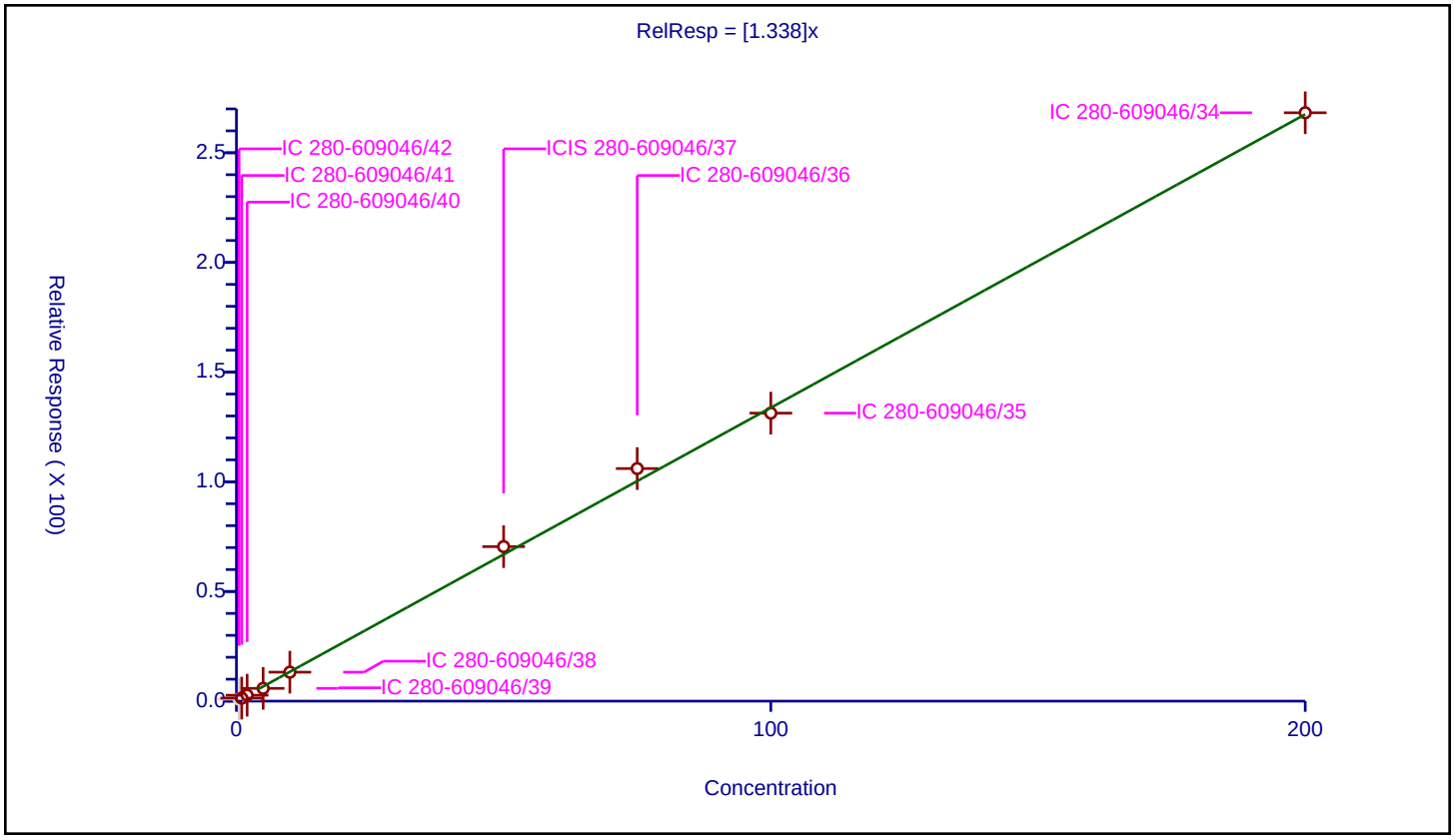
Curve Coefficients

Intercept:	0
Slope:	1.338

Error Coefficients

Standard Error:	738000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.926784	50.0	266567.0	1.853568	N
2	IC 280-609046/41	1.0	1.388562	50.0	263402.0	1.388562	Y
3	IC 280-609046/40	2.0	2.701785	50.0	266472.0	1.350892	Y
4	IC 280-609046/39	5.0	5.82062	50.0	284291.0	1.164124	Y
5	IC 280-609046/38	10.0	13.210054	50.0	285207.0	1.321005	Y
6	ICIS 280-609046/37	50.0	70.437232	50.0	293780.0	1.408745	Y
7	IC 280-609046/36	75.0	106.031985	50.0	295823.0	1.41376	Y
8	IC 280-609046/35	100.0	131.300694	50.0	298110.0	1.313007	Y
9	IC 280-609046/34	200.0	268.238081	50.0	302477.0	1.34119	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

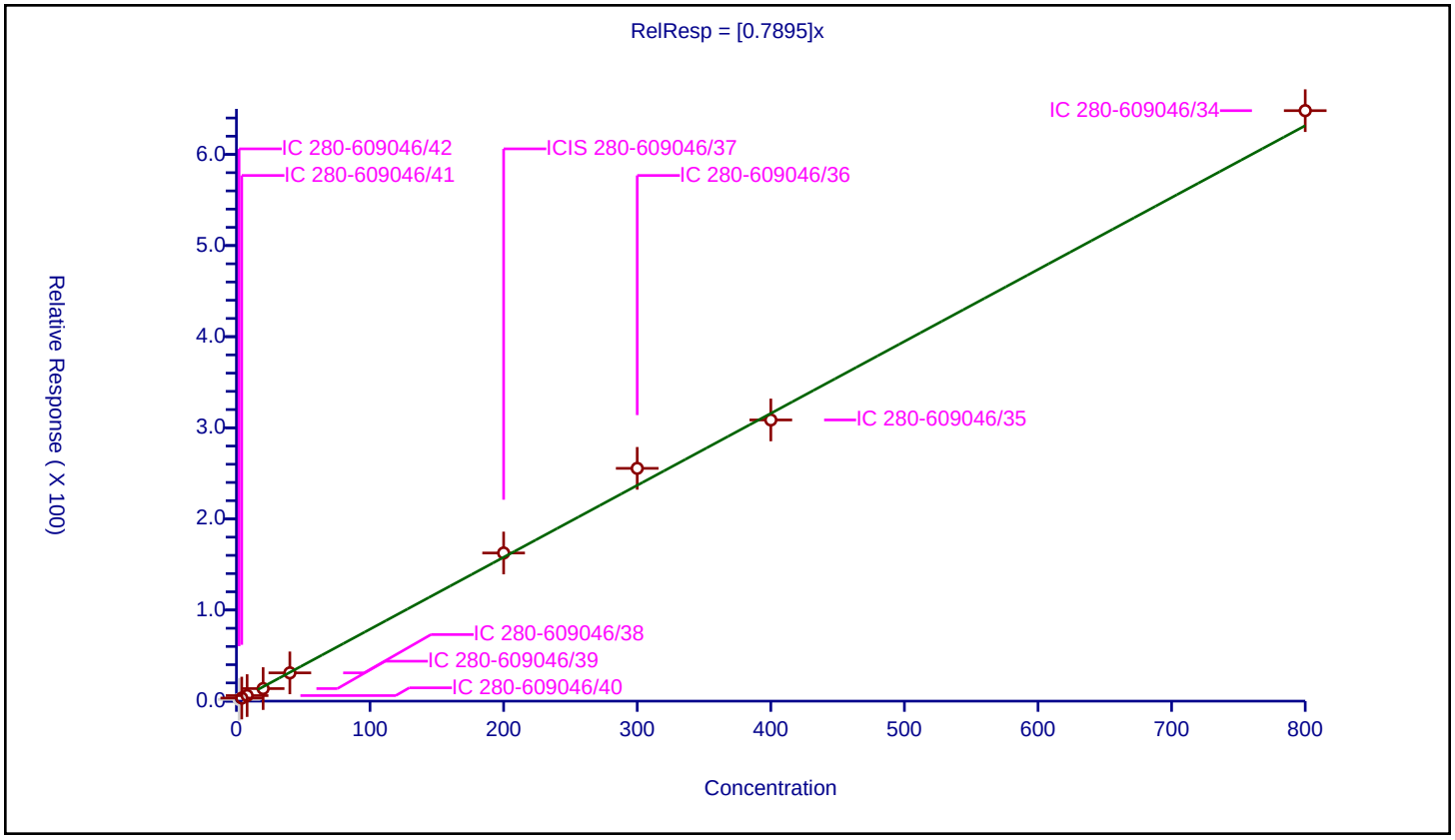
Curve Coefficients

Intercept:	0
Slope:	0.7895

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	6.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	2.0	1.883767	50.0	266567.0	0.941883	N
2	IC 280-609046/41	4.0	3.378866	50.0	263402.0	0.844716	Y
3	IC 280-609046/40	8.0	6.083941	50.0	266472.0	0.760493	Y
4	IC 280-609046/39	20.0	13.775849	50.0	284291.0	0.688792	Y
5	IC 280-609046/38	40.0	31.040087	50.0	285207.0	0.776002	Y
6	ICIS 280-609046/37	200.0	162.605351	50.0	293780.0	0.813027	Y
7	IC 280-609046/36	300.0	255.490614	50.0	295823.0	0.851635	Y
8	IC 280-609046/35	400.0	308.602865	50.0	298110.0	0.771507	Y
9	IC 280-609046/34	800.0	648.079689	50.0	302477.0	0.8101	Y



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Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

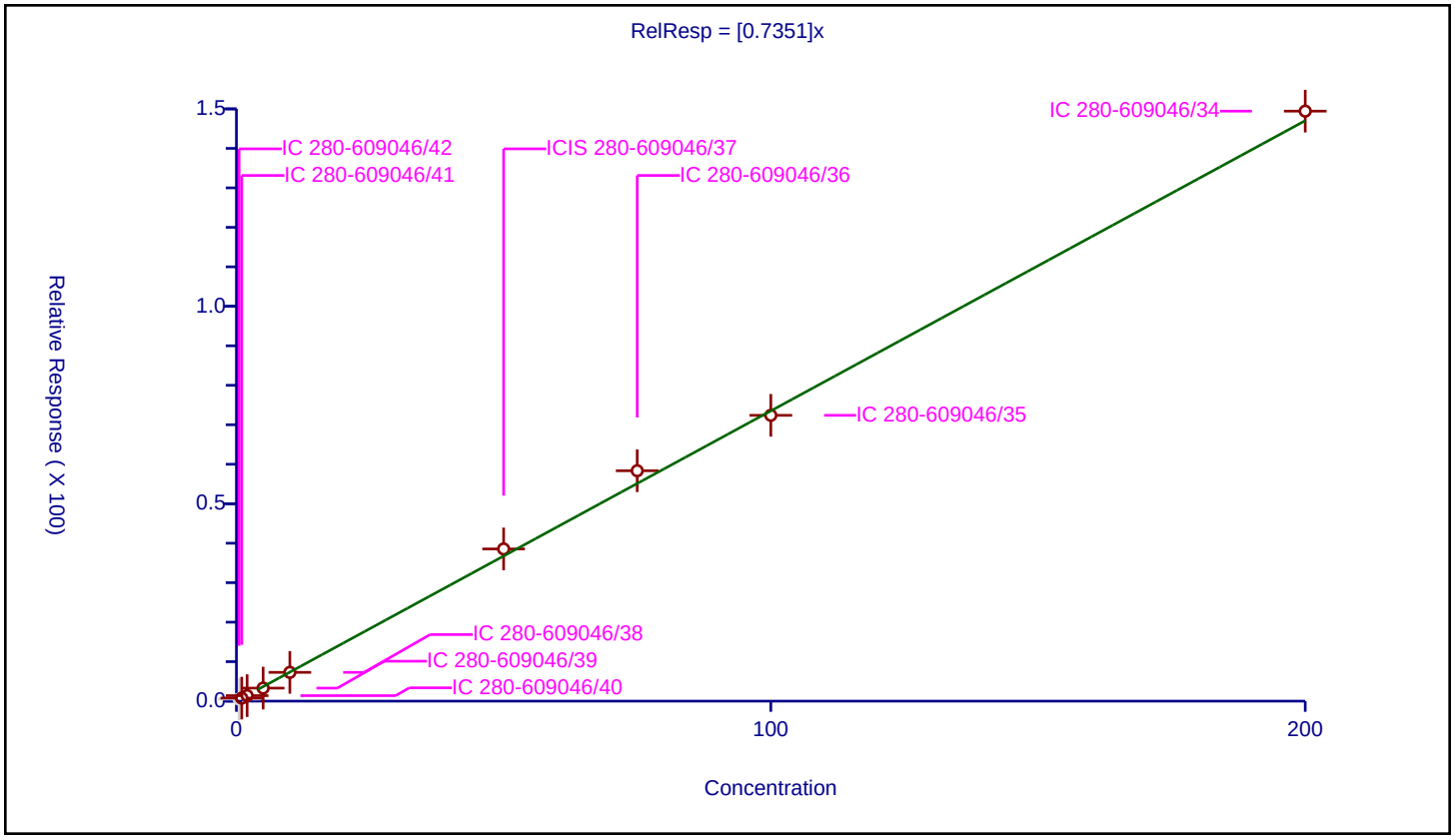
Curve Coefficients

Intercept:	0
Slope:	0.7351

Error Coefficients

Standard Error:	410000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.529886	50.0	266567.0	1.059771	N
2	IC 280-609046/41	1.0	0.773912	50.0	263402.0	0.773912	Y
3	IC 280-609046/40	2.0	1.393767	50.0	266472.0	0.696884	Y
4	IC 280-609046/39	5.0	3.304009	50.0	284291.0	0.660802	Y
5	IC 280-609046/38	10.0	7.290319	50.0	285207.0	0.729032	Y
6	ICIS 280-609046/37	50.0	38.548233	50.0	293780.0	0.770965	Y
7	IC 280-609046/36	75.0	58.354658	50.0	295823.0	0.778062	Y
8	IC 280-609046/35	100.0	72.390225	50.0	298110.0	0.723902	Y
9	IC 280-609046/34	200.0	149.432519	50.0	302477.0	0.747163	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

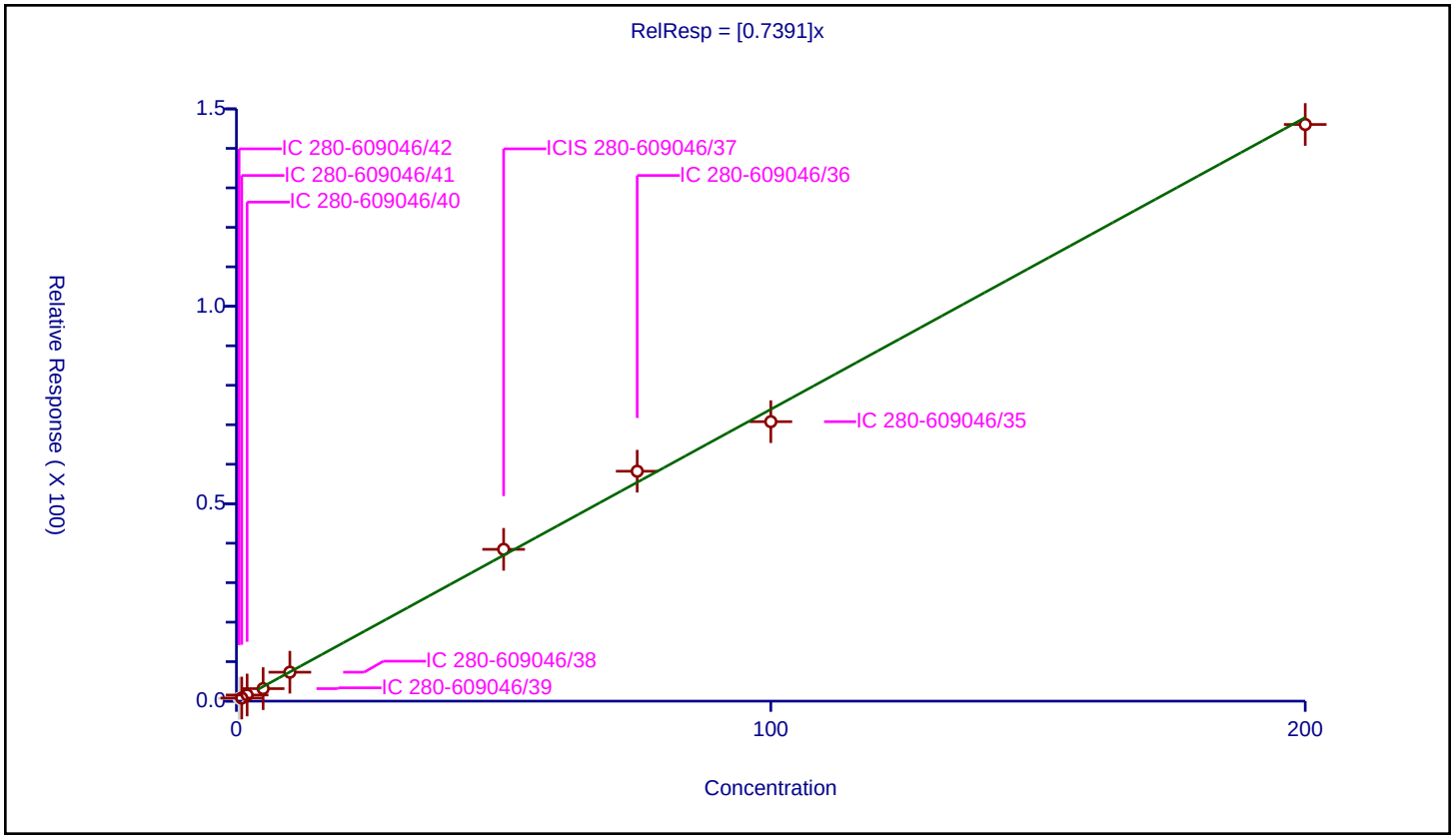
Curve Coefficients

Intercept:	0
Slope:	0.7391

Error Coefficients

Standard Error:	402000
Relative Standard Error:	6.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.705826	50.0	266567.0	1.411653	N
2	IC 280-609046/41	1.0	0.784352	50.0	263402.0	0.784352	Y
3	IC 280-609046/40	2.0	1.557012	50.0	266472.0	0.778506	Y
4	IC 280-609046/39	5.0	3.167705	50.0	284291.0	0.633541	Y
5	IC 280-609046/38	10.0	7.325907	50.0	285207.0	0.732591	Y
6	ICIS 280-609046/37	50.0	38.450031	50.0	293780.0	0.769001	Y
7	IC 280-609046/36	75.0	58.233471	50.0	295823.0	0.776446	Y
8	IC 280-609046/35	100.0	70.782262	50.0	298110.0	0.707823	Y
9	IC 280-609046/34	200.0	146.050939	50.0	302477.0	0.730255	Y



Calibration / 1-Chlorohexane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

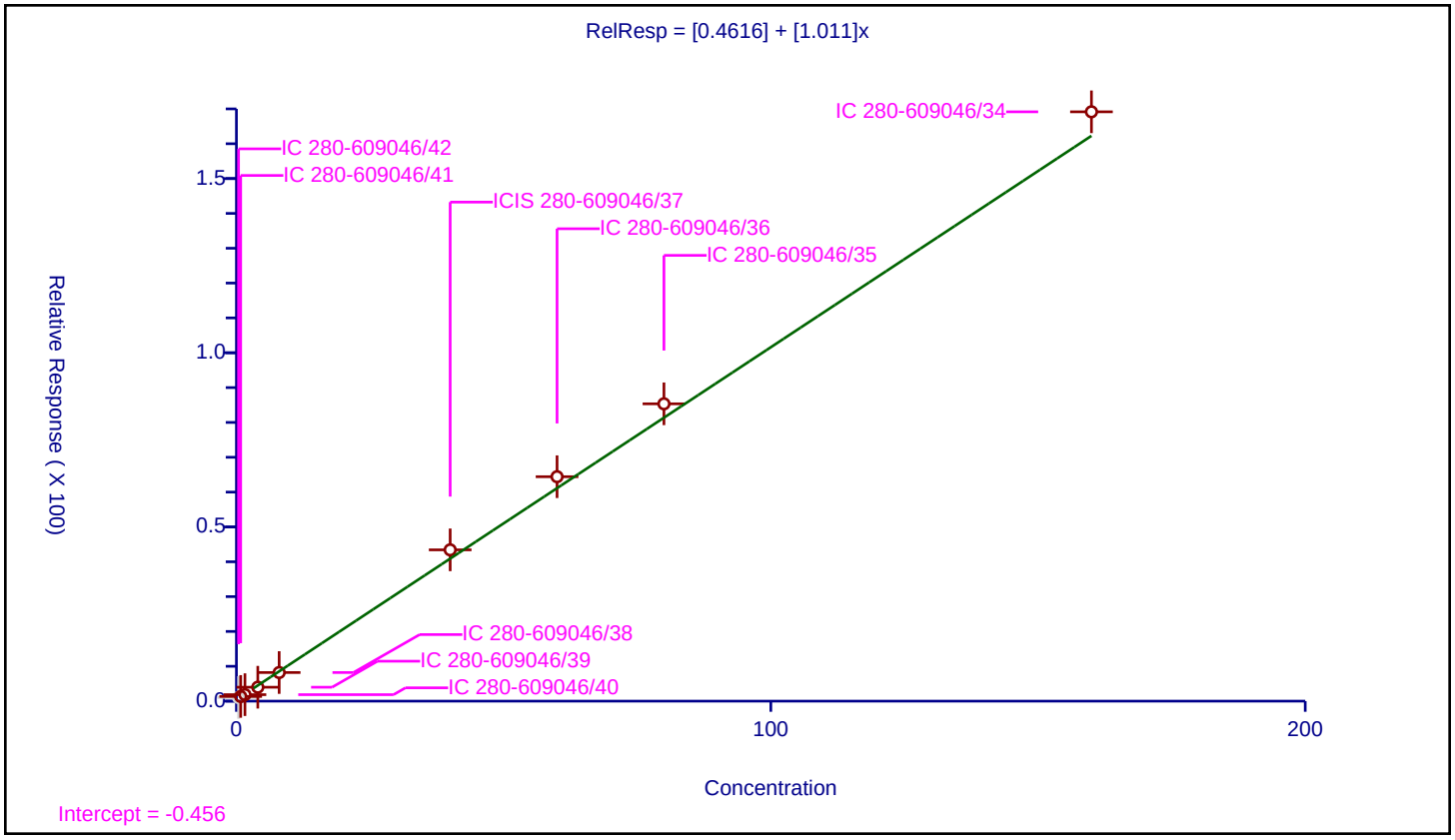
Curve Coefficients

Intercept:	0.4616
Slope:	1.011

Error Coefficients

Standard Error:	503000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.4	1.053956	50.0	266567.0	2.634891	N
2	IC 280-609046/41	0.8	1.346041	50.0	263402.0	1.682552	Y
3	IC 280-609046/40	1.6	1.864549	50.0	266472.0	1.165343	Y
4	IC 280-609046/39	4.0	3.993795	50.0	284291.0	0.998449	Y
5	IC 280-609046/38	8.0	8.212807	50.0	285207.0	1.026601	Y
6	ICIS 280-609046/37	40.0	43.425352	50.0	293780.0	1.085634	Y
7	IC 280-609046/36	60.0	64.421631	50.0	295823.0	1.073694	Y
8	IC 280-609046/35	80.0	85.342659	50.0	298110.0	1.066783	Y
9	IC 280-609046/34	160.0	169.160134	50.0	302477.0	1.057251	Y



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Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

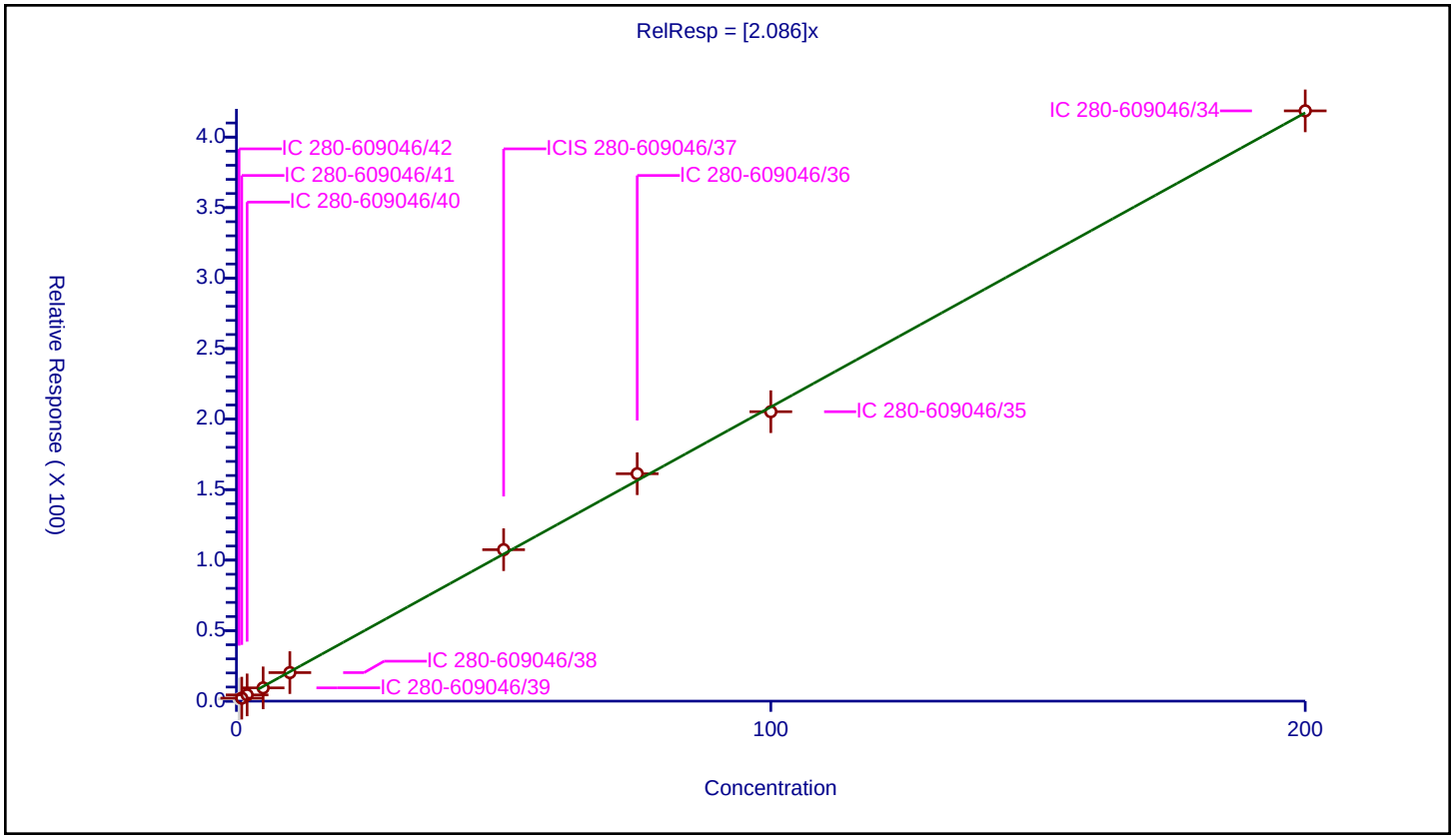
Curve Coefficients

Intercept:	0
Slope:	2.086

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.595659	50.0	266567.0	3.191318	N
2	IC 280-609046/41	1.0	2.122421	50.0	263402.0	2.122421	Y
3	IC 280-609046/40	2.0	4.429171	50.0	266472.0	2.214585	Y
4	IC 280-609046/39	5.0	9.423795	50.0	284291.0	1.884759	Y
5	IC 280-609046/38	10.0	20.231797	50.0	285207.0	2.02318	Y
6	ICIS 280-609046/37	50.0	107.40401	50.0	293780.0	2.14808	Y
7	IC 280-609046/36	75.0	161.275154	50.0	295823.0	2.150335	Y
8	IC 280-609046/35	100.0	205.256114	50.0	298110.0	2.052561	Y
9	IC 280-609046/34	200.0	418.60191	50.0	302477.0	2.09301	Y



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Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

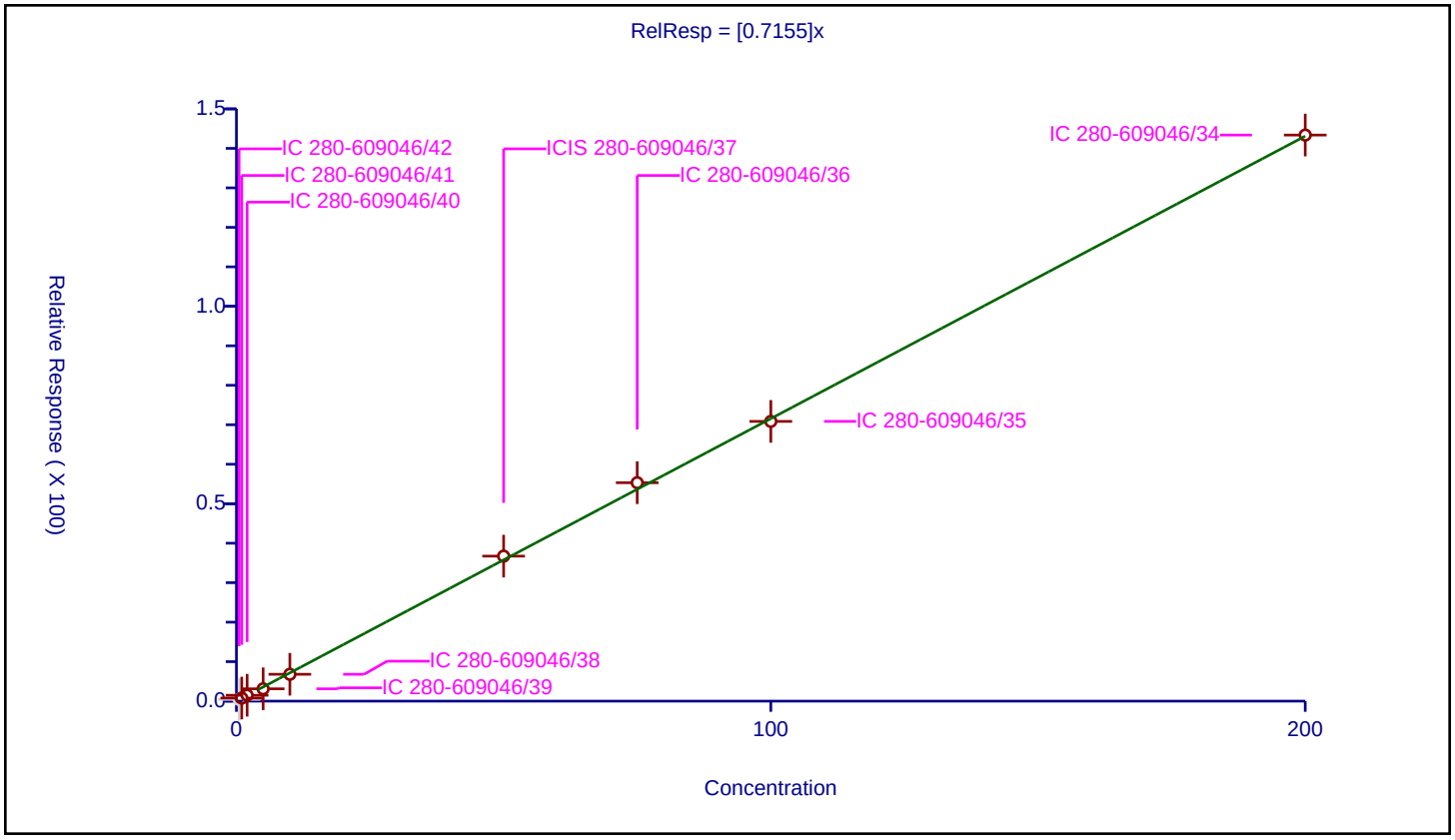
Curve Coefficients

Intercept:	0
Slope:	0.7155

Error Coefficients

Standard Error:	394000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.435538	50.0	266567.0	0.871076	N
2	IC 280-609046/41	1.0	0.780556	50.0	263402.0	0.780556	Y
3	IC 280-609046/40	2.0	1.484396	50.0	266472.0	0.742198	Y
4	IC 280-609046/39	5.0	3.117228	50.0	284291.0	0.623446	Y
5	IC 280-609046/38	10.0	6.803655	50.0	285207.0	0.680365	Y
6	ICIS 280-609046/37	50.0	36.725271	50.0	293780.0	0.734505	Y
7	IC 280-609046/36	75.0	55.327341	50.0	295823.0	0.737698	Y
8	IC 280-609046/35	100.0	70.85606	50.0	298110.0	0.708561	Y
9	IC 280-609046/34	200.0	143.375033	50.0	302477.0	0.716875	Y



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Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

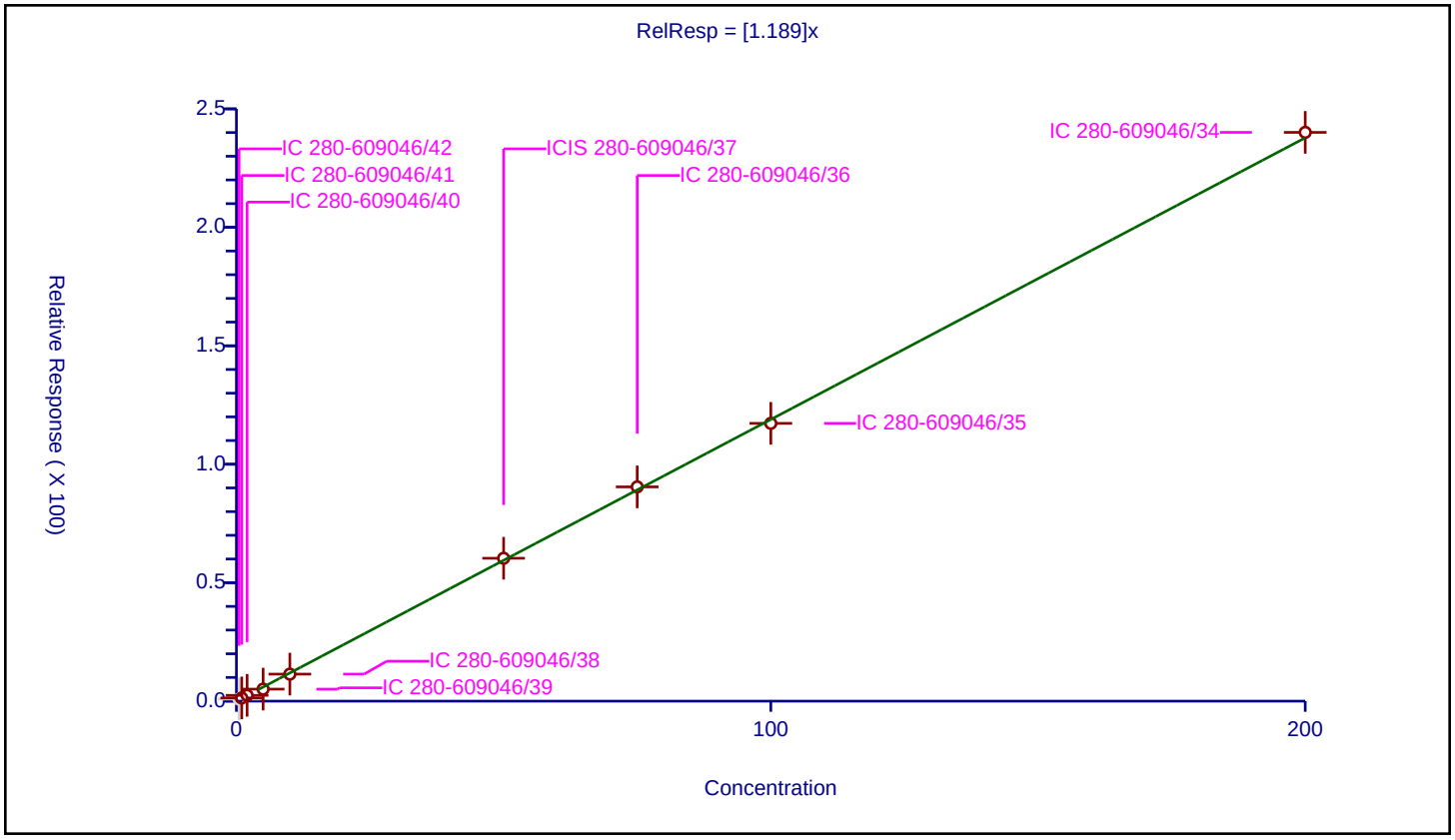
Curve Coefficients

Intercept:	0
Slope:	1.189

Error Coefficients

Standard Error:	656000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.879704	50.0	266567.0	1.759408	N
2	IC 280-609046/41	1.0	1.349079	50.0	263402.0	1.349079	Y
3	IC 280-609046/40	2.0	2.443596	50.0	266472.0	1.221798	Y
4	IC 280-609046/39	5.0	5.077896	50.0	284291.0	1.015579	Y
5	IC 280-609046/38	10.0	11.401894	50.0	285207.0	1.140189	Y
6	ICIS 280-609046/37	50.0	60.307543	50.0	293780.0	1.206151	Y
7	IC 280-609046/36	75.0	90.439891	50.0	295823.0	1.205865	Y
8	IC 280-609046/35	100.0	117.261749	50.0	298110.0	1.172617	Y
9	IC 280-609046/34	200.0	240.086023	50.0	302477.0	1.20043	Y



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Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

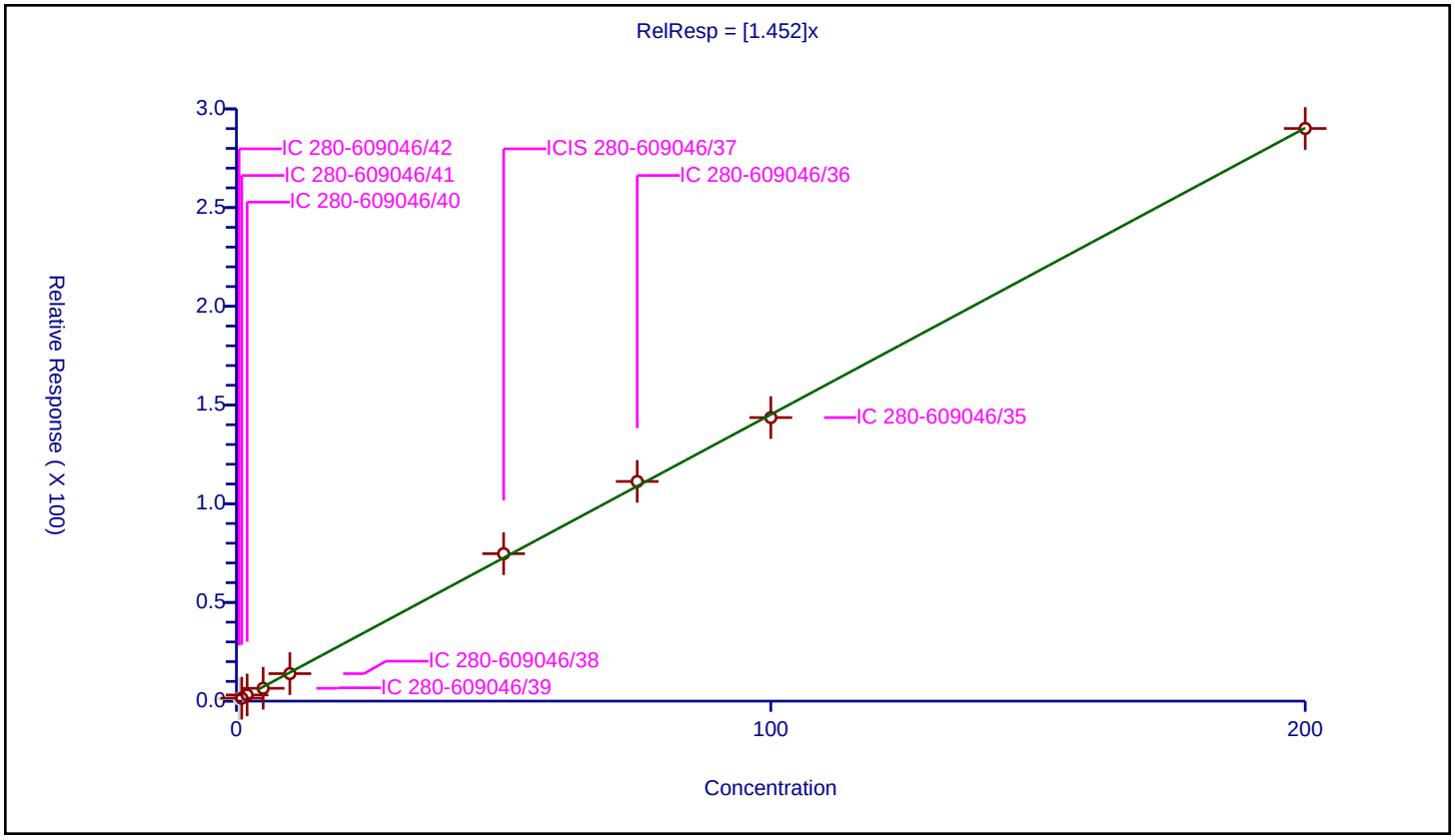
Curve Coefficients

Intercept:	0
Slope:	1.452

Error Coefficients

Standard Error:	797000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.200636	50.0	266567.0	2.401272	N
2	IC 280-609046/41	1.0	1.491067	50.0	263402.0	1.491067	Y
3	IC 280-609046/40	2.0	3.127721	50.0	266472.0	1.56386	Y
4	IC 280-609046/39	5.0	6.507593	50.0	284291.0	1.301519	Y
5	IC 280-609046/38	10.0	13.928831	50.0	285207.0	1.392883	Y
6	ICIS 280-609046/37	50.0	74.688372	50.0	293780.0	1.493767	Y
7	IC 280-609046/36	75.0	111.281746	50.0	295823.0	1.483757	Y
8	IC 280-609046/35	100.0	143.638422	50.0	298110.0	1.436384	Y
9	IC 280-609046/34	200.0	290.080568	50.0	302477.0	1.450403	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

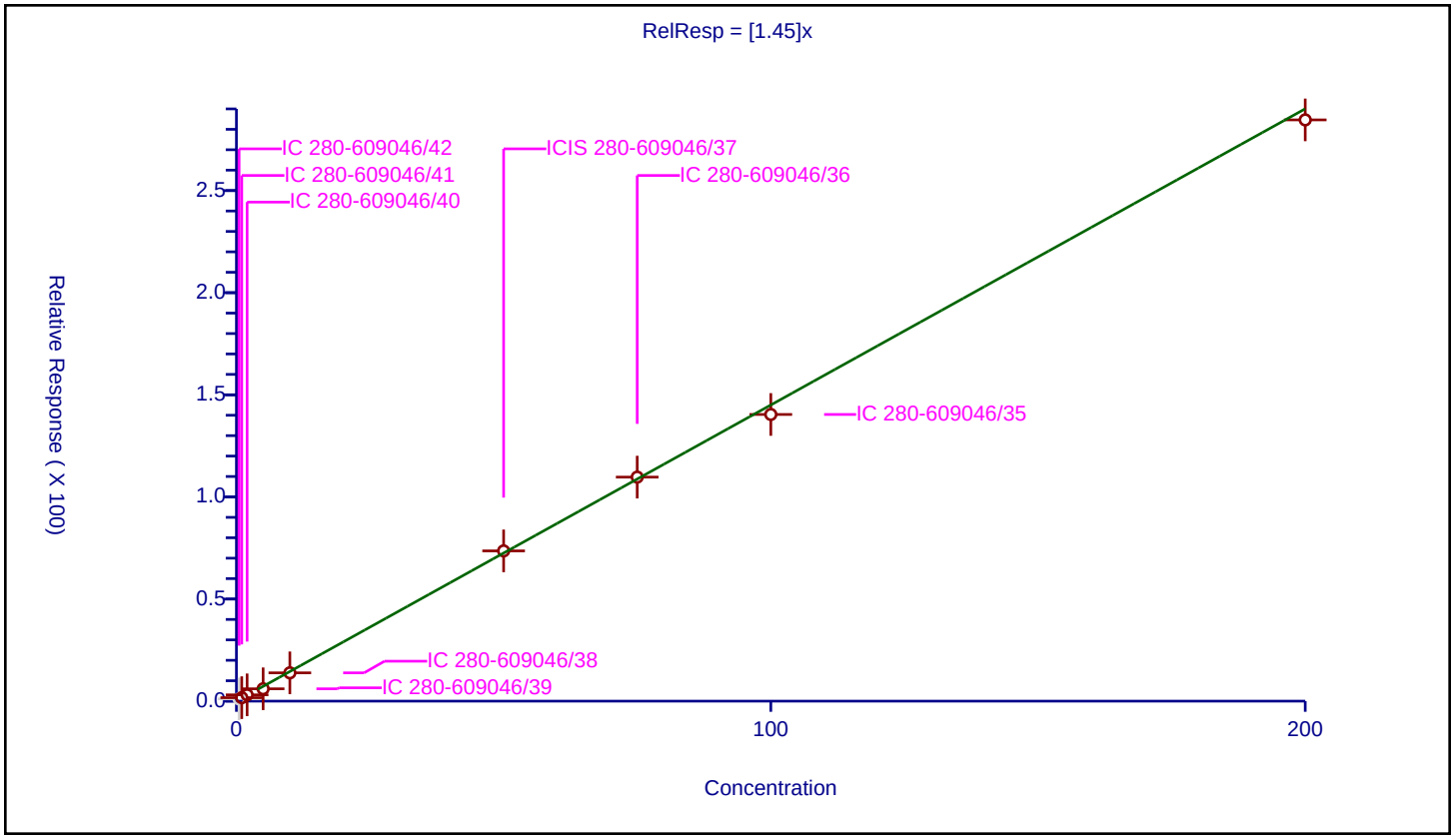
Curve Coefficients

Intercept:	0
Slope:	1.45

Error Coefficients

Standard Error:	782000
Relative Standard Error:	9.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.095597	50.0	266567.0	2.191194	N
2	IC 280-609046/41	1.0	1.70367	50.0	263402.0	1.70367	Y
3	IC 280-609046/40	2.0	3.085127	50.0	266472.0	1.542564	Y
4	IC 280-609046/39	5.0	6.046445	50.0	284291.0	1.209289	Y
5	IC 280-609046/38	10.0	13.850467	50.0	285207.0	1.385047	Y
6	ICIS 280-609046/37	50.0	73.569167	50.0	293780.0	1.471383	Y
7	IC 280-609046/36	75.0	109.700733	50.0	295823.0	1.462676	Y
8	IC 280-609046/35	100.0	140.377545	50.0	298110.0	1.403775	Y
9	IC 280-609046/34	200.0	284.618004	50.0	302477.0	1.42309	Y



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Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

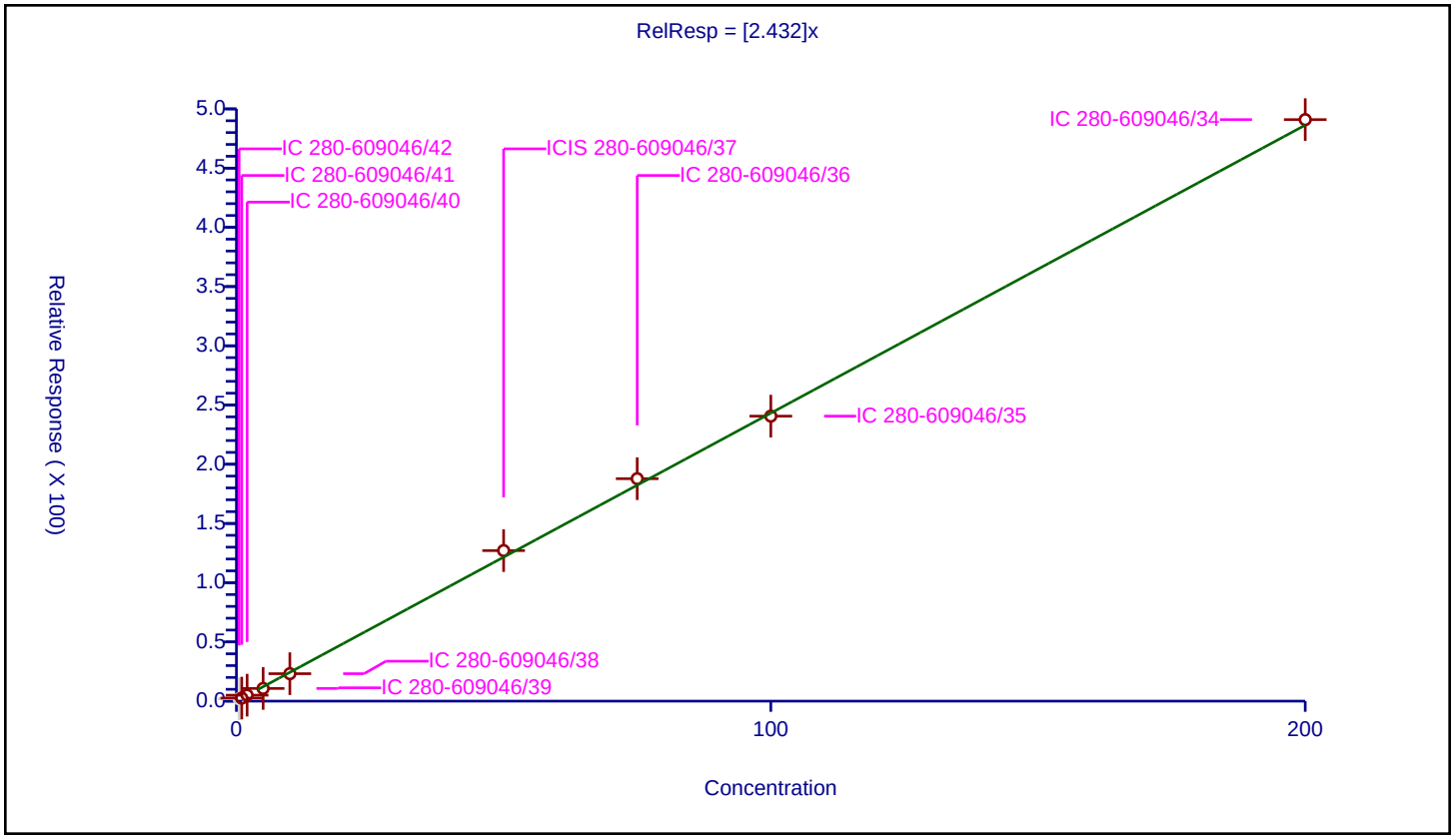
Curve Coefficients

Intercept:	0
Slope:	2.432

Error Coefficients

Standard Error:	1350000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	2.001561	50.0	266567.0	4.003121	N
2	IC 280-609046/41	1.0	2.577999	50.0	263402.0	2.577999	Y
3	IC 280-609046/40	2.0	5.01685	50.0	266472.0	2.508425	Y
4	IC 280-609046/39	5.0	10.708746	50.0	284291.0	2.141749	Y
5	IC 280-609046/38	10.0	23.168961	50.0	285207.0	2.316896	Y
6	ICIS 280-609046/37	50.0	127.102934	50.0	293780.0	2.542059	Y
7	IC 280-609046/36	75.0	187.806222	50.0	295823.0	2.504083	Y
8	IC 280-609046/35	100.0	240.615545	50.0	298110.0	2.406155	Y
9	IC 280-609046/34	200.0	490.946584	50.0	302477.0	2.454733	Y



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Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

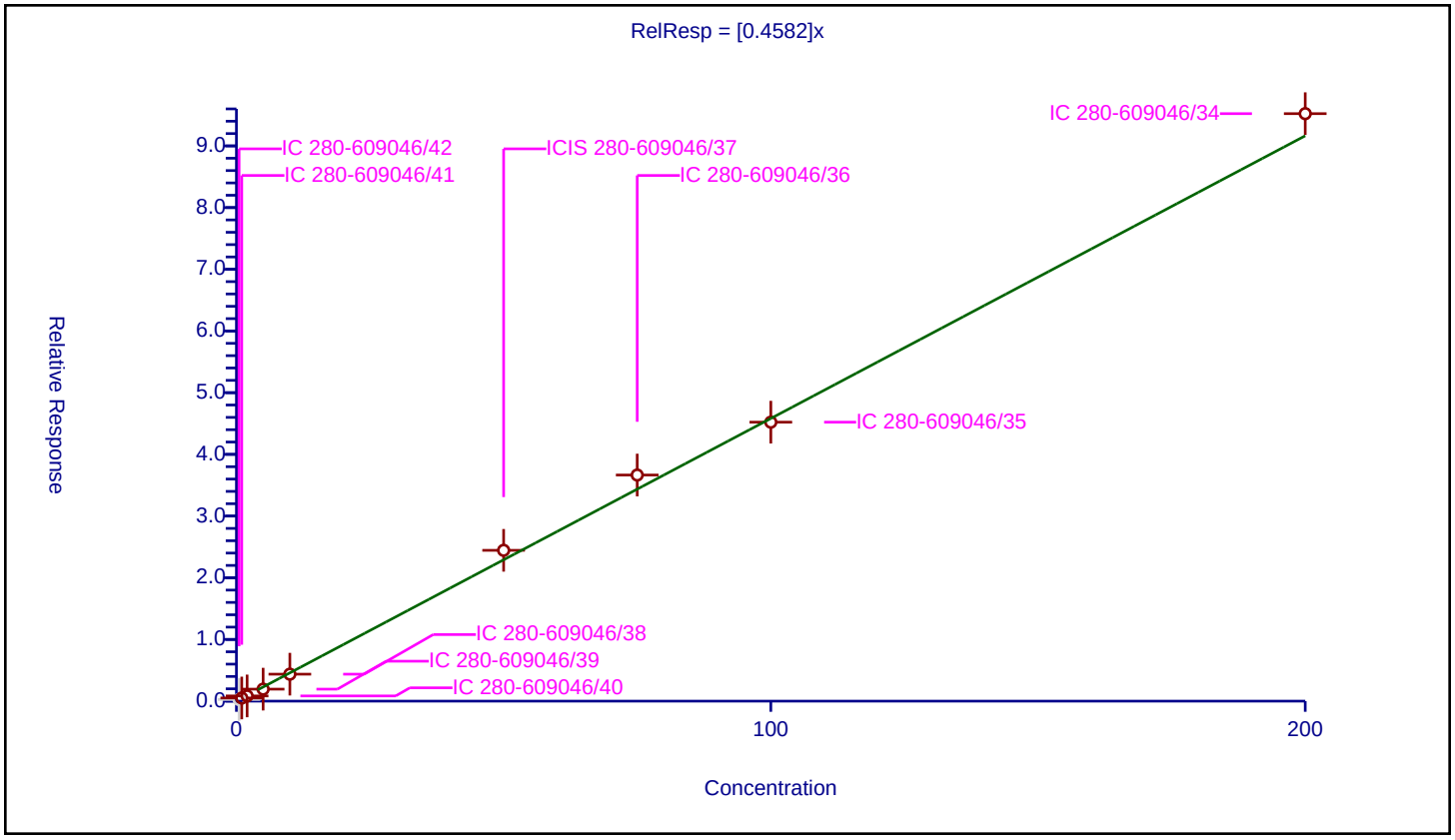
Curve Coefficients

Intercept:	0
Slope:	0.4582

Error Coefficients

Standard Error:	260000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.263536	50.0	266567.0	0.527072	N
2	IC 280-609046/41	1.0	0.510816	50.0	263402.0	0.510816	Y
3	IC 280-609046/40	2.0	0.844929	50.0	266472.0	0.422465	Y
4	IC 280-609046/39	5.0	1.94519	50.0	284291.0	0.389038	Y
5	IC 280-609046/38	10.0	4.372789	50.0	285207.0	0.437279	Y
6	ICIS 280-609046/37	50.0	24.445674	50.0	293780.0	0.488913	Y
7	IC 280-609046/36	75.0	36.651308	50.0	295823.0	0.488684	Y
8	IC 280-609046/35	100.0	45.219047	50.0	298110.0	0.45219	Y
9	IC 280-609046/34	200.0	95.228728	50.0	302477.0	0.476144	Y



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Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

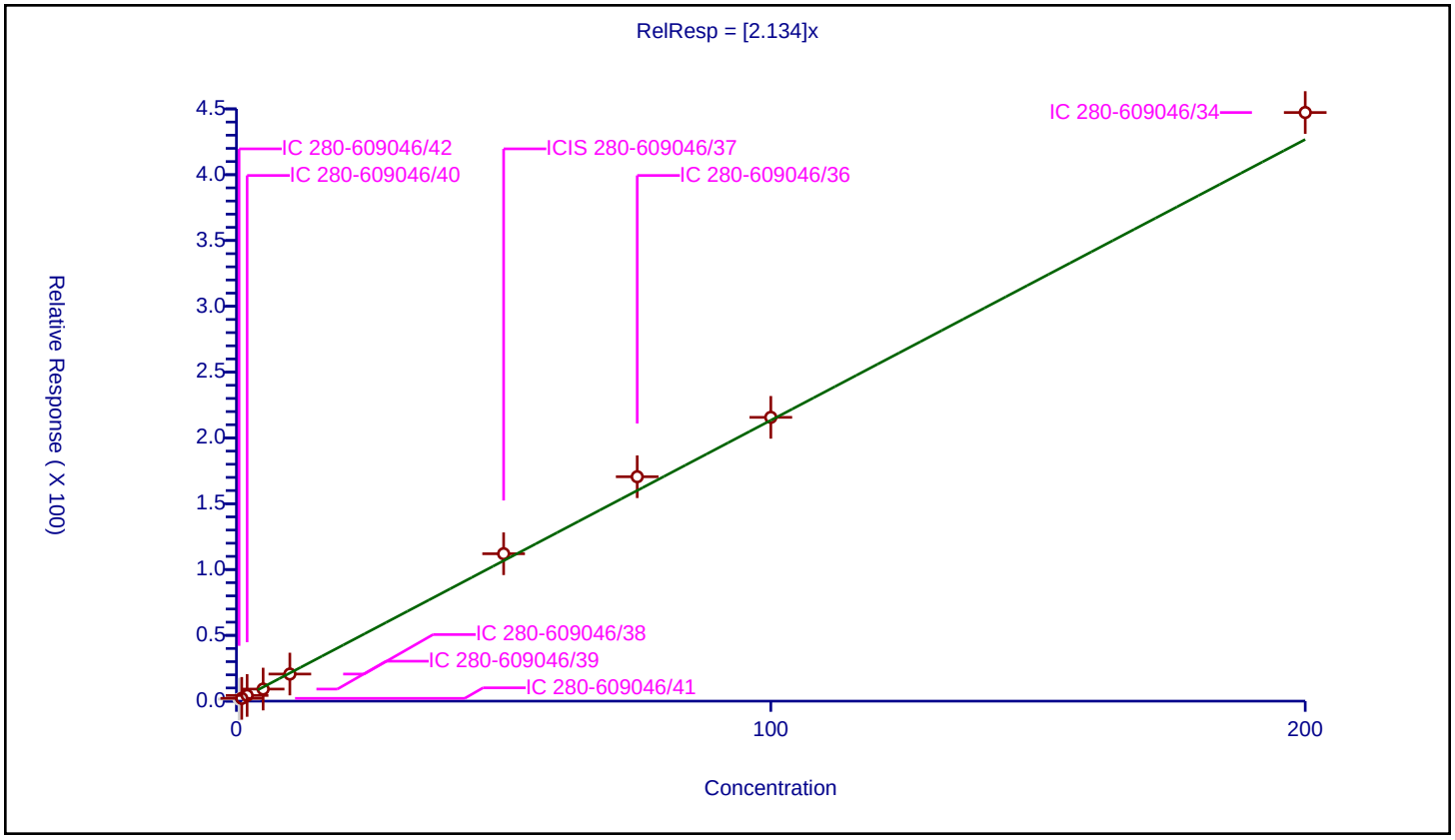
Curve Coefficients

Intercept:	0
Slope:	2.134

Error Coefficients

Standard Error:	1930000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.569235	50.0	427119.0	3.13847	N
2	IC 280-609046/41	1.0	2.108908	50.0	430436.0	2.108908	Y
3	IC 280-609046/40	2.0	4.325041	50.0	433915.0	2.16252	Y
4	IC 280-609046/39	5.0	9.175847	50.0	458568.0	1.835169	Y
5	IC 280-609046/38	10.0	20.581157	50.0	469942.0	2.058116	Y
6	ICIS 280-609046/37	50.0	111.997632	50.0	475448.0	2.239953	Y
7	IC 280-609046/36	75.0	170.502658	50.0	471295.0	2.273369	Y
8	IC 280-609046/35	100.0	215.63248	50.0	482150.0	2.156325	Y
9	IC 280-609046/34	200.0	447.245819	50.0	473698.0	2.236229	Y



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Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

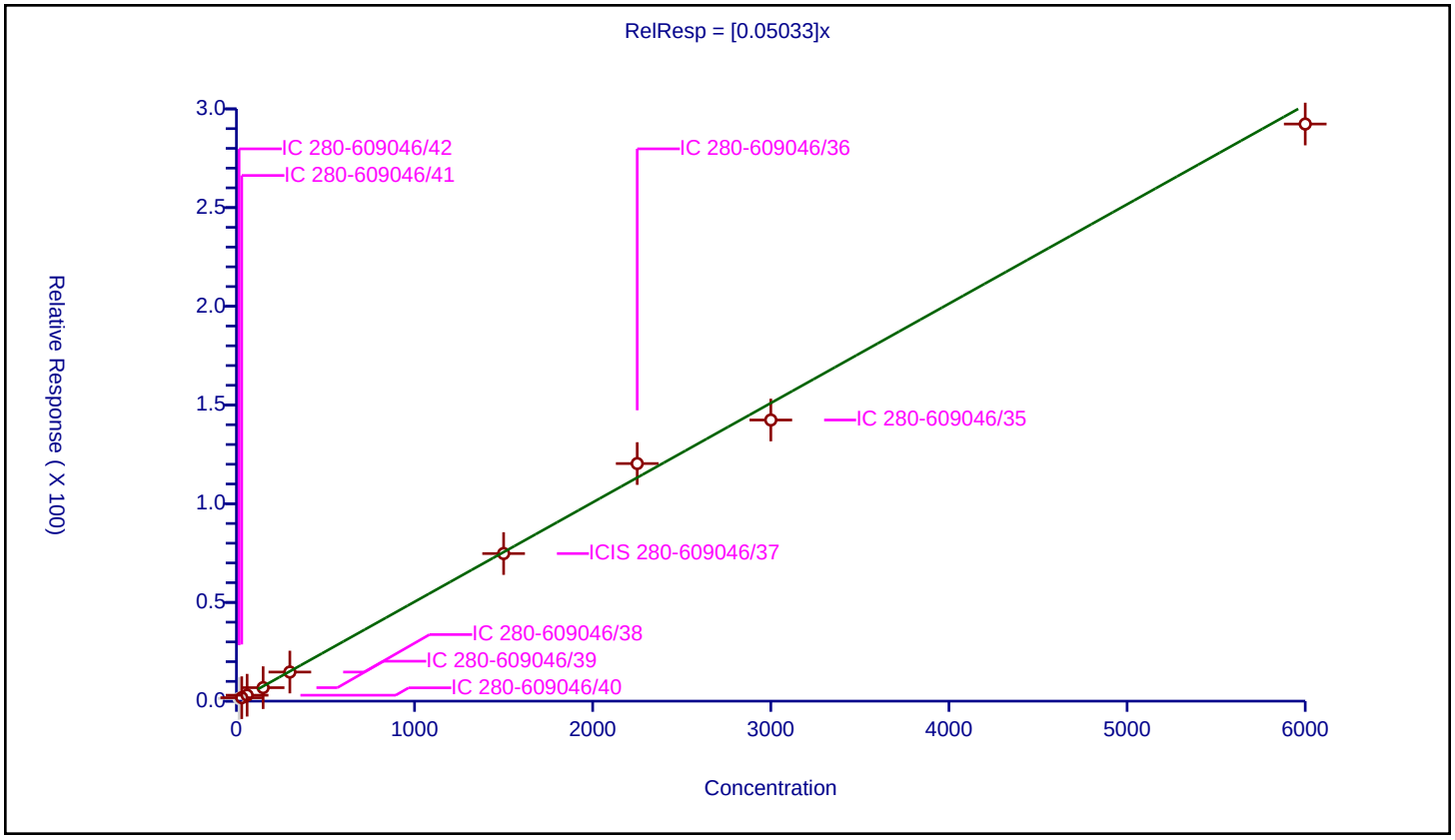
Curve Coefficients

Intercept:	0
Slope:	0.05033

Error Coefficients

Standard Error:	807000
Relative Standard Error:	7.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	15.0	1.364948	50.0	266567.0	0.090997	N
2	IC 280-609046/41	30.0	1.749797	50.0	263402.0	0.058327	Y
3	IC 280-609046/40	60.0	3.004068	50.0	266472.0	0.050068	Y
4	IC 280-609046/39	150.0	6.83736	50.0	284291.0	0.045582	Y
5	IC 280-609046/38	300.0	14.741574	50.0	285207.0	0.049139	Y
6	ICIS 280-609046/37	1500.0	74.767513	50.0	293780.0	0.049845	Y
7	IC 280-609046/36	2250.0	120.344936	50.0	295823.0	0.053487	Y
8	IC 280-609046/35	3000.0	142.40901	50.0	298110.0	0.04747	Y
9	IC 280-609046/34	6000.0	292.338922	50.0	302477.0	0.048723	Y



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Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

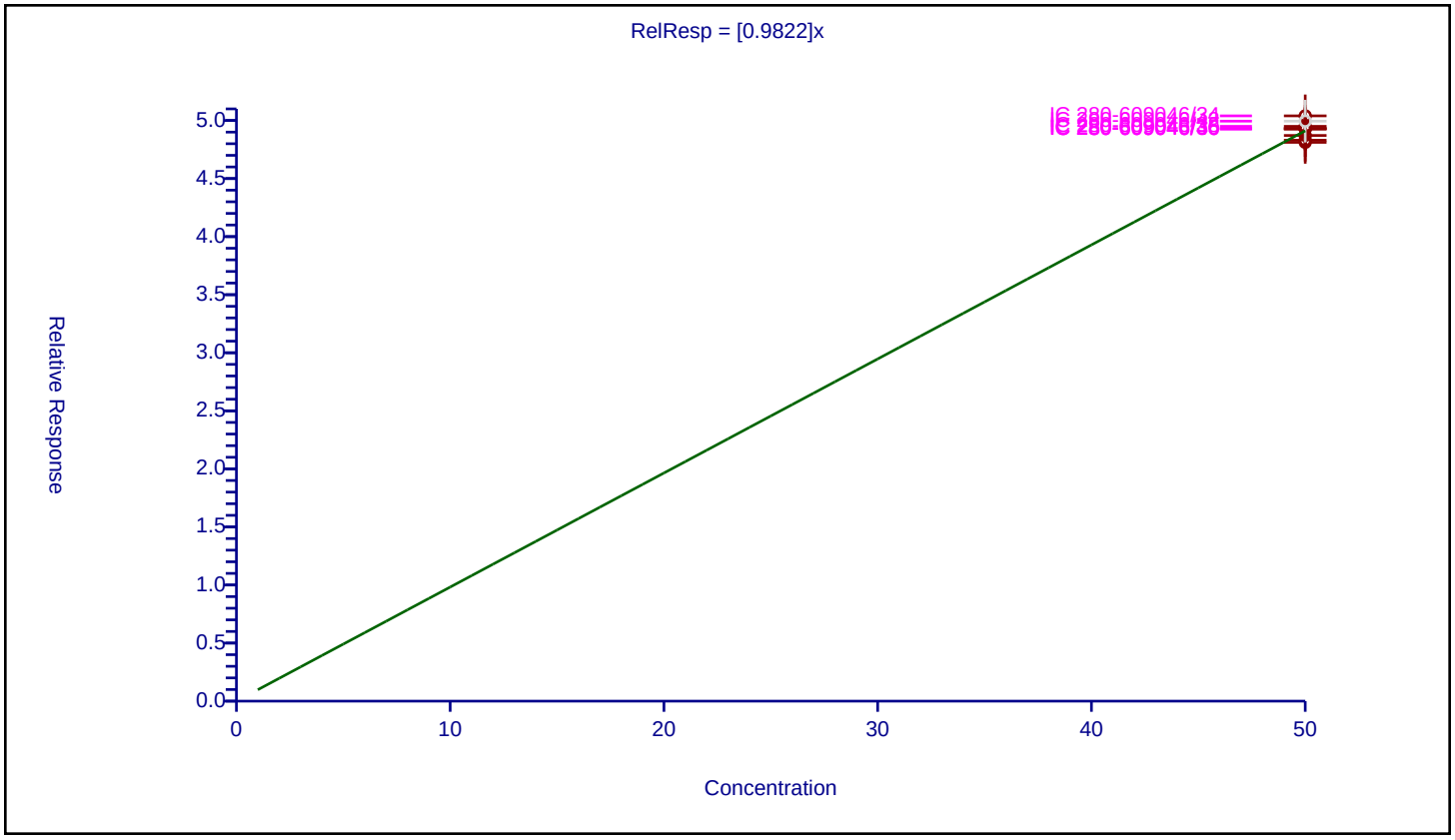
Curve Coefficients

Intercept:	0
Slope:	0.9822

Error Coefficients

Standard Error:	486000
Relative Standard Error:	1.5
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/34	50.0	50.399622	50.0	473698.0	1.007992	Y
2	IC 280-609046/35	50.0	49.315566	50.0	482150.0	0.986311	Y
3	IC 280-609046/36	50.0	49.261185	50.0	471295.0	0.985224	Y
4	ICIS 280-609046/37	50.0	48.299499	50.0	475448.0	0.96599	Y
5	IC 280-609046/38	50.0	49.495682	50.0	469942.0	0.989914	Y
6	IC 280-609046/39	50.0	48.11631	50.0	458568.0	0.962326	Y
7	IC 280-609046/40	50.0	49.287418	50.0	433915.0	0.985748	Y
8	IC 280-609046/41	50.0	48.711539	50.0	430436.0	0.974231	Y
9	IC 280-609046/42	50.0	49.946034	50.0	427119.0	0.998921	N



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Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

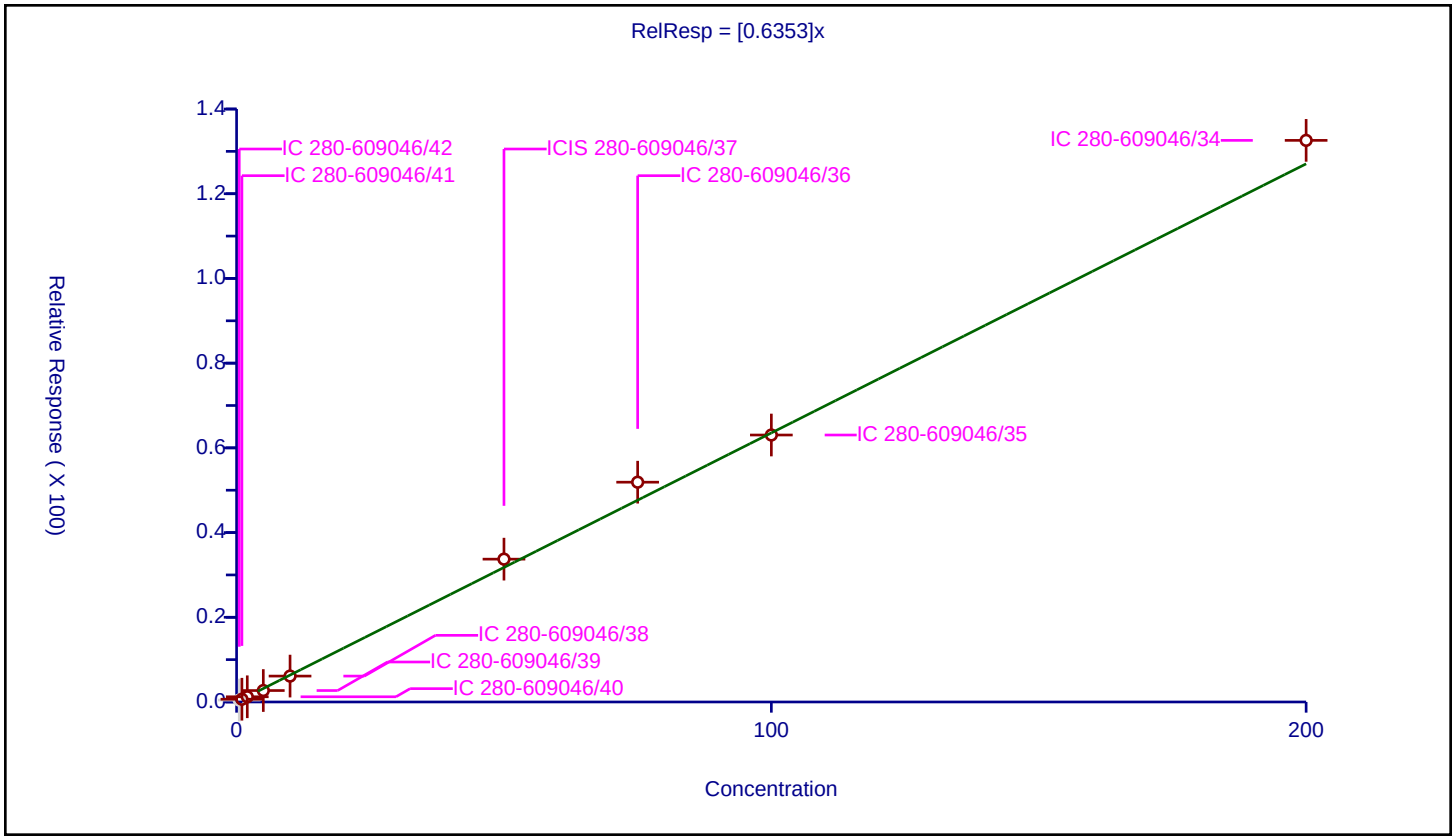
Curve Coefficients

Intercept:	0
Slope:	0.6353

Error Coefficients

Standard Error:	572000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.457015	50.0	427119.0	0.914031	N
2	IC 280-609046/41	1.0	0.654337	50.0	430436.0	0.654337	Y
3	IC 280-609046/40	2.0	1.231808	50.0	433915.0	0.615904	Y
4	IC 280-609046/39	5.0	2.702216	50.0	458568.0	0.540443	Y
5	IC 280-609046/38	10.0	6.118415	50.0	469942.0	0.611841	Y
6	ICIS 280-609046/37	50.0	33.725875	50.0	475448.0	0.674518	Y
7	IC 280-609046/36	75.0	51.893082	50.0	471295.0	0.691908	Y
8	IC 280-609046/35	100.0	63.033392	50.0	482150.0	0.630334	Y
9	IC 280-609046/34	200.0	132.594818	50.0	473698.0	0.662974	Y



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Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

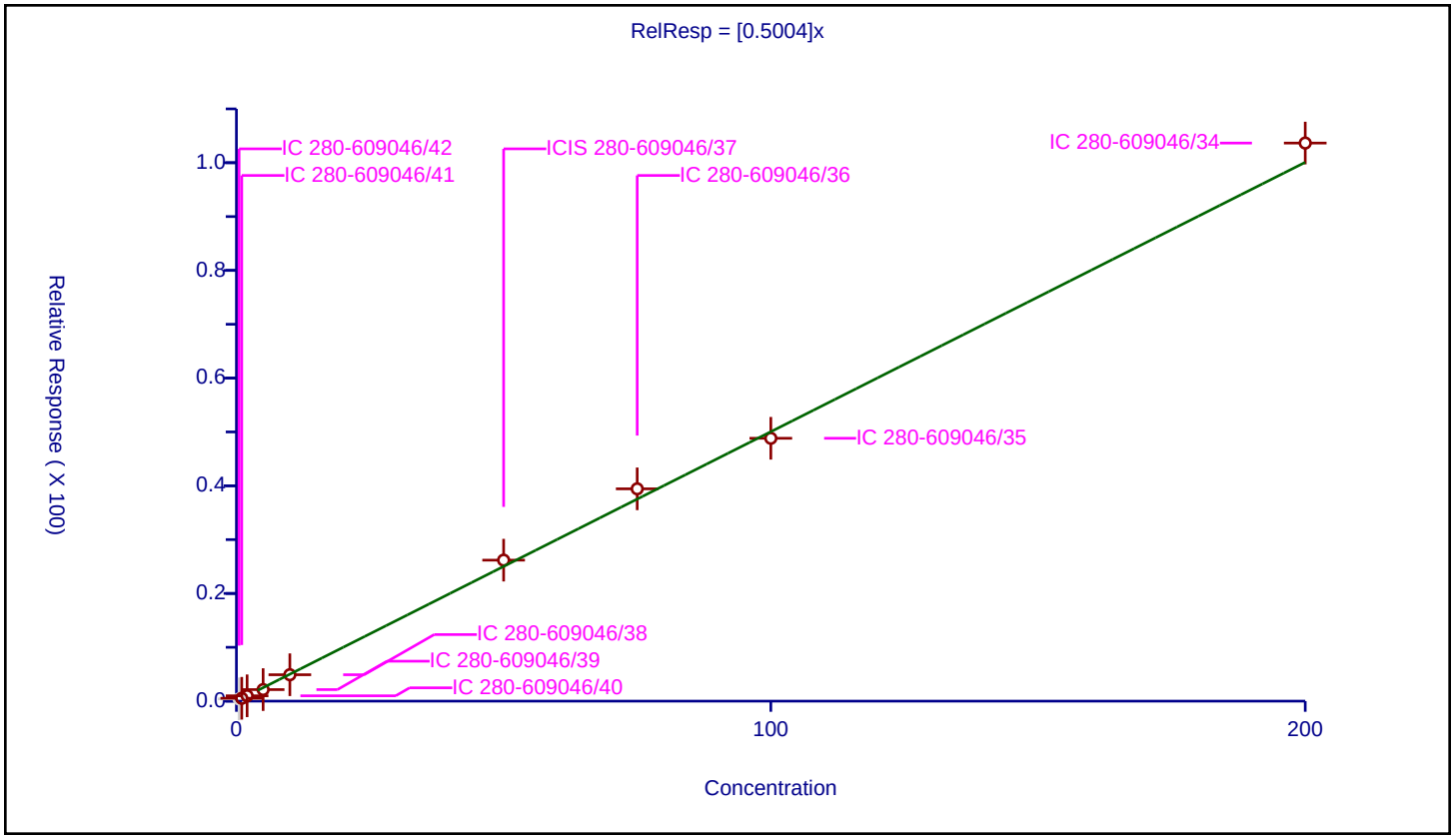
Curve Coefficients

Intercept:	0
Slope:	0.5004

Error Coefficients

Standard Error:	445000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.418619	50.0	427119.0	0.837237	N
2	IC 280-609046/41	1.0	0.531554	50.0	430436.0	0.531554	Y
3	IC 280-609046/40	2.0	0.993397	50.0	433915.0	0.496699	Y
4	IC 280-609046/39	5.0	2.141994	50.0	458568.0	0.428399	Y
5	IC 280-609046/38	10.0	4.905073	50.0	469942.0	0.490507	Y
6	ICIS 280-609046/37	50.0	26.183831	50.0	475448.0	0.523677	Y
7	IC 280-609046/36	75.0	39.435704	50.0	471295.0	0.525809	Y
8	IC 280-609046/35	100.0	48.821943	50.0	482150.0	0.488219	Y
9	IC 280-609046/34	200.0	103.654649	50.0	473698.0	0.518273	Y



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Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

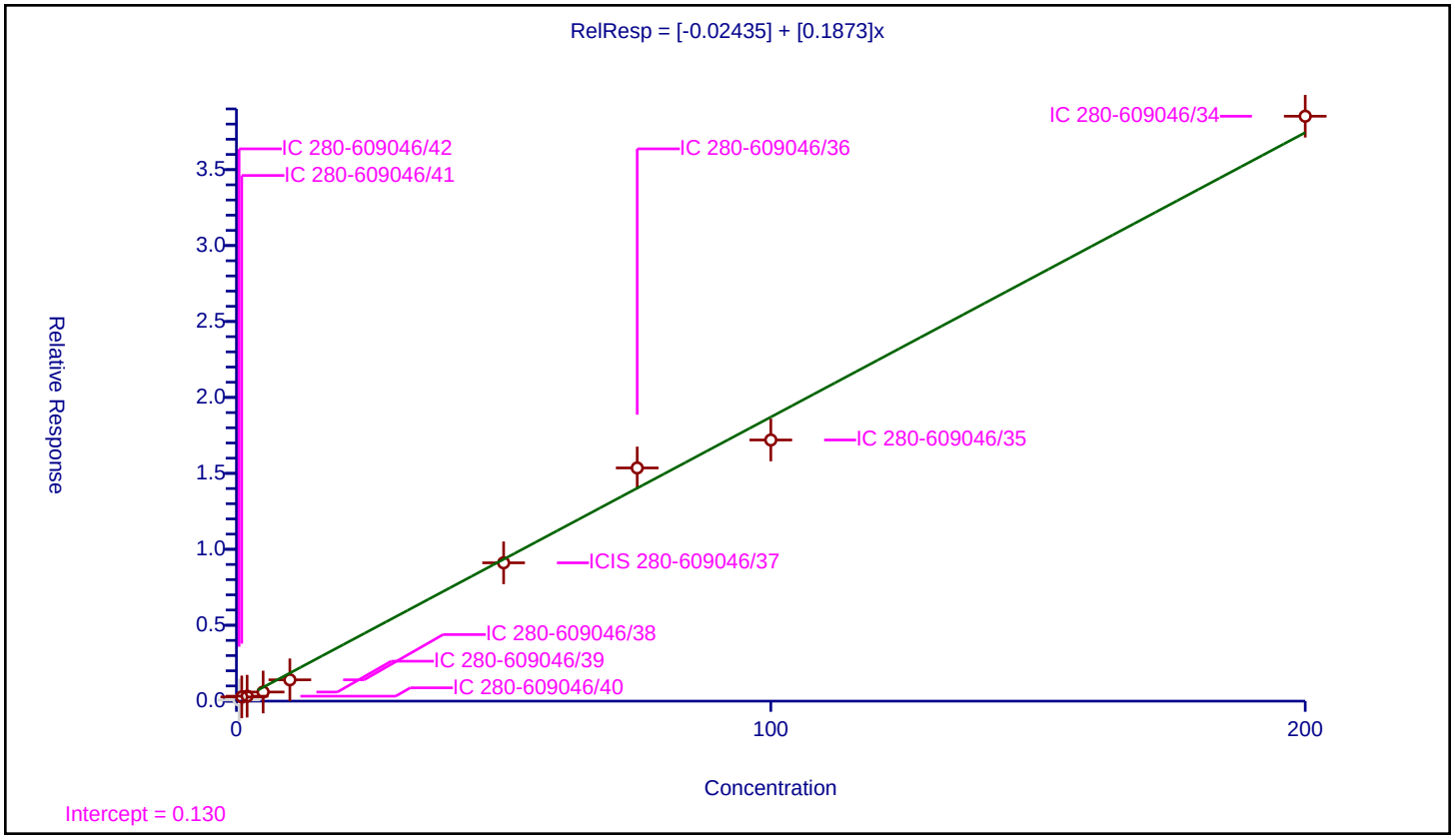
Curve Coefficients

Intercept:	-0.02435
Slope:	0.1873

Error Coefficients

Standard Error:	178000
Relative Standard Error:	30.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.075038	50.0	427119.0	0.150075	N
2	IC 280-609046/41	1.0	0.277509	50.0	430436.0	0.277509	Y
3	IC 280-609046/40	2.0	0.327714	50.0	433915.0	0.163857	Y
4	IC 280-609046/39	5.0	0.601547	50.0	458568.0	0.120309	Y
5	IC 280-609046/38	10.0	1.404322	50.0	469942.0	0.140432	Y
6	ICIS 280-609046/37	50.0	9.108567	50.0	475448.0	0.182171	Y
7	IC 280-609046/36	75.0	15.355775	50.0	471295.0	0.204744	Y
8	IC 280-609046/35	100.0	17.197656	50.0	482150.0	0.171977	Y
9	IC 280-609046/34	200.0	38.517051	50.0	473698.0	0.192585	Y



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Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

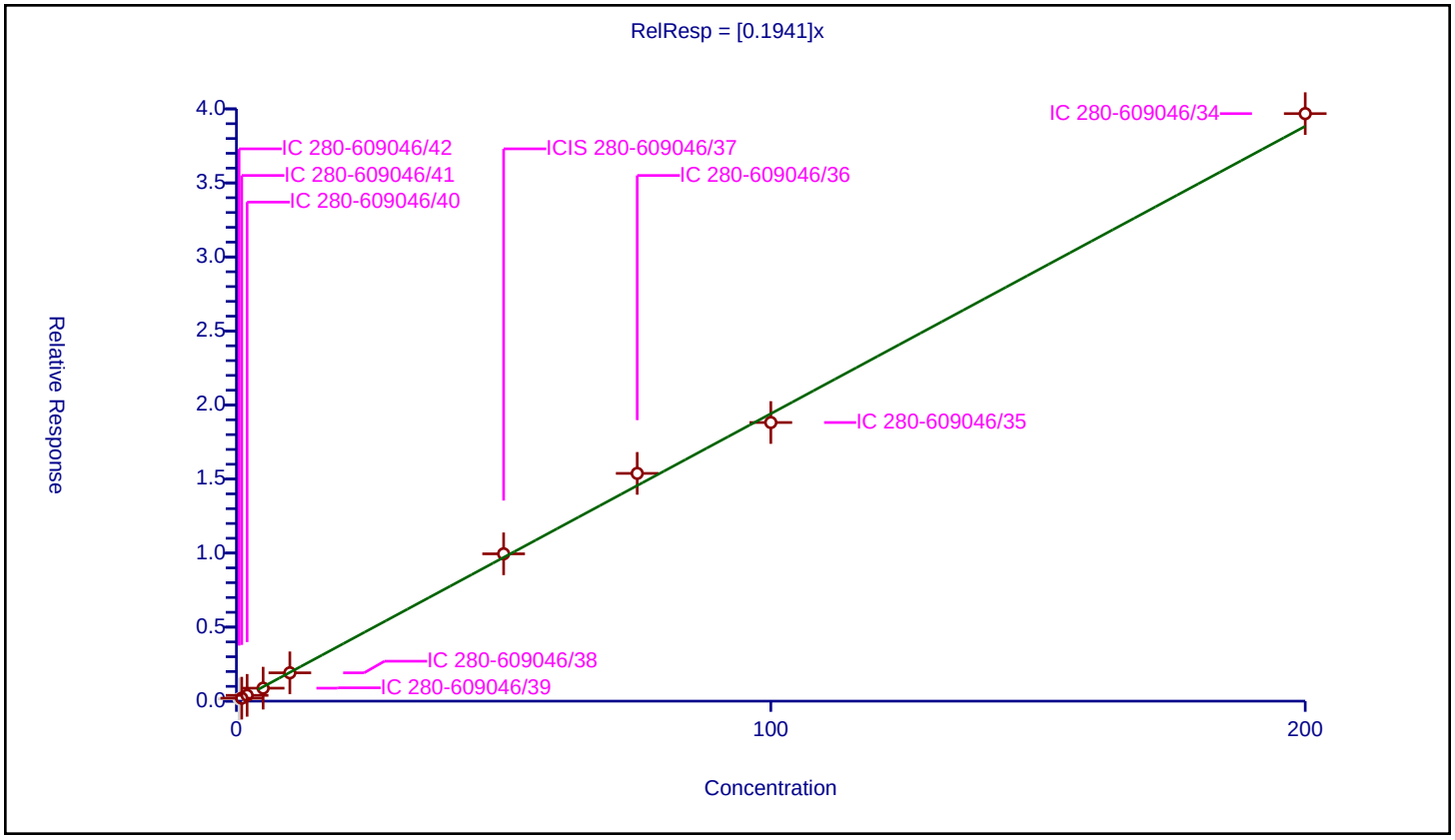
Curve Coefficients

Intercept:	0
Slope:	0.1941

Error Coefficients

Standard Error:	171000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.156397	50.0	427119.0	0.312793	N
2	IC 280-609046/41	1.0	0.20003	50.0	430436.0	0.20003	Y
3	IC 280-609046/40	2.0	0.391436	50.0	433915.0	0.195718	Y
4	IC 280-609046/39	5.0	0.876969	50.0	458568.0	0.175394	Y
5	IC 280-609046/38	10.0	1.91247	50.0	469942.0	0.191247	Y
6	ICIS 280-609046/37	50.0	9.95051	50.0	475448.0	0.19901	Y
7	IC 280-609046/36	75.0	15.382616	50.0	471295.0	0.205102	Y
8	IC 280-609046/35	100.0	18.817899	50.0	482150.0	0.188179	Y
9	IC 280-609046/34	200.0	39.680028	50.0	473698.0	0.1984	Y



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Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

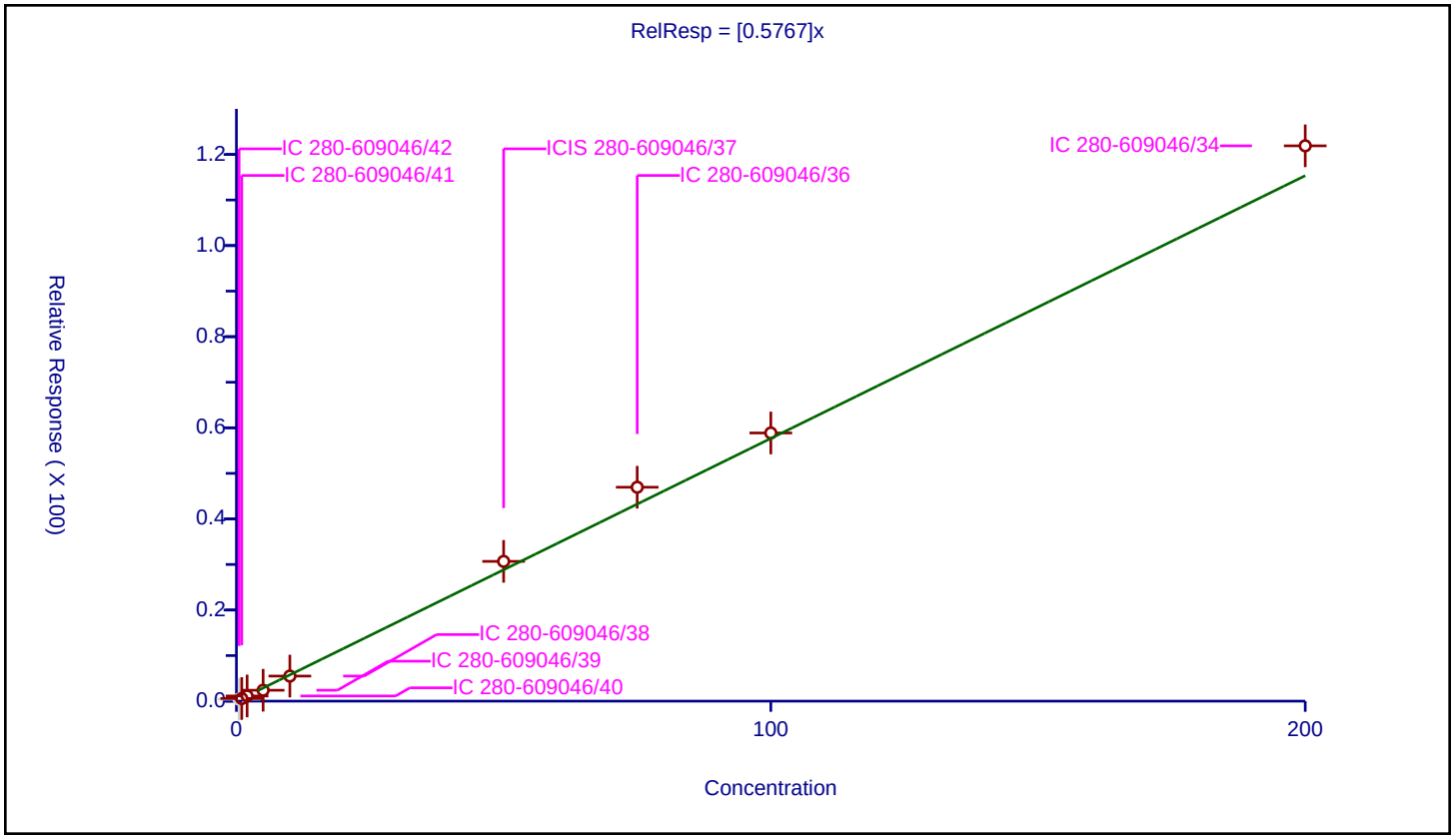
Curve Coefficients

Intercept:	0
Slope:	0.5767

Error Coefficients

Standard Error:	526000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.432198	50.0	427119.0	0.864396	N
2	IC 280-609046/41	1.0	0.578019	50.0	430436.0	0.578019	Y
3	IC 280-609046/40	2.0	1.137089	50.0	433915.0	0.568545	Y
4	IC 280-609046/39	5.0	2.394192	50.0	458568.0	0.478838	Y
5	IC 280-609046/38	10.0	5.505254	50.0	469942.0	0.550525	Y
6	ICIS 280-609046/37	50.0	30.676331	50.0	475448.0	0.613527	Y
7	IC 280-609046/36	75.0	46.953288	50.0	471295.0	0.626044	Y
8	IC 280-609046/35	100.0	58.865083	50.0	482150.0	0.588651	Y
9	IC 280-609046/34	200.0	121.892535	50.0	473698.0	0.609463	Y



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Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

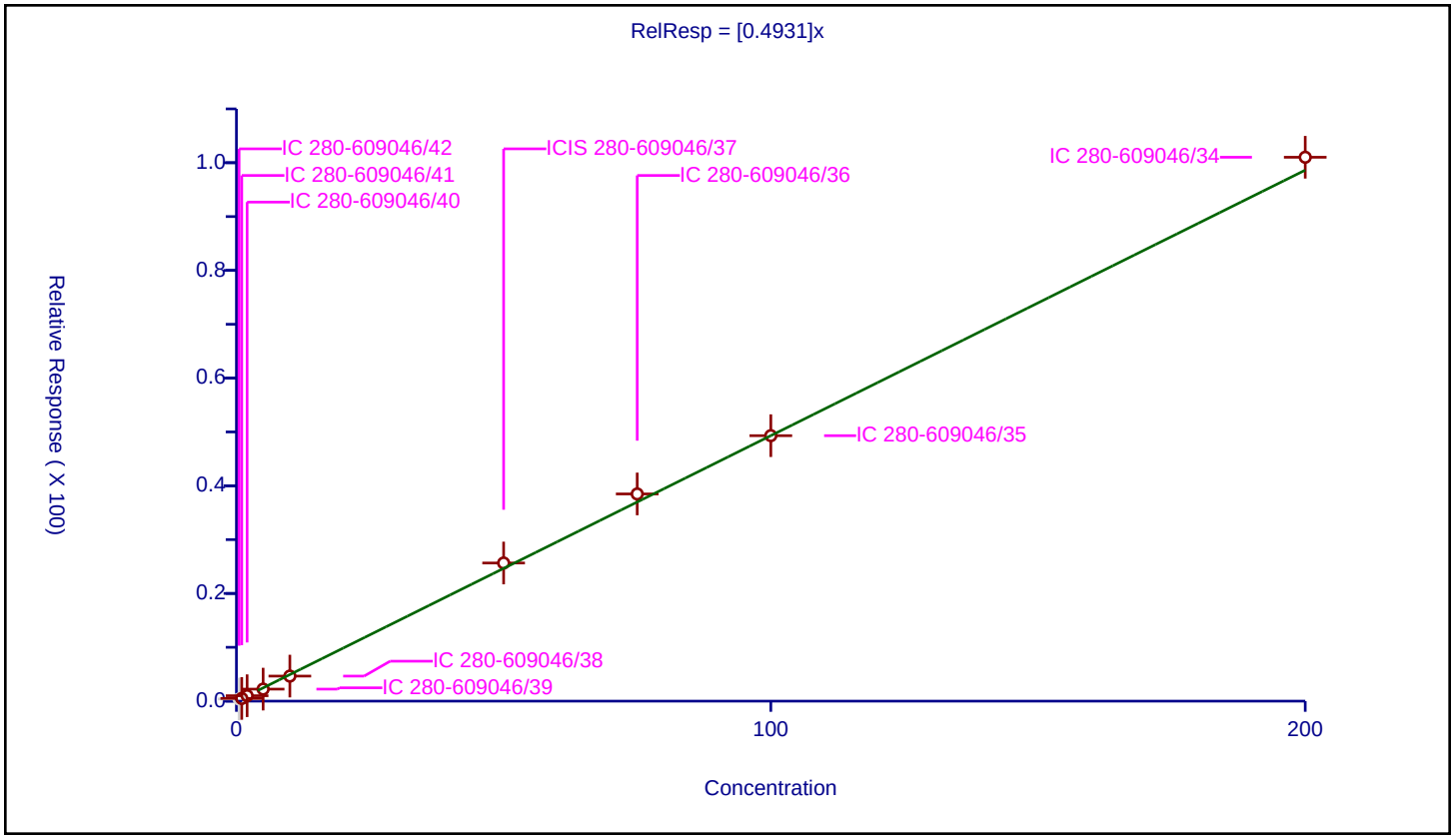
Curve Coefficients

Intercept:	0
Slope:	0.4931

Error Coefficients

Standard Error:	437000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.400825	50.0	427119.0	0.80165	N
2	IC 280-609046/41	1.0	0.503792	50.0	430436.0	0.503792	Y
3	IC 280-609046/40	2.0	1.008723	50.0	433915.0	0.504361	Y
4	IC 280-609046/39	5.0	2.234238	50.0	458568.0	0.446848	Y
5	IC 280-609046/38	10.0	4.65483	50.0	469942.0	0.465483	Y
6	ICIS 280-609046/37	50.0	25.654751	50.0	475448.0	0.513095	Y
7	IC 280-609046/36	75.0	38.483222	50.0	471295.0	0.51311	Y
8	IC 280-609046/35	100.0	49.30841	50.0	482150.0	0.493084	Y
9	IC 280-609046/34	200.0	101.017843	50.0	473698.0	0.505089	Y



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Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

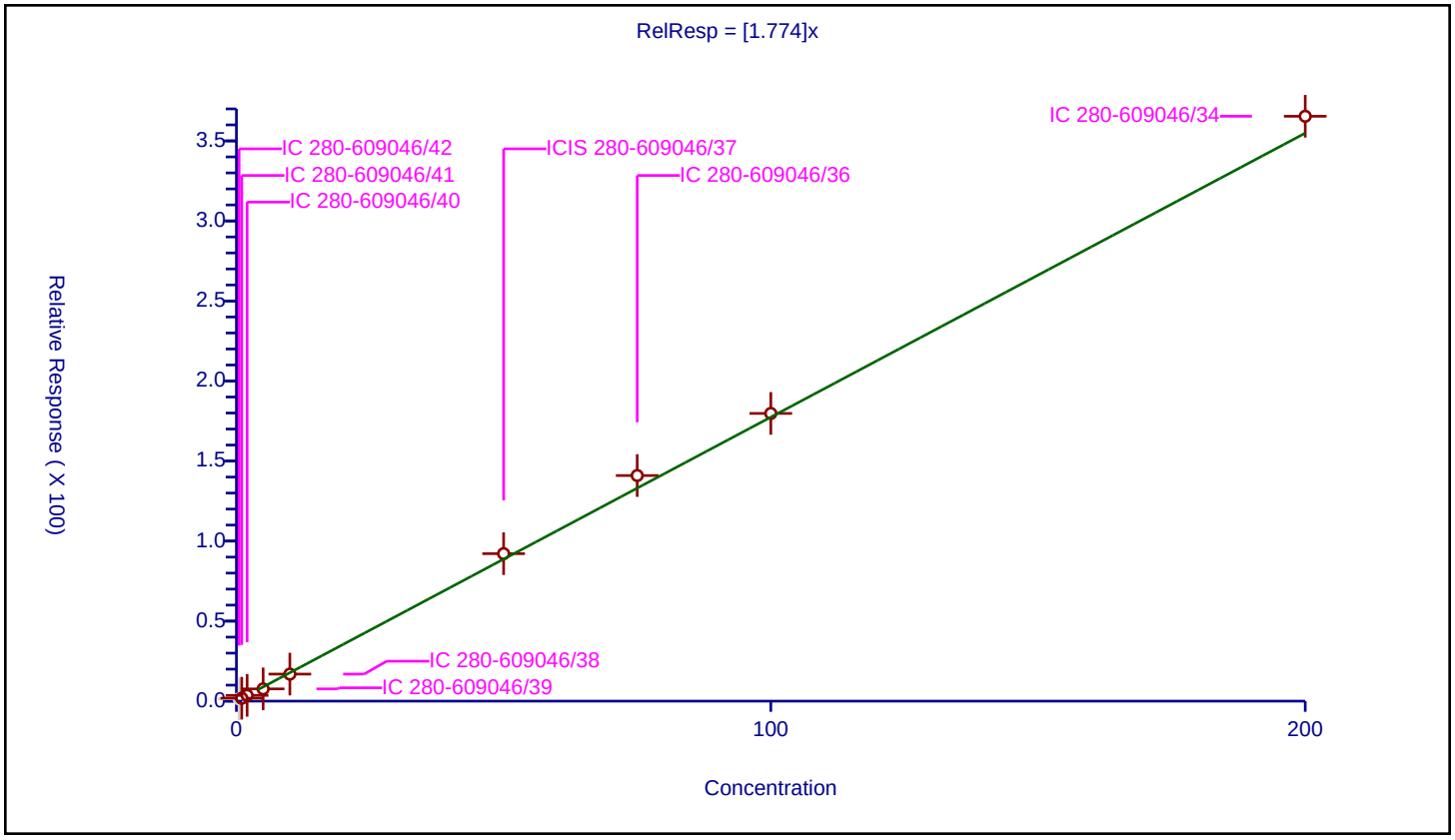
Curve Coefficients

Intercept:	0
Slope:	1.774

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.421969	50.0	427119.0	2.843938	N
2	IC 280-609046/41	1.0	1.830818	50.0	430436.0	1.830818	Y
3	IC 280-609046/40	2.0	3.595635	50.0	433915.0	1.797818	Y
4	IC 280-609046/39	5.0	7.647939	50.0	458568.0	1.529588	Y
5	IC 280-609046/38	10.0	16.896128	50.0	469942.0	1.689613	Y
6	ICIS 280-609046/37	50.0	92.135943	50.0	475448.0	1.842719	Y
7	IC 280-609046/36	75.0	140.944207	50.0	471295.0	1.879256	Y
8	IC 280-609046/35	100.0	179.750389	50.0	482150.0	1.797504	Y
9	IC 280-609046/34	200.0	365.392824	50.0	473698.0	1.826964	Y



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Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

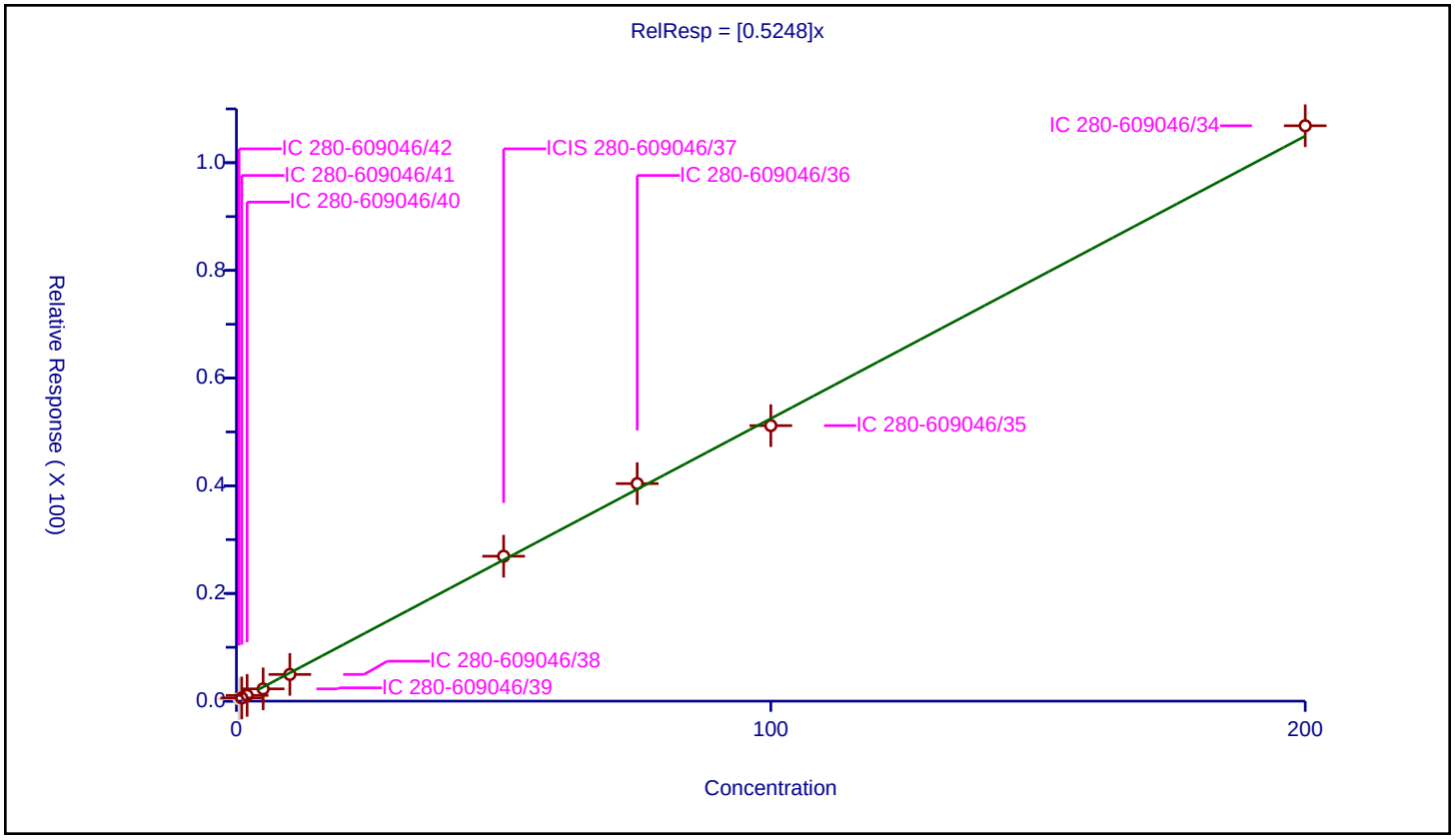
Curve Coefficients

Intercept:	0
Slope:	0.5248

Error Coefficients

Standard Error:	460000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.436295	50.0	427119.0	0.872591	N
2	IC 280-609046/41	1.0	0.59219	50.0	430436.0	0.59219	Y
3	IC 280-609046/40	2.0	1.063918	50.0	433915.0	0.531959	Y
4	IC 280-609046/39	5.0	2.276216	50.0	458568.0	0.455243	Y
5	IC 280-609046/38	10.0	4.957739	50.0	469942.0	0.495774	Y
6	ICIS 280-609046/37	50.0	26.918191	50.0	475448.0	0.538364	Y
7	IC 280-609046/36	75.0	40.403781	50.0	471295.0	0.538717	Y
8	IC 280-609046/35	100.0	51.17422	50.0	482150.0	0.511742	Y
9	IC 280-609046/34	200.0	106.866822	50.0	473698.0	0.534334	Y



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Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

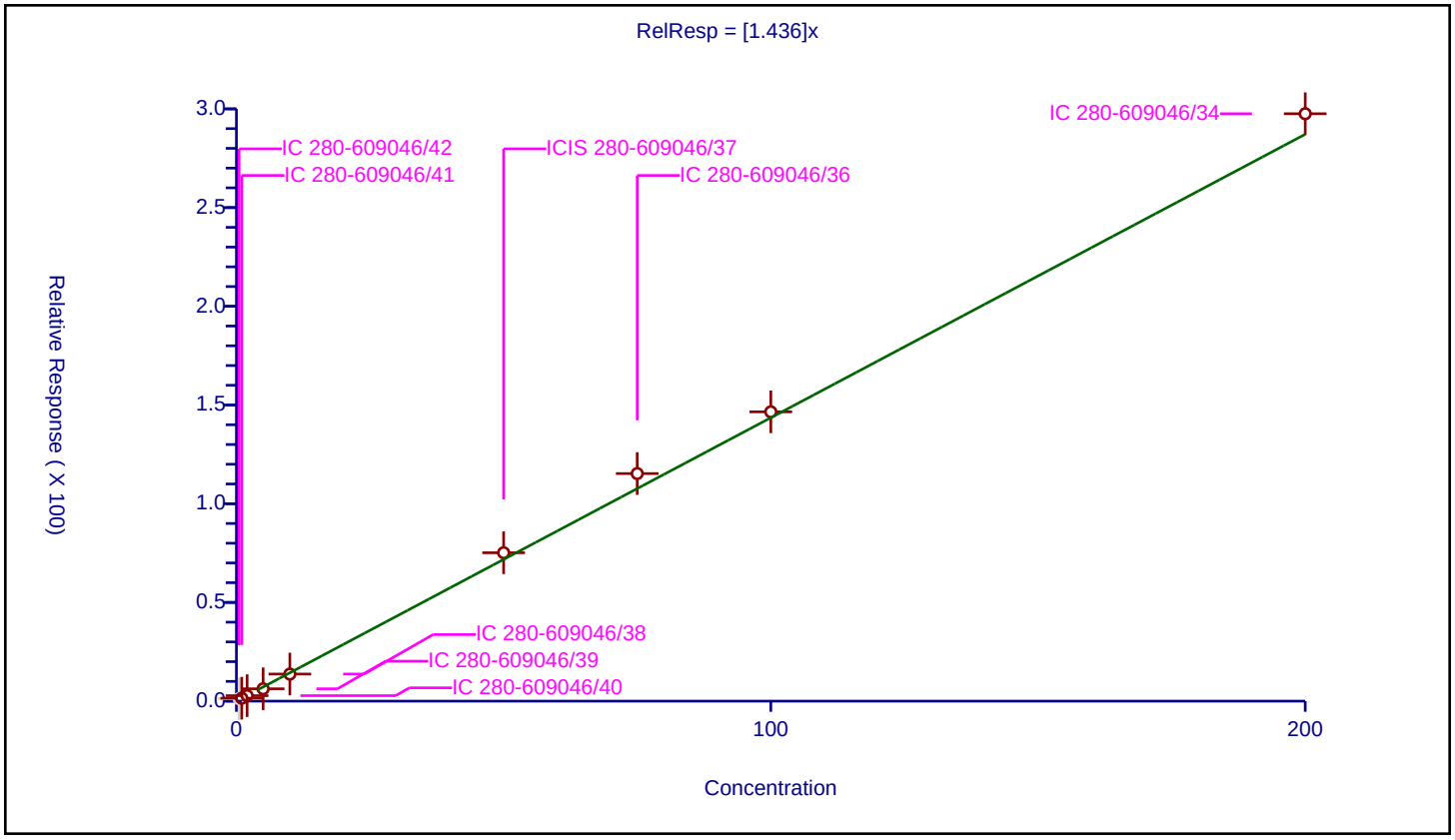
Curve Coefficients

Intercept:	0
Slope:	1.436

Error Coefficients

Standard Error:	1290000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.271777	50.0	427119.0	2.543553	N
2	IC 280-609046/41	1.0	1.487445	50.0	430436.0	1.487445	Y
3	IC 280-609046/40	2.0	2.765749	50.0	433915.0	1.382875	Y
4	IC 280-609046/39	5.0	6.251745	50.0	458568.0	1.250349	Y
5	IC 280-609046/38	10.0	13.711373	50.0	469942.0	1.371137	Y
6	ICIS 280-609046/37	50.0	75.164582	50.0	475448.0	1.503292	Y
7	IC 280-609046/36	75.0	115.282997	50.0	471295.0	1.537107	Y
8	IC 280-609046/35	100.0	146.548896	50.0	482150.0	1.465489	Y
9	IC 280-609046/34	200.0	297.544849	50.0	473698.0	1.487724	Y



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Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

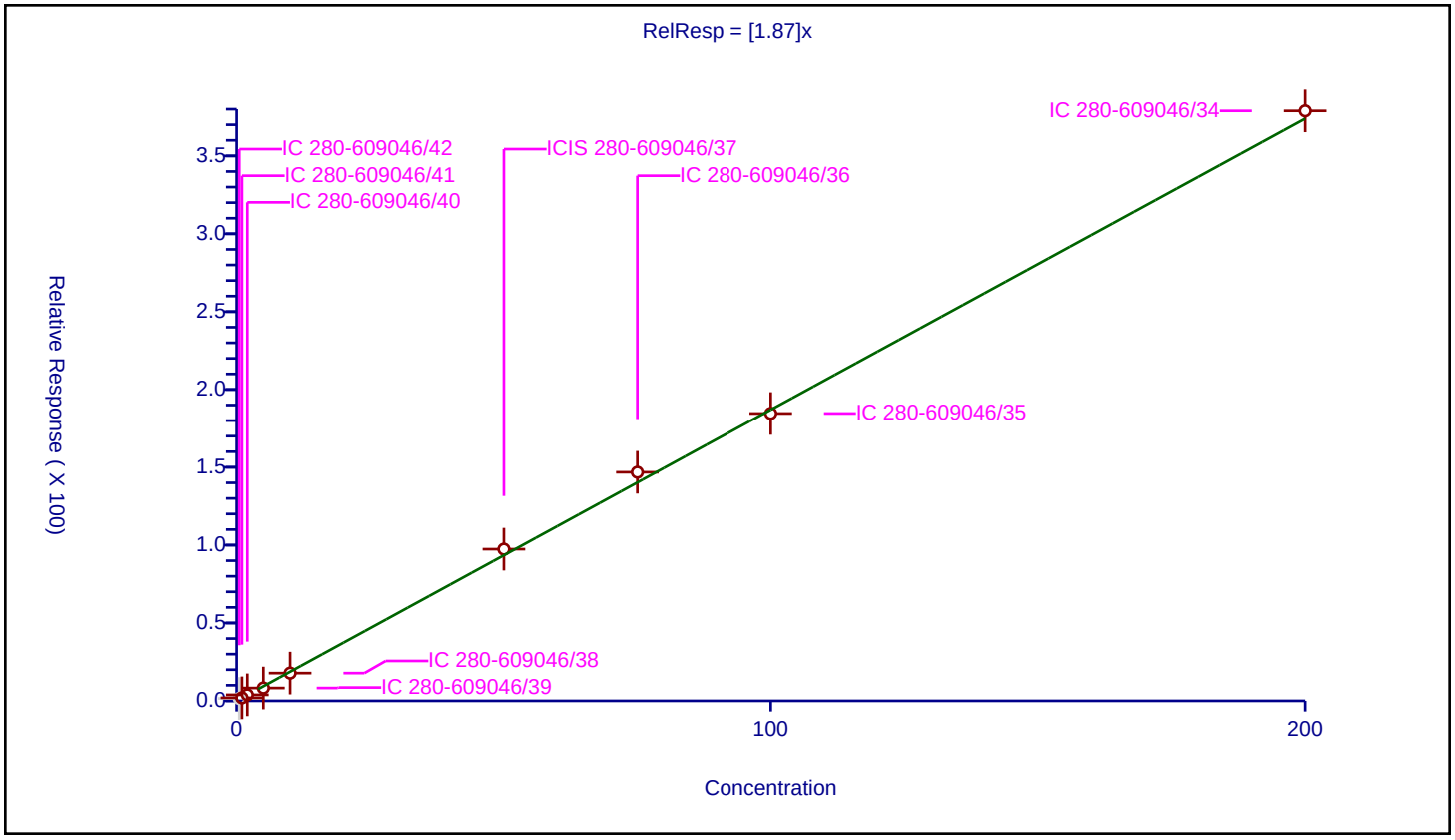
Curve Coefficients

Intercept:	0
Slope:	1.87

Error Coefficients

Standard Error:	1640000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.538213	50.0	427119.0	3.076426	N
2	IC 280-609046/41	1.0	1.945353	50.0	430436.0	1.945353	Y
3	IC 280-609046/40	2.0	3.869882	50.0	433915.0	1.934941	Y
4	IC 280-609046/39	5.0	8.247305	50.0	458568.0	1.649461	Y
5	IC 280-609046/38	10.0	17.821135	50.0	469942.0	1.782114	Y
6	ICIS 280-609046/37	50.0	97.403291	50.0	475448.0	1.948066	Y
7	IC 280-609046/36	75.0	146.799457	50.0	471295.0	1.957326	Y
8	IC 280-609046/35	100.0	184.593902	50.0	482150.0	1.845939	Y
9	IC 280-609046/34	200.0	378.924441	50.0	473698.0	1.894622	Y



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Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

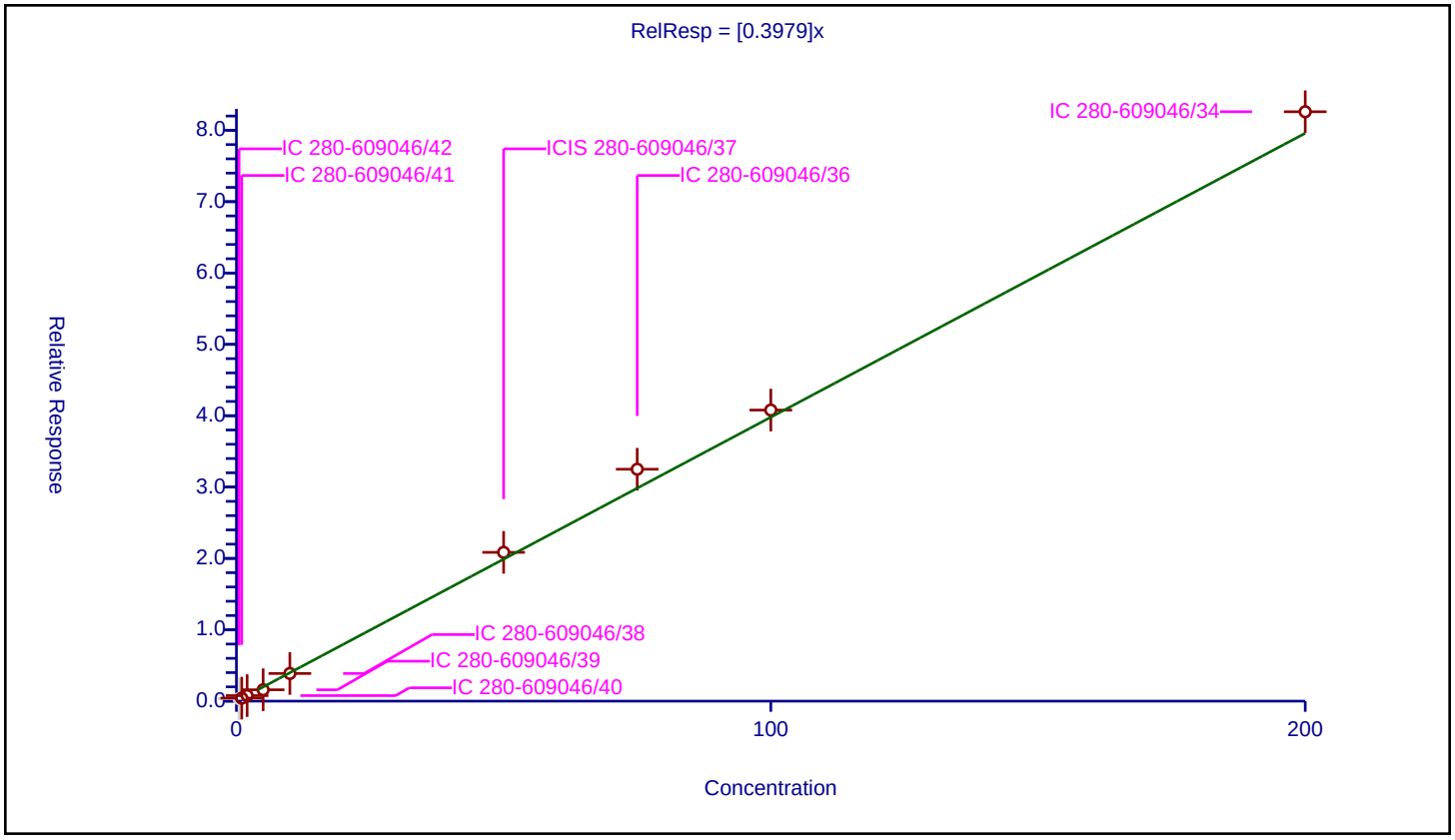
Curve Coefficients

Intercept:	0
Slope:	0.3979

Error Coefficients

Standard Error:	359000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.354	50.0	427119.0	0.707999	N
2	IC 280-609046/41	1.0	0.418529	50.0	430436.0	0.418529	Y
3	IC 280-609046/40	2.0	0.775843	50.0	433915.0	0.387922	Y
4	IC 280-609046/39	5.0	1.590277	50.0	458568.0	0.318055	Y
5	IC 280-609046/38	10.0	3.8775	50.0	469942.0	0.38775	Y
6	ICIS 280-609046/37	50.0	20.85391	50.0	475448.0	0.417078	Y
7	IC 280-609046/36	75.0	32.500663	50.0	471295.0	0.433342	Y
8	IC 280-609046/35	100.0	40.792077	50.0	482150.0	0.407921	Y
9	IC 280-609046/34	200.0	82.59904	50.0	473698.0	0.412995	Y



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Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

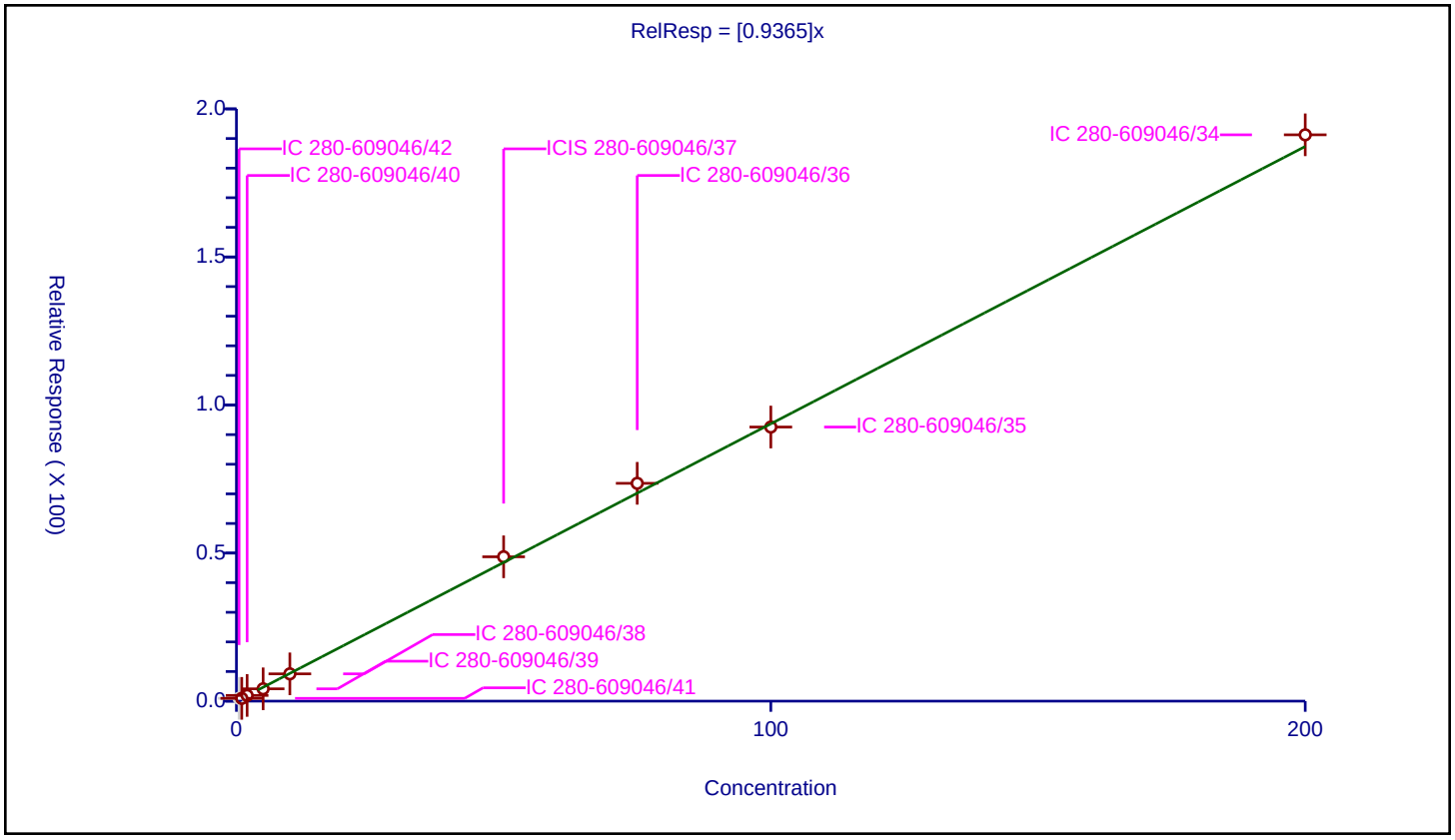
Curve Coefficients

Intercept:	0
Slope:	0.9365

Error Coefficients

Standard Error:	827000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.965539	50.0	427119.0	1.931078	N
2	IC 280-609046/41	1.0	0.935911	50.0	430436.0	0.935911	Y
3	IC 280-609046/40	2.0	1.92941	50.0	433915.0	0.964705	Y
4	IC 280-609046/39	5.0	4.162196	50.0	458568.0	0.832439	Y
5	IC 280-609046/38	10.0	9.216988	50.0	469942.0	0.921699	Y
6	ICIS 280-609046/37	50.0	48.745499	50.0	475448.0	0.97491	Y
7	IC 280-609046/36	75.0	73.562206	50.0	471295.0	0.980829	Y
8	IC 280-609046/35	100.0	92.562688	50.0	482150.0	0.925627	Y
9	IC 280-609046/34	200.0	191.245794	50.0	473698.0	0.956229	Y



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Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

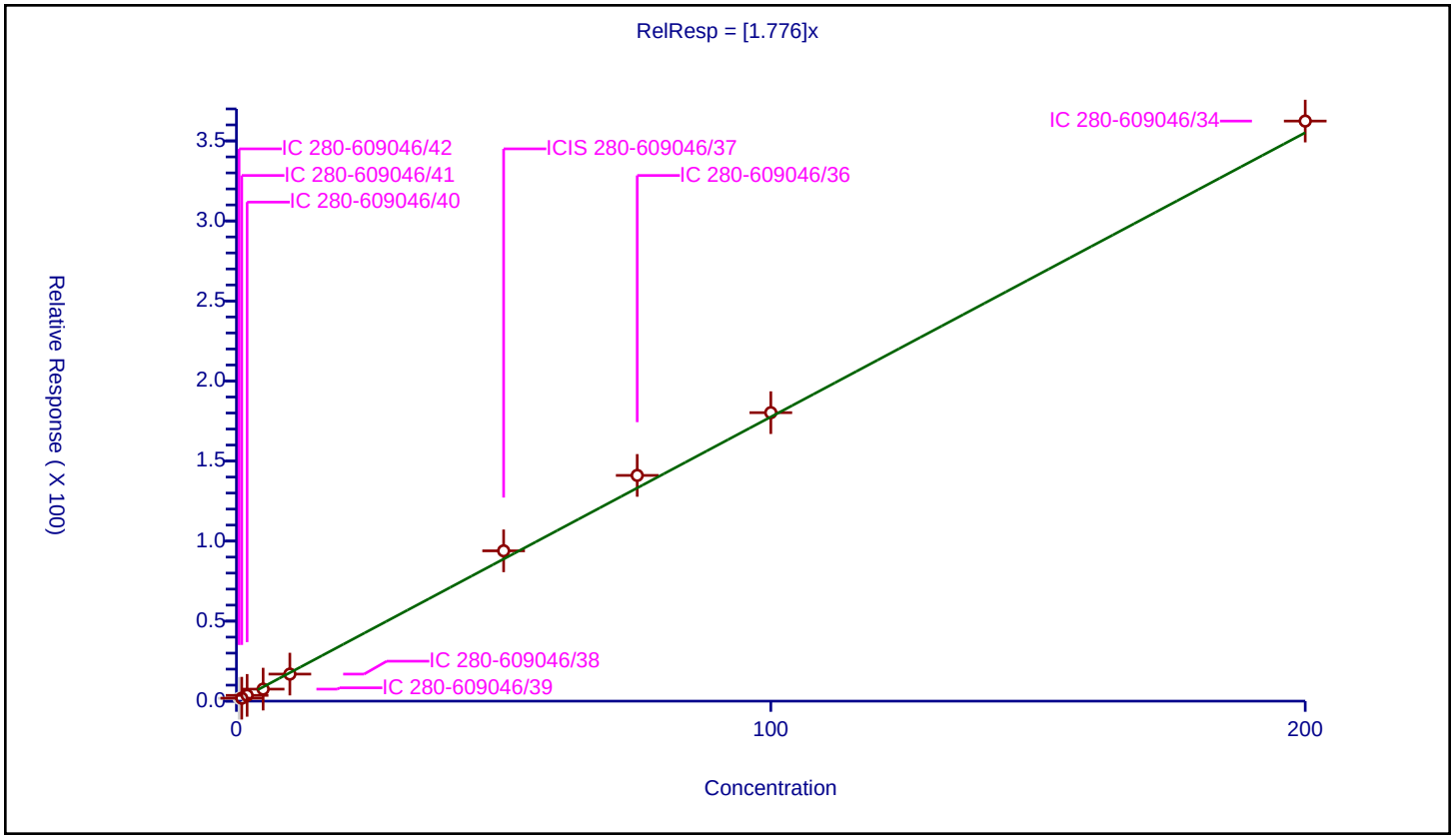
Curve Coefficients

Intercept:	0
Slope:	1.776

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.807693	50.0	427119.0	3.615386	N
2	IC 280-609046/41	1.0	1.843247	50.0	430436.0	1.843247	Y
3	IC 280-609046/40	2.0	3.595405	50.0	433915.0	1.797702	Y
4	IC 280-609046/39	5.0	7.516224	50.0	458568.0	1.503245	Y
5	IC 280-609046/38	10.0	16.890914	50.0	469942.0	1.689091	Y
6	ICIS 280-609046/37	50.0	93.901121	50.0	475448.0	1.878022	Y
7	IC 280-609046/36	75.0	141.022184	50.0	471295.0	1.880296	Y
8	IC 280-609046/35	100.0	180.232604	50.0	482150.0	1.802326	Y
9	IC 280-609046/34	200.0	362.391334	50.0	473698.0	1.811957	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

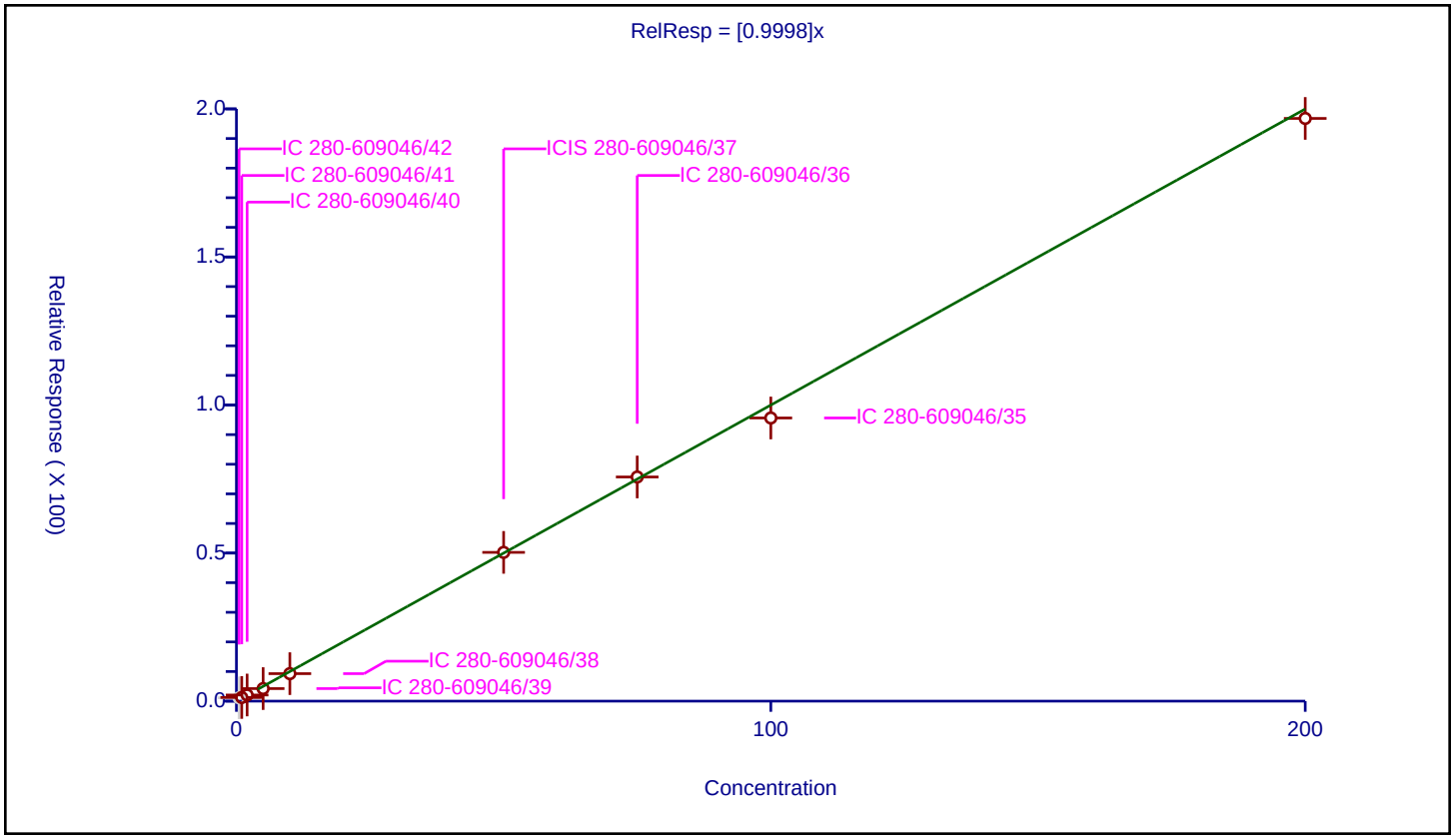
Curve Coefficients

Intercept:	0
Slope:	0.9998

Error Coefficients

Standard Error:	851000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.139261	50.0	427119.0	2.278522	N
2	IC 280-609046/41	1.0	1.232471	50.0	430436.0	1.232471	Y
3	IC 280-609046/40	2.0	2.07195	50.0	433915.0	1.035975	Y
4	IC 280-609046/39	5.0	4.237212	50.0	458568.0	0.847442	Y
5	IC 280-609046/38	10.0	9.284976	50.0	469942.0	0.928498	Y
6	ICIS 280-609046/37	50.0	50.239984	50.0	475448.0	1.0048	Y
7	IC 280-609046/36	75.0	75.697069	50.0	471295.0	1.009294	Y
8	IC 280-609046/35	100.0	95.62128	50.0	482150.0	0.956213	Y
9	IC 280-609046/34	200.0	196.779277	50.0	473698.0	0.983896	Y



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Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

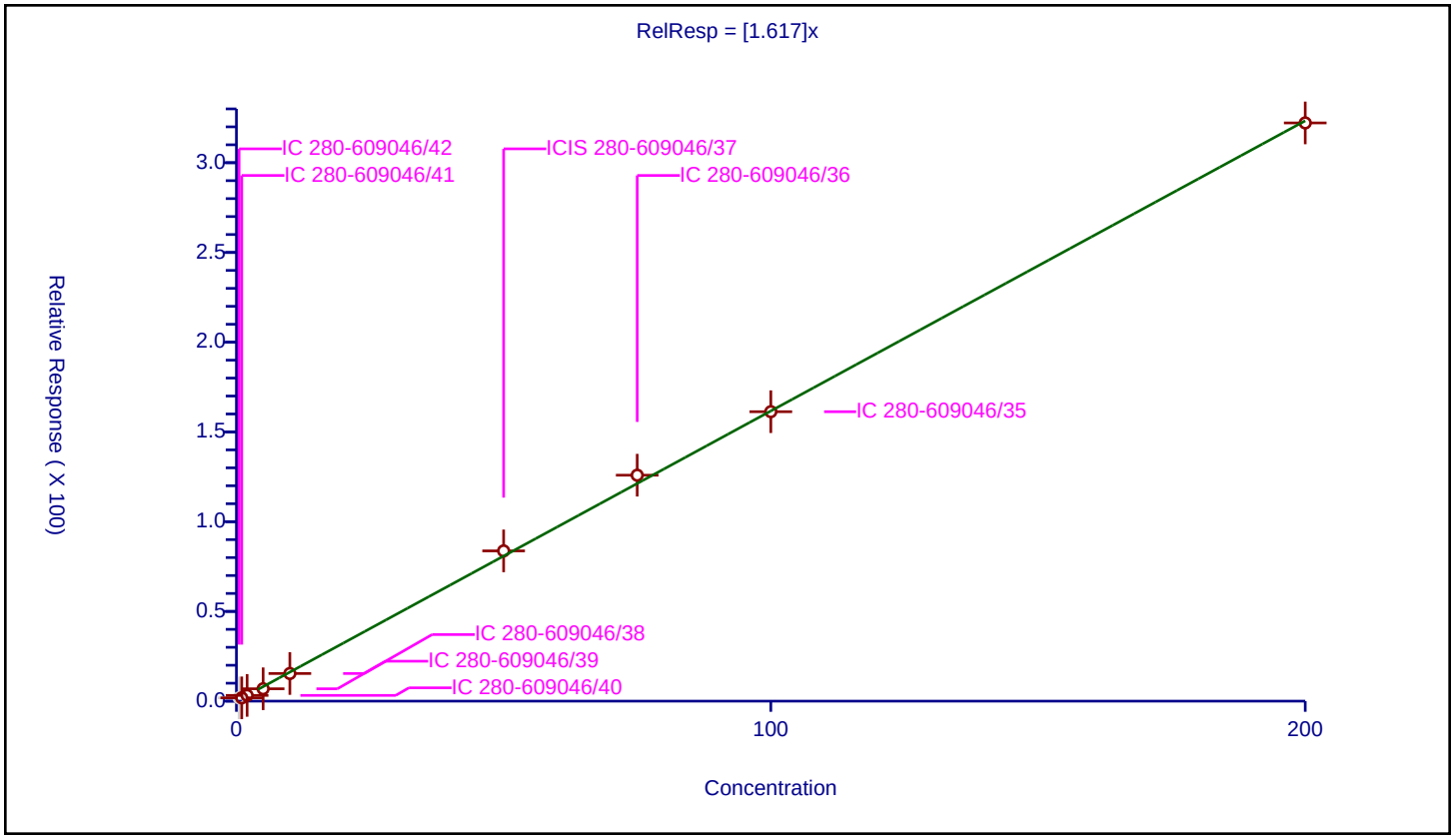
Curve Coefficients

Intercept:	0
Slope:	1.617

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	1.831808	50.0	427119.0	3.663616	N
2	IC 280-609046/41	1.0	1.837439	50.0	430436.0	1.837439	Y
3	IC 280-609046/40	2.0	3.203969	50.0	433915.0	1.601984	Y
4	IC 280-609046/39	5.0	6.898541	50.0	458568.0	1.379708	Y
5	IC 280-609046/38	10.0	15.391155	50.0	469942.0	1.539115	Y
6	ICIS 280-609046/37	50.0	83.720197	50.0	475448.0	1.674404	Y
7	IC 280-609046/36	75.0	125.895883	50.0	471295.0	1.678612	Y
8	IC 280-609046/35	100.0	161.273048	50.0	482150.0	1.61273	Y
9	IC 280-609046/34	200.0	322.176893	50.0	473698.0	1.610884	Y



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Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

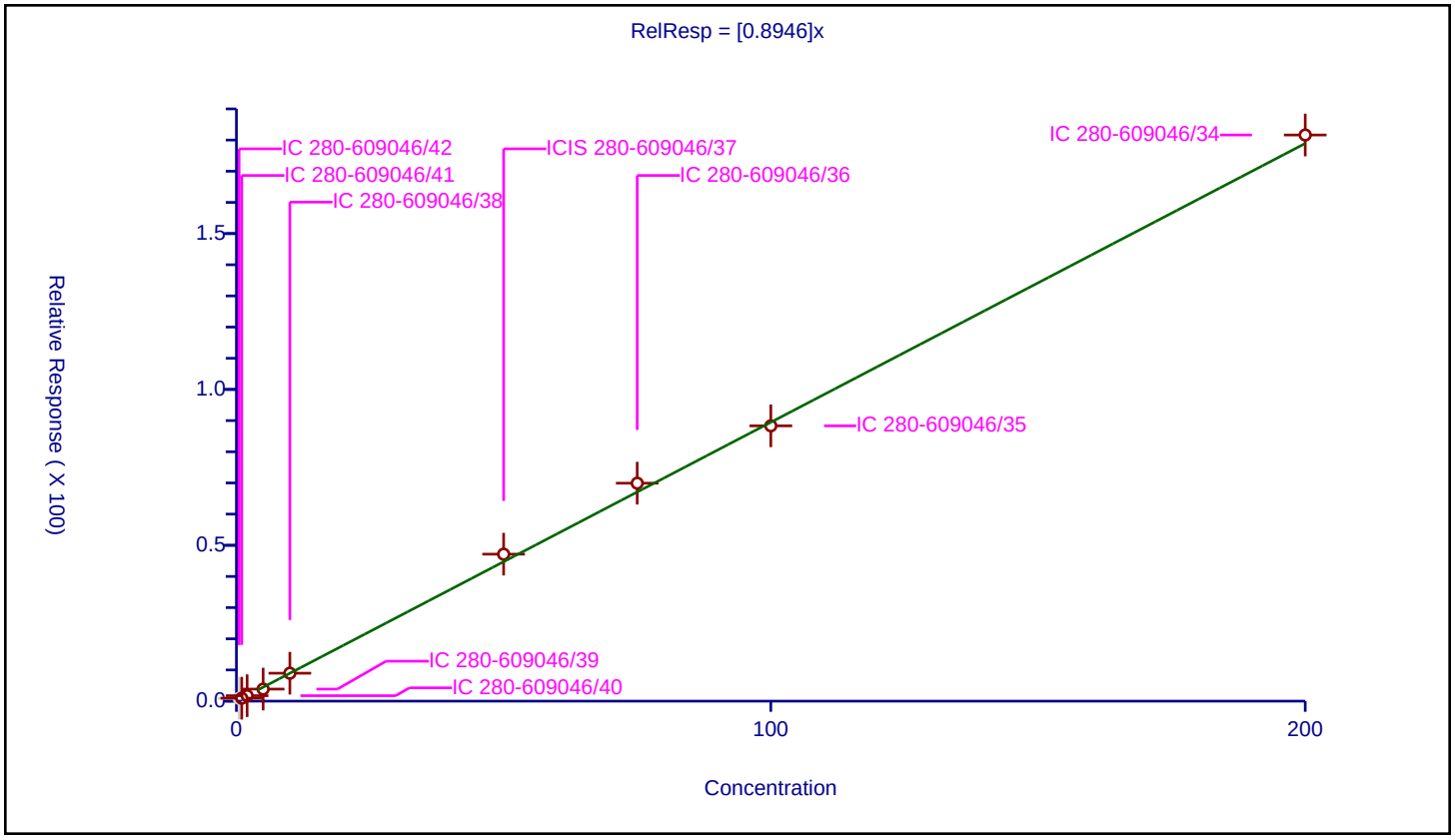
Curve Coefficients

Intercept:	0
Slope:	0.8946

Error Coefficients

Standard Error:	786000
Relative Standard Error:	6.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.912392	50.0	427119.0	1.824784	N
2	IC 280-609046/41	1.0	0.946714	50.0	430436.0	0.946714	Y
3	IC 280-609046/40	2.0	1.747808	50.0	433915.0	0.873904	Y
4	IC 280-609046/39	5.0	3.866166	50.0	458568.0	0.773233	Y
5	IC 280-609046/38	10.0	8.960467	50.0	469942.0	0.896047	Y
6	ICIS 280-609046/37	50.0	47.150793	50.0	475448.0	0.943016	Y
7	IC 280-609046/36	75.0	69.92266	50.0	471295.0	0.932302	Y
8	IC 280-609046/35	100.0	88.323551	50.0	482150.0	0.883236	Y
9	IC 280-609046/34	200.0	181.629857	50.0	473698.0	0.908149	Y



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Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

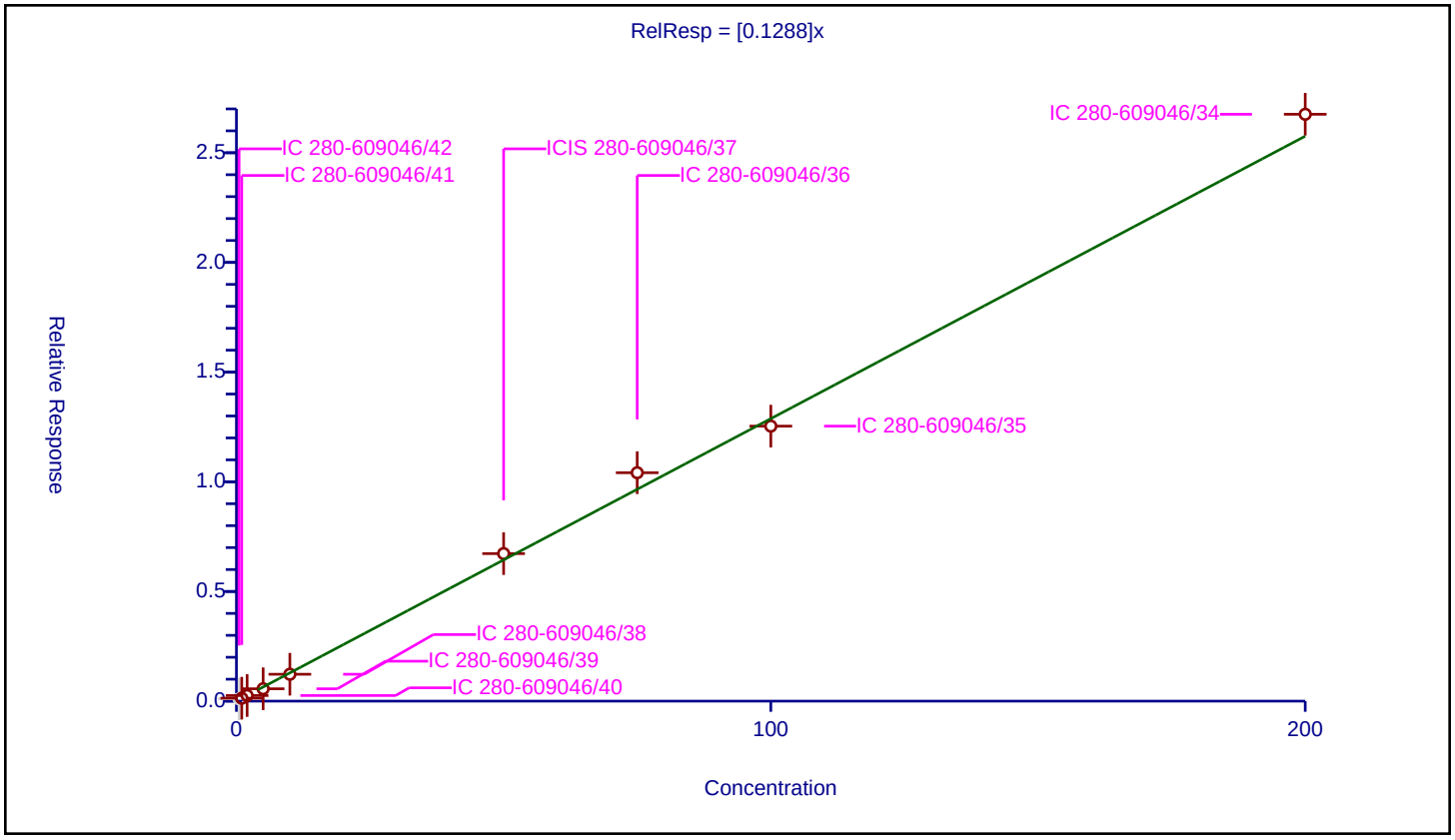
Curve Coefficients

Intercept:	0
Slope:	0.1288

Error Coefficients

Standard Error:	115000
Relative Standard Error:	6.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.104421	50.0	427119.0	0.208841	N
2	IC 280-609046/41	1.0	0.134631	50.0	430436.0	0.134631	Y
3	IC 280-609046/40	2.0	0.255465	50.0	433915.0	0.127732	Y
4	IC 280-609046/39	5.0	0.563929	50.0	458568.0	0.112786	Y
5	IC 280-609046/38	10.0	1.22579	50.0	469942.0	0.122579	Y
6	ICIS 280-609046/37	50.0	6.726603	50.0	475448.0	0.134532	Y
7	IC 280-609046/36	75.0	10.413541	50.0	471295.0	0.138847	Y
8	IC 280-609046/35	100.0	12.537903	50.0	482150.0	0.125379	Y
9	IC 280-609046/34	200.0	26.754599	50.0	473698.0	0.133773	Y



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Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

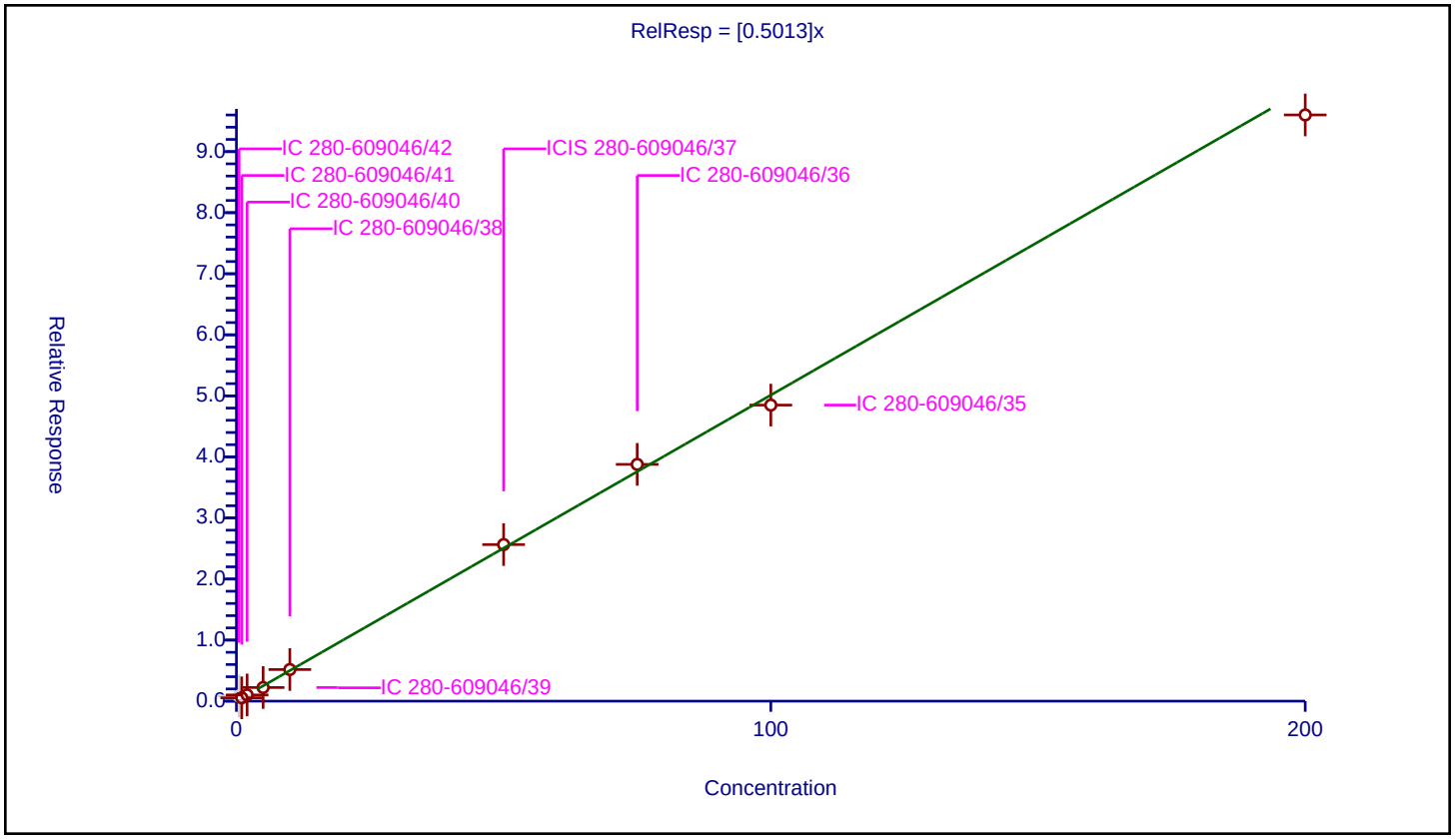
Curve Coefficients

Intercept:	0
Slope:	0.5013

Error Coefficients

Standard Error:	421000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.843442	50.0	427119.0	1.686884	N
2	IC 280-609046/41	1.0	0.545029	50.0	430436.0	0.545029	Y
3	IC 280-609046/40	2.0	1.01241	50.0	433915.0	0.506205	Y
4	IC 280-609046/39	5.0	2.233148	50.0	458568.0	0.44663	Y
5	IC 280-609046/38	10.0	5.174256	50.0	469942.0	0.517426	Y
6	ICIS 280-609046/37	50.0	25.644129	50.0	475448.0	0.512883	Y
7	IC 280-609046/36	75.0	38.778578	50.0	471295.0	0.517048	Y
8	IC 280-609046/35	100.0	48.488022	50.0	482150.0	0.48488	Y
9	IC 280-609046/34	200.0	96.008744	50.0	473698.0	0.480044	Y



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Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

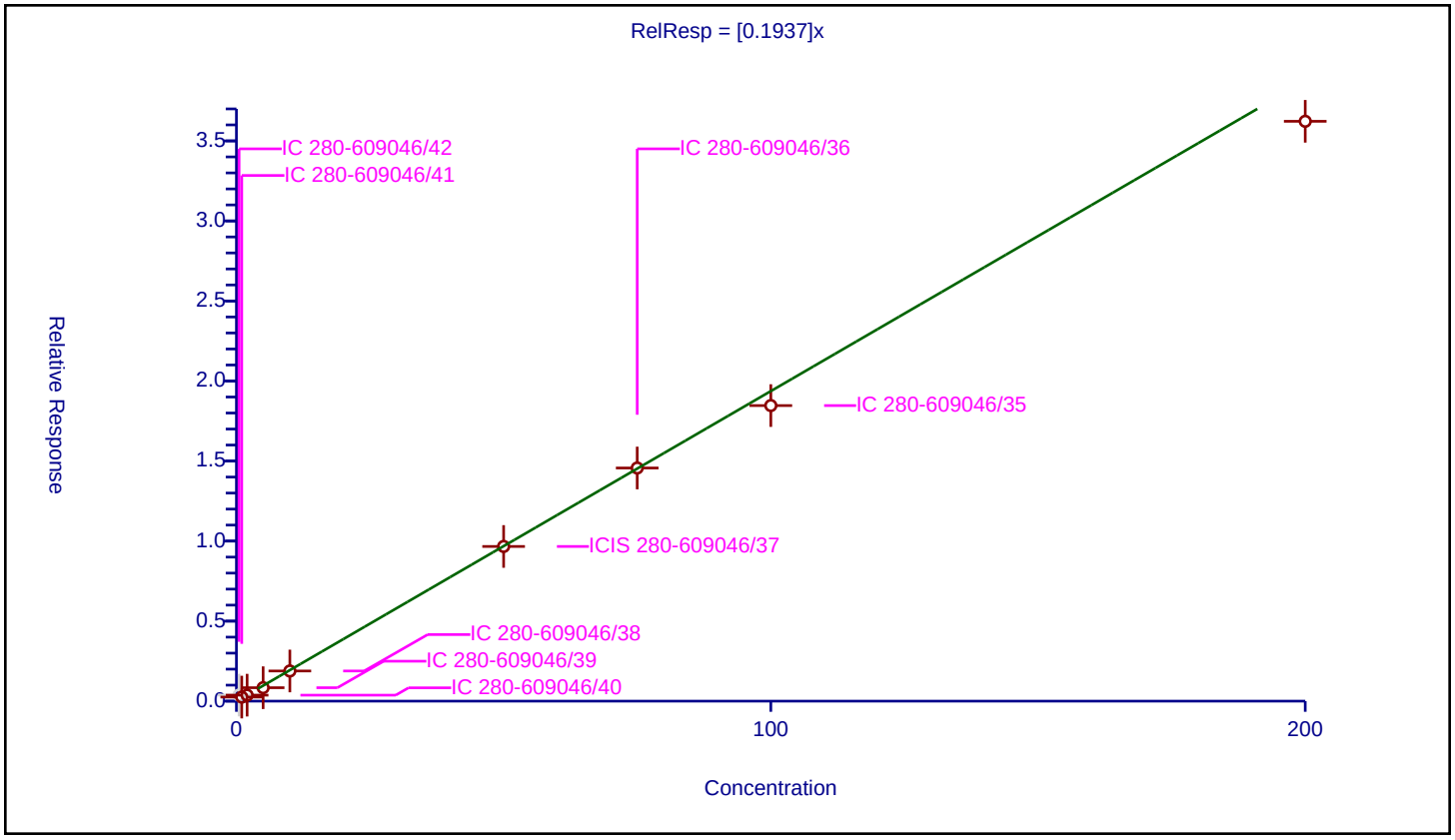
Curve Coefficients

Intercept:	0
Slope:	0.1937

Error Coefficients

Standard Error:	159000
Relative Standard Error:	13.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.380807	50.0	427119.0	0.761614	N
2	IC 280-609046/41	1.0	0.25358	50.0	430436.0	0.25358	Y
3	IC 280-609046/40	2.0	0.372884	50.0	433915.0	0.186442	Y
4	IC 280-609046/39	5.0	0.839025	50.0	458568.0	0.167805	Y
5	IC 280-609046/38	10.0	1.883743	50.0	469942.0	0.188374	Y
6	ICIS 280-609046/37	50.0	9.663412	50.0	475448.0	0.193268	Y
7	IC 280-609046/36	75.0	14.5654	50.0	471295.0	0.194205	Y
8	IC 280-609046/35	100.0	18.465312	50.0	482150.0	0.184653	Y
9	IC 280-609046/34	200.0	36.224662	50.0	473698.0	0.181123	Y



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Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

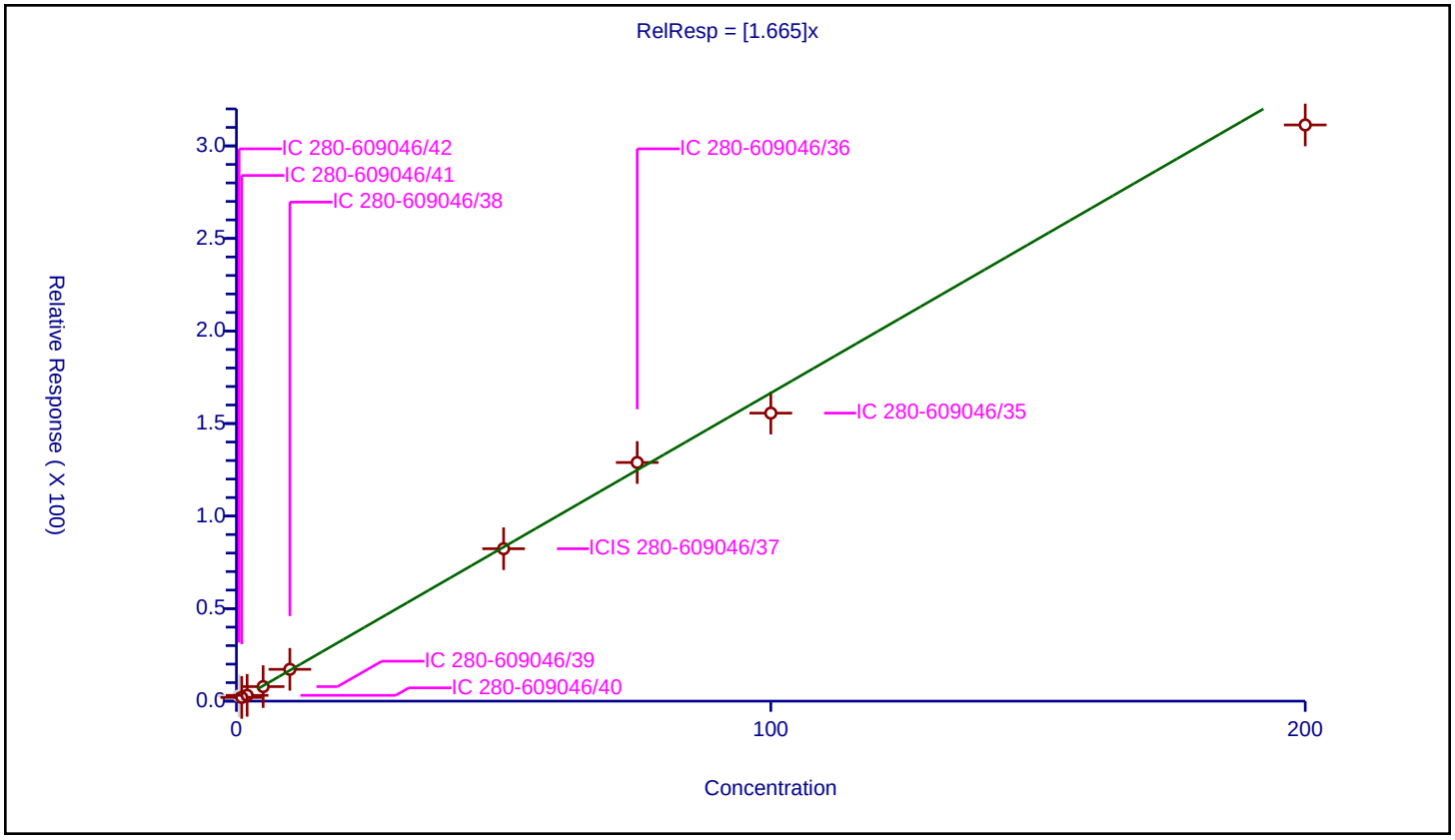
Curve Coefficients

Intercept:	0
Slope:	1.665

Error Coefficients

Standard Error:	1370000
Relative Standard Error:	8.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	2.883974	50.0	427119.0	5.767948	N
2	IC 280-609046/41	1.0	1.987984	50.0	430436.0	1.987984	Y
3	IC 280-609046/40	2.0	3.128608	50.0	433915.0	1.564304	Y
4	IC 280-609046/39	5.0	7.845074	50.0	458568.0	1.569015	Y
5	IC 280-609046/38	10.0	17.196803	50.0	469942.0	1.71968	Y
6	ICIS 280-609046/37	50.0	82.344652	50.0	475448.0	1.646893	Y
7	IC 280-609046/36	75.0	128.945565	50.0	471295.0	1.719274	Y
8	IC 280-609046/35	100.0	155.625739	50.0	482150.0	1.556257	Y
9	IC 280-609046/34	200.0	311.321559	50.0	473698.0	1.556608	Y



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Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

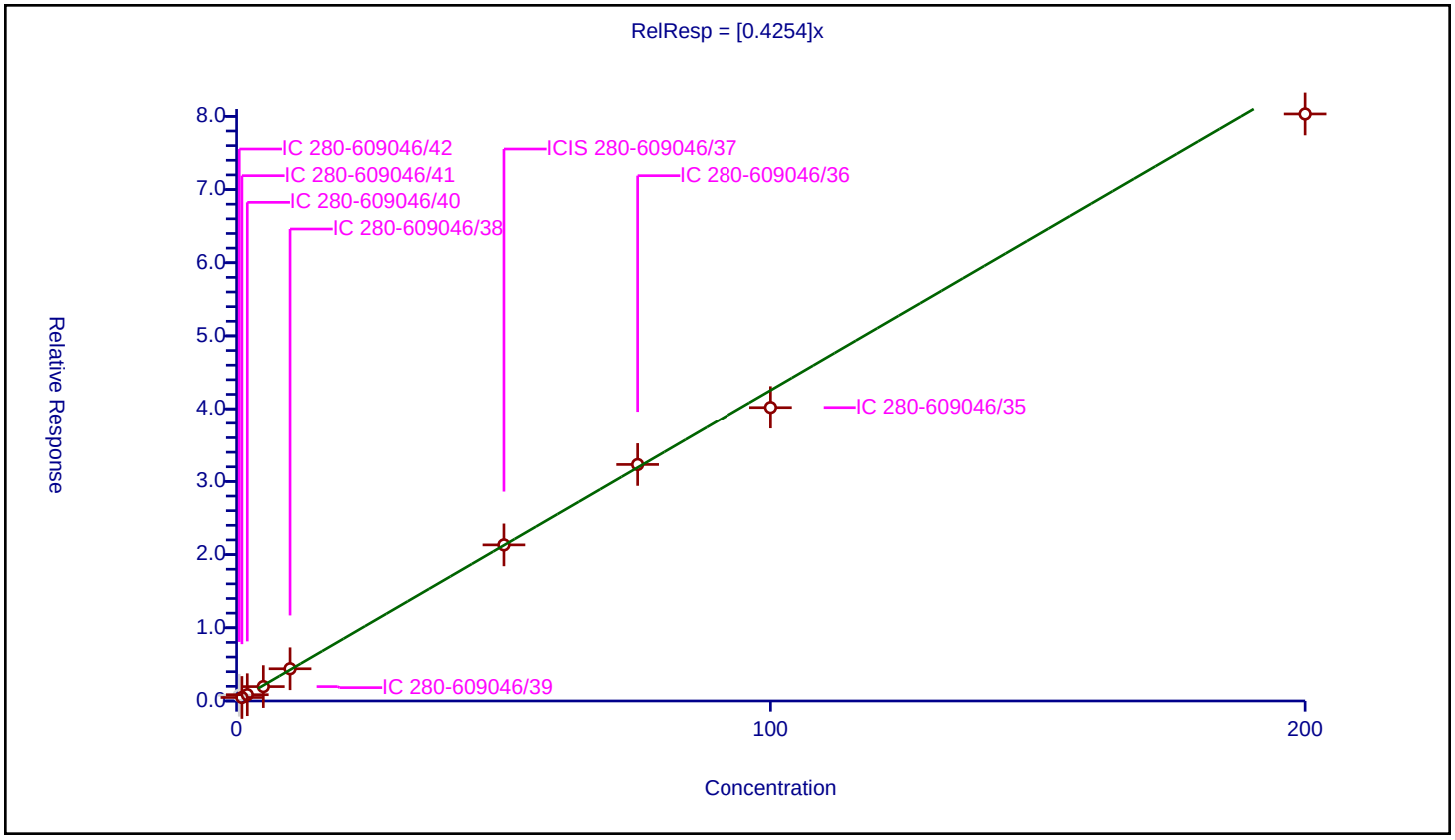
Curve Coefficients

Intercept:	0
Slope:	0.4254

Error Coefficients

Standard Error:	352000
Relative Standard Error:	6.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-609046/42	0.5	0.783388	50.0	427119.0	1.566776	N
2	IC 280-609046/41	1.0	0.480559	50.0	430436.0	0.480559	Y
3	IC 280-609046/40	2.0	0.857196	50.0	433915.0	0.428598	Y
4	IC 280-609046/39	5.0	1.966121	50.0	458568.0	0.393224	Y
5	IC 280-609046/38	10.0	4.402033	50.0	469942.0	0.440203	Y
6	ICIS 280-609046/37	50.0	21.326622	50.0	475448.0	0.426532	Y
7	IC 280-609046/36	75.0	32.31405	50.0	471295.0	0.430854	Y
8	IC 280-609046/35	100.0	40.196101	50.0	482150.0	0.401961	Y
9	IC 280-609046/34	200.0	80.325651	50.0	473698.0	0.401628	Y



11/27/2023
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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 Calibration End Date: 10/22/2022 17:23 Calibration ID: 72174

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-590907/23	X43673.D
Level 2	STD020 280-590907/24	X43674.D
Level 3	STD050 280-590907/25	X43675.D
Level 4	STD10 280-590907/26	X43676.D
Level 5	STD50 280-590907/27	X43677.D
Level 6	STD100 280-590907/28	X43678.D
Level 7	STD200 280-590907/29	X43679.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol	0.0032 0.0026	0.0026 0.0023	0.0029	0.0025	0.0025	Ave		0.0026				10.6		15.0			
Isopropyl alcohol	0.0178 0.0147	0.0171 0.0142	0.0159	0.0150	0.0139	Ave		0.0155				9.6		15.0			
Acetonitrile	0.0357 0.0260	0.0313 0.0247	0.0279	0.0254	0.0246	Ave		0.0279				14.8		15.0			
Isopropyl ether	0.1986 0.1823	0.1972 0.1737	0.1904	0.1822	0.1823	Ave		0.1867				4.9		15.0			
Chloroprene	0.3174 0.3430	0.2769 0.3217	0.3500	0.3482	0.3347	Ave		0.3274				7.8		15.0			
Tert-butyl ethyl ether	0.6896 0.6362	0.6424 0.6075	0.6570	0.6470	0.6461	Ave		0.6465				3.8		15.0			
Ethyl acetate	0.2311 0.1772	0.2104 0.1690	0.1935	0.1861	0.1868	Ave		0.1934				10.9		15.0			
Propionitrile	0.0348 0.0301	0.0312 0.0288	0.0318	0.0306	0.0301	Ave		0.0311				6.1		15.0			
Methacrylonitrile	0.1385 0.1142	0.1269 0.1079	0.1219	0.1219	0.1200	Ave		0.1216				7.9		15.0			
Tert-amyl methyl ether	0.6631 0.6037	0.6257 0.5760	0.6386	0.6432	0.6205	Ave		0.6244				4.5		15.0			
n-Butanol	0.0046 0.0071	0.0060 0.0066	0.0060	0.0060	0.0067	Ave		0.0061				13.1		15.0			
Methyl methacrylate	0.0714 0.0640	0.0656 0.0612	0.0657	0.0665	0.0678	Ave		0.0660				4.8		15.0			
2-Nitropropane	0.0833 0.0644	0.0730 0.0637	0.0698	0.0672	0.0684	Ave		0.0700				9.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 Calibration End Date: 10/22/2022 17:23 Calibration ID: 72174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-1,4-Dichloro-2-butene	0.2016 0.1913	0.1918 0.2163	0.1942	0.1866	0.1968	Ave		0.1969				5.0		15.0			
1,2,3-Trimethylbenzene	2.8314 2.6571	2.6423 2.5044	2.8365	2.7578	2.7500	Ave		2.7114				4.4		15.0			
1,3,5-Trichlorobenzene	0.8958 0.8497	0.7739 0.8025	0.8734	0.8509	0.8566	Ave		0.8433				4.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 | GC Column: DB-624 (60 ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 | Calibration End Date: 10/22/2022 17:23 | Calibration ID: 72174

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-590907/23	X43673.D
Level 2	STD020 280-590907/24	X43674.D
Level 3	STD050 280-590907/25	X43675.D
Level 4	STD10 280-590907/26	X43676.D
Level 5	STD50 280-590907/27	X43677.D
Level 6	STD100 280-590907/28	X43678.D
Level 7	STD200 280-590907/29	X43679.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethanol	FB	Ave	4673 399032	7779 718910	21619	37444	193816	60.0 6000	120 12000	300	600	3000
Isopropyl alcohol	FB	Ave	4391 372304	8539 733137	19965	37978	179278	10.0 1000	20.0 2000	50.0	100	500
Acetonitrile	FB	Ave	8803 660703	15619 1273959	34977	64393	317384	10.0 1000	20.0 2000	50.0	100	500
Isopropyl ether	FB	Ave	4904 463376	9855 894974	23877	46219	235392	1.00 100	2.00 200	5.00	10.0	50.0
Chloroprene	FB	Ave	7835 871601	13838 1657553	43897	88324	432283	1.00 100	2.00 200	5.00	10.0	50.0
Tert-butyl ethyl ether	FB	Ave	17025 1616686	32102 3130196	82404	164107	834301	1.00 100	2.00 200	5.00	10.0	50.0
Ethyl acetate	FB	Ave	11412 900674	21024 1742173	48531	94394	482374	2.00 200	4.00 400	10.0	20.0	100
Propionitrile	FB	Ave	8599 764517	15584 1484489	39918	77594	389290	10.0 1000	20.0 2000	50.0	100	500
Methacrylonitrile	FB	Ave	34182 2902366	63429 5559833	152942	309281	1549638	10.0 1000	20.0 2000	50.0	100	500
Tert-amyl methyl ether	FB	Ave	16370 1534136	31268 2968159	80101	163148	801237	1.00 100	2.00 200	5.00	10.0	50.0
n-Butanol	FB	Ave	2828 450075	7446 848596	18679	38349	215752	25.0 2500	50.0 5000	125	250	1250
Methyl methacrylate	FB	Ave	3527 325472	6557 630700	16474	33734	175199	2.00 200	4.00 400	10.0	20.0	100
2-Nitropropane	FB	Ave	4115 327521	7296 656258	17515	34115	176598	2.00 200	4.00 400	10.0	20.0	100
cis-1,4-Dichloro-2-butene	DCBd4	Ave	3716 384763	7080 889057	18102	35175	186298	2.00 200	4.00 400	10.0	20.0	100
1,2,3-Trimethylbenzene	DCBd4	Ave	26094 2672462	48769 5146842	132233	259975	1301729	1.00 100	2.00 200	5.00	10.0	50.0
1,3,5-Trichlorobenzene	DCBd4	Ave	8256	14284	40714	80216	405455	1.00	2.00	5.00	10.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 590907

SDG No.:

Instrument ID: VMS_X4 GC Column: DB-624 (60 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2022 15:19 Calibration End Date: 10/22/2022 17:23 Calibration ID: 72174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			854593	1649274				100	200			

Curve Type Legend:
Ave = Average ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43673.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Oct-2022 15:19:30 ALS Bottle#: 12 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:03 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1234372	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	284993	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	460800	50.0	50.0	
13 Ethylene oxide	43	2.146	2.210	-0.064	81	2305	100.0	0	
18 Ethanol	45	2.647	2.654	-0.007	94	4673	60.0	71.5	
20 Propene oxide	58	2.682	2.661	0.021	9	109	100.0	0	
25 Isopropyl alcohol	45	3.033	3.040	-0.007	97	4391	10.0	11.5	
28 Acetonitrile	41	3.161	3.161	0.000	100	8803	10.0	12.8	
41 Isopropyl ether	87	3.812	3.805	0.007	96	4904	1.00	1.06	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	7835	1.00	0.9693	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	96	17025	1.00	1.07	
46 Ethyl acetate	43	4.205	4.198	0.007	97	11412	2.00	2.39	
49 Propionitrile	54	4.234	4.234	0.000	98	8599	10.0	11.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	91	34182	10.0	11.4	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	92	16370	1.00	1.06	
66 n-Butanol	56	5.206	5.199	0.007	88	2828	25.0	18.7	
71 Methyl methacrylate	100	5.542	5.542	0.000	92	3527	2.00	2.16	
75 2-Nitropropane	41	5.900	5.900	0.000	96	4115	2.00	2.38	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	85	1528	2.00	2.56	a
98 cis-1,4-Dichloro-2-butene	53	8.545	8.538	0.007	0	3716	2.00	2.05	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	-0.001	98	26094	1.00	1.04	
119 1,3,5-Trichlorobenzene	180	11.141	11.134	0.007	94	8256	1.00	1.06	
166 Ethyl acrylate	55		0.000				ND	ND	
165 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	1.00	Units: uL
MV-Supp A_00073	Amount Added:	1.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

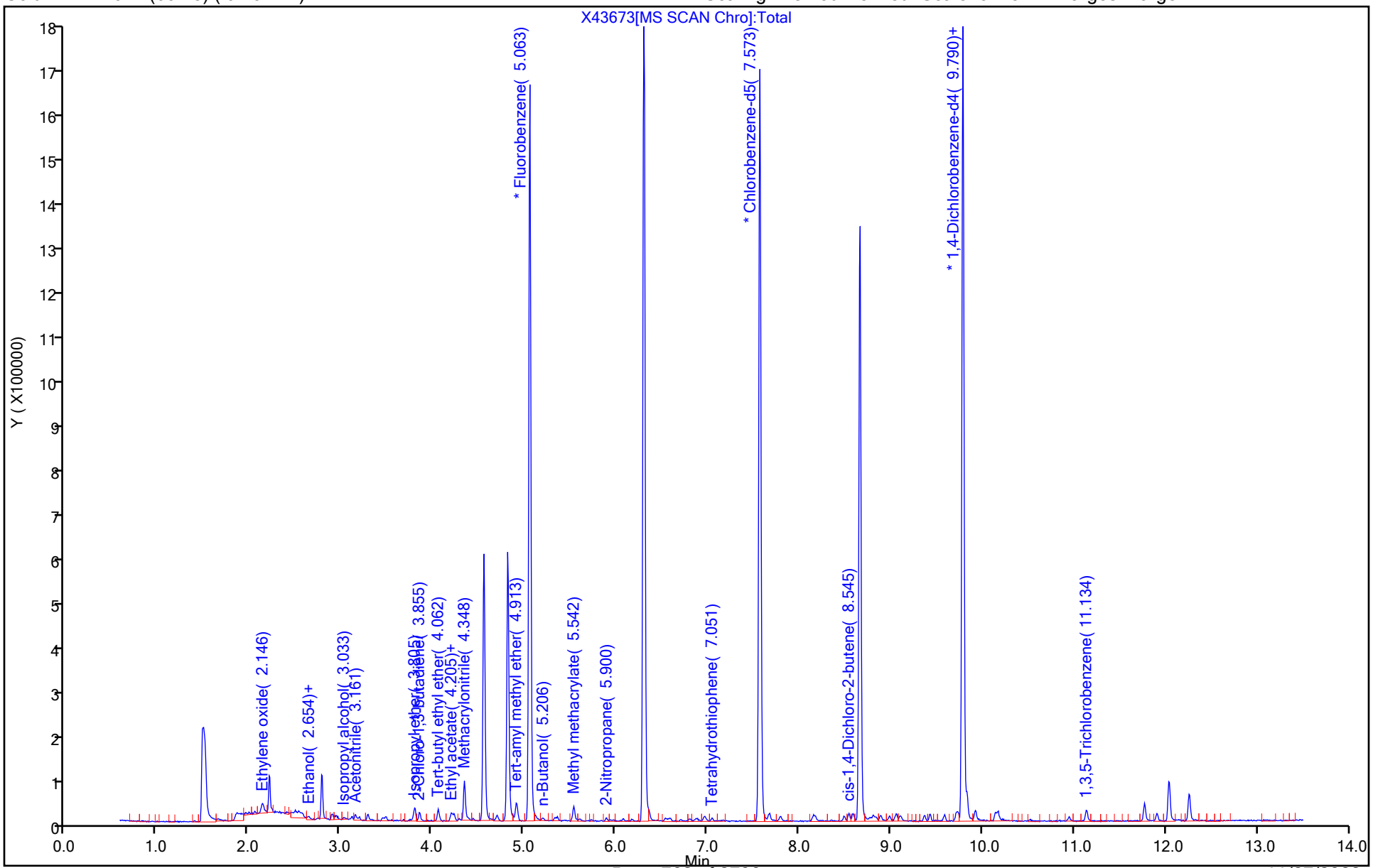
Report Date: 23-Oct-2022 12:17:03 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43673.D

Injection Date:	22-Oct-2022 15:19:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD010			Worklist Smp#:	23
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Manual Integration/User Assign Peak Report

Eurofins Denver

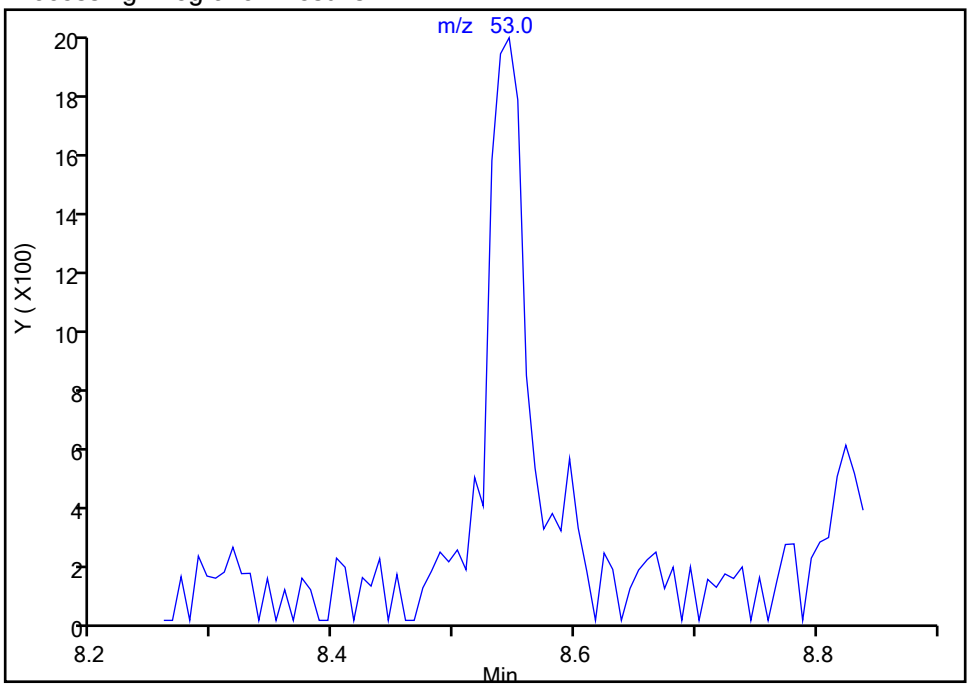
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43673.D
Injection Date: 22-Oct-2022 15:19:30 Instrument ID: VMS_X4
Lims ID: STD010
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 12 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

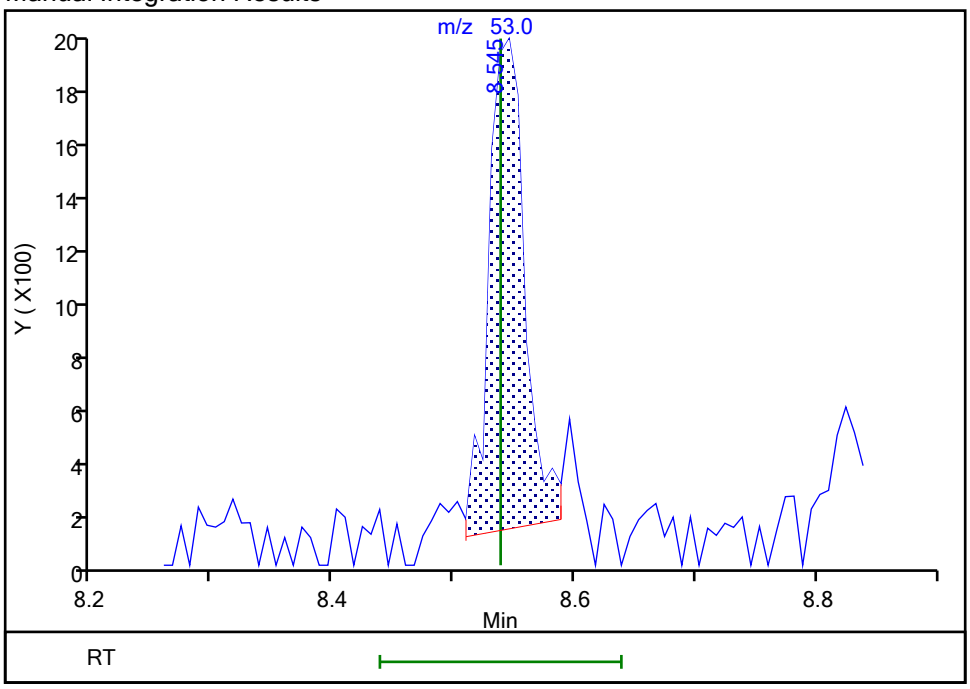
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 3716
Amount: 2.047520
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:26
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43674.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Oct-2022 15:40:30 ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:04 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1249318	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	287204	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	461417	50.0	50.0	
13 Ethylene oxide	43	2.139	2.210	-0.071	77	2101	200.0	0	
18 Ethanol	45	2.647	2.654	-0.007	99	7779	120.0	117.6	
20 Propene oxide	58	2.654	2.661	-0.007	23	163	200.0	0	
25 Isopropyl alcohol	45	3.033	3.040	-0.007	96	8539	20.0	22.0	
28 Acetonitrile	41	3.161	3.161	0.000	99	15619	20.0	22.4	
41 Isopropyl ether	87	3.805	3.805	0.000	92	9855	2.00	2.11	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	13838	2.00	1.69	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	96	32102	2.00	1.99	
46 Ethyl acetate	43	4.205	4.198	0.007	99	21024	4.00	4.35	
49 Propionitrile	54	4.234	4.234	0.000	98	15584	20.0	20.1	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	63429	20.0	20.9	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	92	31268	2.00	2.00	
66 n-Butanol	56	5.199	5.199	0.000	89	7446	50.0	48.6	
71 Methyl methacrylate	100	5.542	5.542	0.000	87	6557	4.00	3.97	
75 2-Nitropropane	41	5.900	5.900	0.000	98	7296	4.00	4.17	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	81	2459	4.00	4.09	a
98 cis-1,4-Dichloro-2-butene	53	8.546	8.538	0.008	0	7080	4.00	3.90	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	48769	2.00	1.95	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	95	14284	2.00	1.84	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	2.00	Units: uL
MV-Supp A_00073	Amount Added:	2.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

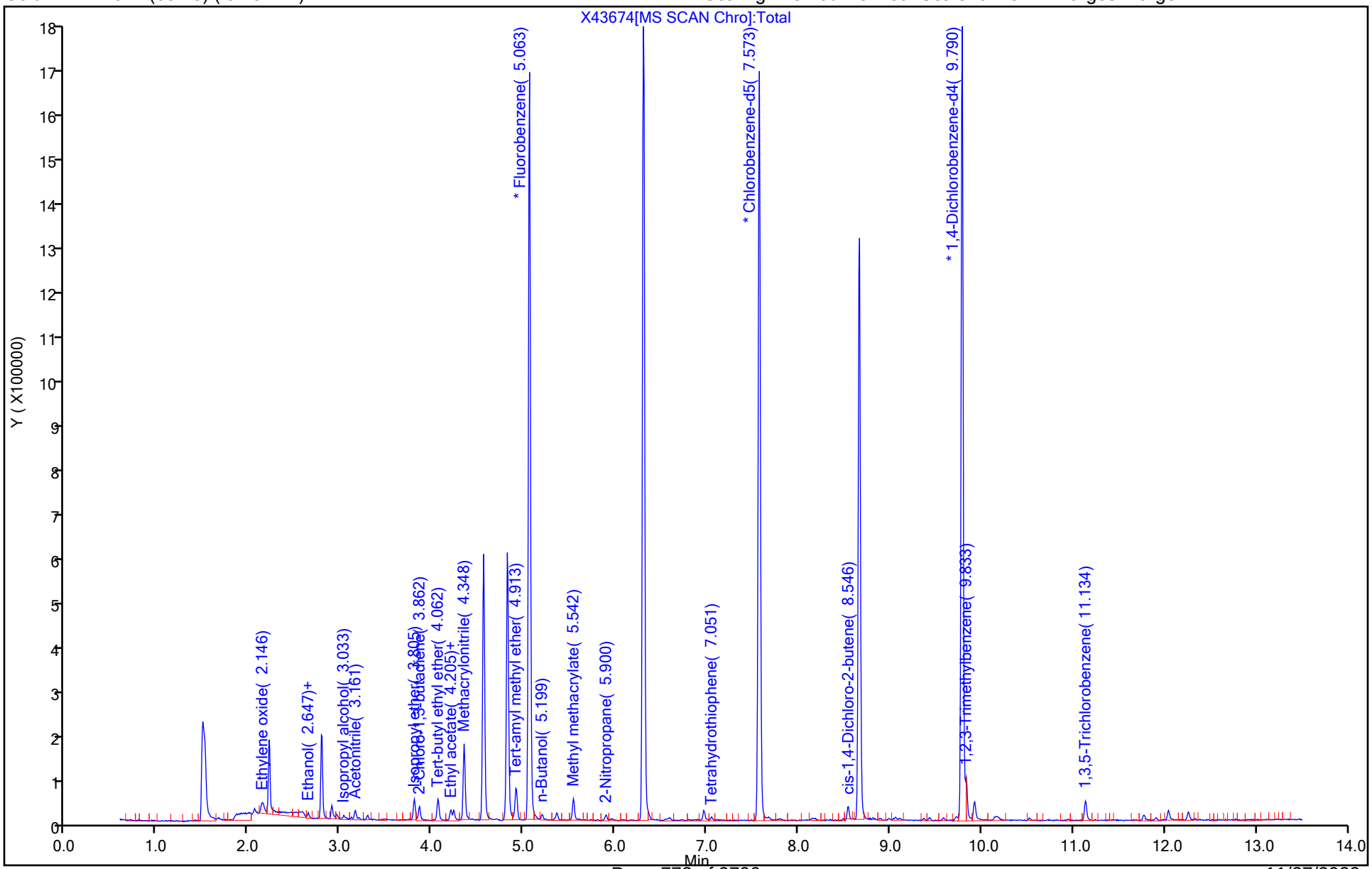
Report Date: 23-Oct-2022 12:17:04 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43674.D

Injection Date:	22-Oct-2022 15:40:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD020			Worklist Smp#:	24
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Manual Integration/User Assign Peak Report

Eurofins Denver

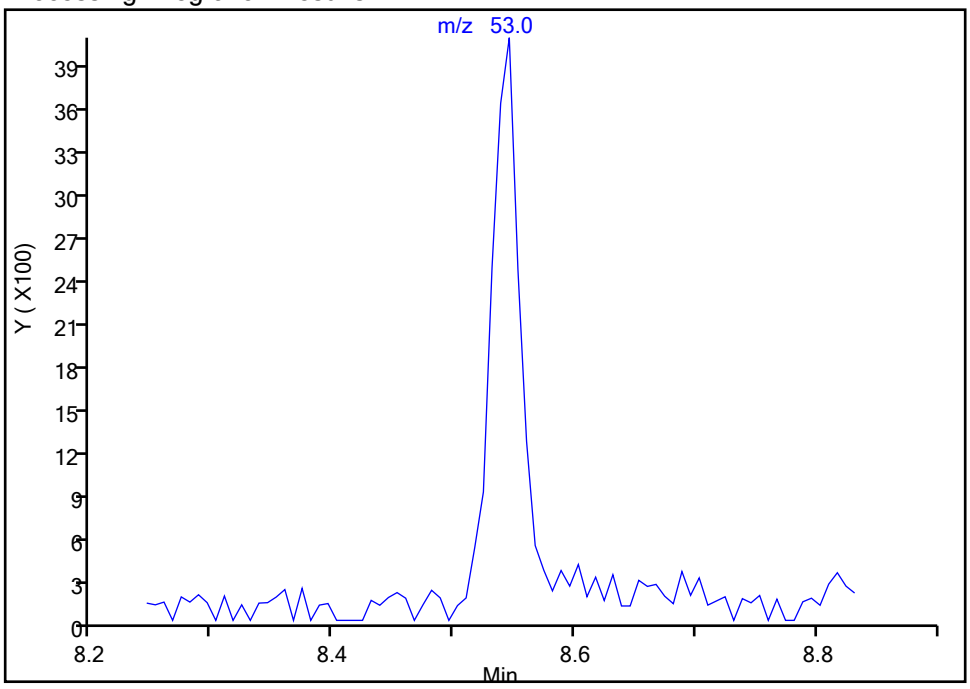
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43674.D
Injection Date: 22-Oct-2022 15:40:30 Instrument ID: VMS_X4
Lims ID: STD020
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

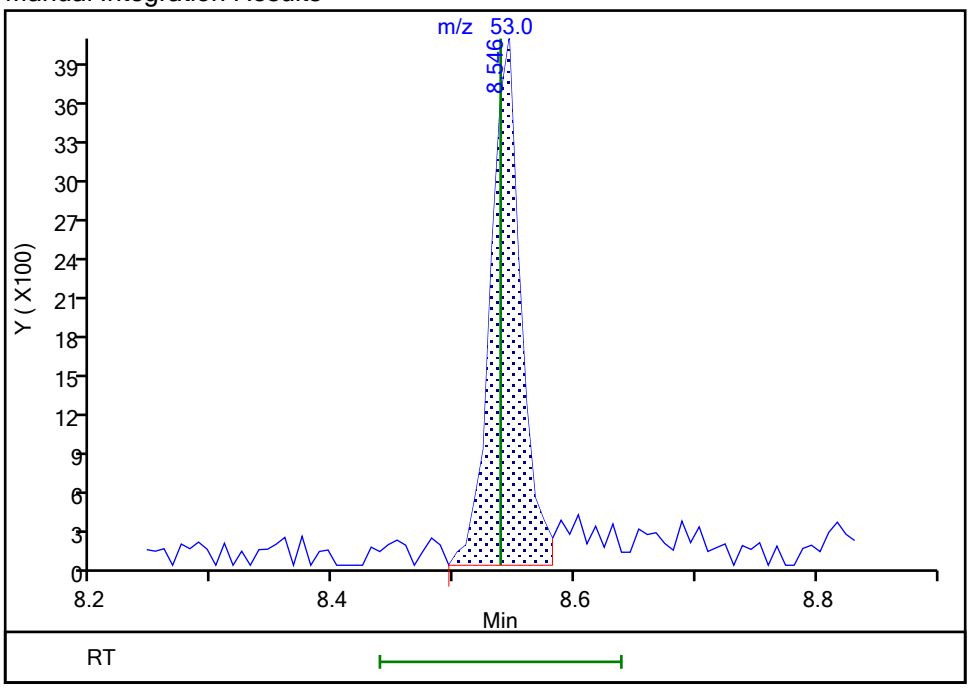
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 7080
Amount: 3.895870
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43675.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Oct-2022 16:01:30 ALS Bottle#: 14 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:05 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1254313	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	292644	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	466180	50.0	50.0	
13 Ethylene oxide	43	2.210	2.210	0.000	99	87282	500.0	0	
18 Ethanol	45	2.654	2.654	0.000	99	21619	300.0	325.6	
20 Propene oxide	58	2.654	2.661	-0.007	15	46	500.0	0	
25 Isopropyl alcohol	45	3.040	3.040	0.000	98	19965	50.0	51.3	
28 Acetonitrile	41	3.161	3.161	0.000	100	34977	50.0	49.9	
41 Isopropyl ether	87	3.805	3.805	0.000	93	23877	5.00	5.10	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	92	43897	5.00	5.34	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	82404	5.00	5.08	
46 Ethyl acetate	43	4.198	4.198	0.000	99	48531	10.0	10.0	
49 Propionitrile	54	4.234	4.234	0.000	99	39918	50.0	51.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	89	152942	50.0	50.1	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	90	80101	5.00	5.11	
66 n-Butanol	56	5.199	5.199	0.000	87	18679	125.0	121.5	
71 Methyl methacrylate	100	5.542	5.542	0.000	90	16474	10.0	9.94	
75 2-Nitropropane	41	5.900	5.900	0.000	98	17515	10.0	9.98	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	89	6254	10.0	10.2	a
98 cis-1,4-Dichloro-2-butene	53	8.545	8.538	0.007	0	18102	10.0	9.86	a
115 1,2,3-Trimethylbenzene	105	9.832	9.833	-0.001	99	132233	5.00	5.23	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	95	40714	5.00	5.18	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	5.00	Units: uL
MV-Supp A_00073	Amount Added:	5.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

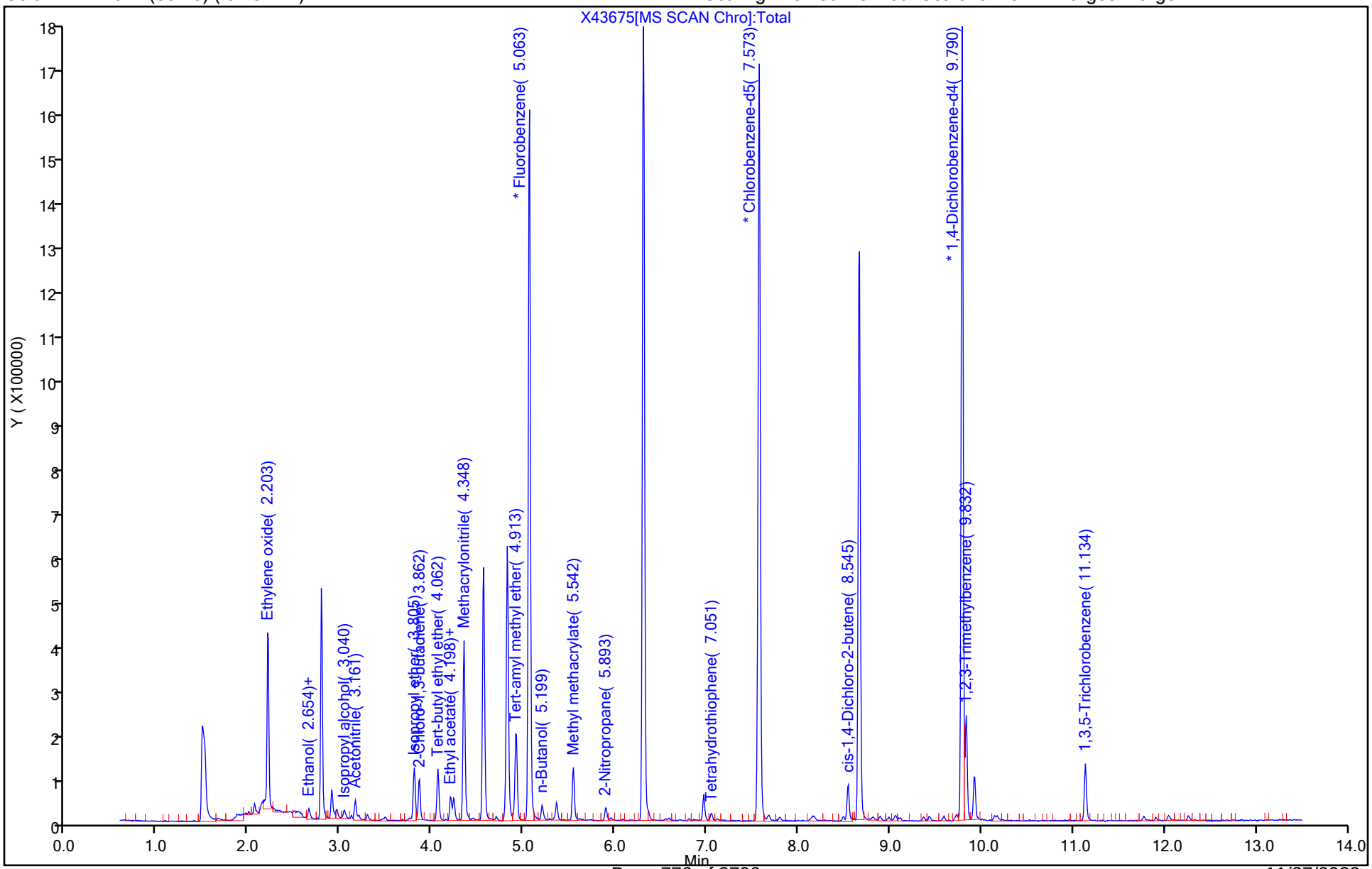
Report Date: 23-Oct-2022 12:17:05 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43675.D

Injection Date:	22-Oct-2022 16:01:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD050			Worklist Smp#:	25
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver

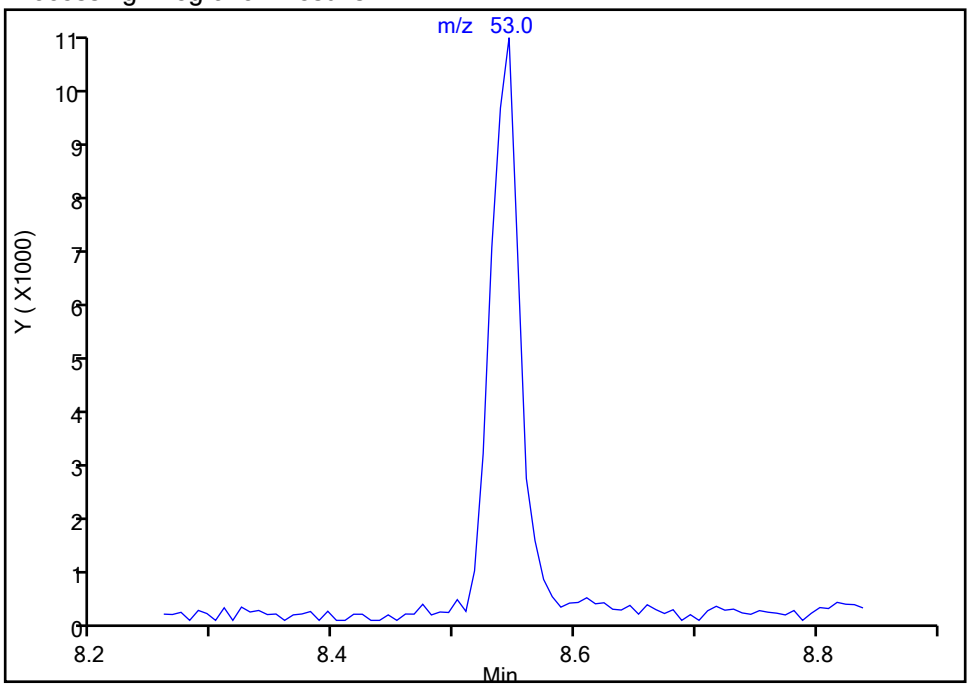
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43675.D
Injection Date: 22-Oct-2022 16:01:30 Instrument ID: VMS_X4
Lims ID: STD050
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 14 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

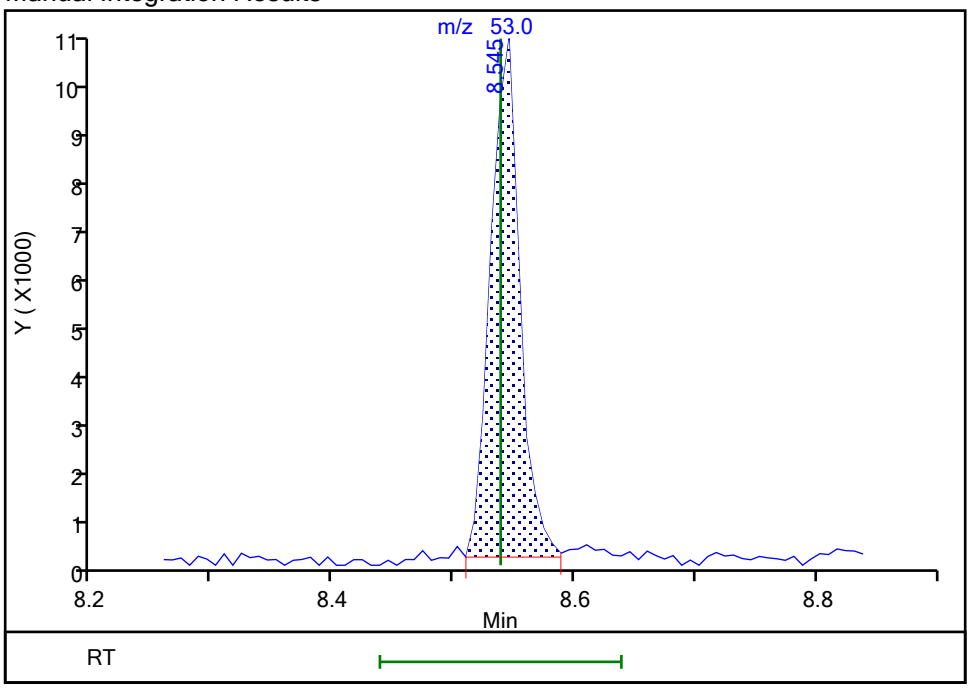
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 18102
Amount: 9.859111
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:38
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43676.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Oct-2022 16:21:30 ALS Bottle#: 15 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:07 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	98	1268265	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	87	294502	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	97	471349	50.0	50.0	
13 Ethylene oxide	43	2.146	2.210	-0.064	76	5283	1000.0	0	
18 Ethanol	45	2.646	2.654	-0.008	100	37444	600.0	557.8	
20 Propene oxide	58	2.725	2.661	0.064	8	60	1000.0	0	
25 Isopropyl alcohol	45	3.040	3.040	0.000	98	37978	100.0	96.6	
28 Acetonitrile	41	3.161	3.161	0.000	100	64393	100.0	90.9	
41 Isopropyl ether	87	3.805	3.805	0.000	92	46219	10.0	9.76	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	88324	10.0	10.6	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	164107	10.0	10.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	94394	20.0	19.2	
49 Propionitrile	54	4.234	4.234	0.000	99	77594	100.0	98.5	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	309281	100.0	100.3	
64 Tert-amyl methyl ether	73	4.920	4.913	0.007	90	163148	10.0	10.3	
66 n-Butanol	56	5.199	5.199	0.000	88	38349	250.0	246.7	
71 Methyl methacrylate	100	5.542	5.542	0.000	88	33734	20.0	20.1	
75 2-Nitropropane	41	5.893	5.900	-0.007	98	34115	20.0	19.2	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	92	11047	20.0	17.9	a
98 cis-1,4-Dichloro-2-butene	53	8.545	8.538	0.007	0	35175	20.0	18.9	a
115 1,2,3-Trimethylbenzene	105	9.832	9.833	-0.001	99	259975	10.0	10.2	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	80216	10.0	10.1	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added:	10.00	Units: uL
MV-Supp A_00073	Amount Added:	10.00	Units: uL
mv-Cent IS_00007	Amount Added:	5.00	Units: uL

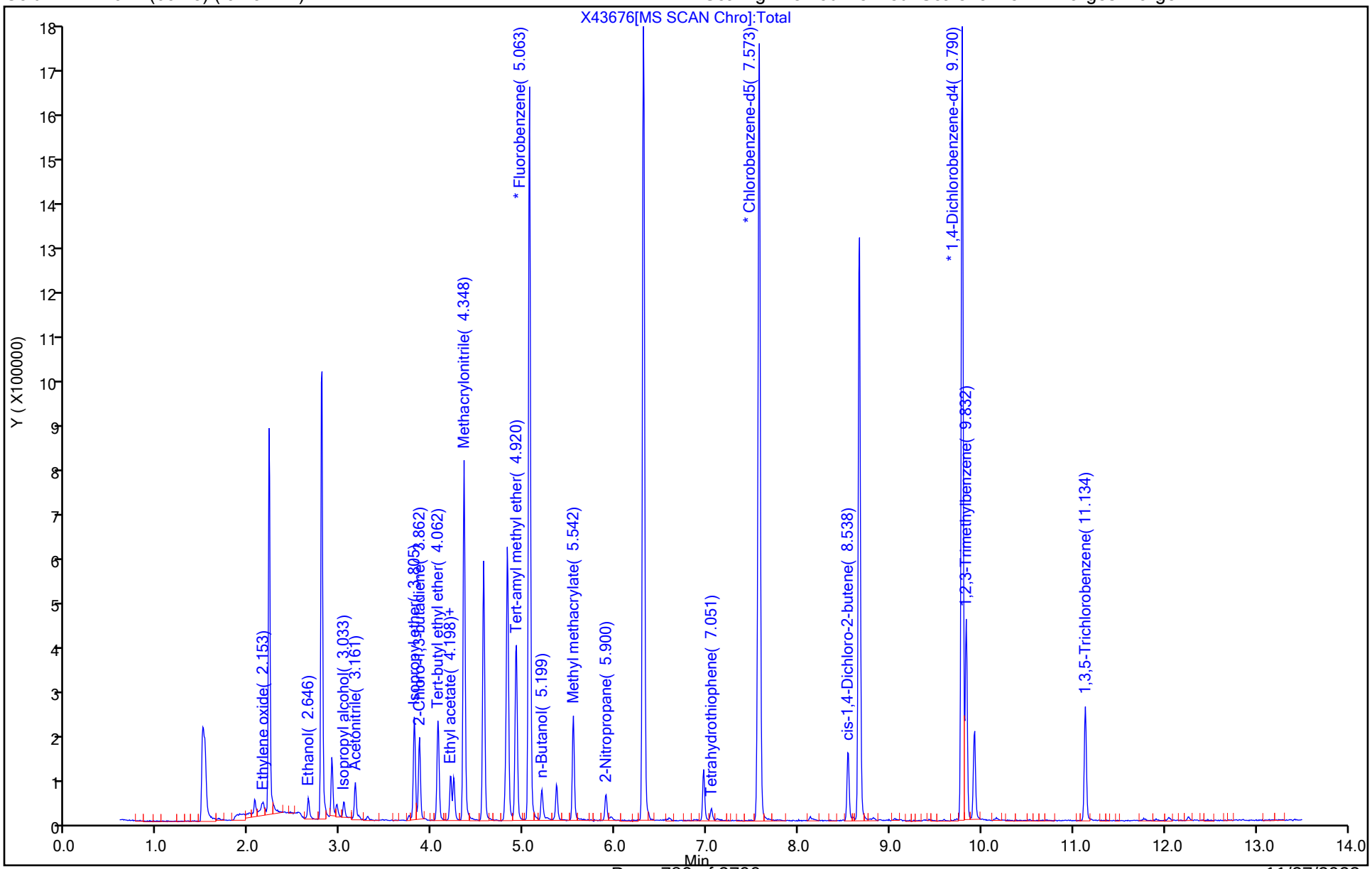
Report Date: 23-Oct-2022 12:17:07 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43676.D

Injection Date:	22-Oct-2022 16:21:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD10			Worklist Smp#:	26
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

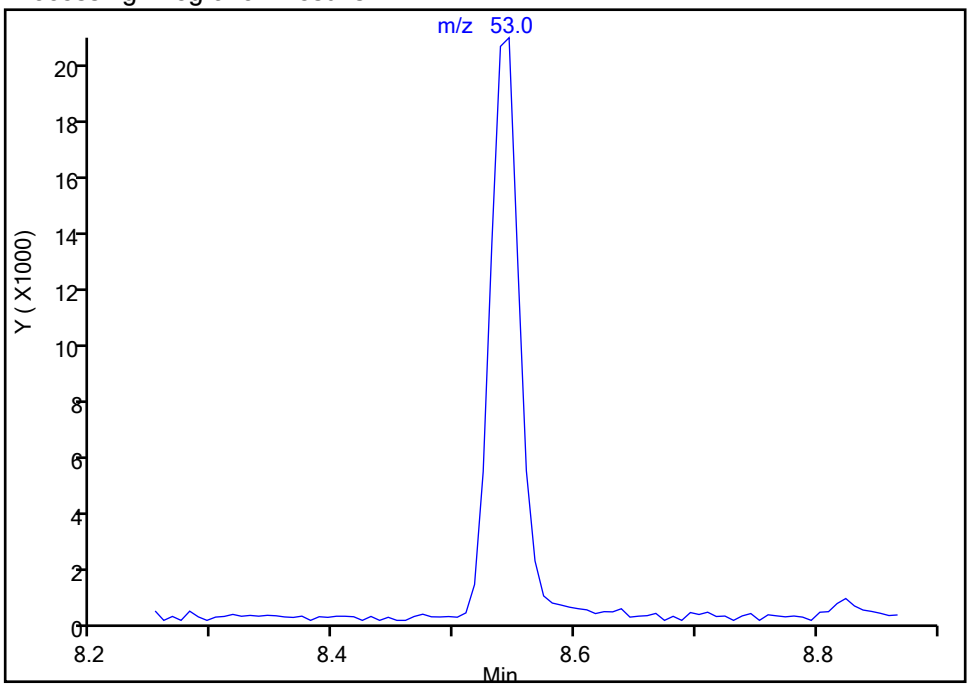
Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43676.D				
Injection Date:	22-Oct-2022 16:21:30	Instrument ID:	VMS_X4		
Lims ID:	STD10				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	15	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

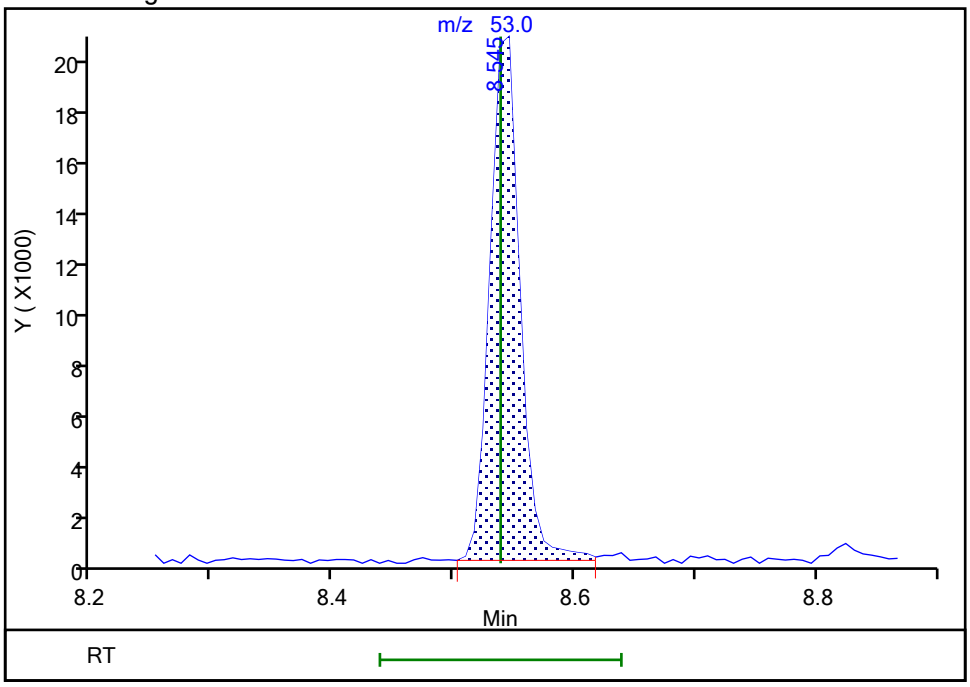
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.55
Area: 35175
Amount: 18.947693
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:42
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43677.D
Lims ID: STD50
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 22-Oct-2022 16:42:30 ALS Bottle#: 16 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD50
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:08 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1291361	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	293360	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	473350	50.0	50.0	
13 Ethylene oxide	43	2.210	2.210	0.000	100	1025949	5000.0	0	
18 Ethanol	45	2.654	2.654	0.000	100	193816	3000.0	2835.5	
20 Propene oxide	58	2.661	2.661	0.000	19	46	5000.0	0	
25 Isopropyl alcohol	45	3.040	3.040	0.000	98	179278	500.0	447.7	
28 Acetonitrile	41	3.161	3.161	0.000	100	317384	500.0	440.0	
41 Isopropyl ether	87	3.805	3.805	0.000	92	235392	50.0	48.8	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	93	432283	50.0	51.1	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	834301	50.0	50.0	
46 Ethyl acetate	43	4.198	4.198	0.000	99	482374	100.0	96.6	
49 Propionitrile	54	4.234	4.234	0.000	99	389290	500.0	485.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	1549638	500.0	493.3	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	90	801237	50.0	49.7	
66 n-Butanol	56	5.199	5.199	0.000	87	215752	1250.0	1363.0	
71 Methyl methacrylate	100	5.542	5.542	0.000	88	175199	100.0	102.7	
75 2-Nitropropane	41	5.900	5.900	0.000	98	176598	100.0	97.7	
86 Tetrahydrothiophene	60	7.051	7.051	0.000	91	56224	100.0	91.6	a
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	186298	100.0	99.9	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	1301729	50.0	50.7	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	405455	50.0	50.8	
166 Ethyl acrylate	55		0.000				ND	ND	
165 t-Amyl alcohol	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added: 50.00	Units: uL
MV-Supp A_00073	Amount Added: 50.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

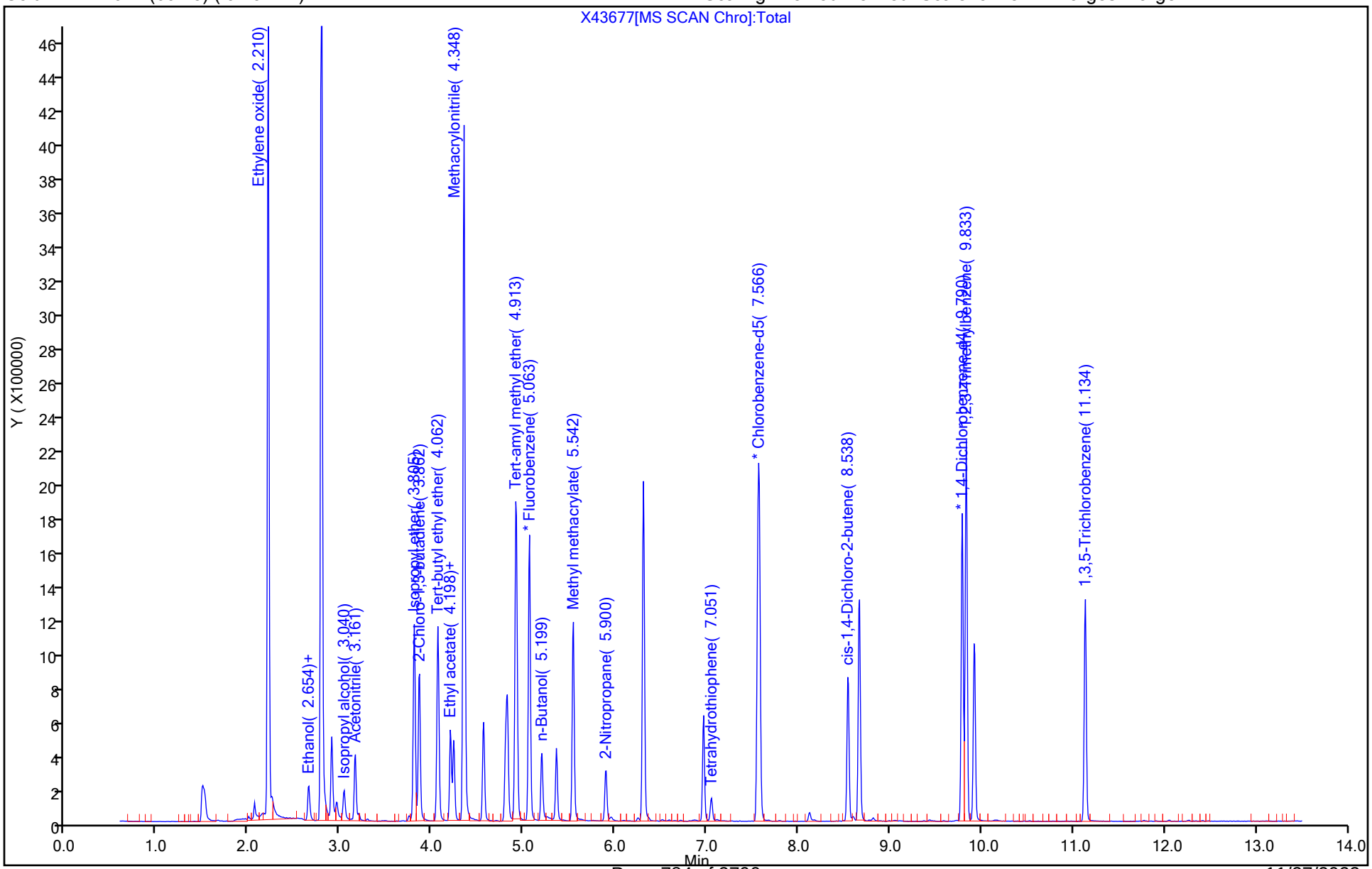
Report Date: 23-Oct-2022 12:17:08 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43677.D

Injection Date:	22-Oct-2022 16:42:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD50			Worklist Smp#:	27
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

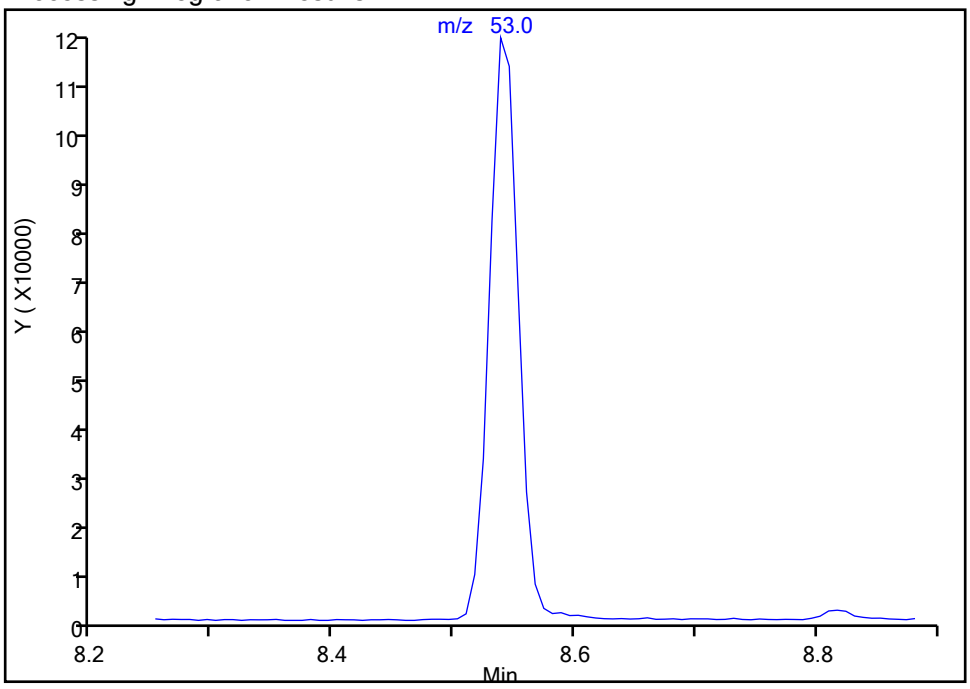
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43677.D
Injection Date: 22-Oct-2022 16:42:30 Instrument ID: VMS_X4
Lims ID: STD50
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 16 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

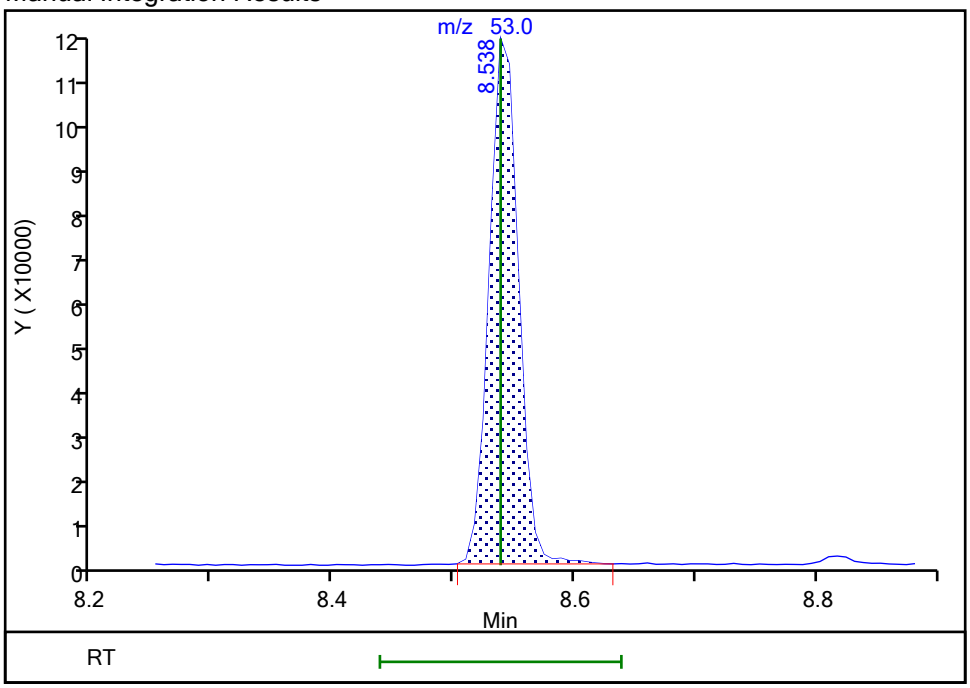
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.54
Area: 186298
Amount: 99.928790
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:46
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43678.D
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 22-Oct-2022 17:02:30 ALS Bottle#: 17 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD100
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:09 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.063	-0.007	98	1270651	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	295681	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	502900	50.0	50.0	
13 Ethylene oxide	43	2.225	2.210	0.015	97	22695	10000	0	
18 Ethanol	45	2.697	2.654	0.043	100	399032	6000.0	5933.0	
20 Propene oxide	58	2.625	2.661	-0.036	14	360	10000	0	
25 Isopropyl alcohol	45	3.076	3.040	0.036	99	372304	1000.0	945.0	
28 Acetonitrile	41	3.162	3.161	0.001	100	660703	1000.0	931.0	
41 Isopropyl ether	87	3.805	3.805	0.000	92	463376	100.0	97.7	
42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	93	871601	100.0	104.8	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	1616686	100.0	98.4	
46 Ethyl acetate	43	4.198	4.198	0.000	99	900674	200.0	183.2	
49 Propionitrile	54	4.241	4.234	0.007	99	764517	1000.0	968.3	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	2902366	1000.0	939.0	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	89	1534136	100.0	96.7	
66 n-Butanol	56	5.214	5.199	0.015	87	450075	2500.0	2889.8	
71 Methyl methacrylate	100	5.543	5.542	0.001	88	325472	200.0	193.9	
75 2-Nitropropane	41	5.893	5.900	-0.007	98	327521	200.0	184.1	
86 Tetrahydrothiophene	60	7.044	7.051	-0.007	91	108454	200.0	175.3	a
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	384763	200.0	194.3	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	2672462	100.0	98.0	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	854593	100.0	100.8	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added: 100.00	Units: uL
MV-Supp A_00073	Amount Added: 100.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

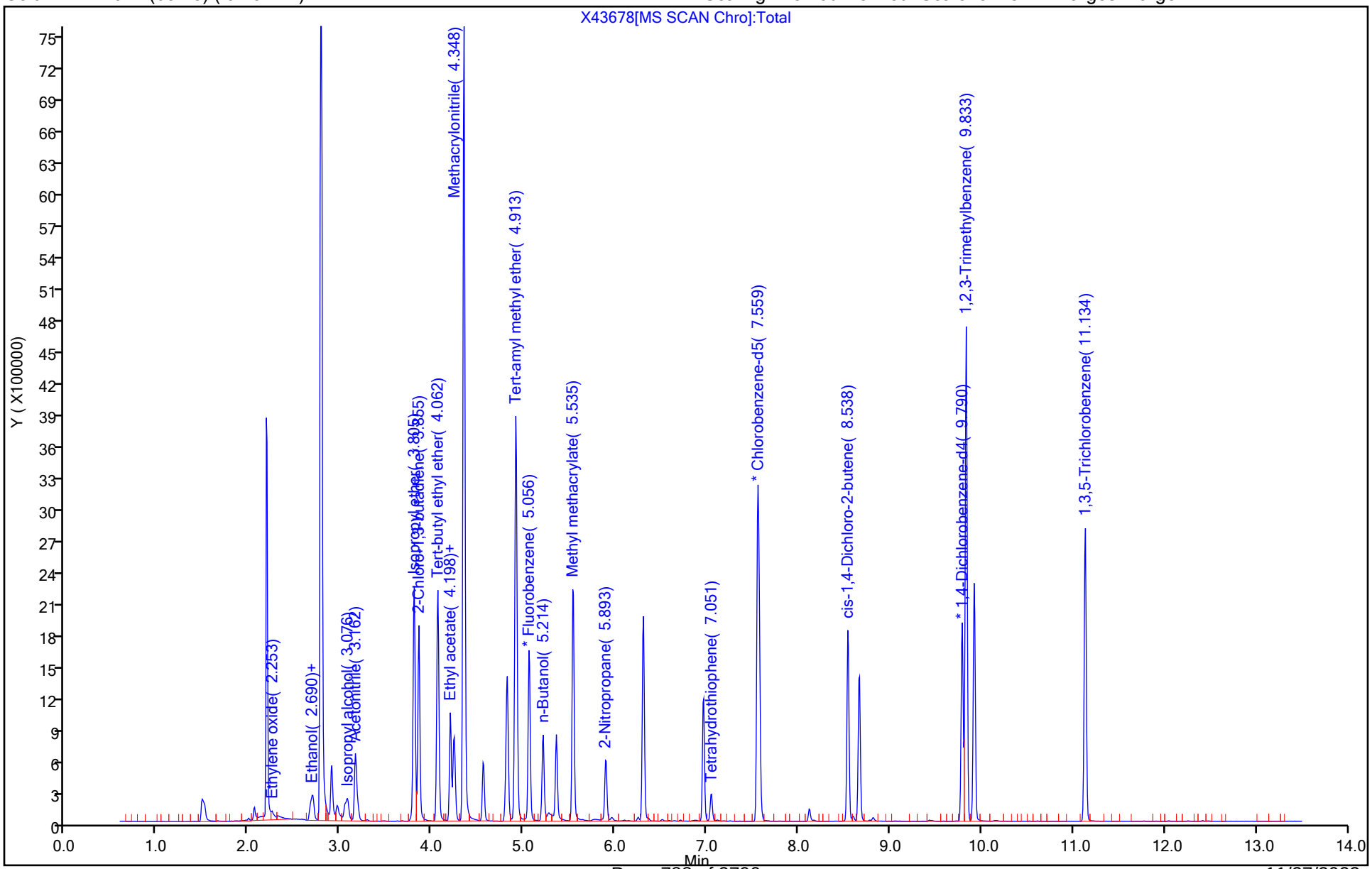
Report Date: 23-Oct-2022 12:17:09 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43678.D

Injection Date:	22-Oct-2022 17:02:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD100			Worklist Smp#:	28
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

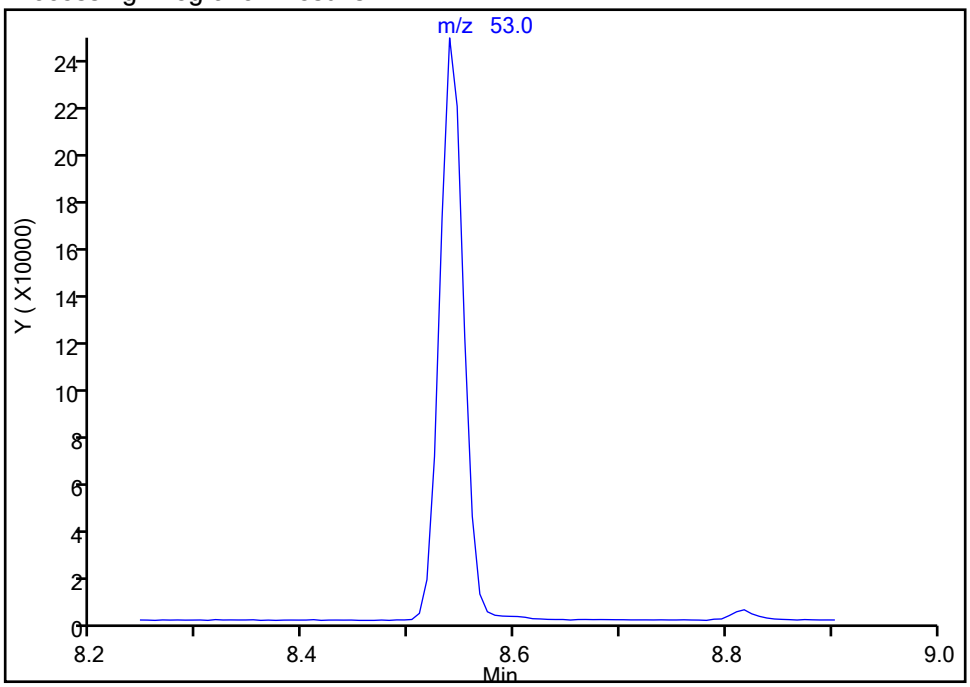
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43678.D
Injection Date: 22-Oct-2022 17:02:30 Instrument ID: VMS_X4
Lims ID: STD100
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 17 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

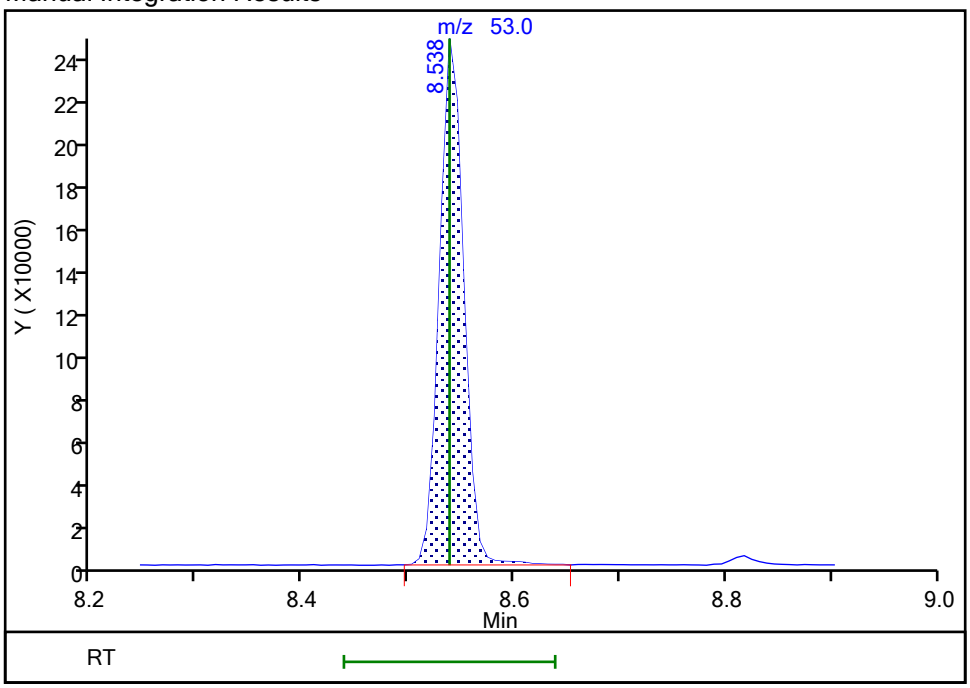
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.54
Area: 384763
Amount: 194.2569
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:50
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 22-Oct-2022 17:23:30 ALS Bottle#: 18 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Operator ID: SEIFERTJ Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub17

Method: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2022 12:17:10 Calib Date: 22-Oct-2022 17:23:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1673

First Level Reviewer: V1QB Date: 23-Oct-2022 12:08:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.056	5.063	-0.007	98	1288234	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	88	305072	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	96	513774	50.0	50.0	
13 Ethylene oxide	43	2.225	2.210	0.015	98	17599	20000	0	
18 Ethanol	45	2.711	2.654	0.057	100	718910	12000	10543	
20 Propene oxide	58	2.704	2.661	0.043	22	215	20000	0	
25 Isopropyl alcohol	45	3.090	3.040	0.050	99	733137	2000.0	1835.4	
28 Acetonitrile	41	3.162	3.161	0.001	99	1273959	2000.0	1770.6	
41 Isopropyl ether	87	3.805	3.805	0.000	92	894974	200.0	186.1	
42 2-Chloro-1,3-butadiene	53	3.855	3.862	-0.007	93	1657553	200.0	196.5	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	3130196	200.0	187.9	
46 Ethyl acetate	43	4.198	4.198	0.000	99	1742173	400.0	349.6	
49 Propionitrile	54	4.241	4.234	0.007	99	1484489	2000.0	1854.6	
51 Methacrylonitrile	41	4.348	4.348	0.000	90	5559833	2000.0	1774.3	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	89	2968159	200.0	184.5	
66 n-Butanol	56	5.221	5.199	0.022	86	848596	5000.0	5374.1	
71 Methyl methacrylate	100	5.543	5.542	0.001	88	630700	400.0	370.7	
75 2-Nitropropane	41	5.893	5.900	-0.007	98	656258	400.0	363.9	
86 Tetrahydrothiophene	60	7.044	7.051	-0.007	91	251334	400.0	393.8	a
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	889057	400.0	439.4	a
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	5146842	200.0	184.7	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	96	1649274	200.0	190.3	
165 t-Amyl alcohol	1		0.000				ND	ND	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
a - User Assigned ID

Reagents:

MV-TAOH_CUST_00004	Amount Added: 200.00	Units: uL
MV-Supp A_00073	Amount Added: 200.00	Units: uL
mv-Cent IS_00007	Amount Added: 5.00	Units: uL

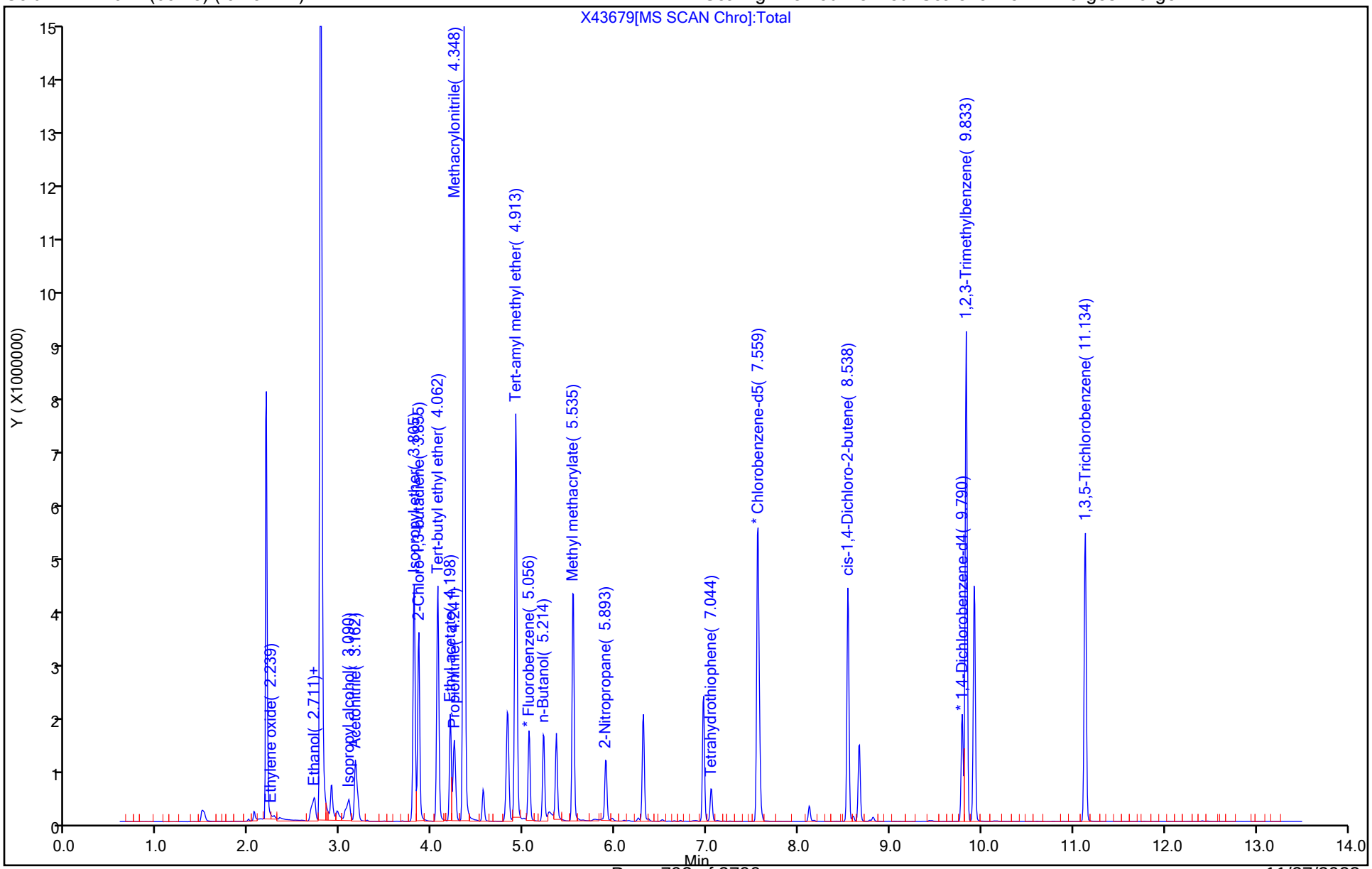
Report Date: 23-Oct-2022 12:17:11 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D

Injection Date:	22-Oct-2022 17:23:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	STD200			Worklist Smp#:	29
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Manual Integration/User Assign Peak Report

Eurofins Denver

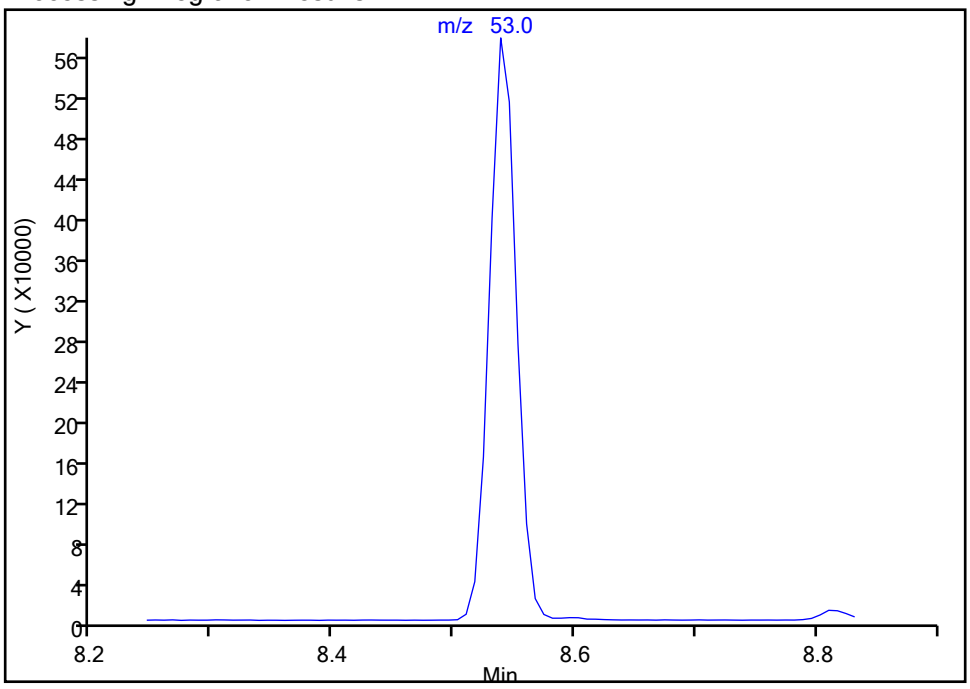
Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D
Injection Date: 22-Oct-2022 17:23:30 Instrument ID: VMS_X4
Lims ID: STD200
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 18 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

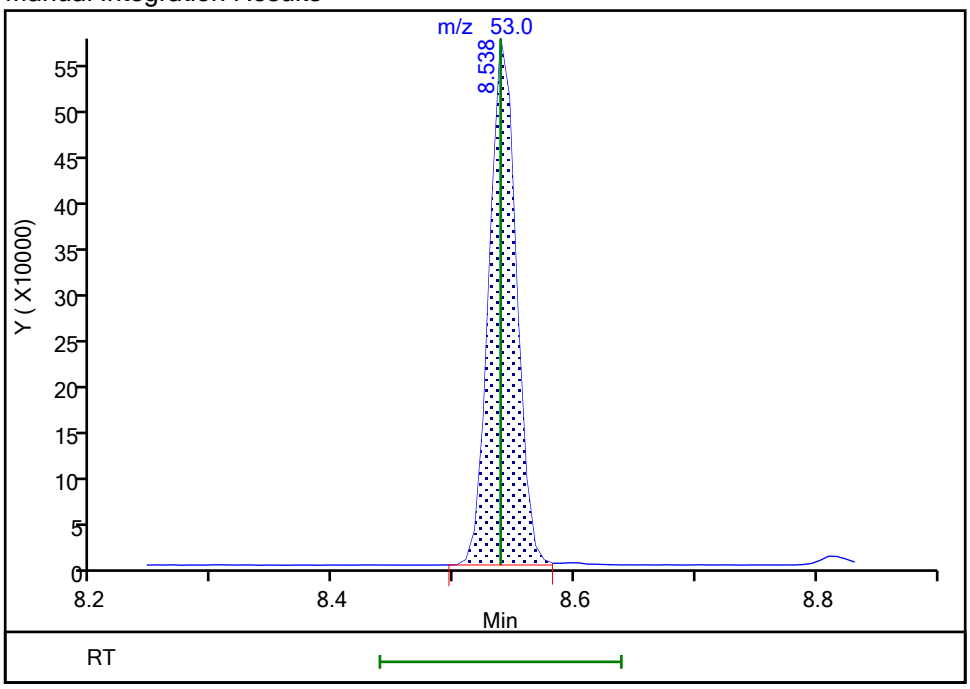
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.54
Area: 889057
Amount: 439.3618
Amount Units: ug/l



Reviewer: V1QB, 23-Oct-2022 12:11:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Calibration / Ethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

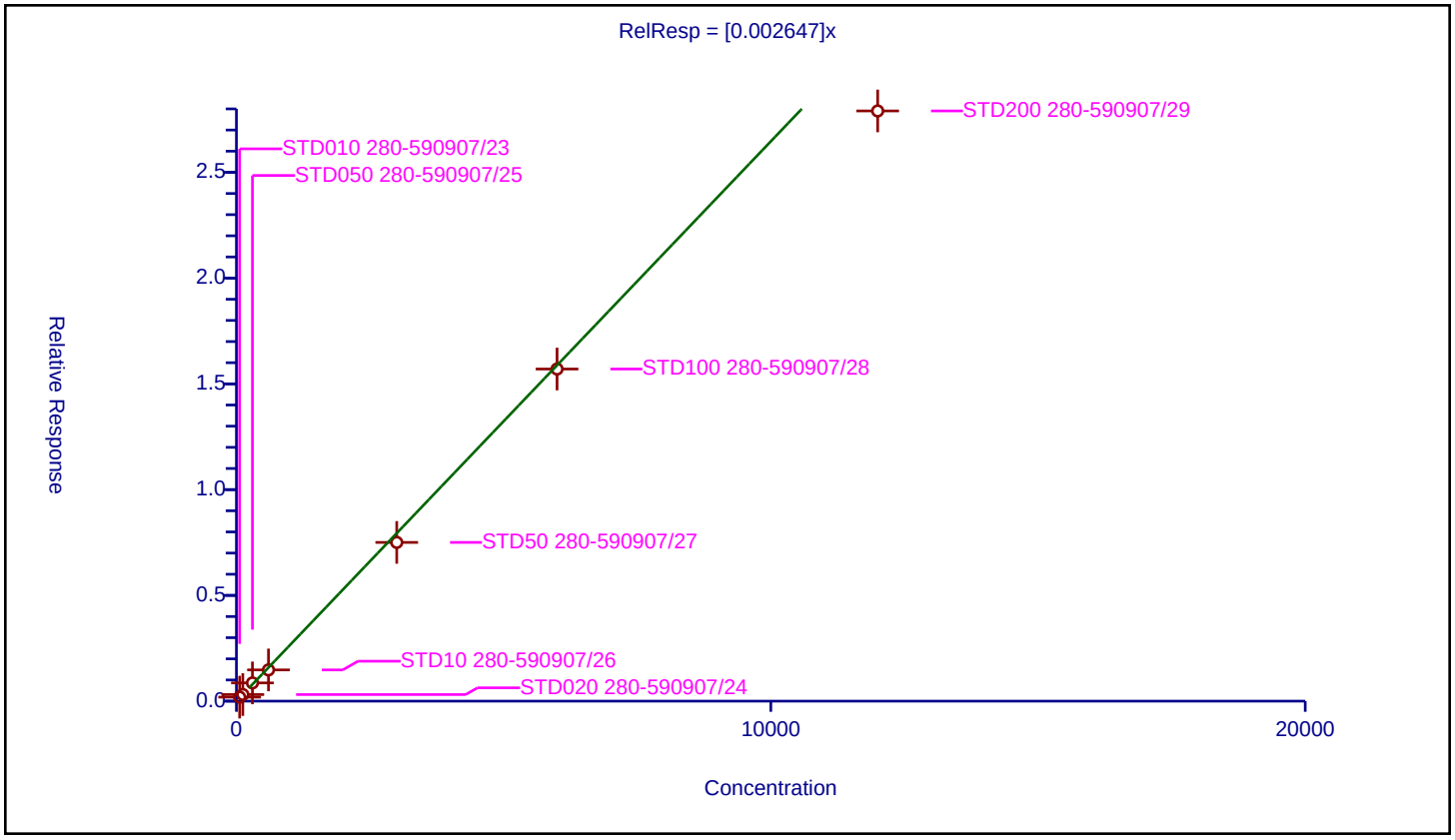
Curve Coefficients

Intercept:	0
Slope:	0.002647

Error Coefficients

Standard Error:	345000
Relative Standard Error:	10.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	60.0	0.189287	50.0	1234372.0	0.003155	Y
2	STD020 280-590907/24	120.0	0.31133	50.0	1249318.0	0.002594	Y
3	STD050 280-590907/25	300.0	0.861786	50.0	1254313.0	0.002873	Y
4	STD10 280-590907/26	600.0	1.47619	50.0	1268265.0	0.00246	Y
5	STD50 280-590907/27	3000.0	7.504331	50.0	1291361.0	0.002501	Y
6	STD100 280-590907/28	6000.0	15.701873	50.0	1270651.0	0.002617	Y
7	STD200 280-590907/29	12000.0	27.902928	50.0	1288234.0	0.002325	Y



Calibration / Isopropyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

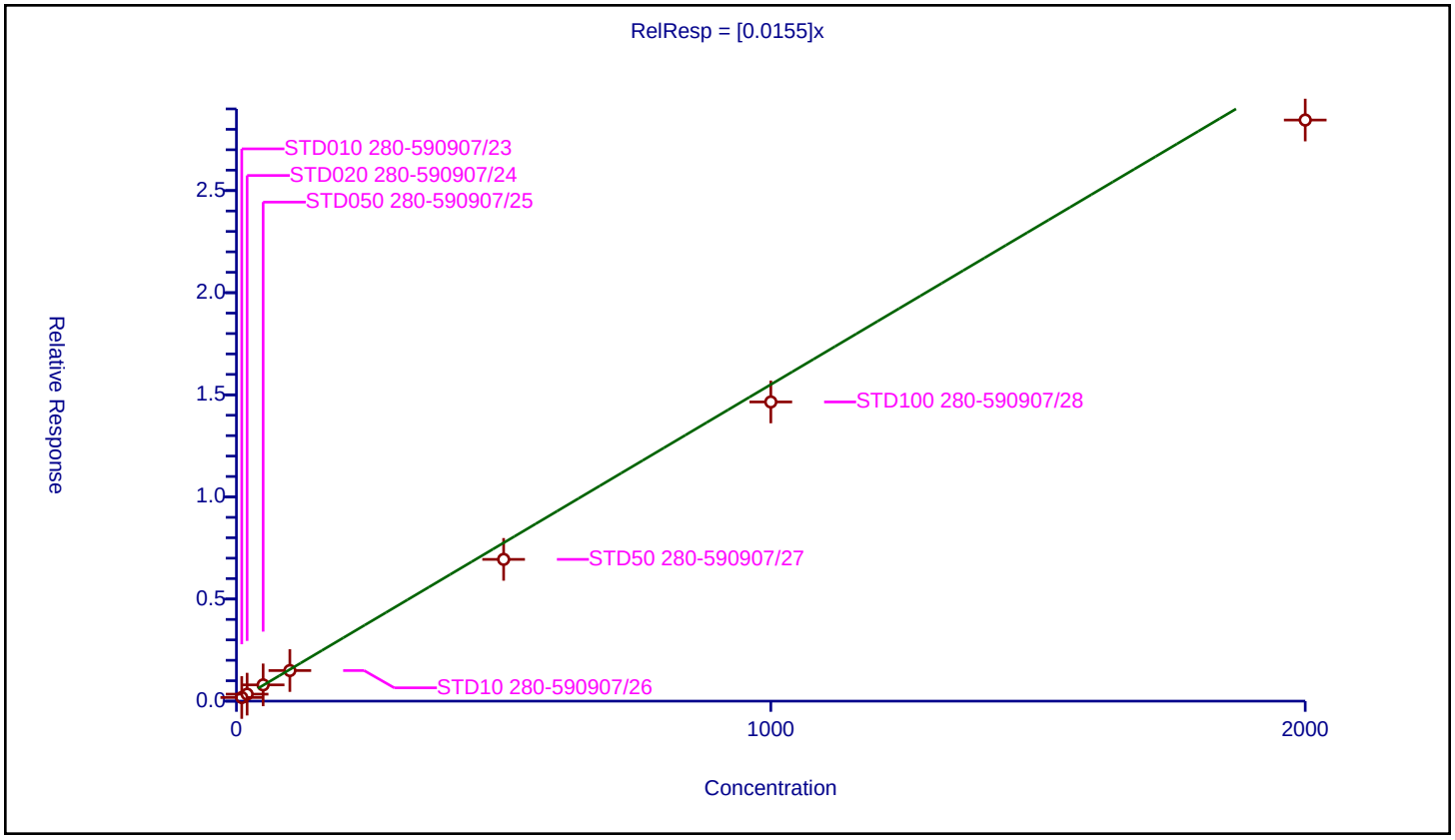
Curve Coefficients

Intercept:	0
Slope:	0.0155

Error Coefficients

Standard Error:	344000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	0.177864	50.0	1234372.0	0.017786	Y
2	STD020 280-590907/24	20.0	0.341746	50.0	1249318.0	0.017087	Y
3	STD050 280-590907/25	50.0	0.795854	50.0	1254313.0	0.015917	Y
4	STD10 280-590907/26	100.0	1.497242	50.0	1268265.0	0.014972	Y
5	STD50 280-590907/27	500.0	6.941436	50.0	1291361.0	0.013883	Y
6	STD100 280-590907/28	1000.0	14.650128	50.0	1270651.0	0.01465	Y
7	STD200 280-590907/29	2000.0	28.455118	50.0	1288234.0	0.014228	Y



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Calibration / Acetonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

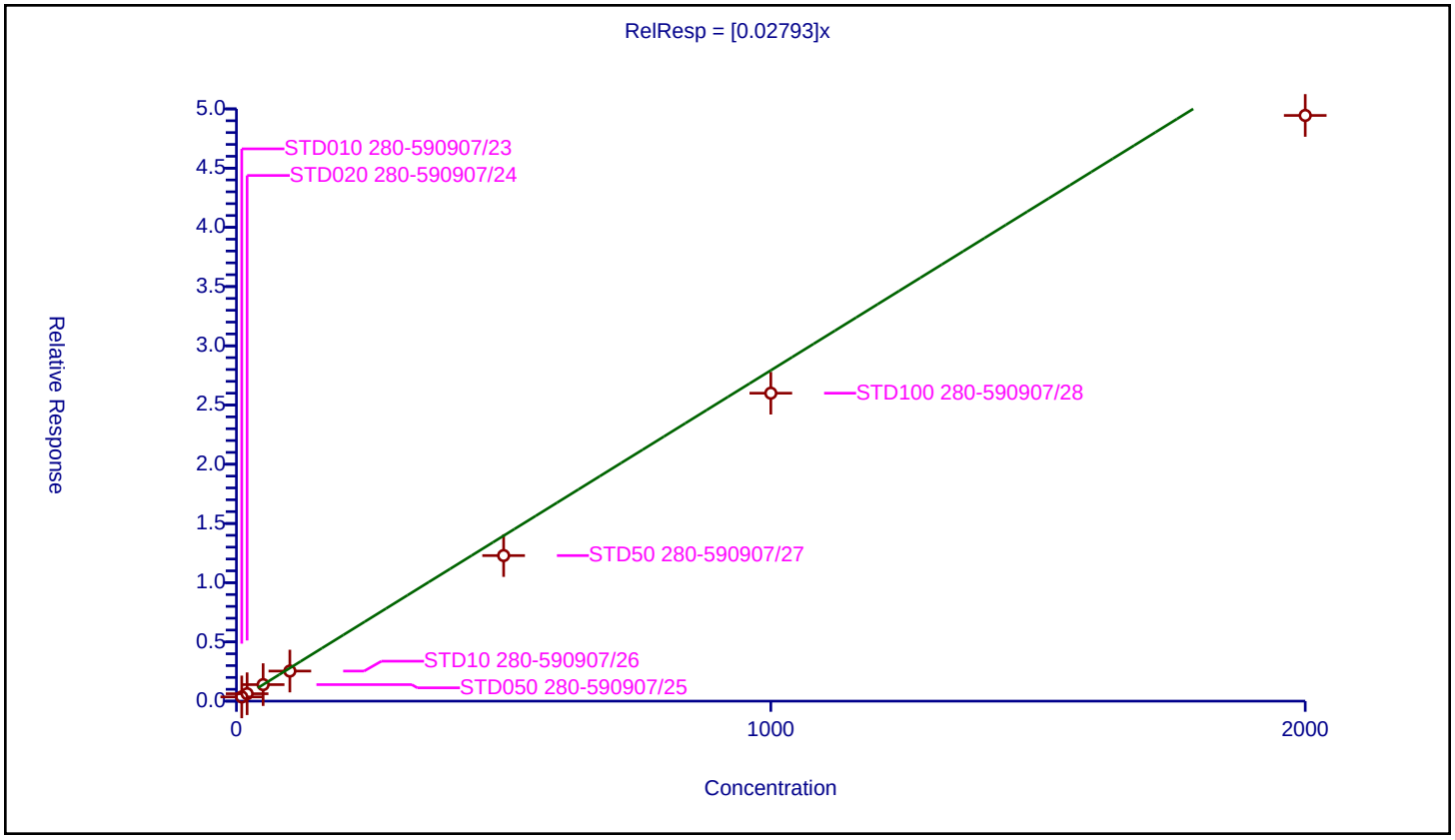
Curve Coefficients

Intercept:	0
Slope:	0.02793

Error Coefficients

Standard Error:	601000
Relative Standard Error:	14.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.963

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	0.356578	50.0	1234372.0	0.035658	Y
2	STD020 280-590907/24	20.0	0.625101	50.0	1249318.0	0.031255	Y
3	STD050 280-590907/25	50.0	1.394269	50.0	1254313.0	0.027885	Y
4	STD10 280-590907/26	100.0	2.538626	50.0	1268265.0	0.025386	Y
5	STD50 280-590907/27	500.0	12.28874	50.0	1291361.0	0.024577	Y
6	STD100 280-590907/28	1000.0	25.998602	50.0	1270651.0	0.025999	Y
7	STD200 280-590907/29	2000.0	49.445947	50.0	1288234.0	0.024723	Y



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Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

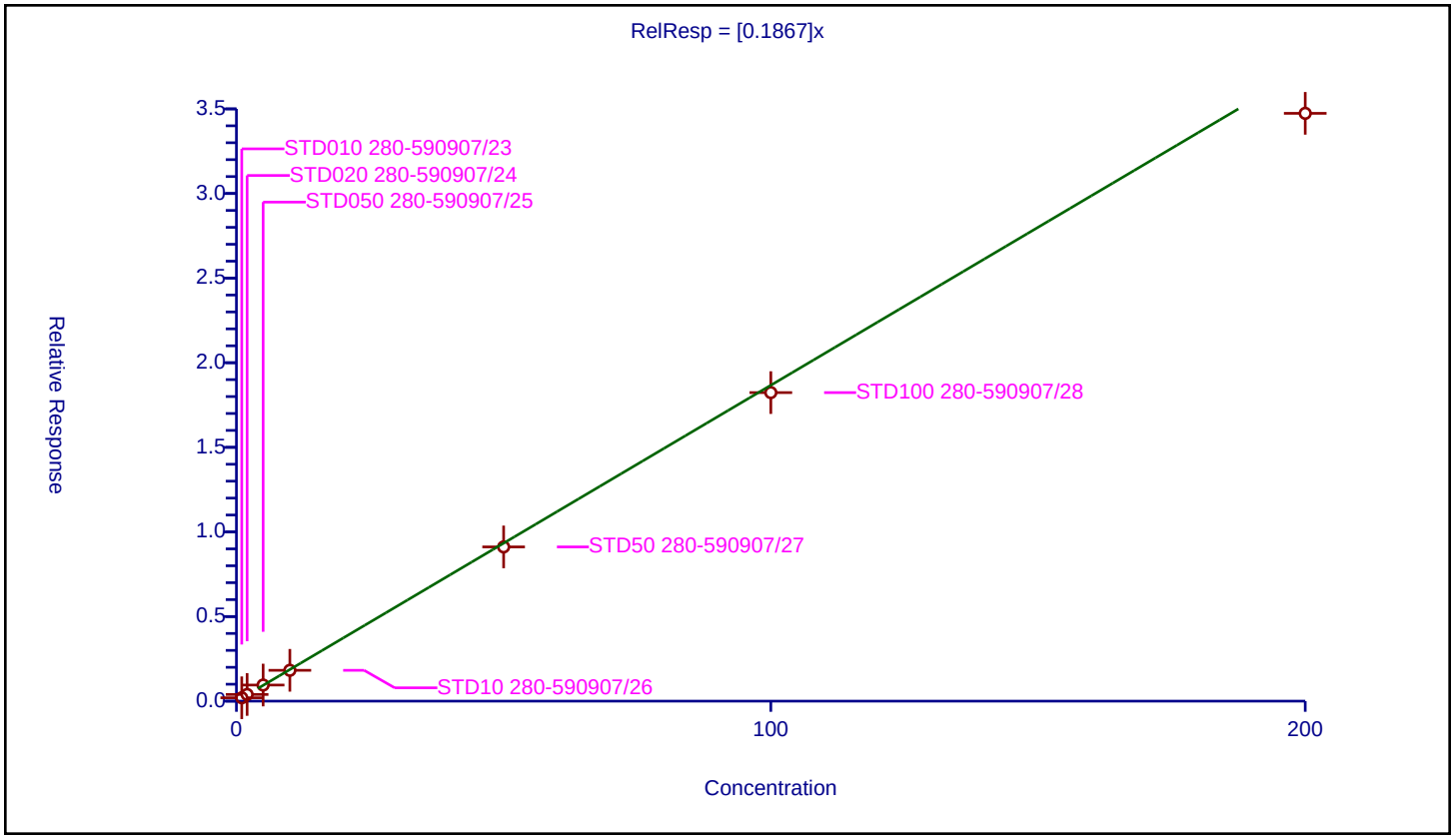
Curve Coefficients

Intercept:	0
Slope:	0.1867

Error Coefficients

Standard Error:	423000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.198644	50.0	1234372.0	0.198644	Y
2	STD020 280-590907/24	2.0	0.394415	50.0	1249318.0	0.197208	Y
3	STD050 280-590907/25	5.0	0.951796	50.0	1254313.0	0.190359	Y
4	STD10 280-590907/26	10.0	1.822135	50.0	1268265.0	0.182213	Y
5	STD50 280-590907/27	50.0	9.114105	50.0	1291361.0	0.182282	Y
6	STD100 280-590907/28	100.0	18.233803	50.0	1270651.0	0.182338	Y
7	STD200 280-590907/29	200.0	34.736469	50.0	1288234.0	0.173682	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

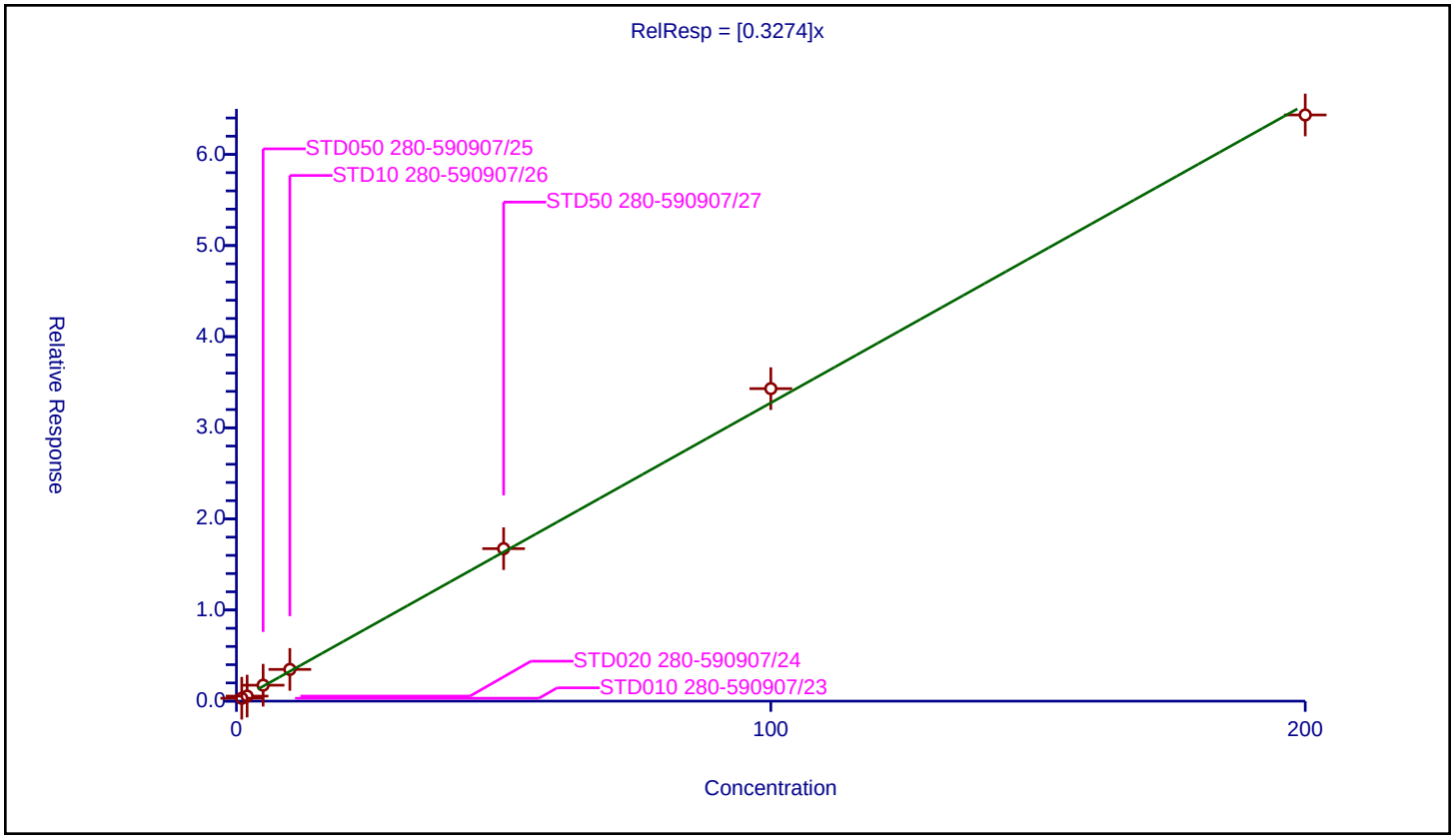
Curve Coefficients

Intercept:	0
Slope:	0.3274

Error Coefficients

Standard Error:	786000
Relative Standard Error:	7.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.317368	50.0	1234372.0	0.317368	Y
2	STD020 280-590907/24	2.0	0.553822	50.0	1249318.0	0.276911	Y
3	STD050 280-590907/25	5.0	1.749842	50.0	1254313.0	0.349968	Y
4	STD10 280-590907/26	10.0	3.48208	50.0	1268265.0	0.348208	Y
5	STD50 280-590907/27	50.0	16.737496	50.0	1291361.0	0.33475	Y
6	STD100 280-590907/28	100.0	34.297419	50.0	1270651.0	0.342974	Y
7	STD200 280-590907/29	200.0	64.334313	50.0	1288234.0	0.321672	Y



11/27/2023
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Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

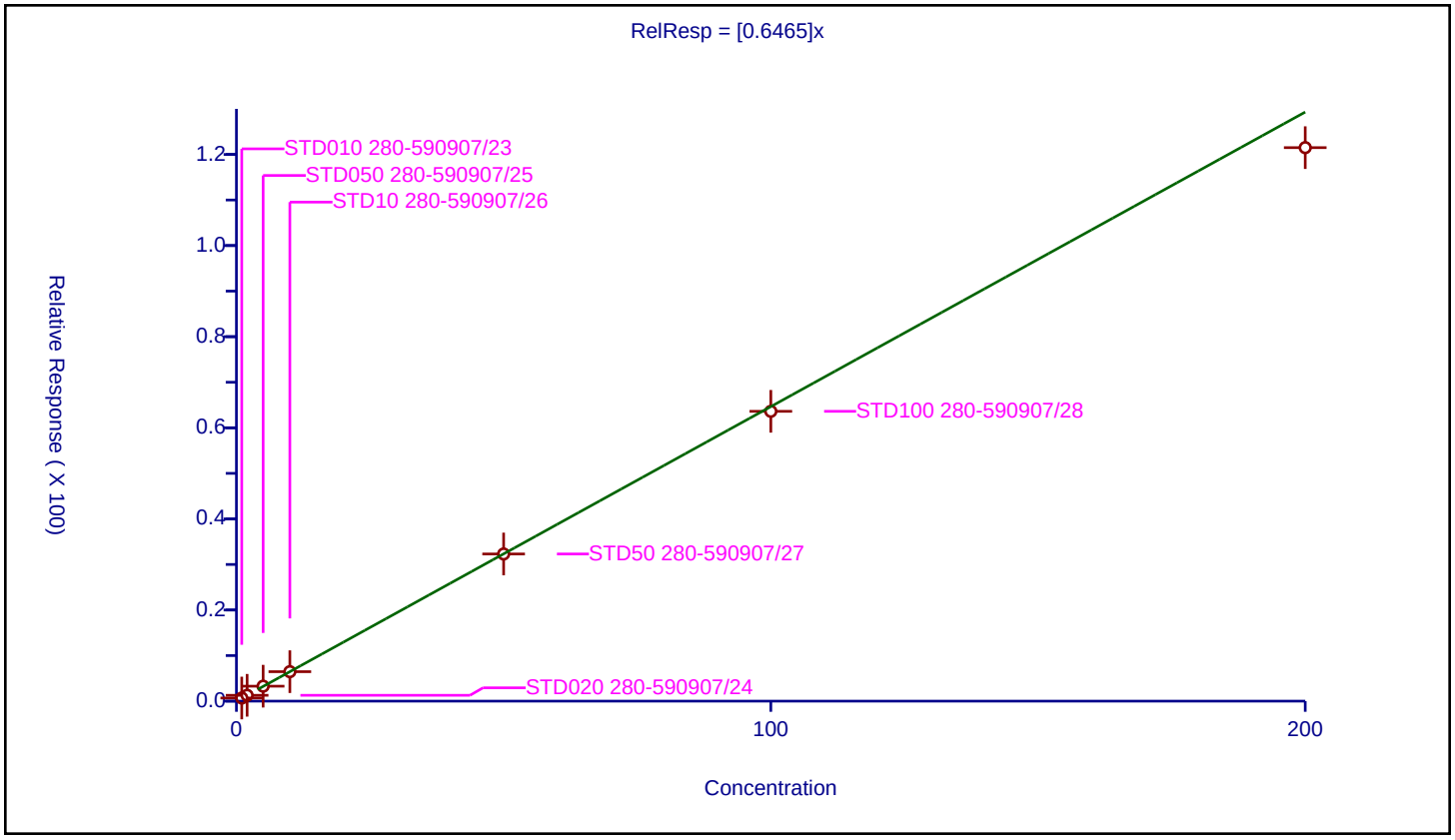
Curve Coefficients

Intercept:	0
Slope:	0.6465

Error Coefficients

Standard Error:	1480000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.689622	50.0	1234372.0	0.689622	Y
2	STD020 280-590907/24	2.0	1.284781	50.0	1249318.0	0.64239	Y
3	STD050 280-590907/25	5.0	3.284826	50.0	1254313.0	0.656965	Y
4	STD10 280-590907/26	10.0	6.469744	50.0	1268265.0	0.646974	Y
5	STD50 280-590907/27	50.0	32.303167	50.0	1291361.0	0.646063	Y
6	STD100 280-590907/28	100.0	63.616445	50.0	1270651.0	0.636164	Y
7	STD200 280-590907/29	200.0	121.491748	50.0	1288234.0	0.607459	Y



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Calibration / Ethyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

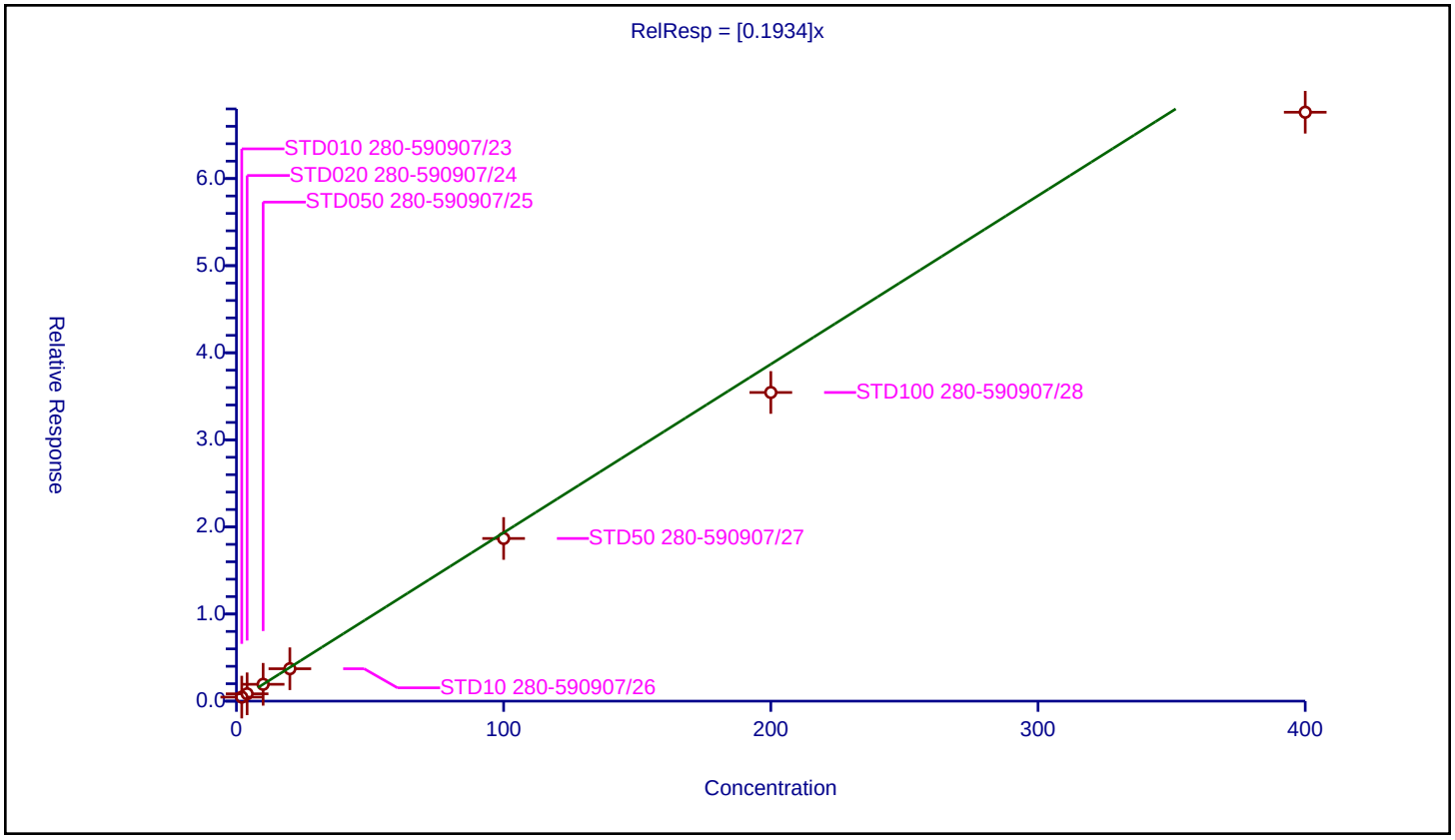
Curve Coefficients

Intercept:	0
Slope:	0.1934

Error Coefficients

Standard Error:	826000
Relative Standard Error:	10.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.462259	50.0	1234372.0	0.23113	Y
2	STD020 280-590907/24	4.0	0.841419	50.0	1249318.0	0.210355	Y
3	STD050 280-590907/25	10.0	1.934565	50.0	1254313.0	0.193456	Y
4	STD10 280-590907/26	20.0	3.721383	50.0	1268265.0	0.186069	Y
5	STD50 280-590907/27	100.0	18.676962	50.0	1291361.0	0.18677	Y
6	STD100 280-590907/28	200.0	35.441439	50.0	1270651.0	0.177207	Y
7	STD200 280-590907/29	400.0	67.618655	50.0	1288234.0	0.169047	Y



11/27/2023
7:19 PM

Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

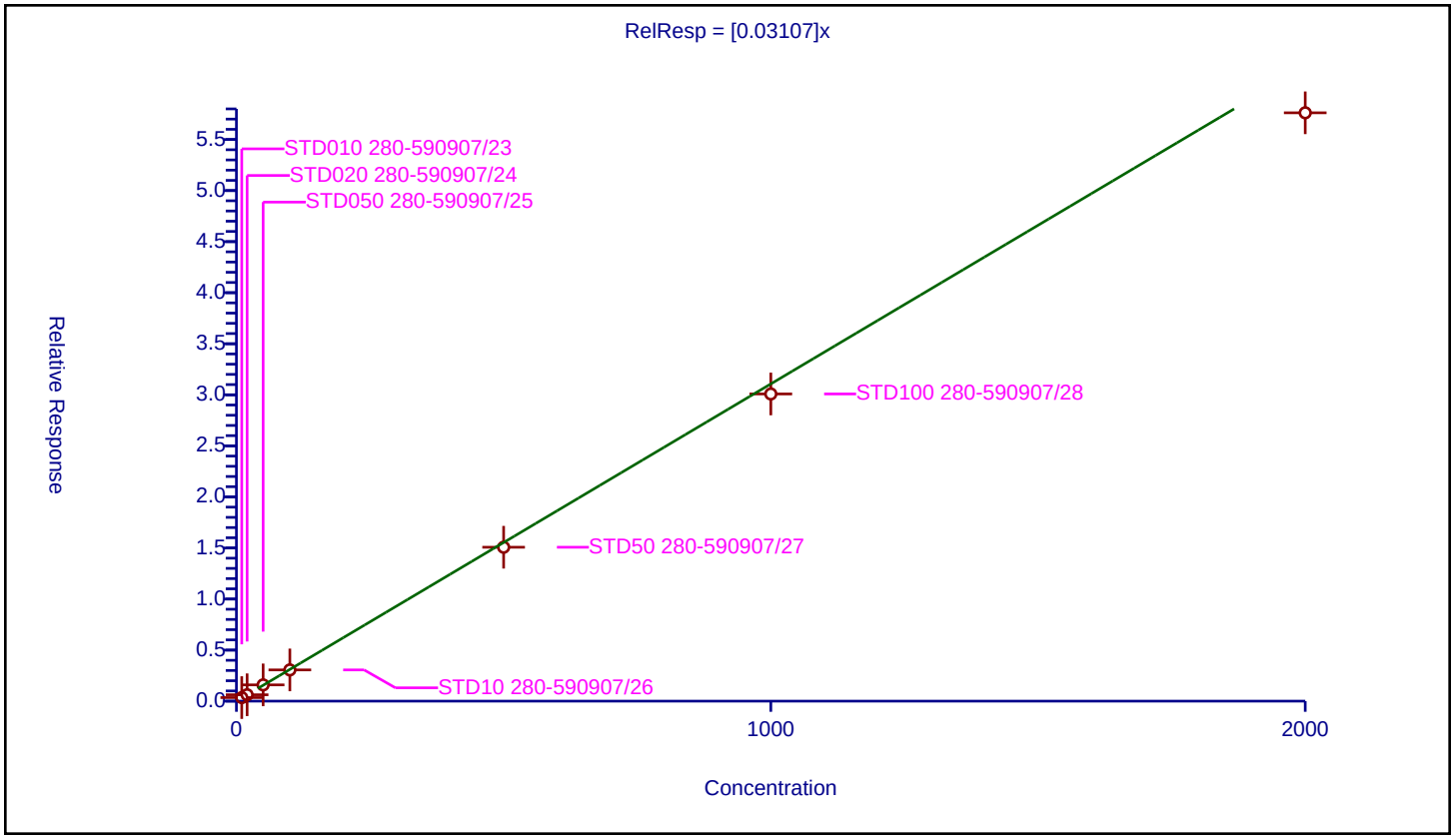
Curve Coefficients

Intercept:	0
Slope:	0.03107

Error Coefficients

Standard Error:	701000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	0.348315	50.0	1234372.0	0.034831	Y
2	STD020 280-590907/24	20.0	0.6237	50.0	1249318.0	0.031185	Y
3	STD050 280-590907/25	50.0	1.59123	50.0	1254313.0	0.031825	Y
4	STD10 280-590907/26	100.0	3.059061	50.0	1268265.0	0.030591	Y
5	STD50 280-590907/27	500.0	15.072857	50.0	1291361.0	0.030146	Y
6	STD100 280-590907/28	1000.0	30.083674	50.0	1270651.0	0.030084	Y
7	STD200 280-590907/29	2000.0	57.617211	50.0	1288234.0	0.028809	Y



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Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

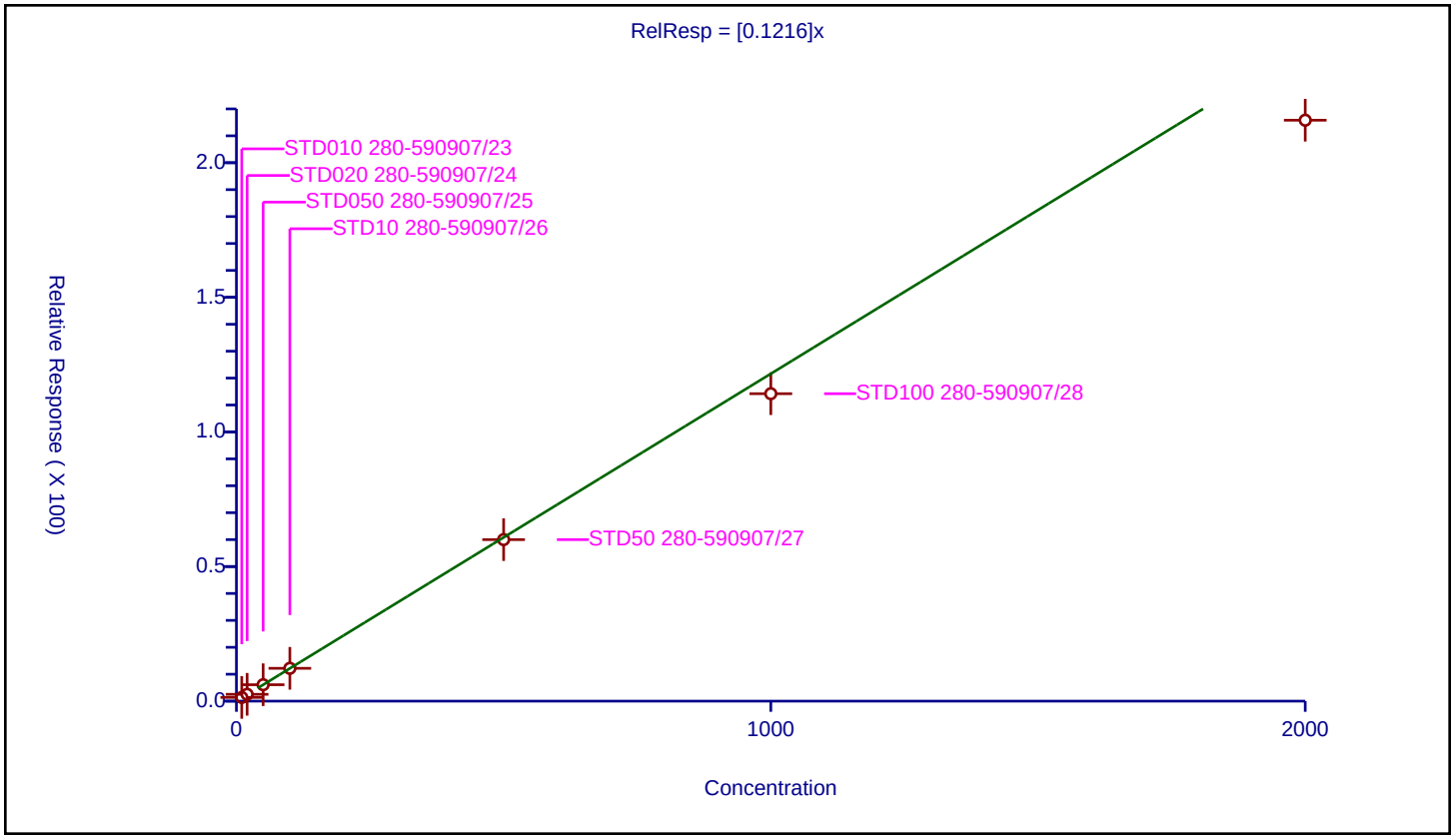
Curve Coefficients

Intercept:	0
Slope:	0.1216

Error Coefficients

Standard Error:	2640000
Relative Standard Error:	7.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	10.0	1.384591	50.0	1234372.0	0.138459	Y
2	STD020 280-590907/24	20.0	2.538545	50.0	1249318.0	0.126927	Y
3	STD050 280-590907/25	50.0	6.096644	50.0	1254313.0	0.121933	Y
4	STD10 280-590907/26	100.0	12.193075	50.0	1268265.0	0.121931	Y
5	STD50 280-590907/27	500.0	60.000186	50.0	1291361.0	0.12	Y
6	STD100 280-590907/28	1000.0	114.207835	50.0	1270651.0	0.114208	Y
7	STD200 280-590907/29	2000.0	215.792822	50.0	1288234.0	0.107896	Y



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Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

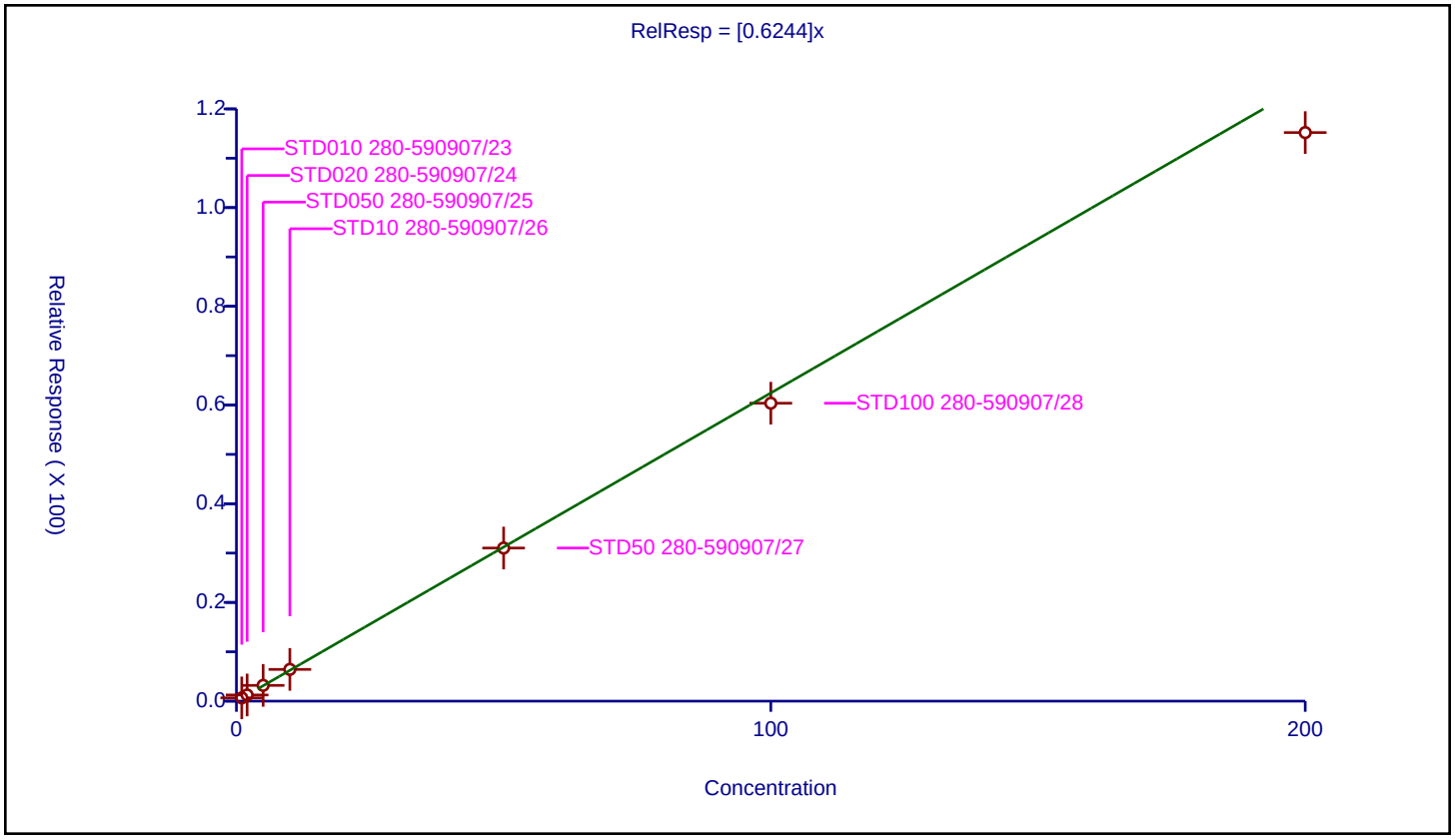
Curve Coefficients

Intercept:	0
Slope:	0.6244

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.66309	50.0	1234372.0	0.66309	Y
2	STD020 280-590907/24	2.0	1.251403	50.0	1249318.0	0.625701	Y
3	STD050 280-590907/25	5.0	3.193023	50.0	1254313.0	0.638605	Y
4	STD10 280-590907/26	10.0	6.431937	50.0	1268265.0	0.643194	Y
5	STD50 280-590907/27	50.0	31.022967	50.0	1291361.0	0.620459	Y
6	STD100 280-590907/28	100.0	60.368111	50.0	1270651.0	0.603681	Y
7	STD200 280-590907/29	200.0	115.202634	50.0	1288234.0	0.576013	Y



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Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

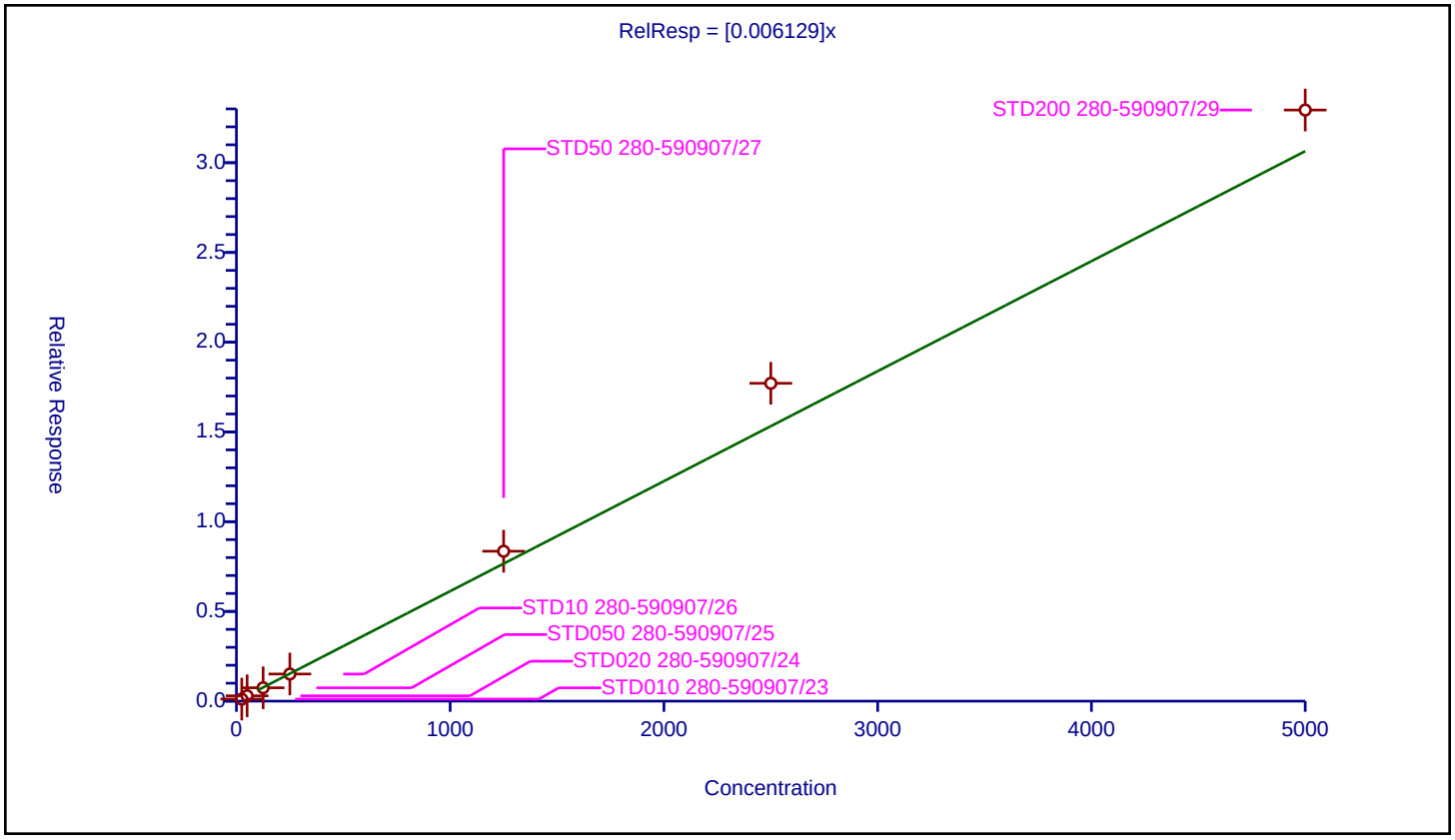
Curve Coefficients

Intercept:	0
Slope:	0.006129

Error Coefficients

Standard Error:	402000
Relative Standard Error:	13.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	25.0	0.114552	50.0	1234372.0	0.004582	Y
2	STD020 280-590907/24	50.0	0.298003	50.0	1249318.0	0.00596	Y
3	STD050 280-590907/25	125.0	0.744591	50.0	1254313.0	0.005957	Y
4	STD10 280-590907/26	250.0	1.511869	50.0	1268265.0	0.006047	Y
5	STD50 280-590907/27	1250.0	8.353667	50.0	1291361.0	0.006683	Y
6	STD100 280-590907/28	2500.0	17.71041	50.0	1270651.0	0.007084	Y
7	STD200 280-590907/29	5000.0	32.936408	50.0	1288234.0	0.006587	Y



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Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

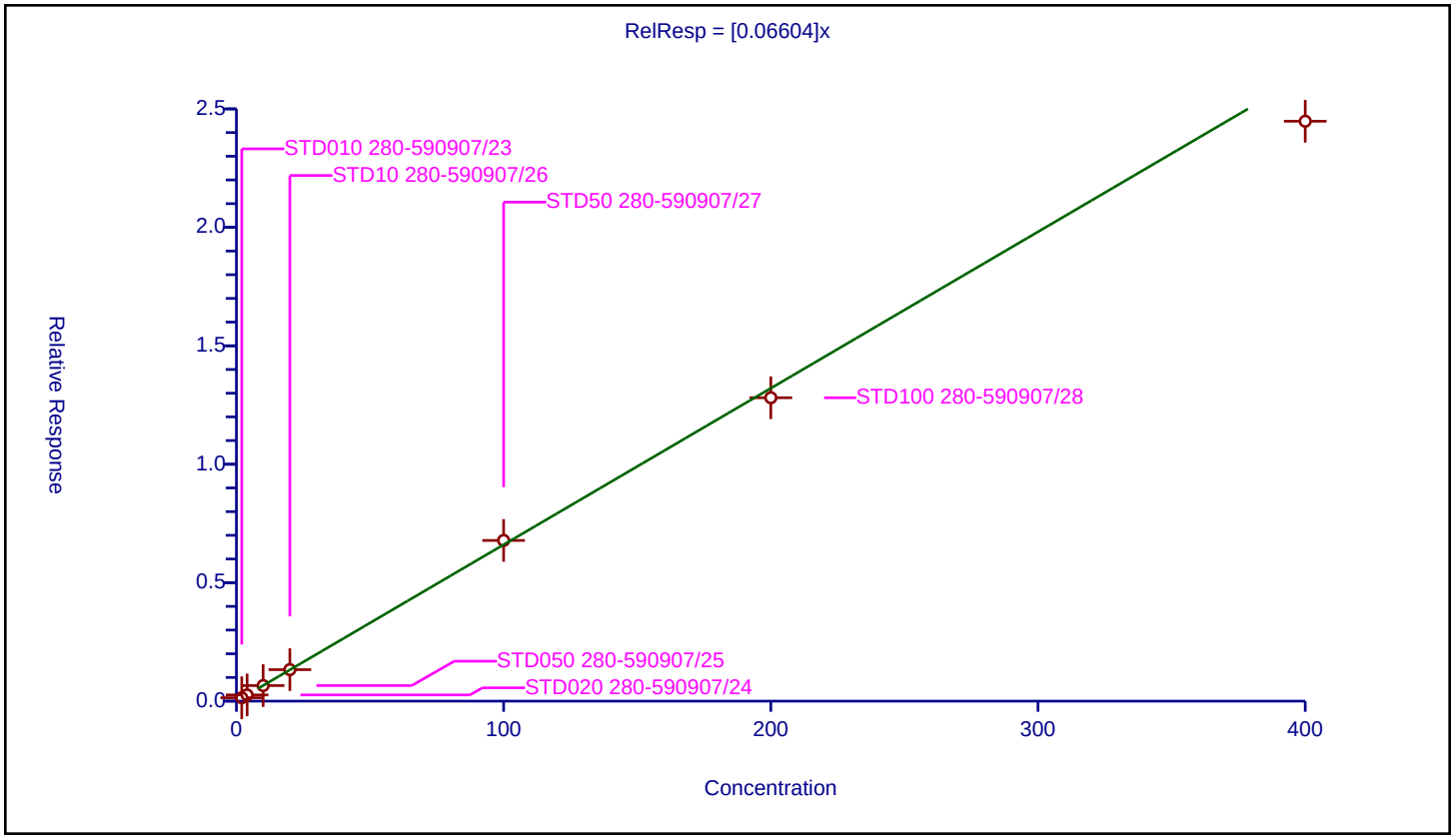
Curve Coefficients

Intercept:	0
Slope:	0.06604

Error Coefficients

Standard Error:	299000
Relative Standard Error:	4.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.142866	50.0	1234372.0	0.071433	Y
2	STD020 280-590907/24	4.0	0.262423	50.0	1249318.0	0.065606	Y
3	STD050 280-590907/25	10.0	0.656694	50.0	1254313.0	0.065669	Y
4	STD10 280-590907/26	20.0	1.329927	50.0	1268265.0	0.066496	Y
5	STD50 280-590907/27	100.0	6.783502	50.0	1291361.0	0.067835	Y
6	STD100 280-590907/28	200.0	12.807293	50.0	1270651.0	0.064036	Y
7	STD200 280-590907/29	400.0	24.479248	50.0	1288234.0	0.061198	Y



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Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

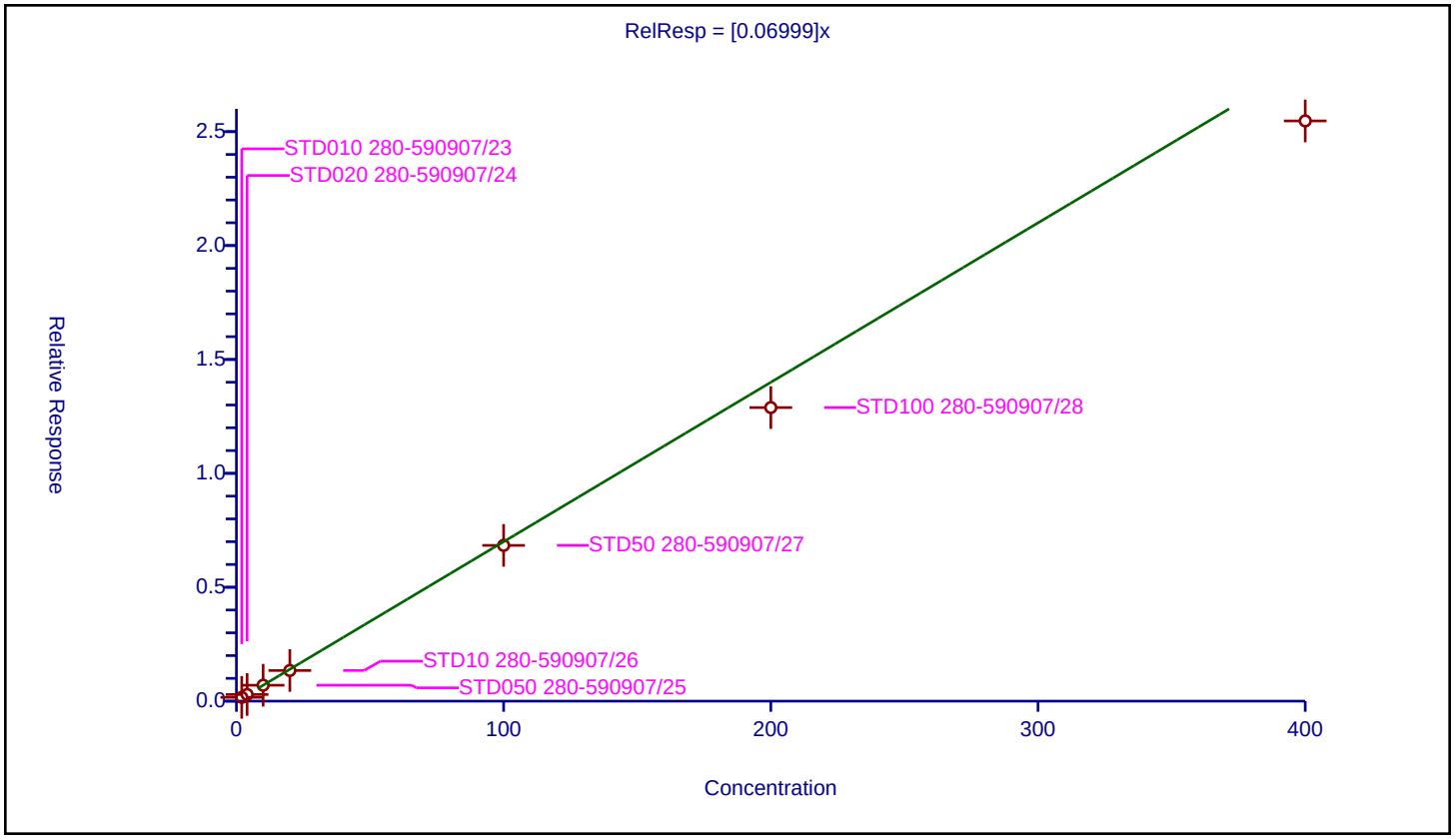
Curve Coefficients

Intercept:	0
Slope:	0.06999

Error Coefficients

Standard Error:	308000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.166684	50.0	1234372.0	0.083342	Y
2	STD020 280-590907/24	4.0	0.291999	50.0	1249318.0	0.073	Y
3	STD050 280-590907/25	10.0	0.698191	50.0	1254313.0	0.069819	Y
4	STD10 280-590907/26	20.0	1.344948	50.0	1268265.0	0.067247	Y
5	STD50 280-590907/27	100.0	6.83767	50.0	1291361.0	0.068377	Y
6	STD100 280-590907/28	200.0	12.887921	50.0	1270651.0	0.06444	Y
7	STD200 280-590907/29	400.0	25.471227	50.0	1288234.0	0.063678	Y



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Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

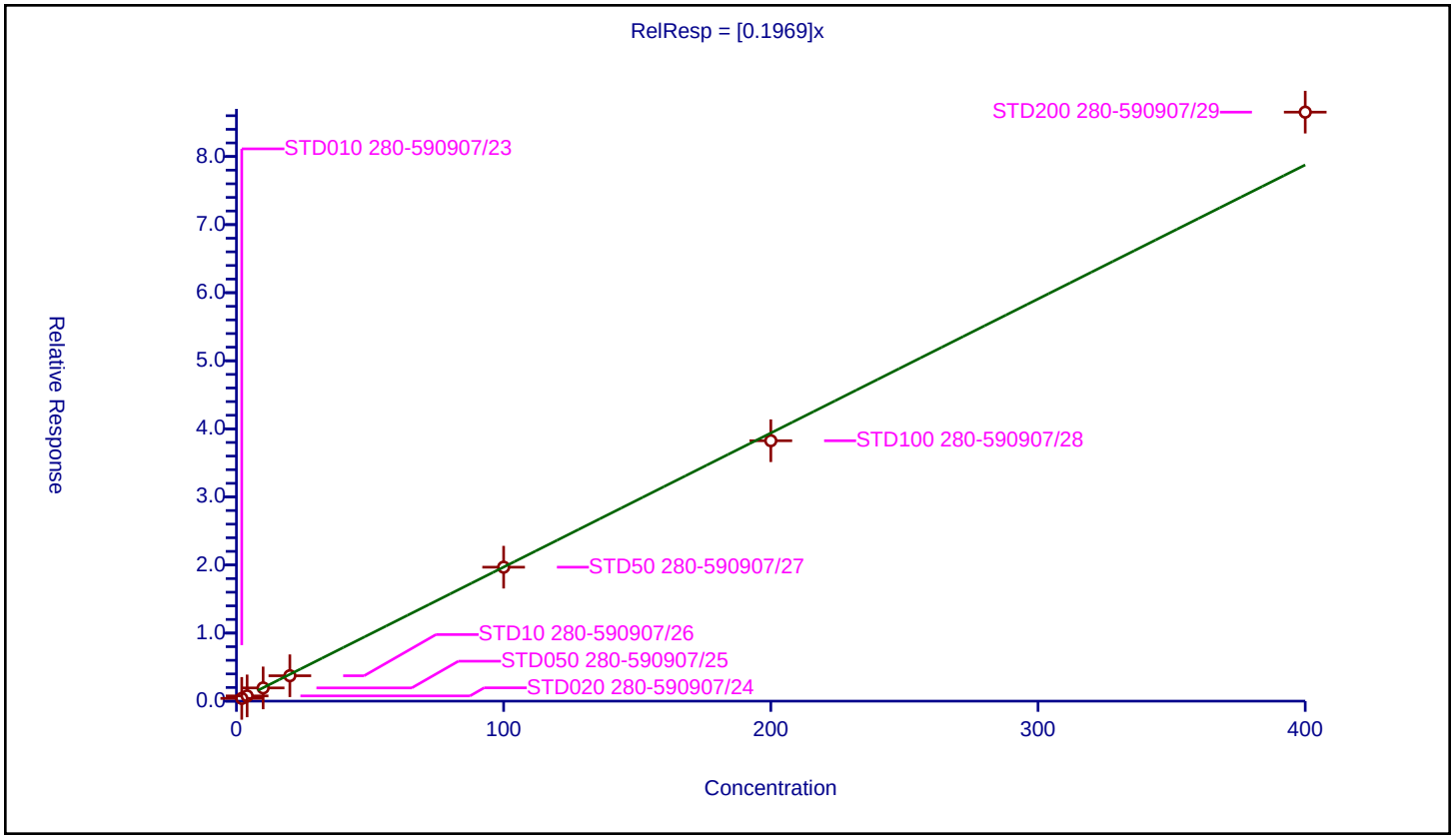
Curve Coefficients

Intercept:	0
Slope:	0.1969

Error Coefficients

Standard Error:	403000
Relative Standard Error:	5.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	2.0	0.403212	50.0	460800.0	0.201606	Y
2	STD020 280-590907/24	4.0	0.767202	50.0	461417.0	0.1918	Y
3	STD050 280-590907/25	10.0	1.941525	50.0	466180.0	0.194152	Y
4	STD10 280-590907/26	20.0	3.731312	50.0	471349.0	0.186566	Y
5	STD50 280-590907/27	100.0	19.678673	50.0	473350.0	0.196787	Y
6	STD100 280-590907/28	200.0	38.254424	50.0	502900.0	0.191272	Y
7	STD200 280-590907/29	400.0	86.522187	50.0	513774.0	0.216305	Y



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Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

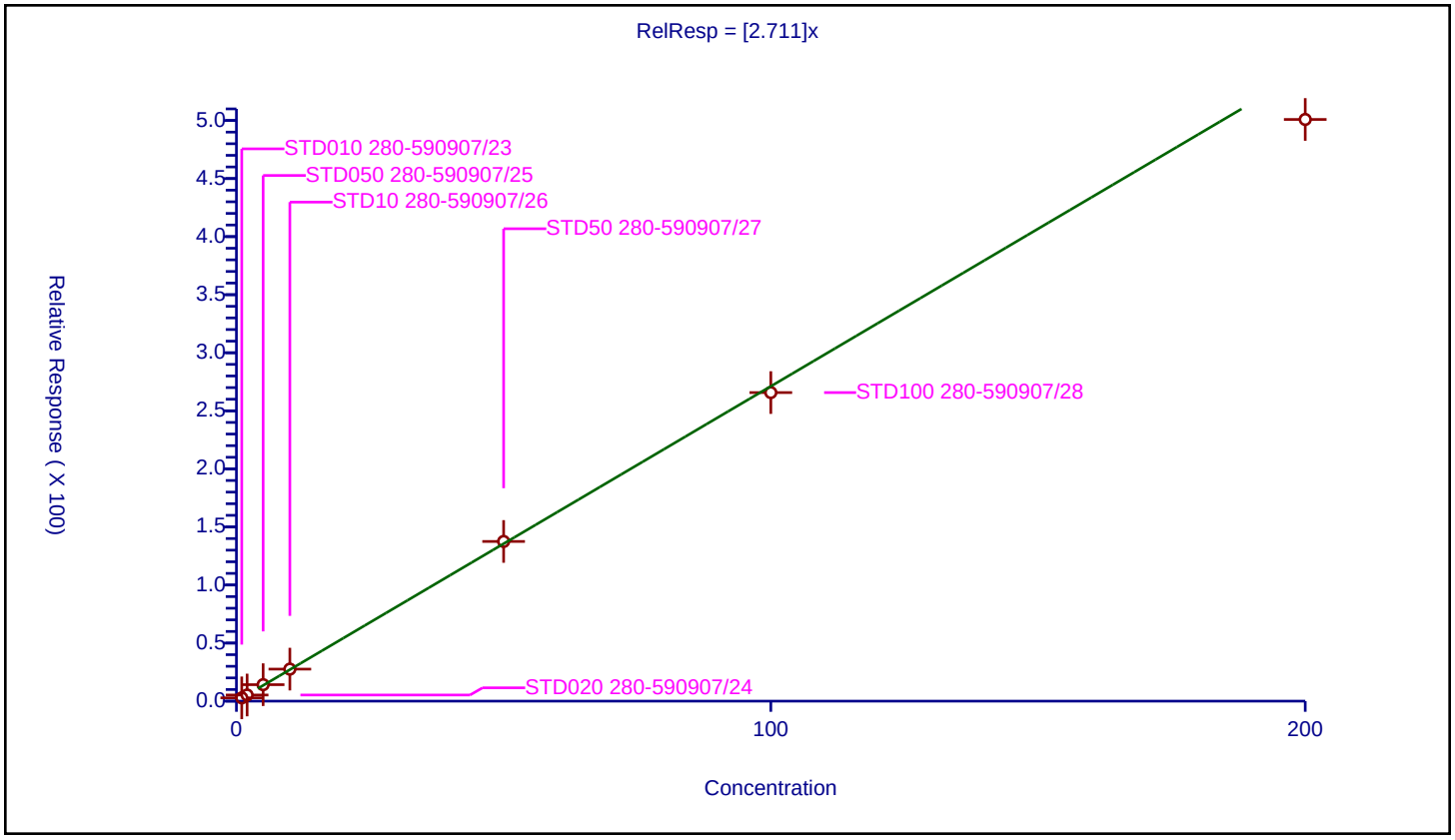
Curve Coefficients

Intercept:	0
Slope:	2.711

Error Coefficients

Standard Error:	2430000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	2.83138	50.0	460800.0	2.83138	Y
2	STD020 280-590907/24	2.0	5.284699	50.0	461417.0	2.64235	Y
3	STD050 280-590907/25	5.0	14.182612	50.0	466180.0	2.836522	Y
4	STD10 280-590907/26	10.0	27.577761	50.0	471349.0	2.757776	Y
5	STD50 280-590907/27	50.0	137.501743	50.0	473350.0	2.750035	Y
6	STD100 280-590907/28	100.0	265.70511	50.0	502900.0	2.657051	Y
7	STD200 280-590907/29	200.0	500.885798	50.0	513774.0	2.504429	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

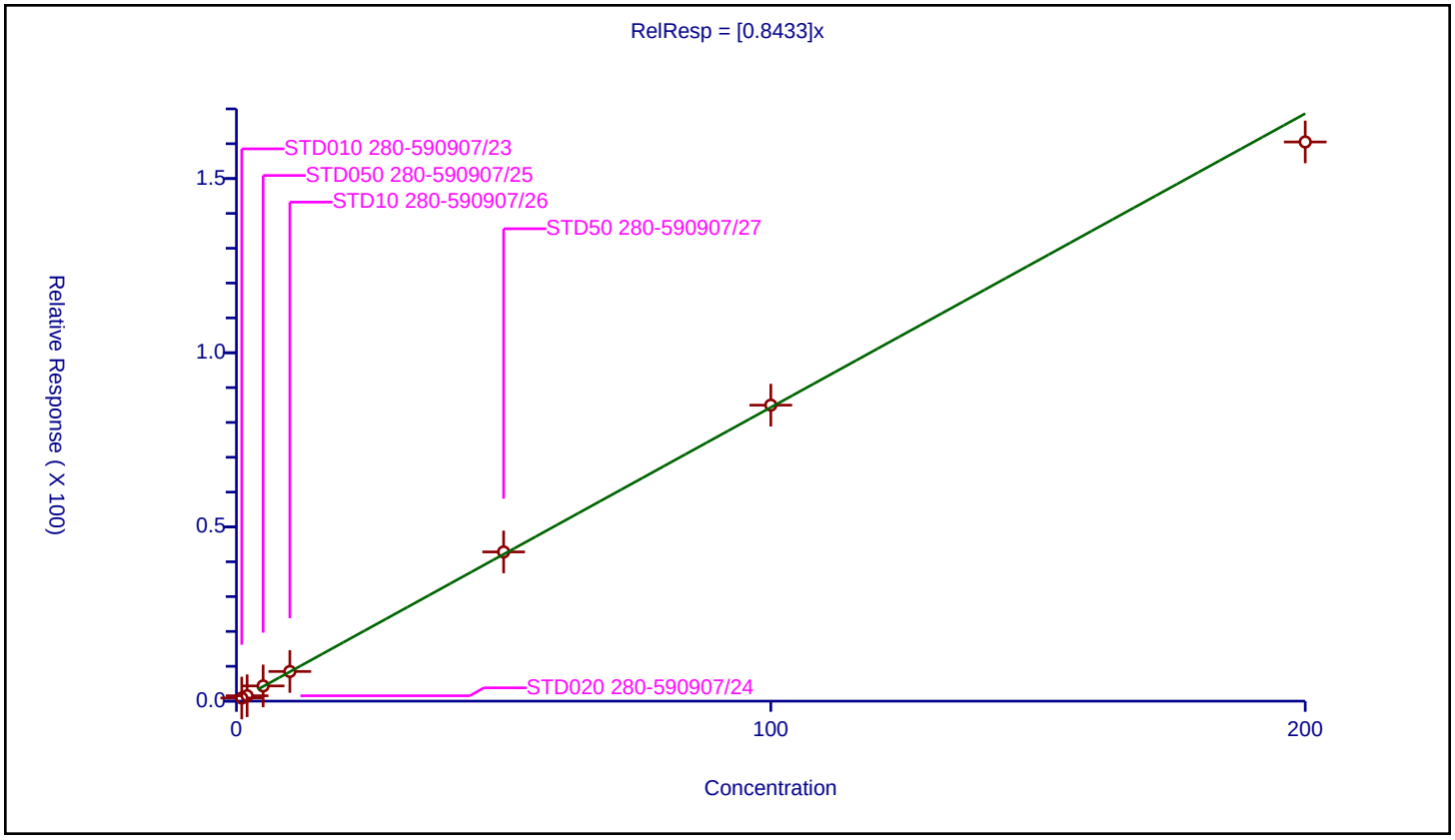
Curve Coefficients

Intercept:	0
Slope:	0.8433

Error Coefficients

Standard Error:	777000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD010 280-590907/23	1.0	0.895833	50.0	460800.0	0.895833	Y
2	STD020 280-590907/24	2.0	1.547841	50.0	461417.0	0.77392	Y
3	STD050 280-590907/25	5.0	4.366768	50.0	466180.0	0.873354	Y
4	STD10 280-590907/26	10.0	8.509194	50.0	471349.0	0.850919	Y
5	STD50 280-590907/27	50.0	42.828245	50.0	473350.0	0.856565	Y
6	STD100 280-590907/28	100.0	84.966494	50.0	502900.0	0.849665	Y
7	STD200 280-590907/29	200.0	160.505787	50.0	513774.0	0.802529	Y



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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-607881/19	X502127.D
Level 2	STD 280-607881/18	X502128.D
Level 3	STD 280-607881/16	X502129.D
Level 4	STD 280-607881/17	X502130.D
Level 5	STD 280-607881/15	X502131.D
Level 6	ICIS 280-607881/14	X502132.D
Level 7	STD 280-607881/13	X502133.D
Level 8	STD 280-607881/12	X502134.D
Level 9	STD 280-607881/11	X502135.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2400 0.2364	0.2098 0.2058	0.1634 0.2408	0.2219 0.2369	0.2196	Ave		0.2194				11.3		15.0			
Chloromethane	0.2540 0.2229	0.2083 0.2053	0.1870 0.2246	0.2270 0.2248	0.2523	Ave		0.2229			0.1000	9.6		15.0			
Vinyl chloride	0.2171 0.2257	0.1938 0.2038	0.1790 0.2325	0.2288 0.2345	0.2095	Lin1	-0.032	0.2275							0.9970		0.9900
Bromomethane	0.1457 0.1080	0.1036 0.1142	0.1252 0.1311	0.1238 0.1276	0.1112	Ave		0.1211				10.9		15.0			
Chloroethane	0.1419 0.1566	0.1689 0.1409	0.1225 0.1560	0.1601 0.1574	0.1631	Ave		0.1519				9.4		15.0			
Dichlorofluoromethane	0.3887 0.3839	0.3567 0.3619	0.3564 0.3896	0.3844 0.3944	0.3965	Ave		0.3792				4.3		15.0			
Trichlorofluoromethane	0.3016 0.3031	0.2964 0.2751	0.2601 0.3142	0.2807 0.3141	0.2877	Ave		0.2925				6.2		15.0			
Ethyl ether	0.1994 0.1624	0.1353 0.1550	0.1727 0.1670	0.1735 0.1736	0.1795	Ave		0.1687				10.4		15.0			
Acrolein	0.0295 0.0268	0.0253 0.0264	0.0226 0.0276	0.0291 0.0287	0.0288	Ave		0.0272				8.2		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 0.1506	0.1121 0.1260	0.1192 0.1471	0.1365 0.1451	0.1684	Ave		0.1381				13.4		15.0			
1,1-Dichloroethene	0.2232 0.1942	0.2036 0.1672	0.1662 0.1889	0.1826 0.1932	0.2095	Ave		0.1921				9.7		30.0			
Acetone	+++++ 0.0531	0.1188 0.0519	0.0879 0.0531	0.0676 0.0564	0.0630	Lin2	0.2638	0.0537							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	+++++ 0.2428	0.0859 0.2403	0.0968 0.2700	0.1599 0.2878	0.1934	Lin1	-0.322	0.2716							0.9940		0.9900
Carbon disulfide	0.8237 0.6000	0.6206 0.5382	0.5271 0.5995	0.6043 0.6074	0.6809	Ave		0.6224				14.1		15.0			
Methyl acetate	0.1302 0.1269	0.1033 0.1241	0.1127 0.1304	0.1374 0.1383	0.1329	Ave		0.1262				9.1		15.0			
Allyl chloride	0.2680 0.2564	0.2417 0.2437	0.2100 0.2549	0.2795 0.2501	0.2914	Ave		0.2551				9.2		15.0			
Methylene Chloride	+++++ 0.2222	0.3098 0.2089	0.2479 0.2237	0.2676 0.2300	0.2627	Ave		0.2466				13.3		15.0			
2-Methyl-2-propanol	0.0172 0.0169	0.0125 0.0179	0.0116 0.0193	0.0186 0.0212	0.0183	Lin1	-0.061	0.0197							0.9930		0.9900
Acrylonitrile	0.0749 0.0709	0.0637 0.0698	0.0620 0.0724	0.0761 0.0768	0.0785	Ave		0.0717				8.0		15.0			
Methyl tert-butyl ether	0.6217 0.5978	0.5246 0.5854	0.5009 0.6259	0.6675 0.6471	0.6688	Ave		0.6044				9.8		15.0			
trans-1,2-Dichloroethene	0.2063 0.2224	0.2129 0.1986	0.1799 0.2189	0.2201 0.2255	0.2350	Ave		0.2133				7.7		15.0			
Hexane	1.3406 1.2250	1.1213 1.0415	0.9109 1.1799	1.0412 1.1848	1.2672	Ave		1.1458				11.5		15.0			
Vinyl acetate	0.3457 0.3436	0.3007 0.3349	0.2645 0.3731	0.3450 0.3639	0.3707	Ave		0.3380				10.4		15.0			
1,1-Dichloroethane	0.4000 0.3925	0.3422 0.3691	0.3371 0.3992	0.4167 0.4123	0.4320	Ave		0.3890			0.1000	8.5		15.0			
2-Butanone (MEK)	+++++ 0.0801	0.0714 0.0809	0.0775 0.0829	0.0849 0.0873	0.0923	Ave		0.0821				7.7		15.0			
cis-1,2-Dichloroethene	0.2877 0.2443	0.2431 0.2300	0.2255 0.2519	0.2853 0.2568	0.2743	Ave		0.2554				8.9		15.0			
2,2-Dichloropropane	0.3305 0.3077	0.2598 0.2797	0.2642 0.3150	0.2845 0.3248	0.3249	Ave		0.2990				9.2		15.0			
sec-Butyl Alcohol	0.0097 0.0127	0.0088 0.0138	0.0082 0.0143	0.0130 0.0160	0.0124	Lin1	-0.152	0.0148							0.9930		0.9900
Chlorobromomethane	0.1164 0.1130	0.1164 0.1102	0.1114 0.1157	0.1293 0.1148	0.1320	Ave		0.1177				6.5		15.0			
Tetrahydrofuran	0.0649 0.0547	0.0496 0.0526	0.0480 0.0545	0.0567 0.0588	0.0613	Ave		0.0557				9.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chloroform	0.4289 0.3881	0.3823 0.3610	0.3395 0.3947	0.4332 0.4017	0.4331	Ave		0.3958				8.3		30.0			
1,1,1-Trichloroethane	0.3593 0.3270	0.3070 0.2903	0.2797 0.3271	0.3183 0.3336	0.3437	Ave		0.3206				7.9		15.0			
Cyclohexane	0.3472 0.3437	0.3205 0.2995	0.2697 0.3438	0.3274 0.3390	0.3862	Ave		0.3308				9.9		15.0			
1,1-Dichloropropene	0.3469 0.3153	0.3309 0.2822	0.2618 0.3193	0.3068 0.3236	0.3412	Ave		0.3142				8.7		15.0			
Carbon tetrachloride	0.2503 0.2773	0.2555 0.2456	0.2042 0.2806	0.2534 0.2853	0.2834	Ave		0.2595				10.0		15.0			
Isobutyl alcohol	0.0037 0.0056	0.0035 0.0058	0.0030 0.0060	0.0060 0.0067	0.0053	Lin1	-0.071	0.0063							0.9940		0.9900
Benzene	1.0614 0.9194	0.8520 0.8467	0.8152 0.9164	1.0143 0.9263	1.0083	Ave		0.9289				9.1		15.0			
1,2-Dichloroethane	+++++ 0.2931	0.2484 0.2849	0.2810 0.2993	0.3198 0.3047	0.3245	Ave		0.2944				8.2		15.0			
n-Heptane	+++++ 0.2007	0.1848 0.1831	0.1786 0.2027	0.1808 0.1979	0.2137	Ave		0.1928				6.6		15.0			
Trichloroethene	0.9482 0.9884	0.8928 0.8886	0.8011 0.9962	1.0224 1.0287	1.0411	Ave		0.9564				8.4		15.0			
2-Pentanone	+++++ 0.1284	0.0852 0.1285	0.0989 0.1325	0.1232 0.1396	0.1350	Lin2	-0.166	0.1334							0.9980		0.9900
Methylcyclohexane	0.2797 0.2528	0.2195 0.2243	0.2030 0.2535	0.2310 0.2509	0.2650	Ave		0.2422				10.1		15.0			
1,2-Dichloropropane	0.2960 0.2289	0.1845 0.2202	0.2089 0.2377	0.2522 0.2468	0.2508	Ave		0.2362				13.3		30.0			
1,4-Dioxane	+++++ 0.0028	0.0026 0.0030	0.0028 0.0030	0.0032 0.0030	0.0035	Ave		0.0030				9.8		15.0			
Dibromomethane	0.1530 0.1358	0.1395 0.1337	0.1230 0.1413	0.1401 0.1446	0.1569	Ave		0.1409				7.2		15.0			
Dichlorobromomethane	0.3298 0.2923	0.2574 0.2836	0.2529 0.3072	0.3185 0.3106	0.3243	Ave		0.2974				9.4		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0749	0.0860 0.0710	0.1086 0.0783	0.1053 0.0728	0.1185	Lin1	0.0651	0.0744							0.9900		0.9900
cis-1,3-Dichloropropene	1.4117 1.5795	1.2425 1.5208	1.3778 1.6454	1.5331 1.7171	1.6820	Ave		1.5233				10.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Methyl-2-pentanone (MIBK)	0.1454 0.1657	0.1212 0.1686	0.1235 0.1714	0.1641 0.1790	0.1842	Ave		0.1581				14.5		15.0			
Toluene	1.0661 0.9997	0.9758 0.9219	0.8750 0.9956	1.0755 1.0007	1.0956	Ave		1.0007				7.2		30.0			
trans-1,3-Dichloropropene	0.2907 0.3187	0.2574 0.3134	0.2396 0.3408	0.3121 0.3575	0.3319	Ave		0.3069				12.5		15.0			
Ethyl methacrylate	0.9701 1.1405	0.9124 1.1208	0.8475 1.1774	1.1664 1.2527	1.2438	Ave		1.0924				13.4		15.0			
1,1,2-Trichloroethane	0.2006 0.1942	0.1784 0.1897	0.1919 0.1991	0.2178 0.2016	0.2267	Ave		0.2000				7.3		15.0			
Tetrachloroethene	0.8562 0.7557	0.6039 0.6601	0.6675 0.7365	0.7038 0.7487	0.8008	Ave		0.7259				10.6		15.0			
1,3-Dichloropropane	1.5878 1.5228	1.4523 1.4632	1.3230 1.5350	1.5940 1.5966	1.7173	Ave		1.5324				7.3		15.0			
2-Hexanone	+++++ 0.5049	0.3825 0.4958	0.3703 0.5140	0.4663 0.5443	0.5530	Ave		0.4789				14.4		15.0			
Chlorodibromomethane	0.9064 0.9385	0.8593 0.8841	0.7457 0.9640	0.9631 1.0039	1.0535	Ave		0.9243				9.7		15.0			
1,2-Dibromoethane	0.8954 0.8694	0.7676 0.8468	0.7784 0.8905	0.9326 0.9199	0.9781	Ave		0.8754				7.9		15.0			
1-Chlorohexane	+++++ 1.3402	1.7170 1.1706	1.2481 1.3002	1.2677 1.3189	1.4650	Ave		1.3535				12.5		15.0			
Chlorobenzene	3.1050 2.7824	2.4890 2.5403	2.5301 2.7684	2.9586 2.7890	3.1063	Ave		2.7855			0.3000	8.5		15.0			
1,1,1,2-Tetrachloroethane	0.8652 0.9018	0.8481 0.8604	0.6725 0.9342	0.9610 0.9731	1.0421	Ave		0.8954				11.7		15.0			
Ethylbenzene	1.8784 1.5384	1.4104 1.3577	1.3823 1.5016	1.5351 1.5580	1.6375	Ave		1.5332				10.3		30.0			
m-Xylene & p-Xylene	1.9878 1.8724	1.7192 1.6721	1.6824 1.8200	1.8799 1.8385	2.0707	Ave		1.8381				7.3		15.0			
o-Xylene	1.9940 1.8244	1.7776 1.6899	1.7061 1.8053	1.9731 1.8633	2.1494	Ave		1.8648				8.0		15.0			
Styrene	2.8118 3.0976	2.5487 2.8469	2.4820 3.0545	3.1245 3.1233	3.5752	Ave		2.9627				11.3		15.0			
Bromoform	0.5330 0.5638	0.5015 0.5688	0.4391 0.5921	0.5691 0.6311	0.6295	Ave		0.5587			0.1000	10.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Isopropylbenzene	2.8936 2.9182	2.7601 2.5824	2.4989 2.8659	2.8273 2.8974	3.3009	Ave		2.8383				8.0		15.0			
Cyclohexanone	0.0334 0.0401	0.0267 0.0404	0.0305 0.0418	0.0468 0.0443	0.0453	Lin1	-0.276	0.0427							0.9980		0.9900
1,1,2,2-Tetrachloroethane	0.6301 0.7085	0.6248 0.6871	0.6626 0.7226	0.7903 0.7516	0.8670	Ave		0.7161			0.3000	10.9		15.0			
Bromobenzene	0.7766 0.7077	0.6263 0.6577	0.6563 0.7080	0.7647 0.7221	0.8149	Ave		0.7149				8.7		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1822	0.1263 0.1835	0.1287 0.1940	0.1519 0.2125	0.1894	Lin2	-0.077	0.1888							0.9900		0.9900
1,2,3-Trichloropropane	0.2499 0.2155	0.2004 0.2066	0.1906 0.2155	0.2179 0.2217	0.2381	Ave		0.2173				8.3		15.0			
N-Propylbenzene	0.6759 0.8318	0.7555 0.7400	0.6784 0.8152	0.8276 0.8332	0.9397	Ave		0.7886				10.7		15.0			
2-Chlorotoluene	0.6489 0.7072	0.6256 0.6538	0.6306 0.7058	0.7889 0.7279	0.8105	Ave		0.6999				9.6		15.0			
1,3,5-Trimethylbenzene	2.4596 2.4282	2.4243 2.2064	2.0402 2.3845	2.4665 2.4215	2.7111	Ave		2.3936				7.7		15.0			
4-Chlorotoluene	0.7915 0.7318	0.6133 0.6916	0.6247 0.7450	0.7554 0.7566	0.8437	Ave		0.7282				10.2		15.0			
tert-Butylbenzene	2.0916 2.0393	1.9174 1.8308	1.7605 1.9996	2.0336 2.0130	2.3148	Ave		2.0001				8.0		15.0			
1,2,4-Trimethylbenzene	2.5467 2.5377	2.2047 2.3227	2.1669 2.5199	2.5783 2.5345	2.8738	Ave		2.4761				8.7		15.0			
sec-Butylbenzene	0.6749 0.6094	0.5621 0.5379	0.5279 0.5978	0.5998 0.5993	0.6832	Ave		0.5991				9.0		15.0			
1,3-Dichlorobenzene	1.4200 1.3305	1.1613 1.2337	1.0806 1.3224	1.3945 1.3544	1.5820	Ave		1.3199				11.2		15.0			
4-Isopropyltoluene	2.6229 2.5483	2.2922 2.2999	2.1048 2.4915	2.4527 2.4962	2.9289	Ave		2.4708				9.4		15.0			
1,4-Dichlorobenzene	1.4352 1.3411	1.4443 1.2583	1.3203 1.3446	1.5037 1.3687	1.6038	Ave		1.4022				7.5		15.0			
n-Butylbenzene	2.1326 2.2934	1.8212 2.0756	1.7970 2.2244	2.1769 2.2368	2.5001	Ave		2.1398				10.4		15.0			
1,2-Dichlorobenzene	1.3335 1.2382	1.2170 1.1866	1.1044 1.2523	1.3639 1.2572	1.4825	Ave		1.2706				8.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-175123-1 Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 GC Column: RXI-624SilM ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 Calibration End Date: 04/07/2023 05:58 Calibration ID: 79019

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dibromo-3-Chloropropane	0.0697 0.1376	0.0878 0.1390	0.0699 0.1413	0.1473 0.1508	0.1432	Lin1	-0.058	0.1455							0.9980		0.9900
1,2,4-Trichlorobenzene	+++++ 0.6449	0.5083 0.6322	0.5417 0.6705	0.7012 0.6625	0.7563	Ave		0.6397				12.6		15.0			
Hexachlorobutadiene	+++++ 0.2390	0.1972 0.2215	0.2168 0.2412	0.2393 0.2321	0.2783	Ave		0.2332				10.1		15.0			
Naphthalene	1.4705 1.6489	1.2750 1.6963	1.3620 1.7576	1.7489 1.7291	1.9996	Ave		1.6320				13.8		15.0			
1,2,3-Trichlorobenzene	0.4869 0.4768	0.3653 0.4926	0.4280 0.5076	0.5113 0.4977	0.5791	Ave		0.4828				12.2		15.0			
Dibromofluoromethane (Surr)	0.2382 0.2381	0.2408 0.2421	0.2412 0.2419	0.2381 0.2420	0.2421	Ave		0.2405				0.8		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2484 0.2416	0.2535 0.2553	0.2564 0.2532	0.2542 0.2544	0.2564	Ave		0.2526				1.9		15.0			
Toluene-d8 (Surr)	4.2464 4.3013	4.2733 4.2275	4.2546 4.2538	4.2016 4.2763	4.2990	Ave		4.2593				0.8		15.0			
4-Bromofluorobenzene (Surr)	0.8784 0.8996	0.9003 0.8995	0.8888 0.9133	0.8857 0.9033	0.8728	Ave		0.8935				1.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 280-607881/19	X502127.D
Level 2	STD 280-607881/18	X502128.D
Level 3	STD 280-607881/16	X502129.D
Level 4	STD 280-607881/17	X502130.D
Level 5	STD 280-607881/15	X502131.D
Level 6	ICIS 280-607881/14	X502132.D
Level 7	STD 280-607881/13	X502133.D
Level 8	STD 280-607881/12	X502134.D
Level 9	STD 280-607881/11	X502135.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	3233 338892	5544 455235	8877 719193	29690 1487302	60240	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloromethane	FB	Ave	3421 319506	5505 454103	10159 670892	30373 1411421	69201	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl chloride	FB	Lin1	2925 323546	5121 450884	9723 694430	30616 1472583	57453	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromomethane	FB	Ave	1963 154866	2737 252611	6801 391432	16566 800852	30485	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Chloroethane	FB	Ave	1911 224545	4463 311792	6653 465962	21424 988102	44742	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorofluoromethane	FB	Ave	5236 550286	9428 800461	19362 1163656	51426 2476231	108746	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichlorofluoromethane	FB	Ave	4063 434484	7834 608496	14131 938320	37549 1971931	78899	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl ether	FB	Ave	2686 232745	3577 342946	9381 498848	23215 1090208	49231	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acrolein	FB	Ave	3927 379722	6604 577559	12124 814984	38447 1778974	77990	4.94 494	9.88 741	19.8 988	49.4 1975	98.8
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	+++++ 215857	2962 278730	6474 439333	18269 910907	46180	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloroethene	FB	Ave	3007 278445	5380 369837	9029 564261	24433 1212739	57452	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Acetone	FB	Lin2	+++++ 304604	12556 458920	19107 634088	36169 1417706	69108	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Iodomethane	FB	Lin1	+++++ 348041	2269 531498	5258 806371	21390 1807115	53045	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Carbon disulfide	FB	Ave	11096 860085	16403 1190511	28640 1790422	80848 3813466	186751	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methyl acetate	FB	Ave	3507 363705	5462 549127	12245 778916	36777 1736405	72912	1.00 100	2.00 150	4.00 200	10.0 400	20.0
Allyl chloride	FB	Ave	3610 367558	6388 539065	11410 761288	37396 1570415	79909	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Methylene Chloride	FB	Ave	+++++ 318574	8188 462061	13471 668279	35804 1444297	72041	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Methyl-2-propanol	FB	Lin1	2320 242268	3291 395522	6328 575215	24877 1330547	50092	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Acrylonitrile	FB	Ave	10085 1016179	16828 1544048	33673 2161584	101841 4821060	215343	5.00 500	10.0 750	20.0 1000	50.0 2000	100
Methyl tert-butyl ether	FB	Ave	8375 856915	13865 1294920	27213 1869281	89301 4062888	183431	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,2-Dichloroethene	FB	Ave	2779 318807	5628 439291	9776 653913	29443 1416053	64462	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexane	CBNZd5	Ave	4165 401685	6800 539664	11365 826083	32583 1712945	80887	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Vinyl acetate	FB	Ave	9312 985044	15894 1481686	28743 2229008	92305 4569454	203312	1.00 100	2.00 150	4.00 200	10.0 400	20.0
1,1-Dichloroethane	FB	Ave	5388 562644	9045 816491	18317 1192336	55748 2588608	118483	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Butanone (MEK)	FB	Ave	+++++ 459249	7552 715496	16837 989943	45431 2191938	101248	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
cis-1,2-Dichloroethene	FB	Ave	3876 350256	6426 508687	12253 752429	38166 1612272	75236	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2,2-Dichloropropane	FB	Ave	4452 441048	6866 618660	14356 940919	38064 2039483	89114	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butyl Alcohol	FB	Lin1	3124 438034	5594 733439	10662 1022793	41713 2406100	81863	12.0 1200	24.0 1800	48.0 2400	120 4800	240
Chlorobromomethane	FB	Ave	1568 161935	3076 243851	6050 345635	17299 720959	36209	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Tetrahydrofuran	FB	Ave	1748 156862	2622 232688	5217 325621	15172 738419	33630	1.00 100	2.00 150	4.00 200	10.0 400	20.0
Chloroform	FB	Ave	5777 556331	10105 798668	18443 1178968	57954 2521900	118770	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1-Trichloroethane	FB	Ave	4840 468729	8113 642071	15195 976837	42581 2094298	94276	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexane	FB	Ave	4677 492743	8471 662501	14652 1026924	43802 2128312	105926	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1-Dichloropropene	FB	Ave	4673 451920	8745 624293	14223 953615	41052 2031898	93579	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon tetrachloride	FB	Ave	3372 397512	6754 543267	11093 838075	33909 1791238	77728	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isobutyl alcohol	FB	Lin1	1239 202099	2296 322140	4131 449774	19923 1059317	36138	12.5 1250	25.0 1875	50.0 2500	125 5000	250
Benzene	FB	Ave	14297 1317866	22519 1872929	44293 2737137	135707 5815711	276546	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloroethane	FB	Ave	+++++ 420189	6564 630156	15265 894032	42781 1912823	88985	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Heptane	FB	Ave	+++++ 287678	4883 405076	9701 605305	24184 1242834	58608	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Trichloroethene	CBNZd5	Ave	2946 324099	5414 460433	9994 697477	31994 1487283	66453	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Pentanone	FB	Lin2	+++++ 588946	7204 909963	17190 1266287	52743 2805362	118471	+++++ 160	3.20 240	6.40 320	16.0 640	32.0
Methylcyclohexane	FB	Ave	3768 362438	5802 496273	11028 757279	30908 1575514	72674	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichloropropane	FB	Ave	3987 328128	4877 487163	11347 709804	33738 1549684	68795	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dioxane	FB	Ave	+++++ 80232	1363 131133	3045 180232	8564 378292	19458	+++++ 1000	20.0 1500	40.0 2000	100 4000	200
Dibromomethane	FB	Ave	2061 194598	3688 295852	6682 422071	18747 907837	43029	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dichlorobromomethane	FB	Ave	4442 419022	6802 627304	13742 917466	42619 1950032	88953	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chloroethyl vinyl ether	FB	Lin1	+++++ 107303	2272 157070	5903 233733	14093 457301	32500	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
cis-1,3-Dichloropropene	CBNZd5	Ave	4386 517953	7535 788014	17190 1151983	47976 2482593	107368	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	7832 949935	12812 1491522	26840 2047359	87812 4496701	202042	2.00 200	4.00 300	8.00 400	20.0 800	40.0
Toluene	FB	Ave	14361 1433071	25789 2039321	47540 2973481	143890 6283173	300489	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,3-Dichloropropene	FB	Ave	3916 456797	6802 693272	13015 1017829	41755 2244726	91033	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethyl methacrylate	CBNZd5	Ave	3014 373973	5533 580727	10574 824314	36500 1811167	79396	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,2-Trichloroethane	FB	Ave	2702 278363	4715 419600	10425 594722	29134 1265996	62169	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Tetrachloroethene	CBNZd5	Ave	2660 247796	3662 342034	8328 515640	22024 1082502	51118	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichloropropane	CBNZd5	Ave	4933 499334	8807 758142	16506 1074648	49882 2308352	109621	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Hexanone	CBNZd5	Ave	+++++ 662278	9279 1027635	18479 1439383	58368 3147857	141186	+++++ 200	4.00 300	8.00 400	20.0 800	40.0
Chlorodibromomethane	CBNZd5	Ave	2816 307759	5211 458113	9303 674905	30139 1451433	67246	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromoethane	CBNZd5	Ave	2782 285071	4655 438788	9711 623452	29186 1329989	62436	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1-Chlorohexane	CBNZd5	Ave	+++++ 351579	8330 485226	12457 728215	31737 1525490	74809	+++++ 40.0	0.800 60.0	1.60 80.0	4.00 160	8.00
Chlorobenzene	CBNZd5	Ave	9647 912393	15094 1316251	31566 1938193	92586 4032300	198280	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,1,1,2-Tetrachloroethane	CBNZd5	Ave	2688 295726	5143 445800	8390 654047	30072 1406924	66518	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Ethylbenzene	CBNZd5	Ave	5836 504466	8553 703490	17245 1051276	48039 2252454	104522	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
m-Xylene & p-Xylene	CBNZd5	Ave	6176 613970	10426 866391	20990 1274199	58830 2658033	132180	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
o-Xylene	CBNZd5	Ave	6195 598233	10780 875612	21285 1263921	61746 2693943	137199	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Styrene	CBNZd5	Ave	8736 1015747	15456 1475117	30966 2138500	97777 4515616	228213	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromoform	CBNZd5	Ave	1656 184865	3041 294736	5478 414564	17809 912378	40184	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Isopropylbenzene	DCBd4	Ave	14024 1487164	26320 2070408	48399 3086487	137693 6405703	333813	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Cyclohexanone	CBNZd5	Lin1	3115	4862	11401	43891	86743	15.0	30.0	60.0	150	300

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
			394415	628647	877871	1922235		1500	2250	3000	6000	
1,1,2,2-Tetrachloroethane	DCBd4	Ave	3054 361050	5958 550837	12834 778211	38489 1661698	87682	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Bromobenzene	DCBd4	Ave	3764 360643	5972 527328	12712 762506	37243 1596570	82410	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
trans-1,4-Dichloro-2-butene	DCBd4	Lin2	+++++ 92835	1204 147092	2492 208918	7396 469794	19149	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,3-Trichloropropane	DCBd4	Ave	1211 109805	1911 165636	3692 232101	10613 490084	24074	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
N-Propylbenzene	DCBd4	Ave	3276 423898	7204 593298	13139 877894	40306 1842046	95031	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
2-Chlorotoluene	DCBd4	Ave	3145 360383	5966 524154	12213 760094	38420 1609270	81968	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3,5-Trimethylbenzene	DCBd4	Ave	11921 1237465	23118 1768967	39515 2568017	120120 5353526	274169	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Chlorotoluene	DCBd4	Ave	3836 372917	5848 554452	12100 802364	36788 1672759	85320	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
tert-Butylbenzene	DCBd4	Ave	10137 1039264	18284 1467821	34097 2153460	99040 4450424	234094	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trimethylbenzene	DCBd4	Ave	12343 1293267	21024 1862150	41968 2713812	125567 5603513	290623	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
sec-Butylbenzene	DCBd4	Ave	3271 310567	5360 431247	10225 643793	29211 1324888	69093	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,3-Dichlorobenzene	DCBd4	Ave	6882 678055	11074 989115	20930 1424143	67914 2994458	159983	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
4-Isopropyltoluene	DCBd4	Ave	12712 1298661	21858 1843862	40766 2683227	119450 5518835	296199	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,4-Dichlorobenzene	DCBd4	Ave	6956 683454	13773 1008782	25571 1448050	73232 3025964	162189	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
n-Butylbenzene	DCBd4	Ave	10336 1168748	17367 1664058	34804 2395612	106017 4945270	252833	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dichlorobenzene	DCBd4	Ave	6463 630995	11605 951304	21390 1348625	66425 2779439	149928	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2-Dibromo-3-Chloropropane	DCBd4	Lin1	338 70118	837 111417	1353 152194	7174 333356	14481	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
1,2,4-Trichlorobenzene	DCBd4	Ave	+++++ 328647	4847 506863	10492 722079	34150 1464797	76481	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Hexachlorobutadiene	DCBd4	Ave	+++++ 121800	1880 177563	4199 259806	11656 513207	28148	+++++ 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Naphthalene	DCBd4	Ave	7127 840312	12158 1359974	26379 1892905	85174 3822819	202222	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-175123-1 | Analy Batch No.: 607881

SDG No.:

Instrument ID: VMS_X4 | GC Column: RXI-624Sil ID: 0.25(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 03:14 | Calibration End Date: 04/07/2023 05:58 | Calibration ID: 79019

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trichlorobenzene	DCBd4	Ave	2360 243010	3483 394915	8290 546626	24900 1100436	58565	0.500 50.0	1.00 75.0	2.00 100	5.00 200	10.0
Dibromofluoromethane (Surr)	FB	Ave	320846 341310	318271 357034	327624 361321	318595 379808	331984	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	334584 346313	334967 376482	348242 378106	340158 399359	351639	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
Toluene-d8 (Surr)	CBNZd5	Ave	1319319 1410445	1295729 1460315	1327001 1489072	1314839 1545654	1372074	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	425745 458461	429272 480762	430376 491788	431339 499290	441338	50.0 50.0	50.0 50.0	50.0 50.0	50.0 50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 07-Apr-2023 05:58:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 200
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:36 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:46:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1569677	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	361445	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	552718	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	379808	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	399359	50.0	50.4	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1545654	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	88	499290	50.0	50.5	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	1487302	200.0	215.9	
11 Chloromethane	50	1.867	1.867	0.000	99	1411421	200.0	201.7	
12 Vinyl chloride	62	1.960	1.967	-0.007	98	1472583	200.0	206.3	
14 Bromomethane	94	2.232	2.246	-0.014	91	800852	200.0	210.6	
15 Chloroethane	64	2.332	2.339	-0.007	100	988102	200.0	207.2	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	97	2476231	200.0	208.0	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	1971931	200.0	214.7	
19 Ethyl ether	59	2.747	2.747	0.000	88	1090208	200.0	205.8	
21 Acrolein	56	2.854	2.854	0.000	100	1778974	1975.0	2082.4	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.932	0.001	96	910907	200.0	210.1	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	98	1212739	200.0	201.1	
24 Acetone	43	2.954	2.954	0.000	100	1417706	800.0	835.5	
26 Iodomethane	142	3.054	3.061	-0.007	99	1807115	200.0	213.1	
27 Carbon disulfide	76	3.119	3.118	0.001	99	3813466	200.0	195.2	
29 Methyl acetate	43	3.176	3.176	0.000	97	1736405	400.0	438.1	
30 3-Chloro-1-propene	41	3.197	3.204	-0.007	87	1570415	200.0	196.1	
31 Methylene Chloride	84	3.290	3.297	-0.007	89	1444297	200.0	186.5	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	100	1330547	2000.0	2157.4	
33 Acrylonitrile	53	3.455	3.454	0.001	97	4821060	2000.0	2142.8	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	4062888	200.0	214.1	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	1416053	200.0	211.5	
37 Hexane	57	3.683	3.683	0.000	90	1712945	200.0	206.8	
39 Vinyl acetate	43	3.784	3.783	0.001	97	4569454	400.0	430.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	2588608	200.0	212.0	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	2191938	800.0	849.9	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	82	1612272	200.0	201.0	
48 2,2-Dichloropropane	77	4.220	4.227	-0.007	89	2039483	200.0	217.3	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	2406100	4800.0	5184.4	
52 Chlorobromomethane	128	4.384	4.391	-0.007	94	720959	200.0	195.1	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	738419	400.0	422.4	
54 Chloroform	83	4.441	4.448	-0.007	93	2521900	200.0	202.9	
55 1,1,1-Trichloroethane	97	4.584	4.591	-0.007	99	2094298	200.0	208.1	
56 Cyclohexane	56	4.649	4.649	0.000	88	2128312	200.0	205.0	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	2031898	200.0	206.0	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	1059317	5000.0	5374.3	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	1791238	200.0	219.9	
62 Benzene	78	4.849	4.849	0.000	96	5815711	200.0	199.4	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	1912823	200.0	206.9	
65 n-Heptane	43	5.028	5.035	-0.007	89	1242834	200.0	205.4	
67 Trichloroethene	95	5.335	5.335	0.000	98	1487283	200.0	215.1	
68 2-Pentanone	43	5.435	5.435	0.000	98	2805362	640.0	671.1	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	1575514	200.0	207.2	
70 1,2-Dichloropropane	63	5.535	5.542	-0.007	97	1549684	200.0	209.0	
72 1,4-Dioxane	88	5.578	5.578	0.000	92	378292	4000.0	4030.0	
73 Dibromomethane	93	5.607	5.607	0.000	94	907837	200.0	205.3	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	1950032	200.0	208.9	
76 2-Chloroethyl vinyl ether	63	5.929	5.936	-0.007	90	457301	200.0	194.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	2482593	200.0	225.4	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	4496701	800.0	906.0	
79 Toluene	91	6.365	6.365	0.000	98	6283173	200.0	200.0	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	2244726	200.0	233.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	1811167	200.0	229.4	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	1265996	200.0	201.6	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	1082502	200.0	206.3	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	95	2308352	200.0	208.4	
85 2-Hexanone	43	6.872	6.879	-0.007	94	3147857	800.0	909.3	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	1451433	200.0	217.2	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	1329989	200.0	210.2	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	1525490	160.0	155.9	
90 Chlorobenzene	112	7.602	7.602	0.000	95	4032300	200.0	200.3	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	96	1406924	200.0	217.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	2252454	200.0	203.2	
93 m-Xylene & p-Xylene	106	7.788	7.795	-0.007	0	2658033	200.0	200.0	
94 o-Xylene	106	8.152	8.152	0.000	96	2693943	200.0	199.8	
95 Styrene	104	8.167	8.166	0.001	94	4515616	200.0	210.8	
96 Bromoform	173	8.345	8.345	0.000	94	912378	200.0	225.9	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	6405703	200.0	204.2	
99 Cyclohexanone	55	8.588	8.588	0.000	91	1922235	6000.0	6228.1	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	1661698	200.0	209.9	
101 Bromobenzene	156	8.810	8.810	0.000	97	1596570	200.0	202.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	79	469794	200.0	225.5	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	490084	200.0	204.0	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	1842046	200.0	211.3	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	1609270	200.0	208.0	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	5353526	200.0	202.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	1672759	200.0	207.8	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	4450424	200.0	201.3	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	5603513	200.0	204.7	
111 sec-Butylbenzene	134	9.589	9.582	0.007	94	1324888	200.0	200.0	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	2994458	200.0	205.2	
113 4-Isopropyltoluene	119	9.733	9.732	0.000	97	5518835	200.0	202.1	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	3025964	200.0	195.2	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	4945270	200.0	209.1	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	2779439	200.0	197.9	
118 1,2-Dibromo-3-Chloropropane	157	10.941	10.948	-0.007	87	333356	200.0	207.6	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	1464797	200.0	207.1	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	513207	200.0	199.1	
122 Naphthalene	128	12.035	12.035	0.000	97	3822819	200.0	211.9	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	94	1100436	200.0	206.2	
S 135 1,2-Dichloroethene, Total (URS)	96				0		400.0	412.5	
S 139 Xylenes, Total (URS)	1				0		400.0	399.9	
S 136 1,3-Dichloropropene, Total	1				0		400.0	458.4	
S 138 Xylenes, Total	106				0		400.0	399.9	
S 137 Total BTEX	1				0			1002.5	
S 140 Trihalomethanes, Total	1				0		800.0	855.0	
S 141 1,2-Dichloroethene, Total	1				0		400.0	412.5	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00086	Amount Added: 100.00	Units: uL	
MV-Gas A_00150	Amount Added: 40.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

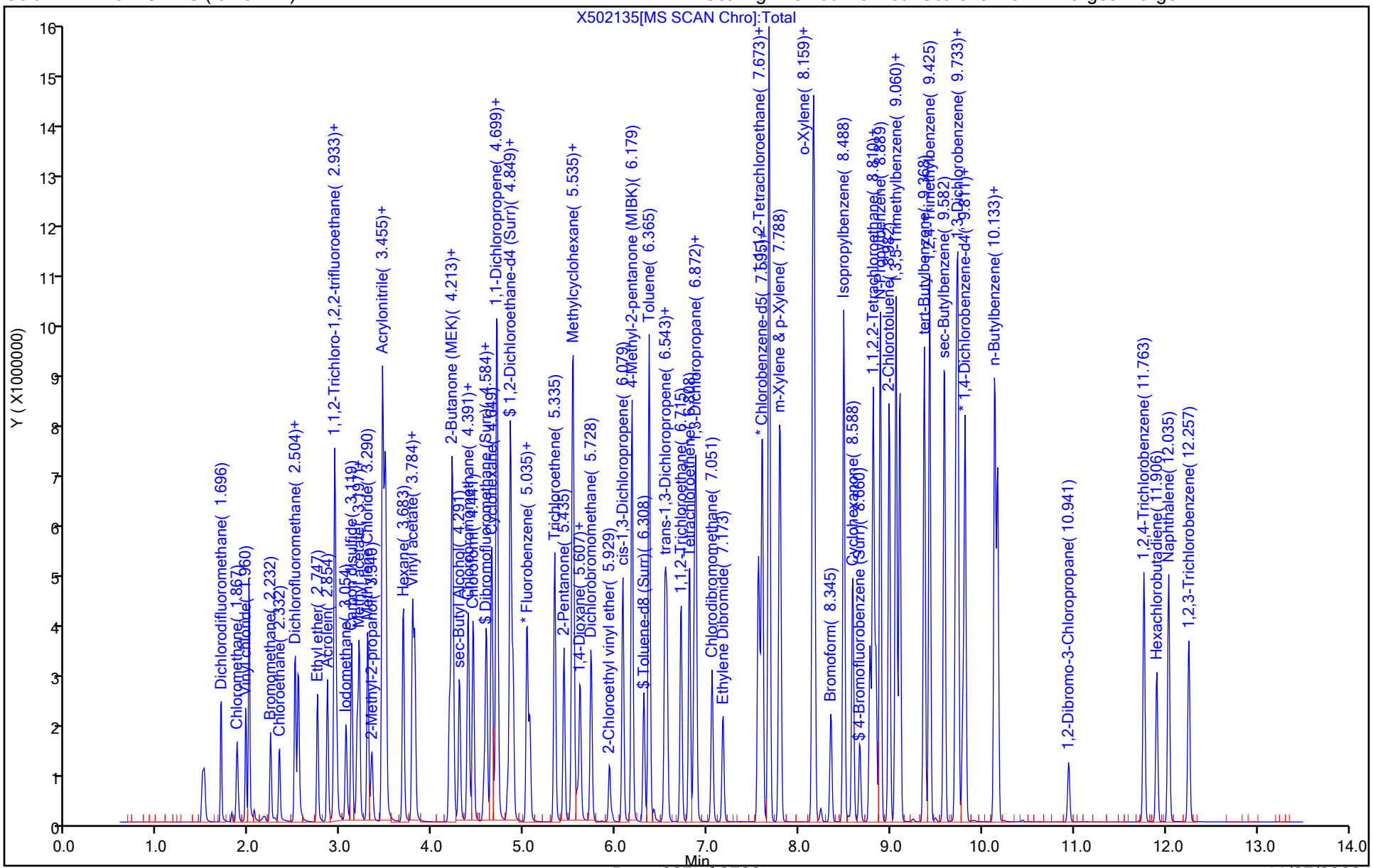
Report Date: 10-Apr-2023 11:26:37 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Injection Date:	07-Apr-2023 05:58:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502134.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 07-Apr-2023 05:38:30 ALS Bottle#: 9 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 100
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:39 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:26:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1493380	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	350056	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	538480	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	361321	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	378106	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1489072	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	88	491788	50.0	51.1	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	100	719193	100.0	109.8	
11 Chloromethane	50	1.867	1.867	0.000	98	670892	100.0	100.8	
12 Vinyl chloride	62	1.967	1.967	0.000	98	694430	100.0	102.3	
14 Bromomethane	94	2.239	2.246	-0.007	91	391432	100.0	108.2	
15 Chloroethane	64	2.332	2.339	-0.007	100	465962	100.0	102.7	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	97	1163656	100.0	102.8	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	99	938320	100.0	107.4	
19 Ethyl ether	59	2.747	2.747	0.000	89	498848	100.0	99.0	
21 Acrolein	56	2.854	2.854	0.000	99	814984	987.5	1002.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.932	0.001	96	439333	100.0	106.5	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	564261	100.0	98.4	
24 Acetone	43	2.954	2.954	0.000	100	634088	400.0	390.2	
26 Iodomethane	142	3.061	3.061	0.000	98	806371	100.0	100.6	
27 Carbon disulfide	76	3.118	3.118	0.000	99	1790422	100.0	96.3	
29 Methyl acetate	43	3.176	3.176	0.000	97	778916	200.0	206.6	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	87	761288	100.0	99.9	
31 Methylene Chloride	84	3.297	3.297	0.000	89	668279	100.0	90.7	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	575215	1000.0	982.0	
33 Acrylonitrile	53	3.455	3.454	0.001	98	2161584	1000.0	1009.8	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	1869281	100.0	103.5	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	653913	100.0	102.6	
37 Hexane	57	3.683	3.683	0.000	90	826083	100.0	103.0	
39 Vinyl acetate	43	3.783	3.783	0.000	97	2229008	200.0	220.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	1192336	100.0	102.6	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	989943	400.0	403.5	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	752429	100.0	98.6	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	89	940919	100.0	105.4	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	1022793	2400.0	2322.1	
52 Chlorobromomethane	128	4.384	4.391	-0.007	94	345635	100.0	98.3	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	325621	200.0	195.8	
54 Chloroform	83	4.441	4.448	-0.007	93	1178968	100.0	99.7	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	976837	100.0	102.0	
56 Cyclohexane	56	4.649	4.649	0.000	87	1026924	100.0	103.9	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	953615	100.0	101.6	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	449774	2500.0	2404.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	838075	100.0	108.1	
62 Benzene	78	4.849	4.849	0.000	96	2737137	100.0	98.7	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	894032	100.0	101.7	
65 n-Heptane	43	5.035	5.035	0.000	87	605305	100.0	105.1	
67 Trichloroethene	95	5.335	5.335	0.000	98	697477	100.0	104.2	
68 2-Pentanone	43	5.435	5.435	0.000	98	1266287	320.0	319.1	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	757279	100.0	104.7	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	96	709804	100.0	100.6	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	180232	2000.0	2018.1	
73 Dibromomethane	93	5.607	5.607	0.000	94	422071	100.0	100.3	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	917466	100.0	103.3	
76 2-Chloroethyl vinyl ether	63	5.929	5.936	-0.007	91	233733	100.0	104.3	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	1151983	100.0	108.0	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	2047359	400.0	433.6	
79 Toluene	91	6.365	6.365	0.000	98	2973481	100.0	99.5	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	97	1017829	100.0	111.0	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	824314	100.0	107.8	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	594722	100.0	99.6	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	515640	100.0	101.5	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	1074648	100.0	100.2	
85 2-Hexanone	43	6.872	6.879	-0.007	94	1439383	400.0	429.3	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	674905	100.0	104.3	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	623452	100.0	101.7	
89 1-Chlorohexane	91	7.552	7.559	-0.007	95	728215	80.0	76.9	
90 Chlorobenzene	112	7.602	7.602	0.000	96	1938193	100.0	99.4	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	46	654047	100.0	104.3	
92 Ethylbenzene	106	7.673	7.673	0.000	98	1051276	100.0	97.9	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	1274199	100.0	99.0	
94 o-Xylene	106	8.152	8.152	0.000	96	1263921	100.0	96.8	
95 Styrene	104	8.167	8.166	0.001	94	2138500	100.0	103.1	
96 Bromoform	173	8.345	8.345	0.000	95	414564	100.0	106.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	3086487	100.0	101.0	
99 Cyclohexanone	55	8.588	8.588	0.000	91	877871	3000.0	2940.3	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	778211	100.0	100.9	
101 Bromobenzene	156	8.810	8.810	0.000	97	762506	100.0	99.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	79	208918	100.0	103.2	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	232101	100.0	99.2	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	877894	100.0	103.4	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	760094	100.0	100.8	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	2568017	100.0	99.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	802364	100.0	102.3	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	2153460	100.0	100.0	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	2713812	100.0	101.8	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	643793	100.0	99.8	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	1424143	100.0	100.2	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	2683227	100.0	100.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	1448050	100.0	95.9	
116 n-Butylbenzene	91	10.140	10.133	0.007	98	2395612	100.0	104.0	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	1348625	100.0	98.6	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	85	152194	100.0	97.5	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	722079	100.0	104.8	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	259806	100.0	103.5	
122 Naphthalene	128	12.035	12.035	0.000	97	1892905	100.0	107.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	546626	100.0	105.1	
S 135 1,2-Dichloroethene, Total (URS)	96				0		200.0	201.3	
S 139 Xylenes, Total (URS)	1				0		200.0	195.8	
S 136 1,3-Dichloropropene, Total	1				0		200.0	219.1	
S 138 Xylenes, Total	106				0		200.0	195.8	
S 137 Total BTEX	1				0			491.9	
S 140 Trihalomethanes, Total	1				0		400.0	413.3	
S 141 1,2-Dichloroethene, Total	1				0		200.0	201.3	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00150	Amount Added: 20.00	Units: uL	
MV-MegaMainA_00086	Amount Added: 50.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

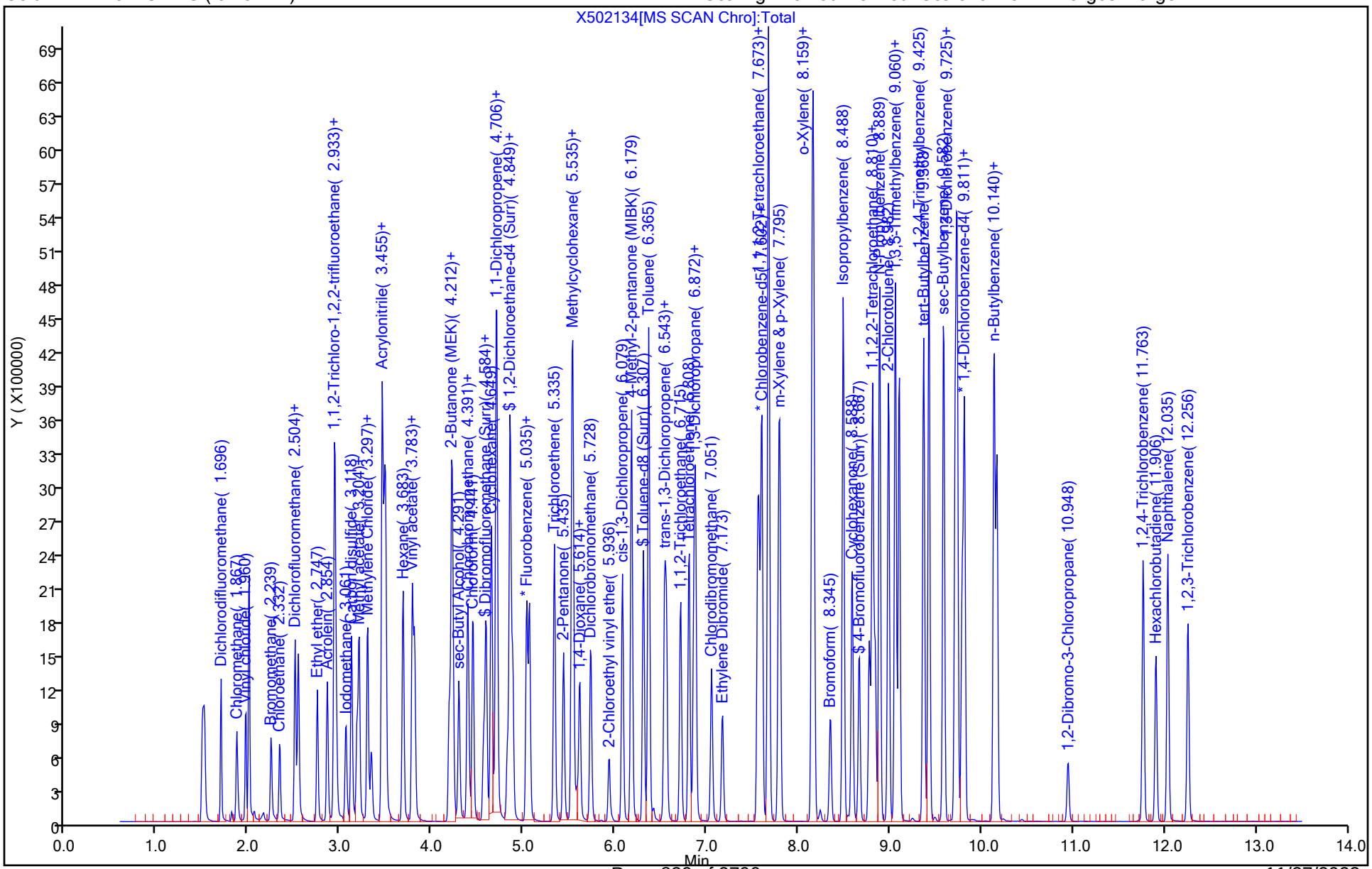
Report Date: 10-Apr-2023 11:26:40 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502134.D

Injection Date:	07-Apr-2023 05:38:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502133.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 07-Apr-2023 05:17:30 ALS Bottle#: 8 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 75
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:46 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:25:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1474746	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	345430	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	534485	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	357034	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	376482	50.0	50.5	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1460315	50.0	49.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	88	480762	50.0	50.3	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	455235	75.0	70.3	
11 Chloromethane	50	1.867	1.867	0.000	99	454103	75.0	69.1	
12 Vinyl chloride	62	1.967	1.967	0.000	98	450884	75.0	67.3	
14 Bromomethane	94	2.246	2.246	0.000	91	252611	75.0	70.7	
15 Chloroethane	64	2.339	2.339	0.000	100	311792	75.0	69.6	
16 Dichlorofluoromethane	67	2.504	2.503	0.001	97	800461	75.0	71.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	608496	75.0	70.5	
19 Ethyl ether	59	2.747	2.747	0.000	89	342946	75.0	68.9	
21 Acrolein	56	2.854	2.854	0.000	99	577559	740.6	719.6	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.932	0.001	96	278730	75.0	68.4	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	369837	75.0	65.3	
24 Acetone	43	2.954	2.954	0.000	100	458920	300.0	284.7	
26 Iodomethane	142	3.061	3.061	0.000	98	531498	75.0	67.5	
27 Carbon disulfide	76	3.118	3.118	0.000	99	1190511	75.0	64.8	
29 Methyl acetate	43	3.183	3.176	0.007	97	549127	150.0	147.5	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	86	539065	75.0	71.7	
31 Methylene Chloride	84	3.297	3.297	0.000	90	462061	75.0	63.5	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	395522	750.0	684.7	
33 Acrylonitrile	53	3.454	3.454	0.000	98	1544048	750.0	730.5	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	1294920	75.0	72.6	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	439291	75.0	69.8	
37 Hexane	57	3.683	3.683	0.000	90	539664	75.0	68.2	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1481686	150.0	148.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	816491	75.0	71.2	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	715496	300.0	295.3	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	508687	75.0	67.5	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	618660	75.0	70.1	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	733439	1800.0	1689.0	
52 Chlorobromomethane	128	4.391	4.391	0.000	93	243851	75.0	70.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	232688	150.0	141.7	
54 Chloroform	83	4.441	4.448	-0.007	93	798668	75.0	68.4	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	98	642071	75.0	67.9	
56 Cyclohexane	56	4.649	4.649	0.000	87	662501	75.0	67.9	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	624293	75.0	67.4	
60 Isobutyl alcohol	41	4.706	4.706	0.000	95	322140	1875.0	1747.2	
59 Carbon tetrachloride	117	4.706	4.706	0.000	95	543267	75.0	71.0	
62 Benzene	78	4.849	4.849	0.000	96	1872929	75.0	68.4	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	630156	75.0	72.6	
65 n-Heptane	43	5.035	5.035	0.000	88	405076	75.0	71.2	
67 Trichloroethene	95	5.335	5.335	0.000	98	460433	75.0	69.7	
68 2-Pentanone	43	5.435	5.435	0.000	98	909963	240.0	232.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	496273	75.0	69.5	
70 1,2-Dichloropropane	63	5.535	5.542	-0.007	96	487163	75.0	69.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	90	131133	1500.0	1486.9	
73 Dibromomethane	93	5.614	5.607	0.007	96	295852	75.0	71.2	
74 Dichlorobromomethane	83	5.728	5.735	-0.007	99	627304	75.0	71.5	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	90	157070	75.0	70.7	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	788014	75.0	74.9	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	1491522	300.0	319.8	
79 Toluene	91	6.365	6.365	0.000	98	2039321	75.0	69.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	693272	75.0	76.6	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	580727	75.0	76.9	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	419600	75.0	71.1	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	342034	75.0	68.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	758142	75.0	71.6	
85 2-Hexanone	43	6.879	6.879	0.000	94	1027635	300.0	310.6	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	458113	75.0	71.7	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	438788	75.0	72.6	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	485226	60.0	51.9	
90 Chlorobenzene	112	7.602	7.602	0.000	95	1316251	75.0	68.4	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	445800	75.0	72.1	
92 Ethylbenzene	106	7.673	7.673	0.000	98	703490	75.0	66.4	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	866391	75.0	68.2	
94 o-Xylene	106	8.152	8.152	0.000	96	875612	75.0	68.0	
95 Styrene	104	8.167	8.166	0.000	94	1475117	75.0	72.1	
96 Bromoform	173	8.345	8.345	0.000	94	294736	75.0	76.4	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	2070408	75.0	68.2	
99 Cyclohexanone	55	8.588	8.588	0.000	91	628647	2250.0	2135.5	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	550837	75.0	72.0	
101 Bromobenzene	156	8.810	8.810	0.000	97	527328	75.0	69.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	80	147092	75.0	73.3	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	165636	75.0	71.3	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	593298	75.0	70.4	
105 2-Chlorotoluene	126	8.982	8.982	0.000	96	524154	75.0	70.1	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1768967	75.0	69.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	554452	75.0	71.2	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1467821	75.0	68.7	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1862150	75.0	70.4	
111 sec-Butylbenzene	134	9.589	9.582	0.007	94	431247	75.0	67.3	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	989115	75.0	70.1	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1843862	75.0	69.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	1008782	75.0	67.3	
116 n-Butylbenzene	91	10.140	10.133	0.007	98	1664058	75.0	72.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	951304	75.0	70.0	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	86	111417	75.0	72.0	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	506863	75.0	74.1	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	177563	75.0	71.2	
122 Naphthalene	128	12.035	12.035	0.000	97	1359974	75.0	78.0	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	394915	75.0	76.5	
S 135 1,2-Dichloroethene, Total (URS)	96				0		150.0	137.3	
S 139 Xylenes, Total (URS)	1				0		150.0	136.2	
S 136 1,3-Dichloropropene, Total	1				0		150.0	151.5	
S 138 Xylenes, Total	106				0		150.0	136.2	
S 137 Total BTEX	1				0			340.1	
S 140 Trihalomethanes, Total	1				0		300.0	288.0	
S 141 1,2-Dichloroethene, Total	1				0		150.0	137.3	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00086	Amount Added:	37.50	Units: uL	
MV-Gas A_00150	Amount Added:	15.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

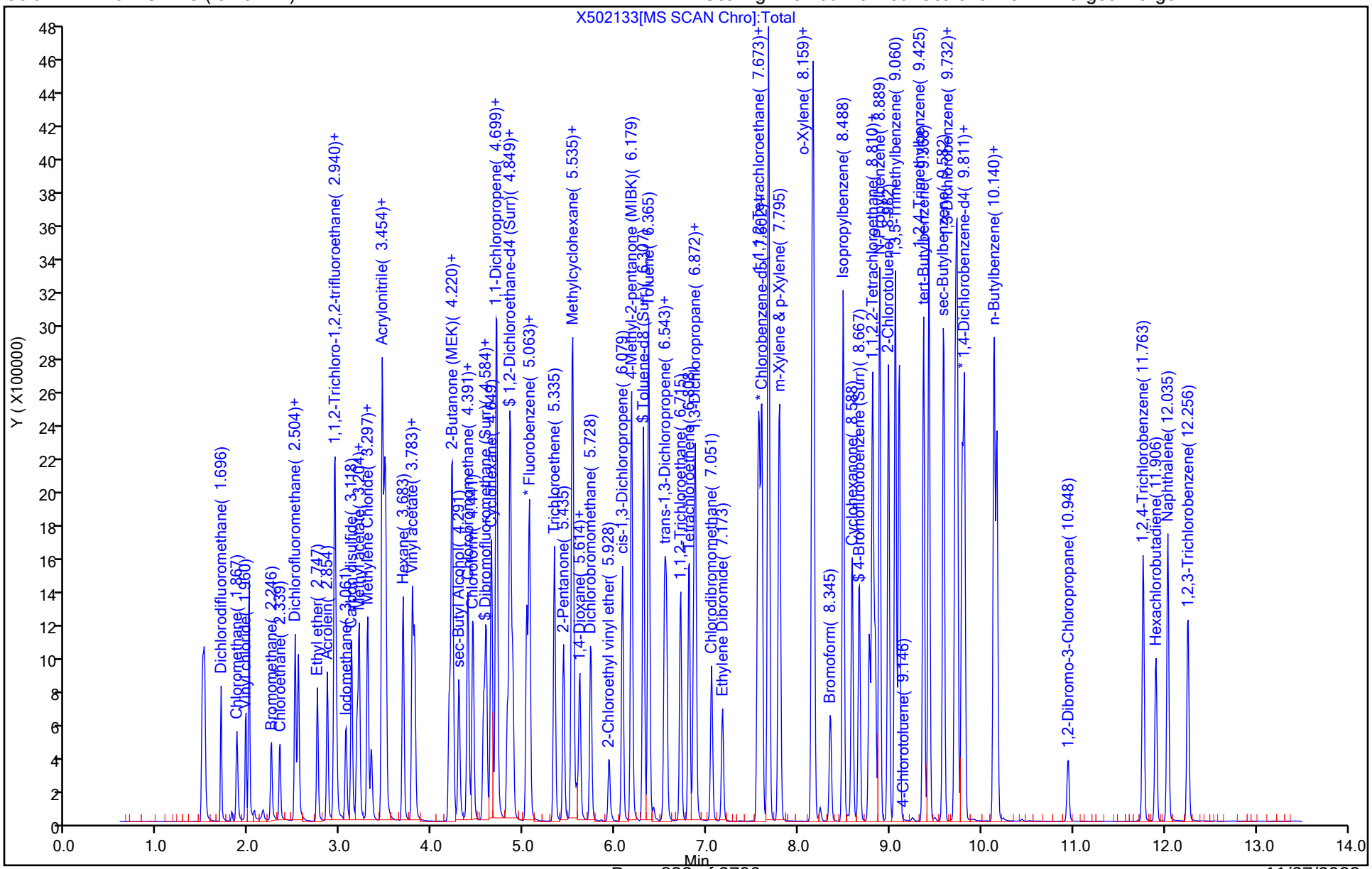
Report Date: 10-Apr-2023 11:26:47 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502133.D

Injection Date:	07-Apr-2023 05:17:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502132.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 07-Apr-2023 04:56:30 ALS Bottle#: 7 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icis
Misc. Info.: 50
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:53 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:25:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1433467	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	327912	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	509618	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	341310	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	346313	50.0	47.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1410445	50.0	50.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	87	458461	50.0	50.3	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	338892	50.0	53.9	
11 Chloromethane	50	1.867	1.867	0.000	99	319506	50.0	50.0	
12 Vinyl chloride	62	1.967	1.967	0.000	98	323546	50.0	49.7	
14 Bromomethane	94	2.246	2.246	0.000	91	154866	50.0	44.6	
15 Chloroethane	64	2.339	2.339	0.000	99	224545	50.0	51.5	
16 Dichlorofluoromethane	67	2.503	2.503	0.000	97	550286	50.0	50.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	434484	50.0	51.8	
19 Ethyl ether	59	2.747	2.747	0.000	87	232745	50.0	48.1	
21 Acrolein	56	2.854	2.854	0.000	100	379722	493.8	486.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.932	0.000	96	215857	50.0	54.5	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	278445	50.0	50.6	
24 Acetone	43	2.954	2.954	0.000	100	304604	200.0	192.8	
26 Iodomethane	142	3.061	3.061	0.000	98	348041	50.0	45.9	
27 Carbon disulfide	76	3.118	3.118	0.000	99	860085	50.0	48.2	
29 Methyl acetate	43	3.176	3.176	0.000	96	363705	100.0	100.5	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	85	367558	50.0	50.3	
31 Methylene Chloride	84	3.297	3.297	0.000	90	318574	50.0	45.1	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	242268	500.0	432.6	
33 Acrylonitrile	53	3.454	3.454	0.000	97	1016179	500.0	494.6	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	856915	50.0	49.5	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	97	318807	50.0	52.1	
37 Hexane	57	3.683	3.683	0.000	90	401685	50.0	53.5	
39 Vinyl acetate	43	3.783	3.783	0.000	97	985044	100.0	101.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	562644	50.0	50.4	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	459249	200.0	195.0	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	82	350256	50.0	47.8	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	88	441048	50.0	51.4	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	438034	1200.0	1041.7	
52 Chlorobromomethane	128	4.391	4.391	0.000	93	161935	50.0	48.0	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	156862	100.0	98.3	
54 Chloroform	83	4.448	4.448	0.000	93	556331	50.0	49.0	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	468729	50.0	51.0	
56 Cyclohexane	56	4.649	4.649	0.000	88	492743	50.0	52.0	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	451920	50.0	50.2	
60 Isobutyl alcohol	41	4.706	4.706	0.000	92	202099	1250.0	1131.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	397512	50.0	53.4	
62 Benzene	78	4.849	4.849	0.000	96	1317866	50.0	49.5	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	420189	50.0	49.8	
65 n-Heptane	43	5.035	5.035	0.000	88	287678	50.0	52.1	
67 Trichloroethene	95	5.335	5.335	0.000	98	324099	50.0	51.7	
68 2-Pentanone	43	5.435	5.435	0.000	98	588946	160.0	155.2	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	362438	50.0	52.2	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	95	328128	50.0	48.5	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	80232	1000.0	935.9	
73 Dibromomethane	93	5.607	5.607	0.000	94	194598	50.0	48.2	
74 Dichlorobromomethane	83	5.735	5.735	0.000	99	419022	50.0	49.1	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	91	107303	50.0	49.4	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	517953	50.0	51.8	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	949935	200.0	209.6	
79 Toluene	91	6.365	6.365	0.000	98	1433071	50.0	50.0	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	456797	50.0	51.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	373973	50.0	52.2	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	278363	50.0	48.5	
83 Tetrachloroethene	164	6.808	6.808	0.000	96	247796	50.0	52.1	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	499334	50.0	49.7	
85 2-Hexanone	43	6.879	6.879	0.000	94	662278	200.0	210.9	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	307759	50.0	50.8	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	285071	50.0	49.7	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	351579	40.0	39.6	
90 Chlorobenzene	112	7.602	7.602	0.000	96	912393	50.0	49.9	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	96	295726	50.0	50.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	504466	50.0	50.2	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	613970	50.0	50.9	
94 o-Xylene	106	8.152	8.152	0.000	96	598233	50.0	48.9	
95 Styrene	104	8.166	8.166	0.000	94	1015747	50.0	52.3	
96 Bromoform	173	8.345	8.345	0.000	94	184865	50.0	50.5	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1487164	50.0	51.4	
99 Cyclohexanone	55	8.588	8.588	0.000	91	394415	1500.0	1413.6	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	361050	50.0	49.5	
101 Bromobenzene	156	8.810	8.810	0.000	96	360643	50.0	49.5	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	84	92835	50.0	48.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	87	109805	50.0	49.6	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	423898	50.0	52.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	96	360383	50.0	50.5	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	1237465	50.0	50.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	372917	50.0	50.2	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1039264	50.0	51.0	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	1293267	50.0	51.2	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	310567	50.0	50.9	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	678055	50.0	50.4	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1298661	50.0	51.6	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	683454	50.0	47.8	
116 n-Butylbenzene	91	10.133	10.133	0.000	98	1168748	50.0	53.6	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	630995	50.0	48.7	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	86	70118	50.0	47.7	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	93	328647	50.0	50.4	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	96	121800	50.0	51.2	
122 Naphthalene	128	12.035	12.035	0.000	97	840312	50.0	50.5	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	243010	50.0	49.4	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	100.0	
S 139 Xylenes, Total (URS)	1				0		100.0	99.8	
S 136 1,3-Dichloropropene, Total	1				0		100.0	103.8	
S 138 Xylenes, Total	106				0		100.0	99.8	
S 140 Trihalomethanes, Total	1				0		200.0	199.4	
S 141 1,2-Dichloroethene, Total	1				0		100.0	100.0	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00150	Amount Added: 10.00	Units: uL	
MV-MegaMainA_00086	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

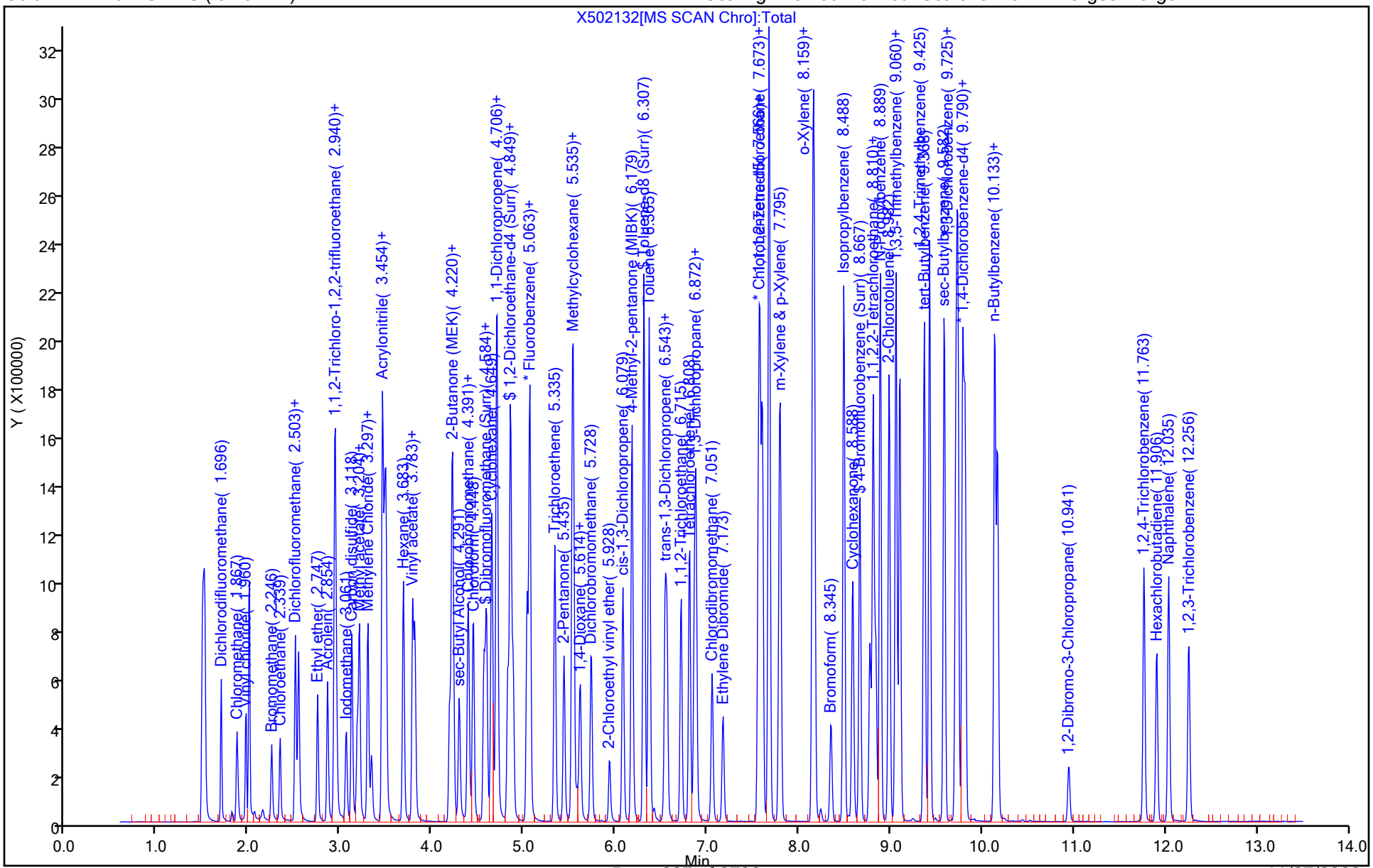
Report Date: 10-Apr-2023 11:26:54 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502132.D

Injection Date:	07-Apr-2023 04:56:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	ICIS			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502131.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 07-Apr-2023 04:36:30 ALS Bottle#: 6 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 10
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:26:56 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:24:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1371311	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	319160	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	505647	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	331984	50.0	50.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	351639	50.0	50.8	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1372074	50.0	50.5	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	441338	50.0	48.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	60240	10.0	10.0	
11 Chloromethane	50	1.860	1.860	0.000	99	69201	10.0	11.3	
12 Vinyl chloride	62	1.960	1.960	0.000	98	57453	10.0	9.35	
14 Bromomethane	94	2.246	2.246	0.000	91	30485	10.0	9.18	
15 Chloroethane	64	2.339	2.339	0.000	99	44742	10.0	10.7	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	108746	10.0	10.5	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	78899	10.0	9.83	
19 Ethyl ether	59	2.747	2.747	0.000	89	49231	10.0	10.6	
21 Acrolein	56	2.854	2.854	0.000	99	77990	98.8	104.5	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	46180	10.0	12.2	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	97	57452	10.0	10.9	
24 Acetone	43	2.954	2.954	0.000	100	69108	40.0	42.0	
26 Iodomethane	142	3.054	3.054	0.000	99	53045	10.0	8.31	
27 Carbon disulfide	76	3.118	3.118	0.000	99	186751	10.0	10.9	
29 Methyl acetate	43	3.176	3.176	0.000	96	72912	20.0	21.1	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	79909	10.0	11.4	
31 Methylene Chloride	84	3.297	3.297	0.000	89	72041	10.0	10.7	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	50092	100.0	96.0	
33 Acrylonitrile	53	3.455	3.455	0.000	98	215343	100.0	109.6	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	183431	10.0	11.1	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	96	64462	10.0	11.0	
37 Hexane	57	3.683	3.683	0.000	91	80887	10.0	11.1	
39 Vinyl acetate	43	3.783	3.783	0.000	97	203312	20.0	21.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	118483	10.0	11.1	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	101248	40.0	44.9	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	81	75236	10.0	10.7	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	93	89114	10.0	10.9	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	97	81863	240.0	211.8	
52 Chlorobromomethane	128	4.384	4.384	0.000	93	36209	10.0	11.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	84	33630	20.0	22.0	
54 Chloroform	83	4.448	4.448	0.000	93	118770	10.0	10.9	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	94276	10.0	10.7	
56 Cyclohexane	56	4.649	4.649	0.000	87	105926	10.0	11.7	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	93579	10.0	10.9	
60 Isobutyl alcohol	41	4.706	4.706	0.000	77	36138	250.0	220.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	77728	10.0	10.9	
62 Benzene	78	4.849	4.849	0.000	97	276546	10.0	10.9	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	88985	10.0	11.0	
65 n-Heptane	43	5.035	5.035	0.000	83	58608	10.0	11.1	
67 Trichloroethene	95	5.335	5.335	0.000	96	66453	10.0	10.9	
68 2-Pentanone	43	5.435	5.435	0.000	97	118471	32.0	33.6	
69 Methylcyclohexane	55	5.528	5.528	0.000	88	72674	10.0	10.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	96	68795	10.0	10.6	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	19458	200.0	237.3	
73 Dibromomethane	93	5.614	5.614	0.000	91	43029	10.0	11.1	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	88953	10.0	10.9	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	90	32500	10.0	15.1	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	107368	10.0	11.0	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	202042	40.0	46.6	
79 Toluene	91	6.365	6.365	0.000	98	300489	10.0	10.9	
80 trans-1,3-Dichloropropene	75	6.543	6.543	0.000	95	91033	10.0	10.8	
81 Ethyl methacrylate	69	6.558	6.558	0.000	88	79396	10.0	11.4	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	92	62169	10.0	11.3	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	51118	10.0	11.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	109621	10.0	11.2	
85 2-Hexanone	43	6.880	6.880	0.000	93	141186	40.0	46.2	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	67246	10.0	11.4	
88 Ethylene Dibromide	107	7.173	7.173	0.000	100	62436	10.0	11.2	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	74809	8.00	8.66	
90 Chlorobenzene	112	7.602	7.602	0.000	97	198280	10.0	11.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	93	66518	10.0	11.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	104522	10.0	10.7	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	132180	10.0	11.3	
94 o-Xylene	106	8.152	8.152	0.000	95	137199	10.0	11.5	
95 Styrene	104	8.167	8.167	0.000	94	228213	10.0	12.1	
96 Bromoform	173	8.352	8.352	0.000	91	40184	10.0	11.3	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	333813	10.0	11.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	86743	300.0	324.4	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	87682	10.0	12.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	82410	10.0	11.4	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	60	19149	10.0	10.4	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	84	24074	10.0	11.0	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	95031	10.0	11.9	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	81968	10.0	11.6	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	274169	10.0	11.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	85320	10.0	11.6	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	234094	10.0	11.6	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	290623	10.0	11.6	
111 sec-Butylbenzene	134	9.582	9.582	0.000	94	69093	10.0	11.4	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	159983	10.0	12.0	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	296199	10.0	11.9	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	162189	10.0	11.4	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	252833	10.0	11.7	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	149928	10.0	11.7	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	85	14481	10.0	10.2	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	90	76481	10.0	11.8	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	96	28148	10.0	11.9	
122 Naphthalene	128	12.035	12.035	0.000	96	202222	10.0	12.3	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	94	58565	10.0	12.0	
S 135 1,2-Dichloroethene, Total (URS)	96				0		20.0	21.8	
S 139 Xylenes, Total (URS)	1				0		20.0	22.8	
S 136 1,3-Dichloropropene, Total	1				0		20.0	21.9	
S 138 Xylenes, Total	106				0		20.0	22.8	
S 137 Total BTEX	1				0			55.3	
S 140 Trihalomethanes, Total	1				0		40.0	44.5	
S 141 1,2-Dichloroethene, Total	1				0		20.0	21.8	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMainA_00086	Amount Added:	5.00	Units: uL	
MV-Gas A_00150	Amount Added:	2.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 10-Apr-2023 11:26:57 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502131.D

Injection Date: 07-Apr-2023 04:36:30 Instrument ID: VMS_X4 Operator ID: bj

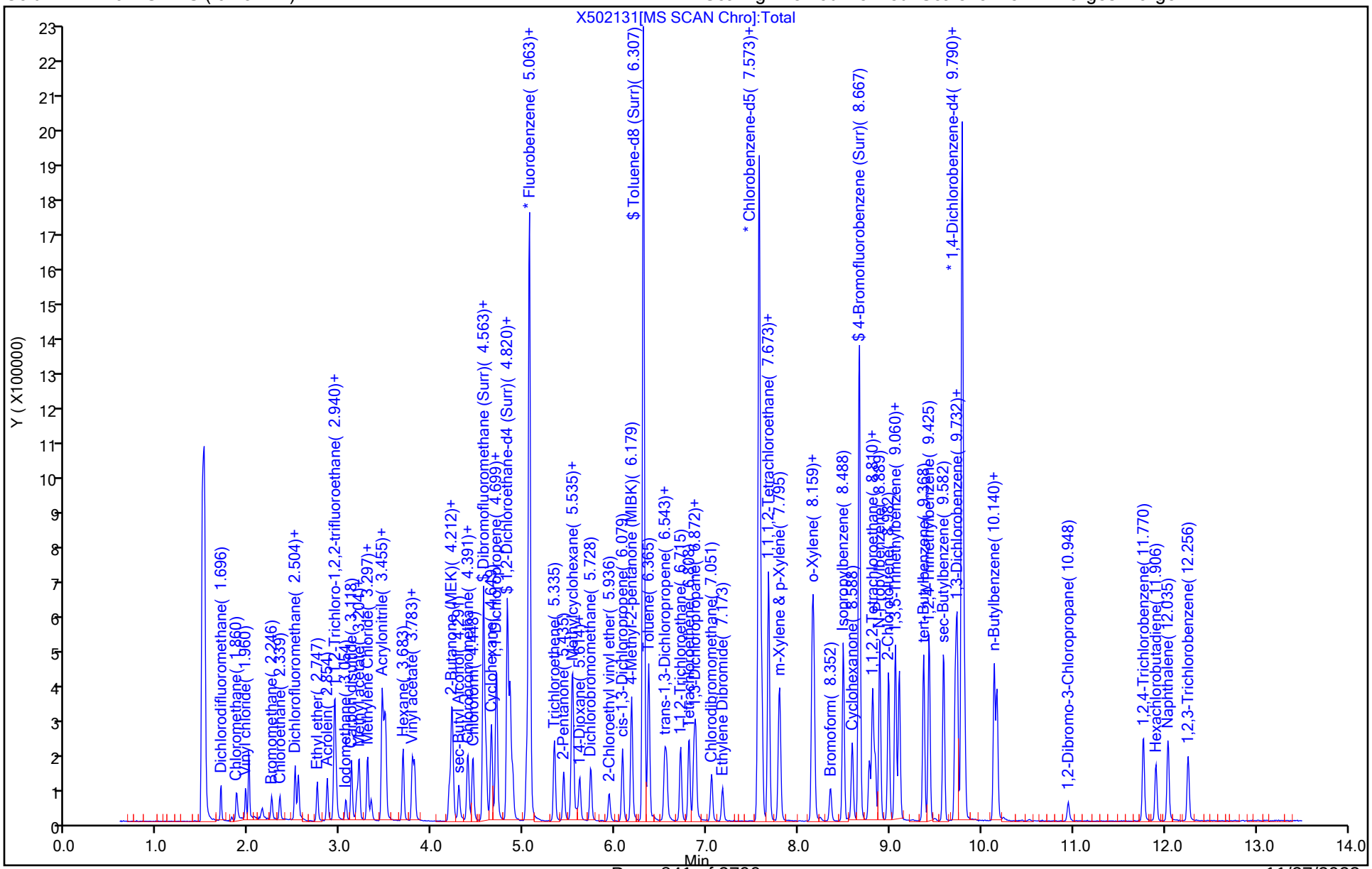
Lims ID: STD Worklist Smp#: 15

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 6

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502129.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 07-Apr-2023 03:55:30 ALS Bottle#: 4 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:00 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:17:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1358265	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	311900	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	484201	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	327624	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	348242	50.0	50.7	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1327001	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	95	430376	50.0	49.7	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	8877	2.00	1.49	
11 Chloromethane	50	1.867	1.860	0.007	99	10159	2.00	1.68	
12 Vinyl chloride	62	1.960	1.960	0.000	97	9723	2.00	1.71	
14 Bromomethane	94	2.246	2.246	0.000	88	6801	2.00	2.07	
15 Chloroethane	64	2.339	2.339	0.000	99	6653	2.00	1.61	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	19362	2.00	1.88	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	97	14131	2.00	1.78	
19 Ethyl ether	59	2.747	2.747	0.000	87	9381	2.00	2.05	
21 Acrolein	56	2.854	2.854	0.000	99	12124	19.8	16.4	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	88	6474	2.00	1.73	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	97	9029	2.00	1.73	
24 Acetone	43	2.954	2.954	0.000	98	19107	8.00	8.18	
26 Iodomethane	142	3.061	3.054	0.007	96	5258	2.00	1.90	
27 Carbon disulfide	76	3.119	3.118	0.001	99	28640	2.00	1.69	
29 Methyl acetate	43	3.176	3.176	0.000	97	12245	4.00	3.57	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	88	11410	2.00	1.65	
31 Methylene Chloride	84	3.297	3.297	0.000	91	13471	2.00	2.01	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	97	6328	20.0	15.0	
33 Acrylonitrile	53	3.455	3.455	0.000	96	33673	20.0	17.3	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	95	27213	2.00	1.66	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	9776	2.00	1.69	
37 Hexane	57	3.683	3.683	0.000	88	11365	2.00	1.59	
39 Vinyl acetate	43	3.784	3.783	0.001	97	28743	4.00	3.13	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	98	18317	2.00	1.73	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	98	16837	8.00	7.54	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	84	12253	2.00	1.77	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	74	14356	2.00	1.77	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	96	10662	48.0	36.8	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	6050	2.00	1.89	
53 Tetrahydrofuran	42	4.398	4.398	0.000	88	5217	4.00	3.45	
54 Chloroform	83	4.441	4.448	-0.007	93	18443	2.00	1.72	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	99	15195	2.00	1.74	
56 Cyclohexane	56	4.642	4.649	-0.007	86	14652	2.00	1.63	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	92	14223	2.00	1.67	
60 Isobutyl alcohol	41	4.713	4.706	0.007	74	4131	50.0	35.5	
59 Carbon tetrachloride	117	4.706	4.706	0.000	82	11093	2.00	1.57	
62 Benzene	78	4.849	4.849	0.000	93	44293	2.00	1.76	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	97	15265	2.00	1.91	
65 n-Heptane	43	5.028	5.035	-0.007	83	9701	2.00	1.85	
67 Trichloroethene	95	5.342	5.335	0.007	97	9994	2.00	1.68	
68 2-Pentanone	43	5.442	5.435	0.007	98	17190	6.40	5.99	
69 Methylcyclohexane	55	5.528	5.528	0.000	88	11028	2.00	1.68	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	92	11347	2.00	1.77	
72 1,4-Dioxane	88	5.593	5.578	0.015	76	3045	40.0	37.5	
73 Dibromomethane	93	5.614	5.614	0.000	93	6682	2.00	1.75	
74 Dichlorobromomethane	83	5.736	5.728	0.008	99	13742	2.00	1.70	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	82	5903	2.00	2.05	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	95	17190	2.00	1.81	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	95	26840	8.00	6.25	
79 Toluene	91	6.365	6.365	0.000	98	47540	2.00	1.75	
80 trans-1,3-Dichloropropene	75	6.544	6.543	0.001	93	13015	2.00	1.56	
81 Ethyl methacrylate	69	6.565	6.558	0.007	86	10574	2.00	1.55	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	86	10425	2.00	1.92	
83 Tetrachloroethene	164	6.808	6.808	0.000	91	8328	2.00	1.84	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	93	16506	2.00	1.73	
85 2-Hexanone	43	6.887	6.880	0.007	96	18479	8.00	6.19	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	9303	2.00	1.61	
88 Ethylene Dibromide	107	7.173	7.173	0.000	97	9711	2.00	1.78	
89 1-Chlorohexane	91	7.566	7.559	0.007	94	12457	1.60	1.48	
90 Chlorobenzene	112	7.602	7.602	0.000	97	31566	2.00	1.82	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	92	8390	2.00	1.50	
92 Ethylbenzene	106	7.680	7.673	0.007	98	17245	2.00	1.80	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	20990	2.00	1.83	
94 o-Xylene	106	8.152	8.152	0.000	96	21285	2.00	1.83	
95 Styrene	104	8.174	8.167	0.007	94	30966	2.00	1.68	
96 Bromoform	173	8.353	8.352	0.001	90	5478	2.00	1.57	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	48399	2.00	1.76	
99 Cyclohexanone	55	8.596	8.588	0.008	90	11401	60.0	49.2	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	12834	2.00	1.85	
101 Bromobenzene	156	8.810	8.810	0.000	94	12712	2.00	1.84	
102 trans-1,4-Dichloro-2-butene	53	8.824	8.817	0.007	61	2492	2.00	1.77	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	3692	2.00	1.75	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	13139	2.00	1.72	
105 2-Chlorotoluene	126	8.982	8.982	0.000	95	12213	2.00	1.80	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	39515	2.00	1.70	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	12100	2.00	1.72	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	91	34097	2.00	1.76	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	41968	2.00	1.75	
111 sec-Butylbenzene	134	9.590	9.582	0.008	93	10225	2.00	1.76	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	20930	2.00	1.64	
113 4-Isopropyltoluene	119	9.733	9.732	0.001	96	40766	2.00	1.70	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	25571	2.00	1.88	
116 n-Butylbenzene	91	10.140	10.140	0.000	96	34804	2.00	1.68	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	96	21390	2.00	1.74	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	43	1353	2.00	1.36	
120 1,2,4-Trichlorobenzene	180	11.778	11.770	0.008	93	10492	2.00	1.69	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	4199	2.00	1.86	
122 Naphthalene	128	12.042	12.035	0.007	97	26379	2.00	1.67	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	95	8290	2.00	1.77	
S 135 1,2-Dichloroethene, Total (URS)	96				0		4.00	3.45	
S 139 Xylenes, Total (URS)	1				0		4.00	3.66	
S 136 1,3-Dichloropropene, Total	1				0		4.00	3.37	
S 138 Xylenes, Total	106				0		4.00	3.66	
S 137 Total BTEX	1				0			8.97	
S 140 Trihalomethanes, Total	1				0		8.00	6.60	
S 141 1,2-Dichloroethene, Total	1				0		4.00	3.45	

QC Flag Legend

Processing Flags

Reagents:

Cal Dil Std_00162	Amount Added: 20.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

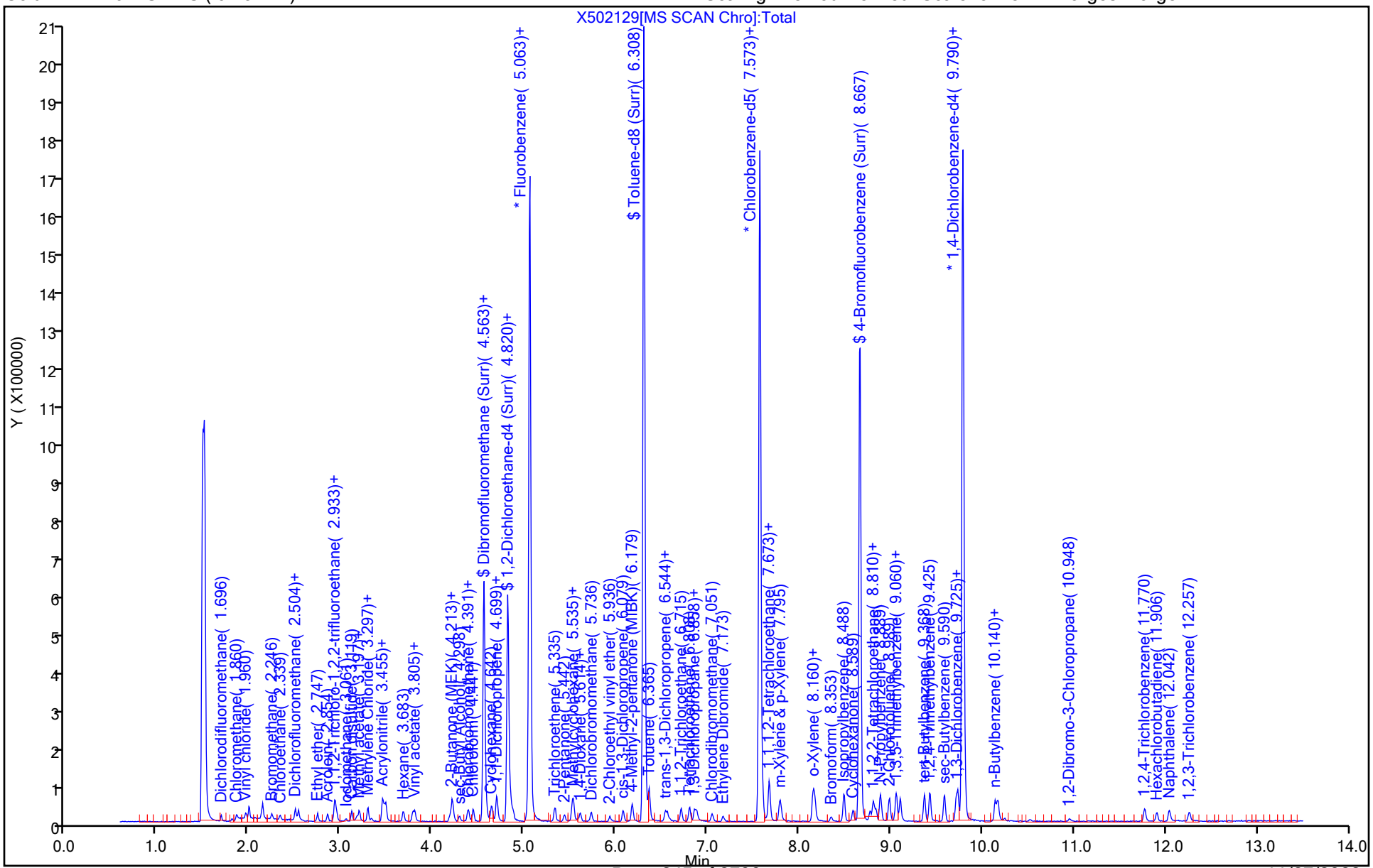
Report Date: 10-Apr-2023 11:27:01 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502129.D

Injection Date:	07-Apr-2023 03:55:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502130.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 07-Apr-2023 04:15:30 ALS Bottle#: 5 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:17:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1337910	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	312939	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	487009	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	318595	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	340158	50.0	50.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1314839	50.0	49.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	431339	50.0	49.6	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	29690	5.00	5.06	
11 Chloromethane	50	1.867	1.860	0.007	99	30373	5.00	5.09	
12 Vinyl chloride	62	1.960	1.960	0.000	97	30616	5.00	5.17	
14 Bromomethane	94	2.246	2.246	0.000	90	16566	5.00	5.11	
15 Chloroethane	64	2.339	2.339	0.000	98	21424	5.00	5.27	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	51426	5.00	5.07	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	97	37549	5.00	4.80	
19 Ethyl ether	59	2.747	2.747	0.000	88	23215	5.00	5.14	
21 Acrolein	56	2.854	2.854	0.000	99	38447	49.4	52.8	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	86	18269	5.00	4.94	
23 1,1-Dichloroethene	96	2.933	2.940	-0.007	98	24433	5.00	4.75	
24 Acetone	43	2.954	2.954	0.000	99	36169	20.0	20.2	
26 Iodomethane	142	3.061	3.054	0.007	99	21390	5.00	4.13	
27 Carbon disulfide	76	3.119	3.118	0.001	100	80848	5.00	4.85	
29 Methyl acetate	43	3.183	3.176	0.007	97	36777	10.0	10.9	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	90	37396	5.00	5.48	
31 Methylene Chloride	84	3.297	3.297	0.000	86	35804	5.00	5.43	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	24877	50.0	50.4	
33 Acrylonitrile	53	3.455	3.455	0.000	97	101841	50.0	53.1	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	89301	5.00	5.52	
35 trans-1,2-Dichloroethene	96	3.498	3.490	0.008	98	29443	5.00	5.16	
37 Hexane	57	3.683	3.683	0.000	91	32583	5.00	4.54	
39 Vinyl acetate	43	3.784	3.783	0.001	97	92305	10.0	10.2	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	97	55748	5.00	5.36	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	98	45431	20.0	20.7	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	80	38166	5.00	5.58	
48 2,2-Dichloropropane	77	4.227	4.220	0.007	89	38064	5.00	4.76	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	95	41713	120.0	115.5	
52 Chlorobromomethane	128	4.384	4.384	0.000	92	17299	5.00	5.49	
53 Tetrahydrofuran	42	4.398	4.398	0.000	86	15172	10.0	10.2	
54 Chloroform	83	4.441	4.448	-0.007	95	57954	5.00	5.47	
55 1,1,1-Trichloroethane	97	4.592	4.584	0.008	98	42581	5.00	4.96	
56 Cyclohexane	56	4.649	4.649	0.000	89	43802	5.00	4.95	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	95	41052	5.00	4.88	
60 Isobutyl alcohol	41	4.706	4.706	0.000	75	19923	125.0	129.7	
59 Carbon tetrachloride	117	4.706	4.706	0.000	92	33909	5.00	4.88	
62 Benzene	78	4.849	4.849	0.000	97	135707	5.00	5.46	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	98	42781	5.00	5.43	
65 n-Heptane	43	5.035	5.035	0.000	86	24184	5.00	4.69	
67 Trichloroethene	95	5.335	5.335	0.000	99	31994	5.00	5.35	
68 2-Pentanone	43	5.435	5.435	0.000	98	52743	16.0	16.0	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	30908	5.00	4.77	
70 1,2-Dichloropropane	63	5.543	5.535	0.007	95	33738	5.00	5.34	
72 1,4-Dioxane	88	5.578	5.578	0.000	92	8564	100.0	107.0	
73 Dibromomethane	93	5.614	5.614	0.000	95	18747	5.00	4.97	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	42619	5.00	5.36	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	93	14093	5.00	6.21	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	94	47976	5.00	5.03	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	87812	20.0	20.8	
79 Toluene	91	6.365	6.365	0.000	97	143890	5.00	5.37	
80 trans-1,3-Dichloropropene	75	6.544	6.543	0.001	96	41755	5.00	5.08	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	36500	5.00	5.34	
82 1,1,2-Trichloroethane	97	6.708	6.715	-0.007	92	29134	5.00	5.44	
83 Tetrachloroethene	164	6.801	6.808	-0.007	93	22024	5.00	4.85	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	92	49882	5.00	5.20	
85 2-Hexanone	43	6.880	6.880	0.000	94	58368	20.0	19.5	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	30139	5.00	5.21	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	29186	5.00	5.33	
89 1-Chlorohexane	91	7.559	7.559	0.000	95	31737	4.00	3.75	
90 Chlorobenzene	112	7.602	7.602	0.000	95	92586	5.00	5.31	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	91	30072	5.00	5.37	
92 Ethylbenzene	106	7.673	7.673	0.000	98	48039	5.00	5.01	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	58830	5.00	5.11	
94 o-Xylene	106	8.152	8.152	0.000	95	61746	5.00	5.29	
95 Styrene	104	8.167	8.167	0.000	94	97777	5.00	5.27	
96 Bromoform	173	8.353	8.352	0.001	94	17809	5.00	5.09	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	137693	5.00	4.98	
99 Cyclohexanone	55	8.589	8.588	0.000	90	43891	150.0	170.5	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	95	38489	5.00	5.52	
101 Bromobenzene	156	8.810	8.810	0.000	95	37243	5.00	5.35	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.817	-0.007	61	7396	5.00	4.43	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	10613	5.00	5.01	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	40306	5.00	5.25	
105 2-Chlorotoluene	126	8.989	8.982	0.007	97	38420	5.00	5.64	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	96	120120	5.00	5.15	
107 4-Chlorotoluene	126	9.103	9.103	0.000	98	36788	5.00	5.19	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	99040	5.00	5.08	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	125567	5.00	5.21	
111 sec-Butylbenzene	134	9.590	9.582	0.008	94	29211	5.00	5.01	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	67914	5.00	5.28	
113 4-Isopropyltoluene	119	9.733	9.732	0.001	97	119450	5.00	4.96	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	73232	5.00	5.36	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	106017	5.00	5.09	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	66425	5.00	5.37	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	84	7174	5.00	5.46	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	91	34150	5.00	5.48	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	11656	5.00	5.13	
122 Naphthalene	128	12.035	12.035	0.000	97	85174	5.00	5.36	
123 1,2,3-Trichlorobenzene	180	12.257	12.256	0.001	95	24900	5.00	5.29	
S 135 1,2-Dichloroethene, Total (URS)	96				0		10.0	10.7	
S 139 Xylenes, Total (URS)	1				0		10.0	10.4	
S 136 1,3-Dichloropropene, Total	1				0		10.0	10.1	
S 138 Xylenes, Total	106				0		10.0	10.4	
S 137 Total BTEX	1				0			26.2	
S 140 Trihalomethanes, Total	1				0		20.0	21.1	
S 141 1,2-Dichloroethene, Total	1				0		10.0	10.7	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas A_00150	Amount Added:	1.00	Units: uL	
MV-MegaMainA_00086	Amount Added:	2.50	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

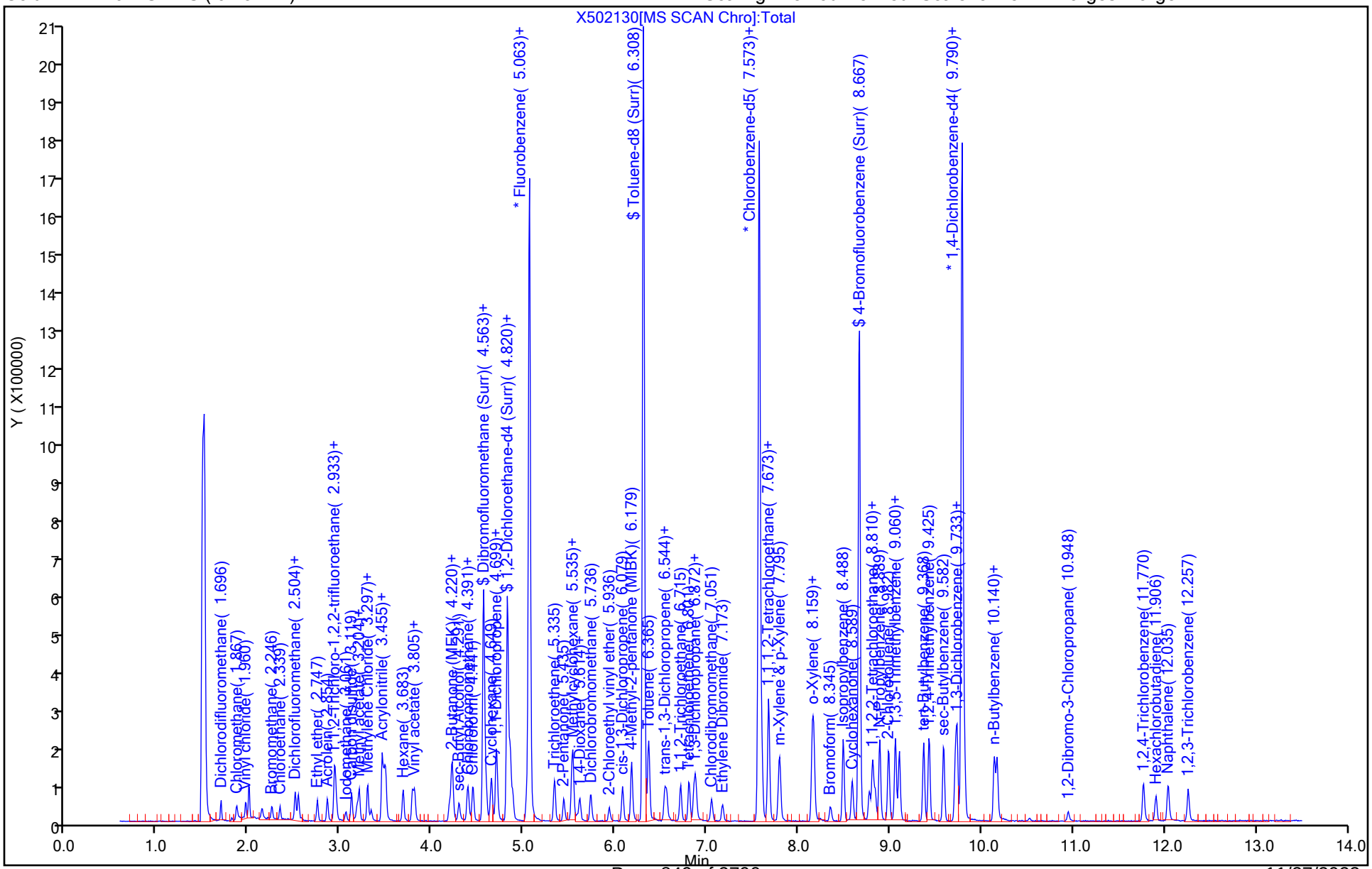
Report Date: 10-Apr-2023 11:27:04 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502130.D

Injection Date:	07-Apr-2023 04:15:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502128.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 07-Apr-2023 03:34:30 ALS Bottle#: 3 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:15:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1321475	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	86	303218	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	476794	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	318271	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	334967	50.0	50.2	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1295729	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	429272	50.0	50.4	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	5544	1.00	0.9561	
11 Chloromethane	50	1.867	1.860	0.007	97	5505	1.00	0.9344	
12 Vinyl chloride	62	1.967	1.960	0.007	97	5121	1.00	0.99	
14 Bromomethane	94	2.246	2.246	0.000	89	2737	1.00	0.8549	
15 Chloroethane	64	2.332	2.339	-0.007	95	4463	1.00	1.11	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	95	9428	1.00	0.9408	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	95	7834	1.00	1.01	
19 Ethyl ether	59	2.747	2.747	0.000	83	3577	1.00	0.8022	
21 Acrolein	56	2.854	2.854	0.000	95	6604	9.88	9.18	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.940	2.933	0.007	71	2962	1.00	0.8114	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	95	5380	1.00	1.06	
24 Acetone	43	2.954	2.954	0.000	99	12556	4.00	3.93	
26 Iodomethane	142	3.054	3.054	0.000	94	2269	1.00	1.50	
27 Carbon disulfide	76	3.118	3.118	0.000	99	16403	1.00	1.00	
29 Methyl acetate	43	3.183	3.176	0.007	97	5462	2.00	1.64	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	82	6388	1.00	0.9476	
31 Methylene Chloride	84	3.297	3.297	0.000	86	8188	1.00	1.26	
32 2-Methyl-2-propanol	59	3.340	3.333	0.007	99	3291	10.0	9.45	
33 Acrylonitrile	53	3.454	3.455	-0.001	98	16828	10.0	8.88	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	13865	1.00	0.8680	
35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	93	5628	1.00	1.00	
37 Hexane	57	3.676	3.683	-0.007	85	6800	1.00	0.9786	
39 Vinyl acetate	43	3.783	3.783	0.000	96	15894	2.00	1.78	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	9045	1.00	0.8797	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.191	4.184	0.007	100	7552	4.00	3.48	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	85	6426	1.00	0.9518	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	72	6866	1.00	0.8688	
50 sec-Butyl Alcohol	45	4.298	4.291	0.007	95	5594	24.0	24.6	
52 Chlorobromomethane	128	4.384	4.384	0.000	87	3076	1.00	0.9889	
53 Tetrahydrofuran	42	4.405	4.398	0.007	80	2622	2.00	1.78	
54 Chloroform	83	4.448	4.448	0.000	93	10105	1.00	0.9659	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	95	8113	1.00	0.9573	
56 Cyclohexane	56	4.641	4.649	-0.008	90	8471	1.00	0.9690	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	90	8745	1.00	1.05	
60 Isobutyl alcohol	41	4.713	4.706	0.007	67	2296	25.0	25.1	
59 Carbon tetrachloride	117	4.699	4.706	-0.007	89	6754	1.00	0.9847	
62 Benzene	78	4.856	4.849	0.007	92	22519	1.00	0.9173	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	96	6564	1.00	0.8435	
65 n-Heptane	43	5.035	5.035	0.000	77	4883	1.00	0.9584	
67 Trichloroethene	95	5.335	5.335	0.000	96	5414	1.00	0.9335	
68 2-Pentanone	43	5.442	5.435	0.007	97	7204	3.20	3.29	
69 Methylcyclohexane	55	5.528	5.528	0.000	87	5802	1.00	0.9064	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	79	4877	1.00	0.7812	
72 1,4-Dioxane	88	5.592	5.578	0.014	72	1363	20.0	17.2	a
73 Dibromomethane	93	5.614	5.614	0.000	89	3688	1.00	0.99	
74 Dichlorobromomethane	83	5.735	5.728	0.007	98	6802	1.00	0.8654	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	85	2272	1.00	0.2808	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	93	7535	1.00	0.8156	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	12812	4.00	3.07	
79 Toluene	91	6.365	6.365	0.000	97	25789	1.00	0.9751	
80 trans-1,3-Dichloropropene	75	6.551	6.543	0.008	94	6802	1.00	0.8386	
81 Ethyl methacrylate	69	6.565	6.558	0.007	90	5533	1.00	0.8352	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	4715	1.00	0.8920	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	3662	1.00	0.8319	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	89	8807	1.00	0.9477	
85 2-Hexanone	43	6.879	6.880	-0.001	92	9279	4.00	3.20	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	5211	1.00	0.9297	
88 Ethylene Dibromide	107	7.180	7.173	0.007	97	4655	1.00	0.8768	
89 1-Chlorohexane	91	7.566	7.559	0.007	33	8330	0.8000	1.01	
90 Chlorobenzene	112	7.602	7.602	0.000	96	15094	1.00	0.8936	
91 1,1,1,2-Tetrachloroethane	131	7.666	7.673	-0.007	86	5143	1.00	0.9472	
92 Ethylbenzene	106	7.673	7.673	0.000	98	8553	1.00	0.9199	
93 m-Xylene & p-Xylene	106	7.809	7.795	0.014	0	10426	1.00	0.9353	
94 o-Xylene	106	8.152	8.152	0.000	97	10780	1.00	0.9532	
95 Styrene	104	8.174	8.167	0.007	93	15456	1.00	0.8602	
96 Bromoform	173	8.345	8.352	-0.007	94	3041	1.00	0.8976	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	26320	1.00	0.9725	
99 Cyclohexanone	55	8.596	8.588	0.008	88	4862	30.0	25.2	
100 1,1,2,2-Tetrachloroethane	83	8.781	8.774	0.007	93	5958	1.00	0.8725	
101 Bromobenzene	156	8.817	8.810	0.007	92	5972	1.00	0.8760	
102 trans-1,4-Dichloro-2-butene	53	8.831	8.817	0.014	43	1204	1.00	1.08	
103 1,2,3-Trichloropropane	110	8.831	8.839	-0.008	79	1911	1.00	0.9220	
104 N-Propylbenzene	120	8.896	8.889	0.007	98	7204	1.00	0.9580	
105 2-Chlorotoluene	126	8.996	8.982	0.014	95	5966	1.00	0.8939	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	23118	1.00	1.01	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	5848	1.00	0.8422	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	90	18284	1.00	0.9587	
110 1,2,4-Trimethylbenzene	105	9.432	9.425	0.007	97	21024	1.00	0.8904	
111 sec-Butylbenzene	134	9.589	9.582	0.007	93	5360	1.00	0.9382	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	96	11074	1.00	0.8798	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	96	21858	1.00	0.9277	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	93	13773	1.00	1.03	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	17367	1.00	0.8511	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	96	11605	1.00	0.9578	
118 1,2-Dibromo-3-Chloropropane	157	10.955	10.948	0.007	15	837	1.00	1.00	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	90	4847	1.00	0.7946	
121 Hexachlorobutadiene	225	11.913	11.906	0.007	85	1880	1.00	0.8455	
122 Naphthalene	128	12.042	12.035	0.007	97	12158	1.00	0.7812	
123 1,2,3-Trichlorobenzene	180	12.264	12.256	0.008	93	3483	1.00	0.7565	
S 135 1,2-Dichloroethene, Total (URS)	96				0		2.00	1.95	
S 139 Xylenes, Total (URS)	1				0		2.00	1.89	
S 136 1,3-Dichloropropene, Total	1				0		2.00	1.65	
S 138 Xylenes, Total	106				0		2.00	1.89	
S 137 Total BTEX	1				0			4.70	
S 140 Trihalomethanes, Total	1				0		4.00	3.66	
S 141 1,2-Dichloroethene, Total	1				0		2.00	1.95	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

Cal Dil Std_00162	Amount Added:	10.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

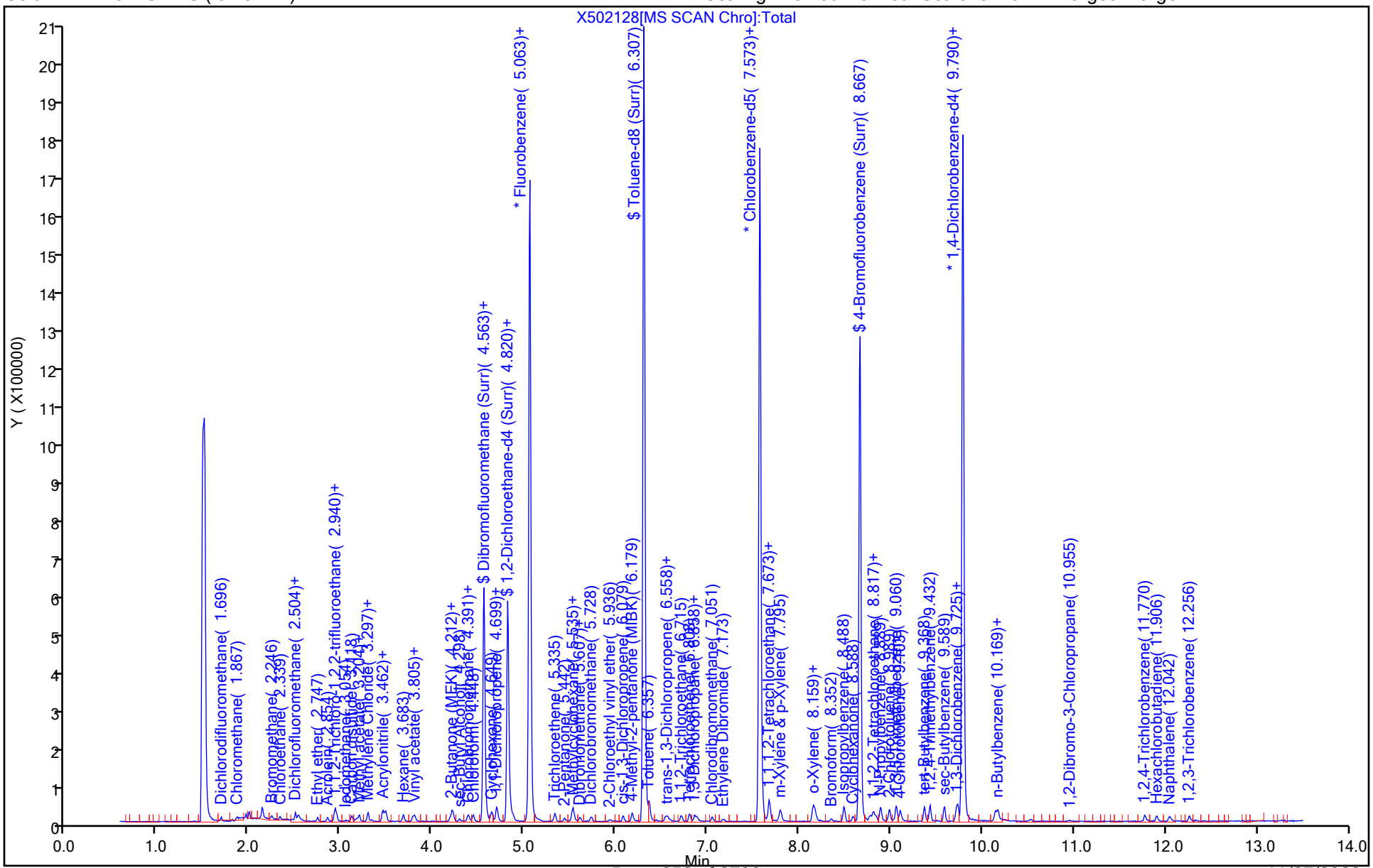
Report Date: 10-Apr-2023 11:27:07 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502128.D

Injection Date:	07-Apr-2023 03:34:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

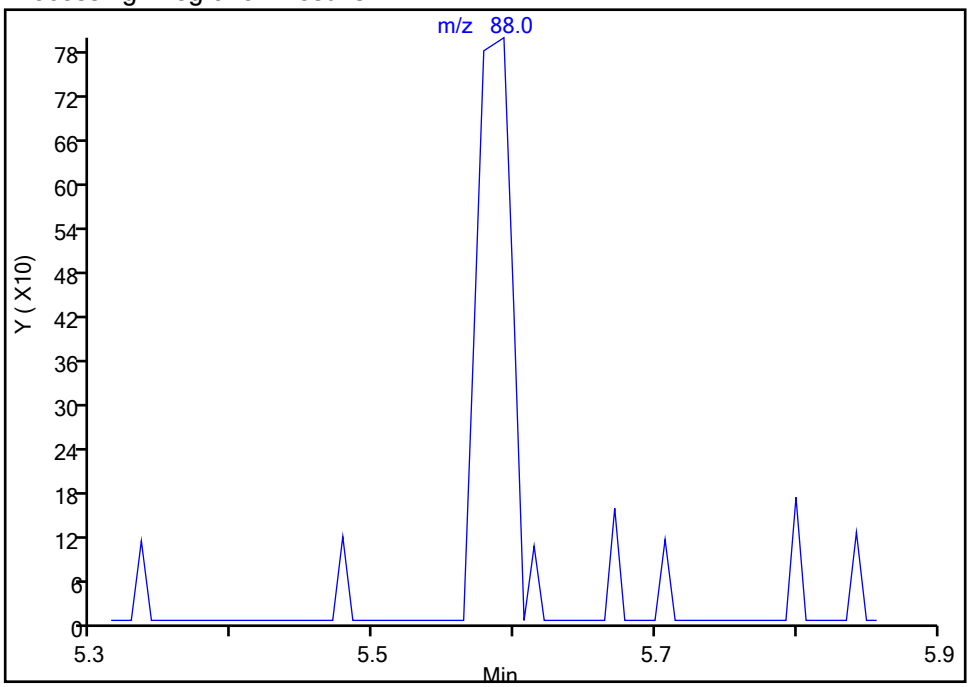
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502128.D
Injection Date: 07-Apr-2023 03:34:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 3 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

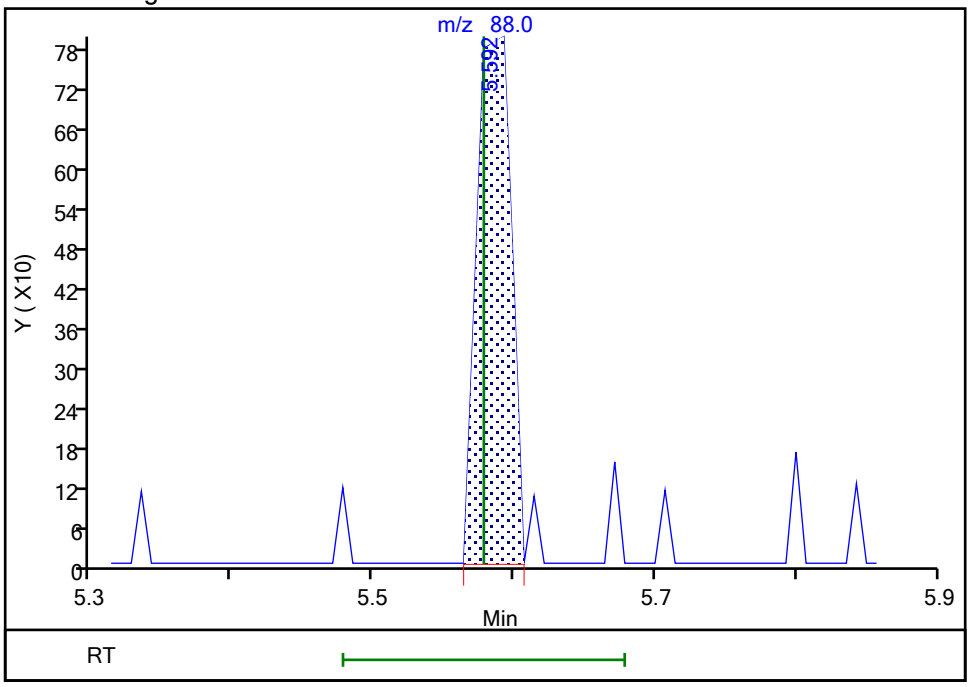
Not Detected
Expected RT: 5.58

Processing Integration Results



Manual Integration Results

RT: 5.59
Area: 1363
Amount: 17.247249
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:15:45
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Lims ID: STD
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 07-Apr-2023 03:14:30 ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: .5
Operator ID: bj Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:27:10 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

First Level Reviewer: BX8N Date: 10-Apr-2023 10:13:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1347020	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	310688	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	484663	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	320846	50.0	49.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	334584	50.0	49.2	
$ 6 Toluene-d8 (Surr)	98	6.308	6.307	0.001	93	1319319	50.0	49.8	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.667	-0.007	87	425745	50.0	49.2	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	97	3233	0.5000	0.5470	
11 Chloromethane	50	1.860	1.860	0.000	97	3421	0.5000	0.5697	
12 Vinyl chloride	62	1.967	1.960	0.007	96	2925	0.5000	0.6178	
14 Bromomethane	94	2.246	2.246	0.000	90	1963	0.5000	0.6015	
15 Chloroethane	64	2.332	2.339	-0.007	77	1911	0.5000	0.4669	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	95	5236	0.5000	0.5126	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	94	4063	0.5000	0.5155	
19 Ethyl ether	59	2.747	2.747	0.000	89	2686	0.5000	0.5909	
21 Acrolein	56	2.854	2.854	0.000	95	3927	4.94	5.36	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	71	2615	0.5000	0.7028	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	97	3007	0.5000	0.5811	
24 Acetone	43	2.954	2.954	0.000	97	10634	2.00	2.44	
26 Iodomethane	142	3.061	3.054	0.007	72	1377	0.5000	1.38	a
27 Carbon disulfide	76	3.119	3.118	0.001	98	11096	0.5000	0.6617	
29 Methyl acetate	43	3.176	3.176	0.000	88	3507	1.00	1.03	
30 3-Chloro-1-propene	41	3.197	3.204	-0.007	87	3610	0.5000	0.5253	
31 Methylene Chloride	84	3.290	3.297	-0.007	86	6039	0.5000	0.9089	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	93	2320	5.00	7.50	
33 Acrylonitrile	53	3.455	3.455	0.000	96	10085	5.00	5.22	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	92	8375	0.5000	0.5143	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	94	2779	0.5000	0.4836	
37 Hexane	57	3.683	3.683	0.000	89	4165	0.5000	0.5850	
39 Vinyl acetate	43	3.784	3.783	0.001	97	9312	1.00	1.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	3.805	3.805	0.000	93	5388	0.5000	0.5141	
45 2-Butanone (MEK)	43	4.191	4.184	0.007	97	6157	2.00	2.78	
47 cis-1,2-Dichloroethene	96	4.213	4.212	0.001	84	3876	0.5000	0.5632	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	63	4452	0.5000	0.5527	
50 sec-Butyl Alcohol	45	4.298	4.291	0.007	95	3124	12.0	18.1	
52 Chlorobromomethane	128	4.391	4.384	0.007	90	1568	0.5000	0.4945	
53 Tetrahydrofuran	42	4.391	4.398	-0.007	67	1748	1.00	1.17	
54 Chloroform	83	4.441	4.448	-0.007	95	5777	0.5000	0.5417	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	93	4840	0.5000	0.5603	
56 Cyclohexane	56	4.656	4.649	0.007	80	4677	0.5000	0.5248	
57 1,1-Dichloropropene	75	4.706	4.699	0.007	93	4673	0.5000	0.5520	
60 Isobutyl alcohol	41	4.713	4.706	0.007	58	1239	12.5	18.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	76	3372	0.5000	0.4823	
62 Benzene	78	4.849	4.849	0.000	93	14297	0.5000	0.5713	
63 1,2-Dichloroethane	62	4.878	4.877	0.001	92	5952	0.5000	0.7503	
65 n-Heptane	43	5.028	5.035	-0.007	78	3879	0.5000	0.7469	
67 Trichloroethene	95	5.335	5.335	0.000	95	2946	0.5000	0.4957	
68 2-Pentanone	43	5.450	5.435	0.015	97	4444	1.60	2.48	
69 Methylcyclohexane	55	5.528	5.528	0.000	87	3768	0.5000	0.5775	
70 1,2-Dichloropropane	63	5.543	5.535	0.008	93	3987	0.5000	0.6265	
72 1,4-Dioxane	88		5.578				ND	ND	
73 Dibromomethane	93	5.607	5.614	-0.007	90	2061	0.5000	0.5430	
74 Dichlorobromomethane	83	5.736	5.728	0.008	98	4442	0.5000	0.5544	
76 2-Chloroethyl vinyl ether	63	5.943	5.936	0.007	31	765	0.5000	-0.4931	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	91	4386	0.5000	0.4634	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	92	7832	2.00	1.84	
79 Toluene	91	6.365	6.365	0.000	97	14361	0.5000	0.5327	a
80 trans-1,3-Dichloropropene	75	6.544	6.543	0.001	94	3916	0.5000	0.4736	a
81 Ethyl methacrylate	69	6.565	6.558	0.007	63	3014	0.5000	0.4440	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	88	2702	0.5000	0.5015	
83 Tetrachloroethene	164	6.808	6.808	0.000	86	2660	0.5000	0.5897	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	4933	0.5000	0.5181	
85 2-Hexanone	43	6.887	6.880	0.007	87	4483	2.00	1.51	
87 Chlorodibromomethane	129	7.058	7.051	0.007	93	2816	0.5000	0.4903	
88 Ethylene Dibromide	107	7.173	7.173	0.000	94	2782	0.5000	0.5114	
89 1-Chlorohexane	91	7.559	7.559	0.000	33	5343	0.4000	0.6353	
90 Chlorobenzene	112	7.602	7.602	0.000	83	9647	0.5000	0.5574	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	41	2688	0.5000	0.4831	
92 Ethylbenzene	106	7.680	7.673	0.007	97	5836	0.5000	0.6126	
93 m-Xylene & p-Xylene	106	7.802	7.795	0.007	0	6176	0.5000	0.5407	
94 o-Xylene	106	8.152	8.152	0.000	96	6195	0.5000	0.5346	
95 Styrene	104	8.174	8.167	0.007	94	8736	0.5000	0.4745	
96 Bromoform	173	8.353	8.352	0.001	85	1656	0.5000	0.4770	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	14024	0.5000	0.5097	
99 Cyclohexanone	55	8.596	8.588	0.008	74	3115	15.0	18.2	
100 1,1,2,2-Tetrachloroethane	83	8.782	8.774	0.008	90	3054	0.5000	0.4400	
101 Bromobenzene	156	8.810	8.810	0.000	93	3764	0.5000	0.5431	
102 trans-1,4-Dichloro-2-butene	53		8.817				ND	ND	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	62	1211	0.5000	0.5748	
104 N-Propylbenzene	120	8.896	8.889	0.007	98	3276	0.5000	0.4286	
105 2-Chlorotoluene	126	8.989	8.982	0.007	93	3145	0.5000	0.4636	
106 1,3,5-Trimethylbenzene	105	9.068	9.060	0.008	91	11921	0.5000	0.5138	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Chlorotoluene	126	9.110	9.103	0.007	95	3836	0.5000	0.5435	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	10137	0.5000	0.5229	
110 1,2,4-Trimethylbenzene	105	9.432	9.425	0.007	97	12343	0.5000	0.5143	
111 sec-Butylbenzene	134	9.590	9.582	0.008	93	3271	0.5000	0.5632	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	95	6882	0.5000	0.5379	
113 4-Isopropyltoluene	119	9.740	9.732	0.008	96	12712	0.5000	0.5308	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	77	6956	0.5000	0.5118	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	10336	0.5000	0.4983	
117 1,2-Dichlorobenzene	146	10.176	10.169	0.007	94	6463	0.5000	0.5247	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	1	338	0.5000	0.6382	
120 1,2,4-Trichlorobenzene	180	11.778	11.770	0.008	91	2093	0.5000	0.3375	
121 Hexachlorobutadiene	225	11.913	11.906	0.007	85	1540	0.5000	0.6813	
122 Naphthalene	128	12.049	12.035	0.014	94	7127	0.5000	0.4505	
123 1,2,3-Trichlorobenzene	180	12.271	12.256	0.015	86	2360	0.5000	0.5043	
S 135 1,2-Dichloroethene, Total (URS)	96				0		1.00	1.05	
S 139 Xylenes, Total (URS)	1				0		1.00	1.08	
S 136 1,3-Dichloropropene, Total	1				0		1.00	0.9370	
S 138 Xylenes, Total	106				0		1.00	1.08	
S 137 Total BTEX	1				0			2.79	
S 140 Trihalomethanes, Total	1				0		2.00	2.06	
S 141 1,2-Dichloroethene, Total	1				0		1.00	1.05	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

Cal Dil Std_00162	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

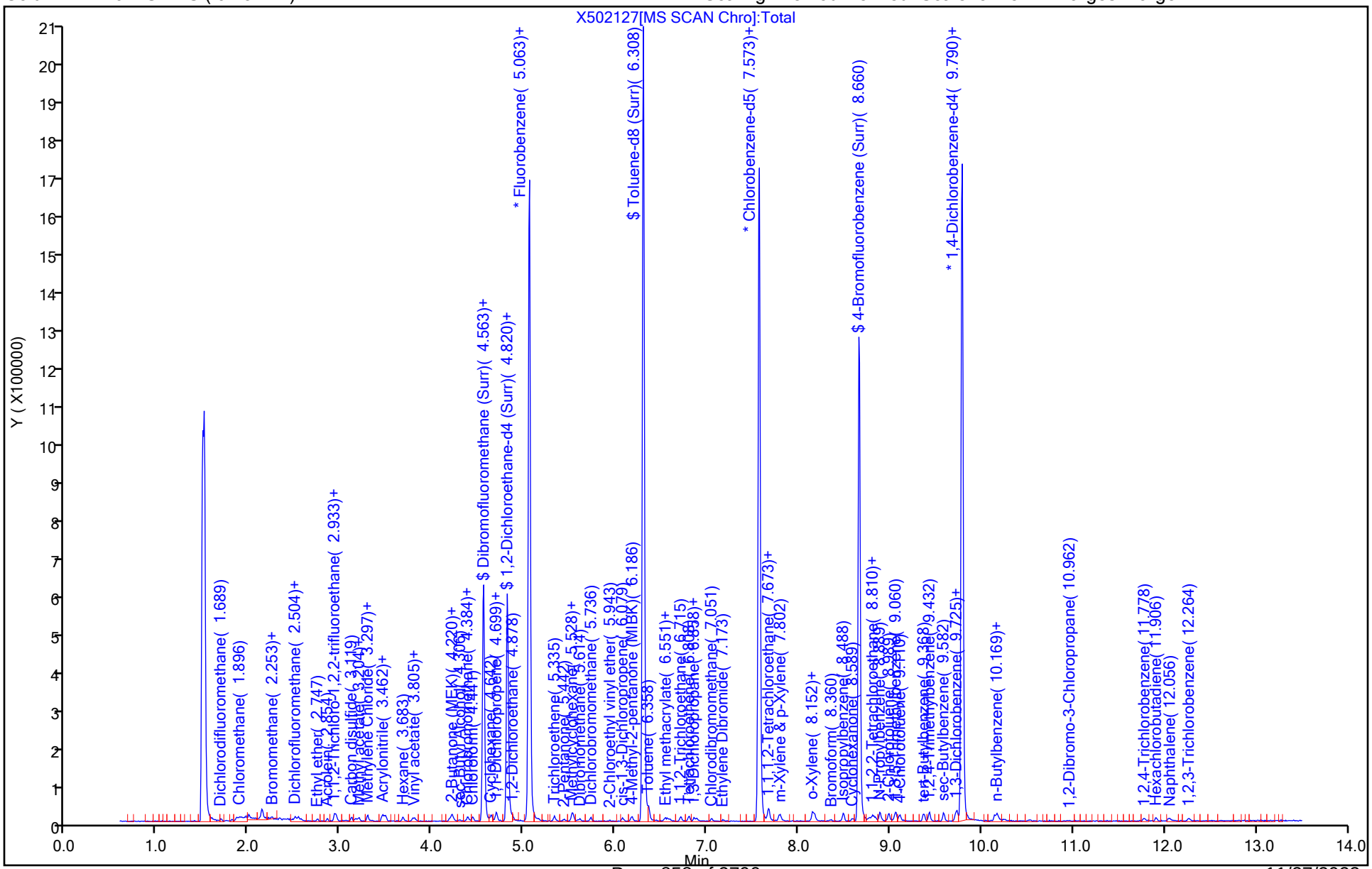
Report Date: 10-Apr-2023 11:27:11 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D

Injection Date:	07-Apr-2023 03:14:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	STD			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

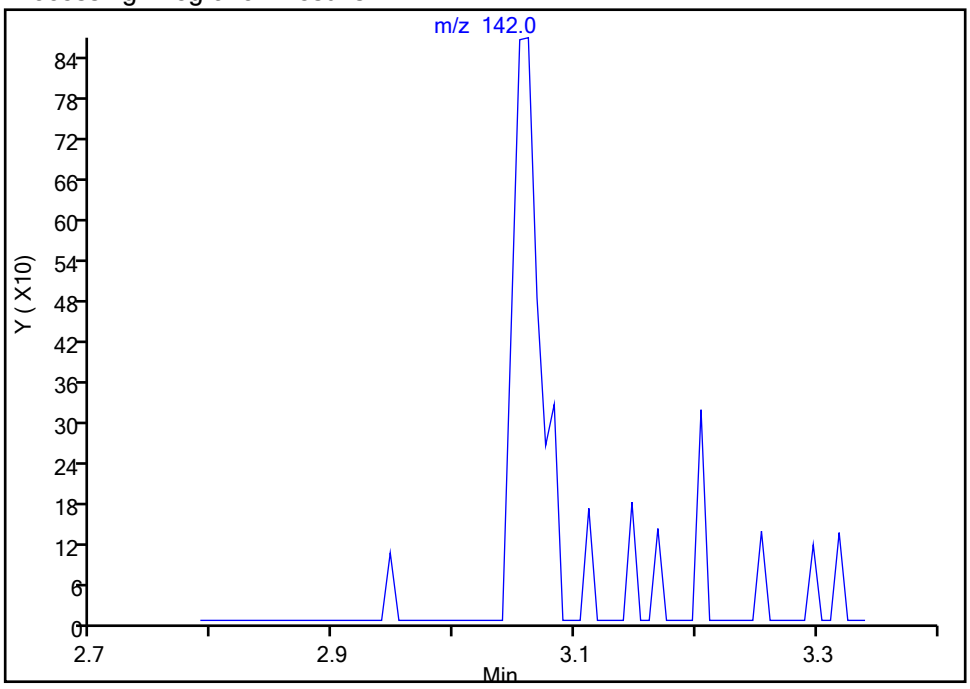
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Injection Date: 07-Apr-2023 03:14:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

26 Iodomethane, CAS: 74-88-4

Signal: 1

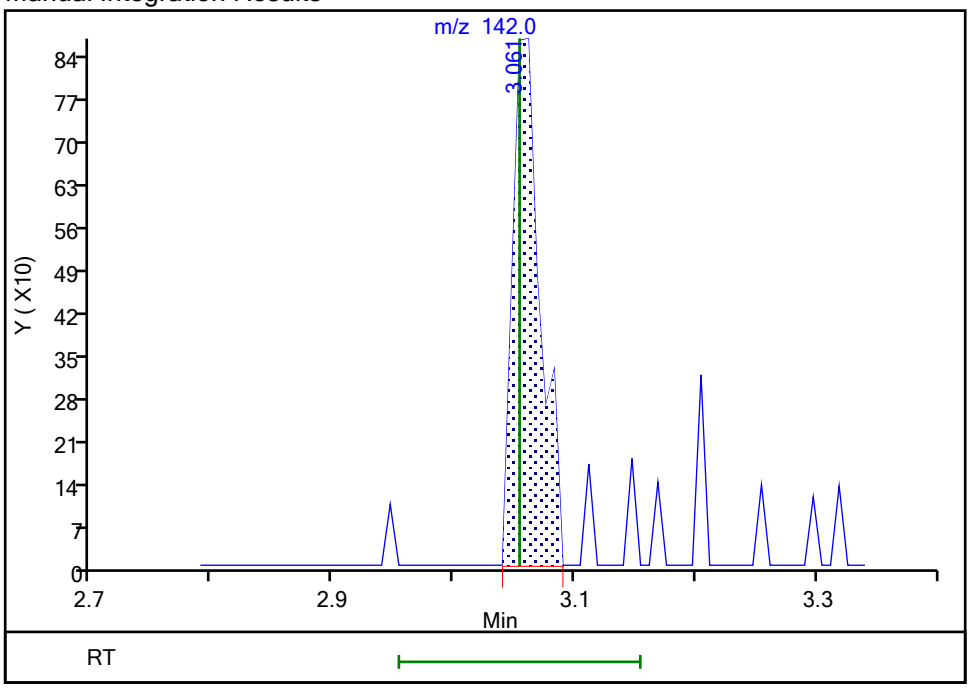
Not Detected
Expected RT: 3.05

Processing Integration Results



Manual Integration Results

RT: 3.06
Area: 1377
Amount: 1.375342
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:13:14
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

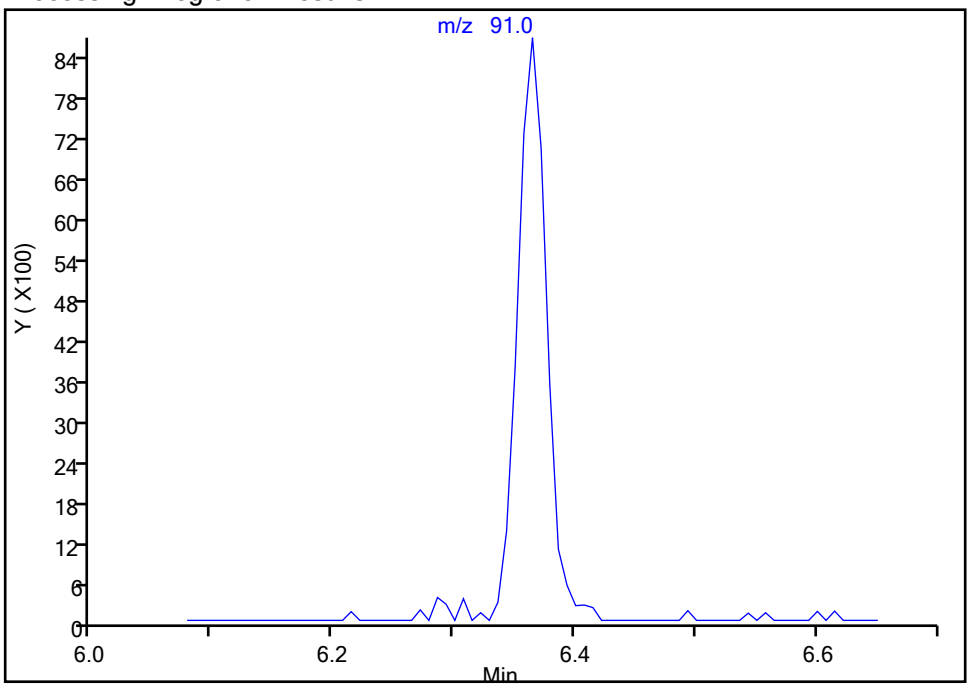
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Injection Date: 07-Apr-2023 03:14:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

79 Toluene, CAS: 108-88-3

Signal: 1

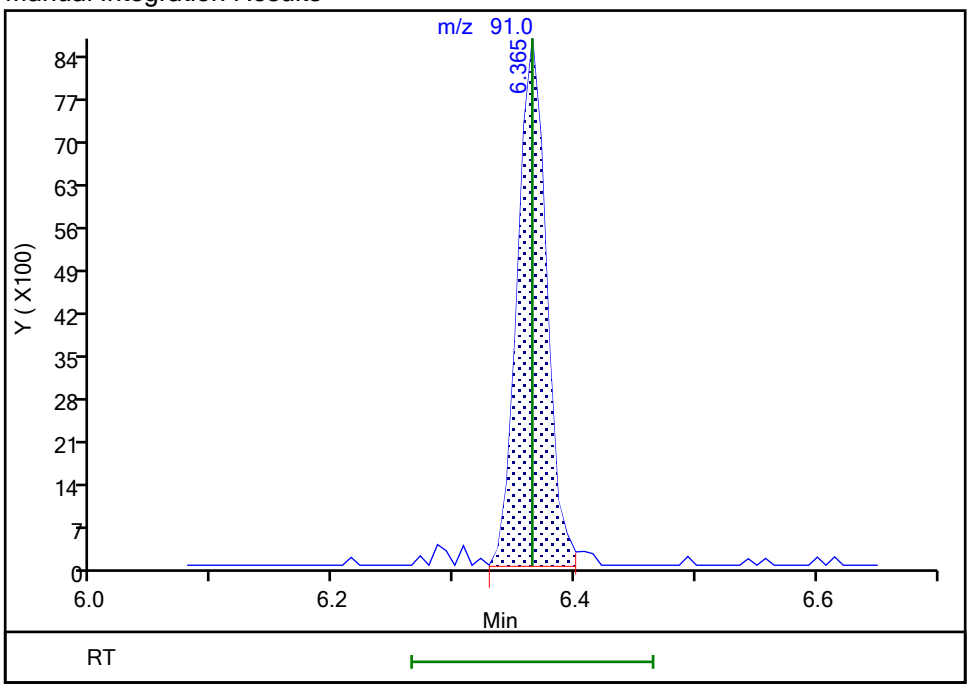
Not Detected
Expected RT: 6.36

Processing Integration Results



Manual Integration Results

RT: 6.36
Area: 14361
Amount: 0.532717
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:14:20
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins Denver

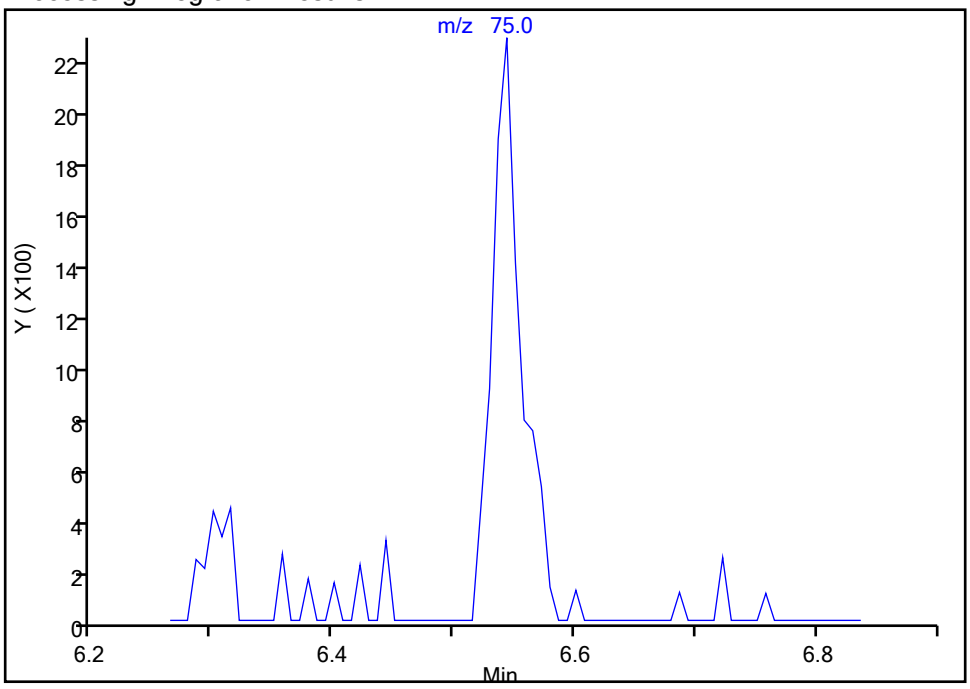
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502127.D
Injection Date: 07-Apr-2023 03:14:30 Instrument ID: VMS_X4
Lims ID: STD
Client ID:
Operator ID: bj ALS Bottle#: 2 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

80 trans-1,3-Dichloropropene, CAS: 10061-02-6

Signal: 1

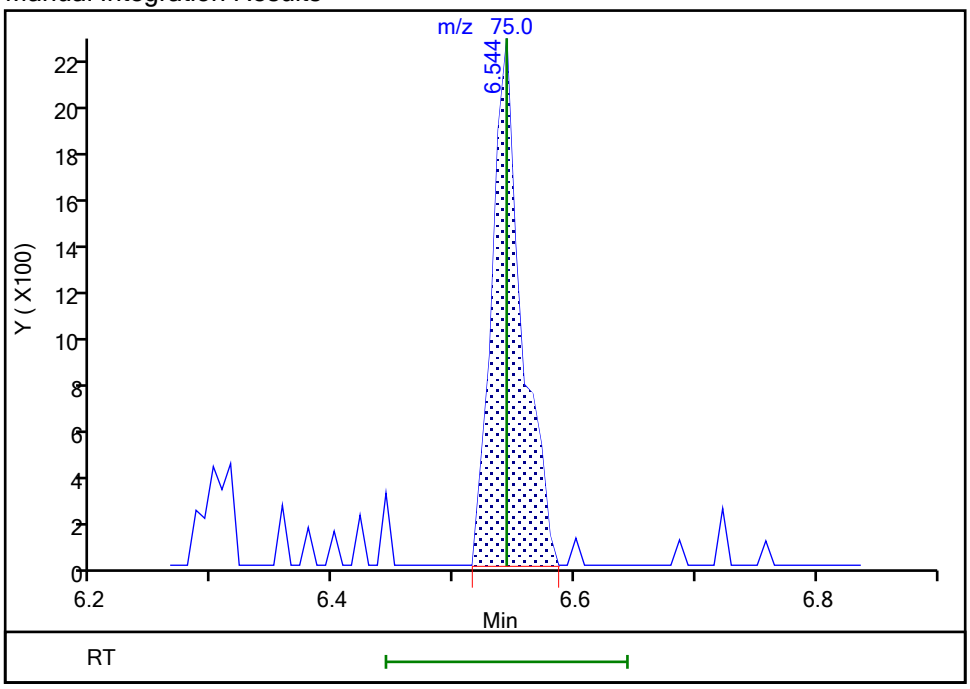
Not Detected
Expected RT: 6.54

Processing Integration Results



Manual Integration Results

RT: 6.54
Area: 3916
Amount: 0.473650
Amount Units: ug/l



Reviewer: BX8N, 10-Apr-2023 10:14:41
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

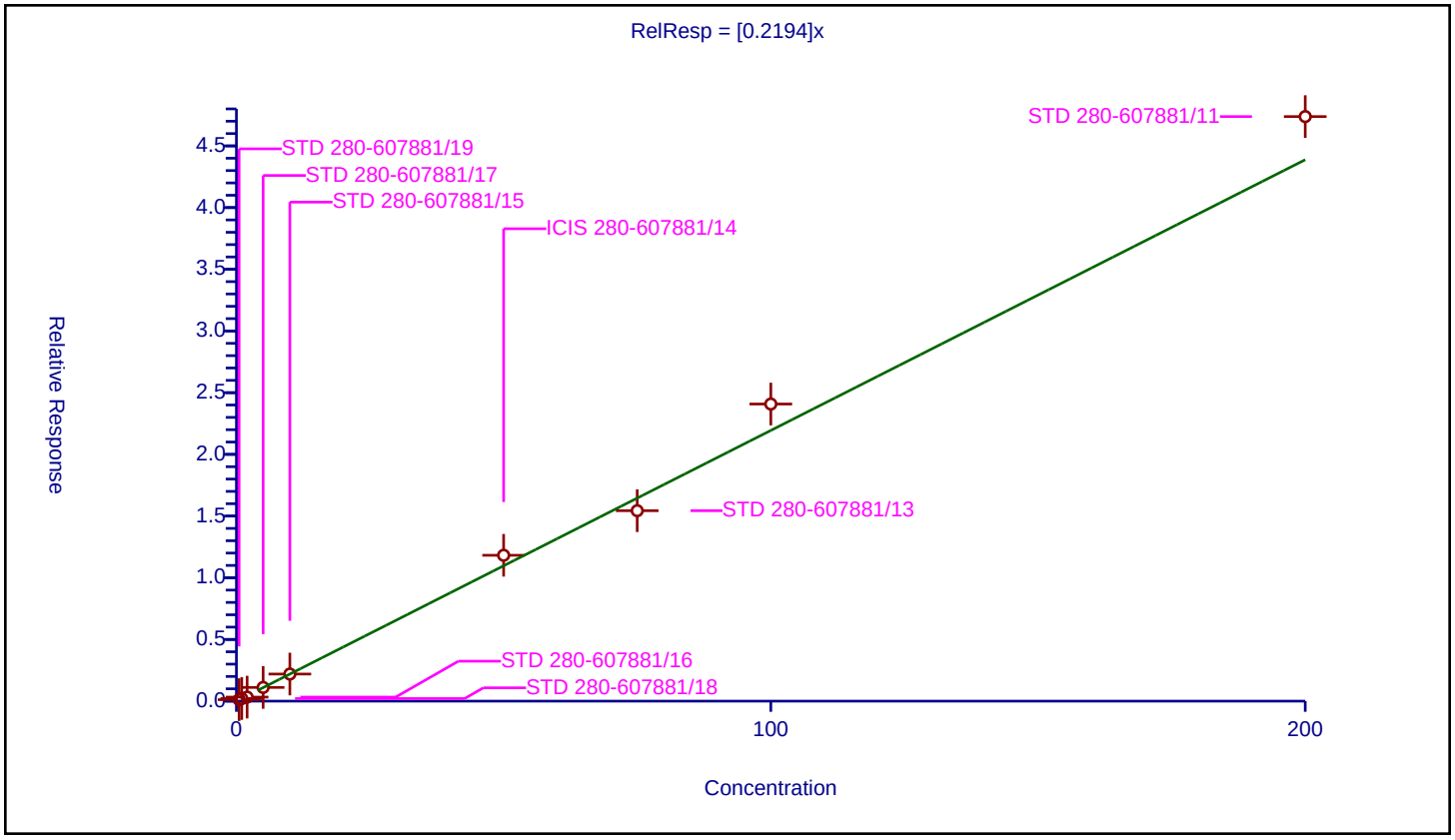
Curve Coefficients

Intercept:	0
Slope:	0.2194

Error Coefficients

Standard Error:	618000
Relative Standard Error:	11.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.120006	50.0	1347020.0	0.240011	Y
2	STD 280-607881/18	1.0	0.209766	50.0	1321475.0	0.209766	Y
3	STD 280-607881/16	2.0	0.326777	50.0	1358265.0	0.163389	Y
4	STD 280-607881/17	5.0	1.109566	50.0	1337910.0	0.221913	Y
5	STD 280-607881/15	10.0	2.196438	50.0	1371311.0	0.219644	Y
6	ICIS 280-607881/14	50.0	11.820712	50.0	1433467.0	0.236414	Y
7	STD 280-607881/13	75.0	15.434353	50.0	1474746.0	0.205791	Y
8	STD 280-607881/12	100.0	24.07937	50.0	1493380.0	0.240794	Y
9	STD 280-607881/11	200.0	47.376053	50.0	1569677.0	0.23688	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

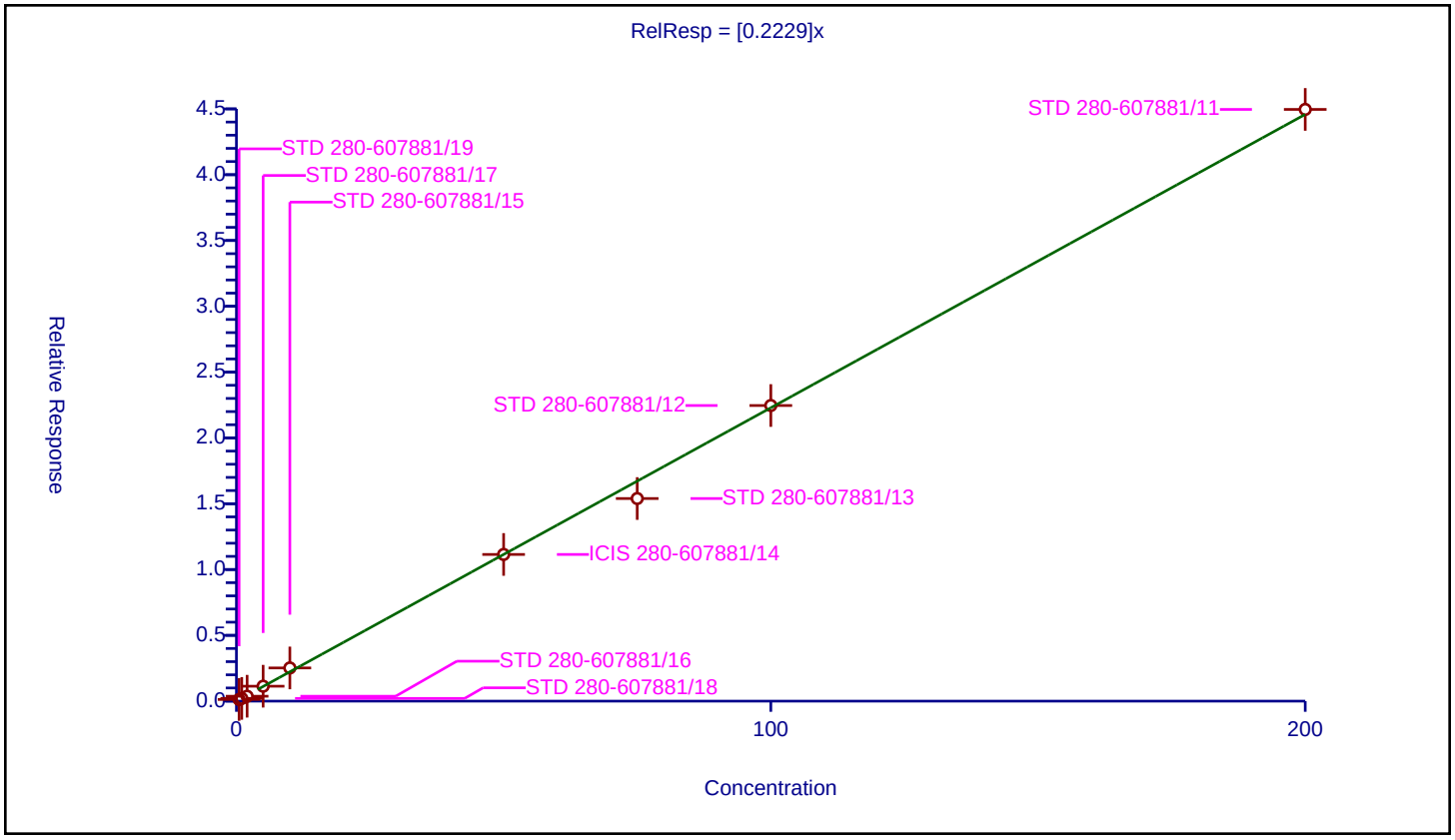
Curve Coefficients

Intercept:	0
Slope:	0.2229

Error Coefficients

Standard Error:	587000
Relative Standard Error:	9.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.126984	50.0	1347020.0	0.253968	Y
2	STD 280-607881/18	1.0	0.20829	50.0	1321475.0	0.20829	Y
3	STD 280-607881/16	2.0	0.37397	50.0	1358265.0	0.186985	Y
4	STD 280-607881/17	5.0	1.135091	50.0	1337910.0	0.227018	Y
5	STD 280-607881/15	10.0	2.523169	50.0	1371311.0	0.252317	Y
6	ICIS 280-607881/14	50.0	11.144519	50.0	1433467.0	0.22289	Y
7	STD 280-607881/13	75.0	15.395973	50.0	1474746.0	0.20528	Y
8	STD 280-607881/12	100.0	22.4622	50.0	1493380.0	0.224622	Y
9	STD 280-607881/11	200.0	44.958963	50.0	1569677.0	0.224795	Y



Calibration / Vinyl chloride

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

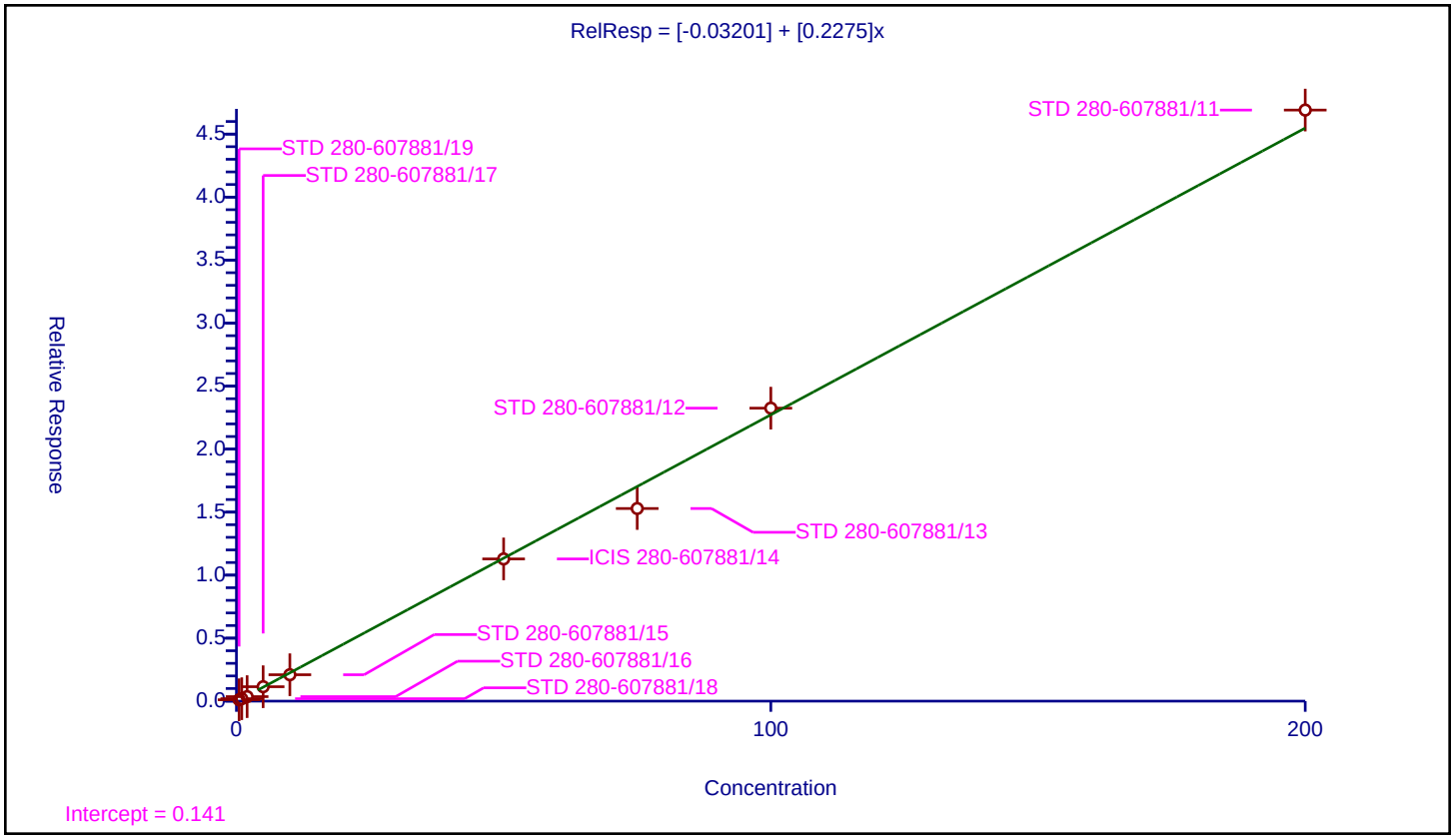
Curve Coefficients

Intercept:	-0.03201
Slope:	0.2275

Error Coefficients

Standard Error:	651000
Relative Standard Error:	11.6
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.108573	50.0	1347020.0	0.217146	Y
2	STD 280-607881/18	1.0	0.193761	50.0	1321475.0	0.193761	Y
3	STD 280-607881/16	2.0	0.35792	50.0	1358265.0	0.17896	Y
4	STD 280-607881/17	5.0	1.144173	50.0	1337910.0	0.228835	Y
5	STD 280-607881/15	10.0	2.09482	50.0	1371311.0	0.209482	Y
6	ICIS 280-607881/14	50.0	11.285436	50.0	1433467.0	0.225709	Y
7	STD 280-607881/13	75.0	15.286836	50.0	1474746.0	0.203824	Y
8	STD 280-607881/12	100.0	23.250278	50.0	1493380.0	0.232503	Y
9	STD 280-607881/11	200.0	46.907198	50.0	1569677.0	0.234536	Y



11/27/2023
7:19 PM

Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

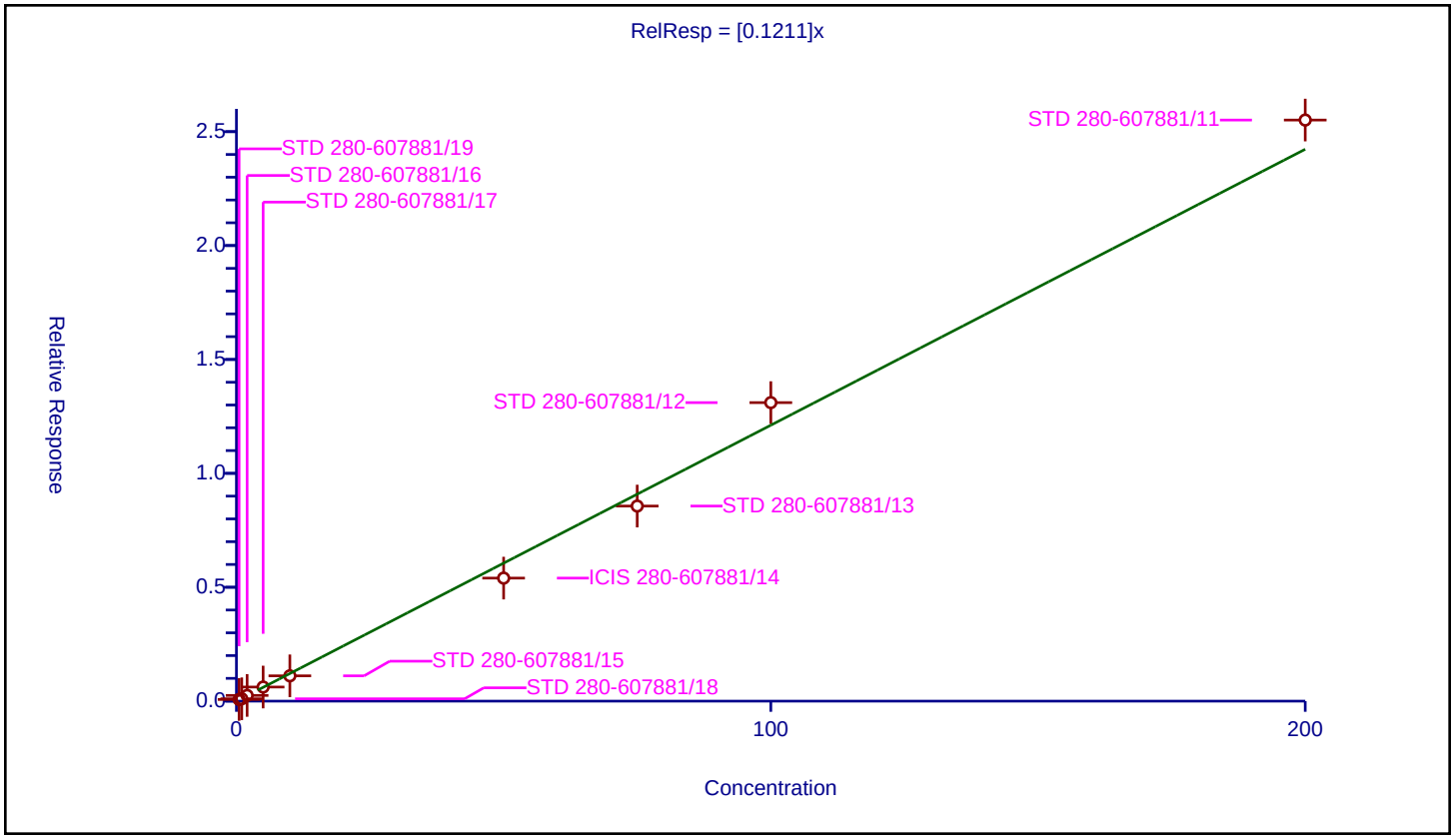
Curve Coefficients

Intercept:	0
Slope:	0.1211

Error Coefficients

Standard Error:	332000
Relative Standard Error:	10.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.072865	50.0	1347020.0	0.145729	Y
2	STD 280-607881/18	1.0	0.103559	50.0	1321475.0	0.103559	Y
3	STD 280-607881/16	2.0	0.250356	50.0	1358265.0	0.125178	Y
4	STD 280-607881/17	5.0	0.6191	50.0	1337910.0	0.12382	Y
5	STD 280-607881/15	10.0	1.111528	50.0	1371311.0	0.111153	Y
6	ICIS 280-607881/14	50.0	5.401799	50.0	1433467.0	0.108036	Y
7	STD 280-607881/13	75.0	8.56456	50.0	1474746.0	0.114194	Y
8	STD 280-607881/12	100.0	13.105573	50.0	1493380.0	0.131056	Y
9	STD 280-607881/11	200.0	25.510089	50.0	1569677.0	0.12755	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

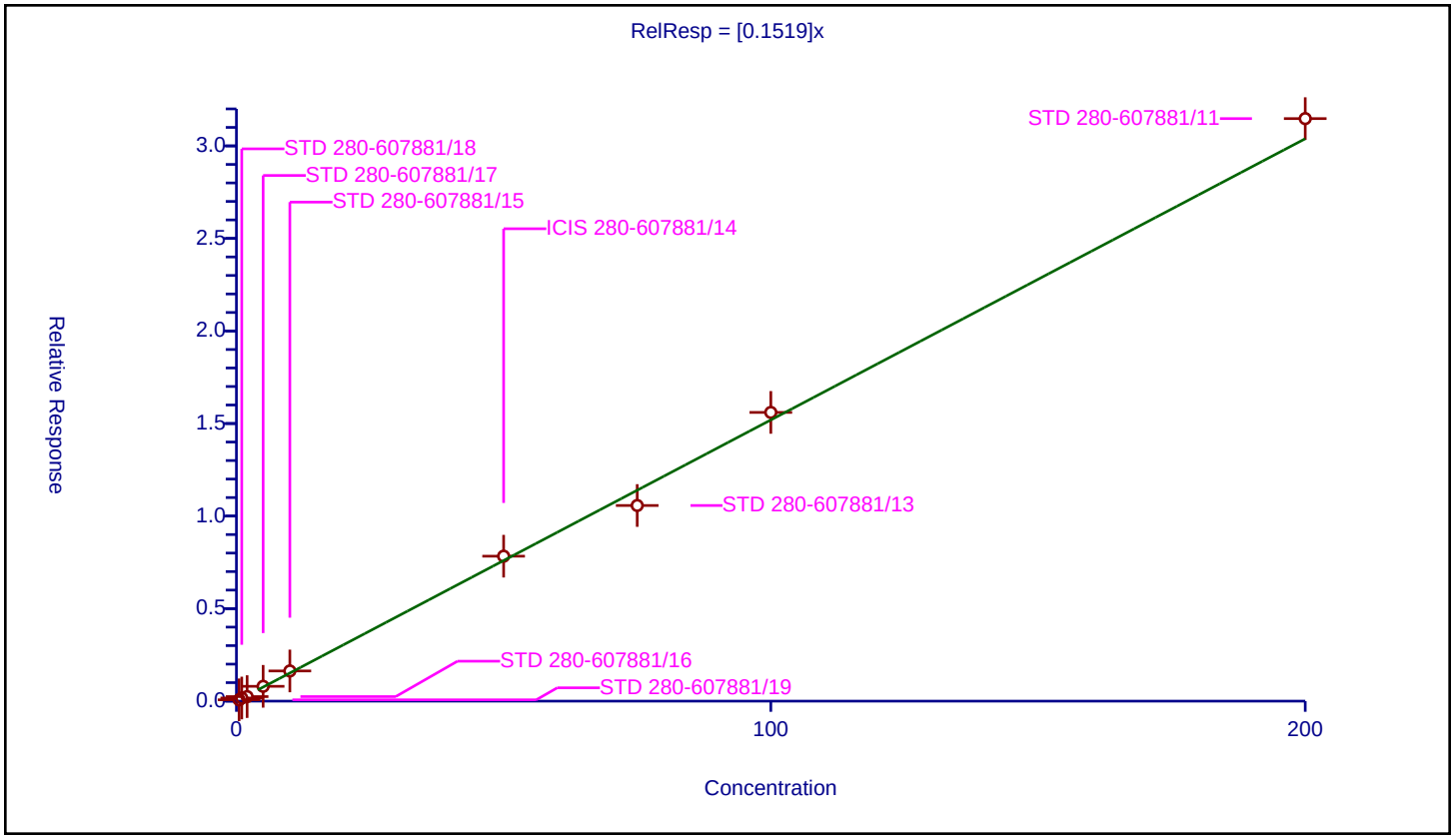
Curve Coefficients

Intercept:	0
Slope:	0.1519

Error Coefficients

Standard Error:	410000
Relative Standard Error:	9.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.070934	50.0	1347020.0	0.141869	Y
2	STD 280-607881/18	1.0	0.168864	50.0	1321475.0	0.168864	Y
3	STD 280-607881/16	2.0	0.244908	50.0	1358265.0	0.122454	Y
4	STD 280-607881/17	5.0	0.800652	50.0	1337910.0	0.16013	Y
5	STD 280-607881/15	10.0	1.631359	50.0	1371311.0	0.163136	Y
6	ICIS 280-607881/14	50.0	7.832235	50.0	1433467.0	0.156645	Y
7	STD 280-607881/13	75.0	10.571041	50.0	1474746.0	0.140947	Y
8	STD 280-607881/12	100.0	15.600919	50.0	1493380.0	0.156009	Y
9	STD 280-607881/11	200.0	31.474692	50.0	1569677.0	0.157373	Y



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Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

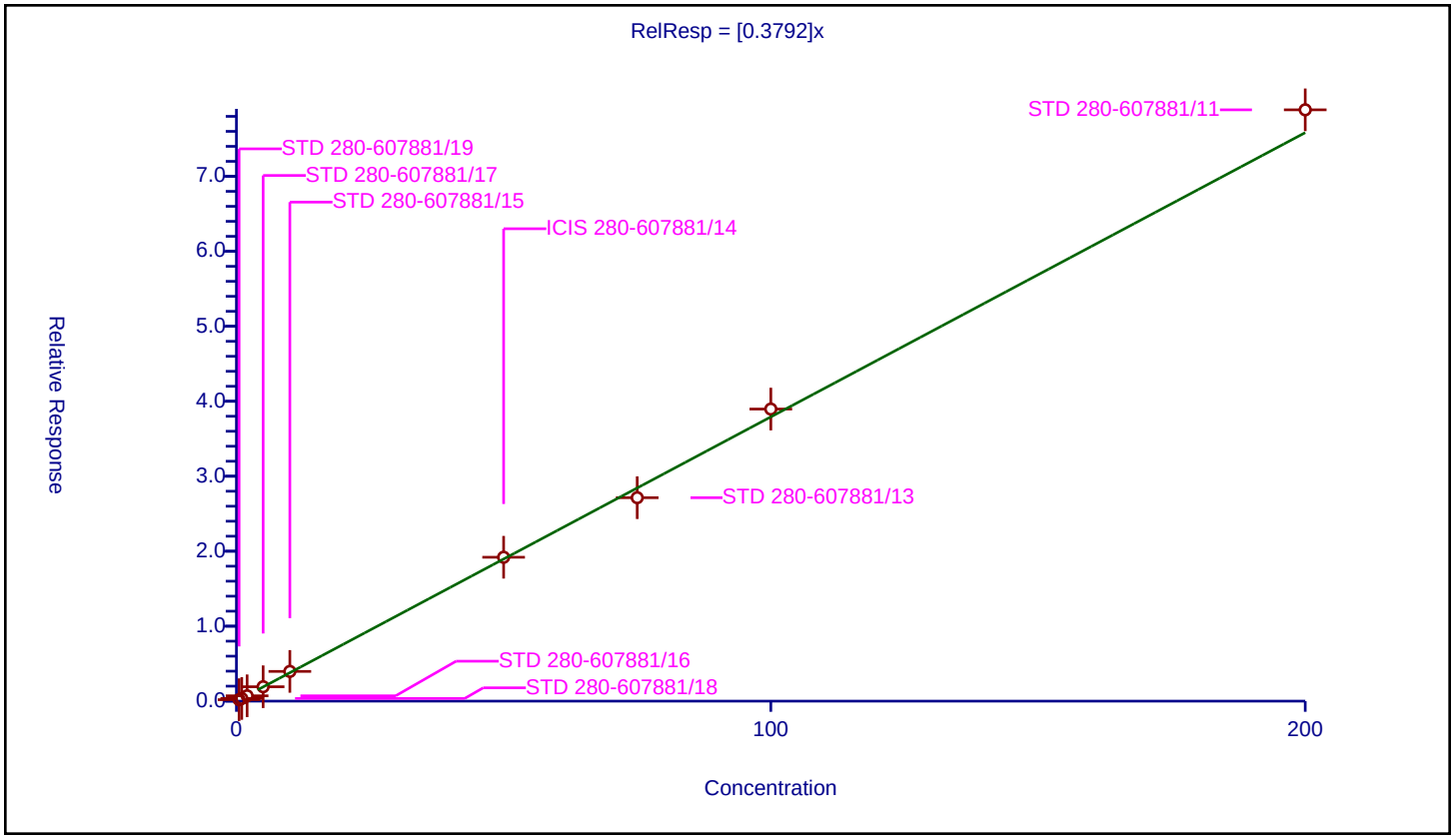
Curve Coefficients

Intercept:	0
Slope:	0.3792

Error Coefficients

Standard Error:	1030000
Relative Standard Error:	4.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.194355	50.0	1347020.0	0.38871	Y
2	STD 280-607881/18	1.0	0.356723	50.0	1321475.0	0.356723	Y
3	STD 280-607881/16	2.0	0.712748	50.0	1358265.0	0.356374	Y
4	STD 280-607881/17	5.0	1.921878	50.0	1337910.0	0.384376	Y
5	STD 280-607881/15	10.0	3.965038	50.0	1371311.0	0.396504	Y
6	ICIS 280-607881/14	50.0	19.194233	50.0	1433467.0	0.383885	Y
7	STD 280-607881/13	75.0	27.138945	50.0	1474746.0	0.361853	Y
8	STD 280-607881/12	100.0	38.960479	50.0	1493380.0	0.389605	Y
9	STD 280-607881/11	200.0	78.877087	50.0	1569677.0	0.394385	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

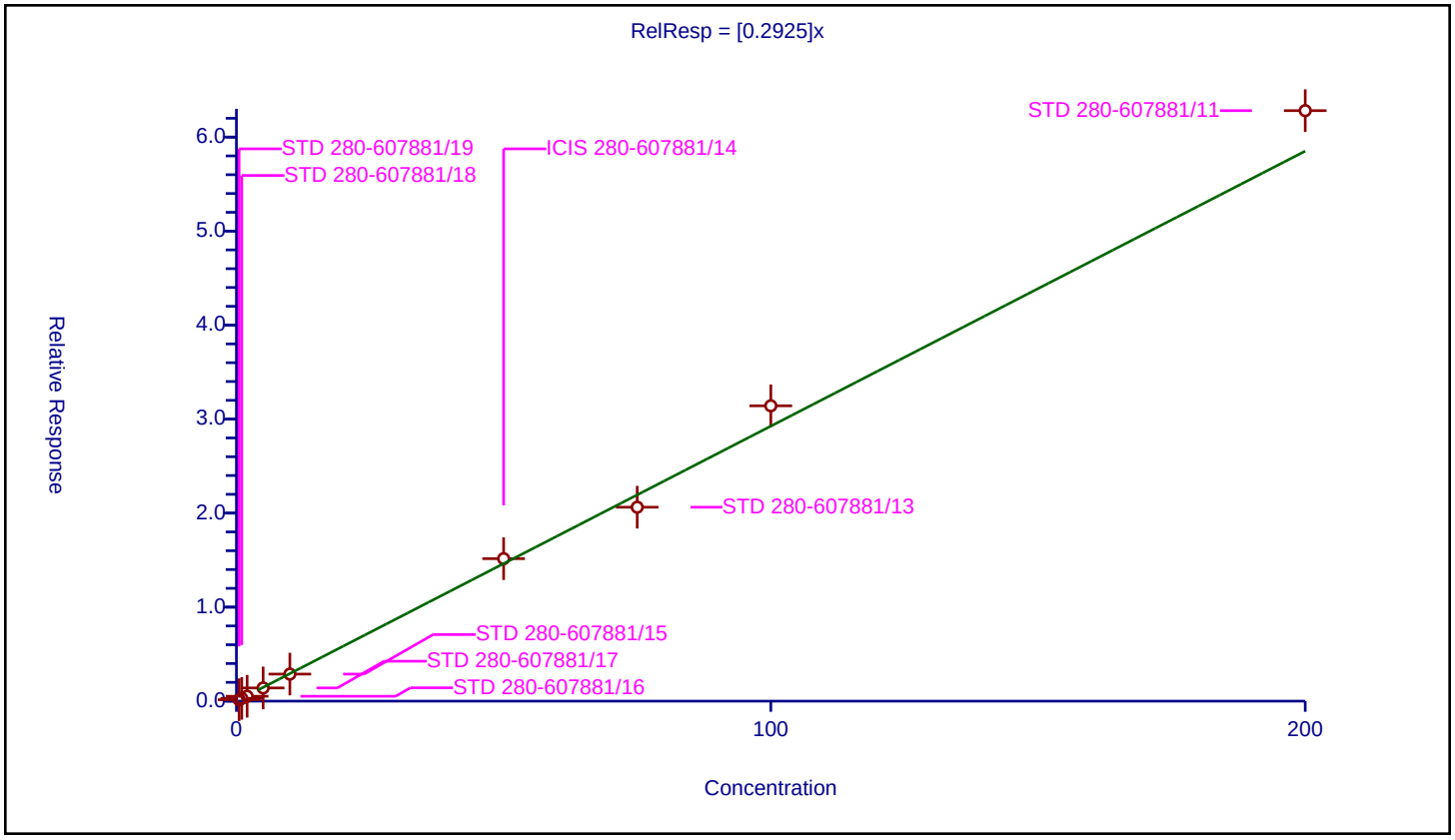
Curve Coefficients

Intercept:	0
Slope:	0.2925

Error Coefficients

Standard Error:	817000
Relative Standard Error:	6.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.150814	50.0	1347020.0	0.301629	Y
2	STD 280-607881/18	1.0	0.296411	50.0	1321475.0	0.296411	Y
3	STD 280-607881/16	2.0	0.520186	50.0	1358265.0	0.260093	Y
4	STD 280-607881/17	5.0	1.403271	50.0	1337910.0	0.280654	Y
5	STD 280-607881/15	10.0	2.876773	50.0	1371311.0	0.287677	Y
6	ICIS 280-607881/14	50.0	15.155005	50.0	1433467.0	0.3031	Y
7	STD 280-607881/13	75.0	20.630536	50.0	1474746.0	0.275074	Y
8	STD 280-607881/12	100.0	31.415983	50.0	1493380.0	0.31416	Y
9	STD 280-607881/11	200.0	62.813273	50.0	1569677.0	0.314066	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

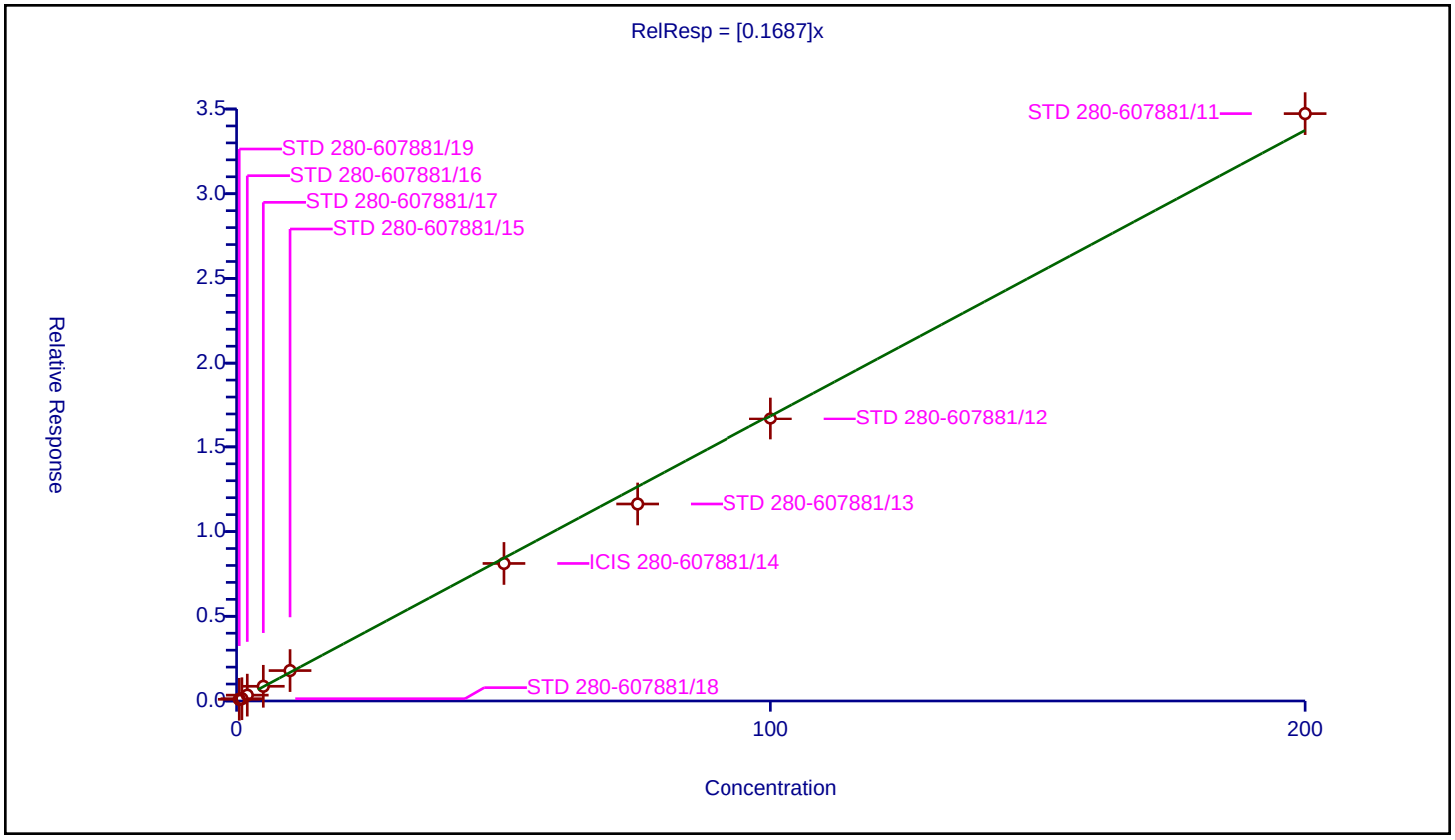
Curve Coefficients

Intercept:	0
Slope:	0.1687

Error Coefficients

Standard Error:	449000
Relative Standard Error:	10.4
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.099702	50.0	1347020.0	0.199403	Y
2	STD 280-607881/18	1.0	0.135341	50.0	1321475.0	0.135341	Y
3	STD 280-607881/16	2.0	0.34533	50.0	1358265.0	0.172665	Y
4	STD 280-607881/17	5.0	0.867585	50.0	1337910.0	0.173517	Y
5	STD 280-607881/15	10.0	1.795034	50.0	1371311.0	0.179503	Y
6	ICIS 280-607881/14	50.0	8.118255	50.0	1433467.0	0.162365	Y
7	STD 280-607881/13	75.0	11.62729	50.0	1474746.0	0.155031	Y
8	STD 280-607881/12	100.0	16.701978	50.0	1493380.0	0.16702	Y
9	STD 280-607881/11	200.0	34.727145	50.0	1569677.0	0.173636	Y



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Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

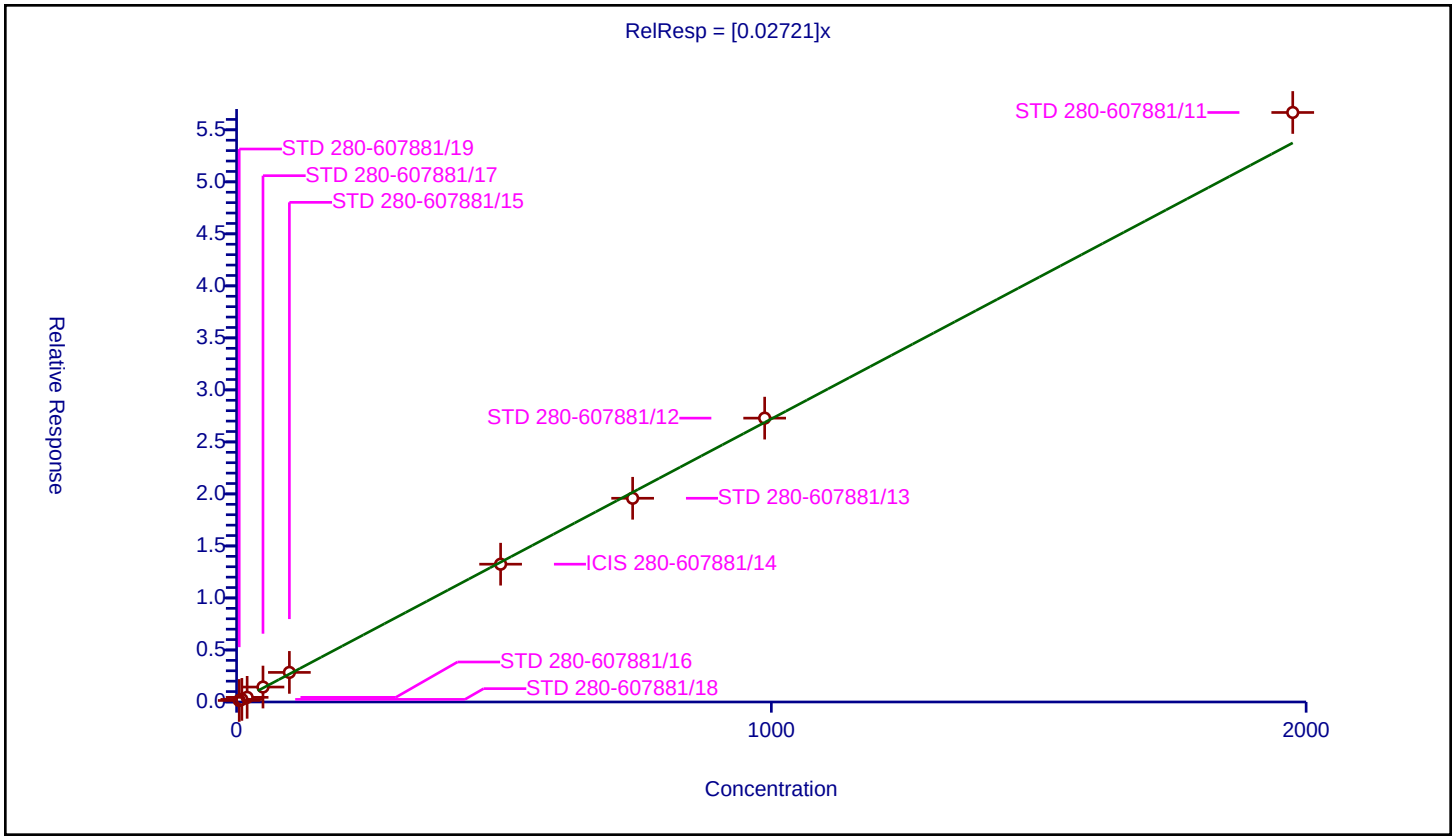
Curve Coefficients

Intercept:	0
Slope:	0.02721

Error Coefficients

Standard Error:	734000
Relative Standard Error:	8.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	4.9375	0.145766	50.0	1347020.0	0.029522	Y
2	STD 280-607881/18	9.875	0.249872	50.0	1321475.0	0.025304	Y
3	STD 280-607881/16	19.75	0.446305	50.0	1358265.0	0.022598	Y
4	STD 280-607881/17	49.375	1.436831	50.0	1337910.0	0.0291	Y
5	STD 280-607881/15	98.75	2.843629	50.0	1371311.0	0.028796	Y
6	ICIS 280-607881/14	493.75	13.244881	50.0	1433467.0	0.026825	Y
7	STD 280-607881/13	740.625	19.581643	50.0	1474746.0	0.026439	Y
8	STD 280-607881/12	987.5	27.286558	50.0	1493380.0	0.027632	Y
9	STD 280-607881/11	1975.0	56.666881	50.0	1569677.0	0.028692	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

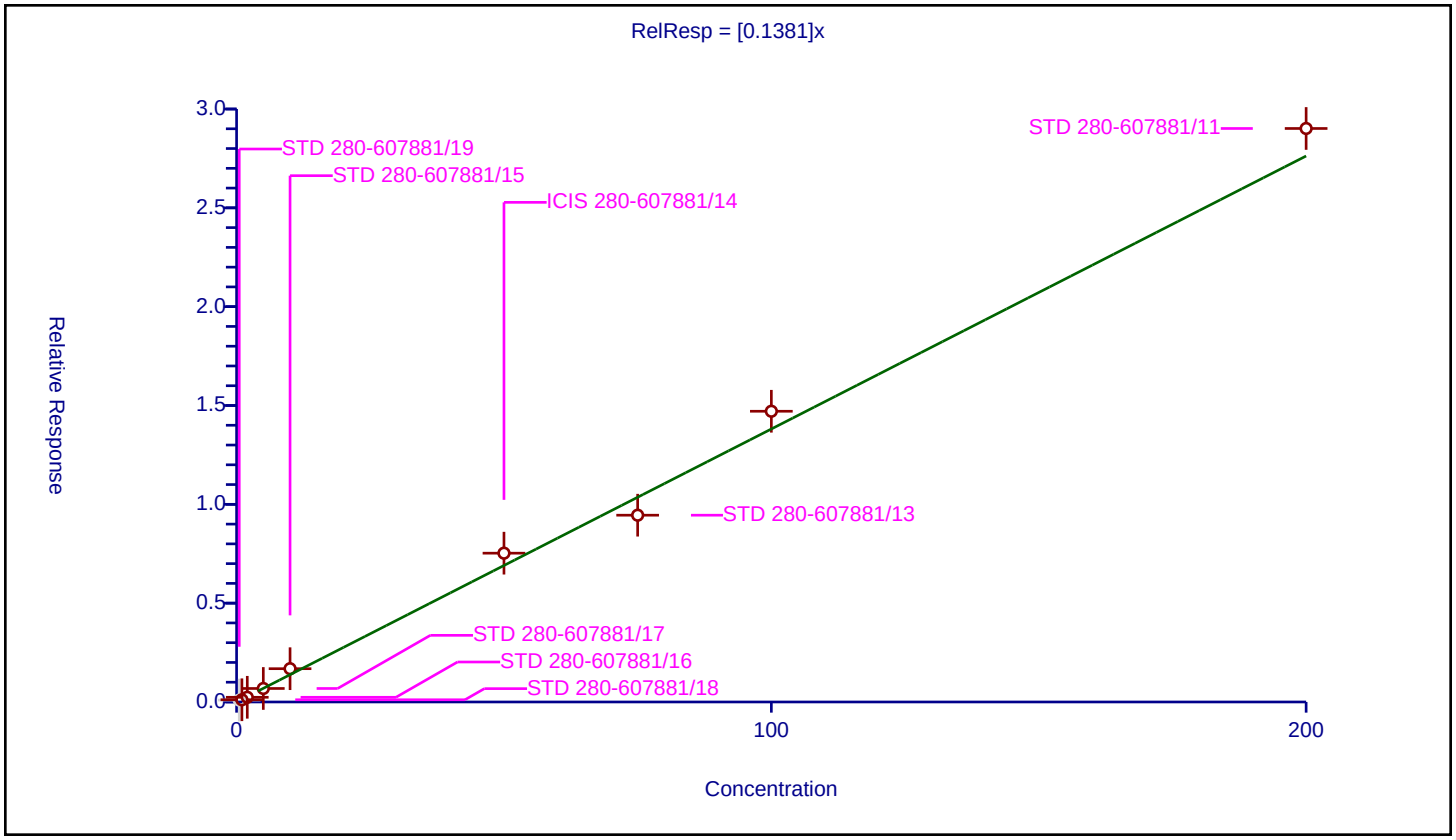
Curve Coefficients

Intercept:	0
Slope:	0.1381

Error Coefficients

Standard Error:	405000
Relative Standard Error:	13.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.097066	50.0	1347020.0	0.194132	N
2	STD 280-607881/18	1.0	0.112072	50.0	1321475.0	0.112072	Y
3	STD 280-607881/16	2.0	0.238319	50.0	1358265.0	0.119159	Y
4	STD 280-607881/17	5.0	0.682744	50.0	1337910.0	0.136549	Y
5	STD 280-607881/15	10.0	1.68379	50.0	1371311.0	0.168379	Y
6	ICIS 280-607881/14	50.0	7.529193	50.0	1433467.0	0.150584	Y
7	STD 280-607881/13	75.0	9.450102	50.0	1474746.0	0.126001	Y
8	STD 280-607881/12	100.0	14.709351	50.0	1493380.0	0.147094	Y
9	STD 280-607881/11	200.0	29.015747	50.0	1569677.0	0.145079	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

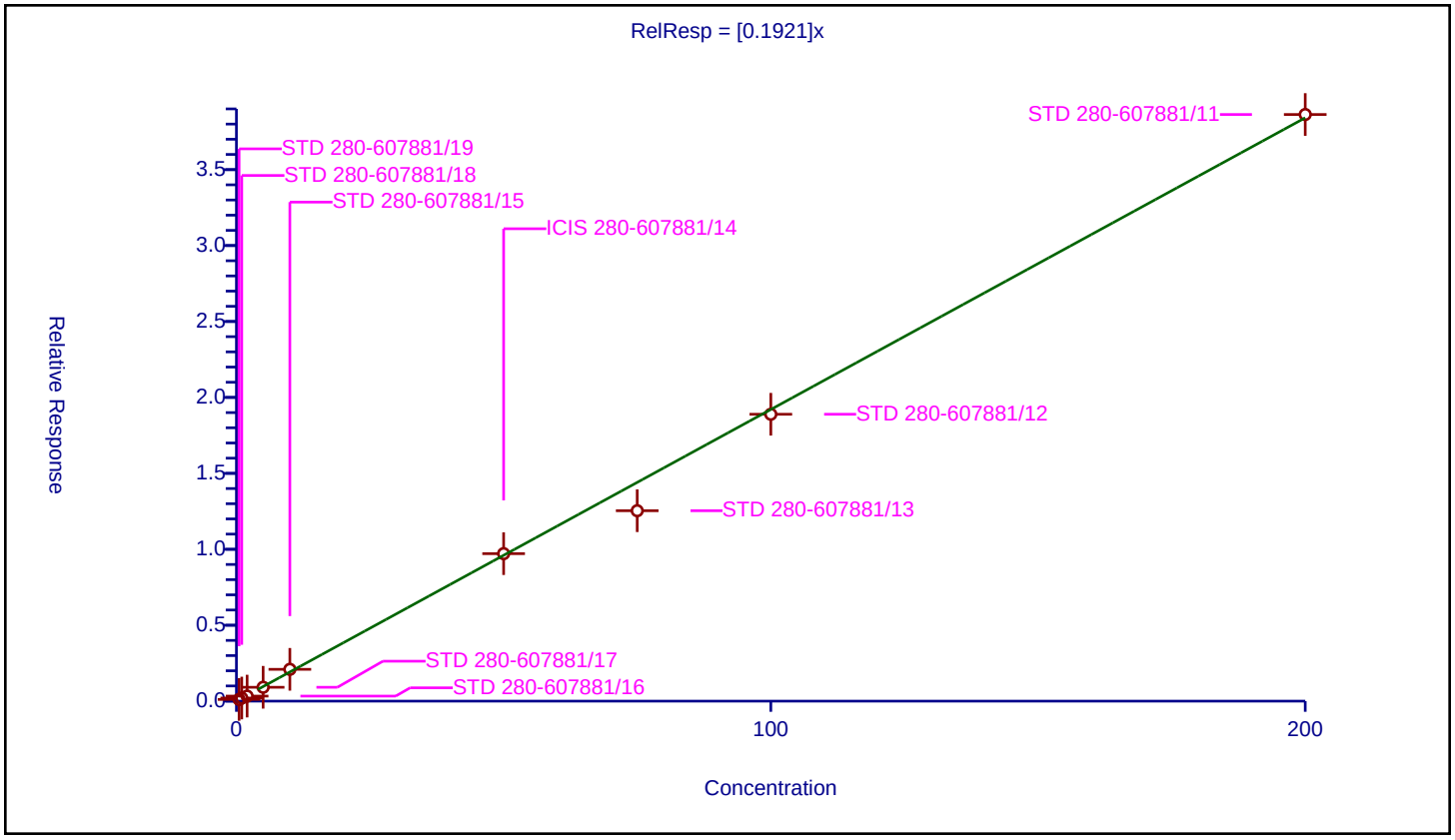
Curve Coefficients

Intercept:	0
Slope:	0.1921

Error Coefficients

Standard Error:	501000
Relative Standard Error:	9.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.111617	50.0	1347020.0	0.223234	Y
2	STD 280-607881/18	1.0	0.20356	50.0	1321475.0	0.20356	Y
3	STD 280-607881/16	2.0	0.332373	50.0	1358265.0	0.166186	Y
4	STD 280-607881/17	5.0	0.913103	50.0	1337910.0	0.182621	Y
5	STD 280-607881/15	10.0	2.094784	50.0	1371311.0	0.209478	Y
6	ICIS 280-607881/14	50.0	9.712292	50.0	1433467.0	0.194246	Y
7	STD 280-607881/13	75.0	12.539007	50.0	1474746.0	0.167187	Y
8	STD 280-607881/12	100.0	18.892077	50.0	1493380.0	0.188921	Y
9	STD 280-607881/11	200.0	38.630209	50.0	1569677.0	0.193151	Y



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Calibration / Acetone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

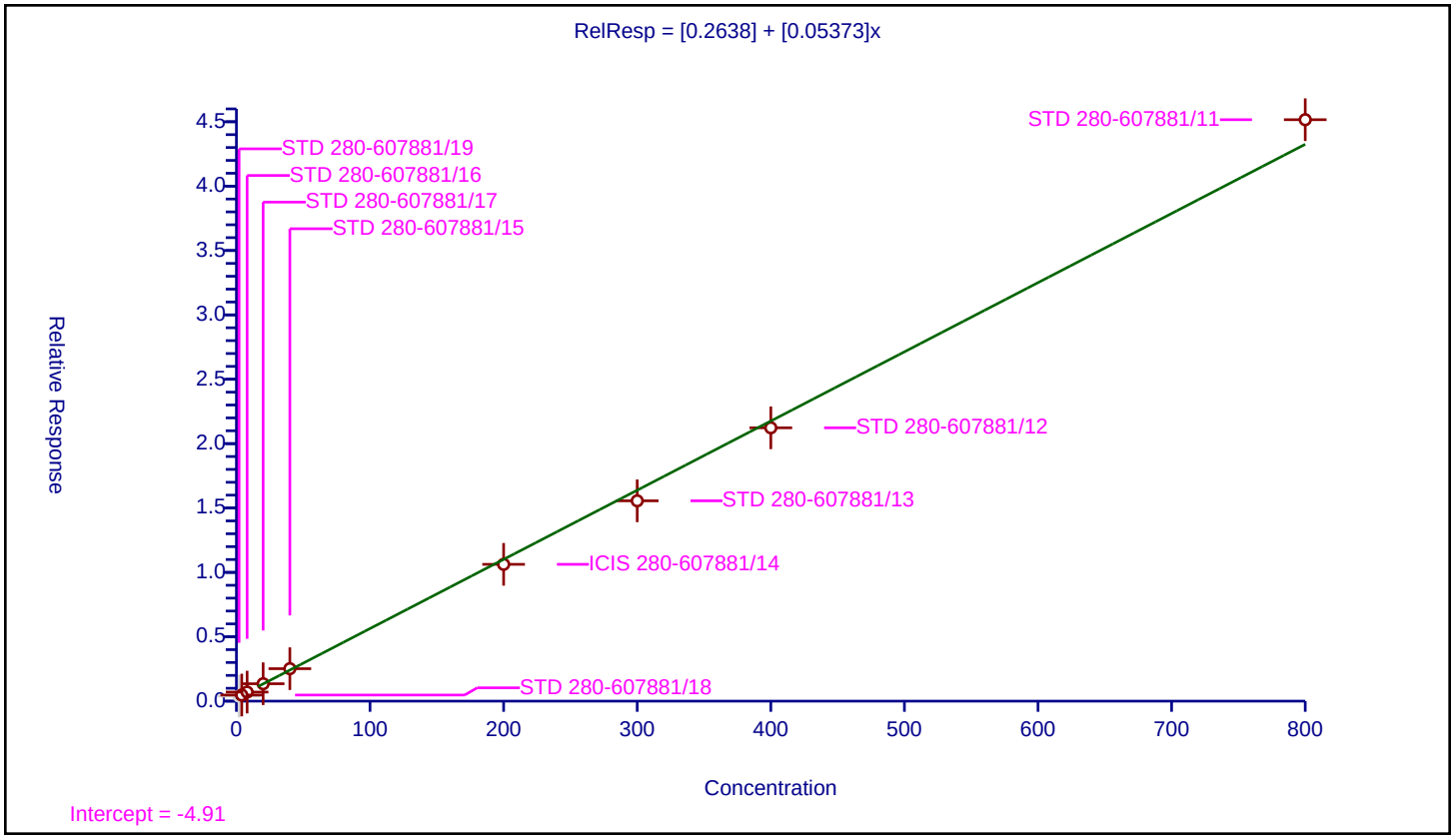
Curve Coefficients

Intercept:	0.2638
Slope:	0.05373

Error Coefficients

Standard Error:	674000
Relative Standard Error:	4.1
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.394723	50.0	1347020.0	0.197362	N
2	STD 280-607881/18	4.0	0.475075	50.0	1321475.0	0.118769	Y
3	STD 280-607881/16	8.0	0.703361	50.0	1358265.0	0.08792	Y
4	STD 280-607881/17	20.0	1.351698	50.0	1337910.0	0.067585	Y
5	STD 280-607881/15	40.0	2.519779	50.0	1371311.0	0.062994	Y
6	ICIS 280-607881/14	200.0	10.62473	50.0	1433467.0	0.053124	Y
7	STD 280-607881/13	300.0	15.55929	50.0	1474746.0	0.051864	Y
8	STD 280-607881/12	400.0	21.229962	50.0	1493380.0	0.053075	Y
9	STD 280-607881/11	800.0	45.159163	50.0	1569677.0	0.056449	Y



Calibration / Iodomethane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

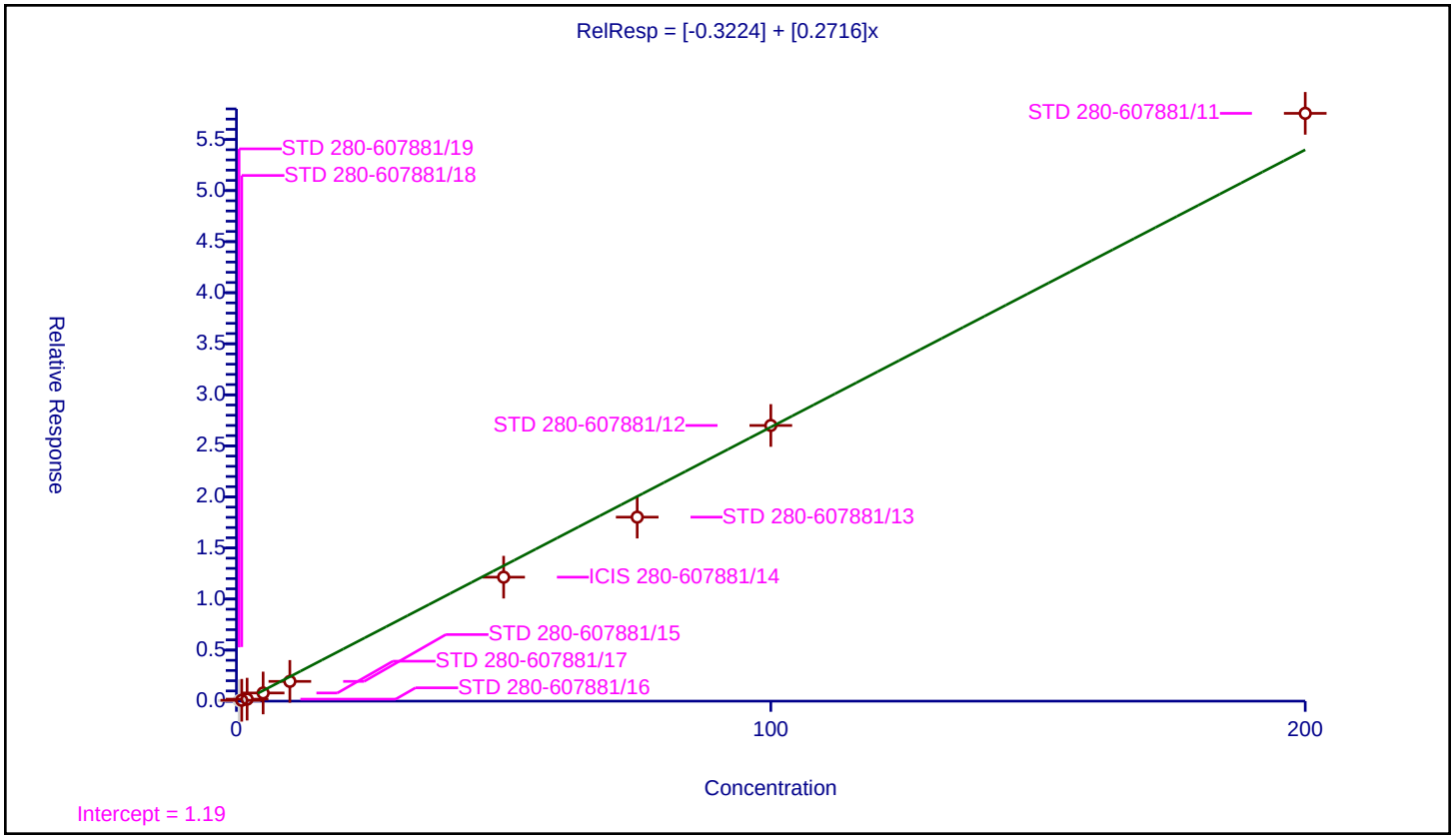
Curve Coefficients

Intercept:	-0.3224
Slope:	0.2716

Error Coefficients

Standard Error:	849000
Relative Standard Error:	23.7
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.051113	50.0	1347020.0	0.102226	N
2	STD 280-607881/18	1.0	0.085851	50.0	1321475.0	0.085851	Y
3	STD 280-607881/16	2.0	0.193556	50.0	1358265.0	0.096778	Y
4	STD 280-607881/17	5.0	0.799381	50.0	1337910.0	0.159876	Y
5	STD 280-607881/15	10.0	1.934098	50.0	1371311.0	0.19341	Y
6	ICIS 280-607881/14	50.0	12.139833	50.0	1433467.0	0.242797	Y
7	STD 280-607881/13	75.0	18.019984	50.0	1474746.0	0.240266	Y
8	STD 280-607881/12	100.0	26.998185	50.0	1493380.0	0.269982	Y
9	STD 280-607881/11	200.0	57.563276	50.0	1569677.0	0.287816	Y



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Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

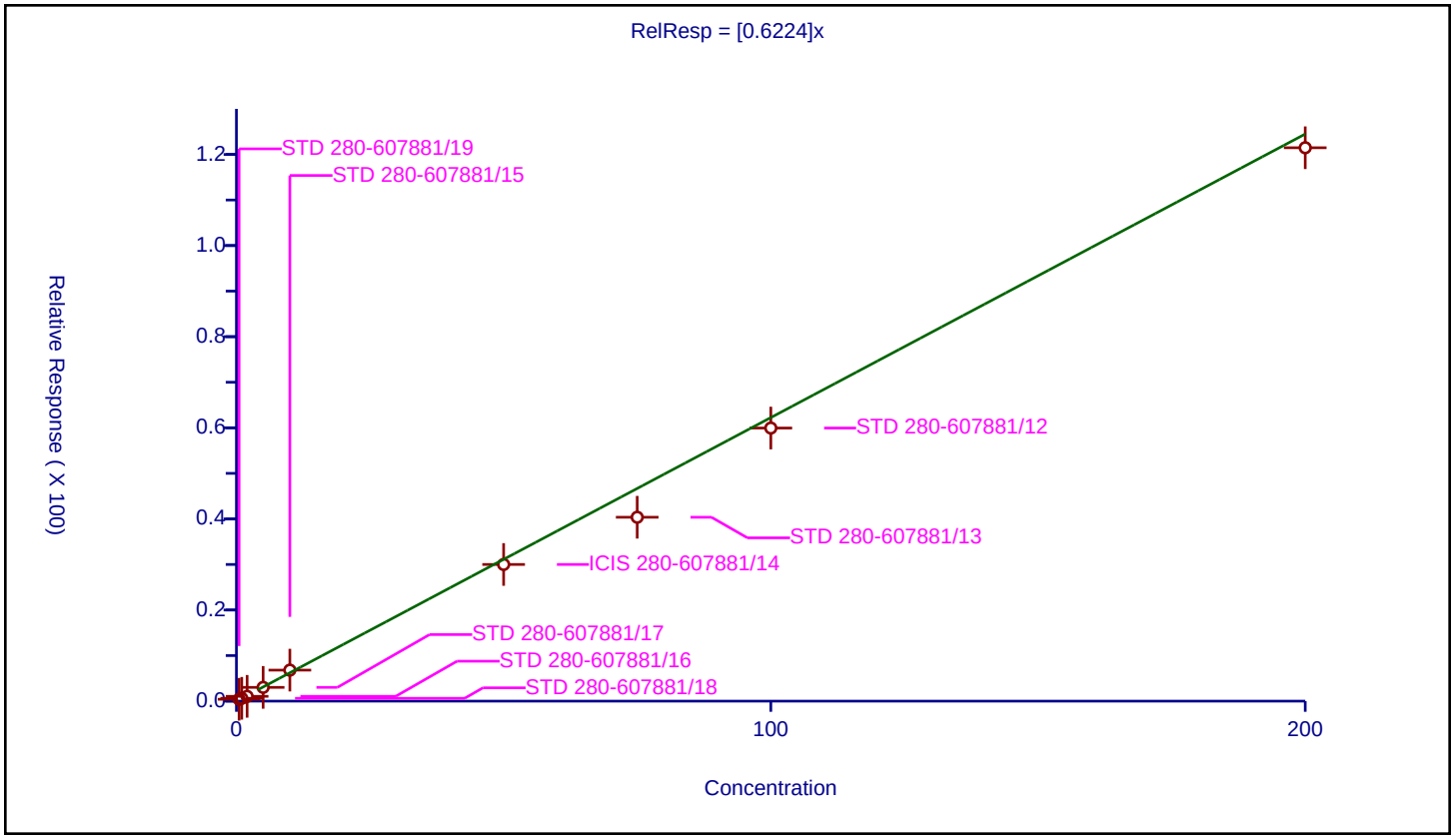
Curve Coefficients

Intercept:	0
Slope:	0.6224

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	14.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.411872	50.0	1347020.0	0.823744	Y
2	STD 280-607881/18	1.0	0.620632	50.0	1321475.0	0.620632	Y
3	STD 280-607881/16	2.0	1.054286	50.0	1358265.0	0.527143	Y
4	STD 280-607881/17	5.0	3.021429	50.0	1337910.0	0.604286	Y
5	STD 280-607881/15	10.0	6.809214	50.0	1371311.0	0.680921	Y
6	ICIS 280-607881/14	50.0	30.000167	50.0	1433467.0	0.600003	Y
7	STD 280-607881/13	75.0	40.363256	50.0	1474746.0	0.538177	Y
8	STD 280-607881/12	100.0	59.945292	50.0	1493380.0	0.599453	Y
9	STD 280-607881/11	200.0	121.472953	50.0	1569677.0	0.607365	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

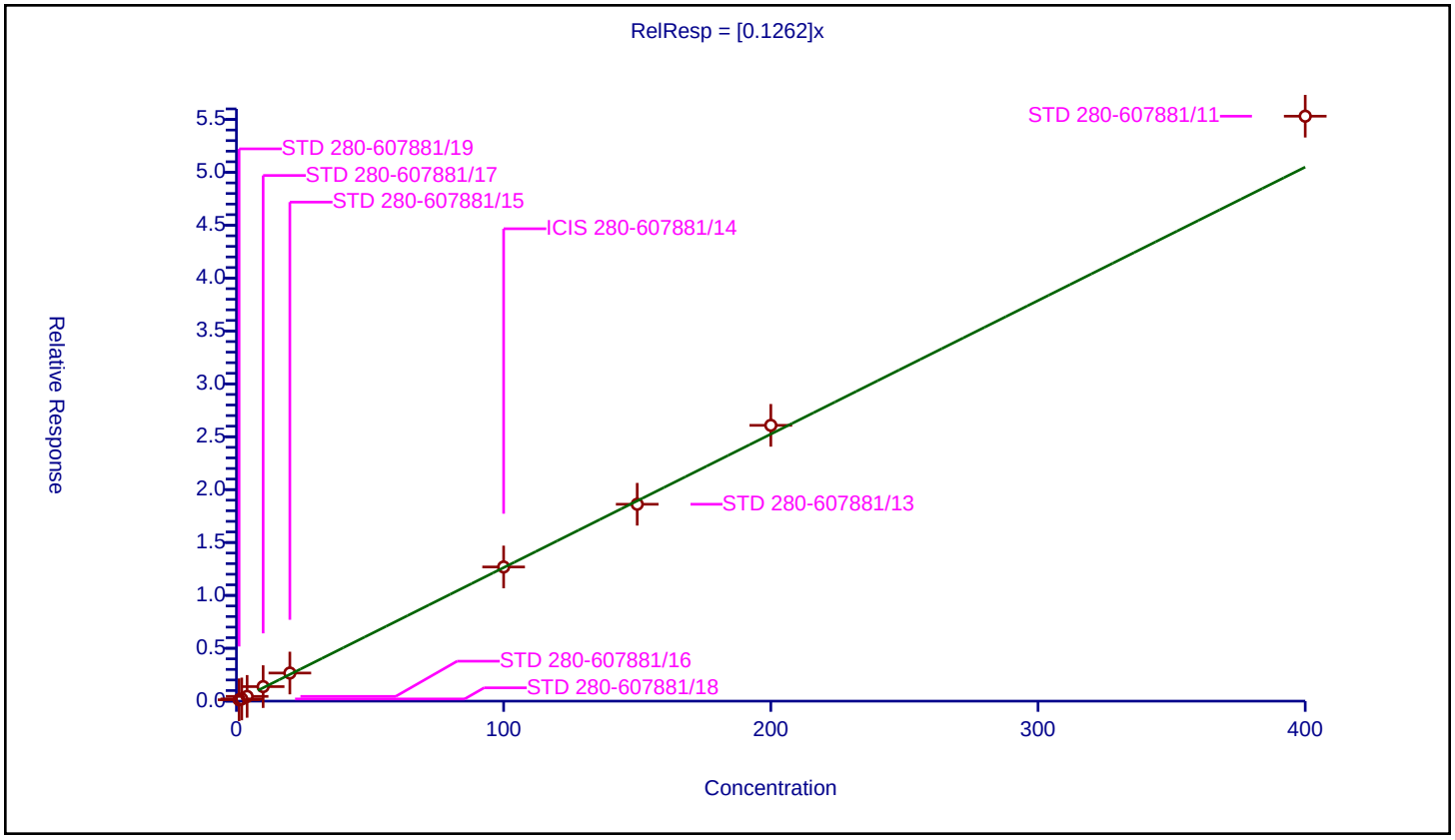
Curve Coefficients

Intercept:	0
Slope:	0.1262

Error Coefficients

Standard Error:	713000
Relative Standard Error:	9.1
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.0	0.130176	50.0	1347020.0	0.130176	Y
2	STD 280-607881/18	2.0	0.206663	50.0	1321475.0	0.103332	Y
3	STD 280-607881/16	4.0	0.450759	50.0	1358265.0	0.11269	Y
4	STD 280-607881/17	10.0	1.37442	50.0	1337910.0	0.137442	Y
5	STD 280-607881/15	20.0	2.658478	50.0	1371311.0	0.132924	Y
6	ICIS 280-607881/14	100.0	12.686201	50.0	1433467.0	0.126862	Y
7	STD 280-607881/13	150.0	18.617681	50.0	1474746.0	0.124118	Y
8	STD 280-607881/12	200.0	26.078962	50.0	1493380.0	0.130395	Y
9	STD 280-607881/11	400.0	55.310902	50.0	1569677.0	0.138277	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

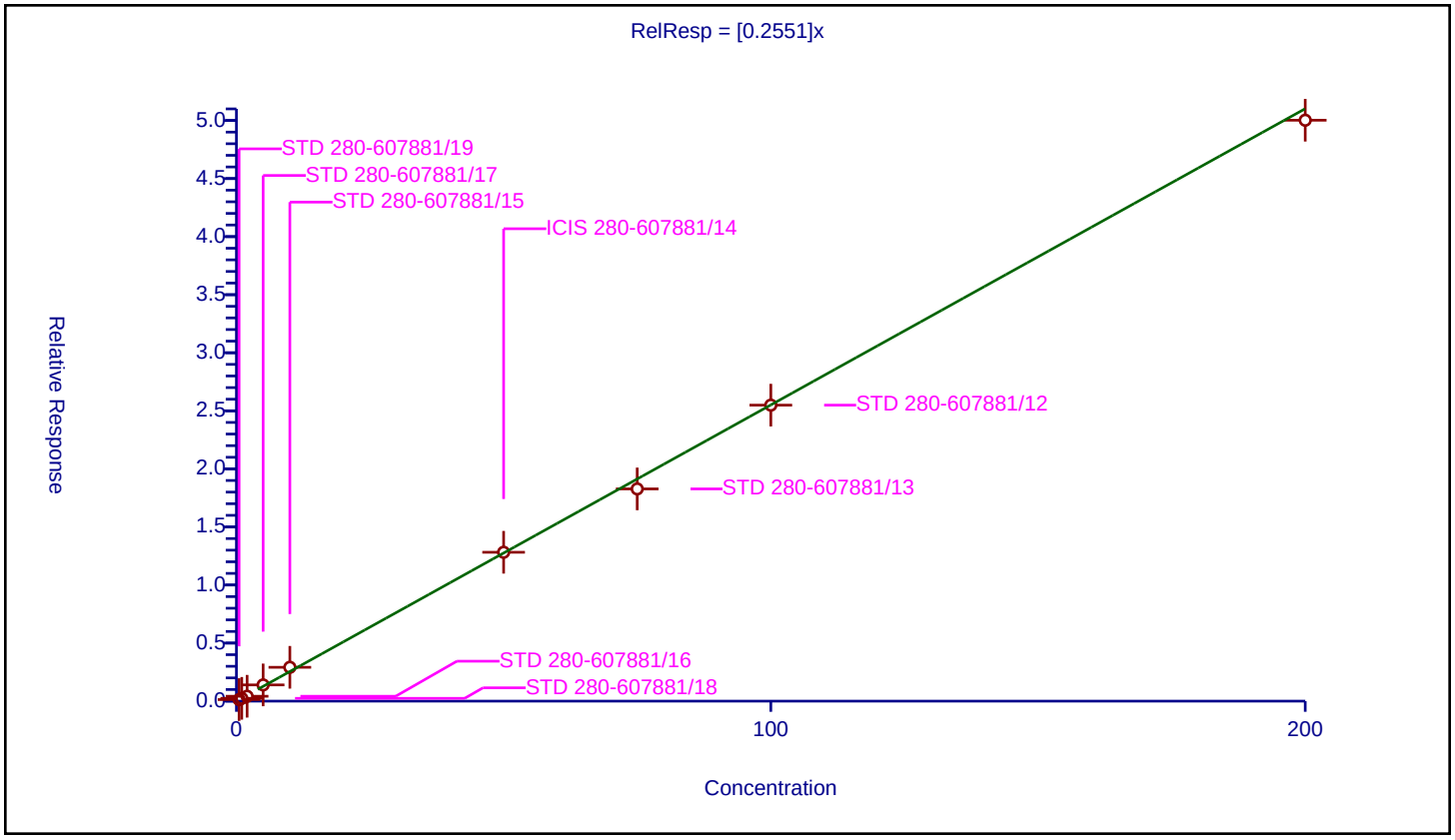
Curve Coefficients

Intercept:	0
Slope:	0.2551

Error Coefficients

Standard Error:	659000
Relative Standard Error:	9.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.133999	50.0	1347020.0	0.267999	Y
2	STD 280-607881/18	1.0	0.2417	50.0	1321475.0	0.2417	Y
3	STD 280-607881/16	2.0	0.420021	50.0	1358265.0	0.210011	Y
4	STD 280-607881/17	5.0	1.397553	50.0	1337910.0	0.279511	Y
5	STD 280-607881/15	10.0	2.913599	50.0	1371311.0	0.29136	Y
6	ICIS 280-607881/14	50.0	12.820595	50.0	1433467.0	0.256412	Y
7	STD 280-607881/13	75.0	18.276537	50.0	1474746.0	0.243687	Y
8	STD 280-607881/12	100.0	25.488757	50.0	1493380.0	0.254888	Y
9	STD 280-607881/11	200.0	50.023508	50.0	1569677.0	0.250118	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

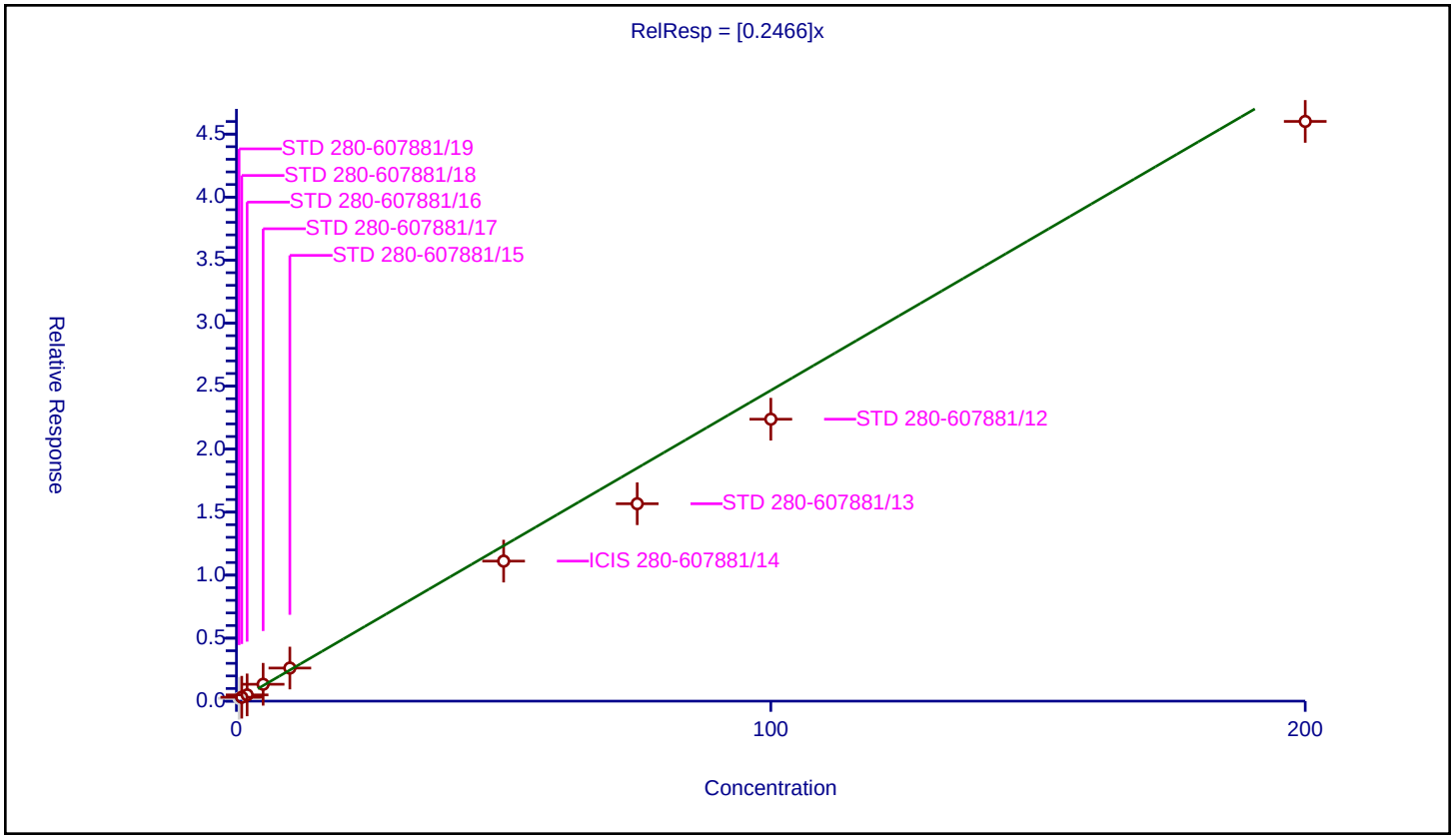
Curve Coefficients

Intercept:	0
Slope:	0.2466

Error Coefficients

Standard Error:	639000
Relative Standard Error:	13.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.224161	50.0	1347020.0	0.448323	N
2	STD 280-607881/18	1.0	0.309805	50.0	1321475.0	0.309805	Y
3	STD 280-607881/16	2.0	0.49589	50.0	1358265.0	0.247945	Y
4	STD 280-607881/17	5.0	1.338057	50.0	1337910.0	0.267611	Y
5	STD 280-607881/15	10.0	2.62672	50.0	1371311.0	0.262672	Y
6	ICIS 280-607881/14	50.0	11.11201	50.0	1433467.0	0.22224	Y
7	STD 280-607881/13	75.0	15.665782	50.0	1474746.0	0.208877	Y
8	STD 280-607881/12	100.0	22.374714	50.0	1493380.0	0.223747	Y
9	STD 280-607881/11	200.0	46.006185	50.0	1569677.0	0.230031	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

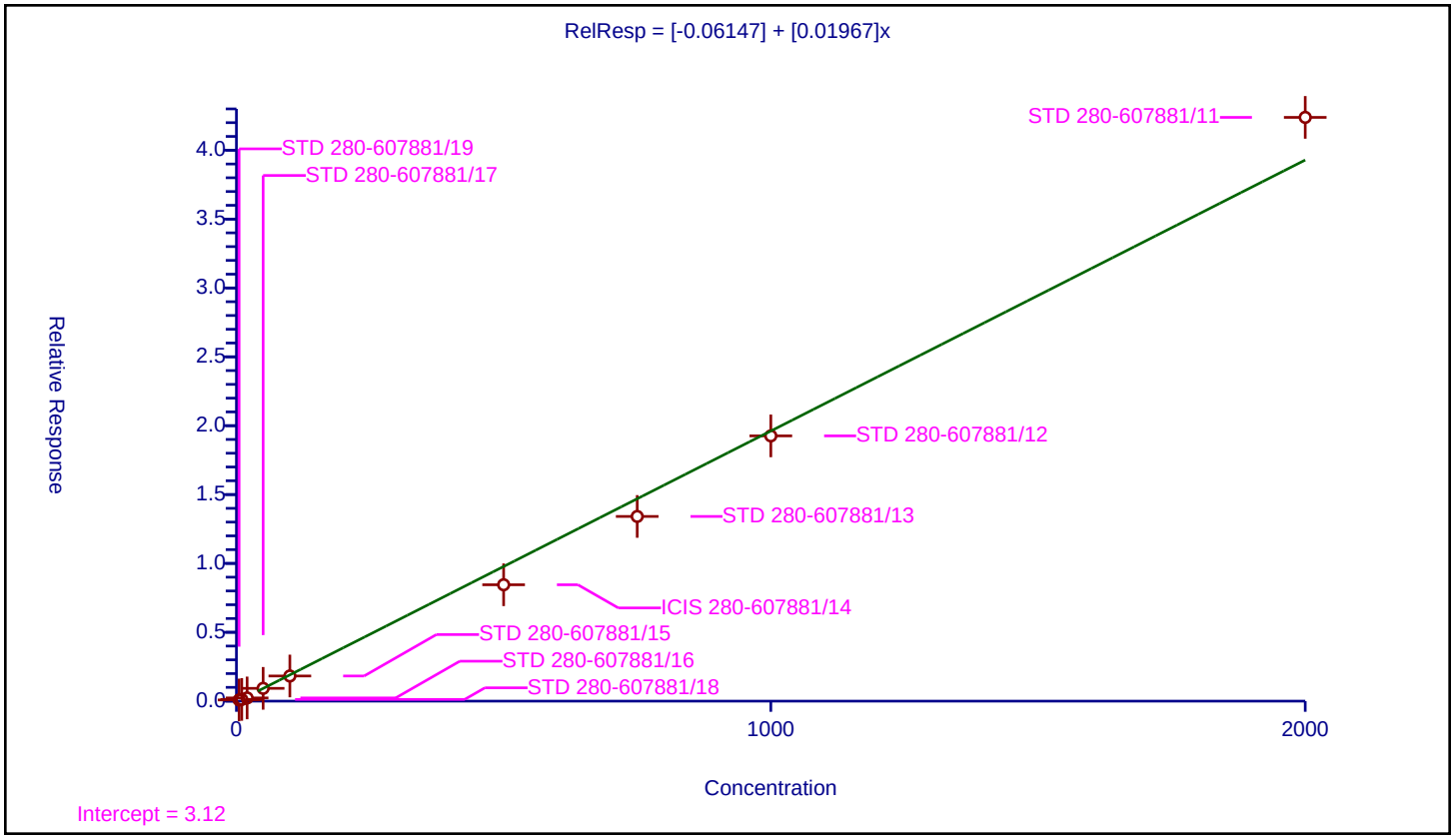
Curve Coefficients

Intercept:	-0.06147
Slope:	0.01967

Error Coefficients

Standard Error:	576000
Relative Standard Error:	22.4
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	5.0	0.086116	50.0	1347020.0	0.017223	Y
2	STD 280-607881/18	10.0	0.12452	50.0	1321475.0	0.012452	Y
3	STD 280-607881/16	20.0	0.232944	50.0	1358265.0	0.011647	Y
4	STD 280-607881/17	50.0	0.929696	50.0	1337910.0	0.018594	Y
5	STD 280-607881/15	100.0	1.826427	50.0	1371311.0	0.018264	Y
6	ICIS 280-607881/14	500.0	8.450421	50.0	1433467.0	0.016901	Y
7	STD 280-607881/13	750.0	13.409835	50.0	1474746.0	0.01788	Y
8	STD 280-607881/12	1000.0	19.258829	50.0	1493380.0	0.019259	Y
9	STD 280-607881/11	2000.0	42.382828	50.0	1569677.0	0.021191	Y



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Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

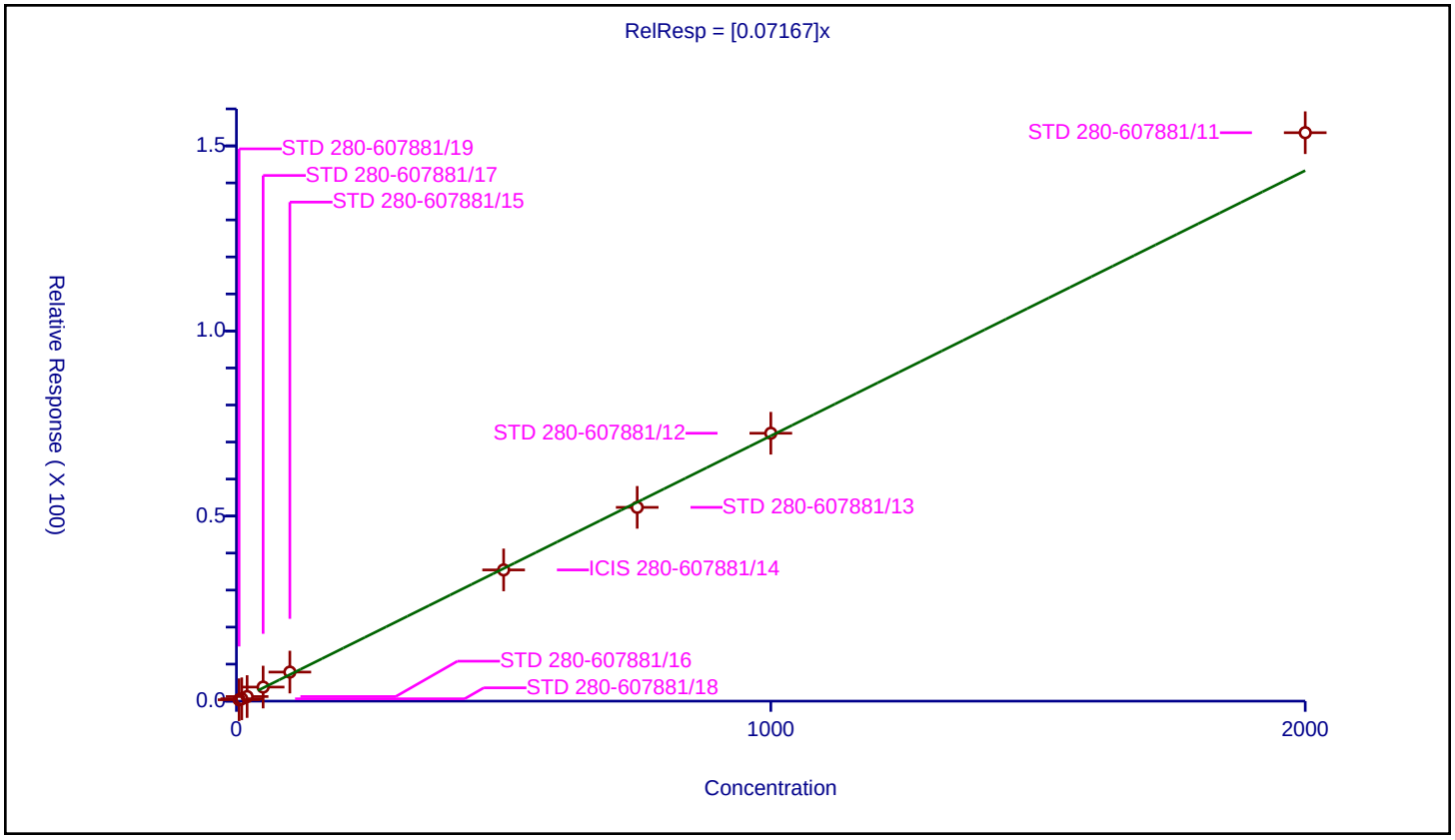
Curve Coefficients

Intercept:	0
Slope:	0.07167

Error Coefficients

Standard Error:	1980000
Relative Standard Error:	8.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	5.0	0.374345	50.0	1347020.0	0.074869	Y
2	STD 280-607881/18	10.0	0.636713	50.0	1321475.0	0.063671	Y
3	STD 280-607881/16	20.0	1.239559	50.0	1358265.0	0.061978	Y
4	STD 280-607881/17	50.0	3.805973	50.0	1337910.0	0.076119	Y
5	STD 280-607881/15	100.0	7.85172	50.0	1371311.0	0.078517	Y
6	ICIS 280-607881/14	500.0	35.444799	50.0	1433467.0	0.07089	Y
7	STD 280-607881/13	750.0	52.349625	50.0	1474746.0	0.069799	Y
8	STD 280-607881/12	1000.0	72.372203	50.0	1493380.0	0.072372	Y
9	STD 280-607881/11	2000.0	153.568537	50.0	1569677.0	0.076784	Y



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Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

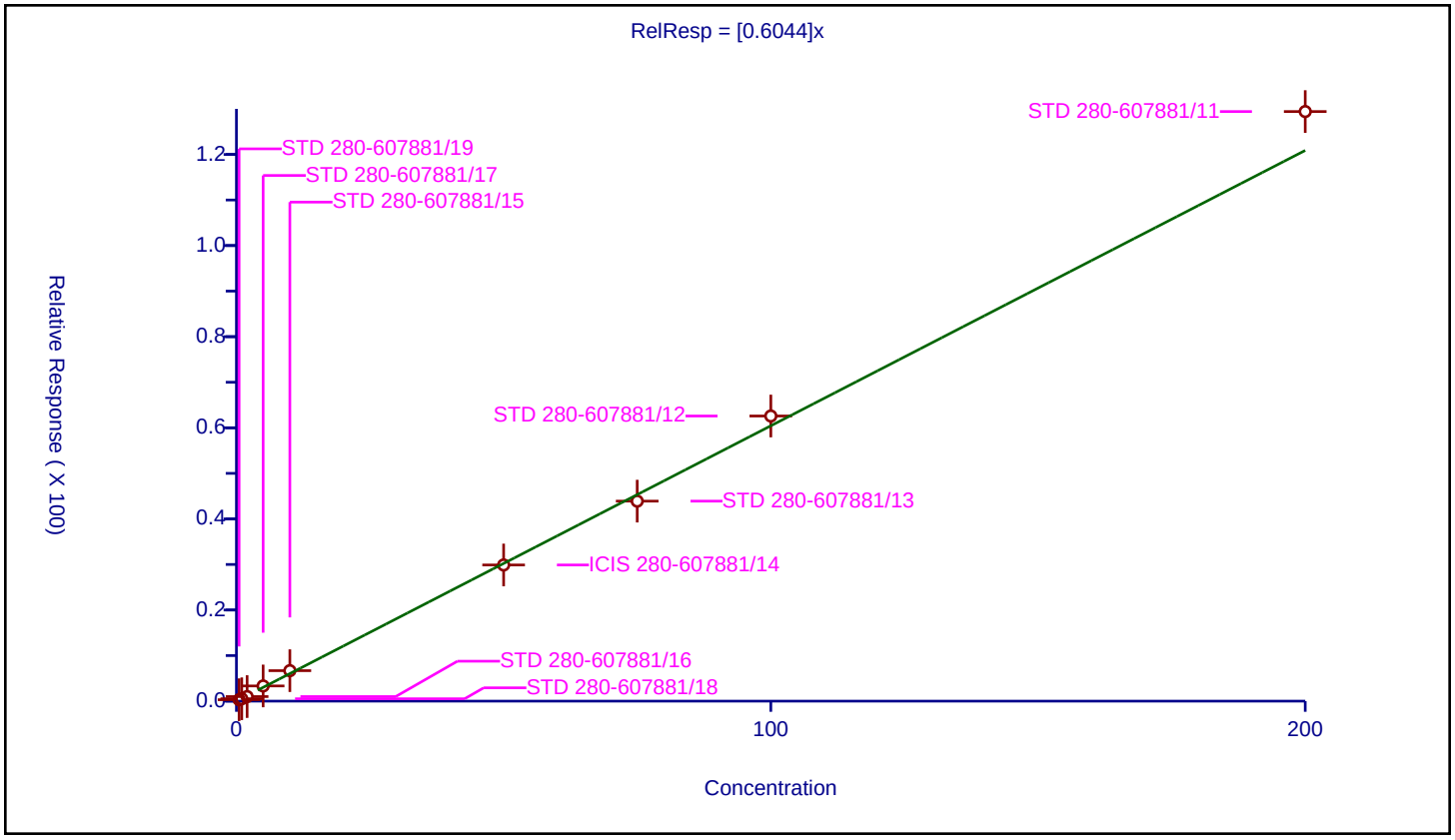
Curve Coefficients

Intercept:	0
Slope:	0.6044

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	9.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.310871	50.0	1347020.0	0.621743	Y
2	STD 280-607881/18	1.0	0.524603	50.0	1321475.0	0.524603	Y
3	STD 280-607881/16	2.0	1.001756	50.0	1358265.0	0.500878	Y
4	STD 280-607881/17	5.0	3.337332	50.0	1337910.0	0.667466	Y
5	STD 280-607881/15	10.0	6.688162	50.0	1371311.0	0.668816	Y
6	ICIS 280-607881/14	50.0	29.889596	50.0	1433467.0	0.597792	Y
7	STD 280-607881/13	75.0	43.903153	50.0	1474746.0	0.585375	Y
8	STD 280-607881/12	100.0	62.585578	50.0	1493380.0	0.625856	Y
9	STD 280-607881/11	200.0	129.417963	50.0	1569677.0	0.64709	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

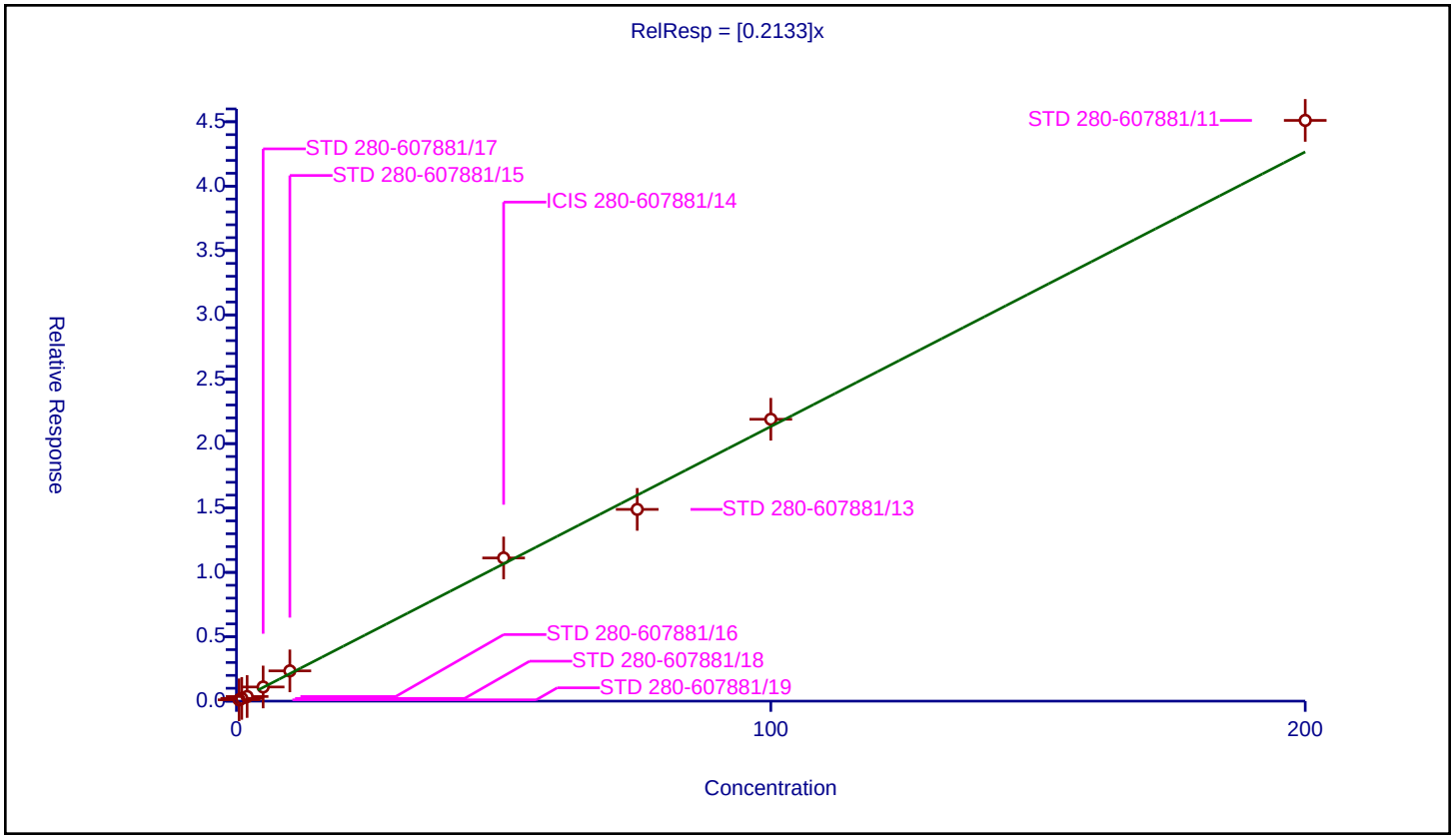
Curve Coefficients

Intercept:	0
Slope:	0.2133

Error Coefficients

Standard Error:	584000
Relative Standard Error:	7.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.103154	50.0	1347020.0	0.206307	Y
2	STD 280-607881/18	1.0	0.212944	50.0	1321475.0	0.212944	Y
3	STD 280-607881/16	2.0	0.359871	50.0	1358265.0	0.179935	Y
4	STD 280-607881/17	5.0	1.100336	50.0	1337910.0	0.220067	Y
5	STD 280-607881/15	10.0	2.350379	50.0	1371311.0	0.235038	Y
6	ICIS 280-607881/14	50.0	11.120137	50.0	1433467.0	0.222403	Y
7	STD 280-607881/13	75.0	14.893785	50.0	1474746.0	0.198584	Y
8	STD 280-607881/12	100.0	21.893724	50.0	1493380.0	0.218937	Y
9	STD 280-607881/11	200.0	45.106509	50.0	1569677.0	0.225533	Y



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Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

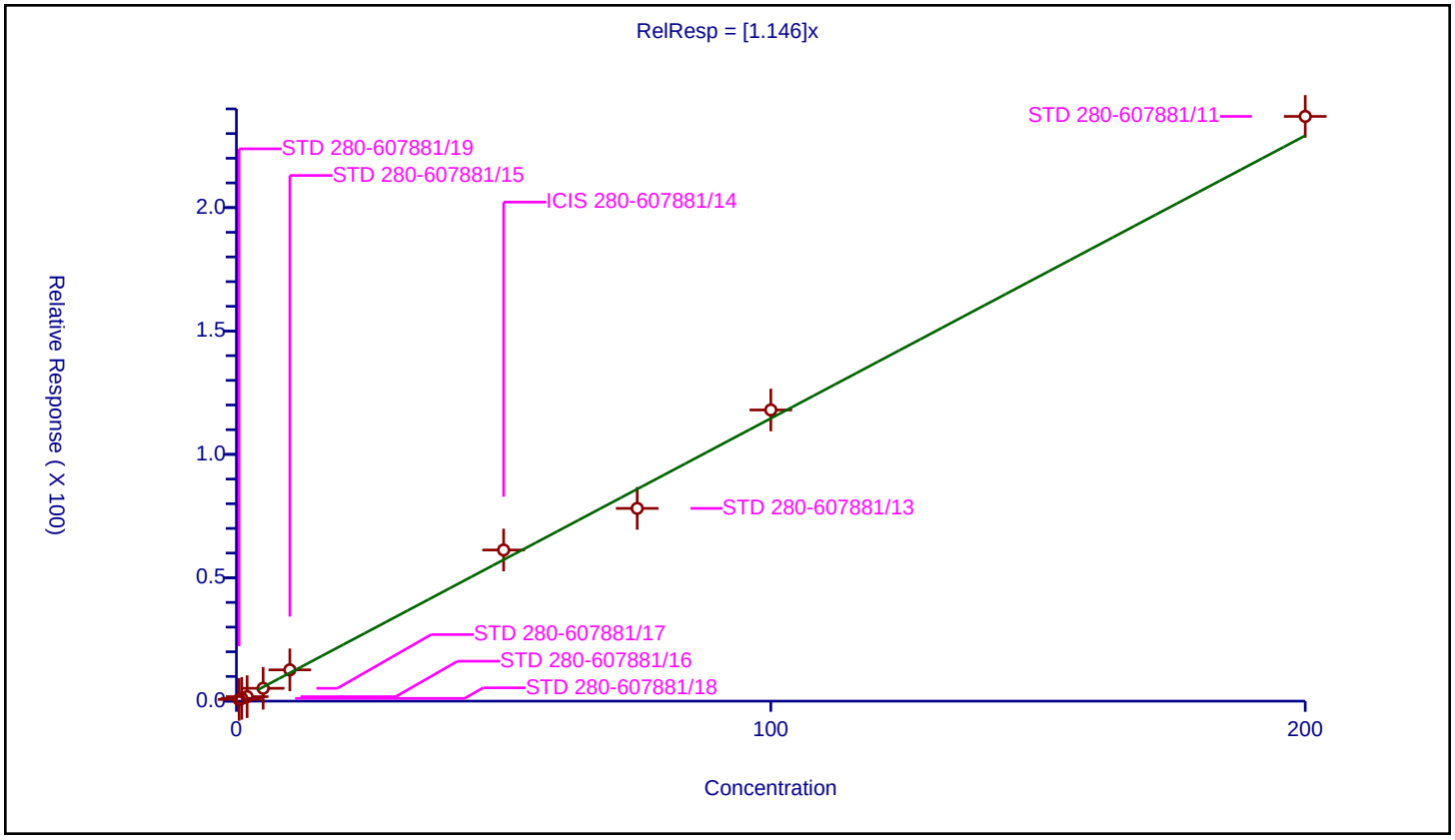
Curve Coefficients

Intercept:	0
Slope:	1.146

Error Coefficients

Standard Error:	714000
Relative Standard Error:	11.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.670287	50.0	310688.0	1.340573	Y
2	STD 280-607881/18	1.0	1.121305	50.0	303218.0	1.121305	Y
3	STD 280-607881/16	2.0	1.821898	50.0	311900.0	0.910949	Y
4	STD 280-607881/17	5.0	5.205967	50.0	312939.0	1.041193	Y
5	STD 280-607881/15	10.0	12.671857	50.0	319160.0	1.267186	Y
6	ICIS 280-607881/14	50.0	61.248902	50.0	327912.0	1.224978	Y
7	STD 280-607881/13	75.0	78.114813	50.0	345430.0	1.041531	Y
8	STD 280-607881/12	100.0	117.992978	50.0	350056.0	1.17993	Y
9	STD 280-607881/11	200.0	236.957905	50.0	361445.0	1.18479	Y



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Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

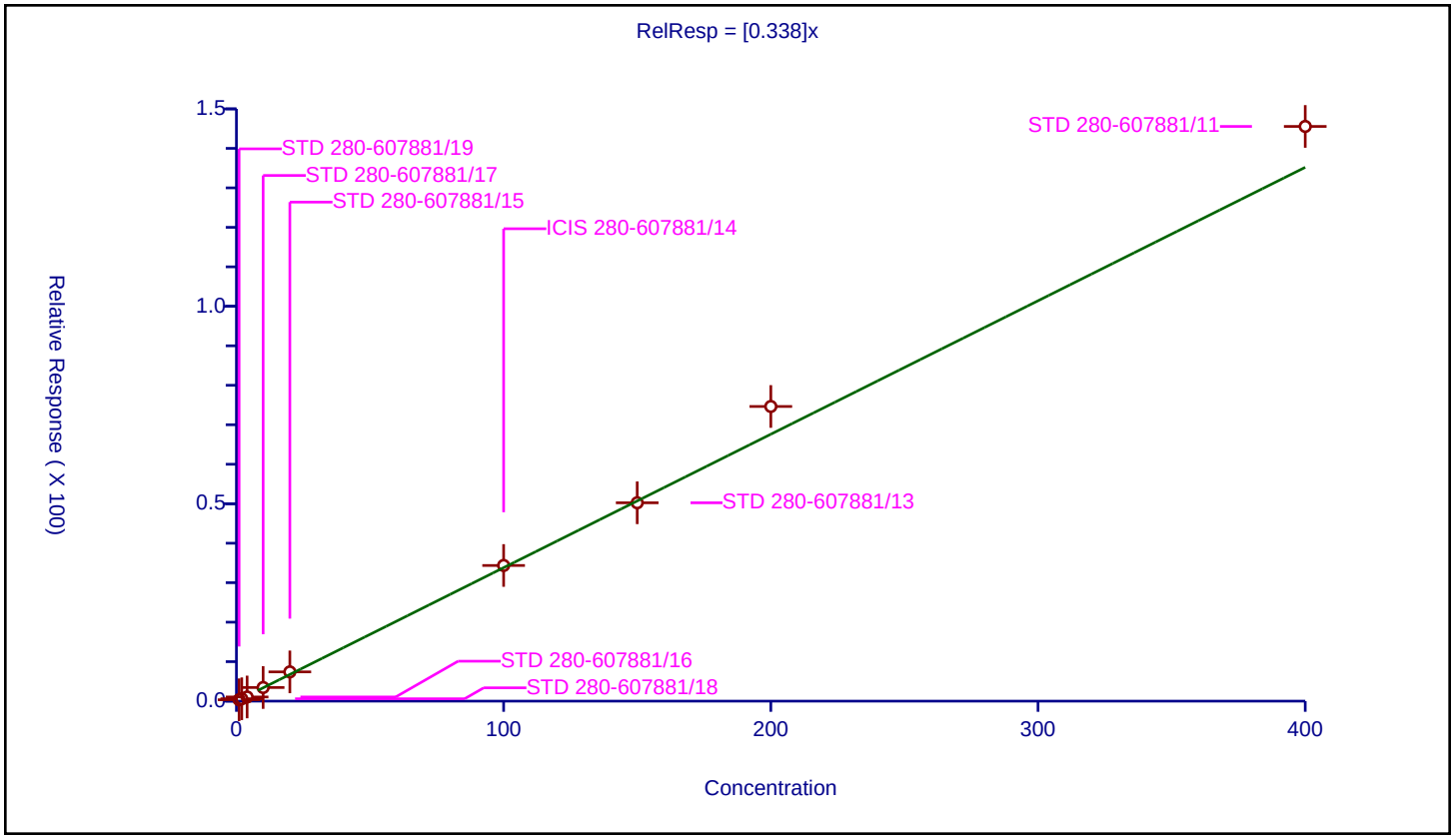
Curve Coefficients

Intercept:	0
Slope:	0.338

Error Coefficients

Standard Error:	1910000
Relative Standard Error:	10.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.0	0.345652	50.0	1347020.0	0.345652	Y
2	STD 280-607881/18	2.0	0.601373	50.0	1321475.0	0.300687	Y
3	STD 280-607881/16	4.0	1.058078	50.0	1358265.0	0.264519	Y
4	STD 280-607881/17	10.0	3.449597	50.0	1337910.0	0.34496	Y
5	STD 280-607881/15	20.0	7.413052	50.0	1371311.0	0.370653	Y
6	ICIS 280-607881/14	100.0	34.358796	50.0	1433467.0	0.343588	Y
7	STD 280-607881/13	150.0	50.235295	50.0	1474746.0	0.334902	Y
8	STD 280-607881/12	200.0	74.629632	50.0	1493380.0	0.373148	Y
9	STD 280-607881/11	400.0	145.553958	50.0	1569677.0	0.363885	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

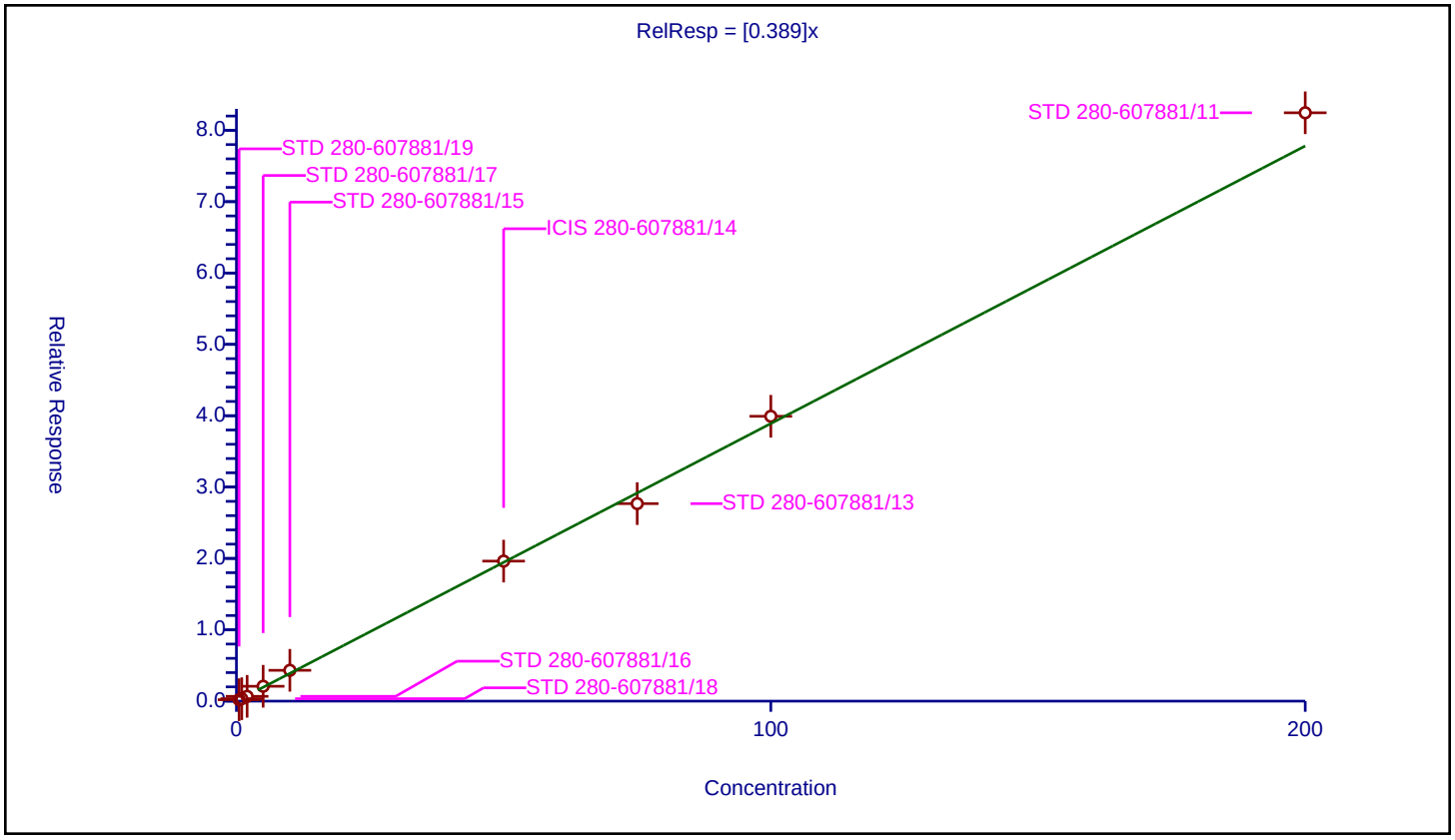
Curve Coefficients

Intercept:	0
Slope:	0.389

Error Coefficients

Standard Error:	1070000
Relative Standard Error:	8.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.199997	50.0	1347020.0	0.399994	Y
2	STD 280-607881/18	1.0	0.342231	50.0	1321475.0	0.342231	Y
3	STD 280-607881/16	2.0	0.674279	50.0	1358265.0	0.33714	Y
4	STD 280-607881/17	5.0	2.083399	50.0	1337910.0	0.41668	Y
5	STD 280-607881/15	10.0	4.320063	50.0	1371311.0	0.432006	Y
6	ICIS 280-607881/14	50.0	19.625286	50.0	1433467.0	0.392506	Y
7	STD 280-607881/13	75.0	27.682428	50.0	1474746.0	0.369099	Y
8	STD 280-607881/12	100.0	39.920717	50.0	1493380.0	0.399207	Y
9	STD 280-607881/11	200.0	82.456709	50.0	1569677.0	0.412284	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

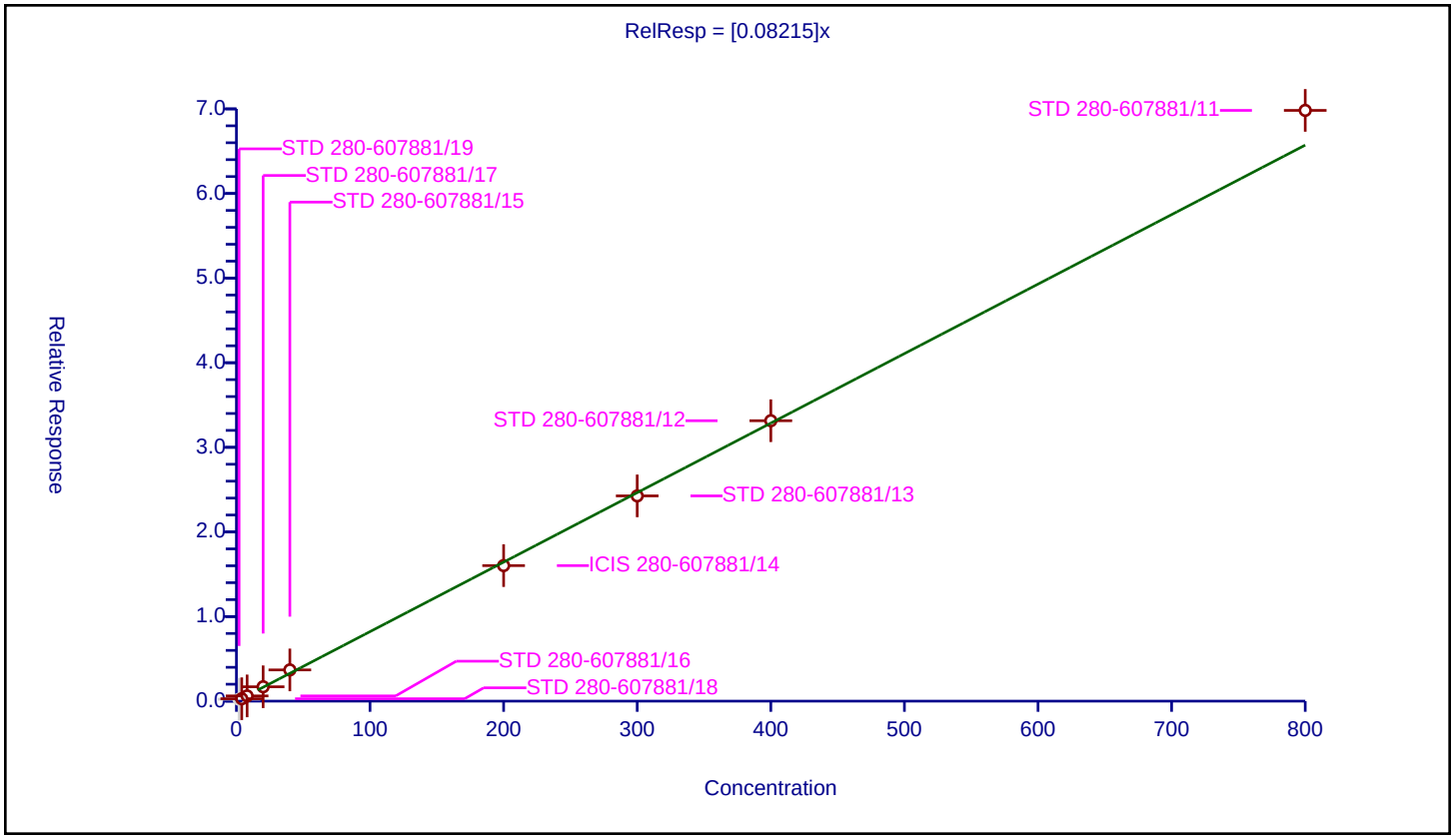
Curve Coefficients

Intercept:	0
Slope:	0.08215

Error Coefficients

Standard Error:	965000
Relative Standard Error:	7.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.228542	50.0	1347020.0	0.114271	N
2	STD 280-607881/18	4.0	0.285741	50.0	1321475.0	0.071435	Y
3	STD 280-607881/16	8.0	0.619798	50.0	1358265.0	0.077475	Y
4	STD 280-607881/17	20.0	1.697835	50.0	1337910.0	0.084892	Y
5	STD 280-607881/15	40.0	3.69165	50.0	1371311.0	0.092291	Y
6	ICIS 280-607881/14	200.0	16.01882	50.0	1433467.0	0.080094	Y
7	STD 280-607881/13	300.0	24.258279	50.0	1474746.0	0.080861	Y
8	STD 280-607881/12	400.0	33.144377	50.0	1493380.0	0.082861	Y
9	STD 280-607881/11	800.0	69.821307	50.0	1569677.0	0.087277	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

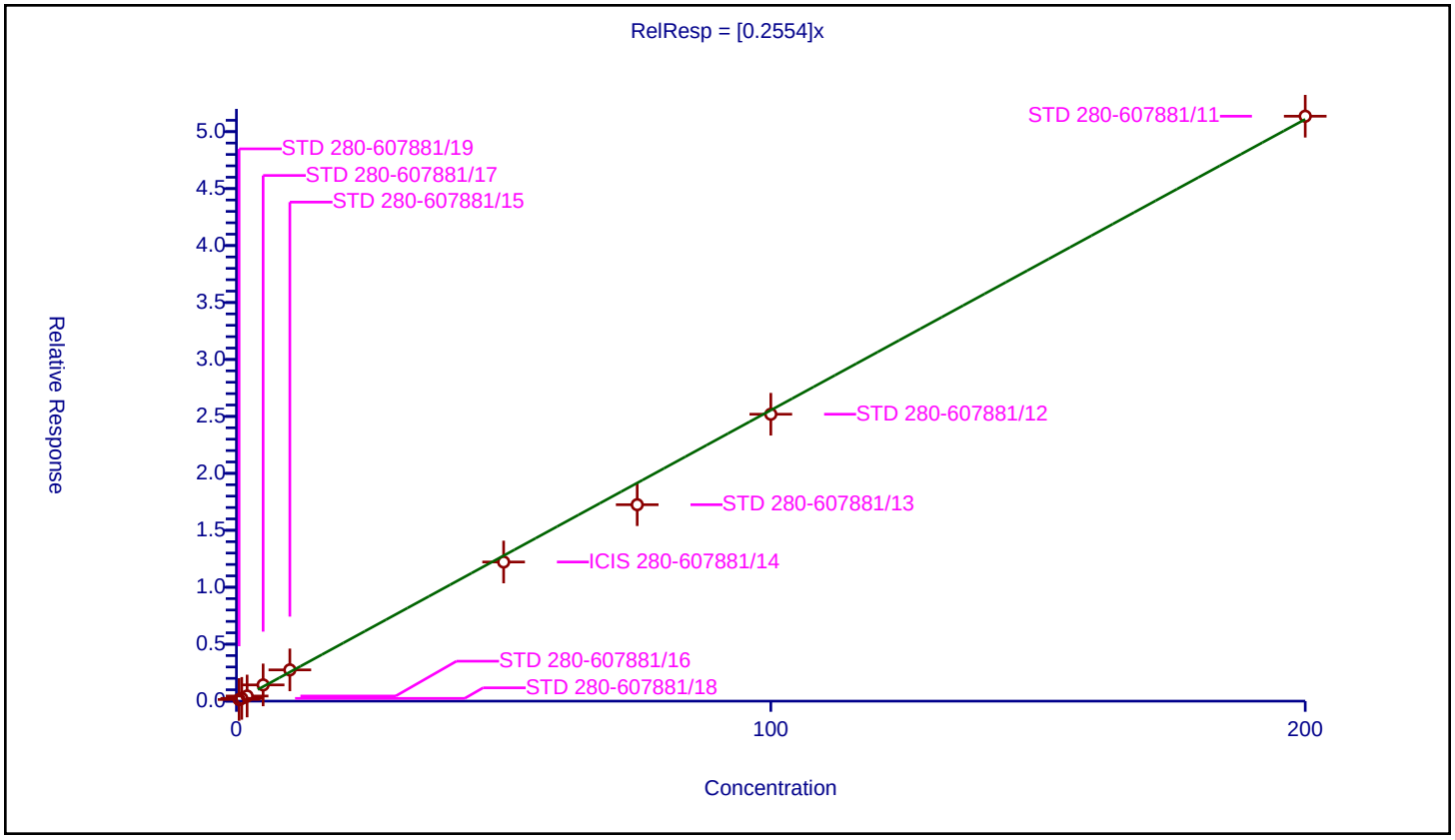
Curve Coefficients

Intercept:	0
Slope:	0.2554

Error Coefficients

Standard Error:	667000
Relative Standard Error:	8.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.143873	50.0	1347020.0	0.287746	Y
2	STD 280-607881/18	1.0	0.243137	50.0	1321475.0	0.243137	Y
3	STD 280-607881/16	2.0	0.451053	50.0	1358265.0	0.225527	Y
4	STD 280-607881/17	5.0	1.426329	50.0	1337910.0	0.285266	Y
5	STD 280-607881/15	10.0	2.743214	50.0	1371311.0	0.274321	Y
6	ICIS 280-607881/14	50.0	12.217093	50.0	1433467.0	0.244342	Y
7	STD 280-607881/13	75.0	17.246597	50.0	1474746.0	0.229955	Y
8	STD 280-607881/12	100.0	25.192148	50.0	1493380.0	0.251921	Y
9	STD 280-607881/11	200.0	51.356808	50.0	1569677.0	0.256784	Y



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Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

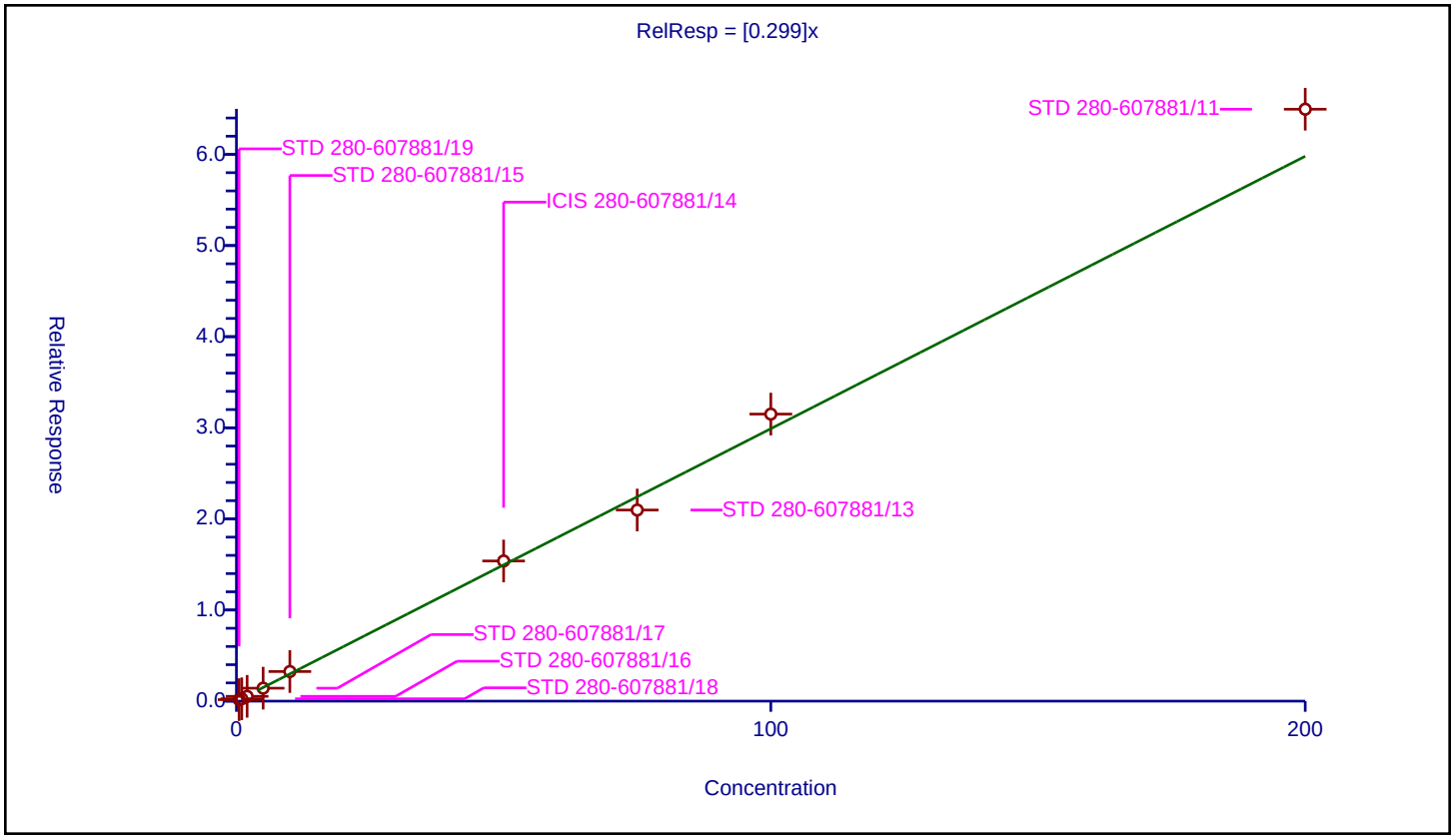
Curve Coefficients

Intercept:	0
Slope:	0.299

Error Coefficients

Standard Error:	839000
Relative Standard Error:	9.2
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.165254	50.0	1347020.0	0.330507	Y
2	STD 280-607881/18	1.0	0.259785	50.0	1321475.0	0.259785	Y
3	STD 280-607881/16	2.0	0.528468	50.0	1358265.0	0.264234	Y
4	STD 280-607881/17	5.0	1.422517	50.0	1337910.0	0.284503	Y
5	STD 280-607881/15	10.0	3.249226	50.0	1371311.0	0.324923	Y
6	ICIS 280-607881/14	50.0	15.383961	50.0	1433467.0	0.307679	Y
7	STD 280-607881/13	75.0	20.975137	50.0	1474746.0	0.279668	Y
8	STD 280-607881/12	100.0	31.503	50.0	1493380.0	0.31503	Y
9	STD 280-607881/11	200.0	64.965053	50.0	1569677.0	0.324825	Y



Calibration / sec-Butyl Alcohol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

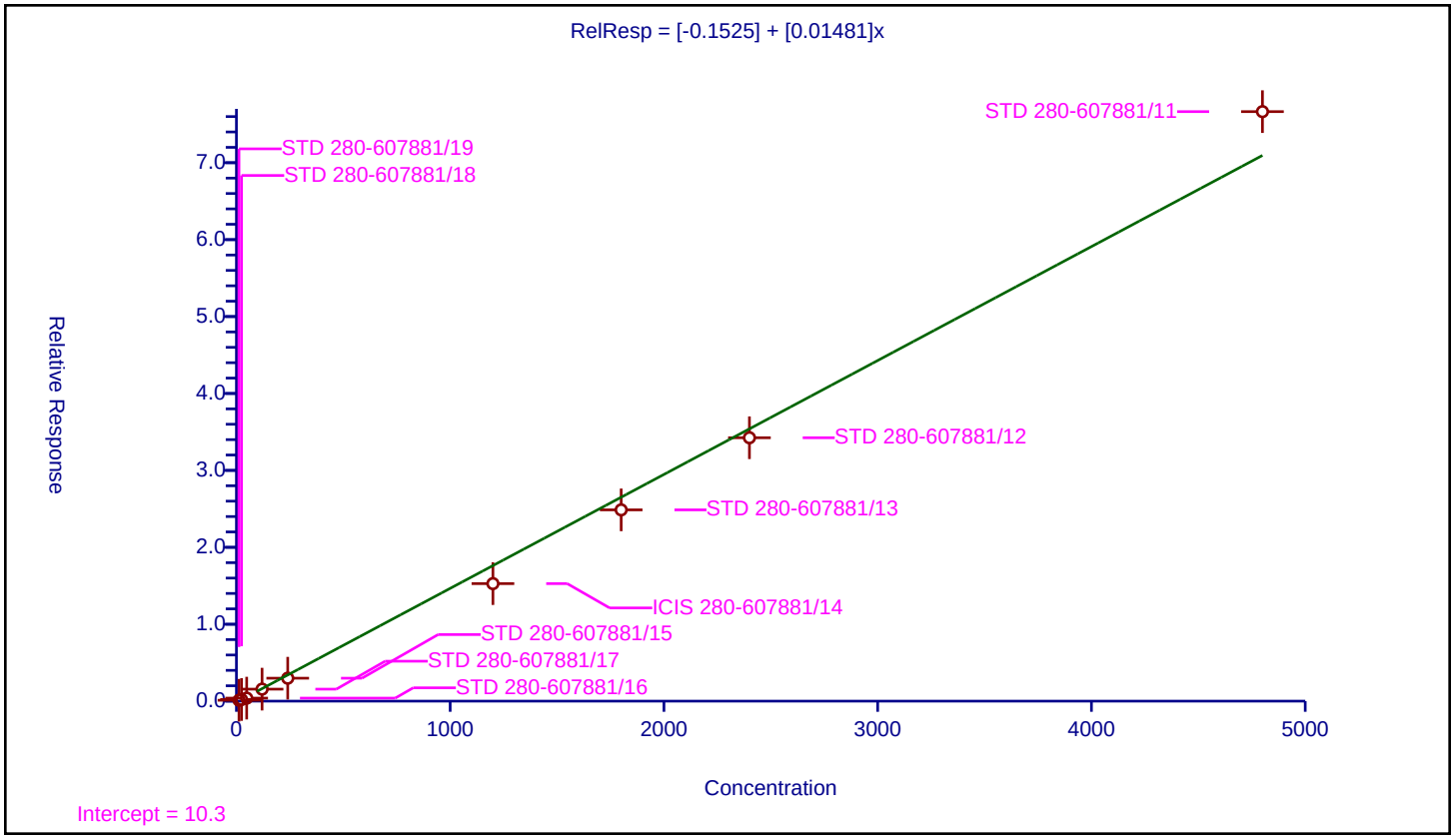
Curve Coefficients

Intercept:	-0.1525
Slope:	0.01481

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	22.7
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	12.0	0.11596	50.0	1347020.0	0.009663	Y
2	STD 280-607881/18	24.0	0.211657	50.0	1321475.0	0.008819	Y
3	STD 280-607881/16	48.0	0.392486	50.0	1358265.0	0.008177	Y
4	STD 280-607881/17	120.0	1.558887	50.0	1337910.0	0.012991	Y
5	STD 280-607881/15	240.0	2.984844	50.0	1371311.0	0.012437	Y
6	ICIS 280-607881/14	1200.0	15.278831	50.0	1433467.0	0.012732	Y
7	STD 280-607881/13	1800.0	24.866621	50.0	1474746.0	0.013815	Y
8	STD 280-607881/12	2400.0	34.244231	50.0	1493380.0	0.014268	Y
9	STD 280-607881/11	4800.0	76.643157	50.0	1569677.0	0.015967	Y



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Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

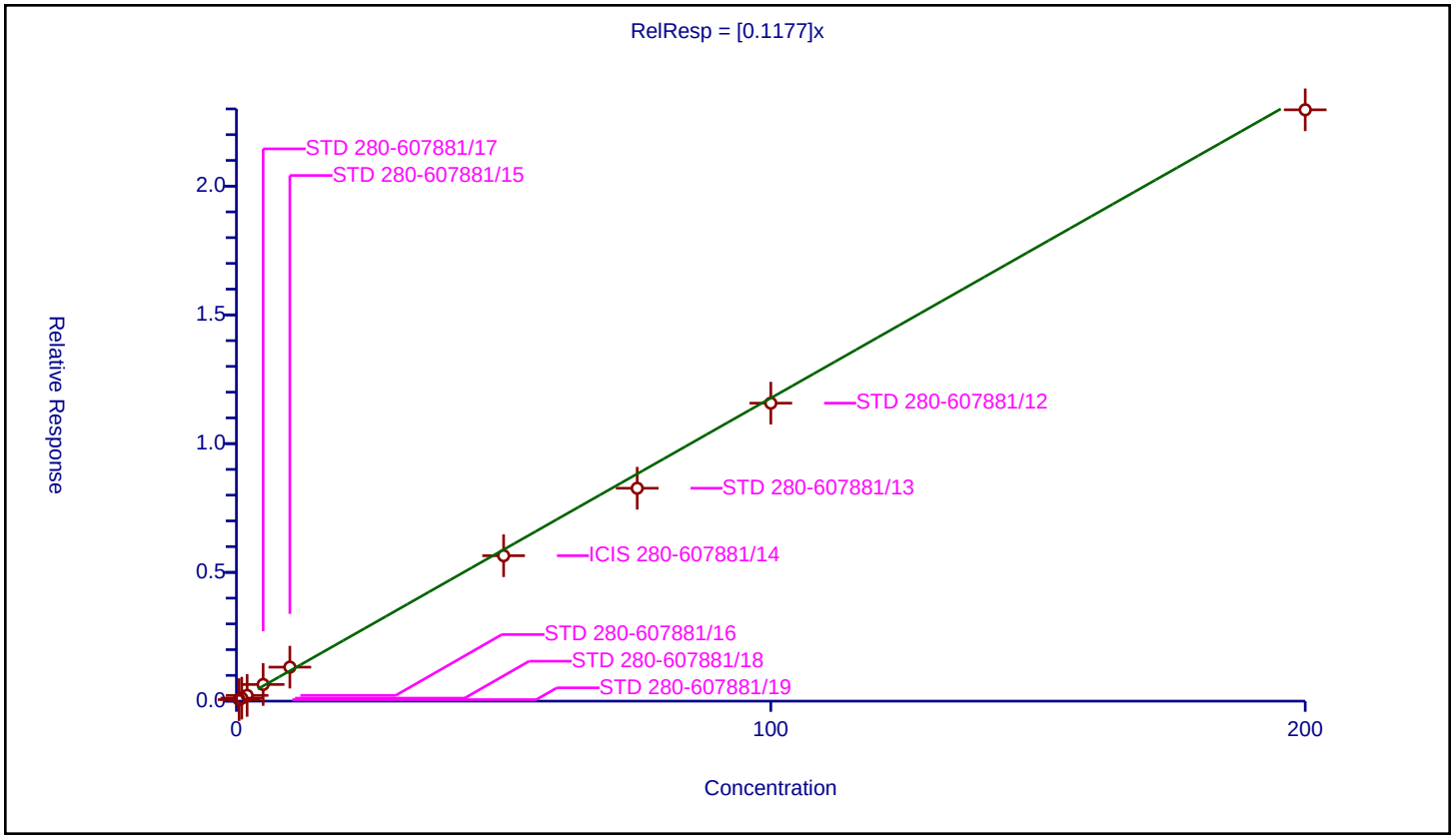
Curve Coefficients

Intercept:	0
Slope:	0.1177

Error Coefficients

Standard Error:	301000
Relative Standard Error:	6.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.058203	50.0	1347020.0	0.116405	Y
2	STD 280-607881/18	1.0	0.116385	50.0	1321475.0	0.116385	Y
3	STD 280-607881/16	2.0	0.222711	50.0	1358265.0	0.111355	Y
4	STD 280-607881/17	5.0	0.646493	50.0	1337910.0	0.129299	Y
5	STD 280-607881/15	10.0	1.320233	50.0	1371311.0	0.132023	Y
6	ICIS 280-607881/14	50.0	5.648369	50.0	1433467.0	0.112967	Y
7	STD 280-607881/13	75.0	8.267559	50.0	1474746.0	0.110234	Y
8	STD 280-607881/12	100.0	11.572239	50.0	1493380.0	0.115722	Y
9	STD 280-607881/11	200.0	22.965202	50.0	1569677.0	0.114826	Y



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Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

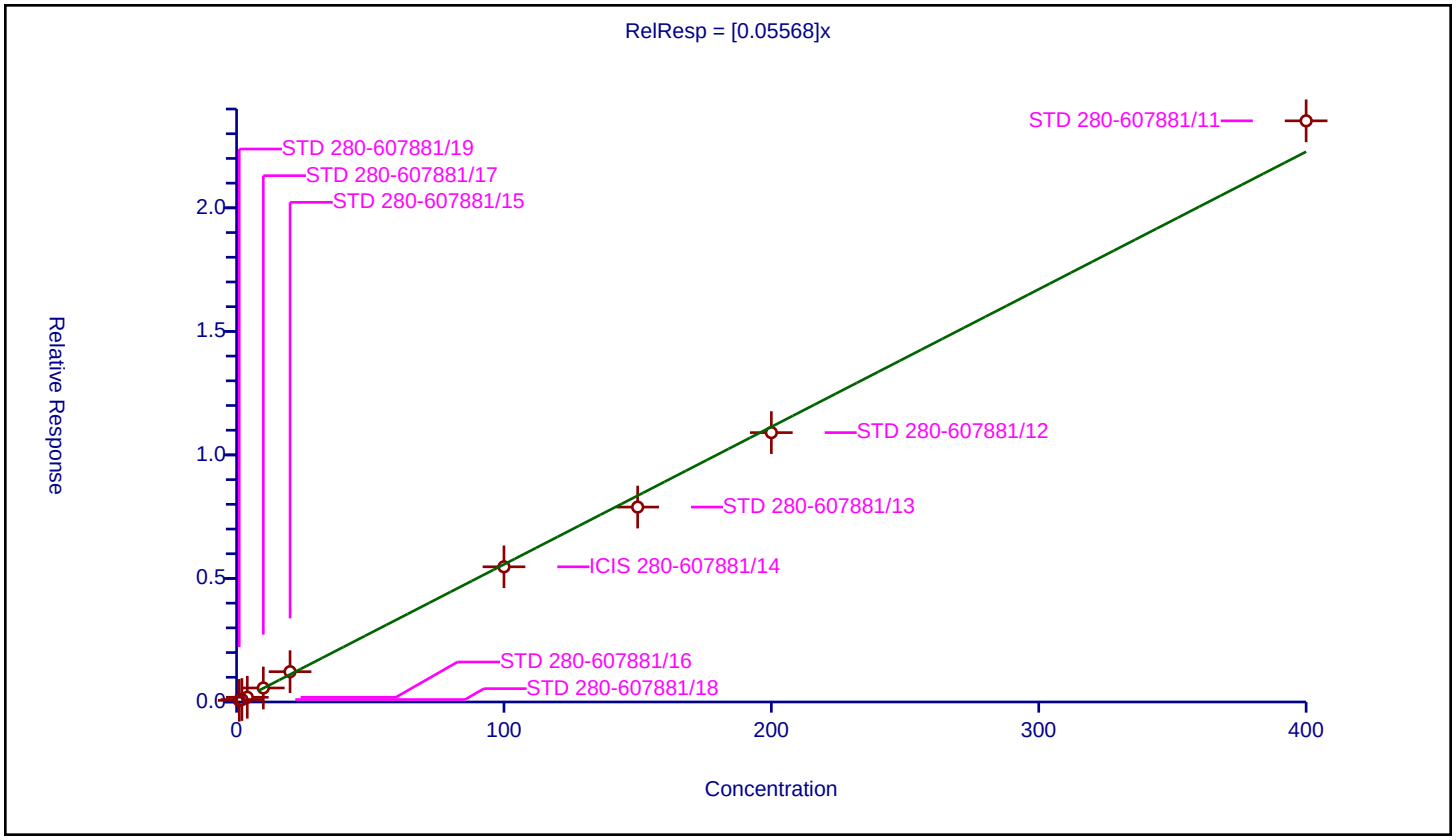
Curve Coefficients

Intercept:	0
Slope:	0.05568

Error Coefficients

Standard Error:	302000
Relative Standard Error:	9.7
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.0	0.064884	50.0	1347020.0	0.064884	Y
2	STD 280-607881/18	2.0	0.099207	50.0	1321475.0	0.049604	Y
3	STD 280-607881/16	4.0	0.192046	50.0	1358265.0	0.048012	Y
4	STD 280-607881/17	10.0	0.567004	50.0	1337910.0	0.0567	Y
5	STD 280-607881/15	20.0	1.226199	50.0	1371311.0	0.06131	Y
6	ICIS 280-607881/14	100.0	5.47142	50.0	1433467.0	0.054714	Y
7	STD 280-607881/13	150.0	7.889087	50.0	1474746.0	0.052594	Y
8	STD 280-607881/12	200.0	10.902148	50.0	1493380.0	0.054511	Y
9	STD 280-607881/11	400.0	23.521368	50.0	1569677.0	0.058803	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

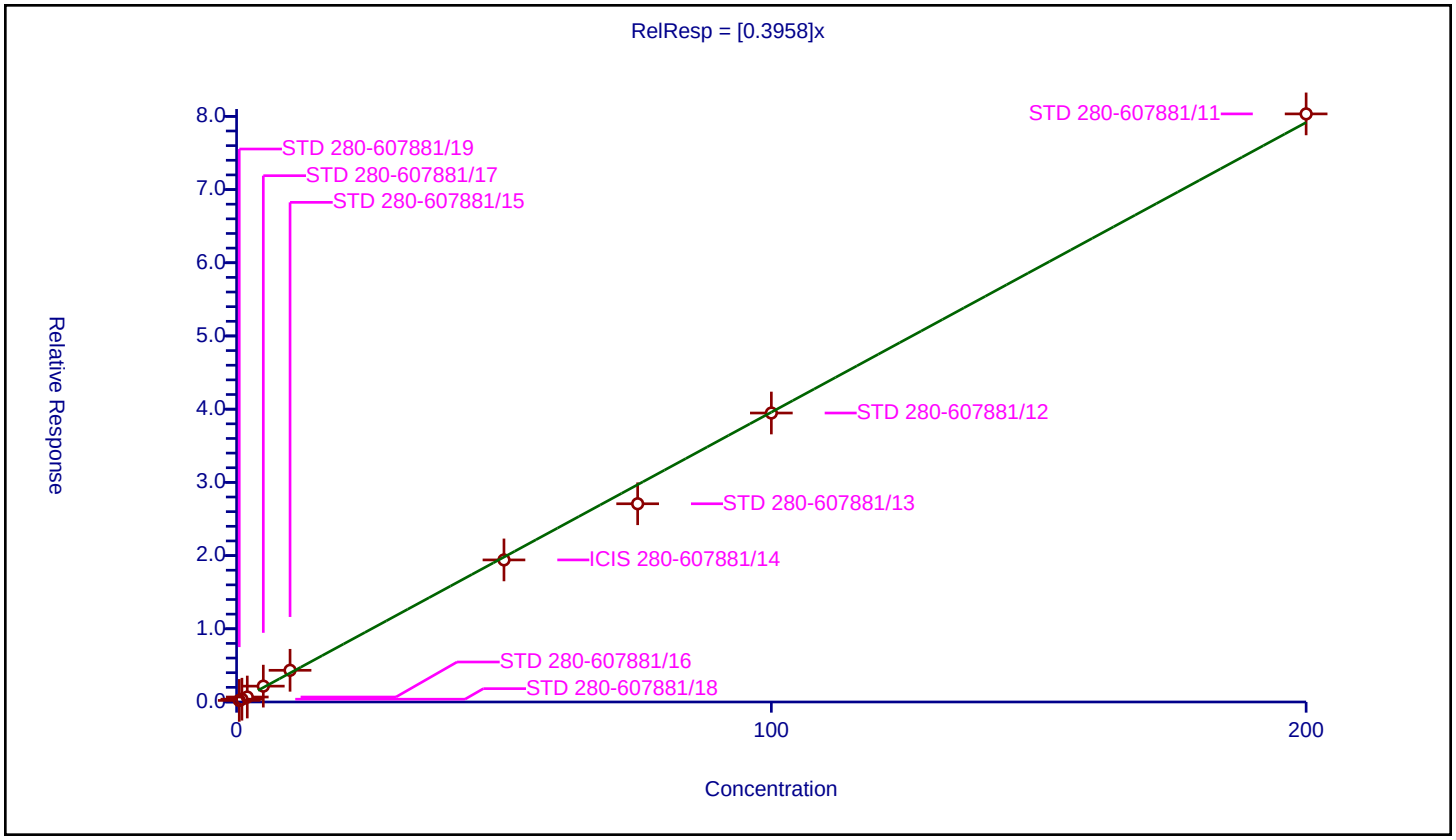
Curve Coefficients

Intercept:	0
Slope:	0.3958

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	8.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.214436	50.0	1347020.0	0.428873	Y
2	STD 280-607881/18	1.0	0.382338	50.0	1321475.0	0.382338	Y
3	STD 280-607881/16	2.0	0.678918	50.0	1358265.0	0.339459	Y
4	STD 280-607881/17	5.0	2.165841	50.0	1337910.0	0.433168	Y
5	STD 280-607881/15	10.0	4.330528	50.0	1371311.0	0.433053	Y
6	ICIS 280-607881/14	50.0	19.405086	50.0	1433467.0	0.388102	Y
7	STD 280-607881/13	75.0	27.078154	50.0	1474746.0	0.361042	Y
8	STD 280-607881/12	100.0	39.473141	50.0	1493380.0	0.394731	Y
9	STD 280-607881/11	200.0	80.331813	50.0	1569677.0	0.401659	Y



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Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

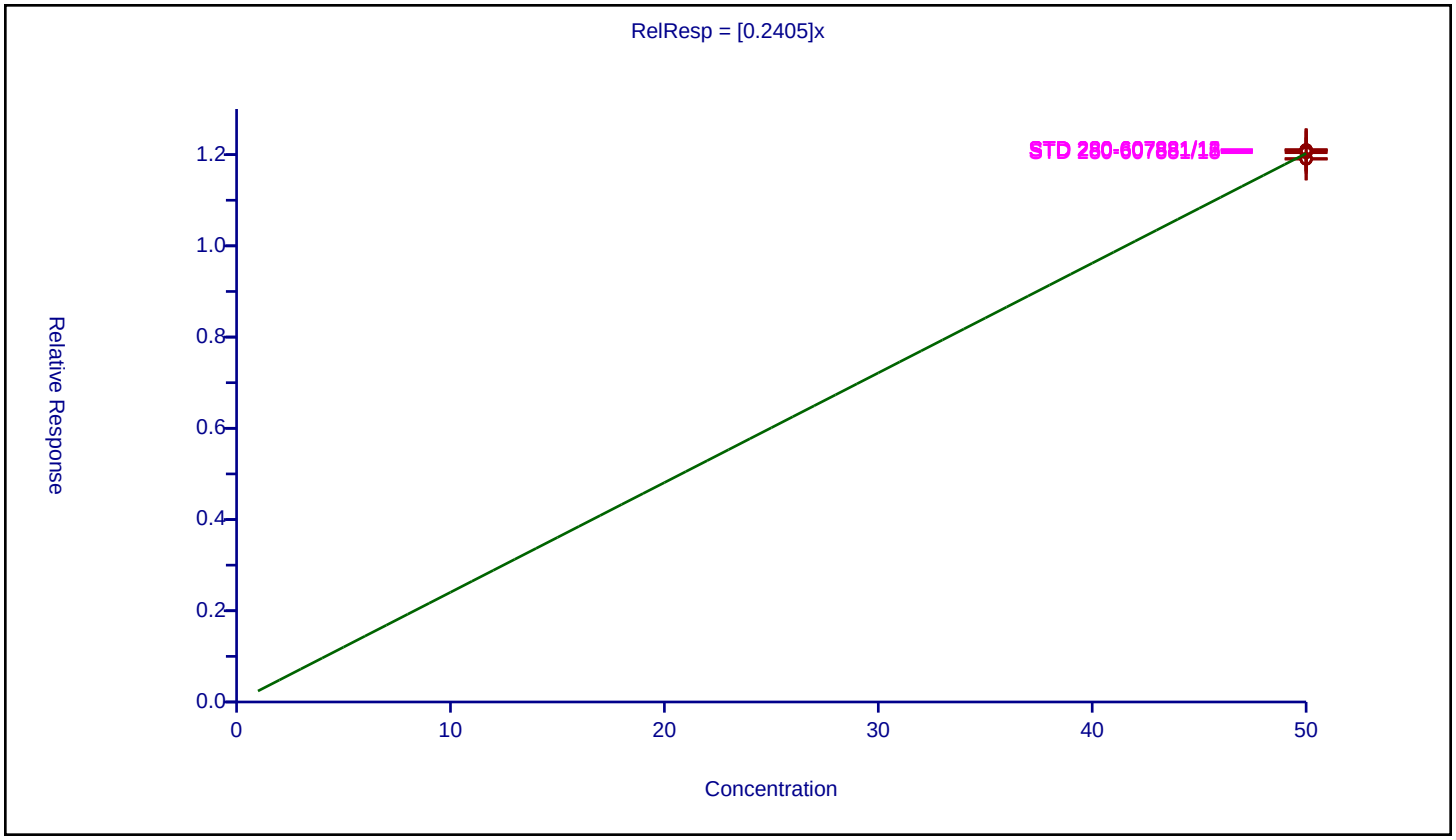
Curve Coefficients

Intercept:	0
Slope:	0.2405

Error Coefficients

Standard Error:	361000
Relative Standard Error:	0.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	12.098285	50.0	1569677.0	0.241966	Y
2	STD 280-607881/12	50.0	12.097423	50.0	1493380.0	0.241948	Y
3	STD 280-607881/13	50.0	12.104932	50.0	1474746.0	0.242099	Y
4	ICIS 280-607881/14	50.0	11.905053	50.0	1433467.0	0.238101	Y
5	STD 280-607881/15	50.0	12.104621	50.0	1371311.0	0.242092	Y
6	STD 280-607881/16	50.0	12.060386	50.0	1358265.0	0.241208	Y
7	STD 280-607881/17	50.0	11.906444	50.0	1337910.0	0.238129	Y
8	STD 280-607881/18	50.0	12.042263	50.0	1321475.0	0.240845	Y
9	STD 280-607881/19	50.0	11.909474	50.0	1347020.0	0.238189	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

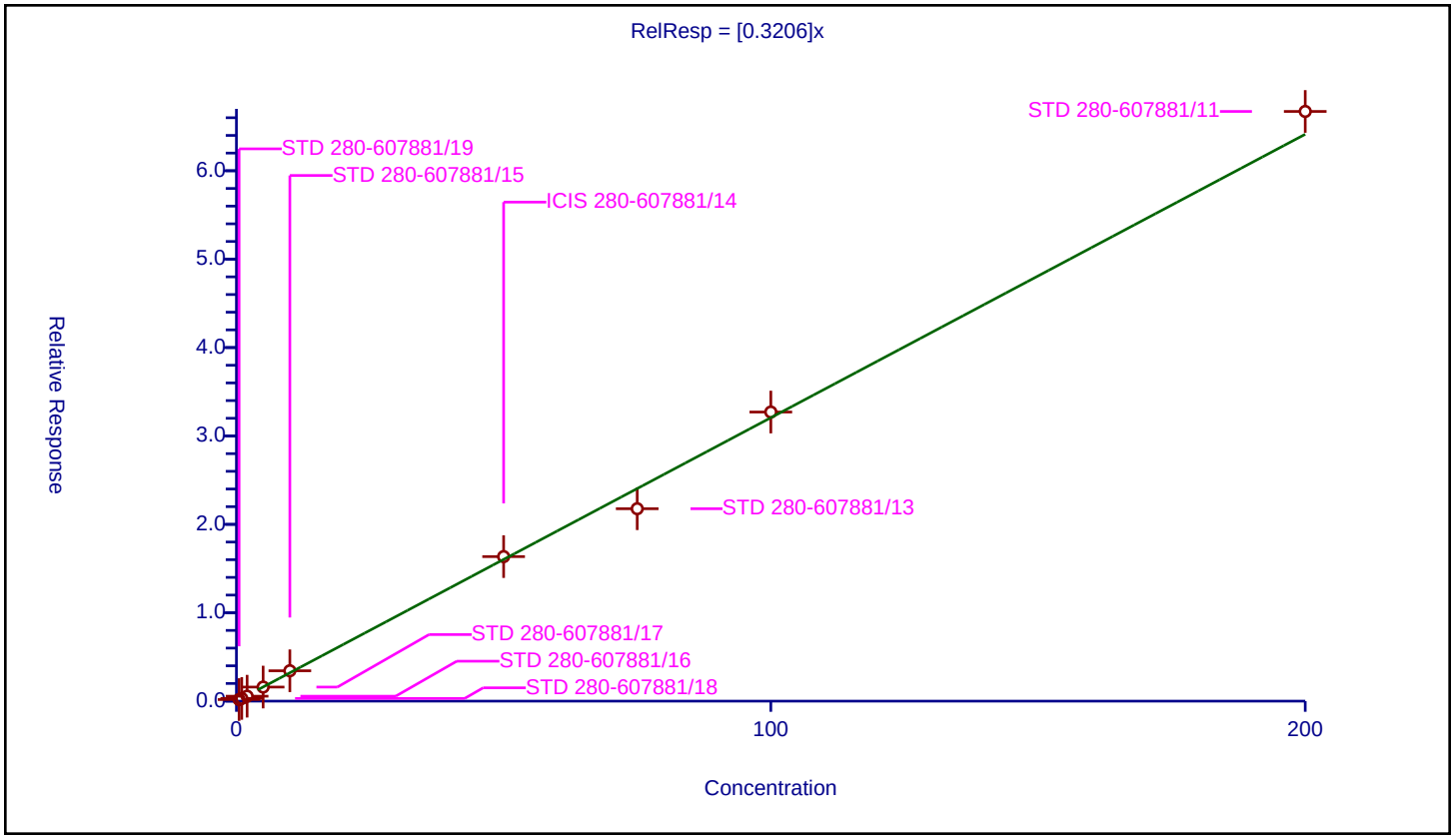
Curve Coefficients

Intercept:	0
Slope:	0.3206

Error Coefficients

Standard Error:	865000
Relative Standard Error:	7.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.179656	50.0	1347020.0	0.359312	Y
2	STD 280-607881/18	1.0	0.306968	50.0	1321475.0	0.306968	Y
3	STD 280-607881/16	2.0	0.559353	50.0	1358265.0	0.279677	Y
4	STD 280-607881/17	5.0	1.591325	50.0	1337910.0	0.318265	Y
5	STD 280-607881/15	10.0	3.437441	50.0	1371311.0	0.343744	Y
6	ICIS 280-607881/14	50.0	16.349487	50.0	1433467.0	0.32699	Y
7	STD 280-607881/13	75.0	21.768867	50.0	1474746.0	0.290252	Y
8	STD 280-607881/12	100.0	32.705574	50.0	1493380.0	0.327056	Y
9	STD 280-607881/11	200.0	66.711113	50.0	1569677.0	0.333556	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

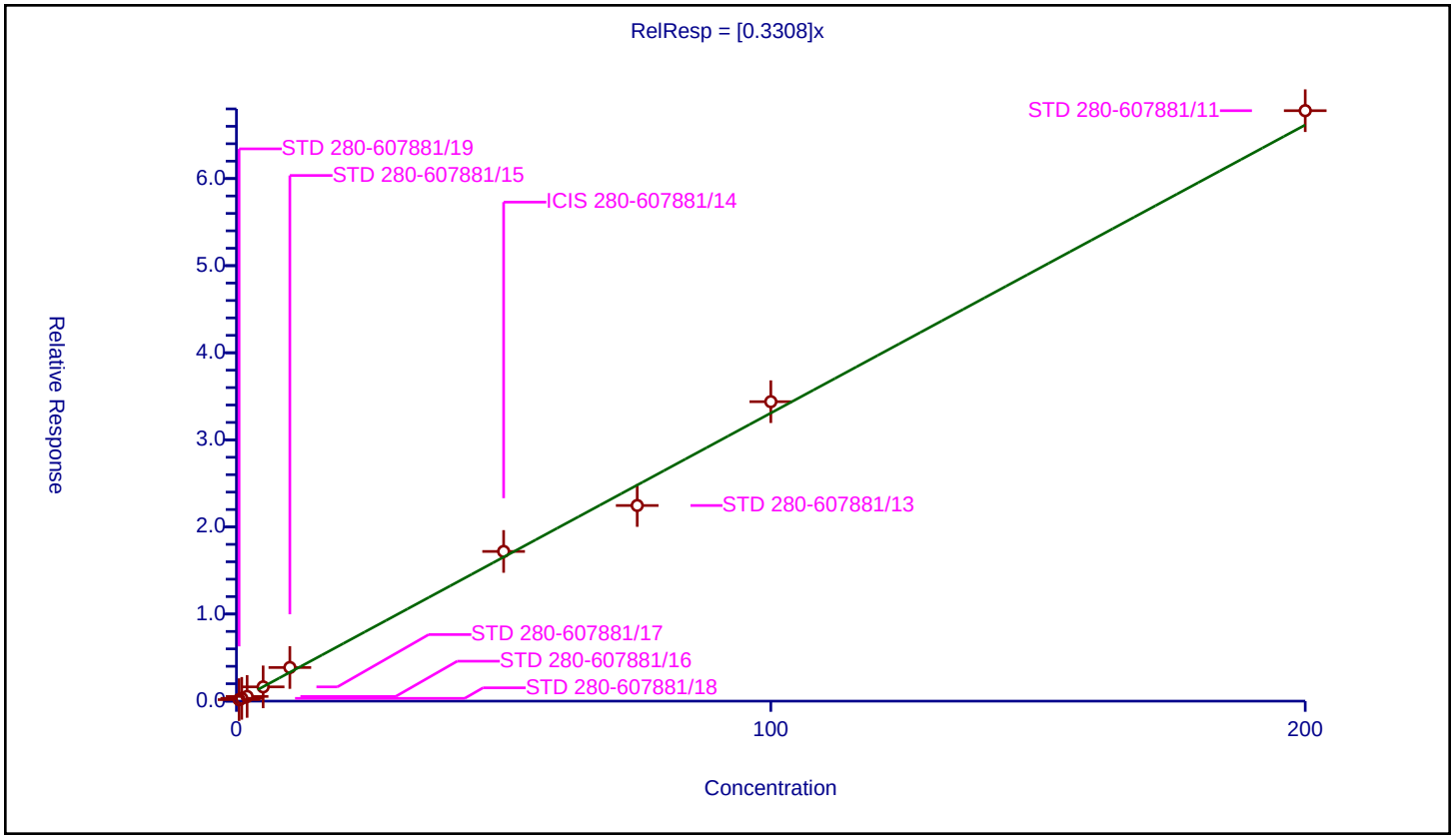
Curve Coefficients

Intercept:	0
Slope:	0.3308

Error Coefficients

Standard Error:	886000
Relative Standard Error:	9.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.173605	50.0	1347020.0	0.347211	Y
2	STD 280-607881/18	1.0	0.320513	50.0	1321475.0	0.320513	Y
3	STD 280-607881/16	2.0	0.539365	50.0	1358265.0	0.269682	Y
4	STD 280-607881/17	5.0	1.636956	50.0	1337910.0	0.327391	Y
5	STD 280-607881/15	10.0	3.862217	50.0	1371311.0	0.386222	Y
6	ICIS 280-607881/14	50.0	17.187107	50.0	1433467.0	0.343742	Y
7	STD 280-607881/13	75.0	22.461529	50.0	1474746.0	0.299487	Y
8	STD 280-607881/12	100.0	34.382542	50.0	1493380.0	0.343825	Y
9	STD 280-607881/11	200.0	67.794584	50.0	1569677.0	0.338973	Y



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Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

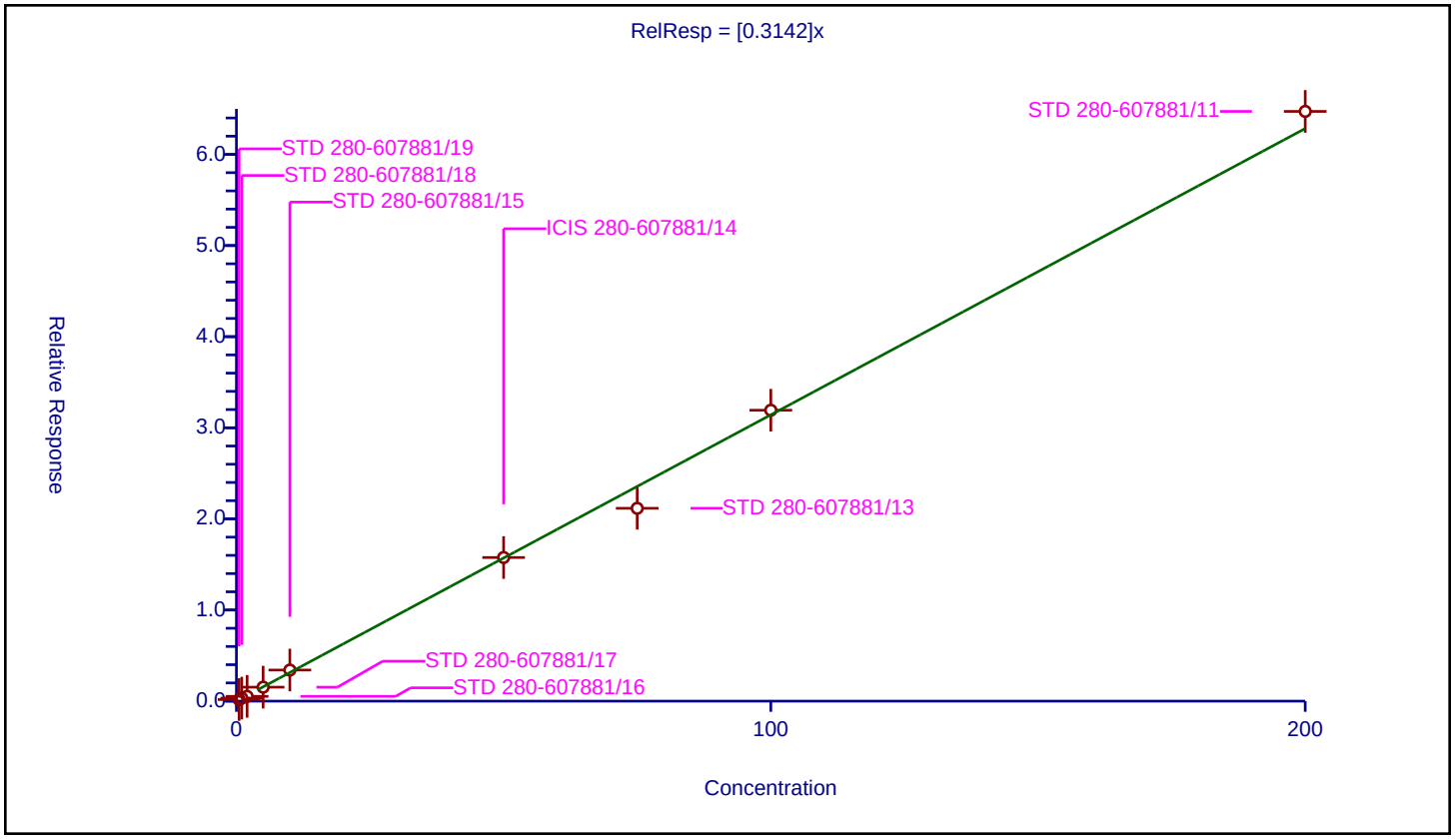
Curve Coefficients

Intercept:	0
Slope:	0.3142

Error Coefficients

Standard Error:	840000
Relative Standard Error:	8.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.173457	50.0	1347020.0	0.346914	Y
2	STD 280-607881/18	1.0	0.33088	50.0	1321475.0	0.33088	Y
3	STD 280-607881/16	2.0	0.523572	50.0	1358265.0	0.261786	Y
4	STD 280-607881/17	5.0	1.534184	50.0	1337910.0	0.306837	Y
5	STD 280-607881/15	10.0	3.412027	50.0	1371311.0	0.341203	Y
6	ICIS 280-607881/14	50.0	15.763181	50.0	1433467.0	0.315264	Y
7	STD 280-607881/13	75.0	21.166119	50.0	1474746.0	0.282215	Y
8	STD 280-607881/12	100.0	31.928076	50.0	1493380.0	0.319281	Y
9	STD 280-607881/11	200.0	64.723443	50.0	1569677.0	0.323617	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

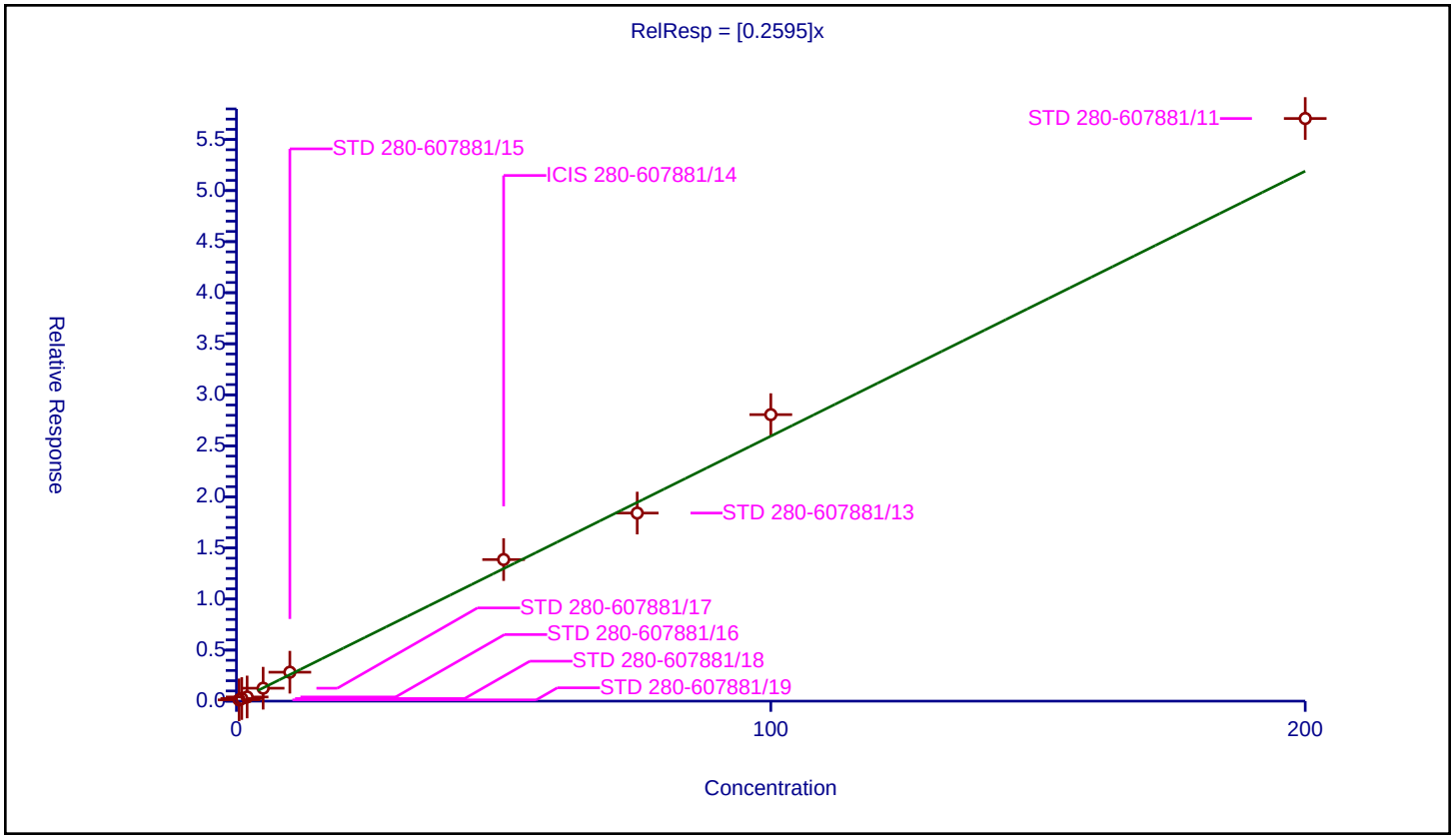
Curve Coefficients

Intercept:	0
Slope:	0.2595

Error Coefficients

Standard Error:	739000
Relative Standard Error:	10.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.125165	50.0	1347020.0	0.25033	Y
2	STD 280-607881/18	1.0	0.255548	50.0	1321475.0	0.255548	Y
3	STD 280-607881/16	2.0	0.408352	50.0	1358265.0	0.204176	Y
4	STD 280-607881/17	5.0	1.267238	50.0	1337910.0	0.253448	Y
5	STD 280-607881/15	10.0	2.834076	50.0	1371311.0	0.283408	Y
6	ICIS 280-607881/14	50.0	13.865405	50.0	1433467.0	0.277308	Y
7	STD 280-607881/13	75.0	18.419002	50.0	1474746.0	0.245587	Y
8	STD 280-607881/12	100.0	28.05967	50.0	1493380.0	0.280597	Y
9	STD 280-607881/11	200.0	57.057535	50.0	1569677.0	0.285288	Y



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Calibration / Isobutyl alcohol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

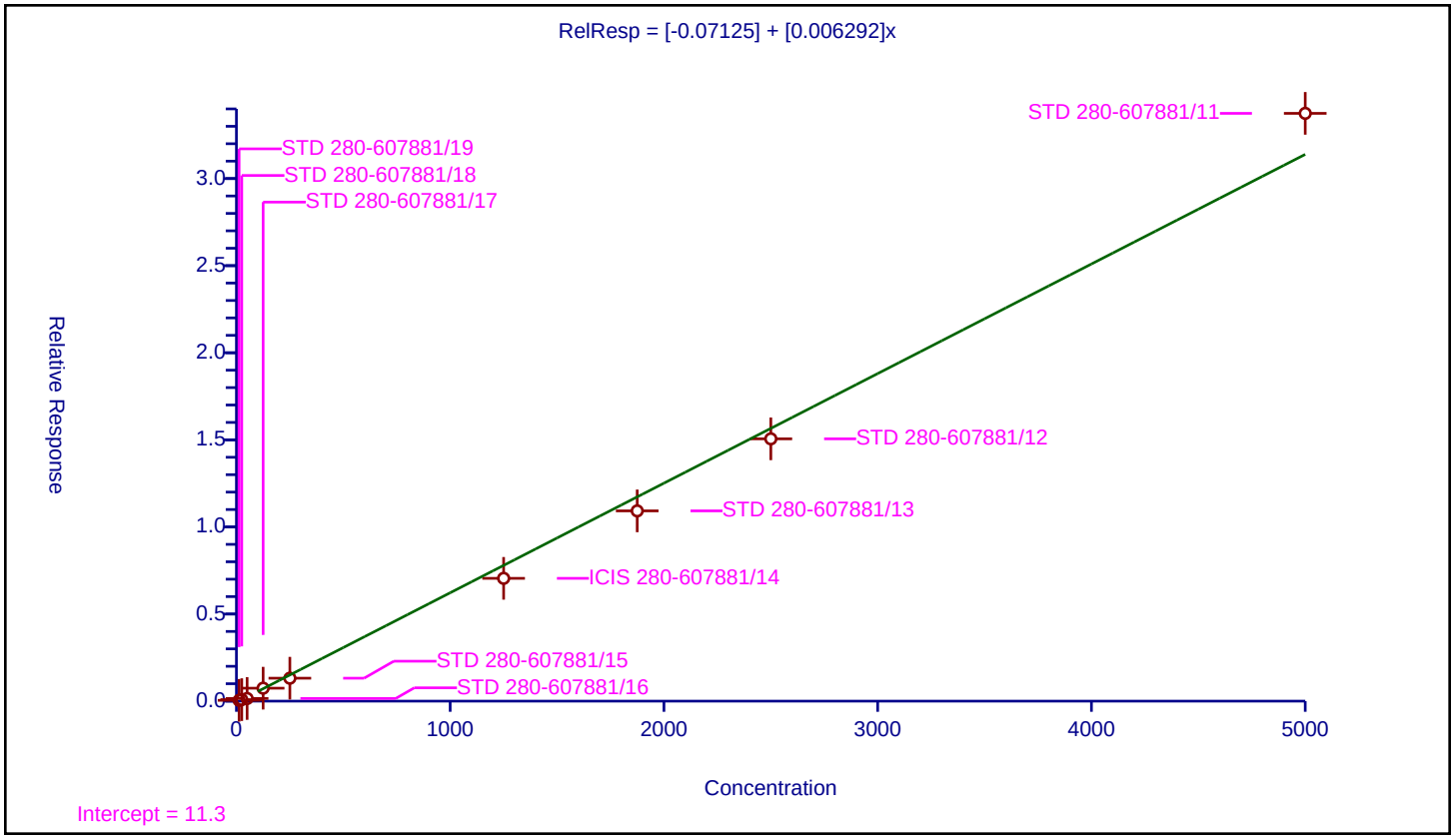
Curve Coefficients

Intercept:	-0.07125
Slope:	0.006292

Error Coefficients

Standard Error:	458000
Relative Standard Error:	22.7
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	12.5	0.04599	50.0	1347020.0	0.003679	Y
2	STD 280-607881/18	25.0	0.086873	50.0	1321475.0	0.003475	Y
3	STD 280-607881/16	50.0	0.152069	50.0	1358265.0	0.003041	Y
4	STD 280-607881/17	125.0	0.744557	50.0	1337910.0	0.005956	Y
5	STD 280-607881/15	250.0	1.317644	50.0	1371311.0	0.005271	Y
6	ICIS 280-607881/14	1250.0	7.049308	50.0	1433467.0	0.005639	Y
7	STD 280-607881/13	1875.0	10.921881	50.0	1474746.0	0.005825	Y
8	STD 280-607881/12	2500.0	15.058927	50.0	1493380.0	0.006024	Y
9	STD 280-607881/11	5000.0	33.743152	50.0	1569677.0	0.006749	Y



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Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

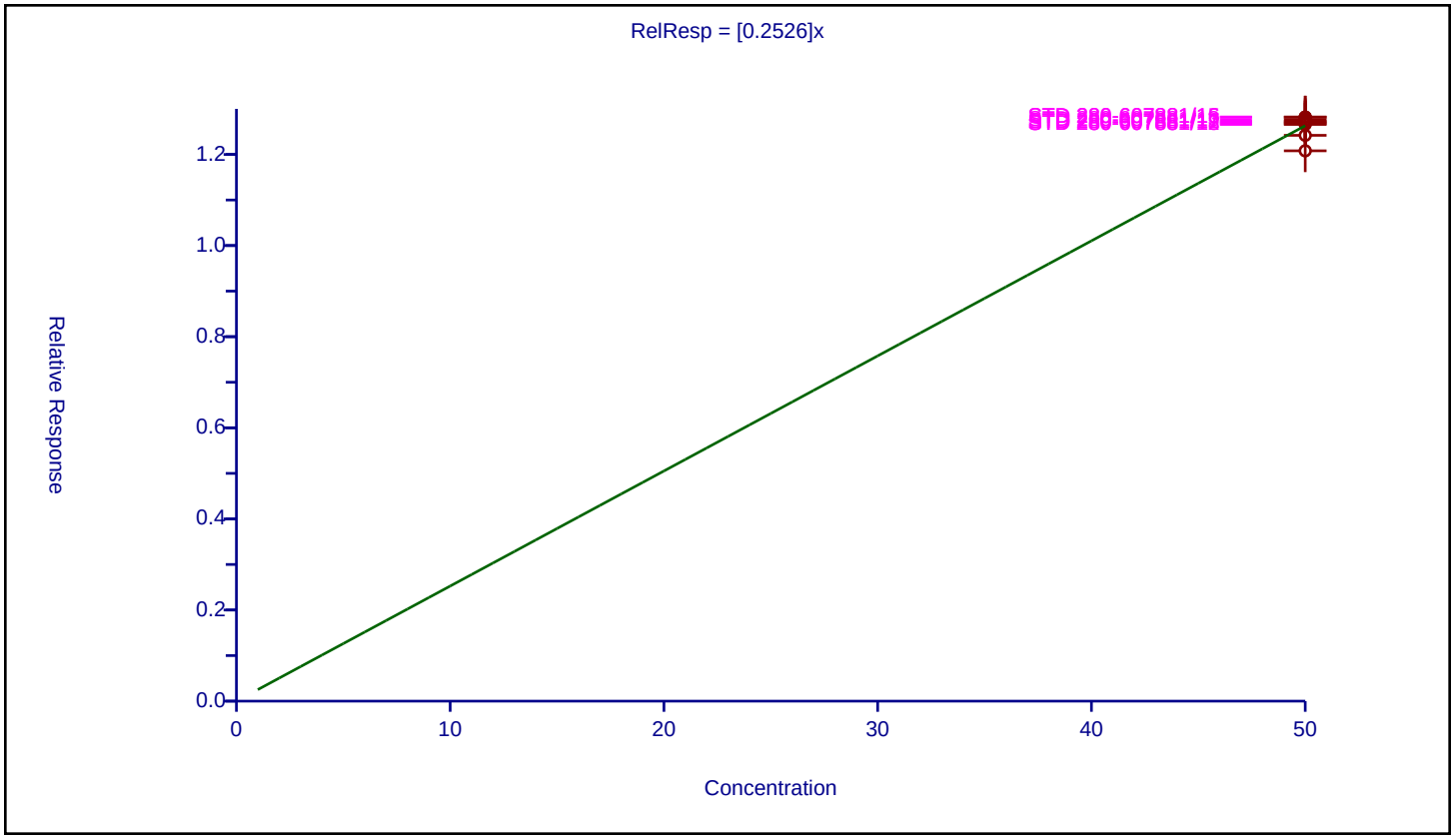
Curve Coefficients

Intercept:	0
Slope:	0.2526

Error Coefficients

Standard Error:	379000
Relative Standard Error:	1.9
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	12.721057	50.0	1569677.0	0.254421	Y
2	STD 280-607881/12	50.0	12.659404	50.0	1493380.0	0.253188	Y
3	STD 280-607881/13	50.0	12.7643	50.0	1474746.0	0.255286	Y
4	ICIS 280-607881/14	50.0	12.07956	50.0	1433467.0	0.241591	Y
5	STD 280-607881/15	50.0	12.821271	50.0	1371311.0	0.256425	Y
6	STD 280-607881/16	50.0	12.819369	50.0	1358265.0	0.256387	Y
7	STD 280-607881/17	50.0	12.71229	50.0	1337910.0	0.254246	Y
8	STD 280-607881/18	50.0	12.673982	50.0	1321475.0	0.25348	Y
9	STD 280-607881/19	50.0	12.419415	50.0	1347020.0	0.248388	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

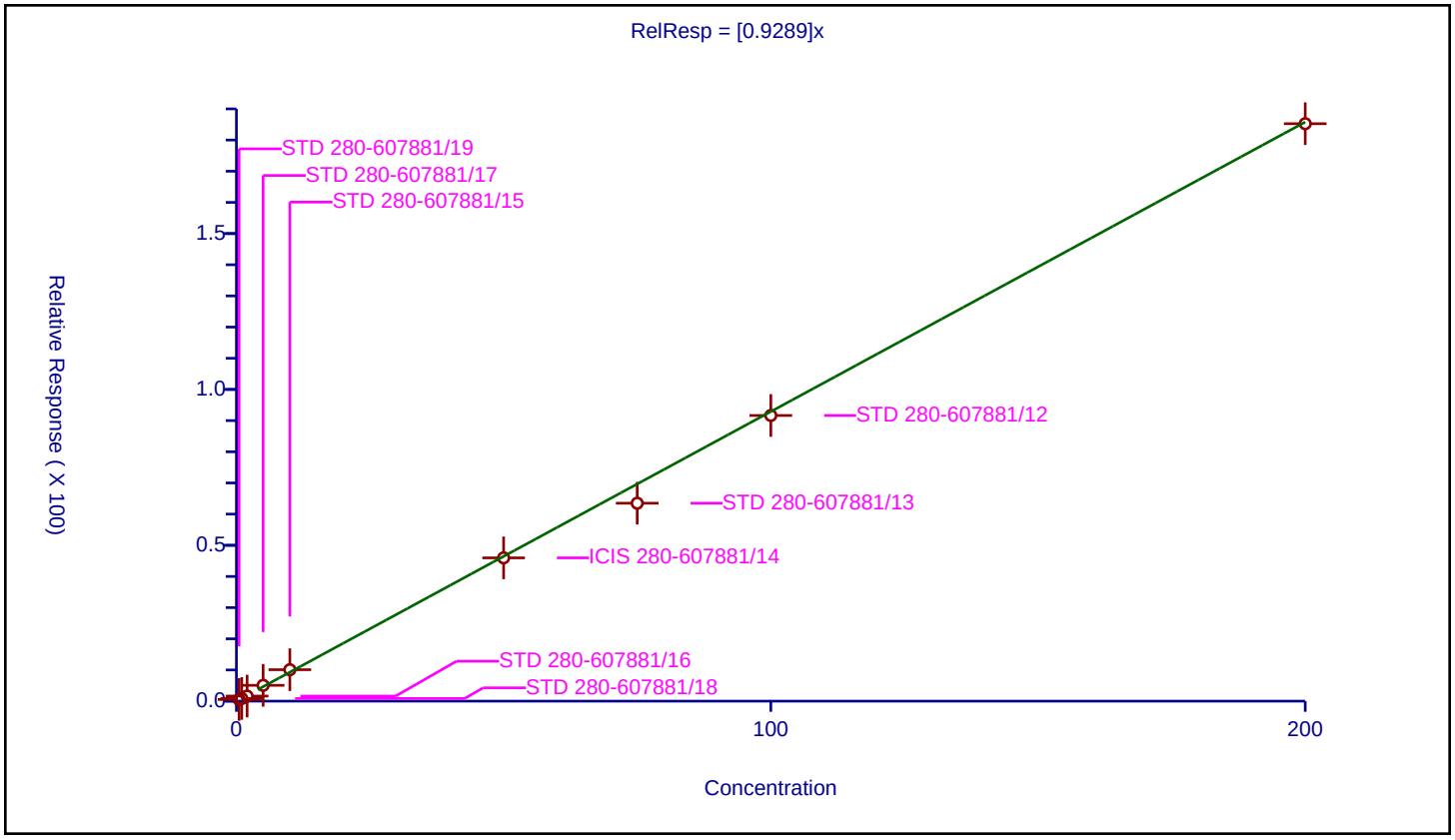
Curve Coefficients

Intercept:	0
Slope:	0.9289

Error Coefficients

Standard Error:	2410000
Relative Standard Error:	9.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.53069	50.0	1347020.0	1.06138	Y
2	STD 280-607881/18	1.0	0.85204	50.0	1321475.0	0.85204	Y
3	STD 280-607881/16	2.0	1.630499	50.0	1358265.0	0.81525	Y
4	STD 280-607881/17	5.0	5.071604	50.0	1337910.0	1.014321	Y
5	STD 280-607881/15	10.0	10.083271	50.0	1371311.0	1.008327	Y
6	ICIS 280-607881/14	50.0	45.967783	50.0	1433467.0	0.919356	Y
7	STD 280-607881/13	75.0	63.500054	50.0	1474746.0	0.846667	Y
8	STD 280-607881/12	100.0	91.642348	50.0	1493380.0	0.916423	Y
9	STD 280-607881/11	200.0	185.251838	50.0	1569677.0	0.926259	Y



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Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

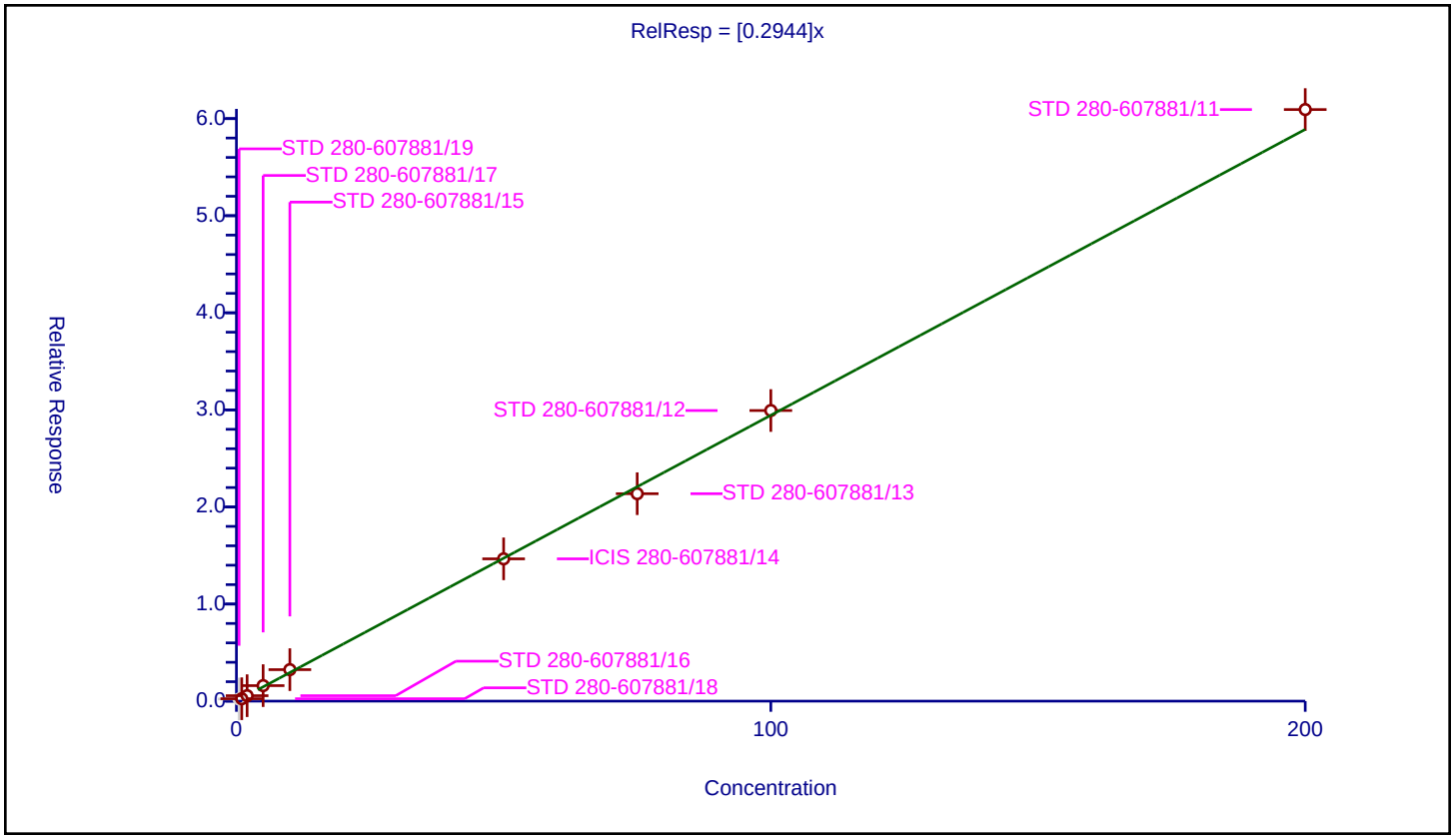
Curve Coefficients

Intercept:	0
Slope:	0.2944

Error Coefficients

Standard Error:	849000
Relative Standard Error:	8.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.220932	50.0	1347020.0	0.441864	N
2	STD 280-607881/18	1.0	0.248359	50.0	1321475.0	0.248359	Y
3	STD 280-607881/16	2.0	0.56193	50.0	1358265.0	0.280965	Y
4	STD 280-607881/17	5.0	1.5988	50.0	1337910.0	0.31976	Y
5	STD 280-607881/15	10.0	3.244523	50.0	1371311.0	0.324452	Y
6	ICIS 280-607881/14	50.0	14.656389	50.0	1433467.0	0.293128	Y
7	STD 280-607881/13	75.0	21.364899	50.0	1474746.0	0.284865	Y
8	STD 280-607881/12	100.0	29.933172	50.0	1493380.0	0.299332	Y
9	STD 280-607881/11	200.0	60.930465	50.0	1569677.0	0.304652	Y



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Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

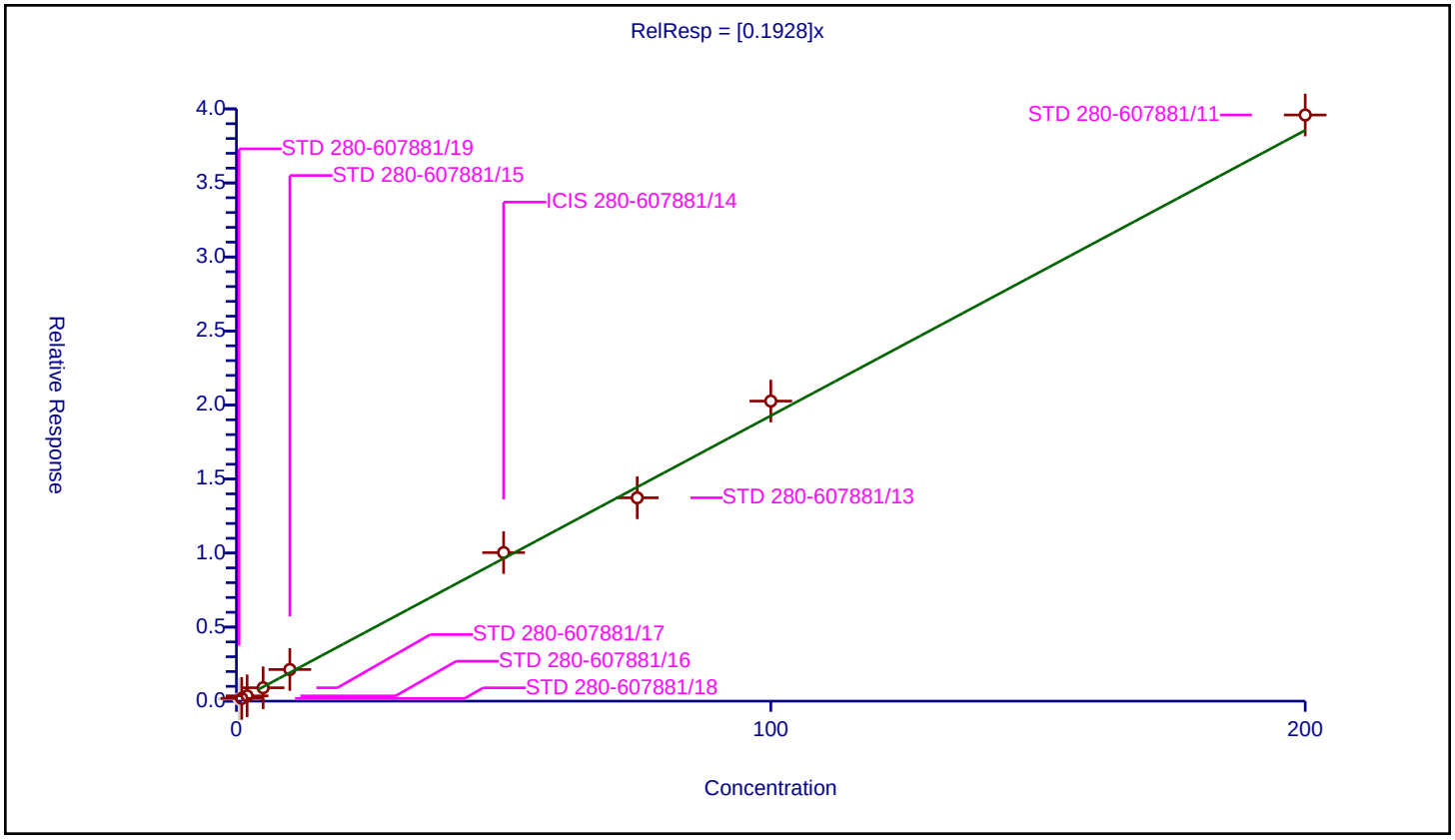
Curve Coefficients

Intercept:	0
Slope:	0.1928

Error Coefficients

Standard Error:	556000
Relative Standard Error:	6.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.143984	50.0	1347020.0	0.287969	N
2	STD 280-607881/18	1.0	0.184756	50.0	1321475.0	0.184756	Y
3	STD 280-607881/16	2.0	0.35711	50.0	1358265.0	0.178555	Y
4	STD 280-607881/17	5.0	0.903798	50.0	1337910.0	0.18076	Y
5	STD 280-607881/15	10.0	2.136933	50.0	1371311.0	0.213693	Y
6	ICIS 280-607881/14	50.0	10.034343	50.0	1433467.0	0.200687	Y
7	STD 280-607881/13	75.0	13.733755	50.0	1474746.0	0.183117	Y
8	STD 280-607881/12	100.0	20.266275	50.0	1493380.0	0.202663	Y
9	STD 280-607881/11	200.0	39.588845	50.0	1569677.0	0.197944	Y



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Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

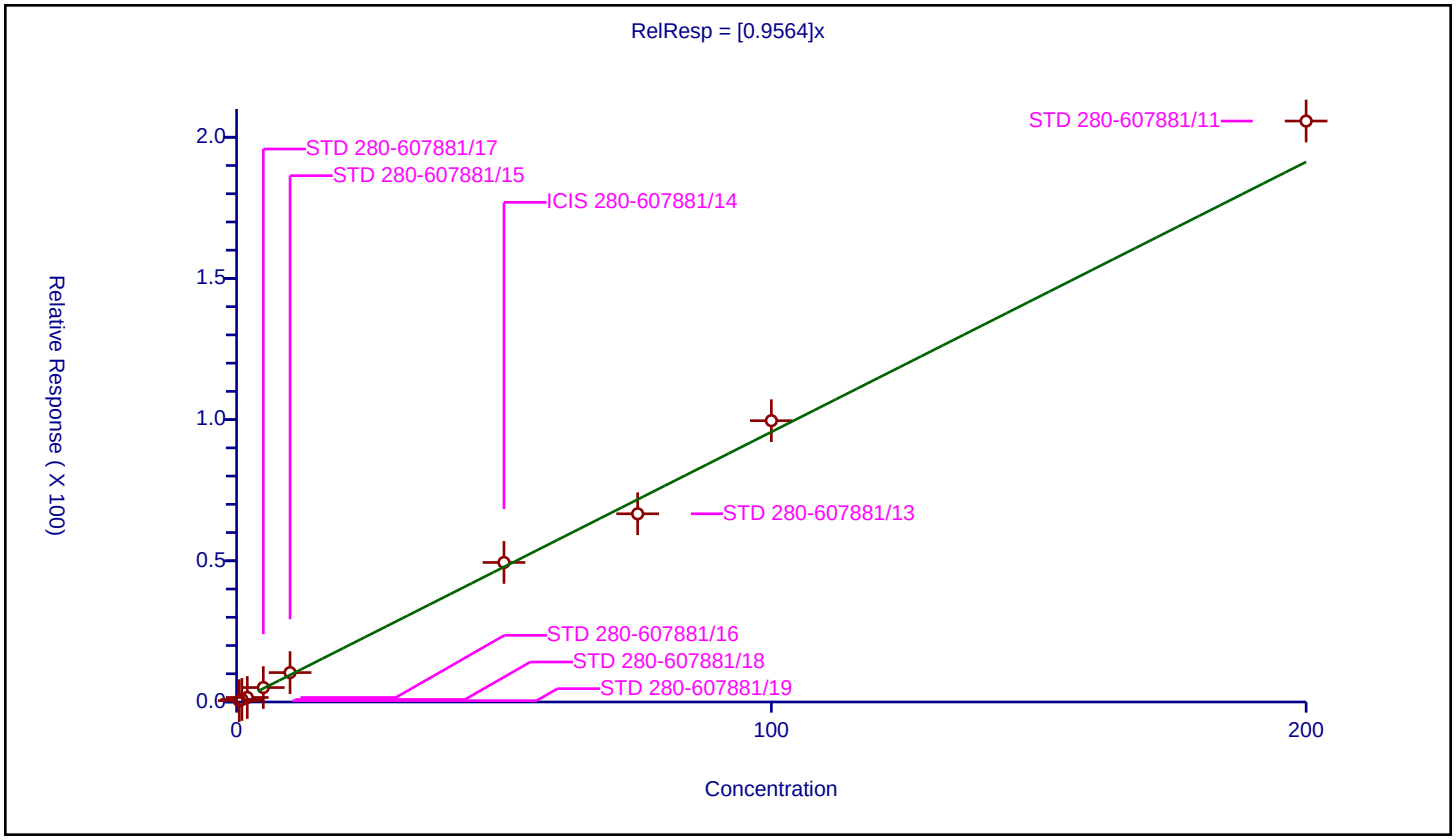
Curve Coefficients

Intercept:	0
Slope:	0.9564

Error Coefficients

Standard Error:	614000
Relative Standard Error:	8.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.474109	50.0	310688.0	0.948218	Y
2	STD 280-607881/18	1.0	0.892757	50.0	303218.0	0.892757	Y
3	STD 280-607881/16	2.0	1.602116	50.0	311900.0	0.801058	Y
4	STD 280-607881/17	5.0	5.111859	50.0	312939.0	1.022372	Y
5	STD 280-607881/15	10.0	10.410609	50.0	319160.0	1.041061	Y
6	ICIS 280-607881/14	50.0	49.418594	50.0	327912.0	0.988372	Y
7	STD 280-607881/13	75.0	66.646354	50.0	345430.0	0.888618	Y
8	STD 280-607881/12	100.0	99.623632	50.0	350056.0	0.996236	Y
9	STD 280-607881/11	200.0	205.741261	50.0	361445.0	1.028706	Y



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Calibration / 2-Pentanone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

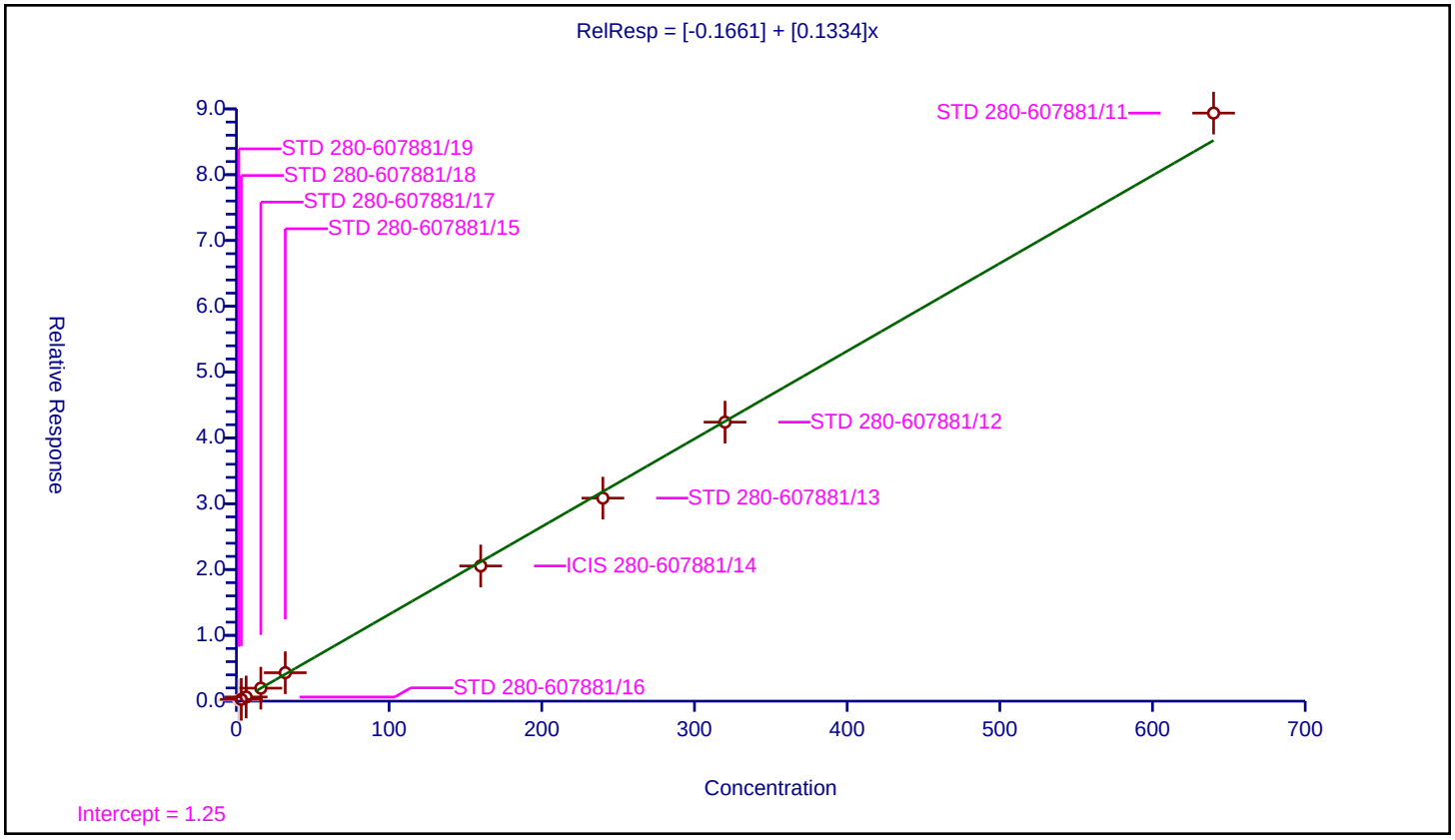
Curve Coefficients

Intercept:	-0.1661
Slope:	0.1334

Error Coefficients

Standard Error:	1330000
Relative Standard Error:	4.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	1.6	0.164957	50.0	1347020.0	0.103098	N
2	STD 280-607881/18	3.2	0.272574	50.0	1321475.0	0.085179	Y
3	STD 280-607881/16	6.4	0.632793	50.0	1358265.0	0.098874	Y
4	STD 280-607881/17	16.0	1.971097	50.0	1337910.0	0.123194	Y
5	STD 280-607881/15	32.0	4.319626	50.0	1371311.0	0.134988	Y
6	ICIS 280-607881/14	160.0	20.542712	50.0	1433467.0	0.128392	Y
7	STD 280-607881/13	240.0	30.851516	50.0	1474746.0	0.128548	Y
8	STD 280-607881/12	320.0	42.396677	50.0	1493380.0	0.13249	Y
9	STD 280-607881/11	640.0	89.361123	50.0	1569677.0	0.139627	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

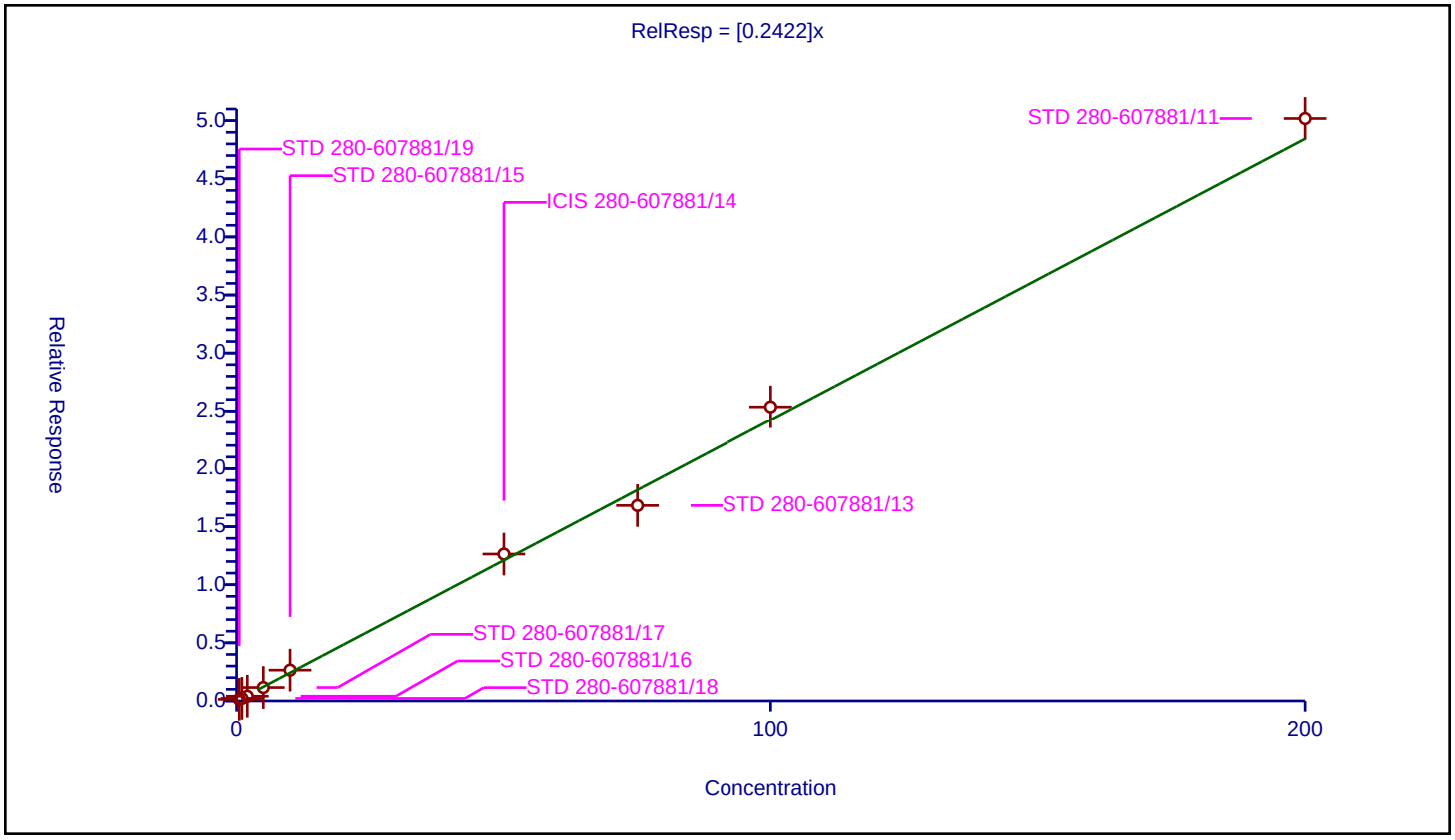
Curve Coefficients

Intercept:	0
Slope:	0.2422

Error Coefficients

Standard Error:	656000
Relative Standard Error:	10.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.139864	50.0	1347020.0	0.279729	Y
2	STD 280-607881/18	1.0	0.219527	50.0	1321475.0	0.219527	Y
3	STD 280-607881/16	2.0	0.405959	50.0	1358265.0	0.20298	Y
4	STD 280-607881/17	5.0	1.155085	50.0	1337910.0	0.231017	Y
5	STD 280-607881/15	10.0	2.6498	50.0	1371311.0	0.26498	Y
6	ICIS 280-607881/14	50.0	12.642007	50.0	1433467.0	0.25284	Y
7	STD 280-607881/13	75.0	16.825711	50.0	1474746.0	0.224343	Y
8	STD 280-607881/12	100.0	25.354531	50.0	1493380.0	0.253545	Y
9	STD 280-607881/11	200.0	50.18593	50.0	1569677.0	0.25093	Y



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Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

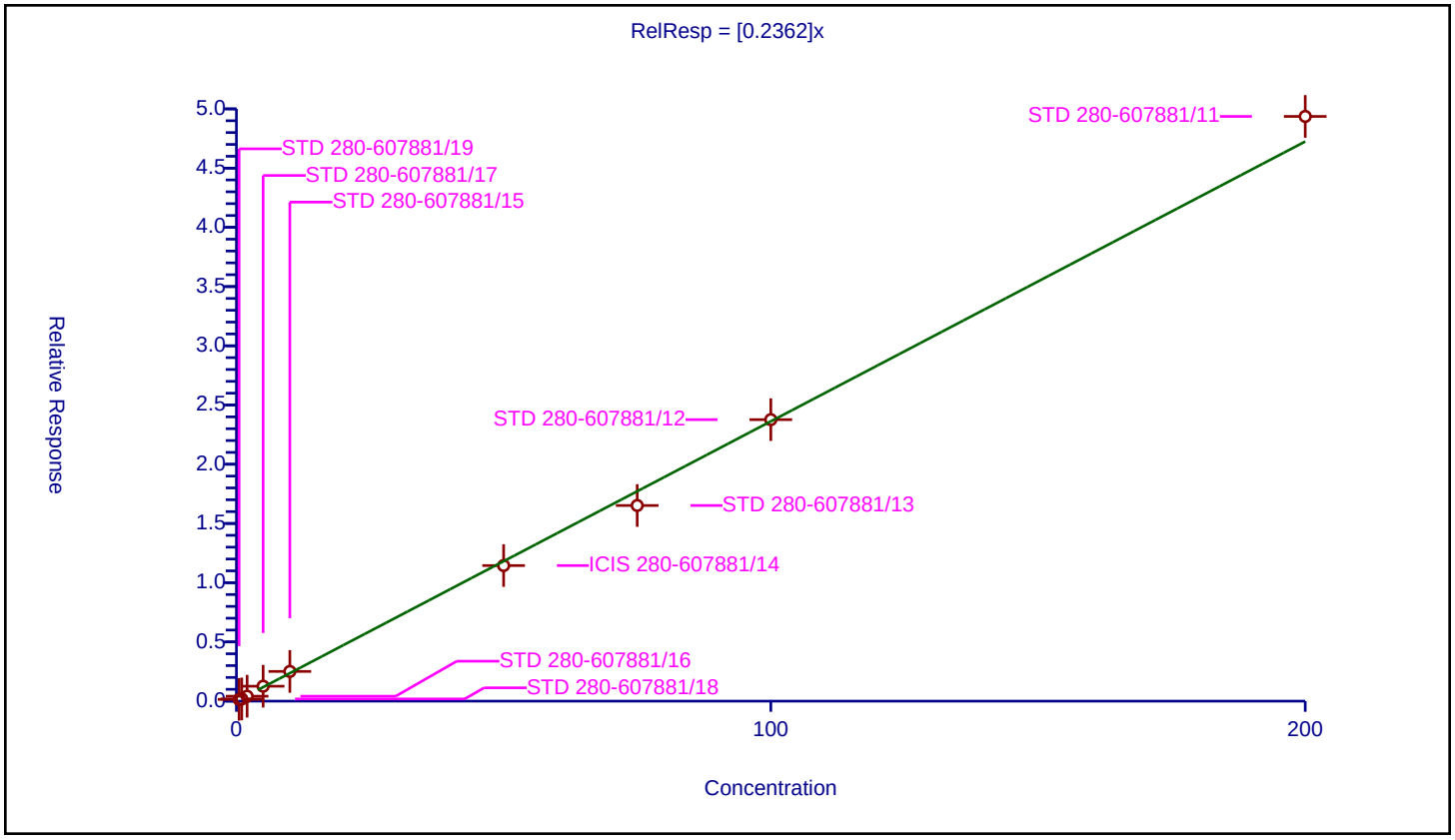
Curve Coefficients

Intercept:	0
Slope:	0.2362

Error Coefficients

Standard Error:	638000
Relative Standard Error:	13.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.147993	50.0	1347020.0	0.295987	Y
2	STD 280-607881/18	1.0	0.184529	50.0	1321475.0	0.184529	Y
3	STD 280-607881/16	2.0	0.417702	50.0	1358265.0	0.208851	Y
4	STD 280-607881/17	5.0	1.260847	50.0	1337910.0	0.252169	Y
5	STD 280-607881/15	10.0	2.508366	50.0	1371311.0	0.250837	Y
6	ICIS 280-607881/14	50.0	11.445258	50.0	1433467.0	0.228905	Y
7	STD 280-607881/13	75.0	16.516844	50.0	1474746.0	0.220225	Y
8	STD 280-607881/12	100.0	23.765016	50.0	1493380.0	0.23765	Y
9	STD 280-607881/11	200.0	49.363149	50.0	1569677.0	0.246816	Y



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Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

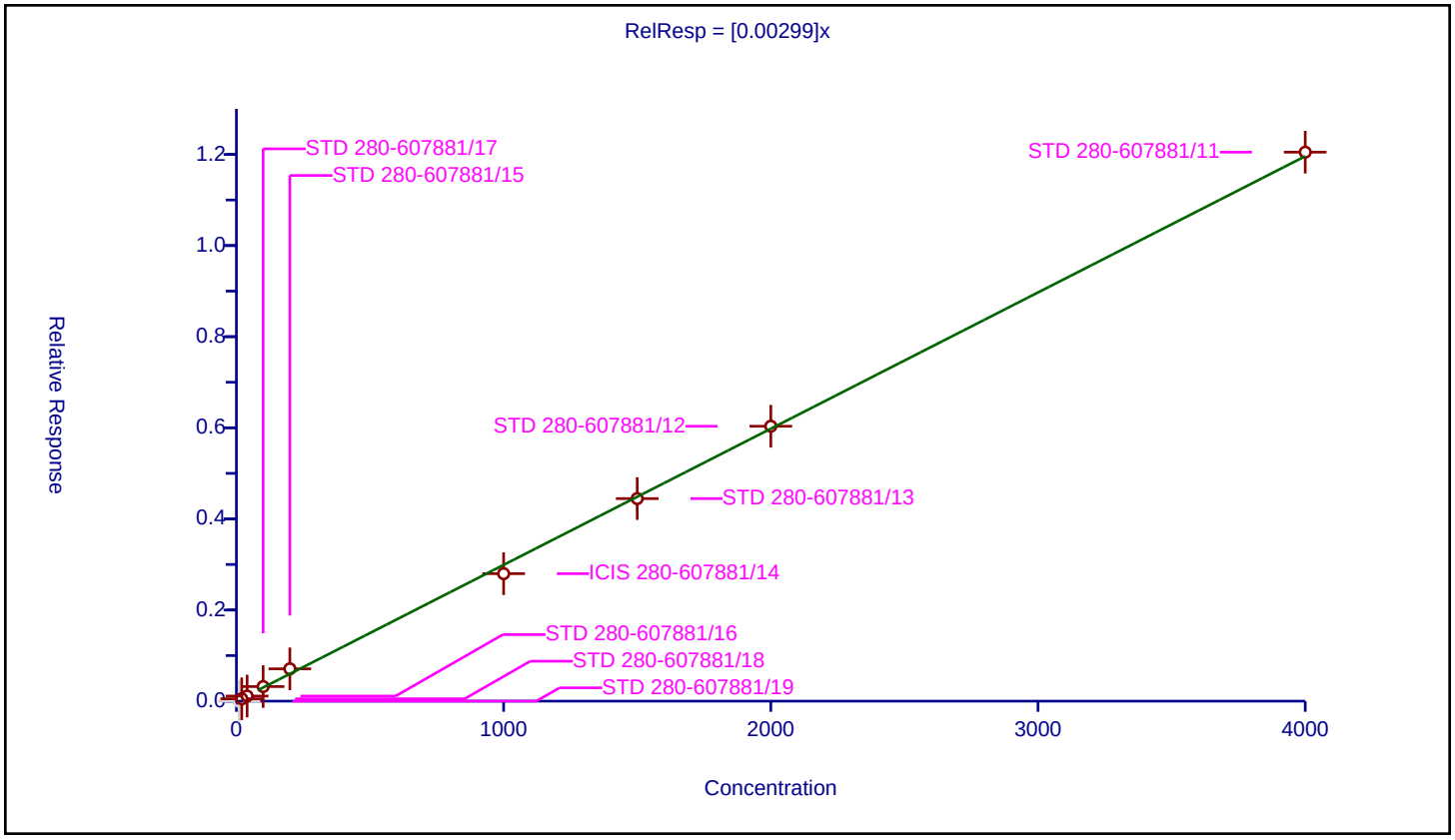
Curve Coefficients

Intercept:	0
Slope:	0.00299

Error Coefficients

Standard Error:	169000
Relative Standard Error:	9.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	10.0	0.0	50.0	1347020.0	0.0	N
2	STD 280-607881/18	20.0	0.051571	50.0	1321475.0	0.002579	Y
3	STD 280-607881/16	40.0	0.112092	50.0	1358265.0	0.002802	Y
4	STD 280-607881/17	100.0	0.320051	50.0	1337910.0	0.003201	Y
5	STD 280-607881/15	200.0	0.709467	50.0	1371311.0	0.003547	Y
6	ICIS 280-607881/14	1000.0	2.79853	50.0	1433467.0	0.002799	Y
7	STD 280-607881/13	1500.0	4.445952	50.0	1474746.0	0.002964	Y
8	STD 280-607881/12	2000.0	6.034365	50.0	1493380.0	0.003017	Y
9	STD 280-607881/11	4000.0	12.049995	50.0	1569677.0	0.003012	Y



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Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

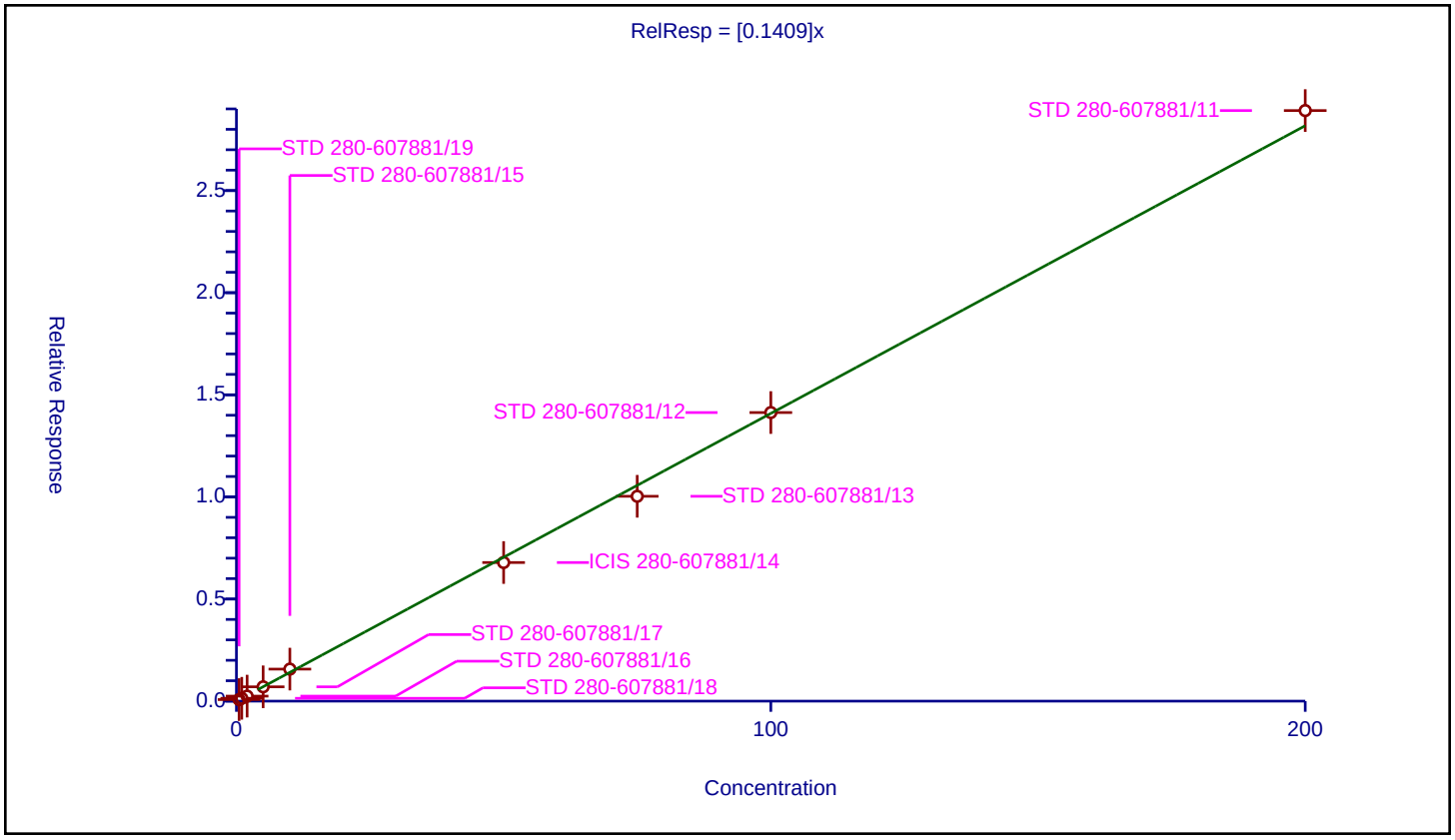
Curve Coefficients

Intercept:	0
Slope:	0.1409

Error Coefficients

Standard Error:	376000
Relative Standard Error:	7.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.076502	50.0	1347020.0	0.153004	Y
2	STD 280-607881/18	1.0	0.139541	50.0	1321475.0	0.139541	Y
3	STD 280-607881/16	2.0	0.245976	50.0	1358265.0	0.122988	Y
4	STD 280-607881/17	5.0	0.700608	50.0	1337910.0	0.140122	Y
5	STD 280-607881/15	10.0	1.5689	50.0	1371311.0	0.15689	Y
6	ICIS 280-607881/14	50.0	6.787669	50.0	1433467.0	0.135753	Y
7	STD 280-607881/13	75.0	10.030609	50.0	1474746.0	0.133741	Y
8	STD 280-607881/12	100.0	14.1314	50.0	1493380.0	0.141314	Y
9	STD 280-607881/11	200.0	28.917956	50.0	1569677.0	0.14459	Y



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Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

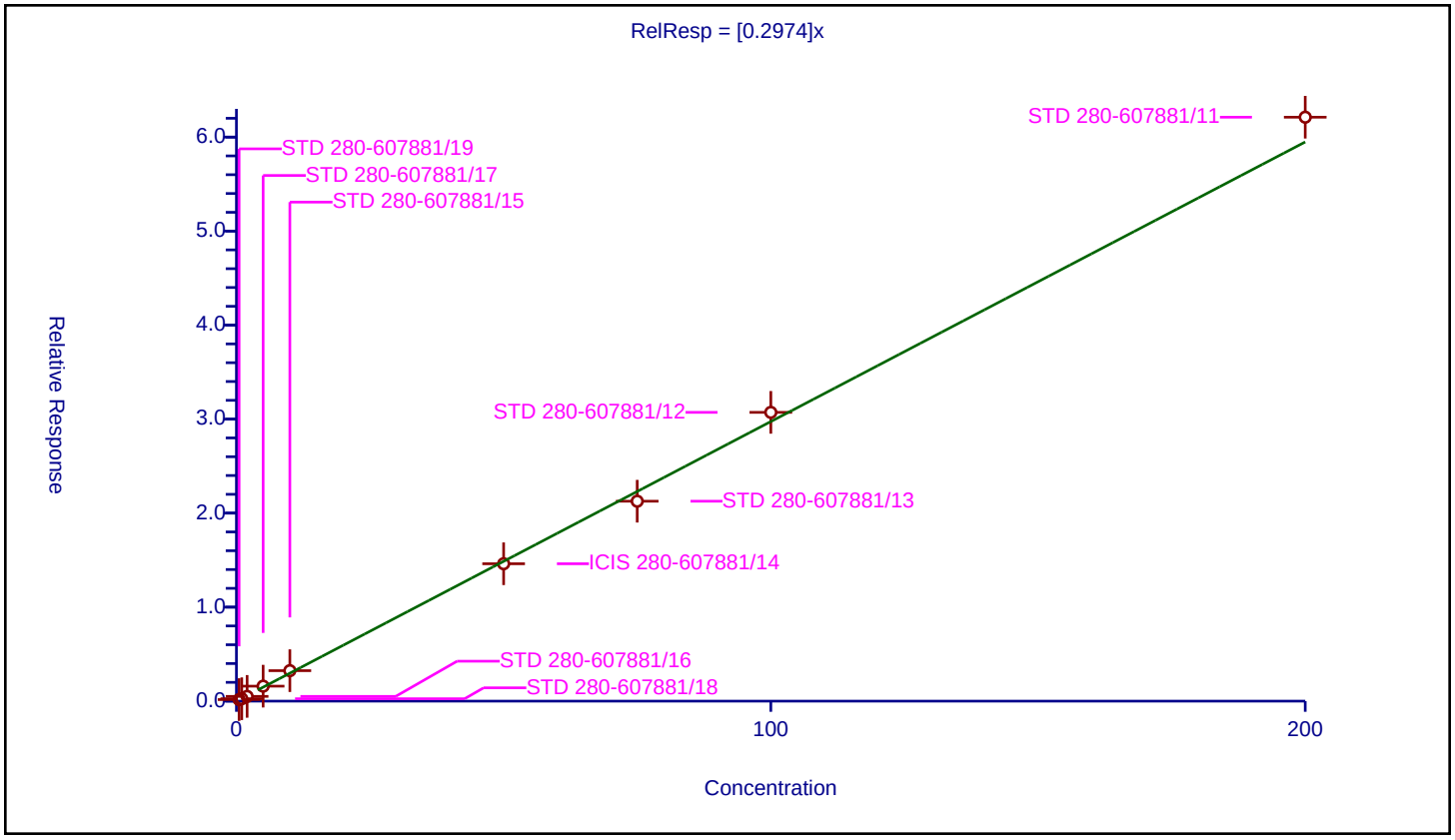
Curve Coefficients

Intercept:	0
Slope:	0.2974

Error Coefficients

Standard Error:	808000
Relative Standard Error:	9.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.164882	50.0	1347020.0	0.329765	Y
2	STD 280-607881/18	1.0	0.257364	50.0	1321475.0	0.257364	Y
3	STD 280-607881/16	2.0	0.505866	50.0	1358265.0	0.252933	Y
4	STD 280-607881/17	5.0	1.592745	50.0	1337910.0	0.318549	Y
5	STD 280-607881/15	10.0	3.243356	50.0	1371311.0	0.324336	Y
6	ICIS 280-607881/14	50.0	14.615684	50.0	1433467.0	0.292314	Y
7	STD 280-607881/13	75.0	21.268205	50.0	1474746.0	0.283576	Y
8	STD 280-607881/12	100.0	30.717768	50.0	1493380.0	0.307178	Y
9	STD 280-607881/11	200.0	62.115709	50.0	1569677.0	0.310579	Y



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Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

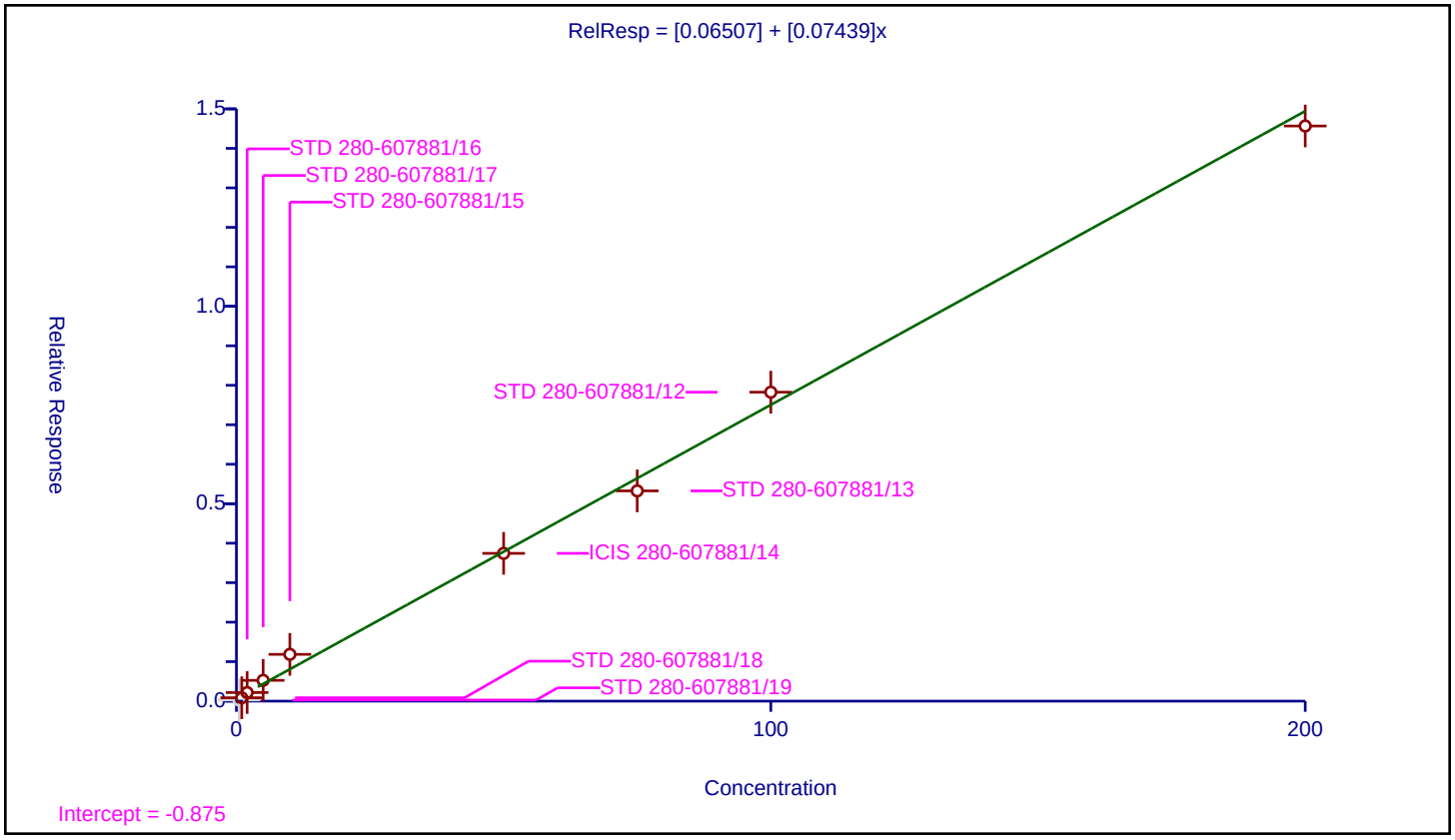
Curve Coefficients

Intercept:	0.06507
Slope:	0.07439

Error Coefficients

Standard Error:	224000
Relative Standard Error:	37.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.028396	50.0	1347020.0	0.056792	N
2	STD 280-607881/18	1.0	0.085965	50.0	1321475.0	0.085965	Y
3	STD 280-607881/16	2.0	0.217299	50.0	1358265.0	0.10865	Y
4	STD 280-607881/17	5.0	0.52668	50.0	1337910.0	0.105336	Y
5	STD 280-607881/15	10.0	1.184997	50.0	1371311.0	0.1185	Y
6	ICIS 280-607881/14	50.0	3.742779	50.0	1433467.0	0.074856	Y
7	STD 280-607881/13	75.0	5.325324	50.0	1474746.0	0.071004	Y
8	STD 280-607881/12	100.0	7.825637	50.0	1493380.0	0.078256	Y
9	STD 280-607881/11	200.0	14.566723	50.0	1569677.0	0.072834	Y



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Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

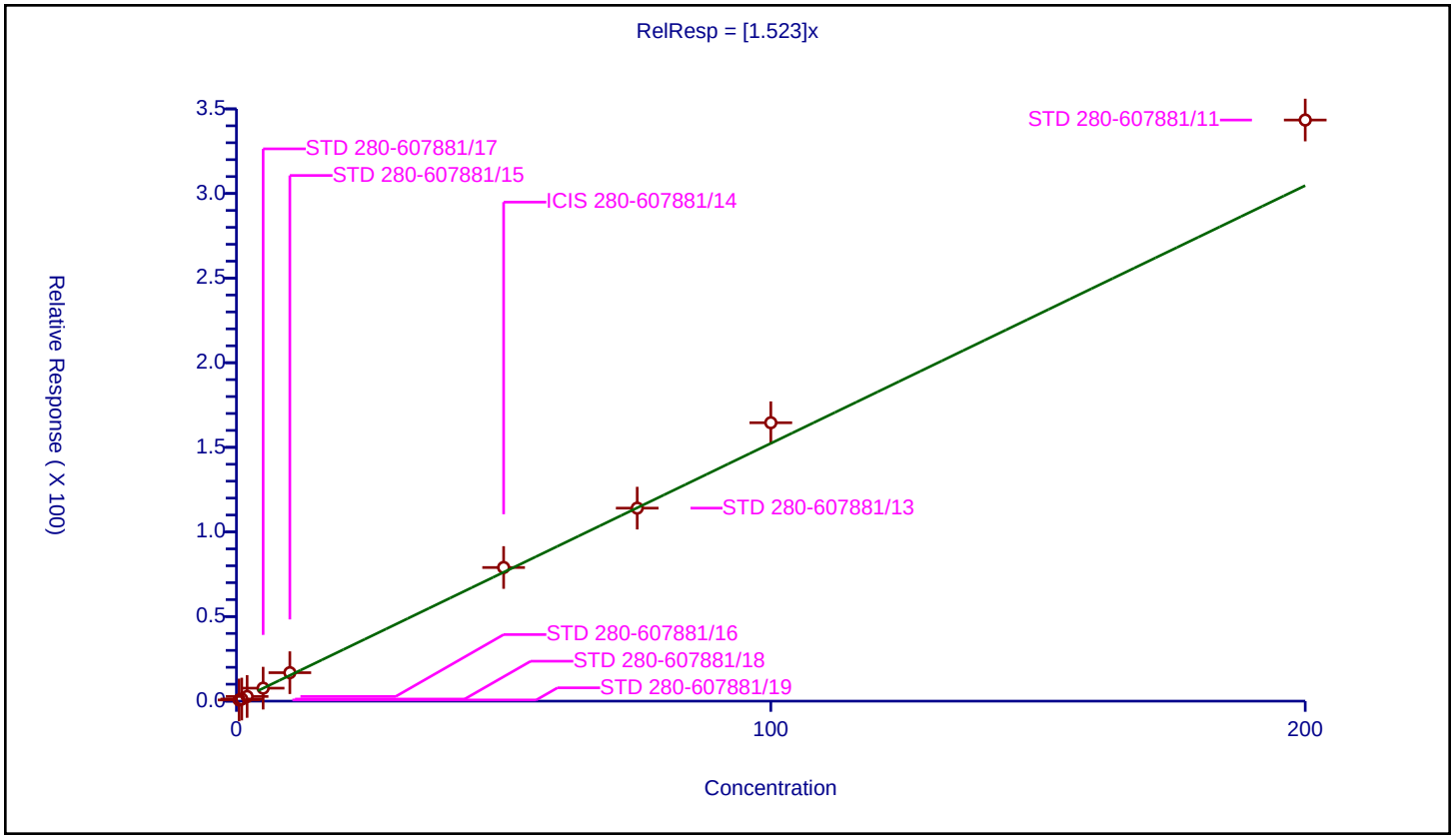
Curve Coefficients

Intercept:	0
Slope:	1.523

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	10.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.705853	50.0	310688.0	1.411706	Y
2	STD 280-607881/18	1.0	1.242505	50.0	303218.0	1.242505	Y
3	STD 280-607881/16	2.0	2.755691	50.0	311900.0	1.377845	Y
4	STD 280-607881/17	5.0	7.665392	50.0	312939.0	1.533078	Y
5	STD 280-607881/15	10.0	16.820404	50.0	319160.0	1.68204	Y
6	ICIS 280-607881/14	50.0	78.977439	50.0	327912.0	1.579549	Y
7	STD 280-607881/13	75.0	114.062762	50.0	345430.0	1.520837	Y
8	STD 280-607881/12	100.0	164.542673	50.0	350056.0	1.645427	Y
9	STD 280-607881/11	200.0	343.426109	50.0	361445.0	1.717131	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

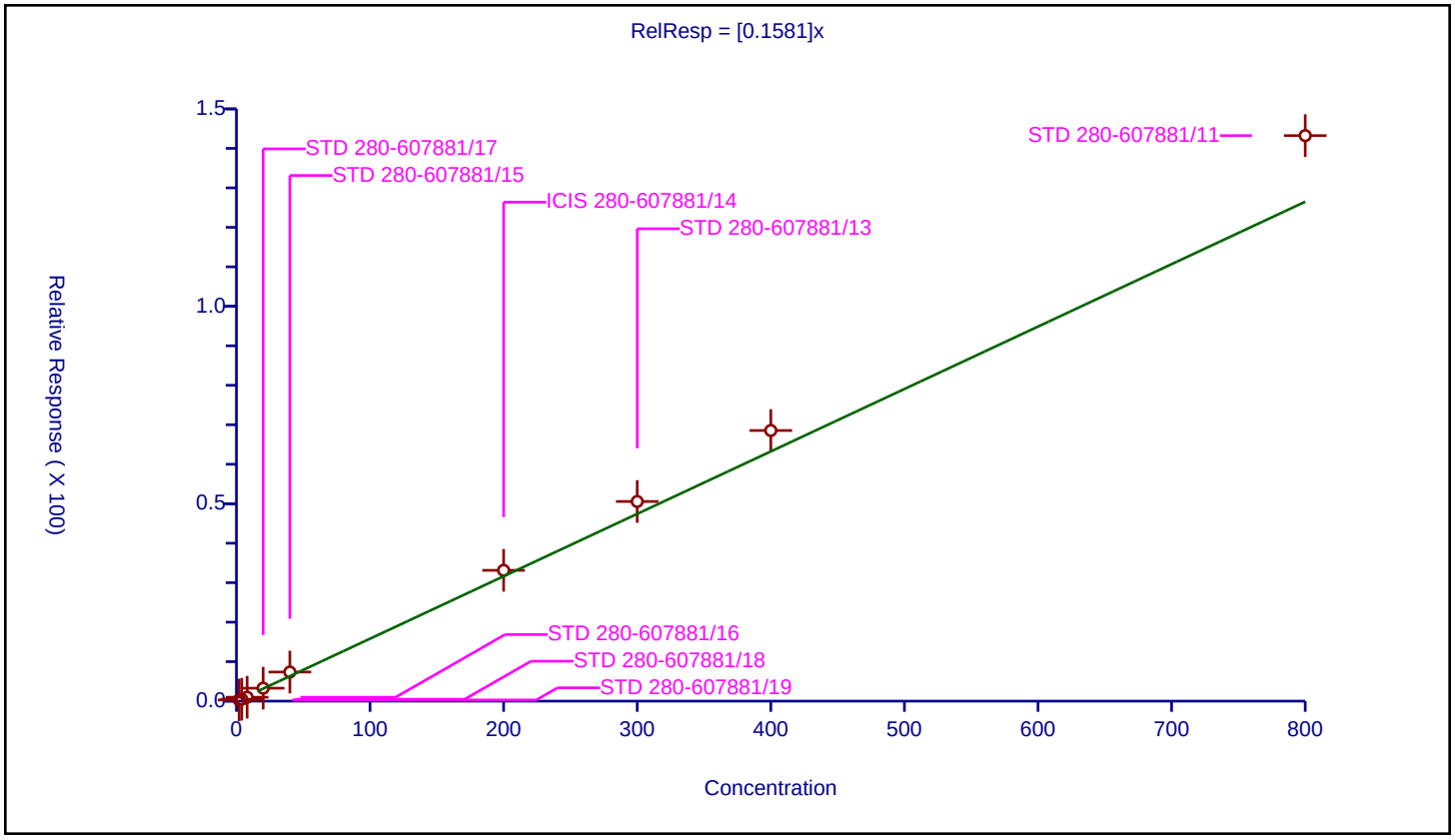
Curve Coefficients

Intercept:	0
Slope:	0.1581

Error Coefficients

Standard Error:	1860000
Relative Standard Error:	14.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.290716	50.0	1347020.0	0.145358	Y
2	STD 280-607881/18	4.0	0.484761	50.0	1321475.0	0.12119	Y
3	STD 280-607881/16	8.0	0.988025	50.0	1358265.0	0.123503	Y
4	STD 280-607881/17	20.0	3.281686	50.0	1337910.0	0.164084	Y
5	STD 280-607881/15	40.0	7.366746	50.0	1371311.0	0.184169	Y
6	ICIS 280-607881/14	200.0	33.134177	50.0	1433467.0	0.165671	Y
7	STD 280-607881/13	300.0	50.568776	50.0	1474746.0	0.168563	Y
8	STD 280-607881/12	400.0	68.547824	50.0	1493380.0	0.17137	Y
9	STD 280-607881/11	800.0	143.236507	50.0	1569677.0	0.179046	Y



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Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

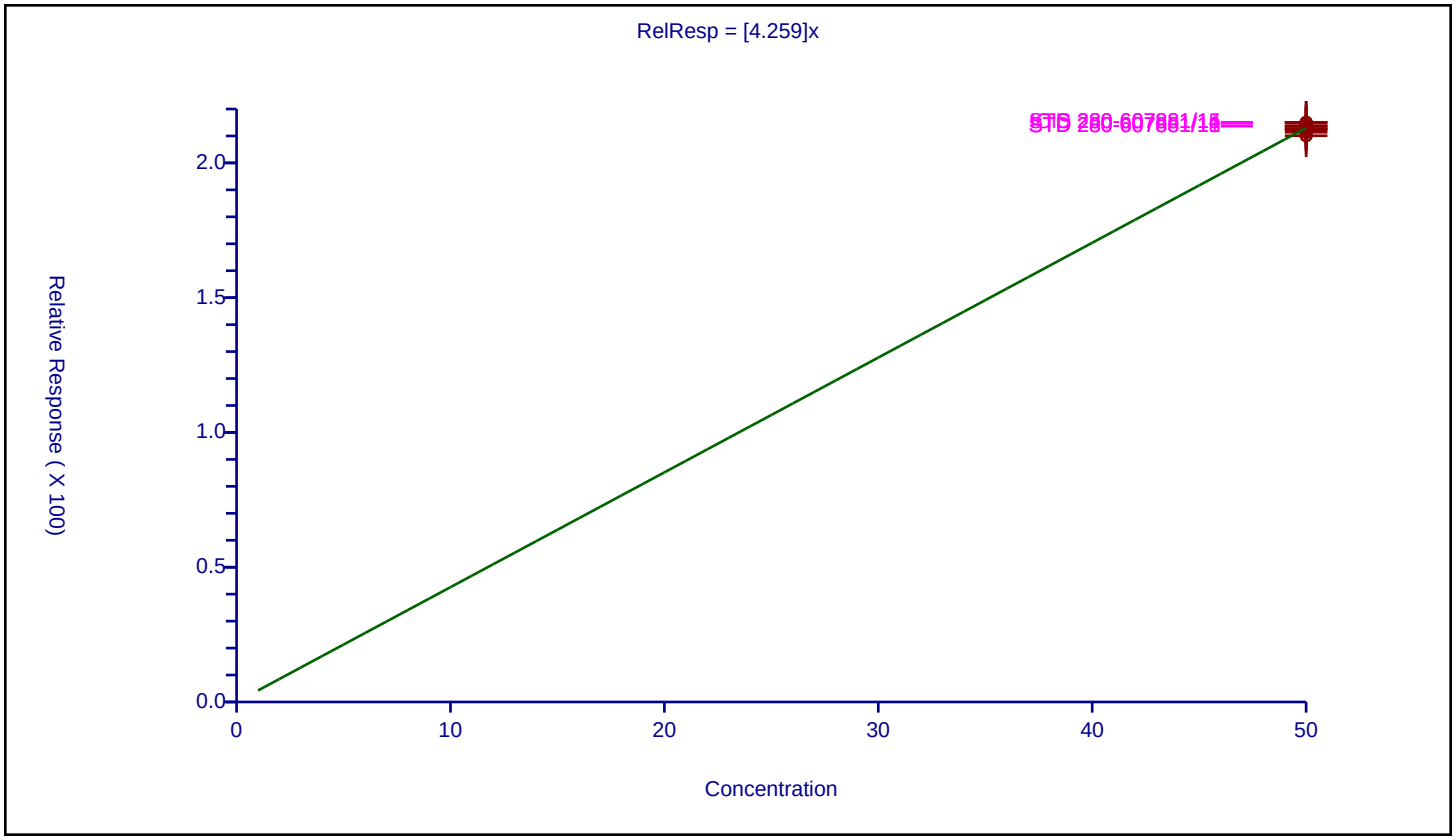
Curve Coefficients

Intercept:	0
Slope:	4.259

Error Coefficients

Standard Error:	1480000
Relative Standard Error:	0.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	213.815933	50.0	361445.0	4.276319	Y
2	STD 280-607881/12	50.0	212.690541	50.0	350056.0	4.253811	Y
3	STD 280-607881/13	50.0	211.3764	50.0	345430.0	4.227528	Y
4	ICIS 280-607881/14	50.0	215.06456	50.0	327912.0	4.301291	Y
5	STD 280-607881/15	50.0	214.950808	50.0	319160.0	4.299016	Y
6	STD 280-607881/16	50.0	212.728599	50.0	311900.0	4.254572	Y
7	STD 280-607881/17	50.0	210.079121	50.0	312939.0	4.201582	Y
8	STD 280-607881/18	50.0	213.662942	50.0	303218.0	4.273259	Y
9	STD 280-607881/19	50.0	212.322169	50.0	310688.0	4.246443	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

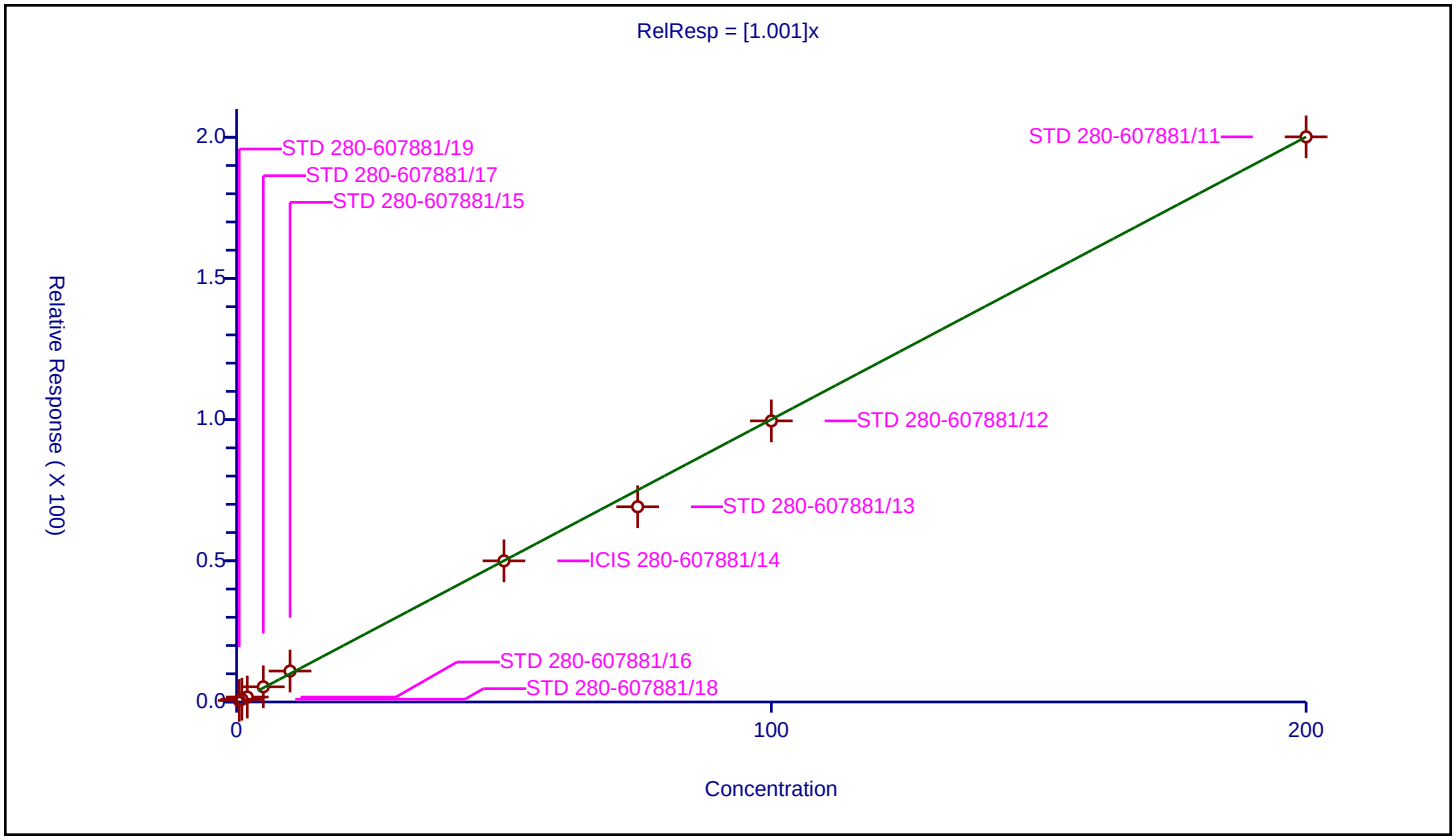
Curve Coefficients

Intercept:	0
Slope:	1.001

Error Coefficients

Standard Error:	2610000
Relative Standard Error:	7.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.533066	50.0	1347020.0	1.066131	Y
2	STD 280-607881/18	1.0	0.975766	50.0	1321475.0	0.975766	Y
3	STD 280-607881/16	2.0	1.750027	50.0	1358265.0	0.875013	Y
4	STD 280-607881/17	5.0	5.377417	50.0	1337910.0	1.075483	Y
5	STD 280-607881/15	10.0	10.956267	50.0	1371311.0	1.095627	Y
6	ICIS 280-607881/14	50.0	49.986187	50.0	1433467.0	0.999724	Y
7	STD 280-607881/13	75.0	69.141432	50.0	1474746.0	0.921886	Y
8	STD 280-607881/12	100.0	99.555405	50.0	1493380.0	0.995554	Y
9	STD 280-607881/11	200.0	200.142227	50.0	1569677.0	1.000711	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

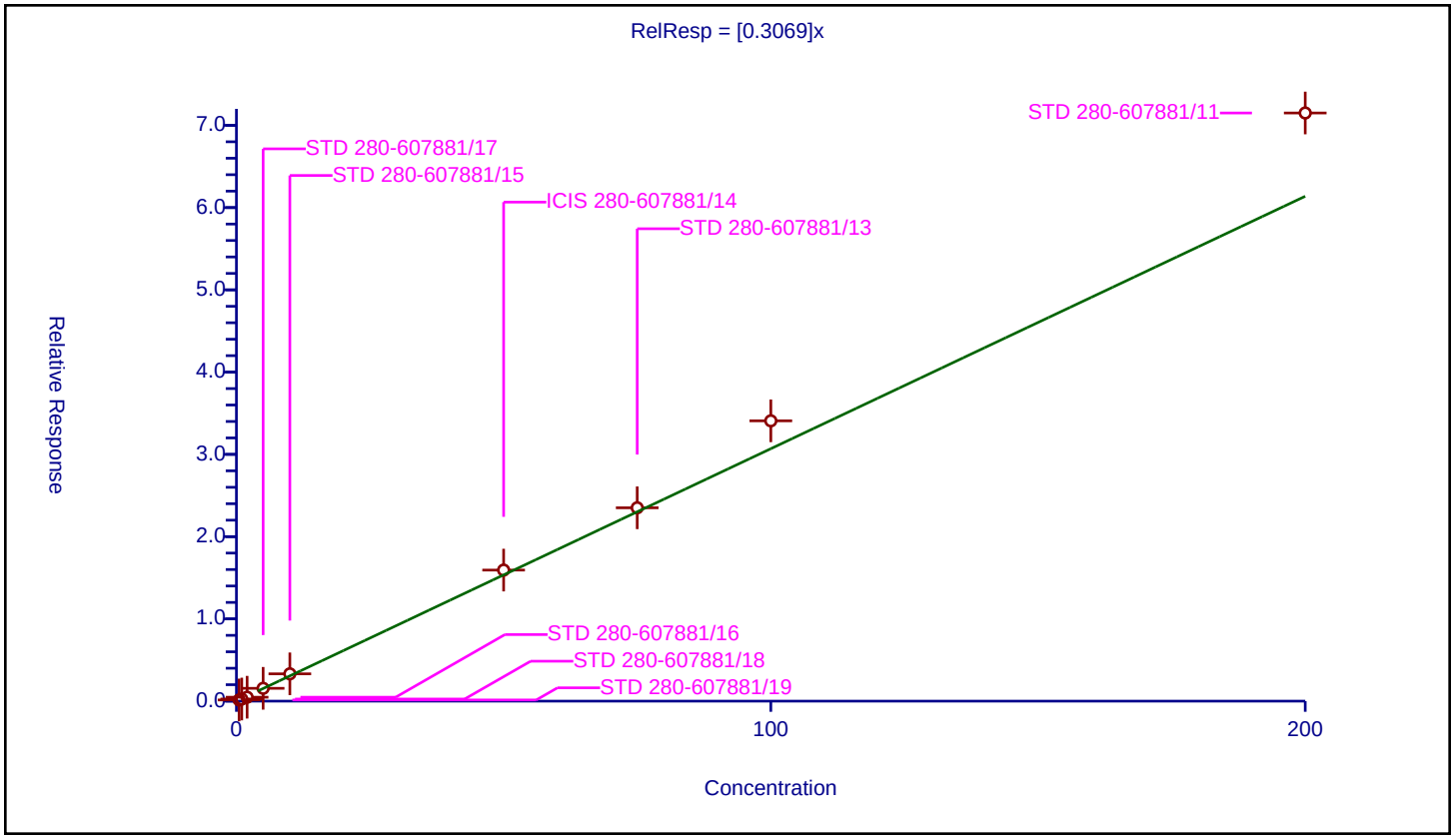
Curve Coefficients

Intercept:	0
Slope:	0.3069

Error Coefficients

Standard Error:	920000
Relative Standard Error:	12.5
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.145358	50.0	1347020.0	0.290716	Y
2	STD 280-607881/18	1.0	0.257364	50.0	1321475.0	0.257364	Y
3	STD 280-607881/16	2.0	0.479104	50.0	1358265.0	0.239552	Y
4	STD 280-607881/17	5.0	1.560456	50.0	1337910.0	0.312091	Y
5	STD 280-607881/15	10.0	3.319196	50.0	1371311.0	0.33192	Y
6	ICIS 280-607881/14	50.0	15.933293	50.0	1433467.0	0.318666	Y
7	STD 280-607881/13	75.0	23.504793	50.0	1474746.0	0.313397	Y
8	STD 280-607881/12	100.0	34.078031	50.0	1493380.0	0.34078	Y
9	STD 280-607881/11	200.0	71.5028	50.0	1569677.0	0.357514	Y



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Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

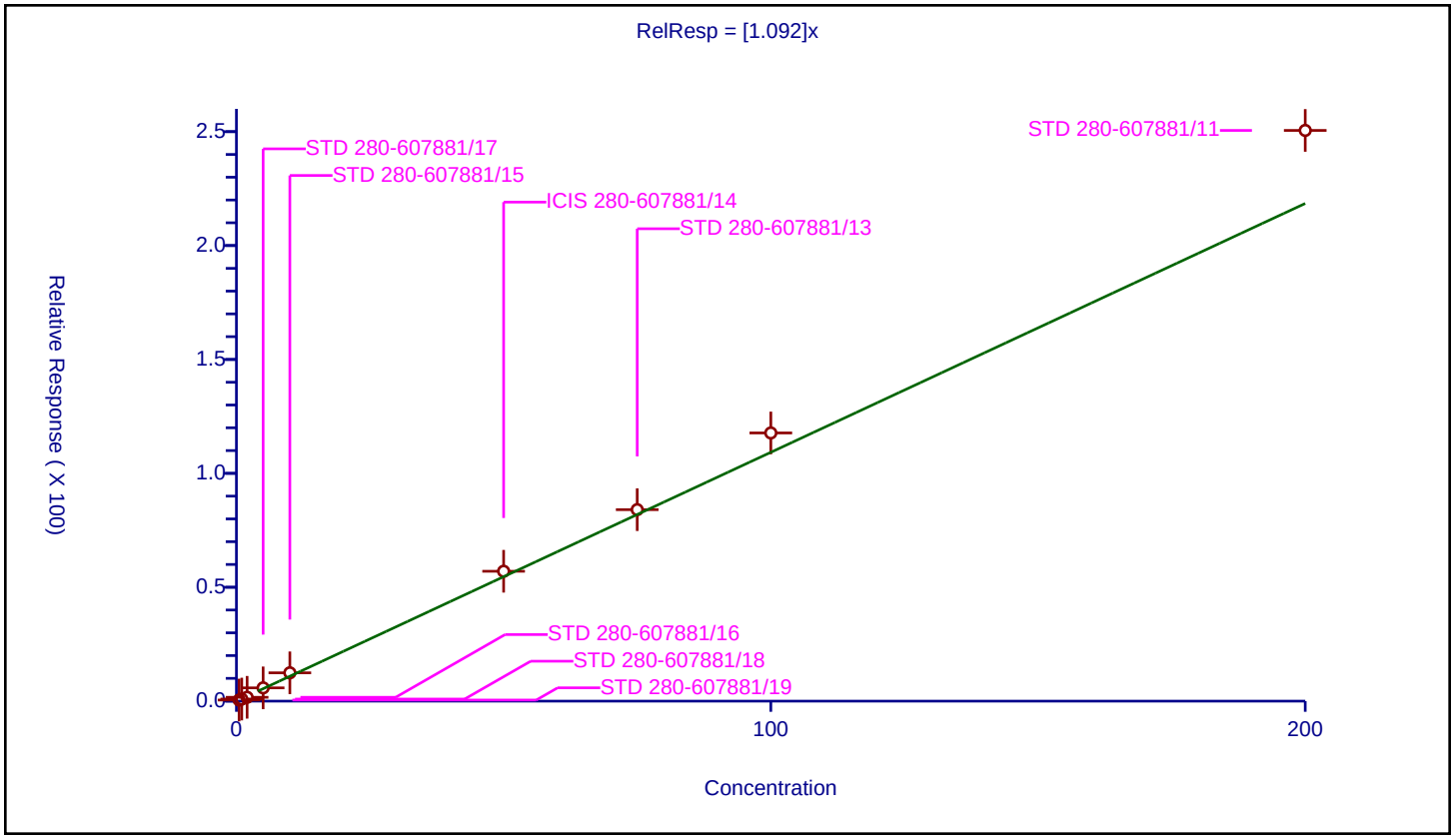
Curve Coefficients

Intercept:	0
Slope:	1.092

Error Coefficients

Standard Error:	745000
Relative Standard Error:	13.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.485053	50.0	310688.0	0.970105	Y
2	STD 280-607881/18	1.0	0.91238	50.0	303218.0	0.91238	Y
3	STD 280-607881/16	2.0	1.695095	50.0	311900.0	0.847547	Y
4	STD 280-607881/17	5.0	5.831807	50.0	312939.0	1.166361	Y
5	STD 280-607881/15	10.0	12.438275	50.0	319160.0	1.243828	Y
6	ICIS 280-607881/14	50.0	57.023378	50.0	327912.0	1.140468	Y
7	STD 280-607881/13	75.0	84.058565	50.0	345430.0	1.120781	Y
8	STD 280-607881/12	100.0	117.740304	50.0	350056.0	1.177403	Y
9	STD 280-607881/11	200.0	250.545311	50.0	361445.0	1.252727	Y



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Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

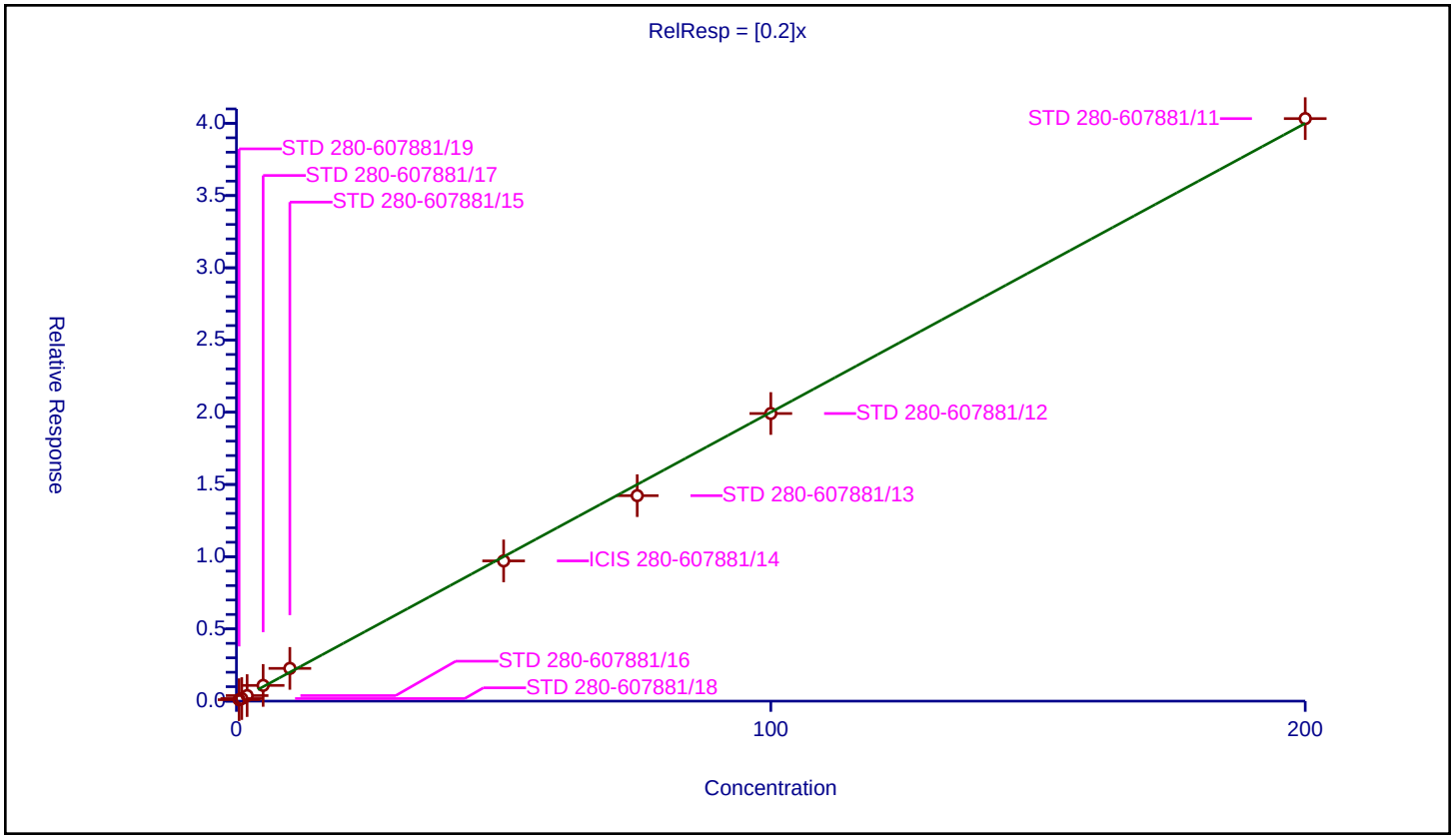
Curve Coefficients

Intercept:	0
Slope:	0.2

Error Coefficients

Standard Error:	526000
Relative Standard Error:	7.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.100295	50.0	1347020.0	0.200591	Y
2	STD 280-607881/18	1.0	0.178399	50.0	1321475.0	0.178399	Y
3	STD 280-607881/16	2.0	0.383762	50.0	1358265.0	0.191881	Y
4	STD 280-607881/17	5.0	1.088788	50.0	1337910.0	0.217758	Y
5	STD 280-607881/15	10.0	2.266772	50.0	1371311.0	0.226677	Y
6	ICIS 280-607881/14	50.0	9.709432	50.0	1433467.0	0.194189	Y
7	STD 280-607881/13	75.0	14.226179	50.0	1474746.0	0.189682	Y
8	STD 280-607881/12	100.0	19.911945	50.0	1493380.0	0.199119	Y
9	STD 280-607881/11	200.0	40.32664	50.0	1569677.0	0.201633	Y



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Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

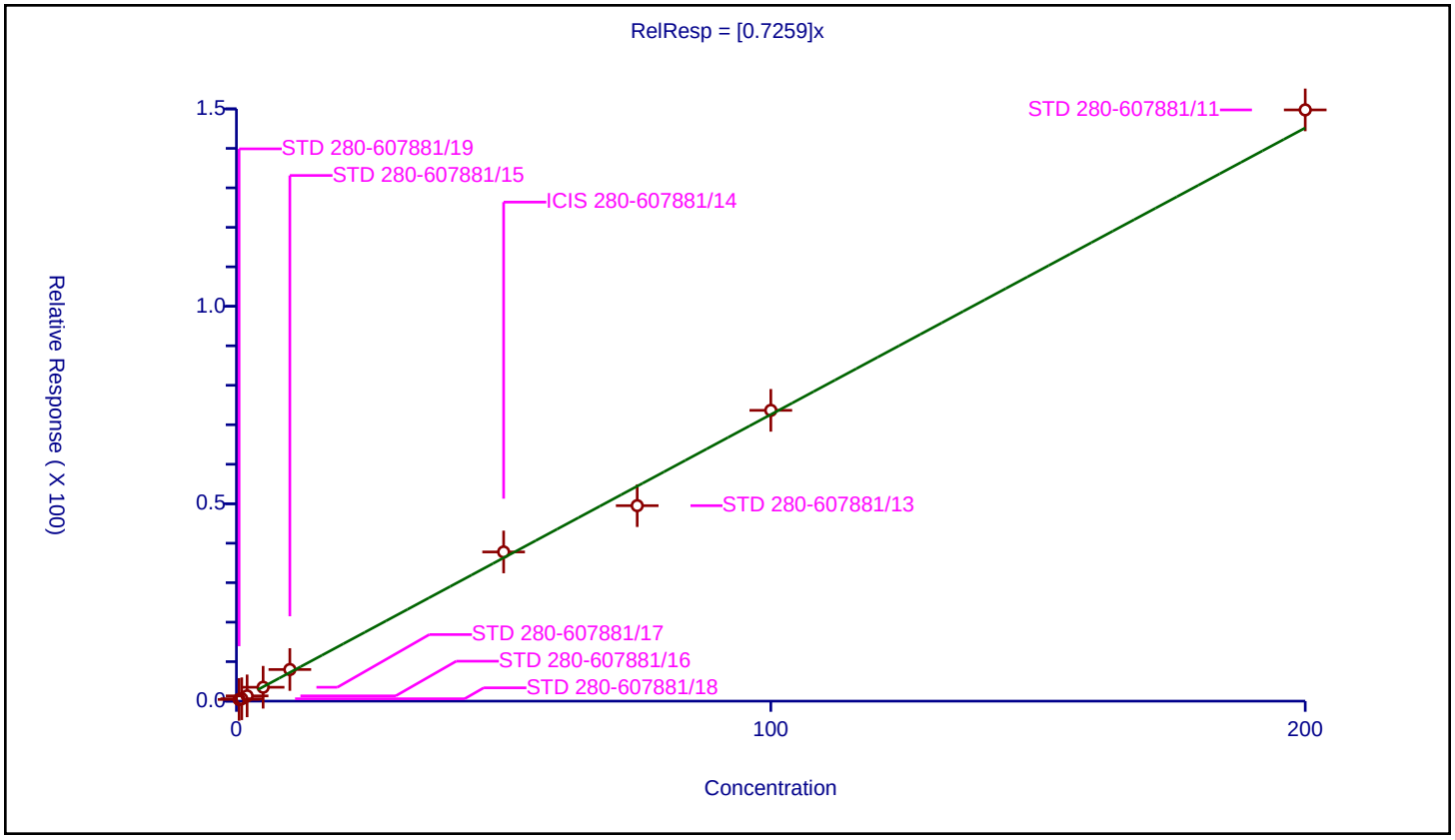
Curve Coefficients

Intercept:	0
Slope:	0.7259

Error Coefficients

Standard Error:	450000
Relative Standard Error:	10.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.428082	50.0	310688.0	0.856164	Y
2	STD 280-607881/18	1.0	0.603856	50.0	303218.0	0.603856	Y
3	STD 280-607881/16	2.0	1.335043	50.0	311900.0	0.667522	Y
4	STD 280-607881/17	5.0	3.518897	50.0	312939.0	0.703779	Y
5	STD 280-607881/15	10.0	8.008209	50.0	319160.0	0.800821	Y
6	ICIS 280-607881/14	50.0	37.783918	50.0	327912.0	0.755678	Y
7	STD 280-607881/13	75.0	49.508439	50.0	345430.0	0.660113	Y
8	STD 280-607881/12	100.0	73.651073	50.0	350056.0	0.736511	Y
9	STD 280-607881/11	200.0	149.746434	50.0	361445.0	0.748732	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

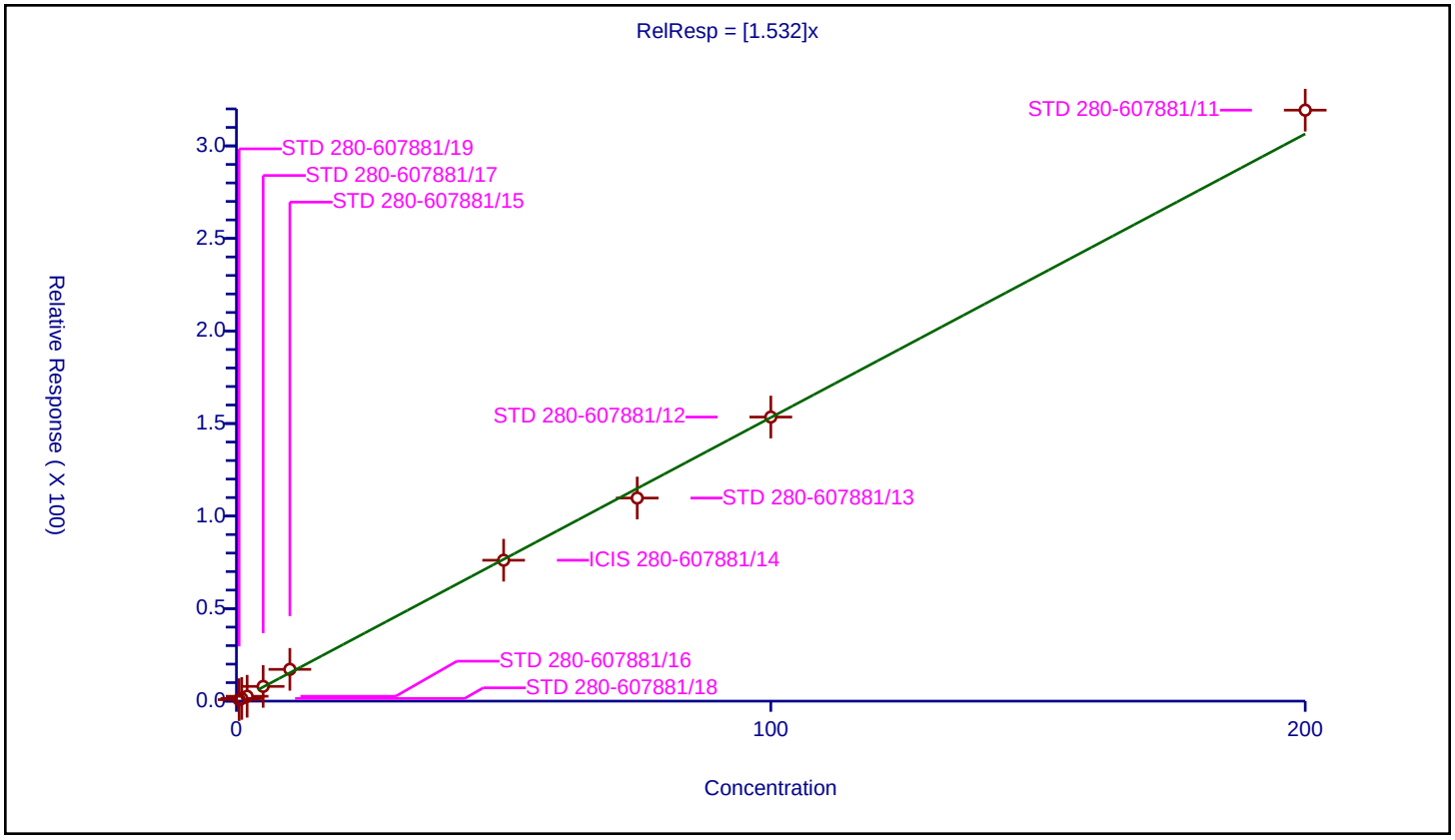
Curve Coefficients

Intercept:	0
Slope:	1.532

Error Coefficients

Standard Error:	957000
Relative Standard Error:	7.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.793883	50.0	310688.0	1.587767	Y
2	STD 280-607881/18	1.0	1.452255	50.0	303218.0	1.452255	Y
3	STD 280-607881/16	2.0	2.64604	50.0	311900.0	1.32302	Y
4	STD 280-607881/17	5.0	7.969924	50.0	312939.0	1.593985	Y
5	STD 280-607881/15	10.0	17.173361	50.0	319160.0	1.717336	Y
6	ICIS 280-607881/14	50.0	76.138415	50.0	327912.0	1.522768	Y
7	STD 280-607881/13	75.0	109.738876	50.0	345430.0	1.463185	Y
8	STD 280-607881/12	100.0	153.496583	50.0	350056.0	1.534966	Y
9	STD 280-607881/11	200.0	319.322719	50.0	361445.0	1.596614	Y



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Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

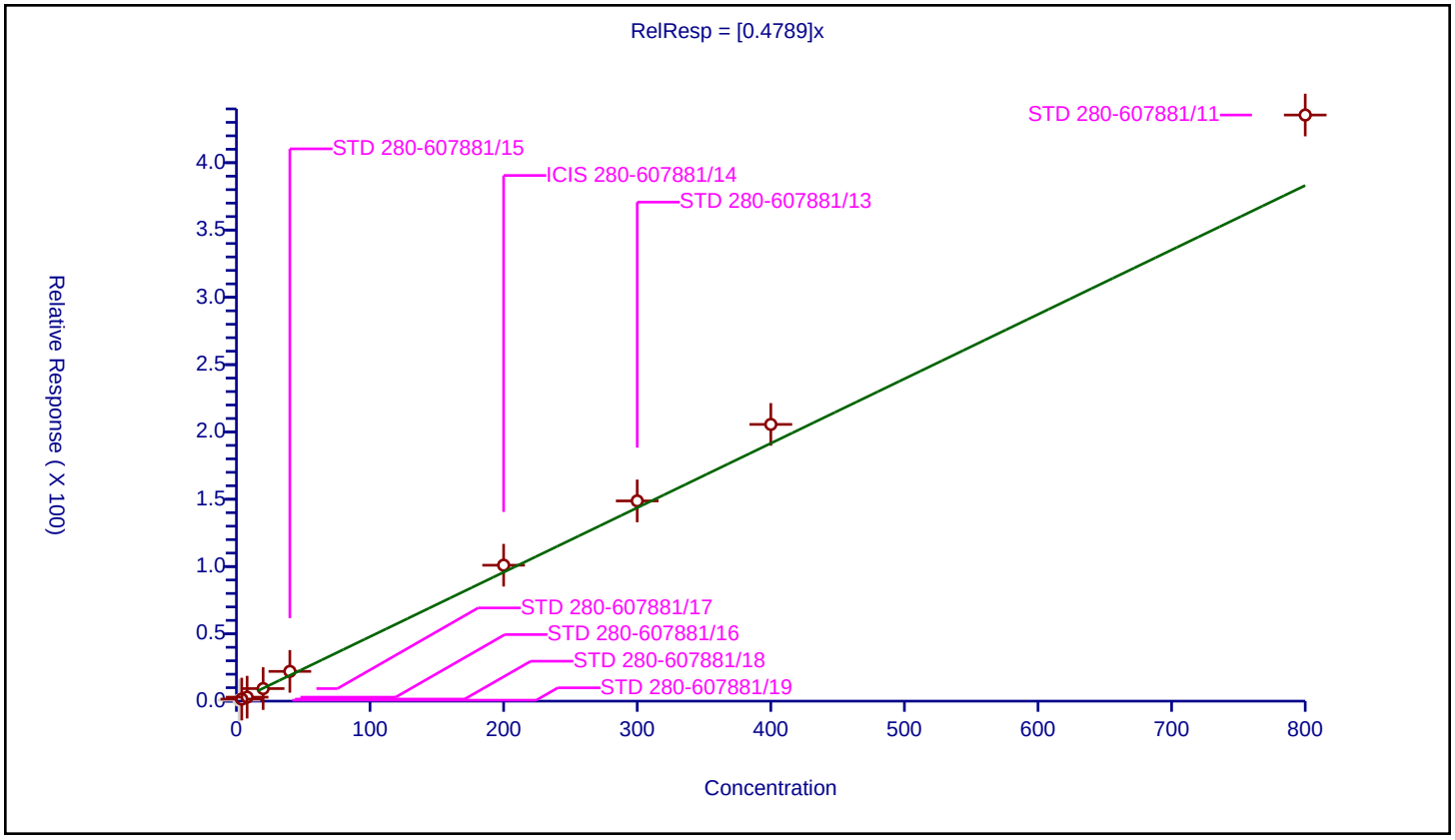
Curve Coefficients

Intercept:	0
Slope:	0.4789

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	14.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	2.0	0.721463	50.0	310688.0	0.360732	N
2	STD 280-607881/18	4.0	1.530087	50.0	303218.0	0.382522	Y
3	STD 280-607881/16	8.0	2.962328	50.0	311900.0	0.370291	Y
4	STD 280-607881/17	20.0	9.325779	50.0	312939.0	0.466289	Y
5	STD 280-607881/15	40.0	22.118373	50.0	319160.0	0.552959	Y
6	ICIS 280-607881/14	200.0	100.984105	50.0	327912.0	0.504921	Y
7	STD 280-607881/13	300.0	148.747214	50.0	345430.0	0.495824	Y
8	STD 280-607881/12	400.0	205.593248	50.0	350056.0	0.513983	Y
9	STD 280-607881/11	800.0	435.454495	50.0	361445.0	0.544318	Y



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Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

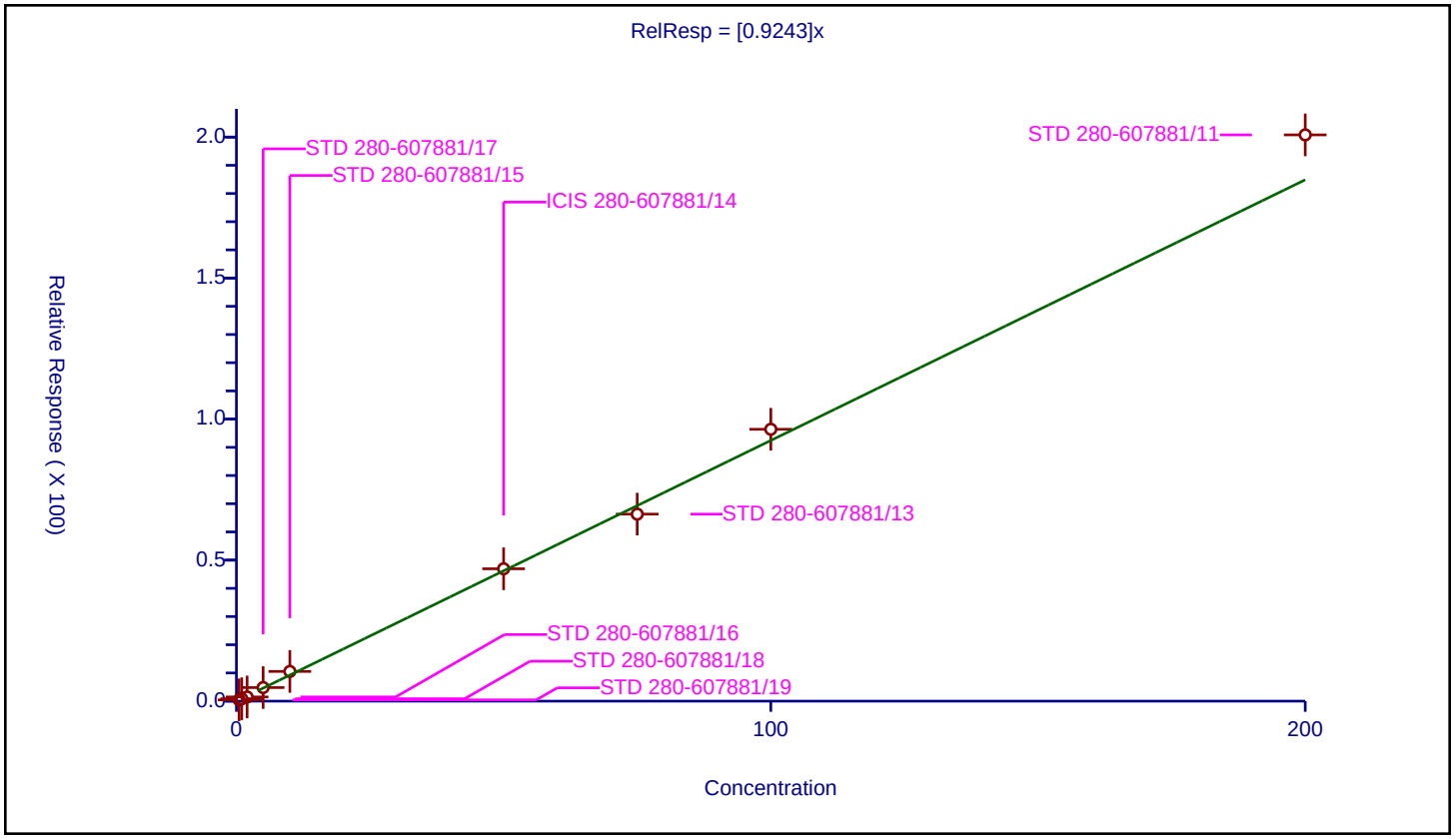
Curve Coefficients

Intercept:	0
Slope:	0.9243

Error Coefficients

Standard Error:	599000
Relative Standard Error:	9.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.453188	50.0	310688.0	0.906376	Y
2	STD 280-607881/18	1.0	0.859283	50.0	303218.0	0.859283	Y
3	STD 280-607881/16	2.0	1.491343	50.0	311900.0	0.745672	Y
4	STD 280-607881/17	5.0	4.815475	50.0	312939.0	0.963095	Y
5	STD 280-607881/15	10.0	10.534841	50.0	319160.0	1.053484	Y
6	ICIS 280-607881/14	50.0	46.927072	50.0	327912.0	0.938541	Y
7	STD 280-607881/13	75.0	66.31054	50.0	345430.0	0.884141	Y
8	STD 280-607881/12	100.0	96.399576	50.0	350056.0	0.963996	Y
9	STD 280-607881/11	200.0	200.782	50.0	361445.0	1.00391	Y



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Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

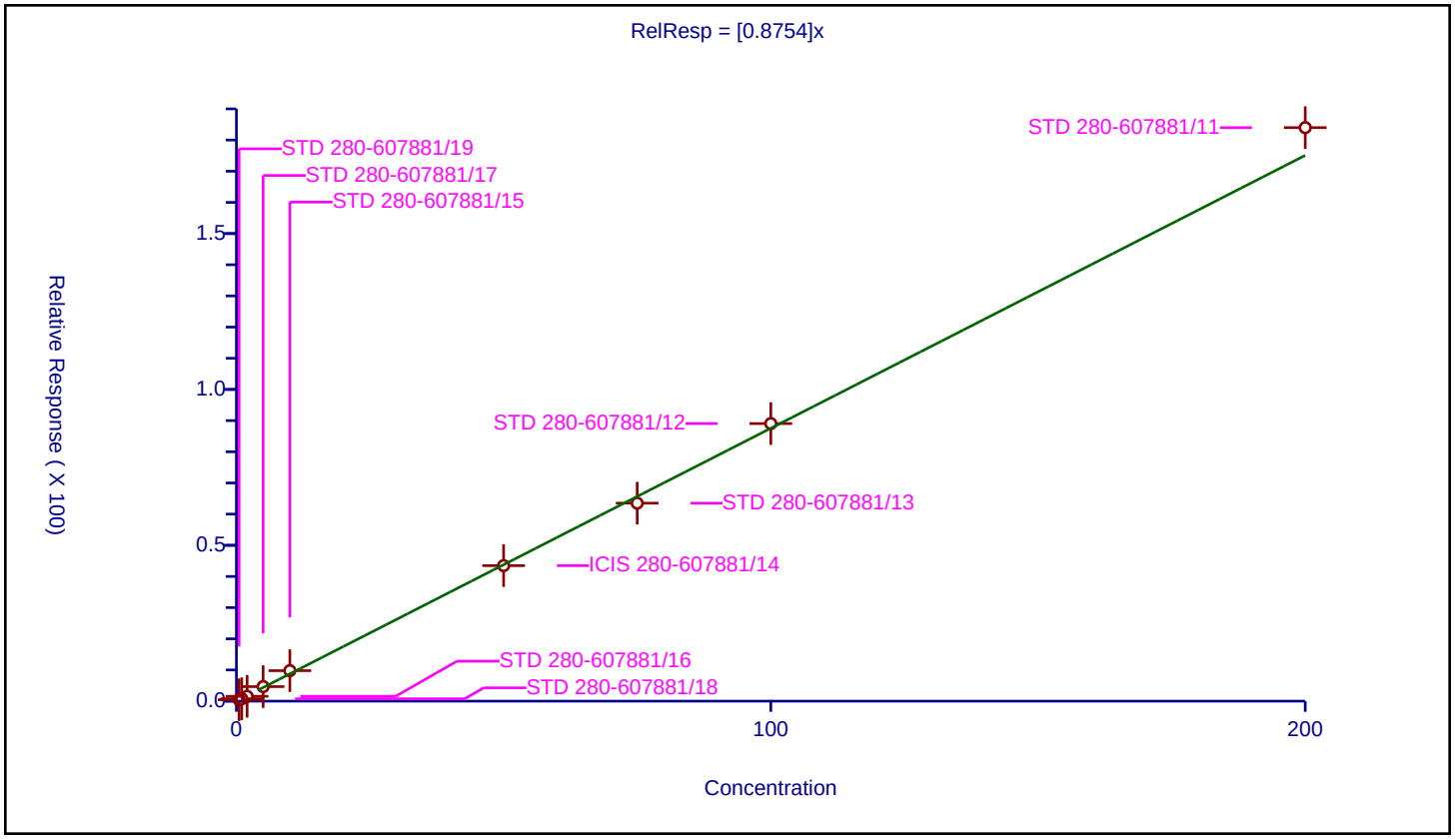
Curve Coefficients

Intercept:	0
Slope:	0.8754

Error Coefficients

Standard Error:	552000
Relative Standard Error:	7.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.447716	50.0	310688.0	0.895432	Y
2	STD 280-607881/18	1.0	0.7676	50.0	303218.0	0.7676	Y
3	STD 280-607881/16	2.0	1.556749	50.0	311900.0	0.778374	Y
4	STD 280-607881/17	5.0	4.663209	50.0	312939.0	0.932642	Y
5	STD 280-607881/15	10.0	9.781301	50.0	319160.0	0.97813	Y
6	ICIS 280-607881/14	50.0	43.467607	50.0	327912.0	0.869352	Y
7	STD 280-607881/13	75.0	63.513302	50.0	345430.0	0.846844	Y
8	STD 280-607881/12	100.0	89.050323	50.0	350056.0	0.890503	Y
9	STD 280-607881/11	200.0	183.98221	50.0	361445.0	0.919911	Y



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Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

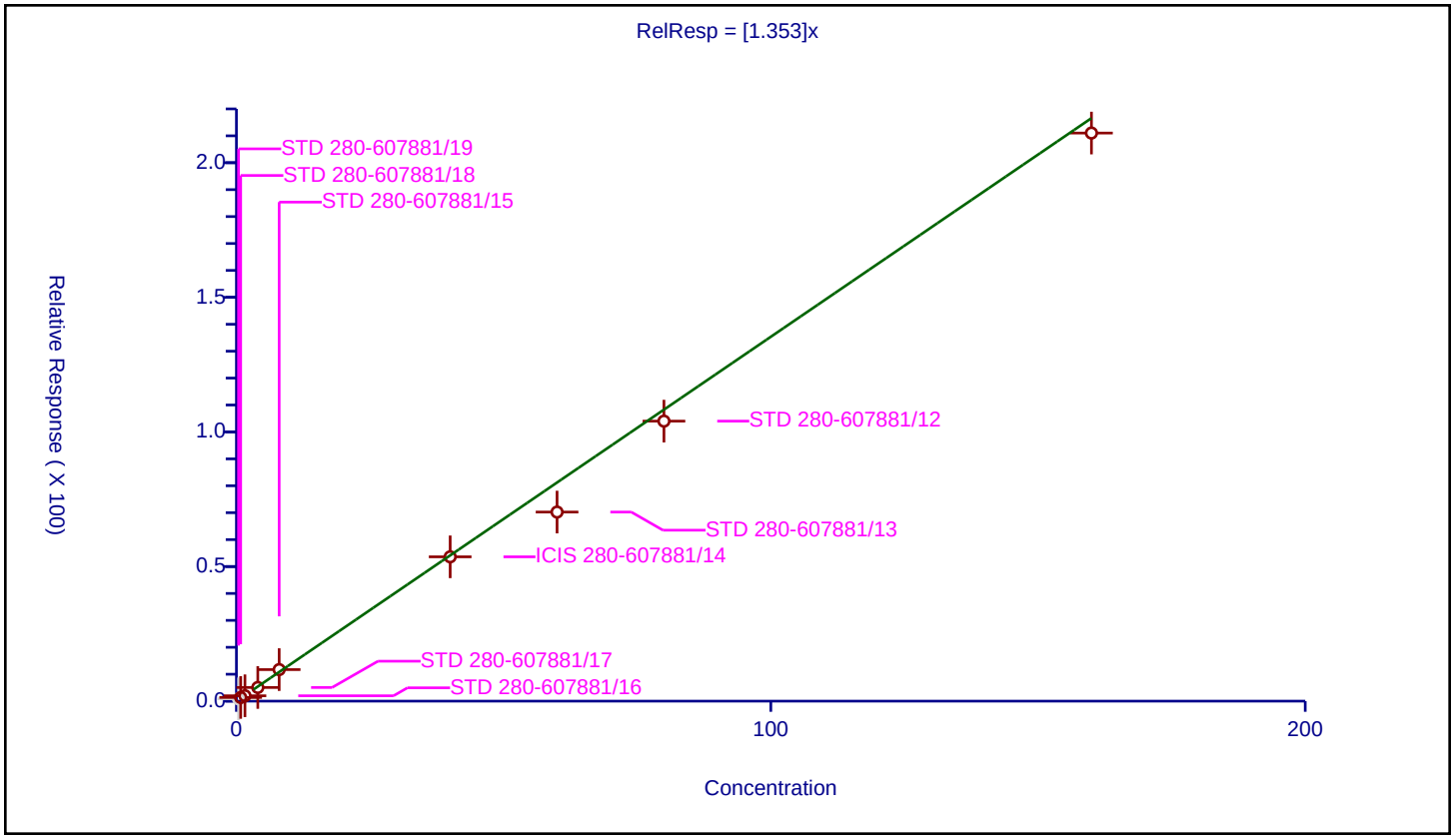
Curve Coefficients

Intercept:	0
Slope:	1.353

Error Coefficients

Standard Error:	678000
Relative Standard Error:	12.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.4	0.859866	50.0	310688.0	2.149665	N
2	STD 280-607881/18	0.8	1.373599	50.0	303218.0	1.716999	Y
3	STD 280-607881/16	1.6	1.996954	50.0	311900.0	1.248096	Y
4	STD 280-607881/17	4.0	5.070797	50.0	312939.0	1.267699	Y
5	STD 280-607881/15	8.0	11.71967	50.0	319160.0	1.464959	Y
6	ICIS 280-607881/14	40.0	53.608743	50.0	327912.0	1.340219	Y
7	STD 280-607881/13	60.0	70.235069	50.0	345430.0	1.170584	Y
8	STD 280-607881/12	80.0	104.014072	50.0	350056.0	1.300176	Y
9	STD 280-607881/11	160.0	211.026574	50.0	361445.0	1.318916	Y



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Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

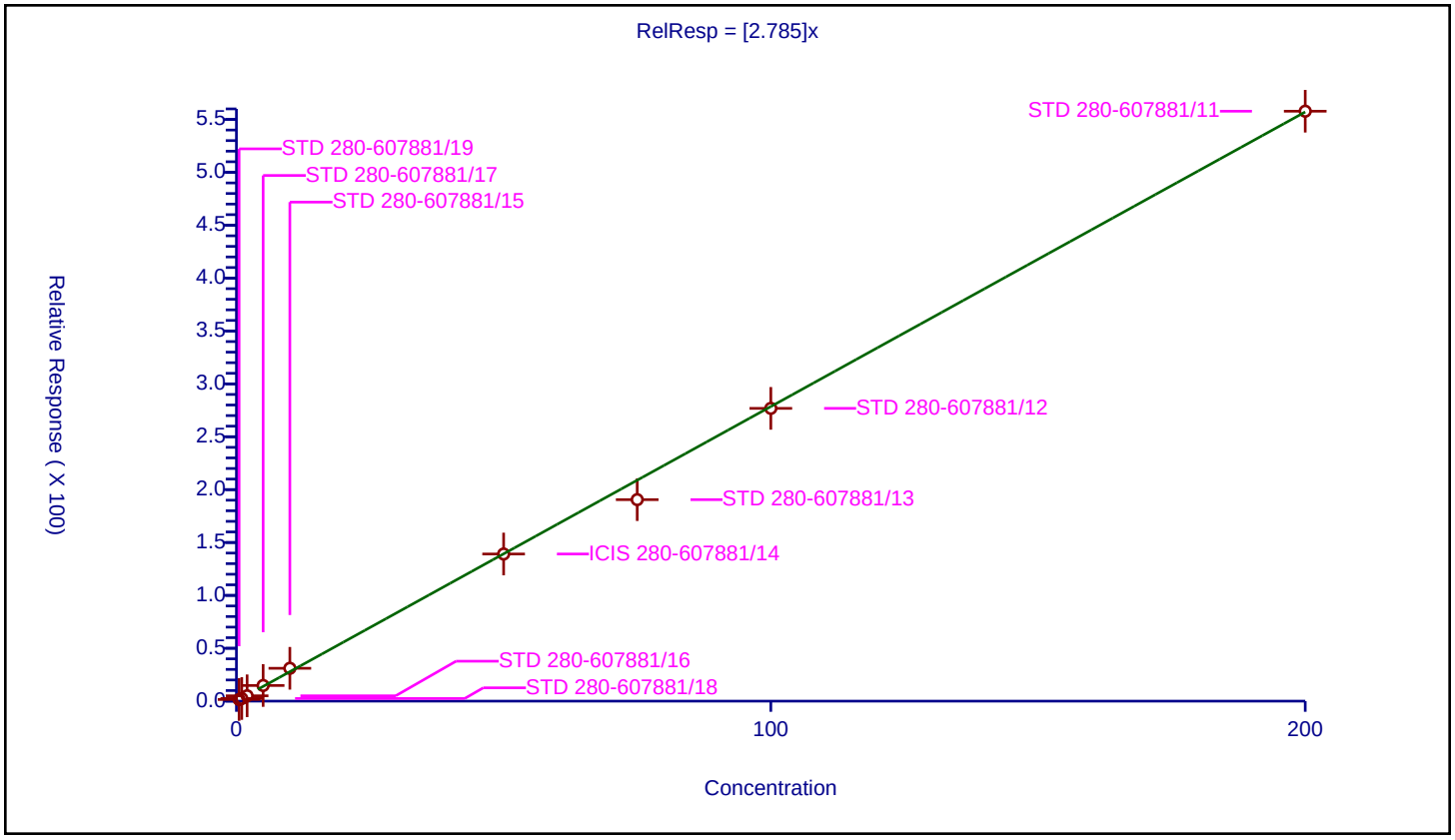
Curve Coefficients

Intercept:	0
Slope:	2.785

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	8.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.552522	50.0	310688.0	3.105044	Y
2	STD 280-607881/18	1.0	2.488968	50.0	303218.0	2.488968	Y
3	STD 280-607881/16	2.0	5.060276	50.0	311900.0	2.530138	Y
4	STD 280-607881/17	5.0	14.792979	50.0	312939.0	2.958596	Y
5	STD 280-607881/15	10.0	31.06279	50.0	319160.0	3.106279	Y
6	ICIS 280-607881/14	50.0	139.121624	50.0	327912.0	2.782432	Y
7	STD 280-607881/13	75.0	190.52355	50.0	345430.0	2.540314	Y
8	STD 280-607881/12	100.0	276.84042	50.0	350056.0	2.768404	Y
9	STD 280-607881/11	200.0	557.802709	50.0	361445.0	2.789014	Y



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Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

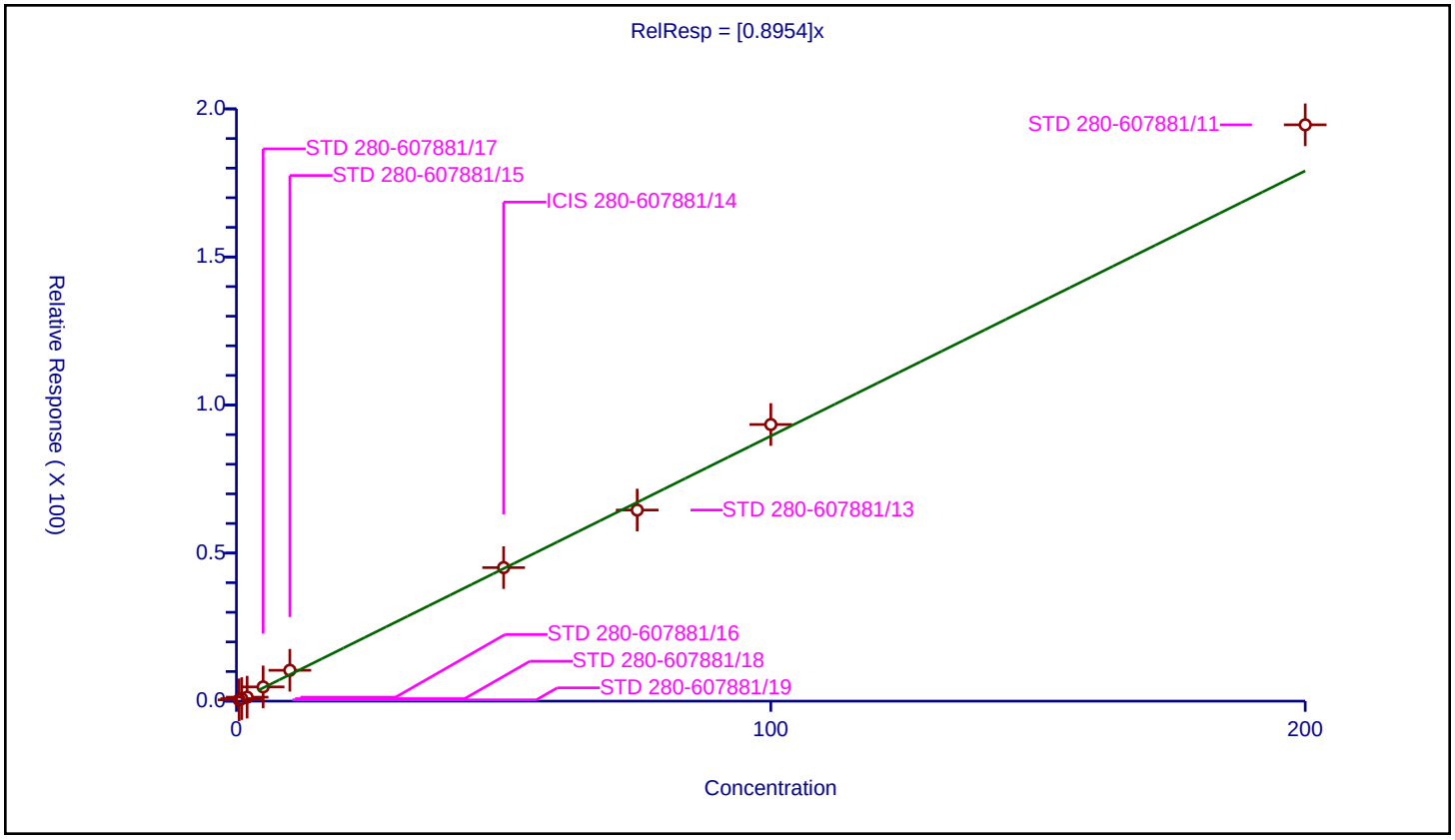
Curve Coefficients

Intercept:	0
Slope:	0.8954

Error Coefficients

Standard Error:	581000
Relative Standard Error:	11.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.432588	50.0	310688.0	0.865177	Y
2	STD 280-607881/18	1.0	0.84807	50.0	303218.0	0.84807	Y
3	STD 280-607881/16	2.0	1.344982	50.0	311900.0	0.672491	Y
4	STD 280-607881/17	5.0	4.80477	50.0	312939.0	0.960954	Y
5	STD 280-607881/15	10.0	10.420792	50.0	319160.0	1.042079	Y
6	ICIS 280-607881/14	50.0	45.092281	50.0	327912.0	0.901846	Y
7	STD 280-607881/13	75.0	64.528269	50.0	345430.0	0.860377	Y
8	STD 280-607881/12	100.0	93.420338	50.0	350056.0	0.934203	Y
9	STD 280-607881/11	200.0	194.624908	50.0	361445.0	0.973125	Y



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Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

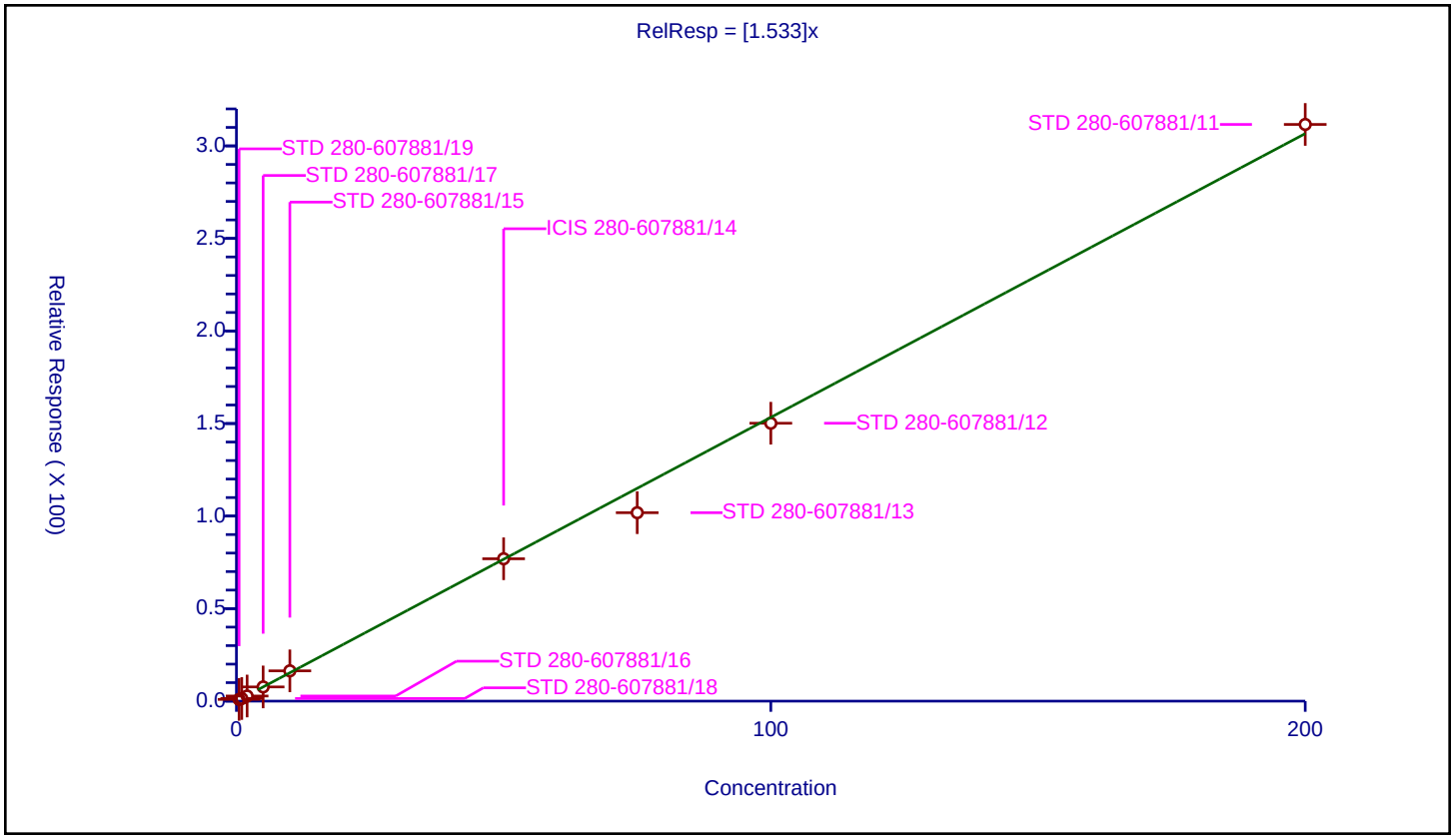
Curve Coefficients

Intercept:	0
Slope:	1.533

Error Coefficients

Standard Error:	931000
Relative Standard Error:	10.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.939206	50.0	310688.0	1.878412	Y
2	STD 280-607881/18	1.0	1.410371	50.0	303218.0	1.410371	Y
3	STD 280-607881/16	2.0	2.764508	50.0	311900.0	1.382254	Y
4	STD 280-607881/17	5.0	7.675458	50.0	312939.0	1.535092	Y
5	STD 280-607881/15	10.0	16.374546	50.0	319160.0	1.637455	Y
6	ICIS 280-607881/14	50.0	76.920942	50.0	327912.0	1.538419	Y
7	STD 280-607881/13	75.0	101.828156	50.0	345430.0	1.357709	Y
8	STD 280-607881/12	100.0	150.15826	50.0	350056.0	1.501583	Y
9	STD 280-607881/11	200.0	311.590145	50.0	361445.0	1.557951	Y



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Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

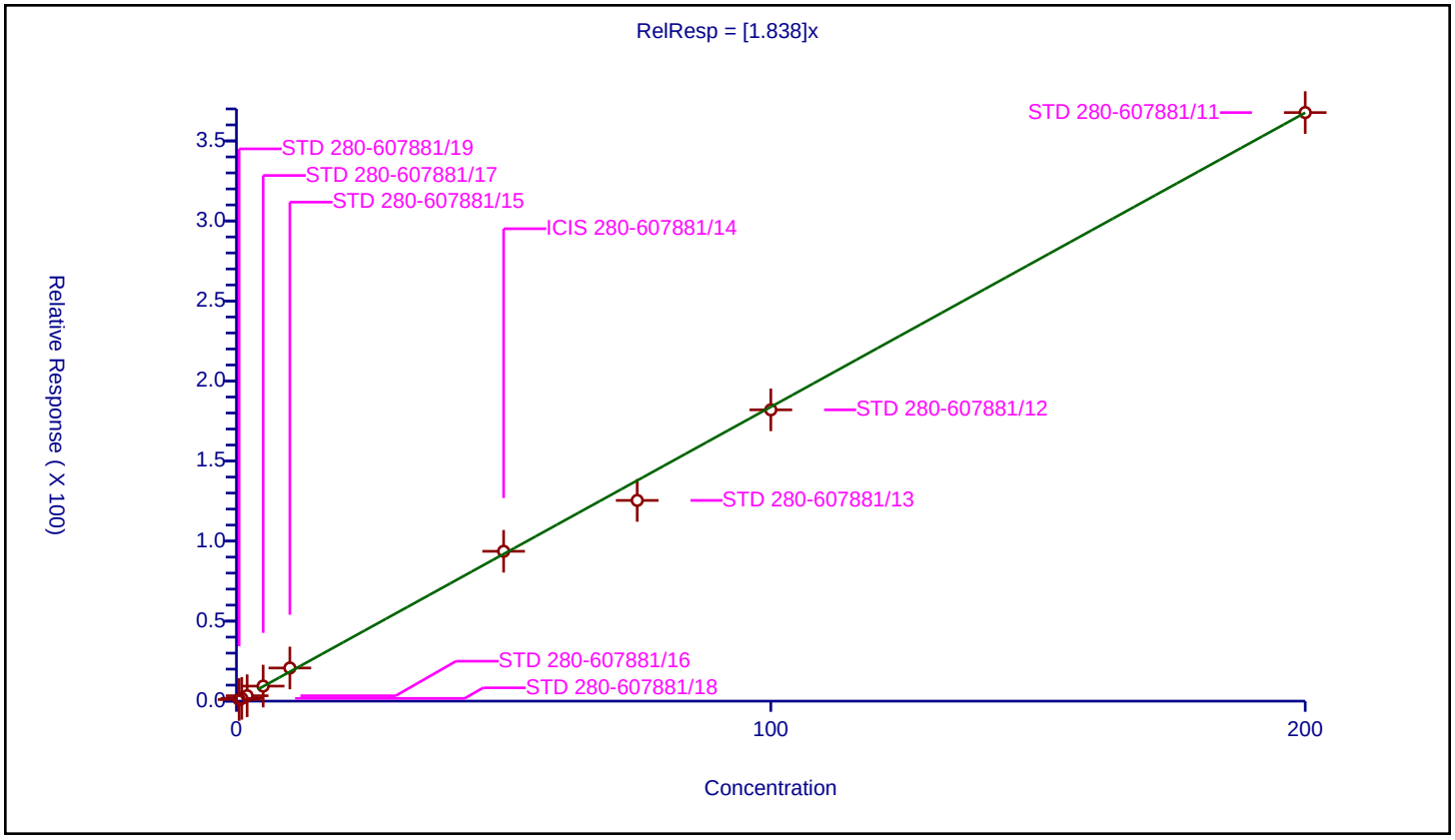
Curve Coefficients

Intercept:	0
Slope:	1.838

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	7.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.993923	50.0	310688.0	1.987846	Y
2	STD 280-607881/18	1.0	1.719225	50.0	303218.0	1.719225	Y
3	STD 280-607881/16	2.0	3.364861	50.0	311900.0	1.68243	Y
4	STD 280-607881/17	5.0	9.399595	50.0	312939.0	1.879919	Y
5	STD 280-607881/15	10.0	20.707482	50.0	319160.0	2.070748	Y
6	ICIS 280-607881/14	50.0	93.618105	50.0	327912.0	1.872362	Y
7	STD 280-607881/13	75.0	125.407608	50.0	345430.0	1.672101	Y
8	STD 280-607881/12	100.0	181.999309	50.0	350056.0	1.819993	Y
9	STD 280-607881/11	200.0	367.695362	50.0	361445.0	1.838477	Y



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Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

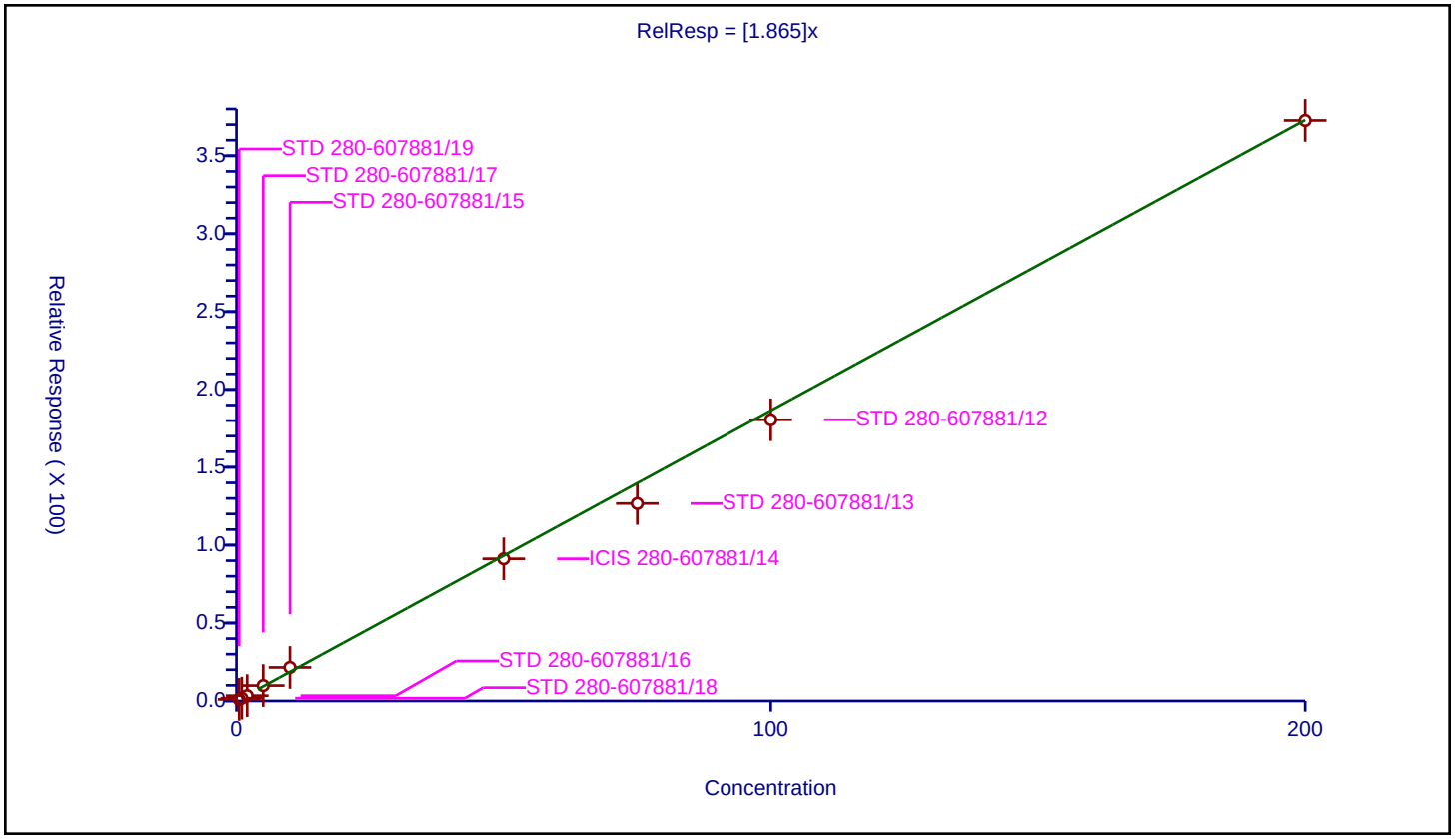
Curve Coefficients

Intercept:	0
Slope:	1.865

Error Coefficients

Standard Error:	1120000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.996981	50.0	310688.0	1.993962	Y
2	STD 280-607881/18	1.0	1.777599	50.0	303218.0	1.777599	Y
3	STD 280-607881/16	2.0	3.412151	50.0	311900.0	1.706076	Y
4	STD 280-607881/17	5.0	9.865501	50.0	312939.0	1.9731	Y
5	STD 280-607881/15	10.0	21.493765	50.0	319160.0	2.149376	Y
6	ICIS 280-607881/14	50.0	91.218528	50.0	327912.0	1.824371	Y
7	STD 280-607881/13	75.0	126.742321	50.0	345430.0	1.689898	Y
8	STD 280-607881/12	100.0	180.531258	50.0	350056.0	1.805313	Y
9	STD 280-607881/11	200.0	372.662922	50.0	361445.0	1.863315	Y



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Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

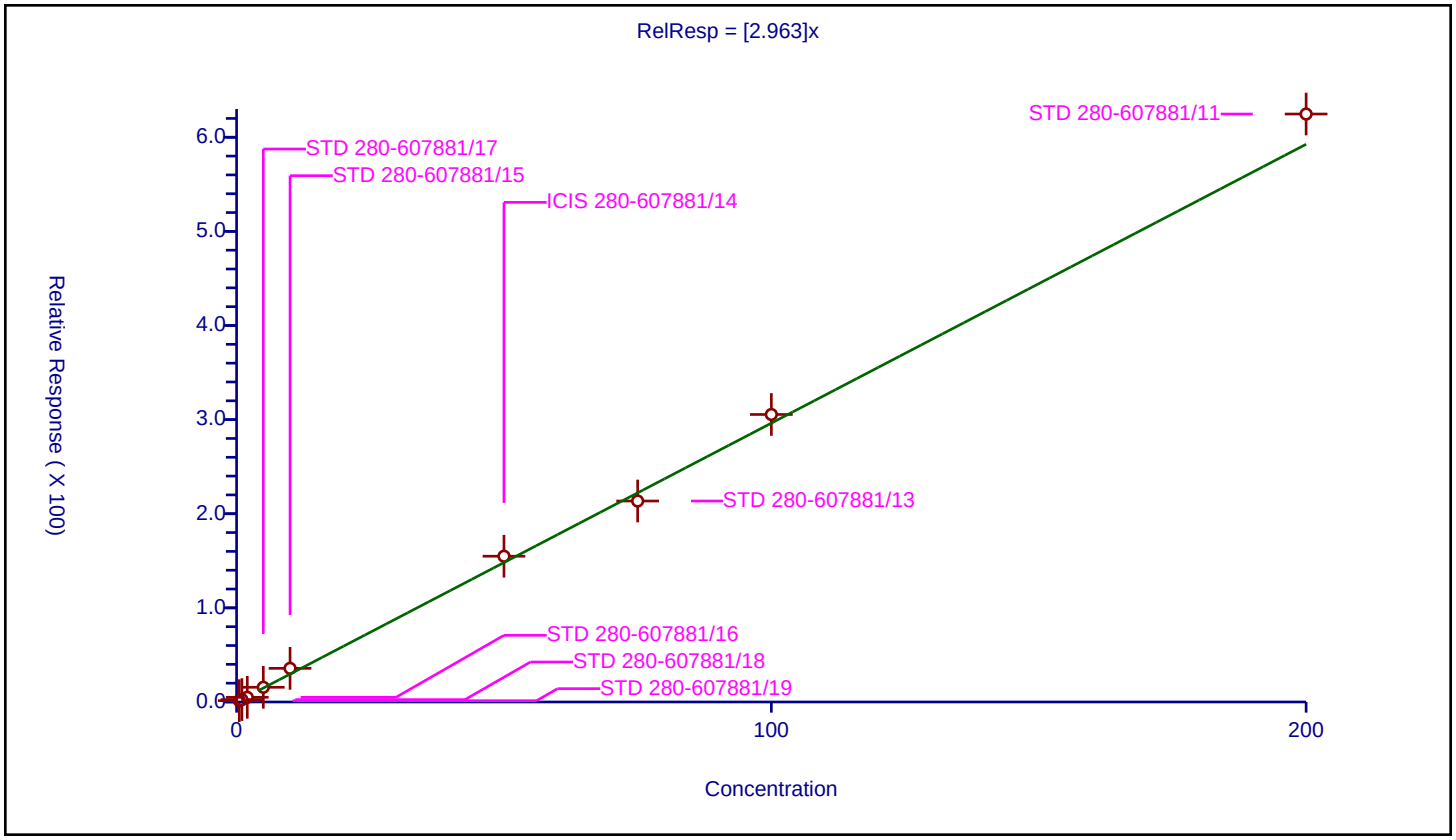
Curve Coefficients

Intercept:	0
Slope:	2.963

Error Coefficients

Standard Error:	1880000
Relative Standard Error:	11.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.405912	50.0	310688.0	2.811824	Y
2	STD 280-607881/18	1.0	2.548661	50.0	303218.0	2.548661	Y
3	STD 280-607881/16	2.0	4.964091	50.0	311900.0	2.482046	Y
4	STD 280-607881/17	5.0	15.622374	50.0	312939.0	3.124475	Y
5	STD 280-607881/15	10.0	35.752131	50.0	319160.0	3.575213	Y
6	ICIS 280-607881/14	50.0	154.881035	50.0	327912.0	3.097621	Y
7	STD 280-607881/13	75.0	213.518947	50.0	345430.0	2.846919	Y
8	STD 280-607881/12	100.0	305.451128	50.0	350056.0	3.054511	Y
9	STD 280-607881/11	200.0	624.661567	50.0	361445.0	3.123308	Y



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Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

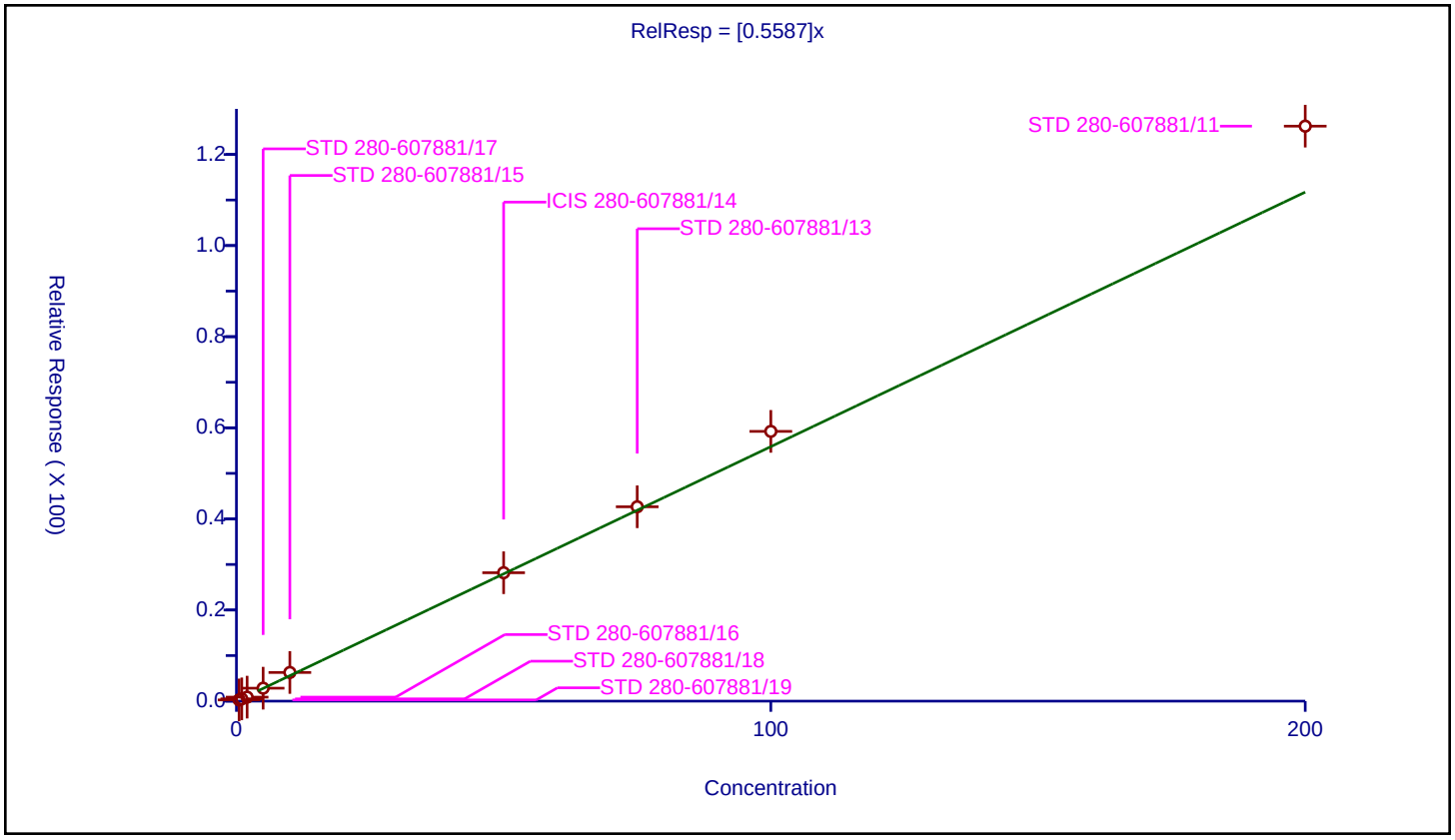
Curve Coefficients

Intercept:	0
Slope:	0.5587

Error Coefficients

Standard Error:	375000
Relative Standard Error:	10.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.266505	50.0	310688.0	0.533011	Y
2	STD 280-607881/18	1.0	0.501454	50.0	303218.0	0.501454	Y
3	STD 280-607881/16	2.0	0.878166	50.0	311900.0	0.439083	Y
4	STD 280-607881/17	5.0	2.845443	50.0	312939.0	0.569089	Y
5	STD 280-607881/15	10.0	6.295275	50.0	319160.0	0.629528	Y
6	ICIS 280-607881/14	50.0	28.188203	50.0	327912.0	0.563764	Y
7	STD 280-607881/13	75.0	42.662189	50.0	345430.0	0.568829	Y
8	STD 280-607881/12	100.0	59.213954	50.0	350056.0	0.59214	Y
9	STD 280-607881/11	200.0	126.212563	50.0	361445.0	0.631063	Y



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Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

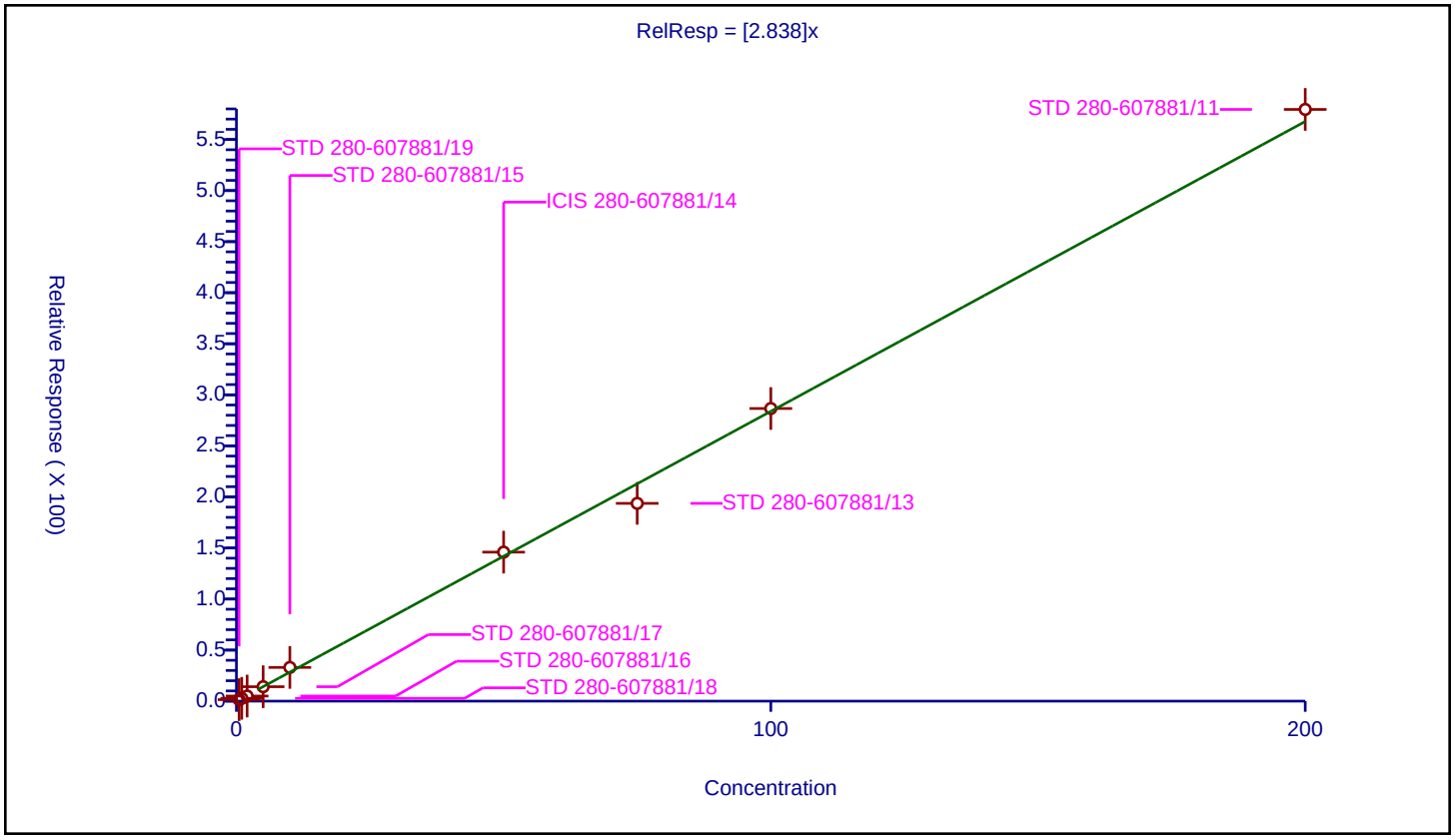
Curve Coefficients

Intercept:	0
Slope:	2.838

Error Coefficients

Standard Error:	2670000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.446778	50.0	484663.0	2.893557	Y
2	STD 280-607881/18	1.0	2.760102	50.0	476794.0	2.760102	Y
3	STD 280-607881/16	2.0	4.997821	50.0	484201.0	2.498911	Y
4	STD 280-607881/17	5.0	14.136597	50.0	487009.0	2.827319	Y
5	STD 280-607881/15	10.0	33.008502	50.0	505647.0	3.30085	Y
6	ICIS 280-607881/14	50.0	145.909681	50.0	509618.0	2.918194	Y
7	STD 280-607881/13	75.0	193.682517	50.0	534485.0	2.582434	Y
8	STD 280-607881/12	100.0	286.592538	50.0	538480.0	2.865925	Y
9	STD 280-607881/11	200.0	579.472986	50.0	552718.0	2.897365	Y



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Calibration / Cyclohexanone

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

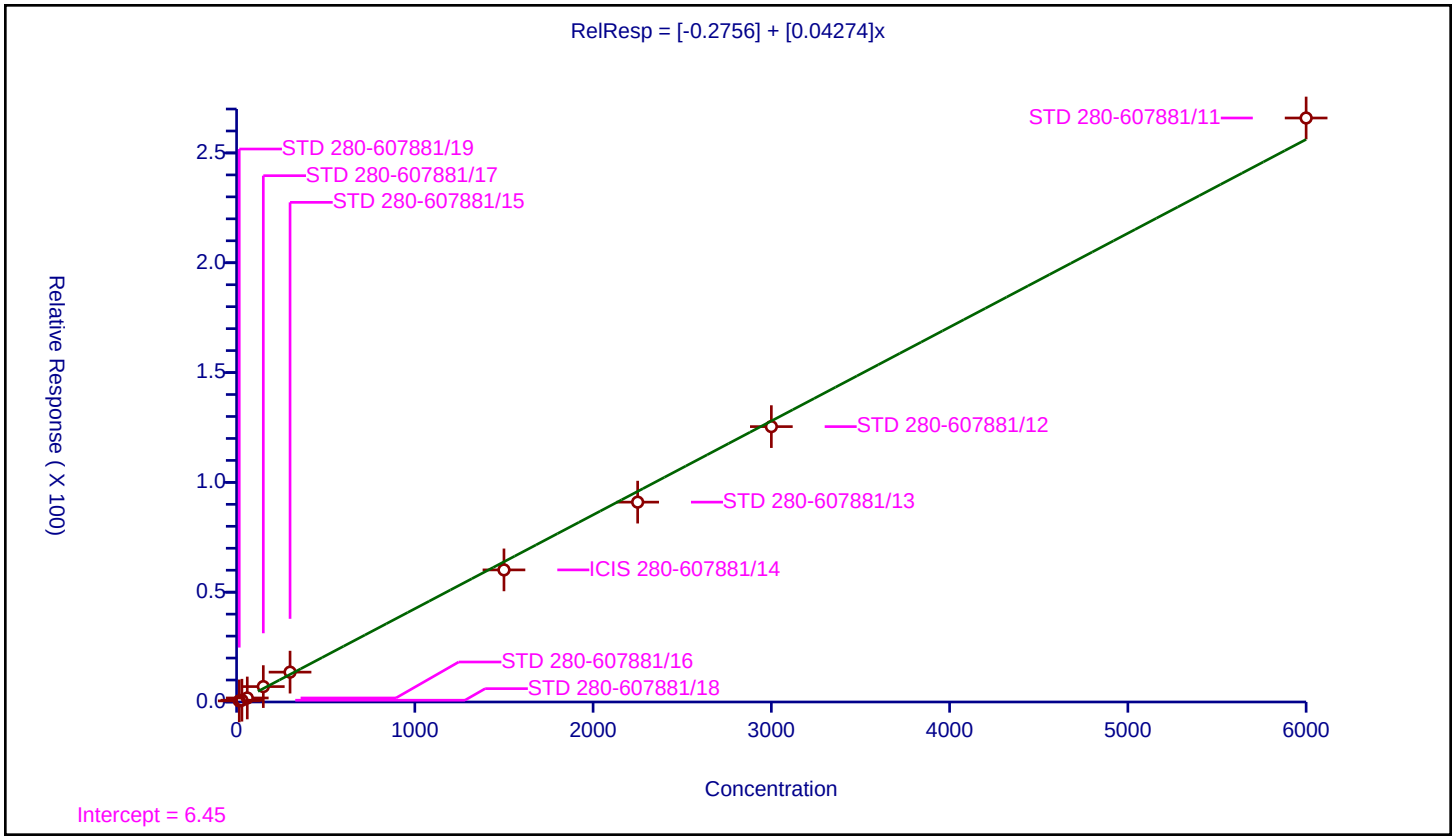
Curve Coefficients

Intercept:	-0.2756
Slope:	0.04274

Error Coefficients

Standard Error:	847000
Relative Standard Error:	13.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	15.0	0.501307	50.0	310688.0	0.03342	Y
2	STD 280-607881/18	30.0	0.801733	50.0	303218.0	0.026724	Y
3	STD 280-607881/16	60.0	1.827669	50.0	311900.0	0.030461	Y
4	STD 280-607881/17	150.0	7.012709	50.0	312939.0	0.046751	Y
5	STD 280-607881/15	300.0	13.589266	50.0	319160.0	0.045298	Y
6	ICIS 280-607881/14	1500.0	60.140373	50.0	327912.0	0.040094	Y
7	STD 280-607881/13	2250.0	90.994847	50.0	345430.0	0.040442	Y
8	STD 280-607881/12	3000.0	125.39008	50.0	350056.0	0.041797	Y
9	STD 280-607881/11	6000.0	265.909751	50.0	361445.0	0.044318	Y



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Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

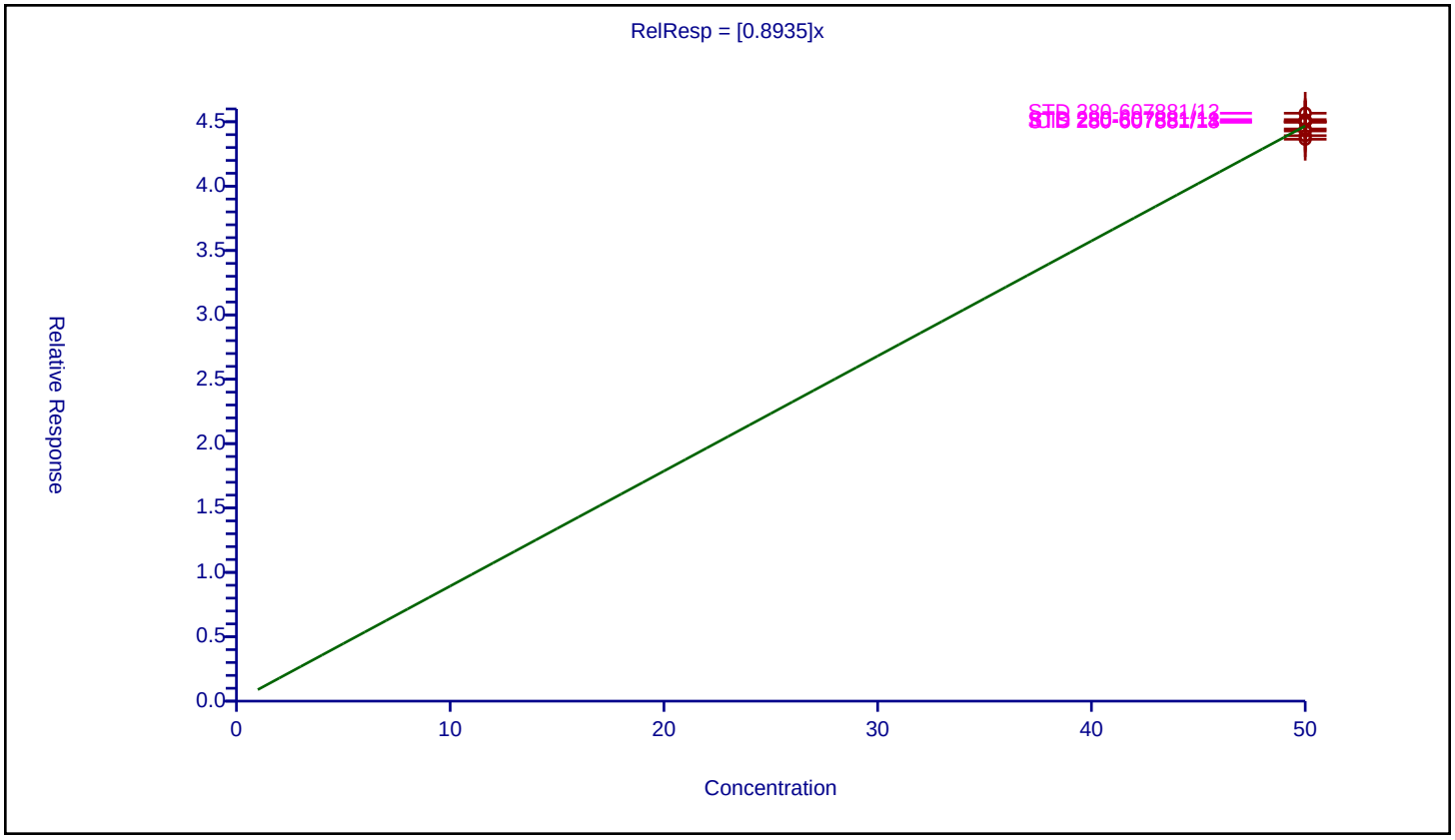
Curve Coefficients

Intercept:	0
Slope:	0.8935

Error Coefficients

Standard Error:	483000
Relative Standard Error:	1.5
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/11	50.0	45.166794	50.0	552718.0	0.903336	Y
2	STD 280-607881/12	50.0	45.664463	50.0	538480.0	0.913289	Y
3	STD 280-607881/13	50.0	44.974321	50.0	534485.0	0.899486	Y
4	ICIS 280-607881/14	50.0	44.980848	50.0	509618.0	0.899617	Y
5	STD 280-607881/15	50.0	43.640919	50.0	505647.0	0.872818	Y
6	STD 280-607881/16	50.0	44.441874	50.0	484201.0	0.888837	Y
7	STD 280-607881/17	50.0	44.2845	50.0	487009.0	0.88569	Y
8	STD 280-607881/18	50.0	45.016506	50.0	476794.0	0.90033	Y
9	STD 280-607881/19	50.0	43.921756	50.0	484663.0	0.878435	Y



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Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

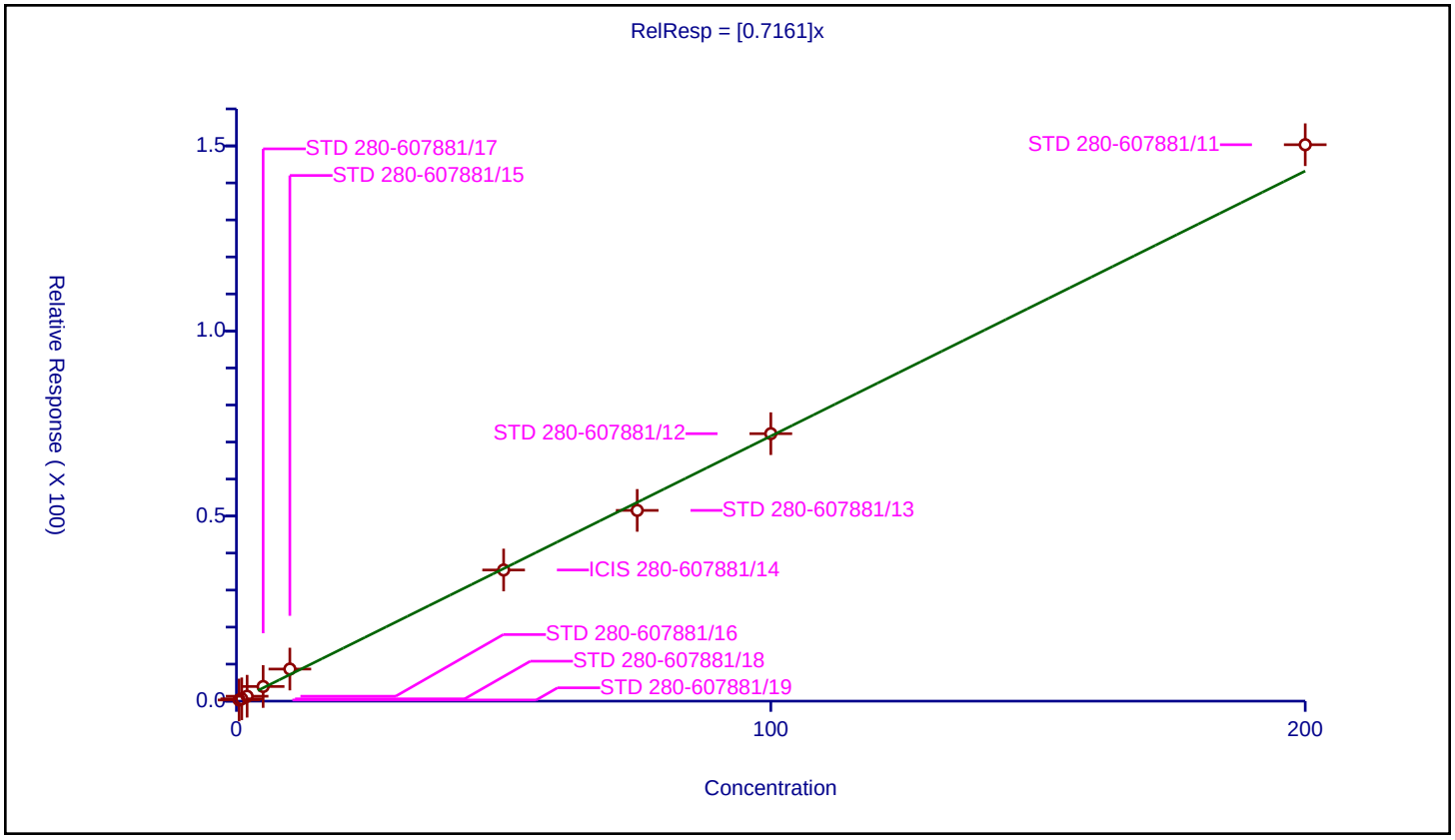
Curve Coefficients

Intercept:	0
Slope:	0.7161

Error Coefficients

Standard Error:	690000
Relative Standard Error:	10.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.315064	50.0	484663.0	0.630129	Y
2	STD 280-607881/18	1.0	0.624798	50.0	476794.0	0.624798	Y
3	STD 280-607881/16	2.0	1.325276	50.0	484201.0	0.662638	Y
4	STD 280-607881/17	5.0	3.95157	50.0	487009.0	0.790314	Y
5	STD 280-607881/15	10.0	8.670278	50.0	505647.0	0.867028	Y
6	ICIS 280-607881/14	50.0	35.423592	50.0	509618.0	0.708472	Y
7	STD 280-607881/13	75.0	51.529697	50.0	534485.0	0.687063	Y
8	STD 280-607881/12	100.0	72.259973	50.0	538480.0	0.7226	Y
9	STD 280-607881/11	200.0	150.320597	50.0	552718.0	0.751603	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

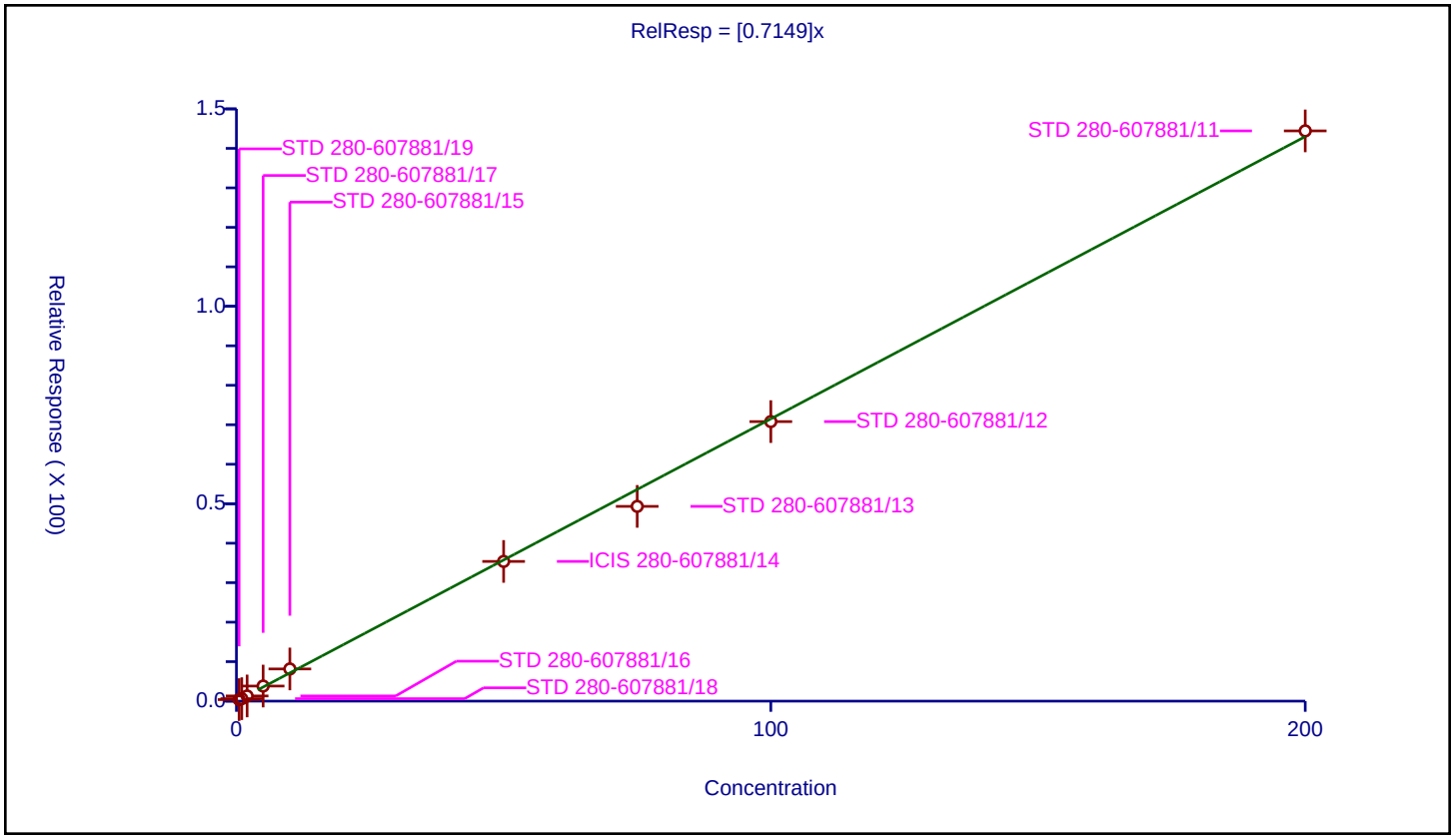
Curve Coefficients

Intercept:	0
Slope:	0.7149

Error Coefficients

Standard Error:	666000
Relative Standard Error:	8.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.388311	50.0	484663.0	0.776622	Y
2	STD 280-607881/18	1.0	0.626266	50.0	476794.0	0.626266	Y
3	STD 280-607881/16	2.0	1.312678	50.0	484201.0	0.656339	Y
4	STD 280-607881/17	5.0	3.823646	50.0	487009.0	0.764729	Y
5	STD 280-607881/15	10.0	8.148966	50.0	505647.0	0.814897	Y
6	ICIS 280-607881/14	50.0	35.38366	50.0	509618.0	0.707673	Y
7	STD 280-607881/13	75.0	49.330477	50.0	534485.0	0.65774	Y
8	STD 280-607881/12	100.0	70.801701	50.0	538480.0	0.708017	Y
9	STD 280-607881/11	200.0	144.428985	50.0	552718.0	0.722145	Y



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Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

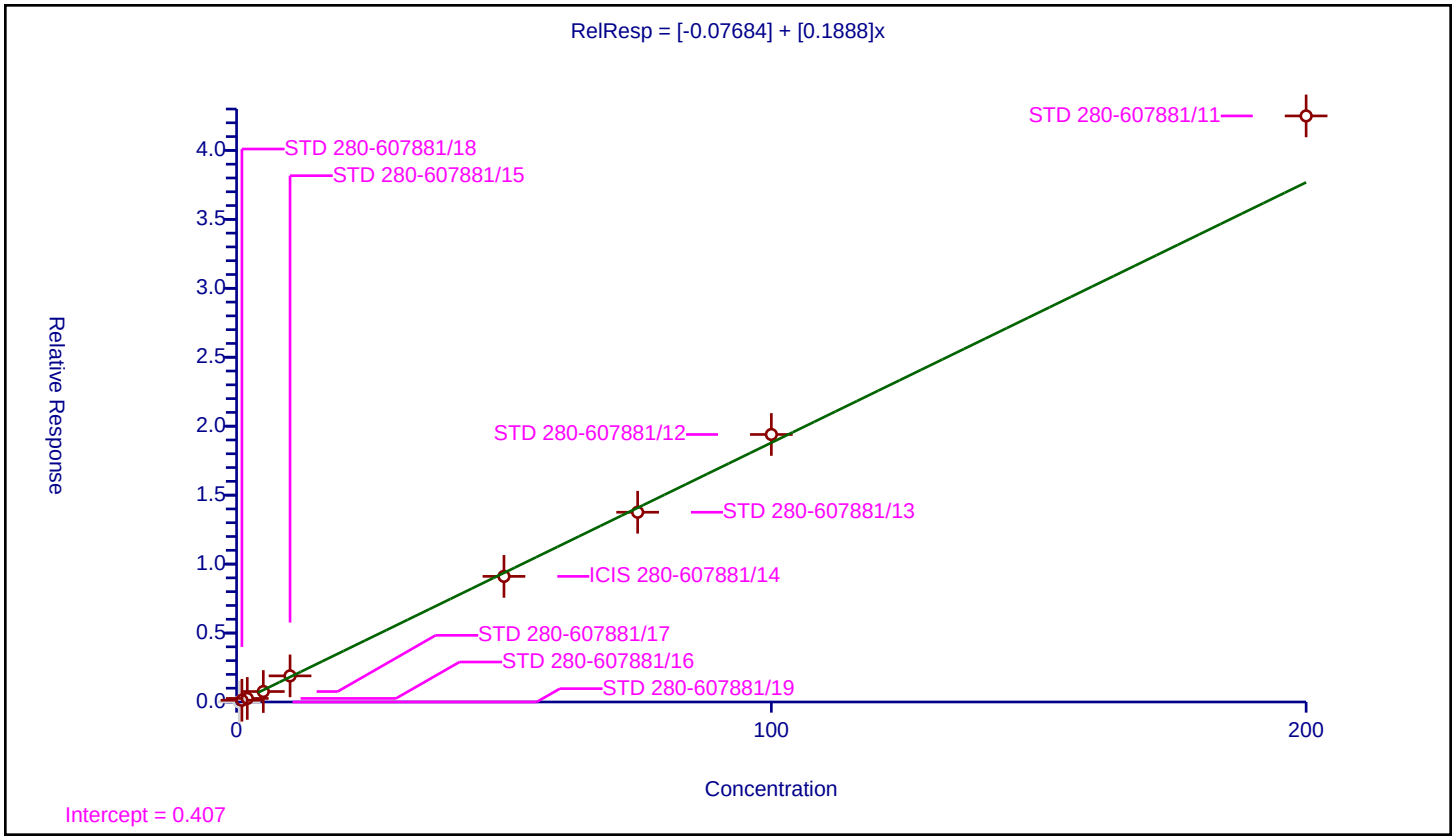
Curve Coefficients

Intercept:	-0.07684
Slope:	0.1888

Error Coefficients

Standard Error:	222000
Relative Standard Error:	9.3
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.0	50.0	484663.0	0.0	N
2	STD 280-607881/18	1.0	0.12626	50.0	476794.0	0.12626	Y
3	STD 280-607881/16	2.0	0.257331	50.0	484201.0	0.128666	Y
4	STD 280-607881/17	5.0	0.759329	50.0	487009.0	0.151866	Y
5	STD 280-607881/15	10.0	1.893515	50.0	505647.0	0.189351	Y
6	ICIS 280-607881/14	50.0	9.108293	50.0	509618.0	0.182166	Y
7	STD 280-607881/13	75.0	13.760162	50.0	534485.0	0.183469	Y
8	STD 280-607881/12	100.0	19.398863	50.0	538480.0	0.193989	Y
9	STD 280-607881/11	200.0	42.498525	50.0	552718.0	0.212493	Y



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Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

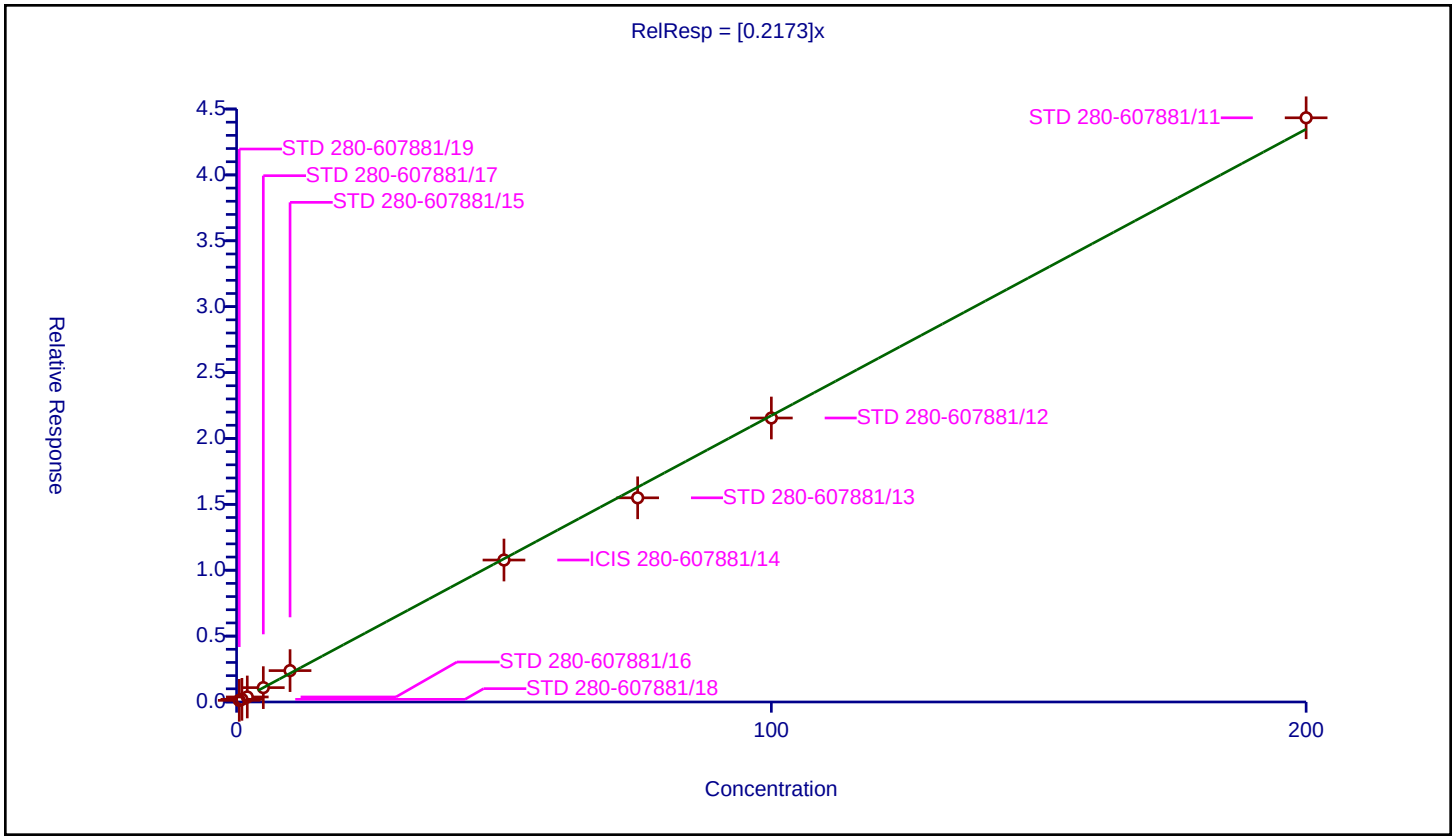
Curve Coefficients

Intercept:	0
Slope:	0.2173

Error Coefficients

Standard Error:	204000
Relative Standard Error:	8.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.124932	50.0	484663.0	0.249864	Y
2	STD 280-607881/18	1.0	0.200401	50.0	476794.0	0.200401	Y
3	STD 280-607881/16	2.0	0.381247	50.0	484201.0	0.190623	Y
4	STD 280-607881/17	5.0	1.08961	50.0	487009.0	0.217922	Y
5	STD 280-607881/15	10.0	2.380514	50.0	505647.0	0.238051	Y
6	ICIS 280-607881/14	50.0	10.773265	50.0	509618.0	0.215465	Y
7	STD 280-607881/13	75.0	15.494916	50.0	534485.0	0.206599	Y
8	STD 280-607881/12	100.0	21.551497	50.0	538480.0	0.215515	Y
9	STD 280-607881/11	200.0	44.334	50.0	552718.0	0.22167	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

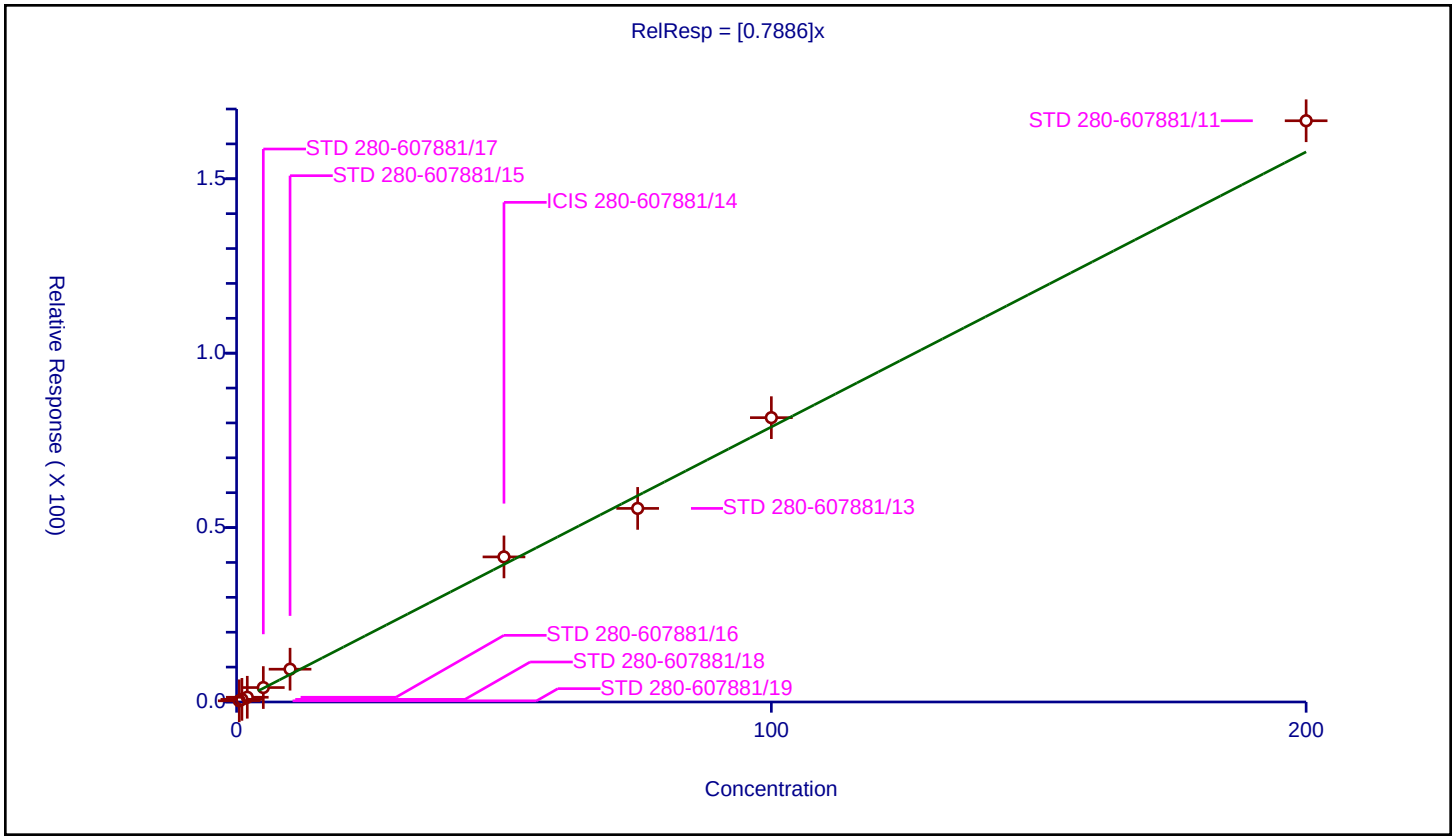
Curve Coefficients

Intercept:	0
Slope:	0.7886

Error Coefficients

Standard Error:	767000
Relative Standard Error:	10.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.337967	50.0	484663.0	0.675934	Y
2	STD 280-607881/18	1.0	0.755463	50.0	476794.0	0.755463	Y
3	STD 280-607881/16	2.0	1.356771	50.0	484201.0	0.678386	Y
4	STD 280-607881/17	5.0	4.138117	50.0	487009.0	0.827623	Y
5	STD 280-607881/15	10.0	9.396971	50.0	505647.0	0.939697	Y
6	ICIS 280-607881/14	50.0	41.589779	50.0	509618.0	0.831796	Y
7	STD 280-607881/13	75.0	55.501838	50.0	534485.0	0.740025	Y
8	STD 280-607881/12	100.0	81.515934	50.0	538480.0	0.815159	Y
9	STD 280-607881/11	200.0	166.635246	50.0	552718.0	0.833176	Y



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Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

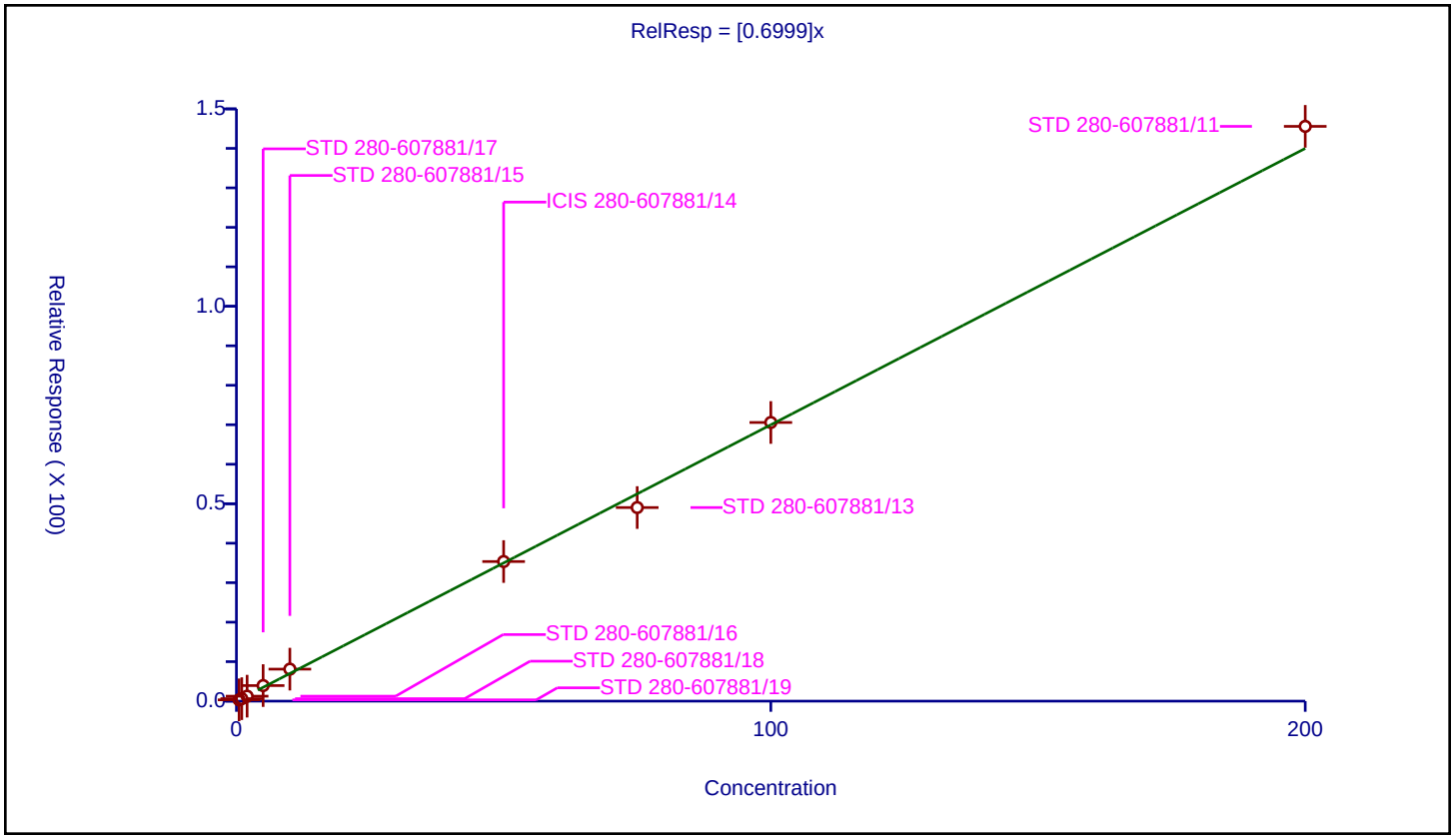
Curve Coefficients

Intercept:	0
Slope:	0.6999

Error Coefficients

Standard Error:	669000
Relative Standard Error:	9.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.324452	50.0	484663.0	0.648904	Y
2	STD 280-607881/18	1.0	0.625637	50.0	476794.0	0.625637	Y
3	STD 280-607881/16	2.0	1.26115	50.0	484201.0	0.630575	Y
4	STD 280-607881/17	5.0	3.944486	50.0	487009.0	0.788897	Y
5	STD 280-607881/15	10.0	8.105259	50.0	505647.0	0.810526	Y
6	ICIS 280-607881/14	50.0	35.358151	50.0	509618.0	0.707163	Y
7	STD 280-607881/13	75.0	49.033556	50.0	534485.0	0.653781	Y
8	STD 280-607881/12	100.0	70.577737	50.0	538480.0	0.705777	Y
9	STD 280-607881/11	200.0	145.577853	50.0	552718.0	0.727889	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

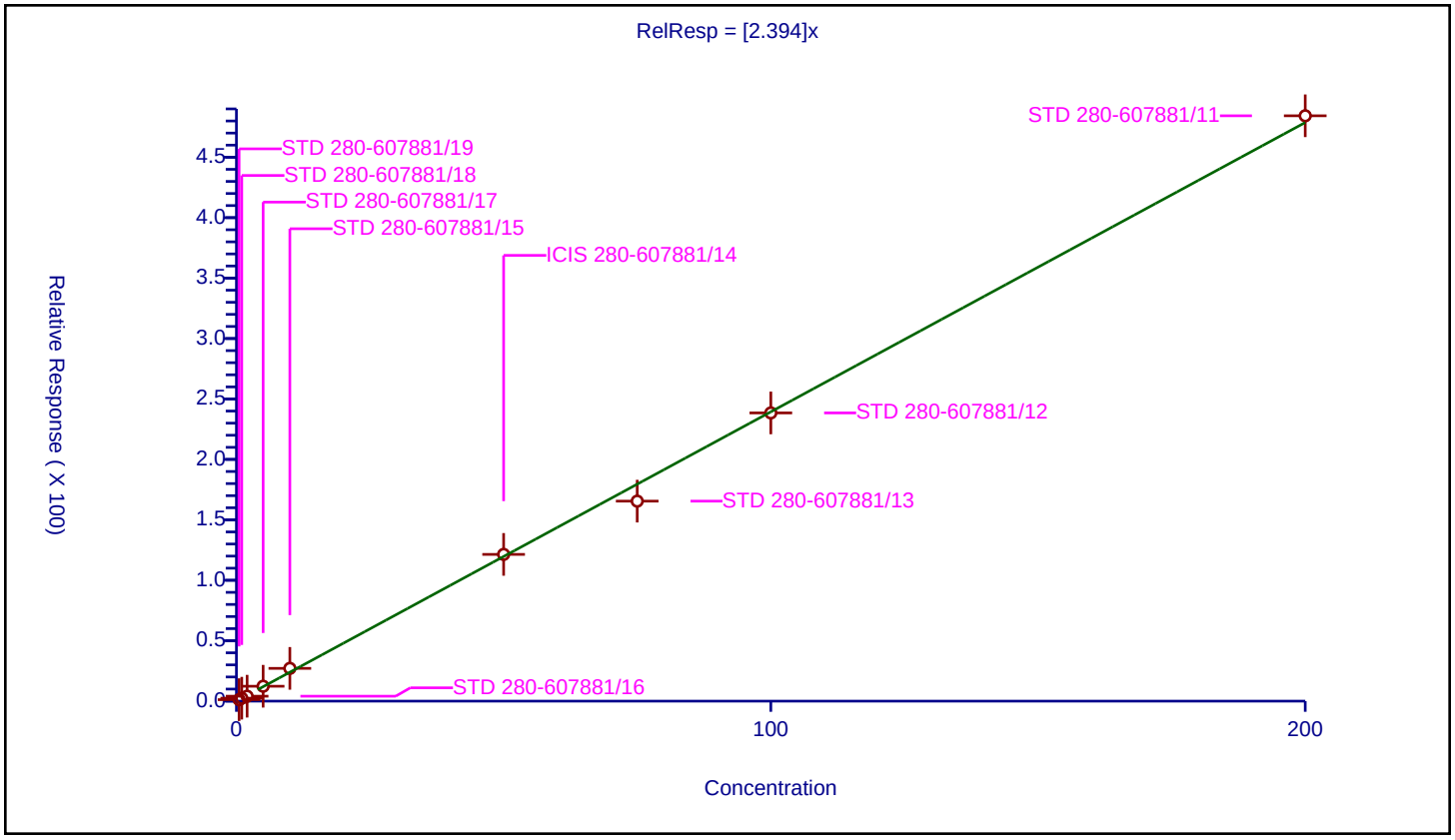
Curve Coefficients

Intercept:	0
Slope:	2.394

Error Coefficients

Standard Error:	2240000
Relative Standard Error:	7.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.229824	50.0	484663.0	2.459647	Y
2	STD 280-607881/18	1.0	2.424317	50.0	476794.0	2.424317	Y
3	STD 280-607881/16	2.0	4.080434	50.0	484201.0	2.040217	Y
4	STD 280-607881/17	5.0	12.332421	50.0	487009.0	2.466484	Y
5	STD 280-607881/15	10.0	27.110712	50.0	505647.0	2.711071	Y
6	ICIS 280-607881/14	50.0	121.411037	50.0	509618.0	2.428221	Y
7	STD 280-607881/13	75.0	165.483316	50.0	534485.0	2.206444	Y
8	STD 280-607881/12	100.0	238.450546	50.0	538480.0	2.384505	Y
9	STD 280-607881/11	200.0	484.290904	50.0	552718.0	2.421455	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

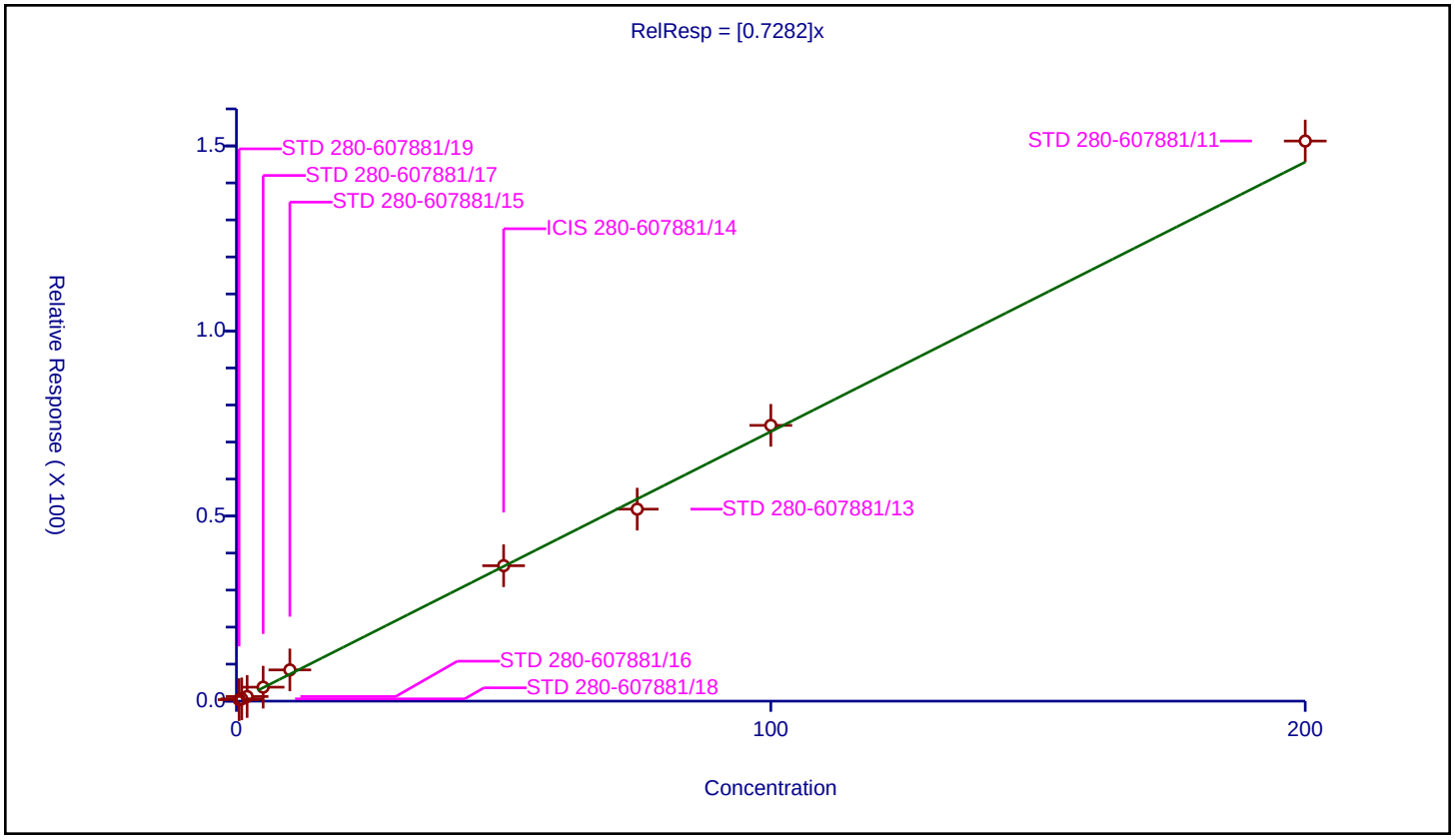
Curve Coefficients

Intercept:	0
Slope:	0.7282

Error Coefficients

Standard Error:	698000
Relative Standard Error:	10.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.395739	50.0	484663.0	0.791478	Y
2	STD 280-607881/18	1.0	0.613263	50.0	476794.0	0.613263	Y
3	STD 280-607881/16	2.0	1.249481	50.0	484201.0	0.624741	Y
4	STD 280-607881/17	5.0	3.776932	50.0	487009.0	0.755386	Y
5	STD 280-607881/15	10.0	8.436716	50.0	505647.0	0.843672	Y
6	ICIS 280-607881/14	50.0	36.587895	50.0	509618.0	0.731758	Y
7	STD 280-607881/13	75.0	51.867873	50.0	534485.0	0.691572	Y
8	STD 280-607881/12	100.0	74.502674	50.0	538480.0	0.745027	Y
9	STD 280-607881/11	200.0	151.321198	50.0	552718.0	0.756606	Y



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Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

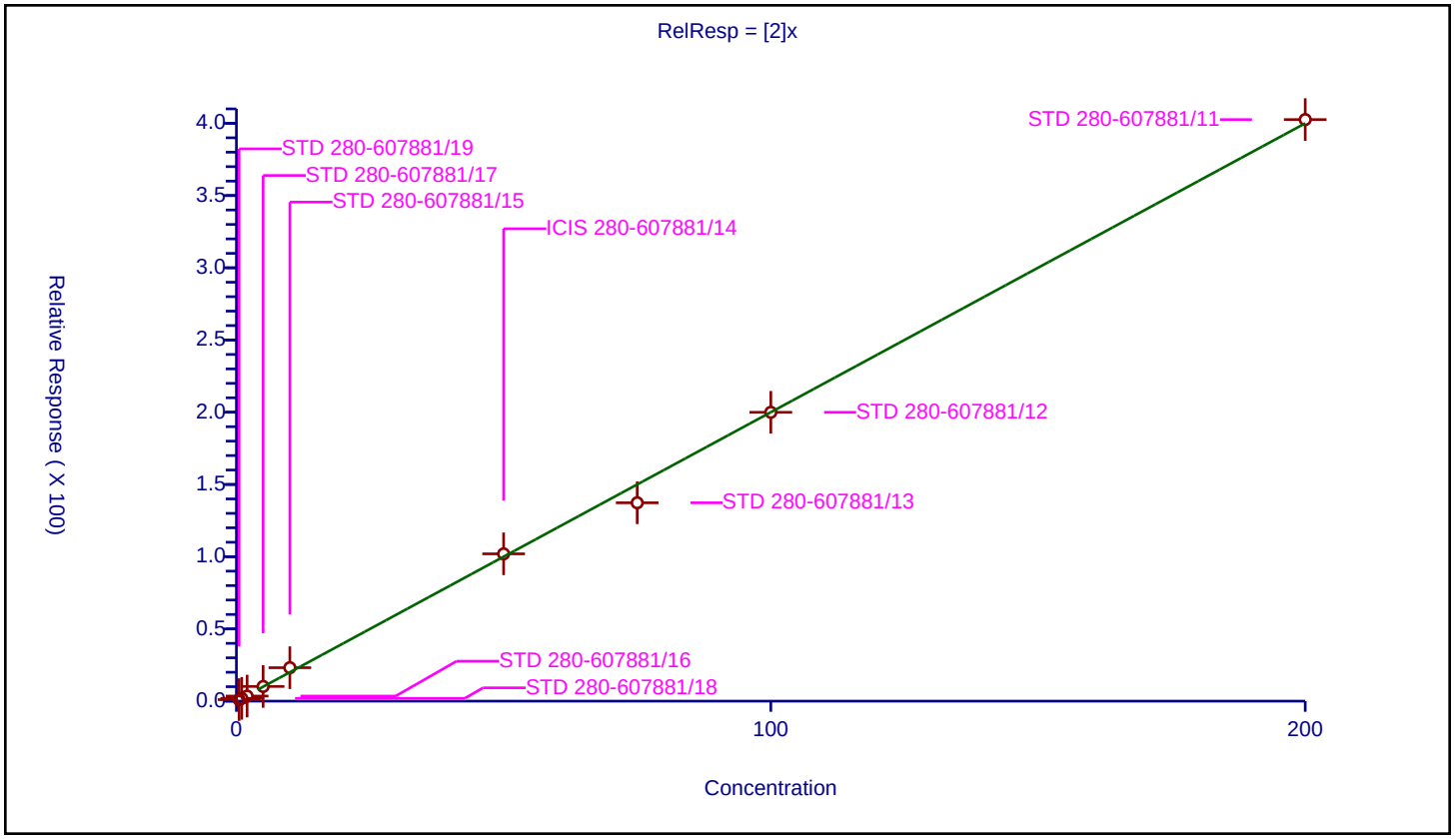
Curve Coefficients

Intercept:	0
Slope:	2

Error Coefficients

Standard Error:	1860000
Relative Standard Error:	8.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.045778	50.0	484663.0	2.091556	Y
2	STD 280-607881/18	1.0	1.91739	50.0	476794.0	1.91739	Y
3	STD 280-607881/16	2.0	3.520955	50.0	484201.0	1.760478	Y
4	STD 280-607881/17	5.0	10.16819	50.0	487009.0	2.033638	Y
5	STD 280-607881/15	10.0	23.147967	50.0	505647.0	2.314797	Y
6	ICIS 280-607881/14	50.0	101.965001	50.0	509618.0	2.0393	Y
7	STD 280-607881/13	75.0	137.311711	50.0	534485.0	1.830823	Y
8	STD 280-607881/12	100.0	199.957287	50.0	538480.0	1.999573	Y
9	STD 280-607881/11	200.0	402.594451	50.0	552718.0	2.012972	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

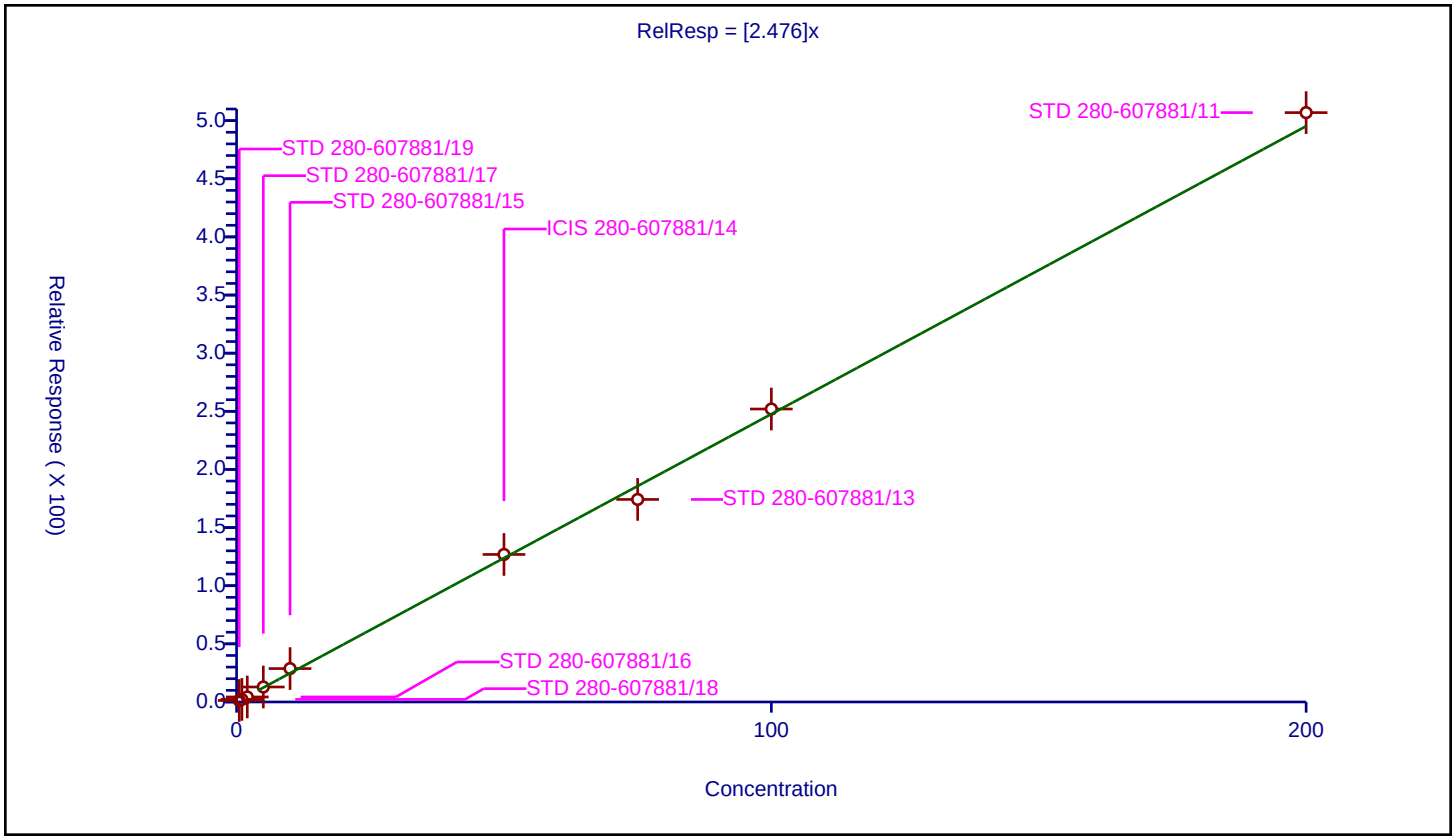
Curve Coefficients

Intercept:	0
Slope:	2.476

Error Coefficients

Standard Error:	2350000
Relative Standard Error:	8.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.273359	50.0	484663.0	2.546718	Y
2	STD 280-607881/18	1.0	2.204726	50.0	476794.0	2.204726	Y
3	STD 280-607881/16	2.0	4.333737	50.0	484201.0	2.166869	Y
4	STD 280-607881/17	5.0	12.891651	50.0	487009.0	2.57833	Y
5	STD 280-607881/15	10.0	28.737736	50.0	505647.0	2.873774	Y
6	ICIS 280-607881/14	50.0	126.885922	50.0	509618.0	2.537718	Y
7	STD 280-607881/13	75.0	174.200399	50.0	534485.0	2.322672	Y
8	STD 280-607881/12	100.0	251.988189	50.0	538480.0	2.519882	Y
9	STD 280-607881/11	200.0	506.905239	50.0	552718.0	2.534526	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

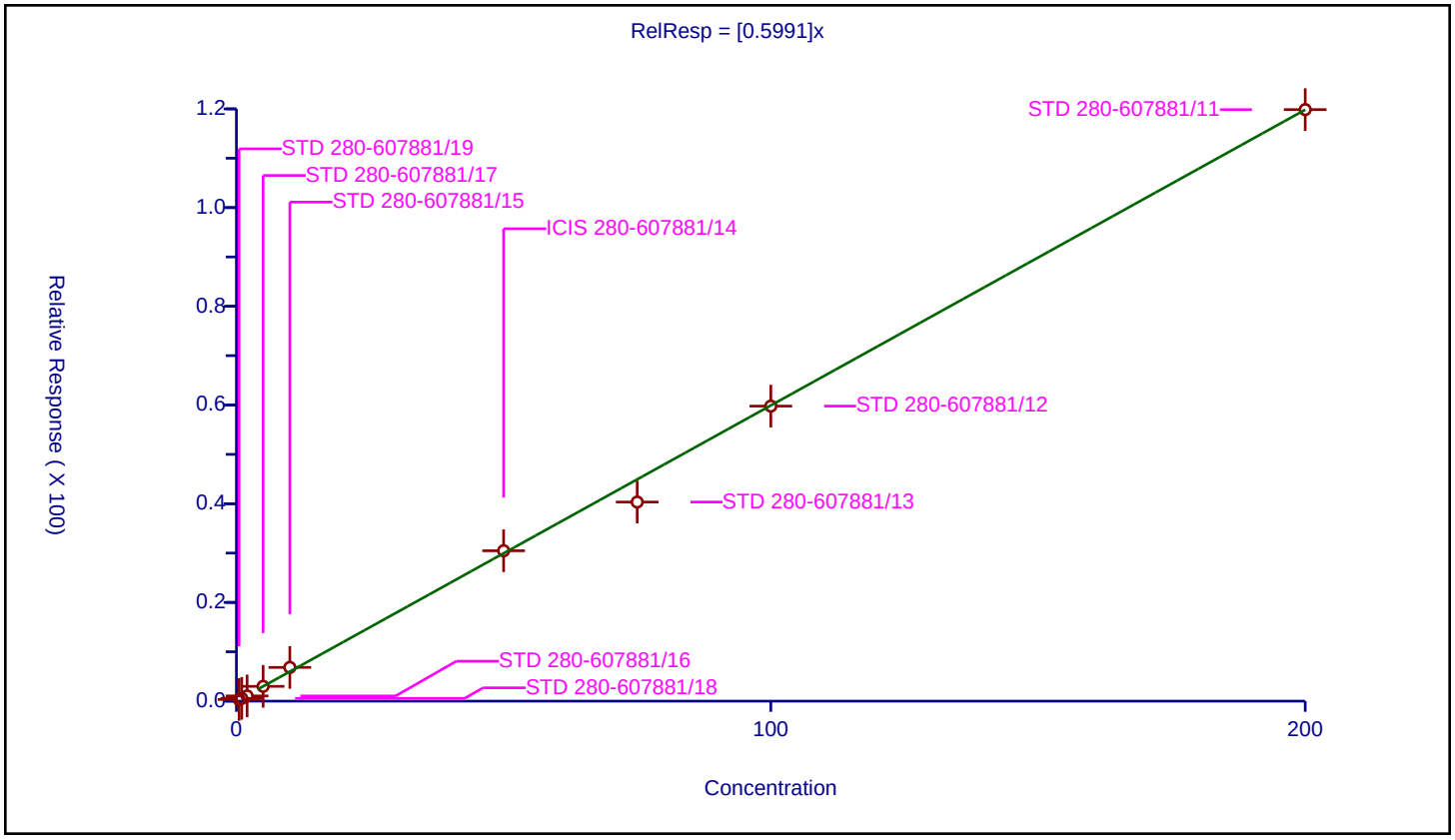
Curve Coefficients

Intercept:	0
Slope:	0.5991

Error Coefficients

Standard Error:	554000
Relative Standard Error:	9.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.337451	50.0	484663.0	0.674902	Y
2	STD 280-607881/18	1.0	0.562088	50.0	476794.0	0.562088	Y
3	STD 280-607881/16	2.0	1.055863	50.0	484201.0	0.527932	Y
4	STD 280-607881/17	5.0	2.999021	50.0	487009.0	0.599804	Y
5	STD 280-607881/15	10.0	6.832138	50.0	505647.0	0.683214	Y
6	ICIS 280-607881/14	50.0	30.470568	50.0	509618.0	0.609411	Y
7	STD 280-607881/13	75.0	40.342292	50.0	534485.0	0.537897	Y
8	STD 280-607881/12	100.0	59.778729	50.0	538480.0	0.597787	Y
9	STD 280-607881/11	200.0	119.852076	50.0	552718.0	0.59926	Y



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Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

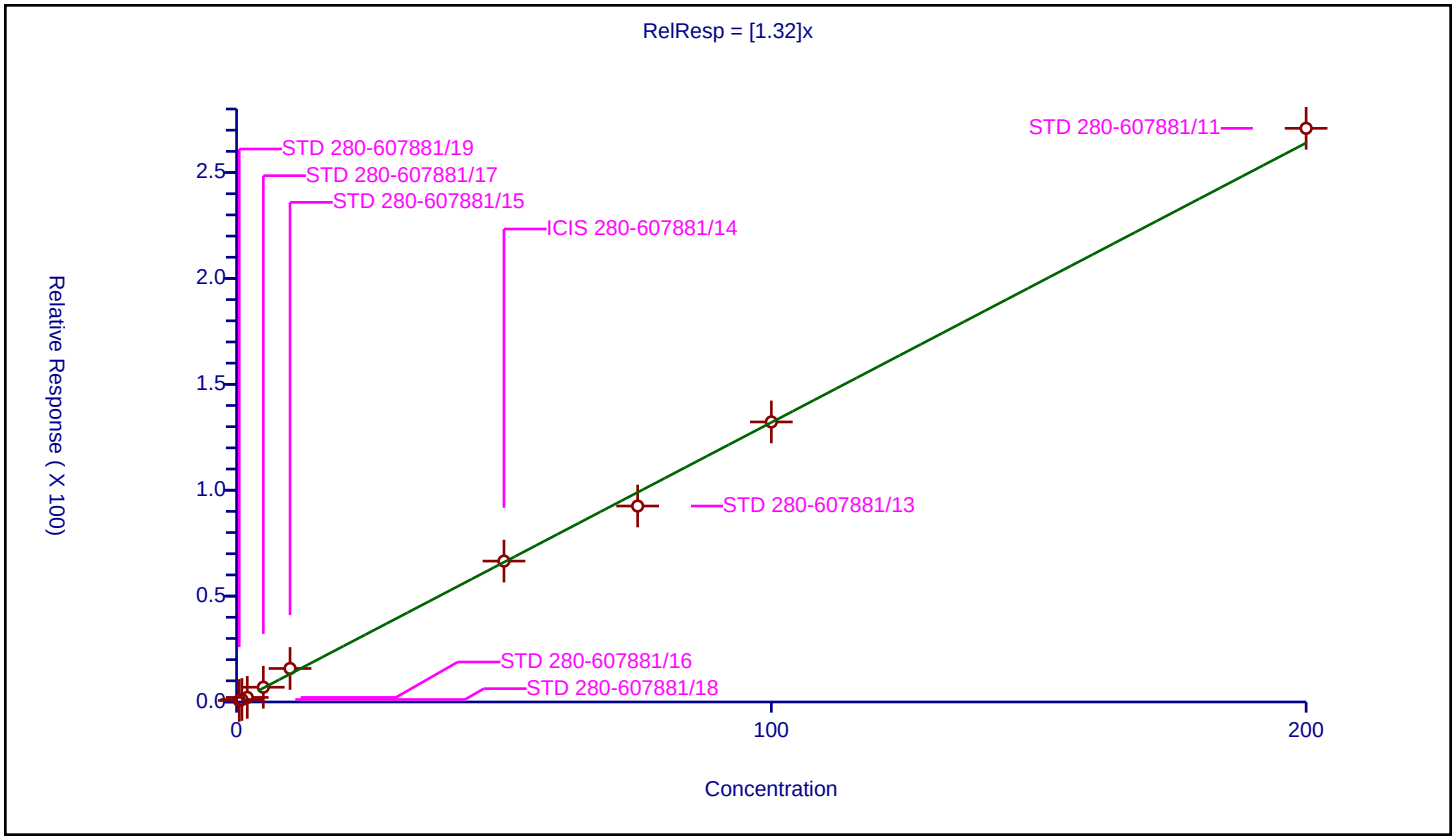
Curve Coefficients

Intercept:	0
Slope:	1.32

Error Coefficients

Standard Error:	1250000
Relative Standard Error:	11.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.709978	50.0	484663.0	1.419956	Y
2	STD 280-607881/18	1.0	1.161298	50.0	476794.0	1.161298	Y
3	STD 280-607881/16	2.0	2.161293	50.0	484201.0	1.080646	Y
4	STD 280-607881/17	5.0	6.972561	50.0	487009.0	1.394512	Y
5	STD 280-607881/15	10.0	15.819633	50.0	505647.0	1.581963	Y
6	ICIS 280-607881/14	50.0	66.52581	50.0	509618.0	1.330516	Y
7	STD 280-607881/13	75.0	92.529725	50.0	534485.0	1.23373	Y
8	STD 280-607881/12	100.0	132.237316	50.0	538480.0	1.322373	Y
9	STD 280-607881/11	200.0	270.884791	50.0	552718.0	1.354424	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

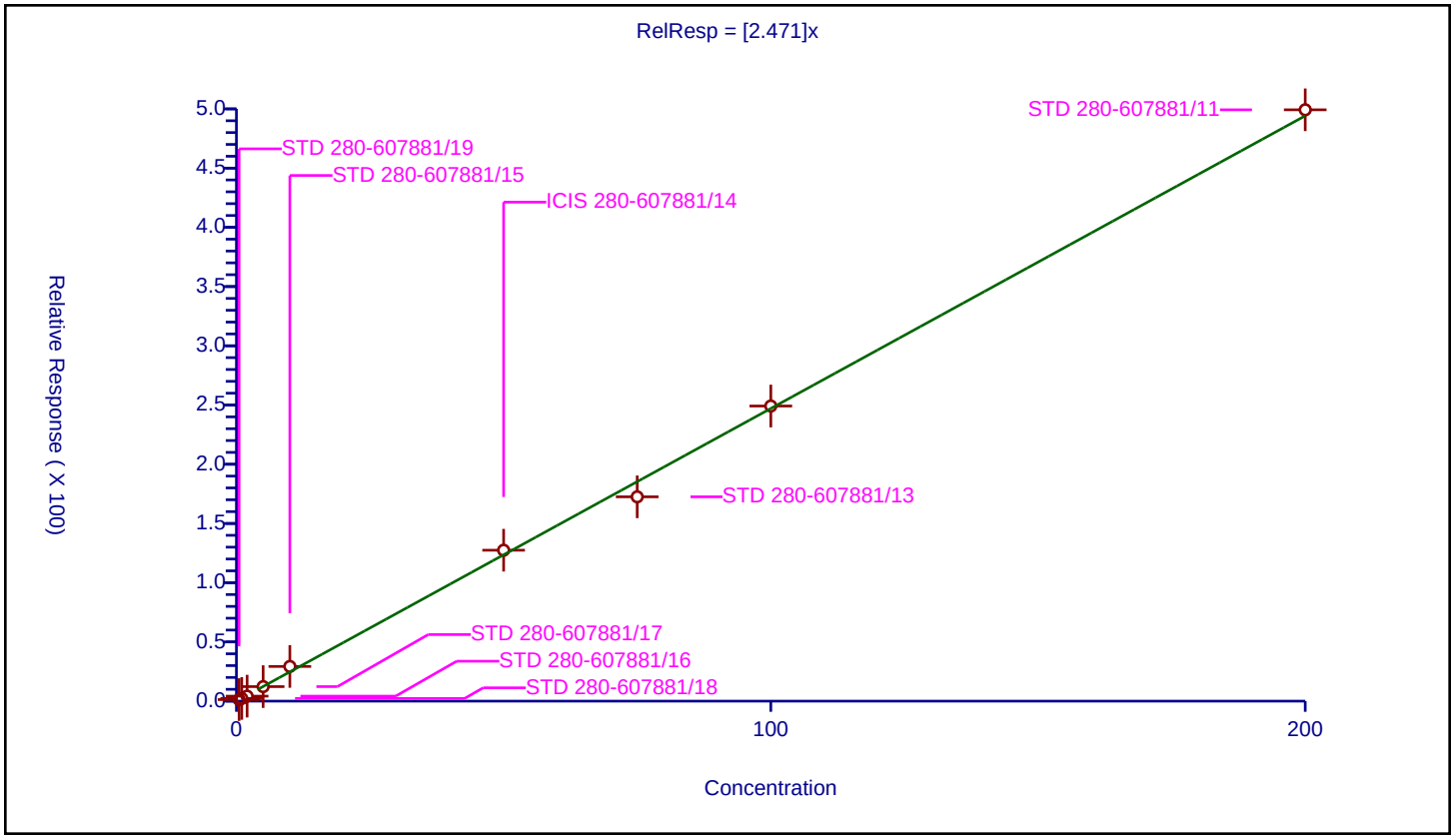
Curve Coefficients

Intercept:	0
Slope:	2.471

Error Coefficients

Standard Error:	2310000
Relative Standard Error:	9.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.311427	50.0	484663.0	2.622853	Y
2	STD 280-607881/18	1.0	2.292185	50.0	476794.0	2.292185	Y
3	STD 280-607881/16	2.0	4.209615	50.0	484201.0	2.104808	Y
4	STD 280-607881/17	5.0	12.263634	50.0	487009.0	2.452727	Y
5	STD 280-607881/15	10.0	29.289109	50.0	505647.0	2.928911	Y
6	ICIS 280-607881/14	50.0	127.415142	50.0	509618.0	2.548303	Y
7	STD 280-607881/13	75.0	172.489593	50.0	534485.0	2.299861	Y
8	STD 280-607881/12	100.0	249.148251	50.0	538480.0	2.491483	Y
9	STD 280-607881/11	200.0	499.245094	50.0	552718.0	2.496225	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

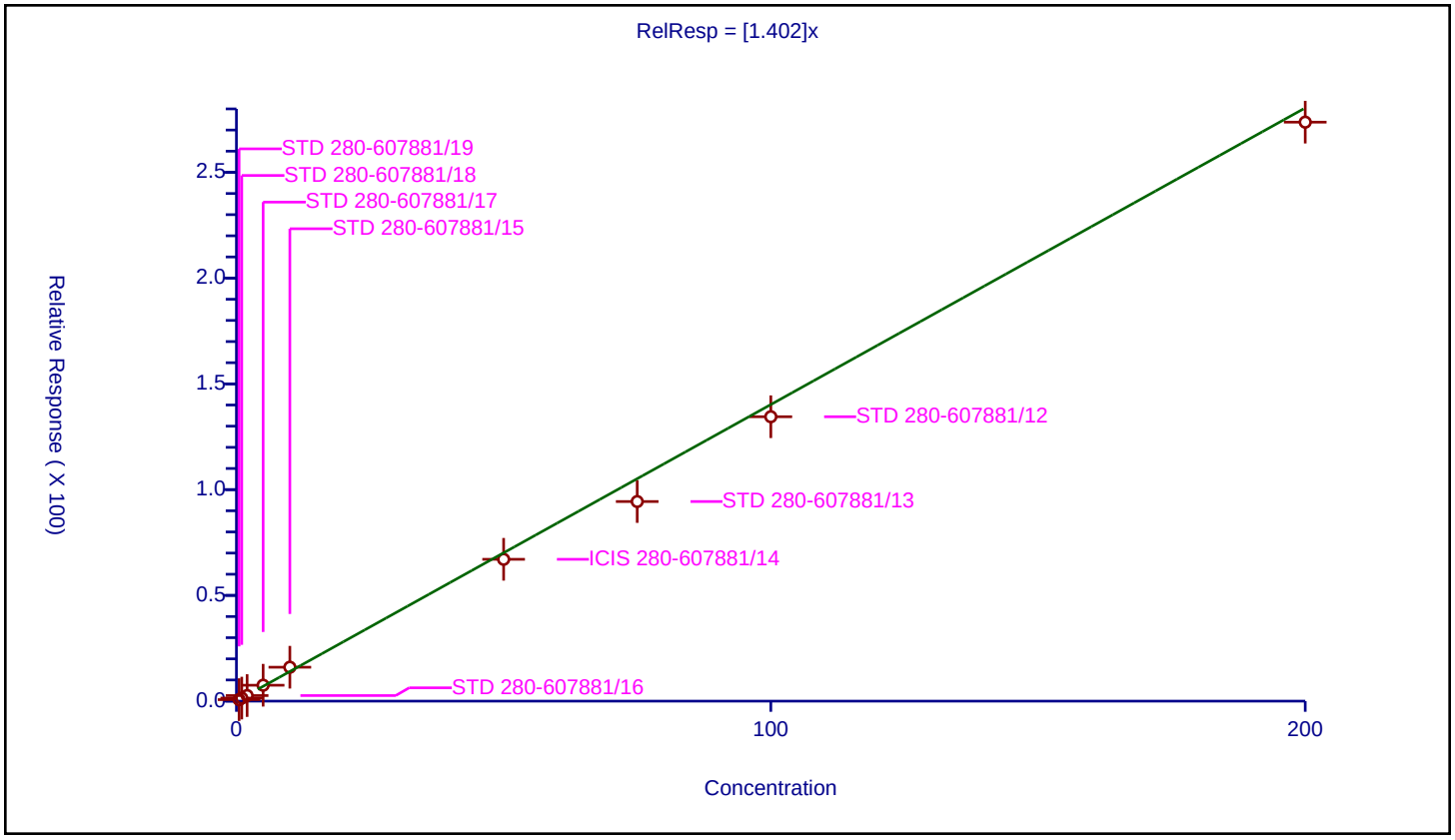
Curve Coefficients

Intercept:	0
Slope:	1.402

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	7.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.717612	50.0	484663.0	1.435224	Y
2	STD 280-607881/18	1.0	1.444334	50.0	476794.0	1.444334	Y
3	STD 280-607881/16	2.0	2.640536	50.0	484201.0	1.320268	Y
4	STD 280-607881/17	5.0	7.518547	50.0	487009.0	1.503709	Y
5	STD 280-607881/15	10.0	16.037769	50.0	505647.0	1.603777	Y
6	ICIS 280-607881/14	50.0	67.05552	50.0	509618.0	1.34111	Y
7	STD 280-607881/13	75.0	94.369533	50.0	534485.0	1.25826	Y
8	STD 280-607881/12	100.0	134.457176	50.0	538480.0	1.344572	Y
9	STD 280-607881/11	200.0	273.734888	50.0	552718.0	1.368674	Y



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Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

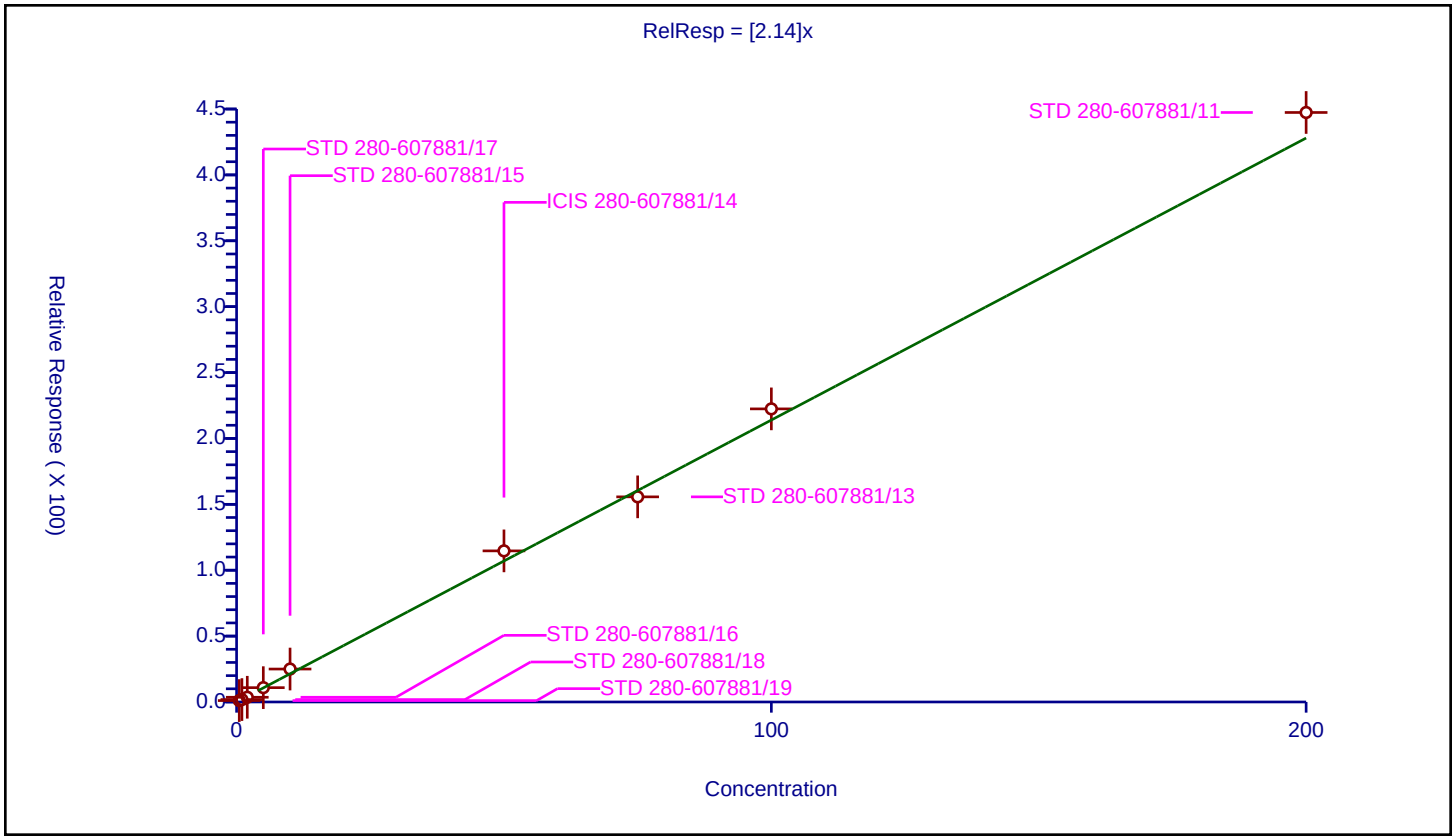
Curve Coefficients

Intercept:	0
Slope:	2.14

Error Coefficients

Standard Error:	2070000
Relative Standard Error:	10.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	1.066308	50.0	484663.0	2.132616	Y
2	STD 280-607881/18	1.0	1.821227	50.0	476794.0	1.821227	Y
3	STD 280-607881/16	2.0	3.593962	50.0	484201.0	1.796981	Y
4	STD 280-607881/17	5.0	10.884501	50.0	487009.0	2.1769	Y
5	STD 280-607881/15	10.0	25.000939	50.0	505647.0	2.500094	Y
6	ICIS 280-607881/14	50.0	114.669027	50.0	509618.0	2.293381	Y
7	STD 280-607881/13	75.0	155.669289	50.0	534485.0	2.075591	Y
8	STD 280-607881/12	100.0	222.442059	50.0	538480.0	2.224421	Y
9	STD 280-607881/11	200.0	447.359232	50.0	552718.0	2.236796	Y



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Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

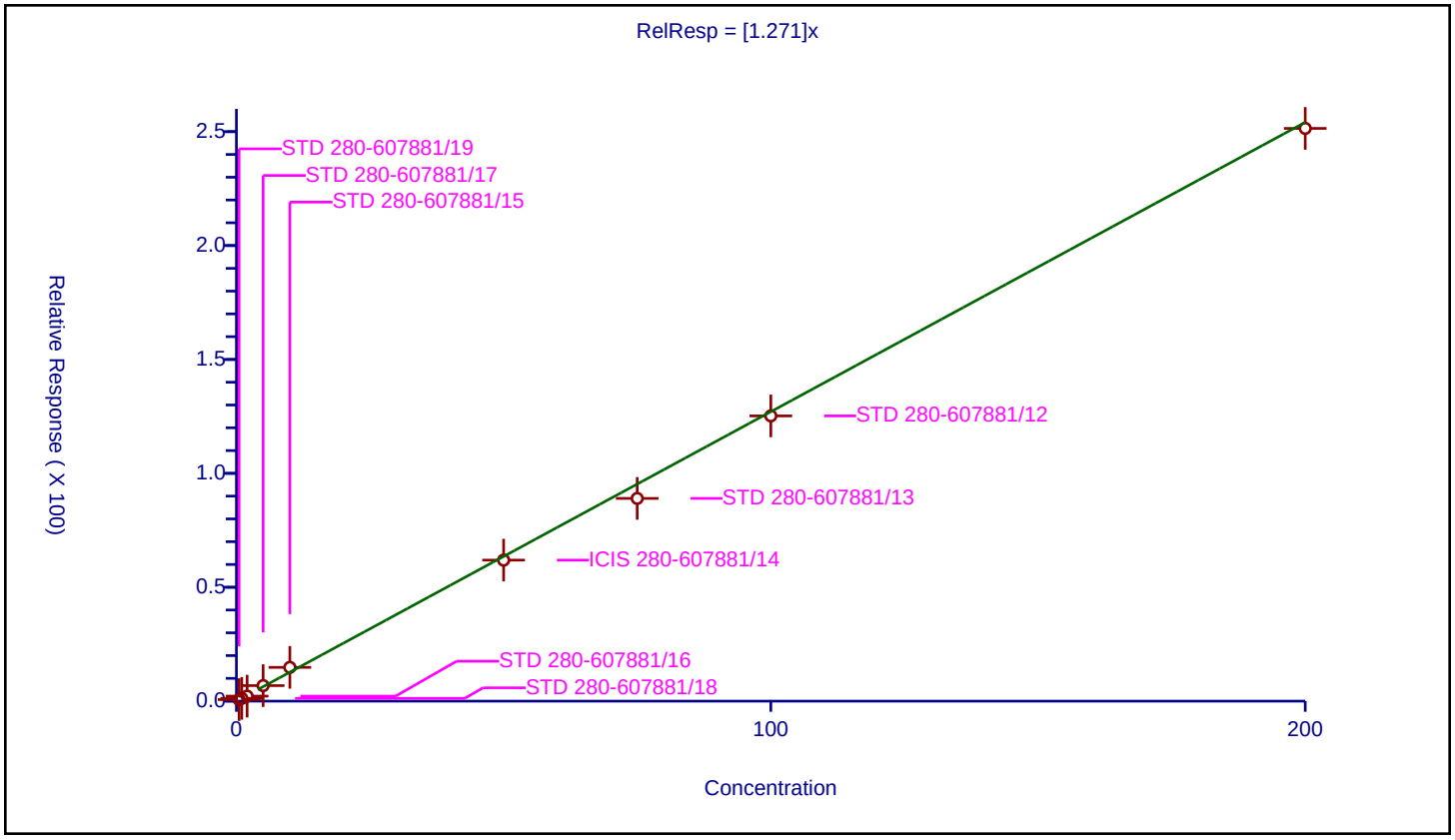
Curve Coefficients

Intercept:	0
Slope:	1.271

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	8.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.666752	50.0	484663.0	1.333504	Y
2	STD 280-607881/18	1.0	1.216983	50.0	476794.0	1.216983	Y
3	STD 280-607881/16	2.0	2.208793	50.0	484201.0	1.104397	Y
4	STD 280-607881/17	5.0	6.819689	50.0	487009.0	1.363938	Y
5	STD 280-607881/15	10.0	14.825362	50.0	505647.0	1.482536	Y
6	ICIS 280-607881/14	50.0	61.908626	50.0	509618.0	1.238173	Y
7	STD 280-607881/13	75.0	88.992582	50.0	534485.0	1.186568	Y
8	STD 280-607881/12	100.0	125.225171	50.0	538480.0	1.252252	Y
9	STD 280-607881/11	200.0	251.433733	50.0	552718.0	1.257169	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

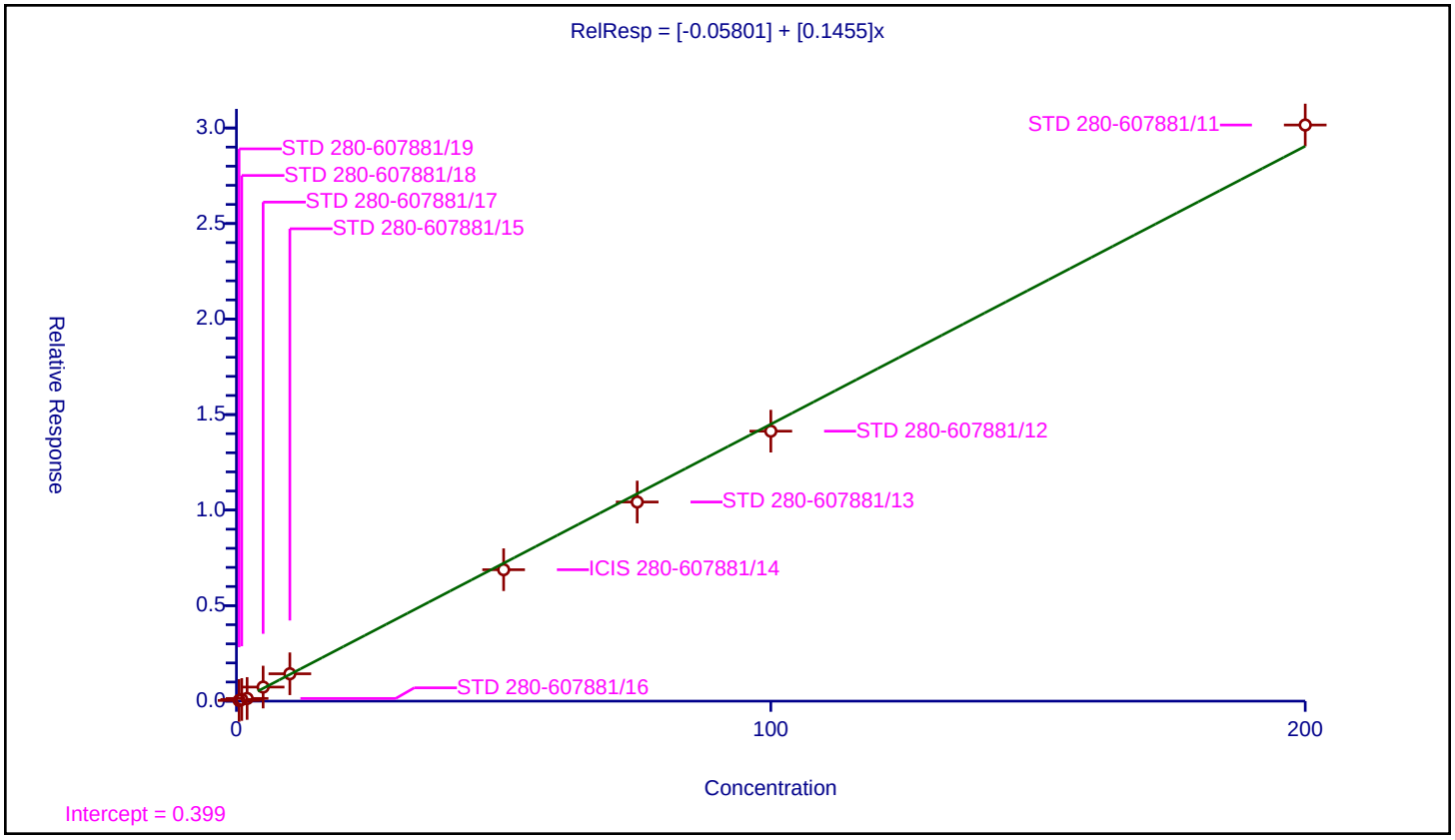
Curve Coefficients

Intercept:	-0.05801
Slope:	0.1455

Error Coefficients

Standard Error:	147000
Relative Standard Error:	16.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.03487	50.0	484663.0	0.069739	Y
2	STD 280-607881/18	1.0	0.087774	50.0	476794.0	0.087774	Y
3	STD 280-607881/16	2.0	0.139715	50.0	484201.0	0.069857	Y
4	STD 280-607881/17	5.0	0.736537	50.0	487009.0	0.147307	Y
5	STD 280-607881/15	10.0	1.431928	50.0	505647.0	0.143193	Y
6	ICIS 280-607881/14	50.0	6.879467	50.0	509618.0	0.137589	Y
7	STD 280-607881/13	75.0	10.422837	50.0	534485.0	0.138971	Y
8	STD 280-607881/12	100.0	14.131815	50.0	538480.0	0.141318	Y
9	STD 280-607881/11	200.0	30.156065	50.0	552718.0	0.15078	Y



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Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

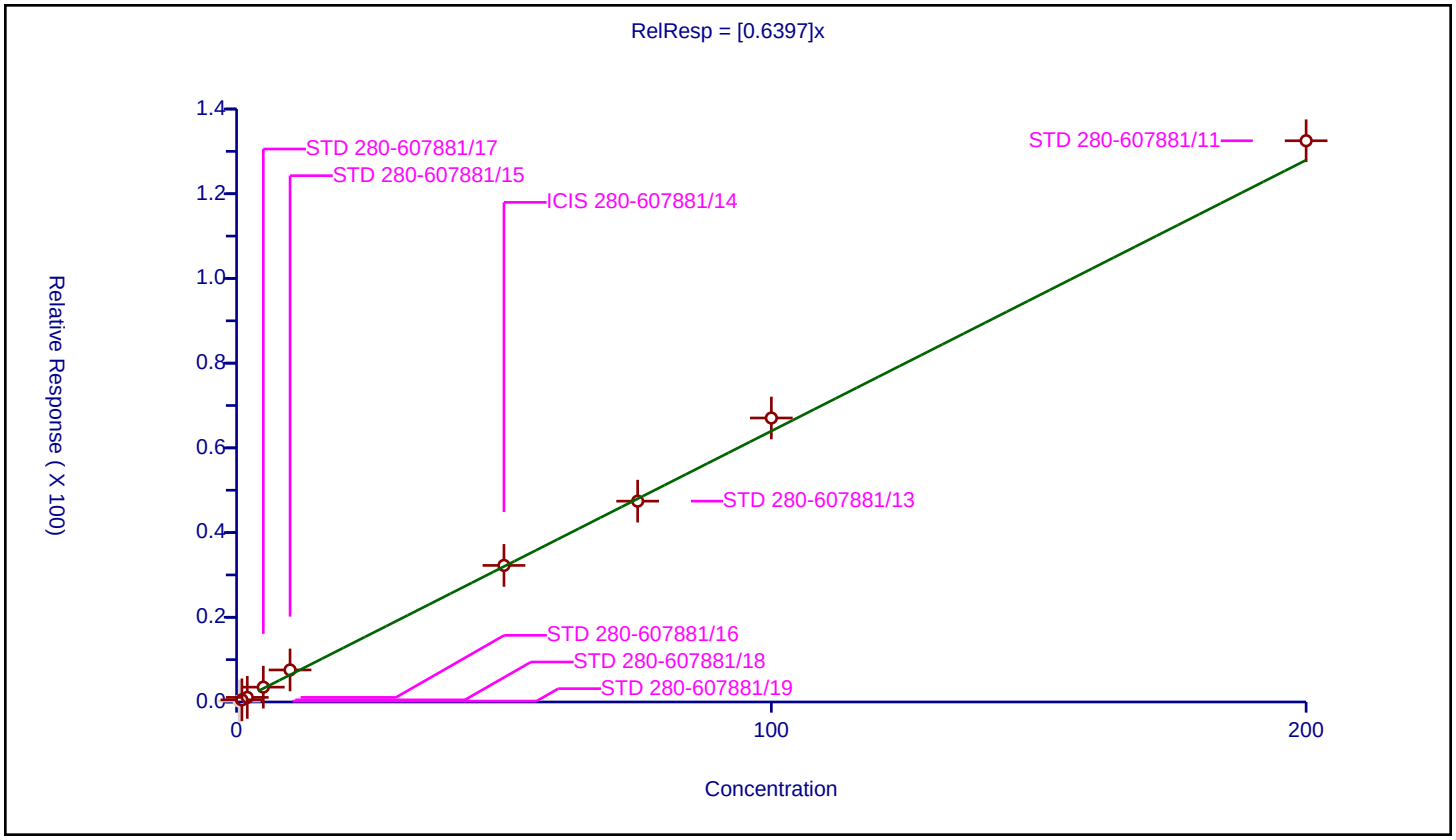
Curve Coefficients

Intercept:	0
Slope:	0.6397

Error Coefficients

Standard Error:	659000
Relative Standard Error:	12.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.215923	50.0	484663.0	0.431846	N
2	STD 280-607881/18	1.0	0.508291	50.0	476794.0	0.508291	Y
3	STD 280-607881/16	2.0	1.083434	50.0	484201.0	0.541717	Y
4	STD 280-607881/17	5.0	3.506095	50.0	487009.0	0.701219	Y
5	STD 280-607881/15	10.0	7.562687	50.0	505647.0	0.756269	Y
6	ICIS 280-607881/14	50.0	32.244446	50.0	509618.0	0.644889	Y
7	STD 280-607881/13	75.0	47.416017	50.0	534485.0	0.632214	Y
8	STD 280-607881/12	100.0	67.047894	50.0	538480.0	0.670479	Y
9	STD 280-607881/11	200.0	132.508531	50.0	552718.0	0.662543	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

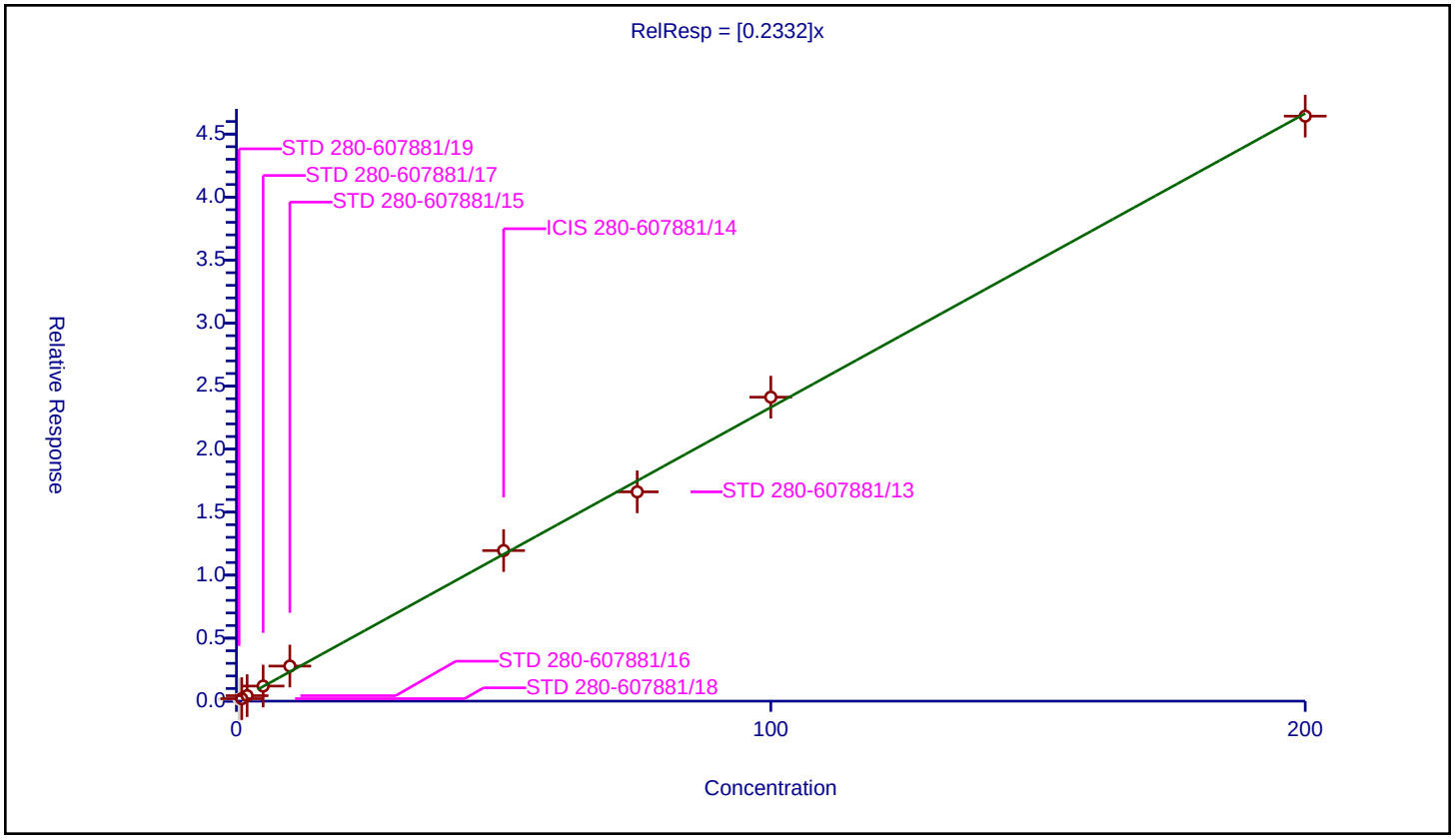
Curve Coefficients

Intercept:	0
Slope:	0.2332

Error Coefficients

Standard Error:	232000
Relative Standard Error:	10.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.158873	50.0	484663.0	0.317747	N
2	STD 280-607881/18	1.0	0.19715	50.0	476794.0	0.19715	Y
3	STD 280-607881/16	2.0	0.433601	50.0	484201.0	0.2168	Y
4	STD 280-607881/17	5.0	1.196692	50.0	487009.0	0.239338	Y
5	STD 280-607881/15	10.0	2.783365	50.0	505647.0	0.278336	Y
6	ICIS 280-607881/14	50.0	11.950127	50.0	509618.0	0.239003	Y
7	STD 280-607881/13	75.0	16.610663	50.0	534485.0	0.221476	Y
8	STD 280-607881/12	100.0	24.124016	50.0	538480.0	0.24124	Y
9	STD 280-607881/11	200.0	46.425754	50.0	552718.0	0.232129	Y



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Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

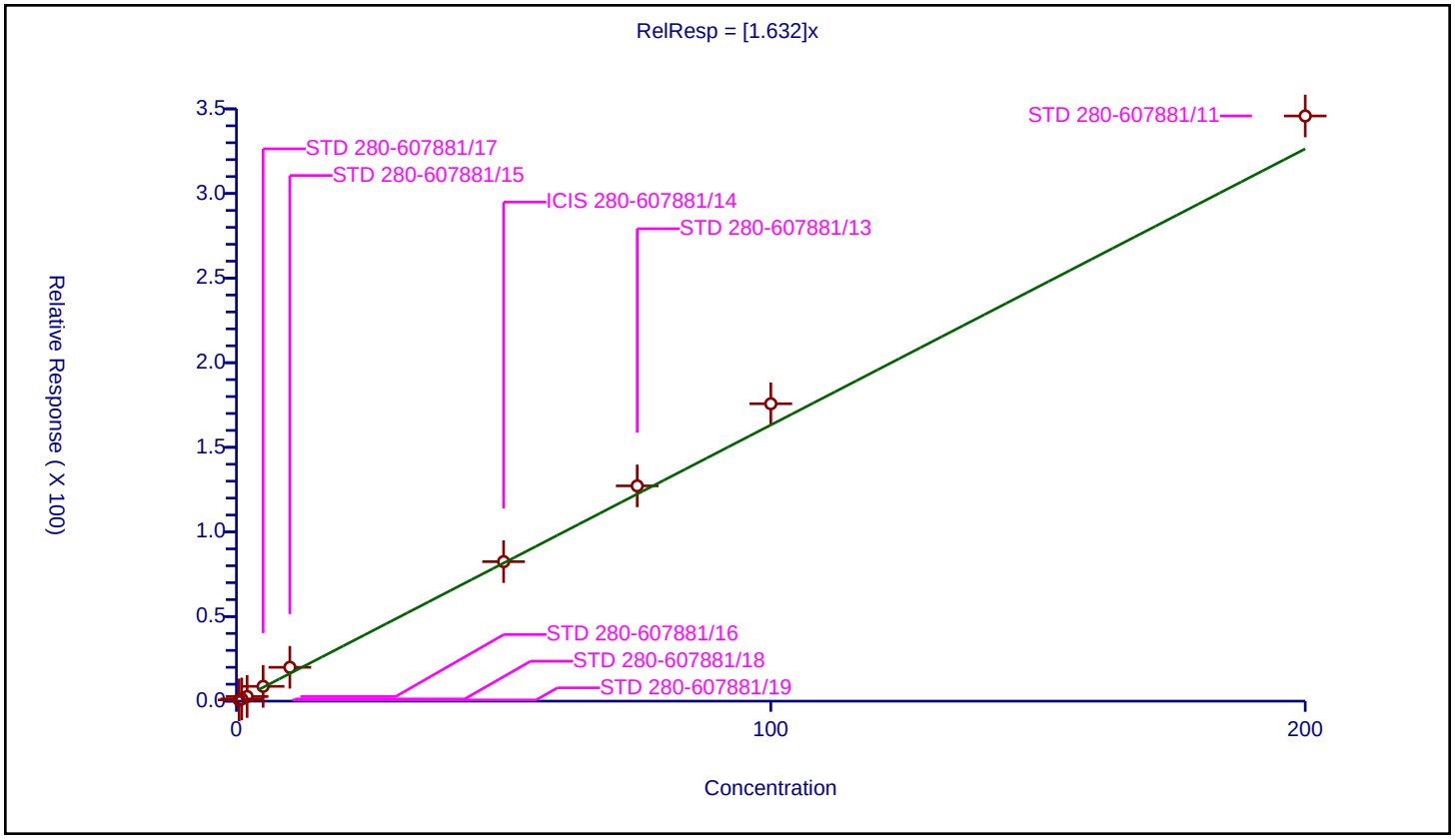
Curve Coefficients

Intercept:	0
Slope:	1.632

Error Coefficients

Standard Error:	1610000
Relative Standard Error:	13.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.735253	50.0	484663.0	1.470506	Y
2	STD 280-607881/18	1.0	1.274974	50.0	476794.0	1.274974	Y
3	STD 280-607881/16	2.0	2.723972	50.0	484201.0	1.361986	Y
4	STD 280-607881/17	5.0	8.744602	50.0	487009.0	1.74892	Y
5	STD 280-607881/15	10.0	19.996361	50.0	505647.0	1.999636	Y
6	ICIS 280-607881/14	50.0	82.445283	50.0	509618.0	1.648906	Y
7	STD 280-607881/13	75.0	127.222841	50.0	534485.0	1.696305	Y
8	STD 280-607881/12	100.0	175.763724	50.0	538480.0	1.757637	Y
9	STD 280-607881/11	200.0	345.82002	50.0	552718.0	1.7291	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

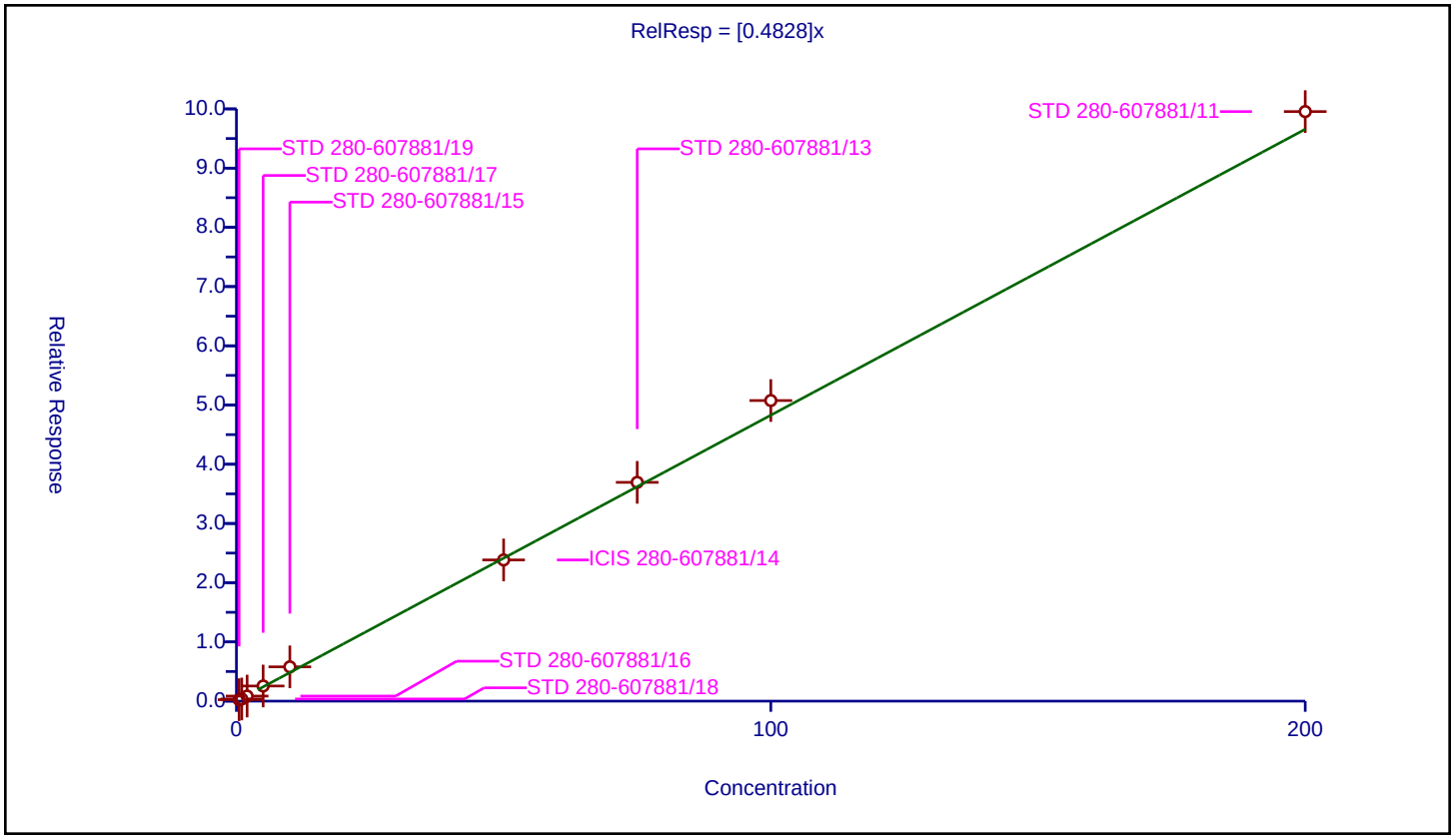
Curve Coefficients

Intercept:	0
Slope:	0.4828

Error Coefficients

Standard Error:	465000
Relative Standard Error:	12.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD 280-607881/19	0.5	0.243468	50.0	484663.0	0.486936	Y
2	STD 280-607881/18	1.0	0.365252	50.0	476794.0	0.365252	Y
3	STD 280-607881/16	2.0	0.856049	50.0	484201.0	0.428025	Y
4	STD 280-607881/17	5.0	2.556421	50.0	487009.0	0.511284	Y
5	STD 280-607881/15	10.0	5.791095	50.0	505647.0	0.57911	Y
6	ICIS 280-607881/14	50.0	23.842368	50.0	509618.0	0.476847	Y
7	STD 280-607881/13	75.0	36.943506	50.0	534485.0	0.49258	Y
8	STD 280-607881/12	100.0	50.756388	50.0	538480.0	0.507564	Y
9	STD 280-607881/11	200.0	99.54769	50.0	552718.0	0.497738	Y



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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICV 280-609046/43 | Calibration Date: 04/18/2023 19:19

Instrument ID: VMS_MS1 | Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8198.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.2006	0.1000	41.8	50.0	-16.5	30.0
Chloromethane	Ave	0.2309	0.2529	0.1000	54.8	50.0	9.5	30.0
Vinyl chloride	Lin1		0.2308	0.0100	48.5	50.0	-3.1	30.0
Bromomethane	Lin1		0.1322	0.0100	52.7	50.0	5.3	30.0
Chloroethane	Lin1		0.1396	0.0100	47.6	50.0	-4.7	30.0
Dichlorofluoromethane	Lin1		0.3250	0.0100	48.7	50.0	-2.6	30.0
Trichlorofluoromethane	Lin1		0.2560	0.0100	45.6	50.0	-8.8	30.0
Ethyl ether	Ave	0.1774	0.1596	0.0100	45.0	50.0	-10.0	30.0
Acrolein	Ave	0.0271	0.0235	0.0010	428	494	-13.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1133	0.1037	0.0500	45.7	50.0	-8.5	30.0
1,1-Dichloroethene	Ave	0.1550	0.1390	0.0600	44.8	50.0	-10.3	30.0
Acetone	Lin1		0.0736	0.0100	170	200	-14.9	30.0
Iodomethane	Ave	0.2071	0.1975	0.0100	47.7	50.0	-4.6	30.0
Carbon disulfide	Ave	0.5567	0.4802	0.1000	43.1	50.0	-13.7	30.0
Methyl acetate	Ave	0.1963	0.1775	0.0100	90.4	100	-9.6	30.0
Allyl chloride	Lin2		0.3252	0.0100	45.4	50.0	-9.2	30.0
Methylene Chloride	Ave	0.1929	0.1670	0.0100	43.3	50.0	-13.5	30.0
2-Methyl-2-propanol	Ave	0.0283	0.0259	0.0010	457	500	-8.7	30.0
Acrylonitrile	Ave	0.0914	0.0845	0.0100	462	500	-7.6	30.0
Methyl tert-butyl ether	Ave	0.5999	0.5594	0.1000	46.6	50.0	-6.7	30.0
trans-1,2-Dichloroethene	Ave	0.1798	0.1563	0.1000	43.4	50.0	-13.1	30.0
Hexane	Ave	1.082	0.9836	0.0100	45.4	50.0	-9.1	30.0
Vinyl acetate	Ave	0.4685	0.4305	0.0100	91.9	100	-8.1	30.0
1,1-Dichloroethane	Ave	0.3570	0.3188	0.1000	44.7	50.0	-10.7	30.0
2-Butanone (MEK)	Ave	0.1340	0.1144	0.0100	171	200	-14.6	30.0
2,2-Dichloropropane	Ave	0.3031	0.2656	0.0100	43.8	50.0	-12.4	30.0
cis-1,2-Dichloroethene	Ave	0.1936	0.1750	0.1000	45.2	50.0	-9.6	30.0
sec-Butyl Alcohol	Ave	0.0238	0.0220	0.0100	1110	1200	-7.3	30.0
Chlorobromomethane	Ave	0.0885	0.0796	0.0500	45.0	50.0	-10.1	30.0
Tetrahydrofuran	Ave	0.0841	0.0763	0.0010	90.7	100	-9.3	30.0
Chloroform	Ave	0.3253	0.2965	0.2000	45.6	50.0	-8.8	30.0
1,1,1-Trichloroethane	Ave	0.2706	0.2528	0.0500	46.7	50.0	-6.6	30.0
Cyclohexane	Ave	0.3491	0.3149	0.0100	45.1	50.0	-9.8	30.0
1,1-Dichloropropene	Ave	0.2649	0.2386	0.0100	45.0	50.0	-10.0	30.0
Carbon tetrachloride	Ave	0.2286	0.2031	0.1000	44.4	50.0	-11.2	30.0
Isobutyl alcohol	Ave	0.0100	0.0091	0.0010	1150	1250	-8.2	30.0
Benzene	Ave	0.7728	0.7068	0.2000	45.7	50.0	-8.5	30.0
1,2-Dichloroethane	Ave	0.3017	0.2618	0.0700	43.4	50.0	-13.2	30.0
n-Heptane	Ave	0.2404	0.2073		43.1	50.0	-13.8	
Trichloroethene	Ave	0.8031	0.7051	0.2000	43.9	50.0	-12.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICV 280-609046/43 | Calibration Date: 04/18/2023 19:19

Instrument ID: VMS_MS1 | Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8198.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Ave	0.2043	0.1874	0.0010	147	160	-8.3	30.0
Methylcyclohexane	Ave	0.2531	0.2261	0.0500	44.7	50.0	-10.7	30.0
1,2-Dichloropropane	Ave	0.2130	0.1885	0.1000	44.3	50.0	-11.5	30.0
1,4-Dioxane	Ave	0.0034	0.0029	0.0010	834	1000	-16.6	30.0
Dibromomethane	Ave	0.1167	0.1056	0.0100	45.2	50.0	-9.5	30.0
Dichlorobromomethane	Ave	0.2543	0.2300	0.2000	45.2	50.0	-9.5	30.0
2-Chloroethyl vinyl ether	Lin1		0.1340	0.0100	44.1	50.0	-11.7	30.0
cis-1,3-Dichloropropene	Ave	1.433	1.273	0.2000	44.4	50.0	-11.1	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2558	0.2346	0.0300	183	200	-8.3	30.0
Toluene	Ave	0.7996	0.7269	0.3000	45.5	50.0	-9.1	30.0
trans-1,3-Dichloropropene	Ave	0.3155	0.2859	0.2000	45.3	50.0	-9.4	30.0
Ethyl methacrylate	Ave	1.217	1.082	0.0100	44.4	50.0	-11.1	30.0
1,1,2-Trichloroethane	Ave	0.1674	0.1561	0.1000	46.6	50.0	-6.8	30.0
Tetrachloroethene	Ave	0.5506	0.5109	0.1000	46.4	50.0	-7.2	30.0
1,3-Dichloropropane	Ave	1.338	1.248	0.0100	46.7	50.0	-6.7	30.0
2-Hexanone	Ave	0.7895	0.7235	0.0100	183	200	-8.4	30.0
Chlorodibromomethane	Ave	0.7351	0.6614	0.1000	45.0	50.0	-10.0	30.0
1,2-Dibromoethane	Ave	0.7391	0.6747	0.1000	45.6	50.0	-8.7	30.0
1-Chlorohexane	Lin2		0.9475	0.0100	37.0	40.0	-7.4	30.0
Chlorobenzene	Ave	2.086	1.928	0.3000	46.2	50.0	-7.6	30.0
1,1,1,2-Tetrachloroethane	Ave	0.7155	0.6561	0.0100	45.8	50.0	-8.3	30.0
Ethylbenzene	Ave	1.189	1.074	0.3000	45.1	50.0	-9.7	30.0
m-Xylene & p-Xylene	Ave	1.452	1.312	0.1000	45.2	50.0	-9.6	30.0
o-Xylene	Ave	1.450	1.300	0.2000	44.8	50.0	-10.3	30.0
Styrene	Ave	2.432	2.225	0.2000	45.8	50.0	-8.5	30.0
Bromoform	Ave	0.4582	0.4093	0.1000	44.7	50.0	-10.7	30.0
Isopropylbenzene	Ave	2.134	1.932	0.3000	45.3	50.0	-9.5	30.0
Cyclohexanone	Ave	0.0503	0.0458	0.0010	1370	1500	-9.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6353	0.5942	0.3000	46.8	50.0	-6.5	30.0
Bromobenzene	Ave	0.5004	0.4486	0.0100	44.8	50.0	-10.4	30.0
trans-1,4-Dichloro-2-butene	Lin1		0.1542	0.0100	41.3	50.0	-17.4	30.0
1,2,3-Trichloropropane	Ave	0.1941	0.1720	0.0100	44.3	50.0	-11.4	30.0
N-Propylbenzene	Ave	0.5767	0.5163	0.0100	44.8	50.0	-10.5	30.0
2-Chlorotoluene	Ave	0.4931	0.4382	0.0100	44.4	50.0	-11.1	30.0
1,3,5-Trimethylbenzene	Ave	1.774	1.615	0.0100	45.5	50.0	-9.0	30.0
4-Chlorotoluene	Ave	0.5248	0.4635	0.0100	44.2	50.0	-11.7	30.0
tert-Butylbenzene	Ave	1.436	1.303	0.0100	45.4	50.0	-9.2	30.0
1,2,4-Trimethylbenzene	Ave	1.870	1.671	0.3000	44.7	50.0	-10.6	30.0
sec-Butylbenzene	Ave	0.3979	0.3602	0.0100	45.3	50.0	-9.5	30.0
1,3-Dichlorobenzene	Ave	0.9365	0.8561	0.5000	45.7	50.0	-8.6	30.0
4-Isopropyltoluene	Ave	1.776	1.617	0.0100	45.5	50.0	-8.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICV 280-609046/43 Calibration Date: 04/18/2023 19:19

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8198.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.000	0.8776	0.5000	43.9	50.0	-12.2	30.0
n-Butylbenzene	Ave	1.617	1.404	0.0100	43.4	50.0	-13.2	30.0
1,2-Dichlorobenzene	Ave	0.8946	0.8263	0.5000	46.2	50.0	-7.6	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1288	0.1096	0.0100	42.6	50.0	-14.9	30.0
1,2,4-Trichlorobenzene	Ave	0.5013	0.4363	0.2000	43.5	50.0	-13.0	30.0
Hexachlorobutadiene	Ave	0.1937	0.1646	0.0100	42.5	50.0	-15.0	30.0
Naphthalene	Ave	1.665	1.416	0.0100	42.5	50.0	-14.9	30.0
1,2,3-Trichlorobenzene	Ave	0.4254	0.3649	0.3000	42.9	50.0	-14.2	30.0
Dibromofluoromethane (Surr)	Ave	0.2380	0.2382	0.0100	50.0	50.0	0.0	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3225	0.3233	0.0100	50.1	50.0	0.3	30.0
Toluene-d8 (Surr)	Ave	4.291	4.367	0.0100	50.9	50.0	1.8	30.0
4-Bromofluorobenzene (Surr)	Ave	0.9822	0.9716	0.0100	49.5	50.0	-1.1	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8198.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 18-Apr-2023 19:19:30 ALS Bottle#: 16 Worklist Smp#: 43
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 08:23:10 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 19-Apr-2023 06:58:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1180704	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	91	275927	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	454451	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	281211	50.0	50.0	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	381753	50.0	50.1	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1205067	50.0	50.9	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	82	441559	50.0	49.5	
11 Dichlorodifluoromethane	85	1.814	1.813	0.001	99	236804	50.0	41.8	
12 Chloromethane	50	2.009	2.009	0.000	99	298607	50.0	54.8	
13 Vinyl chloride	62	2.135	2.135	0.000	98	272560	50.0	48.5	
15 Bromomethane	94	2.498	2.498	0.000	92	156111	50.0	52.7	
16 Chloroethane	64	2.624	2.623	0.001	99	164881	50.0	47.6	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	383715	50.0	48.7	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	302292	50.0	45.6	
20 Ethyl ether	59	3.182	3.182	0.000	94	188472	50.0	45.0	
22 Acrolein	56	3.322	3.322	0.000	99	273875	493.8	428.4	
23 1,1-Dichloroethene	96	3.420	3.420	0.000	95	164062	50.0	44.8	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.420	0.000	94	122424	50.0	45.7	
25 Acetone	43	3.448	3.447	0.001	98	347446	200.0	170.2	
26 Iodomethane	142	3.559	3.559	0.000	100	233215	50.0	47.7	
28 Carbon disulfide	76	3.629	3.629	0.000	100	566991	50.0	43.1	
30 Methyl acetate	43	3.755	3.755	0.000	98	419122	100.0	90.4	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	88	383974	50.0	45.4	
32 Methylene Chloride	84	3.895	3.894	0.001	97	197145	50.0	43.3	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	98	305297	500.0	456.7	
34 Acrylonitrile	53	4.104	4.104	0.000	98	998000	500.0	462.2	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	98	660538	50.0	46.6	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	184487	50.0	43.4	
37 Hexane	57	4.383	4.383	0.000	96	271395	50.0	45.4	
39 Vinyl acetate	43	4.523	4.523	0.000	97	1016576	100.0	91.9	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	97	376413	50.0	44.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	100	540259	200.0	170.7	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	91	313617	50.0	43.8	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	86	206640	50.0	45.2	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	624644	1200.0	1112.0	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	94010	50.0	45.0	
54 Tetrahydrofuran	42	5.249	5.249	0.000	88	180242	100.0	90.7	
55 Chloroform	83	5.319	5.319	0.000	96	350093	50.0	45.6	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	97	298444	50.0	46.7	
57 Cyclohexane	56	5.543	5.542	0.001	95	371768	50.0	45.1	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	91	281677	50.0	45.0	
59 Carbon tetrachloride	117	5.612	5.612	0.000	84	239766	50.0	44.4	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	269880	1250.0	1147.7	
63 Benzene	78	5.780	5.794	-0.014	99	834511	50.0	45.7	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	98	309128	50.0	43.4	
66 n-Heptane	43	6.003	6.003	0.000	97	244750	50.0	43.1	
68 Trichloroethene	95	6.353	6.352	0.001	97	194563	50.0	43.9	
69 2-Pentanone	43	6.478	6.478	0.000	98	708162	160.0	146.8	
70 Methylcyclohexane	55	6.548	6.548	0.000	95	266964	50.0	44.7	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	92	222580	50.0	44.3	
73 1,4-Dioxane	88	6.632	6.632	0.000	98	67721	1000.0	833.5	
74 Dibromomethane	93	6.660	6.660	0.000	95	124691	50.0	45.2	
75 Dichlorobromomethane	83	6.800	6.799	0.001	98	271602	50.0	45.2	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	158245	50.0	44.1	
78 cis-1,3-Dichloropropene	75	7.177	7.176	0.001	91	351306	50.0	44.4	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	99	1107813	200.0	183.4	
82 Toluene	91	7.484	7.484	0.000	97	858203	50.0	45.5	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	99	337600	50.0	45.3	
85 Ethyl methacrylate	69	7.707	7.707	0.000	93	298532	50.0	44.4	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	93	184274	50.0	46.6	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	140983	50.0	46.4	
90 1,3-Dichloropropane	76	8.015	8.014	0.001	97	344421	50.0	46.7	
91 2-Hexanone	43	8.043	8.042	0.001	97	798568	200.0	183.3	
95 Chlorodibromomethane	129	8.224	8.224	0.000	91	182491	50.0	45.0	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	186171	50.0	45.6	
98 1-Chlorohexane	91	8.755	8.755	0.000	91	209146	40.0	37.0	
99 Chlorobenzene	112	8.797	8.797	0.000	91	532048	50.0	46.2	
100 1,1,1,2-Tetrachloroethane	131	8.881	8.880	0.000	94	181025	50.0	45.8	
101 Ethylbenzene	106	8.881	8.880	0.000	99	296218	50.0	45.1	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	361977	50.0	45.2	
103 o-Xylene	106	9.369	9.369	0.000	97	358839	50.0	44.8	
104 Styrene	104	9.397	9.397	0.000	96	613957	50.0	45.8	
106 Bromoform	173	9.579	9.579	0.000	94	112939	50.0	44.7	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	877968	50.0	45.3	
109 Cyclohexanone	55	9.830	9.830	0.000	96	379277	1500.0	1365.5	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	270057	50.0	46.8	
111 Bromobenzene	156	10.054	10.053	0.001	98	203844	50.0	44.8	
112 trans-1,4-Dichloro-2-butene	53	10.054	10.053	0.001	91	70062	50.0	41.3	
113 1,2,3-Trichloropropane	110	10.082	10.095	-0.013	87	78170	50.0	44.3	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	234611	50.0	44.8	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	199148	50.0	44.4	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	733751	50.0	45.5	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	210619	50.0	44.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	592232	50.0	45.4	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	759344	50.0	44.7	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	163683	50.0	45.3	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	389077	50.0	45.7	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	734991	50.0	45.5	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	92	398832	50.0	43.9	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	638122	50.0	43.4	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	375504	50.0	46.2	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	76	49829	50.0	42.6	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	94	198288	50.0	43.5	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	74791	50.0	42.5	
132 Naphthalene	128	13.336	13.336	0.000	98	643638	50.0	42.5	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	93	165823	50.0	42.9	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	88.7	
S 151 Trihalomethanes, Total	1				0		200.0	180.5	
S 150 1,2-Dichloroethene, Total	1				0		100.0	88.7	
S 156 1,3-Dichloropropene, Total	1				0		100.0	89.7	
S 155 Xylenes, Total	106				0		100.0	90.0	
S 153 Xylenes, Total (URS)	1				0		100.0	90.0	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added: 25.00	Units: uL	
MV-Gas B_00133	Amount Added: 10.00	Units: uL	
mv-IS_SS_00057	Amount Added: 5.00	Units: uL	Run Reagent

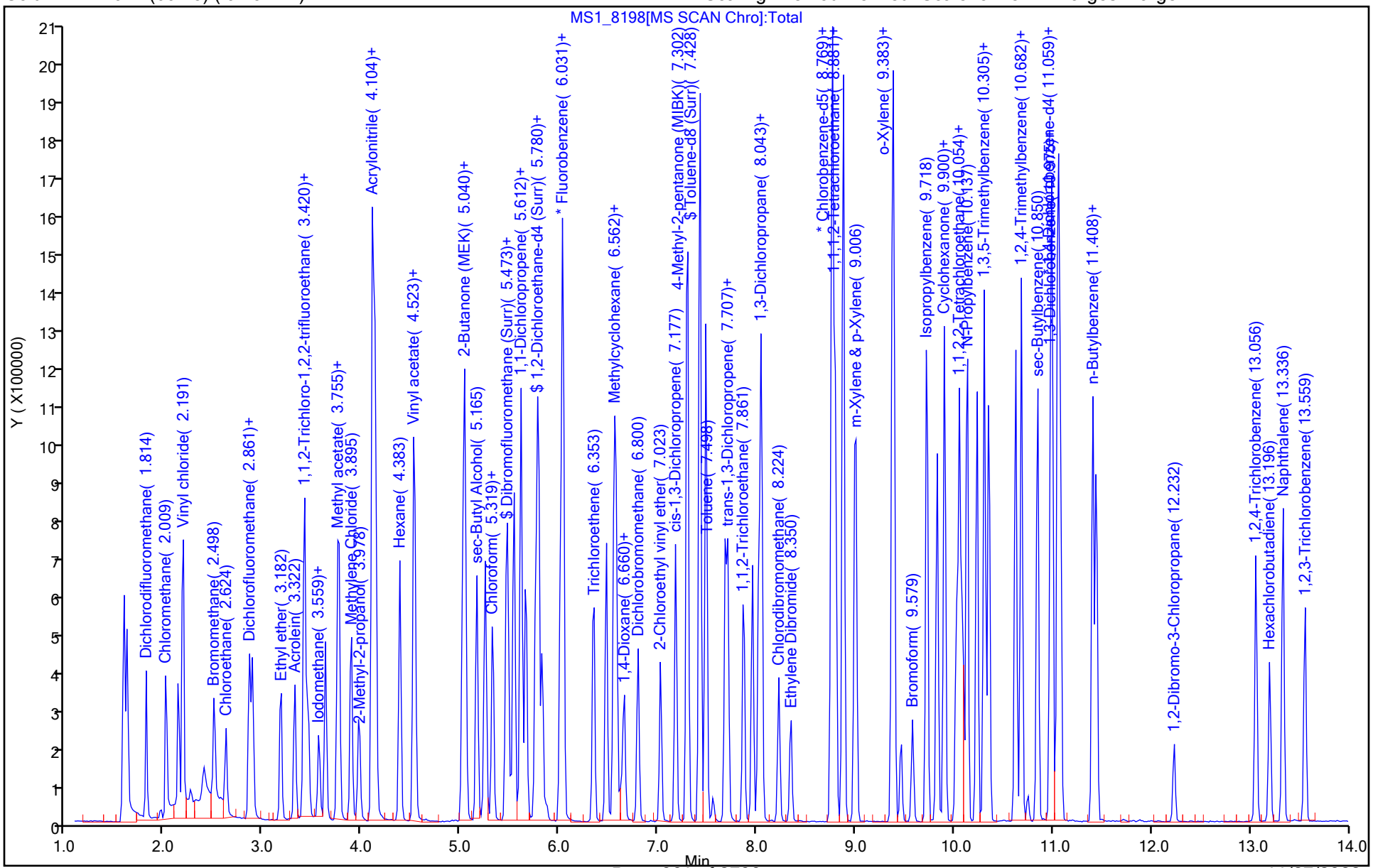
Report Date: 19-Apr-2023 08:23:16 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8198.D

Injection Date:	18-Apr-2023 19:19:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	icv			Worklist Smp#:	43
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610464/2 | Calibration Date: 04/27/2023 16:12

Instrument ID: VMS_MS1 | Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8602b.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.1800	0.1000	37.6	50.0	-24.7*	20.0
Chloromethane	Ave	0.2309	0.2236	0.1000	48.4	50.0	-3.2	20.0
Vinyl chloride	Lin1		0.2299	0.0100	48.3	50.0	-3.4	20.0
Bromomethane	Lin1		0.1058	0.0100	42.1	50.0	-15.9	20.0
Chloroethane	Lin1		0.1417	0.0100	48.3	50.0	-3.3	20.0
Dichlorofluoromethane	Lin1		0.3194	0.0100	47.9	50.0	-4.3	20.0
Trichlorofluoromethane	Lin1		0.2342	0.0100	41.8	50.0	-16.4	20.0
Ethyl ether	Ave	0.1774	0.1797	0.0100	50.6	50.0	1.3	20.0
Acrolein	Ave	0.0271	0.0254	0.0010	463	494	-6.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1133	0.1108	0.0500	48.9	50.0	-2.2	20.0
1,1-Dichloroethene	Ave	0.1550	0.1581	0.0600	51.0	50.0	2.0	20.0
Acetone	Lin1		0.0780	0.0100	181	200	-9.6	20.0
Iodomethane	Ave	0.2071	0.1460	0.0100	35.2	50.0	-29.5*	20.0
Carbon disulfide	Ave	0.5567	0.5452	0.1000	49.0	50.0	-2.1	20.0
Methyl acetate	Ave	0.1963	0.1860	0.0100	94.8	100	-5.2	20.0
Allyl chloride	Lin2		0.3345	0.0100	46.7	50.0	-6.6	20.0
Methylene Chloride	Ave	0.1929	0.1936	0.0100	50.2	50.0	0.3	20.0
2-Methyl-2-propanol	Ave	0.0283	0.0271	0.0010	479	500	-4.3	20.0
Acrylonitrile	Ave	0.0914	0.0959	0.0100	525	500	4.9	20.0
Methyl tert-butyl ether	Ave	0.5999	0.6093	0.1000	50.8	50.0	1.6	20.0
trans-1,2-Dichloroethene	Ave	0.1798	0.1782	0.1000	49.6	50.0	-0.9	20.0
Hexane	Ave	1.082	1.048	0.0100	48.4	50.0	-3.2	20.0
Vinyl acetate	Ave	0.4685	0.4189	0.0100	89.4	100	-10.6	20.0
1,1-Dichloroethane	Ave	0.3570	0.3705	0.1000	51.9	50.0	3.8	20.0
2-Butanone (MEK)	Ave	0.1340	0.1266	0.0100	189	200	-5.6	20.0
2,2-Dichloropropane	Ave	0.3031	0.2447	0.0100	40.4	50.0	-19.3	20.0
cis-1,2-Dichloroethene	Ave	0.1936	0.1987	0.1000	51.3	50.0	2.7	20.0
sec-Butyl Alcohol	Ave	0.0238	0.0231	0.0100	1160	1200	-3.0	20.0
Chlorobromomethane	Ave	0.0885	0.0814	0.0500	46.0	50.0	-8.0	20.0
Tetrahydrofuran	Ave	0.0841	0.0838	0.0010	99.6	100	-0.4	20.0
Chloroform	Ave	0.3253	0.3187	0.2000	49.0	50.0	-2.0	20.0
1,1,1-Trichloroethane	Ave	0.2706	0.2603	0.0500	48.1	50.0	-3.8	20.0
Cyclohexane	Ave	0.3491	0.3652	0.0100	52.3	50.0	4.6	20.0
1,1-Dichloropropene	Ave	0.2649	0.2757	0.0100	52.0	50.0	4.1	20.0
Carbon tetrachloride	Ave	0.2286	0.2003	0.1000	43.8	50.0	-12.4	20.0
Isobutyl alcohol	Ave	0.0100	0.0093	0.0010	1170	1250	-6.1	20.0
Benzene	Ave	0.7728	0.8090	0.2000	52.3	50.0	4.7	20.0
1,2-Dichloroethane	Ave	0.3017	0.2764	0.0700	45.8	50.0	-8.4	20.0
n-Heptane	Ave	0.2404	0.2034		42.3	50.0	-15.4	
Trichloroethene	Ave	0.8031	0.7820	0.2000	48.7	50.0	-2.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610464/2 | Calibration Date: 04/27/2023 16:12

Instrument ID: VMS_MS1 | Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) | Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8602b.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Ave	0.2043	0.1982	0.0010	155	160	-3.0	20.0
Methylcyclohexane	Ave	0.2531	0.2529	0.0500	49.9	50.0	-0.1	20.0
1,2-Dichloropropane	Ave	0.2130	0.2201	0.1000	51.7	50.0	3.3	20.0
1,4-Dioxane	Ave	0.0034	0.0032	0.0010	940	1000	-6.0	20.0
Dibromomethane	Ave	0.1167	0.1126	0.0100	48.2	50.0	-3.6	20.0
Dichlorobromomethane	Ave	0.2543	0.2317	0.2000	45.6	50.0	-8.9	20.0
2-Chloroethyl vinyl ether	Lin1		0.1348	0.0100	44.4	50.0	-11.2	20.0
cis-1,3-Dichloropropene	Ave	1.433	1.310	0.2000	45.7	50.0	-8.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2558	0.2499	0.0300	195	200	-2.3	20.0
Toluene	Ave	0.7996	0.8201	0.3000	51.3	50.0	2.6	20.0
trans-1,3-Dichloropropene	Ave	0.3155	0.2813	0.2000	44.6	50.0	-10.8	20.0
Ethyl methacrylate	Ave	1.217	1.151	0.0100	47.3	50.0	-5.5	20.0
1,1,2-Trichloroethane	Ave	0.1674	0.1685	0.1000	50.3	50.0	0.6	20.0
Tetrachloroethene	Ave	0.5506	0.5382	0.1000	48.9	50.0	-2.2	20.0
1,3-Dichloropropane	Ave	1.338	1.349	0.0100	50.4	50.0	0.9	20.0
2-Hexanone	Ave	0.7895	0.7323	0.0100	186	200	-7.2	20.0
Chlorodibromomethane	Ave	0.7351	0.6185	0.1000	42.1	50.0	-15.9	20.0
1,2-Dibromoethane	Ave	0.7391	0.6841	0.1000	46.3	50.0	-7.4	20.0
1-Chlorohexane	Lin2		1.010	0.0100	39.5	40.0	-1.3	20.0
Chlorobenzene	Ave	2.086	2.058	0.3000	49.3	50.0	-1.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.7155	0.6236	0.0100	43.6	50.0	-12.8	20.0
Ethylbenzene	Ave	1.189	1.138	0.3000	47.8	50.0	-4.3	20.0
m-Xylene & p-Xylene	Ave	1.452	1.414	0.1000	48.7	50.0	-2.6	20.0
o-Xylene	Ave	1.450	1.396	0.2000	48.1	50.0	-3.7	20.0
Styrene	Ave	2.432	2.375	0.2000	48.8	50.0	-2.3	20.0
Bromoform	Ave	0.4582	0.3488	0.1000	38.1	50.0	-23.9*	20.0
Isopropylbenzene	Ave	2.134	2.163	0.3000	50.7	50.0	1.4	20.0
Cyclohexanone	Ave	0.0503	0.0561	0.0010	1670	1500	11.5	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6353	0.6128	0.3000	48.2	50.0	-3.5	20.0
Bromobenzene	Ave	0.5004	0.4841	0.0100	48.4	50.0	-3.2	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.1461	0.0100	39.1	50.0	-21.7*	20.0
1,2,3-Trichloropropane	Ave	0.1941	0.1795	0.0100	46.2	50.0	-7.6	20.0
N-Propylbenzene	Ave	0.5767	0.5814	0.0100	50.4	50.0	0.8	20.0
2-Chlorotoluene	Ave	0.4931	0.4977	0.0100	50.5	50.0	0.9	20.0
1,3,5-Trimethylbenzene	Ave	1.774	1.795	0.0100	50.6	50.0	1.2	20.0
4-Chlorotoluene	Ave	0.5248	0.5148	0.0100	49.0	50.0	-1.9	20.0
tert-Butylbenzene	Ave	1.436	1.434	0.0100	50.0	50.0	-0.1	20.0
1,2,4-Trimethylbenzene	Ave	1.870	1.877	0.3000	50.2	50.0	0.4	20.0
sec-Butylbenzene	Ave	0.3979	0.3944	0.0100	49.6	50.0	-0.9	20.0
1,3-Dichlorobenzene	Ave	0.9365	0.9198	0.5000	49.1	50.0	-1.8	20.0
4-Isopropyltoluene	Ave	1.776	1.784	0.0100	50.2	50.0	0.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610464/2 Calibration Date: 04/27/2023 16:12

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8602b.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.000	0.9460	0.5000	47.3	50.0	-5.4	20.0
n-Butylbenzene	Ave	1.617	1.562	0.0100	48.3	50.0	-3.4	20.0
1,2-Dichlorobenzene	Ave	0.8946	0.8762	0.5000	49.0	50.0	-2.1	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1288	0.1052	0.0100	40.9	50.0	-18.3	20.0
1,2,4-Trichlorobenzene	Ave	0.5013	0.4724	0.2000	47.1	50.0	-5.7	20.0
Hexachlorobutadiene	Ave	0.1937	0.1681	0.0100	43.4	50.0	-13.2	20.0
Naphthalene	Ave	1.665	1.516	0.0100	45.5	50.0	-9.0	20.0
1,2,3-Trichlorobenzene	Ave	0.4254	0.3984	0.3000	46.8	50.0	-6.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2380	0.2469	0.0100	51.9	50.0	3.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3225	0.3304	0.0100	51.2	50.0	2.5	20.0
Toluene-d8 (Surr)	Ave	4.291	4.549	0.0100	53.0	50.0	6.0	20.0
4-Bromofluorobenzene (Surr)	Ave	0.9822	1.030	0.0100	52.4	50.0	4.8	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8602b.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 16:12:30 ALS Bottle#: 24 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120816-032
Operator ID: wt/be Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub164

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:18 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 18:01:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1286498	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	310409	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	484361	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	317645	50.0	51.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	425055	50.0	51.2	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1412057	50.0	53.0	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	498778	50.0	52.4	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	231574	50.0	37.6	
12 Chloromethane	50	2.009	2.009	0.000	99	287657	50.0	48.4	
13 Vinyl chloride	62	2.135	2.135	0.000	98	295810	50.0	48.3	
15 Bromomethane	94	2.498	2.498	0.000	92	136134	50.0	42.1	
16 Chloroethane	64	2.623	2.623	0.000	99	182305	50.0	48.3	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	410892	50.0	47.9	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	301296	50.0	41.8	
20 Ethyl ether	59	3.182	3.182	0.000	94	231134	50.0	50.6	
22 Acrolein	56	3.322	3.322	0.000	99	322391	493.8	462.8	
23 1,1-Dichloroethene	96	3.419	3.419	0.000	95	203374	50.0	51.0	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.419	3.419	0.000	96	142543	50.0	48.9	
25 Acetone	43	3.447	3.447	0.000	100	401587	200.0	180.7	
26 Iodomethane	142	3.559	3.559	0.000	99	187859	50.0	35.2	
28 Carbon disulfide	76	3.629	3.629	0.000	100	701454	50.0	49.0	
30 Methyl acetate	43	3.755	3.755	0.000	98	478523	100.0	94.8	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	90	430370	50.0	46.7	
32 Methylene Chloride	84	3.894	3.894	0.000	97	249051	50.0	50.2	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	99	348643	500.0	478.6	
34 Acrylonitrile	53	4.104	4.104	0.000	98	1234284	500.0	524.6	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	97	783867	50.0	50.8	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	229281	50.0	49.6	
37 Hexane	57	4.383	4.383	0.000	95	325204	50.0	48.4	
39 Vinyl acetate	43	4.523	4.523	0.000	97	1077836	100.0	89.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	476643	50.0	51.9	
46 2-Butanone (MEK)	43	5.012	5.012	0.000	100	651306	200.0	188.9	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	90	314782	50.0	40.4	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	85	255619	50.0	51.3	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	712245	1200.0	1163.7	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	104763	50.0	46.0	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	215664	100.0	99.6	
55 Chloroform	83	5.319	5.319	0.000	95	410061	50.0	49.0	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	98	334903	50.0	48.1	
57 Cyclohexane	56	5.542	5.542	0.000	93	469800	50.0	52.3	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	93	354684	50.0	52.0	
59 Carbon tetrachloride	117	5.612	5.612	0.000	77	257629	50.0	43.8	
60 Isobutyl alcohol	41	5.654	5.654	0.000	95	300632	1250.0	1173.4	
63 Benzene	78	5.780	5.780	0.000	99	1040736	50.0	52.3	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	355581	50.0	45.8	
66 n-Heptane	43	6.003	6.003	0.000	96	261640	50.0	42.3	
68 Trichloroethene	95	6.352	6.352	0.000	97	242745	50.0	48.7	
69 2-Pentanone	43	6.478	6.478	0.000	99	816088	160.0	155.2	
70 Methylcyclohexane	55	6.548	6.548	0.000	96	325317	50.0	49.9	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	96	283119	50.0	51.7	
73 1,4-Dioxane	88	6.632	6.632	0.000	95	83225	1000.0	940.1	
74 Dibromomethane	93	6.660	6.660	0.000	91	144820	50.0	48.2	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	298041	50.0	45.6	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	92	173452	50.0	44.4	
78 cis-1,3-Dichloropropene	75	7.176	7.176	0.000	92	406660	50.0	45.7	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	98	1285764	200.0	195.3	
82 Toluene	91	7.484	7.484	0.000	98	1055069	50.0	51.3	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	96	361929	50.0	44.6	
85 Ethyl methacrylate	69	7.707	7.707	0.000	92	357208	50.0	47.3	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	92	216803	50.0	50.3	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	167071	50.0	48.9	
90 1,3-Dichloropropane	76	8.014	8.014	0.000	97	418870	50.0	50.4	
91 2-Hexanone	43	8.042	8.042	0.000	97	909273	200.0	185.5	
95 Chlorodibromomethane	129	8.224	8.224	0.000	91	191990	50.0	42.1	
96 Ethylene Dibromide	107	8.350	8.350	0.000	97	212358	50.0	46.3	
98 1-Chlorohexane	91	8.755	8.755	0.000	93	250712	40.0	39.5	
99 Chlorobenzene	112	8.796	8.796	0.000	92	638696	50.0	49.3	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	43	193567	50.0	43.6	
101 Ethylbenzene	106	8.880	8.880	0.000	99	353121	50.0	47.8	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	438980	50.0	48.7	
103 o-Xylene	106	9.369	9.369	0.000	98	433277	50.0	48.1	
104 Styrene	104	9.397	9.397	0.000	96	737341	50.0	48.8	
106 Bromoform	173	9.579	9.579	0.000	94	108264	50.0	38.1	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	1047606	50.0	50.7	
109 Cyclohexanone	55	9.830	9.830	0.000	95	522376	1500.0	1671.8	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	296803	50.0	48.2	
111 Bromobenzene	156	10.053	10.053	0.000	96	234501	50.0	48.4	
112 trans-1,4-Dichloro-2-butene	53	10.053	10.053	0.000	80	70772	50.0	39.1	
113 1,2,3-Trichloropropane	110	10.081	10.081	0.000	86	86922	50.0	46.2	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	281620	50.0	50.4	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	241077	50.0	50.5	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	869419	50.0	50.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	249340	50.0	49.0	
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	694721	50.0	50.0	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	909001	50.0	50.2	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	191046	50.0	49.6	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	97	445504	50.0	49.1	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	864206	50.0	50.2	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	92	458210	50.0	47.3	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	756335	50.0	48.3	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	424388	50.0	49.0	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	77	50964	50.0	40.9	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	94	228834	50.0	47.1	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	81441	50.0	43.4	
132 Naphthalene	128	13.336	13.336	0.000	98	734054	50.0	45.5	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	192953	50.0	46.8	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	100.9	
S 151 Trihalomethanes, Total	1				0		200.0	174.7	
S 150 1,2-Dichloroethene, Total	1				0		100.0	100.9	
S 156 1,3-Dichloropropene, Total	1				0		100.0	90.3	
S 155 Xylenes, Total	106				0		100.0	96.8	
S 153 Xylenes, Total (URS)	1				0		100.0	96.8	
S 152 Total BTEX	1				0			248.3	

Reagents:

MV-Gas A_00151	Amount Added:	10.00	Units: uL	
MV-MegaMainA_00087	Amount Added:	25.00	Units: uL	
mv-IS_SS_00059	Amount Added:	5.00	Units: uL	Run Reagent

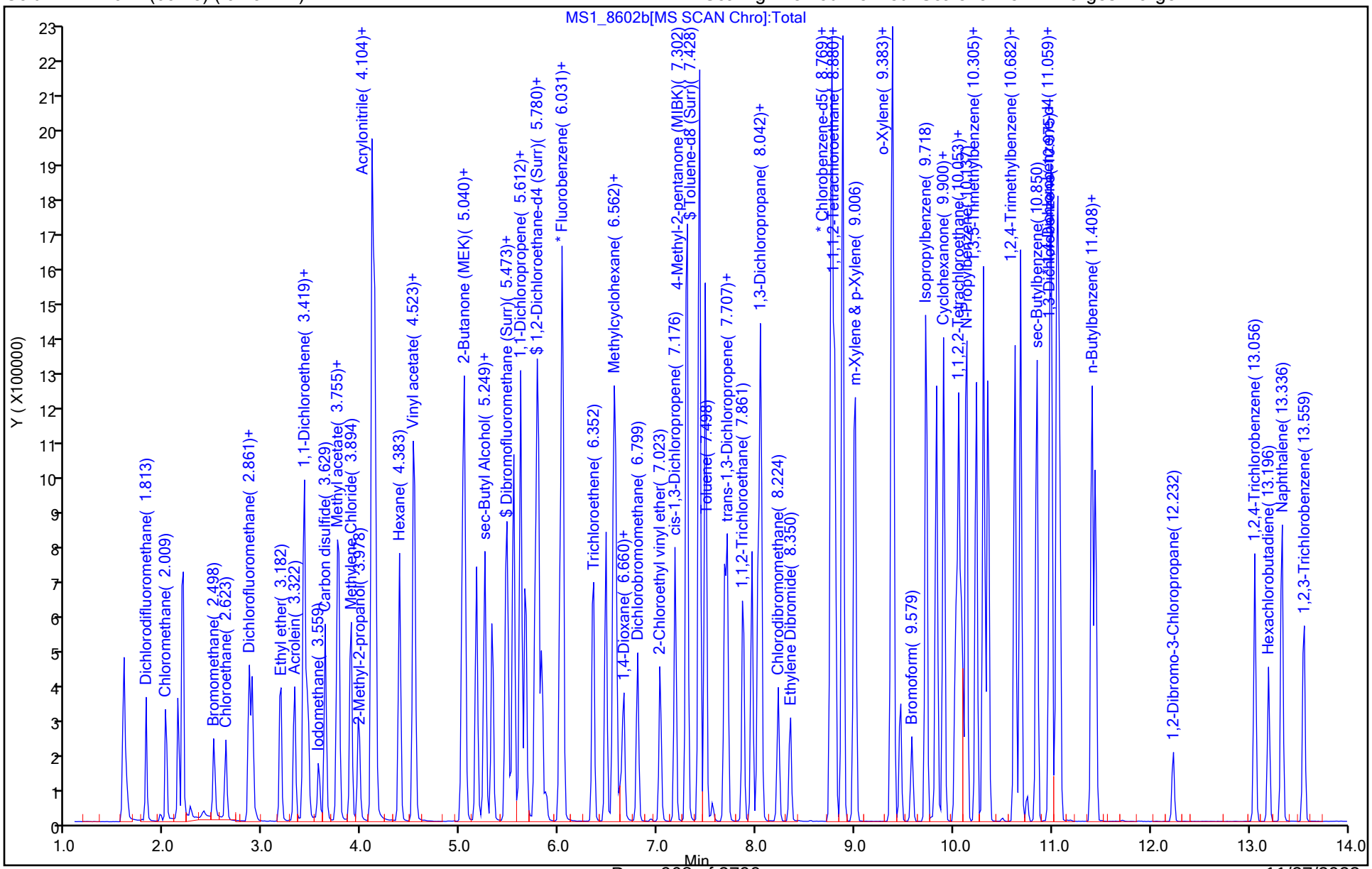
Report Date: 28-Apr-2023 09:53:18 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8602b.D

Injection Date:	27-Apr-2023 16:12:30	Instrument ID:	VMS_MS1	Operator ID:	wt/be
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610464/3 Calibration Date: 04/27/2023 16:34

Instrument ID: VMS_MS1 Calib Start Date: 12/28/2022 11:59

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 12/28/2022 14:33

Lab File ID: MS1_8603a.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0035	0.0033*	0.0100	1390	1500	-7.3	20.0
Isopropyl alcohol	Ave	0.0168	0.0151	0.0100	224	250	-10.4	20.0
Acetonitrile	Ave	0.0400	0.0364	0.0100	228	250	-9.0	20.0
Isopropyl ether	Ave	0.1639	0.1649	0.0100	25.2	25.0	0.7	20.0
Chloroprene	Ave	0.3120	0.3263	0.0100	26.1	25.0	4.6	20.0
Tert-butyl ethyl ether	Ave	0.6150	0.6411	0.0100	26.1	25.0	4.2	20.0
Ethyl acetate	Lin2		0.2133	0.0100	43.5	50.0	-13.0	20.0
Propionitrile	Ave	0.0404	0.0352	0.0100	218	250	-12.9	20.0
Methacrylonitrile	Ave	0.1568	0.1444	0.0100	230	250	-7.9	20.0
Tert-amyl methyl ether	Ave	0.5682	0.5734	0.0100	25.2	25.0	0.9	20.0
n-Butanol	Ave	0.0060	0.0062*	0.0100	647	625	3.6	20.0
Methyl methacrylate	Ave	0.0634	0.0514	0.0100	40.5	50.0	-19.0	20.0
2-Nitropropane	Lin1		0.0452	0.0100	41.9	50.0	-16.2	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1861	0.1103	0.0100	29.6	50.0	-40.7*	20.0
1,2,3-Trimethylbenzene	Ave	2.095	1.749	0.0100	20.9	25.0	-16.5	20.0
1,3,5-Trichlorobenzene	Ave	0.6831	0.4525	0.0100	16.6	25.0	-33.8*	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8603a.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 16:34:30 ALS Bottle#: 25 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120816-033
Operator ID: wt/be Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub197

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 17:45:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1273999	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	301529	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	475598	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	313592	50.0	51.7	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	425183	50.0	51.7	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1365719	50.0	52.8	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	489072	50.0	52.3	
19 Ethanol	45	3.071	3.071	0.000	99	124446	1500.0	1390.0	
27 Isopropyl alcohol	45	3.587	3.587	0.000	99	96154	250.0	224.1	
29 Acetonitrile	41	3.727	3.727	0.000	99	232129	250.0	227.6	
41 Isopropyl ether	87	4.551	4.551	0.000	94	105059	25.0	25.2	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	93	207862	25.0	26.1	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	408379	25.0	26.1	
47 Ethyl acetate	43	5.040	5.040	0.000	99	271742	50.0	43.5	
50 Propionitrile	54	5.082	5.082	0.000	99	223958	250.0	217.6	
52 Methacrylonitrile	41	5.207	5.207	0.000	95	919868	250.0	230.3	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	90	365240	25.0	25.2	
67 n-Butanol	56	6.227	6.227	0.000	91	99390	625.0	647.5	
72 Methyl methacrylate	100	6.590	6.590	0.000	94	65459	50.0	40.5	
76 2-Nitropropane	41	6.995	6.995	0.000	97	57564	50.0	41.9	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	52454	50.0	29.6	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	415880	25.0	20.9	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	107611	25.0	16.6	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added:	25.00	Units: uL	
mv-IS_SS_00059	Amount Added:	5.00	Units: uL	Run Reagent

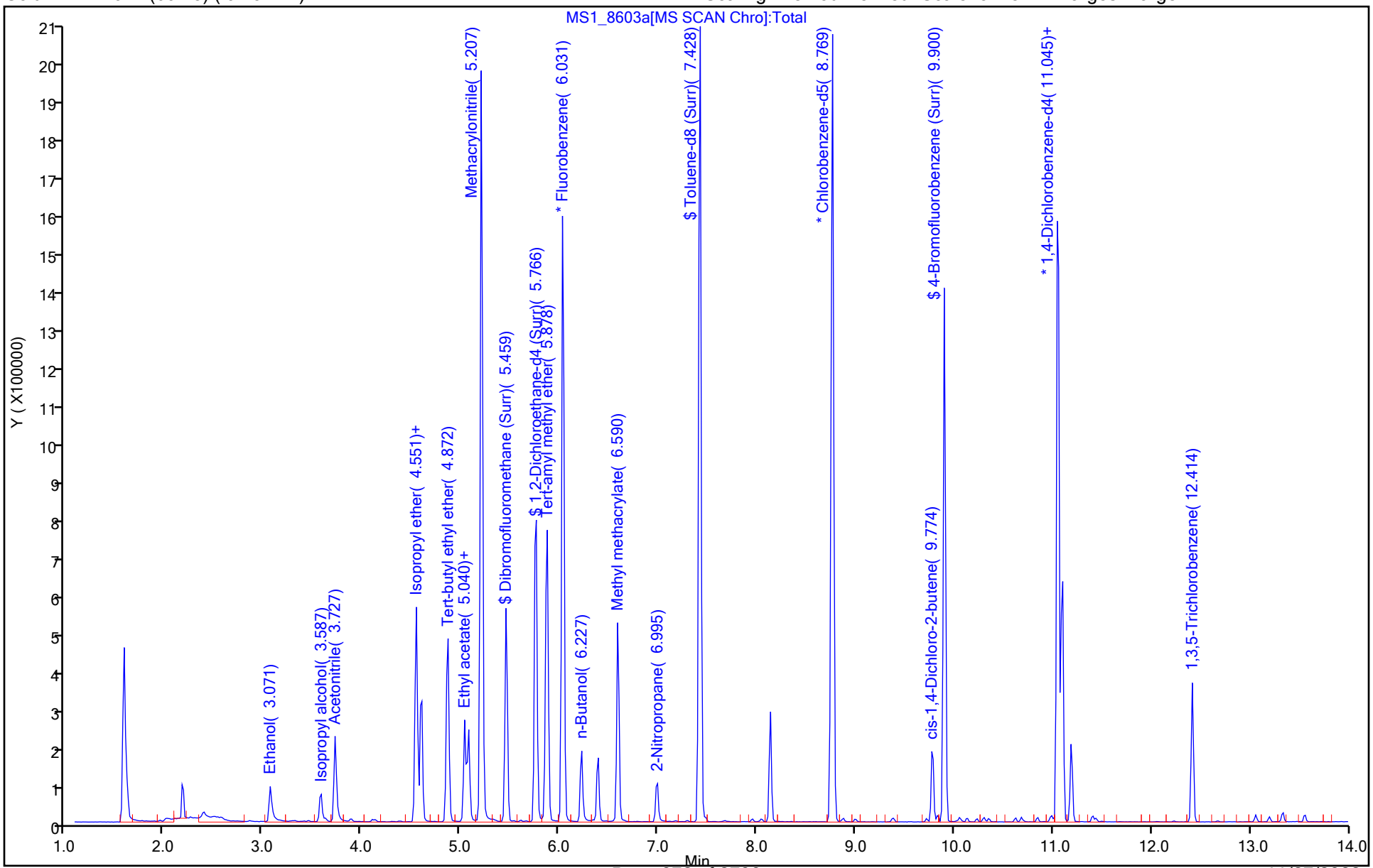
Report Date: 28-Apr-2023 09:53:21 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8603a.D

Injection Date:	27-Apr-2023 16:34:30	Instrument ID:	VMS_MS1	Operator ID:	wt/be
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610464/3 Calibration Date: 04/27/2023 16:34

Instrument ID: VMS_MS1 Calib Start Date: 04/18/2023 11:03

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/18/2023 18:58

Lab File ID: MS1_8603a.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2380	0.2461	0.0100	51.7	50.0	3.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3225	0.3337	0.0100	51.7	50.0	3.5	20.0
Toluene-d8 (Surr)	Ave	4.291	4.529	0.0100	52.8	50.0	5.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.9822	1.028	0.0100	52.3	50.0	4.7	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8603a.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 16:34:30 ALS Bottle#: 25 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120816-033
Operator ID: wt/be Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub197

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 17:45:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1273999	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	301529	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	475598	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	313592	50.0	51.7	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	425183	50.0	51.7	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1365719	50.0	52.8	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	489072	50.0	52.3	
19 Ethanol	45	3.071	3.071	0.000	99	124446	1500.0	1390.0	
27 Isopropyl alcohol	45	3.587	3.587	0.000	99	96154	250.0	224.1	
29 Acetonitrile	41	3.727	3.727	0.000	99	232129	250.0	227.6	
41 Isopropyl ether	87	4.551	4.551	0.000	94	105059	25.0	25.2	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	93	207862	25.0	26.1	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	408379	25.0	26.1	
47 Ethyl acetate	43	5.040	5.040	0.000	99	271742	50.0	43.5	
50 Propionitrile	54	5.082	5.082	0.000	99	223958	250.0	217.6	
52 Methacrylonitrile	41	5.207	5.207	0.000	95	919868	250.0	230.3	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	90	365240	25.0	25.2	
67 n-Butanol	56	6.227	6.227	0.000	91	99390	625.0	647.5	
72 Methyl methacrylate	100	6.590	6.590	0.000	94	65459	50.0	40.5	
76 2-Nitropropane	41	6.995	6.995	0.000	97	57564	50.0	41.9	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	52454	50.0	29.6	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	415880	25.0	20.9	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	107611	25.0	16.6	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added:	25.00	Units: uL	
mv-IS_SS_00059	Amount Added:	5.00	Units: uL	Run Reagent

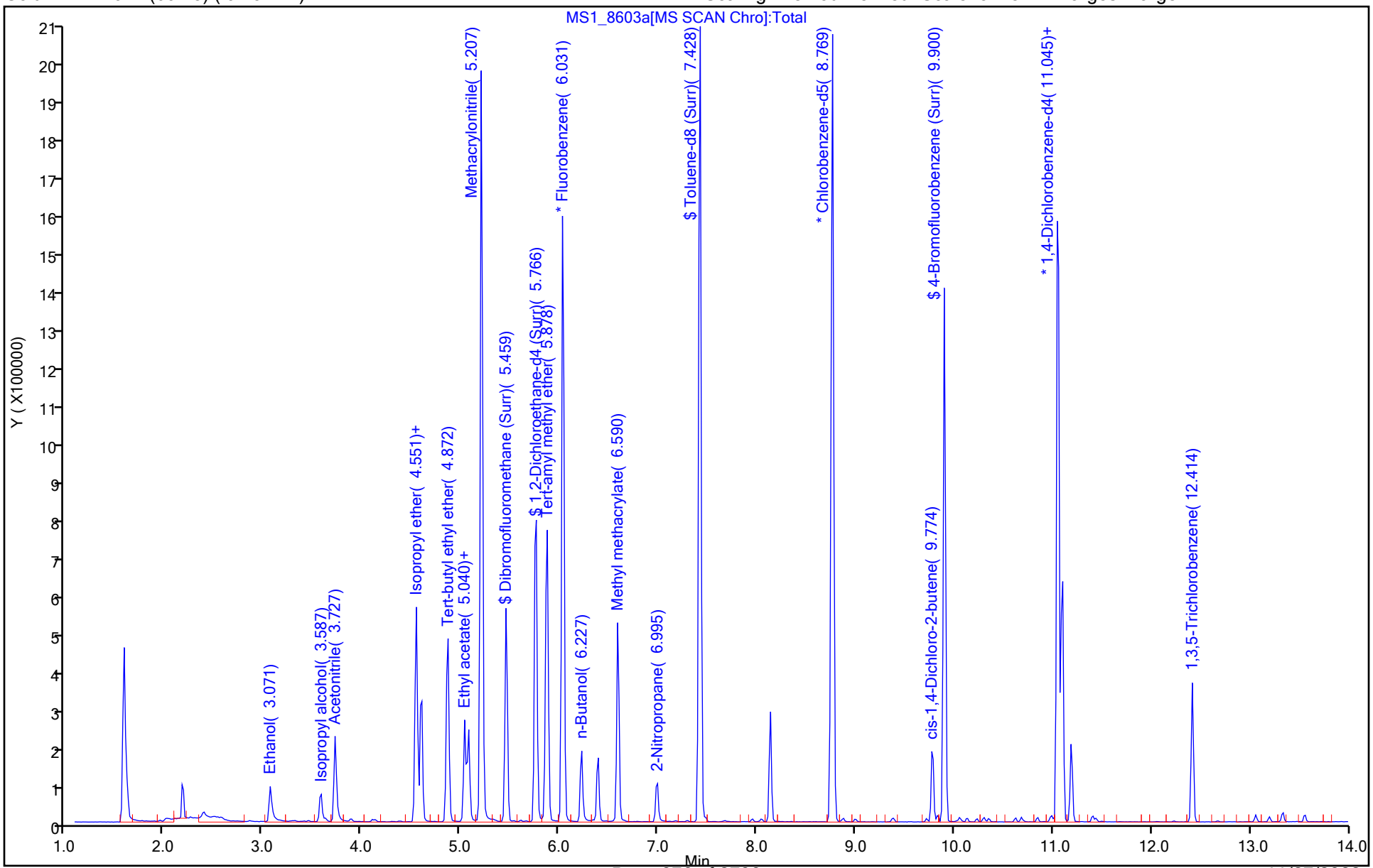
Report Date: 28-Apr-2023 09:53:21 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8603a.D

Injection Date:	27-Apr-2023 16:34:30	Instrument ID:	VMS_MS1	Operator ID:	wt/be
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICV 280-608203/8 Calibration Date: 04/11/2023 00:52

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502177.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.2375	0.1000	54.1	50.0	8.3	30.0
Chloromethane	Ave	0.2229	0.2221	0.1000	49.8	50.0	-0.4	30.0
Vinyl chloride	Lin1		0.2611	0.0100	57.5	50.0	15.0	30.0
Bromomethane	Ave	0.1211	0.1410	0.0100	58.2	50.0	16.4	30.0
Chloroethane	Ave	0.1519	0.1722	0.0100	56.7	50.0	13.3	30.0
Dichlorofluoromethane	Ave	0.3792	0.3949	0.0100	52.1	50.0	4.2	30.0
Trichlorofluoromethane	Ave	0.2925	0.3340	0.0100	57.1	50.0	14.2	30.0
Ethyl ether	Ave	0.1687	0.1643	0.0100	48.7	50.0	-2.6	30.0
Acrolein	Ave	0.0272	0.0254	0.0010	461	494	-6.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1554	0.0500	56.3	50.0	12.5	30.0
1,1-Dichloroethene	Ave	0.1921	0.2016	0.0600	52.5	50.0	4.9	30.0
Acetone	Lin2		0.0555	0.0100	202	200	0.8	30.0
Iodomethane	Lin1		0.2511	0.0100	47.4	50.0	-5.2	30.0
Carbon disulfide	Ave	0.6224	0.6163	0.1000	49.5	50.0	-1.0	30.0
Methyl acetate	Ave	0.1262	0.1266	0.0100	100	100	0.3	30.0
Allyl chloride	Ave	0.2551	0.2679	0.0100	52.5	50.0	5.0	30.0
Methylene Chloride	Ave	0.2466	0.2343	0.0100	47.5	50.0	-5.0	30.0
2-Methyl-2-propanol	Lin1		0.0175	0.0010	449	500	-10.2	30.0
Acrylonitrile	Ave	0.0717	0.0707	0.0100	493	500	-1.4	30.0
Methyl tert-butyl ether	Ave	0.6044	0.6254	0.1000	51.7	50.0	3.5	30.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2260	0.1000	53.0	50.0	6.0	30.0
Hexane	Ave	1.146	1.080	0.0100	47.1	50.0	-5.8	30.0
Vinyl acetate	Ave	0.3380	0.3735	0.0100	111	100	10.5	30.0
1,1-Dichloroethane	Ave	0.3890	0.4001	0.1000	51.4	50.0	2.8	30.0
2-Butanone (MEK)	Ave	0.0821	0.0835	0.0100	203	200	1.6	30.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2592	0.1000	50.7	50.0	1.5	30.0
2,2-Dichloropropane	Ave	0.2990	0.3173	0.0100	53.1	50.0	6.1	30.0
sec-Butyl Alcohol	Lin1		0.0130	0.0100	1060	1200	-11.6	30.0
Chlorobromomethane	Ave	0.1177	0.1223	0.0500	51.9	50.0	3.9	30.0
Tetrahydrofuran	Ave	0.0557	0.0530	0.0010	95.2	100	-4.8	30.0
Chloroform	Ave	0.3958	0.4101	0.2000	51.8	50.0	3.6	30.0
1,1,1-Trichloroethane	Ave	0.3206	0.3525	0.0500	55.0	50.0	9.9	30.0
Cyclohexane	Ave	0.3308	0.3483	0.0100	52.6	50.0	5.3	30.0
1,1-Dichloropropene	Ave	0.3142	0.3361	0.0100	53.5	50.0	7.0	30.0
Carbon tetrachloride	Ave	0.2595	0.2956	0.1000	56.9	50.0	13.9	30.0
Isobutyl alcohol	Lin1		0.0057	0.0010	1150	1250	-8.2	30.0
Benzene	Ave	0.9289	0.9492	0.2000	51.1	50.0	2.2	30.0
1,2-Dichloroethane	Ave	0.2944	0.3077	0.0700	52.3	50.0	4.5	30.0
n-Heptane	Ave	0.1928	0.1961		50.9	50.0	1.8	
Trichloroethene	Ave	0.9564	0.9925	0.2000	51.9	50.0	3.8	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICV 280-608203/8 | Calibration Date: 04/11/2023 00:52

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502177.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1294	0.0010	156	160	-2.2	30.0
Methylcyclohexane	Ave	0.2422	0.2579	0.0500	53.2	50.0	6.5	30.0
1,2-Dichloropropane	Ave	0.2362	0.2402	0.1000	50.8	50.0	1.7	30.0
1,4-Dioxane	Ave	0.0030	0.0029	0.0010	982	1000	-1.8	30.0
Dibromomethane	Ave	0.1409	0.1469	0.0100	52.1	50.0	4.2	30.0
Dichlorobromomethane	Ave	0.2974	0.3127	0.2000	52.6	50.0	5.1	30.0
2-Chloroethyl vinyl ether	Lin1		0.1144	0.0100	76.0	50.0	52.1*	30.0
cis-1,3-Dichloropropene	Ave	1.523	1.541	0.2000	50.6	50.0	1.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1734	0.0300	219	200	9.7	30.0
Toluene	Ave	1.001	1.045	0.3000	52.2	50.0	4.5	30.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3367	0.2000	54.9	50.0	9.7	30.0
Ethyl methacrylate	Ave	1.092	1.109	0.0100	50.7	50.0	1.5	30.0
1,1,2-Trichloroethane	Ave	0.2000	0.2084	0.1000	52.1	50.0	4.2	30.0
Tetrachloroethene	Ave	0.7259	0.7668	0.1000	52.8	50.0	5.6	30.0
1,3-Dichloropropane	Ave	1.532	1.496	0.0100	48.8	50.0	-2.3	30.0
2-Hexanone	Ave	0.4789	0.4980	0.0100	208	200	4.0	30.0
Chlorodibromomethane	Ave	0.9243	0.9266	0.1000	50.1	50.0	0.2	30.0
1,2-Dibromoethane	Ave	0.8754	0.8924	0.1000	51.0	50.0	1.9	30.0
1-Chlorohexane	Ave	1.353	1.377	0.0100	40.7	40.0	1.8	30.0
Chlorobenzene	Ave	2.785	2.788	0.3000	50.0	50.0	0.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.9412	0.0100	52.6	50.0	5.1	30.0
Ethylbenzene	Ave	1.533	1.552	0.3000	50.6	50.0	1.2	30.0
m-Xylene & p-Xylene	Ave	1.838	1.885	0.1000	51.3	50.0	2.5	30.0
o-Xylene	Ave	1.865	1.840	0.2000	49.3	50.0	-1.3	30.0
Styrene	Ave	2.963	3.052	0.2000	51.5	50.0	3.0	30.0
Bromoform	Ave	0.5587	0.5565	0.1000	49.8	50.0	-0.4	30.0
Isopropylbenzene	Ave	2.838	2.984	0.3000	52.6	50.0	5.1	30.0
Cyclohexanone	Lin1		0.0419	0.0010	1480	1500	-1.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.7188	0.3000	50.2	50.0	0.4	30.0
Bromobenzene	Ave	0.7149	0.7091	0.0100	49.6	50.0	-0.8	30.0
trans-1,4-Dichloro-2-butene	Lin2		0.1898	0.0100	50.7	50.0	1.4	30.0
1,2,3-Trichloropropane	Ave	0.2173	0.2178	0.0100	50.1	50.0	0.2	30.0
N-Propylbenzene	Ave	0.7886	0.8463	0.0100	53.7	50.0	7.3	30.0
2-Chlorotoluene	Ave	0.6999	0.7331	0.0100	52.4	50.0	4.7	30.0
1,3,5-Trimethylbenzene	Ave	2.394	2.490	0.0100	52.0	50.0	4.0	30.0
4-Chlorotoluene	Ave	0.7282	0.7663	0.0100	52.6	50.0	5.2	30.0
tert-Butylbenzene	Ave	2.000	2.078	0.0100	51.9	50.0	3.9	30.0
1,2,4-Trimethylbenzene	Ave	2.476	2.571	0.3000	51.9	50.0	3.8	30.0
sec-Butylbenzene	Ave	0.5991	0.6151	0.0100	51.3	50.0	2.7	30.0
1,3-Dichlorobenzene	Ave	1.320	1.354	0.5000	51.3	50.0	2.6	30.0
4-Isopropyltoluene	Ave	2.471	2.618	0.0100	53.0	50.0	6.0	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICV 280-608203/8 | Calibration Date: 04/11/2023 00:52

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502177.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.387	0.5000	49.5	50.0	-1.1	30.0
n-Butylbenzene	Ave	2.140	2.289	0.0100	53.5	50.0	7.0	30.0
1,2-Dichlorobenzene	Ave	1.271	1.286	0.5000	50.6	50.0	1.2	30.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1223	0.0100	42.4	50.0	-15.1	30.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.6514	0.2000	50.9	50.0	1.8	30.0
Hexachlorobutadiene	Ave	0.2332	0.2497	0.0100	53.5	50.0	7.1	30.0
Naphthalene	Ave	1.632	1.570	0.0100	48.1	50.0	-3.8	30.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.4865	0.3000	50.4	50.0	0.8	30.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2409	0.0100	50.1	50.0	0.2	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2532	0.0100	50.1	50.0	0.2	30.0
Toluene-d8 (Surr)	Ave	4.259	4.114	0.0100	48.3	50.0	-3.4	30.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.8864	0.0100	49.6	50.0	-0.8	30.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502177.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 11-Apr-2023 00:52:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: COULTERD Instrument ID: VMS_X4
Sublist:

Method: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 07:35:16 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: BX8N Date: 11-Apr-2023 07:35:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	1472574	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	356963	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	549141	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	92	354816	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	372903	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	93	1468680	50.0	48.3	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	89	486743	50.0	49.6	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	100	349805	50.0	54.1	
11 Chloromethane	50	1.867	1.867	0.000	99	327043	50.0	49.8	
12 Vinyl chloride	62	1.967	1.967	0.000	98	384458	50.0	57.5	
14 Bromomethane	94	2.246	2.246	0.000	91	207640	50.0	58.2	
15 Chloroethane	64	2.339	2.339	0.000	99	253510	50.0	56.7	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	581591	50.0	52.1	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	491826	50.0	57.1	
19 Ethyl ether	59	2.747	2.747	0.000	87	241978	50.0	48.7	
21 Acrolein	56	2.854	2.854	0.000	99	369503	493.8	461.1	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	96	228889	50.0	56.3	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	296821	50.0	52.5	
24 Acetone	43	2.954	2.954	0.000	100	326659	200.0	201.5	
26 Iodomethane	142	3.061	3.061	0.000	99	369742	50.0	47.4	
27 Carbon disulfide	76	3.118	3.119	0.000	99	907562	50.0	49.5	
29 Methyl acetate	43	3.176	3.176	0.000	96	372821	100.0	100.3	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	84	394556	50.0	52.5	
31 Methylene Chloride	84	3.297	3.297	0.000	88	344980	50.0	47.5	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	99	258260	500.0	448.8	
33 Acrylonitrile	53	3.455	3.455	0.000	97	1040968	500.0	493.2	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	94	920911	50.0	51.7	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	98	332829	50.0	53.0	
37 Hexane	57	3.683	3.683	0.000	89	385479	50.0	47.1	
39 Vinyl acetate	43	3.783	3.783	0.000	97	1100062	100.0	110.5	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	589139	50.0	51.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	491662	200.0	203.2	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	81	381622	50.0	50.7	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	467208	50.0	53.1	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	98	458399	1200.0	1061.0	
52 Chlorobromomethane	128	4.384	4.391	-0.007	91	180047	50.0	51.9	
53 Tetrahydrofuran	42	4.398	4.398	0.000	83	156118	100.0	95.2	
54 Chloroform	83	4.448	4.448	0.000	93	603959	50.0	51.8	
55 1,1,1-Trichloroethane	97	4.591	4.591	0.000	99	519048	50.0	55.0	
56 Cyclohexane	56	4.649	4.649	0.000	87	512833	50.0	52.6	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	494884	50.0	53.5	
60 Isobutyl alcohol	41	4.706	4.706	0.000	87	210637	1250.0	1148.0	
59 Carbon tetrachloride	117	4.706	4.706	0.000	93	435260	50.0	56.9	
62 Benzene	78	4.849	4.849	0.000	96	1397730	50.0	51.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	97	453127	50.0	52.3	
65 n-Heptane	43	5.035	5.035	0.000	87	288841	50.0	50.9	
67 Trichloroethene	95	5.335	5.335	0.000	98	354303	50.0	51.9	
68 2-Pentanone	43	5.435	5.435	0.000	97	609936	160.0	156.5	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	379764	50.0	53.2	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	95	353755	50.0	50.8	
72 1,4-Dioxane	88	5.578	5.578	0.000	89	86501	1000.0	982.3	
73 Dibromomethane	93	5.607	5.614	-0.007	94	216268	50.0	52.1	
74 Dichlorobromomethane	83	5.735	5.735	0.000	100	460419	50.0	52.6	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	91	168486	50.0	76.0	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	96	550239	50.0	50.6	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	1021236	200.0	219.3	
79 Toluene	91	6.365	6.365	0.000	98	1539573	50.0	52.2	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	495828	50.0	54.9	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	395737	50.0	50.7	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	91	306947	50.0	52.1	
83 Tetrachloroethene	164	6.808	6.808	0.000	95	273720	50.0	52.8	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	94	534171	50.0	48.8	
85 2-Hexanone	43	6.880	6.880	0.000	97	711085	200.0	208.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	330746	50.0	50.1	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	318564	50.0	51.0	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	393346	40.0	40.7	
90 Chlorobenzene	112	7.602	7.602	0.000	96	995087	50.0	50.0	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	94	335958	50.0	52.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	554111	50.0	50.6	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	672846	50.0	51.3	
94 o-Xylene	106	8.152	8.152	0.000	96	656959	50.0	49.3	
95 Styrene	104	8.167	8.167	0.000	94	1089528	50.0	51.5	
96 Bromoform	173	8.352	8.352	0.000	94	198643	50.0	49.8	
97 Isopropylbenzene	105	8.488	8.488	0.000	96	1638770	50.0	52.6	
99 Cyclohexanone	55	8.588	8.588	0.000	90	448738	1500.0	1477.1	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	394709	50.0	50.2	
101 Bromobenzene	156	8.810	8.810	0.000	96	389410	50.0	49.6	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	74	104235	50.0	50.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	119578	50.0	50.1	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	464747	50.0	53.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	402556	50.0	52.4	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	1367329	50.0	52.0	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	420792	50.0	52.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	1140927	50.0	51.9	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	98	1411577	50.0	51.9	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	337760	50.0	51.3	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	743380	50.0	51.3	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1437685	50.0	53.0	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	94	761683	50.0	49.5	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	1257063	50.0	53.5	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	97	706003	50.0	50.6	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	84	67177	50.0	42.4	
120 1,2,4-Trichlorobenzene	180	11.763	11.763	0.000	94	357702	50.0	50.9	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	95	137140	50.0	53.5	
122 Naphthalene	128	12.035	12.035	0.000	97	862181	50.0	48.1	
123 1,2,3-Trichlorobenzene	180	12.256	12.257	0.000	95	267144	50.0	50.4	
S 135 1,2-Dichloroethene, Total (URS)	96				0		100.0	103.7	
S 139 Xylenes, Total (URS)	1				0		100.0	100.6	
S 136 1,3-Dichloropropene, Total	1				0		100.0	105.5	
S 138 Xylenes, Total	106				0		100.0	100.6	
S 140 Trihalomethanes, Total	1				0		200.0	204.3	
S 141 1,2-Dichloroethene, Total	1				0		100.0	103.7	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas B_00131	Amount Added: 10.00	Units: uL	
MV-MegaMain B_00082	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

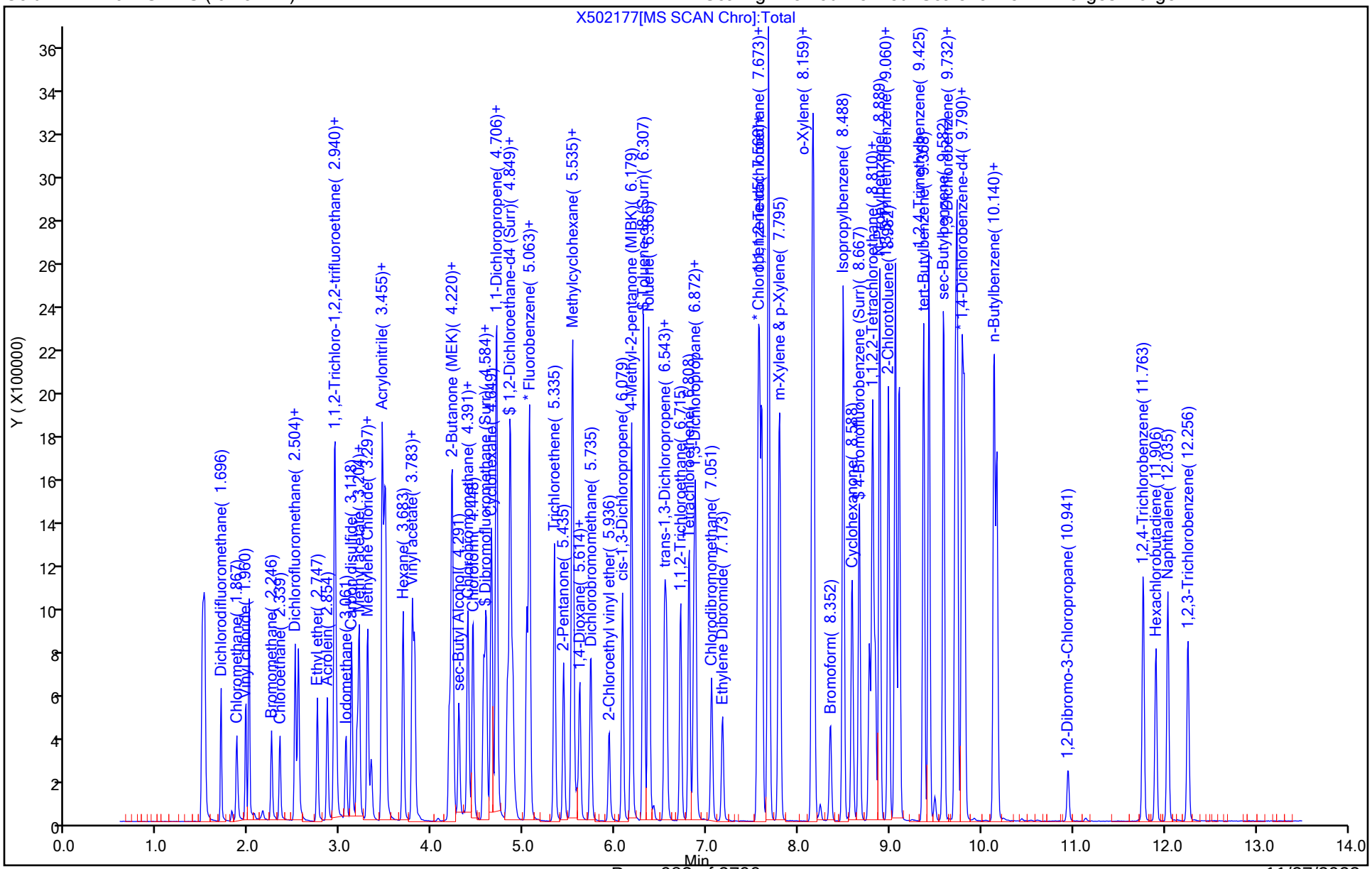
Report Date: 11-Apr-2023 07:36:07 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502177.D

Injection Date:	11-Apr-2023 00:52:30	Instrument ID:	VMS_X4	Operator ID:	COULTERD
Lims ID:	ICV			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610121/3 Calibration Date: 04/26/2023 09:51

Instrument ID: VMS_X4 Calib Start Date: 10/22/2022 15:19

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 10/22/2022 17:23

Lab File ID: X502846.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0024*	0.0100	1380	1500	-8.3	20.0
Isopropyl alcohol	Ave	0.0155	0.0116	0.0100	187	250	-25.2*	20.0
Acetonitrile	Ave	0.0279	0.0284	0.0100	254	250	1.6	20.0
Isopropyl ether	Ave	0.1867	0.2035	0.0100	27.3	25.0	9.0	20.0
Chloroprene	Ave	0.3274	0.3405	0.0100	26.0	25.0	4.0	20.0
Tert-butyl ethyl ether	Ave	0.6465	0.6688	0.0100	25.9	25.0	3.4	20.0
Ethyl acetate	Ave	0.1934	0.1788	0.0100	46.2	50.0	-7.5	20.0
Propionitrile	Ave	0.0311	0.0309	0.0100	248	250	-0.6	20.0
Methacrylonitrile	Ave	0.1216	0.1183	0.0100	243	250	-2.7	20.0
Tert-amyl methyl ether	Ave	0.6244	0.6267	0.0100	25.1	25.0	0.4	20.0
n-Butanol	Ave	0.0061	0.0049*	0.0100	500	625	-20.0	20.0
Methyl methacrylate	Ave	0.0660	0.0568	0.0100	43.0	50.0	-14.0	20.0
2-Nitropropane	Ave	0.0700	0.0349	0.0100	25.0	50.0	-50.1*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1587	0.0100	40.3	50.0	-19.4	20.0
1,2,3-Trimethylbenzene	Ave	2.711	2.492	0.0100	23.0	25.0	-8.1	20.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.7864	0.0100	23.3	25.0	-6.7	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 09:51:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:17:06

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2035170	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	505460	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	795445	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518213	50.0	52.9	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	507773	50.0	49.4	
$	6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2148658	50.0	49.9	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	711206	50.0	50.0	
	18 Ethanol	45	2.654	2.654	0.000	100	148229	1500.0	1376.0	
	25 Isopropyl alcohol	45	3.033	3.033	0.000	99	117927	250.0	186.9	
	28 Acetonitrile	41	3.161	3.161	0.000	99	288783	250.0	254.1	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	207116	25.0	27.3	
	42 2-Chloro-1,3-butadiene	53	3.855	3.855	0.000	88	346526	25.0	26.0	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	680555	25.0	25.9	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	363952	50.0	46.2	
	49 Propionitrile	54	4.234	4.234	0.000	99	314088	250.0	248.4	
	51 Methacrylonitrile	41	4.348	4.348	0.000	88	1203797	250.0	243.2	
	64 Tert-amyl methyl ether	73	4.913	4.913	0.000	92	637713	25.0	25.1	
	66 n-Butanol	56	5.199	5.199	0.000	86	124737	625.0	500.0	
	71 Methyl methacrylate	100	5.543	5.543	0.000	88	115629	50.0	43.0	
	75 2-Nitropropane	41	5.893	5.893	0.000	98	71079	50.0	25.0	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	126262	50.0	40.3	
	115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	990988	25.0	23.0	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	312775	25.0	23.3	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

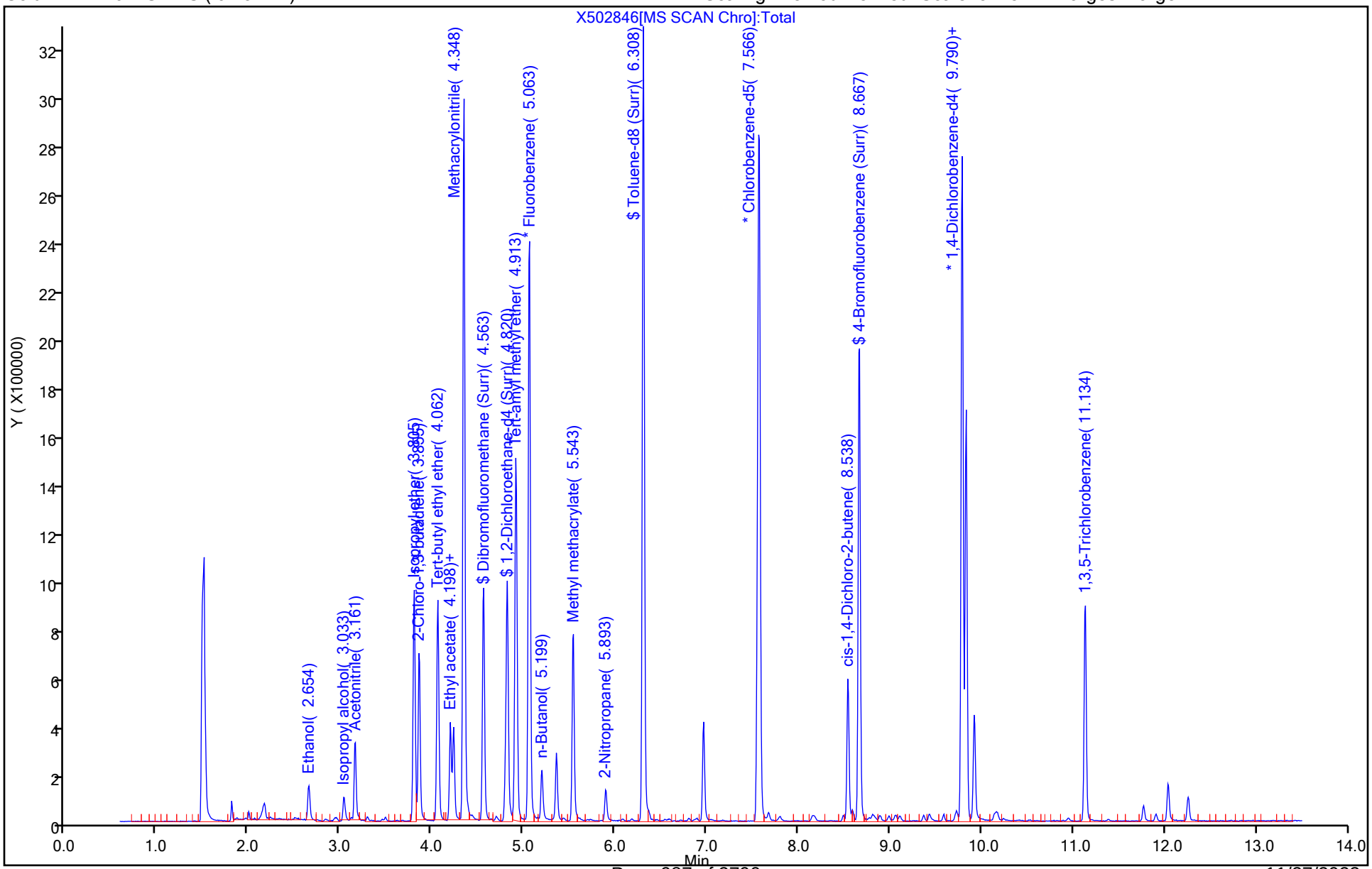
Report Date: 26-Apr-2023 11:04:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846.D

Injection Date:	26-Apr-2023 09:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610121/3 Calibration Date: 04/26/2023 09:51

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502846.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2405	0.2546	0.0100	52.9	50.0	5.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2495	0.0100	49.4	50.0	-1.2	20.0
Toluene-d8 (Surr)	Ave	4.259	4.251	0.0100	49.9	50.0	-0.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.8941	0.0100	50.0	50.0	0.0	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 09:51:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:17:06

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2035170	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	505460	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	795445	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518213	50.0	52.9	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	507773	50.0	49.4	
$	6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2148658	50.0	49.9	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	711206	50.0	50.0	
	18 Ethanol	45	2.654	2.654	0.000	100	148229	1500.0	1376.0	
	25 Isopropyl alcohol	45	3.033	3.033	0.000	99	117927	250.0	186.9	
	28 Acetonitrile	41	3.161	3.161	0.000	99	288783	250.0	254.1	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	207116	25.0	27.3	
	42 2-Chloro-1,3-butadiene	53	3.855	3.855	0.000	88	346526	25.0	26.0	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	680555	25.0	25.9	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	363952	50.0	46.2	
	49 Propionitrile	54	4.234	4.234	0.000	99	314088	250.0	248.4	
	51 Methacrylonitrile	41	4.348	4.348	0.000	88	1203797	250.0	243.2	
	64 Tert-amyl methyl ether	73	4.913	4.913	0.000	92	637713	25.0	25.1	
	66 n-Butanol	56	5.199	5.199	0.000	86	124737	625.0	500.0	
	71 Methyl methacrylate	100	5.543	5.543	0.000	88	115629	50.0	43.0	
	75 2-Nitropropane	41	5.893	5.893	0.000	98	71079	50.0	25.0	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	126262	50.0	40.3	
	115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	990988	25.0	23.0	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	312775	25.0	23.3	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

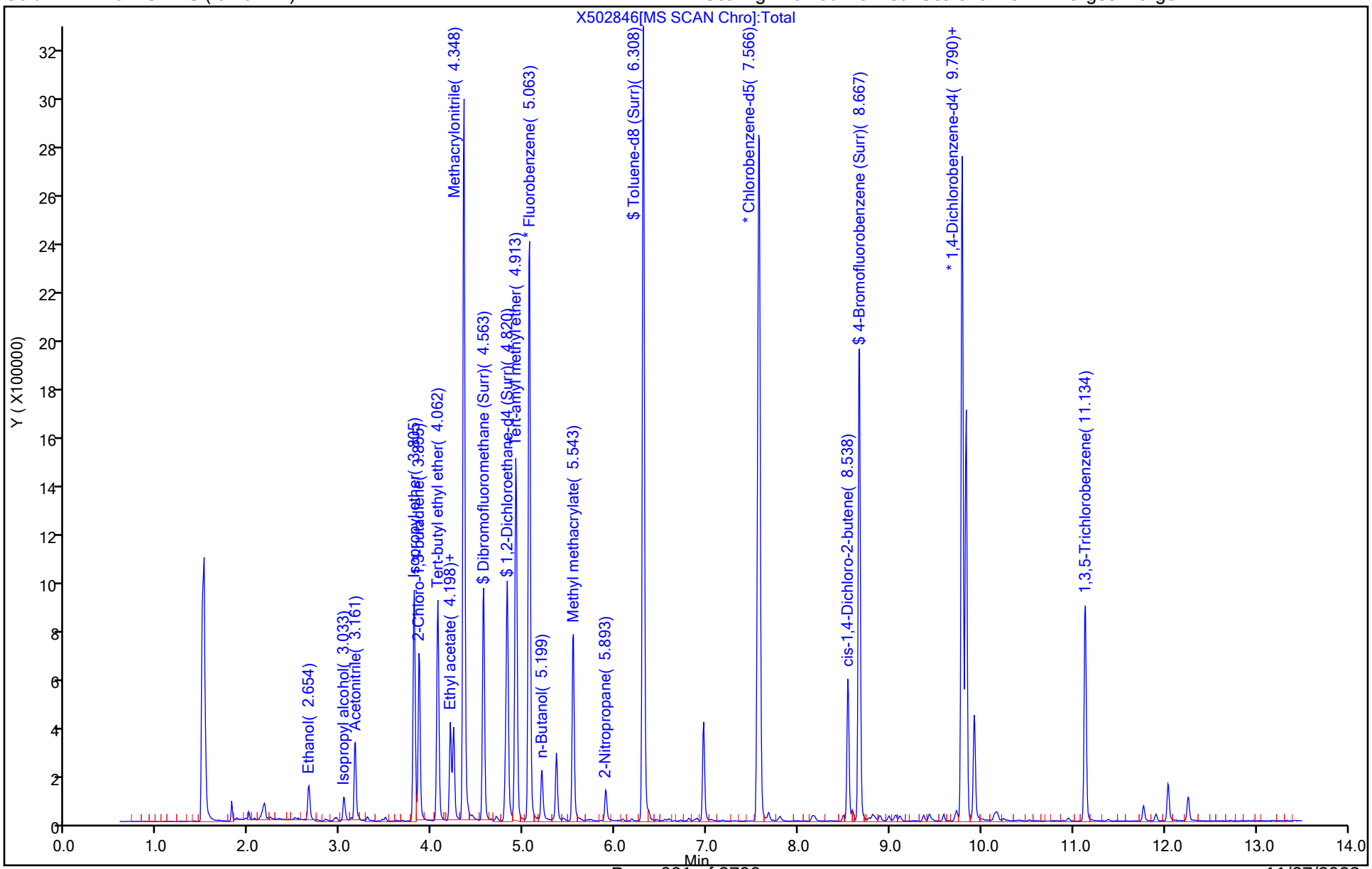
Report Date: 26-Apr-2023 11:04:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846.D

Injection Date:	26-Apr-2023 09:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610121/2 Calibration Date: 04/26/2023 10:19

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502847.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.1552	0.1000	17.7	25.0	-29.2*	20.0
Chloromethane	Ave	0.2229	0.2053	0.1000	23.0	25.0	-7.9	20.0
Vinyl chloride	Lin1		0.2495	0.0100	27.5	25.0	10.2	20.0
Bromomethane	Ave	0.1211	0.1073	0.0100	22.2	25.0	-11.4	20.0
Chloroethane	Ave	0.1519	0.1619	0.0100	26.6	25.0	6.6	20.0
Dichlorofluoromethane	Ave	0.3792	0.3575	0.0100	23.6	25.0	-5.7	20.0
Trichlorofluoromethane	Ave	0.2925	0.2451	0.0100	20.9	25.0	-16.2	20.0
Ethyl ether	Ave	0.1687	0.1874	0.0100	27.8	25.0	11.1	20.0
Acrolein	Ave	0.0272	0.0269	0.0010	244	247	-1.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1235	0.0500	22.4	25.0	-10.6	20.0
1,1-Dichloroethene	Ave	0.1921	0.2036	0.0600	26.5	25.0	6.0	20.0
Acetone	Lin2		0.0566	0.0100	100	100	0.5	20.0
Iodomethane	Lin1		0.1923	0.0100	18.9	25.0	-24.4*	20.0
Carbon disulfide	Ave	0.6224	0.6851	0.1000	27.5	25.0	10.1	20.0
Methyl acetate	Ave	0.1262	0.1470	0.0100	58.2	50.0	16.4	20.0
Allyl chloride	Ave	0.2551	0.3283	0.0100	32.2	25.0	28.7*	20.0
Methylene Chloride	Ave	0.2466	0.2524	0.0100	25.6	25.0	2.3	20.0
2-Methyl-2-propanol	Lin1		0.0194	0.0010	250	250	-0.2	20.0
Acrylonitrile	Ave	0.0717	0.0858	0.0100	299	250	19.8	20.0
Methyl tert-butyl ether	Ave	0.6044	0.6436	0.1000	26.6	25.0	6.5	20.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2388	0.1000	28.0	25.0	12.0	20.0
Hexane	Ave	1.146	0.9813	0.0100	21.4	25.0	-14.4	20.0
Vinyl acetate	Ave	0.3380	0.3940	0.0100	58.3	50.0	16.6	20.0
1,1-Dichloroethane	Ave	0.3890	0.4458	0.1000	28.6	25.0	14.6	20.0
2-Butanone (MEK)	Ave	0.0821	0.0939	0.0100	114	100	14.4	20.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2748	0.1000	26.9	25.0	7.6	20.0
2,2-Dichloropropane	Ave	0.2990	0.3220	0.0100	26.9	25.0	7.7	20.0
sec-Butyl Alcohol	Lin1		0.0149	0.0100	613	600	2.2	20.0
Chlorobromomethane	Ave	0.1177	0.1234	0.0500	26.2	25.0	4.8	20.0
Tetrahydrofuran	Ave	0.0557	0.0627	0.0010	56.3	50.0	12.7	20.0
Chloroform	Ave	0.3958	0.4203	0.2000	26.5	25.0	6.2	20.0
1,1,1-Trichloroethane	Ave	0.3206	0.3294	0.0500	25.7	25.0	2.7	20.0
Cyclohexane	Ave	0.3308	0.3352	0.0100	25.3	25.0	1.3	20.0
1,1-Dichloropropene	Ave	0.3142	0.3319	0.0100	26.4	25.0	5.6	20.0
Carbon tetrachloride	Ave	0.2595	0.2633	0.1000	25.4	25.0	1.5	20.0
Isobutyl alcohol	Lin1		0.0053	0.0010	538	625	-14.0	20.0
Benzene	Ave	0.9289	1.021	0.2000	27.5	25.0	9.9	20.0
1,2-Dichloroethane	Ave	0.2944	0.2874	0.0700	24.4	25.0	-2.4	20.0
n-Heptane	Ave	0.1928	0.1884		24.4	25.0	-2.3	
Trichloroethene	Ave	0.9564	0.9925	0.2000	25.9	25.0	3.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610121/2 | Calibration Date: 04/26/2023 10:19

Instrument ID: VMS_X4 | Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 04/07/2023 05:58

Lab File ID: X502847.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1368	0.0010	83.3	80.0	4.1	20.0
Methylcyclohexane	Ave	0.2422	0.2222	0.0500	22.9	25.0	-8.3	20.0
1,2-Dichloropropane	Ave	0.2362	0.2634	0.1000	27.9	25.0	11.5	20.0
1,4-Dioxane	Ave	0.0030	0.0032	0.0010	527	500	5.5	20.0
Dibromomethane	Ave	0.1409	0.1472	0.0100	26.1	25.0	4.5	20.0
Dichlorobromomethane	Ave	0.2974	0.3053	0.2000	25.7	25.0	2.6	20.0
2-Chloroethyl vinyl ether	Lin1		0.1271	0.0100	41.9	25.0	67.4*	20.0
cis-1,3-Dichloropropene	Ave	1.523	1.628	0.2000	26.7	25.0	6.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1843	0.0300	117	100	16.6	20.0
Toluene	Ave	1.001	1.079	0.3000	26.9	25.0	7.8	20.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3373	0.2000	27.5	25.0	9.9	20.0
Ethyl methacrylate	Ave	1.092	1.232	0.0100	28.2	25.0	12.8	20.0
1,1,2-Trichloroethane	Ave	0.2000	0.2138	0.1000	26.7	25.0	6.9	20.0
Tetrachloroethene	Ave	0.7259	0.7307	0.1000	25.2	25.0	0.7	20.0
1,3-Dichloropropane	Ave	1.532	1.579	0.0100	25.8	25.0	3.0	20.0
2-Hexanone	Ave	0.4789	0.5268	0.0100	110	100	10.0	20.0
Chlorodibromomethane	Ave	0.9243	0.9056	0.1000	24.5	25.0	-2.0	20.0
1,2-Dibromoethane	Ave	0.8754	0.8719	0.1000	24.9	25.0	-0.4	20.0
1-Chlorohexane	Ave	1.353	1.336	0.0100	19.7	20.0	-1.3	20.0
Chlorobenzene	Ave	2.785	2.813	0.3000	25.2	25.0	1.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.8737	0.0100	24.4	25.0	-2.4	20.0
Ethylbenzene	Ave	1.533	1.568	0.3000	25.6	25.0	2.3	20.0
m-Xylene & p-Xylene	Ave	1.838	1.949	0.1000	26.5	25.0	6.0	20.0
o-Xylene	Ave	1.865	1.936	0.2000	26.0	25.0	3.8	20.0
Styrene	Ave	2.963	3.166	0.2000	26.7	25.0	6.9	20.0
Bromoform	Ave	0.5587	0.5638	0.1000	25.2	25.0	0.9	20.0
Isopropylbenzene	Ave	2.838	2.884	0.3000	25.4	25.0	1.6	20.0
Cyclohexanone	Lin1		0.0495	0.0010	876	750	16.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.7000	0.3000	24.4	25.0	-2.2	20.0
Bromobenzene	Ave	0.7149	0.7091	0.0100	24.8	25.0	-0.8	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1668	0.0100	22.5	25.0	-10.0	20.0
1,2,3-Trichloropropane	Ave	0.2173	0.2031	0.0100	23.4	25.0	-6.6	20.0
N-Propylbenzene	Ave	0.7886	0.8373	0.0100	26.5	25.0	6.2	20.0
2-Chlorotoluene	Ave	0.6999	0.7139	0.0100	25.5	25.0	2.0	20.0
1,3,5-Trimethylbenzene	Ave	2.394	2.430	0.0100	25.4	25.0	1.5	20.0
4-Chlorotoluene	Ave	0.7282	0.7532	0.0100	25.9	25.0	3.4	20.0
tert-Butylbenzene	Ave	2.000	2.010	0.0100	25.1	25.0	0.5	20.0
1,2,4-Trimethylbenzene	Ave	2.476	2.527	0.3000	25.5	25.0	2.1	20.0
sec-Butylbenzene	Ave	0.5991	0.5904	0.0100	24.6	25.0	-1.5	20.0
1,3-Dichlorobenzene	Ave	1.320	1.337	0.5000	25.3	25.0	1.3	20.0
4-Isopropyltoluene	Ave	2.471	2.543	0.0100	25.7	25.0	2.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610121/2 Calibration Date: 04/26/2023 10:19

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502847.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.357	0.5000	24.2	25.0	-3.2	20.0
n-Butylbenzene	Ave	2.140	2.207	0.0100	25.8	25.0	3.1	20.0
1,2-Dichlorobenzene	Ave	1.271	1.260	0.5000	24.8	25.0	-0.8	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1308	0.0100	22.9	25.0	-8.5	20.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.6478	0.2000	25.3	25.0	1.3	20.0
Hexachlorobutadiene	Ave	0.2332	0.2435	0.0100	26.1	25.0	4.4	20.0
Naphthalene	Ave	1.632	1.571	0.0100	24.1	25.0	-3.7	20.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.4833	0.3000	25.0	25.0	0.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2512	0.0100	52.2	50.0	4.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2461	0.0100	48.7	50.0	-2.6	20.0
Toluene-d8 (Surr)	Ave	4.259	4.313	0.0100	50.6	50.0	1.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9086	0.0100	50.8	50.0	1.7	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502847.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Apr-2023 10:19:30 ALS Bottle#: 3 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:01 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:44:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2064544	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	504405	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	799833	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518622	50.0	52.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	508168	50.0	48.7	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2175562	50.0	50.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	90	726751	50.0	50.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	98	160251	25.0	17.7	
11 Chloromethane	50	1.867	1.867	0.000	99	211940	25.0	23.0	
12 Vinyl chloride	62	1.960	1.960	0.000	97	257527	25.0	27.5	
14 Bromomethane	94	2.239	2.239	0.000	90	110813	25.0	22.2	
15 Chloroethane	64	2.332	2.332	0.000	99	167146	25.0	26.6	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	368994	25.0	23.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	252967	25.0	20.9	
19 Ethyl ether	59	2.747	2.747	0.000	89	193482	25.0	27.8	
21 Acrolein	56	2.854	2.854	0.000	98	273823	246.9	243.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	94	127530	25.0	22.4	
23 1,1-Dichloroethene	96	2.933	2.933	0.000	97	210157	25.0	26.5	
24 Acetone	43	2.954	2.954	0.000	98	233790	100.0	100.5	
26 Iodomethane	142	3.054	3.054	0.000	98	198535	25.0	18.9	
27 Carbon disulfide	76	3.119	3.119	0.000	98	707220	25.0	27.5	
29 Methyl acetate	43	3.176	3.176	0.000	96	303445	50.0	58.2	
30 3-Chloro-1-propene	41	3.197	3.197	0.000	93	338883	25.0	32.2	
31 Methylene Chloride	84	3.297	3.297	0.000	89	260505	25.0	25.6	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	200237	250.0	249.6	
33 Acrylonitrile	53	3.455	3.455	0.000	99	885921	250.0	299.4	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	92	664390	25.0	26.6	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	100	246544	25.0	28.0	
37 Hexane	57	3.683	3.683	0.000	88	247487	25.0	21.4	
39 Vinyl acetate	43	3.784	3.784	0.000	96	813503	50.0	58.3	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	460148	25.0	28.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	387907	100.0	114.4	
47 cis-1,2-Dichloroethene	96	4.213	4.213	0.000	81	283630	25.0	26.9	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	85	332397	25.0	26.9	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	368927	600.0	613.5	
52 Chlorobromomethane	128	4.384	4.384	0.000	98	127348	25.0	26.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	86	129512	50.0	56.3	
54 Chloroform	83	4.441	4.441	0.000	92	433861	25.0	26.5	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	340016	25.0	25.7	
56 Cyclohexane	56	4.649	4.649	0.000	87	345989	25.0	25.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	342640	25.0	26.4	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	136733	625.0	537.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	271844	25.0	25.4	
62 Benzene	78	4.849	4.849	0.000	95	1053859	25.0	27.5	
63 1,2-Dichloroethane	62	4.878	4.878	0.000	97	296701	25.0	24.4	
65 n-Heptane	43	5.035	5.035	0.000	89	194507	25.0	24.4	
67 Trichloroethene	95	5.335	5.335	0.000	99	250320	25.0	25.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	451835	80.0	83.3	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	229366	25.0	22.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	97	271905	25.0	27.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	94	65099	500.0	527.3	
73 Dibromomethane	93	5.607	5.607	0.000	96	151912	25.0	26.1	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	315102	25.0	25.7	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	131240	25.0	41.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	410463	25.0	26.7	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	761100	100.0	116.6	
79 Toluene	91	6.365	6.365	0.000	98	1113418	25.0	26.9	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	348188	25.0	27.5	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	310693	25.0	28.2	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	220679	25.0	26.7	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	184278	25.0	25.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	87	398218	25.0	25.8	
85 2-Hexanone	43	6.872	6.872	0.000	93	531399	100.0	110.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	228393	25.0	24.5	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	219893	25.0	24.9	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	269568	20.0	19.7	
90 Chlorobenzene	112	7.602	7.602	0.000	96	709470	25.0	25.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	220347	25.0	24.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	395495	25.0	25.6	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	491574	25.0	26.5	
94 o-Xylene	106	8.152	8.152	0.000	96	488359	25.0	26.0	
95 Styrene	104	8.167	8.167	0.000	94	798517	25.0	26.7	
96 Bromoform	173	8.353	8.353	0.000	96	142182	25.0	25.2	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1153171	25.0	25.4	
99 Cyclohexanone	55	8.589	8.589	0.000	88	374895	750.0	876.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	279953	25.0	24.4	
101 Bromobenzene	156	8.810	8.810	0.000	95	283598	25.0	24.8	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	70	66703	25.0	22.5	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	81217	25.0	23.4	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	334843	25.0	26.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	285481	25.0	25.5	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	971615	25.0	25.4	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	301230	25.0	25.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	803789	25.0	25.1	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1010569	25.0	25.5	
111 sec-Butylbenzene	134	9.590	9.590	0.000	94	236118	25.0	24.6	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	534768	25.0	25.3	
113 4-Isopropyltoluene	119	9.733	9.733	0.000	97	1017060	25.0	25.7	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	542632	25.0	24.2	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	882556	25.0	25.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	504066	25.0	24.8	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	89	52321	25.0	22.9	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	259074	25.0	25.3	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	97383	25.0	26.1	
122 Naphthalene	128	12.035	12.035	0.000	97	628270	25.0	24.1	
123 1,2,3-Trichlorobenzene	180	12.257	12.257	0.000	95	193272	25.0	25.0	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	54.9	
S 139 Xylenes, Total (URS)	1				0		50.0	52.5	
S 136 1,3-Dichloropropene, Total	1				0		50.0	54.2	
S 138 Xylenes, Total	106				0		50.0	52.5	
S 140 Trihalomethanes, Total	1				0		100.0	101.9	
S 141 1,2-Dichloroethene, Total	1				0		50.0	54.9	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

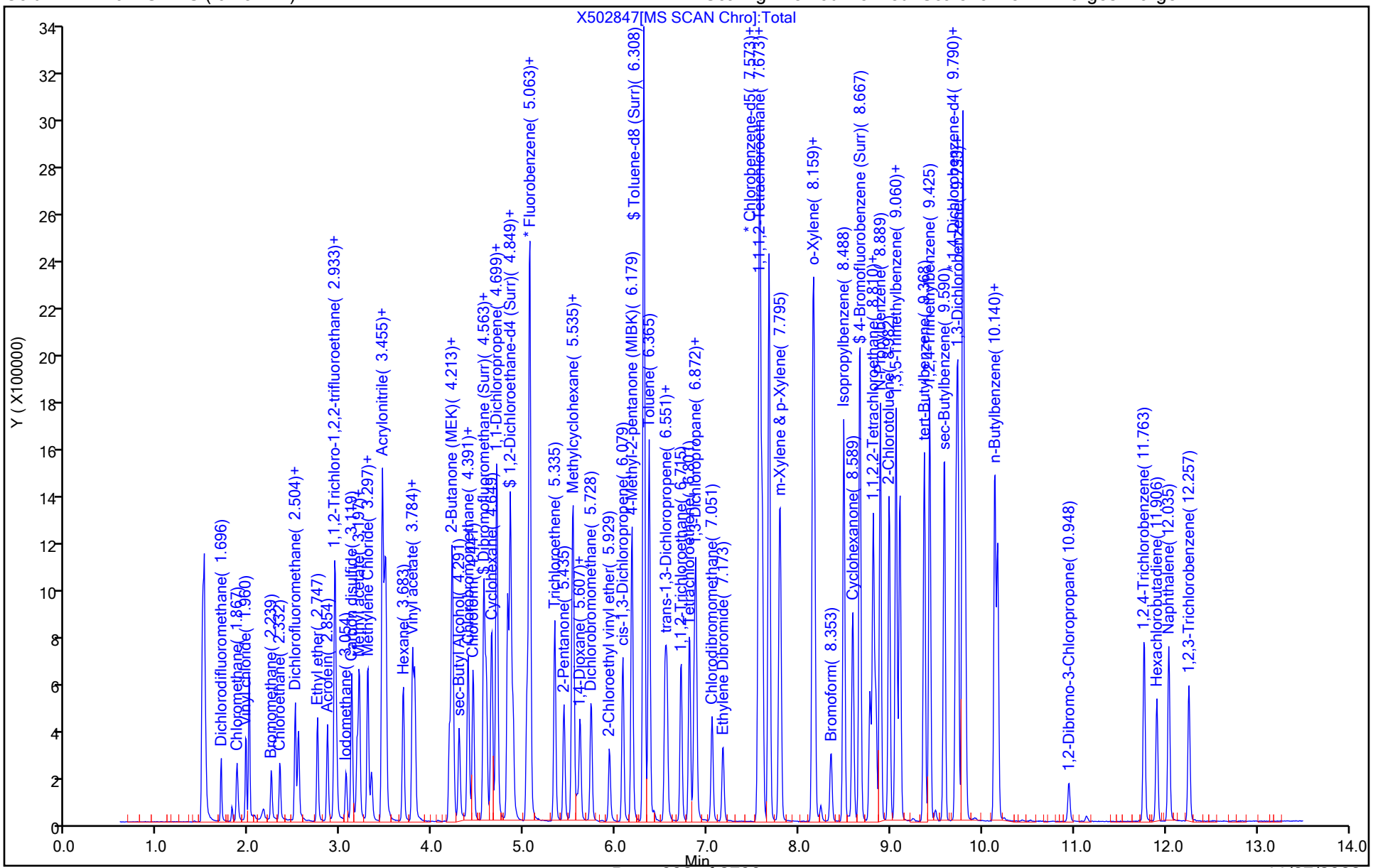
Report Date: 26-Apr-2023 11:04:02 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502847.D

Injection Date:	26-Apr-2023 10:19:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610347/2 Calibration Date: 04/27/2023 11:12

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502910.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2194	0.1574	0.1000	17.9	25.0	-28.3*	20.0
Chloromethane	Ave	0.2229	0.2204	0.1000	24.7	25.0	-1.1	20.0
Vinyl chloride	Lin1		0.2419	0.0100	26.7	25.0	6.9	20.0
Bromomethane	Ave	0.1211	0.1244	0.0100	25.7	25.0	2.6	20.0
Chloroethane	Ave	0.1519	0.1672	0.0100	27.5	25.0	10.1	20.0
Dichlorofluoromethane	Ave	0.3792	0.3450	0.0100	22.7	25.0	-9.0	20.0
Trichlorofluoromethane	Ave	0.2925	0.2529	0.0100	21.6	25.0	-13.6	20.0
Ethyl ether	Ave	0.1687	0.1871	0.0100	27.7	25.0	10.9	20.0
Acrolein	Ave	0.0272	0.0262	0.0010	238	247	-3.6	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1381	0.1383	0.0500	25.0	25.0	0.1	20.0
1,1-Dichloroethene	Ave	0.1921	0.2042	0.0600	26.6	25.0	6.3	20.0
Acetone	Lin2		0.0555	0.0100	98.5	100	-1.5	20.0
Iodomethane	Lin1		0.2047	0.0100	20.0	25.0	-19.9	20.0
Carbon disulfide	Ave	0.6224	0.6889	0.1000	27.7	25.0	10.7	20.0
Methyl acetate	Ave	0.1262	0.1538	0.0100	60.9	50.0	21.8*	20.0
Allyl chloride	Ave	0.2551	0.3279	0.0100	32.1	25.0	28.5*	20.0
Methylene Chloride	Ave	0.2466	0.2567	0.0100	26.0	25.0	4.1	20.0
2-Methyl-2-propanol	Lin1		0.0206	0.0010	265	250	5.9	20.0
Acrylonitrile	Ave	0.0717	0.0868	0.0100	303	250	21.1*	20.0
Methyl tert-butyl ether	Ave	0.6044	0.6414	0.1000	26.5	25.0	6.1	20.0
trans-1,2-Dichloroethene	Ave	0.2133	0.2416	0.1000	28.3	25.0	13.2	20.0
Hexane	Ave	1.146	1.112	0.0100	24.3	25.0	-3.0	20.0
Vinyl acetate	Ave	0.3380	0.4106	0.0100	60.7	50.0	21.5*	20.0
1,1-Dichloroethane	Ave	0.3890	0.4346	0.1000	27.9	25.0	11.7	20.0
2-Butanone (MEK)	Ave	0.0821	0.0966	0.0100	118	100	17.6	20.0
cis-1,2-Dichloroethene	Ave	0.2554	0.2694	0.1000	26.4	25.0	5.5	20.0
2,2-Dichloropropane	Ave	0.2990	0.3197	0.0100	26.7	25.0	6.9	20.0
sec-Butyl Alcohol	Lin1		0.0167	0.0100	689	600	14.8	20.0
Chlorobromomethane	Ave	0.1177	0.1267	0.0500	26.9	25.0	7.6	20.0
Tetrahydrofuran	Ave	0.0557	0.0673	0.0010	60.4	50.0	20.8*	20.0
Chloroform	Ave	0.3958	0.4036	0.2000	25.5	25.0	2.0	20.0
1,1,1-Trichloroethane	Ave	0.3206	0.3238	0.0500	25.2	25.0	1.0	20.0
Cyclohexane	Ave	0.3308	0.3614	0.0100	27.3	25.0	9.3	20.0
1,1-Dichloropropene	Ave	0.3142	0.3230	0.0100	25.7	25.0	2.8	20.0
Carbon tetrachloride	Ave	0.2595	0.2634	0.1000	25.4	25.0	1.5	20.0
Isobutyl alcohol	Lin1		0.0064	0.0010	651	625	4.1	20.0
Benzene	Ave	0.9289	1.043	0.2000	28.1	25.0	12.3	20.0
1,2-Dichloroethane	Ave	0.2944	0.2810	0.0700	23.9	25.0	-4.6	20.0
n-Heptane	Ave	0.1928	0.2177		28.2	25.0	12.9	
Trichloroethene	Ave	0.9564	1.031	0.2000	26.9	25.0	7.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610347/2 Calibration Date: 04/27/2023 11:12

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502910.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1507	0.0010	91.6	80.0	14.5	20.0
Methylcyclohexane	Ave	0.2422	0.2430	0.0500	25.1	25.0	0.3	20.0
1,2-Dichloropropane	Ave	0.2362	0.2617	0.1000	27.7	25.0	10.8	20.0
1,4-Dioxane	Ave	0.0030	0.0033	0.0010	556	500	11.2	20.0
Dibromomethane	Ave	0.1409	0.1436	0.0100	25.5	25.0	1.9	20.0
Dichlorobromomethane	Ave	0.2974	0.3045	0.2000	25.6	25.0	2.4	20.0
2-Chloroethyl vinyl ether	Lin1		0.1213	0.0100	39.9	25.0	59.6*	20.0
cis-1,3-Dichloropropene	Ave	1.523	1.634	0.2000	26.8	25.0	7.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1581	0.1934	0.0300	122	100	22.3*	20.0
Toluene	Ave	1.001	1.091	0.3000	27.3	25.0	9.1	20.0
trans-1,3-Dichloropropene	Ave	0.3069	0.3492	0.2000	28.4	25.0	13.8	20.0
Ethyl methacrylate	Ave	1.092	1.269	0.0100	29.0	25.0	16.2	20.0
1,1,2-Trichloroethane	Ave	0.2000	0.2213	0.1000	27.7	25.0	10.7	20.0
Tetrachloroethene	Ave	0.7259	0.7885	0.1000	27.2	25.0	8.6	20.0
1,3-Dichloropropane	Ave	1.532	1.642	0.0100	26.8	25.0	7.2	20.0
2-Hexanone	Ave	0.4789	0.5587	0.0100	117	100	16.7	20.0
Chlorodibromomethane	Ave	0.9243	0.9309	0.1000	25.2	25.0	0.7	20.0
1,2-Dibromoethane	Ave	0.8754	0.9112	0.1000	26.0	25.0	4.1	20.0
1-Chlorohexane	Ave	1.353	1.428	0.0100	21.1	20.0	5.5	20.0
Chlorobenzene	Ave	2.785	2.953	0.3000	26.5	25.0	6.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8954	0.9528	0.0100	26.6	25.0	6.4	20.0
Ethylbenzene	Ave	1.533	1.615	0.3000	26.3	25.0	5.3	20.0
m-Xylene & p-Xylene	Ave	1.838	1.974	0.1000	26.8	25.0	7.4	20.0
o-Xylene	Ave	1.865	1.932	0.2000	25.9	25.0	3.6	20.0
Styrene	Ave	2.963	3.204	0.2000	27.0	25.0	8.1	20.0
Bromoform	Ave	0.5587	0.5817	0.1000	26.0	25.0	4.1	20.0
Isopropylbenzene	Ave	2.838	2.984	0.3000	26.3	25.0	5.1	20.0
Cyclohexanone	Lin1		0.0580	0.0010	1030	750	36.7*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7161	0.8053	0.3000	28.1	25.0	12.5	20.0
Bromobenzene	Ave	0.7149	0.7525	0.0100	26.3	25.0	5.2	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1838	0.0100	24.7	25.0	-1.0	20.0
1,2,3-Trichloropropane	Ave	0.2173	0.2190	0.0100	25.2	25.0	0.8	20.0
N-Propylbenzene	Ave	0.7886	0.8669	0.0100	27.5	25.0	9.9	20.0
2-Chlorotoluene	Ave	0.6999	0.7348	0.0100	26.2	25.0	5.0	20.0
1,3,5-Trimethylbenzene	Ave	2.394	2.551	0.0100	26.6	25.0	6.6	20.0
4-Chlorotoluene	Ave	0.7282	0.7874	0.0100	27.0	25.0	8.1	20.0
tert-Butylbenzene	Ave	2.000	2.089	0.0100	26.1	25.0	4.5	20.0
1,2,4-Trimethylbenzene	Ave	2.476	2.628	0.3000	26.5	25.0	6.1	20.0
sec-Butylbenzene	Ave	0.5991	0.6244	0.0100	26.1	25.0	4.2	20.0
1,3-Dichlorobenzene	Ave	1.320	1.390	0.5000	26.3	25.0	5.3	20.0
4-Isopropyltoluene	Ave	2.471	2.651	0.0100	26.8	25.0	7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610347/2 Calibration Date: 04/27/2023 11:12

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502910.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.402	1.442	0.5000	25.7	25.0	2.8	20.0
n-Butylbenzene	Ave	2.140	2.348	0.0100	27.4	25.0	9.7	20.0
1,2-Dichlorobenzene	Ave	1.271	1.336	0.5000	26.3	25.0	5.1	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1342	0.0100	23.4	25.0	-6.2	20.0
1,2,4-Trichlorobenzene	Ave	0.6397	0.7383	0.2000	28.9	25.0	15.4	20.0
Hexachlorobutadiene	Ave	0.2332	0.2814	0.0100	30.2	25.0	20.7*	20.0
Naphthalene	Ave	1.632	1.952	0.0100	29.9	25.0	19.6	20.0
1,2,3-Trichlorobenzene	Ave	0.4828	0.6111	0.3000	31.6	25.0	26.6*	20.0
Dibromofluoromethane (Surr)	Ave	0.2405	0.2458	0.0100	51.1	50.0	2.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2367	0.0100	46.9	50.0	-6.3	20.0
Toluene-d8 (Surr)	Ave	4.259	4.341	0.0100	51.0	50.0	1.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9099	0.0100	50.9	50.0	1.8	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502910.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 11:12:30 ALS Bottle#: 4 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub1

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:13:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2075744	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	498852	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	782929	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	510246	50.0	51.1	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	491370	50.0	46.9	
$ 6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2165513	50.0	51.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	712384	50.0	50.9	
10 Dichlorodifluoromethane	85	1.695	1.695	0.000	99	163334	25.0	17.9	
11 Chloromethane	50	1.867	1.867	0.000	99	228796	25.0	24.7	
12 Vinyl chloride	62	1.960	1.960	0.000	98	251101	25.0	26.7	
14 Bromomethane	94	2.246	2.246	0.000	90	129061	25.0	25.7	
15 Chloroethane	64	2.339	2.339	0.000	99	173572	25.0	27.5	
16 Dichlorofluoromethane	67	2.503	2.503	0.000	97	358050	25.0	22.7	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	262426	25.0	21.6	
19 Ethyl ether	59	2.747	2.747	0.000	88	194217	25.0	27.7	
21 Acrolein	56	2.854	2.854	0.000	99	268897	246.9	238.0	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.932	0.000	94	143495	25.0	25.0	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	211927	25.0	26.6	
24 Acetone	43	2.954	2.954	0.000	99	230572	100.0	98.5	
26 Iodomethane	142	3.054	3.054	0.000	99	212470	25.0	20.0	
27 Carbon disulfide	76	3.118	3.118	0.000	98	715021	25.0	27.7	
29 Methyl acetate	43	3.183	3.183	0.000	97	319280	50.0	60.9	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	340282	25.0	32.1	
31 Methylene Chloride	84	3.297	3.297	0.000	89	266407	25.0	26.0	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	213644	250.0	264.7	
33 Acrylonitrile	53	3.454	3.454	0.000	99	900911	250.0	302.8	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	665726	25.0	26.5	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	250701	25.0	28.3	
37 Hexane	57	3.683	3.683	0.000	89	277302	25.0	24.3	
39 Vinyl acetate	43	3.783	3.783	0.000	97	852234	50.0	60.7	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	451091	25.0	27.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	400913	100.0	117.6	
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	80	279614	25.0	26.4	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	86	331830	25.0	26.7	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	417159	600.0	688.6	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	131447	25.0	26.9	
53 Tetrahydrofuran	42	4.398	4.398	0.000	87	139656	50.0	60.4	
54 Chloroform	83	4.441	4.441	0.000	93	418879	25.0	25.5	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	336079	25.0	25.2	
56 Cyclohexane	56	4.648	4.648	0.000	86	375128	25.0	27.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	335247	25.0	25.7	
60 Isobutyl alcohol	41	4.706	4.706	0.000	97	166976	625.0	650.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	273405	25.0	25.4	
62 Benzene	78	4.849	4.849	0.000	94	1082545	25.0	28.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	291629	25.0	23.9	
65 n-Heptane	43	5.035	5.035	0.000	88	225963	25.0	28.2	
67 Trichloroethene	95	5.335	5.335	0.000	98	257097	25.0	26.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	500452	80.0	91.6	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	252227	25.0	25.1	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	97	271590	25.0	27.7	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	69013	500.0	556.0	
73 Dibromomethane	93	5.614	5.614	0.000	96	149015	25.0	25.5	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	316050	25.0	25.6	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	88	125945	25.0	39.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	407461	25.0	26.8	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	93	802839	100.0	122.3	
79 Toluene	91	6.365	6.365	0.000	98	1132572	25.0	27.3	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	362408	25.0	28.4	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	316517	25.0	29.0	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	229681	25.0	27.7	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	196675	25.0	27.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	91	409613	25.0	26.8	
85 2-Hexanone	43	6.872	6.872	0.000	93	557461	100.0	116.7	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	232179	25.0	25.2	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	227268	25.0	26.0	
89 1-Chlorohexane	91	7.559	7.559	0.000	92	284848	20.0	21.1	
90 Chlorobenzene	112	7.602	7.602	0.000	96	736579	25.0	26.5	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	237658	25.0	26.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	402699	25.0	26.3	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	492316	25.0	26.8	
94 o-Xylene	106	8.152	8.152	0.000	95	481974	25.0	25.9	
95 Styrene	104	8.166	8.166	0.000	95	799043	25.0	27.0	
96 Bromoform	173	8.345	8.345	0.000	96	145079	25.0	26.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1168056	25.0	26.3	
99 Cyclohexanone	55	8.588	8.588	0.000	89	434326	750.0	1025.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	315261	25.0	28.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	294565	25.0	26.3	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	75	71938	25.0	24.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	82	85723	25.0	25.2	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	339348	25.0	27.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	287640	25.0	26.2	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	998455	25.0	26.6	
107 4-Chlorotoluene	126	9.103	9.103	0.000	96	308247	25.0	27.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	817928	25.0	26.1	
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1028843	25.0	26.5	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	244445	25.0	26.1	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	543942	25.0	26.3	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1037887	25.0	26.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	564532	25.0	25.7	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	919303	25.0	27.4	
117 1,2-Dichlorobenzene	146	10.168	10.168	0.000	98	522970	25.0	26.3	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	87	52521	25.0	23.4	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	289025	25.0	28.9	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	110154	25.0	30.2	
122 Naphthalene	128	12.035	12.035	0.000	97	764333	25.0	29.9	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	96	239241	25.0	31.6	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	54.7	
S 139 Xylenes, Total (URS)	1				0		50.0	52.8	
S 136 1,3-Dichloropropene, Total	1				0		50.0	55.3	
S 138 Xylenes, Total	106				0		50.0	52.8	
S 140 Trihalomethanes, Total	1				0		100.0	102.3	
S 141 1,2-Dichloroethene, Total	1				0		50.0	54.7	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

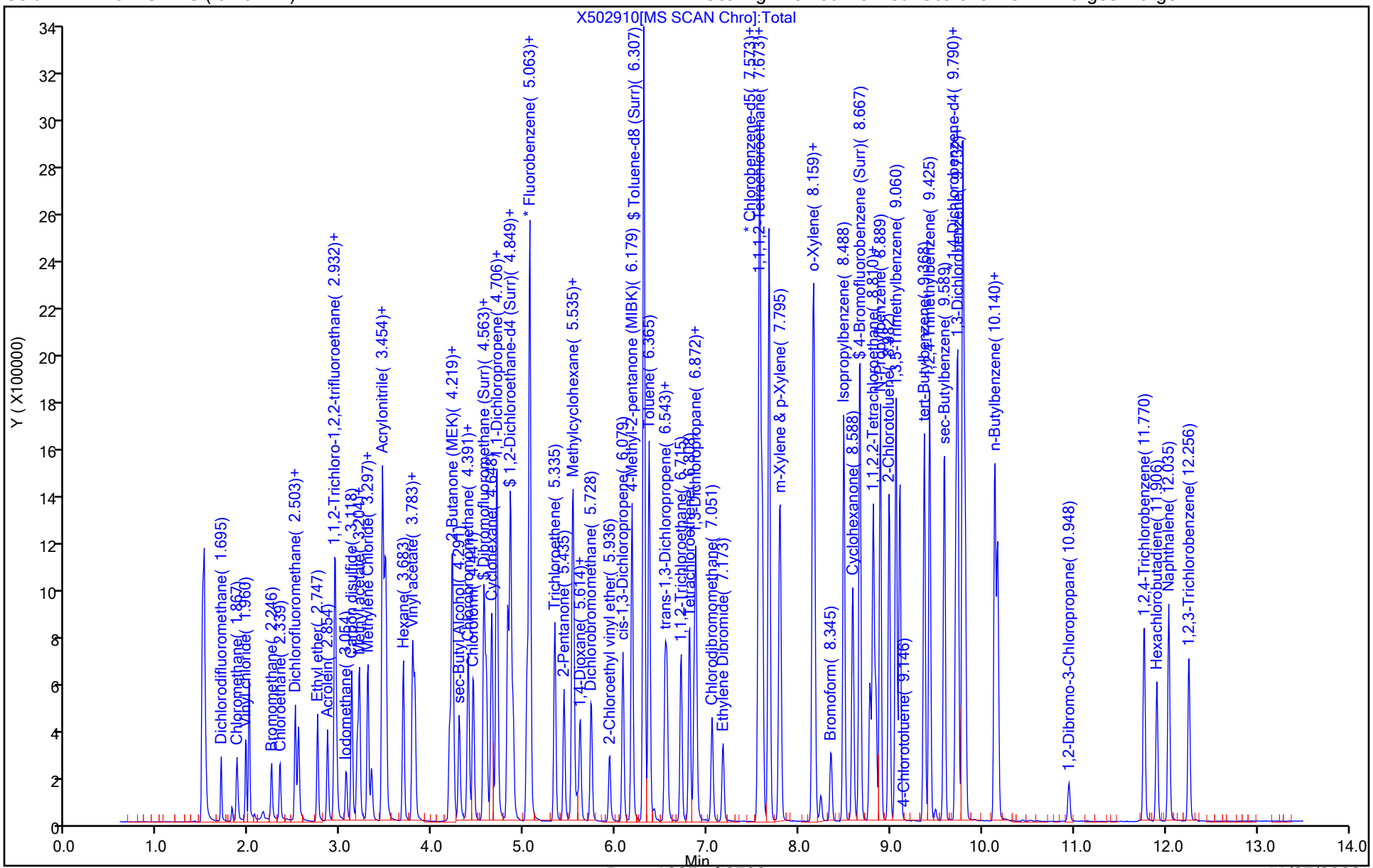
Report Date: 27-Apr-2023 12:40:04 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502910.D

Injection Date:	27-Apr-2023 11:12:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610347/3 | Calibration Date: 04/27/2023 11:36

Instrument ID: VMS_X4 | Calib Start Date: 10/22/2022 15:19

GC Column: RXI-624SilMS ID: 0.25(mm) | Calib End Date: 10/22/2022 17:23

Lab File ID: X502911.D | Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0026	0.0028*	0.0100	1610	1500	7.0	20.0
Isopropyl alcohol	Ave	0.0155	0.0142	0.0100	230	250	-8.2	20.0
Acetonitrile	Ave	0.0279	0.0335	0.0100	300	250	19.8	20.0
Isopropyl ether	Ave	0.1867	0.2236	0.0100	30.0	25.0	19.8	20.0
Chloroprene	Ave	0.3274	0.3693	0.0100	28.2	25.0	12.8	20.0
Tert-butyl ethyl ether	Ave	0.6465	0.7475	0.0100	28.9	25.0	15.6	20.0
Ethyl acetate	Ave	0.1934	0.2106	0.0100	54.4	50.0	8.9	20.0
Propionitrile	Ave	0.0311	0.0379	0.0100	305	250	22.1*	20.0
Methacrylonitrile	Ave	0.1216	0.1391	0.0100	286	250	14.4	20.0
Tert-amyl methyl ether	Ave	0.6244	0.7184	0.0100	28.8	25.0	15.1	20.0
n-Butanol	Ave	0.0061	0.0063*	0.0100	644	625	3.0	20.0
Methyl methacrylate	Ave	0.0660	0.0708	0.0100	53.6	50.0	7.2	20.0
2-Nitropropane	Ave	0.0700	0.0406	0.0100	29.0	50.0	-42.0*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1969	0.1881	0.0100	47.8	50.0	-4.5	20.0
1,2,3-Trimethylbenzene	Ave	2.711	2.755	0.0100	25.4	25.0	1.6	20.0
1,3,5-Trichlorobenzene	Ave	0.8433	0.8783	0.0100	26.0	25.0	4.2	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502911.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 11:36:30 ALS Bottle#: 5 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:14:14

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2059516	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	497540	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	790650	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	499980	50.0	50.5	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	492603	50.0	47.3	
$	6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2149937	50.0	50.7	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	714000	50.0	50.5	
	18 Ethanol	45	2.647	2.647	0.000	99	175008	1500.0	1605.4	
	25 Isopropyl alcohol	45	3.040	3.040	0.000	99	146574	250.0	229.5	
	28 Acetonitrile	41	3.161	3.161	0.000	98	344647	250.0	299.6	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	230296	25.0	30.0	
	42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	380277	25.0	28.2	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	769768	25.0	28.9	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	433749	50.0	54.4	
	49 Propionitrile	54	4.234	4.234	0.000	99	390737	250.0	305.3	
	51 Methacrylonitrile	41	4.348	4.348	0.000	88	1432481	250.0	285.9	
	64 Tert-amyl methyl ether	73	4.920	4.920	0.000	92	739780	25.0	28.8	
	66 n-Butanol	56	5.199	5.199	0.000	84	162457	625.0	643.5	
	71 Methyl methacrylate	100	5.542	5.542	0.000	89	145808	50.0	53.6	
	75 2-Nitropropane	41	5.900	5.900	0.000	95	83659	50.0	29.0	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	148716	50.0	47.8	
	115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	1088923	25.0	25.4	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	347222	25.0	26.0	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

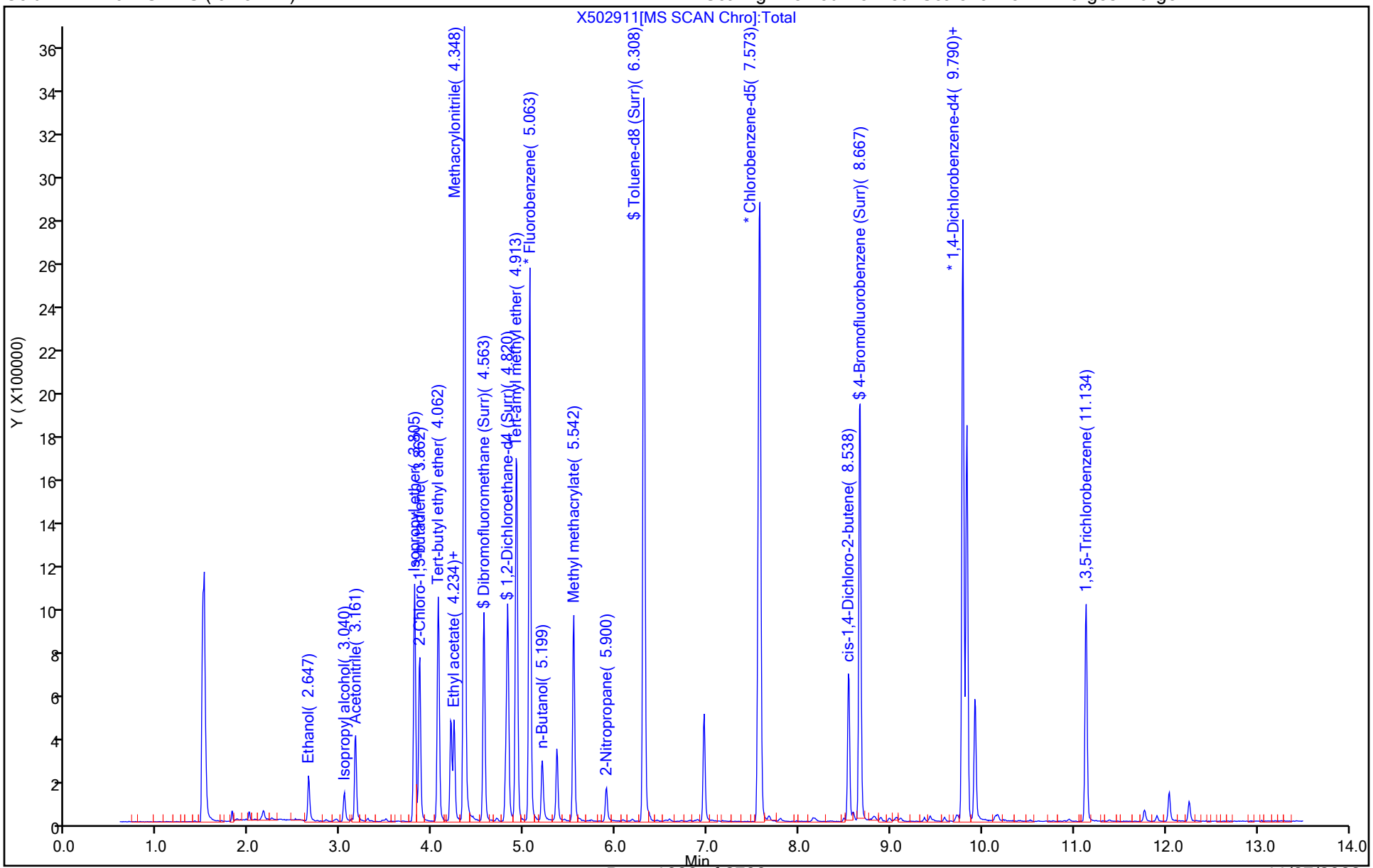
Report Date: 27-Apr-2023 12:40:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502911.D

Injection Date:	27-Apr-2023 11:36:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: CCV 280-610347/3 Calibration Date: 04/27/2023 11:36

Instrument ID: VMS_X4 Calib Start Date: 04/07/2023 03:14

GC Column: RXI-624SilMS ID: 0.25(mm) Calib End Date: 04/07/2023 05:58

Lab File ID: X502911.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2405	0.2428	0.0100	50.5	50.0	0.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2526	0.2392	0.0100	47.3	50.0	-5.3	20.0
Toluene-d8 (Surr)	Ave	4.259	4.321	0.0100	50.7	50.0	1.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8935	0.9031	0.0100	50.5	50.0	1.1	20.0

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502911.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Apr-2023 11:36:30 ALS Bottle#: 5 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4
Sublist: chrom-VMS_X4_8260*sub19

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:14:14

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2059516	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	497540	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	790650	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	499980	50.0	50.5	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	492603	50.0	47.3	
$	6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2149937	50.0	50.7	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	714000	50.0	50.5	
	18 Ethanol	45	2.647	2.647	0.000	99	175008	1500.0	1605.4	
	25 Isopropyl alcohol	45	3.040	3.040	0.000	99	146574	250.0	229.5	
	28 Acetonitrile	41	3.161	3.161	0.000	98	344647	250.0	299.6	
	41 Isopropyl ether	87	3.805	3.805	0.000	95	230296	25.0	30.0	
	42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	380277	25.0	28.2	
	44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	769768	25.0	28.9	
	46 Ethyl acetate	43	4.198	4.198	0.000	98	433749	50.0	54.4	
	49 Propionitrile	54	4.234	4.234	0.000	99	390737	250.0	305.3	
	51 Methacrylonitrile	41	4.348	4.348	0.000	88	1432481	250.0	285.9	
	64 Tert-amyl methyl ether	73	4.920	4.920	0.000	92	739780	25.0	28.8	
	66 n-Butanol	56	5.199	5.199	0.000	84	162457	625.0	643.5	
	71 Methyl methacrylate	100	5.542	5.542	0.000	89	145808	50.0	53.6	
	75 2-Nitropropane	41	5.900	5.900	0.000	95	83659	50.0	29.0	
	98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	148716	50.0	47.8	
	115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	1088923	25.0	25.4	
	119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	347222	25.0	26.0	
	166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

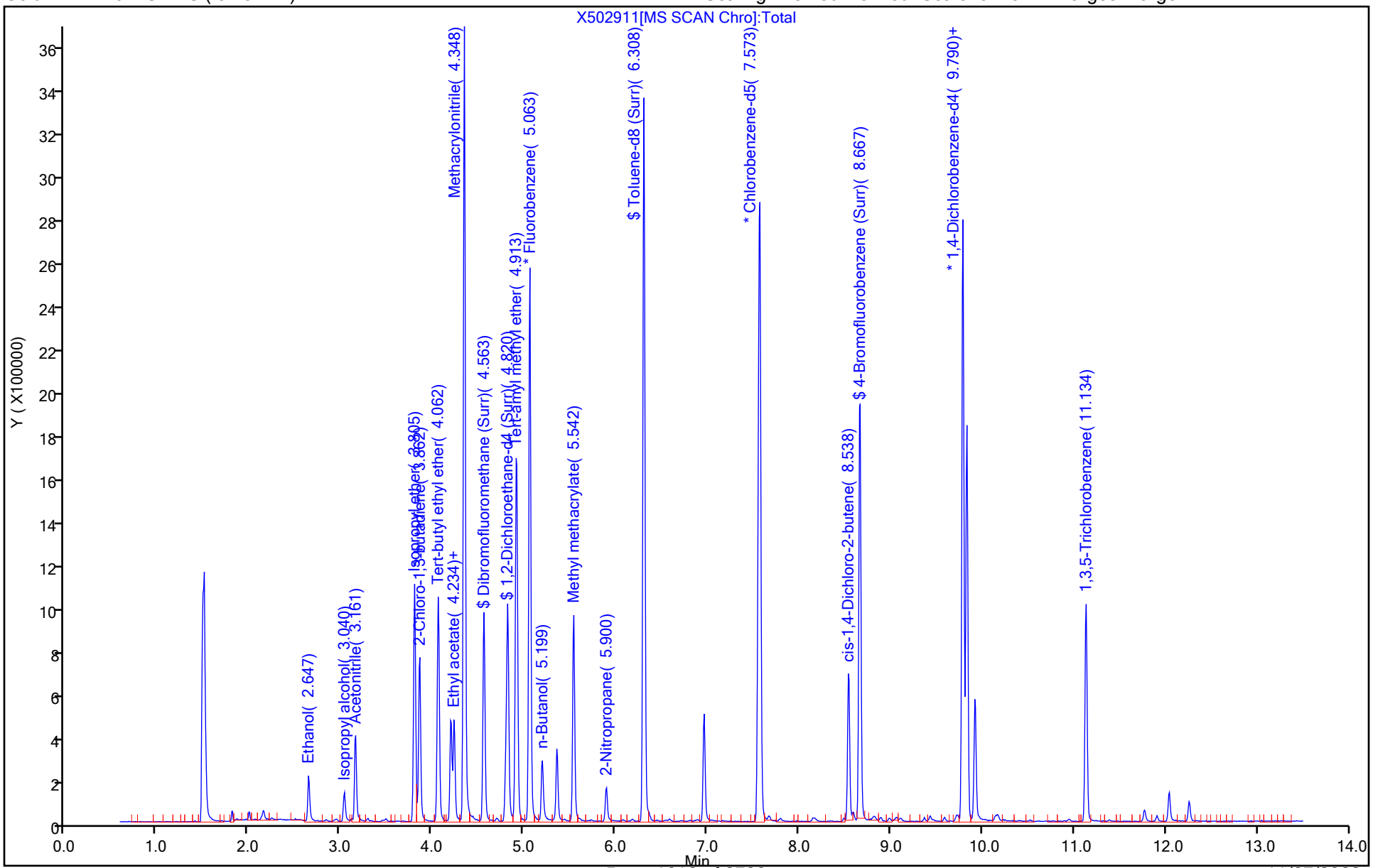
Report Date: 27-Apr-2023 12:40:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502911.D

Injection Date:	27-Apr-2023 11:36:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 28-Dec-2022 07:14:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: SUNLEEC Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Dec-2022 11:01:03 Calib Date: 28-Dec-2022 14:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4157.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: LW7N Date: 28-Dec-2022 07:47:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	3.733	3.733	0.000	0	591602	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

mv-Cent BFB_00004 Amount Added: 5.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins Denver

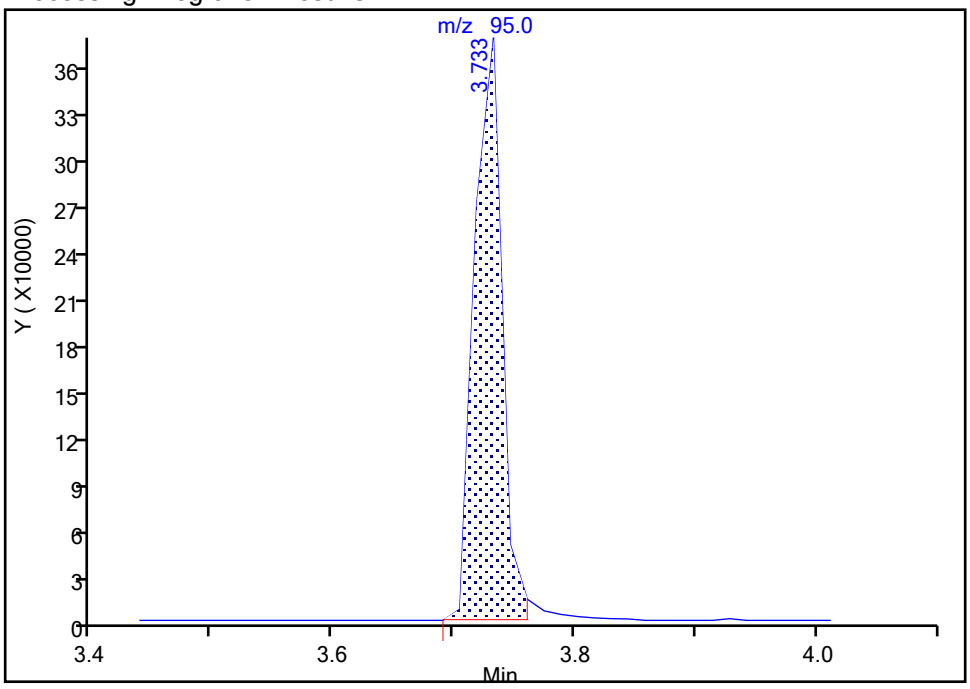
Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D				
Injection Date:	28-Dec-2022 07:14:30	Instrument ID:	VMS_MS1		
Lims ID:	BFB				
Client ID:					
Operator ID:	SUNLEEC	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

$ 10 BFB, CAS: 460-00-4

Signal: 1

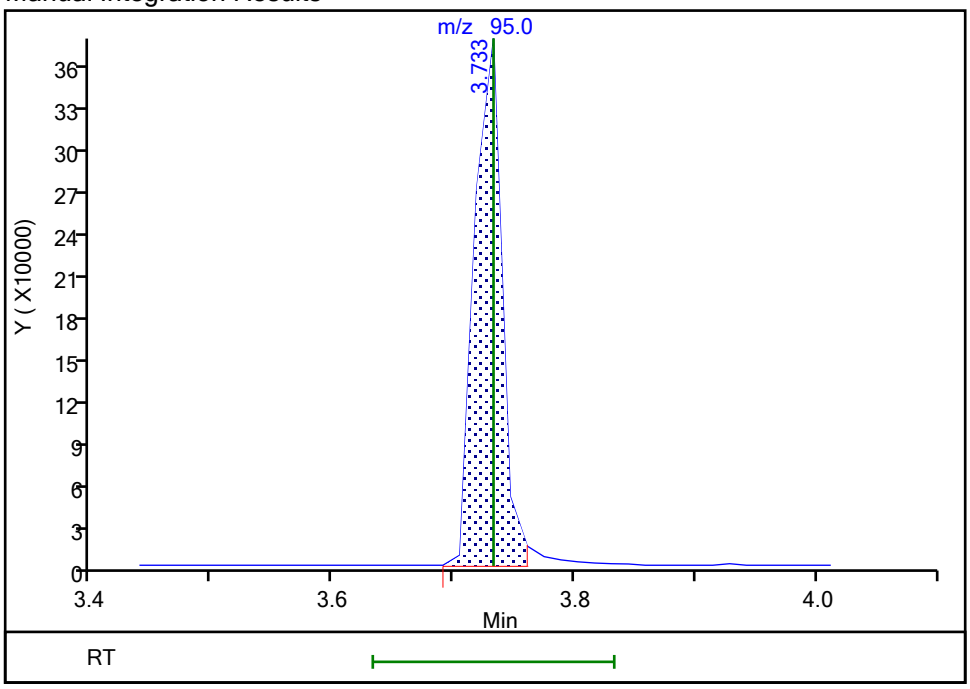
Processing Integration Results

RT: 3.73
Area: 591602
Amount: 0
Amount Units: ug/l



Manual Integration Results

RT: 3.73
Area: 591602
Amount: 0
Amount Units: ug/l



Reviewer: LW7N, 28-Dec-2022 07:47:45

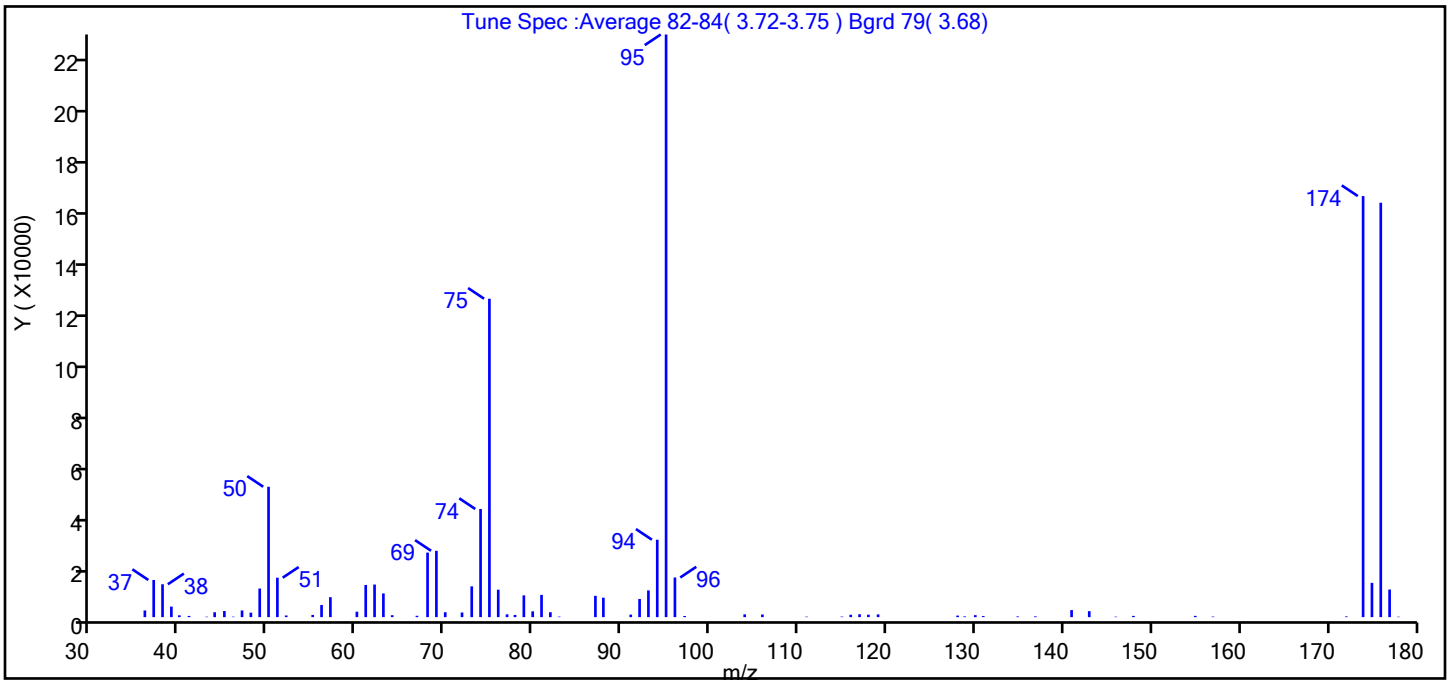
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D
Injection Date: 28-Dec-2022 07:14:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: SUNLEEC ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.4
75	30 to 60% of m/z 95	54.6
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	72.3
175	5 to 9% of m/z 174	5.9 (8.1)
176	Greater than 95% but less than 101% of m/z 174	71.1 (98.4)
177	5 to 9% of m/z 176	4.7 (6.7)

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D\AQ_VMS1_8260.rslt\spectra.c
Injection Date: 28-Dec-2022 07:14:30
Spectrum: Tune Spec :Average 82-84(3.72-3.75) Bgrd 79(3.68)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 75

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2620	60.00	2145	82.00	1939	128.00	615
37.00	14563	61.00	12609	83.00	209	129.00	292
38.00	12897	62.00	12778	87.00	8354	130.00	778
39.00	4133	63.00	9297	88.00	7630	131.00	419
40.00	711	64.00	761	91.00	996	135.00	278
41.00	479	67.00	537	92.00	7123	137.00	306
43.00	177	68.00	25312	93.00	10478	141.00	2768
44.00	1917	69.00	26016	94.00	30360	143.00	2348
45.00	2397	70.00	1934	95.00	228480	146.00	191
46.00	191	72.00	1826	96.00	15549	148.00	490
47.00	2624	73.00	12068	97.00	450	155.00	504
48.00	1759	74.00	42416	104.00	1093	157.00	218
49.00	11222	75.00	124864	106.00	1044	172.00	287
50.00	51128	76.00	10759	111.00	196	174.00	165120
51.00	15466	77.00	1104	115.00	217	175.00	13436
52.00	655	78.00	855	116.00	931	176.00	162496
55.00	869	79.00	8539	117.00	1131	177.00	10831
56.00	4771	80.00	2280	118.00	960	178.00	174
57.00	7824	81.00	8734	119.00	1079		

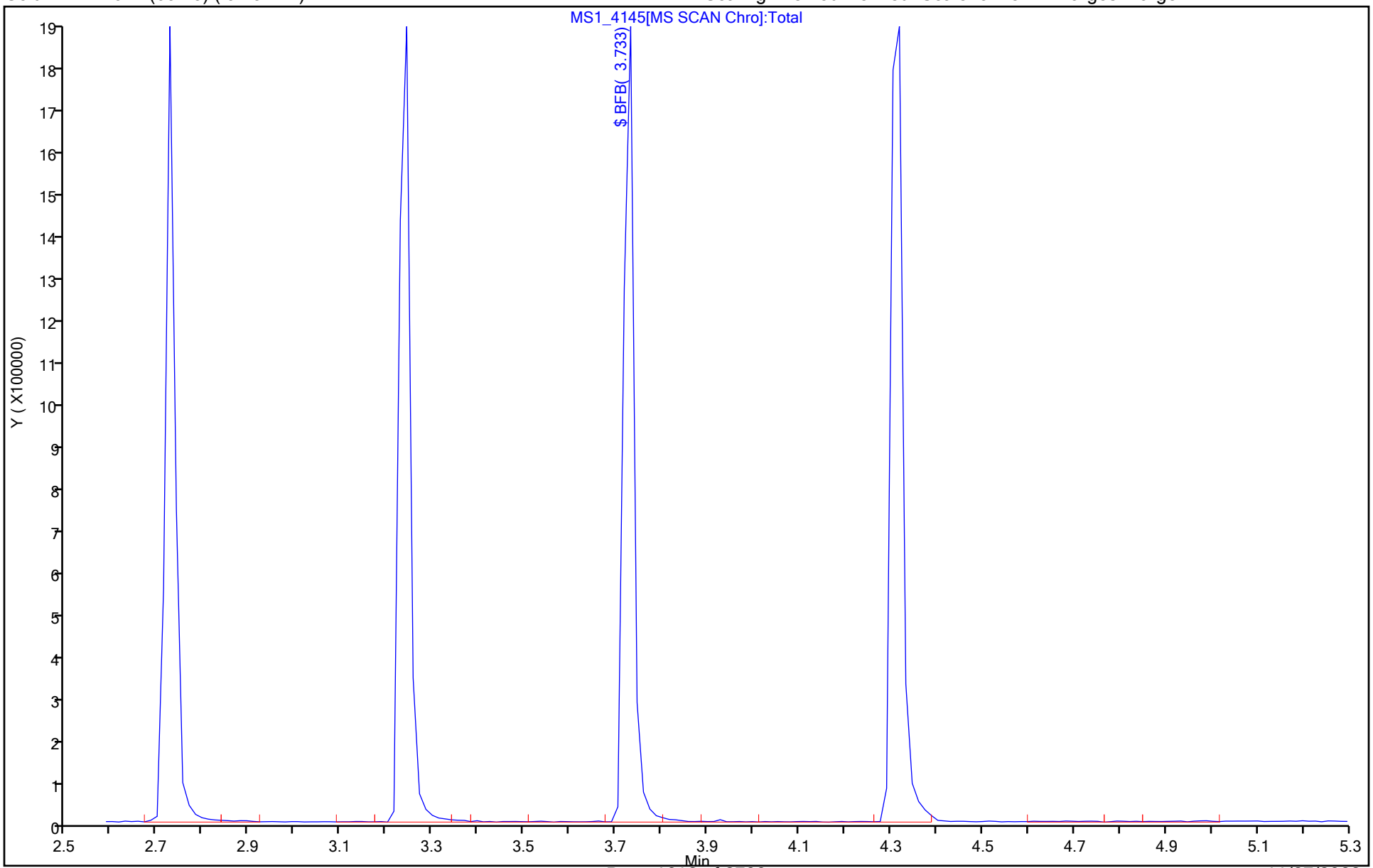
Report Date: 29-Dec-2022 11:01:03 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20221228-117355.b\MS1_4145.D

Injection Date:	28-Dec-2022 07:14:30	Instrument ID:	VMS_MS1	Operator ID:	SUNLEEC
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8181.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 18-Apr-2023 09:29:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: wickhamt/bustillose Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 19-Apr-2023 08:23:10 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1677

First Level Reviewer: AF7X Date: 18-Apr-2023 09:39:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	3.733	3.733	0.000	0	401720	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

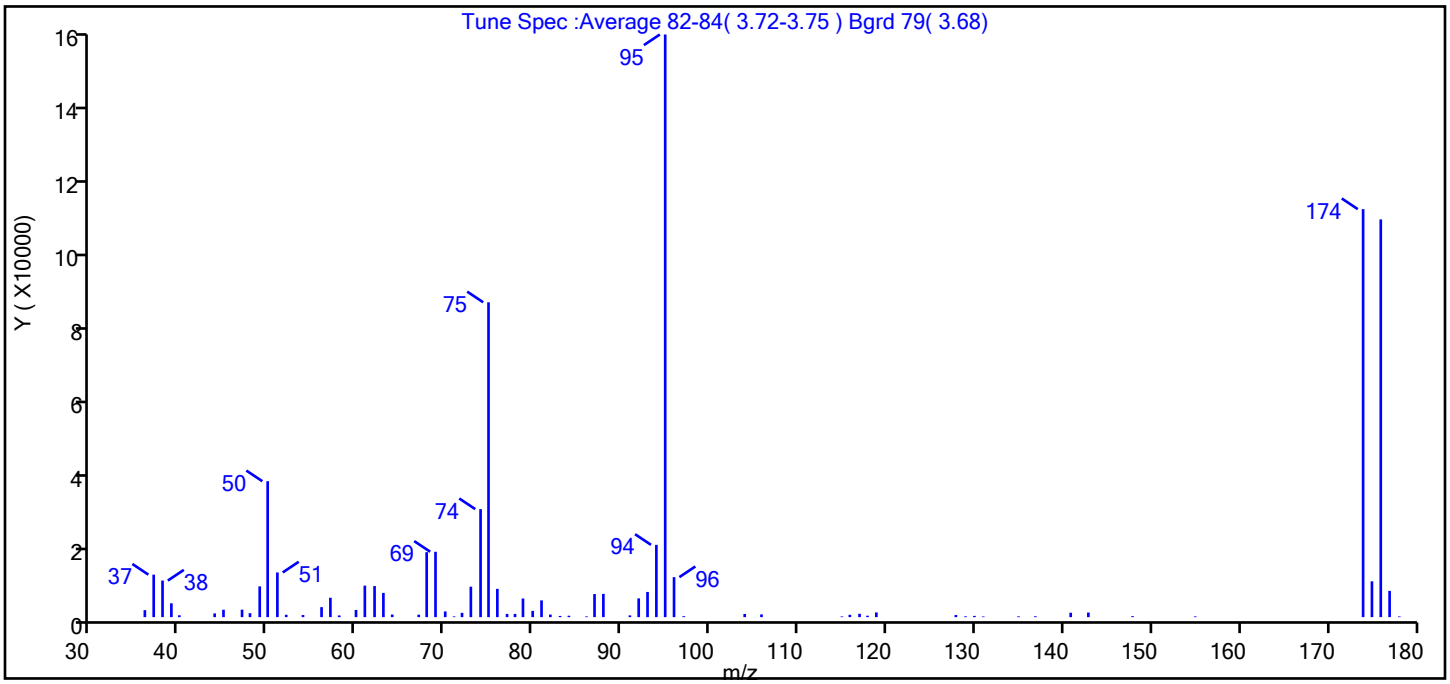
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8181.D
Injection Date: 18-Apr-2023 09:29:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: wickhamt/bustillose ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	23.3
75	30 to 60% of m/z 95	54.0
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	70.0
175	5 to 9% of m/z 174	6.1 (8.8)
176	Greater than 95% but less than 101% of m/z 174	68.3 (97.5)
177	5 to 9% of m/z 176	4.5 (6.6)

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8181.D\AQ_VMS1_8260.rslt\spectra.c
Injection Date: 18-Apr-2023 09:29:30
Spectrum: Tune Spec :Average 82-84(3.72-3.75) Bgrd 79(3.68)
Base Peak: 94.90
Minimum % Base Peak: 0
Number of Points: 73

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1828	62.00	8136	83.00	315	119.00	1235
37.00	11129	63.00	6350	84.00	378	128.00	556
38.00	9583	64.00	680	86.00	200	129.00	212
39.00	3622	67.00	646	87.00	6051	130.00	329
40.00	494	68.00	17024	88.00	6094	131.00	171
44.00	982	69.00	17120	91.00	454	135.00	206
45.00	1940	70.00	1497	92.00	4916	137.00	229
47.00	1957	71.00	193	93.00	6597	141.00	1149
48.00	1038	72.00	1127	94.00	18928	143.00	1207
49.00	8048	73.00	7975	95.00	152576	148.00	253
50.00	35592	74.00	28288	96.00	10477	155.00	193
51.00	11703	75.00	82448	97.00	247	174.00	106840
52.00	625	76.00	7407	104.00	825	175.00	9382
54.00	556	77.00	842	105.00	22	176.00	104144
56.00	2618	78.00	850	106.00	719	177.00	6881
57.00	5074	79.00	4882	115.00	183	178.00	185
58.00	452	80.00	1638	116.00	617		
60.00	1888	81.00	4392	117.00	877		
61.00	8256	82.00	678	118.00	378		

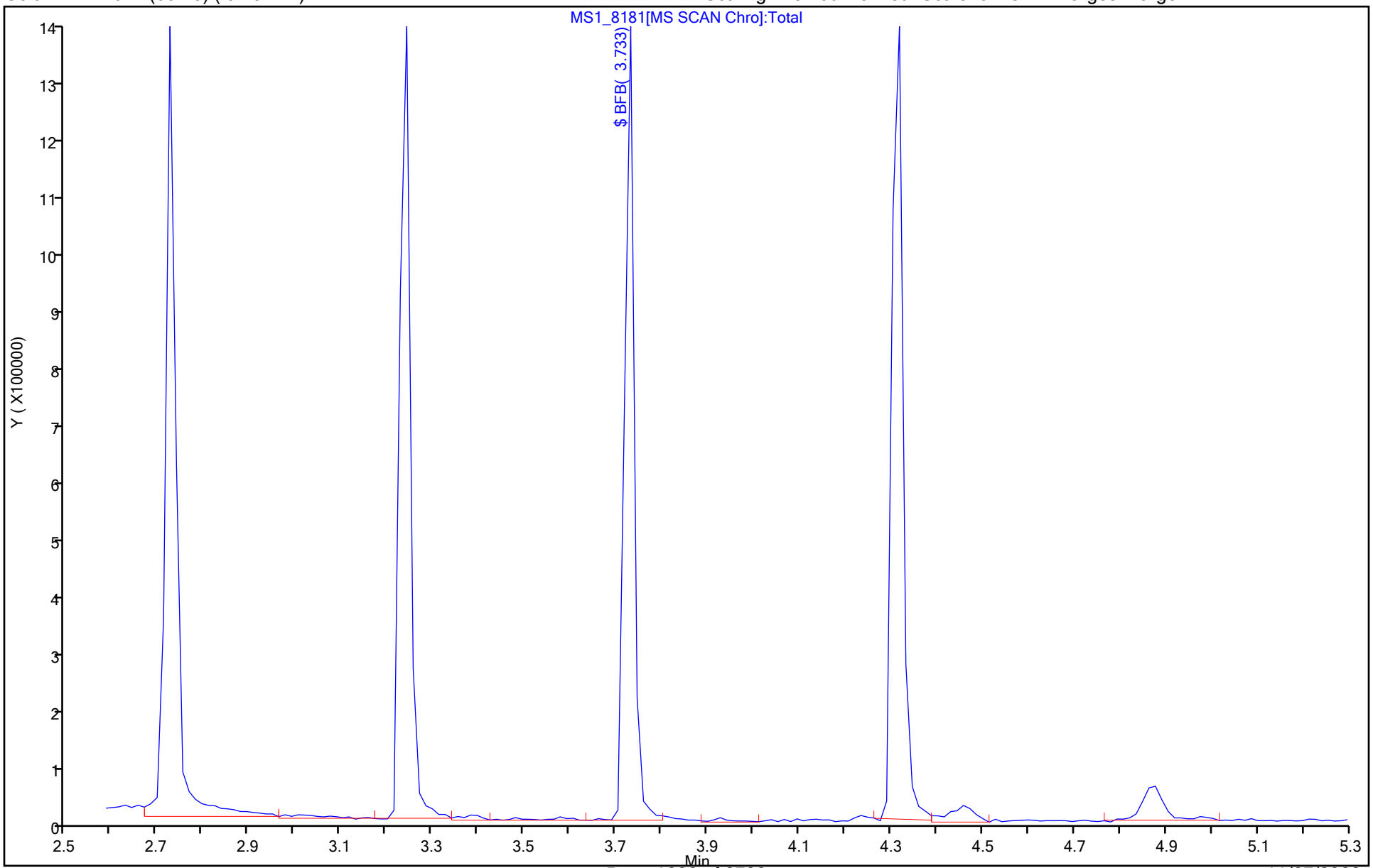
Report Date: 19-Apr-2023 08:23:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8181.D

Injection Date:	18-Apr-2023 09:29:30	Instrument ID:	VMS_MS1	Operator ID:	wickhamt/bustillose
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8602a.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	27-Apr-2023 16:12:30	ALS Bottle#:	24	Worklist Smp#:	1
Injection Vol:	2.0 uL	Dil. Factor:	1.0000		
Sample Info:	ccvc				
Misc. Info.:	280-0120816-032				
Operator ID:	wt/be	Instrument ID:	VMS_MS1		
Method:	\\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	28-Apr-2023 06:49:21	Calib Date:	18-Apr-2023 18:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1608				
First Level Reviewer: AK2J		Date:	27-Apr-2023 17:44:48		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 10 BFB	95	9.900	9.900	0.000	0	499304	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

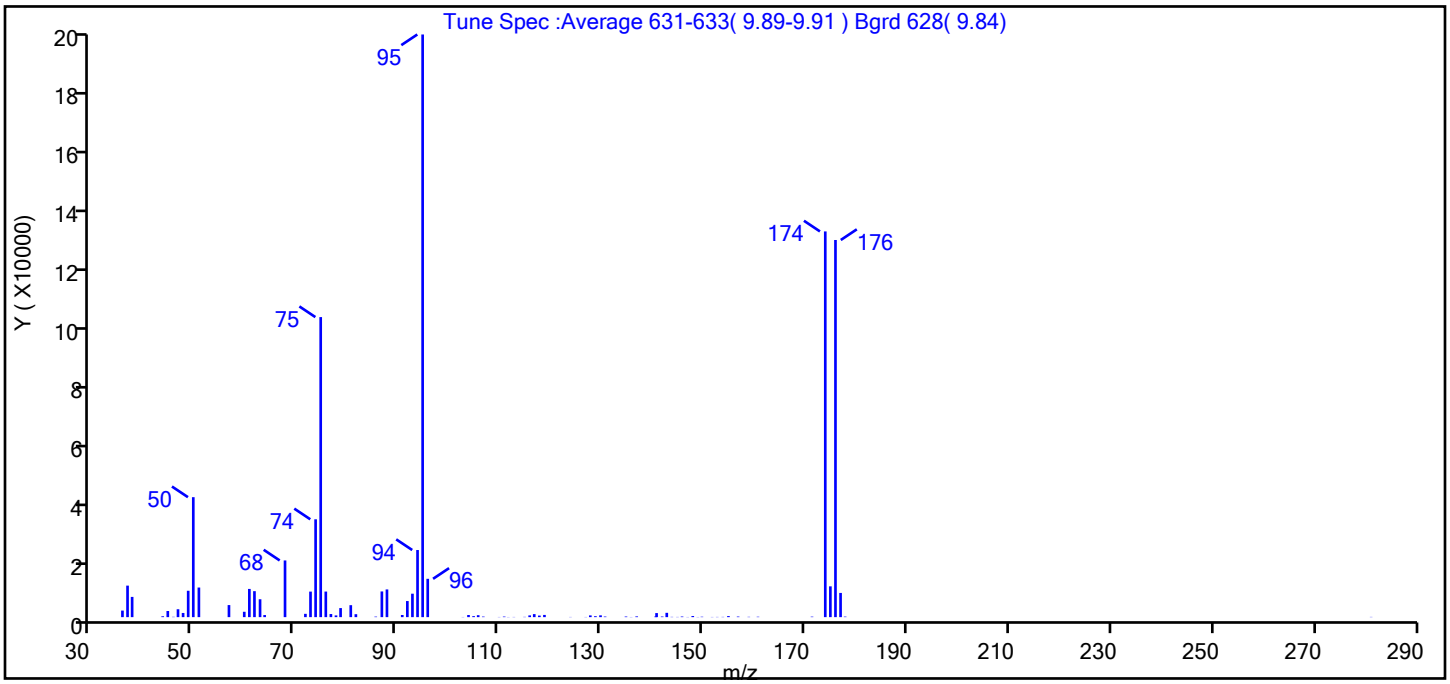
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8602a.D
Injection Date: 27-Apr-2023 16:12:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: wt/be ALS Bottle#: 24 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.6
75	30 to 60% of m/z 95	51.5
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	66.2
175	5 to 9% of m/z 174	5.3 (8.0)
176	Greater than 95% but less than 101% of m/z 174	64.7 (97.8)
177	5 to 9% of m/z 176	4.2 (6.4)

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8602a.D\AQ_VMS1_8260.rslt\spectra
Injection Date: 27-Apr-2023 16:12:30
Spectrum: Tune Spec :Average 631-633(9.89-9.91) Bgrd 628(9.84)
Base Peak: 94.90
Minimum % Base Peak: 0
Number of Points: 85

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2144	76.00	8355	112.00	51	146.00	198
37.00	10294	77.00	1016	113.00	64	147.00	54
38.00	6609	78.00	569	115.00	90	148.00	362
44.00	286	79.00	2959	116.00	568	149.00	52
45.00	2006	81.00	3907	117.00	991	150.00	137
46.00	104	82.00	964	118.00	515	152.00	61
47.00	2580	86.00	172	119.00	723	153.00	72
48.00	1364	87.00	8391	124.00	63	154.00	81
49.00	8615	88.00	9047	127.00	56	155.00	343
50.00	39176	91.00	701	128.00	566	157.00	191
51.00	9669	92.00	5255	129.00	309	159.00	103
57.00	3939	93.00	7658	130.00	587	161.00	135
60.00	1753	94.00	21920	131.00	193	171.00	162
61.00	9214	95.00	190272	135.00	202	174.00	125960
62.00	8483	96.00	12516	136.00	51	175.00	10058
63.00	5843	103.00	53	137.00	245	176.00	123160
64.00	684	104.00	696	141.00	191	177.00	7907
68.00	18512	105.00	328	141.00	1329	178.00	172
72.00	1081	106.00	636	142.00	202	281.00	76
73.00	8341	107.00	183	143.00	1409		
74.00	31952	110.00	59	144.00	89		
75.00	97984	111.00	184	145.00	69		

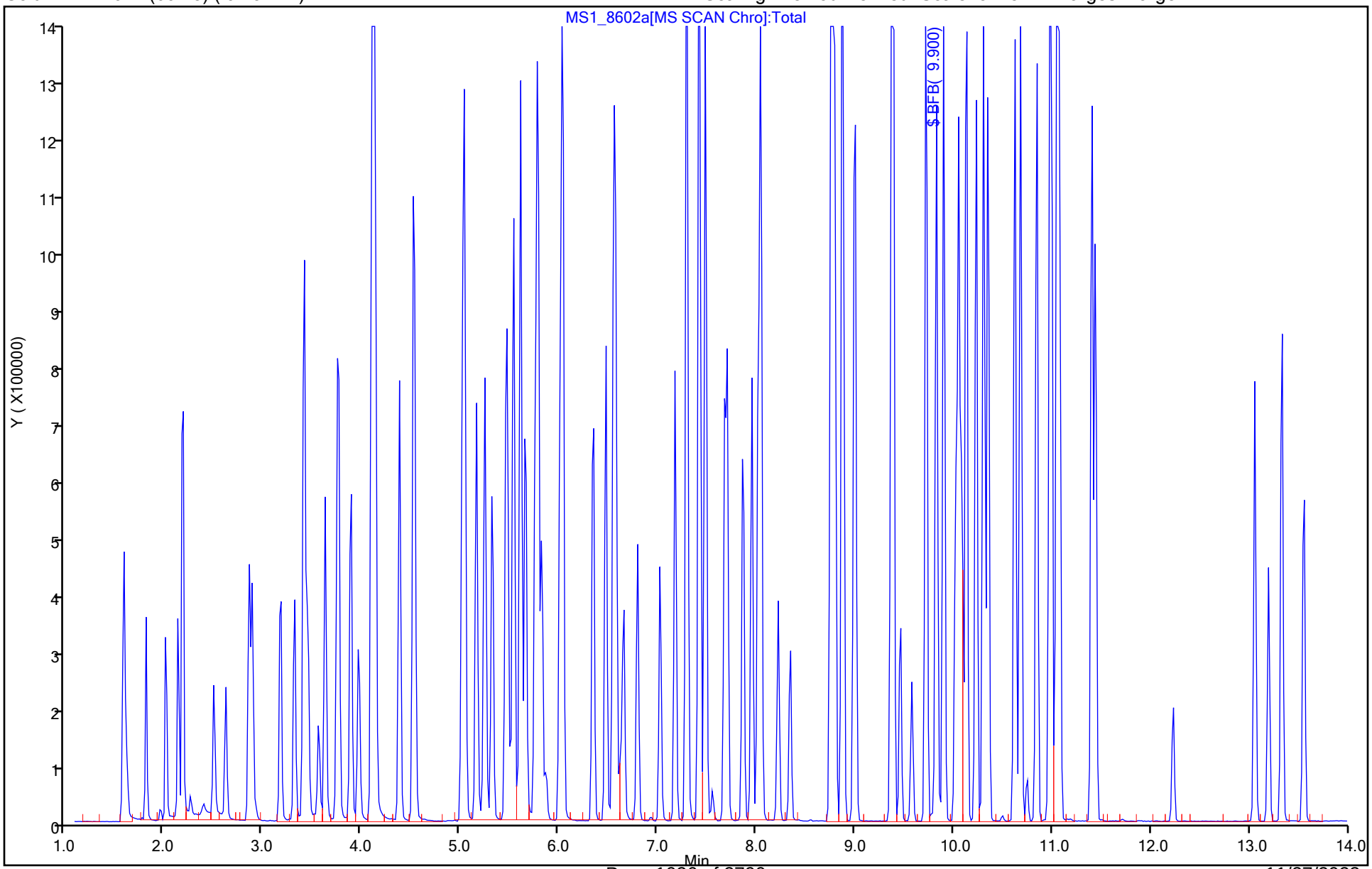
Report Date: 28-Apr-2023 06:49:21 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8602a.D

Injection Date:	27-Apr-2023 16:12:30	Instrument ID:	VMS_MS1	Operator ID:	wt/be
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	22-Oct-2022 11:07:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	2.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	24-Oct-2022 11:52:40	Calib Date:	22-Oct-2022 17:23:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43679.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1674				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.547	3.547	0.000	85	446769	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

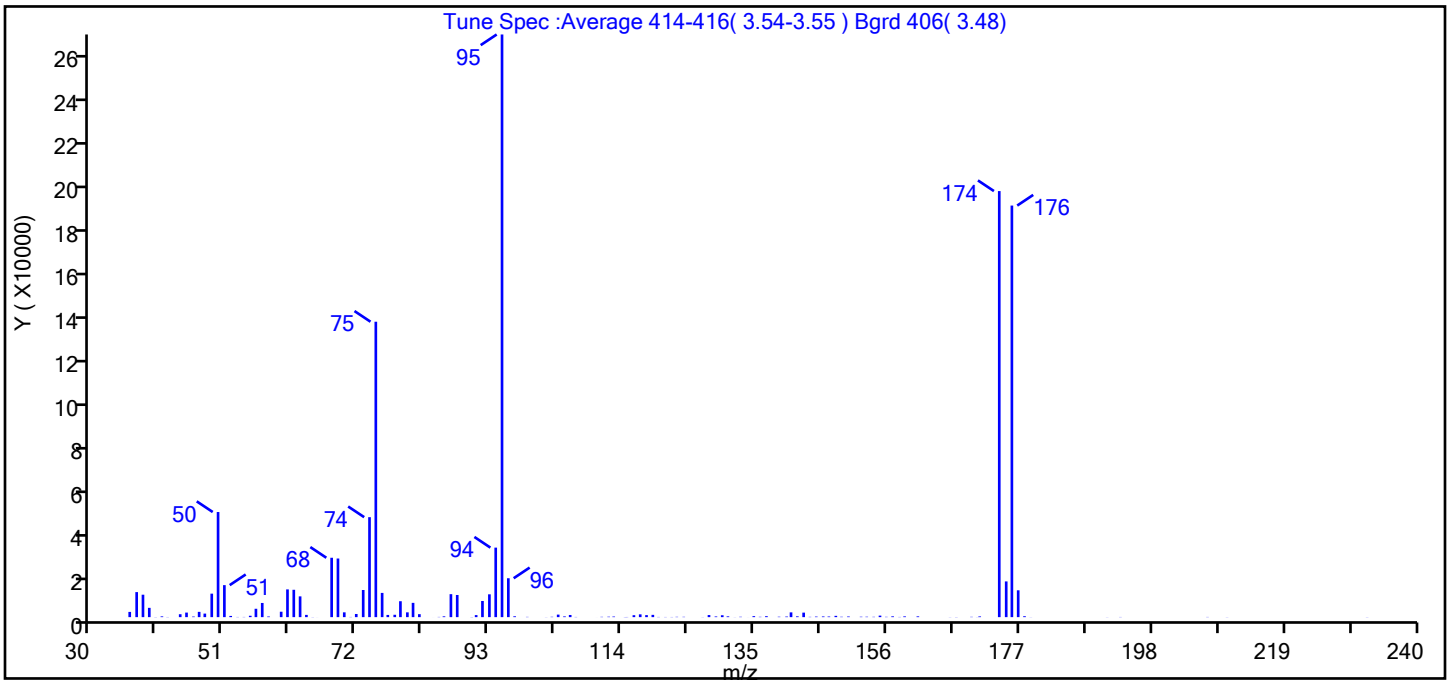
mv-Cent BFB_00004 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D
Injection Date: 22-Oct-2022 11:07:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.0
75	30 to 60% of m/z 95	50.7
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	73.1
175	5 to 9% of m/z 174	6.1 (8.4)
176	Greater than 95% but less than 101% of m/z 174	70.6 (96.6)
177	5 to 9% of m/z 176	4.6 (6.5)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 22-Oct-2022 11:07:30
Spectrum: Tune Spec :Average 414-416(3.54-3.55) Bgrd 406(3.48)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2338	71.00	85	110.00	9	145.00	253
37.00	11173	72.00	1409	111.00	137	146.00	303
38.00	10014	73.00	12114	112.00	193	147.00	279
39.00	4149	74.00	44616	113.00	265	148.00	578
40.00	63	75.00	131840	114.00	64	149.00	166
41.00	336	76.00	10814	115.00	76	150.00	283
42.00	68	77.00	986	116.00	866	152.00	184
44.00	1301	78.00	1056	117.00	1248	153.00	188
45.00	2033	79.00	7105	118.00	904	154.00	142
46.00	259	80.00	2140	119.00	1020	155.00	677
47.00	2358	81.00	6374	120.00	89	156.00	139
48.00	1581	82.00	1331	121.00	78	157.00	357
49.00	10484	84.00	9	122.00	74	158.00	89
50.00	46912	85.00	96	123.00	142	159.00	337
51.00	14286	86.00	353	124.00	142	161.00	342
52.00	543	87.00	10254	127.00	43	166.00	46
53.00	79	88.00	9886	128.00	931	167.00	65
54.00	85	90.00	65	129.00	310	169.00	136
55.00	612	91.00	908	130.00	843	170.00	34
56.00	3738	92.00	7210	131.00	347	171.00	323
57.00	6328	93.00	10187	132.00	35	174.00	190144
58.00	286	94.00	31024	133.00	162	175.00	15946
60.00	2421	95.00	260032	134.00	13	176.00	183680
61.00	12385	96.00	17360	135.00	439	177.00	11982
62.00	12211	97.00	377	136.00	148	178.00	401
63.00	9272	99.00	115	137.00	424	179.00	39
64.00	1004	102.00	39	139.00	187	191.00	40
65.00	52	103.00	154	140.00	264	193.00	80
66.00	14	104.00	1131	141.00	2128	207.00	89
68.00	26504	105.00	328	142.00	354	210.00	45
69.00	26168	106.00	963	143.00	2015	232.00	51
70.00	2145	107.00	82	144.00	127		

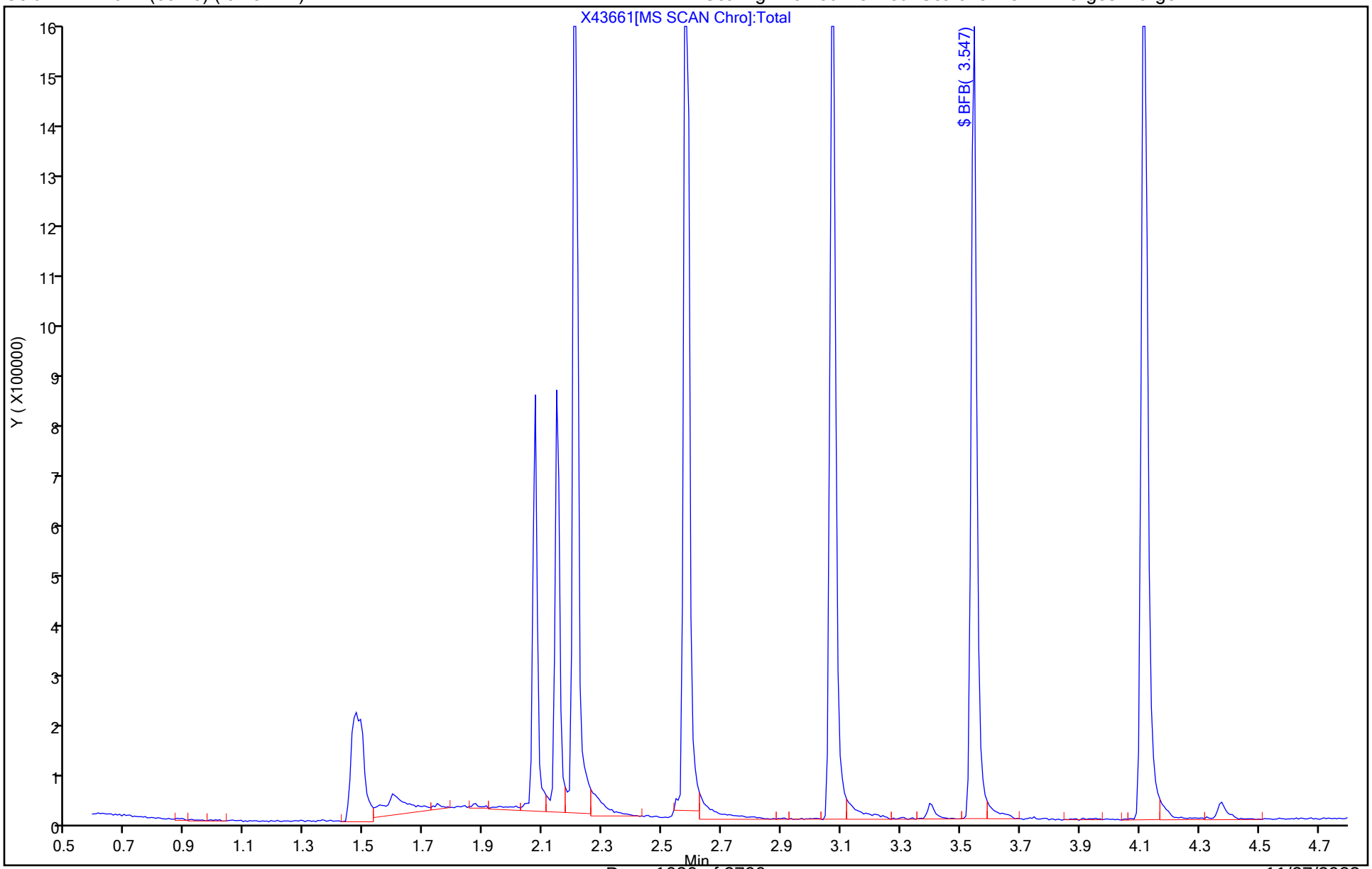
Report Date: 24-Oct-2022 11:52:40 Chrom Revision: 2.3 28-Sep-2022 12:57:42

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20221022-115393.b\X43661.D

Injection Date:	22-Oct-2022 11:07:30	Instrument ID:	VMS_X4	Operator ID:	SEIFERTJ
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 07-Apr-2023 02:33:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: bj Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Apr-2023 11:30:21 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1637

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.549	3.549	0.000	88	436891	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

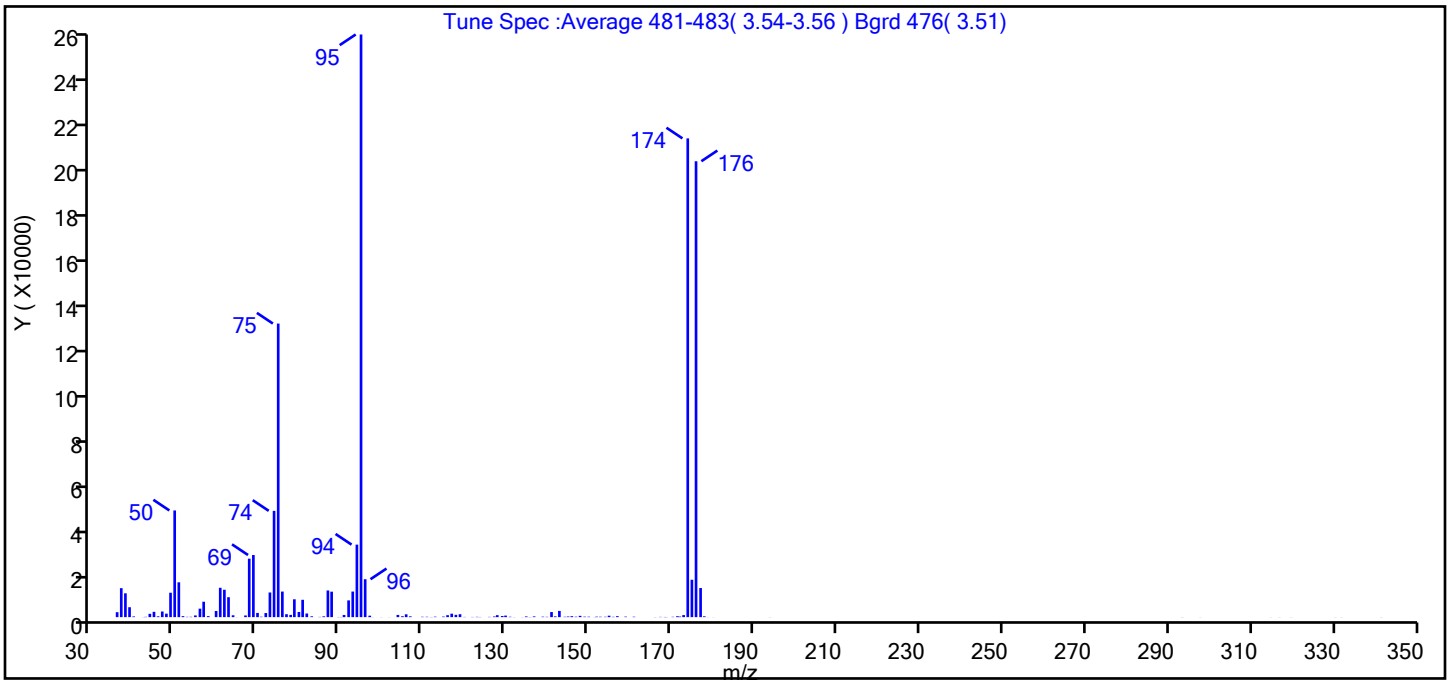
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D
Injection Date: 07-Apr-2023 02:33:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: bj ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.3
75	30 to 60% of m/z 95	50.4
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.4 (0.4)
174	50 to 120% of m/z 95	82.2
175	5 to 9% of m/z 174	6.4 (7.8)
176	Greater than 95% but less than 101% of m/z 174	78.2 (95.2)
177	5 to 9% of m/z 176	5.0 (6.4)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 07-Apr-2023 02:33:30
Spectrum: Tune Spec :Average 481-483(3.54-3.56) Bgrd 476(3.51)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 135

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2183	73.00	10844	112.00	71	151.00	42
37.00	12751	74.00	46752	113.00	209	152.00	212
38.00	10483	75.00	129120	115.00	250	153.00	179
39.00	4364	76.00	11248	116.00	864	154.00	164
40.00	303	77.00	1290	117.00	1527	155.00	634
42.00	35	78.00	990	118.00	1010	156.00	144
43.00	135	79.00	7856	119.00	1286	157.00	426
44.00	1461	80.00	2280	120.00	96	159.00	224
45.00	2340	81.00	7630	122.00	88	161.00	187
46.00	349	82.00	1600	123.00	135	166.00	60
47.00	2484	83.00	355	124.00	78	167.00	112
48.00	1534	85.00	99	126.00	114	168.00	85
49.00	10734	86.00	349	127.00	281	169.00	54
50.00	46920	87.00	11739	128.00	868	170.00	152
51.00	15321	88.00	11195	129.00	489	171.00	397
52.00	439	90.00	73	130.00	677	172.00	234
53.00	138	90.00	80	131.00	175	173.00	897
54.00	148	91.00	957	132.00	45	174.00	210560
55.00	749	92.00	7370	134.00	38	175.00	16448
56.00	3730	93.00	11252	135.00	310	176.00	200512
57.00	6780	94.00	31888	136.00	61	177.00	12803
58.00	445	95.00	256256	137.00	321	178.00	356
60.00	2713	96.00	16680	139.00	204	179.00	36
61.00	12912	97.00	632	140.00	143	180.00	34
62.00	12049	98.00	37	141.00	2240	194.00	35
63.00	8765	100.00	35	142.00	333	293.00	48
64.00	817	102.00	35	143.00	2734	298.00	34
65.00	35	103.00	4	144.00	160	315.00	36
67.00	739	104.00	972	145.00	276	317.00	38
68.00	25712	105.00	392	146.00	414	320.00	36
69.00	27320	106.00	1245	147.00	191	330.00	37
70.00	1848	107.00	349	148.00	572	332.00	38
71.00	183	110.00	166	149.00	207	341.00	39

Report Date: 10-Apr-2023 11:30:21 Chrom Revision: 2.3 16-Mar-2023 15:40:40
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 07-Apr-2023 02:33:30
Spectrum: Tune Spec :Average 481-483(3.54-3.56) Bgrd 476(3.51)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 135

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	1801	111.00	165	150.00	198		

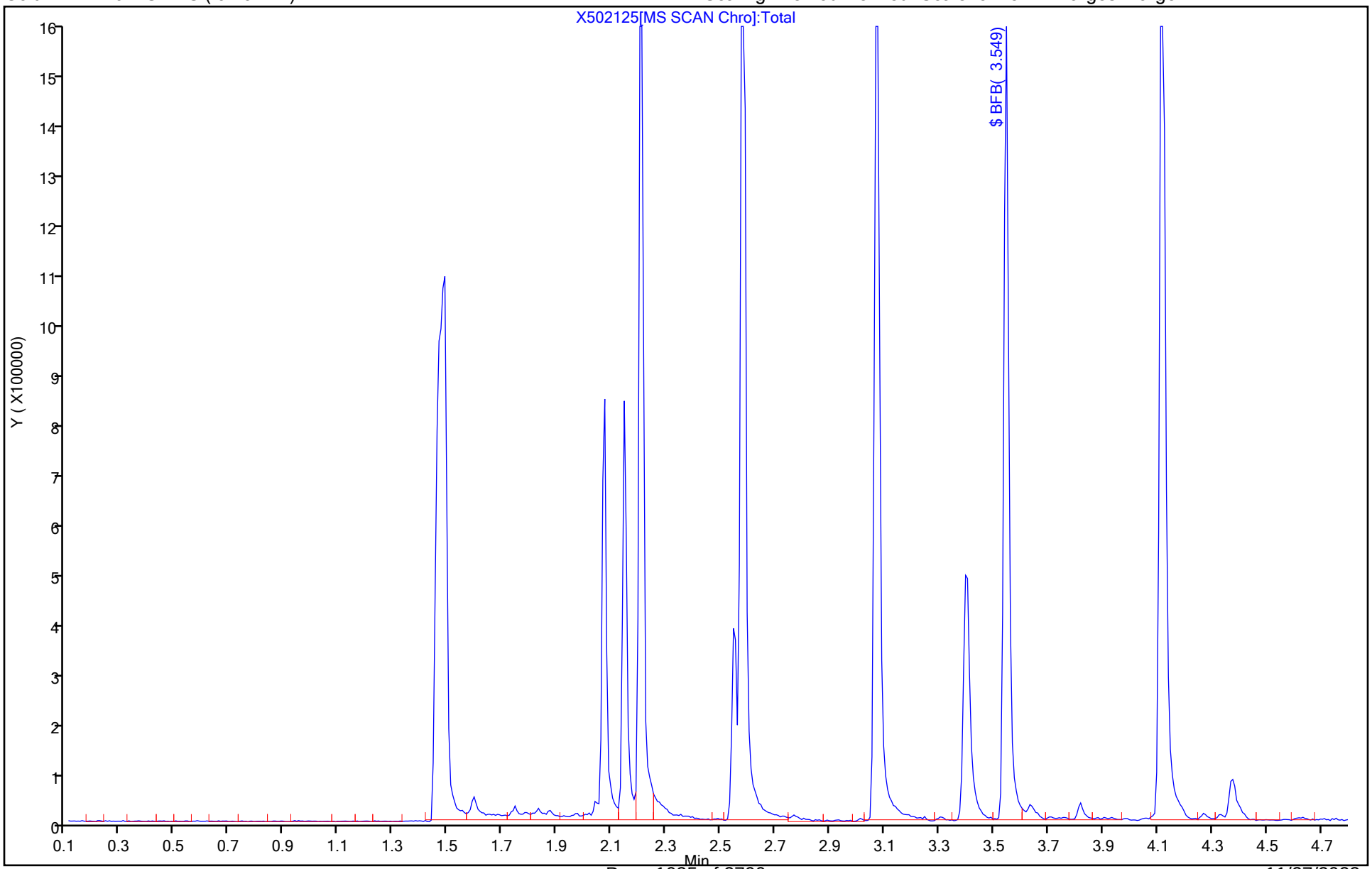
Report Date: 10-Apr-2023 11:30:21 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502125.D

Injection Date:	07-Apr-2023 02:33:30	Instrument ID:	VMS_X4	Operator ID:	bj
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 10-Apr-2023 21:51:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: COULTERD Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Apr-2023 01:28:25 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1663

First Level Reviewer: NNS5 Date: 10-Apr-2023 22:47:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	3.547	3.547	0.000	0	468110	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

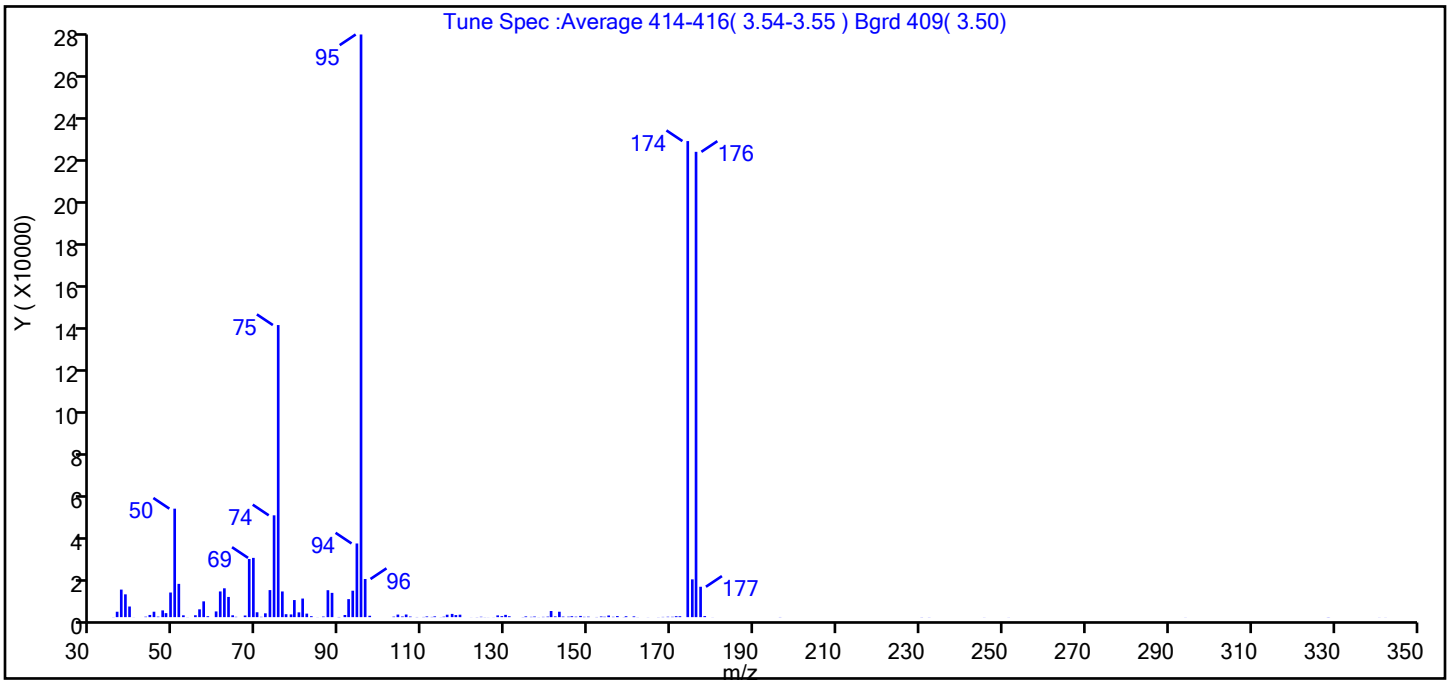
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D
Injection Date: 10-Apr-2023 21:51:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: COULTERD ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.6
75	30 to 60% of m/z 95	50.1
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	81.7
175	5 to 9% of m/z 174	6.5 (7.9)
176	Greater than 95% but less than 101% of m/z 174	79.9 (97.7)
177	5 to 9% of m/z 176	5.2 (6.5)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 10-Apr-2023 21:51:30
Spectrum: Tune Spec :Average 414-416(3.54-3.55) Bgrd 409(3.50)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	54	73.00	12727	114.00	45	153.00	311
36.00	2548	74.00	47920	115.00	215	154.00	191
37.00	12967	75.00	137472	116.00	1145	155.00	768
38.00	10736	76.00	12090	117.00	1522	156.00	163
39.00	5007	77.00	1388	118.00	972	157.00	505
40.00	37	78.00	1277	119.00	1153	158.00	50
42.00	3	79.00	8037	122.00	33	159.00	427
43.00	216	80.00	2250	123.00	61	161.00	363
44.00	1028	81.00	8754	124.00	177	162.00	45
45.00	2555	82.00	1664	125.00	49	164.00	38
46.00	242	83.00	440	126.00	37	167.00	50
47.00	3179	84.00	39	127.00	35	168.00	113
48.00	1892	86.00	272	128.00	822	169.00	192
49.00	11590	87.00	12679	129.00	462	170.00	168
50.00	51056	88.00	11424	130.00	1076	171.00	445
51.00	15660	90.00	78	131.00	416	172.00	430
52.00	853	90.00	40	134.00	65	174.00	224064
53.00	46	91.00	1008	135.00	352	175.00	17784
55.00	887	92.00	8481	136.00	141	176.00	219008
56.00	3683	93.00	12443	137.00	284	177.00	14304
57.00	7433	94.00	34672	138.00	45	178.00	490
58.00	427	95.00	274240	139.00	141	180.00	37
60.00	2694	96.00	17952	140.00	251	196.00	73
61.00	12097	97.00	652	141.00	2888	230.00	62
62.00	13575	103.00	236	142.00	342	232.00	52
63.00	9507	104.00	1207	143.00	2546	246.00	39
64.00	865	105.00	310	144.00	262	251.00	35
65.00	154	106.00	1238	145.00	228	294.00	38
67.00	768	107.00	274	146.00	431	328.00	47
68.00	27376	108.00	76	147.00	216	329.00	45
69.00	27896	110.00	95	148.00	577	341.00	38
70.00	2292	111.00	342	149.00	147	342.00	34
71.00	152	112.00	108	150.00	228		

Report Date: 11-Apr-2023 01:28:25 Chrom Revision: 2.3 16-Mar-2023 15:40:40
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 10-Apr-2023 21:51:30
Spectrum: Tune Spec :Average 414-416(3.54-3.55) Bgrd 409(3.50)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	1795	113.00	368	152.00	79		

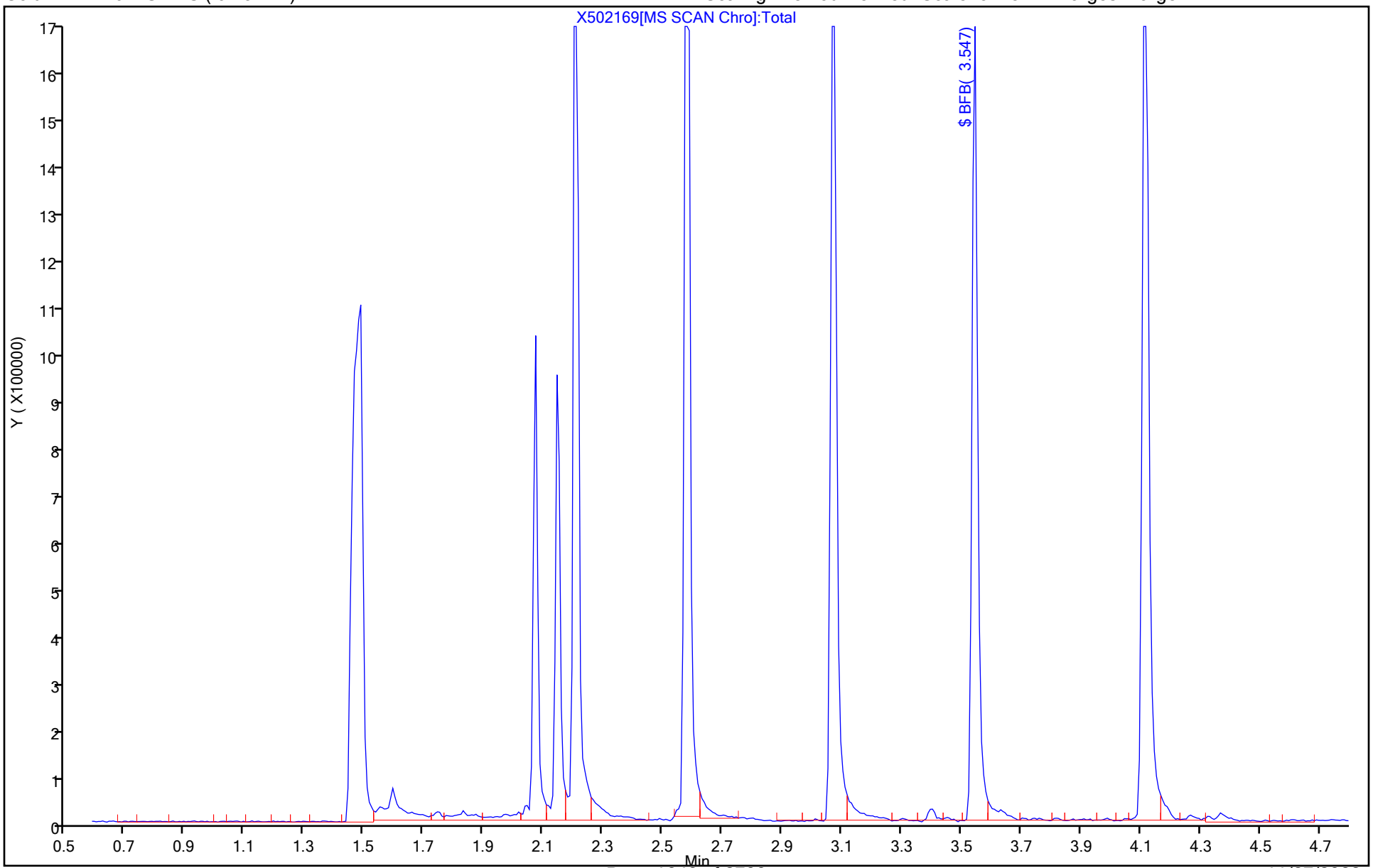
Report Date: 11-Apr-2023 01:28:25 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230410-120285.b\X502169.D

Injection Date:	10-Apr-2023 21:51:30	Instrument ID:	VMS_X4	Operator ID:	COULTERD
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	26-Apr-2023 09:51:30	ALS Bottle#:	2	Worklist Smp#:	1
Injection Vol:	2.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	26-Apr-2023 11:24:03	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1609				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	8.660	8.660	0.000	86	707095	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

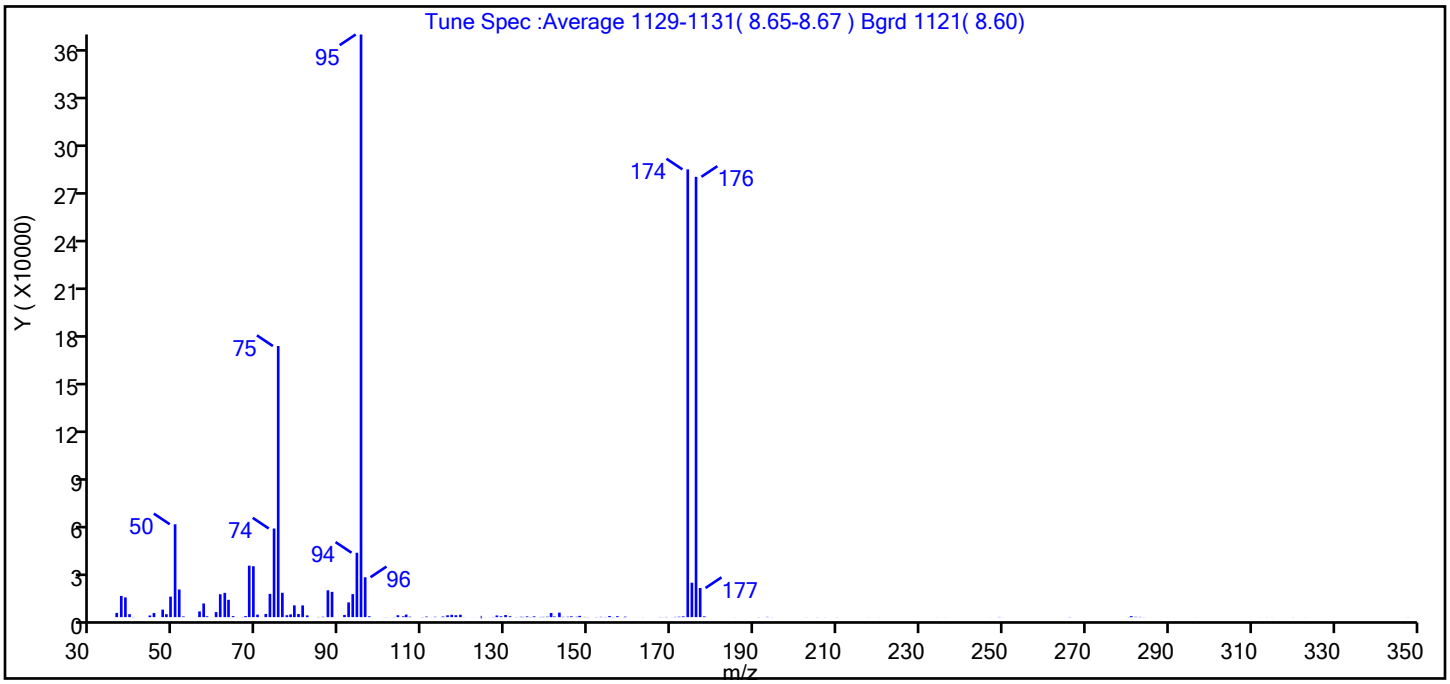
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D
Injection Date: 26-Apr-2023 09:51:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: MED ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.9
75	30 to 60% of m/z 95	46.5
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.1 (0.2)
174	50 to 120% of m/z 95	76.8
175	5 to 9% of m/z 174	5.9 (7.7)
176	Greater than 95% but less than 101% of m/z 174	75.6 (98.3)
177	5 to 9% of m/z 176	5.0 (6.6)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 26-Apr-2023 09:51:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2667	81.00	7372	128.00	1071	170.00	39
37.00	13349	82.00	1089	129.00	523	171.00	168
38.00	12404	85.00	131	130.00	1308	172.00	285
39.00	1857	86.00	230	131.00	559	173.00	496
40.00	101	87.00	16864	132.00	108	174.00	281472
44.00	1038	88.00	15892	134.00	220	175.00	21632
45.00	2583	91.00	1364	134.00	148	176.00	276800
47.00	4739	92.00	9262	135.00	481	177.00	18328
48.00	1850	93.00	14475	136.00	88	178.00	475
49.00	12894	94.00	40480	137.00	499	185.00	39
50.00	58384	95.00	366272	138.00	123	191.00	80
51.00	17392	96.00	25088	139.00	181	193.00	189
52.00	430	97.00	533	140.00	275	194.00	57
56.00	3603	100.00	35	141.00	2631	202.00	55
57.00	8580	101.00	63	142.00	415	205.00	73
58.00	524	103.00	103	143.00	2845	207.00	44
59.00	36	104.00	1201	144.00	194	210.00	54
60.00	3178	105.00	500	145.00	251	218.00	36
61.00	14404	106.00	1618	146.00	519	220.00	34
62.00	15258	107.00	292	147.00	219	234.00	37
63.00	10897	110.00	87	148.00	803	236.00	35
64.00	650	111.00	372	149.00	153	247.00	38
65.00	33	112.00	55	150.00	107	249.00	134
66.00	94	113.00	240	152.00	108	250.00	39
67.00	651	115.00	73	153.00	198	266.00	106
68.00	32368	115.00	396	154.00	112	280.00	86
69.00	32000	116.00	1163	155.00	680	281.00	640
70.00	1559	117.00	1486	156.00	117	282.00	211
72.00	2005	118.00	1224	157.00	587	283.00	164
73.00	14624	119.00	1510	159.00	87	284.00	53
74.00	55712	120.00	74	159.00	307	297.00	44
75.00	170432	122.00	36	161.00	14	312.00	37
76.00	15309	123.00	35	162.00	35	314.00	44

Report Date: 26-Apr-2023 11:24:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 26-Apr-2023 09:51:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	1226	124.00	1	163.00	49	315.00	33
78.00	1752	125.00	34	167.00	100	320.00	37
79.00	7398	126.00	41	168.00	42	323.00	36
80.00	1988	127.00	127	169.00	139	348.00	48

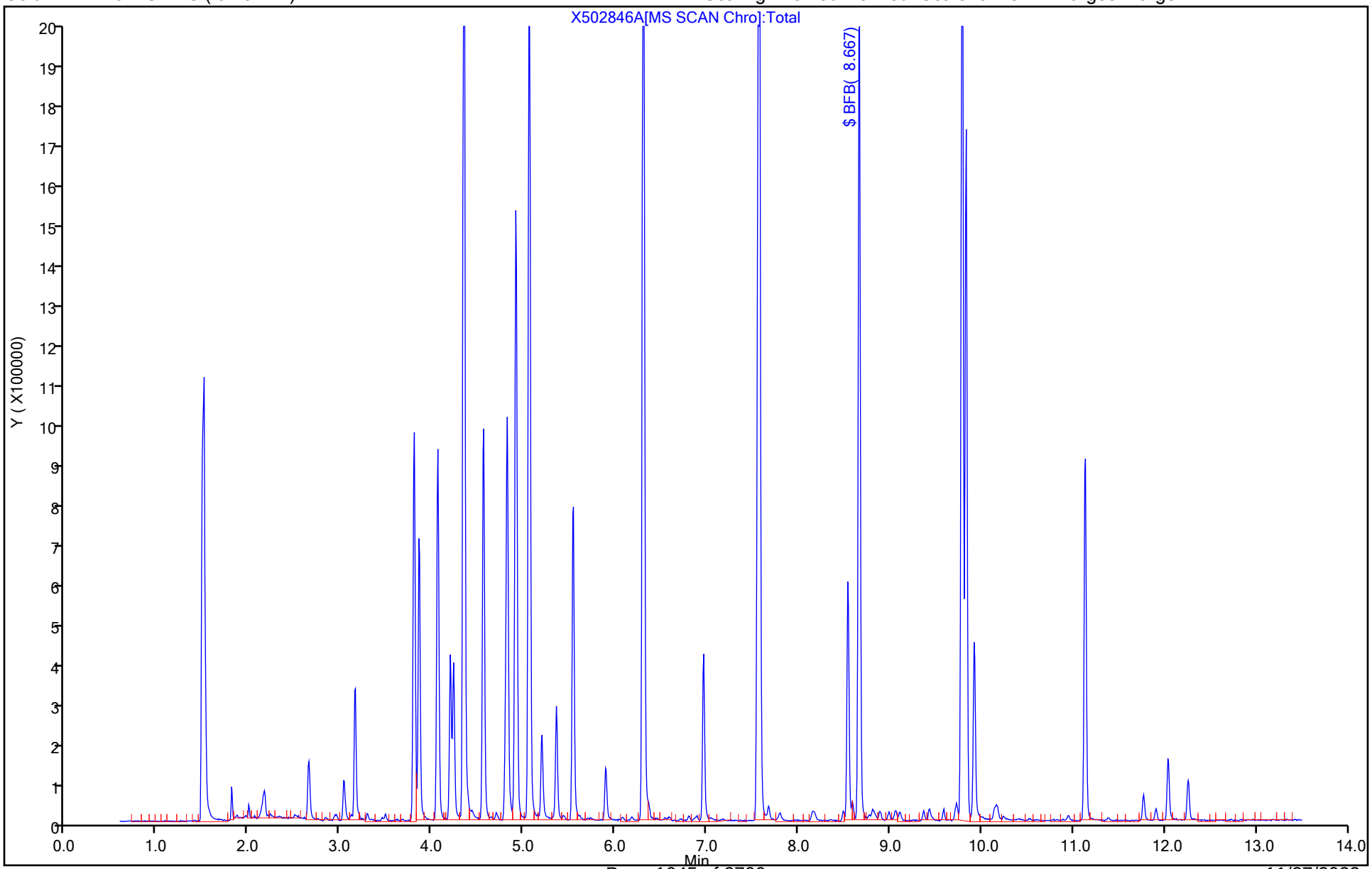
Report Date: 26-Apr-2023 11:24:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502846A.D

Injection Date:	26-Apr-2023 09:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 27-Apr-2023 10:51:30 ALS Bottle#: 3 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:02 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:13:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 9 BFB	95	8.660	8.660	0.000	86	719336	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

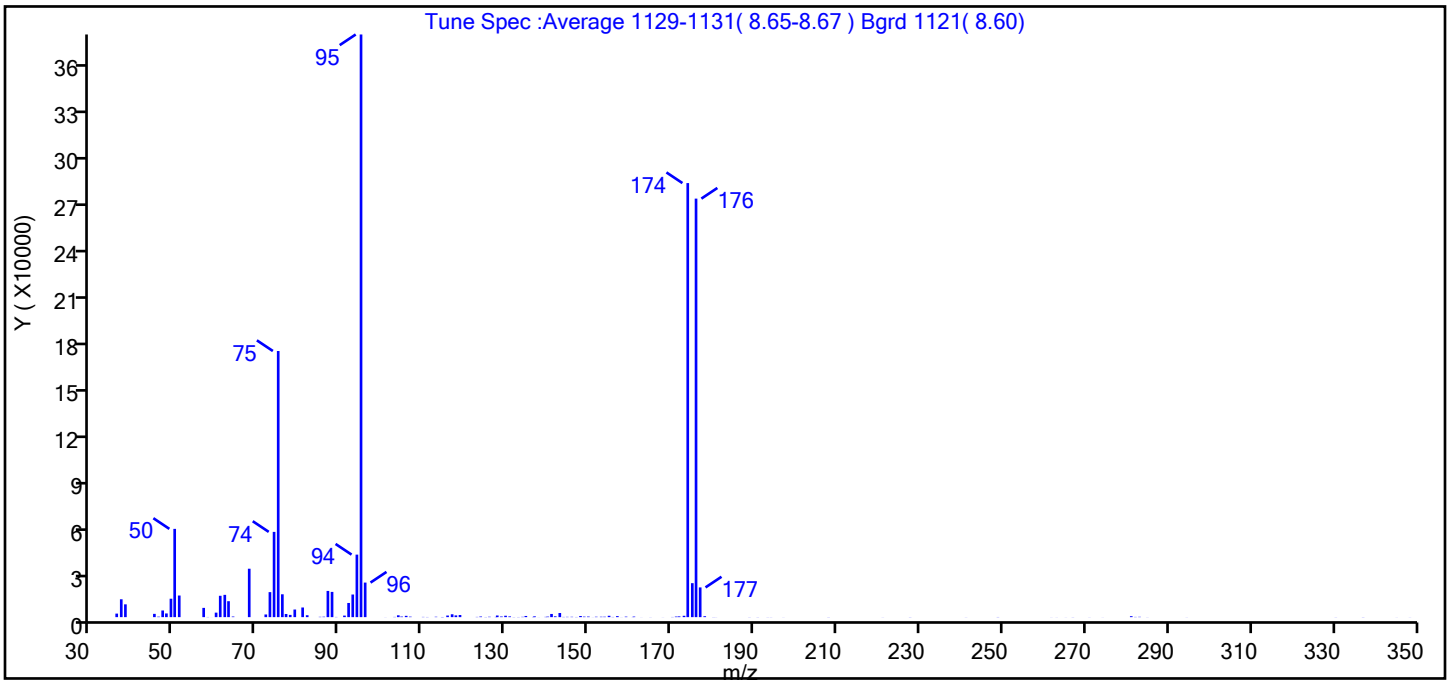
mv-Cent BFB_00005 Amount Added: 5.00 Units: uL

MS Tune Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D
Injection Date: 27-Apr-2023 10:51:30 Instrument ID: VMS_X4
Lims ID: BFB
Client ID:
Operator ID: MED ALS Bottle#: 3 Worklist Smp#: 1
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 9 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.1
75	30 to 60% of m/z 95	45.7
96	5 to 9% of m/z 95	5.9
173	Less than 2% of m/z 174	0.2 (0.3)
174	50 to 120% of m/z 95	74.5
175	5 to 9% of m/z 174	5.8 (7.8)
176	Greater than 95% but less than 101% of m/z 174	71.8 (96.4)
177	5 to 9% of m/z 176	5.1 (7.1)

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 27-Apr-2023 10:51:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2274	91.00	998	137.00	137	175.00	21832
37.00	11481	92.00	9107	137.00	510	176.00	268928
38.00	8229	93.00	14543	138.00	37	177.00	19104
45.00	2109	94.00	40176	140.00	175	178.00	586
46.00	309	95.00	374400	140.00	335	180.00	66
47.00	4283	96.00	22208	141.00	2046	181.00	46
48.00	2378	101.00	41	142.00	528	189.00	65
49.00	11847	103.00	145	143.00	2663	191.00	65
50.00	56720	104.00	1177	144.00	132	193.00	56
51.00	13895	105.00	376	145.00	193	194.00	53
57.00	5953	106.00	840	146.00	221	197.00	39
58.00	109	107.00	317	147.00	104	208.00	75
59.00	23	110.00	149	148.00	736	221.00	45
60.00	2896	111.00	107	149.00	324	228.00	76
61.00	13723	113.00	256	150.00	374	241.00	50
62.00	14321	115.00	98	151.00	39	249.00	102
63.00	10245	115.00	73	152.00	262	262.00	39
64.00	392	116.00	1029	153.00	262	263.00	38
68.00	31112	117.00	1845	154.00	277	265.00	36
72.00	1719	118.00	1123	155.00	878	267.00	65
73.00	16072	119.00	1370	156.00	123	271.00	48
74.00	54784	123.00	147	157.00	655	274.00	37
75.00	171008	124.00	405	158.00	40	281.00	605
76.00	14688	125.00	100	159.00	327	282.00	142
77.00	2028	126.00	253	161.00	41	283.00	208
78.00	1439	128.00	150	161.00	366	285.00	48
79.00	4895	128.00	1054	163.00	34	294.00	44
81.00	6201	129.00	409	165.00	54	330.00	58
82.00	1222	130.00	901	168.00	40	337.00	77
85.00	202	131.00	478	170.00	114	345.00	37
86.00	278	132.00	83	171.00	368	348.00	44
87.00	16840	133.00	100	172.00	484		
88.00	16223	134.00	199	173.00	864		

Report Date: 27-Apr-2023 12:40:02 Chrom Revision: 2.3 29-Mar-2023 18:39:10
Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D\VMS_X4_8260.rslt\spectra.d
Injection Date: 27-Apr-2023 10:51:30
Spectrum: Tune Spec :Average 1129-1131(8.65-8.67) Bgrd 1121(8.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	125	135.00	753	174.00	278912		

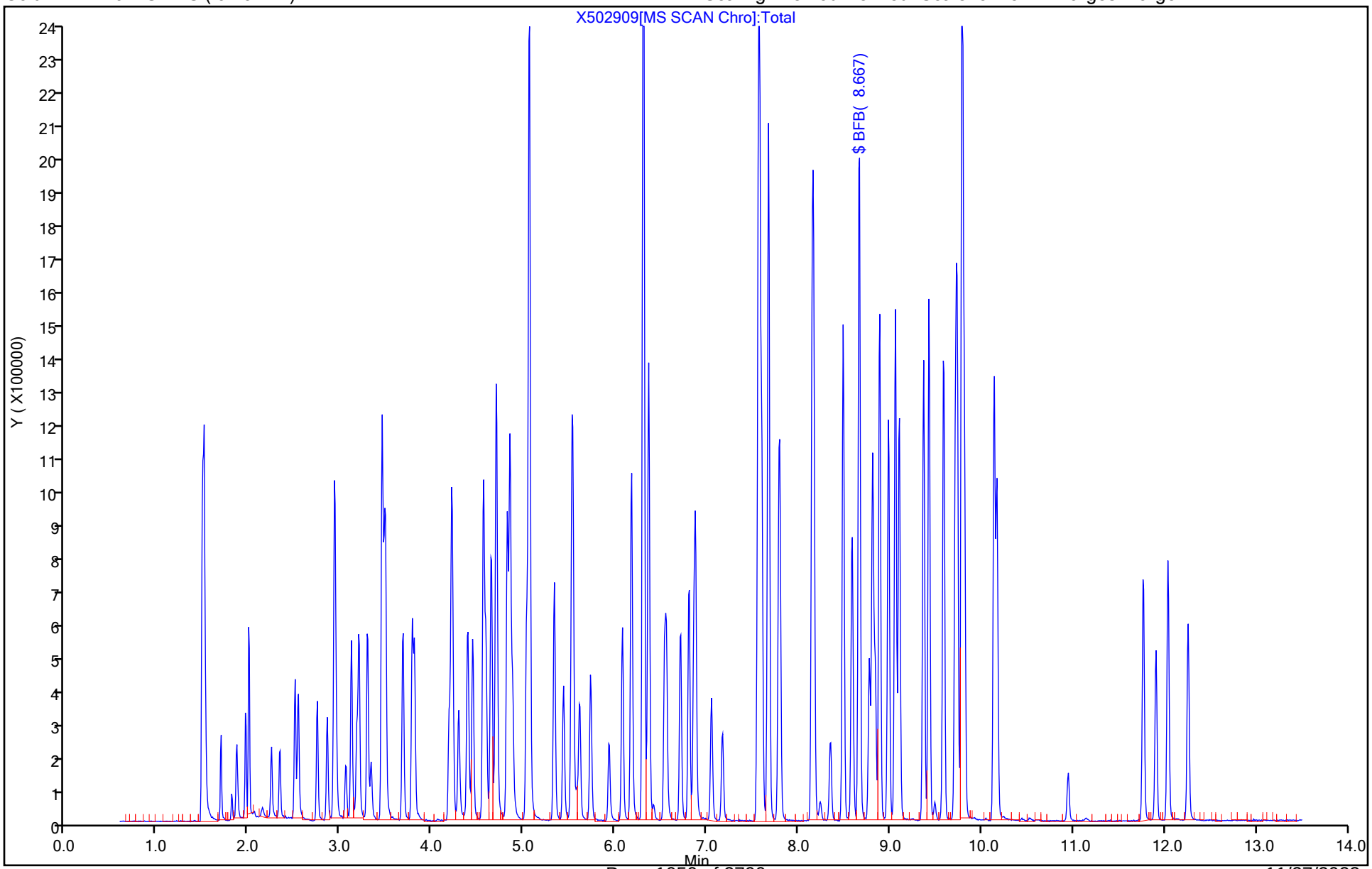
Report Date: 27-Apr-2023 12:40:02 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502909.D

Injection Date:	27-Apr-2023 10:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	2.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610121/7

Matrix: Water | Lab File ID: X502851.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 11:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610121/7

Matrix: Water | Lab File ID: X502851.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 11:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610121/7

Matrix: Water | Lab File ID: X502851.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 11:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-127
460-00-4	4-Bromofluorobenzene (Surr)	98		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 26-Apr-2023 11:43:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 12:16:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 12:16:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942					ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2025881	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	487961	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	789543	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	500343	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	483299	50.0	47.2	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2115079	50.0	50.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	92	693696	50.0	49.2	
$ 8 Trifluorotoluene (Surr)	1		0.000					ND	
$ 9 BFB	95	8.667	8.660	0.007	92	693696		NR	
10 Dichlorodifluoromethane	85		1.696					ND	7
11 Chloromethane	50		1.867					ND	
12 Vinyl chloride	62		1.960					ND	
13 Ethylene oxide	43		2.225					ND	7
14 Bromomethane	94		2.239					ND	U
15 Chloroethane	64		2.332					ND	U
16 Dichlorofluoromethane	67		2.504					ND	
20 Propene oxide	58		2.504					ND	7
17 Trichlorofluoromethane	101		2.539					ND	
18 Ethanol	45		2.654					ND	U
19 Ethyl ether	59		2.747					ND	
21 Acrolein	56		2.854					ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.933					ND	
23 1,1-Dichloroethene	96		2.933					ND	
24 Acetone	43		2.954					ND	7
25 Isopropyl alcohol	45		3.033					ND	U
26 Iodomethane	142		3.054					ND	
27 Carbon disulfide	76		3.119					ND	7
28 Acetonitrile	41	3.161	3.161	0.000	98	4919		4.35	
29 Methyl acetate	43		3.176					ND	
30 3-Chloro-1-propene	41		3.197					ND	
31 Methylene Chloride	84	3.297	3.297	0.000	79	2713		0.2715	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333					ND	
33 Acrylonitrile	53		3.455					ND	
34 Methyl tert-butyl ether	73		3.476					ND	
35 trans-1,2-Dichloroethene	96		3.490					ND	
36 Chlorotrifluoroethene	116		3.526					ND	
37 Hexane	57		3.683					ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733					ND	
39 Vinyl acetate	43		3.784					ND	
40 1,1-Dichloroethane	63		3.805					ND	
41 Isopropyl ether	87		3.805					ND	
42 2-Chloro-1,3-butadiene	53		3.855					ND	
43 2-Chloro-1,1,1-Trifluoroethane	118		3.948					ND	
44 Tert-butyl ethyl ether	59		4.062					ND	
45 2-Butanone (MEK)	43		4.184					ND	
46 Ethyl acetate	43		4.198					ND	U
47 cis-1,2-Dichloroethene	96		4.213					ND	
48 2,2-Dichloropropane	77		4.220					ND	
49 Propionitrile	54		4.234					ND	
50 sec-Butyl Alcohol	45		4.291					ND	U
51 Methacrylonitrile	41		4.348					ND	
52 Chlorobromomethane	128		4.384					ND	
53 Tetrahydrofuran	42		4.398					ND	
54 Chloroform	83		4.441					ND	
55 1,1,1-Trichloroethane	97		4.584					ND	
56 Cyclohexane	56		4.649					ND	
58 1,2-Dichloro-1,1,2-trifluoroetha	117		4.678					ND	
57 1,1-Dichloropropene	75		4.699					ND	
60 Isobutyl alcohol	41		4.706					ND	U
59 Carbon tetrachloride	117		4.706					ND	
61 1,1,1-Trifluoro-2,2-dichloroetha	83		4.706					ND	
62 Benzene	78		4.849					ND	
63 1,2-Dichloroethane	62		4.878					ND	7
64 Tert-amyl methyl ether	73		4.913					ND	
65 n-Heptane	43		5.035					ND	
66 n-Butanol	56		5.199					ND	
67 Trichloroethene	95		5.335					ND	
68 2-Pentanone	43		5.435					ND	
69 Methylcyclohexane	55		5.528					ND	
70 1,2-Dichloropropane	63		5.535					ND	
71 Methyl methacrylate	100		5.543					ND	
72 1,4-Dioxane	88		5.578					ND	
73 Dibromomethane	93		5.607					ND	
74 Dichlorobromomethane	83		5.728					ND	
75 2-Nitropropane	41		5.893					ND	
76 2-Chloroethyl vinyl ether	63		5.929					ND	
77 cis-1,3-Dichloropropene	75		6.079					ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179					ND	
79 Toluene	91		6.365					ND	
80 trans-1,3-Dichloropropene	75		6.536					ND	
81 Ethyl methacrylate	69		6.558					ND	
82 1,1,2-Trichloroethane	97		6.715					ND	
83 Tetrachloroethene	164		6.801					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 1,3-Dichloropropane	76		6.858					ND	
85 2-Hexanone	43		6.872					ND	
86 Tetrahydrothiophene	60		7.051					ND	
87 Chlorodibromomethane	129		7.051					ND	
88 Ethylene Dibromide	107		7.173					ND	
89 1-Chlorohexane	91		7.559					ND	U
90 Chlorobenzene	112		7.602					ND	
91 1,1,1,2-Tetrachloroethane	131		7.673					ND	
92 Ethylbenzene	106		7.673					ND	
93 m-Xylene & p-Xylene	106		7.795					ND	7
94 o-Xylene	106		8.152					ND	
95 Styrene	104		8.167					ND	
96 Bromoform	173		8.353					ND	
97 Isopropylbenzene	105		8.488					ND	
98 cis-1,4-Dichloro-2-butene	53		8.538					ND	
99 Cyclohexanone	55		8.589					ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774					ND	
101 Bromobenzene	156		8.810					ND	
102 trans-1,4-Dichloro-2-butene	53		8.810					ND	
103 1,2,3-Trichloropropane	110		8.839					ND	
104 N-Propylbenzene	120		8.889					ND	
105 2-Chlorotoluene	126		8.982					ND	
106 1,3,5-Trimethylbenzene	105		9.060					ND	
107 4-Chlorotoluene	126		9.103					ND	
108 tert-Butylbenzene	119		9.368					ND	
109 Pentachloroethane	167		9.403					ND	
110 1,2,4-Trimethylbenzene	105		9.425					ND	
111 sec-Butylbenzene	134		9.590					ND	
112 1,3-Dichlorobenzene	146		9.711					ND	
113 4-Isopropyltoluene	119		9.733					ND	
114 1,4-Dichlorobenzene	146		9.811					ND	
115 1,2,3-Trimethylbenzene	105		9.833					ND	
116 n-Butylbenzene	91		10.140					ND	
117 1,2-Dichlorobenzene	146		10.169					ND	7
118 1,2-Dibromo-3-Chloropropane	157		10.948					ND	
119 1,3,5-Trichlorobenzene	180		11.134					ND	7
120 1,2,4-Trichlorobenzene	180	11.777	11.770	0.007	23	2462		0.2437	
121 Hexachlorobutadiene	225		11.906					ND	
122 Naphthalene	128	12.049	12.035	0.014	95	10571		0.4102	
123 1,2,3-Trichlorobenzene	180	12.256	12.257	-0.001	56	1991		0.2611	
172 4-Chlorobenzotrifluoride	1		0.000					ND	
175 1-Bromo-2-chloroethane	1		0.000					ND	
167 1-Chloro-1-fluoroethane TIC	1		0.000					ND	
124 3-Methylhexane	1		0.000					ND	
129 2,2,3-Trimethylbutane	1		0.000					ND	
132 3,3-Dimethylpentane	1		0.000					ND	
127 n-Nonyl Aldehyde	1		0.000					ND	
171 4-Bromofluorobenzene	95		0.000					ND	
133 2-Methylhexane	1		0.000					ND	
128 2,4-Dimethylpentane	1		0.000					ND	
173 Benzene, 1-bromo-4-ethyl-	1		0.000					ND	
168 1,2-dichloro-4-(trifluoromethyl)	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 2,2-Dimethylpentane	1		0.000				ND		
131 2,3-Dimethylpentane	1		0.000				ND		
169 1,4-Dibromobenzene	1		0.000				ND		
166 Ethyl acrylate	55		0.000				ND		
165 t-Amyl alcohol	1		0.000				ND		
126 Dimethyl disulfide	1		0.000				ND		
170 1,3-Dibromobenzene	1		0.000				ND		
174 Benzene, 1-bromo-3-fluoro-	1		0.000				ND		
177 Pentachloroethane TIC	1		0.000				ND		
125 3-Ethylpentane	1		0.000				ND		
134 Propene oxide TIC	58		5.334				ND		
S 135 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 139 Xylenes, Total (URS)	1		0.000				ND		7
S 136 1,3-Dichloropropene, Total	1		0.000				ND		7
S 138 Xylenes, Total	106		0.000				ND		7
S 137 Total BTEX	1		0.000				ND		7
S 140 Trihalomethanes, Total	1		0.000				ND		7
S 142 TAH	1				0			0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND		7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

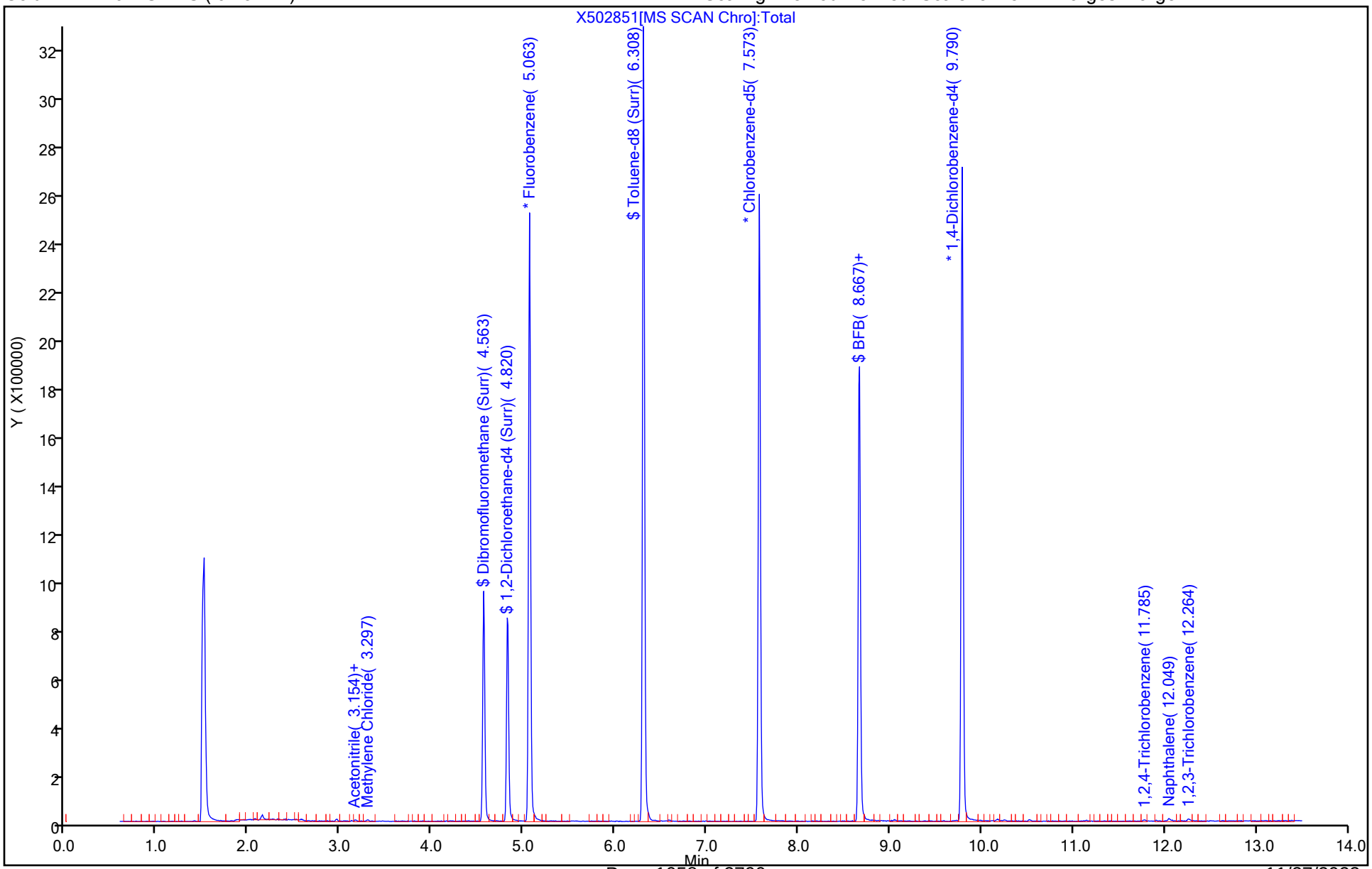
Report Date: 26-Apr-2023 12:16:47 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D

Injection Date:	26-Apr-2023 11:43:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 26-Apr-2023 11:43:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 12:16:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 12:16:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.69
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.2	94.44
$ 6 Toluene-d8 (Surr)	50.0	50.9	101.77
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.2	98.33

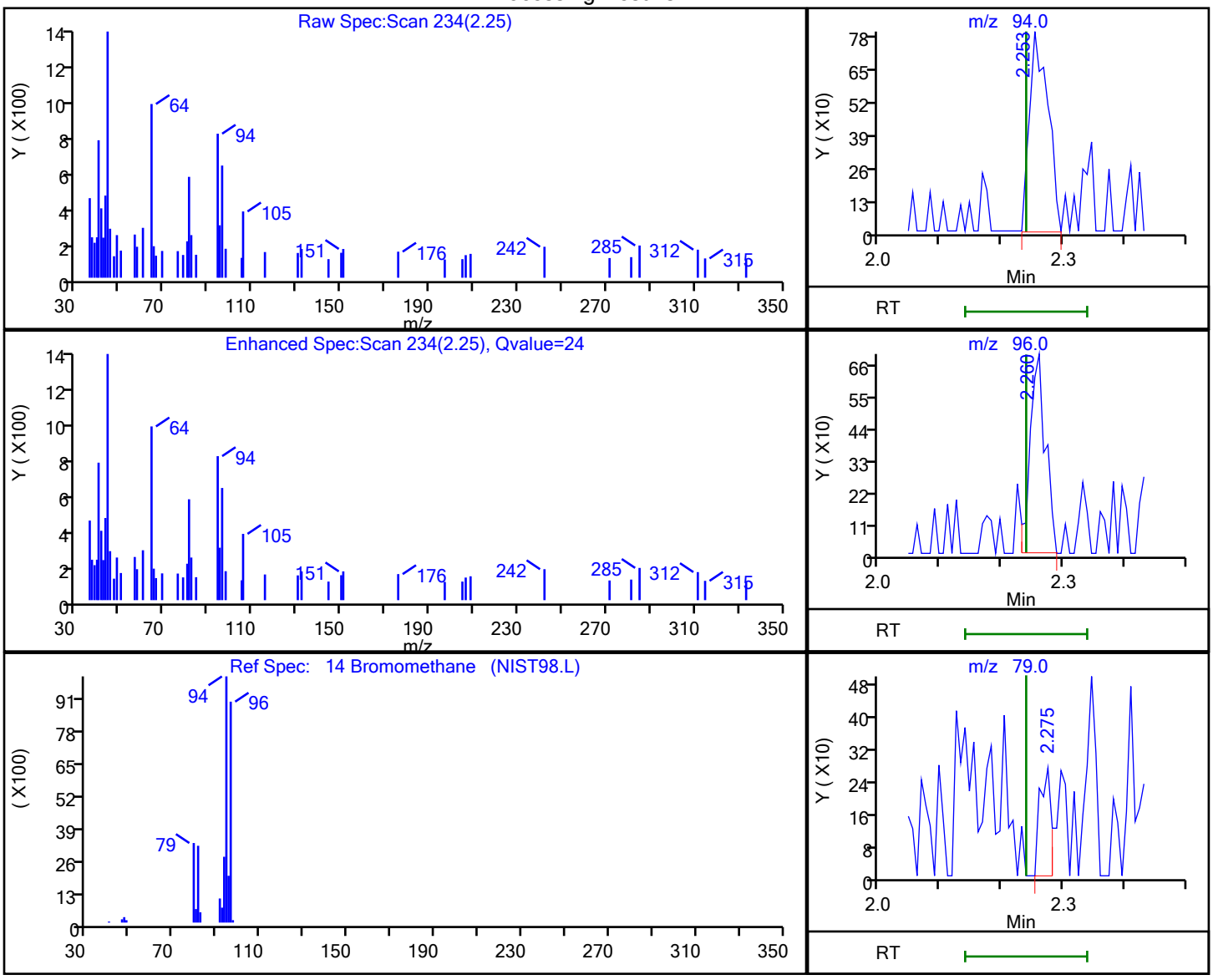
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D				
Injection Date:	26-Apr-2023 11:43:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	MED	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.25	94.00	1666	0.339420
2.26	96.00	1217	
2.27	79.00	346	

Reviewer: BX8N, 26-Apr-2023 12:15:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

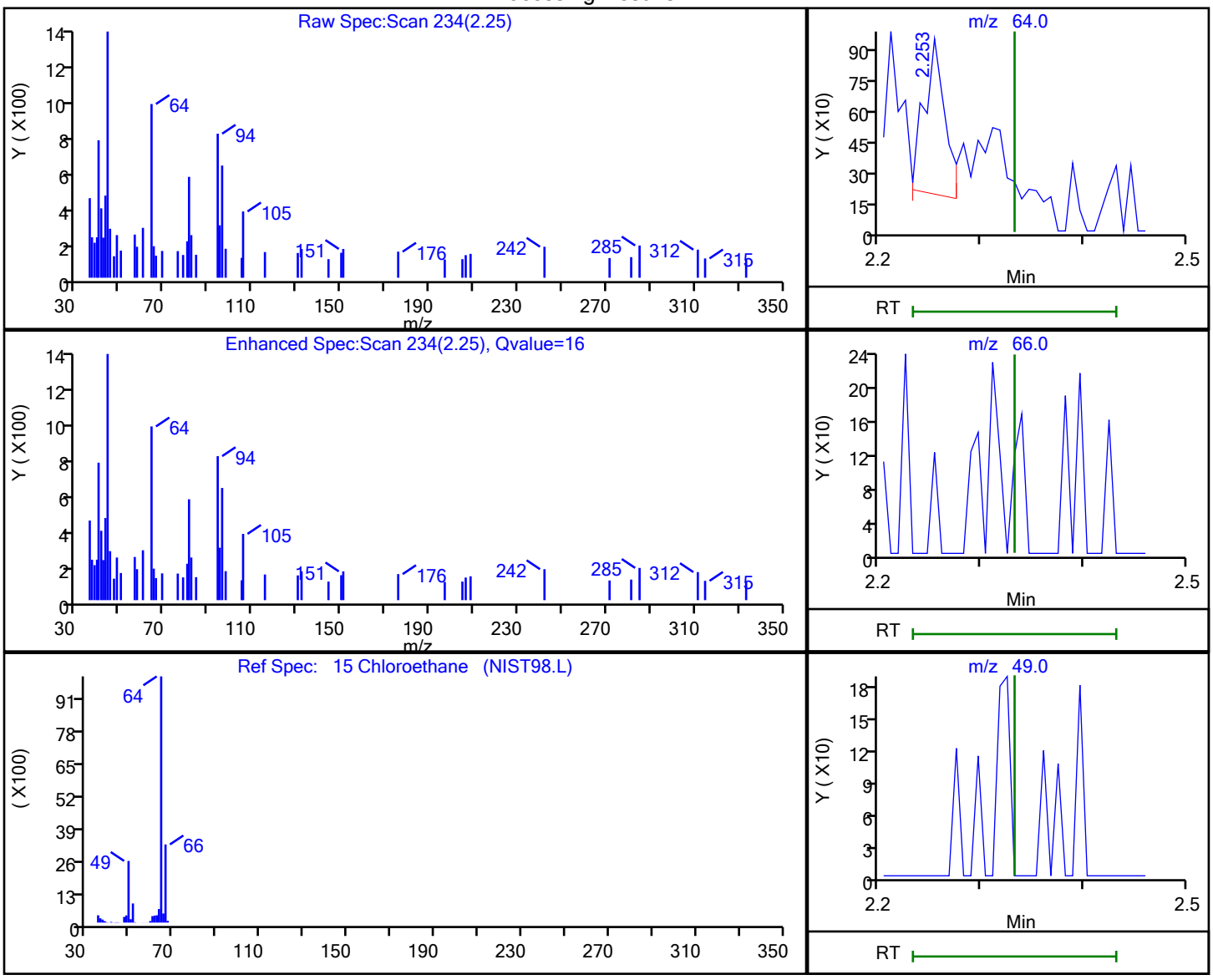
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D				
Injection Date:	26-Apr-2023 11:43:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	MED	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

15 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.25	64.00	1105	0.179497
2.33	66.00	0	
2.33	49.00	0	

Reviewer: BX8N, 26-Apr-2023 12:15:14

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

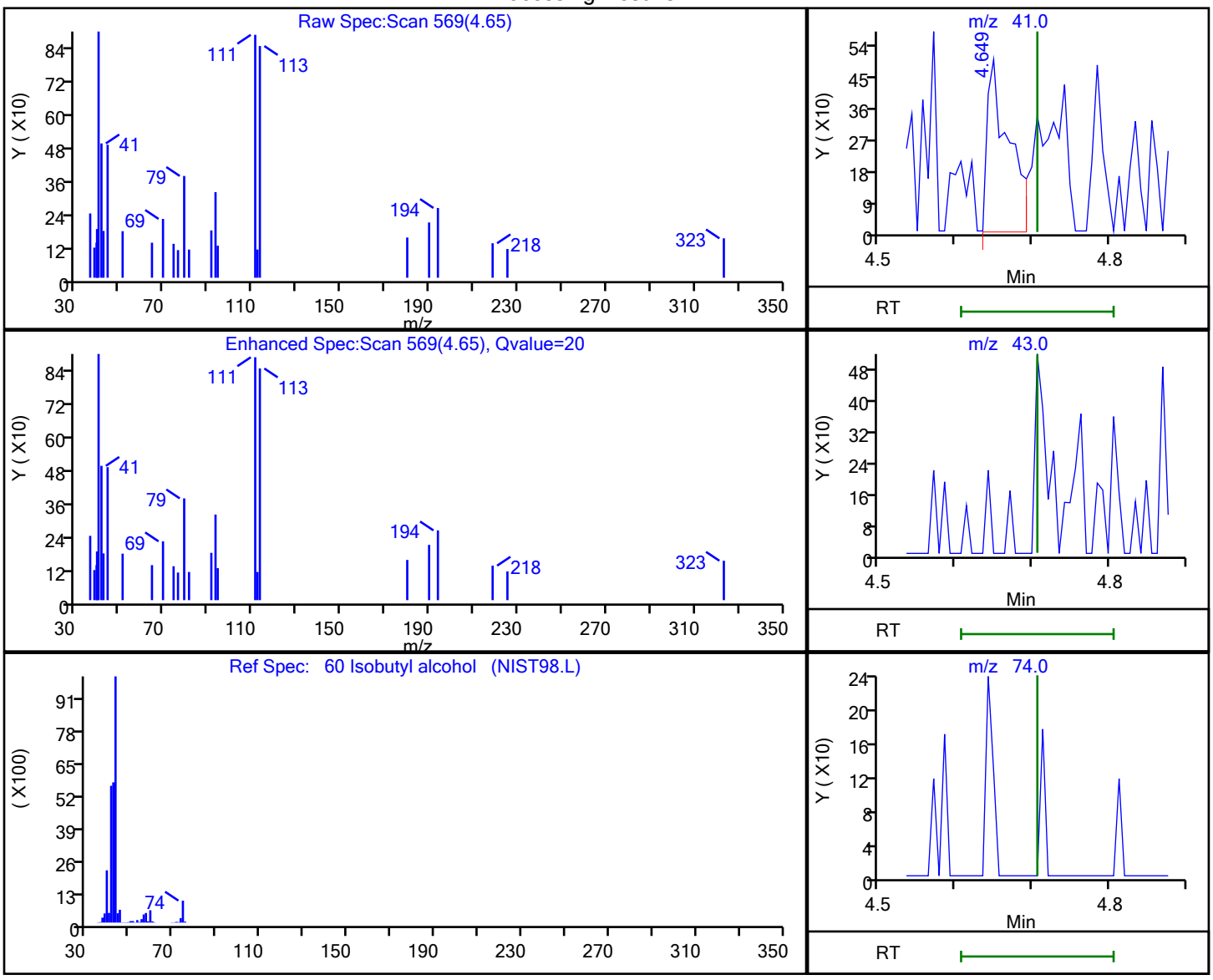
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502851.D				
Injection Date:	26-Apr-2023 11:43:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	MED	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.65	41.00	963	15.101847
4.71	43.00	0	
4.71	74.00	0	

Reviewer: BX8N, 26-Apr-2023 12:15:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610347/7

Matrix: Water | Lab File ID: X502915.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610347/7

Matrix: Water | Lab File ID: X502915.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610347/7

Matrix: Water | Lab File ID: X502915.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-127
460-00-4	4-Bromofluorobenzene (Surr)	99		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Apr-2023 12:59:30 ALS Bottle#: 9 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 13:57:39 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 13:57:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 176 Fluorobenzene (IS)	96		4.942					ND	
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2037332	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	495922	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	787571	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	501407	50.0	51.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	498413	50.0	48.4	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	92	2113755	50.0	50.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	92	693485	50.0	49.3	
$ 8 Trifluorotoluene (Surr)	1		0.000					ND	
$ 9 BFB	95	8.667	8.660	0.007	90	693485		NR	
10 Dichlorodifluoromethane	85		1.695					ND	
11 Chloromethane	50		1.867					ND	
12 Vinyl chloride	62		1.960					ND	
13 Ethylene oxide	43		2.225					ND	7
14 Bromomethane	94		2.246					ND	U
15 Chloroethane	64		2.339					ND	
16 Dichlorofluoromethane	67		2.503					ND	
20 Propene oxide	58		2.504					ND	7
17 Trichlorofluoromethane	101		2.539					ND	
18 Ethanol	45		2.647					ND	U
19 Ethyl ether	59		2.747					ND	
21 Acrolein	56		2.854					ND	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.932					ND	
23 1,1-Dichloroethene	96		2.940					ND	
24 Acetone	43		2.954					ND	7
25 Isopropyl alcohol	45		3.040					ND	U
26 Iodomethane	142		3.054					ND	
27 Carbon disulfide	76		3.118					ND	7
28 Acetonitrile	41	3.161	3.161	0.000	98	6623		5.82	
29 Methyl acetate	43		3.183					ND	
30 3-Chloro-1-propene	41		3.204					ND	
31 Methylene Chloride	84		3.297					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59		3.333					ND	
33 Acrylonitrile	53		3.454					ND	
34 Methyl tert-butyl ether	73		3.476					ND	
35 trans-1,2-Dichloroethene	96		3.490					ND	
36 Chlorotrifluoroethene	116		3.526					ND	
37 Hexane	57		3.683					ND	
38 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.733					ND	
39 Vinyl acetate	43		3.783					ND	
40 1,1-Dichloroethane	63		3.805					ND	
41 Isopropyl ether	87		3.805					ND	
42 2-Chloro-1,3-butadiene	53		3.862					ND	
43 2-Chloro-1,1,1-Trifluoroethane	118		3.948					ND	
44 Tert-butyl ethyl ether	59		4.062					ND	
45 2-Butanone (MEK)	43		4.184					ND	
46 Ethyl acetate	43		4.198					ND	U
47 cis-1,2-Dichloroethene	96		4.212					ND	
48 2,2-Dichloropropane	77		4.227					ND	
49 Propionitrile	54		4.234					ND	
50 sec-Butyl Alcohol	45		4.291					ND	
51 Methacrylonitrile	41		4.348					ND	
52 Chlorobromomethane	128		4.384					ND	
53 Tetrahydrofuran	42		4.398					ND	
54 Chloroform	83		4.441					ND	
55 1,1,1-Trichloroethane	97		4.584					ND	
56 Cyclohexane	56		4.648					ND	
58 1,2-Dichloro-1,1,2-trifluoroetha	117		4.678					ND	
57 1,1-Dichloropropene	75		4.699					ND	
60 Isobutyl alcohol	41		4.706					ND	U
59 Carbon tetrachloride	117		4.706					ND	
61 1,1,1-Trifluoro-2,2-dichloroetha	83		4.706					ND	
62 Benzene	78		4.849					ND	
63 1,2-Dichloroethane	62		4.877					ND	7
64 Tert-amyl methyl ether	73		4.920					ND	
65 n-Heptane	43		5.035					ND	U
66 n-Butanol	56		5.199					ND	
67 Trichloroethene	95		5.335					ND	
68 2-Pentanone	43		5.435					ND	
69 Methylcyclohexane	55		5.528					ND	
70 1,2-Dichloropropane	63		5.542					ND	
71 Methyl methacrylate	100		5.542					ND	
72 1,4-Dioxane	88		5.578					ND	
73 Dibromomethane	93		5.614					ND	
74 Dichlorobromomethane	83		5.728					ND	
75 2-Nitropropane	41		5.900					ND	
76 2-Chloroethyl vinyl ether	63		5.936					ND	
77 cis-1,3-Dichloropropene	75		6.079					ND	
78 4-Methyl-2-pentanone (MIBK)	43		6.179					ND	
79 Toluene	91		6.365					ND	
80 trans-1,3-Dichloropropene	75		6.536					ND	
81 Ethyl methacrylate	69		6.558					ND	
82 1,1,2-Trichloroethane	97		6.715					ND	
83 Tetrachloroethene	164		6.808					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 1,3-Dichloropropane	76		6.858					ND	7
85 2-Hexanone	43		6.872					ND	
86 Tetrahydrothiophene	60		7.051					ND	
87 Chlorodibromomethane	129		7.051					ND	
88 Ethylene Dibromide	107		7.173					ND	
89 1-Chlorohexane	91		7.559					ND	U
90 Chlorobenzene	112		7.602					ND	
91 1,1,1,2-Tetrachloroethane	131		7.673					ND	
92 Ethylbenzene	106		7.673					ND	
93 m-Xylene & p-Xylene	106		7.795					ND	7
94 o-Xylene	106		8.152					ND	
95 Styrene	104		8.166					ND	
96 Bromoform	173		8.345					ND	
97 Isopropylbenzene	105		8.488					ND	
98 cis-1,4-Dichloro-2-butene	53		8.538					ND	
99 Cyclohexanone	55		8.588					ND	U
100 1,1,2,2-Tetrachloroethane	83		8.774					ND	
101 Bromobenzene	156		8.810					ND	
102 trans-1,4-Dichloro-2-butene	53		8.817					ND	
103 1,2,3-Trichloropropane	110		8.839					ND	
104 N-Propylbenzene	120		8.889					ND	
105 2-Chlorotoluene	126		8.982					ND	
106 1,3,5-Trimethylbenzene	105		9.060					ND	
107 4-Chlorotoluene	126		9.103					ND	
108 tert-Butylbenzene	119		9.368					ND	
109 Pentachloroethane	167		9.403					ND	
110 1,2,4-Trimethylbenzene	105		9.425					ND	
111 sec-Butylbenzene	134		9.589					ND	
112 1,3-Dichlorobenzene	146		9.711					ND	
113 4-Isopropyltoluene	119		9.732					ND	
114 1,4-Dichlorobenzene	146		9.811					ND	7
115 1,2,3-Trimethylbenzene	105		9.833					ND	
116 n-Butylbenzene	91		10.140					ND	
117 1,2-Dichlorobenzene	146		10.168					ND	
118 1,2-Dibromo-3-Chloropropane	157		10.948					ND	
119 1,3,5-Trichlorobenzene	180		11.134					ND	7
120 1,2,4-Trichlorobenzene	180		11.770					ND	7
121 Hexachlorobutadiene	225		11.906					ND	
122 Naphthalene	128		12.035					ND	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	86	2356		0.3098	
166 Ethyl acrylate	55		0.000					ND	
133 2-Methylhexane	1		0.000					ND	
169 1,4-Dibromobenzene	1		0.000					ND	
131 2,3-Dimethylpentane	1		0.000					ND	
168 1,2-dichloro-4-(trifluoromethyl)	1		0.000					ND	
177 Pentachloroethane TIC	1		0.000					ND	
125 3-Ethylpentane	1		0.000					ND	
174 Benzene, 1-bromo-3-fluoro-	1		0.000					ND	
170 1,3-Dibromobenzene	1		0.000					ND	
165 t-Amyl alcohol	1		0.000					ND	
172 4-Chlorobenzotrifluoride	1		0.000					ND	
175 1-Bromo-2-chloroethane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 2,2-Dimethylpentane	1		0.000				ND		
167 1-Chloro-1-fluoroethane TIC	1		0.000				ND		
129 2,2,3-Trimethylbutane	1		0.000				ND		
132 3,3-Dimethylpentane	1		0.000				ND		
127 n-Nonyl Aldehyde	1		0.000				ND		
126 Dimethyl disulfide	1		0.000				ND		
171 4-Bromofluorobenzene	95		0.000				ND		
128 2,4-Dimethylpentane	1		0.000				ND		
173 Benzene, 1-bromo-4-ethyl-	1		0.000				ND		
124 3-Methylhexane	1		0.000				ND		
134 Propene oxide TIC	58		5.334				ND		
S 135 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 139 Xylenes, Total (URS)	1		0.000				ND		7
S 136 1,3-Dichloropropene, Total	1		0.000				ND		7
S 138 Xylenes, Total	106		0.000				ND		7
S 137 Total BTEX	1		0.000				ND		7
S 140 Trihalomethanes, Total	1		0.000				ND		7
S 142 TAH	1				0			0	
S 141 1,2-Dichloroethene, Total	1		0.000				ND		7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00058 Amount Added: 5.00 Units: uL Run Reagent

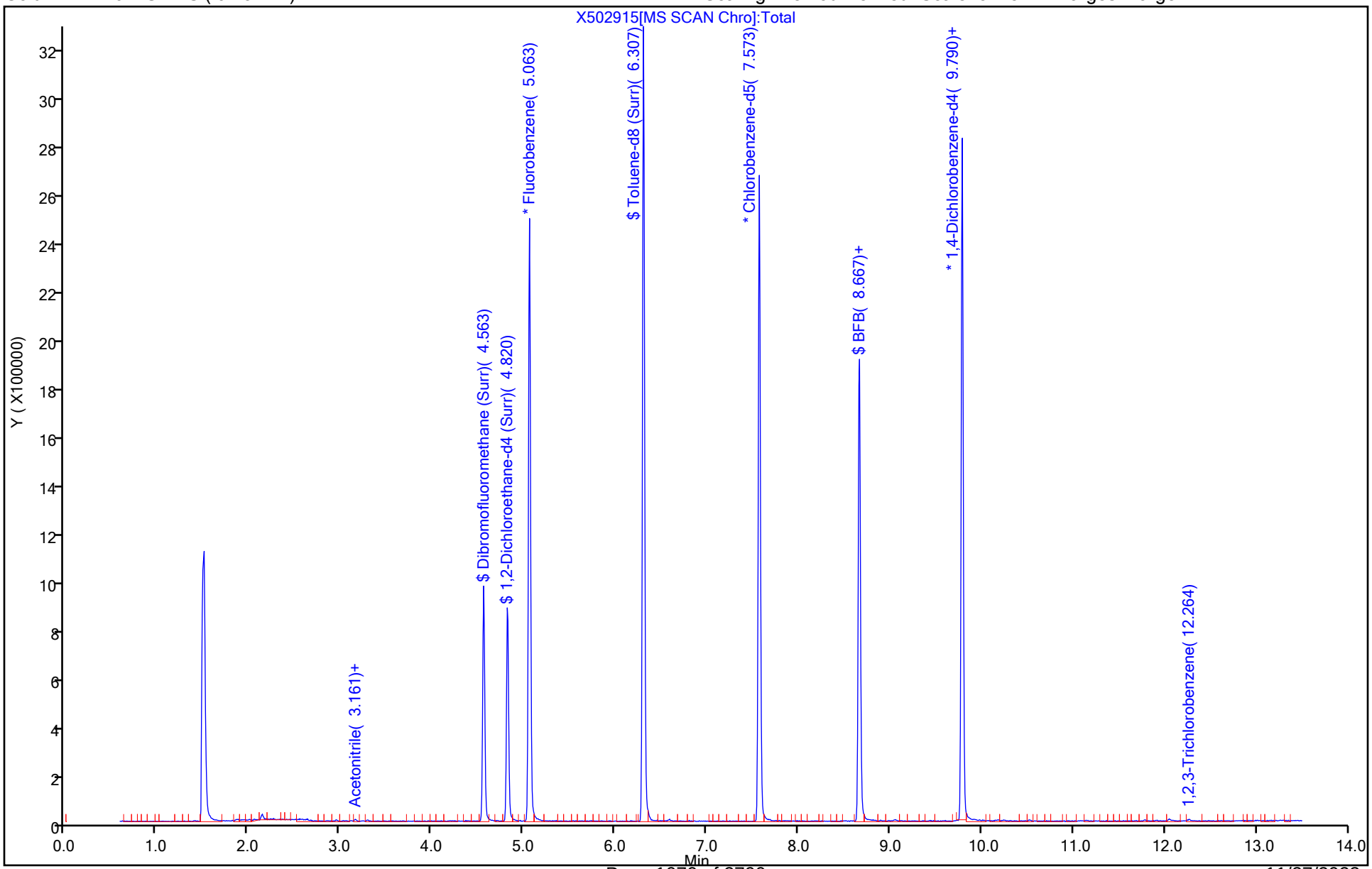
Report Date: 27-Apr-2023 13:57:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D

Injection Date:	27-Apr-2023 12:59:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Apr-2023 12:59:30 ALS Bottle#: 9 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 13:57:39 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 13:57:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.2	102.33
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.4	96.85
$ 6 Toluene-d8 (Surr)	50.0	50.0	100.07
$ 7 4-Bromofluorobenzene (Surr)	50.0	49.3	98.54

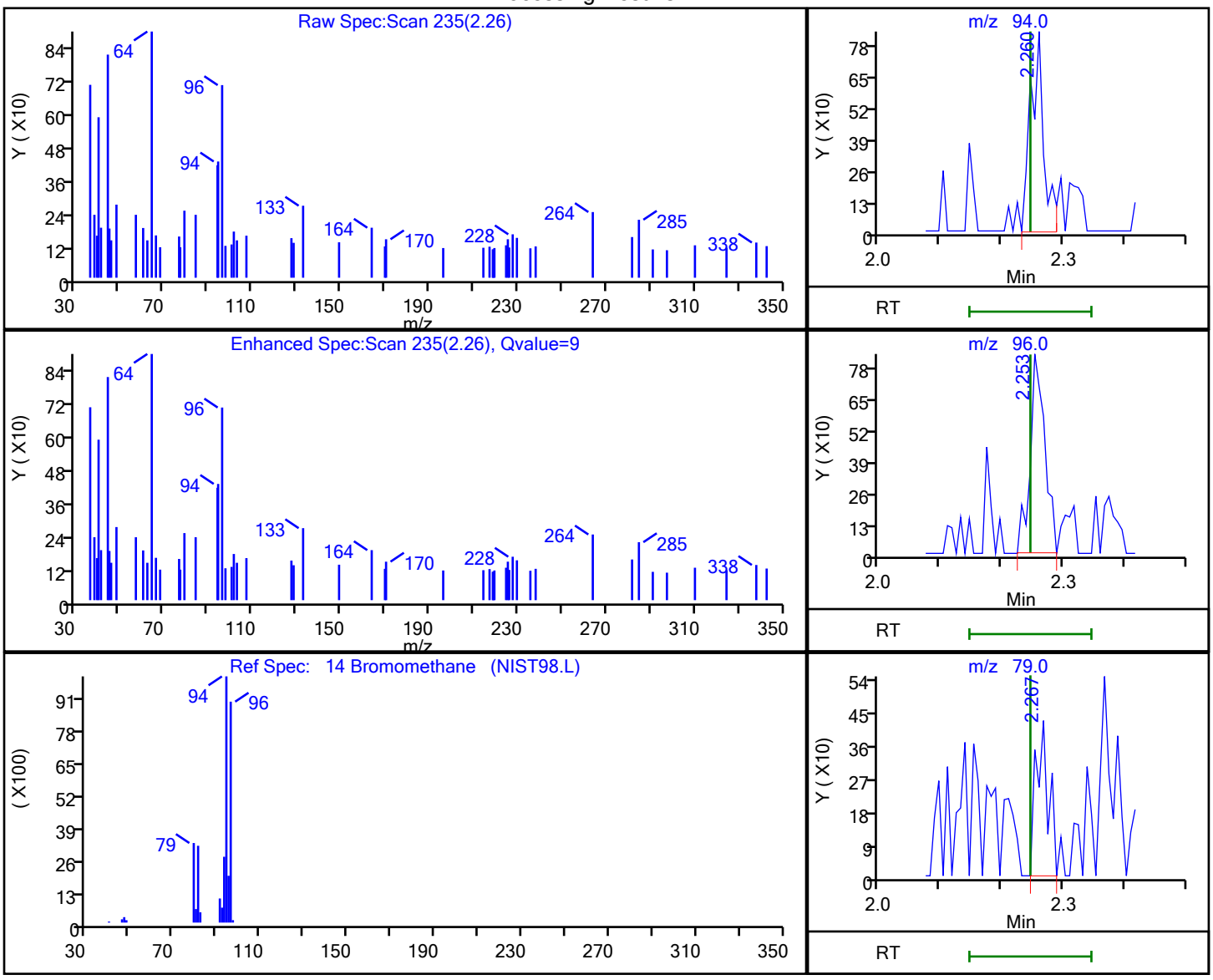
User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D
Injection Date: 27-Apr-2023 12:59:30 Instrument ID: VMS_X4
Lims ID: MB
Client ID:
Operator ID: MED ALS Bottle#: 9 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid
Column: Rxi-624Sil MS (0.25 mm) Detector MS SCAN

14 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.26	94.00	1249	0.253033
2.25	96.00	1416	
2.27	79.00	609	

Reviewer: BX8N, 27-Apr-2023 13:57:06
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

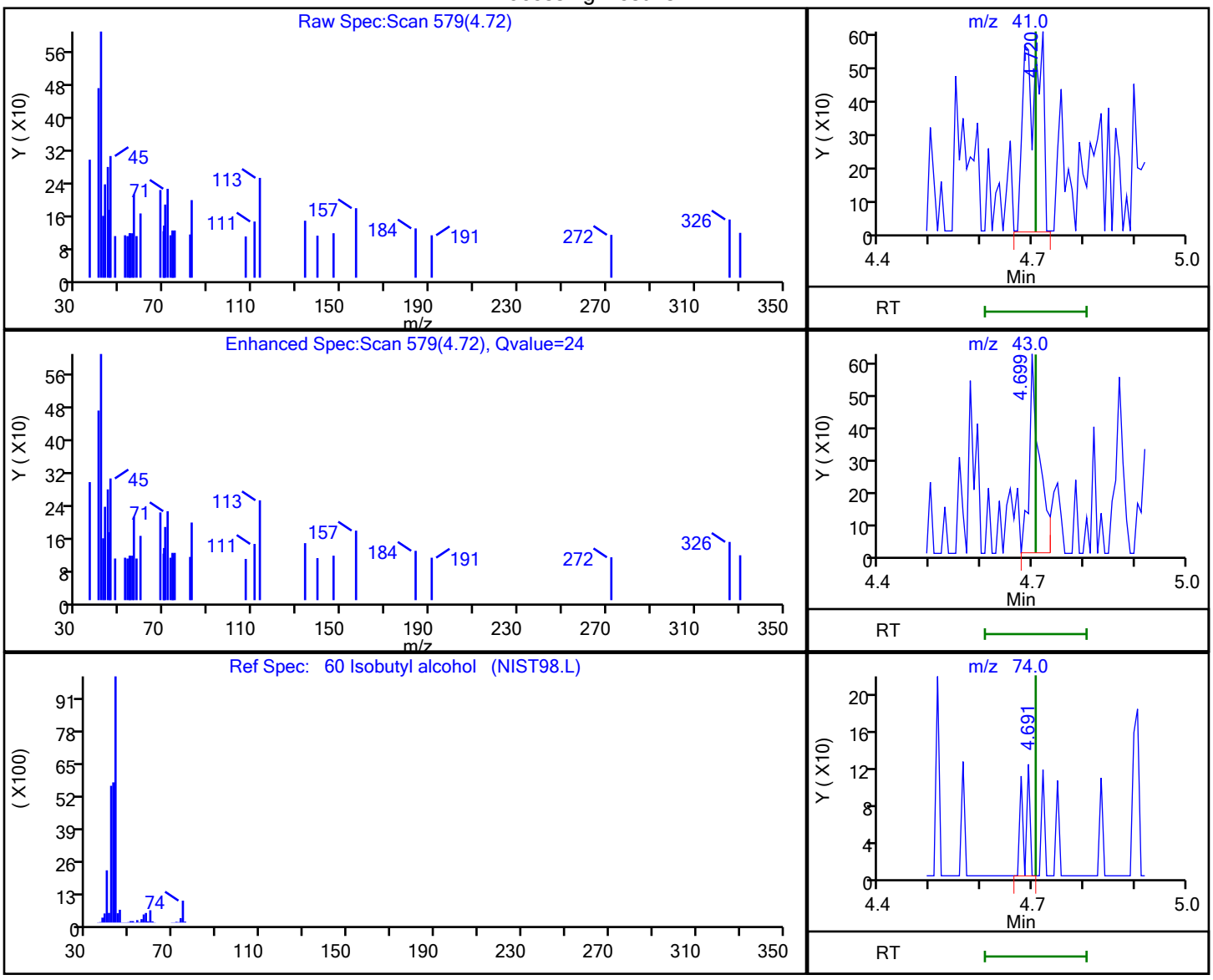
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502915.D				
Injection Date:	27-Apr-2023 12:59:30	Instrument ID:	VMS_X4		
Lims ID:	MB				
Client ID:					
Operator ID:	MED	ALS Bottle#:	9	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	Rxi-624Sil MS (0.25 mm)	Detector	MS SCAN		

60 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
4.72	41.00	1374	16.683738
4.70	43.00	874	
4.69	74.00	100	

Reviewer: BX8N, 27-Apr-2023 13:57:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610464/7

Matrix: Water | Lab File ID: MS1_8607.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 18:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.58
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.27
75-34-3	1,1-Dichloroethane	ND		1.0	0.22
75-35-4	1,1-Dichloroethene	ND		1.0	0.23
563-58-6	1,1-Dichloropropene	ND		1.0	0.42
96-18-4	1,2,3-Trichloropropane	ND		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	1.8
106-93-4	1,2-Dibromoethane	ND		1.0	0.40
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.37
107-06-2	1,2-Dichloroethane	ND		1.0	0.54
78-87-5	1,2-Dichloropropane	ND		1.0	0.52
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.33
142-28-9	1,3-Dichloropropane	ND		1.0	0.38
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.39
594-20-7	2,2-Dichloropropane	ND		1.0	0.38
78-93-3	2-Butanone (MEK)	ND		15	6.0
591-78-6	2-Hexanone	ND		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98
67-64-1	Acetone	ND		15	6.6
75-05-8	Acetonitrile	ND		30	9.6
107-02-8	Acrolein	ND		20	4.9
107-13-1	Acrylonitrile	ND		20	4.5
107-05-1	Allyl chloride	ND		2.0	0.17
71-43-2	Benzene	ND		1.0	0.31
75-25-2	Bromoform	ND		2.0	1.2
74-83-9	Bromomethane	ND		5.0	2.4
75-15-0	Carbon disulfide	ND		2.0	0.63
56-23-5	Carbon tetrachloride	ND		1.0	0.57
108-90-7	Chlorobenzene	ND		1.0	0.42
74-97-5	Chlorobromomethane	ND		1.0	0.40
124-48-1	Chlorodibromomethane	ND		2.0	0.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610464/7

Matrix: Water | Lab File ID: MS1_8607.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 18:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	ND		4.0	1.4
67-66-3	Chloroform	ND		1.0	0.36
74-87-3	Chloromethane	ND		2.0	0.75
126-99-8	Chloroprene	ND		3.0	1.2
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.63
74-95-3	Dibromomethane	ND		1.0	0.34
75-27-4	Dichlorobromomethane	ND		1.0	0.39
75-71-8	Dichlorodifluoromethane	ND		3.0	0.96
97-63-2	Ethyl methacrylate	ND		3.0	0.86
100-41-4	Ethylbenzene	ND		1.0	0.30
74-88-4	Iodomethane	ND		5.0	2.6
78-83-1	Isobutyl alcohol	ND		110	37
126-98-7	Methacrylonitrile	ND		15	5.3
80-62-6	Methyl methacrylate	ND		4.0	1.1
75-09-2	Methylene Chloride	ND		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	ND		2.0	0.36
95-47-6	o-Xylene	ND		1.0	0.33
107-12-0	Propionitrile	ND		20	3.7
100-42-5	Styrene	ND		1.0	0.36
127-18-4	Tetrachloroethene	ND		1.0	0.40
108-88-3	Toluene	ND		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	ND		3.0	1.4
79-01-6	Trichloroethene	ND		1.0	0.30
75-69-4	Trichlorofluoromethane	ND		2.0	0.57
108-05-4	Vinyl acetate	ND		3.0	0.94
75-01-4	Vinyl chloride	ND		2.0	0.51
1330-20-7	Xylenes, Total	ND		1.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-610464/7

Matrix: Water | Lab File ID: MS1_8607.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 18:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	105		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8607.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Apr-2023 18:43:30 ALS Bottle#: 4 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Misc. Info.: 280-0120816-033
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AF7X Date: 28-Apr-2023 06:13:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1258766	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	297736	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	465850	50.0	50.0	
* 4 Fluorobenzene (IS)	96		0.000					ND	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	303942	50.0	50.7	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	414265	50.0	51.0	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1340083	50.0	52.4	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	473511	50.0	51.7	
$ 9 Trifluorotoluene (Surr)	1		3.543					ND	
$ 10 BFB	95	9.900	9.900	0.000	78	473511		NR	
11 Dichlorodifluoromethane	85		1.813					ND	
12 Chloromethane	50		2.009					ND	
13 Vinyl chloride	62		2.135					ND	
14 Ethylene oxide	43		2.260					ND	
15 Bromomethane	94		2.498					ND	
16 Chloroethane	64		2.623					ND	
17 Dichlorofluoromethane	67		2.861					ND	
18 Trichlorofluoromethane	101		2.889					ND	
19 Ethanol	45		3.071					ND	
20 Ethyl ether	59		3.182					ND	
21 Propene oxide	58		3.238					ND	
22 Acrolein	56		3.322					ND	
23 1,1-Dichloroethene	96		3.419					ND	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.419					ND	
25 Acetone	43		3.447					ND	
26 Iodomethane	142		3.559					ND	
27 Isopropyl alcohol	45		3.587					ND	
28 Carbon disulfide	76		3.629					ND	7
29 Acetonitrile	41	3.727	3.727	0.000	100	4571		4.54	
30 Methyl acetate	43		3.755					ND	
31 3-Chloro-1-propene	41		3.769					ND	7

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
32 Methylene Chloride	84	3.894	3.894	0.000	95	1462		0.3010	
33 2-Methyl-2-propanol	59		3.964					ND	
34 Acrylonitrile	53		4.104					ND	
35 Methyl tert-butyl ether	73		4.132					ND	
36 trans-1,2-Dichloroethene	96		4.146					ND	
38 Chlorotrifluoroethene	116		4.248					ND	
37 Hexane	57		4.383					ND	
43 1,2-Dichloro-1,1,2,2-tetrafluoro	85		4.472					ND	
39 Vinyl acetate	43		4.523					ND	
40 1,1-Dichloroethane	63		4.537					ND	
41 Isopropyl ether	87		4.551					ND	
42 2-Chloro-1,3-butadiene	53		4.607					ND	
45 2-Chloro-1,1,1-Trifluoroethane	118		4.737					ND	
44 Tert-butyl ethyl ether	59		4.872					ND	
46 2-Butanone (MEK)	43		5.012					ND	
49 2,2-Dichloropropane	77		5.040					ND	
48 cis-1,2-Dichloroethene	96		5.040					ND	
47 Ethyl acetate	43		5.040					ND	7
50 Propionitrile	54		5.082					ND	
51 sec-Butyl Alcohol	45		5.165					ND	
52 Methacrylonitrile	41		5.207					ND	
53 Chlorobromomethane	128		5.249					ND	
54 Tetrahydrofuran	42		5.249					ND	
55 Chloroform	83		5.319					ND	
56 1,1,1-Trichloroethane	97		5.473					ND	
61 1,2-Dichloro-1,1,2-trifluoroetha	117		5.505					ND	
62 1,1,1-Trifluoro-2,2-dichloroetha	83		5.533					ND	
57 Cyclohexane	56		5.542					ND	
58 1,1-Dichloropropene	75		5.612					ND	
59 Carbon tetrachloride	117		5.612					ND	
60 Isobutyl alcohol	41		5.654					ND	
63 Benzene	78		5.780					ND	
64 1,2-Dichloroethane	62		5.822					ND	
65 Tert-amyl methyl ether	73		5.878					ND	
66 n-Heptane	43		6.003					ND	
67 n-Butanol	56		6.227					ND	
68 Trichloroethene	95		6.352					ND	
69 2-Pentanone	43		6.478					ND	
70 Methylcyclohexane	55		6.548					ND	
71 1,2-Dichloropropane	63		6.576					ND	
72 Methyl methacrylate	100		6.590					ND	
73 1,4-Dioxane	88		6.632					ND	
74 Dibromomethane	93		6.660					ND	
75 Dichlorobromomethane	83		6.799					ND	
76 2-Nitropropane	41		6.995					ND	
77 2-Chloroethyl vinyl ether	63		7.023					ND	
78 cis-1,3-Dichloropropene	75		7.176					ND	
80 2,2-Dimethylpentane	57		7.278					ND	
81 2,4-Dimethylpentane	43		7.292					ND	
79 4-Methyl-2-pentanone (MIBK)	43		7.302					ND	
82 Toluene	91		7.484					ND	
83 2,2,3-Trimethylbutane	57		7.502					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 trans-1,3-Dichloropropene	75		7.679					ND	
86 3,3-Dimethylpentane	43		7.682					ND	
85 Ethyl methacrylate	69		7.707					ND	
88 2-Methylhexane	43		7.810					ND	
87 1,1,2-Trichloroethane	97		7.861					ND	
92 3-Methylhexane	43		7.903					ND	
93 2,3-Dimethylpentane	56		7.949					ND	
89 Tetrachloroethene	164		7.959					ND	
90 1,3-Dichloropropane	76		8.014					ND	
91 2-Hexanone	43		8.042					ND	
97 3-Ethylpentane	43		8.214					ND	
95 Chlorodibromomethane	129		8.224					ND	
94 Tetrahydrothiophene	60		8.224					ND	
96 Ethylene Dibromide	107		8.350					ND	
98 1-Chlorohexane	91		8.755					ND	
99 Chlorobenzene	112		8.796					ND	
100 1,1,1,2-Tetrachloroethane	131		8.880					ND	
101 Ethylbenzene	106		8.880					ND	
102 m-Xylene & p-Xylene	106		9.006					ND	
103 o-Xylene	106		9.369					ND	
105 Dimethyl disulfide	94		9.388					ND	
104 Styrene	104		9.397					ND	
106 Bromoform	173		9.579					ND	
107 Isopropylbenzene	105		9.718					ND	
108 cis-1,4-Dichloro-2-butene	53		9.774					ND	
109 Cyclohexanone	55		9.830					ND	U
110 1,1,2,2-Tetrachloroethane	83		10.026					ND	
111 Bromobenzene	156		10.053					ND	
112 trans-1,4-Dichloro-2-butene	53		10.053					ND	
113 1,2,3-Trichloropropane	110		10.081					ND	
114 N-Propylbenzene	120		10.137					ND	
115 2-Chlorotoluene	126		10.235					ND	
116 1,3,5-Trimethylbenzene	105		10.305					ND	
117 4-Chlorotoluene	126		10.347					ND	
118 tert-Butylbenzene	119		10.626					ND	
119 1,2,4-Trimethylbenzene	105		10.682					ND	
120 sec-Butylbenzene	134		10.850					ND	
121 1,3-Dichlorobenzene	146		10.975					ND	
122 4-Isopropyltoluene	119		10.989					ND	
123 1,4-Dichlorobenzene	146		11.073					ND	
124 1,2,3-Trimethylbenzene	105		11.101					ND	
126 Pentachloroethane	167		11.283					ND	
125 n-Butylbenzene	91		11.408					ND	
127 1,2-Dichlorobenzene	146		11.436					ND	
128 1,2-Dibromo-3-Chloropropane	157		12.232					ND	
129 1,3,5-Trichlorobenzene	180		12.414					ND	
130 1,2,4-Trichlorobenzene	180		13.056					ND	
131 Hexachlorobutadiene	225		13.196					ND	
132 Naphthalene	128		13.336					ND	
133 n-Nonyl Aldehyde	57		13.340					ND	
134 1,2,3-Trichlorobenzene	180		13.559					ND	
141 4-Chlorobenzotrifluoride	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
144 1-Chlorohexane TIC	1		0.000				ND		
138 1,4-Dibromobenzene	1		0.000				ND		
148 1-Bromo-2-chloroethane	1		0.000				ND		
146 t-Amyl alcohol	1		0.000				ND		
139 1,3-Dibromobenzene	1		0.000				ND		
137 1,2-dichloro-4-(trifluoromethyl)	1		0.000				ND		
143 Benzene, 1-bromo-3-fluoro-	1		0.000				ND		
140 4-Bromofluorobenzene	95		0.000				ND		
136 1-Chloro-1-fluoroethane TIC	1		0.000				ND		
142 Benzene, 1-bromo-4-ethyl-	1		0.000				ND		
135 Pentachloroethane TIC	1		0.000				ND		
145 Ethyl acrylate	55		0.000				ND		
147 n-Nonane TIC	1		0.000				ND		
S 149 1,2-Dichloroethene, Total (URS)	96		2.000				ND		7
S 151 Trihalomethanes, Total	1		0.000				ND		7
S 150 1,2-Dichloroethene, Total	1		0.000				ND		7
S 156 1,3-Dichloropropene, Total	1		0.000				ND		7
S 155 Xylenes, Total	106		0.000				ND		7
S 154 TAH	1				0			0	
S 153 Xylenes, Total (URS)	1		0.000				ND		7
S 152 Total BTEX	1		0.000				ND		7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-IS_SS_00059 Amount Added: 5.00 Units: uL Run Reagent

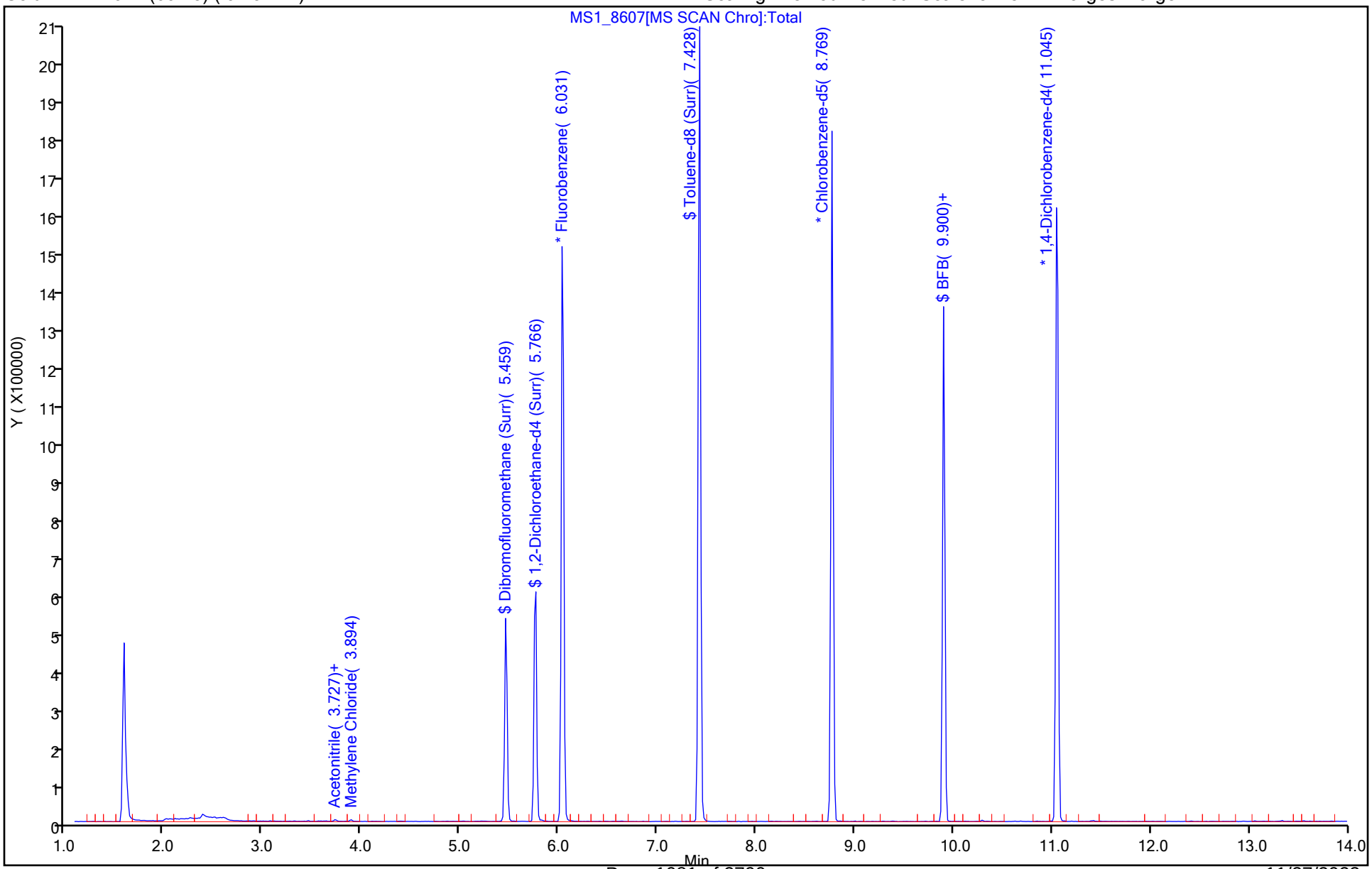
Report Date: 28-Apr-2023 09:53:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8607.D

Injection Date:	27-Apr-2023 18:43:30	Instrument ID:	VMS_MS1	Operator ID:	CCF
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8607.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Apr-2023 18:43:30 ALS Bottle#: 4 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Misc. Info.: 280-0120816-033
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AF7X Date: 28-Apr-2023 06:13:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	50.7	101.47
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.0	102.05
$ 7 Toluene-d8 (Surr)	50.0	52.4	104.88
$ 8 4-Bromofluorobenzene (Surr)	50.0	51.7	103.48

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610121/1002

Matrix: Water | Lab File ID: -X502847-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	24.4		1.0	0.58
71-55-6	1,1,1-Trichloroethane	25.7		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	24.4		1.0	0.21
79-00-5	1,1,2-Trichloroethane	26.7		1.0	0.27
75-34-3	1,1-Dichloroethane	28.6		1.0	0.22
75-35-4	1,1-Dichloroethene	26.5		1.0	0.23
563-58-6	1,1-Dichloropropene	26.4		1.0	0.42
96-18-4	1,2,3-Trichloropropane	23.4		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	25.3		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	22.9		5.0	1.8
106-93-4	1,2-Dibromoethane	24.9		1.0	0.40
95-50-1	1,2-Dichlorobenzene	24.8		1.0	0.37
107-06-2	1,2-Dichloroethane	24.4		1.0	0.54
78-87-5	1,2-Dichloropropane	27.9		1.0	0.52
541-73-1	1,3-Dichlorobenzene	25.3		1.0	0.33
142-28-9	1,3-Dichloropropane	25.8		1.0	0.38
106-46-7	1,4-Dichlorobenzene	24.2		1.0	0.39
594-20-7	2,2-Dichloropropane	26.9		1.0	0.38
78-93-3	2-Butanone (MEK)	114		15	6.0
591-78-6	2-Hexanone	110		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	117		5.0	0.98
67-64-1	Acetone	100		15	6.6
107-02-8	Acrolein	244		20	4.9
107-13-1	Acrylonitrile	299		20	4.5
107-05-1	Allyl chloride	32.2		2.0	0.17
71-43-2	Benzene	27.5		1.0	0.31
75-25-2	Bromoform	25.2		2.0	1.2
74-83-9	Bromomethane	22.2		5.0	2.4
75-15-0	Carbon disulfide	27.5		2.0	0.63
56-23-5	Carbon tetrachloride	25.4		1.0	0.57
108-90-7	Chlorobenzene	25.2		1.0	0.42
74-97-5	Chlorobromomethane	26.2		1.0	0.40
124-48-1	Chlorodibromomethane	24.5		2.0	0.62
75-00-3	Chloroethane	26.6		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610121/1002

Matrix: Water | Lab File ID: -X502847-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	26.5		1.0	0.36
74-87-3	Chloromethane	23.0		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	26.9		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	26.7		2.0	0.63
74-95-3	Dibromomethane	26.1		1.0	0.34
75-27-4	Dichlorobromomethane	25.7		1.0	0.39
75-71-8	Dichlorodifluoromethane	17.7		3.0	0.96
97-63-2	Ethyl methacrylate	28.2		3.0	0.86
100-41-4	Ethylbenzene	25.6		1.0	0.30
74-88-4	Iodomethane	18.9		5.0	2.6
78-83-1	Isobutyl alcohol	538		110	37
75-09-2	Methylene Chloride	25.6		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	26.5		2.0	0.36
95-47-6	o-Xylene	26.0		1.0	0.33
100-42-5	Styrene	26.7		1.0	0.36
127-18-4	Tetrachloroethene	25.2		1.0	0.40
108-88-3	Toluene	26.9		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	28.0		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	27.5		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	22.5		3.0	1.4
79-01-6	Trichloroethene	25.9		1.0	0.30
75-69-4	Trichlorofluoromethane	20.9		2.0	0.57
108-05-4	Vinyl acetate	58.3		3.0	0.94
75-01-4	Vinyl chloride	27.5		2.0	0.51
1330-20-7	Xylenes, Total	52.5		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502847-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 10:19:30 ALS Bottle#: 3 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:01 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:44:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2064544	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	504405	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	799833	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518622	50.0	52.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	508168	50.0	48.7	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2175562	50.0	50.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.667	0.000	90	726751	50.0	50.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	98	160251	25.0	17.7	
11 Chloromethane	50	1.867	1.867	0.000	99	211940	25.0	23.0	
12 Vinyl chloride	62	1.960	1.960	0.000	97	257527	25.0	27.5	
14 Bromomethane	94	2.239	2.239	0.000	90	110813	25.0	22.2	
15 Chloroethane	64	2.332	2.332	0.000	99	167146	25.0	26.6	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	97	368994	25.0	23.6	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	252967	25.0	20.9	
19 Ethyl ether	59	2.747	2.747	0.000	89	193482	25.0	27.8	
21 Acrolein	56	2.854	2.854	0.000	98	273823	246.9	243.7	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	94	127530	25.0	22.4	
23 1,1-Dichloroethene	96	2.933	2.933	0.000	97	210157	25.0	26.5	
24 Acetone	43	2.954	2.954	0.000	98	233790	100.0	100.5	
26 Iodomethane	142	3.054	3.054	0.000	98	198535	25.0	18.9	
27 Carbon disulfide	76	3.119	3.119	0.000	98	707220	25.0	27.5	
29 Methyl acetate	43	3.176	3.176	0.000	96	303445	50.0	58.2	
30 3-Chloro-1-propene	41	3.197	3.197	0.000	93	338883	25.0	32.2	
31 Methylene Chloride	84	3.297	3.297	0.000	89	260505	25.0	25.6	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	200237	250.0	249.6	
33 Acrylonitrile	53	3.455	3.455	0.000	99	885921	250.0	299.4	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	92	664390	25.0	26.6	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	100	246544	25.0	28.0	
37 Hexane	57	3.683	3.683	0.000	88	247487	25.0	21.4	
39 Vinyl acetate	43	3.784	3.784	0.000	96	813503	50.0	58.3	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	460148	25.0	28.6	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	99	387907	100.0	114.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.213	4.213	0.000	81	283630	25.0	26.9	
48 2,2-Dichloropropane	77	4.220	4.220	0.000	85	332397	25.0	26.9	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	368927	600.0	613.5	
52 Chlorobromomethane	128	4.384	4.384	0.000	98	127348	25.0	26.2	
53 Tetrahydrofuran	42	4.398	4.398	0.000	86	129512	50.0	56.3	
54 Chloroform	83	4.441	4.441	0.000	92	433861	25.0	26.5	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	340016	25.0	25.7	
56 Cyclohexane	56	4.649	4.649	0.000	87	345989	25.0	25.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	342640	25.0	26.4	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	136733	625.0	537.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	271844	25.0	25.4	
62 Benzene	78	4.849	4.849	0.000	95	1053859	25.0	27.5	
63 1,2-Dichloroethane	62	4.878	4.878	0.000	97	296701	25.0	24.4	
65 n-Heptane	43	5.035	5.035	0.000	89	194507	25.0	24.4	
67 Trichloroethene	95	5.335	5.335	0.000	99	250320	25.0	25.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	451835	80.0	83.3	
69 Methylcyclohexane	55	5.528	5.528	0.000	89	229366	25.0	22.9	
70 1,2-Dichloropropane	63	5.535	5.535	0.000	97	271905	25.0	27.9	
72 1,4-Dioxane	88	5.578	5.578	0.000	94	65099	500.0	527.3	
73 Dibromomethane	93	5.607	5.607	0.000	96	151912	25.0	26.1	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	315102	25.0	25.7	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	131240	25.0	41.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	410463	25.0	26.7	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	761100	100.0	116.6	
79 Toluene	91	6.365	6.365	0.000	98	1113418	25.0	26.9	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	96	348188	25.0	27.5	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	310693	25.0	28.2	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	220679	25.0	26.7	
83 Tetrachloroethene	164	6.801	6.801	0.000	97	184278	25.0	25.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	87	398218	25.0	25.8	
85 2-Hexanone	43	6.872	6.872	0.000	93	531399	100.0	110.0	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	228393	25.0	24.5	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	219893	25.0	24.9	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	269568	20.0	19.7	
90 Chlorobenzene	112	7.602	7.602	0.000	96	709470	25.0	25.2	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	220347	25.0	24.4	
92 Ethylbenzene	106	7.673	7.673	0.000	98	395495	25.0	25.6	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	491574	25.0	26.5	
94 o-Xylene	106	8.152	8.152	0.000	96	488359	25.0	26.0	
95 Styrene	104	8.167	8.167	0.000	94	798517	25.0	26.7	
96 Bromoform	173	8.353	8.353	0.000	96	142182	25.0	25.2	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1153171	25.0	25.4	
99 Cyclohexanone	55	8.589	8.589	0.000	88	374895	750.0	876.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	94	279953	25.0	24.4	
101 Bromobenzene	156	8.810	8.810	0.000	95	283598	25.0	24.8	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.810	0.000	70	66703	25.0	22.5	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	85	81217	25.0	23.4	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	334843	25.0	26.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	285481	25.0	25.5	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	971615	25.0	25.4	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	301230	25.0	25.9	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	803789	25.0	25.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1010569	25.0	25.5	
111 sec-Butylbenzene	134	9.590	9.590	0.000	94	236118	25.0	24.6	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	534768	25.0	25.3	
113 4-Isopropyltoluene	119	9.733	9.733	0.000	97	1017060	25.0	25.7	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	542632	25.0	24.2	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	882556	25.0	25.8	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	98	504066	25.0	24.8	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	89	52321	25.0	22.9	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	259074	25.0	25.3	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	98	97383	25.0	26.1	
122 Naphthalene	128	12.035	12.035	0.000	97	628270	25.0	24.1	
123 1,2,3-Trichlorobenzene	180	12.257	12.257	0.000	95	193272	25.0	25.0	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	54.9	
S 139 Xylenes, Total (URS)	1				0		50.0	52.5	
S 136 1,3-Dichloropropene, Total	1				0		50.0	54.2	
S 138 Xylenes, Total	106				0		50.0	52.5	
S 140 Trihalomethanes, Total	1				0		100.0	101.9	
S 141 1,2-Dichloroethene, Total	1				0		50.0	54.9	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 26-Apr-2023 11:04:03 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502847-LCS.d

Injection Date: 26-Apr-2023 10:19:30 Instrument ID: VMS_X4 Operator ID: MED

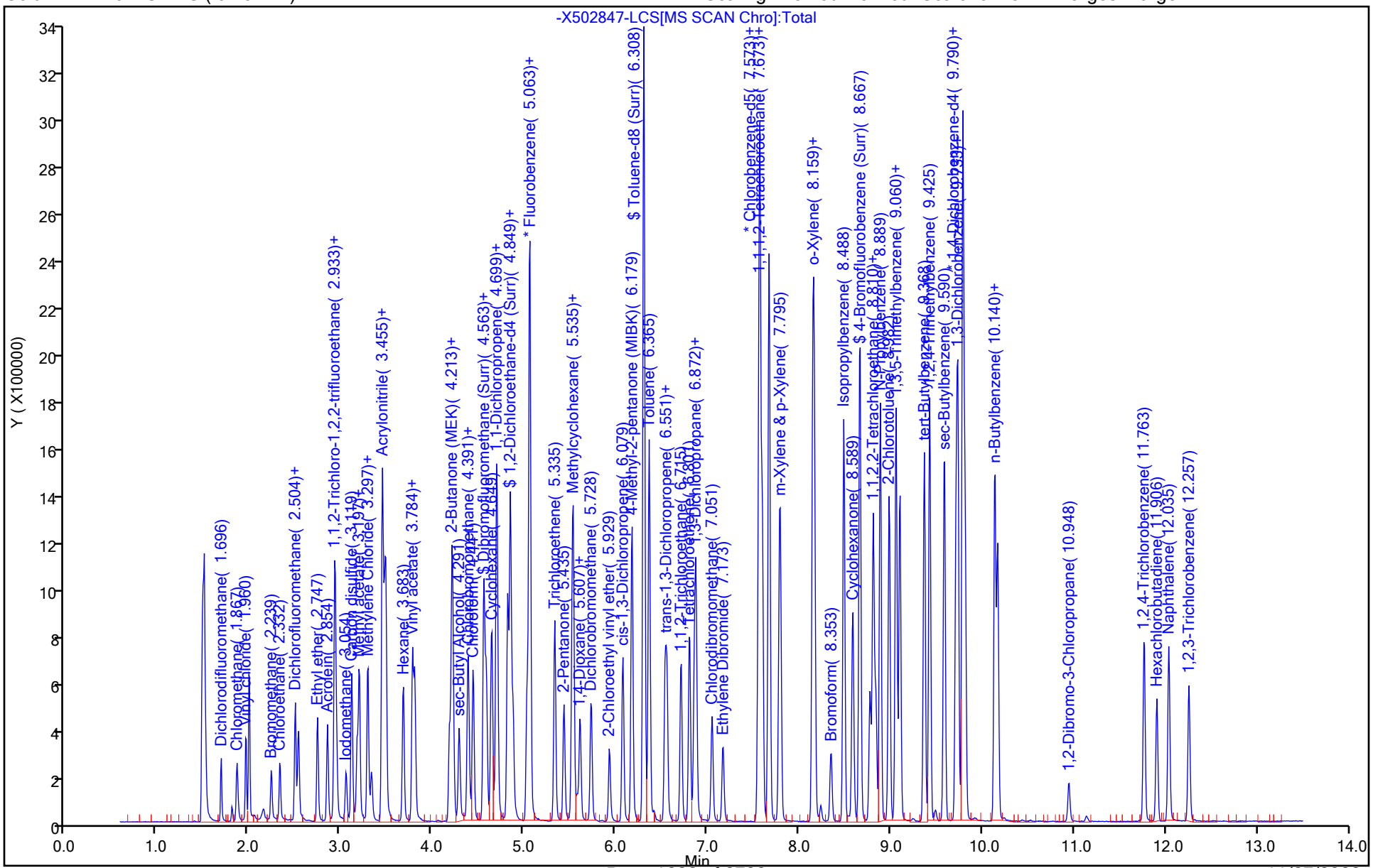
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: VMS_X4_8260 Limit Group: MSV - 8260B Water and Solid

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502847-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 10:19:30 ALS Bottle#: 3 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:01 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:44:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.2	104.45
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.7	97.44
$ 6 Toluene-d8 (Surr)	50.0	50.6	101.26
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.8	101.69

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610121/1003

Matrix: Water | Lab File ID: -X502846-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 09:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	254		30	9.6
126-99-8	Chloroprene	26.0		3.0	1.2
126-98-7	Methacrylonitrile	243		15	5.3
80-62-6	Methyl methacrylate	43.0		4.0	1.1
107-12-0	Propionitrile	248		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	106		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502846-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 09:51:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:17:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2035170	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	505460	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	795445	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	518213	50.0	52.9	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	507773	50.0	49.4	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2148658	50.0	49.9	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	711206	50.0	50.0	
18 Ethanol	45	2.654	2.654	0.000	100	148229	1500.0	1376.0	
25 Isopropyl alcohol	45	3.033	3.033	0.000	99	117927	250.0	186.9	
28 Acetonitrile	41	3.161	3.161	0.000	99	288783	250.0	254.1	
41 Isopropyl ether	87	3.805	3.805	0.000	95	207116	25.0	27.3	
42 2-Chloro-1,3-butadiene	53	3.855	3.855	0.000	88	346526	25.0	26.0	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	680555	25.0	25.9	
46 Ethyl acetate	43	4.198	4.198	0.000	98	363952	50.0	46.2	
49 Propionitrile	54	4.234	4.234	0.000	99	314088	250.0	248.4	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	1203797	250.0	243.2	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	92	637713	25.0	25.1	
66 n-Butanol	56	5.199	5.199	0.000	86	124737	625.0	500.0	
71 Methyl methacrylate	100	5.543	5.543	0.000	88	115629	50.0	43.0	
75 2-Nitropropane	41	5.893	5.893	0.000	98	71079	50.0	25.0	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	126262	50.0	40.3	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	990988	25.0	23.0	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	312775	25.0	23.3	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

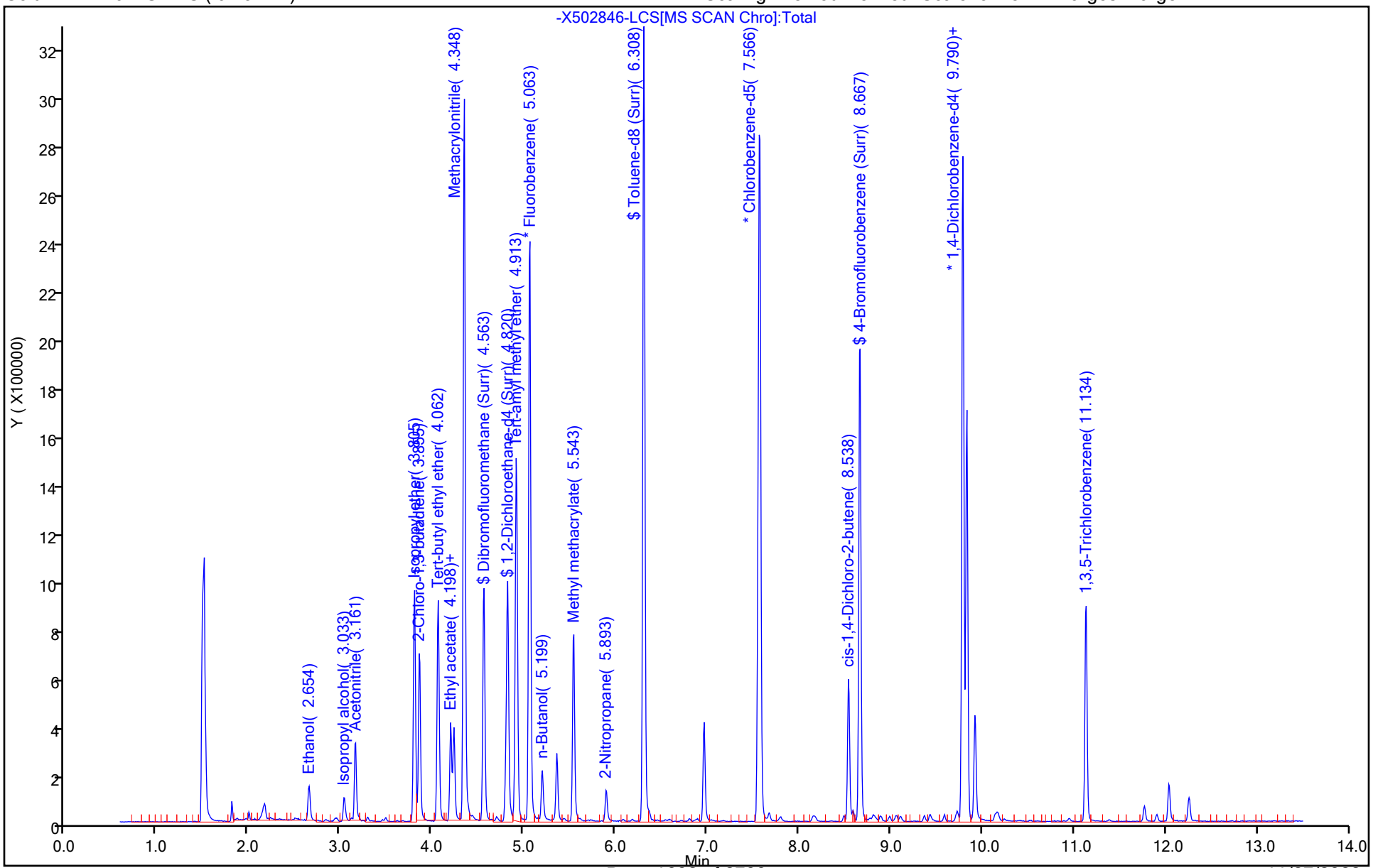
Report Date: 26-Apr-2023 11:04:06 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502846-LCS.d

Injection Date:	26-Apr-2023 09:51:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\-X502846-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 26-Apr-2023 09:51:30 ALS Bottle#: 2 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 10:17:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	52.9	105.87
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	49.4	98.77
$ 6 Toluene-d8 (Surr)	50.0	49.9	99.80
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.0	100.06

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610347/1002

Matrix: Water | Lab File ID: -X502910-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	26.6		1.0	0.58
71-55-6	1,1,1-Trichloroethane	25.2		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	28.1		1.0	0.21
79-00-5	1,1,2-Trichloroethane	27.7		1.0	0.27
75-34-3	1,1-Dichloroethane	27.9		1.0	0.22
75-35-4	1,1-Dichloroethene	26.6		1.0	0.23
563-58-6	1,1-Dichloropropene	25.7		1.0	0.42
96-18-4	1,2,3-Trichloropropane	25.2		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	28.9		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	23.4		5.0	1.8
106-93-4	1,2-Dibromoethane	26.0		1.0	0.40
95-50-1	1,2-Dichlorobenzene	26.3		1.0	0.37
107-06-2	1,2-Dichloroethane	23.9		1.0	0.54
78-87-5	1,2-Dichloropropane	27.7		1.0	0.52
541-73-1	1,3-Dichlorobenzene	26.3		1.0	0.33
142-28-9	1,3-Dichloropropane	26.8		1.0	0.38
106-46-7	1,4-Dichlorobenzene	25.7		1.0	0.39
594-20-7	2,2-Dichloropropane	26.7		1.0	0.38
78-93-3	2-Butanone (MEK)	118		15	6.0
591-78-6	2-Hexanone	117		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	122		5.0	0.98
67-64-1	Acetone	98.5		15	6.6
107-02-8	Acrolein	238		20	4.9
107-13-1	Acrylonitrile	303		20	4.5
107-05-1	Allyl chloride	32.1		2.0	0.17
71-43-2	Benzene	28.1		1.0	0.31
75-25-2	Bromoform	26.0		2.0	1.2
74-83-9	Bromomethane	25.7		5.0	2.4
75-15-0	Carbon disulfide	27.7		2.0	0.63
56-23-5	Carbon tetrachloride	25.4		1.0	0.57
108-90-7	Chlorobenzene	26.5		1.0	0.42
74-97-5	Chlorobromomethane	26.9		1.0	0.40
124-48-1	Chlorodibromomethane	25.2		2.0	0.62
75-00-3	Chloroethane	27.5		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610347/1002

Matrix: Water | Lab File ID: -X502910-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	25.5		1.0	0.36
74-87-3	Chloromethane	24.7		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	26.4		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	26.8		2.0	0.63
74-95-3	Dibromomethane	25.5		1.0	0.34
75-27-4	Dichlorobromomethane	25.6		1.0	0.39
75-71-8	Dichlorodifluoromethane	17.9		3.0	0.96
97-63-2	Ethyl methacrylate	29.0		3.0	0.86
100-41-4	Ethylbenzene	26.3		1.0	0.30
74-88-4	Iodomethane	20.0		5.0	2.6
78-83-1	Isobutyl alcohol	651		110	37
75-09-2	Methylene Chloride	26.0		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	26.8		2.0	0.36
95-47-6	o-Xylene	25.9		1.0	0.33
100-42-5	Styrene	27.0		1.0	0.36
127-18-4	Tetrachloroethene	27.2		1.0	0.40
108-88-3	Toluene	27.3		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	28.3		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	28.4		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	24.7		3.0	1.4
79-01-6	Trichloroethene	26.9		1.0	0.30
75-69-4	Trichlorofluoromethane	21.6		2.0	0.57
108-05-4	Vinyl acetate	60.7		3.0	0.94
75-01-4	Vinyl chloride	26.7		2.0	0.51
1330-20-7	Xylenes, Total	52.7		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	102		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502910-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 11:12:30 ALS Bottle#: 4 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:13:19

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.063	5.063	0.000	99	2075744	50.0	50.0	
*	2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	498852	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	782929	50.0	50.0	
$	4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	510246	50.0	51.1	
$	5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	491370	50.0	46.9	
$	6 Toluene-d8 (Surr)	98	6.307	6.307	0.000	92	2165513	50.0	51.0	
$	7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	712384	50.0	50.9	
	10 Dichlorodifluoromethane	85	1.695	1.695	0.000	99	163334	25.0	17.9	
	11 Chloromethane	50	1.867	1.867	0.000	99	228796	25.0	24.7	
	12 Vinyl chloride	62	1.960	1.960	0.000	98	251101	25.0	26.7	
	14 Bromomethane	94	2.246	2.246	0.000	90	129061	25.0	25.7	
	15 Chloroethane	64	2.339	2.339	0.000	99	173572	25.0	27.5	
	16 Dichlorofluoromethane	67	2.503	2.503	0.000	97	358050	25.0	22.7	
	17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	262426	25.0	21.6	
	19 Ethyl ether	59	2.747	2.747	0.000	88	194217	25.0	27.7	
	21 Acrolein	56	2.854	2.854	0.000	99	268897	246.9	238.0	
	22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.932	0.000	94	143495	25.0	25.0	
	23 1,1-Dichloroethene	96	2.940	2.940	0.000	98	211927	25.0	26.6	
	24 Acetone	43	2.954	2.954	0.000	99	230572	100.0	98.5	
	26 Iodomethane	142	3.054	3.054	0.000	99	212470	25.0	20.0	
	27 Carbon disulfide	76	3.118	3.118	0.000	98	715021	25.0	27.7	
	29 Methyl acetate	43	3.183	3.183	0.000	97	319280	50.0	60.9	
	30 3-Chloro-1-propene	41	3.204	3.204	0.000	93	340282	25.0	32.1	
	31 Methylene Chloride	84	3.297	3.297	0.000	89	266407	25.0	26.0	
	32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	213644	250.0	264.7	
	33 Acrylonitrile	53	3.454	3.454	0.000	99	900911	250.0	302.8	
	34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	665726	25.0	26.5	
	35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	250701	25.0	28.3	
	37 Hexane	57	3.683	3.683	0.000	89	277302	25.0	24.3	
	39 Vinyl acetate	43	3.783	3.783	0.000	97	852234	50.0	60.7	
	40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	451091	25.0	27.9	
	45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	400913	100.0	117.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	80	279614	25.0	26.4	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	86	331830	25.0	26.7	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	417159	600.0	688.6	
52 Chlorobromomethane	128	4.384	4.384	0.000	95	131447	25.0	26.9	
53 Tetrahydrofuran	42	4.398	4.398	0.000	87	139656	50.0	60.4	
54 Chloroform	83	4.441	4.441	0.000	93	418879	25.0	25.5	
55 1,1,1-Trichloroethane	97	4.584	4.584	0.000	98	336079	25.0	25.2	
56 Cyclohexane	56	4.648	4.648	0.000	86	375128	25.0	27.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	97	335247	25.0	25.7	
60 Isobutyl alcohol	41	4.706	4.706	0.000	97	166976	625.0	650.6	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	273405	25.0	25.4	
62 Benzene	78	4.849	4.849	0.000	94	1082545	25.0	28.1	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	98	291629	25.0	23.9	
65 n-Heptane	43	5.035	5.035	0.000	88	225963	25.0	28.2	
67 Trichloroethene	95	5.335	5.335	0.000	98	257097	25.0	26.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	500452	80.0	91.6	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	252227	25.0	25.1	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	97	271590	25.0	27.7	
72 1,4-Dioxane	88	5.578	5.578	0.000	91	69013	500.0	556.0	
73 Dibromomethane	93	5.614	5.614	0.000	96	149015	25.0	25.5	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	316050	25.0	25.6	
76 2-Chloroethyl vinyl ether	63	5.936	5.936	0.000	88	125945	25.0	39.9	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	407461	25.0	26.8	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	93	802839	100.0	122.3	
79 Toluene	91	6.365	6.365	0.000	98	1132572	25.0	27.3	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	362408	25.0	28.4	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	316517	25.0	29.0	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	229681	25.0	27.7	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	196675	25.0	27.2	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	91	409613	25.0	26.8	
85 2-Hexanone	43	6.872	6.872	0.000	93	557461	100.0	116.7	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	232179	25.0	25.2	
88 Ethylene Dibromide	107	7.173	7.173	0.000	99	227268	25.0	26.0	
89 1-Chlorohexane	91	7.559	7.559	0.000	92	284848	20.0	21.1	
90 Chlorobenzene	112	7.602	7.602	0.000	96	736579	25.0	26.5	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	237658	25.0	26.6	
92 Ethylbenzene	106	7.673	7.673	0.000	98	402699	25.0	26.3	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	492316	25.0	26.8	
94 o-Xylene	106	8.152	8.152	0.000	95	481974	25.0	25.9	
95 Styrene	104	8.166	8.166	0.000	95	799043	25.0	27.0	
96 Bromoform	173	8.345	8.345	0.000	96	145079	25.0	26.0	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1168056	25.0	26.3	
99 Cyclohexanone	55	8.588	8.588	0.000	89	434326	750.0	1025.0	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	315261	25.0	28.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	294565	25.0	26.3	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.817	0.000	75	71938	25.0	24.7	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	82	85723	25.0	25.2	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	339348	25.0	27.5	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	287640	25.0	26.2	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	95	998455	25.0	26.6	
107 4-Chlorotoluene	126	9.103	9.103	0.000	96	308247	25.0	27.0	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	817928	25.0	26.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1028843	25.0	26.5	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	244445	25.0	26.1	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	97	543942	25.0	26.3	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	1037887	25.0	26.8	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	564532	25.0	25.7	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	919303	25.0	27.4	
117 1,2-Dichlorobenzene	146	10.168	10.168	0.000	98	522970	25.0	26.3	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	87	52521	25.0	23.4	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	94	289025	25.0	28.9	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	110154	25.0	30.2	
122 Naphthalene	128	12.035	12.035	0.000	97	764333	25.0	29.9	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	96	239241	25.0	31.6	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	54.7	
S 139 Xylenes, Total (URS)	1				0		50.0	52.8	
S 136 1,3-Dichloropropene, Total	1				0		50.0	55.3	
S 138 Xylenes, Total	106				0		50.0	52.8	
S 140 Trihalomethanes, Total	1				0		100.0	102.3	
S 141 1,2-Dichloroethene, Total	1				0		50.0	54.7	

QC Flag Legend

Processing Flags

Reagents:

MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
MV-Gas B_00133	Amount Added:	5.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

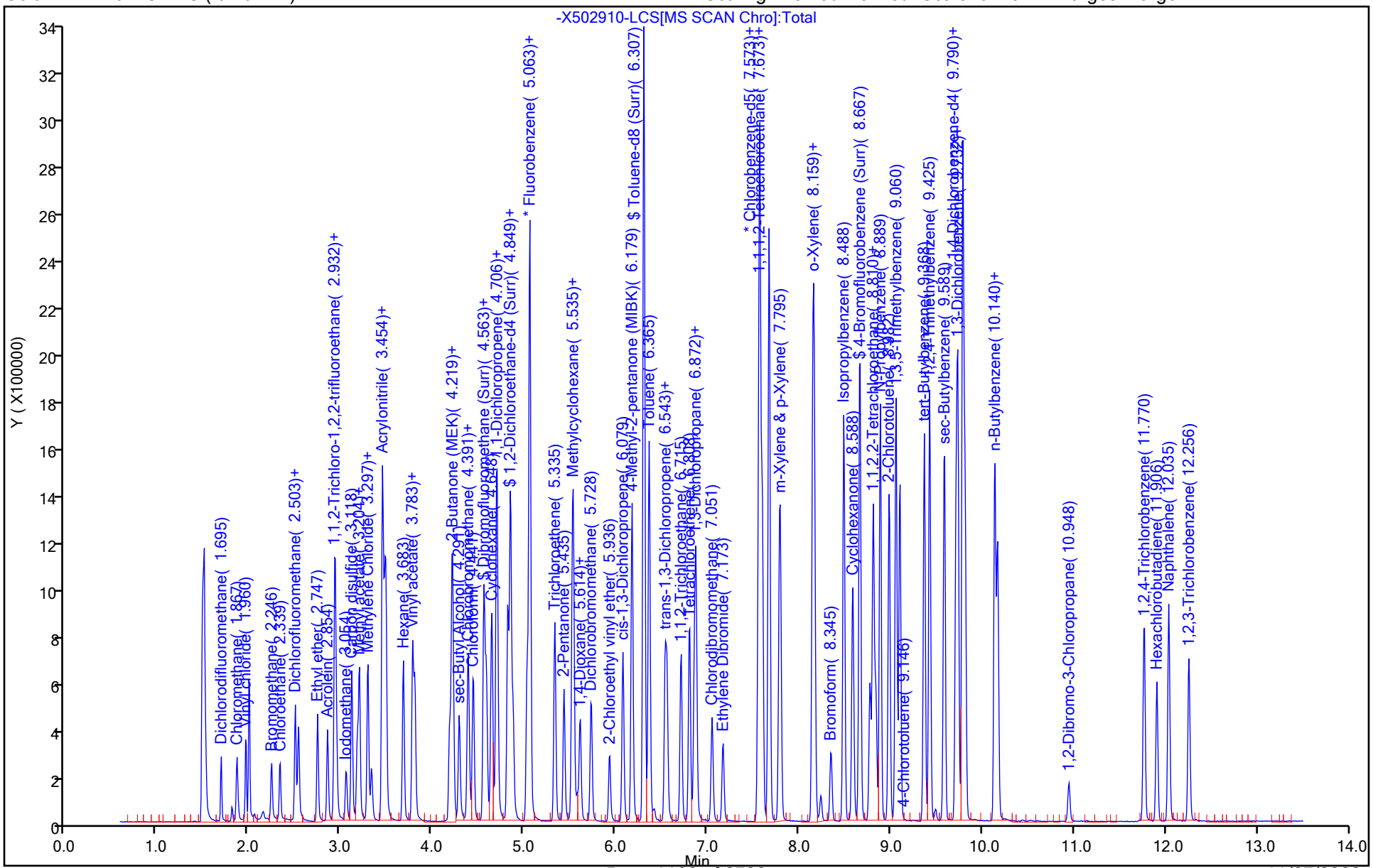
Report Date: 27-Apr-2023 12:40:05 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502910-LCS.d

Injection Date:	27-Apr-2023 11:12:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502910-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 11:12:30 ALS Bottle#: 4 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:03 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:13:19

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.1	102.21
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.9	93.71
$ 6 Toluene-d8 (Surr)	50.0	51.0	101.92
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.9	101.83

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610347/1003

Matrix: Water | Lab File ID: -X502911-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	300		30	9.6
126-99-8	Chloroprene	28.2		3.0	1.2
126-98-7	Methacrylonitrile	286		15	5.3
80-62-6	Methyl methacrylate	53.6		4.0	1.1
107-12-0	Propionitrile	305		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-127
460-00-4	4-Bromofluorobenzene (Surr)	101		78-120
1868-53-7	Dibromofluoromethane (Surr)	101		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502911-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 11:36:30 ALS Bottle#: 5 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:14:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2059516	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	497540	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	790650	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	499980	50.0	50.5	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	492603	50.0	47.3	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2149937	50.0	50.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	89	714000	50.0	50.5	
18 Ethanol	45	2.647	2.647	0.000	99	175008	1500.0	1605.4	
25 Isopropyl alcohol	45	3.040	3.040	0.000	99	146574	250.0	229.5	
28 Acetonitrile	41	3.161	3.161	0.000	98	344647	250.0	299.6	
41 Isopropyl ether	87	3.805	3.805	0.000	95	230296	25.0	30.0	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	380277	25.0	28.2	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	769768	25.0	28.9	
46 Ethyl acetate	43	4.198	4.198	0.000	98	433749	50.0	54.4	
49 Propionitrile	54	4.234	4.234	0.000	99	390737	250.0	305.3	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	1432481	250.0	285.9	
64 Tert-amyl methyl ether	73	4.920	4.920	0.000	92	739780	25.0	28.8	
66 n-Butanol	56	5.199	5.199	0.000	84	162457	625.0	643.5	
71 Methyl methacrylate	100	5.542	5.542	0.000	89	145808	50.0	53.6	
75 2-Nitropropane	41	5.900	5.900	0.000	95	83659	50.0	29.0	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	148716	50.0	47.8	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	99	1088923	25.0	25.4	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	347222	25.0	26.0	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added: 25.00	Units: uL	
mv-IS_SS_00058	Amount Added: 5.00	Units: uL	Run Reagent

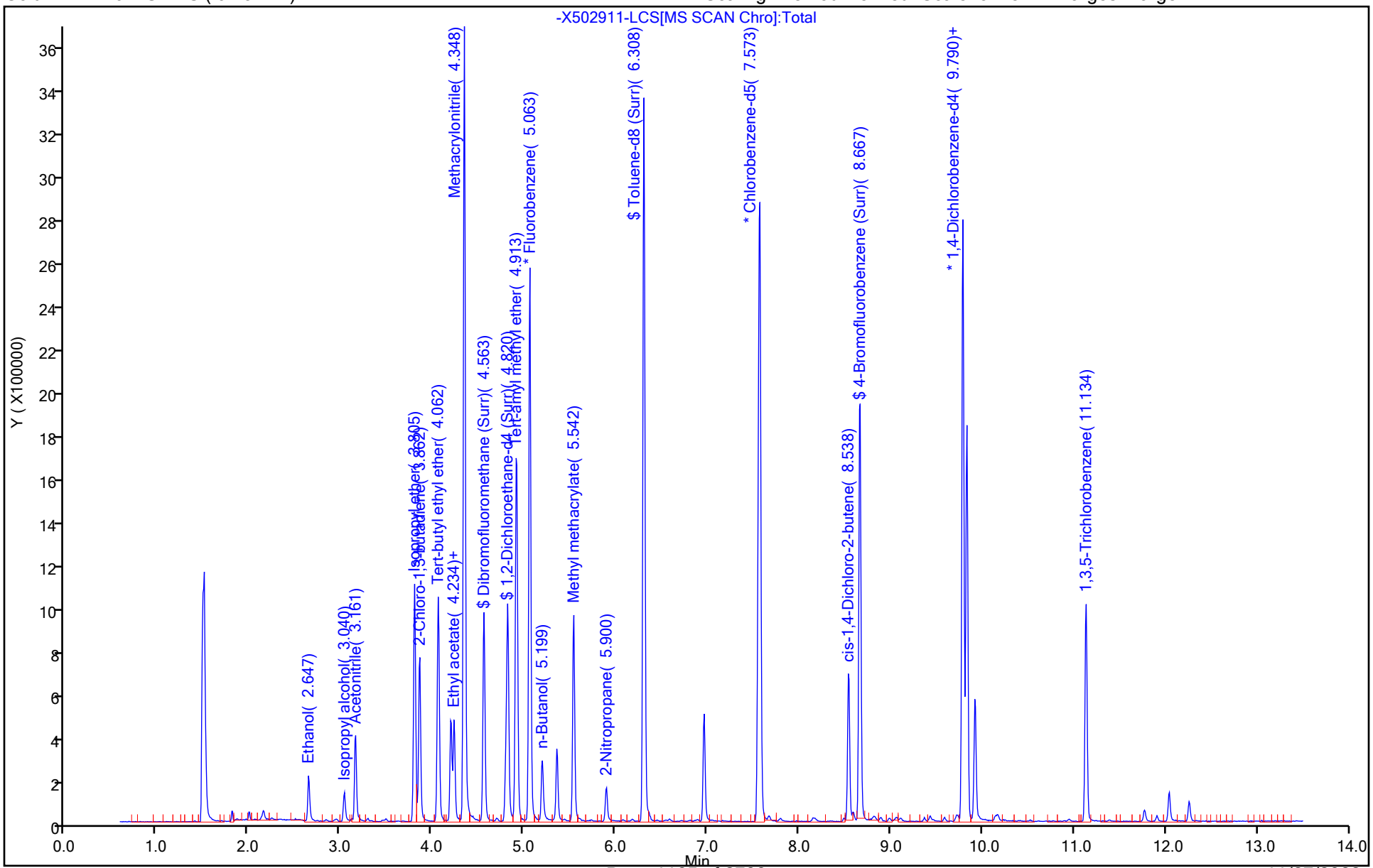
Report Date: 27-Apr-2023 12:40:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502911-LCS.d

Injection Date:	27-Apr-2023 11:36:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\-X502911-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 11:36:30 ALS Bottle#: 5 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCV S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:14:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	50.5	100.94
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.3	94.69
$ 6 Toluene-d8 (Surr)	50.0	50.7	101.45
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.5	101.07

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610464/1002

Matrix: Water | Lab File ID: -MS1_8602b-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	43.6		1.0	0.58
71-55-6	1,1,1-Trichloroethane	48.1		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	48.2		1.0	0.21
79-00-5	1,1,2-Trichloroethane	50.3		1.0	0.27
75-34-3	1,1-Dichloroethane	51.9		1.0	0.22
75-35-4	1,1-Dichloroethene	51.0		1.0	0.23
563-58-6	1,1-Dichloropropene	52.0		1.0	0.42
96-18-4	1,2,3-Trichloropropane	46.2		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	47.1		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	40.9		5.0	1.8
106-93-4	1,2-Dibromoethane	46.3		1.0	0.40
95-50-1	1,2-Dichlorobenzene	49.0		1.0	0.37
107-06-2	1,2-Dichloroethane	45.8		1.0	0.54
78-87-5	1,2-Dichloropropane	51.7		1.0	0.52
541-73-1	1,3-Dichlorobenzene	49.1		1.0	0.33
142-28-9	1,3-Dichloropropane	50.4		1.0	0.38
106-46-7	1,4-Dichlorobenzene	47.3		1.0	0.39
594-20-7	2,2-Dichloropropane	40.4		1.0	0.38
78-93-3	2-Butanone (MEK)	189		15	6.0
591-78-6	2-Hexanone	186		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	195		5.0	0.98
67-64-1	Acetone	181		15	6.6
107-02-8	Acrolein	463		20	4.9
107-13-1	Acrylonitrile	525		20	4.5
107-05-1	Allyl chloride	46.7		2.0	0.17
71-43-2	Benzene	52.3		1.0	0.31
75-25-2	Bromoform	38.1		2.0	1.2
74-83-9	Bromomethane	42.1		5.0	2.4
75-15-0	Carbon disulfide	49.0		2.0	0.63
56-23-5	Carbon tetrachloride	43.8		1.0	0.57
108-90-7	Chlorobenzene	49.3		1.0	0.42
74-97-5	Chlorobromomethane	46.0		1.0	0.40
124-48-1	Chlorodibromomethane	42.1		2.0	0.62
75-00-3	Chloroethane	48.3		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610464/1002

Matrix: Water | Lab File ID: -MS1_8602b-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	49.0		1.0	0.36
74-87-3	Chloromethane	48.4		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	51.3		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	45.7		2.0	0.63
74-95-3	Dibromomethane	48.2		1.0	0.34
75-27-4	Dichlorobromomethane	45.6		1.0	0.39
75-71-8	Dichlorodifluoromethane	37.6		3.0	0.96
97-63-2	Ethyl methacrylate	47.3		3.0	0.86
100-41-4	Ethylbenzene	47.8		1.0	0.30
74-88-4	Iodomethane	35.2		5.0	2.6
78-83-1	Isobutyl alcohol	1170		110	37
75-09-2	Methylene Chloride	50.2		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	48.7		2.0	0.36
95-47-6	o-Xylene	48.1		1.0	0.33
100-42-5	Styrene	48.8		1.0	0.36
127-18-4	Tetrachloroethene	48.9		1.0	0.40
108-88-3	Toluene	51.3		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	49.6		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	44.6		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	39.1		3.0	1.4
79-01-6	Trichloroethene	48.7		1.0	0.30
75-69-4	Trichlorofluoromethane	41.8		2.0	0.57
108-05-4	Vinyl acetate	89.4		3.0	0.94
75-01-4	Vinyl chloride	48.3		2.0	0.51
1330-20-7	Xylenes, Total	96.8		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-127
460-00-4	4-Bromofluorobenzene (Surr)	105		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	106		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\-MS1_8602b-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 16:12:30 ALS Bottle#: 24 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120816-032
Operator ID: wt/be Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:18 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 18:01:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1286498	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	310409	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	484361	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	317645	50.0	51.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.766	0.000	0	425055	50.0	51.2	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1412057	50.0	53.0	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	498778	50.0	52.4	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	231574	50.0	37.6	
12 Chloromethane	50	2.009	2.009	0.000	99	287657	50.0	48.4	
13 Vinyl chloride	62	2.135	2.135	0.000	98	295810	50.0	48.3	
15 Bromomethane	94	2.498	2.498	0.000	92	136134	50.0	42.1	
16 Chloroethane	64	2.623	2.623	0.000	99	182305	50.0	48.3	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	410892	50.0	47.9	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	301296	50.0	41.8	
20 Ethyl ether	59	3.182	3.182	0.000	94	231134	50.0	50.6	
22 Acrolein	56	3.322	3.322	0.000	99	322391	493.8	462.8	
23 1,1-Dichloroethene	96	3.419	3.419	0.000	95	203374	50.0	51.0	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.419	3.419	0.000	96	142543	50.0	48.9	
25 Acetone	43	3.447	3.447	0.000	100	401587	200.0	180.7	
26 Iodomethane	142	3.559	3.559	0.000	99	187859	50.0	35.2	
28 Carbon disulfide	76	3.629	3.629	0.000	100	701454	50.0	49.0	
30 Methyl acetate	43	3.755	3.755	0.000	98	478523	100.0	94.8	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	90	430370	50.0	46.7	
32 Methylene Chloride	84	3.894	3.894	0.000	97	249051	50.0	50.2	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	99	348643	500.0	478.6	
34 Acrylonitrile	53	4.104	4.104	0.000	98	1234284	500.0	524.6	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	97	783867	50.0	50.8	
36 trans-1,2-Dichloroethene	96	4.146	4.146	0.000	95	229281	50.0	49.6	
37 Hexane	57	4.383	4.383	0.000	95	325204	50.0	48.4	
39 Vinyl acetate	43	4.523	4.523	0.000	97	1077836	100.0	89.4	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	476643	50.0	51.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 2-Butanone (MEK)	43	5.012	5.012	0.000	100	651306	200.0	188.9	
49 2,2-Dichloropropane	77	5.040	5.040	0.000	90	314782	50.0	40.4	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	85	255619	50.0	51.3	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	712245	1200.0	1163.7	
53 Chlorobromomethane	128	5.249	5.249	0.000	95	104763	50.0	46.0	
54 Tetrahydrofuran	42	5.249	5.249	0.000	89	215664	100.0	99.6	
55 Chloroform	83	5.319	5.319	0.000	95	410061	50.0	49.0	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	98	334903	50.0	48.1	
57 Cyclohexane	56	5.542	5.542	0.000	93	469800	50.0	52.3	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	93	354684	50.0	52.0	
59 Carbon tetrachloride	117	5.612	5.612	0.000	77	257629	50.0	43.8	
60 Isobutyl alcohol	41	5.654	5.654	0.000	95	300632	1250.0	1173.4	
63 Benzene	78	5.780	5.780	0.000	99	1040736	50.0	52.3	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	355581	50.0	45.8	
66 n-Heptane	43	6.003	6.003	0.000	96	261640	50.0	42.3	
68 Trichloroethene	95	6.352	6.352	0.000	97	242745	50.0	48.7	
69 2-Pentanone	43	6.478	6.478	0.000	99	816088	160.0	155.2	
70 Methylcyclohexane	55	6.548	6.548	0.000	96	325317	50.0	49.9	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	96	283119	50.0	51.7	
73 1,4-Dioxane	88	6.632	6.632	0.000	95	83225	1000.0	940.1	
74 Dibromomethane	93	6.660	6.660	0.000	91	144820	50.0	48.2	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	298041	50.0	45.6	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	92	173452	50.0	44.4	
78 cis-1,3-Dichloropropene	75	7.176	7.176	0.000	92	406660	50.0	45.7	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	98	1285764	200.0	195.3	
82 Toluene	91	7.484	7.484	0.000	98	1055069	50.0	51.3	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	96	361929	50.0	44.6	
85 Ethyl methacrylate	69	7.707	7.707	0.000	92	357208	50.0	47.3	
87 1,1,2-Trichloroethane	97	7.861	7.861	0.000	92	216803	50.0	50.3	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	167071	50.0	48.9	
90 1,3-Dichloropropane	76	8.014	8.014	0.000	97	418870	50.0	50.4	
91 2-Hexanone	43	8.042	8.042	0.000	97	909273	200.0	185.5	
95 Chlorodibromomethane	129	8.224	8.224	0.000	91	191990	50.0	42.1	
96 Ethylene Dibromide	107	8.350	8.350	0.000	97	212358	50.0	46.3	
98 1-Chlorohexane	91	8.755	8.755	0.000	93	250712	40.0	39.5	
99 Chlorobenzene	112	8.796	8.796	0.000	92	638696	50.0	49.3	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	43	193567	50.0	43.6	
101 Ethylbenzene	106	8.880	8.880	0.000	99	353121	50.0	47.8	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	438980	50.0	48.7	
103 o-Xylene	106	9.369	9.369	0.000	98	433277	50.0	48.1	
104 Styrene	104	9.397	9.397	0.000	96	737341	50.0	48.8	
106 Bromoform	173	9.579	9.579	0.000	94	108264	50.0	38.1	
107 Isopropylbenzene	105	9.718	9.718	0.000	97	1047606	50.0	50.7	
109 Cyclohexanone	55	9.830	9.830	0.000	95	522376	1500.0	1671.8	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	296803	50.0	48.2	
111 Bromobenzene	156	10.053	10.053	0.000	96	234501	50.0	48.4	
112 trans-1,4-Dichloro-2-butene	53	10.053	10.053	0.000	80	70772	50.0	39.1	
113 1,2,3-Trichloropropane	110	10.081	10.081	0.000	86	86922	50.0	46.2	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	281620	50.0	50.4	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	241077	50.0	50.5	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	93	869419	50.0	50.6	
117 4-Chlorotoluene	126	10.347	10.347	0.000	99	249340	50.0	49.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
118 tert-Butylbenzene	119	10.626	10.626	0.000	94	694721	50.0	50.0	
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	909001	50.0	50.2	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	191046	50.0	49.6	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	97	445504	50.0	49.1	
122 4-Isopropyltoluene	119	10.989	10.989	0.000	97	864206	50.0	50.2	
123 1,4-Dichlorobenzene	146	11.073	11.073	0.000	92	458210	50.0	47.3	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	756335	50.0	48.3	
127 1,2-Dichlorobenzene	146	11.436	11.436	0.000	95	424388	50.0	49.0	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	77	50964	50.0	40.9	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	94	228834	50.0	47.1	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	81441	50.0	43.4	
132 Naphthalene	128	13.336	13.336	0.000	98	734054	50.0	45.5	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	192953	50.0	46.8	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	100.9	
S 151 Trihalomethanes, Total	1				0		200.0	174.7	
S 150 1,2-Dichloroethene, Total	1				0		100.0	100.9	
S 156 1,3-Dichloropropene, Total	1				0		100.0	90.3	
S 155 Xylenes, Total	106				0		100.0	96.8	
S 153 Xylenes, Total (URS)	1				0		100.0	96.8	
S 152 Total BTEX	1				0			248.3	

Reagents:

MV-Gas A_00151	Amount Added: 10.00	Units: uL	
MV-MegaMainA_00087	Amount Added: 25.00	Units: uL	
mv-IS_SS_00059	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 28-Apr-2023 09:53:20 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\-MS1_8602b-LCS.d

Injection Date: 27-Apr-2023 16:12:30 Instrument ID: VMS_MS1 Operator ID: wt/be

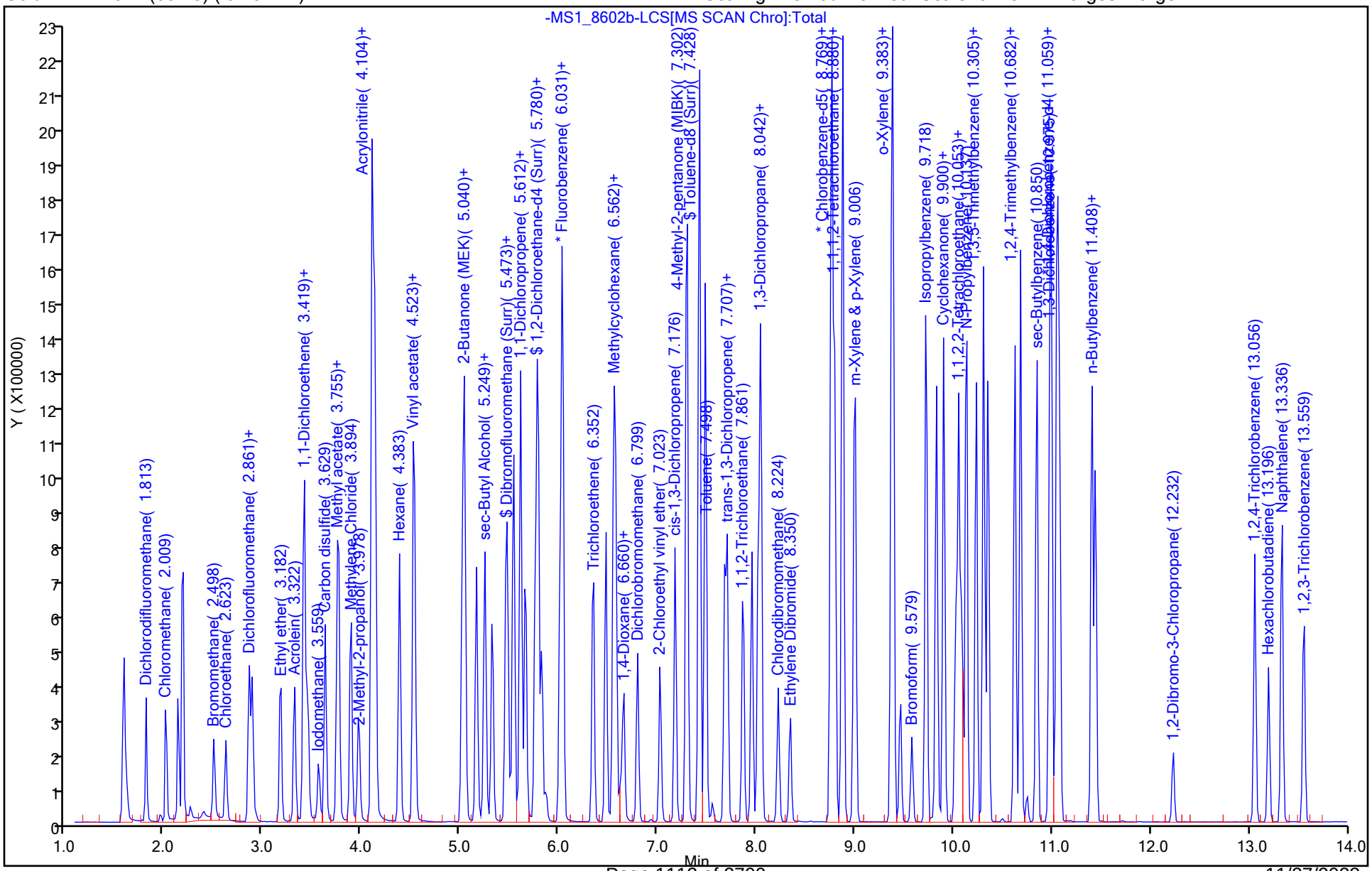
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 24

Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\-MS1_8602b-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 16:12:30 ALS Bottle#: 24 Worklist Smp#: 1002
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120816-032
Operator ID: wt/be Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:18 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 18:01:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	51.9	103.76
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.2	102.45
$ 7 Toluene-d8 (Surr)	50.0	53.0	106.00
$ 8 4-Bromofluorobenzene (Surr)	50.0	52.4	104.84

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-610464/1003

Matrix: Water | Lab File ID: -MS1_8603a-LCS.d

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	228		30	9.6
126-99-8	Chloroprene	26.1		3.0	1.2
126-98-7	Methacrylonitrile	230		15	5.3
80-62-6	Methyl methacrylate	40.5		4.0	1.1
107-12-0	Propionitrile	218		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	105		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	106		80-125

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\-MS1_8603a-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 16:34:30 ALS Bottle#: 25 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120816-033
Operator ID: wt/be Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 17:45:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1273999	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	301529	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	475598	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	313592	50.0	51.7	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.752	5.752	0.000	0	425183	50.0	51.7	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1365719	50.0	52.8	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	489072	50.0	52.3	
19 Ethanol	45	3.071	3.071	0.000	99	124446	1500.0	1390.0	
27 Isopropyl alcohol	45	3.587	3.587	0.000	99	96154	250.0	224.1	
29 Acetonitrile	41	3.727	3.727	0.000	99	232129	250.0	227.6	
41 Isopropyl ether	87	4.551	4.551	0.000	94	105059	25.0	25.2	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	93	207862	25.0	26.1	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	408379	25.0	26.1	
47 Ethyl acetate	43	5.040	5.040	0.000	99	271742	50.0	43.5	
50 Propionitrile	54	5.082	5.082	0.000	99	223958	250.0	217.6	
52 Methacrylonitrile	41	5.207	5.207	0.000	95	919868	250.0	230.3	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	90	365240	25.0	25.2	
67 n-Butanol	56	6.227	6.227	0.000	91	99390	625.0	647.5	
72 Methyl methacrylate	100	6.590	6.590	0.000	94	65459	50.0	40.5	
76 2-Nitropropane	41	6.995	6.995	0.000	97	57564	50.0	41.9	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	52454	50.0	29.6	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	415880	25.0	20.9	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	95	107611	25.0	16.6	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added: 25.00	Units: uL	
mv-IS_SS_00059	Amount Added: 5.00	Units: uL	Run Reagent

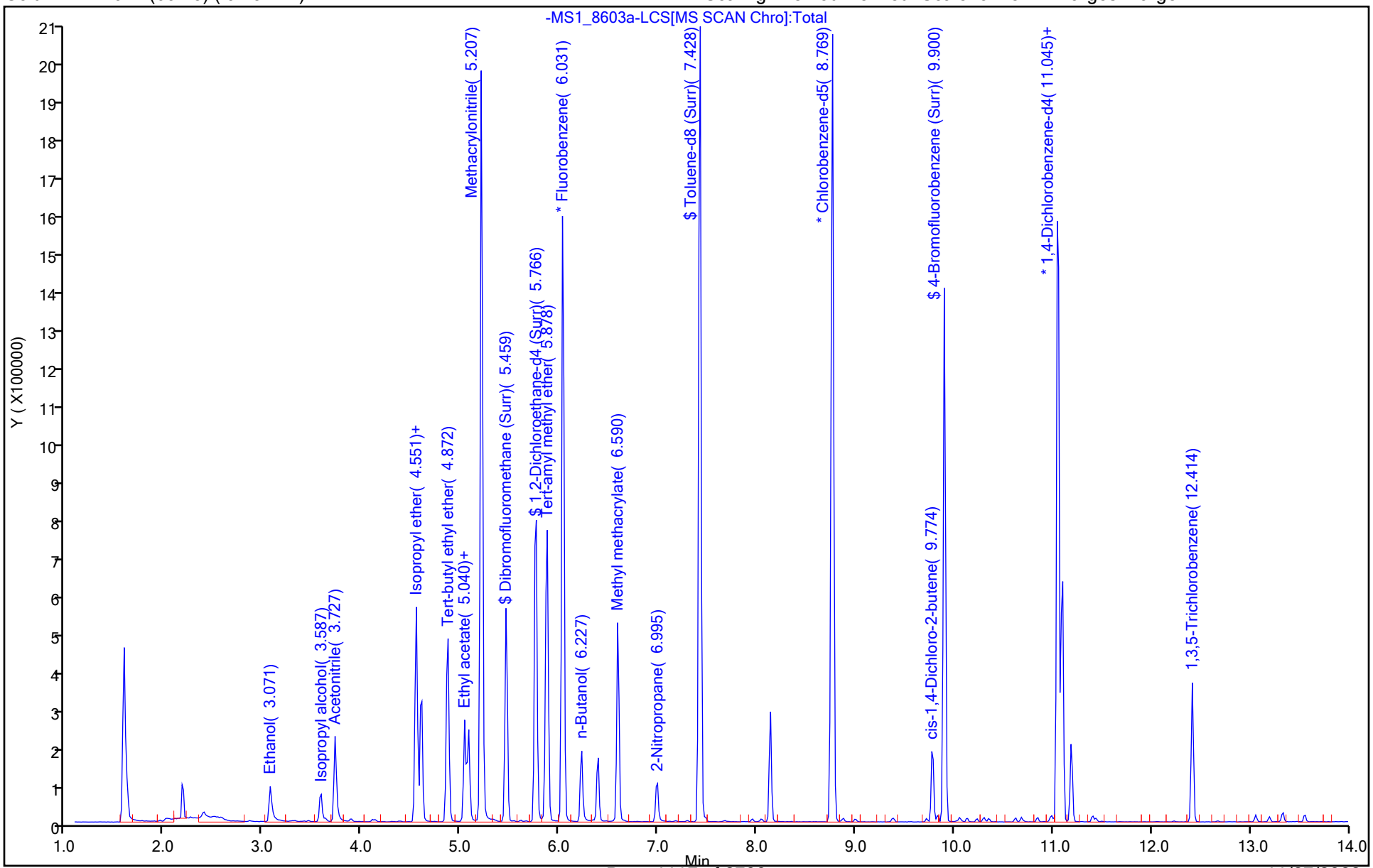
Report Date: 28-Apr-2023 09:53:22 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Environment Testing America

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\-MS1_8603a-LCS.d

Injection Date:	27-Apr-2023 16:34:30	Instrument ID:	VMS_MS1	Operator ID:	wt/be
Lims ID:	LCS			Worklist Smp#:	1003
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Environment Testing America
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\-MS1_8603a-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Apr-2023 16:34:30 ALS Bottle#: 25 Worklist Smp#: 1003
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Misc. Info.: 280-0120816-033
Operator ID: wt/be Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 17:45:59

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	51.7	103.44
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.7	103.49
$ 7 Toluene-d8 (Surr)	50.0	52.8	105.54
$ 8 4-Bromofluorobenzene (Surr)	50.0	52.3	104.69

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610121/4

Matrix: Water | Lab File ID: X502848.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	24.9		1.0	0.58
71-55-6	1,1,1-Trichloroethane	25.4		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	24.4		1.0	0.21
79-00-5	1,1,2-Trichloroethane	26.0		1.0	0.27
75-34-3	1,1-Dichloroethane	27.4		1.0	0.22
75-35-4	1,1-Dichloroethene	26.5		1.0	0.23
563-58-6	1,1-Dichloropropene	25.6		1.0	0.42
96-18-4	1,2,3-Trichloropropane	23.9		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	26.7		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	22.8		5.0	1.8
106-93-4	1,2-Dibromoethane	25.3		1.0	0.40
95-50-1	1,2-Dichlorobenzene	24.4		1.0	0.37
107-06-2	1,2-Dichloroethane	23.8		1.0	0.54
78-87-5	1,2-Dichloropropane	27.4		1.0	0.52
541-73-1	1,3-Dichlorobenzene	25.4		1.0	0.33
142-28-9	1,3-Dichloropropane	25.7		1.0	0.38
106-46-7	1,4-Dichlorobenzene	24.3		1.0	0.39
594-20-7	2,2-Dichloropropane	26.3		1.0	0.38
78-93-3	2-Butanone (MEK)	108		15	6.0
591-78-6	2-Hexanone	104		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	110		5.0	0.98
67-64-1	Acetone	96.2		15	6.6
107-02-8	Acrolein	247		20	4.9
107-13-1	Acrylonitrile	286		20	4.5
107-05-1	Allyl chloride	30.3		2.0	0.17
71-43-2	Benzene	27.8		1.0	0.31
75-25-2	Bromoform	24.8		2.0	1.2
74-83-9	Bromomethane	22.4		5.0	2.4
75-15-0	Carbon disulfide	27.8		2.0	0.63
56-23-5	Carbon tetrachloride	25.7		1.0	0.57
108-90-7	Chlorobenzene	25.5		1.0	0.42
74-97-5	Chlorobromomethane	27.1		1.0	0.40
124-48-1	Chlorodibromomethane	24.1		2.0	0.62
75-00-3	Chloroethane	26.1		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610121/4

Matrix: Water | Lab File ID: X502848.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 10:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	26.2		1.0	0.36
74-87-3	Chloromethane	23.0		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	27.0		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	26.9		2.0	0.63
74-95-3	Dibromomethane	25.7		1.0	0.34
75-27-4	Dichlorobromomethane	25.9		1.0	0.39
75-71-8	Dichlorodifluoromethane	17.3		3.0	0.96
97-63-2	Ethyl methacrylate	27.4		3.0	0.86
100-41-4	Ethylbenzene	25.6		1.0	0.30
74-88-4	Iodomethane	21.1		5.0	2.6
78-83-1	Isobutyl alcohol	568		110	37
75-09-2	Methylene Chloride	26.2		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	26.4		2.0	0.36
95-47-6	o-Xylene	25.6		1.0	0.33
100-42-5	Styrene	26.8		1.0	0.36
127-18-4	Tetrachloroethene	26.0		1.0	0.40
108-88-3	Toluene	27.1		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	28.0		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	27.6		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	22.4		3.0	1.4
79-01-6	Trichloroethene	26.4		1.0	0.30
75-69-4	Trichlorofluoromethane	20.8		2.0	0.57
108-05-4	Vinyl acetate	60.0		3.0	0.94
75-01-4	Vinyl chloride	27.8		2.0	0.51
1330-20-7	Xylenes, Total	52.0		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-127
460-00-4	4-Bromofluorobenzene (Surr)	104		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502848.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 10:41:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 11:02:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2094082	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	509073	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	797999	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	520983	50.0	51.7	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	506027	50.0	47.8	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	92	2186054	50.0	50.4	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	89	738657	50.0	51.8	
10 Dichlorodifluoromethane	85	1.696	1.696	0.000	99	158594	25.0	17.3	
11 Chloromethane	50	1.867	1.867	0.000	99	214652	25.0	23.0	
12 Vinyl chloride	62	1.967	1.960	0.007	98	263798	25.0	27.8	
14 Bromomethane	94	2.239	2.239	0.000	92	113724	25.0	22.4	
15 Chloroethane	64	2.339	2.332	0.007	98	166295	25.0	26.1	
16 Dichlorofluoromethane	67	2.504	2.504	0.000	96	376410	25.0	23.7	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	255326	25.0	20.8	
19 Ethyl ether	59	2.747	2.747	0.000	89	194389	25.0	27.5	
21 Acrolein	56	2.854	2.854	0.000	99	280948	246.9	246.5	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.933	2.933	0.000	95	139700	25.0	24.2	
23 1,1-Dichloroethene	96	2.940	2.933	0.007	97	213290	25.0	26.5	
24 Acetone	43	2.954	2.954	0.000	99	227536	100.0	96.2	
26 Iodomethane	142	3.061	3.054	0.007	97	226196	25.0	21.1	
27 Carbon disulfide	76	3.119	3.119	-0.001	98	724827	25.0	27.8	
29 Methyl acetate	43	3.176	3.176	0.000	97	297188	50.0	56.2	
30 3-Chloro-1-propene	41	3.204	3.197	0.007	93	323472	25.0	30.3	
31 Methylene Chloride	84	3.297	3.297	0.000	90	270220	25.0	26.2	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	187474	250.0	230.6	
33 Acrylonitrile	53	3.455	3.455	0.000	99	857552	250.0	285.7	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	93	650214	25.0	25.7	
35 trans-1,2-Dichloroethene	96	3.490	3.490	0.000	99	249713	25.0	28.0	
37 Hexane	57	3.683	3.683	0.000	87	249143	25.0	21.4	
39 Vinyl acetate	43	3.783	3.784	-0.001	97	848895	50.0	60.0	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	95	446863	25.0	27.4	
45 2-Butanone (MEK)	43	4.184	4.184	0.000	98	371033	100.0	107.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.213	-0.001	81	288949	25.0	27.0	
48 2,2-Dichloropropane	77	4.227	4.220	0.007	85	329063	25.0	26.3	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	361373	600.0	592.8	
52 Chlorobromomethane	128	4.391	4.384	0.007	96	133511	25.0	27.1	
53 Tetrahydrofuran	42	4.398	4.398	0.000	88	128498	50.0	55.1	
54 Chloroform	83	4.441	4.441	0.000	92	434512	25.0	26.2	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	98	341618	25.0	25.4	
56 Cyclohexane	56	4.649	4.649	0.000	87	350771	25.0	25.3	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	99	337533	25.0	25.6	
60 Isobutyl alcohol	41	4.706	4.706	0.000	92	146780	625.0	568.3	
59 Carbon tetrachloride	117	4.706	4.706	0.000	94	279186	25.0	25.7	
62 Benzene	78	4.849	4.849	0.000	95	1081075	25.0	27.8	
63 1,2-Dichloroethane	62	4.877	4.878	-0.001	97	293772	25.0	23.8	
65 n-Heptane	43	5.035	5.035	0.000	86	192325	25.0	23.8	
67 Trichloroethene	95	5.335	5.335	0.000	98	257149	25.0	26.4	
68 2-Pentanone	43	5.435	5.435	0.000	98	450628	80.0	81.9	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	237662	25.0	23.4	
70 1,2-Dichloropropane	63	5.542	5.535	0.007	96	271459	25.0	27.4	
72 1,4-Dioxane	88	5.578	5.578	0.000	93	66461	500.0	530.7	
73 Dibromomethane	93	5.607	5.607	0.000	96	151778	25.0	25.7	
74 Dichlorobromomethane	83	5.728	5.728	0.000	99	323164	25.0	25.9	
76 2-Chloroethyl vinyl ether	63	5.929	5.929	0.000	90	128086	25.0	40.2	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	416774	25.0	26.9	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	94	726962	100.0	109.8	
79 Toluene	91	6.365	6.365	0.000	98	1135544	25.0	27.1	
80 trans-1,3-Dichloropropene	75	6.536	6.536	0.000	94	354647	25.0	27.6	
81 Ethyl methacrylate	69	6.558	6.558	0.000	87	304379	25.0	27.4	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	90	217729	25.0	26.0	
83 Tetrachloroethene	164	6.808	6.801	0.007	97	192361	25.0	26.0	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	90	400390	25.0	25.7	
85 2-Hexanone	43	6.880	6.872	0.008	94	505921	100.0	103.8	
87 Chlorodibromomethane	129	7.051	7.051	0.000	90	226327	25.0	24.1	
88 Ethylene Dibromide	107	7.173	7.173	0.000	97	225445	25.0	25.3	
89 1-Chlorohexane	91	7.559	7.559	0.000	94	271793	20.0	19.7	
90 Chlorobenzene	112	7.602	7.602	0.000	96	724145	25.0	25.5	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	226675	25.0	24.9	
92 Ethylbenzene	106	7.673	7.673	0.000	98	400272	25.0	25.6	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	493377	25.0	26.4	
94 o-Xylene	106	8.152	8.152	0.000	95	485237	25.0	25.6	
95 Styrene	104	8.167	8.167	0.000	95	809571	25.0	26.8	
96 Bromoform	173	8.352	8.353	-0.001	97	141279	25.0	24.8	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1164701	25.0	25.7	
99 Cyclohexanone	55	8.588	8.589	0.000	89	281413	750.0	653.2	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	278622	25.0	24.4	
101 Bromobenzene	156	8.810	8.810	0.000	94	289623	25.0	25.4	
102 trans-1,4-Dichloro-2-butene	53	8.817	8.810	0.007	75	66139	25.0	22.4	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	82	82738	25.0	23.9	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	336648	25.0	26.7	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	288880	25.0	25.9	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	978126	25.0	25.6	
107 4-Chlorotoluene	126	9.103	9.103	0.000	96	298307	25.0	25.7	
108 tert-Butylbenzene	119	9.368	9.368	0.000	93	812985	25.0	25.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	1015688	25.0	25.7	
111 sec-Butylbenzene	134	9.589	9.590	-0.001	94	238430	25.0	24.9	
112 1,3-Dichlorobenzene	146	9.711	9.711	0.000	98	535133	25.0	25.4	
113 4-Isopropyltoluene	119	9.732	9.733	-0.001	97	1027523	25.0	26.1	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	544921	25.0	24.3	
116 n-Butylbenzene	91	10.140	10.140	0.000	97	895815	25.0	26.2	
117 1,2-Dichlorobenzene	146	10.169	10.169	0.000	99	494760	25.0	24.4	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	89	52062	25.0	22.8	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	93	272981	25.0	26.7	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	103070	25.0	27.7	
122 Naphthalene	128	12.035	12.035	0.000	97	712247	25.0	27.3	
123 1,2,3-Trichlorobenzene	180	12.257	12.257	0.000	96	206279	25.0	26.8	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	55.0	
S 139 Xylenes, Total (URS)	1				0		50.0	51.9	
S 136 1,3-Dichloropropene, Total	1				0		50.0	54.5	
S 138 Xylenes, Total	106				0		50.0	51.9	
S 140 Trihalomethanes, Total	1				0		100.0	101.0	
S 141 1,2-Dichloroethene, Total	1				0		50.0	55.0	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas B_00133	Amount Added:	5.00	Units: uL	
MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

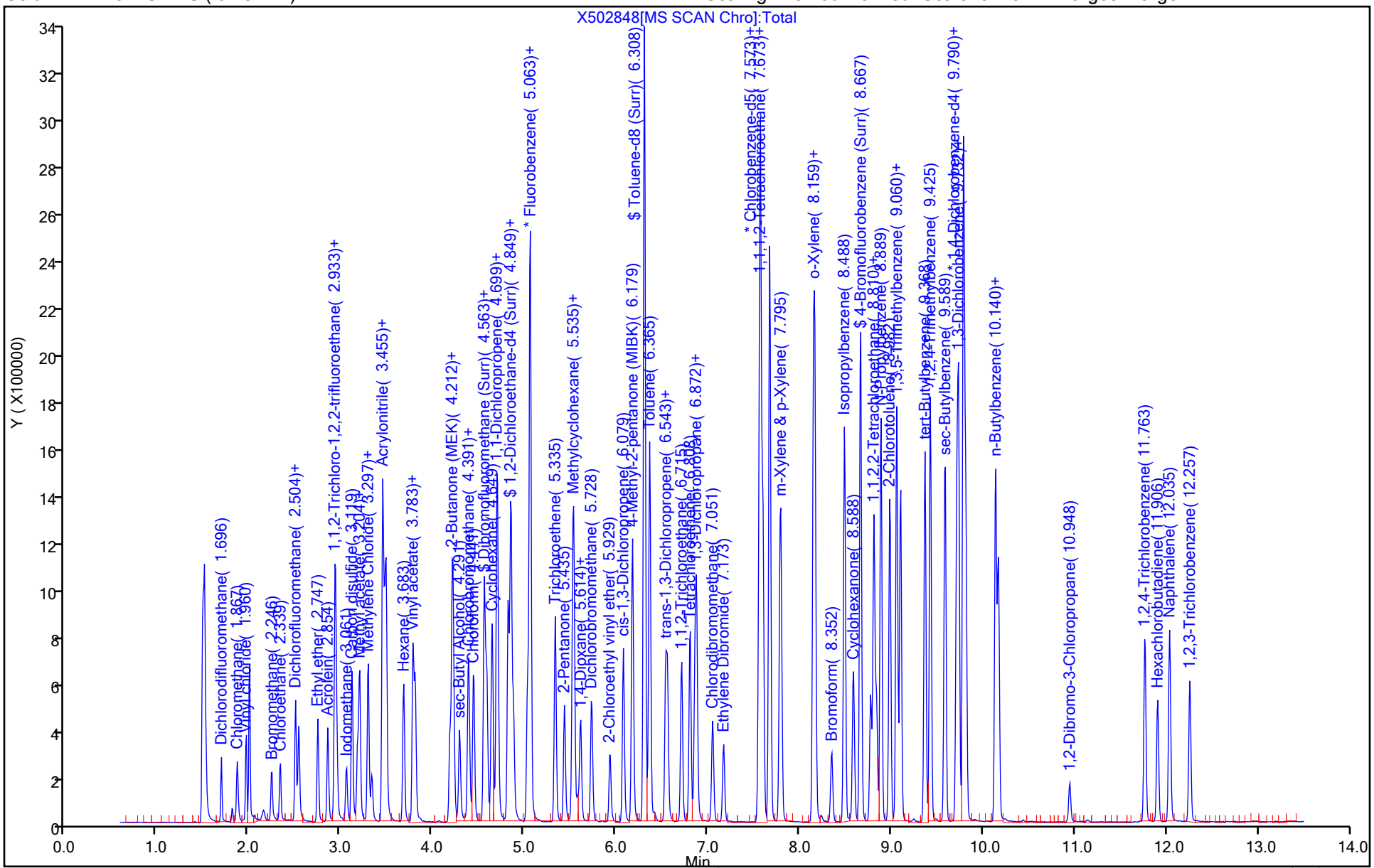
Report Date: 26-Apr-2023 11:04:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502848.D

Injection Date:	26-Apr-2023 10:41:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502848.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 10:41:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:04:05 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 11:02:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.7	103.44
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	47.8	95.66
$ 6 Toluene-d8 (Surr)	50.0	50.4	100.82
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.8	103.59

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610121/5

Matrix: Water | Lab File ID: X502849.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2023 11:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	265		30	9.6
126-99-8	Chloroprene	27.1		3.0	1.2
126-98-7	Methacrylonitrile	260		15	5.3
80-62-6	Methyl methacrylate	47.7		4.0	1.1
107-12-0	Propionitrile	278		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	99		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502849.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 11:02:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:48:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 11:49:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2049501	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	510941	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	790900	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	509128	50.0	51.6	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	506114	50.0	48.9	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	93	2164429	50.0	49.7	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	88	729576	50.0	51.6	
18 Ethanol	45	2.647	2.654	-0.007	98	165046	1500.0	1521.4	
25 Isopropyl alcohol	45	3.033	3.033	0.000	99	127939	250.0	201.3	
28 Acetonitrile	41	3.161	3.161	0.000	98	303285	250.0	264.9	
41 Isopropyl ether	87	3.805	3.805	0.000	95	216537	25.0	28.3	
42 2-Chloro-1,3-butadiene	53	3.862	3.855	0.007	87	363861	25.0	27.1	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	97	722750	25.0	27.3	
46 Ethyl acetate	43	4.198	4.198	0.000	98	387370	50.0	48.9	
49 Propionitrile	54	4.234	4.234	0.000	100	353878	250.0	277.9	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	1297399	250.0	260.2	
64 Tert-amyl methyl ether	73	4.913	4.913	0.000	93	694250	25.0	27.1	
66 n-Butanol	56	5.199	5.199	0.000	85	141522	625.0	563.4	
71 Methyl methacrylate	100	5.542	5.543	0.000	89	129079	50.0	47.7	
75 2-Nitropropane	41	5.900	5.893	0.007	95	74860	50.0	26.1	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	141434	50.0	45.4	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	1028034	25.0	24.0	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	324412	25.0	24.3	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

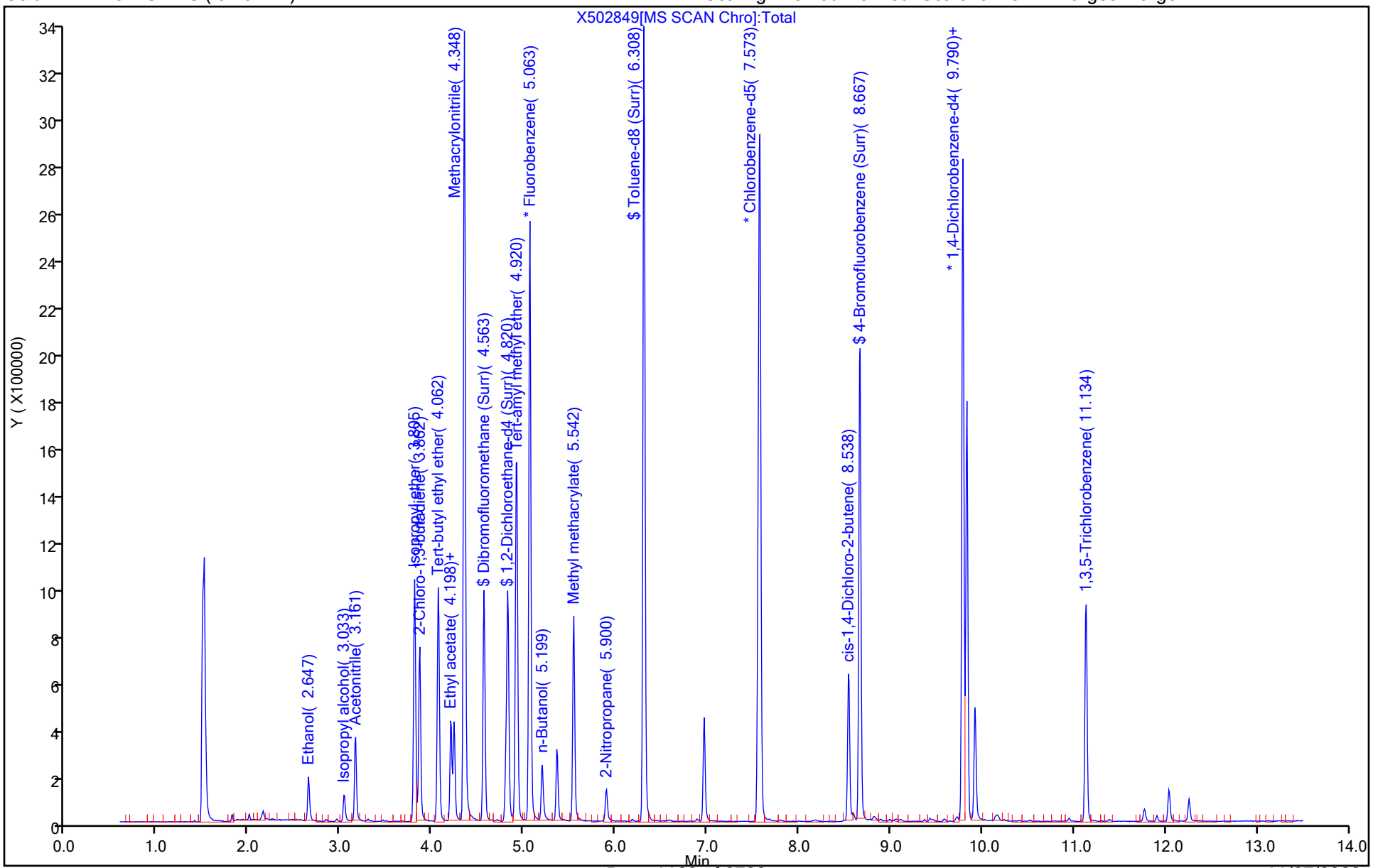
Report Date: 26-Apr-2023 11:49:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502849.D

Injection Date:	26-Apr-2023 11:02:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\X502849.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 26-Apr-2023 11:02:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Apr-2023 11:48:48 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1609

First Level Reviewer: BX8N Date: 26-Apr-2023 11:49:02

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.6	103.29
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.9	97.76
$ 6 Toluene-d8 (Surr)	50.0	49.7	99.46
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.6	103.24

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610347/4

Matrix: Water | Lab File ID: X502912.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	22.7		1.0	0.58
71-55-6	1,1,1-Trichloroethane	22.8		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	25.1		1.0	0.21
79-00-5	1,1,2-Trichloroethane	25.0		1.0	0.27
75-34-3	1,1-Dichloroethane	24.4		1.0	0.22
75-35-4	1,1-Dichloroethene	24.2		1.0	0.23
563-58-6	1,1-Dichloropropene	23.1		1.0	0.42
96-18-4	1,2,3-Trichloropropane	22.5		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	24.7		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	21.8		5.0	1.8
106-93-4	1,2-Dibromoethane	23.3		1.0	0.40
95-50-1	1,2-Dichlorobenzene	22.9		1.0	0.37
107-06-2	1,2-Dichloroethane	21.4		1.0	0.54
78-87-5	1,2-Dichloropropane	24.8		1.0	0.52
541-73-1	1,3-Dichlorobenzene	22.9		1.0	0.33
142-28-9	1,3-Dichloropropane	23.9		1.0	0.38
106-46-7	1,4-Dichlorobenzene	22.0		1.0	0.39
594-20-7	2,2-Dichloropropane	22.5		1.0	0.38
78-93-3	2-Butanone (MEK)	113		15	6.0
591-78-6	2-Hexanone	108		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	114		5.0	0.98
67-64-1	Acetone	93.4		15	6.6
107-02-8	Acrolein	223		20	4.9
107-13-1	Acrylonitrile	281		20	4.5
107-05-1	Allyl chloride	28.5		2.0	0.17
71-43-2	Benzene	24.5		1.0	0.31
75-25-2	Bromoform	22.4		2.0	1.2
74-83-9	Bromomethane	21.0		5.0	2.4
75-15-0	Carbon disulfide	23.6		2.0	0.63
56-23-5	Carbon tetrachloride	22.2		1.0	0.57
108-90-7	Chlorobenzene	22.6		1.0	0.42
74-97-5	Chlorobromomethane	23.0		1.0	0.40
124-48-1	Chlorodibromomethane	21.7		2.0	0.62
75-00-3	Chloroethane	23.6		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610347/4

Matrix: Water | Lab File ID: X502912.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 11:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	22.9		1.0	0.36
74-87-3	Chloromethane	21.9		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	24.0		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	23.5		2.0	0.63
74-95-3	Dibromomethane	23.3		1.0	0.34
75-27-4	Dichlorobromomethane	22.7		1.0	0.39
75-71-8	Dichlorodifluoromethane	15.6		3.0	0.96
97-63-2	Ethyl methacrylate	25.8		3.0	0.86
100-41-4	Ethylbenzene	22.5		1.0	0.30
74-88-4	Iodomethane	16.5		5.0	2.6
78-83-1	Isobutyl alcohol	627		110	37
75-09-2	Methylene Chloride	23.0		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	23.0		2.0	0.36
95-47-6	o-Xylene	22.2		1.0	0.33
100-42-5	Styrene	23.5		1.0	0.36
127-18-4	Tetrachloroethene	22.5		1.0	0.40
108-88-3	Toluene	24.2		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	24.4		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	24.5		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	23.0		3.0	1.4
79-01-6	Trichloroethene	22.9		1.0	0.30
75-69-4	Trichlorofluoromethane	18.9		2.0	0.57
108-05-4	Vinyl acetate	55.6		3.0	0.94
75-01-4	Vinyl chloride	23.6		2.0	0.51
1330-20-7	Xylenes, Total	45.2		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-127
460-00-4	4-Bromofluorobenzene (Surr)	102		78-120
1868-53-7	Dibromofluoromethane (Surr)	102		77-120
2037-26-5	Toluene-d8 (Surr)	101		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502912.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 11:57:30 ALS Bottle#: 6 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:15:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2083610	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	84	508261	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	95	794649	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	513347	50.0	51.2	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	509585	50.0	48.4	
$ 6 Toluene-d8 (Surr)	98	6.307	6.308	-0.001	92	2191469	50.0	50.6	
$ 7 4-Bromofluorobenzene (Surr)	95	8.660	8.660	0.000	90	720765	50.0	50.8	
10 Dichlorodifluoromethane	85	1.695	1.695	0.000	97	142212	25.0	15.6	
11 Chloromethane	50	1.867	1.867	0.000	99	203500	25.0	21.9	
12 Vinyl chloride	62	1.967	1.960	0.007	98	222446	25.0	23.6	
14 Bromomethane	94	2.246	2.246	0.000	89	105844	25.0	21.0	
15 Chloroethane	64	2.339	2.339	0.000	99	149112	25.0	23.6	
16 Dichlorofluoromethane	67	2.503	2.503	0.000	97	316238	25.0	20.0	
17 Trichlorofluoromethane	101	2.539	2.539	0.000	98	230301	25.0	18.9	
19 Ethyl ether	59	2.747	2.747	0.000	88	176993	25.0	25.2	
21 Acrolein	56	2.854	2.854	0.000	99	252462	246.9	222.6	
22 1,1,2-Trichloro-1,2,2-trifluoroe	151	2.932	2.932	0.000	96	130035	25.0	22.6	
23 1,1-Dichloroethene	96	2.940	2.940	0.000	97	193405	25.0	24.2	
24 Acetone	43	2.954	2.954	0.000	100	220241	100.0	93.4	
26 Iodomethane	142	3.061	3.054	0.007	96	172777	25.0	16.5	
27 Carbon disulfide	76	3.118	3.118	0.000	98	612987	25.0	23.6	
29 Methyl acetate	43	3.183	3.183	0.000	97	299125	50.0	56.9	
30 3-Chloro-1-propene	41	3.204	3.204	0.000	94	302571	25.0	28.5	
31 Methylene Chloride	84	3.297	3.297	0.000	89	236358	25.0	23.0	
32 2-Methyl-2-propanol	59	3.333	3.333	0.000	100	196337	250.0	242.6	
33 Acrylonitrile	53	3.454	3.454	0.000	99	837761	250.0	280.5	
34 Methyl tert-butyl ether	73	3.476	3.476	0.000	92	611053	25.0	24.3	
35 trans-1,2-Dichloroethene	96	3.497	3.490	0.007	99	216838	25.0	24.4	
37 Hexane	57	3.683	3.683	0.000	88	254216	25.0	21.8	
39 Vinyl acetate	43	3.783	3.783	0.000	96	783385	50.0	55.6	
40 1,1-Dichloroethane	63	3.805	3.805	0.000	96	394968	25.0	24.4	
45 2-Butanone (MEK)	43	4.191	4.184	0.007	99	386605	100.0	112.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
47 cis-1,2-Dichloroethene	96	4.212	4.212	0.000	80	255647	25.0	24.0	
48 2,2-Dichloropropane	77	4.227	4.227	0.000	87	280950	25.0	22.5	
50 sec-Butyl Alcohol	45	4.291	4.291	0.000	99	390601	600.0	643.1	
52 Chlorobromomethane	128	4.391	4.384	0.007	96	112693	25.0	23.0	
53 Tetrahydrofuran	42	4.398	4.398	0.000	87	131577	50.0	56.7	
54 Chloroform	83	4.448	4.441	0.007	92	377201	25.0	22.9	
55 1,1,1-Trichloroethane	97	4.591	4.584	0.007	98	304063	25.0	22.8	
56 Cyclohexane	56	4.649	4.648	0.000	86	328058	25.0	23.8	
57 1,1-Dichloropropene	75	4.699	4.699	0.000	98	302590	25.0	23.1	
60 Isobutyl alcohol	41	4.706	4.706	0.000	94	161547	625.0	627.4	
59 Carbon tetrachloride	117	4.706	4.706	0.000	93	239917	25.0	22.2	
62 Benzene	78	4.856	4.849	0.007	94	946732	25.0	24.5	
63 1,2-Dichloroethane	62	4.877	4.877	0.000	96	262881	25.0	21.4	
65 n-Heptane	43	5.035	5.035	0.000	88	197205	25.0	24.5	
67 Trichloroethene	95	5.335	5.335	0.000	99	222595	25.0	22.9	
68 2-Pentanone	43	5.435	5.435	0.000	98	473490	80.0	86.4	
69 Methylcyclohexane	55	5.528	5.528	0.000	90	223126	25.0	22.1	
70 1,2-Dichloropropane	63	5.542	5.542	0.000	98	244594	25.0	24.8	
72 1,4-Dioxane	88	5.578	5.578	0.000	95	61897	500.0	496.7	
73 Dibromomethane	93	5.614	5.614	0.000	94	137017	25.0	23.3	
74 Dichlorobromomethane	83	5.735	5.728	0.007	99	281477	25.0	22.7	
76 2-Chloroethyl vinyl ether	63	5.928	5.936	-0.008	90	100194	25.0	31.4	
77 cis-1,3-Dichloropropene	75	6.079	6.079	0.000	98	363626	25.0	23.5	
78 4-Methyl-2-pentanone (MIBK)	43	6.179	6.179	0.000	93	752391	100.0	114.2	
79 Toluene	91	6.365	6.365	0.000	98	1011085	25.0	24.2	
80 trans-1,3-Dichloropropene	75	6.543	6.536	0.007	94	313647	25.0	24.5	
81 Ethyl methacrylate	69	6.558	6.558	0.000	86	286184	25.0	25.8	
82 1,1,2-Trichloroethane	97	6.715	6.715	0.000	89	208039	25.0	25.0	
83 Tetrachloroethene	164	6.808	6.808	0.000	97	165828	25.0	22.5	
84 1,3-Dichloropropane	76	6.858	6.858	0.000	91	372843	25.0	23.9	
85 2-Hexanone	43	6.879	6.872	0.007	94	527464	100.0	108.4	
87 Chlorodibromomethane	129	7.051	7.051	0.000	89	204297	25.0	21.7	
88 Ethylene Dibromide	107	7.173	7.173	0.000	98	207027	25.0	23.3	
89 1-Chlorohexane	91	7.559	7.559	0.000	93	246712	20.0	17.9	
90 Chlorobenzene	112	7.602	7.602	0.000	95	640914	25.0	22.6	
91 1,1,1,2-Tetrachloroethane	131	7.673	7.673	0.000	95	206706	25.0	22.7	
92 Ethylbenzene	106	7.673	7.673	0.000	98	350085	25.0	22.5	
93 m-Xylene & p-Xylene	106	7.795	7.795	0.000	0	430503	25.0	23.0	
94 o-Xylene	106	8.152	8.152	0.000	95	421016	25.0	22.2	
95 Styrene	104	8.166	8.166	0.000	95	707120	25.0	23.5	
96 Bromoform	173	8.345	8.345	0.000	95	127454	25.0	22.4	
97 Isopropylbenzene	105	8.488	8.488	0.000	95	1046015	25.0	23.2	
99 Cyclohexanone	55	8.588	8.588	0.000	88	347066	750.0	805.3	
100 1,1,2,2-Tetrachloroethane	83	8.774	8.774	0.000	93	285556	25.0	25.1	
101 Bromobenzene	156	8.810	8.810	0.000	95	249917	25.0	22.0	
102 trans-1,4-Dichloro-2-butene	53	8.810	8.817	-0.007	76	67918	25.0	23.0	
103 1,2,3-Trichloropropane	110	8.839	8.839	0.000	82	77558	25.0	22.5	
104 N-Propylbenzene	120	8.889	8.889	0.000	99	293717	25.0	23.4	
105 2-Chlorotoluene	126	8.982	8.982	0.000	97	260349	25.0	23.4	
106 1,3,5-Trimethylbenzene	105	9.060	9.060	0.000	94	871540	25.0	22.9	
107 4-Chlorotoluene	126	9.103	9.103	0.000	97	266769	25.0	23.1	
108 tert-Butylbenzene	119	9.368	9.368	0.000	92	725265	25.0	22.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 1,2,4-Trimethylbenzene	105	9.425	9.425	0.000	97	898677	25.0	22.8	
111 sec-Butylbenzene	134	9.589	9.589	0.000	94	216989	25.0	22.8	
112 1,3-Dichlorobenzene	146	9.718	9.711	0.007	97	480139	25.0	22.9	
113 4-Isopropyltoluene	119	9.732	9.732	0.000	97	903702	25.0	23.0	
114 1,4-Dichlorobenzene	146	9.811	9.811	0.000	95	489977	25.0	22.0	
116 n-Butylbenzene	91	10.140	10.140	0.000	98	803011	25.0	23.6	
117 1,2-Dichlorobenzene	146	10.168	10.168	0.000	97	462233	25.0	22.9	
118 1,2-Dibromo-3-Chloropropane	157	10.948	10.948	0.000	89	49461	25.0	21.8	
120 1,2,4-Trichlorobenzene	180	11.770	11.770	0.000	93	250633	25.0	24.7	
121 Hexachlorobutadiene	225	11.906	11.906	0.000	97	93162	25.0	25.1	
122 Naphthalene	128	12.035	12.035	0.000	97	640973	25.0	24.7	
123 1,2,3-Trichlorobenzene	180	12.256	12.256	0.000	95	189121	25.0	24.6	
S 135 1,2-Dichloroethene, Total (URS)	96				0		50.0	48.4	
S 139 Xylenes, Total (URS)	1				0		50.0	45.3	
S 136 1,3-Dichloropropene, Total	1				0		50.0	48.0	
S 138 Xylenes, Total	106				0		50.0	45.3	
S 140 Trihalomethanes, Total	1				0		100.0	89.8	
S 141 1,2-Dichloroethene, Total	1				0		50.0	48.4	

QC Flag Legend

Processing Flags

Reagents:

MV-Gas B_00133	Amount Added:	5.00	Units: uL	
MV-MegaMain B_00083	Amount Added:	12.50	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

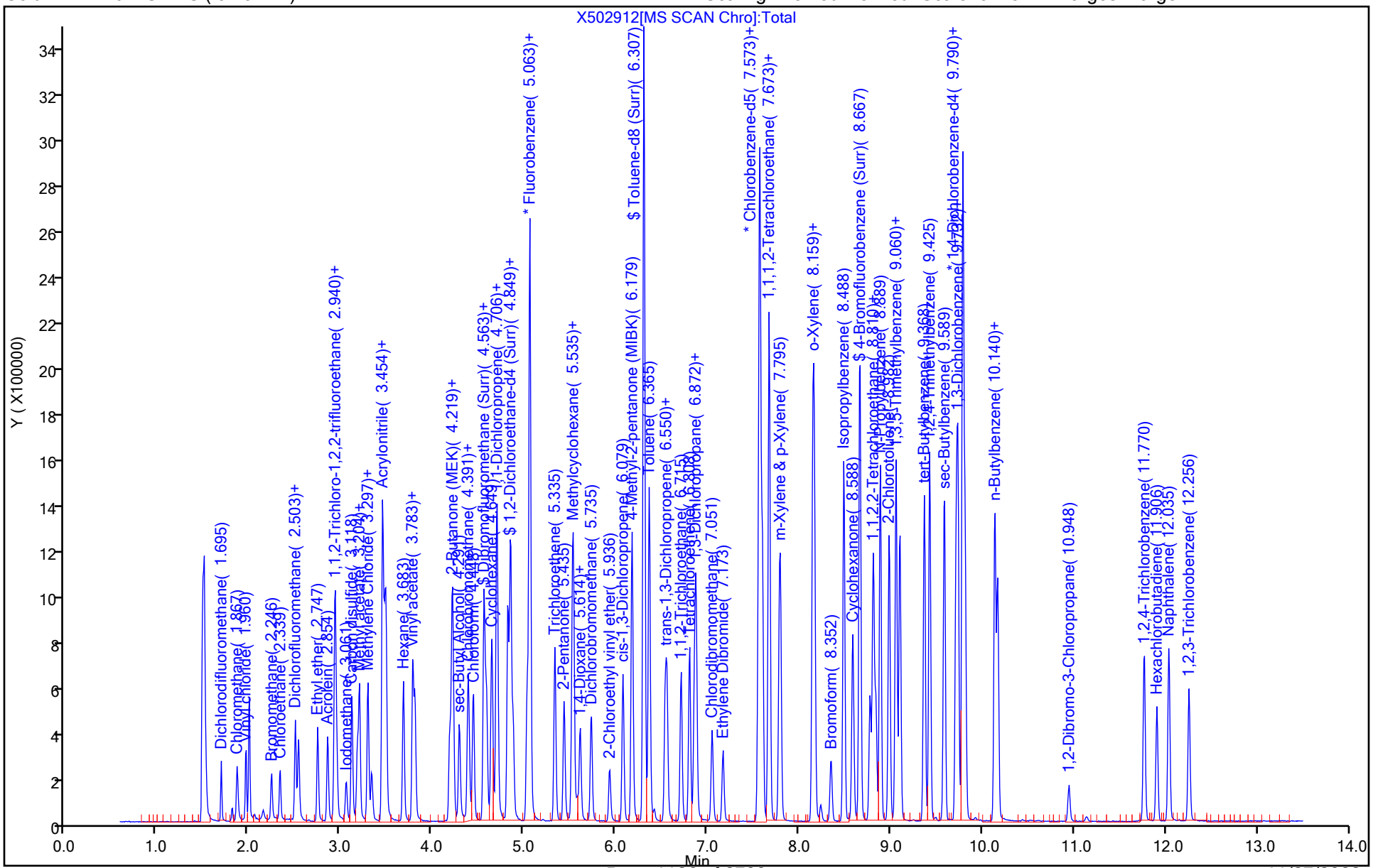
Report Date: 27-Apr-2023 12:40:09 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502912.D

Injection Date:	27-Apr-2023 11:57:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502912.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 11:57:30 ALS Bottle#: 6 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD M
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:15:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.2	102.44
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.4	96.82
$ 6 Toluene-d8 (Surr)	50.0	50.6	101.23
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.8	101.51

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610347/5

Matrix: Water | Lab File ID: X502913.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RXI-624SilMS ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	280		30	9.6
126-99-8	Chloroprene	25.1		3.0	1.2
126-98-7	Methacrylonitrile	270		15	5.3
80-62-6	Methyl methacrylate	49.3		4.0	1.1
107-12-0	Propionitrile	290		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-127
460-00-4	4-Bromofluorobenzene (Surr)	100		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	100		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502913.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 12:18:30 ALS Bottle#: 7 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD S
Operator ID: MED Instrument ID: VMS_X4

Method: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 27-Apr-2023 12:40:06 Calib Date: 07-Apr-2023 05:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D

Column 1 : Rxi-624Sil MS (0.25 mm) Det: MS SCAN
Process Host: CTX1649

First Level Reviewer: BX8N Date: 27-Apr-2023 12:39:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.063	5.063	0.000	99	2066644	50.0	50.0	
* 2 Chlorobenzene-d5	119	7.573	7.573	0.000	85	511317	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.790	9.790	0.000	94	795555	50.0	50.0	
$ 4 Dibromofluoromethane (Surr)	111	4.563	4.563	0.000	93	510098	50.0	51.3	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.820	4.820	0.000	0	501370	50.0	48.0	
$ 6 Toluene-d8 (Surr)	98	6.308	6.308	0.000	93	2179796	50.0	50.0	
$ 7 4-Bromofluorobenzene (Surr)	95	8.667	8.660	0.007	90	713411	50.0	50.2	
18 Ethanol	45	2.647	2.647	0.000	100	195768	1500.0	1789.6	
25 Isopropyl alcohol	45	3.040	3.040	0.000	99	137446	250.0	214.5	
28 Acetonitrile	41	3.161	3.161	0.000	99	322870	250.0	279.7	
41 Isopropyl ether	87	3.805	3.805	0.000	95	217052	25.0	28.1	
42 2-Chloro-1,3-butadiene	53	3.862	3.862	0.000	88	339516	25.0	25.1	
44 Tert-butyl ethyl ether	59	4.062	4.062	0.000	96	708557	25.0	26.5	
46 Ethyl acetate	43	4.198	4.198	0.000	98	414966	50.0	51.9	
49 Propionitrile	54	4.234	4.234	0.000	99	372660	250.0	290.2	
51 Methacrylonitrile	41	4.348	4.348	0.000	88	1355834	250.0	269.7	
64 Tert-amyl methyl ether	73	4.920	4.920	0.000	92	685016	25.0	26.5	
66 n-Butanol	56	5.199	5.199	0.000	83	159225	625.0	628.6	
71 Methyl methacrylate	100	5.542	5.542	0.000	91	134529	50.0	49.3	
75 2-Nitropropane	41	5.900	5.900	0.000	98	75508	50.0	26.1	
98 cis-1,4-Dichloro-2-butene	53	8.538	8.538	0.000	0	135980	50.0	43.4	
115 1,2,3-Trimethylbenzene	105	9.833	9.833	0.000	98	988148	25.0	22.9	
119 1,3,5-Trichlorobenzene	180	11.134	11.134	0.000	97	317098	25.0	23.6	
166 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00062	Amount Added:	25.00	Units: uL	
mv-IS_SS_00058	Amount Added:	5.00	Units: uL	Run Reagent

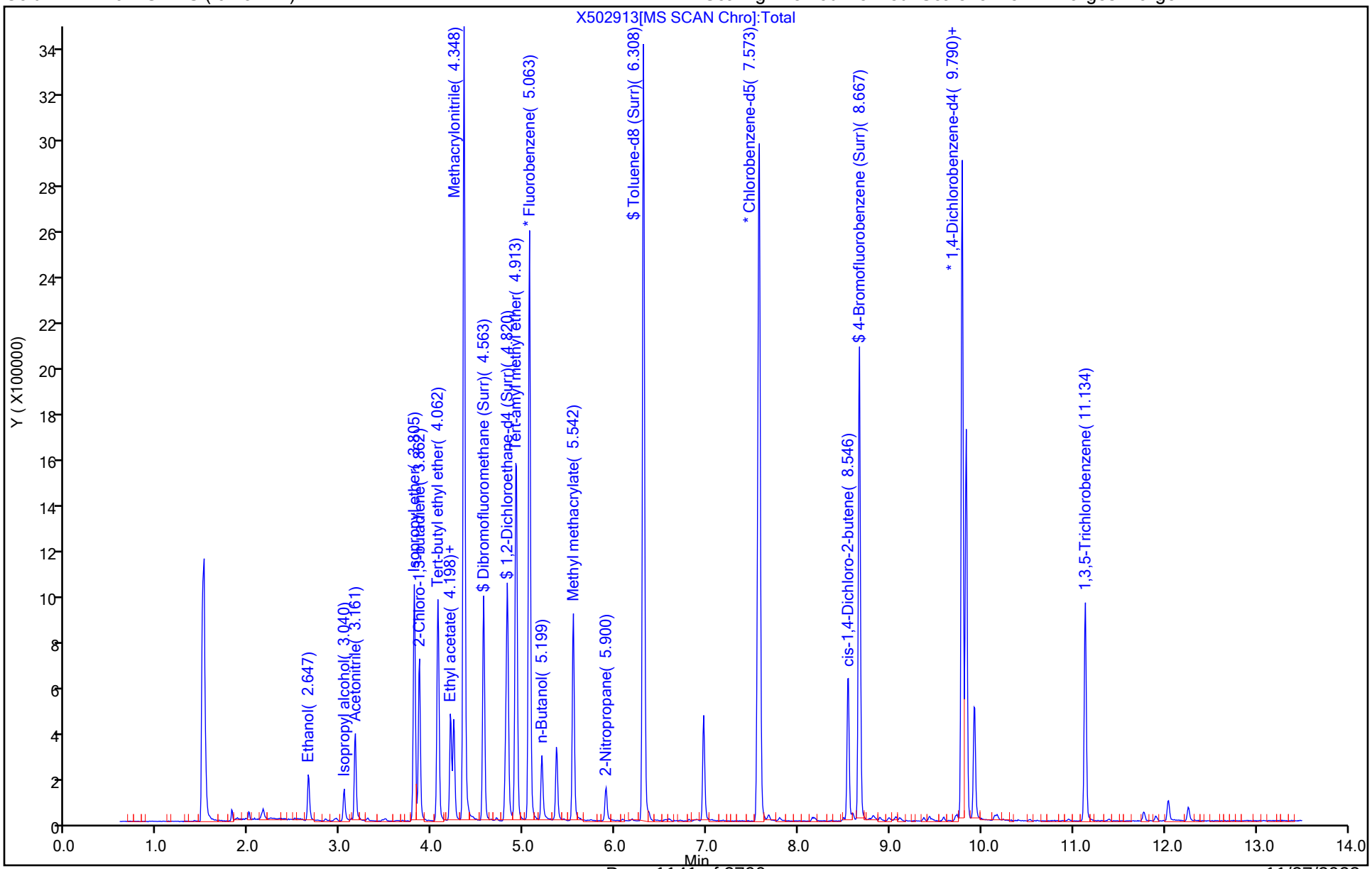
Report Date: 27-Apr-2023 12:40:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502913.D

Injection Date:	27-Apr-2023 12:18:30	Instrument ID:	VMS_X4	Operator ID:	MED
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	VMS_X4_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: Rxi-624Sil MS (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\X502913.D				
Lims ID:	LCSD				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	27-Apr-2023 12:18:30	ALS Bottle#:	7	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	LCSD S				
Operator ID:	MED	Instrument ID:	VMS_X4		
Method:	\\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b\VMS_X4_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	27-Apr-2023 12:40:06	Calib Date:	07-Apr-2023 05:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b\X502135.D				
Column 1 :	Rxi-624Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1649				

First Level Reviewer: BX8N Date: 27-Apr-2023 12:39:54

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	51.3	102.63
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	48.0	96.04
$ 6 Toluene-d8 (Surr)	50.0	50.0	100.09
$ 7 4-Bromofluorobenzene (Surr)	50.0	50.2	100.36

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610464/4

Matrix: Water | Lab File ID: MS1_8604.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 17:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	43.8		1.0	0.58
71-55-6	1,1,1-Trichloroethane	46.3		1.0	0.39
79-34-5	1,1,2,2-Tetrachloroethane	46.0		1.0	0.21
79-00-5	1,1,2-Trichloroethane	49.7		1.0	0.27
75-34-3	1,1-Dichloroethane	52.0		1.0	0.22
75-35-4	1,1-Dichloroethene	49.0		1.0	0.23
563-58-6	1,1-Dichloropropene	50.2		1.0	0.42
96-18-4	1,2,3-Trichloropropane	44.2		2.5	0.86
120-82-1	1,2,4-Trichlorobenzene	45.7		1.0	0.58
96-12-8	1,2-Dibromo-3-Chloropropane	35.6		5.0	1.8
106-93-4	1,2-Dibromoethane	45.7		1.0	0.40
95-50-1	1,2-Dichlorobenzene	48.0		1.0	0.37
107-06-2	1,2-Dichloroethane	46.3		1.0	0.54
78-87-5	1,2-Dichloropropane	51.1		1.0	0.52
541-73-1	1,3-Dichlorobenzene	48.9		1.0	0.33
142-28-9	1,3-Dichloropropane	50.3		1.0	0.38
106-46-7	1,4-Dichlorobenzene	47.0		1.0	0.39
594-20-7	2,2-Dichloropropane	47.9		1.0	0.38
78-93-3	2-Butanone (MEK)	163		15	6.0
591-78-6	2-Hexanone	161		5.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	172		5.0	0.98
67-64-1	Acetone	162		15	6.6
107-02-8	Acrolein	475		20	4.9
107-13-1	Acrylonitrile	480		20	4.5
107-05-1	Allyl chloride	50.3		2.0	0.17
71-43-2	Benzene	51.6		1.0	0.31
75-25-2	Bromoform	37.2		2.0	1.2
74-83-9	Bromomethane	43.0		5.0	2.4
75-15-0	Carbon disulfide	48.5		2.0	0.63
56-23-5	Carbon tetrachloride	42.1		1.0	0.57
108-90-7	Chlorobenzene	49.9		1.0	0.42
74-97-5	Chlorobromomethane	47.0		1.0	0.40
124-48-1	Chlorodibromomethane	42.0		2.0	0.62
75-00-3	Chloroethane	49.1		4.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610464/4

Matrix: Water | Lab File ID: MS1_8604.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 17:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	48.9		1.0	0.36
74-87-3	Chloromethane	51.0		2.0	0.75
156-59-2	cis-1,2-Dichloroethene	50.8		1.0	0.32
10061-01-5	cis-1,3-Dichloropropene	47.9		2.0	0.63
74-95-3	Dibromomethane	48.0		1.0	0.34
75-27-4	Dichlorobromomethane	45.1		1.0	0.39
75-71-8	Dichlorodifluoromethane	40.0		3.0	0.96
97-63-2	Ethyl methacrylate	44.9		3.0	0.86
100-41-4	Ethylbenzene	48.0		1.0	0.30
74-88-4	Iodomethane	35.4		5.0	2.6
78-83-1	Isobutyl alcohol	937		110	37
75-09-2	Methylene Chloride	50.8		2.0	0.94
179601-23-1	m-Xylene & p-Xylene	48.4		2.0	0.36
95-47-6	o-Xylene	48.0		1.0	0.33
100-42-5	Styrene	50.0		1.0	0.36
127-18-4	Tetrachloroethene	48.0		1.0	0.40
108-88-3	Toluene	50.4		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	48.6		1.0	0.37
10061-02-6	trans-1,3-Dichloropropene	45.7		2.0	0.65
110-57-6	trans-1,4-Dichloro-2-butene	37.5		3.0	1.4
79-01-6	Trichloroethene	47.1		1.0	0.30
75-69-4	Trichlorofluoromethane	41.8		2.0	0.57
108-05-4	Vinyl acetate	102		3.0	0.94
75-01-4	Vinyl chloride	49.3		2.0	0.51
1330-20-7	Xylenes, Total	96.4		1.0	0.33

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-127
460-00-4	4-Bromofluorobenzene (Surr)	103		78-120
1868-53-7	Dibromofluoromethane (Surr)	104		77-120
2037-26-5	Toluene-d8 (Surr)	105		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8604.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 17:40:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Misc. Info.: 280-0120816-033
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1287518	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	90	306035	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	96	486416	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	93	317984	50.0	51.9	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	420639	50.0	50.7	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1383815	50.0	52.7	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	83	492695	50.0	51.6	
11 Dichlorodifluoromethane	85	1.813	1.813	0.000	99	247077	50.0	40.0	
12 Chloromethane	50	2.009	2.009	0.000	99	303377	50.0	51.0	
13 Vinyl chloride	62	2.135	2.135	0.000	98	302378	50.0	49.3	
15 Bromomethane	94	2.498	2.498	0.000	92	139185	50.0	43.0	
16 Chloroethane	64	2.623	2.623	0.000	100	185454	50.0	49.1	
17 Dichlorofluoromethane	67	2.861	2.861	0.000	97	413649	50.0	48.1	
18 Trichlorofluoromethane	101	2.889	2.889	0.000	98	301581	50.0	41.8	
20 Ethyl ether	59	3.168	3.182	-0.014	96	229844	50.0	50.3	
22 Acrolein	56	3.322	3.322	0.000	99	331413	493.8	475.4	
23 1,1-Dichloroethene	96	3.420	3.419	0.001	94	195631	50.0	49.0	
24 1,1,2-Trichloro-1,2,2-trifluoroe	151	3.420	3.419	0.001	95	140900	50.0	48.3	
25 Acetone	43	3.447	3.447	0.000	99	359763	200.0	161.6	
26 Iodomethane	142	3.559	3.559	0.000	100	188904	50.0	35.4	
28 Carbon disulfide	76	3.629	3.629	0.000	100	695175	50.0	48.5	
30 Methyl acetate	43	3.741	3.755	-0.014	99	434046	100.0	85.9	
31 3-Chloro-1-propene	41	3.769	3.769	0.000	90	463324	50.0	50.3	
32 Methylene Chloride	84	3.894	3.894	0.000	97	252463	50.0	50.8	
33 2-Methyl-2-propanol	59	3.964	3.964	0.000	99	272016	500.0	373.1	
34 Acrylonitrile	53	4.104	4.104	0.000	98	1130100	500.0	479.9	
35 Methyl tert-butyl ether	73	4.132	4.132	0.000	97	760056	50.0	49.2	
36 trans-1,2-Dichloroethene	96	4.132	4.146	-0.014	94	224900	50.0	48.6	
37 Hexane	57	4.383	4.383	0.000	95	338076	50.0	51.0	
39 Vinyl acetate	43	4.523	4.523	0.000	97	1231929	100.0	102.1	
40 1,1-Dichloroethane	63	4.537	4.537	0.000	96	478092	50.0	52.0	
46 2-Butanone (MEK)	43	5.012	5.012	0.000	100	560904	200.0	162.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
49 2,2-Dichloropropane	77	5.040	5.040	0.000	90	373750	50.0	47.9	
48 cis-1,2-Dichloroethene	96	5.040	5.040	0.000	85	253029	50.0	50.8	
51 sec-Butyl Alcohol	45	5.165	5.165	0.000	99	554558	1200.0	905.3	
53 Chlorobromomethane	128	5.249	5.249	0.000	94	107140	50.0	47.0	
54 Tetrahydrofuran	42	5.249	5.249	0.000	90	188395	100.0	87.0	
55 Chloroform	83	5.319	5.319	0.000	95	409181	50.0	48.9	
56 1,1,1-Trichloroethane	97	5.473	5.473	0.000	98	322712	50.0	46.3	
57 Cyclohexane	56	5.542	5.542	0.000	93	452131	50.0	50.3	
58 1,1-Dichloropropene	75	5.612	5.612	0.000	93	342736	50.0	50.2	
59 Carbon tetrachloride	117	5.612	5.612	0.000	77	247794	50.0	42.1	
60 Isobutyl alcohol	41	5.654	5.654	0.000	94	240213	1250.0	936.8	
63 Benzene	78	5.780	5.780	0.000	98	1026355	50.0	51.6	
64 1,2-Dichloroethane	62	5.822	5.822	0.000	97	359507	50.0	46.3	
66 n-Heptane	43	6.003	6.003	0.000	96	290153	50.0	46.9	
68 Trichloroethene	95	6.352	6.352	0.000	97	231523	50.0	47.1	
69 2-Pentanone	43	6.478	6.478	0.000	98	696625	160.0	132.4	
70 Methylcyclohexane	55	6.562	6.548	0.014	93	313330	50.0	48.1	
71 1,2-Dichloropropane	63	6.576	6.576	0.000	96	280436	50.0	51.1	
73 1,4-Dioxane	88	6.632	6.632	0.000	99	67567	1000.0	762.6	
74 Dibromomethane	93	6.660	6.660	0.000	93	144437	50.0	48.0	
75 Dichlorobromomethane	83	6.799	6.799	0.000	98	295134	50.0	45.1	
77 2-Chloroethyl vinyl ether	63	7.023	7.023	0.000	93	165356	50.0	42.3	
78 cis-1,3-Dichloropropene	75	7.176	7.176	0.000	92	419905	50.0	47.9	
79 4-Methyl-2-pentanone (MIBK)	43	7.302	7.302	0.000	98	1130719	200.0	171.7	
82 Toluene	91	7.484	7.484	0.000	98	1038043	50.0	50.4	
84 trans-1,3-Dichloropropene	75	7.679	7.679	0.000	98	370943	50.0	45.7	
85 Ethyl methacrylate	69	7.707	7.707	0.000	92	334613	50.0	44.9	
87 1,1,2-Trichloroethane	97	7.875	7.861	0.014	92	214103	50.0	49.7	
89 Tetrachloroethene	164	7.959	7.959	0.000	94	161912	50.0	48.0	
90 1,3-Dichloropropane	76	8.028	8.014	0.014	96	411650	50.0	50.3	
91 2-Hexanone	43	8.042	8.042	0.000	97	776699	200.0	160.7	
95 Chlorodibromomethane	129	8.224	8.224	0.000	91	189150	50.0	42.0	
96 Ethylene Dibromide	107	8.350	8.350	0.000	98	206902	50.0	45.7	
98 1-Chlorohexane	91	8.755	8.755	0.000	92	242863	40.0	38.8	
99 Chlorobenzene	112	8.797	8.796	0.001	92	636576	50.0	49.9	
100 1,1,1,2-Tetrachloroethane	131	8.880	8.880	0.000	43	192040	50.0	43.8	
101 Ethylbenzene	106	8.880	8.880	0.000	99	349138	50.0	48.0	
102 m-Xylene & p-Xylene	106	9.006	9.006	0.000	0	429745	50.0	48.4	
103 o-Xylene	106	9.369	9.369	0.000	97	425971	50.0	48.0	
104 Styrene	104	9.397	9.397	0.000	96	744297	50.0	50.0	
106 Bromoform	173	9.579	9.579	0.000	94	104297	50.0	37.2	
107 Isopropylbenzene	105	9.732	9.718	0.014	96	1029166	50.0	49.6	
109 Cyclohexanone	55	9.830	9.830	0.000	96	430834	1500.0	1398.6	
110 1,1,2,2-Tetrachloroethane	83	10.026	10.026	0.000	94	284263	50.0	46.0	
111 Bromobenzene	156	10.054	10.053	0.001	97	232198	50.0	47.7	
112 trans-1,4-Dichloro-2-butene	53	10.067	10.053	0.014	78	68087	50.0	37.5	
113 1,2,3-Trichloropropane	110	10.095	10.081	0.014	85	83461	50.0	44.2	
114 N-Propylbenzene	120	10.137	10.137	0.000	99	277320	50.0	49.4	
115 2-Chlorotoluene	126	10.235	10.235	0.000	95	235553	50.0	49.1	
116 1,3,5-Trimethylbenzene	105	10.305	10.305	0.000	94	864124	50.0	50.1	
117 4-Chlorotoluene	126	10.361	10.347	0.014	98	253472	50.0	49.6	
118 tert-Butylbenzene	119	10.626	10.626	0.000	95	683619	50.0	48.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 1,2,4-Trimethylbenzene	105	10.682	10.682	0.000	98	904734	50.0	49.7	
120 sec-Butylbenzene	134	10.850	10.850	0.000	95	189539	50.0	49.0	
121 1,3-Dichlorobenzene	146	10.975	10.975	0.000	96	445932	50.0	48.9	
122 4-Isopropyltoluene	119	11.003	10.989	0.014	97	845078	50.0	48.9	
123 1,4-Dichlorobenzene	146	11.087	11.073	0.014	95	457113	50.0	47.0	
125 n-Butylbenzene	91	11.408	11.408	0.000	98	760125	50.0	48.3	
127 1,2-Dichlorobenzene	146	11.450	11.436	0.014	96	417644	50.0	48.0	
128 1,2-Dibromo-3-Chloropropane	157	12.232	12.232	0.000	79	44608	50.0	35.6	
130 1,2,4-Trichlorobenzene	180	13.056	13.056	0.000	93	222773	50.0	45.7	
131 Hexachlorobutadiene	225	13.196	13.196	0.000	97	81558	50.0	43.3	
132 Naphthalene	128	13.336	13.336	0.000	97	635398	50.0	39.2	
134 1,2,3-Trichlorobenzene	180	13.559	13.559	0.000	94	174749	50.0	42.2	
S 149 1,2-Dichloroethene, Total (URS)	96				0		100.0	99.3	
S 151 Trihalomethanes, Total	1				0		200.0	173.2	
S 150 1,2-Dichloroethene, Total	1				0		100.0	99.3	
S 156 1,3-Dichloropropene, Total	1				0		100.0	93.5	
S 155 Xylenes, Total	106				0		100.0	96.4	
S 153 Xylenes, Total (URS)	1				0		100.0	96.4	

Reagents:

MV-Gas A_00151	Amount Added: 10.00	Units: uL	
MV-MegaMainA_00087	Amount Added: 25.00	Units: uL	
mv-IS_SS_00059	Amount Added: 5.00	Units: uL	Run Reagent

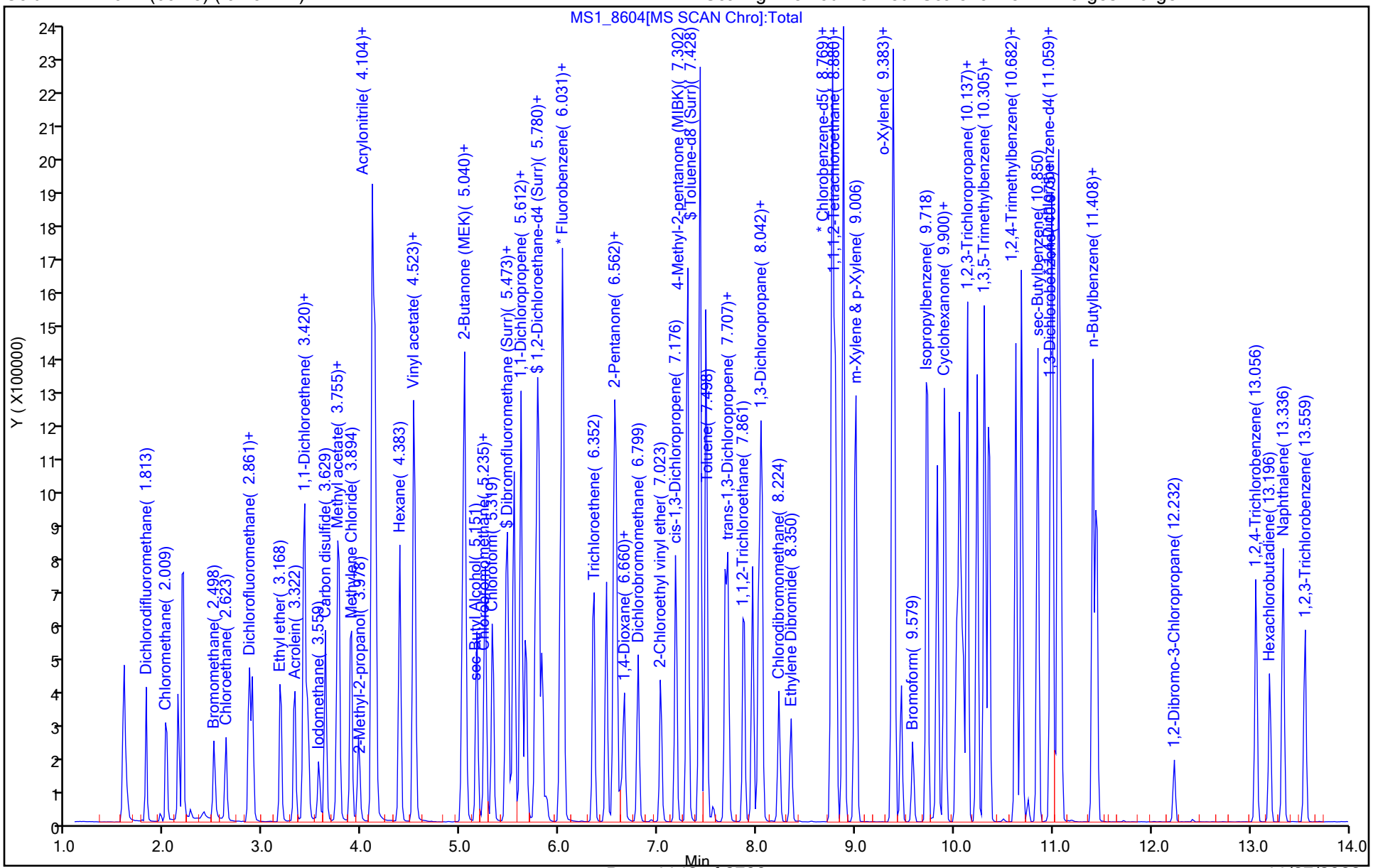
Report Date: 28-Apr-2023 09:53:24 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8604.D

Injection Date:	27-Apr-2023 17:40:30	Instrument ID:	VMS_MS1	Operator ID:	CCF
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



11/27/2023
7:19 PM

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8604.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 17:40:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Misc. Info.: 280-0120816-033
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	51.9	103.79
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	50.7	101.31
$ 7 Toluene-d8 (Surr)	50.0	52.7	105.37
$ 8 4-Bromofluorobenzene (Surr)	50.0	51.6	103.12

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-610464/5

Matrix: Water | Lab File ID: MS1_8605.D

Analysis Method: 8260D | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2023 18:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 610464 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-05-8	Acetonitrile	255		30	9.6
126-99-8	Chloroprene	26.1		3.0	1.2
126-98-7	Methacrylonitrile	249		15	5.3
80-62-6	Methyl methacrylate	43.2		4.0	1.1
107-12-0	Propionitrile	244		20	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-127
460-00-4	4-Bromofluorobenzene (Surr)	104		78-120
1868-53-7	Dibromofluoromethane (Surr)	103		77-120
2037-26-5	Toluene-d8 (Surr)	105		80-125

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8605.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 18:01:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsds
Misc. Info.: 280-0120816-033
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 18:40:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.031	6.031	0.000	98	1274423	50.0	50.0	
* 2 Chlorobenzene-d5	119	8.769	8.769	0.000	89	303452	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.059	11.059	0.000	97	477579	50.0	50.0	
$ 5 Dibromofluoromethane (Surr)	111	5.459	5.459	0.000	92	311035	50.0	51.3	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.766	5.752	0.014	0	424715	50.0	51.7	
$ 7 Toluene-d8 (Surr)	98	7.428	7.428	0.000	94	1362291	50.0	52.3	
$ 8 4-Bromofluorobenzene (Surr)	95	9.900	9.900	0.000	81	489445	50.0	52.2	
19 Ethanol	45	3.070	3.071	-0.001	100	138186	1500.0	1542.9	
27 Isopropyl alcohol	45	3.587	3.587	0.000	98	107617	250.0	250.8	
29 Acetonitrile	41	3.727	3.727	0.000	99	260383	250.0	255.2	
41 Isopropyl ether	87	4.551	4.551	0.000	94	109076	25.0	26.1	
42 2-Chloro-1,3-butadiene	53	4.607	4.607	0.000	93	207560	25.0	26.1	
44 Tert-butyl ethyl ether	59	4.872	4.872	0.000	98	432510	25.0	27.6	
47 Ethyl acetate	43	5.040	5.040	0.000	99	308488	50.0	49.5	
50 Propionitrile	54	5.082	5.082	0.000	99	250763	250.0	243.6	
52 Methacrylonitrile	41	5.207	5.207	0.000	95	994295	250.0	248.8	
65 Tert-amyl methyl ether	73	5.878	5.878	0.000	90	383703	25.0	26.5	
67 n-Butanol	56	6.227	6.227	0.000	90	115041	625.0	749.2	
72 Methyl methacrylate	100	6.590	6.590	0.000	94	69854	50.0	43.2	
76 2-Nitropropane	41	6.995	6.995	0.000	98	68132	50.0	49.5	
108 cis-1,4-Dichloro-2-butene	53	9.774	9.774	0.000	0	60279	50.0	33.9	
124 1,2,3-Trimethylbenzene	105	11.101	11.101	0.000	98	436225	25.0	21.8	
129 1,3,5-Trichlorobenzene	180	12.414	12.414	0.000	96	117236	25.0	18.0	
146 t-Amyl alcohol	1		0.000				ND	ND	
145 Ethyl acrylate	55		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00080	Amount Added: 25.00	Units: uL	
mv-IS_SS_00059	Amount Added: 5.00	Units: uL	Run Reagent

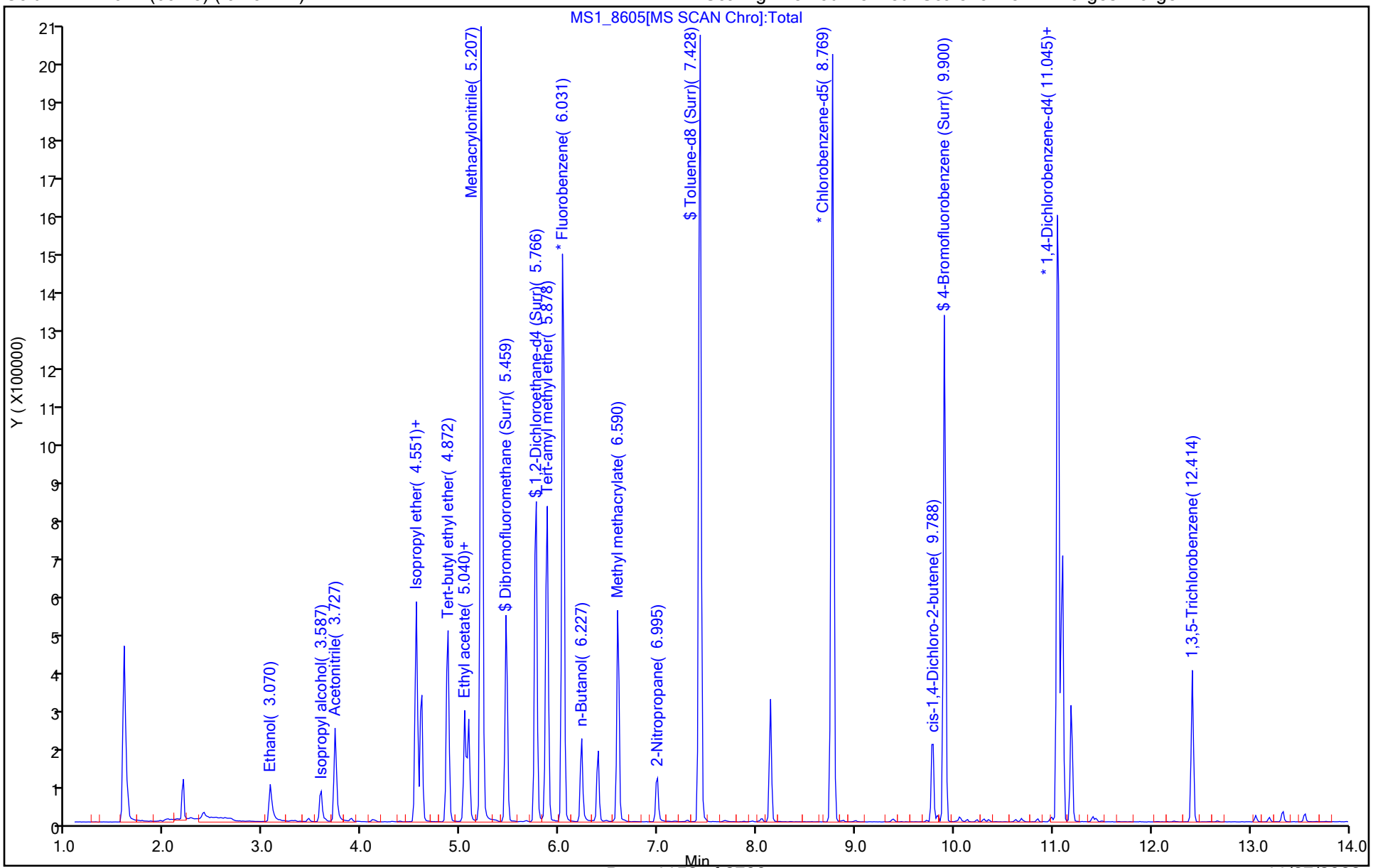
Report Date: 28-Apr-2023 09:53:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8605.D

Injection Date:	27-Apr-2023 18:01:30	Instrument ID:	VMS_MS1	Operator ID:	CCF
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMS1_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\MS1_8605.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 27-Apr-2023 18:01:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsds
Misc. Info.: 280-0120816-033
Operator ID: CCF Instrument ID: VMS_MS1

Method: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2023 09:53:21 Calib Date: 18-Apr-2023 18:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b\MS1_8197.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX1608

First Level Reviewer: AK2J Date: 27-Apr-2023 18:40:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	51.3	102.57
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.7	103.34
$ 7 Toluene-d8 (Surr)	50.0	52.3	104.61
$ 8 4-Bromofluorobenzene (Surr)	50.0	52.2	104.34

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 10/22/2022 11:07

Analysis Batch Number: 590907 End Date: 10/22/2022 17:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-590907/1		10/22/2022 11:07	1	X43661.D	DB-624 (60.25) 0.25(mm)
STD005 280-590907/13 IC		10/22/2022 11:33	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 11:33	1		DB-624 (60.25) 0.25(mm)
ICIS 280-590907/18		10/22/2022 11:54	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 11:54	1		DB-624 (60.25) 0.25(mm)
STD010 280-590907/14 IC		10/22/2022 12:14	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 12:14	1		DB-624 (60.25) 0.25(mm)
STD020 280-590907/15 IC		10/22/2022 12:35	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 12:35	1		DB-624 (60.25) 0.25(mm)
STD050 280-590907/16 IC		10/22/2022 12:55	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 12:55	1		DB-624 (60.25) 0.25(mm)
STD10 280-590907/17 IC		10/22/2022 13:16	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 13:16	1		DB-624 (60.25) 0.25(mm)
STD75 280-590907/19 IC		10/22/2022 13:36	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 13:36	1		DB-624 (60.25) 0.25(mm)
STD100 280-590907/20 IC		10/22/2022 13:57	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 13:57	1		DB-624 (60.25) 0.25(mm)
STD200 280-590907/21 IC		10/22/2022 14:18	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 14:18	1		DB-624 (60.25) 0.25(mm)
ICV 280-590907/22		10/22/2022 14:59	1		DB-624 (60.25) 0.25(mm)
STD010 280-590907/23 IC		10/22/2022 15:19	1	X43673.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 15:19	1		DB-624 (60.25) 0.25(mm)
STD020 280-590907/24 IC		10/22/2022 15:40	1	X43674.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 15:40	1		DB-624 (60.25) 0.25(mm)
STD050 280-590907/25 IC		10/22/2022 16:01	1	X43675.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 16:01	1		DB-624 (60.25) 0.25(mm)
STD10 280-590907/26 IC		10/22/2022 16:21	1	X43676.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 16:21	1		DB-624 (60.25) 0.25(mm)
STD50 280-590907/27 IC		10/22/2022 16:42	1	X43677.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 16:42	1		DB-624 (60.25) 0.25(mm)
STD100 280-590907/28 IC		10/22/2022 17:02	1	X43678.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 17:02	1		DB-624 (60.25) 0.25(mm)
STD200 280-590907/29 IC		10/22/2022 17:23	1	X43679.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2022 17:23	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_MS1 Start Date: 12/28/2022 07:14

Analysis Batch Number: 597846 End Date: 12/28/2022 14:55

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-597846/1		12/28/2022 07:14	1	MS1_4145.D	DB-624 (60.25) 0.25(mm)
STD1 280-597846/12 IC		12/28/2022 11:59	1	MS1_4150.D	DB-624 (60.25) 0.25(mm)
STD2 280-597846/13 IC		12/28/2022 12:21	1	MS1_4151.D	DB-624 (60.25) 0.25(mm)
STD5 280-597846/14 IC		12/28/2022 12:43	1	MS1_4152.D	DB-624 (60.25) 0.25(mm)
STD10 280-597846/15 IC		12/28/2022 13:05	1	MS1_4153.D	DB-624 (60.25) 0.25(mm)
STD50 280-597846/16 IC		12/28/2022 13:27	1	MS1_4154.D	DB-624 (60.25) 0.25(mm)
STD75 280-597846/17 IC		12/28/2022 13:49	1	MS1_4155.D	DB-624 (60.25) 0.25(mm)
STD100 280-597846/18 IC		12/28/2022 14:11	1	MS1_4156.D	DB-624 (60.25) 0.25(mm)
STD200 280-597846/19 IC		12/28/2022 14:33	1	MS1_4157.D	DB-624 (60.25) 0.25(mm)
ICV 280-597846/20		12/28/2022 14:55	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/07/2023 02:33

Analysis Batch Number: 607881 End Date: 04/07/2023 06:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-607881/1		04/07/2023 02:33	1	X502125.D	RXI-624SilMS 0.25(mm)
STD 280-607881/19 IC		04/07/2023 03:14	1	X502127.D	RXI-624SilMS 0.25(mm)
STD 280-607881/18 IC		04/07/2023 03:34	1	X502128.D	RXI-624SilMS 0.25(mm)
STD 280-607881/16 IC		04/07/2023 03:55	1	X502129.D	RXI-624SilMS 0.25(mm)
STD 280-607881/17 IC		04/07/2023 04:15	1	X502130.D	RXI-624SilMS 0.25(mm)
STD 280-607881/15 IC		04/07/2023 04:36	1	X502131.D	RXI-624SilMS 0.25(mm)
ICIS 280-607881/14		04/07/2023 04:56	1	X502132.D	RXI-624SilMS 0.25(mm)
STD 280-607881/13 IC		04/07/2023 05:17	1	X502133.D	RXI-624SilMS 0.25(mm)
STD 280-607881/12 IC		04/07/2023 05:38	1	X502134.D	RXI-624SilMS 0.25(mm)
STD 280-607881/11 IC		04/07/2023 05:58	1	X502135.D	RXI-624SilMS 0.25(mm)
ICV 280-607881/20		04/07/2023 06:39	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/10/2023 21:51

Analysis Batch Number: 608203 End Date: 04/11/2023 08:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-608203/1		04/10/2023 21:51	1	X502169.D	RXI-624SilMS 0.25(mm)
CCV 280-608203/3		04/10/2023 22:47	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 22:47	1		RXI-624SilMS 0.25(mm)
CCV 280-608203/2		04/10/2023 23:09	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 23:09	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 23:30	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/10/2023 23:50	1		RXI-624SilMS 0.25(mm)
RINSE 280-608203/6		04/11/2023 00:11	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 00:32	1		RXI-624SilMS 0.25(mm)
ICV 280-608203/8		04/11/2023 00:52	1	X502177.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 01:13	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 01:33	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 01:54	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 02:14	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 02:35	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 02:55	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 03:16	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 03:36	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 03:57	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 04:17	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 04:38	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 04:59	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 05:20	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 05:41	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 06:02	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 06:23	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 06:44	10		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 07:05	20		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 07:25	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/11/2023 07:46	1		RXI-624SilMS 0.25(mm)
CCVC 280-608203/32		04/11/2023 08:07	1		RXI-624SilMS 0.25(mm)
CCVC 280-608203/33		04/11/2023 08:27	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_MS1 Start Date: 04/18/2023 09:29

Analysis Batch Number: 609046 End Date: 04/18/2023 19:19

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-609046/1		04/18/2023 09:29	1	MS1_8181.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/34		04/18/2023 11:03	1	MS1_8185.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/35		04/18/2023 11:24	1	MS1_8186.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/36		04/18/2023 11:45	1	MS1_8187.D	DB-624 (60.25) 0.25(mm)
ICIS 280-609046/37		04/18/2023 12:06	1	MS1_8188.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/38		04/18/2023 12:27	1	MS1_8189.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/39		04/18/2023 12:49	1	MS1_8190.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/42		04/18/2023 18:15	1	MS1_8195.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/41		04/18/2023 18:36	1	MS1_8196.D	DB-624 (60.25) 0.25(mm)
IC 280-609046/40		04/18/2023 18:58	1	MS1_8197.D	DB-624 (60.25) 0.25(mm)
ICV 280-609046/43		04/18/2023 19:19	1	MS1_8198.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/26/2023 09:51

Analysis Batch Number: 610121 End Date: 04/26/2023 20:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-610121/1		04/26/2023 09:51	1	X502846A.D	RXI-624SilMS 0.25(mm)
CCV 280-610121/3		04/26/2023 09:51	1	X502846.D	RXI-624SilMS 0.25(mm)
LCS 280-610121/1003		04/26/2023 09:51	1	-X502846-LCS.d	RXI-624SilMS 0.25(mm)
CCV 280-610121/2		04/26/2023 10:19	1	X502847.D	RXI-624SilMS 0.25(mm)
LCS 280-610121/1002		04/26/2023 10:19	1	-X502847-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-610121/4		04/26/2023 10:41	1	X502848.D	RXI-624SilMS 0.25(mm)
LCSD 280-610121/5		04/26/2023 11:02	1	X502849.D	RXI-624SilMS 0.25(mm)
MB 280-610121/7		04/26/2023 11:43	1	X502851.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 12:18	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 12:38	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 12:59	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 13:19	1		RXI-624SilMS 0.25(mm)
280-175123-9	EB-03-20230413	04/26/2023 13:40	1	X502856.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 14:00	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 14:21	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 14:41	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 15:02	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 15:22	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 15:43	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 16:03	1		RXI-624SilMS 0.25(mm)
280-175123-1	MW-119D-20230413	04/26/2023 16:24	1	X502864.D	RXI-624SilMS 0.25(mm)
280-175123-2	MW-119S-20230413	04/26/2023 16:45	2	X502865.D	RXI-624SilMS 0.25(mm)
280-175123-3	RW-3-20230413	04/26/2023 17:06	2	X502866.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 17:27	4		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 17:47	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 18:08	2000		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 18:28	2000		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 18:49	500		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 19:09	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/26/2023 19:30	1		RXI-624SilMS 0.25(mm)
CCVC 280-610121/34		04/26/2023 19:51	1		RXI-624SilMS 0.25(mm)
CCVC 280-610121/35		04/26/2023 20:11	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_X4 Start Date: 04/27/2023 10:51

Analysis Batch Number: 610347 End Date: 04/27/2023 20:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-610347/1		04/27/2023 10:51	1	X502909.D	RXI-624SilMS 0.25(mm)
CCV 280-610347/2		04/27/2023 11:12	1	X502910.D	RXI-624SilMS 0.25(mm)
LCS 280-610347/1002		04/27/2023 11:12	1	-X502910-LCS.d	RXI-624SilMS 0.25(mm)
CCV 280-610347/3		04/27/2023 11:36	1	X502911.D	RXI-624SilMS 0.25(mm)
LCS 280-610347/1003		04/27/2023 11:36	1	-X502911-LCS.d	RXI-624SilMS 0.25(mm)
LCSD 280-610347/4		04/27/2023 11:57	1	X502912.D	RXI-624SilMS 0.25(mm)
LCSD 280-610347/5		04/27/2023 12:18	1	X502913.D	RXI-624SilMS 0.25(mm)
MB 280-610347/7		04/27/2023 12:59	1	X502915.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 13:20	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 13:41	1		RXI-624SilMS 0.25(mm)
280-175123-8	EB-04-20230414	04/27/2023 14:01	1	X502918.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 14:22	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 14:42	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 15:03	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 15:23	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 15:44	1		RXI-624SilMS 0.25(mm)
280-175123-4	MW-113D-20230414	04/27/2023 16:04	1	X502924.D	RXI-624SilMS 0.25(mm)
280-175123-5	MW-113S-20230414	04/27/2023 16:25	1	X502925.D	RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 16:46	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 17:06	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 17:27	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 17:47	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 18:07	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 18:28	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 18:49	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 19:10	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 19:31	2		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 19:51	1		RXI-624SilMS 0.25(mm)
ZZZZZ		04/27/2023 20:12	1		RXI-624SilMS 0.25(mm)
CCVC 280-610347/33		04/27/2023 20:32	1		RXI-624SilMS 0.25(mm)
CCVC 280-610347/34		04/27/2023 20:53	1		RXI-624SilMS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: VMS_MS1 Start Date: 04/27/2023 16:12

Analysis Batch Number: 610464 End Date: 04/28/2023 02:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-610464/1		04/27/2023 16:12	1	MS1_8602a.D	DB-624 (60.25) 0.25(mm)
CCV 280-610464/2		04/27/2023 16:12	1	MS1_8602b.D	DB-624 (60.25) 0.25(mm)
LCS 280-610464/1002		04/27/2023 16:12	1	-MS1_8602b-LCS.d	DB-624 (60.25) 0.25(mm)
CCV 280-610464/3		04/27/2023 16:34	1	MS1_8603a.D	DB-624 (60.25) 0.25(mm)
LCS 280-610464/1003		04/27/2023 16:34	1	-MS1_8603a-LCS.d	DB-624 (60.25) 0.25(mm)
LCSD 280-610464/4		04/27/2023 17:40	1	MS1_8604.D	DB-624 (60.25) 0.25(mm)
LCSD 280-610464/5		04/27/2023 18:01	1	MS1_8605.D	DB-624 (60.25) 0.25(mm)
MB 280-610464/7		04/27/2023 18:43	1	MS1_8607.D	DB-624 (60.25) 0.25(mm)
280-175123-11	TB-05-20230416	04/27/2023 19:27	1	MS1_8608.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/27/2023 19:48	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/27/2023 20:10	1		DB-624 (60.25) 0.25(mm)
280-175123-6	MW-112M-20230415	04/27/2023 20:31	1	MS1_8611.D	DB-624 (60.25) 0.25(mm)
280-175123-7	MW-112D-20230415	04/27/2023 20:52	1	MS1_8612.D	DB-624 (60.25) 0.25(mm)
280-175123-10	MW-109D-20230415	04/27/2023 21:13	1	MS1_8613.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		04/27/2023 21:34	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/27/2023 21:55	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/27/2023 22:17	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/27/2023 22:38	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/27/2023 23:00	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/27/2023 23:21	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/27/2023 23:42	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/28/2023 00:04	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/28/2023 00:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/28/2023 00:46	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/28/2023 01:08	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/28/2023 01:29	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/28/2023 01:50	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		04/28/2023 02:12	2		DB-624 (60.25) 0.25(mm)
CCVC 280-610464/31		04/28/2023 02:33	1		DB-624 (60.25) 0.25(mm)
CCVC 280-610464/32		04/28/2023 02:54	1		DB-624 (60.25) 0.25(mm)

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042623AM
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120767
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-175066-A-8	Client	1.000	voaWater	5.000	mL		<2	
12	#12 280-175066-A-7	Client	1.000	voaWater	5.000	mL			
13	#13 280-175097-A-3	Client	1.000	voaWater	5.000	mL			
14	#14 280-175097-A-2	Client	1.000	voaWater	5.000	mL			
15	#15 280-175123-B-9	Client	1.000	voaWater	5.000	mL		<2	
16	#16 160-49724-C-8	Client	1.000	voaWater	5.000	mL		6	
17	#17 280-175097-B-4	Client	1.000	voaWater	5.000	mL		<2	
18	#18 280-175097-B-5	Client	1.000	voaWater	5.000	mL			
19	#19 280-175097-B-6	Client	1.000	voaWater	5.000	mL			
20	#20 280-175097-B-7	Client	1.000	voaWater	5.000	mL			
21	#21 280-175097-A-8	Client	1.000	voaWater	5.000	mL			
22	#22 280-175097-A-9	Client	1.000	voaWater	5.000	mL			
23	#23 280-175123-F-1	Client	1.000	voaWater	5.000	mL			
24	#24 280-175123-F-2	Client	2.000	voaWater	5.000	mL			
25	#25 280-175123-D-3	Client	2.000	voaWater	5.000	mL			
26	#26 280-175122-F-1	Client	4.000	voaWater	5.000	mL			
27	#27 280-175122-D-2	Client	2.000	voaWater	5.000	mL			
28	#28 280-175066-B-1	Client	2000.0	voaWater	5.000	mL			
29	#29 280-175066-B-3	Client	2000.0	voaWater	5.000	mL			
30	#30 280-175066-A-2	Client	500.0	voaWater	5.000	mL		<2	
31	#31 160-49724-A-8 MS	MS	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083	6	
32	#32 160-49724-A-8 MSD	MSD	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083	6	
34	#34 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
35	#35 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp B_00062		
33	#33 Samp 33	Client	1.000	voaWater	5.000	mL			

dil ✓ CF
4-27-23

pH = HC293085

Eurofins TestAmerica Denver
Instrument ID: X4
SOP: DV-MS 0010 Rev. 29
Method: (524 / 624 / 8260B / 8260C) 8260D
Purge Volume: (20mL / 5mL)
Matrix: (Water / Soil / Waste)
Tune Time:
Analysis: 6/01/21

Sample Request Form: 82279

XY 4/26/23 AM

den_msvoa_totalbacklog Gabe 4/26/2023 11:55:24 AM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
160-49724-8 1X	E007539-01		8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
S Additional volume included with sample for MS/MSD										
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
160-49724-8MS	E007539-01		8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
S Additional volume included with sample for MS/MSD										
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
160-49724-8MSD	E007539-01		8260B_DOD5	8260B_DOD5	04/27 23:59	05/18/23	EJ	TN	L Soil	Unconfirmed
S Additional volume included with sample for MS/MSD										
M Do not overdilute <DIL3>/Q5DOE QC ON CLIENT OR LCSD NCM ALL FAIL/DIL										
280-175066-1 2000X	GWS1H23-OW-37-B2		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175066-2 500X	GWS1H23-OW-37-D		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175066-3 2000X	GWS1H23-OW-41-B2		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175066-7 1X	EB-041323		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175066-8	TB-041323		8260D	8260D	04/27 23:59	04/25/23	MAJ	TX	VS-5	Unconfirmed
M Dupont & TX QAS_DIL3										
280-175097-2	EB-CMPSC-GMW-9-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed

11/27/2023 7:19 PM

Sample Request Form: 82279

den_msvoa_totalbacklog Gabe 4/26/2023 11:55:24 AM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
M Q5.4_No variances										
280-175097-3	FB-CMPSC-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-4	CMPSC-GMW-01-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-5	CMPSC-GMW-02-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-6	CMPSC-GMW-10-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-7	CMPSC-GMW-03-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-8	CMPSC-GMW-05-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175097-9	CMPSC-GMW-13-041323		8260D_DOD5	8260D_DOD5	04/27 23:59	05/02/23	MAJ	IL	VS-5	Unconfirmed
M Q5.4_No variances										
280-175122-1	RW-1-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2 & Mtls-Strge & 188	Unconfirmed
M 8260 Supp Spk DIL2										
280-175122-4	MP-3-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										

Sample Request Form: 82279

den_msvoa_totalbacklog Gabe 4/26/2023 11:55:24 AM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175123-1 1x	MW-119D-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	Mtls-Strge & AA-2 & 188	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-2 2x	MW-119S-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	Mtls-Strge & 188 & AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-3 2x	RW-3-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2 & Mtls-Strge & 188	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-9 1x	EB-03-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b

Worklist Name:	042623AM	Worklist Num:	120767
Instrument:	VMS_X4	Method:	VMS_X4_8260
Analysis Type:	VOA	Creator:	Dobransky, Michael E
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 610121
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-175066-A-8	# 11 280-175066-A-8
# 12 280-175066-A-7	# 12 280-175066-A-7
# 13 280-175097-A-3	# 13 280-175097-A-3
# 14 280-175097-A-2	# 14 280-175097-A-2
# 15 280-175123-B-9	# 15 280-175123-B-9
# 16 160-49724-C-8	# 16 160-49724-C-8
# 17 280-175097-B-4	# 17 280-175097-B-4
# 18 280-175097-B-5	# 18 280-175097-B-5
# 19 280-175097-B-6	# 19 280-175097-B-6
# 20 280-175097-B-7	# 20 280-175097-B-7
# 21 280-175097-A-8	# 21 280-175097-A-8
# 22 280-175097-A-9	# 22 280-175097-A-9
# 23 280-175123-F-1	# 23 280-175123-F-1
# 24 280-175123-F-2	# 24 280-175123-F-2
# 25 280-175123-D-3	# 25 280-175123-D-3
# 26 280-175122-F-1	# 26 280-175122-F-1
# 27 280-175122-D-2	# 27 280-175122-D-2
# 28 280-175066-B-1	# 28 280-175066-B-1
# 29 280-175066-B-3	# 29 280-175066-B-3
# 30 280-175066-A-2	# 30 280-175066-A-2
# 31 160-49724-A-8 MS	# 31 160-49724-A-8 MS
# 32 160-49724-A-8 MSD	# 32 160-49724-A-8 MSD
# 34 CCVC	# 34 CCVC
# 35 CCVC	# 35 CCVC
# 33 Samp 33	# 33 Samp 33

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042623AM
Worklist Number: 120767
Instrument Name: VMS_X4
Chrom Method: VMS_X4_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230426-120767.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4
Run Reagent: mv-IS_SS_00058
Amount Added: 5.000, Units: uL
Batch #s: 610121

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120767-001	#1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120767-002	#2 CCV	MV-MegaMain B_00083 MV-Gas B_00133	CCV	voaWater	5.000	mL	1.000
280-0120767-003	#3 CCV	MV-Supp B_00062	CCV	voaWater	5.000	mL	1.000
280-0120767-004	#4 LCSD	MV-Gas B_00133 MV-MegaMain B_00083	LCSD	voaWater	5.000	mL	1.000
280-0120767-005	#5 LCSD	MV-Supp B_00062	LCSD	voaWater	5.000	mL	1.000
280-0120767-006	#6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120767-007	#7 MB		MB	voaWater	5.000	mL	1.000
280-0120767-008	#8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120767-009	#9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120767-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120767-011	#11 280-175066-A-8		Client	voaWater	5.000	mL	1.000
280-0120767-012	#12 280-175066-A-7		Client	voaWater	5.000	mL	1.000
280-0120767-013	#13 280-175097-A-3		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120767-032	#32 160-49724-A-8 MSD	MV-Gas B_00133 MV-MegaMain B_00083	MSD	voaWater	5.000	mL	1.000
280-0120767-034	#34 CCVC	MV-MegaMain B_00083 MV-Gas B_00133	CCVC	voaWater	5.000	mL	1.000
280-0120767-035	#35 CCVC	MV-Supp B_00062	CCVC	voaWater	5.000	mL	1.000
280-0120767-033	#33 Samp 33		Client	voaWater	5.000	mL	1.000

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042723AM
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120830
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-175202-A-21	Client	1.000	voaWater	5.000	mL		CZ	
12	#12 280-175489-B-2	Client	1.000	voaWater	5.000	mL		CZ	
13	#13 280-175123-B-8	Client	1.000	voaWater	5.000	mL		CZ	
14	#14 280-175339-B-1	Client	1.000	voaWater	5.000	mL		CZ	
15	#15 280-175176-B-2	Client	1.000	voaWater	5.000	mL		CZ	
16	#16 280-175339-B-2	Client	1.000	voaWater	5.000	mL		CZ	
17	#17 280-175339-B-3	Client	1.000	voaWater	5.000	mL		CZ	
18	#18 280-175122-B-7	Client	1.000	voaWater	5.000	mL		CZ	
19	#19 280-175123-B-4	Client	1.000	voaWater	5.000	mL	#5	CZ	
20	#20 280-175123-B-5	Client	1.000	voaWater	5.000	mL		CZ	
21	#21 280-175202-C-17	Client	1.000	voaWater	5.000	mL		CZ	
22	#22 280-175202-C-19	Client	1.000	voaWater	5.000	mL		CZ	
23	#23 280-175202-C-20	Client	1.000	voaWater	5.000	mL		CZ	
24	#24 280-175489-B-1	Client	1.000	voaWater	5.000	mL		CZ	
25	#25 280-175489-B-5	Client	1.000	voaWater	5.000	mL		CZ	
26	#26 280-175489-B-6	Client	1.000	voaWater	5.000	mL		CZ	
27	#27 280-175122-A-4	Client	2.000	voaWater	5.000	mL		CZ	
28	#28 280-175121-B-5	Client	2.000	voaWater	5.000	mL		CZ	
29	#29 280-175121-B-8	Client	2.000	voaWater	5.000	mL		CZ	
30	#30 280-175339-B-1 MS	MS	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083	CZ	
31	#31 280-175339-B-1 MSD	MSD	1.000	voaWater	5.000	mL	MV-Gas B_00133 MV-MegaMain B_00083	CZ	
33	#33 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		
34	#34 CCVC	CCVC	1.000	voaWater	5.000	mL	MV-Supp B_00062		
32	#32 Samp 32	Client	1.000	voaWater	5.000	mL			

Dilution 04/27
check B5

HC293080

[illegible] Denver
[illegible] SOP: X9 29
[illegible] MS 8010 Rev. [illegible]
Method: (624 / 624 / 8260B / 8260C) 8260
Purge Volume (20mL / 25mL)
Matrix: (Water / Soil / Waste)
Tune Time: _____
TALs Batch: 610847

Sample Request Form: 82320

X4 4/27/23

den_msvoa_totalbacklog Gabe 4/27/2023 12:36:39 PM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175121-5 2x	MW-110S-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175121-8 2x	MP-4-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175122-4 2x	MP-3-20230413		8260D	8260D	04/27 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175122-7 1x	MW-102S-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-4	MW-113D-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-5	MW-113S-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175123-8	EB-04-20230414		8260D	8260D	04/28 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed
M 8260 Supp Spk DIL2										
280-175176-2	SB64-02-1A_F23Q3_53SPL		8260B_DOD5	8260B_DOD5	04/28 23:59	05/04/23	PJM	CA	AA-2	Unconfirmed
M Q5.3_ DIL3_ Client must be immediately notified of dilutions > 3x										
280-175202-17	2304-B6A		8260D	8260D	04/28 23:59	05/01/23	NCR	ID	VS-8	Unconfirmed
280-175202-19	2304-EW6		8260D	8260D	04/28 23:59	05/01/23	NCR	ID	VS-8	Unconfirmed
280-175202-20	2304-MW106		8260D	8260D	04/28 23:59	05/01/23	NCR	ID	VS-8 & Mtls-Strge	Unconfirmed

Sample Request Form: 82320

den_msvoa_totalbacklog Gabe 4/27/2023 12:36:39 PM Assigned to:Dobransky, Michael E

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-175202-21	TB11		8260D	8260D	04/28 23:59	05/01/23	NCR	ID	VS-8	Unconfirmed
280-175339-1	23-PP006		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175339-1MS	23-PP006		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175339-1MSD	23-PP006		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175339-2	23-PP007		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175339-3	23-PP008		8260D_DOD5	8260D_DOD5	04/27 23:59	05/11/23	PJM	OH	VS-13	Unconfirmed
M Q5.4_SeeFluorB&W QAS_LCSD_DIL3_BatchQC required on this job for all analytical batches.										
280-175489-1	23-DTOP0535		8260D_DOD5	8260D_DOD5	05/02 23:59	04/28/23	PJM	OH	VS-9	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3										
280-175489-2	23-DTOP0536		8260D_DOD5	8260D_DOD5	05/02 23:59	04/28/23	PJM	OH	VS-9	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3										
280-175489-5	23-DTOP0548		8260D_DOD5	8260D_DOD5	05/02 23:59	04/28/23	PJM	OH	VS-9	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3										
280-175489-6	23-DTOP0552		8260D_DOD5	8260D_DOD5	05/02 23:59	04/28/23	PJM	OH	VS-9	Unconfirmed
M Q5.3_SeeFluorB&W QAS_LCSD_DIL3										

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7:19 PM

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b

Worklist Name:	042723AM	Worklist Num:	120830
Instrument:	VMS_X4	Method:	VMS_X4_8260
Analysis Type:	VOA	Creator:	Dobransky, Michael E
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 610347
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-175202-A-21	# 11 280-175202-A-21
# 12 280-175489-B-2	# 12 280-175489-B-2
# 13 280-175123-B-8	# 13 280-175123-B-8
# 14 280-175339-B-1	# 14 280-175339-B-1
# 15 280-175176-B-2	# 15 280-175176-B-2
# 16 280-175339-B-2	# 16 280-175339-B-2
# 17 280-175339-B-3	# 17 280-175339-B-3
# 18 280-175122-B-7	# 18 280-175122-B-7
# 19 280-175123-B-4	# 19 280-175123-B-4
# 20 280-175123-B-5	# 20 280-175123-B-5
# 21 280-175202-C-17	# 21 280-175202-C-17
# 22 280-175202-C-19	# 22 280-175202-C-19
# 23 280-175202-C-20	# 23 280-175202-C-20
# 24 280-175489-B-1	# 24 280-175489-B-1
# 25 280-175489-B-5	# 25 280-175489-B-5
# 26 280-175489-B-6	# 26 280-175489-B-6
# 27 280-175122-A-4	# 27 280-175122-A-4
# 28 280-175121-B-5	# 28 280-175121-B-5
# 29 280-175121-B-8	# 29 280-175121-B-8
# 30 280-175339-B-1 MS	# 30 280-175339-B-1 MS
# 31 280-175339-B-1 MSD	# 31 280-175339-B-1 MSD
# 33 CCVC	# 33 CCVC
# 34 CCVC	# 34 CCVC
# 32 Samp 32	# 32 Samp 32

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042723AM
Worklist Number: 120830
Instrument Name: VMS_X4
Chrom Method: VMS_X4_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230427-120830.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4
Run Reagent: mv-IS_SS_00058
Amount Added: 5.000, Units: uL
Batch #s: 610347

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120830-001	#1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120830-002	#2 CCV	MV-MegaMain B_00083 MV-Gas B_00133	CCV	voaWater	5.000	mL	1.000
280-0120830-003	#3 CCV	MV-Supp B_00062	CCV	voaWater	5.000	mL	1.000
280-0120830-004	#4 LCSD	MV-Gas B_00133 MV-MegaMain B_00083	LCSD	voaWater	5.000	mL	1.000
280-0120830-005	#5 LCSD	MV-Supp B_00062	LCSD	voaWater	5.000	mL	1.000
280-0120830-006	#6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120830-007	#7 MB		MB	voaWater	5.000	mL	1.000
280-0120830-008	#8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120830-009	#9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120830-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120830-011	#11 280-175202-A-21		Client	voaWater	5.000	mL	1.000
280-0120830-012	#12 280-175489-B-2		Client	voaWater	5.000	mL	1.000
280-0120830-013	#13 280-175123-B-8		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120830-033	#33 CCVC	MV-MegaMain B_00083 MV-Gas B_00133	CCVC	voaWater	5.000	mL	1.000
280-0120830-034	#34 CCVC	MV-Supp B_00062	CCVC	voaWater	5.000	mL	1.000
280-0120830-032	#32 Samp 32		Client	voaWater	5.000	mL	1.000

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042723pm
Instrument Name: VMS_MS1
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_MS1

Worklist Number: 120856
Chrom Method: AQ_VMS1_8260
Units: mL

Run Reagent: mv-IS_SS_00057 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB	1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV	1.000	voaWater	5.000	mL	MV-Gas A_00151 MV-MegaMainA_00087		
3	# 3 CCV	CCV	1.000	voaWater	5.000	mL	MV-Supp A_00080		
4	# 4 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Gas A_00151 MV-MegaMainA_00087		
5	# 5 LCSD	LCSD	1.000	voaWater	5.000	mL	MV-Supp A_00080		
6	# 6 RINSE	Client	1.000	voaWater	5.000	mL			
7	# 7 MB	MB	1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client	1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client	1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client	1.000	voaWater	5.000	mL			
11	#11 280-175123-A-11	Client	1.000	voaWater	5.000	mL		<2	TB
12	#12 280-175253-C-1	Client	1.000	voaWater	5.000	mL		<2	
13	#13 280-175253-B-2	Client	1.000	voaWater	5.000	mL		<2	
14	#14 280-175123-B-6	Client	1.000	voaWater	5.000	mL		<2	
15	#15 280-175123-C-7	Client	1.000	voaWater	5.000	mL		<2	HS
16	#16 280-175123-C-10	Client	1.000	voaWater	5.000	mL		<2	
17	#17 280-175614-A-1	Client	1.000	voaWater	5.000	mL		7	unpreserved
18	#18 280-175614-F-2	Client	1.000	voaWater	5.000	mL		7	
19	#19 280-175614-D-3	Client	1.000	voaWater	5.000	mL		7	
20	#20 280-175614-C-4	Client	1.000	voaWater	5.000	mL		7	
21	#21 280-175614-E-5	Client	1.000	voaWater	5.000	mL		8	
22	#22 280-175614-E-6	Client	1.000	voaWater	5.000	mL		7	
23	#23 280-175614-A-8	Client	1.000	voaWater	5.000	mL		7	
24	#24 280-175614-A-9	Client	1.000	voaWater	5.000	mL		7	
25	#25 280-175614-A-10	Client	1.000	voaWater	5.000	mL		7	
26	#26 280-175614-A-11	Client	1.000	voaWater	5.000	mL		6	
27	#27 280-175614-C-12	Client	1.000	voaWater	5.000	mL		5	
28	#28 280-175614-C-13	Client	1.000	voaWater	5.000	mL		5	
29	#29 280-175614-C-14	Client	1.000	voaWater	5.000	mL		5	
30	#30 280-175614-A-7	Client	2.000	voaWater	5.000	mL		5	2x
31	#31 ccvc	CCVC	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
32	#32 ccvc	CCVC	1.000	voaWater	5.000	mL	MV-Supp A_00080		

✓dil 4/28 1110
pH strip lot: HC293086

Eurofins TestAmerica Denver
Instrument ID: MS1
SOP: DV MS-0010 Rev. 29
Method: (524) 624 / 8260B / 8260C (8260D)
Purge Volume (20mL / 5mL)
Matrix: (Water) Soil / Waste)
Date Time: 11-12-0254
TALs Batch: 610464

Preliminary Report

Eurofins Environment Testing America
Qc Batch Report

Data Path: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b

Worklist Name:	042723pm	Worklist Num:	120856
Instrument:	VMS_MS1	Method:	AQ_VMS1_8260
Analysis Type:	VOA	Creator:	Fogg, Cameron C
Inj Volume:	5	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 610464
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCSD	# 4 LCSD
# 5 LCSD	# 5 LCSD
# 6 RINSE	# 6 RINSE
# 7 MB	# 7 MB
# 8 280-141475-A-2	# 8 280-141475-A-2
# 9 280-141475-A-3	# 9 280-141475-A-3
# 10 280-141475-A-7	# 10 280-141475-A-7
# 11 280-175123-A-11	# 11 280-175123-A-11
# 12 280-175253-C-1	# 12 280-175253-C-1
# 13 280-175253-B-2	# 13 280-175253-B-2
# 14 280-175123-B-6	# 14 280-175123-B-6
# 15 280-175123-C-7	# 15 280-175123-C-7
# 16 280-175123-C-10	# 16 280-175123-C-10
# 17 280-175614-A-1	# 17 280-175614-A-1
# 18 280-175614-F-2	# 18 280-175614-F-2
# 19 280-175614-D-3	# 19 280-175614-D-3
# 20 280-175614-C-4	# 20 280-175614-C-4
# 21 280-175614-E-5	# 21 280-175614-E-5
# 22 280-175614-E-6	# 22 280-175614-E-6
# 23 280-175614-A-8	# 23 280-175614-A-8
# 24 280-175614-A-9	# 24 280-175614-A-9
# 25 280-175614-A-10	# 25 280-175614-A-10
# 26 280-175614-A-11	# 26 280-175614-A-11
# 27 280-175614-C-12	# 27 280-175614-C-12
# 28 280-175614-C-13	# 28 280-175614-C-13
# 29 280-175614-C-14	# 29 280-175614-C-14
# 30 280-175614-A-7	# 30 280-175614-A-7
# 31 ccvc	# 31 ccvc
# 32 ccvc	# 32 ccvc

Sample Request Form: 82336

den_msvoa_totalbacklog Gabe 4/27/2023 6:26:34 PM Assigned to:Fogg, Cameron C

11/27/2023
7:19 PM

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level	Dilution History
280-175614-6	CMP-00239	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12 & 242	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-7	CMP-00240	2x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-8	CMP-00256	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-9	CMP-00257	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-10	CMP-00258	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-11	CMP-00290	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-12	CMP-00289	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-13	CMP-00261	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-14	CMP-00279	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											

Sample Request Form: 82336

den_msvoa_totalbacklog Gabe 4/27/2023 6:26:34 PM Assigned to:Fogg, Cameron C

11/27/2023
7:19 PM

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level	Dilution History
280-175123-6	MW-112M-20230415	1x	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed	
M 8260 Supp Spk DIL2											
280-175123-7	MW-112D-20230415	1x	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed	
M 8260 Supp Spk DIL2											
280-175123-10	MW-109D-20230415	1x	8260D	8260D	04/29 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed	
M 8260 Supp Spk DIL2											
280-175123-11	TB-05-20230416	1x	8260D	8260D	04/30 23:59	05/03/23	DTB	ID	AA-2	Unconfirmed	
M 8260 Supp Spk DIL2											
280-175253-1	Outfall 001	1x	624.1	624.1	05/01 23:59	05/08/23	SRT	CO	VS-8 & 205	Unconfirmed	
280-175253-2	Outfall 001	1x	624.1	624.1	05/01 23:59	05/08/23	SRT	CO	VS-8 & 205	Unconfirmed	
280-175614-1	CMP-00243	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-2	CMP-00248	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	Shared Samples In-Transi & 242 & VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-3	CMP-00242	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	Shared Samples In-Transi & VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-4	CMP-00251	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	Shared Samples In-Transi & VS-12	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											
280-175614-5	CMP-00249	1x	8260D_DOD5	8260D_DOD5	05/01 23:59	05/21/23	DTB	SC	VS-12 & 242	Unconfirmed	
M DOD QSM 5.3; QC ON SAVANNAH SAMPLE_NCM MUST INCLUDE FAILING ANALYTE AND %.											

Eurofins Environment Testing America
Worklist Report

Worklist Name: 042723pm
Instrument Name: VMS_MS1
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_MS1\20230427-120856.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_MS1
Run Reagent: mv-IS_SS_00057
Batch #s: 610464

Worklist Number: 120856
Chrom Method: AQ_VMS1_8260
Units: mL
Amount Added: 5.000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120856-001	#1 BFB	mv-Cent BFB_00005	BFB	voaWater	2.000	uL	1.000
280-0120856-002	#2 CCV	MV-Gas A_00151 MV-MegaMainA_00087	CCV	voaWater	5.000	mL	1.000
280-0120856-003	#3 CCV	MV-Supp A_00080	CCV	voaWater	5.000	mL	1.000
280-0120856-004	#4 LCSD	MV-Gas A_00151 MV-MegaMainA_00087	LCSD	voaWater	5.000	mL	1.000
280-0120856-005	#5 LCSD	MV-Supp A_00080	LCSD	voaWater	5.000	mL	1.000
280-0120856-006	#6 RINSE		Client	voaWater	5.000	mL	1.000
280-0120856-007	#7 MB		MB	voaWater	5.000	mL	1.000
280-0120856-008	#8 280-141475-A-2		Client	voaWater	5.000	mL	1.000
280-0120856-009	#9 280-141475-A-3		Client	voaWater	5.000	mL	1.000
280-0120856-010	#10 280-141475-A-7		Client	voaWater	5.000	mL	1.000
280-0120856-011	#11 280-175123-A-11		Client	voaWater	5.000	mL	1.000
280-0120856-012	#12 280-175253-C-1		Client	voaWater	5.000	mL	1.000
280-0120856-013	#13 280-175253-B-2		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120856-014	#14 280-175123-B-6		Client	voaWater	5.000	mL	1.000
280-0120856-015	#15 280-175123-C-7		Client	voaWater	5.000	mL	1.000
280-0120856-016	#16 280-175123-C-10		Client	voaWater	5.000	mL	1.000
280-0120856-017	#17 280-175614-A-1		Client	voaWater	5.000	mL	1.000
280-0120856-018	#18 280-175614-F-2		Client	voaWater	5.000	mL	1.000
280-0120856-019	#19 280-175614-D-3		Client	voaWater	5.000	mL	1.000
280-0120856-020	#20 280-175614-C-4		Client	voaWater	5.000	mL	1.000
280-0120856-021	#21 280-175614-E-5		Client	voaWater	5.000	mL	1.000
280-0120856-022	#22 280-175614-E-6		Client	voaWater	5.000	mL	1.000
280-0120856-023	#23 280-175614-A-8		Client	voaWater	5.000	mL	1.000
280-0120856-024	#24 280-175614-A-9		Client	voaWater	5.000	mL	1.000
280-0120856-025	#25 280-175614-A-10		Client	voaWater	5.000	mL	1.000
280-0120856-026	#26 280-175614-A-11		Client	voaWater	5.000	mL	1.000
280-0120856-027	#27 280-175614-C-12		Client	voaWater	5.000	mL	1.000
280-0120856-028	#28 280-175614-C-13		Client	voaWater	5.000	mL	1.000
280-0120856-029	#29 280-175614-C-14		Client	voaWater	5.000	mL	1.000
280-0120856-030	#30 280-175614-A-7		Client	voaWater	5.000	mL	2.000
280-0120856-031	#31 ccvc	MV-MegaMainA_00087 MV-Gas A_00151	CCVC	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0120856-032	#32 ccvc	MV-Supp A_00080	CCVC	voaWater	5.000	mL	1.000

Eurofins Environment Testing America
Worklist Report

Worklist Name: 040623ical
Instrument Name: VMS_X4
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_X4\20230406-120207.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_X4

Worklist Number: 120207
Chrom Method: VMS_X4_8260
Units: mL

Run Reagent: mv-IS_SS_00058 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Ical Lvl	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB		1.000	voaWater	2.000	uL	mv-Cent BFB_00005		
2	# 2 CCV	CCV		1.000	voaWater	5.000	mL	MV-MegaMain B_00082 MV-Gas B_00132		
3	# 3 CCV	CCV		1.000	voaWater	5.000	mL	MV-Supp B_00062		
4	# 4 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00082		
5	# 5 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Supp B_00062		
6	# 6 RINSE	Client		1.000	voaWater	5.000	mL			
7	# 7 MB	MB		1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client		1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client		1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client		1.000	voaWater	5.000	mL			
19	#19 STD	IC	1	1.000	voaWater	5.000	mL	Cal Dil Std_00162		
18	#18 STD	IC	2	1.000	voaWater	5.000	mL	Cal Dil Std_00162		
16	#16 STD	IC	4	1.000	voaWater	5.000	mL	Cal Dil Std_00162		
17	#17 STD	IC	3	1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00086		
15	#15 STD	IC	5	1.000	voaWater	5.000	mL	MV-MegaMainA_00086 MV-Gas A_00150		
14	#14 ICIS	ICIS	6	1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00086		
13	#13 STD	IC	7	1.000	voaWater	5.000	mL	MV-MegaMainA_00086 MV-Gas A_00150		
12	#12 STD	IC	8	1.000	voaWater	5.000	mL	MV-Gas A_00150 MV-MegaMainA_00086		
11	#11 STD	IC	9	1.000	voaWater	5.000	mL	MV-MegaMainA_00086 MV-Gas A_00150		
20	#20 ICV	ICV		1.000	voaWater	5.000	mL	MV-Gas B_00132 MV-MegaMain B_00082		

Rerun of ICV in batch 608203 Line 8: All compounds within 20%, except:
2-CLEVE (+52.1%)

Eurofins TestAmerica Denver
Instrument ID: _____
SOP: DV-MS-00010 Rev. _____
Method: (8260B / 8260C / 8260D / 8260D SIM)
Purge Volume: (5ml / 25ml)
Matrix: (Water / Soil / Waste)
Time Times: _____
TALs Batch: _____
4/11/23

Eurofins TestAmerica Denver
Instrument ID: X4
SOP: DV-MS-00010 Rev. 28 29
Method: (8260B / 8260C / 8260D / 8260D SIM)
Purge Volume: (5ml / 25ml)
Matrix: (Water / Soil / Waste)
02:33 - 06:39
607881
4/11/23

ICV Line 20: All compounds ≤ 20% except for: Vinyl Chloride (+22.5%) & Cyclohexanone (+27.2%)

4/11/23

Eurofins Environment Testing America
Worklist Report

Worklist Name: 041823ic
Instrument Name: VMS_MS1
Purge Volume: 5.000
Analysis Type: VOA
Batch Directory: \\chromfs\Denver\ChromData\VMS_MS1\20230418-120497.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_MS1

Worklist Number: 120497
Chrom Method: AQ_VMS1_8260
Units: mL

Run Reagent: mv-IS_SS_00057 Amount Added: 5.000, Units: uL

Smp #	Lims ID	Smp Type	Ical Lvl	Dil Fact	Fract	Initial Vol/Wt	Vol/Wt Units	Sample Reagents	pH	Comment
1	# 1 BFB	BFB		1.000	voaWater	5.000	mL	mv-Cent BFB_00005		
2	# 2 CCV	CCV		1.000	voaWater	5.000	mL	MV-Gas A_00151 MV-MegaMainA_00087		
3	# 3 CCV	CCV		1.000	voaWater	5.000	mL	MV-Supp A_00080		
4	# 4 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Gas A_00151 MV-MegaMainA_00087		
5	# 5 LCSD	LCSD		1.000	voaWater	5.000	mL	MV-Supp A_00080		
6	# 6 RINSE	Client		1.000	voaWater	5.000	mL			
7	# 7 MB	MB		1.000	voaWater	5.000	mL			
8	# 8 280-141475-A-2	Client		1.000	voaWater	5.000	mL			
9	# 9 280-141475-A-3	Client		1.000	voaWater	5.000	mL			
10	#10 280-141475-A-7	Client		1.000	voaWater	5.000	mL			
34	#34 ic	IC	9	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
35	#35 ic	IC	8	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
36	#36 ic	IC	7	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
37	#37 icis	ICIS	6	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
38	#38 ic	IC	5	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
39	#39 ic	IC	4	1.000	voaWater	5.000	mL	MV-MegaMainA_00087 MV-Gas A_00151		
40	#40 ic	IC	3	1.000	voaWater	5.000	mL	Cal Dil Std_00169		
41	#41 ic	IC	2	1.000	voaWater	5.000	mL	Cal Dil Std_00169		
42	#42 ic	IC	1	1.000	voaWater	5.000	mL	Cal Dil Std_00169		
43	#43 icv	ICV		1.000	voaWater	5.000	mL	MV-MegaMain B_00083 MV-Gas B_00133		

Calib ID 79362

ICV: all ±20%D

Eurofins TestAmerica Denver
Instrument ID: MS1
SOP: DV-MS 0010 Rev.___
Method: (524 / 624 / 8260B / 8260C)
Purge Volume (20mL / 5mL)
Matrix: (Water / Soil / Waste)
Tune Time: 09:29-19.19
TALs Batch: 609046

1st Level Review: Tam 4-19-23
2nd Level Review: JL 4/19/23

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 590907 Batch Start Date: 10/22/22 11:07 Batch Analyst: Seifert, Judy L

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00004	mv-Cent IS 00007	MV-Supp A 00073	MV-TAOH_CUST 00004
BFB 280-590907/1		8260D		2 uL	2 uL	5 uL			
STD010 280-590907/23 IC		8260D		5 mL	5 mL		5 uL	1 uL	1 uL
STD020 280-590907/24 IC		8260D		5 mL	5 mL		5 uL	2 uL	2 uL
STD050 280-590907/25 IC		8260D		5 mL	5 mL		5 uL	5 uL	5 uL
STD10 280-590907/26 IC		8260D		5 mL	5 mL		5 uL	10 uL	10 uL
STD50 280-590907/27 IC		8260D		5 mL	5 mL		5 uL	50 uL	50 uL
STD100 280-590907/28 IC		8260D		5 mL	5 mL		5 uL	100 uL	100 uL
STD200 280-590907/29 IC		8260D		5 mL	5 mL		5 uL	200 uL	200 uL

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 597846 Batch Start Date: 12/28/22 07:14 Batch Analyst: Sunlee, Claire K

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00004	mv-Cent IS 00007	MV-Supp A 00076	
BFB 280-597846/1		8260D		5 mL	5 mL	5 uL			
STD1 280-597846/12 IC		8260D		5 mL	5 mL		5 uL	1 uL	
STD2 280-597846/13 IC		8260D		5 mL	5 mL		5 uL	2 uL	
STD5 280-597846/14 IC		8260D		5 mL	5 mL		5 uL	5 uL	
STD10 280-597846/15 IC		8260D		5 mL	5 mL		5 uL	10 uL	
STD50 280-597846/16 IC		8260D		5 mL	5 mL		5 uL	50 uL	
STD75 280-597846/17 IC		8260D		5 mL	5 mL		5 uL	75 uL	
STD100 280-597846/18 IC		8260D		5 mL	5 mL		5 uL	100 uL	
STD200 280-597846/19 IC		8260D		5 mL	5 mL		5 uL	100 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 607881 Batch Start Date: 04/07/23 02:33 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00162	mv-Cent BFB 00005	MV-Gas A 00150	mv-IS_SS 00058
BFB 280-607881/1		8260D		2 uL	2 uL		5 uL		
STD 280-607881/11 IC		8260D		5 mL	5 mL			40 uL	5 uL
STD 280-607881/12 IC		8260D		5 mL	5 mL			20 uL	5 uL
STD 280-607881/13 IC		8260D		5 mL	5 mL			15 uL	5 uL
ICIS 280-607881/14		8260D		5 mL	5 mL			10 uL	5 uL
STD 280-607881/15 IC		8260D		5 mL	5 mL			2 uL	5 uL
STD 280-607881/16 IC		8260D		5 mL	5 mL	20 uL			5 uL
STD 280-607881/17 IC		8260D		5 mL	5 mL			1 uL	5 uL
STD 280-607881/18 IC		8260D		5 mL	5 mL	10 uL			5 uL
STD 280-607881/19 IC		8260D		5 mL	5 mL	5 uL			5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00086					
BFB 280-607881/1		8260D							
STD 280-607881/11 IC		8260D		100 uL					
STD 280-607881/12 IC		8260D		50 uL					
STD 280-607881/13 IC		8260D		37.5 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 607881 Batch Start Date: 04/07/23 02:33 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00086					
ICIS 280-607881/14		8260D		25 uL					
STD 280-607881/15 IC		8260D		5 uL					
STD 280-607881/16 IC		8260D							
STD 280-607881/17 IC		8260D		2.5 uL					
STD 280-607881/18 IC		8260D							
STD 280-607881/19 IC		8260D							

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608203 Batch Start Date: 04/10/23 21:51 Batch Analyst: Coulter, Dawn (goes by Sh

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00131	mv-IS_SS 00058	MV-MegaMain B 00082
BFB 280-608203/1		8260D		2 uL	2 uL	5 uL			
ICV 280-608203/8		8260D		5 mL	5 mL		10 uL	5 uL	25 uL

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 609046 Batch Start Date: 04/18/23 09:29 Batch Analyst: Bustillos, Ethan T

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cal Dil Std 00169	mv-Cent BFB 00005	MV-Gas A 00151	MV-Gas B 00133
BFB 280-609046/1		8260D		5 mL	5 mL		5 uL		
IC 280-609046/34		8260D		5 mL	5 mL			40 uL	
IC 280-609046/35		8260D		5 mL	5 mL			20 uL	
IC 280-609046/36		8260D		5 mL	5 mL			15 uL	
ICIS 280-609046/37		8260D		5 mL	5 mL			10 uL	
IC 280-609046/38		8260D		5 mL	5 mL			2 uL	
IC 280-609046/39		8260D		5 mL	5 mL			1 uL	
IC 280-609046/40		8260D		5 mL	5 mL	20 uL			
IC 280-609046/41		8260D		5 mL	5 mL	10 uL			
IC 280-609046/42		8260D		5 mL	5 mL	5 uL			
ICV 280-609046/43		8260D		5 mL	5 mL				10 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057	MV-MegaMain B 00083	MV-MegaMainA 00087			
BFB 280-609046/1		8260D							
IC 280-609046/34		8260D		5 uL		100 uL			
IC 280-609046/35		8260D		5 uL		50 uL			
IC 280-609046/36		8260D		5 uL		37.5 uL			
ICIS 280-609046/37		8260D		5 uL		25 uL			
IC 280-609046/38		8260D		5 uL		5 uL			
IC 280-609046/39		8260D		5 uL		2.5 uL			
IC 280-609046/40		8260D		5 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 609046 Batch Start Date: 04/18/23 09:29 Batch Analyst: Bustillos, Ethan T

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00057	MV-MegaMain B 00083	MV-MegaMainA 00087			
IC 280-609046/41		8260D		5 uL					
IC 280-609046/42		8260D		5 uL					
ICV 280-609046/43		8260D		5 uL	25 uL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610121 Batch Start Date: 04/26/23 09:51 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Headspace	mv-Cent BFB 00005	MV-Gas B 00133
BFB 280-610121/1		8260D		2 uL	2 uL			5 uL	
CCV 280-610121/2		8260D		5 mL	5 mL				5 uL
CCV 280-610121/3		8260D		5 mL	5 mL				
LCSD 280-610121/4		8260D		5 mL	5 mL				5 uL
LCSD 280-610121/5		8260D		5 mL	5 mL				
MB 280-610121/7		8260D		5 mL	5 mL				
280-175123-B-9	EB-03-20230413	8260D	T	5 mL	5 mL				
280-175123-F-1	MW-119D-20230413	8260D	T	5 mL	5 mL	<2 SU	NO		
280-175123-F-2	MW-119S-20230413	8260D	T	5 mL	5 mL	<2 SU	NO		
280-175123-D-3	RW-3-20230413	8260D	T	5 mL	5 mL				
LCS 280-610121/1002		8260D		5 mL	5 mL				5 uL
LCS 280-610121/1003		8260D		5 mL	5 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00058	MV-MegaMain B 00083	MV-Supp B 00062			
BFB 280-610121/1		8260D							
CCV 280-610121/2		8260D		5 uL	12.5 uL				
CCV 280-610121/3		8260D		5 uL		25 uL			
LCSD 280-610121/4		8260D		5 uL	12.5 uL				
LCSD 280-610121/5		8260D		5 uL		25 uL			
MB 280-610121/7		8260D		5 uL					
280-175123-B-9	EB-03-20230413	8260D	T	5 uL					
280-175123-F-1	MW-119D-20230413	8260D	T	5 uL					
280-175123-F-2	MW-119S-20230413	8260D	T	5 uL					
280-175123-D-3	RW-3-20230413	8260D	T	5 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610121 Batch Start Date: 04/26/23 09:51 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	mv-IS_SS 00058	MV-MegaMain B 00083	MV-Supp B 00062			
LCS 280-610121/1002		8260D		5 uL	12.5 uL				
LCS 280-610121/1003		8260D		5 uL		25 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610347 Batch Start Date: 04/27/23 10:51 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas B 00133	mv-IS_SS 00058	MV-MegaMain B 00083
BFB 280-610347/1		8260D		2 uL	2 uL	5 uL			
CCV 280-610347/2		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
CCV 280-610347/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-610347/4		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
LCSD 280-610347/5		8260D		5 mL	5 mL			5 uL	
MB 280-610347/7		8260D		5 mL	5 mL			5 uL	
280-175123-B-8	EB-04-20230414	8260D	T	5 mL	5 mL			5 uL	
280-175123-B-4	MW-113D-20230414	8260D	T	5 mL	5 mL			5 uL	
280-175123-B-5	MW-113S-20230414	8260D	T	5 mL	5 mL			5 uL	
LCS 280-610347/1002		8260D		5 mL	5 mL		5 uL	5 uL	12.5 uL
LCS 280-610347/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00062					
BFB 280-610347/1		8260D							
CCV 280-610347/2		8260D							
CCV 280-610347/3		8260D		25 uL					
LCSD 280-610347/4		8260D							
LCSD 280-610347/5		8260D		25 uL					
MB 280-610347/7		8260D							
280-175123-B-8	EB-04-20230414	8260D	T						
280-175123-B-4	MW-113D-20230414	8260D	T						
280-175123-B-5	MW-113S-20230414	8260D	T						
LCS 280-610347/1002		8260D							
LCS 280-610347/1003		8260D		25 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610347 Batch Start Date: 04/27/23 10:51 Batch Analyst: Dobransky, Michael E

Batch Method: 8260D Batch End Date:

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610464 Batch Start Date: 04/27/23 16:12 Batch Analyst: Fogg, Cameron C

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	mv-Cent BFB 00005	MV-Gas A 00151	mv-IS_SS 00059	MV-MegaMainA 00087
BFB 280-610464/1		8260D		2 uL	2 uL	5 uL			
CCV 280-610464/2		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
CCV 280-610464/3		8260D		5 mL	5 mL			5 uL	
LCSD 280-610464/4		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCSD 280-610464/5		8260D		5 mL	5 mL			5 uL	
MB 280-610464/7		8260D		5 mL	5 mL			5 uL	
280-175123-A-11	TB-05-20230416	8260D	T	5 mL	5 mL			5 uL	
280-175123-B-6	MW-112M-20230415	8260D	T	5 mL	5 mL			5 uL	
280-175123-C-7	MW-112D-20230415	8260D	T	5 mL	5 mL			5 uL	
280-175123-C-10	MW-109D-20230415	8260D	T	5 mL	5 mL			5 uL	
LCS 280-610464/1002		8260D		5 mL	5 mL		10 uL	5 uL	25 uL
LCS 280-610464/1003		8260D		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp A 00080					
BFB 280-610464/1		8260D							
CCV 280-610464/2		8260D							
CCV 280-610464/3		8260D		25 uL					
LCSD 280-610464/4		8260D							
LCSD 280-610464/5		8260D		25 uL					
MB 280-610464/7		8260D							
280-175123-A-11	TB-05-20230416	8260D	T						
280-175123-B-6	MW-112M-20230415	8260D	T						
280-175123-C-7	MW-112D-20230415	8260D	T						
280-175123-C-10	MW-109D-20230415	8260D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610464 Batch Start Date: 04/27/23 16:12 Batch Analyst: Fogg, Cameron C

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp A 00080					
LCS 280-610464/1002		8260D							
LCS 280-610464/1003		8260D		25 uL					

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG No.:

Project: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID	Lab Sample ID
MW-119D-20230413	280-175123-1
MW-119S-20230413	280-175123-2
RW-3-20230413	280-175123-3

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-119D-20230413 Lab Sample ID: 280-175123-1

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG ID.:

Matrix: Water Date Sampled: 04/13/2023 10:55

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	ND	5.0	0.50	ug/L			1	6020B
7440-39-3	Barium	220	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	120000	200	32	ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0	0.19	ug/L			1	6020B
7440-48-4	Co	ND	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	ND	3.0	0.50	ug/L			1	6020B
7440-50-8	Copper	ND	2.0	0.71	ug/L			1	6020B
7439-89-6	Iron	9.9	200	8.7	ug/L	J		1	6020B
7440-09-7	Potassium	3500	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	54000	200	4.2	ug/L			1	6020B
7439-96-5	Manganese	0.52	3.0	0.51	ug/L	J		1	6020B
7440-23-5	Sodium	68000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	ND	3.0	0.83	ug/L			1	6020B
7439-92-1	Lead	ND	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	ND	5.0	1.1	ug/L			1	6020B
7440-66-6	Zinc	ND	10	2.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-119S-20230413 Lab Sample ID: 280-175123-2

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG ID.:

Matrix: Water Date Sampled: 04/13/2023 09:15

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	0.58	5.0	0.50	ug/L	J		1	6020B
7440-39-3	Barium	250	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	140000	200	32	ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0	0.19	ug/L			1	6020B
7440-48-4	Co	ND	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	ND	3.0	0.50	ug/L			1	6020B
7440-50-8	Copper	0.96	2.0	0.71	ug/L	J		1	6020B
7439-89-6	Iron	ND	200	8.7	ug/L			1	6020B
7440-09-7	Potassium	4400	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	63000	200	4.2	ug/L			1	6020B
7439-96-5	Manganese	ND	3.0	0.51	ug/L			1	6020B
7440-23-5	Sodium	78000	1000	73	ug/L			1	6020B
7440-02-0	Nickel	ND	3.0	0.83	ug/L			1	6020B
7439-92-1	Lead	ND	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	ND	5.0	1.1	ug/L			1	6020B
7440-66-6	Zinc	ND	10	2.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: RW-3-20230413 Lab Sample ID: 280-175123-3

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG ID.:

Matrix: Water Date Sampled: 04/13/2023 12:45

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	ND	1.0	0.045	ug/L			1	6020B
7440-38-2	Arsenic	1.4	5.0	0.50	ug/L	J		1	6020B
7440-39-3	Barium	410	3.0	0.38	ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0	0.30	ug/L			1	6020B
7440-70-2	Calcium	210000	2000	320	ug/L			10	6020B
7440-43-9	Cadmium	ND	1.0	0.19	ug/L			1	6020B
7440-48-4	Co	1.6	1.0	0.33	ug/L			1	6020B
7440-47-3	Chromium	0.80	3.0	0.50	ug/L	J		1	6020B
7440-50-8	Copper	1.2	2.0	0.71	ug/L	J		1	6020B
7439-89-6	Iron	52	200	8.7	ug/L	J		1	6020B
7440-09-7	Potassium	4800	1000	52	ug/L			1	6020B
7439-95-4	Magnesium	60000	2000	42	ug/L			10	6020B
7439-96-5	Manganese	280	3.0	0.51	ug/L			1	6020B
7440-23-5	Sodium	160000	10000	730	ug/L			10	6020B
7440-02-0	Nickel	39	3.0	0.83	ug/L			1	6020B
7439-92-1	Lead	ND	1.0	0.23	ug/L			1	6020B
7440-36-0	Antimony	ND	2.0	0.40	ug/L			1	6020B
7782-49-2	Selenium	ND	5.0	1.0	ug/L			1	6020B
7440-31-5	Tin	ND	10	0.58	ug/L			1	6020B
7440-28-0	Thallium	ND	1.0	0.21	ug/L			1	6020B
7440-62-2	Vanadium	2.9	5.0	1.1	ug/L	J		1	6020B
7440-66-6	Zinc	8.4	10	2.0	ug/L	J	B	1	6020B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

ICV Source: ms 77 icv_02965 Concentration Units: ug/L

CCV Source: ms 77 ccv_02963

Analyte	ICV 280-609240/44 04/18/2023 16:21				CCV 280-609240/93 04/18/2023 17:54				CCV 280-609240/104 04/18/2023 18:14			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	40.8		40.0	102	49.8		50.0	100	49.3		50.0	99
Arsenic	39.4		40.0	99	51.8		50.0	104	53.4		50.0	107
Barium	40.9		40.0	102	50.1		50.0	100	49.3		50.0	99
Cadmium	40.8		40.0	102	48.6		50.0	97	49.8		50.0	100
Calcium	4920		4800	103	10300		11000	94	10200		11000	93
Chromium	42.1		40.0	105	51.1		50.0	102	51.4		50.0	103
Co	40.8		40.0	102	50.2		50.0	100	50.4		50.0	101
Copper	42.3		40.0	106	50.3		50.0	101	51.4		50.0	103
Iron	820		800	103	1040		1000	104	1030		1000	103
Lead	40.8		40.0	102	48.9		50.0	98	48.1		50.0	96
Magnesium	4700		4800	98	9920		11000	90	10100		11000	92
Nickel	40.1		40.0	100	49.1		50.0	98	49.4		50.0	99
Potassium	4840		4800	101	10300		11000	93	10400		11000	95
Selenium	42.6		40.0	107	52.7		50.0	105	52.7		50.0	105
Silver	80.5		80.0	101	48.7		50.0	97	47.1		50.0	94
Sodium	12900		12800	100	46100		51000	90	47000		51000	92
Thallium	40.7		40.0	102	48.5		50.0	97	48.4		50.0	97
Tin	39.1		40.0	98	47.8		50.0	96	47.9		50.0	96
Vanadium	41.1		40.0	103	49.7		50.0	99	50.7		50.0	101
Zinc	80.4		80.0	100	50.6		50.0	101	49.9		50.0	100
Beryllium	42.7		40.0	107	49.9		50.0	100	49.3		50.0	99
Manganese	42.0		40.0	105	50.8		50.0	102	51.4		50.0	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

ICV Source: ms 77 icv_02965 Concentration Units: ug/L

CCV Source: ms 77 ccv_02963

Analyte	CCV 280-609240/124 04/18/2023 18:51				CCV 280-609240/136 04/18/2023 19:12							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	48.6		50.0	97	53.3		50.0	107				
Arsenic	51.5		50.0	103	52.2		50.0	104				
Barium	48.7		50.0	97	49.7		50.0	99				
Cadmium	49.9		50.0	100	50.0		50.0	100				
Calcium	10100		11000	92	10000		11000	91				
Chromium	50.8		50.0	102	49.8		50.0	100				
Co	50.4		50.0	101	49.5		50.0	99				
Copper	50.7		50.0	101	49.6		50.0	99				
Iron	1020		1000	102	1030		1000	103				
Lead	47.6		50.0	95	47.9		50.0	96				
Magnesium	10000		11000	91								
Nickel	50.2		50.0	100	48.5		50.0	97				
Potassium	10100		11000	92	10200		11000	92				
Selenium	50.9		50.0	102	53.0		50.0	106				
Silver	48.3		50.0	97	48.6		50.0	97				
Sodium	47100		51000	92								
Thallium	47.6		50.0	95	48.3		50.0	97				
Tin	48.1		50.0	96	50.8		50.0	102				
Vanadium	50.0		50.0	100	48.7		50.0	97				
Zinc	50.2		50.0	100	49.7		50.0	99				
Beryllium	47.3		50.0	95	47.7		50.0	95				
Manganese	51.4		50.0	103	49.7		50.0	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

ICV Source: ms 77 icv_02966 Concentration Units: ug/L

CCV Source: ms 77 ccv_02964

Analyte	ICV 280-609394/47 04/19/2023 14:19				CCV 280-609394/86 04/19/2023 15:40				CCV 280-609394/98 04/19/2023 16:01			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	43.9		40.0	110	47.7		50.0	95	45.8		50.0	92
Magnesium	4680		4800	98	10200		11000	92	10300		11000	94
Manganese	41.7		40.0	104	51.1		50.0	102	51.5		50.0	103
Sodium	13000		12800	102	48000		51000	94	48900		51000	96
Zinc	85.0		80.0	106	51.6		50.0	103	52.5		50.0	105
Antimony	41.3		40.0	103	49.7		50.0	99	49.9		50.0	100
Arsenic	40.5		40.0	101	50.1		50.0	100	50.0		50.0	100
Barium	41.8		40.0	104	50.5		50.0	101	51.1		50.0	102
Cadmium	39.3		40.0	98	48.8		50.0	98	49.0		50.0	98
Calcium	4800		4800	100	10300		11000	94				
Chromium	41.0		40.0	103	51.1		50.0	102	51.4		50.0	103
Cobalt	40.7		40.0	102	50.4		50.0	101	50.6		50.0	101
Copper	41.6		40.0	104	50.5		50.0	101	50.2		50.0	100
Iron	812		800	102	1020		1000	102	917		1000	92
Lead	40.0		40.0	100	48.7		50.0	97	48.5		50.0	97
Nickel	41.5		40.0	104	51.8		50.0	104	51.6		50.0	103
Potassium	4590		4800	96	10000		11000	91	10000		11000	91
Selenium	40.6		40.0	101	50.0		50.0	100	46.4		50.0	93
Silver	81.6		80.0	102	49.9		50.0	100	50.4		50.0	101
Thallium	38.8		40.0	97	47.9		50.0	96	47.8		50.0	96
Tin	42.1		40.0	105	49.7		50.0	99	49.4		50.0	99
Vanadium	40.5		40.0	101	50.7		50.0	101	50.8		50.0	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

ICV Source: ms 77 icv_02966 Concentration Units: ug/L

CCV Source: ms 77 ccv_02964

Analyte	CCV 280-609394/109 04/19/2023 16:21				CCV 280-609394/120 04/19/2023 16:41							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	49.4		50.0	99	51.9		50.0	104				
Magnesium	10200		11000	93	10200		11000	92				
Manganese	50.3		50.0	101	49.9		50.0	100				
Sodium	47600		51000	93	47500		51000	93				
Zinc	51.8		50.0	104	51.1		50.0	102				
Antimony	49.8		50.0	100	48.7		50.0	97				
Arsenic	50.7		50.0	101	50.5		50.0	101				
Barium	52.8		50.0	106	50.6		50.0	101				
Cadmium	48.4		50.0	97	47.8		50.0	96				
Calcium	10300		11000	94	10000		11000	91				
Chromium	51.1		50.0	102	51.2		50.0	102				
Cobalt	49.7		50.0	99	50.0		50.0	100				
Copper	49.5		50.0	99	50.5		50.0	101				
Iron	1020		1000	102	1010		1000	101				
Lead	48.2		50.0	96	48.7		50.0	97				
Nickel	50.3		50.0	101	51.7		50.0	103				
Potassium	10100		11000	92	10000		11000	91				
Selenium	50.5		50.0	101	49.6		50.0	99				
Silver	49.9		50.0	100	49.8		50.0	100				
Thallium	47.7		50.0	95	48.2		50.0	96				
Tin	49.6		50.0	99	49.5		50.0	99				
Vanadium	49.9		50.0	100	49.1		50.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

ICV Source: ms 77 icv_02966 Concentration Units: ug/L

CCV Source: ms 77 ccv_02964

Analyte	ICV 280-609488/26 04/20/2023 08:55				CCV 280-609488/27 04/20/2023 08:56				CCV 280-609488/34 04/20/2023 09:25			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	38.1		40.0	95	48.2		50.0	96	54.6		50.0	109
Calcium	4900		4800	102	10500		11000	96	10700		11000	97
Manganese	41.4		40.0	103	52.8		50.0	106	54.5		50.0	109
Antimony	40.6		40.0	101	50.4		50.0	101	50.9		50.0	102
Arsenic	40.3		40.0	101	52.1		50.0	104				
Barium	39.2		40.0	98	51.0		50.0	102	51.2		50.0	102
Cadmium	39.3		40.0	98	50.8		50.0	102	50.8		50.0	102
Chromium	41.8		40.0	104	53.3		50.0	107				
Cobalt	40.9		40.0	102	52.7		50.0	105	54.9		50.0	110
Copper	41.6		40.0	104	52.8		50.0	106	54.7		50.0	109
Iron	827		800	103	1070		1000	107				
Lead	42.1		40.0	105	50.6		50.0	101	50.3		50.0	101
Magnesium	4630		4800	97	10400		11000	94	10300		11000	94
Nickel	41.7		40.0	104	52.0		50.0	104				
Potassium	4710		4800	98	10300		11000	94	10400		11000	95
Selenium	41.3		40.0	103	53.7		50.0	107	54.7		50.0	109
Silver	80.2		80.0	100	50.9		50.0	102	50.0		50.0	100
Sodium	13300		12800	104	49200		51000	96	48900		51000	96
Thallium	41.4		40.0	104	50.2		50.0	100	50.0		50.0	100
Tin	41.1		40.0	103	50.9		50.0	102	49.9		50.0	100
Vanadium	40.8		40.0	102	54.3		50.0	109	55.2		50.0	110
Zinc	84.9		80.0	106	53.7		50.0	107				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

ICV Source: ms 77 icv_02966 Concentration Units: ug/L

CCV Source: ms 77 ccv_02964

Analyte	CCV 280-609488/40 04/20/2023 09:36											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	49.6		50.0	99								
Calcium	10500		11000	96								
Manganese	54.6		50.0	109								
Antimony	50.4		50.0	101								
Arsenic	54.4		50.0	109								
Barium	49.0		50.0	98								
Cadmium	51.0		50.0	102								
Chromium												
Cobalt	54.1		50.0	108								
Copper												
Iron												
Lead	51.3		50.0	103								
Magnesium	10400		11000	95								
Nickel	54.3		50.0	109								
Potassium	10600		11000	96								
Selenium	54.5		50.0	109								
Silver	49.8		50.0	100								
Sodium	48300		51000	95								
Thallium	51.4		50.0	103								
Tin	49.3		50.0	99								
Vanadium	54.4		50.0	109								
Zinc												

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Method: 6020B Instrument ID: MT_079

Lab Sample ID: CRI 280-609240/46 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02785

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	1.01		101	80-120
Arsenic	5.00	5.92		118	80-120
Calcium	200	225		112	80-120
Cadmium	1.00	1.14		114	80-120
Co	1.00	1.12		112	80-120
Chromium	2.00	2.34	J	117	80-120
Copper	2.00	2.17		108	80-120
Iron	50.0	55.4	J	111	80-120
Potassium	120	119	J	99	80-120
Magnesium	50.0	53.2	J	106	80-120
Sodium	300	327	J	109	80-120
Nickel	2.00	2.17	J	109	80-120
Lead	1.00	1.00		100	80-120
Antimony	2.00	2.20		110	80-120
Selenium	5.00	5.33		107	80-120
Tin	10.0	10.4		104	80-120
Thallium	1.00	1.05		105	80-120
Vanadium	5.00	6.01		120	80-120
Zinc	10.0	10.4		104	80-120

Lab Sample ID: CRI 280-609240/47 Concentration Units: ug/L

CRQL Check Standard Source: MS 79 alt cri_00013

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Barium	2.00	2.02	J	101	80-120

Lab Sample ID: CRI 280-609394/50 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02786

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	0.855	J	86	80-120
Arsenic	5.00	4.98	J	100	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Method: 6020B Instrument ID: MT_079

Lab Sample ID: CRI 280-609394/50 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02786

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Barium	1.00	0.925	J	93	80-120
Beryllium	1.00	1.03		103	80-120
Calcium	200	201		101	80-120
Cadmium	1.00	0.853	J	85	80-120
Cobalt	1.00	0.929	J	93	80-120
Chromium	2.00	1.89	J	94	80-120
Copper	2.00	1.96	J	98	80-120
Iron	50.0	50.5	J	101	80-120
Magnesium	50.0	45.6	J	91	80-120
Manganese	1.00	1.08	J	108	80-120
Sodium	300	292	J	97	80-120
Nickel	2.00	2.14	J	107	80-120
Lead	1.00	0.900	J	90	80-120
Antimony	2.00	1.82	J	91	80-120
Selenium	5.00	4.73	J	95	80-120
Tin	10.0	8.55	J	86	80-120
Thallium	1.00	0.866	J	87	80-120
Vanadium	5.00	4.89	J	98	80-120
Zinc	10.0	9.76	J	98	80-120

Lab Sample ID: CRI 280-609488/9 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02786

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	0.855	J	86	80-120
Arsenic	5.00	4.98	J	100	80-120
Barium	1.00	0.925	J	93	80-120
Beryllium	1.00	1.03		103	80-120
Calcium	200	201		101	80-120
Cadmium	1.00	0.853	J	85	80-120
Cobalt	1.00	0.929	J	93	80-120
Chromium	2.00	1.89	J	94	80-120
Copper	2.00	1.96	J	98	80-120
Iron	50.0	50.5	J	101	80-120
Magnesium	50.0	45.6	J	91	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Method: 6020B Instrument ID: MT_079

Lab Sample ID: CRI 280-609488/9 Concentration Units: ug/L

CRQL Check Standard Source: MS 77 LLCCV_02786

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Manganese	1.00	1.08	J	108	80-120
Sodium	300	292	J	97	80-120
Nickel	2.00	2.14	J	107	80-120
Lead	1.00	0.900	J	90	80-120
Antimony	2.00	1.82	J	91	80-120
Selenium	5.00	4.73	J	95	80-120
Tin	10.0	8.55	J	86	80-120
Thallium	1.00	0.866	J	87	80-120
Vanadium	5.00	4.89	J	98	80-120
Zinc	10.0	9.76	J	98	80-120

Lab Sample ID: CRI 280-609394/59 Concentration Units: ug/L

CRQL Check Standard Source: MS 79 alt cri_00014

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Potassium	500	535	J	107	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-609240/45 04/18/2023 16:23		CCB 280-609240/94 04/18/2023 17:56		CCB 280-609240/105 04/18/2023 18:16		CCB 280-609240/125 04/18/2023 18:52	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	ND		ND		ND		ND	
Arsenic	5.0	ND		ND		ND		ND	
Barium	3.0	ND		ND		ND		ND	
Cadmium	1.0	ND		ND		ND		ND	
Calcium	200	ND		ND		ND		ND	
Chromium	3.0	ND		ND		ND		ND	
Co	1.0	ND		ND		ND		ND	
Copper	2.0	ND		ND		ND		ND	
Iron	200	ND		ND		ND		ND	
Lead	1.0	ND		ND		ND		ND	
Magnesium	200	ND		ND		ND		7.81	J
Nickel	3.0	ND		ND		ND		ND	
Potassium	1000	ND		ND		ND		ND	
Selenium	5.0	ND		ND		ND		ND	
Silver	1.0	ND		ND		ND		ND	
Sodium	1000	ND		ND		ND		ND	
Thallium	1.0	ND		ND		ND		ND	
Tin	10	ND		ND		ND		ND	
Vanadium	5.0	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	
Beryllium	1.0	ND		ND		ND		ND	
Manganese	3.0	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 280-609240/137 04/18/2023 19:14							
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.625	J						
Arsenic	5.0	ND							
Barium	3.0	ND							
Cadmium	1.0	ND							
Calcium	200	ND							
Chromium	3.0	ND							
Co	1.0	ND							
Copper	2.0	ND							
Iron	200	15.7	J						
Lead	1.0	ND							
Magnesium	200	ND							
Nickel	3.0	ND							
Potassium	1000	ND							
Selenium	5.0	ND							
Silver	1.0	0.0450	J						
Sodium	1000	ND							
Thallium	1.0	ND							
Tin	10	0.934	J						
Vanadium	5.0	ND							
Zinc	10	ND							
Beryllium	1.0	ND							
Manganese	3.0	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-609394/49 04/19/2023 14:26		CCB 280-609394/87 04/19/2023 15:41		CCB 280-609394/99 04/19/2023 16:03		CCB 280-609394/110 04/19/2023 16:23	
		Found	C	Found	C	Found	C	Found	C
Beryllium	1.0	ND		ND		ND		ND	
Magnesium	200	ND		ND		ND		ND	
Manganese	3.0	ND		ND		ND		ND	
Sodium	1000	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	
Antimony	2.0	ND		ND		ND		ND	
Arsenic	5.0	ND		ND		ND		ND	
Barium	3.0	ND		ND		ND		ND	
Cadmium	1.0	ND		ND		ND		ND	
Calcium	200	ND		ND		ND		ND	
Chromium	3.0	ND		0.599	J	0.542	J	0.720	J
Cobalt	1.0	ND		ND		ND		ND	
Copper	2.0	ND		ND		ND		ND	
Iron	200	ND		10.1	J	10.3	J	10.7	J
Lead	1.0	ND		ND		ND		ND	
Nickel	3.0	ND		ND		ND		ND	
Potassium	1000	ND		ND		ND		ND	
Selenium	5.0	ND		ND		ND		ND	
Silver	1.0	ND		ND		ND		ND	
Thallium	1.0	ND		ND		ND		ND	
Tin	10	ND		ND		ND		ND	
Vanadium	5.0	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 280-609394/121 04/19/2023 16:43							
		Found	C	Found	C	Found	C	Found	C
Beryllium	1.0	ND							
Magnesium	200	ND							
Manganese	3.0	ND							
Sodium	1000	ND							
Zinc	10	ND							
Antimony	2.0	ND							
Arsenic	5.0	ND							
Barium	3.0	ND							
Cadmium	1.0	ND							
Calcium	200	ND							
Chromium	3.0	0.815	J						
Cobalt	1.0	ND							
Copper	2.0	ND							
Iron	200	19.8	J						
Lead	1.0	ND							
Nickel	3.0	0.979	J						
Potassium	1000	ND							
Selenium	5.0	ND							
Silver	1.0	ND							
Thallium	1.0	ND							
Tin	10	0.646	J						
Vanadium	5.0	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-609488/8 04/19/2023 14:26		CCB 280-609488/28 04/20/2023 08:58		CCB 280-609488/35 04/20/2023 09:27		CCB 280-609488/41 04/20/2023 09:39	
		Found	C	Found	C	Found	C	Found	C
Beryllium	1.0	ND		ND		ND		ND	
Calcium	200	ND		ND		ND		ND	
Manganese	3.0	ND		ND		ND		ND	
Antimony	2.0	ND		ND		ND		ND	
Arsenic	5.0	ND		ND		ND		ND	
Barium	3.0	ND		ND		ND		ND	
Cadmium	1.0	ND		ND		ND		ND	
Chromium	3.0	ND		ND		0.550	J	0.545	J
Cobalt	1.0	ND		ND		ND		ND	
Copper	2.0	ND		ND		ND		ND	
Iron	200	ND		ND		8.73	J	ND	
Lead	1.0	ND		ND		ND		ND	
Magnesium	200	ND		ND		ND		ND	
Nickel	3.0	ND		ND		ND		0.838	J
Potassium	1000	ND		ND		ND		ND	
Selenium	5.0	ND		ND		ND		ND	
Silver	1.0	ND		ND		ND		ND	
Sodium	1000	ND		ND		ND		ND	
Thallium	1.0	ND		ND		ND		ND	
Tin	10	ND		ND		ND		ND	
Vanadium	5.0	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-608984/1-A

Instrument Code: MT_079 Batch No.: 609240

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	ND			6020B
7440-38-2	Arsenic	ND			6020B
7440-39-3	Barium	ND			6020B
7440-70-2	Calcium	ND			6020B
7440-43-9	Cadmium	ND			6020B
7440-48-4	Co	ND			6020B
7440-47-3	Chromium	ND			6020B
7440-50-8	Copper	ND			6020B
7439-89-6	Iron	ND			6020B
7440-09-7	Potassium	ND			6020B
7439-95-4	Magnesium	ND			6020B
7440-23-5	Sodium	ND			6020B
7440-02-0	Nickel	ND			6020B
7439-92-1	Lead	ND			6020B
7440-36-0	Antimony	ND			6020B
7782-49-2	Selenium	ND			6020B
7440-31-5	Tin	ND			6020B
7440-28-0	Thallium	ND			6020B
7440-62-2	Vanadium	ND			6020B
7440-66-6	Zinc	5.19	J		6020B

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-608984/1-A

Instrument Code: MT_079 Batch No.: 609488

CAS No.	Analyte	Concentration	C	Q	Method
7440-41-7	Beryllium	ND			6020B
7439-96-5	Manganese	ND			6020B

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICSA 280-609240/48 Instrument ID: MT_079

Lab File ID: 048ICSA.d ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.136**	
Arsenic		**0.122**	
Barium		**1.59**	
Cadmium		**0.235**	
Calcium	**100000**	**95525**	**96**
Chromium		**1.05**	
Co		**0.230**	
Copper		**0.122**	
Iron	**100000**	**95433**	**95**
Lead		**0.102**	
Magnesium	**100000**	**95613**	**96**
Nickel		**0.0600**	
Potassium	**100000**	**95916**	**96**
Selenium		**0.0360**	
Silver		**0.0320**	
Sodium	**100000**	**95336**	**95**
Thallium		**-0.0340**	
Tin		**0.0770**	
Vanadium		**0.211**	
Zinc		**0.464**	
Aluminum	*100000*	*96041*	*96*
Beryllium		*-0.0020*	
Manganese		*0.230*	
Molybdenum	*2000*	*1981*	*99*
Strontium		*0.607*	
Thorium		*0.0400*	
Uranium		*0.0160*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICSAB 280-609240/49 Instrument ID: MT_079

Lab File ID: 049ICSB.d ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**99.3**	**99**
Arsenic	**100**	**92.7**	**93**
Barium	**100**	**99.8**	**100**
Cadmium	**100**	**95.5**	**95**
Calcium	**107000**	**97685**	**91**
Chromium	**100**	**99.7**	**100**
Co	**100**	**96.5**	**96**
Copper	**100**	**97.0**	**97**
Iron	**102000**	**95624**	**94**
Lead	**100**	**95.1**	**95**
Magnesium	**107000**	**97688**	**91**
Nickel	**100**	**92.5**	**93**
Potassium	**107000**	**100044**	**93**
Selenium	**100**	**101**	**101**
Silver	**100**	**96.8**	**97**
Sodium	**107000**	**98434**	**92**
Thallium	**100**	**94.0**	**94**
Tin	**100**	**98.2**	**98**
Vanadium	**100**	**96.2**	**96**
Zinc	**100**	**92.7**	**93**
Aluminum	*102000*	*95133*	*93*
Beryllium	*100*	*95.7*	*96*
Manganese	*100*	*97.5*	*97*
Molybdenum	*2100*	*2049*	*98*
Strontium	*200*	*193*	*97*
Thorium	*100*	*95.9*	*96*
Uranium	*100*	*103*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICSA 280-609394/51 Instrument ID: MT_079

Lab File ID: 054ICSA_79_041923.D ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**-0.0020**	
Magnesium	**100000**	**94133**	**94**
Manganese		**0.241**	
Sodium	**100000**	**94525**	**95**
Zinc		**0.884**	
Aluminum	*100000*	*93661*	*94*
Antimony		*0.127*	
Arsenic		*-0.0600*	
Barium		*1.91*	
Cadmium		*0.0980*	
Calcium	*100000*	*95001*	*95*
Chromium		*1.04*	
Cobalt		*0.225*	
Copper		*0.151*	
Iron	*100000*	*92693*	*93*
Lead		*0.121*	
Molybdenum	*2000*	*1923*	*96*
Nickel		*0.423*	
Potassium	*100000*	*91707*	*92*
Selenium		*-0.0020*	
Silver		*0.0280*	
Strontium		*0.793*	
Thallium		*-0.0940*	
Thorium		*0.0680*	
Tin		*-0.0060*	
Uranium		*0.0430*	
Vanadium		*-0.197*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICSA 280-609488/10 Instrument ID: MT_079

Lab File ID: 054ICSA_79_041923.D ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**-0.0020**	
Calcium	**100000**	**95001**	**95**
Manganese		**0.241**	
Aluminum	*100000*	*93661*	*94*
Antimony		*0.127*	
Arsenic		*-0.0600*	
Barium		*1.91*	
Cadmium		*0.0980*	
Chromium		*1.04*	
Cobalt		*0.225*	
Copper		*0.151*	
Iron	*100000*	*92693*	*93*
Lead		*0.121*	
Magnesium	*100000*	*94133*	*94*
Molybdenum	*2000*	*1923*	*96*
Nickel		*0.423*	
Potassium	*100000*	*91707*	*92*
Selenium		*-0.0020*	
Silver		*0.0280*	
Sodium	*100000*	*94525*	*95*
Strontium		*0.793*	
Thallium		*-0.0940*	
Thorium		*0.0680*	
Tin		*-0.0060*	
Uranium		*0.0430*	
Vanadium		*-0.197*	
Zinc		*0.884*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICSAB 280-609394/52 Instrument ID: MT_079

Lab File ID: 055ICSB_79_041923.D ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Beryllium	**100**	**102**	**102**
Magnesium	**107000**	**99805**	**93**
Manganese	**100**	**97.6**	**98**
Sodium	**107000**	**100769**	**94**
Zinc	**100**	**97.3**	**97**
Aluminum	*102000*	*94151*	*92*
Antimony	*100*	*99.6*	*100*
Arsenic	*100*	*95.9*	*96*
Barium	*100*	*104*	*104*
Cadmium	*100*	*96.4*	*96*
Calcium	*107000*	*99439*	*93*
Chromium	*100*	*99.5*	*99*
Cobalt	*100*	*95.8*	*96*
Copper	*100*	*96.3*	*96*
Iron	*102000*	*95494*	*94*
Lead	*100*	*98.7*	*99*
Molybdenum	*2100*	*2048*	*98*
Nickel	*100*	*96.4*	*96*
Potassium	*107000*	*98905*	*92*
Selenium	*100*	*102*	*102*
Silver	*100*	*99.9*	*100*
Strontium	*200*	*194*	*97*
Thallium	*100*	*97.7*	*98*
Thorium	*100*	*101*	*101*
Tin	*100*	*101*	*101*
Uranium	*100*	*107*	*107*
Vanadium	*100*	*95.4*	*95*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICSAB 280-609488/11 Instrument ID: MT_079

Lab File ID: 055ICSB_79_041923.D ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Beryllium	**100**	**102**	**102**
Calcium	**107000**	**99439**	**93**
Manganese	**100**	**97.6**	**98**
Aluminum	*102000*	*94151*	*92*
Antimony	*100*	*99.6*	*100*
Arsenic	*100*	*95.9*	*96*
Barium	*100*	*104*	*104*
Cadmium	*100*	*96.4*	*96*
Chromium	*100*	*99.5*	*99*
Cobalt	*100*	*95.8*	*96*
Copper	*100*	*96.3*	*96*
Iron	*102000*	*95494*	*94*
Lead	*100*	*98.7*	*99*
Magnesium	*107000*	*99805*	*93*
Molybdenum	*2100*	*2048*	*98*
Nickel	*100*	*96.4*	*96*
Potassium	*107000*	*98905*	*92*
Selenium	*100*	*102*	*102*
Silver	*100*	*99.9*	*100*
Sodium	*107000*	*100769*	*94*
Strontium	*200*	*194*	*97*
Thallium	*100*	*97.7*	*98*
Thorium	*100*	*101*	*101*
Tin	*100*	*101*	*101*
Uranium	*100*	*107*	*107*
Vanadium	*100*	*95.4*	*95*
Zinc	*100*	*97.3*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICSA 280-609488/31 Instrument ID: MT_079

Lab File ID: 306ICSA.d ICS Source: ms 77 icsa_00677

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**0.0000**	
Calcium	**100000**	**91301**	**91**
Manganese		**0.940**	
Aluminum	*100000*	*93390*	*93*
Antimony		*0.125*	
Arsenic		*-0.0130*	
Barium		*1.55*	
Cadmium		*0.185*	
Chromium		*2.00*	
Cobalt		*0.242*	
Copper		*0.221*	
Iron	*100000*	*98240*	*98*
Lead		*0.144*	
Magnesium	*100000*	*90240*	*90*
Molybdenum	*2000*	*1826*	*91*
Nickel		*0.717*	
Potassium	*100000*	*91289*	*91*
Selenium		*0.0440*	
Silver		*0.0340*	
Sodium	*100000*	*90482*	*90*
Strontium		*0.827*	
Thallium		*0.0230*	
Thorium		*-0.387*	
Tin		*0.495*	
Uranium		*0.0530*	
Vanadium		*-0.108*	
Zinc		*1.52*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Lab Sample ID: ICSAB 280-609488/32 Instrument ID: MT_079

Lab File ID: 307ICSB.d ICS Source: ms 77 icsab_00672

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Beryllium	**100**	**99.7**	**100**
Calcium	**107000**	**101480**	**95**
Manganese	**100**	**100**	**100**
Aluminum	*102000*	*95349*	*93*
Antimony	*100*	*95.7*	*96*
Arsenic	*100*	*99.9*	*100*
Barium	*100*	*96.8*	*97*
Cadmium	*100*	*93.7*	*94*
Chromium	*100*	*101*	*101*
Cobalt	*100*	*98.5*	*98*
Copper	*100*	*100*	*100*
Iron	*102000*	*97095*	*95*
Lead	*100*	*98.2*	*98*
Magnesium	*107000*	*93564*	*87*
Molybdenum	*2100*	*1955*	*93*
Nickel	*100*	*97.6*	*98*
Potassium	*107000*	*96389*	*90*
Selenium	*100*	*101*	*101*
Silver	*100*	*94.4*	*94*
Sodium	*107000*	*95050*	*89*
Strontium	*200*	*198*	*99*
Thallium	*100*	*97.4*	*97*
Thorium	*100*	*98.0*	*98*
Tin	*100*	*97.0*	*97*
Uranium	*100*	*106*	*106*
Vanadium	*100*	*98.5*	*99*
Zinc	*100*	*97.3*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 280-608984/2-A

Lab Name: Eurofins Denver Job No.: 280-175123-1

Sample Matrix: Water LCS Source: MS spike 2_00106

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	40.0	39.9		100	85	115		6020B
Arsenic	40.0	40.6		101	85	117		6020B
Barium	40.0	40.9		102	85	118		6020B
Calcium	800	849		106	80	120		6020B
Cadmium	40.0	39.3		98	85	115		6020B
Co	40.0	40.0		100	85	120		6020B
Chromium	40.0	40.5		101	84	121		6020B
Copper	40.0	41.1		103	85	119		6020B
Iron	800	830		104	80	120		6020B
Potassium	800	767	J	96	80	120		6020B
Magnesium	800	724		90	80	120		6020B
Sodium	800	886	J	111	80	120		6020B
Nickel	40.0	39.2		98	85	119		6020B
Lead	40.0	38.7		97	85	118		6020B
Antimony	40.0	39.1		98	85	115		6020B
Selenium	40.0	42.1		105	77	122		6020B
Tin	40.0	37.1		93	77	115		6020B
Thallium	40.0	38.6		97	85	118		6020B
Vanadium	40.0	39.3		98	85	120		6020B
Zinc	40.0	39.2		98	83	122		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 280-608984/2-A

Lab Name: Eurofins Denver Job No.: 280-175123-1

Sample Matrix: Water LCS Source: ms spike 1_00017

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Beryllium	40.0	39.1		98	80	125		6020B
Manganese	40.0	41.3		103	85	117		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG Number:

Matrix: Water Instrument ID: MT_079

Method: 6020B MDL Date: 09/01/2022 00:00

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony		2	0.4
Arsenic		5	0.5
Barium		3	0.38
Beryllium		1	0.303
Cadmium		1	0.19
Calcium		200	32.29
Chromium		3	0.5
Co		1	0.33
Copper		2	0.71
Iron		200	8.67
Lead		1	0.23
Magnesium		200	4.16
Manganese		3	0.51
Nickel		3	0.83
Potassium		1000	52
Selenium		5	1
Silver		1	0.045
Sodium		1000	73.3
Thallium		1	0.21
Tin		10	0.58
Vanadium		5	1.12
Zinc		10	2

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG Number:

Matrix: Water Instrument ID: MT_079

Method: 6020B XMDL Date: 01/03/2023 12:35

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony		2	0.4
Arsenic		5	0.5
Barium		3	0.38
Beryllium		1	0.303
Cadmium		1	0.19
Calcium		200	32.29
Chromium		3	0.5
Co		1	0.33
Copper		2	0.71
Iron		200	8.67
Lead		1	0.23
Magnesium		200	4.16
Manganese		3	0.51
Nickel		3	0.83
Potassium		1000	52
Selenium		5	1
Silver		1	0.045
Sodium		1000	73.3
Thallium		1	0.21
Tin		10	0.58
Vanadium		5	1.12
Zinc		10	2

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Denver Job No: 280-175123-1

SDG No.:

Instrument ID: MT_079 Date: 10/06/2022 14:28

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Silver		900	6020B
Arsenic		3600	6020B
Barium		4500	6020B
Beryllium		3600	6020B
Calcium		72000	6020B
Cadmium		3600	6020B
Co		3600	6020B
Chromium		4500	6020B
Copper		4500	6020B
Iron		72000	6020B
Potassium		72000	6020B
Magnesium		72000	6020B
Manganese		18000	6020B
Sodium		72000	6020B
Nickel		4500	6020B
Lead		4500	6020B
Antimony		3600	6020B
Selenium		3600	6020B
Tin		3600	6020B
Thallium		3600	6020B
Vanadium		3600	6020B
Zinc		4500	6020B

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-608984/1-A	04/18/2023 07:56	608984		50	50
LCS 280-608984/2-A	04/18/2023 07:56	608984		50	50
280-175123-1	04/18/2023 07:56	608984		50	50
280-175123-2	04/18/2023 07:56	608984		50	50
280-175123-3	04/18/2023 07:56	608984		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/18/2023 14:56 End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn							
RINSE 280-609240/1			14:56																											
RINSE 280-609240/2			14:57																											
RINSE 280-609240/3			14:59																											
RINSE 280-609240/4			15:01																											
RINSE 280-609240/5			15:03																											
RINSE 280-609240/6			15:07																											
RINSE 280-609240/7			15:09																											
RINSE 280-609240/8			15:10																											
RINSE 280-609240/9			15:12																											
RINSE 280-609240/10			15:14																											
RINSE 280-609240/11			15:16																											
RINSE 280-609240/12			15:18																											
RINSE 280-609240/13			15:20																											
RINSE 280-609240/14			15:21																											
RINSE 280-609240/15			15:23																											
RINSE 280-609240/16			15:25																											
RINSE 280-609240/17			15:27																											
RINSE 280-609240/18			15:29																											
RINSE 280-609240/19			15:30																											
RINSE 280-609240/20			15:32																											
RINSE 280-609240/21			15:34																											
RINSE 280-609240/22			15:36																											
RINSE 280-609240/23			15:38																											
RINSE 280-609240/24			15:41																											
RINSE 280-609240/25			15:43																											
RINSE 280-609240/26			15:46																											
RINSE 280-609240/27			15:48																											
RINSE 280-609240/28			15:50																											
RINSE 280-609240/29			15:52																											
RINSE 280-609240/30			15:54																											
RINSE 280-609240/31			15:55																											
ICIS 280-609240/32			15:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
IC 280-609240/33			15:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
IC 280-609240/34			16:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICV 280-609240/35			16:03																											
ICB 280-609240/36			16:04																											
CRI 280-609240/37			16:06																											
RINSE 280-609240/38			16:10																											
RINSE 280-609240/39			16:12																											
RINSE 280-609240/40			16:14																											
ICIS 280-609240/41			16:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/18/2023 14:56 End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn						
IC 280-609240/42	1		16:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
IC 280-609240/43	1		16:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 280-609240/44	1		16:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 280-609240/45	1		16:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CRI 280-609240/46	1		16:25	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CRI 280-609240/47	1		16:31			X																							
ICSA 280-609240/48	1		16:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 280-609240/49	1		16:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
RINSE 280-609240/50			16:36																										
LRA 280-609240/51			16:38																										
RINSE 280-609240/52			16:40																										
CCV 280-609240/53			16:42																										
CCB 280-609240/54			16:44																										
CCVL 280-609240/55			16:45																										
ZZZZZZ			16:47																										
ZZZZZZ			16:49																										
ZZZZZZ			16:51																										
ZZZZZZ			16:53																										
ZZZZZZ			16:54																										
ZZZZZZ			16:56																										
ZZZZZZ			16:58																										
ZZZZZZ			17:00																										
CCV 280-609240/64			17:02																										
CCB 280-609240/65			17:03																										
ZZZZZZ			17:05																										
ZZZZZZ			17:07																										
ZZZZZZ			17:09																										
ZZZZZZ			17:11																										
ZZZZZZ			17:13																										
ZZZZZZ			17:14																										
ZZZZZZ			17:16																										
ZZZZZZ			17:18																										
ZZZZZZ			17:20																										
ZZZZZZ			17:22																										
CCV 280-609240/76			17:24																										
CCB 280-609240/77			17:25																										
ZZZZZZ			17:27																										
ZZZZZZ			17:29																										
ZZZZZZ			17:31																										
ZZZZZZ			17:33																										
ZZZZZZ			17:34																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/18/2023 14:56 End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn						
ZZZZZZ			17:36																									
ZZZZZZ			17:38																									
ZZZZZZ			17:40																									
ZZZZZZ			17:42																									
ZZZZZZ			17:43																									
CCV 280-609240/88			17:45																									
CCB 280-609240/89			17:47																									
ZZZZZZ			17:49																									
ZZZZZZ			17:51																									
ZZZZZZ			17:53																									
CCV 280-609240/93	1		17:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB 280-609240/94	1		17:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
MB 280-608984/1-A	1	R	17:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
LCS 280-608984/2-A	1	R	18:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			18:02																									
ZZZZZZ			18:03																									
ZZZZZZ			18:05																									
ZZZZZZ			18:07																									
ZZZZZZ			18:09																									
ZZZZZZ			18:11																									
ZZZZZZ			18:12																									
CCV 280-609240/104	1		18:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB 280-609240/105	1		18:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			18:18																									
ZZZZZZ			18:20																									
ZZZZZZ			18:22																									
ZZZZZZ			18:23																									
ZZZZZZ			18:25																									
ZZZZZZ			18:27																									
ZZZZZZ			18:29																									
CCV 280-609240/113			18:31																									
CCB 280-609240/114			18:32																									
ZZZZZZ			18:34																									
ZZZZZZ			18:36																									
ZZZZZZ			18:38																									
ZZZZZZ			18:40																									
ZZZZZZ			18:42																									
ZZZZZZ			18:43																									
ZZZZZZ			18:45																									
ZZZZZZ			18:47																									
ZZZZZZ			18:49																									

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/18/2023 14:56 End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn							
CCV 280-609240/124	1		18:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 280-609240/125	1		18:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:54																										
280-175123-1	1	D	18:56	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X						
280-175123-2	1	D	18:58	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X						
280-175123-3	1	D	19:00	X	X	X		X	X	X	X	X	X			X	X	X	X	X	X	X							
ZZZZZZ			19:01																										
ZZZZZZ			19:03																										
ZZZZZZ			19:05																										
ZZZZZZ			19:07																										
ZZZZZZ			19:09																										
ZZZZZZ			19:11																										
CCV 280-609240/136	1		19:12	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X						
CCB 280-609240/137	1		19:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:16																										
ZZZZZZ			19:18																										
ZZZZZZ			19:19																										
ZZZZZZ			19:21																										
ZZZZZZ			19:23																										
ZZZZZZ			19:25																										
ZZZZZZ			19:27																										
ZZZZZZ			19:28																										
ZZZZZZ			19:30																										
ZZZZZZ			19:32																										
CCV 280-609240/148			19:34																										
CCB 280-609240/149			19:36																										
ZZZZZZ			19:38																										
ZZZZZZ			19:39																										
ZZZZZZ			19:41																										
ZZZZZZ			19:43																										
ZZZZZZ			19:45																										
ZZZZZZ			19:47																										
CCV 280-609240/156			19:49																										
CCB 280-609240/157			19:50																										
ZZZZZZ			19:52																										
ZZZZZZ			19:54																										
ZZZZZZ			19:56																										
ZZZZZZ			19:58																										
ZZZZZZ			19:59																										
ZZZZZZ			20:01																										
ZZZZZZ			20:03																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/18/2023 14:56 End Date: 04/18/2023 20:32

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	Pb	Sb	Se	Sn	Tl	V	Zn							
ZZZZZZ			20:05																											
CCV 280-609240/166			20:07																											
CCB 280-609240/167			20:08																											
ZZZZZZ			20:10																											
ZZZZZZ			20:12																											
ZZZZZZ			20:14																											
ZZZZZZ			20:16																											
ZZZZZZ			20:18																											
ZZZZZZ			20:19																											
ZZZZZZ			20:21																											
ZZZZZZ			20:23																											
ZZZZZZ			20:25																											
ZZZZZZ			20:27																											
ZZZZZZ			20:29																											
ZZZZZZ			20:30																											
ZZZZZZ			20:32																											

Prep Types:
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 | Analysis Method: 6020B

Start Date: 04/19/2023 12:48 | End Date: 04/19/2023 17:38

Lab Sample Id	D/F	Type	Time	Analytes																									
				Be	Mg	Mn	Na	Zn																					
RINSE 280-609394/1			12:48																										
RINSE 280-609394/2			12:50																										
RINSE 280-609394/3			12:52																										
RINSE 280-609394/4			12:54																										
RINSE 280-609394/5			12:55																										
RINSE 280-609394/6			12:57																										
RINSE 280-609394/7			12:59																										
RINSE 280-609394/8			13:01																										
RINSE 280-609394/9			13:03																										
RINSE 280-609394/10			13:05																										
RINSE 280-609394/11			13:06																										
RINSE 280-609394/12			13:08																										
RINSE 280-609394/13			13:10																										
RINSE 280-609394/14			13:12																										
RINSE 280-609394/15			13:14																										
RINSE 280-609394/16			13:15																										
RINSE 280-609394/17			13:17																										
RINSE 280-609394/18			13:19																										
RINSE 280-609394/19			13:21																										
RINSE 280-609394/20			13:23																										
RINSE 280-609394/21			13:25																										
RINSE 280-609394/22			13:26																										
RINSE 280-609394/23			13:28																										
RINSE 280-609394/24			13:30																										
RINSE 280-609394/25			13:32																										
RINSE 280-609394/26			13:34																										
RINSE 280-609394/27			13:35																										
ICIS 280-609394/28			13:37	X	X	X	X	X																					
IC 280-609394/29			13:39	X	X	X	X	X																					
IC 280-609394/30			13:41	X	X	X	X	X																					
ICV 280-609394/31			13:43																										
ICB 280-609394/32			13:44																										
RINSE 280-609394/33			13:46																										
RINSE 280-609394/34			13:48																										
ICIS 280-609394/35			13:50	X	X	X	X	X																					
IC 280-609394/36			13:52	X	X	X	X	X																					
IC 280-609394/37			13:54	X	X	X	X	X																					
ICV 280-609394/38			13:55																										
ICB 280-609394/39			14:00																										
ICB 280-609394/40			14:02																										
CRI 280-609394/41			14:07																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 12:48 End Date: 04/19/2023 17:38

Lab Sample Id	D/F	Type	Time	Analytes																										
				Be	Mg	Mn	Na	Zn																						
RINSE 280-609394/42			14:09																											
RINSE 280-609394/43			14:11																											
ICIS 280-609394/44			14:13	X	X	X	X	X																						
IC 280-609394/45	1		14:15	X	X	X	X	X																						
IC 280-609394/46	1		14:17	X	X	X	X	X																						
ICV 280-609394/47	1		14:19	X	X	X	X	X																						
ICB 280-609394/48			14:21																											
ICB 280-609394/49	1		14:26	X	X	X	X	X																						
CRI 280-609394/50	1		14:28	X	X	X	X	X																						
ICSA 280-609394/51	1		14:32	X	X	X	X	X																						
ICSAB 280-609394/52	1		14:34	X	X	X	X	X																						
RINSE 280-609394/53			14:35																											
LRA 280-609394/54			14:37																											
ZZZZZZ			14:39																											
CCV 280-609394/56			14:41																											
CCB 280-609394/57			14:42																											
CCVL 280-609394/58			14:44																											
CRI 280-609394/59	1		14:46																											
ZZZZZZ			14:48																											
ZZZZZZ			14:50																											
ZZZZZZ			14:51																											
ZZZZZZ			14:53																											
ZZZZZZ			14:55																											
ZZZZZZ			14:57																											
ZZZZZZ			14:59																											
CCV 280-609394/67			15:00																											
CCB 280-609394/68			15:02																											
ZZZZZZ			15:04																											
ZZZZZZ			15:06																											
ZZZZZZ			15:08																											
ZZZZZZ			15:10																											
ZZZZZZ			15:11																											
ZZZZZZ			15:14																											
ZZZZZZ			15:15																											
ZZZZZZ			15:17																											
ZZZZZZ			15:20																											
ZZZZZZ			15:21																											
CCV 280-609394/79			15:23																											
CCB 280-609394/80			15:28																											
ZZZZZZ			15:30																											
ZZZZZZ			15:32																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 12:48 End Date: 04/19/2023 17:38

Lab Sample Id	D/F	Type	Time	Analytes																										
				Be	Mg	Mn	Na	Zn																						
ZZZZZZ			15:34																											
ZZZZZZ			15:36																											
ZZZZZZ			15:38																											
CCV 280-609394/86	1		15:40	X	X	X	X	X																						
CCB 280-609394/87	1		15:41	X	X	X	X	X																						
ZZZZZZ			15:43																											
LCS 280-608984/2-A	1	R	15:45	X		X																								
ZZZZZZ			15:47																											
ZZZZZZ			15:49																											
ZZZZZZ			15:51																											
ZZZZZZ			15:52																											
ZZZZZZ			15:54																											
ZZZZZZ			15:56																											
ZZZZZZ			15:58																											
280-175123-3	10	D	16:00		X		X																							
CCV 280-609394/98	1		16:01	X	X	X	X	X																						
CCB 280-609394/99	1		16:03	X	X	X	X	X																						
ZZZZZZ			16:05																											
ZZZZZZ			16:07																											
ZZZZZZ			16:09																											
ZZZZZZ			16:10																											
ZZZZZZ			16:12																											
ZZZZZZ			16:14																											
ZZZZZZ			16:16																											
ZZZZZZ			16:18																											
ZZZZZZ			16:20																											
CCV 280-609394/109	1		16:21	X	X	X	X	X																						
CCB 280-609394/110	1		16:23	X	X	X	X	X																						
ZZZZZZ			16:25																											
280-175123-1	1	D	16:27	X	X	X	X																							
280-175123-2	1	D	16:29	X	X	X	X																							
280-175123-3	1	D	16:30	X		X		X																						
ZZZZZZ			16:32																											
ZZZZZZ			16:34																											
ZZZZZZ			16:36																											
ZZZZZZ			16:38																											
ZZZZZZ			16:39																											
CCV 280-609394/120	1		16:41	X	X	X	X	X																						
CCB 280-609394/121	1		16:43	X	X	X	X	X																						
ZZZZZZ			16:45																											
ZZZZZZ			16:47																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 12:48 End Date: 04/19/2023 17:38

Lab Sample Id	D/F	Type	Time	Analytes																									
				Be	Mg	Mn	Na	Zn																					
ZZZZZZ			16:48																										
ZZZZZZ			16:50																										
ZZZZZZ			16:52																										
ZZZZZZ			16:54																										
ZZZZZZ			16:56																										
ZZZZZZ			16:58																										
ZZZZZZ			16:59																										
ZZZZZZ			17:01																										
CCV 280-609394/132			17:03																										
CCB 280-609394/133			17:05																										
ZZZZZZ			17:07																										
ZZZZZZ			17:08																										
ZZZZZZ			17:10																										
ZZZZZZ			17:12																										
ZZZZZZ			17:14																										
ZZZZZZ			17:16																										
CCV 280-609394/140			17:17																										
CCB 280-609394/141			17:19																										
ZZZZZZ			17:21																										
ZZZZZZ			17:23																										
ZZZZZZ			17:25																										
ZZZZZZ			17:27																										
ZZZZZZ			17:28																										
ZZZZZZ			17:30																										
ZZZZZZ			17:32																										
ZZZZZZ			17:34																										
CCV 280-609394/150			17:36																										
CCB 280-609394/151			17:38																										

Prep Types:
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 14:09 End Date: 04/20/2023 12:49

Lab Sample Id	D/F	Type	Time	Analytes																											
				Be	Ca	Mn																									
RINSE 280-609488/1			14:09																												
RINSE 280-609488/2			14:11																												
ICIS 280-609488/3			14:13	X	X	X																									
IC 280-609488/4			14:15	X	X	X																									
IC 280-609488/5			14:17	X	X	X																									
ICV 280-609488/6			14:19																												
ICB 280-609488/7			14:21																												
ICB 280-609488/8	1		14:26	X	X	X																									
CRI 280-609488/9	1		14:28	X	X	X																									
ICSA 280-609488/10	1		14:32	X	X	X																									
ICSAB 280-609488/11	1		14:34	X	X	X																									
RINSE 280-609488/12			14:35																												
LRA 280-609488/13			14:37																												
ZZZZZZ			14:39																												
CCV 280-609488/15			14:41																												
CCB 280-609488/16			14:42																												
CCVL 280-609488/17			14:44																												
CRI 280-609488/18			14:46																												
RINSE 280-609488/19			08:41																												
RINSE 280-609488/20			08:44																												
RINSE 280-609488/21			08:45																												
RINSE 280-609488/22			08:47																												
ICIS 280-609488/23			08:49	X	X	X																									
IC 280-609488/24	1		08:51	X	X	X																									
IC 280-609488/25	1		08:53	X	X	X																									
ICV 280-609488/26	1		08:55	X	X	X																									
CCV 280-609488/27	1		08:56	X	X	X																									
CCB 280-609488/28	1		08:58	X	X	X																									
CCVL 280-609488/29			09:12																												
ZZZZZZ			09:15																												
ICSA 280-609488/31	1		09:20	X	X	X																									
ICSAB 280-609488/32	1		09:22	X	X	X																									
RINSE 280-609488/33			09:23																												
CCV 280-609488/34	1		09:25	X	X	X																									
CCB 280-609488/35	1		09:27	X	X	X																									
MB 280-608984/1-A	1	R	09:29	X		X																									
ZZZZZZ			09:31																												
ZZZZZZ			09:33																												
280-175123-3	10	D	09:34		X																										
CCV 280-609488/40	1		09:36	X	X	X																									
CCB 280-609488/41	1		09:39	X	X	X																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 14:09 End Date: 04/20/2023 12:49

Lab Sample Id	D/F	Type	Time	Analytes																										
				Be	Ca	Mn																								
ZZZZZZ			09:40																											
ZZZZZZ			09:42																											
ZZZZZZ			09:44																											
ZZZZZZ			09:46																											
ZZZZZZ			09:48																											
ZZZZZZ			09:49																											
ZZZZZZ			09:52																											
CCV 280-609488/49			09:54																											
CCB 280-609488/50			09:55																											
ZZZZZZ			09:57																											
ZZZZZZ			09:59																											
ZZZZZZ			10:01																											
ZZZZZZ			10:03																											
ZZZZZZ			10:04																											
ZZZZZZ			10:06																											
ZZZZZZ			10:08																											
ZZZZZZ			10:10																											
ZZZZZZ			10:12																											
CCV 280-609488/60			10:14																											
CCB 280-609488/61			10:37																											
RINSE 280-609488/62			10:38																											
RINSE 280-609488/63			10:40																											
RINSE 280-609488/64			10:42																											
RINSE 280-609488/65			10:44																											
RINSE 280-609488/66			10:47																											
ICIS 280-609488/67			10:49	X	X	X																								
IC 280-609488/68			10:51	X	X	X																								
IC 280-609488/69			10:53	X	X	X																								
ICV 280-609488/70			10:54																											
CCV 280-609488/71			10:56																											
CCB 280-609488/72			10:58																											
CCVL 280-609488/73			11:00																											
CCVL 280-609488/74			11:02																											
ZZZZZZ			11:03																											
ZZZZZZ			11:05																											
ZZZZZZ			11:07																											
ZZZZZZ			11:09																											
ZZZZZZ			11:11																											
ZZZZZZ			11:13																											
ZZZZZZ			11:15																											
ZZZZZZ			11:16																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 14:09 End Date: 04/20/2023 12:49

Lab Sample Id	D/F	Type	Time	Analytes																									
				Be	Ca	Mn																							
ZZZZZZ			11:18																										
ZZZZZZ			11:20																										
CCV 280-609488/85			11:23																										
CCB 280-609488/86			11:25																										
CCVL 280-609488/87			11:27																										
ZZZZZZ			11:29																										
ZZZZZZ			11:31																										
ZZZZZZ			11:32																										
ZZZZZZ			11:34																										
ZZZZZZ			11:36																										
ZZZZZZ			11:38																										
ZZZZZZ			11:40																										
ZZZZZZ			11:41																										
ZZZZZZ			11:43																										
CCV 280-609488/97			11:45																										
CCB 280-609488/98			11:47																										
CCVL 280-609488/99			11:49																										
ZZZZZZ			11:51																										
ZZZZZZ			11:52																										
ZZZZZZ			11:54																										
ZZZZZZ			11:56																										
ZZZZZZ			11:58																										
ZZZZZZ			12:00																										
CCV 280-609488/106			12:02																										
CCB 280-609488/107			12:04																										
CCVL 280-609488/108			12:06																										
ZZZZZZ			12:08																										
ZZZZZZ			12:09																										
ZZZZZZ			12:27																										
ZZZZZZ			12:29																										
ZZZZZZ			12:31																										
ZZZZZZ			12:33																										
ZZZZZZ			12:34																										
ZZZZZZ			12:36																										
ZZZZZZ			12:38																										
ZZZZZZ			12:40																										
CCV 280-609488/119			12:42																										
CCB 280-609488/120			12:44																										
ZZZZZZ			12:45																										
CCVL 280-609488/122			12:47																										
ZZZZZZ			12:49																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: MT_079 Analysis Method: 6020B

Start Date: 04/19/2023 14:09 End Date: 04/20/2023 12:49

Lab Sample Id	D/F	Type	Time	Analytes																							
				Be	Ca	Mn																					

Prep Types:
D = Dissolved
R = Total Recoverable

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609240

ICP-MS Instrument ID: MT_079 Start Date: 04/18/2023 End Date: 04/18/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/2	Q	Element Sc/3	Q	Element Ge/2	Q
IC 280-609240/42	16:17	105		102		101		101		98	
IC 280-609240/43	16:19	107		102		101		101		105	
ICV 280-609240/44	16:21	101		102		102		100		102	
ICB 280-609240/45	16:23	104		102		103		101		104	
CRI 280-609240/46	16:25	104		102		102		100		104	
CRI 280-609240/47	16:31	96		100		99		100		103	
ICSA 280-609240/48	16:33	108		102		101		101		101	
ICSAB 280-609240/49	16:35	102		101		104		101		101	
CCV 280-609240/93	17:54	104		99		103		102		102	
CCB 280-609240/94	17:56	106		99		104		101		102	
MB 280-608984/1-A	17:58	98		100		103		103		103	
LCS 280-608984/2-A	18:00	95		98		102		102		103	
CCV 280-609240/104	18:14	100		100		105		103		103	
CCB 280-609240/105	18:16	112		100		103		103		105	
CCV 280-609240/124	18:51	100		101		105		103		103	
CCB 280-609240/125	18:52	102		101		105		102		104	
280-175123-1	18:56	99		104		104		103		107	
280-175123-2	18:58	101		102		107		103		104	
280-175123-3	19:00	98		102		105		103		107	
CCV 280-609240/136	19:12	93		98		102		101		102	
CCB 280-609240/137	19:14	103		100		102		99		104	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609240

ICP-MS Instrument ID: MT_079 Start Date: 04/18/2023 End Date: 04/18/2023

Analyte	Mass	Internal Standard Used:				
		Element In 115	Element Ir 193	Element Sc/2 45	Element Sc/3 45	Element Li-6/1 6
Silver	107	X				
Arsenic	75					
Barium	137	X				
Beryllium	9					
Calcium	40			X		
Cadmium	111	X				
Co	59					
Chromium	52					
Copper	63					
Iron	56					
Potassium	39				X	
Magnesium	24				X	
Manganese	55					
Sodium	23				X	
Nickel	60					
Lead	208		X			
Antimony	121	X				
Selenium	78					
Tin	120	X				
Thallium	205		X			
Vanadium	51					
Zinc	66					
Aluminum	27				X	
Molybdenum	95	X				
Strontium	88					
Thorium	232		X			
Uranium	238		X			
Internal Standard Name on Instrument		In Internal Standard	Ir (IS)	Sc (IS)	Sc (IS)	Li-6 Internal standard

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609240

ICP-MS Instrument ID: MT_079 Start Date: 04/18/2023 End Date: 04/18/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In	Q	Element Ir	Q	Element	Q	Element	Q
IC 280-609240/42	16:17	95		101		100					
IC 280-609240/43	16:19	103		102		100					
ICV 280-609240/44	16:21	101		103		101					
ICB 280-609240/45	16:23	101		101		103					
CRI 280-609240/46	16:25	100		101		101					
CRI 280-609240/47	16:31	100		100		100					
ICSA 280-609240/48	16:33	102		101		101					
ICSAB 280-609240/49	16:35	101		100		101					
CCV 280-609240/93	17:54	101		104		102					
CCB 280-609240/94	17:56	100		103		102					
MB 280-608984/1-A	17:58	102		105		102					
LCS 280-608984/2-A	18:00	102		103		103					
CCV 280-609240/104	18:14	102		107		104					
CCB 280-609240/105	18:16	104		106		104					
CCV 280-609240/124	18:51	101		105		106					
CCB 280-609240/125	18:52	103		105		106					
280-175123-1	18:56	105		105		104					
280-175123-2	18:58	105		104		105					
280-175123-3	19:00	104		105		105					
CCV 280-609240/136	19:12	101		103		104					
CCB 280-609240/137	19:14	101		105		105					
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609240

ICP-MS Instrument ID: MT_079 Start Date: 04/18/2023 End Date: 04/18/2023

Analyte	Mass	Internal Standard Used:				
		Element Li-6/2 6	Element Ge/2 72	Element Ge/3 72	Element	Element
Silver	107					
Arsenic	75			X		
Barium	137					
Beryllium	9	X				
Calcium	40					
Cadmium	111					
Co	59			X		
Chromium	52			X		
Copper	63			X		
Iron	56		X			
Potassium	39					
Magnesium	24					
Manganese	55			X		
Sodium	23					
Nickel	60			X		
Lead	208					
Antimony	121					
Selenium	78		X			
Tin	120					
Thallium	205					
Vanadium	51			X		
Zinc	66			X		
Aluminum	27					
Molybdenum	95					
Strontium	88			X		
Thorium	232					
Uranium	238					
Internal Standard Name on Instrument		Li-6 Internal standard	Ge Internal standard	Ge Internal standard		

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609394

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/19/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/2	Q	Element Sc/3	Q	Element Ge/2	Q
IC 280-609394/45	14:15	103		100		101		102		97	
IC 280-609394/46	14:17	98		101		103		101		103	
ICV 280-609394/47	14:19	101		101		103		103		104	
ICB 280-609394/49	14:26	98		100		100		102		101	
CRI 280-609394/50	14:28	99		101		99		102		102	
ICSA 280-609394/51	14:32	100		102		102		104		104	
ICSAB 280-609394/52	14:34	98		101		102		102		101	
CRI 280-609394/59	14:46	100		103		104		105		105	
CCV 280-609394/86	15:40	94		105		105		107		103	
CCB 280-609394/87	15:41	97		105		106		105		106	
LCS 280-608984/2-A	15:45	92		105		107		106		107	
280-175123-3	16:00	101		108		108		108		110	
CCV 280-609394/98	16:01	94		106		109		106		107	
CCB 280-609394/99	16:03	99		105		105		106		106	
CCV 280-609394/109	16:21	96		106		106		108		104	
CCB 280-609394/110	16:23	100		108		108		106		107	
280-175123-1	16:27	99		107		109		108		110	
280-175123-2	16:29	98		105		109		109		110	
280-175123-3	16:30	95		105		108		108		110	
CCV 280-609394/120	16:41	90		103		107		107		104	
CCB 280-609394/121	16:43	99		104		104		107		104	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609394

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/19/2023

Analyte	Mass	Internal Standard Used:				
		Element In 115	Element Ir 193	Element Sc/2 45	Element Sc/3 45	Element Li-6/1 6
Silver	107	X				
Arsenic	75					
Barium	137	X				
Beryllium	9					
Calcium	40			X		
Cadmium	111	X				
Cobalt	59					
Chromium	52					
Copper	63					
Iron	56					
Potassium	39				X	
Magnesium	24				X	
Manganese	55					
Sodium	23				X	
Nickel	60					
Lead	208		X			
Antimony	121	X				
Selenium	78					
Tin	120	X				
Thallium	205		X			
Vanadium	51					
Zinc	66					
Aluminum	27				X	
Molybdenum	95	X				
Strontium	88					
Thorium	232		X			
Uranium	238		X			
Internal Standard Name on Instrument		In Internal Standard	Ir (IS)	Sc (IS)	Sc (IS)	Li-6 Internal standard

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609394

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/19/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In	Q	Element Ir	Q	Element	Q	Element	Q
IC 280-609394/45	14:15	97		100		103					
IC 280-609394/46	14:17	103		102		101					
ICV 280-609394/47	14:19	103		101		102					
ICB 280-609394/49	14:26	101		101		100					
CRI 280-609394/50	14:28	103		103		102					
ICSA 280-609394/51	14:32	105		100		101					
ICSAB 280-609394/52	14:34	105		100		100					
CRI 280-609394/59	14:46	104		104		104					
CCV 280-609394/86	15:40	104		104		104					
CCB 280-609394/87	15:41	104		103		106					
LCS 280-608984/2-A	15:45	107		104		107					
280-175123-3	16:00	110		104		108					
CCV 280-609394/98	16:01	103		104		106					
CCB 280-609394/99	16:03	105		104		106					
CCV 280-609394/109	16:21	106		105		107					
CCB 280-609394/110	16:23	105		106		106					
280-175123-1	16:27	111		105		106					
280-175123-2	16:29	109		105		106					
280-175123-3	16:30	109		106		105					
CCV 280-609394/120	16:41	104		106		105					
CCB 280-609394/121	16:43	107		107		106					
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609394

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/19/2023

Analyte	Mass	Internal Standard Used:				
		Element Li-6/2 6	Element Ge/2 72	Element Ge/3 72	Element	Element
Silver	107					
Arsenic	75			X		
Barium	137					
Beryllium	9	X				
Calcium	40					
Cadmium	111					
Cobalt	59			X		
Chromium	52			X		
Copper	63			X		
Iron	56		X			
Potassium	39					
Magnesium	24					
Manganese	55			X		
Sodium	23					
Nickel	60			X		
Lead	208					
Antimony	121					
Selenium	78		X			
Tin	120					
Thallium	205					
Vanadium	51			X		
Zinc	66			X		
Aluminum	27					
Molybdenum	95					
Strontium	88			X		
Thorium	232					
Uranium	238					
Internal Standard Name on Instrument		Li-6 Internal standard	Ge Internal standard	Ge Internal standard		

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609488

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/20/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/2	Q	Element Sc/3	Q	Element Ge/2	Q
ICB 280-609488/8	14:26	98		100		100		102		101	
CRI 280-609488/9	14:28	99		101		99		102		102	
ICSA 280-609488/10	14:32	100		102		102		104		104	
ICSAB 280-609488/11	14:34	98		101		102		102		101	
IC 280-609488/24	08:51	106		102		101		101		92	
IC 280-609488/25	08:53	107		102		101		100		101	
ICV 280-609488/26	08:55	103		100		101		101		97	
CCV 280-609488/27	08:56	103		101		102		102		97	
CCB 280-609488/28	08:58	104		100		101		101		98	
ICSA 280-609488/31	09:20	101		102		104		104		94	
ICSAB 280-609488/32	09:22	104		100		102		105		97	
CCV 280-609488/34	09:25	106		96		102		102		91	
CCB 280-609488/35	09:27	101		99		102		101		93	
MB 280-608984/1-A	09:29	102		98		101		103		92	
280-175123-3	09:34	104		100		103		102		94	
CCV 280-609488/40	09:36	101		100		100		100		92	
CCB 280-609488/41	09:39	101		100		102		100		90	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609488

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/20/2023

Analyte	Mass	Internal Standard Used:				
		Element In 115	Element Ir 193	Element Sc/2 45	Element Sc/3 45	Element Li-6/1 6
Silver	107	X				
Arsenic	75					
Barium	137	X				
Beryllium	9					
Calcium	40			X		
Cadmium	111	X				
Cobalt	59					
Chromium	52					
Copper	63					
Iron	56					
Potassium	39				X	
Magnesium	24				X	
Manganese	55					
Sodium	23				X	
Nickel	60					
Lead	208		X			
Antimony	121	X				
Selenium	78					
Tin	120	X				
Thallium	205		X			
Vanadium	51					
Zinc	66					
Aluminum	27				X	
Molybdenum	95	X				
Strontium	88					
Thorium	232		X			
Uranium	238		X			
Internal Standard Name on Instrument		In Internal Standard	Ir (IS)	Sc (IS)	Sc (IS)	Li-6 Internal standard

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609488

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/20/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In	Q	Element Ir	Q	Element	Q	Element	Q
ICB 280-609488/8	14:26	101		101		100					
CRI 280-609488/9	14:28	103		103		102					
ICSA 280-609488/10	14:32	105		100		101					
ICSAB 280-609488/11	14:34	105		100		100					
IC 280-609488/24	08:51	93		102		99					
IC 280-609488/25	08:53	99		99		102					
ICV 280-609488/26	08:55	98		101		99					
CCV 280-609488/27	08:56	96		100		103					
CCB 280-609488/28	08:58	98		100		103					
ICSA 280-609488/31	09:20	98		105		101					
ICSAB 280-609488/32	09:22	97		102		101					
CCV 280-609488/34	09:25	93		101		105					
CCB 280-609488/35	09:27	94		103		103					
MB 280-608984/1-A	09:29	95		103		104					
280-175123-3	09:34	95		101		103					
CCV 280-609488/40	09:36	92		100		103					
CCB 280-609488/41	09:39	93		100		102					
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.: Analysis Batch No.: 609488

ICP-MS Instrument ID: MT_079 Start Date: 04/19/2023 End Date: 04/20/2023

Analyte	Mass	Internal Standard Used:				
		Element Li-6/2 6	Element Ge/2 72	Element Ge/3 72	Element	Element
Silver	107					
Arsenic	75			X		
Barium	137					
Beryllium	9	X				
Calcium	40					
Cadmium	111					
Cobalt	59			X		
Chromium	52			X		
Copper	63			X		
Iron	56		X			
Potassium	39					
Magnesium	24					
Manganese	55			X		
Sodium	23					
Nickel	60			X		
Lead	208					
Antimony	121					
Selenium	78		X			
Tin	120					
Thallium	205					
Vanadium	51			X		
Zinc	66			X		
Aluminum	27					
Molybdenum	95					
Strontium	88			X		
Thorium	232					
Uranium	238					
Internal Standard Name on Instrument		Li-6 Internal standard	Ge Internal standard	Ge Internal standard		

METALS BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608984 Batch Start Date: 04/18/23 07:56 Batch Analyst: Sweet, Lydia J

Batch Method: 3005A Batch End Date: 04/18/23 13:44

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	ms spike 1 00017	MS spike 2 00106	
MB 280-608984/1		3005A, 6020B		<2 SU	50 mL	50 mL			
LCS 280-608984/2		3005A, 6020B		<2 SU	50 mL	50 mL	0.1 mL	0.1 mL	
280-175123-A-1	MW-119D-20230413	3005A, 6020B	D	<2 SU	50 mL	50 mL			
280-175123-A-2	MW-119S-20230413	3005A, 6020B	D	<2 SU	50 mL	50 mL			
280-175123-A-3	RW-3-20230413	3005A, 6020B	D	<2 SU	50 mL	50 mL			

Batch Notes	
Digestion Tube/Cup ID	2210117
Pipette/Syringe/Dispenser ID	MET88
Analyst ID - Spike Analyst	LJS
Sufficient Volume for Batch QC	YES
Hydrochloric Acid ID	226031
Nitric Acid ID	225038
Digestion Unit ID	05
Thermometer ID	QA55
Thermometer Location ID	B5
Temperature - Uncorrected - Start	92 Degrees C
Temperature - Corrected - Start	91 Degrees C
Digestion Start Time	04/18/2023 07:56
Digestion End Time	04/18/2023 13:44
Temperature - Uncorrected - End	96 Degrees C
Temperature - Corrected - End	95 Degrees C

Basis	Basis Description
D	Dissolved

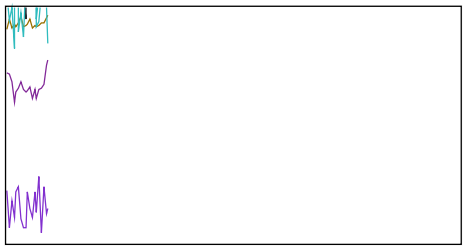
The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/18/2023 2:30:47 PM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041823.b

[HMI He]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	53	20	27	29	16 978
2	59	2000	1527	1530	2 418
3	66	50	38	32	19.724
4	70	50	82	95	11 401
5	78	20	4	2	80 653
6	115	2000	2226	2294	2.669
7	118	20	31	29	19 147
8	137	500	389	334	6 974
9	140	5000	4829	4658	1.913
10	205	5000	5194	5175	1.500
11	51/59	1	1.768 %	1.586 %	22 178
12	70/140	2	1.698 %	2.039 %	11 580
13	156/140	1	0.145 %	0.153 %	46 421

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas	---	Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-60 V
Extract 2	190 0 V	Q1 Exit		Def ect	0 8 V
Omega Bias	90 V	Cel Focus		P ate Bias	55 V
Omega Lens	10 3 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	4.3 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0.0 mL/min	OctP Bias	18 0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Torch H	0.4 mm	Torch V	0.3 mm		

Current Signal

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

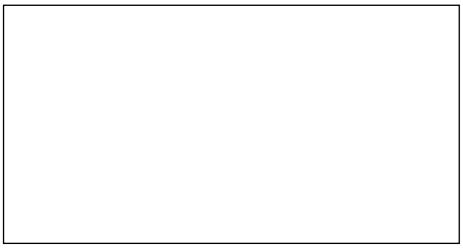
Name	Value	Unit
F/BK Press	2 09E+2	Pa
Ana yzer Press	1 82E-4	Pa
Reflected Power	0	W
Forward Power	1600	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/18/2023 2:38:47 PM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041823.b

[No Gas]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	200000	4290	4290	0.000
2	59	100000	5328	5328	0 000
3	63	100000	116	116	0 000
4	70	500000	381	381	0.000
5	80	1000000	1060789	1060789	0.000
6	89	100000	8459	8459	0.000
7	115	2000000	9043	9043	0.000
8	118	100000	104	104	0 000
9	137	50000	1185	1185	0.000
10	140	20000	9628	9628	0.000
11	205	2000000	7916	7916	0.000
12	6	5000000	6468	6468	0.000
13	70/140	1000	3.958 %	3.958 %	0.000
14	156/140	500	0 467 %	0 467 %	0 000

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-50 V
Extract 2	185 0 V	Q1 Exit		Def ect	12 8 V
Omega Bias	85 V	Cel Focus		P ate Bias	35 V
Omega Lens	10 3 V	Cel Entrance	30 V		

Cell Parameters

Use Gas	No	3rd Gas F ow		Axia Acce eration	
He F ow	0.0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0 0 mL/min	OctP Bias	8 0 V	Energy Discrimination	5 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	-3 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Current Signal

Torch H	0 4 mm	Torch V	0 3 mm		

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

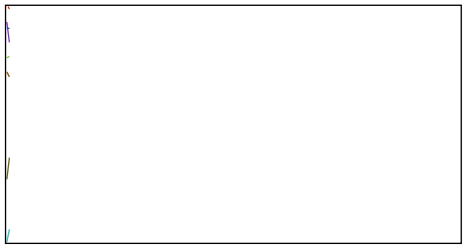
Name	Value	Unit
F/BK Press	2.11E+2	Pa
Ana yzer Press	3 24E 5	Pa
Reflected Power	2	W
Forward Power	1601	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/18/2023 2:39:03 PM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041823.b

[HMI H2]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	100	106	100	8.486
2	9	200	169	178	7 151
3	59	1000	701	699	0 506
4	63	20	3	6	64 283
5	70	100	142	147	4.811
6	78	20	1	1	141 421
7	89	5000	6194	6147	1.086
8	115	10000	7897	7851	0 833
9	118	100	99	100	1.414
10	137	1000	1106	1092	1.814
11	140	5000	5866	5925	1.403
12	205	10000	7012	7119	2.118
13	238	10000	9073	9081	0.126
14	70/140	2	2 421 %	2 481 %	3 409
15	156/140	1	0.358 %	0.313 %	20 486

Integration Time [sec] 0 1

Tune Parameters

Plasma Parameters

P asma Mode		Nebulizer Gas	0.64 L/min	Dilution Gas	0.26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1 40 V	Nebulizer Pump	0 10 rps	P asma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance		Cel Exit	60 V
Extract 2	155 0 V	Q1 Exit		Def ect	1 0 V
Omega Bias	80 V	Cel Focus		P ate Bias	60 V
Omega Lens	9 8 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	0 0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	5 0 mL/min	OctP Bias	18.0 V	Energy Discrimination	3 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Current Signal

Torch

Torch H	0 4 mm	Torch V	-0 3 mm		

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

Name	Value	Unit
F/BK Press	2.20E+2	Pa
Ana yzer Press	1.34E 4	Pa
Reflected Power	2	W
Forward Power	1601	W
Tune/ISTD Va ve		

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041823.b
Acq. Date-Time	4/18/2023 2:46:40 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

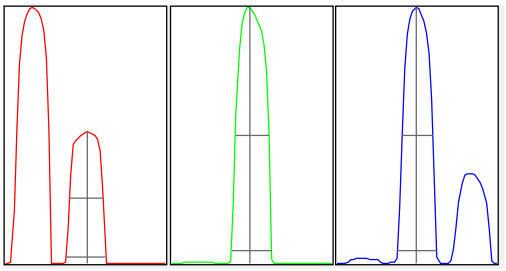
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2195	21950 93	2.009	5 000	
89		4280	42799 61	1.993	5 000	
205		3940	39401 13	2.244	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2148	2166	2194	2204	2263
89	4191	4202	4290	4321	4396
205	3872	3857	3919	3980	4073

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3598.56	7.05	6 90 7 10	
89	7306.42	89.00	88 90 89.10	
205	7100 83	205 00	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.63	0.737	0.900	
89	0.61	0.738	0.900	
205	0.57	0.739	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	10 3 V	Def ect	12 8 V
Extract 2	-185.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	85 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

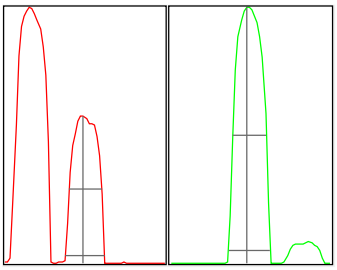
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		59	585 72	2 676	5.000	
9		111	1112 67	1.241	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	58	56	59	61	59
9	111	113	113	110	110

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	101 15	7 00	6.90 - 7.10	
9	190 26	8 95	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.61	0.738	0.900	
9	0.61	0.776	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	9 8 V	Def ect	-1 0 V
Extract 2	-155 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	80 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		173	1733.96	1 217	5.000	
25		26	258 30	4 835	5.000	
26		32	324.51	4.187	5 000	
59		942	9419 88	0.260	5 000	
103		2769	27691.16	1 031	5.000	
115		1349	13486.57	0 664	5.000	
205		2924	29244.43	1 042	5.000	
206		963	9629 36	1.323	5 000	
207		832	8319 86	0.671	5 000	

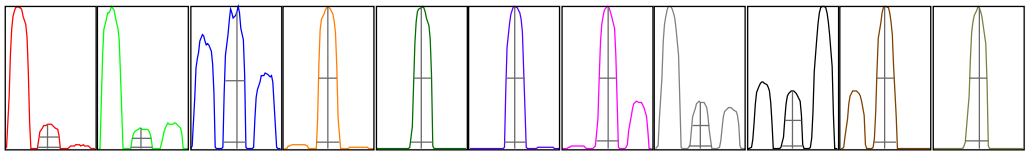
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		2055	20554.49	1 189	5.000	
238		4144	41438.26	1 213	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	171	171	175	174	176
25	26	25	24	26	27
26	33	31	34	31	33
59	942	944	943	938	943
103	2726	2755	2780	2796	2789
115	1334	1356	1352	1354	1348
205	2882	2918	2932	2923	2967
206	943	962	973	961	976
207	822	836	834	835	834
208	2016	2054	2071	2057	2079
238	4060	4137	4183	4160	4179

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	287.58	23.95	23 90 24.10	
25	43.50	24.95	24 90 25.10	
26	52 55	26 05	25.90 - 26 10	
59	1578 60	59 00	58.90 - 59 10	
103	4834.54	103.00	102.90 103.10	
115	2359.68	115.05	114.90 115.10	
205	5273.78	205.05	204.90 205.10	
206	1743 05	206 05	205 90 - 206 10	
207	1518 87	207 00	206 90 - 207 10	
208	3737.15	208.00	207.90 208.10	
238	7490.04	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 739	0 900	
25	0.64	0.743	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.741	0.900	
59	0.62	0.777	0.900	
103	0 59	0 732	0 900	
115	0 59	0 691	0 900	
205	0.57	0.735	0.900	
206	0.56	0.724	0.900	
207	0.56	0.707	0.900	
208	0 57	0 759	0 900	
238	0 57	0 746	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.3 V	Def ect	0.8 V
Extract 2	190.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	90 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
6		0.094412	☑
9		0.104837	☑
23		0.107206	☑
24		0.112530	☑
27		0.117478	☑
39		0.123213	☑
45		0.124033	☑
48		0.125664	☑
51		0.129069	☑
52		0.130073	☑
55		0.133751	☑
59		0.140041	☑
60		0.140568	☑
63		0.144149	☑
66		0.143387	☑
72		0.141018	☑
75		0.140025	☑
88		0.143997	☑
98		0.140283	☑
102		0.145265	☑
106		0.150754	☑
114		0.155430	☑
115		0.154387	☑

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
118		0.152626	☑
121		0.152586	☑
138		0.154903	☑
175		0.162539	☑
193		0.164423	☑
205		0.168782	☑
208		0.169618	☑
209		0.169141	☑
232		0.165052	☑
238		0.167563	☑

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	001SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T14:56:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	002SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T14:57:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	003SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T14:59:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	004SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:01:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	005SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:03:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	006SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:07:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	007SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:09:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	008SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:10:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	009SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:12:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	010SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:14:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	011SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:16:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	012SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:18:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	013SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:20:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	014SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:21:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	015SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:23:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	016SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:25:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	017SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:27:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	018SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:29:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	019SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:30:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	020SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:32:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	021SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:34:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	022SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:36:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	023SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:38:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	024SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:41:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:43:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	026SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:46:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	027SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:48:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	028SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:50:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	029SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:52:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	030SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:54:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	031SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T15:55:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7689701
Data File Name	032CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Method	
Acq Date Time	2023-04-18T15:57:46-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	2000.00
Na	23	45	3	HMI He	23253	0.01
Mg	24	45	3	HMI He	908	1.09
Al	27	45	3	HMI He	113	16.19
K	39	45	3	HMI He	27344	0.01
Ca	40	45	2	HMI H2	26756	0.00
V	51	72	3	HMI He	728	1.33
Cr	52	72	3	HMI He	1753	0.18
Mn	55	72	3	HMI He	192	3.14
Fe	56	72	2	HMI H2	16406	0.01
Co	59	72	3	HMI He	73	61.94
Ni	60	72	3	HMI He	318	4.20
Cu	63	72	3	HMI He	446	4.24
Zn	66	72	3	HMI He	332	6.90
As	75	72	3	HMI He	48	24.71
Se	78	72	2	HMI H2	5	405.95
(Se)	78	72	3	HMI He	22	221.73
Sr	88	72	3	HMI He	200	15.16
Mo	95	115	3	HMI He	33	93.70
Ag	107	115	3	HMI He	43	40.71
Cd	111	115	3	HMI He	20	433.01
Sn	120	115	3	HMI He	908	0.79
Sb	121	115	3	HMI He	142	10.38
Ba	137	115	3	HMI He	82	11.46
Tl	205	193	3	HMI He	1448	0.44
(Pb)	206	193	3	HMI He	440	2.37
(Pb)	207	193	3	HMI He	683	1.33
Pb	208	193	3	HMI He	2002	0.24
Th	232	193	3	HMI He	5648	0.06
U	238	193	3	HMI He	2337	0.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3913058	1.25
Sc (IS)	45	3	HMI He	607591	1.32
Ge Internal standard	72	2	HMI H2	2473250	1.48
Ge Internal standard	72	3	HMI He	757568	0.25
In Internal Standard	115	3	HMI He	3087258	2.11
Ir (IS)	193	3	HMI He	7041080	1.85

Calibration Standard Report

Sample Table

Sample Name	ic-7689703
Data File Name	033CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
method	
Acq Date Time	2023-04-18T15:59:33-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	032CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	10543128	0.00
Mg	24	45	3	HMI He	1141345	0.00
Al	27	45	3	HMI He	147	22.91
K	39	45	3	HMI He	986143	0.00
V	51	72	3	HMI He	855	0.25
Cr	52	72	3	HMI He	1841	0.44
Mn	55	72	3	HMI He	302	1.77
Co	59	72	3	HMI He	93	34.61
Ni	60	72	3	HMI He	267	4.24
Cu	63	72	3	HMI He	605	1.50
Zn	66	72	3	HMI He	416	2.72
As	75	72	3	HMI He	43	15.39
Se	78	72	2	HMI H2	7	429.43
(Se)	78	72	3	HMI He	15	444.62
Sr	88	72	3	HMI He	503	2.79
Mo	95	115	3	HMI He	53	20.29
Ag	107	115	3	HMI He	95	36.35
Cd	111	115	3	HMI He	28	95.18
Sn	120	115	3	HMI He	1058	0.39
Sb	121	115	3	HMI He	157	4.71
Ba	137	115	3	HMI He	253	5.64
Tl	205	193	3	HMI He	1103	0.58
(Pb)	206	193	3	HMI He	506	0.79
(Pb)	207	193	3	HMI He	683	2.31
Pb	208	193	3	HMI He	2422	0.10
Th	232	193	3	HMI He	5850	0.07
U	238	193	3	HMI He	2267	0.16

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4009817	1.21	3913058	102.47	60	120	
Sc (IS)	45	3	HMI He	619553	0.53	607591	101.97	60	120	
Ge Internal standard	72	2	HMI H2	2358414	1.62	2473250	95.36	60	120	
Ge Internal standard	72	3	HMI He	730010	0.41	757568	96.36	60	120	
In Internal Standard	115	3	HMI He	3098321	1.59	3087258	100.36	60	120	
Ir (IS)	193	3	HMI He	7015722	1.00	7041080	99.64	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7689702
Data File Name	034CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
method	
Acq Date Time	2023-04-18T16:01:20-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	032CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4117	0.07
Na	23	45	3	HMI He	240460	0.00
Mg	24	45	3	HMI He	114628	0.00
Al	27	45	3	HMI He	45940	0.00
K	39	45	3	HMI He	119158	0.00
V	51	72	3	HMI He	62266	0.00
Cr	52	72	3	HMI He	78620	0.00
Mn	55	72	3	HMI He	42738	0.00
Co	59	72	3	HMI He	132263	0.00
Ni	60	72	3	HMI He	36622	0.00
Cu	63	72	3	HMI He	100333	0.00
Zn	66	72	3	HMI He	16964	0.01
As	75	72	3	HMI He	11903	0.02
Se	78	72	2	HMI H2	5898	0.02
(Se)	78	72	3	HMI He	716	1.72
Sr	88	72	3	HMI He	120728	0.00
Mo	95	115	3	HMI He	52560	0.00
Ag	107	115	3	HMI He	186100	0.00
Cd	111	115	3	HMI He	26964	0.00
Sn	120	115	3	HMI He	87433	0.00
Sb	121	115	3	HMI He	86575	0.00
Ba	137	115	3	HMI He	28672	0.00
Tl	205	193	3	HMI He	468423	0.00
(Pb)	206	193	3	HMI He	159593	0.00
(Pb)	207	193	3	HMI He	139130	0.00
Pb	208	193	3	HMI He	639905	0.00
Th	232	193	3	HMI He	650625	0.00
U	238	193	3	HMI He	677168	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4069725	0.32	3913058	104.00	60	120	
Sc (IS)	45	3	HMI He	622261	0.27	607591	102.41	60	120	
Ge Internal standard	72	2	HMI H2	2521556	2.85	2473250	101.95	60	120	
Ge Internal standard	72	3	HMI He	781607	0.72	757568	103.17	60	120	
In Internal Standard	115	3	HMI He	3080334	1.33	3087258	99.78	60	120	
Ir (IS)	193	3	HMI He	7202488	1.61	7041080	102.29	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7689705
Data File Name	035_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:03:07-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	032CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.441	ppb	7.915	1676	40	101.1	90	110	
Na	23	3	45	13430.668	ppb	0.400	1444252	12800	104.9	90	110	
Mg	24	3	45	4760.924	ppb	1.466	273844	4800	99.2	90	110	
Al	27	3	45	775.431	ppb	2.096	17899	800	96.9	90	110	
K	39	3	45	4529.889	ppb	3.045	246206	4800	94.4	90	110	
Ca	40	2	45	4865.692	ppb	1.951	2741454	4800	101.4	90	110	
V	51	3	72	42.122	ppb	1.541	26028	40	105.3	90	110	
Cr	52	3	72	42.710	ppb	1.097	33796	40	106.8	90	110	
Mn	55	3	72	42.154	ppb	1.394	17699	40	105.4	90	110	
Fe	56	2	72	818.412	ppb	1.161	1293355	800	102.3	90	110	
Co	59	3	72	41.069	ppb	0.480	53075	40	102.7	90	110	
Ni	60	3	72	41.332	ppb	1.085	14966	40	103.3	90	110	
Cu	63	3	72	42.939	ppb	0.999	42315	40	107.3	90	110	
Zn	66	3	72	82.170	ppb	2.502	13667	80	102.7	90	110	
As	75	3	72	41.235	ppb	9.237	4818	40	103.1	90	110	
Se	78	2	72	42.512	ppb	0.415	2482	40	106.3	90	110	
Sr	88	3	72	122.646	ppb	1.170	72355	120	102.2	90	110	
Mo	95	3	115	41.298	ppb	1.947	21623	40	103.2	90	110	
Ag	107	3	115	81.311	ppb	1.499	150603	80	101.6	90	110	
Cd	111	3	115	39.958	ppb	3.581	10734	40	99.9	90	110	
Sn	120	3	115	40.029	ppb	1.491	35374	40	100.1	90	110	
Sb	121	3	115	40.974	ppb	0.634	35391	40	102.4	90	110	
Ba	137	3	115	41.450	ppb	1.317	11878	40	103.6	90	110	
Tl	205	3	193	41.449	ppb	0.633	189290	40	103.6	90	110	
(Pb)	206	3	193	42.062	ppb	1.891	65395	40	105.2	90	110	
(Pb)	207	3	193	40.952	ppb	2.229	55691	40	102.4	90	110	
Pb	208	3	193	41.726	ppb	1.950	260290	40	104.3	90	110	
Th	232	3	193	83.569	ppb	1.697	528508	80	104.5	90	110	
U	238	3	193	44.995	ppb	1.568	296984	40	112.5	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068443	0.85	3913058	103.97	60	120	
Sc (IS)	45	3	HMI He	622907	1.04	607591	102.52	60	120	
Ge Internal standard	72	2	HMI H2	2491911	1.34	2473250	100.75	60	120	
Ge Internal standard	72	3	HMI He	763065	0.48	757568	100.73	60	120	
In Internal Standard	115	3	HMI He	3065434	1.13	3087258	99.29	60	120	
Ir (IS)	193	3	HMI He	6990365	1.84	7041080	99.28	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7689701
Data File Name	036_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:04:55-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	032CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	-0.084	ppb	-84.0	2	0.5	
Na	23	3	16.394	ppb	29.6	25158	25	
Mg	24	3	-0.309	ppb	-178.0	898	25	
Al	27	3	0.382	ppb	524.9	123	15	
K	39	3	-4.267	ppb	-519.0	27388	50	
V	51	3	0.261	ppb	19.9	896	1	
Cr	52	3	-0.117	ppb	-41.6	1689	1	
Mn	55	3	0.045	ppb	140.2	213	0.5	
Co	59	3	0.002	ppb	466.3	77	0.5	
Ni	60	3	0.048	ppb	88.9	340	1	
Cu	63	3	0.007	ppb	794.5	460	1	
Zn	66	3	0.176	ppb	234.6	365	5	
As	75	3	0.008	ppb	1382.5	50	1	
Se	78	2	-0.059	ppb	-57.5	2	1	
Sr	88	3	0.007	ppb	208.8	207	0.5	
Mo	95	3	0.065	ppb	49.0	67	0.5	
Ag	107	3	0.024	ppb	22.0	87	1	
Cd	111	3	-0.005	ppb	-571.4	18	0.5	
Sn	120	3	0.276	ppb	37.9	1129	1	
Sb	121	3	-0.003	ppb	-288.0	137	0.6	
Ba	137	3	-0.002	ppb	-5498.1	80	0.5	
Tl	205	3	-0.075	ppb	-1.7	1100	0.1	
(Pb)	206	3	0.019	ppb	342.0	466	1	
(Pb)	207	3	-0.028	ppb	-124.6	643	1	
Pb	208	3	0.010	ppb	180.4	2059	0.5	
Th	232	3	4.021	ppb	11.0	30846	1	>RL
U	238	3	0.010	ppb	190.5	2396	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4001038	1.39	3913058	102.25	60	120	
Sc (IS)	45	3	HMI He	612961	1.19	607591	100.88	60	120	
Ge Internal standard	72	2	HMI H2	2513706	2.42	2473250	101.64	60	120	
Ge Internal standard	72	3	HMI He	768291	0.67	757568	101.42	60	120	
In Internal Standard	115	3	HMI He	3036737	1.15	3087258	98.36	60	120	
Ir (IS)	193	3	HMI He	7009291	0.61	7041080	99.55	60	120	

CRI Report

Sample Table

Sample Name	cri-7689706
Data File Name	037LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:06:43-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	032CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.807	ppb	29.530	38	1	80.7	80	120	
Na	23	3	45	346.543	ppb	1.602	59501	300	115.5	80	120	
Mg	24	3	45	50.524	ppb	0.964	3764	50	101.0	80	120	
Al	27	3	45	58.665	ppb	6.777	1438	50	117.3	80	120	
K	39	3	45	113.105	ppb	19.896	32942	120	94.3	80	120	
Ca	40	2	45	226.701	ppb	2.757	152568	200	113.4	80	120	
V	51	3	72	6.024	ppb	4.186	4350	5	120.5	80	120	>+/-30%
Cr	52	3	72	1.941	ppb	17.013	3220	2	97.0	80	120	
Mn	55	3	72	1.237	ppb	6.713	706	1	123.7	80	120	>+/-30%
Fe	56	2	72	57.594	ppb	1.361	104939	50	115.2	80	120	
Co	59	3	72	1.127	ppb	2.696	1528	1	112.7	80	120	
Ni	60	3	72	2.503	ppb	19.114	1206	2	125.1	80	120	>+/-30%
Cu	63	3	72	2.267	ppb	4.414	2659	2	113.4	80	120	
Zn	66	3	72	11.234	ppb	4.561	2156	10	112.3	80	120	
As	75	3	72	5.399	ppb	7.158	673	5	108.0	80	120	
Se	78	2	72	5.535	ppb	3.732	323	5	110.7	80	120	
Sr	88	3	72	5.762	ppb	3.873	3590	5	115.2	80	120	
Mo	95	3	115	2.174	ppb	5.282	1173	2	108.7	80	120	
Ag	107	3	115	0.970	ppb	8.043	1844	1	97.0	80	120	
Cd	111	3	115	1.010	ppb	4.346	292	1	101.0	80	120	
Sn	120	3	115	10.048	ppb	3.604	9582	10	100.5	80	120	
Sb	121	3	115	2.163	ppb	4.610	2007	2	108.1	80	120	
Ba	137	3	115	1.197	ppb	4.250	423	1	119.7	80	120	
Tl	205	3	193	0.977	ppb	3.745	5948	1	97.7	80	120	
(Pb)	206	3	193	1.045	ppb	3.087	2079	1	104.5	80	120	
(Pb)	207	3	193	1.031	ppb	5.734	2094	1	103.1	80	120	
Pb	208	3	193	1.074	ppb	1.435	8762	1	107.4	80	120	
Th	232	3	193	3.378	ppb	15.960	27135	1	337.8	80	120	>+/-30%
U	238	3	193	1.135	ppb	6.324	9894	1	113.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4024219	1.35	3913058	102.84	60	120	
Sc (IS)	45	3	HMI He	612751	0.24	607591	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2458051	0.84	2473250	99.39	60	120	
Ge Internal standard	72	3	HMI He	762783	0.64	757568	100.69	60	120	
In Internal Standard	115	3	HMI He	3074417	1.34	3087258	99.58	60	120	
Ir (IS)	193	3	HMI He	7089731	0.33	7041080	100.69	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	038SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:10:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	032CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.050	ppb	-0.050	-128.43	3	2000	
Na	23	3	45	2.055	ppb	2.055	181.78	25184	400000	
Mg	24	3	45	7.331	ppb	7.331	23.63	1415	400000	
Al	27	3	45	7.561	ppb	7.561	15.98	304	400000	
K	39	3	45	-59.630	ppb	-59.630	-32.43	26355	400000	
Ca	40	2	45	27.840	ppb	27.840	5.26	46550	400000	
V	51	3	72	-0.778	ppb	-0.778	-4.73	283	2000	
Cr	52	3	72	-1.002	ppb	-1.002	-9.81	1080	5000	
Mn	55	3	72	0.127	ppb	0.127	84.69	262	10000	
Fe	56	2	72	7.810	ppb	7.810	3.59	31066	10000	
Co	59	3	72	0.018	ppb	0.018	21.71	103	2000	
Ni	60	3	72	-0.450	ppb	-0.450	-2.90	172	5000	
Cu	63	3	72	-0.021	ppb	-0.021	-348.07	456	5000	
Zn	66	3	72	-0.968	ppb	-0.968	-4.91	188	5000	
As	75	3	72	-0.191	ppb	-0.191	-43.62	28	2000	
Se	78	2	72	-0.029	ppb	-0.029	-111.33	4	2000	
Sr	88	3	72	0.301	ppb	0.301	27.36	403	4000	
Mo	95	3	115	0.033	ppb	0.033	149.93	53	2000	
Ag	107	3	115	0.014	ppb	0.014	62.89	72	100	
Cd	111	3	115	0.033	ppb	0.033	146.20	30	2000	
Sn	120	3	115	-0.653	ppb	-0.653	-10.72	358	2000	
Sb	121	3	115	-0.047	ppb	-0.047	-43.72	105	1000	
Ba	137	3	115	-0.052	ppb	-0.052	-126.40	70	5000	
Tl	205	3	193	-0.186	ppb	-0.186	-5.60	641	2000	
(Pb)	206	3	193	-0.015	ppb	-0.015	-54.17	446	100	
(Pb)	207	3	193	-0.019	ppb	-0.019	-209.12	706	100	
Pb	208	3	193	0.015	ppb	0.015	120.26	2252	5000	
Th	232	3	193	0.013	ppb	0.013	30.17	6153	2000	
U	238	3	193	0.016	ppb	0.016	98.44	2624	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368093	1.87	3913058	111.63	60	120	
Sc (IS)	45	3	HMI He	652252	1.17	607591	107.35	60	120	
Ge Internal standard	72	2	HMI H2	2695995	1.49	2473250	109.01	60	120	
Ge Internal standard	72	3	HMI He	812341	0.54	757568	107.23	60	120	
In Internal Standard	115	3	HMI He	3228082	0.66	3087258	104.56	60	120	
Ir (IS)	193	3	HMI He	7556125	1.56	7041080	107.31	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	039SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:12:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	032CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.125	ppb	-0.125	0.00	0	2000	
Na	23	3	45	-6.067	ppb	-6.067	-158.39	24339	400000	
Mg	24	3	45	7.734	ppb	7.734	35.02	1442	400000	
Al	27	3	45	6.029	ppb	6.029	34.65	267	400000	
K	39	3	45	-63.930	ppb	-63.930	-19.74	26197	400000	
Ca	40	2	45	27.210	ppb	27.210	1.67	46045	400000	
V	51	3	72	-0.819	ppb	-0.819	-3.88	257	2000	
Cr	52	3	72	-0.967	ppb	-0.967	-12.78	1106	5000	
Mn	55	3	72	0.105	ppb	0.105	102.03	252	10000	
Fe	56	2	72	7.267	ppb	7.267	3.27	30063	10000	
Co	59	3	72	0.010	ppb	0.010	57.59	92	2000	
Ni	60	3	72	-0.480	ppb	-0.480	-6.95	160	5000	
Cu	63	3	72	0.023	ppb	0.023	180.70	501	5000	
Zn	66	3	72	-1.015	ppb	-1.015	-14.50	180	5000	
As	75	3	72	-0.244	ppb	-0.244	-53.83	22	2000	
Se	78	2	72	-0.060	ppb	-0.060	-52.49	2	2000	
Sr	88	3	72	0.348	ppb	0.348	17.53	431	4000	
Mo	95	3	115	0.031	ppb	0.031	129.71	53	2000	
Ag	107	3	115	0.009	ppb	0.009	90.52	65	100	
Cd	111	3	115	-0.039	ppb	-0.039	-46.34	10	2000	
Sn	120	3	115	-0.652	ppb	-0.652	-1.42	366	2000	
Sb	121	3	115	-0.072	ppb	-0.072	-29.58	85	1000	
Ba	137	3	115	0.031	ppb	0.031	82.43	97	5000	
Tl	205	3	193	-0.174	ppb	-0.174	-2.13	695	2000	
(Pb)	206	3	193	0.016	ppb	0.016	122.14	493	100	
(Pb)	207	3	193	0.035	ppb	0.035	119.10	776	100	
Pb	208	3	193	0.037	ppb	0.037	33.76	2367	5000	
Th	232	3	193	0.010	ppb	0.010	296.75	6060	2000	
U	238	3	193	0.029	ppb	0.029	42.91	2687	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4357096	0.97	3913058	111.35	60	120	
Sc (IS)	45	3	HMI He	653713	1.11	607591	107.59	60	120	
Ge Internal standard	72	2	HMI H2	2688443	2.57	2473250	108.70	60	120	
Ge Internal standard	72	3	HMI He	811275	0.41	757568	107.09	60	120	
In Internal Standard	115	3	HMI He	3291398	2.31	3087258	106.61	60	120	
Ir (IS)	193	3	HMI He	7469785	0.70	7041080	106.09	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	040SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:14:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	032CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.048	ppb	-0.048	-141.02	3	2000	
Na	23	3	45	-10.580	ppb	-10.580	-61.20	23794	400000	
Mg	24	3	45	8.667	ppb	8.667	6.25	1495	400000	
Al	27	3	45	9.651	ppb	9.651	8.20	354	400000	
K	39	3	45	-52.477	ppb	-52.477	-27.28	26732	400000	
Ca	40	2	45	28.220	ppb	28.220	5.20	46273	400000	
V	51	3	72	-0.909	ppb	-0.909	-5.32	200	2000	
Cr	52	3	72	-1.107	ppb	-1.107	-4.14	998	5000	
Mn	55	3	72	0.073	ppb	0.073	113.20	238	10000	
Fe	56	2	72	7.483	ppb	7.483	4.41	29993	10000	
Co	59	3	72	0.009	ppb	0.009	217.63	92	2000	
Ni	60	3	72	-0.482	ppb	-0.482	-6.68	160	5000	
Cu	63	3	72	-0.050	ppb	-0.050	-118.80	428	5000	
Zn	66	3	72	-0.672	ppb	-0.672	-43.47	240	5000	
As	75	3	72	-0.151	ppb	-0.151	-30.54	33	2000	
Se	78	2	72	-0.006	ppb	-0.006	-1319.66	5	2000	
Sr	88	3	72	0.295	ppb	0.295	2.86	400	4000	
Mo	95	3	115	0.053	ppb	0.053	32.55	65	2000	
Ag	107	3	115	0.003	ppb	0.003	286.76	52	100	
Cd	111	3	115	-0.022	ppb	-0.022	-79.38	15	2000	
Sn	120	3	115	-0.673	ppb	-0.673	-4.08	345	2000	
Sb	121	3	115	-0.078	ppb	-0.078	-51.80	78	1000	
Ba	137	3	115	0.043	ppb	0.043	210.56	100	5000	
Tl	205	3	193	-0.204	ppb	-0.204	-8.65	546	2000	
(Pb)	206	3	193	0.018	ppb	0.018	236.27	495	100	
(Pb)	207	3	193	-0.050	ppb	-0.050	-95.29	651	100	
Pb	208	3	193	0.009	ppb	0.009	169.24	2181	5000	
Th	232	3	193	0.010	ppb	0.010	164.37	6040	2000	
U	238	3	193	0.016	ppb	0.016	55.89	2587	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4321856	0.54	3913058	110.45	60	120	
Sc (IS)	45	3	HMI He	652607	1.39	607591	107.41	60	120	
Ge Internal standard	72	2	HMI H2	2649820	1.01	2473250	107.14	60	120	
Ge Internal standard	72	3	HMI He	814217	0.76	757568	107.48	60	120	
In Internal Standard	115	3	HMI He	3274689	0.72	3087258	106.07	60	120	
Ir (IS)	193	3	HMI He	7443423	1.41	7041080	105.71	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7689701
Data File Name	041CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Method	
Acq Date Time	2023-04-18T16:15:54-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	2000.00
Na	23	45	3	HMI He	23593	0.00
Mg	24	45	3	HMI He	767	1.72
Al	27	45	3	HMI He	127	46.73
K	39	45	3	HMI He	27364	0.01
Ca	40	45	2	HMI H2	26649	0.00
V	51	72	3	HMI He	755	0.85
Cr	52	72	3	HMI He	1671	0.02
Mn	55	72	3	HMI He	188	6.67
Fe	56	72	2	HMI H2	16710	0.01
Co	59	72	3	HMI He	72	39.36
Ni	60	72	3	HMI He	320	1.29
Cu	63	72	3	HMI He	466	1.95
Zn	66	72	3	HMI He	300	0.96
As	75	72	3	HMI He	73	29.91
Se	78	72	2	HMI H2	4	1250.00
(Se)	78	72	3	HMI He	20	125.13
Sr	88	72	3	HMI He	248	2.61
Mo	95	115	3	HMI He	52	60.24
Ag	107	115	3	HMI He	37	93.64
Cd	111	115	3	HMI He	17	275.02
Sn	120	115	3	HMI He	965	0.79
Sb	121	115	3	HMI He	137	10.14
Ba	137	115	3	HMI He	98	21.54
Tl	205	193	3	HMI He	836	0.80
(Pb)	206	193	3	HMI He	443	1.06
(Pb)	207	193	3	HMI He	665	0.90
Pb	208	193	3	HMI He	2001	0.16
Th	232	193	3	HMI He	7897	0.08
U	238	193	3	HMI He	2234	0.39

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3936624	0.34
Sc (IS)	45	3	HMI He	609520	1.05
Ge Internal standard	72	2	HMI H2	2391663	0.61
Ge Internal standard	72	3	HMI He	756863	0.67
In Internal Standard	115	3	HMI He	2988279	1.34
Ir (IS)	193	3	HMI He	6996686	0.72

Calibration Standard Report

Sample Table

Sample Name	ic-7689703
Data File Name	042CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
method	
Acq Date Time	2023-04-18T16:17:43-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	041CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	10550073	0.00
Mg	24	45	3	HMI He	1141095	0.00
Al	27	45	3	HMI He	170	5.99
K	39	45	3	HMI He	933741	0.00
V	51	72	3	HMI He	930	1.17
Cr	52	72	3	HMI He	1758	0.26
Mn	55	72	3	HMI He	255	4.68
Co	59	72	3	HMI He	100	13.23
Ni	60	72	3	HMI He	268	8.96
Cu	63	72	3	HMI He	550	1.44
Zn	66	72	3	HMI He	401	2.64
As	75	72	3	HMI He	48	24.71
Se	78	72	2	HMI H2	5	1074.04
(Se)	78	72	3	HMI He	28	71.91
Sr	88	72	3	HMI He	435	0.95
Mo	95	115	3	HMI He	73	41.94
Ag	107	115	3	HMI He	75	15.40
Cd	111	115	3	HMI He	18	478.38
Sn	120	115	3	HMI He	1123	0.87
Sb	121	115	3	HMI He	113	18.41
Ba	137	115	3	HMI He	263	2.73
Tl	205	193	3	HMI He	785	0.99
(Pb)	206	193	3	HMI He	560	1.80
(Pb)	207	193	3	HMI He	648	1.45
Pb	208	193	3	HMI He	2281	0.18
Th	232	193	3	HMI He	7637	0.08
U	238	193	3	HMI He	2382	0.15

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3985603	3.43	3936624	101.24	60	120	
Sc (IS)	45	3	HMI He	612266	0.23	609520	100.45	60	120	
Ge Internal standard	72	2	HMI H2	2351254	0.65	2391663	98.31	60	120	
Ge Internal standard	72	3	HMI He	718498	0.61	756863	94.93	60	120	
In Internal Standard	115	3	HMI He	3020920	1.40	2988279	101.09	60	120	
Ir (IS)	193	3	HMI He	6989999	2.07	6996686	99.90	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7689702
Data File Name	043CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
method	
Acq Date Time	2023-04-18T16:19:30-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	041CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4042	0.07
Na	23	45	3	HMI He	237964	0.00
Mg	24	45	3	HMI He	115567	0.00
Al	27	45	3	HMI He	44735	0.00
K	39	45	3	HMI He	118653	0.00
V	51	72	3	HMI He	62845	0.00
Cr	52	72	3	HMI He	77874	0.00
Mn	55	72	3	HMI He	42218	0.00
Co	59	72	3	HMI He	130363	0.00
Ni	60	72	3	HMI He	37016	0.00
Cu	63	72	3	HMI He	99347	0.00
Zn	66	72	3	HMI He	17094	0.02
As	75	72	3	HMI He	11561	0.04
Se	78	72	2	HMI H2	5760	0.02
(Se)	78	72	3	HMI He	721	0.40
Sr	88	72	3	HMI He	119503	0.00
Mo	95	115	3	HMI He	52843	0.00
Ag	107	115	3	HMI He	182284	0.00
Cd	111	115	3	HMI He	26643	0.00
Sn	120	115	3	HMI He	86591	0.00
Sb	121	115	3	HMI He	85435	0.00
Ba	137	115	3	HMI He	28163	0.00
Tl	205	193	3	HMI He	469934	0.00
(Pb)	206	193	3	HMI He	156879	0.00
(Pb)	207	193	3	HMI He	139136	0.00
Pb	208	193	3	HMI He	633972	0.00
Th	232	193	3	HMI He	647200	0.00
U	238	193	3	HMI He	677502	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3975929	0.96	3936624	101.00	60	120	
Sc (IS)	45	3	HMI He	613207	0.94	609520	100.60	60	120	
Ge Internal standard	72	2	HMI H2	2502926	0.39	2391663	104.65	60	120	
Ge Internal standard	72	3	HMI He	778479	0.49	756863	102.86	60	120	
In Internal Standard	115	3	HMI He	3052272	3.79	2988279	102.14	60	120	
Ir (IS)	193	3	HMI He	7022884	1.55	6996686	100.37	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7689705
Data File Name	044_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:21:19-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	42.733	ppb	7.235	1721	40	106.8	90	110	
Na	23	3	45	12857.380	ppb	2.397	1374557	12800	100.4	90	110	
Mg	24	3	45	4702.144	ppb	1.318	268386	4800	98.0	90	110	
Al	27	3	45	795.439	ppb	3.406	17809	800	99.4	90	110	
K	39	3	45	4837.919	ppb	0.924	246268	4800	100.8	90	110	
Ca	40	2	45	4922.670	ppb	1.632	2730731	4800	102.6	90	110	
V	51	3	72	41.090	ppb	1.460	25689	40	102.7	90	110	
Cr	52	3	72	42.124	ppb	1.464	33038	40	105.3	90	110	
Mn	55	3	72	42.031	ppb	1.870	17454	40	105.1	90	110	
Fe	56	2	72	820.161	ppb	2.825	1262153	800	102.5	90	110	
Co	59	3	72	40.838	ppb	1.226	52080	40	102.1	90	110	
Ni	60	3	72	40.086	ppb	1.778	14695	40	100.2	90	110	
Cu	63	3	72	42.346	ppb	2.359	41391	40	105.9	90	110	
Zn	66	3	72	80.364	ppb	3.004	13487	80	100.5	90	110	
As	75	3	72	39.443	ppb	3.010	4502	40	98.6	90	110	
Se	78	2	72	42.639	ppb	0.738	2387	40	106.6	90	110	
Sr	88	3	72	123.869	ppb	0.632	72442	120	103.2	90	110	
Mo	95	3	115	40.474	ppb	1.161	21565	40	101.2	90	110	
Ag	107	3	115	80.496	ppb	0.898	147809	80	100.6	90	110	
Cd	111	3	115	40.833	ppb	4.714	10961	40	102.1	90	110	
Sn	120	3	115	39.131	ppb	1.236	34741	40	97.8	90	110	
Sb	121	3	115	40.813	ppb	1.178	35184	40	102.0	90	110	
Ba	137	3	115	40.887	ppb	1.543	11658	40	102.2	90	110	
Tl	205	3	193	40.729	ppb	5.266	192383	40	101.8	90	110	
(Pb)	206	3	193	41.228	ppb	3.420	65124	40	103.1	90	110	
(Pb)	207	3	193	40.273	ppb	2.522	56606	40	100.7	90	110	
Pb	208	3	193	40.756	ppb	4.925	260248	40	101.9	90	110	
Th	232	3	193	80.771	ppb	2.719	525808	80	101.0	90	110	
U	238	3	193	43.714	ppb	5.146	298184	40	109.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4009115	1.10	3936624	101.84	60	120	
Sc (IS)	45	3	HMI He	611184	0.65	609520	100.27	60	120	
Ge Internal standard	72	2	HMI H2	2430317	0.67	2391663	101.62	60	120	
Ge Internal standard	72	3	HMI He	760930	0.38	756863	100.54	60	120	
In Internal Standard	115	3	HMI He	3070743	1.17	2988279	102.76	60	120	
Ir (IS)	193	3	HMI He	7046104	3.32	6996686	100.71	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7689701
Data File Name	045_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:23:07-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.040	ppb	181.7	7	0.5	
Na	23	3	11.696	ppb	20.8	24977	25	
Mg	24	3	0.198	ppb	1023.4	784	25	
Al	27	3	-1.095	ppb	-27.2	103	15	
K	39	3	-15.243	ppb	-94.8	26846	50	
V	51	3	0.205	ppb	51.9	888	1	
Cr	52	3	-0.014	ppb	-557.6	1678	1	
Mn	55	3	0.096	ppb	93.8	230	0.5	
Co	59	3	0.022	ppb	80.0	100	0.5	
Ni	60	3	0.004	ppb	2650.0	325	1	
Cu	63	3	-0.061	ppb	-87.6	411	1	
Zn	66	3	0.082	ppb	191.9	317	5	
As	75	3	-0.125	ppb	-124.5	60	1	
Se	78	2	-0.026	ppb	-78.8	3	1	
Sr	88	3	-0.070	ppb	-56.3	210	0.5	
Mo	95	3	0.059	ppb	73.3	83	0.5	
Ag	107	3	0.030	ppb	52.2	92	1	
Cd	111	3	-0.001	ppb	-4832.4	17	0.5	
Sn	120	3	0.261	ppb	6.7	1199	1	
Sb	121	3	-0.042	ppb	-43.1	103	0.6	
Ba	137	3	-0.070	ppb	-90.6	80	0.5	
Tl	205	3	0.003	ppb	515.5	876	0.1	
(Pb)	206	3	-0.046	ppb	-36.9	383	1	
(Pb)	207	3	-0.008	ppb	-512.5	673	1	
Pb	208	3	-0.020	ppb	-108.8	1929	0.5	
Th	232	3	4.040	ppb	12.3	34599	1	>RL
U	238	3	0.021	ppb	87.0	2446	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4065398	0.42	3936624	103.27	60	120	
Sc (IS)	45	3	HMI He	613340	0.84	609520	100.63	60	120	
Ge Internal standard	72	2	HMI H2	2480833	2.54	2391663	103.73	60	120	
Ge Internal standard	72	3	HMI He	764802	0.61	756863	101.05	60	120	
In Internal Standard	115	3	HMI He	3027920	0.84	2988279	101.33	60	120	
Ir (IS)	193	3	HMI He	7205137	2.02	6996686	102.98	60	120	

CRI Report

Sample Table

Sample Name	cri-7689706
Data File Name	046LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:25:33-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.742	ppb	72.263	35	1	74.2	80	120	>+/-30%
Na	23	3	45	326.633	ppb	4.045	57842	300	108.9	80	120	
Mg	24	3	45	53.173	ppb	6.145	3788	50	106.3	80	120	
Al	27	3	45	52.927	ppb	8.974	1301	50	105.9	80	120	
K	39	3	45	119.004	ppb	22.178	32741	120	99.2	80	120	
Ca	40	2	45	224.510	ppb	1.373	150811	200	112.3	80	120	
V	51	3	72	6.005	ppb	4.367	4357	5	120.1	80	120	>+/-30%
Cr	52	3	72	2.338	ppb	5.056	3385	2	116.9	80	120	
Mn	55	3	72	1.236	ppb	11.749	690	1	123.6	80	120	>+/-30%
Fe	56	2	72	55.437	ppb	1.883	103137	50	110.9	80	120	
Co	59	3	72	1.117	ppb	6.543	1479	1	111.7	80	120	
Ni	60	3	72	2.173	ppb	3.861	1090	2	108.7	80	120	
Cu	63	3	72	2.168	ppb	3.547	2537	2	108.4	80	120	
Zn	66	3	72	10.421	ppb	1.090	1991	10	104.2	80	120	
As	75	3	72	5.924	ppb	8.398	731	5	118.5	80	120	
Se	78	2	72	5.330	ppb	6.495	308	5	106.6	80	120	
Sr	88	3	72	5.476	ppb	3.818	3405	5	109.5	80	120	
Mo	95	3	115	2.298	ppb	5.642	1248	2	114.9	80	120	
Ag	107	3	115	1.013	ppb	7.964	1856	1	101.3	80	120	
Cd	111	3	115	1.138	ppb	14.494	315	1	113.8	80	120	
Sn	120	3	115	10.398	ppb	1.609	9744	10	104.0	80	120	
Sb	121	3	115	2.195	ppb	6.056	1983	2	109.7	80	120	
Ba	137	3	115	1.245	ppb	2.101	443	1	124.5	80	120	>+/-30%
Tl	205	3	193	1.045	ppb	4.955	5772	1	104.5	80	120	
(Pb)	206	3	193	1.028	ppb	4.961	2064	1	102.8	80	120	
(Pb)	207	3	193	0.911	ppb	6.807	1939	1	91.1	80	120	
Pb	208	3	193	1.003	ppb	5.220	8395	1	100.3	80	120	
Th	232	3	193	3.348	ppb	15.703	29502	1	334.8	80	120	>+/-30%
U	238	3	193	1.103	ppb	4.456	9744	1	110.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4019147	1.36	3936624	102.10	60	120	
Sc (IS)	45	3	HMI He	609705	0.70	609520	100.03	60	120	
Ge Internal standard	72	2	HMI H2	2478358	1.66	2391663	103.62	60	120	
Ge Internal standard	72	3	HMI He	753160	0.99	756863	99.51	60	120	
In Internal Standard	115	3	HMI He	3004752	1.35	2988279	100.55	60	120	
Ir (IS)	193	3	HMI He	7062491	1.83	6996686	100.94	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	047LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:31:34-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.085	ppb	172.452	8	1	8.5	80	120	>+/-30%
Na	23	3	45	-4.522	ppb	-196.661	23009	300	-1.5	80	120	>+/-30%
Mg	24	3	45	0.888	ppb	206.471	814	50	1.8	80	120	>+/-30%
Al	27	3	45	-1.501	ppb	-91.289	93	50	-3.0	80	120	>+/-30%
K	39	3	45	-12.024	ppb	-95.579	26692	120	-10.0	80	120	>+/-30%
Ca	40	2	45	-2.015	ppb	-70.047	25325	200	-1.0	80	120	>+/-30%
V	51	3	72	0.214	ppb	20.662	883	5	4.3	80	120	>+/-30%
Cr	52	3	72	-0.101	ppb	-215.130	1593	2	-5.0	80	120	>+/-30%
Mn	55	3	72	1.565	ppb	1.540	826	1	156.5	80	120	>+/-30%
Fe	56	2	72	-0.626	ppb	-60.594	16283	50	-1.3	80	120	>+/-30%
Co	59	3	72	0.003	ppb	367.672	75	1	0.3	80	120	>+/-30%
Ni	60	3	72	0.006	ppb	429.658	322	2	0.3	80	120	>+/-30%
Cu	63	3	72	-0.006	ppb	-1040.085	460	2	-0.3	80	120	>+/-30%
Zn	66	3	72	-0.292	ppb	-104.959	252	10	-2.9	80	120	>+/-30%
As	75	3	72	-0.207	ppb	-67.390	50	5	-4.1	80	120	>+/-30%
Se	78	2	72	-0.014	ppb	-306.915	3	5	-0.3	80	120	>+/-30%
Sr	88	3	72	-0.132	ppb	-51.363	172	5	-2.6	80	120	>+/-30%
Mo	95	3	115	0.000	ppb	-4455.495	52	2	0.0	80	120	>+/-30%
Ag	107	3	115	0.009	ppb	39.716	53	1	0.9	80	120	>+/-30%
Cd	111	3	115	0.006	ppb	472.565	18	1	0.6	80	120	>+/-30%
Sn	120	3	115	-0.028	ppb	-308.865	943	10	-0.3	80	120	>+/-30%
Sb	121	3	115	-0.005	ppb	-417.423	133	2	-0.2	80	120	>+/-30%
Ba	137	3	115	2.017	ppb	4.545	655	1	201.7	80	120	>+/-30%
Tl	205	3	193	-0.026	ppb	-61.024	715	1	-2.6	80	120	>+/-30%
(Pb)	206	3	193	-0.037	ppb	-55.067	385	1	-3.7	80	120	>+/-30%
(Pb)	207	3	193	-0.040	ppb	-183.299	608	1	-4.0	80	120	>+/-30%
Pb	208	3	193	-0.025	ppb	-80.034	1837	1	-2.5	80	120	>+/-30%
Th	232	3	193	0.062	ppb	163.589	8289	1	6.2	80	120	>+/-30%
U	238	3	193	0.004	ppb	822.038	2254	1	0.4	80	120	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3900710	1.20	3936624	99.09	60	120	
Sc (IS)	45	3	HMI He	606498	0.63	609520	99.50	60	120	
Ge Internal standard	72	2	HMI H2	2467828	1.56	2391663	103.18	60	120	
Ge Internal standard	72	3	HMI He	755630	1.18	756863	99.84	60	120	
In Internal Standard	115	3	HMI He	2996648	2.22	2988279	100.28	60	120	
Ir (IS)	193	3	HMI He	6994183	2.59	6996686	99.96	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	048ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:33:24-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.002	ppb	-5436.2	5	0.5	
Na	23	3	45	95336.197	ppb	1.7	10062096	100000	
Mg	24	3	45	95613.307	ppb	1.4	5454208	100000	
Al	27	3	45	96041.201	ppb	2.1	2139685	100000	
K	39	3	45	95915.765	ppb	0.7	4375067	100000	
Ca	40	2	45	95524.955	ppb	0.6	52259702	100000	
V	51	3	72	0.211	ppb	54.2	896	1	
Cr	52	3	72	1.045	ppb	23.3	2482	1	>RL or LOD
Mn	55	3	72	0.230	ppb	14.6	287	0.95	
Fe	56	2	72	95432.708	ppb	1.2	143280651	100000	
Co	59	3	72	0.230	ppb	4.2	368	0.5	
Ni	60	3	72	0.060	ppb	215.0	347	1	
Cu	63	3	72	0.122	ppb	25.5	593	1	
Zn	66	3	72	0.464	ppb	35.1	381	1	
As	75	3	72	0.122	ppb	103.5	88	1	
Se	78	2	72	0.036	ppb	101.5	6	1	
(Se)	78	3	72	0.930	ppb	349.9	27	1	
Sr	88	3	72	0.607	ppb	13.1	610	1	
Mo	95	3	115	1981.484	ppb	5.2	1034037	2000	
Ag	107	3	115	0.032	ppb	51.3	95	1	
Cd	111	3	115	0.235	ppb	36.3	78	1	
Sn	120	3	115	0.077	ppb	40.5	1040	1	
Sb	121	3	115	0.136	ppb	17.9	253	1	
Ba	137	3	115	1.592	ppb	11.5	541	0.95	>RL or LOD
Tl	205	3	193	-0.034	ppb	-46.0	683	1	
(Pb)	206	3	193	0.126	ppb	39.1	645	1	
(Pb)	207	3	193	0.084	ppb	23.9	788	1	
Pb	208	3	193	0.102	ppb	3.8	2667	1	
Th	232	3	193	0.040	ppb	228.7	8232	1	
U	238	3	193	0.016	ppb	101.2	2361	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3991653	2.38	3936624	101.40	60	120	
Sc (IS)	45	3	HMI He	612485	0.74	609520	100.49	60	120	
Ge Internal standard	72	2	HMI H2	2402882	0.40	2391663	100.47	60	120	
Ge Internal standard	72	3	HMI He	768894	1.32	756863	101.59	60	120	
In Internal Standard	115	3	HMI He	3018640	3.91	2988279	101.02	60	120	
Ir (IS)	193	3	HMI He	7059843	2.44	6996686	100.90	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	049ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:35:09-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	95.731	ppb	6.384	3819	100	95.7	80	120	
Na	23	3	45	98434.351	ppb	0.769	10418460	100	98434.4	80	120	>+\-20%
Mg	24	3	45	97688.443	ppb	0.752	5588419	100	97688.4	80	120	>+\-20%
Al	27	3	45	95132.883	ppb	1.823	2125575	100	95132.9	80	120	>+\-20%
K	39	3	45	100043.929	ppb	1.589	4575275	100	100043.9	80	120	>+\-20%
Ca	40	2	45	97684.946	ppb	1.310	54529637	100	97684.9	80	120	>+\-20%
V	51	3	72	96.213	ppb	0.809	59323	100	96.2	80	120	
Cr	52	3	72	99.652	ppb	0.598	76101	100	99.7	80	120	
Mn	55	3	72	97.499	ppb	1.786	40367	100	97.5	80	120	
Fe	56	2	72	95623.562	ppb	1.468	143854199	100	95623.6	80	120	>+\-20%
Co	59	3	72	96.489	ppb	0.456	123346	100	96.5	80	120	
Ni	60	3	72	92.535	ppb	0.807	33611	100	92.5	80	120	
Cu	63	3	72	97.020	ppb	0.935	94531	100	97.0	80	120	
Zn	66	3	72	92.671	ppb	2.175	15556	100	92.7	80	120	
As	75	3	72	92.738	ppb	2.477	10519	100	92.7	80	120	
Se	78	2	72	100.948	ppb	1.127	5593	100	100.9	80	120	
(Se)	78	3	72	105.459	ppb	5.381	745	100	105.5	80	120	
Sr	88	3	72	193.458	ppb	0.660	113361	100	193.5	80	120	>+\-20%
Mo	95	3	115	2048.899	ppb	1.905	1059043	100	2048.9	80	120	>+\-20%
Ag	107	3	115	96.794	ppb	1.406	172835	100	96.8	80	120	
Cd	111	3	115	95.450	ppb	0.794	24902	100	95.5	80	120	
Sn	120	3	115	98.180	ppb	1.452	83305	100	98.2	80	120	
Sb	121	3	115	99.296	ppb	1.317	83044	100	99.3	80	120	
Ba	137	3	115	99.845	ppb	1.546	27545	100	99.8	80	120	
Tl	205	3	193	93.992	ppb	1.107	444954	100	94.0	80	120	
(Pb)	206	3	193	95.288	ppb	1.746	150579	100	95.3	80	120	
(Pb)	207	3	193	93.897	ppb	1.976	131613	100	93.9	80	120	
Pb	208	3	193	95.062	ppb	1.863	607096	100	95.1	80	120	
Th	232	3	193	95.862	ppb	2.433	625067	100	95.9	80	120	
U	238	3	193	103.074	ppb	1.913	703285	100	103.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4072523	0.80	3936624	103.45	60	120	
Sc (IS)	45	3	HMI He	614217	0.19	609520	100.77	60	120	
Ge Internal standard	72	2	HMI H2	2407755	0.69	2391663	100.67	60	120	
Ge Internal standard	72	3	HMI He	763361	0.54	756863	100.86	60	120	
In Internal Standard	115	3	HMI He	2986324	1.05	2988279	99.93	60	120	
Ir (IS)	193	3	HMI He	7072411	1.78	6996686	101.08	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	050SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:36:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.001	ppb	-0.001	-20511.61	5	2000	
Na	23	3	45	39.183	ppb	39.183	16.27	27133	400000	
Mg	24	3	45	5.145	ppb	5.145	55.00	1038	400000	
Al	27	3	45	6.559	ppb	6.559	39.98	267	400000	
K	39	3	45	15.325	ppb	15.325	88.75	27481	400000	
Ca	40	2	45	6.680	ppb	6.680	17.75	30323	400000	
V	51	3	72	0.529	ppb	0.529	28.52	1048	2000	
Cr	52	3	72	-0.067	ppb	-0.067	-19.66	1583	5000	
Mn	55	3	72	-0.026	ppb	-0.026	-352.67	173	10000	
Fe	56	2	72	11.957	ppb	11.957	8.24	34762	10000	
Co	59	3	72	0.008	ppb	0.008	212.47	80	2000	
Ni	60	3	72	-0.041	ppb	-0.041	-215.79	298	5000	
Cu	63	3	72	0.019	ppb	0.019	47.61	473	5000	
Zn	66	3	72	0.087	ppb	0.087	276.12	307	5000	
As	75	3	72	-0.153	ppb	-0.153	-128.34	55	2000	
Se	78	2	72	0.048	ppb	0.048	117.91	7	2000	
Sr	88	3	72	-0.096	ppb	-0.096	-58.74	188	4000	
Mo	95	3	115	3.751	ppb	3.751	25.08	2024	2000	
Ag	107	3	115	0.006	ppb	0.006	189.30	48	100	
Cd	111	3	115	-0.001	ppb	-0.001	-4165.42	17	2000	
Sn	120	3	115	-0.097	ppb	-0.097	-69.63	898	2000	
Sb	121	3	115	-0.030	ppb	-0.030	-29.07	113	1000	
Ba	137	3	115	-0.131	ppb	-0.131	-20.78	63	5000	
Tl	205	3	193	-0.011	ppb	-0.011	-44.58	798	2000	
(Pb)	206	3	193	0.001	ppb	0.001	2715.16	453	100	
(Pb)	207	3	193	-0.070	ppb	-0.070	-36.38	578	100	
Pb	208	3	193	-0.024	ppb	-0.024	-29.84	1879	5000	
Th	232	3	193	2.410	ppb	2.410	11.34	23654	2000	
U	238	3	193	0.019	ppb	0.019	76.01	2404	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3947112	1.97	3936624	100.27	60	120	
Sc (IS)	45	3	HMI He	597018	0.09	609520	97.95	60	120	
Ge Internal standard	72	2	HMI H2	2405201	1.32	2391663	100.57	60	120	
Ge Internal standard	72	3	HMI He	738661	0.95	756863	97.60	60	120	
In Internal Standard	115	3	HMI He	3037084	0.14	2988279	101.63	60	120	
Ir (IS)	193	3	HMI He	7117390	0.91	6996686	101.73	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-7616617
Data File Name	051_LR.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:38:45-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	2023.462	ppb	2.389	87373	2000	101.2	90	110	
Na	23	3	45	189555.451	ppb	2.323	21675985	200000	94.8	90	110	
Mg	24	3	45	186670.922	ppb	2.041	11550314	200000	93.3	90	110	
Al	27	3	45	290616.003	ppb	1.870	7023204	300000	96.9	90	110	
V	51	3	72	1992.263	ppb	2.255	1294439	2000	99.6	90	110	
Cr	52	3	72	4895.348	ppb	0.738	3902415	5000	97.9	90	110	
Mn	55	3	72	9868.435	ppb	1.291	4338776	10000	98.7	90	110	
Fe	56	2	72	195193.040	ppb	1.705	321383249	200000	97.6	90	110	
Co	59	3	72	1928.158	ppb	0.550	2628345	2000	96.4	90	110	
Ni	60	3	72	4682.171	ppb	2.367	1797165	5000	93.6	90	110	
Cu	63	3	72	4949.046	ppb	1.268	5119355	5000	99.0	90	110	
Zn	66	3	72	4786.488	ppb	1.562	840788	5000	95.7	90	110	
As	75	3	72	2042.561	ppb	1.246	245495	2000	102.1	90	110	
Se	78	2	72	2038.133	ppb	0.914	123522	2000	101.9	90	110	
(Se)	78	3	72	2006.903	ppb	0.997	14734	2000	100.3	90	110	
Sr	88	3	72	5151.291	ppb	1.653	3213491	5000	103.0	90	110	
Mo	95	3	115	1996.865	ppb	2.237	1098017	2000	99.8	90	110	
Cd	111	3	115	1954.613	ppb	1.704	542080	2000	97.7	90	110	
Sn	120	3	115	2085.854	ppb	0.727	1862278	2000	104.3	90	110	
Sb	121	3	115	1017.873	ppb	1.302	904260	1000	101.8	90	110	
Ba	137	3	115	5272.915	ppb	0.712	1542301	5000	105.5	90	110	
Tl	205	3	193	971.297	ppb	0.576	4918008	1000	97.1	90	110	
(Pb)	206	3	193	4886.389	ppb	0.608	8249751	5000	97.7	90	110	
(Pb)	207	3	193	4890.926	ppb	0.054	7309205	5000	97.8	90	110	
Pb	208	3	193	4871.107	ppb	0.278	33225301	5000	97.4	90	110	
Th	232	3	193	942.292	ppb	2.733	6509689	1000	94.2	90	110	
U	238	3	193	2029.180	ppb	0.595	14789609	2000	101.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4366053	2.40	3936624	110.91	60	120	
Sc (IS)	45	3	HMI He	664398	1.22	609520	109.00	60	120	
Ge Internal standard	72	2	HMI H2	2635342	0.64	2391663	110.19	60	120	
Ge Internal standard	72	3	HMI He	814468	1.05	756863	107.61	60	120	
In Internal Standard	115	3	HMI He	3177004	1.40	2988279	106.32	60	120	
Ir (IS)	193	3	HMI He	7576642	1.61	6996686	108.29	60	120	

Sample Report

Sample Table

Sample Name	rinse-
Data File Name	052SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:40:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.255	ppb	0.255	86.53	15	2000	
Na	23	3	45	103.991	ppb	103.991	3.52	33577	400000	
Mg	24	3	45	28.333	ppb	28.333	22.57	2313	400000	
Al	27	3	45	39.885	ppb	39.885	30.70	984	400000	
K	39	3	45	120.318	ppb	120.318	19.44	31922	400000	
Ca	40	2	45	10.694	ppb	10.694	26.81	32039	400000	
V	51	3	72	0.316	ppb	0.316	38.83	931	2000	
Cr	52	3	72	0.797	ppb	0.797	11.28	2227	5000	
Mn	55	3	72	1.448	ppb	1.448	17.57	768	10000	
Fe	56	2	72	21.466	ppb	21.466	5.74	48008	10000	
Co	59	3	72	0.277	ppb	0.277	17.75	416	2000	
Ni	60	3	72	0.768	ppb	0.768	6.66	585	5000	
Cu	63	3	72	1.082	ppb	1.082	18.62	1483	5000	
Zn	66	3	72	1.024	ppb	1.024	50.78	460	5000	
As	75	3	72	0.130	ppb	0.130	136.12	87	2000	
Se	78	2	72	0.530	ppb	0.530	17.20	33	2000	
Sr	88	3	72	0.529	ppb	0.529	17.19	546	4000	
Mo	95	3	115	10.124	ppb	10.124	17.60	5352	2000	
Ag	107	3	115	0.009	ppb	0.009	59.83	53	100	
Cd	111	3	115	0.372	ppb	0.372	24.67	115	2000	
Sn	120	3	115	12.486	ppb	12.486	3.13	11561	2000	
Sb	121	3	115	1.536	ppb	1.536	10.26	1436	1000	
Ba	137	3	115	0.603	ppb	0.603	20.00	267	5000	
Tl	205	3	193	0.390	ppb	0.390	2.89	2707	2000	
(Pb)	206	3	193	0.800	ppb	0.800	12.10	1719	100	
(Pb)	207	3	193	0.717	ppb	0.717	12.89	1683	100	
Pb	208	3	193	0.773	ppb	0.773	13.96	6987	5000	
Th	232	3	193	43.697	ppb	43.697	13.35	291191	2000	
U	238	3	193	0.851	ppb	0.851	15.51	8095	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3891614	0.79	3936624	98.86	60	120	
Sc (IS)	45	3	HMI He	593328	0.17	609520	97.34	60	120	
Ge Internal standard	72	2	HMI H2	2354325	2.37	2391663	98.44	60	120	
Ge Internal standard	72	3	HMI He	745502	0.82	756863	98.50	60	120	
In Internal Standard	115	3	HMI He	3017820	1.78	2988279	100.99	60	120	
Ir (IS)	193	3	HMI He	7120606	0.66	6996686	101.77	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	053_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:42:15-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.191	ppb	5.133	2071	50	102.4	90	110	
Na	23	3	45	48631.638	ppb	1.729	5074740	51000	95.4	90	110	
Mg	24	3	45	10120.861	ppb	0.784	570157	11000	92.0	90	110	
Al	27	3	45	990.777	ppb	2.123	21899	1000	99.1	90	110	
K	39	3	45	10526.946	ppb	0.127	497785	11000	95.7	90	110	
Ca	40	2	45	10313.670	ppb	1.118	5665316	11000	93.8	90	110	
V	51	3	72	50.921	ppb	2.647	30737	50	101.8	90	110	
Cr	52	3	72	52.345	ppb	1.192	39469	50	104.7	90	110	
Mn	55	3	72	52.204	ppb	1.725	21007	50	104.4	90	110	
Fe	56	2	72	1043.807	ppb	1.723	1579895	1000	104.4	90	110	
Co	59	3	72	51.797	ppb	1.575	64127	50	103.6	90	110	
Ni	60	3	72	50.591	ppb	1.140	17931	50	101.2	90	110	
Cu	63	3	72	52.429	ppb	1.324	49661	50	104.9	90	110	
Zn	66	3	72	50.805	ppb	2.455	8387	50	101.6	90	110	
As	75	3	72	54.483	ppb	0.835	6012	50	109.0	90	110	
Se	78	2	72	52.100	ppb	2.124	2876	50	104.2	90	110	
Sr	88	3	72	105.697	ppb	0.523	60065	100	105.7	90	110	
Mo	95	3	115	50.722	ppb	1.021	26658	50	101.4	90	110	
Ag	107	3	115	48.442	ppb	2.001	87786	50	96.9	90	110	
Cd	111	3	115	49.949	ppb	2.577	13230	50	99.9	90	110	
Sn	120	3	115	49.042	ppb	3.600	42704	50	98.1	90	110	
Sb	121	3	115	50.451	ppb	2.286	42881	50	100.9	90	110	
Ba	137	3	115	49.829	ppb	4.405	13994	50	99.7	90	110	
Tl	205	3	193	50.440	ppb	0.848	235705	50	100.9	90	110	
(Pb)	206	3	193	49.801	ppb	0.406	77767	50	99.6	90	110	
(Pb)	207	3	193	49.094	ppb	0.460	68139	50	98.2	90	110	
Pb	208	3	193	49.812	ppb	0.727	314465	50	99.6	90	110	
Th	232	3	193	60.825	ppb	4.640	393842	50	121.6	90	110	>+\-10%
U	238	3	193	50.525	ppb	0.589	340891	50	101.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3990427	0.34	3936624	101.37	60	120	
Sc (IS)	45	3	HMI He	604134	0.65	609520	99.12	60	120	
Ge Internal standard	72	2	HMI H2	2396928	0.27	2391663	100.22	60	120	
Ge Internal standard	72	3	HMI He	738967	0.81	756863	97.64	60	120	
In Internal Standard	115	3	HMI He	3030528	1.70	2988279	101.41	60	120	
Ir (IS)	193	3	HMI He	6968734	0.62	6996686	99.60	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	054_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:44:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.044	ppb	-164.0	3	0.5	
Na	23	3	45	40.592	ppb	9.6	27742	25	>RL
Mg	24	3	45	3.011	ppb	75.3	934	25	
Al	27	3	45	4.387	ppb	20.8	224	15	
K	39	3	45	23.326	ppb	19.9	28310	50	
V	51	3	72	0.348	ppb	50.8	961	1	
Cr	52	3	72	0.322	ppb	76.3	1903	1	
Mn	55	3	72	0.108	ppb	97.6	232	0.5	
Co	59	3	72	0.005	ppb	521.0	78	0.5	
Ni	60	3	72	0.092	ppb	79.2	352	1	
Cu	63	3	72	0.122	ppb	20.2	581	1	
Zn	66	3	72	0.262	ppb	49.9	342	5	
As	75	3	72	-0.252	ppb	-98.5	45	1	
Se	78	2	72	0.225	ppb	38.2	17	1	
Sr	88	3	72	-0.019	ppb	-272.7	237	0.5	
Mo	95	3	115	0.283	ppb	9.2	198	0.5	
Ag	107	3	115	0.029	ppb	20.2	88	1	
Cd	111	3	115	0.083	ppb	37.0	38	0.5	
Sn	120	3	115	0.570	ppb	6.5	1444	1	
Sb	121	3	115	0.165	ppb	4.8	275	0.6	
Ba	137	3	115	-0.031	ppb	-380.5	90	0.5	
Tl	205	3	193	0.032	ppb	10.4	1011	0.1	
(Pb)	206	3	193	0.025	ppb	106.9	495	1	
(Pb)	207	3	193	0.068	ppb	80.3	778	1	
Pb	208	3	193	0.056	ppb	40.7	2414	0.5	
Th	232	3	193	3.704	ppb	17.3	32368	1	>RL
U	238	3	193	0.037	ppb	78.9	2546	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3998985	1.32	3936624	101.58	60	120	
Sc (IS)	45	3	HMI He	607208	0.78	609520	99.62	60	120	
Ge Internal standard	72	2	HMI H2	2442163	1.23	2391663	102.11	60	120	
Ge Internal standard	72	3	HMI He	754094	0.52	756863	99.63	60	120	
In Internal Standard	115	3	HMI He	2990984	1.43	2988279	100.09	60	120	
Ir (IS)	193	3	HMI He	7180675	2.17	6996686	102.63	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7689706
Data File Name	055LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:45:50-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.057	ppb	6.494	47	1	105.7	70	130	
Na	23	3	45	344.849	ppb	1.754	59986	300	114.9	70	130	
Mg	24	3	45	60.069	ppb	1.367	4195	50	120.1	70	130	
Al	27	3	45	54.801	ppb	15.352	1348	50	109.6	70	130	
K	39	3	45	137.012	ppb	11.382	33687	120	114.2	70	130	
Ca	40	2	45	232.240	ppb	1.986	153860	200	116.1	70	130	
V	51	3	72	5.716	ppb	7.452	4227	5	114.3	70	130	
Cr	52	3	72	2.259	ppb	1.382	3362	2	113.0	70	130	
Mn	55	3	72	1.295	ppb	8.909	721	1	129.5	70	130	
Fe	56	2	72	59.054	ppb	2.235	108402	50	118.1	70	130	
Co	59	3	72	1.173	ppb	8.581	1566	1	117.3	70	130	
Ni	60	3	72	2.039	ppb	7.432	1053	2	102.0	70	130	
Cu	63	3	72	2.312	ppb	4.161	2704	2	115.6	70	130	
Zn	66	3	72	11.099	ppb	5.545	2122	10	111.0	70	130	
As	75	3	72	5.577	ppb	6.804	700	5	111.5	70	130	
Se	78	2	72	5.761	ppb	9.220	331	5	115.2	70	130	
Sr	88	3	72	5.403	ppb	5.010	3399	5	108.1	70	130	
Mo	95	3	115	2.350	ppb	6.275	1303	2	117.5	70	130	
Ag	107	3	115	0.980	ppb	2.225	1839	1	98.0	70	130	
Cd	111	3	115	1.297	ppb	10.527	365	1	129.7	70	130	
Sn	120	3	115	10.431	ppb	2.344	9994	10	104.3	70	130	
Sb	121	3	115	2.140	ppb	3.748	1979	2	107.0	70	130	
Ba	137	3	115	0.972	ppb	14.462	376	1	97.2	70	130	
Tl	205	3	193	1.027	ppb	7.460	5735	1	102.7	70	130	
(Pb)	206	3	193	1.060	ppb	3.263	2132	1	106.0	70	130	
(Pb)	207	3	193	1.071	ppb	6.657	2181	1	107.1	70	130	
Pb	208	3	193	1.116	ppb	1.899	9192	1	111.6	70	130	
Th	232	3	193	3.639	ppb	21.232	31690	1	363.9	70	130	>+/-30%
U	238	3	193	1.147	ppb	1.788	10132	1	114.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3987615	0.34	3936624	101.30	60	120	
Sc (IS)	45	3	HMI He	612114	0.28	609520	100.43	60	120	
Ge Internal standard	72	2	HMI H2	2470696	1.52	2391663	103.30	60	120	
Ge Internal standard	72	3	HMI He	760964	0.28	756863	100.54	60	120	
In Internal Standard	115	3	HMI He	3073589	1.98	2988279	102.85	60	120	
Ir (IS)	193	3	HMI He	7120734	1.99	6996686	101.77	60	120	

Sample Report

Sample Table

Sample Name	07646136
Data File Name	056SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:47:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.043	ppb	0.043	170.38	7	2000	
Na	23	3	45	46085.452	ppb	46085.452	0.24	4907285	400000	
Mg	24	3	45	70045.027	ppb	70045.027	0.58	4021009	400000	
Al	27	3	45	32.679	ppb	32.679	13.70	861	400000	
K	39	3	45	8761.584	ppb	8761.584	1.41	427304	400000	
Ca	40	2	45	419313.931	ppb	419313.931	1.62	225171360	400000	
V	51	3	72	-0.246	ppb	-0.246	-57.96	586	2000	
Cr	52	3	72	0.282	ppb	0.282	121.06	1816	5000	
Mn	55	3	72	90.381	ppb	90.381	1.59	35868	10000	
Fe	56	2	72	223.965	ppb	223.965	2.57	349594	10000	
Co	59	3	72	0.233	ppb	0.233	4.37	355	2000	
Ni	60	3	72	3.979	ppb	3.979	16.89	1681	5000	
Cu	63	3	72	1.383	ppb	1.383	6.85	1736	5000	
Zn	66	3	72	10.491	ppb	10.491	4.70	1944	5000	
As	75	3	72	-0.209	ppb	-0.209	-55.61	48	2000	
Se	78	2	72	0.242	ppb	0.242	53.44	17	2000	
Sr	88	3	72	2220.926	ppb	2220.926	0.71	1244456	4000	
Mo	95	3	115	0.174	ppb	0.174	19.61	143	2000	
Ag	107	3	115	0.017	ppb	0.017	65.81	68	100	
Cd	111	3	115	0.074	ppb	0.074	75.05	37	2000	
Sn	120	3	115	0.538	ppb	0.538	12.36	1434	2000	
Sb	121	3	115	0.145	ppb	0.145	5.54	262	1000	
Ba	137	3	115	3.171	ppb	3.171	1.62	983	5000	
Tl	205	3	193	0.046	ppb	0.046	10.16	1070	2000	
(Pb)	206	3	193	0.095	ppb	0.095	17.09	601	100	
(Pb)	207	3	193	0.068	ppb	0.068	46.26	771	100	
Pb	208	3	193	0.089	ppb	0.089	14.07	2607	5000	
Th	232	3	193	0.386	ppb	0.386	58.23	10531	2000	
U	238	3	193	0.488	ppb	0.488	2.26	5615	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3919452	0.42	3936624	99.56	60	120	
Sc (IS)	45	3	HMI He	616340	0.44	609520	101.12	60	120	
Ge Internal standard	72	2	HMI H2	2380476	2.41	2391663	99.53	60	120	
Ge Internal standard	72	3	HMI He	731438	0.32	756863	96.64	60	120	
In Internal Standard	115	3	HMI He	3027041	1.73	2988279	101.30	60	120	
Ir (IS)	193	3	HMI He	7117865	0.48	6996686	101.73	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608988/1-A
Data File Name	057_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:49:27-06:00
Sample Type	Blank
Dilution	1
Comment	608988 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.044	ppb	-321.0276816	3	0.5
Na	23	3	45	61.604	ppb	1.725422507	30279	25
Mg	24	3	45	5.278	ppb	34.80472678	1074	25
Al	27	3	45	5.174	ppb	22.44213393	244	15
K	39	3	45	28.000	ppb	89.45930801	28855	50
Ca	40	2	45	36.773	ppb	7.430288725	47582	200
V	51	3	72	0.083	ppb	115.2881194	813	1
Cr	52	3	72	-0.080	ppb	-171.4636165	1628	1
Mn	55	3	72	0.331	ppb	43.36226534	327	0.5
Fe	56	2	72	4.859	ppb	2.450064103	24927	50
Co	59	3	72	-0.012	ppb	-18.81117387	57	0.5
Ni	60	3	72	0.570	ppb	13.9753172	528	1
Cu	63	3	72	0.164	ppb	6.41419743	630	1
Zn	66	3	72	0.063	ppb	69.10900256	313	5
As	75	3	72	-0.228	ppb	-11.08640188	48	1
(Se)	78	3	72	1.913	ppb	44.09982287	33	1
Sr	88	3	72	0.115	ppb	68.13703367	318	0.5
Mo	95	3	115	0.075	ppb	106.8583026	93	0.5
Ag	107	3	115	0.005	ppb	30.81743947	48	1
Cd	111	3	115	0.035	ppb	162.0698733	27	0.5
Sn	120	3	115	0.020	ppb	472.8983403	1020	1
Sb	121	3	115	0.020	ppb	247.9946202	160	0.6
Ba	137	3	115	0.000	ppb	60172.67308	102	0.5
Tl	205	3	193	-0.030	ppb	-9.410549234	720	0.1
(Pb)	206	3	193	0.004	ppb	263.9839086	465	1
(Pb)	207	3	193	0.004	ppb	1324.596008	693	1
Pb	208	3	193	0.021	ppb	97.69472547	2211	0.5
Th	232	3	193	-0.114	ppb	-33.8856839	7424	1
U	238	3	193	0.006	ppb	516.4768832	2359	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4030655	1.88	3936624	102.39	60	120	
Sc (IS)	45	3	HMI He	614157	1.19	609520	100.76	60	120	
Ge Internal standard	72	2	HMI H2	2487414	2.91	2391663	104.00	60	120	
Ge Internal standard	72	3	HMI He	764122	0.21	756863	100.96	60	120	
In Internal Standard	115	3	HMI He	3103312	1.89	2988279	103.85	60	120	
Ir (IS)	193	3	HMI He	7246645	1.66	6996686	103.57	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608988/2-A
Data File Name	058_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:51:18-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608988 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.049	40.049	ppb	1.910	1586	40	100.1	80	120	
Na	23	3	45	811.112	811.112	ppb	1.174	110820	40	2027.8	80	120	>+/-20%
Mg	24	3	45	745.347	745.347	ppb	0.480	43962	40	1863.4	80	120	>+/-20%
Al	27	3	45	796.060	796.060	ppb	1.909	18140	40	1990.1	80	120	>+/-20%
K	39	3	45	791.602	791.602	ppb	5.579	64361	40	1979.0	80	120	>+/-20%
Ca	40	2	45	828.740	828.740	ppb	0.630	492343	40	2071.8	80	120	>+/-20%
V	51	3	72	40.016	40.016	ppb	0.274	25517	40	100.0	80	120	
Cr	52	3	72	41.732	41.732	ppb	1.620	33372	40	104.3	80	120	
Mn	55	3	72	42.214	42.214	ppb	2.748	17864	40	105.5	80	120	
Fe	56	2	72	811.694	811.694	ppb	4.279	1280215	40	2029.2	80	120	>+/-20%
(Fe)	56	3	72	810.317	810.317	ppb	1.194	540160	40	2025.8	80	120	>+/-20%
Co	59	3	72	40.958	40.958	ppb	1.340	53237	40	102.4	80	120	
Ni	60	3	72	38.219	38.219	ppb	1.825	14295	40	95.5	80	120	
Cu	63	3	72	41.471	41.471	ppb	1.215	41323	40	103.7	80	120	
Zn	66	3	72	41.450	41.450	ppb	1.461	7238	40	103.6	80	120	
As	75	3	72	41.078	41.078	ppb	4.110	4775	40	102.7	80	120	
Se	78	2	72	42.038	42.038	ppb	3.513	2412	40	105.1	80	120	
(Se)	78	3	72	41.213	41.213	ppb	4.103	308	40	103.0	80	120	
Sr	88	3	72	82.162	82.162	ppb	1.180	49057	40	205.4	80	120	>+/-20%
Mo	95	3	115	38.819	38.819	ppb	1.280	21174	40	97.0	80	120	
Ag	107	3	115	40.439	40.439	ppb	0.639	76026	40	101.1	80	120	
Cd	111	3	115	40.033	40.033	ppb	2.246	11004	40	100.1	80	120	
Sn	120	3	115	37.105	37.105	ppb	3.392	33761	40	92.8	80	120	
Sb	121	3	115	39.396	39.396	ppb	0.943	34766	40	98.5	80	120	
Ba	137	3	115	39.836	39.836	ppb	1.740	11631	40	99.6	80	120	
Tl	205	3	193	38.669	38.669	ppb	1.279	191299	40	96.7	80	120	
(Pb)	206	3	193	38.976	38.976	ppb	1.291	64469	40	97.4	80	120	
(Pb)	207	3	193	38.528	38.528	ppb	1.918	56700	40	96.3	80	120	
Pb	208	3	193	39.197	39.197	ppb	1.289	262145	40	98.0	80	120	
Th	232	3	193	36.769	36.769	ppb	0.451	255031	40	91.9	80	120	
U	238	3	193	39.475	39.475	ppb	1.818	282168	40	98.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4092547	0.67	3936624	103.96	60	120	
Sc (IS)	45	3	HMI He	622065	1.30	609520	102.06	60	120	
Ge Internal standard	72	2	HMI H2	2491566	2.38	2391663	104.18	60	120	
Ge Internal standard	72	3	HMI He	775518	0.53	756863	102.46	60	120	
In Internal Standard	115	3	HMI He	3143141	1.36	2988279	105.18	60	120	
Ir (IS)	193	3	HMI He	7369962	0.43	6996686	105.34	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-608988/3-A
Data File Name	059SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:53:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.311	ppb	42.311	3.77	1698	2000	
Na	23	3	45	802.860	ppb	802.860	2.22	109822	400000	
Mg	24	3	45	741.393	ppb	741.393	1.78	43684	400000	
Al	27	3	45	820.529	ppb	820.529	2.11	18678	400000	
K	39	3	45	796.314	ppb	796.314	5.56	64512	400000	
Ca	40	2	45	833.238	ppb	833.238	2.15	494199	400000	
V	51	3	72	40.234	ppb	40.234	2.52	25809	2000	
Cr	52	3	72	41.134	ppb	41.134	0.69	33123	5000	
Mn	55	3	72	41.575	ppb	41.575	4.40	17704	10000	
Fe	56	2	72	818.913	ppb	818.913	1.93	1295787	10000	
Co	59	3	72	40.526	ppb	40.526	1.32	52999	2000	
Ni	60	3	72	39.754	ppb	39.754	1.22	14949	5000	
Cu	63	3	72	41.623	ppb	41.623	1.52	41730	5000	
Zn	66	3	72	40.741	ppb	40.741	2.42	7163	5000	
As	75	3	72	40.203	ppb	40.203	4.48	4705	2000	
Se	78	2	72	42.376	ppb	42.376	2.49	2439	2000	
Sr	88	3	72	81.283	ppb	81.283	0.69	48836	4000	
Mo	95	3	115	39.260	ppb	39.260	1.03	21183	2000	
Ag	107	3	115	40.548	ppb	40.548	0.26	75408	100	
Cd	111	3	115	40.403	ppb	40.403	1.16	10984	2000	
Sn	120	3	115	37.877	ppb	37.877	0.60	34078	2000	
Sb	121	3	115	40.041	ppb	40.041	0.70	34952	1000	
Ba	137	3	115	40.398	ppb	40.398	1.53	11664	5000	
Tl	205	3	193	39.418	ppb	39.418	1.71	192169	2000	
(Pb)	206	3	193	39.381	ppb	39.381	2.44	64187	100	
(Pb)	207	3	193	39.062	ppb	39.062	1.67	56646	100	
Pb	208	3	193	39.439	ppb	39.439	2.06	259944	5000	
Th	232	3	193	39.380	ppb	39.380	1.52	268613	2000	
U	238	3	193	39.891	ppb	39.891	2.31	281000	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4087545	1.95	3936624	103.83	60	120	
Sc (IS)	45	3	HMI He	621403	0.62	609520	101.95	60	120	
Ge Internal standard	72	2	HMI H2	2498758	0.58	2391663	104.48	60	120	
Ge Internal standard	72	3	HMI He	780346	0.84	756863	103.10	60	120	
In Internal Standard	115	3	HMI He	3109050	0.22	2988279	104.04	60	120	
Ir (IS)	193	3	HMI He	7264494	1.56	6996686	103.83	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-D
Data File Name	060SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:54:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	19545.399	ppb	19545.399	1.02	2130238	400000	
Mg	24	3	45	26093.020	ppb	26093.020	3.35	1523373	400000	
Al	27	3	45	14.894	ppb	14.894	63.21	471	400000	
K	39	3	45	11049.524	ppb	11049.524	1.71	540602	400000	
Ca	40	2	45	70521.865	ppb	70521.865	2.09	38581225	400000	
V	51	3	72	0.247	ppb	0.247	47.08	936	2000	
Cr	52	3	72	1.057	ppb	1.057	16.75	2542	5000	
Mn	55	3	72	9.080	ppb	9.080	5.33	4039	10000	
Fe	56	2	72	60.210	ppb	60.210	3.00	113329	10000	
Co	59	3	72	0.200	ppb	0.200	12.48	337	2000	
Ni	60	3	72	2.372	ppb	2.372	6.36	1208	5000	
Cu	63	3	72	1.973	ppb	1.973	3.24	2447	5000	
Zn	66	3	72	4.204	ppb	4.204	5.35	1021	5000	
As	75	3	72	0.841	ppb	0.841	18.70	173	2000	
Se	78	2	72	1.197	ppb	1.197	26.89	74	2000	
Sr	88	3	72	155.897	ppb	155.897	0.38	93870	4000	
Mo	95	3	115	17.638	ppb	17.638	2.49	9620	2000	
Ag	107	3	115	0.017	ppb	0.017	15.03	70	100	
Cd	111	3	115	0.040	ppb	0.040	95.88	28	2000	
Sn	120	3	115	0.124	ppb	0.124	50.80	1121	2000	
Sb	121	3	115	0.804	ppb	0.804	6.56	848	1000	
Ba	137	3	115	23.361	ppb	23.361	1.14	6842	5000	
Tl	205	3	193	0.012	ppb	0.012	64.71	916	2000	
(Pb)	206	3	193	0.129	ppb	0.129	10.57	663	100	
(Pb)	207	3	193	0.093	ppb	0.093	51.92	816	100	
Pb	208	3	193	0.136	ppb	0.136	12.64	2942	5000	
Th	232	3	193	2.719	ppb	2.719	10.72	25956	2000	
U	238	3	193	0.126	ppb	0.126	12.72	3171	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3990427	1.77	3936624	101.37	60	120	
Sc (IS)	45	3	HMI He	626752	1.03	609520	102.83	60	120	
Ge Internal standard	72	2	HMI H2	2541628	2.20	2391663	106.27	60	120	
Ge Internal standard	72	3	HMI He	783987	0.51	756863	103.58	60	120	
In Internal Standard	115	3	HMI He	3133503	0.53	2988279	104.86	60	120	
Ir (IS)	193	3	HMI He	7199182	1.82	6996686	102.89	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-E MS
Data File Name	061SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:56:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.079	ppb	40.079	4.07	1633	2000	
Na	23	3	45	19881.152	ppb	19881.152	1.68	2148737	400000	
Mg	24	3	45	26000.278	ppb	26000.278	2.95	1505531	400000	
Al	27	3	45	851.792	ppb	851.792	9.29	19398	400000	
K	39	3	45	11643.301	ppb	11643.301	1.37	563491	400000	
Ca	40	2	45	67641.581	ppb	67641.581	1.27	38656994	400000	
V	51	3	72	39.704	ppb	39.704	0.53	25501	2000	
Cr	52	3	72	40.961	ppb	40.961	0.53	33016	5000	
Mn	55	3	72	48.863	ppb	48.863	1.78	20794	10000	
Fe	56	2	72	855.087	ppb	855.087	1.30	1368496	10000	
Co	59	3	72	39.700	ppb	39.700	1.56	51961	2000	
Ni	60	3	72	41.156	ppb	41.156	2.86	15474	5000	
Cu	63	3	72	41.873	ppb	41.873	0.66	42011	5000	
Zn	66	3	72	43.808	ppb	43.808	2.85	7685	5000	
As	75	3	72	41.559	ppb	41.559	1.63	4863	2000	
Se	78	2	72	41.690	ppb	41.690	2.54	2428	2000	
Sr	88	3	72	232.131	ppb	232.131	1.41	139097	4000	
Mo	95	3	115	56.340	ppb	56.340	1.75	29967	2000	
Ag	107	3	115	40.466	ppb	40.466	1.58	74252	100	
Cd	111	3	115	39.864	ppb	39.864	2.82	10694	2000	
Sn	120	3	115	38.685	ppb	38.685	1.00	34322	2000	
Sb	121	3	115	41.023	ppb	41.023	1.50	35327	1000	
Ba	137	3	115	62.903	ppb	62.903	1.61	17867	5000	
Tl	205	3	193	39.025	ppb	39.025	3.47	190190	2000	
(Pb)	206	3	193	39.289	ppb	39.289	1.48	64029	100	
(Pb)	207	3	193	38.832	ppb	38.832	1.83	56302	100	
Pb	208	3	193	39.192	ppb	39.192	1.59	258258	5000	
Th	232	3	193	37.940	ppb	37.940	2.26	259009	2000	
U	238	3	193	39.855	ppb	39.855	2.02	280672	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4168827	1.81	3936624	105.90	60	120	
Sc (IS)	45	3	HMI He	621606	1.08	609520	101.98	60	120	
Ge Internal standard	72	2	HMI H2	2528732	1.27	2391663	105.73	60	120	
Ge Internal standard	72	3	HMI He	780942	0.67	756863	103.18	60	120	
In Internal Standard	115	3	HMI He	3067858	1.51	2988279	102.66	60	120	
Ir (IS)	193	3	HMI He	7262868	1.84	6996686	103.80	60	120	

Sample Report

Sample Table

Sample Name	280-174839-A-4-F MSD
Data File Name	062SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T16:58:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.732	ppb	41.732	2.25	1681	2000	
Na	23	3	45	20117.790	ppb	20117.790	1.28	2168285	400000	
Mg	24	3	45	26700.257	ppb	26700.257	1.78	1542303	400000	
Al	27	3	45	815.127	ppb	815.127	3.55	18511	400000	
K	39	3	45	11782.468	ppb	11782.468	0.32	568431	400000	
Ca	40	2	45	69474.555	ppb	69474.555	0.85	39011152	400000	
V	51	3	72	40.221	ppb	40.221	1.53	25871	2000	
Cr	52	3	72	41.859	ppb	41.859	1.56	33766	5000	
Mn	55	3	72	49.222	ppb	49.222	2.00	20984	10000	
Fe	56	2	72	853.433	ppb	853.433	0.73	1352857	10000	
Co	59	3	72	39.508	ppb	39.508	0.59	51809	2000	
Ni	60	3	72	40.883	ppb	40.883	0.89	15404	5000	
Cu	63	3	72	42.427	ppb	42.427	1.26	42643	5000	
Zn	66	3	72	43.934	ppb	43.934	1.31	7722	5000	
As	75	3	72	41.196	ppb	41.196	8.24	4830	2000	
Se	78	2	72	42.553	ppb	42.553	1.97	2455	2000	
Sr	88	3	72	234.492	ppb	234.492	1.13	140780	4000	
Mo	95	3	115	57.869	ppb	57.869	1.91	31023	2000	
Ag	107	3	115	40.403	ppb	40.403	2.63	74696	100	
Cd	111	3	115	40.680	ppb	40.680	2.63	10994	2000	
Sn	120	3	115	39.318	ppb	39.318	1.93	35134	2000	
Sb	121	3	115	40.749	ppb	40.749	2.28	35361	1000	
Ba	137	3	115	63.493	ppb	63.493	3.08	18165	5000	
Tl	205	3	193	39.361	ppb	39.361	3.64	191206	2000	
(Pb)	206	3	193	39.754	ppb	39.754	2.38	64573	100	
(Pb)	207	3	193	39.232	ppb	39.232	2.61	56695	100	
Pb	208	3	193	39.480	ppb	39.480	2.56	259311	5000	
Th	232	3	193	39.931	ppb	39.931	2.43	271324	2000	
U	238	3	193	40.208	ppb	40.208	2.48	282256	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4096378	2.51	3936624	104.06	60	120	
Sc (IS)	45	3	HMI He	619959	0.29	609520	101.71	60	120	
Ge Internal standard	72	2	HMI H2	2504477	0.36	2391663	104.72	60	120	
Ge Internal standard	72	3	HMI He	782420	0.44	756863	103.38	60	120	
In Internal Standard	115	3	HMI He	3092159	2.59	2988279	103.48	60	120	
Ir (IS)	193	3	HMI He	7240269	1.65	6996686	103.48	60	120	

Sample Report

Sample Table

Sample Name	280-175093-A-1-A
Data File Name	063SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:00:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-170.45	3	2000	
Na	23	3	45	100.269	ppb	100.269	10.18	34540	400000	
Mg	24	3	45	3.248	ppb	3.248	99.63	964	400000	
Al	27	3	45	7.050	ppb	7.050	17.15	287	400000	
K	39	3	45	0.410	ppb	0.410	3727.56	27739	400000	
Ca	40	2	45	23.049	ppb	23.049	2.16	39679	400000	
V	51	3	72	0.435	ppb	0.435	10.20	1033	2000	
Cr	52	3	72	-0.161	ppb	-0.161	-41.70	1576	5000	
Mn	55	3	72	0.109	ppb	0.109	56.11	237	10000	
Fe	56	2	72	6.576	ppb	6.576	6.12	27431	10000	
Co	59	3	72	0.010	ppb	0.010	70.38	85	2000	
Ni	60	3	72	-0.405	ppb	-0.405	-8.48	178	5000	
Cu	63	3	72	0.158	ppb	0.158	38.52	628	5000	
Zn	66	3	72	0.223	ppb	0.223	97.22	342	5000	
As	75	3	72	-0.098	ppb	-0.098	-50.67	63	2000	
Se	78	2	72	0.068	ppb	0.068	51.05	8	2000	
Sr	88	3	72	0.050	ppb	0.050	175.06	282	4000	
Mo	95	3	115	0.051	ppb	0.051	25.82	82	2000	
Ag	107	3	115	0.024	ppb	0.024	68.93	83	100	
Cd	111	3	115	0.016	ppb	0.016	355.13	22	2000	
Sn	120	3	115	0.297	ppb	0.297	24.12	1269	2000	
Sb	121	3	115	0.048	ppb	0.048	82.70	185	1000	
Ba	137	3	115	0.083	ppb	0.083	79.80	127	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-26.62	608	2000	
(Pb)	206	3	193	-0.024	ppb	-0.024	-92.15	420	100	
(Pb)	207	3	193	-0.021	ppb	-0.021	-130.54	656	100	
Pb	208	3	193	-0.009	ppb	-0.009	-251.72	2006	5000	
Th	232	3	193	2.010	ppb	2.010	13.00	21389	2000	
U	238	3	193	0.012	ppb	0.012	224.71	2389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997235	0.81	3936624	101.54	60	120	
Sc (IS)	45	3	HMI He	617411	0.69	609520	101.29	60	120	
Ge Internal standard	72	2	HMI H2	2472889	1.71	2391663	103.40	60	120	
Ge Internal standard	72	3	HMI He	768552	0.27	756863	101.54	60	120	
In Internal Standard	115	3	HMI He	3124341	0.67	2988279	104.55	60	120	
Ir (IS)	193	3	HMI He	7230733	1.92	6996686	103.35	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	064_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:02:08-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.954	ppb	8.196	1928	50	95.9	90	110	
Na	23	3	45	47011.024	ppb	2.438	5070202	51000	92.2	90	110	
Mg	24	3	45	10053.804	ppb	2.682	585337	11000	91.4	90	110	
Al	27	3	45	1008.409	ppb	2.903	23032	1000	100.8	90	110	
K	39	3	45	10408.192	ppb	1.816	508979	11000	94.6	90	110	
Ca	40	2	45	10172.036	ppb	0.348	5711216	11000	92.5	90	110	
V	51	3	72	51.211	ppb	0.687	31388	50	102.4	90	110	
Cr	52	3	72	52.636	ppb	0.568	40295	50	105.3	90	110	
Mn	55	3	72	52.728	ppb	1.705	21546	50	105.5	90	110	
Fe	56	2	72	1041.188	ppb	1.788	1597210	1000	104.1	90	110	
Co	59	3	72	52.075	ppb	1.297	65470	50	104.2	90	110	
Ni	60	3	72	51.459	ppb	1.592	18513	50	102.9	90	110	
Cu	63	3	72	52.871	ppb	1.361	50848	50	105.7	90	110	
Zn	66	3	72	52.553	ppb	2.032	8800	50	105.1	90	110	
As	75	3	72	52.352	ppb	1.636	5868	50	104.7	90	110	
Se	78	2	72	52.558	ppb	1.824	2939	50	105.1	90	110	
Sr	88	3	72	104.504	ppb	2.010	60306	100	104.5	90	110	
Mo	95	3	115	50.107	ppb	1.736	27040	50	100.2	90	110	
Ag	107	3	115	49.292	ppb	0.468	91735	50	98.6	90	110	
Cd	111	3	115	50.845	ppb	1.582	13830	50	101.7	90	110	
Sn	120	3	115	48.870	ppb	0.790	43713	50	97.7	90	110	
Sb	121	3	115	50.429	ppb	1.994	44017	50	100.9	90	110	
Ba	137	3	115	49.468	ppb	1.316	14272	50	98.9	90	110	
Tl	205	3	193	48.769	ppb	4.177	236181	50	97.5	90	110	
(Pb)	206	3	193	49.173	ppb	5.001	79564	50	98.3	90	110	
(Pb)	207	3	193	48.714	ppb	3.136	70083	50	97.4	90	110	
Pb	208	3	193	48.943	ppb	4.087	320243	50	97.9	90	110	
Th	232	3	193	49.622	ppb	1.670	334628	50	99.2	90	110	
U	238	3	193	50.066	ppb	5.245	349980	50	100.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4078462	0.49	3936624	103.60	60	120	
Sc (IS)	45	3	HMI He	624492	1.73	609520	102.46	60	120	
Ge Internal standard	72	2	HMI H2	2428719	2.92	2391663	101.55	60	120	
Ge Internal standard	72	3	HMI He	750379	0.40	756863	99.14	60	120	
In Internal Standard	115	3	HMI He	3111707	0.85	2988279	104.13	60	120	
Ir (IS)	193	3	HMI He	7228248	3.42	6996686	103.31	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	065_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:03:58-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.041	ppb	173.9	7	0.5	
Na	23	3	45	20.292	ppb	32.6	25850	25	
Mg	24	3	45	2.053	ppb	143.8	888	25	
Al	27	3	45	-0.638	ppb	-114.6	113	15	
K	39	3	45	-5.245	ppb	-210.4	27274	50	
V	51	3	72	0.487	ppb	25.3	1068	1	
Cr	52	3	72	0.029	ppb	301.5	1723	1	
Mn	55	3	72	0.024	ppb	190.3	202	0.5	
Co	59	3	72	-0.014	ppb	-48.9	55	0.5	
Ni	60	3	72	-0.002	ppb	-2709.4	325	1	
Cu	63	3	72	0.054	ppb	155.6	528	1	
Zn	66	3	72	-0.204	ppb	-118.7	272	5	
As	75	3	72	0.047	ppb	426.3	80	1	
Se	78	2	72	0.139	ppb	26.1	12	1	
Sr	88	3	72	-0.053	ppb	-92.7	222	0.5	
Mo	95	3	115	0.021	ppb	222.3	65	0.5	
Ag	107	3	115	0.011	ppb	113.5	58	1	
Cd	111	3	115	0.005	ppb	501.8	18	0.5	
Sn	120	3	115	0.150	ppb	79.7	1124	1	
Sb	121	3	115	0.025	ppb	68.9	163	0.6	
Ba	137	3	115	-0.058	ppb	-39.4	85	0.5	
Tl	205	3	193	-0.059	ppb	-17.6	588	0.1	
(Pb)	206	3	193	-0.029	ppb	-107.8	416	1	
(Pb)	207	3	193	-0.081	ppb	-4.5	578	1	
Pb	208	3	193	-0.047	ppb	-27.6	1781	0.5	
Th	232	3	193	1.793	ppb	17.6	20191	1	>RL
U	238	3	193	0.008	ppb	37.5	2392	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4016611	1.17	3936624	102.03	60	120	
Sc (IS)	45	3	HMI He	612687	1.34	609520	100.52	60	120	
Ge Internal standard	72	2	HMI H2	2471620	0.65	2391663	103.34	60	120	
Ge Internal standard	72	3	HMI He	770411	0.66	756863	101.79	60	120	
In Internal Standard	115	3	HMI He	3084099	1.81	2988279	103.21	60	120	
Ir (IS)	193	3	HMI He	7310733	1.29	6996686	104.49	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-1-A
Data File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:05:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-86.68	2	2000	
Na	23	3	45	5948.177	ppb	5948.177	1.89	663657	400000	
Mg	24	3	45	24920.793	ppb	24920.793	1.61	1451991	400000	
Al	27	3	45	52.195	ppb	52.195	14.77	1318	400000	
K	39	3	45	2963.270	ppb	2963.270	1.68	165204	400000	
Ca	40	2	45	72671.323	ppb	72671.323	1.62	41222099	400000	
V	51	3	72	0.521	ppb	0.521	27.08	1101	2000	
Cr	52	3	72	0.302	ppb	0.302	103.70	1953	5000	
Mn	55	3	72	6.279	ppb	6.279	4.67	2837	10000	
Fe	56	2	72	56.344	ppb	56.344	1.16	104397	10000	
Co	59	3	72	0.150	ppb	0.150	20.25	270	2000	
Ni	60	3	72	0.427	ppb	0.427	21.18	486	5000	
Cu	63	3	72	0.564	ppb	0.564	16.26	1040	5000	
Zn	66	3	72	292.541	ppb	292.541	0.99	49482	5000	
As	75	3	72	-0.207	ppb	-0.207	-49.71	52	2000	
Se	78	2	72	0.278	ppb	0.278	18.28	20	2000	
Sr	88	3	72	357.913	ppb	357.913	1.86	213962	4000	
Mo	95	3	115	2.447	ppb	2.447	5.57	1403	2000	
Ag	107	3	115	0.015	ppb	0.015	79.46	67	100	
Cd	111	3	115	0.308	ppb	0.308	15.91	103	2000	
Sn	120	3	115	-0.064	ppb	-0.064	-125.52	970	2000	
Sb	121	3	115	0.112	ppb	0.112	41.78	245	1000	
Ba	137	3	115	43.544	ppb	43.544	1.86	12857	5000	
Tl	205	3	193	-0.051	ppb	-0.051	-11.96	615	2000	
(Pb)	206	3	193	0.169	ppb	0.169	22.16	726	100	
(Pb)	207	3	193	0.141	ppb	0.141	17.91	883	100	
Pb	208	3	193	0.169	ppb	0.169	5.52	3154	5000	
Th	232	3	193	0.615	ppb	0.615	12.58	12157	2000	
U	238	3	193	0.940	ppb	0.940	3.56	8797	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4137626	1.18	3936624	105.11	60	120	
Sc (IS)	45	3	HMI He	625343	0.76	609520	102.60	60	120	
Ge Internal standard	72	2	HMI H2	2474879	2.70	2391663	103.48	60	120	
Ge Internal standard	72	3	HMI He	779639	0.83	756863	103.01	60	120	
In Internal Standard	115	3	HMI He	3180954	1.66	2988279	106.45	60	120	
Ir (IS)	193	3	HMI He	7195601	3.13	6996686	102.84	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-2-A
Data File Name	067SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:07:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-6386.69	5	2000	
Na	23	3	45	21921.288	ppb	21921.288	1.92	2342875	400000	
Mg	24	3	45	30776.878	ppb	30776.878	2.44	1764251	400000	
Al	27	3	45	110.985	ppb	110.985	4.69	2613	400000	
K	39	3	45	4612.812	ppb	4612.812	0.96	237700	400000	
Ca	40	2	45	92289.739	ppb	92289.739	1.62	50580187	400000	
V	51	3	72	0.248	ppb	0.248	70.20	931	2000	
Cr	52	3	72	0.208	ppb	0.208	30.52	1879	5000	
Mn	55	3	72	5.244	ppb	5.244	1.80	2401	10000	
Fe	56	2	72	66.729	ppb	66.729	2.78	121537	10000	
Co	59	3	72	0.204	ppb	0.204	15.71	340	2000	
Ni	60	3	72	1.044	ppb	1.044	21.11	713	5000	
Cu	63	3	72	0.652	ppb	0.652	2.03	1126	5000	
Zn	66	3	72	83.162	ppb	83.162	1.07	14285	5000	
As	75	3	72	0.169	ppb	0.169	203.29	95	2000	
Se	78	2	72	0.159	ppb	0.159	23.89	13	2000	
Sr	88	3	72	2161.673	ppb	2161.673	3.06	1290805	4000	
Mo	95	3	115	2.158	ppb	2.158	1.56	1213	2000	
Ag	107	3	115	0.000	ppb	0.000	2727.36	38	100	
Cd	111	3	115	0.311	ppb	0.311	28.17	102	2000	
Sn	120	3	115	0.030	ppb	0.030	276.90	1028	2000	
Sb	121	3	115	0.211	ppb	0.211	21.27	325	1000	
Ba	137	3	115	29.098	ppb	29.098	1.65	8410	5000	
Tl	205	3	193	-0.082	ppb	-0.082	-9.24	475	2000	
(Pb)	206	3	193	0.620	ppb	0.620	7.83	1476	100	
(Pb)	207	3	193	0.495	ppb	0.495	10.75	1409	100	
Pb	208	3	193	0.602	ppb	0.602	7.23	6063	5000	
Th	232	3	193	0.223	ppb	0.223	65.02	9747	2000	
U	238	3	193	1.239	ppb	1.239	3.91	11058	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3998379	1.07	3936624	101.57	60	120	
Sc (IS)	45	3	HMI He	615372	0.76	609520	100.96	60	120	
Ge Internal standard	72	2	HMI H2	2496627	0.94	2391663	104.39	60	120	
Ge Internal standard	72	3	HMI He	779493	0.28	756863	102.99	60	120	
In Internal Standard	115	3	HMI He	3102078	1.06	2988279	103.81	60	120	
Ir (IS)	193	3	HMI He	7321001	0.61	6996686	104.64	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-3-A
Data File Name	068SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:09:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.079	ppb	0.079	85.17	8	2000	
Na	23	3	45	7368.820	ppb	7368.820	0.82	809323	400000	
Mg	24	3	45	37701.785	ppb	37701.785	2.58	2177274	400000	
Al	27	3	45	33.943	ppb	33.943	6.98	894	400000	
K	39	3	45	4952.131	ppb	4952.131	1.28	254996	400000	
Ca	40	2	45	81714.772	ppb	81714.772	2.22	45885373	400000	
V	51	3	72	0.445	ppb	0.445	3.24	1050	2000	
Cr	52	3	72	0.116	ppb	0.116	110.95	1803	5000	
Mn	55	3	72	11.827	ppb	11.827	0.82	5150	10000	
Fe	56	2	72	37.853	ppb	37.853	2.43	77982	10000	
Co	59	3	72	0.240	ppb	0.240	13.62	385	2000	
Ni	60	3	72	3.435	ppb	3.435	10.51	1584	5000	
Cu	63	3	72	10.662	ppb	10.662	1.89	10992	5000	
Zn	66	3	72	187.375	ppb	187.375	1.78	31674	5000	
As	75	3	72	0.187	ppb	0.187	71.98	97	2000	
Se	78	2	72	0.279	ppb	0.279	48.53	21	2000	
Sr	88	3	72	844.437	ppb	844.437	1.15	502403	4000	
Mo	95	3	115	7.353	ppb	7.353	1.55	4024	2000	
Ag	107	3	115	0.016	ppb	0.016	26.06	68	100	
Cd	111	3	115	0.799	ppb	0.799	14.98	235	2000	
Sn	120	3	115	-0.115	ppb	-0.115	-16.11	906	2000	
Sb	121	3	115	2.202	ppb	2.202	5.80	2062	1000	
Ba	137	3	115	26.310	ppb	26.310	1.18	7657	5000	
Tl	205	3	193	-0.030	ppb	-0.030	-6.55	723	2000	
(Pb)	206	3	193	0.081	ppb	0.081	35.10	595	100	
(Pb)	207	3	193	0.050	ppb	0.050	87.76	765	100	
Pb	208	3	193	0.085	ppb	0.085	24.12	2644	5000	
Th	232	3	193	-0.025	ppb	-0.025	-323.88	8062	2000	
U	238	3	193	1.960	ppb	1.960	0.78	16082	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4097067	2.18	3936624	104.08	60	120	
Sc (IS)	45	3	HMI He	619913	1.60	609520	101.71	60	120	
Ge Internal standard	72	2	HMI H2	2545717	1.74	2391663	106.44	60	120	
Ge Internal standard	72	3	HMI He	776390	0.66	756863	102.58	60	120	
In Internal Standard	115	3	HMI He	3119096	0.71	2988279	104.38	60	120	
Ir (IS)	193	3	HMI He	7294218	1.60	6996686	104.25	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-4-A
Data File Name	069SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:11:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-175.44	3	2000	
Na	23	3	45	5916.292	ppb	5916.292	2.39	662167	400000	
Mg	24	3	45	33801.903	ppb	33801.903	0.92	1975245	400000	
Al	27	3	45	47.828	ppb	47.828	17.15	1225	400000	
K	39	3	45	4318.799	ppb	4318.799	2.69	228600	400000	
Ca	40	2	45	83917.351	ppb	83917.351	2.05	47593732	400000	
V	51	3	72	0.606	ppb	0.606	14.86	1159	2000	
Cr	52	3	72	0.096	ppb	0.096	121.98	1803	5000	
Mn	55	3	72	3.392	ppb	3.392	6.82	1629	10000	
Fe	56	2	72	52.369	ppb	52.369	0.71	99343	10000	
Co	59	3	72	0.144	ppb	0.144	12.57	263	2000	
Ni	60	3	72	1.518	ppb	1.518	5.15	891	5000	
Cu	63	3	72	0.853	ppb	0.853	10.24	1331	5000	
Zn	66	3	72	91.424	ppb	91.424	1.09	15748	5000	
As	75	3	72	0.252	ppb	0.252	60.65	105	2000	
Se	78	2	72	0.136	ppb	0.136	45.50	12	2000	
Sr	88	3	72	851.299	ppb	851.299	1.09	510913	4000	
Mo	95	3	115	4.122	ppb	4.122	7.38	2274	2000	
Ag	107	3	115	0.011	ppb	0.011	33.90	58	100	
Cd	111	3	115	0.114	ppb	0.114	30.99	48	2000	
Sn	120	3	115	-0.095	ppb	-0.095	-93.62	921	2000	
Sb	121	3	115	0.312	ppb	0.312	30.05	413	1000	
Ba	137	3	115	29.489	ppb	29.489	1.62	8557	5000	
Tl	205	3	193	-0.067	ppb	-0.067	-18.84	546	2000	
(Pb)	206	3	193	0.128	ppb	0.128	35.02	673	100	
(Pb)	207	3	193	0.043	ppb	0.043	32.67	758	100	
Pb	208	3	193	0.105	ppb	0.105	27.09	2785	5000	
Th	232	3	193	-0.155	ppb	-0.155	-42.20	7229	2000	
U	238	3	193	2.003	ppb	2.003	4.95	16444	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4137957	1.39	3936624	105.11	60	120	
Sc (IS)	45	3	HMI He	627327	2.11	609520	102.92	60	120	
Ge Internal standard	72	2	HMI H2	2502127	1.12	2391663	104.62	60	120	
Ge Internal standard	72	3	HMI He	783181	0.36	756863	103.48	60	120	
In Internal Standard	115	3	HMI He	3114018	1.63	2988279	104.21	60	120	
Ir (IS)	193	3	HMI He	7326463	2.17	6996686	104.71	60	120	

Sample Report

Sample Table

Sample Name	280-175069-C-5-A
Data File Name	070SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:13:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-84.72	2	2000	
Na	23	3	45	4056.058	ppb	4056.058	0.41	462715	400000	
Mg	24	3	45	25509.596	ppb	25509.596	2.68	1494040	400000	
Al	27	3	45	15.596	ppb	15.596	33.89	487	400000	
K	39	3	45	2780.645	ppb	2780.645	2.63	157580	400000	
Ca	40	2	45	63006.278	ppb	63006.278	1.36	35367017	400000	
V	51	3	72	0.382	ppb	0.382	18.42	1018	2000	
Cr	52	3	72	0.045	ppb	0.045	410.21	1759	5000	
Mn	55	3	72	1.893	ppb	1.893	9.80	993	10000	
Fe	56	2	72	19.841	ppb	19.841	3.05	49628	10000	
Co	59	3	72	0.175	ppb	0.175	5.61	303	2000	
Ni	60	3	72	1.886	ppb	1.886	14.77	1025	5000	
Cu	63	3	72	0.876	ppb	0.876	11.36	1351	5000	
Zn	66	3	72	326.021	ppb	326.021	1.91	55269	5000	
As	75	3	72	-0.078	ppb	-0.078	-127.45	67	2000	
Se	78	2	72	0.097	ppb	0.097	91.93	10	2000	
Sr	88	3	72	445.011	ppb	445.011	0.65	266799	4000	
Mo	95	3	115	2.516	ppb	2.516	11.66	1426	2000	
Ag	107	3	115	0.006	ppb	0.006	162.46	50	100	
Cd	111	3	115	0.433	ppb	0.433	27.57	137	2000	
Sn	120	3	115	-0.255	ppb	-0.255	-31.11	791	2000	
Sb	121	3	115	0.069	ppb	0.069	27.16	205	1000	
Ba	137	3	115	77.173	ppb	77.173	2.73	22490	5000	
Tl	205	3	193	-0.079	ppb	-0.079	-18.96	485	2000	
(Pb)	206	3	193	0.028	ppb	0.028	84.70	508	100	
(Pb)	207	3	193	0.048	ppb	0.048	98.03	763	100	
Pb	208	3	193	0.068	ppb	0.068	21.64	2536	5000	
Th	232	3	193	-0.224	ppb	-0.224	-27.64	6748	2000	
U	238	3	193	1.964	ppb	1.964	3.58	16119	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4095055	2.81	3936624	104.02	60	120	
Sc (IS)	45	3	HMI He	628648	0.85	609520	103.14	60	120	
Ge Internal standard	72	2	HMI H2	2560618	0.80	2391663	107.06	60	120	
Ge Internal standard	72	3	HMI He	782032	1.67	756863	103.33	60	120	
In Internal Standard	115	3	HMI He	3151672	1.12	2988279	105.47	60	120	
Ir (IS)	193	3	HMI He	7302202	2.10	6996686	104.37	60	120	

Sample Report

Sample Table

Sample Name	280-175085-A-1-A
Data File Name	071SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:14:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-172.28	3	2000	
Na	23	3	45	146112.814	ppb	146112.814	1.88	15860309	400000	
Mg	24	3	45	3001.175	ppb	3001.175	0.43	176957	400000	
Al	27	3	45	61.635	ppb	61.635	7.55	1545	400000	
K	39	3	45	10772.173	ppb	10772.173	1.41	530738	400000	
Ca	40	2	45	21655.638	ppb	21655.638	0.66	12290582	400000	
V	51	3	72	0.805	ppb	0.805	12.44	1301	2000	
Cr	52	3	72	0.268	ppb	0.268	53.12	1961	5000	
Mn	55	3	72	11.805	ppb	11.805	5.95	5257	10000	
Fe	56	2	72	118.001	ppb	118.001	1.82	205445	10000	
Co	59	3	72	0.439	ppb	0.439	8.03	658	2000	
Ni	60	3	72	0.921	ppb	0.921	25.19	680	5000	
Cu	63	3	72	104.589	ppb	104.589	1.76	105986	5000	
Zn	66	3	72	28.825	ppb	28.825	2.59	5250	5000	
As	75	3	72	0.027	ppb	0.027	204.73	80	2000	
Se	78	2	72	0.132	ppb	0.132	67.59	12	2000	
Sr	88	3	72	72.330	ppb	72.330	1.52	44260	4000	
Mo	95	3	115	0.853	ppb	0.853	7.59	511	2000	
Ag	107	3	115	0.018	ppb	0.018	60.36	72	100	
Cd	111	3	115	0.016	ppb	0.016	172.26	22	2000	
Sn	120	3	115	0.336	ppb	0.336	29.03	1293	2000	
Sb	121	3	115	0.050	ppb	0.050	49.08	185	1000	
Ba	137	3	115	16.169	ppb	16.169	2.69	4712	5000	
Tl	205	3	193	-0.075	ppb	-0.075	-25.21	505	2000	
(Pb)	206	3	193	0.264	ppb	0.264	17.09	893	100	
(Pb)	207	3	193	0.228	ppb	0.228	18.28	1023	100	
Pb	208	3	193	0.260	ppb	0.260	12.44	3802	5000	
Th	232	3	193	-0.235	ppb	-0.235	-11.40	6690	2000	
U	238	3	193	0.055	ppb	0.055	42.71	2716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4133216	1.83	3936624	104.99	60	120	
Sc (IS)	45	3	HMI He	630304	1.17	609520	103.41	60	120	
Ge Internal standard	72	2	HMI H2	2545654	0.61	2391663	106.44	60	120	
Ge Internal standard	72	3	HMI He	794348	1.75	756863	104.95	60	120	
In Internal Standard	115	3	HMI He	3098695	2.57	2988279	103.69	60	120	
Ir (IS)	193	3	HMI He	7312487	3.49	6996686	104.51	60	120	

Sample Report

Sample Table

Sample Name	280-175085-A-2-A
Data File Name	072SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:16:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.040	ppb	-0.040	-375.50	3	2000	
Na	23	3	45	86364.653	ppb	86364.653	2.88	9423269	400000	
Mg	24	3	45	5403.261	ppb	5403.261	2.65	319275	400000	
Al	27	3	45	73.564	ppb	73.564	8.25	1825	400000	
K	39	3	45	6469.492	ppb	6469.492	1.06	331484	400000	
Ca	40	2	45	26360.069	ppb	26360.069	0.74	14767077	400000	
V	51	3	72	1.308	ppb	1.308	12.23	1643	2000	
Cr	52	3	72	0.616	ppb	0.616	7.52	2262	5000	
Mn	55	3	72	10.986	ppb	10.986	3.39	4973	10000	
Fe	56	2	72	227.709	ppb	227.709	2.83	380573	10000	
Co	59	3	72	0.384	ppb	0.384	3.77	593	2000	
Ni	60	3	72	0.768	ppb	0.768	8.10	631	5000	
Cu	63	3	72	61.758	ppb	61.758	1.26	63626	5000	
Zn	66	3	72	45.454	ppb	45.454	1.76	8207	5000	
As	75	3	72	0.282	ppb	0.282	79.85	112	2000	
Se	78	2	72	0.325	ppb	0.325	66.16	23	2000	
Sr	88	3	72	123.933	ppb	123.933	1.67	76668	4000	
Mo	95	3	115	2.739	ppb	2.739	7.18	1528	2000	
Ag	107	3	115	0.037	ppb	0.037	20.97	107	100	
Cd	111	3	115	0.022	ppb	0.022	131.19	23	2000	
Sn	120	3	115	0.520	ppb	0.520	20.40	1458	2000	
Sb	121	3	115	0.104	ppb	0.104	17.87	233	1000	
Ba	137	3	115	39.146	ppb	39.146	4.67	11308	5000	
Tl	205	3	193	-0.085	ppb	-0.085	-16.91	463	2000	
(Pb)	206	3	193	0.264	ppb	0.264	5.58	903	100	
(Pb)	207	3	193	0.292	ppb	0.292	8.30	1128	100	
Pb	208	3	193	0.260	ppb	0.260	1.57	3845	5000	
Th	232	3	193	-0.231	ppb	-0.231	-27.95	6787	2000	
U	238	3	193	0.217	ppb	0.217	10.55	3907	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4081205	1.43	3936624	103.67	60	120	
Sc (IS)	45	3	HMI He	632996	0.66	609520	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2550903	2.21	2391663	106.66	60	120	
Ge Internal standard	72	3	HMI He	804919	0.86	756863	106.35	60	120	
In Internal Standard	115	3	HMI He	3110547	1.72	2988279	104.09	60	120	
Ir (IS)	193	3	HMI He	7395703	0.68	6996686	105.70	60	120	

Sample Report

Sample Table

Sample Name	280-172265-A-10-E
Data File Name	073SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:18:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.045	ppb	-0.045	-157.81	3	2000	
Na	23	3	45	15386.183	ppb	15386.183	0.40	1691612	400000	
Mg	24	3	45	16994.244	ppb	16994.244	1.50	998198	400000	
Al	27	3	45	7.079	ppb	7.079	19.55	294	400000	
K	39	3	45	4899.121	ppb	4899.121	0.70	256810	400000	
Ca	40	2	45	48022.189	ppb	48022.189	1.54	27024479	400000	
V	51	3	72	29.742	ppb	29.742	0.55	19742	2000	
Cr	52	3	72	15.029	ppb	15.029	2.93	13508	5000	
Mn	55	3	72	1.844	ppb	1.844	15.70	995	10000	
Fe	56	2	72	73.940	ppb	73.940	2.65	137637	10000	
Co	59	3	72	0.161	ppb	0.161	11.86	292	2000	
Ni	60	3	72	6.369	ppb	6.369	2.78	2736	5000	
Cu	63	3	72	0.743	ppb	0.743	6.35	1246	5000	
Zn	66	3	72	1.866	ppb	1.866	7.66	638	5000	
As	75	3	72	1.138	ppb	1.138	21.89	212	2000	
Se	78	2	72	2.851	ppb	2.851	4.22	174	2000	
Sr	88	3	72	231.022	ppb	231.022	0.87	141623	4000	
Mo	95	3	115	1.585	ppb	1.585	15.57	926	2000	
Ag	107	3	115	0.029	ppb	0.029	44.66	95	100	
Cd	111	3	115	-0.028	ppb	-0.028	-65.32	10	2000	
Sn	120	3	115	-0.273	ppb	-0.273	-9.40	781	2000	
Sb	121	3	115	0.013	ppb	0.013	133.20	157	1000	
Ba	137	3	115	85.730	ppb	85.730	1.50	25155	5000	
Tl	205	3	193	-0.074	ppb	-0.074	-12.50	505	2000	
(Pb)	206	3	193	0.092	ppb	0.092	7.01	605	100	
(Pb)	207	3	193	0.035	ppb	0.035	51.84	735	100	
Pb	208	3	193	0.106	ppb	0.106	20.90	2750	5000	
Th	232	3	193	-0.280	ppb	-0.280	-7.55	6295	2000	
U	238	3	193	0.959	ppb	0.959	3.73	8952	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4103504	2.88	3936624	104.24	60	120	
Sc (IS)	45	3	HMI He	630261	0.41	609520	103.40	60	120	
Ge Internal standard	72	2	HMI H2	2589010	2.80	2391663	108.25	60	120	
Ge Internal standard	72	3	HMI He	798924	0.78	756863	105.56	60	120	
In Internal Standard	115	3	HMI He	3174264	0.17	2988279	106.22	60	120	
Ir (IS)	193	3	HMI He	7210691	0.29	6996686	103.06	60	120	

Sample Report

Sample Table

Sample Name	280-172265-A-11-E
Data File Name	074SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:20:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-82.47	2	2000	
Na	23	3	45	87.679	ppb	87.679	3.83	33908	400000	
Mg	24	3	45	2.683	ppb	2.683	47.93	951	400000	
Al	27	3	45	5.199	ppb	5.199	45.71	250	400000	
K	39	3	45	-20.722	ppb	-20.722	-94.30	27344	400000	
Ca	40	2	45	9.727	ppb	9.727	20.96	33373	400000	
V	51	3	72	0.496	ppb	0.496	30.30	1093	2000	
Cr	52	3	72	0.097	ppb	0.097	93.84	1806	5000	
Mn	55	3	72	0.247	ppb	0.247	57.00	300	10000	
Fe	56	2	72	7.255	ppb	7.255	13.05	29096	10000	
Co	59	3	72	-0.007	ppb	-0.007	-90.71	65	2000	
Ni	60	3	72	-0.311	ppb	-0.311	-20.71	217	5000	
Cu	63	3	72	0.085	ppb	0.085	90.80	568	5000	
Zn	66	3	72	0.467	ppb	0.467	41.31	390	5000	
As	75	3	72	-0.138	ppb	-0.138	-60.96	60	2000	
Se	78	2	72	0.030	ppb	0.030	223.59	6	2000	
Sr	88	3	72	0.049	ppb	0.049	133.64	287	4000	
Mo	95	3	115	-0.008	ppb	-0.008	-320.10	50	2000	
Ag	107	3	115	0.022	ppb	0.022	57.69	80	100	
Cd	111	3	115	-0.009	ppb	-0.009	-205.76	15	2000	
Sn	120	3	115	-0.333	ppb	-0.333	-6.52	721	2000	
Sb	121	3	115	-0.004	ppb	-0.004	-290.51	140	1000	
Ba	137	3	115	0.029	ppb	0.029	248.15	112	5000	
Tl	205	3	193	-0.075	ppb	-0.075	-2.48	508	2000	
(Pb)	206	3	193	-0.031	ppb	-0.031	-91.69	413	100	
(Pb)	207	3	193	-0.081	ppb	-0.081	-24.34	580	100	
Pb	208	3	193	-0.040	ppb	-0.040	-18.41	1832	5000	
Th	232	3	193	-0.306	ppb	-0.306	-10.53	6232	2000	
U	238	3	193	0.010	ppb	0.010	83.36	2414	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4119352	0.72	3936624	104.64	60	120	
Sc (IS)	45	3	HMI He	630419	1.38	609520	103.43	60	120	
Ge Internal standard	72	2	HMI H2	2526507	0.83	2391663	105.64	60	120	
Ge Internal standard	72	3	HMI He	784452	0.40	756863	103.65	60	120	
In Internal Standard	115	3	HMI He	3145842	2.03	2988279	105.27	60	120	
Ir (IS)	193	3	HMI He	7333844	1.46	6996686	104.82	60	120	

Sample Report

Sample Table

Sample Name	280-175043-K-1-B
Data File Name	075SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:22:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	-29779.62	5	2000	
Na	23	3	45	990455.993	ppb	990455.993	0.42	107103825	400000	
Mg	24	3	45	100535.661	ppb	100535.661	1.30	5887762	400000	
Al	27	3	45	87.317	ppb	87.317	9.68	2129	400000	
K	39	3	45	235508.282	ppb	235508.282	0.66	10988082	400000	
Ca	40	2	45	81432.970	ppb	81432.970	1.76	45568270	400000	
V	51	3	72	33.626	ppb	33.626	2.55	21728	2000	
Cr	52	3	72	53.614	ppb	53.614	1.15	42712	5000	
Mn	55	3	72	214.448	ppb	214.448	1.30	90654	10000	
Fe	56	2	72	2246.324	ppb	2246.324	2.79	3499945	10000	
Co	59	3	72	18.865	ppb	18.865	1.77	24745	2000	
Ni	60	3	72	105.062	ppb	105.062	1.45	39017	5000	
Cu	63	3	72	2.765	ppb	2.765	2.95	3225	5000	
Zn	66	3	72	9.783	ppb	9.783	4.71	1958	5000	
As	75	3	72	51.221	ppb	51.221	2.40	5982	2000	
Se	78	2	72	0.687	ppb	0.687	23.70	43	2000	
Sr	88	3	72	623.088	ppb	623.088	2.19	373150	4000	
Mo	95	3	115	2.895	ppb	2.895	7.30	1578	2000	
Ag	107	3	115	0.014	ppb	0.014	85.11	63	100	
Cd	111	3	115	-0.039	ppb	-0.039	-75.11	7	2000	
Sn	120	3	115	6.888	ppb	6.888	0.92	6868	2000	
Sb	121	3	115	5.162	ppb	5.162	2.24	4532	1000	
Ba	137	3	115	496.311	ppb	496.311	2.55	139091	5000	
Tl	205	3	193	-0.094	ppb	-0.094	-13.14	405	2000	
(Pb)	206	3	193	0.159	ppb	0.159	8.69	705	100	
(Pb)	207	3	193	0.127	ppb	0.127	47.79	856	100	
Pb	208	3	193	0.176	ppb	0.176	21.16	3170	5000	
Th	232	3	193	-0.294	ppb	-0.294	-4.30	6138	2000	
U	238	3	193	0.120	ppb	0.120	5.27	3102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4082225	0.33	3936624	103.70	60	120	
Sc (IS)	45	3	HMI He	628835	0.69	609520	103.17	60	120	
Ge Internal standard	72	2	HMI H2	2481977	1.10	2391663	103.78	60	120	
Ge Internal standard	72	3	HMI He	781459	0.97	756863	103.25	60	120	
In Internal Standard	115	3	HMI He	3042778	1.11	2988279	101.82	60	120	
Ir (IS)	193	3	HMI He	7131823	0.66	6996686	101.93	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	076_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:24:00-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.765	ppb	2.651	1928	50	95.5	90	110	
Na	23	3	45	47558.077	ppb	2.299	5218634	51000	93.3	90	110	
Mg	24	3	45	10088.336	ppb	0.729	597553	11000	91.7	90	110	
Al	27	3	45	1001.022	ppb	2.711	23263	1000	100.1	90	110	
K	39	3	45	10408.751	ppb	1.440	517799	11000	94.6	90	110	
Ca	40	2	45	10426.970	ppb	2.580	5797972	11000	94.8	90	110	
V	51	3	72	51.884	ppb	0.939	32214	50	103.8	90	110	
Cr	52	3	72	53.712	ppb	0.751	41635	50	107.4	90	110	
Mn	55	3	72	52.305	ppb	0.702	21659	50	104.6	90	110	
Fe	56	2	72	1047.478	ppb	2.782	1615272	1000	104.7	90	110	
Co	59	3	72	52.166	ppb	1.782	66460	50	104.3	90	110	
Ni	60	3	72	49.854	ppb	1.195	18186	50	99.7	90	110	
Cu	63	3	72	52.384	ppb	2.170	51060	50	104.8	90	110	
Zn	66	3	72	52.489	ppb	4.492	8905	50	105.0	90	110	
As	75	3	72	54.038	ppb	3.273	6137	50	108.1	90	110	
Se	78	2	72	52.714	ppb	3.364	2965	50	105.4	90	110	
Sr	88	3	72	104.997	ppb	2.050	61401	100	105.0	90	110	
Mo	95	3	115	49.397	ppb	0.254	26865	50	98.8	90	110	
Ag	107	3	115	49.821	ppb	1.283	93424	50	99.6	90	110	
Cd	111	3	115	50.160	ppb	1.513	13747	50	100.3	90	110	
Sn	120	3	115	49.056	ppb	1.686	44208	50	98.1	90	110	
Sb	121	3	115	49.701	ppb	1.957	43713	50	99.4	90	110	
Ba	137	3	115	50.657	ppb	2.026	14723	50	101.3	90	110	
Tl	205	3	193	50.355	ppb	2.221	235595	50	100.7	90	110	
(Pb)	206	3	193	50.981	ppb	2.537	79703	50	102.0	90	110	
(Pb)	207	3	193	49.274	ppb	2.022	68470	50	98.5	90	110	
Pb	208	3	193	50.656	ppb	1.881	320179	50	101.3	90	110	
Th	232	3	193	48.973	ppb	0.585	319020	50	97.9	90	110	
U	238	3	193	51.381	ppb	3.278	347030	50	102.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4041074	2.13	3936624	102.65	60	120	
Sc (IS)	45	3	HMI He	635192	0.51	609520	104.21	60	120	
Ge Internal standard	72	2	HMI H2	2442602	0.98	2391663	102.13	60	120	
Ge Internal standard	72	3	HMI He	760399	0.65	756863	100.47	60	120	
In Internal Standard	115	3	HMI He	3135592	1.38	2988279	104.93	60	120	
Ir (IS)	193	3	HMI He	6978490	1.07	6996686	99.74	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	077_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:25:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.079	ppb	88.0	8	0.5	
Na	23	3	45	111.387	ppb	3.2	36604	25	>RL
Mg	24	3	45	1.823	ppb	78.8	904	25	
Al	27	3	45	-2.250	ppb	-51.4	80	15	
K	39	3	45	0.493	ppb	2999.9	28427	50	
V	51	3	72	1.107	ppb	6.8	1469	1	>RL
Cr	52	3	72	0.061	ppb	25.1	1773	1	
Mn	55	3	72	0.052	ppb	74.3	217	0.5	
Co	59	3	72	-0.016	ppb	-111.2	53	0.5	
Ni	60	3	72	-0.078	ppb	-74.1	302	1	
Cu	63	3	72	0.144	ppb	15.5	625	1	
Zn	66	3	72	0.031	ppb	553.7	315	5	
As	75	3	72	0.007	ppb	2168.2	77	1	
Se	78	2	72	0.007	ppb	1140.3	5	1	
Sr	88	3	72	-0.077	ppb	-117.0	210	0.5	
Mo	95	3	115	0.015	ppb	159.1	62	0.5	
Ag	107	3	115	0.018	ppb	31.3	72	1	
Cd	111	3	115	-0.008	ppb	-581.4	15	0.5	
Sn	120	3	115	-0.039	ppb	-35.1	968	1	
Sb	121	3	115	-0.004	ppb	-465.8	138	0.6	
Ba	137	3	115	-0.071	ppb	-51.2	82	0.5	
Tl	205	3	193	-0.066	ppb	-21.0	551	0.1	
(Pb)	206	3	193	-0.076	ppb	-13.0	340	1	
(Pb)	207	3	193	-0.084	ppb	-37.3	575	1	
Pb	208	3	193	-0.056	ppb	-22.5	1726	0.5	
Th	232	3	193	1.455	ppb	8.3	17999	1	>RL
U	238	3	193	-0.004	ppb	-481.6	2312	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4194282	1.34	3936624	106.55	60	120	
Sc (IS)	45	3	HMI He	632580	0.80	609520	103.78	60	120	
Ge Internal standard	72	2	HMI H2	2538337	1.22	2391663	106.13	60	120	
Ge Internal standard	72	3	HMI He	781688	0.89	756863	103.28	60	120	
In Internal Standard	115	3	HMI He	3102611	0.15	2988279	103.83	60	120	
Ir (IS)	193	3	HMI He	7335342	1.16	6996686	104.84	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A
Data File Name	078SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:27:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	-299.90	3	2000	
Na	23	3	45	7561.313	ppb	7561.313	0.16	862619	400000	
Mg	24	3	45	40329.121	ppb	40329.121	1.94	2420903	400000	
Al	27	3	45	7.214	ppb	7.214	45.26	304	400000	
K	39	3	45	849.273	ppb	849.273	3.24	69434	400000	
Ca	40	2	45	118938.970	ppb	118938.970	2.59	68713851	400000	
V	51	3	72	0.801	ppb	0.801	11.13	1304	2000	
Cr	52	3	72	-0.025	ppb	-0.025	-635.43	1741	5000	
Mn	55	3	72	46.144	ppb	46.144	0.71	20056	10000	
Fe	56	2	72	769.713	ppb	769.713	1.20	1242903	10000	
Co	59	3	72	0.027	ppb	0.027	46.11	112	2000	
Ni	60	3	72	-0.165	ppb	-0.165	-43.53	275	5000	
Cu	63	3	72	0.525	ppb	0.525	4.06	1023	5000	
Zn	66	3	72	0.935	ppb	0.935	35.81	476	5000	
As	75	3	72	1.001	ppb	1.001	5.31	195	2000	
Se	78	2	72	0.087	ppb	0.087	99.74	9	2000	
Sr	88	3	72	135.776	ppb	135.776	0.69	83165	4000	
Mo	95	3	115	0.358	ppb	0.358	5.15	255	2000	
Ag	107	3	115	0.011	ppb	0.011	106.62	62	100	
Cd	111	3	115	-0.040	ppb	-0.040	-68.15	7	2000	
Sn	120	3	115	-0.218	ppb	-0.218	-32.56	841	2000	
Sb	121	3	115	-0.027	ppb	-0.027	-83.29	123	1000	
Ba	137	3	115	140.527	ppb	140.527	0.21	41700	5000	
Tl	205	3	193	-0.089	ppb	-0.089	-7.23	441	2000	
(Pb)	206	3	193	0.037	ppb	0.037	28.79	528	100	
(Pb)	207	3	193	0.013	ppb	0.013	298.52	720	100	
Pb	208	3	193	0.026	ppb	0.026	57.04	2286	5000	
Th	232	3	193	0.112	ppb	0.112	54.16	9092	2000	
U	238	3	193	0.197	ppb	0.197	13.48	3754	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4216773	2.13	3936624	107.12	60	120	
Sc (IS)	45	3	HMI He	644371	0.37	609520	105.72	60	120	
Ge Internal standard	72	2	HMI H2	2547707	0.60	2391663	106.52	60	120	
Ge Internal standard	72	3	HMI He	797163	0.64	756863	105.32	60	120	
In Internal Standard	115	3	HMI He	3215367	0.22	2988279	107.60	60	120	
Ir (IS)	193	3	HMI He	7385929	1.62	6996686	105.56	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-Asd@5
Data File Name	079SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:29:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.079	ppb	0.079	322.81	8	2000	
Na	23	3	45	1513.165	ppb	1513.165	2.40	190909	400000	
Mg	24	3	45	8154.585	ppb	8154.585	2.30	485851	400000	
Al	27	3	45	1.025	ppb	1.025	152.96	157	400000	
K	39	3	45	172.163	ppb	172.163	13.09	36822	400000	
Ca	40	2	45	24313.736	ppb	24313.736	3.44	13978654	400000	
V	51	3	72	0.885	ppb	0.885	5.94	1359	2000	
Cr	52	3	72	0.133	ppb	0.133	168.26	1866	5000	
Mn	55	3	72	10.681	ppb	10.681	2.57	4802	10000	
Fe	56	2	72	156.111	ppb	156.111	1.25	265520	10000	
Co	59	3	72	-0.004	ppb	-0.004	-246.59	70	2000	
Ni	60	3	72	0.002	ppb	0.002	6612.82	338	5000	
Cu	63	3	72	0.127	ppb	0.127	53.73	621	5000	
Zn	66	3	72	2.645	ppb	2.645	17.53	771	5000	
As	75	3	72	0.107	ppb	0.107	100.55	90	2000	
Se	78	2	72	0.064	ppb	0.064	50.99	8	2000	
Sr	88	3	72	26.932	ppb	26.932	2.02	16727	4000	
Mo	95	3	115	0.085	ppb	0.085	70.65	102	2000	
Ag	107	3	115	0.014	ppb	0.014	51.78	65	100	
Cd	111	3	115	-0.022	ppb	-0.022	-46.40	12	2000	
Sn	120	3	115	-0.115	ppb	-0.115	-26.94	920	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-207.51	128	1000	
Ba	137	3	115	29.054	ppb	29.054	1.44	8570	5000	
Tl	205	3	193	-0.080	ppb	-0.080	-7.01	486	2000	
(Pb)	206	3	193	0.356	ppb	0.356	17.74	1051	100	
(Pb)	207	3	193	0.315	ppb	0.315	13.81	1158	100	
Pb	208	3	193	0.326	ppb	0.326	10.11	4275	5000	
Th	232	3	193	0.022	ppb	0.022	454.83	8464	2000	
U	238	3	193	0.057	ppb	0.057	11.05	2756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4189858	2.16	3936624	106.43	60	120	
Sc (IS)	45	3	HMI He	638799	0.84	609520	104.80	60	120	
Ge Internal standard	72	2	HMI H2	2540139	1.65	2391663	106.21	60	120	
Ge Internal standard	72	3	HMI He	798243	0.58	756863	105.47	60	120	
In Internal Standard	115	3	HMI He	3165737	1.08	2988279	105.94	60	120	
Ir (IS)	193	3	HMI He	7372374	1.03	6996686	105.37	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-B MS
Data File Name	080SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:31:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.554	ppb	39.554	2.24	1596	2000	
Na	23	3	45	8386.385	ppb	8386.385	0.86	940481	400000	
Mg	24	3	45	41461.765	ppb	41461.765	2.23	2453211	400000	
Al	27	3	45	778.671	ppb	778.671	2.17	18123	400000	
K	39	3	45	1623.449	ppb	1623.449	2.57	104834	400000	
Ca	40	2	45	123859.994	ppb	123859.994	1.84	71365093	400000	
V	51	3	72	39.994	ppb	39.994	2.43	26300	2000	
Cr	52	3	72	40.037	ppb	40.037	1.49	33088	5000	
Mn	55	3	72	85.352	ppb	85.352	1.90	37046	10000	
Fe	56	2	72	1584.685	ppb	1584.685	3.83	2581798	10000	
Co	59	3	72	39.321	ppb	39.321	1.05	52707	2000	
Ni	60	3	72	38.342	ppb	38.342	2.37	14787	5000	
Cu	63	3	72	40.410	ppb	40.410	2.02	41535	5000	
Zn	66	3	72	40.653	ppb	40.653	5.10	7325	5000	
As	75	3	72	39.698	ppb	39.698	5.26	4760	2000	
Se	78	2	72	35.788	ppb	35.788	8.04	2134	2000	
Sr	88	3	72	214.714	ppb	214.714	1.40	131784	4000	
Mo	95	3	115	40.160	ppb	40.160	5.17	21867	2000	
Ag	107	3	115	39.504	ppb	39.504	3.07	74165	100	
Cd	111	3	115	39.110	ppb	39.110	2.80	10741	2000	
Sn	120	3	115	37.936	ppb	37.936	1.02	34464	2000	
Sb	121	3	115	39.924	ppb	39.924	0.94	35192	1000	
Ba	137	3	115	185.517	ppb	185.517	2.40	53709	5000	
Tl	205	3	193	38.829	ppb	38.829	2.28	191996	2000	
(Pb)	206	3	193	38.843	ppb	38.843	1.79	64230	100	
(Pb)	207	3	193	38.683	ppb	38.683	2.41	56897	100	
Pb	208	3	193	38.963	ppb	38.963	1.49	260491	5000	
Th	232	3	193	36.509	ppb	36.509	1.69	253179	2000	
U	238	3	193	39.545	ppb	39.545	0.94	282581	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203901	0.52	3936624	106.79	60	120	
Sc (IS)	45	3	HMI He	635206	0.47	609520	104.21	60	120	
Ge Internal standard	72	2	HMI H2	2591517	3.11	2391663	108.36	60	120	
Ge Internal standard	72	3	HMI He	799808	1.20	756863	105.67	60	120	
In Internal Standard	115	3	HMI He	3139843	2.00	2988279	105.07	60	120	
Ir (IS)	193	3	HMI He	7368153	1.79	6996686	105.31	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-C MSD
Data File Name	081SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:33:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.977	ppb	39.977	7.05	1589	2000	
Na	23	3	45	8317.695	ppb	8317.695	0.93	934832	400000	
Mg	24	3	45	40946.968	ppb	40946.968	2.13	2428055	400000	
Al	27	3	45	789.532	ppb	789.532	2.77	18411	400000	
K	39	3	45	1617.651	ppb	1617.651	0.64	104780	400000	
Ca	40	2	45	118837.640	ppb	118837.640	0.99	67859249	400000	
V	51	3	72	40.537	ppb	40.537	0.52	26485	2000	
Cr	52	3	72	41.268	ppb	41.268	1.19	33846	5000	
Mn	55	3	72	86.893	ppb	86.893	2.99	37478	10000	
Fe	56	2	72	1593.781	ppb	1593.781	2.44	2553948	10000	
Co	59	3	72	39.824	ppb	39.824	0.70	53055	2000	
Ni	60	3	72	38.531	ppb	38.531	1.68	14771	5000	
Cu	63	3	72	41.204	ppb	41.204	2.04	42083	5000	
Zn	66	3	72	41.253	ppb	41.253	0.45	7385	5000	
As	75	3	72	43.003	ppb	43.003	3.27	5120	2000	
Se	78	2	72	37.270	ppb	37.270	5.09	2186	2000	
Sr	88	3	72	215.359	ppb	215.359	1.24	131370	4000	
Mo	95	3	115	40.323	ppb	40.323	3.78	22074	2000	
Ag	107	3	115	40.222	ppb	40.222	2.12	75905	100	
Cd	111	3	115	40.499	ppb	40.499	2.37	11172	2000	
Sn	120	3	115	38.505	ppb	38.505	3.74	35135	2000	
Sb	121	3	115	40.203	ppb	40.203	2.66	35608	1000	
Ba	137	3	115	181.631	ppb	181.631	1.54	52859	5000	
Tl	205	3	193	39.094	ppb	39.094	1.50	194389	2000	
(Pb)	206	3	193	39.594	ppb	39.594	2.31	65817	100	
(Pb)	207	3	193	38.795	ppb	38.795	3.63	57366	100	
Pb	208	3	193	39.401	ppb	39.401	2.64	264828	5000	
Th	232	3	193	38.926	ppb	38.926	3.11	270837	2000	
U	238	3	193	39.974	ppb	39.974	2.40	287158	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4166195	0.74	3936624	105.83	60	120	
Sc (IS)	45	3	HMI He	636505	0.69	609520	104.43	60	120	
Ge Internal standard	72	2	HMI H2	2548161	2.75	2391663	106.54	60	120	
Ge Internal standard	72	3	HMI He	794896	0.83	756863	105.03	60	120	
In Internal Standard	115	3	HMI He	3155792	1.89	2988279	105.61	60	120	
Ir (IS)	193	3	HMI He	7409515	2.22	6996686	105.90	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A pds
Data File Name	082SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:34:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	96.784	ppb	96.784	2.19	3894	2000	
Na	23	3	45	12833.985	ppb	12833.985	3.53	1410566	400000	
Mg	24	3	45	42483.363	ppb	42483.363	0.41	2486820	400000	
Al	27	3	45	1989.629	ppb	1989.629	0.19	45609	400000	
K	39	3	45	2924.067	ppb	2924.067	0.85	164199	400000	
Ca	40	2	45	120409.525	ppb	120409.525	1.17	68427449	400000	
V	51	3	72	98.167	ppb	98.167	1.51	62585	2000	
Cr	52	3	72	99.444	ppb	99.444	1.54	78555	5000	
Mn	55	3	72	144.043	ppb	144.043	1.45	61590	10000	
Fe	56	2	72	1758.639	ppb	1758.639	2.33	2791698	10000	
Co	59	3	72	97.947	ppb	97.947	2.13	129499	2000	
Ni	60	3	72	96.569	ppb	96.569	2.05	36264	5000	
Cu	63	3	72	100.928	ppb	100.928	0.99	101694	5000	
Zn	66	3	72	199.884	ppb	199.884	1.87	34339	5000	
As	75	3	72	105.685	ppb	105.685	1.07	12388	2000	
Se	78	2	72	104.977	ppb	104.977	1.13	6100	2000	
Sr	88	3	72	233.087	ppb	233.087	0.67	141219	4000	
Mo	95	3	115	98.465	ppb	98.465	1.31	53716	2000	
Ag	107	3	115	26.030	ppb	26.030	1.47	49033	100	
Cd	111	3	115	99.948	ppb	99.948	2.42	27495	2000	
Sn	120	3	115	95.746	ppb	95.746	1.05	85689	2000	
Sb	121	3	115	95.345	ppb	95.345	0.46	84093	1000	
Ba	137	3	115	240.535	ppb	240.535	1.66	69812	5000	
Tl	205	3	193	96.759	ppb	96.759	1.18	475654	2000	
(Pb)	206	3	193	95.105	ppb	95.105	1.07	156080	100	
(Pb)	207	3	193	94.501	ppb	94.501	0.51	137570	100	
Pb	208	3	193	95.258	ppb	95.258	1.06	631817	5000	
Th	232	3	193	104.665	ppb	104.665	1.42	708091	2000	
U	238	3	193	210.006	ppb	210.006	1.77	1485664	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4146474	0.26	3936624	105.33	60	120	
Sc (IS)	45	3	HMI He	628372	0.81	609520	103.09	60	120	
Ge Internal standard	72	2	HMI H2	2525395	1.57	2391663	105.59	60	120	
Ge Internal standard	72	3	HMI He	789596	0.83	756863	104.32	60	120	
In Internal Standard	115	3	HMI He	3148763	1.51	2988279	105.37	60	120	
Ir (IS)	193	3	HMI He	7343874	0.65	6996686	104.96	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-2-A
Data File Name	083SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:36:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-87.03	2	2000	
Na	23	3	45	7606.228	ppb	7606.228	0.05	838016	400000	
Mg	24	3	45	40604.418	ppb	40604.418	0.56	2354122	400000	
Al	27	3	45	5.162	ppb	5.162	27.53	247	400000	
K	39	3	45	854.890	ppb	854.890	3.95	67308	400000	
Ca	40	2	45	121151.707	ppb	121151.707	0.77	68898322	400000	
V	51	3	72	0.619	ppb	0.619	35.13	1164	2000	
Cr	52	3	72	0.183	ppb	0.183	59.19	1864	5000	
Mn	55	3	72	45.770	ppb	45.770	1.28	19492	10000	
Fe	56	2	72	747.360	ppb	747.360	5.58	1202259	10000	
Co	59	3	72	-0.006	ppb	-0.006	-212.98	67	2000	
Ni	60	3	72	0.099	ppb	0.099	30.14	366	5000	
Cu	63	3	72	0.408	ppb	0.408	6.89	886	5000	
Zn	66	3	72	1.230	ppb	1.230	29.51	516	5000	
As	75	3	72	1.238	ppb	1.238	36.45	218	2000	
Se	78	2	72	0.041	ppb	0.041	121.41	7	2000	
Sr	88	3	72	135.636	ppb	135.636	0.10	81396	4000	
Mo	95	3	115	0.438	ppb	0.438	7.60	292	2000	
Ag	107	3	115	0.023	ppb	0.023	23.64	82	100	
Cd	111	3	115	0.028	ppb	0.028	116.24	25	2000	
Sn	120	3	115	0.167	ppb	0.167	50.24	1156	2000	
Sb	121	3	115	0.025	ppb	0.025	182.48	165	1000	
Ba	137	3	115	143.011	ppb	143.011	3.17	41259	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-23.70	608	2000	
(Pb)	206	3	193	-0.002	ppb	-0.002	-277.54	466	100	
(Pb)	207	3	193	-0.006	ppb	-0.006	-564.67	696	100	
Pb	208	3	193	0.021	ppb	0.021	54.89	2261	5000	
Th	232	3	193	3.309	ppb	3.309	11.53	30766	2000	
U	238	3	193	0.233	ppb	0.233	7.08	4034	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4149464	0.26	3936624	105.41	60	120	
Sc (IS)	45	3	HMI He	622399	1.32	609520	102.11	60	120	
Ge Internal standard	72	2	HMI H2	2538557	2.27	2391663	106.14	60	120	
Ge Internal standard	72	3	HMI He	781039	0.28	756863	103.19	60	120	
In Internal Standard	115	3	HMI He	3127086	1.29	2988279	104.65	60	120	
Ir (IS)	193	3	HMI He	7424770	2.06	6996686	106.12	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-3-A
Data File Name	084SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:38:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.003	ppb	-0.003	-3605.37	5	2000	
Na	23	3	45	2455.336	ppb	2455.336	2.75	288363	400000	
Mg	24	3	45	32918.539	ppb	32918.539	3.41	1918992	400000	
Al	27	3	45	263.002	ppb	263.002	11.26	6118	400000	
K	39	3	45	1048.369	ppb	1048.369	5.99	76642	400000	
Ca	40	2	45	159367.867	ppb	159367.867	1.27	91231088	400000	
V	51	3	72	1.020	ppb	1.020	23.94	1429	2000	
Cr	52	3	72	0.445	ppb	0.445	45.27	2087	5000	
Mn	55	3	72	78.669	ppb	78.669	2.60	33742	10000	
Fe	56	2	72	241.368	ppb	241.368	0.46	398101	10000	
Co	59	3	72	0.493	ppb	0.493	5.97	726	2000	
Ni	60	3	72	0.700	ppb	0.700	17.08	595	5000	
Cu	63	3	72	0.714	ppb	0.714	7.91	1203	5000	
Zn	66	3	72	3.365	ppb	3.365	8.72	886	5000	
As	75	3	72	0.128	ppb	0.128	231.37	92	2000	
Se	78	2	72	0.478	ppb	0.478	30.29	32	2000	
Sr	88	3	72	262.961	ppb	262.961	0.65	159367	4000	
Mo	95	3	115	0.228	ppb	0.228	46.85	177	2000	
Ag	107	3	115	0.020	ppb	0.020	49.61	75	100	
Cd	111	3	115	0.004	ppb	0.004	573.24	18	2000	
Sn	120	3	115	0.041	ppb	0.041	166.12	1040	2000	
Sb	121	3	115	0.062	ppb	0.062	31.02	197	1000	
Ba	137	3	115	100.162	ppb	100.162	0.30	28784	5000	
Tl	205	3	193	-0.066	ppb	-0.066	-14.45	555	2000	
(Pb)	206	3	193	0.489	ppb	0.489	2.12	1266	100	
(Pb)	207	3	193	0.412	ppb	0.412	9.85	1294	100	
Pb	208	3	193	0.466	ppb	0.466	4.89	5183	5000	
Th	232	3	193	1.072	ppb	1.072	16.97	15454	2000	
U	238	3	193	0.679	ppb	0.679	8.21	7135	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4177772	1.55	3936624	106.13	60	120	
Sc (IS)	45	3	HMI He	625837	1.26	609520	102.68	60	120	
Ge Internal standard	72	2	HMI H2	2523170	1.24	2391663	105.50	60	120	
Ge Internal standard	72	3	HMI He	789997	0.88	756863	104.38	60	120	
In Internal Standard	115	3	HMI He	3110689	0.49	2988279	104.10	60	120	
Ir (IS)	193	3	HMI He	7344623	2.19	6996686	104.97	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-4-A
Data File Name	085SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:40:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	3522.169	ppb	3522.169	0.64	407174	400000	
Mg	24	3	45	43699.303	ppb	43699.303	1.88	2572844	400000	
Al	27	3	45	268.558	ppb	268.558	15.52	6305	400000	
K	39	3	45	2482.221	ppb	2482.221	3.92	144437	400000	
Ca	40	2	45	85755.954	ppb	85755.954	3.44	48547364	400000	
V	51	3	72	1.228	ppb	1.228	15.85	1556	2000	
Cr	52	3	72	0.684	ppb	0.684	22.93	2264	5000	
Mn	55	3	72	12.382	ppb	12.382	8.08	5455	10000	
Fe	56	2	72	942.309	ppb	942.309	3.55	1509200	10000	
Co	59	3	72	0.210	ppb	0.210	34.31	351	2000	
Ni	60	3	72	0.805	ppb	0.805	36.26	631	5000	
Cu	63	3	72	0.740	ppb	0.740	8.53	1224	5000	
Zn	66	3	72	2.600	ppb	2.600	8.58	753	5000	
As	75	3	72	1.008	ppb	1.008	3.21	193	2000	
Se	78	2	72	0.076	ppb	0.076	24.57	9	2000	
Sr	88	3	72	343.361	ppb	343.361	1.04	207238	4000	
Mo	95	3	115	0.349	ppb	0.349	14.89	243	2000	
Ag	107	3	115	0.039	ppb	0.039	12.85	112	100	
Cd	111	3	115	0.028	ppb	0.028	174.34	25	2000	
Sn	120	3	115	-0.035	ppb	-0.035	-499.17	976	2000	
Sb	121	3	115	0.077	ppb	0.077	25.89	210	1000	
Ba	137	3	115	137.245	ppb	137.245	2.94	39559	5000	
Tl	205	3	193	-0.085	ppb	-0.085	-9.45	465	2000	
(Pb)	206	3	193	0.458	ppb	0.458	7.93	1221	100	
(Pb)	207	3	193	0.401	ppb	0.401	4.16	1286	100	
Pb	208	3	193	0.433	ppb	0.433	5.84	4993	5000	
Th	232	3	193	0.426	ppb	0.426	40.44	11215	2000	
U	238	3	193	0.434	ppb	0.434	7.04	5437	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4131934	2.20	3936624	104.96	60	120	
Sc (IS)	45	3	HMI He	632016	1.43	609520	103.69	60	120	
Ge Internal standard	72	2	HMI H2	2534028	0.94	2391663	105.95	60	120	
Ge Internal standard	72	3	HMI He	786996	0.50	756863	103.98	60	120	
In Internal Standard	115	3	HMI He	3123949	2.11	2988279	104.54	60	120	
Ir (IS)	193	3	HMI He	7386971	1.69	6996686	105.58	60	120	

Sample Report

Sample Table

Sample Name	280-175012-J-16-A
Data File Name	086SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:42:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-85.90	2	2000	
Na	23	3	45	4783.589	ppb	4783.589	0.16	547395	400000	
Mg	24	3	45	7717.361	ppb	7717.361	1.16	457632	400000	
Al	27	3	45	8.553	ppb	8.553	35.02	330	400000	
K	39	3	45	1822.448	ppb	1822.448	1.60	114279	400000	
Ca	40	2	45	33719.706	ppb	33719.706	2.23	19008321	400000	
V	51	3	72	0.809	ppb	0.809	17.96	1306	2000	
Cr	52	3	72	0.142	ppb	0.142	98.94	1866	5000	
Mn	55	3	72	1.006	ppb	1.006	6.19	630	10000	
Fe	56	2	72	47.828	ppb	47.828	1.51	94834	10000	
Co	59	3	72	0.030	ppb	0.030	75.62	115	2000	
Ni	60	3	72	-0.065	ppb	-0.065	-196.92	312	5000	
Cu	63	3	72	30.097	ppb	30.097	0.55	30882	5000	
Zn	66	3	72	199.939	ppb	199.939	1.57	34589	5000	
As	75	3	72	-0.031	ppb	-0.031	-1234.07	73	2000	
Se	78	2	72	0.119	ppb	0.119	42.90	11	2000	
Sr	88	3	72	141.155	ppb	141.155	0.79	86222	4000	
Mo	95	3	115	0.158	ppb	0.158	47.66	140	2000	
Ag	107	3	115	0.026	ppb	0.026	75.03	87	100	
Cd	111	3	115	0.028	ppb	0.028	66.32	25	2000	
Sn	120	3	115	-0.127	ppb	-0.127	-38.51	900	2000	
Sb	121	3	115	0.049	ppb	0.049	133.47	187	1000	
Ba	137	3	115	34.244	ppb	34.244	0.27	9977	5000	
Tl	205	3	193	-0.085	ppb	-0.085	-7.60	453	2000	
(Pb)	206	3	193	0.855	ppb	0.855	1.88	1839	100	
(Pb)	207	3	193	0.887	ppb	0.887	1.29	1956	100	
Pb	208	3	193	0.873	ppb	0.873	3.94	7769	5000	
Th	232	3	193	0.159	ppb	0.159	65.99	9222	2000	
U	238	3	193	0.024	ppb	0.024	98.13	2482	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109485	1.44	3936624	104.39	60	120	
Sc (IS)	45	3	HMI He	635667	0.50	609520	104.29	60	120	
Ge Internal standard	72	2	HMI H2	2572134	0.50	2391663	107.55	60	120	
Ge Internal standard	72	3	HMI He	795109	0.50	756863	105.05	60	120	
In Internal Standard	115	3	HMI He	3132373	0.11	2988279	104.82	60	120	
Ir (IS)	193	3	HMI He	7247102	0.55	6996686	103.58	60	120	

Sample Report

Sample Table

Sample Name	280-175031-E-1-A
Data File Name	087SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:43:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	85497.238	ppb	85497.238	0.72	9335003	400000	
Mg	24	3	45	68753.195	ppb	68753.195	1.73	4055768	400000	
Al	27	3	45	6.727	ppb	6.727	49.55	287	400000	
K	39	3	45	4610.960	ppb	4610.960	0.87	244570	400000	
Ca	40	2	45	160927.968	ppb	160927.968	1.35	91810813	400000	
V	51	3	72	1.509	ppb	1.509	4.20	1733	2000	
Cr	52	3	72	0.427	ppb	0.427	24.17	2067	5000	
Mn	55	3	72	181.155	ppb	181.155	0.42	77198	10000	
Fe	56	2	72	11.251	ppb	11.251	5.50	35705	10000	
Co	59	3	72	0.194	ppb	0.194	20.71	330	2000	
Ni	60	3	72	2.340	ppb	2.340	7.41	1201	5000	
Cu	63	3	72	9.575	ppb	9.575	2.40	10060	5000	
Zn	66	3	72	19.517	ppb	19.517	4.16	3625	5000	
As	75	3	72	0.835	ppb	0.835	26.50	173	2000	
Se	78	2	72	0.529	ppb	0.529	18.88	35	2000	
Sr	88	3	72	752.586	ppb	752.586	0.35	454136	4000	
Mo	95	3	115	0.030	ppb	0.030	58.39	70	2000	
Ag	107	3	115	0.199	ppb	0.199	15.39	408	100	
Cd	111	3	115	0.090	ppb	0.090	11.84	42	2000	
Sn	120	3	115	1.705	ppb	1.705	8.93	2494	2000	
Sb	121	3	115	0.074	ppb	0.074	28.26	207	1000	
Ba	137	3	115	279.104	ppb	279.104	1.34	80036	5000	
Tl	205	3	193	-0.071	ppb	-0.071	-20.41	525	2000	
(Pb)	206	3	193	1.107	ppb	1.107	0.43	2249	100	
(Pb)	207	3	193	0.993	ppb	0.993	6.33	2109	100	
Pb	208	3	193	1.097	ppb	1.097	3.33	9237	5000	
Th	232	3	193	0.006	ppb	0.006	1663.15	8219	2000	
U	238	3	193	4.219	ppb	4.219	2.64	31745	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162915	2.89	3936624	105.75	60	120	
Sc (IS)	45	3	HMI He	633388	0.76	609520	103.92	60	120	
Ge Internal standard	72	2	HMI H2	2547754	2.00	2391663	106.53	60	120	
Ge Internal standard	72	3	HMI He	787392	0.16	756863	104.03	60	120	
In Internal Standard	115	3	HMI He	3111511	1.39	2988279	104.12	60	120	
Ir (IS)	193	3	HMI He	7252528	1.10	6996686	103.66	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	088_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:45:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.681	ppb	8.161	1987	50	99.4	90	110	
Na	23	3	45	47437.069	ppb	0.760	5217193	51000	93.0	90	110	
Mg	24	3	45	9986.239	ppb	2.032	592775	11000	90.8	90	110	
Al	27	3	45	974.685	ppb	5.769	22694	1000	97.5	90	110	
K	39	3	45	10385.536	ppb	1.893	517886	11000	94.4	90	110	
Ca	40	2	45	10477.816	ppb	1.225	5898421	11000	95.3	90	110	
V	51	3	72	51.875	ppb	1.349	32615	50	103.7	90	110	
Cr	52	3	72	52.810	ppb	2.107	41474	50	105.6	90	110	
Mn	55	3	72	52.395	ppb	1.186	21970	50	104.8	90	110	
Fe	56	2	72	1059.635	ppb	3.492	1647979	1000	106.0	90	110	
Co	59	3	72	52.189	ppb	2.525	67317	50	104.4	90	110	
Ni	60	3	72	50.343	ppb	2.347	18598	50	100.7	90	110	
Cu	63	3	72	51.809	ppb	2.282	51132	50	103.6	90	110	
Zn	66	3	72	49.745	ppb	1.383	8563	50	99.5	90	110	
As	75	3	72	54.290	ppb	4.927	6240	50	108.6	90	110	
Se	78	2	72	53.226	ppb	3.333	3020	50	106.5	90	110	
Sr	88	3	72	104.588	ppb	1.875	61929	100	104.6	90	110	
Mo	95	3	115	50.065	ppb	1.085	27444	50	100.1	90	110	
Ag	107	3	115	49.611	ppb	1.291	93782	50	99.2	90	110	
Cd	111	3	115	49.768	ppb	2.423	13750	50	99.5	90	110	
Sn	120	3	115	48.720	ppb	1.086	44268	50	97.4	90	110	
Sb	121	3	115	50.245	ppb	1.039	44552	50	100.5	90	110	
Ba	137	3	115	50.724	ppb	1.751	14863	50	101.4	90	110	
Tl	205	3	193	49.715	ppb	1.159	239691	50	99.4	90	110	
(Pb)	206	3	193	49.904	ppb	3.634	80375	50	99.8	90	110	
(Pb)	207	3	193	48.960	ppb	1.875	70108	50	97.9	90	110	
Pb	208	3	193	49.771	ppb	3.047	324095	50	99.5	90	110	
Th	232	3	193	48.813	ppb	1.062	327658	50	97.6	90	110	
U	238	3	193	50.631	ppb	2.741	352386	50	101.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4089736	0.32	3936624	103.89	60	120	
Sc (IS)	45	3	HMI He	636700	1.65	609520	104.46	60	120	
Ge Internal standard	72	2	HMI H2	2464240	1.63	2391663	103.03	60	120	
Ge Internal standard	72	3	HMI He	770063	1.60	756863	101.74	60	120	
In Internal Standard	115	3	HMI He	3160729	0.94	2988279	105.77	60	120	
Ir (IS)	193	3	HMI He	7190979	2.12	6996686	102.78	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	089_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:47:33-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.126	ppb	0.0	0	0.5	
Na	23	3	45	40.545	ppb	10.7	29032	25	>RL
Mg	24	3	45	2.494	ppb	18.5	948	25	
Al	27	3	45	-0.534	ppb	-165.2	120	15	
K	39	3	45	-10.249	ppb	-95.3	28050	50	
V	51	3	72	0.792	ppb	18.2	1273	1	
Cr	52	3	72	0.027	ppb	126.7	1746	1	
Mn	55	3	72	0.160	ppb	76.8	262	0.5	
Co	59	3	72	-0.005	ppb	-218.1	67	0.5	
Ni	60	3	72	-0.010	ppb	-1342.5	327	1	
Cu	63	3	72	-0.022	ppb	-129.3	460	1	
Zn	66	3	72	-0.069	ppb	-440.2	298	5	
As	75	3	72	-0.194	ppb	-68.9	53	1	
Se	78	2	72	0.045	ppb	185.0	7	1	
Sr	88	3	72	-0.033	ppb	-301.6	237	0.5	
Mo	95	3	115	0.004	ppb	531.2	57	0.5	
Ag	107	3	115	0.014	ppb	50.2	65	1	
Cd	111	3	115	-0.021	ppb	-130.8	12	0.5	
Sn	120	3	115	-0.042	ppb	-117.8	981	1	
Sb	121	3	115	0.004	ppb	183.0	148	0.6	
Ba	137	3	115	-0.099	ppb	-63.9	75	0.5	
Tl	205	3	193	-0.076	ppb	-13.1	506	0.1	
(Pb)	206	3	193	-0.054	ppb	-36.6	376	1	
(Pb)	207	3	193	-0.055	ppb	-64.5	618	1	
Pb	208	3	193	-0.040	ppb	-2.1	1834	0.5	
Th	232	3	193	1.563	ppb	16.6	18716	1	>RL
U	238	3	193	0.028	ppb	63.1	2537	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4179894	1.12	3936624	106.18	60	120	
Sc (IS)	45	3	HMI He	635464	1.03	609520	104.26	60	120	
Ge Internal standard	72	2	HMI H2	2486693	1.18	2391663	103.97	60	120	
Ge Internal standard	72	3	HMI He	781251	0.71	756863	103.22	60	120	
In Internal Standard	115	3	HMI He	3154758	0.41	2988279	105.57	60	120	
Ir (IS)	193	3	HMI He	7337461	0.61	6996686	104.87	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608988/1-A
Data File Name	090_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:49:23-06:00
Sample Type	Blank
Dilution	1
Comment	608988 6020b filt
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.001	ppb	-22016.19114	5	0.5
Na	23	3	45	277.175	ppb	5.163222761	54398	25
Mg	24	3	45	2.864	ppb	34.56722668	961	25
Al	27	3	45	5.043	ppb	44.13580395	247	15
K	39	3	45	-17.020	ppb	-137.6620215	27488	50
Ca	40	2	45	28.724	ppb	7.531075469	44826	200
V	51	3	72	0.713	ppb	12.61089963	1229	1
Cr	52	3	72	-0.115	ppb	-141.7976741	1646	1
Mn	55	3	72	0.298	ppb	57.98073513	322	0.5
Fe	56	2	72	4.829	ppb	5.586342572	25058	50
Co	59	3	72	0.007	ppb	223.914722	83	0.5
Ni	60	3	72	0.481	ppb	21.88876384	510	1
Cu	63	3	72	0.051	ppb	101.6606682	535	1
Zn	66	3	72	12.293	ppb	10.54172818	2392	5
As	75	3	72	-0.153	ppb	-69.51952095	58	1
(Se)	78	3	72	0.603	ppb	2.458309925	25	1
Sr	88	3	72	-0.052	ppb	-143.6373535	227	0.5
Mo	95	3	115	-0.027	ppb	-88.87834352	40	0.5
Ag	107	3	115	0.006	ppb	206.0486684	50	1
Cd	111	3	115	-0.004	ppb	-266.2320767	17	0.5
Sn	120	3	115	-0.167	ppb	-73.20502323	876	1
Sb	121	3	115	-0.030	ppb	-118.5547753	118	0.6
Ba	137	3	115	1.121	ppb	10.01685152	431	0.5
Tl	205	3	193	-0.097	ppb	-4.07339559	398	0.1
(Pb)	206	3	193	-0.048	ppb	-33.63512566	383	1
(Pb)	207	3	193	-0.049	ppb	-83.38357006	621	1
Pb	208	3	193	-0.029	ppb	-52.13322609	1896	0.5
Th	232	3	193	0.294	ppb	42.88489074	10182	1
U	238	3	193	0.025	ppb	52.48341714	2501	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4188631	1.70	3936624	106.40	60	120	
Sc (IS)	45	3	HMI He	629851	0.51	609520	103.34	60	120	
Ge Internal standard	72	2	HMI H2	2505057	1.47	2391663	104.74	60	120	
Ge Internal standard	72	3	HMI He	785281	0.42	756863	103.75	60	120	
In Internal Standard	115	3	HMI He	3172686	1.03	2988279	106.17	60	120	
Ir (IS)	193	3	HMI He	7287513	1.64	6996686	104.16	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608988/2-A
Data File Name	091_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:51:13-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608988 6020b filt
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.118	41.118	ppb	2.288	1648	40	102.8	80	120	
Na	23	3	45	987.005	987.005	ppb	1.434	131267	40	2467.5	80	120	>+/-20%
Mg	24	3	45	736.809	736.809	ppb	0.741	44012	40	1842.0	80	120	>+/-20%
Al	27	3	45	785.179	785.179	ppb	2.145	18123	40	1962.9	80	120	>+/-20%
K	39	3	45	777.625	777.625	ppb	4.192	64536	40	1944.1	80	120	>+/-20%
Ca	40	2	45	841.265	841.265	ppb	2.621	517418	40	2103.2	80	120	>+/-20%
V	51	3	72	40.047	40.047	ppb	1.843	25928	40	100.1	80	120	
Cr	52	3	72	40.860	40.860	ppb	1.861	33208	40	102.2	80	120	
Mn	55	3	72	40.951	40.951	ppb	0.180	17602	40	102.4	80	120	
Fe	56	2	72	815.045	815.045	ppb	4.090	1302366	40	2037.6	80	120	>+/-20%
(Fe)	56	3	72	805.357	805.357	ppb	0.195	545134	40	2013.4	80	120	>+/-20%
Co	59	3	72	39.745	39.745	ppb	0.988	52451	40	99.4	80	120	
Ni	60	3	72	38.900	38.900	ppb	1.090	14767	40	97.3	80	120	
Cu	63	3	72	41.065	41.065	ppb	1.739	41547	40	102.7	80	120	
Zn	66	3	72	124.958	124.958	ppb	1.726	21524	40	312.4	80	120	>+/-20%
As	75	3	72	40.185	40.185	ppb	3.364	4743	40	100.5	80	120	
Se	78	2	72	44.197	44.197	ppb	2.479	2570	40	110.5	80	120	
(Se)	78	3	72	43.386	43.386	ppb	10.479	328	40	108.5	80	120	
Sr	88	3	72	81.389	81.389	ppb	0.994	49340	40	203.5	80	120	>+/-20%
Mo	95	3	115	38.750	38.750	ppb	1.382	21189	40	96.9	80	120	
Ag	107	3	115	40.255	40.255	ppb	1.087	75872	40	100.6	80	120	
Cd	111	3	115	39.065	39.065	ppb	1.373	10764	40	97.7	80	120	
Sn	120	3	115	37.054	37.054	ppb	0.329	33809	40	92.6	80	120	
Sb	121	3	115	39.218	39.218	ppb	1.150	34698	40	98.0	80	120	
Ba	137	3	115	42.224	42.224	ppb	1.974	12351	40	105.6	80	120	
Tl	205	3	193	37.858	37.858	ppb	1.253	185748	40	94.6	80	120	
(Pb)	206	3	193	39.483	39.483	ppb	1.164	64756	40	98.7	80	120	
(Pb)	207	3	193	38.891	38.891	ppb	1.341	56750	40	97.2	80	120	
Pb	208	3	193	39.015	39.015	ppb	0.900	258766	40	97.5	80	120	
Th	232	3	193	36.953	36.953	ppb	1.318	254121	40	92.4	80	120	
U	238	3	193	39.601	39.601	ppb	1.174	280704	40	99.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4241607	1.74	3936624	107.75	60	120	
Sc (IS)	45	3	HMI He	629888	0.58	609520	103.34	60	120	
Ge Internal standard	72	2	HMI H2	2525113	3.23	2391663	105.58	60	120	
Ge Internal standard	72	3	HMI He	787381	0.87	756863	104.03	60	120	
In Internal Standard	115	3	HMI He	3150965	0.12	2988279	105.44	60	120	
Ir (IS)	193	3	HMI He	7308413	0.94	6996686	104.46	60	120	

Sample Report

Sample Table

Sample Name	590-20247-A-3-A
Data File Name	092SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:53:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b filt
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-82.89	2	2000	
Na	23	3	45	162886.840	ppb	162886.840	1.65	18002352	400000	
Mg	24	3	45	13829.562	ppb	13829.562	2.20	827431	400000	
Al	27	3	45	193.304	ppb	193.304	3.15	4649	400000	
K	39	3	45	26699.018	ppb	26699.018	1.83	1297106	400000	
Ca	40	2	45	56746.897	ppb	56746.897	1.41	32879863	400000	
V	51	3	72	2.729	ppb	2.729	6.21	2536	2000	
Cr	52	3	72	5.580	ppb	5.580	1.57	6127	5000	
Mn	55	3	72	24.615	ppb	24.615	0.59	10819	10000	
Fe	56	2	72	591.945	ppb	591.945	1.52	963864	10000	
Co	59	3	72	0.698	ppb	0.698	3.49	1010	2000	
Ni	60	3	72	4.336	ppb	4.336	2.70	1971	5000	
Cu	63	3	72	25.250	ppb	25.250	0.61	26122	5000	
Zn	66	3	72	120.067	ppb	120.067	2.98	21004	5000	
As	75	3	72	1.986	ppb	1.986	14.32	312	2000	
Se	78	2	72	0.833	ppb	0.833	14.98	53	2000	
Sr	88	3	72	261.812	ppb	261.812	0.19	160523	4000	
Mo	95	3	115	4.484	ppb	4.484	4.69	2556	2000	
Ag	107	3	115	0.016	ppb	0.016	53.27	70	100	
Cd	111	3	115	0.107	ppb	0.107	55.10	48	2000	
Sn	120	3	115	0.478	ppb	0.478	13.31	1473	2000	
Sb	121	3	115	0.636	ppb	0.636	21.15	720	1000	
Ba	137	3	115	60.797	ppb	60.797	2.80	18132	5000	
Tl	205	3	193	-0.088	ppb	-0.088	-4.78	455	2000	
(Pb)	206	3	193	1.101	ppb	1.101	2.80	2302	100	
(Pb)	207	3	193	1.072	ppb	1.072	2.27	2284	100	
Pb	208	3	193	1.063	ppb	1.063	2.33	9265	5000	
Th	232	3	193	2.241	ppb	2.241	14.47	23624	2000	
U	238	3	193	1.129	ppb	1.129	0.53	10481	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4225965	1.61	3936624	107.35	60	120	
Sc (IS)	45	3	HMI He	641960	1.17	609520	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2558456	2.10	2391663	106.97	60	120	
Ge Internal standard	72	3	HMI He	799190	0.46	756863	105.59	60	120	
In Internal Standard	115	3	HMI He	3222049	2.25	2988279	107.82	60	120	
Ir (IS)	193	3	HMI He	7456997	1.20	6996686	106.58	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	093_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:54:50-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.907	ppb	1.700	1954	50	99.8	90	110	
Na	23	3	45	46120.602	ppb	1.901	4968440	51000	90.4	90	110	
Mg	24	3	45	9922.448	ppb	1.322	576985	11000	90.2	90	110	
Al	27	3	45	993.172	ppb	2.960	22654	1000	99.3	90	110	
K	39	3	45	10265.524	ppb	3.390	501639	11000	93.3	90	110	
Ca	40	2	45	10311.004	ppb	1.317	5760902	11000	93.7	90	110	
V	51	3	72	49.735	ppb	0.470	31178	50	99.5	90	110	
Cr	52	3	72	51.125	ppb	3.075	40048	50	102.2	90	110	
Mn	55	3	72	50.819	ppb	1.448	21231	50	101.6	90	110	
Fe	56	2	72	1038.243	ppb	2.585	1604884	1000	103.8	90	110	
Co	59	3	72	50.224	ppb	1.578	64536	50	100.4	90	110	
Ni	60	3	72	49.097	ppb	0.867	18068	50	98.2	90	110	
Cu	63	3	72	50.301	ppb	2.633	49464	50	100.6	90	110	
Zn	66	3	72	50.554	ppb	0.167	8663	50	101.1	90	110	
As	75	3	72	51.840	ppb	2.655	5940	50	103.7	90	110	
Se	78	2	72	52.743	ppb	0.196	2973	50	105.5	90	110	
Sr	88	3	72	102.274	ppb	1.779	60325	100	102.3	90	110	
Mo	95	3	115	49.083	ppb	0.786	26514	50	98.2	90	110	
Ag	107	3	115	48.661	ppb	2.054	90639	50	97.3	90	110	
Cd	111	3	115	48.589	ppb	3.221	13230	50	97.2	90	110	
Sn	120	3	115	47.794	ppb	1.959	42812	50	95.6	90	110	
Sb	121	3	115	49.820	ppb	1.035	43529	50	99.6	90	110	
Ba	137	3	115	50.136	ppb	1.394	14476	50	100.3	90	110	
Tl	205	3	193	48.532	ppb	2.619	232769	50	97.1	90	110	
(Pb)	206	3	193	48.762	ppb	1.702	78161	50	97.5	90	110	
(Pb)	207	3	193	48.883	ppb	0.924	69629	50	97.8	90	110	
Pb	208	3	193	48.944	ppb	0.948	317162	50	97.9	90	110	
Th	232	3	193	48.218	ppb	1.512	322028	50	96.4	90	110	
U	238	3	193	49.198	ppb	1.490	340729	50	98.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4058604	1.10	3936624	103.10	60	120	
Sc (IS)	45	3	HMI He	623653	1.62	609520	102.32	60	120	
Ge Internal standard	72	2	HMI H2	2447772	0.57	2391663	102.35	60	120	
Ge Internal standard	72	3	HMI He	766940	0.82	756863	101.33	60	120	
In Internal Standard	115	3	HMI He	3114420	0.40	2988279	104.22	60	120	
Ir (IS)	193	3	HMI He	7152029	0.42	6996686	102.22	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	094_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:56:37-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-175.5	3	0.5	
Na	23	3	45	47.964	ppb	18.2	28785	25	>RL
Mg	24	3	45	1.027	ppb	81.7	831	25	
Al	27	3	45	-1.688	ppb	-72.0	90	15	
K	39	3	45	-4.298	ppb	-379.8	27334	50	
V	51	3	72	0.757	ppb	18.9	1214	1	
Cr	52	3	72	-0.035	ppb	-238.0	1649	1	
Mn	55	3	72	-0.018	ppb	-490.1	182	0.5	
Co	59	3	72	-0.007	ppb	-129.1	63	0.5	
Ni	60	3	72	0.031	ppb	345.8	332	1	
Cu	63	3	72	0.030	ppb	230.7	496	1	
Zn	66	3	72	-0.239	ppb	-91.5	262	5	
As	75	3	72	0.029	ppb	334.1	77	1	
Se	78	2	72	0.011	ppb	197.1	5	1	
Sr	88	3	72	-0.030	ppb	-256.4	232	0.5	
Mo	95	3	115	0.049	ppb	96.3	80	0.5	
Ag	107	3	115	0.009	ppb	164.3	55	1	
Cd	111	3	115	-0.026	ppb	-71.7	10	0.5	
Sn	120	3	115	-0.013	ppb	-927.0	985	1	
Sb	121	3	115	-0.016	ppb	-317.3	128	0.6	
Ba	137	3	115	-0.111	ppb	-40.8	70	0.5	
Tl	205	3	193	-0.069	ppb	-32.6	520	0.1	
(Pb)	206	3	193	-0.072	ppb	-37.9	337	1	
(Pb)	207	3	193	-0.063	ppb	-12.1	588	1	
Pb	208	3	193	-0.054	ppb	-21.4	1686	0.5	
Th	232	3	193	1.739	ppb	12.1	19310	1	>RL
U	238	3	193	0.020	ppb	82.8	2412	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4076326	1.42	3936624	103.55	60	120	
Sc (IS)	45	3	HMI He	613088	0.82	609520	100.59	60	120	
Ge Internal standard	72	2	HMI H2	2437541	1.01	2391663	101.92	60	120	
Ge Internal standard	72	3	HMI He	758506	0.72	756863	100.22	60	120	
In Internal Standard	115	3	HMI He	3085971	1.79	2988279	103.27	60	120	
Ir (IS)	193	3	HMI He	7119400	3.15	6996686	101.75	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	095_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T17:58:26-06:00
Sample Type	Blank
Dilution	1
Comment	608984 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.084	ppb	-85.29810963	2	0.5
Na	23	3	45	40.127	ppb	12.75160892	28564	25
Mg	24	3	45	-0.425	ppb	-382.2468311	764	25
Al	27	3	45	1.157	ppb	156.4601325	157	15
K	39	3	45	-19.889	ppb	-114.9460835	27197	50
Ca	40	2	45	4.257	ppb	29.87997565	29848	200
V	51	3	72	0.836	ppb	5.682867746	1279	1
Cr	52	3	72	-0.016	ppb	-52.78139698	1686	1
Mn	55	3	72	0.184	ppb	84.75112884	268	0.5
Fe	56	2	72	4.414	ppb	11.87156484	24085	50
Co	59	3	72	0.002	ppb	1366.584667	75	0.5
Ni	60	3	72	-0.226	ppb	-16.70561547	243	1
Cu	63	3	72	0.033	ppb	40.97504732	506	1
Zn	66	3	72	5.186	ppb	8.901231564	1164	5
As	75	3	72	0.122	ppb	145.3331813	88	1
(Se)	78	3	72	1.401	ppb	52.6846484	30	1
Sr	88	3	72	-0.066	ppb	-34.74179611	213	0.5
Mo	95	3	115	-0.035	ppb	-69.78161744	35	0.5
Ag	107	3	115	0.001	ppb	1397.674608	40	1
Cd	111	3	115	-0.015	ppb	-186.0572267	13	0.5
Sn	120	3	115	0.340	ppb	13.01324535	1308	1
Sb	121	3	115	-0.042	ppb	-40.6443549	107	0.6
Ba	137	3	115	-0.033	ppb	-117.5122285	93	0.5
Tl	205	3	193	-0.087	ppb	-6.842555303	436	0.1
(Pb)	206	3	193	-0.063	ppb	-35.36996248	351	1
(Pb)	207	3	193	-0.075	ppb	-109.0161451	570	1
Pb	208	3	193	-0.055	ppb	-20.8755518	1683	0.5
Th	232	3	193	0.350	ppb	25.42954326	10321	1
U	238	3	193	0.015	ppb	144.7857104	2381	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4059072	1.58	3936624	103.11	60	120	
Sc (IS)	45	3	HMI He	626220	0.52	609520	102.74	60	120	
Ge Internal standard	72	2	HMI H2	2472059	1.06	2391663	103.36	60	120	
Ge Internal standard	72	3	HMI He	769118	0.55	756863	101.62	60	120	
In Internal Standard	115	3	HMI He	3126968	0.41	2988279	104.64	60	120	
Ir (IS)	193	3	HMI He	7132243	2.23	6996686	101.94	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608984/2-A
Data File Name	096_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:00:15-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608984 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.419	39.419	ppb	3.519	1539	40	98.5	80	120	
Na	23	3	45	885.573	885.573	ppb	1.636	118658	40	2213.9	80	120	>+/-20%
Mg	24	3	45	723.660	723.660	ppb	3.153	42657	40	1809.2	80	120	>+/-20%
Al	27	3	45	788.243	788.243	ppb	1.146	17946	40	1970.6	80	120	>+/-20%
K	39	3	45	767.036	767.036	ppb	6.306	63165	40	1917.6	80	120	>+/-20%
Ca	40	2	45	849.056	849.056	ppb	2.986	492018	40	2122.6	80	120	>+/-20%
V	51	3	72	39.281	39.281	ppb	1.147	25012	40	98.2	80	120	
Cr	52	3	72	40.537	40.537	ppb	1.467	32400	40	101.3	80	120	
Mn	55	3	72	41.558	41.558	ppb	3.165	17556	40	103.9	80	120	
Fe	56	2	72	830.416	830.416	ppb	0.788	1293772	40	2076.0	80	120	>+/-20%
(Fe)	56	3	72	803.814	803.814	ppb	0.336	534828	40	2009.5	80	120	>+/-20%
Co	59	3	72	39.954	39.954	ppb	0.438	51827	40	99.9	80	120	
Ni	60	3	72	39.198	39.198	ppb	1.129	14624	40	98.0	80	120	
Cu	63	3	72	41.050	41.050	ppb	1.590	40828	40	102.6	80	120	
Zn	66	3	72	39.183	39.183	ppb	2.697	6845	40	98.0	80	120	
As	75	3	72	40.550	40.550	ppb	1.796	4705	40	101.4	80	120	
Se	78	2	72	42.059	42.059	ppb	3.170	2383	40	105.1	80	120	
(Se)	78	3	72	43.695	43.695	ppb	2.771	325	40	109.2	80	120	
Sr	88	3	72	80.909	80.909	ppb	1.568	48218	40	202.3	80	120	>+/-20%
Mo	95	3	115	38.444	38.444	ppb	1.883	20595	40	96.1	80	120	
Ag	107	3	115	39.916	39.916	ppb	1.484	73706	40	99.8	80	120	
Cd	111	3	115	39.348	39.348	ppb	0.521	10622	40	98.4	80	120	
Sn	120	3	115	37.072	37.072	ppb	1.744	33138	40	92.7	80	120	
Sb	121	3	115	39.102	39.102	ppb	1.325	33894	40	97.8	80	120	
Ba	137	3	115	40.871	40.871	ppb	2.096	11716	40	102.2	80	120	
Tl	205	3	193	38.612	38.612	ppb	1.165	187008	40	96.5	80	120	
(Pb)	206	3	193	39.090	39.090	ppb	2.054	63293	40	97.7	80	120	
(Pb)	207	3	193	38.371	38.371	ppb	2.755	55276	40	95.9	80	120	
Pb	208	3	193	38.672	38.672	ppb	1.834	253215	40	96.7	80	120	
Th	232	3	193	36.131	36.131	ppb	3.042	245430	40	90.3	80	120	
U	238	3	193	38.835	38.835	ppb	2.526	271786	40	97.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997262	0.30	3936624	101.54	60	120	
Sc (IS)	45	3	HMI He	621369	0.37	609520	101.94	60	120	
Ge Internal standard	72	2	HMI H2	2460417	1.94	2391663	102.87	60	120	
Ge Internal standard	72	3	HMI He	773961	0.25	756863	102.26	60	120	
In Internal Standard	115	3	HMI He	3087210	0.77	2988279	103.31	60	120	
Ir (IS)	193	3	HMI He	7216044	1.79	6996686	103.14	60	120	

Sample Report

Sample Table

Sample Name	280-175067-C-1-A
Data File Name	097SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:02:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.001	ppb	0.001	17499.86	5	2000	
Na	23	3	45	151468.658	ppb	151468.658	0.99	16149895	400000	
Mg	24	3	45	40619.339	ppb	40619.339	1.72	2343069	400000	
Al	27	3	45	44.941	ppb	44.941	7.67	1141	400000	
K	39	3	45	10343.325	ppb	10343.325	0.55	501836	400000	
Ca	40	2	45	69462.190	ppb	69462.190	0.85	38973465	400000	
V	51	3	72	1.020	ppb	1.020	15.88	1386	2000	
Cr	52	3	72	0.320	ppb	0.320	61.07	1929	5000	
Mn	55	3	72	61.943	ppb	61.943	1.16	25788	10000	
Fe	56	2	72	75.295	ppb	75.295	1.71	131483	10000	
Co	59	3	72	0.370	ppb	0.370	5.96	546	2000	
Ni	60	3	72	3.091	ppb	3.091	14.55	1438	5000	
Cu	63	3	72	13.656	ppb	13.656	1.35	13748	5000	
Zn	66	3	72	1005.584	ppb	1005.584	1.40	166273	5000	
As	75	3	72	0.790	ppb	0.790	22.82	163	2000	
Se	78	2	72	1.116	ppb	1.116	16.24	67	2000	
Sr	88	3	72	3341.608	ppb	3341.608	2.31	1959329	4000	
Mo	95	3	115	16.492	ppb	16.492	4.11	8960	2000	
Ag	107	3	115	0.024	ppb	0.024	22.55	83	100	
Cd	111	3	115	4.066	ppb	4.066	9.47	1124	2000	
Sn	120	3	115	-0.096	ppb	-0.096	-58.84	923	2000	
Sb	121	3	115	7.892	ppb	7.892	6.36	7027	1000	
Ba	137	3	115	99.129	ppb	99.129	1.78	28572	5000	
Tl	205	3	193	-0.010	ppb	-0.010	-126.75	813	2000	
(Pb)	206	3	193	0.661	ppb	0.661	10.40	1516	100	
(Pb)	207	3	193	0.634	ppb	0.634	9.53	1584	100	
Pb	208	3	193	0.649	ppb	0.649	4.78	6269	5000	
Th	232	3	193	2.215	ppb	2.215	12.26	22663	2000	
U	238	3	193	3.170	ppb	3.170	0.75	24253	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4092203	2.16	3936624	103.95	60	120	
Sc (IS)	45	3	HMI He	619252	0.50	609520	101.60	60	120	
Ge Internal standard	72	2	HMI H2	2433953	1.96	2391663	101.77	60	120	
Ge Internal standard	72	3	HMI He	765540	0.92	756863	101.15	60	120	
In Internal Standard	115	3	HMI He	3119971	0.65	2988279	104.41	60	120	
Ir (IS)	193	3	HMI He	7200862	1.70	6996686	102.92	60	120	

Sample Report

Sample Table

Sample Name	280-175067-C-2-A
Data File Name	098SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:03:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.009	ppb	0.009	29.32	5	2000	
Na	23	3	45	879567.759	ppb	879567.759	0.25	94856412	400000	
Mg	24	3	45	69245.716	ppb	69245.716	1.08	4044365	400000	
Al	27	3	45	57.371	ppb	57.371	16.03	1438	400000	
K	39	3	45	32327.446	ppb	32327.446	0.19	1528514	400000	
Ca	40	2	45	157915.045	ppb	157915.045	2.10	88726228	400000	
V	51	3	72	0.456	ppb	0.456	42.10	1038	2000	
Cr	52	3	72	0.295	ppb	0.295	33.03	1903	5000	
Mn	55	3	72	7.428	ppb	7.428	4.98	3245	10000	
Fe	56	2	72	98.735	ppb	98.735	4.02	165678	10000	
Co	59	3	72	0.205	ppb	0.205	10.89	333	2000	
Ni	60	3	72	0.741	ppb	0.741	20.83	588	5000	
Cu	63	3	72	1.198	ppb	1.198	6.42	1629	5000	
Zn	66	3	72	333.962	ppb	333.962	1.16	55179	5000	
As	75	3	72	13.627	ppb	13.627	2.02	1606	2000	
Se	78	2	72	0.095	ppb	0.095	53.98	9	2000	
Sr	88	3	72	10454.075	ppb	10454.075	1.31	6102670	4000	
Mo	95	3	115	0.703	ppb	0.703	7.74	430	2000	
Ag	107	3	115	0.017	ppb	0.017	109.20	70	100	
Cd	111	3	115	0.991	ppb	0.991	6.23	285	2000	
Sn	120	3	115	-0.089	ppb	-0.089	-110.48	921	2000	
Sb	121	3	115	0.073	ppb	0.073	25.49	205	1000	
Ba	137	3	115	22.053	ppb	22.053	0.28	6378	5000	
Tl	205	3	193	-0.105	ppb	-0.105	-8.70	345	2000	
(Pb)	206	3	193	0.324	ppb	0.324	8.39	945	100	
(Pb)	207	3	193	0.310	ppb	0.310	24.92	1088	100	
Pb	208	3	193	0.331	ppb	0.331	6.79	4068	5000	
Th	232	3	193	0.592	ppb	0.592	35.72	11613	2000	
U	238	3	193	1.392	ppb	1.392	4.51	11546	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4101023	4.25	3936624	104.18	60	120	
Sc (IS)	45	3	HMI He	627118	1.20	609520	102.89	60	120	
Ge Internal standard	72	2	HMI H2	2413944	2.87	2391663	100.93	60	120	
Ge Internal standard	72	3	HMI He	762154	0.60	756863	100.70	60	120	
In Internal Standard	115	3	HMI He	3091856	0.58	2988279	103.47	60	120	
Ir (IS)	193	3	HMI He	6963746	1.66	6996686	99.53	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A
Data File Name	099SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:05:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-82.58	2	2000	
Na	23	3	45	18064.090	ppb	18064.090	1.85	1976160	400000	
Mg	24	3	45	13215.431	ppb	13215.431	1.61	774331	400000	
Al	27	3	45	6.805	ppb	6.805	37.79	287	400000	
K	39	3	45	5943.480	ppb	5943.480	0.31	304670	400000	
Ca	40	2	45	53679.410	ppb	53679.410	1.11	30350096	400000	
V	51	3	72	8.907	ppb	8.907	3.35	6315	2000	
Cr	52	3	72	19.449	ppb	19.449	2.06	16557	5000	
Mn	55	3	72	0.303	ppb	0.303	14.39	322	10000	
Fe	56	2	72	8.120	ppb	8.120	7.73	30939	10000	
Co	59	3	72	0.024	ppb	0.024	16.88	105	2000	
Ni	60	3	72	-0.152	ppb	-0.152	-85.52	273	5000	
Cu	63	3	72	0.312	ppb	0.312	7.79	790	5000	
Zn	66	3	72	1.074	ppb	1.074	20.25	490	5000	
As	75	3	72	1.851	ppb	1.851	14.69	288	2000	
Se	78	2	72	1.995	ppb	1.995	8.62	122	2000	
Sr	88	3	72	283.172	ppb	283.172	0.45	169344	4000	
Mo	95	3	115	1.186	ppb	1.186	11.46	691	2000	
Ag	107	3	115	0.011	ppb	0.011	81.26	58	100	
Cd	111	3	115	-0.039	ppb	-0.039	-26.21	7	2000	
Sn	120	3	115	-0.102	ppb	-0.102	-80.65	915	2000	
Sb	121	3	115	0.212	ppb	0.212	47.14	325	1000	
Ba	137	3	115	48.722	ppb	48.722	2.71	14022	5000	
Tl	205	3	193	-0.095	ppb	-0.095	-5.78	390	2000	
(Pb)	206	3	193	-0.047	ppb	-0.047	-97.95	371	100	
(Pb)	207	3	193	-0.065	ppb	-0.065	-85.74	575	100	
Pb	208	3	193	-0.039	ppb	-0.039	-47.32	1753	5000	
Th	232	3	193	-0.115	ppb	-0.115	-49.49	7162	2000	
U	238	3	193	2.246	ppb	2.246	1.82	17340	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4123693	3.23	3936624	104.75	60	120	
Sc (IS)	45	3	HMI He	628489	0.93	609520	103.11	60	120	
Ge Internal standard	72	2	HMI H2	2565381	0.59	2391663	107.26	60	120	
Ge Internal standard	72	3	HMI He	779611	1.32	756863	103.01	60	120	
In Internal Standard	115	3	HMI He	3104653	1.99	2988279	103.89	60	120	
Ir (IS)	193	3	HMI He	6995900	2.60	6996686	99.99	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-Asd@5
Data File Name	100SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:07:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-85.09	2	2000	
Na	23	3	45	3567.832	ppb	3567.832	1.67	411327	400000	
Mg	24	3	45	2676.096	ppb	2676.096	0.63	158000	400000	
Al	27	3	45	3.141	ppb	3.141	35.87	204	400000	
K	39	3	45	1196.187	ppb	1196.187	2.25	84162	400000	
Ca	40	2	45	10808.632	ppb	10808.632	1.35	6179306	400000	
V	51	3	72	2.348	ppb	2.348	4.48	2304	2000	
Cr	52	3	72	3.852	ppb	3.852	5.07	4798	5000	
Mn	55	3	72	1.572	ppb	1.572	13.21	881	10000	
Fe	56	2	72	5.774	ppb	5.774	7.00	27699	10000	
Co	59	3	72	-0.009	ppb	-0.009	-136.70	63	2000	
Ni	60	3	72	0.010	ppb	0.010	901.43	343	5000	
Cu	63	3	72	0.180	ppb	0.180	33.32	678	5000	
Zn	66	3	72	2.907	ppb	2.907	8.67	821	5000	
As	75	3	72	0.342	ppb	0.342	38.51	118	2000	
Se	78	2	72	0.359	ppb	0.359	16.48	26	2000	
Sr	88	3	72	56.578	ppb	56.578	1.68	35058	4000	
Mo	95	3	115	0.265	ppb	0.265	13.58	200	2000	
Ag	107	3	115	0.023	ppb	0.023	42.44	82	100	
Cd	111	3	115	-0.022	ppb	-0.022	-48.46	12	2000	
Sn	120	3	115	-0.039	ppb	-0.039	-292.05	986	2000	
Sb	121	3	115	0.049	ppb	0.049	44.64	188	1000	
Ba	137	3	115	9.739	ppb	9.739	4.11	2937	5000	
Tl	205	3	193	-0.100	ppb	-0.100	-7.08	378	2000	
(Pb)	206	3	193	0.306	ppb	0.306	8.25	946	100	
(Pb)	207	3	193	0.266	ppb	0.266	16.76	1061	100	
Pb	208	3	193	0.287	ppb	0.287	8.16	3918	5000	
Th	232	3	193	-0.163	ppb	-0.163	-45.57	7052	2000	
U	238	3	193	0.447	ppb	0.447	1.75	5389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4153489	2.33	3936624	105.51	60	120	
Sc (IS)	45	3	HMI He	630813	0.87	609520	103.49	60	120	
Ge Internal standard	72	2	HMI H2	2614048	1.92	2391663	109.30	60	120	
Ge Internal standard	72	3	HMI He	802957	0.46	756863	106.09	60	120	
In Internal Standard	115	3	HMI He	3161208	1.05	2988279	105.79	60	120	
Ir (IS)	193	3	HMI He	7195674	0.92	6996686	102.84	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-B MS
Data File Name	101SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:09:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.482	ppb	41.482	6.63	1688	2000	
Na	23	3	45	19334.124	ppb	19334.124	1.07	2143758	400000	
Mg	24	3	45	14974.241	ppb	14974.241	1.43	889737	400000	
Al	27	3	45	767.052	ppb	767.052	2.38	17919	400000	
K	39	3	45	6973.304	ppb	6973.304	0.97	357623	400000	
Ca	40	2	45	56976.183	ppb	56976.183	0.58	32353915	400000	
V	51	3	72	47.639	ppb	47.639	0.66	31860	2000	
Cr	52	3	72	57.843	ppb	57.843	0.67	48055	5000	
Mn	55	3	72	39.182	ppb	39.182	2.44	17492	10000	
Fe	56	2	72	771.194	ppb	771.194	2.88	1293242	10000	
Co	59	3	72	37.997	ppb	37.997	2.04	52053	2000	
Ni	60	3	72	37.178	ppb	37.178	0.64	14665	5000	
Cu	63	3	72	39.101	ppb	39.101	0.94	41094	5000	
Zn	66	3	72	39.169	ppb	39.169	1.77	7227	5000	
As	75	3	72	40.615	ppb	40.615	2.03	4977	2000	
Se	78	2	72	41.600	ppb	41.600	3.41	2536	2000	
Sr	88	3	72	364.209	ppb	364.209	0.66	228271	4000	
Mo	95	3	115	39.626	ppb	39.626	1.07	21643	2000	
Ag	107	3	115	40.114	ppb	40.114	1.49	75513	100	
Cd	111	3	115	39.020	ppb	39.020	0.78	10739	2000	
Sn	120	3	115	38.390	ppb	38.390	1.04	34950	2000	
Sb	121	3	115	38.957	ppb	38.957	0.52	34429	1000	
Ba	137	3	115	90.567	ppb	90.567	1.26	26341	5000	
Tl	205	3	193	38.594	ppb	38.594	1.39	189280	2000	
(Pb)	206	3	193	38.975	ppb	38.975	1.45	63907	100	
(Pb)	207	3	193	38.034	ppb	38.034	1.17	55499	100	
Pb	208	3	193	38.691	ppb	38.691	0.67	256549	5000	
Th	232	3	193	36.371	ppb	36.371	1.25	250168	2000	
U	238	3	193	41.296	ppb	41.296	0.50	292535	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4141485	1.02	3936624	105.20	60	120	
Sc (IS)	45	3	HMI He	637497	0.35	609520	104.59	60	120	
Ge Internal standard	72	2	HMI H2	2646106	1.14	2391663	110.64	60	120	
Ge Internal standard	72	3	HMI He	817346	0.50	756863	107.99	60	120	
In Internal Standard	115	3	HMI He	3147333	0.75	2988279	105.32	60	120	
Ir (IS)	193	3	HMI He	7305965	0.44	6996686	104.42	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-C MSD
Data File Name	102SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:11:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.138	ppb	40.138	3.83	1616	2000	
Na	23	3	45	19584.623	ppb	19584.623	1.56	2170095	400000	
Mg	24	3	45	15082.089	ppb	15082.089	0.76	895691	400000	
Al	27	3	45	777.926	ppb	777.926	2.21	18160	400000	
K	39	3	45	7005.783	ppb	7005.783	1.46	358948	400000	
Ca	40	2	45	57439.541	ppb	57439.541	1.91	32926144	400000	
V	51	3	72	47.370	ppb	47.370	0.38	31727	2000	
Cr	52	3	72	58.007	ppb	58.007	1.42	48241	5000	
Mn	55	3	72	40.053	ppb	40.053	1.41	17896	10000	
Fe	56	2	72	788.049	ppb	788.049	2.21	1312699	10000	
Co	59	3	72	37.781	ppb	37.781	2.19	51816	2000	
Ni	60	3	72	37.190	ppb	37.190	3.05	14685	5000	
Cu	63	3	72	38.494	ppb	38.494	1.20	40509	5000	
Zn	66	3	72	38.616	ppb	38.616	1.55	7138	5000	
As	75	3	72	41.381	ppb	41.381	2.51	5075	2000	
Se	78	2	72	41.474	ppb	41.474	3.12	2513	2000	
Sr	88	3	72	367.999	ppb	367.999	1.31	230907	4000	
Mo	95	3	115	38.870	ppb	38.870	0.70	21616	2000	
Ag	107	3	115	38.852	ppb	38.852	0.50	74473	100	
Cd	111	3	115	38.774	ppb	38.774	1.33	10866	2000	
Sn	120	3	115	38.016	ppb	38.016	0.14	35251	2000	
Sb	121	3	115	38.979	ppb	38.979	1.40	35072	1000	
Ba	137	3	115	89.552	ppb	89.552	1.12	26522	5000	
Tl	205	3	193	39.257	ppb	39.257	0.70	191249	2000	
(Pb)	206	3	193	39.297	ppb	39.297	1.29	64007	100	
(Pb)	207	3	193	38.627	ppb	38.627	0.28	55985	100	
Pb	208	3	193	38.885	ppb	38.885	1.39	256128	5000	
Th	232	3	193	39.061	ppb	39.061	0.61	266309	2000	
U	238	3	193	41.572	ppb	41.572	0.62	292544	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4181299	1.32	3936624	106.22	60	120	
Sc (IS)	45	3	HMI He	637143	0.90	609520	104.53	60	120	
Ge Internal standard	72	2	HMI H2	2629529	1.56	2391663	109.95	60	120	
Ge Internal standard	72	3	HMI He	818370	1.43	756863	108.13	60	120	
In Internal Standard	115	3	HMI He	3204587	0.57	2988279	107.24	60	120	
Ir (IS)	193	3	HMI He	7258465	1.26	6996686	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A pds
Data File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:12:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	100.348	ppb	100.348	5.79	4007	2000	
Na	23	3	45	22933.453	ppb	22933.453	2.52	2509616	400000	
Mg	24	3	45	15503.882	ppb	15503.882	2.82	910866	400000	
Al	27	3	45	2011.577	ppb	2011.577	1.04	46259	400000	
K	39	3	45	7924.753	ppb	7924.753	0.47	398006	400000	
Ca	40	2	45	55108.681	ppb	55108.681	2.94	31178927	400000	
V	51	3	72	104.212	ppb	104.212	1.24	67420	2000	
Cr	52	3	72	117.161	ppb	117.161	0.69	93666	5000	
Mn	55	3	72	98.808	ppb	98.808	1.88	42963	10000	
Fe	56	2	72	1023.124	ppb	1023.124	1.25	1666996	10000	
Co	59	3	72	97.128	ppb	97.128	0.74	130415	2000	
Ni	60	3	72	95.093	ppb	95.093	1.56	36266	5000	
Cu	63	3	72	100.621	ppb	100.621	1.57	102953	5000	
Zn	66	3	72	198.070	ppb	198.070	1.11	34558	5000	
As	75	3	72	106.763	ppb	106.763	1.73	12706	2000	
Se	78	2	72	100.870	ppb	100.870	3.89	5988	2000	
Sr	88	3	72	373.548	ppb	373.548	1.32	229652	4000	
Mo	95	3	115	98.244	ppb	98.244	2.14	54310	2000	
Ag	107	3	115	25.872	ppb	25.872	0.67	49394	100	
Cd	111	3	115	95.241	ppb	95.241	3.13	26543	2000	
Sn	120	3	115	97.082	ppb	97.082	2.31	88018	2000	
Sb	121	3	115	94.998	ppb	94.998	0.62	84903	1000	
Ba	137	3	115	145.784	ppb	145.784	1.08	42923	5000	
Tl	205	3	193	96.735	ppb	96.735	0.21	470375	2000	
(Pb)	206	3	193	96.489	ppb	96.489	1.02	156628	100	
(Pb)	207	3	193	95.360	ppb	95.360	0.87	137307	100	
Pb	208	3	193	96.144	ppb	96.144	0.61	630737	5000	
Th	232	3	193	104.251	ppb	104.251	0.77	697621	2000	
U	238	3	193	211.083	ppb	211.083	2.16	1476860	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4127139	1.40	3936624	104.84	60	120	
Sc (IS)	45	3	HMI He	630383	0.82	609520	103.42	60	120	
Ge Internal standard	72	2	HMI H2	2579859	0.79	2391663	107.87	60	120	
Ge Internal standard	72	3	HMI He	801814	0.98	756863	105.94	60	120	
In Internal Standard	115	3	HMI He	3190924	1.32	2988279	106.78	60	120	
Ir (IS)	193	3	HMI He	7263891	1.22	6996686	103.82	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	104_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:14:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.292	ppb	8.873	1959	50	98.6	90	110	
Na	23	3	45	46966.072	ppb	2.337	5103972	51000	92.1	90	110	
Mg	24	3	45	10094.290	ppb	0.145	592191	11000	91.8	90	110	
Al	27	3	45	993.926	ppb	4.318	22871	1000	99.4	90	110	
K	39	3	45	10407.758	ppb	0.632	512837	11000	94.6	90	110	
Ca	40	2	45	10207.763	ppb	0.810	5788642	11000	92.8	90	110	
V	51	3	72	50.732	ppb	2.512	32016	50	101.5	90	110	
Cr	52	3	72	51.373	ppb	1.495	40529	50	102.7	90	110	
Mn	55	3	72	51.350	ppb	0.702	21608	50	102.7	90	110	
Fe	56	2	72	1030.200	ppb	2.085	1608904	1000	103.0	90	110	
Co	59	3	72	50.372	ppb	2.334	65199	50	100.7	90	110	
Ni	60	3	72	49.430	ppb	1.381	18321	50	98.9	90	110	
Cu	63	3	72	51.368	ppb	1.804	50871	50	102.7	90	110	
Zn	66	3	72	49.943	ppb	6.192	8622	50	99.9	90	110	
As	75	3	72	53.356	ppb	3.879	6155	50	106.7	90	110	
Se	78	2	72	52.660	ppb	0.952	2999	50	105.3	90	110	
Sr	88	3	72	103.989	ppb	1.556	61782	100	104.0	90	110	
Mo	95	3	115	48.411	ppb	2.031	26917	50	96.8	90	110	
Ag	107	3	115	47.096	ppb	1.069	90296	50	94.2	90	110	
Cd	111	3	115	49.763	ppb	0.463	13945	50	99.5	90	110	
Sn	120	3	115	47.930	ppb	2.223	44183	50	95.9	90	110	
Sb	121	3	115	49.271	ppb	2.240	44303	50	98.5	90	110	
Ba	137	3	115	49.276	ppb	0.915	14646	50	98.6	90	110	
Tl	205	3	193	48.388	ppb	2.424	236856	50	96.8	90	110	
(Pb)	206	3	193	48.184	ppb	5.276	78788	50	96.4	90	110	
(Pb)	207	3	193	48.436	ppb	2.913	70411	50	96.9	90	110	
Pb	208	3	193	48.134	ppb	4.261	318257	50	96.3	90	110	
Th	232	3	193	51.267	ppb	1.844	348961	50	102.5	90	110	
U	238	3	193	48.569	ppb	3.676	343251	50	97.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4119449	0.54	3936624	104.64	60	120	
Sc (IS)	45	3	HMI He	629136	0.97	609520	103.22	60	120	
Ge Internal standard	72	2	HMI H2	2473093	0.91	2391663	103.40	60	120	
Ge Internal standard	72	3	HMI He	772583	1.17	756863	102.08	60	120	
In Internal Standard	115	3	HMI He	3205849	1.70	2988279	107.28	60	120	
Ir (IS)	193	3	HMI He	7302275	2.88	6996686	104.37	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	105_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:16:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.126	ppb	0.0	0	0.5	
Na	23	3	45	44.284	ppb	6.6	29169	25	>RL
Mg	24	3	45	1.164	ppb	144.2	861	25	
Al	27	3	45	-0.051	ppb	-42.9	130	15	
K	39	3	45	-12.688	ppb	-92.0	27678	50	
V	51	3	72	0.643	ppb	34.1	1184	1	
Cr	52	3	72	-0.052	ppb	-283.3	1693	1	
Mn	55	3	72	0.042	ppb	81.7	213	0.5	
Co	59	3	72	-0.007	ppb	-216.5	65	0.5	
Ni	60	3	72	-0.032	ppb	-435.8	320	1	
Cu	63	3	72	0.015	ppb	120.4	498	1	
Zn	66	3	72	-0.174	ppb	-125.5	282	5	
As	75	3	72	-0.253	ppb	-43.3	47	1	
Se	78	2	72	-0.015	ppb	-365.4	3	1	
Sr	88	3	72	-0.012	ppb	-384.2	250	0.5	
Mo	95	3	115	0.006	ppb	366.7	58	0.5	
Ag	107	3	115	0.008	ppb	55.4	55	1	
Cd	111	3	115	-0.004	ppb	-300.7	17	0.5	
Sn	120	3	115	0.179	ppb	30.4	1181	1	
Sb	121	3	115	-0.006	ppb	-89.1	140	0.6	
Ba	137	3	115	-0.037	ppb	-189.2	93	0.5	
Tl	205	3	193	-0.063	ppb	-29.2	565	0.1	
(Pb)	206	3	193	-0.084	ppb	-13.1	327	1	
(Pb)	207	3	193	-0.123	ppb	-7.2	516	1	
Pb	208	3	193	-0.079	ppb	-4.4	1568	0.5	
Th	232	3	193	1.971	ppb	15.7	21311	1	>RL
U	238	3	193	0.015	ppb	139.3	2434	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071310	2.14	3936624	103.42	60	120	
Sc (IS)	45	3	HMI He	629644	0.38	609520	103.30	60	120	
Ge Internal standard	72	2	HMI H2	2510933	0.83	2391663	104.99	60	120	
Ge Internal standard	72	3	HMI He	784650	0.29	756863	103.67	60	120	
In Internal Standard	115	3	HMI He	3166850	0.57	2988279	105.98	60	120	
Ir (IS)	193	3	HMI He	7297726	1.83	6996686	104.30	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-1-A
Data File Name	106SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:18:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-172.20	3	2000	
Na	23	3	45	17285.573	ppb	17285.573	1.83	1904213	400000	
Mg	24	3	45	14370.697	ppb	14370.697	2.45	847025	400000	
Al	27	3	45	92.376	ppb	92.376	6.65	2256	400000	
K	39	3	45	2023.414	ppb	2023.414	0.83	123105	400000	
Ca	40	2	45	52927.291	ppb	52927.291	2.96	30568405	400000	
V	51	3	72	0.941	ppb	0.941	14.99	1388	2000	
Cr	52	3	72	0.421	ppb	0.421	48.99	2079	5000	
Mn	55	3	72	19.826	ppb	19.826	2.41	8693	10000	
Fe	56	2	72	107.454	ppb	107.454	1.28	193535	10000	
Co	59	3	72	0.083	ppb	0.083	50.18	185	2000	
Ni	60	3	72	0.118	ppb	0.118	128.04	380	5000	
Cu	63	3	72	3.529	ppb	3.529	2.01	4047	5000	
Zn	66	3	72	16.114	ppb	16.114	3.94	3072	5000	
As	75	3	72	0.339	ppb	0.339	75.67	117	2000	
Se	78	2	72	0.405	ppb	0.405	20.52	29	2000	
Sr	88	3	72	140.516	ppb	140.516	0.96	85691	4000	
Mo	95	3	115	28.106	ppb	28.106	1.05	15416	2000	
Ag	107	3	115	0.020	ppb	0.020	39.51	77	100	
Cd	111	3	115	0.057	ppb	0.057	49.36	33	2000	
Sn	120	3	115	-0.135	ppb	-0.135	-36.56	900	2000	
Sb	121	3	115	0.080	ppb	0.080	68.93	215	1000	
Ba	137	3	115	59.685	ppb	59.685	1.71	17451	5000	
Tl	205	3	193	-0.093	ppb	-0.093	-13.95	418	2000	
(Pb)	206	3	193	0.036	ppb	0.036	26.18	518	100	
(Pb)	207	3	193	0.072	ppb	0.072	25.54	793	100	
Pb	208	3	193	0.050	ppb	0.050	22.59	2409	5000	
Th	232	3	193	0.631	ppb	0.631	29.66	12382	2000	
U	238	3	193	19.248	ppb	19.248	1.09	136891	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214375	3.44	3936624	107.06	60	120	
Sc (IS)	45	3	HMI He	632482	1.58	609520	103.77	60	120	
Ge Internal standard	72	2	HMI H2	2611510	2.10	2391663	109.19	60	120	
Ge Internal standard	72	3	HMI He	793772	0.37	756863	104.88	60	120	
In Internal Standard	115	3	HMI He	3157762	1.10	2988279	105.67	60	120	
Ir (IS)	193	3	HMI He	7268422	0.34	6996686	103.88	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-5-A
Data File Name	107SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:20:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-169.22	3	2000	
Na	23	3	45	12326.902	ppb	12326.902	2.03	1339107	400000	
Mg	24	3	45	14242.885	ppb	14242.885	0.30	823848	400000	
Al	27	3	45	511.727	ppb	511.727	2.57	11680	400000	
K	39	3	45	2115.777	ppb	2115.777	0.59	125028	400000	
Ca	40	2	45	53903.828	ppb	53903.828	0.60	30405221	400000	
V	51	3	72	1.133	ppb	1.133	22.22	1503	2000	
Cr	52	3	72	0.892	ppb	0.892	18.35	2437	5000	
Mn	55	3	72	41.118	ppb	41.118	1.41	17756	10000	
Fe	56	2	72	250.180	ppb	250.180	3.24	421554	10000	
Co	59	3	72	0.286	ppb	0.286	3.76	453	2000	
Ni	60	3	72	0.449	ppb	0.449	16.09	501	5000	
Cu	63	3	72	13.117	ppb	13.117	2.43	13668	5000	
Zn	66	3	72	32.597	ppb	32.597	5.07	5873	5000	
As	75	3	72	0.072	ppb	0.072	161.45	85	2000	
Se	78	2	72	0.364	ppb	0.364	30.88	26	2000	
Sr	88	3	72	142.978	ppb	142.978	1.50	86894	4000	
Mo	95	3	115	36.759	ppb	36.759	1.70	19795	2000	
Ag	107	3	115	0.010	ppb	0.010	112.33	57	100	
Cd	111	3	115	0.429	ppb	0.429	26.16	133	2000	
Sn	120	3	115	-0.142	ppb	-0.142	-32.07	878	2000	
Sb	121	3	115	0.081	ppb	0.081	51.88	212	1000	
Ba	137	3	115	60.370	ppb	60.370	0.97	17344	5000	
Tl	205	3	193	-0.091	ppb	-0.091	-7.42	428	2000	
(Pb)	206	3	193	0.375	ppb	0.375	4.04	1068	100	
(Pb)	207	3	193	0.391	ppb	0.391	29.80	1251	100	
Pb	208	3	193	0.411	ppb	0.411	11.31	4763	5000	
Th	232	3	193	0.233	ppb	0.233	52.18	9742	2000	
U	238	3	193	39.218	ppb	39.218	0.88	276334	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4113688	1.11	3936624	104.50	60	120	
Sc (IS)	45	3	HMI He	620544	0.39	609520	101.81	60	120	
Ge Internal standard	72	2	HMI H2	2582883	2.46	2391663	108.00	60	120	
Ge Internal standard	72	3	HMI He	791110	1.30	756863	104.52	60	120	
In Internal Standard	115	3	HMI He	3102767	1.49	2988279	103.83	60	120	
Ir (IS)	193	3	HMI He	7264165	0.74	6996686	103.82	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-A
Data File Name	108SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:22:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.003	ppb	-0.003	-4710.65	5	2000	
Na	23	3	45	11881.271	ppb	11881.271	2.86	1303634	400000	
Mg	24	3	45	13207.241	ppb	13207.241	0.22	771045	400000	
Al	27	3	45	57.115	ppb	57.115	8.41	1432	400000	
K	39	3	45	2008.452	ppb	2008.452	1.80	121211	400000	
Ca	40	2	45	51349.006	ppb	51349.006	2.39	29166001	400000	
V	51	3	72	0.879	ppb	0.879	8.53	1363	2000	
Cr	52	3	72	0.219	ppb	0.219	50.85	1944	5000	
Mn	55	3	72	10.201	ppb	10.201	3.82	4620	10000	
Fe	56	2	72	18.923	ppb	18.923	1.54	48533	10000	
Co	59	3	72	0.071	ppb	0.071	31.51	172	2000	
Ni	60	3	72	-0.091	ppb	-0.091	-132.86	305	5000	
Cu	63	3	72	7.646	ppb	7.646	4.08	8288	5000	
Zn	66	3	72	11.860	ppb	11.860	4.25	2371	5000	
As	75	3	72	0.131	ppb	0.131	218.45	93	2000	
Se	78	2	72	0.243	ppb	0.243	69.79	19	2000	
Sr	88	3	72	135.579	ppb	135.579	0.99	83609	4000	
Mo	95	3	115	36.229	ppb	36.229	4.28	19746	2000	
Ag	107	3	115	0.004	ppb	0.004	174.68	47	100	
Cd	111	3	115	0.325	ppb	0.325	10.49	107	2000	
Sn	120	3	115	-0.254	ppb	-0.254	-13.36	790	2000	
Sb	121	3	115	0.111	ppb	0.111	20.63	242	1000	
Ba	137	3	115	54.335	ppb	54.335	3.15	15812	5000	
Tl	205	3	193	-0.101	ppb	-0.101	-1.41	385	2000	
(Pb)	206	3	193	-0.025	ppb	-0.025	-76.56	428	100	
(Pb)	207	3	193	-0.054	ppb	-0.054	-125.21	623	100	
Pb	208	3	193	-0.031	ppb	-0.031	-58.25	1907	5000	
Th	232	3	193	0.007	ppb	0.007	1015.82	8409	2000	
U	238	3	193	37.220	ppb	37.220	1.89	267452	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4142560	0.98	3936624	105.23	60	120	
Sc (IS)	45	3	HMI He	626274	0.40	609520	102.75	60	120	
Ge Internal standard	72	2	HMI H2	2580345	0.82	2391663	107.89	60	120	
Ge Internal standard	72	3	HMI He	802602	0.53	756863	106.04	60	120	
In Internal Standard	115	3	HMI He	3141998	2.21	2988279	105.14	60	120	
Ir (IS)	193	3	HMI He	7406866	2.90	6996686	105.86	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-B MS
Data File Name	109SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:23:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.197	ppb	38.197	10.97	1533	2000	
Na	23	3	45	12592.389	ppb	12592.389	2.83	1388231	400000	
Mg	24	3	45	13986.585	ppb	13986.585	1.17	821362	400000	
Al	27	3	45	819.554	ppb	819.554	2.99	18915	400000	
K	39	3	45	2755.825	ppb	2755.825	0.58	156771	400000	
Ca	40	2	45	51307.895	ppb	51307.895	0.74	29396624	400000	
V	51	3	72	39.254	ppb	39.254	2.12	25564	2000	
Cr	52	3	72	39.182	ppb	39.182	1.14	32091	5000	
Mn	55	3	72	49.290	ppb	49.290	0.43	21261	10000	
Fe	56	2	72	801.790	ppb	801.790	1.71	1304684	10000	
Co	59	3	72	37.977	ppb	37.977	1.13	50391	2000	
Ni	60	3	72	37.312	ppb	37.312	0.61	14254	5000	
Cu	63	3	72	46.935	ppb	46.935	1.43	47676	5000	
Zn	66	3	72	50.895	ppb	50.895	0.82	9000	5000	
As	75	3	72	40.382	ppb	40.382	4.72	4793	2000	
Se	78	2	72	39.977	ppb	39.977	3.54	2365	2000	
Sr	88	3	72	216.856	ppb	216.856	0.13	131744	4000	
Mo	95	3	115	75.924	ppb	75.924	2.13	40594	2000	
Ag	107	3	115	39.585	ppb	39.585	2.02	73039	100	
Cd	111	3	115	39.828	ppb	39.828	3.38	10742	2000	
Sn	120	3	115	37.983	ppb	37.983	2.90	33901	2000	
Sb	121	3	115	39.709	ppb	39.709	0.78	34394	1000	
Ba	137	3	115	97.062	ppb	97.062	3.16	27660	5000	
Tl	205	3	193	38.176	ppb	38.176	1.42	187474	2000	
(Pb)	206	3	193	38.481	ppb	38.481	0.78	63180	100	
(Pb)	207	3	193	38.089	ppb	38.089	1.30	55642	100	
Pb	208	3	193	38.534	ppb	38.534	0.48	255829	5000	
Th	232	3	193	35.613	ppb	35.613	1.11	245417	2000	
U	238	3	193	77.285	ppb	77.285	1.27	546139	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4178433	1.60	3936624	106.14	60	120	
Sc (IS)	45	3	HMI He	629999	0.83	609520	103.36	60	120	
Ge Internal standard	72	2	HMI H2	2568797	2.19	2391663	107.41	60	120	
Ge Internal standard	72	3	HMI He	791612	0.52	756863	104.59	60	120	
In Internal Standard	115	3	HMI He	3085102	1.13	2988279	103.24	60	120	
Ir (IS)	193	3	HMI He	7314935	0.74	6996686	104.55	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-C MSD
Data File Name	110SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:25:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.080	ppb	40.080	2.90	1584	2000	
Na	23	3	45	13020.300	ppb	13020.300	1.90	1412924	400000	
Mg	24	3	45	14514.750	ppb	14514.750	1.31	839252	400000	
Al	27	3	45	841.549	ppb	841.549	1.66	19119	400000	
K	39	3	45	2878.251	ppb	2878.251	1.89	160010	400000	
Ca	40	2	45	53586.224	ppb	53586.224	2.59	29493471	400000	
V	51	3	72	39.701	ppb	39.701	2.07	25714	2000	
Cr	52	3	72	40.665	ppb	40.665	0.46	33068	5000	
Mn	55	3	72	51.382	ppb	51.382	1.01	22042	10000	
Fe	56	2	72	794.071	ppb	794.071	0.55	1286946	10000	
Co	59	3	72	39.119	ppb	39.119	0.93	51638	2000	
Ni	60	3	72	38.311	ppb	38.311	2.34	14550	5000	
Cu	63	3	72	47.610	ppb	47.610	1.62	48103	5000	
Zn	66	3	72	53.985	ppb	53.985	5.37	9479	5000	
As	75	3	72	40.170	ppb	40.170	3.30	4743	2000	
Se	78	2	72	40.610	ppb	40.610	3.94	2394	2000	
Sr	88	3	72	222.495	ppb	222.495	1.31	134467	4000	
Mo	95	3	115	76.287	ppb	76.287	1.98	41108	2000	
Ag	107	3	115	39.829	ppb	39.829	3.04	74053	100	
Cd	111	3	115	39.796	ppb	39.796	1.86	10819	2000	
Sn	120	3	115	37.171	ppb	37.171	2.37	33460	2000	
Sb	121	3	115	39.645	ppb	39.645	1.67	34603	1000	
Ba	137	3	115	96.902	ppb	96.902	1.52	27832	5000	
Tl	205	3	193	38.613	ppb	38.613	0.58	188123	2000	
(Pb)	206	3	193	39.529	ppb	39.529	1.50	64386	100	
(Pb)	207	3	193	38.577	ppb	38.577	0.67	55910	100	
Pb	208	3	193	38.915	ppb	38.915	0.15	256325	5000	
Th	232	3	193	39.123	ppb	39.123	0.34	266709	2000	
U	238	3	193	79.259	ppb	79.259	0.96	555632	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4015371	3.06	3936624	102.00	60	120	
Sc (IS)	45	3	HMI He	620375	1.13	609520	101.78	60	120	
Ge Internal standard	72	2	HMI H2	2558158	1.72	2391663	106.96	60	120	
Ge Internal standard	72	3	HMI He	787540	0.62	756863	104.05	60	120	
In Internal Standard	115	3	HMI He	3109125	1.53	2988279	104.04	60	120	
Ir (IS)	193	3	HMI He	7257954	0.06	6996686	103.73	60	120	

Sample Report

Sample Table

Sample Name	160-49634-A-2-A
Data File Name	111SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:27:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	13962.888	ppb	13962.888	1.24	1517593	400000	
Mg	24	3	45	13116.752	ppb	13116.752	1.03	760738	400000	
Al	27	3	45	125.257	ppb	125.257	7.79	2963	400000	
K	39	3	45	2359.130	ppb	2359.130	0.32	136568	400000	
Ca	40	2	45	57643.916	ppb	57643.916	2.66	32358698	400000	
V	51	3	72	1.066	ppb	1.066	9.37	1446	2000	
Cr	52	3	72	0.802	ppb	0.802	3.80	2344	5000	
Mn	55	3	72	51.603	ppb	51.603	1.31	22016	10000	
Fe	56	2	72	168.913	ppb	168.913	2.63	285268	10000	
Co	59	3	72	0.256	ppb	0.256	15.69	410	2000	
Ni	60	3	72	0.728	ppb	0.728	25.36	600	5000	
Cu	63	3	72	15.999	ppb	15.999	1.98	16397	5000	
Zn	66	3	72	35.394	ppb	35.394	2.04	6287	5000	
As	75	3	72	0.164	ppb	0.164	71.68	95	2000	
Se	78	2	72	0.248	ppb	0.248	49.39	19	2000	
Sr	88	3	72	164.797	ppb	164.797	1.52	99106	4000	
Mo	95	3	115	52.757	ppb	52.757	1.34	28292	2000	
Ag	107	3	115	0.017	ppb	0.017	54.48	70	100	
Cd	111	3	115	0.528	ppb	0.528	28.73	160	2000	
Sn	120	3	115	0.060	ppb	0.060	266.69	1050	2000	
Sb	121	3	115	0.141	ppb	0.141	32.16	263	1000	
Ba	137	3	115	59.723	ppb	59.723	2.17	17101	5000	
Tl	205	3	193	-0.094	ppb	-0.094	-19.84	410	2000	
(Pb)	206	3	193	0.408	ppb	0.408	18.22	1118	100	
(Pb)	207	3	193	0.322	ppb	0.322	19.23	1148	100	
Pb	208	3	193	0.400	ppb	0.400	2.83	4675	5000	
Th	232	3	193	2.242	ppb	2.242	13.65	22940	2000	
U	238	3	193	53.554	ppb	53.554	4.22	375047	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4096006	2.77	3936624	104.05	60	120	
Sc (IS)	45	3	HMI He	622197	1.08	609520	102.08	60	120	
Ge Internal standard	72	2	HMI H2	2535799	1.47	2391663	106.03	60	120	
Ge Internal standard	72	3	HMI He	783233	1.63	756863	103.48	60	120	
In Internal Standard	115	3	HMI He	3092574	1.45	2988279	103.49	60	120	
Ir (IS)	193	3	HMI He	7239355	1.90	6996686	103.47	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-2-B
Data File Name	112SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:29:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-85.09	2	2000	
Na	23	3	45	182049.617	ppb	182049.617	0.69	19408474	400000	
Mg	24	3	45	78938.703	ppb	78938.703	1.19	4553478	400000	
Al	27	3	45	4.931	ppb	4.931	8.51	240	400000	
K	39	3	45	862.424	ppb	862.424	1.16	67335	400000	
Ca	40	2	45	312262.594	ppb	312262.594	1.15	171689243	400000	
V	51	3	72	0.960	ppb	0.960	19.98	1356	2000	
Cr	52	3	72	0.122	ppb	0.122	113.70	1789	5000	
Mn	55	3	72	5.355	ppb	5.355	4.86	2414	10000	
Fe	56	2	72	8.320	ppb	8.320	9.06	30554	10000	
Co	59	3	72	0.131	ppb	0.131	11.04	242	2000	
Ni	60	3	72	2.255	ppb	2.255	3.01	1143	5000	
Cu	63	3	72	1.309	ppb	1.309	2.43	1753	5000	
Zn	66	3	72	1.076	ppb	1.076	16.31	483	5000	
As	75	3	72	1.045	ppb	1.045	18.42	193	2000	
Se	78	2	72	2.308	ppb	2.308	1.13	137	2000	
Sr	88	3	72	2544.906	ppb	2544.906	1.81	1499804	4000	
Mo	95	3	115	2.257	ppb	2.257	10.08	1256	2000	
Ag	107	3	115	0.110	ppb	0.110	15.28	240	100	
Cd	111	3	115	0.035	ppb	0.035	79.81	27	2000	
Sn	120	3	115	0.150	ppb	0.150	37.67	1124	2000	
Sb	121	3	115	0.041	ppb	0.041	47.29	177	1000	
Ba	137	3	115	33.124	ppb	33.124	1.24	9494	5000	
Tl	205	3	193	-0.094	ppb	-0.094	-5.43	411	2000	
(Pb)	206	3	193	-0.071	ppb	-0.071	-22.15	347	100	
(Pb)	207	3	193	-0.118	ppb	-0.118	-5.55	523	100	
Pb	208	3	193	-0.077	ppb	-0.077	-6.81	1581	5000	
Th	232	3	193	0.938	ppb	0.938	21.00	14455	2000	
U	238	3	193	49.846	ppb	49.846	0.88	351724	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4012918	1.75	3936624	101.94	60	120	
Sc (IS)	45	3	HMI He	619336	0.24	609520	101.61	60	120	
Ge Internal standard	72	2	HMI H2	2508441	1.74	2391663	104.88	60	120	
Ge Internal standard	72	3	HMI He	769212	1.38	756863	101.63	60	120	
In Internal Standard	115	3	HMI He	3080482	0.77	2988279	103.09	60	120	
Ir (IS)	193	3	HMI He	7287477	1.23	6996686	104.16	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	113_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:31:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.628	ppb	4.855	1908	50	95.3	90	110	
Na	23	3	45	47280.003	ppb	1.471	5110988	51000	92.7	90	110	
Mg	24	3	45	10063.495	ppb	2.537	587162	11000	91.5	90	110	
Al	27	3	45	980.032	ppb	1.235	22440	1000	98.0	90	110	
K	39	3	45	10115.530	ppb	2.933	496478	11000	92.0	90	110	
Ca	40	2	45	10090.575	ppb	1.650	5771756	11000	91.7	90	110	
V	51	3	72	50.373	ppb	0.776	31388	50	100.7	90	110	
Cr	52	3	72	50.646	ppb	1.613	39466	50	101.3	90	110	
Mn	55	3	72	51.560	ppb	1.115	21412	50	103.1	90	110	
Fe	56	2	72	1024.564	ppb	1.294	1588332	1000	102.5	90	110	
Co	59	3	72	50.248	ppb	2.053	64193	50	100.5	90	110	
Ni	60	3	72	50.317	ppb	1.288	18401	50	100.6	90	110	
Cu	63	3	72	50.667	ppb	1.086	49539	50	101.3	90	110	
Zn	66	3	72	50.314	ppb	4.208	8572	50	100.6	90	110	
As	75	3	72	52.752	ppb	2.828	6008	50	105.5	90	110	
Se	78	2	72	52.037	ppb	5.161	2941	50	104.1	90	110	
Sr	88	3	72	102.130	ppb	1.661	59891	100	102.1	90	110	
Mo	95	3	115	50.168	ppb	1.565	26771	50	100.3	90	110	
Ag	107	3	115	49.850	ppb	0.647	91740	50	99.7	90	110	
Cd	111	3	115	50.433	ppb	2.418	13563	50	100.9	90	110	
Sn	120	3	115	49.315	ppb	1.622	43609	50	98.6	90	110	
Sb	121	3	115	50.224	ppb	1.072	43350	50	100.4	90	110	
Ba	137	3	115	52.479	ppb	3.803	14963	50	105.0	90	110	
Tl	205	3	193	47.378	ppb	0.491	233619	50	94.8	90	110	
(Pb)	206	3	193	48.294	ppb	1.810	79582	50	96.6	90	110	
(Pb)	207	3	193	47.682	ppb	1.264	69837	50	95.4	90	110	
Pb	208	3	193	47.795	ppb	0.806	318426	50	95.6	90	110	
Th	232	3	193	48.158	ppb	1.485	330643	50	96.3	90	110	
U	238	3	193	47.709	ppb	1.314	339736	50	95.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4155707	1.96	3936624	105.57	60	120	
Sc (IS)	45	3	HMI He	625902	2.05	609520	102.69	60	120	
Ge Internal standard	72	2	HMI H2	2454510	0.50	2391663	102.63	60	120	
Ge Internal standard	72	3	HMI He	762523	1.01	756863	100.75	60	120	
In Internal Standard	115	3	HMI He	3077140	1.27	2988279	102.97	60	120	
Ir (IS)	193	3	HMI He	7352168	0.38	6996686	105.08	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	114_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:32:55-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.044	ppb	-323.4	3	0.5	
Na	23	3	45	41.344	ppb	7.1	28624	25	>RL
Mg	24	3	45	3.280	ppb	35.2	978	25	
Al	27	3	45	0.439	ppb	309.9	140	15	
K	39	3	45	-32.083	ppb	-61.0	26562	50	
V	51	3	72	0.331	ppb	58.3	981	1	
Cr	52	3	72	-0.013	ppb	-1220.9	1708	1	
Mn	55	3	72	0.062	ppb	166.5	220	0.5	
Co	59	3	72	-0.013	ppb	-60.0	57	0.5	
Ni	60	3	72	0.057	ppb	193.8	350	1	
Cu	63	3	72	-0.015	ppb	-193.8	465	1	
Zn	66	3	72	-0.079	ppb	-336.0	295	5	
As	75	3	72	-0.323	ppb	-27.7	38	1	
Se	78	2	72	-0.004	ppb	-862.9	4	1	
Sr	88	3	72	0.025	ppb	206.7	270	0.5	
Mo	95	3	115	0.008	ppb	271.6	58	0.5	
Ag	107	3	115	0.018	ppb	18.4	72	1	
Cd	111	3	115	0.003	ppb	858.6	18	0.5	
Sn	120	3	115	-0.003	ppb	-2347.1	1003	1	
Sb	121	3	115	-0.004	ppb	-1104.9	140	0.6	
Ba	137	3	115	-0.057	ppb	-159.5	87	0.5	
Tl	205	3	193	-0.104	ppb	-11.2	370	0.1	
(Pb)	206	3	193	-0.075	ppb	-20.2	343	1	
(Pb)	207	3	193	-0.094	ppb	-46.8	561	1	
Pb	208	3	193	-0.076	ppb	-18.2	1601	0.5	
Th	232	3	193	1.493	ppb	10.2	18296	1	>RL
U	238	3	193	0.011	ppb	167.2	2427	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4060712	2.11	3936624	103.15	60	120	
Sc (IS)	45	3	HMI He	624745	1.08	609520	102.50	60	120	
Ge Internal standard	72	2	HMI H2	2525724	1.02	2391663	105.61	60	120	
Ge Internal standard	72	3	HMI He	778031	0.42	756863	102.80	60	120	
In Internal Standard	115	3	HMI He	3118168	2.92	2988279	104.35	60	120	
Ir (IS)	193	3	HMI He	7350761	1.95	6996686	105.06	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-D
Data File Name	115SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:34:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.044	ppb	-0.044	-162.22	3	2000	
Na	23	3	45	124123.114	ppb	124123.114	2.22	13390180	400000	
Mg	24	3	45	25904.094	ppb	25904.094	1.01	1511795	400000	
Al	27	3	45	4.647	ppb	4.647	57.53	237	400000	
K	39	3	45	316.408	ppb	316.408	1.69	42791	400000	
Ca	40	2	45	88409.578	ppb	88409.578	2.13	49452427	400000	
V	51	3	72	1.259	ppb	1.259	6.86	1586	2000	
Cr	52	3	72	-0.003	ppb	-0.003	-6204.51	1748	5000	
Mn	55	3	72	18.039	ppb	18.039	0.76	7913	10000	
Fe	56	2	72	174.377	ppb	174.377	3.30	295080	10000	
Co	59	3	72	0.244	ppb	0.244	22.93	398	2000	
Ni	60	3	72	0.611	ppb	0.611	4.31	563	5000	
Cu	63	3	72	0.586	ppb	0.586	6.60	1078	5000	
Zn	66	3	72	0.756	ppb	0.756	22.21	443	5000	
As	75	3	72	0.213	ppb	0.213	76.90	102	2000	
Se	78	2	72	4.170	ppb	4.170	12.72	248	2000	
Sr	88	3	72	826.502	ppb	826.502	0.37	501873	4000	
Mo	95	3	115	1.147	ppb	1.147	4.80	681	2000	
Ag	107	3	115	0.013	ppb	0.013	50.04	63	100	
Cd	111	3	115	0.003	ppb	0.003	970.98	18	2000	
Sn	120	3	115	-0.047	ppb	-0.047	-167.26	978	2000	
Sb	121	3	115	0.076	ppb	0.076	40.82	212	1000	
Ba	137	3	115	113.922	ppb	113.922	0.71	33220	5000	
Tl	205	3	193	-0.099	ppb	-0.099	-6.97	391	2000	
(Pb)	206	3	193	-0.081	ppb	-0.081	-14.17	332	100	
(Pb)	207	3	193	-0.081	ppb	-0.081	-53.94	578	100	
Pb	208	3	193	-0.073	ppb	-0.073	-7.17	1616	5000	
Th	232	3	193	0.507	ppb	0.507	21.52	11645	2000	
U	238	3	193	13.937	ppb	13.937	0.71	100539	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4082018	2.50	3936624	103.69	60	120	
Sc (IS)	45	3	HMI He	626422	1.02	609520	102.77	60	120	
Ge Internal standard	72	2	HMI H2	2546783	3.04	2391663	106.49	60	120	
Ge Internal standard	72	3	HMI He	792389	0.41	756863	104.69	60	120	
In Internal Standard	115	3	HMI He	3157951	1.11	2988279	105.68	60	120	
Ir (IS)	193	3	HMI He	7324983	0.93	6996686	104.69	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-Dsd@5
Data File Name	116SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:36:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.042	ppb	0.042	348.74	7	2000	
Na	23	3	45	25261.984	ppb	25261.984	1.20	2738810	400000	
Mg	24	3	45	5122.896	ppb	5122.896	1.41	298910	400000	
Al	27	3	45	1.737	ppb	1.737	121.95	170	400000	
K	39	3	45	51.444	ppb	51.444	32.66	30440	400000	
Ca	40	2	45	18272.703	ppb	18272.703	2.77	10369970	400000	
V	51	3	72	0.443	ppb	0.443	17.44	1078	2000	
Cr	52	3	72	0.064	ppb	0.064	252.35	1813	5000	
Mn	55	3	72	4.728	ppb	4.728	3.55	2236	10000	
Fe	56	2	72	39.429	ppb	39.429	4.15	79969	10000	
Co	59	3	72	0.045	ppb	0.045	70.31	135	2000	
Ni	60	3	72	0.114	ppb	0.114	123.94	380	5000	
Cu	63	3	72	0.160	ppb	0.160	59.28	653	5000	
Zn	66	3	72	2.364	ppb	2.364	30.73	723	5000	
As	75	3	72	-0.104	ppb	-0.104	-113.44	65	2000	
Se	78	2	72	0.993	ppb	0.993	30.66	62	2000	
Sr	88	3	72	165.160	ppb	165.160	1.31	101234	4000	
Mo	95	3	115	0.251	ppb	0.251	28.58	192	2000	
Ag	107	3	115	0.028	ppb	0.028	46.84	92	100	
Cd	111	3	115	-0.003	ppb	-0.003	-1589.43	17	2000	
Sn	120	3	115	0.023	ppb	0.023	57.02	1038	2000	
Sb	121	3	115	-0.007	ppb	-0.007	-416.76	138	1000	
Ba	137	3	115	22.909	ppb	22.909	2.83	6750	5000	
Tl	205	3	193	-0.095	ppb	-0.095	-20.63	403	2000	
(Pb)	206	3	193	0.269	ppb	0.269	24.44	888	100	
(Pb)	207	3	193	0.282	ppb	0.282	23.02	1085	100	
Pb	208	3	193	0.290	ppb	0.290	11.43	3942	5000	
Th	232	3	193	0.023	ppb	0.023	304.70	8279	2000	
U	238	3	193	2.881	ppb	2.881	3.29	22257	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4132224	1.47	3936624	104.97	60	120	
Sc (IS)	45	3	HMI He	624978	1.17	609520	102.54	60	120	
Ge Internal standard	72	2	HMI H2	2531114	3.84	2391663	105.83	60	120	
Ge Internal standard	72	3	HMI He	798121	1.08	756863	105.45	60	120	
In Internal Standard	115	3	HMI He	3151446	0.77	2988279	105.46	60	120	
Ir (IS)	193	3	HMI He	7203475	1.52	6996686	102.96	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-E MS
Data File Name	117SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:38:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.862	ppb	40.862	8.11	1644	2000	
Na	23	3	45	123306.783	ppb	123306.783	0.93	13436195	400000	
Mg	24	3	45	26113.975	ppb	26113.975	1.72	1539265	400000	
Al	27	3	45	743.701	ppb	743.701	3.90	17248	400000	
K	39	3	45	1084.491	ppb	1084.491	4.17	79188	400000	
Ca	40	2	45	90208.631	ppb	90208.631	2.39	50956277	400000	
V	51	3	72	39.290	ppb	39.290	2.36	25733	2000	
Cr	52	3	72	39.189	ppb	39.189	1.49	32275	5000	
Mn	55	3	72	55.999	ppb	55.999	2.66	24262	10000	
Fe	56	2	72	963.149	ppb	963.149	1.84	1565207	10000	
Co	59	3	72	38.366	ppb	38.366	0.87	51190	2000	
Ni	60	3	72	37.264	ppb	37.264	1.07	14315	5000	
Cu	63	3	72	39.131	ppb	39.131	2.75	40048	5000	
Zn	66	3	72	37.840	ppb	37.840	2.96	6810	5000	
As	75	3	72	38.726	ppb	38.726	2.18	4625	2000	
Se	78	2	72	44.233	ppb	44.233	3.97	2620	2000	
Sr	88	3	72	895.210	ppb	895.210	0.34	546093	4000	
Mo	95	3	115	39.217	ppb	39.217	1.03	21601	2000	
Ag	107	3	115	38.511	ppb	38.511	0.84	73118	100	
Cd	111	3	115	38.121	ppb	38.121	2.89	10582	2000	
Sn	120	3	115	36.835	ppb	36.835	0.80	33863	2000	
Sb	121	3	115	38.568	ppb	38.568	1.26	34374	1000	
Ba	137	3	115	152.414	ppb	152.414	0.95	44636	5000	
Tl	205	3	193	37.515	ppb	37.515	1.52	185885	2000	
(Pb)	206	3	193	37.510	ppb	37.510	2.57	62146	100	
(Pb)	207	3	193	37.244	ppb	37.244	1.76	54913	100	
Pb	208	3	193	37.494	ppb	37.494	2.58	251180	5000	
Th	232	3	193	36.329	ppb	36.329	2.64	252406	2000	
U	238	3	193	52.416	ppb	52.416	1.32	374461	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121888	1.80	3936624	104.71	60	120	
Sc (IS)	45	3	HMI He	632662	0.64	609520	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2571758	1.59	2391663	107.53	60	120	
Ge Internal standard	72	3	HMI He	796063	0.71	756863	105.18	60	120	
In Internal Standard	115	3	HMI He	3174039	0.52	2988279	106.22	60	120	
Ir (IS)	193	3	HMI He	7381855	1.83	6996686	105.51	60	120	

Sample Report

Sample Table

Sample Name	280-174993-A-3-F MSD
Data File Name	118SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:40:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.397	ppb	40.397	1.69	1639	2000	
Na	23	3	45	119565.989	ppb	119565.989	0.90	12901846	400000	
Mg	24	3	45	25415.333	ppb	25415.333	0.91	1483437	400000	
Al	27	3	45	766.497	ppb	766.497	4.83	17595	400000	
K	39	3	45	1110.259	ppb	1110.259	2.82	79601	400000	
Ca	40	2	45	87695.939	ppb	87695.939	2.82	49003851	400000	
V	51	3	72	40.200	ppb	40.200	0.85	26148	2000	
Cr	52	3	72	39.088	ppb	39.088	1.85	31997	5000	
Mn	55	3	72	55.825	ppb	55.825	2.27	24037	10000	
Fe	56	2	72	970.296	ppb	970.296	0.57	1552823	10000	
Co	59	3	72	39.146	ppb	39.146	2.21	51909	2000	
Ni	60	3	72	37.377	ppb	37.377	1.53	14270	5000	
Cu	63	3	72	40.327	ppb	40.327	1.44	41007	5000	
Zn	66	3	72	40.772	ppb	40.772	1.22	7268	5000	
As	75	3	72	38.294	ppb	38.294	5.35	4545	2000	
Se	78	2	72	45.790	ppb	45.790	5.25	2669	2000	
Sr	88	3	72	867.572	ppb	867.572	1.12	525978	4000	
Mo	95	3	115	39.791	ppb	39.791	1.53	21682	2000	
Ag	107	3	115	38.798	ppb	38.798	1.31	72870	100	
Cd	111	3	115	38.941	ppb	38.941	3.21	10692	2000	
Sn	120	3	115	37.376	ppb	37.376	1.56	33975	2000	
Sb	121	3	115	38.463	ppb	38.463	0.30	33916	1000	
Ba	137	3	115	150.748	ppb	150.748	1.65	43675	5000	
Tl	205	3	193	38.415	ppb	38.415	1.48	188386	2000	
(Pb)	206	3	193	39.280	ppb	39.280	2.04	64391	100	
(Pb)	207	3	193	38.254	ppb	38.254	2.25	55801	100	
Pb	208	3	193	38.799	ppb	38.799	2.06	257204	5000	
Th	232	3	193	39.003	ppb	39.003	2.73	267612	2000	
U	238	3	193	53.079	ppb	53.079	2.13	375251	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4078132	2.18	3936624	103.59	60	120	
Sc (IS)	45	3	HMI He	626434	0.38	609520	102.78	60	120	
Ge Internal standard	72	2	HMI H2	2532555	2.20	2391663	105.89	60	120	
Ge Internal standard	72	3	HMI He	791205	1.03	756863	104.54	60	120	
In Internal Standard	115	3	HMI He	3140121	0.74	2988279	105.08	60	120	
Ir (IS)	193	3	HMI He	7306020	1.73	6996686	104.42	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-2-A
Data File Name	119SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:42:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.003	ppb	-0.003	-82.51	5	2000	
Na	23	3	45	54440.987	ppb	54440.987	0.23	5923917	400000	
Mg	24	3	45	43483.476	ppb	43483.476	1.34	2553138	400000	
Al	27	3	45	2.273	ppb	2.273	30.64	184	400000	
K	39	3	45	6032.020	ppb	6032.020	0.76	309678	400000	
Ca	40	2	45	135623.360	ppb	135623.360	0.08	76295390	400000	
V	51	3	72	1.378	ppb	1.378	13.25	1678	2000	
Cr	52	3	72	1.210	ppb	1.210	12.76	2714	5000	
Mn	55	3	72	224.737	ppb	224.737	1.18	97305	10000	
Fe	56	2	72	5.559	ppb	5.559	2.90	26716	10000	
Co	59	3	72	0.677	ppb	0.677	7.71	983	2000	
Ni	60	3	72	2.542	ppb	2.542	8.40	1298	5000	
Cu	63	3	72	1.004	ppb	1.004	10.69	1514	5000	
Zn	66	3	72	5.508	ppb	5.508	1.59	1268	5000	
As	75	3	72	0.839	ppb	0.839	20.18	177	2000	
Se	78	2	72	0.052	ppb	0.052	136.79	7	2000	
Sr	88	3	72	461.633	ppb	461.633	2.00	283262	4000	
Mo	95	3	115	0.313	ppb	0.313	25.44	223	2000	
Ag	107	3	115	0.018	ppb	0.018	54.73	72	100	
Cd	111	3	115	0.052	ppb	0.052	26.76	32	2000	
Sn	120	3	115	0.189	ppb	0.189	17.79	1178	2000	
Sb	121	3	115	0.109	ppb	0.109	55.92	238	1000	
Ba	137	3	115	275.022	ppb	275.022	2.71	79394	5000	
Tl	205	3	193	-0.078	ppb	-0.078	-10.85	498	2000	
(Pb)	206	3	193	-0.021	ppb	-0.021	-62.87	436	100	
(Pb)	207	3	193	-0.094	ppb	-0.094	-6.73	568	100	
Pb	208	3	193	-0.043	ppb	-0.043	-9.08	1837	5000	
Th	232	3	193	1.891	ppb	1.891	8.36	21191	2000	
U	238	3	193	3.601	ppb	3.601	2.72	28109	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4104785	1.36	3936624	104.27	60	120	
Sc (IS)	45	3	HMI He	630300	0.43	609520	103.41	60	120	
Ge Internal standard	72	2	HMI H2	2554037	2.01	2391663	106.79	60	120	
Ge Internal standard	72	3	HMI He	800454	0.75	756863	105.76	60	120	
In Internal Standard	115	3	HMI He	3133211	2.78	2988279	104.85	60	120	
Ir (IS)	193	3	HMI He	7432443	2.16	6996686	106.23	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A
Data File Name	120SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:43:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	102014.154	ppb	102014.154	0.87	11114750	400000	
Mg	24	3	45	72727.141	ppb	72727.141	1.63	4282855	400000	
Al	27	3	45	4.127	ppb	4.127	41.60	227	400000	
K	39	3	45	4721.231	ppb	4721.231	1.99	249300	400000	
Ca	40	2	45	217361.451	ppb	217361.451	2.60	121754262	400000	
V	51	3	72	2.693	ppb	2.693	3.46	2482	2000	
Cr	52	3	72	0.977	ppb	0.977	5.70	2497	5000	
Mn	55	3	72	3.601	ppb	3.601	5.61	1731	10000	
Fe	56	2	72	33.829	ppb	33.829	2.02	71227	10000	
Co	59	3	72	0.295	ppb	0.295	2.64	465	2000	
Ni	60	3	72	3.506	ppb	3.506	7.57	1638	5000	
Cu	63	3	72	1.743	ppb	1.743	5.96	2234	5000	
Zn	66	3	72	2.470	ppb	2.470	15.86	733	5000	
As	75	3	72	1.747	ppb	1.747	6.96	280	2000	
Se	78	2	72	0.191	ppb	0.191	75.26	15	2000	
Sr	88	3	72	795.694	ppb	795.694	0.26	481337	4000	
Mo	95	3	115	0.087	ppb	0.087	68.48	100	2000	
Ag	107	3	115	0.009	ppb	0.009	85.44	55	100	
Cd	111	3	115	0.060	ppb	0.060	64.30	33	2000	
Sn	120	3	115	0.087	ppb	0.087	124.40	1075	2000	
Sb	121	3	115	0.104	ppb	0.104	9.88	232	1000	
Ba	137	3	115	345.175	ppb	345.175	3.14	98281	5000	
Tl	205	3	193	-0.055	ppb	-0.055	-12.81	608	2000	
(Pb)	206	3	193	-0.031	ppb	-0.031	-85.76	416	100	
(Pb)	207	3	193	-0.088	ppb	-0.088	-7.97	573	100	
Pb	208	3	193	-0.046	ppb	-0.046	-30.39	1801	5000	
Th	232	3	193	0.503	ppb	0.503	33.63	11696	2000	
U	238	3	193	4.539	ppb	4.539	2.75	34546	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4087944	0.45	3936624	103.84	60	120	
Sc (IS)	45	3	HMI He	632316	0.83	609520	103.74	60	120	
Ge Internal standard	72	2	HMI H2	2532744	0.52	2391663	105.90	60	120	
Ge Internal standard	72	3	HMI He	789367	0.35	756863	104.29	60	120	
In Internal Standard	115	3	HMI He	3091407	2.44	2988279	103.45	60	120	
Ir (IS)	193	3	HMI He	7373963	1.34	6996686	105.39	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A
Data File Name	121SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:45:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-175.75	3	2000	
Na	23	3	45	98552.440	ppb	98552.440	1.67	10610049	400000	
Mg	24	3	45	72312.198	ppb	72312.198	3.31	4208335	400000	
Al	27	3	45	2.191	ppb	2.191	86.30	180	400000	
K	39	3	45	5760.677	ppb	5760.677	1.15	294419	400000	
Ca	40	2	45	192651.345	ppb	192651.345	1.26	108820163	400000	
V	51	3	72	1.505	ppb	1.505	9.79	1729	2000	
Cr	52	3	72	0.333	ppb	0.333	20.03	1994	5000	
Mn	55	3	72	180.470	ppb	180.470	1.51	76877	10000	
Fe	56	2	72	511.301	ppb	511.301	2.44	834908	10000	
Co	59	3	72	3.051	ppb	3.051	0.41	4094	2000	
Ni	60	3	72	5.010	ppb	5.010	3.66	2191	5000	
Cu	63	3	72	1.061	ppb	1.061	7.33	1546	5000	
Zn	66	3	72	5.938	ppb	5.938	7.49	1319	5000	
As	75	3	72	0.835	ppb	0.835	28.84	173	2000	
Se	78	2	72	0.107	ppb	0.107	108.59	11	2000	
Sr	88	3	72	775.951	ppb	775.951	1.06	468021	4000	
Mo	95	3	115	0.222	ppb	0.222	27.95	175	2000	
Ag	107	3	115	0.007	ppb	0.007	171.31	52	100	
Cd	111	3	115	0.070	ppb	0.070	31.09	37	2000	
Sn	120	3	115	2.433	ppb	2.433	3.37	3152	2000	
Sb	121	3	115	0.028	ppb	0.028	102.40	168	1000	
Ba	137	3	115	339.505	ppb	339.505	1.76	98014	5000	
Tl	205	3	193	-0.073	ppb	-0.073	-11.90	520	2000	
(Pb)	206	3	193	0.258	ppb	0.258	12.00	888	100	
(Pb)	207	3	193	0.256	ppb	0.256	12.71	1068	100	
Pb	208	3	193	0.292	ppb	0.292	5.94	4030	5000	
Th	232	3	193	0.087	ppb	0.087	69.49	8874	2000	
U	238	3	193	4.322	ppb	4.322	1.48	32870	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4122301	0.90	3936624	104.72	60	120	
Sc (IS)	45	3	HMI He	624794	0.97	609520	102.51	60	120	
Ge Internal standard	72	2	HMI H2	2558048	2.23	2391663	106.96	60	120	
Ge Internal standard	72	3	HMI He	787066	0.34	756863	103.99	60	120	
In Internal Standard	115	3	HMI He	3133105	0.76	2988279	104.85	60	120	
Ir (IS)	193	3	HMI He	7343874	1.73	6996686	104.96	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-1-A
Data File Name	122SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:47:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.084	ppb	-0.084	-85.81	2	2000	
Na	23	3	45	101940.386	ppb	101940.386	0.37	10959921	400000	
Mg	24	3	45	75525.847	ppb	75525.847	1.45	4389183	400000	
Al	27	3	45	5.155	ppb	5.155	69.67	247	400000	
K	39	3	45	4774.749	ppb	4774.749	0.17	248499	400000	
Ca	40	2	45	199516.995	ppb	199516.995	1.72	111869428	400000	
V	51	3	72	1.184	ppb	1.184	3.42	1524	2000	
Cr	52	3	72	0.298	ppb	0.298	37.62	1963	5000	
Mn	55	3	72	388.557	ppb	388.557	0.60	164868	10000	
Fe	56	2	72	43.963	ppb	43.963	0.85	89060	10000	
Co	59	3	72	0.225	ppb	0.225	11.17	370	2000	
Ni	60	3	72	8.673	ppb	8.673	2.29	3540	5000	
Cu	63	3	72	1.345	ppb	1.345	9.45	1824	5000	
Zn	66	3	72	1.756	ppb	1.756	20.00	608	5000	
As	75	3	72	0.624	ppb	0.624	14.63	148	2000	
Se	78	2	72	0.151	ppb	0.151	43.24	13	2000	
Sr	88	3	72	793.526	ppb	793.526	0.60	477403	4000	
Mo	95	3	115	0.148	ppb	0.148	30.71	133	2000	
Ag	107	3	115	0.018	ppb	0.018	69.05	72	100	
Cd	111	3	115	0.140	ppb	0.140	35.95	55	2000	
Sn	120	3	115	-0.002	ppb	-0.002	-2094.61	998	2000	
Sb	121	3	115	-0.016	ppb	-0.016	-30.24	128	1000	
Ba	137	3	115	340.379	ppb	340.379	0.90	97170	5000	
Tl	205	3	193	0.028	ppb	0.028	58.66	1013	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-808.68	458	100	
(Pb)	207	3	193	-0.011	ppb	-0.011	-335.53	680	100	
Pb	208	3	193	0.011	ppb	0.011	71.30	2162	5000	
Th	232	3	193	-0.095	ppb	-0.095	-75.97	7627	2000	
U	238	3	193	3.945	ppb	3.945	1.70	30093	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4092134	0.89	3936624	103.95	60	120	
Sc (IS)	45	3	HMI He	623957	0.69	609520	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2585202	2.18	2391663	108.09	60	120	
Ge Internal standard	72	3	HMI He	785067	0.53	756863	103.73	60	120	
In Internal Standard	115	3	HMI He	3098117	1.03	2988279	103.68	60	120	
Ir (IS)	193	3	HMI He	7315630	1.22	6996686	104.56	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-2-A
Data File Name	123SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:49:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-83.88	2	2000	
Na	23	3	45	84633.718	ppb	84633.718	1.87	9229226	400000	
Mg	24	3	45	67185.854	ppb	67185.854	1.23	3958817	400000	
Al	27	3	45	2.382	ppb	2.382	56.76	187	400000	
K	39	3	45	4243.423	ppb	4243.423	1.34	227074	400000	
Ca	40	2	45	200297.710	ppb	200297.710	3.14	112649561	400000	
V	51	3	72	2.468	ppb	2.468	6.18	2346	2000	
Cr	52	3	72	0.367	ppb	0.367	22.65	2031	5000	
Mn	55	3	72	3.443	ppb	3.443	1.65	1668	10000	
Fe	56	2	72	8.777	ppb	8.777	6.97	32363	10000	
Co	59	3	72	0.121	ppb	0.121	12.67	235	2000	
Ni	60	3	72	2.026	ppb	2.026	12.84	1090	5000	
Cu	63	3	72	1.055	ppb	1.055	4.42	1548	5000	
Zn	66	3	72	1.356	ppb	1.356	3.28	545	5000	
As	75	3	72	0.913	ppb	0.913	15.94	183	2000	
Se	78	2	72	0.050	ppb	0.050	192.73	7	2000	
Sr	88	3	72	721.521	ppb	721.521	1.16	437500	4000	
Mo	95	3	115	0.080	ppb	0.080	74.83	97	2000	
Ag	107	3	115	0.009	ppb	0.009	134.77	55	100	
Cd	111	3	115	0.023	ppb	0.023	168.72	23	2000	
Sn	120	3	115	-0.283	ppb	-0.283	-30.80	751	2000	
Sb	121	3	115	0.004	ppb	0.004	1482.73	145	1000	
Ba	137	3	115	366.868	ppb	366.868	1.52	104363	5000	
Tl	205	3	193	-0.042	ppb	-0.042	-37.34	665	2000	
(Pb)	206	3	193	-0.008	ppb	-0.008	-677.20	450	100	
(Pb)	207	3	193	-0.036	ppb	-0.036	-48.53	641	100	
Pb	208	3	193	-0.011	ppb	-0.011	-163.09	2017	5000	
Th	232	3	193	-0.122	ppb	-0.122	-20.69	7430	2000	
U	238	3	193	4.375	ppb	4.375	2.07	33036	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4105639	2.96	3936624	104.29	60	120	
Sc (IS)	45	3	HMI He	632643	0.69	609520	103.79	60	120	
Ge Internal standard	72	2	HMI H2	2595653	1.31	2391663	108.53	60	120	
Ge Internal standard	72	3	HMI He	791231	0.67	756863	104.54	60	120	
In Internal Standard	115	3	HMI He	3087670	1.45	2988279	103.33	60	120	
Ir (IS)	193	3	HMI He	7298731	1.94	6996686	104.32	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	124_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:51:05-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.344	ppb	8.529	1888	50	94.7	90	110	
Na	23	3	45	47119.933	ppb	1.014	5083734	51000	92.4	90	110	
Mg	24	3	45	10011.521	ppb	0.948	583082	11000	91.0	90	110	
Al	27	3	45	1000.806	ppb	1.548	22868	1000	100.1	90	110	
K	39	3	45	10142.029	ppb	1.259	496810	11000	92.2	90	110	
Ca	40	2	45	10097.776	ppb	1.701	5744410	11000	91.8	90	110	
V	51	3	72	49.991	ppb	1.931	31069	50	100.0	90	110	
Cr	52	3	72	50.789	ppb	1.060	39466	50	101.6	90	110	
Mn	55	3	72	51.409	ppb	2.359	21292	50	102.8	90	110	
Fe	56	2	72	1016.835	ppb	0.450	1583593	1000	101.7	90	110	
Co	59	3	72	50.381	ppb	0.975	64198	50	100.8	90	110	
Ni	60	3	72	50.231	ppb	2.295	18321	50	100.5	90	110	
Cu	63	3	72	50.659	ppb	1.348	49400	50	101.3	90	110	
Zn	66	3	72	50.232	ppb	2.290	8538	50	100.5	90	110	
As	75	3	72	51.485	ppb	5.304	5848	50	103.0	90	110	
Se	78	2	72	50.879	ppb	3.405	2889	50	101.8	90	110	
Sr	88	3	72	103.201	ppb	1.149	60370	100	103.2	90	110	
Mo	95	3	115	48.972	ppb	0.996	26693	50	97.9	90	110	
Ag	107	3	115	48.302	ppb	2.700	90771	50	96.6	90	110	
Cd	111	3	115	49.941	ppb	1.649	13719	50	99.9	90	110	
Sn	120	3	115	48.131	ppb	2.404	43491	50	96.3	90	110	
Sb	121	3	115	48.648	ppb	2.102	42892	50	97.3	90	110	
Ba	137	3	115	48.690	ppb	4.864	14186	50	97.4	90	110	
Tl	205	3	193	47.620	ppb	0.948	236493	50	95.2	90	110	
(Pb)	206	3	193	47.713	ppb	2.133	79177	50	95.4	90	110	
(Pb)	207	3	193	47.473	ppb	1.283	70028	50	94.9	90	110	
Pb	208	3	193	47.635	ppb	1.051	319606	50	95.3	90	110	
Th	232	3	193	47.208	ppb	1.850	326575	50	94.4	90	110	
U	238	3	193	47.719	ppb	0.259	342220	50	95.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4132637	1.17	3936624	104.98	60	120	
Sc (IS)	45	3	HMI He	624578	0.84	609520	102.47	60	120	
Ge Internal standard	72	2	HMI H2	2465729	1.40	2391663	103.10	60	120	
Ge Internal standard	72	3	HMI He	760529	1.00	756863	100.48	60	120	
In Internal Standard	115	3	HMI He	3142516	1.14	2988279	105.16	60	120	
Ir (IS)	193	3	HMI He	7404509	0.95	6996686	105.83	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	125_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:52:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.126	ppb	0.0	0	0.5	
Na	23	3	45	61.091	ppb	4.1	30594	25	>RL
Mg	24	3	45	7.807	ppb	17.8	1235	25	
Al	27	3	45	-0.860	ppb	-156.0	110	15	
K	39	3	45	-28.094	ppb	-75.8	26615	50	
V	51	3	72	0.152	ppb	30.6	868	1	
Cr	52	3	72	0.053	ppb	178.4	1753	1	
Mn	55	3	72	-0.011	ppb	-519.6	188	0.5	
Co	59	3	72	0.008	ppb	116.6	83	0.5	
Ni	60	3	72	0.129	ppb	50.6	375	1	
Cu	63	3	72	-0.042	ppb	-165.8	436	1	
Zn	66	3	72	0.115	ppb	253.7	327	5	
As	75	3	72	-0.147	ppb	-45.9	58	1	
Se	78	2	72	0.067	ppb	53.5	8	1	
Sr	88	3	72	0.018	ppb	140.3	265	0.5	
Mo	95	3	115	0.022	ppb	89.3	67	0.5	
Ag	107	3	115	0.010	ppb	39.8	57	1	
Cd	111	3	115	-0.034	ppb	-111.3	8	0.5	
Sn	120	3	115	-0.025	ppb	-113.7	993	1	
Sb	121	3	115	-0.021	ppb	-199.5	125	0.6	
Ba	137	3	115	-0.023	ppb	-314.1	97	0.5	
Tl	205	3	193	-0.088	ppb	-8.1	448	0.1	
(Pb)	206	3	193	-0.071	ppb	-47.3	352	1	
(Pb)	207	3	193	-0.129	ppb	-14.4	515	1	
Pb	208	3	193	-0.068	ppb	-25.1	1663	0.5	
Th	232	3	193	1.626	ppb	12.4	19330	1	>RL
U	238	3	193	0.003	ppb	714.6	2389	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4125760	1.81	3936624	104.80	60	120	
Sc (IS)	45	3	HMI He	621638	0.30	609520	101.99	60	120	
Ge Internal standard	72	2	HMI H2	2490140	0.77	2391663	104.12	60	120	
Ge Internal standard	72	3	HMI He	775683	0.28	756863	102.49	60	120	
In Internal Standard	115	3	HMI He	3143264	1.07	2988279	105.19	60	120	
Ir (IS)	193	3	HMI He	7408693	0.59	6996686	105.89	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-3-A
Data File Name	126SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:54:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-10023.55	5	2000	
Na	23	3	45	167713.615	ppb	167713.615	0.96	18111297	400000	
Mg	24	3	45	92788.410	ppb	92788.410	1.71	5421324	400000	
Al	27	3	45	3.621	ppb	3.621	44.91	214	400000	
K	39	3	45	5653.897	ppb	5653.897	0.22	290655	400000	
Ca	40	2	45	251533.861	ppb	251533.861	0.62	142164751	400000	
V	51	3	72	2.552	ppb	2.552	5.36	2389	2000	
Cr	52	3	72	0.616	ppb	0.616	6.14	2214	5000	
Mn	55	3	72	23.342	ppb	23.342	1.50	10124	10000	
Fe	56	2	72	22.755	ppb	22.755	1.25	53912	10000	
Co	59	3	72	3.998	ppb	3.998	0.50	5347	2000	
Ni	60	3	72	70.012	ppb	70.012	1.18	26327	5000	
Cu	63	3	72	4.017	ppb	4.017	4.41	4505	5000	
Zn	66	3	72	1.379	ppb	1.379	9.21	546	5000	
As	75	3	72	1.192	ppb	1.192	15.48	215	2000	
Se	78	2	72	0.817	ppb	0.817	11.44	52	2000	
Sr	88	3	72	948.121	ppb	948.121	0.48	572411	4000	
Mo	95	3	115	0.348	ppb	0.348	22.40	245	2000	
Ag	107	3	115	0.008	ppb	0.008	130.18	53	100	
Cd	111	3	115	0.027	ppb	0.027	178.52	25	2000	
Sn	120	3	115	-0.064	ppb	-0.064	-102.22	963	2000	
Sb	121	3	115	0.032	ppb	0.032	130.36	173	1000	
Ba	137	3	115	516.090	ppb	516.090	0.81	150268	5000	
Tl	205	3	193	-0.092	ppb	-0.092	-5.57	428	2000	
(Pb)	206	3	193	2.899	ppb	2.899	7.04	5245	100	
(Pb)	207	3	193	2.590	ppb	2.590	0.93	4480	100	
Pb	208	3	193	2.797	ppb	2.797	1.91	20735	5000	
Th	232	3	193	0.320	ppb	0.320	45.84	10494	2000	
U	238	3	193	5.347	ppb	5.347	3.10	40392	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124713	0.37	3936624	104.78	60	120	
Sc (IS)	45	3	HMI He	627313	1.28	609520	102.92	60	120	
Ge Internal standard	72	2	HMI H2	2542646	0.73	2391663	106.31	60	120	
Ge Internal standard	72	3	HMI He	787880	0.23	756863	104.10	60	120	
In Internal Standard	115	3	HMI He	3160918	1.08	2988279	105.78	60	120	
Ir (IS)	193	3	HMI He	7394626	0.37	6996686	105.69	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-1-A
Data File Name	127SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:56:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-82.10	2	2000	
Na	23	3	45	67189.015	ppb	67189.015	1.97	7256437	400000	
Mg	24	3	45	53382.977	ppb	53382.977	1.22	3114227	400000	
Al	27	3	45	5.833	ppb	5.833	49.84	264	400000	
K	39	3	45	3533.542	ppb	3533.542	1.13	191854	400000	
Ca	40	2	45	119678.828	ppb	119678.828	0.79	66870377	400000	
V	51	3	72	0.740	ppb	0.740	12.97	1258	2000	
Cr	52	3	72	0.199	ppb	0.199	87.72	1904	5000	
Mn	55	3	72	0.606	ppb	0.606	10.22	456	10000	
Fe	56	2	72	9.879	ppb	9.879	7.64	33531	10000	
Co	59	3	72	0.005	ppb	0.005	92.71	82	2000	
Ni	60	3	72	0.102	ppb	0.102	89.40	373	5000	
Cu	63	3	72	0.696	ppb	0.696	6.51	1189	5000	
Zn	66	3	72	1.186	ppb	1.186	41.07	516	5000	
As	75	3	72	0.298	ppb	0.298	54.43	112	2000	
Se	78	2	72	0.519	ppb	0.519	20.62	35	2000	
Sr	88	3	72	617.601	ppb	617.601	1.00	375144	4000	
Mo	95	3	115	0.044	ppb	0.044	124.57	78	2000	
Ag	107	3	115	0.018	ppb	0.018	8.19	72	100	
Cd	111	3	115	-0.015	ppb	-0.015	-182.34	13	2000	
Sn	120	3	115	-0.225	ppb	-0.225	-34.44	810	2000	
Sb	121	3	115	-0.001	ppb	-0.001	-1018.65	142	1000	
Ba	137	3	115	215.791	ppb	215.791	2.05	62098	5000	
Tl	205	3	193	-0.106	ppb	-0.106	-8.32	356	2000	
(Pb)	206	3	193	-0.016	ppb	-0.016	-149.97	436	100	
(Pb)	207	3	193	-0.072	ppb	-0.072	-24.05	590	100	
Pb	208	3	193	-0.033	ppb	-0.033	-53.75	1872	5000	
Th	232	3	193	0.026	ppb	0.026	444.65	8412	2000	
U	238	3	193	2.234	ppb	2.234	2.41	18032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4077153	1.56	3936624	103.57	60	120	
Sc (IS)	45	3	HMI He	626213	1.65	609520	102.74	60	120	
Ge Internal standard	72	2	HMI H2	2547770	0.61	2391663	106.53	60	120	
Ge Internal standard	72	3	HMI He	792516	0.73	756863	104.71	60	120	
In Internal Standard	115	3	HMI He	3121447	1.28	2988279	104.46	60	120	
Ir (IS)	193	3	HMI He	7307098	0.83	6996686	104.44	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-2-A
Data File Name	128SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T18:58:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-164.33	3	2000	
Na	23	3	45	76608.289	ppb	76608.289	2.48	8265446	400000	
Mg	24	3	45	61962.030	ppb	61962.030	0.83	3611624	400000	
Al	27	3	45	2.480	ppb	2.480	55.30	187	400000	
K	39	3	45	4438.322	ppb	4438.322	2.10	233629	400000	
Ca	40	2	45	138987.728	ppb	138987.728	1.70	79814627	400000	
V	51	3	72	0.820	ppb	0.820	21.27	1309	2000	
Cr	52	3	72	0.227	ppb	0.227	49.79	1926	5000	
Mn	55	3	72	0.217	ppb	0.217	73.69	290	10000	
Fe	56	2	72	2.843	ppb	2.843	35.50	21796	10000	
Co	59	3	72	0.033	ppb	0.033	10.31	118	2000	
Ni	60	3	72	0.445	ppb	0.445	25.33	501	5000	
Cu	63	3	72	0.957	ppb	0.957	6.66	1453	5000	
Zn	66	3	72	-0.066	ppb	-0.066	-412.34	303	5000	
As	75	3	72	0.581	ppb	0.581	51.46	145	2000	
Se	78	2	72	0.754	ppb	0.754	28.07	47	2000	
Sr	88	3	72	689.857	ppb	689.857	2.42	419161	4000	
Mo	95	3	115	0.000	ppb	0.000	-7232.63	53	2000	
Ag	107	3	115	0.019	ppb	0.019	48.69	73	100	
Cd	111	3	115	-0.021	ppb	-0.021	-102.96	12	2000	
Sn	120	3	115	-0.258	ppb	-0.258	-22.15	775	2000	
Sb	121	3	115	0.002	ppb	0.002	902.21	143	1000	
Ba	137	3	115	246.724	ppb	246.724	0.30	70377	5000	
Tl	205	3	193	-0.099	ppb	-0.099	-19.75	390	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-36.98	380	100	
(Pb)	207	3	193	-0.109	ppb	-0.109	-56.30	536	100	
Pb	208	3	193	-0.072	ppb	-0.072	-27.86	1618	5000	
Th	232	3	193	-0.074	ppb	-0.074	-69.70	7752	2000	
U	238	3	193	3.366	ppb	3.366	3.01	25994	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4191098	1.88	3936624	106.46	60	120	
Sc (IS)	45	3	HMI He	625814	1.00	609520	102.67	60	120	
Ge Internal standard	72	2	HMI H2	2488871	1.97	2391663	104.06	60	120	
Ge Internal standard	72	3	HMI He	792936	1.09	756863	104.77	60	120	
In Internal Standard	115	3	HMI He	3094224	0.66	2988279	103.55	60	120	
Ir (IS)	193	3	HMI He	7308322	0.31	6996686	104.45	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A
Data File Name	129SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:00:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.085	ppb	-0.085	-84.20	2	2000	
Na	23	3	45	151785.087	ppb	151785.087	1.61	16327451	400000	
Mg	24	3	45	57987.729	ppb	57987.729	2.04	3374672	400000	
Al	27	3	45	4.991	ppb	4.991	40.71	244	400000	
K	39	3	45	4805.759	ppb	4805.759	1.21	250245	400000	
Ca	40	2	45	199701.563	ppb	199701.563	1.17	113426248	400000	
V	51	3	72	2.923	ppb	2.923	5.92	2619	2000	
Cr	52	3	72	0.804	ppb	0.804	32.96	2354	5000	
Mn	55	3	72	278.088	ppb	278.088	0.98	118291	10000	
Fe	56	2	72	52.100	ppb	52.100	1.74	100859	10000	
Co	59	3	72	1.642	ppb	1.642	2.79	2236	2000	
Ni	60	3	72	38.794	ppb	38.794	1.83	14715	5000	
Cu	63	3	72	1.156	ppb	1.156	4.54	1639	5000	
Zn	66	3	72	7.252	ppb	7.252	8.82	1543	5000	
As	75	3	72	1.395	ppb	1.395	30.25	238	2000	
Se	78	2	72	0.530	ppb	0.530	20.73	35	2000	
Sr	88	3	72	1028.343	ppb	1028.343	0.31	619897	4000	
Mo	95	3	115	0.352	ppb	0.352	15.96	245	2000	
Ag	107	3	115	0.007	ppb	0.007	122.21	52	100	
Cd	111	3	115	0.010	ppb	0.010	385.06	20	2000	
Sn	120	3	115	-0.220	ppb	-0.220	-3.97	816	2000	
Sb	121	3	115	0.023	ppb	0.023	108.70	163	1000	
Ba	137	3	115	406.082	ppb	406.082	0.55	117040	5000	
Tl	205	3	193	-0.089	ppb	-0.089	-6.97	443	2000	
(Pb)	206	3	193	0.028	ppb	0.028	77.63	511	100	
(Pb)	207	3	193	-0.040	ppb	-0.040	-41.58	640	100	
Pb	208	3	193	0.000	ppb	0.000	14474.97	2102	5000	
Th	232	3	193	-0.167	ppb	-0.167	-35.43	7164	2000	
U	238	3	193	3.650	ppb	3.650	3.17	28114	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4145165	1.21	3936624	105.30	60	120	
Sc (IS)	45	3	HMI He	624769	0.68	609520	102.50	60	120	
Ge Internal standard	72	2	HMI H2	2551311	2.01	2391663	106.68	60	120	
Ge Internal standard	72	3	HMI He	786718	1.06	756863	103.94	60	120	
In Internal Standard	115	3	HMI He	3128326	1.00	2988279	104.69	60	120	
Ir (IS)	193	3	HMI He	7343873	2.48	6996686	104.96	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-3-A
Data File Name	130SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:01:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.044	ppb	-0.044	-320.02	3	2000	
Na	23	3	45	18530.328	ppb	18530.328	2.85	2013098	400000	
Mg	24	3	45	13996.982	ppb	13996.982	3.56	814492	400000	
Al	27	3	45	2.342	ppb	2.342	24.02	184	400000	
K	39	3	45	5985.919	ppb	5985.919	1.24	304625	400000	
Ca	40	2	45	55740.691	ppb	55740.691	0.88	31400928	400000	
V	51	3	72	8.551	ppb	8.551	3.14	6210	2000	
Cr	52	3	72	19.163	ppb	19.163	0.67	16650	5000	
Mn	55	3	72	0.370	ppb	0.370	23.07	356	10000	
Fe	56	2	72	9.008	ppb	9.008	10.22	32146	10000	
Co	59	3	72	0.080	ppb	0.080	2.67	182	2000	
Ni	60	3	72	-0.149	ppb	-0.149	-132.07	280	5000	
Cu	63	3	72	0.132	ppb	0.132	81.73	623	5000	
Zn	66	3	72	0.438	ppb	0.438	54.77	390	5000	
As	75	3	72	2.031	ppb	2.031	31.26	315	2000	
Se	78	2	72	1.926	ppb	1.926	11.70	117	2000	
Sr	88	3	72	283.615	ppb	283.615	1.17	172866	4000	
Mo	95	3	115	1.184	ppb	1.184	8.42	696	2000	
Ag	107	3	115	0.004	ppb	0.004	190.97	47	100	
Cd	111	3	115	-0.009	ppb	-0.009	-215.50	15	2000	
Sn	120	3	115	-0.199	ppb	-0.199	-22.03	836	2000	
Sb	121	3	115	0.181	ppb	0.181	22.68	302	1000	
Ba	137	3	115	49.674	ppb	49.674	1.61	14431	5000	
Tl	205	3	193	-0.104	ppb	-0.104	-6.73	368	2000	
(Pb)	206	3	193	-0.085	ppb	-0.085	-21.40	325	100	
(Pb)	207	3	193	-0.103	ppb	-0.103	-39.14	546	100	
Pb	208	3	193	-0.066	ppb	-0.066	-27.79	1659	5000	
Th	232	3	193	-0.227	ppb	-0.227	-24.22	6748	2000	
U	238	3	193	2.231	ppb	2.231	1.17	18049	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4108230	0.60	3936624	104.36	60	120	
Sc (IS)	45	3	HMI He	624423	1.44	609520	102.45	60	120	
Ge Internal standard	72	2	HMI H2	2548773	2.07	2391663	106.57	60	120	
Ge Internal standard	72	3	HMI He	794599	0.40	756863	104.99	60	120	
In Internal Standard	115	3	HMI He	3133731	1.29	2988279	104.87	60	120	
Ir (IS)	193	3	HMI He	7322261	1.70	6996686	104.65	60	120	

Sample Report

Sample Table

Sample Name	160-49634-A-3-A
Data File Name	131SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:03:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-7084.51	5	2000	
Na	23	3	45	13170.019	ppb	13170.019	0.97	1441918	400000	
Mg	24	3	45	12221.328	ppb	12221.328	2.14	713301	400000	
Al	27	3	45	32.064	ppb	32.064	11.05	861	400000	
K	39	3	45	2176.788	ppb	2176.788	2.98	128967	400000	
Ca	40	2	45	53271.089	ppb	53271.089	0.71	30181550	400000	
V	51	3	72	0.566	ppb	0.566	24.46	1136	2000	
Cr	52	3	72	0.708	ppb	0.708	17.37	2274	5000	
Mn	55	3	72	36.325	ppb	36.325	2.90	15568	10000	
Fe	56	2	72	29.972	ppb	29.972	1.76	66314	10000	
Co	59	3	72	0.194	ppb	0.194	6.65	328	2000	
Ni	60	3	72	0.108	ppb	0.108	200.37	371	5000	
Cu	63	3	72	11.922	ppb	11.922	3.19	12353	5000	
Zn	66	3	72	25.789	ppb	25.789	4.32	4670	5000	
As	75	3	72	0.006	ppb	0.006	4201.88	77	2000	
Se	78	2	72	0.377	ppb	0.377	33.79	27	2000	
Sr	88	3	72	156.359	ppb	156.359	1.17	94142	4000	
Mo	95	3	115	50.551	ppb	50.551	2.81	27347	2000	
Ag	107	3	115	0.012	ppb	0.012	101.80	62	100	
Cd	111	3	115	0.494	ppb	0.494	28.38	152	2000	
Sn	120	3	115	-0.236	ppb	-0.236	-24.29	801	2000	
Sb	121	3	115	0.079	ppb	0.079	59.17	212	1000	
Ba	137	3	115	56.022	ppb	56.022	0.90	16194	5000	
Tl	205	3	193	-0.092	ppb	-0.092	-8.25	423	2000	
(Pb)	206	3	193	0.023	ppb	0.023	228.20	498	100	
(Pb)	207	3	193	-0.049	ppb	-0.049	-23.68	620	100	
Pb	208	3	193	0.012	ppb	0.012	294.61	2156	5000	
Th	232	3	193	-0.238	ppb	-0.238	-15.41	6627	2000	
U	238	3	193	51.227	ppb	51.227	4.16	360453	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4131755	0.77	3936624	104.96	60	120	
Sc (IS)	45	3	HMI He	626147	1.04	609520	102.73	60	120	
Ge Internal standard	72	2	HMI H2	2579091	0.79	2391663	107.84	60	120	
Ge Internal standard	72	3	HMI He	783954	0.37	756863	103.58	60	120	
In Internal Standard	115	3	HMI He	3119851	1.68	2988279	104.40	60	120	
Ir (IS)	193	3	HMI He	7271491	1.91	6996686	103.93	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608663/1-A
Data File Name	132_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:05:38-06:00
Sample Type	Blank
Dilution	1
Comment	608663 soil 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.126	ppb	-1.47853E-06	0	0.5
Na	23	3	45	116.070	ppb	1.205243455	36898	25
Mg	24	3	45	25.330	ppb	20.00976072	2276	25
Al	27	3	45	9.585	ppb	24.5009312	350	15
K	39	3	45	-22.823	ppb	-89.40554613	27177	50
Ca	40	2	45	115.298	ppb	4.610579821	92580	200
V	51	3	72	-0.070	ppb	-122.291256	731	1
Cr	52	3	72	1.561	ppb	14.54506082	2902	1
Mn	55	3	72	1.097	ppb	19.21295524	653	0.5
Fe	56	2	72	24.859	ppb	4.142000334	56391	50
Co	59	3	72	0.014	ppb	105.8046466	92	0.5
Ni	60	3	72	0.023	ppb	829.1350658	337	1
Cu	63	3	72	1.750	ppb	3.882699469	2206	1
Zn	66	3	72	3.931	ppb	13.67322508	966	5
As	75	3	72	-0.380	ppb	-35.1517608	32	1
(Se)	78	3	72	-0.074	ppb	-951.0679512	20	1
Sr	88	3	72	0.530	ppb	21.65422238	570	0.5
Mo	95	3	115	0.275	ppb	16.82335094	203	0.5
Ag	107	3	115	0.006	ppb	190.9061164	50	1
Cd	111	3	115	-0.033	ppb	-31.05502038	8	0.5
Sn	120	3	115	9.393	ppb	2.484415903	9284	1
Sb	121	3	115	-0.088	ppb	-27.7803613	67	0.6
Ba	137	3	115	0.416	ppb	9.717369596	223	0.5
Tl	205	3	193	-0.093	ppb	-16.34933833	418	0.1
(Pb)	206	3	193	0.489	ppb	17.76979082	1264	1
(Pb)	207	3	193	0.417	ppb	10.38063903	1299	1
Pb	208	3	193	0.492	ppb	9.661192083	5344	0.5
Th	232	3	193	-0.247	ppb	-25.70722489	6625	1
U	238	3	193	0.035	ppb	48.83319259	2586	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4103806	1.21	3936624	104.25	60	120	
Sc (IS)	45	3	HMI He	628944	0.28	609520	103.19	60	120	
Ge Internal standard	72	2	HMI H2	2504540	0.97	2391663	104.72	60	120	
Ge Internal standard	72	3	HMI He	776893	0.73	756863	102.65	60	120	
In Internal Standard	115	3	HMI He	3135642	0.88	2988279	104.93	60	120	
Ir (IS)	193	3	HMI He	7333204	1.83	6996686	104.81	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608663/2-A
Data File Name	133_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:07:28-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608663 soil 6020b
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	183.722	183.722	ppb	3.704	7293	40	459.3	80	120	>+/-20%
Na	23	3	45	3744.215	3744.215	ppb	1.006	415890	40	9360.5	80	120	>+/-20%
Mg	24	3	45	3386.854	3386.854	ppb	0.321	192982	40	8467.1	80	120	>+/-20%
Al	27	3	45	3652.572	3652.572	ppb	0.887	81102	40	9131.4	80	120	>+/-20%
K	39	3	45	3703.557	3703.557	ppb	1.640	194389	40	9258.9	80	120	>+/-20%
Ca	40	2	45	3864.873	3864.873	ppb	1.242	2167278	40	9662.2	80	120	>+/-20%
V	51	3	72	182.326	182.326	ppb	1.295	112943	40	455.8	80	120	>+/-20%
Cr	52	3	72	190.138	190.138	ppb	1.631	145227	40	475.3	80	120	>+/-20%
Mn	55	3	72	190.273	190.273	ppb	1.843	79450	40	475.7	80	120	>+/-20%
Fe	56	2	72	3613.254	3613.254	ppb	1.263	5712154	40	9033.1	80	120	>+/-20%
(Fe)	56	3	72	3723.731	3723.731	ppb	0.299	2443840	40	9309.3	80	120	>+/-20%
Co	59	3	72	187.101	187.101	ppb	1.306	241701	40	467.8	80	120	>+/-20%
Ni	60	3	72	182.434	182.434	ppb	0.389	66665	40	456.1	80	120	>+/-20%
Cu	63	3	72	190.936	190.936	ppb	1.287	187590	40	477.3	80	120	>+/-20%
Zn	66	3	72	188.157	188.157	ppb	1.763	31609	40	470.4	80	120	>+/-20%
As	75	3	72	186.861	186.861	ppb	3.539	21346	40	467.2	80	120	>+/-20%
Se	78	2	72	188.047	188.047	ppb	1.519	10914	40	470.1	80	120	>+/-20%
(Se)	78	3	72	195.886	195.886	ppb	4.044	1381	40	489.7	80	120	>+/-20%
Sr	88	3	72	378.255	378.255	ppb	1.109	223813	40	945.6	80	120	>+/-20%
Mo	95	3	115	180.569	180.569	ppb	2.022	97101	40	451.4	80	120	>+/-20%
Ag	107	3	115	185.733	185.733	ppb	2.342	344771	40	464.3	80	120	>+/-20%
Cd	111	3	115	182.527	182.527	ppb	1.518	49496	40	456.3	80	120	>+/-20%
Sn	120	3	115	181.819	181.819	ppb	3.146	159527	40	454.5	80	120	>+/-20%
Sb	121	3	115	182.734	182.734	ppb	2.037	158780	40	456.8	80	120	>+/-20%
Ba	137	3	115	189.926	189.926	ppb	3.428	54384	40	474.8	80	120	>+/-20%
Tl	205	3	193	181.681	181.681	ppb	0.412	885028	40	454.2	80	120	>+/-20%
(Pb)	206	3	193	185.046	185.046	ppb	1.868	300755	40	462.6	80	120	>+/-20%
(Pb)	207	3	193	180.077	180.077	ppb	1.371	259344	40	450.2	80	120	>+/-20%
Pb	208	3	193	183.250	183.250	ppb	1.336	1203492	40	458.1	80	120	>+/-20%
Th	232	3	193	182.084	182.084	ppb	1.979	1215742	40	455.2	80	120	>+/-20%
U	238	3	193	191.309	191.309	ppb	1.920	1342406	40	478.3	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4041763	0.92	3936624	102.67	60	120	
Sc (IS)	45	3	HMI He	609436	0.89	609520	99.99	60	120	
Ge Internal standard	72	2	HMI H2	2522778	0.93	2391663	105.48	60	120	
Ge Internal standard	72	3	HMI He	771636	0.28	756863	101.95	60	120	
In Internal Standard	115	3	HMI He	3105731	2.55	2988279	103.93	60	120	
Ir (IS)	193	3	HMI He	7283659	1.27	6996686	104.10	60	120	

Sample Report

Sample Table

Sample Name	GB 280-608265/1-B
Data File Name	134SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:09:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.490	ppb	0.490	110.77	25	2000	
Na	23	3	45	485.327	ppb	485.327	2.53	75365	400000	
Mg	24	3	45	2623.047	ppb	2623.047	0.48	151493	400000	
Al	27	3	45	3606.027	ppb	3606.027	1.18	81059	400000	
K	39	3	45	1951.163	ppb	1951.163	2.09	116800	400000	
Ca	40	2	45	7741.449	ppb	7741.449	3.79	4387317	400000	
V	51	3	72	8.544	ppb	8.544	2.15	6020	2000	
Cr	52	3	72	32.778	ppb	32.778	1.74	26420	5000	
Mn	55	3	72	476.551	ppb	476.551	1.67	198500	10000	
Fe	56	2	72	36245.110	ppb	36245.110	3.05	57288856	10000	
Co	59	3	72	2.420	ppb	2.420	3.30	3197	2000	
Ni	60	3	72	9.422	ppb	9.422	6.05	3747	5000	
Cu	63	3	72	13.335	ppb	13.335	1.51	13530	5000	
Zn	66	3	72	15.219	ppb	15.219	6.06	2836	5000	
As	75	3	72	3.515	ppb	3.515	10.94	475	2000	
Se	78	2	72	0.031	ppb	0.031	11.11	6	2000	
Sr	88	3	72	32.621	ppb	32.621	1.45	19514	4000	
Mo	95	3	115	2.932	ppb	2.932	6.64	1609	2000	
Ag	107	3	115	0.105	ppb	0.105	9.13	230	100	
Cd	111	3	115	0.148	ppb	0.148	96.13	57	2000	
Sn	120	3	115	7.818	ppb	7.818	6.67	7718	2000	
Sb	121	3	115	0.375	ppb	0.375	11.64	461	1000	
Ba	137	3	115	61.732	ppb	61.732	0.92	17520	5000	
Tl	205	3	193	0.018	ppb	0.018	78.04	961	2000	
(Pb)	206	3	193	9.375	ppb	9.375	2.24	15739	100	
(Pb)	207	3	193	6.149	ppb	6.149	3.78	9562	100	
Pb	208	3	193	7.463	ppb	7.463	1.47	51213	5000	
Th	232	3	193	12.235	ppb	12.235	5.67	89686	2000	
U	238	3	193	3.322	ppb	3.322	1.99	25697	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4114212	3.60	3936624	104.51	60	120	
Sc (IS)	45	3	HMI He	617029	0.94	609520	101.23	60	120	
Ge Internal standard	72	2	HMI H2	2530785	3.31	2391663	105.82	60	120	
Ge Internal standard	72	3	HMI He	770970	1.44	756863	101.86	60	120	
In Internal Standard	115	3	HMI He	3065142	0.57	2988279	102.57	60	120	
Ir (IS)	193	3	HMI He	7312030	0.77	6996686	104.51	60	120	

Sample Report

Sample Table

Sample Name	LCSSRM 280-608265/2-B
Data File Name	135SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:11:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1096.374	ppb	1096.374	0.96	43033	2000	
Na	23	3	45	7418.191	ppb	7418.191	4.07	826215	400000	
Mg	24	3	45	34983.978	ppb	34983.978	3.20	2049265	400000	
Al	27	3	45	149283.047	ppb	149283.047	2.13	3414200	400000	
K	39	3	45	38586.350	ppb	38586.350	0.48	1823706	400000	
Ca	40	2	45	68174.576	ppb	68174.576	0.89	38559383	400000	
V	51	3	72	3144.502	ppb	3144.502	1.89	1947343	2000	
Cr	52	3	72	2921.051	ppb	2921.051	2.51	2220328	5000	
Mn	55	3	72	5892.859	ppb	5892.859	0.47	2470142	10000	
Fe	56	2	72	281899.763	ppb	281899.763	0.27	426646939	10000	>LDR
Co	59	3	72	1386.311	ppb	1386.311	1.70	1801696	2000	
Ni	60	3	72	2262.927	ppb	2262.927	0.95	828285	5000	
Cu	63	3	72	1901.240	ppb	1901.240	0.83	1875298	5000	
Zn	66	3	72	3073.305	ppb	3073.305	0.67	514809	5000	
As	75	3	72	2626.352	ppb	2626.352	1.37	300910	2000	
Se	78	2	72	3270.691	ppb	3270.691	0.26	182207	2000	
Sr	88	3	72	1778.740	ppb	1778.740	2.86	1057944	4000	
Mo	95	3	115	2566.701	ppb	2566.701	1.98	1385147	2000	
Ag	107	3	115	938.902	ppb	938.902	2.63	1749882	100	>LDR
Cd	111	3	115	3001.334	ppb	3001.334	1.78	816938	2000	
Sn	120	3	115	2060.017	ppb	2060.017	1.35	1805109	2000	
Sb	121	3	115	2854.197	ppb	2854.197	2.78	2487996	1000	
Ba	137	3	115	4503.736	ppb	4503.736	2.31	1292558	5000	
Tl	205	3	193	1138.077	ppb	1138.077	1.86	5520203	2000	
(Pb)	206	3	193	3697.309	ppb	3697.309	1.93	5979868	100	>LDR
(Pb)	207	3	193	3534.401	ppb	3534.401	0.82	5059690	100	>LDR
Pb	208	3	193	3585.822	ppb	3585.822	0.70	23428858	5000	
Th	232	3	193	365.783	ppb	365.783	2.23	2425359	2000	
U	238	3	193	1820.627	ppb	1820.627	1.13	12711640	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4125595	0.40	3936624	104.80	60	120	
Sc (IS)	45	3	HMI He	628745	0.34	609520	103.15	60	120	
Ge Internal standard	72	2	HMI H2	2422405	0.35	2391663	101.29	60	120	
Ge Internal standard	72	3	HMI He	776444	0.67	756863	102.59	60	120	
In Internal Standard	115	3	HMI He	3118228	1.63	2988279	104.35	60	120	
Ir (IS)	193	3	HMI He	7257808	0.68	6996686	103.73	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	136_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:12:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.710	ppb	2.486	1849	50	95.4	90	110	
Na	23	3	45	45624.059	ppb	2.707	4826309	51000	89.5	90	110	>+\-10%
Mg	24	3	45	9838.274	ppb	2.134	561740	11000	89.4	90	110	>+\-10%
Al	27	3	45	970.425	ppb	2.373	21742	1000	97.0	90	110	
K	39	3	45	10170.477	ppb	0.527	488462	11000	92.5	90	110	
Ca	40	2	45	10044.261	ppb	2.317	5547048	11000	91.3	90	110	
V	51	3	72	48.678	ppb	1.173	30410	50	97.4	90	110	
Cr	52	3	72	49.819	ppb	0.790	38913	50	99.6	90	110	
Mn	55	3	72	49.692	ppb	4.280	20677	50	99.4	90	110	
Fe	56	2	72	1026.977	ppb	0.499	1580115	1000	102.7	90	110	
Co	59	3	72	49.497	ppb	1.279	63349	50	99.0	90	110	
Ni	60	3	72	48.510	ppb	1.940	17783	50	97.0	90	110	
Cu	63	3	72	49.613	ppb	1.336	48597	50	99.2	90	110	
Zn	66	3	72	49.732	ppb	2.239	8492	50	99.5	90	110	
As	75	3	72	52.161	ppb	2.958	5952	50	104.3	90	110	
Se	78	2	72	52.988	ppb	1.781	2972	50	106.0	90	110	
Sr	88	3	72	101.616	ppb	1.470	59697	100	101.6	90	110	
Mo	95	3	115	55.353	ppb	1.654	29586	50	110.7	90	110	>+\-10%
Ag	107	3	115	48.575	ppb	1.185	89523	50	97.1	90	110	
Cd	111	3	115	50.016	ppb	0.519	13473	50	100.0	90	110	
Sn	120	3	115	50.840	ppb	3.146	44987	50	101.7	90	110	
Sb	121	3	115	53.312	ppb	0.410	46080	50	106.6	90	110	
Ba	137	3	115	49.744	ppb	4.438	14209	50	99.5	90	110	
Tl	205	3	193	48.261	ppb	3.007	235797	50	96.5	90	110	
(Pb)	206	3	193	47.795	ppb	2.428	78050	50	95.6	90	110	
(Pb)	207	3	193	47.981	ppb	3.013	69638	50	96.0	90	110	
Pb	208	3	193	47.873	ppb	2.934	316038	50	95.7	90	110	
Th	232	3	193	55.787	ppb	3.172	378247	50	111.6	90	110	>+\-10%
U	238	3	193	48.778	ppb	3.706	344108	50	97.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4012436	1.69	3936624	101.93	60	120	
Sc (IS)	45	3	HMI He	612400	1.24	609520	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2436131	0.91	2391663	101.86	60	120	
Ge Internal standard	72	3	HMI He	763832	0.99	756863	100.92	60	120	
In Internal Standard	115	3	HMI He	3081766	1.52	2988279	103.13	60	120	
Ir (IS)	193	3	HMI He	7287459	1.53	6996686	104.16	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	137_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:14:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.127	ppb	200.2	10	0.5	
Na	23	3	45	27.669	ppb	16.6	26304	25	>RL
Mg	24	3	45	-0.562	ppb	-257.0	731	25	
Al	27	3	45	2.890	ppb	117.1	190	15	
K	39	3	45	-27.679	ppb	-7.0	25930	50	
V	51	3	72	-0.435	ppb	-23.0	495	1	
Cr	52	3	72	0.116	ppb	151.0	1768	1	
Mn	55	3	72	0.180	ppb	51.9	263	0.5	
Co	59	3	72	0.039	ppb	74.1	122	0.5	
Ni	60	3	72	0.171	ppb	110.4	383	1	
Cu	63	3	72	-0.003	ppb	-2347.4	466	1	
Zn	66	3	72	0.182	ppb	77.2	332	5	
As	75	3	72	-0.048	ppb	-554.8	68	1	
Se	78	2	72	0.302	ppb	37.8	21	1	
Sr	88	3	72	-0.057	ppb	-48.0	217	0.5	
Mo	95	3	115	0.408	ppb	28.7	277	0.5	
Ag	107	3	115	0.045	ppb	12.9	123	1	
Cd	111	3	115	0.155	ppb	34.3	60	0.5	
Sn	120	3	115	0.934	ppb	6.0	1838	1	
Sb	121	3	115	0.625	ppb	4.2	693	0.6	>RL
Ba	137	3	115	0.052	ppb	19.5	118	0.5	
Tl	205	3	193	0.014	ppb	127.3	941	0.1	
(Pb)	206	3	193	0.021	ppb	102.4	498	1	
(Pb)	207	3	193	-0.001	ppb	-5621.4	691	1	
Pb	208	3	193	0.025	ppb	52.6	2257	0.5	
Th	232	3	193	2.131	ppb	16.7	22459	1	>RL
U	238	3	193	0.078	ppb	20.9	2882	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997028	1.38	3936624	101.53	60	120	
Sc (IS)	45	3	HMI He	605161	0.99	609520	99.28	60	120	
Ge Internal standard	72	2	HMI H2	2480019	0.80	2391663	103.69	60	120	
Ge Internal standard	72	3	HMI He	761454	0.85	756863	100.61	60	120	
In Internal Standard	115	3	HMI He	3140976	0.70	2988279	105.11	60	120	
Ir (IS)	193	3	HMI He	7312615	2.05	6996686	104.52	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C
Data File Name	138SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:16:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	10.554	ppb	10.554	6.78	411	2000	
Na	23	3	45	2612.120	ppb	2612.120	0.65	303677	400000	
Mg	24	3	45	77219.795	ppb	77219.795	1.24	4477507	400000	
Al	27	3	45	122687.550	ppb	122687.550	1.17	2778359	400000	
K	39	3	45	10147.329	ppb	10147.329	0.59	495463	400000	
Ca	40	2	45	240603.484	ppb	240603.484	2.61	134562554	400000	
V	51	3	72	386.736	ppb	386.736	0.75	241715	2000	
Cr	52	3	72	1788.103	ppb	1788.103	7.85	1368527	5000	
Mn	55	3	72	110022.490	ppb	110022.490	0.63	46407811	10000	>LDR
Fe	56	2	72	225153.852	ppb	225153.852	0.86	338925090	10000	>LDR
Co	59	3	72	108.632	ppb	108.632	0.67	142135	2000	
Ni	60	3	72	527.638	ppb	527.638	0.90	194616	5000	
Cu	63	3	72	1155.048	ppb	1155.048	1.32	1146638	5000	
Zn	66	3	72	3120.282	ppb	3120.282	0.71	525983	5000	
As	75	3	72	554.636	ppb	554.636	0.85	64013	2000	
Se	78	2	72	6.664	ppb	6.664	7.89	373	2000	
Sr	88	3	72	540.364	ppb	540.364	1.00	323637	4000	
Mo	95	3	115	30.877	ppb	30.877	5.30	16544	2000	
Ag	107	3	115	2.352	ppb	2.352	1.54	4379	100	
Cd	111	3	115	4.149	ppb	4.149	11.25	1136	2000	
Sn	120	3	115	903.554	ppb	903.554	1.65	784172	2000	
Sb	121	3	115	25.872	ppb	25.872	1.61	22468	1000	
Ba	137	3	115	2783.667	ppb	2783.667	1.72	790904	5000	
Tl	205	3	193	1.245	ppb	1.245	2.00	7090	2000	
(Pb)	206	3	193	1661.428	ppb	1661.428	2.77	2757116	100	>LDR
(Pb)	207	3	193	1596.468	ppb	1596.468	0.69	2346124	100	>LDR
Pb	208	3	193	1619.606	ppb	1619.606	0.61	10861454	5000	
Th	232	3	193	34.605	ppb	34.605	3.37	243004	2000	
U	238	3	193	9.324	ppb	9.324	2.37	69170	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4083327	2.63	3936624	103.73	60	120	
Sc (IS)	45	3	HMI He	622553	0.59	609520	102.14	60	120	
Ge Internal standard	72	2	HMI H2	2409306	0.23	2391663	100.74	60	120	
Ge Internal standard	72	3	HMI He	781353	0.52	756863	103.24	60	120	
In Internal Standard	115	3	HMI He	3086641	1.58	2988279	103.29	60	120	
Ir (IS)	193	3	HMI He	7448867	1.63	6996686	106.46	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-2-C
Data File Name	139SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:18:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	5.100	ppb	5.100	8.53	208	2000	
Na	23	3	45	789.763	ppb	789.763	0.40	111120	400000	
Mg	24	3	45	15866.826	ppb	15866.826	2.03	941765	400000	
Al	27	3	45	86303.687	ppb	86303.687	1.25	1999339	400000	
K	39	3	45	6277.120	ppb	6277.120	1.05	324421	400000	
Ca	40	2	45	51492.371	ppb	51492.371	0.17	29329394	400000	
V	51	3	72	182.887	ppb	182.887	0.22	116225	2000	
Cr	52	3	72	180.256	ppb	180.256	2.26	141332	5000	
Mn	55	3	72	8529.665	ppb	8529.665	0.92	3645307	10000	
Fe	56	2	72	100467.871	ppb	100467.871	3.34	157866302	10000	>LDR
Co	59	3	72	31.416	ppb	31.416	0.82	41698	2000	
Ni	60	3	72	93.197	ppb	93.197	1.51	35100	5000	
Cu	63	3	72	112.095	ppb	112.095	2.21	113180	5000	
Zn	66	3	72	289.111	ppb	289.111	1.26	49658	5000	
As	75	3	72	587.339	ppb	587.339	0.48	68673	2000	
Se	78	2	72	1.885	ppb	1.885	9.83	113	2000	
Sr	88	3	72	146.691	ppb	146.691	0.33	89203	4000	
Mo	95	3	115	9.872	ppb	9.872	2.64	5525	2000	
Ag	107	3	115	0.457	ppb	0.457	2.57	915	100	
Cd	111	3	115	0.335	ppb	0.335	41.29	112	2000	
Sn	120	3	115	21.476	ppb	21.476	1.38	20342	2000	
Sb	121	3	115	5.677	ppb	5.677	3.21	5228	1000	
Ba	137	3	115	1028.871	ppb	1028.871	1.13	303281	5000	
Tl	205	3	193	0.844	ppb	0.844	0.39	5007	2000	
(Pb)	206	3	193	163.530	ppb	163.530	2.17	267221	100	
(Pb)	207	3	193	152.603	ppb	152.603	1.97	221048	100	
Pb	208	3	193	158.355	ppb	158.355	2.51	1045666	5000	
Th	232	3	193	27.786	ppb	27.786	3.25	193433	2000	
U	238	3	193	6.692	ppb	6.692	2.53	49458	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4153571	1.31	3936624	105.51	60	120	
Sc (IS)	45	3	HMI He	636812	0.34	609520	104.48	60	120	
Ge Internal standard	72	2	HMI H2	2515524	1.39	2391663	105.18	60	120	
Ge Internal standard	72	3	HMI He	791627	0.44	756863	104.59	60	120	
In Internal Standard	115	3	HMI He	3201197	0.64	2988279	107.13	60	120	
Ir (IS)	193	3	HMI He	7324161	2.91	6996686	104.68	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-3-C
Data File Name	140SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:19:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.642	ppb	0.642	51.17	30	2000	
Na	23	3	45	316.874	ppb	316.874	1.55	58107	400000	
Mg	24	3	45	1060.031	ppb	1060.031	0.98	62332	400000	
Al	27	3	45	22541.235	ppb	22541.235	1.70	511261	400000	
K	39	3	45	2966.547	ppb	2966.547	0.50	164867	400000	
Ca	40	2	45	1602.986	ppb	1602.986	3.70	932360	400000	
V	51	3	72	133.290	ppb	133.290	1.46	83847	2000	
Cr	52	3	72	130.464	ppb	130.464	1.33	101484	5000	
Mn	55	3	72	423.586	ppb	423.586	0.91	178931	10000	
Fe	56	2	72	54655.134	ppb	54655.134	1.14	85924488	10000	>LDR
Co	59	3	72	7.558	ppb	7.558	2.39	9962	2000	
Ni	60	3	72	18.392	ppb	18.392	2.64	7107	5000	
Cu	63	3	72	116.229	ppb	116.229	3.27	115834	5000	
Zn	66	3	72	192.002	ppb	192.002	2.40	32664	5000	
As	75	3	72	58.293	ppb	58.293	0.52	6798	2000	
Se	78	2	72	1.286	ppb	1.286	11.91	79	2000	
Sr	88	3	72	38.794	ppb	38.794	0.99	23482	4000	
Mo	95	3	115	16.557	ppb	16.557	3.44	9129	2000	
Ag	107	3	115	0.225	ppb	0.225	5.60	465	100	
Cd	111	3	115	0.334	ppb	0.334	56.52	110	2000	
Sn	120	3	115	16.525	ppb	16.525	1.54	15718	2000	
Sb	121	3	115	3.964	ppb	3.964	6.03	3654	1000	
Ba	137	3	115	325.850	ppb	325.850	1.48	95078	5000	
Tl	205	3	193	0.169	ppb	0.169	9.26	1728	2000	
(Pb)	206	3	193	111.553	ppb	111.553	0.93	185296	100	
(Pb)	207	3	193	106.669	ppb	106.669	0.74	157144	100	
Pb	208	3	193	109.496	ppb	109.496	0.71	735078	5000	
Th	232	3	193	21.846	ppb	21.846	1.32	156287	2000	
U	238	3	193	3.064	ppb	3.064	1.42	24293	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4119076	1.24	3936624	104.63	60	120	
Sc (IS)	45	3	HMI He	623469	1.54	609520	102.29	60	120	
Ge Internal standard	72	2	HMI H2	2515868	0.86	2391663	105.19	60	120	
Ge Internal standard	72	3	HMI He	781747	2.05	756863	103.29	60	120	
In Internal Standard	115	3	HMI He	3166568	1.08	2988279	105.97	60	120	
Ir (IS)	193	3	HMI He	7436462	1.02	6996686	106.29	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-4-C
Data File Name	141SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:21:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.582	ppb	0.582	86.47	28	2000	
Na	23	3	45	370.200	ppb	370.200	2.98	63988	400000	
Mg	24	3	45	2137.377	ppb	2137.377	2.83	125207	400000	
Al	27	3	45	21111.479	ppb	21111.479	0.39	480248	400000	
K	39	3	45	2144.906	ppb	2144.906	2.93	127304	400000	
Ca	40	2	45	3237.618	ppb	3237.618	1.26	1839546	400000	
V	51	3	72	93.424	ppb	93.424	1.10	59363	2000	
Cr	52	3	72	118.544	ppb	118.544	1.83	92934	5000	
Mn	55	3	72	3561.726	ppb	3561.726	1.52	1512292	10000	
Fe	56	2	72	82266.798	ppb	82266.798	2.65	128708495	10000	>LDR
Co	59	3	72	11.908	ppb	11.908	1.26	15748	2000	
Ni	60	3	72	37.146	ppb	37.146	1.06	14099	5000	
Cu	63	3	72	317.827	ppb	317.827	0.28	317917	5000	
Zn	66	3	72	885.661	ppb	885.661	1.19	150477	5000	
As	75	3	72	50.957	ppb	50.957	2.37	5988	2000	
Se	78	2	72	1.503	ppb	1.503	8.96	91	2000	
Sr	88	3	72	40.020	ppb	40.020	1.23	24363	4000	
Mo	95	3	115	8.010	ppb	8.010	6.27	4432	2000	
Ag	107	3	115	2.647	ppb	2.647	1.39	5035	100	
Cd	111	3	115	1.889	ppb	1.889	7.62	538	2000	
Sn	120	3	115	221.005	ppb	221.005	2.92	196991	2000	
Sb	121	3	115	31.996	ppb	31.996	0.79	28389	1000	
Ba	137	3	115	486.005	ppb	486.005	1.25	141340	5000	
Tl	205	3	193	0.366	ppb	0.366	3.80	2671	2000	
(Pb)	206	3	193	2235.938	ppb	2235.938	0.45	3653863	100	>LDR
(Pb)	207	3	193	2143.020	ppb	2143.020	0.56	3100212	100	>LDR
Pb	208	3	193	2141.304	ppb	2141.304	0.46	14137456	5000	
Th	232	3	193	15.086	ppb	15.086	1.15	108994	2000	
U	238	3	193	2.376	ppb	2.376	1.96	19099	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4085849	2.55	3936624	103.79	60	120	
Sc (IS)	45	3	HMI He	625196	0.83	609520	102.57	60	120	
Ge Internal standard	72	2	HMI H2	2504650	2.03	2391663	104.72	60	120	
Ge Internal standard	72	3	HMI He	786405	0.29	756863	103.90	60	120	
In Internal Standard	115	3	HMI He	3157161	0.94	2988279	105.65	60	120	
Ir (IS)	193	3	HMI He	7333497	1.28	6996686	104.81	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-5-C
Data File Name	142SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:23:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.087	ppb	0.087	226.38	8	2000	
Na	23	3	45	235.244	ppb	235.244	2.57	49827	400000	
Mg	24	3	45	319.364	ppb	319.364	4.58	19520	400000	
Al	27	3	45	6858.009	ppb	6858.009	0.61	157169	400000	
K	39	3	45	1192.626	ppb	1192.626	6.52	83805	400000	
Ca	40	2	45	701.825	ppb	701.825	3.37	420115	400000	
V	51	3	72	67.998	ppb	67.998	1.37	43874	2000	
Cr	52	3	72	74.162	ppb	74.162	0.97	59400	5000	
Mn	55	3	72	458.112	ppb	458.112	0.33	196705	10000	
Fe	56	2	72	50315.442	ppb	50315.442	0.87	78949146	10000	>LDR
Co	59	3	72	5.060	ppb	5.060	2.74	6803	2000	
Ni	60	3	72	12.675	ppb	12.675	3.17	5082	5000	
Cu	63	3	72	55.879	ppb	55.879	0.35	56880	5000	
Zn	66	3	72	120.092	ppb	120.092	0.38	20889	5000	
As	75	3	72	17.026	ppb	17.026	5.47	2072	2000	
Se	78	2	72	0.677	ppb	0.677	20.09	43	2000	
Sr	88	3	72	20.392	ppb	20.392	2.78	12671	4000	
Mo	95	3	115	13.999	ppb	13.999	4.50	7668	2000	
Ag	107	3	115	0.210	ppb	0.210	6.66	433	100	
Cd	111	3	115	0.211	ppb	0.211	33.78	75	2000	
Sn	120	3	115	46.651	ppb	46.651	3.06	42194	2000	
Sb	121	3	115	2.562	ppb	2.562	9.70	2392	1000	
Ba	137	3	115	236.121	ppb	236.121	4.79	68392	5000	
Tl	205	3	193	0.013	ppb	0.013	108.48	960	2000	
(Pb)	206	3	193	146.194	ppb	146.194	2.59	244133	100	
(Pb)	207	3	193	139.421	ppb	139.421	1.61	206415	100	
Pb	208	3	193	141.686	ppb	141.686	2.81	956068	5000	
Th	232	3	193	14.764	ppb	14.764	0.21	109031	2000	
U	238	3	193	1.424	ppb	1.424	6.24	12623	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4083617	2.00	3936624	103.73	60	120	
Sc (IS)	45	3	HMI He	629528	0.97	609520	103.28	60	120	
Ge Internal standard	72	2	HMI H2	2510933	0.60	2391663	104.99	60	120	
Ge Internal standard	72	3	HMI He	794596	0.67	756863	104.99	60	120	
In Internal Standard	115	3	HMI He	3144605	2.84	2988279	105.23	60	120	
Ir (IS)	193	3	HMI He	7483195	2.92	6996686	106.95	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-1-C
Data File Name	143SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:25:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.495	ppb	0.495	52.02	25	2000	
Na	23	3	45	410.845	ppb	410.845	2.99	69737	400000	
Mg	24	3	45	1775.241	ppb	1775.241	0.63	106239	400000	
Al	27	3	45	16079.144	ppb	16079.144	0.76	373164	400000	
K	39	3	45	2032.045	ppb	2032.045	2.73	124540	400000	
Ca	40	2	45	3458.167	ppb	3458.167	19.90	2031271	400000	
V	51	3	72	101.438	ppb	101.438	1.26	65700	2000	
Cr	52	3	72	161.060	ppb	161.060	0.75	128202	5000	
Mn	55	3	72	6586.738	ppb	6586.738	1.51	2853621	10000	
Fe	56	2	72	110516.230	ppb	110516.230	19.20	176234600	10000	>LDR
Co	59	3	72	13.184	ppb	13.184	0.93	17783	2000	
Ni	60	3	72	50.126	ppb	50.126	2.01	19294	5000	
Cu	63	3	72	542.887	ppb	542.887	0.20	553770	5000	
Zn	66	3	72	1630.337	ppb	1630.337	1.24	282379	5000	
As	75	3	72	62.049	ppb	62.049	1.76	7423	2000	
Se	78	2	72	1.738	ppb	1.738	8.02	107	2000	
Sr	88	3	72	53.158	ppb	53.158	2.13	32935	4000	
Mo	95	3	115	10.690	ppb	10.690	3.93	5953	2000	
Ag	107	3	115	5.501	ppb	5.501	1.31	10519	100	
Cd	111	3	115	4.222	ppb	4.222	12.35	1193	2000	
Sn	120	3	115	214.825	ppb	214.825	0.49	193293	2000	
Sb	121	3	115	22.299	ppb	22.299	0.68	20015	1000	
Ba	137	3	115	509.634	ppb	509.634	0.40	149603	5000	
Tl	205	3	193	0.410	ppb	0.410	6.84	2966	2000	
(Pb)	206	3	193	1735.687	ppb	1735.687	0.84	2913454	100	>LDR
(Pb)	207	3	193	1662.039	ppb	1662.039	4.07	2468963	100	>LDR
Pb	208	3	193	1694.588	ppb	1694.588	2.26	11490533	5000	
Th	232	3	193	16.891	ppb	16.891	1.78	124321	2000	
U	238	3	193	2.362	ppb	2.362	2.23	19519	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4278982	9.31	3936624	108.70	60	120	
Sc (IS)	45	3	HMI He	637794	0.76	609520	104.64	60	120	
Ge Internal standard	72	2	HMI H2	2583416	9.45	2391663	108.02	60	120	
Ge Internal standard	72	3	HMI He	802450	0.47	756863	106.02	60	120	
In Internal Standard	115	3	HMI He	3186649	0.97	2988279	106.64	60	120	
Ir (IS)	193	3	HMI He	7532851	1.48	6996686	107.66	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-2-C
Data File Name	144SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:27:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.284	ppb	0.284	63.46	17	2000	
Na	23	3	45	258.875	ppb	258.875	1.54	53407	400000	
Mg	24	3	45	883.501	ppb	883.501	4.56	53578	400000	
Al	27	3	45	15873.136	ppb	15873.136	2.40	370530	400000	
K	39	3	45	1855.761	ppb	1855.761	4.87	116887	400000	
Ca	40	2	45	1122.069	ppb	1122.069	0.86	662749	400000	
V	51	3	72	105.465	ppb	105.465	1.91	68642	2000	
Cr	52	3	72	97.808	ppb	97.808	1.27	78967	5000	
Mn	55	3	72	937.761	ppb	937.761	0.49	408604	10000	
Fe	56	2	72	54589.487	ppb	54589.487	1.68	88362813	10000	>LDR
Co	59	3	72	6.558	ppb	6.558	2.60	8930	2000	
Ni	60	3	72	16.757	ppb	16.757	1.10	6712	5000	
Cu	63	3	72	170.900	ppb	170.900	1.72	175587	5000	
Zn	66	3	72	207.257	ppb	207.257	1.34	36368	5000	
As	75	3	72	31.816	ppb	31.816	2.40	3865	2000	
Se	78	2	72	1.471	ppb	1.471	1.52	92	2000	
Sr	88	3	72	28.108	ppb	28.108	2.87	17634	4000	
Mo	95	3	115	10.991	ppb	10.991	0.42	6130	2000	
Ag	107	3	115	0.533	ppb	0.533	3.42	1056	100	
Cd	111	3	115	0.336	ppb	0.336	21.11	112	2000	
Sn	120	3	115	39.849	ppb	39.849	2.47	36762	2000	
Sb	121	3	115	4.424	ppb	4.424	1.22	4095	1000	
Ba	137	3	115	241.704	ppb	241.704	1.15	71142	5000	
Tl	205	3	193	0.182	ppb	0.182	14.09	1816	2000	
(Pb)	206	3	193	187.389	ppb	187.389	3.49	315399	100	
(Pb)	207	3	193	180.893	ppb	180.893	1.31	269916	100	
Pb	208	3	193	184.103	ppb	184.103	3.20	1252162	5000	
Th	232	3	193	16.124	ppb	16.124	2.36	119277	2000	
U	238	3	193	3.079	ppb	3.079	2.60	24751	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4129785	2.00	3936624	104.91	60	120	
Sc (IS)	45	3	HMI He	641699	1.94	609520	105.28	60	120	
Ge Internal standard	72	2	HMI H2	2591203	2.97	2391663	108.34	60	120	
Ge Internal standard	72	3	HMI He	806740	0.72	756863	106.59	60	120	
In Internal Standard	115	3	HMI He	3193022	1.46	2988279	106.85	60	120	
Ir (IS)	193	3	HMI He	7547320	2.99	6996686	107.87	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-3-C
Data File Name	145SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:28:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.900	ppb	3.900	22.00	162	2000	
Na	23	3	45	518.283	ppb	518.283	2.61	83461	400000	
Mg	24	3	45	6807.432	ppb	6807.432	1.27	414861	400000	
Al	27	3	45	78264.943	ppb	78264.943	2.05	1859122	400000	
K	39	3	45	6065.410	ppb	6065.410	2.08	322431	400000	
Ca	40	2	45	2580.882	ppb	2580.882	3.58	1520355	400000	
V	51	3	72	186.295	ppb	186.295	2.58	121011	2000	
Cr	52	3	72	139.946	ppb	139.946	0.88	112577	5000	
Mn	55	3	72	4058.835	ppb	4058.835	0.43	1773389	10000	
Fe	56	2	72	93948.247	ppb	93948.247	1.66	147825355	10000	>LDR
Co	59	3	72	43.966	ppb	43.966	0.78	59626	2000	
Ni	60	3	72	67.014	ppb	67.014	3.23	25898	5000	
Cu	63	3	72	193.752	ppb	193.752	1.16	199639	5000	
Zn	66	3	72	346.228	ppb	346.228	1.50	60731	5000	
As	75	3	72	39.059	ppb	39.059	0.56	4742	2000	
Se	78	2	72	3.383	ppb	3.383	14.15	200	2000	
Sr	88	3	72	50.126	ppb	50.126	3.60	31338	4000	
Mo	95	3	115	7.199	ppb	7.199	4.38	4010	2000	
Ag	107	3	115	0.878	ppb	0.878	3.39	1704	100	
Cd	111	3	115	0.628	ppb	0.628	9.04	192	2000	
Sn	120	3	115	31.102	ppb	31.102	0.75	28750	2000	
Sb	121	3	115	5.660	ppb	5.660	2.91	5168	1000	
Ba	137	3	115	517.973	ppb	517.973	1.08	151444	5000	
Tl	205	3	193	1.062	ppb	1.062	4.30	6212	2000	
(Pb)	206	3	193	381.492	ppb	381.492	3.62	637227	100	
(Pb)	207	3	193	360.762	ppb	360.762	3.31	533711	100	
Pb	208	3	193	385.273	ppb	385.273	4.69	2599739	5000	
Th	232	3	193	22.028	ppb	22.028	4.21	158720	2000	
U	238	3	193	6.204	ppb	6.204	3.77	47094	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4219956	1.51	3936624	107.20	60	120	
Sc (IS)	45	3	HMI He	653059	1.20	609520	107.14	60	120	
Ge Internal standard	72	2	HMI H2	2518266	0.91	2391663	105.29	60	120	
Ge Internal standard	72	3	HMI He	809274	0.26	756863	106.92	60	120	
In Internal Standard	115	3	HMI He	3173957	0.24	2988279	106.21	60	120	
Ir (IS)	193	3	HMI He	7496020	2.97	6996686	107.14	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-4-C
Data File Name	146SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:30:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.014	ppb	3.014	14.85	127	2000	
Na	23	3	45	460.390	ppb	460.390	1.43	76633	400000	
Mg	24	3	45	6755.713	ppb	6755.713	0.69	409857	400000	
Al	27	3	45	80449.061	ppb	80449.061	1.16	1902811	400000	
K	39	3	45	7045.866	ppb	7045.866	0.91	368214	400000	
Ca	40	2	45	1887.722	ppb	1887.722	2.50	1126738	400000	
V	51	3	72	190.074	ppb	190.074	0.79	121966	2000	
Cr	52	3	72	136.635	ppb	136.635	0.36	108634	5000	
Mn	55	3	72	1548.697	ppb	1548.697	0.23	668632	10000	
Fe	56	2	72	98796.189	ppb	98796.189	1.69	156511292	10000	>LDR
Co	59	3	72	29.698	ppb	29.698	1.19	39816	2000	
Ni	60	3	72	58.111	ppb	58.111	2.02	22232	5000	
Cu	63	3	72	57.897	ppb	57.897	1.15	59284	5000	
Zn	66	3	72	184.315	ppb	184.315	0.20	32090	5000	
As	75	3	72	27.466	ppb	27.466	1.53	3317	2000	
Se	78	2	72	1.389	ppb	1.389	14.20	85	2000	
Sr	88	3	72	49.226	ppb	49.226	5.00	30408	4000	
Mo	95	3	115	8.490	ppb	8.490	3.85	4818	2000	
Ag	107	3	115	0.198	ppb	0.198	9.03	423	100	
Cd	111	3	115	0.254	ppb	0.254	12.94	90	2000	
Sn	120	3	115	12.671	ppb	12.671	1.65	12580	2000	
Sb	121	3	115	1.539	ppb	1.539	4.52	1543	1000	
Ba	137	3	115	470.409	ppb	470.409	2.46	140428	5000	
Tl	205	3	193	0.694	ppb	0.694	4.19	4369	2000	
(Pb)	206	3	193	58.258	ppb	58.258	2.21	97678	100	
(Pb)	207	3	193	54.588	ppb	54.588	1.47	81346	100	
Pb	208	3	193	56.222	ppb	56.222	1.41	381155	5000	
Th	232	3	193	30.811	ppb	30.811	0.95	218553	2000	
U	238	3	193	5.415	ppb	5.415	1.38	41398	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4247065	2.00	3936624	107.89	60	120	
Sc (IS)	45	3	HMI He	650171	0.28	609520	106.67	60	120	
Ge Internal standard	72	2	HMI H2	2535752	1.40	2391663	106.02	60	120	
Ge Internal standard	72	3	HMI He	799523	0.29	756863	105.64	60	120	
In Internal Standard	115	3	HMI He	3240932	0.92	2988279	108.45	60	120	
Ir (IS)	193	3	HMI He	7490009	1.72	6996686	107.05	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-5-F
Data File Name	147SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:32:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.533	ppb	6.533	16.91	265	2000	
Na	23	3	45	832.718	ppb	832.718	2.14	119981	400000	
Mg	24	3	45	14432.514	ppb	14432.514	1.91	887466	400000	
Al	27	3	45	133721.521	ppb	133721.521	0.80	3209084	400000	
K	39	3	45	10457.260	ppb	10457.260	1.74	540151	400000	
Ca	40	2	45	10382.861	ppb	10382.861	1.08	6038147	400000	
V	51	3	72	315.920	ppb	315.920	1.81	206320	2000	
Cr	52	3	72	223.777	ppb	223.777	1.11	180407	5000	
Mn	55	3	72	5738.163	ppb	5738.163	2.10	2527491	10000	
Fe	56	2	72	149748.892	ppb	149748.892	2.07	236105484	10000	>LDR
Co	59	3	72	64.547	ppb	64.547	1.04	88218	2000	
Ni	60	3	72	114.094	ppb	114.094	2.48	44208	5000	
Cu	63	3	72	209.495	ppb	209.495	2.97	217558	5000	
Zn	66	3	72	679.625	ppb	679.625	1.80	119872	5000	
As	75	3	72	57.390	ppb	57.390	2.22	6988	2000	
Se	78	2	72	4.946	ppb	4.946	1.43	291	2000	
Sr	88	3	72	83.437	ppb	83.437	1.80	52407	4000	
Mo	95	3	115	9.738	ppb	9.738	0.57	5455	2000	
Ag	107	3	115	1.035	ppb	1.035	3.40	2021	100	
Cd	111	3	115	1.210	ppb	1.210	8.01	356	2000	
Sn	120	3	115	36.829	ppb	36.829	0.78	34165	2000	
Sb	121	3	115	6.320	ppb	6.320	4.05	5805	1000	
Ba	137	3	115	823.225	ppb	823.225	1.03	242826	5000	
Tl	205	3	193	1.669	ppb	1.669	3.78	9384	2000	
(Pb)	206	3	193	433.086	ppb	433.086	0.51	733770	100	
(Pb)	207	3	193	407.000	ppb	407.000	0.60	610702	100	
Pb	208	3	193	437.208	ppb	437.208	1.94	2993024	5000	
Th	232	3	193	35.923	ppb	35.923	0.84	257106	2000	
U	238	3	193	9.180	ppb	9.180	0.97	69525	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4224863	0.52	3936624	107.32	60	120	
Sc (IS)	45	3	HMI He	659735	0.79	609520	108.24	60	120	
Ge Internal standard	72	2	HMI H2	2524016	1.63	2391663	105.53	60	120	
Ge Internal standard	72	3	HMI He	815932	0.87	756863	107.80	60	120	
In Internal Standard	115	3	HMI He	3203105	1.07	2988279	107.19	60	120	
Ir (IS)	193	3	HMI He	7599095	0.65	6996686	108.61	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	148_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:34:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.155	ppb	3.787	1921	50	96.3	90	110	
Na	23	3	45	46904.283	ppb	1.785	5215716	51000	92.0	90	110	
Mg	24	3	45	9763.839	ppb	1.523	586086	11000	88.8	90	110	>+\-10%
Al	27	3	45	969.157	ppb	2.756	22825	1000	96.9	90	110	
K	39	3	45	10181.935	ppb	1.768	513940	11000	92.6	90	110	
Ca	40	2	45	10348.328	ppb	1.403	6003035	11000	94.1	90	110	
V	51	3	72	50.110	ppb	1.161	31997	50	100.2	90	110	
Cr	52	3	72	51.286	ppb	3.276	40920	50	102.6	90	110	
Mn	55	3	72	51.005	ppb	1.572	21708	50	102.0	90	110	
Fe	56	2	72	1063.202	ppb	4.133	1701756	1000	106.3	90	110	
Co	59	3	72	49.991	ppb	1.983	65441	50	100.0	90	110	
Ni	60	3	72	49.949	ppb	2.579	18722	50	99.9	90	110	
Cu	63	3	72	50.477	ppb	2.611	50565	50	101.0	90	110	
Zn	66	3	72	49.464	ppb	3.162	8642	50	98.9	90	110	
As	75	3	72	52.412	ppb	3.485	6117	50	104.8	90	110	
Se	78	2	72	50.843	ppb	2.671	2969	50	101.7	90	110	
Sr	88	3	72	101.297	ppb	1.368	60877	100	101.3	90	110	
Mo	95	3	115	48.523	ppb	0.620	27272	50	97.0	90	110	
Ag	107	3	115	48.453	ppb	2.501	93896	50	96.9	90	110	
Cd	111	3	115	47.490	ppb	0.936	13453	50	95.0	90	110	
Sn	120	3	115	48.742	ppb	1.486	45404	50	97.5	90	110	
Sb	121	3	115	48.532	ppb	1.201	44124	50	97.1	90	110	
Ba	137	3	115	49.277	ppb	1.543	14804	50	98.6	90	110	
Tl	205	3	193	47.197	ppb	1.654	234509	50	94.4	90	110	
(Pb)	206	3	193	48.207	ppb	4.935	79980	50	96.4	90	110	
(Pb)	207	3	193	46.928	ppb	1.959	69266	50	93.9	90	110	
Pb	208	3	193	47.791	ppb	4.111	320646	50	95.6	90	110	
Th	232	3	193	49.074	ppb	3.045	339240	50	98.1	90	110	
U	238	3	193	47.755	ppb	4.208	342464	50	95.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214582	1.26	3936624	107.06	60	120	
Sc (IS)	45	3	HMI He	643796	1.60	609520	105.62	60	120	
Ge Internal standard	72	2	HMI H2	2535987	1.05	2391663	106.03	60	120	
Ge Internal standard	72	3	HMI He	781361	0.88	756863	103.24	60	120	
In Internal Standard	115	3	HMI He	3240450	1.07	2988279	108.44	60	120	
Ir (IS)	193	3	HMI He	7411323	3.75	6996686	105.93	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	149_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:36:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.126	ppb	0.0	0	0.5	
Na	23	3	45	15.556	ppb	21.5	26451	25	
Mg	24	3	45	-0.165	ppb	-1213.0	794	25	
Al	27	3	45	1.736	ppb	54.5	174	15	
K	39	3	45	-30.407	ppb	-63.0	27261	50	
V	51	3	72	-0.562	ppb	-3.5	436	1	
Cr	52	3	72	0.093	ppb	184.0	1828	1	
Mn	55	3	72	0.490	ppb	39.8	408	0.5	
Co	59	3	72	-0.004	ppb	-416.5	70	0.5	
Ni	60	3	72	-0.026	ppb	-305.4	327	1	
Cu	63	3	72	-0.013	ppb	-358.4	476	1	
Zn	66	3	72	0.107	ppb	139.1	333	5	
As	75	3	72	-0.201	ppb	-76.5	53	1	
Se	78	2	72	0.087	ppb	60.4	9	1	
Sr	88	3	72	-0.072	ppb	-29.7	217	0.5	
Mo	95	3	115	0.043	ppb	59.7	80	0.5	
Ag	107	3	115	0.019	ppb	67.9	77	1	
Cd	111	3	115	0.014	ppb	275.1	22	0.5	
Sn	120	3	115	0.729	ppb	4.6	1696	1	
Sb	121	3	115	-0.049	ppb	-47.3	103	0.6	
Ba	137	3	115	0.071	ppb	105.9	127	0.5	
Tl	205	3	193	-0.081	ppb	-11.6	480	0.1	
(Pb)	206	3	193	-0.036	ppb	-88.8	405	1	
(Pb)	207	3	193	-0.072	ppb	-70.3	593	1	
Pb	208	3	193	-0.038	ppb	-51.2	1847	0.5	
Th	232	3	193	1.291	ppb	17.6	16891	1	>RL
U	238	3	193	0.025	ppb	77.8	2514	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214099	0.61	3936624	107.05	60	120	
Sc (IS)	45	3	HMI He	639120	1.04	609520	104.86	60	120	
Ge Internal standard	72	2	HMI H2	2547253	0.39	2391663	106.51	60	120	
Ge Internal standard	72	3	HMI He	794598	1.18	756863	104.99	60	120	
In Internal Standard	115	3	HMI He	3213898	0.72	2988279	107.55	60	120	
Ir (IS)	193	3	HMI He	7326628	1.48	6996686	104.72	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-6-C
Data File Name	150SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:38:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.749	ppb	3.749	13.10	153	2000	
Na	23	3	45	697.145	ppb	697.145	3.24	104293	400000	
Mg	24	3	45	9725.768	ppb	9725.768	0.45	596495	400000	
Al	27	3	45	117627.044	ppb	117627.044	2.21	2813955	400000	
K	39	3	45	11423.586	ppb	11423.586	1.53	585516	400000	
Ca	40	2	45	3754.647	ppb	3754.647	1.05	2234165	400000	
V	51	3	72	270.537	ppb	270.537	0.10	174481	2000	
Cr	52	3	72	181.292	ppb	181.292	0.48	144572	5000	
Mn	55	3	72	1450.498	ppb	1450.498	0.21	630663	10000	
Fe	56	2	72	142291.788	ppb	142291.788	2.02	226204388	10000	>LDR
Co	59	3	72	38.426	ppb	38.426	1.92	51858	2000	
Ni	60	3	72	70.927	ppb	70.927	1.43	27252	5000	
Cu	63	3	72	74.688	ppb	74.688	0.18	76871	5000	
Zn	66	3	72	240.605	ppb	240.605	0.67	42088	5000	
As	75	3	72	38.406	ppb	38.406	1.46	4640	2000	
Se	78	2	72	1.988	ppb	1.988	3.90	121	2000	
Sr	88	3	72	65.557	ppb	65.557	1.92	40692	4000	
Mo	95	3	115	9.778	ppb	9.778	2.18	5417	2000	
Ag	107	3	115	0.213	ppb	0.213	13.39	443	100	
Cd	111	3	115	0.268	ppb	0.268	4.46	92	2000	
Sn	120	3	115	13.689	ppb	13.689	2.54	13203	2000	
Sb	121	3	115	1.764	ppb	1.764	8.36	1708	1000	
Ba	137	3	115	535.834	ppb	535.834	0.28	156382	5000	
Tl	205	3	193	1.063	ppb	1.063	3.91	6193	2000	
(Pb)	206	3	193	80.445	ppb	80.445	0.55	134269	100	
(Pb)	207	3	193	75.465	ppb	75.465	0.72	111808	100	
Pb	208	3	193	77.913	ppb	77.913	0.40	525661	5000	
Th	232	3	193	41.635	ppb	41.635	0.39	291371	2000	
U	238	3	193	7.765	ppb	7.765	1.63	58130	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4286810	0.66	3936624	108.90	60	120	
Sc (IS)	45	3	HMI He	657674	0.59	609520	107.90	60	120	
Ge Internal standard	72	2	HMI H2	2545075	2.17	2391663	106.41	60	120	
Ge Internal standard	72	3	HMI He	805158	0.16	756863	106.38	60	120	
In Internal Standard	115	3	HMI He	3168260	0.45	2988279	106.02	60	120	
Ir (IS)	193	3	HMI He	7464286	1.04	6996686	106.68	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-1-C
Data File Name	151SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:39:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.721	ppb	3.721	21.47	155	2000	
Na	23	3	45	562.621	ppb	562.621	1.45	88946	400000	
Mg	24	3	45	6691.766	ppb	6691.766	0.59	410080	400000	
Al	27	3	45	75692.566	ppb	75692.566	1.27	1808307	400000	
K	39	3	45	6581.819	ppb	6581.819	1.48	349373	400000	
Ca	40	2	45	2071.728	ppb	2071.728	1.14	1258839	400000	
V	51	3	72	189.650	ppb	189.650	1.91	123912	2000	
Cr	52	3	72	137.982	ppb	137.982	1.16	111694	5000	
Mn	55	3	72	2391.699	ppb	2391.699	1.69	1051311	10000	
Fe	56	2	72	93803.540	ppb	93803.540	2.99	150552097	10000	>LDR
Co	59	3	72	38.728	ppb	38.728	0.56	52852	2000	
Ni	60	3	72	60.569	ppb	60.569	2.98	23580	5000	
Cu	63	3	72	166.396	ppb	166.396	2.58	172528	5000	
Zn	66	3	72	313.264	ppb	313.264	1.66	55309	5000	
As	75	3	72	38.987	ppb	38.987	3.07	4763	2000	
Se	78	2	72	3.364	ppb	3.364	14.59	203	2000	
Sr	88	3	72	52.794	ppb	52.794	2.35	33192	4000	
Mo	95	3	115	6.686	ppb	6.686	4.77	3802	2000	
Ag	107	3	115	0.855	ppb	0.855	9.11	1693	100	
Cd	111	3	115	0.508	ppb	0.508	2.77	162	2000	
Sn	120	3	115	22.074	ppb	22.074	0.92	21106	2000	
Sb	121	3	115	5.354	ppb	5.354	4.19	4992	1000	
Ba	137	3	115	509.589	ppb	509.589	1.16	151894	5000	
Tl	205	3	193	0.957	ppb	0.957	6.34	5760	2000	
(Pb)	206	3	193	408.264	ppb	408.264	2.33	691251	100	
(Pb)	207	3	193	375.055	ppb	375.055	1.47	562490	100	
Pb	208	3	193	402.659	ppb	402.659	3.12	2754362	5000	
Th	232	3	193	22.061	ppb	22.061	3.25	161074	2000	
U	238	3	193	5.906	ppb	5.906	2.40	45561	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4332041	0.22	3936624	110.04	60	120	
Sc (IS)	45	3	HMI He	656727	0.35	609520	107.74	60	120	
Ge Internal standard	72	2	HMI H2	2569941	2.54	2391663	107.45	60	120	
Ge Internal standard	72	3	HMI He	814255	1.75	756863	107.58	60	120	
In Internal Standard	115	3	HMI He	3235916	0.76	2988279	108.29	60	120	
Ir (IS)	193	3	HMI He	7595751	1.89	6996686	108.56	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-2-C
Data File Name	152SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:41:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.434	ppb	2.434	18.97	102	2000	
Na	23	3	45	464.719	ppb	464.719	2.22	77367	400000	
Mg	24	3	45	4809.020	ppb	4809.020	0.82	292961	400000	
Al	27	3	45	63898.050	ppb	63898.050	0.28	1516414	400000	
K	39	3	45	6556.146	ppb	6556.146	0.69	345794	400000	
Ca	40	2	45	1383.954	ppb	1383.954	1.46	826351	400000	
V	51	3	72	169.423	ppb	169.423	1.33	109243	2000	
Cr	52	3	72	127.186	ppb	127.186	0.55	101653	5000	
Mn	55	3	72	1026.284	ppb	1026.284	1.32	444948	10000	
Fe	56	2	72	72203.240	ppb	72203.240	2.85	114906171	10000	>LDR
Co	59	3	72	23.944	ppb	23.944	0.22	32246	2000	
Ni	60	3	72	44.113	ppb	44.113	0.64	17027	5000	
Cu	63	3	72	57.424	ppb	57.424	0.99	59041	5000	
Zn	66	3	72	150.046	ppb	150.046	0.87	26289	5000	
As	75	3	72	25.310	ppb	25.310	6.73	3075	2000	
Se	78	2	72	1.131	ppb	1.131	15.84	71	2000	
Sr	88	3	72	48.466	ppb	48.466	1.90	30063	4000	
Mo	95	3	115	6.776	ppb	6.776	1.87	3797	2000	
Ag	107	3	115	0.207	ppb	0.207	11.74	435	100	
Cd	111	3	115	0.170	ppb	0.170	53.51	65	2000	
Sn	120	3	115	10.816	ppb	10.816	1.72	10722	2000	
Sb	121	3	115	1.582	ppb	1.582	9.17	1558	1000	
Ba	137	3	115	435.333	ppb	435.333	0.90	127956	5000	
Tl	205	3	193	0.501	ppb	0.501	2.67	3460	2000	
(Pb)	206	3	193	55.622	ppb	55.622	2.32	94869	100	
(Pb)	207	3	193	52.092	ppb	52.092	2.02	78971	100	
Pb	208	3	193	53.887	ppb	53.887	2.36	371609	5000	
Th	232	3	193	26.506	ppb	26.506	2.74	192380	2000	
U	238	3	193	4.466	ppb	4.466	4.00	35144	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4208118	1.00	3936624	106.90	60	120	
Sc (IS)	45	3	HMI He	652346	0.98	609520	107.03	60	120	
Ge Internal standard	72	2	HMI H2	2548365	3.08	2391663	106.55	60	120	
Ge Internal standard	72	3	HMI He	802763	0.14	756863	106.06	60	120	
In Internal Standard	115	3	HMI He	3190489	0.78	2988279	106.77	60	120	
Ir (IS)	193	3	HMI He	7618241	1.96	6996686	108.88	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-3-C
Data File Name	153SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:43:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.696	ppb	2.696	9.95	112	2000	
Na	23	3	45	492.639	ppb	492.639	1.31	79964	400000	
Mg	24	3	45	5212.931	ppb	5212.931	0.64	315381	400000	
Al	27	3	45	69647.748	ppb	69647.748	0.89	1641724	400000	
K	39	3	45	7042.061	ppb	7042.061	1.60	366806	400000	
Ca	40	2	45	1531.501	ppb	1531.501	3.65	932512	400000	
V	51	3	72	177.788	ppb	177.788	1.53	115141	2000	
Cr	52	3	72	130.882	ppb	130.882	1.50	105050	5000	
Mn	55	3	72	1022.332	ppb	1022.332	1.15	445341	10000	
Fe	56	2	72	80878.649	ppb	80878.649	4.86	128655250	10000	>LDR
Co	59	3	72	28.502	ppb	28.502	1.55	38551	2000	
Ni	60	3	72	46.845	ppb	46.845	1.86	18146	5000	
Cu	63	3	72	58.044	ppb	58.044	2.34	59953	5000	
Zn	66	3	72	179.624	ppb	179.624	1.21	31557	5000	
As	75	3	72	25.507	ppb	25.507	1.94	3114	2000	
Se	78	2	72	0.910	ppb	0.910	22.16	57	2000	
Sr	88	3	72	50.983	ppb	50.983	1.33	31765	4000	
Mo	95	3	115	8.594	ppb	8.594	2.98	4870	2000	
Ag	107	3	115	0.231	ppb	0.231	2.24	486	100	
Cd	111	3	115	0.272	ppb	0.272	28.67	95	2000	
Sn	120	3	115	16.048	ppb	16.048	1.61	15633	2000	
Sb	121	3	115	1.631	ppb	1.631	4.05	1624	1000	
Ba	137	3	115	442.937	ppb	442.937	1.74	132075	5000	
Tl	205	3	193	0.532	ppb	0.532	1.59	3600	2000	
(Pb)	206	3	193	58.048	ppb	58.048	0.53	98473	100	
(Pb)	207	3	193	54.269	ppb	54.269	1.85	81811	100	
Pb	208	3	193	56.359	ppb	56.359	1.12	386532	5000	
Th	232	3	193	28.541	ppb	28.541	1.28	205412	2000	
U	238	3	193	4.664	ppb	4.664	1.35	36408	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4307028	1.57	3936624	109.41	60	120	
Sc (IS)	45	3	HMI He	647982	0.62	609520	106.31	60	120	
Ge Internal standard	72	2	HMI H2	2548161	2.97	2391663	106.54	60	120	
Ge Internal standard	72	3	HMI He	806620	0.75	756863	106.57	60	120	
In Internal Standard	115	3	HMI He	3237290	2.02	2988279	108.33	60	120	
Ir (IS)	193	3	HMI He	7576678	1.07	6996686	108.29	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-4-C
Data File Name	154SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:45:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.706	ppb	2.706	28.26	110	2000	
Na	23	3	45	417.151	ppb	417.151	2.54	71370	400000	
Mg	24	3	45	5225.883	ppb	5225.883	1.05	315326	400000	
Al	27	3	45	66843.467	ppb	66843.467	2.02	1571433	400000	
K	39	3	45	6293.833	ppb	6293.833	1.60	330037	400000	
Ca	40	2	45	1397.435	ppb	1397.435	2.85	835682	400000	
V	51	3	72	174.427	ppb	174.427	0.38	112459	2000	
Cr	52	3	72	126.811	ppb	126.811	0.76	101371	5000	
Mn	55	3	72	958.400	ppb	958.400	0.82	415582	10000	
Fe	56	2	72	85134.783	ppb	85134.783	0.41	133259840	10000	>LDR
Co	59	3	72	24.963	ppb	24.963	1.01	33619	2000	
Ni	60	3	72	46.731	ppb	46.731	1.07	18019	5000	
Cu	63	3	72	52.444	ppb	52.444	0.29	53970	5000	
Zn	66	3	72	158.805	ppb	158.805	2.31	27807	5000	
As	75	3	72	30.850	ppb	30.850	5.71	3732	2000	
Se	78	2	72	1.118	ppb	1.118	9.78	69	2000	
Sr	88	3	72	44.016	ppb	44.016	1.28	27330	4000	
Mo	95	3	115	7.899	ppb	7.899	6.53	4382	2000	
Ag	107	3	115	0.168	ppb	0.168	18.27	356	100	
Cd	111	3	115	0.117	ppb	0.117	102.41	50	2000	
Sn	120	3	115	11.883	ppb	11.883	2.81	11589	2000	
Sb	121	3	115	1.503	ppb	1.503	4.16	1474	1000	
Ba	137	3	115	402.847	ppb	402.847	1.17	117484	5000	
Tl	205	3	193	0.557	ppb	0.557	6.26	3679	2000	
(Pb)	206	3	193	52.160	ppb	52.160	0.13	87415	100	
(Pb)	207	3	193	49.075	ppb	49.075	1.98	73112	100	
Pb	208	3	193	50.693	ppb	50.693	1.78	343488	5000	
Th	232	3	193	26.152	ppb	26.152	2.29	186548	2000	
U	238	3	193	4.462	ppb	4.462	2.11	34492	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4217655	4.08	3936624	107.14	60	120	
Sc (IS)	45	3	HMI He	646276	0.47	609520	106.03	60	120	
Ge Internal standard	72	2	HMI H2	2505088	1.37	2391663	104.74	60	120	
Ge Internal standard	72	3	HMI He	802861	0.06	756863	106.08	60	120	
In Internal Standard	115	3	HMI He	3165603	1.41	2988279	105.93	60	120	
Ir (IS)	193	3	HMI He	7480692	0.46	6996686	106.92	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-1-C
Data File Name	155SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:47:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.375	ppb	3.375	32.57	133	2000	
Na	23	3	45	424.915	ppb	424.915	1.46	72309	400000	
Mg	24	3	45	4800.471	ppb	4800.471	0.72	290034	400000	
Al	27	3	45	59993.553	ppb	59993.553	1.00	1412094	400000	
K	39	3	45	4803.852	ppb	4803.852	1.05	259057	400000	
Ca	40	2	45	1485.021	ppb	1485.021	4.39	881897	400000	
V	51	3	72	155.323	ppb	155.323	1.14	101099	2000	
Cr	52	3	72	129.564	ppb	129.564	0.43	104440	5000	
Mn	55	3	72	1919.255	ppb	1919.255	0.68	839264	10000	
Fe	56	2	72	95065.647	ppb	95065.647	2.41	148313290	10000	>LDR
Co	59	3	72	28.086	ppb	28.086	1.14	38145	2000	
Ni	60	3	72	48.494	ppb	48.494	1.62	18850	5000	
Cu	63	3	72	131.866	ppb	131.866	1.12	136127	5000	
Zn	66	3	72	217.657	ppb	217.657	1.48	38324	5000	
As	75	3	72	35.742	ppb	35.742	2.70	4349	2000	
Se	78	2	72	2.980	ppb	2.980	2.60	175	2000	
Sr	88	3	72	42.659	ppb	42.659	2.13	26725	4000	
Mo	95	3	115	7.090	ppb	7.090	1.38	3932	2000	
Ag	107	3	115	0.726	ppb	0.726	8.42	1408	100	
Cd	111	3	115	0.201	ppb	0.201	39.73	73	2000	
Sn	120	3	115	25.086	ppb	25.086	1.05	23274	2000	
Sb	121	3	115	6.526	ppb	6.526	1.45	5908	1000	
Ba	137	3	115	407.891	ppb	407.891	2.25	118681	5000	
Tl	205	3	193	0.824	ppb	0.824	2.26	5012	2000	
(Pb)	206	3	193	546.854	ppb	546.854	1.48	911619	100	>LDR
(Pb)	207	3	193	525.116	ppb	525.116	2.21	775048	100	>LDR
Pb	208	3	193	553.390	ppb	553.390	0.96	3727851	5000	
Th	232	3	193	19.296	ppb	19.296	2.00	139795	2000	
U	238	3	193	4.799	ppb	4.799	3.08	36898	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4196873	1.60	3936624	106.61	60	120	
Sc (IS)	45	3	HMI He	646985	0.60	609520	106.15	60	120	
Ge Internal standard	72	2	HMI H2	2497270	1.09	2391663	104.42	60	120	
Ge Internal standard	72	3	HMI He	809877	0.94	756863	107.00	60	120	
In Internal Standard	115	3	HMI He	3158864	1.93	2988279	105.71	60	120	
Ir (IS)	193	3	HMI He	7480016	3.02	6996686	106.91	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	156_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:49:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.386	ppb	6.074	2052	50	104.8	90	110	
Na	23	3	45	46104.541	ppb	2.166	5173608	51000	90.4	90	110	
Mg	24	3	45	9705.160	ppb	1.014	587907	11000	88.2	90	110	>+\-10%
Al	27	3	45	932.287	ppb	1.036	22166	1000	93.2	90	110	
K	39	3	45	10197.541	ppb	2.033	519363	11000	92.7	90	110	
Ca	40	2	45	10103.938	ppb	1.314	5876909	11000	91.9	90	110	
V	51	3	72	50.054	ppb	1.611	32446	50	100.1	90	110	
Cr	52	3	72	51.051	ppb	1.297	41366	50	102.1	90	110	
Mn	55	3	72	50.281	ppb	2.039	21726	50	100.6	90	110	
Fe	56	2	72	1046.429	ppb	0.773	1664751	1000	104.6	90	110	
Co	59	3	72	50.461	ppb	3.719	67051	50	100.9	90	110	
Ni	60	3	72	49.295	ppb	2.107	18762	50	98.6	90	110	
Cu	63	3	72	51.142	ppb	0.940	52012	50	102.3	90	110	
Zn	66	3	72	51.403	ppb	3.179	9105	50	102.8	90	110	
As	75	3	72	53.166	ppb	1.701	6300	50	106.3	90	110	
Se	78	2	72	53.882	ppb	0.910	3126	50	107.8	90	110	
Sr	88	3	72	100.917	ppb	1.094	61573	100	100.9	90	110	
Mo	95	3	115	49.208	ppb	4.349	27703	50	98.4	90	110	
Ag	107	3	115	48.246	ppb	2.262	93698	50	96.5	90	110	
Cd	111	3	115	47.656	ppb	5.401	13520	50	95.3	90	110	
Sn	120	3	115	48.198	ppb	1.774	45007	50	96.4	90	110	
Sb	121	3	115	48.997	ppb	3.240	44626	50	98.0	90	110	
Ba	137	3	115	49.772	ppb	3.808	14981	50	99.5	90	110	
Tl	205	3	193	47.785	ppb	2.690	236412	50	95.6	90	110	
(Pb)	206	3	193	48.091	ppb	0.723	79520	50	96.2	90	110	
(Pb)	207	3	193	47.044	ppb	3.197	69137	50	94.1	90	110	
Pb	208	3	193	48.123	ppb	0.552	321691	50	96.2	90	110	
Th	232	3	193	48.109	ppb	0.535	331458	50	96.2	90	110	
U	238	3	193	48.850	ppb	0.514	349009	50	97.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4225690	2.34	3936624	107.34	60	120	
Sc (IS)	45	3	HMI He	649639	1.31	609520	106.58	60	120	
Ge Internal standard	72	2	HMI H2	2519582	0.84	2391663	105.35	60	120	
Ge Internal standard	72	3	HMI He	793281	1.31	756863	104.81	60	120	
In Internal Standard	115	3	HMI He	3248382	2.88	2988279	108.70	60	120	
Ir (IS)	193	3	HMI He	7377690	1.38	6996686	105.45	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	157_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:50:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.083	ppb	-88.4	2	0.5	
Na	23	3	45	9.384	ppb	98.9	25890	25	
Mg	24	3	45	1.428	ppb	90.6	894	25	
Al	27	3	45	2.820	ppb	118.7	200	15	
K	39	3	45	-29.914	ppb	-0.9	27404	50	
V	51	3	72	-0.336	ppb	-6.9	581	1	
Cr	52	3	72	0.133	ppb	90.9	1863	1	
Mn	55	3	72	0.306	ppb	43.4	330	0.5	
Co	59	3	72	-0.012	ppb	-85.2	60	0.5	
Ni	60	3	72	0.102	ppb	199.2	375	1	
Cu	63	3	72	-0.034	ppb	-145.0	456	1	
Zn	66	3	72	0.218	ppb	102.1	353	5	
As	75	3	72	-0.273	ppb	-67.9	45	1	
Se	78	2	72	0.018	ppb	284.6	5	1	
Sr	88	3	72	-0.032	ppb	-381.6	242	0.5	
Mo	95	3	115	0.010	ppb	87.4	62	0.5	
Ag	107	3	115	0.011	ppb	129.4	60	1	
Cd	111	3	115	-0.004	ppb	-1018.1	17	0.5	
Sn	120	3	115	0.307	ppb	46.0	1318	1	
Sb	121	3	115	-0.023	ppb	-95.9	127	0.6	
Ba	137	3	115	-0.003	ppb	-1336.9	105	0.5	
Tl	205	3	193	-0.080	ppb	-12.6	488	0.1	
(Pb)	206	3	193	-0.081	ppb	-26.0	333	1	
(Pb)	207	3	193	-0.113	ppb	-25.2	535	1	
Pb	208	3	193	-0.077	ppb	-18.3	1593	0.5	
Th	232	3	193	1.002	ppb	14.5	15008	1	>RL
U	238	3	193	0.016	ppb	48.4	2461	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4205390	1.06	3936624	106.83	60	120	
Sc (IS)	45	3	HMI He	642045	0.93	609520	105.34	60	120	
Ge Internal standard	72	2	HMI H2	2547268	1.40	2391663	106.51	60	120	
Ge Internal standard	72	3	HMI He	796719	0.23	756863	105.27	60	120	
In Internal Standard	115	3	HMI He	3222977	1.85	2988279	107.85	60	120	
Ir (IS)	193	3	HMI He	7352461	1.27	6996686	105.08	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F
Data File Name	158SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:52:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.245	ppb	2.245	26.86	93	2000	
Na	23	3	45	298.435	ppb	298.435	3.50	59028	400000	
Mg	24	3	45	3173.279	ppb	3173.279	1.64	194552	400000	
Al	27	3	45	47531.224	ppb	47531.224	2.83	1133515	400000	
K	39	3	45	3638.192	ppb	3638.192	0.38	205977	400000	
Ca	40	2	45	1093.048	ppb	1093.048	1.30	670625	400000	
V	51	3	72	125.083	ppb	125.083	1.17	81880	2000	
Cr	52	3	72	100.258	ppb	100.258	0.78	81515	5000	
Mn	55	3	72	1395.887	ppb	1395.887	0.70	612710	10000	
Fe	56	2	72	57529.581	ppb	57529.581	1.93	93130262	10000	>LDR
Co	59	3	72	18.383	ppb	18.383	1.43	25085	2000	
Ni	60	3	72	32.097	ppb	32.097	2.39	12638	5000	
Cu	63	3	72	63.119	ppb	63.119	1.09	65661	5000	
Zn	66	3	72	124.261	ppb	124.261	1.09	22100	5000	
As	75	3	72	21.251	ppb	21.251	3.66	2627	2000	
Se	78	2	72	1.214	ppb	1.214	8.82	77	2000	
Sr	88	3	72	33.836	ppb	33.836	1.98	21333	4000	
Mo	95	3	115	4.598	ppb	4.598	8.21	2642	2000	
Ag	107	3	115	0.241	ppb	0.241	6.53	508	100	
Cd	111	3	115	0.242	ppb	0.242	38.11	87	2000	
Sn	120	3	115	19.786	ppb	19.786	2.30	19092	2000	
Sb	121	3	115	1.782	ppb	1.782	5.36	1768	1000	
Ba	137	3	115	340.105	ppb	340.105	0.90	101774	5000	
Tl	205	3	193	0.461	ppb	0.461	5.76	3164	2000	
(Pb)	206	3	193	159.780	ppb	159.780	1.88	264036	100	
(Pb)	207	3	193	147.481	ppb	147.481	1.41	216053	100	
Pb	208	3	193	153.702	ppb	153.702	1.38	1026479	5000	
Th	232	3	193	18.504	ppb	18.504	0.96	133082	2000	
U	238	3	193	3.600	ppb	3.600	0.77	27999	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4285281	1.83	3936624	108.86	60	120	
Sc (IS)	45	3	HMI He	655655	1.17	609520	107.57	60	120	
Ge Internal standard	72	2	HMI H2	2591203	1.93	2391663	108.34	60	120	
Ge Internal standard	72	3	HMI He	812840	0.42	756863	107.40	60	120	
In Internal Standard	115	3	HMI He	3247502	1.11	2988279	108.67	60	120	
Ir (IS)	193	3	HMI He	7403979	0.87	6996686	105.82	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-Fsd@5
Data File Name	159SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:54:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.702	ppb	0.702	71.33	33	2000	
Na	23	3	45	63.522	ppb	63.522	2.01	32105	400000	
Mg	24	3	45	645.772	ppb	645.772	2.26	39705	400000	
Al	27	3	45	9296.215	ppb	9296.215	1.76	218825	400000	
K	39	3	45	714.789	ppb	714.789	6.93	63236	400000	
Ca	40	2	45	241.406	ppb	241.406	1.06	169486	400000	
V	51	3	72	24.300	ppb	24.300	3.80	16473	2000	
Cr	52	3	72	20.044	ppb	20.044	3.76	17641	5000	
Mn	55	3	72	282.430	ppb	282.430	3.92	123485	10000	
Fe	56	2	72	11641.607	ppb	11641.607	1.03	18760918	10000	
Co	59	3	72	3.626	ppb	3.626	2.14	4985	2000	
Ni	60	3	72	6.492	ppb	6.492	4.73	2816	5000	
Cu	63	3	72	12.513	ppb	12.513	3.50	13350	5000	
Zn	66	3	72	28.383	ppb	28.383	4.15	5268	5000	
As	75	3	72	3.782	ppb	3.782	4.61	530	2000	
Se	78	2	72	0.332	ppb	0.332	16.85	24	2000	
Sr	88	3	72	6.559	ppb	6.559	5.56	4327	4000	
Mo	95	3	115	0.864	ppb	0.864	6.36	535	2000	
Ag	107	3	115	0.059	ppb	0.059	36.24	152	100	
Cd	111	3	115	0.032	ppb	0.032	185.70	27	2000	
Sn	120	3	115	3.987	ppb	3.987	6.96	4619	2000	
Sb	121	3	115	0.366	ppb	0.366	3.46	475	1000	
Ba	137	3	115	69.034	ppb	69.034	2.91	20457	5000	
Tl	205	3	193	-0.001	ppb	-0.001	-917.97	898	2000	
(Pb)	206	3	193	31.054	ppb	31.054	4.73	52822	100	
(Pb)	207	3	193	29.664	ppb	29.664	1.25	44984	100	
Pb	208	3	193	30.227	ppb	30.227	2.57	208017	5000	
Th	232	3	193	3.749	ppb	3.749	4.29	34362	2000	
U	238	3	193	0.731	ppb	0.731	3.11	7732	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4253790	0.85	3936624	108.06	60	120	
Sc (IS)	45	3	HMI He	646827	1.54	609520	106.12	60	120	
Ge Internal standard	72	2	HMI H2	2577117	0.76	2391663	107.75	60	120	
Ge Internal standard	72	3	HMI He	808905	1.63	756863	106.88	60	120	
In Internal Standard	115	3	HMI He	3204138	2.56	2988279	107.22	60	120	
Ir (IS)	193	3	HMI He	7566374	1.06	6996686	108.14	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-G MS
Data File Name	160SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:56:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	203.565	ppb	203.565	1.78	7933	2000	
Na	23	3	45	4048.997	ppb	4048.997	2.64	483132	400000	
Mg	24	3	45	7017.567	ppb	7017.567	2.22	430510	400000	
Al	27	3	45	67648.974	ppb	67648.974	1.81	1618179	400000	
K	39	3	45	9286.917	ppb	9286.917	3.21	481344	400000	
Ca	40	2	45	4993.433	ppb	4993.433	1.09	2956582	400000	
V	51	3	72	326.743	ppb	326.743	3.54	212841	2000	
Cr	52	3	72	305.975	ppb	305.975	3.60	245403	5000	
Mn	55	3	72	1598.790	ppb	1598.790	4.43	702486	10000	
Fe	56	2	72	62974.233	ppb	62974.233	1.16	101421028	10000	>LDR
Co	59	3	72	207.933	ppb	207.933	5.07	283218	2000	
Ni	60	3	72	222.990	ppb	222.990	4.96	85839	5000	
Cu	63	3	72	256.671	ppb	256.671	5.31	265699	5000	
Zn	66	3	72	320.144	ppb	320.144	5.08	56481	5000	
As	75	3	72	202.891	ppb	202.891	5.75	24435	2000	
Se	78	2	72	192.900	ppb	192.900	0.76	11438	2000	
Sr	88	3	72	428.584	ppb	428.584	4.98	267345	4000	
Mo	95	3	115	187.122	ppb	187.122	5.00	103821	2000	
Ag	107	3	115	191.250	ppb	191.250	5.11	366336	100	
Cd	111	3	115	185.742	ppb	185.742	5.55	51961	2000	
Sn	120	3	115	198.925	ppb	198.925	5.50	180000	2000	
Sb	121	3	115	181.273	ppb	181.273	6.34	162482	1000	
Ba	137	3	115	589.132	ppb	589.132	6.10	173800	5000	
Tl	205	3	193	181.788	ppb	181.788	7.32	905231	2000	
(Pb)	206	3	193	352.388	ppb	352.388	8.55	584860	100	
(Pb)	207	3	193	335.151	ppb	335.151	8.33	492710	100	
Pb	208	3	193	351.991	ppb	351.991	6.85	2361530	5000	
Th	232	3	193	195.604	ppb	195.604	9.13	1333624	2000	
U	238	3	193	197.070	ppb	197.070	6.05	1414180	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4279754	0.86	3936624	108.72	60	120	
Sc (IS)	45	3	HMI He	657653	1.97	609520	107.90	60	120	
Ge Internal standard	72	2	HMI H2	2577525	1.10	2391663	107.77	60	120	
Ge Internal standard	72	3	HMI He	814473	3.27	756863	107.61	60	120	
In Internal Standard	115	3	HMI He	3207038	3.25	2988279	107.32	60	120	
Ir (IS)	193	3	HMI He	7461052	4.34	6996686	106.64	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-H MSD
Data File Name	161SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:58:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	188.869	ppb	188.869	1.75	7407	2000	
Na	23	3	45	4034.057	ppb	4034.057	0.14	478329	400000	
Mg	24	3	45	7065.961	ppb	7065.961	0.22	430641	400000	
Al	27	3	45	68252.871	ppb	68252.871	1.72	1621948	400000	
K	39	3	45	9190.725	ppb	9190.725	0.28	473631	400000	
Ca	40	2	45	4912.609	ppb	4912.609	0.76	2909236	400000	
V	51	3	72	332.306	ppb	332.306	0.74	215683	2000	
Cr	52	3	72	311.186	ppb	311.186	0.60	248683	5000	
Mn	55	3	72	1599.204	ppb	1599.204	0.57	700347	10000	
Fe	56	2	72	62600.251	ppb	62600.251	2.20	102452934	10000	>LDR
Co	59	3	72	209.685	ppb	209.685	0.35	284691	2000	
Ni	60	3	72	222.659	ppb	222.659	0.42	85438	5000	
Cu	63	3	72	257.687	ppb	257.687	0.58	265911	5000	
Zn	66	3	72	322.182	ppb	322.182	0.76	56656	5000	
As	75	3	72	205.702	ppb	205.702	1.48	24690	2000	
Se	78	2	72	189.791	ppb	189.791	1.47	11436	2000	
Sr	88	3	72	434.094	ppb	434.094	0.82	269907	4000	
Mo	95	3	115	189.646	ppb	189.646	2.43	106258	2000	
Ag	107	3	115	190.680	ppb	190.680	1.35	368900	100	
Cd	111	3	115	184.690	ppb	184.690	2.69	52182	2000	
Sn	120	3	115	199.697	ppb	199.697	0.86	182536	2000	
Sb	121	3	115	182.144	ppb	182.144	1.91	164930	1000	
Ba	137	3	115	585.005	ppb	585.005	2.12	174335	5000	
Tl	205	3	193	182.488	ppb	182.488	0.75	924358	2000	
(Pb)	206	3	193	343.506	ppb	343.506	1.12	580111	100	
(Pb)	207	3	193	331.413	ppb	331.413	1.51	495699	100	
Pb	208	3	193	343.615	ppb	343.615	0.65	2344751	5000	
Th	232	3	193	193.098	ppb	193.098	1.90	1339843	2000	
U	238	3	193	196.555	ppb	196.555	1.68	1434113	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4279437	1.16	3936624	108.71	60	120	
Sc (IS)	45	3	HMI He	653212	0.37	609520	107.17	60	120	
Ge Internal standard	72	2	HMI H2	2619485	1.76	2391663	109.53	60	120	
Ge Internal standard	72	3	HMI He	811002	0.64	756863	107.15	60	120	
In Internal Standard	115	3	HMI He	3236246	2.05	2988279	108.30	60	120	
Ir (IS)	193	3	HMI He	7573938	1.58	6996686	108.25	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-I DU
Data File Name	162SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T19:59:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.375	ppb	2.375	0.47	100	2000	
Na	23	3	45	307.368	ppb	307.368	5.39	60198	400000	
Mg	24	3	45	3200.563	ppb	3200.563	1.94	196781	400000	
Al	27	3	45	46222.253	ppb	46222.253	1.08	1105634	400000	
K	39	3	45	3513.295	ppb	3513.295	1.58	200494	400000	
Ca	40	2	45	1144.464	ppb	1144.464	1.68	694434	400000	
V	51	3	72	125.249	ppb	125.249	0.80	82131	2000	
Cr	52	3	72	101.755	ppb	101.755	1.82	82850	5000	
Mn	55	3	72	1393.368	ppb	1393.368	1.54	612676	10000	
Fe	56	2	72	56960.254	ppb	56960.254	1.16	93826255	10000	>LDR
Co	59	3	72	18.070	ppb	18.070	1.85	24703	2000	
Ni	60	3	72	32.347	ppb	32.347	2.18	12758	5000	
Cu	63	3	72	61.153	ppb	61.153	0.40	63746	5000	
Zn	66	3	72	123.584	ppb	123.584	0.68	22020	5000	
As	75	3	72	21.807	ppb	21.807	4.94	2699	2000	
Se	78	2	72	1.422	ppb	1.422	16.13	91	2000	
Sr	88	3	72	34.490	ppb	34.490	7.04	21771	4000	
Mo	95	3	115	4.880	ppb	4.880	4.02	2779	2000	
Ag	107	3	115	0.262	ppb	0.262	12.08	545	100	
Cd	111	3	115	0.309	ppb	0.309	14.89	105	2000	
Sn	120	3	115	18.307	ppb	18.307	4.17	17616	2000	
Sb	121	3	115	2.137	ppb	2.137	2.33	2074	1000	
Ba	137	3	115	339.806	ppb	339.806	0.56	100953	5000	
Tl	205	3	193	0.499	ppb	0.499	2.06	3437	2000	
(Pb)	206	3	193	156.268	ppb	156.268	0.23	264542	100	
(Pb)	207	3	193	145.940	ppb	145.940	0.39	219006	100	
Pb	208	3	193	150.331	ppb	150.331	0.46	1028448	5000	
Th	232	3	193	22.218	ppb	22.218	3.43	161984	2000	
U	238	3	193	3.669	ppb	3.669	1.89	29183	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4246375	2.64	3936624	107.87	60	120	
Sc (IS)	45	3	HMI He	657536	1.03	609520	107.88	60	120	
Ge Internal standard	72	2	HMI H2	2635937	0.71	2391663	110.21	60	120	
Ge Internal standard	72	3	HMI He	814322	0.88	756863	107.59	60	120	
In Internal Standard	115	3	HMI He	3223998	0.27	2988279	107.89	60	120	
Ir (IS)	193	3	HMI He	7584077	1.27	6996686	108.40	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F pds
Data File Name	163SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:01:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	100.442	ppb	100.442	3.77	4044	2000	
Na	23	3	45	4947.157	ppb	4947.157	1.44	585304	400000	
Mg	24	3	45	4959.434	ppb	4959.434	0.96	304857	400000	
Al	27	3	45	48400.520	ppb	48400.520	2.08	1158852	400000	
K	39	3	45	5495.348	ppb	5495.348	2.04	297223	400000	
Ca	40	2	45	3038.356	ppb	3038.356	2.99	1816326	400000	
V	51	3	72	215.096	ppb	215.096	1.01	140166	2000	
Cr	52	3	72	196.773	ppb	196.773	1.19	158205	5000	
Mn	55	3	72	1460.250	ppb	1460.250	0.74	640749	10000	
Fe	56	2	72	57022.369	ppb	57022.369	0.29	93455229	10000	>LDR
Co	59	3	72	113.951	ppb	113.951	1.30	155037	2000	
Ni	60	3	72	124.102	ppb	124.102	0.59	47865	5000	
Cu	63	3	72	160.143	ppb	160.143	1.11	165760	5000	
Zn	66	3	72	313.095	ppb	313.095	1.43	55171	5000	
As	75	3	72	117.946	ppb	117.946	2.69	14215	2000	
Se	78	2	72	99.583	ppb	99.583	0.46	6011	2000	
Sr	88	3	72	129.736	ppb	129.736	1.18	81010	4000	
Mo	95	3	115	97.780	ppb	97.780	1.90	54992	2000	
Ag	107	3	115	25.099	ppb	25.099	2.10	48744	100	
Cd	111	3	115	93.378	ppb	93.378	0.25	26485	2000	
Sn	120	3	115	112.613	ppb	112.613	1.63	103710	2000	
Sb	121	3	115	91.224	ppb	91.224	1.52	82945	1000	
Ba	137	3	115	430.239	ppb	430.239	1.87	128658	5000	
Tl	205	3	193	92.016	ppb	92.016	2.30	463542	2000	
(Pb)	206	3	193	244.010	ppb	244.010	1.82	409623	100	
(Pb)	207	3	193	231.848	ppb	231.848	1.10	344865	100	
Pb	208	3	193	238.572	ppb	238.572	1.91	1618282	5000	
Th	232	3	193	114.481	ppb	114.481	1.70	792869	2000	
U	238	3	193	198.056	ppb	198.056	2.02	1435971	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4293177	0.81	3936624	109.06	60	120	
Sc (IS)	45	3	HMI He	658276	1.48	609520	108.00	60	120	
Ge Internal standard	72	2	HMI H2	2622775	0.49	2391663	109.66	60	120	
Ge Internal standard	72	3	HMI He	812644	1.81	756863	107.37	60	120	
In Internal Standard	115	3	HMI He	3246498	1.79	2988279	108.64	60	120	
Ir (IS)	193	3	HMI He	7527753	2.58	6996686	107.59	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-3-C
Data File Name	164SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:03:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.140	ppb	4.140	8.11	170	2000	
Na	23	3	45	493.843	ppb	493.843	0.96	81393	400000	
Mg	24	3	45	5987.982	ppb	5987.982	2.03	367938	400000	
Al	27	3	45	78107.645	ppb	78107.645	1.41	1870701	400000	
K	39	3	45	5744.112	ppb	5744.112	1.10	309444	400000	
Ca	40	2	45	1699.327	ppb	1699.327	2.51	1035194	400000	
V	51	3	72	174.422	ppb	174.422	2.33	114649	2000	
Cr	52	3	72	132.789	ppb	132.789	2.19	108137	5000	
Mn	55	3	72	3787.106	ppb	3787.106	2.01	1673774	10000	
Fe	56	2	72	86798.214	ppb	86798.214	1.18	139885966	10000	>LDR
Co	59	3	72	41.114	ppb	41.114	2.25	56401	2000	
Ni	60	3	72	61.841	ppb	61.841	1.39	24206	5000	
Cu	63	3	72	183.125	ppb	183.125	2.96	190856	5000	
Zn	66	3	72	291.636	ppb	291.636	2.05	51794	5000	
As	75	3	72	41.074	ppb	41.074	8.31	5037	2000	
Se	78	2	72	3.466	ppb	3.466	6.34	210	2000	
Sr	88	3	72	45.583	ppb	45.583	0.47	28853	4000	
Mo	95	3	115	6.623	ppb	6.623	1.77	3752	2000	
Ag	107	3	115	0.917	ppb	0.917	2.36	1808	100	
Cd	111	3	115	0.505	ppb	0.505	16.08	160	2000	
Sn	120	3	115	28.360	ppb	28.360	0.80	26718	2000	
Sb	121	3	115	5.788	ppb	5.788	2.84	5363	1000	
Ba	137	3	115	505.752	ppb	505.752	1.36	150179	5000	
Tl	205	3	193	1.121	ppb	1.121	4.49	6598	2000	
(Pb)	206	3	193	425.936	ppb	425.936	4.36	721269	100	
(Pb)	207	3	193	406.283	ppb	406.283	2.82	609437	100	
Pb	208	3	193	431.623	ppb	431.623	4.48	2953060	5000	
Th	232	3	193	21.582	ppb	21.582	6.44	157771	2000	
U	238	3	193	6.092	ppb	6.092	1.45	46952	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4321760	1.15	3936624	109.78	60	120	
Sc (IS)	45	3	HMI He	658415	0.85	609520	108.02	60	120	
Ge Internal standard	72	2	HMI H2	2579405	0.84	2391663	107.85	60	120	
Ge Internal standard	72	3	HMI He	818737	1.76	756863	108.18	60	120	
In Internal Standard	115	3	HMI He	3224128	2.35	2988279	107.89	60	120	
Ir (IS)	193	3	HMI He	7599953	2.29	6996686	108.62	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-4-C
Data File Name	165SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:05:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.387	ppb	4.387	4.99	178	2000	
Na	23	3	45	459.502	ppb	459.502	1.15	77197	400000	
Mg	24	3	45	4404.722	ppb	4404.722	0.39	269831	400000	
Al	27	3	45	67069.742	ppb	67069.742	3.17	1600137	400000	
K	39	3	45	4784.991	ppb	4784.991	0.11	261679	400000	
Ca	40	2	45	1352.367	ppb	1352.367	3.43	842067	400000	
V	51	3	72	126.422	ppb	126.422	1.82	82833	2000	
Cr	52	3	72	97.224	ppb	97.224	1.68	79189	5000	
Mn	55	3	72	2458.899	ppb	2458.899	1.84	1080330	10000	
Fe	56	2	72	62542.843	ppb	62542.843	2.09	101679361	10000	>LDR
Co	59	3	72	25.308	ppb	25.308	2.94	34541	2000	
Ni	60	3	72	52.303	ppb	52.303	2.12	20402	5000	
Cu	63	3	72	58.528	ppb	58.528	1.65	60989	5000	
Zn	66	3	72	177.320	ppb	177.320	1.26	31435	5000	
As	75	3	72	17.942	ppb	17.942	3.93	2232	2000	
Se	78	2	72	1.120	ppb	1.120	17.34	71	2000	
Sr	88	3	72	46.596	ppb	46.596	3.04	29305	4000	
Mo	95	3	115	4.347	ppb	4.347	3.85	2477	2000	
Ag	107	3	115	0.219	ppb	0.219	11.88	461	100	
Cd	111	3	115	0.244	ppb	0.244	8.41	87	2000	
Sn	120	3	115	16.083	ppb	16.083	0.92	15581	2000	
Sb	121	3	115	1.522	ppb	1.522	9.06	1516	1000	
Ba	137	3	115	570.920	ppb	570.920	2.03	169279	5000	
Tl	205	3	193	0.694	ppb	0.694	2.81	4439	2000	
(Pb)	206	3	193	100.281	ppb	100.281	1.68	170559	100	
(Pb)	207	3	193	94.315	ppb	94.315	1.14	142316	100	
Pb	208	3	193	97.636	ppb	97.636	1.54	671182	5000	
Th	232	3	193	22.207	ppb	22.207	1.90	162480	2000	
U	238	3	193	4.018	ppb	4.018	2.13	31848	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386532	1.78	3936624	111.43	60	120	
Sc (IS)	45	3	HMI He	655805	0.69	609520	107.59	60	120	
Ge Internal standard	72	2	HMI H2	2601827	1.13	2391663	108.79	60	120	
Ge Internal standard	72	3	HMI He	813798	0.93	756863	107.52	60	120	
In Internal Standard	115	3	HMI He	3219766	2.07	2988279	107.75	60	120	
Ir (IS)	193	3	HMI He	7612504	0.94	6996686	108.80	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7689704
Data File Name	166_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:07:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.267	ppb	5.867	2027	50	102.5	90	110	
Na	23	3	45	46693.764	ppb	1.819	5237955	51000	91.6	90	110	
Mg	24	3	45	9839.566	ppb	2.204	595817	11000	89.5	90	110	>+\-10%
Al	27	3	45	958.080	ppb	2.786	22765	1000	95.8	90	110	
K	39	3	45	10120.232	ppb	1.729	515471	11000	92.0	90	110	
Ca	40	2	45	10218.384	ppb	2.591	5973573	11000	92.9	90	110	
V	51	3	72	50.413	ppb	1.872	33131	50	100.8	90	110	
Cr	52	3	72	50.742	ppb	0.934	41701	50	101.5	90	110	
Mn	55	3	72	50.110	ppb	4.212	21958	50	100.2	90	110	
Fe	56	2	72	1047.942	ppb	1.350	1689108	1000	104.8	90	110	
Co	59	3	72	49.418	ppb	1.073	66603	50	98.8	90	110	
Ni	60	3	72	49.299	ppb	0.492	19027	50	98.6	90	110	
Cu	63	3	72	49.690	ppb	0.706	51257	50	99.4	90	110	
Zn	66	3	72	50.163	ppb	2.689	9018	50	100.3	90	110	
As	75	3	72	51.764	ppb	2.304	6220	50	103.5	90	110	
Se	78	2	72	51.481	ppb	3.541	3026	50	103.0	90	110	
Sr	88	3	72	99.500	ppb	1.037	61561	100	99.5	90	110	
Mo	95	3	115	49.237	ppb	3.175	27861	50	98.5	90	110	
Ag	107	3	115	48.051	ppb	2.823	93763	50	96.1	90	110	
Cd	111	3	115	48.747	ppb	1.442	13905	50	97.5	90	110	
Sn	120	3	115	48.950	ppb	3.590	45904	50	97.9	90	110	
Sb	121	3	115	48.879	ppb	2.173	44748	50	97.8	90	110	
Ba	137	3	115	49.070	ppb	2.803	14844	50	98.1	90	110	
Tl	205	3	193	46.297	ppb	2.410	236354	50	92.6	90	110	
(Pb)	206	3	193	45.970	ppb	1.452	78449	50	91.9	90	110	
(Pb)	207	3	193	45.823	ppb	2.238	69529	50	91.6	90	110	
Pb	208	3	193	46.024	ppb	0.492	317584	50	92.0	90	110	
Th	232	3	193	47.332	ppb	0.745	336705	50	94.7	90	110	
U	238	3	193	46.458	ppb	2.164	342566	50	92.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4247450	1.17	3936624	107.90	60	120	
Sc (IS)	45	3	HMI He	649328	0.24	609520	106.53	60	120	
Ge Internal standard	72	2	HMI H2	2552752	1.04	2391663	106.74	60	120	
Ge Internal standard	72	3	HMI He	804357	0.70	756863	106.28	60	120	
In Internal Standard	115	3	HMI He	3263098	1.03	2988279	109.20	60	120	
Ir (IS)	193	3	HMI He	7613418	2.00	6996686	108.81	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7689701
Data File Name	167_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:08:58-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	041CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.084	ppb	-85.8	2	0.5	
Na	23	3	45	9.648	ppb	30.1	26167	25	
Mg	24	3	45	-0.807	ppb	-98.0	767	25	
Al	27	3	45	4.170	ppb	47.4	234	15	
K	39	3	45	-25.507	ppb	-113.0	27876	50	
V	51	3	72	-0.391	ppb	-8.6	551	1	
Cr	52	3	72	0.249	ppb	24.0	1972	1	
Mn	55	3	72	0.371	ppb	25.5	361	0.5	
Co	59	3	72	-0.006	ppb	-366.7	68	0.5	
Ni	60	3	72	0.144	ppb	75.9	395	1	
Cu	63	3	72	-0.011	ppb	-258.4	485	1	
Zn	66	3	72	0.102	ppb	190.0	337	5	
As	75	3	72	-0.222	ppb	-110.2	52	1	
Se	78	2	72	0.074	ppb	138.7	9	1	
Sr	88	3	72	-0.041	ppb	-188.9	238	0.5	
Mo	95	3	115	0.046	ppb	67.2	82	0.5	
Ag	107	3	115	0.015	ppb	19.6	68	1	
Cd	111	3	115	-0.028	ppb	-65.5	10	0.5	
Sn	120	3	115	0.358	ppb	14.8	1374	1	
Sb	121	3	115	-0.059	ppb	-35.9	95	0.6	
Ba	137	3	115	0.024	ppb	446.8	113	0.5	
Tl	205	3	193	-0.083	ppb	-12.5	473	0.1	
(Pb)	206	3	193	-0.067	ppb	-23.5	356	1	
(Pb)	207	3	193	-0.113	ppb	-12.3	536	1	
Pb	208	3	193	-0.063	ppb	-25.1	1689	0.5	
Th	232	3	193	1.480	ppb	10.1	18303	1	>RL
U	238	3	193	0.037	ppb	39.4	2621	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4240822	2.43	3936624	107.73	60	120	
Sc (IS)	45	3	HMI He	648217	0.82	609520	106.35	60	120	
Ge Internal standard	72	2	HMI H2	2577697	2.18	2391663	107.78	60	120	
Ge Internal standard	72	3	HMI He	804425	0.66	756863	106.28	60	120	
In Internal Standard	115	3	HMI He	3245413	2.63	2988279	108.60	60	120	
Ir (IS)	193	3	HMI He	7388286	2.17	6996686	105.60	60	120	

Sample Report

Sample Table

Sample Name	
Data File Name	168SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:10:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.033	ppb	-0.033	-240.63	7	2000	
Na	23	3	45	-83.865	ppb	-83.865	-5.77	30029	400000	
Mg	24	3	45	-1.278	ppb	-1.278	-67.25	1408	400000	
Al	27	3	45	-1.069	ppb	-1.069	-41.02	210	400000	
K	39	3	45	-330.216	ppb	-330.216	-3.14	25288	400000	
Ca	40	2	45	-13.069	ppb	-13.069	-4.36	38174	400000	
V	51	3	72	-1.043	ppb	-1.043	-5.51	250	2000	
Cr	52	3	72	-1.535	ppb	-1.535	-2.57	1073	5000	
Mn	55	3	72	-0.022	ppb	-0.022	-129.76	360	10000	
Fe	56	2	72	-2.341	ppb	-2.341	-29.67	26009	10000	
Co	59	3	72	0.000	ppb	0.000	-7239.76	143	2000	
Ni	60	3	72	-0.694	ppb	-0.694	-4.04	145	5000	
Cu	63	3	72	-0.220	ppb	-0.220	-7.44	511	5000	
Zn	66	3	72	-1.117	ppb	-1.117	-2.50	237	5000	
As	75	3	72	-0.411	ppb	-0.411	-5.54	55	2000	
Se	78	2	72	0.063	ppb	0.063	14.98	15	2000	
Sr	88	3	72	-0.082	ppb	-0.082	-57.42	405	4000	
Mo	95	3	115	-0.052	ppb	-0.052	-32.29	48	2000	
Ag	107	3	115	0.007	ppb	0.007	84.55	98	100	
Cd	111	3	115	-0.018	ppb	-0.018	-126.10	23	2000	
Sn	120	3	115	-0.889	ppb	-0.889	-4.20	433	2000	
Sb	121	3	115	-0.117	ppb	-0.117	-3.93	77	1000	
Ba	137	3	115	-0.204	ppb	-0.204	-4.05	83	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-1.47	608	2000	
(Pb)	206	3	193	-0.139	ppb	-0.139	-8.81	443	100	
(Pb)	207	3	193	-0.199	ppb	-0.199	-17.83	760	100	
Pb	208	3	193	-0.144	ppb	-0.144	-5.92	2139	5000	
Th	232	3	193	-0.352	ppb	-0.352	-9.89	11018	2000	
U	238	3	193	0.004	ppb	0.004	599.32	4422	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7667919	1.92	3936624	194.78	60	120	IS Failed
Sc (IS)	45	3	HMI He	1236855	3.55	609520	202.92	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4707474	1.21	2391663	196.83	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1520157	3.80	756863	200.85	60	120	IS Failed
In Internal Standard	115	3	HMI He	5904819	3.84	2988279	197.60	60	120	IS Failed
Ir (IS)	193	3	HMI He	13658479	4.91	6996686	195.21	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	169SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:12:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.126	ppb	-0.126	0.00	0	2000	
Na	23	3	45	-82.581	ppb	-82.581	-5.14	29092	400000	
Mg	24	3	45	-2.172	ppb	-2.172	-65.10	1255	400000	
Al	27	3	45	0.126	ppb	0.126	503.63	254	400000	
K	39	3	45	-320.709	ppb	-320.709	-2.95	25128	400000	
Ca	40	2	45	-11.805	ppb	-11.805	-5.08	39412	400000	
V	51	3	72	-1.088	ppb	-1.088	-1.65	197	2000	
Cr	52	3	72	-1.536	ppb	-1.536	-3.84	1068	5000	
Mn	55	3	72	-0.096	ppb	-0.096	-11.36	298	10000	
Fe	56	2	72	-2.251	ppb	-2.251	-15.32	26094	10000	
Co	59	3	72	-0.005	ppb	-0.005	-42.23	130	2000	
Ni	60	3	72	-0.692	ppb	-0.692	-3.83	147	5000	
Cu	63	3	72	-0.244	ppb	-0.244	-10.48	465	5000	
Zn	66	3	72	-1.195	ppb	-1.195	-4.31	210	5000	
As	75	3	72	-0.545	ppb	-0.545	-16.33	25	2000	
Se	78	2	72	-0.017	ppb	-0.017	-194.15	6	2000	
Sr	88	3	72	-0.105	ppb	-0.105	-8.04	375	4000	
Mo	95	3	115	-0.046	ppb	-0.046	-43.64	53	2000	
Ag	107	3	115	0.005	ppb	0.005	9.24	88	100	
Cd	111	3	115	-0.033	ppb	-0.033	-53.87	15	2000	
Sn	120	3	115	-0.756	ppb	-0.756	-24.92	642	2000	
Sb	121	3	115	-0.116	ppb	-0.116	-10.46	77	1000	
Ba	137	3	115	-0.214	ppb	-0.214	-16.77	75	5000	
Tl	205	3	193	-0.114	ppb	-0.114	-3.57	580	2000	
(Pb)	206	3	193	-0.144	ppb	-0.144	-22.09	418	100	
(Pb)	207	3	193	-0.203	ppb	-0.203	-12.44	733	100	
Pb	208	3	193	-0.148	ppb	-0.148	-0.94	2042	5000	
Th	232	3	193	-0.370	ppb	-0.370	-3.85	10554	2000	
U	238	3	193	0.010	ppb	0.010	45.97	4389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7651780	3.16	3936624	194.37	60	120	IS Failed
Sc (IS)	45	3	HMI He	1187449	3.05	609520	194.82	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4676622	0.98	2391663	195.54	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1514454	1.24	756863	200.10	60	120	IS Failed
In Internal Standard	115	3	HMI He	5710360	4.92	2988279	191.09	60	120	IS Failed
Ir (IS)	193	3	HMI He	13339919	1.75	6996686	190.66	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	170SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:14:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.031	ppb	-0.031	-125.91	7	2000	
Na	23	3	45	-80.103	ppb	-80.103	-5.52	29005	400000	
Mg	24	3	45	-0.359	ppb	-0.359	-245.79	1425	400000	
Al	27	3	45	-0.542	ppb	-0.542	-255.91	220	400000	
K	39	3	45	-311.211	ppb	-311.211	-4.11	25435	400000	
Ca	40	2	45	-12.933	ppb	-12.933	-6.86	37421	400000	
V	51	3	72	-1.099	ppb	-1.099	-3.55	177	2000	
Cr	52	3	72	-1.535	ppb	-1.535	-4.69	1033	5000	
Mn	55	3	72	-0.114	ppb	-0.114	-63.81	273	10000	
Fe	56	2	72	-2.875	ppb	-2.875	-9.61	23587	10000	
Co	59	3	72	-0.018	ppb	-0.018	-44.15	95	2000	
Ni	60	3	72	-0.672	ppb	-0.672	-8.56	155	5000	
Cu	63	3	72	-0.203	ppb	-0.203	-11.35	525	5000	
Zn	66	3	72	-1.047	ppb	-1.047	-7.44	250	5000	
As	75	3	72	-0.572	ppb	-0.572	-11.81	18	2000	
Se	78	2	72	-0.002	ppb	-0.002	-1151.19	7	2000	
Sr	88	3	72	-0.070	ppb	-0.070	-69.19	403	4000	
Mo	95	3	115	-0.065	ppb	-0.065	-20.04	35	2000	
Ag	107	3	115	0.012	ppb	0.012	24.76	112	100	
Cd	111	3	115	-0.037	ppb	-0.037	-16.36	13	2000	
Sn	120	3	115	-0.880	ppb	-0.880	-4.23	435	2000	
Sb	121	3	115	-0.109	ppb	-0.109	-2.33	88	1000	
Ba	137	3	115	-0.137	ppb	-0.137	-10.52	117	5000	
Tl	205	3	193	-0.119	ppb	-0.119	-4.16	533	2000	
(Pb)	206	3	193	-0.122	ppb	-0.122	-32.50	478	100	
(Pb)	207	3	193	-0.178	ppb	-0.178	-7.48	795	100	
Pb	208	3	193	-0.135	ppb	-0.135	-11.80	2179	5000	
Th	232	3	193	-0.377	ppb	-0.377	-1.69	10429	2000	
U	238	3	193	-0.005	ppb	-0.005	-168.93	4175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7490924	3.65	3936624	190.29	60	120	IS Failed
Sc (IS)	45	3	HMI He	1163420	2.11	609520	190.87	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4541574	2.40	2391663	189.89	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1464034	3.17	756863	193.43	60	120	IS Failed
In Internal Standard	115	3	HMI He	5751564	2.21	2988279	192.47	60	120	IS Failed
Ir (IS)	193	3	HMI He	13287212	2.98	6996686	189.91	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	171SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:16:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.103	ppb	-0.103	-37.99	2	2000	
Na	23	3	45	-85.019	ppb	-85.019	-3.20	27762	400000	
Mg	24	3	45	0.200	ppb	0.200	774.31	1472	400000	
Al	27	3	45	-1.266	ppb	-1.266	-53.46	187	400000	
K	39	3	45	-306.657	ppb	-306.657	-3.05	25582	400000	
Ca	40	2	45	-12.581	ppb	-12.581	-5.65	38026	400000	
V	51	3	72	-1.085	ppb	-1.085	-1.80	190	2000	
Cr	52	3	72	-1.517	ppb	-1.517	-6.93	1038	5000	
Mn	55	3	72	-0.114	ppb	-0.114	-63.56	268	10000	
Fe	56	2	72	-3.052	ppb	-3.052	-8.42	23276	10000	
Co	59	3	72	-0.011	ppb	-0.011	-73.99	110	2000	
Ni	60	3	72	-0.712	ppb	-0.712	-4.78	125	5000	
Cu	63	3	72	-0.205	ppb	-0.205	-6.93	511	5000	
Zn	66	3	72	-1.045	ppb	-1.045	-21.21	245	5000	
As	75	3	72	-0.529	ppb	-0.529	-16.23	27	2000	
Se	78	2	72	0.023	ppb	0.023	150.76	10	2000	
Sr	88	3	72	-0.083	ppb	-0.083	-57.65	380	4000	
Mo	95	3	115	-0.046	ppb	-0.046	-28.49	52	2000	
Ag	107	3	115	0.006	ppb	0.006	100.59	88	100	
Cd	111	3	115	-0.019	ppb	-0.019	-82.91	22	2000	
Sn	120	3	115	-0.894	ppb	-0.894	-3.29	395	2000	
Sb	121	3	115	-0.099	ppb	-0.099	-17.04	100	1000	
Ba	137	3	115	-0.170	ppb	-0.170	-42.37	95	5000	
Tl	205	3	193	-0.122	ppb	-0.122	-5.92	498	2000	
(Pb)	206	3	193	-0.152	ppb	-0.152	-11.07	385	100	
(Pb)	207	3	193	-0.214	ppb	-0.214	-6.80	688	100	
Pb	208	3	193	-0.153	ppb	-0.153	-7.09	1927	5000	
Th	232	3	193	-0.424	ppb	-0.424	-4.83	9677	2000	
U	238	3	193	-0.008	ppb	-0.008	-93.30	4059	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7536747	1.09	3936624	191.45	60	120	IS Failed
Sc (IS)	45	3	HMI He	1151887	2.02	609520	188.98	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4580746	1.91	2391663	191.53	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1436793	2.27	756863	189.84	60	120	IS Failed
In Internal Standard	115	3	HMI He	5511991	0.56	2988279	184.45	60	120	IS Failed
Ir (IS)	193	3	HMI He	13032813	1.99	6996686	186.27	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	172SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:18:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.056	ppb	-0.056	-1.22	5	2000	
Na	23	3	45	-88.749	ppb	-88.749	-1.76	27220	400000	
Mg	24	3	45	-1.204	ppb	-1.204	-48.83	1331	400000	
Al	27	3	45	-0.982	ppb	-0.982	-79.55	200	400000	
K	39	3	45	-308.363	ppb	-308.363	-0.84	25622	400000	
Ca	40	2	45	-12.983	ppb	-12.983	-3.88	38220	400000	
V	51	3	72	-1.063	ppb	-1.063	-1.31	212	2000	
Cr	52	3	72	-1.532	ppb	-1.532	-2.63	1001	5000	
Mn	55	3	72	-0.109	ppb	-0.109	-39.08	268	10000	
Fe	56	2	72	-2.977	ppb	-2.977	-11.94	23701	10000	
Co	59	3	72	-0.019	ppb	-0.019	-73.67	88	2000	
Ni	60	3	72	-0.707	ppb	-0.707	-0.80	127	5000	
Cu	63	3	72	-0.206	ppb	-0.206	-13.43	501	5000	
Zn	66	3	72	-1.067	ppb	-1.067	-9.65	235	5000	
As	75	3	72	-0.465	ppb	-0.465	-14.90	40	2000	
Se	78	2	72	0.015	ppb	0.015	251.31	9	2000	
Sr	88	3	72	-0.085	ppb	-0.085	-50.82	371	4000	
Mo	95	3	115	-0.059	ppb	-0.059	-23.52	40	2000	
Ag	107	3	115	0.002	ppb	0.002	570.19	75	100	
Cd	111	3	115	-0.026	ppb	-0.026	-57.38	18	2000	
Sn	120	3	115	-0.895	ppb	-0.895	-4.53	396	2000	
Sb	121	3	115	-0.097	ppb	-0.097	-4.23	103	1000	
Ba	137	3	115	-0.195	ppb	-0.195	-17.10	83	5000	
Tl	205	3	193	-0.117	ppb	-0.117	-6.34	530	2000	
(Pb)	206	3	193	-0.157	ppb	-0.157	-12.04	363	100	
(Pb)	207	3	193	-0.193	ppb	-0.193	-9.31	731	100	
Pb	208	3	193	-0.154	ppb	-0.154	-4.03	1899	5000	
Th	232	3	193	-0.409	ppb	-0.409	-6.00	9732	2000	
U	238	3	193	0.000	ppb	0.000	5894.06	4112	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7659636	1.97	3936624	194.57	60	120	IS Failed
Sc (IS)	45	3	HMI He	1160568	1.61	609520	190.41	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4624696	2.53	2391663	193.37	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1413098	1.36	756863	186.70	60	120	IS Failed
In Internal Standard	115	3	HMI He	5555905	2.15	2988279	185.92	60	120	IS Failed
Ir (IS)	193	3	HMI He	12866344	1.82	6996686	183.89	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	173SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:19:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.057	ppb	-0.057	-2.03	5	2000	
Na	23	3	45	-88.016	ppb	-88.016	-0.44	27571	400000	
Mg	24	3	45	-1.278	ppb	-1.278	-64.07	1335	400000	
Al	27	3	45	-0.326	ppb	-0.326	-298.95	230	400000	
K	39	3	45	-313.445	ppb	-313.445	-1.36	25379	400000	
Ca	40	2	45	-13.231	ppb	-13.231	-0.59	38117	400000	
V	51	3	72	-1.051	ppb	-1.051	-1.56	227	2000	
Cr	52	3	72	-1.518	ppb	-1.518	-3.30	1026	5000	
Mn	55	3	72	-0.150	ppb	-0.150	-25.03	238	10000	
Fe	56	2	72	-3.031	ppb	-3.031	-15.62	23627	10000	
Co	59	3	72	-0.014	ppb	-0.014	-42.34	100	2000	
Ni	60	3	72	-0.675	ppb	-0.675	-4.71	148	5000	
Cu	63	3	72	-0.206	ppb	-0.206	-7.95	503	5000	
Zn	66	3	72	-1.087	ppb	-1.087	-5.00	230	5000	
As	75	3	72	-0.458	ppb	-0.458	-19.58	42	2000	
Se	78	2	72	-0.023	ppb	-0.023	-124.99	5	2000	
Sr	88	3	72	-0.137	ppb	-0.137	-36.30	317	4000	
Mo	95	3	115	-0.063	ppb	-0.063	-7.27	35	2000	
Ag	107	3	115	0.004	ppb	0.004	103.20	82	100	
Cd	111	3	115	-0.019	ppb	-0.019	-117.94	22	2000	
Sn	120	3	115	-0.887	ppb	-0.887	-0.80	405	2000	
Sb	121	3	115	-0.115	ppb	-0.115	-16.36	75	1000	
Ba	137	3	115	-0.206	ppb	-0.206	-1.73	77	5000	
Tl	205	3	193	-0.118	ppb	-0.118	-1.05	523	2000	
(Pb)	206	3	193	-0.149	ppb	-0.149	-10.85	388	100	
(Pb)	207	3	193	-0.194	ppb	-0.194	-18.92	728	100	
Pb	208	3	193	-0.155	ppb	-0.155	-6.55	1882	5000	
Th	232	3	193	-0.394	ppb	-0.394	-1.11	9884	2000	
U	238	3	193	0.011	ppb	0.011	118.45	4242	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7689914	0.84	3936624	195.34	60	120	IS Failed
Sc (IS)	45	3	HMI He	1169335	3.08	609520	191.85	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4637545	1.44	2391663	193.90	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1419546	0.50	756863	187.56	60	120	IS Failed
In Internal Standard	115	3	HMI He	5501870	1.72	2988279	184.11	60	120	IS Failed
Ir (IS)	193	3	HMI He	12845828	2.00	6996686	183.60	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	174SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:21:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.057	ppb	-0.057	-0.61	5	2000	
Na	23	3	45	-81.156	ppb	-81.156	-3.41	27788	400000	
Mg	24	3	45	-0.098	ppb	-0.098	-845.83	1405	400000	
Al	27	3	45	-1.516	ppb	-1.516	-116.35	174	400000	
K	39	3	45	-296.461	ppb	-296.461	-3.89	25760	400000	
Ca	40	2	45	-12.987	ppb	-12.987	-2.31	38568	400000	
V	51	3	72	-1.062	ppb	-1.062	-1.90	217	2000	
Cr	52	3	72	-1.610	ppb	-1.610	-1.28	911	5000	
Mn	55	3	72	-0.131	ppb	-0.131	-28.85	257	10000	
Fe	56	2	72	-3.306	ppb	-3.306	-6.09	23086	10000	
Co	59	3	72	-0.012	ppb	-0.012	-76.01	107	2000	
Ni	60	3	72	-0.698	ppb	-0.698	-1.65	135	5000	
Cu	63	3	72	-0.232	ppb	-0.232	-10.88	463	5000	
Zn	66	3	72	-1.119	ppb	-1.119	-7.75	223	5000	
As	75	3	72	-0.508	ppb	-0.508	-17.46	32	2000	
Se	78	2	72	0.008	ppb	0.008	140.69	9	2000	
Sr	88	3	72	-0.114	ppb	-0.114	-63.33	345	4000	
Mo	95	3	115	-0.057	ppb	-0.057	-43.57	42	2000	
Ag	107	3	115	0.001	ppb	0.001	193.54	72	100	
Cd	111	3	115	-0.023	ppb	-0.023	-76.03	20	2000	
Sn	120	3	115	-0.897	ppb	-0.897	-0.38	393	2000	
Sb	121	3	115	-0.100	ppb	-0.100	-13.91	98	1000	
Ba	137	3	115	-0.120	ppb	-0.120	-65.73	122	5000	
Tl	205	3	193	-0.121	ppb	-0.121	-5.02	498	2000	
(Pb)	206	3	193	-0.140	ppb	-0.140	-10.50	411	100	
(Pb)	207	3	193	-0.204	ppb	-0.204	-8.22	701	100	
Pb	208	3	193	-0.153	ppb	-0.153	-3.68	1899	5000	
Th	232	3	193	-0.388	ppb	-0.388	-7.29	9917	2000	
U	238	3	193	0.008	ppb	0.008	100.72	4184	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7730045	3.08	3936624	196.36	60	120	IS Failed
Sc (IS)	45	3	HMI He	1122798	3.07	609520	184.21	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4690677	0.92	2391663	196.13	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1439213	2.08	756863	190.16	60	120	IS Failed
In Internal Standard	115	3	HMI He	5537207	3.02	2988279	185.30	60	120	IS Failed
Ir (IS)	193	3	HMI He	12799187	3.69	6996686	182.93	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	175SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:23:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.012	ppb	-0.012	-339.23	8	2000	
Na	23	3	45	-87.486	ppb	-87.486	-3.12	27698	400000	
Mg	24	3	45	-2.146	ppb	-2.146	-33.65	1241	400000	
Al	27	3	45	-0.369	ppb	-0.369	-455.90	227	400000	
K	39	3	45	-309.267	ppb	-309.267	-2.04	25773	400000	
Ca	40	2	45	-12.557	ppb	-12.557	-6.95	39358	400000	
V	51	3	72	-1.050	ppb	-1.050	-3.10	233	2000	
Cr	52	3	72	-1.545	ppb	-1.545	-0.80	1011	5000	
Mn	55	3	72	-0.066	ppb	-0.066	-33.49	310	10000	
Fe	56	2	72	-3.060	ppb	-3.060	-4.51	24289	10000	
Co	59	3	72	-0.025	ppb	-0.025	-27.58	77	2000	
Ni	60	3	72	-0.693	ppb	-0.693	-3.17	140	5000	
Cu	63	3	72	-0.222	ppb	-0.222	-7.53	486	5000	
Zn	66	3	72	-0.994	ppb	-0.994	-15.37	265	5000	
As	75	3	72	-0.525	ppb	-0.525	-6.31	28	2000	
Se	78	2	72	0.000	ppb	0.000	-44856.84	8	2000	
Sr	88	3	72	-0.075	ppb	-0.075	-26.02	393	4000	
Mo	95	3	115	-0.035	ppb	-0.035	-27.91	62	2000	
Ag	107	3	115	0.011	ppb	0.011	15.89	103	100	
Cd	111	3	115	-0.026	ppb	-0.026	-21.10	18	2000	
Sn	120	3	115	-0.891	ppb	-0.891	-3.66	400	2000	
Sb	121	3	115	-0.110	ppb	-0.110	-14.78	82	1000	
Ba	137	3	115	-0.147	ppb	-0.147	-11.65	107	5000	
Tl	205	3	193	-0.118	ppb	-0.118	-2.31	518	2000	
(Pb)	206	3	193	-0.155	ppb	-0.155	-9.24	368	100	
(Pb)	207	3	193	-0.206	ppb	-0.206	-3.32	696	100	
Pb	208	3	193	-0.150	ppb	-0.150	-1.69	1932	5000	
Th	232	3	193	-0.354	ppb	-0.354	-9.42	10336	2000	
U	238	3	193	0.004	ppb	0.004	289.00	4147	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7795025	0.29	3936624	198.01	60	120	IS Failed
Sc (IS)	45	3	HMI He	1170584	3.35	609520	192.05	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4786366	1.45	2391663	200.13	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1452218	2.09	756863	191.87	60	120	IS Failed
In Internal Standard	115	3	HMI He	5511631	3.90	2988279	184.44	60	120	IS Failed
Ir (IS)	193	3	HMI He	12816579	1.22	6996686	183.18	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	176SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:25:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.080	ppb	-0.080	-50.25	3	2000	
Na	23	3	45	-88.097	ppb	-88.097	-6.52	27885	400000	
Mg	24	3	45	0.112	ppb	0.112	1314.87	1505	400000	
Al	27	3	45	-1.082	ppb	-1.082	-24.26	200	400000	
K	39	3	45	-309.832	ppb	-309.832	-3.67	26000	400000	
Ca	40	2	45	-12.851	ppb	-12.851	-2.99	37759	400000	
V	51	3	72	-1.094	ppb	-1.094	-1.86	185	2000	
Cr	52	3	72	-1.540	ppb	-1.540	-0.64	1040	5000	
Mn	55	3	72	-0.107	ppb	-0.107	-49.33	283	10000	
Fe	56	2	72	-2.576	ppb	-2.576	-21.11	24797	10000	
Co	59	3	72	-0.014	ppb	-0.014	-33.28	107	2000	
Ni	60	3	72	-0.680	ppb	-0.680	-3.67	152	5000	
Cu	63	3	72	-0.233	ppb	-0.233	-7.47	475	5000	
Zn	66	3	72	-1.103	ppb	-1.103	-7.69	235	5000	
As	75	3	72	-0.489	ppb	-0.489	-2.10	37	2000	
Se	78	2	72	-0.004	ppb	-0.004	-1025.95	7	2000	
Sr	88	3	72	-0.093	ppb	-0.093	-63.56	380	4000	
Mo	95	3	115	-0.056	ppb	-0.056	-18.69	43	2000	
Ag	107	3	115	0.009	ppb	0.009	77.97	98	100	
Cd	111	3	115	-0.023	ppb	-0.023	-118.28	20	2000	
Sn	120	3	115	-0.906	ppb	-0.906	-2.20	385	2000	
Sb	121	3	115	-0.106	ppb	-0.106	-0.81	90	1000	
Ba	137	3	115	-0.203	ppb	-0.203	-13.15	80	5000	
Tl	205	3	193	-0.120	ppb	-0.120	-1.27	490	2000	
(Pb)	206	3	193	-0.149	ppb	-0.149	-11.06	376	100	
(Pb)	207	3	193	-0.220	ppb	-0.220	-6.50	645	100	
Pb	208	3	193	-0.153	ppb	-0.153	-0.75	1852	5000	
Th	232	3	193	-0.373	ppb	-0.373	-9.33	9867	2000	
U	238	3	193	0.032	ppb	0.032	25.86	4377	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7539517	2.51	3936624	191.52	60	120	IS Failed
Sc (IS)	45	3	HMI He	1183824	1.68	609520	194.22	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4611457	1.13	2391663	192.81	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1481612	1.86	756863	195.76	60	120	IS Failed
In Internal Standard	115	3	HMI He	5624882	1.49	2988279	188.23	60	120	IS Failed
Ir (IS)	193	3	HMI He	12520198	2.56	6996686	178.94	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	177SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:27:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.079	ppb	-0.079	-50.93	3	2000	
Na	23	3	45	-85.507	ppb	-85.507	-2.89	27274	400000	
Mg	24	3	45	-1.025	ppb	-1.025	-121.08	1321	400000	
Al	27	3	45	-0.967	ppb	-0.967	-32.12	197	400000	
K	39	3	45	-305.279	ppb	-305.279	-4.23	25335	400000	
Ca	40	2	45	-12.088	ppb	-12.088	-0.88	38779	400000	
V	51	3	72	-1.084	ppb	-1.084	-2.32	192	2000	
Cr	52	3	72	-1.524	ppb	-1.524	-3.48	1031	5000	
Mn	55	3	72	-0.072	ppb	-0.072	-47.10	302	10000	
Fe	56	2	72	-3.373	ppb	-3.373	-7.45	22882	10000	
Co	59	3	72	-0.015	ppb	-0.015	-14.15	100	2000	
Ni	60	3	72	-0.656	ppb	-0.656	-5.44	163	5000	
Cu	63	3	72	-0.229	ppb	-0.229	-8.90	468	5000	
Zn	66	3	72	-1.064	ppb	-1.064	-12.85	240	5000	
As	75	3	72	-0.531	ppb	-0.531	-2.68	27	2000	
Se	78	2	72	0.008	ppb	0.008	363.60	9	2000	
Sr	88	3	72	-0.058	ppb	-0.058	-52.28	408	4000	
Mo	95	3	115	-0.039	ppb	-0.039	-48.44	60	2000	
Ag	107	3	115	0.009	ppb	0.009	70.17	98	100	
Cd	111	3	115	-0.023	ppb	-0.023	-132.10	20	2000	
Sn	120	3	115	-0.903	ppb	-0.903	-3.28	390	2000	
Sb	121	3	115	-0.119	ppb	-0.119	-7.13	70	1000	
Ba	137	3	115	-0.161	ppb	-0.161	-18.85	102	5000	
Tl	205	3	193	-0.114	ppb	-0.114	-6.17	555	2000	
(Pb)	206	3	193	-0.154	ppb	-0.154	-6.27	373	100	
(Pb)	207	3	193	-0.201	ppb	-0.201	-2.35	710	100	
Pb	208	3	193	-0.149	ppb	-0.149	-2.95	1956	5000	
Th	232	3	193	-0.396	ppb	-0.396	-5.58	9852	2000	
U	238	3	193	0.016	ppb	0.016	29.28	4292	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7584128	1.75	3936624	192.66	60	120	IS Failed
Sc (IS)	45	3	HMI He	1135984	0.76	609520	186.37	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4690411	1.44	2391663	196.12	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1437693	0.87	756863	189.95	60	120	IS Failed
In Internal Standard	115	3	HMI He	5628827	0.30	2988279	188.36	60	120	IS Failed
Ir (IS)	193	3	HMI He	12840676	3.64	6996686	183.53	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	178SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:29:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.056	ppb	-0.056	-1.11	5	2000	
Na	23	3	45	-91.233	ppb	-91.233	-8.29	26909	400000	
Mg	24	3	45	-1.375	ppb	-1.375	-62.95	1321	400000	
Al	27	3	45	-0.862	ppb	-0.862	-75.30	207	400000	
K	39	3	45	-312.077	ppb	-312.077	-2.09	25492	400000	
Ca	40	2	45	-12.033	ppb	-12.033	-6.40	38900	400000	
V	51	3	72	-1.059	ppb	-1.059	-1.15	220	2000	
Cr	52	3	72	-1.550	ppb	-1.550	-1.88	995	5000	
Mn	55	3	72	-0.055	ppb	-0.055	-124.04	315	10000	
Fe	56	2	72	-2.928	ppb	-2.928	-12.67	23654	10000	
Co	59	3	72	-0.020	ppb	-0.020	-59.38	88	2000	
Ni	60	3	72	-0.671	ppb	-0.671	-8.14	153	5000	
Cu	63	3	72	-0.264	ppb	-0.264	-9.60	403	5000	
Zn	66	3	72	-1.166	ppb	-1.166	-6.24	208	5000	
As	75	3	72	-0.571	ppb	-0.571	-7.81	18	2000	
Se	78	2	72	-0.047	ppb	-0.047	-23.29	3	2000	
Sr	88	3	72	-0.080	ppb	-0.080	-133.70	381	4000	
Mo	95	3	115	-0.062	ppb	-0.062	-18.77	37	2000	
Ag	107	3	115	0.005	ppb	0.005	184.56	85	100	
Cd	111	3	115	-0.025	ppb	-0.025	-105.17	18	2000	
Sn	120	3	115	-0.894	ppb	-0.894	-3.36	396	2000	
Sb	121	3	115	-0.107	ppb	-0.107	-5.44	87	1000	
Ba	137	3	115	-0.190	ppb	-0.190	-3.73	85	5000	
Tl	205	3	193	-0.119	ppb	-0.119	-3.75	526	2000	
(Pb)	206	3	193	-0.158	ppb	-0.158	-6.12	370	100	
(Pb)	207	3	193	-0.214	ppb	-0.214	-13.14	690	100	
Pb	208	3	193	-0.154	ppb	-0.154	-4.61	1932	5000	
Th	232	3	193	-0.375	ppb	-0.375	-11.18	10304	2000	
U	238	3	193	0.001	ppb	0.001	1443.18	4194	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7594601	1.78	3936624	192.92	60	120	IS Failed
Sc (IS)	45	3	HMI He	1169240	1.96	609520	191.83	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4587186	0.69	2391663	191.80	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1437512	4.28	756863	189.93	60	120	IS Failed
In Internal Standard	115	3	HMI He	5511390	2.05	2988279	184.43	60	120	IS Failed
Ir (IS)	193	3	HMI He	13100811	1.55	6996686	187.24	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	179SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:30:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.056	ppb	-0.056	-124.36	5	2000	
Na	23	3	45	-89.667	ppb	-89.667	-3.76	27524	400000	
Mg	24	3	45	-1.391	ppb	-1.391	-142.52	1331	400000	
Al	27	3	45	-1.998	ppb	-1.998	-49.82	160	400000	
K	39	3	45	-309.747	ppb	-309.747	-5.70	25960	400000	
Ca	40	2	45	-12.653	ppb	-12.653	-0.56	39321	400000	
V	51	3	72	-1.081	ppb	-1.081	-3.59	198	2000	
Cr	52	3	72	-1.546	ppb	-1.546	-7.57	1025	5000	
Mn	55	3	72	-0.146	ppb	-0.146	-34.11	250	10000	
Fe	56	2	72	-2.924	ppb	-2.924	-2.84	23744	10000	
Co	59	3	72	-0.014	ppb	-0.014	-78.22	103	2000	
Ni	60	3	72	-0.683	ppb	-0.683	-4.52	148	5000	
Cu	63	3	72	-0.241	ppb	-0.241	-7.29	458	5000	
Zn	66	3	72	-1.103	ppb	-1.103	-10.33	235	5000	
As	75	3	72	-0.480	ppb	-0.480	-4.33	38	2000	
Se	78	2	72	-0.035	ppb	-0.035	-94.17	4	2000	
Sr	88	3	72	-0.102	ppb	-0.102	-50.74	368	4000	
Mo	95	3	115	-0.054	ppb	-0.054	-33.40	45	2000	
Ag	107	3	115	0.008	ppb	0.008	77.57	97	100	
Cd	111	3	115	-0.040	ppb	-0.040	-38.36	12	2000	
Sn	120	3	115	-0.895	ppb	-0.895	-2.34	405	2000	
Sb	121	3	115	-0.102	ppb	-0.102	-8.96	98	1000	
Ba	137	3	115	-0.172	ppb	-0.172	-10.97	97	5000	
Tl	205	3	193	-0.119	ppb	-0.119	-4.66	521	2000	
(Pb)	206	3	193	-0.148	ppb	-0.148	-10.37	395	100	
(Pb)	207	3	193	-0.204	ppb	-0.204	-14.25	710	100	
Pb	208	3	193	-0.149	ppb	-0.149	-6.91	1976	5000	
Th	232	3	193	-0.379	ppb	-0.379	-17.15	10164	2000	
U	238	3	193	0.003	ppb	0.003	747.18	4177	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7808020	2.06	3936624	198.34	60	120	IS Failed
Sc (IS)	45	3	HMI He	1182067	2.80	609520	193.93	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4601428	1.32	2391663	192.39	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1477899	5.06	756863	195.27	60	120	IS Failed
In Internal Standard	115	3	HMI He	5672604	0.81	2988279	189.83	60	120	IS Failed
Ir (IS)	193	3	HMI He	13004678	4.65	6996686	185.87	60	120	IS Failed

Sample Report

Sample Table

Sample Name	
Data File Name	180SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041823.b
Acq Date Time	2023-04-18T20:32:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	041CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.080	ppb	-0.080	-99.62	3	2000	
Na	23	3	45	-87.912	ppb	-87.912	-3.33	27611	400000	
Mg	24	3	45	-0.965	ppb	-0.965	-41.23	1368	400000	
Al	27	3	45	-1.107	ppb	-1.107	-15.47	197	400000	
K	39	3	45	-310.196	ppb	-310.196	-3.87	25686	400000	
Ca	40	2	45	-12.261	ppb	-12.261	-3.55	39110	400000	
V	51	3	72	-1.093	ppb	-1.093	-1.56	183	2000	
Cr	52	3	72	-1.557	ppb	-1.557	-2.77	998	5000	
Mn	55	3	72	-0.099	ppb	-0.099	-3.26	285	10000	
Fe	56	2	72	-3.047	ppb	-3.047	-3.42	23808	10000	
Co	59	3	72	-0.016	ppb	-0.016	-31.32	98	2000	
Ni	60	3	72	-0.703	ppb	-0.703	-7.34	133	5000	
Cu	63	3	72	-0.241	ppb	-0.241	-2.73	451	5000	
Zn	66	3	72	-1.180	ppb	-1.180	-9.65	207	5000	
As	75	3	72	-0.518	ppb	-0.518	-18.86	30	2000	
Se	78	2	72	-0.029	ppb	-0.029	-162.38	5	2000	
Sr	88	3	72	-0.074	ppb	-0.074	-47.29	395	4000	
Mo	95	3	115	-0.059	ppb	-0.059	-26.34	40	2000	
Ag	107	3	115	0.002	ppb	0.002	153.16	75	100	
Cd	111	3	115	-0.026	ppb	-0.026	-133.74	18	2000	
Sn	120	3	115	-0.876	ppb	-0.876	-3.68	428	2000	
Sb	121	3	115	-0.110	ppb	-0.110	-12.35	83	1000	
Ba	137	3	115	-0.186	ppb	-0.186	-21.52	88	5000	
Tl	205	3	193	-0.124	ppb	-0.124	-2.86	473	2000	
(Pb)	206	3	193	-0.140	ppb	-0.140	-6.32	420	100	
(Pb)	207	3	193	-0.197	ppb	-0.197	-11.70	731	100	
Pb	208	3	193	-0.153	ppb	-0.153	-1.35	1934	5000	
Th	232	3	193	-0.403	ppb	-0.403	-7.96	9912	2000	
U	238	3	193	-0.001	ppb	-0.001	-2283.00	4142	2000	

QC ISTD Table

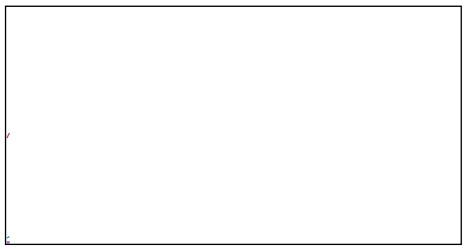
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	7684773	1.27	3936624	195.21	60	120	IS Failed
Sc (IS)	45	3	HMI He	1170390	1.76	609520	192.02	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	4683611	1.80	2391663	195.83	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1457592	1.88	756863	192.58	60	120	IS Failed
In Internal Standard	115	3	HMI He	5565837	2.46	2988279	186.26	60	120	IS Failed
Ir (IS)	193	3	HMI He	13024739	1.58	6996686	186.16	60	120	IS Failed

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:55:42 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[No Gas]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	200000	3796	3822	0.946
2	59	100000	4792	4861	2 014
3	63	100000	87	98	15.874
4	70	500000	238	236	1.199
5	80	1000000	1052236	1049470	0.373
6	89	100000	7628	7727	1.813
7	115	2000000	9048	9011	0.593
8	118	100000	147	138	9 771
9	137	50000	1150	1134	2.060
10	140	20000	9278	9070	3.242
11	205	2000000	7199	7110	1.770
12	6	5000000	4870	4963	2.645
13	70/140	1000	2.565 %	2.603 %	2.044
14	156/140	500	0 291 %	0 253 %	21.439

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-50 V
Extract 2	200 0 V	Q1 Exit		Def ect	12 6 V
Omega Bias	95 V	Cel Focus		P ate Bias	35 V
Omega Lens	8.0 V	Cel Entrance	30 V		

Cell Parameters

Use Gas	No	3rd Gas F ow		Axia Acce eration	
He F ow	0.0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0 0 mL/min	OctP Bias	8 0 V	Energy Discrimination	5 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	-3 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Current Signal

Torch H	0 4 mm	Torch V	0 3 mm		

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

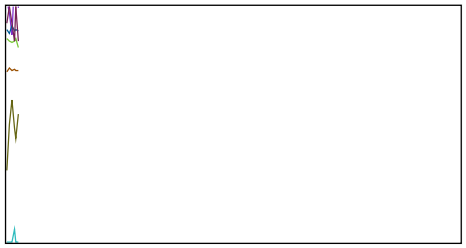
Name	Value	Unit
F/BK Press	2.11E+2	Pa
Ana yzer Press	7 25E 5	Pa
Reflected Power	0	W
Forward Power	1599	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:55:59 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[HMI H2]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	100	100	93	4.047
2	9	200	199	200	7 260
3	59	1000	747	750	2 051
4	63	20	11	5	60 078
5	70	100	100	110	6.567
6	78	20	0	0	244 949
7	89	5000	6404	6294	1.209
8	115	10000	8267	8519	1 644
9	118	100	141	143	8.632
10	137	1000	1069	1097	1.817
11	140	5000	5878	5900	2.664
12	205	10000	7259	7290	0.791
13	238	10000	8988	9012	1.188
14	70/140	2	1 701 %	1 861 %	7 553
15	156/140	1	0.544 %	0.479 %	21 242

Integration Time [sec] 0 1

Tune Parameters

Plasma Parameters

P asma Mode		Nebulizer Gas	0.64 L/min	Dilution Gas	0.26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1 40 V	Nebulizer Pump	0 10 rps	P asma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance		Cel Exit	60 V
Extract 2	190 0 V	Q1 Exit		Def ect	0 8 V
Omega Bias	95 V	Cel Focus		P ate Bias	60 V
Omega Lens	7 9 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	0 0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	5 0 mL/min	OctP Bias	18.0 V	Energy Discrimination	3 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Current Signal

Torch

Torch H	0 4 mm	Torch V	-0 3 mm		

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

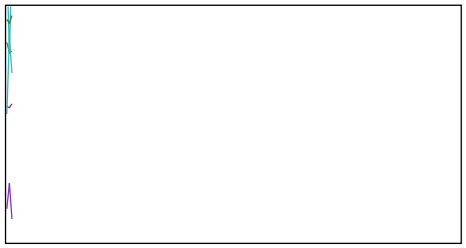
Name	Value	Unit
F/BK Press	2.20E+2	Pa
Ana yzer Press	2.35E 4	Pa
Reflected Power	0	W
Forward Power	1600	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:56:11 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[HMI He]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	53	20	22	20	17 321
2	59	2000	1520	1483	2 247
3	66	50	36	31	25.797
4	70	50	58	58	20 690
5	78	20	3	3	21 651
6	115	2000	2037	2171	5.418
7	118	20	43	37	17 745
8	137	500	292	288	1 402
9	140	5000	4048	4099	2.749
10	205	5000	4799	4720	1.628
11	51/59	1	1.316 %	1.440 %	7.495
12	70/140	2	1.433 %	1.421 %	23 001
13	156/140	1	0.099 %	0.163 %	47 312

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas	---	Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-60 V
Extract 2	200 0 V	Q1 Exit		Def ect	0 2 V
Omega Bias	100 V	Cel Focus		P ate Bias	55 V
Omega Lens	8.2 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	4.3 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0.0 mL/min	OctP Bias	18 0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Torch H	0.4 mm	Torch V	0.3 mm		

Current Signal

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

Name	Value	Unit
F/BK Press	2 13E+2	Pa
Ana yzer Press	2 46E-4	Pa
Reflected Power	0	W
Forward Power	1599	W
Tune/ISTD Va ve		

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:03:48 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

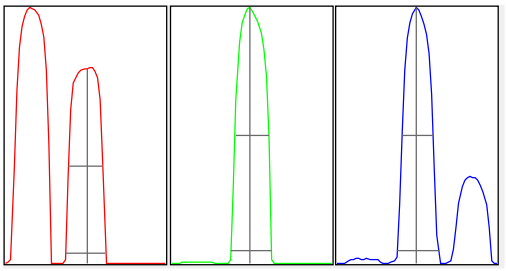
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2368	23683 69	0.619	5 000	
89		4594	45941 66	0.441	5 000	
205		3945	39452 88	0.410	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2385	2364	2380	2365	2348
89	4581	4592	4627	4596	4574
205	3943	3966	3956	3936	3925

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3738.86	7.05	6 90 7 10	
89	7792.04	89.00	88 90 89.10	
205	7082 03	205 00	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.742	0.900	
89	0.62	0.740	0.900	
205	0.58	0.771	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

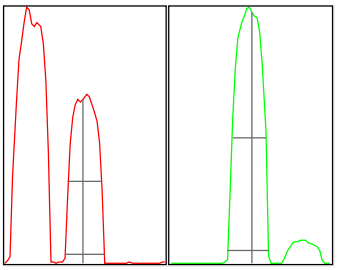
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	616 52	1 812	5.000	
9		119	1194 58	2.113	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	61	61	61	64	61
9	122	121	121	116	118

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	101 30	7 00	6.90 - 7.10	
9	199 16	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.741	0.900	
9	0.62	0.741	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		167	1667.65	3 184	5.000	
25		23	234 90	4 441	5.000	
26		31	311.61	5.056	5 000	Fai
59		874	8744 50	1.312	5 000	
103		2521	25210.46	0 616	5.000	
115		1169	11693.27	0 334	5.000	
205		2568	25683.92	0 311	5.000	
206		835	8351 79	0.437	5 000	
207		718	7179 82	0.950	5 000	

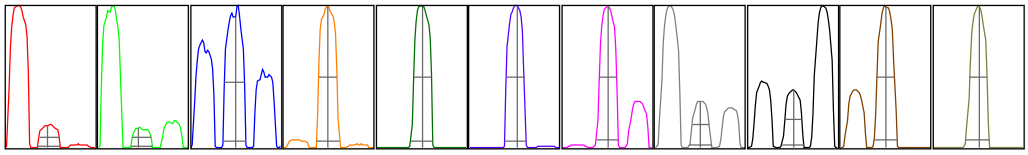
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1787	17869.62	0 558	5.000	
238		3626	36263.35	0 868	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	173	170	168	160	163
25	25	23	22	23	25
26	33	32	31	31	29
59	890	875	880	861	866
103	2534	2509	2538	2522	2502
115	1173	1170	1163	1168	1172
205	2558	2563	2577	2568	2576
206	838	835	839	830	835
207	723	725	720	711	711
208	1801	1790	1789	1775	1780
238	3644	3618	3668	3584	3618

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	265.03	23.95	23 90 24.10	
25	38.55	24.85	24 90 25.10	Fail
26	49 05	26 00	25.90 - 26 10	
59	1479 29	59 00	58.90 - 59 10	
103	4374.57	103.05	102.90 103.10	
115	2045.31	115.10	114.90 115.10	
205	4619.84	205.05	204.90 205.10	
206	1514 26	206 05	205 90 - 206 10	
207	1316 19	207 05	206 90 - 207 10	
208	3238.59	208.05	207.90 208.10	
238	6568.26	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 64	0 741	0 900	
25	0.64	0.743	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.744	0.900	
59	0.62	0.777	0.900	
103	0 60	0 734	0 900	
115	0 59	0 692	0 900	
205	0.58	0.737	0.900	
206	0.56	0.724	0.900	
207	0.56	0.734	0.900	
208	0 57	0 758	0 900	
238	0 57	0 776	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:12:16 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

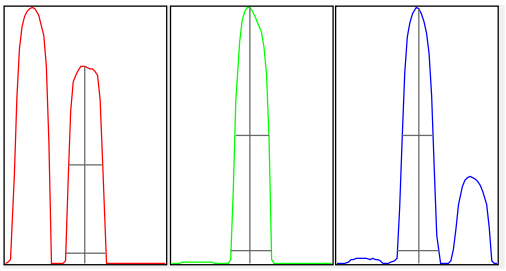
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2343	23429 98	0.525	5 000	
89		4553	45533 05	0.175	5 000	
205		3885	38854 32	0.405	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2332	2350	2359	2344	2330
89	4555	4546	4553	4547	4566
205	3872	3869	3907	3886	3894

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3733.04	7.00	6 90 7 10	
89	7702.53	89.00	88 90 89.10	
205	6978 55	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.741	0.900	
89	0.62	0.740	0.900	
205	0.58	0.770	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

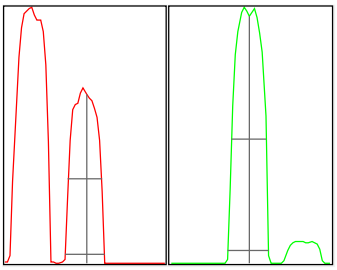
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		60	604 02	1 152	5.000	
9		120	1197 78	2.470	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	60	60	60	62	60
9	121	115	122	119	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	100 35	7 05	6.90 - 7.10	
9	191 91	9 00	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.740	0.900	
9	0.63	0.742	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		165	1646.75	1 767	5.000	
25		25	251 40	3 437	5.000	
26		30	302.81	6.894	5 000	Fai
59		874	8737 48	0.430	5 000	
103		2508	25080.94	0 353	5.000	
115		1161	11609.59	1 029	5.000	
205		2535	25345.57	0 415	5.000	
206		828	8281 54	1.404	5 000	
207		711	7107 08	0.581	5 000	

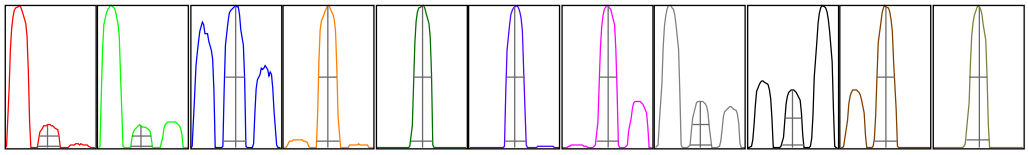
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1756	17555.50	0 234	5.000	
238		3560	35602.23	0 975	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	165	162	164	169	163
25	26	24	26	26	25
26	28	32	29	30	33
59	871	873	877	878	869
103	2505	2514	2509	2518	2495
115	1163	1178	1150	1149	1165
205	2525	2530	2527	2550	2541
206	814	840	832	818	837
207	709	711	705	717	711
208	1751	1760	1752	1758	1758
238	3513	3610	3557	3553	3568

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	271.13	23.95	23 90 24.10	
25	43.15	24.95	24 90 25.10	
26	49 90	26 00	25.90 - 26 10	
59	1465 38	59 00	58.90 - 59 10	
103	4375.58	103.05	102.90 103.10	
115	2034.75	115.05	114.90 115.10	
205	4548.33	205.05	204.90 205.10	
206	1498 74	206 05	205 90 - 206 10	
207	1316 74	207 00	206 90 - 207 10	
208	3194.53	208.05	207.90 208.10	
238	6501.97	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.63	0.741	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.63	0.741	0.900	
59	0.62	0.778	0.900	
103	0 59	0 733	0 900	
115	0 59	0 692	0 900	
205	0.57	0.736	0.900	
206	0.56	0.717	0.900	
207	0.56	0.733	0.900	
208	0 57	0 754	0 900	
238	0 57	0 773	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:22:24 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

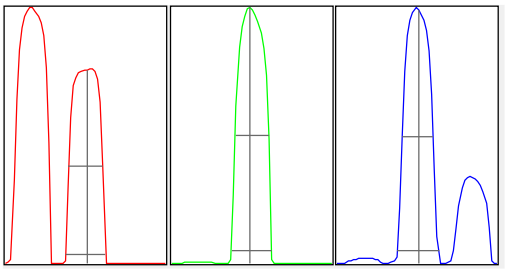
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2268	22679 02	6.280	5 000	Fai
89		4370	43701 67	5.855	5 000	Fai
205		3674	36738 02	7.214	5 000	Fai

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2292	2017	2329	2345	2357
89	4339	3937	4540	4538	4498
205	3712	3214	3755	3800	3888

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3620.00	7.05	6 90 7 10	
89	7467.06	89.00	88 90 89.10	
205	6528 70	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.740	0.900	
89	0.61	0.739	0.900	
205	0.58	0.769	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

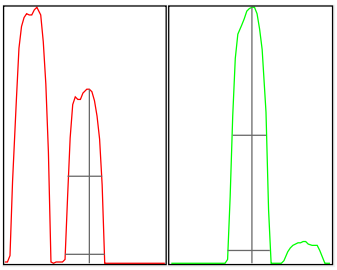
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	622 42	2 779	5.000	
9		121	1212 18	2.034	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	61	62	62	61	65
9	117	121	122	124	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	103 50	7 10	6.90 - 7.10	
9	202 36	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.740	0.900	
9	0.62	0.780	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		164	1638.35	1 204	5.000	
25		24	244 80	3 996	5.000	
26		30	301.11	3.829	5 000	
59		870	8700 25	0.981	5 000	
103		2489	24888.79	0 570	5.000	
115		1143	11431.44	0 367	5.000	
205		2513	25126.52	0 433	5.000	
206		823	8228 81	1.018	5 000	
207		709	7085 06	1.110	5 000	

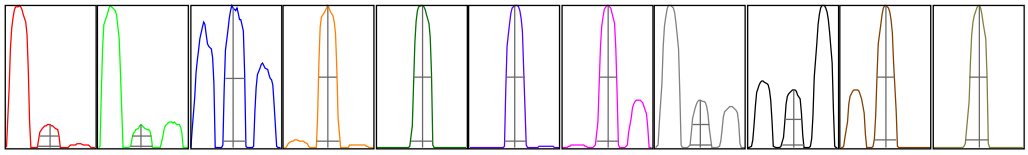
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1749	17493.20	1 169	5.000	
238		3571	35705.33	0 629	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	162	163	167	164	164
25	26	24	24	25	23
26	32	29	30	30	30
59	871	879	874	856	870
103	2495	2477	2487	2510	2476
115	1145	1149	1141	1138	1143
205	2524	2507	2499	2510	2524
206	830	818	833	812	821
207	715	716	700	700	710
208	1721	1760	1771	1736	1759
238	3541	3600	3563	3583	3565

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	270.33	24.00	23 90 24.10	
25	44.00	24.95	24 90 25.10	
26	48 65	25 95	25.90 - 26 10	
59	1466 58	59 00	58.90 - 59 10	
103	4329.68	103.05	102.90 103.10	
115	1993.58	115.05	114.90 115.10	
205	4507.84	205.05	204.90 205.10	
206	1515 76	206 05	205 90 - 206 10	
207	1304 28	207 05	206 90 - 207 10	
208	3207.15	208.05	207.90 208.10	
238	6505.08	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.63	0.745	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.743	0.900	
59	0.62	0.778	0.900	
103	0 59	0 733	0 900	
115	0 59	0 692	0 900	
205	0.57	0.736	0.900	
206	0.56	0.718	0.900	
207	0.56	0.733	0.900	
208	0 56	0 754	0 900	
238	0 57	0 736	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:30:35 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

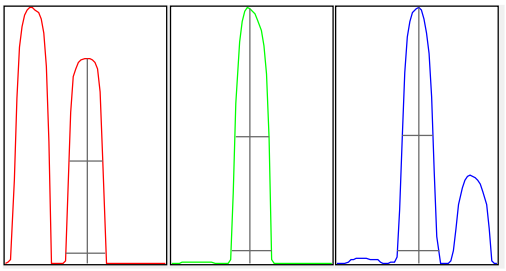
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2332	23319 89	0.259	5 000	
89		4495	44946 11	0.530	5 000	
205		3765	37653 97	0.292	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2328	2340	2335	2334	2324
89	4494	4494	4519	4509	4456
205	3782	3763	3762	3752	3768

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3741.12	7.05	6 90 7 10	
89	7577.14	89.00	88 90 89.10	
205	6771 30	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.63	0.740	0.900	
89	0.62	0.740	0.900	
205	0.57	0.768	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

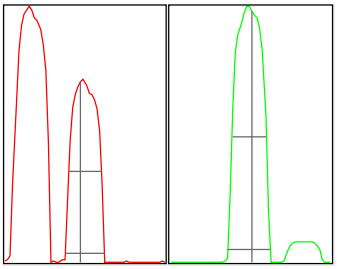
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	622 22	2 332	5.000	
9		121	1211 48	1.028	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	64	61	62	64	60
9	122	119	120	122	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	106 10	6 95	6.90 - 7.10	
9	198 71	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.61	0.739	0.900	
9	0.63	0.780	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		168	1683.25	2 072	5.000	
25		24	237 60	2 643	5.000	
26		31	313.51	4.696	5 000	
59		869	8690 25	0.751	5 000	
103		2475	24753.67	0 805	5.000	
115		1130	11297.36	0 840	5.000	
205		2492	24916.75	0 522	5.000	
206		818	8176 75	0.943	5 000	
207		701	7005 29	0.913	5 000	

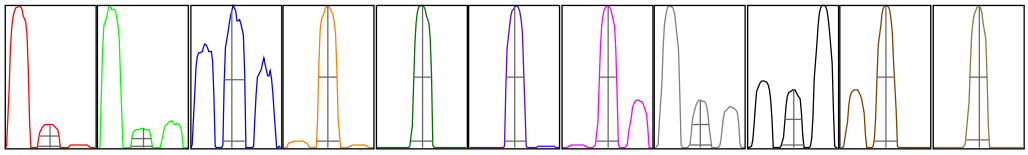
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1732	17320.34	0 753	5.000	
238		3531	35311.90	0 857	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	170	170	162	170	170
25	24	24	23	24	24
26	33	32	30	30	32
59	872	867	877	859	870
103	2489	2463	2446	2494	2484
115	1138	1141	1122	1119	1128
205	2469	2497	2499	2496	2498
206	808	828	813	820	819
207	696	709	706	695	697
208	1737	1750	1722	1735	1717
238	3493	3529	3576	3519	3539

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	274.48	24.00	23 90 24.10	
25	38.05	25.05	24 90 25.10	
26	50 65	25 90	25.90 - 26 10	
59	1460 77	59 00	58.90 - 59 10	
103	4340.01	103.05	102.90 103.10	
115	1976.06	115.05	114.90 115.10	
205	4474.77	205.05	204.90 205.10	
206	1505 20	206 05	205 90 - 206 10	
207	1293 06	207 05	206 90 - 207 10	
208	3179.14	208.05	207.90 208.10	
238	6410.45	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.65	0.744	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.65	0.742	0.900	
59	0.62	0.777	0.900	
103	0 59	0 732	0 900	
115	0 59	0 691	0 900	
205	0.57	0.736	0.900	
206	0.56	0.719	0.900	
207	0.55	0.732	0.900	
208	0 56	0 754	0 900	
238	0 57	0 772	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
6		0.095136	☑
9		0.105250	☑
23		0.106345	☑
24		0.112207	☑
27		0.117441	☑
39		0.122445	☑
45		0.123608	☑
48		0.123190	☑
51		0.126432	☑
52		0.130208	☑
55		0.133122	☑
59		0.139351	☑
60		0.140186	☑
63		0.144222	☑
66		0.143375	☑
72		0.140891	☑
75		0.139603	☑
88		0.142791	☑
98		0.139456	☑
102		0.144294	☑
106		0.150388	☑
114		0.154121	☑
115		0.153759	☑

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
118		0.151558	☑
121		0.151549	☑
138		0.154070	☑
175		0.161681	☑
193		0.163213	☑
205		0.166749	☑
208		0.168611	☑
209		0.167650	☑
232		0.164717	☑
238		0.165737	☑

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	001SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:41:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	002SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:43:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	003SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:46:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	004SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:48:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	005SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:50:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	006SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:52:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	007SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:54:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	008SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:55:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	009SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:57:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	010SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:59:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	011SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:01:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	012SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:03:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	013SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:05:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	014SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:06:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	015SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:08:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	016SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:10:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	017SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:12:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	018SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:14:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	019SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:15:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	020SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:17:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	021SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:19:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	022SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:21:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	023SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:23:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	024SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:25:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:26:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	026SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:28:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	027SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:30:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	028SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:32:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	029SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:34:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	030SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:35:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	031CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T13:37:45-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	15203	0.02
Mg	24	45	3	HMI He	220	14.30
Al	27	45	3	HMI He	97	16.33
K	39	45	3	HMI He	24506	0.03
Ca	40	45	2	HMI H2	9907	0.03
V	51	72	3	HMI He	823	0.93
Cr	52	72	3	HMI He	2084	0.05
Mn	55	72	3	HMI He	173	5.35
Fe	56	72	2	HMI H2	31461	0.02
Co	59	72	3	HMI He	52	60.24
Ni	60	72	3	HMI He	371	3.29
Cu	63	72	3	HMI He	530	3.21
Zn	66	72	3	HMI He	190	13.65
As	75	72	3	HMI He	58	37.00
Se	78	72	2	HMI H2	1	25980.76
(Se)	78	72	3	HMI He	22	162.85
Sr	88	72	3	HMI He	18	309.78
Mo	95	115	3	HMI He	40	125.06
Ag	107	115	3	HMI He	18	85.98
Cd	111	115	3	HMI He	42	44.03
Sn	120	115	3	HMI He	1163	0.31
Sb	121	115	3	HMI He	88	40.71
Ba	137	115	3	HMI He	50	72.16
Tl	205	193	3	HMI He	4050	0.07
(Pb)	206	193	3	HMI He	505	2.57
(Pb)	207	193	3	HMI He	580	0.93
Pb	208	193	3	HMI He	2139	0.23
Th	232	193	3	HMI He	5207	0.04
U	238	193	3	HMI He	1538	0.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3892690	1.21
Sc (IS)	45	3	HMI He	558682	0.71
Ge Internal standard	72	2	HMI H2	2351137	1.90
Ge Internal standard	72	3	HMI He	686329	0.71
In Internal Standard	115	3	HMI He	2596034	0.99
Ir (IS)	193	3	HMI He	5774995	1.94

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	032CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:39:33-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	031CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	649.52
Na	23	45	3	HMI He	10742393	0.00
Mg	24	45	3	HMI He	1134826	0.00
Al	27	45	3	HMI He	107	30.84
K	39	45	3	HMI He	895777	0.00
V	51	72	3	HMI He	818	1.06
Cr	52	72	3	HMI He	2189	0.33
Mn	55	72	3	HMI He	258	3.03
Co	59	72	3	HMI He	78	20.52
Ni	60	72	3	HMI He	510	2.31
Cu	63	72	3	HMI He	651	0.41
Zn	66	72	3	HMI He	351	6.22
As	75	72	3	HMI He	55	43.76
Se	78	72	2	HMI H2	3	2078.46
(Se)	78	72	3	HMI He	17	207.80
Sr	88	72	3	HMI He	278	6.14
Mo	95	115	3	HMI He	47	35.08
Ag	107	115	3	HMI He	28	71.91
Cd	111	115	3	HMI He	47	103.57
Sn	120	115	3	HMI He	1046	0.67
Sb	121	115	3	HMI He	80	20.68
Ba	137	115	3	HMI He	238	5.73
Tl	205	193	3	HMI He	2547	0.12
(Pb)	206	193	3	HMI He	511	3.18
(Pb)	207	193	3	HMI He	561	1.39
Pb	208	193	3	HMI He	2102	0.24
Th	232	193	3	HMI He	4807	0.14
U	238	193	3	HMI He	1648	0.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4062280	1.43	3892690	104.36	60	120	
Sc (IS)	45	3	HMI He	567214	0.07	558682	101.53	60	120	
Ge Internal standard	72	2	HMI H2	2234245	1.68	2351137	95.03	60	120	
Ge Internal standard	72	3	HMI He	663901	0.73	686329	96.73	60	120	
In Internal Standard	115	3	HMI He	2619267	1.35	2596034	100.89	60	120	
Ir (IS)	193	3	HMI He	5907923	1.45	5774995	102.30	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	033CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:41:20-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	031CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4663	0.06
Na	23	45	3	HMI He	228024	0.00
Mg	24	45	3	HMI He	111342	0.00
Al	27	45	3	HMI He	43286	0.01
K	39	45	3	HMI He	112991	0.00
V	51	72	3	HMI He	60009	0.00
Cr	52	72	3	HMI He	75692	0.00
Mn	55	72	3	HMI He	39326	0.00
Co	59	72	3	HMI He	126170	0.00
Ni	60	72	3	HMI He	36012	0.00
Cu	63	72	3	HMI He	98515	0.00
Zn	66	72	3	HMI He	15870	0.02
As	75	72	3	HMI He	10916	0.01
Se	78	72	2	HMI H2	5851	0.03
(Se)	78	72	3	HMI He	601	1.31
Sr	88	72	3	HMI He	106061	0.00
Mo	95	115	3	HMI He	48643	0.01
Ag	107	115	3	HMI He	167827	0.00
Cd	111	115	3	HMI He	23853	0.00
Sn	120	115	3	HMI He	76843	0.00
Sb	121	115	3	HMI He	74925	0.00
Ba	137	115	3	HMI He	24853	0.01
Tl	205	193	3	HMI He	386055	0.00
(Pb)	206	193	3	HMI He	129422	0.00
(Pb)	207	193	3	HMI He	113785	0.00
Pb	208	193	3	HMI He	521753	0.00
Th	232	193	3	HMI He	529561	0.00
U	238	193	3	HMI He	549424	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3974834	2.44	3892690	102.11	60	120	
Sc (IS)	45	3	HMI He	572255	0.57	558682	102.43	60	120	
Ge Internal standard	72	2	HMI H2	2406898	0.94	2351137	102.37	60	120	
Ge Internal standard	72	3	HMI He	712494	0.83	686329	103.81	60	120	
In Internal Standard	115	3	HMI He	2634865	0.10	2596034	101.50	60	120	
Ir (IS)	193	3	HMI He	5938117	1.80	5774995	102.82	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	034_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:43:08-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.074	ppb	2.894	1756	40	95.2	90	110	
Na	23	3	45	12422.210	ppb	2.590	1360213	12800	97.0	90	110	
Mg	24	3	45	4563.419	ppb	1.861	261473	4800	95.1	90	110	
Al	27	3	45	786.237	ppb	1.429	17084	800	98.3	90	110	
K	39	3	45	4723.360	ppb	1.284	232681	4800	98.4	90	110	
Ca	40	2	45	5032.893	ppb	2.779	2698189	4800	104.9	90	110	
V	51	3	72	41.551	ppb	1.953	24801	40	103.9	90	110	
Cr	52	3	72	41.694	ppb	2.696	32006	40	104.2	90	110	
Mn	55	3	72	42.460	ppb	1.165	16390	40	106.2	90	110	
Fe	56	2	72	806.726	ppb	2.562	1272035	800	100.8	90	110	
Co	59	3	72	41.216	ppb	2.797	50739	40	103.0	90	110	
Ni	60	3	72	41.898	ppb	2.073	14936	40	104.7	90	110	
Cu	63	3	72	42.051	ppb	1.688	40718	40	105.1	90	110	
Zn	66	3	72	82.283	ppb	1.344	12771	80	102.9	90	110	
As	75	3	72	41.410	ppb	3.799	4442	40	103.5	90	110	
Se	78	2	72	40.535	ppb	5.141	2334	40	101.3	90	110	
Sr	88	3	72	122.900	ppb	2.320	63573	120	102.4	90	110	
Mo	95	3	115	39.950	ppb	0.643	19695	40	99.9	90	110	
Ag	107	3	115	79.510	ppb	2.259	135049	80	99.4	90	110	
Cd	111	3	115	39.885	ppb	2.723	9654	40	99.7	90	110	
Sn	120	3	115	39.389	ppb	3.956	31351	40	98.5	90	110	
Sb	121	3	115	38.890	ppb	2.406	29545	40	97.2	90	110	
Ba	137	3	115	39.019	ppb	2.082	9845	40	97.5	90	110	
Tl	205	3	193	40.956	ppb	2.435	158694	40	102.4	90	110	
(Pb)	206	3	193	41.113	ppb	0.891	52902	40	102.8	90	110	
(Pb)	207	3	193	40.662	ppb	0.632	46079	40	101.7	90	110	
Pb	208	3	193	41.132	ppb	0.713	213401	40	102.8	90	110	
Th	232	3	193	81.341	ppb	0.792	426795	80	101.7	90	110	
U	238	3	193	43.848	ppb	2.189	238966	40	109.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3944042	1.80	3892690	101.32	60	120	
Sc (IS)	45	3	HMI He	572458	0.94	558682	102.47	60	120	
Ge Internal standard	72	2	HMI H2	2367950	0.88	2351137	100.72	60	120	
Ge Internal standard	72	3	HMI He	694948	1.86	686329	101.26	60	120	
In Internal Standard	115	3	HMI He	2667207	1.57	2596034	102.74	60	120	
Ir (IS)	193	3	HMI He	5868335	0.85	5774995	101.62	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	035_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:44:54-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	031CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.109	ppb	58.9	7	0.5	
Na	23	3	14.222	ppb	12.1	17041	25	
Mg	24	3	-0.078	ppb	-198.0	220	25	
Al	27	3	0.681	ppb	140.3	113	15	
K	39	3	-14.262	ppb	-150.5	24376	50	
V	51	3	0.106	ppb	76.2	893	1	
Cr	52	3	0.198	ppb	106.0	2249	1	
Mn	55	3	-0.053	ppb	-68.1	155	0.5	
Co	59	3	0.008	ppb	80.0	62	0.5	
Ni	60	3	0.016	ppb	1285.5	381	1	
Cu	63	3	-0.027	ppb	-190.8	510	1	
Zn	66	3	0.216	ppb	215.7	225	5	
As	75	3	-0.131	ppb	-219.3	45	1	
Se	78	2	0.138	ppb	15.7	9	1	
Sr	88	3	0.019	ppb	106.6	28	0.5	
Mo	95	3	0.057	ppb	89.3	68	0.5	
Ag	107	3	0.016	ppb	42.0	47	1	
Cd	111	3	0.024	ppb	214.3	48	0.5	
Sn	120	3	-0.086	ppb	-79.7	1121	1	
Sb	121	3	-0.022	ppb	-94.2	73	0.6	
Ba	137	3	-0.037	ppb	-232.2	42	0.5	
Tl	205	3	-0.452	ppb	-4.6	2416	0.1	
(Pb)	206	3	-0.046	ppb	-30.2	456	1	
(Pb)	207	3	0.037	ppb	52.3	631	1	
Pb	208	3	-0.035	ppb	-81.9	1997	0.5	
Th	232	3	3.245	ppb	11.8	22149	1	>RL
U	238	3	0.026	ppb	40.2	1704	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3933329	1.01	3892690	101.04	60	120	
Sc (IS)	45	3	HMI He	569801	0.55	558682	101.99	60	120	
Ge Internal standard	72	2	HMI H2	2382195	1.10	2351137	101.32	60	120	
Ge Internal standard	72	3	HMI He	693916	0.36	686329	101.11	60	120	
In Internal Standard	115	3	HMI He	2649286	2.26	2596034	102.05	60	120	
Ir (IS)	193	3	HMI He	5879016	0.69	5774995	101.80	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	036SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:46:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1427.20	2	2000	
Na	23	3	45	12.131	ppb	12.131	24.38	18347	400000	
Mg	24	3	45	12.469	ppb	12.469	25.43	1021	400000	
Al	27	3	45	7.654	ppb	7.654	38.30	287	400000	
K	39	3	45	-70.740	ppb	-70.740	-41.03	23908	400000	
Ca	40	2	45	31.260	ppb	31.260	1.61	29745	400000	
V	51	3	72	-0.988	ppb	-0.988	-2.91	288	2000	
Cr	52	3	72	-0.809	ppb	-0.809	-14.90	1678	5000	
Mn	55	3	72	0.062	ppb	0.062	61.30	218	10000	
Fe	56	2	72	8.931	ppb	8.931	18.15	50499	10000	
Co	59	3	72	0.016	ppb	0.016	114.96	78	2000	
Ni	60	3	72	-0.030	ppb	-0.030	-272.70	401	5000	
Cu	63	3	72	-0.082	ppb	-0.082	-31.60	503	5000	
Zn	66	3	72	-0.295	ppb	-0.295	-83.92	162	5000	
As	75	3	72	-0.371	ppb	-0.371	-26.39	22	2000	
Se	78	2	72	0.145	ppb	0.145	21.42	10	2000	
Sr	88	3	72	0.320	ppb	0.320	11.30	202	4000	
Mo	95	3	115	0.004	ppb	0.004	1226.58	47	2000	
Ag	107	3	115	0.011	ppb	0.011	70.59	42	100	
Cd	111	3	115	-0.107	ppb	-0.107	-9.27	18	2000	
Sn	120	3	115	-1.232	ppb	-1.232	-4.83	273	2000	
Sb	121	3	115	-0.033	ppb	-0.033	-32.61	72	1000	
Ba	137	3	115	-0.021	ppb	-0.021	-242.38	50	5000	
Tl	205	3	193	-0.807	ppb	-0.807	-1.02	1188	2000	
(Pb)	206	3	193	-0.060	ppb	-0.060	-13.10	485	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-2303.71	650	100	
Pb	208	3	193	-0.044	ppb	-0.044	-11.71	2161	5000	
Th	232	3	193	-0.151	ppb	-0.151	-34.62	5000	2000	
U	238	3	193	0.031	ppb	0.031	44.62	1921	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386792	0.70	3892690	112.69	60	120	
Sc (IS)	45	3	HMI He	621731	1.02	558682	111.29	60	120	
Ge Internal standard	72	2	HMI H2	2631494	0.70	2351137	111.92	60	120	
Ge Internal standard	72	3	HMI He	761976	0.71	686329	111.02	60	120	
In Internal Standard	115	3	HMI He	2892268	2.63	2596034	111.41	60	120	
Ir (IS)	193	3	HMI He	6507059	1.27	5774995	112.68	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	037SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:48:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.032	ppb	0.032	186.24	3	2000	
Na	23	3	45	2.294	ppb	2.294	314.20	16984	400000	
Mg	24	3	45	10.413	ppb	10.413	20.13	881	400000	
Al	27	3	45	7.463	ppb	7.463	38.39	280	400000	
K	39	3	45	-51.796	ppb	-51.796	-37.44	24533	400000	
Ca	40	2	45	31.991	ppb	31.991	2.93	29507	400000	
V	51	3	72	-0.930	ppb	-0.930	-6.17	320	2000	
Cr	52	3	72	-0.820	ppb	-0.820	-16.38	1643	5000	
Mn	55	3	72	0.143	ppb	0.143	33.29	248	10000	
Fe	56	2	72	6.499	ppb	6.499	26.29	45651	10000	
Co	59	3	72	0.005	ppb	0.005	293.36	63	2000	
Ni	60	3	72	-0.061	ppb	-0.061	-143.05	383	5000	
Cu	63	3	72	-0.072	ppb	-0.072	-78.50	505	5000	
Zn	66	3	72	-0.532	ppb	-0.532	-30.94	120	5000	
As	75	3	72	-0.338	ppb	-0.338	-35.11	25	2000	
Se	78	2	72	0.062	ppb	0.062	78.10	5	2000	
Sr	88	3	72	0.293	ppb	0.293	26.26	183	4000	
Mo	95	3	115	0.025	ppb	0.025	118.22	57	2000	
Ag	107	3	115	0.011	ppb	0.011	90.40	40	100	
Cd	111	3	115	-0.068	ppb	-0.068	-98.26	28	2000	
Sn	120	3	115	-1.173	ppb	-1.173	-2.03	317	2000	
Sb	121	3	115	-0.071	ppb	-0.071	-29.61	40	1000	
Ba	137	3	115	-0.030	ppb	-0.030	-97.12	47	5000	
Tl	205	3	193	-0.838	ppb	-0.838	-2.38	1028	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-27.31	460	100	
(Pb)	207	3	193	-0.033	ppb	-0.033	-208.78	595	100	
Pb	208	3	193	-0.056	ppb	-0.056	-11.73	2036	5000	
Th	232	3	193	-0.172	ppb	-0.172	-16.74	4750	2000	
U	238	3	193	0.052	ppb	0.052	33.63	1991	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4289210	0.30	3892690	110.19	60	120	
Sc (IS)	45	3	HMI He	614573	1.76	558682	110.00	60	120	
Ge Internal standard	72	2	HMI H2	2591903	0.38	2351137	110.24	60	120	
Ge Internal standard	72	3	HMI He	749726	1.21	686329	109.24	60	120	
In Internal Standard	115	3	HMI He	2849472	2.56	2596034	109.76	60	120	
Ir (IS)	193	3	HMI He	6330898	0.80	5774995	109.63	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	038CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T13:50:34-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	2000.00
Na	23	45	3	HMI He	16212	0.01
Mg	24	45	3	HMI He	204	16.97
Al	27	45	3	HMI He	70	61.16
K	39	45	3	HMI He	24416	0.02
Ca	40	45	2	HMI H2	10237	0.01
V	51	72	3	HMI He	830	0.13
Cr	52	72	3	HMI He	2006	0.16
Mn	55	72	3	HMI He	180	6.73
Fe	56	72	2	HMI H2	29695	0.02
Co	59	72	3	HMI He	37	187.24
Ni	60	72	3	HMI He	353	7.13
Cu	63	72	3	HMI He	553	0.74
Zn	66	72	3	HMI He	187	5.80
As	75	72	3	HMI He	77	19.65
Se	78	72	2	HMI H2	1	12990.38
(Se)	78	72	3	HMI He	25	211.80
Sr	88	72	3	HMI He	12	924.61
Mo	95	115	3	HMI He	38	119.55
Ag	107	115	3	HMI He	15	587.95
Cd	111	115	3	HMI He	27	226.17
Sn	120	115	3	HMI He	888	0.37
Sb	121	115	3	HMI He	67	79.86
Ba	137	115	3	HMI He	28	95.18
Tl	205	193	3	HMI He	1656	0.14
(Pb)	206	193	3	HMI He	450	1.08
(Pb)	207	193	3	HMI He	566	0.80
Pb	208	193	3	HMI He	1784	0.08
Th	232	193	3	HMI He	9326	0.10
U	238	193	3	HMI He	1606	0.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3906300	1.35
Sc (IS)	45	3	HMI He	564278	0.18
Ge Internal standard	72	2	HMI H2	2319843	0.48
Ge Internal standard	72	3	HMI He	683756	1.23
In Internal Standard	115	3	HMI He	2609293	1.64
Ir (IS)	193	3	HMI He	5781904	1.76

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	039CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:52:22-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	038CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	10524268	0.00
Mg	24	45	3	HMI He	1127552	0.00
Al	27	45	3	HMI He	107	36.56
K	39	45	3	HMI He	914177	0.00
V	51	72	3	HMI He	865	1.17
Cr	52	72	3	HMI He	2187	0.35
Mn	55	72	3	HMI He	238	9.00
Co	59	72	3	HMI He	75	58.32
Ni	60	72	3	HMI He	513	0.58
Cu	63	72	3	HMI He	566	0.72
Zn	66	72	3	HMI He	393	0.37
As	75	72	3	HMI He	52	21.63
Se	78	72	2	HMI H2	3	4296.16
(Se)	78	72	3	HMI He	13	429.74
Sr	88	72	3	HMI He	280	4.82
Mo	95	115	3	HMI He	43	15.39
Ag	107	115	3	HMI He	30	96.27
Cd	111	115	3	HMI He	33	51.95
Sn	120	115	3	HMI He	986	0.44
Sb	121	115	3	HMI He	75	54.10
Ba	137	115	3	HMI He	193	10.82
Tl	205	193	3	HMI He	1379	0.23
(Pb)	206	193	3	HMI He	481	0.82
(Pb)	207	193	3	HMI He	581	0.60
Pb	208	193	3	HMI He	1914	0.44
Th	232	193	3	HMI He	6462	0.10
U	238	193	3	HMI He	1619	0.29

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3974477	2.57	3906300	101.75	60	120	
Sc (IS)	45	3	HMI He	572943	1.24	564278	101.54	60	120	
Ge Internal standard	72	2	HMI H2	2295156	2.80	2319843	98.94	60	120	
Ge Internal standard	72	3	HMI He	658531	0.28	683756	96.31	60	120	
In Internal Standard	115	3	HMI He	2604919	1.76	2609293	99.83	60	120	
Ir (IS)	193	3	HMI He	5871218	2.38	5781904	101.54	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	040CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:54:10-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	038CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4613	0.03
Na	23	45	3	HMI He	228432	0.00
Mg	24	45	3	HMI He	110616	0.00
Al	27	45	3	HMI He	42982	0.00
K	39	45	3	HMI He	111605	0.00
V	51	72	3	HMI He	60954	0.00
Cr	52	72	3	HMI He	76201	0.00
Mn	55	72	3	HMI He	38578	0.00
Co	59	72	3	HMI He	126473	0.00
Ni	60	72	3	HMI He	36263	0.00
Cu	63	72	3	HMI He	98347	0.00
Zn	66	72	3	HMI He	15790	0.01
As	75	72	3	HMI He	11211	0.01
Se	78	72	2	HMI H2	5820	0.01
(Se)	78	72	3	HMI He	688	1.57
Sr	88	72	3	HMI He	105245	0.00
Mo	95	115	3	HMI He	48623	0.00
Ag	107	115	3	HMI He	168890	0.00
Cd	111	115	3	HMI He	23996	0.01
Sn	120	115	3	HMI He	75408	0.00
Sb	121	115	3	HMI He	74287	0.00
Ba	137	115	3	HMI He	24162	0.00
Tl	205	193	3	HMI He	390694	0.00
(Pb)	206	193	3	HMI He	128772	0.00
(Pb)	207	193	3	HMI He	113250	0.00
Pb	208	193	3	HMI He	520116	0.00
Th	232	193	3	HMI He	531664	0.00
U	238	193	3	HMI He	547505	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4007727	2.96	3906300	102.60	60	120	
Sc (IS)	45	3	HMI He	566930	1.66	564278	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2451576	1.76	2319843	105.68	60	120	
Ge Internal standard	72	3	HMI He	713945	0.68	683756	104.42	60	120	
In Internal Standard	115	3	HMI He	2623653	1.87	2609293	100.55	60	120	
Ir (IS)	193	3	HMI He	5785749	1.71	5781904	100.07	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	041_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:55:57-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	37.542	ppb	3.969	1746	40	93.9	90	110	
Na	23	3	45	13081.363	ppb	0.681	1399561	12800	102.2	90	110	
Mg	24	3	45	4584.841	ppb	1.478	260240	4800	95.5	90	110	
Al	27	3	45	758.470	ppb	5.457	16620	800	94.8	90	110	
K	39	3	45	4653.277	ppb	2.368	233131	4800	96.9	90	110	
Ca	40	2	45	4990.228	ppb	0.493	2733606	4800	104.0	90	110	
V	51	3	72	40.980	ppb	1.554	24533	40	102.5	90	110	
Cr	52	3	72	42.293	ppb	2.337	32183	40	105.7	90	110	
Mn	55	3	72	42.725	ppb	1.594	15968	40	106.8	90	110	
Fe	56	2	72	831.084	ppb	0.497	1295086	800	103.9	90	110	
Co	59	3	72	42.257	ppb	1.426	51466	40	105.6	90	110	
Ni	60	3	72	42.257	ppb	1.119	14957	40	105.6	90	110	
Cu	63	3	72	42.032	ppb	1.606	40113	40	105.1	90	110	
Zn	66	3	72	81.691	ppb	0.612	12449	80	102.1	90	110	
As	75	3	72	40.727	ppb	1.699	4440	40	101.8	90	110	
Se	78	2	72	40.977	ppb	1.702	2312	40	102.4	90	110	
Sr	88	3	72	125.294	ppb	1.473	63469	120	104.4	90	110	
Mo	95	3	115	39.035	ppb	0.544	19533	40	97.6	90	110	
Ag	107	3	115	77.277	ppb	1.945	134127	80	96.6	90	110	
Cd	111	3	115	38.871	ppb	3.018	9602	40	97.2	90	110	
Sn	120	3	115	39.918	ppb	2.355	31491	40	99.8	90	110	
Sb	121	3	115	39.619	ppb	2.279	30288	40	99.0	90	110	
Ba	137	3	115	39.943	ppb	2.484	9935	40	99.9	90	110	
Tl	205	3	193	39.484	ppb	3.629	155560	40	98.7	90	110	
(Pb)	206	3	193	40.880	ppb	1.586	53032	40	102.2	90	110	
(Pb)	207	3	193	39.502	ppb	3.285	45161	40	98.8	90	110	
Pb	208	3	193	40.392	ppb	3.246	211592	40	101.0	90	110	
Th	232	3	193	79.116	ppb	1.792	423459	80	98.9	90	110	
U	238	3	193	43.524	ppb	4.279	239648	40	108.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3986563	1.80	3906300	102.05	60	120	
Sc (IS)	45	3	HMI He	576416	0.37	564278	102.15	60	120	
Ge Internal standard	72	2	HMI H2	2375558	0.37	2319843	102.40	60	120	
Ge Internal standard	72	3	HMI He	687241	1.16	683756	100.51	60	120	
In Internal Standard	115	3	HMI He	2696458	2.30	2609293	103.34	60	120	
Ir (IS)	193	3	HMI He	5799785	2.98	5781904	100.31	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	042_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:00:22-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.110	ppb	99.5	10	0.5	
Na	23	3	7.477	ppb	46.5	16991	25	
Mg	24	3	0.418	ppb	577.4	227	25	
Al	27	3	2.036	ppb	76.2	113	15	
K	39	3	4.847	ppb	408.7	24630	50	
V	51	3	0.137	ppb	126.2	918	1	
Cr	52	3	0.002	ppb	5532.9	2029	1	
Mn	55	3	-0.049	ppb	-152.1	163	0.5	
Co	59	3	-0.002	ppb	-566.1	35	0.5	
Ni	60	3	0.165	ppb	66.6	415	1	
Cu	63	3	-0.107	ppb	-48.7	458	1	
Zn	66	3	-0.113	ppb	-121.9	172	5	
As	75	3	0.008	ppb	2328.6	78	1	
Se	78	2	0.024	ppb	82.3	3	1	
Sr	88	3	0.075	ppb	23.6	50	0.5	
Mo	95	3	0.027	ppb	212.4	52	0.5	
Ag	107	3	0.007	ppb	87.6	27	1	
Cd	111	3	0.027	ppb	166.2	33	0.5	
Sn	120	3	0.040	ppb	247.2	930	1	
Sb	121	3	-0.004	ppb	-766.9	65	0.6	
Ba	137	3	0.041	ppb	210.1	38	0.5	
Tl	205	3	-0.101	ppb	-18.3	1261	0.1	
(Pb)	206	3	-0.054	ppb	-14.0	380	1	
(Pb)	207	3	-0.031	ppb	-202.5	531	1	
Pb	208	3	-0.020	ppb	-71.8	1679	0.5	
Th	232	3	2.669	ppb	13.7	23220	1	>RL
U	238	3	0.015	ppb	136.0	1686	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3860126	2.02	3906300	98.82	60	120	
Sc (IS)	45	3	HMI He	564381	0.80	564278	100.02	60	120	
Ge Internal standard	72	2	HMI H2	2328375	2.48	2319843	100.37	60	120	
Ge Internal standard	72	3	HMI He	691008	0.98	683756	101.06	60	120	
In Internal Standard	115	3	HMI He	2644486	2.21	2609293	101.35	60	120	
Ir (IS)	193	3	HMI He	5776591	0.92	5781904	99.91	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	043_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:02:13-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	-0.073	ppb	-83.0	2	0.5	
Na	23	3	6.912	ppb	18.6	17077	25	
Mg	24	3	1.214	ppb	93.6	274	25	
Al	27	3	0.743	ppb	34.4	87	15	
K	39	3	-12.844	ppb	-256.4	24061	50	
V	51	3	0.033	ppb	282.7	865	1	
Cr	52	3	-0.055	ppb	-463.7	2001	1	
Mn	55	3	-0.088	ppb	-85.3	150	0.5	
Co	59	3	0.001	ppb	1765.4	38	0.5	
Ni	60	3	0.026	ppb	318.2	370	1	
Cu	63	3	-0.112	ppb	-46.2	456	1	
Zn	66	3	0.119	ppb	127.6	208	5	
As	75	3	-0.058	ppb	-272.4	72	1	
Se	78	2	0.012	ppb	537.7	2	1	
Sr	88	3	0.019	ppb	129.9	22	0.5	
Mo	95	3	0.023	ppb	116.3	50	0.5	
Ag	107	3	-0.001	ppb	-162.2	13	1	
Cd	111	3	0.006	ppb	206.9	28	0.5	
Sn	120	3	-0.050	ppb	-137.2	863	1	
Sb	121	3	-0.003	ppb	-1394.6	65	0.6	
Ba	137	3	0.053	ppb	124.1	42	0.5	
Tl	205	3	-0.121	ppb	-5.5	1189	0.1	
(Pb)	206	3	-0.076	ppb	-37.5	353	1	
(Pb)	207	3	-0.020	ppb	-119.1	546	1	
Pb	208	3	-0.024	ppb	-58.6	1666	0.5	
Th	232	3	0.086	ppb	189.6	9802	1	
U	238	3	0.012	ppb	126.6	1676	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3952585	1.17	3906300	101.18	60	120	
Sc (IS)	45	3	HMI He	569282	0.55	564278	100.89	60	120	
Ge Internal standard	72	2	HMI H2	2377233	2.29	2319843	102.47	60	120	
Ge Internal standard	72	3	HMI He	696104	1.53	683756	101.81	60	120	
In Internal Standard	115	3	HMI He	2645120	0.21	2609293	101.37	60	120	
Ir (IS)	193	3	HMI He	5801436	1.21	5781904	100.34	60	120	

CRI Report

Sample Table

Sample Name	cri-7691038
Data File Name	044LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:07:35-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.566	ppb	29.296	32	1	56.6	80	120	>+/-30%
Na	23	3	45	284.797	ppb	0.943	46232	300	94.9	80	120	
Mg	24	3	45	47.184	ppb	10.179	2857	50	94.4	80	120	
Al	27	3	45	47.657	ppb	6.580	1101	50	95.3	80	120	
K	39	3	45	100.258	ppb	6.588	29153	120	83.5	80	120	
Ca	40	2	45	200.940	ppb	1.652	116685	200	100.5	80	120	
V	51	3	72	4.684	ppb	2.255	3567	5	93.7	80	120	
Cr	52	3	72	1.885	ppb	21.006	3384	2	94.3	80	120	
Mn	55	3	72	0.962	ppb	6.226	540	1	96.2	80	120	
Fe	56	2	72	48.154	ppb	5.557	102347	50	96.3	80	120	
Co	59	3	72	0.931	ppb	6.565	1178	1	93.1	80	120	
Ni	60	3	72	2.065	ppb	10.757	1076	2	103.3	80	120	
Cu	63	3	72	1.888	ppb	8.935	2347	2	94.4	80	120	
Zn	66	3	72	9.322	ppb	7.559	1598	10	93.2	80	120	
As	75	3	72	4.271	ppb	7.356	538	5	85.4	80	120	
Se	78	2	72	5.384	ppb	4.191	301	5	107.7	80	120	
Sr	88	3	72	4.807	ppb	4.129	2462	5	96.1	80	120	
Mo	95	3	115	1.873	ppb	5.477	953	2	93.6	80	120	
Ag	107	3	115	1.012	ppb	7.948	1733	1	101.2	80	120	
Cd	111	3	115	0.884	ppb	9.634	240	1	88.4	80	120	
Sn	120	3	115	8.351	ppb	3.628	7152	10	83.5	80	120	
Sb	121	3	115	1.772	ppb	2.655	1389	2	88.6	80	120	
Ba	137	3	115	0.982	ppb	34.334	267	1	98.2	80	120	
Tl	205	3	193	0.738	ppb	1.661	4527	1	73.8	80	120	>+/-30%
(Pb)	206	3	193	0.816	ppb	3.871	1496	1	81.6	80	120	
(Pb)	207	3	193	0.784	ppb	6.274	1449	1	78.4	80	120	>+/-30%
Pb	208	3	193	0.853	ppb	5.095	6203	1	85.3	80	120	
Th	232	3	193	0.601	ppb	23.137	12457	1	60.1	80	120	>+/-30%
U	238	3	193	0.917	ppb	3.485	6608	1	91.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3873805	2.16	3906300	99.17	60	120	
Sc (IS)	45	3	HMI He	571007	0.59	564278	101.19	60	120	
Ge Internal standard	72	2	HMI H2	2345423	2.06	2319843	101.10	60	120	
Ge Internal standard	72	3	HMI He	691858	0.82	683756	101.18	60	120	
In Internal Standard	115	3	HMI He	2636372	0.90	2609293	101.04	60	120	
Ir (IS)	193	3	HMI He	5782158	1.55	5781904	100.00	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	045SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:09:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.075	ppb	-0.075	-77.59	2	2000	
Na	23	3	45	-4.199	ppb	-4.199	-139.75	17007	400000	
Mg	24	3	45	10.822	ppb	10.822	15.30	868	400000	
Al	27	3	45	7.143	ppb	7.143	26.96	240	400000	
K	39	3	45	-53.199	ppb	-53.199	-13.91	23814	400000	
Ca	40	2	45	26.487	ppb	26.487	1.72	26465	400000	
V	51	3	72	-0.858	ppb	-0.858	-5.12	365	2000	
Cr	52	3	72	-0.996	ppb	-0.996	-18.01	1411	5000	
Mn	55	3	72	0.095	ppb	0.095	110.61	233	10000	
Fe	56	2	72	5.704	ppb	5.704	31.89	42494	10000	
Co	59	3	72	0.010	ppb	0.010	153.19	53	2000	
Ni	60	3	72	-0.222	ppb	-0.222	-33.18	302	5000	
Cu	63	3	72	-0.207	ppb	-0.207	-5.44	390	5000	
Zn	66	3	72	-0.274	ppb	-0.274	-86.16	158	5000	
As	75	3	72	-0.546	ppb	-0.546	-8.02	20	2000	
Se	78	2	72	0.008	ppb	0.008	387.19	2	2000	
Sr	88	3	72	0.293	ppb	0.293	14.27	173	4000	
Mo	95	3	115	0.004	ppb	0.004	473.74	43	2000	
Ag	107	3	115	0.009	ppb	0.009	17.36	32	100	
Cd	111	3	115	-0.033	ppb	-0.033	-155.33	20	2000	
Sn	120	3	115	-0.860	ppb	-0.860	-7.16	270	2000	
Sb	121	3	115	-0.042	ppb	-0.042	-37.10	38	1000	
Ba	137	3	115	0.075	ppb	0.075	102.38	50	5000	
Tl	205	3	193	-0.273	ppb	-0.273	-4.62	645	2000	
(Pb)	206	3	193	-0.034	ppb	-0.034	-41.24	441	100	
(Pb)	207	3	193	-0.041	ppb	-0.041	-44.93	565	100	
Pb	208	3	193	-0.028	ppb	-0.028	-34.37	1783	5000	
Th	232	3	193	-0.888	ppb	-0.888	-2.97	5085	2000	
U	238	3	193	0.029	ppb	0.029	25.60	1918	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4236402	0.90	3906300	108.45	60	120	
Sc (IS)	45	3	HMI He	608358	0.70	564278	107.81	60	120	
Ge Internal standard	72	2	HMI H2	2583669	1.39	2319843	111.37	60	120	
Ge Internal standard	72	3	HMI He	742975	0.38	683756	108.66	60	120	
In Internal Standard	115	3	HMI He	2813030	0.71	2609293	107.81	60	120	
Ir (IS)	193	3	HMI He	6278216	0.67	5781904	108.58	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	046SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:11:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.128	ppb	0.128	45.05	12	2000	
Na	23	3	45	-9.049	ppb	-9.049	-40.04	16389	400000	
Mg	24	3	45	8.648	ppb	8.648	34.35	734	400000	
Al	27	3	45	8.953	ppb	8.953	22.79	280	400000	
K	39	3	45	-44.755	ppb	-44.755	-48.92	24095	400000	
Ca	40	2	45	25.717	ppb	25.717	4.01	25897	400000	
V	51	3	72	-0.899	ppb	-0.899	-8.78	337	2000	
Cr	52	3	72	-0.716	ppb	-0.716	-12.44	1613	5000	
Mn	55	3	72	0.096	ppb	0.096	50.56	232	10000	
Fe	56	2	72	6.255	ppb	6.255	30.86	42987	10000	
Co	59	3	72	0.010	ppb	0.010	181.01	53	2000	
Ni	60	3	72	-0.008	ppb	-0.008	-1332.56	378	5000	
Cu	63	3	72	-0.148	ppb	-0.148	-5.26	446	5000	
Zn	66	3	72	-0.348	ppb	-0.348	-31.81	145	5000	
As	75	3	72	-0.414	ppb	-0.414	-37.76	35	2000	
Se	78	2	72	0.031	ppb	0.031	63.12	3	2000	
Sr	88	3	72	0.324	ppb	0.324	20.09	188	4000	
Mo	95	3	115	0.022	ppb	0.022	111.57	52	2000	
Ag	107	3	115	0.007	ppb	0.007	21.77	28	100	
Cd	111	3	115	-0.085	ppb	-0.085	-13.69	7	2000	
Sn	120	3	115	-0.758	ppb	-0.758	-5.75	346	2000	
Sb	121	3	115	-0.022	ppb	-0.022	-118.87	53	1000	
Ba	137	3	115	0.039	ppb	0.039	152.51	40	5000	
Tl	205	3	193	-0.271	ppb	-0.271	-4.64	651	2000	
(Pb)	206	3	193	-0.087	ppb	-0.087	-67.22	365	100	
(Pb)	207	3	193	-0.039	ppb	-0.039	-172.22	565	100	
Pb	208	3	193	-0.022	ppb	-0.022	-90.77	1802	5000	
Th	232	3	193	-0.932	ppb	-0.932	-2.04	4814	2000	
U	238	3	193	0.012	ppb	0.012	147.92	1808	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4217586	1.15	3906300	107.97	60	120	
Sc (IS)	45	3	HMI He	605387	0.44	564278	107.29	60	120	
Ge Internal standard	72	2	HMI H2	2558121	1.53	2319843	110.27	60	120	
Ge Internal standard	72	3	HMI He	736145	0.14	683756	107.66	60	120	
In Internal Standard	115	3	HMI He	2766834	0.72	2609293	106.04	60	120	
Ir (IS)	193	3	HMI He	6253263	1.73	5781904	108.15	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	047CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T14:13:35-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	16232	0.01
Mg	24	45	3	HMI He	220	7.44
Al	27	45	3	HMI He	83	72.41
K	39	45	3	HMI He	24713	0.02
Ca	40	45	2	HMI H2	10638	0.03
V	51	72	3	HMI He	958	0.76
Cr	52	72	3	HMI He	2041	0.23
Mn	55	72	3	HMI He	172	10.91
Fe	56	72	2	HMI H2	29407	0.03
Co	59	72	3	HMI He	35	122.52
Ni	60	72	3	HMI He	325	5.68
Cu	63	72	3	HMI He	430	0.00
Zn	66	72	3	HMI He	198	11.54
As	75	72	3	HMI He	65	61.51
Se	78	72	2	HMI H2	3	2749.55
(Se)	78	72	3	HMI He	30	55.55
Sr	88	72	3	HMI He	23	140.40
Mo	95	115	3	HMI He	37	21.50
Ag	107	115	3	HMI He	15	444.62
Cd	111	115	3	HMI He	23	53.07
Sn	120	115	3	HMI He	881	1.18
Sb	121	115	3	HMI He	38	39.33
Ba	137	115	3	HMI He	37	21.50
Tl	205	193	3	HMI He	970	0.51
(Pb)	206	193	3	HMI He	347	4.27
(Pb)	207	193	3	HMI He	496	1.02
Pb	208	193	3	HMI He	1524	0.24
Th	232	193	3	HMI He	5338	0.04
U	238	193	3	HMI He	1693	0.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3887690	1.05
Sc (IS)	45	3	HMI He	560366	0.91
Ge Internal standard	72	2	HMI H2	2321471	1.97
Ge Internal standard	72	3	HMI He	685485	0.75
In Internal Standard	115	3	HMI He	2631879	2.69
Ir (IS)	193	3	HMI He	5771767	2.03

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	048CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T14:15:25-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	10397055	0.00
Mg	24	45	3	HMI He	1104369	0.00
Al	27	45	3	HMI He	137	22.27
K	39	45	3	HMI He	917458	0.00
V	51	72	3	HMI He	905	0.90
Cr	52	72	3	HMI He	2387	0.18
Mn	55	72	3	HMI He	248	12.04
Co	59	72	3	HMI He	93	17.55
Ni	60	72	3	HMI He	505	1.37
Cu	63	72	3	HMI He	531	2.10
Zn	66	72	3	HMI He	288	3.53
As	75	72	3	HMI He	43	85.62
Se	78	72	2	HMI H2	2	5000.00
(Se)	78	72	3	HMI He	8	1499.19
Sr	88	72	3	HMI He	258	3.12
Mo	95	115	3	HMI He	58	59.42
Ag	107	115	3	HMI He	37	130.68
Cd	111	115	3	HMI He	23	140.40
Sn	120	115	3	HMI He	956	1.11
Sb	121	115	3	HMI He	75	17.79
Ba	137	115	3	HMI He	185	2.53
Tl	205	193	3	HMI He	746	0.51
(Pb)	206	193	3	HMI He	381	3.61
(Pb)	207	193	3	HMI He	550	1.88
Pb	208	193	3	HMI He	1716	0.68
Th	232	193	3	HMI He	4812	0.03
U	238	193	3	HMI He	1711	0.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3923317	1.55	3887690	100.92	60	120	
Sc (IS)	45	3	HMI He	573668	1.64	560366	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2251543	0.98	2321471	96.99	60	120	
Ge Internal standard	72	3	HMI He	664487	0.73	685485	96.94	60	120	
In Internal Standard	115	3	HMI He	2642607	2.90	2631879	100.41	60	120	
Ir (IS)	193	3	HMI He	5930827	0.38	5771767	102.76	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	049CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T14:17:31-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4360	0.20
Na	23	45	3	HMI He	225411	0.00
Mg	24	45	3	HMI He	108864	0.00
Al	27	45	3	HMI He	43075	0.00
K	39	45	3	HMI He	113960	0.00
V	51	72	3	HMI He	60640	0.00
Cr	52	72	3	HMI He	75653	0.00
Mn	55	72	3	HMI He	38895	0.00
Co	59	72	3	HMI He	126285	0.00
Ni	60	72	3	HMI He	35389	0.00
Cu	63	72	3	HMI He	97271	0.00
Zn	66	72	3	HMI He	15246	0.01
As	75	72	3	HMI He	11109	0.02
Se	78	72	2	HMI H2	5765	0.01
(Se)	78	72	3	HMI He	586	1.92
Sr	88	72	3	HMI He	105252	0.00
Mo	95	115	3	HMI He	49103	0.00
Ag	107	115	3	HMI He	165265	0.00
Cd	111	115	3	HMI He	24136	0.01
Sn	120	115	3	HMI He	74607	0.00
Sb	121	115	3	HMI He	74527	0.00
Ba	137	115	3	HMI He	23659	0.00
Tl	205	193	3	HMI He	383650	0.00
(Pb)	206	193	3	HMI He	126139	0.00
(Pb)	207	193	3	HMI He	112363	0.00
Pb	208	193	3	HMI He	512273	0.00
Th	232	193	3	HMI He	514586	0.00
U	238	193	3	HMI He	541664	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3983857	0.59	3887690	102.47	60	120	
Sc (IS)	45	3	HMI He	566455	1.47	560366	101.09	60	120	
Ge Internal standard	72	2	HMI H2	2391072	1.28	2321471	103.00	60	120	
Ge Internal standard	72	3	HMI He	708657	1.38	685485	103.38	60	120	
In Internal Standard	115	3	HMI He	2686640	1.54	2631879	102.08	60	120	
Ir (IS)	193	3	HMI He	5820840	3.05	5771767	100.85	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	050_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:19:31-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	43.871	ppb	2.578	1913	40	109.7	90	110	
Na	23	3	45	13029.017	ppb	4.250	1380135	12800	101.8	90	110	
Mg	24	3	45	4684.011	ppb	1.329	260916	4800	97.6	90	110	
Al	27	3	45	772.380	ppb	3.501	17034	800	96.5	90	110	
K	39	3	45	4591.791	ppb	1.040	231957	4800	95.7	90	110	
Ca	40	2	45	4795.142	ppb	1.722	2682583	4800	99.9	90	110	
V	51	3	72	40.531	ppb	0.641	25023	40	101.3	90	110	
Cr	52	3	72	41.042	ppb	1.487	32113	40	102.6	90	110	
Mn	55	3	72	41.707	ppb	1.436	16233	40	104.3	90	110	
Fe	56	2	72	812.491	ppb	2.008	1300933	800	101.6	90	110	
Co	59	3	72	40.721	ppb	2.203	51152	40	101.8	90	110	
Ni	60	3	72	41.523	ppb	1.878	14807	40	103.8	90	110	
Cu	63	3	72	41.567	ppb	1.312	40461	40	103.9	90	110	
Zn	66	3	72	85.032	ppb	1.570	12920	80	106.3	90	110	
As	75	3	72	40.459	ppb	5.199	4509	40	101.1	90	110	
Se	78	2	72	40.565	ppb	0.608	2353	40	101.4	90	110	
Sr	88	3	72	119.048	ppb	1.306	62306	120	99.2	90	110	
Mo	95	3	115	39.798	ppb	3.088	19391	40	99.5	90	110	
Ag	107	3	115	81.636	ppb	1.183	133730	80	102.0	90	110	
Cd	111	3	115	39.269	ppb	2.245	9409	40	98.2	90	110	
Sn	120	3	115	42.148	ppb	1.676	31680	40	105.4	90	110	
Sb	121	3	115	41.295	ppb	0.829	30526	40	103.2	90	110	
Ba	137	3	115	41.767	ppb	2.369	9817	40	104.4	90	110	
Tl	205	3	193	38.782	ppb	0.744	151574	40	97.0	90	110	
(Pb)	206	3	193	41.019	ppb	2.339	52710	40	102.5	90	110	
(Pb)	207	3	193	39.270	ppb	1.823	45076	40	98.2	90	110	
Pb	208	3	193	40.010	ppb	1.911	208925	40	100.0	90	110	
Th	232	3	193	81.667	ppb	1.170	427428	80	102.1	90	110	
U	238	3	193	42.395	ppb	1.173	234052	40	106.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4001080	0.88	3887690	102.92	60	120	
Sc (IS)	45	3	HMI He	578216	0.76	560366	103.19	60	120	
Ge Internal standard	72	2	HMI H2	2403423	1.34	2321471	103.53	60	120	
Ge Internal standard	72	3	HMI He	704595	0.49	685485	102.79	60	120	
In Internal Standard	115	3	HMI He	2662723	0.49	2631879	101.17	60	120	
Ir (IS)	193	3	HMI He	5904260	0.87	5771767	102.30	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	051_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:21:17-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.033	ppb	582.0	5	0.5	
Na	23	3	3.979	ppb	80.7	17007	25	
Mg	24	3	0.815	ppb	79.8	270	25	
Al	27	3	-0.375	ppb	-397.4	77	15	
K	39	3	-5.445	ppb	-475.8	25021	50	
V	51	3	0.006	ppb	1957.2	986	1	
Cr	52	3	0.134	ppb	133.1	2192	1	
Mn	55	3	0.092	ppb	98.5	212	0.5	
Co	59	3	0.023	ppb	75.1	65	0.5	
Ni	60	3	0.144	ppb	106.9	383	1	
Cu	63	3	0.016	ppb	91.5	456	1	
Zn	66	3	0.044	ppb	315.8	210	5	
As	75	3	-0.078	ppb	-87.7	58	1	
Se	78	2	-0.014	ppb	-377.8	3	1	
Sr	88	3	0.047	ppb	31.6	48	0.5	
Mo	95	3	0.052	ppb	32.5	62	0.5	
Ag	107	3	0.029	ppb	22.4	62	1	
Cd	111	3	-0.042	ppb	-153.4	13	0.5	
Sn	120	3	0.168	ppb	42.6	1001	1	
Sb	121	3	0.048	ppb	110.6	73	0.6	
Ba	137	3	0.072	ppb	104.6	53	0.5	
Tl	205	3	0.007	ppb	365.3	1001	0.1	
(Pb)	206	3	-0.026	ppb	-57.0	315	1	
(Pb)	207	3	-0.022	ppb	-341.2	473	1	
Pb	208	3	-0.008	ppb	-315.7	1486	0.5	
Th	232	3	3.365	ppb	11.3	22424	1	>RL
U	238	3	-0.001	ppb	-3540.9	1696	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3981413	1.34	3887690	102.41	60	120	
Sc (IS)	45	3	HMI He	572923	0.63	560366	102.24	60	120	
Ge Internal standard	72	2	HMI H2	2359261	2.32	2321471	101.63	60	120	
Ge Internal standard	72	3	HMI He	703442	0.43	685485	102.62	60	120	
In Internal Standard	115	3	HMI He	2627129	0.81	2631879	99.82	60	120	
Ir (IS)	193	3	HMI He	5792350	2.30	5771767	100.36	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	052_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:26:07-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.000	ppb	19162.2	3	0.5	
Na	23	3	1.070	ppb	265.4	16660	25	
Mg	24	3	0.403	ppb	566.3	247	25	
Al	27	3	0.248	ppb	812.7	90	15	
K	39	3	-14.955	ppb	-154.3	24529	50	
V	51	3	-0.051	ppb	-167.6	940	1	
Cr	52	3	0.227	ppb	64.3	2229	1	
Mn	55	3	0.034	ppb	75.9	187	0.5	
Co	59	3	0.002	ppb	273.6	38	0.5	
Ni	60	3	0.137	ppb	204.8	375	1	
Cu	63	3	-0.033	ppb	-123.3	403	1	
Zn	66	3	0.087	ppb	133.4	213	5	
As	75	3	-0.116	ppb	-116.4	53	1	
Se	78	2	-0.013	ppb	-151.1	3	1	
Sr	88	3	0.012	ppb	152.7	30	0.5	
Mo	95	3	0.023	ppb	92.4	48	0.5	
Ag	107	3	0.006	ppb	53.4	25	1	
Cd	111	3	-0.015	ppb	-279.8	20	0.5	
Sn	120	3	-0.092	ppb	-63.7	826	1	
Sb	121	3	0.031	ppb	15.4	62	0.6	
Ba	137	3	-0.002	ppb	-2638.1	37	0.5	
Tl	205	3	-0.067	ppb	-18.1	716	0.1	
(Pb)	206	3	-0.027	ppb	-109.1	313	1	
(Pb)	207	3	-0.032	ppb	-87.4	461	1	
Pb	208	3	-0.016	ppb	-107.5	1446	0.5	
Th	232	3	0.928	ppb	26.5	10054	1	
U	238	3	-0.018	ppb	-86.6	1601	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3884367	0.48	3887690	99.91	60	120	
Sc (IS)	45	3	HMI He	571345	0.37	560366	101.96	60	120	
Ge Internal standard	72	2	HMI H2	2347114	1.44	2321471	101.10	60	120	
Ge Internal standard	72	3	HMI He	693628	0.89	685485	101.19	60	120	
In Internal Standard	115	3	HMI He	2667841	1.04	2631879	101.37	60	120	
Ir (IS)	193	3	HMI He	5784770	0.50	5771767	100.23	60	120	

CRI Report

Sample Table

Sample Name	cri-7691038
Data File Name	053LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:28:30-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	1.032	ppb	4.982	48	1	103.2	80	120	
Na	23	3	45	291.700	ppb	1.534	46924	300	97.2	80	120	
Mg	24	3	45	45.630	ppb	4.626	2746	50	91.3	80	120	
Al	27	3	45	45.301	ppb	13.381	1071	50	90.6	80	120	
K	39	3	45	91.661	ppb	11.631	29400	120	76.4	80	120	>+/-30%
Ca	40	2	45	201.007	ppb	1.917	118297	200	100.5	80	120	
V	51	3	72	4.887	ppb	11.222	3870	5	97.7	80	120	
Cr	52	3	72	1.889	ppb	4.031	3469	2	94.4	80	120	
Mn	55	3	72	1.082	ppb	6.894	591	1	108.2	80	120	
Fe	56	2	72	50.474	ppb	2.654	107434	50	100.9	80	120	
Co	59	3	72	0.929	ppb	6.682	1199	1	92.9	80	120	
Ni	60	3	72	2.140	ppb	5.739	1076	2	107.0	80	120	
Cu	63	3	72	1.958	ppb	7.435	2319	2	97.9	80	120	
Zn	66	3	72	9.757	ppb	6.100	1658	10	97.6	80	120	
As	75	3	72	4.976	ppb	2.137	611	5	99.5	80	120	
Se	78	2	72	4.729	ppb	9.503	273	5	94.6	80	120	
Sr	88	3	72	4.723	ppb	6.623	2487	5	94.5	80	120	
Mo	95	3	115	1.814	ppb	9.970	930	2	90.7	80	120	
Ag	107	3	115	0.855	ppb	1.951	1433	1	85.5	80	120	
Cd	111	3	115	0.853	ppb	20.772	230	1	85.3	80	120	
Sn	120	3	115	8.553	ppb	9.024	7222	10	85.5	80	120	
Sb	121	3	115	1.818	ppb	3.333	1398	2	90.9	80	120	
Ba	137	3	115	0.925	ppb	18.799	257	1	92.5	80	120	
Tl	205	3	193	0.866	ppb	7.183	4340	1	86.6	80	120	
(Pb)	206	3	193	0.931	ppb	11.281	1536	1	93.1	80	120	
(Pb)	207	3	193	0.917	ppb	12.527	1543	1	91.7	80	120	
Pb	208	3	193	0.900	ppb	4.275	6204	1	90.0	80	120	
Th	232	3	193	1.482	ppb	14.759	13074	1	148.2	80	120	>+/-30%
U	238	3	193	0.949	ppb	5.036	6910	1	94.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3850484	1.88	3887690	99.04	60	120	
Sc (IS)	45	3	HMI He	573947	0.97	560366	102.42	60	120	
Ge Internal standard	72	2	HMI H2	2360389	1.29	2321471	101.68	60	120	
Ge Internal standard	72	3	HMI He	702506	0.67	685485	102.48	60	120	
In Internal Standard	115	3	HMI He	2696475	2.84	2631879	102.45	60	120	
Ir (IS)	193	3	HMI He	5884982	1.43	5771767	101.96	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	054ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:32:20-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.002	ppb	-6451.4	3	0.5	
Na	23	3	45	94524.593	ppb	0.4	9991609	100000	
Mg	24	3	45	94132.759	ppb	1.3	5283346	100000	
Al	27	3	45	93660.568	ppb	0.7	2072628	100000	
K	39	3	45	91707.384	ppb	0.7	4183716	100000	
Ca	40	2	45	95000.943	ppb	2.6	52202626	100000	
V	51	3	72	-0.197	ppb	-98.2	886	1	
Cr	52	3	72	1.040	ppb	2.9	2921	1	>RL or LOD
Mn	55	3	72	0.241	ppb	57.6	275	0.95	
Fe	56	2	72	92692.524	ppb	1.6	145127449	100000	
Co	59	3	72	0.225	ppb	23.7	325	0.5	
Ni	60	3	72	0.423	ppb	9.0	491	1	
Cu	63	3	72	0.151	ppb	8.8	600	1	
Zn	66	3	72	0.884	ppb	68.7	343	1	
As	75	3	72	-0.060	ppb	-373.7	62	1	
Se	78	2	72	-0.002	ppb	-2411.2	3	1	
(Se)	78	3	72	-2.931	ppb	-30.1	15	1	
Sr	88	3	72	0.793	ppb	18.2	448	1	
Mo	95	3	115	1923.280	ppb	2.2	928344	2000	
Ag	107	3	115	0.028	ppb	50.9	62	1	
Cd	111	3	115	0.098	ppb	46.1	47	1	
Sn	120	3	115	-0.006	ppb	-2543.5	880	1	
Sb	121	3	115	0.127	ppb	27.6	132	1	
Ba	137	3	115	1.914	ppb	4.2	481	0.95	>RL or LOD
Tl	205	3	193	-0.094	ppb	-7.9	616	1	
(Pb)	206	3	193	0.116	ppb	16.8	493	1	
(Pb)	207	3	193	0.082	ppb	64.1	591	1	
Pb	208	3	193	0.121	ppb	9.2	2146	1	
Th	232	3	193	0.068	ppb	150.4	5702	1	
U	238	3	193	0.043	ppb	62.3	1934	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3945924	1.86	3887690	101.50	60	120	
Sc (IS)	45	3	HMI He	583054	0.40	560366	104.05	60	120	
Ge Internal standard	72	2	HMI H2	2406131	2.04	2321471	103.65	60	120	
Ge Internal standard	72	3	HMI He	719839	0.44	685485	105.01	60	120	
In Internal Standard	115	3	HMI He	2643255	1.77	2631879	100.43	60	120	
Ir (IS)	193	3	HMI He	5798317	2.43	5771767	100.46	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	055ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:34:06-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	102.117	ppb	0.480	4465	100	102.1	80	120	
Na	23	3	45	100769.299	ppb	2.086	10480122	100	100769.3	80	120	>+\-20%
Mg	24	3	45	99804.508	ppb	1.313	5512260	100	99804.5	80	120	>+\-20%
Al	27	3	45	94151.240	ppb	2.269	2050210	100	94151.2	80	120	>+\-20%
K	39	3	45	98905.142	ppb	1.913	4437926	100	98905.1	80	120	>+\-20%
Ca	40	2	45	99439.167	ppb	1.295	55029414	100	99439.2	80	120	>+\-20%
V	51	3	72	95.424	ppb	1.400	58851	100	95.4	80	120	
Cr	52	3	72	99.491	ppb	0.382	76514	100	99.5	80	120	
Mn	55	3	72	97.590	ppb	0.191	38581	100	97.6	80	120	
Fe	56	2	72	95494.333	ppb	3.418	145586867	100	95494.3	80	120	>+\-20%
Co	59	3	72	95.829	ppb	1.560	122990	100	95.8	80	120	
Ni	60	3	72	96.435	ppb	1.917	34696	100	96.4	80	120	
Cu	63	3	72	96.265	ppb	1.622	95181	100	96.3	80	120	
Zn	66	3	72	97.324	ppb	3.308	15082	100	97.3	80	120	
As	75	3	72	95.870	ppb	1.547	10827	100	95.9	80	120	
Se	78	2	72	101.635	ppb	3.645	5741	100	101.6	80	120	
(Se)	78	3	72	106.353	ppb	10.660	631	100	106.4	80	120	
Sr	88	3	72	193.635	ppb	1.102	103571	100	193.6	80	120	>+\-20%
Mo	95	3	115	2047.668	ppb	0.472	985060	100	2047.7	80	120	>+\-20%
Ag	107	3	115	99.932	ppb	0.633	161907	100	99.9	80	120	
Cd	111	3	115	96.442	ppb	1.224	22820	100	96.4	80	120	
Sn	120	3	115	101.378	ppb	2.229	74121	100	101.4	80	120	
Sb	121	3	115	99.600	ppb	2.106	72763	100	99.6	80	120	
Ba	137	3	115	103.516	ppb	3.251	24007	100	103.5	80	120	
Tl	205	3	193	97.675	ppb	0.694	372586	100	97.7	80	120	
(Pb)	206	3	193	100.420	ppb	0.495	125950	100	100.4	80	120	
(Pb)	207	3	193	97.403	ppb	1.388	108815	100	97.4	80	120	
Pb	208	3	193	98.726	ppb	1.065	502915	100	98.7	80	120	
Th	232	3	193	101.085	ppb	1.565	517103	100	101.1	80	120	
U	238	3	193	106.845	ppb	1.413	575380	100	106.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3973309	1.11	3887690	102.20	60	120	
Sc (IS)	45	3	HMI He	573772	0.73	560366	102.39	60	120	
Ge Internal standard	72	2	HMI H2	2343889	2.98	2321471	100.97	60	120	
Ge Internal standard	72	3	HMI He	720178	0.44	685485	105.06	60	120	
In Internal Standard	115	3	HMI He	2633692	0.98	2631879	100.07	60	120	
Ir (IS)	193	3	HMI He	5785314	1.06	5771767	100.23	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	056SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:35:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1626.20	3	2000	
Na	23	3	45	51.072	ppb	51.072	13.19	21785	400000	
Mg	24	3	45	18.520	ppb	18.520	16.88	1241	400000	
Al	27	3	45	16.910	ppb	16.910	9.71	450	400000	
K	39	3	45	44.536	ppb	44.536	50.60	27113	400000	
Ca	40	2	45	20.142	ppb	20.142	5.55	22140	400000	
V	51	3	72	0.067	ppb	0.067	164.65	991	2000	
Cr	52	3	72	0.251	ppb	0.251	65.75	2207	5000	
Mn	55	3	72	0.011	ppb	0.011	480.04	175	10000	
Fe	56	2	72	23.590	ppb	23.590	9.52	67216	10000	
Co	59	3	72	0.016	ppb	0.016	128.65	55	2000	
Ni	60	3	72	0.806	ppb	0.806	7.53	595	5000	
Cu	63	3	72	0.055	ppb	0.055	178.71	478	5000	
Zn	66	3	72	0.046	ppb	0.046	858.82	203	5000	
As	75	3	72	0.160	ppb	0.160	116.02	82	2000	
Se	78	2	72	0.078	ppb	0.078	73.97	8	2000	
Sr	88	3	72	0.036	ppb	0.036	119.92	42	4000	
Mo	95	3	115	4.287	ppb	4.287	18.44	2119	2000	
Ag	107	3	115	0.025	ppb	0.025	5.19	57	100	
Cd	111	3	115	-0.036	ppb	-0.036	-98.82	15	2000	
Sn	120	3	115	-0.027	ppb	-0.027	-622.60	871	2000	
Sb	121	3	115	0.071	ppb	0.071	33.44	92	1000	
Ba	137	3	115	0.013	ppb	0.013	453.25	40	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-10.12	743	2000	
(Pb)	206	3	193	-0.015	ppb	-0.015	-145.33	337	100	
(Pb)	207	3	193	0.000	ppb	0.000	-13947.95	510	100	
Pb	208	3	193	-0.005	ppb	-0.005	-189.60	1539	5000	
Th	232	3	193	2.809	ppb	2.809	10.58	20050	2000	
U	238	3	193	0.028	ppb	0.028	10.95	1894	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997248	2.23	3887690	102.82	60	120	
Sc (IS)	45	3	HMI He	570094	0.69	560366	101.74	60	120	
Ge Internal standard	72	2	HMI H2	2399134	3.10	2321471	103.35	60	120	
Ge Internal standard	72	3	HMI He	681944	1.36	685485	99.48	60	120	
In Internal Standard	115	3	HMI He	2657198	1.67	2631879	100.96	60	120	
Ir (IS)	193	3	HMI He	5927581	0.81	5771767	102.70	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-7616617
Data File Name	057_LR.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:37:39-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	2066.706	ppb	1.423	96354	2000	103.3	90	110	
Na	23	3	45	186848.823	ppb	1.774	21522621	200000	93.4	90	110	
Mg	24	3	45	188460.576	ppb	1.542	11535286	200000	94.2	90	110	
Al	27	3	45	279528.764	ppb	2.099	6746213	300000	93.2	90	110	
V	51	3	72	2009.353	ppb	2.841	1291601	2000	100.5	90	110	
Cr	52	3	72	4838.814	ppb	1.700	3834383	5000	96.8	90	110	
Mn	55	3	72	9987.391	ppb	0.914	4163867	10000	99.9	90	110	
Fe	56	2	72	194847.620	ppb	3.046	323357860	200000	97.4	90	110	
Co	59	3	72	1916.087	ppb	1.336	2604865	2000	95.8	90	110	
Ni	60	3	72	4806.176	ppb	1.444	1814525	5000	96.1	90	110	
Cu	63	3	72	4933.338	ppb	2.278	5144180	5000	98.7	90	110	
Zn	66	3	72	4918.573	ppb	0.100	796734	5000	98.4	90	110	
As	75	3	72	2001.397	ppb	0.990	238046	2000	100.1	90	110	
Se	78	2	72	2021.175	ppb	1.871	124239	2000	101.1	90	110	
(Se)	78	3	72	2300.185	ppb	0.825	13775	2000	115.0	90	110	LRS Main CR1 Failed
Sr	88	3	72	5082.538	ppb	1.132	2879656	5000	101.7	90	110	
Mo	95	3	115	1963.220	ppb	1.676	1021690	2000	98.2	90	110	
Cd	111	3	115	1908.068	ppb	0.692	487978	2000	95.4	90	110	
Sn	120	3	115	2057.089	ppb	1.771	1609011	2000	102.9	90	110	
Sb	121	3	115	1005.126	ppb	0.408	794104	1000	100.5	90	110	
Ba	137	3	115	5280.243	ppb	1.330	1323058	5000	105.6	90	110	
Tl	205	3	193	997.221	ppb	1.213	4115447	1000	99.7	90	110	
(Pb)	206	3	193	5060.418	ppb	1.517	6863910	5000	101.2	90	110	
(Pb)	207	3	193	5031.909	ppb	0.689	6069453	5000	100.6	90	110	
Pb	208	3	193	5020.632	ppb	2.187	27649840	5000	100.4	90	110	
Th	232	3	193	979.449	ppb	1.957	5383019	1000	97.9	90	110	
U	238	3	193	2030.449	ppb	1.923	11824134	2000	101.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4401817	2.27	3887690	113.22	60	120	
Sc (IS)	45	3	HMI He	635832	0.77	560366	113.47	60	120	
Ge Internal standard	72	2	HMI H2	2551092	1.79	2321471	109.89	60	120	
Ge Internal standard	72	3	HMI He	763021	0.29	685485	111.31	60	120	
In Internal Standard	115	3	HMI He	2849262	0.42	2631879	108.26	60	120	
Ir (IS)	193	3	HMI He	6274390	1.71	5771767	108.71	60	120	

Sample Report

Sample Table

Sample Name	rinse-
Data File Name	058SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:39:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.265	ppb	0.265	44.58	15	2000	
Na	23	3	45	88.244	ppb	88.244	4.27	25726	400000	
Mg	24	3	45	30.249	ppb	30.249	3.34	1892	400000	
Al	27	3	45	45.387	ppb	45.387	20.44	1071	400000	
K	39	3	45	103.505	ppb	103.505	22.14	29848	400000	
Ca	40	2	45	34.202	ppb	34.202	7.83	29340	400000	
V	51	3	72	-0.075	ppb	-0.075	-130.86	936	2000	
Cr	52	3	72	0.791	ppb	0.791	6.34	2664	5000	
Mn	55	3	72	1.407	ppb	1.407	3.71	715	10000	
Fe	56	2	72	42.553	ppb	42.553	9.61	96894	10000	
Co	59	3	72	0.265	ppb	0.265	1.93	366	2000	
Ni	60	3	72	1.245	ppb	1.245	17.35	765	5000	
Cu	63	3	72	1.100	ppb	1.100	2.13	1494	5000	
Zn	66	3	72	1.425	ppb	1.425	10.61	415	5000	
As	75	3	72	0.673	ppb	0.673	48.70	140	2000	
Se	78	2	72	0.447	ppb	0.447	30.71	29	2000	
Sr	88	3	72	0.654	ppb	0.654	10.96	365	4000	
Mo	95	3	115	10.697	ppb	10.697	19.88	5233	2000	
Ag	107	3	115	0.004	ppb	0.004	328.19	22	100	
Cd	111	3	115	0.397	ppb	0.397	20.96	118	2000	
Sn	120	3	115	13.636	ppb	13.636	8.36	10851	2000	
Sb	121	3	115	1.696	ppb	1.696	7.50	1291	1000	
Ba	137	3	115	0.681	ppb	0.681	13.48	197	5000	
Tl	205	3	193	0.401	ppb	0.401	9.30	2581	2000	
(Pb)	206	3	193	0.851	ppb	0.851	10.02	1459	100	
(Pb)	207	3	193	0.825	ppb	0.825	4.35	1463	100	
Pb	208	3	193	0.826	ppb	0.826	2.48	5916	5000	
Th	232	3	193	46.184	ppb	46.184	10.95	247312	2000	
U	238	3	193	0.879	ppb	0.879	7.18	6634	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3912426	1.08	3887690	100.64	60	120	
Sc (IS)	45	3	HMI He	572471	0.08	560366	102.16	60	120	
Ge Internal standard	72	2	HMI H2	2400198	0.56	2321471	103.39	60	120	
Ge Internal standard	72	3	HMI He	701364	1.15	685485	102.32	60	120	
In Internal Standard	115	3	HMI He	2664197	1.62	2631879	101.23	60	120	
Ir (IS)	193	3	HMI He	5979591	1.43	5771767	103.60	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	059_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:41:07-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.479	ppb	1.431	2379	50	109.0	90	110	
Na	23	3	45	47771.331	ppb	0.960	5054773	51000	93.7	90	110	
Mg	24	3	45	10300.216	ppb	1.938	577904	11000	93.6	90	110	
Al	27	3	45	939.202	ppb	3.060	20853	1000	93.9	90	110	
K	39	3	45	10180.941	ppb	2.962	486943	11000	92.6	90	110	
Ca	40	2	45	10254.331	ppb	0.623	5731991	11000	93.2	90	110	
V	51	3	72	50.201	ppb	1.620	30513	50	100.4	90	110	
Cr	52	3	72	51.391	ppb	1.039	39366	50	102.8	90	110	
Mn	55	3	72	51.080	ppb	1.887	19686	50	102.2	90	110	
Fe	56	2	72	1038.773	ppb	2.432	1599553	1000	103.9	90	110	
Co	59	3	72	50.925	ppb	1.697	63458	50	101.9	90	110	
Ni	60	3	72	51.178	ppb	0.480	18028	50	102.4	90	110	
Cu	63	3	72	50.941	ppb	2.200	49094	50	101.9	90	110	
Zn	66	3	72	51.070	ppb	2.498	7778	50	102.1	90	110	
As	75	3	72	51.243	ppb	2.066	5648	50	102.5	90	110	
Se	78	2	72	51.487	ppb	3.774	2886	50	103.0	90	110	
Sr	88	3	72	102.155	ppb	1.904	53042	100	102.2	90	110	
Mo	95	3	115	51.453	ppb	2.204	24772	50	102.9	90	110	
Ag	107	3	115	51.296	ppb	2.062	83074	50	102.6	90	110	
Cd	111	3	115	50.134	ppb	4.205	11866	50	100.3	90	110	
Sn	120	3	115	52.194	ppb	0.581	38573	50	104.4	90	110	
Sb	121	3	115	50.755	ppb	1.353	37080	50	101.5	90	110	
Ba	137	3	115	51.689	ppb	1.594	12001	50	103.4	90	110	
Tl	205	3	193	49.934	ppb	3.092	191446	50	99.9	90	110	
(Pb)	206	3	193	51.439	ppb	2.159	64865	50	102.9	90	110	
(Pb)	207	3	193	49.638	ppb	1.771	55861	50	99.3	90	110	
Pb	208	3	193	50.780	ppb	1.399	260148	50	101.6	90	110	
Th	232	3	193	60.028	ppb	3.882	310214	50	120.1	90	110	>+\-10%
U	238	3	193	50.888	ppb	2.251	275689	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4006258	0.98	3887690	103.05	60	120	
Sc (IS)	45	3	HMI He	582711	1.02	560366	103.99	60	120	
Ge Internal standard	72	2	HMI H2	2323334	1.22	2321471	100.08	60	120	
Ge Internal standard	72	3	HMI He	699010	0.80	685485	101.97	60	120	
In Internal Standard	115	3	HMI He	2632265	0.75	2631879	100.01	60	120	
Ir (IS)	193	3	HMI He	5802179	1.82	5771767	100.53	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	060_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:42:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.194	ppb	153.0	12	0.5	
Na	23	3	45	36.278	ppb	21.6	20723	25	>RL
Mg	24	3	45	5.069	ppb	30.3	514	25	
Al	27	3	45	5.895	ppb	29.9	217	15	
K	39	3	45	26.109	ppb	159.5	26896	50	
V	51	3	72	-0.041	ppb	-232.0	965	1	
Cr	52	3	72	0.541	ppb	14.3	2504	1	
Mn	55	3	72	0.213	ppb	62.2	260	0.5	
Co	59	3	72	0.040	ppb	81.2	87	0.5	
Ni	60	3	72	0.452	ppb	45.2	493	1	
Cu	63	3	72	0.249	ppb	27.7	685	1	
Zn	66	3	72	0.458	ppb	10.8	273	5	
As	75	3	72	0.024	ppb	979.9	70	1	
Se	78	2	72	0.067	ppb	119.5	7	1	
Sr	88	3	72	0.088	ppb	65.9	70	0.5	
Mo	95	3	115	0.317	ppb	14.9	193	0.5	
Ag	107	3	115	0.013	ppb	57.0	37	1	
Cd	111	3	115	0.102	ppb	49.3	48	0.5	
Sn	120	3	115	0.324	ppb	50.6	1139	1	
Sb	121	3	115	0.166	ppb	11.1	163	0.6	
Ba	137	3	115	0.101	ppb	48.8	62	0.5	
Tl	205	3	193	-0.004	ppb	-594.7	996	0.1	
(Pb)	206	3	193	0.077	ppb	23.8	461	1	
(Pb)	207	3	193	0.096	ppb	46.2	628	1	
Pb	208	3	193	0.086	ppb	12.4	2042	0.5	
Th	232	3	193	3.195	ppb	17.6	22366	1	>RL
U	238	3	193	0.060	ppb	61.0	2096	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4032600	1.65	3887690	103.73	60	120	
Sc (IS)	45	3	HMI He	583251	0.79	560366	104.08	60	120	
Ge Internal standard	72	2	HMI H2	2399572	0.75	2321471	103.36	60	120	
Ge Internal standard	72	3	HMI He	707538	1.09	685485	103.22	60	120	
In Internal Standard	115	3	HMI He	2690712	1.42	2631879	102.24	60	120	
Ir (IS)	193	3	HMI He	6013757	2.38	5771767	104.19	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	061LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:44:45-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.595	ppb	33.903	30	1	59.5	70	130	>+/-30%
Na	23	3	45	299.744	ppb	1.623	48458	300	99.9	70	130	
Mg	24	3	45	51.366	ppb	4.934	3107	50	102.7	70	130	
Al	27	3	45	44.215	ppb	12.751	1064	50	88.4	70	130	
K	39	3	45	120.199	ppb	24.134	31126	120	100.2	70	130	
Ca	40	2	45	190.911	ppb	2.690	118960	200	95.5	70	130	
V	51	3	72	4.670	ppb	8.416	3795	5	93.4	70	130	
Cr	52	3	72	2.206	ppb	2.706	3752	2	110.3	70	130	
Mn	55	3	72	0.920	ppb	7.213	536	1	92.0	70	130	
Fe	56	2	72	52.714	ppb	2.270	114292	50	105.4	70	130	
Co	59	3	72	0.911	ppb	4.571	1193	1	91.1	70	130	
Ni	60	3	72	2.301	ppb	17.406	1148	2	115.0	70	130	
Cu	63	3	72	2.073	ppb	8.753	2464	2	103.6	70	130	
Zn	66	3	72	8.931	ppb	2.454	1556	10	89.3	70	130	
As	75	3	72	4.553	ppb	3.505	573	5	91.1	70	130	
Se	78	2	72	4.542	ppb	10.350	270	5	90.8	70	130	
Sr	88	3	72	4.661	ppb	6.242	2489	5	93.2	70	130	
Mo	95	3	115	2.172	ppb	9.398	1108	2	108.6	70	130	
Ag	107	3	115	0.934	ppb	4.232	1566	1	93.4	70	130	
Cd	111	3	115	1.030	ppb	7.177	273	1	103.0	70	130	
Sn	120	3	115	9.186	ppb	2.223	7702	10	91.9	70	130	
Sb	121	3	115	2.030	ppb	3.590	1558	2	101.5	70	130	
Ba	137	3	115	0.994	ppb	12.394	273	1	99.4	70	130	
Tl	205	3	193	0.888	ppb	0.760	4520	1	88.8	70	130	
(Pb)	206	3	193	1.015	ppb	13.812	1678	1	101.5	70	130	
(Pb)	207	3	193	0.878	ppb	9.253	1531	1	87.8	70	130	
Pb	208	3	193	0.924	ppb	0.915	6464	1	92.4	70	130	
Th	232	3	193	2.525	ppb	20.300	18808	1	252.5	70	130	>+/-30%
U	238	3	193	0.947	ppb	8.887	7037	1	94.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4058091	2.47	3887690	104.38	60	120	
Sc (IS)	45	3	HMI He	582259	1.23	560366	103.91	60	120	
Ge Internal standard	72	2	HMI H2	2432916	1.01	2321471	104.80	60	120	
Ge Internal standard	72	3	HMI He	712270	0.43	685485	103.91	60	120	
In Internal Standard	115	3	HMI He	2697478	0.71	2631879	102.49	60	120	
Ir (IS)	193	3	HMI He	6009713	1.91	5771767	104.12	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	062LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:46:33-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.073	ppb	180.028	7	1	7.3	80	120	>+/-30%
Na	23	3	45	11.735	ppb	30.138	18280	300	3.9	80	120	>+/-30%
Mg	24	3	45	0.340	ppb	333.707	250	50	0.7	80	120	>+/-30%
Al	27	3	45	2.819	ppb	31.218	150	50	5.6	80	120	>+/-30%
K	39	3	45	534.617	ppb	4.325	50374	120	445.5	80	120	>+/-30%
Ca	40	2	45	1.222	ppb	74.643	11723	200	0.6	80	120	>+/-30%
V	51	3	72	-0.025	ppb	-816.473	985	5	-0.5	80	120	>+/-30%
Cr	52	3	72	0.226	ppb	66.236	2299	2	11.3	80	120	>+/-30%
Mn	55	3	72	0.066	ppb	39.026	205	1	6.6	80	120	>+/-30%
Fe	56	2	72	6.343	ppb	32.198	40938	50	12.7	80	120	>+/-30%
Co	59	3	72	0.012	ppb	162.221	52	1	1.2	80	120	>+/-30%
Ni	60	3	72	0.652	ppb	24.714	570	2	32.6	80	120	>+/-30%
Cu	63	3	72	0.085	ppb	9.000	531	2	4.2	80	120	>+/-30%
Zn	66	3	72	0.262	ppb	29.688	247	10	2.6	80	120	>+/-30%
As	75	3	72	-0.131	ppb	-42.295	53	5	-2.6	80	120	>+/-30%
Se	78	2	72	0.008	ppb	425.083	4	5	0.2	80	120	>+/-30%
Sr	88	3	72	-0.005	ppb	-688.893	22	5	-0.1	80	120	>+/-30%
Mo	95	3	115	0.094	ppb	28.001	85	2	4.7	80	120	>+/-30%
Ag	107	3	115	0.004	ppb	208.713	22	1	0.4	80	120	>+/-30%
Cd	111	3	115	0.058	ppb	38.051	38	1	5.8	80	120	>+/-30%
Sn	120	3	115	0.057	ppb	189.254	958	10	0.6	80	120	>+/-30%
Sb	121	3	115	0.088	ppb	7.837	107	2	4.4	80	120	>+/-30%
Ba	137	3	115	0.015	ppb	356.018	42	1	1.5	80	120	>+/-30%
Tl	205	3	193	-0.084	ppb	-5.339	676	1	-8.4	80	120	>+/-30%
(Pb)	206	3	193	-0.010	ppb	-11.538	347	1	-1.0	80	120	>+/-30%
(Pb)	207	3	193	-0.034	ppb	-118.625	476	1	-3.4	80	120	>+/-30%
Pb	208	3	193	-0.012	ppb	-100.747	1518	1	-1.2	80	120	>+/-30%
Th	232	3	193	1.951	ppb	6.409	15767	1	195.1	80	120	>+/-30%
U	238	3	193	0.002	ppb	541.089	1771	1	0.2	80	120	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4036226	2.54	3887690	103.82	60	120	
Sc (IS)	45	3	HMI He	588013	0.66	560366	104.93	60	120	
Ge Internal standard	72	2	HMI H2	2437644	1.49	2321471	105.00	60	120	
Ge Internal standard	72	3	HMI He	715645	0.80	685485	104.40	60	120	
In Internal Standard	115	3	HMI He	2731905	0.99	2631879	103.80	60	120	
Ir (IS)	193	3	HMI He	5990926	1.76	5771767	103.80	60	120	

Sample Report

Sample Table

Sample Name	MB 280-608551/1-A
Data File Name	063SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:48:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-153.63	2	2000	
Na	23	3	45	19.053	ppb	19.053	55.91	18948	400000	
Mg	24	3	45	1.618	ppb	1.618	83.37	320	400000	
Al	27	3	45	2.851	ppb	2.851	40.56	150	400000	
K	39	3	45	7.112	ppb	7.112	354.69	26107	400000	
Ca	40	2	45	10.881	ppb	10.881	6.09	17318	400000	
V	51	3	72	-0.020	ppb	-0.020	-480.85	991	2000	
Cr	52	3	72	0.264	ppb	0.264	45.64	2334	5000	
Mn	55	3	72	0.268	ppb	0.268	21.31	285	10000	
Fe	56	2	72	12.484	ppb	12.484	13.97	50740	10000	
Co	59	3	72	-0.001	ppb	-0.001	-584.44	35	2000	
Ni	60	3	72	0.620	ppb	0.620	39.18	560	5000	
Cu	63	3	72	0.100	ppb	0.100	36.95	548	5000	
Zn	66	3	72	2.608	ppb	2.608	9.60	605	5000	
As	75	3	72	-0.103	ppb	-0.103	-183.49	57	2000	
Se	78	2	72	0.110	ppb	0.110	81.64	10	2000	
Sr	88	3	72	0.020	ppb	0.020	124.88	35	4000	
Mo	95	3	115	0.080	ppb	0.080	16.36	78	2000	
Ag	107	3	115	0.001	ppb	0.001	313.18	17	100	
Cd	111	3	115	-0.058	ppb	-0.058	-62.72	10	2000	
Sn	120	3	115	-0.012	ppb	-0.012	-419.68	906	2000	
Sb	121	3	115	0.094	ppb	0.094	24.72	112	1000	
Ba	137	3	115	0.056	ppb	0.056	88.57	52	5000	
Tl	205	3	193	-0.091	ppb	-0.091	-22.54	655	2000	
(Pb)	206	3	193	-0.036	ppb	-0.036	-78.37	315	100	
(Pb)	207	3	193	0.028	ppb	0.028	304.41	550	100	
Pb	208	3	193	0.006	ppb	0.006	307.88	1624	5000	
Th	232	3	193	0.158	ppb	0.158	58.17	6408	2000	
U	238	3	193	-0.009	ppb	-0.009	-267.12	1716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4073816	0.51	3887690	104.79	60	120	
Sc (IS)	45	3	HMI He	584940	1.68	560366	104.39	60	120	
Ge Internal standard	72	2	HMI H2	2438599	1.95	2321471	105.05	60	120	
Ge Internal standard	72	3	HMI He	717897	0.75	685485	104.73	60	120	
In Internal Standard	115	3	HMI He	2733342	1.40	2631879	103.86	60	120	
Ir (IS)	193	3	HMI He	6029117	2.24	5771767	104.46	60	120	

Sample Report

Sample Table

Sample Name	LCS 280-608551/2-A
Data File Name	064SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:50:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.093	ppb	40.093	9.86	1768	2000	
Na	23	3	45	805.342	ppb	805.342	1.29	103142	400000	
Mg	24	3	45	742.717	ppb	742.717	2.37	42439	400000	
Al	27	3	45	772.505	ppb	772.505	0.62	17395	400000	
K	39	3	45	770.617	ppb	770.617	4.47	61405	400000	
Ca	40	2	45	829.825	ppb	829.825	2.88	479609	400000	
V	51	3	72	39.543	ppb	39.543	1.46	25105	2000	
Cr	52	3	72	40.983	ppb	40.983	2.07	32947	5000	
Mn	55	3	72	40.995	ppb	40.995	2.64	16392	10000	
Fe	56	2	72	797.537	ppb	797.537	2.48	1284300	10000	
Co	59	3	72	40.053	ppb	40.053	1.48	51685	2000	
Ni	60	3	72	41.430	ppb	41.430	2.33	15177	5000	
Cu	63	3	72	41.867	ppb	41.867	1.74	41864	5000	
Zn	66	3	72	42.768	ppb	42.768	6.58	6780	5000	
As	75	3	72	39.057	ppb	39.057	2.55	4474	2000	
Se	78	2	72	40.700	ppb	40.700	3.13	2373	2000	
Sr	88	3	72	79.630	ppb	79.630	0.73	42823	4000	
Mo	95	3	115	39.385	ppb	39.385	3.54	19561	2000	
Ag	107	3	115	40.666	ppb	40.666	3.19	67912	100	
Cd	111	3	115	39.328	ppb	39.328	5.12	9602	2000	
Sn	120	3	115	38.241	ppb	38.241	1.69	29389	2000	
Sb	121	3	115	39.568	ppb	39.568	0.60	29827	1000	
Ba	137	3	115	42.095	ppb	42.095	2.68	10086	5000	
Tl	205	3	193	39.024	ppb	39.024	0.99	156757	2000	
(Pb)	206	3	193	40.318	ppb	40.318	0.71	53262	100	
(Pb)	207	3	193	39.424	ppb	39.424	0.55	46514	100	
Pb	208	3	193	39.624	ppb	39.624	0.76	212701	5000	
Th	232	3	193	37.236	ppb	37.236	1.92	203357	2000	
U	238	3	193	39.431	ppb	39.431	0.81	223893	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4056566	3.28	3887690	104.34	60	120	
Sc (IS)	45	3	HMI He	590336	1.47	560366	105.35	60	120	
Ge Internal standard	72	2	HMI H2	2416275	1.35	2321471	104.08	60	120	
Ge Internal standard	72	3	HMI He	723821	0.92	685485	105.59	60	120	
In Internal Standard	115	3	HMI He	2715108	1.79	2631879	103.16	60	120	
Ir (IS)	193	3	HMI He	6068669	0.86	5771767	105.14	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-A
Data File Name	065SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:51:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1535.06	3	2000	
Na	23	3	45	10792.076	ppb	10792.076	2.77	1171427	400000	
Mg	24	3	45	11001.414	ppb	11001.414	1.60	626076	400000	
Al	27	3	45	3.975	ppb	3.975	50.06	177	400000	
K	39	3	45	6251.886	ppb	6251.886	2.58	313339	400000	
Ca	40	2	45	28383.611	ppb	28383.611	1.56	16278352	400000	
V	51	3	72	19.843	ppb	19.843	0.52	13366	2000	
Cr	52	3	72	1.297	ppb	1.297	12.31	3192	5000	
Mn	55	3	72	0.331	ppb	0.331	35.01	318	10000	
Fe	56	2	72	14.129	ppb	14.129	18.80	55145	10000	
Co	59	3	72	0.071	ppb	0.071	24.54	132	2000	
Ni	60	3	72	0.726	ppb	0.726	12.61	615	5000	
Cu	63	3	72	1.034	ppb	1.034	2.96	1506	5000	
Zn	66	3	72	1.010	ppb	1.010	26.39	371	5000	
As	75	3	72	5.981	ppb	5.981	5.85	758	2000	
Se	78	2	72	2.846	ppb	2.846	9.85	177	2000	
Sr	88	3	72	212.370	ppb	212.370	0.76	116467	4000	
Mo	95	3	115	3.414	ppb	3.414	1.94	1759	2000	
Ag	107	3	115	0.008	ppb	0.008	107.90	30	100	
Cd	111	3	115	-0.018	ppb	-0.018	-231.37	20	2000	
Sn	120	3	115	-0.036	ppb	-0.036	-374.46	896	2000	
Sb	121	3	115	0.357	ppb	0.357	15.13	313	1000	
Ba	137	3	115	24.546	ppb	24.546	0.59	5997	5000	
Tl	205	3	193	-0.064	ppb	-0.064	-32.48	751	2000	
(Pb)	206	3	193	0.000	ppb	0.000	-9664.91	356	100	
(Pb)	207	3	193	-0.029	ppb	-0.029	-241.58	478	100	
Pb	208	3	193	-0.014	ppb	-0.014	-178.20	1499	5000	
Th	232	3	193	2.179	ppb	2.179	4.43	16843	2000	
U	238	3	193	2.220	ppb	2.220	2.81	13999	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4116159	2.15	3887690	105.88	60	120	
Sc (IS)	45	3	HMI He	591063	1.64	560366	105.48	60	120	
Ge Internal standard	72	2	HMI H2	2521286	0.68	2321471	108.61	60	120	
Ge Internal standard	72	3	HMI He	738468	1.64	685485	107.73	60	120	
In Internal Standard	115	3	HMI He	2760353	1.66	2631879	104.88	60	120	
Ir (IS)	193	3	HMI He	5946659	0.48	5771767	103.03	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-Asd@5
Data File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:53:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.034	ppb	0.034	333.29	5	2000	
Na	23	3	45	2048.668	ppb	2048.668	0.24	236279	400000	
Mg	24	3	45	2219.061	ppb	2219.061	0.92	126494	400000	
Al	27	3	45	3.983	ppb	3.983	35.98	177	400000	
K	39	3	45	1230.570	ppb	1230.570	1.20	82625	400000	
Ca	40	2	45	5993.113	ppb	5993.113	3.68	3421695	400000	
V	51	3	72	4.629	ppb	4.629	2.86	3860	2000	
Cr	52	3	72	0.443	ppb	0.443	30.04	2506	5000	
Mn	55	3	72	1.838	ppb	1.838	8.30	915	10000	
Fe	56	2	72	10.646	ppb	10.646	13.38	48624	10000	
Co	59	3	72	0.027	ppb	0.027	73.98	72	2000	
Ni	60	3	72	0.757	ppb	0.757	8.24	618	5000	
Cu	63	3	72	0.382	ppb	0.382	18.61	838	5000	
Zn	66	3	72	3.408	ppb	3.408	3.00	738	5000	
As	75	3	72	0.916	ppb	0.916	24.89	173	2000	
Se	78	2	72	0.597	ppb	0.597	30.20	39	2000	
Sr	88	3	72	42.198	ppb	42.198	2.88	22868	4000	
Mo	95	3	115	0.799	ppb	0.799	6.55	428	2000	
Ag	107	3	115	0.012	ppb	0.012	52.52	35	100	
Cd	111	3	115	-0.036	ppb	-0.036	-111.97	15	2000	
Sn	120	3	115	-0.011	ppb	-0.011	-727.27	890	2000	
Sb	121	3	115	0.138	ppb	0.138	9.35	142	1000	
Ba	137	3	115	7.493	ppb	7.493	2.76	1803	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-11.14	565	2000	
(Pb)	206	3	193	0.332	ppb	0.332	13.39	791	100	
(Pb)	207	3	193	0.297	ppb	0.297	34.89	856	100	
Pb	208	3	193	0.346	ppb	0.346	3.35	3403	5000	
Th	232	3	193	0.496	ppb	0.496	17.96	8155	2000	
U	238	3	193	0.443	ppb	0.443	6.79	4219	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4088828	3.84	3887690	105.17	60	120	
Sc (IS)	45	3	HMI He	591067	0.94	560366	105.48	60	120	
Ge Internal standard	72	2	HMI H2	2480396	1.00	2321471	106.85	60	120	
Ge Internal standard	72	3	HMI He	729120	0.80	685485	106.37	60	120	
In Internal Standard	115	3	HMI He	2679288	1.12	2631879	101.80	60	120	
Ir (IS)	193	3	HMI He	5993846	1.73	5771767	103.85	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-B MS
Data File Name	067SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:55:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.761	ppb	39.761	7.35	1761	2000	
Na	23	3	45	11398.664	ppb	11398.664	1.01	1226065	400000	
Mg	24	3	45	11754.343	ppb	11754.343	2.63	663225	400000	
Al	27	3	45	762.564	ppb	762.564	1.64	17047	400000	
K	39	3	45	7043.927	ppb	7043.927	1.53	346861	400000	
Ca	40	2	45	29814.424	ppb	29814.424	1.26	17203188	400000	
V	51	3	72	57.459	ppb	57.459	0.96	37124	2000	
Cr	52	3	72	40.040	ppb	40.040	3.19	33225	5000	
Mn	55	3	72	39.195	ppb	39.195	1.35	16163	10000	
Fe	56	2	72	788.527	ppb	788.527	4.74	1294325	10000	
Co	59	3	72	38.100	ppb	38.100	1.98	50677	2000	
Ni	60	3	72	39.030	ppb	39.030	3.04	14757	5000	
Cu	63	3	72	39.062	ppb	39.062	1.67	40287	5000	
Zn	66	3	72	41.787	ppb	41.787	1.48	6832	5000	
As	75	3	72	43.319	ppb	43.319	0.78	5107	2000	
Se	78	2	72	43.801	ppb	43.801	5.92	2602	2000	
Sr	88	3	72	287.719	ppb	287.719	2.38	159402	4000	
Mo	95	3	115	42.927	ppb	42.927	2.46	21356	2000	
Ag	107	3	115	39.451	ppb	39.451	0.75	66005	100	
Cd	111	3	115	39.169	ppb	39.169	0.45	9584	2000	
Sn	120	3	115	39.106	ppb	39.106	1.01	30082	2000	
Sb	121	3	115	39.920	ppb	39.920	0.54	30137	1000	
Ba	137	3	115	65.932	ppb	65.932	3.06	15802	5000	
Tl	205	3	193	39.475	ppb	39.475	0.64	156884	2000	
(Pb)	206	3	193	40.260	ppb	40.260	1.25	52623	100	
(Pb)	207	3	193	39.364	ppb	39.364	0.35	45952	100	
Pb	208	3	193	39.603	ppb	39.603	0.65	210339	5000	
Th	232	3	193	37.577	ppb	37.577	1.23	203008	2000	
U	238	3	193	41.961	ppb	41.961	1.63	235611	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4140524	0.49	3887690	106.50	60	120	
Sc (IS)	45	3	HMI He	586132	1.64	560366	104.60	60	120	
Ge Internal standard	72	2	HMI H2	2464225	3.22	2321471	106.15	60	120	
Ge Internal standard	72	3	HMI He	746009	0.07	685485	108.83	60	120	
In Internal Standard	115	3	HMI He	2719235	1.03	2631879	103.32	60	120	
Ir (IS)	193	3	HMI He	6004218	0.19	5771767	104.03	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-C MSD
Data File Name	068SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:57:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.852	ppb	41.852	3.62	1869	2000	
Na	23	3	45	11137.291	ppb	11137.291	1.94	1220984	400000	
Mg	24	3	45	11633.446	ppb	11633.446	1.21	668909	400000	
Al	27	3	45	758.029	ppb	758.029	1.37	17268	400000	
K	39	3	45	6897.578	ppb	6897.578	1.70	346620	400000	
Ca	40	2	45	30099.817	ppb	30099.817	2.65	17055420	400000	
V	51	3	72	59.164	ppb	59.164	1.14	38103	2000	
Cr	52	3	72	40.770	ppb	40.770	1.67	33712	5000	
Mn	55	3	72	43.763	ppb	43.763	3.74	17978	10000	
Fe	56	2	72	765.594	ppb	765.594	3.23	1282860	10000	
Co	59	3	72	38.446	ppb	38.446	1.17	51018	2000	
Ni	60	3	72	40.054	ppb	40.054	3.78	15096	5000	
Cu	63	3	72	40.665	ppb	40.665	1.83	41822	5000	
Zn	66	3	72	41.731	ppb	41.731	3.66	6807	5000	
As	75	3	72	44.314	ppb	44.314	5.75	5208	2000	
Se	78	2	72	41.375	ppb	41.375	2.07	2508	2000	
Sr	88	3	72	286.375	ppb	286.375	0.41	158285	4000	
Mo	95	3	115	41.743	ppb	41.743	1.72	20839	2000	
Ag	107	3	115	40.725	ppb	40.725	2.29	68352	100	
Cd	111	3	115	39.816	ppb	39.816	3.80	9770	2000	
Sn	120	3	115	39.737	ppb	39.737	3.55	30647	2000	
Sb	121	3	115	39.488	ppb	39.488	1.38	29914	1000	
Ba	137	3	115	67.389	ppb	67.389	3.90	16200	5000	
Tl	205	3	193	39.113	ppb	39.113	1.94	156974	2000	
(Pb)	206	3	193	40.059	ppb	40.059	3.94	52850	100	
(Pb)	207	3	193	39.231	ppb	39.231	2.71	46233	100	
Pb	208	3	193	39.674	ppb	39.674	2.66	212711	5000	
Th	232	3	193	40.150	ppb	40.150	2.31	218603	2000	
U	238	3	193	42.066	ppb	42.066	2.06	238455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068075	2.90	3887690	104.64	60	120	
Sc (IS)	45	3	HMI He	597141	0.30	560366	106.56	60	120	
Ge Internal standard	72	2	HMI H2	2512331	2.78	2321471	108.22	60	120	
Ge Internal standard	72	3	HMI He	744230	0.88	685485	108.57	60	120	
In Internal Standard	115	3	HMI He	2728532	1.81	2631879	103.67	60	120	
Ir (IS)	193	3	HMI He	6063356	2.04	5771767	105.05	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-A pds
Data File Name	069SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:59:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	103.188	ppb	103.188	2.48	4633	2000	
Na	23	3	45	10631.149	ppb	10631.149	1.44	1159563	400000	
Mg	24	3	45	10805.902	ppb	10805.902	0.22	617752	400000	
Al	27	3	45	15.342	ppb	15.342	14.10	434	400000	
K	39	3	45	6131.504	ppb	6131.504	2.55	309196	400000	
Ca	40	2	45	29216.836	ppb	29216.836	1.21	16530248	400000	
V	51	3	72	115.923	ppb	115.923	0.02	72744	2000	
Cr	52	3	72	101.020	ppb	101.020	1.52	79258	5000	
Mn	55	3	72	97.717	ppb	97.717	1.66	39421	10000	
Fe	56	2	72	1016.350	ppb	1016.350	1.08	1661555	10000	
Co	59	3	72	97.329	ppb	97.329	1.14	127488	2000	
Ni	60	3	72	97.866	ppb	97.866	0.43	35930	5000	
Cu	63	3	72	100.753	ppb	100.753	2.27	101647	5000	
Zn	66	3	72	3.469	ppb	3.469	17.54	753	5000	
As	75	3	72	105.684	ppb	105.684	1.02	12174	2000	
Se	78	2	72	102.686	ppb	102.686	4.01	6101	2000	
Sr	88	3	72	309.849	ppb	309.849	1.49	169115	4000	
Mo	95	3	115	100.224	ppb	100.224	1.12	50313	2000	
Ag	107	3	115	26.058	ppb	26.058	2.04	44035	100	
Cd	111	3	115	96.058	ppb	96.058	4.03	23696	2000	
Sn	120	3	115	100.568	ppb	100.568	0.34	76694	2000	
Sb	121	3	115	92.995	ppb	92.995	1.17	70850	1000	
Ba	137	3	115	126.853	ppb	126.853	0.48	30675	5000	
Tl	205	3	193	99.649	ppb	99.649	1.99	387833	2000	
(Pb)	206	3	193	100.959	ppb	100.959	1.41	129204	100	
(Pb)	207	3	193	98.841	ppb	98.841	0.92	112679	100	
Pb	208	3	193	99.910	ppb	99.910	1.06	519335	5000	
Th	232	3	193	105.445	ppb	105.445	2.01	550176	2000	
U	238	3	193	2.330	ppb	2.330	0.77	14501	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4060247	1.22	3887690	104.44	60	120	
Sc (IS)	45	3	HMI He	593677	1.00	560366	105.94	60	120	
Ge Internal standard	72	2	HMI H2	2465493	2.05	2321471	106.20	60	120	
Ge Internal standard	72	3	HMI He	734974	0.78	685485	107.22	60	120	
In Internal Standard	115	3	HMI He	2746483	1.29	2631879	104.35	60	120	
Ir (IS)	193	3	HMI He	5903552	0.92	5771767	102.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	070_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:00:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.902	ppb	3.236	2289	50	109.8	90	110	
Na	23	3	45	48405.358	ppb	2.121	5130408	51000	94.9	90	110	
Mg	24	3	45	10238.992	ppb	2.428	575548	11000	93.1	90	110	
Al	27	3	45	935.202	ppb	4.328	20810	1000	93.5	90	110	
K	39	3	45	10258.099	ppb	0.835	491345	11000	93.3	90	110	
Ca	40	2	45	11630.992	ppb	5.610	6139288	11000	105.7	90	110	
V	51	3	72	52.008	ppb	1.126	31348	50	104.0	90	110	
Cr	52	3	72	52.330	ppb	3.978	39745	50	104.7	90	110	
Mn	55	3	72	52.836	ppb	2.413	20203	50	105.7	90	110	
Fe	56	2	72	1131.389	ppb	5.474	1673369	1000	113.1	90	110	>+\-10%
Co	59	3	72	51.250	ppb	2.632	63381	50	102.5	90	110	
Ni	60	3	72	51.585	ppb	4.048	18029	50	103.2	90	110	
Cu	63	3	72	51.125	ppb	2.359	48902	50	102.3	90	110	
Zn	66	3	72	54.439	ppb	1.036	8218	50	108.9	90	110	
As	75	3	72	52.316	ppb	1.556	5723	50	104.6	90	110	
Se	78	2	72	56.301	ppb	5.606	3035	50	112.6	90	110	>+\-10%
Sr	88	3	72	103.361	ppb	0.562	53282	100	103.4	90	110	
Mo	95	3	115	49.698	ppb	1.900	24266	50	99.4	90	110	
Ag	107	3	115	50.780	ppb	1.452	83375	50	101.6	90	110	
Cd	111	3	115	50.101	ppb	0.746	12024	50	100.2	90	110	
Sn	120	3	115	50.186	ppb	1.872	37636	50	100.4	90	110	
Sb	121	3	115	50.675	ppb	0.497	37539	50	101.3	90	110	
Ba	137	3	115	53.754	ppb	0.145	12653	50	107.5	90	110	
Tl	205	3	193	49.880	ppb	2.252	191663	50	99.8	90	110	
(Pb)	206	3	193	50.754	ppb	1.283	64140	50	101.5	90	110	
(Pb)	207	3	193	50.076	ppb	1.552	56464	50	100.2	90	110	
Pb	208	3	193	50.430	ppb	1.212	258899	50	100.9	90	110	
Th	232	3	193	54.357	ppb	1.079	281948	50	108.7	90	110	
U	238	3	193	50.892	ppb	2.078	276288	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3789367	3.99	3887690	97.47	60	120	
Sc (IS)	45	3	HMI He	583718	0.83	560366	104.17	60	120	
Ge Internal standard	72	2	HMI H2	2235904	1.88	2321471	96.31	60	120	
Ge Internal standard	72	3	HMI He	693956	1.77	685485	101.24	60	120	
In Internal Standard	115	3	HMI He	2668880	0.99	2631879	101.41	60	120	
Ir (IS)	193	3	HMI He	5813876	1.41	5771767	100.73	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	071_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:02:40-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.003	ppb	-4086.6	3	0.5	
Na	23	3	45	26.349	ppb	17.0	19633	25	>RL
Mg	24	3	45	1.271	ppb	113.0	300	25	
Al	27	3	45	0.326	ppb	406.7	93	15	
K	39	3	45	4.034	ppb	407.9	25840	50	
V	51	3	72	0.736	ppb	12.6	1431	1	
Cr	52	3	72	0.493	ppb	24.4	2476	1	
Mn	55	3	72	0.105	ppb	156.6	218	0.5	
Co	59	3	72	0.023	ppb	79.6	65	0.5	
Ni	60	3	72	0.466	ppb	43.2	500	1	
Cu	63	3	72	0.057	ppb	99.8	500	1	
Zn	66	3	72	0.043	ppb	931.1	212	5	
As	75	3	72	0.054	ppb	256.3	73	1	
Se	78	2	72	0.068	ppb	77.6	7	1	
Sr	88	3	72	0.046	ppb	48.2	48	0.5	
Mo	95	3	115	0.094	ppb	72.8	83	0.5	
Ag	107	3	115	0.013	ppb	51.3	37	1	
Cd	111	3	115	-0.050	ppb	-47.6	12	0.5	
Sn	120	3	115	-0.028	ppb	-55.3	881	1	
Sb	121	3	115	0.103	ppb	12.9	117	0.6	
Ba	137	3	115	0.066	ppb	75.1	53	0.5	
Tl	205	3	193	-0.091	ppb	-28.9	653	0.1	
(Pb)	206	3	193	-0.029	ppb	-75.1	325	1	
(Pb)	207	3	193	-0.044	ppb	-69.4	468	1	
Pb	208	3	193	-0.026	ppb	-31.6	1458	0.5	
Th	232	3	193	2.125	ppb	17.4	16815	1	>RL
U	238	3	193	-0.003	ppb	-694.2	1753	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3927630	1.49	3887690	101.03	60	120	
Sc (IS)	45	3	HMI He	581946	0.47	560366	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2380771	0.71	2321471	102.55	60	120	
Ge Internal standard	72	3	HMI He	709450	0.39	685485	103.50	60	120	
In Internal Standard	115	3	HMI He	2692289	1.64	2631879	102.30	60	120	
Ir (IS)	193	3	HMI He	6037224	1.15	5771767	104.60	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608988/1-A
Data File Name	072_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:04:30-06:00
Sample Type	Blank
Dilution	1
Comment	608988 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.041	ppb	-155.0859771	2	0.5
Na	23	3	45	46.687	ppb	7.492511907	22026	25
Mg	24	3	45	1.096	ppb	23.5942986	294	25
Al	27	3	45	2.510	ppb	61.89514535	143	15
K	39	3	45	-14.903	ppb	-130.8927844	25275	50
Ca	40	2	45	16.778	ppb	5.606056658	20699	200
V	51	3	72	0.569	ppb	22.58078858	1353	1
Cr	52	3	72	0.369	ppb	70.51278155	2422	1
Mn	55	3	72	0.239	ppb	54.84651189	275	0.5
Fe	56	2	72	9.694	ppb	17.63140757	46833	50
Co	59	3	72	0.019	ppb	104.5183753	62	0.5
Ni	60	3	72	1.247	ppb	7.441109716	786	1
Cu	63	3	72	0.061	ppb	195.1232072	511	1
Zn	66	3	72	0.338	ppb	114.8307696	260	5
As	75	3	72	-0.031	ppb	-295.0944246	65	1
(Se)	78	3	72	1.488	ppb	156.1533275	40	1
Sr	88	3	72	0.035	ppb	192.2389977	43	0.5
Mo	95	3	115	0.040	ppb	114.1373571	58	0.5
Ag	107	3	115	0.004	ppb	96.58909184	22	1
Cd	111	3	115	-0.071	ppb	-65.92145891	7	0.5
Sn	120	3	115	-0.176	ppb	-22.40229225	783	1
Sb	121	3	115	0.062	ppb	4.491696795	87	0.6
Ba	137	3	115	0.056	ppb	89.18887751	52	0.5
Tl	205	3	193	-0.134	ppb	-17.02348229	488	0.1
(Pb)	206	3	193	-0.044	ppb	-61.51707365	308	1
(Pb)	207	3	193	-0.030	ppb	-206.0445783	488	1
Pb	208	3	193	-0.021	ppb	-83.7024333	1496	0.5
Th	232	3	193	0.487	ppb	23.30643585	8224	1
U	238	3	193	-0.001	ppb	-2076.619115	1779	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4080491	2.12	3887690	104.96	60	120	
Sc (IS)	45	3	HMI He	588644	0.54	560366	105.05	60	120	
Ge Internal standard	72	2	HMI H2	2465571	1.01	2321471	106.21	60	120	
Ge Internal standard	72	3	HMI He	720912	0.59	685485	105.17	60	120	
In Internal Standard	115	3	HMI He	2731807	1.09	2631879	103.80	60	120	
Ir (IS)	193	3	HMI He	6092263	2.92	5771767	105.55	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608988/2-A
Data File Name	073_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:06:20-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608988 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	43.090	43.090	ppb	6.781	1946	40	107.7	80	120	
Na	23	3	45	811.400	811.400	ppb	0.945	103902	40	2028.5	80	120	>+/-20%
Mg	24	3	45	745.047	745.047	ppb	0.367	42613	40	1862.6	80	120	>+/-20%
Al	27	3	45	771.606	771.606	ppb	3.182	17392	40	1929.0	80	120	>+/-20%
K	39	3	45	757.516	757.516	ppb	2.741	60862	40	1893.8	80	120	>+/-20%
Ca	40	2	45	827.387	827.387	ppb	0.847	480307	40	2068.5	80	120	>+/-20%
V	51	3	72	40.595	40.595	ppb	1.690	25714	40	101.5	80	120	
Cr	52	3	72	40.977	40.977	ppb	1.440	32901	40	102.4	80	120	
Mn	55	3	72	42.078	42.078	ppb	0.946	16802	40	105.2	80	120	
Fe	56	2	72	819.547	819.547	ppb	0.710	1305737	40	2048.9	80	120	>+/-20%
(Fe)	56	3	72	801.511	801.511	ppb	1.218	530316	40	2003.8	80	120	>+/-20%
Co	59	3	72	40.546	40.546	ppb	0.843	52264	40	101.4	80	120	
Ni	60	3	72	41.323	41.323	ppb	1.858	15121	40	103.3	80	120	
Cu	63	3	72	41.223	41.223	ppb	2.360	41181	40	103.1	80	120	
Zn	66	3	72	42.803	42.803	ppb	2.551	6777	40	107.0	80	120	
As	75	3	72	40.197	40.197	ppb	3.021	4597	40	100.5	80	120	
Se	78	2	72	42.120	42.120	ppb	3.947	2431	40	105.3	80	120	
(Se)	78	3	72	42.976	42.976	ppb	7.483	275	40	107.4	80	120	
Sr	88	3	72	81.052	81.052	ppb	2.355	43533	40	202.6	80	120	>+/-20%
Mo	95	3	115	40.275	40.275	ppb	3.079	20262	40	100.7	80	120	
Ag	107	3	115	40.935	40.935	ppb	2.521	69248	40	102.3	80	120	
Cd	111	3	115	39.674	39.674	ppb	3.938	9814	40	99.2	80	120	
Sn	120	3	115	38.212	38.212	ppb	3.073	29742	40	95.5	80	120	
Sb	121	3	115	39.722	39.722	ppb	2.763	30323	40	99.3	80	120	
Ba	137	3	115	42.004	42.004	ppb	4.533	10199	40	105.0	80	120	
Tl	205	3	193	40.005	40.005	ppb	1.152	159664	40	100.0	80	120	
(Pb)	206	3	193	40.922	40.922	ppb	1.528	53713	40	102.3	80	120	
(Pb)	207	3	193	39.942	39.942	ppb	1.764	46820	40	99.9	80	120	
Pb	208	3	193	40.694	40.694	ppb	1.066	217024	40	101.7	80	120	
Th	232	3	193	39.081	39.081	ppb	1.977	211821	40	97.7	80	120	
U	238	3	193	40.713	40.713	ppb	1.873	229633	40	101.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071852	0.66	3887690	104.74	60	120	
Sc (IS)	45	3	HMI He	590953	0.76	560366	105.46	60	120	
Ge Internal standard	72	2	HMI H2	2391682	1.26	2321471	103.02	60	120	
Ge Internal standard	72	3	HMI He	722977	0.73	685485	105.47	60	120	
In Internal Standard	115	3	HMI He	2750626	2.73	2631879	104.51	60	120	
Ir (IS)	193	3	HMI He	6030532	0.80	5771767	104.48	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-608988/3-A
Data File Name	074SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:08:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.206	ppb	39.206	3.81	1794	2000	
Na	23	3	45	800.848	ppb	800.848	0.28	102904	400000	
Mg	24	3	45	740.941	ppb	740.941	2.38	42436	400000	
Al	27	3	45	769.090	ppb	769.090	2.07	17358	400000	
K	39	3	45	759.474	ppb	759.474	2.47	61033	400000	
Ca	40	2	45	842.949	ppb	842.949	1.25	487356	400000	
V	51	3	72	40.594	ppb	40.594	2.01	25609	2000	
Cr	52	3	72	41.488	ppb	41.488	0.55	33153	5000	
Mn	55	3	72	41.673	ppb	41.673	1.39	16575	10000	
Fe	56	2	72	808.807	ppb	808.807	1.94	1322330	10000	
Co	59	3	72	40.334	ppb	40.334	1.23	51781	2000	
Ni	60	3	72	40.551	ppb	40.551	2.41	14784	5000	
Cu	63	3	72	41.533	ppb	41.533	0.89	41321	5000	
Zn	66	3	72	43.977	ppb	43.977	2.85	6930	5000	
As	75	3	72	38.963	ppb	38.963	3.54	4440	2000	
Se	78	2	72	40.964	ppb	40.964	3.63	2425	2000	
Sr	88	3	72	80.793	ppb	80.793	1.04	43222	4000	
Mo	95	3	115	40.379	ppb	40.379	1.41	19960	2000	
Ag	107	3	115	41.365	ppb	41.365	2.42	68751	100	
Cd	111	3	115	40.373	ppb	40.373	1.35	9814	2000	
Sn	120	3	115	39.308	ppb	39.308	1.03	30035	2000	
Sb	121	3	115	40.389	ppb	40.389	0.92	30291	1000	
Ba	137	3	115	43.929	ppb	43.929	1.71	10474	5000	
Tl	205	3	193	39.483	ppb	39.483	3.59	158099	2000	
(Pb)	206	3	193	40.910	ppb	40.910	2.38	53882	100	
(Pb)	207	3	193	39.670	ppb	39.670	2.66	46664	100	
Pb	208	3	193	40.205	ppb	40.205	2.26	215173	5000	
Th	232	3	193	40.301	ppb	40.301	2.98	218988	2000	
U	238	3	193	39.939	ppb	39.939	2.56	226077	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4057130	0.57	3887690	104.36	60	120	
Sc (IS)	45	3	HMI He	591701	0.43	560366	105.59	60	120	
Ge Internal standard	72	2	HMI H2	2454144	2.35	2321471	105.71	60	120	
Ge Internal standard	72	3	HMI He	720119	1.27	685485	105.05	60	120	
In Internal Standard	115	3	HMI He	2701513	1.31	2631879	102.65	60	120	
Ir (IS)	193	3	HMI He	6053291	2.61	5771767	104.88	60	120	

Sample Report

Sample Table

Sample Name	280-175093-A-1-A
Data File Name	075SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:10:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-6191.75	3	2000	
Na	23	3	45	83.402	ppb	83.402	1.96	26003	400000	
Mg	24	3	45	1.318	ppb	1.318	30.35	307	400000	
Al	27	3	45	5.922	ppb	5.922	19.57	220	400000	
K	39	3	45	-18.125	ppb	-18.125	-90.40	25188	400000	
Ca	40	2	45	9.137	ppb	9.137	7.29	16062	400000	
V	51	3	72	0.617	ppb	0.617	7.67	1378	2000	
Cr	52	3	72	0.400	ppb	0.400	54.72	2439	5000	
Mn	55	3	72	0.229	ppb	0.229	11.34	270	10000	
Fe	56	2	72	13.122	ppb	13.122	15.71	51892	10000	
Co	59	3	72	0.017	ppb	0.017	54.09	58	2000	
Ni	60	3	72	0.514	ppb	0.514	13.76	523	5000	
Cu	63	3	72	0.063	ppb	0.063	21.69	513	5000	
Zn	66	3	72	0.594	ppb	0.594	56.99	298	5000	
As	75	3	72	-0.105	ppb	-0.105	-233.23	57	2000	
Se	78	2	72	0.053	ppb	0.053	32.30	7	2000	
Sr	88	3	72	0.067	ppb	0.067	78.82	60	4000	
Mo	95	3	115	0.050	ppb	0.050	74.96	62	2000	
Ag	107	3	115	0.015	ppb	0.015	60.83	40	100	
Cd	111	3	115	-0.022	ppb	-0.022	-58.24	18	2000	
Sn	120	3	115	0.422	ppb	0.422	29.43	1204	2000	
Sb	121	3	115	0.117	ppb	0.117	52.99	125	1000	
Ba	137	3	115	0.125	ppb	0.125	36.94	67	5000	
Tl	205	3	193	-0.123	ppb	-0.123	-18.64	530	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-67.23	298	100	
(Pb)	207	3	193	-0.038	ppb	-0.038	-43.88	478	100	
Pb	208	3	193	-0.034	ppb	-0.034	-45.78	1423	5000	
Th	232	3	193	2.011	ppb	2.011	11.59	16303	2000	
U	238	3	193	-0.017	ppb	-0.017	-124.41	1688	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4008249	1.98	3887690	103.10	60	120	
Sc (IS)	45	3	HMI He	590153	0.23	560366	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2447318	2.07	2321471	105.42	60	120	
Ge Internal standard	72	3	HMI He	718840	0.53	685485	104.87	60	120	
In Internal Standard	115	3	HMI He	2669990	1.54	2631879	101.45	60	120	
Ir (IS)	193	3	HMI He	6071933	0.56	5771767	105.20	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A
Data File Name	076SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:11:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	7738.623	ppb	7738.623	3.18	848583	400000	
Mg	24	3	45	42209.492	ppb	42209.492	2.25	2411612	400000	
Al	27	3	45	6.440	ppb	6.440	51.32	234	400000	
K	39	3	45	825.746	ppb	825.746	3.35	64288	400000	
Ca	40	2	45	120955.501	ppb	120955.501	0.38	68652573	400000	
V	51	3	72	0.033	ppb	0.033	293.85	1043	2000	
Cr	52	3	72	0.499	ppb	0.499	22.96	2557	5000	
Mn	55	3	72	46.466	ppb	46.466	2.36	18755	10000	
Fe	56	2	72	757.313	ppb	757.313	1.38	1244226	10000	
Co	59	3	72	0.049	ppb	0.049	22.87	102	2000	
Ni	60	3	72	0.912	ppb	0.912	13.95	676	5000	
Cu	63	3	72	0.505	ppb	0.505	7.41	963	5000	
Zn	66	3	72	1.812	ppb	1.812	30.80	493	5000	
As	75	3	72	1.043	ppb	1.043	34.98	188	2000	
Se	78	2	72	0.063	ppb	0.063	133.10	7	2000	
Sr	88	3	72	133.935	ppb	133.935	1.62	72777	4000	
Mo	95	3	115	0.390	ppb	0.390	21.88	232	2000	
Ag	107	3	115	0.003	ppb	0.003	198.94	20	100	
Cd	111	3	115	-0.011	ppb	-0.011	-587.72	22	2000	
Sn	120	3	115	-0.128	ppb	-0.128	-57.00	816	2000	
Sb	121	3	115	0.124	ppb	0.124	45.11	133	1000	
Ba	137	3	115	147.519	ppb	147.519	0.69	35375	5000	
Tl	205	3	193	-0.124	ppb	-0.124	-7.13	528	2000	
(Pb)	206	3	193	0.011	ppb	0.011	446.15	380	100	
(Pb)	207	3	193	0.018	ppb	0.018	101.90	543	100	
Pb	208	3	193	0.022	ppb	0.022	42.70	1723	5000	
Th	232	3	193	0.539	ppb	0.539	28.48	8487	2000	
U	238	3	193	0.156	ppb	0.156	17.87	2659	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4074929	1.54	3887690	104.82	60	120	
Sc (IS)	45	3	HMI He	593579	0.96	560366	105.93	60	120	
Ge Internal standard	72	2	HMI H2	2461830	1.14	2321471	106.05	60	120	
Ge Internal standard	72	3	HMI He	731546	0.68	685485	106.72	60	120	
In Internal Standard	115	3	HMI He	2724050	1.23	2631879	103.50	60	120	
Ir (IS)	193	3	HMI He	6074618	0.56	5771767	105.25	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-Asd@5
Data File Name	077SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:14:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.033	ppb	0.033	5.77	5	2000	
Na	23	3	45	1521.062	ppb	1521.062	1.21	176932	400000	
Mg	24	3	45	8440.542	ppb	8440.542	1.53	472673	400000	
Al	27	3	45	4.395	ppb	4.395	33.99	184	400000	
K	39	3	45	163.730	ppb	163.730	6.54	33049	400000	
Ca	40	2	45	24304.593	ppb	24304.593	2.67	13779359	400000	
V	51	3	72	0.350	ppb	0.350	46.47	1204	2000	
Cr	52	3	72	0.671	ppb	0.671	20.77	2616	5000	
Mn	55	3	72	10.960	ppb	10.960	1.54	4442	10000	
Fe	56	2	72	161.532	ppb	161.532	1.07	286821	10000	
Co	59	3	72	0.029	ppb	0.029	56.93	73	2000	
Ni	60	3	72	0.713	ppb	0.713	29.24	588	5000	
Cu	63	3	72	0.181	ppb	0.181	57.00	623	5000	
Zn	66	3	72	3.060	ppb	3.060	25.96	668	5000	
As	75	3	72	0.352	ppb	0.352	52.62	107	2000	
Se	78	2	72	0.031	ppb	0.031	169.51	5	2000	
Sr	88	3	72	27.151	ppb	27.151	1.23	14379	4000	
Mo	95	3	115	0.103	ppb	0.103	24.89	88	2000	
Ag	107	3	115	0.014	ppb	0.014	65.06	38	100	
Cd	111	3	115	-0.037	ppb	-0.037	-54.73	15	2000	
Sn	120	3	115	0.023	ppb	0.023	153.77	918	2000	
Sb	121	3	115	0.072	ppb	0.072	72.66	93	1000	
Ba	137	3	115	28.613	ppb	28.613	6.35	6807	5000	
Tl	205	3	193	-0.144	ppb	-0.144	-4.48	446	2000	
(Pb)	206	3	193	0.326	ppb	0.326	22.44	793	100	
(Pb)	207	3	193	0.325	ppb	0.325	26.09	903	100	
Pb	208	3	193	0.302	ppb	0.302	3.20	3220	5000	
Th	232	3	193	0.353	ppb	0.353	28.78	7502	2000	
U	238	3	193	0.031	ppb	0.031	25.18	1961	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4070493	4.19	3887690	104.70	60	120	
Sc (IS)	45	3	HMI He	581540	1.28	560366	103.78	60	120	
Ge Internal standard	72	2	HMI H2	2434810	1.65	2321471	104.88	60	120	
Ge Internal standard	72	3	HMI He	711984	0.35	685485	103.87	60	120	
In Internal Standard	115	3	HMI He	2690154	1.06	2631879	102.21	60	120	
Ir (IS)	193	3	HMI He	6081327	0.81	5771767	105.36	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-B MS
Data File Name	078SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:15:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.684	ppb	42.684	3.37	1916	2000	
Na	23	3	45	8578.782	ppb	8578.782	2.58	938167	400000	
Mg	24	3	45	42423.693	ppb	42423.693	1.25	2422396	400000	
Al	27	3	45	762.195	ppb	762.195	4.43	17248	400000	
K	39	3	45	1616.705	ppb	1616.705	3.46	100717	400000	
Ca	40	2	45	123116.006	ppb	123116.006	0.80	68779943	400000	
V	51	3	72	40.363	ppb	40.363	2.71	25454	2000	
Cr	52	3	72	40.998	ppb	40.998	1.22	32769	5000	
Mn	55	3	72	87.639	ppb	87.639	2.85	34644	10000	
Fe	56	2	72	1545.885	ppb	1545.885	0.82	2492756	10000	
Co	59	3	72	39.912	ppb	39.912	0.90	51209	2000	
Ni	60	3	72	40.901	ppb	40.901	3.03	14904	5000	
Cu	63	3	72	41.387	ppb	41.387	1.06	41149	5000	
Zn	66	3	72	42.659	ppb	42.659	1.06	6723	5000	
As	75	3	72	39.330	ppb	39.330	6.07	4479	2000	
Se	78	2	72	35.472	ppb	35.472	2.45	2096	2000	
Sr	88	3	72	215.447	ppb	215.447	1.86	115145	4000	
Mo	95	3	115	40.597	ppb	40.597	2.45	20200	2000	
Ag	107	3	115	41.141	ppb	41.141	1.06	68836	100	
Cd	111	3	115	39.967	ppb	39.967	5.42	9775	2000	
Sn	120	3	115	39.067	ppb	39.067	2.26	30054	2000	
Sb	121	3	115	40.121	ppb	40.121	1.08	30296	1000	
Ba	137	3	115	191.828	ppb	191.828	1.51	45910	5000	
Tl	205	3	193	39.200	ppb	39.200	2.19	157198	2000	
(Pb)	206	3	193	40.010	ppb	40.010	2.84	52773	100	
(Pb)	207	3	193	39.865	ppb	39.865	3.01	46945	100	
Pb	208	3	193	39.984	ppb	39.984	2.99	214251	5000	
Th	232	3	193	38.003	ppb	38.003	1.66	207108	2000	
U	238	3	193	40.244	ppb	40.244	1.45	228091	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4011257	1.93	3887690	103.18	60	120	
Sc (IS)	45	3	HMI He	593154	0.59	560366	105.85	60	120	
Ge Internal standard	72	2	HMI H2	2447350	1.38	2321471	105.42	60	120	
Ge Internal standard	72	3	HMI He	719660	0.64	685485	104.99	60	120	
In Internal Standard	115	3	HMI He	2719608	1.30	2631879	103.33	60	120	
Ir (IS)	193	3	HMI He	6059439	1.44	5771767	104.98	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-C MSD
Data File Name	079SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:17:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.736	ppb	42.736	3.00	1933	2000	
Na	23	3	45	8446.635	ppb	8446.635	3.02	905938	400000	
Mg	24	3	45	42438.924	ppb	42438.924	0.36	2376291	400000	
Al	27	3	45	790.574	ppb	790.574	4.37	17535	400000	
K	39	3	45	1622.604	ppb	1622.604	3.21	99026	400000	
Ca	40	2	45	118450.603	ppb	118450.603	1.39	68138137	400000	
V	51	3	72	39.848	ppb	39.848	0.92	25329	2000	
Cr	52	3	72	41.086	ppb	41.086	2.08	33074	5000	
Mn	55	3	72	87.349	ppb	87.349	0.63	34779	10000	
Fe	56	2	72	1525.394	ppb	1525.394	0.61	2486346	10000	
Co	59	3	72	40.190	ppb	40.190	1.57	51944	2000	
Ni	60	3	72	41.005	ppb	41.005	1.91	15049	5000	
Cu	63	3	72	40.953	ppb	40.953	0.79	41022	5000	
Zn	66	3	72	43.994	ppb	43.994	1.99	6978	5000	
As	75	3	72	39.935	ppb	39.935	0.58	4580	2000	
Se	78	2	72	37.422	ppb	37.422	2.37	2234	2000	
Sr	88	3	72	213.172	ppb	213.172	0.90	114772	4000	
Mo	95	3	115	41.088	ppb	41.088	4.89	20140	2000	
Ag	107	3	115	41.800	ppb	41.800	0.89	68918	100	
Cd	111	3	115	40.742	ppb	40.742	4.55	9819	2000	
Sn	120	3	115	40.123	ppb	40.123	2.27	30393	2000	
Sb	121	3	115	41.201	ppb	41.201	1.19	30650	1000	
Ba	137	3	115	188.912	ppb	188.912	1.94	44548	5000	
Tl	205	3	193	40.244	ppb	40.244	2.53	162147	2000	
(Pb)	206	3	193	40.540	ppb	40.540	1.64	53733	100	
(Pb)	207	3	193	39.607	ppb	39.607	2.79	46875	100	
Pb	208	3	193	40.340	ppb	40.340	2.24	217218	5000	
Th	232	3	193	39.889	ppb	39.889	3.46	218129	2000	
U	238	3	193	40.558	ppb	40.558	3.23	230933	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4130044	0.73	3887690	106.23	60	120	
Sc (IS)	45	3	HMI He	581644	0.72	560366	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2473524	2.46	2321471	106.55	60	120	
Ge Internal standard	72	3	HMI He	724932	0.23	685485	105.75	60	120	
In Internal Standard	115	3	HMI He	2680050	2.27	2631879	101.83	60	120	
Ir (IS)	193	3	HMI He	6090630	2.76	5771767	105.52	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A pds
Data File Name	080SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:20:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	103.321	ppb	103.321	5.59	4565	2000	
Na	23	3	45	12506.495	ppb	12506.495	0.93	1350169	400000	
Mg	24	3	45	42805.231	ppb	42805.231	0.73	2426946	400000	
Al	27	3	45	1981.447	ppb	1981.447	0.10	44377	400000	
K	39	3	45	2809.713	ppb	2809.713	0.56	154649	400000	
Ca	40	2	45	120054.245	ppb	120054.245	1.69	67167121	400000	
V	51	3	72	98.724	ppb	98.724	2.33	60278	2000	
Cr	52	3	72	99.956	ppb	99.956	1.37	76139	5000	
Mn	55	3	72	145.888	ppb	145.888	0.58	57048	10000	
Fe	56	2	72	1733.613	ppb	1733.613	2.40	2733317	10000	
Co	59	3	72	97.208	ppb	97.208	1.25	123594	2000	
Ni	60	3	72	98.644	ppb	98.644	1.49	35152	5000	
Cu	63	3	72	101.063	ppb	101.063	1.10	98969	5000	
Zn	66	3	72	214.043	ppb	214.043	0.80	32616	5000	
As	75	3	72	102.174	ppb	102.174	2.59	11426	2000	
Se	78	2	72	102.654	ppb	102.654	3.35	5933	2000	
Sr	88	3	72	231.646	ppb	231.646	1.30	122735	4000	
Mo	95	3	115	101.343	ppb	101.343	1.53	48887	2000	
Ag	107	3	115	27.320	ppb	27.320	2.29	44363	100	
Cd	111	3	115	101.041	ppb	101.041	0.35	23958	2000	
Sn	120	3	115	100.386	ppb	100.386	1.97	73560	2000	
Sb	121	3	115	98.901	ppb	98.901	1.49	72405	1000	
Ba	137	3	115	253.395	ppb	253.395	1.13	58845	5000	
Tl	205	3	193	96.952	ppb	96.952	3.18	387858	2000	
(Pb)	206	3	193	98.210	ppb	98.210	1.80	129221	100	
(Pb)	207	3	193	96.111	ppb	96.111	2.72	112631	100	
Pb	208	3	193	96.854	ppb	96.854	2.76	517526	5000	
Th	232	3	193	106.875	ppb	106.875	5.31	572861	2000	
U	238	3	193	203.028	ppb	203.028	1.33	1145547	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4017822	2.72	3887690	103.35	60	120	
Sc (IS)	45	3	HMI He	588953	0.17	560366	105.10	60	120	
Ge Internal standard	72	2	HMI H2	2397318	3.28	2321471	103.27	60	120	
Ge Internal standard	72	3	HMI He	713465	0.96	685485	104.08	60	120	
In Internal Standard	115	3	HMI He	2639293	1.21	2631879	100.28	60	120	
Ir (IS)	193	3	HMI He	6070628	2.78	5771767	105.18	60	120	

Sample Report

Sample Table

Sample Name	280-175031-E-1-A
Data File Name	081SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:21:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.034	ppb	0.034	0.85	5	2000	
Na	23	3	45	87875.630	ppb	87875.630	1.28	9268025	400000	
Mg	24	3	45	70920.104	ppb	70920.104	1.55	3971162	400000	
Al	27	3	45	5.767	ppb	5.767	23.04	214	400000	
K	39	3	45	4579.884	ppb	4579.884	1.20	232809	400000	
Ca	40	2	45	165454.527	ppb	165454.527	2.27	91154689	400000	
V	51	3	72	0.907	ppb	0.907	7.22	1576	2000	
Cr	52	3	72	0.465	ppb	0.465	25.33	2522	5000	
Mn	55	3	72	176.350	ppb	176.350	1.33	70429	10000	
Fe	56	2	72	15.591	ppb	15.591	14.25	55463	10000	
Co	59	3	72	0.212	ppb	0.212	17.39	313	2000	
Ni	60	3	72	2.858	ppb	2.858	2.85	1376	5000	
Cu	63	3	72	9.500	ppb	9.500	0.60	9922	5000	
Zn	66	3	72	19.111	ppb	19.111	7.02	3167	5000	
As	75	3	72	0.226	ppb	0.226	108.33	95	2000	
Se	78	2	72	0.590	ppb	0.590	22.64	38	2000	
Sr	88	3	72	728.579	ppb	728.579	0.83	394462	4000	
Mo	95	3	115	0.267	ppb	0.267	32.82	165	2000	
Ag	107	3	115	0.210	ppb	0.210	8.49	356	100	
Cd	111	3	115	0.014	ppb	0.014	227.68	27	2000	
Sn	120	3	115	1.974	ppb	1.974	10.32	2312	2000	
Sb	121	3	115	0.155	ppb	0.155	34.99	152	1000	
Ba	137	3	115	291.057	ppb	291.057	1.13	67567	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-13.23	765	2000	
(Pb)	206	3	193	1.170	ppb	1.170	3.93	1884	100	
(Pb)	207	3	193	1.123	ppb	1.123	8.91	1818	100	
Pb	208	3	193	1.159	ppb	1.159	5.87	7715	5000	
Th	232	3	193	3.343	ppb	3.343	9.66	23180	2000	
U	238	3	193	4.275	ppb	4.275	1.25	25652	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3955469	0.93	3887690	101.74	60	120	
Sc (IS)	45	3	HMI He	581681	0.22	560366	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2430677	1.97	2321471	104.70	60	120	
Ge Internal standard	72	3	HMI He	729103	0.84	685485	106.36	60	120	
In Internal Standard	115	3	HMI He	2638493	1.42	2631879	100.25	60	120	
Ir (IS)	193	3	HMI He	6019252	0.15	5771767	104.29	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	082_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:23:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.271	ppb	4.377	2209	50	98.5	90	110	
Na	23	3	45	48132.845	ppb	1.176	5134508	51000	94.4	90	110	
Mg	24	3	45	10416.280	ppb	1.446	589215	11000	94.7	90	110	
Al	27	3	45	946.518	ppb	4.165	21184	1000	94.7	90	110	
K	39	3	45	10101.218	ppb	2.282	487285	11000	91.8	90	110	
Ca	40	2	45	10502.896	ppb	0.675	5847917	11000	95.5	90	110	
V	51	3	72	51.196	ppb	2.207	31011	50	102.4	90	110	
Cr	52	3	72	51.211	ppb	1.313	39122	50	102.4	90	110	
Mn	55	3	72	51.663	ppb	1.137	19848	50	103.3	90	110	
Fe	56	2	72	1016.356	ppb	5.095	1589974	1000	101.6	90	110	
Co	59	3	72	50.831	ppb	0.922	63153	50	101.7	90	110	
Ni	60	3	72	50.586	ppb	1.072	17771	50	101.2	90	110	
Cu	63	3	72	50.363	ppb	0.388	48400	50	100.7	90	110	
Zn	66	3	72	51.360	ppb	3.708	7798	50	102.7	90	110	
As	75	3	72	51.108	ppb	2.928	5617	50	102.2	90	110	
Se	78	2	72	50.608	ppb	1.314	2881	50	101.2	90	110	
Sr	88	3	72	100.838	ppb	1.358	52209	100	100.8	90	110	
Mo	95	3	115	49.766	ppb	0.669	24351	50	99.5	90	110	
Ag	107	3	115	50.272	ppb	3.552	82707	50	100.5	90	110	
Cd	111	3	115	49.157	ppb	0.977	11828	50	98.3	90	110	
Sn	120	3	115	49.549	ppb	0.989	37255	50	99.1	90	110	
Sb	121	3	115	49.617	ppb	3.306	36826	50	99.2	90	110	
Ba	137	3	115	53.283	ppb	3.458	12566	50	106.6	90	110	
Tl	205	3	193	47.760	ppb	1.250	191269	50	95.5	90	110	
(Pb)	206	3	193	48.473	ppb	1.402	63837	50	96.9	90	110	
(Pb)	207	3	193	47.478	ppb	2.938	55811	50	95.0	90	110	
Pb	208	3	193	47.924	ppb	0.405	256427	50	95.8	90	110	
Th	232	3	193	49.713	ppb	0.830	269116	50	99.4	90	110	
U	238	3	193	48.335	ppb	2.374	273483	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3990518	0.60	3887690	102.64	60	120	
Sc (IS)	45	3	HMI He	587506	1.47	560366	104.84	60	120	
Ge Internal standard	72	2	HMI H2	2359700	1.36	2321471	101.65	60	120	
Ge Internal standard	72	3	HMI He	696960	0.43	685485	101.67	60	120	
In Internal Standard	115	3	HMI He	2675089	1.94	2631879	101.64	60	120	
Ir (IS)	193	3	HMI He	6056991	0.78	5771767	104.94	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	083_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:28:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.041	ppb	-157.4	2	0.5	
Na	23	3	45	14.622	ppb	17.6	18444	25	
Mg	24	3	45	0.194	ppb	407.1	240	25	
Al	27	3	45	-1.048	ppb	-172.9	63	15	
K	39	3	45	1.391	ppb	2091.3	25790	50	
V	51	3	72	0.601	ppb	45.4	1363	1	
Cr	52	3	72	0.306	ppb	36.5	2356	1	
Mn	55	3	72	0.066	ppb	190.5	205	0.5	
Co	59	3	72	0.000	ppb	38142.3	37	0.5	
Ni	60	3	72	0.408	ppb	11.4	483	1	
Cu	63	3	72	0.022	ppb	53.7	470	1	
Zn	66	3	72	-0.076	ppb	-239.8	195	5	
As	75	3	72	0.018	ppb	1745.3	70	1	
Se	78	2	72	0.008	ppb	409.7	4	1	
Sr	88	3	72	0.004	ppb	239.9	27	0.5	
Mo	95	3	115	0.058	ppb	26.5	67	0.5	
Ag	107	3	115	-0.003	ppb	-87.8	10	1	
Cd	111	3	115	0.003	ppb	579.1	25	0.5	
Sn	120	3	115	0.071	ppb	54.5	966	1	
Sb	121	3	115	0.060	ppb	45.6	85	0.6	
Ba	137	3	115	0.078	ppb	113.9	57	0.5	
Tl	205	3	193	-0.123	ppb	-3.5	525	0.1	
(Pb)	206	3	193	-0.065	ppb	-32.7	277	1	
(Pb)	207	3	193	-0.052	ppb	-51.5	456	1	
Pb	208	3	193	-0.037	ppb	-32.3	1391	0.5	
Th	232	3	193	2.134	ppb	11.8	16765	1	>RL
U	238	3	193	-0.003	ppb	-698.8	1744	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4010735	1.58	3887690	103.16	60	120	
Sc (IS)	45	3	HMI He	583392	0.98	560366	104.11	60	120	
Ge Internal standard	72	2	HMI H2	2428000	1.28	2321471	104.59	60	120	
Ge Internal standard	72	3	HMI He	715216	1.24	685485	104.34	60	120	
In Internal Standard	115	3	HMI He	2726729	0.79	2631879	103.60	60	120	
Ir (IS)	193	3	HMI He	6001879	1.46	5771767	103.99	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608652/1-A
Data File Name	084_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:30:09-06:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.041	ppb	-154.1565254	2	0.5
Na	23	3	45	98.834	ppb	6.447903046	27698	25
Mg	24	3	45	19.546	ppb	1.300379086	1345	25
Al	27	3	45	7.244	ppb	21.02101515	250	15
K	39	3	45	13.935	ppb	158.8611174	26706	50
Ca	40	2	45	120.589	ppb	1.184974186	80286	200
V	51	3	72	0.361	ppb	25.74720255	1226	1
Cr	52	3	72	1.790	ppb	9.147913719	3485	1
Mn	55	3	72	0.471	ppb	58.2378923	366	0.5
Fe	56	2	72	23.146	ppb	11.78747805	68122	50
Co	59	3	72	0.027	ppb	54.27537698	72	0.5
Ni	60	3	72	1.594	ppb	3.166002109	910	1
Cu	63	3	72	1.867	ppb	3.464822222	2291	1
Zn	66	3	72	2.558	ppb	6.958246608	600	5
As	75	3	72	-0.224	ppb	-29.94015954	43	1
(Se)	78	3	72	-1.457	ppb	-35.12611855	23	1
Sr	88	3	72	0.602	ppb	21.84269628	347	0.5
Mo	95	3	115	0.275	ppb	37.36694057	175	0.5
Ag	107	3	115	0.002	ppb	288.8867943	18	1
Cd	111	3	115	-0.051	ppb	-23.61649586	12	0.5
Sn	120	3	115	11.713	ppb	3.425963108	9709	1
Sb	121	3	115	0.013	ppb	84.71639555	50	0.6
Ba	137	3	115	0.429	ppb	12.62987632	142	0.5
Tl	205	3	193	-0.151	ppb	-11.4741905	421	0.1
(Pb)	206	3	193	0.322	ppb	10.57615086	795	1
(Pb)	207	3	193	0.367	ppb	15.56702065	958	1
Pb	208	3	193	0.346	ppb	5.183500973	3480	0.5
Th	232	3	193	0.674	ppb	24.14334344	9281	1
U	238	3	193	0.000	ppb	-114.2060878	1794	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4111146	0.80	3887690	105.75	60	120	
Sc (IS)	45	3	HMI He	591166	0.30	560366	105.50	60	120	
Ge Internal standard	72	2	HMI H2	2456523	1.05	2321471	105.82	60	120	
Ge Internal standard	72	3	HMI He	720830	0.46	685485	105.16	60	120	
In Internal Standard	115	3	HMI He	2737248	2.05	2631879	104.00	60	120	
Ir (IS)	193	3	HMI He	6123509	2.26	5771767	106.09	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-10-C MDLV
Data File Name	085SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:32:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.510	ppb	0.510	50.99	27	2000	
Na	23	3	45	427.007	ppb	427.007	0.53	62440	400000	
Mg	24	3	45	115.629	ppb	115.629	5.11	6772	400000	
Al	27	3	45	102.208	ppb	102.208	8.32	2366	400000	
K	39	3	45	195.500	ppb	195.500	10.44	34842	400000	
Ca	40	2	45	381.008	ppb	381.008	2.33	228917	400000	
V	51	3	72	2.699	ppb	2.699	10.13	2632	2000	
Cr	52	3	72	5.237	ppb	5.237	4.28	6035	5000	
Mn	55	3	72	3.554	ppb	3.554	6.06	1573	10000	
Fe	56	2	72	157.966	ppb	157.966	2.82	284498	10000	
Co	59	3	72	0.252	ppb	0.252	12.08	358	2000	
Ni	60	3	72	15.358	ppb	15.358	6.62	5790	5000	
Cu	63	3	72	7.289	ppb	7.289	3.21	7595	5000	
Zn	66	3	72	17.457	ppb	17.457	7.43	2866	5000	
As	75	3	72	1.686	ppb	1.686	15.64	257	2000	
Se	78	2	72	1.243	ppb	1.243	8.76	77	2000	
Sr	88	3	72	2.900	ppb	2.900	10.82	1569	4000	
Mo	95	3	115	1.992	ppb	1.992	16.49	1020	2000	
Ag	107	3	115	0.181	ppb	0.181	15.04	317	100	
Cd	111	3	115	0.472	ppb	0.472	9.61	138	2000	
Sn	120	3	115	11.349	ppb	11.349	2.44	9315	2000	
Sb	121	3	115	1.183	ppb	1.183	11.73	925	1000	
Ba	137	3	115	2.431	ppb	2.431	11.13	615	5000	
Tl	205	3	193	0.390	ppb	0.390	7.54	2599	2000	
(Pb)	206	3	193	1.408	ppb	1.408	2.35	2229	100	
(Pb)	207	3	193	1.491	ppb	1.491	2.63	2279	100	
Pb	208	3	193	1.473	ppb	1.473	4.15	9527	5000	
Th	232	3	193	1.103	ppb	1.103	4.74	11571	2000	
U	238	3	193	0.468	ppb	0.468	7.05	4457	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4103826	1.99	3887690	105.56	60	120	
Sc (IS)	45	3	HMI He	587658	0.64	560366	104.87	60	120	
Ge Internal standard	72	2	HMI H2	2464695	1.98	2321471	106.17	60	120	
Ge Internal standard	72	3	HMI He	717394	0.37	685485	104.66	60	120	
In Internal Standard	115	3	HMI He	2700866	1.07	2631879	102.62	60	120	
Ir (IS)	193	3	HMI He	6119139	2.29	5771767	106.02	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-11-C MDLV
Data File Name	086SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:34:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.730	ppb	0.730	29.04	35	2000	
Na	23	3	45	434.341	ppb	434.341	3.27	63488	400000	
Mg	24	3	45	115.993	ppb	115.993	11.48	6819	400000	
Al	27	3	45	174.421	ppb	174.421	3.13	3995	400000	
K	39	3	45	223.893	ppb	223.893	7.93	36293	400000	
Ca	40	2	45	942.159	ppb	942.159	9.83	504859	400000	
V	51	3	72	2.838	ppb	2.838	9.40	2719	2000	
Cr	52	3	72	5.537	ppb	5.537	2.45	6268	5000	
Mn	55	3	72	7.026	ppb	7.026	4.14	2937	10000	
Fe	56	2	72	266.871	ppb	266.871	7.09	429241	10000	
Co	59	3	72	0.252	ppb	0.252	16.50	360	2000	
Ni	60	3	72	6.075	ppb	6.075	3.14	2499	5000	
Cu	63	3	72	7.295	ppb	7.295	2.02	7612	5000	
Zn	66	3	72	21.602	ppb	21.602	7.33	3500	5000	
As	75	3	72	1.787	ppb	1.787	5.00	268	2000	
Se	78	2	72	1.091	ppb	1.091	8.89	64	2000	
Sr	88	3	72	4.254	ppb	4.254	1.54	2294	4000	
Mo	95	3	115	1.805	ppb	1.805	8.55	946	2000	
Ag	107	3	115	0.184	ppb	0.184	28.20	328	100	
Cd	111	3	115	0.556	ppb	0.556	23.11	162	2000	
Sn	120	3	115	10.371	ppb	10.371	3.84	8752	2000	
Sb	121	3	115	1.159	ppb	1.159	0.35	925	1000	
Ba	137	3	115	2.456	ppb	2.456	13.41	633	5000	
Tl	205	3	193	0.388	ppb	0.388	11.27	2534	2000	
(Pb)	206	3	193	1.815	ppb	1.815	12.54	2707	100	
(Pb)	207	3	193	1.686	ppb	1.686	4.17	2456	100	
Pb	208	3	193	1.768	ppb	1.768	5.94	10876	5000	
Th	232	3	193	0.957	ppb	0.957	5.23	10558	2000	
U	238	3	193	0.465	ppb	0.465	5.29	4340	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3783475	6.03	3887690	97.32	60	120	
Sc (IS)	45	3	HMI He	590168	0.61	560366	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2307257	3.55	2321471	99.39	60	120	
Ge Internal standard	72	3	HMI He	718490	1.35	685485	104.81	60	120	
In Internal Standard	115	3	HMI He	2752644	1.11	2631879	104.59	60	120	
Ir (IS)	193	3	HMI He	5990055	1.59	5771767	103.78	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-12-C LOQV
Data File Name	087SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:36:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.031	ppb	1.031	41.90	50	2000	
Na	23	3	45	490.298	ppb	490.298	2.63	69620	400000	
Mg	24	3	45	504.059	ppb	504.059	1.85	28935	400000	
Al	27	3	45	109.217	ppb	109.217	2.84	2539	400000	
K	39	3	45	257.919	ppb	257.919	8.74	37943	400000	
Ca	40	2	45	636.159	ppb	636.159	2.68	368484	400000	
V	51	3	72	4.804	ppb	4.804	6.63	3969	2000	
Cr	52	3	72	7.585	ppb	7.585	4.01	7915	5000	
Mn	55	3	72	5.568	ppb	5.568	1.30	2402	10000	
Fe	56	2	72	173.924	ppb	173.924	3.20	304164	10000	
Co	59	3	72	1.002	ppb	1.002	5.29	1339	2000	
Ni	60	3	72	6.974	ppb	6.974	1.48	2862	5000	
Cu	63	3	72	8.923	ppb	8.923	1.82	9352	5000	
Zn	66	3	72	17.340	ppb	17.340	5.81	2896	5000	
As	75	3	72	5.309	ppb	5.309	12.71	673	2000	
Se	78	2	72	4.623	ppb	4.623	7.19	273	2000	
Sr	88	3	72	3.863	ppb	3.863	1.90	2117	4000	
Mo	95	3	115	2.153	ppb	2.153	11.23	1123	2000	
Ag	107	3	115	0.977	ppb	0.977	6.25	1674	100	
Cd	111	3	115	0.701	ppb	0.701	19.93	198	2000	
Sn	120	3	115	9.386	ppb	9.386	2.68	8028	2000	
Sb	121	3	115	1.952	ppb	1.952	10.94	1533	1000	
Ba	137	3	115	4.428	ppb	4.428	2.14	1113	5000	
Tl	205	3	193	0.758	ppb	0.758	1.50	4087	2000	
(Pb)	206	3	193	3.797	ppb	3.797	2.06	5400	100	
(Pb)	207	3	193	3.985	ppb	3.985	3.26	5223	100	
Pb	208	3	193	3.893	ppb	3.893	1.80	22568	5000	
Th	232	3	193	1.729	ppb	1.729	2.70	14945	2000	
U	238	3	193	0.955	ppb	0.955	0.97	7234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4036817	3.15	3887690	103.84	60	120	
Sc (IS)	45	3	HMI He	591546	1.10	560366	105.56	60	120	
Ge Internal standard	72	2	HMI H2	2418029	2.59	2321471	104.16	60	120	
Ge Internal standard	72	3	HMI He	729502	0.93	685485	106.42	60	120	
In Internal Standard	115	3	HMI He	2759282	1.34	2631879	104.84	60	120	
Ir (IS)	193	3	HMI He	6129185	0.99	5771767	106.19	60	120	

Sample Report

Sample Table

Sample Name	280-173726-A-12-A LOQV
Data File Name	088SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:38:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.203	ppb	1.203	11.26	58	2000	
Na	23	3	45	963.131	ppb	963.131	0.41	121225	400000	
Mg	24	3	45	192.671	ppb	192.671	3.14	11296	400000	
Al	27	3	45	95.788	ppb	95.788	4.30	2256	400000	
K	39	3	45	944.747	ppb	944.747	4.30	70094	400000	
Ca	40	2	45	202.997	ppb	202.997	0.63	128425	400000	
V	51	3	72	5.426	ppb	5.426	7.04	4337	2000	
Cr	52	3	72	3.362	ppb	3.362	5.01	4702	5000	
Mn	55	3	72	3.252	ppb	3.252	6.01	1474	10000	
Fe	56	2	72	110.504	ppb	110.504	2.08	202533	10000	
Co	59	3	72	0.932	ppb	0.932	3.83	1244	2000	
Ni	60	3	72	3.477	ppb	3.477	8.20	1594	5000	
Cu	63	3	72	2.035	ppb	2.035	8.92	2477	5000	
Zn	66	3	72	10.827	ppb	10.827	2.92	1881	5000	
As	75	3	72	4.788	ppb	4.788	7.34	611	2000	
Se	78	2	72	4.769	ppb	4.769	5.70	279	2000	
Sr	88	3	72	9.402	ppb	9.402	3.41	5100	4000	
Mo	95	3	115	1.873	ppb	1.873	8.79	968	2000	
Ag	107	3	115	0.950	ppb	0.950	8.38	1604	100	
Cd	111	3	115	0.959	ppb	0.959	6.68	258	2000	
Sn	120	3	115	9.734	ppb	9.734	1.86	8172	2000	
Sb	121	3	115	1.982	ppb	1.982	2.39	1534	1000	
Ba	137	3	115	3.206	ppb	3.206	7.97	805	5000	
Tl	205	3	193	0.760	ppb	0.760	6.98	4079	2000	
(Pb)	206	3	193	0.900	ppb	0.900	2.14	1554	100	
(Pb)	207	3	193	0.945	ppb	0.945	7.59	1634	100	
Pb	208	3	193	0.916	ppb	0.916	1.88	6524	5000	
Th	232	3	193	4.305	ppb	4.305	1.44	28654	2000	
U	238	3	193	0.899	ppb	0.899	1.36	6885	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4141979	1.85	3887690	106.54	60	120	
Sc (IS)	45	3	HMI He	596350	1.03	560366	106.42	60	120	
Ge Internal standard	72	2	HMI H2	2394625	0.65	2321471	103.15	60	120	
Ge Internal standard	72	3	HMI He	727120	0.98	685485	106.07	60	120	
In Internal Standard	115	3	HMI He	2719096	0.33	2631879	103.31	60	120	
Ir (IS)	193	3	HMI He	6104957	0.77	5771767	105.77	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	089_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:40:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.717	ppb	2.803	2167	50	95.4	90	110	
Na	23	3	45	48032.938	ppb	1.299	5211183	51000	94.2	90	110	
Mg	24	3	45	10168.678	ppb	1.637	585081	11000	92.4	90	110	
Al	27	3	45	932.118	ppb	4.329	21224	1000	93.2	90	110	
K	39	3	45	10047.516	ppb	0.127	493186	11000	91.3	90	110	
Ca	40	2	45	10291.280	ppb	1.286	5881343	11000	93.6	90	110	
V	51	3	72	50.659	ppb	1.792	31246	50	101.3	90	110	
Cr	52	3	72	51.104	ppb	1.899	39747	50	102.2	90	110	
Mn	55	3	72	51.113	ppb	2.365	19991	50	102.2	90	110	
Fe	56	2	72	1023.278	ppb	2.233	1624100	1000	102.3	90	110	
Co	59	3	72	50.354	ppb	1.467	63691	50	100.7	90	110	
Ni	60	3	72	51.781	ppb	2.207	18510	50	103.6	90	110	
Cu	63	3	72	50.500	ppb	0.325	49412	50	101.0	90	110	
Zn	66	3	72	51.574	ppb	3.666	7972	50	103.1	90	110	
As	75	3	72	50.126	ppb	1.412	5610	50	100.3	90	110	
Se	78	2	72	49.998	ppb	4.594	2887	50	100.0	90	110	
Sr	88	3	72	101.868	ppb	1.060	53694	100	101.9	90	110	
Mo	95	3	115	48.866	ppb	2.008	24423	50	97.7	90	110	
Ag	107	3	115	49.903	ppb	1.497	83904	50	99.8	90	110	
Cd	111	3	115	48.847	ppb	2.498	12003	50	97.7	90	110	
Sn	120	3	115	49.690	ppb	1.946	38161	50	99.4	90	110	
Sb	121	3	115	49.671	ppb	1.074	37671	50	99.3	90	110	
Ba	137	3	115	50.460	ppb	1.232	12163	50	100.9	90	110	
Tl	205	3	193	47.877	ppb	2.041	190644	50	95.8	90	110	
(Pb)	206	3	193	49.197	ppb	1.631	64424	50	98.4	90	110	
(Pb)	207	3	193	48.620	ppb	1.447	56812	50	97.2	90	110	
Pb	208	3	193	48.703	ppb	0.221	259107	50	97.4	90	110	
Th	232	3	193	49.280	ppb	1.717	265318	50	98.6	90	110	
U	238	3	193	49.139	ppb	0.334	276464	50	98.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4095722	0.23	3887690	105.35	60	120	
Sc (IS)	45	3	HMI He	597500	1.22	560366	106.63	60	120	
Ge Internal standard	72	2	HMI H2	2393874	0.94	2321471	103.12	60	120	
Ge Internal standard	72	3	HMI He	709588	1.10	685485	103.52	60	120	
In Internal Standard	115	3	HMI He	2732719	1.66	2631879	103.83	60	120	
Ir (IS)	193	3	HMI He	6022843	0.39	5771767	104.35	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	090_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:41:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.030	ppb	358.3	5	0.5	
Na	23	3	45	16.137	ppb	14.2	18701	25	
Mg	24	3	45	1.650	ppb	97.4	324	25	
Al	27	3	45	-0.013	ppb	-7211.6	87	15	
K	39	3	45	1.918	ppb	1346.4	25940	50	
V	51	3	72	0.630	ppb	47.3	1376	1	
Cr	52	3	72	0.599	ppb	12.5	2569	1	
Mn	55	3	72	0.063	ppb	48.9	203	0.5	
Co	59	3	72	0.018	ppb	22.1	60	0.5	
Ni	60	3	72	0.661	ppb	39.3	571	1	
Cu	63	3	72	0.018	ppb	346.3	465	1	
Zn	66	3	72	-0.074	ppb	-492.2	195	5	
As	75	3	72	0.065	ppb	209.8	75	1	
Se	78	2	72	0.076	ppb	121.1	8	1	
Sr	88	3	72	0.014	ppb	102.0	32	0.5	
Mo	95	3	115	0.059	ppb	63.1	67	0.5	
Ag	107	3	115	0.008	ppb	100.0	28	1	
Cd	111	3	115	-0.044	ppb	-108.5	13	0.5	
Sn	120	3	115	0.068	ppb	44.5	958	1	
Sb	121	3	115	0.069	ppb	18.2	92	0.6	
Ba	137	3	115	0.058	ppb	72.8	52	0.5	
Tl	205	3	193	-0.143	ppb	-6.9	451	0.1	
(Pb)	206	3	193	-0.072	ppb	-35.2	272	1	
(Pb)	207	3	193	-0.052	ppb	-32.3	463	1	
Pb	208	3	193	-0.050	ppb	-13.6	1343	0.5	
Th	232	3	193	1.776	ppb	12.6	15122	1	>RL
U	238	3	193	-0.025	ppb	-46.4	1644	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124042	2.19	3887690	106.08	60	120	
Sc (IS)	45	3	HMI He	586442	0.60	560366	104.65	60	120	
Ge Internal standard	72	2	HMI H2	2452171	1.70	2321471	105.63	60	120	
Ge Internal standard	72	3	HMI He	713813	0.33	685485	104.13	60	120	
In Internal Standard	115	3	HMI He	2708057	1.14	2631879	102.89	60	120	
Ir (IS)	193	3	HMI He	6095708	1.13	5771767	105.61	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	091_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:43:41-06:00
Sample Type	Blank
Dilution	1
Comment	608984 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.251	ppb	115.5603826	15	0.5
Na	23	3	45	137.641	ppb	2.655608454	32530	25
Mg	24	3	45	9.001	ppb	19.65298475	761	25
Al	27	3	45	142.844	ppb	8.673987484	3364	15
K	39	3	45	27.635	ppb	34.65418719	27919	50
Ca	40	2	45	100.206	ppb	2.699899156	69263	200
V	51	3	72	0.534	ppb	11.04765122	1353	1
Cr	52	3	72	0.865	ppb	13.47348038	2839	1
Mn	55	3	72	5.102	ppb	2.04078623	2226	0.5
Fe	56	2	72	43.115	ppb	9.083568193	99935	50
Co	59	3	72	0.044	ppb	10.04421936	95	0.5
Ni	60	3	72	1.374	ppb	15.74551772	845	1
Cu	63	3	72	1.575	ppb	7.14721645	2036	1
Zn	66	3	72	53.167	ppb	1.579788832	8478	5
As	75	3	72	-0.026	ppb	-938.375574	67	1
(Se)	78	3	72	-1.233	ppb	-70.19177681	25	1
Sr	88	3	72	0.217	ppb	22.38827528	143	0.5
Mo	95	3	115	0.086	ppb	19.13719293	82	0.5
Ag	107	3	115	0.017	ppb	17.31199483	45	1
Cd	111	3	115	-0.004	ppb	-558.6848725	23	0.5
Sn	120	3	115	2.827	ppb	3.499246731	3062	1
Sb	121	3	115	0.089	ppb	16.45981833	108	0.6
Ba	137	3	115	0.351	ppb	53.66450349	123	0.5
Tl	205	3	193	-0.136	ppb	-14.84670383	480	0.1
(Pb)	206	3	193	0.086	ppb	73.75227593	480	1
(Pb)	207	3	193	0.058	ppb	108.1179244	593	1
Pb	208	3	193	0.083	ppb	25.43927819	2057	0.5
Th	232	3	193	0.324	ppb	9.710350369	7382	1
U	238	3	193	0.021	ppb	102.2623103	1908	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4150467	1.39	3887690	106.76	60	120	
Sc (IS)	45	3	HMI He	603810	0.87	560366	107.75	60	120	
Ge Internal standard	72	2	HMI H2	2454692	1.38	2321471	105.74	60	120	
Ge Internal standard	72	3	HMI He	732547	0.94	685485	106.87	60	120	
In Internal Standard	115	3	HMI He	2757358	1.03	2631879	104.77	60	120	
Ir (IS)	193	3	HMI He	6104594	0.74	5771767	105.77	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608984/2-A
Data File Name	092_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:45:33-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608984 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.050	39.050	ppb	6.208	1778	40	97.6	80	120	
Na	23	3	45	880.738	880.738	ppb	0.901	112250	40	2201.8	80	120	>+/-20%
Mg	24	3	45	747.486	747.486	ppb	1.484	43109	40	1868.7	80	120	>+/-20%
Al	27	3	45	768.652	768.652	ppb	1.847	17472	40	1921.6	80	120	>+/-20%
K	39	3	45	752.692	752.692	ppb	3.885	61154	40	1881.7	80	120	>+/-20%
Ca	40	2	45	826.463	826.463	ppb	3.526	489006	40	2066.2	80	120	>+/-20%
V	51	3	72	40.493	40.493	ppb	1.866	25903	40	101.2	80	120	
Cr	52	3	72	40.948	40.948	ppb	2.367	33200	40	102.4	80	120	
Mn	55	3	72	41.267	41.267	ppb	1.440	16643	40	103.2	80	120	
Fe	56	2	72	793.847	793.847	ppb	2.765	1315287	40	1984.6	80	120	>+/-20%
(Fe)	56	3	72	795.365	795.365	ppb	0.914	531497	40	1988.4	80	120	>+/-20%
Co	59	3	72	40.322	40.322	ppb	0.958	52484	40	100.8	80	120	
Ni	60	3	72	41.525	41.525	ppb	3.191	15341	40	103.8	80	120	
Cu	63	3	72	41.300	41.300	ppb	2.214	41655	40	103.2	80	120	
Zn	66	3	72	42.935	42.935	ppb	2.500	6863	40	107.3	80	120	
As	75	3	72	39.152	39.152	ppb	1.078	4524	40	97.9	80	120	
Se	78	2	72	39.851	39.851	ppb	4.154	2391	40	99.6	80	120	
(Se)	78	3	72	43.933	43.933	ppb	10.222	283	40	109.8	80	120	
Sr	88	3	72	79.349	79.349	ppb	2.623	43036	40	198.4	80	120	>+/-20%
Mo	95	3	115	39.691	39.691	ppb	2.588	19906	40	99.2	80	120	
Ag	107	3	115	41.176	41.176	ppb	1.264	69427	40	102.9	80	120	
Cd	111	3	115	39.528	39.528	ppb	4.277	9745	40	98.8	80	120	
Sn	120	3	115	38.821	38.821	ppb	0.650	30107	40	97.1	80	120	
Sb	121	3	115	40.121	40.121	ppb	0.920	30526	40	100.3	80	120	
Ba	137	3	115	41.965	41.965	ppb	3.541	10154	40	104.9	80	120	
Tl	205	3	193	38.713	38.713	ppb	1.419	158787	40	96.8	80	120	
(Pb)	206	3	193	39.684	39.684	ppb	1.965	53529	40	99.2	80	120	
(Pb)	207	3	193	39.100	39.100	ppb	2.369	47101	40	97.7	80	120	
Pb	208	3	193	39.398	39.398	ppb	1.942	215929	40	98.5	80	120	
Th	232	3	193	37.157	37.157	ppb	1.359	207209	40	92.9	80	120	
U	238	3	193	38.895	38.895	ppb	1.124	225503	40	97.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152046	2.72	3887690	106.80	60	120	
Sc (IS)	45	3	HMI He	595896	0.41	560366	106.34	60	120	
Ge Internal standard	72	2	HMI H2	2485734	1.85	2321471	107.08	60	120	
Ge Internal standard	72	3	HMI He	730076	0.72	685485	106.51	60	120	
In Internal Standard	115	3	HMI He	2740611	1.02	2631879	104.13	60	120	
Ir (IS)	193	3	HMI He	6196556	1.28	5771767	107.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A
Data File Name	093SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:47:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-157.84	2	2000	
Na	23	3	45	17914.017	ppb	17914.017	2.42	1961264	400000	
Mg	24	3	45	13409.445	ppb	13409.445	1.68	774191	400000	
Al	27	3	45	5.176	ppb	5.176	30.99	207	400000	
K	39	3	45	5852.172	ppb	5852.172	1.69	299288	400000	
Ca	40	2	45	53566.531	ppb	53566.531	1.75	31264270	400000	
V	51	3	72	8.484	ppb	8.484	5.93	6465	2000	
Cr	52	3	72	18.688	ppb	18.688	2.15	16939	5000	
Mn	55	3	72	0.492	ppb	0.492	45.24	393	10000	
Fe	56	2	72	17.702	ppb	17.702	8.40	61390	10000	
Co	59	3	72	0.049	ppb	0.049	59.62	105	2000	
Ni	60	3	72	0.881	ppb	0.881	24.10	688	5000	
Cu	63	3	72	0.250	ppb	0.250	11.82	733	5000	
Zn	66	3	72	1.158	ppb	1.158	22.05	405	5000	
As	75	3	72	1.918	ppb	1.918	18.87	298	2000	
Se	78	2	72	1.598	ppb	1.598	17.33	101	2000	
Sr	88	3	72	270.175	ppb	270.175	1.27	151902	4000	
Mo	95	3	115	1.043	ppb	1.043	5.59	565	2000	
Ag	107	3	115	0.011	ppb	0.011	26.57	35	100	
Cd	111	3	115	-0.065	ppb	-0.065	-64.71	8	2000	
Sn	120	3	115	-0.076	ppb	-0.076	-118.71	868	2000	
Sb	121	3	115	0.276	ppb	0.276	21.01	252	1000	
Ba	137	3	115	50.727	ppb	50.727	0.15	12365	5000	
Tl	205	3	193	-0.146	ppb	-0.146	-10.88	435	2000	
(Pb)	206	3	193	-0.061	ppb	-0.061	-23.28	283	100	
(Pb)	207	3	193	-0.052	ppb	-0.052	-79.00	460	100	
Pb	208	3	193	-0.049	ppb	-0.049	-4.77	1334	5000	
Th	232	3	193	1.763	ppb	1.763	11.54	14908	2000	
U	238	3	193	2.264	ppb	2.264	1.37	14463	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4189665	2.16	3887690	107.77	60	120	
Sc (IS)	45	3	HMI He	599609	0.64	560366	107.00	60	120	
Ge Internal standard	72	2	HMI H2	2537300	0.62	2321471	109.30	60	120	
Ge Internal standard	72	3	HMI He	757077	0.41	685485	110.44	60	120	
In Internal Standard	115	3	HMI He	2763153	0.32	2631879	104.99	60	120	
Ir (IS)	193	3	HMI He	6040053	1.02	5771767	104.65	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-Asd@5
Data File Name	094SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:49:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1267.74	3	2000	
Na	23	3	45	3599.153	ppb	3599.153	0.82	409008	400000	
Mg	24	3	45	2793.413	ppb	2793.413	2.61	161882	400000	
Al	27	3	45	1.509	ppb	1.509	147.55	123	400000	
K	39	3	45	1173.832	ppb	1173.832	2.62	81386	400000	
Ca	40	2	45	10730.584	ppb	10730.584	0.94	6216013	400000	
V	51	3	72	2.240	ppb	2.240	6.23	2459	2000	
Cr	52	3	72	4.132	ppb	4.132	7.61	5440	5000	
Mn	55	3	72	1.668	ppb	1.668	10.70	870	10000	
Fe	56	2	72	16.129	ppb	16.129	10.84	59001	10000	
Co	59	3	72	0.031	ppb	0.031	36.92	80	2000	
Ni	60	3	72	0.764	ppb	0.764	34.31	638	5000	
Cu	63	3	72	0.122	ppb	0.122	59.70	595	5000	
Zn	66	3	72	3.199	ppb	3.199	18.93	725	5000	
As	75	3	72	0.476	ppb	0.476	91.00	127	2000	
Se	78	2	72	0.333	ppb	0.333	70.28	24	2000	
Sr	88	3	72	55.920	ppb	55.920	1.87	31113	4000	
Mo	95	3	115	0.274	ppb	0.274	25.41	175	2000	
Ag	107	3	115	0.017	ppb	0.017	49.90	45	100	
Cd	111	3	115	-0.078	ppb	-0.078	-0.36	5	2000	
Sn	120	3	115	0.033	ppb	0.033	144.00	941	2000	
Sb	121	3	115	0.138	ppb	0.138	19.08	145	1000	
Ba	137	3	115	11.099	ppb	11.099	7.33	2707	5000	
Tl	205	3	193	-0.157	ppb	-0.157	-9.38	391	2000	
(Pb)	206	3	193	0.361	ppb	0.361	18.28	831	100	
(Pb)	207	3	193	0.306	ppb	0.306	39.84	873	100	
Pb	208	3	193	0.325	ppb	0.325	10.62	3312	5000	
Th	232	3	193	0.554	ppb	0.554	21.05	8522	2000	
U	238	3	193	0.407	ppb	0.407	10.65	4045	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152198	1.30	3887690	106.80	60	120	
Sc (IS)	45	3	HMI He	601168	0.54	560366	107.28	60	120	
Ge Internal standard	72	2	HMI H2	2546850	1.20	2321471	109.71	60	120	
Ge Internal standard	72	3	HMI He	748778	0.87	685485	109.23	60	120	
In Internal Standard	115	3	HMI He	2736314	1.39	2631879	103.97	60	120	
Ir (IS)	193	3	HMI He	6036389	3.00	5771767	104.58	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-B MS
Data File Name	095SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:51:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.252	ppb	39.252	3.76	1809	2000	
Na	23	3	45	20027.897	ppb	20027.897	0.70	2201368	400000	
Mg	24	3	45	15262.236	ppb	15262.236	1.76	885444	400000	
Al	27	3	45	739.852	ppb	739.852	1.23	17007	400000	
K	39	3	45	6898.320	ppb	6898.320	2.33	349736	400000	
Ca	40	2	45	57038.548	ppb	57038.548	0.88	33485443	400000	
V	51	3	72	47.169	ppb	47.169	1.50	30907	2000	
Cr	52	3	72	59.519	ppb	59.519	1.17	48696	5000	
Mn	55	3	72	40.863	ppb	40.863	2.17	16977	10000	
Fe	56	2	72	789.256	ppb	789.256	1.23	1329144	10000	
Co	59	3	72	39.035	ppb	39.035	1.14	52336	2000	
Ni	60	3	72	39.005	ppb	39.005	2.81	14866	5000	
Cu	63	3	72	39.727	ppb	39.727	0.96	41293	5000	
Zn	66	3	72	40.602	ppb	40.602	4.43	6697	5000	
As	75	3	72	40.410	ppb	40.410	2.60	4807	2000	
Se	78	2	72	41.257	ppb	41.257	1.51	2515	2000	
Sr	88	3	72	367.664	ppb	367.664	0.94	205322	4000	
Mo	95	3	115	40.617	ppb	40.617	1.68	20437	2000	
Ag	107	3	115	41.307	ppb	41.307	1.00	69886	100	
Cd	111	3	115	39.841	ppb	39.841	1.26	9857	2000	
Sn	120	3	115	40.191	ppb	40.191	0.37	31241	2000	
Sb	121	3	115	40.847	ppb	40.847	1.35	31183	1000	
Ba	137	3	115	94.890	ppb	94.890	0.76	22984	5000	
Tl	205	3	193	39.714	ppb	39.714	2.78	160022	2000	
(Pb)	206	3	193	40.125	ppb	40.125	3.92	53168	100	
(Pb)	207	3	193	39.759	ppb	39.759	3.48	47054	100	
Pb	208	3	193	39.820	ppb	39.820	2.92	214420	5000	
Th	232	3	193	38.010	ppb	38.010	2.88	208145	2000	
U	238	3	193	42.430	ppb	42.430	3.07	241530	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214070	0.16	3887690	108.40	60	120	
Sc (IS)	45	3	HMI He	602503	0.60	560366	107.52	60	120	
Ge Internal standard	72	2	HMI H2	2525763	1.63	2321471	108.80	60	120	
Ge Internal standard	72	3	HMI He	751980	0.27	685485	109.70	60	120	
In Internal Standard	115	3	HMI He	2749766	0.54	2631879	104.48	60	120	
Ir (IS)	193	3	HMI He	6090250	2.25	5771767	105.52	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-C MSD
Data File Name	096SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:52:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.876	ppb	41.876	5.76	1901	2000	
Na	23	3	45	19433.463	ppb	19433.463	0.32	2147451	400000	
Mg	24	3	45	15284.279	ppb	15284.279	2.76	891211	400000	
Al	27	3	45	749.309	ppb	749.309	2.68	17311	400000	
K	39	3	45	6894.447	ppb	6894.447	1.37	351356	400000	
Ca	40	2	45	57623.698	ppb	57623.698	1.24	33504178	400000	
V	51	3	72	48.660	ppb	48.660	0.72	31962	2000	
Cr	52	3	72	59.955	ppb	59.955	1.17	49205	5000	
Mn	55	3	72	39.673	ppb	39.673	3.23	16545	10000	
Fe	56	2	72	792.766	ppb	792.766	1.15	1340223	10000	
Co	59	3	72	38.274	ppb	38.274	0.31	51496	2000	
Ni	60	3	72	39.676	ppb	39.676	1.32	15167	5000	
Cu	63	3	72	39.935	ppb	39.935	0.81	41650	5000	
Zn	66	3	72	41.262	ppb	41.262	3.31	6827	5000	
As	75	3	72	42.006	ppb	42.006	3.59	5012	2000	
Se	78	2	72	42.094	ppb	42.094	2.24	2576	2000	
Sr	88	3	72	368.238	ppb	368.238	1.28	206362	4000	
Mo	95	3	115	41.127	ppb	41.127	2.94	20916	2000	
Ag	107	3	115	40.769	ppb	40.769	1.67	69729	100	
Cd	111	3	115	39.166	ppb	39.166	4.39	9792	2000	
Sn	120	3	115	39.489	ppb	39.489	2.12	31046	2000	
Sb	121	3	115	39.947	ppb	39.947	2.72	30824	1000	
Ba	137	3	115	94.369	ppb	94.369	3.59	23104	5000	
Tl	205	3	193	39.641	ppb	39.641	0.61	160819	2000	
(Pb)	206	3	193	39.679	ppb	39.679	0.79	52949	100	
(Pb)	207	3	193	39.409	ppb	39.409	0.87	46962	100	
Pb	208	3	193	39.692	ppb	39.692	0.94	215191	5000	
Th	232	3	193	39.813	ppb	39.813	0.64	219238	2000	
U	238	3	193	42.110	ppb	42.110	0.63	241361	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174008	1.26	3887690	107.36	60	120	
Sc (IS)	45	3	HMI He	605563	0.52	560366	108.07	60	120	
Ge Internal standard	72	2	HMI H2	2535688	1.13	2321471	109.23	60	120	
Ge Internal standard	72	3	HMI He	754614	0.80	685485	110.08	60	120	
In Internal Standard	115	3	HMI He	2780533	2.51	2631879	105.65	60	120	
Ir (IS)	193	3	HMI He	6129421	0.72	5771767	106.20	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A pds
Data File Name	097SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:54:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	102.840	ppb	102.840	3.46	4645	2000	
Na	23	3	45	22842.210	ppb	22842.210	2.64	2521703	400000	
Mg	24	3	45	15805.602	ppb	15805.602	3.12	921803	400000	
Al	27	3	45	1965.312	ppb	1965.312	1.88	45284	400000	
K	39	3	45	7817.373	ppb	7817.373	1.20	394970	400000	
Ca	40	2	45	55168.937	ppb	55168.937	1.71	32175907	400000	
V	51	3	72	104.218	ppb	104.218	0.84	67420	2000	
Cr	52	3	72	118.251	ppb	118.251	0.88	95099	5000	
Mn	55	3	72	97.322	ppb	97.322	2.84	40408	10000	
Fe	56	2	72	1040.449	ppb	1040.449	0.77	1737532	10000	
Co	59	3	72	97.205	ppb	97.205	1.09	131037	2000	
Ni	60	3	72	97.480	ppb	97.480	0.10	36837	5000	
Cu	63	3	72	99.577	ppb	99.577	1.23	103404	5000	
Zn	66	3	72	207.822	ppb	207.822	2.93	33577	5000	
As	75	3	72	101.968	ppb	101.968	3.24	12093	2000	
Se	78	2	72	104.727	ppb	104.727	1.98	6362	2000	
Sr	88	3	72	370.790	ppb	370.790	0.25	208296	4000	
Mo	95	3	115	100.570	ppb	100.570	1.01	51624	2000	
Ag	107	3	115	26.843	ppb	26.843	0.04	46388	100	
Cd	111	3	115	97.786	ppb	97.786	0.76	24672	2000	
Sn	120	3	115	100.566	ppb	100.566	0.84	78424	2000	
Sb	121	3	115	96.052	ppb	96.052	1.59	74828	1000	
Ba	137	3	115	153.335	ppb	153.335	0.86	37905	5000	
Tl	205	3	193	99.487	ppb	99.487	2.25	399153	2000	
(Pb)	206	3	193	100.781	ppb	100.781	1.40	132964	100	
(Pb)	207	3	193	98.321	ppb	98.321	2.48	115536	100	
Pb	208	3	193	99.715	ppb	99.715	1.87	534314	5000	
Th	232	3	193	109.455	ppb	109.455	1.46	588555	2000	
U	238	3	193	221.224	ppb	221.224	1.81	1251312	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4186780	1.32	3887690	107.69	60	120	
Sc (IS)	45	3	HMI He	605843	1.23	560366	108.12	60	120	
Ge Internal standard	72	2	HMI H2	2519282	0.67	2321471	108.52	60	120	
Ge Internal standard	72	3	HMI He	756465	1.04	685485	110.35	60	120	
In Internal Standard	115	3	HMI He	2808319	1.05	2631879	106.70	60	120	
Ir (IS)	193	3	HMI He	6086170	1.22	5771767	105.45	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A@10
Data File Name	098SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:56:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.103	ppb	0.103	161.00	8	2000	
Na	23	3	45	10921.066	ppb	10921.066	1.37	1212098	400000	
Mg	24	3	45	7713.438	ppb	7713.438	0.66	448922	400000	
Al	27	3	45	4.527	ppb	4.527	33.27	194	400000	
K	39	3	45	469.924	ppb	469.924	12.77	48713	400000	
Ca	40	2	45	21572.581	ppb	21572.581	1.27	12513438	400000	
V	51	3	72	0.456	ppb	0.456	33.95	1328	2000	
Cr	52	3	72	0.587	ppb	0.587	6.76	2672	5000	
Mn	55	3	72	2.036	ppb	2.036	9.97	1015	10000	
Fe	56	2	72	15.437	ppb	15.437	17.28	56853	10000	
Co	59	3	72	0.054	ppb	0.054	25.20	110	2000	
Ni	60	3	72	1.226	ppb	1.226	7.09	805	5000	
Cu	63	3	72	0.226	ppb	0.226	39.68	698	5000	
Zn	66	3	72	3.447	ppb	3.447	9.95	760	5000	
As	75	3	72	0.049	ppb	0.049	546.25	77	2000	
Se	78	2	72	0.016	ppb	0.016	653.03	5	2000	
Sr	88	3	72	79.927	ppb	79.927	2.05	44235	4000	
Mo	95	3	115	0.127	ppb	0.127	10.88	105	2000	
Ag	107	3	115	0.020	ppb	0.020	67.57	50	100	
Cd	111	3	115	-0.046	ppb	-0.046	-48.77	13	2000	
Sn	120	3	115	0.014	ppb	0.014	726.94	956	2000	
Sb	121	3	115	0.101	ppb	0.101	61.12	120	1000	
Ba	137	3	115	35.985	ppb	35.985	4.35	8977	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-17.08	581	2000	
(Pb)	206	3	193	0.325	ppb	0.325	21.73	805	100	
(Pb)	207	3	193	0.239	ppb	0.239	2.51	816	100	
Pb	208	3	193	0.330	ppb	0.330	6.70	3425	5000	
Th	232	3	193	2.934	ppb	2.934	12.89	21583	2000	
U	238	3	193	0.500	ppb	0.500	6.91	4680	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162017	1.91	3887690	107.06	60	120	
Sc (IS)	45	3	HMI He	604324	0.89	560366	107.84	60	120	
Ge Internal standard	72	2	HMI H2	2505287	2.97	2321471	107.92	60	120	
Ge Internal standard	72	3	HMI He	745095	1.97	685485	108.70	60	120	
In Internal Standard	115	3	HMI He	2825906	2.04	2631879	107.37	60	120	
Ir (IS)	193	3	HMI He	6185566	2.43	5771767	107.17	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A@10
Data File Name	099SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:58:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1375.84	3	2000	
Na	23	3	45	10805.958	ppb	10805.958	1.90	1189884	400000	
Mg	24	3	45	7663.222	ppb	7663.222	2.36	442447	400000	
Al	27	3	45	1.384	ppb	1.384	91.47	120	400000	
K	39	3	45	576.068	ppb	576.068	5.37	53298	400000	
Ca	40	2	45	19667.839	ppb	19667.839	0.72	11660286	400000	
V	51	3	72	0.397	ppb	0.397	10.54	1304	2000	
Cr	52	3	72	0.576	ppb	0.576	26.27	2694	5000	
Mn	55	3	72	20.293	ppb	20.293	2.20	8538	10000	
Fe	56	2	72	68.986	ppb	68.986	6.02	144281	10000	
Co	59	3	72	0.322	ppb	0.322	21.08	470	2000	
Ni	60	3	72	1.314	ppb	1.314	10.04	846	5000	
Cu	63	3	72	0.156	ppb	0.156	6.61	633	5000	
Zn	66	3	72	3.710	ppb	3.710	11.21	811	5000	
As	75	3	72	0.269	ppb	0.269	97.82	103	2000	
Se	78	2	72	0.093	ppb	0.093	121.39	9	2000	
Sr	88	3	72	77.405	ppb	77.405	2.41	43304	4000	
Mo	95	3	115	0.047	ppb	0.047	42.90	62	2000	
Ag	107	3	115	0.014	ppb	0.014	22.11	40	100	
Cd	111	3	115	-0.044	ppb	-0.044	-69.85	13	2000	
Sn	120	3	115	0.163	ppb	0.163	69.88	1038	2000	
Sb	121	3	115	0.072	ppb	0.072	53.60	95	1000	
Ba	137	3	115	36.934	ppb	36.934	2.64	8907	5000	
Tl	205	3	193	-0.155	ppb	-0.155	-8.81	410	2000	
(Pb)	206	3	193	0.330	ppb	0.330	5.30	811	100	
(Pb)	207	3	193	0.329	ppb	0.329	18.40	921	100	
Pb	208	3	193	0.349	ppb	0.349	4.34	3520	5000	
Th	232	3	193	0.934	ppb	0.934	30.00	10743	2000	
U	238	3	193	0.391	ppb	0.391	5.62	4049	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4252924	2.09	3887690	109.39	60	120	
Sc (IS)	45	3	HMI He	599621	1.78	560366	107.01	60	120	
Ge Internal standard	72	2	HMI H2	2507932	2.53	2321471	108.03	60	120	
Ge Internal standard	72	3	HMI He	753164	1.52	685485	109.87	60	120	
In Internal Standard	115	3	HMI He	2730779	2.29	2631879	103.76	60	120	
Ir (IS)	193	3	HMI He	6171312	2.13	5771767	106.92	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A@10
Data File Name	100SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:00:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-141.90	2	2000	
Na	23	3	45	15877.568	ppb	15877.568	3.66	1755463	400000	
Mg	24	3	45	6043.050	ppb	6043.050	3.56	351935	400000	
Al	27	3	45	2.343	ppb	2.343	47.47	143	400000	
K	39	3	45	474.216	ppb	474.216	7.24	48954	400000	
Ca	40	2	45	20388.438	ppb	20388.438	2.43	11925654	400000	
V	51	3	72	0.528	ppb	0.528	33.87	1394	2000	
Cr	52	3	72	0.718	ppb	0.718	32.90	2817	5000	
Mn	55	3	72	30.081	ppb	30.081	2.14	12623	10000	
Fe	56	2	72	23.420	ppb	23.420	12.54	71100	10000	
Co	59	3	72	0.201	ppb	0.201	20.39	310	2000	
Ni	60	3	72	5.070	ppb	5.070	2.37	2256	5000	
Cu	63	3	72	0.131	ppb	0.131	23.66	610	5000	
Zn	66	3	72	3.361	ppb	3.361	8.57	758	5000	
As	75	3	72	0.139	ppb	0.139	58.89	88	2000	
Se	78	2	72	-0.006	ppb	-0.006	-907.84	3	2000	
Sr	88	3	72	102.825	ppb	102.825	1.04	57793	4000	
Mo	95	3	115	0.083	ppb	0.083	74.82	80	2000	
Ag	107	3	115	0.011	ppb	0.011	95.21	35	100	
Cd	111	3	115	-0.024	ppb	-0.024	-131.12	18	2000	
Sn	120	3	115	-0.174	ppb	-0.174	-102.80	788	2000	
Sb	121	3	115	0.074	ppb	0.074	37.51	97	1000	
Ba	137	3	115	43.555	ppb	43.555	1.52	10559	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-1.06	383	2000	
(Pb)	206	3	193	0.303	ppb	0.303	21.59	781	100	
(Pb)	207	3	193	0.310	ppb	0.310	11.93	906	100	
Pb	208	3	193	0.315	ppb	0.315	16.67	3360	5000	
Th	232	3	193	0.411	ppb	0.411	25.46	7989	2000	
U	238	3	193	0.360	ppb	0.360	5.08	3905	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4197012	1.44	3887690	107.96	60	120	
Sc (IS)	45	3	HMI He	604845	1.76	560366	107.94	60	120	
Ge Internal standard	72	2	HMI H2	2545269	1.23	2321471	109.64	60	120	
Ge Internal standard	72	3	HMI He	756617	1.21	685485	110.38	60	120	
In Internal Standard	115	3	HMI He	2747128	1.57	2631879	104.38	60	120	
Ir (IS)	193	3	HMI He	6221582	1.36	5771767	107.79	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	101_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:01:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	45.782	ppb	17.096	2084	50	91.6	90	110	
Na	23	3	45	48912.847	ppb	2.441	5274647	51000	95.9	90	110	
Mg	24	3	45	10296.130	ppb	1.589	588861	11000	93.6	90	110	
Al	27	3	45	969.464	ppb	5.584	21936	1000	96.9	90	110	
K	39	3	45	9998.926	ppb	1.513	488012	11000	90.9	90	110	
Ca	40	2	45	9530.339	ppb	15.221	5577677	11000	86.6	90	110	>+\-10%
V	51	3	72	50.847	ppb	0.161	31311	50	101.7	90	110	
Cr	52	3	72	51.442	ppb	0.633	39936	50	102.9	90	110	
Mn	55	3	72	51.476	ppb	2.407	20101	50	103.0	90	110	
Fe	56	2	72	917.002	ppb	15.499	1501016	1000	91.7	90	110	
Co	59	3	72	50.635	ppb	0.353	63948	50	101.3	90	110	
Ni	60	3	72	51.601	ppb	1.255	18420	50	103.2	90	110	
Cu	63	3	72	50.213	ppb	0.680	49052	50	100.4	90	110	
Zn	66	3	72	52.466	ppb	3.787	8093	50	104.9	90	110	
As	75	3	72	49.971	ppb	2.933	5583	50	99.9	90	110	
Se	78	2	72	46.359	ppb	11.353	2761	50	92.7	90	110	
Sr	88	3	72	102.378	ppb	0.099	53879	100	102.4	90	110	
Mo	95	3	115	49.312	ppb	1.695	24679	50	98.6	90	110	
Ag	107	3	115	50.389	ppb	1.182	84803	50	100.8	90	110	
Cd	111	3	115	48.993	ppb	1.457	12053	50	98.0	90	110	
Sn	120	3	115	49.434	ppb	1.388	38013	50	98.9	90	110	
Sb	121	3	115	49.867	ppb	0.913	37861	50	99.7	90	110	
Ba	137	3	115	51.102	ppb	1.207	12331	50	102.2	90	110	
Tl	205	3	193	47.786	ppb	2.717	192810	50	95.6	90	110	
(Pb)	206	3	193	48.618	ppb	2.241	64516	50	97.2	90	110	
(Pb)	207	3	193	48.104	ppb	3.840	56956	50	96.2	90	110	
Pb	208	3	193	48.482	ppb	2.183	261371	50	97.0	90	110	
Th	232	3	193	48.691	ppb	2.475	265746	50	97.4	90	110	
U	238	3	193	47.868	ppb	3.025	272928	50	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4223794	7.01	3887690	108.65	60	120	
Sc (IS)	45	3	HMI He	593979	1.09	560366	106.00	60	120	
Ge Internal standard	72	2	HMI H2	2481946	7.49	2321471	106.91	60	120	
Ge Internal standard	72	3	HMI He	708440	0.70	685485	103.35	60	120	
In Internal Standard	115	3	HMI He	2735594	0.92	2631879	103.94	60	120	
Ir (IS)	193	3	HMI He	6104431	1.68	5771767	105.76	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	102_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:03:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.006	ppb	-1067.7	3	0.5	
Na	23	3	45	16.801	ppb	28.6	19052	25	
Mg	24	3	45	1.674	ppb	55.7	330	25	
Al	27	3	45	0.815	ppb	124.0	107	15	
K	39	3	45	-6.107	ppb	-385.5	25960	50	
V	51	3	72	0.465	ppb	32.4	1289	1	
Cr	52	3	72	0.542	ppb	43.8	2551	1	
Mn	55	3	72	0.189	ppb	42.4	255	0.5	
Co	59	3	72	0.011	ppb	50.0	52	0.5	
Ni	60	3	72	0.726	ppb	23.4	600	1	
Cu	63	3	72	0.005	ppb	1022.5	456	1	
Zn	66	3	72	-0.295	ppb	-97.3	163	5	
As	75	3	72	0.207	ppb	67.5	92	1	
Se	78	2	72	-0.014	ppb	-559.9	3	1	
Sr	88	3	72	0.023	ppb	132.5	37	0.5	
Mo	95	3	115	0.070	ppb	58.4	73	0.5	
Ag	107	3	115	0.009	ppb	18.9	32	1	
Cd	111	3	115	-0.051	ppb	-45.9	12	0.5	
Sn	120	3	115	-0.057	ppb	-62.5	876	1	
Sb	121	3	115	0.055	ppb	35.1	82	0.6	
Ba	137	3	115	0.097	ppb	117.5	62	0.5	
Tl	205	3	193	-0.153	ppb	-4.6	415	0.1	
(Pb)	206	3	193	-0.067	ppb	-71.6	278	1	
(Pb)	207	3	193	-0.089	ppb	-25.5	421	1	
Pb	208	3	193	-0.056	ppb	-48.3	1314	0.5	
Th	232	3	193	1.720	ppb	8.9	14872	1	>RL
U	238	3	193	-0.020	ppb	-66.8	1683	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4061277	1.56	3887690	104.47	60	120	
Sc (IS)	45	3	HMI He	595316	0.83	560366	106.24	60	120	
Ge Internal standard	72	2	HMI H2	2460703	1.65	2321471	106.00	60	120	
Ge Internal standard	72	3	HMI He	720699	0.50	685485	105.14	60	120	
In Internal Standard	115	3	HMI He	2744652	0.38	2631879	104.28	60	120	
Ir (IS)	193	3	HMI He	6118649	0.66	5771767	106.01	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-5-A
Data File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:05:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	12222.928	ppb	12222.928	1.60	1350819	400000	
Mg	24	3	45	13889.901	ppb	13889.901	2.11	806019	400000	
Al	27	3	45	459.582	ppb	459.582	4.40	10605	400000	
K	39	3	45	2061.823	ppb	2061.823	2.91	123203	400000	
Ca	40	2	45	52019.243	ppb	52019.243	1.00	30253398	400000	
V	51	3	72	0.865	ppb	0.865	12.48	1576	2000	
Cr	52	3	72	1.415	ppb	1.415	27.70	3297	5000	
Mn	55	3	72	40.795	ppb	40.795	1.56	16713	10000	
Fe	56	2	72	252.605	ppb	252.605	2.15	441116	10000	
Co	59	3	72	0.289	ppb	0.289	8.95	420	2000	
Ni	60	3	72	1.195	ppb	1.195	7.50	790	5000	
Cu	63	3	72	13.132	ppb	13.132	2.00	13772	5000	
Zn	66	3	72	32.658	ppb	32.658	3.82	5353	5000	
As	75	3	72	0.097	ppb	0.097	155.06	82	2000	
Se	78	2	72	0.295	ppb	0.295	26.02	21	2000	
Sr	88	3	72	141.546	ppb	141.546	1.19	77962	4000	
Mo	95	3	115	37.887	ppb	37.887	1.14	19007	2000	
Ag	107	3	115	0.013	ppb	0.013	51.20	38	100	
Cd	111	3	115	0.409	ppb	0.409	4.85	125	2000	
Sn	120	3	115	0.024	ppb	0.024	208.54	936	2000	
Sb	121	3	115	0.232	ppb	0.232	14.37	217	1000	
Ba	137	3	115	62.945	ppb	62.945	3.01	15211	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-6.04	375	2000	
(Pb)	206	3	193	0.446	ppb	0.446	23.88	951	100	
(Pb)	207	3	193	0.429	ppb	0.429	19.97	1025	100	
Pb	208	3	193	0.458	ppb	0.458	7.99	4053	5000	
Th	232	3	193	0.496	ppb	0.496	26.97	8265	2000	
U	238	3	193	39.766	ppb	39.766	1.44	226237	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4175024	1.93	3887690	107.39	60	120	
Sc (IS)	45	3	HMI He	602726	0.88	560366	107.56	60	120	
Ge Internal standard	72	2	HMI H2	2491307	0.95	2321471	107.32	60	120	
Ge Internal standard	72	3	HMI He	741544	0.50	685485	108.18	60	120	
In Internal Standard	115	3	HMI He	2741253	0.34	2631879	104.16	60	120	
Ir (IS)	193	3	HMI He	6080946	0.80	5771767	105.36	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-A
Data File Name	104SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:07:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	12099.879	ppb	12099.879	1.77	1350855	400000	
Mg	24	3	45	13670.591	ppb	13670.591	2.15	801246	400000	
Al	27	3	45	65.165	ppb	65.165	12.98	1595	400000	
K	39	3	45	1935.929	ppb	1935.929	2.90	118471	400000	
Ca	40	2	45	49573.100	ppb	49573.100	0.08	28797080	400000	
V	51	3	72	0.457	ppb	0.457	58.36	1333	2000	
Cr	52	3	72	1.064	ppb	1.064	22.89	3057	5000	
Mn	55	3	72	10.733	ppb	10.733	3.67	4575	10000	
Fe	56	2	72	27.561	ppb	27.561	10.22	77661	10000	
Co	59	3	72	0.117	ppb	0.117	36.18	193	2000	
Ni	60	3	72	1.007	ppb	1.007	17.56	728	5000	
Cu	63	3	72	7.480	ppb	7.480	3.09	8118	5000	
Zn	66	3	72	13.566	ppb	13.566	1.89	2371	5000	
As	75	3	72	0.135	ppb	0.135	119.65	87	2000	
Se	78	2	72	0.180	ppb	0.180	10.09	15	2000	
Sr	88	3	72	135.164	ppb	135.164	4.20	75112	4000	
Mo	95	3	115	35.498	ppb	35.498	1.92	18111	2000	
Ag	107	3	115	0.007	ppb	0.007	22.78	28	100	
Cd	111	3	115	0.221	ppb	0.221	30.95	80	2000	
Sn	120	3	115	-0.273	ppb	-0.273	-22.74	725	2000	
Sb	121	3	115	0.200	ppb	0.200	11.38	195	1000	
Ba	137	3	115	57.365	ppb	57.365	3.31	14101	5000	
Tl	205	3	193	-0.168	ppb	-0.168	-3.64	355	2000	
(Pb)	206	3	193	-0.046	ppb	-0.046	-41.50	308	100	
(Pb)	207	3	193	-0.040	ppb	-0.040	-93.54	481	100	
Pb	208	3	193	-0.040	ppb	-0.040	-33.72	1406	5000	
Th	232	3	193	0.128	ppb	0.128	61.19	6370	2000	
U	238	3	193	37.991	ppb	37.991	2.04	218174	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4169572	1.07	3887690	107.25	60	120	
Sc (IS)	45	3	HMI He	608833	1.72	560366	108.65	60	120	
Ge Internal standard	72	2	HMI H2	2537144	0.87	2321471	109.29	60	120	
Ge Internal standard	72	3	HMI He	748452	1.50	685485	109.19	60	120	
In Internal Standard	115	3	HMI He	2787467	0.30	2631879	105.91	60	120	
Ir (IS)	193	3	HMI He	6136766	1.11	5771767	106.32	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-B MS
Data File Name	105SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:09:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.921	ppb	39.921	4.78	1803	2000	
Na	23	3	45	12723.771	ppb	12723.771	1.31	1402775	400000	
Mg	24	3	45	14081.516	ppb	14081.516	1.46	815544	400000	
Al	27	3	45	793.783	ppb	793.783	5.67	18207	400000	
K	39	3	45	2736.637	ppb	2736.637	1.59	154528	400000	
Ca	40	2	45	51721.198	ppb	51721.198	2.05	29942925	400000	
V	51	3	72	38.436	ppb	38.436	2.49	25085	2000	
Cr	52	3	72	39.553	ppb	39.553	1.51	32725	5000	
Mn	55	3	72	49.963	ppb	49.963	0.89	20477	10000	
Fe	56	2	72	778.064	ppb	778.064	1.45	1302764	10000	
Co	59	3	72	38.147	ppb	38.147	1.25	50552	2000	
Ni	60	3	72	39.096	ppb	39.096	3.45	14727	5000	
Cu	63	3	72	46.144	ppb	46.144	1.84	47327	5000	
Zn	66	3	72	53.436	ppb	53.436	1.46	8643	5000	
As	75	3	72	38.290	ppb	38.290	3.34	4505	2000	
Se	78	2	72	40.248	ppb	40.248	2.05	2438	2000	
Sr	88	3	72	213.739	ppb	213.739	0.51	117984	4000	
Mo	95	3	115	74.073	ppb	74.073	3.57	37597	2000	
Ag	107	3	115	40.002	ppb	40.002	2.13	68340	100	
Cd	111	3	115	39.348	ppb	39.348	0.76	9834	2000	
Sn	120	3	115	37.273	ppb	37.273	2.42	29323	2000	
Sb	121	3	115	39.140	ppb	39.140	3.40	30167	1000	
Ba	137	3	115	97.833	ppb	97.833	1.66	23928	5000	
Tl	205	3	193	38.403	ppb	38.403	2.88	156426	2000	
(Pb)	206	3	193	39.189	ppb	39.189	2.10	52506	100	
(Pb)	207	3	193	38.134	ppb	38.134	2.79	45636	100	
Pb	208	3	193	38.708	ppb	38.708	2.55	210706	5000	
Th	232	3	193	36.300	ppb	36.300	3.50	201126	2000	
U	238	3	193	76.696	ppb	76.696	2.33	439821	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4155920	0.80	3887690	106.90	60	120	
Sc (IS)	45	3	HMI He	601539	0.77	560366	107.35	60	120	
Ge Internal standard	72	2	HMI H2	2510610	1.44	2321471	108.15	60	120	
Ge Internal standard	72	3	HMI He	743252	0.56	685485	108.43	60	120	
In Internal Standard	115	3	HMI He	2777277	1.94	2631879	105.52	60	120	
Ir (IS)	193	3	HMI He	6155480	2.64	5771767	106.65	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-C MSD
Data File Name	106SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:10:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.466	ppb	40.466	5.84	1819	2000	
Na	23	3	45	13221.335	ppb	13221.335	1.91	1444935	400000	
Mg	24	3	45	15264.498	ppb	15264.498	1.39	876981	400000	
Al	27	3	45	818.101	ppb	818.101	2.84	18614	400000	
K	39	3	45	2868.564	ppb	2868.564	2.13	159427	400000	
Ca	40	2	45	54026.279	ppb	54026.279	1.03	31079946	400000	
V	51	3	72	40.629	ppb	40.629	1.61	26337	2000	
Cr	52	3	72	41.501	ppb	41.501	0.34	34075	5000	
Mn	55	3	72	51.156	ppb	51.156	1.74	20864	10000	
Fe	56	2	72	838.633	ppb	838.633	2.25	1387350	10000	
Co	59	3	72	38.979	ppb	38.979	1.12	51418	2000	
Ni	60	3	72	40.229	ppb	40.229	2.34	15072	5000	
Cu	63	3	72	47.199	ppb	47.199	0.09	48185	5000	
Zn	66	3	72	57.144	ppb	57.144	2.64	9185	5000	
As	75	3	72	39.718	ppb	39.718	3.46	4648	2000	
Se	78	2	72	41.316	ppb	41.316	3.81	2477	2000	
Sr	88	3	72	221.593	ppb	221.593	2.36	121745	4000	
Mo	95	3	115	77.575	ppb	77.575	2.26	39080	2000	
Ag	107	3	115	41.172	ppb	41.172	0.41	69809	100	
Cd	111	3	115	39.228	ppb	39.228	2.35	9725	2000	
Sn	120	3	115	38.614	ppb	38.614	0.40	30116	2000	
Sb	121	3	115	40.076	ppb	40.076	1.31	30658	1000	
Ba	137	3	115	100.728	ppb	100.728	0.36	24449	5000	
Tl	205	3	193	39.105	ppb	39.105	1.66	159782	2000	
(Pb)	206	3	193	40.050	ppb	40.050	2.62	53815	100	
(Pb)	207	3	193	39.331	ppb	39.331	0.71	47209	100	
Pb	208	3	193	39.463	ppb	39.463	1.68	215477	5000	
Th	232	3	193	39.894	ppb	39.894	1.19	221234	2000	
U	238	3	193	78.696	ppb	78.696	1.93	452676	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4129550	2.31	3887690	106.22	60	120	
Sc (IS)	45	3	HMI He	596734	1.57	560366	106.49	60	120	
Ge Internal standard	72	2	HMI H2	2485233	1.66	2321471	107.05	60	120	
Ge Internal standard	72	3	HMI He	739917	1.40	685485	107.94	60	120	
In Internal Standard	115	3	HMI He	2755824	1.52	2631879	104.71	60	120	
Ir (IS)	193	3	HMI He	6173488	1.30	5771767	106.96	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-2-A
Data File Name	107SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:12:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	54975.635	ppb	54975.635	0.81	5940982	400000	
Mg	24	3	45	44390.809	ppb	44390.809	0.66	2544340	400000	
Al	27	3	45	2.141	ppb	2.141	85.49	137	400000	
K	39	3	45	5987.668	ppb	5987.668	1.97	303438	400000	
Ca	40	2	45	131606.253	ppb	131606.253	1.00	77118771	400000	
V	51	3	72	1.109	ppb	1.109	20.95	1728	2000	
Cr	52	3	72	1.787	ppb	1.787	8.90	3582	5000	
Mn	55	3	72	222.372	ppb	222.372	0.99	90248	10000	
Fe	56	2	72	12.987	ppb	12.987	7.71	54079	10000	
Co	59	3	72	0.657	ppb	0.657	3.03	906	2000	
Ni	60	3	72	3.613	ppb	3.613	4.92	1676	5000	
Cu	63	3	72	0.891	ppb	0.891	6.01	1368	5000	
Zn	66	3	72	6.305	ppb	6.305	6.61	1206	5000	
As	75	3	72	1.004	ppb	1.004	38.72	187	2000	
Se	78	2	72	0.059	ppb	0.059	116.14	7	2000	
Sr	88	3	72	456.895	ppb	456.895	0.74	251512	4000	
Mo	95	3	115	0.445	ppb	0.445	11.82	260	2000	
Ag	107	3	115	0.010	ppb	0.010	156.95	32	100	
Cd	111	3	115	-0.024	ppb	-0.024	-92.89	18	2000	
Sn	120	3	115	0.030	ppb	0.030	162.11	936	2000	
Sb	121	3	115	0.210	ppb	0.210	8.39	198	1000	
Ba	137	3	115	285.678	ppb	285.678	2.47	68540	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-5.83	373	2000	
(Pb)	206	3	193	-0.053	ppb	-0.053	-30.65	295	100	
(Pb)	207	3	193	-0.045	ppb	-0.045	-52.12	468	100	
Pb	208	3	193	-0.037	ppb	-0.037	-33.19	1404	5000	
Th	232	3	193	2.032	ppb	2.032	9.13	16378	2000	
U	238	3	193	3.676	ppb	3.676	1.94	22444	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4207162	0.60	3887690	108.22	60	120	
Sc (IS)	45	3	HMI He	595385	1.01	560366	106.25	60	120	
Ge Internal standard	72	2	HMI H2	2558575	1.31	2321471	110.21	60	120	
Ge Internal standard	72	3	HMI He	741297	0.79	685485	108.14	60	120	
In Internal Standard	115	3	HMI He	2727397	1.53	2631879	103.63	60	120	
Ir (IS)	193	3	HMI He	6057680	0.60	5771767	104.95	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A
Data File Name	108SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:14:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1585.01	3	2000	
Na	23	3	45	103880.243	ppb	103880.243	1.02	11384280	400000	
Mg	24	3	45	75774.293	ppb	75774.293	1.50	4409940	400000	
Al	27	3	45	8.017	ppb	8.017	16.74	274	400000	
K	39	3	45	4680.306	ppb	4680.306	1.72	246676	400000	
Ca	40	2	45	218740.119	ppb	218740.119	0.78	122754230	400000	
V	51	3	72	2.273	ppb	2.273	6.15	2459	2000	
Cr	52	3	72	1.901	ppb	1.901	19.40	3675	5000	
Mn	55	3	72	3.586	ppb	3.586	3.98	1641	10000	
Fe	56	2	72	40.904	ppb	40.904	5.78	98567	10000	
Co	59	3	72	0.323	ppb	0.323	14.62	465	2000	
Ni	60	3	72	4.462	ppb	4.462	6.54	1991	5000	
Cu	63	3	72	1.835	ppb	1.835	2.69	2327	5000	
Zn	66	3	72	3.271	ppb	3.271	16.51	730	5000	
As	75	3	72	1.549	ppb	1.549	13.73	250	2000	
Se	78	2	72	0.249	ppb	0.249	27.44	19	2000	
Sr	88	3	72	786.302	ppb	786.302	0.75	433545	4000	
Mo	95	3	115	0.153	ppb	0.153	28.74	115	2000	
Ag	107	3	115	0.010	ppb	0.010	100.94	33	100	
Cd	111	3	115	-0.004	ppb	-0.004	-317.22	23	2000	
Sn	120	3	115	-0.132	ppb	-0.132	-56.57	821	2000	
Sb	121	3	115	0.142	ppb	0.142	20.36	148	1000	
Ba	137	3	115	354.242	ppb	354.242	1.44	85624	5000	
Tl	205	3	193	-0.129	ppb	-0.129	-6.95	510	2000	
(Pb)	206	3	193	-0.066	ppb	-0.066	-19.44	282	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-103.77	433	100	
Pb	208	3	193	-0.057	ppb	-0.057	-8.61	1318	5000	
Th	232	3	193	0.701	ppb	0.701	11.40	9466	2000	
U	238	3	193	4.529	ppb	4.529	2.26	27645	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4029469	1.05	3887690	103.65	60	120	
Sc (IS)	45	3	HMI He	604560	0.48	560366	107.89	60	120	
Ge Internal standard	72	2	HMI H2	2507432	1.96	2321471	108.01	60	120	
Ge Internal standard	72	3	HMI He	742531	0.57	685485	108.32	60	120	
In Internal Standard	115	3	HMI He	2747609	1.01	2631879	104.40	60	120	
Ir (IS)	193	3	HMI He	6147791	1.88	5771767	106.51	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A
Data File Name	109SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:16:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-145.43	2	2000	
Na	23	3	45	98723.510	ppb	98723.510	1.51	10737773	400000	
Mg	24	3	45	73507.326	ppb	73507.326	0.49	4245819	400000	
Al	27	3	45	4.303	ppb	4.303	43.29	187	400000	
K	39	3	45	5790.288	ppb	5790.288	1.05	296626	400000	
Ca	40	2	45	197588.775	ppb	197588.775	0.75	113471840	400000	
V	51	3	72	1.256	ppb	1.256	23.91	1804	2000	
Cr	52	3	72	0.988	ppb	0.988	20.87	2944	5000	
Mn	55	3	72	183.692	ppb	183.692	1.83	73984	10000	
Fe	56	2	72	521.844	ppb	521.844	0.27	878726	10000	
Co	59	3	72	3.058	ppb	3.058	4.80	4044	2000	
Ni	60	3	72	6.014	ppb	6.014	3.15	2536	5000	
Cu	63	3	72	1.041	ppb	1.041	17.12	1508	5000	
Zn	66	3	72	6.507	ppb	6.507	6.03	1228	5000	
As	75	3	72	0.873	ppb	0.873	25.36	170	2000	
Se	78	2	72	0.173	ppb	0.173	39.21	14	2000	
Sr	88	3	72	779.074	ppb	779.074	1.06	425401	4000	
Mo	95	3	115	0.259	ppb	0.259	26.21	170	2000	
Ag	107	3	115	0.001	ppb	0.001	317.44	18	100	
Cd	111	3	115	0.015	ppb	0.015	200.82	28	2000	
Sn	120	3	115	2.347	ppb	2.347	22.64	2716	2000	
Sb	121	3	115	0.140	ppb	0.140	10.96	148	1000	
Ba	137	3	115	354.366	ppb	354.366	1.47	86485	5000	
Tl	205	3	193	-0.145	ppb	-0.145	-6.94	441	2000	
(Pb)	206	3	193	0.259	ppb	0.259	13.23	705	100	
(Pb)	207	3	193	0.245	ppb	0.245	26.76	808	100	
Pb	208	3	193	0.273	ppb	0.273	9.86	3060	5000	
Th	232	3	193	0.252	ppb	0.252	29.95	6957	2000	
U	238	3	193	4.244	ppb	4.244	0.88	25697	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4123370	0.77	3887690	106.06	60	120	
Sc (IS)	45	3	HMI He	600040	0.95	560366	107.08	60	120	
Ge Internal standard	72	2	HMI H2	2494657	0.61	2321471	107.46	60	120	
Ge Internal standard	72	3	HMI He	735346	0.68	685485	107.27	60	120	
In Internal Standard	115	3	HMI He	2774174	0.55	2631879	105.41	60	120	
Ir (IS)	193	3	HMI He	6070700	0.79	5771767	105.18	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-1-A
Data File Name	110SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:18:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.032	ppb	0.032	343.14	5	2000	
Na	23	3	45	100950.593	ppb	100950.593	1.17	11216941	400000	
Mg	24	3	45	74323.710	ppb	74323.710	1.34	4385504	400000	
Al	27	3	45	3.120	ppb	3.120	28.99	163	400000	
K	39	3	45	4660.248	ppb	4660.248	0.43	249165	400000	
Ca	40	2	45	205720.452	ppb	205720.452	0.76	118533026	400000	
V	51	3	72	0.949	ppb	0.949	8.27	1649	2000	
Cr	52	3	72	1.120	ppb	1.120	16.49	3109	5000	
Mn	55	3	72	388.948	ppb	388.948	1.52	159782	10000	
Fe	56	2	72	54.752	ppb	54.752	3.95	122307	10000	
Co	59	3	72	0.274	ppb	0.274	11.46	405	2000	
Ni	60	3	72	9.676	ppb	9.676	2.84	3950	5000	
Cu	63	3	72	1.322	ppb	1.322	1.53	1828	5000	
Zn	66	3	72	2.265	ppb	2.265	18.37	578	5000	
As	75	3	72	0.415	ppb	0.415	63.38	120	2000	
Se	78	2	72	0.082	ppb	0.082	58.56	9	2000	
Sr	88	3	72	784.697	ppb	784.697	0.44	437606	4000	
Mo	95	3	115	0.143	ppb	0.143	29.45	112	2000	
Ag	107	3	115	0.010	ppb	0.010	47.55	33	100	
Cd	111	3	115	0.086	ppb	0.086	135.75	47	2000	
Sn	120	3	115	-0.237	ppb	-0.237	-29.12	751	2000	
Sb	121	3	115	0.068	ppb	0.068	48.92	93	1000	
Ba	137	3	115	352.201	ppb	352.201	2.22	86313	5000	
Tl	205	3	193	-0.038	ppb	-0.038	-45.13	881	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-573.34	365	100	
(Pb)	207	3	193	-0.008	ppb	-0.008	-132.54	520	100	
Pb	208	3	193	-0.005	ppb	-0.005	-396.87	1599	5000	
Th	232	3	193	0.061	ppb	0.061	79.01	6027	2000	
U	238	3	193	3.907	ppb	3.907	2.98	24140	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4137186	1.16	3887690	106.42	60	120	
Sc (IS)	45	3	HMI He	612990	0.97	560366	109.39	60	120	
Ge Internal standard	72	2	HMI H2	2531649	1.69	2321471	109.05	60	120	
Ge Internal standard	72	3	HMI He	751006	0.42	685485	109.56	60	120	
In Internal Standard	115	3	HMI He	2786373	2.25	2631879	105.87	60	120	
Ir (IS)	193	3	HMI He	6161882	3.12	5771767	106.76	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-2-A
Data File Name	111SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:20:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1267.00	3	2000	
Na	23	3	45	85549.071	ppb	85549.071	1.04	9474771	400000	
Mg	24	3	45	68064.018	ppb	68064.018	0.71	4001844	400000	
Al	27	3	45	1.990	ppb	1.990	48.80	137	400000	
K	39	3	45	4256.764	ppb	4256.764	1.87	229091	400000	
Ca	40	2	45	195592.112	ppb	195592.112	1.22	115819176	400000	
V	51	3	72	1.968	ppb	1.968	4.14	2304	2000	
Cr	52	3	72	1.008	ppb	1.008	17.58	3035	5000	
Mn	55	3	72	3.457	ppb	3.457	3.91	1614	10000	
Fe	56	2	72	20.423	ppb	20.423	13.41	65963	10000	
Co	59	3	72	0.115	ppb	0.115	43.20	193	2000	
Ni	60	3	72	2.941	ppb	2.941	13.90	1454	5000	
Cu	63	3	72	0.994	ppb	0.994	3.62	1498	5000	
Zn	66	3	72	2.113	ppb	2.113	18.64	556	5000	
As	75	3	72	1.078	ppb	1.078	25.10	198	2000	
Se	78	2	72	0.103	ppb	0.103	30.46	10	2000	
Sr	88	3	72	714.732	ppb	714.732	0.47	400443	4000	
Mo	95	3	115	0.123	ppb	0.123	32.26	102	2000	
Ag	107	3	115	0.004	ppb	0.004	102.92	23	100	
Cd	111	3	115	-0.052	ppb	-0.052	-97.75	12	2000	
Sn	120	3	115	-0.277	ppb	-0.277	-24.71	721	2000	
Sb	121	3	115	0.118	ppb	0.118	22.63	132	1000	
Ba	137	3	115	367.949	ppb	367.949	1.71	90220	5000	
Tl	205	3	193	-0.117	ppb	-0.117	-9.23	565	2000	
(Pb)	206	3	193	-0.008	ppb	-0.008	-655.35	360	100	
(Pb)	207	3	193	-0.010	ppb	-0.010	-784.41	520	100	
Pb	208	3	193	-0.008	ppb	-0.008	-582.34	1589	5000	
Th	232	3	193	-0.054	ppb	-0.054	-37.34	5432	2000	
U	238	3	193	4.396	ppb	4.396	1.40	27041	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4251675	0.44	3887690	109.36	60	120	
Sc (IS)	45	3	HMI He	610770	0.68	560366	108.99	60	120	
Ge Internal standard	72	2	HMI H2	2541856	1.58	2321471	109.49	60	120	
Ge Internal standard	72	3	HMI He	754497	0.69	685485	110.07	60	120	
In Internal Standard	115	3	HMI He	2787143	0.59	2631879	105.90	60	120	
Ir (IS)	193	3	HMI He	6183535	1.42	5771767	107.13	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	112_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:21:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.425	ppb	2.218	2261	50	98.9	90	110	
Na	23	3	45	47592.519	ppb	1.319	5243535	51000	93.3	90	110	
Mg	24	3	45	10216.810	ppb	2.199	596876	11000	92.9	90	110	
Al	27	3	45	948.900	ppb	1.622	21942	1000	94.9	90	110	
K	39	3	45	10087.458	ppb	0.420	502712	11000	91.7	90	110	
Ca	40	2	45	10300.432	ppb	0.519	5940615	11000	93.6	90	110	
V	51	3	72	49.914	ppb	2.019	31480	50	99.8	90	110	
Cr	52	3	72	51.065	ppb	2.663	40590	50	102.1	90	110	
Mn	55	3	72	50.346	ppb	4.059	20126	50	100.7	90	110	
Fe	56	2	72	1021.105	ppb	1.574	1635899	1000	102.1	90	110	
Co	59	3	72	49.728	ppb	1.093	64283	50	99.5	90	110	
Ni	60	3	72	50.273	ppb	1.740	18376	50	100.5	90	110	
Cu	63	3	72	49.494	ppb	3.797	49482	50	99.0	90	110	
Zn	66	3	72	51.793	ppb	4.009	8180	50	103.6	90	110	
As	75	3	72	50.723	ppb	1.684	5802	50	101.4	90	110	
Se	78	2	72	50.542	ppb	2.785	2947	50	101.1	90	110	
Sr	88	3	72	99.417	ppb	1.996	53550	100	99.4	90	110	
Mo	95	3	115	49.059	ppb	2.234	24667	50	98.1	90	110	
Ag	107	3	115	49.920	ppb	1.678	84423	50	99.8	90	110	
Cd	111	3	115	48.399	ppb	2.863	11963	50	96.8	90	110	
Sn	120	3	115	49.630	ppb	3.425	38342	50	99.3	90	110	
Sb	121	3	115	49.845	ppb	2.642	38030	50	99.7	90	110	
Ba	137	3	115	52.783	ppb	2.216	12797	50	105.6	90	110	
Tl	205	3	193	47.718	ppb	4.074	193837	50	95.4	90	110	
(Pb)	206	3	193	48.909	ppb	2.699	65350	50	97.8	90	110	
(Pb)	207	3	193	47.613	ppb	2.366	56783	50	95.2	90	110	
Pb	208	3	193	48.219	ppb	3.517	261720	50	96.4	90	110	
Th	232	3	193	47.280	ppb	2.105	259986	50	94.6	90	110	
U	238	3	193	47.903	ppb	3.766	274996	50	95.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4133382	0.88	3887690	106.32	60	120	
Sc (IS)	45	3	HMI He	606749	0.88	560366	108.28	60	120	
Ge Internal standard	72	2	HMI H2	2416244	0.92	2321471	104.08	60	120	
Ge Internal standard	72	3	HMI He	725235	1.73	685485	105.80	60	120	
In Internal Standard	115	3	HMI He	2749334	1.94	2631879	104.46	60	120	
Ir (IS)	193	3	HMI He	6148045	2.59	5771767	106.52	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	113_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:23:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.043	ppb	-142.9	2	0.5	
Na	23	3	45	50.825	ppb	9.2	22758	25	>RL
Mg	24	3	45	3.186	ppb	35.3	417	25	
Al	27	3	45	-0.222	ppb	-459.9	83	15	
K	39	3	45	1.440	ppb	1349.6	26365	50	
V	51	3	72	0.083	ppb	139.8	1058	1	
Cr	52	3	72	0.720	ppb	30.2	2684	1	
Mn	55	3	72	0.214	ppb	19.0	265	0.5	
Co	59	3	72	0.023	ppb	7.0	67	0.5	
Ni	60	3	72	0.776	ppb	18.1	618	1	
Cu	63	3	72	0.035	ppb	83.4	486	1	
Zn	66	3	72	-0.030	ppb	-867.0	203	5	
As	75	3	72	-0.018	ppb	-1381.4	67	1	
Se	78	2	72	-0.005	ppb	-850.1	3	1	
Sr	88	3	72	0.045	ppb	33.7	48	0.5	
Mo	95	3	115	0.035	ppb	68.0	57	0.5	
Ag	107	3	115	0.015	ppb	28.5	42	1	
Cd	111	3	115	-0.045	ppb	-53.5	13	0.5	
Sn	120	3	115	-0.107	ppb	-15.2	850	1	
Sb	121	3	115	0.079	ppb	75.9	102	0.6	
Ba	137	3	115	0.066	ppb	58.9	55	0.5	
Tl	205	3	193	-0.163	ppb	-3.2	375	0.1	
(Pb)	206	3	193	-0.071	ppb	-28.0	273	1	
(Pb)	207	3	193	-0.076	ppb	-90.0	438	1	
Pb	208	3	193	-0.067	ppb	-18.6	1258	0.5	
Th	232	3	193	1.842	ppb	8.3	15564	1	>RL
U	238	3	193	-0.010	ppb	-136.4	1741	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4178087	1.16	3887690	107.47	60	120	
Sc (IS)	45	3	HMI He	596356	0.85	560366	106.42	60	120	
Ge Internal standard	72	2	HMI H2	2490963	0.63	2321471	107.30	60	120	
Ge Internal standard	72	3	HMI He	720583	1.38	685485	105.12	60	120	
In Internal Standard	115	3	HMI He	2781673	1.45	2631879	105.69	60	120	
Ir (IS)	193	3	HMI He	6133719	2.30	5771767	106.27	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-3-A
Data File Name	114SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:25:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	170724.098	ppb	170724.098	0.70	18875018	400000	
Mg	24	3	45	96302.930	ppb	96302.930	1.81	5657257	400000	
Al	27	3	45	4.586	ppb	4.586	18.01	197	400000	
K	39	3	45	5651.461	ppb	5651.461	0.69	295116	400000	
Ca	40	2	45	253157.959	ppb	253157.959	0.51	149488191	400000	
V	51	3	72	2.575	ppb	2.575	6.46	2657	2000	
Cr	52	3	72	1.155	ppb	1.155	20.48	3112	5000	
Mn	55	3	72	23.186	ppb	23.186	1.58	9629	10000	
Fe	56	2	72	31.146	ppb	31.146	7.80	83229	10000	
Co	59	3	72	4.172	ppb	4.172	1.84	5578	2000	
Ni	60	3	72	72.772	ppb	72.772	1.61	27186	5000	
Cu	63	3	72	4.203	ppb	4.203	6.74	4747	5000	
Zn	66	3	72	2.168	ppb	2.168	11.82	558	5000	
As	75	3	72	1.256	ppb	1.256	23.60	217	2000	
Se	78	2	72	0.783	ppb	0.783	10.85	51	2000	
Sr	88	3	72	946.650	ppb	946.650	2.08	523898	4000	
Mo	95	3	115	0.379	ppb	0.379	11.46	232	2000	
Ag	107	3	115	0.003	ppb	0.003	219.48	22	100	
Cd	111	3	115	0.002	ppb	0.002	3460.71	25	2000	
Sn	120	3	115	-0.078	ppb	-0.078	-102.74	873	2000	
Sb	121	3	115	0.157	ppb	0.157	54.26	162	1000	
Ba	137	3	115	543.061	ppb	543.061	0.60	132955	5000	
Tl	205	3	193	-0.177	ppb	-0.177	-3.38	315	2000	
(Pb)	206	3	193	3.026	ppb	3.026	2.97	4362	100	
(Pb)	207	3	193	2.851	ppb	2.851	2.35	3870	100	
Pb	208	3	193	2.916	ppb	2.916	1.68	17236	5000	
Th	232	3	193	0.397	ppb	0.397	21.76	7775	2000	
U	238	3	193	5.530	ppb	5.530	1.92	33118	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4240014	2.12	3887690	109.06	60	120	
Sc (IS)	45	3	HMI He	610310	0.83	560366	108.91	60	120	
Ge Internal standard	72	2	HMI H2	2525967	0.54	2321471	108.81	60	120	
Ge Internal standard	72	3	HMI He	745338	0.59	685485	108.73	60	120	
In Internal Standard	115	3	HMI He	2783315	1.08	2631879	105.75	60	120	
Ir (IS)	193	3	HMI He	6104304	1.60	5771767	105.76	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-1-A
Data File Name	115SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:27:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-149.18	2	2000	
Na	23	3	45	67559.157	ppb	67559.157	2.44	7441689	400000	
Mg	24	3	45	53903.643	ppb	53903.643	1.30	3150705	400000	
Al	27	3	45	3.903	ppb	3.903	68.64	180	400000	
K	39	3	45	3491.573	ppb	3491.573	2.07	191626	400000	
Ca	40	2	45	120897.680	ppb	120897.680	1.25	71326803	400000	
V	51	3	72	0.648	ppb	0.648	9.80	1476	2000	
Cr	52	3	72	0.902	ppb	0.902	46.77	2972	5000	
Mn	55	3	72	0.522	ppb	0.522	27.67	406	10000	
Fe	56	2	72	20.048	ppb	20.048	11.71	65463	10000	
Co	59	3	72	0.043	ppb	0.043	25.55	97	2000	
Ni	60	3	72	1.148	ppb	1.148	15.40	791	5000	
Cu	63	3	72	0.682	ppb	0.682	10.16	1184	5000	
Zn	66	3	72	1.387	ppb	1.387	23.85	443	5000	
As	75	3	72	0.699	ppb	0.699	25.11	155	2000	
Se	78	2	72	0.429	ppb	0.429	27.26	30	2000	
Sr	88	3	72	604.409	ppb	604.409	0.89	340949	4000	
Mo	95	3	115	0.067	ppb	0.067	55.21	72	2000	
Ag	107	3	115	0.002	ppb	0.002	108.90	20	100	
Cd	111	3	115	-0.025	ppb	-0.025	-125.66	18	2000	
Sn	120	3	115	-0.341	ppb	-0.341	-23.25	663	2000	
Sb	121	3	115	0.099	ppb	0.099	31.99	115	1000	
Ba	137	3	115	225.430	ppb	225.430	3.16	54517	5000	
Tl	205	3	193	-0.191	ppb	-0.191	-4.01	262	2000	
(Pb)	206	3	193	-0.065	ppb	-0.065	-24.62	282	100	
(Pb)	207	3	193	-0.064	ppb	-0.064	-140.52	451	100	
Pb	208	3	193	-0.057	ppb	-0.057	-33.78	1311	5000	
Th	232	3	193	0.141	ppb	0.141	32.88	6427	2000	
U	238	3	193	2.194	ppb	2.194	2.42	14274	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4235317	1.88	3887690	108.94	60	120	
Sc (IS)	45	3	HMI He	607202	0.44	560366	108.36	60	120	
Ge Internal standard	72	2	HMI H2	2545049	0.33	2321471	109.63	60	120	
Ge Internal standard	72	3	HMI He	759660	0.71	685485	110.82	60	120	
In Internal Standard	115	3	HMI He	2749677	2.96	2631879	104.48	60	120	
Ir (IS)	193	3	HMI He	6126356	0.64	5771767	106.14	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-2-A
Data File Name	116SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:29:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	78145.393	ppb	78145.393	0.91	8614144	400000	
Mg	24	3	45	62532.700	ppb	62532.700	2.05	3659401	400000	
Al	27	3	45	2.307	ppb	2.307	70.27	143	400000	
K	39	3	45	4376.001	ppb	4376.001	2.08	233633	400000	
Ca	40	2	45	143482.977	ppb	143482.977	0.81	84247471	400000	
V	51	3	72	0.689	ppb	0.689	7.21	1483	2000	
Cr	52	3	72	1.060	ppb	1.060	13.73	3057	5000	
Mn	55	3	72	0.277	ppb	0.277	29.77	302	10000	
Fe	56	2	72	11.966	ppb	11.966	22.43	52358	10000	
Co	59	3	72	0.089	ppb	0.089	27.28	157	2000	
Ni	60	3	72	1.321	ppb	1.321	10.37	845	5000	
Cu	63	3	72	1.025	ppb	1.025	12.84	1519	5000	
Zn	66	3	72	0.188	ppb	0.188	154.92	247	5000	
As	75	3	72	0.218	ppb	0.218	28.31	97	2000	
Se	78	2	72	0.545	ppb	0.545	5.84	37	2000	
Sr	88	3	72	695.714	ppb	695.714	1.30	387199	4000	
Mo	95	3	115	0.065	ppb	0.065	34.98	72	2000	
Ag	107	3	115	0.017	ppb	0.017	34.38	45	100	
Cd	111	3	115	-0.058	ppb	-0.058	-34.42	10	2000	
Sn	120	3	115	-0.334	ppb	-0.334	-12.38	673	2000	
Sb	121	3	115	0.128	ppb	0.128	34.71	138	1000	
Ba	137	3	115	252.707	ppb	252.707	0.42	61545	5000	
Tl	205	3	193	-0.183	ppb	-0.183	-4.59	292	2000	
(Pb)	206	3	193	-0.045	ppb	-0.045	-56.90	308	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-74.10	431	100	
Pb	208	3	193	-0.057	ppb	-0.057	-31.08	1308	5000	
Th	232	3	193	-0.008	ppb	-0.008	-953.36	5614	2000	
U	238	3	193	3.312	ppb	3.312	1.22	20577	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4216213	2.82	3887690	108.45	60	120	
Sc (IS)	45	3	HMI He	607849	1.05	560366	108.47	60	120	
Ge Internal standard	72	2	HMI H2	2557917	1.04	2321471	110.19	60	120	
Ge Internal standard	72	3	HMI He	749534	1.08	685485	109.34	60	120	
In Internal Standard	115	3	HMI He	2767717	0.05	2631879	105.16	60	120	
Ir (IS)	193	3	HMI He	6111522	0.76	5771767	105.89	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A
Data File Name	117SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:30:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-155.60	2	2000	
Na	23	3	45	154926.575	ppb	154926.575	3.05	17045859	400000	
Mg	24	3	45	60742.988	ppb	60742.988	3.69	3550847	400000	
Al	27	3	45	4.496	ppb	4.496	26.57	194	400000	
K	39	3	45	4832.545	ppb	4832.545	0.49	255027	400000	
Ca	40	2	45	206686.521	ppb	206686.521	1.77	120629445	400000	
V	51	3	72	3.077	ppb	3.077	9.32	2964	2000	
Cr	52	3	72	1.720	ppb	1.720	13.51	3540	5000	
Mn	55	3	72	284.052	ppb	284.052	1.70	115578	10000	
Fe	56	2	72	61.614	ppb	61.614	4.35	134222	10000	
Co	59	3	72	1.678	ppb	1.678	1.98	2261	2000	
Ni	60	3	72	42.167	ppb	42.167	2.72	15861	5000	
Cu	63	3	72	1.256	ppb	1.256	6.89	1743	5000	
Zn	66	3	72	8.407	ppb	8.407	10.94	1541	5000	
As	75	3	72	1.617	ppb	1.617	14.99	258	2000	
Se	78	2	72	0.288	ppb	0.288	75.29	21	2000	
Sr	88	3	72	1032.507	ppb	1032.507	1.00	570072	4000	
Mo	95	3	115	0.350	ppb	0.350	14.88	217	2000	
Ag	107	3	115	0.007	ppb	0.007	87.93	28	100	
Cd	111	3	115	-0.051	ppb	-0.051	-82.75	12	2000	
Sn	120	3	115	-0.332	ppb	-0.332	-25.48	678	2000	
Sb	121	3	115	0.131	ppb	0.131	28.76	142	1000	
Ba	137	3	115	424.821	ppb	424.821	1.85	103841	5000	
Tl	205	3	193	-0.167	ppb	-0.167	-3.86	355	2000	
(Pb)	206	3	193	-0.017	ppb	-0.017	-106.75	343	100	
(Pb)	207	3	193	0.033	ppb	0.033	107.72	561	100	
Pb	208	3	193	-0.004	ppb	-0.004	-382.39	1588	5000	
Th	232	3	193	-0.064	ppb	-0.064	-74.46	5290	2000	
U	238	3	193	3.772	ppb	3.772	1.07	23087	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4190914	0.99	3887690	107.80	60	120	
Sc (IS)	45	3	HMI He	607397	1.27	560366	108.39	60	120	
Ge Internal standard	72	2	HMI H2	2543625	0.35	2321471	109.57	60	120	
Ge Internal standard	72	3	HMI He	743582	1.02	685485	108.48	60	120	
In Internal Standard	115	3	HMI He	2779303	2.27	2631879	105.60	60	120	
Ir (IS)	193	3	HMI He	6084737	0.93	5771767	105.42	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608663/1-A
Data File Name	118_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:32:45-06:00
Sample Type	Blank
Dilution	1
Comment	608663 soil 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.043	ppb	-141.7169234	2	0.5
Na	23	3	45	171.643	ppb	3.598355403	36601	25
Mg	24	3	45	31.737	ppb	6.179301456	2102	25
Al	27	3	45	8.346	ppb	42.09065349	284	15
K	39	3	45	16.523	ppb	81.60693185	27665	50
Ca	40	2	45	153.213	ppb	0.951974283	103180	200
V	51	3	72	-0.321	ppb	-47.78181136	830	1
Cr	52	3	72	2.042	ppb	7.54744709	3752	1
Mn	55	3	72	1.331	ppb	7.453917504	720	0.5
Fe	56	2	72	33.896	ppb	8.210389911	86734	50
Co	59	3	72	0.041	ppb	29.29743347	92	0.5
Ni	60	3	72	0.923	ppb	23.22381397	685	1
Cu	63	3	72	1.717	ppb	6.853433621	2189	1
Zn	66	3	72	4.503	ppb	8.664139578	916	5
As	75	3	72	-0.086	ppb	-101.7801397	60	1
(Se)	78	3	72	-0.098	ppb	-3362.582687	32	1
Sr	88	3	72	0.799	ppb	3.597958779	461	0.5
Mo	95	3	115	0.286	ppb	35.5767915	185	0.5
Ag	107	3	115	0.005	ppb	57.21913302	25	1
Cd	111	3	115	-0.059	ppb	-0.75781046	10	0.5
Sn	120	3	115	9.761	ppb	1.745941336	8408	1
Sb	121	3	115	0.018	ppb	32.53543956	55	0.6
Ba	137	3	115	0.615	ppb	2.688866575	190	0.5
Tl	205	3	193	-0.169	ppb	-3.852107335	352	0.1
(Pb)	206	3	193	0.149	ppb	34.55289268	566	1
(Pb)	207	3	193	0.184	ppb	34.02063022	746	1
Pb	208	3	193	0.169	ppb	8.30571369	2536	0.5
Th	232	3	193	-0.044	ppb	-31.77776377	5445	1
U	238	3	193	0.001	ppb	744.7012945	1809	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4286106	0.06	3887690	110.25	60	120	
Sc (IS)	45	3	HMI He	609688	0.10	560366	108.80	60	120	
Ge Internal standard	72	2	HMI H2	2498055	2.26	2321471	107.61	60	120	
Ge Internal standard	72	3	HMI He	736122	0.31	685485	107.39	60	120	
In Internal Standard	115	3	HMI He	2791177	1.12	2631879	106.05	60	120	
Ir (IS)	193	3	HMI He	6141915	1.47	5771767	106.41	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608663/2-A
Data File Name	119_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:34:36-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608663 soil 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	199.584	199.584	ppb	2.437	8917	40	499.0	80	120	>+/-20%
Na	23	3	45	3876.425	3876.425	ppb	1.025	441966	40	9691.1	80	120	>+/-20%
Mg	24	3	45	3485.198	3485.198	ppb	2.031	203179	40	8713.0	80	120	>+/-20%
Al	27	3	45	3496.844	3496.844	ppb	1.549	80374	40	8742.1	80	120	>+/-20%
K	39	3	45	3679.085	3679.085	ppb	0.697	199768	40	9197.7	80	120	>+/-20%
Ca	40	2	45	3910.233	3910.233	ppb	0.991	2284228	40	9775.6	80	120	>+/-20%
V	51	3	72	185.994	185.994	ppb	1.191	116334	40	465.0	80	120	>+/-20%
Cr	52	3	72	195.966	195.966	ppb	2.233	151988	40	489.9	80	120	>+/-20%
Mn	55	3	72	193.862	193.862	ppb	0.841	78195	40	484.7	80	120	>+/-20%
Fe	56	2	72	3713.938	3713.938	ppb	1.496	6117641	40	9284.8	80	120	>+/-20%
(Fe)	56	3	72	3694.361	3694.361	ppb	1.331	2455724	40	9235.9	80	120	>+/-20%
Co	59	3	72	190.119	190.119	ppb	1.562	249497	40	475.3	80	120	>+/-20%
Ni	60	3	72	192.243	192.243	ppb	1.132	70389	40	480.6	80	120	>+/-20%
Cu	63	3	72	195.602	195.602	ppb	0.433	197316	40	489.0	80	120	>+/-20%
Zn	66	3	72	199.452	199.452	ppb	0.882	31390	40	498.6	80	120	>+/-20%
As	75	3	72	186.402	186.402	ppb	1.298	21463	40	466.0	80	120	>+/-20%
Se	78	2	72	190.851	190.851	ppb	2.956	11585	40	477.1	80	120	>+/-20%
(Se)	78	3	72	212.222	212.222	ppb	6.651	1256	40	530.6	80	120	>+/-20%
Sr	88	3	72	379.707	379.707	ppb	1.270	207671	40	949.3	80	120	>+/-20%
Mo	95	3	115	186.506	186.506	ppb	2.102	93512	40	466.3	80	120	>+/-20%
Ag	107	3	115	197.433	197.433	ppb	2.634	333243	40	493.6	80	120	>+/-20%
Cd	111	3	115	188.660	188.660	ppb	1.616	46490	40	471.7	80	120	>+/-20%
Sn	120	3	115	193.261	193.261	ppb	1.219	146424	40	483.2	80	120	>+/-20%
Sb	121	3	115	188.244	188.244	ppb	1.627	143267	40	470.6	80	120	>+/-20%
Ba	137	3	115	200.985	200.985	ppb	0.987	48545	40	502.5	80	120	>+/-20%
Tl	205	3	193	187.343	187.343	ppb	1.599	749850	40	468.4	80	120	>+/-20%
(Pb)	206	3	193	196.068	196.068	ppb	2.359	257987	40	490.2	80	120	>+/-20%
(Pb)	207	3	193	186.744	186.744	ppb	1.738	218713	40	466.9	80	120	>+/-20%
Pb	208	3	193	190.540	190.540	ppb	2.497	1018180	40	476.4	80	120	>+/-20%
Th	232	3	193	188.277	188.277	ppb	2.123	1007022	40	470.7	80	120	>+/-20%
U	238	3	193	190.374	190.374	ppb	2.463	1075673	40	475.9	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174021	1.33	3887690	107.37	60	120	
Sc (IS)	45	3	HMI He	605022	1.29	560366	107.97	60	120	
Ge Internal standard	72	2	HMI H2	2518405	0.82	2321471	108.48	60	120	
Ge Internal standard	72	3	HMI He	736509	0.59	685485	107.44	60	120	
In Internal Standard	115	3	HMI He	2744742	2.03	2631879	104.29	60	120	
Ir (IS)	193	3	HMI He	6078825	1.68	5771767	105.32	60	120	

Sample Report

Sample Table

Sample Name	GB 280-608265/1-B
Data File Name	120SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:36:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.440	ppb	0.440	14.50	23	2000	
Na	23	3	45	528.981	ppb	528.981	0.97	73469	400000	
Mg	24	3	45	2812.111	ppb	2812.111	1.79	159704	400000	
Al	27	3	45	3661.657	ppb	3661.657	1.33	81955	400000	
K	39	3	45	1965.066	ppb	1965.066	4.46	115989	400000	
Ca	40	2	45	8021.145	ppb	8021.145	1.54	4558271	400000	
V	51	3	72	8.469	ppb	8.469	3.12	6302	2000	
Cr	52	3	72	33.984	ppb	33.984	4.75	28270	5000	
Mn	55	3	72	476.187	ppb	476.187	1.04	192494	10000	
Fe	56	2	72	36460.790	ppb	36460.790	1.41	59360494	10000	
Co	59	3	72	2.481	ppb	2.481	5.56	3305	2000	
Ni	60	3	72	10.321	ppb	10.321	4.04	4124	5000	
Cu	63	3	72	13.777	ppb	13.777	2.15	14377	5000	
Zn	66	3	72	15.003	ppb	15.003	1.94	2567	5000	
As	75	3	72	4.177	ppb	4.177	5.14	551	2000	
Se	78	2	72	0.206	ppb	0.206	49.13	16	2000	
Sr	88	3	72	32.791	ppb	32.791	2.47	18021	4000	
Mo	95	3	115	2.931	ppb	2.931	1.24	1506	2000	
Ag	107	3	115	0.126	ppb	0.126	9.79	228	100	
Cd	111	3	115	-0.004	ppb	-0.004	-293.14	23	2000	
Sn	120	3	115	8.192	ppb	8.192	3.70	7080	2000	
Sb	121	3	115	0.322	ppb	0.322	23.56	285	1000	
Ba	137	3	115	63.209	ppb	63.209	1.81	15275	5000	
Tl	205	3	193	-0.042	ppb	-0.042	-7.40	855	2000	
(Pb)	206	3	193	9.149	ppb	9.149	2.64	12397	100	
(Pb)	207	3	193	6.323	ppb	6.323	3.73	7915	100	
Pb	208	3	193	7.391	ppb	7.391	2.92	41074	5000	
Th	232	3	193	12.315	ppb	12.315	1.61	71219	2000	
U	238	3	193	3.423	ppb	3.423	5.80	21102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071440	2.01	3887690	104.73	60	120	
Sc (IS)	45	3	HMI He	589131	0.52	560366	105.13	60	120	
Ge Internal standard	72	2	HMI H2	2500685	0.96	2321471	107.72	60	120	
Ge Internal standard	72	3	HMI He	739184	0.81	685485	107.83	60	120	
In Internal Standard	115	3	HMI He	2741303	0.83	2631879	104.16	60	120	
Ir (IS)	193	3	HMI He	6084302	2.08	5771767	105.41	60	120	

Sample Report

Sample Table

Sample Name	LCSSRM 280-608265/2-B
Data File Name	121SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:38:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1140.877	ppb	1140.877	1.13	51207	2000	
Na	23	3	45	7920.150	ppb	7920.150	0.46	891545	400000	
Mg	24	3	45	37776.767	ppb	37776.767	2.11	2216858	400000	
Al	27	3	45	150485.133	ppb	150485.133	1.60	3481570	400000	
K	39	3	45	39536.183	ppb	39536.183	1.63	1900979	400000	
Ca	40	2	45	68989.074	ppb	68989.074	2.31	40824230	400000	
V	51	3	72	3152.636	ppb	3152.636	0.80	1941779	2000	
Cr	52	3	72	3042.589	ppb	3042.589	1.56	2311541	5000	
Mn	55	3	72	6020.589	ppb	6020.589	1.93	2405605	10000	
Fe	56	2	72	281695.384	ppb	281695.384	0.84	447890074	10000	>LDR
Co	59	3	72	1409.918	ppb	1409.918	1.14	1837039	2000	
Ni	60	3	72	2419.080	ppb	2419.080	2.03	875445	5000	
Cu	63	3	72	1981.913	ppb	1981.913	1.51	1980843	5000	
Zn	66	3	72	3306.123	ppb	3306.123	1.77	513310	5000	
As	75	3	72	2672.940	ppb	2672.940	0.89	304675	2000	
Se	78	2	72	3225.503	ppb	3225.503	0.95	189943	2000	
Sr	88	3	72	1775.095	ppb	1775.095	0.78	963935	4000	
Mo	95	3	115	2645.922	ppb	2645.922	2.41	1336456	2000	
Ag	107	3	115	1011.953	ppb	1011.953	0.72	1721279	100	>LDR
Cd	111	3	115	3080.935	ppb	3080.935	0.55	764663	2000	
Sn	120	3	115	2167.336	ppb	2167.336	1.42	1645367	2000	
Sb	121	3	115	2926.627	ppb	2926.627	1.98	2243845	1000	
Ba	137	3	115	4768.281	ppb	4768.281	0.68	1159605	5000	
Tl	205	3	193	1176.504	ppb	1176.504	0.86	4817811	2000	
(Pb)	206	3	193	3838.811	ppb	3838.811	1.68	5167130	100	>LDR
(Pb)	207	3	193	3631.367	ppb	3631.367	3.09	4346072	100	>LDR
Pb	208	3	193	3678.870	ppb	3678.870	2.03	20106542	5000	
Th	232	3	193	368.515	ppb	368.515	1.13	2013407	2000	
U	238	3	193	1842.145	ppb	1842.145	2.34	10645648	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4248763	1.58	3887690	109.29	60	120	
Sc (IS)	45	3	HMI He	609626	0.78	560366	108.79	60	120	
Ge Internal standard	72	2	HMI H2	2443451	0.76	2321471	105.25	60	120	
Ge Internal standard	72	3	HMI He	731333	0.99	685485	106.69	60	120	
In Internal Standard	115	3	HMI He	2765278	1.37	2631879	105.07	60	120	
Ir (IS)	193	3	HMI He	6225281	0.62	5771767	107.86	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C@50
Data File Name	122SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:39:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.221	ppb	0.221	59.91	13	2000	
Na	23	3	45	92.561	ppb	92.561	2.95	27347	400000	
Mg	24	3	45	1605.423	ppb	1605.423	2.44	92667	400000	
Al	27	3	45	2442.798	ppb	2442.798	1.82	55541	400000	
K	39	3	45	209.250	ppb	209.250	15.81	36109	400000	
Ca	40	2	45	5040.710	ppb	5040.710	3.09	2851980	400000	
V	51	3	72	7.097	ppb	7.097	4.46	5343	2000	
Cr	52	3	72	36.091	ppb	36.091	7.16	29290	5000	
Mn	55	3	72	2267.569	ppb	2267.569	2.04	897972	10000	
Fe	56	2	72	4422.665	ppb	4422.665	1.89	6918294	10000	
Co	59	3	72	2.402	ppb	2.402	4.70	3139	2000	
Ni	60	3	72	12.465	ppb	12.465	5.36	4812	5000	
Cu	63	3	72	24.042	ppb	24.042	1.99	24264	5000	
Zn	66	3	72	71.637	ppb	71.637	3.41	11226	5000	
As	75	3	72	11.016	ppb	11.016	2.22	1313	2000	
Se	78	2	72	0.829	ppb	0.829	16.09	51	2000	
Sr	88	3	72	10.832	ppb	10.832	5.16	5857	4000	
Mo	95	3	115	5.987	ppb	5.987	22.11	3014	2000	
Ag	107	3	115	0.185	ppb	0.185	10.07	327	100	
Cd	111	3	115	0.395	ppb	0.395	24.63	122	2000	
Sn	120	3	115	20.232	ppb	20.232	8.29	16070	2000	
Sb	121	3	115	3.047	ppb	3.047	5.39	2347	1000	
Ba	137	3	115	56.803	ppb	56.803	5.68	13677	5000	
Tl	205	3	193	0.254	ppb	0.254	17.00	2072	2000	
(Pb)	206	3	193	33.807	ppb	33.807	1.97	45586	100	
(Pb)	207	3	193	31.826	ppb	31.826	1.09	38381	100	
Pb	208	3	193	32.463	ppb	32.463	0.65	177930	5000	
Th	232	3	193	8.465	ppb	8.465	13.02	51540	2000	
U	238	3	193	0.497	ppb	0.497	2.46	4670	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4048793	2.43	3887690	104.14	60	120	
Sc (IS)	45	3	HMI He	598185	0.82	560366	106.75	60	120	
Ge Internal standard	72	2	HMI H2	2393764	0.99	2321471	103.11	60	120	
Ge Internal standard	72	3	HMI He	724778	1.41	685485	105.73	60	120	
In Internal Standard	115	3	HMI He	2733501	3.04	2631879	103.86	60	120	
Ir (IS)	193	3	HMI He	6186110	0.49	5771767	107.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	123_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:41:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.880	ppb	2.130	2306	50	103.8	90	110	
Na	23	3	45	47529.208	ppb	0.822	5176644	51000	93.2	90	110	
Mg	24	3	45	10158.602	ppb	2.127	586677	11000	92.4	90	110	
Al	27	3	45	933.106	ppb	1.302	21328	1000	93.3	90	110	
K	39	3	45	9996.589	ppb	1.470	492661	11000	90.9	90	110	
Ca	40	2	45	9998.745	ppb	1.185	5785476	11000	90.9	90	110	
V	51	3	72	49.116	ppb	3.425	30426	50	98.2	90	110	
Cr	52	3	72	51.192	ppb	1.941	39951	50	102.4	90	110	
Mn	55	3	72	49.941	ppb	1.694	19607	50	99.9	90	110	
Fe	56	2	72	1010.473	ppb	0.811	1620026	1000	101.0	90	110	
Co	59	3	72	50.033	ppb	2.162	63502	50	100.1	90	110	
Ni	60	3	72	51.673	ppb	1.438	18540	50	103.3	90	110	
Cu	63	3	72	50.463	ppb	2.499	49542	50	100.9	90	110	
Zn	66	3	72	51.116	ppb	3.585	7928	50	102.2	90	110	
As	75	3	72	50.499	ppb	2.944	5670	50	101.0	90	110	
Se	78	2	72	49.641	ppb	2.367	2896	50	99.3	90	110	
Sr	88	3	72	100.203	ppb	2.778	52995	100	100.2	90	110	
Mo	95	3	115	49.857	ppb	2.867	25433	50	99.7	90	110	
Ag	107	3	115	49.781	ppb	1.270	85422	50	99.6	90	110	
Cd	111	3	115	47.776	ppb	0.440	11986	50	95.6	90	110	
Sn	120	3	115	49.544	ppb	1.915	38840	50	99.1	90	110	
Sb	121	3	115	48.747	ppb	0.853	37743	50	97.5	90	110	
Ba	137	3	115	50.571	ppb	4.886	12440	50	101.1	90	110	
Tl	205	3	193	48.237	ppb	3.225	193375	50	96.5	90	110	
(Pb)	206	3	193	49.131	ppb	2.980	64776	50	98.3	90	110	
(Pb)	207	3	193	48.133	ppb	2.434	56638	50	96.3	90	110	
Pb	208	3	193	48.736	ppb	3.456	261021	50	97.5	90	110	
Th	232	3	193	51.079	ppb	1.451	276752	50	102.2	90	110	
U	238	3	193	48.746	ppb	4.486	276073	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4147267	1.91	3887690	106.68	60	120	
Sc (IS)	45	3	HMI He	599768	0.94	560366	107.03	60	120	
Ge Internal standard	72	2	HMI H2	2417434	1.34	2321471	104.13	60	120	
Ge Internal standard	72	3	HMI He	712099	1.50	685485	103.88	60	120	
In Internal Standard	115	3	HMI He	2789356	1.51	2631879	105.98	60	120	
Ir (IS)	193	3	HMI He	6066983	2.63	5771767	105.11	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	124_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:43:30-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.078	ppb	0.0	0	0.5	
Na	23	3	45	28.249	ppb	16.5	20412	25	>RL
Mg	24	3	45	1.815	ppb	91.5	340	25	
Al	27	3	45	1.228	ppb	73.7	117	15	
K	39	3	45	3.995	ppb	585.8	26592	50	
V	51	3	72	-0.695	ppb	-8.1	595	1	
Cr	52	3	72	0.815	ppb	24.2	2799	1	
Mn	55	3	72	0.400	ppb	20.7	343	0.5	
Co	59	3	72	0.053	ppb	17.2	107	0.5	
Ni	60	3	72	0.979	ppb	13.6	701	1	
Cu	63	3	72	0.037	ppb	23.5	496	1	
Zn	66	3	72	0.107	ppb	289.2	228	5	
As	75	3	72	-0.391	ppb	-19.1	25	1	
Se	78	2	72	0.203	ppb	25.4	15	1	
Sr	88	3	72	0.037	ppb	107.9	45	0.5	
Mo	95	3	115	0.232	ppb	36.7	158	0.5	
Ag	107	3	115	0.041	ppb	17.1	87	1	
Cd	111	3	115	0.086	ppb	14.1	47	0.5	
Sn	120	3	115	0.646	ppb	13.9	1439	1	
Sb	121	3	115	0.253	ppb	5.5	238	0.6	
Ba	137	3	115	0.111	ppb	72.6	67	0.5	
Tl	205	3	193	-0.108	ppb	-11.5	590	0.1	
(Pb)	206	3	193	-0.007	ppb	-316.0	356	1	
(Pb)	207	3	193	-0.040	ppb	-219.9	478	1	
Pb	208	3	193	-0.001	ppb	-1742.2	1603	0.5	
Th	232	3	193	1.876	ppb	16.0	15624	1	>RL
U	238	3	193	0.012	ppb	315.3	1854	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4056923	1.28	3887690	104.35	60	120	
Sc (IS)	45	3	HMI He	598933	0.28	560366	106.88	60	120	
Ge Internal standard	72	2	HMI H2	2420674	1.08	2321471	104.27	60	120	
Ge Internal standard	72	3	HMI He	732045	0.53	685485	106.79	60	120	
In Internal Standard	115	3	HMI He	2810593	0.63	2631879	106.79	60	120	
Ir (IS)	193	3	HMI He	6088926	1.01	5771767	105.50	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C
Data File Name	125SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:45:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	11.470	ppb	11.470	2.82	520	2000	
Na	23	3	45	2754.283	ppb	2754.283	2.13	322458	400000	
Mg	24	3	45	80848.193	ppb	80848.193	0.40	4758430	400000	
Al	27	3	45	126319.364	ppb	126319.364	0.64	2931489	400000	
K	39	3	45	10371.384	ppb	10371.384	0.20	520075	400000	
Ca	40	2	45	253074.888	ppb	253074.888	1.47	147445484	400000	
V	51	3	72	404.300	ppb	404.300	0.49	250521	2000	
Cr	52	3	72	1818.228	ppb	1818.228	1.41	1385829	5000	
Mn	55	3	72	115287.611	ppb	115287.611	1.71	46179156	10000	>LDR
Fe	56	2	72	226181.025	ppb	226181.025	1.46	353591172	10000	>LDR
Co	59	3	72	114.264	ppb	114.264	0.49	149284	2000	
Ni	60	3	72	565.391	ppb	565.391	0.25	205402	5000	
Cu	63	3	72	1208.770	ppb	1208.770	1.33	1211395	5000	
Zn	66	3	72	3354.855	ppb	3354.855	0.33	522207	5000	
As	75	3	72	563.688	ppb	563.688	1.22	64469	2000	
Se	78	2	72	6.816	ppb	6.816	6.82	398	2000	
Sr	88	3	72	555.177	ppb	555.177	0.63	302242	4000	
Mo	95	3	115	31.962	ppb	31.962	3.18	16203	2000	
Ag	107	3	115	2.389	ppb	2.389	5.97	4085	100	
Cd	111	3	115	4.243	ppb	4.243	5.32	1080	2000	
Sn	120	3	115	941.002	ppb	941.002	1.24	715864	2000	
Sb	121	3	115	25.997	ppb	25.997	1.58	20002	1000	
Ba	137	3	115	2906.258	ppb	2906.258	1.16	707837	5000	
Tl	205	3	193	1.199	ppb	1.199	4.88	5830	2000	
(Pb)	206	3	193	1792.190	ppb	1792.190	1.88	2361494	100	>LDR
(Pb)	207	3	193	1703.106	ppb	1703.106	3.37	1995365	100	>LDR
Pb	208	3	193	1725.678	ppb	1725.678	2.57	9232264	5000	
Th	232	3	193	36.524	ppb	36.524	1.46	200419	2000	
U	238	3	193	9.746	ppb	9.746	1.11	56915	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4183855	2.10	3887690	107.62	60	120	
Sc (IS)	45	3	HMI He	611426	1.06	560366	109.11	60	120	
Ge Internal standard	72	2	HMI H2	2402452	1.16	2321471	103.49	60	120	
Ge Internal standard	72	3	HMI He	733130	0.65	685485	106.95	60	120	
In Internal Standard	115	3	HMI He	2769737	1.64	2631879	105.24	60	120	
Ir (IS)	193	3	HMI He	6094457	1.44	5771767	105.59	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-2-C
Data File Name	126SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:47:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.173	ppb	6.173	8.49	285	2000	
Na	23	3	45	839.606	ppb	839.606	0.79	112452	400000	
Mg	24	3	45	17021.087	ppb	17021.087	2.54	1018628	400000	
Al	27	3	45	88099.444	ppb	88099.444	0.64	2078304	400000	
K	39	3	45	6268.805	ppb	6268.805	0.41	330395	400000	
Ca	40	2	45	51915.457	ppb	51915.457	3.32	30753459	400000	
V	51	3	72	189.779	ppb	189.779	1.41	120272	2000	
Cr	52	3	72	186.060	ppb	186.060	0.20	146370	5000	
Mn	55	3	72	8851.364	ppb	8851.364	0.43	3610005	10000	
Fe	56	2	72	103538.949	ppb	103538.949	0.52	166453878	10000	>LDR
Co	59	3	72	32.704	ppb	32.704	1.93	43530	2000	
Ni	60	3	72	100.740	ppb	100.740	2.27	37549	5000	
Cu	63	3	72	115.624	ppb	115.624	0.85	118394	5000	
Zn	66	3	72	311.378	ppb	311.378	1.09	49541	5000	
As	75	3	72	599.672	ppb	599.672	1.59	69820	2000	
Se	78	2	72	2.068	ppb	2.068	8.43	127	2000	
Sr	88	3	72	148.710	ppb	148.710	0.41	82446	4000	
Mo	95	3	115	10.378	ppb	10.378	3.96	5400	2000	
Ag	107	3	115	0.469	ppb	0.469	13.24	833	100	
Cd	111	3	115	0.354	ppb	0.354	8.58	115	2000	
Sn	120	3	115	22.226	ppb	22.226	1.78	18192	2000	
Sb	121	3	115	6.122	ppb	6.122	5.30	4842	1000	
Ba	137	3	115	1098.325	ppb	1098.325	2.57	273176	5000	
Tl	205	3	193	0.759	ppb	0.759	3.05	4125	2000	
(Pb)	206	3	193	169.370	ppb	169.370	1.14	226570	100	
(Pb)	207	3	193	158.115	ppb	158.115	2.35	188261	100	
Pb	208	3	193	163.172	ppb	163.172	1.89	886427	5000	
Th	232	3	193	28.562	ppb	28.562	1.72	160113	2000	
U	238	3	193	6.791	ppb	6.791	2.94	40743	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4252677	0.83	3887690	109.39	60	120	
Sc (IS)	45	3	HMI He	621542	0.29	560366	110.92	60	120	
Ge Internal standard	72	2	HMI H2	2470174	0.81	2321471	106.41	60	120	
Ge Internal standard	72	3	HMI He	746410	0.62	685485	108.89	60	120	
In Internal Standard	115	3	HMI He	2828415	1.08	2631879	107.47	60	120	
Ir (IS)	193	3	HMI He	6178221	2.17	5771767	107.04	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-3-C
Data File Name	127SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:48:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.329	ppb	0.329	19.25	18	2000	
Na	23	3	45	346.427	ppb	346.427	2.49	55581	400000	
Mg	24	3	45	1107.458	ppb	1107.458	1.78	64876	400000	
Al	27	3	45	22288.288	ppb	22288.288	2.02	512957	400000	
K	39	3	45	2958.161	ppb	2958.161	1.58	166207	400000	
Ca	40	2	45	1713.513	ppb	1713.513	4.07	1004044	400000	
V	51	3	72	138.312	ppb	138.312	1.95	87077	2000	
Cr	52	3	72	135.108	ppb	135.108	1.34	105843	5000	
Mn	55	3	72	440.768	ppb	440.768	0.78	178177	10000	
Fe	56	2	72	55657.552	ppb	55657.552	1.74	89623796	10000	>LDR
Co	59	3	72	7.942	ppb	7.942	3.47	10497	2000	
Ni	60	3	72	20.362	ppb	20.362	3.50	7795	5000	
Cu	63	3	72	119.111	ppb	119.111	1.67	120748	5000	
Zn	66	3	72	201.035	ppb	201.035	2.29	31749	5000	
As	75	3	72	60.182	ppb	60.182	4.97	7003	2000	
Se	78	2	72	1.415	ppb	1.415	6.73	88	2000	
Sr	88	3	72	40.401	ppb	40.401	2.67	22194	4000	
Mo	95	3	115	17.726	ppb	17.726	2.77	8970	2000	
Ag	107	3	115	0.221	ppb	0.221	3.05	391	100	
Cd	111	3	115	0.190	ppb	0.190	45.46	72	2000	
Sn	120	3	115	17.246	ppb	17.246	6.41	13965	2000	
Sb	121	3	115	4.200	ppb	4.200	3.44	3252	1000	
Ba	137	3	115	353.269	ppb	353.269	2.55	85705	5000	
Tl	205	3	193	0.111	ppb	0.111	17.96	1486	2000	
(Pb)	206	3	193	116.940	ppb	116.940	4.59	156220	100	
(Pb)	207	3	193	110.332	ppb	110.332	4.05	131292	100	
Pb	208	3	193	113.169	ppb	113.169	4.63	614038	5000	
Th	232	3	193	22.653	ppb	22.653	3.35	127952	2000	
U	238	3	193	3.095	ppb	3.095	3.49	19524	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4161990	2.21	3887690	107.06	60	120	
Sc (IS)	45	3	HMI He	606311	0.50	560366	108.20	60	120	
Ge Internal standard	72	2	HMI H2	2474291	1.62	2321471	106.58	60	120	
Ge Internal standard	72	3	HMI He	739114	1.20	685485	107.82	60	120	
In Internal Standard	115	3	HMI He	2758278	1.57	2631879	104.80	60	120	
Ir (IS)	193	3	HMI He	6172201	4.40	5771767	106.94	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-4-C
Data File Name	128SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:50:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.772	ppb	0.772	40.23	40	2000	
Na	23	3	45	380.104	ppb	380.104	2.21	60559	400000	
Mg	24	3	45	2178.239	ppb	2178.239	0.69	130129	400000	
Al	27	3	45	20659.284	ppb	20659.284	0.80	485797	400000	
K	39	3	45	2178.835	ppb	2178.835	4.11	132266	400000	
Ca	40	2	45	3192.877	ppb	3192.877	1.64	1929238	400000	
V	51	3	72	95.442	ppb	95.442	1.96	61615	2000	
Cr	52	3	72	120.514	ppb	120.514	1.79	96541	5000	
Mn	55	3	72	3653.153	ppb	3653.153	3.45	1504901	10000	
Fe	56	2	72	82079.891	ppb	82079.891	2.98	133186982	10000	>LDR
Co	59	3	72	11.603	ppb	11.603	3.28	15621	2000	
Ni	60	3	72	39.316	ppb	39.316	1.49	15022	5000	
Cu	63	3	72	317.989	ppb	317.989	1.35	328034	5000	
Zn	66	3	72	913.764	ppb	913.764	0.75	146424	5000	
As	75	3	72	51.087	ppb	51.087	2.10	6073	2000	
Se	78	2	72	1.379	ppb	1.379	8.99	87	2000	
Sr	88	3	72	40.078	ppb	40.078	2.15	22459	4000	
Mo	95	3	115	8.222	ppb	8.222	1.64	4209	2000	
Ag	107	3	115	2.740	ppb	2.740	4.33	4695	100	
Cd	111	3	115	1.839	ppb	1.839	22.95	481	2000	
Sn	120	3	115	224.428	ppb	224.428	3.32	171834	2000	
Sb	121	3	115	33.153	ppb	33.153	3.79	25553	1000	
Ba	137	3	115	519.594	ppb	519.594	4.28	126845	5000	
Tl	205	3	193	0.303	ppb	0.303	11.88	2292	2000	
(Pb)	206	3	193	2285.316	ppb	2285.316	0.63	3082426	100	>LDR
(Pb)	207	3	193	2154.131	ppb	2154.131	3.52	2583238	100	>LDR
Pb	208	3	193	2202.132	ppb	2202.132	1.44	12060255	5000	
Th	232	3	193	15.380	ppb	15.380	2.53	89726	2000	
U	238	3	193	2.343	ppb	2.343	1.58	15395	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4313053	1.94	3887690	110.94	60	120	
Sc (IS)	45	3	HMI He	619468	0.17	560366	110.55	60	120	
Ge Internal standard	72	2	HMI H2	2494438	2.64	2321471	107.45	60	120	
Ge Internal standard	72	3	HMI He	753935	1.14	685485	109.99	60	120	
In Internal Standard	115	3	HMI He	2777509	2.95	2631879	105.53	60	120	
Ir (IS)	193	3	HMI He	6237939	0.78	5771767	108.08	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-5-C
Data File Name	129SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:52:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.101	ppb	0.101	119.08	8	2000	
Na	23	3	45	259.540	ppb	259.540	3.83	46473	400000	
Mg	24	3	45	331.787	ppb	331.787	1.91	19784	400000	
Al	27	3	45	6815.304	ppb	6815.304	0.37	158394	400000	
K	39	3	45	1238.864	ppb	1238.864	1.41	85941	400000	
Ca	40	2	45	740.020	ppb	740.020	2.46	439930	400000	
V	51	3	72	69.786	ppb	69.786	0.83	44796	2000	
Cr	52	3	72	77.604	ppb	77.604	1.31	62212	5000	
Mn	55	3	72	471.601	ppb	471.601	1.17	192110	10000	
Fe	56	2	72	49632.381	ppb	49632.381	0.92	81971535	10000	
Co	59	3	72	5.314	ppb	5.314	3.09	7090	2000	
Ni	60	3	72	15.333	ppb	15.333	3.97	6002	5000	
Cu	63	3	72	56.871	ppb	56.871	0.63	58355	5000	
Zn	66	3	72	125.636	ppb	125.636	1.47	20076	5000	
As	75	3	72	17.272	ppb	17.272	9.63	2074	2000	
Se	78	2	72	0.714	ppb	0.714	2.60	47	2000	
Sr	88	3	72	20.647	ppb	20.647	3.38	11446	4000	
Mo	95	3	115	14.850	ppb	14.850	2.50	7615	2000	
Ag	107	3	115	0.217	ppb	0.217	7.25	388	100	
Cd	111	3	115	0.067	ppb	0.067	69.27	42	2000	
Sn	120	3	115	47.862	ppb	47.862	4.82	37596	2000	
Sb	121	3	115	2.677	ppb	2.677	3.02	2114	1000	
Ba	137	3	115	243.741	ppb	243.741	3.36	59897	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-47.82	785	2000	
(Pb)	206	3	193	154.705	ppb	154.705	1.69	205874	100	
(Pb)	207	3	193	145.218	ppb	145.218	0.92	172051	100	
Pb	208	3	193	149.482	ppb	149.482	1.37	807865	5000	
Th	232	3	193	15.286	ppb	15.286	1.63	87876	2000	
U	238	3	193	1.487	ppb	1.487	4.91	10279	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4159340	1.56	3887690	106.99	60	120	
Sc (IS)	45	3	HMI He	612022	1.34	560366	109.22	60	120	
Ge Internal standard	72	2	HMI H2	2537081	0.79	2321471	109.29	60	120	
Ge Internal standard	72	3	HMI He	744901	1.21	685485	108.67	60	120	
In Internal Standard	115	3	HMI He	2794560	3.12	2631879	106.18	60	120	
Ir (IS)	193	3	HMI He	6144400	1.27	5771767	106.46	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-1-C
Data File Name	130SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:54:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.473	ppb	0.473	61.79	25	2000	
Na	23	3	45	430.912	ppb	430.912	3.96	66395	400000	
Mg	24	3	45	1813.945	ppb	1813.945	1.01	108645	400000	
Al	27	3	45	15708.236	ppb	15708.236	1.19	370205	400000	
K	39	3	45	2034.319	ppb	2034.319	4.09	125569	400000	
Ca	40	2	45	3677.056	ppb	3677.056	2.37	2200865	400000	
V	51	3	72	102.635	ppb	102.635	0.78	66639	2000	
Cr	52	3	72	166.589	ppb	166.589	3.87	133474	5000	
Mn	55	3	72	6731.703	ppb	6731.703	2.11	2791644	10000	
Fe	56	2	72	113716.284	ppb	113716.284	1.89	186725744	10000	>LDR
Co	59	3	72	13.403	ppb	13.403	2.56	18163	2000	
Ni	60	3	72	53.109	ppb	53.109	2.51	20300	5000	
Cu	63	3	72	551.711	ppb	551.711	1.58	572656	5000	
Zn	66	3	72	1709.105	ppb	1709.105	1.32	275536	5000	
As	75	3	72	62.884	ppb	62.884	4.01	7508	2000	
Se	78	2	72	1.297	ppb	1.297	15.72	83	2000	
Sr	88	3	72	54.357	ppb	54.357	1.79	30663	4000	
Mo	95	3	115	10.962	ppb	10.962	1.52	5712	2000	
Ag	107	3	115	5.702	ppb	5.702	3.11	9952	100	
Cd	111	3	115	4.115	ppb	4.115	7.94	1071	2000	
Sn	120	3	115	221.876	ppb	221.876	1.77	173390	2000	
Sb	121	3	115	23.140	ppb	23.140	1.99	18217	1000	
Ba	137	3	115	530.738	ppb	530.738	1.07	132266	5000	
Tl	205	3	193	0.352	ppb	0.352	3.13	2481	2000	
(Pb)	206	3	193	1801.387	ppb	1801.387	0.38	2417470	100	>LDR
(Pb)	207	3	193	1745.502	ppb	1745.502	0.98	2083079	100	>LDR
Pb	208	3	193	1745.767	ppb	1745.767	0.59	9513185	5000	
Th	232	3	193	17.693	ppb	17.693	0.87	101839	2000	
U	238	3	193	2.434	ppb	2.434	3.26	15841	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4274528	0.77	3887690	109.95	60	120	
Sc (IS)	45	3	HMI He	620843	0.70	560366	110.79	60	120	
Ge Internal standard	72	2	HMI H2	2523524	1.50	2321471	108.70	60	120	
Ge Internal standard	72	3	HMI He	759071	1.15	685485	110.73	60	120	
In Internal Standard	115	3	HMI He	2833208	0.96	2631879	107.65	60	120	
Ir (IS)	193	3	HMI He	6206203	0.47	5771767	107.53	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-2-C
Data File Name	131SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:56:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.633	ppb	0.633	50.11	33	2000	
Na	23	3	45	264.314	ppb	264.314	2.51	47939	400000	
Mg	24	3	45	915.784	ppb	915.784	2.33	55273	400000	
Al	27	3	45	15745.222	ppb	15745.222	1.65	373110	400000	
K	39	3	45	1906.639	ppb	1906.639	0.58	120070	400000	
Ca	40	2	45	1088.665	ppb	1088.665	0.66	674240	400000	
V	51	3	72	108.474	ppb	108.474	1.63	70256	2000	
Cr	52	3	72	102.840	ppb	102.840	2.17	83145	5000	
Mn	55	3	72	978.416	ppb	978.416	0.50	405323	10000	
Fe	56	2	72	54058.073	ppb	54058.073	0.56	91702059	10000	>LDR
Co	59	3	72	6.952	ppb	6.952	3.17	9425	2000	
Ni	60	3	72	18.994	ppb	18.994	1.56	7480	5000	
Cu	63	3	72	175.911	ppb	175.911	1.21	182642	5000	
Zn	66	3	72	222.957	ppb	222.957	0.46	36081	5000	
As	75	3	72	31.555	ppb	31.555	0.27	3799	2000	
Se	78	2	72	1.318	ppb	1.318	21.19	87	2000	
Sr	88	3	72	28.789	ppb	28.789	0.41	16227	4000	
Mo	95	3	115	11.191	ppb	11.191	1.87	6037	2000	
Ag	107	3	115	0.534	ppb	0.534	7.85	981	100	
Cd	111	3	115	0.459	ppb	0.459	24.20	147	2000	
Sn	120	3	115	39.698	ppb	39.698	1.54	32931	2000	
Sb	121	3	115	4.500	ppb	4.500	5.87	3702	1000	
Ba	137	3	115	248.059	ppb	248.059	1.78	64031	5000	
Tl	205	3	193	0.093	ppb	0.093	13.94	1428	2000	
(Pb)	206	3	193	200.300	ppb	200.300	0.87	270302	100	
(Pb)	207	3	193	187.327	ppb	187.327	1.66	224994	100	
Pb	208	3	193	194.449	ppb	194.449	1.27	1065664	5000	
Th	232	3	193	16.864	ppb	16.864	1.67	97757	2000	
U	238	3	193	3.195	ppb	3.195	1.62	20313	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368388	0.50	3887690	112.36	60	120	
Sc (IS)	45	3	HMI He	624195	0.48	560366	111.39	60	120	
Ge Internal standard	72	2	HMI H2	2605914	1.65	2321471	112.25	60	120	
Ge Internal standard	72	3	HMI He	757867	0.73	685485	110.56	60	120	
In Internal Standard	115	3	HMI He	2933795	1.15	2631879	111.47	60	120	
Ir (IS)	193	3	HMI He	6233297	0.55	5771767	108.00	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-3-C
Data File Name	132SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:58:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.998	ppb	4.998	9.41	237	2000	
Na	23	3	45	548.963	ppb	548.963	2.53	81912	400000	
Mg	24	3	45	7071.727	ppb	7071.727	0.83	434799	400000	
Al	27	3	45	79457.757	ppb	79457.757	1.17	1925122	400000	
K	39	3	45	6184.386	ppb	6184.386	0.71	335154	400000	
Ca	40	2	45	2596.471	ppb	2596.471	2.62	1597606	400000	
V	51	3	72	188.151	ppb	188.151	1.38	123886	2000	
Cr	52	3	72	144.065	ppb	144.065	1.88	118251	5000	
Mn	55	3	72	4126.257	ppb	4126.257	1.31	1748307	10000	
Fe	56	2	72	93318.248	ppb	93318.248	1.66	156383319	10000	>LDR
Co	59	3	72	45.016	ppb	45.016	1.39	62230	2000	
Ni	60	3	72	71.999	ppb	71.999	1.56	27986	5000	
Cu	63	3	72	196.523	ppb	196.523	0.14	208722	5000	
Zn	66	3	72	368.769	ppb	368.769	1.05	60912	5000	
As	75	3	72	40.402	ppb	40.402	3.63	4955	2000	
Se	78	2	72	3.323	ppb	3.323	7.54	210	2000	
Sr	88	3	72	48.059	ppb	48.059	2.00	27696	4000	
Mo	95	3	115	7.419	ppb	7.419	7.03	3887	2000	
Ag	107	3	115	0.920	ppb	0.920	6.19	1624	100	
Cd	111	3	115	0.581	ppb	0.581	3.56	173	2000	
Sn	120	3	115	32.439	ppb	32.439	2.24	26231	2000	
Sb	121	3	115	5.771	ppb	5.771	2.61	4589	1000	
Ba	137	3	115	543.878	ppb	543.878	1.80	135905	5000	
Tl	205	3	193	1.089	ppb	1.089	3.65	5552	2000	
(Pb)	206	3	193	398.231	ppb	398.231	2.25	540806	100	
(Pb)	207	3	193	378.554	ppb	378.554	1.80	457344	100	
Pb	208	3	193	396.585	ppb	396.585	2.01	2187056	5000	
Th	232	3	193	22.562	ppb	22.562	2.62	129757	2000	
U	238	3	193	6.557	ppb	6.557	1.40	40048	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386710	2.81	3887690	112.84	60	120	
Sc (IS)	45	3	HMI He	638398	0.97	560366	113.93	60	120	
Ge Internal standard	72	2	HMI H2	2574730	1.29	2321471	110.91	60	120	
Ge Internal standard	72	3	HMI He	775452	0.88	685485	113.12	60	120	
In Internal Standard	115	3	HMI He	2841104	1.39	2631879	107.95	60	120	
Ir (IS)	193	3	HMI He	6278416	1.75	5771767	108.78	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-4-C
Data File Name	133SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:59:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.602	ppb	3.602	38.96	172	2000	
Na	23	3	45	486.291	ppb	486.291	3.06	75241	400000	
Mg	24	3	45	7011.771	ppb	7011.771	1.57	434357	400000	
Al	27	3	45	80604.704	ppb	80604.704	0.58	1967675	400000	
K	39	3	45	7109.555	ppb	7109.555	1.70	383935	400000	
Ca	40	2	45	1954.884	ppb	1954.884	0.67	1201753	400000	
V	51	3	72	195.323	ppb	195.323	1.45	125841	2000	
Cr	52	3	72	142.762	ppb	142.762	1.62	114719	5000	
Mn	55	3	72	1605.139	ppb	1605.139	1.58	665784	10000	
Fe	56	2	72	99323.417	ppb	99323.417	1.41	164644604	10000	>LDR
Co	59	3	72	31.216	ppb	31.216	1.68	42248	2000	
Ni	60	3	72	61.108	ppb	61.108	2.62	23301	5000	
Cu	63	3	72	59.335	ppb	59.335	1.90	62009	5000	
Zn	66	3	72	197.539	ppb	197.539	1.83	32038	5000	
As	75	3	72	27.957	ppb	27.957	0.48	3379	2000	
Se	78	2	72	1.146	ppb	1.146	3.80	74	2000	
Sr	88	3	72	49.752	ppb	49.752	1.53	28063	4000	
Mo	95	3	115	9.305	ppb	9.305	2.27	4867	2000	
Ag	107	3	115	0.200	ppb	0.200	14.80	366	100	
Cd	111	3	115	0.234	ppb	0.234	58.21	85	2000	
Sn	120	3	115	12.959	ppb	12.959	1.67	11049	2000	
Sb	121	3	115	1.479	ppb	1.479	3.30	1206	1000	
Ba	137	3	115	500.459	ppb	500.459	0.62	125035	5000	
Tl	205	3	193	0.652	ppb	0.652	6.26	3689	2000	
(Pb)	206	3	193	61.348	ppb	61.348	0.41	82337	100	
(Pb)	207	3	193	57.361	ppb	57.361	0.87	68674	100	
Pb	208	3	193	59.147	ppb	59.147	0.92	322515	5000	
Th	232	3	193	32.598	ppb	32.598	1.86	182008	2000	
U	238	3	193	5.566	ppb	5.566	1.64	33741	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370407	0.73	3887690	112.42	60	120	
Sc (IS)	45	3	HMI He	643170	0.30	560366	114.78	60	120	
Ge Internal standard	72	2	HMI H2	2547319	1.25	2321471	109.73	60	120	
Ge Internal standard	72	3	HMI He	758985	0.61	685485	110.72	60	120	
In Internal Standard	115	3	HMI He	2840156	0.35	2631879	107.91	60	120	
Ir (IS)	193	3	HMI He	6179835	0.57	5771767	107.07	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-5-F
Data File Name	134SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:01:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.189	ppb	6.189	23.62	297	2000	
Na	23	3	45	853.572	ppb	853.572	3.17	118541	400000	
Mg	24	3	45	14978.474	ppb	14978.474	1.37	931906	400000	
Al	27	3	45	133979.574	ppb	133979.574	3.09	3285769	400000	
K	39	3	45	10676.065	ppb	10676.065	2.03	564936	400000	
Ca	40	2	45	10418.987	ppb	10418.987	1.68	6509008	400000	
V	51	3	72	326.616	ppb	326.616	0.63	215174	2000	
Cr	52	3	72	231.474	ppb	231.474	0.15	189413	5000	
Mn	55	3	72	5969.624	ppb	5969.624	0.80	2540103	10000	
Fe	56	2	72	148928.611	ppb	148928.611	0.80	249677746	10000	>LDR
Co	59	3	72	66.316	ppb	66.316	0.56	92046	2000	
Ni	60	3	72	123.671	ppb	123.671	1.16	48012	5000	
Cu	63	3	72	215.223	ppb	215.223	0.39	229497	5000	
Zn	66	3	72	728.383	ppb	728.383	0.63	120605	5000	
As	75	3	72	59.131	ppb	59.131	3.97	7248	2000	
Se	78	2	72	4.642	ppb	4.642	3.01	292	2000	
Sr	88	3	72	83.778	ppb	83.778	1.07	48467	4000	
Mo	95	3	115	10.214	ppb	10.214	4.66	5477	2000	
Ag	107	3	115	0.983	ppb	0.983	3.30	1779	100	
Cd	111	3	115	1.411	ppb	1.411	6.84	395	2000	
Sn	120	3	115	37.677	ppb	37.677	0.70	31094	2000	
Sb	121	3	115	6.454	ppb	6.454	1.20	5257	1000	
Ba	137	3	115	857.362	ppb	857.362	1.25	219723	5000	
Tl	205	3	193	1.661	ppb	1.661	4.17	7909	2000	
(Pb)	206	3	193	463.246	ppb	463.246	1.05	628831	100	
(Pb)	207	3	193	434.477	ppb	434.477	1.19	524632	100	
Pb	208	3	193	458.096	ppb	458.096	1.50	2525087	5000	
Th	232	3	193	37.378	ppb	37.378	0.78	211067	2000	
U	238	3	193	9.695	ppb	9.695	1.44	58307	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4478193	1.52	3887690	115.19	60	120	
Sc (IS)	45	3	HMI He	646171	0.10	560366	115.31	60	120	
Ge Internal standard	72	2	HMI H2	2576218	0.61	2321471	110.97	60	120	
Ge Internal standard	72	3	HMI He	778717	0.75	685485	113.60	60	120	
In Internal Standard	115	3	HMI He	2913845	0.64	2631879	110.71	60	120	
Ir (IS)	193	3	HMI He	6275188	0.90	5771767	108.72	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	135_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:03:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.310	ppb	2.613	2399	50	102.6	90	110	
Na	23	3	45	47587.606	ppb	1.678	5383592	51000	93.3	90	110	
Mg	24	3	45	10257.222	ppb	1.653	615351	11000	93.2	90	110	
Al	27	3	45	978.341	ppb	2.903	23219	1000	97.8	90	110	
K	39	3	45	10254.951	ppb	2.212	524225	11000	93.2	90	110	
Ca	40	2	45	10106.217	ppb	1.075	6205290	11000	91.9	90	110	
V	51	3	72	49.457	ppb	0.653	32234	50	98.9	90	110	
Cr	52	3	72	51.677	ppb	1.666	42415	50	103.4	90	110	
Mn	55	3	72	51.333	ppb	3.174	21196	50	102.7	90	110	
Fe	56	2	72	1059.956	ppb	2.247	1782522	1000	106.0	90	110	
Co	59	3	72	49.535	ppb	1.762	66149	50	99.1	90	110	
Ni	60	3	72	51.498	ppb	3.857	19436	50	103.0	90	110	
Cu	63	3	72	49.728	ppb	2.189	51370	50	99.5	90	110	
Zn	66	3	72	52.461	ppb	1.886	8557	50	104.9	90	110	
As	75	3	72	50.555	ppb	1.007	5973	50	101.1	90	110	
Se	78	2	72	50.504	ppb	3.106	3092	50	101.0	90	110	
Sr	88	3	72	99.457	ppb	1.848	55348	100	99.5	90	110	
Mo	95	3	115	49.512	ppb	0.887	25630	50	99.0	90	110	
Ag	107	3	115	49.754	ppb	2.080	86613	50	99.5	90	110	
Cd	111	3	115	49.670	ppb	0.433	12640	50	99.3	90	110	
Sn	120	3	115	49.364	ppb	1.246	39268	50	98.7	90	110	
Sb	121	3	115	50.081	ppb	1.295	39332	50	100.2	90	110	
Ba	137	3	115	51.851	ppb	3.355	12943	50	103.7	90	110	
Tl	205	3	193	47.339	ppb	2.632	193904	50	94.7	90	110	
(Pb)	206	3	193	48.988	ppb	1.601	65990	50	98.0	90	110	
(Pb)	207	3	193	48.087	ppb	2.297	57799	50	96.2	90	110	
Pb	208	3	193	48.160	ppb	2.008	263564	50	96.3	90	110	
Th	232	3	193	49.642	ppb	2.027	274879	50	99.3	90	110	
U	238	3	193	47.338	ppb	1.025	274046	50	94.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400100	1.08	3887690	113.18	60	120	
Sc (IS)	45	3	HMI He	623088	2.11	560366	111.19	60	120	
Ge Internal standard	72	2	HMI H2	2538005	0.52	2321471	109.33	60	120	
Ge Internal standard	72	3	HMI He	749194	1.17	685485	109.29	60	120	
In Internal Standard	115	3	HMI He	2829705	0.88	2631879	107.52	60	120	
Ir (IS)	193	3	HMI He	6196520	1.81	5771767	107.36	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	136_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:05:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-145.9	2	0.5	
Na	23	3	45	19.080	ppb	13.5	20338	25	
Mg	24	3	45	0.994	ppb	57.6	307	25	
Al	27	3	45	4.656	ppb	43.4	204	15	
K	39	3	45	-10.517	ppb	-172.1	27140	50	
V	51	3	72	-0.869	ppb	-2.0	505	1	
Cr	52	3	72	1.103	ppb	9.0	3122	1	>RL
Mn	55	3	72	0.778	ppb	22.0	511	0.5	>RL
Co	59	3	72	0.033	ppb	5.8	83	0.5	
Ni	60	3	72	1.172	ppb	10.4	798	1	>RL
Cu	63	3	72	0.045	ppb	49.3	521	1	
Zn	66	3	72	-0.014	ppb	-616.2	217	5	
As	75	3	72	-0.313	ppb	-35.6	35	1	
Se	78	2	72	0.025	ppb	70.2	5	1	
Sr	88	3	72	0.028	ppb	77.9	42	0.5	
Mo	95	3	115	0.093	ppb	39.4	88	0.5	
Ag	107	3	115	0.011	ppb	79.5	35	1	
Cd	111	3	115	-0.086	ppb	-26.1	3	0.5	
Sn	120	3	115	0.413	ppb	15.2	1278	1	
Sb	121	3	115	0.044	ppb	6.6	77	0.6	
Ba	137	3	115	0.120	ppb	43.9	70	0.5	
Tl	205	3	193	-0.165	ppb	-2.9	375	0.1	
(Pb)	206	3	193	-0.054	ppb	-36.4	303	1	
(Pb)	207	3	193	-0.044	ppb	-54.1	486	1	
Pb	208	3	193	-0.028	ppb	-11.0	1503	0.5	
Th	232	3	193	1.600	ppb	11.6	14561	1	>RL
U	238	3	193	-0.005	ppb	-169.5	1808	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4425097	1.22	3887690	113.82	60	120	
Sc (IS)	45	3	HMI He	627274	1.14	560366	111.94	60	120	
Ge Internal standard	72	2	HMI H2	2592154	1.63	2321471	111.66	60	120	
Ge Internal standard	72	3	HMI He	757452	0.47	685485	110.50	60	120	
In Internal Standard	115	3	HMI He	2851270	0.80	2631879	108.34	60	120	
Ir (IS)	193	3	HMI He	6264724	1.05	5771767	108.54	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-6-C
Data File Name	137SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:07:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.189	ppb	4.189	23.43	198	2000	
Na	23	3	45	715.144	ppb	715.144	0.16	102806	400000	
Mg	24	3	45	10061.423	ppb	10061.423	0.85	628838	400000	
Al	27	3	45	120622.987	ppb	120622.987	1.53	2971353	400000	
K	39	3	45	11606.268	ppb	11606.268	1.78	614382	400000	
Ca	40	2	45	3688.066	ppb	3688.066	0.62	2316411	400000	
V	51	3	72	276.012	ppb	276.012	0.64	181595	2000	
Cr	52	3	72	185.813	ppb	185.813	1.15	152157	5000	
Mn	55	3	72	1488.915	ppb	1488.915	0.61	632244	10000	
Fe	56	2	72	143081.334	ppb	143081.334	0.44	243028293	10000	>LDR
Co	59	3	72	39.191	ppb	39.191	1.14	54289	2000	
Ni	60	3	72	74.282	ppb	74.282	2.54	28917	5000	
Cu	63	3	72	76.553	ppb	76.553	0.68	81760	5000	
Zn	66	3	72	253.850	ppb	253.850	3.17	42081	5000	
As	75	3	72	37.167	ppb	37.167	3.72	4573	2000	
Se	78	2	72	1.752	ppb	1.752	7.84	114	2000	
Sr	88	3	72	67.167	ppb	67.167	2.63	38774	4000	
Mo	95	3	115	9.806	ppb	9.806	1.28	5228	2000	
Ag	107	3	115	0.197	ppb	0.197	12.51	366	100	
Cd	111	3	115	0.241	ppb	0.241	4.88	88	2000	
Sn	120	3	115	14.405	ppb	14.405	1.01	12418	2000	
Sb	121	3	115	1.918	ppb	1.918	1.97	1583	1000	
Ba	137	3	115	555.447	ppb	555.447	2.09	141508	5000	
Tl	205	3	193	1.009	ppb	1.009	6.29	5155	2000	
(Pb)	206	3	193	85.918	ppb	85.918	1.20	115520	100	
(Pb)	207	3	193	79.418	ppb	79.418	1.87	95165	100	
Pb	208	3	193	82.475	ppb	82.475	1.66	450439	5000	
Th	232	3	193	43.798	ppb	43.798	1.57	243329	2000	
U	238	3	193	8.022	ppb	8.022	1.86	47972	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4486186	0.91	3887690	115.39	60	120	
Sc (IS)	45	3	HMI He	649031	0.08	560366	115.82	60	120	
Ge Internal standard	72	2	HMI H2	2610031	1.11	2321471	112.43	60	120	
Ge Internal standard	72	3	HMI He	776951	0.27	685485	113.34	60	120	
In Internal Standard	115	3	HMI He	2896576	0.91	2631879	110.06	60	120	
Ir (IS)	193	3	HMI He	6199729	1.84	5771767	107.41	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-1-C
Data File Name	138SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:08:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.926	ppb	2.926	18.14	143	2000	
Na	23	3	45	594.578	ppb	594.578	1.65	88403	400000	
Mg	24	3	45	6931.501	ppb	6931.501	2.03	432057	400000	
Al	27	3	45	74251.511	ppb	74251.511	1.56	1823901	400000	
K	39	3	45	6556.294	ppb	6556.294	1.55	358505	400000	
Ca	40	2	45	2170.304	ppb	2170.304	4.51	1343668	400000	
V	51	3	72	199.035	ppb	199.035	0.86	130143	2000	
Cr	52	3	72	143.173	ppb	143.173	1.36	116778	5000	
Mn	55	3	72	2610.667	ppb	2610.667	1.60	1099018	10000	
Fe	56	2	72	95828.196	ppb	95828.196	1.26	161021678	10000	>LDR
Co	59	3	72	40.481	ppb	40.481	1.47	55600	2000	
Ni	60	3	72	66.521	ppb	66.521	1.45	25716	5000	
Cu	63	3	72	175.754	ppb	175.754	1.44	185496	5000	
Zn	66	3	72	335.404	ppb	335.404	1.13	55062	5000	
As	75	3	72	39.267	ppb	39.267	2.62	4787	2000	
Se	78	2	72	3.182	ppb	3.182	7.47	202	2000	
Sr	88	3	72	54.676	ppb	54.676	1.95	31300	4000	
Mo	95	3	115	7.001	ppb	7.001	5.53	3770	2000	
Ag	107	3	115	0.780	ppb	0.780	7.71	1416	100	
Cd	111	3	115	0.442	ppb	0.442	29.35	142	2000	
Sn	120	3	115	22.261	ppb	22.261	1.96	18792	2000	
Sb	121	3	115	5.410	ppb	5.410	4.51	4419	1000	
Ba	137	3	115	532.549	ppb	532.549	0.52	136663	5000	
Tl	205	3	193	1.025	ppb	1.025	2.25	5220	2000	
(Pb)	206	3	193	436.106	ppb	436.106	2.47	584611	100	
(Pb)	207	3	193	403.938	ppb	403.938	1.31	481765	100	
Pb	208	3	193	432.766	ppb	432.766	1.07	2356079	5000	
Th	232	3	193	23.415	ppb	23.415	1.74	132718	2000	
U	238	3	193	6.042	ppb	6.042	1.70	36569	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4409220	2.94	3887690	113.41	60	120	
Sc (IS)	45	3	HMI He	647257	1.00	560366	115.51	60	120	
Ge Internal standard	72	2	HMI H2	2582245	2.43	2321471	111.23	60	120	
Ge Internal standard	72	3	HMI He	770380	0.68	685485	112.38	60	120	
In Internal Standard	115	3	HMI He	2917344	0.69	2631879	110.85	60	120	
Ir (IS)	193	3	HMI He	6197589	1.23	5771767	107.38	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-2-C
Data File Name	139SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:10:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.964	ppb	1.964	11.42	95	2000	
Na	23	3	45	485.761	ppb	485.761	1.80	74976	400000	
Mg	24	3	45	5050.298	ppb	5050.298	0.71	312068	400000	
Al	27	3	45	65362.535	ppb	65362.535	1.78	1591367	400000	
K	39	3	45	6671.806	ppb	6671.806	0.97	361074	400000	
Ca	40	2	45	1441.563	ppb	1441.563	0.35	878375	400000	
V	51	3	72	177.532	ppb	177.532	0.69	115852	2000	
Cr	52	3	72	133.601	ppb	133.601	0.28	108796	5000	
Mn	55	3	72	1075.532	ppb	1075.532	1.01	451553	10000	
Fe	56	2	72	73921.805	ppb	73921.805	2.40	124566174	10000	>LDR
Co	59	3	72	24.804	ppb	24.804	0.40	33981	2000	
Ni	60	3	72	47.752	ppb	47.752	1.48	18508	5000	
Cu	63	3	72	59.379	ppb	59.379	0.64	62802	5000	
Zn	66	3	72	160.000	ppb	160.000	0.34	26304	5000	
As	75	3	72	25.546	ppb	25.546	2.66	3130	2000	
Se	78	2	72	1.008	ppb	1.008	11.90	67	2000	
Sr	88	3	72	48.911	ppb	48.911	1.03	27922	4000	
Mo	95	3	115	6.964	ppb	6.964	6.34	3675	2000	
Ag	107	3	115	0.196	ppb	0.196	15.79	360	100	
Cd	111	3	115	0.124	ppb	0.124	86.60	57	2000	
Sn	120	3	115	11.434	ppb	11.434	3.45	9930	2000	
Sb	121	3	115	1.779	ppb	1.779	6.29	1453	1000	
Ba	137	3	115	463.814	ppb	463.814	3.26	116670	5000	
Tl	205	3	193	0.450	ppb	0.450	10.00	2904	2000	
(Pb)	206	3	193	59.288	ppb	59.288	2.77	80583	100	
(Pb)	207	3	193	55.586	ppb	55.586	2.66	67403	100	
Pb	208	3	193	57.555	ppb	57.555	2.75	317822	5000	
Th	232	3	193	28.635	ppb	28.635	3.18	162599	2000	
U	238	3	193	4.660	ppb	4.660	1.61	28908	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4316322	1.35	3887690	111.03	60	120	
Sc (IS)	45	3	HMI He	641420	0.84	560366	114.46	60	120	
Ge Internal standard	72	2	HMI H2	2589430	1.87	2321471	111.54	60	120	
Ge Internal standard	72	3	HMI He	768070	0.27	685485	112.05	60	120	
In Internal Standard	115	3	HMI He	2861187	2.80	2631879	108.71	60	120	
Ir (IS)	193	3	HMI He	6259393	1.81	5771767	108.45	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-3-C
Data File Name	140SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:12:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.481	ppb	2.481	22.15	120	2000	
Na	23	3	45	498.272	ppb	498.272	2.34	77203	400000	
Mg	24	3	45	5450.700	ppb	5450.700	1.63	340226	400000	
Al	27	3	45	70932.221	ppb	70932.221	0.20	1744680	400000	
K	39	3	45	6959.237	ppb	6959.237	1.36	379258	400000	
Ca	40	2	45	1633.721	ppb	1633.721	2.50	1013132	400000	
V	51	3	72	186.680	ppb	186.680	0.89	121697	2000	
Cr	52	3	72	137.821	ppb	137.821	1.09	112097	5000	
Mn	55	3	72	1064.094	ppb	1064.094	1.27	446520	10000	
Fe	56	2	72	82659.434	ppb	82659.434	0.98	136581223	10000	>LDR
Co	59	3	72	29.950	ppb	29.950	1.08	41005	2000	
Ni	60	3	72	51.601	ppb	51.601	2.78	19959	5000	
Cu	63	3	72	60.412	ppb	60.412	1.38	63852	5000	
Zn	66	3	72	192.380	ppb	192.380	2.97	31562	5000	
As	75	3	72	25.409	ppb	25.409	3.37	3112	2000	
Se	78	2	72	1.117	ppb	1.117	10.85	72	2000	
Sr	88	3	72	52.161	ppb	52.161	1.53	29759	4000	
Mo	95	3	115	9.088	ppb	9.088	4.10	4870	2000	
Ag	107	3	115	0.226	ppb	0.226	14.43	420	100	
Cd	111	3	115	0.279	ppb	0.279	30.74	98	2000	
Sn	120	3	115	16.793	ppb	16.793	3.17	14374	2000	
Sb	121	3	115	1.745	ppb	1.745	12.02	1448	1000	
Ba	137	3	115	467.628	ppb	467.628	2.60	119654	5000	
Tl	205	3	193	0.497	ppb	0.497	3.86	3052	2000	
(Pb)	206	3	193	63.093	ppb	63.093	1.91	84429	100	
(Pb)	207	3	193	58.658	ppb	58.658	0.91	70023	100	
Pb	208	3	193	60.706	ppb	60.706	1.90	330030	5000	
Th	232	3	193	31.010	ppb	31.010	1.31	172945	2000	
U	238	3	193	4.892	ppb	4.892	2.07	29789	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400581	0.76	3887690	113.19	60	120	
Sc (IS)	45	3	HMI He	648059	1.38	560366	115.65	60	120	
Ge Internal standard	72	2	HMI H2	2538819	0.52	2321471	109.36	60	120	
Ge Internal standard	72	3	HMI He	767669	0.69	685485	111.99	60	120	
In Internal Standard	115	3	HMI He	2909642	2.12	2631879	110.55	60	120	
Ir (IS)	193	3	HMI He	6163297	1.58	5771767	106.78	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-4-C
Data File Name	141SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:14:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.664	ppb	2.664	12.57	128	2000	
Na	23	3	45	432.791	ppb	432.791	1.66	69127	400000	
Mg	24	3	45	5431.231	ppb	5431.231	0.44	337073	400000	
Al	27	3	45	66479.128	ppb	66479.128	2.70	1625660	400000	
K	39	3	45	6316.089	ppb	6316.089	1.07	344853	400000	
Ca	40	2	45	1435.414	ppb	1435.414	3.93	896599	400000	
V	51	3	72	181.982	ppb	181.982	0.86	118108	2000	
Cr	52	3	72	132.625	ppb	132.625	1.02	107453	5000	
Mn	55	3	72	996.228	ppb	996.228	0.96	416077	10000	
Fe	56	2	72	85505.582	ppb	85505.582	2.10	143944893	10000	>LDR
Co	59	3	72	25.584	ppb	25.584	1.39	34865	2000	
Ni	60	3	72	51.297	ppb	51.297	1.98	19751	5000	
Cu	63	3	72	54.332	ppb	54.332	1.83	57203	5000	
Zn	66	3	72	168.731	ppb	168.731	3.52	27579	5000	
As	75	3	72	30.580	ppb	30.580	0.12	3714	2000	
Se	78	2	72	0.774	ppb	0.774	4.80	52	2000	
Sr	88	3	72	44.467	ppb	44.467	0.99	25254	4000	
Mo	95	3	115	7.912	ppb	7.912	5.22	4235	2000	
Ag	107	3	115	0.160	ppb	0.160	17.62	302	100	
Cd	111	3	115	0.163	ppb	0.163	15.16	68	2000	
Sn	120	3	115	11.914	ppb	11.914	2.52	10464	2000	
Sb	121	3	115	1.705	ppb	1.705	5.04	1416	1000	
Ba	137	3	115	411.832	ppb	411.832	1.73	105223	5000	
Tl	205	3	193	0.476	ppb	0.476	5.94	3024	2000	
(Pb)	206	3	193	54.117	ppb	54.117	3.53	73817	100	
(Pb)	207	3	193	50.633	ppb	50.633	1.58	61654	100	
Pb	208	3	193	52.287	ppb	52.287	1.91	289822	5000	
Th	232	3	193	27.103	ppb	27.103	1.34	154717	2000	
U	238	3	193	4.468	ppb	4.468	0.47	27877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4425152	1.30	3887690	113.82	60	120	
Sc (IS)	45	3	HMI He	644267	0.58	560366	114.97	60	120	
Ge Internal standard	72	2	HMI H2	2586612	0.69	2321471	111.42	60	120	
Ge Internal standard	72	3	HMI He	764089	0.72	685485	111.47	60	120	
In Internal Standard	115	3	HMI He	2904677	1.83	2631879	110.37	60	120	
Ir (IS)	193	3	HMI He	6278670	1.33	5771767	108.78	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-1-C
Data File Name	142SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:16:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.272	ppb	2.272	28.29	110	2000	
Na	23	3	45	438.400	ppb	438.400	1.73	69888	400000	
Mg	24	3	45	5019.582	ppb	5019.582	1.94	311972	400000	
Al	27	3	45	58841.653	ppb	58841.653	1.93	1440951	400000	
K	39	3	45	4843.192	ppb	4843.192	0.96	271434	400000	
Ca	40	2	45	1506.943	ppb	1506.943	0.40	943913	400000	
V	51	3	72	160.911	ppb	160.911	0.42	106493	2000	
Cr	52	3	72	134.318	ppb	134.318	1.47	110813	5000	
Mn	55	3	72	2005.388	ppb	2005.388	1.39	852868	10000	
Fe	56	2	72	94990.130	ppb	94990.130	1.42	160776629	10000	>LDR
Co	59	3	72	29.188	ppb	29.188	1.26	40509	2000	
Ni	60	3	72	53.070	ppb	53.070	2.92	20799	5000	
Cu	63	3	72	135.686	ppb	135.686	0.87	144774	5000	
Zn	66	3	72	233.419	ppb	233.419	1.60	38777	5000	
As	75	3	72	36.321	ppb	36.321	2.65	4479	2000	
Se	78	2	72	2.866	ppb	2.866	21.66	183	2000	
Sr	88	3	72	43.386	ppb	43.386	1.66	25097	4000	
Mo	95	3	115	7.383	ppb	7.383	6.73	3835	2000	
Ag	107	3	115	0.779	ppb	0.779	7.36	1364	100	
Cd	111	3	115	0.258	ppb	0.258	15.01	90	2000	
Sn	120	3	115	26.420	ppb	26.420	2.20	21338	2000	
Sb	121	3	115	7.185	ppb	7.185	1.48	5648	1000	
Ba	137	3	115	439.111	ppb	439.111	1.20	108710	5000	
Tl	205	3	193	0.737	ppb	0.737	2.52	4134	2000	
(Pb)	206	3	193	571.319	ppb	571.319	1.78	782456	100	>LDR
(Pb)	207	3	193	540.489	ppb	540.489	2.23	658363	100	>LDR
Pb	208	3	193	572.858	ppb	572.858	1.20	3185998	5000	
Th	232	3	193	19.283	ppb	19.283	2.64	112697	2000	
U	238	3	193	4.868	ppb	4.868	3.70	30460	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4439682	2.27	3887690	114.20	60	120	
Sc (IS)	45	3	HMI He	645210	0.82	560366	115.14	60	120	
Ge Internal standard	72	2	HMI H2	2600748	0.45	2321471	112.03	60	120	
Ge Internal standard	72	3	HMI He	778208	0.16	685485	113.53	60	120	
In Internal Standard	115	3	HMI He	2814465	1.41	2631879	106.94	60	120	
Ir (IS)	193	3	HMI He	6332494	1.63	5771767	109.71	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	143_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:17:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.431	ppb	3.013	2396	50	102.9	90	110	
Na	23	3	45	46993.385	ppb	2.456	5436114	51000	92.1	90	110	
Mg	24	3	45	10004.647	ppb	1.036	613710	11000	91.0	90	110	
Al	27	3	45	944.350	ppb	0.614	22925	1000	94.4	90	110	
K	39	3	45	10141.085	ppb	0.456	530426	11000	92.2	90	110	
Ca	40	2	45	10180.057	ppb	1.709	6265138	11000	92.5	90	110	
V	51	3	72	48.672	ppb	0.776	32525	50	97.3	90	110	
Cr	52	3	72	52.045	ppb	0.343	43758	50	104.1	90	110	
Mn	55	3	72	51.181	ppb	2.058	21659	50	102.4	90	110	
Fe	56	2	72	1055.651	ppb	2.011	1813392	1000	105.6	90	110	
Co	59	3	72	49.715	ppb	0.977	68041	50	99.4	90	110	
Ni	60	3	72	51.598	ppb	0.407	19959	50	103.2	90	110	
Cu	63	3	72	49.962	ppb	2.225	52896	50	99.9	90	110	
Zn	66	3	72	49.903	ppb	2.325	8353	50	99.8	90	110	
As	75	3	72	50.482	ppb	4.022	6113	50	101.0	90	110	
Se	78	2	72	49.834	ppb	2.197	3117	50	99.7	90	110	
Sr	88	3	72	100.922	ppb	2.103	57563	100	100.9	90	110	
Mo	95	3	115	48.882	ppb	2.664	25904	50	97.8	90	110	
Ag	107	3	115	48.901	ppb	3.260	87142	50	97.8	90	110	
Cd	111	3	115	48.478	ppb	2.511	12631	50	97.0	90	110	
Sn	120	3	115	48.819	ppb	2.056	39769	50	97.6	90	110	
Sb	121	3	115	49.583	ppb	1.919	39875	50	99.2	90	110	
Ba	137	3	115	51.071	ppb	4.063	13048	50	102.1	90	110	
Tl	205	3	193	48.810	ppb	3.392	195428	50	97.6	90	110	
(Pb)	206	3	193	49.999	ppb	0.269	65839	50	100.0	90	110	
(Pb)	207	3	193	49.815	ppb	1.784	58521	50	99.6	90	110	
Pb	208	3	193	49.562	ppb	0.927	265134	50	99.1	90	110	
Th	232	3	193	49.633	ppb	0.872	268700	50	99.3	90	110	
U	238	3	193	48.751	ppb	2.669	275832	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4411060	0.90	3887690	113.46	60	120	
Sc (IS)	45	3	HMI He	637012	0.46	560366	113.68	60	120	
Ge Internal standard	72	2	HMI H2	2592091	0.73	2321471	111.66	60	120	
Ge Internal standard	72	3	HMI He	767712	0.80	685485	112.00	60	120	
In Internal Standard	115	3	HMI He	2897444	1.86	2631879	110.09	60	120	
Ir (IS)	193	3	HMI He	6057081	0.68	5771767	104.94	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	144_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:19:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.043	ppb	-138.7	2	0.5	
Na	23	3	45	9.227	ppb	48.4	19680	25	
Mg	24	3	45	0.826	ppb	116.2	304	25	
Al	27	3	45	7.182	ppb	15.9	270	15	
K	39	3	45	-19.630	ppb	-135.9	27337	50	
V	51	3	72	-0.693	ppb	-6.5	630	1	
Cr	52	3	72	1.332	ppb	13.2	3370	1	>RL
Mn	55	3	72	0.654	ppb	20.8	470	0.5	>RL
Co	59	3	72	0.020	ppb	56.6	67	0.5	
Ni	60	3	72	1.012	ppb	2.4	753	1	>RL
Cu	63	3	72	-0.024	ppb	-118.6	460	1	
Zn	66	3	72	0.335	ppb	128.2	278	5	
As	75	3	72	-0.291	ppb	-78.2	38	1	
Se	78	2	72	0.014	ppb	342.3	5	1	
Sr	88	3	72	-0.005	ppb	-430.9	23	0.5	
Mo	95	3	115	0.124	ppb	35.6	107	0.5	
Ag	107	3	115	0.006	ppb	154.4	27	1	
Cd	111	3	115	-0.060	ppb	-54.8	10	0.5	
Sn	120	3	115	0.089	ppb	87.1	1048	1	
Sb	121	3	115	0.030	ppb	30.1	67	0.6	
Ba	137	3	115	0.095	ppb	53.2	65	0.5	
Tl	205	3	193	-0.173	ppb	-3.9	337	0.1	
(Pb)	206	3	193	-0.026	ppb	-182.5	337	1	
(Pb)	207	3	193	-0.069	ppb	-7.0	450	1	
Pb	208	3	193	-0.029	ppb	-82.0	1478	0.5	
Th	232	3	193	1.044	ppb	12.5	11380	1	>RL
U	238	3	193	-0.024	ppb	-142.5	1676	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4420399	1.14	3887690	113.70	60	120	
Sc (IS)	45	3	HMI He	642349	0.52	560366	114.63	60	120	
Ge Internal standard	72	2	HMI H2	2615448	1.01	2321471	112.66	60	120	
Ge Internal standard	72	3	HMI He	773131	0.17	685485	112.79	60	120	
In Internal Standard	115	3	HMI He	2915236	0.63	2631879	110.77	60	120	
Ir (IS)	193	3	HMI He	6188177	0.95	5771767	107.21	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F
Data File Name	145SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:21:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.450	ppb	2.450	28.35	120	2000	
Na	23	3	45	309.968	ppb	309.968	1.61	55437	400000	
Mg	24	3	45	3301.253	ppb	3301.253	0.89	207346	400000	
Al	27	3	45	46978.160	ppb	46978.160	2.47	1162067	400000	
K	39	3	45	3549.198	ppb	3549.198	1.83	208604	400000	
Ca	40	2	45	1126.425	ppb	1126.425	0.19	718715	400000	
V	51	3	72	126.987	ppb	126.987	2.48	85314	2000	
Cr	52	3	72	103.072	ppb	103.072	2.05	86636	5000	
Mn	55	3	72	1428.123	ppb	1428.123	2.40	614941	10000	
Fe	56	2	72	58434.781	ppb	58434.781	1.61	99674320	10000	>LDR
Co	59	3	72	18.312	ppb	18.312	2.24	25744	2000	
Ni	60	3	72	34.483	ppb	34.483	3.03	13812	5000	
Cu	63	3	72	63.062	ppb	63.062	1.99	68388	5000	
Zn	66	3	72	130.342	ppb	130.342	1.79	22023	5000	
As	75	3	72	21.336	ppb	21.336	4.90	2694	2000	
Se	78	2	72	1.417	ppb	1.417	13.30	93	2000	
Sr	88	3	72	34.043	ppb	34.043	1.28	19946	4000	
Mo	95	3	115	4.681	ppb	4.681	6.26	2552	2000	
Ag	107	3	115	0.252	ppb	0.252	5.74	471	100	
Cd	111	3	115	0.123	ppb	0.123	32.74	58	2000	
Sn	120	3	115	20.020	ppb	20.020	1.26	17117	2000	
Sb	121	3	115	1.972	ppb	1.972	2.51	1649	1000	
Ba	137	3	115	355.606	ppb	355.606	0.76	91899	5000	
Tl	205	3	193	0.371	ppb	0.371	4.57	2601	2000	
(Pb)	206	3	193	163.900	ppb	163.900	2.07	223989	100	
(Pb)	207	3	193	151.299	ppb	151.299	2.37	184074	100	
Pb	208	3	193	156.792	ppb	156.792	1.72	870292	5000	
Th	232	3	193	18.765	ppb	18.765	2.95	109459	2000	
U	238	3	193	3.563	ppb	3.563	1.51	22719	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4503121	1.68	3887690	115.83	60	120	
Sc (IS)	45	3	HMI He	651694	0.30	560366	116.30	60	120	
Ge Internal standard	72	2	HMI H2	2620301	0.98	2321471	112.87	60	120	
Ge Internal standard	72	3	HMI He	788002	1.30	685485	114.96	60	120	
In Internal Standard	115	3	HMI He	2937436	0.30	2631879	111.61	60	120	
Ir (IS)	193	3	HMI He	6311602	1.56	5771767	109.35	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-Fsd@5
Data File Name	146SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:23:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.577	ppb	0.577	26.59	32	2000	
Na	23	3	45	65.284	ppb	65.284	15.87	26438	400000	
Mg	24	3	45	648.302	ppb	648.302	4.96	40709	400000	
Al	27	3	45	8933.363	ppb	8933.363	3.17	219916	400000	
K	39	3	45	690.511	ppb	690.511	4.36	63410	400000	
Ca	40	2	45	241.059	ppb	241.059	3.01	165080	400000	
V	51	3	72	24.475	ppb	24.475	0.92	17150	2000	
Cr	52	3	72	21.428	ppb	21.428	4.79	19654	5000	
Mn	55	3	72	283.125	ppb	283.125	0.65	120782	10000	
Fe	56	2	72	11192.627	ppb	11192.627	1.18	19344357	10000	
Co	59	3	72	3.706	ppb	3.706	1.18	5187	2000	
Ni	60	3	72	7.773	ppb	7.773	7.30	3365	5000	
Cu	63	3	72	12.717	ppb	12.717	3.43	14032	5000	
Zn	66	3	72	29.224	ppb	29.224	0.57	5060	5000	
As	75	3	72	3.919	ppb	3.919	9.41	550	2000	
Se	78	2	72	0.272	ppb	0.272	31.89	21	2000	
Sr	88	3	72	6.634	ppb	6.634	4.88	3865	4000	
Mo	95	3	115	0.955	ppb	0.955	3.27	555	2000	
Ag	107	3	115	0.072	ppb	0.072	21.81	147	100	
Cd	111	3	115	-0.010	ppb	-0.010	-104.69	23	2000	
Sn	120	3	115	3.904	ppb	3.904	3.12	4142	2000	
Sb	121	3	115	0.404	ppb	0.404	10.99	373	1000	
Ba	137	3	115	69.018	ppb	69.018	1.47	17918	5000	
Tl	205	3	193	-0.087	ppb	-0.087	-35.16	688	2000	
(Pb)	206	3	193	32.981	ppb	32.981	1.88	44775	100	
(Pb)	207	3	193	30.194	ppb	30.194	2.72	36676	100	
Pb	208	3	193	31.339	ppb	31.339	2.25	172938	5000	
Th	232	3	193	3.987	ppb	3.987	2.69	27495	2000	
U	238	3	193	0.656	ppb	0.656	1.03	5618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4548938	2.88	3887690	117.01	60	120	
Sc (IS)	45	3	HMI He	648565	1.61	560366	115.74	60	120	
Ge Internal standard	72	2	HMI H2	2652048	2.67	2321471	114.24	60	120	
Ge Internal standard	72	3	HMI He	779546	1.06	685485	113.72	60	120	
In Internal Standard	115	3	HMI He	2945460	0.66	2631879	111.91	60	120	
Ir (IS)	193	3	HMI He	6227421	1.55	5771767	107.89	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-G MS
Data File Name	147SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:25:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	193.765	ppb	193.765	4.64	9113	2000	
Na	23	3	45	4166.747	ppb	4166.747	0.64	510473	400000	
Mg	24	3	45	7355.056	ppb	7355.056	1.37	461754	400000	
Al	27	3	45	67832.438	ppb	67832.438	1.04	1678156	400000	
K	39	3	45	9218.341	ppb	9218.341	1.23	496033	400000	
Ca	40	2	45	5067.503	ppb	5067.503	2.17	3174748	400000	
V	51	3	72	338.491	ppb	338.491	1.92	223167	2000	
Cr	52	3	72	316.674	ppb	316.674	1.57	258521	5000	
Mn	55	3	72	1640.593	ppb	1640.593	1.88	698857	10000	
Fe	56	2	72	62055.132	ppb	62055.132	1.31	106460384	10000	>LDR
Co	59	3	72	211.276	ppb	211.276	1.09	293455	2000	
Ni	60	3	72	231.644	ppb	231.644	2.41	89684	5000	
Cu	63	3	72	261.561	ppb	261.561	2.34	279050	5000	
Zn	66	3	72	337.209	ppb	337.209	3.11	56004	5000	
As	75	3	72	204.550	ppb	204.550	1.26	24920	2000	
Se	78	2	72	187.244	ppb	187.244	0.76	11897	2000	
Sr	88	3	72	433.167	ppb	433.167	2.43	250711	4000	
Mo	95	3	115	193.287	ppb	193.287	1.60	101764	2000	
Ag	107	3	115	197.690	ppb	197.690	1.49	350412	100	
Cd	111	3	115	188.026	ppb	188.026	2.42	48649	2000	
Sn	120	3	115	207.155	ppb	207.155	2.21	164714	2000	
Sb	121	3	115	187.611	ppb	187.611	2.29	149919	1000	
Ba	137	3	115	619.418	ppb	619.418	2.03	156988	5000	
Tl	205	3	193	186.484	ppb	186.484	1.50	768831	2000	
(Pb)	206	3	193	363.207	ppb	363.207	1.51	491979	100	
(Pb)	207	3	193	345.124	ppb	345.124	2.12	415856	100	
Pb	208	3	193	354.560	ppb	354.560	1.61	1950218	5000	
Th	232	3	193	195.607	ppb	195.607	1.79	1077404	2000	
U	238	3	193	195.841	ppb	195.841	0.67	1140017	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4481228	0.46	3887690	115.27	60	120	
Sc (IS)	45	3	HMI He	651847	0.63	560366	116.33	60	120	
Ge Internal standard	72	2	HMI H2	2635673	1.18	2321471	113.53	60	120	
Ge Internal standard	72	3	HMI He	779566	1.45	685485	113.72	60	120	
In Internal Standard	115	3	HMI He	2881637	0.90	2631879	109.49	60	120	
Ir (IS)	193	3	HMI He	6261260	1.92	5771767	108.48	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-H MSD
Data File Name	148SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:27:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	200.085	ppb	200.085	1.96	9383	2000	
Na	23	3	45	4208.604	ppb	4208.604	0.92	510652	400000	
Mg	24	3	45	7411.526	ppb	7411.526	2.21	461001	400000	
Al	27	3	45	67067.461	ppb	67067.461	3.38	1643955	400000	
K	39	3	45	9233.295	ppb	9233.295	1.70	492192	400000	
Ca	40	2	45	5010.660	ppb	5010.660	1.93	3143508	400000	
V	51	3	72	337.793	ppb	337.793	1.76	224669	2000	
Cr	52	3	72	313.459	ppb	313.459	1.02	258168	5000	
Mn	55	3	72	1624.329	ppb	1624.329	0.94	698040	10000	
Fe	56	2	72	63605.187	ppb	63605.187	2.54	108268171	10000	>LDR
Co	59	3	72	211.748	ppb	211.748	1.57	296679	2000	
Ni	60	3	72	232.745	ppb	232.745	1.02	90906	5000	
Cu	63	3	72	261.966	ppb	261.966	0.98	281962	5000	
Zn	66	3	72	333.896	ppb	333.896	0.78	55948	5000	
As	75	3	72	202.823	ppb	202.823	1.95	24927	2000	
Se	78	2	72	193.485	ppb	193.485	1.71	12200	2000	
Sr	88	3	72	432.213	ppb	432.213	1.30	252376	4000	
Mo	95	3	115	191.656	ppb	191.656	1.39	101977	2000	
Ag	107	3	115	197.055	ppb	197.055	0.80	353004	100	
Cd	111	3	115	186.698	ppb	186.698	2.19	48819	2000	
Sn	120	3	115	206.906	ppb	206.906	1.54	166269	2000	
Sb	121	3	115	186.278	ppb	186.278	1.35	150443	1000	
Ba	137	3	115	613.840	ppb	613.840	1.33	157233	5000	
Tl	205	3	193	191.194	ppb	191.194	3.79	783103	2000	
(Pb)	206	3	193	366.607	ppb	366.607	3.15	493428	100	
(Pb)	207	3	193	352.518	ppb	352.518	3.68	422040	100	
Pb	208	3	193	358.469	ppb	358.469	3.20	1959212	5000	
Th	232	3	193	201.484	ppb	201.484	3.61	1102609	2000	
U	238	3	193	196.697	ppb	196.697	3.65	1137455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4487656	0.72	3887690	115.43	60	120	
Sc (IS)	45	3	HMI He	645862	0.51	560366	115.26	60	120	
Ge Internal standard	72	2	HMI H2	2616262	2.46	2321471	112.70	60	120	
Ge Internal standard	72	3	HMI He	786323	0.41	685485	114.71	60	120	
In Internal Standard	115	3	HMI He	2912165	0.70	2631879	110.65	60	120	
Ir (IS)	193	3	HMI He	6224211	2.85	5771767	107.84	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-I DU
Data File Name	149SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:28:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.354	ppb	2.354	15.35	117	2000	
Na	23	3	45	324.996	ppb	324.996	3.12	57145	400000	
Mg	24	3	45	3266.229	ppb	3266.229	2.04	204900	400000	
Al	27	3	45	45621.808	ppb	45621.808	4.35	1126893	400000	
K	39	3	45	3453.736	ppb	3453.736	0.74	203540	400000	
Ca	40	2	45	1163.245	ppb	1163.245	1.38	734183	400000	
V	51	3	72	127.975	ppb	127.975	1.24	85384	2000	
Cr	52	3	72	104.183	ppb	104.183	0.60	86948	5000	
Mn	55	3	72	1429.728	ppb	1429.728	0.33	611482	10000	
Fe	56	2	72	58069.717	ppb	58069.717	1.11	99823246	10000	>LDR
Co	59	3	72	18.797	ppb	18.797	0.73	26247	2000	
Ni	60	3	72	34.092	ppb	34.092	1.30	13568	5000	
Cu	63	3	72	63.014	ppb	63.014	0.91	67869	5000	
Zn	66	3	72	130.745	ppb	130.745	2.03	21942	5000	
As	75	3	72	21.237	ppb	21.237	2.40	2664	2000	
Se	78	2	72	1.217	ppb	1.217	29.67	81	2000	
Sr	88	3	72	32.848	ppb	32.848	1.62	19112	4000	
Mo	95	3	115	5.169	ppb	5.169	6.06	2794	2000	
Ag	107	3	115	0.272	ppb	0.272	6.38	505	100	
Cd	111	3	115	0.251	ppb	0.251	22.32	92	2000	
Sn	120	3	115	18.427	ppb	18.427	3.41	15716	2000	
Sb	121	3	115	2.388	ppb	2.388	10.74	1971	1000	
Ba	137	3	115	353.123	ppb	353.123	3.86	90570	5000	
Tl	205	3	193	0.437	ppb	0.437	8.05	2876	2000	
(Pb)	206	3	193	161.924	ppb	161.924	2.21	221461	100	
(Pb)	207	3	193	151.099	ppb	151.099	2.36	183968	100	
Pb	208	3	193	156.455	ppb	156.455	1.64	869056	5000	
Th	232	3	193	22.929	ppb	22.929	2.30	132582	2000	
U	238	3	193	3.770	ppb	3.770	1.72	23951	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4456974	1.09	3887690	114.64	60	120	
Sc (IS)	45	3	HMI He	651031	1.52	560366	116.18	60	120	
Ge Internal standard	72	2	HMI H2	2641184	1.64	2321471	113.77	60	120	
Ge Internal standard	72	3	HMI He	782523	0.68	685485	114.16	60	120	
In Internal Standard	115	3	HMI He	2917259	2.65	2631879	110.84	60	120	
Ir (IS)	193	3	HMI He	6315610	0.88	5771767	109.42	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F pds
Data File Name	150SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:30:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	114.117	ppb	114.117	8.03	5183	2000	
Na	23	3	45	5179.635	ppb	5179.635	0.40	627434	400000	
Mg	24	3	45	5226.595	ppb	5226.595	0.51	326887	400000	
Al	27	3	45	47233.603	ppb	47233.603	1.01	1163933	400000	
K	39	3	45	5484.415	ppb	5484.415	0.32	305512	400000	
Ca	40	2	45	3335.503	ppb	3335.503	12.77	1990448	400000	
V	51	3	72	222.345	ppb	222.345	1.12	147417	2000	
Cr	52	3	72	201.596	ppb	201.596	1.17	165918	5000	
Mn	55	3	72	1513.037	ppb	1513.037	0.96	646510	10000	
Fe	56	2	72	61799.646	ppb	61799.646	12.31	103009140	10000	>LDR
Co	59	3	72	116.993	ppb	116.993	1.21	163000	2000	
Ni	60	3	72	132.128	ppb	132.128	0.53	51473	5000	
Cu	63	3	72	162.579	ppb	162.579	0.45	174176	5000	
Zn	66	3	72	334.695	ppb	334.695	0.99	55761	5000	
As	75	3	72	121.381	ppb	121.381	0.82	14862	2000	
Se	78	2	72	108.328	ppb	108.328	6.59	6703	2000	
Sr	88	3	72	131.921	ppb	131.921	0.49	76611	4000	
Mo	95	3	115	103.109	ppb	103.109	0.37	54407	2000	
Ag	107	3	115	26.813	ppb	26.813	1.43	47629	100	
Cd	111	3	115	95.483	ppb	95.483	1.03	24764	2000	
Sn	120	3	115	119.907	ppb	119.907	2.06	95922	2000	
Sb	121	3	115	95.396	ppb	95.396	1.45	76395	1000	
Ba	137	3	115	453.572	ppb	453.572	1.44	115182	5000	
Tl	205	3	193	94.749	ppb	94.749	1.08	392562	2000	
(Pb)	206	3	193	257.226	ppb	257.226	1.34	349787	100	
(Pb)	207	3	193	244.528	ppb	244.528	2.17	295862	100	
Pb	208	3	193	249.730	ppb	249.730	2.02	1379010	5000	
Th	232	3	193	119.871	ppb	119.871	2.15	664871	2000	
U	238	3	193	207.401	ppb	207.401	1.04	1211439	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4283634	6.56	3887690	110.18	60	120	
Sc (IS)	45	3	HMI He	649231	0.17	560366	115.86	60	120	
Ge Internal standard	72	2	HMI H2	2571928	5.28	2321471	110.79	60	120	
Ge Internal standard	72	3	HMI He	781830	0.37	685485	114.06	60	120	
In Internal Standard	115	3	HMI He	2886792	0.69	2631879	109.69	60	120	
Ir (IS)	193	3	HMI He	6283711	1.50	5771767	108.87	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-3-C
Data File Name	151SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:32:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.721	ppb	4.721	16.77	232	2000	
Na	23	3	45	513.703	ppb	513.703	2.77	79461	400000	
Mg	24	3	45	6220.968	ppb	6220.968	0.39	390521	400000	
Al	27	3	45	77914.627	ppb	77914.627	0.35	1927314	400000	
K	39	3	45	5804.251	ppb	5804.251	0.68	322903	400000	
Ca	40	2	45	1769.363	ppb	1769.363	3.25	1116060	400000	
V	51	3	72	179.538	ppb	179.538	1.98	119724	2000	
Cr	52	3	72	136.216	ppb	136.216	0.96	113321	5000	
Mn	55	3	72	3864.060	ppb	3864.060	1.56	1657429	10000	
Fe	56	2	72	85927.257	ppb	85927.257	3.13	146892032	10000	>LDR
Co	59	3	72	42.629	ppb	42.629	1.20	59658	2000	
Ni	60	3	72	66.732	ppb	66.732	0.95	26285	5000	
Cu	63	3	72	185.647	ppb	185.647	0.84	199620	5000	
Zn	66	3	72	307.083	ppb	307.083	0.92	51386	5000	
As	75	3	72	41.915	ppb	41.915	1.78	5202	2000	
Se	78	2	72	3.391	ppb	3.391	9.17	219	2000	
Sr	88	3	72	47.307	ppb	47.307	2.23	27599	4000	
Mo	95	3	115	6.713	ppb	6.713	1.41	3565	2000	
Ag	107	3	115	0.949	ppb	0.949	4.84	1696	100	
Cd	111	3	115	0.585	ppb	0.585	24.54	177	2000	
Sn	120	3	115	30.213	ppb	30.213	1.83	24787	2000	
Sb	121	3	115	5.894	ppb	5.894	3.72	4738	1000	
Ba	137	3	115	541.344	ppb	541.344	1.96	136869	5000	
Tl	205	3	193	1.104	ppb	1.104	2.89	5648	2000	
(Pb)	206	3	193	451.030	ppb	451.030	1.63	616352	100	
(Pb)	207	3	193	425.475	ppb	425.475	1.33	517214	100	
Pb	208	3	193	449.225	ppb	449.225	2.13	2492680	5000	
Th	232	3	193	22.573	ppb	22.573	0.98	130642	2000	
U	238	3	193	6.286	ppb	6.286	2.02	38707	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4481009	1.71	3887690	115.26	60	120	
Sc (IS)	45	3	HMI He	651748	1.66	560366	116.31	60	120	
Ge Internal standard	72	2	HMI H2	2627674	2.06	2321471	113.19	60	120	
Ge Internal standard	72	3	HMI He	784987	0.40	685485	114.52	60	120	
In Internal Standard	115	3	HMI He	2874859	1.86	2631879	109.23	60	120	
Ir (IS)	193	3	HMI He	6317641	1.45	5771767	109.46	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-4-C
Data File Name	152SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:34:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.979	ppb	3.979	14.00	192	2000	
Na	23	3	45	465.714	ppb	465.714	3.04	74691	400000	
Mg	24	3	45	4532.297	ppb	4532.297	0.41	287980	400000	
Al	27	3	45	65427.523	ppb	65427.523	1.20	1637717	400000	
K	39	3	45	4669.811	ppb	4669.811	0.57	268566	400000	
Ca	40	2	45	1358.959	ppb	1358.959	1.66	870659	400000	
V	51	3	72	128.358	ppb	128.358	0.76	85755	2000	
Cr	52	3	72	100.073	ppb	100.073	1.66	83722	5000	
Mn	55	3	72	2551.571	ppb	2551.571	1.27	1092557	10000	
Fe	56	2	72	62059.425	ppb	62059.425	1.34	106727098	10000	>LDR
Co	59	3	72	25.524	ppb	25.524	1.62	35671	2000	
Ni	60	3	72	55.909	ppb	55.909	1.95	22042	5000	
Cu	63	3	72	59.817	ppb	59.817	0.66	64538	5000	
Zn	66	3	72	183.107	ppb	183.107	2.10	30675	5000	
As	75	3	72	18.905	ppb	18.905	6.42	2382	2000	
Se	78	2	72	1.312	ppb	1.312	5.41	87	2000	
Sr	88	3	72	46.408	ppb	46.408	2.11	27027	4000	
Mo	95	3	115	4.642	ppb	4.642	5.84	2504	2000	
Ag	107	3	115	0.237	ppb	0.237	3.80	440	100	
Cd	111	3	115	0.234	ppb	0.234	32.56	87	2000	
Sn	120	3	115	16.174	ppb	16.174	1.98	13870	2000	
Sb	121	3	115	1.617	ppb	1.617	10.84	1344	1000	
Ba	137	3	115	596.869	ppb	596.869	1.75	152595	5000	
Tl	205	3	193	0.646	ppb	0.646	4.03	3762	2000	
(Pb)	206	3	193	106.034	ppb	106.034	0.81	145874	100	
(Pb)	207	3	193	98.857	ppb	98.857	1.01	121155	100	
Pb	208	3	193	102.139	ppb	102.139	0.82	570747	5000	
Th	232	3	193	23.031	ppb	23.031	0.56	133791	2000	
U	238	3	193	4.174	ppb	4.174	1.21	26448	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4535108	0.61	3887690	116.65	60	120	
Sc (IS)	45	3	HMI He	659498	0.13	560366	117.69	60	120	
Ge Internal standard	72	2	HMI H2	2642655	2.47	2321471	113.84	60	120	
Ge Internal standard	72	3	HMI He	783583	0.61	685485	114.31	60	120	
In Internal Standard	115	3	HMI He	2906888	1.37	2631879	110.45	60	120	
Ir (IS)	193	3	HMI He	6346548	0.29	5771767	109.96	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	153_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:36:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.422	ppb	1.301	2319	50	96.8	90	110	
Na	23	3	45	47951.096	ppb	0.975	5641940	51000	94.0	90	110	
Mg	24	3	45	10005.675	ppb	0.531	624316	11000	91.0	90	110	
Al	27	3	45	922.090	ppb	2.944	22775	1000	92.2	90	110	
K	39	3	45	10005.551	ppb	1.668	532660	11000	91.0	90	110	
Ca	40	2	45	9898.260	ppb	0.580	6180491	11000	90.0	90	110	>+\-10%
V	51	3	72	49.908	ppb	0.687	32857	50	99.8	90	110	
Cr	52	3	72	52.498	ppb	0.348	43499	50	105.0	90	110	
Mn	55	3	72	51.911	ppb	2.470	21658	50	103.8	90	110	
Fe	56	2	72	1040.811	ppb	4.873	1775878	1000	104.1	90	110	
Co	59	3	72	50.403	ppb	1.268	68007	50	100.8	90	110	
Ni	60	3	72	51.864	ppb	0.208	19779	50	103.7	90	110	
Cu	63	3	72	50.332	ppb	2.578	52528	50	100.7	90	110	
Zn	66	3	72	51.125	ppb	3.832	8430	50	102.3	90	110	
As	75	3	72	52.955	ppb	2.085	6318	50	105.9	90	110	
Se	78	2	72	49.481	ppb	3.964	3074	50	99.0	90	110	
Sr	88	3	72	100.481	ppb	1.953	56495	100	100.5	90	110	
Mo	95	3	115	47.449	ppb	1.115	25543	50	94.9	90	110	
Ag	107	3	115	48.658	ppb	0.688	88091	50	97.3	90	110	
Cd	111	3	115	47.154	ppb	1.189	12480	50	94.3	90	110	
Sn	120	3	115	47.285	ppb	0.536	39158	50	94.6	90	110	
Sb	121	3	115	48.081	ppb	1.064	39271	50	96.2	90	110	
Ba	137	3	115	50.080	ppb	1.570	13000	50	100.2	90	110	
Tl	205	3	193	46.933	ppb	3.604	194017	50	93.9	90	110	
(Pb)	206	3	193	48.036	ppb	3.536	65312	50	96.1	90	110	
(Pb)	207	3	193	46.344	ppb	1.957	56248	50	92.7	90	110	
Pb	208	3	193	47.389	ppb	2.124	261797	50	94.8	90	110	
Th	232	3	193	48.390	ppb	1.268	270649	50	96.8	90	110	
U	238	3	193	47.208	ppb	2.962	275796	50	94.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4474595	0.81	3887690	115.10	60	120	
Sc (IS)	45	3	HMI He	647936	0.82	560366	115.63	60	120	
Ge Internal standard	72	2	HMI H2	2576750	3.35	2321471	111.00	60	120	
Ge Internal standard	72	3	HMI He	756937	0.87	685485	110.42	60	120	
In Internal Standard	115	3	HMI He	2942544	0.22	2631879	111.80	60	120	
Ir (IS)	193	3	HMI He	6255004	2.23	5771767	108.37	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	154_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:38:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-148.6	2	0.5	
Na	23	3	45	11.884	ppb	36.4	20081	25	
Mg	24	3	45	-0.164	ppb	-162.9	244	25	
Al	27	3	45	4.542	ppb	23.5	207	15	
K	39	3	45	-21.360	ppb	-119.7	27378	50	
V	51	3	72	-0.592	ppb	-16.3	698	1	
Cr	52	3	72	1.346	ppb	35.5	3395	1	>RL
Mn	55	3	72	0.716	ppb	24.6	498	0.5	>RL
Co	59	3	72	0.038	ppb	19.7	92	0.5	
Ni	60	3	72	1.276	ppb	12.6	858	1	>RL
Cu	63	3	72	-0.039	ppb	-172.8	445	1	
Zn	66	3	72	0.034	ppb	131.2	230	5	
As	75	3	72	-0.224	ppb	-46.9	47	1	
Se	78	2	72	0.002	ppb	1658.8	4	1	
Sr	88	3	72	0.035	ppb	74.5	47	0.5	
Mo	95	3	115	0.098	ppb	14.4	92	0.5	
Ag	107	3	115	0.011	ppb	51.6	37	1	
Cd	111	3	115	-0.053	ppb	-75.3	12	0.5	
Sn	120	3	115	0.169	ppb	70.8	1100	1	
Sb	121	3	115	0.043	ppb	64.8	77	0.6	
Ba	137	3	115	0.071	ppb	16.6	58	0.5	
Tl	205	3	193	-0.158	ppb	-8.4	396	0.1	
(Pb)	206	3	193	-0.047	ppb	-60.2	308	1	
(Pb)	207	3	193	-0.123	ppb	-33.5	386	1	
Pb	208	3	193	-0.070	ppb	-7.9	1256	0.5	
Th	232	3	193	1.430	ppb	12.0	13489	1	>RL
U	238	3	193	0.004	ppb	597.5	1841	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4478124	2.06	3887690	115.19	60	120	
Sc (IS)	45	3	HMI He	645318	0.77	560366	115.16	60	120	
Ge Internal standard	72	2	HMI H2	2680164	0.91	2321471	115.45	60	120	
Ge Internal standard	72	3	HMI He	776456	0.59	685485	113.27	60	120	
In Internal Standard	115	3	HMI He	2883459	0.22	2631879	109.56	60	120	
Ir (IS)	193	3	HMI He	6193817	1.04	5771767	107.31	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	156SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:12:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	157SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:14:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	158SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:15:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	159SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:17:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	160SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:19:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	161CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-19T18:21:18-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	649.52
Na	23	45	3	HMI He	16700	0.00
Mg	24	45	3	HMI He	270	8.56
Al	27	45	3	HMI He	153	30.15
K	39	45	3	HMI He	28103	0.01
Ca	40	45	2	HMI H2	12952	0.04
V	51	72	3	HMI He	996	0.98
Cr	52	72	3	HMI He	3124	0.29
Mn	55	72	3	HMI He	378	4.77
Fe	56	72	2	HMI H2	63727	0.01
Co	59	72	3	HMI He	55	28.64
Ni	60	72	3	HMI He	690	2.05
Cu	63	72	3	HMI He	395	1.16
Zn	66	72	3	HMI He	228	6.17
As	75	72	3	HMI He	43	81.37
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	23	347.82
Sr	88	72	3	HMI He	43	85.62
Mo	95	115	3	HMI He	38	85.67
Ag	107	115	3	HMI He	13	429.74
Cd	111	115	3	HMI He	10	866.60
Sn	120	115	3	HMI He	755	1.48
Sb	121	115	3	HMI He	45	65.37
Ba	137	115	3	HMI He	62	27.38
Tl	205	193	3	HMI He	380	3.81
(Pb)	206	193	3	HMI He	318	5.97
(Pb)	207	193	3	HMI He	481	2.29
Pb	208	193	3	HMI He	1484	0.12
Th	232	193	3	HMI He	6897	0.12
U	238	193	3	HMI He	1533	0.18

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	4300192	1.48
Sc (IS)	45	3	HMI He	644593	0.42
Ge Internal standard	72	2	HMI H2	2598552	1.09
Ge Internal standard	72	3	HMI He	772392	0.66
In Internal Standard	115	3	HMI He	2872781	1.83
Ir (IS)	193	3	HMI He	6092963	0.22

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	162CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-19T18:23:05-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	161CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	11542953	0.00
Mg	24	45	3	HMI He	1211814	0.00
Al	27	45	3	HMI He	153	19.16
K	39	45	3	HMI He	1018275	0.00
V	51	72	3	HMI He	1091	0.43
Cr	52	72	3	HMI He	3375	0.12
Mn	55	72	3	HMI He	398	3.46
Co	59	72	3	HMI He	93	28.33
Ni	60	72	3	HMI He	793	0.53
Cu	63	72	3	HMI He	578	1.48
Zn	66	72	3	HMI He	353	3.26
As	75	72	3	HMI He	63	80.17
Se	78	72	2	HMI H2	7	568.09
(Se)	78	72	3	HMI He	22	325.48
Sr	88	72	3	HMI He	292	3.83
Mo	95	115	3	HMI He	73	56.07
Ag	107	115	3	HMI He	42	66.55
Cd	111	115	3	HMI He	15	444.62
Sn	120	115	3	HMI He	908	0.88
Sb	121	115	3	HMI He	53	71.07
Ba	137	115	3	HMI He	182	6.31
Tl	205	193	3	HMI He	212	10.07
(Pb)	206	193	3	HMI He	388	2.35
(Pb)	207	193	3	HMI He	560	0.84
Pb	208	193	3	HMI He	1639	0.13
Th	232	193	3	HMI He	5652	0.04
U	238	193	3	HMI He	1659	0.28

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4345877	0.57	4300192	101.06	60	120	
Sc (IS)	45	3	HMI He	646398	1.04	644593	100.28	60	120	
Ge Internal standard	72	2	HMI H2	2478875	2.60	2598552	95.39	60	120	
Ge Internal standard	72	3	HMI He	746652	0.46	772392	96.67	60	120	
In Internal Standard	115	3	HMI He	2913487	0.28	2872781	101.42	60	120	
Ir (IS)	193	3	HMI He	6127949	1.75	6092963	100.57	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	163CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-19T18:24:50-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	161CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4492	0.08
Na	23	45	3	HMI He	247645	0.00
Mg	24	45	3	HMI He	121495	0.00
Al	27	45	3	HMI He	46834	0.00
K	39	45	3	HMI He	125530	0.00
V	51	72	3	HMI He	66816	0.00
Cr	52	72	3	HMI He	84037	0.00
Mn	55	72	3	HMI He	43088	0.00
Co	59	72	3	HMI He	137360	0.00
Ni	60	72	3	HMI He	39433	0.00
Cu	63	72	3	HMI He	105761	0.00
Zn	66	72	3	HMI He	17100	0.01
As	75	72	3	HMI He	11966	0.02
Se	78	72	2	HMI H2	6170	0.01
(Se)	78	72	3	HMI He	693	2.06
Sr	88	72	3	HMI He	113456	0.00
Mo	95	115	3	HMI He	51821	0.00
Ag	107	115	3	HMI He	174838	0.00
Cd	111	115	3	HMI He	24926	0.01
Sn	120	115	3	HMI He	79605	0.00
Sb	121	115	3	HMI He	78154	0.00
Ba	137	115	3	HMI He	25524	0.01
Tl	205	193	3	HMI He	385460	0.00
(Pb)	206	193	3	HMI He	128141	0.00
(Pb)	207	193	3	HMI He	112870	0.00
Pb	208	193	3	HMI He	517163	0.00
Th	232	193	3	HMI He	520653	0.00
U	238	193	3	HMI He	542005	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416121	3.15	4300192	102.70	60	120	
Sc (IS)	45	3	HMI He	643874	0.14	644593	99.89	60	120	
Ge Internal standard	72	2	HMI H2	2663498	2.80	2598552	102.50	60	120	
Ge Internal standard	72	3	HMI He	799151	0.74	772392	103.46	60	120	
In Internal Standard	115	3	HMI He	2887881	0.25	2872781	100.53	60	120	
Ir (IS)	193	3	HMI He	6075954	2.08	6092963	99.72	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	164_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:26:37-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.973	ppb	3.165	1806	40	102.4	90	110	
Na	23	3	45	12931.845	ppb	1.631	1517283	12800	101.0	90	110	
Mg	24	3	45	4626.207	ppb	1.911	282388	4800	96.4	90	110	
Al	27	3	45	744.838	ppb	1.321	17726	800	93.1	90	110	
K	39	3	45	4627.923	ppb	0.835	259015	4800	96.4	90	110	
Ca	40	2	45	4818.738	ppb	0.754	2869774	4800	100.4	90	110	
V	51	3	72	41.258	ppb	1.431	27185	40	103.1	90	110	
Cr	52	3	72	42.319	ppb	2.232	36122	40	105.8	90	110	
Mn	55	3	72	42.645	ppb	1.090	17948	40	106.6	90	110	
Fe	56	2	72	848.670	ppb	2.786	1389452	800	106.1	90	110	
Co	59	3	72	41.368	ppb	0.725	54869	40	103.4	90	110	
Ni	60	3	72	41.149	ppb	1.929	16063	40	102.9	90	110	
Cu	63	3	72	42.156	ppb	0.788	43253	40	105.4	90	110	
Zn	66	3	72	82.201	ppb	2.648	13607	80	102.8	90	110	
As	75	3	72	40.365	ppb	1.868	4687	40	100.9	90	110	
Se	78	2	72	43.250	ppb	1.023	2564	40	108.1	90	110	
Sr	88	3	72	123.495	ppb	0.758	67625	120	102.9	90	110	
Mo	95	3	115	39.776	ppb	2.602	20856	40	99.4	90	110	
Ag	107	3	115	79.963	ppb	2.670	141296	80	100.0	90	110	
Cd	111	3	115	39.060	ppb	3.141	9845	40	97.6	90	110	
Sn	120	3	115	40.280	ppb	1.873	32876	40	100.7	90	110	
Sb	121	3	115	40.073	ppb	1.960	31687	40	100.2	90	110	
Ba	137	3	115	41.077	ppb	3.815	10636	40	102.7	90	110	
Tl	205	3	193	39.290	ppb	0.825	154016	40	98.2	90	110	
(Pb)	206	3	193	40.919	ppb	2.103	53436	40	102.3	90	110	
(Pb)	207	3	193	39.233	ppb	0.588	45256	40	98.1	90	110	
Pb	208	3	193	40.171	ppb	1.236	211862	40	100.4	90	110	
Th	232	3	193	79.580	ppb	1.149	422112	80	99.5	90	110	
U	238	3	193	42.356	ppb	1.978	234041	40	105.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4410499	1.73	4300192	102.57	60	120	
Sc (IS)	45	3	HMI He	650733	0.35	644593	100.95	60	120	
Ge Internal standard	72	2	HMI H2	2556811	0.53	2598552	98.39	60	120	
Ge Internal standard	72	3	HMI He	771169	0.53	772392	99.84	60	120	
In Internal Standard	115	3	HMI He	2919678	2.13	2872781	101.63	60	120	
Ir (IS)	193	3	HMI He	6169073	0.98	6092963	101.25	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	165_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:28:25-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.006	ppb	3.891	2321	50	104.0	90	110	
Na	23	3	45	48491.391	ppb	1.073	5551354	51000	95.1	90	110	
Mg	24	3	45	10203.337	ppb	1.802	612356	11000	92.8	90	110	
Al	27	3	45	1002.387	ppb	1.233	23413	1000	100.2	90	110	
K	39	3	45	10543.587	ppb	0.309	544843	11000	95.9	90	110	
Ca	40	2	45	10179.436	ppb	1.940	6198045	11000	92.5	90	110	
V	51	3	72	51.102	ppb	0.489	33410	50	102.2	90	110	
Cr	52	3	72	52.074	ppb	0.482	43700	50	104.1	90	110	
Mn	55	3	72	50.606	ppb	0.742	21214	50	101.2	90	110	
Fe	56	2	72	1059.567	ppb	1.387	1747757	1000	106.0	90	110	
Co	59	3	72	51.122	ppb	1.167	67751	50	102.2	90	110	
Ni	60	3	72	51.762	ppb	0.666	20014	50	103.5	90	110	
Cu	63	3	72	51.722	ppb	1.334	52945	50	103.4	90	110	
Zn	66	3	72	51.114	ppb	1.255	8540	50	102.2	90	110	
As	75	3	72	52.863	ppb	0.581	6120	50	105.7	90	110	
Se	78	2	72	49.921	ppb	2.193	3009	50	99.8	90	110	
Sr	88	3	72	104.058	ppb	2.472	56954	100	104.1	90	110	
Mo	95	3	115	50.298	ppb	1.711	26326	50	100.6	90	110	
Ag	107	3	115	49.062	ppb	1.613	86574	50	98.1	90	110	
Cd	111	3	115	51.918	ppb	1.842	13067	50	103.8	90	110	
Sn	120	3	115	48.086	ppb	2.074	39031	50	96.2	90	110	
Sb	121	3	115	49.760	ppb	1.825	39271	50	99.5	90	110	
Ba	137	3	115	49.998	ppb	2.148	12910	50	100.0	90	110	
Tl	205	3	193	50.154	ppb	3.024	194787	50	100.3	90	110	
(Pb)	206	3	193	49.492	ppb	1.528	64016	50	99.0	90	110	
(Pb)	207	3	193	49.793	ppb	1.699	56817	50	99.6	90	110	
Pb	208	3	193	49.602	ppb	1.671	259029	50	99.2	90	110	
Th	232	3	193	52.550	ppb	1.303	278746	50	105.1	90	110	
U	238	3	193	50.129	ppb	1.545	274365	50	100.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4520502	1.04	4300192	105.12	60	120	
Sc (IS)	45	3	HMI He	640162	0.73	644593	99.31	60	120	
Ge Internal standard	72	2	HMI H2	2599539	1.83	2598552	100.04	60	120	
Ge Internal standard	72	3	HMI He	770642	0.73	772392	99.77	60	120	
In Internal Standard	115	3	HMI He	2914703	0.58	2872781	101.46	60	120	
Ir (IS)	193	3	HMI He	6117188	1.67	6092963	100.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	166_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:30:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	27.455	ppb	17.7	19944	25	>RL
Mg	24	3	45	1.301	ppb	17.3	350	25	
Al	27	3	45	-0.591	ppb	-132.5	140	15	
K	39	3	45	1.275	ppb	1206.6	28294	50	
V	51	3	72	0.235	ppb	36.9	1153	1	
Cr	52	3	72	0.547	ppb	36.1	3572	1	
Mn	55	3	72	0.035	ppb	402.8	395	0.5	
Co	59	3	72	0.016	ppb	77.0	77	0.5	
Ni	60	3	72	0.692	ppb	16.1	955	1	
Cu	63	3	72	0.012	ppb	439.1	410	1	
Zn	66	3	72	-0.060	ppb	-268.5	220	5	
As	75	3	72	0.342	ppb	19.9	83	1	
Se	78	2	72	0.088	ppb	20.9	7	1	
Sr	88	3	72	0.006	ppb	737.4	47	0.5	
Mo	95	3	115	0.088	ppb	24.7	85	0.5	
Ag	107	3	115	0.023	ppb	48.8	53	1	
Cd	111	3	115	0.013	ppb	246.7	13	0.5	
Sn	120	3	115	0.239	ppb	16.9	958	1	
Sb	121	3	115	0.054	ppb	25.9	88	0.6	
Ba	137	3	115	-0.017	ppb	-206.9	58	0.5	
Tl	205	3	193	-0.013	ppb	-72.0	337	0.1	
(Pb)	206	3	193	-0.045	ppb	-48.4	268	1	
(Pb)	207	3	193	-0.051	ppb	-46.6	435	1	
Pb	208	3	193	-0.042	ppb	-23.6	1301	0.5	
Th	232	3	193	1.890	ppb	9.6	17070	1	>RL
U	238	3	193	0.039	ppb	42.5	1789	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400686	1.62	4300192	102.34	60	120	
Sc (IS)	45	3	HMI He	647440	1.12	644593	100.44	60	120	
Ge Internal standard	72	2	HMI H2	2603566	0.77	2598552	100.19	60	120	
Ge Internal standard	72	3	HMI He	777078	0.56	772392	100.61	60	120	
In Internal Standard	115	3	HMI He	2919165	2.18	2872781	101.61	60	120	
Ir (IS)	193	3	HMI He	6249640	2.31	6092963	102.57	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	167LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:32:01-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.750	ppb	14.535	40	1	75.0	70	130	
Na	23	3	45	305.665	ppb	3.372	51676	300	101.9	70	130	
Mg	24	3	45	48.963	ppb	5.725	3220	50	97.9	70	130	
Al	27	3	45	42.950	ppb	12.095	1155	50	85.9	70	130	
K	39	3	45	108.683	ppb	19.880	33376	120	90.6	70	130	
Ca	40	2	45	193.555	ppb	1.929	129189	200	96.8	70	130	
V	51	3	72	4.845	ppb	4.984	4065	5	96.9	70	130	
Cr	52	3	72	2.353	ppb	9.813	4950	2	117.7	70	130	
Mn	55	3	72	0.852	ppb	18.335	728	1	85.2	70	130	
Fe	56	2	72	51.681	ppb	11.099	146450	50	103.4	70	130	
Co	59	3	72	1.018	ppb	6.673	1401	1	101.8	70	130	
Ni	60	3	72	2.261	ppb	11.155	1531	2	113.0	70	130	
Cu	63	3	72	1.988	ppb	4.488	2412	2	99.4	70	130	
Zn	66	3	72	9.072	ppb	9.450	1703	10	90.7	70	130	
As	75	3	72	5.334	ppb	4.456	656	5	106.7	70	130	
Se	78	2	72	4.672	ppb	11.759	285	5	93.4	70	130	
Sr	88	3	72	4.832	ppb	5.014	2686	5	96.6	70	130	
Mo	95	3	115	1.767	ppb	4.821	960	2	88.4	70	130	
Ag	107	3	115	0.988	ppb	8.495	1751	1	98.8	70	130	
Cd	111	3	115	0.977	ppb	17.634	255	1	97.7	70	130	
Sn	120	3	115	8.684	ppb	5.012	7652	10	86.8	70	130	
Sb	121	3	115	2.021	ppb	8.462	1634	2	101.0	70	130	
Ba	137	3	115	0.823	ppb	2.187	273	1	82.3	70	130	
Tl	205	3	193	0.891	ppb	3.046	3902	1	89.1	70	130	
(Pb)	206	3	193	0.865	ppb	13.601	1456	1	86.5	70	130	
(Pb)	207	3	193	0.874	ppb	9.420	1498	1	87.4	70	130	
Pb	208	3	193	0.856	ppb	7.152	6033	1	85.6	70	130	
Th	232	3	193	1.485	ppb	14.965	14846	1	148.5	70	130	>+/-30%
U	238	3	193	0.960	ppb	6.242	6878	1	96.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4451222	1.52	4300192	103.51	60	120	
Sc (IS)	45	3	HMI He	642760	1.42	644593	99.72	60	120	
Ge Internal standard	72	2	HMI H2	2611259	1.43	2598552	100.49	60	120	
Ge Internal standard	72	3	HMI He	770357	1.05	772392	99.74	60	120	
In Internal Standard	115	3	HMI He	2906088	1.38	2872781	101.16	60	120	
Ir (IS)	193	3	HMI He	6220701	1.89	6092963	102.10	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609036/1-B
Data File Name	168_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:55:36-06:00
Sample Type	Blank
Dilution	1
Comment	609057 6020b
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	54.581	ppb	0.167723457	23286	25
Mg	24	3	45	1.085	ppb	41.94777928	340	25
Al	27	3	45	2.592	ppb	19.64914671	217	15
K	39	3	45	-0.837	ppb	-1980.866517	28444	50
Ca	40	2	45	15.020	ppb	6.233689535	22334	200
V	51	3	72	0.039	ppb	107.1646743	1033	1
Cr	52	3	72	-0.525	ppb	-23.84580673	2746	1
Mn	55	3	72	-0.117	ppb	-179.8126051	333	0.5
Fe	56	2	72	-1.241	ppb	-89.07008604	63592	50
Co	59	3	72	-0.003	ppb	-211.7968476	52	0.5
Ni	60	3	72	-0.283	ppb	-64.93569685	590	1
Cu	63	3	72	0.287	ppb	12.7890343	695	1
Zn	66	3	72	1.299	ppb	18.4746995	445	5
As	75	3	72	0.123	ppb	118.4989319	58	1
(Se)	78	3	72	-0.058	ppb	-1458.039627	23	1
Sr	88	3	72	0.041	ppb	47.430189	67	0.5
Mo	95	3	115	0.024	ppb	239.1274034	52	0.5
Ag	107	3	115	0.005	ppb	166.9571439	23	1
Cd	111	3	115	-0.021	ppb	-93.40690784	5	0.5
Sn	120	3	115	0.100	ppb	141.460846	853	1
Sb	121	3	115	0.026	ppb	113.668541	67	0.6
Ba	137	3	115	0.091	ppb	39.32124844	87	0.5
Tl	205	3	193	-0.042	ppb	-23.36577668	222	0.1
(Pb)	206	3	193	-0.034	ppb	-49.8860987	282	1
(Pb)	207	3	193	0.029	ppb	81.81627739	526	1
Pb	208	3	193	-0.025	ppb	-51.68552183	1386	0.5
Th	232	3	193	-0.271	ppb	-21.66249358	5637	1
U	238	3	193	0.016	ppb	55.47367837	1658	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4439674	1.24	4300192	103.24	60	120	
Sc (IS)	45	3	HMI He	653353	0.53	644593	101.36	60	120	
Ge Internal standard	72	2	HMI H2	2675845	2.23	2598552	102.97	60	120	
Ge Internal standard	72	3	HMI He	781210	1.04	772392	101.14	60	120	
In Internal Standard	115	3	HMI He	2942634	1.42	2872781	102.43	60	120	
Ir (IS)	193	3	HMI He	6241327	0.54	6092963	102.44	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609036/2-C
Data File Name	169_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:57:25-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609057 6020b
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.014	40.014	ppb	9.952	1799	40	100.0	80	120	
Na	23	3	45	750.740	750.740	ppb	2.033	104588	40	1876.9	80	120	>+/-20%
Mg	24	3	45	695.339	695.339	ppb	0.989	42935	40	1738.3	80	120	>+/-20%
Al	27	3	45	728.186	728.186	ppb	1.940	17438	40	1820.5	80	120	>+/-20%
K	39	3	45	719.728	719.728	ppb	2.026	64630	40	1799.3	80	120	>+/-20%
Ca	40	2	45	799.056	799.056	ppb	0.299	493622	40	1997.6	80	120	>+/-20%
V	51	3	72	38.057	38.057	ppb	2.103	25746	40	95.1	80	120	
Cr	52	3	72	38.687	38.687	ppb	1.631	34076	40	96.7	80	120	
Mn	55	3	72	38.377	38.377	ppb	1.985	16572	40	95.9	80	120	
Fe	56	2	72	789.066	789.066	ppb	2.403	1348924	40	1972.7	80	120	>+/-20%
(Fe)	56	3	72	766.951	766.951	ppb	0.186	538037	40	1917.4	80	120	>+/-20%
Co	59	3	72	38.717	38.717	ppb	1.057	52570	40	96.8	80	120	
Ni	60	3	72	37.369	37.369	ppb	0.714	14997	40	93.4	80	120	
Cu	63	3	72	39.974	39.974	ppb	0.514	42006	40	99.9	80	120	
Zn	66	3	72	39.173	39.173	ppb	3.503	6760	40	97.9	80	120	
As	75	3	72	38.522	38.522	ppb	0.825	4580	40	96.3	80	120	
Se	78	2	72	40.163	40.163	ppb	2.005	2478	40	100.4	80	120	
(Se)	78	3	72	35.958	35.958	ppb	19.270	262	40	89.9	80	120	
Sr	88	3	72	77.569	77.569	ppb	1.761	43498	40	193.9	80	120	>+/-20%
Mo	95	3	115	37.431	37.431	ppb	2.205	19469	40	93.6	80	120	
Ag	107	3	115	39.188	39.188	ppb	1.948	68679	40	98.0	80	120	
Cd	111	3	115	38.099	38.099	ppb	2.794	9524	40	95.2	80	120	
Sn	120	3	115	35.737	35.737	ppb	3.187	28999	40	89.3	80	120	
Sb	121	3	115	38.145	38.145	ppb	1.208	29912	40	95.4	80	120	
Ba	137	3	115	38.632	38.632	ppb	4.952	9919	40	96.6	80	120	
Tl	205	3	193	37.380	37.380	ppb	0.733	149090	40	93.5	80	120	
(Pb)	206	3	193	37.287	37.287	ppb	1.300	49570	40	93.2	80	120	
(Pb)	207	3	193	37.186	37.186	ppb	1.084	43665	40	93.0	80	120	
Pb	208	3	193	37.467	37.467	ppb	0.663	201142	40	93.7	80	120	
Th	232	3	193	34.463	34.463	ppb	1.761	189994	40	86.2	80	120	
U	238	3	193	37.304	37.304	ppb	0.036	209911	40	93.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4470655	1.94	4300192	103.96	60	120	
Sc (IS)	45	3	HMI He	654656	0.71	644593	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2661148	1.75	2598552	102.41	60	120	
Ge Internal standard	72	3	HMI He	789409	0.54	772392	102.20	60	120	
In Internal Standard	115	3	HMI He	2895205	1.98	2872781	100.78	60	120	
Ir (IS)	193	3	HMI He	6275966	0.46	6092963	103.00	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-E
Data File Name	170SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:59:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.036	ppb	-0.036	-551.78	5	2000	
Na	23	3	45	113589.274	ppb	113589.274	1.40	13433384	400000	
Mg	24	3	45	49480.849	ppb	49480.849	2.51	3071678	400000	
Al	27	3	45	0.946	ppb	0.946	182.28	180	400000	
K	39	3	45	6750.228	ppb	6750.228	1.63	371314	400000	
Ca	40	2	45	74700.350	ppb	74700.350	2.12	45019419	400000	
V	51	3	72	1.643	ppb	1.643	3.20	2086	2000	
Cr	52	3	72	0.243	ppb	0.243	91.45	3387	5000	
Mn	55	3	72	1.308	ppb	1.308	23.15	940	10000	
Fe	56	2	72	9.263	ppb	9.263	28.26	78567	10000	
Co	59	3	72	0.392	ppb	0.392	12.22	588	2000	
Ni	60	3	72	1.123	ppb	1.123	3.68	1134	5000	
Cu	63	3	72	1.500	ppb	1.500	5.97	1966	5000	
Zn	66	3	72	9.405	ppb	9.405	8.79	1799	5000	
As	75	3	72	1.606	ppb	1.606	21.42	233	2000	
Se	78	2	72	1.712	ppb	1.712	11.49	105	2000	
Sr	88	3	72	1290.108	ppb	1290.108	1.42	722767	4000	
Mo	95	3	115	2.965	ppb	2.965	4.56	1621	2000	
Ag	107	3	115	0.021	ppb	0.021	19.64	52	100	
Cd	111	3	115	0.050	ppb	0.050	117.02	23	2000	
Sn	120	3	115	0.074	ppb	0.074	178.75	841	2000	
Sb	121	3	115	0.280	ppb	0.280	30.64	272	1000	
Ba	137	3	115	50.712	ppb	50.712	1.18	13367	5000	
Tl	205	3	193	-0.021	ppb	-0.021	-27.50	303	2000	
(Pb)	206	3	193	0.030	ppb	0.030	66.87	363	100	
(Pb)	207	3	193	0.078	ppb	0.078	42.95	580	100	
Pb	208	3	193	0.035	ppb	0.035	61.91	1694	5000	
Th	232	3	193	1.901	ppb	1.901	14.03	16997	2000	
U	238	3	193	10.980	ppb	10.980	0.05	62175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4482052	0.63	4300192	104.23	60	120	
Sc (IS)	45	3	HMI He	662428	0.83	644593	102.77	60	120	
Ge Internal standard	72	2	HMI H2	2601889	1.70	2598552	100.13	60	120	
Ge Internal standard	72	3	HMI He	789531	1.30	772392	102.22	60	120	
In Internal Standard	115	3	HMI He	2975586	1.37	2872781	103.58	60	120	
Ir (IS)	193	3	HMI He	6203985	0.87	6092963	101.82	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-Esd@5
Data File Name	171SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:01:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	23727.265	ppb	23727.265	0.82	2815188	400000	
Mg	24	3	45	10031.707	ppb	10031.707	2.00	621905	400000	
Al	27	3	45	0.276	ppb	0.276	1041.43	163	400000	
K	39	3	45	1355.979	ppb	1355.979	4.68	97487	400000	
Ca	40	2	45	15276.510	ppb	15276.510	2.24	9300859	400000	
V	51	3	72	0.562	ppb	0.562	14.62	1358	2000	
Cr	52	3	72	0.026	ppb	0.026	1051.69	3154	5000	
Mn	55	3	72	1.719	ppb	1.719	4.74	1091	10000	
Fe	56	2	72	2.911	ppb	2.911	83.03	68484	10000	
Co	59	3	72	0.080	ppb	0.080	18.45	162	2000	
Ni	60	3	72	0.415	ppb	0.415	37.29	848	5000	
Cu	63	3	72	0.442	ppb	0.442	11.24	848	5000	
Zn	66	3	72	4.732	ppb	4.732	11.99	1003	5000	
As	75	3	72	0.503	ppb	0.503	43.27	102	2000	
Se	78	2	72	0.320	ppb	0.320	57.77	21	2000	
Sr	88	3	72	267.709	ppb	267.709	0.37	147257	4000	
Mo	95	3	115	0.619	ppb	0.619	13.42	366	2000	
Ag	107	3	115	0.018	ppb	0.018	53.95	47	100	
Cd	111	3	115	-0.014	ppb	-0.014	-158.20	7	2000	
Sn	120	3	115	0.162	ppb	0.162	23.73	906	2000	
Sb	121	3	115	0.090	ppb	0.090	44.04	118	1000	
Ba	137	3	115	10.643	ppb	10.643	6.45	2832	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-3.19	227	2000	
(Pb)	206	3	193	0.336	ppb	0.336	21.98	765	100	
(Pb)	207	3	193	0.341	ppb	0.341	2.72	885	100	
Pb	208	3	193	0.336	ppb	0.336	8.44	3290	5000	
Th	232	3	193	0.092	ppb	0.092	95.41	7525	2000	
U	238	3	193	2.325	ppb	2.325	2.29	14438	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4523217	0.56	4300192	105.19	60	120	
Sc (IS)	45	3	HMI He	661327	1.55	644593	102.60	60	120	
Ge Internal standard	72	2	HMI H2	2603127	3.41	2598552	100.18	60	120	
Ge Internal standard	72	3	HMI He	774925	0.47	772392	100.33	60	120	
In Internal Standard	115	3	HMI He	2952119	1.11	2872781	102.76	60	120	
Ir (IS)	193	3	HMI He	6224081	1.43	6092963	102.15	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-F MS
Data File Name	172SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:02:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.961	ppb	40.961	6.41	1804	2000	
Na	23	3	45	112416.789	ppb	112416.789	1.89	13297912	400000	
Mg	24	3	45	49051.373	ppb	49051.373	0.69	3046009	400000	
Al	27	3	45	768.019	ppb	768.019	3.66	18601	400000	
K	39	3	45	7477.776	ppb	7477.776	1.09	408308	400000	
Ca	40	2	45	77230.298	ppb	77230.298	2.51	46507105	400000	
V	51	3	72	40.336	ppb	40.336	0.49	27340	2000	
Cr	52	3	72	40.248	ppb	40.248	0.39	35467	5000	
Mn	55	3	72	41.720	ppb	41.720	0.66	18056	10000	
Fe	56	2	72	827.816	ppb	827.816	4.08	1408820	10000	
Co	59	3	72	39.568	ppb	39.568	1.76	53948	2000	
Ni	60	3	72	40.210	ppb	40.210	0.68	16150	5000	
Cu	63	3	72	40.711	ppb	40.711	0.45	42948	5000	
Zn	66	3	72	49.318	ppb	49.318	2.82	8483	5000	
As	75	3	72	41.308	ppb	41.308	2.32	4928	2000	
Se	78	2	72	42.433	ppb	42.433	3.27	2613	2000	
Sr	88	3	72	1343.910	ppb	1343.910	0.43	755962	4000	
Mo	95	3	115	40.421	ppb	40.421	1.41	21491	2000	
Ag	107	3	115	39.098	ppb	39.098	0.92	70068	100	
Cd	111	3	115	37.918	ppb	37.918	1.00	9694	2000	
Sn	120	3	115	36.414	ppb	36.414	1.66	30204	2000	
Sb	121	3	115	38.541	ppb	38.541	1.25	30904	1000	
Ba	137	3	115	90.284	ppb	90.284	1.00	23623	5000	
Tl	205	3	193	38.490	ppb	38.490	1.22	153680	2000	
(Pb)	206	3	193	38.588	ppb	38.588	0.71	51348	100	
(Pb)	207	3	193	38.254	ppb	38.254	0.88	44962	100	
Pb	208	3	193	38.393	ppb	38.393	1.58	206298	5000	
Th	232	3	193	37.288	ppb	37.288	2.22	205203	2000	
U	238	3	193	49.750	ppb	49.750	2.51	279687	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4479640	1.16	4300192	104.17	60	120	
Sc (IS)	45	3	HMI He	662539	0.58	644593	102.78	60	120	
Ge Internal standard	72	2	HMI H2	2655570	1.84	2598552	102.19	60	120	
Ge Internal standard	72	3	HMI He	792644	0.36	772392	102.62	60	120	
In Internal Standard	115	3	HMI He	2959887	1.03	2872781	103.03	60	120	
Ir (IS)	193	3	HMI He	6283931	1.83	6092963	103.13	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-G MSD
Data File Name	173SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:04:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.380	ppb	42.380	2.81	1889	2000	
Na	23	3	45	115435.643	ppb	115435.643	1.71	13536457	400000	
Mg	24	3	45	49902.808	ppb	49902.808	1.24	3072016	400000	
Al	27	3	45	723.973	ppb	723.973	3.83	17395	400000	
K	39	3	45	7420.791	ppb	7420.791	0.56	401919	400000	
Ca	40	2	45	77241.280	ppb	77241.280	2.98	46317509	400000	
V	51	3	72	41.099	ppb	41.099	1.74	27735	2000	
Cr	52	3	72	39.441	ppb	39.441	3.11	34691	5000	
Mn	55	3	72	41.561	ppb	41.561	0.89	17923	10000	
Fe	56	2	72	828.013	ppb	828.013	1.56	1379899	10000	
Co	59	3	72	38.840	ppb	38.840	2.79	52755	2000	
Ni	60	3	72	39.717	ppb	39.717	1.07	15903	5000	
Cu	63	3	72	41.274	ppb	41.274	1.01	43376	5000	
Zn	66	3	72	48.204	ppb	48.204	3.29	8267	5000	
As	75	3	72	42.427	ppb	42.427	2.67	5042	2000	
Se	78	2	72	44.448	ppb	44.448	0.62	2679	2000	
Sr	88	3	72	1356.414	ppb	1356.414	1.18	760169	4000	
Mo	95	3	115	41.303	ppb	41.303	1.52	21737	2000	
Ag	107	3	115	38.673	ppb	38.673	1.97	68598	100	
Cd	111	3	115	37.127	ppb	37.127	1.17	9395	2000	
Sn	120	3	115	37.236	ppb	37.236	2.22	30553	2000	
Sb	121	3	115	38.514	ppb	38.514	2.94	30561	1000	
Ba	137	3	115	90.773	ppb	90.773	3.87	23506	5000	
Tl	205	3	193	38.171	ppb	38.171	1.21	152739	2000	
(Pb)	206	3	193	38.339	ppb	38.339	1.90	51122	100	
(Pb)	207	3	193	38.048	ppb	38.048	1.66	44812	100	
Pb	208	3	193	38.162	ppb	38.162	1.45	205516	5000	
Th	232	3	193	38.451	ppb	38.451	0.99	211868	2000	
U	238	3	193	49.359	ppb	49.359	1.25	278150	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4462344	2.79	4300192	103.77	60	120	
Sc (IS)	45	3	HMI He	656805	0.31	644593	101.89	60	120	
Ge Internal standard	72	2	HMI H2	2599351	0.52	2598552	100.03	60	120	
Ge Internal standard	72	3	HMI He	789766	0.90	772392	102.25	60	120	
In Internal Standard	115	3	HMI He	2930146	1.57	2872781	102.00	60	120	
Ir (IS)	193	3	HMI He	6297450	1.67	6092963	103.36	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-E pds
Data File Name	174SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:06:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	102.986	ppb	102.986	3.46	4512	2000	
Na	23	3	45	116614.091	ppb	116614.091	3.10	13625033	400000	
Mg	24	3	45	51284.976	ppb	51284.976	2.96	3145673	400000	
Al	27	3	45	1965.215	ppb	1965.215	2.70	46787	400000	
K	39	3	45	8570.501	ppb	8570.501	2.25	458138	400000	
Ca	40	2	45	77402.595	ppb	77402.595	2.23	46420770	400000	
V	51	3	72	100.130	ppb	100.130	1.37	65976	2000	
Cr	52	3	72	98.937	ppb	98.937	0.75	82044	5000	
Mn	55	3	72	100.129	ppb	100.129	0.29	42550	10000	
Fe	56	2	72	1065.924	ppb	1065.924	2.07	1768813	10000	
Co	59	3	72	98.371	ppb	98.371	1.67	133276	2000	
Ni	60	3	72	99.067	ppb	99.067	1.85	38533	5000	
Cu	63	3	72	103.135	ppb	103.135	1.20	107567	5000	
Zn	66	3	72	208.325	ppb	208.325	1.92	34882	5000	
As	75	3	72	106.960	ppb	106.960	3.15	12618	2000	
Se	78	2	72	102.030	ppb	102.030	2.64	6186	2000	
Sr	88	3	72	1349.986	ppb	1349.986	1.21	755062	4000	
Mo	95	3	115	99.856	ppb	99.856	1.30	52866	2000	
Ag	107	3	115	25.652	ppb	25.652	2.79	45832	100	
Cd	111	3	115	96.205	ppb	96.205	1.98	24498	2000	
Sn	120	3	115	95.095	ppb	95.095	2.54	77368	2000	
Sb	121	3	115	95.043	ppb	95.043	2.15	75882	1000	
Ba	137	3	115	146.726	ppb	146.726	1.96	38226	5000	
Tl	205	3	193	95.854	ppb	95.854	2.43	383238	2000	
(Pb)	206	3	193	95.204	ppb	95.204	3.48	126534	100	
(Pb)	207	3	193	95.828	ppb	95.828	3.23	112173	100	
Pb	208	3	193	94.787	ppb	94.787	3.15	508490	5000	
Th	232	3	193	103.200	ppb	103.200	3.88	556865	2000	
U	238	3	193	217.206	ppb	217.206	3.09	1219389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4461007	1.81	4300192	103.74	60	120	
Sc (IS)	45	3	HMI He	654622	1.43	644593	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2615474	0.42	2598552	100.65	60	120	
Ge Internal standard	72	3	HMI He	788174	0.53	772392	102.04	60	120	
In Internal Standard	115	3	HMI He	2950563	1.29	2872781	102.71	60	120	
Ir (IS)	193	3	HMI He	6303790	2.68	6092963	103.46	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-2-B
Data File Name	175SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:08:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.110	ppb	-0.110	-60.50	2	2000	
Na	23	3	45	114204.456	ppb	114204.456	3.02	13178151	400000	
Mg	24	3	45	45766.703	ppb	45766.703	3.64	2772397	400000	
Al	27	3	45	1.410	ppb	1.410	65.07	187	400000	
K	39	3	45	7633.489	ppb	7633.489	1.96	406049	400000	
Ca	40	2	45	71666.266	ppb	71666.266	0.51	42559849	400000	
V	51	3	72	2.016	ppb	2.016	12.91	2281	2000	
Cr	52	3	72	0.305	ppb	0.305	32.47	3365	5000	
Mn	55	3	72	1.628	ppb	1.628	6.32	1051	10000	
Fe	56	2	72	20.999	ppb	20.999	13.21	96705	10000	
Co	59	3	72	0.327	ppb	0.327	3.45	490	2000	
Ni	60	3	72	1.612	ppb	1.612	6.67	1294	5000	
Cu	63	3	72	1.599	ppb	1.599	4.82	2026	5000	
Zn	66	3	72	19.398	ppb	19.398	7.57	3394	5000	
As	75	3	72	1.501	ppb	1.501	14.37	217	2000	
Se	78	2	72	1.712	ppb	1.712	8.00	105	2000	
Sr	88	3	72	1166.101	ppb	1166.101	1.24	639916	4000	
Mo	95	3	115	2.837	ppb	2.837	4.83	1514	2000	
Ag	107	3	115	0.014	ppb	0.014	51.55	38	100	
Cd	111	3	115	0.039	ppb	0.039	88.03	20	2000	
Sn	120	3	115	0.339	ppb	0.339	23.37	1031	2000	
Sb	121	3	115	0.462	ppb	0.462	14.55	408	1000	
Ba	137	3	115	46.402	ppb	46.402	1.71	11931	5000	
Tl	205	3	193	0.005	ppb	0.005	337.95	405	2000	
(Pb)	206	3	193	0.076	ppb	0.076	14.90	423	100	
(Pb)	207	3	193	0.128	ppb	0.128	66.47	636	100	
Pb	208	3	193	0.110	ppb	0.110	15.75	2091	5000	
Th	232	3	193	2.409	ppb	2.409	13.45	19654	2000	
U	238	3	193	9.799	ppb	9.799	1.36	55606	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416590	1.54	4300192	102.71	60	120	
Sc (IS)	45	3	HMI He	646370	0.34	644593	100.28	60	120	
Ge Internal standard	72	2	HMI H2	2589746	2.03	2598552	99.66	60	120	
Ge Internal standard	72	3	HMI He	773307	0.52	772392	100.12	60	120	
In Internal Standard	115	3	HMI He	2901427	0.73	2872781	101.00	60	120	
Ir (IS)	193	3	HMI He	6198212	0.81	6092963	101.73	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-3-B
Data File Name	176SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:10:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	105877.743	ppb	105877.743	1.11	12161316	400000	
Mg	24	3	45	41195.081	ppb	41195.081	0.46	2483957	400000	
Al	27	3	45	0.160	ppb	0.160	822.66	157	400000	
K	39	3	45	2644.294	ppb	2644.294	1.43	158346	400000	
Ca	40	2	45	92134.882	ppb	92134.882	1.60	55877767	400000	
V	51	3	72	0.215	ppb	0.215	28.81	1173	2000	
Cr	52	3	72	0.135	ppb	0.135	140.36	3342	5000	
Mn	55	3	72	0.703	ppb	0.703	40.10	691	10000	
Fe	56	2	72	5.917	ppb	5.917	46.87	74584	10000	
Co	59	3	72	0.372	ppb	0.372	4.59	568	2000	
Ni	60	3	72	1.058	ppb	1.058	36.10	1124	5000	
Cu	63	3	72	1.227	ppb	1.227	10.43	1701	5000	
Zn	66	3	72	295.418	ppb	295.418	2.25	50071	5000	
As	75	3	72	0.377	ppb	0.377	66.18	90	2000	
Se	78	2	72	0.704	ppb	0.704	21.77	45	2000	
Sr	88	3	72	830.627	ppb	830.627	1.12	471215	4000	
Mo	95	3	115	2.756	ppb	2.756	4.43	1478	2000	
Ag	107	3	115	0.006	ppb	0.006	77.67	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	-154.04	8	2000	
Sn	120	3	115	0.046	ppb	0.046	263.82	801	2000	
Sb	121	3	115	0.090	ppb	0.090	9.41	117	1000	
Ba	137	3	115	34.268	ppb	34.268	4.11	8860	5000	
Tl	205	3	193	-0.037	ppb	-0.037	-16.30	245	2000	
(Pb)	206	3	193	-0.079	ppb	-0.079	-44.05	225	100	
(Pb)	207	3	193	-0.067	ppb	-0.067	-101.69	420	100	
Pb	208	3	193	-0.058	ppb	-0.058	-15.65	1223	5000	
Th	232	3	193	0.160	ppb	0.160	62.38	7990	2000	
U	238	3	193	24.818	ppb	24.818	1.04	140733	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4511558	2.34	4300192	104.92	60	120	
Sc (IS)	45	3	HMI He	643348	1.22	644593	99.81	60	120	
Ge Internal standard	72	2	HMI H2	2652295	1.38	2598552	102.07	60	120	
Ge Internal standard	72	3	HMI He	799395	0.85	772392	103.50	60	120	
In Internal Standard	115	3	HMI He	2913180	1.93	2872781	101.41	60	120	
Ir (IS)	193	3	HMI He	6301086	1.17	6092963	103.42	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-4-B
Data File Name	177SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:11:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-93.00	3	2000	
Na	23	3	45	89462.249	ppb	89462.249	1.70	10348586	400000	
Mg	24	3	45	39594.831	ppb	39594.831	1.52	2403698	400000	
Al	27	3	45	28.524	ppb	28.524	11.14	824	400000	
K	39	3	45	4845.430	ppb	4845.430	0.83	268577	400000	
Ca	40	2	45	45391.731	ppb	45391.731	1.17	26791230	400000	
V	51	3	72	1.030	ppb	1.030	14.15	1621	2000	
Cr	52	3	72	0.376	ppb	0.376	88.68	3355	5000	
Mn	55	3	72	3.109	ppb	3.109	15.64	1629	10000	
Fe	56	2	72	21.482	ppb	21.482	13.83	93471	10000	
Co	59	3	72	0.259	ppb	0.259	8.89	391	2000	
Ni	60	3	72	1.492	ppb	1.492	12.39	1224	5000	
Cu	63	3	72	1.910	ppb	1.910	7.01	2297	5000	
Zn	66	3	72	5.924	ppb	5.924	11.96	1171	5000	
As	75	3	72	2.984	ppb	2.984	4.90	380	2000	
Se	78	2	72	0.442	ppb	0.442	13.10	27	2000	
Sr	88	3	72	905.772	ppb	905.772	1.21	487232	4000	
Mo	95	3	115	3.394	ppb	3.394	2.28	1808	2000	
Ag	107	3	115	0.003	ppb	0.003	162.20	18	100	
Cd	111	3	115	-0.028	ppb	-0.028	-41.63	3	2000	
Sn	120	3	115	0.219	ppb	0.219	45.63	938	2000	
Sb	121	3	115	0.245	ppb	0.245	13.24	238	1000	
Ba	137	3	115	24.321	ppb	24.321	4.22	6293	5000	
Tl	205	3	193	-0.036	ppb	-0.036	-6.55	247	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-948.34	325	100	
(Pb)	207	3	193	0.003	ppb	0.003	258.75	500	100	
Pb	208	3	193	0.002	ppb	0.002	639.53	1539	5000	
Th	232	3	193	-0.086	ppb	-0.086	-169.18	6642	2000	
U	238	3	193	5.958	ppb	5.958	4.56	34861	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4388875	0.15	4300192	102.06	60	120	
Sc (IS)	45	3	HMI He	647650	0.78	644593	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2481147	1.82	2598552	95.48	60	120	
Ge Internal standard	72	3	HMI He	758014	1.50	772392	98.14	60	120	
In Internal Standard	115	3	HMI He	2906436	0.86	2872781	101.17	60	120	
Ir (IS)	193	3	HMI He	6282213	2.62	6092963	103.11	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	178_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:13:34-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.150	ppb	7.804	2334	50	108.3	90	110	
Na	23	3	45	47325.525	ppb	2.947	5422838	51000	92.8	90	110	
Mg	24	3	45	10103.494	ppb	2.344	606804	11000	91.8	90	110	
Al	27	3	45	950.310	ppb	3.582	22216	1000	95.0	90	110	
K	39	3	45	10115.044	ppb	3.540	524111	11000	92.0	90	110	
Ca	40	2	45	10264.042	ppb	0.986	6081381	11000	93.3	90	110	
V	51	3	72	49.799	ppb	1.516	32066	50	99.6	90	110	
Cr	52	3	72	51.680	ppb	1.889	42701	50	103.4	90	110	
Mn	55	3	72	50.452	ppb	0.921	20814	50	100.9	90	110	
Fe	56	2	72	1061.157	ppb	2.619	1720685	1000	106.1	90	110	
Co	59	3	72	49.920	ppb	1.727	65103	50	99.8	90	110	
Ni	60	3	72	49.999	ppb	0.789	19049	50	100.0	90	110	
Cu	63	3	72	50.697	ppb	1.784	51075	50	101.4	90	110	
Zn	66	3	72	49.513	ppb	1.503	8148	50	99.0	90	110	
As	75	3	72	52.178	ppb	2.392	5945	50	104.4	90	110	
Se	78	2	72	51.880	ppb	1.148	3075	50	103.8	90	110	
Sr	88	3	72	104.238	ppb	0.393	56139	100	104.2	90	110	
Mo	95	3	115	48.661	ppb	1.948	25520	50	97.3	90	110	
Ag	107	3	115	47.997	ppb	1.183	84847	50	96.0	90	110	
Cd	111	3	115	48.094	ppb	1.250	12126	50	96.2	90	110	
Sn	120	3	115	47.893	ppb	1.552	38949	50	95.8	90	110	
Sb	121	3	115	48.814	ppb	0.701	38596	50	97.6	90	110	
Ba	137	3	115	48.728	ppb	1.341	12606	50	97.5	90	110	
Tl	205	3	193	49.031	ppb	2.961	191697	50	98.1	90	110	
(Pb)	206	3	193	49.211	ppb	2.116	64066	50	98.4	90	110	
(Pb)	207	3	193	49.575	ppb	3.019	56937	50	99.1	90	110	
Pb	208	3	193	49.258	ppb	1.547	258924	50	98.5	90	110	
Th	232	3	193	48.105	ppb	2.113	257381	50	96.2	90	110	
U	238	3	193	49.372	ppb	1.977	271998	50	98.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4397985	2.08	4300192	102.27	60	120	
Sc (IS)	45	3	HMI He	640744	1.75	644593	99.40	60	120	
Ge Internal standard	72	2	HMI H2	2556215	2.38	2598552	98.37	60	120	
Ge Internal standard	72	3	HMI He	758374	0.41	772392	98.19	60	120	
In Internal Standard	115	3	HMI He	2919949	0.93	2872781	101.64	60	120	
Ir (IS)	193	3	HMI He	6156759	1.07	6092963	101.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	179_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:15:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	61.009	ppb	6.0	23460	25	>RL
Mg	24	3	45	1.774	ppb	39.7	374	25	
Al	27	3	45	-2.956	ppb	-30.9	83	15	
K	39	3	45	8.307	ppb	265.5	28213	50	
V	51	3	72	0.355	ppb	17.0	1233	1	
Cr	52	3	72	0.115	ppb	292.7	3242	1	
Mn	55	3	72	-0.188	ppb	-63.6	303	0.5	
Co	59	3	72	0.005	ppb	396.6	62	0.5	
Ni	60	3	72	0.470	ppb	42.0	873	1	
Cu	63	3	72	0.050	ppb	96.7	450	1	
Zn	66	3	72	0.098	ppb	62.5	247	5	
As	75	3	72	0.297	ppb	65.8	78	1	
Se	78	2	72	0.088	ppb	77.7	7	1	
Sr	88	3	72	0.041	ppb	106.4	67	0.5	
Mo	95	3	115	0.078	ppb	37.2	80	0.5	
Ag	107	3	115	0.006	ppb	78.2	25	1	
Cd	111	3	115	-0.021	ppb	-97.2	5	0.5	
Sn	120	3	115	0.146	ppb	48.5	885	1	
Sb	121	3	115	0.045	ppb	58.9	82	0.6	
Ba	137	3	115	0.001	ppb	4373.0	63	0.5	
Tl	205	3	193	-0.039	ppb	-12.4	242	0.1	
(Pb)	206	3	193	-0.063	ppb	-79.8	248	1	
(Pb)	207	3	193	-0.053	ppb	-39.0	441	1	
Pb	208	3	193	-0.070	ppb	-20.8	1176	0.5	
Th	232	3	193	1.310	ppb	12.4	14293	1	>RL
U	238	3	193	0.028	ppb	48.1	1766	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4360444	1.50	4300192	101.40	60	120	
Sc (IS)	45	3	HMI He	637775	0.83	644593	98.94	60	120	
Ge Internal standard	72	2	HMI H2	2592300	0.57	2598552	99.76	60	120	
Ge Internal standard	72	3	HMI He	779118	0.45	772392	100.87	60	120	
In Internal Standard	115	3	HMI He	2922581	3.34	2872781	101.73	60	120	
Ir (IS)	193	3	HMI He	6380356	0.42	6092963	104.72	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-B
Data File Name	180SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:17:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-64.38	2	2000	
Na	23	3	45	108276.094	ppb	108276.094	2.03	12204949	400000	
Mg	24	3	45	15319.471	ppb	15319.471	2.18	906643	400000	
Al	27	3	45	83.602	ppb	83.602	10.72	2066	400000	
K	39	3	45	5760.462	ppb	5760.462	1.48	306068	400000	
Ca	40	2	45	143543.621	ppb	143543.621	1.90	85006146	400000	
V	51	3	72	0.062	ppb	0.062	204.24	995	2000	
Cr	52	3	72	0.776	ppb	0.776	28.44	3582	5000	
Mn	55	3	72	0.059	ppb	0.059	74.30	386	10000	
Fe	56	2	72	6.962	ppb	6.962	43.85	71814	10000	
Co	59	3	72	0.119	ppb	0.119	18.86	205	2000	
Ni	60	3	72	23.598	ppb	23.598	2.98	9140	5000	
Cu	63	3	72	0.502	ppb	0.502	11.91	870	5000	
Zn	66	3	72	4.361	ppb	4.361	12.28	901	5000	
As	75	3	72	0.286	ppb	0.286	31.05	73	2000	
Se	78	2	72	0.877	ppb	0.877	10.00	53	2000	
Sr	88	3	72	1011.970	ppb	1011.970	0.95	532523	4000	
Mo	95	3	115	4.706	ppb	4.706	4.23	2476	2000	
Ag	107	3	115	0.007	ppb	0.007	132.35	27	100	
Cd	111	3	115	-0.014	ppb	-0.014	-167.75	7	2000	
Sn	120	3	115	-0.004	ppb	-0.004	-2238.58	756	2000	
Sb	121	3	115	0.418	ppb	0.418	8.04	371	1000	
Ba	137	3	115	82.390	ppb	82.390	1.80	21041	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-6.21	217	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-94.96	273	100	
(Pb)	207	3	193	-0.084	ppb	-0.084	-57.10	390	100	
Pb	208	3	193	-0.061	ppb	-0.061	-19.91	1178	5000	
Th	232	3	193	0.165	ppb	0.165	113.36	7812	2000	
U	238	3	193	0.155	ppb	0.155	26.39	2396	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4405896	1.60	4300192	102.46	60	120	
Sc (IS)	45	3	HMI He	631448	1.53	644593	97.96	60	120	
Ge Internal standard	72	2	HMI H2	2494716	1.27	2598552	96.00	60	120	
Ge Internal standard	72	3	HMI He	741538	0.78	772392	96.01	60	120	
In Internal Standard	115	3	HMI He	2887980	0.77	2872781	100.53	60	120	
Ir (IS)	193	3	HMI He	6149543	1.69	6092963	100.93	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-E MS
Data File Name	181SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:18:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.804	ppb	40.804	3.45	1744	2000	
Na	23	3	45	106166.409	ppb	106166.409	1.90	12113896	400000	
Mg	24	3	45	15563.043	ppb	15563.043	1.29	932365	400000	
Al	27	3	45	803.423	ppb	803.423	2.91	18765	400000	
K	39	3	45	6248.382	ppb	6248.382	0.35	333722	400000	
Ca	40	2	45	142741.361	ppb	142741.361	0.99	84257908	400000	
V	51	3	72	38.459	ppb	38.459	1.00	24930	2000	
Cr	52	3	72	39.730	ppb	39.730	1.44	33460	5000	
Mn	55	3	72	39.918	ppb	39.918	1.64	16508	10000	
Fe	56	2	72	797.625	ppb	797.625	1.90	1312212	10000	
Co	59	3	72	38.586	ppb	38.586	1.69	50219	2000	
Ni	60	3	72	61.788	ppb	61.788	0.59	23328	5000	
Cu	63	3	72	39.014	ppb	39.014	0.38	39306	5000	
Zn	66	3	72	41.208	ppb	41.208	3.32	6803	5000	
As	75	3	72	39.970	ppb	39.970	2.34	4554	2000	
Se	78	2	72	39.618	ppb	39.618	1.59	2354	2000	
Sr	88	3	72	1057.854	ppb	1057.854	0.93	568042	4000	
Mo	95	3	115	41.243	ppb	41.243	0.45	21430	2000	
Ag	107	3	115	38.269	ppb	38.269	1.25	67016	100	
Cd	111	3	115	37.014	ppb	37.014	3.85	9245	2000	
Sn	120	3	115	35.422	ppb	35.422	1.70	28732	2000	
Sb	121	3	115	37.513	ppb	37.513	1.15	29391	1000	
Ba	137	3	115	120.543	ppb	120.543	1.21	30802	5000	
Tl	205	3	193	37.373	ppb	37.373	1.03	149872	2000	
(Pb)	206	3	193	37.457	ppb	37.457	2.75	50060	100	
(Pb)	207	3	193	37.031	ppb	37.031	2.38	43718	100	
Pb	208	3	193	37.222	ppb	37.222	1.79	200916	5000	
Th	232	3	193	35.932	ppb	35.932	1.36	198869	2000	
U	238	3	193	38.035	ppb	38.035	0.94	215151	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4391094	1.12	4300192	102.11	60	120	
Sc (IS)	45	3	HMI He	639138	1.24	644593	99.15	60	120	
Ge Internal standard	72	2	HMI H2	2561715	0.89	2598552	98.58	60	120	
Ge Internal standard	72	3	HMI He	756687	0.68	772392	97.97	60	120	
In Internal Standard	115	3	HMI He	2892476	0.95	2872781	100.69	60	120	
Ir (IS)	193	3	HMI He	6310165	0.57	6092963	103.56	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-F MSD
Data File Name	182SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:20:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	43.133	ppb	43.133	6.51	1876	2000	
Na	23	3	45	106808.788	ppb	106808.788	1.10	12180911	400000	
Mg	24	3	45	15751.164	ppb	15751.164	1.82	943024	400000	
Al	27	3	45	790.424	ppb	790.424	2.60	18451	400000	
K	39	3	45	6409.061	ppb	6409.061	2.40	341321	400000	
Ca	40	2	45	143677.144	ppb	143677.144	2.31	84303284	400000	
V	51	3	72	39.486	ppb	39.486	3.82	25492	2000	
Cr	52	3	72	41.025	ppb	41.025	1.31	34357	5000	
Mn	55	3	72	40.427	ppb	40.427	1.79	16667	10000	
Fe	56	2	72	817.129	ppb	817.129	3.74	1319265	10000	
Co	59	3	72	40.024	ppb	40.024	2.14	51941	2000	
Ni	60	3	72	61.926	ppb	61.926	2.54	23311	5000	
Cu	63	3	72	40.689	ppb	40.689	3.83	40853	5000	
Zn	66	3	72	42.775	ppb	42.775	2.17	7035	5000	
As	75	3	72	40.432	ppb	40.432	4.57	4592	2000	
Se	78	2	72	41.550	ppb	41.550	4.59	2425	2000	
Sr	88	3	72	1062.937	ppb	1062.937	1.05	569220	4000	
Mo	95	3	115	43.684	ppb	43.684	2.61	22307	2000	
Ag	107	3	115	39.235	ppb	39.235	1.66	67547	100	
Cd	111	3	115	40.072	ppb	40.072	1.28	9842	2000	
Sn	120	3	115	36.665	ppb	36.665	1.11	29214	2000	
Sb	121	3	115	39.517	ppb	39.517	3.45	30428	1000	
Ba	137	3	115	126.060	ppb	126.060	2.09	31660	5000	
Tl	205	3	193	38.156	ppb	38.156	1.03	152006	2000	
(Pb)	206	3	193	38.702	ppb	38.702	0.89	51378	100	
(Pb)	207	3	193	37.800	ppb	37.800	1.65	44325	100	
Pb	208	3	193	38.405	ppb	38.405	1.56	205899	5000	
Th	232	3	193	38.654	ppb	38.654	0.61	212004	2000	
U	238	3	193	38.965	ppb	38.965	0.78	218931	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365392	1.23	4300192	101.52	60	120	
Sc (IS)	45	3	HMI He	638707	0.78	644593	99.09	60	120	
Ge Internal standard	72	2	HMI H2	2517827	1.71	2598552	96.89	60	120	
Ge Internal standard	72	3	HMI He	754656	1.46	772392	97.70	60	120	
In Internal Standard	115	3	HMI He	2843989	2.11	2872781	99.00	60	120	
Ir (IS)	193	3	HMI He	6268932	0.69	6092963	102.89	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-1-B@50
Data File Name	183SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:22:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.073	ppb	-0.073	-181.67	3	2000	
Na	23	3	45	22827.275	ppb	22827.275	1.44	2586351	400000	
Mg	24	3	45	7235.369	ppb	7235.369	1.23	428414	400000	
Al	27	3	45	1.002	ppb	1.002	129.82	174	400000	
K	39	3	45	314.388	ppb	314.388	7.95	42745	400000	
Ca	40	2	45	10718.537	ppb	10718.537	0.39	6220647	400000	
V	51	3	72	-0.118	ppb	-0.118	-96.99	895	2000	
Cr	52	3	72	0.235	ppb	0.235	165.07	3210	5000	
Mn	55	3	72	2.007	ppb	2.007	11.75	1171	10000	
Fe	56	2	72	4.042	ppb	4.042	86.88	68286	10000	
Co	59	3	72	0.019	ppb	0.019	74.31	78	2000	
Ni	60	3	72	0.510	ppb	0.510	22.80	855	5000	
Cu	63	3	72	0.217	ppb	0.217	2.79	598	5000	
Zn	66	3	72	4.146	ppb	4.146	4.84	878	5000	
As	75	3	72	0.174	ppb	0.174	76.33	62	2000	
Se	78	2	72	47.813	ppb	47.813	3.63	2804	2000	
Sr	88	3	72	198.424	ppb	198.424	0.63	105641	4000	
Mo	95	3	115	0.086	ppb	0.086	64.20	80	2000	
Ag	107	3	115	0.016	ppb	0.016	31.12	40	100	
Cd	111	3	115	-0.020	ppb	-0.020	-103.20	5	2000	
Sn	120	3	115	0.531	ppb	0.531	7.97	1134	2000	
Sb	121	3	115	0.064	ppb	0.064	79.71	92	1000	
Ba	137	3	115	0.219	ppb	0.219	40.95	113	5000	
Tl	205	3	193	-0.024	ppb	-0.024	-30.09	300	2000	
(Pb)	206	3	193	0.404	ppb	0.404	13.61	868	100	
(Pb)	207	3	193	0.382	ppb	0.382	6.56	946	100	
Pb	208	3	193	0.373	ppb	0.373	9.29	3543	5000	
Th	232	3	193	1.903	ppb	1.903	11.44	17327	2000	
U	238	3	193	3.677	ppb	3.677	1.58	22276	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4308668	0.80	4300192	100.20	60	120	
Sc (IS)	45	3	HMI He	631484	1.27	644593	97.97	60	120	
Ge Internal standard	72	2	HMI H2	2529892	0.61	2598552	97.36	60	120	
Ge Internal standard	72	3	HMI He	749987	0.75	772392	97.10	60	120	
In Internal Standard	115	3	HMI He	2782601	1.68	2872781	96.86	60	120	
Ir (IS)	193	3	HMI He	6321109	0.94	6092963	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-2-B@50
Data File Name	184SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:24:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.074	ppb	-0.074	-88.64	3	2000	
Na	23	3	45	45712.170	ppb	45712.170	0.97	5182280	400000	
Mg	24	3	45	6806.536	ppb	6806.536	1.95	404553	400000	
Al	27	3	45	2.581	ppb	2.581	102.17	210	400000	
K	39	3	45	321.613	ppb	321.613	7.01	43240	400000	
Ca	40	2	45	5812.678	ppb	5812.678	1.06	3442662	400000	
V	51	3	72	0.021	ppb	0.021	272.28	990	2000	
Cr	52	3	72	0.363	ppb	0.363	53.70	3339	5000	
Mn	55	3	72	6.153	ppb	6.153	3.58	2859	10000	
Fe	56	2	72	5.935	ppb	5.935	53.24	72136	10000	
Co	59	3	72	0.186	ppb	0.186	10.80	297	2000	
Ni	60	3	72	1.006	ppb	1.006	7.83	1045	5000	
Cu	63	3	72	0.180	ppb	0.180	6.64	566	5000	
Zn	66	3	72	3.918	ppb	3.918	12.99	850	5000	
As	75	3	72	0.215	ppb	0.215	80.00	67	2000	
Se	78	2	72	0.123	ppb	0.123	102.00	9	2000	
Sr	88	3	72	172.552	ppb	172.552	0.76	92729	4000	
Mo	95	3	115	0.163	ppb	0.163	14.48	122	2000	
Ag	107	3	115	0.014	ppb	0.014	89.36	38	100	
Cd	111	3	115	-0.014	ppb	-0.014	-222.87	7	2000	
Sn	120	3	115	0.337	ppb	0.337	47.05	1016	2000	
Sb	121	3	115	0.059	ppb	0.059	62.05	90	1000	
Ba	137	3	115	0.292	ppb	0.292	36.37	135	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-6.86	220	2000	
(Pb)	206	3	193	0.365	ppb	0.365	8.49	806	100	
(Pb)	207	3	193	0.319	ppb	0.319	4.77	861	100	
Pb	208	3	193	0.330	ppb	0.330	1.56	3272	5000	
Th	232	3	193	0.392	ppb	0.392	25.98	9144	2000	
U	238	3	193	1.054	ppb	1.054	3.89	7425	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4389440	1.35	4300192	102.08	60	120	
Sc (IS)	45	3	HMI He	633781	0.15	644593	98.32	60	120	
Ge Internal standard	72	2	HMI H2	2561668	1.44	2598552	98.58	60	120	
Ge Internal standard	72	3	HMI He	757000	1.06	772392	98.01	60	120	
In Internal Standard	115	3	HMI He	2859777	1.68	2872781	99.55	60	120	
Ir (IS)	193	3	HMI He	6244634	1.73	6092963	102.49	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-3-B@50
Data File Name	185SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:26:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.073	ppb	-0.073	-178.91	3	2000	
Na	23	3	45	22808.443	ppb	22808.443	0.67	2588615	400000	
Mg	24	3	45	5761.280	ppb	5761.280	1.03	341760	400000	
Al	27	3	45	0.564	ppb	0.564	41.94	163	400000	
K	39	3	45	239.810	ppb	239.810	10.22	39187	400000	
Ca	40	2	45	7870.827	ppb	7870.827	0.82	4588819	400000	
V	51	3	72	0.169	ppb	0.169	18.72	1088	2000	
Cr	52	3	72	0.405	ppb	0.405	55.81	3390	5000	
Mn	55	3	72	5.811	ppb	5.811	6.77	2737	10000	
Fe	56	2	72	6.852	ppb	6.852	51.09	72810	10000	
Co	59	3	72	0.018	ppb	0.018	81.53	78	2000	
Ni	60	3	72	0.620	ppb	0.620	20.70	908	5000	
Cu	63	3	72	0.202	ppb	0.202	8.96	591	5000	
Zn	66	3	72	3.616	ppb	3.616	10.23	806	5000	
As	75	3	72	0.285	ppb	0.285	43.59	75	2000	
Se	78	2	72	5.563	ppb	5.563	14.12	329	2000	
Sr	88	3	72	157.871	ppb	157.871	1.85	85302	4000	
Mo	95	3	115	0.089	ppb	0.089	50.70	85	2000	
Ag	107	3	115	0.025	ppb	0.025	12.05	58	100	
Cd	111	3	115	-0.028	ppb	-0.028	-82.70	3	2000	
Sn	120	3	115	0.198	ppb	0.198	32.75	923	2000	
Sb	121	3	115	0.035	ppb	0.035	19.19	73	1000	
Ba	137	3	115	0.120	ppb	0.120	49.63	93	5000	
Tl	205	3	193	-0.047	ppb	-0.047	-13.85	202	2000	
(Pb)	206	3	193	0.352	ppb	0.352	7.91	785	100	
(Pb)	207	3	193	0.344	ppb	0.344	18.32	886	100	
Pb	208	3	193	0.346	ppb	0.346	1.37	3339	5000	
Th	232	3	193	-0.035	ppb	-0.035	-298.91	6840	2000	
U	238	3	193	2.473	ppb	2.473	3.29	15228	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4325564	1.84	4300192	100.59	60	120	
Sc (IS)	45	3	HMI He	632470	0.34	644593	98.12	60	120	
Ge Internal standard	72	2	HMI H2	2537883	1.65	2598552	97.67	60	120	
Ge Internal standard	72	3	HMI He	761130	1.47	772392	98.54	60	120	
In Internal Standard	115	3	HMI He	2911788	1.00	2872781	101.36	60	120	
Ir (IS)	193	3	HMI He	6208479	1.78	6092963	101.90	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-1-B
Data File Name	186SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:28:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	1035626.592	ppb	1035626.592	0.84	118340153	400000	
Mg	24	3	45	327846.123	ppb	327846.123	1.09	19689796	400000	
Al	27	3	45	-0.104	ppb	-0.104	-2282.91	150	400000	
K	39	3	45	15034.455	ppb	15034.455	1.56	765817	400000	
Ca	40	2	45	524072.720	ppb	524072.720	0.58	297473506	400000	
V	51	3	72	-0.236	ppb	-0.236	-51.66	828	2000	
Cr	52	3	72	0.308	ppb	0.308	76.42	3292	5000	
Mn	55	3	72	20.070	ppb	20.070	0.98	8473	10000	
Fe	56	2	72	7.936	ppb	7.936	45.89	74004	10000	
Co	59	3	72	0.127	ppb	0.127	16.60	218	2000	
Ni	60	3	72	1.511	ppb	1.511	3.75	1228	5000	
Cu	63	3	72	1.189	ppb	1.189	3.42	1571	5000	
Zn	66	3	72	2.694	ppb	2.694	6.35	653	5000	
As	75	3	72	0.214	ppb	0.214	105.80	67	2000	
Se	78	2	72	2264.598	ppb	2264.598	0.77	132166	2000	
Sr	88	3	72	9743.235	ppb	9743.235	2.09	5224020	4000	
Mo	95	3	115	0.996	ppb	0.996	20.26	530	2000	
Ag	107	3	115	0.008	ppb	0.008	20.96	27	100	
Cd	111	3	115	-0.013	ppb	-0.013	-250.93	7	2000	
Sn	120	3	115	-0.001	ppb	-0.001	-12900.80	725	2000	
Sb	121	3	115	0.087	ppb	0.087	52.36	108	1000	
Ba	137	3	115	11.154	ppb	11.154	6.98	2776	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-14.88	215	2000	
(Pb)	206	3	193	-0.032	ppb	-0.032	-30.65	277	100	
(Pb)	207	3	193	-0.021	ppb	-0.021	-44.57	456	100	
Pb	208	3	193	-0.026	ppb	-0.026	-28.77	1348	5000	
Th	232	3	193	-0.111	ppb	-0.111	-60.45	6312	2000	
U	238	3	193	182.125	ppb	182.125	3.30	985818	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4222837	1.31	4300192	98.20	60	120	
Sc (IS)	45	3	HMI He	640786	1.10	644593	99.41	60	120	
Ge Internal standard	72	2	HMI H2	2518751	0.98	2598552	96.93	60	120	
Ge Internal standard	72	3	HMI He	755730	1.56	772392	97.84	60	120	
In Internal Standard	115	3	HMI He	2763803	1.18	2872781	96.21	60	120	
Ir (IS)	193	3	HMI He	6076904	2.70	6092963	99.74	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-2-B
Data File Name	187SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:29:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-96.48	3	2000	
Na	23	3	45	2080505.447	ppb	2080505.447	0.24	233686306	400000	>LDR
Mg	24	3	45	308910.886	ppb	308910.886	0.92	18235279	400000	
Al	27	3	45	1.762	ppb	1.762	41.81	190	400000	
K	39	3	45	15359.140	ppb	15359.140	0.89	768431	400000	
Ca	40	2	45	270339.985	ppb	270339.985	1.21	156862090	400000	
V	51	3	72	-0.297	ppb	-0.297	-50.31	778	2000	
Cr	52	3	72	2.288	ppb	2.288	9.43	4727	5000	
Mn	55	3	72	191.126	ppb	191.126	1.30	76270	10000	
Fe	56	2	72	9.680	ppb	9.680	48.63	78084	10000	
Co	59	3	72	6.594	ppb	6.594	1.05	8475	2000	
Ni	60	3	72	18.634	ppb	18.634	4.34	7375	5000	
Cu	63	3	72	0.605	ppb	0.605	6.09	973	5000	
Zn	66	3	72	7.687	ppb	7.687	5.39	1426	5000	
As	75	3	72	0.225	ppb	0.225	66.60	67	2000	
Se	78	2	72	3.702	ppb	3.702	12.64	222	2000	
Sr	88	3	72	8569.151	ppb	8569.151	1.49	4519780	4000	
Mo	95	3	115	6.110	ppb	6.110	3.77	3050	2000	
Ag	107	3	115	0.003	ppb	0.003	52.08	18	100	
Cd	111	3	115	-0.013	ppb	-0.013	-86.14	7	2000	
Sn	120	3	115	0.661	ppb	0.661	11.64	1219	2000	
Sb	121	3	115	0.798	ppb	0.798	5.43	638	1000	
Ba	137	3	115	11.926	ppb	11.926	5.62	2951	5000	
Tl	205	3	193	-0.050	ppb	-0.050	-8.21	180	2000	
(Pb)	206	3	193	0.019	ppb	0.019	197.17	330	100	
(Pb)	207	3	193	-0.035	ppb	-0.035	-276.14	425	100	
Pb	208	3	193	-0.010	ppb	-0.010	-382.06	1376	5000	
Th	232	3	193	-0.255	ppb	-0.255	-21.15	5382	2000	
U	238	3	193	49.188	ppb	49.188	2.49	258432	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4316178	1.41	4300192	100.37	60	120	
Sc (IS)	45	3	HMI He	629887	0.64	644593	97.72	60	120	
Ge Internal standard	72	2	HMI H2	2572009	3.91	2598552	98.98	60	120	
Ge Internal standard	72	3	HMI He	743395	1.66	772392	96.25	60	120	
In Internal Standard	115	3	HMI He	2753145	3.17	2872781	95.84	60	120	
Ir (IS)	193	3	HMI He	5872618	2.08	6092963	96.38	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-3-B
Data File Name	188SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:31:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.27	2	2000	
Na	23	3	45	1061466.876	ppb	1061466.876	1.06	119050991	400000	
Mg	24	3	45	269346.915	ppb	269346.915	1.06	15874380	400000	
Al	27	3	45	2.065	ppb	2.065	84.81	197	400000	
K	39	3	45	11479.921	ppb	11479.921	0.35	580359	400000	
Ca	40	2	45	377803.164	ppb	377803.164	0.93	214963825	400000	
V	51	3	72	-0.169	ppb	-0.169	-51.94	861	2000	
Cr	52	3	72	0.483	ppb	0.483	39.23	3394	5000	
Mn	55	3	72	190.064	ppb	190.064	0.62	76381	10000	
Fe	56	2	72	6.447	ppb	6.447	63.56	71026	10000	
Co	59	3	72	0.217	ppb	0.217	16.24	333	2000	
Ni	60	3	72	4.486	ppb	4.486	4.63	2296	5000	
Cu	63	3	72	2.403	ppb	2.403	4.95	2754	5000	
Zn	66	3	72	2.672	ppb	2.672	13.50	643	5000	
As	75	3	72	0.578	ppb	0.578	15.26	107	2000	
Se	78	2	72	262.819	ppb	262.819	0.99	15195	2000	
Sr	88	3	72	7868.433	ppb	7868.433	1.31	4179756	4000	
Mo	95	3	115	2.102	ppb	2.102	3.25	1091	2000	
Ag	107	3	115	0.013	ppb	0.013	82.36	35	100	
Cd	111	3	115	0.022	ppb	0.022	256.15	15	2000	
Sn	120	3	115	-0.062	ppb	-0.062	-71.05	688	2000	
Sb	121	3	115	0.089	ppb	0.089	9.74	112	1000	
Ba	137	3	115	10.246	ppb	10.246	2.34	2586	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-37.19	215	2000	
(Pb)	206	3	193	-0.032	ppb	-0.032	-78.99	267	100	
(Pb)	207	3	193	-0.044	ppb	-0.044	-118.65	416	100	
Pb	208	3	193	-0.043	ppb	-0.043	-19.24	1214	5000	
Th	232	3	193	-0.387	ppb	-0.387	-23.21	4717	2000	
U	238	3	193	117.315	ppb	117.315	1.51	613804	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4232952	1.30	4300192	98.44	60	120	
Sc (IS)	45	3	HMI He	628919	1.28	644593	97.57	60	120	
Ge Internal standard	72	2	HMI H2	2494872	1.01	2598552	96.01	60	120	
Ge Internal standard	72	3	HMI He	748592	1.23	772392	96.92	60	120	
In Internal Standard	115	3	HMI He	2796362	1.01	2872781	97.34	60	120	
Ir (IS)	193	3	HMI He	5866571	1.61	6092963	96.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	189_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:33:24-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	50.581	ppb	1.959	2269	50	101.2	90	110	
Na	23	3	45	47905.615	ppb	1.639	5559584	51000	93.9	90	110	
Mg	24	3	45	10179.456	ppb	1.173	619353	11000	92.5	90	110	
Al	27	3	45	959.724	ppb	4.008	22725	1000	96.0	90	110	
K	39	3	45	10120.786	ppb	2.799	531221	11000	92.0	90	110	
Ca	40	2	45	10171.823	ppb	2.661	6189346	11000	92.5	90	110	
V	51	3	72	50.608	ppb	0.345	32994	50	101.2	90	110	
Cr	52	3	72	51.370	ppb	2.720	43013	50	102.7	90	110	
Mn	55	3	72	50.900	ppb	2.778	21267	50	101.8	90	110	
Fe	56	2	72	1056.325	ppb	1.111	1721888	1000	105.6	90	110	
Co	59	3	72	50.242	ppb	2.223	66372	50	100.5	90	110	
Ni	60	3	72	49.146	ppb	1.269	18979	50	98.3	90	110	
Cu	63	3	72	49.971	ppb	0.949	51005	50	99.9	90	110	
Zn	66	3	72	50.784	ppb	1.973	8460	50	101.6	90	110	
As	75	3	72	51.935	ppb	1.069	5995	50	103.9	90	110	
Se	78	2	72	50.756	ppb	1.366	3022	50	101.5	90	110	
Sr	88	3	72	103.197	ppb	1.044	56301	100	103.2	90	110	
Mo	95	3	115	48.448	ppb	2.848	25301	50	96.9	90	110	
Ag	107	3	115	48.711	ppb	1.473	85773	50	97.4	90	110	
Cd	111	3	115	49.009	ppb	2.645	12306	50	98.0	90	110	
Sn	120	3	115	46.987	ppb	1.108	38072	50	94.0	90	110	
Sb	121	3	115	49.400	ppb	1.570	38904	50	98.8	90	110	
Ba	137	3	115	48.663	ppb	1.805	12540	50	97.3	90	110	
Tl	205	3	193	48.146	ppb	2.531	192047	50	96.3	90	110	
(Pb)	206	3	193	48.508	ppb	3.603	64419	50	97.0	90	110	
(Pb)	207	3	193	48.086	ppb	2.594	56354	50	96.2	90	110	
Pb	208	3	193	48.144	ppb	3.899	258143	50	96.3	90	110	
Th	232	3	193	47.400	ppb	0.501	258884	50	94.8	90	110	
U	238	3	193	48.445	ppb	3.485	272268	50	96.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4517622	1.35	4300192	105.06	60	120	
Sc (IS)	45	3	HMI He	648996	1.47	644593	100.68	60	120	
Ge Internal standard	72	2	HMI H2	2568452	1.23	2598552	98.84	60	120	
Ge Internal standard	72	3	HMI He	768265	0.61	772392	99.47	60	120	
In Internal Standard	115	3	HMI He	2908196	0.66	2872781	101.23	60	120	
Ir (IS)	193	3	HMI He	6281867	1.93	6092963	103.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	190_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:35:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	382.206	ppb	6.9	61035	25	>RL
Mg	24	3	45	20.213	ppb	13.6	1502	25	
Al	27	3	45	-2.435	ppb	-87.8	97	15	
K	39	3	45	2.161	ppb	1404.0	28397	50	
V	51	3	72	0.272	ppb	36.9	1183	1	
Cr	52	3	72	0.296	ppb	52.4	3392	1	
Mn	55	3	72	-0.198	ppb	-49.7	300	0.5	
Co	59	3	72	0.021	ppb	74.6	83	0.5	
Ni	60	3	72	0.228	ppb	82.2	783	1	
Cu	63	3	72	0.082	ppb	35.9	483	1	
Zn	66	3	72	-0.371	ppb	-54.5	170	5	
As	75	3	72	0.109	ppb	78.8	57	1	
Se	78	2	72	0.151	ppb	44.6	11	1	
Sr	88	3	72	0.490	ppb	17.4	315	0.5	
Mo	95	3	115	0.077	ppb	15.1	80	0.5	
Ag	107	3	115	0.012	ppb	105.5	35	1	
Cd	111	3	115	-0.021	ppb	-89.9	5	0.5	
Sn	120	3	115	0.095	ppb	142.2	855	1	
Sb	121	3	115	0.030	ppb	48.4	70	0.6	
Ba	137	3	115	-0.033	ppb	-139.7	55	0.5	
Tl	205	3	193	-0.029	ppb	-13.3	277	0.1	
(Pb)	206	3	193	-0.065	ppb	-26.8	243	1	
(Pb)	207	3	193	-0.030	ppb	-143.4	463	1	
Pb	208	3	193	-0.056	ppb	-38.6	1238	0.5	
Th	232	3	193	1.404	ppb	11.7	14611	1	>RL
U	238	3	193	0.047	ppb	24.6	1851	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4449982	1.41	4300192	103.48	60	120	
Sc (IS)	45	3	HMI He	649116	1.39	644593	100.70	60	120	
Ge Internal standard	72	2	HMI H2	2650603	0.92	2598552	102.00	60	120	
Ge Internal standard	72	3	HMI He	780881	1.24	772392	101.10	60	120	
In Internal Standard	115	3	HMI He	2956235	2.19	2872781	102.90	60	120	
Ir (IS)	193	3	HMI He	6301634	0.35	6092963	103.42	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	191LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:36:58-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.675	ppb	10.287	37	1	67.5	70	130	>+/-30%
Na	23	3	45	506.186	ppb	2.751	74543	300	168.7	70	130	>+/-30%
Mg	24	3	45	53.060	ppb	6.589	3461	50	106.1	70	130	
Al	27	3	45	43.520	ppb	7.793	1165	50	87.0	70	130	
K	39	3	45	89.064	ppb	26.200	32357	120	74.2	70	130	
Ca	40	2	45	208.763	ppb	2.831	137189	200	104.4	70	130	
V	51	3	72	5.184	ppb	3.978	4365	5	103.7	70	130	
Cr	52	3	72	2.138	ppb	19.417	4873	2	106.9	70	130	
Mn	55	3	72	0.843	ppb	23.255	738	1	84.3	70	130	
Fe	56	2	72	51.523	ppb	9.516	147650	50	103.0	70	130	
Co	59	3	72	0.948	ppb	4.360	1336	1	94.8	70	130	
Ni	60	3	72	2.352	ppb	15.171	1596	2	117.6	70	130	
Cu	63	3	72	2.061	ppb	6.016	2536	2	103.1	70	130	
Zn	66	3	72	8.597	ppb	7.708	1658	10	86.0	70	130	
As	75	3	72	5.355	ppb	11.386	671	5	107.1	70	130	
Se	78	2	72	5.144	ppb	11.427	316	5	102.9	70	130	
Sr	88	3	72	4.920	ppb	8.739	2786	5	98.4	70	130	
Mo	95	3	115	1.862	ppb	12.747	1006	2	93.1	70	130	
Ag	107	3	115	0.944	ppb	3.858	1671	1	94.4	70	130	
Cd	111	3	115	0.984	ppb	2.421	257	1	98.4	70	130	
Sn	120	3	115	8.470	ppb	4.451	7470	10	84.7	70	130	
Sb	121	3	115	1.879	ppb	4.896	1519	2	93.9	70	130	
Ba	137	3	115	0.870	ppb	11.112	285	1	87.0	70	130	
Tl	205	3	193	0.878	ppb	4.638	3942	1	87.8	70	130	
(Pb)	206	3	193	0.851	ppb	6.392	1474	1	85.1	70	130	
(Pb)	207	3	193	0.873	ppb	9.175	1533	1	87.3	70	130	
Pb	208	3	193	0.829	ppb	3.541	6034	1	82.9	70	130	
Th	232	3	193	1.076	ppb	7.697	13010	1	107.6	70	130	
U	238	3	193	0.967	ppb	2.474	7085	1	96.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4415970	1.23	4300192	102.69	60	120	
Sc (IS)	45	3	HMI He	641660	0.90	644593	99.54	60	120	
Ge Internal standard	72	2	HMI H2	2636047	1.40	2598552	101.44	60	120	
Ge Internal standard	72	3	HMI He	785536	0.72	772392	101.70	60	120	
In Internal Standard	115	3	HMI He	2901834	1.75	2872781	101.01	60	120	
Ir (IS)	193	3	HMI He	6371714	0.75	6092963	104.57	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608911/1-A
Data File Name	192_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:38:47-06:00
Sample Type	Blank
Dilution	1
Comment	608911 6020a
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.033	ppb	-349.025718	5	0.5
Na	23	3	45	320.204	ppb	29.00000116	52358	25
Mg	24	3	45	27.052	ppb	70.39938229	1862	25
Al	27	3	45	-0.149	ppb	-174.3655859	147	15
K	39	3	45	4.101	ppb	505.1885651	27712	50
Ca	40	2	45	18.116	ppb	3.291432152	23500	200
V	51	3	72	0.364	ppb	12.46072274	1219	1
Cr	52	3	72	1.174	ppb	18.88421992	4014	1
Mn	55	3	72	0.075	ppb	83.10990192	406	0.5
Fe	56	2	72	6.647	ppb	60.38003348	73092	50
Co	59	3	72	0.022	ppb	40.30865654	83	0.5
Ni	60	3	72	0.236	ppb	80.56793972	773	1
Cu	63	3	72	0.085	ppb	89.16352533	478	1
Zn	66	3	72	0.255	ppb	114.8503603	268	5
As	75	3	72	0.133	ppb	114.5280332	58	1
(Se)	78	3	72	1.055	ppb	130.4585939	30	1
Sr	88	3	72	0.663	ppb	76.11594634	403	0.5
Mo	95	3	115	0.042	ppb	19.56234625	60	0.5
Ag	107	3	115	0.008	ppb	191.478153	27	1
Cd	111	3	115	-0.014	ppb	-81.45558274	7	0.5
Sn	120	3	115	0.023	ppb	278.4439662	773	1
Sb	121	3	115	0.030	ppb	29.3351865	68	0.6
Ba	137	3	115	0.066	ppb	143.7242161	78	0.5
Tl	205	3	193	-0.036	ppb	-10.37806758	245	0.1
(Pb)	206	3	193	-0.033	ppb	-172.641127	280	1
(Pb)	207	3	193	-0.044	ppb	-92.5715793	438	1
Pb	208	3	193	-0.057	ppb	-19.34123853	1211	0.5
Th	232	3	193	-0.146	ppb	-29.64398167	6245	1
U	238	3	193	0.059	ppb	24.7279098	1884	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4315007	1.38	4300192	100.34	60	120	
Sc (IS)	45	3	HMI He	631093	0.35	644593	97.91	60	120	
Ge Internal standard	72	2	HMI H2	2558221	0.54	2598552	98.45	60	120	
Ge Internal standard	72	3	HMI He	767083	0.58	772392	99.31	60	120	
In Internal Standard	115	3	HMI He	2870398	1.26	2872781	99.92	60	120	
Ir (IS)	193	3	HMI He	6190210	0.42	6092963	101.60	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608911/24-A
Data File Name	193_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:40:36-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608911 6020a
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.974	41.974	ppb	4.861	1866	40	104.9	80	120	
Na	23	3	45	905.381	905.381	ppb	1.531	122302	40	2263.5	80	120	>+/-20%
Mg	24	3	45	717.109	717.109	ppb	1.371	44146	40	1792.8	80	120	>+/-20%
Al	27	3	45	728.956	728.956	ppb	4.531	17402	40	1822.4	80	120	>+/-20%
K	39	3	45	723.121	723.121	ppb	5.300	64603	40	1807.8	80	120	>+/-20%
Ca	40	2	45	793.203	793.203	ppb	2.760	498916	40	1983.0	80	120	>+/-20%
V	51	3	72	38.136	38.136	ppb	0.702	25873	40	95.3	80	120	
Cr	52	3	72	39.201	39.201	ppb	0.641	34586	40	98.0	80	120	
Mn	55	3	72	39.203	39.203	ppb	2.525	16970	40	98.0	80	120	
Fe	56	2	72	824.506	824.506	ppb	2.489	1408703	40	2061.3	80	120	>+/-20%
(Fe)	56	3	72	768.920	768.920	ppb	1.053	540931	40	1922.3	80	120	>+/-20%
Co	59	3	72	38.638	38.638	ppb	0.984	52617	40	96.6	80	120	
Ni	60	3	72	38.056	38.056	ppb	1.183	15304	40	95.1	80	120	
Cu	63	3	72	39.404	39.404	ppb	1.865	41533	40	98.5	80	120	
Zn	66	3	72	40.428	40.428	ppb	1.381	6988	40	101.1	80	120	
As	75	3	72	39.243	39.243	ppb	1.666	4678	40	98.1	80	120	
Se	78	2	72	41.442	41.442	ppb	3.258	2560	40	103.6	80	120	
(Se)	78	3	72	44.651	44.651	ppb	20.621	320	40	111.6	80	120	
Sr	88	3	72	80.247	80.247	ppb	1.488	45127	40	200.6	80	120	>+/-20%
Mo	95	3	115	37.287	37.287	ppb	2.100	20125	40	93.2	80	120	
Ag	107	3	115	38.420	38.420	ppb	2.514	69879	40	96.1	80	120	
Cd	111	3	115	38.465	38.465	ppb	6.030	9975	40	96.2	80	120	
Sn	120	3	115	35.883	35.883	ppb	1.187	30224	40	89.7	80	120	
Sb	121	3	115	38.113	38.113	ppb	1.887	31021	40	95.3	80	120	
Ba	137	3	115	38.225	38.225	ppb	2.219	10192	40	95.6	80	120	
Tl	205	3	193	37.678	37.678	ppb	1.783	157442	40	94.2	80	120	
(Pb)	206	3	193	38.255	38.255	ppb	2.124	53270	40	95.6	80	120	
(Pb)	207	3	193	37.543	37.543	ppb	1.515	46183	40	93.9	80	120	
Pb	208	3	193	38.013	38.013	ppb	2.138	213772	40	95.0	80	120	
Th	232	3	193	34.769	34.769	ppb	2.973	200735	40	86.9	80	120	
U	238	3	193	37.928	37.928	ppb	1.719	223569	40	94.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4553343	2.98	4300192	105.89	60	120	
Sc (IS)	45	3	HMI He	652843	1.11	644593	101.28	60	120	
Ge Internal standard	72	2	HMI H2	2665629	2.67	2598552	102.58	60	120	
Ge Internal standard	72	3	HMI He	791688	0.31	772392	102.50	60	120	
In Internal Standard	115	3	HMI He	3004777	1.89	2872781	104.59	60	120	
Ir (IS)	193	3	HMI He	6576293	1.51	6092963	107.93	60	120	

Sample Report

Sample Table

Sample Name	280-175070-D-2-A
Data File Name	194SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:42:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3041812.782	ppb	3041812.782	0.45	346055296	400000	>LDR
Mg	24	3	45	64345.029	ppb	64345.029	1.40	3847550	400000	
Al	27	3	45	140.175	ppb	140.175	2.96	3394	400000	
K	39	3	45	224844.315	ppb	224844.315	1.59	11014505	400000	
Ca	40	2	45	5585.121	ppb	5585.121	1.23	3420743	400000	
V	51	3	72	209.428	ppb	209.428	2.18	134270	2000	
Cr	52	3	72	242.206	ppb	242.206	2.09	192486	5000	
Mn	55	3	72	134.477	ppb	134.477	1.27	55929	10000	
Fe	56	2	72	1771.257	ppb	1771.257	1.10	2993661	10000	
Co	59	3	72	12.162	ppb	12.162	2.45	16211	2000	
Ni	60	3	72	188.940	ppb	188.940	2.77	71459	5000	
Cu	63	3	72	3.399	ppb	3.399	1.87	3860	5000	
Zn	66	3	72	17.775	ppb	17.775	1.72	3129	5000	
As	75	3	72	97.443	ppb	97.443	2.00	11282	2000	
Se	78	2	72	0.892	ppb	0.892	9.11	58	2000	
Sr	88	3	72	261.918	ppb	261.918	1.85	143739	4000	
Mo	95	3	115	9.786	ppb	9.786	3.00	4913	2000	
Ag	107	3	115	0.061	ppb	0.061	26.96	115	100	
Cd	111	3	115	0.036	ppb	0.036	147.42	18	2000	
Sn	120	3	115	5.307	ppb	5.307	5.29	4757	2000	
Sb	121	3	115	16.451	ppb	16.451	4.92	12408	1000	
Ba	137	3	115	159.262	ppb	159.262	2.07	39083	5000	
Tl	205	3	193	0.490	ppb	0.490	10.35	2222	2000	
(Pb)	206	3	193	0.500	ppb	0.500	9.01	938	100	
(Pb)	207	3	193	0.459	ppb	0.459	4.88	976	100	
Pb	208	3	193	0.491	ppb	0.491	0.93	3937	5000	
Th	232	3	193	0.621	ppb	0.621	9.22	9874	2000	
U	238	3	193	0.478	ppb	0.478	4.48	4032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4537949	1.20	4300192	105.53	60	120	
Sc (IS)	45	3	HMI He	638008	0.12	644593	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2702999	1.53	2598552	104.02	60	120	
Ge Internal standard	72	3	HMI He	773235	1.22	772392	100.11	60	120	
In Internal Standard	115	3	HMI He	2779540	0.98	2872781	96.75	60	120	
Ir (IS)	193	3	HMI He	5957679	0.51	6092963	97.78	60	120	

Sample Report

Sample Table

Sample Name	280-175070-D-3-A
Data File Name	195SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:44:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	275744.557	ppb	275744.557	2.23	29957417	400000	
Mg	24	3	45	149426.163	ppb	149426.163	1.03	8529274	400000	
Al	27	3	45	26.245	ppb	26.245	8.46	724	400000	
K	39	3	45	25770.808	ppb	25770.808	1.14	1228855	400000	
Ca	40	2	45	293856.186	ppb	293856.186	2.77	160900637	400000	
V	51	3	72	2.356	ppb	2.356	6.77	2406	2000	
Cr	52	3	72	2.995	ppb	2.995	11.07	5267	5000	
Mn	55	3	72	5626.433	ppb	5626.433	3.94	2239392	10000	
Fe	56	2	72	9422.300	ppb	9422.300	1.98	14364102	10000	
Co	59	3	72	4.947	ppb	4.947	3.70	6383	2000	
Ni	60	3	72	107.431	ppb	107.431	1.28	39436	5000	
Cu	63	3	72	8.885	ppb	8.885	2.29	9105	5000	
Zn	66	3	72	26.121	ppb	26.121	3.32	4327	5000	
As	75	3	72	2.938	ppb	2.938	13.29	368	2000	
Se	78	2	72	0.244	ppb	0.244	50.27	16	2000	
Sr	88	3	72	1678.839	ppb	1678.839	1.43	887464	4000	
Mo	95	3	115	0.404	ppb	0.404	13.90	237	2000	
Ag	107	3	115	0.009	ppb	0.009	53.88	28	100	
Cd	111	3	115	-0.026	ppb	-0.026	-95.21	3	2000	
Sn	120	3	115	0.921	ppb	0.921	12.14	1414	2000	
Sb	121	3	115	0.206	ppb	0.206	20.65	197	1000	
Ba	137	3	115	416.941	ppb	416.941	2.35	101205	5000	
Tl	205	3	193	0.061	ppb	0.061	4.38	596	2000	
(Pb)	206	3	193	3.255	ppb	3.255	2.90	4344	100	
(Pb)	207	3	193	3.178	ppb	3.178	1.96	3930	100	
Pb	208	3	193	3.243	ppb	3.243	1.59	17659	5000	
Th	232	3	193	0.917	ppb	0.917	12.50	11238	2000	
U	238	3	193	0.331	ppb	0.331	4.95	3217	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4076175	4.12	4300192	94.79	60	120	
Sc (IS)	45	3	HMI He	609128	1.91	644593	94.50	60	120	
Ge Internal standard	72	2	HMI H2	2482886	1.33	2598552	95.55	60	120	
Ge Internal standard	72	3	HMI He	744845	0.89	772392	96.43	60	120	
In Internal Standard	115	3	HMI He	2752750	2.98	2872781	95.82	60	120	
Ir (IS)	193	3	HMI He	5892696	0.96	6092963	96.71	60	120	

Sample Report

Sample Table

Sample Name	280-174977-C-12-A
Data File Name	196SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:45:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.43	2	2000	
Na	23	3	45	1120.298	ppb	1120.298	2.98	140447	400000	
Mg	24	3	45	107.913	ppb	107.913	6.08	6555	400000	
Al	27	3	45	503.614	ppb	503.614	5.25	11510	400000	
K	39	3	45	225.195	ppb	225.195	13.59	37866	400000	
Ca	40	2	45	299.520	ppb	299.520	4.12	183985	400000	
V	51	3	72	1.259	ppb	1.259	21.23	1779	2000	
Cr	52	3	72	1.753	ppb	1.753	23.91	4454	5000	
Mn	55	3	72	8.672	ppb	8.672	3.26	3920	10000	
Fe	56	2	72	435.817	ppb	435.817	2.94	736093	10000	
Co	59	3	72	0.136	ppb	0.136	6.87	233	2000	
Ni	60	3	72	0.910	ppb	0.910	28.35	1020	5000	
Cu	63	3	72	0.646	ppb	0.646	4.92	1043	5000	
Zn	66	3	72	2.840	ppb	2.840	8.40	685	5000	
As	75	3	72	0.236	ppb	0.236	62.01	70	2000	
Se	78	2	72	0.023	ppb	0.023	86.41	3	2000	
Sr	88	3	72	1.294	ppb	1.294	13.34	746	4000	
Mo	95	3	115	8.510	ppb	8.510	6.14	4405	2000	
Ag	107	3	115	0.009	ppb	0.009	15.37	28	100	
Cd	111	3	115	0.000	ppb	0.000	-75700.74	10	2000	
Sn	120	3	115	0.428	ppb	0.428	164.43	1091	2000	
Sb	121	3	115	0.127	ppb	0.127	8.68	143	1000	
Ba	137	3	115	3.185	ppb	3.185	9.99	866	5000	
Tl	205	3	193	0.024	ppb	0.024	63.70	470	2000	
(Pb)	206	3	193	0.204	ppb	0.204	19.45	576	100	
(Pb)	207	3	193	0.218	ppb	0.218	7.27	723	100	
Pb	208	3	193	0.190	ppb	0.190	3.30	2451	5000	
Th	232	3	193	0.050	ppb	0.050	41.04	7110	2000	
U	238	3	193	0.045	ppb	0.045	75.85	1764	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4254796	2.72	4300192	98.94	60	120	
Sc (IS)	45	3	HMI He	622400	0.29	644593	96.56	60	120	
Ge Internal standard	72	2	HMI H2	2529955	1.41	2598552	97.36	60	120	
Ge Internal standard	72	3	HMI He	764969	1.58	772392	99.04	60	120	
In Internal Standard	115	3	HMI He	2864496	2.21	2872781	99.71	60	120	
Ir (IS)	193	3	HMI He	6056571	0.25	6092963	99.40	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-2-A
Data File Name	197SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:47:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-185.10	3	2000	
Na	23	3	45	18992.908	ppb	18992.908	1.68	2239779	400000	
Mg	24	3	45	13172.659	ppb	13172.659	2.88	810423	400000	
Al	27	3	45	0.723	ppb	0.723	260.41	174	400000	
K	39	3	45	7427.584	ppb	7427.584	0.66	401966	400000	
Ca	40	2	45	49558.479	ppb	49558.479	2.89	30100787	400000	
V	51	3	72	24.265	ppb	24.265	0.40	17110	2000	
Cr	52	3	72	1.828	ppb	1.828	18.03	4742	5000	
Mn	55	3	72	3.995	ppb	3.995	7.94	2111	10000	
Fe	56	2	72	9.111	ppb	9.111	54.00	82853	10000	
Co	59	3	72	0.037	ppb	0.037	40.72	108	2000	
Ni	60	3	72	0.410	ppb	0.410	52.32	878	5000	
Cu	63	3	72	0.555	ppb	0.555	10.15	1000	5000	
Zn	66	3	72	1.365	ppb	1.365	9.72	470	5000	
As	75	3	72	13.560	ppb	13.560	4.50	1673	2000	
Se	78	2	72	3.948	ppb	3.948	8.36	255	2000	
Sr	88	3	72	264.945	ppb	264.945	1.66	151324	4000	
Mo	95	3	115	9.370	ppb	9.370	3.47	4988	2000	
Ag	107	3	115	0.004	ppb	0.004	82.56	20	100	
Cd	111	3	115	-0.021	ppb	-0.021	-94.64	5	2000	
Sn	120	3	115	-0.192	ppb	-0.192	-31.98	620	2000	
Sb	121	3	115	0.314	ppb	0.314	13.06	297	1000	
Ba	137	3	115	42.893	ppb	42.893	3.38	11204	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-1092.19	385	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-46.98	262	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-69.10	426	100	
Pb	208	3	193	-0.057	ppb	-0.057	-22.98	1226	5000	
Th	232	3	193	-0.154	ppb	-0.154	-34.33	6295	2000	
U	238	3	193	1.660	ppb	1.660	1.40	10866	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4518104	2.86	4300192	105.07	60	120	
Sc (IS)	45	3	HMI He	656296	0.93	644593	101.82	60	120	
Ge Internal standard	72	2	HMI H2	2758294	3.29	2598552	106.15	60	120	
Ge Internal standard	72	3	HMI He	804689	0.86	772392	104.18	60	120	
In Internal Standard	115	3	HMI He	2945724	0.84	2872781	102.54	60	120	
Ir (IS)	193	3	HMI He	6285356	1.74	6092963	103.16	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-5-A
Data File Name	198SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:49:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.111	ppb	-0.111	-59.96	2	2000	
Na	23	3	45	17580.192	ppb	17580.192	1.59	2041698	400000	
Mg	24	3	45	17301.380	ppb	17301.380	1.69	1047709	400000	
Al	27	3	45	7.532	ppb	7.532	54.55	330	400000	
K	39	3	45	6992.106	ppb	6992.106	2.05	374092	400000	
Ca	40	2	45	59037.914	ppb	59037.914	2.07	35174806	400000	
V	51	3	72	21.574	ppb	21.574	5.10	15221	2000	
Cr	52	3	72	0.949	ppb	0.949	30.05	4000	5000	
Mn	55	3	72	0.324	ppb	0.324	29.24	530	10000	
Fe	56	2	72	6.338	ppb	6.338	49.52	75028	10000	
Co	59	3	72	0.022	ppb	0.022	20.98	87	2000	
Ni	60	3	72	1.422	ppb	1.422	6.71	1264	5000	
Cu	63	3	72	17.739	ppb	17.739	1.10	19099	5000	
Zn	66	3	72	1.857	ppb	1.857	11.63	550	5000	
As	75	3	72	5.353	ppb	5.353	15.41	683	2000	
Se	78	2	72	5.677	ppb	5.677	4.10	349	2000	
Sr	88	3	72	300.982	ppb	300.982	1.82	170738	4000	
Mo	95	3	115	2.774	ppb	2.774	4.88	1499	2000	
Ag	107	3	115	0.004	ppb	0.004	74.14	22	100	
Cd	111	3	115	0.005	ppb	0.005	208.81	12	2000	
Sn	120	3	115	-0.051	ppb	-0.051	-27.74	731	2000	
Sb	121	3	115	0.202	ppb	0.202	17.50	207	1000	
Ba	137	3	115	38.769	ppb	38.769	2.44	10101	5000	
Tl	205	3	193	-0.021	ppb	-0.021	-24.96	305	2000	
(Pb)	206	3	193	-0.012	ppb	-0.012	-96.57	310	100	
(Pb)	207	3	193	-0.083	ppb	-0.083	-35.25	396	100	
Pb	208	3	193	-0.049	ppb	-0.049	-40.17	1254	5000	
Th	232	3	193	-0.320	ppb	-0.320	-9.02	5360	2000	
U	238	3	193	3.048	ppb	3.048	1.02	18446	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4432053	2.40	4300192	103.07	60	120	
Sc (IS)	45	3	HMI He	646075	1.42	644593	100.23	60	120	
Ge Internal standard	72	2	HMI H2	2640387	2.05	2598552	101.61	60	120	
Ge Internal standard	72	3	HMI He	799244	0.87	772392	103.48	60	120	
In Internal Standard	115	3	HMI He	2937128	1.59	2872781	102.24	60	120	
Ir (IS)	193	3	HMI He	6224811	0.93	6092963	102.16	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-7-A
Data File Name	199SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:51:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.09	2	2000	
Na	23	3	45	18389.089	ppb	18389.089	0.50	2121519	400000	
Mg	24	3	45	10855.172	ppb	10855.172	1.87	653296	400000	
Al	27	3	45	11.215	ppb	11.215	3.00	414	400000	
K	39	3	45	5847.061	ppb	5847.061	2.09	315453	400000	
Ca	40	2	45	30972.346	ppb	30972.346	1.11	18199042	400000	
V	51	3	72	18.273	ppb	18.273	2.16	13081	2000	
Cr	52	3	72	1.964	ppb	1.964	20.15	4830	5000	
Mn	55	3	72	78.795	ppb	78.795	1.40	34111	10000	
Fe	56	2	72	312.361	ppb	312.361	1.46	565076	10000	
Co	59	3	72	0.093	ppb	0.093	34.13	185	2000	
Ni	60	3	72	0.738	ppb	0.738	18.68	1001	5000	
Cu	63	3	72	0.869	ppb	0.869	5.07	1328	5000	
Zn	66	3	72	4.856	ppb	4.856	5.24	1058	5000	
As	75	3	72	5.900	ppb	5.900	7.08	750	2000	
Se	78	2	72	1.667	ppb	1.667	8.36	103	2000	
Sr	88	3	72	168.391	ppb	168.391	2.92	95745	4000	
Mo	95	3	115	3.498	ppb	3.498	6.53	1894	2000	
Ag	107	3	115	0.030	ppb	0.030	21.74	67	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.239	ppb	-0.239	-11.09	585	2000	
Sb	121	3	115	0.115	ppb	0.115	40.54	138	1000	
Ba	137	3	115	19.957	ppb	19.957	3.36	5268	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-15.82	215	2000	
(Pb)	206	3	193	0.175	ppb	0.175	26.29	550	100	
(Pb)	207	3	193	0.133	ppb	0.133	23.75	640	100	
Pb	208	3	193	0.167	ppb	0.167	2.70	2381	5000	
Th	232	3	193	-0.339	ppb	-0.339	-4.81	5219	2000	
U	238	3	193	1.931	ppb	1.931	2.08	12158	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368755	1.68	4300192	101.59	60	120	
Sc (IS)	45	3	HMI He	641954	0.50	644593	99.59	60	120	
Ge Internal standard	72	2	HMI H2	2621726	0.84	2598552	100.89	60	120	
Ge Internal standard	72	3	HMI He	801016	0.86	772392	103.71	60	120	
In Internal Standard	115	3	HMI He	2959568	2.18	2872781	103.02	60	120	
Ir (IS)	193	3	HMI He	6173384	0.19	6092963	101.32	60	120	

Sample Report

Sample Table

Sample Name	280-175081-A-1-A
Data File Name	200SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:53:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.57	2	2000	
Na	23	3	45	2998.985	ppb	2998.985	1.66	359616	400000	
Mg	24	3	45	4467.315	ppb	4467.315	0.50	268825	400000	
Al	27	3	45	0.606	ppb	0.606	283.29	167	400000	
K	39	3	45	2062.071	ppb	2062.071	1.46	129284	400000	
Ca	40	2	45	19940.107	ppb	19940.107	1.68	11746433	400000	
V	51	3	72	3.340	ppb	3.340	5.01	3209	2000	
Cr	52	3	72	1.652	ppb	1.652	10.03	4540	5000	
Mn	55	3	72	0.124	ppb	0.124	158.50	441	10000	
Fe	56	2	72	7.009	ppb	7.009	50.29	77017	10000	
Co	59	3	72	0.031	ppb	0.031	92.77	98	2000	
Ni	60	3	72	0.278	ppb	0.278	92.44	816	5000	
Cu	63	3	72	0.314	ppb	0.314	19.27	735	5000	
Zn	66	3	72	1.749	ppb	1.749	8.87	528	5000	
As	75	3	72	0.931	ppb	0.931	34.00	155	2000	
Se	78	2	72	0.183	ppb	0.183	40.57	13	2000	
Sr	88	3	72	97.612	ppb	97.612	2.05	55069	4000	
Mo	95	3	115	0.715	ppb	0.715	24.45	415	2000	
Ag	107	3	115	0.026	ppb	0.026	0.25	60	100	
Cd	111	3	115	-0.008	ppb	-0.008	-521.26	8	2000	
Sn	120	3	115	-0.280	ppb	-0.280	-32.51	546	2000	
Sb	121	3	115	0.121	ppb	0.121	21.37	142	1000	
Ba	137	3	115	24.147	ppb	24.147	2.44	6305	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-57.90	257	2000	
(Pb)	206	3	193	-0.075	ppb	-0.075	-7.72	225	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-73.52	421	100	
Pb	208	3	193	-0.063	ppb	-0.063	-18.17	1171	5000	
Th	232	3	193	-0.404	ppb	-0.404	-11.78	4874	2000	
U	238	3	193	0.274	ppb	0.274	6.70	3051	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4378112	1.60	4300192	101.81	60	120	
Sc (IS)	45	3	HMI He	641482	1.01	644593	99.52	60	120	
Ge Internal standard	72	2	HMI H2	2677349	2.94	2598552	103.03	60	120	
Ge Internal standard	72	3	HMI He	794389	0.16	772392	102.85	60	120	
In Internal Standard	115	3	HMI He	2932034	0.19	2872781	102.06	60	120	
Ir (IS)	193	3	HMI He	6161290	1.12	6092963	101.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	201_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:55:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	55.314	ppb	4.202	2271	50	110.6	90	110	>+\-10%
Na	23	3	45	47026.133	ppb	2.730	5299158	51000	92.2	90	110	
Mg	24	3	45	10016.072	ppb	1.295	591673	11000	91.1	90	110	
Al	27	3	45	935.853	ppb	0.548	21525	1000	93.6	90	110	
K	39	3	45	9982.011	ppb	1.000	509142	11000	90.7	90	110	
Ca	40	2	45	10306.743	ppb	0.889	5939670	11000	93.7	90	110	
V	51	3	72	49.961	ppb	3.697	31770	50	99.9	90	110	
Cr	52	3	72	51.181	ppb	5.138	41788	50	102.4	90	110	
Mn	55	3	72	51.032	ppb	5.485	20784	50	102.1	90	110	
Fe	56	2	72	1035.671	ppb	3.033	1680774	1000	103.6	90	110	
Co	59	3	72	49.716	ppb	3.473	64042	50	99.4	90	110	
Ni	60	3	72	50.013	ppb	4.635	18817	50	100.0	90	110	
Cu	63	3	72	49.248	ppb	2.443	49029	50	98.5	90	110	
Zn	66	3	72	50.505	ppb	5.836	8202	50	101.0	90	110	
As	75	3	72	53.650	ppb	4.733	6035	50	107.3	90	110	
Se	78	2	72	49.250	ppb	1.770	2918	50	98.5	90	110	
Sr	88	3	72	101.516	ppb	3.729	54010	100	101.5	90	110	
Mo	95	3	115	47.552	ppb	1.381	24548	50	95.1	90	110	
Ag	107	3	115	47.668	ppb	0.695	82961	50	95.3	90	110	
Cd	111	3	115	47.955	ppb	4.120	11903	50	95.9	90	110	
Sn	120	3	115	46.953	ppb	1.911	37606	50	93.9	90	110	
Sb	121	3	115	48.290	ppb	2.036	37589	50	96.6	90	110	
Ba	137	3	115	48.685	ppb	4.488	12400	50	97.4	90	110	
Tl	205	3	193	47.913	ppb	0.742	185137	50	95.8	90	110	
(Pb)	206	3	193	48.314	ppb	2.700	62147	50	96.6	90	110	
(Pb)	207	3	193	48.078	ppb	1.871	54583	50	96.2	90	110	
Pb	208	3	193	48.139	ppb	2.449	250032	50	96.3	90	110	
Th	232	3	193	47.596	ppb	1.118	251705	50	95.2	90	110	
U	238	3	193	48.401	ppb	1.964	263488	50	96.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4278307	0.82	4300192	99.49	60	120	
Sc (IS)	45	3	HMI He	630052	0.42	644593	97.74	60	120	
Ge Internal standard	72	2	HMI H2	2555306	1.02	2598552	98.34	60	120	
Ge Internal standard	72	3	HMI He	749526	2.79	772392	97.04	60	120	
In Internal Standard	115	3	HMI He	2874606	0.37	2872781	100.06	60	120	
Ir (IS)	193	3	HMI He	6083536	1.67	6092963	99.85	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	202_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:56:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	134.539	ppb	0.1	31540	25	>RL
Mg	24	3	45	1.496	ppb	71.8	354	25	
Al	27	3	45	-3.068	ppb	-49.6	80	15	
K	39	3	45	6.069	ppb	625.6	27849	50	
V	51	3	72	0.708	ppb	38.3	1438	1	
Cr	52	3	72	0.263	ppb	82.1	3310	1	
Mn	55	3	72	0.010	ppb	1566.3	380	0.5	
Co	59	3	72	0.017	ppb	160.7	77	0.5	
Ni	60	3	72	0.306	ppb	36.3	800	1	
Cu	63	3	72	0.076	ppb	82.2	470	1	
Zn	66	3	72	-0.466	ppb	-12.8	152	5	
As	75	3	72	0.090	ppb	200.5	53	1	
Se	78	2	72	0.057	ppb	68.5	5	1	
Sr	88	3	72	0.031	ppb	157.3	60	0.5	
Mo	95	3	115	0.079	ppb	53.6	80	0.5	
Ag	107	3	115	0.009	ppb	32.2	30	1	
Cd	111	3	115	-0.021	ppb	-94.6	5	0.5	
Sn	120	3	115	-0.058	ppb	-56.4	718	1	
Sb	121	3	115	0.008	ppb	100.8	52	0.6	
Ba	137	3	115	-0.093	ppb	-54.1	38	0.5	
Tl	205	3	193	-0.026	ppb	-35.8	283	0.1	
(Pb)	206	3	193	-0.054	ppb	-29.6	252	1	
(Pb)	207	3	193	-0.073	ppb	-51.6	403	1	
Pb	208	3	193	-0.068	ppb	-14.9	1143	0.5	
Th	232	3	193	1.269	ppb	8.8	13549	1	>RL
U	238	3	193	0.028	ppb	93.7	1699	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4301515	0.79	4300192	100.03	60	120	
Sc (IS)	45	3	HMI He	632095	0.35	644593	98.06	60	120	
Ge Internal standard	72	2	HMI H2	2545655	0.44	2598552	97.96	60	120	
Ge Internal standard	72	3	HMI He	768110	0.68	772392	99.45	60	120	
In Internal Standard	115	3	HMI He	2906748	1.03	2872781	101.18	60	120	
Ir (IS)	193	3	HMI He	6143386	1.74	6092963	100.83	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	203LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:58:36-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.611	ppb	29.631	32	1	61.1	70	130	>+/-30%
Na	23	3	45	381.963	ppb	2.652	59695	300	127.3	70	130	
Mg	24	3	45	45.888	ppb	8.534	2997	50	91.8	70	130	
Al	27	3	45	39.103	ppb	13.662	1051	50	78.2	70	130	
K	39	3	45	112.573	ppb	13.665	33159	120	93.8	70	130	
Ca	40	2	45	196.061	ppb	2.359	125576	200	98.0	70	130	
V	51	3	72	5.435	ppb	0.970	4472	5	108.7	70	130	
Cr	52	3	72	2.225	ppb	8.752	4883	2	111.3	70	130	
Mn	55	3	72	0.799	ppb	23.505	711	1	79.9	70	130	
Fe	56	2	72	54.451	ppb	7.939	149862	50	108.9	70	130	
Co	59	3	72	0.957	ppb	4.085	1331	1	95.7	70	130	
Ni	60	3	72	2.256	ppb	4.110	1541	2	112.8	70	130	
Cu	63	3	72	1.880	ppb	1.630	2319	2	94.0	70	130	
Zn	66	3	72	9.255	ppb	9.686	1744	10	92.5	70	130	
As	75	3	72	4.908	ppb	10.232	611	5	98.2	70	130	
Se	78	2	72	4.795	ppb	5.582	290	5	95.9	70	130	
Sr	88	3	72	4.756	ppb	4.963	2662	5	95.1	70	130	
Mo	95	3	115	1.742	ppb	20.869	955	2	87.1	70	130	
Ag	107	3	115	0.946	ppb	9.562	1691	1	94.6	70	130	
Cd	111	3	115	0.975	ppb	22.741	257	1	97.5	70	130	
Sn	120	3	115	8.235	ppb	4.463	7362	10	82.3	70	130	
Sb	121	3	115	1.848	ppb	9.346	1511	2	92.4	70	130	
Ba	137	3	115	0.761	ppb	13.013	260	1	76.1	70	130	
Tl	205	3	193	0.888	ppb	1.506	3910	1	88.8	70	130	
(Pb)	206	3	193	0.821	ppb	4.233	1408	1	82.1	70	130	
(Pb)	207	3	193	0.828	ppb	3.923	1453	1	82.8	70	130	
Pb	208	3	193	0.841	ppb	3.905	5991	1	84.1	70	130	
Th	232	3	193	0.990	ppb	17.033	12317	1	99.0	70	130	
U	238	3	193	0.971	ppb	1.622	6980	1	97.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4276736	0.64	4300192	99.45	60	120	
Sc (IS)	45	3	HMI He	635007	0.71	644593	98.51	60	120	
Ge Internal standard	72	2	HMI H2	2591673	0.80	2598552	99.74	60	120	
Ge Internal standard	72	3	HMI He	775846	0.50	772392	100.45	60	120	
In Internal Standard	115	3	HMI He	2932884	1.84	2872781	102.09	60	120	
Ir (IS)	193	3	HMI He	6257349	0.81	6092963	102.70	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A
Data File Name	204SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:00:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	66.508	ppb	66.508	6.10	2679	2000	
Na	23	3	45	36018.963	ppb	36018.963	1.81	4025220	400000	
Mg	24	3	45	214314.481	ppb	214314.481	0.88	12538480	400000	
Al	27	3	45	230487.389	ppb	230487.389	1.85	5215615	400000	
K	39	3	45	6881.028	ppb	6881.028	2.10	356170	400000	
Ca	40	2	45	443052.895	ppb	443052.895	1.14	245756423	400000	
V	51	3	72	55.279	ppb	55.279	2.82	35853	2000	
Cr	52	3	72	7.105	ppb	7.105	2.81	8605	5000	
Mn	55	3	72	12183.473	ppb	12183.473	1.89	4988345	10000	
Fe	56	2	72	808.990	ppb	808.990	1.31	1313749	10000	
Co	59	3	72	588.979	ppb	588.979	3.08	775423	2000	
Ni	60	3	72	534.943	ppb	534.943	2.44	199274	5000	
Cu	63	3	72	7.139	ppb	7.139	4.72	7602	5000	
Zn	66	3	72	2747.999	ppb	2747.999	2.20	444575	5000	
As	75	3	72	4.594	ppb	4.594	7.82	568	2000	
Se	78	2	72	14.072	ppb	14.072	4.73	827	2000	
Sr	88	3	72	3410.465	ppb	3410.465	2.50	1854356	4000	
Mo	95	3	115	0.064	ppb	0.064	47.61	70	2000	
Ag	107	3	115	0.022	ppb	0.022	48.33	50	100	
Cd	111	3	115	7.651	ppb	7.651	6.84	1878	2000	
Sn	120	3	115	-0.047	ppb	-0.047	-281.87	708	2000	
Sb	121	3	115	0.057	ppb	0.057	39.45	88	1000	
Ba	137	3	115	10.534	ppb	10.534	0.68	2689	5000	
Tl	205	3	193	0.687	ppb	0.687	0.95	2992	2000	
(Pb)	206	3	193	10.215	ppb	10.215	2.07	13239	100	
(Pb)	207	3	193	9.137	ppb	9.137	3.13	10634	100	
Pb	208	3	193	9.537	ppb	9.537	1.20	50135	5000	
Th	232	3	193	2.327	ppb	2.327	6.71	18630	2000	
U	238	3	193	98.474	ppb	98.474	1.94	528231	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4126753	1.22	4300192	95.97	60	120	
Sc (IS)	45	3	HMI He	624296	1.10	644593	96.85	60	120	
Ge Internal standard	72	2	HMI H2	2530315	1.19	2598552	97.37	60	120	
Ge Internal standard	72	3	HMI He	766376	1.33	772392	99.22	60	120	
In Internal Standard	115	3	HMI He	2830137	1.09	2872781	98.52	60	120	
Ir (IS)	193	3	HMI He	6011628	1.36	6092963	98.67	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A
Data File Name	205SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:02:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	80.479	ppb	80.479	2.79	3145	2000	
Na	23	3	45	62599.010	ppb	62599.010	1.52	6902206	400000	
Mg	24	3	45	315441.966	ppb	315441.966	1.69	18238867	400000	
Al	27	3	45	86190.242	ppb	86190.242	2.05	1927703	400000	
K	39	3	45	14970.773	ppb	14970.773	1.20	734266	400000	
Ca	40	2	45	452445.885	ppb	452445.885	0.18	253162962	400000	
V	51	3	72	4.207	ppb	4.207	7.75	3622	2000	
Cr	52	3	72	2.783	ppb	2.783	14.83	5227	5000	
Mn	55	3	72	15542.305	ppb	15542.305	0.14	6329272	10000	
Fe	56	2	72	282.266	ppb	282.266	3.38	501951	10000	
Co	59	3	72	758.186	ppb	758.186	2.21	992978	2000	
Ni	60	3	72	612.129	ppb	612.129	0.32	226718	5000	
Cu	63	3	72	4.891	ppb	4.891	3.36	5303	5000	
Zn	66	3	72	3422.970	ppb	3422.970	0.78	550762	5000	
As	75	3	72	3.565	ppb	3.565	15.39	448	2000	
Se	78	2	72	17.076	ppb	17.076	6.86	1009	2000	
Sr	88	3	72	4417.561	ppb	4417.561	1.65	2389255	4000	
Mo	95	3	115	0.082	ppb	0.082	15.03	78	2000	
Ag	107	3	115	0.017	ppb	0.017	42.91	42	100	
Cd	111	3	115	10.678	ppb	10.678	3.95	2576	2000	
Sn	120	3	115	-0.139	ppb	-0.139	-58.26	626	2000	
Sb	121	3	115	0.046	ppb	0.046	88.12	78	1000	
Ba	137	3	115	8.387	ppb	8.387	5.45	2119	5000	
Tl	205	3	193	1.896	ppb	1.896	0.35	7445	2000	
(Pb)	206	3	193	10.695	ppb	10.695	1.14	13562	100	
(Pb)	207	3	193	9.425	ppb	9.425	2.01	10734	100	
Pb	208	3	193	9.989	ppb	9.989	1.18	51380	5000	
Th	232	3	193	0.493	ppb	0.493	9.85	9122	2000	
U	238	3	193	178.002	ppb	178.002	0.97	934440	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162571	0.67	4300192	96.80	60	120	
Sc (IS)	45	3	HMI He	616938	0.27	644593	95.71	60	120	
Ge Internal standard	72	2	HMI H2	2547065	1.51	2598552	98.02	60	120	
Ge Internal standard	72	3	HMI He	762151	0.25	772392	98.67	60	120	
In Internal Standard	115	3	HMI He	2786327	1.97	2872781	96.99	60	120	
Ir (IS)	193	3	HMI He	5890028	0.48	6092963	96.67	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-3-A
Data File Name	206SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:03:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-96.79	3	2000	
Na	23	3	45	2156.261	ppb	2156.261	1.39	259640	400000	
Mg	24	3	45	7370.378	ppb	7370.378	2.69	437197	400000	
Al	27	3	45	1706.327	ppb	1706.327	2.59	39279	400000	
K	39	3	45	21401.330	ppb	21401.330	0.48	1064798	400000	
Ca	40	2	45	43170.960	ppb	43170.960	1.11	25707597	400000	
V	51	3	72	4.145	ppb	4.145	1.14	3719	2000	
Cr	52	3	72	1.640	ppb	1.640	27.37	4507	5000	
Mn	55	3	72	26.790	ppb	26.790	5.11	11701	10000	
Fe	56	2	72	882.769	ppb	882.769	5.31	1491636	10000	
Co	59	3	72	1.019	ppb	1.019	8.11	1439	2000	
Ni	60	3	72	2.095	ppb	2.095	13.30	1508	5000	
Cu	63	3	72	5.104	ppb	5.104	4.34	5723	5000	
Zn	66	3	72	4.493	ppb	4.493	10.26	983	5000	
As	75	3	72	1.261	ppb	1.261	39.98	193	2000	
Se	78	2	72	0.467	ppb	0.467	4.25	31	2000	
Sr	88	3	72	286.002	ppb	286.002	1.13	160524	4000	
Mo	95	3	115	2.492	ppb	2.492	7.03	1344	2000	
Ag	107	3	115	0.014	ppb	0.014	42.94	38	100	
Cd	111	3	115	-0.014	ppb	-0.014	-213.93	7	2000	
Sn	120	3	115	-0.259	ppb	-0.259	-6.89	561	2000	
Sb	121	3	115	0.317	ppb	0.317	8.21	297	1000	
Ba	137	3	115	64.781	ppb	64.781	0.60	16756	5000	
Tl	205	3	193	0.016	ppb	0.016	46.38	458	2000	
(Pb)	206	3	193	0.932	ppb	0.932	14.01	1566	100	
(Pb)	207	3	193	0.804	ppb	0.804	11.73	1436	100	
Pb	208	3	193	0.897	ppb	0.897	5.15	6343	5000	
Th	232	3	193	0.122	ppb	0.122	17.72	7792	2000	
U	238	3	193	4.368	ppb	4.368	2.83	26102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4428318	1.37	4300192	102.98	60	120	
Sc (IS)	45	3	HMI He	632769	1.81	644593	98.17	60	120	
Ge Internal standard	72	2	HMI H2	2643364	0.42	2598552	101.72	60	120	
Ge Internal standard	72	3	HMI He	790807	1.48	772392	102.38	60	120	
In Internal Standard	115	3	HMI He	2922634	2.31	2872781	101.74	60	120	
Ir (IS)	193	3	HMI He	6308338	1.49	6092963	103.53	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A
Data File Name	207SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:05:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	65.797	ppb	65.797	5.14	2726	2000	
Na	23	3	45	34986.640	ppb	34986.640	2.87	4018561	400000	
Mg	24	3	45	209631.690	ppb	209631.690	0.55	12605173	400000	
Al	27	3	45	222943.233	ppb	222943.233	1.30	5185188	400000	
K	39	3	45	6654.281	ppb	6654.281	2.40	354908	400000	
Ca	40	2	45	423680.196	ppb	423680.196	2.15	246279286	400000	
V	51	3	72	55.627	ppb	55.627	1.95	36605	2000	
Cr	52	3	72	6.354	ppb	6.354	4.98	8140	5000	
Mn	55	3	72	12154.415	ppb	12154.415	2.79	5049231	10000	
Fe	56	2	72	795.128	ppb	795.128	2.26	1295704	10000	
Co	59	3	72	586.403	ppb	586.403	1.86	783478	2000	
Ni	60	3	72	533.288	ppb	533.288	2.17	201593	5000	
Cu	63	3	72	7.069	ppb	7.069	2.78	7645	5000	
Zn	66	3	72	2728.319	ppb	2728.319	1.53	447907	5000	
As	75	3	72	4.263	ppb	4.263	4.13	538	2000	
Se	78	2	72	13.834	ppb	13.834	6.52	815	2000	
Sr	88	3	72	3360.743	ppb	3360.743	2.24	1854308	4000	
Mo	95	3	115	0.049	ppb	0.049	40.71	63	2000	
Ag	107	3	115	0.018	ppb	0.018	13.83	45	100	
Cd	111	3	115	7.527	ppb	7.527	3.94	1873	2000	
Sn	120	3	115	-0.180	ppb	-0.180	-20.64	613	2000	
Sb	121	3	115	0.039	ppb	0.039	21.00	75	1000	
Ba	137	3	115	9.960	ppb	9.960	4.91	2579	5000	
Tl	205	3	193	0.627	ppb	0.627	3.31	2842	2000	
(Pb)	206	3	193	9.813	ppb	9.813	4.48	13082	100	
(Pb)	207	3	193	9.081	ppb	9.081	1.68	10869	100	
Pb	208	3	193	9.398	ppb	9.398	2.24	50808	5000	
Th	232	3	193	2.038	ppb	2.038	5.71	17645	2000	
U	238	3	193	96.572	ppb	96.572	2.05	532610	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4325701	2.23	4300192	100.59	60	120	
Sc (IS)	45	3	HMI He	641628	1.23	644593	99.54	60	120	
Ge Internal standard	72	2	HMI H2	2537099	0.36	2598552	97.64	60	120	
Ge Internal standard	72	3	HMI He	777618	1.00	772392	100.68	60	120	
In Internal Standard	115	3	HMI He	2868118	2.03	2872781	99.84	60	120	
Ir (IS)	193	3	HMI He	6180838	1.26	6092963	101.44	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	208SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:07:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-97.30	3	2000	
Na	23	3	45	19570.011	ppb	19570.011	0.71	2192442	400000	
Mg	24	3	45	13625.582	ppb	13625.582	1.91	796602	400000	
Al	27	3	45	37.280	ppb	37.280	8.08	991	400000	
K	39	3	45	7502.718	ppb	7502.718	1.03	385543	400000	
Ca	40	2	45	51463.936	ppb	51463.936	1.86	29801781	400000	
V	51	3	72	22.809	ppb	22.809	1.79	15679	2000	
Cr	52	3	72	1.945	ppb	1.945	19.45	4697	5000	
Mn	55	3	72	5.541	ppb	5.541	8.19	2696	10000	
Fe	56	2	72	10.224	ppb	10.224	43.62	79943	10000	
Co	59	3	72	0.156	ppb	0.156	18.30	265	2000	
Ni	60	3	72	0.658	ppb	0.658	49.41	946	5000	
Cu	63	3	72	0.612	ppb	0.612	12.23	1030	5000	
Zn	66	3	72	1.873	ppb	1.873	24.34	540	5000	
As	75	3	72	14.349	ppb	14.349	4.05	1716	2000	
Se	78	2	72	4.091	ppb	4.091	15.50	249	2000	
Sr	88	3	72	263.079	ppb	263.079	2.10	145899	4000	
Mo	95	3	115	9.682	ppb	9.682	7.58	4997	2000	
Ag	107	3	115	0.010	ppb	0.010	4.67	30	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.262	ppb	-0.262	-15.57	546	2000	
Sb	121	3	115	0.407	ppb	0.407	29.33	358	1000	
Ba	137	3	115	42.041	ppb	42.041	1.87	10657	5000	
Tl	205	3	193	-0.039	ppb	-0.039	-10.83	230	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-56.12	272	100	
(Pb)	207	3	193	-0.010	ppb	-0.010	-458.88	471	100	
Pb	208	3	193	-0.038	ppb	-0.038	-35.26	1294	5000	
Th	232	3	193	-0.363	ppb	-0.363	-6.54	5040	2000	
U	238	3	193	1.722	ppb	1.722	1.63	10898	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4306104	0.63	4300192	100.14	60	120	
Sc (IS)	45	3	HMI He	623665	0.60	644593	96.75	60	120	
Ge Internal standard	72	2	HMI H2	2599664	1.13	2598552	100.04	60	120	
Ge Internal standard	72	3	HMI He	781373	0.78	772392	101.16	60	120	
In Internal Standard	115	3	HMI He	2859165	2.61	2872781	99.53	60	120	
Ir (IS)	193	3	HMI He	6110465	1.42	6092963	100.29	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	209SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:09:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3733.612	ppb	3733.612	1.23	431951	400000	
Mg	24	3	45	2610.885	ppb	2610.885	1.37	153072	400000	
Al	27	3	45	9.053	ppb	9.053	31.16	354	400000	
K	39	3	45	1488.268	ppb	1488.268	3.12	98408	400000	
Ca	40	2	45	10478.390	ppb	10478.390	0.65	5934046	400000	
V	51	3	72	4.245	ppb	4.245	5.80	3732	2000	
Cr	52	3	72	0.622	ppb	0.622	77.10	3644	5000	
Mn	55	3	72	2.986	ppb	2.986	6.54	1626	10000	
Fe	56	2	72	9.044	ppb	9.044	30.42	76457	10000	
Co	59	3	72	0.066	ppb	0.066	15.58	143	2000	
Ni	60	3	72	0.537	ppb	0.537	22.08	900	5000	
Cu	63	3	72	0.262	ppb	0.262	14.02	668	5000	
Zn	66	3	72	3.184	ppb	3.184	7.85	755	5000	
As	75	3	72	2.829	ppb	2.829	12.57	373	2000	
Se	78	2	72	0.803	ppb	0.803	6.79	49	2000	
Sr	88	3	72	52.806	ppb	52.806	1.01	29277	4000	
Mo	95	3	115	1.822	ppb	1.822	0.99	971	2000	
Ag	107	3	115	0.017	ppb	0.017	24.61	43	100	
Cd	111	3	115	-0.034	ppb	-0.034	-34.83	2	2000	
Sn	120	3	115	-0.093	ppb	-0.093	-87.77	678	2000	
Sb	121	3	115	0.093	ppb	0.093	39.07	117	1000	
Ba	137	3	115	8.826	ppb	8.826	3.42	2284	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-22.47	205	2000	
(Pb)	206	3	193	0.281	ppb	0.281	35.46	680	100	
(Pb)	207	3	193	0.294	ppb	0.294	8.88	816	100	
Pb	208	3	193	0.280	ppb	0.280	15.61	2944	5000	
Th	232	3	193	-0.417	ppb	-0.417	-9.10	4774	2000	
U	238	3	193	0.322	ppb	0.322	5.31	3294	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4204632	2.57	4300192	97.78	60	120	
Sc (IS)	45	3	HMI He	624529	0.52	644593	96.89	60	120	
Ge Internal standard	72	2	HMI H2	2542709	2.14	2598552	97.85	60	120	
Ge Internal standard	72	3	HMI He	780147	0.80	772392	101.00	60	120	
In Internal Standard	115	3	HMI He	2856264	0.76	2872781	99.43	60	120	
Ir (IS)	193	3	HMI He	6126451	2.42	6092963	100.55	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	210SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:11:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.333	ppb	42.333	5.59	1751	2000	
Na	23	3	45	20149.916	ppb	20149.916	1.81	2280184	400000	
Mg	24	3	45	14544.064	ppb	14544.064	3.48	858963	400000	
Al	27	3	45	746.564	ppb	746.564	1.18	17201	400000	
K	39	3	45	8472.126	ppb	8472.126	0.69	436284	400000	
Ca	40	2	45	52832.747	ppb	52832.747	0.77	30789867	400000	
V	51	3	72	61.977	ppb	61.977	3.45	40889	2000	
Cr	52	3	72	40.728	ppb	40.728	0.93	35366	5000	
Mn	55	3	72	43.898	ppb	43.898	0.84	18722	10000	
Fe	56	2	72	803.842	ppb	803.842	0.74	1341676	10000	
Co	59	3	72	38.789	ppb	38.789	1.00	52170	2000	
Ni	60	3	72	38.522	ppb	38.522	3.20	15289	5000	
Cu	63	3	72	39.733	ppb	39.733	1.33	41359	5000	
Zn	66	3	72	41.138	ppb	41.138	3.16	7018	5000	
As	75	3	72	52.785	ppb	52.785	5.24	6198	2000	
Se	78	2	72	43.027	ppb	43.027	4.88	2594	2000	
Sr	88	3	72	350.038	ppb	350.038	0.59	194262	4000	
Mo	95	3	115	48.231	ppb	48.231	0.88	24817	2000	
Ag	107	3	115	39.016	ppb	39.016	2.00	67672	100	
Cd	111	3	115	38.545	ppb	38.545	2.65	9537	2000	
Sn	120	3	115	37.829	ppb	37.829	1.94	30341	2000	
Sb	121	3	115	39.897	ppb	39.897	0.15	30965	1000	
Ba	137	3	115	84.570	ppb	84.570	0.63	21425	5000	
Tl	205	3	193	38.895	ppb	38.895	1.75	152930	2000	
(Pb)	206	3	193	38.743	ppb	38.743	2.00	50764	100	
(Pb)	207	3	193	38.255	ppb	38.255	2.99	44267	100	
Pb	208	3	193	38.805	ppb	38.805	2.32	205320	5000	
Th	232	3	193	36.836	ppb	36.836	0.46	199763	2000	
U	238	3	193	40.406	ppb	40.406	1.85	224021	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4333860	0.29	4300192	100.78	60	120	
Sc (IS)	45	3	HMI He	630064	0.46	644593	97.75	60	120	
Ge Internal standard	72	2	HMI H2	2599837	1.19	2598552	100.05	60	120	
Ge Internal standard	72	3	HMI He	781920	0.98	772392	101.23	60	120	
In Internal Standard	115	3	HMI He	2865374	1.92	2872781	99.74	60	120	
Ir (IS)	193	3	HMI He	6188054	1.10	6092963	101.56	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	211SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:12:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.706	ppb	40.706	11.26	1703	2000	
Na	23	3	45	19638.019	ppb	19638.019	2.67	2247474	400000	
Mg	24	3	45	14205.849	ppb	14205.849	1.32	848420	400000	
Al	27	3	45	742.830	ppb	742.830	2.29	17308	400000	
K	39	3	45	8084.840	ppb	8084.840	0.32	422257	400000	
Ca	40	2	45	52969.865	ppb	52969.865	1.57	30608600	400000	
V	51	3	72	60.625	ppb	60.625	1.35	40625	2000	
Cr	52	3	72	40.305	ppb	40.305	2.55	35554	5000	
Mn	55	3	72	42.297	ppb	42.297	0.55	18323	10000	
Fe	56	2	72	808.243	ppb	808.243	0.91	1366429	10000	
Co	59	3	72	37.472	ppb	37.472	0.86	51153	2000	
Ni	60	3	72	37.776	ppb	37.776	2.97	15232	5000	
Cu	63	3	72	38.982	ppb	38.982	1.86	41189	5000	
Zn	66	3	72	39.835	ppb	39.835	5.15	6905	5000	
As	75	3	72	53.814	ppb	53.814	0.48	6415	2000	
Se	78	2	72	42.703	ppb	42.703	3.90	2608	2000	
Sr	88	3	72	336.853	ppb	336.853	1.59	189740	4000	
Mo	95	3	115	46.018	ppb	46.018	5.07	24103	2000	
Ag	107	3	115	38.291	ppb	38.291	2.92	67626	100	
Cd	111	3	115	38.413	ppb	38.413	1.68	9680	2000	
Sn	120	3	115	37.396	ppb	37.396	1.83	30553	2000	
Sb	121	3	115	39.477	ppb	39.477	0.29	31201	1000	
Ba	137	3	115	81.374	ppb	81.374	2.65	20991	5000	
Tl	205	3	193	39.117	ppb	39.117	1.41	153075	2000	
(Pb)	206	3	193	39.454	ppb	39.454	2.60	51457	100	
(Pb)	207	3	193	39.035	ppb	39.035	1.66	44956	100	
Pb	208	3	193	38.989	ppb	38.989	2.14	205349	5000	
Th	232	3	193	38.725	ppb	38.725	0.31	208647	2000	
U	238	3	193	40.456	ppb	40.456	1.04	223252	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4297767	1.35	4300192	99.94	60	120	
Sc (IS)	45	3	HMI He	637082	0.43	644593	98.83	60	120	
Ge Internal standard	72	2	HMI H2	2634308	1.50	2598552	101.38	60	120	
Ge Internal standard	72	3	HMI He	793611	0.49	772392	102.75	60	120	
In Internal Standard	115	3	HMI He	2917914	1.78	2872781	101.57	60	120	
Ir (IS)	193	3	HMI He	6158732	0.90	6092963	101.08	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D pds
Data File Name	212SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:14:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	110.211	ppb	110.211	1.35	4660	2000	
Na	23	3	45	23925.909	ppb	23925.909	1.05	2709352	400000	
Mg	24	3	45	15391.736	ppb	15391.736	3.13	910776	400000	
Al	27	3	45	2023.025	ppb	2023.025	2.72	46439	400000	
K	39	3	45	9453.909	ppb	9453.909	1.29	484563	400000	
Ca	40	2	45	53409.699	ppb	53409.699	1.69	31188875	400000	
V	51	3	72	116.746	ppb	116.746	0.51	77415	2000	
Cr	52	3	72	98.533	ppb	98.533	0.88	82421	5000	
Mn	55	3	72	97.745	ppb	97.745	1.79	41900	10000	
Fe	56	2	72	1058.323	ppb	1058.323	1.69	1748432	10000	
Co	59	3	72	96.194	ppb	96.194	1.48	131441	2000	
Ni	60	3	72	94.646	ppb	94.646	0.65	37163	5000	
Cu	63	3	72	97.959	ppb	97.959	0.56	103069	5000	
Zn	66	3	72	201.755	ppb	201.755	2.04	34078	5000	
As	75	3	72	117.837	ppb	117.837	1.26	14017	2000	
Se	78	2	72	106.172	ppb	106.172	1.69	6406	2000	
Sr	88	3	72	356.230	ppb	356.230	1.09	200985	4000	
Mo	95	3	115	106.449	ppb	106.449	2.56	55086	2000	
Ag	107	3	115	26.103	ppb	26.103	0.96	45588	100	
Cd	111	3	115	99.167	ppb	99.167	1.71	24687	2000	
Sn	120	3	115	98.130	ppb	98.130	1.02	78033	2000	
Sb	121	3	115	95.655	ppb	95.655	1.01	74666	1000	
Ba	137	3	115	142.131	ppb	142.131	0.70	36205	5000	
Tl	205	3	193	98.154	ppb	98.154	1.19	385849	2000	
(Pb)	206	3	193	97.892	ppb	97.892	1.44	127941	100	
(Pb)	207	3	193	96.998	ppb	96.998	3.06	111633	100	
Pb	208	3	193	97.265	ppb	97.265	1.60	513054	5000	
Th	232	3	193	104.980	ppb	104.980	2.01	556961	2000	
U	238	3	193	214.112	ppb	214.112	3.98	1181706	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4343562	2.01	4300192	101.01	60	120	
Sc (IS)	45	3	HMI He	631265	0.66	644593	97.93	60	120	
Ge Internal standard	72	2	HMI H2	2603174	0.31	2598552	100.18	60	120	
Ge Internal standard	72	3	HMI He	794934	0.61	772392	102.92	60	120	
In Internal Standard	115	3	HMI He	2884393	1.06	2872781	100.40	60	120	
Ir (IS)	193	3	HMI He	6196001	1.16	6092963	101.69	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	213_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:16:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.166	ppb	4.253	2199	50	106.3	90	110	
Na	23	3	45	48077.438	ppb	0.728	5396703	51000	94.3	90	110	
Mg	24	3	45	10265.689	ppb	1.400	604064	11000	93.3	90	110	
Al	27	3	45	972.928	ppb	2.884	22283	1000	97.3	90	110	
K	39	3	45	10181.534	ppb	1.063	516772	11000	92.6	90	110	
Ca	40	2	45	10406.909	ppb	1.045	5978238	11000	94.6	90	110	
V	51	3	72	51.478	ppb	1.701	32670	50	103.0	90	110	
Cr	52	3	72	51.808	ppb	2.226	42228	50	103.6	90	110	
Mn	55	3	72	50.939	ppb	1.550	20730	50	101.9	90	110	
Fe	56	2	72	1073.315	ppb	0.849	1697398	1000	107.3	90	110	
Co	59	3	72	50.702	ppb	1.882	65237	50	101.4	90	110	
Ni	60	3	72	50.905	ppb	0.572	19124	50	101.8	90	110	
Cu	63	3	72	50.169	ppb	2.599	49868	50	100.3	90	110	
Zn	66	3	72	49.873	ppb	1.541	8097	50	99.7	90	110	
As	75	3	72	53.952	ppb	2.057	6063	50	107.9	90	110	
Se	78	2	72	50.244	ppb	3.823	2904	50	100.5	90	110	
Sr	88	3	72	103.817	ppb	2.957	55159	100	103.8	90	110	
Mo	95	3	115	49.334	ppb	2.913	25495	50	98.7	90	110	
Ag	107	3	115	48.425	ppb	3.274	84361	50	96.8	90	110	
Cd	111	3	115	49.329	ppb	2.339	12258	50	98.7	90	110	
Sn	120	3	115	48.001	ppb	3.144	38471	50	96.0	90	110	
Sb	121	3	115	49.566	ppb	3.388	38620	50	99.1	90	110	
Ba	137	3	115	48.750	ppb	4.260	12428	50	97.5	90	110	
Tl	205	3	193	48.712	ppb	2.849	189756	50	97.4	90	110	
(Pb)	206	3	193	49.709	ppb	2.843	64474	50	99.4	90	110	
(Pb)	207	3	193	48.995	ppb	3.456	56066	50	98.0	90	110	
Pb	208	3	193	49.000	ppb	3.002	256611	50	98.0	90	110	
Th	232	3	193	51.785	ppb	2.011	275559	50	103.6	90	110	
U	238	3	193	48.273	ppb	2.856	265002	50	96.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4264829	1.09	4300192	99.18	60	120	
Sc (IS)	45	3	HMI He	627631	0.58	644593	97.37	60	120	
Ge Internal standard	72	2	HMI H2	2493149	1.33	2598552	95.94	60	120	
Ge Internal standard	72	3	HMI He	748314	1.08	772392	96.88	60	120	
In Internal Standard	115	3	HMI He	2878701	2.31	2872781	100.21	60	120	
Ir (IS)	193	3	HMI He	6135421	1.91	6092963	100.70	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	214_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:18:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.070	ppb	-192.6	3	0.5	
Na	23	3	45	75.801	ppb	4.2	24927	25	>RL
Mg	24	3	45	3.129	ppb	43.3	450	25	
Al	27	3	45	-0.894	ppb	-125.4	130	15	
K	39	3	45	-9.953	ppb	-223.3	27080	50	
V	51	3	72	0.202	ppb	56.8	1121	1	
Cr	52	3	72	0.547	ppb	60.5	3540	1	
Mn	55	3	72	0.188	ppb	55.0	455	0.5	
Co	59	3	72	0.030	ppb	41.3	95	0.5	
Ni	60	3	72	0.447	ppb	48.7	855	1	
Cu	63	3	72	0.059	ppb	19.3	453	1	
Zn	66	3	72	-0.108	ppb	-181.0	210	5	
As	75	3	72	0.073	ppb	146.4	52	1	
Se	78	2	72	0.068	ppb	49.6	6	1	
Sr	88	3	72	0.037	ppb	90.5	63	0.5	
Mo	95	3	115	0.107	ppb	46.4	93	0.5	
Ag	107	3	115	0.010	ppb	17.0	32	1	
Cd	111	3	115	-0.007	ppb	-306.3	8	0.5	
Sn	120	3	115	0.050	ppb	215.1	796	1	
Sb	121	3	115	0.055	ppb	42.6	88	0.6	
Ba	137	3	115	-0.040	ppb	-31.8	52	0.5	
Tl	205	3	193	-0.004	ppb	-327.0	365	0.1	
(Pb)	206	3	193	-0.064	ppb	-32.5	237	1	
(Pb)	207	3	193	-0.050	ppb	-97.0	426	1	
Pb	208	3	193	-0.054	ppb	-21.1	1209	0.5	
Th	232	3	193	1.912	ppb	13.4	16803	1	>RL
U	238	3	193	0.038	ppb	69.7	1746	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4256588	0.88	4300192	98.99	60	120	
Sc (IS)	45	3	HMI He	632311	0.97	644593	98.09	60	120	
Ge Internal standard	72	2	HMI H2	2558926	0.27	2598552	98.48	60	120	
Ge Internal standard	72	3	HMI He	769939	1.85	772392	99.68	60	120	
In Internal Standard	115	3	HMI He	2880210	1.16	2872781	100.26	60	120	
Ir (IS)	193	3	HMI He	6113205	1.49	6092963	100.33	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	215LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:20:07-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.069	ppb	21.974	50	1	106.9	70	130	
Na	23	3	45	336.198	ppb	3.848	54918	300	112.1	70	130	
Mg	24	3	45	44.087	ppb	6.897	2910	50	88.2	70	130	
Al	27	3	45	45.104	ppb	7.255	1198	50	90.2	70	130	
K	39	3	45	98.456	ppb	44.011	32698	120	82.0	70	130	
Ca	40	2	45	203.148	ppb	1.687	126238	200	101.6	70	130	
V	51	3	72	4.669	ppb	5.436	4015	5	93.4	70	130	
Cr	52	3	72	2.058	ppb	10.851	4792	2	102.9	70	130	
Mn	55	3	72	0.920	ppb	8.343	768	1	92.0	70	130	
Fe	56	2	72	53.543	ppb	8.305	143126	50	107.1	70	130	
Co	59	3	72	0.991	ppb	1.470	1388	1	99.1	70	130	
Ni	60	3	72	2.200	ppb	5.698	1533	2	110.0	70	130	
Cu	63	3	72	1.867	ppb	2.391	2326	2	93.4	70	130	
Zn	66	3	72	8.714	ppb	6.137	1669	10	87.1	70	130	
As	75	3	72	5.336	ppb	8.820	666	5	106.7	70	130	
Se	78	2	72	5.096	ppb	8.007	297	5	101.9	70	130	
Sr	88	3	72	4.740	ppb	3.159	2676	5	94.8	70	130	
Mo	95	3	115	2.020	ppb	13.177	1086	2	101.0	70	130	
Ag	107	3	115	0.871	ppb	3.995	1543	1	87.1	70	130	
Cd	111	3	115	0.867	ppb	11.077	227	1	86.7	70	130	
Sn	120	3	115	8.286	ppb	3.578	7317	10	82.9	70	130	
Sb	121	3	115	1.935	ppb	6.939	1561	2	96.7	70	130	
Ba	137	3	115	0.838	ppb	25.362	277	1	83.8	70	130	
Tl	205	3	193	0.834	ppb	5.022	3682	1	83.4	70	130	
(Pb)	206	3	193	0.776	ppb	9.358	1343	1	77.6	70	130	
(Pb)	207	3	193	0.837	ppb	11.739	1456	1	83.7	70	130	
Pb	208	3	193	0.803	ppb	7.923	5764	1	80.3	70	130	
Th	232	3	193	1.370	ppb	14.931	14286	1	137.0	70	130	>+/-30%
U	238	3	193	0.938	ppb	6.796	6767	1	93.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4164266	1.42	4300192	96.84	60	120	
Sc (IS)	45	3	HMI He	639897	2.10	644593	99.27	60	120	
Ge Internal standard	72	2	HMI H2	2499401	1.15	2598552	96.18	60	120	
Ge Internal standard	72	3	HMI He	782523	1.75	772392	101.31	60	120	
In Internal Standard	115	3	HMI He	2898903	2.53	2872781	100.91	60	120	
Ir (IS)	193	3	HMI He	6232941	1.98	6092963	102.30	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-6-A
Data File Name	216SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:21:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17162.830	ppb	17162.830	0.96	1975564	400000	
Mg	24	3	45	17042.542	ppb	17042.542	2.71	1022747	400000	
Al	27	3	45	4.072	ppb	4.072	42.28	247	400000	
K	39	3	45	6978.035	ppb	6978.035	0.53	370000	400000	
Ca	40	2	45	59240.009	ppb	59240.009	0.26	34581404	400000	
V	51	3	72	21.099	ppb	21.099	2.82	14987	2000	
Cr	52	3	72	1.250	ppb	1.250	14.67	4265	5000	
Mn	55	3	72	0.364	ppb	0.364	27.72	550	10000	
Fe	56	2	72	5.910	ppb	5.910	57.53	75279	10000	
Co	59	3	72	0.129	ppb	0.129	6.21	235	2000	
Ni	60	3	72	1.478	ppb	1.478	7.59	1293	5000	
Cu	63	3	72	16.258	ppb	16.258	0.46	17629	5000	
Zn	66	3	72	1.823	ppb	1.823	13.97	546	5000	
As	75	3	72	5.993	ppb	5.993	14.90	763	2000	
Se	78	2	72	4.957	ppb	4.957	11.29	309	2000	
Sr	88	3	72	293.571	ppb	293.571	2.10	167392	4000	
Mo	95	3	115	3.131	ppb	3.131	6.12	1696	2000	
Ag	107	3	115	0.013	ppb	0.013	53.47	37	100	
Cd	111	3	115	-0.015	ppb	-0.015	-72.96	7	2000	
Sn	120	3	115	-0.143	ppb	-0.143	-28.61	660	2000	
Sb	121	3	115	0.268	ppb	0.268	17.04	260	1000	
Ba	137	3	115	38.564	ppb	38.564	3.14	10086	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-17.02	230	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-15.57	237	100	
(Pb)	207	3	193	-0.114	ppb	-0.114	-26.19	363	100	
Pb	208	3	193	-0.082	ppb	-0.082	-15.15	1088	5000	
Th	232	3	193	-0.288	ppb	-0.288	-14.29	5573	2000	
U	238	3	193	3.079	ppb	3.079	1.27	18755	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4341330	1.77	4300192	100.96	60	120	
Sc (IS)	45	3	HMI He	640116	0.56	644593	99.31	60	120	
Ge Internal standard	72	2	HMI H2	2675516	0.62	2598552	102.96	60	120	
Ge Internal standard	72	3	HMI He	803351	0.49	772392	104.01	60	120	
In Internal Standard	115	3	HMI He	2948846	2.15	2872781	102.65	60	120	
Ir (IS)	193	3	HMI He	6270777	1.95	6092963	102.92	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-8-A
Data File Name	217SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:23:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17968.914	ppb	17968.914	2.72	2112895	400000	
Mg	24	3	45	10644.127	ppb	10644.127	1.38	652916	400000	
Al	27	3	45	-0.110	ppb	-0.110	-1386.71	153	400000	
K	39	3	45	5698.770	ppb	5698.770	1.35	314079	400000	
Ca	40	2	45	31171.925	ppb	31171.925	1.19	18301108	400000	
V	51	3	72	17.074	ppb	17.074	2.32	12398	2000	
Cr	52	3	72	2.015	ppb	2.015	16.17	4915	5000	
Mn	55	3	72	0.762	ppb	0.762	4.70	725	10000	
Fe	56	2	72	14.068	ppb	14.068	30.23	89850	10000	
Co	59	3	72	0.046	ppb	0.046	5.25	122	2000	
Ni	60	3	72	0.413	ppb	0.413	5.39	883	5000	
Cu	63	3	72	0.288	ppb	0.288	22.25	720	5000	
Zn	66	3	72	0.426	ppb	0.426	45.62	312	5000	
As	75	3	72	5.940	ppb	5.940	4.18	761	2000	
Se	78	2	72	1.395	ppb	1.395	6.90	90	2000	
Sr	88	3	72	167.249	ppb	167.249	1.22	95938	4000	
Mo	95	3	115	3.677	ppb	3.677	1.10	2039	2000	
Ag	107	3	115	0.006	ppb	0.006	44.53	25	100	
Cd	111	3	115	-0.022	ppb	-0.022	-88.42	5	2000	
Sn	120	3	115	-0.208	ppb	-0.208	-44.96	625	2000	
Sb	121	3	115	0.166	ppb	0.166	26.21	183	1000	
Ba	137	3	115	17.688	ppb	17.688	4.32	4792	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-18.83	162	2000	
(Pb)	206	3	193	-0.057	ppb	-0.057	-12.22	252	100	
(Pb)	207	3	193	-0.099	ppb	-0.099	-71.07	378	100	
Pb	208	3	193	-0.081	ppb	-0.081	-16.71	1089	5000	
Th	232	3	193	-0.347	ppb	-0.347	-8.90	5234	2000	
U	238	3	193	1.938	ppb	1.938	2.58	12330	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365199	2.77	4300192	101.51	60	120	
Sc (IS)	45	3	HMI He	654338	1.46	644593	101.51	60	120	
Ge Internal standard	72	2	HMI H2	2716067	2.17	2598552	104.52	60	120	
Ge Internal standard	72	3	HMI He	807997	0.39	772392	104.61	60	120	
In Internal Standard	115	3	HMI He	3031665	1.80	2872781	105.53	60	120	
Ir (IS)	193	3	HMI He	6239719	0.59	6092963	102.41	60	120	

Sample Report

Sample Table

Sample Name	280-175081-A-2-A
Data File Name	218SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:25:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3130.310	ppb	3130.310	1.08	371814	400000	
Mg	24	3	45	4854.081	ppb	4854.081	0.17	289875	400000	
Al	27	3	45	2.835	ppb	2.835	62.70	217	400000	
K	39	3	45	2217.382	ppb	2217.382	1.53	135861	400000	
Ca	40	2	45	21781.359	ppb	21781.359	0.40	12665898	400000	
V	51	3	72	2.782	ppb	2.782	12.74	2886	2000	
Cr	52	3	72	1.780	ppb	1.780	28.15	4708	5000	
Mn	55	3	72	0.252	ppb	0.252	43.35	503	10000	
Fe	56	2	72	9.383	ppb	9.383	38.45	81329	10000	
Co	59	3	72	0.030	ppb	0.030	8.33	98	2000	
Ni	60	3	72	0.719	ppb	0.719	40.44	1000	5000	
Cu	63	3	72	0.241	ppb	0.241	16.77	668	5000	
Zn	66	3	72	2.852	ppb	2.852	6.81	723	5000	
As	75	3	72	1.093	ppb	1.093	4.71	177	2000	
Se	78	2	72	0.220	ppb	0.220	87.72	16	2000	
Sr	88	3	72	103.186	ppb	103.186	1.16	59041	4000	
Mo	95	3	115	0.725	ppb	0.725	5.36	421	2000	
Ag	107	3	115	0.000	ppb	0.000	-615.10	13	100	
Cd	111	3	115	-0.021	ppb	-0.021	-92.44	5	2000	
Sn	120	3	115	-0.189	ppb	-0.189	-19.17	621	2000	
Sb	121	3	115	0.187	ppb	0.187	16.50	195	1000	
Ba	137	3	115	26.829	ppb	26.829	2.59	7022	5000	
Tl	205	3	193	-0.058	ppb	-0.058	-17.28	160	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-62.91	233	100	
(Pb)	207	3	193	-0.106	ppb	-0.106	-43.36	366	100	
Pb	208	3	193	-0.072	ppb	-0.072	-13.93	1124	5000	
Th	232	3	193	-0.393	ppb	-0.393	-6.21	4939	2000	
U	238	3	193	0.306	ppb	0.306	6.63	3234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4321856	1.19	4300192	100.50	60	120	
Sc (IS)	45	3	HMI He	636629	0.82	644593	98.76	60	120	
Ge Internal standard	72	2	HMI H2	2688098	2.28	2598552	103.45	60	120	
Ge Internal standard	72	3	HMI He	805737	0.71	772392	104.32	60	120	
In Internal Standard	115	3	HMI He	2942533	1.38	2872781	102.43	60	120	
Ir (IS)	193	3	HMI He	6172800	1.02	6092963	101.31	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	219SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:27:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	67.268	ppb	67.268	6.24	2772	2000	
Na	23	3	45	35834.303	ppb	35834.303	1.80	4077929	400000	
Mg	24	3	45	216104.005	ppb	216104.005	0.81	12874859	400000	
Al	27	3	45	224973.435	ppb	224973.435	0.96	5184366	400000	
K	39	3	45	6732.856	ppb	6732.856	1.57	355488	400000	
Ca	40	2	45	431773.739	ppb	431773.739	0.43	248277294	400000	
V	51	3	72	54.221	ppb	54.221	1.95	35900	2000	
Cr	52	3	72	5.861	ppb	5.861	4.81	7797	5000	
Mn	55	3	72	12172.671	ppb	12172.671	1.11	5085344	10000	
Fe	56	2	72	785.076	ppb	785.076	1.31	1310068	10000	
Co	59	3	72	588.483	ppb	588.483	1.63	790573	2000	
Ni	60	3	72	539.096	ppb	539.096	2.03	204898	5000	
Cu	63	3	72	7.273	ppb	7.273	3.90	7895	5000	
Zn	66	3	72	2748.503	ppb	2748.503	0.74	453722	5000	
As	75	3	72	4.195	ppb	4.195	2.68	533	2000	
Se	78	2	72	13.431	ppb	13.431	5.90	810	2000	
Sr	88	3	72	3393.452	ppb	3393.452	0.87	1883011	4000	
Mo	95	3	115	0.093	ppb	0.093	46.54	85	2000	
Ag	107	3	115	0.011	ppb	0.011	70.85	32	100	
Cd	111	3	115	8.115	ppb	8.115	11.63	1989	2000	
Sn	120	3	115	-0.007	ppb	-0.007	-472.37	738	2000	
Sb	121	3	115	0.068	ppb	0.068	53.79	97	1000	
Ba	137	3	115	10.952	ppb	10.952	0.89	2792	5000	
Tl	205	3	193	0.668	ppb	0.668	1.98	2899	2000	
(Pb)	206	3	193	10.275	ppb	10.275	1.49	13214	100	
(Pb)	207	3	193	9.340	ppb	9.340	1.21	10783	100	
Pb	208	3	193	9.650	ppb	9.650	1.06	50334	5000	
Th	232	3	193	2.205	ppb	2.205	3.98	17876	2000	
U	238	3	193	99.861	ppb	99.861	0.65	531729	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4277811	0.81	4300192	99.48	60	120	
Sc (IS)	45	3	HMI He	635708	0.89	644593	98.62	60	120	
Ge Internal standard	72	2	HMI H2	2596452	0.89	2598552	99.92	60	120	
Ge Internal standard	72	3	HMI He	781901	1.28	772392	101.23	60	120	
In Internal Standard	115	3	HMI He	2829213	1.93	2872781	98.48	60	120	
Ir (IS)	193	3	HMI He	5967399	1.74	6092963	97.94	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	220SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:29:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	84.503	ppb	84.503	4.47	3474	2000	
Na	23	3	45	63181.090	ppb	63181.090	0.51	7214329	400000	
Mg	24	3	45	314358.980	ppb	314358.980	1.83	18822124	400000	
Al	27	3	45	90010.661	ppb	90010.661	1.36	2084758	400000	
K	39	3	45	15188.374	ppb	15188.374	1.72	771002	400000	
Ca	40	2	45	456069.231	ppb	456069.231	1.24	263651549	400000	
V	51	3	72	3.994	ppb	3.994	3.76	3595	2000	
Cr	52	3	72	1.959	ppb	1.959	8.29	4733	5000	
Mn	55	3	72	16070.615	ppb	16070.615	0.92	6744301	10000	
Fe	56	2	72	228.948	ppb	228.948	1.92	425119	10000	
Co	59	3	72	787.154	ppb	787.154	3.40	1062163	2000	
Ni	60	3	72	623.663	ppb	623.663	0.99	238020	5000	
Cu	63	3	72	4.808	ppb	4.808	1.73	5380	5000	
Zn	66	3	72	3475.035	ppb	3475.035	1.15	576182	5000	
As	75	3	72	2.911	ppb	2.911	24.70	385	2000	
Se	78	2	72	18.023	ppb	18.023	3.04	1081	2000	
Sr	88	3	72	4494.422	ppb	4494.422	1.46	2505028	4000	
Mo	95	3	115	0.051	ppb	0.051	51.31	65	2000	
Ag	107	3	115	0.023	ppb	0.023	40.47	55	100	
Cd	111	3	115	11.474	ppb	11.474	2.64	2887	2000	
Sn	120	3	115	-0.216	ppb	-0.216	-51.45	591	2000	
Sb	121	3	115	0.044	ppb	0.044	15.07	80	1000	
Ba	137	3	115	8.957	ppb	8.957	1.95	2357	5000	
Tl	205	3	193	1.914	ppb	1.914	2.99	7835	2000	
(Pb)	206	3	193	10.508	ppb	10.508	2.55	13906	100	
(Pb)	207	3	193	9.097	ppb	9.097	3.16	10823	100	
Pb	208	3	193	9.785	ppb	9.785	1.39	52530	5000	
Th	232	3	193	0.474	ppb	0.474	7.56	9421	2000	
U	238	3	193	178.277	ppb	178.277	1.01	976190	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4300550	0.35	4300192	100.01	60	120	
Sc (IS)	45	3	HMI He	638908	0.68	644593	99.12	60	120	
Ge Internal standard	72	2	HMI H2	2584356	0.97	2598552	99.45	60	120	
Ge Internal standard	72	3	HMI He	785426	0.83	772392	101.69	60	120	
In Internal Standard	115	3	HMI He	2906612	1.39	2872781	101.18	60	120	
Ir (IS)	193	3	HMI He	6143952	0.53	6092963	100.84	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-3-A
Data File Name	221SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:30:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.028	ppb	-0.028	-440.75	5	2000	
Na	23	3	45	2208.436	ppb	2208.436	1.04	266122	400000	
Mg	24	3	45	7581.004	ppb	7581.004	0.64	450767	400000	
Al	27	3	45	1688.905	ppb	1688.905	4.08	38970	400000	
K	39	3	45	21546.320	ppb	21546.320	1.40	1074026	400000	
Ca	40	2	45	46050.758	ppb	46050.758	2.89	26223808	400000	
V	51	3	72	4.134	ppb	4.134	4.38	3732	2000	
Cr	52	3	72	1.601	ppb	1.601	18.47	4502	5000	
Mn	55	3	72	25.755	ppb	25.755	1.84	11331	10000	
Fe	56	2	72	914.341	ppb	914.341	3.35	1509772	10000	
Co	59	3	72	0.868	ppb	0.868	18.93	1241	2000	
Ni	60	3	72	2.039	ppb	2.039	3.42	1496	5000	
Cu	63	3	72	5.135	ppb	5.135	3.36	5792	5000	
Zn	66	3	72	4.677	ppb	4.677	6.35	1020	5000	
As	75	3	72	1.167	ppb	1.167	18.07	183	2000	
Se	78	2	72	0.444	ppb	0.444	4.16	29	2000	
Sr	88	3	72	292.814	ppb	292.814	0.94	165268	4000	
Mo	95	3	115	2.502	ppb	2.502	9.93	1354	2000	
Ag	107	3	115	0.011	ppb	0.011	51.66	33	100	
Cd	111	3	115	-0.014	ppb	-0.014	-217.50	7	2000	
Sn	120	3	115	-0.152	ppb	-0.152	-6.16	648	2000	
Sb	121	3	115	0.409	ppb	0.409	27.75	370	1000	
Ba	137	3	115	66.593	ppb	66.593	1.91	17261	5000	
Tl	205	3	193	0.003	ppb	0.003	423.09	401	2000	
(Pb)	206	3	193	1.012	ppb	1.012	14.38	1654	100	
(Pb)	207	3	193	0.864	ppb	0.864	3.51	1493	100	
Pb	208	3	193	0.909	ppb	0.909	5.45	6337	5000	
Th	232	3	193	0.252	ppb	0.252	28.23	8395	2000	
U	238	3	193	4.484	ppb	4.484	0.27	26500	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4235543	1.45	4300192	98.50	60	120	
Sc (IS)	45	3	HMI He	634109	0.67	644593	98.37	60	120	
Ge Internal standard	72	2	HMI H2	2586800	0.19	2598552	99.55	60	120	
Ge Internal standard	72	3	HMI He	795233	1.38	772392	102.96	60	120	
In Internal Standard	115	3	HMI He	2929632	1.33	2872781	101.98	60	120	
Ir (IS)	193	3	HMI He	6247794	3.26	6092963	102.54	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-4-A
Data File Name	222SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:32:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	65.285	ppb	65.285	4.76	2731	2000	
Na	23	3	45	36872.250	ppb	36872.250	2.50	4269720	400000	
Mg	24	3	45	222207.082	ppb	222207.082	2.16	13471794	400000	
Al	27	3	45	234239.822	ppb	234239.822	1.43	5493358	400000	
K	39	3	45	6922.680	ppb	6922.680	1.25	371203	400000	
Ca	40	2	45	425333.995	ppb	425333.995	2.01	253506795	400000	
V	51	3	72	56.523	ppb	56.523	1.01	38369	2000	
Cr	52	3	72	6.214	ppb	6.214	6.06	8287	5000	
Mn	55	3	72	12366.508	ppb	12366.508	0.91	5302362	10000	
Fe	56	2	72	804.463	ppb	804.463	0.87	1357626	10000	
Co	59	3	72	602.236	ppb	602.236	0.65	830404	2000	
Ni	60	3	72	547.621	ppb	547.621	1.42	213620	5000	
Cu	63	3	72	7.371	ppb	7.371	2.39	8208	5000	
Zn	66	3	72	2779.945	ppb	2779.945	1.70	470971	5000	
As	75	3	72	4.675	ppb	4.675	3.36	605	2000	
Se	78	2	72	13.570	ppb	13.570	7.41	829	2000	
Sr	88	3	72	3391.624	ppb	3391.624	2.47	1931218	4000	
Mo	95	3	115	0.081	ppb	0.081	8.34	82	2000	
Ag	107	3	115	0.016	ppb	0.016	46.07	42	100	
Cd	111	3	115	7.991	ppb	7.991	8.04	2029	2000	
Sn	120	3	115	-0.100	ppb	-0.100	-26.51	690	2000	
Sb	121	3	115	0.075	ppb	0.075	18.30	105	1000	
Ba	137	3	115	10.974	ppb	10.974	4.20	2896	5000	
Tl	205	3	193	0.680	ppb	0.680	4.13	3014	2000	
(Pb)	206	3	193	10.650	ppb	10.650	1.74	14007	100	
(Pb)	207	3	193	9.403	ppb	9.403	3.02	11104	100	
Pb	208	3	193	10.004	ppb	10.004	2.86	53351	5000	
Th	232	3	193	2.327	ppb	2.327	5.04	18930	2000	
U	238	3	193	102.773	ppb	102.773	1.71	560113	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4434933	1.71	4300192	103.13	60	120	
Sc (IS)	45	3	HMI He	646982	1.00	644593	100.37	60	120	
Ge Internal standard	72	2	HMI H2	2628933	0.70	2598552	101.17	60	120	
Ge Internal standard	72	3	HMI He	802459	0.79	772392	103.89	60	120	
In Internal Standard	115	3	HMI He	2927505	0.81	2872781	101.90	60	120	
Ir (IS)	193	3	HMI He	6109168	2.05	6092963	100.27	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	223_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:34:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.943	ppb	8.515	2286	50	107.9	90	110	
Na	23	3	45	47999.546	ppb	1.128	5477143	51000	94.1	90	110	
Mg	24	3	45	10360.068	ppb	1.740	619640	11000	94.2	90	110	
Al	27	3	45	994.342	ppb	2.521	23146	1000	99.4	90	110	
K	39	3	45	10118.174	ppb	3.178	522092	11000	92.0	90	110	
Ca	40	2	45	10517.787	ppb	1.906	6167572	11000	95.6	90	110	
V	51	3	72	49.582	ppb	2.792	32735	50	99.2	90	110	
Cr	52	3	72	50.144	ppb	2.048	42572	50	100.3	90	110	
Mn	55	3	72	50.908	ppb	0.867	21529	50	101.8	90	110	
Fe	56	2	72	1092.971	ppb	1.216	1769928	1000	109.3	90	110	
Co	59	3	72	49.035	ppb	1.776	65565	50	98.1	90	110	
Ni	60	3	72	50.159	ppb	1.360	19591	50	100.3	90	110	
Cu	63	3	72	49.239	ppb	0.341	50871	50	98.5	90	110	
Zn	66	3	72	51.449	ppb	2.390	8672	50	102.9	90	110	
As	75	3	72	50.465	ppb	2.179	5897	50	100.9	90	110	
Se	78	2	72	51.686	ppb	1.751	3062	50	103.4	90	110	
Sr	88	3	72	101.403	ppb	1.979	55992	100	101.4	90	110	
Mo	95	3	115	49.431	ppb	1.994	25680	50	98.9	90	110	
Ag	107	3	115	49.148	ppb	0.449	86083	50	98.3	90	110	
Cd	111	3	115	49.996	ppb	2.193	12490	50	100.0	90	110	
Sn	120	3	115	48.505	ppb	1.353	39071	50	97.0	90	110	
Sb	121	3	115	49.652	ppb	2.147	38894	50	99.3	90	110	
Ba	137	3	115	48.918	ppb	3.706	12536	50	97.8	90	110	
Tl	205	3	193	47.342	ppb	2.525	192861	50	94.7	90	110	
(Pb)	206	3	193	47.676	ppb	0.190	64685	50	95.4	90	110	
(Pb)	207	3	193	47.902	ppb	1.871	57339	50	95.8	90	110	
Pb	208	3	193	47.440	ppb	0.895	259876	50	94.9	90	110	
Th	232	3	193	47.038	ppb	0.447	262392	50	94.1	90	110	
U	238	3	193	46.999	ppb	1.354	269860	50	94.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4353678	1.03	4300192	101.24	60	120	
Sc (IS)	45	3	HMI He	637998	1.36	644593	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2554492	1.33	2598552	98.30	60	120	
Ge Internal standard	72	3	HMI He	777537	0.22	772392	100.67	60	120	
In Internal Standard	115	3	HMI He	2892981	0.88	2872781	100.70	60	120	
Ir (IS)	193	3	HMI He	6414355	0.74	6092963	105.27	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	224_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:36:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	63.518	ppb	18.5	23700	25	>RL
Mg	24	3	45	6.831	ppb	49.4	674	25	
Al	27	3	45	2.973	ppb	37.3	220	15	
K	39	3	45	-19.033	ppb	-132.2	26826	50	
V	51	3	72	-0.193	ppb	-45.1	885	1	
Cr	52	3	72	0.565	ppb	68.4	3610	1	
Mn	55	3	72	0.479	ppb	26.0	583	0.5	
Co	59	3	72	0.028	ppb	6.7	93	0.5	
Ni	60	3	72	0.492	ppb	17.3	885	1	
Cu	63	3	72	0.070	ppb	69.1	471	1	
Zn	66	3	72	-0.159	ppb	-19.7	205	5	
As	75	3	72	-0.020	ppb	-657.3	42	1	
Se	78	2	72	-0.001	ppb	-2433.6	2	1	
Sr	88	3	72	0.086	ppb	73.9	92	0.5	
Mo	95	3	115	0.099	ppb	27.2	90	0.5	
Ag	107	3	115	0.007	ppb	47.6	25	1	
Cd	111	3	115	-0.041	ppb	0.0	0	0.5	
Sn	120	3	115	-0.018	ppb	-119.4	748	1	
Sb	121	3	115	0.051	ppb	48.6	85	0.6	
Ba	137	3	115	-0.008	ppb	-442.0	60	0.5	
Tl	205	3	193	-0.032	ppb	-35.2	267	0.1	
(Pb)	206	3	193	-0.065	ppb	-37.3	245	1	
(Pb)	207	3	193	-0.091	ppb	-29.4	395	1	
Pb	208	3	193	-0.075	ppb	-9.8	1141	0.5	
Th	232	3	193	1.466	ppb	13.1	15058	1	>RL
U	238	3	193	0.019	ppb	58.6	1704	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365902	1.22	4300192	101.53	60	120	
Sc (IS)	45	3	HMI He	636615	0.44	644593	98.76	60	120	
Ge Internal standard	72	2	HMI H2	2653141	1.02	2598552	102.10	60	120	
Ge Internal standard	72	3	HMI He	782023	0.41	772392	101.25	60	120	
In Internal Standard	115	3	HMI He	2899354	2.07	2872781	100.92	60	120	
Ir (IS)	193	3	HMI He	6348915	0.36	6092963	104.20	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	225LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:38:04-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.243	ppb	65.111	60	1	124.3	70	130	
Na	23	3	45	324.988	ppb	2.716	52774	300	108.3	70	130	
Mg	24	3	45	50.330	ppb	12.335	3230	50	100.7	70	130	
Al	27	3	45	50.927	ppb	8.285	1311	50	101.9	70	130	
K	39	3	45	99.128	ppb	42.526	32223	120	82.6	70	130	
Ca	40	2	45	204.322	ppb	2.522	133548	200	102.2	70	130	
V	51	3	72	4.381	ppb	5.914	3812	5	87.6	70	130	
Cr	52	3	72	2.222	ppb	4.226	4900	2	111.1	70	130	
Mn	55	3	72	1.381	ppb	10.622	956	1	138.1	70	130	>+/-30%
Fe	56	2	72	56.407	ppb	10.188	155439	50	112.8	70	130	
Co	59	3	72	0.940	ppb	5.084	1313	1	94.0	70	130	
Ni	60	3	72	2.324	ppb	8.125	1573	2	116.2	70	130	
Cu	63	3	72	1.937	ppb	4.077	2386	2	96.8	70	130	
Zn	66	3	72	9.920	ppb	2.531	1861	10	99.2	70	130	
As	75	3	72	4.874	ppb	5.530	610	5	97.5	70	130	
Se	78	2	72	5.122	ppb	8.041	315	5	102.4	70	130	
Sr	88	3	72	4.929	ppb	2.905	2767	5	98.6	70	130	
Mo	95	3	115	1.897	ppb	6.582	1011	2	94.9	70	130	
Ag	107	3	115	0.927	ppb	8.981	1619	1	92.7	70	130	
Cd	111	3	115	0.951	ppb	19.130	245	1	95.1	70	130	
Sn	120	3	115	8.979	ppb	2.171	7770	10	89.8	70	130	
Sb	121	3	115	1.906	ppb	9.839	1519	2	95.3	70	130	
Ba	137	3	115	1.060	ppb	22.355	328	1	106.0	70	130	
Tl	205	3	193	0.877	ppb	2.601	3805	1	87.7	70	130	
(Pb)	206	3	193	0.861	ppb	6.662	1438	1	86.1	70	130	
(Pb)	207	3	193	0.762	ppb	0.766	1354	1	76.2	70	130	
Pb	208	3	193	0.854	ppb	4.112	5963	1	85.4	70	130	
Th	232	3	193	1.090	ppb	16.365	12644	1	109.0	70	130	
U	238	3	193	0.957	ppb	4.070	6792	1	95.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4383115	1.53	4300192	101.93	60	120	
Sc (IS)	45	3	HMI He	629416	1.25	644593	97.65	60	120	
Ge Internal standard	72	2	HMI H2	2635514	1.33	2598552	101.42	60	120	
Ge Internal standard	72	3	HMI He	778798	1.18	772392	100.83	60	120	
In Internal Standard	115	3	HMI He	2862811	1.62	2872781	99.65	60	120	
Ir (IS)	193	3	HMI He	6157855	1.35	6092963	101.07	60	120	

Blank Report

Sample Table

Sample Name	mb 280-609143/1-a
Data File Name	226_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:39:53-06:00
Sample Type	Blank
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	45.502	ppb	12.0009917	22116	25
Mg	24	3	45	4.121	ppb	29.63340442	524	25
Al	27	3	45	2.632	ppb	47.45452554	217	15
K	39	3	45	-22.906	ppb	-121.2845018	27207	50
Ca	40	2	45	16.975	ppb	3.678945867	23380	200
V	51	3	72	-0.258	ppb	-44.29458665	861	1
Cr	52	3	72	0.729	ppb	39.36049459	3825	1
Mn	55	3	72	0.444	ppb	27.04636596	581	0.5
Fe	56	2	72	12.418	ppb	35.2160176	85506	50
Co	59	3	72	0.036	ppb	43.49347516	107	0.5
Ni	60	3	72	0.709	ppb	43.47275477	990	1
Cu	63	3	72	0.018	ppb	180.1674152	428	1
Zn	66	3	72	-0.157	ppb	-164.570884	210	5
As	75	3	72	0.043	ppb	449.5222468	50	1
(Se)	78	3	72	1.351	ppb	81.49243514	33	1
Sr	88	3	72	0.056	ppb	103.6082434	77	0.5
Mo	95	3	115	0.030	ppb	33.63924674	55	0.5
Ag	107	3	115	0.008	ppb	84.72416675	28	1
Cd	111	3	115	-0.008	ppb	-391.5766997	8	0.5
Sn	120	3	115	-0.152	ppb	-34.14916741	653	1
Sb	121	3	115	-0.012	ppb	-217.611064	37	0.6
Ba	137	3	115	-0.058	ppb	-137.7335862	48	0.5
Tl	205	3	193	-0.059	ppb	-2.560123429	162	0.1
(Pb)	206	3	193	-0.095	ppb	-20.53285127	207	1
(Pb)	207	3	193	-0.101	ppb	-40.25824719	388	1
Pb	208	3	193	-0.087	ppb	-13.11454761	1093	0.5
Th	232	3	193	-0.350	ppb	-10.59033505	5377	1
U	238	3	193	0.011	ppb	169.1043338	1683	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416245	1.39	4300192	102.70	60	120	
Sc (IS)	45	3	HMI He	650133	0.69	644593	100.86	60	120	
Ge Internal standard	72	2	HMI H2	2662668	0.73	2598552	102.47	60	120	
Ge Internal standard	72	3	HMI He	799828	0.88	772392	103.55	60	120	
In Internal Standard	115	3	HMI He	2947969	1.27	2872781	102.62	60	120	
Ir (IS)	193	3	HMI He	6432258	1.88	6092963	105.57	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-609143/19-a
Data File Name	227_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:41:42-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609143 200.8/6020B
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.895	38.895	ppb	1.956	1686	40	97.2	80	120	
Na	23	3	45	825.258	825.258	ppb	2.918	112533	40	2063.1	80	120	>+/-20%
Mg	24	3	45	729.088	729.088	ppb	1.698	44705	40	1822.7	80	120	>+/-20%
Al	27	3	45	749.049	749.049	ppb	3.424	17812	40	1872.6	80	120	>+/-20%
K	39	3	45	734.359	734.359	ppb	5.887	64918	40	1835.9	80	120	>+/-20%
Ca	40	2	45	804.999	804.999	ppb	1.179	496868	40	2012.5	80	120	>+/-20%
V	51	3	72	37.089	37.089	ppb	1.550	25794	40	92.7	80	120	
Cr	52	3	72	39.002	39.002	ppb	2.673	35252	40	97.5	80	120	
Mn	55	3	72	38.996	38.996	ppb	1.923	17287	40	97.5	80	120	
Fe	56	2	72	816.789	816.789	ppb	0.397	1384419	40	2042.0	80	120	>+/-20%
(Fe)	56	3	72	749.593	749.593	ppb	1.080	540418	40	1874.0	80	120	>+/-20%
Co	59	3	72	38.426	38.426	ppb	1.385	53580	40	96.1	80	120	
Ni	60	3	72	38.192	38.192	ppb	0.791	15724	40	95.5	80	120	
Cu	63	3	72	39.194	39.194	ppb	0.100	42303	40	98.0	80	120	
Zn	66	3	72	39.145	39.145	ppb	1.422	6937	40	97.9	80	120	
As	75	3	72	38.724	38.724	ppb	2.507	4728	40	96.8	80	120	
Se	78	2	72	39.654	39.654	ppb	0.917	2430	40	99.1	80	120	
(Se)	78	3	72	39.840	39.840	ppb	8.293	295	40	99.6	80	120	
Sr	88	3	72	78.228	78.228	ppb	1.458	45047	40	195.6	80	120	>+/-20%
Mo	95	3	115	38.210	38.210	ppb	3.065	20157	40	95.5	80	120	
Ag	107	3	115	39.835	39.835	ppb	2.225	70820	40	99.6	80	120	
Cd	111	3	115	39.479	39.479	ppb	3.964	10010	40	98.7	80	120	
Sn	120	3	115	36.722	36.722	ppb	3.403	30209	40	91.8	80	120	
Sb	121	3	115	38.791	38.791	ppb	1.178	30860	40	97.0	80	120	
Ba	137	3	115	39.384	39.384	ppb	4.998	10256	40	98.5	80	120	
Tl	205	3	193	38.127	38.127	ppb	1.915	156306	40	95.3	80	120	
(Pb)	206	3	193	38.976	38.976	ppb	2.206	53243	40	97.4	80	120	
(Pb)	207	3	193	38.541	38.541	ppb	1.626	46502	40	96.4	80	120	
Pb	208	3	193	38.630	38.630	ppb	1.913	213123	40	96.6	80	120	
Th	232	3	193	35.532	35.532	ppb	3.249	201109	40	88.8	80	120	
U	238	3	193	38.402	38.402	ppb	1.056	222091	40	96.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4467733	0.99	4300192	103.90	60	120	
Sc (IS)	45	3	HMI He	650340	0.78	644593	100.89	60	120	
Ge Internal standard	72	2	HMI H2	2642126	0.38	2598552	101.68	60	120	
Ge Internal standard	72	3	HMI He	810674	0.54	772392	104.96	60	120	
In Internal Standard	115	3	HMI He	2937072	1.77	2872781	102.24	60	120	
Ir (IS)	193	3	HMI He	6452373	1.59	6092963	105.90	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-g
Data File Name	228SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:43:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.161	ppb	0.161	111.32	13	2000	
Na	23	3	45	11790.045	ppb	11790.045	1.59	1362073	400000	
Mg	24	3	45	6115.585	ppb	6115.585	2.01	367083	400000	
Al	27	3	45	6296.376	ppb	6296.376	2.35	146253	400000	
K	39	3	45	1916.707	ppb	1916.707	3.57	121854	400000	
Ca	40	2	45	15442.848	ppb	15442.848	1.07	9084061	400000	
V	51	3	72	10.053	ppb	10.053	5.10	7648	2000	
Cr	52	3	72	4.407	ppb	4.407	3.83	6798	5000	
Mn	55	3	72	164.620	ppb	164.620	0.22	70722	10000	
Fe	56	2	72	6120.061	ppb	6120.061	2.05	10217214	10000	
Co	59	3	72	2.054	ppb	2.054	7.88	2877	2000	
Ni	60	3	72	4.367	ppb	4.367	2.43	2406	5000	
Cu	63	3	72	5.245	ppb	5.245	2.14	5938	5000	
Zn	66	3	72	22.455	ppb	22.455	4.54	4025	5000	
As	75	3	72	1.479	ppb	1.479	30.33	222	2000	
Se	78	2	72	0.465	ppb	0.465	11.37	31	2000	
Sr	88	3	72	134.770	ppb	134.770	1.15	76514	4000	
Mo	95	3	115	0.527	ppb	0.527	7.83	318	2000	
Ag	107	3	115	0.045	ppb	0.045	25.74	93	100	
Cd	111	3	115	0.044	ppb	0.044	110.98	22	2000	
Sn	120	3	115	0.116	ppb	0.116	68.65	870	2000	
Sb	121	3	115	0.399	ppb	0.399	11.65	365	1000	
Ba	137	3	115	125.537	ppb	125.537	0.62	32734	5000	
Tl	205	3	193	0.012	ppb	0.012	74.73	445	2000	
(Pb)	206	3	193	3.998	ppb	3.998	0.58	5705	100	
(Pb)	207	3	193	3.778	ppb	3.778	0.70	4967	100	
Pb	208	3	193	4.674	ppb	4.674	28.68	26861	5000	
Th	232	3	193	3.251	ppb	3.251	8.68	24782	2000	
U	238	3	193	0.486	ppb	0.486	2.89	4367	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370022	0.26	4300192	101.62	60	120	
Sc (IS)	45	3	HMI He	640062	0.68	644593	99.30	60	120	
Ge Internal standard	72	2	HMI H2	2712792	1.18	2598552	104.40	60	120	
Ge Internal standard	72	3	HMI He	799644	0.93	772392	103.53	60	120	
In Internal Standard	115	3	HMI He	2951896	0.89	2872781	102.75	60	120	
Ir (IS)	193	3	HMI He	6385270	1.06	6092963	104.80	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-h ms
Data File Name	229SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:45:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.868	ppb	38.868	3.77	1676	2000	
Na	23	3	45	12735.514	ppb	12735.514	1.76	1470613	400000	
Mg	24	3	45	7005.833	ppb	7005.833	1.12	420671	400000	
Al	27	3	45	7415.005	ppb	7415.005	2.30	172262	400000	
K	39	3	45	2752.028	ppb	2752.028	1.12	162880	400000	
Ca	40	2	45	16099.985	ppb	16099.985	1.61	9631968	400000	
V	51	3	72	48.266	ppb	48.266	1.70	32944	2000	
Cr	52	3	72	43.095	ppb	43.095	1.28	38245	5000	
Mn	55	3	72	205.052	ppb	205.052	0.61	88374	10000	
Fe	56	2	72	7062.430	ppb	7062.430	3.43	11721997	10000	
Co	59	3	72	40.211	ppb	40.211	1.04	55541	2000	
Ni	60	3	72	41.901	ppb	41.901	0.71	17020	5000	
Cu	63	3	72	43.635	ppb	43.635	1.63	46607	5000	
Zn	66	3	72	61.617	ppb	61.617	3.39	10679	5000	
As	75	3	72	39.821	ppb	39.821	0.96	4815	2000	
Se	78	2	72	38.164	ppb	38.164	2.85	2389	2000	
Sr	88	3	72	213.281	ppb	213.281	1.20	121586	4000	
Mo	95	3	115	38.069	ppb	38.069	2.11	20255	2000	
Ag	107	3	115	38.642	ppb	38.642	0.33	69290	100	
Cd	111	3	115	38.008	ppb	38.008	1.65	9722	2000	
Sn	120	3	115	34.602	ppb	34.602	0.94	28757	2000	
Sb	121	3	115	36.571	ppb	36.571	0.95	29341	1000	
Ba	137	3	115	164.309	ppb	164.309	0.52	42965	5000	
Tl	205	3	193	38.594	ppb	38.594	2.44	154641	2000	
(Pb)	206	3	193	43.525	ppb	43.525	1.61	58080	100	
(Pb)	207	3	193	42.866	ppb	42.866	0.72	50498	100	
Pb	208	3	193	43.076	ppb	43.076	1.25	232127	5000	
Th	232	3	193	39.175	ppb	39.175	1.89	216016	2000	
U	238	3	193	39.279	ppb	39.279	1.34	221981	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4444952	1.18	4300192	103.37	60	120	
Sc (IS)	45	3	HMI He	640331	0.61	644593	99.34	60	120	
Ge Internal standard	72	2	HMI H2	2700304	2.25	2598552	103.92	60	120	
Ge Internal standard	72	3	HMI He	803091	0.79	772392	103.97	60	120	
In Internal Standard	115	3	HMI He	2961545	0.46	2872781	103.09	60	120	
Ir (IS)	193	3	HMI He	6306055	0.73	6092963	103.50	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-i msd
Data File Name	230SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:47:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.777	ppb	41.777	8.96	1806	2000	
Na	23	3	45	13036.975	ppb	13036.975	0.26	1502108	400000	
Mg	24	3	45	7210.290	ppb	7210.290	0.95	432092	400000	
Al	27	3	45	7518.560	ppb	7518.560	0.29	174328	400000	
K	39	3	45	2861.264	ppb	2861.264	2.88	167890	400000	
Ca	40	2	45	16924.049	ppb	16924.049	1.93	9978203	400000	
V	51	3	72	49.058	ppb	49.058	3.20	33636	2000	
Cr	52	3	72	44.157	ppb	44.157	1.15	39307	5000	
Mn	55	3	72	212.503	ppb	212.503	0.46	92040	10000	
Fe	56	2	72	7304.557	ppb	7304.557	3.58	12146538	10000	
Co	59	3	72	41.308	ppb	41.308	1.53	57346	2000	
Ni	60	3	72	42.731	ppb	42.731	1.30	17432	5000	
Cu	63	3	72	44.457	ppb	44.457	2.13	47720	5000	
Zn	66	3	72	62.017	ppb	62.017	1.78	10804	5000	
As	75	3	72	40.596	ppb	40.596	0.73	4933	2000	
Se	78	2	72	40.381	ppb	40.381	4.56	2536	2000	
Sr	88	3	72	219.971	ppb	219.971	0.77	126047	4000	
Mo	95	3	115	39.532	ppb	39.532	1.42	20806	2000	
Ag	107	3	115	39.977	ppb	39.977	0.83	70911	100	
Cd	111	3	115	38.694	ppb	38.694	1.82	9790	2000	
Sn	120	3	115	36.494	ppb	36.494	1.43	29962	2000	
Sb	121	3	115	37.789	ppb	37.789	1.42	29989	1000	
Ba	137	3	115	172.759	ppb	172.759	1.74	44683	5000	
Tl	205	3	193	40.152	ppb	40.152	0.92	158579	2000	
(Pb)	206	3	193	45.133	ppb	45.133	1.20	59354	100	
(Pb)	207	3	193	44.577	ppb	44.577	0.81	51741	100	
Pb	208	3	193	44.933	ppb	44.933	0.27	238604	5000	
Th	232	3	193	42.064	ppb	42.064	0.94	228126	2000	
U	238	3	193	41.032	ppb	41.032	0.48	228503	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4380221	0.62	4300192	101.86	60	120	
Sc (IS)	45	3	HMI He	639065	0.74	644593	99.14	60	120	
Ge Internal standard	72	2	HMI H2	2706070	2.42	2598552	104.14	60	120	
Ge Internal standard	72	3	HMI He	807207	0.87	772392	104.51	60	120	
In Internal Standard	115	3	HMI He	2929724	0.75	2872781	101.98	60	120	
Ir (IS)	193	3	HMI He	6215586	0.56	6092963	102.01	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-k
Data File Name	231SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:48:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17997.152	ppb	17997.152	1.50	2039030	400000	
Mg	24	3	45	10950.376	ppb	10950.376	2.84	646999	400000	
Al	27	3	45	1.760	ppb	1.760	90.26	190	400000	
K	39	3	45	5922.532	ppb	5922.532	1.59	313386	400000	
Ca	40	2	45	31264.279	ppb	31264.279	2.15	18251014	400000	
V	51	3	72	17.034	ppb	17.034	1.36	12254	2000	
Cr	52	3	72	2.160	ppb	2.160	0.49	4985	5000	
Mn	55	3	72	0.990	ppb	0.990	22.27	815	10000	
Fe	56	2	72	20.896	ppb	20.896	23.47	99788	10000	
Co	59	3	72	0.061	ppb	0.061	32.48	142	2000	
Ni	60	3	72	0.559	ppb	0.559	11.14	931	5000	
Cu	63	3	72	0.313	ppb	0.313	13.01	740	5000	
Zn	66	3	72	1.667	ppb	1.667	9.63	518	5000	
As	75	3	72	6.183	ppb	6.183	4.44	783	2000	
Se	78	2	72	1.442	ppb	1.442	18.99	91	2000	
Sr	88	3	72	168.532	ppb	168.532	0.37	95765	4000	
Mo	95	3	115	3.633	ppb	3.633	3.40	1971	2000	
Ag	107	3	115	0.017	ppb	0.017	89.84	45	100	
Cd	111	3	115	-0.021	ppb	-0.021	-93.19	5	2000	
Sn	120	3	115	-0.016	ppb	-0.016	-203.62	766	2000	
Sb	121	3	115	0.185	ppb	0.185	25.97	195	1000	
Ba	137	3	115	18.119	ppb	18.119	2.40	4800	5000	
Tl	205	3	193	-0.026	ppb	-0.026	-33.81	288	2000	
(Pb)	206	3	193	-0.084	ppb	-0.084	-26.37	217	100	
(Pb)	207	3	193	-0.090	ppb	-0.090	-31.75	391	100	
Pb	208	3	193	-0.088	ppb	-0.088	-12.40	1059	5000	
Th	232	3	193	2.051	ppb	2.051	17.81	18017	2000	
U	238	3	193	1.945	ppb	1.945	2.39	12452	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4340971	2.59	4300192	100.95	60	120	
Sc (IS)	45	3	HMI He	630417	1.90	644593	97.80	60	120	
Ge Internal standard	72	2	HMI H2	2676347	1.88	2598552	102.99	60	120	
Ge Internal standard	72	3	HMI He	800393	1.00	772392	103.63	60	120	
In Internal Standard	115	3	HMI He	2965449	0.90	2872781	103.23	60	120	
Ir (IS)	193	3	HMI He	6282269	1.75	6092963	103.11	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-kSD@5
Data File Name	232SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:50:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3626.512	ppb	3626.512	0.89	424691	400000	
Mg	24	3	45	2225.418	ppb	2225.418	2.33	131958	400000	
Al	27	3	45	2.619	ppb	2.619	73.35	210	400000	
K	39	3	45	1177.166	ppb	1177.166	2.54	84467	400000	
Ca	40	2	45	6479.623	ppb	6479.623	0.17	3860370	400000	
V	51	3	72	3.499	ppb	3.499	3.85	3319	2000	
Cr	52	3	72	0.588	ppb	0.588	6.95	3692	5000	
Mn	55	3	72	1.635	ppb	1.635	11.77	1085	10000	
Fe	56	2	72	15.499	ppb	15.499	34.10	89821	10000	
Co	59	3	72	0.026	ppb	0.026	51.75	92	2000	
Ni	60	3	72	0.579	ppb	0.579	40.15	935	5000	
Cu	63	3	72	0.200	ppb	0.200	13.98	616	5000	
Zn	66	3	72	3.481	ppb	3.481	10.53	820	5000	
As	75	3	72	1.460	ppb	1.460	16.93	218	2000	
Se	78	2	72	0.403	ppb	0.403	31.46	27	2000	
Sr	88	3	72	34.412	ppb	34.412	3.14	19476	4000	
Mo	95	3	115	0.782	ppb	0.782	14.44	445	2000	
Ag	107	3	115	0.013	ppb	0.013	30.99	37	100	
Cd	111	3	115	-0.034	ppb	-0.034	-33.50	2	2000	
Sn	120	3	115	0.104	ppb	0.104	130.43	843	2000	
Sb	121	3	115	0.076	ppb	0.076	23.39	105	1000	
Ba	137	3	115	3.851	ppb	3.851	4.68	1045	5000	
Tl	205	3	193	-0.050	ppb	-0.050	-11.45	188	2000	
(Pb)	206	3	193	0.316	ppb	0.316	11.02	730	100	
(Pb)	207	3	193	0.221	ppb	0.221	10.67	736	100	
Pb	208	3	193	0.271	ppb	0.271	12.70	2910	5000	
Th	232	3	193	0.406	ppb	0.406	19.79	9074	2000	
U	238	3	193	0.439	ppb	0.439	5.40	3950	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4417059	0.43	4300192	102.72	60	120	
Sc (IS)	45	3	HMI He	631480	0.60	644593	97.97	60	120	
Ge Internal standard	72	2	HMI H2	2640356	1.66	2598552	101.61	60	120	
Ge Internal standard	72	3	HMI He	795916	1.11	772392	103.05	60	120	
In Internal Standard	115	3	HMI He	2895339	1.87	2872781	100.79	60	120	
Ir (IS)	193	3	HMI He	6147606	1.43	6092963	100.90	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-I ms
Data File Name	233SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:52:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.396	ppb	39.396	1.59	1699	2000	
Na	23	3	45	18121.049	ppb	18121.049	1.03	2112216	400000	
Mg	24	3	45	11018.360	ppb	11018.360	1.12	669967	400000	
Al	27	3	45	745.153	ppb	745.153	2.83	17672	400000	
K	39	3	45	6258.895	ppb	6258.895	2.42	339117	400000	
Ca	40	2	45	30681.148	ppb	30681.148	2.49	18214549	400000	
V	51	3	72	54.329	ppb	54.329	0.88	36996	2000	
Cr	52	3	72	40.188	ppb	40.188	0.82	35933	5000	
Mn	55	3	72	39.633	ppb	39.633	3.61	17416	10000	
Fe	56	2	72	798.361	ppb	798.361	1.12	1398589	10000	
Co	59	3	72	38.583	ppb	38.583	2.03	53357	2000	
Ni	60	3	72	37.638	ppb	37.638	1.93	15379	5000	
Cu	63	3	72	38.903	ppb	38.903	2.21	41645	5000	
Zn	66	3	72	39.768	ppb	39.768	1.40	6987	5000	
As	75	3	72	45.112	ppb	45.112	3.96	5458	2000	
Se	78	2	72	39.596	ppb	39.596	2.73	2505	2000	
Sr	88	3	72	241.075	ppb	241.075	0.76	137600	4000	
Mo	95	3	115	41.721	ppb	41.721	0.86	21930	2000	
Ag	107	3	115	39.022	ppb	39.022	1.99	69132	100	
Cd	111	3	115	38.798	ppb	38.798	3.05	9805	2000	
Sn	120	3	115	38.165	ppb	38.165	2.65	31263	2000	
Sb	121	3	115	39.101	ppb	39.101	1.75	30994	1000	
Ba	137	3	115	57.685	ppb	57.685	1.04	14944	5000	
Tl	205	3	193	38.412	ppb	38.412	0.69	155218	2000	
(Pb)	206	3	193	38.774	ppb	38.774	2.37	52201	100	
(Pb)	207	3	193	37.961	ppb	37.961	0.75	45149	100	
Pb	208	3	193	38.715	ppb	38.715	2.02	210493	5000	
Th	232	3	193	36.529	ppb	36.529	0.40	203624	2000	
U	238	3	193	40.376	ppb	40.376	2.52	230014	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4414605	1.52	4300192	102.66	60	120	
Sc (IS)	45	3	HMI He	648520	0.69	644593	100.61	60	120	
Ge Internal standard	72	2	HMI H2	2727850	0.47	2598552	104.98	60	120	
Ge Internal standard	72	3	HMI He	804143	1.55	772392	104.11	60	120	
In Internal Standard	115	3	HMI He	2926156	0.50	2872781	101.86	60	120	
Ir (IS)	193	3	HMI He	6358816	1.49	6092963	104.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-m msd
Data File Name	234SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:54:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.537	ppb	38.537	6.87	1649	2000	
Na	23	3	45	18071.159	ppb	18071.159	2.57	2063008	400000	
Mg	24	3	45	10888.089	ppb	10888.089	2.21	648414	400000	
Al	27	3	45	744.057	ppb	744.057	4.57	17281	400000	
K	39	3	45	6272.587	ppb	6272.587	2.63	332813	400000	
Ca	40	2	45	30468.657	ppb	30468.657	1.97	18023836	400000	
V	51	3	72	51.998	ppb	51.998	2.27	35407	2000	
Cr	52	3	72	40.219	ppb	40.219	2.99	35907	5000	
Mn	55	3	72	37.945	ppb	37.945	3.30	16672	10000	
Fe	56	2	72	789.889	ppb	789.889	1.93	1364505	10000	
Co	59	3	72	37.409	ppb	37.409	1.09	51675	2000	
Ni	60	3	72	36.047	ppb	36.047	0.96	14742	5000	
Cu	63	3	72	38.735	ppb	38.735	1.45	41420	5000	
Zn	66	3	72	38.441	ppb	38.441	0.48	6752	5000	
As	75	3	72	43.105	ppb	43.105	1.40	5208	2000	
Se	78	2	72	39.231	ppb	39.231	2.90	2446	2000	
Sr	88	3	72	235.137	ppb	235.137	1.29	134035	4000	
Mo	95	3	115	39.749	ppb	39.749	2.58	21448	2000	
Ag	107	3	115	37.119	ppb	37.119	0.59	67498	100	
Cd	111	3	115	35.757	ppb	35.757	2.46	9277	2000	
Sn	120	3	115	35.233	ppb	35.233	1.11	29680	2000	
Sb	121	3	115	36.698	ppb	36.698	0.78	29857	1000	
Ba	137	3	115	55.094	ppb	55.094	2.42	14651	5000	
Tl	205	3	193	38.591	ppb	38.591	1.27	152321	2000	
(Pb)	206	3	193	38.423	ppb	38.423	0.76	50544	100	
(Pb)	207	3	193	37.869	ppb	37.869	1.53	43999	100	
Pb	208	3	193	38.361	ppb	38.361	1.03	203779	5000	
Th	232	3	193	38.119	ppb	38.119	1.87	207234	2000	
U	238	3	193	40.375	ppb	40.375	0.88	224718	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4398536	1.41	4300192	102.29	60	120	
Sc (IS)	45	3	HMI He	635293	1.48	644593	98.56	60	120	
Ge Internal standard	72	2	HMI H2	2688788	0.79	2598552	103.47	60	120	
Ge Internal standard	72	3	HMI He	803022	0.36	772392	103.97	60	120	
In Internal Standard	115	3	HMI He	3003228	0.81	2872781	104.54	60	120	
Ir (IS)	193	3	HMI He	6211329	0.47	6092963	101.94	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-kPDS
Data File Name	235SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:56:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	105.792	ppb	105.792	1.49	4442	2000	
Na	23	3	45	22567.554	ppb	22567.554	2.09	2588090	400000	
Mg	24	3	45	12450.362	ppb	12450.362	0.29	745994	400000	
Al	27	3	45	1907.289	ppb	1907.289	3.42	44334	400000	
K	39	3	45	7613.407	ppb	7613.407	0.88	400514	400000	
Ca	40	2	45	32874.878	ppb	32874.878	3.77	19268719	400000	
V	51	3	72	109.502	ppb	109.502	1.14	73662	2000	
Cr	52	3	72	94.537	ppb	94.537	0.82	80288	5000	
Mn	55	3	72	92.815	ppb	92.815	2.02	40347	10000	
Fe	56	2	72	1037.663	ppb	1037.663	4.15	1746407	10000	
Co	59	3	72	92.951	ppb	92.951	2.24	128741	2000	
Ni	60	3	72	91.606	ppb	91.606	2.75	36476	5000	
Cu	63	3	72	95.654	ppb	95.654	0.90	102020	5000	
Zn	66	3	72	192.155	ppb	192.155	2.43	32908	5000	
As	75	3	72	103.696	ppb	103.696	2.01	12508	2000	
Se	78	2	72	99.226	ppb	99.226	1.48	6095	2000	
Sr	88	3	72	261.381	ppb	261.381	1.47	149484	4000	
Mo	95	3	115	97.249	ppb	97.249	1.32	50871	2000	
Ag	107	3	115	25.127	ppb	25.127	3.27	44346	100	
Cd	111	3	115	95.153	ppb	95.153	1.10	23943	2000	
Sn	120	3	115	94.647	ppb	94.647	1.74	76096	2000	
Sb	121	3	115	93.950	ppb	93.950	2.55	74118	1000	
Ba	137	3	115	114.610	ppb	114.610	4.24	29510	5000	
Tl	205	3	193	95.361	ppb	95.361	0.57	376721	2000	
(Pb)	206	3	193	95.279	ppb	95.279	1.48	125144	100	
(Pb)	207	3	193	94.622	ppb	94.622	0.91	109464	100	
Pb	208	3	193	94.794	ppb	94.794	0.95	502520	5000	
Th	232	3	193	102.053	ppb	102.053	0.48	544327	2000	
U	238	3	193	206.103	ppb	206.103	3.49	1143319	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4360555	2.72	4300192	101.40	60	120	
Sc (IS)	45	3	HMI He	639121	0.71	644593	99.15	60	120	
Ge Internal standard	72	2	HMI H2	2650713	2.23	2598552	102.01	60	120	
Ge Internal standard	72	3	HMI He	805763	0.99	772392	104.32	60	120	
In Internal Standard	115	3	HMI He	2915437	1.51	2872781	101.48	60	120	
Ir (IS)	193	3	HMI He	6225981	0.36	6092963	102.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	236_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:57:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	55.626	ppb	1.863	2329	50	111.3	90	110	>+\-10%
Na	23	3	45	48121.679	ppb	2.417	5537524	51000	94.4	90	110	
Mg	24	3	45	10269.952	ppb	0.849	619427	11000	93.4	90	110	
Al	27	3	45	964.318	ppb	3.670	22638	1000	96.4	90	110	
K	39	3	45	10148.410	ppb	1.281	528057	11000	92.3	90	110	
Ca	40	2	45	10340.438	ppb	0.569	6079357	11000	94.0	90	110	
V	51	3	72	51.000	ppb	0.547	33041	50	102.0	90	110	
Cr	52	3	72	51.278	ppb	0.748	42682	50	102.6	90	110	
Mn	55	3	72	49.990	ppb	1.624	20769	50	100.0	90	110	
Fe	56	2	72	1068.488	ppb	0.371	1724500	1000	106.8	90	110	
Co	59	3	72	51.521	ppb	1.238	67646	50	103.0	90	110	
Ni	60	3	72	51.082	ppb	0.960	19581	50	102.2	90	110	
Cu	63	3	72	50.190	ppb	0.414	50915	50	100.4	90	110	
Zn	66	3	72	49.300	ppb	5.291	8167	50	98.6	90	110	
As	75	3	72	53.499	ppb	2.644	6135	50	107.0	90	110	
Se	78	2	72	50.432	ppb	2.126	2975	50	100.9	90	110	
Sr	88	3	72	103.848	ppb	2.707	56310	100	103.8	90	110	
Mo	95	3	115	48.579	ppb	4.570	25411	50	97.2	90	110	
Ag	107	3	115	49.270	ppb	3.110	86919	50	98.5	90	110	
Cd	111	3	115	49.684	ppb	4.314	12498	50	99.4	90	110	
Sn	120	3	115	48.408	ppb	3.961	39268	50	96.8	90	110	
Sb	121	3	115	49.877	ppb	2.655	39358	50	99.8	90	110	
Ba	137	3	115	50.989	ppb	4.473	13157	50	102.0	90	110	
Tl	205	3	193	48.622	ppb	3.805	193361	50	97.2	90	110	
(Pb)	206	3	193	48.897	ppb	4.108	64749	50	97.8	90	110	
(Pb)	207	3	193	48.536	ppb	2.937	56723	50	97.1	90	110	
Pb	208	3	193	48.787	ppb	3.530	260852	50	97.6	90	110	
Th	232	3	193	52.210	ppb	3.981	283514	50	104.4	90	110	
U	238	3	193	49.055	ppb	4.869	274823	50	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4364730	2.95	4300192	101.50	60	120	
Sc (IS)	45	3	HMI He	643338	0.99	644593	99.81	60	120	
Ge Internal standard	72	2	HMI H2	2543915	1.33	2598552	97.90	60	120	
Ge Internal standard	72	3	HMI He	763583	1.25	772392	98.86	60	120	
In Internal Standard	115	3	HMI He	2915636	3.40	2872781	101.49	60	120	
Ir (IS)	193	3	HMI He	6266173	3.14	6092963	102.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	237_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:59:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.110	ppb	-60.9	2	0.5	
Na	23	3	45	46.922	ppb	13.6	21815	25	>RL
Mg	24	3	45	1.900	ppb	37.3	380	25	
Al	27	3	45	-2.952	ppb	-8.2	83	15	
K	39	3	45	-6.033	ppb	-455.9	27458	50	
V	51	3	72	0.059	ppb	154.4	1040	1	
Cr	52	3	72	0.184	ppb	139.7	3285	1	
Mn	55	3	72	0.079	ppb	73.8	413	0.5	
Co	59	3	72	0.034	ppb	59.4	100	0.5	
Ni	60	3	72	0.587	ppb	66.0	915	1	
Cu	63	3	72	-0.002	ppb	-2605.5	395	1	
Zn	66	3	72	0.012	ppb	628.4	232	5	
As	75	3	72	0.141	ppb	30.1	60	1	
Se	78	2	72	0.089	ppb	109.7	7	1	
Sr	88	3	72	0.069	ppb	33.4	82	0.5	
Mo	95	3	115	0.049	ppb	68.3	65	0.5	
Ag	107	3	115	0.017	ppb	53.7	43	1	
Cd	111	3	115	-0.001	ppb	-1341.9	10	0.5	
Sn	120	3	115	0.136	ppb	61.7	881	1	
Sb	121	3	115	0.085	ppb	56.8	113	0.6	
Ba	137	3	115	-0.057	ppb	-152.0	48	0.5	
Tl	205	3	193	-0.034	ppb	-67.6	257	0.1	
(Pb)	206	3	193	-0.079	ppb	-76.3	223	1	
(Pb)	207	3	193	-0.100	ppb	-23.4	380	1	
Pb	208	3	193	-0.086	ppb	-20.8	1069	0.5	
Th	232	3	193	1.729	ppb	14.7	16286	1	>RL
U	238	3	193	0.043	ppb	40.3	1819	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4317419	0.59	4300192	100.40	60	120	
Sc (IS)	45	3	HMI He	636554	0.53	644593	98.75	60	120	
Ge Internal standard	72	2	HMI H2	2596922	1.25	2598552	99.94	60	120	
Ge Internal standard	72	3	HMI He	776490	0.41	772392	100.53	60	120	
In Internal Standard	115	3	HMI He	2939974	0.90	2872781	102.34	60	120	
Ir (IS)	193	3	HMI He	6278103	0.19	6092963	103.04	60	120	

Sample Report

Sample Table

Sample Name	280-175143-n-1-a
Data File Name	238SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:01:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.014	ppb	0.014	1032.53	7	2000	
Na	23	3	45	1402798.912	ppb	1402798.912	2.34	157748304	400000	
Mg	24	3	45	434245.480	ppb	434245.480	3.80	25658718	400000	
Al	27	3	45	671.133	ppb	671.133	5.78	15491	400000	
K	39	3	45	86616.998	ppb	86616.998	1.83	4211002	400000	
Ca	40	2	45	1654612.756	ppb	1654612.756	1.79	949464745	400000	
V	51	3	72	18.126	ppb	18.126	1.90	12298	2000	
Cr	52	3	72	10.062	ppb	10.062	1.50	10789	5000	
Mn	55	3	72	3867.904	ppb	3867.904	0.84	1568259	10000	
Fe	56	2	72	359136.250	ppb	359136.250	2.12	551286534	10000	>LDR
Co	59	3	72	7.366	ppb	7.366	0.92	9657	2000	
Ni	60	3	72	30.380	ppb	30.380	3.77	11843	5000	
Cu	63	3	72	11.357	ppb	11.357	2.68	11746	5000	
Zn	66	3	72	44.684	ppb	44.684	4.14	7377	5000	
As	75	3	72	33.607	ppb	33.607	2.62	3845	2000	
Se	78	2	72	3.392	ppb	3.392	9.39	199	2000	
Sr	88	3	72	8260.934	ppb	8260.934	2.16	4447190	4000	
Mo	95	3	115	19.614	ppb	19.614	3.68	9859	2000	
Ag	107	3	115	0.022	ppb	0.022	28.43	50	100	
Cd	111	3	115	0.050	ppb	0.050	89.12	22	2000	
Sn	120	3	115	1.960	ppb	1.960	10.03	2227	2000	
Sb	121	3	115	1.707	ppb	1.707	9.96	1333	1000	
Ba	137	3	115	10052.436	ppb	10052.436	4.55	2474872	5000	
Tl	205	3	193	-0.019	ppb	-0.019	-31.58	313	2000	
(Pb)	206	3	193	1.323	ppb	1.323	3.98	2066	100	
(Pb)	207	3	193	1.214	ppb	1.214	9.54	1896	100	
Pb	208	3	193	1.216	ppb	1.216	1.33	7972	5000	
Th	232	3	193	0.828	ppb	0.828	34.43	11436	2000	
U	238	3	193	0.594	ppb	0.594	1.82	4875	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4269749	1.41	4300192	99.29	60	120	
Sc (IS)	45	3	HMI He	630756	1.70	644593	97.85	60	120	
Ge Internal standard	72	2	HMI H2	2510275	0.76	2598552	96.60	60	120	
Ge Internal standard	72	3	HMI He	758749	1.29	772392	98.23	60	120	
In Internal Standard	115	3	HMI He	2793533	1.44	2872781	97.24	60	120	
Ir (IS)	193	3	HMI He	6246406	0.96	6092963	102.52	60	120	

Sample Report

Sample Table

Sample Name	280-175147-c-1-a
Data File Name	239SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:03:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.004	ppb	0.004	4196.71	7	2000	
Na	23	3	45	7861.977	ppb	7861.977	1.20	912408	400000	
Mg	24	3	45	4621.481	ppb	4621.481	0.34	277046	400000	
Al	27	3	45	4211.198	ppb	4211.198	1.57	97712	400000	
K	39	3	45	1722.683	ppb	1722.683	1.53	112172	400000	
Ca	40	2	45	11853.012	ppb	11853.012	4.61	7057613	400000	
V	51	3	72	6.387	ppb	6.387	3.06	5257	2000	
Cr	52	3	72	3.120	ppb	3.120	12.76	5780	5000	
Mn	55	3	72	127.204	ppb	127.204	0.45	54966	10000	
Fe	56	2	72	3917.360	ppb	3917.360	2.29	6515087	10000	
Co	59	3	72	1.686	ppb	1.686	2.72	2384	2000	
Ni	60	3	72	3.099	ppb	3.099	6.40	1923	5000	
Cu	63	3	72	4.927	ppb	4.927	0.74	5627	5000	
Zn	66	3	72	17.752	ppb	17.752	2.58	3245	5000	
As	75	3	72	1.321	ppb	1.321	22.98	203	2000	
Se	78	2	72	0.489	ppb	0.489	12.86	33	2000	
Sr	88	3	72	72.655	ppb	72.655	2.10	41442	4000	
Mo	95	3	115	0.408	ppb	0.408	14.96	258	2000	
Ag	107	3	115	0.035	ppb	0.035	16.21	77	100	
Cd	111	3	115	0.056	ppb	0.056	33.11	25	2000	
Sn	120	3	115	-0.059	ppb	-0.059	-74.11	738	2000	
Sb	121	3	115	0.249	ppb	0.249	9.70	248	1000	
Ba	137	3	115	110.661	ppb	110.661	2.03	29234	5000	
Tl	205	3	193	0.003	ppb	0.003	196.03	405	2000	
(Pb)	206	3	193	3.663	ppb	3.663	3.44	5195	100	
(Pb)	207	3	193	3.317	ppb	3.317	5.41	4372	100	
Pb	208	3	193	3.562	ppb	3.562	1.64	20625	5000	
Th	232	3	193	0.917	ppb	0.917	10.49	12038	2000	
U	238	3	193	0.483	ppb	0.483	4.29	4304	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4426444	3.70	4300192	102.94	60	120	
Sc (IS)	45	3	HMI He	639052	0.39	644593	99.14	60	120	
Ge Internal standard	72	2	HMI H2	2692924	1.72	2598552	103.63	60	120	
Ge Internal standard	72	3	HMI He	802989	0.57	772392	103.96	60	120	
In Internal Standard	115	3	HMI He	2990700	2.18	2872781	104.10	60	120	
Ir (IS)	193	3	HMI He	6313162	1.57	6092963	103.61	60	120	

Sample Report

Sample Table

Sample Name	280-175148-c-1-a
Data File Name	240SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:05:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.089	ppb	0.089	134.28	10	2000	
Na	23	3	45	16353.605	ppb	16353.605	1.22	1892408	400000	
Mg	24	3	45	10438.489	ppb	10438.489	0.69	629567	400000	
Al	27	3	45	1589.391	ppb	1589.391	7.64	37205	400000	
K	39	3	45	1470.640	ppb	1470.640	1.87	100504	400000	
Ca	40	2	45	21496.262	ppb	21496.262	1.70	12795098	400000	
V	51	3	72	1.894	ppb	1.894	5.17	2296	2000	
Cr	52	3	72	1.162	ppb	1.162	9.89	4205	5000	
Mn	55	3	72	86.580	ppb	86.580	0.76	37666	10000	
Fe	56	2	72	1589.093	ppb	1589.093	3.09	2667915	10000	
Co	59	3	72	0.858	ppb	0.858	5.04	1244	2000	
Ni	60	3	72	1.916	ppb	1.916	10.53	1468	5000	
Cu	63	3	72	2.586	ppb	2.586	0.53	3159	5000	
Zn	66	3	72	8.516	ppb	8.516	4.28	1686	5000	
As	75	3	72	0.525	ppb	0.525	32.90	108	2000	
Se	78	2	72	0.214	ppb	0.214	18.14	15	2000	
Sr	88	3	72	202.537	ppb	202.537	0.34	115840	4000	
Mo	95	3	115	0.380	ppb	0.380	19.09	245	2000	
Ag	107	3	115	0.014	ppb	0.014	66.06	40	100	
Cd	111	3	115	0.049	ppb	0.049	78.77	23	2000	
Sn	120	3	115	-0.210	ppb	-0.210	-42.57	618	2000	
Sb	121	3	115	0.165	ppb	0.165	7.55	182	1000	
Ba	137	3	115	88.103	ppb	88.103	1.36	23446	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-9.82	210	2000	
(Pb)	206	3	193	1.654	ppb	1.654	3.63	2537	100	
(Pb)	207	3	193	1.599	ppb	1.599	3.58	2376	100	
Pb	208	3	193	1.634	ppb	1.634	2.49	10335	5000	
Th	232	3	193	0.162	ppb	0.162	15.19	8044	2000	
U	238	3	193	1.413	ppb	1.413	0.41	9564	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4423412	1.02	4300192	102.87	60	120	
Sc (IS)	45	3	HMI He	643287	0.64	644593	99.80	60	120	
Ge Internal standard	72	2	HMI H2	2678227	0.95	2598552	103.07	60	120	
Ge Internal standard	72	3	HMI He	805690	0.85	772392	104.31	60	120	
In Internal Standard	115	3	HMI He	3010480	1.66	2872781	104.79	60	120	
Ir (IS)	193	3	HMI He	6339067	0.93	6092963	104.04	60	120	

Sample Report

Sample Table

Sample Name	280-175150-c-1-a
Data File Name	241SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:07:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.031	ppb	-0.031	-5.62	5	2000	
Na	23	3	45	9683.477	ppb	9683.477	1.45	1120829	400000	
Mg	24	3	45	6919.401	ppb	6919.401	2.23	414937	400000	
Al	27	3	45	969.086	ppb	969.086	1.54	22621	400000	
K	39	3	45	1220.723	ppb	1220.723	2.45	87684	400000	
Ca	40	2	45	13911.860	ppb	13911.860	1.81	8240512	400000	
V	51	3	72	0.937	ppb	0.937	8.53	1643	2000	
Cr	52	3	72	1.128	ppb	1.128	11.78	4132	5000	
Mn	55	3	72	80.597	ppb	80.597	1.61	34701	10000	
Fe	56	2	72	1163.379	ppb	1163.379	1.95	1993607	10000	
Co	59	3	72	0.795	ppb	0.795	8.64	1144	2000	
Ni	60	3	72	1.415	ppb	1.415	15.76	1258	5000	
Cu	63	3	72	2.574	ppb	2.574	5.43	3112	5000	
Zn	66	3	72	10.229	ppb	10.229	7.00	1956	5000	
As	75	3	72	0.858	ppb	0.858	23.65	147	2000	
Se	78	2	72	0.330	ppb	0.330	68.50	23	2000	
Sr	88	3	72	98.099	ppb	98.099	1.45	55512	4000	
Mo	95	3	115	0.460	ppb	0.460	18.33	282	2000	
Ag	107	3	115	0.014	ppb	0.014	114.47	38	100	
Cd	111	3	115	-0.001	ppb	-0.001	-3682.55	10	2000	
Sn	120	3	115	-0.239	ppb	-0.239	-14.22	580	2000	
Sb	121	3	115	0.208	ppb	0.208	21.90	212	1000	
Ba	137	3	115	78.642	ppb	78.642	1.29	20422	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-15.43	222	2000	
(Pb)	206	3	193	2.280	ppb	2.280	4.26	3327	100	
(Pb)	207	3	193	2.152	ppb	2.152	9.39	2982	100	
Pb	208	3	193	2.176	ppb	2.176	4.40	13074	5000	
Th	232	3	193	0.009	ppb	0.009	654.67	7134	2000	
U	238	3	193	0.282	ppb	0.282	8.50	3141	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400369	1.36	4300192	102.33	60	120	
Sc (IS)	45	3	HMI He	639608	1.79	644593	99.23	60	120	
Ge Internal standard	72	2	HMI H2	2709439	2.01	2598552	104.27	60	120	
Ge Internal standard	72	3	HMI He	796851	0.82	772392	103.17	60	120	
In Internal Standard	115	3	HMI He	2936425	0.86	2872781	102.22	60	120	
Ir (IS)	193	3	HMI He	6256362	2.14	6092963	102.68	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-7-b
Data File Name	242SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:08:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.79	2	2000	
Na	23	3	45	17220.218	ppb	17220.218	1.77	1993753	400000	
Mg	24	3	45	10385.738	ppb	10385.738	0.37	627006	400000	
Al	27	3	45	11.300	ppb	11.300	10.41	417	400000	
K	39	3	45	5585.165	ppb	5585.165	1.29	303525	400000	
Ca	40	2	45	30201.679	ppb	30201.679	1.39	17773082	400000	
V	51	3	72	15.526	ppb	15.526	2.43	11489	2000	
Cr	52	3	72	1.964	ppb	1.964	16.16	4925	5000	
Mn	55	3	72	71.672	ppb	71.672	1.16	31667	10000	
Fe	56	2	72	194.497	ppb	194.497	5.08	389896	10000	
Co	59	3	72	0.076	ppb	0.076	27.94	165	2000	
Ni	60	3	72	0.561	ppb	0.561	9.09	951	5000	
Cu	63	3	72	0.669	ppb	0.669	6.14	1138	5000	
Zn	66	3	72	1.588	ppb	1.588	17.20	515	5000	
As	75	3	72	4.970	ppb	4.970	20.95	651	2000	
Se	78	2	72	1.390	ppb	1.390	31.95	89	2000	
Sr	88	3	72	162.171	ppb	162.171	2.54	94001	4000	
Mo	95	3	115	3.039	ppb	3.039	3.36	1673	2000	
Ag	107	3	115	0.035	ppb	0.035	27.28	78	100	
Cd	111	3	115	-0.021	ppb	-0.021	-1.18	5	2000	
Sn	120	3	115	-0.320	ppb	-0.320	-42.51	525	2000	
Sb	121	3	115	0.166	ppb	0.166	16.30	182	1000	
Ba	137	3	115	18.588	ppb	18.588	7.00	4972	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-16.16	165	2000	
(Pb)	206	3	193	0.156	ppb	0.156	7.92	541	100	
(Pb)	207	3	193	0.105	ppb	0.105	49.40	626	100	
Pb	208	3	193	0.123	ppb	0.123	9.68	2214	5000	
Th	232	3	193	-0.329	ppb	-0.329	-3.54	5430	2000	
U	238	3	193	1.862	ppb	1.862	3.12	12142	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4375356	1.50	4300192	101.75	60	120	
Sc (IS)	45	3	HMI He	643926	0.62	644593	99.90	60	120	
Ge Internal standard	72	2	HMI H2	2720109	2.81	2598552	104.68	60	120	
Ge Internal standard	72	3	HMI He	816541	1.00	772392	105.72	60	120	
In Internal Standard	115	3	HMI He	2996380	1.31	2872781	104.30	60	120	
Ir (IS)	193	3	HMI He	6361557	1.15	6092963	104.41	60	120	

Sample Report

Sample Table

Sample Name	280-175151-c-1-a
Data File Name	243SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:10:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-196.80	3	2000	
Na	23	3	45	35007.353	ppb	35007.353	3.96	4005589	400000	
Mg	24	3	45	16432.033	ppb	16432.033	1.66	984485	400000	
Al	27	3	45	1245.100	ppb	1245.100	7.67	28994	400000	
K	39	3	45	2481.115	ppb	2481.115	3.30	149304	400000	
Ca	40	2	45	37438.980	ppb	37438.980	2.69	22096088	400000	
V	51	3	72	2.062	ppb	2.062	6.22	2372	2000	
Cr	52	3	72	1.363	ppb	1.363	16.97	4305	5000	
Mn	55	3	72	33.581	ppb	33.581	3.58	14632	10000	
Fe	56	2	72	1029.757	ppb	1029.757	4.65	1757192	10000	
Co	59	3	72	0.451	ppb	0.451	18.13	671	2000	
Ni	60	3	72	1.081	ppb	1.081	7.81	1124	5000	
Cu	63	3	72	3.296	ppb	3.296	2.69	3855	5000	
Zn	66	3	72	5.450	ppb	5.450	3.90	1148	5000	
As	75	3	72	0.750	ppb	0.750	35.67	133	2000	
Se	78	2	72	1.411	ppb	1.411	1.58	90	2000	
Sr	88	3	72	309.871	ppb	309.871	2.72	174613	4000	
Mo	95	3	115	1.522	ppb	1.522	12.96	841	2000	
Ag	107	3	115	0.011	ppb	0.011	49.27	33	100	
Cd	111	3	115	-0.001	ppb	-0.001	-1800.23	10	2000	
Sn	120	3	115	-0.203	ppb	-0.203	-38.14	610	2000	
Sb	121	3	115	0.460	ppb	0.460	19.61	411	1000	
Ba	137	3	115	106.837	ppb	106.837	2.54	27759	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-12.94	220	2000	
(Pb)	206	3	193	0.926	ppb	0.926	8.52	1574	100	
(Pb)	207	3	193	0.857	ppb	0.857	10.24	1513	100	
Pb	208	3	193	0.903	ppb	0.903	1.96	6437	5000	
Th	232	3	193	-0.002	ppb	-0.002	-3182.62	7200	2000	
U	238	3	193	1.846	ppb	1.846	1.77	12067	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4389027	1.10	4300192	102.07	60	120	
Sc (IS)	45	3	HMI He	639160	0.60	644593	99.16	60	120	
Ge Internal standard	72	2	HMI H2	2687738	2.16	2598552	103.43	60	120	
Ge Internal standard	72	3	HMI He	794027	0.99	772392	102.80	60	120	
In Internal Standard	115	3	HMI He	2941435	2.40	2872781	102.39	60	120	
Ir (IS)	193	3	HMI He	6369997	0.08	6092963	104.55	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-3-a
Data File Name	244SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:12:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	19587.315	ppb	19587.315	0.20	2249940	400000	
Mg	24	3	45	20063.211	ppb	20063.211	2.35	1202618	400000	
Al	27	3	45	6.387	ppb	6.387	37.42	300	400000	
K	39	3	45	7886.015	ppb	7886.015	0.85	414097	400000	
Ca	40	2	45	105136.073	ppb	105136.073	2.77	62380392	400000	
V	51	3	72	6.374	ppb	6.374	6.25	5235	2000	
Cr	52	3	72	4.765	ppb	4.765	8.37	7097	5000	
Mn	55	3	72	0.626	ppb	0.626	37.18	660	10000	
Fe	56	2	72	31.833	ppb	31.833	14.04	118589	10000	
Co	59	3	72	0.029	ppb	0.029	33.61	97	2000	
Ni	60	3	72	2.086	ppb	2.086	11.17	1524	5000	
Cu	63	3	72	0.616	ppb	0.616	19.14	1060	5000	
Zn	66	3	72	2.728	ppb	2.728	4.72	698	5000	
As	75	3	72	1.699	ppb	1.699	17.36	248	2000	
Se	78	2	72	2.504	ppb	2.504	9.94	159	2000	
Sr	88	3	72	458.141	ppb	458.141	1.26	260429	4000	
Mo	95	3	115	1.670	ppb	1.670	7.39	930	2000	
Ag	107	3	115	0.023	ppb	0.023	20.46	55	100	
Cd	111	3	115	-0.028	ppb	-0.028	-78.02	3	2000	
Sn	120	3	115	-0.176	ppb	-0.176	-58.86	638	2000	
Sb	121	3	115	0.151	ppb	0.151	28.91	168	1000	
Ba	137	3	115	124.046	ppb	124.046	4.10	32494	5000	
Tl	205	3	193	-0.068	ppb	-0.068	-3.59	123	2000	
(Pb)	206	3	193	-0.034	ppb	-0.034	-96.20	285	100	
(Pb)	207	3	193	-0.072	ppb	-0.072	-11.26	415	100	
Pb	208	3	193	-0.046	ppb	-0.046	-26.94	1294	5000	
Th	232	3	193	-0.378	ppb	-0.378	-14.88	5135	2000	
U	238	3	193	7.457	ppb	7.457	0.29	43536	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4413916	0.86	4300192	102.64	60	120	
Sc (IS)	45	3	HMI He	639471	0.51	644593	99.21	60	120	
Ge Internal standard	72	2	HMI H2	2695870	1.02	2598552	103.75	60	120	
Ge Internal standard	72	3	HMI He	801012	1.31	772392	103.71	60	120	
In Internal Standard	115	3	HMI He	2967749	3.29	2872781	103.31	60	120	
Ir (IS)	193	3	HMI He	6321017	0.62	6092963	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-2-a
Data File Name	245SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:14:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	19163.049	ppb	19163.049	2.38	2191000	400000	
Mg	24	3	45	20401.832	ppb	20401.832	2.33	1217070	400000	
Al	27	3	45	1.821	ppb	1.821	59.27	194	400000	
K	39	3	45	7894.035	ppb	7894.035	0.75	412498	400000	
Ca	40	2	45	102671.245	ppb	102671.245	2.58	60081219	400000	
V	51	3	72	6.558	ppb	6.558	6.28	5362	2000	
Cr	52	3	72	2.506	ppb	2.506	8.64	5275	5000	
Mn	55	3	72	0.461	ppb	0.461	35.63	590	10000	
Fe	56	2	72	26.264	ppb	26.264	14.96	110582	10000	
Co	59	3	72	0.093	ppb	0.093	17.01	185	2000	
Ni	60	3	72	1.672	ppb	1.672	23.79	1366	5000	
Cu	63	3	72	0.274	ppb	0.274	10.78	700	5000	
Zn	66	3	72	1.334	ppb	1.334	33.60	463	5000	
As	75	3	72	1.699	ppb	1.699	12.27	248	2000	
Se	78	2	72	2.406	ppb	2.406	8.49	154	2000	
Sr	88	3	72	453.998	ppb	453.998	1.26	258325	4000	
Mo	95	3	115	1.693	ppb	1.693	10.03	933	2000	
Ag	107	3	115	0.025	ppb	0.025	27.66	58	100	
Cd	111	3	115	-0.015	ppb	-0.015	-74.11	7	2000	
Sn	120	3	115	-0.294	ppb	-0.294	-41.48	536	2000	
Sb	121	3	115	0.176	ppb	0.176	8.96	187	1000	
Ba	137	3	115	123.325	ppb	123.325	1.18	32093	5000	
Tl	205	3	193	-0.068	ppb	-0.068	-8.38	120	2000	
(Pb)	206	3	193	-0.064	ppb	-0.064	-30.68	243	100	
(Pb)	207	3	193	-0.066	ppb	-0.066	-56.71	418	100	
Pb	208	3	193	-0.054	ppb	-0.054	-26.41	1239	5000	
Th	232	3	193	-0.410	ppb	-0.410	-5.02	4917	2000	
U	238	3	193	7.375	ppb	7.375	0.79	42678	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4353871	1.71	4300192	101.25	60	120	
Sc (IS)	45	3	HMI He	636396	0.15	644593	98.73	60	120	
Ge Internal standard	72	2	HMI H2	2724747	1.03	2598552	104.86	60	120	
Ge Internal standard	72	3	HMI He	801745	0.79	772392	103.80	60	120	
In Internal Standard	115	3	HMI He	2946170	1.64	2872781	102.55	60	120	
Ir (IS)	193	3	HMI He	6263068	0.72	6092963	102.79	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-5-a
Data File Name	246SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:16:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.53	2	2000	
Na	23	3	45	19683.583	ppb	19683.583	1.27	2257051	400000	
Mg	24	3	45	20532.071	ppb	20532.071	1.32	1228669	400000	
Al	27	3	45	3.093	ppb	3.093	5.38	224	400000	
K	39	3	45	8031.140	ppb	8031.140	1.33	420464	400000	
Ca	40	2	45	106918.000	ppb	106918.000	1.04	62819914	400000	
V	51	3	72	6.825	ppb	6.825	2.86	5527	2000	
Cr	52	3	72	4.623	ppb	4.623	8.61	6975	5000	
Mn	55	3	72	0.538	ppb	0.538	26.92	621	10000	
Fe	56	2	72	28.474	ppb	28.474	13.35	111616	10000	
Co	59	3	72	0.046	ppb	0.046	53.13	120	2000	
Ni	60	3	72	2.085	ppb	2.085	7.00	1523	5000	
Cu	63	3	72	0.514	ppb	0.514	19.73	951	5000	
Zn	66	3	72	1.036	ppb	1.036	1.80	411	5000	
As	75	3	72	1.702	ppb	1.702	20.14	248	2000	
Se	78	2	72	2.690	ppb	2.690	7.09	168	2000	
Sr	88	3	72	461.692	ppb	461.692	0.03	262145	4000	
Mo	95	3	115	1.803	ppb	1.803	12.41	990	2000	
Ag	107	3	115	0.022	ppb	0.022	37.90	53	100	
Cd	111	3	115	-0.008	ppb	-0.008	-153.39	8	2000	
Sn	120	3	115	-0.251	ppb	-0.251	-39.88	570	2000	
Sb	121	3	115	0.120	ppb	0.120	34.05	142	1000	
Ba	137	3	115	122.888	ppb	122.888	3.69	31894	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-15.24	135	2000	
(Pb)	206	3	193	0.093	ppb	0.093	25.16	458	100	
(Pb)	207	3	193	0.045	ppb	0.045	59.05	556	100	
Pb	208	3	193	0.093	ppb	0.093	14.80	2056	5000	
Th	232	3	193	-0.414	ppb	-0.414	-11.23	4985	2000	
U	238	3	193	7.413	ppb	7.413	0.55	43650	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370670	1.43	4300192	101.64	60	120	
Sc (IS)	45	3	HMI He	638386	1.03	644593	99.04	60	120	
Ge Internal standard	72	2	HMI H2	2661258	2.29	2598552	102.41	60	120	
Ge Internal standard	72	3	HMI He	800000	0.71	772392	103.57	60	120	
In Internal Standard	115	3	HMI He	2939788	2.56	2872781	102.33	60	120	
Ir (IS)	193	3	HMI He	6374364	0.97	6092963	104.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	247_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:17:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.765	ppb	11.044	2214	50	105.5	90	110	
Na	23	3	45	48488.942	ppb	1.733	5395202	51000	95.1	90	110	
Mg	24	3	45	10290.100	ppb	1.491	600249	11000	93.5	90	110	
Al	27	3	45	959.856	ppb	2.973	21795	1000	96.0	90	110	
K	39	3	45	10210.153	ppb	1.242	513612	11000	92.8	90	110	
Ca	40	2	45	10529.589	ppb	1.914	6145915	11000	95.7	90	110	
V	51	3	72	48.879	ppb	1.036	31388	50	97.8	90	110	
Cr	52	3	72	50.791	ppb	2.473	41885	50	101.6	90	110	
Mn	55	3	72	50.373	ppb	2.699	20713	50	100.7	90	110	
Fe	56	2	72	1086.154	ppb	2.566	1741359	1000	108.6	90	110	
Co	59	3	72	50.313	ppb	0.398	65403	50	100.6	90	110	
Ni	60	3	72	51.074	ppb	0.479	19381	50	102.1	90	110	
Cu	63	3	72	50.256	ppb	0.356	50470	50	100.5	90	110	
Zn	66	3	72	50.191	ppb	3.783	8230	50	100.4	90	110	
As	75	3	72	53.445	ppb	2.242	6068	50	106.9	90	110	
Se	78	2	72	51.915	ppb	1.983	3044	50	103.8	90	110	
Sr	88	3	72	104.209	ppb	2.121	55942	100	104.2	90	110	
Mo	95	3	115	49.974	ppb	1.843	25446	50	99.9	90	110	
Ag	107	3	115	49.191	ppb	3.576	84423	50	98.4	90	110	
Cd	111	3	115	50.394	ppb	0.720	12341	50	100.8	90	110	
Sn	120	3	115	49.086	ppb	3.170	38740	50	98.2	90	110	
Sb	121	3	115	50.486	ppb	2.700	38759	50	101.0	90	110	
Ba	137	3	115	51.425	ppb	5.326	12910	50	102.8	90	110	
Tl	205	3	193	47.951	ppb	2.112	193301	50	95.9	90	110	
(Pb)	206	3	193	47.466	ppb	1.100	63730	50	94.9	90	110	
(Pb)	207	3	193	47.616	ppb	0.647	56405	50	95.2	90	110	
Pb	208	3	193	47.686	ppb	0.926	258493	50	95.4	90	110	
Th	232	3	193	47.516	ppb	0.670	262226	50	95.0	90	110	
U	238	3	193	47.862	ppb	1.895	271900	50	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4334439	2.31	4300192	100.80	60	120	
Sc (IS)	45	3	HMI He	622156	0.55	644593	96.52	60	120	
Ge Internal standard	72	2	HMI H2	2528670	0.37	2598552	97.31	60	120	
Ge Internal standard	72	3	HMI He	755913	0.31	772392	97.87	60	120	
In Internal Standard	115	3	HMI He	2835965	1.95	2872781	98.72	60	120	
Ir (IS)	193	3	HMI He	6347234	0.74	6092963	104.17	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	248_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:19:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	74.760	ppb	8.4	24335	25	>RL
Mg	24	3	45	3.222	ppb	36.2	447	25	
Al	27	3	45	-1.963	ppb	-35.9	103	15	
K	39	3	45	-6.900	ppb	-477.6	26712	50	
V	51	3	72	-0.560	ppb	-9.0	631	1	
Cr	52	3	72	0.368	ppb	83.4	3364	1	
Mn	55	3	72	-0.007	ppb	-1381.9	370	0.5	
Co	59	3	72	0.017	ppb	108.5	77	0.5	
Ni	60	3	72	0.505	ppb	48.4	866	1	
Cu	63	3	72	0.009	ppb	425.9	398	1	
Zn	66	3	72	0.009	ppb	2275.1	227	5	
As	75	3	72	0.049	ppb	184.6	48	1	
Se	78	2	72	0.055	ppb	35.0	5	1	
Sr	88	3	72	0.072	ppb	91.9	82	0.5	
Mo	95	3	115	0.049	ppb	55.0	63	0.5	
Ag	107	3	115	0.010	ppb	30.9	30	1	
Cd	111	3	115	-0.027	ppb	-86.5	3	0.5	
Sn	120	3	115	0.032	ppb	101.3	780	1	
Sb	121	3	115	0.036	ppb	25.8	73	0.6	
Ba	137	3	115	-0.033	ppb	-191.4	53	0.5	
Tl	205	3	193	-0.039	ppb	-27.9	233	0.1	
(Pb)	206	3	193	-0.067	ppb	-19.3	235	1	
(Pb)	207	3	193	-0.134	ppb	-18.0	335	1	
Pb	208	3	193	-0.089	ppb	-17.4	1038	0.5	
Th	232	3	193	1.564	ppb	9.2	15150	1	>RL
U	238	3	193	0.033	ppb	49.3	1738	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4332137	0.82	4300192	100.74	60	120	
Sc (IS)	45	3	HMI He	620232	0.72	644593	96.22	60	120	
Ge Internal standard	72	2	HMI H2	2594948	0.33	2598552	99.86	60	120	
Ge Internal standard	72	3	HMI He	761522	0.44	772392	98.59	60	120	
In Internal Standard	115	3	HMI He	2870724	0.98	2872781	99.93	60	120	
Ir (IS)	193	3	HMI He	6174407	2.28	6092963	101.34	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609194/1-B
Data File Name	249_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:05:58-06:00
Sample Type	Blank
Dilution	1
Comment	609233 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	281.230	ppb	1.082267342	46650	25
Mg	24	3	45	1.563	ppb	45.98899089	347	25
Al	27	3	45	-0.262	ppb	-303.3904984	140	15
K	39	3	45	-2.733	ppb	-1025.155607	26612	50
Ca	40	2	45	16.072	ppb	3.172188851	21786	200
V	51	3	72	-0.358	ppb	-36.15352345	760	1
Cr	52	3	72	-0.469	ppb	-12.89308656	2724	1
Mn	55	3	72	0.188	ppb	45.45909871	450	0.5
Fe	56	2	72	20.001	ppb	13.2390376	97474	50
Co	59	3	72	0.003	ppb	288.8187496	58	0.5
Ni	60	3	72	-0.581	ppb	-18.75977448	466	1
Cu	63	3	72	0.121	ppb	16.28564249	511	1
Zn	66	3	72	1.393	ppb	7.443895937	450	5
As	75	3	72	0.092	ppb	112.1561568	53	1
(Se)	78	3	72	0.293	ppb	264.0718631	25	1
Sr	88	3	72	0.056	ppb	51.92766477	73	0.5
Mo	95	3	115	0.046	ppb	101.1237291	62	0.5
Ag	107	3	115	0.005	ppb	125.3402849	22	1
Cd	111	3	115	-0.041	ppb	0	0	0.5
Sn	120	3	115	-0.132	ppb	-40.30787229	650	1
Sb	121	3	115	0.009	ppb	284.4853356	52	0.6
Ba	137	3	115	0.219	ppb	51.55799151	117	0.5
Tl	205	3	193	-0.061	ppb	-18.25714322	143	0.1
(Pb)	206	3	193	-0.007	ppb	-344.8737397	310	1
(Pb)	207	3	193	0.068	ppb	78.34724986	560	1
Pb	208	3	193	0.002	ppb	652.1535081	1503	0.5
Th	232	3	193	0.030	ppb	404.0969576	7077	1
U	238	3	193	0.011	ppb	159.4563042	1598	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4212308	0.52	4300192	97.96	60	120	
Sc (IS)	45	3	HMI He	613371	0.41	644593	95.16	60	120	
Ge Internal standard	72	2	HMI H2	2653486	1.92	2598552	102.11	60	120	
Ge Internal standard	72	3	HMI He	762841	0.76	772392	98.76	60	120	
In Internal Standard	115	3	HMI He	2865732	0.86	2872781	99.75	60	120	
Ir (IS)	193	3	HMI He	6116676	1.21	6092963	100.39	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609194/2-C
Data File Name	250_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:07:46-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609233 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.163	41.163	ppb	4.612	1784	40	102.9	80	120	
Na	23	3	45	824.460	824.460	ppb	1.679	107441	40	2061.1	80	120	>+/-20%
Mg	24	3	45	698.999	698.999	ppb	1.645	40967	40	1747.5	80	120	>+/-20%
Al	27	3	45	761.725	761.725	ppb	3.092	17305	40	1904.3	80	120	>+/-20%
K	39	3	45	757.724	757.724	ppb	1.037	63148	40	1894.3	80	120	>+/-20%
Ca	40	2	45	801.018	801.018	ppb	1.655	479066	40	2002.5	80	120	>+/-20%
V	51	3	72	38.527	38.527	ppb	2.065	25187	40	96.3	80	120	
Cr	52	3	72	37.658	37.658	ppb	0.635	32151	40	94.1	80	120	
Mn	55	3	72	39.176	39.176	ppb	0.499	16348	40	97.9	80	120	
Fe	56	2	72	773.093	773.093	ppb	1.989	1309478	40	1932.7	80	120	>+/-20%
(Fe)	56	3	72	754.416	754.416	ppb	0.655	511947	40	1886.0	80	120	>+/-20%
Co	59	3	72	38.356	38.356	ppb	2.256	50351	40	95.9	80	120	
Ni	60	3	72	37.869	37.869	ppb	2.291	14684	40	94.7	80	120	
Cu	63	3	72	39.145	39.145	ppb	0.733	39777	40	97.9	80	120	
Zn	66	3	72	39.778	39.778	ppb	4.304	6632	40	99.4	80	120	
As	75	3	72	38.143	38.143	ppb	5.616	4385	40	95.4	80	120	
Se	78	2	72	39.470	39.470	ppb	0.941	2411	40	98.7	80	120	
(Se)	78	3	72	42.557	42.557	ppb	18.467	295	40	106.4	80	120	
Sr	88	3	72	78.554	78.554	ppb	1.938	42587	40	196.4	80	120	>+/-20%
Mo	95	3	115	36.550	36.550	ppb	4.096	18869	40	91.4	80	120	
Ag	107	3	115	38.059	38.059	ppb	1.738	66218	40	95.1	80	120	
Cd	111	3	115	36.763	36.763	ppb	3.147	9127	40	91.9	80	120	
Sn	120	3	115	35.786	35.786	ppb	2.087	28835	40	89.5	80	120	
Sb	121	3	115	38.069	38.069	ppb	1.840	29633	40	95.2	80	120	
Ba	137	3	115	38.212	38.212	ppb	2.119	9742	40	95.5	80	120	
Tl	205	3	193	37.354	37.354	ppb	1.662	148953	40	93.4	80	120	
(Pb)	206	3	193	37.722	37.722	ppb	1.004	50134	40	94.3	80	120	
(Pb)	207	3	193	36.963	36.963	ppb	2.713	43393	40	92.4	80	120	
Pb	208	3	193	37.509	37.509	ppb	1.850	201317	40	93.8	80	120	
Th	232	3	193	34.808	34.808	ppb	0.302	191800	40	87.0	80	120	
U	238	3	193	37.561	37.561	ppb	2.263	211284	40	93.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4329078	1.58	4300192	100.67	60	120	
Sc (IS)	45	3	HMI He	621380	0.57	644593	96.40	60	120	
Ge Internal standard	72	2	HMI H2	2633775	1.83	2598552	101.36	60	120	
Ge Internal standard	72	3	HMI He	763204	0.37	772392	98.81	60	120	
In Internal Standard	115	3	HMI He	2873938	1.43	2872781	100.04	60	120	
Ir (IS)	193	3	HMI He	6274906	0.73	6092963	102.99	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-G
Data File Name	251SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:09:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.110	ppb	-0.110	-62.10	2	2000	
Na	23	3	45	64588.015	ppb	64588.015	1.04	7139357	400000	
Mg	24	3	45	25228.902	ppb	25228.902	1.30	1462682	400000	
Al	27	3	45	-0.018	ppb	-0.018	-7612.56	147	400000	
K	39	3	45	2797.418	ppb	2797.418	0.87	159483	400000	
Ca	40	2	45	91824.080	ppb	91824.080	0.49	52558958	400000	
V	51	3	72	-0.187	ppb	-0.187	-48.76	878	2000	
Cr	52	3	72	-0.521	ppb	-0.521	-67.96	2719	5000	
Mn	55	3	72	0.410	ppb	0.410	20.06	548	10000	
Fe	56	2	72	-1.611	ppb	-1.611	-128.64	61354	10000	
Co	59	3	72	0.085	ppb	0.085	38.33	168	2000	
Ni	60	3	72	0.425	ppb	0.425	35.17	850	5000	
Cu	63	3	72	0.472	ppb	0.472	11.02	876	5000	
Zn	66	3	72	1.099	ppb	1.099	22.65	408	5000	
As	75	3	72	0.245	ppb	0.245	81.02	72	2000	
Se	78	2	72	2.010	ppb	2.010	17.63	123	2000	
Sr	88	3	72	711.645	ppb	711.645	0.38	390537	4000	
Mo	95	3	115	1.402	ppb	1.402	6.06	753	2000	
Ag	107	3	115	0.008	ppb	0.008	76.43	27	100	
Cd	111	3	115	-0.021	ppb	-0.021	-98.10	5	2000	
Sn	120	3	115	-0.117	ppb	-0.117	-37.98	656	2000	
Sb	121	3	115	0.133	ppb	0.133	2.04	147	1000	
Ba	137	3	115	76.719	ppb	76.719	2.69	19289	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-26.08	210	2000	
(Pb)	206	3	193	-0.084	ppb	-0.084	-18.73	212	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-26.24	418	100	
Pb	208	3	193	-0.064	ppb	-0.064	-8.93	1158	5000	
Th	232	3	193	1.797	ppb	1.797	17.49	16234	2000	
U	238	3	193	7.065	ppb	7.065	1.94	40028	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4257359	0.48	4300192	99.00	60	120	
Sc (IS)	45	3	HMI He	618551	0.84	644593	95.96	60	120	
Ge Internal standard	72	2	HMI H2	2607060	1.09	2598552	100.33	60	120	
Ge Internal standard	72	3	HMI He	773259	0.68	772392	100.11	60	120	
In Internal Standard	115	3	HMI He	2843433	1.40	2872781	98.98	60	120	
Ir (IS)	193	3	HMI He	6123162	1.16	6092963	100.50	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-H MS
Data File Name	252SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:11:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.146	ppb	40.146	2.59	1699	2000	
Na	23	3	45	65304.473	ppb	65304.473	1.14	7149696	400000	
Mg	24	3	45	25258.121	ppb	25258.121	1.00	1450429	400000	
Al	27	3	45	730.811	ppb	730.811	0.96	16376	400000	
K	39	3	45	3515.170	ppb	3515.170	0.20	191642	400000	
Ca	40	2	45	91340.960	ppb	91340.960	1.04	52532165	400000	
V	51	3	72	36.612	ppb	36.612	2.62	24064	2000	
Cr	52	3	72	36.935	ppb	36.935	3.17	31697	5000	
Mn	55	3	72	37.777	ppb	37.777	2.35	15831	10000	
Fe	56	2	72	765.281	ppb	765.281	2.39	1280209	10000	
Co	59	3	72	36.344	ppb	36.344	1.58	47874	2000	
Ni	60	3	72	36.757	ppb	36.757	1.49	14324	5000	
Cu	63	3	72	37.231	ppb	37.231	0.41	37983	5000	
Zn	66	3	72	38.946	ppb	38.946	2.47	6522	5000	
As	75	3	72	38.842	ppb	38.842	5.44	4482	2000	
Se	78	2	72	39.966	ppb	39.966	3.93	2409	2000	
Sr	88	3	72	784.544	ppb	784.544	0.81	426380	4000	
Mo	95	3	115	36.891	ppb	36.891	1.03	18957	2000	
Ag	107	3	115	37.399	ppb	37.399	1.48	64760	100	
Cd	111	3	115	36.983	ppb	36.983	1.74	9137	2000	
Sn	120	3	115	34.754	ppb	34.754	0.27	27894	2000	
Sb	121	3	115	36.625	ppb	36.625	2.19	28373	1000	
Ba	137	3	115	111.807	ppb	111.807	1.20	28255	5000	
Tl	205	3	193	37.250	ppb	37.250	1.21	144783	2000	
(Pb)	206	3	193	37.268	ppb	37.268	0.55	48279	100	
(Pb)	207	3	193	36.978	ppb	36.978	1.15	42318	100	
Pb	208	3	193	37.127	ppb	37.127	1.24	194237	5000	
Th	232	3	193	36.564	ppb	36.564	0.61	196013	2000	
U	238	3	193	44.745	ppb	44.745	1.46	245052	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4277770	0.87	4300192	99.48	60	120	
Sc (IS)	45	3	HMI He	612639	0.39	644593	95.04	60	120	
Ge Internal standard	72	2	HMI H2	2600338	2.15	2598552	100.07	60	120	
Ge Internal standard	72	3	HMI He	765830	1.16	772392	99.15	60	120	
In Internal Standard	115	3	HMI He	2860310	1.55	2872781	99.57	60	120	
Ir (IS)	193	3	HMI He	6116074	1.35	6092963	100.38	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-I MSD
Data File Name	253SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:13:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.146	ppb	39.146	5.78	1654	2000	
Na	23	3	45	66001.043	ppb	66001.043	1.32	7236759	400000	
Mg	24	3	45	25769.290	ppb	25769.290	2.15	1481875	400000	
Al	27	3	45	713.503	ppb	713.503	1.68	16015	400000	
K	39	3	45	3514.291	ppb	3514.291	0.57	191903	400000	
Ca	40	2	45	92678.286	ppb	92678.286	2.91	53190519	400000	
V	51	3	72	37.014	ppb	37.014	1.44	24087	2000	
Cr	52	3	72	36.818	ppb	36.818	3.77	31306	5000	
Mn	55	3	72	38.222	ppb	38.222	0.35	15861	10000	
Fe	56	2	72	752.179	ppb	752.179	2.84	1265483	10000	
Co	59	3	72	36.609	ppb	36.609	0.59	47767	2000	
Ni	60	3	72	37.907	ppb	37.907	2.23	14607	5000	
Cu	63	3	72	37.706	ppb	37.706	0.45	38093	5000	
Zn	66	3	72	38.311	ppb	38.311	5.09	6357	5000	
As	75	3	72	38.281	ppb	38.281	3.63	4374	2000	
Se	78	2	72	39.274	ppb	39.274	2.99	2379	2000	
Sr	88	3	72	797.322	ppb	797.322	0.37	429194	4000	
Mo	95	3	115	37.418	ppb	37.418	2.60	19259	2000	
Ag	107	3	115	36.583	ppb	36.583	1.62	63456	100	
Cd	111	3	115	36.628	ppb	36.628	1.73	9064	2000	
Sn	120	3	115	35.220	ppb	35.220	1.65	28303	2000	
Sb	121	3	115	36.786	ppb	36.786	0.67	28551	1000	
Ba	137	3	115	114.317	ppb	114.317	1.72	28936	5000	
Tl	205	3	193	36.799	ppb	36.799	1.34	144089	2000	
(Pb)	206	3	193	37.149	ppb	37.149	0.48	48482	100	
(Pb)	207	3	193	36.957	ppb	36.957	2.83	42602	100	
Pb	208	3	193	36.868	ppb	36.868	0.32	194326	5000	
Th	232	3	193	37.536	ppb	37.536	1.29	202528	2000	
U	238	3	193	44.511	ppb	44.511	0.58	245572	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4270534	2.12	4300192	99.31	60	120	
Sc (IS)	45	3	HMI He	613615	1.30	644593	95.19	60	120	
Ge Internal standard	72	2	HMI H2	2612372	0.69	2598552	100.53	60	120	
Ge Internal standard	72	3	HMI He	758502	0.41	772392	98.20	60	120	
In Internal Standard	115	3	HMI He	2865262	1.50	2872781	99.74	60	120	
Ir (IS)	193	3	HMI He	6161016	0.32	6092963	101.12	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-2-B
Data File Name	254SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:14:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.97	2	2000	
Na	23	3	45	68988.229	ppb	68988.229	0.72	7494637	400000	
Mg	24	3	45	27563.941	ppb	27563.941	2.21	1570786	400000	
Al	27	3	45	5.546	ppb	5.546	53.46	267	400000	
K	39	3	45	2795.503	ppb	2795.503	2.11	156683	400000	
Ca	40	2	45	98923.752	ppb	98923.752	2.25	55845415	400000	
V	51	3	72	-0.273	ppb	-0.273	-22.53	810	2000	
Cr	52	3	72	0.192	ppb	0.192	193.43	3222	5000	
Mn	55	3	72	0.742	ppb	0.742	3.72	673	10000	
Fe	56	2	72	10.285	ppb	10.285	46.68	79232	10000	
Co	59	3	72	0.067	ppb	0.067	18.13	142	2000	
Ni	60	3	72	0.733	ppb	0.733	8.82	948	5000	
Cu	63	3	72	0.944	ppb	0.944	16.84	1333	5000	
Zn	66	3	72	1.092	ppb	1.092	18.89	400	5000	
As	75	3	72	0.314	ppb	0.314	57.03	78	2000	
Se	78	2	72	1.964	ppb	1.964	7.87	119	2000	
Sr	88	3	72	783.478	ppb	783.478	0.87	422417	4000	
Mo	95	3	115	1.585	ppb	1.585	7.64	848	2000	
Ag	107	3	115	0.014	ppb	0.014	23.35	38	100	
Cd	111	3	115	0.000	ppb	0.000	-17552.63	10	2000	
Sn	120	3	115	-0.008	ppb	-0.008	-939.58	743	2000	
Sb	121	3	115	0.104	ppb	0.104	38.67	125	1000	
Ba	137	3	115	77.648	ppb	77.648	1.93	19575	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-9.04	252	2000	
(Pb)	206	3	193	-0.007	ppb	-0.007	-453.91	308	100	
(Pb)	207	3	193	-0.054	ppb	-0.054	-113.21	420	100	
Pb	208	3	193	-0.020	ppb	-0.020	-49.57	1379	5000	
Th	232	3	193	2.203	ppb	2.203	14.22	18191	2000	
U	238	3	193	8.221	ppb	8.221	1.15	46002	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4200235	2.16	4300192	97.68	60	120	
Sc (IS)	45	3	HMI He	607979	0.49	644593	94.32	60	120	
Ge Internal standard	72	2	HMI H2	2574955	1.75	2598552	99.09	60	120	
Ge Internal standard	72	3	HMI He	759750	1.11	772392	98.36	60	120	
In Internal Standard	115	3	HMI He	2850466	0.20	2872781	99.22	60	120	
Ir (IS)	193	3	HMI He	6079371	1.69	6092963	99.78	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-3-B
Data File Name	255SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:16:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	69004.482	ppb	69004.482	1.41	7468753	400000	
Mg	24	3	45	26735.746	ppb	26735.746	0.68	1518122	400000	
Al	27	3	45	-1.702	ppb	-1.702	-18.96	107	400000	
K	39	3	45	2695.500	ppb	2695.500	2.84	151444	400000	
Ca	40	2	45	94297.291	ppb	94297.291	1.31	53516808	400000	
V	51	3	72	-0.326	ppb	-0.326	-35.64	770	2000	
Cr	52	3	72	0.245	ppb	0.245	80.92	3234	5000	
Mn	55	3	72	0.374	ppb	0.374	35.35	520	10000	
Fe	56	2	72	12.611	ppb	12.611	20.56	82171	10000	
Co	59	3	72	0.086	ppb	0.086	11.68	165	2000	
Ni	60	3	72	0.763	ppb	0.763	15.91	951	5000	
Cu	63	3	72	0.630	ppb	0.630	7.81	1011	5000	
Zn	66	3	72	0.884	ppb	0.884	27.19	363	5000	
As	75	3	72	0.394	ppb	0.394	63.64	87	2000	
Se	78	2	72	1.929	ppb	1.929	8.34	116	2000	
Sr	88	3	72	756.090	ppb	756.090	1.50	404250	4000	
Mo	95	3	115	1.705	ppb	1.705	9.63	890	2000	
Ag	107	3	115	0.012	ppb	0.012	78.59	33	100	
Cd	111	3	115	-0.027	ppb	-0.027	-90.06	3	2000	
Sn	120	3	115	-0.260	ppb	-0.260	-16.95	535	2000	
Sb	121	3	115	0.085	ppb	0.085	37.78	108	1000	
Ba	137	3	115	78.377	ppb	78.377	0.31	19328	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-10.50	180	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-235.08	320	100	
(Pb)	207	3	193	-0.048	ppb	-0.048	-92.66	435	100	
Pb	208	3	193	-0.035	ppb	-0.035	-11.86	1326	5000	
Th	232	3	193	0.345	ppb	0.345	38.32	8837	2000	
U	238	3	193	8.419	ppb	8.419	1.64	48033	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4222024	2.71	4300192	98.18	60	120	
Sc (IS)	45	3	HMI He	605807	1.31	644593	93.98	60	120	
Ge Internal standard	72	2	HMI H2	2549493	0.96	2598552	98.11	60	120	
Ge Internal standard	72	3	HMI He	753417	0.65	772392	97.54	60	120	
In Internal Standard	115	3	HMI He	2788404	0.77	2872781	97.06	60	120	
Ir (IS)	193	3	HMI He	6203747	1.14	6092963	101.82	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-4-B
Data File Name	256SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:18:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	69550.283	ppb	69550.283	1.06	7628858	400000	
Mg	24	3	45	27019.688	ppb	27019.688	1.95	1554657	400000	
Al	27	3	45	-0.426	ppb	-0.426	-573.56	137	400000	
K	39	3	45	2790.537	ppb	2790.537	0.91	157965	400000	
Ca	40	2	45	100310.879	ppb	100310.879	2.61	56287277	400000	
V	51	3	72	-0.260	ppb	-0.260	-83.09	825	2000	
Cr	52	3	72	0.266	ppb	0.266	83.91	3305	5000	
Mn	55	3	72	0.573	ppb	0.573	18.49	610	10000	
Fe	56	2	72	14.191	ppb	14.191	28.83	84427	10000	
Co	59	3	72	0.104	ppb	0.104	23.44	192	2000	
Ni	60	3	72	0.643	ppb	0.643	10.49	923	5000	
Cu	63	3	72	0.617	ppb	0.617	10.97	1015	5000	
Zn	66	3	72	3.698	ppb	3.698	4.23	825	5000	
As	75	3	72	0.148	ppb	0.148	58.36	60	2000	
Se	78	2	72	1.798	ppb	1.798	6.45	108	2000	
Sr	88	3	72	765.968	ppb	765.968	0.15	416563	4000	
Mo	95	3	115	1.772	ppb	1.772	5.06	943	2000	
Ag	107	3	115	0.012	ppb	0.012	38.83	33	100	
Cd	111	3	115	0.000	ppb	0.000	-1617.94	10	2000	
Sn	120	3	115	-0.229	ppb	-0.229	-21.60	570	2000	
Sb	121	3	115	0.078	ppb	0.078	5.90	105	1000	
Ba	137	3	115	78.564	ppb	78.564	2.00	19782	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-13.11	178	2000	
(Pb)	206	3	193	-0.074	ppb	-0.074	-20.60	225	100	
(Pb)	207	3	193	-0.066	ppb	-0.066	-57.99	408	100	
Pb	208	3	193	-0.061	ppb	-0.061	-13.64	1174	5000	
Th	232	3	193	-0.023	ppb	-0.023	-114.65	6815	2000	
U	238	3	193	8.654	ppb	8.654	2.29	48713	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174202	1.04	4300192	97.07	60	120	
Sc (IS)	45	3	HMI He	613924	0.99	644593	95.24	60	120	
Ge Internal standard	72	2	HMI H2	2543759	0.59	2598552	97.89	60	120	
Ge Internal standard	72	3	HMI He	766302	0.26	772392	99.21	60	120	
In Internal Standard	115	3	HMI He	2847414	1.46	2872781	99.12	60	120	
Ir (IS)	193	3	HMI He	6127656	2.62	6092963	100.57	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-5-B
Data File Name	257SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:20:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	73605.834	ppb	73605.834	2.11	7868952	400000	
Mg	24	3	45	27022.897	ppb	27022.897	2.24	1515646	400000	
Al	27	3	45	0.934	ppb	0.934	585.87	164	400000	
K	39	3	45	2720.268	ppb	2720.268	1.34	150767	400000	
Ca	40	2	45	91273.610	ppb	91273.610	1.75	51713820	400000	
V	51	3	72	-0.079	ppb	-0.079	-272.61	918	2000	
Cr	52	3	72	0.049	ppb	0.049	87.99	3069	5000	
Mn	55	3	72	0.827	ppb	0.827	15.22	698	10000	
Fe	56	2	72	9.543	ppb	9.543	31.93	79281	10000	
Co	59	3	72	0.080	ppb	0.080	17.48	157	2000	
Ni	60	3	72	0.588	ppb	0.588	17.41	883	5000	
Cu	63	3	72	0.464	ppb	0.464	11.05	841	5000	
Zn	66	3	72	0.790	ppb	0.790	23.34	347	5000	
As	75	3	72	0.204	ppb	0.204	57.43	65	2000	
Se	78	2	72	1.629	ppb	1.629	7.20	101	2000	
Sr	88	3	72	738.204	ppb	738.204	1.32	392705	4000	
Mo	95	3	115	1.774	ppb	1.774	9.38	918	2000	
Ag	107	3	115	0.004	ppb	0.004	71.84	20	100	
Cd	111	3	115	-0.006	ppb	-0.006	-416.03	8	2000	
Sn	120	3	115	-0.152	ppb	-0.152	-76.68	613	2000	
Sb	121	3	115	0.084	ppb	0.084	29.48	107	1000	
Ba	137	3	115	72.699	ppb	72.699	2.12	17805	5000	
Tl	205	3	193	-0.058	ppb	-0.058	-14.64	158	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-23.29	232	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-35.70	393	100	
Pb	208	3	193	-0.063	ppb	-0.063	-3.01	1164	5000	
Th	232	3	193	-0.183	ppb	-0.183	-51.44	5978	2000	
U	238	3	193	9.420	ppb	9.420	1.78	52844	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214265	0.67	4300192	98.00	60	120	
Sc (IS)	45	3	HMI He	598474	1.13	644593	92.85	60	120	
Ge Internal standard	72	2	HMI H2	2614675	2.52	2598552	100.62	60	120	
Ge Internal standard	72	3	HMI He	749610	0.41	772392	97.05	60	120	
In Internal Standard	115	3	HMI He	2768727	0.51	2872781	96.38	60	120	
Ir (IS)	193	3	HMI He	6121207	1.31	6092963	100.46	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-6-B
Data File Name	258SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:22:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	75592.496	ppb	75592.496	1.11	8070618	400000	
Mg	24	3	45	27196.551	ppb	27196.551	3.78	1523348	400000	
Al	27	3	45	-0.406	ppb	-0.406	-328.96	133	400000	
K	39	3	45	2755.581	ppb	2755.581	1.50	152186	400000	
Ca	40	2	45	95851.899	ppb	95851.899	1.32	54222036	400000	
V	51	3	72	-0.259	ppb	-0.259	-10.16	806	2000	
Cr	52	3	72	0.000	ppb	0.000	-209880.55	3029	5000	
Mn	55	3	72	1.374	ppb	1.374	7.73	916	10000	
Fe	56	2	72	20.036	ppb	20.036	16.59	93947	10000	
Co	59	3	72	0.098	ppb	0.098	19.43	180	2000	
Ni	60	3	72	0.738	ppb	0.738	24.66	936	5000	
Cu	63	3	72	1.257	ppb	1.257	11.36	1623	5000	
Zn	66	3	72	1.299	ppb	1.299	31.33	426	5000	
As	75	3	72	0.430	ppb	0.430	38.97	90	2000	
Se	78	2	72	1.790	ppb	1.790	11.45	108	2000	
Sr	88	3	72	747.254	ppb	747.254	0.56	397071	4000	
Mo	95	3	115	1.832	ppb	1.832	1.95	951	2000	
Ag	107	3	115	0.004	ppb	0.004	68.85	20	100	
Cd	111	3	115	-0.006	ppb	-0.006	-516.75	8	2000	
Sn	120	3	115	-0.232	ppb	-0.232	-41.82	555	2000	
Sb	121	3	115	0.099	ppb	0.099	9.53	118	1000	
Ba	137	3	115	71.423	ppb	71.423	2.36	17576	5000	
Tl	205	3	193	-0.059	ppb	-0.059	-4.78	150	2000	
(Pb)	206	3	193	0.003	ppb	0.003	1038.99	318	100	
(Pb)	207	3	193	0.054	ppb	0.054	52.43	536	100	
Pb	208	3	193	0.003	ppb	0.003	1098.54	1483	5000	
Th	232	3	193	-0.250	ppb	-0.250	-22.25	5552	2000	
U	238	3	193	10.086	ppb	10.086	2.01	55656	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4207787	1.41	4300192	97.85	60	120	
Sc (IS)	45	3	HMI He	597638	0.46	644593	92.72	60	120	
Ge Internal standard	72	2	HMI H2	2555103	0.81	2598552	98.33	60	120	
Ge Internal standard	72	3	HMI He	748759	0.84	772392	96.94	60	120	
In Internal Standard	115	3	HMI He	2782160	1.03	2872781	96.85	60	120	
Ir (IS)	193	3	HMI He	6033021	1.72	6092963	99.02	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	259_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:23:57-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.103	ppb	9.691	2159	50	104.2	90	110	
Na	23	3	45	48340.448	ppb	2.156	5161446	51000	94.8	90	110	
Mg	24	3	45	10235.290	ppb	2.941	572862	11000	93.0	90	110	
Al	27	3	45	934.612	ppb	4.740	20365	1000	93.5	90	110	
K	39	3	45	10095.410	ppb	2.563	487602	11000	91.8	90	110	
Ca	40	2	45	10398.909	ppb	0.790	5821928	11000	94.5	90	110	
V	51	3	72	49.847	ppb	1.753	30248	50	99.7	90	110	
Cr	52	3	72	50.016	ppb	0.209	39045	50	100.0	90	110	
Mn	55	3	72	49.819	ppb	1.672	19374	50	99.6	90	110	
Fe	56	2	72	1056.946	ppb	2.387	1657473	1000	105.7	90	110	
Co	59	3	72	50.040	ppb	1.004	61505	50	100.1	90	110	
Ni	60	3	72	51.129	ppb	0.536	18345	50	102.3	90	110	
Cu	63	3	72	50.046	ppb	2.452	47519	50	100.1	90	110	
Zn	66	3	72	50.143	ppb	0.196	7775	50	100.3	90	110	
As	75	3	72	52.668	ppb	2.744	5655	50	105.3	90	110	
Se	78	2	72	49.777	ppb	3.528	2851	50	99.6	90	110	
Sr	88	3	72	102.966	ppb	0.615	52266	100	103.0	90	110	
Mo	95	3	115	48.790	ppb	3.971	24121	50	97.6	90	110	
Ag	107	3	115	48.770	ppb	1.975	81311	50	97.5	90	110	
Cd	111	3	115	49.568	ppb	1.512	11788	50	99.1	90	110	
Sn	120	3	115	48.649	ppb	2.463	37298	50	97.3	90	110	
Sb	121	3	115	49.672	ppb	2.500	37038	50	99.3	90	110	
Ba	137	3	115	49.558	ppb	1.360	12095	50	99.1	90	110	
Tl	205	3	193	47.670	ppb	0.352	184409	50	95.3	90	110	
(Pb)	206	3	193	48.401	ppb	1.672	62340	50	96.8	90	110	
(Pb)	207	3	193	47.398	ppb	1.201	53882	50	94.8	90	110	
Pb	208	3	193	48.229	ppb	1.356	250818	50	96.5	90	110	
Th	232	3	193	47.417	ppb	0.609	251108	50	94.8	90	110	
U	238	3	193	48.341	ppb	0.702	263505	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4156576	1.75	4300192	96.66	60	120	
Sc (IS)	45	3	HMI He	597176	2.13	644593	92.64	60	120	
Ge Internal standard	72	2	HMI H2	2471134	1.61	2598552	95.10	60	120	
Ge Internal standard	72	3	HMI He	714790	1.01	772392	92.54	60	120	
In Internal Standard	115	3	HMI He	2754191	1.74	2872781	95.87	60	120	
Ir (IS)	193	3	HMI He	6090424	1.00	6092963	99.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	260_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:25:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.108	ppb	-64.5	2	0.5	
Na	23	3	45	62.656	ppb	4.6	21912	25	>RL
Mg	24	3	45	1.496	ppb	180.2	330	25	
Al	27	3	45	-3.751	ppb	-38.3	60	15	
K	39	3	45	-12.521	ppb	-236.8	25205	50	
V	51	3	72	-0.509	ppb	-19.3	638	1	
Cr	52	3	72	0.153	ppb	231.8	3079	1	
Mn	55	3	72	-0.116	ppb	-36.4	313	0.5	
Co	59	3	72	0.027	ppb	48.7	87	0.5	
Ni	60	3	72	0.662	ppb	31.2	890	1	
Cu	63	3	72	-0.024	ppb	-113.2	351	1	
Zn	66	3	72	-0.076	ppb	-143.7	205	5	
As	75	3	72	0.004	ppb	3973.7	42	1	
Se	78	2	72	0.082	ppb	23.7	7	1	
Sr	88	3	72	0.062	ppb	89.5	73	0.5	
Mo	95	3	115	0.030	ppb	142.2	52	0.5	
Ag	107	3	115	0.021	ppb	55.4	48	1	
Cd	111	3	115	-0.020	ppb	-106.8	5	0.5	
Sn	120	3	115	0.102	ppb	73.6	805	1	
Sb	121	3	115	0.024	ppb	71.1	62	0.6	
Ba	137	3	115	0.009	ppb	780.2	62	0.5	
Tl	205	3	193	-0.039	ppb	-7.7	228	0.1	
(Pb)	206	3	193	-0.094	ppb	-21.7	198	1	
(Pb)	207	3	193	-0.081	ppb	-66.7	391	1	
Pb	208	3	193	-0.077	ppb	-26.1	1088	0.5	
Th	232	3	193	1.470	ppb	12.0	14506	1	>RL
U	238	3	193	0.024	ppb	62.8	1666	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109760	0.94	4300192	95.57	60	120	
Sc (IS)	45	3	HMI He	590897	1.24	644593	91.67	60	120	
Ge Internal standard	72	2	HMI H2	2479940	1.93	2598552	95.44	60	120	
Ge Internal standard	72	3	HMI He	732941	0.90	772392	94.89	60	120	
In Internal Standard	115	3	HMI He	2770663	1.35	2872781	96.45	60	120	
Ir (IS)	193	3	HMI He	6107195	0.60	6092963	100.23	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609246/1-A
Data File Name	261_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:27:34-06:00
Sample Type	Blank
Dilution	1
Comment	609246 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.031	ppb	-656.0920877	5	0.5
Na	23	3	45	91.889	ppb	2.920074882	25121	25
Mg	24	3	45	1.158	ppb	118.0304718	314	25
Al	27	3	45	1.025	ppb	92.07209853	163	15
K	39	3	45	-9.415	ppb	-426.1376362	25472	50
Ca	40	2	45	12.972	ppb	6.12751493	19981	200
V	51	3	72	-0.543	ppb	-7.607723281	626	1
Cr	52	3	72	0.133	ppb	93.81636075	3107	1
Mn	55	3	72	-0.103	ppb	-101.7702416	323	0.5
Fe	56	2	72	1.775	ppb	207.4065478	65269	50
Co	59	3	72	0.020	ppb	19.57785546	78	0.5
Ni	60	3	72	0.081	ppb	28.21117499	693	1
Cu	63	3	72	0.163	ppb	13.05018855	540	1
Zn	66	3	72	0.130	ppb	220.8150574	240	5
As	75	3	72	0.119	ppb	211.572423	55	1
(Se)	78	3	72	0.663	ppb	253.1302327	27	1
Sr	88	3	72	0.038	ppb	63.19564445	62	0.5
Mo	95	3	115	0.019	ppb	283.0322028	47	0.5
Ag	107	3	115	0.008	ppb	55.41541296	27	1
Cd	111	3	115	-0.027	ppb	-43.51917327	3	0.5
Sn	120	3	115	-0.110	ppb	-58.76283385	650	1
Sb	121	3	115	0.013	ppb	42.74688118	53	0.6
Ba	137	3	115	0.090	ppb	89.38543346	82	0.5
Tl	205	3	193	-0.065	ppb	-10.56832699	128	0.1
(Pb)	206	3	193	-0.108	ppb	-10.26379454	178	1
(Pb)	207	3	193	-0.076	ppb	-66.55678964	393	1
Pb	208	3	193	-0.095	ppb	-5.56824325	985	0.5
Th	232	3	193	0.044	ppb	241.1659186	7074	1
U	238	3	193	0.020	ppb	103.3668355	1633	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203060	1.95	4300192	97.74	60	120	
Sc (IS)	45	3	HMI He	593948	0.57	644593	92.14	60	120	
Ge Internal standard	72	2	HMI H2	2548365	2.86	2598552	98.07	60	120	
Ge Internal standard	72	3	HMI He	743470	1.02	772392	96.26	60	120	
In Internal Standard	115	3	HMI He	2788061	2.98	2872781	97.05	60	120	
Ir (IS)	193	3	HMI He	6054579	1.12	6092963	99.37	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609246/2-A
Data File Name	262_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:29:23-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609246 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.856	39.856	ppb	6.170	1674	40	99.6	80	120	
Na	23	3	45	763.874	763.874	ppb	1.392	97786	40	1909.7	80	120	>+/-20%
Mg	24	3	45	694.716	694.716	ppb	1.185	39525	40	1736.8	80	120	>+/-20%
Al	27	3	45	743.128	743.128	ppb	2.800	16393	40	1857.8	80	120	>+/-20%
K	39	3	45	712.085	712.085	ppb	2.327	59194	40	1780.2	80	120	>+/-20%
Ca	40	2	45	785.723	785.723	ppb	0.932	446843	40	1964.3	80	120	>+/-20%
V	51	3	72	36.608	36.608	ppb	1.107	23470	40	91.5	80	120	
Cr	52	3	72	38.118	38.118	ppb	0.353	31812	40	95.3	80	120	
Mn	55	3	72	39.357	39.357	ppb	0.426	16071	40	98.4	80	120	
Fe	56	2	72	798.123	798.123	ppb	2.781	1268234	40	1995.3	80	120	>+/-20%
(Fe)	56	3	72	740.340	740.340	ppb	0.719	491973	40	1850.9	80	120	>+/-20%
Co	59	3	72	37.884	37.884	ppb	1.118	48671	40	94.7	80	120	
Ni	60	3	72	38.130	38.130	ppb	2.847	14464	40	95.3	80	120	
Cu	63	3	72	38.046	38.046	ppb	1.012	37844	40	95.1	80	120	
Zn	66	3	72	37.755	37.755	ppb	0.944	6172	40	94.4	80	120	
As	75	3	72	39.209	39.209	ppb	2.591	4410	40	98.0	80	120	
Se	78	2	72	39.358	39.358	ppb	3.140	2258	40	98.4	80	120	
(Se)	78	3	72	38.189	38.189	ppb	16.810	262	40	95.5	80	120	
Sr	88	3	72	75.985	75.985	ppb	2.124	40318	40	190.0	80	120	>+/-20%
Mo	95	3	115	37.076	37.076	ppb	0.894	18527	40	92.7	80	120	
Ag	107	3	115	38.387	38.387	ppb	1.634	64637	40	96.0	80	120	
Cd	111	3	115	37.601	37.601	ppb	0.963	9034	40	94.0	80	120	
Sn	120	3	115	35.075	35.075	ppb	3.309	27358	40	87.7	80	120	
Sb	121	3	115	37.421	37.421	ppb	0.275	28194	40	93.6	80	120	
Ba	137	3	115	38.593	38.593	ppb	2.718	9520	40	96.5	80	120	
Tl	205	3	193	36.656	36.656	ppb	1.348	145627	40	91.6	80	120	
(Pb)	206	3	193	37.194	37.194	ppb	1.774	49248	40	93.0	80	120	
(Pb)	207	3	193	36.913	36.913	ppb	2.332	43174	40	92.3	80	120	
Pb	208	3	193	37.165	37.165	ppb	1.443	198739	40	92.9	80	120	
Th	232	3	193	34.411	34.411	ppb	1.591	188962	40	86.0	80	120	
U	238	3	193	37.280	37.280	ppb	0.265	208942	40	93.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4113826	0.85	4300192	95.67	60	120	
Sc (IS)	45	3	HMI He	603197	0.10	644593	93.58	60	120	
Ge Internal standard	72	2	HMI H2	2474550	0.60	2598552	95.23	60	120	
Ge Internal standard	72	3	HMI He	746911	0.63	772392	96.70	60	120	
In Internal Standard	115	3	HMI He	2781363	1.83	2872781	96.82	60	120	
Ir (IS)	193	3	HMI He	6251064	0.50	6092963	102.59	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-609246/3-A
Data File Name	263SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:31:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.246	ppb	41.246	1.43	1684	2000	
Na	23	3	45	800.808	ppb	800.808	0.71	101395	400000	
Mg	24	3	45	698.893	ppb	698.893	0.72	39618	400000	
Al	27	3	45	733.603	ppb	733.603	2.81	16132	400000	
K	39	3	45	716.201	ppb	716.201	2.18	59180	400000	
Ca	40	2	45	803.572	ppb	803.572	0.21	450280	400000	
V	51	3	72	36.514	ppb	36.514	1.36	23483	2000	
Cr	52	3	72	37.674	ppb	37.674	1.33	31568	5000	
Mn	55	3	72	37.929	ppb	37.929	1.48	15549	10000	
Fe	56	2	72	779.472	ppb	779.472	1.03	1249732	10000	
Co	59	3	72	37.722	ppb	37.722	1.91	48599	2000	
Ni	60	3	72	37.484	ppb	37.484	2.16	14270	5000	
Cu	63	3	72	37.842	ppb	37.842	3.21	37749	5000	
Zn	66	3	72	38.531	ppb	38.531	3.25	6312	5000	
As	75	3	72	36.320	ppb	36.320	4.63	4102	2000	
Se	78	2	72	38.314	ppb	38.314	4.00	2216	2000	
Sr	88	3	72	76.170	ppb	76.170	1.09	40527	4000	
Mo	95	3	115	36.275	ppb	36.275	3.16	18111	2000	
Ag	107	3	115	38.212	ppb	38.212	2.28	64277	100	
Cd	111	3	115	38.340	ppb	38.340	0.97	9204	2000	
Sn	120	3	115	35.529	ppb	35.529	2.62	27682	2000	
Sb	121	3	115	38.167	ppb	38.167	1.68	28727	1000	
Ba	137	3	115	38.660	ppb	38.660	2.66	9529	5000	
Tl	205	3	193	37.379	ppb	37.379	2.09	145536	2000	
(Pb)	206	3	193	38.218	ppb	38.218	0.70	49597	100	
(Pb)	207	3	193	37.526	ppb	37.526	3.10	43006	100	
Pb	208	3	193	37.748	ppb	37.748	1.98	197819	5000	
Th	232	3	193	37.327	ppb	37.327	2.58	200301	2000	
U	238	3	193	37.627	ppb	37.627	1.67	206694	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4055751	1.77	4300192	94.32	60	120	
Sc (IS)	45	3	HMI He	601056	1.63	644593	93.25	60	120	
Ge Internal standard	72	2	HMI H2	2493869	1.44	2598552	95.97	60	120	
Ge Internal standard	72	3	HMI He	749116	2.08	772392	96.99	60	120	
In Internal Standard	115	3	HMI He	2778977	1.90	2872781	96.73	60	120	
Ir (IS)	193	3	HMI He	6128113	1.99	6092963	100.58	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-A
Data File Name	264SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:32:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.056	ppb	0.056	132.18	8	2000	
Na	23	3	45	1301.573	ppb	1301.573	1.18	153244	400000	
Mg	24	3	45	1797.249	ppb	1797.249	3.28	100297	400000	
Al	27	3	45	1586.943	ppb	1586.943	3.38	34310	400000	
K	39	3	45	2166.349	ppb	2166.349	2.36	124449	400000	
Ca	40	2	45	34010.724	ppb	34010.724	1.20	18785032	400000	
V	51	3	72	4.399	ppb	4.399	6.55	3662	2000	
Cr	52	3	72	2.147	ppb	2.147	16.98	4635	5000	
Mn	55	3	72	30.246	ppb	30.246	2.14	12418	10000	
Fe	56	2	72	1299.935	ppb	1299.935	2.43	2081661	10000	
Co	59	3	72	0.538	ppb	0.538	3.57	743	2000	
Ni	60	3	72	1.555	ppb	1.555	10.37	1228	5000	
Cu	63	3	72	5.886	ppb	5.886	2.63	6168	5000	
Zn	66	3	72	24.196	ppb	24.196	0.25	4029	5000	
As	75	3	72	1.226	ppb	1.226	7.34	178	2000	
Se	78	2	72	0.226	ppb	0.226	36.04	15	2000	
Sr	88	3	72	63.384	ppb	63.384	1.15	33586	4000	
Mo	95	3	115	2.676	ppb	2.676	7.51	1354	2000	
Ag	107	3	115	0.027	ppb	0.027	17.74	58	100	
Cd	111	3	115	0.023	ppb	0.023	188.04	15	2000	
Sn	120	3	115	0.355	ppb	0.355	5.56	988	2000	
Sb	121	3	115	0.391	ppb	0.391	18.92	333	1000	
Ba	137	3	115	23.470	ppb	23.470	1.64	5740	5000	
Tl	205	3	193	-0.014	ppb	-0.014	-23.27	327	2000	
(Pb)	206	3	193	1.791	ppb	1.791	4.12	2612	100	
(Pb)	207	3	193	1.655	ppb	1.655	4.65	2344	100	
Pb	208	3	193	1.691	ppb	1.691	3.86	10220	5000	
Th	232	3	193	2.288	ppb	2.288	18.05	18651	2000	
U	238	3	193	0.301	ppb	0.301	7.51	3162	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4106577	0.50	4300192	95.50	60	120	
Sc (IS)	45	3	HMI He	594026	0.72	644593	92.16	60	120	
Ge Internal standard	72	2	HMI H2	2541267	2.18	2598552	97.80	60	120	
Ge Internal standard	72	3	HMI He	745801	0.32	772392	96.56	60	120	
In Internal Standard	115	3	HMI He	2745634	0.85	2872781	95.57	60	120	
Ir (IS)	193	3	HMI He	6085984	1.00	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-B MS
Data File Name	265SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:34:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.394	ppb	39.394	6.50	1646	2000	
Na	23	3	45	2152.293	ppb	2152.293	2.82	240263	400000	
Mg	24	3	45	2546.946	ppb	2546.946	2.11	140228	400000	
Al	27	3	45	2623.558	ppb	2623.558	2.18	55908	400000	
K	39	3	45	2981.928	ppb	2981.928	1.35	159470	400000	
Ca	40	2	45	33900.198	ppb	33900.198	2.43	19175801	400000	
V	51	3	72	41.356	ppb	41.356	1.27	26100	2000	
Cr	52	3	72	40.812	ppb	40.812	1.32	33470	5000	
Mn	55	3	72	67.900	ppb	67.900	0.59	27161	10000	
Fe	56	2	72	2049.449	ppb	2049.449	0.51	3268974	10000	
Co	59	3	72	38.114	ppb	38.114	2.10	48422	2000	
Ni	60	3	72	37.429	ppb	37.429	3.69	14048	5000	
Cu	63	3	72	44.359	ppb	44.359	2.54	43563	5000	
Zn	66	3	72	65.575	ppb	65.575	2.64	10437	5000	
As	75	3	72	38.898	ppb	38.898	1.41	4327	2000	
Se	78	2	72	37.707	ppb	37.707	2.94	2237	2000	
Sr	88	3	72	139.392	ppb	139.392	2.36	73091	4000	
Mo	95	3	115	38.407	ppb	38.407	1.52	19391	2000	
Ag	107	3	115	37.035	ppb	37.035	0.85	63024	100	
Cd	111	3	115	36.180	ppb	36.180	1.39	8787	2000	
Sn	120	3	115	34.620	ppb	34.620	0.59	27309	2000	
Sb	121	3	115	37.444	ppb	37.444	3.56	28493	1000	
Ba	137	3	115	61.414	ppb	61.414	2.12	15285	5000	
Tl	205	3	193	37.930	ppb	37.930	0.88	142709	2000	
(Pb)	206	3	193	40.084	ppb	40.084	0.33	50243	100	
(Pb)	207	3	193	39.918	ppb	39.918	1.90	44185	100	
Pb	208	3	193	39.834	ppb	39.834	0.54	201640	5000	
Th	232	3	193	36.936	ppb	36.936	2.09	191624	2000	
U	238	3	193	38.659	ppb	38.659	1.06	205148	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4205734	0.88	4300192	97.80	60	120	
Sc (IS)	45	3	HMI He	586401	1.90	644593	90.97	60	120	
Ge Internal standard	72	2	HMI H2	2558409	0.66	2598552	98.46	60	120	
Ge Internal standard	72	3	HMI He	738682	2.11	772392	95.64	60	120	
In Internal Standard	115	3	HMI He	2810993	3.09	2872781	97.85	60	120	
Ir (IS)	193	3	HMI He	5920209	0.57	6092963	97.16	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-C MSD
Data File Name	266SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:36:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.492	ppb	42.492	4.12	1718	2000	
Na	23	3	45	2103.886	ppb	2103.886	1.52	235817	400000	
Mg	24	3	45	2605.111	ppb	2605.111	1.78	143804	400000	
Al	27	3	45	2898.152	ppb	2898.152	2.25	61914	400000	
K	39	3	45	3087.279	ppb	3087.279	1.57	164672	400000	
Ca	40	2	45	36046.908	ppb	36046.908	3.03	19880045	400000	
V	51	3	72	42.432	ppb	42.432	2.02	26717	2000	
Cr	52	3	72	40.705	ppb	40.705	1.49	33347	5000	
Mn	55	3	72	68.723	ppb	68.723	1.77	27445	10000	
Fe	56	2	72	2237.995	ppb	2237.995	1.65	3436924	10000	
Co	59	3	72	38.567	ppb	38.567	0.80	48935	2000	
Ni	60	3	72	38.424	ppb	38.424	0.62	14392	5000	
Cu	63	3	72	44.688	ppb	44.688	0.82	43836	5000	
Zn	66	3	72	63.294	ppb	63.294	2.35	10070	5000	
As	75	3	72	41.600	ppb	41.600	3.64	4618	2000	
Se	78	2	72	40.684	ppb	40.684	1.96	2328	2000	
Sr	88	3	72	143.051	ppb	143.051	0.61	74921	4000	
Mo	95	3	115	38.793	ppb	38.793	2.76	19624	2000	
Ag	107	3	115	37.829	ppb	37.829	2.22	64500	100	
Cd	111	3	115	36.412	ppb	36.412	1.42	8857	2000	
Sn	120	3	115	35.129	ppb	35.129	1.80	27753	2000	
Sb	121	3	115	36.789	ppb	36.789	2.58	28067	1000	
Ba	137	3	115	63.158	ppb	63.158	3.53	15747	5000	
Tl	205	3	193	39.580	ppb	39.580	1.61	147006	2000	
(Pb)	206	3	193	41.898	ppb	41.898	0.60	51840	100	
(Pb)	207	3	193	40.005	ppb	40.005	0.62	43717	100	
Pb	208	3	193	41.424	ppb	41.424	1.17	206970	5000	
Th	232	3	193	39.641	ppb	39.641	0.95	202550	2000	
U	238	3	193	40.316	ppb	40.316	0.75	211172	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4101257	1.94	4300192	95.37	60	120	
Sc (IS)	45	3	HMI He	588063	1.02	644593	91.23	60	120	
Ge Internal standard	72	2	HMI H2	2467217	0.08	2598552	94.95	60	120	
Ge Internal standard	72	3	HMI He	737667	0.66	772392	95.50	60	120	
In Internal Standard	115	3	HMI He	2816315	1.12	2872781	98.03	60	120	
Ir (IS)	193	3	HMI He	5845561	1.08	6092963	95.94	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-D
Data File Name	267SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:38:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	72565.526	ppb	72565.526	0.55	7651693	400000	
Mg	24	3	45	20243.865	ppb	20243.865	1.31	1119964	400000	
Al	27	3	45	20.571	ppb	20.571	19.44	581	400000	
K	39	3	45	23130.494	ppb	23130.494	2.02	1071282	400000	
Ca	40	2	45	32028.400	ppb	32028.400	2.02	17622410	400000	
V	51	3	72	1.368	ppb	1.368	21.19	1781	2000	
Cr	52	3	72	10.186	ppb	10.186	2.44	10574	5000	
Mn	55	3	72	12.931	ppb	12.931	1.85	5453	10000	
Fe	56	2	72	509.255	ppb	509.255	0.86	847722	10000	
Co	59	3	72	0.846	ppb	0.846	3.69	1124	2000	
Ni	60	3	72	2.565	ppb	2.565	4.07	1574	5000	
Cu	63	3	72	18.023	ppb	18.023	0.30	17891	5000	
Zn	66	3	72	33.509	ppb	33.509	1.08	5430	5000	
As	75	3	72	5.741	ppb	5.741	9.57	673	2000	
Se	78	2	72	0.468	ppb	0.468	41.41	29	2000	
Sr	88	3	72	185.618	ppb	185.618	0.86	97136	4000	
Mo	95	3	115	325.500	ppb	325.500	0.81	162790	2000	
Ag	107	3	115	0.022	ppb	0.022	46.32	50	100	
Cd	111	3	115	0.325	ppb	0.325	24.05	88	2000	
Sn	120	3	115	0.138	ppb	0.138	12.45	838	2000	
Sb	121	3	115	2.561	ppb	2.561	9.03	1974	1000	
Ba	137	3	115	10.233	ppb	10.233	4.08	2576	5000	
Tl	205	3	193	-0.023	ppb	-0.023	-102.47	288	2000	
(Pb)	206	3	193	0.324	ppb	0.324	8.40	728	100	
(Pb)	207	3	193	0.281	ppb	0.281	7.79	793	100	
Pb	208	3	193	0.340	ppb	0.340	4.41	3219	5000	
Th	232	3	193	1.913	ppb	1.913	13.36	16636	2000	
U	238	3	193	0.517	ppb	0.517	6.47	4305	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4090645	1.68	4300192	95.13	60	120	
Sc (IS)	45	3	HMI He	590181	0.35	644593	91.56	60	120	
Ge Internal standard	72	2	HMI H2	2523718	1.03	2598552	97.12	60	120	
Ge Internal standard	72	3	HMI He	737103	1.11	772392	95.43	60	120	
In Internal Standard	115	3	HMI He	2788676	1.49	2872781	97.07	60	120	
Ir (IS)	193	3	HMI He	6049500	1.20	6092963	99.29	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-E MS
Data File Name	268SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:40:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.156	ppb	40.156	8.11	1649	2000	
Na	23	3	45	74172.749	ppb	74172.749	1.23	7830500	400000	
Mg	24	3	45	21167.215	ppb	21167.215	2.79	1172529	400000	
Al	27	3	45	728.701	ppb	728.701	1.36	15751	400000	
K	39	3	45	24499.414	ppb	24499.414	1.31	1134619	400000	
Ca	40	2	45	32500.007	ppb	32500.007	0.46	18375655	400000	
V	51	3	72	37.644	ppb	37.644	2.91	24077	2000	
Cr	52	3	72	46.540	ppb	46.540	1.30	38140	5000	
Mn	55	3	72	49.786	ppb	49.786	1.91	20211	10000	
Fe	56	2	72	1277.468	ppb	1277.468	0.84	2004568	10000	
Co	59	3	72	36.913	ppb	36.913	2.66	47369	2000	
Ni	60	3	72	37.284	ppb	37.284	0.29	14147	5000	
Cu	63	3	72	55.289	ppb	55.289	1.96	54762	5000	
Zn	66	3	72	70.220	ppb	70.220	1.94	11277	5000	
As	75	3	72	42.357	ppb	42.357	4.02	4755	2000	
Se	78	2	72	38.500	ppb	38.500	5.85	2221	2000	
Sr	88	3	72	260.972	ppb	260.972	1.85	138209	4000	
Mo	95	3	115	366.777	ppb	366.777	0.46	183666	2000	
Ag	107	3	115	36.275	ppb	36.275	0.71	61324	100	
Cd	111	3	115	35.917	ppb	35.917	1.93	8664	2000	
Sn	120	3	115	35.379	ppb	35.379	1.33	27702	2000	
Sb	121	3	115	38.541	ppb	38.541	0.97	29147	1000	
Ba	137	3	115	48.797	ppb	48.797	0.40	12073	5000	
Tl	205	3	193	36.496	ppb	36.496	2.42	141397	2000	
(Pb)	206	3	193	37.202	ppb	37.202	0.81	48050	100	
(Pb)	207	3	193	36.777	ppb	36.777	4.55	41940	100	
Pb	208	3	193	36.928	ppb	36.928	1.89	192597	5000	
Th	232	3	193	34.899	ppb	34.899	0.94	186834	2000	
U	238	3	193	37.567	ppb	37.567	2.03	205331	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203419	1.52	4300192	97.75	60	120	
Sc (IS)	45	3	HMI He	590960	0.88	644593	91.68	60	120	
Ge Internal standard	72	2	HMI H2	2487978	0.64	2598552	95.74	60	120	
Ge Internal standard	72	3	HMI He	746231	1.89	772392	96.61	60	120	
In Internal Standard	115	3	HMI He	2792165	1.57	2872781	97.19	60	120	
Ir (IS)	193	3	HMI He	6097658	1.86	6092963	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-F MSD
Data File Name	269SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:41:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.045	ppb	41.045	4.63	1679	2000	
Na	23	3	45	71713.121	ppb	71713.121	1.27	7600520	400000	
Mg	24	3	45	19843.226	ppb	19843.226	0.41	1103435	400000	
Al	27	3	45	719.342	ppb	719.342	0.71	15611	400000	
K	39	3	45	23528.364	ppb	23528.364	2.90	1094657	400000	
Ca	40	2	45	32380.931	ppb	32380.931	0.73	17884845	400000	
V	51	3	72	36.641	ppb	36.641	1.95	23315	2000	
Cr	52	3	72	45.481	ppb	45.481	1.27	37096	5000	
Mn	55	3	72	48.881	ppb	48.881	1.73	19724	10000	
Fe	56	2	72	1260.135	ppb	1260.135	1.11	1991538	10000	
Co	59	3	72	36.493	ppb	36.493	2.88	46531	2000	
Ni	60	3	72	36.286	ppb	36.286	3.94	13692	5000	
Cu	63	3	72	54.840	ppb	54.840	2.04	53981	5000	
Zn	66	3	72	69.397	ppb	69.397	3.17	11074	5000	
As	75	3	72	42.370	ppb	42.370	1.75	4727	2000	
Se	78	2	72	37.521	ppb	37.521	3.65	2180	2000	
Sr	88	3	72	255.410	ppb	255.410	2.15	134391	4000	
Mo	95	3	115	358.305	ppb	358.305	1.46	178374	2000	
Ag	107	3	115	35.588	ppb	35.588	2.00	59811	100	
Cd	111	3	115	36.631	ppb	36.631	1.71	8782	2000	
Sn	120	3	115	35.311	ppb	35.311	1.52	27490	2000	
Sb	121	3	115	38.230	ppb	38.230	1.50	28745	1000	
Ba	137	3	115	46.893	ppb	46.893	1.39	11536	5000	
Tl	205	3	193	35.783	ppb	35.783	1.03	138025	2000	
(Pb)	206	3	193	36.506	ppb	36.506	0.78	46935	100	
(Pb)	207	3	193	36.139	ppb	36.139	0.81	41048	100	
Pb	208	3	193	36.247	ppb	36.247	1.04	188213	5000	
Th	232	3	193	35.103	ppb	35.103	2.19	187012	2000	
U	238	3	193	36.539	ppb	36.539	0.68	198852	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4106232	0.65	4300192	95.49	60	120	
Sc (IS)	45	3	HMI He	593235	1.14	644593	92.03	60	120	
Ge Internal standard	72	2	HMI H2	2504885	0.50	2598552	96.40	60	120	
Ge Internal standard	72	3	HMI He	741428	1.58	772392	95.99	60	120	
In Internal Standard	115	3	HMI He	2776228	2.26	2872781	96.64	60	120	
Ir (IS)	193	3	HMI He	6069067	1.11	6092963	99.61	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	270_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:43:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.511	ppb	4.215	2086	50	107.0	90	110	
Na	23	3	45	46656.803	ppb	2.443	4841818	51000	91.5	90	110	
Mg	24	3	45	9984.710	ppb	2.401	543184	11000	90.8	90	110	
Al	27	3	45	929.153	ppb	5.168	19673	1000	92.9	90	110	
K	39	3	45	9947.093	ppb	1.446	467374	11000	90.4	90	110	
Ca	40	2	45	10357.151	ppb	1.771	5506443	11000	94.2	90	110	
V	51	3	72	47.783	ppb	2.517	28578	50	95.6	90	110	
Cr	52	3	72	48.909	ppb	1.969	37642	50	97.8	90	110	
Mn	55	3	72	47.868	ppb	2.287	18335	50	95.7	90	110	
Fe	56	2	72	1084.984	ppb	2.855	1586836	1000	108.5	90	110	
Co	59	3	72	48.949	ppb	1.675	59221	50	97.9	90	110	
Ni	60	3	72	48.472	ppb	1.235	17149	50	96.9	90	110	
Cu	63	3	72	48.797	ppb	1.467	45614	50	97.6	90	110	
Zn	66	3	72	49.370	ppb	2.225	7537	50	98.7	90	110	
As	75	3	72	52.034	ppb	1.571	5500	50	104.1	90	110	
Se	78	2	72	51.391	ppb	2.206	2749	50	102.8	90	110	
Sr	88	3	72	100.969	ppb	1.972	50446	100	101.0	90	110	
Mo	95	3	115	48.511	ppb	2.824	23407	50	97.0	90	110	
Ag	107	3	115	48.337	ppb	3.077	78623	50	96.7	90	110	
Cd	111	3	115	48.109	ppb	2.117	11162	50	96.2	90	110	
Sn	120	3	115	46.972	ppb	0.418	35175	50	93.9	90	110	
Sb	121	3	115	49.418	ppb	2.518	35954	50	98.8	90	110	
Ba	137	3	115	48.611	ppb	1.678	11574	50	97.2	90	110	
Tl	205	3	193	47.156	ppb	1.317	179717	50	94.3	90	110	
(Pb)	206	3	193	47.258	ppb	1.509	59978	50	94.5	90	110	
(Pb)	207	3	193	47.346	ppb	1.676	53019	50	94.7	90	110	
Pb	208	3	193	47.007	ppb	1.904	240880	50	94.0	90	110	
Th	232	3	193	49.411	ppb	1.072	257517	50	98.8	90	110	
U	238	3	193	47.461	ppb	3.388	254863	50	94.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3947305	1.22	4300192	91.79	60	120	
Sc (IS)	45	3	HMI He	580386	2.06	644593	90.04	60	120	
Ge Internal standard	72	2	HMI H2	2306927	0.92	2598552	88.78	60	120	
Ge Internal standard	72	3	HMI He	703504	0.94	772392	91.08	60	120	
In Internal Standard	115	3	HMI He	2687875	2.51	2872781	93.56	60	120	
Ir (IS)	193	3	HMI He	6000795	1.65	6092963	98.49	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	271_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:45:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.024	ppb	-9.9	5	0.5	
Na	23	3	45	61.916	ppb	14.1	21394	25	>RL
Mg	24	3	45	1.801	ppb	100.0	340	25	
Al	27	3	45	-2.274	ppb	-91.4	90	15	
K	39	3	45	-9.286	ppb	-236.3	24830	50	
V	51	3	72	-0.530	ppb	-8.5	615	1	
Cr	52	3	72	0.629	ppb	30.6	3372	1	
Mn	55	3	72	-0.176	ppb	-70.0	285	0.5	
Co	59	3	72	0.011	ppb	94.4	65	0.5	
Ni	60	3	72	0.687	ppb	28.5	883	1	
Cu	63	3	72	-0.028	ppb	-134.8	342	1	
Zn	66	3	72	-0.162	ppb	-143.9	188	5	
As	75	3	72	0.027	ppb	534.2	43	1	
Se	78	2	72	0.048	ppb	39.2	5	1	
Sr	88	3	72	0.022	ppb	181.7	52	0.5	
Mo	95	3	115	0.145	ppb	20.9	107	0.5	
Ag	107	3	115	0.013	ppb	36.7	33	1	
Cd	111	3	115	0.002	ppb	2393.8	10	0.5	
Sn	120	3	115	0.096	ppb	56.4	785	1	
Sb	121	3	115	0.040	ppb	20.9	72	0.6	
Ba	137	3	115	-0.027	ppb	-112.1	52	0.5	
Tl	205	3	193	-0.018	ppb	-81.0	310	0.1	
(Pb)	206	3	193	-0.089	ppb	-9.8	203	1	
(Pb)	207	3	193	-0.107	ppb	-16.7	358	1	
Pb	208	3	193	-0.092	ppb	-21.8	998	0.5	
Th	232	3	193	1.906	ppb	18.7	16563	1	>RL
U	238	3	193	0.018	ppb	34.6	1616	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4107211	2.34	4300192	95.51	60	120	
Sc (IS)	45	3	HMI He	578971	0.38	644593	89.82	60	120	
Ge Internal standard	72	2	HMI H2	2454682	1.53	2598552	94.46	60	120	
Ge Internal standard	72	3	HMI He	720395	0.78	772392	93.27	60	120	
In Internal Standard	115	3	HMI He	2715462	0.52	2872781	94.52	60	120	
Ir (IS)	193	3	HMI He	6043618	1.78	6092963	99.19	60	120	

Sample Report

Sample Table

Sample Name	280-175167-A-3-A
Data File Name	272SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:47:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.36	2	2000	
Na	23	3	45	222351.348	ppb	222351.348	1.41	23953796	400000	
Mg	24	3	45	10784.708	ppb	10784.708	0.77	610469	400000	
Al	27	3	45	826.412	ppb	826.412	2.61	18230	400000	
K	39	3	45	135302.275	ppb	135302.275	0.26	6282886	400000	
Ca	40	2	45	27209.340	ppb	27209.340	0.55	15107044	400000	
V	51	3	72	-0.441	ppb	-0.441	-33.68	708	2000	
Cr	52	3	72	0.438	ppb	0.438	40.47	3427	5000	
Mn	55	3	72	11.684	ppb	11.684	4.37	5142	10000	
Fe	56	2	72	218.926	ppb	218.926	3.07	393654	10000	
Co	59	3	72	0.086	ppb	0.086	14.36	167	2000	
Ni	60	3	72	3.394	ppb	3.394	12.91	1938	5000	
Cu	63	3	72	2.978	ppb	2.978	6.29	3389	5000	
Zn	66	3	72	5.968	ppb	5.968	4.28	1188	5000	
As	75	3	72	4.215	ppb	4.215	6.86	523	2000	
Se	78	2	72	1.597	ppb	1.597	12.33	94	2000	
Sr	88	3	72	294.483	ppb	294.483	0.84	159654	4000	
Mo	95	3	115	32.268	ppb	32.268	2.56	16253	2000	
Ag	107	3	115	0.011	ppb	0.011	13.06	32	100	
Cd	111	3	115	-0.034	ppb	-0.034	-35.82	2	2000	
Sn	120	3	115	-0.074	ppb	-0.074	-154.69	680	2000	
Sb	121	3	115	2.690	ppb	2.690	6.48	2082	1000	
Ba	137	3	115	7.448	ppb	7.448	6.73	1901	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-29.18	203	2000	
(Pb)	206	3	193	0.009	ppb	0.009	523.01	332	100	
(Pb)	207	3	193	0.016	ppb	0.016	142.86	501	100	
Pb	208	3	193	0.008	ppb	0.008	326.64	1531	5000	
Th	232	3	193	0.484	ppb	0.484	34.95	9442	2000	
U	238	3	193	0.117	ppb	0.117	18.70	2179	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4127125	0.91	4300192	95.98	60	120	
Sc (IS)	45	3	HMI He	603766	0.66	644593	93.67	60	120	
Ge Internal standard	72	2	HMI H2	2485738	1.96	2598552	95.66	60	120	
Ge Internal standard	72	3	HMI He	763809	0.44	772392	98.89	60	120	
In Internal Standard	115	3	HMI He	2803258	1.50	2872781	97.58	60	120	
Ir (IS)	193	3	HMI He	6121810	0.90	6092963	100.47	60	120	

Sample Report

Sample Table

Sample Name	280-175184-B-1-C
Data File Name	273SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:49:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.40	2	2000	
Na	23	3	45	111523.927	ppb	111523.927	1.01	12017006	400000	
Mg	24	3	45	14033.761	ppb	14033.761	2.07	793963	400000	
Al	27	3	45	0.453	ppb	0.453	483.18	153	400000	
K	39	3	45	5709.616	ppb	5709.616	0.93	290235	400000	
Ca	40	2	45	84225.108	ppb	84225.108	1.23	47021819	400000	
V	51	3	72	-0.586	ppb	-0.586	-13.08	606	2000	
Cr	52	3	72	0.243	ppb	0.243	87.39	3224	5000	
Mn	55	3	72	1.428	ppb	1.428	6.75	941	10000	
Fe	56	2	72	11.050	ppb	11.050	38.12	80688	10000	
Co	59	3	72	0.160	ppb	0.160	16.77	260	2000	
Ni	60	3	72	1.943	ppb	1.943	6.54	1378	5000	
Cu	63	3	72	0.417	ppb	0.417	11.71	796	5000	
Zn	66	3	72	2.509	ppb	2.509	16.04	620	5000	
As	75	3	72	0.173	ppb	0.173	105.25	62	2000	
Se	78	2	72	0.100	ppb	0.100	34.21	8	2000	
Sr	88	3	72	612.500	ppb	612.500	0.54	326550	4000	
Mo	95	3	115	1.304	ppb	1.304	12.72	698	2000	
Ag	107	3	115	0.007	ppb	0.007	224.10	25	100	
Cd	111	3	115	0.014	ppb	0.014	225.18	13	2000	
Sn	120	3	115	-0.188	ppb	-0.188	-36.45	598	2000	
Sb	121	3	115	0.064	ppb	0.064	39.97	93	1000	
Ba	137	3	115	70.836	ppb	70.836	1.57	17706	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-4.16	143	2000	
(Pb)	206	3	193	-0.058	ppb	-0.058	-58.28	245	100	
(Pb)	207	3	193	-0.106	ppb	-0.106	-28.25	363	100	
Pb	208	3	193	-0.064	ppb	-0.064	-14.13	1158	5000	
Th	232	3	193	-0.085	ppb	-0.085	-116.38	6488	2000	
U	238	3	193	1.687	ppb	1.687	1.78	10716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152455	0.33	4300192	96.56	60	120	
Sc (IS)	45	3	HMI He	603567	1.26	644593	93.64	60	120	
Ge Internal standard	72	2	HMI H2	2580063	1.34	2598552	99.29	60	120	
Ge Internal standard	72	3	HMI He	751232	0.79	772392	97.26	60	120	
In Internal Standard	115	3	HMI He	2825559	0.88	2872781	98.36	60	120	
Ir (IS)	193	3	HMI He	6113881	2.52	6092963	100.34	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-1-A
Data File Name	274SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:51:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.04	2	2000	
Na	23	3	45	146619.899	ppb	146619.899	3.91	15664528	400000	
Mg	24	3	45	24215.029	ppb	24215.029	2.49	1358779	400000	
Al	27	3	45	20.346	ppb	20.346	11.01	584	400000	
K	39	3	45	5344.690	ppb	5344.690	2.21	271139	400000	
Ca	40	2	45	233156.457	ppb	233156.457	1.15	129033443	400000	
V	51	3	72	-0.434	ppb	-0.434	-17.85	705	2000	
Cr	52	3	72	0.516	ppb	0.516	29.47	3449	5000	
Mn	55	3	72	207.027	ppb	207.027	2.18	83893	10000	
Fe	56	2	72	87.842	ppb	87.842	6.94	200150	10000	
Co	59	3	72	11.815	ppb	11.815	1.32	15386	2000	
Ni	60	3	72	11.160	ppb	11.160	3.68	4757	5000	
Cu	63	3	72	0.275	ppb	0.275	26.59	660	5000	
Zn	66	3	72	15.227	ppb	15.227	2.00	2651	5000	
As	75	3	72	0.689	ppb	0.689	8.50	120	2000	
Se	78	2	72	65.677	ppb	65.677	4.32	3896	2000	
Sr	88	3	72	4807.969	ppb	4807.969	1.34	2576802	4000	
Mo	95	3	115	8072.694	ppb	8072.694	3.74	4018905	2000	
Ag	107	3	115	0.010	ppb	0.010	4.49	30	100	
Cd	111	3	115	0.800	ppb	0.800	23.53	202	2000	
Sn	120	3	115	-0.215	ppb	-0.215	-34.45	568	2000	
Sb	121	3	115	0.082	ppb	0.082	12.25	105	1000	
Ba	137	3	115	29.359	ppb	29.359	6.97	7243	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-15.60	202	2000	
(Pb)	206	3	193	-0.097	ppb	-0.097	-47.85	195	100	
(Pb)	207	3	193	-0.115	ppb	-0.115	-19.45	353	100	
Pb	208	3	193	-0.095	ppb	-0.095	-14.54	1000	5000	
Th	232	3	193	-0.097	ppb	-0.097	-68.04	6427	2000	
U	238	3	193	81.590	ppb	81.590	1.81	445756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4117657	2.72	4300192	95.76	60	120	
Sc (IS)	45	3	HMI He	598724	1.30	644593	92.88	60	120	
Ge Internal standard	72	2	HMI H2	2560759	2.87	2598552	98.55	60	120	
Ge Internal standard	72	3	HMI He	755251	1.34	772392	97.78	60	120	
In Internal Standard	115	3	HMI He	2778111	2.58	2872781	96.70	60	120	
Ir (IS)	193	3	HMI He	6118978	0.79	6092963	100.43	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-2-A
Data File Name	275SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:52:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.106	ppb	-0.106	-69.55	2	2000	
Na	23	3	45	148949.145	ppb	148949.145	1.28	15554272	400000	
Mg	24	3	45	24485.819	ppb	24485.819	2.52	1342875	400000	
Al	27	3	45	32.756	ppb	32.756	9.67	834	400000	
K	39	3	45	5449.826	ppb	5449.826	0.90	269731	400000	
Ca	40	2	45	242988.654	ppb	242988.654	2.42	130740830	400000	
V	51	3	72	-0.427	ppb	-0.427	-24.16	691	2000	
Cr	52	3	72	0.593	ppb	0.593	65.61	3420	5000	
Mn	55	3	72	213.825	ppb	213.825	0.68	84520	10000	
Fe	56	2	72	71.807	ppb	71.807	5.15	171680	10000	
Co	59	3	72	11.843	ppb	11.843	2.71	15044	2000	
Ni	60	3	72	11.529	ppb	11.529	9.14	4772	5000	
Cu	63	3	72	0.310	ppb	0.310	9.53	678	5000	
Zn	66	3	72	14.064	ppb	14.064	5.70	2404	5000	
As	75	3	72	0.624	ppb	0.624	21.52	110	2000	
Se	78	2	72	68.248	ppb	68.248	2.81	3970	2000	
Sr	88	3	72	4893.607	ppb	4893.607	2.60	2558371	4000	
Mo	95	3	115	1775.495	ppb	1775.495	1.96	883470	2000	
Ag	107	3	115	0.008	ppb	0.008	56.43	27	100	
Cd	111	3	115	0.154	ppb	0.154	65.77	47	2000	
Sn	120	3	115	-0.109	ppb	-0.109	-44.05	646	2000	
Sb	121	3	115	0.073	ppb	0.073	43.92	98	1000	
Ba	137	3	115	28.531	ppb	28.531	3.33	7040	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-21.96	158	2000	
(Pb)	206	3	193	-0.062	ppb	-0.062	-4.52	232	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-64.77	401	100	
Pb	208	3	193	-0.076	ppb	-0.076	-14.73	1059	5000	
Th	232	3	193	-0.306	ppb	-0.306	-22.83	5164	2000	
U	238	3	193	66.524	ppb	66.524	0.72	351622	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4003450	1.39	4300192	93.10	60	120	
Sc (IS)	45	3	HMI He	585105	0.45	644593	90.77	60	120	
Ge Internal standard	72	2	HMI H2	2509350	1.56	2598552	96.57	60	120	
Ge Internal standard	72	3	HMI He	736678	0.34	772392	95.38	60	120	
In Internal Standard	115	3	HMI He	2775126	0.79	2872781	96.60	60	120	
Ir (IS)	193	3	HMI He	5915021	0.67	6092963	97.08	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-3-A
Data File Name	276SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:54:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.107	ppb	-0.107	-68.68	2	2000	
Na	23	3	45	141774.209	ppb	141774.209	0.78	15202327	400000	
Mg	24	3	45	23036.447	ppb	23036.447	2.19	1297200	400000	
Al	27	3	45	22.378	ppb	22.378	13.94	631	400000	
K	39	3	45	5238.748	ppb	5238.748	0.45	267235	400000	
Ca	40	2	45	231239.118	ppb	231239.118	0.77	124586190	400000	
V	51	3	72	-0.540	ppb	-0.540	-13.69	636	2000	
Cr	52	3	72	0.511	ppb	0.511	54.64	3434	5000	
Mn	55	3	72	205.028	ppb	205.028	2.15	82839	10000	
Fe	56	2	72	60.194	ppb	60.194	9.81	150551	10000	
Co	59	3	72	11.182	ppb	11.182	2.91	14517	2000	
Ni	60	3	72	10.353	ppb	10.353	0.61	4449	5000	
Cu	63	3	72	0.220	ppb	0.220	2.61	603	5000	
Zn	66	3	72	13.813	ppb	13.813	5.05	2417	5000	
As	75	3	72	0.603	ppb	0.603	7.74	110	2000	
Se	78	2	72	65.226	ppb	65.226	3.18	3714	2000	
Sr	88	3	72	4686.175	ppb	4686.175	1.79	2503540	4000	
Mo	95	3	115	556.933	ppb	556.933	1.25	278234	2000	
Ag	107	3	115	0.014	ppb	0.014	43.84	37	100	
Cd	111	3	115	0.035	ppb	0.035	121.30	18	2000	
Sn	120	3	115	-0.218	ppb	-0.218	-25.15	566	2000	
Sb	121	3	115	0.099	ppb	0.099	16.99	118	1000	
Ba	137	3	115	27.876	ppb	27.876	2.75	6907	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-9.97	163	2000	
(Pb)	206	3	193	-0.089	ppb	-0.089	-18.22	205	100	
(Pb)	207	3	193	-0.089	ppb	-0.089	-6.75	381	100	
Pb	208	3	193	-0.088	ppb	-0.088	-3.08	1028	5000	
Th	232	3	193	-0.338	ppb	-0.338	-19.02	5159	2000	
U	238	3	193	40.981	ppb	40.981	2.06	223877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4007957	1.51	4300192	93.20	60	120	
Sc (IS)	45	3	HMI He	600780	0.69	644593	93.20	60	120	
Ge Internal standard	72	2	HMI H2	2456782	2.01	2598552	94.54	60	120	
Ge Internal standard	72	3	HMI He	752863	0.52	772392	97.47	60	120	
In Internal Standard	115	3	HMI He	2785796	0.38	2872781	96.97	60	120	
Ir (IS)	193	3	HMI He	6097951	1.04	6092963	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-4-A
Data File Name	277SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:56:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	143927.787	ppb	143927.787	0.93	15073239	400000	
Mg	24	3	45	23667.301	ppb	23667.301	2.54	1301563	400000	
Al	27	3	45	26.213	ppb	26.213	4.82	697	400000	
K	39	3	45	5321.918	ppb	5321.918	0.79	264740	400000	
Ca	40	2	45	224463.963	ppb	224463.963	1.05	125578983	400000	
V	51	3	72	-0.904	ppb	-0.904	-4.92	401	2000	
Cr	52	3	72	0.284	ppb	0.284	26.11	3184	5000	
Mn	55	3	72	208.336	ppb	208.336	1.13	82184	10000	
Fe	56	2	72	47.767	ppb	47.767	9.32	136646	10000	
Co	59	3	72	11.157	ppb	11.157	3.60	14145	2000	
Ni	60	3	72	11.161	ppb	11.161	1.74	4632	5000	
Cu	63	3	72	0.169	ppb	0.169	11.57	540	5000	
Zn	66	3	72	13.893	ppb	13.893	6.90	2372	5000	
As	75	3	72	0.641	ppb	0.641	14.83	112	2000	
Se	78	2	72	66.069	ppb	66.069	2.69	3893	2000	
Sr	88	3	72	4713.522	ppb	4713.522	1.99	2458885	4000	
Mo	95	3	115	247.264	ppb	247.264	2.10	122431	2000	
Ag	107	3	115	0.005	ppb	0.005	86.61	22	100	
Cd	111	3	115	-0.013	ppb	-0.013	-190.39	7	2000	
Sn	120	3	115	-0.284	ppb	-0.284	-32.11	511	2000	
Sb	121	3	115	0.078	ppb	0.078	10.25	102	1000	
Ba	137	3	115	28.395	ppb	28.395	2.54	6970	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-11.62	158	2000	
(Pb)	206	3	193	-0.122	ppb	-0.122	-5.99	158	100	
(Pb)	207	3	193	-0.110	ppb	-0.110	-21.91	348	100	
Pb	208	3	193	-0.104	ppb	-0.104	-4.16	926	5000	
Th	232	3	193	-0.372	ppb	-0.372	-7.88	4862	2000	
U	238	3	193	40.472	ppb	40.472	2.64	215663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4161771	0.25	4300192	96.78	60	120	
Sc (IS)	45	3	HMI He	586789	1.00	644593	91.03	60	120	
Ge Internal standard	72	2	HMI H2	2542380	1.74	2598552	97.84	60	120	
Ge Internal standard	72	3	HMI He	735119	0.35	772392	95.17	60	120	
In Internal Standard	115	3	HMI He	2760871	1.02	2872781	96.10	60	120	
Ir (IS)	193	3	HMI He	5949495	2.63	6092963	97.65	60	120	

Sample Report

Sample Table

Sample Name	280-175184-D-1-A
Data File Name	278SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:58:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	112433.923	ppb	112433.923	1.95	11930622	400000	
Mg	24	3	45	14269.181	ppb	14269.181	2.51	795276	400000	
Al	27	3	45	-1.459	ppb	-1.459	-167.08	110	400000	
K	39	3	45	5839.064	ppb	5839.064	1.09	291711	400000	
Ca	40	2	45	85978.585	ppb	85978.585	2.26	47808009	400000	
V	51	3	72	-0.894	ppb	-0.894	-1.37	408	2000	
Cr	52	3	72	0.347	ppb	0.347	87.98	3237	5000	
Mn	55	3	72	1.112	ppb	1.112	10.92	798	10000	
Fe	56	2	72	10.245	ppb	10.245	39.07	78004	10000	
Co	59	3	72	0.153	ppb	0.153	22.26	247	2000	
Ni	60	3	72	1.903	ppb	1.903	28.17	1338	5000	
Cu	63	3	72	0.366	ppb	0.366	15.93	731	5000	
Zn	66	3	72	2.158	ppb	2.158	22.00	553	5000	
As	75	3	72	0.033	ppb	0.033	364.33	45	2000	
Se	78	2	72	0.182	ppb	0.182	29.26	13	2000	
Sr	88	3	72	630.759	ppb	630.759	1.20	329802	4000	
Mo	95	3	115	1.959	ppb	1.959	15.51	1001	2000	
Ag	107	3	115	0.007	ppb	0.007	84.72	25	100	
Cd	111	3	115	-0.020	ppb	-0.020	-179.30	5	2000	
Sn	120	3	115	-0.220	ppb	-0.220	-19.71	556	2000	
Sb	121	3	115	0.021	ppb	0.021	106.67	58	1000	
Ba	137	3	115	71.235	ppb	71.235	1.97	17271	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-4.36	137	2000	
(Pb)	206	3	193	-0.094	ppb	-0.094	-11.53	197	100	
(Pb)	207	3	193	-0.138	ppb	-0.138	-19.46	323	100	
Pb	208	3	193	-0.102	ppb	-0.102	-11.91	951	5000	
Th	232	3	193	-0.388	ppb	-0.388	-2.90	4867	2000	
U	238	3	193	1.627	ppb	1.627	2.72	10296	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4135573	0.91	4300192	96.17	60	120	
Sc (IS)	45	3	HMI He	594403	1.20	644593	92.21	60	120	
Ge Internal standard	72	2	HMI H2	2533245	0.78	2598552	97.49	60	120	
Ge Internal standard	72	3	HMI He	736843	2.10	772392	95.40	60	120	
In Internal Standard	115	3	HMI He	2741316	2.01	2872781	95.42	60	120	
Ir (IS)	193	3	HMI He	6056954	2.78	6092963	99.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	279_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:00:00-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.634	ppb	8.365	2174	50	109.3	90	110	
Na	23	3	45	49740.630	ppb	1.684	5076849	51000	97.5	90	110	
Mg	24	3	45	10556.685	ppb	0.693	564862	11000	96.0	90	110	
Al	27	3	45	991.563	ppb	1.276	20653	1000	99.2	90	110	
K	39	3	45	10215.103	ppb	0.302	471404	11000	92.9	90	110	
Ca	40	2	45	10481.448	ppb	2.357	5635998	11000	95.3	90	110	
V	51	3	72	50.408	ppb	0.437	29378	50	100.8	90	110	
Cr	52	3	72	51.663	ppb	2.478	38643	50	103.3	90	110	
Mn	55	3	72	51.216	ppb	2.520	19120	50	102.4	90	110	
Fe	56	2	72	1052.637	ppb	0.490	1589257	1000	105.3	90	110	
Co	59	3	72	50.880	ppb	2.929	60060	50	101.8	90	110	
Ni	60	3	72	51.098	ppb	3.657	17606	50	102.2	90	110	
Cu	63	3	72	50.003	ppb	2.346	45607	50	100.0	90	110	
Zn	66	3	72	49.746	ppb	3.779	7408	50	99.5	90	110	
As	75	3	72	52.498	ppb	3.509	5413	50	105.0	90	110	
Se	78	2	72	51.129	ppb	1.178	2820	50	102.3	90	110	
Sr	88	3	72	105.011	ppb	2.904	51189	100	105.0	90	110	
Mo	95	3	115	48.415	ppb	2.663	23474	50	96.8	90	110	
Ag	107	3	115	48.777	ppb	0.749	79737	50	97.6	90	110	
Cd	111	3	115	48.610	ppb	2.167	11336	50	97.2	90	110	
Sn	120	3	115	48.256	ppb	3.113	36278	50	96.5	90	110	
Sb	121	3	115	49.122	ppb	1.062	35917	50	98.2	90	110	
Ba	137	3	115	50.156	ppb	2.033	11998	50	100.3	90	110	
Tl	205	3	193	47.529	ppb	2.954	181192	50	95.1	90	110	
(Pb)	206	3	193	48.244	ppb	3.394	61238	50	96.5	90	110	
(Pb)	207	3	193	47.983	ppb	1.319	53759	50	96.0	90	110	
Pb	208	3	193	47.962	ppb	3.196	245823	50	95.9	90	110	
Th	232	3	193	47.319	ppb	2.029	246995	50	94.6	90	110	
U	238	3	193	48.140	ppb	3.560	258595	50	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3993183	2.12	4300192	92.86	60	120	
Sc (IS)	45	3	HMI He	570735	1.12	644593	88.54	60	120	
Ge Internal standard	72	2	HMI H2	2378470	0.41	2598552	91.53	60	120	
Ge Internal standard	72	3	HMI He	686667	1.86	772392	88.90	60	120	
In Internal Standard	115	3	HMI He	2700127	1.08	2872781	93.99	60	120	
Ir (IS)	193	3	HMI He	6004595	2.30	6092963	98.55	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	280_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:01:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	93.551	ppb	5.7	24208	25	>RL
Mg	24	3	45	1.353	ppb	78.0	310	25	
Al	27	3	45	-3.816	ppb	-19.0	57	15	
K	39	3	45	5.229	ppb	203.3	25007	50	
V	51	3	72	-0.690	ppb	-12.3	508	1	
Cr	52	3	72	0.257	ppb	56.3	3034	1	
Mn	55	3	72	-0.032	ppb	-314.1	333	0.5	
Co	59	3	72	0.019	ppb	117.4	73	0.5	
Ni	60	3	72	0.681	ppb	23.9	861	1	
Cu	63	3	72	-0.004	ppb	-1012.4	356	1	
Zn	66	3	72	-0.113	ppb	-68.5	192	5	
As	75	3	72	-0.028	ppb	-93.9	37	1	
Se	78	2	72	0.039	ppb	161.4	4	1	
Sr	88	3	72	0.214	ppb	14.3	147	0.5	
Mo	95	3	115	0.257	ppb	27.9	157	0.5	
Ag	107	3	115	0.005	ppb	169.9	20	1	
Cd	111	3	115	-0.019	ppb	-116.7	5	0.5	
Sn	120	3	115	0.048	ppb	215.2	728	1	
Sb	121	3	115	0.024	ppb	46.9	58	0.6	
Ba	137	3	115	-0.036	ppb	-187.6	48	0.5	
Tl	205	3	193	-0.037	ppb	-35.6	228	0.1	
(Pb)	206	3	193	-0.095	ppb	-15.0	190	1	
(Pb)	207	3	193	-0.103	ppb	-8.8	353	1	
Pb	208	3	193	-0.099	ppb	-9.6	943	0.5	
Th	232	3	193	1.488	ppb	12.7	14091	1	>RL
U	238	3	193	0.018	ppb	97.7	1578	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3930491	1.87	4300192	91.40	60	120	
Sc (IS)	45	3	HMI He	568357	0.68	644593	88.17	60	120	
Ge Internal standard	72	2	HMI H2	2385082	0.54	2598552	91.79	60	120	
Ge Internal standard	72	3	HMI He	704571	1.60	772392	91.22	60	120	
In Internal Standard	115	3	HMI He	2639316	1.70	2872781	91.87	60	120	
Ir (IS)	193	3	HMI He	5897336	1.32	6092963	96.79	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609219/1-B
Data File Name	281_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:03:37-06:00
Sample Type	Blank
Dilution	1
Comment	609238 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	102.446	ppb	4.557803575	25452	25
Mg	24	3	45	1.637	ppb	76.48505131	330	25
Al	27	3	45	-0.810	ppb	-108.1551599	120	15
K	39	3	45	7.183	ppb	455.6774478	25445	50
Ca	40	2	45	23.990	ppb	6.398590519	25693	200
V	51	3	72	-0.728	ppb	-8.523607271	493	1
Cr	52	3	72	0.248	ppb	130.5760524	3069	1
Mn	55	3	72	0.018	ppb	197.6406077	356	0.5
Fe	56	2	72	23.443	ppb	20.1867278	94882	50
Co	59	3	72	-0.009	ppb	-248.519874	40	0.5
Ni	60	3	72	0.074	ppb	328.5979583	663	1
Cu	63	3	72	0.033	ppb	152.6084584	396	1
Zn	66	3	72	1.089	ppb	27.18987172	375	5
As	75	3	72	-0.064	ppb	-181.2821806	33	1
(Se)	78	3	72	-0.003	ppb	-86436.2757	22	1
Sr	88	3	72	0.181	ppb	6.587186937	132	0.5
Mo	95	3	115	0.173	ppb	38.82058169	120	0.5
Ag	107	3	115	0.007	ppb	30.4280059	23	1
Cd	111	3	115	-0.027	ppb	-46.04698027	3	0.5
Sn	120	3	115	-0.203	ppb	-74.97139209	563	1
Sb	121	3	115	-0.015	ppb	-107.3440591	32	0.6
Ba	137	3	115	-0.027	ppb	-397.7907335	52	0.5
Tl	205	3	193	-0.055	ppb	-16.41795192	163	0.1
(Pb)	206	3	193	-0.105	ppb	-22.2516493	180	1
(Pb)	207	3	193	-0.081	ppb	-27.46311505	381	1
Pb	208	3	193	-0.097	ppb	-20.54734367	960	0.5
Th	232	3	193	0.058	ppb	160.6732833	7040	1
U	238	3	193	0.008	ppb	408.9550533	1541	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121585	2.04	4300192	95.85	60	120	
Sc (IS)	45	3	HMI He	576216	0.91	644593	89.39	60	120	
Ge Internal standard	72	2	HMI H2	2442241	0.78	2598552	93.98	60	120	
Ge Internal standard	72	3	HMI He	714043	1.23	772392	92.45	60	120	
In Internal Standard	115	3	HMI He	2710472	1.81	2872781	94.35	60	120	
Ir (IS)	193	3	HMI He	5967033	1.86	6092963	97.93	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609219/2-B
Data File Name	282_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:05:28-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609238 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	42.854	42.854	ppb	10.059	1728	40	107.1	80	120	
Na	23	3	45	810.573	810.573	ppb	0.616	99295	40	2026.4	80	120	>+/-20%
Mg	24	3	45	712.214	712.214	ppb	0.179	39130	40	1780.5	80	120	>+/-20%
Al	27	3	45	725.490	725.490	ppb	2.699	15461	40	1813.7	80	120	>+/-20%
K	39	3	45	713.102	713.102	ppb	1.486	57217	40	1782.8	80	120	>+/-20%
Ca	40	2	45	807.631	807.631	ppb	1.504	460022	40	2019.1	80	120	>+/-20%
V	51	3	72	36.866	36.866	ppb	2.793	22769	40	92.2	80	120	
Cr	52	3	72	38.070	38.070	ppb	0.355	30622	40	95.2	80	120	
Mn	55	3	72	38.431	38.431	ppb	2.065	15132	40	96.1	80	120	
Fe	56	2	72	793.905	793.905	ppb	1.920	1269805	40	1984.8	80	120	>+/-20%
(Fe)	56	3	72	746.427	746.427	ppb	0.391	477879	40	1866.1	80	120	>+/-20%
Co	59	3	72	38.851	38.851	ppb	1.493	48101	40	97.1	80	120	
Ni	60	3	72	38.205	38.205	ppb	2.674	13965	40	95.5	80	120	
Cu	63	3	72	38.752	38.752	ppb	0.663	37141	40	96.9	80	120	
Zn	66	3	72	39.374	39.374	ppb	2.741	6193	40	98.4	80	120	
As	75	3	72	37.657	37.657	ppb	0.567	4084	40	94.1	80	120	
Se	78	2	72	40.075	40.075	ppb	2.478	2314	40	100.2	80	120	
(Se)	78	3	72	45.601	45.601	ppb	2.324	297	40	114.0	80	120	
Sr	88	3	72	78.996	78.996	ppb	0.154	40390	40	197.5	80	120	>+/-20%
Mo	95	3	115	36.361	36.361	ppb	4.616	18040	40	90.9	80	120	
Ag	107	3	115	38.036	38.036	ppb	2.559	63613	40	95.1	80	120	
Cd	111	3	115	37.319	37.319	ppb	2.623	8904	40	93.3	80	120	
Sn	120	3	115	35.292	35.292	ppb	3.004	27341	40	88.2	80	120	
Sb	121	3	115	37.164	37.164	ppb	2.195	27815	40	92.9	80	120	
Ba	137	3	115	39.036	39.036	ppb	6.206	9560	40	97.6	80	120	
Tl	205	3	193	37.451	37.451	ppb	1.569	144072	40	93.6	80	120	
(Pb)	206	3	193	37.621	37.621	ppb	1.523	48236	40	94.1	80	120	
(Pb)	207	3	193	37.503	37.503	ppb	0.531	42478	40	93.8	80	120	
Pb	208	3	193	37.820	37.820	ppb	1.575	195820	40	94.5	80	120	
Th	232	3	193	35.468	35.468	ppb	2.328	188383	40	88.7	80	120	
U	238	3	193	37.680	37.680	ppb	1.999	204477	40	94.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124548	3.35	4300192	95.92	60	120	
Sc (IS)	45	3	HMI He	582584	0.35	644593	90.38	60	120	
Ge Internal standard	72	2	HMI H2	2489999	1.39	2598552	95.82	60	120	
Ge Internal standard	72	3	HMI He	719786	0.55	772392	93.19	60	120	
In Internal Standard	115	3	HMI He	2763459	2.75	2872781	96.19	60	120	
Ir (IS)	193	3	HMI He	6054342	1.89	6092963	99.37	60	120	

Sample Report

Sample Table

Sample Name	280-175144-D-1-B
Data File Name	283SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:07:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.107	ppb	-0.107	-67.74	2	2000	
Na	23	3	45	11572.433	ppb	11572.433	1.06	1225981	400000	
Mg	24	3	45	4808.600	ppb	4808.600	1.24	264668	400000	
Al	27	3	45	766.111	ppb	766.111	1.16	16436	400000	
K	39	3	45	675.829	ppb	675.829	2.87	55957	400000	
Ca	40	2	45	15017.744	ppb	15017.744	0.35	8225229	400000	
V	51	3	72	0.974	ppb	0.974	24.76	1524	2000	
Cr	52	3	72	0.979	ppb	0.979	23.89	3667	5000	
Mn	55	3	72	107.160	ppb	107.160	1.06	42069	10000	
Fe	56	2	72	879.554	ppb	879.554	2.56	1401572	10000	
Co	59	3	72	0.900	ppb	0.900	11.71	1178	2000	
Ni	60	3	72	1.401	ppb	1.401	19.62	1144	5000	
Cu	63	3	72	2.658	ppb	2.658	3.33	2926	5000	
Zn	66	3	72	17.937	ppb	17.937	5.63	2974	5000	
As	75	3	72	0.497	ppb	0.497	24.69	95	2000	
Se	78	2	72	0.289	ppb	0.289	56.19	19	2000	
Sr	88	3	72	121.887	ppb	121.887	1.33	63049	4000	
Mo	95	3	115	0.354	ppb	0.354	13.50	207	2000	
Ag	107	3	115	0.014	ppb	0.014	101.13	35	100	
Cd	111	3	115	0.045	ppb	0.045	93.79	20	2000	
Sn	120	3	115	-0.020	ppb	-0.020	-683.39	693	2000	
Sb	121	3	115	0.246	ppb	0.246	12.30	222	1000	
Ba	137	3	115	93.880	ppb	93.880	2.73	22319	5000	
Tl	205	3	193	-0.039	ppb	-0.039	-20.88	232	2000	
(Pb)	206	3	193	2.500	ppb	2.500	4.34	3565	100	
(Pb)	207	3	193	2.108	ppb	2.108	2.17	2894	100	
Pb	208	3	193	2.252	ppb	2.252	5.18	13284	5000	
Th	232	3	193	1.690	ppb	1.690	8.12	15799	2000	
U	238	3	193	0.344	ppb	0.344	14.09	3434	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068650	0.81	4300192	94.62	60	120	
Sc (IS)	45	3	HMI He	586791	0.63	644593	91.03	60	120	
Ge Internal standard	72	2	HMI H2	2492804	1.35	2598552	95.93	60	120	
Ge Internal standard	72	3	HMI He	728527	0.83	772392	94.32	60	120	
In Internal Standard	115	3	HMI He	2690024	0.89	2872781	93.64	60	120	
Ir (IS)	193	3	HMI He	6172836	4.71	6092963	101.31	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-B
Data File Name	284SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:09:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.059	ppb	0.059	440.95	8	2000	
Na	23	3	45	7165.497	ppb	7165.497	2.47	756191	400000	
Mg	24	3	45	3843.821	ppb	3843.821	1.77	209223	400000	
Al	27	3	45	625.710	ppb	625.710	0.82	13300	400000	
K	39	3	45	865.692	ppb	865.692	4.19	63755	400000	
Ca	40	2	45	11333.695	ppb	11333.695	1.96	6271397	400000	
V	51	3	72	0.586	ppb	0.586	13.40	1316	2000	
Cr	52	3	72	0.417	ppb	0.417	57.07	3317	5000	
Mn	55	3	72	92.926	ppb	92.926	2.20	37218	10000	
Fe	56	2	72	614.610	ppb	614.610	0.58	1013627	10000	
Co	59	3	72	0.926	ppb	0.926	3.45	1234	2000	
Ni	60	3	72	1.447	ppb	1.447	13.45	1183	5000	
Cu	63	3	72	2.434	ppb	2.434	4.25	2762	5000	
Zn	66	3	72	13.675	ppb	13.675	6.05	2362	5000	
As	75	3	72	0.630	ppb	0.630	26.54	112	2000	
Se	78	2	72	0.262	ppb	0.262	32.46	17	2000	
Sr	88	3	72	61.742	ppb	61.742	1.26	32574	4000	
Mo	95	3	115	0.296	ppb	0.296	20.63	180	2000	
Ag	107	3	115	0.005	ppb	0.005	61.33	22	100	
Cd	111	3	115	0.045	ppb	0.045	5.78	20	2000	
Sn	120	3	115	-0.082	ppb	-0.082	-57.13	653	2000	
Sb	121	3	115	0.096	ppb	0.096	57.59	113	1000	
Ba	137	3	115	87.774	ppb	87.774	2.14	21048	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-9.27	160	2000	
(Pb)	206	3	193	2.173	ppb	2.173	4.59	3114	100	
(Pb)	207	3	193	2.030	ppb	2.030	2.38	2779	100	
Pb	208	3	193	2.085	ppb	2.085	3.01	12308	5000	
Th	232	3	193	0.266	ppb	0.266	56.59	8295	2000	
U	238	3	193	0.350	ppb	0.350	7.08	3442	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109030	0.94	4300192	95.55	60	120	
Sc (IS)	45	3	HMI He	580225	1.44	644593	90.01	60	120	
Ge Internal standard	72	2	HMI H2	2531866	0.57	2598552	97.43	60	120	
Ge Internal standard	72	3	HMI He	742443	1.41	772392	96.12	60	120	
In Internal Standard	115	3	HMI He	2713182	3.07	2872781	94.44	60	120	
Ir (IS)	193	3	HMI He	6114356	1.78	6092963	100.35	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-C MS
Data File Name	285SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:10:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.524	ppb	39.524	4.50	1591	2000	
Na	23	3	45	7817.512	ppb	7817.512	3.76	834572	400000	
Mg	24	3	45	4437.266	ppb	4437.266	0.47	244624	400000	
Al	27	3	45	1335.842	ppb	1335.842	3.96	28591	400000	
K	39	3	45	1551.719	ppb	1551.719	1.31	95468	400000	
Ca	40	2	45	11610.329	ppb	11610.329	0.95	6471913	400000	
V	51	3	72	37.252	ppb	37.252	2.44	23735	2000	
Cr	52	3	72	36.960	ppb	36.960	2.77	30769	5000	
Mn	55	3	72	129.144	ppb	129.144	2.25	51616	10000	
Fe	56	2	72	1331.326	ppb	1331.326	2.26	2141645	10000	
Co	59	3	72	37.647	ppb	37.647	1.17	48104	2000	
Ni	60	3	72	36.673	ppb	36.673	2.20	13862	5000	
Cu	63	3	72	39.627	ppb	39.627	0.96	39191	5000	
Zn	66	3	72	49.791	ppb	49.791	0.70	8025	5000	
As	75	3	72	36.831	ppb	36.831	5.03	4124	2000	
Se	78	2	72	37.784	ppb	37.784	2.97	2239	2000	
Sr	88	3	72	136.441	ppb	136.441	1.37	71970	4000	
Mo	95	3	115	37.253	ppb	37.253	2.93	18453	2000	
Ag	107	3	115	37.525	ppb	37.525	3.03	62639	100	
Cd	111	3	115	37.644	ppb	37.644	0.80	8967	2000	
Sn	120	3	115	34.400	ppb	34.400	0.93	26628	2000	
Sb	121	3	115	36.998	ppb	36.998	2.87	27637	1000	
Ba	137	3	115	123.796	ppb	123.796	3.22	30149	5000	
Tl	205	3	193	36.923	ppb	36.923	1.01	142444	2000	
(Pb)	206	3	193	39.565	ppb	39.565	2.20	50850	100	
(Pb)	207	3	193	38.878	ppb	38.878	1.42	44135	100	
Pb	208	3	193	39.445	ppb	39.445	1.57	204736	5000	
Th	232	3	193	35.064	ppb	35.064	1.82	186849	2000	
U	238	3	193	37.667	ppb	37.667	0.72	204990	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4139638	2.13	4300192	96.27	60	120	
Sc (IS)	45	3	HMI He	587687	1.24	644593	91.17	60	120	
Ge Internal standard	72	2	HMI H2	2554539	1.98	2598552	98.31	60	120	
Ge Internal standard	72	3	HMI He	742873	0.72	772392	96.18	60	120	
In Internal Standard	115	3	HMI He	2758122	2.13	2872781	96.01	60	120	
Ir (IS)	193	3	HMI He	6070528	0.98	6092963	99.63	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-D MSD
Data File Name	286SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:12:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.484	ppb	40.484	3.29	1589	2000	
Na	23	3	45	7879.973	ppb	7879.973	1.71	839886	400000	
Mg	24	3	45	4460.038	ppb	4460.038	0.84	245558	400000	
Al	27	3	45	1339.339	ppb	1339.339	1.42	28634	400000	
K	39	3	45	1566.658	ppb	1566.658	2.19	96010	400000	
Ca	40	2	45	11762.212	ppb	11762.212	1.10	6479167	400000	
V	51	3	72	36.940	ppb	36.940	1.09	23318	2000	
Cr	52	3	72	37.289	ppb	37.289	1.17	30714	5000	
Mn	55	3	72	129.643	ppb	129.643	2.12	51307	10000	
Fe	56	2	72	1379.945	ppb	1379.945	1.13	2164535	10000	
Co	59	3	72	37.872	ppb	37.872	1.88	47917	2000	
Ni	60	3	72	37.307	ppb	37.307	1.01	13953	5000	
Cu	63	3	72	40.051	ppb	40.051	1.11	39218	5000	
Zn	66	3	72	50.399	ppb	50.399	4.62	8040	5000	
As	75	3	72	36.880	ppb	36.880	2.66	4089	2000	
Se	78	2	72	38.154	ppb	38.154	1.04	2206	2000	
Sr	88	3	72	138.287	ppb	138.287	2.05	72228	4000	
Mo	95	3	115	36.413	ppb	36.413	0.74	17923	2000	
Ag	107	3	115	37.544	ppb	37.544	2.71	62256	100	
Cd	111	3	115	36.329	ppb	36.329	1.28	8598	2000	
Sn	120	3	115	35.588	ppb	35.588	2.22	27333	2000	
Sb	121	3	115	37.273	ppb	37.273	1.67	27658	1000	
Ba	137	3	115	123.590	ppb	123.590	1.05	29907	5000	
Tl	205	3	193	37.035	ppb	37.035	2.15	142703	2000	
(Pb)	206	3	193	39.888	ppb	39.888	2.68	51196	100	
(Pb)	207	3	193	38.386	ppb	38.386	2.66	43521	100	
Pb	208	3	193	39.299	ppb	39.299	2.28	203722	5000	
Th	232	3	193	37.047	ppb	37.047	2.00	196786	2000	
U	238	3	193	37.787	ppb	37.787	2.77	205347	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4090604	1.89	4300192	95.13	60	120	
Sc (IS)	45	3	HMI He	586899	0.66	644593	91.05	60	120	
Ge Internal standard	72	2	HMI H2	2492804	0.49	2598552	95.93	60	120	
Ge Internal standard	72	3	HMI He	735622	0.92	772392	95.24	60	120	
In Internal Standard	115	3	HMI He	2739675	2.10	2872781	95.37	60	120	
Ir (IS)	193	3	HMI He	6064390	2.40	6092963	99.53	60	120	

Sample Report

Sample Table

Sample Name	280-175148-D-1-B
Data File Name	287SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:14:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.024	ppb	-0.024	-531.34	5	2000	
Na	23	3	45	16737.373	ppb	16737.373	3.07	1780247	400000	
Mg	24	3	45	10487.159	ppb	10487.159	1.35	581537	400000	
Al	27	3	45	511.421	ppb	511.421	1.60	11106	400000	
K	39	3	45	1188.145	ppb	1188.145	4.00	79598	400000	
Ca	40	2	45	22526.553	ppb	22526.553	2.22	12554069	400000	
V	51	3	72	0.502	ppb	0.502	14.38	1246	2000	
Cr	52	3	72	0.482	ppb	0.482	33.62	3315	5000	
Mn	55	3	72	101.191	ppb	101.191	0.51	39919	10000	
Fe	56	2	72	593.641	ppb	593.641	2.91	952269	10000	
Co	59	3	72	0.768	ppb	0.768	3.33	1018	2000	
Ni	60	3	72	1.044	ppb	1.044	30.20	1023	5000	
Cu	63	3	72	2.364	ppb	2.364	2.19	2654	5000	
Zn	66	3	72	12.213	ppb	12.213	2.02	2102	5000	
As	75	3	72	0.738	ppb	0.738	39.88	122	2000	
Se	78	2	72	0.212	ppb	0.212	15.86	14	2000	
Sr	88	3	72	206.902	ppb	206.902	0.69	107471	4000	
Mo	95	3	115	0.416	ppb	0.416	6.82	242	2000	
Ag	107	3	115	0.012	ppb	0.012	39.45	33	100	
Cd	111	3	115	0.050	ppb	0.050	102.67	22	2000	
Sn	120	3	115	0.045	ppb	0.045	243.81	755	2000	
Sb	121	3	115	0.202	ppb	0.202	29.09	193	1000	
Ba	137	3	115	93.503	ppb	93.503	0.57	22700	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-11.68	208	2000	
(Pb)	206	3	193	1.654	ppb	1.654	5.28	2397	100	
(Pb)	207	3	193	1.549	ppb	1.549	8.82	2191	100	
Pb	208	3	193	1.636	ppb	1.636	2.36	9775	5000	
Th	232	3	193	2.182	ppb	2.182	11.66	17836	2000	
U	238	3	193	1.482	ppb	1.482	8.74	9402	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4142891	1.44	4300192	96.34	60	120	
Sc (IS)	45	3	HMI He	591499	1.03	644593	91.76	60	120	
Ge Internal standard	72	2	HMI H2	2457534	0.78	2598552	94.57	60	120	
Ge Internal standard	72	3	HMI He	731731	0.94	772392	94.74	60	120	
In Internal Standard	115	3	HMI He	2746563	1.57	2872781	95.61	60	120	
Ir (IS)	193	3	HMI He	5988865	1.30	6092963	98.29	60	120	

Sample Report

Sample Table

Sample Name	280-175150-D-1-B
Data File Name	288SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:16:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.059	ppb	0.059	125.48	8	2000	
Na	23	3	45	9355.284	ppb	9355.284	0.69	984018	400000	
Mg	24	3	45	6942.019	ppb	6942.019	0.93	378120	400000	
Al	27	3	45	564.764	ppb	564.764	3.99	12027	400000	
K	39	3	45	1140.639	ppb	1140.639	0.74	76065	400000	
Ca	40	2	45	13562.306	ppb	13562.306	2.59	7406739	400000	
V	51	3	72	0.599	ppb	0.599	33.24	1321	2000	
Cr	52	3	72	0.465	ppb	0.465	63.09	3347	5000	
Mn	55	3	72	70.320	ppb	70.320	1.99	28233	10000	
Fe	56	2	72	679.587	ppb	679.587	0.18	1092820	10000	
Co	59	3	72	0.636	ppb	0.636	3.41	865	2000	
Ni	60	3	72	1.307	ppb	1.307	38.65	1129	5000	
Cu	63	3	72	2.041	ppb	2.041	4.83	2377	5000	
Zn	66	3	72	16.299	ppb	16.299	6.51	2769	5000	
As	75	3	72	0.666	ppb	0.666	49.65	115	2000	
Se	78	2	72	0.279	ppb	0.279	37.05	18	2000	
Sr	88	3	72	93.786	ppb	93.786	0.39	49428	4000	
Mo	95	3	115	0.462	ppb	0.462	3.37	263	2000	
Ag	107	3	115	0.004	ppb	0.004	235.96	20	100	
Cd	111	3	115	0.022	ppb	0.022	247.41	15	2000	
Sn	120	3	115	0.047	ppb	0.047	43.42	755	2000	
Sb	121	3	115	0.193	ppb	0.193	34.35	185	1000	
Ba	137	3	115	71.054	ppb	71.054	2.79	17208	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-19.49	160	2000	
(Pb)	206	3	193	1.656	ppb	1.656	1.57	2439	100	
(Pb)	207	3	193	1.595	ppb	1.595	2.61	2277	100	
Pb	208	3	193	1.598	ppb	1.598	2.08	9740	5000	
Th	232	3	193	0.649	ppb	0.649	24.36	10237	2000	
U	238	3	193	0.239	ppb	0.239	11.23	2824	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4057584	1.84	4300192	94.36	60	120	
Sc (IS)	45	3	HMI He	580855	0.90	644593	90.11	60	120	
Ge Internal standard	72	2	HMI H2	2483262	0.29	2598552	95.56	60	120	
Ge Internal standard	72	3	HMI He	742031	2.56	772392	96.07	60	120	
In Internal Standard	115	3	HMI He	2738483	2.62	2872781	95.33	60	120	
Ir (IS)	193	3	HMI He	6086386	2.40	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175151-D-1-B
Data File Name	289SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:18:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.30	2	2000	
Na	23	3	45	33756.301	ppb	33756.301	2.12	3511537	400000	
Mg	24	3	45	15483.833	ppb	15483.833	0.54	843297	400000	
Al	27	3	45	268.799	ppb	268.799	8.27	5797	400000	
K	39	3	45	2124.758	ppb	2124.758	0.79	119871	400000	
Ca	40	2	45	35574.343	ppb	35574.343	1.41	19670776	400000	
V	51	3	72	0.312	ppb	0.312	31.35	1139	2000	
Cr	52	3	72	0.613	ppb	0.613	50.78	3437	5000	
Mn	55	3	72	26.100	ppb	26.100	3.74	10629	10000	
Fe	56	2	72	287.060	ppb	287.060	1.10	499430	10000	
Co	59	3	72	0.300	ppb	0.300	26.77	431	2000	
Ni	60	3	72	0.850	ppb	0.850	16.39	961	5000	
Cu	63	3	72	1.739	ppb	1.739	4.45	2066	5000	
Zn	66	3	72	16.210	ppb	16.210	7.18	2737	5000	
As	75	3	72	0.488	ppb	0.488	64.89	95	2000	
Se	78	2	72	1.015	ppb	1.015	21.79	61	2000	
Sr	88	3	72	291.994	ppb	291.994	0.78	152649	4000	
Mo	95	3	115	1.434	ppb	1.434	10.31	733	2000	
Ag	107	3	115	0.008	ppb	0.008	122.66	25	100	
Cd	111	3	115	-0.019	ppb	-0.019	-113.88	5	2000	
Sn	120	3	115	-0.161	ppb	-0.161	-37.02	593	2000	
Sb	121	3	115	0.416	ppb	0.416	8.38	348	1000	
Ba	137	3	115	96.857	ppb	96.857	3.59	23224	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-7.48	143	2000	
(Pb)	206	3	193	0.572	ppb	0.572	4.43	1051	100	
(Pb)	207	3	193	0.536	ppb	0.536	2.35	1085	100	
Pb	208	3	193	0.551	ppb	0.551	5.31	4331	5000	
Th	232	3	193	0.103	ppb	0.103	115.28	7422	2000	
U	238	3	193	1.677	ppb	1.677	2.37	10609	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4111690	1.40	4300192	95.62	60	120	
Sc (IS)	45	3	HMI He	580971	0.75	644593	90.13	60	120	
Ge Internal standard	72	2	HMI H2	2496659	1.50	2598552	96.08	60	120	
Ge Internal standard	72	3	HMI He	736547	1.10	772392	95.36	60	120	
In Internal Standard	115	3	HMI He	2714316	2.43	2872781	94.48	60	120	
Ir (IS)	193	3	HMI He	6086203	1.25	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175184-B-1-B
Data File Name	290SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:19:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	112279.486	ppb	112279.486	2.64	11890467	400000	
Mg	24	3	45	14237.072	ppb	14237.072	0.99	791841	400000	
Al	27	3	45	2.280	ppb	2.280	36.77	190	400000	
K	39	3	45	5722.800	ppb	5722.800	1.23	285867	400000	
Ca	40	2	45	85405.564	ppb	85405.564	1.15	47321837	400000	
V	51	3	72	-0.731	ppb	-0.731	-19.23	511	2000	
Cr	52	3	72	0.239	ppb	0.239	22.74	3185	5000	
Mn	55	3	72	1.291	ppb	1.291	5.59	876	10000	
Fe	56	2	72	15.014	ppb	15.014	30.78	84189	10000	
Co	59	3	72	0.128	ppb	0.128	20.81	217	2000	
Ni	60	3	72	2.053	ppb	2.053	9.29	1403	5000	
Cu	63	3	72	0.743	ppb	0.743	1.26	1108	5000	
Zn	66	3	72	7.352	ppb	7.352	4.50	1373	5000	
As	75	3	72	0.119	ppb	0.119	36.29	55	2000	
Se	78	2	72	0.105	ppb	0.105	120.27	8	2000	
Sr	88	3	72	615.647	ppb	615.647	0.75	324718	4000	
Mo	95	3	115	1.186	ppb	1.186	9.73	628	2000	
Ag	107	3	115	0.002	ppb	0.002	442.12	17	100	
Cd	111	3	115	-0.027	ppb	-0.027	-88.90	3	2000	
Sn	120	3	115	-0.163	ppb	-0.163	-51.81	606	2000	
Sb	121	3	115	0.072	ppb	0.072	43.53	98	1000	
Ba	137	3	115	71.434	ppb	71.434	3.33	17566	5000	
Tl	205	3	193	-0.060	ppb	-0.060	-12.43	147	2000	
(Pb)	206	3	193	-0.085	ppb	-0.085	-21.49	208	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-9.43	413	100	
Pb	208	3	193	-0.077	ppb	-0.077	-9.74	1083	5000	
Th	232	3	193	-0.140	ppb	-0.140	-47.31	6165	2000	
U	238	3	193	1.656	ppb	1.656	1.38	10488	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121309	2.20	4300192	95.84	60	120	
Sc (IS)	45	3	HMI He	593266	1.05	644593	92.04	60	120	
Ge Internal standard	72	2	HMI H2	2499918	1.15	2598552	96.20	60	120	
Ge Internal standard	72	3	HMI He	743202	0.70	772392	96.22	60	120	
In Internal Standard	115	3	HMI He	2780409	1.15	2872781	96.78	60	120	
Ir (IS)	193	3	HMI He	6081197	0.78	6092963	99.81	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	291_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:21:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.871	ppb	16.885	2057	50	103.7	90	110	
Na	23	3	45	47934.715	ppb	2.548	5013990	51000	94.0	90	110	
Mg	24	3	45	10256.258	ppb	2.625	562389	11000	93.2	90	110	
Al	27	3	45	946.469	ppb	3.521	20205	1000	94.6	90	110	
K	39	3	45	10001.919	ppb	1.504	473514	11000	90.9	90	110	
Ca	40	2	45	10611.587	ppb	0.888	5723766	11000	96.5	90	110	
V	51	3	72	48.709	ppb	2.624	29548	50	97.4	90	110	
Cr	52	3	72	49.408	ppb	1.234	38561	50	98.8	90	110	
Mn	55	3	72	49.225	ppb	4.747	19129	50	98.5	90	110	
Fe	56	2	72	1058.089	ppb	4.180	1604561	1000	105.8	90	110	
Co	59	3	72	48.543	ppb	0.586	59603	50	97.1	90	110	
Ni	60	3	72	48.529	ppb	1.287	17426	50	97.1	90	110	
Cu	63	3	72	48.940	ppb	0.996	46430	50	97.9	90	110	
Zn	66	3	72	49.852	ppb	3.162	7720	50	99.7	90	110	
As	75	3	72	52.034	ppb	0.580	5582	50	104.1	90	110	
Se	78	2	72	51.153	ppb	2.762	2834	50	102.3	90	110	
Sr	88	3	72	100.585	ppb	1.110	51003	100	100.6	90	110	
Mo	95	3	115	47.245	ppb	2.181	23510	50	94.5	90	110	
Ag	107	3	115	47.358	ppb	1.234	79432	50	94.7	90	110	
Cd	111	3	115	47.190	ppb	1.351	11289	50	94.4	90	110	
Sn	120	3	115	47.102	ppb	1.387	36358	50	94.2	90	110	
Sb	121	3	115	48.685	ppb	1.885	36520	50	97.4	90	110	
Ba	137	3	115	49.823	ppb	0.830	12230	50	99.6	90	110	
Tl	205	3	193	46.336	ppb	3.440	182749	50	92.7	90	110	
(Pb)	206	3	193	46.576	ppb	1.713	61187	50	93.2	90	110	
(Pb)	207	3	193	46.716	ppb	2.871	54145	50	93.4	90	110	
Pb	208	3	193	46.494	ppb	1.378	246606	50	93.0	90	110	
Th	232	3	193	46.382	ppb	2.165	250572	50	92.8	90	110	
U	238	3	193	46.958	ppb	2.328	261012	50	93.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4004539	1.18	4300192	93.12	60	120	
Sc (IS)	45	3	HMI He	584902	0.74	644593	90.74	60	120	
Ge Internal standard	72	2	HMI H2	2390425	1.58	2598552	91.99	60	120	
Ge Internal standard	72	3	HMI He	713942	1.43	772392	92.43	60	120	
In Internal Standard	115	3	HMI He	2770617	1.76	2872781	96.44	60	120	
Ir (IS)	193	3	HMI He	6209575	0.56	6092963	101.91	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	292_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:23:30-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.106	ppb	-69.9	2	0.5	
Na	23	3	45	66.160	ppb	4.2	21839	25	>RL
Mg	24	3	45	1.548	ppb	37.4	327	25	
Al	27	3	45	-3.859	ppb	-28.9	57	15	
K	39	3	45	0.297	ppb	10315.7	25258	50	
V	51	3	72	-0.669	ppb	-6.7	535	1	
Cr	52	3	72	0.394	ppb	109.1	3212	1	
Mn	55	3	72	-0.067	ppb	-166.9	328	0.5	
Co	59	3	72	0.018	ppb	55.9	73	0.5	
Ni	60	3	72	0.492	ppb	39.6	818	1	
Cu	63	3	72	-0.022	ppb	-101.2	348	1	
Zn	66	3	72	0.072	ppb	470.4	225	5	
As	75	3	72	0.009	ppb	2469.4	42	1	
Se	78	2	72	0.111	ppb	33.1	8	1	
Sr	88	3	72	0.041	ppb	49.2	62	0.5	
Mo	95	3	115	0.086	ppb	48.5	80	0.5	
Ag	107	3	115	0.008	ppb	92.9	27	1	
Cd	111	3	115	-0.020	ppb	-2.2	5	0.5	
Sn	120	3	115	0.010	ppb	289.4	736	1	
Sb	121	3	115	0.038	ppb	41.8	72	0.6	
Ba	137	3	115	-0.052	ppb	-28.2	47	0.5	
Tl	205	3	193	-0.039	ppb	-11.2	228	0.1	
(Pb)	206	3	193	-0.092	ppb	-25.5	198	1	
(Pb)	207	3	193	-0.133	ppb	-21.4	328	1	
Pb	208	3	193	-0.103	ppb	-6.0	943	0.5	
Th	232	3	193	1.312	ppb	12.5	13511	1	>RL
U	238	3	193	0.018	ppb	90.3	1614	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4047303	1.23	4300192	94.12	60	120	
Sc (IS)	45	3	HMI He	579226	0.80	644593	89.86	60	120	
Ge Internal standard	72	2	HMI H2	2392133	1.10	2598552	92.06	60	120	
Ge Internal standard	72	3	HMI He	723187	0.55	772392	93.63	60	120	
In Internal Standard	115	3	HMI He	2772876	2.15	2872781	96.52	60	120	
Ir (IS)	193	3	HMI He	6024106	1.01	6092963	98.87	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	293SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:39:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-22.058	ppb	-22.058	-11.76	12251	400000	
Mg	24	3	45	-1.927	ppb	-1.927	-53.76	133	400000	
Al	27	3	45	-1.125	ppb	-1.125	-112.15	110	400000	
K	39	3	45	2.069	ppb	2.069	1051.97	24389	400000	
Ca	40	2	45	-9.812	ppb	-9.812	-3.08	6592	400000	
V	51	3	72	-1.198	ppb	-1.198	-3.33	208	2000	
Cr	52	3	72	-2.341	ppb	-2.341	-3.08	1149	5000	
Mn	55	3	72	-0.694	ppb	-0.694	-3.87	82	10000	
Fe	56	2	72	-25.906	ppb	-25.906	-4.64	20573	10000	
Co	59	3	72	-0.026	ppb	-0.026	-58.19	18	2000	
Ni	60	3	72	-1.311	ppb	-1.311	-7.13	177	5000	
Cu	63	3	72	-0.174	ppb	-0.174	-32.24	193	5000	
Zn	66	3	72	-0.859	ppb	-0.859	-12.79	78	5000	
As	75	3	72	-0.246	ppb	-0.246	-41.86	13	2000	
Se	78	2	72	0.003	ppb	0.003	22.43	2	2000	
Sr	88	3	72	-0.024	ppb	-0.024	-51.06	27	4000	
Mo	95	3	115	0.196	ppb	0.196	49.41	127	2000	
Ag	107	3	115	0.006	ppb	0.006	128.02	22	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.744	ppb	-0.744	-5.53	157	2000	
Sb	121	3	115	-0.016	ppb	-0.016	-111.40	30	1000	
Ba	137	3	115	-0.105	ppb	-0.105	-106.18	32	5000	
Tl	205	3	193	-0.071	ppb	-0.071	-12.48	97	2000	
(Pb)	206	3	193	-0.116	ppb	-0.116	-17.33	153	100	
(Pb)	207	3	193	0.546	ppb	0.546	8.96	993	100	
Pb	208	3	193	0.012	ppb	0.012	105.36	1401	5000	
Th	232	3	193	-0.530	ppb	-0.530	-4.16	3767	2000	
U	238	3	193	0.000	ppb	0.000	-5648.87	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3894329	1.11	4300192	90.56	60	120	
Sc (IS)	45	3	HMI He	557420	1.01	644593	86.48	60	120	
Ge Internal standard	72	2	HMI H2	2372720	1.69	2598552	91.31	60	120	
Ge Internal standard	72	3	HMI He	685387	1.02	772392	88.74	60	120	
In Internal Standard	115	3	HMI He	2630300	2.48	2872781	91.56	60	120	
Ir (IS)	193	3	HMI He	5510011	1.89	6092963	90.43	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	294SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:41:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.104	ppb	-0.104	-74.35	2	2000	
Na	23	3	45	-22.786	ppb	-22.786	-15.29	12224	400000	
Mg	24	3	45	-1.353	ppb	-1.353	-47.73	163	400000	
Al	27	3	45	-4.430	ppb	-4.430	-25.49	43	400000	
K	39	3	45	-0.102	ppb	-0.102	-21969.39	24389	400000	
Ca	40	2	45	-8.690	ppb	-8.690	-1.43	7283	400000	
V	51	3	72	-1.249	ppb	-1.249	-5.48	182	2000	
Cr	52	3	72	-2.383	ppb	-2.383	-2.59	1133	5000	
Mn	55	3	72	-0.678	ppb	-0.678	-4.04	88	10000	
Fe	56	2	72	-31.228	ppb	-31.228	-0.43	13423	10000	
Co	59	3	72	-0.023	ppb	-0.023	-20.79	22	2000	
Ni	60	3	72	-1.426	ppb	-1.426	-10.35	140	5000	
Cu	63	3	72	-0.138	ppb	-0.138	-16.53	228	5000	
Zn	66	3	72	-0.558	ppb	-0.558	-41.59	123	5000	
As	75	3	72	-0.119	ppb	-0.119	-101.69	27	2000	
Se	78	2	72	0.013	ppb	0.013	156.71	3	2000	
Sr	88	3	72	-0.021	ppb	-0.021	-109.90	28	4000	
Mo	95	3	115	-0.042	ppb	-0.042	-26.28	15	2000	
Ag	107	3	115	0.001	ppb	0.001	679.16	13	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.597	ppb	-0.597	-5.11	260	2000	
Sb	121	3	115	-0.025	ppb	-0.025	-14.56	23	1000	
Ba	137	3	115	-0.171	ppb	-0.171	-19.57	17	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-24.97	130	2000	
(Pb)	206	3	193	-0.134	ppb	-0.134	-9.05	133	100	
(Pb)	207	3	193	0.201	ppb	0.201	43.99	643	100	
Pb	208	3	193	-0.062	ppb	-0.062	-39.15	1056	5000	
Th	232	3	193	-0.500	ppb	-0.500	-10.02	3922	2000	
U	238	3	193	-0.017	ppb	-0.017	-7.76	1306	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3950461	1.39	4300192	91.87	60	120	
Sc (IS)	45	3	HMI He	559488	0.93	644593	86.80	60	120	
Ge Internal standard	72	2	HMI H2	2477104	1.22	2598552	95.33	60	120	
Ge Internal standard	72	3	HMI He	693043	0.29	772392	89.73	60	120	
In Internal Standard	115	3	HMI He	2606729	2.20	2872781	90.74	60	120	
Ir (IS)	193	3	HMI He	5534291	1.01	6092963	90.83	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	295SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:44:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-23.293	ppb	-23.293	-28.45	12324	400000	
Mg	24	3	45	-0.457	ppb	-0.457	-229.77	214	400000	
Al	27	3	45	-3.477	ppb	-3.477	-21.93	63	400000	
K	39	3	45	2.295	ppb	2.295	1607.12	24797	400000	
Ca	40	2	45	-8.792	ppb	-8.792	-5.78	7283	400000	
V	51	3	72	-1.265	ppb	-1.265	-1.36	173	2000	
Cr	52	3	72	-2.093	ppb	-2.093	-4.69	1343	5000	
Mn	55	3	72	-0.675	ppb	-0.675	-9.91	90	10000	
Fe	56	2	72	-20.969	ppb	-20.969	-7.28	28455	10000	
Co	59	3	72	-0.019	ppb	-0.019	-74.20	27	2000	
Ni	60	3	72	-1.029	ppb	-1.029	-4.88	275	5000	
Cu	63	3	72	-0.121	ppb	-0.121	-17.87	245	5000	
Zn	66	3	72	-0.609	ppb	-0.609	-18.75	117	5000	
As	75	3	72	-0.248	ppb	-0.248	-29.84	13	2000	
Se	78	2	72	0.002	ppb	0.002	1743.86	2	2000	
Sr	88	3	72	0.005	ppb	0.005	616.55	42	4000	
Mo	95	3	115	-0.046	ppb	-0.046	-25.88	13	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-151.48	8	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.704	ppb	-0.704	-11.01	185	2000	
Sb	121	3	115	-0.032	ppb	-0.032	-46.43	18	1000	
Ba	137	3	115	-0.142	ppb	-0.142	-8.46	23	5000	
Tl	205	3	193	-0.075	ppb	-0.075	-7.63	83	2000	
(Pb)	206	3	193	-0.121	ppb	-0.121	-28.30	148	100	
(Pb)	207	3	193	0.044	ppb	0.044	97.32	481	100	
Pb	208	3	193	-0.083	ppb	-0.083	-21.35	956	5000	
Th	232	3	193	-0.448	ppb	-0.448	-3.75	4160	2000	
U	238	3	193	-0.002	ppb	-0.002	-372.71	1379	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3979829	0.38	4300192	92.55	60	120	
Sc (IS)	45	3	HMI He	566574	0.82	644593	87.90	60	120	
Ge Internal standard	72	2	HMI H2	2432480	0.88	2598552	93.61	60	120	
Ge Internal standard	72	3	HMI He	696897	1.56	772392	90.23	60	120	
In Internal Standard	115	3	HMI He	2614140	1.26	2872781	91.00	60	120	
Ir (IS)	193	3	HMI He	5525558	1.46	6092963	90.69	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	296SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:45:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-20.512	ppb	-20.512	-11.17	12655	400000	
Mg	24	3	45	-2.347	ppb	-2.347	-24.24	113	400000	
Al	27	3	45	-2.198	ppb	-2.198	-21.53	90	400000	
K	39	3	45	-0.154	ppb	-0.154	-10624.14	24790	400000	
Ca	40	2	45	-9.299	ppb	-9.299	-3.64	6829	400000	
V	51	3	72	-1.229	ppb	-1.229	-2.77	197	2000	
Cr	52	3	72	-1.735	ppb	-1.735	-8.40	1616	5000	
Mn	55	3	72	-0.475	ppb	-0.475	-20.46	167	10000	
Fe	56	2	72	-15.957	ppb	-15.957	-15.40	35997	10000	
Co	59	3	72	0.000	ppb	0.000	-11904.55	50	2000	
Ni	60	3	72	-0.946	ppb	-0.946	-8.58	307	5000	
Cu	63	3	72	-0.150	ppb	-0.150	-4.73	222	5000	
Zn	66	3	72	-0.652	ppb	-0.652	-15.37	112	5000	
As	75	3	72	-0.234	ppb	-0.234	-20.01	15	2000	
Se	78	2	72	-0.010	ppb	-0.010	-213.87	1	2000	
Sr	88	3	72	-0.016	ppb	-0.016	-97.84	32	4000	
Mo	95	3	115	-0.021	ppb	-0.021	-134.61	25	2000	
Ag	107	3	115	0.008	ppb	0.008	104.03	25	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.732	ppb	-0.732	-6.74	165	2000	
Sb	121	3	115	-0.032	ppb	-0.032	-55.17	18	1000	
Ba	137	3	115	-0.157	ppb	-0.157	-13.64	20	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-3.76	117	2000	
(Pb)	206	3	193	-0.107	ppb	-0.107	-23.00	163	100	
(Pb)	207	3	193	-0.056	ppb	-0.056	-75.96	378	100	
Pb	208	3	193	-0.109	ppb	-0.109	-18.14	830	5000	
Th	232	3	193	-0.487	ppb	-0.487	-5.46	3962	2000	
U	238	3	193	0.027	ppb	0.027	27.23	1516	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3874690	1.86	4300192	90.11	60	120	
Sc (IS)	45	3	HMI He	568774	0.52	644593	88.24	60	120	
Ge Internal standard	72	2	HMI H2	2436021	2.33	2598552	93.75	60	120	
Ge Internal standard	72	3	HMI He	705662	0.48	772392	91.36	60	120	
In Internal Standard	115	3	HMI He	2623077	0.35	2872781	91.31	60	120	
Ir (IS)	193	3	HMI He	5499269	1.76	6092963	90.26	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	297SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:47:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.105	ppb	-0.105	-72.44	2	2000	
Na	23	3	45	-17.368	ppb	-17.368	-19.26	12792	400000	
Mg	24	3	45	-1.494	ppb	-1.494	-17.08	157	400000	
Al	27	3	45	-2.110	ppb	-2.110	-149.03	90	400000	
K	39	3	45	6.742	ppb	6.742	404.67	24750	400000	
Ca	40	2	45	-9.543	ppb	-9.543	-6.84	6815	400000	
V	51	3	72	-1.252	ppb	-1.252	-4.69	182	2000	
Cr	52	3	72	-1.229	ppb	-1.229	-17.83	1961	5000	
Mn	55	3	72	-0.484	ppb	-0.484	-6.32	162	10000	
Fe	56	2	72	-10.135	ppb	-10.135	-25.54	43864	10000	
Co	59	3	72	-0.005	ppb	-0.005	-39.93	43	2000	
Ni	60	3	72	-0.629	ppb	-0.629	-18.57	411	5000	
Cu	63	3	72	-0.136	ppb	-0.136	-36.51	232	5000	
Zn	66	3	72	-0.702	ppb	-0.702	-38.30	103	5000	
As	75	3	72	-0.201	ppb	-0.201	-72.38	18	2000	
Se	78	2	72	0.002	ppb	0.002	1486.33	2	2000	
Sr	88	3	72	-0.025	ppb	-0.025	-182.19	27	4000	
Mo	95	3	115	-0.035	ppb	-0.035	-93.36	18	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-208.69	8	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.750	ppb	-0.750	-4.44	150	2000	
Sb	121	3	115	-0.037	ppb	-0.037	-20.18	15	1000	
Ba	137	3	115	-0.155	ppb	-0.155	-37.23	20	5000	
Tl	205	3	193	-0.069	ppb	-0.069	-7.80	102	2000	
(Pb)	206	3	193	-0.135	ppb	-0.135	-7.87	132	100	
(Pb)	207	3	193	-0.116	ppb	-0.116	-41.86	318	100	
Pb	208	3	193	-0.129	ppb	-0.129	-11.34	743	5000	
Th	232	3	193	-0.483	ppb	-0.483	-6.13	4012	2000	
U	238	3	193	0.008	ppb	0.008	113.65	1433	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3940703	1.16	4300192	91.64	60	120	
Sc (IS)	45	3	HMI He	560859	1.24	644593	87.01	60	120	
Ge Internal standard	72	2	HMI H2	2393104	1.20	2598552	92.09	60	120	
Ge Internal standard	72	3	HMI He	699661	0.75	772392	90.58	60	120	
In Internal Standard	115	3	HMI He	2584395	1.03	2872781	89.96	60	120	
Ir (IS)	193	3	HMI He	5543461	1.88	6092963	90.98	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	298CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T08:49:33-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	13183	0.03
Mg	24	45	3	HMI He	153	27.65
Al	27	45	3	HMI He	117	22.42
K	39	45	3	HMI He	24011	0.03
Ca	40	45	2	HMI H2	10100	0.03
V	51	72	3	HMI He	586	2.47
Cr	52	72	3	HMI He	2272	0.26
Mn	55	72	3	HMI He	163	5.73
Fe	56	72	2	HMI H2	45775	0.02
Co	59	72	3	HMI He	55	59.62
Ni	60	72	3	HMI He	485	1.91
Cu	63	72	3	HMI He	298	6.51
Zn	66	72	3	HMI He	138	7.54
As	75	72	3	HMI He	30	166.76
Se	78	72	2	HMI H2	1	25980.76
(Se)	78	72	3	HMI He	25	80.06
Sr	88	72	3	HMI He	25	138.67
Mo	95	115	3	HMI He	27	332.46
Ag	107	115	3	HMI He	15	222.20
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	546	1.56
Sb	121	115	3	HMI He	33	93.70
Ba	137	115	3	HMI He	33	113.31
Tl	205	193	3	HMI He	100	10.00
(Pb)	206	193	3	HMI He	228	3.63
(Pb)	207	193	3	HMI He	332	5.01
Pb	208	193	3	HMI He	1008	0.77
Th	232	193	3	HMI He	6115	0.14
U	238	193	3	HMI He	1258	0.32

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3535116	3.27
Sc (IS)	45	3	HMI He	505423	0.85
Ge Internal standard	72	2	HMI H2	2359166	1.21
Ge Internal standard	72	3	HMI He	680743	1.25
In Internal Standard	115	3	HMI He	2361818	2.47
Ir (IS)	193	3	HMI He	5045699	1.11

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	299CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T08:51:22-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	298CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	1718.96
Na	23	45	3	HMI He	8793161	0.00
Mg	24	45	3	HMI He	933559	0.00
Al	27	45	3	HMI He	97	62.64
K	39	45	3	HMI He	779161	0.00
V	51	72	3	HMI He	621	0.78
Cr	52	72	3	HMI He	2431	0.32
Mn	55	72	3	HMI He	225	5.50
Co	59	72	3	HMI He	53	61.78
Ni	60	72	3	HMI He	506	4.76
Cu	63	72	3	HMI He	298	4.58
Zn	66	72	3	HMI He	232	5.92
As	75	72	3	HMI He	55	16.53
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	40	82.71
Sr	88	72	3	HMI He	192	8.21
Mo	95	115	3	HMI He	28	190.39
Ag	107	115	3	HMI He	27	107.43
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	713	1.19
Sb	121	115	3	HMI He	38	70.87
Ba	137	115	3	HMI He	148	4.73
Tl	205	193	3	HMI He	85	24.96
(Pb)	206	193	3	HMI He	268	7.81
(Pb)	207	193	3	HMI He	423	0.70
Pb	208	193	3	HMI He	1254	0.55
Th	232	193	3	HMI He	4917	0.12
U	238	193	3	HMI He	1283	0.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3582014	1.43	3535116	101.33	60	120	
Sc (IS)	45	3	HMI He	510430	0.72	505423	100.99	60	120	
Ge Internal standard	72	2	HMI H2	2176579	1.11	2359166	92.26	60	120	
Ge Internal standard	72	3	HMI He	632822	0.14	680743	92.96	60	120	
In Internal Standard	115	3	HMI He	2398594	1.71	2361818	101.56	60	120	
Ir (IS)	193	3	HMI He	5017108	1.62	5045699	99.43	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	300CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T08:53:12-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	298CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3592	0.10
Na	23	45	3	HMI He	189383	0.00
Mg	24	45	3	HMI He	91744	0.00
Al	27	45	3	HMI He	34854	0.00
K	39	45	3	HMI He	99251	0.00
V	51	72	3	HMI He	50546	0.00
Cr	52	72	3	HMI He	63927	0.00
Mn	55	72	3	HMI He	32884	0.00
Co	59	72	3	HMI He	105575	0.00
Ni	60	72	3	HMI He	29849	0.00
Cu	63	72	3	HMI He	79642	0.00
Zn	66	72	3	HMI He	12678	0.02
As	75	72	3	HMI He	9370	0.01
Se	78	72	2	HMI H2	4929	0.03
(Se)	78	72	3	HMI He	485	3.15
Sr	88	72	3	HMI He	88851	0.00
Mo	95	115	3	HMI He	40093	0.00
Ag	107	115	3	HMI He	136255	0.00
Cd	111	115	3	HMI He	19546	0.01
Sn	120	115	3	HMI He	61790	0.00
Sb	121	115	3	HMI He	61892	0.00
Ba	137	115	3	HMI He	20446	0.00
Tl	205	193	3	HMI He	307831	0.00
(Pb)	206	193	3	HMI He	101959	0.00
(Pb)	207	193	3	HMI He	91778	0.00
Pb	208	193	3	HMI He	412678	0.00
Th	232	193	3	HMI He	421028	0.00
U	238	193	3	HMI He	425852	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3570589	0.97	3535116	101.00	60	120	
Sc (IS)	45	3	HMI He	506403	0.83	505423	100.19	60	120	
Ge Internal standard	72	2	HMI H2	2377013	1.72	2359166	100.76	60	120	
Ge Internal standard	72	3	HMI He	673582	0.24	680743	98.95	60	120	
In Internal Standard	115	3	HMI He	2337354	0.47	2361818	98.96	60	120	
Ir (IS)	193	3	HMI He	5150856	1.56	5045699	102.08	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	301_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:55:01-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.124	ppb	1.454	1351	40	95.3	90	110	
Na	23	3	45	13256.336	ppb	0.776	1174427	12800	103.6	90	110	
Mg	24	3	45	4634.094	ppb	0.495	215904	4800	96.5	90	110	
Al	27	3	45	819.580	ppb	2.404	14432	800	102.4	90	110	
K	39	3	45	4710.191	ppb	1.718	201545	4800	98.1	90	110	
Ca	40	2	45	4900.840	ppb	2.256	2271761	4800	102.1	90	110	
V	51	3	72	40.783	ppb	0.691	20784	40	102.0	90	110	
Cr	52	3	72	41.764	ppb	6.280	27740	40	104.4	90	110	
Mn	55	3	72	41.396	ppb	2.257	13585	40	103.5	90	110	
Fe	56	2	72	827.454	ppb	2.394	1115438	800	103.4	90	110	
Co	59	3	72	40.922	ppb	3.101	42840	40	102.3	90	110	
Ni	60	3	72	41.652	ppb	5.407	12593	40	104.1	90	110	
Cu	63	3	72	41.577	ppb	3.314	32983	40	103.9	90	110	
Zn	66	3	72	84.919	ppb	4.085	10686	80	106.1	90	110	
As	75	3	72	40.277	ppb	5.923	3755	40	100.7	90	110	
Se	78	2	72	41.308	ppb	3.480	1956	40	103.3	90	110	
Sr	88	3	72	121.627	ppb	3.796	53541	120	101.4	90	110	
Mo	95	3	115	40.266	ppb	1.084	16450	40	100.7	90	110	
Ag	107	3	115	80.243	ppb	1.676	111288	80	100.3	90	110	
Cd	111	3	115	39.321	ppb	1.645	7825	40	98.3	90	110	
Sn	120	3	115	41.074	ppb	2.075	26156	40	102.7	90	110	
Sb	121	3	115	40.589	ppb	0.513	25595	40	101.5	90	110	
Ba	137	3	115	39.237	ppb	2.338	8185	40	98.1	90	110	
Tl	205	3	193	41.410	ppb	3.832	123428	40	103.5	90	110	
(Pb)	206	3	193	43.039	ppb	3.520	42607	40	107.6	90	110	
(Pb)	207	3	193	41.173	ppb	2.819	36775	40	102.9	90	110	
Pb	208	3	193	42.107	ppb	2.934	168795	40	105.3	90	110	
Th	232	3	193	83.812	ppb	1.904	342727	80	104.8	90	110	
U	238	3	193	45.448	ppb	4.219	187962	40	113.6	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3552026	2.96	3535116	100.48	60	120	
Sc (IS)	45	3	HMI He	509192	0.15	505423	100.75	60	120	
Ge Internal standard	72	2	HMI H2	2283565	0.30	2359166	96.80	60	120	
Ge Internal standard	72	3	HMI He	667882	3.49	680743	98.11	60	120	
In Internal Standard	115	3	HMI He	2379400	1.22	2361818	100.74	60	120	
Ir (IS)	193	3	HMI He	4989247	3.61	5045699	98.88	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	302_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:56:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.223	ppb	4.132	1724	50	96.4	90	110	
Na	23	3	45	49185.508	ppb	1.182	4390625	51000	96.4	90	110	
Mg	24	3	45	10380.009	ppb	2.066	490992	11000	94.4	90	110	
Al	27	3	45	1000.553	ppb	2.842	17866	1000	100.1	90	110	
K	39	3	45	10296.171	ppb	2.252	418336	11000	93.6	90	110	
Ca	40	2	45	10525.914	ppb	3.043	4918180	11000	95.7	90	110	
V	51	3	72	54.349	ppb	0.704	26772	50	108.7	90	110	
Cr	52	3	72	53.278	ppb	2.290	33888	50	106.6	90	110	
Mn	55	3	72	52.844	ppb	1.247	16847	50	105.7	90	110	
Fe	56	2	72	1067.031	ppb	2.405	1424286	1000	106.7	90	110	
Co	59	3	72	52.669	ppb	1.557	53697	50	105.3	90	110	
Ni	60	3	72	52.046	ppb	0.453	15217	50	104.1	90	110	
Cu	63	3	72	52.783	ppb	2.292	40710	50	105.6	90	110	
Zn	66	3	72	53.729	ppb	3.558	6635	50	107.5	90	110	
As	75	3	72	52.146	ppb	7.343	4728	50	104.3	90	110	
Se	78	2	72	53.747	ppb	3.074	2544	50	107.5	90	110	
Sr	88	3	72	105.555	ppb	2.121	45271	100	105.6	90	110	
Mo	95	3	115	51.025	ppb	3.989	20650	50	102.1	90	110	
Ag	107	3	115	50.892	ppb	0.926	69970	50	101.8	90	110	
Cd	111	3	115	50.757	ppb	1.405	10010	50	101.5	90	110	
Sn	120	3	115	50.946	ppb	2.845	32027	50	101.9	90	110	
Sb	121	3	115	50.353	ppb	1.970	31460	50	100.7	90	110	
Ba	137	3	115	50.993	ppb	2.584	10534	50	102.0	90	110	
Tl	205	3	193	50.210	ppb	2.315	155668	50	100.4	90	110	
(Pb)	206	3	193	51.324	ppb	2.090	52810	50	102.6	90	110	
(Pb)	207	3	193	49.754	ppb	1.519	46153	50	99.5	90	110	
Pb	208	3	193	50.638	ppb	2.440	210922	50	101.3	90	110	
Th	232	3	193	52.973	ppb	0.749	227594	50	105.9	90	110	
U	238	3	193	51.012	ppb	2.513	219330	50	102.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588946	1.61	3535116	101.52	60	120	
Sc (IS)	45	3	HMI He	517334	2.35	505423	102.36	60	120	
Ge Internal standard	72	2	HMI H2	2281982	1.94	2359166	96.73	60	120	
Ge Internal standard	72	3	HMI He	650198	0.84	680743	95.51	60	120	
In Internal Standard	115	3	HMI He	2358401	1.08	2361818	99.86	60	120	
Ir (IS)	193	3	HMI He	5187194	1.85	5045699	102.80	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	303_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:58:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.047	ppb	171.4	3	0.5	
Na	23	3	45	26.393	ppb	7.0	15608	25	>RL
Mg	24	3	45	0.551	ppb	32.5	180	25	
Al	27	3	45	-4.067	ppb	-7.6	47	15	
K	39	3	45	-8.726	ppb	-371.6	23888	50	
V	51	3	72	0.125	ppb	11.2	636	1	
Cr	52	3	72	0.432	ppb	28.0	2494	1	
Mn	55	3	72	0.204	ppb	44.4	227	0.5	
Co	59	3	72	0.001	ppb	1484.0	55	0.5	
Ni	60	3	72	0.558	ppb	11.1	638	1	
Cu	63	3	72	-0.063	ppb	-30.9	243	1	
Zn	66	3	72	0.357	ppb	30.6	180	5	
As	75	3	72	0.059	ppb	172.5	35	1	
Se	78	2	72	0.044	ppb	150.8	3	1	
Sr	88	3	72	0.020	ppb	127.6	33	0.5	
Mo	95	3	115	0.028	ppb	93.0	38	0.5	
Ag	107	3	115	0.007	ppb	1.4	25	1	
Cd	111	3	115	0.017	ppb	149.6	5	0.5	
Sn	120	3	115	0.277	ppb	31.3	718	1	
Sb	121	3	115	0.045	ppb	9.0	62	0.6	
Ba	137	3	115	0.057	ppb	151.0	45	0.5	
Tl	205	3	193	0.039	ppb	18.7	225	0.1	
(Pb)	206	3	193	-0.058	ppb	-94.1	175	1	
(Pb)	207	3	193	0.051	ppb	51.1	388	1	
Pb	208	3	193	0.002	ppb	818.0	1046	0.5	
Th	232	3	193	1.303	ppb	22.5	11736	1	>RL
U	238	3	193	0.027	ppb	91.1	1411	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3575013	1.82	3535116	101.13	60	120	
Sc (IS)	45	3	HMI He	509724	0.92	505423	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2312207	4.09	2359166	98.01	60	120	
Ge Internal standard	72	3	HMI He	667560	1.66	680743	98.06	60	120	
In Internal Standard	115	3	HMI He	2361470	0.56	2361818	99.99	60	120	
Ir (IS)	193	3	HMI He	5195379	2.13	5045699	102.97	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	304LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:12:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.920	ppb	28.609	35	1	92.0	70	130	
Na	23	3	45	287.802	ppb	0.568	38394	300	95.9	70	130	
Mg	24	3	45	46.476	ppb	3.126	2313	50	93.0	70	130	
Al	27	3	45	47.635	ppb	11.073	948	50	95.3	70	130	
K	39	3	45	117.142	ppb	25.961	28528	120	97.6	70	130	
Ca	40	2	45	199.977	ppb	0.860	101154	200	100.0	70	130	
V	51	3	72	4.910	ppb	9.630	2957	5	98.2	70	130	
Cr	52	3	72	2.425	ppb	16.138	3654	2	121.3	70	130	
Mn	55	3	72	1.223	ppb	18.870	548	1	122.3	70	130	
Fe	56	2	72	51.530	ppb	3.891	110787	50	103.1	70	130	
Co	59	3	72	0.939	ppb	8.699	1020	1	93.9	70	130	
Ni	60	3	72	2.131	ppb	20.552	1078	2	106.6	70	130	
Cu	63	3	72	1.990	ppb	5.182	1828	2	99.5	70	130	
Zn	66	3	72	9.781	ppb	4.658	1329	10	97.8	70	130	
As	75	3	72	4.857	ppb	6.096	471	5	97.1	70	130	
Se	78	2	72	5.197	ppb	9.402	246	5	103.9	70	130	
Sr	88	3	72	5.178	ppb	5.831	2267	5	103.6	70	130	
Mo	95	3	115	1.876	ppb	2.948	793	2	93.8	70	130	
Ag	107	3	115	0.985	ppb	8.441	1381	1	98.5	70	130	
Cd	111	3	115	0.821	ppb	16.756	165	1	82.1	70	130	
Sn	120	3	115	8.811	ppb	5.022	6050	10	88.1	70	130	
Sb	121	3	115	1.970	ppb	2.568	1274	2	98.5	70	130	
Ba	137	3	115	0.848	ppb	16.998	210	1	84.8	70	130	
Tl	205	3	193	0.974	ppb	6.148	3076	1	97.4	70	130	
(Pb)	206	3	193	0.862	ppb	12.549	1100	1	86.2	70	130	
(Pb)	207	3	193	0.930	ppb	17.537	1179	1	93.0	70	130	
Pb	208	3	193	0.906	ppb	2.430	4718	1	90.6	70	130	
Th	232	3	193	1.534	ppb	13.639	12520	1	153.4	70	130	>+/-30%
U	238	3	193	1.010	ppb	4.286	5527	1	101.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3506520	0.34	3535116	99.19	60	120	
Sc (IS)	45	3	HMI He	507916	0.69	505423	100.49	60	120	
Ge Internal standard	72	2	HMI H2	2278128	2.73	2359166	96.56	60	120	
Ge Internal standard	72	3	HMI He	656862	0.76	680743	96.49	60	120	
In Internal Standard	115	3	HMI He	2380764	1.56	2361818	100.80	60	120	
Ir (IS)	193	3	HMI He	5109678	2.08	5045699	101.27	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	305ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:15:51-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	4549.083	ppb	103.8	650309	100000	
Mg	24	3	45	4608.740	ppb	100.3	339470	100000	
Al	27	3	45	4744.814	ppb	100.0	131215	100000	
K	39	3	45	4193.521	ppb	106.8	289630	100000	
Ca	40	2	45	41161.156	ppb	17.2	12524673	100000	
V	51	3	72	-0.944	ppb	-7.0	168	1	
Cr	52	3	72	-0.315	ppb	-571.7	3237	1	
Mn	55	3	72	0.081	ppb	251.9	298	0.95	
Fe	56	2	72	45509.826	ppb	18.0	36303315	100000	
Co	59	3	72	-0.007	ppb	-403.9	75	0.5	
Ni	60	3	72	0.144	ppb	750.1	821	1	
Cu	63	3	72	-0.167	ppb	-16.9	257	1	
Zn	66	3	72	-0.281	ppb	-25.7	162	1	
As	75	3	72	-0.185	ppb	-24.8	20	1	
Se	78	2	72	0.003	ppb	887.2	1	1	
(Se)	78	3	72	-1.460	ppb	-56.4	28	1	
Sr	88	3	72	0.043	ppb	118.9	68	1	
Mo	95	3	115	86.188	ppb	86.3	56938	2000	
Ag	107	3	115	0.001	ppb	688.5	27	1	
Cd	111	3	115	0.012	ppb	95.1	7	1	
Sn	120	3	115	-0.680	ppb	-4.9	215	1	
Sb	121	3	115	-0.022	ppb	-56.2	33	1	
Ba	137	3	115	0.109	ppb	250.8	100	0.95	
Tl	205	3	193	-0.004	ppb	-203.2	143	1	
(Pb)	206	3	193	-0.082	ppb	-34.2	245	1	
(Pb)	207	3	193	-0.052	ppb	-32.3	481	1	
Pb	208	3	193	-0.076	ppb	-25.2	1176	1	
Th	232	3	193	-0.423	ppb	-30.2	7379	1	
U	238	3	193	0.012	ppb	142.4	2217	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2412949	28.80	3535116	68.26	60	120	
Sc (IS)	45	3	HMI He	868321	12.21	505423	171.80	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	1453442	29.85	2359166	61.61	60	120	
Ge Internal standard	72	3	HMI He	1075211	13.43	680743	157.95	60	120	IS Failed
In Internal Standard	115	3	HMI He	4057722	11.15	2361818	171.81	60	120	IS Failed
Ir (IS)	193	3	HMI He	8521306	11.31	5045699	168.88	60	120	IS Failed

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	306ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:20:28-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	-45300.1	2	0.5	
Na	23	3	45	90482.365	ppb	0.5	8219991	100000	
Mg	24	3	45	90239.909	ppb	0.9	4350548	100000	
Al	27	3	45	93389.621	ppb	0.5	1688950	100000	
K	39	3	45	91288.553	ppb	2.0	3583984	100000	
Ca	40	2	45	91300.863	ppb	0.9	43727031	100000	
V	51	3	72	-0.108	ppb	-102.8	523	1	
Cr	52	3	72	2.000	ppb	15.9	3464	1	>RL or LOD
Mn	55	3	72	0.940	ppb	16.9	466	0.95	
Fe	56	2	72	98239.665	ppb	1.9	122981440	100000	
Co	59	3	72	0.242	ppb	10.4	308	0.5	
Ni	60	3	72	0.717	ppb	29.4	686	1	
Cu	63	3	72	0.221	ppb	14.3	468	1	
Zn	66	3	72	1.515	ppb	14.9	325	1	>RL or LOD
As	75	3	72	-0.013	ppb	-257.5	28	1	
Se	78	2	72	0.044	ppb	146.8	3	1	
(Se)	78	3	72	1.551	ppb	230.1	32	1	>RL or LOD
Sr	88	3	72	0.827	ppb	7.6	390	1	
Mo	95	3	115	1826.386	ppb	2.2	774878	2000	
Ag	107	3	115	0.034	ppb	18.7	65	1	
Cd	111	3	115	0.185	ppb	40.3	40	1	
Sn	120	3	115	0.495	ppb	18.2	895	1	
Sb	121	3	115	0.125	ppb	38.9	117	1	
Ba	137	3	115	1.552	ppb	13.3	370	0.95	>RL or LOD
Tl	205	3	193	0.023	ppb	32.0	170	1	
(Pb)	206	3	193	0.097	ppb	52.6	327	1	
(Pb)	207	3	193	0.137	ppb	49.5	456	1	
Pb	208	3	193	0.144	ppb	29.6	1596	1	
Th	232	3	193	-0.387	ppb	-16.0	4572	1	
U	238	3	193	0.053	ppb	30.0	1484	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3684245	0.36	3535116	104.22	60	120	
Sc (IS)	45	3	HMI He	527232	0.91	505423	104.31	60	120	
Ge Internal standard	72	2	HMI H2	2208340	2.86	2359166	93.61	60	120	
Ge Internal standard	72	3	HMI He	669944	0.71	680743	98.41	60	120	
In Internal Standard	115	3	HMI He	2475459	1.65	2361818	104.81	60	120	
Ir (IS)	193	3	HMI He	5073596	0.38	5045699	100.55	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	307ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:22:14-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	99.709	ppb	3.463	3522	100	99.7	80	120	
Na	23	3	45	95050.388	ppb	1.214	8659487	100	95050.4	80	120	>+\-20%
Mg	24	3	45	93564.093	ppb	1.593	4523620	100	93564.1	80	120	>+\-20%
Al	27	3	45	95349.028	ppb	1.136	1729427	100	95349.0	80	120	>+\-20%
K	39	3	45	96388.768	ppb	2.151	3794486	100	96388.8	80	120	>+\-20%
Ca	40	2	45	101479.803	ppb	2.127	47497334	100	101479.8	80	120	>+\-20%
V	51	3	72	98.530	ppb	1.390	48864	100	98.5	80	120	
Cr	52	3	72	100.906	ppb	0.600	63265	100	100.9	80	120	
Mn	55	3	72	100.263	ppb	1.229	32347	100	100.3	80	120	
Fe	56	2	72	97094.673	ppb	1.064	125460063	100	97094.7	80	120	>+\-20%
Co	59	3	72	98.491	ppb	0.704	102009	100	98.5	80	120	
Ni	60	3	72	97.614	ppb	1.222	28597	100	97.6	80	120	
Cu	63	3	72	100.425	ppb	1.067	78459	100	100.4	80	120	
Zn	66	3	72	97.276	ppb	2.173	12103	100	97.3	80	120	
As	75	3	72	99.906	ppb	3.743	9185	100	99.9	80	120	
Se	78	2	72	100.651	ppb	0.510	4756	100	100.7	80	120	
(Se)	78	3	72	116.480	ppb	9.506	550	100	116.5	80	120	
Sr	88	3	72	197.986	ppb	0.733	86289	100	198.0	80	120	>+\-20%
Mo	95	3	115	1954.505	ppb	2.487	806073	100	1954.5	80	120	>+\-20%
Ag	107	3	115	94.399	ppb	2.503	132387	100	94.4	80	120	
Cd	111	3	115	93.674	ppb	4.005	18841	100	93.7	80	120	
Sn	120	3	115	96.973	ppb	4.353	61668	100	97.0	80	120	
Sb	121	3	115	95.737	ppb	1.859	60999	100	95.7	80	120	
Ba	137	3	115	96.760	ppb	2.190	20366	100	96.8	80	120	
Tl	205	3	193	97.445	ppb	0.657	296059	100	97.4	80	120	
(Pb)	206	3	193	98.524	ppb	0.652	99164	100	98.5	80	120	
(Pb)	207	3	193	95.607	ppb	1.808	86627	100	95.6	80	120	
Pb	208	3	193	98.223	ppb	0.361	400121	100	98.2	80	120	
Th	232	3	193	97.967	ppb	0.944	407287	100	98.0	80	120	
U	238	3	193	106.129	ppb	0.362	445956	100	106.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3601336	1.97	3535116	101.87	60	120	
Sc (IS)	45	3	HMI He	528792	0.64	505423	104.62	60	120	
Ge Internal standard	72	2	HMI H2	2278692	0.77	2359166	96.59	60	120	
Ge Internal standard	72	3	HMI He	660810	0.74	680743	97.07	60	120	
In Internal Standard	115	3	HMI He	2406784	2.57	2361818	101.90	60	120	
Ir (IS)	193	3	HMI He	5083516	0.66	5045699	100.75	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	308SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:23:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.050	ppb	0.050	166.86	3	2000	
Na	23	3	45	51.625	ppb	51.625	5.14	18217	400000	
Mg	24	3	45	20.502	ppb	20.502	5.28	1135	400000	
Al	27	3	45	13.428	ppb	13.428	33.46	360	400000	
K	39	3	45	7.683	ppb	7.683	355.64	25041	400000	
Ca	40	2	45	25.744	ppb	25.744	1.58	22240	400000	
V	51	3	72	0.010	ppb	0.010	83.63	558	2000	
Cr	52	3	72	0.487	ppb	0.487	115.44	2431	5000	
Mn	55	3	72	0.100	ppb	0.100	158.29	185	10000	
Fe	56	2	72	34.923	ppb	34.923	12.94	84370	10000	
Co	59	3	72	0.006	ppb	0.006	56.17	58	2000	
Ni	60	3	72	0.561	ppb	0.561	31.98	615	5000	
Cu	63	3	72	0.035	ppb	0.035	173.05	308	5000	
Zn	66	3	72	0.573	ppb	0.573	114.70	198	5000	
As	75	3	72	0.187	ppb	0.187	80.33	45	2000	
Se	78	2	72	0.076	ppb	0.076	58.97	4	2000	
Sr	88	3	72	0.046	ppb	0.046	60.92	43	4000	
Mo	95	3	115	3.819	ppb	3.819	19.21	1599	2000	
Ag	107	3	115	0.008	ppb	0.008	91.00	27	100	
Cd	111	3	115	0.008	ppb	0.008	360.00	3	2000	
Sn	120	3	115	0.036	ppb	0.036	167.16	578	2000	
Sb	121	3	115	0.025	ppb	0.025	57.53	50	1000	
Ba	137	3	115	0.316	ppb	0.316	10.52	100	5000	
Tl	205	3	193	0.057	ppb	0.057	15.81	277	2000	
(Pb)	206	3	193	0.012	ppb	0.012	78.10	243	100	
(Pb)	207	3	193	0.005	ppb	0.005	524.28	340	100	
Pb	208	3	193	0.017	ppb	0.017	67.39	1089	5000	
Th	232	3	193	2.353	ppb	2.353	13.21	15896	2000	
U	238	3	193	0.049	ppb	0.049	62.33	1481	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3584564	1.00	3535116	101.40	60	120	
Sc (IS)	45	3	HMI He	521035	0.40	505423	103.09	60	120	
Ge Internal standard	72	2	HMI H2	2152700	0.32	2359166	91.25	60	120	
Ge Internal standard	72	3	HMI He	643045	1.76	680743	94.46	60	120	
In Internal Standard	115	3	HMI He	2401681	2.09	2361818	101.69	60	120	
Ir (IS)	193	3	HMI He	5114446	1.10	5045699	101.36	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	309_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:25:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.576	ppb	5.837	1863	50	109.2	90	110	
Na	23	3	45	48907.588	ppb	2.640	4368242	51000	95.9	90	110	
Mg	24	3	45	10299.317	ppb	0.297	487547	11000	93.6	90	110	
Al	27	3	45	1003.695	ppb	2.916	17936	1000	100.4	90	110	
K	39	3	45	10433.987	ppb	0.681	423910	11000	94.9	90	110	
Ca	40	2	45	10654.689	ppb	1.547	5002190	11000	96.9	90	110	
V	51	3	72	55.204	ppb	1.521	26330	50	110.4	90	110	>+\-10%
Cr	52	3	72	55.510	ppb	1.754	34110	50	111.0	90	110	>+\-10%
Mn	55	3	72	54.502	ppb	2.518	16823	50	109.0	90	110	
Fe	56	2	72	1122.671	ppb	1.912	1413390	1000	112.3	90	110	>+\-10%
Co	59	3	72	54.861	ppb	0.851	54172	50	109.7	90	110	
Ni	60	3	72	56.219	ppb	2.621	15883	50	112.4	90	110	>+\-10%
Cu	63	3	72	54.651	ppb	1.974	40815	50	109.3	90	110	
Zn	66	3	72	56.976	ppb	3.800	6808	50	114.0	90	110	>+\-10%
As	75	3	72	55.780	ppb	2.967	4898	50	111.6	90	110	>+\-10%
Se	78	2	72	54.683	ppb	4.332	2444	50	109.4	90	110	
Sr	88	3	72	110.315	ppb	2.840	45822	100	110.3	90	110	>+\-10%
Mo	95	3	115	50.901	ppb	1.508	20919	50	101.8	90	110	
Ag	107	3	115	50.010	ppb	3.048	69774	50	100.0	90	110	
Cd	111	3	115	50.802	ppb	0.960	10172	50	101.6	90	110	
Sn	120	3	115	49.949	ppb	2.961	31875	50	99.9	90	110	
Sb	121	3	115	50.855	ppb	0.271	32260	50	101.7	90	110	
Ba	137	3	115	51.190	ppb	1.989	10734	50	102.4	90	110	
Tl	205	3	193	50.019	ppb	3.763	157603	50	100.0	90	110	
(Pb)	206	3	193	50.980	ppb	1.586	53329	50	102.0	90	110	
(Pb)	207	3	193	49.839	ppb	1.576	46990	50	99.7	90	110	
Pb	208	3	193	50.279	ppb	1.480	212910	50	100.6	90	110	
Th	232	3	193	50.479	ppb	3.112	220685	50	101.0	90	110	
U	238	3	193	50.357	ppb	3.084	220073	50	100.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3605856	2.19	3535116	102.00	60	120	
Sc (IS)	45	3	HMI He	517560	0.60	505423	102.40	60	120	
Ge Internal standard	72	2	HMI H2	2155458	1.19	2359166	91.37	60	120	
Ge Internal standard	72	3	HMI He	629708	0.40	680743	92.50	60	120	
In Internal Standard	115	3	HMI He	2394159	2.25	2361818	101.37	60	120	
Ir (IS)	193	3	HMI He	5272767	2.14	5045699	104.50	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	310_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:27:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.001	ppb	7094.2	2	0.5	
Na	23	3	45	43.558	ppb	16.4	17204	25	>RL
Mg	24	3	45	2.807	ppb	56.1	287	25	
Al	27	3	45	-0.859	ppb	-294.8	103	15	
K	39	3	45	-17.386	ppb	-179.8	23677	50	
V	51	3	72	0.022	ppb	864.5	563	1	
Cr	52	3	72	0.550	ppb	49.2	2466	1	
Mn	55	3	72	0.222	ppb	35.1	223	0.5	
Co	59	3	72	-0.004	ppb	-669.9	48	0.5	
Ni	60	3	72	0.797	ppb	23.5	680	1	
Cu	63	3	72	-0.002	ppb	-1768.1	280	1	
Zn	66	3	72	0.194	ppb	123.0	153	5	
As	75	3	72	0.151	ppb	115.4	42	1	
Se	78	2	72	0.030	ppb	142.6	2	1	
Sr	88	3	72	0.004	ppb	589.2	25	0.5	
Mo	95	3	115	0.269	ppb	21.4	140	0.5	
Ag	107	3	115	0.013	ppb	40.5	33	1	
Cd	111	3	115	0.016	ppb	150.5	5	0.5	
Sn	120	3	115	0.151	ppb	60.1	658	1	
Sb	121	3	115	0.009	ppb	268.6	40	0.6	
Ba	137	3	115	0.115	ppb	101.1	58	0.5	
Tl	205	3	193	0.028	ppb	24.8	190	0.1	
(Pb)	206	3	193	-0.001	ppb	-4973.0	233	1	
(Pb)	207	3	193	-0.024	ppb	-83.0	318	1	
Pb	208	3	193	-0.009	ppb	-322.3	996	0.5	
Th	232	3	193	1.270	ppb	12.8	11580	1	>RL
U	238	3	193	0.005	ppb	362.0	1313	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3605443	0.61	3535116	101.99	60	120	
Sc (IS)	45	3	HMI He	512374	0.71	505423	101.38	60	120	
Ge Internal standard	72	2	HMI H2	2191449	2.12	2359166	92.89	60	120	
Ge Internal standard	72	3	HMI He	641679	0.69	680743	94.26	60	120	
In Internal Standard	115	3	HMI He	2429300	1.66	2361818	102.86	60	120	
Ir (IS)	193	3	HMI He	5179229	0.65	5045699	102.65	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	311_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:29:25-06:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.049	ppb	335.8119925	3	0.5
Na	23	3	45	32.722	ppb	26.03049258	16543	25
Mg	24	3	45	2.771	ppb	40.09669	290	25
Al	27	3	45	1.471	ppb	145.9897711	147	15
K	39	3	45	-22.602	ppb	-83.50806129	23908	50
Ca	40	2	45	6.502	ppb	14.37913377	13233	200
V	51	3	72	-0.007	ppb	-149.6448632	553	1
Cr	52	3	72	0.496	ppb	20.66988758	2452	1
Mn	55	3	72	0.423	ppb	15.01403708	288	0.5
Fe	56	2	72	15.568	ppb	26.8767949	60995	50
Co	59	3	72	0.004	ppb	161.4321325	57	0.5
Ni	60	3	72	0.494	ppb	35.25475843	600	1
Cu	63	3	72	0.053	ppb	102.4399317	323	1
Zn	66	3	72	6.132	ppb	8.39335439	870	5
As	75	3	72	0.109	ppb	114.9429451	38	1
(Se)	78	3	72	1.390	ppb	209.0691421	30	1
Sr	88	3	72	0.042	ppb	106.3123949	42	0.5
Mo	95	3	115	0.170	ppb	31.58238968	98	0.5
Ag	107	3	115	0.002	ppb	195.1008711	18	1
Cd	111	3	115	0.008	ppb	177.7477712	3	0.5
Sn	120	3	115	0.407	ppb	27.43698073	823	1
Sb	121	3	115	0.016	ppb	204.4683249	45	0.6
Ba	137	3	115	0.005	ppb	1353.86144	35	0.5
Tl	205	3	193	0.025	ppb	25.40133462	180	0.1
(Pb)	206	3	193	-0.047	ppb	-8.86716873	188	1
(Pb)	207	3	193	0.008	ppb	613.346312	350	1
Pb	208	3	193	-0.015	ppb	-141.7022912	978	0.5
Th	232	3	193	-0.100	ppb	-69.65103754	5912	1
U	238	3	193	0.013	ppb	92.24450009	1358	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3573029	0.76	3535116	101.07	60	120	
Sc (IS)	45	3	HMI He	521752	0.39	505423	103.23	60	120	
Ge Internal standard	72	2	HMI H2	2159109	1.55	2359166	91.52	60	120	
Ge Internal standard	72	3	HMI He	646402	1.27	680743	94.96	60	120	
In Internal Standard	115	3	HMI He	2433826	2.47	2361818	103.05	60	120	
Ir (IS)	193	3	HMI He	5221412	0.84	5045699	103.48	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A@10
Data File Name	312SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:31:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	11030.895	ppb	11030.895	0.99	982946	400000	
Mg	24	3	45	7781.643	ppb	7781.643	0.75	363725	400000	
Al	27	3	45	3.133	ppb	3.133	149.29	174	400000	
K	39	3	45	480.754	ppb	480.754	5.68	42433	400000	
Ca	40	2	45	22291.512	ppb	22291.512	1.08	10275816	400000	
V	51	3	72	0.211	ppb	0.211	31.88	663	2000	
Cr	52	3	72	0.702	ppb	0.702	42.43	2596	5000	
Mn	55	3	72	2.379	ppb	2.379	13.79	910	10000	
Fe	56	2	72	20.049	ppb	20.049	21.39	67820	10000	
Co	59	3	72	0.048	ppb	0.048	37.78	102	2000	
Ni	60	3	72	0.993	ppb	0.993	22.79	746	5000	
Cu	63	3	72	0.316	ppb	0.316	35.00	528	5000	
Zn	66	3	72	4.183	ppb	4.183	4.07	640	5000	
As	75	3	72	0.382	ppb	0.382	71.80	63	2000	
Se	78	2	72	0.044	ppb	0.044	148.46	3	2000	
Sr	88	3	72	84.465	ppb	84.465	0.97	36312	4000	
Mo	95	3	115	0.120	ppb	0.120	11.22	75	2000	
Ag	107	3	115	0.004	ppb	0.004	99.66	20	100	
Cd	111	3	115	0.017	ppb	0.017	149.00	5	2000	
Sn	120	3	115	0.155	ppb	0.155	78.54	638	2000	
Sb	121	3	115	0.030	ppb	0.030	84.91	52	1000	
Ba	137	3	115	36.055	ppb	36.055	3.98	7417	5000	
Tl	205	3	193	0.032	ppb	0.032	27.25	200	2000	
(Pb)	206	3	193	0.409	ppb	0.409	15.38	651	100	
(Pb)	207	3	193	0.382	ppb	0.382	14.79	690	100	
Pb	208	3	193	0.387	ppb	0.387	8.06	2630	5000	
Th	232	3	193	-0.218	ppb	-0.218	-33.20	5357	2000	
U	238	3	193	0.494	ppb	0.494	5.28	3392	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3543729	1.02	3535116	100.24	60	120	
Sc (IS)	45	3	HMI He	511036	1.85	505423	101.11	60	120	
Ge Internal standard	72	2	HMI H2	2204109	2.30	2359166	93.43	60	120	
Ge Internal standard	72	3	HMI He	651604	0.58	680743	95.72	60	120	
In Internal Standard	115	3	HMI He	2345384	0.67	2361818	99.30	60	120	
Ir (IS)	193	3	HMI He	5166531	0.59	5045699	102.39	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A@10
Data File Name	313SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:33:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	10262.685	ppb	10262.685	1.47	919270	400000	
Mg	24	3	45	7541.734	ppb	7541.734	0.89	353946	400000	
Al	27	3	45	-1.049	ppb	-1.049	-5.66	100	400000	
K	39	3	45	577.266	ppb	577.266	4.72	46279	400000	
Ca	40	2	45	20605.234	ppb	20605.234	1.53	9374303	400000	
V	51	3	72	0.155	ppb	0.155	91.93	636	2000	
Cr	52	3	72	0.380	ppb	0.380	38.65	2407	5000	
Mn	55	3	72	21.135	ppb	21.135	2.83	6860	10000	
Fe	56	2	72	68.467	ppb	68.467	7.34	126993	10000	
Co	59	3	72	0.317	ppb	0.317	12.19	376	2000	
Ni	60	3	72	1.146	ppb	1.146	30.79	791	5000	
Cu	63	3	72	0.198	ppb	0.198	21.52	438	5000	
Zn	66	3	72	4.185	ppb	4.185	27.59	640	5000	
As	75	3	72	0.176	ppb	0.176	119.68	45	2000	
Se	78	2	72	0.105	ppb	0.105	26.11	5	2000	
Sr	88	3	72	84.742	ppb	84.742	0.76	36514	4000	
Mo	95	3	115	0.096	ppb	0.096	18.23	68	2000	
Ag	107	3	115	0.019	ppb	0.019	24.32	43	100	
Cd	111	3	115	0.032	ppb	0.032	158.40	8	2000	
Sn	120	3	115	0.366	ppb	0.366	19.02	803	2000	
Sb	121	3	115	0.011	ppb	0.011	156.03	42	1000	
Ba	137	3	115	33.946	ppb	33.946	5.02	7297	5000	
Tl	205	3	193	0.005	ppb	0.005	55.72	120	2000	
(Pb)	206	3	193	0.425	ppb	0.425	6.40	673	100	
(Pb)	207	3	193	0.434	ppb	0.434	23.46	743	100	
Pb	208	3	193	0.397	ppb	0.397	16.01	2694	5000	
Th	232	3	193	-0.364	ppb	-0.364	-19.20	4792	2000	
U	238	3	193	0.495	ppb	0.495	0.42	3430	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3497479	1.57	3535116	98.94	60	120	
Sc (IS)	45	3	HMI He	513095	1.05	505423	101.52	60	120	
Ge Internal standard	72	2	HMI H2	2182800	1.78	2359166	92.52	60	120	
Ge Internal standard	72	3	HMI He	653132	1.94	680743	95.94	60	120	
In Internal Standard	115	3	HMI He	2451496	2.27	2361818	103.80	60	120	
Ir (IS)	193	3	HMI He	5216644	2.77	5045699	103.39	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A@10
Data File Name	314SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:34:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	15771.825	ppb	15771.825	1.21	1417248	400000	
Mg	24	3	45	5895.950	ppb	5895.950	0.60	279039	400000	
Al	27	3	45	1.926	ppb	1.926	134.79	153	400000	
K	39	3	45	464.868	ppb	464.868	9.85	42366	400000	
Ca	40	2	45	20568.645	ppb	20568.645	2.48	9742220	400000	
V	51	3	72	0.317	ppb	0.317	3.59	708	2000	
Cr	52	3	72	0.795	ppb	0.795	24.06	2629	5000	
Mn	55	3	72	32.292	ppb	32.292	1.44	10292	10000	
Fe	56	2	72	18.996	ppb	18.996	24.42	67160	10000	
Co	59	3	72	0.204	ppb	0.204	21.87	258	2000	
Ni	60	3	72	5.047	ppb	5.047	7.88	1881	5000	
Cu	63	3	72	0.175	ppb	0.175	32.48	416	5000	
Zn	66	3	72	4.194	ppb	4.194	12.97	635	5000	
As	75	3	72	0.219	ppb	0.219	99.12	48	2000	
Se	78	2	72	0.131	ppb	0.131	101.68	7	2000	
Sr	88	3	72	110.974	ppb	110.974	1.59	47292	4000	
Mo	95	3	115	0.113	ppb	0.113	26.46	73	2000	
Ag	107	3	115	0.015	ppb	0.015	65.99	37	100	
Cd	111	3	115	0.000	ppb	0.000	18160.17	2	2000	
Sn	120	3	115	0.179	ppb	0.179	15.73	661	2000	
Sb	121	3	115	0.013	ppb	0.013	66.65	42	1000	
Ba	137	3	115	41.416	ppb	41.416	1.59	8624	5000	
Tl	205	3	193	0.007	ppb	0.007	200.58	123	2000	
(Pb)	206	3	193	0.407	ppb	0.407	8.47	651	100	
(Pb)	207	3	193	0.456	ppb	0.456	20.40	758	100	
Pb	208	3	193	0.386	ppb	0.386	2.56	2632	5000	
Th	232	3	193	-0.434	ppb	-0.434	-12.85	4469	2000	
U	238	3	193	0.434	ppb	0.434	6.94	3141	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3642046	2.46	3535116	103.02	60	120	
Sc (IS)	45	3	HMI He	517351	1.32	505423	102.36	60	120	
Ge Internal standard	72	2	HMI H2	2227174	1.21	2359166	94.41	60	120	
Ge Internal standard	72	3	HMI He	646162	2.57	680743	94.92	60	120	
In Internal Standard	115	3	HMI He	2375162	1.22	2361818	100.57	60	120	
Ir (IS)	193	3	HMI He	5177986	1.94	5045699	102.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	315_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:36:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.645	ppb	3.574	1751	50	99.3	90	110	
Na	23	3	45	48341.984	ppb	1.150	4219381	51000	94.8	90	110	
Mg	24	3	45	10407.657	ppb	2.103	481443	11000	94.6	90	110	
Al	27	3	45	1017.163	ppb	4.280	17759	1000	101.7	90	110	
K	39	3	45	10582.439	ppb	1.569	419832	11000	96.2	90	110	
Ca	40	2	45	10520.169	ppb	1.373	4833842	11000	95.6	90	110	
V	51	3	72	54.400	ppb	1.999	25863	50	108.8	90	110	
Cr	52	3	72	55.526	ppb	1.884	33999	50	111.1	90	110	>+\-10%
Mn	55	3	72	54.607	ppb	3.151	16795	50	109.2	90	110	
Fe	56	2	72	1112.380	ppb	4.814	1402540	1000	111.2	90	110	>+\-10%
Co	59	3	72	54.068	ppb	1.154	53199	50	108.1	90	110	
Ni	60	3	72	54.326	ppb	1.141	15311	50	108.7	90	110	
Cu	63	3	72	55.746	ppb	0.618	41481	50	111.5	90	110	>+\-10%
Zn	66	3	72	56.486	ppb	0.843	6727	50	113.0	90	110	>+\-10%
As	75	3	72	54.405	ppb	2.870	4762	50	108.8	90	110	
Se	78	2	72	54.508	ppb	2.554	2441	50	109.0	90	110	
Sr	88	3	72	111.350	ppb	0.512	46093	100	111.4	90	110	>+\-10%
Mo	95	3	115	50.429	ppb	0.745	20459	50	100.9	90	110	
Ag	107	3	115	49.751	ppb	1.164	68551	50	99.5	90	110	
Cd	111	3	115	50.966	ppb	0.443	10074	50	101.9	90	110	
Sn	120	3	115	49.347	ppb	1.745	31106	50	98.7	90	110	
Sb	121	3	115	50.352	ppb	1.160	31528	50	100.7	90	110	
Ba	137	3	115	48.955	ppb	1.540	10137	50	97.9	90	110	
Tl	205	3	193	51.449	ppb	2.437	159107	50	102.9	90	110	
(Pb)	206	3	193	51.729	ppb	2.601	53091	50	103.5	90	110	
(Pb)	207	3	193	51.247	ppb	2.013	47406	50	102.5	90	110	
Pb	208	3	193	51.310	ppb	3.350	213150	50	102.6	90	110	
Th	232	3	193	50.688	ppb	1.557	217565	50	101.4	90	110	
U	238	3	193	52.127	ppb	3.642	223498	50	104.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3528763	1.82	3535116	99.82	60	120	
Sc (IS)	45	3	HMI He	505848	1.19	505423	100.08	60	120	
Ge Internal standard	72	2	HMI H2	2158858	1.62	2359166	91.51	60	120	
Ge Internal standard	72	3	HMI He	627496	0.38	680743	92.18	60	120	
In Internal Standard	115	3	HMI He	2363551	1.18	2361818	100.07	60	120	
Ir (IS)	193	3	HMI He	5174825	2.43	5045699	102.56	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	316_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:39:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.002	ppb	5442.7	2	0.5	
Na	23	3	45	30.015	ppb	21.6	15808	25	>RL
Mg	24	3	45	0.735	ppb	199.9	187	25	
Al	27	3	45	-1.160	ppb	-57.7	97	15	
K	39	3	45	-21.569	ppb	-122.2	23219	50	
V	51	3	72	0.084	ppb	168.0	586	1	
Cr	52	3	72	0.545	ppb	13.3	2439	1	
Mn	55	3	72	0.192	ppb	69.2	212	0.5	
Co	59	3	72	-0.003	ppb	-175.5	48	0.5	
Ni	60	3	72	0.838	ppb	27.4	685	1	
Cu	63	3	72	0.006	ppb	331.8	283	1	
Zn	66	3	72	0.628	ppb	19.2	203	5	
As	75	3	72	0.214	ppb	164.9	47	1	
Se	78	2	72	0.137	ppb	68.5	7	1	
Sr	88	3	72	-0.024	ppb	-29.3	13	0.5	
Mo	95	3	115	0.099	ppb	65.0	67	0.5	
Ag	107	3	115	-0.002	ppb	-222.9	12	1	
Cd	111	3	115	0.009	ppb	171.3	3	0.5	
Sn	120	3	115	0.213	ppb	25.0	676	1	
Sb	121	3	115	0.022	ppb	134.4	47	0.6	
Ba	137	3	115	-0.015	ppb	-153.5	30	0.5	
Tl	205	3	193	0.028	ppb	25.0	188	0.1	
(Pb)	206	3	193	-0.021	ppb	-162.6	212	1	
(Pb)	207	3	193	-0.007	ppb	-228.8	332	1	
Pb	208	3	193	-0.014	ppb	-43.1	973	0.5	
Th	232	3	193	2.487	ppb	12.7	16568	1	>RL
U	238	3	193	0.013	ppb	280.4	1338	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3590007	2.26	3535116	101.55	60	120	
Sc (IS)	45	3	HMI He	505833	1.03	505423	100.08	60	120	
Ge Internal standard	72	2	HMI H2	2128978	0.38	2359166	90.24	60	120	
Ge Internal standard	72	3	HMI He	635267	0.88	680743	93.32	60	120	
In Internal Standard	115	3	HMI He	2352965	1.37	2361818	99.63	60	120	
Ir (IS)	193	3	HMI He	5152464	1.09	5045699	102.12	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608636/1-A
Data File Name	317_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:40:50-06:00
Sample Type	Blank
Dilution	1
Comment	608636 6020b
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.046	ppb	0	0	0.5
Na	23	3	45	19.128	ppb	20.10431403	15000	25
Mg	24	3	45	1.544	ppb	34.04804705	227	25
Al	27	3	45	-2.739	ppb	-20.27437345	70	15
K	39	3	45	-22.891	ppb	-175.1159629	23386	50
Ca	40	2	45	4.696	ppb	11.13416432	12331	200
V	51	3	72	0.076	ppb	155.7592463	581	1
Cr	52	3	72	0.526	ppb	54.75986058	2424	1
Mn	55	3	72	0.187	ppb	55.79688735	210	0.5
Fe	56	2	72	7.863	ppb	36.55504845	51484	50
Co	59	3	72	0.024	ppb	100.7951035	75	0.5
Ni	60	3	72	0.168	ppb	129.8976574	498	1
Cu	63	3	72	0.038	ppb	223.0146129	307	1
Zn	66	3	72	0.362	ppb	26.89432818	172	5
As	75	3	72	0.232	ppb	127.2844153	48	1
(Se)	78	3	72	1.530	ppb	259.7864212	30	1
Sr	88	3	72	0.040	ppb	139.1878506	40	0.5
Mo	95	3	115	0.054	ppb	60.09709859	50	0.5
Ag	107	3	115	0.001	ppb	587.348189	17	1
Cd	111	3	115	-0.008	ppb	0	0	0.5
Sn	120	3	115	-0.085	ppb	-128.583389	503	1
Sb	121	3	115	0.041	ppb	132.7315572	60	0.6
Ba	137	3	115	0.180	ppb	33.46057732	72	0.5
Tl	205	3	193	0.000	ppb	-1109.485115	102	0.1
(Pb)	206	3	193	-0.028	ppb	-129.9232032	207	1
(Pb)	207	3	193	0.025	ppb	144.0738827	363	1
Pb	208	3	193	-0.019	ppb	-58.35542812	956	0.5
Th	232	3	193	0.090	ppb	30.9366016	6673	1
U	238	3	193	0.024	ppb	51.00239527	1399	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3554189	2.13	3535116	100.54	60	120	
Sc (IS)	45	3	HMI He	510729	0.65	505423	101.05	60	120	
Ge Internal standard	72	2	HMI H2	2158169	0.38	2359166	91.48	60	120	
Ge Internal standard	72	3	HMI He	634614	1.34	680743	93.22	60	120	
In Internal Standard	115	3	HMI He	2407122	1.25	2361818	101.92	60	120	
Ir (IS)	193	3	HMI He	5191085	2.53	5045699	102.88	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608636/19-A
Data File Name	318_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:42:41-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608636 6020b
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	37.962	37.962	ppb	4.626	1329	40	94.9	80	120	
Na	23	3	45	767.533	767.533	ppb	2.330	80776	40	1918.8	80	120	>+/-20%
Mg	24	3	45	710.915	710.915	ppb	2.929	33359	40	1777.3	80	120	>+/-20%
Al	27	3	45	756.549	756.549	ppb	3.507	13380	40	1891.4	80	120	>+/-20%
K	39	3	45	726.949	726.949	ppb	6.038	51727	40	1817.4	80	120	>+/-20%
Ca	40	2	45	811.514	811.514	ppb	1.200	386295	40	2028.8	80	120	>+/-20%
V	51	3	72	41.240	41.240	ppb	1.169	19989	40	103.1	80	120	
Cr	52	3	72	42.009	42.009	ppb	1.580	26572	40	105.0	80	120	
Mn	55	3	72	42.808	42.808	ppb	0.658	13370	40	107.0	80	120	
Fe	56	2	72	845.644	845.644	ppb	0.896	1081138	40	2114.1	80	120	>+/-20%
(Fe)	56	3	72	824.254	824.254	ppb	1.473	420075	40	2060.6	80	120	>+/-20%
Co	59	3	72	41.830	41.830	ppb	1.496	41700	40	104.6	80	120	
Ni	60	3	72	42.415	42.415	ppb	2.964	12206	40	106.0	80	120	
Cu	63	3	72	43.114	43.114	ppb	1.133	32559	40	107.8	80	120	
Zn	66	3	72	43.981	43.981	ppb	0.433	5333	40	110.0	80	120	
As	75	3	72	39.646	39.646	ppb	2.614	3522	40	99.1	80	120	
Se	78	2	72	43.076	43.076	ppb	5.733	1936	40	107.7	80	120	
(Se)	78	3	72	47.576	47.576	ppb	18.039	230	40	118.9	80	120	
Sr	88	3	72	83.610	83.610	ppb	1.288	35059	40	209.0	80	120	>+/-20%
Mo	95	3	115	39.172	39.172	ppb	2.153	15878	40	97.9	80	120	
Ag	107	3	115	40.251	40.251	ppb	0.906	55403	40	100.6	80	120	
Cd	111	3	115	38.605	38.605	ppb	1.858	7622	40	96.5	80	120	
Sn	120	3	115	37.708	37.708	ppb	0.770	23871	40	94.3	80	120	
Sb	121	3	115	38.876	38.876	ppb	1.390	24322	40	97.2	80	120	
Ba	137	3	115	39.715	39.715	ppb	2.833	8222	40	99.3	80	120	
Tl	205	3	193	39.608	39.608	ppb	0.687	124218	40	99.0	80	120	
(Pb)	206	3	193	39.506	39.506	ppb	0.348	41166	40	98.8	80	120	
(Pb)	207	3	193	38.568	38.568	ppb	2.746	36254	40	96.4	80	120	
Pb	208	3	193	39.545	39.545	ppb	1.253	166821	40	98.9	80	120	
Th	232	3	193	36.797	36.797	ppb	1.320	161826	40	92.0	80	120	
U	238	3	193	40.130	40.130	ppb	1.302	174783	40	100.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3566014	0.53	3535116	100.87	60	120	
Sc (IS)	45	3	HMI He	510928	1.15	505423	101.09	60	120	
Ge Internal standard	72	2	HMI H2	2167601	1.03	2359166	91.88	60	120	
Ge Internal standard	72	3	HMI He	635565	0.59	680743	93.36	60	120	
In Internal Standard	115	3	HMI He	2360718	0.57	2361818	99.95	60	120	
Ir (IS)	193	3	HMI He	5245053	0.88	5045699	103.95	60	120	

Sample Report

Sample Table

Sample Name	280-174977-A-2-A
Data File Name	319SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:44:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	530.270	ppb	530.270	1.78	59896	400000	
Mg	24	3	45	14.420	ppb	14.420	18.01	828	400000	
Al	27	3	45	19.567	ppb	19.567	25.40	460	400000	
K	39	3	45	-25.981	ppb	-25.981	-156.43	23266	400000	
Ca	40	2	45	133.741	ppb	133.741	1.52	71687	400000	
V	51	3	72	0.078	ppb	0.078	159.76	590	2000	
Cr	52	3	72	0.926	ppb	0.926	26.77	2689	5000	
Mn	55	3	72	2.310	ppb	2.310	13.82	875	10000	
Fe	56	2	72	34.634	ppb	34.634	9.14	84008	10000	
Co	59	3	72	0.036	ppb	0.036	30.48	88	2000	
Ni	60	3	72	0.338	ppb	0.338	95.56	551	5000	
Cu	63	3	72	0.264	ppb	0.264	7.20	481	5000	
Zn	66	3	72	0.974	ppb	0.974	23.29	247	5000	
As	75	3	72	0.169	ppb	0.169	97.68	43	2000	
Se	78	2	72	0.106	ppb	0.106	24.09	5	2000	
Sr	88	3	72	0.523	ppb	0.523	10.22	245	4000	
Mo	95	3	115	1.886	ppb	1.886	3.74	788	2000	
Ag	107	3	115	0.008	ppb	0.008	204.82	27	100	
Cd	111	3	115	0.000	ppb	0.000	-25000.59	2	2000	
Sn	120	3	115	0.238	ppb	0.238	15.99	691	2000	
Sb	121	3	115	0.105	ppb	0.105	18.61	98	1000	
Ba	137	3	115	0.759	ppb	0.759	43.78	188	5000	
Tl	205	3	193	0.022	ppb	0.022	59.06	173	2000	
(Pb)	206	3	193	0.021	ppb	0.021	106.51	258	100	
(Pb)	207	3	193	-0.001	ppb	-0.001	-3854.42	342	100	
Pb	208	3	193	0.008	ppb	0.008	114.42	1076	5000	
Th	232	3	193	1.476	ppb	1.476	10.76	12553	2000	
U	238	3	193	0.022	ppb	0.022	7.45	1399	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3542282	1.15	3535116	100.20	60	120	
Sc (IS)	45	3	HMI He	510631	0.55	505423	101.03	60	120	
Ge Internal standard	72	2	HMI H2	2151933	0.38	2359166	91.22	60	120	
Ge Internal standard	72	3	HMI He	641944	0.58	680743	94.30	60	120	
In Internal Standard	115	3	HMI He	2352964	1.67	2361818	99.63	60	120	
Ir (IS)	193	3	HMI He	5226619	1.85	5045699	103.59	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-5-A
Data File Name	320SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:46:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.097	ppb	0.097	147.58	5	2000	
Na	23	3	45	27943.364	ppb	27943.364	1.36	2455608	400000	
Mg	24	3	45	10482.176	ppb	10482.176	1.57	487119	400000	
Al	27	3	45	1.689	ppb	1.689	53.24	147	400000	
K	39	3	45	6733.950	ppb	6733.950	0.20	277142	400000	
Ca	40	2	45	34923.832	ppb	34923.832	1.00	16510182	400000	
V	51	3	72	17.121	ppb	17.121	4.59	8813	2000	
Cr	52	3	72	3.403	ppb	3.403	11.02	4195	5000	
Mn	55	3	72	3.726	ppb	3.726	4.15	1333	10000	
Fe	56	2	72	134.708	ppb	134.708	1.27	211301	10000	
Co	59	3	72	0.030	ppb	0.030	23.44	83	2000	
Ni	60	3	72	0.999	ppb	0.999	16.45	746	5000	
Cu	63	3	72	0.120	ppb	0.120	36.04	376	5000	
Zn	66	3	72	3.989	ppb	3.989	1.14	615	5000	
As	75	3	72	6.707	ppb	6.707	17.67	633	2000	
Se	78	2	72	3.204	ppb	3.204	5.52	147	2000	
Sr	88	3	72	198.432	ppb	198.432	1.12	85072	4000	
Mo	95	3	115	5.870	ppb	5.870	5.01	2477	2000	
Ag	107	3	115	0.003	ppb	0.003	102.20	20	100	
Cd	111	3	115	0.000	ppb	0.000	-2815.34	2	2000	
Sn	120	3	115	-0.032	ppb	-0.032	-371.79	543	2000	
Sb	121	3	115	0.176	ppb	0.176	20.57	148	1000	
Ba	137	3	115	26.628	ppb	26.628	8.15	5688	5000	
Tl	205	3	193	0.004	ppb	0.004	113.16	112	2000	
(Pb)	206	3	193	2.273	ppb	2.273	7.51	2514	100	
(Pb)	207	3	193	2.080	ppb	2.080	4.13	2211	100	
Pb	208	3	193	2.151	ppb	2.151	2.42	9755	5000	
Th	232	3	193	0.318	ppb	0.318	51.55	7472	2000	
U	238	3	193	2.709	ppb	2.709	3.48	12618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3635665	1.96	3535116	102.84	60	120	
Sc (IS)	45	3	HMI He	508089	0.27	505423	100.53	60	120	
Ge Internal standard	72	2	HMI H2	2206334	1.93	2359166	93.52	60	120	
Ge Internal standard	72	3	HMI He	650044	0.81	680743	95.49	60	120	
In Internal Standard	115	3	HMI He	2436780	4.13	2361818	103.17	60	120	
Ir (IS)	193	3	HMI He	5084375	1.34	5045699	100.77	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-7-A
Data File Name	321SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:48:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	27928.920	ppb	27928.920	2.00	2458872	400000	
Mg	24	3	45	9155.057	ppb	9155.057	1.54	426232	400000	
Al	27	3	45	-0.055	ppb	-0.055	-2916.40	117	400000	
K	39	3	45	5859.896	ppb	5859.896	0.82	244760	400000	
Ca	40	2	45	28723.013	ppb	28723.013	2.06	13255764	400000	
V	51	3	72	22.439	ppb	22.439	0.96	11249	2000	
Cr	52	3	72	2.656	ppb	2.656	17.65	3707	5000	
Mn	55	3	72	0.707	ppb	0.707	10.64	375	10000	
Fe	56	2	72	15.816	ppb	15.816	24.25	62798	10000	
Co	59	3	72	-0.005	ppb	-0.005	-369.95	47	2000	
Ni	60	3	72	0.591	ppb	0.591	18.62	623	5000	
Cu	63	3	72	0.048	ppb	0.048	238.10	318	5000	
Zn	66	3	72	3.017	ppb	3.017	17.24	491	5000	
As	75	3	72	7.908	ppb	7.908	6.97	733	2000	
Se	78	2	72	2.411	ppb	2.411	19.99	111	2000	
Sr	88	3	72	158.759	ppb	158.759	2.11	67274	4000	
Mo	95	3	115	4.540	ppb	4.540	5.95	1918	2000	
Ag	107	3	115	0.014	ppb	0.014	89.27	35	100	
Cd	111	3	115	0.016	ppb	0.016	151.85	5	2000	
Sn	120	3	115	-0.087	ppb	-0.087	-112.15	506	2000	
Sb	121	3	115	0.183	ppb	0.183	42.64	152	1000	
Ba	137	3	115	17.091	ppb	17.091	4.54	3657	5000	
Tl	205	3	193	0.001	ppb	0.001	628.79	108	2000	
(Pb)	206	3	193	0.003	ppb	0.003	1667.30	240	100	
(Pb)	207	3	193	0.010	ppb	0.010	40.63	353	100	
Pb	208	3	193	0.006	ppb	0.006	356.96	1071	5000	
Th	232	3	193	-0.180	ppb	-0.180	-40.22	5593	2000	
U	238	3	193	1.724	ppb	1.724	1.78	8744	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3548374	0.85	3535116	100.38	60	120	
Sc (IS)	45	3	HMI He	509073	1.31	505423	100.72	60	120	
Ge Internal standard	72	2	HMI H2	2217067	3.73	2359166	93.98	60	120	
Ge Internal standard	72	3	HMI He	642547	1.09	680743	94.39	60	120	
In Internal Standard	115	3	HMI He	2427328	0.84	2361818	102.77	60	120	
Ir (IS)	193	3	HMI He	5236484	2.10	5045699	103.78	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-9-A
Data File Name	322SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:49:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.001	ppb	0.001	7653.12	2	2000	
Na	23	3	45	25486.621	ppb	25486.621	2.27	2194467	400000	
Mg	24	3	45	19044.582	ppb	19044.582	0.22	866632	400000	
Al	27	3	45	2.635	ppb	2.635	109.17	160	400000	
K	39	3	45	7352.144	ppb	7352.144	1.11	294175	400000	
Ca	40	2	45	62119.638	ppb	62119.638	0.90	28569394	400000	
V	51	3	72	19.443	ppb	19.443	3.40	9629	2000	
Cr	52	3	72	3.235	ppb	3.235	3.90	3970	5000	
Mn	55	3	72	0.846	ppb	0.846	27.67	410	10000	
Fe	56	2	72	18.565	ppb	18.565	13.85	64269	10000	
Co	59	3	72	0.046	ppb	0.046	6.19	97	2000	
Ni	60	3	72	0.616	ppb	0.616	20.11	618	5000	
Cu	63	3	72	0.387	ppb	0.387	12.49	563	5000	
Zn	66	3	72	3.384	ppb	3.384	1.64	525	5000	
As	75	3	72	5.727	ppb	5.727	4.17	528	2000	
Se	78	2	72	6.319	ppb	6.319	3.99	282	2000	
Sr	88	3	72	354.225	ppb	354.225	0.76	147171	4000	
Mo	95	3	115	6.517	ppb	6.517	6.54	2612	2000	
Ag	107	3	115	0.005	ppb	0.005	150.11	22	100	
Cd	111	3	115	0.000	ppb	0.000	12043.03	2	2000	
Sn	120	3	115	-0.046	ppb	-0.046	-92.14	508	2000	
Sb	121	3	115	0.384	ppb	0.384	22.84	268	1000	
Ba	137	3	115	76.231	ppb	76.231	0.87	15445	5000	
Tl	205	3	193	0.005	ppb	0.005	42.39	115	2000	
(Pb)	206	3	193	-0.071	ppb	-0.071	-40.96	158	100	
(Pb)	207	3	193	0.023	ppb	0.023	260.20	353	100	
Pb	208	3	193	-0.023	ppb	-0.023	-85.64	920	5000	
Th	232	3	193	-0.311	ppb	-0.311	-28.99	4879	2000	
U	238	3	193	9.434	ppb	9.434	1.68	40668	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3538024	2.24	3535116	100.08	60	120	
Sc (IS)	45	3	HMI He	497608	0.59	505423	98.45	60	120	
Ge Internal standard	72	2	HMI H2	2147357	1.71	2359166	91.02	60	120	
Ge Internal standard	72	3	HMI He	630037	0.37	680743	92.55	60	120	
In Internal Standard	115	3	HMI He	2314935	0.94	2361818	98.01	60	120	
Ir (IS)	193	3	HMI He	5067184	1.06	5045699	100.43	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-10-A
Data File Name	323SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:52:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	24829.367	ppb	24829.367	2.04	2136099	400000	
Mg	24	3	45	18036.696	ppb	18036.696	2.21	819926	400000	
Al	27	3	45	5.016	ppb	5.016	59.43	200	400000	
K	39	3	45	7027.693	ppb	7027.693	1.14	281923	400000	
Ca	40	2	45	62138.428	ppb	62138.428	2.94	27909528	400000	
V	51	3	72	19.117	ppb	19.117	2.98	9482	2000	
Cr	52	3	72	3.114	ppb	3.114	4.70	3904	5000	
Mn	55	3	72	0.633	ppb	0.633	20.72	345	10000	
Fe	56	2	72	13.619	ppb	13.619	20.82	58341	10000	
Co	59	3	72	0.056	ppb	0.056	36.75	107	2000	
Ni	60	3	72	0.614	ppb	0.614	25.74	618	5000	
Cu	63	3	72	0.131	ppb	0.131	100.40	373	5000	
Zn	66	3	72	3.281	ppb	3.281	10.84	513	5000	
As	75	3	72	5.704	ppb	5.704	5.29	526	2000	
Se	78	2	72	6.545	ppb	6.545	13.80	293	2000	
Sr	88	3	72	342.492	ppb	342.492	1.60	142389	4000	
Mo	95	3	115	5.989	ppb	5.989	4.69	2382	2000	
Ag	107	3	115	0.000	ppb	0.000	1281.69	15	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.157	ppb	-0.157	-101.52	436	2000	
Sb	121	3	115	0.292	ppb	0.292	16.30	210	1000	
Ba	137	3	115	74.307	ppb	74.307	4.06	14919	5000	
Tl	205	3	193	0.006	ppb	0.006	262.06	118	2000	
(Pb)	206	3	193	-0.042	ppb	-0.042	-73.84	188	100	
(Pb)	207	3	193	-0.042	ppb	-0.042	-62.67	297	100	
Pb	208	3	193	-0.039	ppb	-0.039	-36.41	860	5000	
Th	232	3	193	-0.419	ppb	-0.419	-6.40	4460	2000	
U	238	3	193	9.101	ppb	9.101	2.29	39518	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3455321	1.11	3535116	97.74	60	120	
Sc (IS)	45	3	HMI He	497069	1.13	505423	98.35	60	120	
Ge Internal standard	72	2	HMI H2	2151682	0.78	2359166	91.21	60	120	
Ge Internal standard	72	3	HMI He	630452	0.72	680743	92.61	60	120	
In Internal Standard	115	3	HMI He	2294832	1.31	2361818	97.16	60	120	
Ir (IS)	193	3	HMI He	5098570	1.22	5045699	101.05	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	324_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:54:02-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.761	ppb	3.599	1736	50	103.5	90	110	
Na	23	3	45	49004.735	ppb	1.549	4140061	51000	96.1	90	110	
Mg	24	3	45	10503.851	ppb	0.606	470274	11000	95.5	90	110	
Al	27	3	45	1040.575	ppb	2.457	17582	1000	104.1	90	110	
K	39	3	45	10431.775	ppb	1.819	400800	11000	94.8	90	110	
Ca	40	2	45	10857.125	ppb	3.206	4803829	11000	98.7	90	110	
V	51	3	72	55.725	ppb	2.430	25426	50	111.5	90	110	>+\-10%
Cr	52	3	72	55.692	ppb	2.138	32740	50	111.4	90	110	>+\-10%
Mn	55	3	72	54.125	ppb	2.505	15986	50	108.2	90	110	
Fe	56	2	72	1129.556	ppb	0.880	1352343	1000	113.0	90	110	>+\-10%
Co	59	3	72	53.818	ppb	0.924	50851	50	107.6	90	110	
Ni	60	3	72	54.850	ppb	2.162	14839	50	109.7	90	110	
Cu	63	3	72	54.857	ppb	1.443	39203	50	109.7	90	110	
Zn	66	3	72	56.881	ppb	2.882	6503	50	113.8	90	110	>+\-10%
As	75	3	72	54.017	ppb	6.398	4539	50	108.0	90	110	
Se	78	2	72	57.112	ppb	4.169	2428	50	114.2	90	110	>+\-10%
Sr	88	3	72	108.429	ppb	1.560	43102	100	108.4	90	110	
Mo	95	3	115	51.203	ppb	1.927	20132	50	102.4	90	110	
Ag	107	3	115	51.095	ppb	1.482	68235	50	102.2	90	110	
Cd	111	3	115	52.298	ppb	3.717	10017	50	104.6	90	110	
Sn	120	3	115	51.936	ppb	1.266	31707	50	103.9	90	110	
Sb	121	3	115	51.097	ppb	1.584	31012	50	102.2	90	110	
Ba	137	3	115	50.207	ppb	2.987	10076	50	100.4	90	110	
Tl	205	3	193	51.283	ppb	0.687	153418	50	102.6	90	110	
(Pb)	206	3	193	52.037	ppb	0.345	51661	50	104.1	90	110	
(Pb)	207	3	193	51.098	ppb	0.765	45724	50	102.2	90	110	
Pb	208	3	193	51.595	ppb	0.301	207362	50	103.2	90	110	
Th	232	3	193	50.660	ppb	1.510	210249	50	101.3	90	110	
U	238	3	193	52.042	ppb	0.502	215897	50	104.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3397839	0.36	3535116	96.12	60	120	
Sc (IS)	45	3	HMI He	489530	2.03	505423	96.86	60	120	
Ge Internal standard	72	2	HMI H2	2049992	1.74	2359166	86.89	60	120	
Ge Internal standard	72	3	HMI He	602613	1.18	680743	88.52	60	120	
In Internal Standard	115	3	HMI He	2290869	1.11	2361818	97.00	60	120	
Ir (IS)	193	3	HMI He	5004027	0.22	5045699	99.17	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	325_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:55:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	40.801	ppb	5.4	16316	25	>RL
Mg	24	3	45	2.232	ppb	89.9	250	25	
Al	27	3	45	-1.810	ppb	-134.7	83	15	
K	39	3	45	-36.448	ppb	-98.6	22086	50	
V	51	3	72	0.192	ppb	105.2	616	1	
Cr	52	3	72	0.514	ppb	21.1	2342	1	
Mn	55	3	72	0.315	ppb	38.1	242	0.5	
Co	59	3	72	-0.005	ppb	-574.1	45	0.5	
Ni	60	3	72	0.516	ppb	48.4	576	1	
Cu	63	3	72	0.021	ppb	240.7	285	1	
Zn	66	3	72	0.380	ppb	16.2	168	5	
As	75	3	72	0.250	ppb	84.5	48	1	
Se	78	2	72	0.094	ppb	29.7	5	1	
Sr	88	3	72	0.035	ppb	175.0	37	0.5	
Mo	95	3	115	0.038	ppb	82.9	42	0.5	
Ag	107	3	115	0.010	ppb	78.0	28	1	
Cd	111	3	115	0.000	ppb	10981.3	2	0.5	
Sn	120	3	115	0.187	ppb	53.6	651	1	
Sb	121	3	115	0.041	ppb	73.8	58	0.6	
Ba	137	3	115	0.102	ppb	60.5	53	0.5	
Tl	205	3	193	0.036	ppb	10.5	210	0.1	
(Pb)	206	3	193	-0.047	ppb	-68.1	183	1	
(Pb)	207	3	193	0.027	ppb	164.2	358	1	
Pb	208	3	193	-0.018	ppb	-122.1	945	0.5	
Th	232	3	193	1.036	ppb	16.6	10431	1	>RL
U	238	3	193	0.019	ppb	129.4	1349	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3361732	0.43	3535116	95.10	60	120	
Sc (IS)	45	3	HMI He	492927	0.46	505423	97.53	60	120	
Ge Internal standard	72	2	HMI H2	2100696	2.34	2359166	89.04	60	120	
Ge Internal standard	72	3	HMI He	614823	1.11	680743	90.32	60	120	
In Internal Standard	115	3	HMI He	2323185	0.52	2361818	98.36	60	120	
Ir (IS)	193	3	HMI He	5092048	2.40	5045699	100.92	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-E
Data File Name	326SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:57:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	29000.961	ppb	29000.961	2.73	2505101	400000	
Mg	24	3	45	3362.944	ppb	3362.944	0.58	153733	400000	
Al	27	3	45	1.634	ppb	1.634	72.10	143	400000	
K	39	3	45	9224.257	ppb	9224.257	0.40	364415	400000	
Ca	40	2	45	13097.203	ppb	13097.203	1.75	6069606	400000	
V	51	3	72	0.941	ppb	0.941	7.01	1021	2000	
Cr	52	3	72	0.711	ppb	0.711	27.24	2614	5000	
Mn	55	3	72	5.852	ppb	5.852	7.83	2019	10000	
Fe	56	2	72	103.714	ppb	103.714	3.93	172088	10000	
Co	59	3	72	0.091	ppb	0.091	15.90	147	2000	
Ni	60	3	72	0.565	ppb	0.565	31.15	628	5000	
Cu	63	3	72	0.023	ppb	0.023	277.30	305	5000	
Zn	66	3	72	1.178	ppb	1.178	28.69	277	5000	
As	75	3	72	1.534	ppb	1.534	15.84	168	2000	
Se	78	2	72	0.060	ppb	0.060	43.89	3	2000	
Sr	88	3	72	157.496	ppb	157.496	1.80	68047	4000	
Mo	95	3	115	6.308	ppb	6.308	1.34	2622	2000	
Ag	107	3	115	0.015	ppb	0.015	33.86	37	100	
Cd	111	3	115	0.016	ppb	0.016	262.82	5	2000	
Sn	120	3	115	0.022	ppb	0.022	288.21	570	2000	
Sb	121	3	115	0.054	ppb	0.054	65.04	68	1000	
Ba	137	3	115	37.292	ppb	37.292	4.24	7845	5000	
Tl	205	3	193	0.009	ppb	0.009	69.07	130	2000	
(Pb)	206	3	193	-0.056	ppb	-0.056	-62.38	178	100	
(Pb)	207	3	193	-0.006	ppb	-0.006	-948.88	337	100	
Pb	208	3	193	-0.030	ppb	-0.030	-98.50	915	5000	
Th	232	3	193	-0.150	ppb	-0.150	-42.50	5700	2000	
U	238	3	193	0.084	ppb	0.084	15.81	1663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3559743	1.65	3535116	100.70	60	120	
Sc (IS)	45	3	HMI He	499467	0.95	505423	98.82	60	120	
Ge Internal standard	72	2	HMI H2	2201398	1.72	2359166	93.31	60	120	
Ge Internal standard	72	3	HMI He	655070	0.31	680743	96.23	60	120	
In Internal Standard	115	3	HMI He	2399504	1.49	2361818	101.60	60	120	
Ir (IS)	193	3	HMI He	5218069	0.43	5045699	103.42	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-Esd@5
Data File Name	327SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:59:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	6083.618	ppb	6083.618	1.00	531233	400000	
Mg	24	3	45	710.660	ppb	710.660	0.80	32333	400000	
Al	27	3	45	0.724	ppb	0.724	202.13	127	400000	
K	39	3	45	2016.212	ppb	2016.212	1.79	97370	400000	
Ca	40	2	45	2869.761	ppb	2869.761	1.65	1314596	400000	
V	51	3	72	0.251	ppb	0.251	25.22	678	2000	
Cr	52	3	72	0.098	ppb	0.098	687.04	2217	5000	
Mn	55	3	72	2.584	ppb	2.584	9.55	968	10000	
Fe	56	2	72	25.373	ppb	25.373	17.82	72548	10000	
Co	59	3	72	0.027	ppb	0.027	34.00	80	2000	
Ni	60	3	72	0.332	ppb	0.332	24.20	555	5000	
Cu	63	3	72	0.117	ppb	0.117	29.35	373	5000	
Zn	66	3	72	3.538	ppb	3.538	10.72	558	5000	
As	75	3	72	0.257	ppb	0.257	54.00	52	2000	
Se	78	2	72	0.017	ppb	0.017	156.72	1	2000	
Sr	88	3	72	34.131	ppb	34.131	1.20	14599	4000	
Mo	95	3	115	1.365	ppb	1.365	5.95	578	2000	
Ag	107	3	115	0.012	ppb	0.012	34.69	32	100	
Cd	111	3	115	0.000	ppb	0.000	25470.54	2	2000	
Sn	120	3	115	0.138	ppb	0.138	83.11	631	2000	
Sb	121	3	115	0.027	ppb	0.027	62.10	50	1000	
Ba	137	3	115	8.120	ppb	8.120	7.89	1704	5000	
Tl	205	3	193	0.006	ppb	0.006	118.85	120	2000	
(Pb)	206	3	193	0.339	ppb	0.339	9.38	573	100	
(Pb)	207	3	193	0.342	ppb	0.342	3.83	645	100	
Pb	208	3	193	0.331	ppb	0.331	8.30	2371	5000	
Th	232	3	193	-0.262	ppb	-0.262	-41.24	5112	2000	
U	238	3	193	0.038	ppb	0.038	28.01	1433	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3498154	0.49	3535116	98.95	60	120	
Sc (IS)	45	3	HMI He	495282	0.32	505423	97.99	60	120	
Ge Internal standard	72	2	HMI H2	2149410	1.92	2359166	91.11	60	120	
Ge Internal standard	72	3	HMI He	647714	1.54	680743	95.15	60	120	
In Internal Standard	115	3	HMI He	2356104	1.77	2361818	99.76	60	120	
Ir (IS)	193	3	HMI He	5104873	0.52	5045699	101.17	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-F MS
Data File Name	328SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:01:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	7315.738	ppb	7315.738	104.33	764302	400000	
Mg	24	3	45	1021.024	ppb	1021.024	105.48	55390	400000	
Al	27	3	45	194.167	ppb	194.167	107.97	4082	400000	
K	39	3	45	2417.410	ppb	2417.410	119.37	136813	400000	
Ca	40	2	45	42.648	ppb	42.648	67.34	7606	400000	
V	51	3	72	9.601	ppb	9.601	115.94	5834	2000	
Cr	52	3	72	10.156	ppb	10.156	129.37	9402	5000	
Mn	55	3	72	12.104	ppb	12.104	108.84	4461	10000	
Fe	56	2	72	-18.354	ppb	-18.354	-28.28	5280	10000	
Co	59	3	72	10.424	ppb	10.424	109.30	11853	2000	
Ni	60	3	72	10.097	ppb	10.097	117.78	3756	5000	
Cu	63	3	72	10.651	ppb	10.651	111.93	9389	5000	
Zn	66	3	72	10.062	ppb	10.062	120.19	1501	5000	
As	75	3	72	9.808	ppb	9.808	109.64	1020	2000	
Se	78	2	72	0.180	ppb	0.180	116.27	2	2000	
Sr	88	3	72	64.796	ppb	64.796	110.61	30760	4000	
Mo	95	3	115	11.152	ppb	11.152	117.86	5064	2000	
Ag	107	3	115	9.706	ppb	9.706	111.46	15107	100	
Cd	111	3	115	9.947	ppb	9.947	115.37	2201	2000	
Sn	120	3	115	9.081	ppb	9.081	127.92	6885	2000	
Sb	121	3	115	9.202	ppb	9.202	116.56	6469	1000	
Ba	137	3	115	20.092	ppb	20.092	115.20	4689	5000	
Tl	205	3	193	9.632	ppb	9.632	114.78	34778	2000	
(Pb)	206	3	193	9.509	ppb	9.509	119.33	11538	100	
(Pb)	207	3	193	9.366	ppb	9.366	118.17	10424	100	
Pb	208	3	193	9.617	ppb	9.617	118.00	47432	5000	
Th	232	3	193	5.412	ppb	5.412	124.68	34703	2000	
U	238	3	193	9.792	ppb	9.792	117.54	50147	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	1006298	36.17	3535116	28.47	60	120	IS Failed
Sc (IS)	45	3	HMI He	720287	25.53	505423	142.51	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	621276	28.55	2359166	26.33	60	120	IS Failed
Ge Internal standard	72	3	HMI He	893930	26.70	680743	131.32	60	120	IS Failed
In Internal Standard	115	3	HMI He	3343475	27.44	2361818	141.56	60	120	IS Failed
Ir (IS)	193	3	HMI He	7464596	25.55	5045699	147.94	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-174901-A-7-G MSD
Data File Name	329SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:03:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.145	ppb	39.145	10.01	1379	2000	
Na	23	3	45	30743.078	ppb	30743.078	3.01	2682682	400000	
Mg	24	3	45	4142.862	ppb	4142.862	1.11	191302	400000	
Al	27	3	45	765.966	ppb	765.966	1.79	13373	400000	
K	39	3	45	10409.165	ppb	10409.165	1.29	412369	400000	
Ca	40	2	45	14083.654	ppb	14083.654	1.27	6451269	400000	
V	51	3	72	40.758	ppb	40.758	1.11	20320	2000	
Cr	52	3	72	39.945	ppb	39.945	0.56	26083	5000	
Mn	55	3	72	45.474	ppb	45.474	5.55	14585	10000	
Fe	56	2	72	873.713	ppb	873.713	1.13	1152491	10000	
Co	59	3	72	39.544	ppb	39.544	1.87	40527	2000	
Ni	60	3	72	40.619	ppb	40.619	2.85	12038	5000	
Cu	63	3	72	41.394	ppb	41.394	1.16	32148	5000	
Zn	66	3	72	48.372	ppb	48.372	2.14	6017	5000	
As	75	3	72	42.419	ppb	42.419	1.82	3872	2000	
Se	78	2	72	41.781	ppb	41.781	4.49	1941	2000	
Sr	88	3	72	243.788	ppb	243.788	0.32	105062	4000	
Mo	95	3	115	44.332	ppb	44.332	0.45	18150	2000	
Ag	107	3	115	39.011	ppb	39.011	2.08	54239	100	
Cd	111	3	115	38.164	ppb	38.164	0.66	7612	2000	
Sn	120	3	115	39.033	ppb	39.033	2.74	24941	2000	
Sb	121	3	115	37.550	ppb	37.550	1.44	23733	1000	
Ba	137	3	115	77.919	ppb	77.919	1.45	16260	5000	
Tl	205	3	193	39.053	ppb	39.053	1.28	120663	2000	
(Pb)	206	3	193	39.901	ppb	39.901	2.25	40956	100	
(Pb)	207	3	193	38.428	ppb	38.428	2.54	35584	100	
Pb	208	3	193	39.502	ppb	39.502	2.48	164142	5000	
Th	232	3	193	38.450	ppb	38.450	2.38	166259	2000	
U	238	3	193	39.781	ppb	39.781	1.82	170693	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3519584	1.42	3535116	99.56	60	120	
Sc (IS)	45	3	HMI He	504635	1.52	505423	99.84	60	120	
Ge Internal standard	72	2	HMI H2	2239113	1.42	2359166	94.91	60	120	
Ge Internal standard	72	3	HMI He	653459	1.28	680743	95.99	60	120	
In Internal Standard	115	3	HMI He	2384746	0.67	2361818	100.97	60	120	
Ir (IS)	193	3	HMI He	5167701	1.98	5045699	102.42	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-E pds
Data File Name	330SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:04:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	99.899	ppb	99.899	0.69	3447	2000	
Na	23	3	45	33354.369	ppb	33354.369	2.39	2916998	400000	
Mg	24	3	45	5312.063	ppb	5312.063	3.69	245919	400000	
Al	27	3	45	1992.190	ppb	1992.190	3.01	34694	400000	
K	39	3	45	11452.526	ppb	11452.526	1.42	452621	400000	
Ca	40	2	45	15198.590	ppb	15198.590	1.49	6965785	400000	
V	51	3	72	100.629	ppb	100.629	3.06	49389	2000	
Cr	52	3	72	101.586	ppb	101.586	2.74	63027	5000	
Mn	55	3	72	105.013	ppb	105.013	4.36	33517	10000	
Fe	56	2	72	1152.508	ppb	1152.508	2.50	1508422	10000	
Co	59	3	72	102.215	ppb	102.215	3.07	104783	2000	
Ni	60	3	72	100.633	ppb	100.633	3.16	29164	5000	
Cu	63	3	72	106.296	ppb	106.296	2.73	82187	5000	
Zn	66	3	72	216.215	ppb	216.215	2.93	26462	5000	
As	75	3	72	101.489	ppb	101.489	3.11	9234	2000	
Se	78	2	72	105.359	ppb	105.359	4.24	4898	2000	
Sr	88	3	72	264.751	ppb	264.751	0.95	114226	4000	
Mo	95	3	115	105.746	ppb	105.746	0.59	42499	2000	
Ag	107	3	115	26.165	ppb	26.165	3.42	35736	100	
Cd	111	3	115	98.690	ppb	98.690	2.39	19334	2000	
Sn	120	3	115	100.664	ppb	100.664	2.95	62331	2000	
Sb	121	3	115	95.246	ppb	95.246	3.10	59083	1000	
Ba	137	3	115	136.948	ppb	136.948	2.51	28049	5000	
Tl	205	3	193	99.923	ppb	99.923	1.66	309131	2000	
(Pb)	206	3	193	100.119	ppb	100.119	3.97	102567	100	
(Pb)	207	3	193	98.627	ppb	98.627	2.30	90968	100	
Pb	208	3	193	99.825	ppb	99.825	3.33	413932	5000	
Th	232	3	193	106.213	ppb	106.213	1.78	449135	2000	
U	238	3	193	209.286	ppb	209.286	3.48	893963	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3521858	1.27	3535116	99.62	60	120	
Sc (IS)	45	3	HMI He	506099	0.93	505423	100.13	60	120	
Ge Internal standard	72	2	HMI H2	2242701	1.79	2359166	95.06	60	120	
Ge Internal standard	72	3	HMI He	654292	1.91	680743	96.11	60	120	
In Internal Standard	115	3	HMI He	2343133	1.71	2361818	99.21	60	120	
Ir (IS)	193	3	HMI He	5177877	2.63	5045699	102.62	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-4-A
Data File Name	331SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:06:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.050	ppb	0.050	332.64	3	2000	
Na	23	3	45	27709.376	ppb	27709.376	2.77	2432904	400000	
Mg	24	3	45	10757.566	ppb	10757.566	0.62	499447	400000	
Al	27	3	45	2.654	ppb	2.654	50.54	163	400000	
K	39	3	45	6755.443	ppb	6755.443	0.76	277691	400000	
Ca	40	2	45	36014.999	ppb	36014.999	0.55	16535505	400000	
V	51	3	72	18.420	ppb	18.420	1.97	9362	2000	
Cr	52	3	72	3.124	ppb	3.124	10.79	3997	5000	
Mn	55	3	72	0.938	ppb	0.938	6.35	448	10000	
Fe	56	2	72	6.971	ppb	6.971	32.83	51929	10000	
Co	59	3	72	0.062	ppb	0.062	22.35	115	2000	
Ni	60	3	72	0.862	ppb	0.862	22.53	701	5000	
Cu	63	3	72	0.098	ppb	0.098	98.24	356	5000	
Zn	66	3	72	3.394	ppb	3.394	5.85	538	5000	
As	75	3	72	6.694	ppb	6.694	9.91	626	2000	
Se	78	2	72	3.197	ppb	3.197	15.75	148	2000	
Sr	88	3	72	197.080	ppb	197.080	1.03	83776	4000	
Mo	95	3	115	6.490	ppb	6.490	4.20	2641	2000	
Ag	107	3	115	0.016	ppb	0.016	29.08	37	100	
Cd	111	3	115	0.043	ppb	0.043	60.85	10	2000	
Sn	120	3	115	-0.054	ppb	-0.054	-190.52	511	2000	
Sb	121	3	115	0.293	ppb	0.293	28.71	215	1000	
Ba	137	3	115	28.141	ppb	28.141	2.08	5803	5000	
Tl	205	3	193	0.057	ppb	0.057	13.02	270	2000	
(Pb)	206	3	193	1.242	ppb	1.242	2.77	1458	100	
(Pb)	207	3	193	1.069	ppb	1.069	7.48	1281	100	
Pb	208	3	193	1.090	ppb	1.090	6.37	5369	5000	
Th	232	3	193	3.148	ppb	3.148	13.06	18792	2000	
U	238	3	193	2.773	ppb	2.773	6.80	12705	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3530775	1.26	3535116	99.88	60	120	
Sc (IS)	45	3	HMI He	507615	0.25	505423	100.43	60	120	
Ge Internal standard	72	2	HMI H2	2223836	0.48	2359166	94.26	60	120	
Ge Internal standard	72	3	HMI He	644513	0.81	680743	94.68	60	120	
In Internal Standard	115	3	HMI He	2348368	1.69	2361818	99.43	60	120	
Ir (IS)	193	3	HMI He	5015829	1.94	5045699	99.41	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-6-A
Data File Name	332SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:08:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	26739.677	ppb	26739.677	2.63	2326878	400000	
Mg	24	3	45	8727.088	ppb	8727.088	1.21	401555	400000	
Al	27	3	45	2.529	ppb	2.529	176.71	160	400000	
K	39	3	45	5652.393	ppb	5652.393	1.56	234135	400000	
Ca	40	2	45	27300.723	ppb	27300.723	0.53	12734309	400000	
V	51	3	72	21.140	ppb	21.140	1.84	10797	2000	
Cr	52	3	72	2.057	ppb	2.057	6.48	3410	5000	
Mn	55	3	72	0.585	ppb	0.585	29.60	342	10000	
Fe	56	2	72	2.890	ppb	2.890	85.32	48075	10000	
Co	59	3	72	0.038	ppb	0.038	17.16	92	2000	
Ni	60	3	72	0.155	ppb	0.155	190.88	510	5000	
Cu	63	3	72	0.082	ppb	0.082	63.37	350	5000	
Zn	66	3	72	3.448	ppb	3.448	4.49	551	5000	
As	75	3	72	6.936	ppb	6.936	3.26	656	2000	
Se	78	2	72	2.027	ppb	2.027	8.12	97	2000	
Sr	88	3	72	150.240	ppb	150.240	2.17	64669	4000	
Mo	95	3	115	4.239	ppb	4.239	8.11	1778	2000	
Ag	107	3	115	0.002	ppb	0.002	260.20	18	100	
Cd	111	3	115	0.008	ppb	0.008	178.15	3	2000	
Sn	120	3	115	-0.055	ppb	-0.055	-77.82	523	2000	
Sb	121	3	115	0.205	ppb	0.205	12.16	165	1000	
Ba	137	3	115	15.594	ppb	15.594	1.68	3317	5000	
Tl	205	3	193	0.023	ppb	0.023	21.33	173	2000	
(Pb)	206	3	193	-0.055	ppb	-0.055	-82.16	177	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-591.00	335	100	
Pb	208	3	193	-0.028	ppb	-0.028	-65.94	913	5000	
Th	232	3	193	0.511	ppb	0.511	37.32	8362	2000	
U	238	3	193	1.680	ppb	1.680	2.02	8410	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3586149	0.74	3535116	101.44	60	120	
Sc (IS)	45	3	HMI He	503019	0.86	505423	99.52	60	120	
Ge Internal standard	72	2	HMI H2	2284646	2.83	2359166	96.84	60	120	
Ge Internal standard	72	3	HMI He	652697	1.78	680743	95.88	60	120	
In Internal Standard	115	3	HMI He	2410810	1.85	2361818	102.07	60	120	
Ir (IS)	193	3	HMI He	5148006	0.07	5045699	102.03	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-8-A
Data File Name	333SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:10:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.002	ppb	0.002	3967.09	2	2000	
Na	23	3	45	26076.770	ppb	26076.770	1.08	2271678	400000	
Mg	24	3	45	19048.080	ppb	19048.080	0.71	877054	400000	
Al	27	3	45	1.959	ppb	1.959	205.35	150	400000	
K	39	3	45	7454.233	ppb	7454.233	1.24	301444	400000	
Ca	40	2	45	62445.260	ppb	62445.260	1.46	29075250	400000	
V	51	3	72	19.490	ppb	19.490	2.74	9879	2000	
Cr	52	3	72	2.631	ppb	2.631	5.03	3709	5000	
Mn	55	3	72	0.501	ppb	0.501	17.66	312	10000	
Fe	56	2	72	3.960	ppb	3.960	63.95	48718	10000	
Co	59	3	72	0.062	ppb	0.062	26.33	115	2000	
Ni	60	3	72	0.512	ppb	0.512	31.05	603	5000	
Cu	63	3	72	0.130	ppb	0.130	60.58	381	5000	
Zn	66	3	72	3.181	ppb	3.181	7.78	513	5000	
As	75	3	72	6.291	ppb	6.291	14.62	591	2000	
Se	78	2	72	6.383	ppb	6.383	6.26	299	2000	
Sr	88	3	72	355.755	ppb	355.755	0.75	151313	4000	
Mo	95	3	115	6.161	ppb	6.161	4.19	2497	2000	
Ag	107	3	115	0.000	ppb	0.000	4477.50	15	100	
Cd	111	3	115	0.026	ppb	0.026	152.94	7	2000	
Sn	120	3	115	-0.151	ppb	-0.151	-101.12	450	2000	
Sb	121	3	115	0.282	ppb	0.282	31.82	208	1000	
Ba	137	3	115	77.981	ppb	77.981	3.56	15958	5000	
Tl	205	3	193	0.004	ppb	0.004	75.46	113	2000	
(Pb)	206	3	193	-0.062	ppb	-0.062	-36.06	168	100	
(Pb)	207	3	193	-0.063	ppb	-0.063	-88.23	278	100	
Pb	208	3	193	-0.043	ppb	-0.043	-64.39	843	5000	
Th	232	3	193	0.045	ppb	0.045	383.13	6362	2000	
U	238	3	193	9.559	ppb	9.559	3.04	41443	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3581670	0.64	3535116	101.32	60	120	
Sc (IS)	45	3	HMI He	503490	0.40	505423	99.62	60	120	
Ge Internal standard	72	2	HMI H2	2251867	1.13	2359166	95.45	60	120	
Ge Internal standard	72	3	HMI He	645004	1.26	680743	94.75	60	120	
In Internal Standard	115	3	HMI He	2339141	1.38	2361818	99.04	60	120	
Ir (IS)	193	3	HMI He	5100233	1.92	5045699	101.08	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-11-A
Data File Name	334SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:12:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.003	ppb	0.003	2838.65	2	2000	
Na	23	3	45	26306.467	ppb	26306.467	0.34	2290654	400000	
Mg	24	3	45	19365.692	ppb	19365.692	1.56	891366	400000	
Al	27	3	45	75.043	ppb	75.043	4.24	1411	400000	
K	39	3	45	7533.880	ppb	7533.880	0.61	304298	400000	
Ca	40	2	45	65545.557	ppb	65545.557	1.71	30103205	400000	
V	51	3	72	19.871	ppb	19.871	0.47	10005	2000	
Cr	52	3	72	2.512	ppb	2.512	5.26	3617	5000	
Mn	55	3	72	3.131	ppb	3.131	4.22	1129	10000	
Fe	56	2	72	83.540	ppb	83.540	7.66	144858	10000	
Co	59	3	72	0.089	ppb	0.089	23.43	142	2000	
Ni	60	3	72	0.607	ppb	0.607	27.69	626	5000	
Cu	63	3	72	0.331	ppb	0.331	22.12	531	5000	
Zn	66	3	72	3.119	ppb	3.119	23.51	503	5000	
As	75	3	72	5.994	ppb	5.994	4.61	561	2000	
Se	78	2	72	6.587	ppb	6.587	10.96	297	2000	
Sr	88	3	72	362.698	ppb	362.698	0.94	153387	4000	
Mo	95	3	115	6.254	ppb	6.254	4.27	2582	2000	
Ag	107	3	115	0.001	ppb	0.001	197.92	17	100	
Cd	111	3	115	0.000	ppb	0.000	-45829.80	2	2000	
Sn	120	3	115	-0.225	ppb	-0.225	-24.57	411	2000	
Sb	121	3	115	0.380	ppb	0.380	5.12	273	1000	
Ba	137	3	115	79.515	ppb	79.515	1.23	16582	5000	
Tl	205	3	193	0.003	ppb	0.003	183.23	110	2000	
(Pb)	206	3	193	0.109	ppb	0.109	23.10	342	100	
(Pb)	207	3	193	0.131	ppb	0.131	13.67	455	100	
Pb	208	3	193	0.148	ppb	0.148	11.16	1628	5000	
Th	232	3	193	-0.214	ppb	-0.214	-33.68	5329	2000	
U	238	3	193	9.860	ppb	9.860	3.66	42834	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3533063	2.56	3535116	99.94	60	120	
Sc (IS)	45	3	HMI He	503287	0.64	505423	99.58	60	120	
Ge Internal standard	72	2	HMI H2	2171550	2.55	2359166	92.05	60	120	
Ge Internal standard	72	3	HMI He	641289	0.91	680743	94.20	60	120	
In Internal Standard	115	3	HMI He	2383054	0.23	2361818	100.90	60	120	
Ir (IS)	193	3	HMI He	5116730	2.66	5045699	101.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	335_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:14:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.120	ppb	6.694	1801	50	108.2	90	110	
Na	23	3	45	50452.994	ppb	1.552	4355247	51000	98.9	90	110	
Mg	24	3	45	10781.619	ppb	1.082	493292	11000	98.0	90	110	
Al	27	3	45	1033.590	ppb	4.721	17846	1000	103.4	90	110	
K	39	3	45	10819.057	ppb	0.744	424004	11000	98.4	90	110	
Ca	40	2	45	10868.234	ppb	0.747	4895578	11000	98.8	90	110	
V	51	3	72	56.276	ppb	2.674	26188	50	112.6	90	110	>+\-10%
Cr	52	3	72	57.404	ppb	0.354	34368	50	114.8	90	110	>+\-10%
Mn	55	3	72	55.969	ppb	3.458	16857	50	111.9	90	110	>+\-10%
Fe	56	2	72	1129.478	ppb	2.582	1374235	1000	112.9	90	110	>+\-10%
Co	59	3	72	56.040	ppb	3.462	54003	50	112.1	90	110	>+\-10%
Ni	60	3	72	56.430	ppb	1.810	15561	50	112.9	90	110	>+\-10%
Cu	63	3	72	56.674	ppb	0.805	41309	50	113.3	90	110	>+\-10%
Zn	66	3	72	59.353	ppb	2.547	6918	50	118.7	90	110	>+\-10%
As	75	3	72	57.755	ppb	6.043	4948	50	115.5	90	110	>+\-10%
Se	78	2	72	58.047	ppb	2.898	2508	50	116.1	90	110	>+\-10%
Sr	88	3	72	114.771	ppb	2.584	46534	100	114.8	90	110	>+\-10%
Mo	95	3	115	53.225	ppb	1.592	21126	50	106.4	90	110	
Ag	107	3	115	52.295	ppb	0.697	70507	50	104.6	90	110	
Cd	111	3	115	53.499	ppb	0.921	10347	50	107.0	90	110	
Sn	120	3	115	52.098	ppb	0.835	32106	50	104.2	90	110	
Sb	121	3	115	51.781	ppb	1.022	31725	50	103.6	90	110	
Ba	137	3	115	52.532	ppb	2.022	10642	50	105.1	90	110	
Tl	205	3	193	51.861	ppb	2.822	158066	50	103.7	90	110	
(Pb)	206	3	193	53.327	ppb	3.782	53924	50	106.7	90	110	
(Pb)	207	3	193	52.736	ppb	1.646	48079	50	105.5	90	110	
Pb	208	3	193	52.949	ppb	3.191	216774	50	105.9	90	110	
Th	232	3	193	52.274	ppb	3.255	220836	50	104.5	90	110	
U	238	3	193	53.630	ppb	3.325	226614	50	107.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3459263	1.50	3535116	97.85	60	120	
Sc (IS)	45	3	HMI He	500282	1.07	505423	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2083633	1.32	2359166	88.32	60	120	
Ge Internal standard	72	3	HMI He	614770	1.51	680743	90.31	60	120	
In Internal Standard	115	3	HMI He	2312597	0.52	2361818	97.92	60	120	
Ir (IS)	193	3	HMI He	5101183	3.14	5045699	101.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	336_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:37:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	18.482	ppb	15.7	14616	25	
Mg	24	3	45	0.917	ppb	85.3	194	25	
Al	27	3	45	-2.446	ppb	-50.7	73	15	
K	39	3	45	-9.592	ppb	-282.6	23370	50	
V	51	3	72	0.402	ppb	28.7	733	1	
Cr	52	3	72	0.149	ppb	53.1	2199	1	
Mn	55	3	72	0.152	ppb	74.1	198	0.5	
Co	59	3	72	-0.001	ppb	-1436.7	50	0.5	
Ni	60	3	72	0.467	ppb	89.6	580	1	
Cu	63	3	72	-0.075	ppb	-28.8	222	1	
Zn	66	3	72	0.452	ppb	43.4	182	5	
As	75	3	72	0.158	ppb	77.4	42	1	
Se	78	2	72	0.017	ppb	157.0	1	1	
Sr	88	3	72	0.016	ppb	266.3	30	0.5	
Mo	95	3	115	0.055	ppb	45.0	48	0.5	
Ag	107	3	115	-0.001	ppb	-385.2	13	1	
Cd	111	3	115	0.000	ppb	3875.9	2	0.5	
Sn	120	3	115	0.158	ppb	43.6	631	1	
Sb	121	3	115	0.029	ppb	202.8	50	0.6	
Ba	137	3	115	0.045	ppb	134.9	42	0.5	
Tl	205	3	193	0.010	ppb	146.2	128	0.1	
(Pb)	206	3	193	-0.034	ppb	-60.2	192	1	
(Pb)	207	3	193	0.069	ppb	121.4	388	1	
Pb	208	3	193	-0.007	ppb	-302.5	965	0.5	
Th	232	3	193	1.351	ppb	16.3	11455	1	>RL
U	238	3	193	0.013	ppb	138.7	1293	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3458643	1.28	3535116	97.84	60	120	
Sc (IS)	45	3	HMI He	499504	1.42	505423	98.83	60	120	
Ge Internal standard	72	2	HMI H2	2143080	0.58	2359166	90.84	60	120	
Ge Internal standard	72	3	HMI He	632646	0.84	680743	92.93	60	120	
In Internal Standard	115	3	HMI He	2314694	1.93	2361818	98.00	60	120	
Ir (IS)	193	3	HMI He	4978249	0.38	5045699	98.66	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	337SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:38:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.001	ppb	-0.001	-6949.53	2	2000	
Na	23	3	45	-13.604	ppb	-13.604	-34.99	13210	400000	
Mg	24	3	45	-0.428	ppb	-0.428	-174.02	147	400000	
Al	27	3	45	-2.714	ppb	-2.714	-11.90	77	400000	
K	39	3	45	-59.795	ppb	-59.795	-35.80	23961	400000	
Ca	40	2	45	-7.416	ppb	-7.416	-16.43	7299	400000	
V	51	3	72	-0.656	ppb	-0.656	-8.53	260	2000	
Cr	52	3	72	-1.058	ppb	-1.058	-7.68	1648	5000	
Mn	55	3	72	-0.070	ppb	-0.070	-75.79	143	10000	
Fe	56	2	72	-10.162	ppb	-10.162	-17.81	32330	10000	
Co	59	3	72	-0.012	ppb	-0.012	-99.78	43	2000	
Ni	60	3	72	-0.512	ppb	-0.512	-18.46	340	5000	
Cu	63	3	72	-0.152	ppb	-0.152	-28.84	180	5000	
Zn	66	3	72	-0.214	ppb	-0.214	-37.31	113	5000	
As	75	3	72	-0.127	ppb	-0.127	-24.12	18	2000	
Se	78	2	72	0.054	ppb	0.054	43.54	3	2000	
Sr	88	3	72	0.043	ppb	0.043	93.10	45	4000	
Mo	95	3	115	0.004	ppb	0.004	367.38	32	2000	
Ag	107	3	115	0.005	ppb	0.005	215.74	23	100	
Cd	111	3	115	0.022	ppb	0.022	56.89	7	2000	
Sn	120	3	115	-0.619	ppb	-0.619	-6.59	180	2000	
Sb	121	3	115	-0.014	ppb	-0.014	-36.35	27	1000	
Ba	137	3	115	-0.109	ppb	-0.109	-13.04	12	5000	
Tl	205	3	193	0.006	ppb	0.006	222.17	128	2000	
(Pb)	206	3	193	-0.123	ppb	-0.123	-3.89	117	100	
(Pb)	207	3	193	-0.071	ppb	-0.071	-46.24	295	100	
Pb	208	3	193	-0.083	ppb	-0.083	-14.35	741	5000	
Th	232	3	193	-0.563	ppb	-0.563	-10.79	4220	2000	
U	238	3	193	0.007	ppb	0.007	200.85	1418	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3851345	1.74	3535116	108.95	60	120	
Sc (IS)	45	3	HMI He	556317	0.64	505423	110.07	60	120	
Ge Internal standard	72	2	HMI H2	2370777	0.43	2359166	100.49	60	120	
Ge Internal standard	72	3	HMI He	694862	0.66	680743	102.07	60	120	
In Internal Standard	115	3	HMI He	2591788	2.54	2361818	109.74	60	120	
Ir (IS)	193	3	HMI He	5564197	2.49	5045699	110.28	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	338SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:40:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-13.286	ppb	-13.286	-6.22	13229	400000	
Mg	24	3	45	-0.557	ppb	-0.557	-105.67	140	400000	
Al	27	3	45	-1.836	ppb	-1.836	-44.61	93	400000	
K	39	3	45	-70.544	ppb	-70.544	-32.76	23503	400000	
Ca	40	2	45	-7.131	ppb	-7.131	-6.42	7433	400000	
V	51	3	72	-0.718	ppb	-0.718	-11.37	225	2000	
Cr	52	3	72	-0.947	ppb	-0.947	-18.84	1693	5000	
Mn	55	3	72	0.027	ppb	0.027	414.14	173	10000	
Fe	56	2	72	-8.185	ppb	-8.185	-14.03	34404	10000	
Co	59	3	72	-0.016	ppb	-0.016	-102.18	38	2000	
Ni	60	3	72	-0.138	ppb	-0.138	-111.96	446	5000	
Cu	63	3	72	-0.077	ppb	-0.077	-75.14	238	5000	
Zn	66	3	72	-0.333	ppb	-0.333	-34.44	97	5000	
As	75	3	72	-0.177	ppb	-0.177	-17.41	13	2000	
Se	78	2	72	0.042	ppb	0.042	152.29	3	2000	
Sr	88	3	72	0.022	ppb	0.022	103.29	35	4000	
Mo	95	3	115	-0.025	ppb	-0.025	-66.99	18	2000	
Ag	107	3	115	0.002	ppb	0.002	145.04	20	100	
Cd	111	3	115	0.000	ppb	0.000	-2955.06	2	2000	
Sn	120	3	115	-0.664	ppb	-0.664	-5.92	148	2000	
Sb	121	3	115	-0.026	ppb	-0.026	-44.21	18	1000	
Ba	137	3	115	-0.086	ppb	-0.086	-41.60	17	5000	
Tl	205	3	193	0.007	ppb	0.007	197.32	130	2000	
(Pb)	206	3	193	-0.103	ppb	-0.103	-6.02	135	100	
(Pb)	207	3	193	-0.053	ppb	-0.053	-156.38	303	100	
Pb	208	3	193	-0.079	ppb	-0.079	-28.13	736	5000	
Th	232	3	193	-0.566	ppb	-0.566	-4.07	4085	2000	
U	238	3	193	0.022	ppb	0.022	69.33	1446	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3848602	1.61	3535116	108.87	60	120	
Sc (IS)	45	3	HMI He	555943	0.34	505423	110.00	60	120	
Ge Internal standard	72	2	HMI H2	2329975	1.16	2359166	98.76	60	120	
Ge Internal standard	72	3	HMI He	684858	0.75	680743	100.60	60	120	
In Internal Standard	115	3	HMI He	2563587	1.97	2361818	108.54	60	120	
Ir (IS)	193	3	HMI He	5399902	1.61	5045699	107.02	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	339SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:42:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.046	ppb	0.046	174.15	3	2000	
Na	23	3	45	-10.440	ppb	-10.440	-48.24	13290	400000	
Mg	24	3	45	0.356	ppb	0.356	291.93	184	400000	
Al	27	3	45	-3.001	ppb	-3.001	-31.49	70	400000	
K	39	3	45	-48.934	ppb	-48.934	-112.26	24021	400000	
Ca	40	2	45	-6.731	ppb	-6.731	-9.53	7510	400000	
V	51	3	72	-0.677	ppb	-0.677	-15.47	245	2000	
Cr	52	3	72	-0.947	ppb	-0.947	-9.90	1689	5000	
Mn	55	3	72	-0.042	ppb	-0.042	-173.40	150	10000	
Fe	56	2	72	-8.029	ppb	-8.029	-30.79	34906	10000	
Co	59	3	72	-0.025	ppb	-0.025	-28.72	28	2000	
Ni	60	3	72	-0.285	ppb	-0.285	-71.61	401	5000	
Cu	63	3	72	-0.134	ppb	-0.134	-23.03	192	5000	
Zn	66	3	72	-0.173	ppb	-0.173	-96.37	117	5000	
As	75	3	72	-0.106	ppb	-0.106	-131.94	20	2000	
Se	78	2	72	0.000	ppb	0.000	10604.11	1	2000	
Sr	88	3	72	0.018	ppb	0.018	126.82	33	4000	
Mo	95	3	115	-0.021	ppb	-0.021	-107.25	20	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-187.61	13	100	
Cd	111	3	115	0.007	ppb	0.007	379.75	3	2000	
Sn	120	3	115	-0.651	ppb	-0.651	-7.43	157	2000	
Sb	121	3	115	-0.024	ppb	-0.024	-31.10	20	1000	
Ba	137	3	115	-0.064	ppb	-0.064	-40.26	22	5000	
Tl	205	3	193	0.005	ppb	0.005	201.30	122	2000	
(Pb)	206	3	193	-0.093	ppb	-0.093	-24.41	143	100	
(Pb)	207	3	193	-0.025	ppb	-0.025	-167.99	327	100	
Pb	208	3	193	-0.069	ppb	-0.069	-17.67	770	5000	
Th	232	3	193	-0.573	ppb	-0.573	-5.09	4010	2000	
U	238	3	193	0.009	ppb	0.009	352.13	1371	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3785607	0.48	3535116	107.09	60	120	
Sc (IS)	45	3	HMI He	547295	0.68	505423	108.28	60	120	
Ge Internal standard	72	2	HMI H2	2350047	0.81	2359166	99.61	60	120	
Ge Internal standard	72	3	HMI He	683098	0.53	680743	100.35	60	120	
In Internal Standard	115	3	HMI He	2569814	0.33	2361818	108.81	60	120	
Ir (IS)	193	3	HMI He	5337440	0.65	5045699	105.78	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	340SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:44:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-15.664	ppb	-15.664	-20.26	12926	400000	
Mg	24	3	45	0.249	ppb	0.249	479.97	180	400000	
Al	27	3	45	-4.627	ppb	-4.627	-19.58	40	400000	
K	39	3	45	-63.196	ppb	-63.196	-61.73	23664	400000	
Ca	40	2	45	-7.309	ppb	-7.309	-6.04	7263	400000	
V	51	3	72	-0.732	ppb	-0.732	-12.97	220	2000	
Cr	52	3	72	-0.826	ppb	-0.826	-21.69	1789	5000	
Mn	55	3	72	-0.063	ppb	-0.063	-99.48	145	10000	
Fe	56	2	72	-7.348	ppb	-7.348	-43.65	35535	10000	
Co	59	3	72	-0.024	ppb	-0.024	-38.99	30	2000	
Ni	60	3	72	-0.238	ppb	-0.238	-24.98	421	5000	
Cu	63	3	72	-0.091	ppb	-0.091	-22.29	230	5000	
Zn	66	3	72	-0.392	ppb	-0.392	-26.91	90	5000	
As	75	3	72	-0.179	ppb	-0.179	-17.23	13	2000	
Se	78	2	72	0.097	ppb	0.097	23.43	5	2000	
Sr	88	3	72	0.032	ppb	0.032	119.29	40	4000	
Mo	95	3	115	-0.036	ppb	-0.036	-67.28	13	2000	
Ag	107	3	115	0.002	ppb	0.002	126.49	20	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.648	ppb	-0.648	-9.41	158	2000	
Sb	121	3	115	-0.029	ppb	-0.029	-51.33	17	1000	
Ba	137	3	115	-0.026	ppb	-0.026	-155.86	30	5000	
Tl	205	3	193	0.002	ppb	0.002	209.05	113	2000	
(Pb)	206	3	193	-0.105	ppb	-0.105	-7.73	133	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-55.95	300	100	
Pb	208	3	193	-0.081	ppb	-0.081	-13.01	735	5000	
Th	232	3	193	-0.593	ppb	-0.593	-7.11	4005	2000	
U	238	3	193	0.006	ppb	0.006	398.73	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3805921	1.18	3535116	107.66	60	120	
Sc (IS)	45	3	HMI He	552690	0.34	505423	109.35	60	120	
Ge Internal standard	72	2	HMI H2	2334660	1.31	2359166	98.96	60	120	
Ge Internal standard	72	3	HMI He	692445	0.68	680743	101.72	60	120	
In Internal Standard	115	3	HMI He	2565285	2.70	2361818	108.61	60	120	
Ir (IS)	193	3	HMI He	5449448	1.24	5045699	108.00	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	341SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:47:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-9.391	ppb	-9.391	-64.39	13564	400000	
Mg	24	3	45	0.039	ppb	0.039	3644.51	170	400000	
Al	27	3	45	-3.937	ppb	-3.937	-32.79	53	400000	
K	39	3	45	-56.036	ppb	-56.036	-52.87	24021	400000	
Ca	40	2	45	-7.167	ppb	-7.167	-9.44	7419	400000	
V	51	3	72	-0.820	ppb	-0.820	-5.11	178	2000	
Cr	52	3	72	-0.461	ppb	-0.461	-53.74	2059	5000	
Mn	55	3	72	0.016	ppb	0.016	570.63	175	10000	
Fe	56	2	72	-1.964	ppb	-1.964	-146.35	43489	10000	
Co	59	3	72	-0.007	ppb	-0.007	-180.66	50	2000	
Ni	60	3	72	-0.156	ppb	-0.156	-80.88	455	5000	
Cu	63	3	72	-0.102	ppb	-0.102	-17.26	225	5000	
Zn	66	3	72	-0.305	ppb	-0.305	-48.14	103	5000	
As	75	3	72	-0.164	ppb	-0.164	-55.07	15	2000	
Se	78	2	72	0.027	ppb	0.027	149.81	2	2000	
Sr	88	3	72	0.009	ppb	0.009	246.74	30	4000	
Mo	95	3	115	-0.018	ppb	-0.018	-94.45	22	2000	
Ag	107	3	115	0.007	ppb	0.007	121.47	27	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.647	ppb	-0.647	-2.14	160	2000	
Sb	121	3	115	-0.024	ppb	-0.024	-31.72	20	1000	
Ba	137	3	115	-0.057	ppb	-0.057	-60.45	23	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-318.90	102	2000	
(Pb)	206	3	193	-0.116	ppb	-0.116	-9.62	123	100	
(Pb)	207	3	193	-0.069	ppb	-0.069	-28.52	295	100	
Pb	208	3	193	-0.083	ppb	-0.083	-14.27	738	5000	
Th	232	3	193	-0.594	ppb	-0.594	-4.03	4054	2000	
U	238	3	193	0.008	ppb	0.008	163.58	1413	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3851813	1.51	3535116	108.96	60	120	
Sc (IS)	45	3	HMI He	554184	1.24	505423	109.65	60	120	
Ge Internal standard	72	2	HMI H2	2377937	0.33	2359166	100.80	60	120	
Ge Internal standard	72	3	HMI He	706006	0.96	680743	103.71	60	120	
In Internal Standard	115	3	HMI He	2581239	1.04	2361818	109.29	60	120	
Ir (IS)	193	3	HMI He	5521502	0.74	5045699	109.43	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	342CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T10:49:28-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	13537	0.02
Mg	24	45	3	HMI He	133	17.17
Al	27	45	3	HMI He	80	94.95
K	39	45	3	HMI He	23062	0.02
Ca	40	45	2	HMI H2	9519	0.02
V	51	72	3	HMI He	633	2.56
Cr	52	72	3	HMI He	2137	0.35
Mn	55	72	3	HMI He	183	13.51
Fe	56	72	2	HMI H2	34036	0.03
Co	59	72	3	HMI He	32	160.36
Ni	60	72	3	HMI He	421	2.11
Cu	63	72	3	HMI He	252	1.21
Zn	66	72	3	HMI He	132	9.28
As	75	72	3	HMI He	60	100.19
Se	78	72	2	HMI H2	1	6495.19
(Se)	78	72	3	HMI He	33	93.70
Sr	88	72	3	HMI He	15	384.99
Mo	95	115	3	HMI He	27	226.17
Ag	107	115	3	HMI He	15	0.00
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	506	3.03
Sb	121	115	3	HMI He	27	107.43
Ba	137	115	3	HMI He	40	54.18
Tl	205	193	3	HMI He	100	18.04
(Pb)	206	193	3	HMI He	172	10.78
(Pb)	207	193	3	HMI He	282	5.25
Pb	208	193	3	HMI He	851	0.85
Th	232	193	3	HMI He	6263	0.09
U	238	193	3	HMI He	1218	0.37

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3473788	3.33
Sc (IS)	45	3	HMI He	498630	0.87
Ge Internal standard	72	2	HMI H2	2241871	1.81
Ge Internal standard	72	3	HMI He	647352	0.70
In Internal Standard	115	3	HMI He	2356036	1.72
Ir (IS)	193	3	HMI He	4999588	0.98

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	343CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T10:51:15-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	342CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	8693007	0.00
Mg	24	45	3	HMI He	928288	0.00
Al	27	45	3	HMI He	157	35.09
K	39	45	3	HMI He	772526	0.00
V	51	72	3	HMI He	620	1.17
Cr	52	72	3	HMI He	2432	0.17
Mn	55	72	3	HMI He	280	4.47
Co	59	72	3	HMI He	68	40.57
Ni	60	72	3	HMI He	560	0.97
Cu	63	72	3	HMI He	347	0.64
Zn	66	72	3	HMI He	257	2.19
As	75	72	3	HMI He	45	74.09
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	22	325.48
Sr	88	72	3	HMI He	238	3.09
Mo	95	115	3	HMI He	48	24.71
Ag	107	115	3	HMI He	27	177.05
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	661	2.60
Sb	121	115	3	HMI He	33	113.31
Ba	137	115	3	HMI He	138	18.36
Tl	205	193	3	HMI He	130	7.83
(Pb)	206	193	3	HMI He	242	2.16
(Pb)	207	193	3	HMI He	376	1.47
Pb	208	193	3	HMI He	1091	0.09
Th	232	193	3	HMI He	5192	0.16
U	238	193	3	HMI He	1361	0.12

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3414129	0.37	3473788	98.28	60	120	
Sc (IS)	45	3	HMI He	503279	0.64	498630	100.93	60	120	
Ge Internal standard	72	2	HMI H2	2085309	2.25	2241871	93.02	60	120	
Ge Internal standard	72	3	HMI He	612711	1.17	647352	94.65	60	120	
In Internal Standard	115	3	HMI He	2393601	2.81	2356036	101.59	60	120	
Ir (IS)	193	3	HMI He	5033952	1.74	4999588	100.69	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	344CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T10:53:03-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	342CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3545	0.02
Na	23	45	3	HMI He	187074	0.00
Mg	24	45	3	HMI He	90081	0.00
Al	27	45	3	HMI He	34560	0.00
K	39	45	3	HMI He	96187	0.00
V	51	72	3	HMI He	50132	0.00
Cr	52	72	3	HMI He	64021	0.00
Mn	55	72	3	HMI He	32544	0.01
Co	59	72	3	HMI He	105629	0.00
Ni	60	72	3	HMI He	29919	0.01
Cu	63	72	3	HMI He	79384	0.00
Zn	66	72	3	HMI He	12920	0.02
As	75	72	3	HMI He	9334	0.04
Se	78	72	2	HMI H2	4743	0.01
(Se)	78	72	3	HMI He	593	0.50
Sr	88	72	3	HMI He	88301	0.00
Mo	95	115	3	HMI He	39969	0.00
Ag	107	115	3	HMI He	136047	0.00
Cd	111	115	3	HMI He	19710	0.01
Sn	120	115	3	HMI He	63402	0.00
Sb	121	115	3	HMI He	62224	0.00
Ba	137	115	3	HMI He	20180	0.01
Tl	205	193	3	HMI He	306600	0.00
(Pb)	206	193	3	HMI He	103769	0.00
(Pb)	207	193	3	HMI He	89872	0.00
Pb	208	193	3	HMI He	414964	0.00
Th	232	193	3	HMI He	420230	0.00
U	238	193	3	HMI He	429581	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3480266	1.17	3473788	100.19	60	120	
Sc (IS)	45	3	HMI He	504412	0.09	498630	101.16	60	120	
Ge Internal standard	72	2	HMI H2	2242215	2.27	2241871	100.02	60	120	
Ge Internal standard	72	3	HMI He	649916	1.04	647352	100.40	60	120	
In Internal Standard	115	3	HMI He	2372947	2.94	2356036	100.72	60	120	
Ir (IS)	193	3	HMI He	5069595	1.85	4999588	101.40	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	345_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:54:50-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.484	ppb	2.917	1458	40	103.7	90	110	
Na	23	3	45	12909.197	ppb	2.551	1137641	12800	100.9	90	110	
Mg	24	3	45	4618.014	ppb	0.637	215176	4800	96.2	90	110	
Al	27	3	45	822.352	ppb	1.609	14272	800	102.8	90	110	
K	39	3	45	4655.089	ppb	1.708	198352	4800	97.0	90	110	
Ca	40	2	45	4709.401	ppb	1.416	2226359	4800	98.1	90	110	
V	51	3	72	42.066	ppb	2.040	20837	40	105.2	90	110	
Cr	52	3	72	42.074	ppb	3.134	27362	40	105.2	90	110	
Mn	55	3	72	43.065	ppb	4.336	13708	40	107.7	90	110	
Fe	56	2	72	821.974	ppb	2.155	1097251	800	102.7	90	110	
Co	59	3	72	40.742	ppb	1.152	41817	40	101.9	90	110	
Ni	60	3	72	40.805	ppb	2.749	12096	40	102.0	90	110	
Cu	63	3	72	43.576	ppb	2.532	33733	40	108.9	90	110	
Zn	66	3	72	82.154	ppb	1.848	10330	80	102.7	90	110	
As	75	3	72	38.578	ppb	5.399	3532	40	96.4	90	110	
Se	78	2	72	42.293	ppb	2.035	1967	40	105.7	90	110	
Sr	88	3	72	123.523	ppb	3.430	52961	120	102.9	90	110	
Mo	95	3	115	40.524	ppb	1.235	16055	40	101.3	90	110	
Ag	107	3	115	82.659	ppb	1.882	111347	80	103.3	90	110	
Cd	111	3	115	39.675	ppb	3.190	7743	40	99.2	90	110	
Sn	120	3	115	40.434	ppb	1.093	25689	40	101.1	90	110	
Sb	121	3	115	41.010	ppb	0.451	25275	40	102.5	90	110	
Ba	137	3	115	40.112	ppb	0.694	8042	40	100.3	90	110	
Tl	205	3	193	40.599	ppb	2.474	123694	40	101.5	90	110	
(Pb)	206	3	193	41.032	ppb	3.365	42386	40	102.6	90	110	
(Pb)	207	3	193	41.014	ppb	2.299	36778	40	102.5	90	110	
Pb	208	3	193	41.074	ppb	3.449	169760	40	102.7	90	110	
Th	232	3	193	82.088	ppb	2.226	343738	80	102.6	90	110	
U	238	3	193	44.049	ppb	3.397	188631	40	110.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508656	1.01	3473788	101.00	60	120	
Sc (IS)	45	3	HMI He	504927	1.13	498630	101.26	60	120	
Ge Internal standard	72	2	HMI H2	2196933	0.58	2241871	98.00	60	120	
Ge Internal standard	72	3	HMI He	631209	1.83	647352	97.51	60	120	
In Internal Standard	115	3	HMI He	2348519	2.06	2356036	99.68	60	120	
Ir (IS)	193	3	HMI He	5036455	3.30	4999588	100.74	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	346_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:56:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.493	ppb	2.210	1683	50	95.0	90	110	
Na	23	3	45	49891.766	ppb	2.101	4292460	51000	97.8	90	110	
Mg	24	3	45	10528.717	ppb	1.078	482959	11000	95.7	90	110	
Al	27	3	45	1035.871	ppb	1.149	17686	1000	103.6	90	110	
K	39	3	45	10644.494	ppb	1.963	416994	11000	96.8	90	110	
Ca	40	2	45	10462.540	ppb	0.428	4890440	11000	95.1	90	110	
V	51	3	72	53.802	ppb	1.421	26330	50	107.6	90	110	
Cr	52	3	72	52.350	ppb	1.358	33352	50	104.7	90	110	
Mn	55	3	72	52.786	ppb	1.779	16673	50	105.6	90	110	
Fe	56	2	72	1053.226	ppb	2.714	1361550	1000	105.3	90	110	
Co	59	3	72	51.737	ppb	1.563	52792	50	103.5	90	110	
Ni	60	3	72	53.289	ppb	1.888	15584	50	106.6	90	110	
Cu	63	3	72	53.477	ppb	0.592	41114	50	107.0	90	110	
Zn	66	3	72	53.111	ppb	2.775	6685	50	106.2	90	110	
As	75	3	72	54.409	ppb	2.021	4930	50	108.8	90	110	
Se	78	2	72	53.686	ppb	0.814	2434	50	107.4	90	110	
Sr	88	3	72	106.256	ppb	2.789	45306	100	106.3	90	110	
Mo	95	3	115	53.109	ppb	2.353	21229	50	106.2	90	110	
Ag	107	3	115	51.023	ppb	2.143	69392	50	102.0	90	110	
Cd	111	3	115	52.246	ppb	1.932	10294	50	104.5	90	110	
Sn	120	3	115	49.458	ppb	0.591	31603	50	98.9	90	110	
Sb	121	3	115	51.096	ppb	1.187	31782	50	102.2	90	110	
Ba	137	3	115	50.503	ppb	3.473	10209	50	101.0	90	110	
Tl	205	3	193	50.389	ppb	3.406	157073	50	100.8	90	110	
(Pb)	206	3	193	49.254	ppb	1.003	52051	50	98.5	90	110	
(Pb)	207	3	193	50.922	ppb	2.255	46651	50	101.8	90	110	
Pb	208	3	193	49.899	ppb	0.343	210923	50	99.8	90	110	
Th	232	3	193	52.397	ppb	1.324	226865	50	104.8	90	110	
U	238	3	193	50.099	ppb	0.849	219429	50	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3477165	0.46	3473788	100.10	60	120	
Sc (IS)	45	3	HMI He	497336	1.96	498630	99.74	60	120	
Ge Internal standard	72	2	HMI H2	2142171	0.63	2241871	95.55	60	120	
Ge Internal standard	72	3	HMI He	627603	1.26	647352	96.95	60	120	
In Internal Standard	115	3	HMI He	2370598	0.84	2356036	100.62	60	120	
Ir (IS)	193	3	HMI He	5152062	1.18	4999588	103.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	347_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:58:26-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.142	ppb	98.6	5	0.5	
Na	23	3	45	28.259	ppb	38.0	16012	25	>RL
Mg	24	3	45	2.305	ppb	39.6	240	25	
Al	27	3	45	-0.411	ppb	-228.0	73	15	
K	39	3	45	0.058	ppb	44172.5	23136	50	
V	51	3	72	0.157	ppb	109.5	686	1	
Cr	52	3	72	0.151	ppb	38.1	2154	1	
Mn	55	3	72	0.154	ppb	90.9	225	0.5	
Co	59	3	72	0.022	ppb	45.5	53	0.5	
Ni	60	3	72	0.133	ppb	107.1	445	1	
Cu	63	3	72	0.038	ppb	9.2	272	1	
Zn	66	3	72	0.253	ppb	79.1	158	5	
As	75	3	72	-0.237	ppb	-27.4	37	1	
Se	78	2	72	0.001	ppb	5501.4	1	1	
Sr	88	3	72	0.064	ppb	56.3	42	0.5	
Mo	95	3	115	0.064	ppb	41.8	52	0.5	
Ag	107	3	115	0.018	ppb	101.3	38	1	
Cd	111	3	115	0.026	ppb	152.3	7	0.5	
Sn	120	3	115	0.395	ppb	22.9	746	1	
Sb	121	3	115	0.038	ppb	0.9	50	0.6	
Ba	137	3	115	0.094	ppb	41.4	58	0.5	
Tl	205	3	193	0.038	ppb	18.1	218	0.1	
(Pb)	206	3	193	-0.002	ppb	-537.7	172	1	
(Pb)	207	3	193	0.038	ppb	41.9	318	1	
Pb	208	3	193	0.001	ppb	2040.5	863	0.5	
Th	232	3	193	1.679	ppb	15.7	13255	1	>RL
U	238	3	193	0.032	ppb	109.5	1368	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3492159	1.36	3473788	100.53	60	120	
Sc (IS)	45	3	HMI He	500112	0.97	498630	100.30	60	120	
Ge Internal standard	72	2	HMI H2	2148438	0.46	2241871	95.83	60	120	
Ge Internal standard	72	3	HMI He	625308	0.13	647352	96.59	60	120	
In Internal Standard	115	3	HMI He	2337987	0.42	2356036	99.23	60	120	
Ir (IS)	193	3	HMI He	5050924	0.46	4999588	101.03	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	348LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:00:14-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.089	ppb	6.436	38	1	108.9	70	130	
Na	23	3	45	279.281	ppb	1.679	38287	300	93.1	70	130	
Mg	24	3	45	42.154	ppb	0.804	2112	50	84.3	70	130	
Al	27	3	45	42.915	ppb	4.862	828	50	85.8	70	130	
K	39	3	45	99.900	ppb	20.872	27297	120	83.2	70	130	
Ca	40	2	45	190.277	ppb	2.423	98640	200	95.1	70	130	
V	51	3	72	4.860	ppb	8.579	2966	5	97.2	70	130	
Cr	52	3	72	2.006	ppb	12.384	3302	2	100.3	70	130	
Mn	55	3	72	0.904	ppb	22.545	465	1	90.4	70	130	
Fe	56	2	72	48.534	ppb	6.278	94572	50	97.1	70	130	
Co	59	3	72	0.916	ppb	3.363	975	1	91.6	70	130	
Ni	60	3	72	1.740	ppb	12.001	913	2	87.0	70	130	
Cu	63	3	72	2.049	ppb	1.312	1828	2	102.5	70	130	
Zn	66	3	72	9.014	ppb	5.881	1253	10	90.1	70	130	
As	75	3	72	4.695	ppb	1.452	483	5	93.9	70	130	
Se	78	2	72	4.615	ppb	12.263	213	5	92.3	70	130	
Sr	88	3	72	4.552	ppb	1.011	1974	5	91.0	70	130	
Mo	95	3	115	1.831	ppb	7.624	763	2	91.6	70	130	
Ag	107	3	115	0.936	ppb	9.828	1296	1	93.6	70	130	
Cd	111	3	115	0.972	ppb	30.273	195	1	97.2	70	130	
Sn	120	3	115	8.236	ppb	1.497	5722	10	82.4	70	130	
Sb	121	3	115	1.877	ppb	7.779	1201	2	93.8	70	130	
Ba	137	3	115	0.778	ppb	13.728	198	1	77.8	70	130	
Tl	205	3	193	0.897	ppb	5.384	2891	1	89.7	70	130	
(Pb)	206	3	193	0.864	ppb	6.794	1085	1	86.4	70	130	
(Pb)	207	3	193	0.966	ppb	0.981	1168	1	96.6	70	130	
Pb	208	3	193	0.884	ppb	3.072	4590	1	88.4	70	130	
Th	232	3	193	1.356	ppb	25.078	12128	1	135.6	70	130	>+/-30%
U	238	3	193	0.942	ppb	6.537	5344	1	94.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3489651	1.02	3473788	100.46	60	120	
Sc (IS)	45	3	HMI He	508372	1.06	498630	101.95	60	120	
Ge Internal standard	72	2	HMI H2	2161929	1.79	2241871	96.43	60	120	
Ge Internal standard	72	3	HMI He	633715	0.13	647352	97.89	60	120	
In Internal Standard	115	3	HMI He	2385291	1.23	2356036	101.24	60	120	
Ir (IS)	193	3	HMI He	5141959	1.12	4999588	102.85	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-
Data File Name	349LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:02:03-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	28.720	ppb	14.485	16386	300	9.6	70	130	>+/-30%
Mg	24	3	45	1.496	ppb	41.687	207	50	3.0	70	130	>+/-30%
Al	27	3	45	1.834	ppb	209.543	113	50	3.7	70	130	>+/-30%
K	39	3	45	-12.738	ppb	-105.515	23139	120	-10.6	70	130	>+/-30%
Ca	40	2	45	13.993	ppb	2.332	16142	200	7.0	70	130	>+/-30%
V	51	3	72	-0.035	ppb	-309.222	610	5	-0.7	70	130	>+/-30%
Cr	52	3	72	0.005	ppb	5367.617	2121	2	0.2	70	130	>+/-30%
Mn	55	3	72	0.146	ppb	105.184	228	1	14.6	70	130	>+/-30%
Fe	56	2	72	3.243	ppb	67.449	36856	50	6.5	70	130	>+/-30%
Co	59	3	72	0.016	ppb	105.628	48	1	1.6	70	130	>+/-30%
Ni	60	3	72	0.202	ppb	56.442	476	2	10.1	70	130	>+/-30%
Cu	63	3	72	0.137	ppb	43.578	356	2	6.9	70	130	>+/-30%
Zn	66	3	72	1.028	ppb	40.659	260	10	10.3	70	130	>+/-30%
As	75	3	72	-0.138	ppb	-48.940	47	5	-2.8	70	130	>+/-30%
Se	78	2	72	0.031	ppb	167.029	3	5	0.6	70	130	>+/-30%
Sr	88	3	72	0.119	ppb	30.419	67	5	2.4	70	130	>+/-30%
Mo	95	3	115	0.017	ppb	92.746	33	2	0.9	70	130	>+/-30%
Ag	107	3	115	0.014	ppb	40.185	33	1	1.4	70	130	>+/-30%
Cd	111	3	115	0.009	ppb	172.167	3	1	0.9	70	130	>+/-30%
Sn	120	3	115	0.262	ppb	53.190	670	10	2.6	70	130	>+/-30%
Sb	121	3	115	0.040	ppb	69.908	52	2	2.0	70	130	>+/-30%
Ba	137	3	115	0.000	ppb	-66641.315	40	1	0.0	70	130	>+/-30%
Tl	205	3	193	0.009	ppb	80.691	133	1	0.9	70	130	>+/-30%
(Pb)	206	3	193	0.034	ppb	37.050	215	1	3.4	70	130	>+/-30%
(Pb)	207	3	193	0.062	ppb	84.894	350	1	6.2	70	130	>+/-30%
Pb	208	3	193	0.027	ppb	81.613	1001	1	2.7	70	130	>+/-30%
Th	232	3	193	3.115	ppb	3.124	19766	1	311.5	70	130	>+/-30%
U	238	3	193	0.022	ppb	131.233	1368	1	2.2	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3495425	1.73	3473788	100.62	60	120	
Sc (IS)	45	3	HMI He	510446	1.70	498630	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2156743	2.14	2241871	96.20	60	120	
Ge Internal standard	72	3	HMI He	641199	1.20	647352	99.05	60	120	
In Internal Standard	115	3	HMI He	2356977	1.88	2356036	100.04	60	120	
Ir (IS)	193	3	HMI He	5207217	2.29	4999588	104.15	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-1-A@10
Data File Name	350SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:03:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	15349.017	ppb	15349.017	1.14	1344754	400000	
Mg	24	3	45	2364.896	ppb	2364.896	1.10	109792	400000	
Al	27	3	45	4.816	ppb	4.816	50.76	163	400000	
K	39	3	45	545.655	ppb	545.655	5.30	43702	400000	
Ca	40	2	45	23163.276	ppb	23163.276	1.00	11053254	400000	
V	51	3	72	-0.030	ppb	-0.030	-368.25	615	2000	
Cr	52	3	72	-0.111	ppb	-0.111	-66.68	2056	5000	
Mn	55	3	72	23.910	ppb	23.910	2.56	7842	10000	
Fe	56	2	72	15.208	ppb	15.208	12.14	52753	10000	
Co	59	3	72	1.254	ppb	1.254	5.53	1343	2000	
Ni	60	3	72	1.369	ppb	1.369	36.34	818	5000	
Cu	63	3	72	0.083	ppb	0.083	38.45	315	5000	
Zn	66	3	72	5.822	ppb	5.822	3.66	868	5000	
As	75	3	72	-0.085	ppb	-0.085	-325.05	52	2000	
Se	78	2	72	7.363	ppb	7.363	2.34	342	2000	
Sr	88	3	72	470.202	ppb	470.202	1.18	205511	4000	
Mo	95	3	115	825.993	ppb	825.993	2.69	331876	2000	
Ag	107	3	115	0.013	ppb	0.013	12.66	33	100	
Cd	111	3	115	0.134	ppb	0.134	41.97	28	2000	
Sn	120	3	115	0.339	ppb	0.339	30.95	728	2000	
Sb	121	3	115	0.002	ppb	0.002	621.26	28	1000	
Ba	137	3	115	3.028	ppb	3.028	4.78	655	5000	
Tl	205	3	193	0.013	ppb	0.013	64.88	143	2000	
(Pb)	206	3	193	0.540	ppb	0.540	5.42	750	100	
(Pb)	207	3	193	0.495	ppb	0.495	6.22	745	100	
Pb	208	3	193	0.482	ppb	0.482	4.04	2924	5000	
Th	232	3	193	-0.245	ppb	-0.245	-13.73	5455	2000	
U	238	3	193	8.434	ppb	8.434	2.18	38181	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3553238	1.40	3473788	102.29	60	120	
Sc (IS)	45	3	HMI He	502853	1.66	498630	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2186889	1.62	2241871	97.55	60	120	
Ge Internal standard	72	3	HMI He	643394	0.99	647352	99.39	60	120	
In Internal Standard	115	3	HMI He	2386278	2.37	2356036	101.28	60	120	
Ir (IS)	193	3	HMI He	5179302	0.67	4999588	103.59	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A@50
Data File Name	351SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:05:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.445	ppb	1.445	19.65	52	2000	
Na	23	3	45	716.104	ppb	716.104	2.26	76552	400000	
Mg	24	3	45	4281.973	ppb	4281.973	1.68	200794	400000	
Al	27	3	45	4739.155	ppb	4739.155	2.32	82384	400000	
K	39	3	45	142.777	ppb	142.777	24.53	28909	400000	
Ca	40	2	45	8638.941	ppb	8638.941	3.34	4034775	400000	
V	51	3	72	1.156	ppb	1.156	7.87	1203	2000	
Cr	52	3	72	0.191	ppb	0.191	97.71	2254	5000	
Mn	55	3	72	252.311	ppb	252.311	0.92	81497	10000	
Fe	56	2	72	22.725	ppb	22.725	12.81	62798	10000	
Co	59	3	72	11.904	ppb	11.904	1.81	12551	2000	
Ni	60	3	72	11.465	ppb	11.465	4.11	3789	5000	
Cu	63	3	72	0.273	ppb	0.273	15.91	466	5000	
Zn	66	3	72	61.426	ppb	61.426	1.85	7953	5000	
As	75	3	72	-0.089	ppb	-0.089	-70.60	52	2000	
Se	78	2	72	0.455	ppb	0.455	48.97	23	2000	
Sr	88	3	72	64.787	ppb	64.787	0.44	28497	4000	
Mo	95	3	115	0.871	ppb	0.871	19.88	376	2000	
Ag	107	3	115	0.008	ppb	0.008	95.95	27	100	
Cd	111	3	115	0.203	ppb	0.203	26.25	42	2000	
Sn	120	3	115	0.303	ppb	0.303	26.09	700	2000	
Sb	121	3	115	0.016	ppb	0.016	65.94	37	1000	
Ba	137	3	115	0.330	ppb	0.330	23.22	107	5000	
Tl	205	3	193	0.043	ppb	0.043	29.59	235	2000	
(Pb)	206	3	193	0.729	ppb	0.729	17.32	938	100	
(Pb)	207	3	193	0.806	ppb	0.806	14.59	1018	100	
Pb	208	3	193	0.734	ppb	0.734	9.00	3943	5000	
Th	232	3	193	-0.360	ppb	-0.360	-10.09	4915	2000	
U	238	3	193	1.967	ppb	1.967	2.05	9761	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3475746	3.72	3473788	100.06	60	120	
Sc (IS)	45	3	HMI He	508185	0.75	498630	101.92	60	120	
Ge Internal standard	72	2	HMI H2	2201351	2.82	2241871	98.19	60	120	
Ge Internal standard	72	3	HMI He	647166	0.27	647352	99.97	60	120	
In Internal Standard	115	3	HMI He	2375625	2.86	2356036	100.83	60	120	
Ir (IS)	193	3	HMI He	5121991	1.29	4999588	102.45	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A@50
Data File Name	352SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:07:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.355	ppb	1.355	13.63	47	2000	
Na	23	3	45	1258.387	ppb	1258.387	1.00	125042	400000	
Mg	24	3	45	6238.150	ppb	6238.150	1.20	294728	400000	
Al	27	3	45	1833.126	ppb	1833.126	3.23	32169	400000	
K	39	3	45	277.651	ppb	277.651	18.03	34286	400000	
Ca	40	2	45	8941.626	ppb	8941.626	0.74	4270587	400000	
V	51	3	72	0.190	ppb	0.190	98.59	723	2000	
Cr	52	3	72	0.245	ppb	0.245	82.29	2276	5000	
Mn	55	3	72	327.321	ppb	327.321	1.56	105128	10000	
Fe	56	2	72	12.153	ppb	12.153	16.79	48423	10000	
Co	59	3	72	15.274	ppb	15.274	1.04	16013	2000	
Ni	60	3	72	13.830	ppb	13.830	0.90	4460	5000	
Cu	63	3	72	0.238	ppb	0.238	30.79	436	5000	
Zn	66	3	72	77.415	ppb	77.415	1.43	9939	5000	
As	75	3	72	-0.013	ppb	-0.013	-823.14	58	2000	
Se	78	2	72	0.349	ppb	0.349	24.22	17	2000	
Sr	88	3	72	85.979	ppb	85.979	1.68	37620	4000	
Mo	95	3	115	0.151	ppb	0.151	50.47	88	2000	
Ag	107	3	115	0.017	ppb	0.017	86.39	38	100	
Cd	111	3	115	0.201	ppb	0.201	32.86	42	2000	
Sn	120	3	115	0.137	ppb	0.137	76.99	603	2000	
Sb	121	3	115	-0.009	ppb	-0.009	-299.97	22	1000	
Ba	137	3	115	0.166	ppb	0.166	118.52	75	5000	
Tl	205	3	193	0.039	ppb	0.039	43.13	225	2000	
(Pb)	206	3	193	0.758	ppb	0.758	7.27	980	100	
(Pb)	207	3	193	0.768	ppb	0.768	8.03	995	100	
Pb	208	3	193	0.703	ppb	0.703	2.89	3857	5000	
Th	232	3	193	-0.469	ppb	-0.469	-8.50	4504	2000	
U	238	3	193	3.556	ppb	3.556	2.29	16813	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3551695	0.11	3473788	102.24	60	120	
Sc (IS)	45	3	HMI He	512085	0.79	498630	102.70	60	120	
Ge Internal standard	72	2	HMI H2	2167304	1.67	2241871	96.67	60	120	
Ge Internal standard	72	3	HMI He	643857	0.37	647352	99.46	60	120	
In Internal Standard	115	3	HMI He	2403088	1.32	2356036	102.00	60	120	
Ir (IS)	193	3	HMI He	5175721	1.67	4999588	103.52	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A@50
Data File Name	353SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:09:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.211	ppb	1.211	17.16	42	2000	
Na	23	3	45	742.395	ppb	742.395	2.93	79900	400000	
Mg	24	3	45	4399.171	ppb	4399.171	2.55	209019	400000	
Al	27	3	45	4826.085	ppb	4826.085	2.97	85006	400000	
K	39	3	45	131.474	ppb	131.474	24.45	28859	400000	
Ca	40	2	45	8849.345	ppb	8849.345	1.33	4268379	400000	
V	51	3	72	1.153	ppb	1.153	3.25	1216	2000	
Cr	52	3	72	-0.055	ppb	-0.055	-238.45	2129	5000	
Mn	55	3	72	259.575	ppb	259.575	1.37	84884	10000	
Fe	56	2	72	23.437	ppb	23.437	7.01	63847	10000	
Co	59	3	72	12.623	ppb	12.623	2.00	13473	2000	
Ni	60	3	72	11.923	ppb	11.923	3.66	3972	5000	
Cu	63	3	72	0.305	ppb	0.305	16.94	498	5000	
Zn	66	3	72	63.591	ppb	63.591	1.88	8332	5000	
As	75	3	72	-0.096	ppb	-0.096	-305.92	52	2000	
Se	78	2	72	0.444	ppb	0.444	34.95	22	2000	
Sr	88	3	72	67.078	ppb	67.078	0.51	29873	4000	
Mo	95	3	115	0.061	ppb	0.061	21.59	52	2000	
Ag	107	3	115	0.008	ppb	0.008	144.03	27	100	
Cd	111	3	115	0.158	ppb	0.158	14.87	33	2000	
Sn	120	3	115	0.278	ppb	0.278	24.09	691	2000	
Sb	121	3	115	0.031	ppb	0.031	86.37	47	1000	
Ba	137	3	115	0.382	ppb	0.382	16.63	118	5000	
Tl	205	3	193	0.024	ppb	0.024	37.07	178	2000	
(Pb)	206	3	193	0.799	ppb	0.799	9.07	1018	100	
(Pb)	207	3	193	0.768	ppb	0.768	6.00	990	100	
Pb	208	3	193	0.769	ppb	0.769	3.49	4110	5000	
Th	232	3	193	-0.454	ppb	-0.454	-11.88	4542	2000	
U	238	3	193	2.058	ppb	2.058	4.41	10211	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3587210	1.30	3473788	103.27	60	120	
Sc (IS)	45	3	HMI He	515033	1.98	498630	103.29	60	120	
Ge Internal standard	72	2	HMI H2	2203341	0.31	2241871	98.28	60	120	
Ge Internal standard	72	3	HMI He	655255	0.28	647352	101.22	60	120	
In Internal Standard	115	3	HMI He	2398268	3.00	2356036	101.79	60	120	
Ir (IS)	193	3	HMI He	5148208	0.65	4999588	102.97	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608911/1-A
Data File Name	354_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:11:15-06:00
Sample Type	Blank
Dilution	1
Comment	608911 6020a
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5
Na	23	3	45	40.437	ppb	20.64133431	16827	25
Mg	24	3	45	4.660	ppb	8.780518785	344	25
Al	27	3	45	2.420	ppb	107.4491378	120	15
K	39	3	45	13.323	ppb	236.5352786	23313	50
Ca	40	2	45	15.415	ppb	5.402050742	16583	200
V	51	3	72	0.087	ppb	162.9532908	648	1
Cr	52	3	72	0.929	ppb	49.4483936	2602	1
Mn	55	3	72	0.357	ppb	19.6560088	287	0.5
Fe	56	2	72	5.111	ppb	42.38813449	37515	50
Co	59	3	72	0.036	ppb	53.164863	67	0.5
Ni	60	3	72	0.013	ppb	916.5315212	408	1
Cu	63	3	72	0.062	ppb	91.53498698	288	1
Zn	66	3	72	1.104	ppb	45.02423846	262	5
As	75	3	72	-0.160	ppb	-52.34701567	43	1
(Se)	78	3	72	-2.841	ppb	-101.3383529	17	1
Sr	88	3	72	0.152	ppb	32.81966272	78	0.5
Mo	95	3	115	0.132	ppb	20.13916644	77	0.5
Ag	107	3	115	0.009	ppb	48.04210485	27	1
Cd	111	3	115	0.009	ppb	335.397613	3	0.5
Sn	120	3	115	0.098	ppb	61.72807631	551	1
Sb	121	3	115	0.015	ppb	56.54409414	35	0.6
Ba	137	3	115	0.057	ppb	163.0090434	50	0.5
Tl	205	3	193	0.016	ppb	26.79545598	150	0.1
(Pb)	206	3	193	-0.018	ppb	-213.2659241	155	1
(Pb)	207	3	193	0.019	ppb	129.0148589	303	1
Pb	208	3	193	0.006	ppb	186.8353461	890	0.5
Th	232	3	193	-0.507	ppb	-18.24446952	4249	1
U	238	3	193	0.039	ppb	29.47320768	1401	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3448693	1.08	3473788	99.28	60	120	
Sc (IS)	45	3	HMI He	493176	1.03	498630	98.91	60	120	
Ge Internal standard	72	2	HMI H2	2065363	2.16	2241871	92.13	60	120	
Ge Internal standard	72	3	HMI He	621277	1.01	647352	95.97	60	120	
In Internal Standard	115	3	HMI He	2291880	0.25	2356036	97.28	60	120	
Ir (IS)	193	3	HMI He	5068499	2.48	4999588	101.38	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608911/24-A
Data File Name	355_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:13:05-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608911 6020a
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.709	39.709	ppb	5.755	1403	40	99.3	80	120	
Na	23	3	45	797.819	797.819	ppb	0.778	83807	40	1994.5	80	120	>+/-20%
Mg	24	3	45	696.917	696.917	ppb	0.850	32831	40	1742.3	80	120	>+/-20%
Al	27	3	45	792.385	792.385	ppb	3.271	13857	40	1981.0	80	120	>+/-20%
K	39	3	45	766.059	766.059	ppb	4.038	52544	40	1915.1	80	120	>+/-20%
Ca	40	2	45	799.011	799.011	ppb	2.685	389519	40	1997.5	80	120	>+/-20%
V	51	3	72	40.713	40.713	ppb	0.216	20877	40	101.8	80	120	
Cr	52	3	72	39.838	39.838	ppb	1.178	26913	40	99.6	80	120	
Mn	55	3	72	40.580	40.580	ppb	0.865	13375	40	101.5	80	120	
Fe	56	2	72	800.600	800.600	ppb	3.143	1075400	40	2001.5	80	120	>+/-20%
(Fe)	56	3	72	775.934	775.934	ppb	0.714	419771	40	1939.8	80	120	>+/-20%
Co	59	3	72	39.175	39.175	ppb	1.131	41583	40	97.9	80	120	
Ni	60	3	72	38.711	38.711	ppb	2.859	11891	40	96.8	80	120	
Cu	63	3	72	41.621	41.621	ppb	0.165	33333	40	104.1	80	120	
Zn	66	3	72	42.273	42.273	ppb	1.178	5562	40	105.7	80	120	
As	75	3	72	39.189	39.189	ppb	1.400	3710	40	98.0	80	120	
Se	78	2	72	41.587	41.587	ppb	3.873	1946	40	104.0	80	120	
(Se)	78	3	72	30.771	30.771	ppb	25.989	207	40	76.9	80	120	>+/-20%
Sr	88	3	72	79.086	79.086	ppb	2.552	35079	40	197.7	80	120	>+/-20%
Mo	95	3	115	39.802	39.802	ppb	1.628	16083	40	99.5	80	120	
Ag	107	3	115	40.057	40.057	ppb	1.389	55033	40	100.1	80	120	
Cd	111	3	115	39.423	39.423	ppb	0.828	7847	40	98.6	80	120	
Sn	120	3	115	36.533	36.533	ppb	4.429	23704	40	91.3	80	120	
Sb	121	3	115	39.446	39.446	ppb	2.124	24791	40	98.6	80	120	
Ba	137	3	115	40.498	40.498	ppb	2.689	8277	40	101.2	80	120	
Tl	205	3	193	39.826	39.826	ppb	2.520	124222	40	99.6	80	120	
(Pb)	206	3	193	39.646	39.646	ppb	2.938	41942	40	99.1	80	120	
(Pb)	207	3	193	39.673	39.673	ppb	2.632	36424	40	99.2	80	120	
Pb	208	3	193	39.908	39.908	ppb	3.025	168898	40	99.8	80	120	
Th	232	3	193	36.367	36.367	ppb	1.083	159516	40	90.9	80	120	
U	238	3	193	39.943	39.943	ppb	3.189	175233	40	99.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3544446	2.41	3473788	102.03	60	120	
Sc (IS)	45	3	HMI He	508708	0.43	498630	102.02	60	120	
Ge Internal standard	72	2	HMI H2	2209734	1.80	2241871	98.57	60	120	
Ge Internal standard	72	3	HMI He	652696	0.35	647352	100.83	60	120	
In Internal Standard	115	3	HMI He	2394637	1.70	2356036	101.64	60	120	
Ir (IS)	193	3	HMI He	5154912	1.93	4999588	103.11	60	120	

Sample Report

Sample Table

Sample Name	280-174977-C-12-A
Data File Name	356SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:15:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.048	ppb	0.048	173.21	2	2000	
Na	23	3	45	559.330	ppb	559.330	2.31	63197	400000	
Mg	24	3	45	85.372	ppb	85.372	2.87	4161	400000	
Al	27	3	45	488.591	ppb	488.591	4.29	8618	400000	
K	39	3	45	135.575	ppb	135.575	27.89	28809	400000	
Ca	40	2	45	244.189	ppb	244.189	0.30	125506	400000	
V	51	3	72	0.810	ppb	0.810	12.83	1038	2000	
Cr	52	3	72	1.595	ppb	1.595	9.64	3137	5000	
Mn	55	3	72	8.349	ppb	8.349	7.28	2891	10000	
Fe	56	2	72	440.606	ppb	440.606	2.37	602436	10000	
Co	59	3	72	0.139	ppb	0.139	14.52	178	2000	
Ni	60	3	72	0.556	ppb	0.556	31.40	588	5000	
Cu	63	3	72	0.467	ppb	0.467	7.29	623	5000	
Zn	66	3	72	3.171	ppb	3.171	11.00	538	5000	
As	75	3	72	-0.163	ppb	-0.163	-1.77	45	2000	
Se	78	2	72	0.058	ppb	0.058	73.63	4	2000	
Sr	88	3	72	1.156	ppb	1.156	13.67	526	4000	
Mo	95	3	115	8.681	ppb	8.681	3.44	3564	2000	
Ag	107	3	115	0.008	ppb	0.008	94.04	27	100	
Cd	111	3	115	0.025	ppb	0.025	59.31	7	2000	
Sn	120	3	115	0.313	ppb	0.313	31.80	720	2000	
Sb	121	3	115	0.149	ppb	0.149	26.25	122	1000	
Ba	137	3	115	3.143	ppb	3.143	12.46	686	5000	
Tl	205	3	193	0.018	ppb	0.018	58.69	160	2000	
(Pb)	206	3	193	0.216	ppb	0.216	20.01	405	100	
(Pb)	207	3	193	0.263	ppb	0.263	21.42	530	100	
Pb	208	3	193	0.234	ppb	0.234	11.93	1862	5000	
Th	232	3	193	0.984	ppb	0.984	18.24	10601	2000	
U	238	3	193	0.035	ppb	0.035	17.42	1411	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3535102	0.32	3473788	101.77	60	120	
Sc (IS)	45	3	HMI He	511291	0.94	498630	102.54	60	120	
Ge Internal standard	72	2	HMI H2	2193188	1.61	2241871	97.83	60	120	
Ge Internal standard	72	3	HMI He	650777	0.59	647352	100.53	60	120	
In Internal Standard	115	3	HMI He	2418954	1.19	2356036	102.67	60	120	
Ir (IS)	193	3	HMI He	5157287	1.32	4999588	103.15	60	120	

Sample Report

Sample Table

Sample Name	174894-2
Data File Name	357SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:16:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	62948.894	ppb	62948.894	1.02	6633286	400000	
Mg	24	3	45	13563.478	ppb	13563.478	0.88	762533	400000	
Al	27	3	45	4.666	ppb	4.666	134.38	197	400000	
K	39	3	45	1608.507	ppb	1608.507	0.64	101184	400000	
Ca	40	2	45	34551.559	ppb	34551.559	1.96	19942962	400000	
V	51	3	72	-0.857	ppb	-0.857	-4.40	250	2000	
Cr	52	3	72	-0.665	ppb	-0.665	-19.71	2051	5000	
Mn	55	3	72	511.045	ppb	511.045	3.16	195808	10000	
Fe	56	2	72	-8.440	ppb	-8.440	-18.37	27187	10000	
Co	59	3	72	0.155	ppb	0.155	14.33	232	2000	
Ni	60	3	72	0.342	ppb	0.342	19.17	620	5000	
Cu	63	3	72	0.124	ppb	0.124	35.44	415	5000	
Zn	66	3	72	0.630	ppb	0.630	28.24	252	5000	
As	75	3	72	16.061	ppb	16.061	2.24	1833	2000	
Se	78	2	72	0.019	ppb	0.019	217.92	3	2000	
Sr	88	3	72	263.447	ppb	263.447	0.81	137578	4000	
Mo	95	3	115	4.968	ppb	4.968	9.47	2461	2000	
Ag	107	3	115	0.008	ppb	0.008	209.63	32	100	
Cd	111	3	115	-0.002	ppb	-0.002	-752.67	2	2000	
Sn	120	3	115	-0.628	ppb	-0.628	-4.49	140	2000	
Sb	121	3	115	0.016	ppb	0.016	154.27	45	1000	
Ba	137	3	115	334.947	ppb	334.947	1.78	82651	5000	
Tl	205	3	193	0.008	ppb	0.008	39.39	152	2000	
(Pb)	206	3	193	-0.014	ppb	-0.014	-176.38	192	100	
(Pb)	207	3	193	0.014	ppb	0.014	177.34	358	100	
Pb	208	3	193	-0.020	ppb	-0.020	-73.68	938	5000	
Th	232	3	193	-0.630	ppb	-0.630	-9.03	4487	2000	
U	238	3	193	0.026	ppb	0.026	10.07	1614	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4300040	1.20	3473788	123.79	60	120	IS Failed
Sc (IS)	45	3	HMI He	609537	1.74	498630	122.24	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2664767	0.84	2241871	118.86	60	120	
Ge Internal standard	72	3	HMI He	768667	0.71	647352	118.74	60	120	
In Internal Standard	115	3	HMI He	2903289	1.57	2356036	123.23	60	120	IS Failed
Ir (IS)	193	3	HMI He	6076046	1.55	4999588	121.53	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	358_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:18:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
Na	23	3	45	-63.184	ppb	-8.625	14689	51000	-0.1	90	110	>+\-10%
Mg	24	3	45	-0.131	ppb	-740.638	230	11000	0.0	90	110	>+\-10%
Al	27	3	45	-2.433	ppb	-26.198	70	1000	-0.2	90	110	>+\-10%
K	39	3	45	-305.327	ppb	-6.449	21271	11000	-2.8	90	110	>+\-10%
Ca	40	2	45	-8.144	ppb	-6.370	9686	11000	-0.1	90	110	>+\-10%
V	51	3	72	-1.072	ppb	-2.015	183	50	-2.1	90	110	>+\-10%
Cr	52	3	72	-2.785	ppb	-3.286	740	50	-5.6	90	110	>+\-10%
Mn	55	3	72	-0.388	ppb	-10.498	103	50	-0.8	90	110	>+\-10%
Fe	56	2	72	-20.192	ppb	-1.960	11620	1000	-2.0	90	110	>+\-10%
Co	59	3	72	-0.018	ppb	-46.918	22	50	0.0	90	110	>+\-10%
Ni	60	3	72	-1.243	ppb	-2.228	98	50	-2.5	90	110	>+\-10%
Cu	63	3	72	-0.130	ppb	-25.108	262	50	-0.3	90	110	>+\-10%
Zn	66	3	72	-0.489	ppb	-13.643	122	50	-1.0	90	110	>+\-10%
As	75	3	72	-0.501	ppb	-22.789	23	50	-1.0	90	110	>+\-10%
Se	78	2	72	-0.001	ppb	-1817.518	2	50	0.0	90	110	>+\-10%
Sr	88	3	72	0.001	ppb	2250.974	27	100	0.0	90	110	>+\-10%
Mo	95	3	115	-0.045	ppb	-27.002	15	50	-0.1	90	110	>+\-10%
Ag	107	3	115	-0.001	ppb	-448.581	23	50	0.0	90	110	>+\-10%
Cd	111	3	115	-0.008	ppb	0.000	0	50	0.0	90	110	>+\-10%
Sn	120	3	115	-0.638	ppb	-1.841	188	50	-1.3	90	110	>+\-10%
Sb	121	3	115	-0.019	ppb	-51.889	27	50	0.0	90	110	>+\-10%
Ba	137	3	115	-0.100	ppb	-28.062	35	50	-0.2	90	110	>+\-10%
Tl	205	3	193	-0.009	ppb	-16.003	130	50	0.0	90	110	>+\-10%
(Pb)	206	3	193	-0.064	ppb	-9.276	192	50	-0.1	90	110	>+\-10%
(Pb)	207	3	193	-0.050	ppb	-62.433	428	50	-0.1	90	110	>+\-10%
Pb	208	3	193	-0.069	ppb	-10.295	1023	50	-0.1	90	110	>+\-10%
Th	232	3	193	-0.637	ppb	-5.679	6592	50	-1.3	90	110	>+\-10%
U	238	3	193	0.032	ppb	63.314	2434	50	0.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	5875479	1.13	3473788	169.14	60	120	IS Failed
Sc (IS)	45	3	HMI He	905025	3.95	498630	181.50	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3552600	3.34	2241871	158.47	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1139526	4.43	647352	176.03	60	120	IS Failed
In Internal Standard	115	3	HMI He	4133853	1.63	2356036	175.46	60	120	IS Failed
Ir (IS)	193	3	HMI He	8994679	2.28	4999588	179.91	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	359_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:20:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.047	ppb	173.2	2	0.5	
Na	23	3	45	66.102	ppb	7.1	18985	25	>RL
Mg	24	3	45	9.300	ppb	14.6	554	25	
Al	27	3	45	-1.337	ppb	-113.1	57	15	
K	39	3	45	8.330	ppb	200.0	23092	50	
V	51	3	72	0.182	ppb	74.7	701	1	
Cr	52	3	72	0.422	ppb	28.8	2326	1	
Mn	55	3	72	0.645	ppb	29.3	380	0.5	>RL
Co	59	3	72	0.022	ppb	63.6	53	0.5	
Ni	60	3	72	0.290	ppb	128.9	491	1	
Cu	63	3	72	-0.032	ppb	-109.5	220	1	
Zn	66	3	72	0.100	ppb	288.3	140	5	
As	75	3	72	-0.108	ppb	-109.7	48	1	
Se	78	2	72	0.001	ppb	4883.5	1	1	
Sr	88	3	72	0.219	ppb	38.0	108	0.5	
Mo	95	3	115	0.067	ppb	27.4	53	0.5	
Ag	107	3	115	-0.006	ppb	-34.3	7	1	
Cd	111	3	115	0.000	ppb	102379.6	2	0.5	
Sn	120	3	115	0.140	ppb	59.8	595	1	
Sb	121	3	115	0.019	ppb	68.0	38	0.6	
Ba	137	3	115	0.232	ppb	33.3	87	0.5	
Tl	205	3	193	0.013	ppb	44.2	137	0.1	
(Pb)	206	3	193	0.008	ppb	452.0	178	1	
(Pb)	207	3	193	0.067	ppb	91.3	338	1	
Pb	208	3	193	0.010	ppb	190.9	886	0.5	
Th	232	3	193	0.287	ppb	63.9	7357	1	
U	238	3	193	0.036	ppb	64.9	1356	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3441292	2.36	3473788	99.06	60	120	
Sc (IS)	45	3	HMI He	492503	0.49	498630	98.77	60	120	
Ge Internal standard	72	2	HMI H2	2146543	1.72	2241871	95.75	60	120	
Ge Internal standard	72	3	HMI He	628060	0.58	647352	97.02	60	120	
In Internal Standard	115	3	HMI He	2363188	0.80	2356036	100.30	60	120	
Ir (IS)	193	3	HMI He	4951375	2.17	4999588	99.04	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	360_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:23:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	46.261	ppb	8.273	1636	50	92.5	90	110	
Na	23	3	45	49524.871	ppb	1.663	4287731	51000	97.1	90	110	
Mg	24	3	45	10510.389	ppb	0.900	485168	11000	95.5	90	110	
Al	27	3	45	1035.059	ppb	3.692	17782	1000	103.5	90	110	
K	39	3	45	10677.234	ppb	1.975	420883	11000	97.1	90	110	
Ca	40	2	45	10311.240	ppb	5.485	4806207	11000	93.7	90	110	
V	51	3	72	53.459	ppb	0.951	25920	50	106.9	90	110	
Cr	52	3	72	53.471	ppb	1.577	33701	50	106.9	90	110	
Mn	55	3	72	53.834	ppb	1.281	16842	50	107.7	90	110	
Fe	56	2	72	1071.515	ppb	4.096	1358426	1000	107.2	90	110	
Co	59	3	72	52.421	ppb	1.242	52986	50	104.8	90	110	
Ni	60	3	72	53.654	ppb	0.960	15541	50	107.3	90	110	
Cu	63	3	72	53.714	ppb	1.662	40900	50	107.4	90	110	
Zn	66	3	72	56.395	ppb	1.826	7025	50	112.8	90	110	>+\-10%
As	75	3	72	53.332	ppb	2.908	4788	50	106.7	90	110	
Se	78	2	72	55.964	ppb	4.036	2489	50	111.9	90	110	>+\-10%
Sr	88	3	72	107.479	ppb	1.888	45401	100	107.5	90	110	
Mo	95	3	115	52.612	ppb	2.033	20444	50	105.2	90	110	
Ag	107	3	115	52.762	ppb	1.880	69752	50	105.5	90	110	
Cd	111	3	115	52.244	ppb	0.574	10007	50	104.5	90	110	
Sn	120	3	115	51.217	ppb	1.591	31794	50	102.4	90	110	
Sb	121	3	115	51.864	ppb	3.720	31353	50	103.7	90	110	
Ba	137	3	115	53.316	ppb	2.718	10474	50	106.6	90	110	
Tl	205	3	193	51.263	ppb	1.974	157223	50	102.5	90	110	
(Pb)	206	3	193	50.856	ppb	1.979	52860	50	101.7	90	110	
(Pb)	207	3	193	52.141	ppb	0.727	47000	50	104.3	90	110	
Pb	208	3	193	50.957	ppb	1.677	211876	50	101.9	90	110	
Th	232	3	193	50.537	ppb	2.694	215465	50	101.1	90	110	
U	238	3	193	51.124	ppb	0.937	220289	50	102.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3473182	4.66	3473788	99.98	60	120	
Sc (IS)	45	3	HMI He	500408	0.14	498630	100.36	60	120	
Ge Internal standard	72	2	HMI H2	2102404	2.20	2241871	93.78	60	120	
Ge Internal standard	72	3	HMI He	621657	0.59	647352	96.03	60	120	
In Internal Standard	115	3	HMI He	2304539	1.60	2356036	97.81	60	120	
Ir (IS)	193	3	HMI He	5069760	2.66	4999588	101.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	361_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:25:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	28.091	ppb	27.1	16102	25	>RL
Mg	24	3	45	2.422	ppb	28.5	247	25	
Al	27	3	45	0.138	ppb	882.9	83	15	
K	39	3	45	0.008	ppb	521420.4	23286	50	
V	51	3	72	-0.024	ppb	-419.4	615	1	
Cr	52	3	72	0.186	ppb	80.7	2229	1	
Mn	55	3	72	0.178	ppb	31.7	238	0.5	
Co	59	3	72	0.015	ppb	134.4	47	0.5	
Ni	60	3	72	0.646	ppb	19.2	605	1	
Cu	63	3	72	0.053	ppb	108.4	290	1	
Zn	66	3	72	0.195	ppb	120.4	155	5	
As	75	3	72	-0.320	ppb	-45.5	30	1	
Se	78	2	72	0.104	ppb	72.7	6	1	
Sr	88	3	72	0.035	ppb	87.0	30	0.5	
Mo	95	3	115	0.126	ppb	38.4	78	0.5	
Ag	107	3	115	0.002	ppb	192.8	18	1	
Cd	111	3	115	0.008	ppb	354.0	3	0.5	
Sn	120	3	115	0.312	ppb	40.0	715	1	
Sb	121	3	115	0.039	ppb	48.1	52	0.6	
Ba	137	3	115	0.037	ppb	203.9	48	0.5	
Tl	205	3	193	0.034	ppb	23.6	212	0.1	
(Pb)	206	3	193	0.009	ppb	130.2	190	1	
(Pb)	207	3	193	0.009	ppb	636.6	303	1	
Pb	208	3	193	-0.014	ppb	-122.6	833	0.5	
Th	232	3	193	1.172	ppb	16.6	11566	1	>RL
U	238	3	193	0.027	ppb	39.0	1393	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3514954	2.47	3473788	101.19	60	120	
Sc (IS)	45	3	HMI He	503353	0.63	498630	100.95	60	120	
Ge Internal standard	72	2	HMI H2	2143158	0.60	2241871	95.60	60	120	
Ge Internal standard	72	3	HMI He	640786	0.58	647352	98.99	60	120	
In Internal Standard	115	3	HMI He	2404117	0.72	2356036	102.04	60	120	
Ir (IS)	193	3	HMI He	5233634	0.08	4999588	104.68	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	362LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:27:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.735	ppb	56.252	27	1	73.5	70	130	
Na	23	3	45	291.626	ppb	2.905	39364	300	97.2	70	130	
Mg	24	3	45	44.492	ppb	6.813	2222	50	89.0	70	130	
Al	27	3	45	43.316	ppb	7.559	834	50	86.6	70	130	
K	39	3	45	113.419	ppb	34.459	27819	120	94.5	70	130	
Ca	40	2	45	183.551	ppb	2.262	97575	200	91.8	70	130	
V	51	3	72	5.139	ppb	5.836	3150	5	102.8	70	130	
Cr	52	3	72	2.140	ppb	11.549	3437	2	107.0	70	130	
Mn	55	3	72	0.916	ppb	18.722	476	1	91.6	70	130	
Fe	56	2	72	49.969	ppb	8.831	97666	50	99.9	70	130	
Co	59	3	72	0.958	ppb	6.101	1033	1	95.8	70	130	
Ni	60	3	72	1.979	ppb	19.354	996	2	99.0	70	130	
Cu	63	3	72	1.936	ppb	4.789	1768	2	96.8	70	130	
Zn	66	3	72	10.445	ppb	6.368	1454	10	104.4	70	130	
As	75	3	72	4.903	ppb	11.294	510	5	98.1	70	130	
Se	78	2	72	4.302	ppb	4.850	201	5	86.0	70	130	
Sr	88	3	72	4.594	ppb	3.028	2024	5	91.9	70	130	
Mo	95	3	115	1.695	ppb	1.970	715	2	84.8	70	130	
Ag	107	3	115	0.971	ppb	6.711	1356	1	97.1	70	130	
Cd	111	3	115	0.791	ppb	12.531	160	1	79.1	70	130	
Sn	120	3	115	8.880	ppb	4.821	6187	10	88.8	70	130	
Sb	121	3	115	1.898	ppb	6.352	1226	2	94.9	70	130	
Ba	137	3	115	1.061	ppb	22.114	258	1	106.1	70	130	
Tl	205	3	193	0.914	ppb	4.862	2932	1	91.4	70	130	
(Pb)	206	3	193	0.893	ppb	11.712	1110	1	89.3	70	130	
(Pb)	207	3	193	0.868	ppb	10.258	1075	1	86.8	70	130	
Pb	208	3	193	0.909	ppb	3.273	4673	1	90.9	70	130	
Th	232	3	193	1.173	ppb	16.852	11321	1	117.3	70	130	
U	238	3	193	0.983	ppb	1.229	5500	1	98.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3565931	1.54	3473788	102.65	60	120	
Sc (IS)	45	3	HMI He	508281	1.10	498630	101.94	60	120	
Ge Internal standard	72	2	HMI H2	2190963	1.89	2241871	97.73	60	120	
Ge Internal standard	72	3	HMI He	643918	1.81	647352	99.47	60	120	
In Internal Standard	115	3	HMI He	2408073	0.78	2356036	102.21	60	120	
Ir (IS)	193	3	HMI He	5118118	0.88	4999588	102.37	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A
Data File Name	363SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:29:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	60.581	ppb	60.581	6.11	2037	2000	
Na	23	3	45	35840.265	ppb	35840.265	2.12	3123381	400000	
Mg	24	3	45	212863.531	ppb	212863.531	1.01	9876113	400000	
Al	27	3	45	239670.632	ppb	239670.632	1.02	4121102	400000	
K	39	3	45	6901.004	ppb	6901.004	1.43	281731	400000	
Ca	40	2	45	424239.762	ppb	424239.762	2.16	194494464	400000	
V	51	3	72	59.108	ppb	59.108	2.27	28747	2000	
Cr	52	3	72	6.899	ppb	6.899	4.42	6170	5000	
Mn	55	3	72	12685.926	ppb	12685.926	1.47	3949278	10000	
Fe	56	2	72	813.299	ppb	813.299	2.40	1039931	10000	
Co	59	3	72	612.104	ppb	612.104	1.55	621764	2000	
Ni	60	3	72	564.723	ppb	564.723	1.33	160596	5000	
Cu	63	3	72	7.342	ppb	7.342	5.98	5828	5000	
Zn	66	3	72	2864.956	ppb	2864.956	1.63	352465	5000	
As	75	3	72	3.595	ppb	3.595	13.41	378	2000	
Se	78	2	72	14.366	ppb	14.366	7.92	641	2000	
Sr	88	3	72	3485.993	ppb	3485.993	2.58	1480189	4000	
Mo	95	3	115	0.162	ppb	0.162	35.29	90	2000	
Ag	107	3	115	0.024	ppb	0.024	32.01	47	100	
Cd	111	3	115	8.440	ppb	8.440	0.98	1643	2000	
Sn	120	3	115	0.251	ppb	0.251	31.97	658	2000	
Sb	121	3	115	0.052	ppb	0.052	56.20	58	1000	
Ba	137	3	115	10.428	ppb	10.428	2.47	2112	5000	
Tl	205	3	193	0.719	ppb	0.719	4.93	2261	2000	
(Pb)	206	3	193	10.411	ppb	10.411	3.17	10736	100	
(Pb)	207	3	193	9.608	ppb	9.608	0.93	8714	100	
Pb	208	3	193	9.842	ppb	9.842	2.47	40770	5000	
Th	232	3	193	2.471	ppb	2.471	2.35	16246	2000	
U	238	3	193	102.308	ppb	102.308	1.70	430618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3418181	2.68	3473788	98.40	60	120	
Sc (IS)	45	3	HMI He	503103	0.22	498630	100.90	60	120	
Ge Internal standard	72	2	HMI H2	2104222	1.70	2241871	93.86	60	120	
Ge Internal standard	72	3	HMI He	625147	1.87	647352	96.57	60	120	
In Internal Standard	115	3	HMI He	2339653	0.73	2356036	99.30	60	120	
Ir (IS)	193	3	HMI He	4966703	2.34	4999588	99.34	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A
Data File Name	364SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:31:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	73.276	ppb	73.276	1.34	2422	2000	
Na	23	3	45	62093.367	ppb	62093.367	1.41	5377585	400000	
Mg	24	3	45	306187.371	ppb	306187.371	1.76	14143200	400000	
Al	27	3	45	91226.880	ppb	91226.880	2.76	1561643	400000	
K	39	3	45	14917.053	ppb	14917.053	2.19	579343	400000	
Ca	40	2	45	441552.111	ppb	441552.111	0.70	202504125	400000	
V	51	3	72	4.300	ppb	4.300	3.60	2697	2000	
Cr	52	3	72	3.024	ppb	3.024	6.03	3920	5000	
Mn	55	3	72	16023.426	ppb	16023.426	0.92	5061298	10000	
Fe	56	2	72	279.809	ppb	279.809	0.54	377439	10000	
Co	59	3	72	743.454	ppb	743.454	0.03	766373	2000	
Ni	60	3	72	624.357	ppb	624.357	0.36	180138	5000	
Cu	63	3	72	5.203	ppb	5.203	2.42	4265	5000	
Zn	66	3	72	3518.706	ppb	3518.706	0.34	439287	5000	
As	75	3	72	2.777	ppb	2.777	19.61	310	2000	
Se	78	2	72	18.727	ppb	18.727	6.12	832	2000	
Sr	88	3	72	4367.568	ppb	4367.568	3.12	1882131	4000	
Mo	95	3	115	0.090	ppb	0.090	10.17	62	2000	
Ag	107	3	115	0.019	ppb	0.019	19.76	40	100	
Cd	111	3	115	10.743	ppb	10.743	4.39	2084	2000	
Sn	120	3	115	-0.026	ppb	-0.026	-418.25	485	2000	
Sb	121	3	115	0.063	ppb	0.063	37.47	65	1000	
Ba	137	3	115	8.697	ppb	8.697	2.35	1763	5000	
Tl	205	3	193	1.987	ppb	1.987	2.36	6165	2000	
(Pb)	206	3	193	10.489	ppb	10.489	3.15	10994	100	
(Pb)	207	3	193	9.425	ppb	9.425	2.02	8692	100	
Pb	208	3	193	9.838	ppb	9.838	2.51	41431	5000	
Th	232	3	193	0.297	ppb	0.297	9.60	7550	2000	
U	238	3	193	178.748	ppb	178.748	0.36	763922	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3418263	1.18	3473788	98.40	60	120	
Sc (IS)	45	3	HMI He	500941	1.13	498630	100.46	60	120	
Ge Internal standard	72	2	HMI H2	2096795	1.22	2241871	93.53	60	120	
Ge Internal standard	72	3	HMI He	634296	0.48	647352	97.98	60	120	
In Internal Standard	115	3	HMI He	2332431	1.12	2356036	99.00	60	120	
Ir (IS)	193	3	HMI He	5047763	0.79	4999588	100.96	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-3-A
Data File Name	365SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:32:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.047	ppb	0.047	173.21	2	2000	
Na	23	3	45	2063.597	ppb	2063.597	2.02	197694	400000	
Mg	24	3	45	7142.523	ppb	7142.523	0.80	340122	400000	
Al	27	3	45	1104.902	ppb	1104.902	3.83	19577	400000	
K	39	3	45	20614.237	ppb	20614.237	0.87	815926	400000	
Ca	40	2	45	42922.982	ppb	42922.982	1.91	20641832	400000	
V	51	3	72	3.410	ppb	3.410	11.09	2349	2000	
Cr	52	3	72	1.196	ppb	1.196	28.01	2917	5000	
Mn	55	3	72	26.936	ppb	26.936	3.24	8998	10000	
Fe	56	2	72	783.898	ppb	783.898	1.42	1073723	10000	
Co	59	3	72	0.979	ppb	0.979	6.63	1078	2000	
Ni	60	3	72	1.600	ppb	1.600	13.91	905	5000	
Cu	63	3	72	5.112	ppb	5.112	0.77	4345	5000	
Zn	66	3	72	5.024	ppb	5.024	11.65	783	5000	
As	75	3	72	1.129	ppb	1.129	28.37	167	2000	
Se	78	2	72	0.503	ppb	0.503	30.90	25	2000	
Sr	88	3	72	284.589	ppb	284.589	1.38	127030	4000	
Mo	95	3	115	2.512	ppb	2.512	2.06	1048	2000	
Ag	107	3	115	0.015	ppb	0.015	49.29	37	100	
Cd	111	3	115	0.025	ppb	0.025	115.99	7	2000	
Sn	120	3	115	-0.012	ppb	-0.012	-381.48	510	2000	
Sb	121	3	115	0.349	ppb	0.349	12.05	248	1000	
Ba	137	3	115	66.333	ppb	66.333	3.58	13630	5000	
Tl	205	3	193	0.038	ppb	0.038	22.79	225	2000	
(Pb)	206	3	193	0.977	ppb	0.977	6.08	1233	100	
(Pb)	207	3	193	1.027	ppb	1.027	5.31	1253	100	
Pb	208	3	193	0.984	ppb	0.984	5.87	5131	5000	
Th	232	3	193	0.024	ppb	0.024	88.62	6704	2000	
U	238	3	193	4.474	ppb	4.474	1.24	21202	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3582855	0.40	3473788	103.14	60	120	
Sc (IS)	45	3	HMI He	516188	1.29	498630	103.52	60	120	
Ge Internal standard	72	2	HMI H2	2250849	1.04	2241871	100.40	60	120	
Ge Internal standard	72	3	HMI He	657005	0.15	647352	101.49	60	120	
In Internal Standard	115	3	HMI He	2412251	1.39	2356036	102.39	60	120	
Ir (IS)	193	3	HMI He	5267286	0.51	4999588	105.35	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A
Data File Name	366SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:34:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	59.376	ppb	59.376	5.51	2056	2000	
Na	23	3	45	35708.041	ppb	35708.041	3.09	3201498	400000	
Mg	24	3	45	209813.921	ppb	209813.921	0.95	10015900	400000	
Al	27	3	45	230532.171	ppb	230532.171	2.12	4078719	400000	
K	39	3	45	6698.976	ppb	6698.976	2.17	282068	400000	
Ca	40	2	45	412764.710	ppb	412764.710	0.32	197451903	400000	
V	51	3	72	58.530	ppb	58.530	0.85	29497	2000	
Cr	52	3	72	6.527	ppb	6.527	4.46	6162	5000	
Mn	55	3	72	12531.776	ppb	12531.776	2.22	4040779	10000	
Fe	56	2	72	761.786	ppb	761.786	2.94	1023517	10000	
Co	59	3	72	601.626	ppb	601.626	0.98	633050	2000	
Ni	60	3	72	558.455	ppb	558.455	0.90	164511	5000	
Cu	63	3	72	7.219	ppb	7.219	1.42	5943	5000	
Zn	66	3	72	2855.269	ppb	2855.269	0.20	363886	5000	
As	75	3	72	3.842	ppb	3.842	9.86	415	2000	
Se	78	2	72	14.522	ppb	14.522	3.37	679	2000	
Sr	88	3	72	3447.605	ppb	3447.605	1.03	1516412	4000	
Mo	95	3	115	0.089	ppb	0.089	48.17	63	2000	
Ag	107	3	115	0.006	ppb	0.006	41.93	23	100	
Cd	111	3	115	8.115	ppb	8.115	7.27	1624	2000	
Sn	120	3	115	-0.029	ppb	-0.029	-300.72	498	2000	
Sb	121	3	115	0.065	ppb	0.065	16.53	68	1000	
Ba	137	3	115	10.981	ppb	10.981	1.06	2287	5000	
Tl	205	3	193	0.722	ppb	0.722	3.90	2351	2000	
(Pb)	206	3	193	10.044	ppb	10.044	3.05	10744	100	
(Pb)	207	3	193	9.491	ppb	9.491	2.84	8925	100	
Pb	208	3	193	9.693	ppb	9.693	0.47	41639	5000	
Th	232	3	193	1.984	ppb	1.984	2.67	14786	2000	
U	238	3	193	100.626	ppb	100.626	0.42	439082	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3565435	2.16	3473788	102.64	60	120	
Sc (IS)	45	3	HMI He	517666	0.96	498630	103.82	60	120	
Ge Internal standard	72	2	HMI H2	2206977	2.44	2241871	98.44	60	120	
Ge Internal standard	72	3	HMI He	647471	0.51	647352	100.02	60	120	
In Internal Standard	115	3	HMI He	2408459	2.31	2356036	102.23	60	120	
Ir (IS)	193	3	HMI He	5147276	0.70	4999588	102.95	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	367SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:36:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	19267.134	ppb	19267.134	1.72	1690099	400000	
Mg	24	3	45	12942.004	ppb	12942.004	2.84	602164	400000	
Al	27	3	45	29.271	ppb	29.271	30.20	584	400000	
K	39	3	45	7408.323	ppb	7408.323	2.03	301574	400000	
Ca	40	2	45	50349.201	ppb	50349.201	1.35	23860298	400000	
V	51	3	72	23.841	ppb	23.841	2.95	12373	2000	
Cr	52	3	72	1.595	ppb	1.595	21.10	3115	5000	
Mn	55	3	72	5.948	ppb	5.948	8.52	2097	10000	
Fe	56	2	72	8.448	ppb	8.448	21.54	44419	10000	
Co	59	3	72	0.167	ppb	0.167	9.14	207	2000	
Ni	60	3	72	0.582	ppb	0.582	17.24	591	5000	
Cu	63	3	72	0.512	ppb	0.512	19.41	655	5000	
Zn	66	3	72	2.661	ppb	2.661	9.01	470	5000	
As	75	3	72	13.469	ppb	13.469	5.74	1303	2000	
Se	78	2	72	4.035	ppb	4.035	14.43	189	2000	
Sr	88	3	72	264.582	ppb	264.582	1.59	116218	4000	
Mo	95	3	115	9.930	ppb	9.930	3.45	4024	2000	
Ag	107	3	115	0.002	ppb	0.002	453.02	18	100	
Cd	111	3	115	0.026	ppb	0.026	152.96	7	2000	
Sn	120	3	115	-0.121	ppb	-0.121	-60.53	436	2000	
Sb	121	3	115	0.281	ppb	0.281	12.37	203	1000	
Ba	137	3	115	43.073	ppb	43.073	3.71	8782	5000	
Tl	205	3	193	0.002	ppb	0.002	224.14	110	2000	
(Pb)	206	3	193	0.035	ppb	0.035	106.64	213	100	
(Pb)	207	3	193	0.044	ppb	0.044	96.52	330	100	
Pb	208	3	193	0.018	ppb	0.018	84.10	950	5000	
Th	232	3	193	-0.543	ppb	-0.543	-4.83	4164	2000	
U	238	3	193	1.779	ppb	1.779	1.59	8982	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3530609	1.34	3473788	101.64	60	120	
Sc (IS)	45	3	HMI He	504644	2.45	498630	101.21	60	120	
Ge Internal standard	72	2	HMI H2	2204814	1.51	2241871	98.35	60	120	
Ge Internal standard	72	3	HMI He	646574	0.76	647352	99.88	60	120	
In Internal Standard	115	3	HMI He	2390053	2.25	2356036	101.44	60	120	
Ir (IS)	193	3	HMI He	5140772	1.24	4999588	102.82	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	368SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:38:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	3632.102	ppb	3632.102	0.90	326817	400000	
Mg	24	3	45	2560.339	ppb	2560.339	2.47	118197	400000	
Al	27	3	45	17.356	ppb	17.356	14.06	377	400000	
K	39	3	45	1482.202	ppb	1482.202	4.64	78306	400000	
Ca	40	2	45	10086.417	ppb	10086.417	2.00	4720660	400000	
V	51	3	72	4.338	ppb	4.338	1.66	2764	2000	
Cr	52	3	72	0.204	ppb	0.204	73.02	2256	5000	
Mn	55	3	72	3.423	ppb	3.423	4.20	1283	10000	
Fe	56	2	72	9.520	ppb	9.520	21.43	45647	10000	
Co	59	3	72	0.060	ppb	0.060	12.94	95	2000	
Ni	60	3	72	0.449	ppb	0.449	75.48	551	5000	
Cu	63	3	72	0.217	ppb	0.217	31.51	421	5000	
Zn	66	3	72	4.174	ppb	4.174	6.49	661	5000	
As	75	3	72	2.319	ppb	2.319	12.51	273	2000	
Se	78	2	72	0.888	ppb	0.888	18.97	43	2000	
Sr	88	3	72	51.727	ppb	51.727	1.73	22694	4000	
Mo	95	3	115	1.841	ppb	1.841	7.21	768	2000	
Ag	107	3	115	0.006	ppb	0.006	233.87	23	100	
Cd	111	3	115	0.008	ppb	0.008	175.35	3	2000	
Sn	120	3	115	0.082	ppb	0.082	37.17	565	2000	
Sb	121	3	115	0.082	ppb	0.082	22.48	78	1000	
Ba	137	3	115	8.595	ppb	8.595	0.72	1784	5000	
Tl	205	3	193	0.003	ppb	0.003	211.42	113	2000	
(Pb)	206	3	193	0.342	ppb	0.342	4.51	536	100	
(Pb)	207	3	193	0.333	ppb	0.333	14.84	593	100	
Pb	208	3	193	0.321	ppb	0.321	7.90	2227	5000	
Th	232	3	193	-0.589	ppb	-0.589	-2.83	3970	2000	
U	238	3	193	0.392	ppb	0.392	1.03	2956	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3482209	1.93	3473788	100.24	60	120	
Sc (IS)	45	3	HMI He	500075	0.62	498630	100.29	60	120	
Ge Internal standard	72	2	HMI H2	2196510	1.26	2241871	97.98	60	120	
Ge Internal standard	72	3	HMI He	645469	0.66	647352	99.71	60	120	
In Internal Standard	115	3	HMI He	2388062	1.61	2356036	101.36	60	120	
Ir (IS)	193	3	HMI He	5143275	1.20	4999588	102.87	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	369SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:40:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.025	ppb	38.025	12.16	1343	2000	
Na	23	3	45	20018.373	ppb	20018.373	1.20	1764345	400000	
Mg	24	3	45	13697.995	ppb	13697.995	1.77	640650	400000	
Al	27	3	45	769.296	ppb	769.296	1.32	13413	400000	
K	39	3	45	8199.277	ppb	8199.277	2.16	332917	400000	
Ca	40	2	45	51593.393	ppb	51593.393	1.01	24292644	400000	
V	51	3	72	62.052	ppb	62.052	1.52	31435	2000	
Cr	52	3	72	39.875	ppb	39.875	0.35	26891	5000	
Mn	55	3	72	44.350	ppb	44.350	0.76	14575	10000	
Fe	56	2	72	791.203	ppb	791.203	3.96	1055648	10000	
Co	59	3	72	38.137	ppb	38.137	3.15	40407	2000	
Ni	60	3	72	37.374	ppb	37.374	2.66	11477	5000	
Cu	63	3	72	39.687	ppb	39.687	1.37	31741	5000	
Zn	66	3	72	40.789	ppb	40.789	3.72	5363	5000	
As	75	3	72	49.864	ppb	49.864	3.69	4697	2000	
Se	78	2	72	45.396	ppb	45.396	2.67	2108	2000	
Sr	88	3	72	342.967	ppb	342.967	0.96	151819	4000	
Mo	95	3	115	48.787	ppb	48.787	2.39	19564	2000	
Ag	107	3	115	39.367	ppb	39.367	1.16	53703	100	
Cd	111	3	115	38.123	ppb	38.123	1.76	7535	2000	
Sn	120	3	115	37.283	ppb	37.283	1.10	24018	2000	
Sb	121	3	115	38.915	ppb	38.915	1.36	24283	1000	
Ba	137	3	115	83.671	ppb	83.671	2.58	16937	5000	
Tl	205	3	193	38.678	ppb	38.678	2.49	120936	2000	
(Pb)	206	3	193	38.624	ppb	38.624	4.12	40954	100	
(Pb)	207	3	193	38.712	ppb	38.712	1.55	35646	100	
Pb	208	3	193	38.988	ppb	38.988	2.56	165433	5000	
Th	232	3	193	36.339	ppb	36.339	0.19	159815	2000	
U	238	3	193	41.121	ppb	41.121	2.75	180806	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508049	0.26	3473788	100.99	60	120	
Sc (IS)	45	3	HMI He	507106	1.38	498630	101.70	60	120	
Ge Internal standard	72	2	HMI H2	2194708	2.41	2241871	97.90	60	120	
Ge Internal standard	72	3	HMI He	651605	1.08	647352	100.66	60	120	
In Internal Standard	115	3	HMI He	2377573	0.96	2356036	100.91	60	120	
Ir (IS)	193	3	HMI He	5167774	2.42	4999588	103.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	370SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:41:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	37.140	ppb	37.140	7.15	1309	2000	
Na	23	3	45	19361.507	ppb	19361.507	2.22	1696531	400000	
Mg	24	3	45	13167.113	ppb	13167.113	1.26	612109	400000	
Al	27	3	45	756.336	ppb	756.336	4.94	13109	400000	
K	39	3	45	7929.399	ppb	7929.399	0.95	320798	400000	
Ca	40	2	45	50131.320	ppb	50131.320	1.81	23606942	400000	
V	51	3	72	61.711	ppb	61.711	0.66	31069	2000	
Cr	52	3	72	40.085	ppb	40.085	0.76	26854	5000	
Mn	55	3	72	42.302	ppb	42.302	3.25	13823	10000	
Fe	56	2	72	755.198	ppb	755.198	3.12	1020924	10000	
Co	59	3	72	37.944	ppb	37.944	1.50	39963	2000	
Ni	60	3	72	36.876	ppb	36.876	3.24	11259	5000	
Cu	63	3	72	40.004	ppb	40.004	1.21	31796	5000	
Zn	66	3	72	40.031	ppb	40.031	3.03	5232	5000	
As	75	3	72	50.844	ppb	50.844	4.67	4758	2000	
Se	78	2	72	43.756	ppb	43.756	5.02	2056	2000	
Sr	88	3	72	335.133	ppb	335.133	0.55	147442	4000	
Mo	95	3	115	48.815	ppb	48.815	3.62	19394	2000	
Ag	107	3	115	39.183	ppb	39.183	0.66	52967	100	
Cd	111	3	115	39.458	ppb	39.458	6.42	7722	2000	
Sn	120	3	115	37.725	ppb	37.725	5.19	24065	2000	
Sb	121	3	115	38.553	ppb	38.553	1.81	23836	1000	
Ba	137	3	115	81.022	ppb	81.022	4.57	16250	5000	
Tl	205	3	193	38.361	ppb	38.361	3.10	120949	2000	
(Pb)	206	3	193	37.938	ppb	37.938	2.15	40581	100	
(Pb)	207	3	193	38.684	ppb	38.684	2.72	35910	100	
Pb	208	3	193	38.430	ppb	38.430	3.18	164437	5000	
Th	232	3	193	37.011	ppb	37.011	1.83	163991	2000	
U	238	3	193	40.651	ppb	40.651	3.86	180234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508559	0.58	3473788	101.00	60	120	
Sc (IS)	45	3	HMI He	503980	0.10	498630	101.07	60	120	
Ge Internal standard	72	2	HMI H2	2219935	2.13	2241871	99.02	60	120	
Ge Internal standard	72	3	HMI He	647563	0.46	647352	100.03	60	120	
In Internal Standard	115	3	HMI He	2355962	1.69	2356036	100.00	60	120	
Ir (IS)	193	3	HMI He	5211565	2.54	4999588	104.24	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D pds
Data File Name	371SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:43:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	100.856	ppb	100.856	3.57	3515	2000	
Na	23	3	45	23209.530	ppb	23209.530	3.00	2036898	400000	
Mg	24	3	45	14657.546	ppb	14657.546	4.59	683158	400000	
Al	27	3	45	2003.283	ppb	2003.283	2.37	34691	400000	
K	39	3	45	9096.044	ppb	9096.044	2.55	365656	400000	
Ca	40	2	45	50896.223	ppb	50896.223	1.12	24093219	400000	
V	51	3	72	120.869	ppb	120.869	1.15	60308	2000	
Cr	52	3	72	97.307	ppb	97.307	1.78	62199	5000	
Mn	55	3	72	101.465	ppb	101.465	0.97	32938	10000	
Fe	56	2	72	1031.252	ppb	1031.252	2.79	1355643	10000	
Co	59	3	72	96.061	ppb	96.061	1.21	101225	2000	
Ni	60	3	72	96.032	ppb	96.032	1.04	28674	5000	
Cu	63	3	72	100.295	ppb	100.295	1.46	79419	5000	
Zn	66	3	72	201.921	ppb	201.921	1.59	25886	5000	
As	75	3	72	115.644	ppb	115.644	0.64	10757	2000	
Se	78	2	72	108.244	ppb	108.244	2.17	4987	2000	
Sr	88	3	72	350.993	ppb	350.993	1.81	154577	4000	
Mo	95	3	115	106.714	ppb	106.714	2.12	43072	2000	
Ag	107	3	115	26.151	ppb	26.151	1.74	35942	100	
Cd	111	3	115	94.122	ppb	94.122	4.46	18729	2000	
Sn	120	3	115	97.404	ppb	97.404	3.73	62368	2000	
Sb	121	3	115	93.266	ppb	93.266	2.91	58577	1000	
Ba	137	3	115	139.610	ppb	139.610	1.69	28445	5000	
Tl	205	3	193	97.060	ppb	97.060	1.96	307095	2000	
(Pb)	206	3	193	94.907	ppb	94.907	1.29	101646	100	
(Pb)	207	3	193	96.957	ppb	96.957	1.68	89914	100	
Pb	208	3	193	95.548	ppb	95.548	1.33	409180	5000	
Th	232	3	193	104.423	ppb	104.423	0.50	452549	2000	
U	238	3	193	202.315	ppb	202.315	0.78	895733	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3526792	0.41	3473788	101.53	60	120	
Sc (IS)	45	3	HMI He	505704	2.74	498630	101.42	60	120	
Ge Internal standard	72	2	HMI H2	2177551	2.07	2241871	97.13	60	120	
Ge Internal standard	72	3	HMI He	648252	0.42	647352	100.14	60	120	
In Internal Standard	115	3	HMI He	2395399	1.79	2356036	101.67	60	120	
Ir (IS)	193	3	HMI He	5230638	1.42	4999588	104.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	372_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:45:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
Na	23	3	45	-75.894	ppb	-1.418	14245	51000	-0.1	90	110	>+\-10%
Mg	24	3	45	1.461	ppb	38.566	407	11000	0.0	90	110	>+\-10%
Al	27	3	45	-1.246	ppb	-90.685	120	1000	-0.1	90	110	>+\-10%
K	39	3	45	-344.027	ppb	-7.705	20907	11000	-3.1	90	110	>+\-10%
Ca	40	2	45	-1.876	ppb	-40.641	14956	11000	0.0	90	110	>+\-10%
V	51	3	72	-1.078	ppb	-2.208	197	50	-2.2	90	110	>+\-10%
Cr	52	3	72	-2.852	ppb	-0.408	731	50	-5.7	90	110	>+\-10%
Mn	55	3	72	-0.156	ppb	-24.378	257	50	-0.3	90	110	>+\-10%
Fe	56	2	72	-11.840	ppb	-23.644	30502	1000	-1.2	90	110	>+\-10%
Co	59	3	72	-0.005	ppb	-190.004	52	50	0.0	90	110	>+\-10%
Ni	60	3	72	-1.311	ppb	-3.680	70	50	-2.6	90	110	>+\-10%
Cu	63	3	72	-0.124	ppb	-31.016	297	50	-0.2	90	110	>+\-10%
Zn	66	3	72	-0.403	ppb	-21.571	155	50	-0.8	90	110	>+\-10%
As	75	3	72	-0.451	ppb	-6.395	35	50	-0.9	90	110	>+\-10%
Se	78	2	72	0.031	ppb	263.977	5	50	0.1	90	110	>+\-10%
Sr	88	3	72	0.040	ppb	70.586	63	100	0.0	90	110	>+\-10%
Mo	95	3	115	-0.049	ppb	-14.819	13	50	-0.1	90	110	>+\-10%
Ag	107	3	115	0.007	ppb	37.909	47	50	0.0	90	110	>+\-10%
Cd	111	3	115	0.000	ppb	3511.370	3	50	0.0	90	110	>+\-10%
Sn	120	3	115	-0.627	ppb	-4.690	217	50	-1.3	90	110	>+\-10%
Sb	121	3	115	-0.010	ppb	-231.344	40	50	0.0	90	110	>+\-10%
Ba	137	3	115	-0.078	ppb	-18.639	47	50	-0.2	90	110	>+\-10%
Tl	205	3	193	0.002	ppb	212.715	210	50	0.0	90	110	>+\-10%
(Pb)	206	3	193	-0.049	ppb	-35.187	243	50	-0.1	90	110	>+\-10%
(Pb)	207	3	193	-0.042	ppb	-112.604	488	50	-0.1	90	110	>+\-10%
Pb	208	3	193	-0.069	ppb	-27.363	1136	50	-0.1	90	110	>+\-10%
Th	232	3	193	-0.617	ppb	-3.454	7479	50	-1.2	90	110	>+\-10%
U	238	3	193	0.034	ppb	47.808	2717	50	0.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6011818	2.26	3473788	173.06	60	120	IS Failed
Sc (IS)	45	3	HMI He	1013190	1.86	498630	203.19	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3726272	1.26	2241871	166.21	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1249194	1.31	647352	192.97	60	120	IS Failed
In Internal Standard	115	3	HMI He	4500401	5.11	2356036	191.02	60	120	IS Failed
Ir (IS)	193	3	HMI He	9984157	3.69	4999588	199.70	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	373_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:47:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.096	ppb	86.6	3	0.5	
Na	23	3	45	28.084	ppb	17.8	16052	25	>RL
Mg	24	3	45	11.151	ppb	16.4	651	25	
Al	27	3	45	5.204	ppb	28.3	170	15	
K	39	3	45	5.426	ppb	482.4	23413	50	
V	51	3	72	0.089	ppb	219.2	656	1	
Cr	52	3	72	0.300	ppb	131.1	2251	1	
Mn	55	3	72	0.877	ppb	21.4	451	0.5	>RL
Co	59	3	72	0.060	ppb	32.4	92	0.5	
Ni	60	3	72	0.268	ppb	31.9	485	1	
Cu	63	3	72	0.071	ppb	67.5	298	1	
Zn	66	3	72	0.371	ppb	36.1	173	5	
As	75	3	72	-0.294	ppb	-47.5	32	1	
Se	78	2	72	0.017	ppb	272.9	2	1	
Sr	88	3	72	0.220	ppb	39.6	108	0.5	
Mo	95	3	115	0.094	ppb	31.2	63	0.5	
Ag	107	3	115	0.014	ppb	69.3	33	1	
Cd	111	3	115	0.060	ppb	107.5	13	0.5	
Sn	120	3	115	0.123	ppb	101.4	580	1	
Sb	121	3	115	0.033	ppb	62.5	47	0.6	
Ba	137	3	115	0.060	ppb	48.3	52	0.5	
Tl	205	3	193	0.037	ppb	21.3	220	0.1	
(Pb)	206	3	193	0.010	ppb	293.2	188	1	
(Pb)	207	3	193	0.068	ppb	38.2	353	1	
Pb	208	3	193	0.019	ppb	74.4	961	0.5	
Th	232	3	193	2.965	ppb	9.7	18982	1	>RL
U	238	3	193	0.054	ppb	18.3	1494	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3520563	0.32	3473788	101.35	60	120	
Sc (IS)	45	3	HMI He	501777	0.90	498630	100.63	60	120	
Ge Internal standard	72	2	HMI H2	2094429	1.25	2241871	93.42	60	120	
Ge Internal standard	72	3	HMI He	627386	0.77	647352	96.92	60	120	
In Internal Standard	115	3	HMI He	2343737	0.66	2356036	99.48	60	120	
Ir (IS)	193	3	HMI He	5164412	1.02	4999588	103.30	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	374LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:49:12-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.654	ppb	24.589	23	1	65.4	70	130	>+/-30%
Na	23	3	45	280.488	ppb	2.579	38461	300	93.5	70	130	
Mg	24	3	45	47.332	ppb	7.845	2359	50	94.7	70	130	
Al	27	3	45	44.535	ppb	16.213	858	50	89.1	70	130	
K	39	3	45	87.238	ppb	33.804	26866	120	72.7	70	130	
Ca	40	2	45	186.694	ppb	1.971	99846	200	93.3	70	130	
V	51	3	72	4.442	ppb	5.748	2774	5	88.8	70	130	
Cr	52	3	72	2.041	ppb	11.706	3334	2	102.1	70	130	
Mn	55	3	72	1.540	ppb	12.893	668	1	154.0	70	130	>+/-30%
Fe	56	2	72	48.919	ppb	7.375	97044	50	97.8	70	130	
Co	59	3	72	0.975	ppb	8.688	1038	1	97.5	70	130	
Ni	60	3	72	2.268	ppb	8.617	1068	2	113.4	70	130	
Cu	63	3	72	1.922	ppb	9.697	1734	2	96.1	70	130	
Zn	66	3	72	9.308	ppb	12.063	1293	10	93.1	70	130	
As	75	3	72	3.924	ppb	3.020	415	5	78.5	70	130	
Se	78	2	72	4.878	ppb	7.896	229	5	97.6	70	130	
Sr	88	3	72	4.330	ppb	8.167	1886	5	86.6	70	130	
Mo	95	3	115	1.781	ppb	4.062	746	2	89.0	70	130	
Ag	107	3	115	0.898	ppb	9.070	1249	1	89.8	70	130	
Cd	111	3	115	0.896	ppb	19.735	180	1	89.6	70	130	
Sn	120	3	115	7.938	ppb	8.495	5560	10	79.4	70	130	
Sb	121	3	115	1.811	ppb	3.975	1166	2	90.5	70	130	
Ba	137	3	115	0.816	ppb	29.405	207	1	81.6	70	130	
Tl	205	3	193	0.926	ppb	3.111	3019	1	92.6	70	130	
(Pb)	206	3	193	0.920	ppb	7.732	1156	1	92.0	70	130	
(Pb)	207	3	193	0.885	ppb	15.253	1108	1	88.5	70	130	
Pb	208	3	193	0.860	ppb	3.372	4543	1	86.0	70	130	
Th	232	3	193	1.841	ppb	11.517	14341	1	184.1	70	130	>+/-30%
U	238	3	193	0.891	ppb	8.594	5187	1	89.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3593149	0.62	3473788	103.44	60	120	
Sc (IS)	45	3	HMI He	509299	1.09	498630	102.14	60	120	
Ge Internal standard	72	2	HMI H2	2207384	1.95	2241871	98.46	60	120	
Ge Internal standard	72	3	HMI He	635847	1.12	647352	98.22	60	120	
In Internal Standard	115	3	HMI He	2398472	1.66	2356036	101.80	60	120	
Ir (IS)	193	3	HMI He	5202905	1.34	4999588	104.07	60	120	

Sample Report

Sample Table

Sample Name	174894-2
Data File Name	375SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:51:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	59568.772	ppb	59568.772	2.86	6500553	400000	
Mg	24	3	45	12898.859	ppb	12898.859	1.91	750853	400000	
Al	27	3	45	8.966	ppb	8.966	87.05	297	400000	
K	39	3	45	1497.502	ppb	1497.502	1.35	99557	400000	
Ca	40	2	45	33469.326	ppb	33469.326	1.30	19677215	400000	
V	51	3	72	-0.875	ppb	-0.875	-8.19	243	2000	
Cr	52	3	72	-0.410	ppb	-0.410	-63.40	2277	5000	
Mn	55	3	72	495.457	ppb	495.457	2.18	193127	10000	
Fe	56	2	72	-2.827	ppb	-2.827	-68.58	36668	10000	
Co	59	3	72	0.188	ppb	0.188	3.58	277	2000	
Ni	60	3	72	0.603	ppb	0.603	5.01	723	5000	
Cu	63	3	72	0.137	ppb	0.137	41.76	435	5000	
Zn	66	3	72	0.668	ppb	0.668	17.08	262	5000	
As	75	3	72	15.553	ppb	15.553	2.53	1808	2000	
Se	78	2	72	0.018	ppb	0.018	223.26	3	2000	
Sr	88	3	72	253.776	ppb	253.776	2.58	134795	4000	
Mo	95	3	115	3.480	ppb	3.480	12.07	1746	2000	
Ag	107	3	115	0.007	ppb	0.007	40.92	30	100	
Cd	111	3	115	0.012	ppb	0.012	170.92	5	2000	
Sn	120	3	115	-0.639	ppb	-0.639	-5.23	132	2000	
Sb	121	3	115	-0.011	ppb	-0.011	-106.30	25	1000	
Ba	137	3	115	328.908	ppb	328.908	2.12	81759	5000	
Tl	205	3	193	0.014	ppb	0.014	58.84	177	2000	
(Pb)	206	3	193	-0.040	ppb	-0.040	-47.93	162	100	
(Pb)	207	3	193	0.018	ppb	0.018	141.66	366	100	
Pb	208	3	193	-0.034	ppb	-0.034	-47.36	876	5000	
Th	232	3	193	-0.601	ppb	-0.601	-8.22	4684	2000	
U	238	3	193	0.052	ppb	0.052	29.34	1768	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4378746	2.12	3473788	126.05	60	120	IS Failed
Sc (IS)	45	3	HMI He	631209	1.71	498630	126.59	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2713356	1.65	2241871	121.03	60	120	IS Failed
Ge Internal standard	72	3	HMI He	781959	1.43	647352	120.79	60	120	IS Failed
In Internal Standard	115	3	HMI He	2924749	1.19	2356036	124.14	60	120	IS Failed
Ir (IS)	193	3	HMI He	6151132	2.15	4999588	123.03	60	120	IS Failed

Sample Report

Sample Table

Sample Name	07658979@10
Data File Name	376SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:52:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.076	ppb	1.076	20.84	38	2000	
Na	23	3	45	157.687	ppb	157.687	5.12	27454	400000	
Mg	24	3	45	5457.613	ppb	5457.613	1.93	254390	400000	
Al	27	3	45	32029.811	ppb	32029.811	2.09	553086	400000	
K	39	3	45	6217.242	ppb	6217.242	2.45	257171	400000	
Ca	40	2	45	110603.204	ppb	110603.204	0.91	53155880	400000	
V	51	3	72	44.820	ppb	44.820	0.58	21636	2000	
Cr	52	3	72	27.341	ppb	27.341	2.96	18071	5000	
Mn	55	3	72	710.618	ppb	710.618	0.92	218211	10000	
Fe	56	2	72	21427.131	ppb	21427.131	1.40	26999714	10000	
Co	59	3	72	8.803	ppb	8.803	2.13	8843	2000	
Ni	60	3	72	22.966	ppb	22.966	4.44	6822	5000	
Cu	63	3	72	29.212	ppb	29.212	1.69	22155	5000	
Zn	66	3	72	55.625	ppb	55.625	4.11	6867	5000	
As	75	3	72	8.473	ppb	8.473	13.28	803	2000	
Se	78	2	72	0.355	ppb	0.355	15.61	17	2000	
Sr	88	3	72	71.018	ppb	71.018	1.43	29741	4000	
Mo	95	3	115	0.978	ppb	0.978	6.64	418	2000	
Ag	107	3	115	0.077	ppb	0.077	2.08	120	100	
Cd	111	3	115	0.395	ppb	0.395	26.51	80	2000	
Sn	120	3	115	2.667	ppb	2.667	5.05	2191	2000	
Sb	121	3	115	0.742	ppb	0.742	2.19	490	1000	
Ba	137	3	115	96.907	ppb	96.907	3.70	19606	5000	
Tl	205	3	193	0.384	ppb	0.384	7.76	1328	2000	
(Pb)	206	3	193	30.552	ppb	30.552	1.14	33097	100	
(Pb)	207	3	193	29.159	ppb	29.159	1.86	27456	100	
Pb	208	3	193	29.681	ppb	29.681	1.49	128701	5000	
Th	232	3	193	4.876	ppb	4.876	0.78	27588	2000	
U	238	3	193	0.834	ppb	0.834	4.84	5000	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3581311	1.01	3473788	103.10	60	120	
Sc (IS)	45	3	HMI He	505173	0.11	498630	101.31	60	120	
Ge Internal standard	72	2	HMI H2	2136342	1.14	2241871	95.29	60	120	
Ge Internal standard	72	3	HMI He	616183	1.48	647352	95.19	60	120	
In Internal Standard	115	3	HMI He	2377873	2.38	2356036	100.93	60	120	
Ir (IS)	193	3	HMI He	5270995	1.78	4999588	105.43	60	120	

Sample Report

Sample Table

Sample Name	07658982@10
Data File Name	377SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:54:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.785	ppb	1.785	37.20	63	2000	
Na	23	3	45	108.564	ppb	108.564	4.83	23764	400000	
Mg	24	3	45	5818.665	ppb	5818.665	0.44	278104	400000	
Al	27	3	45	40555.270	ppb	40555.270	1.38	718076	400000	
K	39	3	45	7358.744	ppb	7358.744	2.37	307735	400000	
Ca	40	2	45	124701.357	ppb	124701.357	1.57	59848466	400000	
V	51	3	72	63.541	ppb	63.541	0.68	30715	2000	
Cr	52	3	72	35.075	ppb	35.075	2.87	22827	5000	
Mn	55	3	72	763.170	ppb	763.170	1.30	236616	10000	
Fe	56	2	72	27427.001	ppb	27427.001	3.03	34104781	10000	
Co	59	3	72	11.378	ppb	11.378	5.31	11529	2000	
Ni	60	3	72	27.861	ppb	27.861	2.61	8270	5000	
Cu	63	3	72	21.261	ppb	21.261	1.25	16348	5000	
Zn	66	3	72	65.009	ppb	65.009	1.88	8083	5000	
As	75	3	72	10.527	ppb	10.527	13.20	991	2000	
Se	78	2	72	0.523	ppb	0.523	33.05	25	2000	
Sr	88	3	72	63.756	ppb	63.756	3.91	26955	4000	
Mo	95	3	115	1.071	ppb	1.071	9.00	461	2000	
Ag	107	3	115	0.089	ppb	0.089	12.46	138	100	
Cd	111	3	115	0.408	ppb	0.408	31.25	83	2000	
Sn	120	3	115	2.352	ppb	2.352	8.51	2016	2000	
Sb	121	3	115	1.158	ppb	1.158	11.18	756	1000	
Ba	137	3	115	132.249	ppb	132.249	0.90	27071	5000	
Tl	205	3	193	0.506	ppb	0.506	4.72	1719	2000	
(Pb)	206	3	193	76.282	ppb	76.282	2.40	82345	100	
(Pb)	207	3	193	72.057	ppb	72.057	0.56	67407	100	
Pb	208	3	193	73.383	ppb	73.383	1.76	316809	5000	
Th	232	3	193	7.225	ppb	7.225	1.89	37691	2000	
U	238	3	193	1.000	ppb	1.000	7.09	5735	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3577080	1.43	3473788	102.97	60	120	
Sc (IS)	45	3	HMI He	518006	0.51	498630	103.89	60	120	
Ge Internal standard	72	2	HMI H2	2109377	1.81	2241871	94.09	60	120	
Ge Internal standard	72	3	HMI He	622147	1.16	647352	96.11	60	120	
In Internal Standard	115	3	HMI He	2406144	2.41	2356036	102.13	60	120	
Ir (IS)	193	3	HMI He	5269387	0.81	4999588	105.40	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	378SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:56:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	60.591	ppb	60.591	7.42	2136	2000	
Na	23	3	45	34643.453	ppb	34643.453	0.38	3107872	400000	
Mg	24	3	45	207046.997	ppb	207046.997	0.76	9887953	400000	
Al	27	3	45	231244.994	ppb	231244.994	0.63	4092790	400000	
K	39	3	45	6520.176	ppb	6520.176	1.40	275273	400000	
Ca	40	2	45	394018.760	ppb	394018.760	2.95	191935744	400000	
V	51	3	72	56.383	ppb	56.383	3.20	28393	2000	
Cr	52	3	72	6.104	ppb	6.104	8.53	5890	5000	
Mn	55	3	72	12377.250	ppb	12377.250	2.15	3984930	10000	
Fe	56	2	72	746.264	ppb	746.264	1.39	1026846	10000	
Co	59	3	72	586.160	ppb	586.160	2.03	615844	2000	
Ni	60	3	72	542.118	ppb	542.118	1.29	159482	5000	
Cu	63	3	72	7.374	ppb	7.374	1.88	6057	5000	
Zn	66	3	72	2788.753	ppb	2788.753	0.16	354922	5000	
As	75	3	72	3.625	ppb	3.625	20.95	395	2000	
Se	78	2	72	13.637	ppb	13.637	5.12	653	2000	
Sr	88	3	72	3282.901	ppb	3282.901	0.70	1441930	4000	
Mo	95	3	115	0.098	ppb	0.098	77.53	67	2000	
Ag	107	3	115	0.011	ppb	0.011	35.91	30	100	
Cd	111	3	115	7.588	ppb	7.588	6.74	1519	2000	
Sn	120	3	115	0.036	ppb	0.036	206.21	540	2000	
Sb	121	3	115	0.081	ppb	0.081	13.28	78	1000	
Ba	137	3	115	10.012	ppb	10.012	8.52	2086	5000	
Tl	205	3	193	0.686	ppb	0.686	2.15	2249	2000	
(Pb)	206	3	193	9.862	ppb	9.862	2.34	10599	100	
(Pb)	207	3	193	9.075	ppb	9.075	1.84	8580	100	
Pb	208	3	193	9.485	ppb	9.485	2.08	40931	5000	
Th	232	3	193	2.697	ppb	2.697	5.51	17859	2000	
U	238	3	193	98.602	ppb	98.602	1.45	432005	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3631462	1.57	3473788	104.54	60	120	
Sc (IS)	45	3	HMI He	517828	0.90	498630	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2257743	1.14	2241871	100.71	60	120	
Ge Internal standard	72	3	HMI He	646584	1.37	647352	99.88	60	120	
In Internal Standard	115	3	HMI He	2406178	1.35	2356036	102.13	60	120	
Ir (IS)	193	3	HMI He	5168742	1.79	4999588	103.38	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	379SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:58:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	75.451	ppb	75.451	4.39	2584	2000	
Na	23	3	45	61901.829	ppb	61901.829	1.96	5512402	400000	
Mg	24	3	45	307183.068	ppb	307183.068	1.11	14591471	400000	
Al	27	3	45	90289.260	ppb	90289.260	3.83	1589329	400000	
K	39	3	45	14838.349	ppb	14838.349	0.94	592777	400000	
Ca	40	2	45	438462.668	ppb	438462.668	1.34	205412328	400000	
V	51	3	72	3.932	ppb	3.932	6.19	2582	2000	
Cr	52	3	72	1.752	ppb	1.752	21.51	3230	5000	
Mn	55	3	72	16087.149	ppb	16087.149	0.88	5207711	10000	
Fe	56	2	72	216.687	ppb	216.687	2.13	312316	10000	
Co	59	3	72	742.370	ppb	742.370	0.98	784222	2000	
Ni	60	3	72	621.961	ppb	621.961	0.77	183898	5000	
Cu	63	3	72	5.123	ppb	5.123	5.94	4309	5000	
Zn	66	3	72	3498.551	ppb	3498.551	0.35	447608	5000	
As	75	3	72	2.514	ppb	2.514	14.88	293	2000	
Se	78	2	72	17.469	ppb	17.469	3.90	809	2000	
Sr	88	3	72	4348.358	ppb	4348.358	0.22	1920162	4000	
Mo	95	3	115	0.071	ppb	0.071	78.76	55	2000	
Ag	107	3	115	0.026	ppb	0.026	37.28	50	100	
Cd	111	3	115	11.214	ppb	11.214	6.19	2214	2000	
Sn	120	3	115	-0.068	ppb	-0.068	-56.31	466	2000	
Sb	121	3	115	0.045	ppb	0.045	83.03	55	1000	
Ba	137	3	115	8.186	ppb	8.186	3.67	1691	5000	
Tl	205	3	193	1.955	ppb	1.955	1.25	6197	2000	
(Pb)	206	3	193	10.203	ppb	10.203	1.75	10929	100	
(Pb)	207	3	193	9.242	ppb	9.242	2.14	8710	100	
Pb	208	3	193	9.644	ppb	9.644	2.77	41489	5000	
Th	232	3	193	0.524	ppb	0.524	13.33	8665	2000	
U	238	3	193	178.046	ppb	178.046	1.94	777040	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3492159	1.63	3473788	100.53	60	120	
Sc (IS)	45	3	HMI He	515116	1.18	498630	103.31	60	120	
Ge Internal standard	72	2	HMI H2	2186905	1.86	2241871	97.55	60	120	
Ge Internal standard	72	3	HMI He	650040	0.55	647352	100.42	60	120	
In Internal Standard	115	3	HMI He	2373516	1.15	2356036	100.74	60	120	
Ir (IS)	193	3	HMI He	5155515	1.36	4999588	103.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	380_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:00:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.061	ppb	86.871	3	50	0.1	90	110	>+\-10%
Na	23	3	45	-0.158	ppb	-44349.447	30251	51000	0.0	90	110	>+\-10%
Mg	24	3	45	33.977	ppb	64.386	3798	11000	0.3	90	110	>+\-10%
Al	27	3	45	7.447	ppb	85.032	464	1000	0.7	90	110	>+\-10%
K	39	3	45	-327.261	ppb	-1.035	24329	11000	-3.0	90	110	>+\-10%
Ca	40	2	45	23.894	ppb	4.892	31229	11000	0.2	90	110	>+\-10%
V	51	3	72	-1.053	ppb	-5.496	243	50	-2.1	90	110	>+\-10%
Cr	52	3	72	0.672	ppb	129.424	5475	50	1.3	90	110	>+\-10%
Mn	55	3	72	2.017	ppb	36.491	1788	50	4.0	90	110	>+\-10%
Fe	56	2	72	-7.744	ppb	-25.444	33782	1000	-0.8	90	110	>+\-10%
Co	59	3	72	0.165	ppb	70.152	440	50	0.3	90	110	>+\-10%
Ni	60	3	72	1.383	ppb	38.224	1774	50	2.8	90	110	>+\-10%
Cu	63	3	72	-0.064	ppb	-72.589	431	50	-0.1	90	110	>+\-10%
Zn	66	3	72	0.018	ppb	955.368	287	50	0.0	90	110	>+\-10%
As	75	3	72	-0.395	ppb	-11.890	50	50	-0.8	90	110	>+\-10%
Se	78	2	72	0.040	ppb	28.381	5	50	0.1	90	110	>+\-10%
Sr	88	3	72	0.468	ppb	48.263	473	100	0.5	90	110	>+\-10%
Mo	95	3	115	0.116	ppb	92.756	153	50	0.2	90	110	>+\-10%
Ag	107	3	115	0.083	ppb	99.523	268	50	0.2	90	110	>+\-10%
Cd	111	3	115	0.072	ppb	61.887	33	50	0.1	90	110	>+\-10%
Sn	120	3	115	-0.567	ppb	-14.607	318	50	-1.1	90	110	>+\-10%
Sb	121	3	115	0.041	ppb	185.526	110	50	0.1	90	110	>+\-10%
Ba	137	3	115	-0.046	ppb	-218.608	65	50	-0.1	90	110	>+\-10%
Tl	205	3	193	0.081	ppb	108.472	738	50	0.2	90	110	>+\-10%
(Pb)	206	3	193	0.025	ppb	361.353	423	50	0.0	90	110	>+\-10%
(Pb)	207	3	193	0.030	ppb	236.804	660	50	0.1	90	110	>+\-10%
Pb	208	3	193	-0.001	ppb	-10814.341	1819	50	0.0	90	110	>+\-10%
Th	232	3	193	-0.530	ppb	-12.941	8779	50	-1.1	90	110	>+\-10%
U	238	3	193	0.109	ppb	66.136	3599	50	0.2	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	5256541	8.97	3473788	151.32	60	120	IS Failed
Sc (IS)	45	3	HMI He	1110560	1.46	498630	222.72	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3181551	9.57	2241871	141.92	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1387585	1.45	647352	214.35	60	120	IS Failed
In Internal Standard	115	3	HMI He	4948464	1.28	2356036	210.03	60	120	IS Failed
Ir (IS)	193	3	HMI He	10699689	1.37	4999588	214.01	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	381_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:02:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.188	ppb	1.466	1768	50	102.4	90	110	
Na	23	3	45	48973.563	ppb	2.116	4185683	51000	96.0	90	110	
Mg	24	3	45	10336.371	ppb	1.262	471048	11000	94.0	90	110	
Al	27	3	45	1026.144	ppb	1.509	17405	1000	102.6	90	110	
K	39	3	45	10323.915	ppb	0.853	402505	11000	93.9	90	110	
Ca	40	2	45	10352.476	ppb	4.052	4784867	11000	94.1	90	110	
V	51	3	72	52.052	ppb	0.938	25088	50	104.1	90	110	
Cr	52	3	72	52.055	ppb	0.561	32650	50	104.1	90	110	
Mn	55	3	72	54.234	ppb	2.289	16854	50	108.5	90	110	
Fe	56	2	72	1079.312	ppb	1.681	1337792	1000	107.9	90	110	
Co	59	3	72	51.734	ppb	3.046	51949	50	103.5	90	110	
Ni	60	3	72	51.178	ppb	0.897	14747	50	102.4	90	110	
Cu	63	3	72	51.808	ppb	1.460	39201	50	103.6	90	110	
Zn	66	3	72	52.070	ppb	0.703	6453	50	104.1	90	110	
As	75	3	72	50.241	ppb	1.801	4485	50	100.5	90	110	
Se	78	2	72	53.745	ppb	3.888	2338	50	107.5	90	110	
Sr	88	3	72	104.882	ppb	1.306	44019	100	104.9	90	110	
Mo	95	3	115	50.439	ppb	3.155	19851	50	100.9	90	110	
Ag	107	3	115	49.890	ppb	1.126	66814	50	99.8	90	110	
Cd	111	3	115	50.017	ppb	3.107	9704	50	100.0	90	110	
Sn	120	3	115	48.484	ppb	2.319	30513	50	97.0	90	110	
Sb	121	3	115	50.600	ppb	3.319	30982	50	101.2	90	110	
Ba	137	3	115	51.331	ppb	0.725	10219	50	102.7	90	110	
Tl	205	3	193	48.335	ppb	1.378	153319	50	96.7	90	110	
(Pb)	206	3	193	47.337	ppb	3.170	50888	50	94.7	90	110	
(Pb)	207	3	193	48.518	ppb	4.345	45225	50	97.0	90	110	
Pb	208	3	193	47.683	ppb	2.646	205060	50	95.4	90	110	
Th	232	3	193	48.221	ppb	2.627	212905	50	96.4	90	110	
U	238	3	193	48.753	ppb	2.267	217267	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3440437	2.55	3473788	99.04	60	120	
Sc (IS)	45	3	HMI He	494022	0.62	498630	99.08	60	120	
Ge Internal standard	72	2	HMI H2	2054881	0.11	2241871	91.66	60	120	
Ge Internal standard	72	3	HMI He	617617	0.63	647352	95.41	60	120	
In Internal Standard	115	3	HMI He	2334237	1.39	2356036	99.07	60	120	
Ir (IS)	193	3	HMI He	5241709	1.50	4999588	104.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	382_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:04:28-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	51.074	ppb	5.0	17869	25	>RL
Mg	24	3	45	9.566	ppb	18.5	571	25	
Al	27	3	45	4.129	ppb	24.4	150	15	
K	39	3	45	-5.571	ppb	-284.9	22795	50	
V	51	3	72	-0.198	ppb	-16.9	511	1	
Cr	52	3	72	0.386	ppb	11.1	2269	1	
Mn	55	3	72	0.936	ppb	29.2	463	0.5	>RL
Co	59	3	72	0.060	ppb	22.8	90	0.5	
Ni	60	3	72	0.661	ppb	19.6	588	1	
Cu	63	3	72	0.001	ppb	8107.6	242	1	
Zn	66	3	72	0.609	ppb	12.7	200	5	
As	75	3	72	-0.142	ppb	-215.7	45	1	
Se	78	2	72	0.045	ppb	114.3	3	1	
Sr	88	3	72	0.137	ppb	37.5	72	0.5	
Mo	95	3	115	0.077	ppb	49.4	57	0.5	
Ag	107	3	115	0.011	ppb	69.3	30	1	
Cd	111	3	115	0.009	ppb	168.3	3	0.5	
Sn	120	3	115	0.422	ppb	25.1	761	1	
Sb	121	3	115	0.052	ppb	41.3	58	0.6	
Ba	137	3	115	0.011	ppb	287.6	42	0.5	
Tl	205	3	193	0.039	ppb	14.0	223	0.1	
(Pb)	206	3	193	-0.010	ppb	-277.1	167	1	
(Pb)	207	3	193	0.026	ppb	191.7	313	1	
Pb	208	3	193	-0.004	ppb	-373.0	861	0.5	
Th	232	3	193	1.119	ppb	19.7	11154	1	>RL
U	238	3	193	0.039	ppb	27.9	1423	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3495508	5.71	3473788	100.63	60	120	
Sc (IS)	45	3	HMI He	496974	2.19	498630	99.67	60	120	
Ge Internal standard	72	2	HMI H2	2145320	2.50	2241871	95.69	60	120	
Ge Internal standard	72	3	HMI He	618498	2.13	647352	95.54	60	120	
In Internal Standard	115	3	HMI He	2327851	2.06	2356036	98.80	60	120	
Ir (IS)	193	3	HMI He	5149267	2.39	4999588	102.99	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	383LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:06:17-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.057	ppb	20.698	37	1	105.7	70	130	
Na	23	3	45	303.035	ppb	2.514	39495	300	101.0	70	130	
Mg	24	3	45	51.897	ppb	3.850	2513	50	103.8	70	130	
Al	27	3	45	49.085	ppb	3.054	914	50	98.2	70	130	
K	39	3	45	118.687	ppb	42.223	27394	120	98.9	70	130	
Ca	40	2	45	193.872	ppb	1.482	97750	200	96.9	70	130	
V	51	3	72	4.638	ppb	6.166	2816	5	92.8	70	130	
Cr	52	3	72	1.933	ppb	14.519	3207	2	96.7	70	130	
Mn	55	3	72	1.797	ppb	7.567	735	1	179.7	70	130	>+/-30%
Fe	56	2	72	51.960	ppb	10.187	95368	50	103.9	70	130	
Co	59	3	72	0.994	ppb	6.057	1038	1	99.4	70	130	
Ni	60	3	72	2.097	ppb	6.890	1000	2	104.8	70	130	
Cu	63	3	72	2.003	ppb	6.606	1764	2	100.2	70	130	
Zn	66	3	72	10.089	ppb	10.012	1364	10	100.9	70	130	
As	75	3	72	4.505	ppb	18.191	458	5	90.1	70	130	
Se	78	2	72	5.019	ppb	9.176	223	5	100.4	70	130	
Sr	88	3	72	4.688	ppb	4.681	2002	5	93.8	70	130	
Mo	95	3	115	1.843	ppb	13.336	756	2	92.1	70	130	
Ag	107	3	115	0.937	ppb	7.936	1279	1	93.7	70	130	
Cd	111	3	115	0.987	ppb	12.944	195	1	98.7	70	130	
Sn	120	3	115	8.151	ppb	3.293	5592	10	81.5	70	130	
Sb	121	3	115	1.674	ppb	7.605	1060	2	83.7	70	130	
Ba	137	3	115	0.908	ppb	19.379	222	1	90.8	70	130	
Tl	205	3	193	0.882	ppb	7.585	2856	1	88.2	70	130	
(Pb)	206	3	193	0.867	ppb	11.213	1093	1	86.7	70	130	
(Pb)	207	3	193	0.961	ppb	20.480	1166	1	96.1	70	130	
Pb	208	3	193	0.883	ppb	3.186	4603	1	88.3	70	130	
Th	232	3	193	1.191	ppb	22.052	11486	1	119.1	70	130	
U	238	3	193	0.976	ppb	2.602	5515	1	97.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3399465	0.97	3473788	97.86	60	120	
Sc (IS)	45	3	HMI He	497320	0.78	498630	99.74	60	120	
Ge Internal standard	72	2	HMI H2	2084448	1.47	2241871	92.98	60	120	
Ge Internal standard	72	3	HMI He	624012	1.63	647352	96.39	60	120	
In Internal Standard	115	3	HMI He	2353594	1.10	2356036	99.90	60	120	
Ir (IS)	193	3	HMI He	5161562	1.60	4999588	103.24	60	120	

Sample Report

Sample Table

Sample Name	07658979@10
Data File Name	384SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:08:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.928	ppb	0.928	48.13	33	2000	
Na	23	3	45	125.357	ppb	125.357	5.79	24696	400000	
Mg	24	3	45	5366.143	ppb	5366.143	1.22	250745	400000	
Al	27	3	45	31241.548	ppb	31241.548	0.68	540800	400000	
K	39	3	45	6095.922	ppb	6095.922	1.32	253226	400000	
Ca	40	2	45	111941.197	ppb	111941.197	0.13	53548925	400000	
V	51	3	72	45.515	ppb	45.515	1.33	21634	2000	
Cr	52	3	72	28.168	ppb	28.168	1.02	18285	5000	
Mn	55	3	72	707.646	ppb	707.646	0.86	214068	10000	
Fe	56	2	72	22405.948	ppb	22405.948	1.37	27620391	10000	
Co	59	3	72	8.731	ppb	8.731	4.06	8642	2000	
Ni	60	3	72	22.527	ppb	22.527	2.30	6600	5000	
Cu	63	3	72	29.295	ppb	29.295	1.65	21888	5000	
Zn	66	3	72	56.907	ppb	56.907	2.70	6920	5000	
As	75	3	72	9.104	ppb	9.104	2.64	845	2000	
Se	78	2	72	0.453	ppb	0.453	19.51	21	2000	
Sr	88	3	72	69.963	ppb	69.963	0.72	28863	4000	
Mo	95	3	115	0.915	ppb	0.915	7.94	388	2000	
Ag	107	3	115	0.097	ppb	0.097	47.50	145	100	
Cd	111	3	115	0.342	ppb	0.342	16.04	68	2000	
Sn	120	3	115	2.910	ppb	2.910	6.87	2314	2000	
Sb	121	3	115	0.849	ppb	0.849	11.30	550	1000	
Ba	137	3	115	96.196	ppb	96.196	2.42	19218	5000	
Tl	205	3	193	0.379	ppb	0.379	6.94	1286	2000	
(Pb)	206	3	193	31.175	ppb	31.175	1.56	33077	100	
(Pb)	207	3	193	29.329	ppb	29.329	2.10	27050	100	
Pb	208	3	193	30.021	ppb	30.021	1.58	127509	5000	
Th	232	3	193	4.716	ppb	4.716	1.68	26350	2000	
U	238	3	193	0.845	ppb	0.845	3.76	4944	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3564856	1.17	3473788	102.62	60	120	
Sc (IS)	45	3	HMI He	506412	0.31	498630	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2090245	1.07	2241871	93.24	60	120	
Ge Internal standard	72	3	HMI He	607004	0.75	647352	93.77	60	120	
In Internal Standard	115	3	HMI He	2347148	1.26	2356036	99.62	60	120	
Ir (IS)	193	3	HMI He	5162549	0.54	4999588	103.26	60	120	

Sample Report

Sample Table

Sample Name	07658982@10
Data File Name	385SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:09:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.797	ppb	1.797	42.39	63	2000	
Na	23	3	45	95.296	ppb	95.296	9.31	22323	400000	
Mg	24	3	45	5543.565	ppb	5543.565	2.50	261933	400000	
Al	27	3	45	38000.245	ppb	38000.245	2.17	665085	400000	
K	39	3	45	6975.166	ppb	6975.166	2.27	289554	400000	
Ca	40	2	45	117897.215	ppb	117897.215	0.75	56773553	400000	
V	51	3	72	58.506	ppb	58.506	0.49	28276	2000	
Cr	52	3	72	31.908	ppb	31.908	0.73	20917	5000	
Mn	55	3	72	709.731	ppb	709.731	0.91	219633	10000	
Fe	56	2	72	25350.285	ppb	25350.285	2.08	31812106	10000	
Co	59	3	72	10.531	ppb	10.531	2.05	10655	2000	
Ni	60	3	72	25.756	ppb	25.756	3.25	7660	5000	
Cu	63	3	72	19.638	ppb	19.638	3.37	15086	5000	
Zn	66	3	72	60.884	ppb	60.884	2.66	7563	5000	
As	75	3	72	9.691	ppb	9.691	3.66	916	2000	
Se	78	2	72	0.550	ppb	0.550	30.17	26	2000	
Sr	88	3	72	58.086	ppb	58.086	1.34	24515	4000	
Mo	95	3	115	1.066	ppb	1.066	0.83	458	2000	
Ag	107	3	115	0.100	ppb	0.100	20.76	153	100	
Cd	111	3	115	0.434	ppb	0.434	19.28	88	2000	
Sn	120	3	115	2.334	ppb	2.334	2.59	2001	2000	
Sb	121	3	115	1.213	ppb	1.213	9.84	791	1000	
Ba	137	3	115	121.199	ppb	121.199	2.15	24751	5000	
Tl	205	3	193	0.516	ppb	0.516	7.22	1746	2000	
(Pb)	206	3	193	70.392	ppb	70.392	2.02	75808	100	
(Pb)	207	3	193	66.784	ppb	66.784	0.86	62337	100	
Pb	208	3	193	67.837	ppb	67.837	1.68	292203	5000	
Th	232	3	193	6.659	ppb	6.659	1.11	35164	2000	
U	238	3	193	0.877	ppb	0.877	2.24	5175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588726	1.03	3473788	103.31	60	120	
Sc (IS)	45	3	HMI He	512117	1.23	498630	102.70	60	120	
Ge Internal standard	72	2	HMI H2	2128320	1.32	2241871	94.93	60	120	
Ge Internal standard	72	3	HMI He	620978	1.59	647352	95.93	60	120	
In Internal Standard	115	3	HMI He	2400312	1.06	2356036	101.88	60	120	
Ir (IS)	193	3	HMI He	5256105	0.47	4999588	105.13	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	386SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:27:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	57.494	ppb	57.494	3.68	2022	2000	
Na	23	3	45	33695.150	ppb	33695.150	1.95	3019880	400000	
Mg	24	3	45	201865.456	ppb	201865.456	0.39	9629284	400000	
Al	27	3	45	222653.489	ppb	222653.489	2.14	3936088	400000	
K	39	3	45	6468.337	ppb	6468.337	2.15	272980	400000	
Ca	40	2	45	391851.335	ppb	391851.335	0.88	188680956	400000	
V	51	3	72	53.966	ppb	53.966	3.54	27473	2000	
Cr	52	3	72	5.818	ppb	5.818	6.51	5772	5000	
Mn	55	3	72	11960.918	ppb	11960.918	0.30	3890175	10000	
Fe	56	2	72	739.362	ppb	739.362	1.54	997861	10000	
Co	59	3	72	560.252	ppb	560.252	1.69	594563	2000	
Ni	60	3	72	510.876	ppb	510.876	2.15	151814	5000	
Cu	63	3	72	7.058	ppb	7.058	5.39	5868	5000	
Zn	66	3	72	2624.572	ppb	2624.572	1.73	337356	5000	
As	75	3	72	4.006	ppb	4.006	17.49	433	2000	
Se	78	2	72	13.462	ppb	13.462	1.81	632	2000	
Sr	88	3	72	3220.101	ppb	3220.101	2.22	1428358	4000	
Mo	95	3	115	0.033	ppb	0.033	228.31	40	2000	
Ag	107	3	115	0.024	ppb	0.024	45.94	48	100	
Cd	111	3	115	7.012	ppb	7.012	8.75	1383	2000	
Sn	120	3	115	-0.025	ppb	-0.025	-143.50	493	2000	
Sb	121	3	115	0.061	ppb	0.061	34.83	65	1000	
Ba	137	3	115	9.500	ppb	9.500	7.20	1953	5000	
Tl	205	3	193	0.638	ppb	0.638	7.02	2062	2000	
(Pb)	206	3	193	9.523	ppb	9.523	3.81	10062	100	
(Pb)	207	3	193	9.012	ppb	9.012	2.17	8377	100	
Pb	208	3	193	9.097	ppb	9.097	1.20	38622	5000	
Th	232	3	193	2.333	ppb	2.333	0.96	16044	2000	
U	238	3	193	94.374	ppb	94.374	1.80	406476	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588657	0.80	3473788	103.31	60	120	
Sc (IS)	45	3	HMI He	517252	0.38	498630	103.73	60	120	
Ge Internal standard	72	2	HMI H2	2214043	1.23	2241871	98.76	60	120	
Ge Internal standard	72	3	HMI He	653108	1.47	647352	100.89	60	120	
In Internal Standard	115	3	HMI He	2369554	0.18	2356036	100.57	60	120	
Ir (IS)	193	3	HMI He	5080191	0.81	4999588	101.61	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	387SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:29:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	70.254	ppb	70.254	9.39	2431	2000	
Na	23	3	45	59394.392	ppb	59394.392	2.74	5307639	400000	
Mg	24	3	45	292349.259	ppb	292349.259	2.98	13932331	400000	
Al	27	3	45	87785.857	ppb	87785.857	1.43	1550652	400000	
K	39	3	45	14421.623	ppb	14421.623	1.24	578698	400000	
Ca	40	2	45	412226.099	ppb	412226.099	1.81	194088031	400000	
V	51	3	72	3.770	ppb	3.770	3.02	2496	2000	
Cr	52	3	72	1.269	ppb	1.269	7.66	2924	5000	
Mn	55	3	72	15561.500	ppb	15561.500	1.87	5023625	10000	
Fe	56	2	72	204.667	ppb	204.667	3.68	292333	10000	
Co	59	3	72	713.830	ppb	713.830	1.32	752015	2000	
Ni	60	3	72	604.005	ppb	604.005	2.34	178100	5000	
Cu	63	3	72	4.909	ppb	4.909	8.77	4125	5000	
Zn	66	3	72	3397.456	ppb	3397.456	1.24	433480	5000	
As	75	3	72	2.577	ppb	2.577	16.46	298	2000	
Se	78	2	72	17.438	ppb	17.438	3.59	796	2000	
Sr	88	3	72	4244.391	ppb	4244.391	1.73	1869027	4000	
Mo	95	3	115	0.047	ppb	0.047	92.22	45	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-176.09	13	100	
Cd	111	3	115	10.937	ppb	10.937	3.83	2131	2000	
Sn	120	3	115	-0.117	ppb	-0.117	-71.14	430	2000	
Sb	121	3	115	0.054	ppb	0.054	52.54	60	1000	
Ba	137	3	115	8.439	ppb	8.439	3.09	1719	5000	
Tl	205	3	193	1.916	ppb	1.916	2.82	5982	2000	
(Pb)	206	3	193	9.939	ppb	9.939	3.16	10487	100	
(Pb)	207	3	193	8.851	ppb	8.851	2.54	8227	100	
Pb	208	3	193	9.361	ppb	9.361	1.63	39688	5000	
Th	232	3	193	0.315	ppb	0.315	11.96	7667	2000	
U	238	3	193	172.348	ppb	172.348	1.44	740683	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3510089	2.28	3473788	101.04	60	120	
Sc (IS)	45	3	HMI He	516800	0.45	498630	103.64	60	120	
Ge Internal standard	72	2	HMI H2	2155035	3.24	2241871	96.13	60	120	
Ge Internal standard	72	3	HMI He	648293	0.97	647352	100.15	60	120	
In Internal Standard	115	3	HMI He	2342897	0.67	2356036	99.44	60	120	
Ir (IS)	193	3	HMI He	5075752	0.75	4999588	101.52	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-3-A
Data File Name	388SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:31:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.191	ppb	0.191	115.44	7	2000	
Na	23	3	45	2049.486	ppb	2049.486	1.44	192947	400000	
Mg	24	3	45	7046.825	ppb	7046.825	1.05	329578	400000	
Al	27	3	45	1100.042	ppb	1100.042	5.05	19143	400000	
K	39	3	45	20499.145	ppb	20499.145	0.76	797048	400000	
Ca	40	2	45	43549.435	ppb	43549.435	0.99	20019285	400000	
V	51	3	72	3.339	ppb	3.339	9.79	2264	2000	
Cr	52	3	72	0.941	ppb	0.941	19.91	2699	5000	
Mn	55	3	72	25.635	ppb	25.635	1.30	8392	10000	
Fe	56	2	72	784.525	ppb	784.525	2.21	1032656	10000	
Co	59	3	72	0.907	ppb	0.907	17.31	980	2000	
Ni	60	3	72	1.563	ppb	1.563	8.76	875	5000	
Cu	63	3	72	4.970	ppb	4.970	4.63	4142	5000	
Zn	66	3	72	4.588	ppb	4.588	11.22	711	5000	
As	75	3	72	1.221	ppb	1.221	25.70	172	2000	
Se	78	2	72	0.525	ppb	0.525	23.30	25	2000	
Sr	88	3	72	284.564	ppb	284.564	1.24	124333	4000	
Mo	95	3	115	2.563	ppb	2.563	6.63	1061	2000	
Ag	107	3	115	0.013	ppb	0.013	16.24	33	100	
Cd	111	3	115	0.025	ppb	0.025	58.46	7	2000	
Sn	120	3	115	-0.065	ppb	-0.065	-58.31	473	2000	
Sb	121	3	115	0.312	ppb	0.312	24.93	223	1000	
Ba	137	3	115	62.305	ppb	62.305	0.89	12723	5000	
Tl	205	3	193	0.030	ppb	0.030	42.58	193	2000	
(Pb)	206	3	193	0.928	ppb	0.928	11.23	1133	100	
(Pb)	207	3	193	0.928	ppb	0.928	15.80	1115	100	
Pb	208	3	193	0.910	ppb	0.910	5.95	4625	5000	
Th	232	3	193	0.062	ppb	0.062	44.53	6598	2000	
U	238	3	193	4.331	ppb	4.331	4.48	19756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3425126	2.07	3473788	98.60	60	120	
Sc (IS)	45	3	HMI He	506961	0.48	498630	101.67	60	120	
Ge Internal standard	72	2	HMI H2	2163433	0.85	2241871	96.50	60	120	
Ge Internal standard	72	3	HMI He	643106	0.28	647352	99.34	60	120	
In Internal Standard	115	3	HMI He	2396124	0.37	2356036	101.70	60	120	
Ir (IS)	193	3	HMI He	5061867	1.54	4999588	101.25	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-4-A
Data File Name	389SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:33:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	61.536	ppb	61.536	5.77	2137	2000	
Na	23	3	45	35887.234	ppb	35887.234	2.77	3143321	400000	
Mg	24	3	45	214042.979	ppb	214042.979	1.99	9981178	400000	
Al	27	3	45	236919.724	ppb	236919.724	1.33	4095022	400000	
K	39	3	45	6820.722	ppb	6820.722	1.95	280145	400000	
Ca	40	2	45	426366.865	ppb	426366.865	0.97	196522913	400000	
V	51	3	72	59.057	ppb	59.057	3.89	29004	2000	
Cr	52	3	72	5.974	ppb	5.974	3.39	5675	5000	
Mn	55	3	72	12978.212	ppb	12978.212	0.35	4080146	10000	
Fe	56	2	72	786.997	ppb	786.997	1.86	1024467	10000	
Co	59	3	72	609.090	ppb	609.090	1.60	624816	2000	
Ni	60	3	72	554.486	ppb	554.486	0.17	159263	5000	
Cu	63	3	72	7.296	ppb	7.296	2.16	5853	5000	
Zn	66	3	72	2857.333	ppb	2857.333	1.01	355021	5000	
As	75	3	72	3.699	ppb	3.699	16.87	391	2000	
Se	78	2	72	15.036	ppb	15.036	0.88	682	2000	
Sr	88	3	72	3468.778	ppb	3468.778	1.97	1487373	4000	
Mo	95	3	115	0.098	ppb	0.098	12.61	65	2000	
Ag	107	3	115	0.020	ppb	0.020	10.69	42	100	
Cd	111	3	115	8.386	ppb	8.386	3.28	1629	2000	
Sn	120	3	115	0.062	ppb	0.062	99.53	540	2000	
Sb	121	3	115	0.052	ppb	0.052	18.04	58	1000	
Ba	137	3	115	10.568	ppb	10.568	3.55	2136	5000	
Tl	205	3	193	0.675	ppb	0.675	2.63	2129	2000	
(Pb)	206	3	193	10.122	ppb	10.122	2.80	10457	100	
(Pb)	207	3	193	9.504	ppb	9.504	3.49	8630	100	
Pb	208	3	193	9.742	ppb	9.742	2.08	40417	5000	
Th	232	3	193	2.064	ppb	2.064	6.25	14605	2000	
U	238	3	193	101.861	ppb	101.861	2.01	429270	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3435380	0.58	3473788	98.89	60	120	
Sc (IS)	45	3	HMI He	505726	1.29	498630	101.42	60	120	
Ge Internal standard	72	2	HMI H2	2139445	1.02	2241871	95.43	60	120	
Ge Internal standard	72	3	HMI He	631279	1.04	647352	97.52	60	120	
In Internal Standard	115	3	HMI He	2335127	0.50	2356036	99.11	60	120	
Ir (IS)	193	3	HMI He	4972439	1.44	4999588	99.46	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	390SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:34:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	18419.688	ppb	18419.688	2.28	1615246	400000	
Mg	24	3	45	12309.509	ppb	12309.509	2.34	572438	400000	
Al	27	3	45	45.650	ppb	45.650	12.02	868	400000	
K	39	3	45	7216.587	ppb	7216.587	2.20	294166	400000	
Ca	40	2	45	49091.953	ppb	49091.953	0.87	22809741	400000	
V	51	3	72	22.839	ppb	22.839	4.47	11781	2000	
Cr	52	3	72	1.153	ppb	1.153	18.15	2821	5000	
Mn	55	3	72	6.432	ppb	6.432	6.10	2236	10000	
Fe	56	2	72	7.855	ppb	7.855	22.15	41431	10000	
Co	59	3	72	0.178	ppb	0.178	24.95	217	2000	
Ni	60	3	72	0.443	ppb	0.443	12.50	546	5000	
Cu	63	3	72	0.447	ppb	0.447	14.73	598	5000	
Zn	66	3	72	2.466	ppb	2.466	5.18	441	5000	
As	75	3	72	14.009	ppb	14.009	4.38	1341	2000	
Se	78	2	72	4.047	ppb	4.047	5.74	181	2000	
Sr	88	3	72	257.823	ppb	257.823	2.23	112334	4000	
Mo	95	3	115	9.181	ppb	9.181	7.10	3709	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-183.27	13	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.121	ppb	-0.121	-85.10	436	2000	
Sb	121	3	115	0.293	ppb	0.293	2.00	210	1000	
Ba	137	3	115	40.398	ppb	40.398	2.17	8220	5000	
Tl	205	3	193	0.002	ppb	0.002	151.82	103	2000	
(Pb)	206	3	193	0.069	ppb	0.069	58.51	240	100	
(Pb)	207	3	193	0.053	ppb	0.053	35.96	325	100	
Pb	208	3	193	0.019	ppb	0.019	119.97	920	5000	
Th	232	3	193	-0.485	ppb	-0.485	-13.85	4227	2000	
U	238	3	193	1.795	ppb	1.795	2.44	8684	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3461661	0.15	3473788	99.65	60	120	
Sc (IS)	45	3	HMI He	504276	1.61	498630	101.13	60	120	
Ge Internal standard	72	2	HMI H2	2093081	2.55	2241871	93.36	60	120	
Ge Internal standard	72	3	HMI He	641400	1.03	647352	99.08	60	120	
In Internal Standard	115	3	HMI He	2384445	3.25	2356036	101.21	60	120	
Ir (IS)	193	3	HMI He	4932886	1.56	4999588	98.67	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	391SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:36:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	3541.552	ppb	3541.552	1.00	314209	400000	
Mg	24	3	45	2505.806	ppb	2505.806	1.21	113943	400000	
Al	27	3	45	20.696	ppb	20.696	25.33	427	400000	
K	39	3	45	1435.278	ppb	1435.278	3.79	75414	400000	
Ca	40	2	45	10061.356	ppb	10061.356	1.51	4609923	400000	
V	51	3	72	4.424	ppb	4.424	0.74	2754	2000	
Cr	52	3	72	0.080	ppb	0.080	582.26	2139	5000	
Mn	55	3	72	3.862	ppb	3.862	8.14	1398	10000	
Fe	56	2	72	6.634	ppb	6.634	33.38	40778	10000	
Co	59	3	72	0.052	ppb	0.052	69.22	85	2000	
Ni	60	3	72	0.264	ppb	0.264	35.75	488	5000	
Cu	63	3	72	0.208	ppb	0.208	17.54	406	5000	
Zn	66	3	72	4.381	ppb	4.381	4.53	675	5000	
As	75	3	72	2.448	ppb	2.448	1.88	280	2000	
Se	78	2	72	0.799	ppb	0.799	21.16	37	2000	
Sr	88	3	72	52.251	ppb	52.251	0.65	22499	4000	
Mo	95	3	115	1.831	ppb	1.831	4.96	745	2000	
Ag	107	3	115	0.010	ppb	0.010	53.36	28	100	
Cd	111	3	115	0.009	ppb	0.009	167.98	3	2000	
Sn	120	3	115	0.194	ppb	0.194	31.93	620	2000	
Sb	121	3	115	0.112	ppb	0.112	19.16	95	1000	
Ba	137	3	115	8.706	ppb	8.706	3.23	1764	5000	
Tl	205	3	193	0.004	ppb	0.004	217.27	113	2000	
(Pb)	206	3	193	0.468	ppb	0.468	14.11	651	100	
(Pb)	207	3	193	0.363	ppb	0.363	17.62	603	100	
Pb	208	3	193	0.416	ppb	0.416	4.23	2554	5000	
Th	232	3	193	-0.537	ppb	-0.537	-8.34	4082	2000	
U	238	3	193	0.368	ppb	0.368	5.28	2779	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3408161	2.36	3473788	98.11	60	120	
Sc (IS)	45	3	HMI He	492547	1.10	498630	98.78	60	120	
Ge Internal standard	72	2	HMI H2	2136703	1.92	2241871	95.31	60	120	
Ge Internal standard	72	3	HMI He	633440	0.45	647352	97.85	60	120	
In Internal Standard	115	3	HMI He	2330819	2.35	2356036	98.93	60	120	
Ir (IS)	193	3	HMI He	5009270	1.36	4999588	100.19	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	392SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:38:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.207	ppb	39.207	7.78	1378	2000	
Na	23	3	45	19480.306	ppb	19480.306	1.33	1728598	400000	
Mg	24	3	45	13388.974	ppb	13388.974	1.63	630430	400000	
Al	27	3	45	765.165	ppb	765.165	0.89	13430	400000	
K	39	3	45	7945.808	ppb	7945.808	0.99	325515	400000	
Ca	40	2	45	51131.967	ppb	51131.967	3.26	23882414	400000	
V	51	3	72	62.212	ppb	62.212	2.50	31224	2000	
Cr	52	3	72	38.609	ppb	38.609	3.21	25868	5000	
Mn	55	3	72	43.238	ppb	43.238	4.31	14083	10000	
Fe	56	2	72	766.595	ppb	766.595	3.16	1023389	10000	
Co	59	3	72	37.254	ppb	37.254	0.87	39126	2000	
Ni	60	3	72	37.572	ppb	37.572	5.04	11429	5000	
Cu	63	3	72	39.360	ppb	39.360	1.70	31198	5000	
Zn	66	3	72	39.679	ppb	39.679	3.54	5173	5000	
As	75	3	72	49.640	ppb	49.640	1.52	4633	2000	
Se	78	2	72	43.010	ppb	43.010	0.78	1997	2000	
Sr	88	3	72	333.804	ppb	333.804	1.06	146438	4000	
Mo	95	3	115	47.154	ppb	47.154	1.83	19022	2000	
Ag	107	3	115	37.646	ppb	37.646	3.22	51651	100	
Cd	111	3	115	36.478	ppb	36.478	0.97	7252	2000	
Sn	120	3	115	36.118	ppb	36.118	1.80	23421	2000	
Sb	121	3	115	37.368	ppb	37.368	1.09	23456	1000	
Ba	137	3	115	79.975	ppb	79.975	2.04	16289	5000	
Tl	205	3	193	36.763	ppb	36.763	3.16	115919	2000	
(Pb)	206	3	193	37.213	ppb	37.213	2.32	39813	100	
(Pb)	207	3	193	36.573	ppb	36.573	3.51	33965	100	
Pb	208	3	193	37.184	ppb	37.184	2.60	159155	5000	
Th	232	3	193	33.844	ppb	33.844	0.10	150532	2000	
U	238	3	193	39.208	ppb	39.208	3.14	173917	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3481658	2.44	3473788	100.23	60	120	
Sc (IS)	45	3	HMI He	510434	1.16	498630	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2193078	1.58	2241871	97.82	60	120	
Ge Internal standard	72	3	HMI He	645747	0.79	647352	99.75	60	120	
In Internal Standard	115	3	HMI He	2391645	1.14	2356036	101.51	60	120	
Ir (IS)	193	3	HMI He	5210834	1.64	4999588	104.23	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	393SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:40:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	36.759	ppb	36.759	4.99	1293	2000	
Na	23	3	45	19113.012	ppb	19113.012	2.74	1669742	400000	
Mg	24	3	45	13348.269	ppb	13348.269	0.66	618719	400000	
Al	27	3	45	806.758	ppb	806.758	1.97	13938	400000	
K	39	3	45	7942.091	ppb	7942.091	2.52	320317	400000	
Ca	40	2	45	47753.423	ppb	47753.423	0.66	23027642	400000	
V	51	3	72	60.549	ppb	60.549	1.49	30857	2000	
Cr	52	3	72	38.913	ppb	38.913	3.25	26440	5000	
Mn	55	3	72	41.943	ppb	41.943	1.46	13872	10000	
Fe	56	2	72	766.921	ppb	766.921	0.85	1028950	10000	
Co	59	3	72	37.122	ppb	37.122	0.59	39562	2000	
Ni	60	3	72	37.699	ppb	37.699	0.71	11637	5000	
Cu	63	3	72	39.056	ppb	39.056	0.51	31418	5000	
Zn	66	3	72	54.369	ppb	54.369	0.41	7143	5000	
As	75	3	72	49.786	ppb	49.786	3.15	4715	2000	
Se	78	2	72	42.982	ppb	42.982	1.30	2005	2000	
Sr	88	3	72	327.212	ppb	327.212	0.64	145669	4000	
Mo	95	3	115	46.842	ppb	46.842	2.87	18819	2000	
Ag	107	3	115	37.928	ppb	37.928	3.12	51834	100	
Cd	111	3	115	37.242	ppb	37.242	2.43	7373	2000	
Sn	120	3	115	36.609	ppb	36.609	2.99	23636	2000	
Sb	121	3	115	37.620	ppb	37.620	2.47	23517	1000	
Ba	137	3	115	78.288	ppb	78.288	1.49	15883	5000	
Tl	205	3	193	38.074	ppb	38.074	1.69	119846	2000	
(Pb)	206	3	193	37.098	ppb	37.098	0.96	39615	100	
(Pb)	207	3	193	37.752	ppb	37.752	2.29	34991	100	
Pb	208	3	193	37.163	ppb	37.163	1.50	158788	5000	
Th	232	3	193	36.607	ppb	36.607	1.63	161964	2000	
U	238	3	193	39.369	ppb	39.369	1.19	174328	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3592736	0.76	3473788	103.42	60	120	
Sc (IS)	45	3	HMI He	502539	1.38	498630	100.78	60	120	
Ge Internal standard	72	2	HMI H2	2203451	1.02	2241871	98.29	60	120	
Ge Internal standard	72	3	HMI He	655287	0.87	647352	101.23	60	120	
In Internal Standard	115	3	HMI He	2382269	1.27	2356036	101.11	60	120	
Ir (IS)	193	3	HMI He	5200403	0.17	4999588	104.02	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	394_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:42:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.456	ppb	7.297	1758	50	98.9	90	110	
Na	23	3	45	48700.813	ppb	0.971	4233139	51000	95.5	90	110	
Mg	24	3	45	10225.766	ppb	1.644	473810	11000	93.0	90	110	
Al	27	3	45	1014.723	ppb	3.033	17498	1000	101.5	90	110	
K	39	3	45	10413.195	ppb	2.610	412564	11000	94.7	90	110	
Ca	40	2	45	10254.651	ppb	3.577	4822449	11000	93.2	90	110	
V	51	3	72	53.251	ppb	1.868	25614	50	106.5	90	110	
Cr	52	3	72	53.333	ppb	0.553	33347	50	106.7	90	110	
Mn	55	3	72	53.530	ppb	1.920	16613	50	107.1	90	110	
Fe	56	2	72	1054.357	ppb	2.710	1335865	1000	105.4	90	110	
Co	59	3	72	51.470	ppb	1.996	51597	50	102.9	90	110	
Ni	60	3	72	51.848	ppb	1.567	14911	50	103.7	90	110	
Cu	63	3	72	52.815	ppb	1.203	39893	50	105.6	90	110	
Zn	66	3	72	53.560	ppb	3.368	6623	50	107.1	90	110	
As	75	3	72	50.679	ppb	2.866	4517	50	101.4	90	110	
Se	78	2	72	54.931	ppb	3.605	2441	50	109.9	90	110	
Sr	88	3	72	105.285	ppb	1.661	44109	100	105.3	90	110	
Mo	95	3	115	49.917	ppb	0.658	20282	50	99.8	90	110	
Ag	107	3	115	49.180	ppb	3.617	67970	50	98.4	90	110	
Cd	111	3	115	48.955	ppb	3.140	9804	50	97.9	90	110	
Sn	120	3	115	47.171	ppb	3.740	30652	50	94.3	90	110	
Sb	121	3	115	49.597	ppb	1.236	31351	50	99.2	90	110	
Ba	137	3	115	48.447	ppb	1.341	9955	50	96.9	90	110	
Tl	205	3	193	50.129	ppb	0.673	154308	50	100.3	90	110	
(Pb)	206	3	193	49.211	ppb	0.806	51341	50	98.4	90	110	
(Pb)	207	3	193	50.439	ppb	1.556	45633	50	100.9	90	110	
Pb	208	3	193	49.603	ppb	0.795	207004	50	99.2	90	110	
Th	232	3	193	51.032	ppb	1.911	218342	50	102.1	90	110	
U	238	3	193	50.551	ppb	0.720	218575	50	101.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3500221	2.68	3473788	100.76	60	120	
Sc (IS)	45	3	HMI He	502384	1.62	498630	100.75	60	120	
Ge Internal standard	72	2	HMI H2	2099975	1.87	2241871	93.67	60	120	
Ge Internal standard	72	3	HMI He	616598	1.20	647352	95.25	60	120	
In Internal Standard	115	3	HMI He	2409117	0.63	2356036	102.25	60	120	
Ir (IS)	193	3	HMI He	5086348	0.73	4999588	101.74	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	395_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:44:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	40.231	ppb	8.5	17234	25	>RL
Mg	24	3	45	5.742	ppb	36.8	404	25	
Al	27	3	45	4.197	ppb	65.4	153	15	
K	39	3	45	-1.082	ppb	-2842.9	23360	50	
V	51	3	72	-0.061	ppb	-483.0	596	1	
Cr	52	3	72	-0.123	ppb	-103.7	2041	1	
Mn	55	3	72	0.759	ppb	23.6	423	0.5	>RL
Co	59	3	72	0.044	ppb	44.5	77	0.5	
Ni	60	3	72	0.342	ppb	14.9	516	1	
Cu	63	3	72	0.059	ppb	74.5	295	1	
Zn	66	3	72	0.882	ppb	25.4	242	5	
As	75	3	72	-0.192	ppb	-195.9	42	1	
Se	78	2	72	0.043	ppb	150.4	3	1	
Sr	88	3	72	0.084	ppb	27.4	52	0.5	
Mo	95	3	115	0.013	ppb	109.8	32	0.5	
Ag	107	3	115	0.011	ppb	116.1	30	1	
Cd	111	3	115	0.009	ppb	170.8	3	0.5	
Sn	120	3	115	0.198	ppb	42.4	628	1	
Sb	121	3	115	0.048	ppb	140.8	57	0.6	
Ba	137	3	115	0.034	ppb	308.6	47	0.5	
Tl	205	3	193	0.036	ppb	16.9	217	0.1	
(Pb)	206	3	193	-0.005	ppb	-769.3	173	1	
(Pb)	207	3	193	-0.002	ppb	-2319.7	292	1	
Pb	208	3	193	-0.019	ppb	-45.1	805	0.5	
Th	232	3	193	1.368	ppb	16.6	12295	1	>RL
U	238	3	193	0.034	ppb	103.4	1411	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3540753	0.45	3473788	101.93	60	120	
Sc (IS)	45	3	HMI He	505641	1.51	498630	101.41	60	120	
Ge Internal standard	72	2	HMI H2	2166207	2.15	2241871	96.62	60	120	
Ge Internal standard	72	3	HMI He	640795	0.97	647352	98.99	60	120	
In Internal Standard	115	3	HMI He	2351369	0.83	2356036	99.80	60	120	
Ir (IS)	193	3	HMI He	5189898	1.86	4999588	103.81	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	396LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:45:49-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	-73.618	ppb	-1.424	14282	300	-24.5	70	130	>+/-30%
Mg	24	3	45	1.241	ppb	80.699	377	50	2.5	70	130	>+/-30%
Al	27	3	45	0.121	ppb	420.408	163	50	0.2	70	130	>+/-30%
K	39	3	45	-324.308	ppb	-3.422	21869	120	-270.3	70	130	>+/-30%
Ca	40	2	45	-1.466	ppb	-85.353	15822	200	-0.7	70	130	>+/-30%
V	51	3	72	-1.079	ppb	-2.722	187	5	-21.6	70	130	>+/-30%
Cr	52	3	72	-2.851	ppb	-1.383	700	2	-142.5	70	130	>+/-30%
Mn	55	3	72	-0.004	ppb	-2999.456	335	1	-0.4	70	130	>+/-30%
Fe	56	2	72	-19.070	ppb	-9.233	14753	50	-38.1	70	130	>+/-30%
Co	59	3	72	-0.013	ppb	-45.522	33	1	-1.3	70	130	>+/-30%
Ni	60	3	72	-1.302	ppb	-1.975	72	2	-65.1	70	130	>+/-30%
Cu	63	3	72	-0.135	ppb	-25.834	268	2	-6.7	70	130	>+/-30%
Zn	66	3	72	-0.253	ppb	-13.329	183	10	-2.5	70	130	>+/-30%
As	75	3	72	-0.490	ppb	-16.201	27	5	-9.8	70	130	>+/-30%
Se	78	2	72	0.006	ppb	276.431	3	5	0.1	70	130	>+/-30%
Sr	88	3	72	0.041	ppb	83.538	60	5	0.8	70	130	>+/-30%
Mo	95	3	115	-0.051	ppb	-21.298	12	2	-2.5	70	130	>+/-30%
Ag	107	3	115	0.000	ppb	1117.419	28	1	0.0	70	130	>+/-30%
Cd	111	3	115	-0.004	ppb	-207.644	2	1	-0.4	70	130	>+/-30%
Sn	120	3	115	-0.628	ppb	-0.265	207	10	-6.3	70	130	>+/-30%
Sb	121	3	115	-0.018	ppb	-49.144	28	2	-0.9	70	130	>+/-30%
Ba	137	3	115	-0.122	ppb	-32.170	28	1	-12.2	70	130	>+/-30%
Tl	205	3	193	-0.007	ppb	-26.182	152	1	-0.7	70	130	>+/-30%
(Pb)	206	3	193	-0.061	ppb	-36.572	213	1	-6.1	70	130	>+/-30%
(Pb)	207	3	193	-0.066	ppb	-52.992	436	1	-6.6	70	130	>+/-30%
Pb	208	3	193	-0.076	ppb	-15.571	1054	1	-7.6	70	130	>+/-30%
Th	232	3	193	-0.660	ppb	-4.678	6952	1	-66.0	70	130	>+/-30%
U	238	3	193	0.011	ppb	206.313	2466	1	1.1	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6227566	3.45	3473788	179.27	60	120	IS Failed
Sc (IS)	45	3	HMI He	988217	2.41	498630	198.19	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3733041	2.35	2241871	166.51	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1194015	3.57	647352	184.45	60	120	IS Failed
In Internal Standard	115	3	HMI He	4299938	1.36	2356036	182.51	60	120	IS Failed
Ir (IS)	193	3	HMI He	9741451	2.37	4999588	194.85	60	120	IS Failed

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-
Data File Name	397LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:47:37-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	39.475	ppb	8.819	17245	300	13.2	70	130	>+/-30%
Mg	24	3	45	9.855	ppb	14.760	597	50	19.7	70	130	>+/-30%
Al	27	3	45	12.603	ppb	17.622	300	50	25.2	70	130	>+/-30%
K	39	3	45	-14.193	ppb	-66.082	22962	120	-11.8	70	130	>+/-30%
Ca	40	2	45	20.616	ppb	1.619	19259	200	10.3	70	130	>+/-30%
V	51	3	72	-0.105	ppb	-93.513	573	5	-2.1	70	130	>+/-30%
Cr	52	3	72	-0.019	ppb	-1576.937	2096	2	-0.9	70	130	>+/-30%
Mn	55	3	72	1.498	ppb	11.233	656	1	149.8	70	130	>+/-30%
Fe	56	2	72	2.378	ppb	68.794	35722	50	4.8	70	130	>+/-30%
Co	59	3	72	0.071	ppb	7.904	105	1	7.1	70	130	>+/-30%
Ni	60	3	72	0.315	ppb	14.502	506	2	15.7	70	130	>+/-30%
Cu	63	3	72	0.101	ppb	32.870	327	2	5.1	70	130	>+/-30%
Zn	66	3	72	1.277	ppb	17.080	290	10	12.8	70	130	>+/-30%
As	75	3	72	-0.245	ppb	-46.442	37	5	-4.9	70	130	>+/-30%
Se	78	2	72	0.074	ppb	35.140	5	5	1.5	70	130	>+/-30%
Sr	88	3	72	0.323	ppb	6.721	155	5	6.5	70	130	>+/-30%
Mo	95	3	115	0.093	ppb	50.985	63	2	4.6	70	130	>+/-30%
Ag	107	3	115	0.011	ppb	36.391	30	1	1.1	70	130	>+/-30%
Cd	111	3	115	0.017	ppb	148.114	5	1	1.7	70	130	>+/-30%
Sn	120	3	115	0.278	ppb	41.460	683	10	2.8	70	130	>+/-30%
Sb	121	3	115	0.029	ppb	25.903	45	2	1.5	70	130	>+/-30%
Ba	137	3	115	0.158	ppb	62.332	72	1	15.8	70	130	>+/-30%
Tl	205	3	193	0.002	ppb	326.361	108	1	0.2	70	130	>+/-30%
(Pb)	206	3	193	0.053	ppb	81.745	230	1	5.3	70	130	>+/-30%
(Pb)	207	3	193	0.041	ppb	154.180	323	1	4.1	70	130	>+/-30%
Pb	208	3	193	0.034	ppb	56.298	1008	1	3.4	70	130	>+/-30%
Th	232	3	193	3.298	ppb	2.429	20054	1	329.8	70	130	>+/-30%
U	238	3	193	0.018	ppb	134.345	1314	1	1.8	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3497024	1.74	3473788	100.67	60	120	
Sc (IS)	45	3	HMI He	507869	0.92	498630	101.85	60	120	
Ge Internal standard	72	2	HMI H2	2156273	0.85	2241871	96.18	60	120	
Ge Internal standard	72	3	HMI He	638056	0.95	647352	98.56	60	120	
In Internal Standard	115	3	HMI He	2365538	2.05	2356036	100.40	60	120	
Ir (IS)	193	3	HMI He	5081653	1.35	4999588	101.64	60	120	

Sample Report

Sample Table

Sample Name	174893-2
Data File Name	398SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:49:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	92563.341	ppb	92563.341	2.29	9995057	400000	
Mg	24	3	45	33494.216	ppb	33494.216	2.03	1930933	400000	
Al	27	3	45	9.324	ppb	9.324	33.48	300	400000	
K	39	3	45	1271.894	ppb	1271.894	4.68	88093	400000	
Ca	40	2	45	52750.583	ppb	52750.583	0.95	31463243	400000	
V	51	3	72	-1.009	ppb	-1.009	-10.90	163	2000	
Cr	52	3	72	-0.637	ppb	-0.637	-33.72	2106	5000	
Mn	55	3	72	694.239	ppb	694.239	2.64	270383	10000	
Fe	56	2	72	-4.512	ppb	-4.512	-181.09	33754	10000	
Co	59	3	72	1.971	ppb	1.971	6.16	2541	2000	
Ni	60	3	72	1.376	ppb	1.376	17.44	996	5000	
Cu	63	3	72	0.595	ppb	0.595	24.57	870	5000	
Zn	66	3	72	2.597	ppb	2.597	6.92	558	5000	
As	75	3	72	1.952	ppb	1.952	27.93	290	2000	
Se	78	2	72	0.134	ppb	0.134	52.82	9	2000	
Sr	88	3	72	460.103	ppb	460.103	0.93	244282	4000	
Mo	95	3	115	1.761	ppb	1.761	14.91	891	2000	
Ag	107	3	115	0.003	ppb	0.003	254.77	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.618	ppb	-0.618	-6.06	147	2000	
Sb	121	3	115	0.005	ppb	0.005	525.86	37	1000	
Ba	137	3	115	269.881	ppb	269.881	2.06	66343	5000	
Tl	205	3	193	0.015	ppb	0.015	134.47	178	2000	
(Pb)	206	3	193	-0.052	ppb	-0.052	-40.38	147	100	
(Pb)	207	3	193	-0.030	ppb	-0.030	-88.61	317	100	
Pb	208	3	193	-0.055	ppb	-0.055	-10.39	778	5000	
Th	232	3	193	-0.645	ppb	-0.645	-8.56	4494	2000	
U	238	3	193	0.100	ppb	0.100	7.14	2032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4443960	0.30	3473788	127.93	60	120	IS Failed
Sc (IS)	45	3	HMI He	625140	1.01	498630	125.37	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2705005	1.12	2241871	120.66	60	120	IS Failed
Ge Internal standard	72	3	HMI He	781543	0.92	647352	120.73	60	120	IS Failed
In Internal Standard	115	3	HMI He	2891916	0.97	2356036	122.75	60	120	IS Failed
Ir (IS)	193	3	HMI He	6189589	1.55	4999588	123.80	60	120	IS Failed

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	399SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:52:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	2.163	ppb	2.163	147.80	15521	400000	
Mg	24	3	45	7.217	ppb	7.217	145.85	527	400000	
Al	27	3	45	3.421	ppb	3.421	100.35	157	400000	
K	39	3	45	-45.867	ppb	-45.867	-13.34	24165	400000	
Ca	40	2	45	-1.732	ppb	-1.732	-55.91	9950	400000	
V	51	3	72	-0.928	ppb	-0.928	-3.83	192	2000	
Cr	52	3	72	-0.537	ppb	-0.537	-23.68	1969	5000	
Mn	55	3	72	0.540	ppb	0.540	36.15	390	10000	
Fe	56	2	72	7.029	ppb	7.029	47.56	45548	10000	
Co	59	3	72	0.030	ppb	0.030	46.03	68	2000	
Ni	60	3	72	0.095	ppb	0.095	223.80	490	5000	
Cu	63	3	72	-0.100	ppb	-0.100	-49.54	188	5000	
Zn	66	3	72	-0.025	ppb	-0.025	-747.66	140	5000	
As	75	3	72	-0.499	ppb	-0.499	-9.84	15	2000	
Se	78	2	72	0.012	ppb	0.012	585.99	2	2000	
Sr	88	3	72	0.115	ppb	0.115	72.12	72	4000	
Mo	95	3	115	-0.010	ppb	-0.010	-95.93	25	2000	
Ag	107	3	115	0.004	ppb	0.004	112.24	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.517	ppb	-0.517	-6.84	203	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-19.22	17	1000	
Ba	137	3	115	-0.043	ppb	-0.043	-173.14	35	5000	
Tl	205	3	193	0.002	ppb	0.002	99.04	118	2000	
(Pb)	206	3	193	-0.050	ppb	-0.050	-33.34	135	100	
(Pb)	207	3	193	0.021	ppb	0.021	363.29	335	100	
Pb	208	3	193	-0.044	ppb	-0.044	-44.39	751	5000	
Th	232	3	193	-0.661	ppb	-0.661	-2.82	3989	2000	
U	238	3	193	0.011	ppb	0.011	265.60	1414	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3966819	1.05	3473788	114.19	60	120	
Sc (IS)	45	3	HMI He	563892	0.40	498630	113.09	60	120	
Ge Internal standard	72	2	HMI H2	2357552	0.68	2241871	105.16	60	120	
Ge Internal standard	72	3	HMI He	705615	0.58	647352	109.00	60	120	
In Internal Standard	115	3	HMI He	2618086	2.56	2356036	111.12	60	120	
Ir (IS)	193	3	HMI He	5590669	1.64	4999588	111.82	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	400SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:54:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.046	ppb	0.046	173.21	2	2000	
Na	23	3	45	-4.869	ppb	-4.869	-92.13	14692	400000	
Mg	24	3	45	2.732	ppb	2.732	36.49	290	400000	
Al	27	3	45	1.751	ppb	1.751	42.00	123	400000	
K	39	3	45	-40.425	ppb	-40.425	-33.27	24165	400000	
Ca	40	2	45	-0.980	ppb	-0.980	-18.72	10291	400000	
V	51	3	72	-0.876	ppb	-0.876	-5.61	218	2000	
Cr	52	3	72	-0.561	ppb	-0.561	-27.88	1944	5000	
Mn	55	3	72	0.532	ppb	0.532	5.19	385	10000	
Fe	56	2	72	2.515	ppb	2.515	71.30	39449	10000	
Co	59	3	72	0.006	ppb	0.006	143.51	42	2000	
Ni	60	3	72	-0.087	ppb	-0.087	-287.87	430	5000	
Cu	63	3	72	-0.054	ppb	-0.054	-52.49	227	5000	
Zn	66	3	72	-0.358	ppb	-0.358	-31.60	93	5000	
As	75	3	72	-0.415	ppb	-0.415	-13.97	23	2000	
Se	78	2	72	-0.002	ppb	-0.002	-1455.33	1	2000	
Sr	88	3	72	0.085	ppb	0.085	52.24	57	4000	
Mo	95	3	115	0.090	ppb	0.090	204.75	68	2000	
Ag	107	3	115	0.000	ppb	0.000	1431.34	17	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.564	ppb	-0.564	-11.84	168	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-81.95	17	1000	
Ba	137	3	115	-0.048	ppb	-0.048	-138.17	33	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-510.26	107	2000	
(Pb)	206	3	193	-0.027	ppb	-0.027	-139.03	162	100	
(Pb)	207	3	193	-0.031	ppb	-0.031	-21.89	285	100	
Pb	208	3	193	-0.044	ppb	-0.044	-37.00	753	5000	
Th	232	3	193	-0.655	ppb	-0.655	-6.07	4022	2000	
U	238	3	193	0.004	ppb	0.004	332.58	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3943350	0.35	3473788	113.52	60	120	
Sc (IS)	45	3	HMI He	558532	0.99	498630	112.01	60	120	
Ge Internal standard	72	2	HMI H2	2367361	1.70	2241871	105.60	60	120	
Ge Internal standard	72	3	HMI He	702394	0.59	647352	108.50	60	120	
In Internal Standard	115	3	HMI He	2585407	0.39	2356036	109.74	60	120	
Ir (IS)	193	3	HMI He	5599036	1.15	4999588	111.99	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	401SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:56:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	-7.750	ppb	-7.750	-91.28	14586	400000	
Mg	24	3	45	2.228	ppb	2.228	71.13	267	400000	
Al	27	3	45	1.348	ppb	1.348	281.41	117	400000	
K	39	3	45	-51.495	ppb	-51.495	-42.39	23978	400000	
Ca	40	2	45	-1.079	ppb	-1.079	-101.32	10070	400000	
V	51	3	72	-0.905	ppb	-0.905	-8.26	203	2000	
Cr	52	3	72	-0.578	ppb	-0.578	-4.41	1938	5000	
Mn	55	3	72	0.386	ppb	0.386	63.12	335	10000	
Fe	56	2	72	2.135	ppb	2.135	120.75	39355	10000	
Co	59	3	72	0.012	ppb	0.012	101.78	48	2000	
Ni	60	3	72	0.217	ppb	0.217	79.34	528	5000	
Cu	63	3	72	-0.067	ppb	-0.067	-35.07	217	5000	
Zn	66	3	72	-0.263	ppb	-0.263	-37.06	107	5000	
As	75	3	72	-0.449	ppb	-0.449	-21.87	20	2000	
Se	78	2	72	-0.002	ppb	-0.002	-989.43	1	2000	
Sr	88	3	72	0.112	ppb	0.112	66.55	70	4000	
Mo	95	3	115	0.001	ppb	0.001	3396.36	30	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-311.70	15	100	
Cd	111	3	115	-0.001	ppb	-0.001	-1970.04	2	2000	
Sn	120	3	115	-0.524	ppb	-0.524	-11.56	198	2000	
Sb	121	3	115	0.003	ppb	0.003	729.89	32	1000	
Ba	137	3	115	-0.140	ppb	-0.140	-8.77	13	5000	
Tl	205	3	193	0.005	ppb	0.005	102.40	130	2000	
(Pb)	206	3	193	-0.042	ppb	-0.042	-60.21	145	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-14.82	258	100	
Pb	208	3	193	-0.059	ppb	-0.059	-17.53	686	5000	
Th	232	3	193	-0.615	ppb	-0.615	-5.86	4212	2000	
U	238	3	193	0.027	ppb	0.027	44.68	1493	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3877667	0.76	3473788	111.63	60	120	
Sc (IS)	45	3	HMI He	565139	0.61	498630	113.34	60	120	
Ge Internal standard	72	2	HMI H2	2396270	1.30	2241871	106.89	60	120	
Ge Internal standard	72	3	HMI He	704309	0.92	647352	108.80	60	120	
In Internal Standard	115	3	HMI He	2620830	1.43	2356036	111.24	60	120	
Ir (IS)	193	3	HMI He	5605741	0.81	4999588	112.12	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	402SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:58:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	-12.538	ppb	-12.538	-58.65	14235	400000	
Mg	24	3	45	2.500	ppb	2.500	31.41	284	400000	
Al	27	3	45	1.970	ppb	1.970	43.94	130	400000	
K	39	3	45	-46.022	ppb	-46.022	-64.64	24409	400000	
Ca	40	2	45	0.287	ppb	0.287	206.32	11042	400000	
V	51	3	72	-0.966	ppb	-0.966	-9.52	172	2000	
Cr	52	3	72	-0.684	ppb	-0.684	-31.43	1878	5000	
Mn	55	3	72	0.358	ppb	0.358	47.88	327	10000	
Fe	56	2	72	2.229	ppb	2.229	91.65	39322	10000	
Co	59	3	72	0.016	ppb	0.016	30.64	53	2000	
Ni	60	3	72	0.105	ppb	0.105	25.15	495	5000	
Cu	63	3	72	-0.068	ppb	-0.068	-40.00	217	5000	
Zn	66	3	72	-0.114	ppb	-0.114	-389.09	128	5000	
As	75	3	72	-0.533	ppb	-0.533	-19.28	12	2000	
Se	78	2	72	0.024	ppb	0.024	90.94	3	2000	
Sr	88	3	72	0.073	ppb	0.073	35.90	52	4000	
Mo	95	3	115	-0.029	ppb	-0.029	-121.97	17	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-28.18	7	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.593	ppb	-0.593	-1.57	152	2000	
Sb	121	3	115	-0.026	ppb	-0.026	-31.77	12	1000	
Ba	137	3	115	-0.096	ppb	-0.096	-35.74	23	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-285.93	107	2000	
(Pb)	206	3	193	-0.056	ppb	-0.056	-43.58	128	100	
(Pb)	207	3	193	-0.047	ppb	-0.047	-86.00	268	100	
Pb	208	3	193	-0.061	ppb	-0.061	-20.50	673	5000	
Th	232	3	193	-0.635	ppb	-0.635	-4.31	4104	2000	
U	238	3	193	0.007	ppb	0.007	42.11	1393	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3971822	1.27	3473788	114.34	60	120	
Sc (IS)	45	3	HMI He	569684	0.36	498630	114.25	60	120	
Ge Internal standard	72	2	HMI H2	2386069	1.30	2241871	106.43	60	120	
Ge Internal standard	72	3	HMI He	708232	0.68	647352	109.40	60	120	
In Internal Standard	115	3	HMI He	2638465	0.82	2356036	111.99	60	120	
Ir (IS)	193	3	HMI He	5585791	0.18	4999588	111.73	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	403SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:59:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	-5.421	ppb	-5.421	-92.91	14662	400000	
Mg	24	3	45	4.402	ppb	4.402	90.07	377	400000	
Al	27	3	45	4.881	ppb	4.881	121.75	184	400000	
K	39	3	45	-24.444	ppb	-24.444	-99.64	24860	400000	
Ca	40	2	45	0.033	ppb	0.033	1015.79	10755	400000	
V	51	3	72	-0.935	ppb	-0.935	-2.99	187	2000	
Cr	52	3	72	-0.606	ppb	-0.606	-7.11	1914	5000	
Mn	55	3	72	0.559	ppb	0.559	51.11	395	10000	
Fe	56	2	72	4.478	ppb	4.478	45.51	42317	10000	
Co	59	3	72	0.015	ppb	0.015	169.82	52	2000	
Ni	60	3	72	0.075	ppb	0.075	300.29	481	5000	
Cu	63	3	72	-0.087	ppb	-0.087	-39.30	198	5000	
Zn	66	3	72	-0.165	ppb	-0.165	-114.82	120	5000	
As	75	3	72	-0.449	ppb	-0.449	-11.06	20	2000	
Se	78	2	72	0.051	ppb	0.051	77.87	4	2000	
Sr	88	3	72	0.119	ppb	0.119	51.50	73	4000	
Mo	95	3	115	0.006	ppb	0.006	323.05	32	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-243.96	12	100	
Cd	111	3	115	-0.001	ppb	-0.001	-2097.85	2	2000	
Sn	120	3	115	-0.603	ppb	-0.603	-6.04	142	2000	
Sb	121	3	115	-0.031	ppb	-0.031	-14.35	8	1000	
Ba	137	3	115	-0.041	ppb	-0.041	-57.08	35	5000	
Tl	205	3	193	-0.004	ppb	-0.004	-149.92	98	2000	
(Pb)	206	3	193	-0.058	ppb	-0.058	-39.49	127	100	
(Pb)	207	3	193	-0.030	ppb	-0.030	-46.30	287	100	
Pb	208	3	193	-0.051	ppb	-0.051	-15.47	723	5000	
Th	232	3	193	-0.647	ppb	-0.647	-3.79	4060	2000	
U	238	3	193	0.025	ppb	0.025	93.24	1483	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3917564	0.77	3473788	112.77	60	120	
Sc (IS)	45	3	HMI He	559324	0.51	498630	112.17	60	120	
Ge Internal standard	72	2	HMI H2	2376386	0.25	2241871	106.00	60	120	
Ge Internal standard	72	3	HMI He	702732	0.48	647352	108.55	60	120	
In Internal Standard	115	3	HMI He	2597449	2.16	2356036	110.25	60	120	
Ir (IS)	193	3	HMI He	5602069	0.40	4999588	112.05	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	404CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T13:01:42-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	15651	0.01
Mg	24	45	3	HMI He	397	16.18
Al	27	45	3	HMI He	127	21.87
K	39	45	3	HMI He	23597	0.03
Ca	40	45	2	HMI H2	12278	0.01
V	51	72	3	HMI He	583	3.06
Cr	52	72	3	HMI He	2041	0.32
Mn	55	72	3	HMI He	443	1.28
Fe	56	72	2	HMI H2	35959	0.02
Co	59	72	3	HMI He	60	97.27
Ni	60	72	3	HMI He	348	1.26
Cu	63	72	3	HMI He	295	1.52
Zn	66	72	3	HMI He	152	10.04
As	75	72	3	HMI He	40	82.71
Se	78	72	2	HMI H2	4	2165.06
(Se)	78	72	3	HMI He	18	374.49
Sr	88	72	3	HMI He	63	47.21
Mo	95	115	3	HMI He	37	140.88
Ag	107	115	3	HMI He	17	207.80
Cd	111	115	3	HMI He	0	#VALUE!
Sn	120	115	3	HMI He	481	3.27
Sb	121	115	3	HMI He	28	95.18
Ba	137	115	3	HMI He	42	158.67
Tl	205	193	3	HMI He	90	16.34
(Pb)	206	193	3	HMI He	178	7.76
(Pb)	207	193	3	HMI He	270	1.19
Pb	208	193	3	HMI He	820	0.78
Th	232	193	3	HMI He	5647	0.14
U	238	193	3	HMI He	1351	0.43

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3460228	0.59
Sc (IS)	45	3	HMI He	505695	0.71
Ge Internal standard	72	2	HMI H2	2187657	2.33
Ge Internal standard	72	3	HMI He	654972	0.70
In Internal Standard	115	3	HMI He	2371544	1.25
Ir (IS)	193	3	HMI He	5024616	0.81

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	405CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T13:03:31-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	404CALB.d
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	2246946	0.01
Mg	24	45	3	HMI He	228150	0.06
Al	27	45	3	HMI He	113	27.31
K	39	45	3	HMI He	206298	0.06
V	51	72	3	HMI He	245	13.41
Cr	52	72	3	HMI He	3766	2.74
Mn	55	72	3	HMI He	528	15.10
Co	59	72	3	HMI He	100	101.17
Ni	60	72	3	HMI He	1113	11.67
Cu	63	72	3	HMI He	310	3.12
Zn	66	72	3	HMI He	175	11.78
As	75	72	3	HMI He	40	205.00
Se	78	72	2	HMI H2	3	1623.80
(Se)	78	72	3	HMI He	43	15.39
Sr	88	72	3	HMI He	90	52.76
Mo	95	115	3	HMI He	80	131.49
Ag	107	115	3	HMI He	22	268.08
Cd	111	115	3	HMI He	3	2598.08
Sn	120	115	3	HMI He	345	10.57
Sb	121	115	3	HMI He	23	140.40
Ba	137	115	3	HMI He	62	114.92
Tl	205	193	3	HMI He	152	13.11
(Pb)	206	193	3	HMI He	202	4.32
(Pb)	207	193	3	HMI He	448	2.26
Pb	208	193	3	HMI He	1035	0.40
Th	232	193	3	HMI He	9317	0.28
U	238	193	3	HMI He	2102	1.21

QC ISTD Table

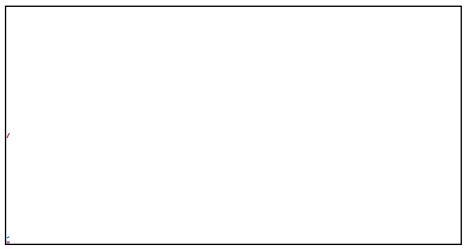
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6261358	4.80	3460228	180.95	60	120	IS Failed
Sc (IS)	45	3	HMI He	863843	26.82	505695	170.82	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3791234	4.78	2187657	173.30	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1057661	28.04	654972	161.48	60	120	IS Failed
In Internal Standard	115	3	HMI He	3913234	25.35	2371544	165.01	60	120	IS Failed
Ir (IS)	193	3	HMI He	8492440	25.47	5024616	169.02	60	120	IS Failed

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:55:42 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[No Gas]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	200000	3796	3822	0.946
2	59	100000	4792	4861	2 014
3	63	100000	87	98	15.874
4	70	500000	238	236	1.199
5	80	1000000	1052236	1049470	0.373
6	89	100000	7628	7727	1.813
7	115	2000000	9048	9011	0.593
8	118	100000	147	138	9 771
9	137	50000	1150	1134	2.060
10	140	20000	9278	9070	3.242
11	205	2000000	7199	7110	1.770
12	6	5000000	4870	4963	2.645
13	70/140	1000	2.565 %	2.603 %	2.044
14	156/140	500	0 291 %	0 253 %	21.439

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-50 V
Extract 2	200 0 V	Q1 Exit		Def ect	12 6 V
Omega Bias	95 V	Cel Focus		P ate Bias	35 V
Omega Lens	8.0 V	Cel Entrance	30 V		

Cell Parameters

Use Gas	No	3rd Gas F ow		Axia Acce eration	
He F ow	0.0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0 0 mL/min	OctP Bias	8 0 V	Energy Discrimination	5 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	-3 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Current Signal

Torch H	0 4 mm	Torch V	0 3 mm		

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

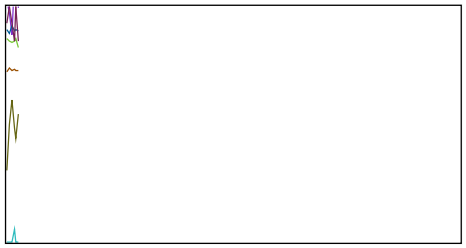
Name	Value	Unit
F/BK Press	2.11E+2	Pa
Ana yzer Press	7 25E 5	Pa
Reflected Power	0	W
Forward Power	1599	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:55:59 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[HMI H2]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	100	100	93	4.047
2	9	200	199	200	7 260
3	59	1000	747	750	2 051
4	63	20	11	5	60 078
5	70	100	100	110	6.567
6	78	20	0	0	244 949
7	89	5000	6404	6294	1.209
8	115	10000	8267	8519	1 644
9	118	100	141	143	8.632
10	137	1000	1069	1097	1.817
11	140	5000	5878	5900	2.664
12	205	10000	7259	7290	0.791
13	238	10000	8988	9012	1.188
14	70/140	2	1 701 %	1 861 %	7 553
15	156/140	1	0.544 %	0.479 %	21 242

Integration Time [sec] 0 1

Tune Parameters

Plasma Parameters

P asma Mode		Nebulizer Gas	0.64 L/min	Dilution Gas	0.26 L/min
RF Power	1600 W	Option Gas		Auxi iary Gas	0.90 L/min
RF Matching	1 40 V	Nebulizer Pump	0 10 rps	P asma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance		Cel Exit	60 V
Extract 2	190 0 V	Q1 Exit		Def ect	0 8 V
Omega Bias	95 V	Cel Focus		P ate Bias	60 V
Omega Lens	7 9 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	0 0 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	5 0 mL/min	OctP Bias	18.0 V	Energy Discrimination	3 0 V

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Current Signal

Torch

Torch H	0 4 mm	Torch V	-0 3 mm		

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

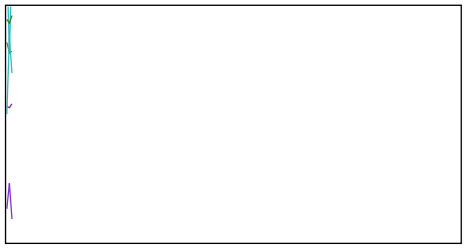
Name	Value	Unit
F/BK Press	2.20E+2	Pa
Ana yzer Press	2.35E 4	Pa
Reflected Power	0	W
Forward Power	1600	W
Tune/ISTD Va ve		

Current Signal

Operator Name	Denver Meta s
Acq. Date-Time	4/19/2023 11:56:11 AM
Instrument Name	G8422A SG22251392
Batch Folder	D:\Agilent\ICPMH\1\DATA\79_041923.b

[HMI He]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	53	20	22	20	17 321
2	59	2000	1520	1483	2 247
3	66	50	36	31	25.797
4	70	50	58	58	20 690
5	78	20	3	3	21 651
6	115	2000	2037	2171	5.418
7	118	20	43	37	17 745
8	137	500	292	288	1 402
9	140	5000	4048	4099	2.749
10	205	5000	4799	4720	1.628
11	51/59	1	1.316 %	1.440 %	7.495
12	70/140	2	1.433 %	1.421 %	23 001
13	156/140	1	0.099 %	0.163 %	47 312

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebulizer Gas	0 64 L/min	Dilution Gas	0 26 L/min
RF Power	1600 W	Option Gas	---	Auxi iary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	P asma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cel Exit	-60 V
Extract 2	200 0 V	Q1 Exit		Def ect	0 2 V
Omega Bias	100 V	Cel Focus		P ate Bias	55 V
Omega Lens	8.2 V	Cel Entrance	40 V		

Cell Parameters

Use Gas	Yes	3rd Gas F ow		Axia Acce eration	
He F ow	4.3 mL/min	4th Gas F ow		OctP RF	200 V
H2 F ow	0.0 mL/min	OctP Bias	18 0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0.05		

Torch

Torch H	0.4 mm	Torch V	0.3 mm		

Current Signal

EM

Discriminator	3 2 mV	Ana og HV	2107 V	Pu se HV	1214 V

Meter

Name	Value	Unit
F/BK Press	2 13E+2	Pa
Ana yzer Press	2 46E-4	Pa
Reflected Power	0	W
Forward Power	1599	W
Tune/ISTD Va ve		

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:03:48 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

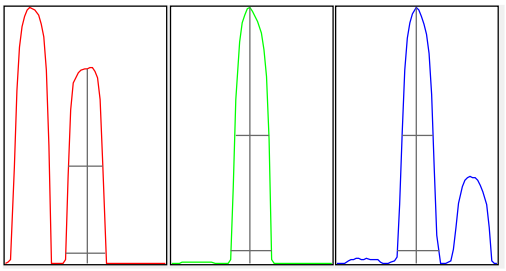
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2368	23683 69	0.619	5 000	
89		4594	45941 66	0.441	5 000	
205		3945	39452 88	0.410	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2385	2364	2380	2365	2348
89	4581	4592	4627	4596	4574
205	3943	3966	3956	3936	3925

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3738.86	7.05	6 90 7 10	
89	7792.04	89.00	88 90 89.10	
205	7082 03	205 00	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.742	0.900	
89	0.62	0.740	0.900	
205	0.58	0.771	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

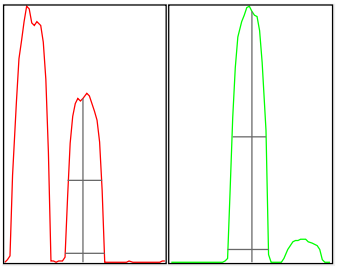
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	616 52	1 812	5.000	
9		119	1194 58	2.113	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	61	61	61	64	61
9	122	121	121	116	118

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	101 30	7 00	6.90 - 7.10	
9	199 16	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.741	0.900	
9	0.62	0.741	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		167	1667.65	3 184	5.000	
25		23	234 90	4 441	5.000	
26		31	311.61	5.056	5 000	Fai
59		874	8744 50	1.312	5 000	
103		2521	25210.46	0 616	5.000	
115		1169	11693.27	0 334	5.000	
205		2568	25683.92	0 311	5.000	
206		835	8351 79	0.437	5 000	
207		718	7179 82	0.950	5 000	

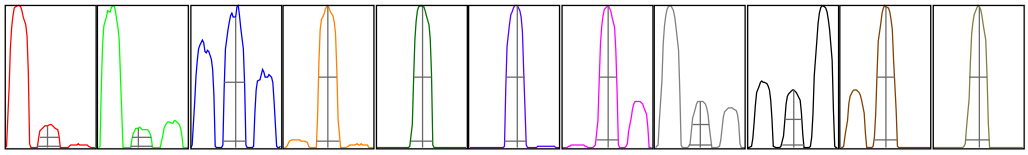
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1787	17869.62	0 558	5.000	
238		3626	36263.35	0 868	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	173	170	168	160	163
25	25	23	22	23	25
26	33	32	31	31	29
59	890	875	880	861	866
103	2534	2509	2538	2522	2502
115	1173	1170	1163	1168	1172
205	2558	2563	2577	2568	2576
206	838	835	839	830	835
207	723	725	720	711	711
208	1801	1790	1789	1775	1780
238	3644	3618	3668	3584	3618

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	265.03	23.95	23 90 24.10	
25	38.55	24.85	24 90 25.10	Fail
26	49 05	26 00	25.90 - 26 10	
59	1479 29	59 00	58.90 - 59 10	
103	4374.57	103.05	102.90 103.10	
115	2045.31	115.10	114.90 115.10	
205	4619.84	205.05	204.90 205.10	
206	1514 26	206 05	205 90 - 206 10	
207	1316 19	207 05	206 90 - 207 10	
208	3238.59	208.05	207.90 208.10	
238	6568.26	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 64	0 741	0 900	
25	0.64	0.743	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.744	0.900	
59	0.62	0.777	0.900	
103	0 60	0 734	0 900	
115	0 59	0 692	0 900	
205	0.58	0.737	0.900	
206	0.56	0.724	0.900	
207	0.56	0.734	0.900	
208	0 57	0 758	0 900	
238	0 57	0 776	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:12:16 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

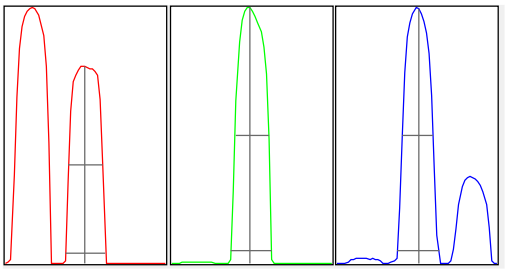
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2343	23429 98	0.525	5 000	
89		4553	45533 05	0.175	5 000	
205		3885	38854 32	0.405	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2332	2350	2359	2344	2330
89	4555	4546	4553	4547	4566
205	3872	3869	3907	3886	3894

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3733.04	7.00	6 90 7 10	
89	7702.53	89.00	88 90 89.10	
205	6978 55	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.741	0.900	
89	0.62	0.740	0.900	
205	0.58	0.770	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

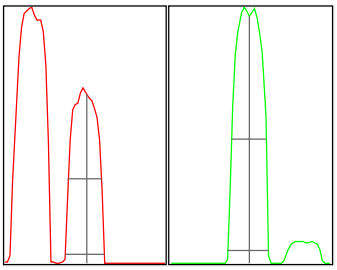
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		60	604 02	1 152	5.000	
9		120	1197 78	2.470	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	60	60	60	62	60
9	121	115	122	119	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	100 35	7 05	6.90 - 7.10	
9	191 91	9 00	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.740	0.900	
9	0.63	0.742	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		165	1646.75	1 767	5.000	
25		25	251 40	3 437	5.000	
26		30	302.81	6.894	5 000	Fai
59		874	8737 48	0.430	5 000	
103		2508	25080.94	0 353	5.000	
115		1161	11609.59	1 029	5.000	
205		2535	25345.57	0 415	5.000	
206		828	8281 54	1.404	5 000	
207		711	7107 08	0.581	5 000	

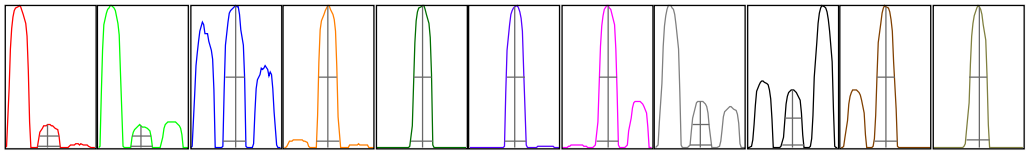
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1756	17555.50	0 234	5.000	
238		3560	35602.23	0 975	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	165	162	164	169	163
25	26	24	26	26	25
26	28	32	29	30	33
59	871	873	877	878	869
103	2505	2514	2509	2518	2495
115	1163	1178	1150	1149	1165
205	2525	2530	2527	2550	2541
206	814	840	832	818	837
207	709	711	705	717	711
208	1751	1760	1752	1758	1758
238	3513	3610	3557	3553	3568

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	271.13	23.95	23 90 24.10	
25	43.15	24.95	24 90 25.10	
26	49 90	26 00	25.90 - 26 10	
59	1465 38	59 00	58.90 - 59 10	
103	4375.58	103.05	102.90 103.10	
115	2034.75	115.05	114.90 115.10	
205	4548.33	205.05	204.90 205.10	
206	1498 74	206 05	205 90 - 206 10	
207	1316 74	207 00	206 90 - 207 10	
208	3194.53	208.05	207.90 208.10	
238	6501.97	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.63	0.741	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.63	0.741	0.900	
59	0.62	0.778	0.900	
103	0 59	0 733	0 900	
115	0 59	0 692	0 900	
205	0.57	0.736	0.900	
206	0.56	0.717	0.900	
207	0.56	0.733	0.900	
208	0 57	0 754	0 900	
238	0 57	0 773	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:22:24 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

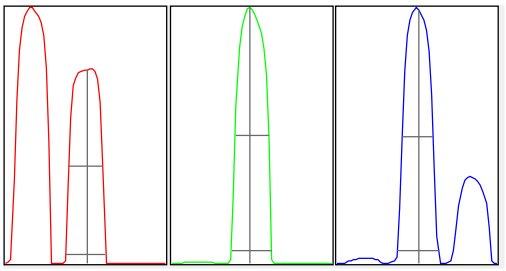
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2268	22679 02	6.280	5 000	Fai
89		4370	43701 67	5.855	5 000	Fai
205		3674	36738 02	7.214	5 000	Fai

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2292	2017	2329	2345	2357
89	4339	3937	4540	4538	4498
205	3712	3214	3755	3800	3888

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3620.00	7.05	6 90 7 10	
89	7467.06	89.00	88 90 89.10	
205	6528 70	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.64	0.740	0.900	
89	0.61	0.739	0.900	
205	0.58	0.769	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode --- Nebu izer Gas Di ution Gas 0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

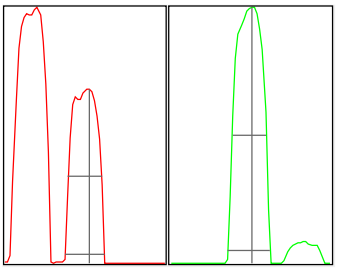
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	622 42	2 779	5.000	
9		121	1212 18	2.034	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	61	62	62	61	65
9	117	121	122	124	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	103 50	7 10	6.90 - 7.10	
9	202 36	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.62	0.740	0.900	
9	0.62	0.780	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm		

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		164	1638.35	1 204	5.000	
25		24	244 80	3 996	5.000	
26		30	301.11	3.829	5 000	
59		870	8700 25	0.981	5 000	
103		2489	24888.79	0 570	5.000	
115		1143	11431.44	0 367	5.000	
205		2513	25126.52	0 433	5.000	
206		823	8228 81	1.018	5 000	
207		709	7085 06	1.110	5 000	

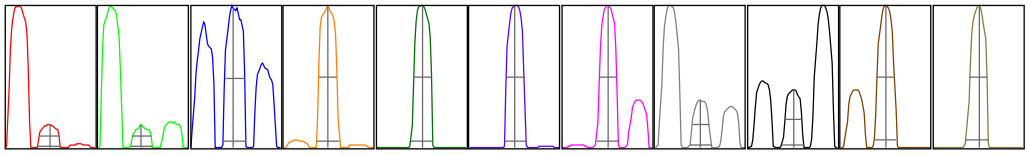
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1749	17493.20	1 169	5.000	
238		3571	35705.33	0 629	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	162	163	167	164	164
25	26	24	24	25	23
26	32	29	30	30	30
59	871	879	874	856	870
103	2495	2477	2487	2510	2476
115	1145	1149	1141	1138	1143
205	2524	2507	2499	2510	2524
206	830	818	833	812	821
207	715	716	700	700	710
208	1721	1760	1771	1736	1759
238	3541	3600	3563	3583	3565

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	270.33	24.00	23 90 24.10	
25	44.00	24.95	24 90 25.10	
26	48 65	25 95	25.90 - 26 10	
59	1466 58	59 00	58.90 - 59 10	
103	4329.68	103.05	102.90 103.10	
115	1993.58	115.05	114.90 115.10	
205	4507.84	205.05	204.90 205.10	
206	1515 76	206 05	205 90 - 206 10	
207	1304 28	207 05	206 90 - 207 10	
208	3207.15	208.05	207.90 208.10	
238	6505.08	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.63	0.745	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.64	0.743	0.900	
59	0.62	0.778	0.900	
103	0 59	0 733	0 900	
115	0 59	0 692	0 900	
205	0.57	0.736	0.900	
206	0.56	0.718	0.900	
207	0.56	0.733	0.900	
208	0 56	0 754	0 900	
238	0 57	0 736	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

US EPA Tune Check Report

Operator Name	Denver Metals
Acq/Data Batch	D:\Agi ent\ICPMH\1\DATA\79 041923.b
Acq. Date-Time	4/19/2023 12:30:35 PM
Report Comment	---
Instrument Name	G8422A SG22251392

[No Gas]

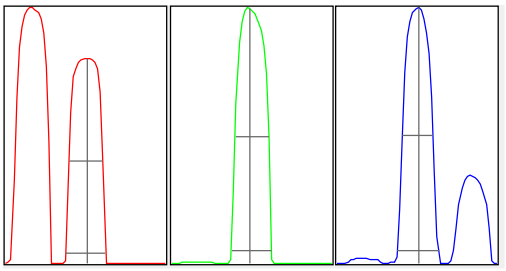
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		2332	23319 89	0.259	5 000	
89		4495	44946 11	0.530	5 000	
205		3765	37653 97	0.292	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	2328	2340	2335	2334	2324
89	4494	4494	4519	4509	4456
205	3782	3763	3762	3752	3768

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	3741.12	7.05	6 90 7 10	
89	7577.14	89.00	88 90 89.10	
205	6771 30	205 05	204 90 - 205 10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (F ag)
7	0.63	0.740	0.900	
89	0.62	0.740	0.900	
205	0.57	0.768	0.900	

Integration Time [sec] 0 1

Acquisition Time [sec] 92.3700000000001

Y Axis Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	8 0 V	Def ect	12 6 V
Extract 2	-200.0 V	Ce l Entrance	-30 V	Plate Bias	-35 V
Omega Bias	95 V	Ce l Exit	50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow		Energy Discriminatio	5.0 V
He Flow	0 0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	3.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI H2]

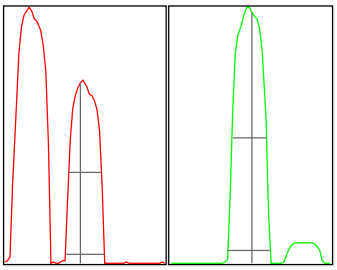
Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
7		62	622 22	2 332	5.000	
9		121	1211 48	1.028	5 000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	64	61	62	64	60
9	122	119	120	122	122

Integration Time [sec] 0 1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	106 10	6 95	6.90 - 7.10	
9	198 71	9 05	8.90 - 9.10	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
7	0.61	0.739	0.900	
9	0.63	0.780	0.900	

Integration Time [sec]	0 1
Acquisition Time [sec]	51.09
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode	---	Nebu izer Gas		Di ution Gas	0.26 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15.0 L/min
Samp e Depth	8 0 mm	S/C Temp			

Lens Parameters

Extract 1	0 0 V	Omega Lens	7 9 V	Def ect	-0 8 V
Extract 2	-190 0 V	Ce l Entrance	-40 V	Plate Bias	-60 V
Omega Bias	95 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow		Energy Discriminatio	3 0 V
He Flow	0 0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5 0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9996	QP Bias	15.0 V
Mass Offset	123	Axis Offset	0.05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0.4 mm	Torch V	0 3 mm

[HMI He]

Sensitivity

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
24		168	1683.25	2 072	5.000	
25		24	237 60	2 643	5.000	
26		31	313.51	4.696	5 000	
59		869	8690 25	0.751	5 000	
103		2475	24753.67	0 805	5.000	
115		1130	11297.36	0 840	5.000	
205		2492	24916.75	0 522	5.000	
206		818	8176 75	0.943	5 000	
207		701	7005 29	0.913	5 000	

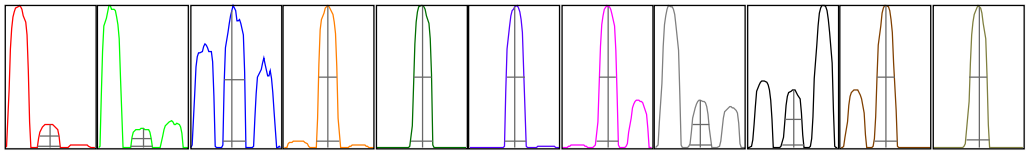
US EPA Tune Check Report

Mass	Conc. [ug/]	Count	CPS	RSD%	RSD% (Required)	RSD% (F ag)
208		1732	17320.34	0 753	5.000	
238		3531	35311.90	0 857	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	170	170	162	170	170
25	24	24	23	24	24
26	33	32	30	30	32
59	872	867	877	859	870
103	2489	2463	2446	2494	2484
115	1138	1141	1122	1119	1128
205	2469	2497	2499	2496	2498
206	808	828	813	820	819
207	696	709	706	695	697
208	1737	1750	1722	1735	1717
238	3493	3529	3576	3519	3539

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	274.48	24.00	23 90 24.10	
25	38.05	25.05	24 90 25.10	
26	50 65	25 90	25.90 - 26 10	
59	1460 77	59 00	58.90 - 59 10	
103	4340.01	103.05	102.90 103.10	
115	1976.06	115.05	114.90 115.10	
205	4474.77	205.05	204.90 205.10	
206	1505 20	206 05	205 90 - 206 10	
207	1293 06	207 05	206 90 - 207 10	
208	3179.14	208.05	207.90 208.10	
238	6410.45	238.05	237.90 238.10	

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
24	0 63	0 740	0 900	
25	0.65	0.744	0.900	

US EPA Tune Check Report

Mass	W 50%	W 5%	W 5% (Required)	W 5% (F ag)
26	0.65	0.742	0.900	
59	0.62	0.777	0.900	
103	0 59	0 732	0 900	
115	0 59	0 691	0 900	
205	0.57	0.736	0.900	
206	0.56	0.719	0.900	
207	0.55	0.732	0.900	
208	0 56	0 754	0 900	
238	0 57	0 772	0 900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235.339999999997
Y Axis	Linear

Tune Parameters

Plasma Parameters

P asma Mode		Nebu izer Gas		Di ution Gas	0 26 L/min
RF Power	1600 W	Option Gas		Auxiliary Gas	0 90 L/min
RF Matching		Nebu izer Pump		Plasma Gas	15 0 L/min
Samp e Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.2 V	Def ect	0.2 V
Extract 2	200.0 V	Ce l Entrance	40 V	Plate Bias	55 V
Omega Bias	100 V	Ce l Exit	60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discriminatio	3 0 V
He Flow	4.3 mL/min	OctP Bias	18 0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0 9996	QP Bias	-15 0 V
Mass Offset	123	Axis Offset	0 05		

Hardware Settings

EM

Discriminator	3.2 mV	Ana og HV	2107 V	Pulse HV	1214 V

Torch

Torch H	0 4 mm	Torch V	-0.3 mm

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
6		0.095136	☑
9		0.105250	☑
23		0.106345	☑
24		0.112207	☑
27		0.117441	☑
39		0.122445	☑
45		0.123608	☑
48		0.123190	☑
51		0.126432	☑
52		0.130208	☑
55		0.133122	☑
59		0.139351	☑
60		0.140186	☑
63		0.144222	☑
66		0.143375	☑
72		0.140891	☑
75		0.139603	☑
88		0.142791	☑
98		0.139456	☑
102		0.144294	☑
106		0.150388	☑
114		0.154121	☑
115		0.153759	☑

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
118		0.151558	☑
121		0.151549	☑
138		0.154070	☑
175		0.161681	☑
193		0.163213	☑
205		0.166749	☑
208		0.168611	☑
209		0.167650	☑
232		0.164717	☑
238		0.165737	☑

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	001SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:41:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	002SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:43:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	003SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:46:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	004SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:48:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	005SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:50:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	006SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:52:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	007SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:54:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	008SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:55:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	009SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:57:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	010SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T12:59:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	011SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:01:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	012SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:03:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	013SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:05:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	014SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:06:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	015SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:08:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	016SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:10:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	017SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:12:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	018SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:14:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	019SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:15:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	020SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:17:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	021SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:19:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	022SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:21:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	023SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:23:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	024SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:25:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:26:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	026SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:28:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	027SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:30:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	028SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:32:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	029SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:34:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	030SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:35:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	031CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T13:37:45-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	15203	0.02
Mg	24	45	3	HMI He	220	14.30
Al	27	45	3	HMI He	97	16.33
K	39	45	3	HMI He	24506	0.03
Ca	40	45	2	HMI H2	9907	0.03
V	51	72	3	HMI He	823	0.93
Cr	52	72	3	HMI He	2084	0.05
Mn	55	72	3	HMI He	173	5.35
Fe	56	72	2	HMI H2	31461	0.02
Co	59	72	3	HMI He	52	60.24
Ni	60	72	3	HMI He	371	3.29
Cu	63	72	3	HMI He	530	3.21
Zn	66	72	3	HMI He	190	13.65
As	75	72	3	HMI He	58	37.00
Se	78	72	2	HMI H2	1	25980.76
(Se)	78	72	3	HMI He	22	162.85
Sr	88	72	3	HMI He	18	309.78
Mo	95	115	3	HMI He	40	125.06
Ag	107	115	3	HMI He	18	85.98
Cd	111	115	3	HMI He	42	44.03
Sn	120	115	3	HMI He	1163	0.31
Sb	121	115	3	HMI He	88	40.71
Ba	137	115	3	HMI He	50	72.16
Tl	205	193	3	HMI He	4050	0.07
(Pb)	206	193	3	HMI He	505	2.57
(Pb)	207	193	3	HMI He	580	0.93
Pb	208	193	3	HMI He	2139	0.23
Th	232	193	3	HMI He	5207	0.04
U	238	193	3	HMI He	1538	0.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3892690	1.21
Sc (IS)	45	3	HMI He	558682	0.71
Ge Internal standard	72	2	HMI H2	2351137	1.90
Ge Internal standard	72	3	HMI He	686329	0.71
In Internal Standard	115	3	HMI He	2596034	0.99
Ir (IS)	193	3	HMI He	5774995	1.94

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	032CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:39:33-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	031CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	649.52
Na	23	45	3	HMI He	10742393	0.00
Mg	24	45	3	HMI He	1134826	0.00
Al	27	45	3	HMI He	107	30.84
K	39	45	3	HMI He	895777	0.00
V	51	72	3	HMI He	818	1.06
Cr	52	72	3	HMI He	2189	0.33
Mn	55	72	3	HMI He	258	3.03
Co	59	72	3	HMI He	78	20.52
Ni	60	72	3	HMI He	510	2.31
Cu	63	72	3	HMI He	651	0.41
Zn	66	72	3	HMI He	351	6.22
As	75	72	3	HMI He	55	43.76
Se	78	72	2	HMI H2	3	2078.46
(Se)	78	72	3	HMI He	17	207.80
Sr	88	72	3	HMI He	278	6.14
Mo	95	115	3	HMI He	47	35.08
Ag	107	115	3	HMI He	28	71.91
Cd	111	115	3	HMI He	47	103.57
Sn	120	115	3	HMI He	1046	0.67
Sb	121	115	3	HMI He	80	20.68
Ba	137	115	3	HMI He	238	5.73
Tl	205	193	3	HMI He	2547	0.12
(Pb)	206	193	3	HMI He	511	3.18
(Pb)	207	193	3	HMI He	561	1.39
Pb	208	193	3	HMI He	2102	0.24
Th	232	193	3	HMI He	4807	0.14
U	238	193	3	HMI He	1648	0.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4062280	1.43	3892690	104.36	60	120	
Sc (IS)	45	3	HMI He	567214	0.07	558682	101.53	60	120	
Ge Internal standard	72	2	HMI H2	2234245	1.68	2351137	95.03	60	120	
Ge Internal standard	72	3	HMI He	663901	0.73	686329	96.73	60	120	
In Internal Standard	115	3	HMI He	2619267	1.35	2596034	100.89	60	120	
Ir (IS)	193	3	HMI He	5907923	1.45	5774995	102.30	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	033CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:41:20-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	031CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4663	0.06
Na	23	45	3	HMI He	228024	0.00
Mg	24	45	3	HMI He	111342	0.00
Al	27	45	3	HMI He	43286	0.01
K	39	45	3	HMI He	112991	0.00
V	51	72	3	HMI He	60009	0.00
Cr	52	72	3	HMI He	75692	0.00
Mn	55	72	3	HMI He	39326	0.00
Co	59	72	3	HMI He	126170	0.00
Ni	60	72	3	HMI He	36012	0.00
Cu	63	72	3	HMI He	98515	0.00
Zn	66	72	3	HMI He	15870	0.02
As	75	72	3	HMI He	10916	0.01
Se	78	72	2	HMI H2	5851	0.03
(Se)	78	72	3	HMI He	601	1.31
Sr	88	72	3	HMI He	106061	0.00
Mo	95	115	3	HMI He	48643	0.01
Ag	107	115	3	HMI He	167827	0.00
Cd	111	115	3	HMI He	23853	0.00
Sn	120	115	3	HMI He	76843	0.00
Sb	121	115	3	HMI He	74925	0.00
Ba	137	115	3	HMI He	24853	0.01
Tl	205	193	3	HMI He	386055	0.00
(Pb)	206	193	3	HMI He	129422	0.00
(Pb)	207	193	3	HMI He	113785	0.00
Pb	208	193	3	HMI He	521753	0.00
Th	232	193	3	HMI He	529561	0.00
U	238	193	3	HMI He	549424	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3974834	2.44	3892690	102.11	60	120	
Sc (IS)	45	3	HMI He	572255	0.57	558682	102.43	60	120	
Ge Internal standard	72	2	HMI H2	2406898	0.94	2351137	102.37	60	120	
Ge Internal standard	72	3	HMI He	712494	0.83	686329	103.81	60	120	
In Internal Standard	115	3	HMI He	2634865	0.10	2596034	101.50	60	120	
Ir (IS)	193	3	HMI He	5938117	1.80	5774995	102.82	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	034_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:43:08-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.074	ppb	2.894	1756	40	95.2	90	110	
Na	23	3	45	12422.210	ppb	2.590	1360213	12800	97.0	90	110	
Mg	24	3	45	4563.419	ppb	1.861	261473	4800	95.1	90	110	
Al	27	3	45	786.237	ppb	1.429	17084	800	98.3	90	110	
K	39	3	45	4723.360	ppb	1.284	232681	4800	98.4	90	110	
Ca	40	2	45	5032.893	ppb	2.779	2698189	4800	104.9	90	110	
V	51	3	72	41.551	ppb	1.953	24801	40	103.9	90	110	
Cr	52	3	72	41.694	ppb	2.696	32006	40	104.2	90	110	
Mn	55	3	72	42.460	ppb	1.165	16390	40	106.2	90	110	
Fe	56	2	72	806.726	ppb	2.562	1272035	800	100.8	90	110	
Co	59	3	72	41.216	ppb	2.797	50739	40	103.0	90	110	
Ni	60	3	72	41.898	ppb	2.073	14936	40	104.7	90	110	
Cu	63	3	72	42.051	ppb	1.688	40718	40	105.1	90	110	
Zn	66	3	72	82.283	ppb	1.344	12771	80	102.9	90	110	
As	75	3	72	41.410	ppb	3.799	4442	40	103.5	90	110	
Se	78	2	72	40.535	ppb	5.141	2334	40	101.3	90	110	
Sr	88	3	72	122.900	ppb	2.320	63573	120	102.4	90	110	
Mo	95	3	115	39.950	ppb	0.643	19695	40	99.9	90	110	
Ag	107	3	115	79.510	ppb	2.259	135049	80	99.4	90	110	
Cd	111	3	115	39.885	ppb	2.723	9654	40	99.7	90	110	
Sn	120	3	115	39.389	ppb	3.956	31351	40	98.5	90	110	
Sb	121	3	115	38.890	ppb	2.406	29545	40	97.2	90	110	
Ba	137	3	115	39.019	ppb	2.082	9845	40	97.5	90	110	
Tl	205	3	193	40.956	ppb	2.435	158694	40	102.4	90	110	
(Pb)	206	3	193	41.113	ppb	0.891	52902	40	102.8	90	110	
(Pb)	207	3	193	40.662	ppb	0.632	46079	40	101.7	90	110	
Pb	208	3	193	41.132	ppb	0.713	213401	40	102.8	90	110	
Th	232	3	193	81.341	ppb	0.792	426795	80	101.7	90	110	
U	238	3	193	43.848	ppb	2.189	238966	40	109.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3944042	1.80	3892690	101.32	60	120	
Sc (IS)	45	3	HMI He	572458	0.94	558682	102.47	60	120	
Ge Internal standard	72	2	HMI H2	2367950	0.88	2351137	100.72	60	120	
Ge Internal standard	72	3	HMI He	694948	1.86	686329	101.26	60	120	
In Internal Standard	115	3	HMI He	2667207	1.57	2596034	102.74	60	120	
Ir (IS)	193	3	HMI He	5868335	0.85	5774995	101.62	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	035_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:44:54-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	031CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.109	ppb	58.9	7	0.5	
Na	23	3	14.222	ppb	12.1	17041	25	
Mg	24	3	-0.078	ppb	-198.0	220	25	
Al	27	3	0.681	ppb	140.3	113	15	
K	39	3	-14.262	ppb	-150.5	24376	50	
V	51	3	0.106	ppb	76.2	893	1	
Cr	52	3	0.198	ppb	106.0	2249	1	
Mn	55	3	-0.053	ppb	-68.1	155	0.5	
Co	59	3	0.008	ppb	80.0	62	0.5	
Ni	60	3	0.016	ppb	1285.5	381	1	
Cu	63	3	-0.027	ppb	-190.8	510	1	
Zn	66	3	0.216	ppb	215.7	225	5	
As	75	3	-0.131	ppb	-219.3	45	1	
Se	78	2	0.138	ppb	15.7	9	1	
Sr	88	3	0.019	ppb	106.6	28	0.5	
Mo	95	3	0.057	ppb	89.3	68	0.5	
Ag	107	3	0.016	ppb	42.0	47	1	
Cd	111	3	0.024	ppb	214.3	48	0.5	
Sn	120	3	-0.086	ppb	-79.7	1121	1	
Sb	121	3	-0.022	ppb	-94.2	73	0.6	
Ba	137	3	-0.037	ppb	-232.2	42	0.5	
Tl	205	3	-0.452	ppb	-4.6	2416	0.1	
(Pb)	206	3	-0.046	ppb	-30.2	456	1	
(Pb)	207	3	0.037	ppb	52.3	631	1	
Pb	208	3	-0.035	ppb	-81.9	1997	0.5	
Th	232	3	3.245	ppb	11.8	22149	1	>RL
U	238	3	0.026	ppb	40.2	1704	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3933329	1.01	3892690	101.04	60	120	
Sc (IS)	45	3	HMI He	569801	0.55	558682	101.99	60	120	
Ge Internal standard	72	2	HMI H2	2382195	1.10	2351137	101.32	60	120	
Ge Internal standard	72	3	HMI He	693916	0.36	686329	101.11	60	120	
In Internal Standard	115	3	HMI He	2649286	2.26	2596034	102.05	60	120	
Ir (IS)	193	3	HMI He	5879016	0.69	5774995	101.80	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	036SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:46:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1427.20	2	2000	
Na	23	3	45	12.131	ppb	12.131	24.38	18347	400000	
Mg	24	3	45	12.469	ppb	12.469	25.43	1021	400000	
Al	27	3	45	7.654	ppb	7.654	38.30	287	400000	
K	39	3	45	-70.740	ppb	-70.740	-41.03	23908	400000	
Ca	40	2	45	31.260	ppb	31.260	1.61	29745	400000	
V	51	3	72	-0.988	ppb	-0.988	-2.91	288	2000	
Cr	52	3	72	-0.809	ppb	-0.809	-14.90	1678	5000	
Mn	55	3	72	0.062	ppb	0.062	61.30	218	10000	
Fe	56	2	72	8.931	ppb	8.931	18.15	50499	10000	
Co	59	3	72	0.016	ppb	0.016	114.96	78	2000	
Ni	60	3	72	-0.030	ppb	-0.030	-272.70	401	5000	
Cu	63	3	72	-0.082	ppb	-0.082	-31.60	503	5000	
Zn	66	3	72	-0.295	ppb	-0.295	-83.92	162	5000	
As	75	3	72	-0.371	ppb	-0.371	-26.39	22	2000	
Se	78	2	72	0.145	ppb	0.145	21.42	10	2000	
Sr	88	3	72	0.320	ppb	0.320	11.30	202	4000	
Mo	95	3	115	0.004	ppb	0.004	1226.58	47	2000	
Ag	107	3	115	0.011	ppb	0.011	70.59	42	100	
Cd	111	3	115	-0.107	ppb	-0.107	-9.27	18	2000	
Sn	120	3	115	-1.232	ppb	-1.232	-4.83	273	2000	
Sb	121	3	115	-0.033	ppb	-0.033	-32.61	72	1000	
Ba	137	3	115	-0.021	ppb	-0.021	-242.38	50	5000	
Tl	205	3	193	-0.807	ppb	-0.807	-1.02	1188	2000	
(Pb)	206	3	193	-0.060	ppb	-0.060	-13.10	485	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-2303.71	650	100	
Pb	208	3	193	-0.044	ppb	-0.044	-11.71	2161	5000	
Th	232	3	193	-0.151	ppb	-0.151	-34.62	5000	2000	
U	238	3	193	0.031	ppb	0.031	44.62	1921	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386792	0.70	3892690	112.69	60	120	
Sc (IS)	45	3	HMI He	621731	1.02	558682	111.29	60	120	
Ge Internal standard	72	2	HMI H2	2631494	0.70	2351137	111.92	60	120	
Ge Internal standard	72	3	HMI He	761976	0.71	686329	111.02	60	120	
In Internal Standard	115	3	HMI He	2892268	2.63	2596034	111.41	60	120	
Ir (IS)	193	3	HMI He	6507059	1.27	5774995	112.68	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	037SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:48:44-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	031CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.032	ppb	0.032	186.24	3	2000	
Na	23	3	45	2.294	ppb	2.294	314.20	16984	400000	
Mg	24	3	45	10.413	ppb	10.413	20.13	881	400000	
Al	27	3	45	7.463	ppb	7.463	38.39	280	400000	
K	39	3	45	-51.796	ppb	-51.796	-37.44	24533	400000	
Ca	40	2	45	31.991	ppb	31.991	2.93	29507	400000	
V	51	3	72	-0.930	ppb	-0.930	-6.17	320	2000	
Cr	52	3	72	-0.820	ppb	-0.820	-16.38	1643	5000	
Mn	55	3	72	0.143	ppb	0.143	33.29	248	10000	
Fe	56	2	72	6.499	ppb	6.499	26.29	45651	10000	
Co	59	3	72	0.005	ppb	0.005	293.36	63	2000	
Ni	60	3	72	-0.061	ppb	-0.061	-143.05	383	5000	
Cu	63	3	72	-0.072	ppb	-0.072	-78.50	505	5000	
Zn	66	3	72	-0.532	ppb	-0.532	-30.94	120	5000	
As	75	3	72	-0.338	ppb	-0.338	-35.11	25	2000	
Se	78	2	72	0.062	ppb	0.062	78.10	5	2000	
Sr	88	3	72	0.293	ppb	0.293	26.26	183	4000	
Mo	95	3	115	0.025	ppb	0.025	118.22	57	2000	
Ag	107	3	115	0.011	ppb	0.011	90.40	40	100	
Cd	111	3	115	-0.068	ppb	-0.068	-98.26	28	2000	
Sn	120	3	115	-1.173	ppb	-1.173	-2.03	317	2000	
Sb	121	3	115	-0.071	ppb	-0.071	-29.61	40	1000	
Ba	137	3	115	-0.030	ppb	-0.030	-97.12	47	5000	
Tl	205	3	193	-0.838	ppb	-0.838	-2.38	1028	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-27.31	460	100	
(Pb)	207	3	193	-0.033	ppb	-0.033	-208.78	595	100	
Pb	208	3	193	-0.056	ppb	-0.056	-11.73	2036	5000	
Th	232	3	193	-0.172	ppb	-0.172	-16.74	4750	2000	
U	238	3	193	0.052	ppb	0.052	33.63	1991	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4289210	0.30	3892690	110.19	60	120	
Sc (IS)	45	3	HMI He	614573	1.76	558682	110.00	60	120	
Ge Internal standard	72	2	HMI H2	2591903	0.38	2351137	110.24	60	120	
Ge Internal standard	72	3	HMI He	749726	1.21	686329	109.24	60	120	
In Internal Standard	115	3	HMI He	2849472	2.56	2596034	109.76	60	120	
Ir (IS)	193	3	HMI He	6330898	0.80	5774995	109.63	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	038CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T13:50:34-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	5	2000.00
Na	23	45	3	HMI He	16212	0.01
Mg	24	45	3	HMI He	204	16.97
Al	27	45	3	HMI He	70	61.16
K	39	45	3	HMI He	24416	0.02
Ca	40	45	2	HMI H2	10237	0.01
V	51	72	3	HMI He	830	0.13
Cr	52	72	3	HMI He	2006	0.16
Mn	55	72	3	HMI He	180	6.73
Fe	56	72	2	HMI H2	29695	0.02
Co	59	72	3	HMI He	37	187.24
Ni	60	72	3	HMI He	353	7.13
Cu	63	72	3	HMI He	553	0.74
Zn	66	72	3	HMI He	187	5.80
As	75	72	3	HMI He	77	19.65
Se	78	72	2	HMI H2	1	12990.38
(Se)	78	72	3	HMI He	25	211.80
Sr	88	72	3	HMI He	12	924.61
Mo	95	115	3	HMI He	38	119.55
Ag	107	115	3	HMI He	15	587.95
Cd	111	115	3	HMI He	27	226.17
Sn	120	115	3	HMI He	888	0.37
Sb	121	115	3	HMI He	67	79.86
Ba	137	115	3	HMI He	28	95.18
Tl	205	193	3	HMI He	1656	0.14
(Pb)	206	193	3	HMI He	450	1.08
(Pb)	207	193	3	HMI He	566	0.80
Pb	208	193	3	HMI He	1784	0.08
Th	232	193	3	HMI He	9326	0.10
U	238	193	3	HMI He	1606	0.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3906300	1.35
Sc (IS)	45	3	HMI He	564278	0.18
Ge Internal standard	72	2	HMI H2	2319843	0.48
Ge Internal standard	72	3	HMI He	683756	1.23
In Internal Standard	115	3	HMI He	2609293	1.64
Ir (IS)	193	3	HMI He	5781904	1.76

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	039CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:52:22-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	038CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	10524268	0.00
Mg	24	45	3	HMI He	1127552	0.00
Al	27	45	3	HMI He	107	36.56
K	39	45	3	HMI He	914177	0.00
V	51	72	3	HMI He	865	1.17
Cr	52	72	3	HMI He	2187	0.35
Mn	55	72	3	HMI He	238	9.00
Co	59	72	3	HMI He	75	58.32
Ni	60	72	3	HMI He	513	0.58
Cu	63	72	3	HMI He	566	0.72
Zn	66	72	3	HMI He	393	0.37
As	75	72	3	HMI He	52	21.63
Se	78	72	2	HMI H2	3	4296.16
(Se)	78	72	3	HMI He	13	429.74
Sr	88	72	3	HMI He	280	4.82
Mo	95	115	3	HMI He	43	15.39
Ag	107	115	3	HMI He	30	96.27
Cd	111	115	3	HMI He	33	51.95
Sn	120	115	3	HMI He	986	0.44
Sb	121	115	3	HMI He	75	54.10
Ba	137	115	3	HMI He	193	10.82
Tl	205	193	3	HMI He	1379	0.23
(Pb)	206	193	3	HMI He	481	0.82
(Pb)	207	193	3	HMI He	581	0.60
Pb	208	193	3	HMI He	1914	0.44
Th	232	193	3	HMI He	6462	0.10
U	238	193	3	HMI He	1619	0.29

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3974477	2.57	3906300	101.75	60	120	
Sc (IS)	45	3	HMI He	572943	1.24	564278	101.54	60	120	
Ge Internal standard	72	2	HMI H2	2295156	2.80	2319843	98.94	60	120	
Ge Internal standard	72	3	HMI He	658531	0.28	683756	96.31	60	120	
In Internal Standard	115	3	HMI He	2604919	1.76	2609293	99.83	60	120	
Ir (IS)	193	3	HMI He	5871218	2.38	5781904	101.54	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	040CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T13:54:10-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	038CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4613	0.03
Na	23	45	3	HMI He	228432	0.00
Mg	24	45	3	HMI He	110616	0.00
Al	27	45	3	HMI He	42982	0.00
K	39	45	3	HMI He	111605	0.00
V	51	72	3	HMI He	60954	0.00
Cr	52	72	3	HMI He	76201	0.00
Mn	55	72	3	HMI He	38578	0.00
Co	59	72	3	HMI He	126473	0.00
Ni	60	72	3	HMI He	36263	0.00
Cu	63	72	3	HMI He	98347	0.00
Zn	66	72	3	HMI He	15790	0.01
As	75	72	3	HMI He	11211	0.01
Se	78	72	2	HMI H2	5820	0.01
(Se)	78	72	3	HMI He	688	1.57
Sr	88	72	3	HMI He	105245	0.00
Mo	95	115	3	HMI He	48623	0.00
Ag	107	115	3	HMI He	168890	0.00
Cd	111	115	3	HMI He	23996	0.01
Sn	120	115	3	HMI He	75408	0.00
Sb	121	115	3	HMI He	74287	0.00
Ba	137	115	3	HMI He	24162	0.00
Tl	205	193	3	HMI He	390694	0.00
(Pb)	206	193	3	HMI He	128772	0.00
(Pb)	207	193	3	HMI He	113250	0.00
Pb	208	193	3	HMI He	520116	0.00
Th	232	193	3	HMI He	531664	0.00
U	238	193	3	HMI He	547505	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4007727	2.96	3906300	102.60	60	120	
Sc (IS)	45	3	HMI He	566930	1.66	564278	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2451576	1.76	2319843	105.68	60	120	
Ge Internal standard	72	3	HMI He	713945	0.68	683756	104.42	60	120	
In Internal Standard	115	3	HMI He	2623653	1.87	2609293	100.55	60	120	
Ir (IS)	193	3	HMI He	5785749	1.71	5781904	100.07	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	041_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T13:55:57-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	37.542	ppb	3.969	1746	40	93.9	90	110	
Na	23	3	45	13081.363	ppb	0.681	1399561	12800	102.2	90	110	
Mg	24	3	45	4584.841	ppb	1.478	260240	4800	95.5	90	110	
Al	27	3	45	758.470	ppb	5.457	16620	800	94.8	90	110	
K	39	3	45	4653.277	ppb	2.368	233131	4800	96.9	90	110	
Ca	40	2	45	4990.228	ppb	0.493	2733606	4800	104.0	90	110	
V	51	3	72	40.980	ppb	1.554	24533	40	102.5	90	110	
Cr	52	3	72	42.293	ppb	2.337	32183	40	105.7	90	110	
Mn	55	3	72	42.725	ppb	1.594	15968	40	106.8	90	110	
Fe	56	2	72	831.084	ppb	0.497	1295086	800	103.9	90	110	
Co	59	3	72	42.257	ppb	1.426	51466	40	105.6	90	110	
Ni	60	3	72	42.257	ppb	1.119	14957	40	105.6	90	110	
Cu	63	3	72	42.032	ppb	1.606	40113	40	105.1	90	110	
Zn	66	3	72	81.691	ppb	0.612	12449	80	102.1	90	110	
As	75	3	72	40.727	ppb	1.699	4440	40	101.8	90	110	
Se	78	2	72	40.977	ppb	1.702	2312	40	102.4	90	110	
Sr	88	3	72	125.294	ppb	1.473	63469	120	104.4	90	110	
Mo	95	3	115	39.035	ppb	0.544	19533	40	97.6	90	110	
Ag	107	3	115	77.277	ppb	1.945	134127	80	96.6	90	110	
Cd	111	3	115	38.871	ppb	3.018	9602	40	97.2	90	110	
Sn	120	3	115	39.918	ppb	2.355	31491	40	99.8	90	110	
Sb	121	3	115	39.619	ppb	2.279	30288	40	99.0	90	110	
Ba	137	3	115	39.943	ppb	2.484	9935	40	99.9	90	110	
Tl	205	3	193	39.484	ppb	3.629	155560	40	98.7	90	110	
(Pb)	206	3	193	40.880	ppb	1.586	53032	40	102.2	90	110	
(Pb)	207	3	193	39.502	ppb	3.285	45161	40	98.8	90	110	
Pb	208	3	193	40.392	ppb	3.246	211592	40	101.0	90	110	
Th	232	3	193	79.116	ppb	1.792	423459	80	98.9	90	110	
U	238	3	193	43.524	ppb	4.279	239648	40	108.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3986563	1.80	3906300	102.05	60	120	
Sc (IS)	45	3	HMI He	576416	0.37	564278	102.15	60	120	
Ge Internal standard	72	2	HMI H2	2375558	0.37	2319843	102.40	60	120	
Ge Internal standard	72	3	HMI He	687241	1.16	683756	100.51	60	120	
In Internal Standard	115	3	HMI He	2696458	2.30	2609293	103.34	60	120	
Ir (IS)	193	3	HMI He	5799785	2.98	5781904	100.31	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	042_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:00:22-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.110	ppb	99.5	10	0.5	
Na	23	3	7.477	ppb	46.5	16991	25	
Mg	24	3	0.418	ppb	577.4	227	25	
Al	27	3	2.036	ppb	76.2	113	15	
K	39	3	4.847	ppb	408.7	24630	50	
V	51	3	0.137	ppb	126.2	918	1	
Cr	52	3	0.002	ppb	5532.9	2029	1	
Mn	55	3	-0.049	ppb	-152.1	163	0.5	
Co	59	3	-0.002	ppb	-566.1	35	0.5	
Ni	60	3	0.165	ppb	66.6	415	1	
Cu	63	3	-0.107	ppb	-48.7	458	1	
Zn	66	3	-0.113	ppb	-121.9	172	5	
As	75	3	0.008	ppb	2328.6	78	1	
Se	78	2	0.024	ppb	82.3	3	1	
Sr	88	3	0.075	ppb	23.6	50	0.5	
Mo	95	3	0.027	ppb	212.4	52	0.5	
Ag	107	3	0.007	ppb	87.6	27	1	
Cd	111	3	0.027	ppb	166.2	33	0.5	
Sn	120	3	0.040	ppb	247.2	930	1	
Sb	121	3	-0.004	ppb	-766.9	65	0.6	
Ba	137	3	0.041	ppb	210.1	38	0.5	
Tl	205	3	-0.101	ppb	-18.3	1261	0.1	
(Pb)	206	3	-0.054	ppb	-14.0	380	1	
(Pb)	207	3	-0.031	ppb	-202.5	531	1	
Pb	208	3	-0.020	ppb	-71.8	1679	0.5	
Th	232	3	2.669	ppb	13.7	23220	1	>RL
U	238	3	0.015	ppb	136.0	1686	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3860126	2.02	3906300	98.82	60	120	
Sc (IS)	45	3	HMI He	564381	0.80	564278	100.02	60	120	
Ge Internal standard	72	2	HMI H2	2328375	2.48	2319843	100.37	60	120	
Ge Internal standard	72	3	HMI He	691008	0.98	683756	101.06	60	120	
In Internal Standard	115	3	HMI He	2644486	2.21	2609293	101.35	60	120	
Ir (IS)	193	3	HMI He	5776591	0.92	5781904	99.91	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	043_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:02:13-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	-0.073	ppb	-83.0	2	0.5	
Na	23	3	6.912	ppb	18.6	17077	25	
Mg	24	3	1.214	ppb	93.6	274	25	
Al	27	3	0.743	ppb	34.4	87	15	
K	39	3	-12.844	ppb	-256.4	24061	50	
V	51	3	0.033	ppb	282.7	865	1	
Cr	52	3	-0.055	ppb	-463.7	2001	1	
Mn	55	3	-0.088	ppb	-85.3	150	0.5	
Co	59	3	0.001	ppb	1765.4	38	0.5	
Ni	60	3	0.026	ppb	318.2	370	1	
Cu	63	3	-0.112	ppb	-46.2	456	1	
Zn	66	3	0.119	ppb	127.6	208	5	
As	75	3	-0.058	ppb	-272.4	72	1	
Se	78	2	0.012	ppb	537.7	2	1	
Sr	88	3	0.019	ppb	129.9	22	0.5	
Mo	95	3	0.023	ppb	116.3	50	0.5	
Ag	107	3	-0.001	ppb	-162.2	13	1	
Cd	111	3	0.006	ppb	206.9	28	0.5	
Sn	120	3	-0.050	ppb	-137.2	863	1	
Sb	121	3	-0.003	ppb	-1394.6	65	0.6	
Ba	137	3	0.053	ppb	124.1	42	0.5	
Tl	205	3	-0.121	ppb	-5.5	1189	0.1	
(Pb)	206	3	-0.076	ppb	-37.5	353	1	
(Pb)	207	3	-0.020	ppb	-119.1	546	1	
Pb	208	3	-0.024	ppb	-58.6	1666	0.5	
Th	232	3	0.086	ppb	189.6	9802	1	
U	238	3	0.012	ppb	126.6	1676	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3952585	1.17	3906300	101.18	60	120	
Sc (IS)	45	3	HMI He	569282	0.55	564278	100.89	60	120	
Ge Internal standard	72	2	HMI H2	2377233	2.29	2319843	102.47	60	120	
Ge Internal standard	72	3	HMI He	696104	1.53	683756	101.81	60	120	
In Internal Standard	115	3	HMI He	2645120	0.21	2609293	101.37	60	120	
Ir (IS)	193	3	HMI He	5801436	1.21	5781904	100.34	60	120	

CRI Report

Sample Table

Sample Name	cri-7691038
Data File Name	044LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:07:35-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	038CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.566	ppb	29.296	32	1	56.6	80	120	>+/-30%
Na	23	3	45	284.797	ppb	0.943	46232	300	94.9	80	120	
Mg	24	3	45	47.184	ppb	10.179	2857	50	94.4	80	120	
Al	27	3	45	47.657	ppb	6.580	1101	50	95.3	80	120	
K	39	3	45	100.258	ppb	6.588	29153	120	83.5	80	120	
Ca	40	2	45	200.940	ppb	1.652	116685	200	100.5	80	120	
V	51	3	72	4.684	ppb	2.255	3567	5	93.7	80	120	
Cr	52	3	72	1.885	ppb	21.006	3384	2	94.3	80	120	
Mn	55	3	72	0.962	ppb	6.226	540	1	96.2	80	120	
Fe	56	2	72	48.154	ppb	5.557	102347	50	96.3	80	120	
Co	59	3	72	0.931	ppb	6.565	1178	1	93.1	80	120	
Ni	60	3	72	2.065	ppb	10.757	1076	2	103.3	80	120	
Cu	63	3	72	1.888	ppb	8.935	2347	2	94.4	80	120	
Zn	66	3	72	9.322	ppb	7.559	1598	10	93.2	80	120	
As	75	3	72	4.271	ppb	7.356	538	5	85.4	80	120	
Se	78	2	72	5.384	ppb	4.191	301	5	107.7	80	120	
Sr	88	3	72	4.807	ppb	4.129	2462	5	96.1	80	120	
Mo	95	3	115	1.873	ppb	5.477	953	2	93.6	80	120	
Ag	107	3	115	1.012	ppb	7.948	1733	1	101.2	80	120	
Cd	111	3	115	0.884	ppb	9.634	240	1	88.4	80	120	
Sn	120	3	115	8.351	ppb	3.628	7152	10	83.5	80	120	
Sb	121	3	115	1.772	ppb	2.655	1389	2	88.6	80	120	
Ba	137	3	115	0.982	ppb	34.334	267	1	98.2	80	120	
Tl	205	3	193	0.738	ppb	1.661	4527	1	73.8	80	120	>+/-30%
(Pb)	206	3	193	0.816	ppb	3.871	1496	1	81.6	80	120	
(Pb)	207	3	193	0.784	ppb	6.274	1449	1	78.4	80	120	>+/-30%
Pb	208	3	193	0.853	ppb	5.095	6203	1	85.3	80	120	
Th	232	3	193	0.601	ppb	23.137	12457	1	60.1	80	120	>+/-30%
U	238	3	193	0.917	ppb	3.485	6608	1	91.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3873805	2.16	3906300	99.17	60	120	
Sc (IS)	45	3	HMI He	571007	0.59	564278	101.19	60	120	
Ge Internal standard	72	2	HMI H2	2345423	2.06	2319843	101.10	60	120	
Ge Internal standard	72	3	HMI He	691858	0.82	683756	101.18	60	120	
In Internal Standard	115	3	HMI He	2636372	0.90	2609293	101.04	60	120	
Ir (IS)	193	3	HMI He	5782158	1.55	5781904	100.00	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	045SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:09:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.075	ppb	-0.075	-77.59	2	2000	
Na	23	3	45	-4.199	ppb	-4.199	-139.75	17007	400000	
Mg	24	3	45	10.822	ppb	10.822	15.30	868	400000	
Al	27	3	45	7.143	ppb	7.143	26.96	240	400000	
K	39	3	45	-53.199	ppb	-53.199	-13.91	23814	400000	
Ca	40	2	45	26.487	ppb	26.487	1.72	26465	400000	
V	51	3	72	-0.858	ppb	-0.858	-5.12	365	2000	
Cr	52	3	72	-0.996	ppb	-0.996	-18.01	1411	5000	
Mn	55	3	72	0.095	ppb	0.095	110.61	233	10000	
Fe	56	2	72	5.704	ppb	5.704	31.89	42494	10000	
Co	59	3	72	0.010	ppb	0.010	153.19	53	2000	
Ni	60	3	72	-0.222	ppb	-0.222	-33.18	302	5000	
Cu	63	3	72	-0.207	ppb	-0.207	-5.44	390	5000	
Zn	66	3	72	-0.274	ppb	-0.274	-86.16	158	5000	
As	75	3	72	-0.546	ppb	-0.546	-8.02	20	2000	
Se	78	2	72	0.008	ppb	0.008	387.19	2	2000	
Sr	88	3	72	0.293	ppb	0.293	14.27	173	4000	
Mo	95	3	115	0.004	ppb	0.004	473.74	43	2000	
Ag	107	3	115	0.009	ppb	0.009	17.36	32	100	
Cd	111	3	115	-0.033	ppb	-0.033	-155.33	20	2000	
Sn	120	3	115	-0.860	ppb	-0.860	-7.16	270	2000	
Sb	121	3	115	-0.042	ppb	-0.042	-37.10	38	1000	
Ba	137	3	115	0.075	ppb	0.075	102.38	50	5000	
Tl	205	3	193	-0.273	ppb	-0.273	-4.62	645	2000	
(Pb)	206	3	193	-0.034	ppb	-0.034	-41.24	441	100	
(Pb)	207	3	193	-0.041	ppb	-0.041	-44.93	565	100	
Pb	208	3	193	-0.028	ppb	-0.028	-34.37	1783	5000	
Th	232	3	193	-0.888	ppb	-0.888	-2.97	5085	2000	
U	238	3	193	0.029	ppb	0.029	25.60	1918	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4236402	0.90	3906300	108.45	60	120	
Sc (IS)	45	3	HMI He	608358	0.70	564278	107.81	60	120	
Ge Internal standard	72	2	HMI H2	2583669	1.39	2319843	111.37	60	120	
Ge Internal standard	72	3	HMI He	742975	0.38	683756	108.66	60	120	
In Internal Standard	115	3	HMI He	2813030	0.71	2609293	107.81	60	120	
Ir (IS)	193	3	HMI He	6278216	0.67	5781904	108.58	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	046SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:11:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	038CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.128	ppb	0.128	45.05	12	2000	
Na	23	3	45	-9.049	ppb	-9.049	-40.04	16389	400000	
Mg	24	3	45	8.648	ppb	8.648	34.35	734	400000	
Al	27	3	45	8.953	ppb	8.953	22.79	280	400000	
K	39	3	45	-44.755	ppb	-44.755	-48.92	24095	400000	
Ca	40	2	45	25.717	ppb	25.717	4.01	25897	400000	
V	51	3	72	-0.899	ppb	-0.899	-8.78	337	2000	
Cr	52	3	72	-0.716	ppb	-0.716	-12.44	1613	5000	
Mn	55	3	72	0.096	ppb	0.096	50.56	232	10000	
Fe	56	2	72	6.255	ppb	6.255	30.86	42987	10000	
Co	59	3	72	0.010	ppb	0.010	181.01	53	2000	
Ni	60	3	72	-0.008	ppb	-0.008	-1332.56	378	5000	
Cu	63	3	72	-0.148	ppb	-0.148	-5.26	446	5000	
Zn	66	3	72	-0.348	ppb	-0.348	-31.81	145	5000	
As	75	3	72	-0.414	ppb	-0.414	-37.76	35	2000	
Se	78	2	72	0.031	ppb	0.031	63.12	3	2000	
Sr	88	3	72	0.324	ppb	0.324	20.09	188	4000	
Mo	95	3	115	0.022	ppb	0.022	111.57	52	2000	
Ag	107	3	115	0.007	ppb	0.007	21.77	28	100	
Cd	111	3	115	-0.085	ppb	-0.085	-13.69	7	2000	
Sn	120	3	115	-0.758	ppb	-0.758	-5.75	346	2000	
Sb	121	3	115	-0.022	ppb	-0.022	-118.87	53	1000	
Ba	137	3	115	0.039	ppb	0.039	152.51	40	5000	
Tl	205	3	193	-0.271	ppb	-0.271	-4.64	651	2000	
(Pb)	206	3	193	-0.087	ppb	-0.087	-67.22	365	100	
(Pb)	207	3	193	-0.039	ppb	-0.039	-172.22	565	100	
Pb	208	3	193	-0.022	ppb	-0.022	-90.77	1802	5000	
Th	232	3	193	-0.932	ppb	-0.932	-2.04	4814	2000	
U	238	3	193	0.012	ppb	0.012	147.92	1808	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4217586	1.15	3906300	107.97	60	120	
Sc (IS)	45	3	HMI He	605387	0.44	564278	107.29	60	120	
Ge Internal standard	72	2	HMI H2	2558121	1.53	2319843	110.27	60	120	
Ge Internal standard	72	3	HMI He	736145	0.14	683756	107.66	60	120	
In Internal Standard	115	3	HMI He	2766834	0.72	2609293	106.04	60	120	
Ir (IS)	193	3	HMI He	6253263	1.73	5781904	108.15	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	047CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Method	
Acq Date Time	2023-04-19T14:13:35-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	16232	0.01
Mg	24	45	3	HMI He	220	7.44
Al	27	45	3	HMI He	83	72.41
K	39	45	3	HMI He	24713	0.02
Ca	40	45	2	HMI H2	10638	0.03
V	51	72	3	HMI He	958	0.76
Cr	52	72	3	HMI He	2041	0.23
Mn	55	72	3	HMI He	172	10.91
Fe	56	72	2	HMI H2	29407	0.03
Co	59	72	3	HMI He	35	122.52
Ni	60	72	3	HMI He	325	5.68
Cu	63	72	3	HMI He	430	0.00
Zn	66	72	3	HMI He	198	11.54
As	75	72	3	HMI He	65	61.51
Se	78	72	2	HMI H2	3	2749.55
(Se)	78	72	3	HMI He	30	55.55
Sr	88	72	3	HMI He	23	140.40
Mo	95	115	3	HMI He	37	21.50
Ag	107	115	3	HMI He	15	444.62
Cd	111	115	3	HMI He	23	53.07
Sn	120	115	3	HMI He	881	1.18
Sb	121	115	3	HMI He	38	39.33
Ba	137	115	3	HMI He	37	21.50
Tl	205	193	3	HMI He	970	0.51
(Pb)	206	193	3	HMI He	347	4.27
(Pb)	207	193	3	HMI He	496	1.02
Pb	208	193	3	HMI He	1524	0.24
Th	232	193	3	HMI He	5338	0.04
U	238	193	3	HMI He	1693	0.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3887690	1.05
Sc (IS)	45	3	HMI He	560366	0.91
Ge Internal standard	72	2	HMI H2	2321471	1.97
Ge Internal standard	72	3	HMI He	685485	0.75
In Internal Standard	115	3	HMI He	2631879	2.69
Ir (IS)	193	3	HMI He	5771767	2.03

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	048CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T14:15:25-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	10397055	0.00
Mg	24	45	3	HMI He	1104369	0.00
Al	27	45	3	HMI He	137	22.27
K	39	45	3	HMI He	917458	0.00
V	51	72	3	HMI He	905	0.90
Cr	52	72	3	HMI He	2387	0.18
Mn	55	72	3	HMI He	248	12.04
Co	59	72	3	HMI He	93	17.55
Ni	60	72	3	HMI He	505	1.37
Cu	63	72	3	HMI He	531	2.10
Zn	66	72	3	HMI He	288	3.53
As	75	72	3	HMI He	43	85.62
Se	78	72	2	HMI H2	2	5000.00
(Se)	78	72	3	HMI He	8	1499.19
Sr	88	72	3	HMI He	258	3.12
Mo	95	115	3	HMI He	58	59.42
Ag	107	115	3	HMI He	37	130.68
Cd	111	115	3	HMI He	23	140.40
Sn	120	115	3	HMI He	956	1.11
Sb	121	115	3	HMI He	75	17.79
Ba	137	115	3	HMI He	185	2.53
Tl	205	193	3	HMI He	746	0.51
(Pb)	206	193	3	HMI He	381	3.61
(Pb)	207	193	3	HMI He	550	1.88
Pb	208	193	3	HMI He	1716	0.68
Th	232	193	3	HMI He	4812	0.03
U	238	193	3	HMI He	1711	0.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3923317	1.55	3887690	100.92	60	120	
Sc (IS)	45	3	HMI He	573668	1.64	560366	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2251543	0.98	2321471	96.99	60	120	
Ge Internal standard	72	3	HMI He	664487	0.73	685485	96.94	60	120	
In Internal Standard	115	3	HMI He	2642607	2.90	2631879	100.41	60	120	
Ir (IS)	193	3	HMI He	5930827	0.38	5771767	102.76	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	049CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
method	
Acq Date Time	2023-04-19T14:17:31-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4360	0.20
Na	23	45	3	HMI He	225411	0.00
Mg	24	45	3	HMI He	108864	0.00
Al	27	45	3	HMI He	43075	0.00
K	39	45	3	HMI He	113960	0.00
V	51	72	3	HMI He	60640	0.00
Cr	52	72	3	HMI He	75653	0.00
Mn	55	72	3	HMI He	38895	0.00
Co	59	72	3	HMI He	126285	0.00
Ni	60	72	3	HMI He	35389	0.00
Cu	63	72	3	HMI He	97271	0.00
Zn	66	72	3	HMI He	15246	0.01
As	75	72	3	HMI He	11109	0.02
Se	78	72	2	HMI H2	5765	0.01
(Se)	78	72	3	HMI He	586	1.92
Sr	88	72	3	HMI He	105252	0.00
Mo	95	115	3	HMI He	49103	0.00
Ag	107	115	3	HMI He	165265	0.00
Cd	111	115	3	HMI He	24136	0.01
Sn	120	115	3	HMI He	74607	0.00
Sb	121	115	3	HMI He	74527	0.00
Ba	137	115	3	HMI He	23659	0.00
Tl	205	193	3	HMI He	383650	0.00
(Pb)	206	193	3	HMI He	126139	0.00
(Pb)	207	193	3	HMI He	112363	0.00
Pb	208	193	3	HMI He	512273	0.00
Th	232	193	3	HMI He	514586	0.00
U	238	193	3	HMI He	541664	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3983857	0.59	3887690	102.47	60	120	
Sc (IS)	45	3	HMI He	566455	1.47	560366	101.09	60	120	
Ge Internal standard	72	2	HMI H2	2391072	1.28	2321471	103.00	60	120	
Ge Internal standard	72	3	HMI He	708657	1.38	685485	103.38	60	120	
In Internal Standard	115	3	HMI He	2686640	1.54	2631879	102.08	60	120	
Ir (IS)	193	3	HMI He	5820840	3.05	5771767	100.85	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	050_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:19:31-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	43.871	ppb	2.578	1913	40	109.7	90	110	
Na	23	3	45	13029.017	ppb	4.250	1380135	12800	101.8	90	110	
Mg	24	3	45	4684.011	ppb	1.329	260916	4800	97.6	90	110	
Al	27	3	45	772.380	ppb	3.501	17034	800	96.5	90	110	
K	39	3	45	4591.791	ppb	1.040	231957	4800	95.7	90	110	
Ca	40	2	45	4795.142	ppb	1.722	2682583	4800	99.9	90	110	
V	51	3	72	40.531	ppb	0.641	25023	40	101.3	90	110	
Cr	52	3	72	41.042	ppb	1.487	32113	40	102.6	90	110	
Mn	55	3	72	41.707	ppb	1.436	16233	40	104.3	90	110	
Fe	56	2	72	812.491	ppb	2.008	1300933	800	101.6	90	110	
Co	59	3	72	40.721	ppb	2.203	51152	40	101.8	90	110	
Ni	60	3	72	41.523	ppb	1.878	14807	40	103.8	90	110	
Cu	63	3	72	41.567	ppb	1.312	40461	40	103.9	90	110	
Zn	66	3	72	85.032	ppb	1.570	12920	80	106.3	90	110	
As	75	3	72	40.459	ppb	5.199	4509	40	101.1	90	110	
Se	78	2	72	40.565	ppb	0.608	2353	40	101.4	90	110	
Sr	88	3	72	119.048	ppb	1.306	62306	120	99.2	90	110	
Mo	95	3	115	39.798	ppb	3.088	19391	40	99.5	90	110	
Ag	107	3	115	81.636	ppb	1.183	133730	80	102.0	90	110	
Cd	111	3	115	39.269	ppb	2.245	9409	40	98.2	90	110	
Sn	120	3	115	42.148	ppb	1.676	31680	40	105.4	90	110	
Sb	121	3	115	41.295	ppb	0.829	30526	40	103.2	90	110	
Ba	137	3	115	41.767	ppb	2.369	9817	40	104.4	90	110	
Tl	205	3	193	38.782	ppb	0.744	151574	40	97.0	90	110	
(Pb)	206	3	193	41.019	ppb	2.339	52710	40	102.5	90	110	
(Pb)	207	3	193	39.270	ppb	1.823	45076	40	98.2	90	110	
Pb	208	3	193	40.010	ppb	1.911	208925	40	100.0	90	110	
Th	232	3	193	81.667	ppb	1.170	427428	80	102.1	90	110	
U	238	3	193	42.395	ppb	1.173	234052	40	106.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4001080	0.88	3887690	102.92	60	120	
Sc (IS)	45	3	HMI He	578216	0.76	560366	103.19	60	120	
Ge Internal standard	72	2	HMI H2	2403423	1.34	2321471	103.53	60	120	
Ge Internal standard	72	3	HMI He	704595	0.49	685485	102.79	60	120	
In Internal Standard	115	3	HMI He	2662723	0.49	2631879	101.17	60	120	
Ir (IS)	193	3	HMI He	5904260	0.87	5771767	102.30	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	051_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:21:17-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.033	ppb	582.0	5	0.5	
Na	23	3	3.979	ppb	80.7	17007	25	
Mg	24	3	0.815	ppb	79.8	270	25	
Al	27	3	-0.375	ppb	-397.4	77	15	
K	39	3	-5.445	ppb	-475.8	25021	50	
V	51	3	0.006	ppb	1957.2	986	1	
Cr	52	3	0.134	ppb	133.1	2192	1	
Mn	55	3	0.092	ppb	98.5	212	0.5	
Co	59	3	0.023	ppb	75.1	65	0.5	
Ni	60	3	0.144	ppb	106.9	383	1	
Cu	63	3	0.016	ppb	91.5	456	1	
Zn	66	3	0.044	ppb	315.8	210	5	
As	75	3	-0.078	ppb	-87.7	58	1	
Se	78	2	-0.014	ppb	-377.8	3	1	
Sr	88	3	0.047	ppb	31.6	48	0.5	
Mo	95	3	0.052	ppb	32.5	62	0.5	
Ag	107	3	0.029	ppb	22.4	62	1	
Cd	111	3	-0.042	ppb	-153.4	13	0.5	
Sn	120	3	0.168	ppb	42.6	1001	1	
Sb	121	3	0.048	ppb	110.6	73	0.6	
Ba	137	3	0.072	ppb	104.6	53	0.5	
Tl	205	3	0.007	ppb	365.3	1001	0.1	
(Pb)	206	3	-0.026	ppb	-57.0	315	1	
(Pb)	207	3	-0.022	ppb	-341.2	473	1	
Pb	208	3	-0.008	ppb	-315.7	1486	0.5	
Th	232	3	3.365	ppb	11.3	22424	1	>RL
U	238	3	-0.001	ppb	-3540.9	1696	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3981413	1.34	3887690	102.41	60	120	
Sc (IS)	45	3	HMI He	572923	0.63	560366	102.24	60	120	
Ge Internal standard	72	2	HMI H2	2359261	2.32	2321471	101.63	60	120	
Ge Internal standard	72	3	HMI He	703442	0.43	685485	102.62	60	120	
In Internal Standard	115	3	HMI He	2627129	0.81	2631879	99.82	60	120	
Ir (IS)	193	3	HMI He	5792350	2.30	5771767	100.36	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-7691033
Data File Name	052_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:26:07-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	0.000	ppb	19162.2	3	0.5	
Na	23	3	1.070	ppb	265.4	16660	25	
Mg	24	3	0.403	ppb	566.3	247	25	
Al	27	3	0.248	ppb	812.7	90	15	
K	39	3	-14.955	ppb	-154.3	24529	50	
V	51	3	-0.051	ppb	-167.6	940	1	
Cr	52	3	0.227	ppb	64.3	2229	1	
Mn	55	3	0.034	ppb	75.9	187	0.5	
Co	59	3	0.002	ppb	273.6	38	0.5	
Ni	60	3	0.137	ppb	204.8	375	1	
Cu	63	3	-0.033	ppb	-123.3	403	1	
Zn	66	3	0.087	ppb	133.4	213	5	
As	75	3	-0.116	ppb	-116.4	53	1	
Se	78	2	-0.013	ppb	-151.1	3	1	
Sr	88	3	0.012	ppb	152.7	30	0.5	
Mo	95	3	0.023	ppb	92.4	48	0.5	
Ag	107	3	0.006	ppb	53.4	25	1	
Cd	111	3	-0.015	ppb	-279.8	20	0.5	
Sn	120	3	-0.092	ppb	-63.7	826	1	
Sb	121	3	0.031	ppb	15.4	62	0.6	
Ba	137	3	-0.002	ppb	-2638.1	37	0.5	
Tl	205	3	-0.067	ppb	-18.1	716	0.1	
(Pb)	206	3	-0.027	ppb	-109.1	313	1	
(Pb)	207	3	-0.032	ppb	-87.4	461	1	
Pb	208	3	-0.016	ppb	-107.5	1446	0.5	
Th	232	3	0.928	ppb	26.5	10054	1	
U	238	3	-0.018	ppb	-86.6	1601	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3884367	0.48	3887690	99.91	60	120	
Sc (IS)	45	3	HMI He	571345	0.37	560366	101.96	60	120	
Ge Internal standard	72	2	HMI H2	2347114	1.44	2321471	101.10	60	120	
Ge Internal standard	72	3	HMI He	693628	0.89	685485	101.19	60	120	
In Internal Standard	115	3	HMI He	2667841	1.04	2631879	101.37	60	120	
Ir (IS)	193	3	HMI He	5784770	0.50	5771767	100.23	60	120	

CRI Report

Sample Table

Sample Name	cri-7691038
Data File Name	053LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:28:30-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	1.032	ppb	4.982	48	1	103.2	80	120	
Na	23	3	45	291.700	ppb	1.534	46924	300	97.2	80	120	
Mg	24	3	45	45.630	ppb	4.626	2746	50	91.3	80	120	
Al	27	3	45	45.301	ppb	13.381	1071	50	90.6	80	120	
K	39	3	45	91.661	ppb	11.631	29400	120	76.4	80	120	>+/-30%
Ca	40	2	45	201.007	ppb	1.917	118297	200	100.5	80	120	
V	51	3	72	4.887	ppb	11.222	3870	5	97.7	80	120	
Cr	52	3	72	1.889	ppb	4.031	3469	2	94.4	80	120	
Mn	55	3	72	1.082	ppb	6.894	591	1	108.2	80	120	
Fe	56	2	72	50.474	ppb	2.654	107434	50	100.9	80	120	
Co	59	3	72	0.929	ppb	6.682	1199	1	92.9	80	120	
Ni	60	3	72	2.140	ppb	5.739	1076	2	107.0	80	120	
Cu	63	3	72	1.958	ppb	7.435	2319	2	97.9	80	120	
Zn	66	3	72	9.757	ppb	6.100	1658	10	97.6	80	120	
As	75	3	72	4.976	ppb	2.137	611	5	99.5	80	120	
Se	78	2	72	4.729	ppb	9.503	273	5	94.6	80	120	
Sr	88	3	72	4.723	ppb	6.623	2487	5	94.5	80	120	
Mo	95	3	115	1.814	ppb	9.970	930	2	90.7	80	120	
Ag	107	3	115	0.855	ppb	1.951	1433	1	85.5	80	120	
Cd	111	3	115	0.853	ppb	20.772	230	1	85.3	80	120	
Sn	120	3	115	8.553	ppb	9.024	7222	10	85.5	80	120	
Sb	121	3	115	1.818	ppb	3.333	1398	2	90.9	80	120	
Ba	137	3	115	0.925	ppb	18.799	257	1	92.5	80	120	
Tl	205	3	193	0.866	ppb	7.183	4340	1	86.6	80	120	
(Pb)	206	3	193	0.931	ppb	11.281	1536	1	93.1	80	120	
(Pb)	207	3	193	0.917	ppb	12.527	1543	1	91.7	80	120	
Pb	208	3	193	0.900	ppb	4.275	6204	1	90.0	80	120	
Th	232	3	193	1.482	ppb	14.759	13074	1	148.2	80	120	>+/-30%
U	238	3	193	0.949	ppb	5.036	6910	1	94.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3850484	1.88	3887690	99.04	60	120	
Sc (IS)	45	3	HMI He	573947	0.97	560366	102.42	60	120	
Ge Internal standard	72	2	HMI H2	2360389	1.29	2321471	101.68	60	120	
Ge Internal standard	72	3	HMI He	702506	0.67	685485	102.48	60	120	
In Internal Standard	115	3	HMI He	2696475	2.84	2631879	102.45	60	120	
Ir (IS)	193	3	HMI He	5884982	1.43	5771767	101.96	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	054ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:32:20-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.002	ppb	-6451.4	3	0.5	
Na	23	3	45	94524.593	ppb	0.4	9991609	100000	
Mg	24	3	45	94132.759	ppb	1.3	5283346	100000	
Al	27	3	45	93660.568	ppb	0.7	2072628	100000	
K	39	3	45	91707.384	ppb	0.7	4183716	100000	
Ca	40	2	45	95000.943	ppb	2.6	52202626	100000	
V	51	3	72	-0.197	ppb	-98.2	886	1	
Cr	52	3	72	1.040	ppb	2.9	2921	1	>RL or LOD
Mn	55	3	72	0.241	ppb	57.6	275	0.95	
Fe	56	2	72	92692.524	ppb	1.6	145127449	100000	
Co	59	3	72	0.225	ppb	23.7	325	0.5	
Ni	60	3	72	0.423	ppb	9.0	491	1	
Cu	63	3	72	0.151	ppb	8.8	600	1	
Zn	66	3	72	0.884	ppb	68.7	343	1	
As	75	3	72	-0.060	ppb	-373.7	62	1	
Se	78	2	72	-0.002	ppb	-2411.2	3	1	
(Se)	78	3	72	-2.931	ppb	-30.1	15	1	
Sr	88	3	72	0.793	ppb	18.2	448	1	
Mo	95	3	115	1923.280	ppb	2.2	928344	2000	
Ag	107	3	115	0.028	ppb	50.9	62	1	
Cd	111	3	115	0.098	ppb	46.1	47	1	
Sn	120	3	115	-0.006	ppb	-2543.5	880	1	
Sb	121	3	115	0.127	ppb	27.6	132	1	
Ba	137	3	115	1.914	ppb	4.2	481	0.95	>RL or LOD
Tl	205	3	193	-0.094	ppb	-7.9	616	1	
(Pb)	206	3	193	0.116	ppb	16.8	493	1	
(Pb)	207	3	193	0.082	ppb	64.1	591	1	
Pb	208	3	193	0.121	ppb	9.2	2146	1	
Th	232	3	193	0.068	ppb	150.4	5702	1	
U	238	3	193	0.043	ppb	62.3	1934	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3945924	1.86	3887690	101.50	60	120	
Sc (IS)	45	3	HMI He	583054	0.40	560366	104.05	60	120	
Ge Internal standard	72	2	HMI H2	2406131	2.04	2321471	103.65	60	120	
Ge Internal standard	72	3	HMI He	719839	0.44	685485	105.01	60	120	
In Internal Standard	115	3	HMI He	2643255	1.77	2631879	100.43	60	120	
Ir (IS)	193	3	HMI He	5798317	2.43	5771767	100.46	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	055ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:34:06-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	102.117	ppb	0.480	4465	100	102.1	80	120	
Na	23	3	45	100769.299	ppb	2.086	10480122	100	100769.3	80	120	>+\-20%
Mg	24	3	45	99804.508	ppb	1.313	5512260	100	99804.5	80	120	>+\-20%
Al	27	3	45	94151.240	ppb	2.269	2050210	100	94151.2	80	120	>+\-20%
K	39	3	45	98905.142	ppb	1.913	4437926	100	98905.1	80	120	>+\-20%
Ca	40	2	45	99439.167	ppb	1.295	55029414	100	99439.2	80	120	>+\-20%
V	51	3	72	95.424	ppb	1.400	58851	100	95.4	80	120	
Cr	52	3	72	99.491	ppb	0.382	76514	100	99.5	80	120	
Mn	55	3	72	97.590	ppb	0.191	38581	100	97.6	80	120	
Fe	56	2	72	95494.333	ppb	3.418	145586867	100	95494.3	80	120	>+\-20%
Co	59	3	72	95.829	ppb	1.560	122990	100	95.8	80	120	
Ni	60	3	72	96.435	ppb	1.917	34696	100	96.4	80	120	
Cu	63	3	72	96.265	ppb	1.622	95181	100	96.3	80	120	
Zn	66	3	72	97.324	ppb	3.308	15082	100	97.3	80	120	
As	75	3	72	95.870	ppb	1.547	10827	100	95.9	80	120	
Se	78	2	72	101.635	ppb	3.645	5741	100	101.6	80	120	
(Se)	78	3	72	106.353	ppb	10.660	631	100	106.4	80	120	
Sr	88	3	72	193.635	ppb	1.102	103571	100	193.6	80	120	>+\-20%
Mo	95	3	115	2047.668	ppb	0.472	985060	100	2047.7	80	120	>+\-20%
Ag	107	3	115	99.932	ppb	0.633	161907	100	99.9	80	120	
Cd	111	3	115	96.442	ppb	1.224	22820	100	96.4	80	120	
Sn	120	3	115	101.378	ppb	2.229	74121	100	101.4	80	120	
Sb	121	3	115	99.600	ppb	2.106	72763	100	99.6	80	120	
Ba	137	3	115	103.516	ppb	3.251	24007	100	103.5	80	120	
Tl	205	3	193	97.675	ppb	0.694	372586	100	97.7	80	120	
(Pb)	206	3	193	100.420	ppb	0.495	125950	100	100.4	80	120	
(Pb)	207	3	193	97.403	ppb	1.388	108815	100	97.4	80	120	
Pb	208	3	193	98.726	ppb	1.065	502915	100	98.7	80	120	
Th	232	3	193	101.085	ppb	1.565	517103	100	101.1	80	120	
U	238	3	193	106.845	ppb	1.413	575380	100	106.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3973309	1.11	3887690	102.20	60	120	
Sc (IS)	45	3	HMI He	573772	0.73	560366	102.39	60	120	
Ge Internal standard	72	2	HMI H2	2343889	2.98	2321471	100.97	60	120	
Ge Internal standard	72	3	HMI He	720178	0.44	685485	105.06	60	120	
In Internal Standard	115	3	HMI He	2633692	0.98	2631879	100.07	60	120	
Ir (IS)	193	3	HMI He	5785314	1.06	5771767	100.23	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	056SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:35:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1626.20	3	2000	
Na	23	3	45	51.072	ppb	51.072	13.19	21785	400000	
Mg	24	3	45	18.520	ppb	18.520	16.88	1241	400000	
Al	27	3	45	16.910	ppb	16.910	9.71	450	400000	
K	39	3	45	44.536	ppb	44.536	50.60	27113	400000	
Ca	40	2	45	20.142	ppb	20.142	5.55	22140	400000	
V	51	3	72	0.067	ppb	0.067	164.65	991	2000	
Cr	52	3	72	0.251	ppb	0.251	65.75	2207	5000	
Mn	55	3	72	0.011	ppb	0.011	480.04	175	10000	
Fe	56	2	72	23.590	ppb	23.590	9.52	67216	10000	
Co	59	3	72	0.016	ppb	0.016	128.65	55	2000	
Ni	60	3	72	0.806	ppb	0.806	7.53	595	5000	
Cu	63	3	72	0.055	ppb	0.055	178.71	478	5000	
Zn	66	3	72	0.046	ppb	0.046	858.82	203	5000	
As	75	3	72	0.160	ppb	0.160	116.02	82	2000	
Se	78	2	72	0.078	ppb	0.078	73.97	8	2000	
Sr	88	3	72	0.036	ppb	0.036	119.92	42	4000	
Mo	95	3	115	4.287	ppb	4.287	18.44	2119	2000	
Ag	107	3	115	0.025	ppb	0.025	5.19	57	100	
Cd	111	3	115	-0.036	ppb	-0.036	-98.82	15	2000	
Sn	120	3	115	-0.027	ppb	-0.027	-622.60	871	2000	
Sb	121	3	115	0.071	ppb	0.071	33.44	92	1000	
Ba	137	3	115	0.013	ppb	0.013	453.25	40	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-10.12	743	2000	
(Pb)	206	3	193	-0.015	ppb	-0.015	-145.33	337	100	
(Pb)	207	3	193	0.000	ppb	0.000	-13947.95	510	100	
Pb	208	3	193	-0.005	ppb	-0.005	-189.60	1539	5000	
Th	232	3	193	2.809	ppb	2.809	10.58	20050	2000	
U	238	3	193	0.028	ppb	0.028	10.95	1894	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3997248	2.23	3887690	102.82	60	120	
Sc (IS)	45	3	HMI He	570094	0.69	560366	101.74	60	120	
Ge Internal standard	72	2	HMI H2	2399134	3.10	2321471	103.35	60	120	
Ge Internal standard	72	3	HMI He	681944	1.36	685485	99.48	60	120	
In Internal Standard	115	3	HMI He	2657198	1.67	2631879	100.96	60	120	
Ir (IS)	193	3	HMI He	5927581	0.81	5771767	102.70	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-7616617
Data File Name	057_LR.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:37:39-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	2066.706	ppb	1.423	96354	2000	103.3	90	110	
Na	23	3	45	186848.823	ppb	1.774	21522621	200000	93.4	90	110	
Mg	24	3	45	188460.576	ppb	1.542	11535286	200000	94.2	90	110	
Al	27	3	45	279528.764	ppb	2.099	6746213	300000	93.2	90	110	
V	51	3	72	2009.353	ppb	2.841	1291601	2000	100.5	90	110	
Cr	52	3	72	4838.814	ppb	1.700	3834383	5000	96.8	90	110	
Mn	55	3	72	9987.391	ppb	0.914	4163867	10000	99.9	90	110	
Fe	56	2	72	194847.620	ppb	3.046	323357860	200000	97.4	90	110	
Co	59	3	72	1916.087	ppb	1.336	2604865	2000	95.8	90	110	
Ni	60	3	72	4806.176	ppb	1.444	1814525	5000	96.1	90	110	
Cu	63	3	72	4933.338	ppb	2.278	5144180	5000	98.7	90	110	
Zn	66	3	72	4918.573	ppb	0.100	796734	5000	98.4	90	110	
As	75	3	72	2001.397	ppb	0.990	238046	2000	100.1	90	110	
Se	78	2	72	2021.175	ppb	1.871	124239	2000	101.1	90	110	
(Se)	78	3	72	2300.185	ppb	0.825	13775	2000	115.0	90	110	LRS Main CR1 Failed
Sr	88	3	72	5082.538	ppb	1.132	2879656	5000	101.7	90	110	
Mo	95	3	115	1963.220	ppb	1.676	1021690	2000	98.2	90	110	
Cd	111	3	115	1908.068	ppb	0.692	487978	2000	95.4	90	110	
Sn	120	3	115	2057.089	ppb	1.771	1609011	2000	102.9	90	110	
Sb	121	3	115	1005.126	ppb	0.408	794104	1000	100.5	90	110	
Ba	137	3	115	5280.243	ppb	1.330	1323058	5000	105.6	90	110	
Tl	205	3	193	997.221	ppb	1.213	4115447	1000	99.7	90	110	
(Pb)	206	3	193	5060.418	ppb	1.517	6863910	5000	101.2	90	110	
(Pb)	207	3	193	5031.909	ppb	0.689	6069453	5000	100.6	90	110	
Pb	208	3	193	5020.632	ppb	2.187	27649840	5000	100.4	90	110	
Th	232	3	193	979.449	ppb	1.957	5383019	1000	97.9	90	110	
U	238	3	193	2030.449	ppb	1.923	11824134	2000	101.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4401817	2.27	3887690	113.22	60	120	
Sc (IS)	45	3	HMI He	635832	0.77	560366	113.47	60	120	
Ge Internal standard	72	2	HMI H2	2551092	1.79	2321471	109.89	60	120	
Ge Internal standard	72	3	HMI He	763021	0.29	685485	111.31	60	120	
In Internal Standard	115	3	HMI He	2849262	0.42	2631879	108.26	60	120	
Ir (IS)	193	3	HMI He	6274390	1.71	5771767	108.71	60	120	

Sample Report

Sample Table

Sample Name	rinse-
Data File Name	058SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:39:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.265	ppb	0.265	44.58	15	2000	
Na	23	3	45	88.244	ppb	88.244	4.27	25726	400000	
Mg	24	3	45	30.249	ppb	30.249	3.34	1892	400000	
Al	27	3	45	45.387	ppb	45.387	20.44	1071	400000	
K	39	3	45	103.505	ppb	103.505	22.14	29848	400000	
Ca	40	2	45	34.202	ppb	34.202	7.83	29340	400000	
V	51	3	72	-0.075	ppb	-0.075	-130.86	936	2000	
Cr	52	3	72	0.791	ppb	0.791	6.34	2664	5000	
Mn	55	3	72	1.407	ppb	1.407	3.71	715	10000	
Fe	56	2	72	42.553	ppb	42.553	9.61	96894	10000	
Co	59	3	72	0.265	ppb	0.265	1.93	366	2000	
Ni	60	3	72	1.245	ppb	1.245	17.35	765	5000	
Cu	63	3	72	1.100	ppb	1.100	2.13	1494	5000	
Zn	66	3	72	1.425	ppb	1.425	10.61	415	5000	
As	75	3	72	0.673	ppb	0.673	48.70	140	2000	
Se	78	2	72	0.447	ppb	0.447	30.71	29	2000	
Sr	88	3	72	0.654	ppb	0.654	10.96	365	4000	
Mo	95	3	115	10.697	ppb	10.697	19.88	5233	2000	
Ag	107	3	115	0.004	ppb	0.004	328.19	22	100	
Cd	111	3	115	0.397	ppb	0.397	20.96	118	2000	
Sn	120	3	115	13.636	ppb	13.636	8.36	10851	2000	
Sb	121	3	115	1.696	ppb	1.696	7.50	1291	1000	
Ba	137	3	115	0.681	ppb	0.681	13.48	197	5000	
Tl	205	3	193	0.401	ppb	0.401	9.30	2581	2000	
(Pb)	206	3	193	0.851	ppb	0.851	10.02	1459	100	
(Pb)	207	3	193	0.825	ppb	0.825	4.35	1463	100	
Pb	208	3	193	0.826	ppb	0.826	2.48	5916	5000	
Th	232	3	193	46.184	ppb	46.184	10.95	247312	2000	
U	238	3	193	0.879	ppb	0.879	7.18	6634	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3912426	1.08	3887690	100.64	60	120	
Sc (IS)	45	3	HMI He	572471	0.08	560366	102.16	60	120	
Ge Internal standard	72	2	HMI H2	2400198	0.56	2321471	103.39	60	120	
Ge Internal standard	72	3	HMI He	701364	1.15	685485	102.32	60	120	
In Internal Standard	115	3	HMI He	2664197	1.62	2631879	101.23	60	120	
Ir (IS)	193	3	HMI He	5979591	1.43	5771767	103.60	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	059_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:41:07-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.479	ppb	1.431	2379	50	109.0	90	110	
Na	23	3	45	47771.331	ppb	0.960	5054773	51000	93.7	90	110	
Mg	24	3	45	10300.216	ppb	1.938	577904	11000	93.6	90	110	
Al	27	3	45	939.202	ppb	3.060	20853	1000	93.9	90	110	
K	39	3	45	10180.941	ppb	2.962	486943	11000	92.6	90	110	
Ca	40	2	45	10254.331	ppb	0.623	5731991	11000	93.2	90	110	
V	51	3	72	50.201	ppb	1.620	30513	50	100.4	90	110	
Cr	52	3	72	51.391	ppb	1.039	39366	50	102.8	90	110	
Mn	55	3	72	51.080	ppb	1.887	19686	50	102.2	90	110	
Fe	56	2	72	1038.773	ppb	2.432	1599553	1000	103.9	90	110	
Co	59	3	72	50.925	ppb	1.697	63458	50	101.9	90	110	
Ni	60	3	72	51.178	ppb	0.480	18028	50	102.4	90	110	
Cu	63	3	72	50.941	ppb	2.200	49094	50	101.9	90	110	
Zn	66	3	72	51.070	ppb	2.498	7778	50	102.1	90	110	
As	75	3	72	51.243	ppb	2.066	5648	50	102.5	90	110	
Se	78	2	72	51.487	ppb	3.774	2886	50	103.0	90	110	
Sr	88	3	72	102.155	ppb	1.904	53042	100	102.2	90	110	
Mo	95	3	115	51.453	ppb	2.204	24772	50	102.9	90	110	
Ag	107	3	115	51.296	ppb	2.062	83074	50	102.6	90	110	
Cd	111	3	115	50.134	ppb	4.205	11866	50	100.3	90	110	
Sn	120	3	115	52.194	ppb	0.581	38573	50	104.4	90	110	
Sb	121	3	115	50.755	ppb	1.353	37080	50	101.5	90	110	
Ba	137	3	115	51.689	ppb	1.594	12001	50	103.4	90	110	
Tl	205	3	193	49.934	ppb	3.092	191446	50	99.9	90	110	
(Pb)	206	3	193	51.439	ppb	2.159	64865	50	102.9	90	110	
(Pb)	207	3	193	49.638	ppb	1.771	55861	50	99.3	90	110	
Pb	208	3	193	50.780	ppb	1.399	260148	50	101.6	90	110	
Th	232	3	193	60.028	ppb	3.882	310214	50	120.1	90	110	>+\-10%
U	238	3	193	50.888	ppb	2.251	275689	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4006258	0.98	3887690	103.05	60	120	
Sc (IS)	45	3	HMI He	582711	1.02	560366	103.99	60	120	
Ge Internal standard	72	2	HMI H2	2323334	1.22	2321471	100.08	60	120	
Ge Internal standard	72	3	HMI He	699010	0.80	685485	101.97	60	120	
In Internal Standard	115	3	HMI He	2632265	0.75	2631879	100.01	60	120	
Ir (IS)	193	3	HMI He	5802179	1.82	5771767	100.53	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	060_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:42:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.194	ppb	153.0	12	0.5	
Na	23	3	45	36.278	ppb	21.6	20723	25	>RL
Mg	24	3	45	5.069	ppb	30.3	514	25	
Al	27	3	45	5.895	ppb	29.9	217	15	
K	39	3	45	26.109	ppb	159.5	26896	50	
V	51	3	72	-0.041	ppb	-232.0	965	1	
Cr	52	3	72	0.541	ppb	14.3	2504	1	
Mn	55	3	72	0.213	ppb	62.2	260	0.5	
Co	59	3	72	0.040	ppb	81.2	87	0.5	
Ni	60	3	72	0.452	ppb	45.2	493	1	
Cu	63	3	72	0.249	ppb	27.7	685	1	
Zn	66	3	72	0.458	ppb	10.8	273	5	
As	75	3	72	0.024	ppb	979.9	70	1	
Se	78	2	72	0.067	ppb	119.5	7	1	
Sr	88	3	72	0.088	ppb	65.9	70	0.5	
Mo	95	3	115	0.317	ppb	14.9	193	0.5	
Ag	107	3	115	0.013	ppb	57.0	37	1	
Cd	111	3	115	0.102	ppb	49.3	48	0.5	
Sn	120	3	115	0.324	ppb	50.6	1139	1	
Sb	121	3	115	0.166	ppb	11.1	163	0.6	
Ba	137	3	115	0.101	ppb	48.8	62	0.5	
Tl	205	3	193	-0.004	ppb	-594.7	996	0.1	
(Pb)	206	3	193	0.077	ppb	23.8	461	1	
(Pb)	207	3	193	0.096	ppb	46.2	628	1	
Pb	208	3	193	0.086	ppb	12.4	2042	0.5	
Th	232	3	193	3.195	ppb	17.6	22366	1	>RL
U	238	3	193	0.060	ppb	61.0	2096	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4032600	1.65	3887690	103.73	60	120	
Sc (IS)	45	3	HMI He	583251	0.79	560366	104.08	60	120	
Ge Internal standard	72	2	HMI H2	2399572	0.75	2321471	103.36	60	120	
Ge Internal standard	72	3	HMI He	707538	1.09	685485	103.22	60	120	
In Internal Standard	115	3	HMI He	2690712	1.42	2631879	102.24	60	120	
Ir (IS)	193	3	HMI He	6013757	2.38	5771767	104.19	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	061LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:44:45-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.595	ppb	33.903	30	1	59.5	70	130	>+/-30%
Na	23	3	45	299.744	ppb	1.623	48458	300	99.9	70	130	
Mg	24	3	45	51.366	ppb	4.934	3107	50	102.7	70	130	
Al	27	3	45	44.215	ppb	12.751	1064	50	88.4	70	130	
K	39	3	45	120.199	ppb	24.134	31126	120	100.2	70	130	
Ca	40	2	45	190.911	ppb	2.690	118960	200	95.5	70	130	
V	51	3	72	4.670	ppb	8.416	3795	5	93.4	70	130	
Cr	52	3	72	2.206	ppb	2.706	3752	2	110.3	70	130	
Mn	55	3	72	0.920	ppb	7.213	536	1	92.0	70	130	
Fe	56	2	72	52.714	ppb	2.270	114292	50	105.4	70	130	
Co	59	3	72	0.911	ppb	4.571	1193	1	91.1	70	130	
Ni	60	3	72	2.301	ppb	17.406	1148	2	115.0	70	130	
Cu	63	3	72	2.073	ppb	8.753	2464	2	103.6	70	130	
Zn	66	3	72	8.931	ppb	2.454	1556	10	89.3	70	130	
As	75	3	72	4.553	ppb	3.505	573	5	91.1	70	130	
Se	78	2	72	4.542	ppb	10.350	270	5	90.8	70	130	
Sr	88	3	72	4.661	ppb	6.242	2489	5	93.2	70	130	
Mo	95	3	115	2.172	ppb	9.398	1108	2	108.6	70	130	
Ag	107	3	115	0.934	ppb	4.232	1566	1	93.4	70	130	
Cd	111	3	115	1.030	ppb	7.177	273	1	103.0	70	130	
Sn	120	3	115	9.186	ppb	2.223	7702	10	91.9	70	130	
Sb	121	3	115	2.030	ppb	3.590	1558	2	101.5	70	130	
Ba	137	3	115	0.994	ppb	12.394	273	1	99.4	70	130	
Tl	205	3	193	0.888	ppb	0.760	4520	1	88.8	70	130	
(Pb)	206	3	193	1.015	ppb	13.812	1678	1	101.5	70	130	
(Pb)	207	3	193	0.878	ppb	9.253	1531	1	87.8	70	130	
Pb	208	3	193	0.924	ppb	0.915	6464	1	92.4	70	130	
Th	232	3	193	2.525	ppb	20.300	18808	1	252.5	70	130	>+/-30%
U	238	3	193	0.947	ppb	8.887	7037	1	94.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4058091	2.47	3887690	104.38	60	120	
Sc (IS)	45	3	HMI He	582259	1.23	560366	103.91	60	120	
Ge Internal standard	72	2	HMI H2	2432916	1.01	2321471	104.80	60	120	
Ge Internal standard	72	3	HMI He	712270	0.43	685485	103.91	60	120	
In Internal Standard	115	3	HMI He	2697478	0.71	2631879	102.49	60	120	
Ir (IS)	193	3	HMI He	6009713	1.91	5771767	104.12	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	062LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:46:33-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.073	ppb	180.028	7	1	7.3	80	120	>+/-30%
Na	23	3	45	11.735	ppb	30.138	18280	300	3.9	80	120	>+/-30%
Mg	24	3	45	0.340	ppb	333.707	250	50	0.7	80	120	>+/-30%
Al	27	3	45	2.819	ppb	31.218	150	50	5.6	80	120	>+/-30%
K	39	3	45	534.617	ppb	4.325	50374	120	445.5	80	120	>+/-30%
Ca	40	2	45	1.222	ppb	74.643	11723	200	0.6	80	120	>+/-30%
V	51	3	72	-0.025	ppb	-816.473	985	5	-0.5	80	120	>+/-30%
Cr	52	3	72	0.226	ppb	66.236	2299	2	11.3	80	120	>+/-30%
Mn	55	3	72	0.066	ppb	39.026	205	1	6.6	80	120	>+/-30%
Fe	56	2	72	6.343	ppb	32.198	40938	50	12.7	80	120	>+/-30%
Co	59	3	72	0.012	ppb	162.221	52	1	1.2	80	120	>+/-30%
Ni	60	3	72	0.652	ppb	24.714	570	2	32.6	80	120	>+/-30%
Cu	63	3	72	0.085	ppb	9.000	531	2	4.2	80	120	>+/-30%
Zn	66	3	72	0.262	ppb	29.688	247	10	2.6	80	120	>+/-30%
As	75	3	72	-0.131	ppb	-42.295	53	5	-2.6	80	120	>+/-30%
Se	78	2	72	0.008	ppb	425.083	4	5	0.2	80	120	>+/-30%
Sr	88	3	72	-0.005	ppb	-688.893	22	5	-0.1	80	120	>+/-30%
Mo	95	3	115	0.094	ppb	28.001	85	2	4.7	80	120	>+/-30%
Ag	107	3	115	0.004	ppb	208.713	22	1	0.4	80	120	>+/-30%
Cd	111	3	115	0.058	ppb	38.051	38	1	5.8	80	120	>+/-30%
Sn	120	3	115	0.057	ppb	189.254	958	10	0.6	80	120	>+/-30%
Sb	121	3	115	0.088	ppb	7.837	107	2	4.4	80	120	>+/-30%
Ba	137	3	115	0.015	ppb	356.018	42	1	1.5	80	120	>+/-30%
Tl	205	3	193	-0.084	ppb	-5.339	676	1	-8.4	80	120	>+/-30%
(Pb)	206	3	193	-0.010	ppb	-11.538	347	1	-1.0	80	120	>+/-30%
(Pb)	207	3	193	-0.034	ppb	-118.625	476	1	-3.4	80	120	>+/-30%
Pb	208	3	193	-0.012	ppb	-100.747	1518	1	-1.2	80	120	>+/-30%
Th	232	3	193	1.951	ppb	6.409	15767	1	195.1	80	120	>+/-30%
U	238	3	193	0.002	ppb	541.089	1771	1	0.2	80	120	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4036226	2.54	3887690	103.82	60	120	
Sc (IS)	45	3	HMI He	588013	0.66	560366	104.93	60	120	
Ge Internal standard	72	2	HMI H2	2437644	1.49	2321471	105.00	60	120	
Ge Internal standard	72	3	HMI He	715645	0.80	685485	104.40	60	120	
In Internal Standard	115	3	HMI He	2731905	0.99	2631879	103.80	60	120	
Ir (IS)	193	3	HMI He	5990926	1.76	5771767	103.80	60	120	

Sample Report

Sample Table

Sample Name	MB 280-608551/1-A
Data File Name	063SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:48:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-153.63	2	2000	
Na	23	3	45	19.053	ppb	19.053	55.91	18948	400000	
Mg	24	3	45	1.618	ppb	1.618	83.37	320	400000	
Al	27	3	45	2.851	ppb	2.851	40.56	150	400000	
K	39	3	45	7.112	ppb	7.112	354.69	26107	400000	
Ca	40	2	45	10.881	ppb	10.881	6.09	17318	400000	
V	51	3	72	-0.020	ppb	-0.020	-480.85	991	2000	
Cr	52	3	72	0.264	ppb	0.264	45.64	2334	5000	
Mn	55	3	72	0.268	ppb	0.268	21.31	285	10000	
Fe	56	2	72	12.484	ppb	12.484	13.97	50740	10000	
Co	59	3	72	-0.001	ppb	-0.001	-584.44	35	2000	
Ni	60	3	72	0.620	ppb	0.620	39.18	560	5000	
Cu	63	3	72	0.100	ppb	0.100	36.95	548	5000	
Zn	66	3	72	2.608	ppb	2.608	9.60	605	5000	
As	75	3	72	-0.103	ppb	-0.103	-183.49	57	2000	
Se	78	2	72	0.110	ppb	0.110	81.64	10	2000	
Sr	88	3	72	0.020	ppb	0.020	124.88	35	4000	
Mo	95	3	115	0.080	ppb	0.080	16.36	78	2000	
Ag	107	3	115	0.001	ppb	0.001	313.18	17	100	
Cd	111	3	115	-0.058	ppb	-0.058	-62.72	10	2000	
Sn	120	3	115	-0.012	ppb	-0.012	-419.68	906	2000	
Sb	121	3	115	0.094	ppb	0.094	24.72	112	1000	
Ba	137	3	115	0.056	ppb	0.056	88.57	52	5000	
Tl	205	3	193	-0.091	ppb	-0.091	-22.54	655	2000	
(Pb)	206	3	193	-0.036	ppb	-0.036	-78.37	315	100	
(Pb)	207	3	193	0.028	ppb	0.028	304.41	550	100	
Pb	208	3	193	0.006	ppb	0.006	307.88	1624	5000	
Th	232	3	193	0.158	ppb	0.158	58.17	6408	2000	
U	238	3	193	-0.009	ppb	-0.009	-267.12	1716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4073816	0.51	3887690	104.79	60	120	
Sc (IS)	45	3	HMI He	584940	1.68	560366	104.39	60	120	
Ge Internal standard	72	2	HMI H2	2438599	1.95	2321471	105.05	60	120	
Ge Internal standard	72	3	HMI He	717897	0.75	685485	104.73	60	120	
In Internal Standard	115	3	HMI He	2733342	1.40	2631879	103.86	60	120	
Ir (IS)	193	3	HMI He	6029117	2.24	5771767	104.46	60	120	

Sample Report

Sample Table

Sample Name	LCS 280-608551/2-A
Data File Name	064SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:50:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.093	ppb	40.093	9.86	1768	2000	
Na	23	3	45	805.342	ppb	805.342	1.29	103142	400000	
Mg	24	3	45	742.717	ppb	742.717	2.37	42439	400000	
Al	27	3	45	772.505	ppb	772.505	0.62	17395	400000	
K	39	3	45	770.617	ppb	770.617	4.47	61405	400000	
Ca	40	2	45	829.825	ppb	829.825	2.88	479609	400000	
V	51	3	72	39.543	ppb	39.543	1.46	25105	2000	
Cr	52	3	72	40.983	ppb	40.983	2.07	32947	5000	
Mn	55	3	72	40.995	ppb	40.995	2.64	16392	10000	
Fe	56	2	72	797.537	ppb	797.537	2.48	1284300	10000	
Co	59	3	72	40.053	ppb	40.053	1.48	51685	2000	
Ni	60	3	72	41.430	ppb	41.430	2.33	15177	5000	
Cu	63	3	72	41.867	ppb	41.867	1.74	41864	5000	
Zn	66	3	72	42.768	ppb	42.768	6.58	6780	5000	
As	75	3	72	39.057	ppb	39.057	2.55	4474	2000	
Se	78	2	72	40.700	ppb	40.700	3.13	2373	2000	
Sr	88	3	72	79.630	ppb	79.630	0.73	42823	4000	
Mo	95	3	115	39.385	ppb	39.385	3.54	19561	2000	
Ag	107	3	115	40.666	ppb	40.666	3.19	67912	100	
Cd	111	3	115	39.328	ppb	39.328	5.12	9602	2000	
Sn	120	3	115	38.241	ppb	38.241	1.69	29389	2000	
Sb	121	3	115	39.568	ppb	39.568	0.60	29827	1000	
Ba	137	3	115	42.095	ppb	42.095	2.68	10086	5000	
Tl	205	3	193	39.024	ppb	39.024	0.99	156757	2000	
(Pb)	206	3	193	40.318	ppb	40.318	0.71	53262	100	
(Pb)	207	3	193	39.424	ppb	39.424	0.55	46514	100	
Pb	208	3	193	39.624	ppb	39.624	0.76	212701	5000	
Th	232	3	193	37.236	ppb	37.236	1.92	203357	2000	
U	238	3	193	39.431	ppb	39.431	0.81	223893	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4056566	3.28	3887690	104.34	60	120	
Sc (IS)	45	3	HMI He	590336	1.47	560366	105.35	60	120	
Ge Internal standard	72	2	HMI H2	2416275	1.35	2321471	104.08	60	120	
Ge Internal standard	72	3	HMI He	723821	0.92	685485	105.59	60	120	
In Internal Standard	115	3	HMI He	2715108	1.79	2631879	103.16	60	120	
Ir (IS)	193	3	HMI He	6068669	0.86	5771767	105.14	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-A
Data File Name	065SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:51:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1535.06	3	2000	
Na	23	3	45	10792.076	ppb	10792.076	2.77	1171427	400000	
Mg	24	3	45	11001.414	ppb	11001.414	1.60	626076	400000	
Al	27	3	45	3.975	ppb	3.975	50.06	177	400000	
K	39	3	45	6251.886	ppb	6251.886	2.58	313339	400000	
Ca	40	2	45	28383.611	ppb	28383.611	1.56	16278352	400000	
V	51	3	72	19.843	ppb	19.843	0.52	13366	2000	
Cr	52	3	72	1.297	ppb	1.297	12.31	3192	5000	
Mn	55	3	72	0.331	ppb	0.331	35.01	318	10000	
Fe	56	2	72	14.129	ppb	14.129	18.80	55145	10000	
Co	59	3	72	0.071	ppb	0.071	24.54	132	2000	
Ni	60	3	72	0.726	ppb	0.726	12.61	615	5000	
Cu	63	3	72	1.034	ppb	1.034	2.96	1506	5000	
Zn	66	3	72	1.010	ppb	1.010	26.39	371	5000	
As	75	3	72	5.981	ppb	5.981	5.85	758	2000	
Se	78	2	72	2.846	ppb	2.846	9.85	177	2000	
Sr	88	3	72	212.370	ppb	212.370	0.76	116467	4000	
Mo	95	3	115	3.414	ppb	3.414	1.94	1759	2000	
Ag	107	3	115	0.008	ppb	0.008	107.90	30	100	
Cd	111	3	115	-0.018	ppb	-0.018	-231.37	20	2000	
Sn	120	3	115	-0.036	ppb	-0.036	-374.46	896	2000	
Sb	121	3	115	0.357	ppb	0.357	15.13	313	1000	
Ba	137	3	115	24.546	ppb	24.546	0.59	5997	5000	
Tl	205	3	193	-0.064	ppb	-0.064	-32.48	751	2000	
(Pb)	206	3	193	0.000	ppb	0.000	-9664.91	356	100	
(Pb)	207	3	193	-0.029	ppb	-0.029	-241.58	478	100	
Pb	208	3	193	-0.014	ppb	-0.014	-178.20	1499	5000	
Th	232	3	193	2.179	ppb	2.179	4.43	16843	2000	
U	238	3	193	2.220	ppb	2.220	2.81	13999	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4116159	2.15	3887690	105.88	60	120	
Sc (IS)	45	3	HMI He	591063	1.64	560366	105.48	60	120	
Ge Internal standard	72	2	HMI H2	2521286	0.68	2321471	108.61	60	120	
Ge Internal standard	72	3	HMI He	738468	1.64	685485	107.73	60	120	
In Internal Standard	115	3	HMI He	2760353	1.66	2631879	104.88	60	120	
Ir (IS)	193	3	HMI He	5946659	0.48	5771767	103.03	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-Asd@5
Data File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:53:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.034	ppb	0.034	333.29	5	2000	
Na	23	3	45	2048.668	ppb	2048.668	0.24	236279	400000	
Mg	24	3	45	2219.061	ppb	2219.061	0.92	126494	400000	
Al	27	3	45	3.983	ppb	3.983	35.98	177	400000	
K	39	3	45	1230.570	ppb	1230.570	1.20	82625	400000	
Ca	40	2	45	5993.113	ppb	5993.113	3.68	3421695	400000	
V	51	3	72	4.629	ppb	4.629	2.86	3860	2000	
Cr	52	3	72	0.443	ppb	0.443	30.04	2506	5000	
Mn	55	3	72	1.838	ppb	1.838	8.30	915	10000	
Fe	56	2	72	10.646	ppb	10.646	13.38	48624	10000	
Co	59	3	72	0.027	ppb	0.027	73.98	72	2000	
Ni	60	3	72	0.757	ppb	0.757	8.24	618	5000	
Cu	63	3	72	0.382	ppb	0.382	18.61	838	5000	
Zn	66	3	72	3.408	ppb	3.408	3.00	738	5000	
As	75	3	72	0.916	ppb	0.916	24.89	173	2000	
Se	78	2	72	0.597	ppb	0.597	30.20	39	2000	
Sr	88	3	72	42.198	ppb	42.198	2.88	22868	4000	
Mo	95	3	115	0.799	ppb	0.799	6.55	428	2000	
Ag	107	3	115	0.012	ppb	0.012	52.52	35	100	
Cd	111	3	115	-0.036	ppb	-0.036	-111.97	15	2000	
Sn	120	3	115	-0.011	ppb	-0.011	-727.27	890	2000	
Sb	121	3	115	0.138	ppb	0.138	9.35	142	1000	
Ba	137	3	115	7.493	ppb	7.493	2.76	1803	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-11.14	565	2000	
(Pb)	206	3	193	0.332	ppb	0.332	13.39	791	100	
(Pb)	207	3	193	0.297	ppb	0.297	34.89	856	100	
Pb	208	3	193	0.346	ppb	0.346	3.35	3403	5000	
Th	232	3	193	0.496	ppb	0.496	17.96	8155	2000	
U	238	3	193	0.443	ppb	0.443	6.79	4219	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4088828	3.84	3887690	105.17	60	120	
Sc (IS)	45	3	HMI He	591067	0.94	560366	105.48	60	120	
Ge Internal standard	72	2	HMI H2	2480396	1.00	2321471	106.85	60	120	
Ge Internal standard	72	3	HMI He	729120	0.80	685485	106.37	60	120	
In Internal Standard	115	3	HMI He	2679288	1.12	2631879	101.80	60	120	
Ir (IS)	193	3	HMI He	5993846	1.73	5771767	103.85	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-B MS
Data File Name	067SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:55:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.761	ppb	39.761	7.35	1761	2000	
Na	23	3	45	11398.664	ppb	11398.664	1.01	1226065	400000	
Mg	24	3	45	11754.343	ppb	11754.343	2.63	663225	400000	
Al	27	3	45	762.564	ppb	762.564	1.64	17047	400000	
K	39	3	45	7043.927	ppb	7043.927	1.53	346861	400000	
Ca	40	2	45	29814.424	ppb	29814.424	1.26	17203188	400000	
V	51	3	72	57.459	ppb	57.459	0.96	37124	2000	
Cr	52	3	72	40.040	ppb	40.040	3.19	33225	5000	
Mn	55	3	72	39.195	ppb	39.195	1.35	16163	10000	
Fe	56	2	72	788.527	ppb	788.527	4.74	1294325	10000	
Co	59	3	72	38.100	ppb	38.100	1.98	50677	2000	
Ni	60	3	72	39.030	ppb	39.030	3.04	14757	5000	
Cu	63	3	72	39.062	ppb	39.062	1.67	40287	5000	
Zn	66	3	72	41.787	ppb	41.787	1.48	6832	5000	
As	75	3	72	43.319	ppb	43.319	0.78	5107	2000	
Se	78	2	72	43.801	ppb	43.801	5.92	2602	2000	
Sr	88	3	72	287.719	ppb	287.719	2.38	159402	4000	
Mo	95	3	115	42.927	ppb	42.927	2.46	21356	2000	
Ag	107	3	115	39.451	ppb	39.451	0.75	66005	100	
Cd	111	3	115	39.169	ppb	39.169	0.45	9584	2000	
Sn	120	3	115	39.106	ppb	39.106	1.01	30082	2000	
Sb	121	3	115	39.920	ppb	39.920	0.54	30137	1000	
Ba	137	3	115	65.932	ppb	65.932	3.06	15802	5000	
Tl	205	3	193	39.475	ppb	39.475	0.64	156884	2000	
(Pb)	206	3	193	40.260	ppb	40.260	1.25	52623	100	
(Pb)	207	3	193	39.364	ppb	39.364	0.35	45952	100	
Pb	208	3	193	39.603	ppb	39.603	0.65	210339	5000	
Th	232	3	193	37.577	ppb	37.577	1.23	203008	2000	
U	238	3	193	41.961	ppb	41.961	1.63	235611	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4140524	0.49	3887690	106.50	60	120	
Sc (IS)	45	3	HMI He	586132	1.64	560366	104.60	60	120	
Ge Internal standard	72	2	HMI H2	2464225	3.22	2321471	106.15	60	120	
Ge Internal standard	72	3	HMI He	746009	0.07	685485	108.83	60	120	
In Internal Standard	115	3	HMI He	2719235	1.03	2631879	103.32	60	120	
Ir (IS)	193	3	HMI He	6004218	0.19	5771767	104.03	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-C MSD
Data File Name	068SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:57:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.852	ppb	41.852	3.62	1869	2000	
Na	23	3	45	11137.291	ppb	11137.291	1.94	1220984	400000	
Mg	24	3	45	11633.446	ppb	11633.446	1.21	668909	400000	
Al	27	3	45	758.029	ppb	758.029	1.37	17268	400000	
K	39	3	45	6897.578	ppb	6897.578	1.70	346620	400000	
Ca	40	2	45	30099.817	ppb	30099.817	2.65	17055420	400000	
V	51	3	72	59.164	ppb	59.164	1.14	38103	2000	
Cr	52	3	72	40.770	ppb	40.770	1.67	33712	5000	
Mn	55	3	72	43.763	ppb	43.763	3.74	17978	10000	
Fe	56	2	72	765.594	ppb	765.594	3.23	1282860	10000	
Co	59	3	72	38.446	ppb	38.446	1.17	51018	2000	
Ni	60	3	72	40.054	ppb	40.054	3.78	15096	5000	
Cu	63	3	72	40.665	ppb	40.665	1.83	41822	5000	
Zn	66	3	72	41.731	ppb	41.731	3.66	6807	5000	
As	75	3	72	44.314	ppb	44.314	5.75	5208	2000	
Se	78	2	72	41.375	ppb	41.375	2.07	2508	2000	
Sr	88	3	72	286.375	ppb	286.375	0.41	158285	4000	
Mo	95	3	115	41.743	ppb	41.743	1.72	20839	2000	
Ag	107	3	115	40.725	ppb	40.725	2.29	68352	100	
Cd	111	3	115	39.816	ppb	39.816	3.80	9770	2000	
Sn	120	3	115	39.737	ppb	39.737	3.55	30647	2000	
Sb	121	3	115	39.488	ppb	39.488	1.38	29914	1000	
Ba	137	3	115	67.389	ppb	67.389	3.90	16200	5000	
Tl	205	3	193	39.113	ppb	39.113	1.94	156974	2000	
(Pb)	206	3	193	40.059	ppb	40.059	3.94	52850	100	
(Pb)	207	3	193	39.231	ppb	39.231	2.71	46233	100	
Pb	208	3	193	39.674	ppb	39.674	2.66	212711	5000	
Th	232	3	193	40.150	ppb	40.150	2.31	218603	2000	
U	238	3	193	42.066	ppb	42.066	2.06	238455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068075	2.90	3887690	104.64	60	120	
Sc (IS)	45	3	HMI He	597141	0.30	560366	106.56	60	120	
Ge Internal standard	72	2	HMI H2	2512331	2.78	2321471	108.22	60	120	
Ge Internal standard	72	3	HMI He	744230	0.88	685485	108.57	60	120	
In Internal Standard	115	3	HMI He	2728532	1.81	2631879	103.67	60	120	
Ir (IS)	193	3	HMI He	6063356	2.04	5771767	105.05	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-13-A pds
Data File Name	069SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T14:59:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608551 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	103.188	ppb	103.188	2.48	4633	2000	
Na	23	3	45	10631.149	ppb	10631.149	1.44	1159563	400000	
Mg	24	3	45	10805.902	ppb	10805.902	0.22	617752	400000	
Al	27	3	45	15.342	ppb	15.342	14.10	434	400000	
K	39	3	45	6131.504	ppb	6131.504	2.55	309196	400000	
Ca	40	2	45	29216.836	ppb	29216.836	1.21	16530248	400000	
V	51	3	72	115.923	ppb	115.923	0.02	72744	2000	
Cr	52	3	72	101.020	ppb	101.020	1.52	79258	5000	
Mn	55	3	72	97.717	ppb	97.717	1.66	39421	10000	
Fe	56	2	72	1016.350	ppb	1016.350	1.08	1661555	10000	
Co	59	3	72	97.329	ppb	97.329	1.14	127488	2000	
Ni	60	3	72	97.866	ppb	97.866	0.43	35930	5000	
Cu	63	3	72	100.753	ppb	100.753	2.27	101647	5000	
Zn	66	3	72	3.469	ppb	3.469	17.54	753	5000	
As	75	3	72	105.684	ppb	105.684	1.02	12174	2000	
Se	78	2	72	102.686	ppb	102.686	4.01	6101	2000	
Sr	88	3	72	309.849	ppb	309.849	1.49	169115	4000	
Mo	95	3	115	100.224	ppb	100.224	1.12	50313	2000	
Ag	107	3	115	26.058	ppb	26.058	2.04	44035	100	
Cd	111	3	115	96.058	ppb	96.058	4.03	23696	2000	
Sn	120	3	115	100.568	ppb	100.568	0.34	76694	2000	
Sb	121	3	115	92.995	ppb	92.995	1.17	70850	1000	
Ba	137	3	115	126.853	ppb	126.853	0.48	30675	5000	
Tl	205	3	193	99.649	ppb	99.649	1.99	387833	2000	
(Pb)	206	3	193	100.959	ppb	100.959	1.41	129204	100	
(Pb)	207	3	193	98.841	ppb	98.841	0.92	112679	100	
Pb	208	3	193	99.910	ppb	99.910	1.06	519335	5000	
Th	232	3	193	105.445	ppb	105.445	2.01	550176	2000	
U	238	3	193	2.330	ppb	2.330	0.77	14501	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4060247	1.22	3887690	104.44	60	120	
Sc (IS)	45	3	HMI He	593677	1.00	560366	105.94	60	120	
Ge Internal standard	72	2	HMI H2	2465493	2.05	2321471	106.20	60	120	
Ge Internal standard	72	3	HMI He	734974	0.78	685485	107.22	60	120	
In Internal Standard	115	3	HMI He	2746483	1.29	2631879	104.35	60	120	
Ir (IS)	193	3	HMI He	5903552	0.92	5771767	102.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	070_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:00:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.902	ppb	3.236	2289	50	109.8	90	110	
Na	23	3	45	48405.358	ppb	2.121	5130408	51000	94.9	90	110	
Mg	24	3	45	10238.992	ppb	2.428	575548	11000	93.1	90	110	
Al	27	3	45	935.202	ppb	4.328	20810	1000	93.5	90	110	
K	39	3	45	10258.099	ppb	0.835	491345	11000	93.3	90	110	
Ca	40	2	45	11630.992	ppb	5.610	6139288	11000	105.7	90	110	
V	51	3	72	52.008	ppb	1.126	31348	50	104.0	90	110	
Cr	52	3	72	52.330	ppb	3.978	39745	50	104.7	90	110	
Mn	55	3	72	52.836	ppb	2.413	20203	50	105.7	90	110	
Fe	56	2	72	1131.389	ppb	5.474	1673369	1000	113.1	90	110	>+\-10%
Co	59	3	72	51.250	ppb	2.632	63381	50	102.5	90	110	
Ni	60	3	72	51.585	ppb	4.048	18029	50	103.2	90	110	
Cu	63	3	72	51.125	ppb	2.359	48902	50	102.3	90	110	
Zn	66	3	72	54.439	ppb	1.036	8218	50	108.9	90	110	
As	75	3	72	52.316	ppb	1.556	5723	50	104.6	90	110	
Se	78	2	72	56.301	ppb	5.606	3035	50	112.6	90	110	>+\-10%
Sr	88	3	72	103.361	ppb	0.562	53282	100	103.4	90	110	
Mo	95	3	115	49.698	ppb	1.900	24266	50	99.4	90	110	
Ag	107	3	115	50.780	ppb	1.452	83375	50	101.6	90	110	
Cd	111	3	115	50.101	ppb	0.746	12024	50	100.2	90	110	
Sn	120	3	115	50.186	ppb	1.872	37636	50	100.4	90	110	
Sb	121	3	115	50.675	ppb	0.497	37539	50	101.3	90	110	
Ba	137	3	115	53.754	ppb	0.145	12653	50	107.5	90	110	
Tl	205	3	193	49.880	ppb	2.252	191663	50	99.8	90	110	
(Pb)	206	3	193	50.754	ppb	1.283	64140	50	101.5	90	110	
(Pb)	207	3	193	50.076	ppb	1.552	56464	50	100.2	90	110	
Pb	208	3	193	50.430	ppb	1.212	258899	50	100.9	90	110	
Th	232	3	193	54.357	ppb	1.079	281948	50	108.7	90	110	
U	238	3	193	50.892	ppb	2.078	276288	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3789367	3.99	3887690	97.47	60	120	
Sc (IS)	45	3	HMI He	583718	0.83	560366	104.17	60	120	
Ge Internal standard	72	2	HMI H2	2235904	1.88	2321471	96.31	60	120	
Ge Internal standard	72	3	HMI He	693956	1.77	685485	101.24	60	120	
In Internal Standard	115	3	HMI He	2668880	0.99	2631879	101.41	60	120	
Ir (IS)	193	3	HMI He	5813876	1.41	5771767	100.73	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	071_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:02:40-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.003	ppb	-4086.6	3	0.5	
Na	23	3	45	26.349	ppb	17.0	19633	25	>RL
Mg	24	3	45	1.271	ppb	113.0	300	25	
Al	27	3	45	0.326	ppb	406.7	93	15	
K	39	3	45	4.034	ppb	407.9	25840	50	
V	51	3	72	0.736	ppb	12.6	1431	1	
Cr	52	3	72	0.493	ppb	24.4	2476	1	
Mn	55	3	72	0.105	ppb	156.6	218	0.5	
Co	59	3	72	0.023	ppb	79.6	65	0.5	
Ni	60	3	72	0.466	ppb	43.2	500	1	
Cu	63	3	72	0.057	ppb	99.8	500	1	
Zn	66	3	72	0.043	ppb	931.1	212	5	
As	75	3	72	0.054	ppb	256.3	73	1	
Se	78	2	72	0.068	ppb	77.6	7	1	
Sr	88	3	72	0.046	ppb	48.2	48	0.5	
Mo	95	3	115	0.094	ppb	72.8	83	0.5	
Ag	107	3	115	0.013	ppb	51.3	37	1	
Cd	111	3	115	-0.050	ppb	-47.6	12	0.5	
Sn	120	3	115	-0.028	ppb	-55.3	881	1	
Sb	121	3	115	0.103	ppb	12.9	117	0.6	
Ba	137	3	115	0.066	ppb	75.1	53	0.5	
Tl	205	3	193	-0.091	ppb	-28.9	653	0.1	
(Pb)	206	3	193	-0.029	ppb	-75.1	325	1	
(Pb)	207	3	193	-0.044	ppb	-69.4	468	1	
Pb	208	3	193	-0.026	ppb	-31.6	1458	0.5	
Th	232	3	193	2.125	ppb	17.4	16815	1	>RL
U	238	3	193	-0.003	ppb	-694.2	1753	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3927630	1.49	3887690	101.03	60	120	
Sc (IS)	45	3	HMI He	581946	0.47	560366	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2380771	0.71	2321471	102.55	60	120	
Ge Internal standard	72	3	HMI He	709450	0.39	685485	103.50	60	120	
In Internal Standard	115	3	HMI He	2692289	1.64	2631879	102.30	60	120	
Ir (IS)	193	3	HMI He	6037224	1.15	5771767	104.60	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608988/1-A
Data File Name	072_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:04:30-06:00
Sample Type	Blank
Dilution	1
Comment	608988 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.041	ppb	-155.0859771	2	0.5
Na	23	3	45	46.687	ppb	7.492511907	22026	25
Mg	24	3	45	1.096	ppb	23.5942986	294	25
Al	27	3	45	2.510	ppb	61.89514535	143	15
K	39	3	45	-14.903	ppb	-130.8927844	25275	50
Ca	40	2	45	16.778	ppb	5.606056658	20699	200
V	51	3	72	0.569	ppb	22.58078858	1353	1
Cr	52	3	72	0.369	ppb	70.51278155	2422	1
Mn	55	3	72	0.239	ppb	54.84651189	275	0.5
Fe	56	2	72	9.694	ppb	17.63140757	46833	50
Co	59	3	72	0.019	ppb	104.5183753	62	0.5
Ni	60	3	72	1.247	ppb	7.441109716	786	1
Cu	63	3	72	0.061	ppb	195.1232072	511	1
Zn	66	3	72	0.338	ppb	114.8307696	260	5
As	75	3	72	-0.031	ppb	-295.0944246	65	1
(Se)	78	3	72	1.488	ppb	156.1533275	40	1
Sr	88	3	72	0.035	ppb	192.2389977	43	0.5
Mo	95	3	115	0.040	ppb	114.1373571	58	0.5
Ag	107	3	115	0.004	ppb	96.58909184	22	1
Cd	111	3	115	-0.071	ppb	-65.92145891	7	0.5
Sn	120	3	115	-0.176	ppb	-22.40229225	783	1
Sb	121	3	115	0.062	ppb	4.491696795	87	0.6
Ba	137	3	115	0.056	ppb	89.18887751	52	0.5
Tl	205	3	193	-0.134	ppb	-17.02348229	488	0.1
(Pb)	206	3	193	-0.044	ppb	-61.51707365	308	1
(Pb)	207	3	193	-0.030	ppb	-206.0445783	488	1
Pb	208	3	193	-0.021	ppb	-83.7024333	1496	0.5
Th	232	3	193	0.487	ppb	23.30643585	8224	1
U	238	3	193	-0.001	ppb	-2076.619115	1779	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4080491	2.12	3887690	104.96	60	120	
Sc (IS)	45	3	HMI He	588644	0.54	560366	105.05	60	120	
Ge Internal standard	72	2	HMI H2	2465571	1.01	2321471	106.21	60	120	
Ge Internal standard	72	3	HMI He	720912	0.59	685485	105.17	60	120	
In Internal Standard	115	3	HMI He	2731807	1.09	2631879	103.80	60	120	
Ir (IS)	193	3	HMI He	6092263	2.92	5771767	105.55	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608988/2-A
Data File Name	073_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:06:20-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608988 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	43.090	43.090	ppb	6.781	1946	40	107.7	80	120	
Na	23	3	45	811.400	811.400	ppb	0.945	103902	40	2028.5	80	120	>+/-20%
Mg	24	3	45	745.047	745.047	ppb	0.367	42613	40	1862.6	80	120	>+/-20%
Al	27	3	45	771.606	771.606	ppb	3.182	17392	40	1929.0	80	120	>+/-20%
K	39	3	45	757.516	757.516	ppb	2.741	60862	40	1893.8	80	120	>+/-20%
Ca	40	2	45	827.387	827.387	ppb	0.847	480307	40	2068.5	80	120	>+/-20%
V	51	3	72	40.595	40.595	ppb	1.690	25714	40	101.5	80	120	
Cr	52	3	72	40.977	40.977	ppb	1.440	32901	40	102.4	80	120	
Mn	55	3	72	42.078	42.078	ppb	0.946	16802	40	105.2	80	120	
Fe	56	2	72	819.547	819.547	ppb	0.710	1305737	40	2048.9	80	120	>+/-20%
(Fe)	56	3	72	801.511	801.511	ppb	1.218	530316	40	2003.8	80	120	>+/-20%
Co	59	3	72	40.546	40.546	ppb	0.843	52264	40	101.4	80	120	
Ni	60	3	72	41.323	41.323	ppb	1.858	15121	40	103.3	80	120	
Cu	63	3	72	41.223	41.223	ppb	2.360	41181	40	103.1	80	120	
Zn	66	3	72	42.803	42.803	ppb	2.551	6777	40	107.0	80	120	
As	75	3	72	40.197	40.197	ppb	3.021	4597	40	100.5	80	120	
Se	78	2	72	42.120	42.120	ppb	3.947	2431	40	105.3	80	120	
(Se)	78	3	72	42.976	42.976	ppb	7.483	275	40	107.4	80	120	
Sr	88	3	72	81.052	81.052	ppb	2.355	43533	40	202.6	80	120	>+/-20%
Mo	95	3	115	40.275	40.275	ppb	3.079	20262	40	100.7	80	120	
Ag	107	3	115	40.935	40.935	ppb	2.521	69248	40	102.3	80	120	
Cd	111	3	115	39.674	39.674	ppb	3.938	9814	40	99.2	80	120	
Sn	120	3	115	38.212	38.212	ppb	3.073	29742	40	95.5	80	120	
Sb	121	3	115	39.722	39.722	ppb	2.763	30323	40	99.3	80	120	
Ba	137	3	115	42.004	42.004	ppb	4.533	10199	40	105.0	80	120	
Tl	205	3	193	40.005	40.005	ppb	1.152	159664	40	100.0	80	120	
(Pb)	206	3	193	40.922	40.922	ppb	1.528	53713	40	102.3	80	120	
(Pb)	207	3	193	39.942	39.942	ppb	1.764	46820	40	99.9	80	120	
Pb	208	3	193	40.694	40.694	ppb	1.066	217024	40	101.7	80	120	
Th	232	3	193	39.081	39.081	ppb	1.977	211821	40	97.7	80	120	
U	238	3	193	40.713	40.713	ppb	1.873	229633	40	101.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071852	0.66	3887690	104.74	60	120	
Sc (IS)	45	3	HMI He	590953	0.76	560366	105.46	60	120	
Ge Internal standard	72	2	HMI H2	2391682	1.26	2321471	103.02	60	120	
Ge Internal standard	72	3	HMI He	722977	0.73	685485	105.47	60	120	
In Internal Standard	115	3	HMI He	2750626	2.73	2631879	104.51	60	120	
Ir (IS)	193	3	HMI He	6030532	0.80	5771767	104.48	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-608988/3-A
Data File Name	074SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:08:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.206	ppb	39.206	3.81	1794	2000	
Na	23	3	45	800.848	ppb	800.848	0.28	102904	400000	
Mg	24	3	45	740.941	ppb	740.941	2.38	42436	400000	
Al	27	3	45	769.090	ppb	769.090	2.07	17358	400000	
K	39	3	45	759.474	ppb	759.474	2.47	61033	400000	
Ca	40	2	45	842.949	ppb	842.949	1.25	487356	400000	
V	51	3	72	40.594	ppb	40.594	2.01	25609	2000	
Cr	52	3	72	41.488	ppb	41.488	0.55	33153	5000	
Mn	55	3	72	41.673	ppb	41.673	1.39	16575	10000	
Fe	56	2	72	808.807	ppb	808.807	1.94	1322330	10000	
Co	59	3	72	40.334	ppb	40.334	1.23	51781	2000	
Ni	60	3	72	40.551	ppb	40.551	2.41	14784	5000	
Cu	63	3	72	41.533	ppb	41.533	0.89	41321	5000	
Zn	66	3	72	43.977	ppb	43.977	2.85	6930	5000	
As	75	3	72	38.963	ppb	38.963	3.54	4440	2000	
Se	78	2	72	40.964	ppb	40.964	3.63	2425	2000	
Sr	88	3	72	80.793	ppb	80.793	1.04	43222	4000	
Mo	95	3	115	40.379	ppb	40.379	1.41	19960	2000	
Ag	107	3	115	41.365	ppb	41.365	2.42	68751	100	
Cd	111	3	115	40.373	ppb	40.373	1.35	9814	2000	
Sn	120	3	115	39.308	ppb	39.308	1.03	30035	2000	
Sb	121	3	115	40.389	ppb	40.389	0.92	30291	1000	
Ba	137	3	115	43.929	ppb	43.929	1.71	10474	5000	
Tl	205	3	193	39.483	ppb	39.483	3.59	158099	2000	
(Pb)	206	3	193	40.910	ppb	40.910	2.38	53882	100	
(Pb)	207	3	193	39.670	ppb	39.670	2.66	46664	100	
Pb	208	3	193	40.205	ppb	40.205	2.26	215173	5000	
Th	232	3	193	40.301	ppb	40.301	2.98	218988	2000	
U	238	3	193	39.939	ppb	39.939	2.56	226077	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4057130	0.57	3887690	104.36	60	120	
Sc (IS)	45	3	HMI He	591701	0.43	560366	105.59	60	120	
Ge Internal standard	72	2	HMI H2	2454144	2.35	2321471	105.71	60	120	
Ge Internal standard	72	3	HMI He	720119	1.27	685485	105.05	60	120	
In Internal Standard	115	3	HMI He	2701513	1.31	2631879	102.65	60	120	
Ir (IS)	193	3	HMI He	6053291	2.61	5771767	104.88	60	120	

Sample Report

Sample Table

Sample Name	280-175093-A-1-A
Data File Name	075SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:10:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.002	ppb	-0.002	-6191.75	3	2000	
Na	23	3	45	83.402	ppb	83.402	1.96	26003	400000	
Mg	24	3	45	1.318	ppb	1.318	30.35	307	400000	
Al	27	3	45	5.922	ppb	5.922	19.57	220	400000	
K	39	3	45	-18.125	ppb	-18.125	-90.40	25188	400000	
Ca	40	2	45	9.137	ppb	9.137	7.29	16062	400000	
V	51	3	72	0.617	ppb	0.617	7.67	1378	2000	
Cr	52	3	72	0.400	ppb	0.400	54.72	2439	5000	
Mn	55	3	72	0.229	ppb	0.229	11.34	270	10000	
Fe	56	2	72	13.122	ppb	13.122	15.71	51892	10000	
Co	59	3	72	0.017	ppb	0.017	54.09	58	2000	
Ni	60	3	72	0.514	ppb	0.514	13.76	523	5000	
Cu	63	3	72	0.063	ppb	0.063	21.69	513	5000	
Zn	66	3	72	0.594	ppb	0.594	56.99	298	5000	
As	75	3	72	-0.105	ppb	-0.105	-233.23	57	2000	
Se	78	2	72	0.053	ppb	0.053	32.30	7	2000	
Sr	88	3	72	0.067	ppb	0.067	78.82	60	4000	
Mo	95	3	115	0.050	ppb	0.050	74.96	62	2000	
Ag	107	3	115	0.015	ppb	0.015	60.83	40	100	
Cd	111	3	115	-0.022	ppb	-0.022	-58.24	18	2000	
Sn	120	3	115	0.422	ppb	0.422	29.43	1204	2000	
Sb	121	3	115	0.117	ppb	0.117	52.99	125	1000	
Ba	137	3	115	0.125	ppb	0.125	36.94	67	5000	
Tl	205	3	193	-0.123	ppb	-0.123	-18.64	530	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-67.23	298	100	
(Pb)	207	3	193	-0.038	ppb	-0.038	-43.88	478	100	
Pb	208	3	193	-0.034	ppb	-0.034	-45.78	1423	5000	
Th	232	3	193	2.011	ppb	2.011	11.59	16303	2000	
U	238	3	193	-0.017	ppb	-0.017	-124.41	1688	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4008249	1.98	3887690	103.10	60	120	
Sc (IS)	45	3	HMI He	590153	0.23	560366	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2447318	2.07	2321471	105.42	60	120	
Ge Internal standard	72	3	HMI He	718840	0.53	685485	104.87	60	120	
In Internal Standard	115	3	HMI He	2669990	1.54	2631879	101.45	60	120	
Ir (IS)	193	3	HMI He	6071933	0.56	5771767	105.20	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A
Data File Name	076SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:11:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	7738.623	ppb	7738.623	3.18	848583	400000	
Mg	24	3	45	42209.492	ppb	42209.492	2.25	2411612	400000	
Al	27	3	45	6.440	ppb	6.440	51.32	234	400000	
K	39	3	45	825.746	ppb	825.746	3.35	64288	400000	
Ca	40	2	45	120955.501	ppb	120955.501	0.38	68652573	400000	
V	51	3	72	0.033	ppb	0.033	293.85	1043	2000	
Cr	52	3	72	0.499	ppb	0.499	22.96	2557	5000	
Mn	55	3	72	46.466	ppb	46.466	2.36	18755	10000	
Fe	56	2	72	757.313	ppb	757.313	1.38	1244226	10000	
Co	59	3	72	0.049	ppb	0.049	22.87	102	2000	
Ni	60	3	72	0.912	ppb	0.912	13.95	676	5000	
Cu	63	3	72	0.505	ppb	0.505	7.41	963	5000	
Zn	66	3	72	1.812	ppb	1.812	30.80	493	5000	
As	75	3	72	1.043	ppb	1.043	34.98	188	2000	
Se	78	2	72	0.063	ppb	0.063	133.10	7	2000	
Sr	88	3	72	133.935	ppb	133.935	1.62	72777	4000	
Mo	95	3	115	0.390	ppb	0.390	21.88	232	2000	
Ag	107	3	115	0.003	ppb	0.003	198.94	20	100	
Cd	111	3	115	-0.011	ppb	-0.011	-587.72	22	2000	
Sn	120	3	115	-0.128	ppb	-0.128	-57.00	816	2000	
Sb	121	3	115	0.124	ppb	0.124	45.11	133	1000	
Ba	137	3	115	147.519	ppb	147.519	0.69	35375	5000	
Tl	205	3	193	-0.124	ppb	-0.124	-7.13	528	2000	
(Pb)	206	3	193	0.011	ppb	0.011	446.15	380	100	
(Pb)	207	3	193	0.018	ppb	0.018	101.90	543	100	
Pb	208	3	193	0.022	ppb	0.022	42.70	1723	5000	
Th	232	3	193	0.539	ppb	0.539	28.48	8487	2000	
U	238	3	193	0.156	ppb	0.156	17.87	2659	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4074929	1.54	3887690	104.82	60	120	
Sc (IS)	45	3	HMI He	593579	0.96	560366	105.93	60	120	
Ge Internal standard	72	2	HMI H2	2461830	1.14	2321471	106.05	60	120	
Ge Internal standard	72	3	HMI He	731546	0.68	685485	106.72	60	120	
In Internal Standard	115	3	HMI He	2724050	1.23	2631879	103.50	60	120	
Ir (IS)	193	3	HMI He	6074618	0.56	5771767	105.25	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-Asd@5
Data File Name	077SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:14:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.033	ppb	0.033	5.77	5	2000	
Na	23	3	45	1521.062	ppb	1521.062	1.21	176932	400000	
Mg	24	3	45	8440.542	ppb	8440.542	1.53	472673	400000	
Al	27	3	45	4.395	ppb	4.395	33.99	184	400000	
K	39	3	45	163.730	ppb	163.730	6.54	33049	400000	
Ca	40	2	45	24304.593	ppb	24304.593	2.67	13779359	400000	
V	51	3	72	0.350	ppb	0.350	46.47	1204	2000	
Cr	52	3	72	0.671	ppb	0.671	20.77	2616	5000	
Mn	55	3	72	10.960	ppb	10.960	1.54	4442	10000	
Fe	56	2	72	161.532	ppb	161.532	1.07	286821	10000	
Co	59	3	72	0.029	ppb	0.029	56.93	73	2000	
Ni	60	3	72	0.713	ppb	0.713	29.24	588	5000	
Cu	63	3	72	0.181	ppb	0.181	57.00	623	5000	
Zn	66	3	72	3.060	ppb	3.060	25.96	668	5000	
As	75	3	72	0.352	ppb	0.352	52.62	107	2000	
Se	78	2	72	0.031	ppb	0.031	169.51	5	2000	
Sr	88	3	72	27.151	ppb	27.151	1.23	14379	4000	
Mo	95	3	115	0.103	ppb	0.103	24.89	88	2000	
Ag	107	3	115	0.014	ppb	0.014	65.06	38	100	
Cd	111	3	115	-0.037	ppb	-0.037	-54.73	15	2000	
Sn	120	3	115	0.023	ppb	0.023	153.77	918	2000	
Sb	121	3	115	0.072	ppb	0.072	72.66	93	1000	
Ba	137	3	115	28.613	ppb	28.613	6.35	6807	5000	
Tl	205	3	193	-0.144	ppb	-0.144	-4.48	446	2000	
(Pb)	206	3	193	0.326	ppb	0.326	22.44	793	100	
(Pb)	207	3	193	0.325	ppb	0.325	26.09	903	100	
Pb	208	3	193	0.302	ppb	0.302	3.20	3220	5000	
Th	232	3	193	0.353	ppb	0.353	28.78	7502	2000	
U	238	3	193	0.031	ppb	0.031	25.18	1961	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4070493	4.19	3887690	104.70	60	120	
Sc (IS)	45	3	HMI He	581540	1.28	560366	103.78	60	120	
Ge Internal standard	72	2	HMI H2	2434810	1.65	2321471	104.88	60	120	
Ge Internal standard	72	3	HMI He	711984	0.35	685485	103.87	60	120	
In Internal Standard	115	3	HMI He	2690154	1.06	2631879	102.21	60	120	
Ir (IS)	193	3	HMI He	6081327	0.81	5771767	105.36	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-B MS
Data File Name	078SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:15:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.684	ppb	42.684	3.37	1916	2000	
Na	23	3	45	8578.782	ppb	8578.782	2.58	938167	400000	
Mg	24	3	45	42423.693	ppb	42423.693	1.25	2422396	400000	
Al	27	3	45	762.195	ppb	762.195	4.43	17248	400000	
K	39	3	45	1616.705	ppb	1616.705	3.46	100717	400000	
Ca	40	2	45	123116.006	ppb	123116.006	0.80	68779943	400000	
V	51	3	72	40.363	ppb	40.363	2.71	25454	2000	
Cr	52	3	72	40.998	ppb	40.998	1.22	32769	5000	
Mn	55	3	72	87.639	ppb	87.639	2.85	34644	10000	
Fe	56	2	72	1545.885	ppb	1545.885	0.82	2492756	10000	
Co	59	3	72	39.912	ppb	39.912	0.90	51209	2000	
Ni	60	3	72	40.901	ppb	40.901	3.03	14904	5000	
Cu	63	3	72	41.387	ppb	41.387	1.06	41149	5000	
Zn	66	3	72	42.659	ppb	42.659	1.06	6723	5000	
As	75	3	72	39.330	ppb	39.330	6.07	4479	2000	
Se	78	2	72	35.472	ppb	35.472	2.45	2096	2000	
Sr	88	3	72	215.447	ppb	215.447	1.86	115145	4000	
Mo	95	3	115	40.597	ppb	40.597	2.45	20200	2000	
Ag	107	3	115	41.141	ppb	41.141	1.06	68836	100	
Cd	111	3	115	39.967	ppb	39.967	5.42	9775	2000	
Sn	120	3	115	39.067	ppb	39.067	2.26	30054	2000	
Sb	121	3	115	40.121	ppb	40.121	1.08	30296	1000	
Ba	137	3	115	191.828	ppb	191.828	1.51	45910	5000	
Tl	205	3	193	39.200	ppb	39.200	2.19	157198	2000	
(Pb)	206	3	193	40.010	ppb	40.010	2.84	52773	100	
(Pb)	207	3	193	39.865	ppb	39.865	3.01	46945	100	
Pb	208	3	193	39.984	ppb	39.984	2.99	214251	5000	
Th	232	3	193	38.003	ppb	38.003	1.66	207108	2000	
U	238	3	193	40.244	ppb	40.244	1.45	228091	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4011257	1.93	3887690	103.18	60	120	
Sc (IS)	45	3	HMI He	593154	0.59	560366	105.85	60	120	
Ge Internal standard	72	2	HMI H2	2447350	1.38	2321471	105.42	60	120	
Ge Internal standard	72	3	HMI He	719660	0.64	685485	104.99	60	120	
In Internal Standard	115	3	HMI He	2719608	1.30	2631879	103.33	60	120	
Ir (IS)	193	3	HMI He	6059439	1.44	5771767	104.98	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-C MSD
Data File Name	079SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:17:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.736	ppb	42.736	3.00	1933	2000	
Na	23	3	45	8446.635	ppb	8446.635	3.02	905938	400000	
Mg	24	3	45	42438.924	ppb	42438.924	0.36	2376291	400000	
Al	27	3	45	790.574	ppb	790.574	4.37	17535	400000	
K	39	3	45	1622.604	ppb	1622.604	3.21	99026	400000	
Ca	40	2	45	118450.603	ppb	118450.603	1.39	68138137	400000	
V	51	3	72	39.848	ppb	39.848	0.92	25329	2000	
Cr	52	3	72	41.086	ppb	41.086	2.08	33074	5000	
Mn	55	3	72	87.349	ppb	87.349	0.63	34779	10000	
Fe	56	2	72	1525.394	ppb	1525.394	0.61	2486346	10000	
Co	59	3	72	40.190	ppb	40.190	1.57	51944	2000	
Ni	60	3	72	41.005	ppb	41.005	1.91	15049	5000	
Cu	63	3	72	40.953	ppb	40.953	0.79	41022	5000	
Zn	66	3	72	43.994	ppb	43.994	1.99	6978	5000	
As	75	3	72	39.935	ppb	39.935	0.58	4580	2000	
Se	78	2	72	37.422	ppb	37.422	2.37	2234	2000	
Sr	88	3	72	213.172	ppb	213.172	0.90	114772	4000	
Mo	95	3	115	41.088	ppb	41.088	4.89	20140	2000	
Ag	107	3	115	41.800	ppb	41.800	0.89	68918	100	
Cd	111	3	115	40.742	ppb	40.742	4.55	9819	2000	
Sn	120	3	115	40.123	ppb	40.123	2.27	30393	2000	
Sb	121	3	115	41.201	ppb	41.201	1.19	30650	1000	
Ba	137	3	115	188.912	ppb	188.912	1.94	44548	5000	
Tl	205	3	193	40.244	ppb	40.244	2.53	162147	2000	
(Pb)	206	3	193	40.540	ppb	40.540	1.64	53733	100	
(Pb)	207	3	193	39.607	ppb	39.607	2.79	46875	100	
Pb	208	3	193	40.340	ppb	40.340	2.24	217218	5000	
Th	232	3	193	39.889	ppb	39.889	3.46	218129	2000	
U	238	3	193	40.558	ppb	40.558	3.23	230933	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4130044	0.73	3887690	106.23	60	120	
Sc (IS)	45	3	HMI He	581644	0.72	560366	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2473524	2.46	2321471	106.55	60	120	
Ge Internal standard	72	3	HMI He	724932	0.23	685485	105.75	60	120	
In Internal Standard	115	3	HMI He	2680050	2.27	2631879	101.83	60	120	
Ir (IS)	193	3	HMI He	6090630	2.76	5771767	105.52	60	120	

Sample Report

Sample Table

Sample Name	280-175012-E-1-A pds
Data File Name	080SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:20:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	103.321	ppb	103.321	5.59	4565	2000	
Na	23	3	45	12506.495	ppb	12506.495	0.93	1350169	400000	
Mg	24	3	45	42805.231	ppb	42805.231	0.73	2426946	400000	
Al	27	3	45	1981.447	ppb	1981.447	0.10	44377	400000	
K	39	3	45	2809.713	ppb	2809.713	0.56	154649	400000	
Ca	40	2	45	120054.245	ppb	120054.245	1.69	67167121	400000	
V	51	3	72	98.724	ppb	98.724	2.33	60278	2000	
Cr	52	3	72	99.956	ppb	99.956	1.37	76139	5000	
Mn	55	3	72	145.888	ppb	145.888	0.58	57048	10000	
Fe	56	2	72	1733.613	ppb	1733.613	2.40	2733317	10000	
Co	59	3	72	97.208	ppb	97.208	1.25	123594	2000	
Ni	60	3	72	98.644	ppb	98.644	1.49	35152	5000	
Cu	63	3	72	101.063	ppb	101.063	1.10	98969	5000	
Zn	66	3	72	214.043	ppb	214.043	0.80	32616	5000	
As	75	3	72	102.174	ppb	102.174	2.59	11426	2000	
Se	78	2	72	102.654	ppb	102.654	3.35	5933	2000	
Sr	88	3	72	231.646	ppb	231.646	1.30	122735	4000	
Mo	95	3	115	101.343	ppb	101.343	1.53	48887	2000	
Ag	107	3	115	27.320	ppb	27.320	2.29	44363	100	
Cd	111	3	115	101.041	ppb	101.041	0.35	23958	2000	
Sn	120	3	115	100.386	ppb	100.386	1.97	73560	2000	
Sb	121	3	115	98.901	ppb	98.901	1.49	72405	1000	
Ba	137	3	115	253.395	ppb	253.395	1.13	58845	5000	
Tl	205	3	193	96.952	ppb	96.952	3.18	387858	2000	
(Pb)	206	3	193	98.210	ppb	98.210	1.80	129221	100	
(Pb)	207	3	193	96.111	ppb	96.111	2.72	112631	100	
Pb	208	3	193	96.854	ppb	96.854	2.76	517526	5000	
Th	232	3	193	106.875	ppb	106.875	5.31	572861	2000	
U	238	3	193	203.028	ppb	203.028	1.33	1145547	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4017822	2.72	3887690	103.35	60	120	
Sc (IS)	45	3	HMI He	588953	0.17	560366	105.10	60	120	
Ge Internal standard	72	2	HMI H2	2397318	3.28	2321471	103.27	60	120	
Ge Internal standard	72	3	HMI He	713465	0.96	685485	104.08	60	120	
In Internal Standard	115	3	HMI He	2639293	1.21	2631879	100.28	60	120	
Ir (IS)	193	3	HMI He	6070628	2.78	5771767	105.18	60	120	

Sample Report

Sample Table

Sample Name	280-175031-E-1-A
Data File Name	081SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:21:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608988 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.034	ppb	0.034	0.85	5	2000	
Na	23	3	45	87875.630	ppb	87875.630	1.28	9268025	400000	
Mg	24	3	45	70920.104	ppb	70920.104	1.55	3971162	400000	
Al	27	3	45	5.767	ppb	5.767	23.04	214	400000	
K	39	3	45	4579.884	ppb	4579.884	1.20	232809	400000	
Ca	40	2	45	165454.527	ppb	165454.527	2.27	91154689	400000	
V	51	3	72	0.907	ppb	0.907	7.22	1576	2000	
Cr	52	3	72	0.465	ppb	0.465	25.33	2522	5000	
Mn	55	3	72	176.350	ppb	176.350	1.33	70429	10000	
Fe	56	2	72	15.591	ppb	15.591	14.25	55463	10000	
Co	59	3	72	0.212	ppb	0.212	17.39	313	2000	
Ni	60	3	72	2.858	ppb	2.858	2.85	1376	5000	
Cu	63	3	72	9.500	ppb	9.500	0.60	9922	5000	
Zn	66	3	72	19.111	ppb	19.111	7.02	3167	5000	
As	75	3	72	0.226	ppb	0.226	108.33	95	2000	
Se	78	2	72	0.590	ppb	0.590	22.64	38	2000	
Sr	88	3	72	728.579	ppb	728.579	0.83	394462	4000	
Mo	95	3	115	0.267	ppb	0.267	32.82	165	2000	
Ag	107	3	115	0.210	ppb	0.210	8.49	356	100	
Cd	111	3	115	0.014	ppb	0.014	227.68	27	2000	
Sn	120	3	115	1.974	ppb	1.974	10.32	2312	2000	
Sb	121	3	115	0.155	ppb	0.155	34.99	152	1000	
Ba	137	3	115	291.057	ppb	291.057	1.13	67567	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-13.23	765	2000	
(Pb)	206	3	193	1.170	ppb	1.170	3.93	1884	100	
(Pb)	207	3	193	1.123	ppb	1.123	8.91	1818	100	
Pb	208	3	193	1.159	ppb	1.159	5.87	7715	5000	
Th	232	3	193	3.343	ppb	3.343	9.66	23180	2000	
U	238	3	193	4.275	ppb	4.275	1.25	25652	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3955469	0.93	3887690	101.74	60	120	
Sc (IS)	45	3	HMI He	581681	0.22	560366	103.80	60	120	
Ge Internal standard	72	2	HMI H2	2430677	1.97	2321471	104.70	60	120	
Ge Internal standard	72	3	HMI He	729103	0.84	685485	106.36	60	120	
In Internal Standard	115	3	HMI He	2638493	1.42	2631879	100.25	60	120	
Ir (IS)	193	3	HMI He	6019252	0.15	5771767	104.29	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	082_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:23:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.271	ppb	4.377	2209	50	98.5	90	110	
Na	23	3	45	48132.845	ppb	1.176	5134508	51000	94.4	90	110	
Mg	24	3	45	10416.280	ppb	1.446	589215	11000	94.7	90	110	
Al	27	3	45	946.518	ppb	4.165	21184	1000	94.7	90	110	
K	39	3	45	10101.218	ppb	2.282	487285	11000	91.8	90	110	
Ca	40	2	45	10502.896	ppb	0.675	5847917	11000	95.5	90	110	
V	51	3	72	51.196	ppb	2.207	31011	50	102.4	90	110	
Cr	52	3	72	51.211	ppb	1.313	39122	50	102.4	90	110	
Mn	55	3	72	51.663	ppb	1.137	19848	50	103.3	90	110	
Fe	56	2	72	1016.356	ppb	5.095	1589974	1000	101.6	90	110	
Co	59	3	72	50.831	ppb	0.922	63153	50	101.7	90	110	
Ni	60	3	72	50.586	ppb	1.072	17771	50	101.2	90	110	
Cu	63	3	72	50.363	ppb	0.388	48400	50	100.7	90	110	
Zn	66	3	72	51.360	ppb	3.708	7798	50	102.7	90	110	
As	75	3	72	51.108	ppb	2.928	5617	50	102.2	90	110	
Se	78	2	72	50.608	ppb	1.314	2881	50	101.2	90	110	
Sr	88	3	72	100.838	ppb	1.358	52209	100	100.8	90	110	
Mo	95	3	115	49.766	ppb	0.669	24351	50	99.5	90	110	
Ag	107	3	115	50.272	ppb	3.552	82707	50	100.5	90	110	
Cd	111	3	115	49.157	ppb	0.977	11828	50	98.3	90	110	
Sn	120	3	115	49.549	ppb	0.989	37255	50	99.1	90	110	
Sb	121	3	115	49.617	ppb	3.306	36826	50	99.2	90	110	
Ba	137	3	115	53.283	ppb	3.458	12566	50	106.6	90	110	
Tl	205	3	193	47.760	ppb	1.250	191269	50	95.5	90	110	
(Pb)	206	3	193	48.473	ppb	1.402	63837	50	96.9	90	110	
(Pb)	207	3	193	47.478	ppb	2.938	55811	50	95.0	90	110	
Pb	208	3	193	47.924	ppb	0.405	256427	50	95.8	90	110	
Th	232	3	193	49.713	ppb	0.830	269116	50	99.4	90	110	
U	238	3	193	48.335	ppb	2.374	273483	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3990518	0.60	3887690	102.64	60	120	
Sc (IS)	45	3	HMI He	587506	1.47	560366	104.84	60	120	
Ge Internal standard	72	2	HMI H2	2359700	1.36	2321471	101.65	60	120	
Ge Internal standard	72	3	HMI He	696960	0.43	685485	101.67	60	120	
In Internal Standard	115	3	HMI He	2675089	1.94	2631879	101.64	60	120	
Ir (IS)	193	3	HMI He	6056991	0.78	5771767	104.94	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	083_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:28:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.041	ppb	-157.4	2	0.5	
Na	23	3	45	14.622	ppb	17.6	18444	25	
Mg	24	3	45	0.194	ppb	407.1	240	25	
Al	27	3	45	-1.048	ppb	-172.9	63	15	
K	39	3	45	1.391	ppb	2091.3	25790	50	
V	51	3	72	0.601	ppb	45.4	1363	1	
Cr	52	3	72	0.306	ppb	36.5	2356	1	
Mn	55	3	72	0.066	ppb	190.5	205	0.5	
Co	59	3	72	0.000	ppb	38142.3	37	0.5	
Ni	60	3	72	0.408	ppb	11.4	483	1	
Cu	63	3	72	0.022	ppb	53.7	470	1	
Zn	66	3	72	-0.076	ppb	-239.8	195	5	
As	75	3	72	0.018	ppb	1745.3	70	1	
Se	78	2	72	0.008	ppb	409.7	4	1	
Sr	88	3	72	0.004	ppb	239.9	27	0.5	
Mo	95	3	115	0.058	ppb	26.5	67	0.5	
Ag	107	3	115	-0.003	ppb	-87.8	10	1	
Cd	111	3	115	0.003	ppb	579.1	25	0.5	
Sn	120	3	115	0.071	ppb	54.5	966	1	
Sb	121	3	115	0.060	ppb	45.6	85	0.6	
Ba	137	3	115	0.078	ppb	113.9	57	0.5	
Tl	205	3	193	-0.123	ppb	-3.5	525	0.1	
(Pb)	206	3	193	-0.065	ppb	-32.7	277	1	
(Pb)	207	3	193	-0.052	ppb	-51.5	456	1	
Pb	208	3	193	-0.037	ppb	-32.3	1391	0.5	
Th	232	3	193	2.134	ppb	11.8	16765	1	>RL
U	238	3	193	-0.003	ppb	-698.8	1744	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4010735	1.58	3887690	103.16	60	120	
Sc (IS)	45	3	HMI He	583392	0.98	560366	104.11	60	120	
Ge Internal standard	72	2	HMI H2	2428000	1.28	2321471	104.59	60	120	
Ge Internal standard	72	3	HMI He	715216	1.24	685485	104.34	60	120	
In Internal Standard	115	3	HMI He	2726729	0.79	2631879	103.60	60	120	
Ir (IS)	193	3	HMI He	6001879	1.46	5771767	103.99	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608652/1-A
Data File Name	084_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:30:09-06:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.041	ppb	-154.1565254	2	0.5
Na	23	3	45	98.834	ppb	6.447903046	27698	25
Mg	24	3	45	19.546	ppb	1.300379086	1345	25
Al	27	3	45	7.244	ppb	21.02101515	250	15
K	39	3	45	13.935	ppb	158.8611174	26706	50
Ca	40	2	45	120.589	ppb	1.184974186	80286	200
V	51	3	72	0.361	ppb	25.74720255	1226	1
Cr	52	3	72	1.790	ppb	9.147913719	3485	1
Mn	55	3	72	0.471	ppb	58.2378923	366	0.5
Fe	56	2	72	23.146	ppb	11.78747805	68122	50
Co	59	3	72	0.027	ppb	54.27537698	72	0.5
Ni	60	3	72	1.594	ppb	3.166002109	910	1
Cu	63	3	72	1.867	ppb	3.464822222	2291	1
Zn	66	3	72	2.558	ppb	6.958246608	600	5
As	75	3	72	-0.224	ppb	-29.94015954	43	1
(Se)	78	3	72	-1.457	ppb	-35.12611855	23	1
Sr	88	3	72	0.602	ppb	21.84269628	347	0.5
Mo	95	3	115	0.275	ppb	37.36694057	175	0.5
Ag	107	3	115	0.002	ppb	288.8867943	18	1
Cd	111	3	115	-0.051	ppb	-23.61649586	12	0.5
Sn	120	3	115	11.713	ppb	3.425963108	9709	1
Sb	121	3	115	0.013	ppb	84.71639555	50	0.6
Ba	137	3	115	0.429	ppb	12.62987632	142	0.5
Tl	205	3	193	-0.151	ppb	-11.4741905	421	0.1
(Pb)	206	3	193	0.322	ppb	10.57615086	795	1
(Pb)	207	3	193	0.367	ppb	15.56702065	958	1
Pb	208	3	193	0.346	ppb	5.183500973	3480	0.5
Th	232	3	193	0.674	ppb	24.14334344	9281	1
U	238	3	193	0.000	ppb	-114.2060878	1794	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4111146	0.80	3887690	105.75	60	120	
Sc (IS)	45	3	HMI He	591166	0.30	560366	105.50	60	120	
Ge Internal standard	72	2	HMI H2	2456523	1.05	2321471	105.82	60	120	
Ge Internal standard	72	3	HMI He	720830	0.46	685485	105.16	60	120	
In Internal Standard	115	3	HMI He	2737248	2.05	2631879	104.00	60	120	
Ir (IS)	193	3	HMI He	6123509	2.26	5771767	106.09	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-10-C MDLV
Data File Name	085SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:32:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.510	ppb	0.510	50.99	27	2000	
Na	23	3	45	427.007	ppb	427.007	0.53	62440	400000	
Mg	24	3	45	115.629	ppb	115.629	5.11	6772	400000	
Al	27	3	45	102.208	ppb	102.208	8.32	2366	400000	
K	39	3	45	195.500	ppb	195.500	10.44	34842	400000	
Ca	40	2	45	381.008	ppb	381.008	2.33	228917	400000	
V	51	3	72	2.699	ppb	2.699	10.13	2632	2000	
Cr	52	3	72	5.237	ppb	5.237	4.28	6035	5000	
Mn	55	3	72	3.554	ppb	3.554	6.06	1573	10000	
Fe	56	2	72	157.966	ppb	157.966	2.82	284498	10000	
Co	59	3	72	0.252	ppb	0.252	12.08	358	2000	
Ni	60	3	72	15.358	ppb	15.358	6.62	5790	5000	
Cu	63	3	72	7.289	ppb	7.289	3.21	7595	5000	
Zn	66	3	72	17.457	ppb	17.457	7.43	2866	5000	
As	75	3	72	1.686	ppb	1.686	15.64	257	2000	
Se	78	2	72	1.243	ppb	1.243	8.76	77	2000	
Sr	88	3	72	2.900	ppb	2.900	10.82	1569	4000	
Mo	95	3	115	1.992	ppb	1.992	16.49	1020	2000	
Ag	107	3	115	0.181	ppb	0.181	15.04	317	100	
Cd	111	3	115	0.472	ppb	0.472	9.61	138	2000	
Sn	120	3	115	11.349	ppb	11.349	2.44	9315	2000	
Sb	121	3	115	1.183	ppb	1.183	11.73	925	1000	
Ba	137	3	115	2.431	ppb	2.431	11.13	615	5000	
Tl	205	3	193	0.390	ppb	0.390	7.54	2599	2000	
(Pb)	206	3	193	1.408	ppb	1.408	2.35	2229	100	
(Pb)	207	3	193	1.491	ppb	1.491	2.63	2279	100	
Pb	208	3	193	1.473	ppb	1.473	4.15	9527	5000	
Th	232	3	193	1.103	ppb	1.103	4.74	11571	2000	
U	238	3	193	0.468	ppb	0.468	7.05	4457	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4103826	1.99	3887690	105.56	60	120	
Sc (IS)	45	3	HMI He	587658	0.64	560366	104.87	60	120	
Ge Internal standard	72	2	HMI H2	2464695	1.98	2321471	106.17	60	120	
Ge Internal standard	72	3	HMI He	717394	0.37	685485	104.66	60	120	
In Internal Standard	115	3	HMI He	2700866	1.07	2631879	102.62	60	120	
Ir (IS)	193	3	HMI He	6119139	2.29	5771767	106.02	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-11-C MDLV
Data File Name	086SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:34:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.730	ppb	0.730	29.04	35	2000	
Na	23	3	45	434.341	ppb	434.341	3.27	63488	400000	
Mg	24	3	45	115.993	ppb	115.993	11.48	6819	400000	
Al	27	3	45	174.421	ppb	174.421	3.13	3995	400000	
K	39	3	45	223.893	ppb	223.893	7.93	36293	400000	
Ca	40	2	45	942.159	ppb	942.159	9.83	504859	400000	
V	51	3	72	2.838	ppb	2.838	9.40	2719	2000	
Cr	52	3	72	5.537	ppb	5.537	2.45	6268	5000	
Mn	55	3	72	7.026	ppb	7.026	4.14	2937	10000	
Fe	56	2	72	266.871	ppb	266.871	7.09	429241	10000	
Co	59	3	72	0.252	ppb	0.252	16.50	360	2000	
Ni	60	3	72	6.075	ppb	6.075	3.14	2499	5000	
Cu	63	3	72	7.295	ppb	7.295	2.02	7612	5000	
Zn	66	3	72	21.602	ppb	21.602	7.33	3500	5000	
As	75	3	72	1.787	ppb	1.787	5.00	268	2000	
Se	78	2	72	1.091	ppb	1.091	8.89	64	2000	
Sr	88	3	72	4.254	ppb	4.254	1.54	2294	4000	
Mo	95	3	115	1.805	ppb	1.805	8.55	946	2000	
Ag	107	3	115	0.184	ppb	0.184	28.20	328	100	
Cd	111	3	115	0.556	ppb	0.556	23.11	162	2000	
Sn	120	3	115	10.371	ppb	10.371	3.84	8752	2000	
Sb	121	3	115	1.159	ppb	1.159	0.35	925	1000	
Ba	137	3	115	2.456	ppb	2.456	13.41	633	5000	
Tl	205	3	193	0.388	ppb	0.388	11.27	2534	2000	
(Pb)	206	3	193	1.815	ppb	1.815	12.54	2707	100	
(Pb)	207	3	193	1.686	ppb	1.686	4.17	2456	100	
Pb	208	3	193	1.768	ppb	1.768	5.94	10876	5000	
Th	232	3	193	0.957	ppb	0.957	5.23	10558	2000	
U	238	3	193	0.465	ppb	0.465	5.29	4340	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3783475	6.03	3887690	97.32	60	120	
Sc (IS)	45	3	HMI He	590168	0.61	560366	105.32	60	120	
Ge Internal standard	72	2	HMI H2	2307257	3.55	2321471	99.39	60	120	
Ge Internal standard	72	3	HMI He	718490	1.35	685485	104.81	60	120	
In Internal Standard	115	3	HMI He	2752644	1.11	2631879	104.59	60	120	
Ir (IS)	193	3	HMI He	5990055	1.59	5771767	103.78	60	120	

Sample Report

Sample Table

Sample Name	280-173732-A-12-C LOQV
Data File Name	087SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:36:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.031	ppb	1.031	41.90	50	2000	
Na	23	3	45	490.298	ppb	490.298	2.63	69620	400000	
Mg	24	3	45	504.059	ppb	504.059	1.85	28935	400000	
Al	27	3	45	109.217	ppb	109.217	2.84	2539	400000	
K	39	3	45	257.919	ppb	257.919	8.74	37943	400000	
Ca	40	2	45	636.159	ppb	636.159	2.68	368484	400000	
V	51	3	72	4.804	ppb	4.804	6.63	3969	2000	
Cr	52	3	72	7.585	ppb	7.585	4.01	7915	5000	
Mn	55	3	72	5.568	ppb	5.568	1.30	2402	10000	
Fe	56	2	72	173.924	ppb	173.924	3.20	304164	10000	
Co	59	3	72	1.002	ppb	1.002	5.29	1339	2000	
Ni	60	3	72	6.974	ppb	6.974	1.48	2862	5000	
Cu	63	3	72	8.923	ppb	8.923	1.82	9352	5000	
Zn	66	3	72	17.340	ppb	17.340	5.81	2896	5000	
As	75	3	72	5.309	ppb	5.309	12.71	673	2000	
Se	78	2	72	4.623	ppb	4.623	7.19	273	2000	
Sr	88	3	72	3.863	ppb	3.863	1.90	2117	4000	
Mo	95	3	115	2.153	ppb	2.153	11.23	1123	2000	
Ag	107	3	115	0.977	ppb	0.977	6.25	1674	100	
Cd	111	3	115	0.701	ppb	0.701	19.93	198	2000	
Sn	120	3	115	9.386	ppb	9.386	2.68	8028	2000	
Sb	121	3	115	1.952	ppb	1.952	10.94	1533	1000	
Ba	137	3	115	4.428	ppb	4.428	2.14	1113	5000	
Tl	205	3	193	0.758	ppb	0.758	1.50	4087	2000	
(Pb)	206	3	193	3.797	ppb	3.797	2.06	5400	100	
(Pb)	207	3	193	3.985	ppb	3.985	3.26	5223	100	
Pb	208	3	193	3.893	ppb	3.893	1.80	22568	5000	
Th	232	3	193	1.729	ppb	1.729	2.70	14945	2000	
U	238	3	193	0.955	ppb	0.955	0.97	7234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4036817	3.15	3887690	103.84	60	120	
Sc (IS)	45	3	HMI He	591546	1.10	560366	105.56	60	120	
Ge Internal standard	72	2	HMI H2	2418029	2.59	2321471	104.16	60	120	
Ge Internal standard	72	3	HMI He	729502	0.93	685485	106.42	60	120	
In Internal Standard	115	3	HMI He	2759282	1.34	2631879	104.84	60	120	
Ir (IS)	193	3	HMI He	6129185	0.99	5771767	106.19	60	120	

Sample Report

Sample Table

Sample Name	280-173726-A-12-A LOQV
Data File Name	088SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:38:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.203	ppb	1.203	11.26	58	2000	
Na	23	3	45	963.131	ppb	963.131	0.41	121225	400000	
Mg	24	3	45	192.671	ppb	192.671	3.14	11296	400000	
Al	27	3	45	95.788	ppb	95.788	4.30	2256	400000	
K	39	3	45	944.747	ppb	944.747	4.30	70094	400000	
Ca	40	2	45	202.997	ppb	202.997	0.63	128425	400000	
V	51	3	72	5.426	ppb	5.426	7.04	4337	2000	
Cr	52	3	72	3.362	ppb	3.362	5.01	4702	5000	
Mn	55	3	72	3.252	ppb	3.252	6.01	1474	10000	
Fe	56	2	72	110.504	ppb	110.504	2.08	202533	10000	
Co	59	3	72	0.932	ppb	0.932	3.83	1244	2000	
Ni	60	3	72	3.477	ppb	3.477	8.20	1594	5000	
Cu	63	3	72	2.035	ppb	2.035	8.92	2477	5000	
Zn	66	3	72	10.827	ppb	10.827	2.92	1881	5000	
As	75	3	72	4.788	ppb	4.788	7.34	611	2000	
Se	78	2	72	4.769	ppb	4.769	5.70	279	2000	
Sr	88	3	72	9.402	ppb	9.402	3.41	5100	4000	
Mo	95	3	115	1.873	ppb	1.873	8.79	968	2000	
Ag	107	3	115	0.950	ppb	0.950	8.38	1604	100	
Cd	111	3	115	0.959	ppb	0.959	6.68	258	2000	
Sn	120	3	115	9.734	ppb	9.734	1.86	8172	2000	
Sb	121	3	115	1.982	ppb	1.982	2.39	1534	1000	
Ba	137	3	115	3.206	ppb	3.206	7.97	805	5000	
Tl	205	3	193	0.760	ppb	0.760	6.98	4079	2000	
(Pb)	206	3	193	0.900	ppb	0.900	2.14	1554	100	
(Pb)	207	3	193	0.945	ppb	0.945	7.59	1634	100	
Pb	208	3	193	0.916	ppb	0.916	1.88	6524	5000	
Th	232	3	193	4.305	ppb	4.305	1.44	28654	2000	
U	238	3	193	0.899	ppb	0.899	1.36	6885	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4141979	1.85	3887690	106.54	60	120	
Sc (IS)	45	3	HMI He	596350	1.03	560366	106.42	60	120	
Ge Internal standard	72	2	HMI H2	2394625	0.65	2321471	103.15	60	120	
Ge Internal standard	72	3	HMI He	727120	0.98	685485	106.07	60	120	
In Internal Standard	115	3	HMI He	2719096	0.33	2631879	103.31	60	120	
Ir (IS)	193	3	HMI He	6104957	0.77	5771767	105.77	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	089_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:40:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.717	ppb	2.803	2167	50	95.4	90	110	
Na	23	3	45	48032.938	ppb	1.299	5211183	51000	94.2	90	110	
Mg	24	3	45	10168.678	ppb	1.637	585081	11000	92.4	90	110	
Al	27	3	45	932.118	ppb	4.329	21224	1000	93.2	90	110	
K	39	3	45	10047.516	ppb	0.127	493186	11000	91.3	90	110	
Ca	40	2	45	10291.280	ppb	1.286	5881343	11000	93.6	90	110	
V	51	3	72	50.659	ppb	1.792	31246	50	101.3	90	110	
Cr	52	3	72	51.104	ppb	1.899	39747	50	102.2	90	110	
Mn	55	3	72	51.113	ppb	2.365	19991	50	102.2	90	110	
Fe	56	2	72	1023.278	ppb	2.233	1624100	1000	102.3	90	110	
Co	59	3	72	50.354	ppb	1.467	63691	50	100.7	90	110	
Ni	60	3	72	51.781	ppb	2.207	18510	50	103.6	90	110	
Cu	63	3	72	50.500	ppb	0.325	49412	50	101.0	90	110	
Zn	66	3	72	51.574	ppb	3.666	7972	50	103.1	90	110	
As	75	3	72	50.126	ppb	1.412	5610	50	100.3	90	110	
Se	78	2	72	49.998	ppb	4.594	2887	50	100.0	90	110	
Sr	88	3	72	101.868	ppb	1.060	53694	100	101.9	90	110	
Mo	95	3	115	48.866	ppb	2.008	24423	50	97.7	90	110	
Ag	107	3	115	49.903	ppb	1.497	83904	50	99.8	90	110	
Cd	111	3	115	48.847	ppb	2.498	12003	50	97.7	90	110	
Sn	120	3	115	49.690	ppb	1.946	38161	50	99.4	90	110	
Sb	121	3	115	49.671	ppb	1.074	37671	50	99.3	90	110	
Ba	137	3	115	50.460	ppb	1.232	12163	50	100.9	90	110	
Tl	205	3	193	47.877	ppb	2.041	190644	50	95.8	90	110	
(Pb)	206	3	193	49.197	ppb	1.631	64424	50	98.4	90	110	
(Pb)	207	3	193	48.620	ppb	1.447	56812	50	97.2	90	110	
Pb	208	3	193	48.703	ppb	0.221	259107	50	97.4	90	110	
Th	232	3	193	49.280	ppb	1.717	265318	50	98.6	90	110	
U	238	3	193	49.139	ppb	0.334	276464	50	98.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4095722	0.23	3887690	105.35	60	120	
Sc (IS)	45	3	HMI He	597500	1.22	560366	106.63	60	120	
Ge Internal standard	72	2	HMI H2	2393874	0.94	2321471	103.12	60	120	
Ge Internal standard	72	3	HMI He	709588	1.10	685485	103.52	60	120	
In Internal Standard	115	3	HMI He	2732719	1.66	2631879	103.83	60	120	
Ir (IS)	193	3	HMI He	6022843	0.39	5771767	104.35	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	090_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:41:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.030	ppb	358.3	5	0.5	
Na	23	3	45	16.137	ppb	14.2	18701	25	
Mg	24	3	45	1.650	ppb	97.4	324	25	
Al	27	3	45	-0.013	ppb	-7211.6	87	15	
K	39	3	45	1.918	ppb	1346.4	25940	50	
V	51	3	72	0.630	ppb	47.3	1376	1	
Cr	52	3	72	0.599	ppb	12.5	2569	1	
Mn	55	3	72	0.063	ppb	48.9	203	0.5	
Co	59	3	72	0.018	ppb	22.1	60	0.5	
Ni	60	3	72	0.661	ppb	39.3	571	1	
Cu	63	3	72	0.018	ppb	346.3	465	1	
Zn	66	3	72	-0.074	ppb	-492.2	195	5	
As	75	3	72	0.065	ppb	209.8	75	1	
Se	78	2	72	0.076	ppb	121.1	8	1	
Sr	88	3	72	0.014	ppb	102.0	32	0.5	
Mo	95	3	115	0.059	ppb	63.1	67	0.5	
Ag	107	3	115	0.008	ppb	100.0	28	1	
Cd	111	3	115	-0.044	ppb	-108.5	13	0.5	
Sn	120	3	115	0.068	ppb	44.5	958	1	
Sb	121	3	115	0.069	ppb	18.2	92	0.6	
Ba	137	3	115	0.058	ppb	72.8	52	0.5	
Tl	205	3	193	-0.143	ppb	-6.9	451	0.1	
(Pb)	206	3	193	-0.072	ppb	-35.2	272	1	
(Pb)	207	3	193	-0.052	ppb	-32.3	463	1	
Pb	208	3	193	-0.050	ppb	-13.6	1343	0.5	
Th	232	3	193	1.776	ppb	12.6	15122	1	>RL
U	238	3	193	-0.025	ppb	-46.4	1644	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124042	2.19	3887690	106.08	60	120	
Sc (IS)	45	3	HMI He	586442	0.60	560366	104.65	60	120	
Ge Internal standard	72	2	HMI H2	2452171	1.70	2321471	105.63	60	120	
Ge Internal standard	72	3	HMI He	713813	0.33	685485	104.13	60	120	
In Internal Standard	115	3	HMI He	2708057	1.14	2631879	102.89	60	120	
Ir (IS)	193	3	HMI He	6095708	1.13	5771767	105.61	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	091_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:43:41-06:00
Sample Type	Blank
Dilution	1
Comment	608984 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.251	ppb	115.5603826	15	0.5
Na	23	3	45	137.641	ppb	2.655608454	32530	25
Mg	24	3	45	9.001	ppb	19.65298475	761	25
Al	27	3	45	142.844	ppb	8.673987484	3364	15
K	39	3	45	27.635	ppb	34.65418719	27919	50
Ca	40	2	45	100.206	ppb	2.699899156	69263	200
V	51	3	72	0.534	ppb	11.04765122	1353	1
Cr	52	3	72	0.865	ppb	13.47348038	2839	1
Mn	55	3	72	5.102	ppb	2.04078623	2226	0.5
Fe	56	2	72	43.115	ppb	9.083568193	99935	50
Co	59	3	72	0.044	ppb	10.04421936	95	0.5
Ni	60	3	72	1.374	ppb	15.74551772	845	1
Cu	63	3	72	1.575	ppb	7.14721645	2036	1
Zn	66	3	72	53.167	ppb	1.579788832	8478	5
As	75	3	72	-0.026	ppb	-938.375574	67	1
(Se)	78	3	72	-1.233	ppb	-70.19177681	25	1
Sr	88	3	72	0.217	ppb	22.38827528	143	0.5
Mo	95	3	115	0.086	ppb	19.13719293	82	0.5
Ag	107	3	115	0.017	ppb	17.31199483	45	1
Cd	111	3	115	-0.004	ppb	-558.6848725	23	0.5
Sn	120	3	115	2.827	ppb	3.499246731	3062	1
Sb	121	3	115	0.089	ppb	16.45981833	108	0.6
Ba	137	3	115	0.351	ppb	53.66450349	123	0.5
Tl	205	3	193	-0.136	ppb	-14.84670383	480	0.1
(Pb)	206	3	193	0.086	ppb	73.75227593	480	1
(Pb)	207	3	193	0.058	ppb	108.1179244	593	1
Pb	208	3	193	0.083	ppb	25.43927819	2057	0.5
Th	232	3	193	0.324	ppb	9.710350369	7382	1
U	238	3	193	0.021	ppb	102.2623103	1908	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4150467	1.39	3887690	106.76	60	120	
Sc (IS)	45	3	HMI He	603810	0.87	560366	107.75	60	120	
Ge Internal standard	72	2	HMI H2	2454692	1.38	2321471	105.74	60	120	
Ge Internal standard	72	3	HMI He	732547	0.94	685485	106.87	60	120	
In Internal Standard	115	3	HMI He	2757358	1.03	2631879	104.77	60	120	
Ir (IS)	193	3	HMI He	6104594	0.74	5771767	105.77	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608984/2-A
Data File Name	092_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:45:33-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608984 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.050	39.050	ppb	6.208	1778	40	97.6	80	120	
Na	23	3	45	880.738	880.738	ppb	0.901	112250	40	2201.8	80	120	>+/-20%
Mg	24	3	45	747.486	747.486	ppb	1.484	43109	40	1868.7	80	120	>+/-20%
Al	27	3	45	768.652	768.652	ppb	1.847	17472	40	1921.6	80	120	>+/-20%
K	39	3	45	752.692	752.692	ppb	3.885	61154	40	1881.7	80	120	>+/-20%
Ca	40	2	45	826.463	826.463	ppb	3.526	489006	40	2066.2	80	120	>+/-20%
V	51	3	72	40.493	40.493	ppb	1.866	25903	40	101.2	80	120	
Cr	52	3	72	40.948	40.948	ppb	2.367	33200	40	102.4	80	120	
Mn	55	3	72	41.267	41.267	ppb	1.440	16643	40	103.2	80	120	
Fe	56	2	72	793.847	793.847	ppb	2.765	1315287	40	1984.6	80	120	>+/-20%
(Fe)	56	3	72	795.365	795.365	ppb	0.914	531497	40	1988.4	80	120	>+/-20%
Co	59	3	72	40.322	40.322	ppb	0.958	52484	40	100.8	80	120	
Ni	60	3	72	41.525	41.525	ppb	3.191	15341	40	103.8	80	120	
Cu	63	3	72	41.300	41.300	ppb	2.214	41655	40	103.2	80	120	
Zn	66	3	72	42.935	42.935	ppb	2.500	6863	40	107.3	80	120	
As	75	3	72	39.152	39.152	ppb	1.078	4524	40	97.9	80	120	
Se	78	2	72	39.851	39.851	ppb	4.154	2391	40	99.6	80	120	
(Se)	78	3	72	43.933	43.933	ppb	10.222	283	40	109.8	80	120	
Sr	88	3	72	79.349	79.349	ppb	2.623	43036	40	198.4	80	120	>+/-20%
Mo	95	3	115	39.691	39.691	ppb	2.588	19906	40	99.2	80	120	
Ag	107	3	115	41.176	41.176	ppb	1.264	69427	40	102.9	80	120	
Cd	111	3	115	39.528	39.528	ppb	4.277	9745	40	98.8	80	120	
Sn	120	3	115	38.821	38.821	ppb	0.650	30107	40	97.1	80	120	
Sb	121	3	115	40.121	40.121	ppb	0.920	30526	40	100.3	80	120	
Ba	137	3	115	41.965	41.965	ppb	3.541	10154	40	104.9	80	120	
Tl	205	3	193	38.713	38.713	ppb	1.419	158787	40	96.8	80	120	
(Pb)	206	3	193	39.684	39.684	ppb	1.965	53529	40	99.2	80	120	
(Pb)	207	3	193	39.100	39.100	ppb	2.369	47101	40	97.7	80	120	
Pb	208	3	193	39.398	39.398	ppb	1.942	215929	40	98.5	80	120	
Th	232	3	193	37.157	37.157	ppb	1.359	207209	40	92.9	80	120	
U	238	3	193	38.895	38.895	ppb	1.124	225503	40	97.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152046	2.72	3887690	106.80	60	120	
Sc (IS)	45	3	HMI He	595896	0.41	560366	106.34	60	120	
Ge Internal standard	72	2	HMI H2	2485734	1.85	2321471	107.08	60	120	
Ge Internal standard	72	3	HMI He	730076	0.72	685485	106.51	60	120	
In Internal Standard	115	3	HMI He	2740611	1.02	2631879	104.13	60	120	
Ir (IS)	193	3	HMI He	6196556	1.28	5771767	107.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A
Data File Name	093SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:47:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-157.84	2	2000	
Na	23	3	45	17914.017	ppb	17914.017	2.42	1961264	400000	
Mg	24	3	45	13409.445	ppb	13409.445	1.68	774191	400000	
Al	27	3	45	5.176	ppb	5.176	30.99	207	400000	
K	39	3	45	5852.172	ppb	5852.172	1.69	299288	400000	
Ca	40	2	45	53566.531	ppb	53566.531	1.75	31264270	400000	
V	51	3	72	8.484	ppb	8.484	5.93	6465	2000	
Cr	52	3	72	18.688	ppb	18.688	2.15	16939	5000	
Mn	55	3	72	0.492	ppb	0.492	45.24	393	10000	
Fe	56	2	72	17.702	ppb	17.702	8.40	61390	10000	
Co	59	3	72	0.049	ppb	0.049	59.62	105	2000	
Ni	60	3	72	0.881	ppb	0.881	24.10	688	5000	
Cu	63	3	72	0.250	ppb	0.250	11.82	733	5000	
Zn	66	3	72	1.158	ppb	1.158	22.05	405	5000	
As	75	3	72	1.918	ppb	1.918	18.87	298	2000	
Se	78	2	72	1.598	ppb	1.598	17.33	101	2000	
Sr	88	3	72	270.175	ppb	270.175	1.27	151902	4000	
Mo	95	3	115	1.043	ppb	1.043	5.59	565	2000	
Ag	107	3	115	0.011	ppb	0.011	26.57	35	100	
Cd	111	3	115	-0.065	ppb	-0.065	-64.71	8	2000	
Sn	120	3	115	-0.076	ppb	-0.076	-118.71	868	2000	
Sb	121	3	115	0.276	ppb	0.276	21.01	252	1000	
Ba	137	3	115	50.727	ppb	50.727	0.15	12365	5000	
Tl	205	3	193	-0.146	ppb	-0.146	-10.88	435	2000	
(Pb)	206	3	193	-0.061	ppb	-0.061	-23.28	283	100	
(Pb)	207	3	193	-0.052	ppb	-0.052	-79.00	460	100	
Pb	208	3	193	-0.049	ppb	-0.049	-4.77	1334	5000	
Th	232	3	193	1.763	ppb	1.763	11.54	14908	2000	
U	238	3	193	2.264	ppb	2.264	1.37	14463	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4189665	2.16	3887690	107.77	60	120	
Sc (IS)	45	3	HMI He	599609	0.64	560366	107.00	60	120	
Ge Internal standard	72	2	HMI H2	2537300	0.62	2321471	109.30	60	120	
Ge Internal standard	72	3	HMI He	757077	0.41	685485	110.44	60	120	
In Internal Standard	115	3	HMI He	2763153	0.32	2631879	104.99	60	120	
Ir (IS)	193	3	HMI He	6040053	1.02	5771767	104.65	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-Asd@5
Data File Name	094SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:49:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1267.74	3	2000	
Na	23	3	45	3599.153	ppb	3599.153	0.82	409008	400000	
Mg	24	3	45	2793.413	ppb	2793.413	2.61	161882	400000	
Al	27	3	45	1.509	ppb	1.509	147.55	123	400000	
K	39	3	45	1173.832	ppb	1173.832	2.62	81386	400000	
Ca	40	2	45	10730.584	ppb	10730.584	0.94	6216013	400000	
V	51	3	72	2.240	ppb	2.240	6.23	2459	2000	
Cr	52	3	72	4.132	ppb	4.132	7.61	5440	5000	
Mn	55	3	72	1.668	ppb	1.668	10.70	870	10000	
Fe	56	2	72	16.129	ppb	16.129	10.84	59001	10000	
Co	59	3	72	0.031	ppb	0.031	36.92	80	2000	
Ni	60	3	72	0.764	ppb	0.764	34.31	638	5000	
Cu	63	3	72	0.122	ppb	0.122	59.70	595	5000	
Zn	66	3	72	3.199	ppb	3.199	18.93	725	5000	
As	75	3	72	0.476	ppb	0.476	91.00	127	2000	
Se	78	2	72	0.333	ppb	0.333	70.28	24	2000	
Sr	88	3	72	55.920	ppb	55.920	1.87	31113	4000	
Mo	95	3	115	0.274	ppb	0.274	25.41	175	2000	
Ag	107	3	115	0.017	ppb	0.017	49.90	45	100	
Cd	111	3	115	-0.078	ppb	-0.078	-0.36	5	2000	
Sn	120	3	115	0.033	ppb	0.033	144.00	941	2000	
Sb	121	3	115	0.138	ppb	0.138	19.08	145	1000	
Ba	137	3	115	11.099	ppb	11.099	7.33	2707	5000	
Tl	205	3	193	-0.157	ppb	-0.157	-9.38	391	2000	
(Pb)	206	3	193	0.361	ppb	0.361	18.28	831	100	
(Pb)	207	3	193	0.306	ppb	0.306	39.84	873	100	
Pb	208	3	193	0.325	ppb	0.325	10.62	3312	5000	
Th	232	3	193	0.554	ppb	0.554	21.05	8522	2000	
U	238	3	193	0.407	ppb	0.407	10.65	4045	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152198	1.30	3887690	106.80	60	120	
Sc (IS)	45	3	HMI He	601168	0.54	560366	107.28	60	120	
Ge Internal standard	72	2	HMI H2	2546850	1.20	2321471	109.71	60	120	
Ge Internal standard	72	3	HMI He	748778	0.87	685485	109.23	60	120	
In Internal Standard	115	3	HMI He	2736314	1.39	2631879	103.97	60	120	
Ir (IS)	193	3	HMI He	6036389	3.00	5771767	104.58	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-B MS
Data File Name	095SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:51:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.252	ppb	39.252	3.76	1809	2000	
Na	23	3	45	20027.897	ppb	20027.897	0.70	2201368	400000	
Mg	24	3	45	15262.236	ppb	15262.236	1.76	885444	400000	
Al	27	3	45	739.852	ppb	739.852	1.23	17007	400000	
K	39	3	45	6898.320	ppb	6898.320	2.33	349736	400000	
Ca	40	2	45	57038.548	ppb	57038.548	0.88	33485443	400000	
V	51	3	72	47.169	ppb	47.169	1.50	30907	2000	
Cr	52	3	72	59.519	ppb	59.519	1.17	48696	5000	
Mn	55	3	72	40.863	ppb	40.863	2.17	16977	10000	
Fe	56	2	72	789.256	ppb	789.256	1.23	1329144	10000	
Co	59	3	72	39.035	ppb	39.035	1.14	52336	2000	
Ni	60	3	72	39.005	ppb	39.005	2.81	14866	5000	
Cu	63	3	72	39.727	ppb	39.727	0.96	41293	5000	
Zn	66	3	72	40.602	ppb	40.602	4.43	6697	5000	
As	75	3	72	40.410	ppb	40.410	2.60	4807	2000	
Se	78	2	72	41.257	ppb	41.257	1.51	2515	2000	
Sr	88	3	72	367.664	ppb	367.664	0.94	205322	4000	
Mo	95	3	115	40.617	ppb	40.617	1.68	20437	2000	
Ag	107	3	115	41.307	ppb	41.307	1.00	69886	100	
Cd	111	3	115	39.841	ppb	39.841	1.26	9857	2000	
Sn	120	3	115	40.191	ppb	40.191	0.37	31241	2000	
Sb	121	3	115	40.847	ppb	40.847	1.35	31183	1000	
Ba	137	3	115	94.890	ppb	94.890	0.76	22984	5000	
Tl	205	3	193	39.714	ppb	39.714	2.78	160022	2000	
(Pb)	206	3	193	40.125	ppb	40.125	3.92	53168	100	
(Pb)	207	3	193	39.759	ppb	39.759	3.48	47054	100	
Pb	208	3	193	39.820	ppb	39.820	2.92	214420	5000	
Th	232	3	193	38.010	ppb	38.010	2.88	208145	2000	
U	238	3	193	42.430	ppb	42.430	3.07	241530	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214070	0.16	3887690	108.40	60	120	
Sc (IS)	45	3	HMI He	602503	0.60	560366	107.52	60	120	
Ge Internal standard	72	2	HMI H2	2525763	1.63	2321471	108.80	60	120	
Ge Internal standard	72	3	HMI He	751980	0.27	685485	109.70	60	120	
In Internal Standard	115	3	HMI He	2749766	0.54	2631879	104.48	60	120	
Ir (IS)	193	3	HMI He	6090250	2.25	5771767	105.52	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-C MSD
Data File Name	096SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:52:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.876	ppb	41.876	5.76	1901	2000	
Na	23	3	45	19433.463	ppb	19433.463	0.32	2147451	400000	
Mg	24	3	45	15284.279	ppb	15284.279	2.76	891211	400000	
Al	27	3	45	749.309	ppb	749.309	2.68	17311	400000	
K	39	3	45	6894.447	ppb	6894.447	1.37	351356	400000	
Ca	40	2	45	57623.698	ppb	57623.698	1.24	33504178	400000	
V	51	3	72	48.660	ppb	48.660	0.72	31962	2000	
Cr	52	3	72	59.955	ppb	59.955	1.17	49205	5000	
Mn	55	3	72	39.673	ppb	39.673	3.23	16545	10000	
Fe	56	2	72	792.766	ppb	792.766	1.15	1340223	10000	
Co	59	3	72	38.274	ppb	38.274	0.31	51496	2000	
Ni	60	3	72	39.676	ppb	39.676	1.32	15167	5000	
Cu	63	3	72	39.935	ppb	39.935	0.81	41650	5000	
Zn	66	3	72	41.262	ppb	41.262	3.31	6827	5000	
As	75	3	72	42.006	ppb	42.006	3.59	5012	2000	
Se	78	2	72	42.094	ppb	42.094	2.24	2576	2000	
Sr	88	3	72	368.238	ppb	368.238	1.28	206362	4000	
Mo	95	3	115	41.127	ppb	41.127	2.94	20916	2000	
Ag	107	3	115	40.769	ppb	40.769	1.67	69729	100	
Cd	111	3	115	39.166	ppb	39.166	4.39	9792	2000	
Sn	120	3	115	39.489	ppb	39.489	2.12	31046	2000	
Sb	121	3	115	39.947	ppb	39.947	2.72	30824	1000	
Ba	137	3	115	94.369	ppb	94.369	3.59	23104	5000	
Tl	205	3	193	39.641	ppb	39.641	0.61	160819	2000	
(Pb)	206	3	193	39.679	ppb	39.679	0.79	52949	100	
(Pb)	207	3	193	39.409	ppb	39.409	0.87	46962	100	
Pb	208	3	193	39.692	ppb	39.692	0.94	215191	5000	
Th	232	3	193	39.813	ppb	39.813	0.64	219238	2000	
U	238	3	193	42.110	ppb	42.110	0.63	241361	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174008	1.26	3887690	107.36	60	120	
Sc (IS)	45	3	HMI He	605563	0.52	560366	108.07	60	120	
Ge Internal standard	72	2	HMI H2	2535688	1.13	2321471	109.23	60	120	
Ge Internal standard	72	3	HMI He	754614	0.80	685485	110.08	60	120	
In Internal Standard	115	3	HMI He	2780533	2.51	2631879	105.65	60	120	
Ir (IS)	193	3	HMI He	6129421	0.72	5771767	106.20	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-4-A pds
Data File Name	097SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:54:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	102.840	ppb	102.840	3.46	4645	2000	
Na	23	3	45	22842.210	ppb	22842.210	2.64	2521703	400000	
Mg	24	3	45	15805.602	ppb	15805.602	3.12	921803	400000	
Al	27	3	45	1965.312	ppb	1965.312	1.88	45284	400000	
K	39	3	45	7817.373	ppb	7817.373	1.20	394970	400000	
Ca	40	2	45	55168.937	ppb	55168.937	1.71	32175907	400000	
V	51	3	72	104.218	ppb	104.218	0.84	67420	2000	
Cr	52	3	72	118.251	ppb	118.251	0.88	95099	5000	
Mn	55	3	72	97.322	ppb	97.322	2.84	40408	10000	
Fe	56	2	72	1040.449	ppb	1040.449	0.77	1737532	10000	
Co	59	3	72	97.205	ppb	97.205	1.09	131037	2000	
Ni	60	3	72	97.480	ppb	97.480	0.10	36837	5000	
Cu	63	3	72	99.577	ppb	99.577	1.23	103404	5000	
Zn	66	3	72	207.822	ppb	207.822	2.93	33577	5000	
As	75	3	72	101.968	ppb	101.968	3.24	12093	2000	
Se	78	2	72	104.727	ppb	104.727	1.98	6362	2000	
Sr	88	3	72	370.790	ppb	370.790	0.25	208296	4000	
Mo	95	3	115	100.570	ppb	100.570	1.01	51624	2000	
Ag	107	3	115	26.843	ppb	26.843	0.04	46388	100	
Cd	111	3	115	97.786	ppb	97.786	0.76	24672	2000	
Sn	120	3	115	100.566	ppb	100.566	0.84	78424	2000	
Sb	121	3	115	96.052	ppb	96.052	1.59	74828	1000	
Ba	137	3	115	153.335	ppb	153.335	0.86	37905	5000	
Tl	205	3	193	99.487	ppb	99.487	2.25	399153	2000	
(Pb)	206	3	193	100.781	ppb	100.781	1.40	132964	100	
(Pb)	207	3	193	98.321	ppb	98.321	2.48	115536	100	
Pb	208	3	193	99.715	ppb	99.715	1.87	534314	5000	
Th	232	3	193	109.455	ppb	109.455	1.46	588555	2000	
U	238	3	193	221.224	ppb	221.224	1.81	1251312	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4186780	1.32	3887690	107.69	60	120	
Sc (IS)	45	3	HMI He	605843	1.23	560366	108.12	60	120	
Ge Internal standard	72	2	HMI H2	2519282	0.67	2321471	108.52	60	120	
Ge Internal standard	72	3	HMI He	756465	1.04	685485	110.35	60	120	
In Internal Standard	115	3	HMI He	2808319	1.05	2631879	106.70	60	120	
Ir (IS)	193	3	HMI He	6086170	1.22	5771767	105.45	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A@10
Data File Name	098SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:56:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.103	ppb	0.103	161.00	8	2000	
Na	23	3	45	10921.066	ppb	10921.066	1.37	1212098	400000	
Mg	24	3	45	7713.438	ppb	7713.438	0.66	448922	400000	
Al	27	3	45	4.527	ppb	4.527	33.27	194	400000	
K	39	3	45	469.924	ppb	469.924	12.77	48713	400000	
Ca	40	2	45	21572.581	ppb	21572.581	1.27	12513438	400000	
V	51	3	72	0.456	ppb	0.456	33.95	1328	2000	
Cr	52	3	72	0.587	ppb	0.587	6.76	2672	5000	
Mn	55	3	72	2.036	ppb	2.036	9.97	1015	10000	
Fe	56	2	72	15.437	ppb	15.437	17.28	56853	10000	
Co	59	3	72	0.054	ppb	0.054	25.20	110	2000	
Ni	60	3	72	1.226	ppb	1.226	7.09	805	5000	
Cu	63	3	72	0.226	ppb	0.226	39.68	698	5000	
Zn	66	3	72	3.447	ppb	3.447	9.95	760	5000	
As	75	3	72	0.049	ppb	0.049	546.25	77	2000	
Se	78	2	72	0.016	ppb	0.016	653.03	5	2000	
Sr	88	3	72	79.927	ppb	79.927	2.05	44235	4000	
Mo	95	3	115	0.127	ppb	0.127	10.88	105	2000	
Ag	107	3	115	0.020	ppb	0.020	67.57	50	100	
Cd	111	3	115	-0.046	ppb	-0.046	-48.77	13	2000	
Sn	120	3	115	0.014	ppb	0.014	726.94	956	2000	
Sb	121	3	115	0.101	ppb	0.101	61.12	120	1000	
Ba	137	3	115	35.985	ppb	35.985	4.35	8977	5000	
Tl	205	3	193	-0.112	ppb	-0.112	-17.08	581	2000	
(Pb)	206	3	193	0.325	ppb	0.325	21.73	805	100	
(Pb)	207	3	193	0.239	ppb	0.239	2.51	816	100	
Pb	208	3	193	0.330	ppb	0.330	6.70	3425	5000	
Th	232	3	193	2.934	ppb	2.934	12.89	21583	2000	
U	238	3	193	0.500	ppb	0.500	6.91	4680	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162017	1.91	3887690	107.06	60	120	
Sc (IS)	45	3	HMI He	604324	0.89	560366	107.84	60	120	
Ge Internal standard	72	2	HMI H2	2505287	2.97	2321471	107.92	60	120	
Ge Internal standard	72	3	HMI He	745095	1.97	685485	108.70	60	120	
In Internal Standard	115	3	HMI He	2825906	2.04	2631879	107.37	60	120	
Ir (IS)	193	3	HMI He	6185566	2.43	5771767	107.17	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A@10
Data File Name	099SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T15:58:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1375.84	3	2000	
Na	23	3	45	10805.958	ppb	10805.958	1.90	1189884	400000	
Mg	24	3	45	7663.222	ppb	7663.222	2.36	442447	400000	
Al	27	3	45	1.384	ppb	1.384	91.47	120	400000	
K	39	3	45	576.068	ppb	576.068	5.37	53298	400000	
Ca	40	2	45	19667.839	ppb	19667.839	0.72	11660286	400000	
V	51	3	72	0.397	ppb	0.397	10.54	1304	2000	
Cr	52	3	72	0.576	ppb	0.576	26.27	2694	5000	
Mn	55	3	72	20.293	ppb	20.293	2.20	8538	10000	
Fe	56	2	72	68.986	ppb	68.986	6.02	144281	10000	
Co	59	3	72	0.322	ppb	0.322	21.08	470	2000	
Ni	60	3	72	1.314	ppb	1.314	10.04	846	5000	
Cu	63	3	72	0.156	ppb	0.156	6.61	633	5000	
Zn	66	3	72	3.710	ppb	3.710	11.21	811	5000	
As	75	3	72	0.269	ppb	0.269	97.82	103	2000	
Se	78	2	72	0.093	ppb	0.093	121.39	9	2000	
Sr	88	3	72	77.405	ppb	77.405	2.41	43304	4000	
Mo	95	3	115	0.047	ppb	0.047	42.90	62	2000	
Ag	107	3	115	0.014	ppb	0.014	22.11	40	100	
Cd	111	3	115	-0.044	ppb	-0.044	-69.85	13	2000	
Sn	120	3	115	0.163	ppb	0.163	69.88	1038	2000	
Sb	121	3	115	0.072	ppb	0.072	53.60	95	1000	
Ba	137	3	115	36.934	ppb	36.934	2.64	8907	5000	
Tl	205	3	193	-0.155	ppb	-0.155	-8.81	410	2000	
(Pb)	206	3	193	0.330	ppb	0.330	5.30	811	100	
(Pb)	207	3	193	0.329	ppb	0.329	18.40	921	100	
Pb	208	3	193	0.349	ppb	0.349	4.34	3520	5000	
Th	232	3	193	0.934	ppb	0.934	30.00	10743	2000	
U	238	3	193	0.391	ppb	0.391	5.62	4049	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4252924	2.09	3887690	109.39	60	120	
Sc (IS)	45	3	HMI He	599621	1.78	560366	107.01	60	120	
Ge Internal standard	72	2	HMI H2	2507932	2.53	2321471	108.03	60	120	
Ge Internal standard	72	3	HMI He	753164	1.52	685485	109.87	60	120	
In Internal Standard	115	3	HMI He	2730779	2.29	2631879	103.76	60	120	
Ir (IS)	193	3	HMI He	6171312	2.13	5771767	106.92	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A@10
Data File Name	100SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:00:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-141.90	2	2000	
Na	23	3	45	15877.568	ppb	15877.568	3.66	1755463	400000	
Mg	24	3	45	6043.050	ppb	6043.050	3.56	351935	400000	
Al	27	3	45	2.343	ppb	2.343	47.47	143	400000	
K	39	3	45	474.216	ppb	474.216	7.24	48954	400000	
Ca	40	2	45	20388.438	ppb	20388.438	2.43	11925654	400000	
V	51	3	72	0.528	ppb	0.528	33.87	1394	2000	
Cr	52	3	72	0.718	ppb	0.718	32.90	2817	5000	
Mn	55	3	72	30.081	ppb	30.081	2.14	12623	10000	
Fe	56	2	72	23.420	ppb	23.420	12.54	71100	10000	
Co	59	3	72	0.201	ppb	0.201	20.39	310	2000	
Ni	60	3	72	5.070	ppb	5.070	2.37	2256	5000	
Cu	63	3	72	0.131	ppb	0.131	23.66	610	5000	
Zn	66	3	72	3.361	ppb	3.361	8.57	758	5000	
As	75	3	72	0.139	ppb	0.139	58.89	88	2000	
Se	78	2	72	-0.006	ppb	-0.006	-907.84	3	2000	
Sr	88	3	72	102.825	ppb	102.825	1.04	57793	4000	
Mo	95	3	115	0.083	ppb	0.083	74.82	80	2000	
Ag	107	3	115	0.011	ppb	0.011	95.21	35	100	
Cd	111	3	115	-0.024	ppb	-0.024	-131.12	18	2000	
Sn	120	3	115	-0.174	ppb	-0.174	-102.80	788	2000	
Sb	121	3	115	0.074	ppb	0.074	37.51	97	1000	
Ba	137	3	115	43.555	ppb	43.555	1.52	10559	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-1.06	383	2000	
(Pb)	206	3	193	0.303	ppb	0.303	21.59	781	100	
(Pb)	207	3	193	0.310	ppb	0.310	11.93	906	100	
Pb	208	3	193	0.315	ppb	0.315	16.67	3360	5000	
Th	232	3	193	0.411	ppb	0.411	25.46	7989	2000	
U	238	3	193	0.360	ppb	0.360	5.08	3905	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4197012	1.44	3887690	107.96	60	120	
Sc (IS)	45	3	HMI He	604845	1.76	560366	107.94	60	120	
Ge Internal standard	72	2	HMI H2	2545269	1.23	2321471	109.64	60	120	
Ge Internal standard	72	3	HMI He	756617	1.21	685485	110.38	60	120	
In Internal Standard	115	3	HMI He	2747128	1.57	2631879	104.38	60	120	
Ir (IS)	193	3	HMI He	6221582	1.36	5771767	107.79	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	101_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:01:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	45.782	ppb	17.096	2084	50	91.6	90	110	
Na	23	3	45	48912.847	ppb	2.441	5274647	51000	95.9	90	110	
Mg	24	3	45	10296.130	ppb	1.589	588861	11000	93.6	90	110	
Al	27	3	45	969.464	ppb	5.584	21936	1000	96.9	90	110	
K	39	3	45	9998.926	ppb	1.513	488012	11000	90.9	90	110	
Ca	40	2	45	9530.339	ppb	15.221	5577677	11000	86.6	90	110	>+\-10%
V	51	3	72	50.847	ppb	0.161	31311	50	101.7	90	110	
Cr	52	3	72	51.442	ppb	0.633	39936	50	102.9	90	110	
Mn	55	3	72	51.476	ppb	2.407	20101	50	103.0	90	110	
Fe	56	2	72	917.002	ppb	15.499	1501016	1000	91.7	90	110	
Co	59	3	72	50.635	ppb	0.353	63948	50	101.3	90	110	
Ni	60	3	72	51.601	ppb	1.255	18420	50	103.2	90	110	
Cu	63	3	72	50.213	ppb	0.680	49052	50	100.4	90	110	
Zn	66	3	72	52.466	ppb	3.787	8093	50	104.9	90	110	
As	75	3	72	49.971	ppb	2.933	5583	50	99.9	90	110	
Se	78	2	72	46.359	ppb	11.353	2761	50	92.7	90	110	
Sr	88	3	72	102.378	ppb	0.099	53879	100	102.4	90	110	
Mo	95	3	115	49.312	ppb	1.695	24679	50	98.6	90	110	
Ag	107	3	115	50.389	ppb	1.182	84803	50	100.8	90	110	
Cd	111	3	115	48.993	ppb	1.457	12053	50	98.0	90	110	
Sn	120	3	115	49.434	ppb	1.388	38013	50	98.9	90	110	
Sb	121	3	115	49.867	ppb	0.913	37861	50	99.7	90	110	
Ba	137	3	115	51.102	ppb	1.207	12331	50	102.2	90	110	
Tl	205	3	193	47.786	ppb	2.717	192810	50	95.6	90	110	
(Pb)	206	3	193	48.618	ppb	2.241	64516	50	97.2	90	110	
(Pb)	207	3	193	48.104	ppb	3.840	56956	50	96.2	90	110	
Pb	208	3	193	48.482	ppb	2.183	261371	50	97.0	90	110	
Th	232	3	193	48.691	ppb	2.475	265746	50	97.4	90	110	
U	238	3	193	47.868	ppb	3.025	272928	50	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4223794	7.01	3887690	108.65	60	120	
Sc (IS)	45	3	HMI He	593979	1.09	560366	106.00	60	120	
Ge Internal standard	72	2	HMI H2	2481946	7.49	2321471	106.91	60	120	
Ge Internal standard	72	3	HMI He	708440	0.70	685485	103.35	60	120	
In Internal Standard	115	3	HMI He	2735594	0.92	2631879	103.94	60	120	
Ir (IS)	193	3	HMI He	6104431	1.68	5771767	105.76	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	102_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:03:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.006	ppb	-1067.7	3	0.5	
Na	23	3	45	16.801	ppb	28.6	19052	25	
Mg	24	3	45	1.674	ppb	55.7	330	25	
Al	27	3	45	0.815	ppb	124.0	107	15	
K	39	3	45	-6.107	ppb	-385.5	25960	50	
V	51	3	72	0.465	ppb	32.4	1289	1	
Cr	52	3	72	0.542	ppb	43.8	2551	1	
Mn	55	3	72	0.189	ppb	42.4	255	0.5	
Co	59	3	72	0.011	ppb	50.0	52	0.5	
Ni	60	3	72	0.726	ppb	23.4	600	1	
Cu	63	3	72	0.005	ppb	1022.5	456	1	
Zn	66	3	72	-0.295	ppb	-97.3	163	5	
As	75	3	72	0.207	ppb	67.5	92	1	
Se	78	2	72	-0.014	ppb	-559.9	3	1	
Sr	88	3	72	0.023	ppb	132.5	37	0.5	
Mo	95	3	115	0.070	ppb	58.4	73	0.5	
Ag	107	3	115	0.009	ppb	18.9	32	1	
Cd	111	3	115	-0.051	ppb	-45.9	12	0.5	
Sn	120	3	115	-0.057	ppb	-62.5	876	1	
Sb	121	3	115	0.055	ppb	35.1	82	0.6	
Ba	137	3	115	0.097	ppb	117.5	62	0.5	
Tl	205	3	193	-0.153	ppb	-4.6	415	0.1	
(Pb)	206	3	193	-0.067	ppb	-71.6	278	1	
(Pb)	207	3	193	-0.089	ppb	-25.5	421	1	
Pb	208	3	193	-0.056	ppb	-48.3	1314	0.5	
Th	232	3	193	1.720	ppb	8.9	14872	1	>RL
U	238	3	193	-0.020	ppb	-66.8	1683	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4061277	1.56	3887690	104.47	60	120	
Sc (IS)	45	3	HMI He	595316	0.83	560366	106.24	60	120	
Ge Internal standard	72	2	HMI H2	2460703	1.65	2321471	106.00	60	120	
Ge Internal standard	72	3	HMI He	720699	0.50	685485	105.14	60	120	
In Internal Standard	115	3	HMI He	2744652	0.38	2631879	104.28	60	120	
Ir (IS)	193	3	HMI He	6118649	0.66	5771767	106.01	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-5-A
Data File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:05:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	12222.928	ppb	12222.928	1.60	1350819	400000	
Mg	24	3	45	13889.901	ppb	13889.901	2.11	806019	400000	
Al	27	3	45	459.582	ppb	459.582	4.40	10605	400000	
K	39	3	45	2061.823	ppb	2061.823	2.91	123203	400000	
Ca	40	2	45	52019.243	ppb	52019.243	1.00	30253398	400000	
V	51	3	72	0.865	ppb	0.865	12.48	1576	2000	
Cr	52	3	72	1.415	ppb	1.415	27.70	3297	5000	
Mn	55	3	72	40.795	ppb	40.795	1.56	16713	10000	
Fe	56	2	72	252.605	ppb	252.605	2.15	441116	10000	
Co	59	3	72	0.289	ppb	0.289	8.95	420	2000	
Ni	60	3	72	1.195	ppb	1.195	7.50	790	5000	
Cu	63	3	72	13.132	ppb	13.132	2.00	13772	5000	
Zn	66	3	72	32.658	ppb	32.658	3.82	5353	5000	
As	75	3	72	0.097	ppb	0.097	155.06	82	2000	
Se	78	2	72	0.295	ppb	0.295	26.02	21	2000	
Sr	88	3	72	141.546	ppb	141.546	1.19	77962	4000	
Mo	95	3	115	37.887	ppb	37.887	1.14	19007	2000	
Ag	107	3	115	0.013	ppb	0.013	51.20	38	100	
Cd	111	3	115	0.409	ppb	0.409	4.85	125	2000	
Sn	120	3	115	0.024	ppb	0.024	208.54	936	2000	
Sb	121	3	115	0.232	ppb	0.232	14.37	217	1000	
Ba	137	3	115	62.945	ppb	62.945	3.01	15211	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-6.04	375	2000	
(Pb)	206	3	193	0.446	ppb	0.446	23.88	951	100	
(Pb)	207	3	193	0.429	ppb	0.429	19.97	1025	100	
Pb	208	3	193	0.458	ppb	0.458	7.99	4053	5000	
Th	232	3	193	0.496	ppb	0.496	26.97	8265	2000	
U	238	3	193	39.766	ppb	39.766	1.44	226237	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4175024	1.93	3887690	107.39	60	120	
Sc (IS)	45	3	HMI He	602726	0.88	560366	107.56	60	120	
Ge Internal standard	72	2	HMI H2	2491307	0.95	2321471	107.32	60	120	
Ge Internal standard	72	3	HMI He	741544	0.50	685485	108.18	60	120	
In Internal Standard	115	3	HMI He	2741253	0.34	2631879	104.16	60	120	
Ir (IS)	193	3	HMI He	6080946	0.80	5771767	105.36	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-A
Data File Name	104SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:07:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	12099.879	ppb	12099.879	1.77	1350855	400000	
Mg	24	3	45	13670.591	ppb	13670.591	2.15	801246	400000	
Al	27	3	45	65.165	ppb	65.165	12.98	1595	400000	
K	39	3	45	1935.929	ppb	1935.929	2.90	118471	400000	
Ca	40	2	45	49573.100	ppb	49573.100	0.08	28797080	400000	
V	51	3	72	0.457	ppb	0.457	58.36	1333	2000	
Cr	52	3	72	1.064	ppb	1.064	22.89	3057	5000	
Mn	55	3	72	10.733	ppb	10.733	3.67	4575	10000	
Fe	56	2	72	27.561	ppb	27.561	10.22	77661	10000	
Co	59	3	72	0.117	ppb	0.117	36.18	193	2000	
Ni	60	3	72	1.007	ppb	1.007	17.56	728	5000	
Cu	63	3	72	7.480	ppb	7.480	3.09	8118	5000	
Zn	66	3	72	13.566	ppb	13.566	1.89	2371	5000	
As	75	3	72	0.135	ppb	0.135	119.65	87	2000	
Se	78	2	72	0.180	ppb	0.180	10.09	15	2000	
Sr	88	3	72	135.164	ppb	135.164	4.20	75112	4000	
Mo	95	3	115	35.498	ppb	35.498	1.92	18111	2000	
Ag	107	3	115	0.007	ppb	0.007	22.78	28	100	
Cd	111	3	115	0.221	ppb	0.221	30.95	80	2000	
Sn	120	3	115	-0.273	ppb	-0.273	-22.74	725	2000	
Sb	121	3	115	0.200	ppb	0.200	11.38	195	1000	
Ba	137	3	115	57.365	ppb	57.365	3.31	14101	5000	
Tl	205	3	193	-0.168	ppb	-0.168	-3.64	355	2000	
(Pb)	206	3	193	-0.046	ppb	-0.046	-41.50	308	100	
(Pb)	207	3	193	-0.040	ppb	-0.040	-93.54	481	100	
Pb	208	3	193	-0.040	ppb	-0.040	-33.72	1406	5000	
Th	232	3	193	0.128	ppb	0.128	61.19	6370	2000	
U	238	3	193	37.991	ppb	37.991	2.04	218174	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4169572	1.07	3887690	107.25	60	120	
Sc (IS)	45	3	HMI He	608833	1.72	560366	108.65	60	120	
Ge Internal standard	72	2	HMI H2	2537144	0.87	2321471	109.29	60	120	
Ge Internal standard	72	3	HMI He	748452	1.50	685485	109.19	60	120	
In Internal Standard	115	3	HMI He	2787467	0.30	2631879	105.91	60	120	
Ir (IS)	193	3	HMI He	6136766	1.11	5771767	106.32	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-B MS
Data File Name	105SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:09:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.921	ppb	39.921	4.78	1803	2000	
Na	23	3	45	12723.771	ppb	12723.771	1.31	1402775	400000	
Mg	24	3	45	14081.516	ppb	14081.516	1.46	815544	400000	
Al	27	3	45	793.783	ppb	793.783	5.67	18207	400000	
K	39	3	45	2736.637	ppb	2736.637	1.59	154528	400000	
Ca	40	2	45	51721.198	ppb	51721.198	2.05	29942925	400000	
V	51	3	72	38.436	ppb	38.436	2.49	25085	2000	
Cr	52	3	72	39.553	ppb	39.553	1.51	32725	5000	
Mn	55	3	72	49.963	ppb	49.963	0.89	20477	10000	
Fe	56	2	72	778.064	ppb	778.064	1.45	1302764	10000	
Co	59	3	72	38.147	ppb	38.147	1.25	50552	2000	
Ni	60	3	72	39.096	ppb	39.096	3.45	14727	5000	
Cu	63	3	72	46.144	ppb	46.144	1.84	47327	5000	
Zn	66	3	72	53.436	ppb	53.436	1.46	8643	5000	
As	75	3	72	38.290	ppb	38.290	3.34	4505	2000	
Se	78	2	72	40.248	ppb	40.248	2.05	2438	2000	
Sr	88	3	72	213.739	ppb	213.739	0.51	117984	4000	
Mo	95	3	115	74.073	ppb	74.073	3.57	37597	2000	
Ag	107	3	115	40.002	ppb	40.002	2.13	68340	100	
Cd	111	3	115	39.348	ppb	39.348	0.76	9834	2000	
Sn	120	3	115	37.273	ppb	37.273	2.42	29323	2000	
Sb	121	3	115	39.140	ppb	39.140	3.40	30167	1000	
Ba	137	3	115	97.833	ppb	97.833	1.66	23928	5000	
Tl	205	3	193	38.403	ppb	38.403	2.88	156426	2000	
(Pb)	206	3	193	39.189	ppb	39.189	2.10	52506	100	
(Pb)	207	3	193	38.134	ppb	38.134	2.79	45636	100	
Pb	208	3	193	38.708	ppb	38.708	2.55	210706	5000	
Th	232	3	193	36.300	ppb	36.300	3.50	201126	2000	
U	238	3	193	76.696	ppb	76.696	2.33	439821	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4155920	0.80	3887690	106.90	60	120	
Sc (IS)	45	3	HMI He	601539	0.77	560366	107.35	60	120	
Ge Internal standard	72	2	HMI H2	2510610	1.44	2321471	108.15	60	120	
Ge Internal standard	72	3	HMI He	743252	0.56	685485	108.43	60	120	
In Internal Standard	115	3	HMI He	2777277	1.94	2631879	105.52	60	120	
Ir (IS)	193	3	HMI He	6155480	2.64	5771767	106.65	60	120	

Sample Report

Sample Table

Sample Name	160-49629-A-6-C MSD
Data File Name	106SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:10:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.466	ppb	40.466	5.84	1819	2000	
Na	23	3	45	13221.335	ppb	13221.335	1.91	1444935	400000	
Mg	24	3	45	15264.498	ppb	15264.498	1.39	876981	400000	
Al	27	3	45	818.101	ppb	818.101	2.84	18614	400000	
K	39	3	45	2868.564	ppb	2868.564	2.13	159427	400000	
Ca	40	2	45	54026.279	ppb	54026.279	1.03	31079946	400000	
V	51	3	72	40.629	ppb	40.629	1.61	26337	2000	
Cr	52	3	72	41.501	ppb	41.501	0.34	34075	5000	
Mn	55	3	72	51.156	ppb	51.156	1.74	20864	10000	
Fe	56	2	72	838.633	ppb	838.633	2.25	1387350	10000	
Co	59	3	72	38.979	ppb	38.979	1.12	51418	2000	
Ni	60	3	72	40.229	ppb	40.229	2.34	15072	5000	
Cu	63	3	72	47.199	ppb	47.199	0.09	48185	5000	
Zn	66	3	72	57.144	ppb	57.144	2.64	9185	5000	
As	75	3	72	39.718	ppb	39.718	3.46	4648	2000	
Se	78	2	72	41.316	ppb	41.316	3.81	2477	2000	
Sr	88	3	72	221.593	ppb	221.593	2.36	121745	4000	
Mo	95	3	115	77.575	ppb	77.575	2.26	39080	2000	
Ag	107	3	115	41.172	ppb	41.172	0.41	69809	100	
Cd	111	3	115	39.228	ppb	39.228	2.35	9725	2000	
Sn	120	3	115	38.614	ppb	38.614	0.40	30116	2000	
Sb	121	3	115	40.076	ppb	40.076	1.31	30658	1000	
Ba	137	3	115	100.728	ppb	100.728	0.36	24449	5000	
Tl	205	3	193	39.105	ppb	39.105	1.66	159782	2000	
(Pb)	206	3	193	40.050	ppb	40.050	2.62	53815	100	
(Pb)	207	3	193	39.331	ppb	39.331	0.71	47209	100	
Pb	208	3	193	39.463	ppb	39.463	1.68	215477	5000	
Th	232	3	193	39.894	ppb	39.894	1.19	221234	2000	
U	238	3	193	78.696	ppb	78.696	1.93	452676	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4129550	2.31	3887690	106.22	60	120	
Sc (IS)	45	3	HMI He	596734	1.57	560366	106.49	60	120	
Ge Internal standard	72	2	HMI H2	2485233	1.66	2321471	107.05	60	120	
Ge Internal standard	72	3	HMI He	739917	1.40	685485	107.94	60	120	
In Internal Standard	115	3	HMI He	2755824	1.52	2631879	104.71	60	120	
Ir (IS)	193	3	HMI He	6173488	1.30	5771767	106.96	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-2-A
Data File Name	107SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:12:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	54975.635	ppb	54975.635	0.81	5940982	400000	
Mg	24	3	45	44390.809	ppb	44390.809	0.66	2544340	400000	
Al	27	3	45	2.141	ppb	2.141	85.49	137	400000	
K	39	3	45	5987.668	ppb	5987.668	1.97	303438	400000	
Ca	40	2	45	131606.253	ppb	131606.253	1.00	77118771	400000	
V	51	3	72	1.109	ppb	1.109	20.95	1728	2000	
Cr	52	3	72	1.787	ppb	1.787	8.90	3582	5000	
Mn	55	3	72	222.372	ppb	222.372	0.99	90248	10000	
Fe	56	2	72	12.987	ppb	12.987	7.71	54079	10000	
Co	59	3	72	0.657	ppb	0.657	3.03	906	2000	
Ni	60	3	72	3.613	ppb	3.613	4.92	1676	5000	
Cu	63	3	72	0.891	ppb	0.891	6.01	1368	5000	
Zn	66	3	72	6.305	ppb	6.305	6.61	1206	5000	
As	75	3	72	1.004	ppb	1.004	38.72	187	2000	
Se	78	2	72	0.059	ppb	0.059	116.14	7	2000	
Sr	88	3	72	456.895	ppb	456.895	0.74	251512	4000	
Mo	95	3	115	0.445	ppb	0.445	11.82	260	2000	
Ag	107	3	115	0.010	ppb	0.010	156.95	32	100	
Cd	111	3	115	-0.024	ppb	-0.024	-92.89	18	2000	
Sn	120	3	115	0.030	ppb	0.030	162.11	936	2000	
Sb	121	3	115	0.210	ppb	0.210	8.39	198	1000	
Ba	137	3	115	285.678	ppb	285.678	2.47	68540	5000	
Tl	205	3	193	-0.162	ppb	-0.162	-5.83	373	2000	
(Pb)	206	3	193	-0.053	ppb	-0.053	-30.65	295	100	
(Pb)	207	3	193	-0.045	ppb	-0.045	-52.12	468	100	
Pb	208	3	193	-0.037	ppb	-0.037	-33.19	1404	5000	
Th	232	3	193	2.032	ppb	2.032	9.13	16378	2000	
U	238	3	193	3.676	ppb	3.676	1.94	22444	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4207162	0.60	3887690	108.22	60	120	
Sc (IS)	45	3	HMI He	595385	1.01	560366	106.25	60	120	
Ge Internal standard	72	2	HMI H2	2558575	1.31	2321471	110.21	60	120	
Ge Internal standard	72	3	HMI He	741297	0.79	685485	108.14	60	120	
In Internal Standard	115	3	HMI He	2727397	1.53	2631879	103.63	60	120	
Ir (IS)	193	3	HMI He	6057680	0.60	5771767	104.95	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A
Data File Name	108SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:14:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.004	ppb	-0.004	-1585.01	3	2000	
Na	23	3	45	103880.243	ppb	103880.243	1.02	11384280	400000	
Mg	24	3	45	75774.293	ppb	75774.293	1.50	4409940	400000	
Al	27	3	45	8.017	ppb	8.017	16.74	274	400000	
K	39	3	45	4680.306	ppb	4680.306	1.72	246676	400000	
Ca	40	2	45	218740.119	ppb	218740.119	0.78	122754230	400000	
V	51	3	72	2.273	ppb	2.273	6.15	2459	2000	
Cr	52	3	72	1.901	ppb	1.901	19.40	3675	5000	
Mn	55	3	72	3.586	ppb	3.586	3.98	1641	10000	
Fe	56	2	72	40.904	ppb	40.904	5.78	98567	10000	
Co	59	3	72	0.323	ppb	0.323	14.62	465	2000	
Ni	60	3	72	4.462	ppb	4.462	6.54	1991	5000	
Cu	63	3	72	1.835	ppb	1.835	2.69	2327	5000	
Zn	66	3	72	3.271	ppb	3.271	16.51	730	5000	
As	75	3	72	1.549	ppb	1.549	13.73	250	2000	
Se	78	2	72	0.249	ppb	0.249	27.44	19	2000	
Sr	88	3	72	786.302	ppb	786.302	0.75	433545	4000	
Mo	95	3	115	0.153	ppb	0.153	28.74	115	2000	
Ag	107	3	115	0.010	ppb	0.010	100.94	33	100	
Cd	111	3	115	-0.004	ppb	-0.004	-317.22	23	2000	
Sn	120	3	115	-0.132	ppb	-0.132	-56.57	821	2000	
Sb	121	3	115	0.142	ppb	0.142	20.36	148	1000	
Ba	137	3	115	354.242	ppb	354.242	1.44	85624	5000	
Tl	205	3	193	-0.129	ppb	-0.129	-6.95	510	2000	
(Pb)	206	3	193	-0.066	ppb	-0.066	-19.44	282	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-103.77	433	100	
Pb	208	3	193	-0.057	ppb	-0.057	-8.61	1318	5000	
Th	232	3	193	0.701	ppb	0.701	11.40	9466	2000	
U	238	3	193	4.529	ppb	4.529	2.26	27645	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4029469	1.05	3887690	103.65	60	120	
Sc (IS)	45	3	HMI He	604560	0.48	560366	107.89	60	120	
Ge Internal standard	72	2	HMI H2	2507432	1.96	2321471	108.01	60	120	
Ge Internal standard	72	3	HMI He	742531	0.57	685485	108.32	60	120	
In Internal Standard	115	3	HMI He	2747609	1.01	2631879	104.40	60	120	
Ir (IS)	193	3	HMI He	6147791	1.88	5771767	106.51	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A
Data File Name	109SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:16:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.043	ppb	-0.043	-145.43	2	2000	
Na	23	3	45	98723.510	ppb	98723.510	1.51	10737773	400000	
Mg	24	3	45	73507.326	ppb	73507.326	0.49	4245819	400000	
Al	27	3	45	4.303	ppb	4.303	43.29	187	400000	
K	39	3	45	5790.288	ppb	5790.288	1.05	296626	400000	
Ca	40	2	45	197588.775	ppb	197588.775	0.75	113471840	400000	
V	51	3	72	1.256	ppb	1.256	23.91	1804	2000	
Cr	52	3	72	0.988	ppb	0.988	20.87	2944	5000	
Mn	55	3	72	183.692	ppb	183.692	1.83	73984	10000	
Fe	56	2	72	521.844	ppb	521.844	0.27	878726	10000	
Co	59	3	72	3.058	ppb	3.058	4.80	4044	2000	
Ni	60	3	72	6.014	ppb	6.014	3.15	2536	5000	
Cu	63	3	72	1.041	ppb	1.041	17.12	1508	5000	
Zn	66	3	72	6.507	ppb	6.507	6.03	1228	5000	
As	75	3	72	0.873	ppb	0.873	25.36	170	2000	
Se	78	2	72	0.173	ppb	0.173	39.21	14	2000	
Sr	88	3	72	779.074	ppb	779.074	1.06	425401	4000	
Mo	95	3	115	0.259	ppb	0.259	26.21	170	2000	
Ag	107	3	115	0.001	ppb	0.001	317.44	18	100	
Cd	111	3	115	0.015	ppb	0.015	200.82	28	2000	
Sn	120	3	115	2.347	ppb	2.347	22.64	2716	2000	
Sb	121	3	115	0.140	ppb	0.140	10.96	148	1000	
Ba	137	3	115	354.366	ppb	354.366	1.47	86485	5000	
Tl	205	3	193	-0.145	ppb	-0.145	-6.94	441	2000	
(Pb)	206	3	193	0.259	ppb	0.259	13.23	705	100	
(Pb)	207	3	193	0.245	ppb	0.245	26.76	808	100	
Pb	208	3	193	0.273	ppb	0.273	9.86	3060	5000	
Th	232	3	193	0.252	ppb	0.252	29.95	6957	2000	
U	238	3	193	4.244	ppb	4.244	0.88	25697	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4123370	0.77	3887690	106.06	60	120	
Sc (IS)	45	3	HMI He	600040	0.95	560366	107.08	60	120	
Ge Internal standard	72	2	HMI H2	2494657	0.61	2321471	107.46	60	120	
Ge Internal standard	72	3	HMI He	735346	0.68	685485	107.27	60	120	
In Internal Standard	115	3	HMI He	2774174	0.55	2631879	105.41	60	120	
Ir (IS)	193	3	HMI He	6070700	0.79	5771767	105.18	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-1-A
Data File Name	110SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:18:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.032	ppb	0.032	343.14	5	2000	
Na	23	3	45	100950.593	ppb	100950.593	1.17	11216941	400000	
Mg	24	3	45	74323.710	ppb	74323.710	1.34	4385504	400000	
Al	27	3	45	3.120	ppb	3.120	28.99	163	400000	
K	39	3	45	4660.248	ppb	4660.248	0.43	249165	400000	
Ca	40	2	45	205720.452	ppb	205720.452	0.76	118533026	400000	
V	51	3	72	0.949	ppb	0.949	8.27	1649	2000	
Cr	52	3	72	1.120	ppb	1.120	16.49	3109	5000	
Mn	55	3	72	388.948	ppb	388.948	1.52	159782	10000	
Fe	56	2	72	54.752	ppb	54.752	3.95	122307	10000	
Co	59	3	72	0.274	ppb	0.274	11.46	405	2000	
Ni	60	3	72	9.676	ppb	9.676	2.84	3950	5000	
Cu	63	3	72	1.322	ppb	1.322	1.53	1828	5000	
Zn	66	3	72	2.265	ppb	2.265	18.37	578	5000	
As	75	3	72	0.415	ppb	0.415	63.38	120	2000	
Se	78	2	72	0.082	ppb	0.082	58.56	9	2000	
Sr	88	3	72	784.697	ppb	784.697	0.44	437606	4000	
Mo	95	3	115	0.143	ppb	0.143	29.45	112	2000	
Ag	107	3	115	0.010	ppb	0.010	47.55	33	100	
Cd	111	3	115	0.086	ppb	0.086	135.75	47	2000	
Sn	120	3	115	-0.237	ppb	-0.237	-29.12	751	2000	
Sb	121	3	115	0.068	ppb	0.068	48.92	93	1000	
Ba	137	3	115	352.201	ppb	352.201	2.22	86313	5000	
Tl	205	3	193	-0.038	ppb	-0.038	-45.13	881	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-573.34	365	100	
(Pb)	207	3	193	-0.008	ppb	-0.008	-132.54	520	100	
Pb	208	3	193	-0.005	ppb	-0.005	-396.87	1599	5000	
Th	232	3	193	0.061	ppb	0.061	79.01	6027	2000	
U	238	3	193	3.907	ppb	3.907	2.98	24140	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4137186	1.16	3887690	106.42	60	120	
Sc (IS)	45	3	HMI He	612990	0.97	560366	109.39	60	120	
Ge Internal standard	72	2	HMI H2	2531649	1.69	2321471	109.05	60	120	
Ge Internal standard	72	3	HMI He	751006	0.42	685485	109.56	60	120	
In Internal Standard	115	3	HMI He	2786373	2.25	2631879	105.87	60	120	
Ir (IS)	193	3	HMI He	6161882	3.12	5771767	106.76	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-2-A
Data File Name	111SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:20:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.005	ppb	-0.005	-1267.00	3	2000	
Na	23	3	45	85549.071	ppb	85549.071	1.04	9474771	400000	
Mg	24	3	45	68064.018	ppb	68064.018	0.71	4001844	400000	
Al	27	3	45	1.990	ppb	1.990	48.80	137	400000	
K	39	3	45	4256.764	ppb	4256.764	1.87	229091	400000	
Ca	40	2	45	195592.112	ppb	195592.112	1.22	115819176	400000	
V	51	3	72	1.968	ppb	1.968	4.14	2304	2000	
Cr	52	3	72	1.008	ppb	1.008	17.58	3035	5000	
Mn	55	3	72	3.457	ppb	3.457	3.91	1614	10000	
Fe	56	2	72	20.423	ppb	20.423	13.41	65963	10000	
Co	59	3	72	0.115	ppb	0.115	43.20	193	2000	
Ni	60	3	72	2.941	ppb	2.941	13.90	1454	5000	
Cu	63	3	72	0.994	ppb	0.994	3.62	1498	5000	
Zn	66	3	72	2.113	ppb	2.113	18.64	556	5000	
As	75	3	72	1.078	ppb	1.078	25.10	198	2000	
Se	78	2	72	0.103	ppb	0.103	30.46	10	2000	
Sr	88	3	72	714.732	ppb	714.732	0.47	400443	4000	
Mo	95	3	115	0.123	ppb	0.123	32.26	102	2000	
Ag	107	3	115	0.004	ppb	0.004	102.92	23	100	
Cd	111	3	115	-0.052	ppb	-0.052	-97.75	12	2000	
Sn	120	3	115	-0.277	ppb	-0.277	-24.71	721	2000	
Sb	121	3	115	0.118	ppb	0.118	22.63	132	1000	
Ba	137	3	115	367.949	ppb	367.949	1.71	90220	5000	
Tl	205	3	193	-0.117	ppb	-0.117	-9.23	565	2000	
(Pb)	206	3	193	-0.008	ppb	-0.008	-655.35	360	100	
(Pb)	207	3	193	-0.010	ppb	-0.010	-784.41	520	100	
Pb	208	3	193	-0.008	ppb	-0.008	-582.34	1589	5000	
Th	232	3	193	-0.054	ppb	-0.054	-37.34	5432	2000	
U	238	3	193	4.396	ppb	4.396	1.40	27041	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4251675	0.44	3887690	109.36	60	120	
Sc (IS)	45	3	HMI He	610770	0.68	560366	108.99	60	120	
Ge Internal standard	72	2	HMI H2	2541856	1.58	2321471	109.49	60	120	
Ge Internal standard	72	3	HMI He	754497	0.69	685485	110.07	60	120	
In Internal Standard	115	3	HMI He	2787143	0.59	2631879	105.90	60	120	
Ir (IS)	193	3	HMI He	6183535	1.42	5771767	107.13	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	112_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:21:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.425	ppb	2.218	2261	50	98.9	90	110	
Na	23	3	45	47592.519	ppb	1.319	5243535	51000	93.3	90	110	
Mg	24	3	45	10216.810	ppb	2.199	596876	11000	92.9	90	110	
Al	27	3	45	948.900	ppb	1.622	21942	1000	94.9	90	110	
K	39	3	45	10087.458	ppb	0.420	502712	11000	91.7	90	110	
Ca	40	2	45	10300.432	ppb	0.519	5940615	11000	93.6	90	110	
V	51	3	72	49.914	ppb	2.019	31480	50	99.8	90	110	
Cr	52	3	72	51.065	ppb	2.663	40590	50	102.1	90	110	
Mn	55	3	72	50.346	ppb	4.059	20126	50	100.7	90	110	
Fe	56	2	72	1021.105	ppb	1.574	1635899	1000	102.1	90	110	
Co	59	3	72	49.728	ppb	1.093	64283	50	99.5	90	110	
Ni	60	3	72	50.273	ppb	1.740	18376	50	100.5	90	110	
Cu	63	3	72	49.494	ppb	3.797	49482	50	99.0	90	110	
Zn	66	3	72	51.793	ppb	4.009	8180	50	103.6	90	110	
As	75	3	72	50.723	ppb	1.684	5802	50	101.4	90	110	
Se	78	2	72	50.542	ppb	2.785	2947	50	101.1	90	110	
Sr	88	3	72	99.417	ppb	1.996	53550	100	99.4	90	110	
Mo	95	3	115	49.059	ppb	2.234	24667	50	98.1	90	110	
Ag	107	3	115	49.920	ppb	1.678	84423	50	99.8	90	110	
Cd	111	3	115	48.399	ppb	2.863	11963	50	96.8	90	110	
Sn	120	3	115	49.630	ppb	3.425	38342	50	99.3	90	110	
Sb	121	3	115	49.845	ppb	2.642	38030	50	99.7	90	110	
Ba	137	3	115	52.783	ppb	2.216	12797	50	105.6	90	110	
Tl	205	3	193	47.718	ppb	4.074	193837	50	95.4	90	110	
(Pb)	206	3	193	48.909	ppb	2.699	65350	50	97.8	90	110	
(Pb)	207	3	193	47.613	ppb	2.366	56783	50	95.2	90	110	
Pb	208	3	193	48.219	ppb	3.517	261720	50	96.4	90	110	
Th	232	3	193	47.280	ppb	2.105	259986	50	94.6	90	110	
U	238	3	193	47.903	ppb	3.766	274996	50	95.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4133382	0.88	3887690	106.32	60	120	
Sc (IS)	45	3	HMI He	606749	0.88	560366	108.28	60	120	
Ge Internal standard	72	2	HMI H2	2416244	0.92	2321471	104.08	60	120	
Ge Internal standard	72	3	HMI He	725235	1.73	685485	105.80	60	120	
In Internal Standard	115	3	HMI He	2749334	1.94	2631879	104.46	60	120	
Ir (IS)	193	3	HMI He	6148045	2.59	5771767	106.52	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	113_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:23:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.043	ppb	-142.9	2	0.5	
Na	23	3	45	50.825	ppb	9.2	22758	25	>RL
Mg	24	3	45	3.186	ppb	35.3	417	25	
Al	27	3	45	-0.222	ppb	-459.9	83	15	
K	39	3	45	1.440	ppb	1349.6	26365	50	
V	51	3	72	0.083	ppb	139.8	1058	1	
Cr	52	3	72	0.720	ppb	30.2	2684	1	
Mn	55	3	72	0.214	ppb	19.0	265	0.5	
Co	59	3	72	0.023	ppb	7.0	67	0.5	
Ni	60	3	72	0.776	ppb	18.1	618	1	
Cu	63	3	72	0.035	ppb	83.4	486	1	
Zn	66	3	72	-0.030	ppb	-867.0	203	5	
As	75	3	72	-0.018	ppb	-1381.4	67	1	
Se	78	2	72	-0.005	ppb	-850.1	3	1	
Sr	88	3	72	0.045	ppb	33.7	48	0.5	
Mo	95	3	115	0.035	ppb	68.0	57	0.5	
Ag	107	3	115	0.015	ppb	28.5	42	1	
Cd	111	3	115	-0.045	ppb	-53.5	13	0.5	
Sn	120	3	115	-0.107	ppb	-15.2	850	1	
Sb	121	3	115	0.079	ppb	75.9	102	0.6	
Ba	137	3	115	0.066	ppb	58.9	55	0.5	
Tl	205	3	193	-0.163	ppb	-3.2	375	0.1	
(Pb)	206	3	193	-0.071	ppb	-28.0	273	1	
(Pb)	207	3	193	-0.076	ppb	-90.0	438	1	
Pb	208	3	193	-0.067	ppb	-18.6	1258	0.5	
Th	232	3	193	1.842	ppb	8.3	15564	1	>RL
U	238	3	193	-0.010	ppb	-136.4	1741	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4178087	1.16	3887690	107.47	60	120	
Sc (IS)	45	3	HMI He	596356	0.85	560366	106.42	60	120	
Ge Internal standard	72	2	HMI H2	2490963	0.63	2321471	107.30	60	120	
Ge Internal standard	72	3	HMI He	720583	1.38	685485	105.12	60	120	
In Internal Standard	115	3	HMI He	2781673	1.45	2631879	105.69	60	120	
Ir (IS)	193	3	HMI He	6133719	2.30	5771767	106.27	60	120	

Sample Report

Sample Table

Sample Name	280-175122-A-3-A
Data File Name	114SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:25:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	170724.098	ppb	170724.098	0.70	18875018	400000	
Mg	24	3	45	96302.930	ppb	96302.930	1.81	5657257	400000	
Al	27	3	45	4.586	ppb	4.586	18.01	197	400000	
K	39	3	45	5651.461	ppb	5651.461	0.69	295116	400000	
Ca	40	2	45	253157.959	ppb	253157.959	0.51	149488191	400000	
V	51	3	72	2.575	ppb	2.575	6.46	2657	2000	
Cr	52	3	72	1.155	ppb	1.155	20.48	3112	5000	
Mn	55	3	72	23.186	ppb	23.186	1.58	9629	10000	
Fe	56	2	72	31.146	ppb	31.146	7.80	83229	10000	
Co	59	3	72	4.172	ppb	4.172	1.84	5578	2000	
Ni	60	3	72	72.772	ppb	72.772	1.61	27186	5000	
Cu	63	3	72	4.203	ppb	4.203	6.74	4747	5000	
Zn	66	3	72	2.168	ppb	2.168	11.82	558	5000	
As	75	3	72	1.256	ppb	1.256	23.60	217	2000	
Se	78	2	72	0.783	ppb	0.783	10.85	51	2000	
Sr	88	3	72	946.650	ppb	946.650	2.08	523898	4000	
Mo	95	3	115	0.379	ppb	0.379	11.46	232	2000	
Ag	107	3	115	0.003	ppb	0.003	219.48	22	100	
Cd	111	3	115	0.002	ppb	0.002	3460.71	25	2000	
Sn	120	3	115	-0.078	ppb	-0.078	-102.74	873	2000	
Sb	121	3	115	0.157	ppb	0.157	54.26	162	1000	
Ba	137	3	115	543.061	ppb	543.061	0.60	132955	5000	
Tl	205	3	193	-0.177	ppb	-0.177	-3.38	315	2000	
(Pb)	206	3	193	3.026	ppb	3.026	2.97	4362	100	
(Pb)	207	3	193	2.851	ppb	2.851	2.35	3870	100	
Pb	208	3	193	2.916	ppb	2.916	1.68	17236	5000	
Th	232	3	193	0.397	ppb	0.397	21.76	7775	2000	
U	238	3	193	5.530	ppb	5.530	1.92	33118	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4240014	2.12	3887690	109.06	60	120	
Sc (IS)	45	3	HMI He	610310	0.83	560366	108.91	60	120	
Ge Internal standard	72	2	HMI H2	2525967	0.54	2321471	108.81	60	120	
Ge Internal standard	72	3	HMI He	745338	0.59	685485	108.73	60	120	
In Internal Standard	115	3	HMI He	2783315	1.08	2631879	105.75	60	120	
Ir (IS)	193	3	HMI He	6104304	1.60	5771767	105.76	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-1-A
Data File Name	115SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:27:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.042	ppb	-0.042	-149.18	2	2000	
Na	23	3	45	67559.157	ppb	67559.157	2.44	7441689	400000	
Mg	24	3	45	53903.643	ppb	53903.643	1.30	3150705	400000	
Al	27	3	45	3.903	ppb	3.903	68.64	180	400000	
K	39	3	45	3491.573	ppb	3491.573	2.07	191626	400000	
Ca	40	2	45	120897.680	ppb	120897.680	1.25	71326803	400000	
V	51	3	72	0.648	ppb	0.648	9.80	1476	2000	
Cr	52	3	72	0.902	ppb	0.902	46.77	2972	5000	
Mn	55	3	72	0.522	ppb	0.522	27.67	406	10000	
Fe	56	2	72	20.048	ppb	20.048	11.71	65463	10000	
Co	59	3	72	0.043	ppb	0.043	25.55	97	2000	
Ni	60	3	72	1.148	ppb	1.148	15.40	791	5000	
Cu	63	3	72	0.682	ppb	0.682	10.16	1184	5000	
Zn	66	3	72	1.387	ppb	1.387	23.85	443	5000	
As	75	3	72	0.699	ppb	0.699	25.11	155	2000	
Se	78	2	72	0.429	ppb	0.429	27.26	30	2000	
Sr	88	3	72	604.409	ppb	604.409	0.89	340949	4000	
Mo	95	3	115	0.067	ppb	0.067	55.21	72	2000	
Ag	107	3	115	0.002	ppb	0.002	108.90	20	100	
Cd	111	3	115	-0.025	ppb	-0.025	-125.66	18	2000	
Sn	120	3	115	-0.341	ppb	-0.341	-23.25	663	2000	
Sb	121	3	115	0.099	ppb	0.099	31.99	115	1000	
Ba	137	3	115	225.430	ppb	225.430	3.16	54517	5000	
Tl	205	3	193	-0.191	ppb	-0.191	-4.01	262	2000	
(Pb)	206	3	193	-0.065	ppb	-0.065	-24.62	282	100	
(Pb)	207	3	193	-0.064	ppb	-0.064	-140.52	451	100	
Pb	208	3	193	-0.057	ppb	-0.057	-33.78	1311	5000	
Th	232	3	193	0.141	ppb	0.141	32.88	6427	2000	
U	238	3	193	2.194	ppb	2.194	2.42	14274	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4235317	1.88	3887690	108.94	60	120	
Sc (IS)	45	3	HMI He	607202	0.44	560366	108.36	60	120	
Ge Internal standard	72	2	HMI H2	2545049	0.33	2321471	109.63	60	120	
Ge Internal standard	72	3	HMI He	759660	0.71	685485	110.82	60	120	
In Internal Standard	115	3	HMI He	2749677	2.96	2631879	104.48	60	120	
Ir (IS)	193	3	HMI He	6126356	0.64	5771767	106.14	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-2-A
Data File Name	116SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:29:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.078	ppb	-0.078	0.00	0	2000	
Na	23	3	45	78145.393	ppb	78145.393	0.91	8614144	400000	
Mg	24	3	45	62532.700	ppb	62532.700	2.05	3659401	400000	
Al	27	3	45	2.307	ppb	2.307	70.27	143	400000	
K	39	3	45	4376.001	ppb	4376.001	2.08	233633	400000	
Ca	40	2	45	143482.977	ppb	143482.977	0.81	84247471	400000	
V	51	3	72	0.689	ppb	0.689	7.21	1483	2000	
Cr	52	3	72	1.060	ppb	1.060	13.73	3057	5000	
Mn	55	3	72	0.277	ppb	0.277	29.77	302	10000	
Fe	56	2	72	11.966	ppb	11.966	22.43	52358	10000	
Co	59	3	72	0.089	ppb	0.089	27.28	157	2000	
Ni	60	3	72	1.321	ppb	1.321	10.37	845	5000	
Cu	63	3	72	1.025	ppb	1.025	12.84	1519	5000	
Zn	66	3	72	0.188	ppb	0.188	154.92	247	5000	
As	75	3	72	0.218	ppb	0.218	28.31	97	2000	
Se	78	2	72	0.545	ppb	0.545	5.84	37	2000	
Sr	88	3	72	695.714	ppb	695.714	1.30	387199	4000	
Mo	95	3	115	0.065	ppb	0.065	34.98	72	2000	
Ag	107	3	115	0.017	ppb	0.017	34.38	45	100	
Cd	111	3	115	-0.058	ppb	-0.058	-34.42	10	2000	
Sn	120	3	115	-0.334	ppb	-0.334	-12.38	673	2000	
Sb	121	3	115	0.128	ppb	0.128	34.71	138	1000	
Ba	137	3	115	252.707	ppb	252.707	0.42	61545	5000	
Tl	205	3	193	-0.183	ppb	-0.183	-4.59	292	2000	
(Pb)	206	3	193	-0.045	ppb	-0.045	-56.90	308	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-74.10	431	100	
Pb	208	3	193	-0.057	ppb	-0.057	-31.08	1308	5000	
Th	232	3	193	-0.008	ppb	-0.008	-953.36	5614	2000	
U	238	3	193	3.312	ppb	3.312	1.22	20577	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4216213	2.82	3887690	108.45	60	120	
Sc (IS)	45	3	HMI He	607849	1.05	560366	108.47	60	120	
Ge Internal standard	72	2	HMI H2	2557917	1.04	2321471	110.19	60	120	
Ge Internal standard	72	3	HMI He	749534	1.08	685485	109.34	60	120	
In Internal Standard	115	3	HMI He	2767717	0.05	2631879	105.16	60	120	
Ir (IS)	193	3	HMI He	6111522	0.76	5771767	105.89	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A
Data File Name	117SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:30:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.041	ppb	-0.041	-155.60	2	2000	
Na	23	3	45	154926.575	ppb	154926.575	3.05	17045859	400000	
Mg	24	3	45	60742.988	ppb	60742.988	3.69	3550847	400000	
Al	27	3	45	4.496	ppb	4.496	26.57	194	400000	
K	39	3	45	4832.545	ppb	4832.545	0.49	255027	400000	
Ca	40	2	45	206686.521	ppb	206686.521	1.77	120629445	400000	
V	51	3	72	3.077	ppb	3.077	9.32	2964	2000	
Cr	52	3	72	1.720	ppb	1.720	13.51	3540	5000	
Mn	55	3	72	284.052	ppb	284.052	1.70	115578	10000	
Fe	56	2	72	61.614	ppb	61.614	4.35	134222	10000	
Co	59	3	72	1.678	ppb	1.678	1.98	2261	2000	
Ni	60	3	72	42.167	ppb	42.167	2.72	15861	5000	
Cu	63	3	72	1.256	ppb	1.256	6.89	1743	5000	
Zn	66	3	72	8.407	ppb	8.407	10.94	1541	5000	
As	75	3	72	1.617	ppb	1.617	14.99	258	2000	
Se	78	2	72	0.288	ppb	0.288	75.29	21	2000	
Sr	88	3	72	1032.507	ppb	1032.507	1.00	570072	4000	
Mo	95	3	115	0.350	ppb	0.350	14.88	217	2000	
Ag	107	3	115	0.007	ppb	0.007	87.93	28	100	
Cd	111	3	115	-0.051	ppb	-0.051	-82.75	12	2000	
Sn	120	3	115	-0.332	ppb	-0.332	-25.48	678	2000	
Sb	121	3	115	0.131	ppb	0.131	28.76	142	1000	
Ba	137	3	115	424.821	ppb	424.821	1.85	103841	5000	
Tl	205	3	193	-0.167	ppb	-0.167	-3.86	355	2000	
(Pb)	206	3	193	-0.017	ppb	-0.017	-106.75	343	100	
(Pb)	207	3	193	0.033	ppb	0.033	107.72	561	100	
Pb	208	3	193	-0.004	ppb	-0.004	-382.39	1588	5000	
Th	232	3	193	-0.064	ppb	-0.064	-74.46	5290	2000	
U	238	3	193	3.772	ppb	3.772	1.07	23087	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4190914	0.99	3887690	107.80	60	120	
Sc (IS)	45	3	HMI He	607397	1.27	560366	108.39	60	120	
Ge Internal standard	72	2	HMI H2	2543625	0.35	2321471	109.57	60	120	
Ge Internal standard	72	3	HMI He	743582	1.02	685485	108.48	60	120	
In Internal Standard	115	3	HMI He	2779303	2.27	2631879	105.60	60	120	
Ir (IS)	193	3	HMI He	6084737	0.93	5771767	105.42	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608663/1-A
Data File Name	118_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:32:45-06:00
Sample Type	Blank
Dilution	1
Comment	608663 soil 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.043	ppb	-141.7169234	2	0.5
Na	23	3	45	171.643	ppb	3.598355403	36601	25
Mg	24	3	45	31.737	ppb	6.179301456	2102	25
Al	27	3	45	8.346	ppb	42.09065349	284	15
K	39	3	45	16.523	ppb	81.60693185	27665	50
Ca	40	2	45	153.213	ppb	0.951974283	103180	200
V	51	3	72	-0.321	ppb	-47.78181136	830	1
Cr	52	3	72	2.042	ppb	7.54744709	3752	1
Mn	55	3	72	1.331	ppb	7.453917504	720	0.5
Fe	56	2	72	33.896	ppb	8.210389911	86734	50
Co	59	3	72	0.041	ppb	29.29743347	92	0.5
Ni	60	3	72	0.923	ppb	23.22381397	685	1
Cu	63	3	72	1.717	ppb	6.853433621	2189	1
Zn	66	3	72	4.503	ppb	8.664139578	916	5
As	75	3	72	-0.086	ppb	-101.7801397	60	1
(Se)	78	3	72	-0.098	ppb	-3362.582687	32	1
Sr	88	3	72	0.799	ppb	3.597958779	461	0.5
Mo	95	3	115	0.286	ppb	35.5767915	185	0.5
Ag	107	3	115	0.005	ppb	57.21913302	25	1
Cd	111	3	115	-0.059	ppb	-0.75781046	10	0.5
Sn	120	3	115	9.761	ppb	1.745941336	8408	1
Sb	121	3	115	0.018	ppb	32.53543956	55	0.6
Ba	137	3	115	0.615	ppb	2.688866575	190	0.5
Tl	205	3	193	-0.169	ppb	-3.852107335	352	0.1
(Pb)	206	3	193	0.149	ppb	34.55289268	566	1
(Pb)	207	3	193	0.184	ppb	34.02063022	746	1
Pb	208	3	193	0.169	ppb	8.30571369	2536	0.5
Th	232	3	193	-0.044	ppb	-31.77776377	5445	1
U	238	3	193	0.001	ppb	744.7012945	1809	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4286106	0.06	3887690	110.25	60	120	
Sc (IS)	45	3	HMI He	609688	0.10	560366	108.80	60	120	
Ge Internal standard	72	2	HMI H2	2498055	2.26	2321471	107.61	60	120	
Ge Internal standard	72	3	HMI He	736122	0.31	685485	107.39	60	120	
In Internal Standard	115	3	HMI He	2791177	1.12	2631879	106.05	60	120	
Ir (IS)	193	3	HMI He	6141915	1.47	5771767	106.41	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608663/2-A
Data File Name	119_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:34:36-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608663 soil 6020b
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	199.584	199.584	ppb	2.437	8917	40	499.0	80	120	>+/-20%
Na	23	3	45	3876.425	3876.425	ppb	1.025	441966	40	9691.1	80	120	>+/-20%
Mg	24	3	45	3485.198	3485.198	ppb	2.031	203179	40	8713.0	80	120	>+/-20%
Al	27	3	45	3496.844	3496.844	ppb	1.549	80374	40	8742.1	80	120	>+/-20%
K	39	3	45	3679.085	3679.085	ppb	0.697	199768	40	9197.7	80	120	>+/-20%
Ca	40	2	45	3910.233	3910.233	ppb	0.991	2284228	40	9775.6	80	120	>+/-20%
V	51	3	72	185.994	185.994	ppb	1.191	116334	40	465.0	80	120	>+/-20%
Cr	52	3	72	195.966	195.966	ppb	2.233	151988	40	489.9	80	120	>+/-20%
Mn	55	3	72	193.862	193.862	ppb	0.841	78195	40	484.7	80	120	>+/-20%
Fe	56	2	72	3713.938	3713.938	ppb	1.496	6117641	40	9284.8	80	120	>+/-20%
(Fe)	56	3	72	3694.361	3694.361	ppb	1.331	2455724	40	9235.9	80	120	>+/-20%
Co	59	3	72	190.119	190.119	ppb	1.562	249497	40	475.3	80	120	>+/-20%
Ni	60	3	72	192.243	192.243	ppb	1.132	70389	40	480.6	80	120	>+/-20%
Cu	63	3	72	195.602	195.602	ppb	0.433	197316	40	489.0	80	120	>+/-20%
Zn	66	3	72	199.452	199.452	ppb	0.882	31390	40	498.6	80	120	>+/-20%
As	75	3	72	186.402	186.402	ppb	1.298	21463	40	466.0	80	120	>+/-20%
Se	78	2	72	190.851	190.851	ppb	2.956	11585	40	477.1	80	120	>+/-20%
(Se)	78	3	72	212.222	212.222	ppb	6.651	1256	40	530.6	80	120	>+/-20%
Sr	88	3	72	379.707	379.707	ppb	1.270	207671	40	949.3	80	120	>+/-20%
Mo	95	3	115	186.506	186.506	ppb	2.102	93512	40	466.3	80	120	>+/-20%
Ag	107	3	115	197.433	197.433	ppb	2.634	333243	40	493.6	80	120	>+/-20%
Cd	111	3	115	188.660	188.660	ppb	1.616	46490	40	471.7	80	120	>+/-20%
Sn	120	3	115	193.261	193.261	ppb	1.219	146424	40	483.2	80	120	>+/-20%
Sb	121	3	115	188.244	188.244	ppb	1.627	143267	40	470.6	80	120	>+/-20%
Ba	137	3	115	200.985	200.985	ppb	0.987	48545	40	502.5	80	120	>+/-20%
Tl	205	3	193	187.343	187.343	ppb	1.599	749850	40	468.4	80	120	>+/-20%
(Pb)	206	3	193	196.068	196.068	ppb	2.359	257987	40	490.2	80	120	>+/-20%
(Pb)	207	3	193	186.744	186.744	ppb	1.738	218713	40	466.9	80	120	>+/-20%
Pb	208	3	193	190.540	190.540	ppb	2.497	1018180	40	476.4	80	120	>+/-20%
Th	232	3	193	188.277	188.277	ppb	2.123	1007022	40	470.7	80	120	>+/-20%
U	238	3	193	190.374	190.374	ppb	2.463	1075673	40	475.9	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174021	1.33	3887690	107.37	60	120	
Sc (IS)	45	3	HMI He	605022	1.29	560366	107.97	60	120	
Ge Internal standard	72	2	HMI H2	2518405	0.82	2321471	108.48	60	120	
Ge Internal standard	72	3	HMI He	736509	0.59	685485	107.44	60	120	
In Internal Standard	115	3	HMI He	2744742	2.03	2631879	104.29	60	120	
Ir (IS)	193	3	HMI He	6078825	1.68	5771767	105.32	60	120	

Sample Report

Sample Table

Sample Name	GB 280-608265/1-B
Data File Name	120SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:36:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.440	ppb	0.440	14.50	23	2000	
Na	23	3	45	528.981	ppb	528.981	0.97	73469	400000	
Mg	24	3	45	2812.111	ppb	2812.111	1.79	159704	400000	
Al	27	3	45	3661.657	ppb	3661.657	1.33	81955	400000	
K	39	3	45	1965.066	ppb	1965.066	4.46	115989	400000	
Ca	40	2	45	8021.145	ppb	8021.145	1.54	4558271	400000	
V	51	3	72	8.469	ppb	8.469	3.12	6302	2000	
Cr	52	3	72	33.984	ppb	33.984	4.75	28270	5000	
Mn	55	3	72	476.187	ppb	476.187	1.04	192494	10000	
Fe	56	2	72	36460.790	ppb	36460.790	1.41	59360494	10000	
Co	59	3	72	2.481	ppb	2.481	5.56	3305	2000	
Ni	60	3	72	10.321	ppb	10.321	4.04	4124	5000	
Cu	63	3	72	13.777	ppb	13.777	2.15	14377	5000	
Zn	66	3	72	15.003	ppb	15.003	1.94	2567	5000	
As	75	3	72	4.177	ppb	4.177	5.14	551	2000	
Se	78	2	72	0.206	ppb	0.206	49.13	16	2000	
Sr	88	3	72	32.791	ppb	32.791	2.47	18021	4000	
Mo	95	3	115	2.931	ppb	2.931	1.24	1506	2000	
Ag	107	3	115	0.126	ppb	0.126	9.79	228	100	
Cd	111	3	115	-0.004	ppb	-0.004	-293.14	23	2000	
Sn	120	3	115	8.192	ppb	8.192	3.70	7080	2000	
Sb	121	3	115	0.322	ppb	0.322	23.56	285	1000	
Ba	137	3	115	63.209	ppb	63.209	1.81	15275	5000	
Tl	205	3	193	-0.042	ppb	-0.042	-7.40	855	2000	
(Pb)	206	3	193	9.149	ppb	9.149	2.64	12397	100	
(Pb)	207	3	193	6.323	ppb	6.323	3.73	7915	100	
Pb	208	3	193	7.391	ppb	7.391	2.92	41074	5000	
Th	232	3	193	12.315	ppb	12.315	1.61	71219	2000	
U	238	3	193	3.423	ppb	3.423	5.80	21102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4071440	2.01	3887690	104.73	60	120	
Sc (IS)	45	3	HMI He	589131	0.52	560366	105.13	60	120	
Ge Internal standard	72	2	HMI H2	2500685	0.96	2321471	107.72	60	120	
Ge Internal standard	72	3	HMI He	739184	0.81	685485	107.83	60	120	
In Internal Standard	115	3	HMI He	2741303	0.83	2631879	104.16	60	120	
Ir (IS)	193	3	HMI He	6084302	2.08	5771767	105.41	60	120	

Sample Report

Sample Table

Sample Name	LCSSRM 280-608265/2-B
Data File Name	121SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:38:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1140.877	ppb	1140.877	1.13	51207	2000	
Na	23	3	45	7920.150	ppb	7920.150	0.46	891545	400000	
Mg	24	3	45	37776.767	ppb	37776.767	2.11	2216858	400000	
Al	27	3	45	150485.133	ppb	150485.133	1.60	3481570	400000	
K	39	3	45	39536.183	ppb	39536.183	1.63	1900979	400000	
Ca	40	2	45	68989.074	ppb	68989.074	2.31	40824230	400000	
V	51	3	72	3152.636	ppb	3152.636	0.80	1941779	2000	
Cr	52	3	72	3042.589	ppb	3042.589	1.56	2311541	5000	
Mn	55	3	72	6020.589	ppb	6020.589	1.93	2405605	10000	
Fe	56	2	72	281695.384	ppb	281695.384	0.84	447890074	10000	>LDR
Co	59	3	72	1409.918	ppb	1409.918	1.14	1837039	2000	
Ni	60	3	72	2419.080	ppb	2419.080	2.03	875445	5000	
Cu	63	3	72	1981.913	ppb	1981.913	1.51	1980843	5000	
Zn	66	3	72	3306.123	ppb	3306.123	1.77	513310	5000	
As	75	3	72	2672.940	ppb	2672.940	0.89	304675	2000	
Se	78	2	72	3225.503	ppb	3225.503	0.95	189943	2000	
Sr	88	3	72	1775.095	ppb	1775.095	0.78	963935	4000	
Mo	95	3	115	2645.922	ppb	2645.922	2.41	1336456	2000	
Ag	107	3	115	1011.953	ppb	1011.953	0.72	1721279	100	>LDR
Cd	111	3	115	3080.935	ppb	3080.935	0.55	764663	2000	
Sn	120	3	115	2167.336	ppb	2167.336	1.42	1645367	2000	
Sb	121	3	115	2926.627	ppb	2926.627	1.98	2243845	1000	
Ba	137	3	115	4768.281	ppb	4768.281	0.68	1159605	5000	
Tl	205	3	193	1176.504	ppb	1176.504	0.86	4817811	2000	
(Pb)	206	3	193	3838.811	ppb	3838.811	1.68	5167130	100	>LDR
(Pb)	207	3	193	3631.367	ppb	3631.367	3.09	4346072	100	>LDR
Pb	208	3	193	3678.870	ppb	3678.870	2.03	20106542	5000	
Th	232	3	193	368.515	ppb	368.515	1.13	2013407	2000	
U	238	3	193	1842.145	ppb	1842.145	2.34	10645648	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4248763	1.58	3887690	109.29	60	120	
Sc (IS)	45	3	HMI He	609626	0.78	560366	108.79	60	120	
Ge Internal standard	72	2	HMI H2	2443451	0.76	2321471	105.25	60	120	
Ge Internal standard	72	3	HMI He	731333	0.99	685485	106.69	60	120	
In Internal Standard	115	3	HMI He	2765278	1.37	2631879	105.07	60	120	
Ir (IS)	193	3	HMI He	6225281	0.62	5771767	107.86	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C@50
Data File Name	122SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:39:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.221	ppb	0.221	59.91	13	2000	
Na	23	3	45	92.561	ppb	92.561	2.95	27347	400000	
Mg	24	3	45	1605.423	ppb	1605.423	2.44	92667	400000	
Al	27	3	45	2442.798	ppb	2442.798	1.82	55541	400000	
K	39	3	45	209.250	ppb	209.250	15.81	36109	400000	
Ca	40	2	45	5040.710	ppb	5040.710	3.09	2851980	400000	
V	51	3	72	7.097	ppb	7.097	4.46	5343	2000	
Cr	52	3	72	36.091	ppb	36.091	7.16	29290	5000	
Mn	55	3	72	2267.569	ppb	2267.569	2.04	897972	10000	
Fe	56	2	72	4422.665	ppb	4422.665	1.89	6918294	10000	
Co	59	3	72	2.402	ppb	2.402	4.70	3139	2000	
Ni	60	3	72	12.465	ppb	12.465	5.36	4812	5000	
Cu	63	3	72	24.042	ppb	24.042	1.99	24264	5000	
Zn	66	3	72	71.637	ppb	71.637	3.41	11226	5000	
As	75	3	72	11.016	ppb	11.016	2.22	1313	2000	
Se	78	2	72	0.829	ppb	0.829	16.09	51	2000	
Sr	88	3	72	10.832	ppb	10.832	5.16	5857	4000	
Mo	95	3	115	5.987	ppb	5.987	22.11	3014	2000	
Ag	107	3	115	0.185	ppb	0.185	10.07	327	100	
Cd	111	3	115	0.395	ppb	0.395	24.63	122	2000	
Sn	120	3	115	20.232	ppb	20.232	8.29	16070	2000	
Sb	121	3	115	3.047	ppb	3.047	5.39	2347	1000	
Ba	137	3	115	56.803	ppb	56.803	5.68	13677	5000	
Tl	205	3	193	0.254	ppb	0.254	17.00	2072	2000	
(Pb)	206	3	193	33.807	ppb	33.807	1.97	45586	100	
(Pb)	207	3	193	31.826	ppb	31.826	1.09	38381	100	
Pb	208	3	193	32.463	ppb	32.463	0.65	177930	5000	
Th	232	3	193	8.465	ppb	8.465	13.02	51540	2000	
U	238	3	193	0.497	ppb	0.497	2.46	4670	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4048793	2.43	3887690	104.14	60	120	
Sc (IS)	45	3	HMI He	598185	0.82	560366	106.75	60	120	
Ge Internal standard	72	2	HMI H2	2393764	0.99	2321471	103.11	60	120	
Ge Internal standard	72	3	HMI He	724778	1.41	685485	105.73	60	120	
In Internal Standard	115	3	HMI He	2733501	3.04	2631879	103.86	60	120	
Ir (IS)	193	3	HMI He	6186110	0.49	5771767	107.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	123_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:41:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.880	ppb	2.130	2306	50	103.8	90	110	
Na	23	3	45	47529.208	ppb	0.822	5176644	51000	93.2	90	110	
Mg	24	3	45	10158.602	ppb	2.127	586677	11000	92.4	90	110	
Al	27	3	45	933.106	ppb	1.302	21328	1000	93.3	90	110	
K	39	3	45	9996.589	ppb	1.470	492661	11000	90.9	90	110	
Ca	40	2	45	9998.745	ppb	1.185	5785476	11000	90.9	90	110	
V	51	3	72	49.116	ppb	3.425	30426	50	98.2	90	110	
Cr	52	3	72	51.192	ppb	1.941	39951	50	102.4	90	110	
Mn	55	3	72	49.941	ppb	1.694	19607	50	99.9	90	110	
Fe	56	2	72	1010.473	ppb	0.811	1620026	1000	101.0	90	110	
Co	59	3	72	50.033	ppb	2.162	63502	50	100.1	90	110	
Ni	60	3	72	51.673	ppb	1.438	18540	50	103.3	90	110	
Cu	63	3	72	50.463	ppb	2.499	49542	50	100.9	90	110	
Zn	66	3	72	51.116	ppb	3.585	7928	50	102.2	90	110	
As	75	3	72	50.499	ppb	2.944	5670	50	101.0	90	110	
Se	78	2	72	49.641	ppb	2.367	2896	50	99.3	90	110	
Sr	88	3	72	100.203	ppb	2.778	52995	100	100.2	90	110	
Mo	95	3	115	49.857	ppb	2.867	25433	50	99.7	90	110	
Ag	107	3	115	49.781	ppb	1.270	85422	50	99.6	90	110	
Cd	111	3	115	47.776	ppb	0.440	11986	50	95.6	90	110	
Sn	120	3	115	49.544	ppb	1.915	38840	50	99.1	90	110	
Sb	121	3	115	48.747	ppb	0.853	37743	50	97.5	90	110	
Ba	137	3	115	50.571	ppb	4.886	12440	50	101.1	90	110	
Tl	205	3	193	48.237	ppb	3.225	193375	50	96.5	90	110	
(Pb)	206	3	193	49.131	ppb	2.980	64776	50	98.3	90	110	
(Pb)	207	3	193	48.133	ppb	2.434	56638	50	96.3	90	110	
Pb	208	3	193	48.736	ppb	3.456	261021	50	97.5	90	110	
Th	232	3	193	51.079	ppb	1.451	276752	50	102.2	90	110	
U	238	3	193	48.746	ppb	4.486	276073	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4147267	1.91	3887690	106.68	60	120	
Sc (IS)	45	3	HMI He	599768	0.94	560366	107.03	60	120	
Ge Internal standard	72	2	HMI H2	2417434	1.34	2321471	104.13	60	120	
Ge Internal standard	72	3	HMI He	712099	1.50	685485	103.88	60	120	
In Internal Standard	115	3	HMI He	2789356	1.51	2631879	105.98	60	120	
Ir (IS)	193	3	HMI He	6066983	2.63	5771767	105.11	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	124_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:43:30-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.078	ppb	0.0	0	0.5	
Na	23	3	45	28.249	ppb	16.5	20412	25	>RL
Mg	24	3	45	1.815	ppb	91.5	340	25	
Al	27	3	45	1.228	ppb	73.7	117	15	
K	39	3	45	3.995	ppb	585.8	26592	50	
V	51	3	72	-0.695	ppb	-8.1	595	1	
Cr	52	3	72	0.815	ppb	24.2	2799	1	
Mn	55	3	72	0.400	ppb	20.7	343	0.5	
Co	59	3	72	0.053	ppb	17.2	107	0.5	
Ni	60	3	72	0.979	ppb	13.6	701	1	
Cu	63	3	72	0.037	ppb	23.5	496	1	
Zn	66	3	72	0.107	ppb	289.2	228	5	
As	75	3	72	-0.391	ppb	-19.1	25	1	
Se	78	2	72	0.203	ppb	25.4	15	1	
Sr	88	3	72	0.037	ppb	107.9	45	0.5	
Mo	95	3	115	0.232	ppb	36.7	158	0.5	
Ag	107	3	115	0.041	ppb	17.1	87	1	
Cd	111	3	115	0.086	ppb	14.1	47	0.5	
Sn	120	3	115	0.646	ppb	13.9	1439	1	
Sb	121	3	115	0.253	ppb	5.5	238	0.6	
Ba	137	3	115	0.111	ppb	72.6	67	0.5	
Tl	205	3	193	-0.108	ppb	-11.5	590	0.1	
(Pb)	206	3	193	-0.007	ppb	-316.0	356	1	
(Pb)	207	3	193	-0.040	ppb	-219.9	478	1	
Pb	208	3	193	-0.001	ppb	-1742.2	1603	0.5	
Th	232	3	193	1.876	ppb	16.0	15624	1	>RL
U	238	3	193	0.012	ppb	315.3	1854	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4056923	1.28	3887690	104.35	60	120	
Sc (IS)	45	3	HMI He	598933	0.28	560366	106.88	60	120	
Ge Internal standard	72	2	HMI H2	2420674	1.08	2321471	104.27	60	120	
Ge Internal standard	72	3	HMI He	732045	0.53	685485	106.79	60	120	
In Internal Standard	115	3	HMI He	2810593	0.63	2631879	106.79	60	120	
Ir (IS)	193	3	HMI He	6088926	1.01	5771767	105.50	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-1-C
Data File Name	125SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:45:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	11.470	ppb	11.470	2.82	520	2000	
Na	23	3	45	2754.283	ppb	2754.283	2.13	322458	400000	
Mg	24	3	45	80848.193	ppb	80848.193	0.40	4758430	400000	
Al	27	3	45	126319.364	ppb	126319.364	0.64	2931489	400000	
K	39	3	45	10371.384	ppb	10371.384	0.20	520075	400000	
Ca	40	2	45	253074.888	ppb	253074.888	1.47	147445484	400000	
V	51	3	72	404.300	ppb	404.300	0.49	250521	2000	
Cr	52	3	72	1818.228	ppb	1818.228	1.41	1385829	5000	
Mn	55	3	72	115287.611	ppb	115287.611	1.71	46179156	10000	>LDR
Fe	56	2	72	226181.025	ppb	226181.025	1.46	353591172	10000	>LDR
Co	59	3	72	114.264	ppb	114.264	0.49	149284	2000	
Ni	60	3	72	565.391	ppb	565.391	0.25	205402	5000	
Cu	63	3	72	1208.770	ppb	1208.770	1.33	1211395	5000	
Zn	66	3	72	3354.855	ppb	3354.855	0.33	522207	5000	
As	75	3	72	563.688	ppb	563.688	1.22	64469	2000	
Se	78	2	72	6.816	ppb	6.816	6.82	398	2000	
Sr	88	3	72	555.177	ppb	555.177	0.63	302242	4000	
Mo	95	3	115	31.962	ppb	31.962	3.18	16203	2000	
Ag	107	3	115	2.389	ppb	2.389	5.97	4085	100	
Cd	111	3	115	4.243	ppb	4.243	5.32	1080	2000	
Sn	120	3	115	941.002	ppb	941.002	1.24	715864	2000	
Sb	121	3	115	25.997	ppb	25.997	1.58	20002	1000	
Ba	137	3	115	2906.258	ppb	2906.258	1.16	707837	5000	
Tl	205	3	193	1.199	ppb	1.199	4.88	5830	2000	
(Pb)	206	3	193	1792.190	ppb	1792.190	1.88	2361494	100	>LDR
(Pb)	207	3	193	1703.106	ppb	1703.106	3.37	1995365	100	>LDR
Pb	208	3	193	1725.678	ppb	1725.678	2.57	9232264	5000	
Th	232	3	193	36.524	ppb	36.524	1.46	200419	2000	
U	238	3	193	9.746	ppb	9.746	1.11	56915	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4183855	2.10	3887690	107.62	60	120	
Sc (IS)	45	3	HMI He	611426	1.06	560366	109.11	60	120	
Ge Internal standard	72	2	HMI H2	2402452	1.16	2321471	103.49	60	120	
Ge Internal standard	72	3	HMI He	733130	0.65	685485	106.95	60	120	
In Internal Standard	115	3	HMI He	2769737	1.64	2631879	105.24	60	120	
Ir (IS)	193	3	HMI He	6094457	1.44	5771767	105.59	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-2-C
Data File Name	126SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:47:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.173	ppb	6.173	8.49	285	2000	
Na	23	3	45	839.606	ppb	839.606	0.79	112452	400000	
Mg	24	3	45	17021.087	ppb	17021.087	2.54	1018628	400000	
Al	27	3	45	88099.444	ppb	88099.444	0.64	2078304	400000	
K	39	3	45	6268.805	ppb	6268.805	0.41	330395	400000	
Ca	40	2	45	51915.457	ppb	51915.457	3.32	30753459	400000	
V	51	3	72	189.779	ppb	189.779	1.41	120272	2000	
Cr	52	3	72	186.060	ppb	186.060	0.20	146370	5000	
Mn	55	3	72	8851.364	ppb	8851.364	0.43	3610005	10000	
Fe	56	2	72	103538.949	ppb	103538.949	0.52	166453878	10000	>LDR
Co	59	3	72	32.704	ppb	32.704	1.93	43530	2000	
Ni	60	3	72	100.740	ppb	100.740	2.27	37549	5000	
Cu	63	3	72	115.624	ppb	115.624	0.85	118394	5000	
Zn	66	3	72	311.378	ppb	311.378	1.09	49541	5000	
As	75	3	72	599.672	ppb	599.672	1.59	69820	2000	
Se	78	2	72	2.068	ppb	2.068	8.43	127	2000	
Sr	88	3	72	148.710	ppb	148.710	0.41	82446	4000	
Mo	95	3	115	10.378	ppb	10.378	3.96	5400	2000	
Ag	107	3	115	0.469	ppb	0.469	13.24	833	100	
Cd	111	3	115	0.354	ppb	0.354	8.58	115	2000	
Sn	120	3	115	22.226	ppb	22.226	1.78	18192	2000	
Sb	121	3	115	6.122	ppb	6.122	5.30	4842	1000	
Ba	137	3	115	1098.325	ppb	1098.325	2.57	273176	5000	
Tl	205	3	193	0.759	ppb	0.759	3.05	4125	2000	
(Pb)	206	3	193	169.370	ppb	169.370	1.14	226570	100	
(Pb)	207	3	193	158.115	ppb	158.115	2.35	188261	100	
Pb	208	3	193	163.172	ppb	163.172	1.89	886427	5000	
Th	232	3	193	28.562	ppb	28.562	1.72	160113	2000	
U	238	3	193	6.791	ppb	6.791	2.94	40743	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4252677	0.83	3887690	109.39	60	120	
Sc (IS)	45	3	HMI He	621542	0.29	560366	110.92	60	120	
Ge Internal standard	72	2	HMI H2	2470174	0.81	2321471	106.41	60	120	
Ge Internal standard	72	3	HMI He	746410	0.62	685485	108.89	60	120	
In Internal Standard	115	3	HMI He	2828415	1.08	2631879	107.47	60	120	
Ir (IS)	193	3	HMI He	6178221	2.17	5771767	107.04	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-3-C
Data File Name	127SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:48:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.329	ppb	0.329	19.25	18	2000	
Na	23	3	45	346.427	ppb	346.427	2.49	55581	400000	
Mg	24	3	45	1107.458	ppb	1107.458	1.78	64876	400000	
Al	27	3	45	22288.288	ppb	22288.288	2.02	512957	400000	
K	39	3	45	2958.161	ppb	2958.161	1.58	166207	400000	
Ca	40	2	45	1713.513	ppb	1713.513	4.07	1004044	400000	
V	51	3	72	138.312	ppb	138.312	1.95	87077	2000	
Cr	52	3	72	135.108	ppb	135.108	1.34	105843	5000	
Mn	55	3	72	440.768	ppb	440.768	0.78	178177	10000	
Fe	56	2	72	55657.552	ppb	55657.552	1.74	89623796	10000	>LDR
Co	59	3	72	7.942	ppb	7.942	3.47	10497	2000	
Ni	60	3	72	20.362	ppb	20.362	3.50	7795	5000	
Cu	63	3	72	119.111	ppb	119.111	1.67	120748	5000	
Zn	66	3	72	201.035	ppb	201.035	2.29	31749	5000	
As	75	3	72	60.182	ppb	60.182	4.97	7003	2000	
Se	78	2	72	1.415	ppb	1.415	6.73	88	2000	
Sr	88	3	72	40.401	ppb	40.401	2.67	22194	4000	
Mo	95	3	115	17.726	ppb	17.726	2.77	8970	2000	
Ag	107	3	115	0.221	ppb	0.221	3.05	391	100	
Cd	111	3	115	0.190	ppb	0.190	45.46	72	2000	
Sn	120	3	115	17.246	ppb	17.246	6.41	13965	2000	
Sb	121	3	115	4.200	ppb	4.200	3.44	3252	1000	
Ba	137	3	115	353.269	ppb	353.269	2.55	85705	5000	
Tl	205	3	193	0.111	ppb	0.111	17.96	1486	2000	
(Pb)	206	3	193	116.940	ppb	116.940	4.59	156220	100	
(Pb)	207	3	193	110.332	ppb	110.332	4.05	131292	100	
Pb	208	3	193	113.169	ppb	113.169	4.63	614038	5000	
Th	232	3	193	22.653	ppb	22.653	3.35	127952	2000	
U	238	3	193	3.095	ppb	3.095	3.49	19524	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4161990	2.21	3887690	107.06	60	120	
Sc (IS)	45	3	HMI He	606311	0.50	560366	108.20	60	120	
Ge Internal standard	72	2	HMI H2	2474291	1.62	2321471	106.58	60	120	
Ge Internal standard	72	3	HMI He	739114	1.20	685485	107.82	60	120	
In Internal Standard	115	3	HMI He	2758278	1.57	2631879	104.80	60	120	
Ir (IS)	193	3	HMI He	6172201	4.40	5771767	106.94	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-4-C
Data File Name	128SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:50:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.772	ppb	0.772	40.23	40	2000	
Na	23	3	45	380.104	ppb	380.104	2.21	60559	400000	
Mg	24	3	45	2178.239	ppb	2178.239	0.69	130129	400000	
Al	27	3	45	20659.284	ppb	20659.284	0.80	485797	400000	
K	39	3	45	2178.835	ppb	2178.835	4.11	132266	400000	
Ca	40	2	45	3192.877	ppb	3192.877	1.64	1929238	400000	
V	51	3	72	95.442	ppb	95.442	1.96	61615	2000	
Cr	52	3	72	120.514	ppb	120.514	1.79	96541	5000	
Mn	55	3	72	3653.153	ppb	3653.153	3.45	1504901	10000	
Fe	56	2	72	82079.891	ppb	82079.891	2.98	133186982	10000	>LDR
Co	59	3	72	11.603	ppb	11.603	3.28	15621	2000	
Ni	60	3	72	39.316	ppb	39.316	1.49	15022	5000	
Cu	63	3	72	317.989	ppb	317.989	1.35	328034	5000	
Zn	66	3	72	913.764	ppb	913.764	0.75	146424	5000	
As	75	3	72	51.087	ppb	51.087	2.10	6073	2000	
Se	78	2	72	1.379	ppb	1.379	8.99	87	2000	
Sr	88	3	72	40.078	ppb	40.078	2.15	22459	4000	
Mo	95	3	115	8.222	ppb	8.222	1.64	4209	2000	
Ag	107	3	115	2.740	ppb	2.740	4.33	4695	100	
Cd	111	3	115	1.839	ppb	1.839	22.95	481	2000	
Sn	120	3	115	224.428	ppb	224.428	3.32	171834	2000	
Sb	121	3	115	33.153	ppb	33.153	3.79	25553	1000	
Ba	137	3	115	519.594	ppb	519.594	4.28	126845	5000	
Tl	205	3	193	0.303	ppb	0.303	11.88	2292	2000	
(Pb)	206	3	193	2285.316	ppb	2285.316	0.63	3082426	100	>LDR
(Pb)	207	3	193	2154.131	ppb	2154.131	3.52	2583238	100	>LDR
Pb	208	3	193	2202.132	ppb	2202.132	1.44	12060255	5000	
Th	232	3	193	15.380	ppb	15.380	2.53	89726	2000	
U	238	3	193	2.343	ppb	2.343	1.58	15395	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4313053	1.94	3887690	110.94	60	120	
Sc (IS)	45	3	HMI He	619468	0.17	560366	110.55	60	120	
Ge Internal standard	72	2	HMI H2	2494438	2.64	2321471	107.45	60	120	
Ge Internal standard	72	3	HMI He	753935	1.14	685485	109.99	60	120	
In Internal Standard	115	3	HMI He	2777509	2.95	2631879	105.53	60	120	
Ir (IS)	193	3	HMI He	6237939	0.78	5771767	108.08	60	120	

Sample Report

Sample Table

Sample Name	410-120837-A-5-C
Data File Name	129SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:52:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.101	ppb	0.101	119.08	8	2000	
Na	23	3	45	259.540	ppb	259.540	3.83	46473	400000	
Mg	24	3	45	331.787	ppb	331.787	1.91	19784	400000	
Al	27	3	45	6815.304	ppb	6815.304	0.37	158394	400000	
K	39	3	45	1238.864	ppb	1238.864	1.41	85941	400000	
Ca	40	2	45	740.020	ppb	740.020	2.46	439930	400000	
V	51	3	72	69.786	ppb	69.786	0.83	44796	2000	
Cr	52	3	72	77.604	ppb	77.604	1.31	62212	5000	
Mn	55	3	72	471.601	ppb	471.601	1.17	192110	10000	
Fe	56	2	72	49632.381	ppb	49632.381	0.92	81971535	10000	
Co	59	3	72	5.314	ppb	5.314	3.09	7090	2000	
Ni	60	3	72	15.333	ppb	15.333	3.97	6002	5000	
Cu	63	3	72	56.871	ppb	56.871	0.63	58355	5000	
Zn	66	3	72	125.636	ppb	125.636	1.47	20076	5000	
As	75	3	72	17.272	ppb	17.272	9.63	2074	2000	
Se	78	2	72	0.714	ppb	0.714	2.60	47	2000	
Sr	88	3	72	20.647	ppb	20.647	3.38	11446	4000	
Mo	95	3	115	14.850	ppb	14.850	2.50	7615	2000	
Ag	107	3	115	0.217	ppb	0.217	7.25	388	100	
Cd	111	3	115	0.067	ppb	0.067	69.27	42	2000	
Sn	120	3	115	47.862	ppb	47.862	4.82	37596	2000	
Sb	121	3	115	2.677	ppb	2.677	3.02	2114	1000	
Ba	137	3	115	243.741	ppb	243.741	3.36	59897	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-47.82	785	2000	
(Pb)	206	3	193	154.705	ppb	154.705	1.69	205874	100	
(Pb)	207	3	193	145.218	ppb	145.218	0.92	172051	100	
Pb	208	3	193	149.482	ppb	149.482	1.37	807865	5000	
Th	232	3	193	15.286	ppb	15.286	1.63	87876	2000	
U	238	3	193	1.487	ppb	1.487	4.91	10279	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4159340	1.56	3887690	106.99	60	120	
Sc (IS)	45	3	HMI He	612022	1.34	560366	109.22	60	120	
Ge Internal standard	72	2	HMI H2	2537081	0.79	2321471	109.29	60	120	
Ge Internal standard	72	3	HMI He	744901	1.21	685485	108.67	60	120	
In Internal Standard	115	3	HMI He	2794560	3.12	2631879	106.18	60	120	
Ir (IS)	193	3	HMI He	6144400	1.27	5771767	106.46	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-1-C
Data File Name	130SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:54:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.473	ppb	0.473	61.79	25	2000	
Na	23	3	45	430.912	ppb	430.912	3.96	66395	400000	
Mg	24	3	45	1813.945	ppb	1813.945	1.01	108645	400000	
Al	27	3	45	15708.236	ppb	15708.236	1.19	370205	400000	
K	39	3	45	2034.319	ppb	2034.319	4.09	125569	400000	
Ca	40	2	45	3677.056	ppb	3677.056	2.37	2200865	400000	
V	51	3	72	102.635	ppb	102.635	0.78	66639	2000	
Cr	52	3	72	166.589	ppb	166.589	3.87	133474	5000	
Mn	55	3	72	6731.703	ppb	6731.703	2.11	2791644	10000	
Fe	56	2	72	113716.284	ppb	113716.284	1.89	186725744	10000	>LDR
Co	59	3	72	13.403	ppb	13.403	2.56	18163	2000	
Ni	60	3	72	53.109	ppb	53.109	2.51	20300	5000	
Cu	63	3	72	551.711	ppb	551.711	1.58	572656	5000	
Zn	66	3	72	1709.105	ppb	1709.105	1.32	275536	5000	
As	75	3	72	62.884	ppb	62.884	4.01	7508	2000	
Se	78	2	72	1.297	ppb	1.297	15.72	83	2000	
Sr	88	3	72	54.357	ppb	54.357	1.79	30663	4000	
Mo	95	3	115	10.962	ppb	10.962	1.52	5712	2000	
Ag	107	3	115	5.702	ppb	5.702	3.11	9952	100	
Cd	111	3	115	4.115	ppb	4.115	7.94	1071	2000	
Sn	120	3	115	221.876	ppb	221.876	1.77	173390	2000	
Sb	121	3	115	23.140	ppb	23.140	1.99	18217	1000	
Ba	137	3	115	530.738	ppb	530.738	1.07	132266	5000	
Tl	205	3	193	0.352	ppb	0.352	3.13	2481	2000	
(Pb)	206	3	193	1801.387	ppb	1801.387	0.38	2417470	100	>LDR
(Pb)	207	3	193	1745.502	ppb	1745.502	0.98	2083079	100	>LDR
Pb	208	3	193	1745.767	ppb	1745.767	0.59	9513185	5000	
Th	232	3	193	17.693	ppb	17.693	0.87	101839	2000	
U	238	3	193	2.434	ppb	2.434	3.26	15841	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4274528	0.77	3887690	109.95	60	120	
Sc (IS)	45	3	HMI He	620843	0.70	560366	110.79	60	120	
Ge Internal standard	72	2	HMI H2	2523524	1.50	2321471	108.70	60	120	
Ge Internal standard	72	3	HMI He	759071	1.15	685485	110.73	60	120	
In Internal Standard	115	3	HMI He	2833208	0.96	2631879	107.65	60	120	
Ir (IS)	193	3	HMI He	6206203	0.47	5771767	107.53	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-2-C
Data File Name	131SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:56:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.633	ppb	0.633	50.11	33	2000	
Na	23	3	45	264.314	ppb	264.314	2.51	47939	400000	
Mg	24	3	45	915.784	ppb	915.784	2.33	55273	400000	
Al	27	3	45	15745.222	ppb	15745.222	1.65	373110	400000	
K	39	3	45	1906.639	ppb	1906.639	0.58	120070	400000	
Ca	40	2	45	1088.665	ppb	1088.665	0.66	674240	400000	
V	51	3	72	108.474	ppb	108.474	1.63	70256	2000	
Cr	52	3	72	102.840	ppb	102.840	2.17	83145	5000	
Mn	55	3	72	978.416	ppb	978.416	0.50	405323	10000	
Fe	56	2	72	54058.073	ppb	54058.073	0.56	91702059	10000	>LDR
Co	59	3	72	6.952	ppb	6.952	3.17	9425	2000	
Ni	60	3	72	18.994	ppb	18.994	1.56	7480	5000	
Cu	63	3	72	175.911	ppb	175.911	1.21	182642	5000	
Zn	66	3	72	222.957	ppb	222.957	0.46	36081	5000	
As	75	3	72	31.555	ppb	31.555	0.27	3799	2000	
Se	78	2	72	1.318	ppb	1.318	21.19	87	2000	
Sr	88	3	72	28.789	ppb	28.789	0.41	16227	4000	
Mo	95	3	115	11.191	ppb	11.191	1.87	6037	2000	
Ag	107	3	115	0.534	ppb	0.534	7.85	981	100	
Cd	111	3	115	0.459	ppb	0.459	24.20	147	2000	
Sn	120	3	115	39.698	ppb	39.698	1.54	32931	2000	
Sb	121	3	115	4.500	ppb	4.500	5.87	3702	1000	
Ba	137	3	115	248.059	ppb	248.059	1.78	64031	5000	
Tl	205	3	193	0.093	ppb	0.093	13.94	1428	2000	
(Pb)	206	3	193	200.300	ppb	200.300	0.87	270302	100	
(Pb)	207	3	193	187.327	ppb	187.327	1.66	224994	100	
Pb	208	3	193	194.449	ppb	194.449	1.27	1065664	5000	
Th	232	3	193	16.864	ppb	16.864	1.67	97757	2000	
U	238	3	193	3.195	ppb	3.195	1.62	20313	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368388	0.50	3887690	112.36	60	120	
Sc (IS)	45	3	HMI He	624195	0.48	560366	111.39	60	120	
Ge Internal standard	72	2	HMI H2	2605914	1.65	2321471	112.25	60	120	
Ge Internal standard	72	3	HMI He	757867	0.73	685485	110.56	60	120	
In Internal Standard	115	3	HMI He	2933795	1.15	2631879	111.47	60	120	
Ir (IS)	193	3	HMI He	6233297	0.55	5771767	108.00	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-3-C
Data File Name	132SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:58:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.998	ppb	4.998	9.41	237	2000	
Na	23	3	45	548.963	ppb	548.963	2.53	81912	400000	
Mg	24	3	45	7071.727	ppb	7071.727	0.83	434799	400000	
Al	27	3	45	79457.757	ppb	79457.757	1.17	1925122	400000	
K	39	3	45	6184.386	ppb	6184.386	0.71	335154	400000	
Ca	40	2	45	2596.471	ppb	2596.471	2.62	1597606	400000	
V	51	3	72	188.151	ppb	188.151	1.38	123886	2000	
Cr	52	3	72	144.065	ppb	144.065	1.88	118251	5000	
Mn	55	3	72	4126.257	ppb	4126.257	1.31	1748307	10000	
Fe	56	2	72	93318.248	ppb	93318.248	1.66	156383319	10000	>LDR
Co	59	3	72	45.016	ppb	45.016	1.39	62230	2000	
Ni	60	3	72	71.999	ppb	71.999	1.56	27986	5000	
Cu	63	3	72	196.523	ppb	196.523	0.14	208722	5000	
Zn	66	3	72	368.769	ppb	368.769	1.05	60912	5000	
As	75	3	72	40.402	ppb	40.402	3.63	4955	2000	
Se	78	2	72	3.323	ppb	3.323	7.54	210	2000	
Sr	88	3	72	48.059	ppb	48.059	2.00	27696	4000	
Mo	95	3	115	7.419	ppb	7.419	7.03	3887	2000	
Ag	107	3	115	0.920	ppb	0.920	6.19	1624	100	
Cd	111	3	115	0.581	ppb	0.581	3.56	173	2000	
Sn	120	3	115	32.439	ppb	32.439	2.24	26231	2000	
Sb	121	3	115	5.771	ppb	5.771	2.61	4589	1000	
Ba	137	3	115	543.878	ppb	543.878	1.80	135905	5000	
Tl	205	3	193	1.089	ppb	1.089	3.65	5552	2000	
(Pb)	206	3	193	398.231	ppb	398.231	2.25	540806	100	
(Pb)	207	3	193	378.554	ppb	378.554	1.80	457344	100	
Pb	208	3	193	396.585	ppb	396.585	2.01	2187056	5000	
Th	232	3	193	22.562	ppb	22.562	2.62	129757	2000	
U	238	3	193	6.557	ppb	6.557	1.40	40048	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4386710	2.81	3887690	112.84	60	120	
Sc (IS)	45	3	HMI He	638398	0.97	560366	113.93	60	120	
Ge Internal standard	72	2	HMI H2	2574730	1.29	2321471	110.91	60	120	
Ge Internal standard	72	3	HMI He	775452	0.88	685485	113.12	60	120	
In Internal Standard	115	3	HMI He	2841104	1.39	2631879	107.95	60	120	
Ir (IS)	193	3	HMI He	6278416	1.75	5771767	108.78	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-4-C
Data File Name	133SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T16:59:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.602	ppb	3.602	38.96	172	2000	
Na	23	3	45	486.291	ppb	486.291	3.06	75241	400000	
Mg	24	3	45	7011.771	ppb	7011.771	1.57	434357	400000	
Al	27	3	45	80604.704	ppb	80604.704	0.58	1967675	400000	
K	39	3	45	7109.555	ppb	7109.555	1.70	383935	400000	
Ca	40	2	45	1954.884	ppb	1954.884	0.67	1201753	400000	
V	51	3	72	195.323	ppb	195.323	1.45	125841	2000	
Cr	52	3	72	142.762	ppb	142.762	1.62	114719	5000	
Mn	55	3	72	1605.139	ppb	1605.139	1.58	665784	10000	
Fe	56	2	72	99323.417	ppb	99323.417	1.41	164644604	10000	>LDR
Co	59	3	72	31.216	ppb	31.216	1.68	42248	2000	
Ni	60	3	72	61.108	ppb	61.108	2.62	23301	5000	
Cu	63	3	72	59.335	ppb	59.335	1.90	62009	5000	
Zn	66	3	72	197.539	ppb	197.539	1.83	32038	5000	
As	75	3	72	27.957	ppb	27.957	0.48	3379	2000	
Se	78	2	72	1.146	ppb	1.146	3.80	74	2000	
Sr	88	3	72	49.752	ppb	49.752	1.53	28063	4000	
Mo	95	3	115	9.305	ppb	9.305	2.27	4867	2000	
Ag	107	3	115	0.200	ppb	0.200	14.80	366	100	
Cd	111	3	115	0.234	ppb	0.234	58.21	85	2000	
Sn	120	3	115	12.959	ppb	12.959	1.67	11049	2000	
Sb	121	3	115	1.479	ppb	1.479	3.30	1206	1000	
Ba	137	3	115	500.459	ppb	500.459	0.62	125035	5000	
Tl	205	3	193	0.652	ppb	0.652	6.26	3689	2000	
(Pb)	206	3	193	61.348	ppb	61.348	0.41	82337	100	
(Pb)	207	3	193	57.361	ppb	57.361	0.87	68674	100	
Pb	208	3	193	59.147	ppb	59.147	0.92	322515	5000	
Th	232	3	193	32.598	ppb	32.598	1.86	182008	2000	
U	238	3	193	5.566	ppb	5.566	1.64	33741	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370407	0.73	3887690	112.42	60	120	
Sc (IS)	45	3	HMI He	643170	0.30	560366	114.78	60	120	
Ge Internal standard	72	2	HMI H2	2547319	1.25	2321471	109.73	60	120	
Ge Internal standard	72	3	HMI He	758985	0.61	685485	110.72	60	120	
In Internal Standard	115	3	HMI He	2840156	0.35	2631879	107.91	60	120	
Ir (IS)	193	3	HMI He	6179835	0.57	5771767	107.07	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-5-F
Data File Name	134SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:01:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	6.189	ppb	6.189	23.62	297	2000	
Na	23	3	45	853.572	ppb	853.572	3.17	118541	400000	
Mg	24	3	45	14978.474	ppb	14978.474	1.37	931906	400000	
Al	27	3	45	133979.574	ppb	133979.574	3.09	3285769	400000	
K	39	3	45	10676.065	ppb	10676.065	2.03	564936	400000	
Ca	40	2	45	10418.987	ppb	10418.987	1.68	6509008	400000	
V	51	3	72	326.616	ppb	326.616	0.63	215174	2000	
Cr	52	3	72	231.474	ppb	231.474	0.15	189413	5000	
Mn	55	3	72	5969.624	ppb	5969.624	0.80	2540103	10000	
Fe	56	2	72	148928.611	ppb	148928.611	0.80	249677746	10000	>LDR
Co	59	3	72	66.316	ppb	66.316	0.56	92046	2000	
Ni	60	3	72	123.671	ppb	123.671	1.16	48012	5000	
Cu	63	3	72	215.223	ppb	215.223	0.39	229497	5000	
Zn	66	3	72	728.383	ppb	728.383	0.63	120605	5000	
As	75	3	72	59.131	ppb	59.131	3.97	7248	2000	
Se	78	2	72	4.642	ppb	4.642	3.01	292	2000	
Sr	88	3	72	83.778	ppb	83.778	1.07	48467	4000	
Mo	95	3	115	10.214	ppb	10.214	4.66	5477	2000	
Ag	107	3	115	0.983	ppb	0.983	3.30	1779	100	
Cd	111	3	115	1.411	ppb	1.411	6.84	395	2000	
Sn	120	3	115	37.677	ppb	37.677	0.70	31094	2000	
Sb	121	3	115	6.454	ppb	6.454	1.20	5257	1000	
Ba	137	3	115	857.362	ppb	857.362	1.25	219723	5000	
Tl	205	3	193	1.661	ppb	1.661	4.17	7909	2000	
(Pb)	206	3	193	463.246	ppb	463.246	1.05	628831	100	
(Pb)	207	3	193	434.477	ppb	434.477	1.19	524632	100	
Pb	208	3	193	458.096	ppb	458.096	1.50	2525087	5000	
Th	232	3	193	37.378	ppb	37.378	0.78	211067	2000	
U	238	3	193	9.695	ppb	9.695	1.44	58307	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4478193	1.52	3887690	115.19	60	120	
Sc (IS)	45	3	HMI He	646171	0.10	560366	115.31	60	120	
Ge Internal standard	72	2	HMI H2	2576218	0.61	2321471	110.97	60	120	
Ge Internal standard	72	3	HMI He	778717	0.75	685485	113.60	60	120	
In Internal Standard	115	3	HMI He	2913845	0.64	2631879	110.71	60	120	
Ir (IS)	193	3	HMI He	6275188	0.90	5771767	108.72	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	135_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:03:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.310	ppb	2.613	2399	50	102.6	90	110	
Na	23	3	45	47587.606	ppb	1.678	5383592	51000	93.3	90	110	
Mg	24	3	45	10257.222	ppb	1.653	615351	11000	93.2	90	110	
Al	27	3	45	978.341	ppb	2.903	23219	1000	97.8	90	110	
K	39	3	45	10254.951	ppb	2.212	524225	11000	93.2	90	110	
Ca	40	2	45	10106.217	ppb	1.075	6205290	11000	91.9	90	110	
V	51	3	72	49.457	ppb	0.653	32234	50	98.9	90	110	
Cr	52	3	72	51.677	ppb	1.666	42415	50	103.4	90	110	
Mn	55	3	72	51.333	ppb	3.174	21196	50	102.7	90	110	
Fe	56	2	72	1059.956	ppb	2.247	1782522	1000	106.0	90	110	
Co	59	3	72	49.535	ppb	1.762	66149	50	99.1	90	110	
Ni	60	3	72	51.498	ppb	3.857	19436	50	103.0	90	110	
Cu	63	3	72	49.728	ppb	2.189	51370	50	99.5	90	110	
Zn	66	3	72	52.461	ppb	1.886	8557	50	104.9	90	110	
As	75	3	72	50.555	ppb	1.007	5973	50	101.1	90	110	
Se	78	2	72	50.504	ppb	3.106	3092	50	101.0	90	110	
Sr	88	3	72	99.457	ppb	1.848	55348	100	99.5	90	110	
Mo	95	3	115	49.512	ppb	0.887	25630	50	99.0	90	110	
Ag	107	3	115	49.754	ppb	2.080	86613	50	99.5	90	110	
Cd	111	3	115	49.670	ppb	0.433	12640	50	99.3	90	110	
Sn	120	3	115	49.364	ppb	1.246	39268	50	98.7	90	110	
Sb	121	3	115	50.081	ppb	1.295	39332	50	100.2	90	110	
Ba	137	3	115	51.851	ppb	3.355	12943	50	103.7	90	110	
Tl	205	3	193	47.339	ppb	2.632	193904	50	94.7	90	110	
(Pb)	206	3	193	48.988	ppb	1.601	65990	50	98.0	90	110	
(Pb)	207	3	193	48.087	ppb	2.297	57799	50	96.2	90	110	
Pb	208	3	193	48.160	ppb	2.008	263564	50	96.3	90	110	
Th	232	3	193	49.642	ppb	2.027	274879	50	99.3	90	110	
U	238	3	193	47.338	ppb	1.025	274046	50	94.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400100	1.08	3887690	113.18	60	120	
Sc (IS)	45	3	HMI He	623088	2.11	560366	111.19	60	120	
Ge Internal standard	72	2	HMI H2	2538005	0.52	2321471	109.33	60	120	
Ge Internal standard	72	3	HMI He	749194	1.17	685485	109.29	60	120	
In Internal Standard	115	3	HMI He	2829705	0.88	2631879	107.52	60	120	
Ir (IS)	193	3	HMI He	6196520	1.81	5771767	107.36	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	136_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:05:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-145.9	2	0.5	
Na	23	3	45	19.080	ppb	13.5	20338	25	
Mg	24	3	45	0.994	ppb	57.6	307	25	
Al	27	3	45	4.656	ppb	43.4	204	15	
K	39	3	45	-10.517	ppb	-172.1	27140	50	
V	51	3	72	-0.869	ppb	-2.0	505	1	
Cr	52	3	72	1.103	ppb	9.0	3122	1	>RL
Mn	55	3	72	0.778	ppb	22.0	511	0.5	>RL
Co	59	3	72	0.033	ppb	5.8	83	0.5	
Ni	60	3	72	1.172	ppb	10.4	798	1	>RL
Cu	63	3	72	0.045	ppb	49.3	521	1	
Zn	66	3	72	-0.014	ppb	-616.2	217	5	
As	75	3	72	-0.313	ppb	-35.6	35	1	
Se	78	2	72	0.025	ppb	70.2	5	1	
Sr	88	3	72	0.028	ppb	77.9	42	0.5	
Mo	95	3	115	0.093	ppb	39.4	88	0.5	
Ag	107	3	115	0.011	ppb	79.5	35	1	
Cd	111	3	115	-0.086	ppb	-26.1	3	0.5	
Sn	120	3	115	0.413	ppb	15.2	1278	1	
Sb	121	3	115	0.044	ppb	6.6	77	0.6	
Ba	137	3	115	0.120	ppb	43.9	70	0.5	
Tl	205	3	193	-0.165	ppb	-2.9	375	0.1	
(Pb)	206	3	193	-0.054	ppb	-36.4	303	1	
(Pb)	207	3	193	-0.044	ppb	-54.1	486	1	
Pb	208	3	193	-0.028	ppb	-11.0	1503	0.5	
Th	232	3	193	1.600	ppb	11.6	14561	1	>RL
U	238	3	193	-0.005	ppb	-169.5	1808	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4425097	1.22	3887690	113.82	60	120	
Sc (IS)	45	3	HMI He	627274	1.14	560366	111.94	60	120	
Ge Internal standard	72	2	HMI H2	2592154	1.63	2321471	111.66	60	120	
Ge Internal standard	72	3	HMI He	757452	0.47	685485	110.50	60	120	
In Internal Standard	115	3	HMI He	2851270	0.80	2631879	108.34	60	120	
Ir (IS)	193	3	HMI He	6264724	1.05	5771767	108.54	60	120	

Sample Report

Sample Table

Sample Name	410-121013-A-6-C
Data File Name	137SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:07:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.189	ppb	4.189	23.43	198	2000	
Na	23	3	45	715.144	ppb	715.144	0.16	102806	400000	
Mg	24	3	45	10061.423	ppb	10061.423	0.85	628838	400000	
Al	27	3	45	120622.987	ppb	120622.987	1.53	2971353	400000	
K	39	3	45	11606.268	ppb	11606.268	1.78	614382	400000	
Ca	40	2	45	3688.066	ppb	3688.066	0.62	2316411	400000	
V	51	3	72	276.012	ppb	276.012	0.64	181595	2000	
Cr	52	3	72	185.813	ppb	185.813	1.15	152157	5000	
Mn	55	3	72	1488.915	ppb	1488.915	0.61	632244	10000	
Fe	56	2	72	143081.334	ppb	143081.334	0.44	243028293	10000	>LDR
Co	59	3	72	39.191	ppb	39.191	1.14	54289	2000	
Ni	60	3	72	74.282	ppb	74.282	2.54	28917	5000	
Cu	63	3	72	76.553	ppb	76.553	0.68	81760	5000	
Zn	66	3	72	253.850	ppb	253.850	3.17	42081	5000	
As	75	3	72	37.167	ppb	37.167	3.72	4573	2000	
Se	78	2	72	1.752	ppb	1.752	7.84	114	2000	
Sr	88	3	72	67.167	ppb	67.167	2.63	38774	4000	
Mo	95	3	115	9.806	ppb	9.806	1.28	5228	2000	
Ag	107	3	115	0.197	ppb	0.197	12.51	366	100	
Cd	111	3	115	0.241	ppb	0.241	4.88	88	2000	
Sn	120	3	115	14.405	ppb	14.405	1.01	12418	2000	
Sb	121	3	115	1.918	ppb	1.918	1.97	1583	1000	
Ba	137	3	115	555.447	ppb	555.447	2.09	141508	5000	
Tl	205	3	193	1.009	ppb	1.009	6.29	5155	2000	
(Pb)	206	3	193	85.918	ppb	85.918	1.20	115520	100	
(Pb)	207	3	193	79.418	ppb	79.418	1.87	95165	100	
Pb	208	3	193	82.475	ppb	82.475	1.66	450439	5000	
Th	232	3	193	43.798	ppb	43.798	1.57	243329	2000	
U	238	3	193	8.022	ppb	8.022	1.86	47972	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4486186	0.91	3887690	115.39	60	120	
Sc (IS)	45	3	HMI He	649031	0.08	560366	115.82	60	120	
Ge Internal standard	72	2	HMI H2	2610031	1.11	2321471	112.43	60	120	
Ge Internal standard	72	3	HMI He	776951	0.27	685485	113.34	60	120	
In Internal Standard	115	3	HMI He	2896576	0.91	2631879	110.06	60	120	
Ir (IS)	193	3	HMI He	6199729	1.84	5771767	107.41	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-1-C
Data File Name	138SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:08:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.926	ppb	2.926	18.14	143	2000	
Na	23	3	45	594.578	ppb	594.578	1.65	88403	400000	
Mg	24	3	45	6931.501	ppb	6931.501	2.03	432057	400000	
Al	27	3	45	74251.511	ppb	74251.511	1.56	1823901	400000	
K	39	3	45	6556.294	ppb	6556.294	1.55	358505	400000	
Ca	40	2	45	2170.304	ppb	2170.304	4.51	1343668	400000	
V	51	3	72	199.035	ppb	199.035	0.86	130143	2000	
Cr	52	3	72	143.173	ppb	143.173	1.36	116778	5000	
Mn	55	3	72	2610.667	ppb	2610.667	1.60	1099018	10000	
Fe	56	2	72	95828.196	ppb	95828.196	1.26	161021678	10000	>LDR
Co	59	3	72	40.481	ppb	40.481	1.47	55600	2000	
Ni	60	3	72	66.521	ppb	66.521	1.45	25716	5000	
Cu	63	3	72	175.754	ppb	175.754	1.44	185496	5000	
Zn	66	3	72	335.404	ppb	335.404	1.13	55062	5000	
As	75	3	72	39.267	ppb	39.267	2.62	4787	2000	
Se	78	2	72	3.182	ppb	3.182	7.47	202	2000	
Sr	88	3	72	54.676	ppb	54.676	1.95	31300	4000	
Mo	95	3	115	7.001	ppb	7.001	5.53	3770	2000	
Ag	107	3	115	0.780	ppb	0.780	7.71	1416	100	
Cd	111	3	115	0.442	ppb	0.442	29.35	142	2000	
Sn	120	3	115	22.261	ppb	22.261	1.96	18792	2000	
Sb	121	3	115	5.410	ppb	5.410	4.51	4419	1000	
Ba	137	3	115	532.549	ppb	532.549	0.52	136663	5000	
Tl	205	3	193	1.025	ppb	1.025	2.25	5220	2000	
(Pb)	206	3	193	436.106	ppb	436.106	2.47	584611	100	
(Pb)	207	3	193	403.938	ppb	403.938	1.31	481765	100	
Pb	208	3	193	432.766	ppb	432.766	1.07	2356079	5000	
Th	232	3	193	23.415	ppb	23.415	1.74	132718	2000	
U	238	3	193	6.042	ppb	6.042	1.70	36569	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4409220	2.94	3887690	113.41	60	120	
Sc (IS)	45	3	HMI He	647257	1.00	560366	115.51	60	120	
Ge Internal standard	72	2	HMI H2	2582245	2.43	2321471	111.23	60	120	
Ge Internal standard	72	3	HMI He	770380	0.68	685485	112.38	60	120	
In Internal Standard	115	3	HMI He	2917344	0.69	2631879	110.85	60	120	
Ir (IS)	193	3	HMI He	6197589	1.23	5771767	107.38	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-2-C
Data File Name	139SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:10:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.964	ppb	1.964	11.42	95	2000	
Na	23	3	45	485.761	ppb	485.761	1.80	74976	400000	
Mg	24	3	45	5050.298	ppb	5050.298	0.71	312068	400000	
Al	27	3	45	65362.535	ppb	65362.535	1.78	1591367	400000	
K	39	3	45	6671.806	ppb	6671.806	0.97	361074	400000	
Ca	40	2	45	1441.563	ppb	1441.563	0.35	878375	400000	
V	51	3	72	177.532	ppb	177.532	0.69	115852	2000	
Cr	52	3	72	133.601	ppb	133.601	0.28	108796	5000	
Mn	55	3	72	1075.532	ppb	1075.532	1.01	451553	10000	
Fe	56	2	72	73921.805	ppb	73921.805	2.40	124566174	10000	>LDR
Co	59	3	72	24.804	ppb	24.804	0.40	33981	2000	
Ni	60	3	72	47.752	ppb	47.752	1.48	18508	5000	
Cu	63	3	72	59.379	ppb	59.379	0.64	62802	5000	
Zn	66	3	72	160.000	ppb	160.000	0.34	26304	5000	
As	75	3	72	25.546	ppb	25.546	2.66	3130	2000	
Se	78	2	72	1.008	ppb	1.008	11.90	67	2000	
Sr	88	3	72	48.911	ppb	48.911	1.03	27922	4000	
Mo	95	3	115	6.964	ppb	6.964	6.34	3675	2000	
Ag	107	3	115	0.196	ppb	0.196	15.79	360	100	
Cd	111	3	115	0.124	ppb	0.124	86.60	57	2000	
Sn	120	3	115	11.434	ppb	11.434	3.45	9930	2000	
Sb	121	3	115	1.779	ppb	1.779	6.29	1453	1000	
Ba	137	3	115	463.814	ppb	463.814	3.26	116670	5000	
Tl	205	3	193	0.450	ppb	0.450	10.00	2904	2000	
(Pb)	206	3	193	59.288	ppb	59.288	2.77	80583	100	
(Pb)	207	3	193	55.586	ppb	55.586	2.66	67403	100	
Pb	208	3	193	57.555	ppb	57.555	2.75	317822	5000	
Th	232	3	193	28.635	ppb	28.635	3.18	162599	2000	
U	238	3	193	4.660	ppb	4.660	1.61	28908	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4316322	1.35	3887690	111.03	60	120	
Sc (IS)	45	3	HMI He	641420	0.84	560366	114.46	60	120	
Ge Internal standard	72	2	HMI H2	2589430	1.87	2321471	111.54	60	120	
Ge Internal standard	72	3	HMI He	768070	0.27	685485	112.05	60	120	
In Internal Standard	115	3	HMI He	2861187	2.80	2631879	108.71	60	120	
Ir (IS)	193	3	HMI He	6259393	1.81	5771767	108.45	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-3-C
Data File Name	140SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:12:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.481	ppb	2.481	22.15	120	2000	
Na	23	3	45	498.272	ppb	498.272	2.34	77203	400000	
Mg	24	3	45	5450.700	ppb	5450.700	1.63	340226	400000	
Al	27	3	45	70932.221	ppb	70932.221	0.20	1744680	400000	
K	39	3	45	6959.237	ppb	6959.237	1.36	379258	400000	
Ca	40	2	45	1633.721	ppb	1633.721	2.50	1013132	400000	
V	51	3	72	186.680	ppb	186.680	0.89	121697	2000	
Cr	52	3	72	137.821	ppb	137.821	1.09	112097	5000	
Mn	55	3	72	1064.094	ppb	1064.094	1.27	446520	10000	
Fe	56	2	72	82659.434	ppb	82659.434	0.98	136581223	10000	>LDR
Co	59	3	72	29.950	ppb	29.950	1.08	41005	2000	
Ni	60	3	72	51.601	ppb	51.601	2.78	19959	5000	
Cu	63	3	72	60.412	ppb	60.412	1.38	63852	5000	
Zn	66	3	72	192.380	ppb	192.380	2.97	31562	5000	
As	75	3	72	25.409	ppb	25.409	3.37	3112	2000	
Se	78	2	72	1.117	ppb	1.117	10.85	72	2000	
Sr	88	3	72	52.161	ppb	52.161	1.53	29759	4000	
Mo	95	3	115	9.088	ppb	9.088	4.10	4870	2000	
Ag	107	3	115	0.226	ppb	0.226	14.43	420	100	
Cd	111	3	115	0.279	ppb	0.279	30.74	98	2000	
Sn	120	3	115	16.793	ppb	16.793	3.17	14374	2000	
Sb	121	3	115	1.745	ppb	1.745	12.02	1448	1000	
Ba	137	3	115	467.628	ppb	467.628	2.60	119654	5000	
Tl	205	3	193	0.497	ppb	0.497	3.86	3052	2000	
(Pb)	206	3	193	63.093	ppb	63.093	1.91	84429	100	
(Pb)	207	3	193	58.658	ppb	58.658	0.91	70023	100	
Pb	208	3	193	60.706	ppb	60.706	1.90	330030	5000	
Th	232	3	193	31.010	ppb	31.010	1.31	172945	2000	
U	238	3	193	4.892	ppb	4.892	2.07	29789	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400581	0.76	3887690	113.19	60	120	
Sc (IS)	45	3	HMI He	648059	1.38	560366	115.65	60	120	
Ge Internal standard	72	2	HMI H2	2538819	0.52	2321471	109.36	60	120	
Ge Internal standard	72	3	HMI He	767669	0.69	685485	111.99	60	120	
In Internal Standard	115	3	HMI He	2909642	2.12	2631879	110.55	60	120	
Ir (IS)	193	3	HMI He	6163297	1.58	5771767	106.78	60	120	

Sample Report

Sample Table

Sample Name	410-121200-A-4-C
Data File Name	141SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:14:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.664	ppb	2.664	12.57	128	2000	
Na	23	3	45	432.791	ppb	432.791	1.66	69127	400000	
Mg	24	3	45	5431.231	ppb	5431.231	0.44	337073	400000	
Al	27	3	45	66479.128	ppb	66479.128	2.70	1625660	400000	
K	39	3	45	6316.089	ppb	6316.089	1.07	344853	400000	
Ca	40	2	45	1435.414	ppb	1435.414	3.93	896599	400000	
V	51	3	72	181.982	ppb	181.982	0.86	118108	2000	
Cr	52	3	72	132.625	ppb	132.625	1.02	107453	5000	
Mn	55	3	72	996.228	ppb	996.228	0.96	416077	10000	
Fe	56	2	72	85505.582	ppb	85505.582	2.10	143944893	10000	>LDR
Co	59	3	72	25.584	ppb	25.584	1.39	34865	2000	
Ni	60	3	72	51.297	ppb	51.297	1.98	19751	5000	
Cu	63	3	72	54.332	ppb	54.332	1.83	57203	5000	
Zn	66	3	72	168.731	ppb	168.731	3.52	27579	5000	
As	75	3	72	30.580	ppb	30.580	0.12	3714	2000	
Se	78	2	72	0.774	ppb	0.774	4.80	52	2000	
Sr	88	3	72	44.467	ppb	44.467	0.99	25254	4000	
Mo	95	3	115	7.912	ppb	7.912	5.22	4235	2000	
Ag	107	3	115	0.160	ppb	0.160	17.62	302	100	
Cd	111	3	115	0.163	ppb	0.163	15.16	68	2000	
Sn	120	3	115	11.914	ppb	11.914	2.52	10464	2000	
Sb	121	3	115	1.705	ppb	1.705	5.04	1416	1000	
Ba	137	3	115	411.832	ppb	411.832	1.73	105223	5000	
Tl	205	3	193	0.476	ppb	0.476	5.94	3024	2000	
(Pb)	206	3	193	54.117	ppb	54.117	3.53	73817	100	
(Pb)	207	3	193	50.633	ppb	50.633	1.58	61654	100	
Pb	208	3	193	52.287	ppb	52.287	1.91	289822	5000	
Th	232	3	193	27.103	ppb	27.103	1.34	154717	2000	
U	238	3	193	4.468	ppb	4.468	0.47	27877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4425152	1.30	3887690	113.82	60	120	
Sc (IS)	45	3	HMI He	644267	0.58	560366	114.97	60	120	
Ge Internal standard	72	2	HMI H2	2586612	0.69	2321471	111.42	60	120	
Ge Internal standard	72	3	HMI He	764089	0.72	685485	111.47	60	120	
In Internal Standard	115	3	HMI He	2904677	1.83	2631879	110.37	60	120	
Ir (IS)	193	3	HMI He	6278670	1.33	5771767	108.78	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-1-C
Data File Name	142SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:16:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.272	ppb	2.272	28.29	110	2000	
Na	23	3	45	438.400	ppb	438.400	1.73	69888	400000	
Mg	24	3	45	5019.582	ppb	5019.582	1.94	311972	400000	
Al	27	3	45	58841.653	ppb	58841.653	1.93	1440951	400000	
K	39	3	45	4843.192	ppb	4843.192	0.96	271434	400000	
Ca	40	2	45	1506.943	ppb	1506.943	0.40	943913	400000	
V	51	3	72	160.911	ppb	160.911	0.42	106493	2000	
Cr	52	3	72	134.318	ppb	134.318	1.47	110813	5000	
Mn	55	3	72	2005.388	ppb	2005.388	1.39	852868	10000	
Fe	56	2	72	94990.130	ppb	94990.130	1.42	160776629	10000	>LDR
Co	59	3	72	29.188	ppb	29.188	1.26	40509	2000	
Ni	60	3	72	53.070	ppb	53.070	2.92	20799	5000	
Cu	63	3	72	135.686	ppb	135.686	0.87	144774	5000	
Zn	66	3	72	233.419	ppb	233.419	1.60	38777	5000	
As	75	3	72	36.321	ppb	36.321	2.65	4479	2000	
Se	78	2	72	2.866	ppb	2.866	21.66	183	2000	
Sr	88	3	72	43.386	ppb	43.386	1.66	25097	4000	
Mo	95	3	115	7.383	ppb	7.383	6.73	3835	2000	
Ag	107	3	115	0.779	ppb	0.779	7.36	1364	100	
Cd	111	3	115	0.258	ppb	0.258	15.01	90	2000	
Sn	120	3	115	26.420	ppb	26.420	2.20	21338	2000	
Sb	121	3	115	7.185	ppb	7.185	1.48	5648	1000	
Ba	137	3	115	439.111	ppb	439.111	1.20	108710	5000	
Tl	205	3	193	0.737	ppb	0.737	2.52	4134	2000	
(Pb)	206	3	193	571.319	ppb	571.319	1.78	782456	100	>LDR
(Pb)	207	3	193	540.489	ppb	540.489	2.23	658363	100	>LDR
Pb	208	3	193	572.858	ppb	572.858	1.20	3185998	5000	
Th	232	3	193	19.283	ppb	19.283	2.64	112697	2000	
U	238	3	193	4.868	ppb	4.868	3.70	30460	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4439682	2.27	3887690	114.20	60	120	
Sc (IS)	45	3	HMI He	645210	0.82	560366	115.14	60	120	
Ge Internal standard	72	2	HMI H2	2600748	0.45	2321471	112.03	60	120	
Ge Internal standard	72	3	HMI He	778208	0.16	685485	113.53	60	120	
In Internal Standard	115	3	HMI He	2814465	1.41	2631879	106.94	60	120	
Ir (IS)	193	3	HMI He	6332494	1.63	5771767	109.71	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	143_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:17:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.431	ppb	3.013	2396	50	102.9	90	110	
Na	23	3	45	46993.385	ppb	2.456	5436114	51000	92.1	90	110	
Mg	24	3	45	10004.647	ppb	1.036	613710	11000	91.0	90	110	
Al	27	3	45	944.350	ppb	0.614	22925	1000	94.4	90	110	
K	39	3	45	10141.085	ppb	0.456	530426	11000	92.2	90	110	
Ca	40	2	45	10180.057	ppb	1.709	6265138	11000	92.5	90	110	
V	51	3	72	48.672	ppb	0.776	32525	50	97.3	90	110	
Cr	52	3	72	52.045	ppb	0.343	43758	50	104.1	90	110	
Mn	55	3	72	51.181	ppb	2.058	21659	50	102.4	90	110	
Fe	56	2	72	1055.651	ppb	2.011	1813392	1000	105.6	90	110	
Co	59	3	72	49.715	ppb	0.977	68041	50	99.4	90	110	
Ni	60	3	72	51.598	ppb	0.407	19959	50	103.2	90	110	
Cu	63	3	72	49.962	ppb	2.225	52896	50	99.9	90	110	
Zn	66	3	72	49.903	ppb	2.325	8353	50	99.8	90	110	
As	75	3	72	50.482	ppb	4.022	6113	50	101.0	90	110	
Se	78	2	72	49.834	ppb	2.197	3117	50	99.7	90	110	
Sr	88	3	72	100.922	ppb	2.103	57563	100	100.9	90	110	
Mo	95	3	115	48.882	ppb	2.664	25904	50	97.8	90	110	
Ag	107	3	115	48.901	ppb	3.260	87142	50	97.8	90	110	
Cd	111	3	115	48.478	ppb	2.511	12631	50	97.0	90	110	
Sn	120	3	115	48.819	ppb	2.056	39769	50	97.6	90	110	
Sb	121	3	115	49.583	ppb	1.919	39875	50	99.2	90	110	
Ba	137	3	115	51.071	ppb	4.063	13048	50	102.1	90	110	
Tl	205	3	193	48.810	ppb	3.392	195428	50	97.6	90	110	
(Pb)	206	3	193	49.999	ppb	0.269	65839	50	100.0	90	110	
(Pb)	207	3	193	49.815	ppb	1.784	58521	50	99.6	90	110	
Pb	208	3	193	49.562	ppb	0.927	265134	50	99.1	90	110	
Th	232	3	193	49.633	ppb	0.872	268700	50	99.3	90	110	
U	238	3	193	48.751	ppb	2.669	275832	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4411060	0.90	3887690	113.46	60	120	
Sc (IS)	45	3	HMI He	637012	0.46	560366	113.68	60	120	
Ge Internal standard	72	2	HMI H2	2592091	0.73	2321471	111.66	60	120	
Ge Internal standard	72	3	HMI He	767712	0.80	685485	112.00	60	120	
In Internal Standard	115	3	HMI He	2897444	1.86	2631879	110.09	60	120	
Ir (IS)	193	3	HMI He	6057081	0.68	5771767	104.94	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	144_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:19:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.043	ppb	-138.7	2	0.5	
Na	23	3	45	9.227	ppb	48.4	19680	25	
Mg	24	3	45	0.826	ppb	116.2	304	25	
Al	27	3	45	7.182	ppb	15.9	270	15	
K	39	3	45	-19.630	ppb	-135.9	27337	50	
V	51	3	72	-0.693	ppb	-6.5	630	1	
Cr	52	3	72	1.332	ppb	13.2	3370	1	>RL
Mn	55	3	72	0.654	ppb	20.8	470	0.5	>RL
Co	59	3	72	0.020	ppb	56.6	67	0.5	
Ni	60	3	72	1.012	ppb	2.4	753	1	>RL
Cu	63	3	72	-0.024	ppb	-118.6	460	1	
Zn	66	3	72	0.335	ppb	128.2	278	5	
As	75	3	72	-0.291	ppb	-78.2	38	1	
Se	78	2	72	0.014	ppb	342.3	5	1	
Sr	88	3	72	-0.005	ppb	-430.9	23	0.5	
Mo	95	3	115	0.124	ppb	35.6	107	0.5	
Ag	107	3	115	0.006	ppb	154.4	27	1	
Cd	111	3	115	-0.060	ppb	-54.8	10	0.5	
Sn	120	3	115	0.089	ppb	87.1	1048	1	
Sb	121	3	115	0.030	ppb	30.1	67	0.6	
Ba	137	3	115	0.095	ppb	53.2	65	0.5	
Tl	205	3	193	-0.173	ppb	-3.9	337	0.1	
(Pb)	206	3	193	-0.026	ppb	-182.5	337	1	
(Pb)	207	3	193	-0.069	ppb	-7.0	450	1	
Pb	208	3	193	-0.029	ppb	-82.0	1478	0.5	
Th	232	3	193	1.044	ppb	12.5	11380	1	>RL
U	238	3	193	-0.024	ppb	-142.5	1676	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4420399	1.14	3887690	113.70	60	120	
Sc (IS)	45	3	HMI He	642349	0.52	560366	114.63	60	120	
Ge Internal standard	72	2	HMI H2	2615448	1.01	2321471	112.66	60	120	
Ge Internal standard	72	3	HMI He	773131	0.17	685485	112.79	60	120	
In Internal Standard	115	3	HMI He	2915236	0.63	2631879	110.77	60	120	
Ir (IS)	193	3	HMI He	6188177	0.95	5771767	107.21	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F
Data File Name	145SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:21:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.450	ppb	2.450	28.35	120	2000	
Na	23	3	45	309.968	ppb	309.968	1.61	55437	400000	
Mg	24	3	45	3301.253	ppb	3301.253	0.89	207346	400000	
Al	27	3	45	46978.160	ppb	46978.160	2.47	1162067	400000	
K	39	3	45	3549.198	ppb	3549.198	1.83	208604	400000	
Ca	40	2	45	1126.425	ppb	1126.425	0.19	718715	400000	
V	51	3	72	126.987	ppb	126.987	2.48	85314	2000	
Cr	52	3	72	103.072	ppb	103.072	2.05	86636	5000	
Mn	55	3	72	1428.123	ppb	1428.123	2.40	614941	10000	
Fe	56	2	72	58434.781	ppb	58434.781	1.61	99674320	10000	>LDR
Co	59	3	72	18.312	ppb	18.312	2.24	25744	2000	
Ni	60	3	72	34.483	ppb	34.483	3.03	13812	5000	
Cu	63	3	72	63.062	ppb	63.062	1.99	68388	5000	
Zn	66	3	72	130.342	ppb	130.342	1.79	22023	5000	
As	75	3	72	21.336	ppb	21.336	4.90	2694	2000	
Se	78	2	72	1.417	ppb	1.417	13.30	93	2000	
Sr	88	3	72	34.043	ppb	34.043	1.28	19946	4000	
Mo	95	3	115	4.681	ppb	4.681	6.26	2552	2000	
Ag	107	3	115	0.252	ppb	0.252	5.74	471	100	
Cd	111	3	115	0.123	ppb	0.123	32.74	58	2000	
Sn	120	3	115	20.020	ppb	20.020	1.26	17117	2000	
Sb	121	3	115	1.972	ppb	1.972	2.51	1649	1000	
Ba	137	3	115	355.606	ppb	355.606	0.76	91899	5000	
Tl	205	3	193	0.371	ppb	0.371	4.57	2601	2000	
(Pb)	206	3	193	163.900	ppb	163.900	2.07	223989	100	
(Pb)	207	3	193	151.299	ppb	151.299	2.37	184074	100	
Pb	208	3	193	156.792	ppb	156.792	1.72	870292	5000	
Th	232	3	193	18.765	ppb	18.765	2.95	109459	2000	
U	238	3	193	3.563	ppb	3.563	1.51	22719	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4503121	1.68	3887690	115.83	60	120	
Sc (IS)	45	3	HMI He	651694	0.30	560366	116.30	60	120	
Ge Internal standard	72	2	HMI H2	2620301	0.98	2321471	112.87	60	120	
Ge Internal standard	72	3	HMI He	788002	1.30	685485	114.96	60	120	
In Internal Standard	115	3	HMI He	2937436	0.30	2631879	111.61	60	120	
Ir (IS)	193	3	HMI He	6311602	1.56	5771767	109.35	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-Fsd@5
Data File Name	146SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:23:30-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.577	ppb	0.577	26.59	32	2000	
Na	23	3	45	65.284	ppb	65.284	15.87	26438	400000	
Mg	24	3	45	648.302	ppb	648.302	4.96	40709	400000	
Al	27	3	45	8933.363	ppb	8933.363	3.17	219916	400000	
K	39	3	45	690.511	ppb	690.511	4.36	63410	400000	
Ca	40	2	45	241.059	ppb	241.059	3.01	165080	400000	
V	51	3	72	24.475	ppb	24.475	0.92	17150	2000	
Cr	52	3	72	21.428	ppb	21.428	4.79	19654	5000	
Mn	55	3	72	283.125	ppb	283.125	0.65	120782	10000	
Fe	56	2	72	11192.627	ppb	11192.627	1.18	19344357	10000	
Co	59	3	72	3.706	ppb	3.706	1.18	5187	2000	
Ni	60	3	72	7.773	ppb	7.773	7.30	3365	5000	
Cu	63	3	72	12.717	ppb	12.717	3.43	14032	5000	
Zn	66	3	72	29.224	ppb	29.224	0.57	5060	5000	
As	75	3	72	3.919	ppb	3.919	9.41	550	2000	
Se	78	2	72	0.272	ppb	0.272	31.89	21	2000	
Sr	88	3	72	6.634	ppb	6.634	4.88	3865	4000	
Mo	95	3	115	0.955	ppb	0.955	3.27	555	2000	
Ag	107	3	115	0.072	ppb	0.072	21.81	147	100	
Cd	111	3	115	-0.010	ppb	-0.010	-104.69	23	2000	
Sn	120	3	115	3.904	ppb	3.904	3.12	4142	2000	
Sb	121	3	115	0.404	ppb	0.404	10.99	373	1000	
Ba	137	3	115	69.018	ppb	69.018	1.47	17918	5000	
Tl	205	3	193	-0.087	ppb	-0.087	-35.16	688	2000	
(Pb)	206	3	193	32.981	ppb	32.981	1.88	44775	100	
(Pb)	207	3	193	30.194	ppb	30.194	2.72	36676	100	
Pb	208	3	193	31.339	ppb	31.339	2.25	172938	5000	
Th	232	3	193	3.987	ppb	3.987	2.69	27495	2000	
U	238	3	193	0.656	ppb	0.656	1.03	5618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4548938	2.88	3887690	117.01	60	120	
Sc (IS)	45	3	HMI He	648565	1.61	560366	115.74	60	120	
Ge Internal standard	72	2	HMI H2	2652048	2.67	2321471	114.24	60	120	
Ge Internal standard	72	3	HMI He	779546	1.06	685485	113.72	60	120	
In Internal Standard	115	3	HMI He	2945460	0.66	2631879	111.91	60	120	
Ir (IS)	193	3	HMI He	6227421	1.55	5771767	107.89	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-G MS
Data File Name	147SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:25:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	193.765	ppb	193.765	4.64	9113	2000	
Na	23	3	45	4166.747	ppb	4166.747	0.64	510473	400000	
Mg	24	3	45	7355.056	ppb	7355.056	1.37	461754	400000	
Al	27	3	45	67832.438	ppb	67832.438	1.04	1678156	400000	
K	39	3	45	9218.341	ppb	9218.341	1.23	496033	400000	
Ca	40	2	45	5067.503	ppb	5067.503	2.17	3174748	400000	
V	51	3	72	338.491	ppb	338.491	1.92	223167	2000	
Cr	52	3	72	316.674	ppb	316.674	1.57	258521	5000	
Mn	55	3	72	1640.593	ppb	1640.593	1.88	698857	10000	
Fe	56	2	72	62055.132	ppb	62055.132	1.31	106460384	10000	>LDR
Co	59	3	72	211.276	ppb	211.276	1.09	293455	2000	
Ni	60	3	72	231.644	ppb	231.644	2.41	89684	5000	
Cu	63	3	72	261.561	ppb	261.561	2.34	279050	5000	
Zn	66	3	72	337.209	ppb	337.209	3.11	56004	5000	
As	75	3	72	204.550	ppb	204.550	1.26	24920	2000	
Se	78	2	72	187.244	ppb	187.244	0.76	11897	2000	
Sr	88	3	72	433.167	ppb	433.167	2.43	250711	4000	
Mo	95	3	115	193.287	ppb	193.287	1.60	101764	2000	
Ag	107	3	115	197.690	ppb	197.690	1.49	350412	100	
Cd	111	3	115	188.026	ppb	188.026	2.42	48649	2000	
Sn	120	3	115	207.155	ppb	207.155	2.21	164714	2000	
Sb	121	3	115	187.611	ppb	187.611	2.29	149919	1000	
Ba	137	3	115	619.418	ppb	619.418	2.03	156988	5000	
Tl	205	3	193	186.484	ppb	186.484	1.50	768831	2000	
(Pb)	206	3	193	363.207	ppb	363.207	1.51	491979	100	
(Pb)	207	3	193	345.124	ppb	345.124	2.12	415856	100	
Pb	208	3	193	354.560	ppb	354.560	1.61	1950218	5000	
Th	232	3	193	195.607	ppb	195.607	1.79	1077404	2000	
U	238	3	193	195.841	ppb	195.841	0.67	1140017	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4481228	0.46	3887690	115.27	60	120	
Sc (IS)	45	3	HMI He	651847	0.63	560366	116.33	60	120	
Ge Internal standard	72	2	HMI H2	2635673	1.18	2321471	113.53	60	120	
Ge Internal standard	72	3	HMI He	779566	1.45	685485	113.72	60	120	
In Internal Standard	115	3	HMI He	2881637	0.90	2631879	109.49	60	120	
Ir (IS)	193	3	HMI He	6261260	1.92	5771767	108.48	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-H MSD
Data File Name	148SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:27:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	200.085	ppb	200.085	1.96	9383	2000	
Na	23	3	45	4208.604	ppb	4208.604	0.92	510652	400000	
Mg	24	3	45	7411.526	ppb	7411.526	2.21	461001	400000	
Al	27	3	45	67067.461	ppb	67067.461	3.38	1643955	400000	
K	39	3	45	9233.295	ppb	9233.295	1.70	492192	400000	
Ca	40	2	45	5010.660	ppb	5010.660	1.93	3143508	400000	
V	51	3	72	337.793	ppb	337.793	1.76	224669	2000	
Cr	52	3	72	313.459	ppb	313.459	1.02	258168	5000	
Mn	55	3	72	1624.329	ppb	1624.329	0.94	698040	10000	
Fe	56	2	72	63605.187	ppb	63605.187	2.54	108268171	10000	>LDR
Co	59	3	72	211.748	ppb	211.748	1.57	296679	2000	
Ni	60	3	72	232.745	ppb	232.745	1.02	90906	5000	
Cu	63	3	72	261.966	ppb	261.966	0.98	281962	5000	
Zn	66	3	72	333.896	ppb	333.896	0.78	55948	5000	
As	75	3	72	202.823	ppb	202.823	1.95	24927	2000	
Se	78	2	72	193.485	ppb	193.485	1.71	12200	2000	
Sr	88	3	72	432.213	ppb	432.213	1.30	252376	4000	
Mo	95	3	115	191.656	ppb	191.656	1.39	101977	2000	
Ag	107	3	115	197.055	ppb	197.055	0.80	353004	100	
Cd	111	3	115	186.698	ppb	186.698	2.19	48819	2000	
Sn	120	3	115	206.906	ppb	206.906	1.54	166269	2000	
Sb	121	3	115	186.278	ppb	186.278	1.35	150443	1000	
Ba	137	3	115	613.840	ppb	613.840	1.33	157233	5000	
Tl	205	3	193	191.194	ppb	191.194	3.79	783103	2000	
(Pb)	206	3	193	366.607	ppb	366.607	3.15	493428	100	
(Pb)	207	3	193	352.518	ppb	352.518	3.68	422040	100	
Pb	208	3	193	358.469	ppb	358.469	3.20	1959212	5000	
Th	232	3	193	201.484	ppb	201.484	3.61	1102609	2000	
U	238	3	193	196.697	ppb	196.697	3.65	1137455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4487656	0.72	3887690	115.43	60	120	
Sc (IS)	45	3	HMI He	645862	0.51	560366	115.26	60	120	
Ge Internal standard	72	2	HMI H2	2616262	2.46	2321471	112.70	60	120	
Ge Internal standard	72	3	HMI He	786323	0.41	685485	114.71	60	120	
In Internal Standard	115	3	HMI He	2912165	0.70	2631879	110.65	60	120	
Ir (IS)	193	3	HMI He	6224211	2.85	5771767	107.84	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-I DU
Data File Name	149SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:28:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	2.354	ppb	2.354	15.35	117	2000	
Na	23	3	45	324.996	ppb	324.996	3.12	57145	400000	
Mg	24	3	45	3266.229	ppb	3266.229	2.04	204900	400000	
Al	27	3	45	45621.808	ppb	45621.808	4.35	1126893	400000	
K	39	3	45	3453.736	ppb	3453.736	0.74	203540	400000	
Ca	40	2	45	1163.245	ppb	1163.245	1.38	734183	400000	
V	51	3	72	127.975	ppb	127.975	1.24	85384	2000	
Cr	52	3	72	104.183	ppb	104.183	0.60	86948	5000	
Mn	55	3	72	1429.728	ppb	1429.728	0.33	611482	10000	
Fe	56	2	72	58069.717	ppb	58069.717	1.11	99823246	10000	>LDR
Co	59	3	72	18.797	ppb	18.797	0.73	26247	2000	
Ni	60	3	72	34.092	ppb	34.092	1.30	13568	5000	
Cu	63	3	72	63.014	ppb	63.014	0.91	67869	5000	
Zn	66	3	72	130.745	ppb	130.745	2.03	21942	5000	
As	75	3	72	21.237	ppb	21.237	2.40	2664	2000	
Se	78	2	72	1.217	ppb	1.217	29.67	81	2000	
Sr	88	3	72	32.848	ppb	32.848	1.62	19112	4000	
Mo	95	3	115	5.169	ppb	5.169	6.06	2794	2000	
Ag	107	3	115	0.272	ppb	0.272	6.38	505	100	
Cd	111	3	115	0.251	ppb	0.251	22.32	92	2000	
Sn	120	3	115	18.427	ppb	18.427	3.41	15716	2000	
Sb	121	3	115	2.388	ppb	2.388	10.74	1971	1000	
Ba	137	3	115	353.123	ppb	353.123	3.86	90570	5000	
Tl	205	3	193	0.437	ppb	0.437	8.05	2876	2000	
(Pb)	206	3	193	161.924	ppb	161.924	2.21	221461	100	
(Pb)	207	3	193	151.099	ppb	151.099	2.36	183968	100	
Pb	208	3	193	156.455	ppb	156.455	1.64	869056	5000	
Th	232	3	193	22.929	ppb	22.929	2.30	132582	2000	
U	238	3	193	3.770	ppb	3.770	1.72	23951	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4456974	1.09	3887690	114.64	60	120	
Sc (IS)	45	3	HMI He	651031	1.52	560366	116.18	60	120	
Ge Internal standard	72	2	HMI H2	2641184	1.64	2321471	113.77	60	120	
Ge Internal standard	72	3	HMI He	782523	0.68	685485	114.16	60	120	
In Internal Standard	115	3	HMI He	2917259	2.65	2631879	110.84	60	120	
Ir (IS)	193	3	HMI He	6315610	0.88	5771767	109.42	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-2-F pds
Data File Name	150SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:30:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	114.117	ppb	114.117	8.03	5183	2000	
Na	23	3	45	5179.635	ppb	5179.635	0.40	627434	400000	
Mg	24	3	45	5226.595	ppb	5226.595	0.51	326887	400000	
Al	27	3	45	47233.603	ppb	47233.603	1.01	1163933	400000	
K	39	3	45	5484.415	ppb	5484.415	0.32	305512	400000	
Ca	40	2	45	3335.503	ppb	3335.503	12.77	1990448	400000	
V	51	3	72	222.345	ppb	222.345	1.12	147417	2000	
Cr	52	3	72	201.596	ppb	201.596	1.17	165918	5000	
Mn	55	3	72	1513.037	ppb	1513.037	0.96	646510	10000	
Fe	56	2	72	61799.646	ppb	61799.646	12.31	103009140	10000	>LDR
Co	59	3	72	116.993	ppb	116.993	1.21	163000	2000	
Ni	60	3	72	132.128	ppb	132.128	0.53	51473	5000	
Cu	63	3	72	162.579	ppb	162.579	0.45	174176	5000	
Zn	66	3	72	334.695	ppb	334.695	0.99	55761	5000	
As	75	3	72	121.381	ppb	121.381	0.82	14862	2000	
Se	78	2	72	108.328	ppb	108.328	6.59	6703	2000	
Sr	88	3	72	131.921	ppb	131.921	0.49	76611	4000	
Mo	95	3	115	103.109	ppb	103.109	0.37	54407	2000	
Ag	107	3	115	26.813	ppb	26.813	1.43	47629	100	
Cd	111	3	115	95.483	ppb	95.483	1.03	24764	2000	
Sn	120	3	115	119.907	ppb	119.907	2.06	95922	2000	
Sb	121	3	115	95.396	ppb	95.396	1.45	76395	1000	
Ba	137	3	115	453.572	ppb	453.572	1.44	115182	5000	
Tl	205	3	193	94.749	ppb	94.749	1.08	392562	2000	
(Pb)	206	3	193	257.226	ppb	257.226	1.34	349787	100	
(Pb)	207	3	193	244.528	ppb	244.528	2.17	295862	100	
Pb	208	3	193	249.730	ppb	249.730	2.02	1379010	5000	
Th	232	3	193	119.871	ppb	119.871	2.15	664871	2000	
U	238	3	193	207.401	ppb	207.401	1.04	1211439	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4283634	6.56	3887690	110.18	60	120	
Sc (IS)	45	3	HMI He	649231	0.17	560366	115.86	60	120	
Ge Internal standard	72	2	HMI H2	2571928	5.28	2321471	110.79	60	120	
Ge Internal standard	72	3	HMI He	781830	0.37	685485	114.06	60	120	
In Internal Standard	115	3	HMI He	2886792	0.69	2631879	109.69	60	120	
Ir (IS)	193	3	HMI He	6283711	1.50	5771767	108.87	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-3-C
Data File Name	151SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:32:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	4.721	ppb	4.721	16.77	232	2000	
Na	23	3	45	513.703	ppb	513.703	2.77	79461	400000	
Mg	24	3	45	6220.968	ppb	6220.968	0.39	390521	400000	
Al	27	3	45	77914.627	ppb	77914.627	0.35	1927314	400000	
K	39	3	45	5804.251	ppb	5804.251	0.68	322903	400000	
Ca	40	2	45	1769.363	ppb	1769.363	3.25	1116060	400000	
V	51	3	72	179.538	ppb	179.538	1.98	119724	2000	
Cr	52	3	72	136.216	ppb	136.216	0.96	113321	5000	
Mn	55	3	72	3864.060	ppb	3864.060	1.56	1657429	10000	
Fe	56	2	72	85927.257	ppb	85927.257	3.13	146892032	10000	>LDR
Co	59	3	72	42.629	ppb	42.629	1.20	59658	2000	
Ni	60	3	72	66.732	ppb	66.732	0.95	26285	5000	
Cu	63	3	72	185.647	ppb	185.647	0.84	199620	5000	
Zn	66	3	72	307.083	ppb	307.083	0.92	51386	5000	
As	75	3	72	41.915	ppb	41.915	1.78	5202	2000	
Se	78	2	72	3.391	ppb	3.391	9.17	219	2000	
Sr	88	3	72	47.307	ppb	47.307	2.23	27599	4000	
Mo	95	3	115	6.713	ppb	6.713	1.41	3565	2000	
Ag	107	3	115	0.949	ppb	0.949	4.84	1696	100	
Cd	111	3	115	0.585	ppb	0.585	24.54	177	2000	
Sn	120	3	115	30.213	ppb	30.213	1.83	24787	2000	
Sb	121	3	115	5.894	ppb	5.894	3.72	4738	1000	
Ba	137	3	115	541.344	ppb	541.344	1.96	136869	5000	
Tl	205	3	193	1.104	ppb	1.104	2.89	5648	2000	
(Pb)	206	3	193	451.030	ppb	451.030	1.63	616352	100	
(Pb)	207	3	193	425.475	ppb	425.475	1.33	517214	100	
Pb	208	3	193	449.225	ppb	449.225	2.13	2492680	5000	
Th	232	3	193	22.573	ppb	22.573	0.98	130642	2000	
U	238	3	193	6.286	ppb	6.286	2.02	38707	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4481009	1.71	3887690	115.26	60	120	
Sc (IS)	45	3	HMI He	651748	1.66	560366	116.31	60	120	
Ge Internal standard	72	2	HMI H2	2627674	2.06	2321471	113.19	60	120	
Ge Internal standard	72	3	HMI He	784987	0.40	685485	114.52	60	120	
In Internal Standard	115	3	HMI He	2874859	1.86	2631879	109.23	60	120	
Ir (IS)	193	3	HMI He	6317641	1.45	5771767	109.46	60	120	

Sample Report

Sample Table

Sample Name	410-121370-A-4-C
Data File Name	152SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:34:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608663 soil 6020b
ISTD Ref FileName	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	3.979	ppb	3.979	14.00	192	2000	
Na	23	3	45	465.714	ppb	465.714	3.04	74691	400000	
Mg	24	3	45	4532.297	ppb	4532.297	0.41	287980	400000	
Al	27	3	45	65427.523	ppb	65427.523	1.20	1637717	400000	
K	39	3	45	4669.811	ppb	4669.811	0.57	268566	400000	
Ca	40	2	45	1358.959	ppb	1358.959	1.66	870659	400000	
V	51	3	72	128.358	ppb	128.358	0.76	85755	2000	
Cr	52	3	72	100.073	ppb	100.073	1.66	83722	5000	
Mn	55	3	72	2551.571	ppb	2551.571	1.27	1092557	10000	
Fe	56	2	72	62059.425	ppb	62059.425	1.34	106727098	10000	>LDR
Co	59	3	72	25.524	ppb	25.524	1.62	35671	2000	
Ni	60	3	72	55.909	ppb	55.909	1.95	22042	5000	
Cu	63	3	72	59.817	ppb	59.817	0.66	64538	5000	
Zn	66	3	72	183.107	ppb	183.107	2.10	30675	5000	
As	75	3	72	18.905	ppb	18.905	6.42	2382	2000	
Se	78	2	72	1.312	ppb	1.312	5.41	87	2000	
Sr	88	3	72	46.408	ppb	46.408	2.11	27027	4000	
Mo	95	3	115	4.642	ppb	4.642	5.84	2504	2000	
Ag	107	3	115	0.237	ppb	0.237	3.80	440	100	
Cd	111	3	115	0.234	ppb	0.234	32.56	87	2000	
Sn	120	3	115	16.174	ppb	16.174	1.98	13870	2000	
Sb	121	3	115	1.617	ppb	1.617	10.84	1344	1000	
Ba	137	3	115	596.869	ppb	596.869	1.75	152595	5000	
Tl	205	3	193	0.646	ppb	0.646	4.03	3762	2000	
(Pb)	206	3	193	106.034	ppb	106.034	0.81	145874	100	
(Pb)	207	3	193	98.857	ppb	98.857	1.01	121155	100	
Pb	208	3	193	102.139	ppb	102.139	0.82	570747	5000	
Th	232	3	193	23.031	ppb	23.031	0.56	133791	2000	
U	238	3	193	4.174	ppb	4.174	1.21	26448	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4535108	0.61	3887690	116.65	60	120	
Sc (IS)	45	3	HMI He	659498	0.13	560366	117.69	60	120	
Ge Internal standard	72	2	HMI H2	2642655	2.47	2321471	113.84	60	120	
Ge Internal standard	72	3	HMI He	783583	0.61	685485	114.31	60	120	
In Internal Standard	115	3	HMI He	2906888	1.37	2631879	110.45	60	120	
Ir (IS)	193	3	HMI He	6346548	0.29	5771767	109.96	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	153_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:36:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.422	ppb	1.301	2319	50	96.8	90	110	
Na	23	3	45	47951.096	ppb	0.975	5641940	51000	94.0	90	110	
Mg	24	3	45	10005.675	ppb	0.531	624316	11000	91.0	90	110	
Al	27	3	45	922.090	ppb	2.944	22775	1000	92.2	90	110	
K	39	3	45	10005.551	ppb	1.668	532660	11000	91.0	90	110	
Ca	40	2	45	9898.260	ppb	0.580	6180491	11000	90.0	90	110	>+\-10%
V	51	3	72	49.908	ppb	0.687	32857	50	99.8	90	110	
Cr	52	3	72	52.498	ppb	0.348	43499	50	105.0	90	110	
Mn	55	3	72	51.911	ppb	2.470	21658	50	103.8	90	110	
Fe	56	2	72	1040.811	ppb	4.873	1775878	1000	104.1	90	110	
Co	59	3	72	50.403	ppb	1.268	68007	50	100.8	90	110	
Ni	60	3	72	51.864	ppb	0.208	19779	50	103.7	90	110	
Cu	63	3	72	50.332	ppb	2.578	52528	50	100.7	90	110	
Zn	66	3	72	51.125	ppb	3.832	8430	50	102.3	90	110	
As	75	3	72	52.955	ppb	2.085	6318	50	105.9	90	110	
Se	78	2	72	49.481	ppb	3.964	3074	50	99.0	90	110	
Sr	88	3	72	100.481	ppb	1.953	56495	100	100.5	90	110	
Mo	95	3	115	47.449	ppb	1.115	25543	50	94.9	90	110	
Ag	107	3	115	48.658	ppb	0.688	88091	50	97.3	90	110	
Cd	111	3	115	47.154	ppb	1.189	12480	50	94.3	90	110	
Sn	120	3	115	47.285	ppb	0.536	39158	50	94.6	90	110	
Sb	121	3	115	48.081	ppb	1.064	39271	50	96.2	90	110	
Ba	137	3	115	50.080	ppb	1.570	13000	50	100.2	90	110	
Tl	205	3	193	46.933	ppb	3.604	194017	50	93.9	90	110	
(Pb)	206	3	193	48.036	ppb	3.536	65312	50	96.1	90	110	
(Pb)	207	3	193	46.344	ppb	1.957	56248	50	92.7	90	110	
Pb	208	3	193	47.389	ppb	2.124	261797	50	94.8	90	110	
Th	232	3	193	48.390	ppb	1.268	270649	50	96.8	90	110	
U	238	3	193	47.208	ppb	2.962	275796	50	94.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4474595	0.81	3887690	115.10	60	120	
Sc (IS)	45	3	HMI He	647936	0.82	560366	115.63	60	120	
Ge Internal standard	72	2	HMI H2	2576750	3.35	2321471	111.00	60	120	
Ge Internal standard	72	3	HMI He	756937	0.87	685485	110.42	60	120	
In Internal Standard	115	3	HMI He	2942544	0.22	2631879	111.80	60	120	
Ir (IS)	193	3	HMI He	6255004	2.23	5771767	108.37	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	154_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041923.b
Acq Date Time	2023-04-19T17:38:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	047CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.042	ppb	-148.6	2	0.5	
Na	23	3	45	11.884	ppb	36.4	20081	25	
Mg	24	3	45	-0.164	ppb	-162.9	244	25	
Al	27	3	45	4.542	ppb	23.5	207	15	
K	39	3	45	-21.360	ppb	-119.7	27378	50	
V	51	3	72	-0.592	ppb	-16.3	698	1	
Cr	52	3	72	1.346	ppb	35.5	3395	1	>RL
Mn	55	3	72	0.716	ppb	24.6	498	0.5	>RL
Co	59	3	72	0.038	ppb	19.7	92	0.5	
Ni	60	3	72	1.276	ppb	12.6	858	1	>RL
Cu	63	3	72	-0.039	ppb	-172.8	445	1	
Zn	66	3	72	0.034	ppb	131.2	230	5	
As	75	3	72	-0.224	ppb	-46.9	47	1	
Se	78	2	72	0.002	ppb	1658.8	4	1	
Sr	88	3	72	0.035	ppb	74.5	47	0.5	
Mo	95	3	115	0.098	ppb	14.4	92	0.5	
Ag	107	3	115	0.011	ppb	51.6	37	1	
Cd	111	3	115	-0.053	ppb	-75.3	12	0.5	
Sn	120	3	115	0.169	ppb	70.8	1100	1	
Sb	121	3	115	0.043	ppb	64.8	77	0.6	
Ba	137	3	115	0.071	ppb	16.6	58	0.5	
Tl	205	3	193	-0.158	ppb	-8.4	396	0.1	
(Pb)	206	3	193	-0.047	ppb	-60.2	308	1	
(Pb)	207	3	193	-0.123	ppb	-33.5	386	1	
Pb	208	3	193	-0.070	ppb	-7.9	1256	0.5	
Th	232	3	193	1.430	ppb	12.0	13489	1	>RL
U	238	3	193	0.004	ppb	597.5	1841	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4478124	2.06	3887690	115.19	60	120	
Sc (IS)	45	3	HMI He	645318	0.77	560366	115.16	60	120	
Ge Internal standard	72	2	HMI H2	2680164	0.91	2321471	115.45	60	120	
Ge Internal standard	72	3	HMI He	776456	0.59	685485	113.27	60	120	
In Internal Standard	115	3	HMI He	2883459	0.22	2631879	109.56	60	120	
Ir (IS)	193	3	HMI He	6193817	1.04	5771767	107.31	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	156SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:12:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	157SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:14:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	158SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:15:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	159SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:17:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	160SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:19:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	161CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-19T18:21:18-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	649.52
Na	23	45	3	HMI He	16700	0.00
Mg	24	45	3	HMI He	270	8.56
Al	27	45	3	HMI He	153	30.15
K	39	45	3	HMI He	28103	0.01
Ca	40	45	2	HMI H2	12952	0.04
V	51	72	3	HMI He	996	0.98
Cr	52	72	3	HMI He	3124	0.29
Mn	55	72	3	HMI He	378	4.77
Fe	56	72	2	HMI H2	63727	0.01
Co	59	72	3	HMI He	55	28.64
Ni	60	72	3	HMI He	690	2.05
Cu	63	72	3	HMI He	395	1.16
Zn	66	72	3	HMI He	228	6.17
As	75	72	3	HMI He	43	81.37
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	23	347.82
Sr	88	72	3	HMI He	43	85.62
Mo	95	115	3	HMI He	38	85.67
Ag	107	115	3	HMI He	13	429.74
Cd	111	115	3	HMI He	10	866.60
Sn	120	115	3	HMI He	755	1.48
Sb	121	115	3	HMI He	45	65.37
Ba	137	115	3	HMI He	62	27.38
Tl	205	193	3	HMI He	380	3.81
(Pb)	206	193	3	HMI He	318	5.97
(Pb)	207	193	3	HMI He	481	2.29
Pb	208	193	3	HMI He	1484	0.12
Th	232	193	3	HMI He	6897	0.12
U	238	193	3	HMI He	1533	0.18

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	4300192	1.48
Sc (IS)	45	3	HMI He	644593	0.42
Ge Internal standard	72	2	HMI H2	2598552	1.09
Ge Internal standard	72	3	HMI He	772392	0.66
In Internal Standard	115	3	HMI He	2872781	1.83
Ir (IS)	193	3	HMI He	6092963	0.22

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	162CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-19T18:23:05-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	161CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	11542953	0.00
Mg	24	45	3	HMI He	1211814	0.00
Al	27	45	3	HMI He	153	19.16
K	39	45	3	HMI He	1018275	0.00
V	51	72	3	HMI He	1091	0.43
Cr	52	72	3	HMI He	3375	0.12
Mn	55	72	3	HMI He	398	3.46
Co	59	72	3	HMI He	93	28.33
Ni	60	72	3	HMI He	793	0.53
Cu	63	72	3	HMI He	578	1.48
Zn	66	72	3	HMI He	353	3.26
As	75	72	3	HMI He	63	80.17
Se	78	72	2	HMI H2	7	568.09
(Se)	78	72	3	HMI He	22	325.48
Sr	88	72	3	HMI He	292	3.83
Mo	95	115	3	HMI He	73	56.07
Ag	107	115	3	HMI He	42	66.55
Cd	111	115	3	HMI He	15	444.62
Sn	120	115	3	HMI He	908	0.88
Sb	121	115	3	HMI He	53	71.07
Ba	137	115	3	HMI He	182	6.31
Tl	205	193	3	HMI He	212	10.07
(Pb)	206	193	3	HMI He	388	2.35
(Pb)	207	193	3	HMI He	560	0.84
Pb	208	193	3	HMI He	1639	0.13
Th	232	193	3	HMI He	5652	0.04
U	238	193	3	HMI He	1659	0.28

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4345877	0.57	4300192	101.06	60	120	
Sc (IS)	45	3	HMI He	646398	1.04	644593	100.28	60	120	
Ge Internal standard	72	2	HMI H2	2478875	2.60	2598552	95.39	60	120	
Ge Internal standard	72	3	HMI He	746652	0.46	772392	96.67	60	120	
In Internal Standard	115	3	HMI He	2913487	0.28	2872781	101.42	60	120	
Ir (IS)	193	3	HMI He	6127949	1.75	6092963	100.57	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	163CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-19T18:24:50-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	161CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	4492	0.08
Na	23	45	3	HMI He	247645	0.00
Mg	24	45	3	HMI He	121495	0.00
Al	27	45	3	HMI He	46834	0.00
K	39	45	3	HMI He	125530	0.00
V	51	72	3	HMI He	66816	0.00
Cr	52	72	3	HMI He	84037	0.00
Mn	55	72	3	HMI He	43088	0.00
Co	59	72	3	HMI He	137360	0.00
Ni	60	72	3	HMI He	39433	0.00
Cu	63	72	3	HMI He	105761	0.00
Zn	66	72	3	HMI He	17100	0.01
As	75	72	3	HMI He	11966	0.02
Se	78	72	2	HMI H2	6170	0.01
(Se)	78	72	3	HMI He	693	2.06
Sr	88	72	3	HMI He	113456	0.00
Mo	95	115	3	HMI He	51821	0.00
Ag	107	115	3	HMI He	174838	0.00
Cd	111	115	3	HMI He	24926	0.01
Sn	120	115	3	HMI He	79605	0.00
Sb	121	115	3	HMI He	78154	0.00
Ba	137	115	3	HMI He	25524	0.01
Tl	205	193	3	HMI He	385460	0.00
(Pb)	206	193	3	HMI He	128141	0.00
(Pb)	207	193	3	HMI He	112870	0.00
Pb	208	193	3	HMI He	517163	0.00
Th	232	193	3	HMI He	520653	0.00
U	238	193	3	HMI He	542005	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416121	3.15	4300192	102.70	60	120	
Sc (IS)	45	3	HMI He	643874	0.14	644593	99.89	60	120	
Ge Internal standard	72	2	HMI H2	2663498	2.80	2598552	102.50	60	120	
Ge Internal standard	72	3	HMI He	799151	0.74	772392	103.46	60	120	
In Internal Standard	115	3	HMI He	2887881	0.25	2872781	100.53	60	120	
Ir (IS)	193	3	HMI He	6075954	2.08	6092963	99.72	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	164_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:26:37-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.973	ppb	3.165	1806	40	102.4	90	110	
Na	23	3	45	12931.845	ppb	1.631	1517283	12800	101.0	90	110	
Mg	24	3	45	4626.207	ppb	1.911	282388	4800	96.4	90	110	
Al	27	3	45	744.838	ppb	1.321	17726	800	93.1	90	110	
K	39	3	45	4627.923	ppb	0.835	259015	4800	96.4	90	110	
Ca	40	2	45	4818.738	ppb	0.754	2869774	4800	100.4	90	110	
V	51	3	72	41.258	ppb	1.431	27185	40	103.1	90	110	
Cr	52	3	72	42.319	ppb	2.232	36122	40	105.8	90	110	
Mn	55	3	72	42.645	ppb	1.090	17948	40	106.6	90	110	
Fe	56	2	72	848.670	ppb	2.786	1389452	800	106.1	90	110	
Co	59	3	72	41.368	ppb	0.725	54869	40	103.4	90	110	
Ni	60	3	72	41.149	ppb	1.929	16063	40	102.9	90	110	
Cu	63	3	72	42.156	ppb	0.788	43253	40	105.4	90	110	
Zn	66	3	72	82.201	ppb	2.648	13607	80	102.8	90	110	
As	75	3	72	40.365	ppb	1.868	4687	40	100.9	90	110	
Se	78	2	72	43.250	ppb	1.023	2564	40	108.1	90	110	
Sr	88	3	72	123.495	ppb	0.758	67625	120	102.9	90	110	
Mo	95	3	115	39.776	ppb	2.602	20856	40	99.4	90	110	
Ag	107	3	115	79.963	ppb	2.670	141296	80	100.0	90	110	
Cd	111	3	115	39.060	ppb	3.141	9845	40	97.6	90	110	
Sn	120	3	115	40.280	ppb	1.873	32876	40	100.7	90	110	
Sb	121	3	115	40.073	ppb	1.960	31687	40	100.2	90	110	
Ba	137	3	115	41.077	ppb	3.815	10636	40	102.7	90	110	
Tl	205	3	193	39.290	ppb	0.825	154016	40	98.2	90	110	
(Pb)	206	3	193	40.919	ppb	2.103	53436	40	102.3	90	110	
(Pb)	207	3	193	39.233	ppb	0.588	45256	40	98.1	90	110	
Pb	208	3	193	40.171	ppb	1.236	211862	40	100.4	90	110	
Th	232	3	193	79.580	ppb	1.149	422112	80	99.5	90	110	
U	238	3	193	42.356	ppb	1.978	234041	40	105.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4410499	1.73	4300192	102.57	60	120	
Sc (IS)	45	3	HMI He	650733	0.35	644593	100.95	60	120	
Ge Internal standard	72	2	HMI H2	2556811	0.53	2598552	98.39	60	120	
Ge Internal standard	72	3	HMI He	771169	0.53	772392	99.84	60	120	
In Internal Standard	115	3	HMI He	2919678	2.13	2872781	101.63	60	120	
Ir (IS)	193	3	HMI He	6169073	0.98	6092963	101.25	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	165_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:28:25-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.006	ppb	3.891	2321	50	104.0	90	110	
Na	23	3	45	48491.391	ppb	1.073	5551354	51000	95.1	90	110	
Mg	24	3	45	10203.337	ppb	1.802	612356	11000	92.8	90	110	
Al	27	3	45	1002.387	ppb	1.233	23413	1000	100.2	90	110	
K	39	3	45	10543.587	ppb	0.309	544843	11000	95.9	90	110	
Ca	40	2	45	10179.436	ppb	1.940	6198045	11000	92.5	90	110	
V	51	3	72	51.102	ppb	0.489	33410	50	102.2	90	110	
Cr	52	3	72	52.074	ppb	0.482	43700	50	104.1	90	110	
Mn	55	3	72	50.606	ppb	0.742	21214	50	101.2	90	110	
Fe	56	2	72	1059.567	ppb	1.387	1747757	1000	106.0	90	110	
Co	59	3	72	51.122	ppb	1.167	67751	50	102.2	90	110	
Ni	60	3	72	51.762	ppb	0.666	20014	50	103.5	90	110	
Cu	63	3	72	51.722	ppb	1.334	52945	50	103.4	90	110	
Zn	66	3	72	51.114	ppb	1.255	8540	50	102.2	90	110	
As	75	3	72	52.863	ppb	0.581	6120	50	105.7	90	110	
Se	78	2	72	49.921	ppb	2.193	3009	50	99.8	90	110	
Sr	88	3	72	104.058	ppb	2.472	56954	100	104.1	90	110	
Mo	95	3	115	50.298	ppb	1.711	26326	50	100.6	90	110	
Ag	107	3	115	49.062	ppb	1.613	86574	50	98.1	90	110	
Cd	111	3	115	51.918	ppb	1.842	13067	50	103.8	90	110	
Sn	120	3	115	48.086	ppb	2.074	39031	50	96.2	90	110	
Sb	121	3	115	49.760	ppb	1.825	39271	50	99.5	90	110	
Ba	137	3	115	49.998	ppb	2.148	12910	50	100.0	90	110	
Tl	205	3	193	50.154	ppb	3.024	194787	50	100.3	90	110	
(Pb)	206	3	193	49.492	ppb	1.528	64016	50	99.0	90	110	
(Pb)	207	3	193	49.793	ppb	1.699	56817	50	99.6	90	110	
Pb	208	3	193	49.602	ppb	1.671	259029	50	99.2	90	110	
Th	232	3	193	52.550	ppb	1.303	278746	50	105.1	90	110	
U	238	3	193	50.129	ppb	1.545	274365	50	100.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4520502	1.04	4300192	105.12	60	120	
Sc (IS)	45	3	HMI He	640162	0.73	644593	99.31	60	120	
Ge Internal standard	72	2	HMI H2	2599539	1.83	2598552	100.04	60	120	
Ge Internal standard	72	3	HMI He	770642	0.73	772392	99.77	60	120	
In Internal Standard	115	3	HMI He	2914703	0.58	2872781	101.46	60	120	
Ir (IS)	193	3	HMI He	6117188	1.67	6092963	100.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	166_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:30:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	27.455	ppb	17.7	19944	25	>RL
Mg	24	3	45	1.301	ppb	17.3	350	25	
Al	27	3	45	-0.591	ppb	-132.5	140	15	
K	39	3	45	1.275	ppb	1206.6	28294	50	
V	51	3	72	0.235	ppb	36.9	1153	1	
Cr	52	3	72	0.547	ppb	36.1	3572	1	
Mn	55	3	72	0.035	ppb	402.8	395	0.5	
Co	59	3	72	0.016	ppb	77.0	77	0.5	
Ni	60	3	72	0.692	ppb	16.1	955	1	
Cu	63	3	72	0.012	ppb	439.1	410	1	
Zn	66	3	72	-0.060	ppb	-268.5	220	5	
As	75	3	72	0.342	ppb	19.9	83	1	
Se	78	2	72	0.088	ppb	20.9	7	1	
Sr	88	3	72	0.006	ppb	737.4	47	0.5	
Mo	95	3	115	0.088	ppb	24.7	85	0.5	
Ag	107	3	115	0.023	ppb	48.8	53	1	
Cd	111	3	115	0.013	ppb	246.7	13	0.5	
Sn	120	3	115	0.239	ppb	16.9	958	1	
Sb	121	3	115	0.054	ppb	25.9	88	0.6	
Ba	137	3	115	-0.017	ppb	-206.9	58	0.5	
Tl	205	3	193	-0.013	ppb	-72.0	337	0.1	
(Pb)	206	3	193	-0.045	ppb	-48.4	268	1	
(Pb)	207	3	193	-0.051	ppb	-46.6	435	1	
Pb	208	3	193	-0.042	ppb	-23.6	1301	0.5	
Th	232	3	193	1.890	ppb	9.6	17070	1	>RL
U	238	3	193	0.039	ppb	42.5	1789	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400686	1.62	4300192	102.34	60	120	
Sc (IS)	45	3	HMI He	647440	1.12	644593	100.44	60	120	
Ge Internal standard	72	2	HMI H2	2603566	0.77	2598552	100.19	60	120	
Ge Internal standard	72	3	HMI He	777078	0.56	772392	100.61	60	120	
In Internal Standard	115	3	HMI He	2919165	2.18	2872781	101.61	60	120	
Ir (IS)	193	3	HMI He	6249640	2.31	6092963	102.57	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	167LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:32:01-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.750	ppb	14.535	40	1	75.0	70	130	
Na	23	3	45	305.665	ppb	3.372	51676	300	101.9	70	130	
Mg	24	3	45	48.963	ppb	5.725	3220	50	97.9	70	130	
Al	27	3	45	42.950	ppb	12.095	1155	50	85.9	70	130	
K	39	3	45	108.683	ppb	19.880	33376	120	90.6	70	130	
Ca	40	2	45	193.555	ppb	1.929	129189	200	96.8	70	130	
V	51	3	72	4.845	ppb	4.984	4065	5	96.9	70	130	
Cr	52	3	72	2.353	ppb	9.813	4950	2	117.7	70	130	
Mn	55	3	72	0.852	ppb	18.335	728	1	85.2	70	130	
Fe	56	2	72	51.681	ppb	11.099	146450	50	103.4	70	130	
Co	59	3	72	1.018	ppb	6.673	1401	1	101.8	70	130	
Ni	60	3	72	2.261	ppb	11.155	1531	2	113.0	70	130	
Cu	63	3	72	1.988	ppb	4.488	2412	2	99.4	70	130	
Zn	66	3	72	9.072	ppb	9.450	1703	10	90.7	70	130	
As	75	3	72	5.334	ppb	4.456	656	5	106.7	70	130	
Se	78	2	72	4.672	ppb	11.759	285	5	93.4	70	130	
Sr	88	3	72	4.832	ppb	5.014	2686	5	96.6	70	130	
Mo	95	3	115	1.767	ppb	4.821	960	2	88.4	70	130	
Ag	107	3	115	0.988	ppb	8.495	1751	1	98.8	70	130	
Cd	111	3	115	0.977	ppb	17.634	255	1	97.7	70	130	
Sn	120	3	115	8.684	ppb	5.012	7652	10	86.8	70	130	
Sb	121	3	115	2.021	ppb	8.462	1634	2	101.0	70	130	
Ba	137	3	115	0.823	ppb	2.187	273	1	82.3	70	130	
Tl	205	3	193	0.891	ppb	3.046	3902	1	89.1	70	130	
(Pb)	206	3	193	0.865	ppb	13.601	1456	1	86.5	70	130	
(Pb)	207	3	193	0.874	ppb	9.420	1498	1	87.4	70	130	
Pb	208	3	193	0.856	ppb	7.152	6033	1	85.6	70	130	
Th	232	3	193	1.485	ppb	14.965	14846	1	148.5	70	130	>+/-30%
U	238	3	193	0.960	ppb	6.242	6878	1	96.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4451222	1.52	4300192	103.51	60	120	
Sc (IS)	45	3	HMI He	642760	1.42	644593	99.72	60	120	
Ge Internal standard	72	2	HMI H2	2611259	1.43	2598552	100.49	60	120	
Ge Internal standard	72	3	HMI He	770357	1.05	772392	99.74	60	120	
In Internal Standard	115	3	HMI He	2906088	1.38	2872781	101.16	60	120	
Ir (IS)	193	3	HMI He	6220701	1.89	6092963	102.10	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609036/1-B
Data File Name	168_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:55:36-06:00
Sample Type	Blank
Dilution	1
Comment	609057 6020b
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	54.581	ppb	0.167723457	23286	25
Mg	24	3	45	1.085	ppb	41.94777928	340	25
Al	27	3	45	2.592	ppb	19.64914671	217	15
K	39	3	45	-0.837	ppb	-1980.866517	28444	50
Ca	40	2	45	15.020	ppb	6.233689535	22334	200
V	51	3	72	0.039	ppb	107.1646743	1033	1
Cr	52	3	72	-0.525	ppb	-23.84580673	2746	1
Mn	55	3	72	-0.117	ppb	-179.8126051	333	0.5
Fe	56	2	72	-1.241	ppb	-89.07008604	63592	50
Co	59	3	72	-0.003	ppb	-211.7968476	52	0.5
Ni	60	3	72	-0.283	ppb	-64.93569685	590	1
Cu	63	3	72	0.287	ppb	12.7890343	695	1
Zn	66	3	72	1.299	ppb	18.4746995	445	5
As	75	3	72	0.123	ppb	118.4989319	58	1
(Se)	78	3	72	-0.058	ppb	-1458.039627	23	1
Sr	88	3	72	0.041	ppb	47.430189	67	0.5
Mo	95	3	115	0.024	ppb	239.1274034	52	0.5
Ag	107	3	115	0.005	ppb	166.9571439	23	1
Cd	111	3	115	-0.021	ppb	-93.40690784	5	0.5
Sn	120	3	115	0.100	ppb	141.460846	853	1
Sb	121	3	115	0.026	ppb	113.668541	67	0.6
Ba	137	3	115	0.091	ppb	39.32124844	87	0.5
Tl	205	3	193	-0.042	ppb	-23.36577668	222	0.1
(Pb)	206	3	193	-0.034	ppb	-49.8860987	282	1
(Pb)	207	3	193	0.029	ppb	81.81627739	526	1
Pb	208	3	193	-0.025	ppb	-51.68552183	1386	0.5
Th	232	3	193	-0.271	ppb	-21.66249358	5637	1
U	238	3	193	0.016	ppb	55.47367837	1658	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4439674	1.24	4300192	103.24	60	120	
Sc (IS)	45	3	HMI He	653353	0.53	644593	101.36	60	120	
Ge Internal standard	72	2	HMI H2	2675845	2.23	2598552	102.97	60	120	
Ge Internal standard	72	3	HMI He	781210	1.04	772392	101.14	60	120	
In Internal Standard	115	3	HMI He	2942634	1.42	2872781	102.43	60	120	
Ir (IS)	193	3	HMI He	6241327	0.54	6092963	102.44	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609036/2-C
Data File Name	169_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:57:25-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609057 6020b
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	40.014	40.014	ppb	9.952	1799	40	100.0	80	120	
Na	23	3	45	750.740	750.740	ppb	2.033	104588	40	1876.9	80	120	>+/-20%
Mg	24	3	45	695.339	695.339	ppb	0.989	42935	40	1738.3	80	120	>+/-20%
Al	27	3	45	728.186	728.186	ppb	1.940	17438	40	1820.5	80	120	>+/-20%
K	39	3	45	719.728	719.728	ppb	2.026	64630	40	1799.3	80	120	>+/-20%
Ca	40	2	45	799.056	799.056	ppb	0.299	493622	40	1997.6	80	120	>+/-20%
V	51	3	72	38.057	38.057	ppb	2.103	25746	40	95.1	80	120	
Cr	52	3	72	38.687	38.687	ppb	1.631	34076	40	96.7	80	120	
Mn	55	3	72	38.377	38.377	ppb	1.985	16572	40	95.9	80	120	
Fe	56	2	72	789.066	789.066	ppb	2.403	1348924	40	1972.7	80	120	>+/-20%
(Fe)	56	3	72	766.951	766.951	ppb	0.186	538037	40	1917.4	80	120	>+/-20%
Co	59	3	72	38.717	38.717	ppb	1.057	52570	40	96.8	80	120	
Ni	60	3	72	37.369	37.369	ppb	0.714	14997	40	93.4	80	120	
Cu	63	3	72	39.974	39.974	ppb	0.514	42006	40	99.9	80	120	
Zn	66	3	72	39.173	39.173	ppb	3.503	6760	40	97.9	80	120	
As	75	3	72	38.522	38.522	ppb	0.825	4580	40	96.3	80	120	
Se	78	2	72	40.163	40.163	ppb	2.005	2478	40	100.4	80	120	
(Se)	78	3	72	35.958	35.958	ppb	19.270	262	40	89.9	80	120	
Sr	88	3	72	77.569	77.569	ppb	1.761	43498	40	193.9	80	120	>+/-20%
Mo	95	3	115	37.431	37.431	ppb	2.205	19469	40	93.6	80	120	
Ag	107	3	115	39.188	39.188	ppb	1.948	68679	40	98.0	80	120	
Cd	111	3	115	38.099	38.099	ppb	2.794	9524	40	95.2	80	120	
Sn	120	3	115	35.737	35.737	ppb	3.187	28999	40	89.3	80	120	
Sb	121	3	115	38.145	38.145	ppb	1.208	29912	40	95.4	80	120	
Ba	137	3	115	38.632	38.632	ppb	4.952	9919	40	96.6	80	120	
Tl	205	3	193	37.380	37.380	ppb	0.733	149090	40	93.5	80	120	
(Pb)	206	3	193	37.287	37.287	ppb	1.300	49570	40	93.2	80	120	
(Pb)	207	3	193	37.186	37.186	ppb	1.084	43665	40	93.0	80	120	
Pb	208	3	193	37.467	37.467	ppb	0.663	201142	40	93.7	80	120	
Th	232	3	193	34.463	34.463	ppb	1.761	189994	40	86.2	80	120	
U	238	3	193	37.304	37.304	ppb	0.036	209911	40	93.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4470655	1.94	4300192	103.96	60	120	
Sc (IS)	45	3	HMI He	654656	0.71	644593	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2661148	1.75	2598552	102.41	60	120	
Ge Internal standard	72	3	HMI He	789409	0.54	772392	102.20	60	120	
In Internal Standard	115	3	HMI He	2895205	1.98	2872781	100.78	60	120	
Ir (IS)	193	3	HMI He	6275966	0.46	6092963	103.00	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-E
Data File Name	170SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T18:59:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.036	ppb	-0.036	-551.78	5	2000	
Na	23	3	45	113589.274	ppb	113589.274	1.40	13433384	400000	
Mg	24	3	45	49480.849	ppb	49480.849	2.51	3071678	400000	
Al	27	3	45	0.946	ppb	0.946	182.28	180	400000	
K	39	3	45	6750.228	ppb	6750.228	1.63	371314	400000	
Ca	40	2	45	74700.350	ppb	74700.350	2.12	45019419	400000	
V	51	3	72	1.643	ppb	1.643	3.20	2086	2000	
Cr	52	3	72	0.243	ppb	0.243	91.45	3387	5000	
Mn	55	3	72	1.308	ppb	1.308	23.15	940	10000	
Fe	56	2	72	9.263	ppb	9.263	28.26	78567	10000	
Co	59	3	72	0.392	ppb	0.392	12.22	588	2000	
Ni	60	3	72	1.123	ppb	1.123	3.68	1134	5000	
Cu	63	3	72	1.500	ppb	1.500	5.97	1966	5000	
Zn	66	3	72	9.405	ppb	9.405	8.79	1799	5000	
As	75	3	72	1.606	ppb	1.606	21.42	233	2000	
Se	78	2	72	1.712	ppb	1.712	11.49	105	2000	
Sr	88	3	72	1290.108	ppb	1290.108	1.42	722767	4000	
Mo	95	3	115	2.965	ppb	2.965	4.56	1621	2000	
Ag	107	3	115	0.021	ppb	0.021	19.64	52	100	
Cd	111	3	115	0.050	ppb	0.050	117.02	23	2000	
Sn	120	3	115	0.074	ppb	0.074	178.75	841	2000	
Sb	121	3	115	0.280	ppb	0.280	30.64	272	1000	
Ba	137	3	115	50.712	ppb	50.712	1.18	13367	5000	
Tl	205	3	193	-0.021	ppb	-0.021	-27.50	303	2000	
(Pb)	206	3	193	0.030	ppb	0.030	66.87	363	100	
(Pb)	207	3	193	0.078	ppb	0.078	42.95	580	100	
Pb	208	3	193	0.035	ppb	0.035	61.91	1694	5000	
Th	232	3	193	1.901	ppb	1.901	14.03	16997	2000	
U	238	3	193	10.980	ppb	10.980	0.05	62175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4482052	0.63	4300192	104.23	60	120	
Sc (IS)	45	3	HMI He	662428	0.83	644593	102.77	60	120	
Ge Internal standard	72	2	HMI H2	2601889	1.70	2598552	100.13	60	120	
Ge Internal standard	72	3	HMI He	789531	1.30	772392	102.22	60	120	
In Internal Standard	115	3	HMI He	2975586	1.37	2872781	103.58	60	120	
Ir (IS)	193	3	HMI He	6203985	0.87	6092963	101.82	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-Esd@5
Data File Name	171SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:01:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	23727.265	ppb	23727.265	0.82	2815188	400000	
Mg	24	3	45	10031.707	ppb	10031.707	2.00	621905	400000	
Al	27	3	45	0.276	ppb	0.276	1041.43	163	400000	
K	39	3	45	1355.979	ppb	1355.979	4.68	97487	400000	
Ca	40	2	45	15276.510	ppb	15276.510	2.24	9300859	400000	
V	51	3	72	0.562	ppb	0.562	14.62	1358	2000	
Cr	52	3	72	0.026	ppb	0.026	1051.69	3154	5000	
Mn	55	3	72	1.719	ppb	1.719	4.74	1091	10000	
Fe	56	2	72	2.911	ppb	2.911	83.03	68484	10000	
Co	59	3	72	0.080	ppb	0.080	18.45	162	2000	
Ni	60	3	72	0.415	ppb	0.415	37.29	848	5000	
Cu	63	3	72	0.442	ppb	0.442	11.24	848	5000	
Zn	66	3	72	4.732	ppb	4.732	11.99	1003	5000	
As	75	3	72	0.503	ppb	0.503	43.27	102	2000	
Se	78	2	72	0.320	ppb	0.320	57.77	21	2000	
Sr	88	3	72	267.709	ppb	267.709	0.37	147257	4000	
Mo	95	3	115	0.619	ppb	0.619	13.42	366	2000	
Ag	107	3	115	0.018	ppb	0.018	53.95	47	100	
Cd	111	3	115	-0.014	ppb	-0.014	-158.20	7	2000	
Sn	120	3	115	0.162	ppb	0.162	23.73	906	2000	
Sb	121	3	115	0.090	ppb	0.090	44.04	118	1000	
Ba	137	3	115	10.643	ppb	10.643	6.45	2832	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-3.19	227	2000	
(Pb)	206	3	193	0.336	ppb	0.336	21.98	765	100	
(Pb)	207	3	193	0.341	ppb	0.341	2.72	885	100	
Pb	208	3	193	0.336	ppb	0.336	8.44	3290	5000	
Th	232	3	193	0.092	ppb	0.092	95.41	7525	2000	
U	238	3	193	2.325	ppb	2.325	2.29	14438	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4523217	0.56	4300192	105.19	60	120	
Sc (IS)	45	3	HMI He	661327	1.55	644593	102.60	60	120	
Ge Internal standard	72	2	HMI H2	2603127	3.41	2598552	100.18	60	120	
Ge Internal standard	72	3	HMI He	774925	0.47	772392	100.33	60	120	
In Internal Standard	115	3	HMI He	2952119	1.11	2872781	102.76	60	120	
Ir (IS)	193	3	HMI He	6224081	1.43	6092963	102.15	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-F MS
Data File Name	172SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:02:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.961	ppb	40.961	6.41	1804	2000	
Na	23	3	45	112416.789	ppb	112416.789	1.89	13297912	400000	
Mg	24	3	45	49051.373	ppb	49051.373	0.69	3046009	400000	
Al	27	3	45	768.019	ppb	768.019	3.66	18601	400000	
K	39	3	45	7477.776	ppb	7477.776	1.09	408308	400000	
Ca	40	2	45	77230.298	ppb	77230.298	2.51	46507105	400000	
V	51	3	72	40.336	ppb	40.336	0.49	27340	2000	
Cr	52	3	72	40.248	ppb	40.248	0.39	35467	5000	
Mn	55	3	72	41.720	ppb	41.720	0.66	18056	10000	
Fe	56	2	72	827.816	ppb	827.816	4.08	1408820	10000	
Co	59	3	72	39.568	ppb	39.568	1.76	53948	2000	
Ni	60	3	72	40.210	ppb	40.210	0.68	16150	5000	
Cu	63	3	72	40.711	ppb	40.711	0.45	42948	5000	
Zn	66	3	72	49.318	ppb	49.318	2.82	8483	5000	
As	75	3	72	41.308	ppb	41.308	2.32	4928	2000	
Se	78	2	72	42.433	ppb	42.433	3.27	2613	2000	
Sr	88	3	72	1343.910	ppb	1343.910	0.43	755962	4000	
Mo	95	3	115	40.421	ppb	40.421	1.41	21491	2000	
Ag	107	3	115	39.098	ppb	39.098	0.92	70068	100	
Cd	111	3	115	37.918	ppb	37.918	1.00	9694	2000	
Sn	120	3	115	36.414	ppb	36.414	1.66	30204	2000	
Sb	121	3	115	38.541	ppb	38.541	1.25	30904	1000	
Ba	137	3	115	90.284	ppb	90.284	1.00	23623	5000	
Tl	205	3	193	38.490	ppb	38.490	1.22	153680	2000	
(Pb)	206	3	193	38.588	ppb	38.588	0.71	51348	100	
(Pb)	207	3	193	38.254	ppb	38.254	0.88	44962	100	
Pb	208	3	193	38.393	ppb	38.393	1.58	206298	5000	
Th	232	3	193	37.288	ppb	37.288	2.22	205203	2000	
U	238	3	193	49.750	ppb	49.750	2.51	279687	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4479640	1.16	4300192	104.17	60	120	
Sc (IS)	45	3	HMI He	662539	0.58	644593	102.78	60	120	
Ge Internal standard	72	2	HMI H2	2655570	1.84	2598552	102.19	60	120	
Ge Internal standard	72	3	HMI He	792644	0.36	772392	102.62	60	120	
In Internal Standard	115	3	HMI He	2959887	1.03	2872781	103.03	60	120	
Ir (IS)	193	3	HMI He	6283931	1.83	6092963	103.13	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-G MSD
Data File Name	173SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:04:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.380	ppb	42.380	2.81	1889	2000	
Na	23	3	45	115435.643	ppb	115435.643	1.71	13536457	400000	
Mg	24	3	45	49902.808	ppb	49902.808	1.24	3072016	400000	
Al	27	3	45	723.973	ppb	723.973	3.83	17395	400000	
K	39	3	45	7420.791	ppb	7420.791	0.56	401919	400000	
Ca	40	2	45	77241.280	ppb	77241.280	2.98	46317509	400000	
V	51	3	72	41.099	ppb	41.099	1.74	27735	2000	
Cr	52	3	72	39.441	ppb	39.441	3.11	34691	5000	
Mn	55	3	72	41.561	ppb	41.561	0.89	17923	10000	
Fe	56	2	72	828.013	ppb	828.013	1.56	1379899	10000	
Co	59	3	72	38.840	ppb	38.840	2.79	52755	2000	
Ni	60	3	72	39.717	ppb	39.717	1.07	15903	5000	
Cu	63	3	72	41.274	ppb	41.274	1.01	43376	5000	
Zn	66	3	72	48.204	ppb	48.204	3.29	8267	5000	
As	75	3	72	42.427	ppb	42.427	2.67	5042	2000	
Se	78	2	72	44.448	ppb	44.448	0.62	2679	2000	
Sr	88	3	72	1356.414	ppb	1356.414	1.18	760169	4000	
Mo	95	3	115	41.303	ppb	41.303	1.52	21737	2000	
Ag	107	3	115	38.673	ppb	38.673	1.97	68598	100	
Cd	111	3	115	37.127	ppb	37.127	1.17	9395	2000	
Sn	120	3	115	37.236	ppb	37.236	2.22	30553	2000	
Sb	121	3	115	38.514	ppb	38.514	2.94	30561	1000	
Ba	137	3	115	90.773	ppb	90.773	3.87	23506	5000	
Tl	205	3	193	38.171	ppb	38.171	1.21	152739	2000	
(Pb)	206	3	193	38.339	ppb	38.339	1.90	51122	100	
(Pb)	207	3	193	38.048	ppb	38.048	1.66	44812	100	
Pb	208	3	193	38.162	ppb	38.162	1.45	205516	5000	
Th	232	3	193	38.451	ppb	38.451	0.99	211868	2000	
U	238	3	193	49.359	ppb	49.359	1.25	278150	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4462344	2.79	4300192	103.77	60	120	
Sc (IS)	45	3	HMI He	656805	0.31	644593	101.89	60	120	
Ge Internal standard	72	2	HMI H2	2599351	0.52	2598552	100.03	60	120	
Ge Internal standard	72	3	HMI He	789766	0.90	772392	102.25	60	120	
In Internal Standard	115	3	HMI He	2930146	1.57	2872781	102.00	60	120	
Ir (IS)	193	3	HMI He	6297450	1.67	6092963	103.36	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-1-E pds
Data File Name	174SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:06:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	102.986	ppb	102.986	3.46	4512	2000	
Na	23	3	45	116614.091	ppb	116614.091	3.10	13625033	400000	
Mg	24	3	45	51284.976	ppb	51284.976	2.96	3145673	400000	
Al	27	3	45	1965.215	ppb	1965.215	2.70	46787	400000	
K	39	3	45	8570.501	ppb	8570.501	2.25	458138	400000	
Ca	40	2	45	77402.595	ppb	77402.595	2.23	46420770	400000	
V	51	3	72	100.130	ppb	100.130	1.37	65976	2000	
Cr	52	3	72	98.937	ppb	98.937	0.75	82044	5000	
Mn	55	3	72	100.129	ppb	100.129	0.29	42550	10000	
Fe	56	2	72	1065.924	ppb	1065.924	2.07	1768813	10000	
Co	59	3	72	98.371	ppb	98.371	1.67	133276	2000	
Ni	60	3	72	99.067	ppb	99.067	1.85	38533	5000	
Cu	63	3	72	103.135	ppb	103.135	1.20	107567	5000	
Zn	66	3	72	208.325	ppb	208.325	1.92	34882	5000	
As	75	3	72	106.960	ppb	106.960	3.15	12618	2000	
Se	78	2	72	102.030	ppb	102.030	2.64	6186	2000	
Sr	88	3	72	1349.986	ppb	1349.986	1.21	755062	4000	
Mo	95	3	115	99.856	ppb	99.856	1.30	52866	2000	
Ag	107	3	115	25.652	ppb	25.652	2.79	45832	100	
Cd	111	3	115	96.205	ppb	96.205	1.98	24498	2000	
Sn	120	3	115	95.095	ppb	95.095	2.54	77368	2000	
Sb	121	3	115	95.043	ppb	95.043	2.15	75882	1000	
Ba	137	3	115	146.726	ppb	146.726	1.96	38226	5000	
Tl	205	3	193	95.854	ppb	95.854	2.43	383238	2000	
(Pb)	206	3	193	95.204	ppb	95.204	3.48	126534	100	
(Pb)	207	3	193	95.828	ppb	95.828	3.23	112173	100	
Pb	208	3	193	94.787	ppb	94.787	3.15	508490	5000	
Th	232	3	193	103.200	ppb	103.200	3.88	556865	2000	
U	238	3	193	217.206	ppb	217.206	3.09	1219389	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4461007	1.81	4300192	103.74	60	120	
Sc (IS)	45	3	HMI He	654622	1.43	644593	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2615474	0.42	2598552	100.65	60	120	
Ge Internal standard	72	3	HMI He	788174	0.53	772392	102.04	60	120	
In Internal Standard	115	3	HMI He	2950563	1.29	2872781	102.71	60	120	
Ir (IS)	193	3	HMI He	6303790	2.68	6092963	103.46	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-2-B
Data File Name	175SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:08:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.110	ppb	-0.110	-60.50	2	2000	
Na	23	3	45	114204.456	ppb	114204.456	3.02	13178151	400000	
Mg	24	3	45	45766.703	ppb	45766.703	3.64	2772397	400000	
Al	27	3	45	1.410	ppb	1.410	65.07	187	400000	
K	39	3	45	7633.489	ppb	7633.489	1.96	406049	400000	
Ca	40	2	45	71666.266	ppb	71666.266	0.51	42559849	400000	
V	51	3	72	2.016	ppb	2.016	12.91	2281	2000	
Cr	52	3	72	0.305	ppb	0.305	32.47	3365	5000	
Mn	55	3	72	1.628	ppb	1.628	6.32	1051	10000	
Fe	56	2	72	20.999	ppb	20.999	13.21	96705	10000	
Co	59	3	72	0.327	ppb	0.327	3.45	490	2000	
Ni	60	3	72	1.612	ppb	1.612	6.67	1294	5000	
Cu	63	3	72	1.599	ppb	1.599	4.82	2026	5000	
Zn	66	3	72	19.398	ppb	19.398	7.57	3394	5000	
As	75	3	72	1.501	ppb	1.501	14.37	217	2000	
Se	78	2	72	1.712	ppb	1.712	8.00	105	2000	
Sr	88	3	72	1166.101	ppb	1166.101	1.24	639916	4000	
Mo	95	3	115	2.837	ppb	2.837	4.83	1514	2000	
Ag	107	3	115	0.014	ppb	0.014	51.55	38	100	
Cd	111	3	115	0.039	ppb	0.039	88.03	20	2000	
Sn	120	3	115	0.339	ppb	0.339	23.37	1031	2000	
Sb	121	3	115	0.462	ppb	0.462	14.55	408	1000	
Ba	137	3	115	46.402	ppb	46.402	1.71	11931	5000	
Tl	205	3	193	0.005	ppb	0.005	337.95	405	2000	
(Pb)	206	3	193	0.076	ppb	0.076	14.90	423	100	
(Pb)	207	3	193	0.128	ppb	0.128	66.47	636	100	
Pb	208	3	193	0.110	ppb	0.110	15.75	2091	5000	
Th	232	3	193	2.409	ppb	2.409	13.45	19654	2000	
U	238	3	193	9.799	ppb	9.799	1.36	55606	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416590	1.54	4300192	102.71	60	120	
Sc (IS)	45	3	HMI He	646370	0.34	644593	100.28	60	120	
Ge Internal standard	72	2	HMI H2	2589746	2.03	2598552	99.66	60	120	
Ge Internal standard	72	3	HMI He	773307	0.52	772392	100.12	60	120	
In Internal Standard	115	3	HMI He	2901427	0.73	2872781	101.00	60	120	
Ir (IS)	193	3	HMI He	6198212	0.81	6092963	101.73	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-3-B
Data File Name	176SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:10:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	105877.743	ppb	105877.743	1.11	12161316	400000	
Mg	24	3	45	41195.081	ppb	41195.081	0.46	2483957	400000	
Al	27	3	45	0.160	ppb	0.160	822.66	157	400000	
K	39	3	45	2644.294	ppb	2644.294	1.43	158346	400000	
Ca	40	2	45	92134.882	ppb	92134.882	1.60	55877767	400000	
V	51	3	72	0.215	ppb	0.215	28.81	1173	2000	
Cr	52	3	72	0.135	ppb	0.135	140.36	3342	5000	
Mn	55	3	72	0.703	ppb	0.703	40.10	691	10000	
Fe	56	2	72	5.917	ppb	5.917	46.87	74584	10000	
Co	59	3	72	0.372	ppb	0.372	4.59	568	2000	
Ni	60	3	72	1.058	ppb	1.058	36.10	1124	5000	
Cu	63	3	72	1.227	ppb	1.227	10.43	1701	5000	
Zn	66	3	72	295.418	ppb	295.418	2.25	50071	5000	
As	75	3	72	0.377	ppb	0.377	66.18	90	2000	
Se	78	2	72	0.704	ppb	0.704	21.77	45	2000	
Sr	88	3	72	830.627	ppb	830.627	1.12	471215	4000	
Mo	95	3	115	2.756	ppb	2.756	4.43	1478	2000	
Ag	107	3	115	0.006	ppb	0.006	77.67	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	-154.04	8	2000	
Sn	120	3	115	0.046	ppb	0.046	263.82	801	2000	
Sb	121	3	115	0.090	ppb	0.090	9.41	117	1000	
Ba	137	3	115	34.268	ppb	34.268	4.11	8860	5000	
Tl	205	3	193	-0.037	ppb	-0.037	-16.30	245	2000	
(Pb)	206	3	193	-0.079	ppb	-0.079	-44.05	225	100	
(Pb)	207	3	193	-0.067	ppb	-0.067	-101.69	420	100	
Pb	208	3	193	-0.058	ppb	-0.058	-15.65	1223	5000	
Th	232	3	193	0.160	ppb	0.160	62.38	7990	2000	
U	238	3	193	24.818	ppb	24.818	1.04	140733	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4511558	2.34	4300192	104.92	60	120	
Sc (IS)	45	3	HMI He	643348	1.22	644593	99.81	60	120	
Ge Internal standard	72	2	HMI H2	2652295	1.38	2598552	102.07	60	120	
Ge Internal standard	72	3	HMI He	799395	0.85	772392	103.50	60	120	
In Internal Standard	115	3	HMI He	2913180	1.93	2872781	101.41	60	120	
Ir (IS)	193	3	HMI He	6301086	1.17	6092963	103.42	60	120	

Sample Report

Sample Table

Sample Name	280-174838-E-4-B
Data File Name	177SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:11:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-93.00	3	2000	
Na	23	3	45	89462.249	ppb	89462.249	1.70	10348586	400000	
Mg	24	3	45	39594.831	ppb	39594.831	1.52	2403698	400000	
Al	27	3	45	28.524	ppb	28.524	11.14	824	400000	
K	39	3	45	4845.430	ppb	4845.430	0.83	268577	400000	
Ca	40	2	45	45391.731	ppb	45391.731	1.17	26791230	400000	
V	51	3	72	1.030	ppb	1.030	14.15	1621	2000	
Cr	52	3	72	0.376	ppb	0.376	88.68	3355	5000	
Mn	55	3	72	3.109	ppb	3.109	15.64	1629	10000	
Fe	56	2	72	21.482	ppb	21.482	13.83	93471	10000	
Co	59	3	72	0.259	ppb	0.259	8.89	391	2000	
Ni	60	3	72	1.492	ppb	1.492	12.39	1224	5000	
Cu	63	3	72	1.910	ppb	1.910	7.01	2297	5000	
Zn	66	3	72	5.924	ppb	5.924	11.96	1171	5000	
As	75	3	72	2.984	ppb	2.984	4.90	380	2000	
Se	78	2	72	0.442	ppb	0.442	13.10	27	2000	
Sr	88	3	72	905.772	ppb	905.772	1.21	487232	4000	
Mo	95	3	115	3.394	ppb	3.394	2.28	1808	2000	
Ag	107	3	115	0.003	ppb	0.003	162.20	18	100	
Cd	111	3	115	-0.028	ppb	-0.028	-41.63	3	2000	
Sn	120	3	115	0.219	ppb	0.219	45.63	938	2000	
Sb	121	3	115	0.245	ppb	0.245	13.24	238	1000	
Ba	137	3	115	24.321	ppb	24.321	4.22	6293	5000	
Tl	205	3	193	-0.036	ppb	-0.036	-6.55	247	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-948.34	325	100	
(Pb)	207	3	193	0.003	ppb	0.003	258.75	500	100	
Pb	208	3	193	0.002	ppb	0.002	639.53	1539	5000	
Th	232	3	193	-0.086	ppb	-0.086	-169.18	6642	2000	
U	238	3	193	5.958	ppb	5.958	4.56	34861	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4388875	0.15	4300192	102.06	60	120	
Sc (IS)	45	3	HMI He	647650	0.78	644593	100.47	60	120	
Ge Internal standard	72	2	HMI H2	2481147	1.82	2598552	95.48	60	120	
Ge Internal standard	72	3	HMI He	758014	1.50	772392	98.14	60	120	
In Internal Standard	115	3	HMI He	2906436	0.86	2872781	101.17	60	120	
Ir (IS)	193	3	HMI He	6282213	2.62	6092963	103.11	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	178_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:13:34-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.150	ppb	7.804	2334	50	108.3	90	110	
Na	23	3	45	47325.525	ppb	2.947	5422838	51000	92.8	90	110	
Mg	24	3	45	10103.494	ppb	2.344	606804	11000	91.8	90	110	
Al	27	3	45	950.310	ppb	3.582	22216	1000	95.0	90	110	
K	39	3	45	10115.044	ppb	3.540	524111	11000	92.0	90	110	
Ca	40	2	45	10264.042	ppb	0.986	6081381	11000	93.3	90	110	
V	51	3	72	49.799	ppb	1.516	32066	50	99.6	90	110	
Cr	52	3	72	51.680	ppb	1.889	42701	50	103.4	90	110	
Mn	55	3	72	50.452	ppb	0.921	20814	50	100.9	90	110	
Fe	56	2	72	1061.157	ppb	2.619	1720685	1000	106.1	90	110	
Co	59	3	72	49.920	ppb	1.727	65103	50	99.8	90	110	
Ni	60	3	72	49.999	ppb	0.789	19049	50	100.0	90	110	
Cu	63	3	72	50.697	ppb	1.784	51075	50	101.4	90	110	
Zn	66	3	72	49.513	ppb	1.503	8148	50	99.0	90	110	
As	75	3	72	52.178	ppb	2.392	5945	50	104.4	90	110	
Se	78	2	72	51.880	ppb	1.148	3075	50	103.8	90	110	
Sr	88	3	72	104.238	ppb	0.393	56139	100	104.2	90	110	
Mo	95	3	115	48.661	ppb	1.948	25520	50	97.3	90	110	
Ag	107	3	115	47.997	ppb	1.183	84847	50	96.0	90	110	
Cd	111	3	115	48.094	ppb	1.250	12126	50	96.2	90	110	
Sn	120	3	115	47.893	ppb	1.552	38949	50	95.8	90	110	
Sb	121	3	115	48.814	ppb	0.701	38596	50	97.6	90	110	
Ba	137	3	115	48.728	ppb	1.341	12606	50	97.5	90	110	
Tl	205	3	193	49.031	ppb	2.961	191697	50	98.1	90	110	
(Pb)	206	3	193	49.211	ppb	2.116	64066	50	98.4	90	110	
(Pb)	207	3	193	49.575	ppb	3.019	56937	50	99.1	90	110	
Pb	208	3	193	49.258	ppb	1.547	258924	50	98.5	90	110	
Th	232	3	193	48.105	ppb	2.113	257381	50	96.2	90	110	
U	238	3	193	49.372	ppb	1.977	271998	50	98.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4397985	2.08	4300192	102.27	60	120	
Sc (IS)	45	3	HMI He	640744	1.75	644593	99.40	60	120	
Ge Internal standard	72	2	HMI H2	2556215	2.38	2598552	98.37	60	120	
Ge Internal standard	72	3	HMI He	758374	0.41	772392	98.19	60	120	
In Internal Standard	115	3	HMI He	2919949	0.93	2872781	101.64	60	120	
Ir (IS)	193	3	HMI He	6156759	1.07	6092963	101.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	179_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:15:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	61.009	ppb	6.0	23460	25	>RL
Mg	24	3	45	1.774	ppb	39.7	374	25	
Al	27	3	45	-2.956	ppb	-30.9	83	15	
K	39	3	45	8.307	ppb	265.5	28213	50	
V	51	3	72	0.355	ppb	17.0	1233	1	
Cr	52	3	72	0.115	ppb	292.7	3242	1	
Mn	55	3	72	-0.188	ppb	-63.6	303	0.5	
Co	59	3	72	0.005	ppb	396.6	62	0.5	
Ni	60	3	72	0.470	ppb	42.0	873	1	
Cu	63	3	72	0.050	ppb	96.7	450	1	
Zn	66	3	72	0.098	ppb	62.5	247	5	
As	75	3	72	0.297	ppb	65.8	78	1	
Se	78	2	72	0.088	ppb	77.7	7	1	
Sr	88	3	72	0.041	ppb	106.4	67	0.5	
Mo	95	3	115	0.078	ppb	37.2	80	0.5	
Ag	107	3	115	0.006	ppb	78.2	25	1	
Cd	111	3	115	-0.021	ppb	-97.2	5	0.5	
Sn	120	3	115	0.146	ppb	48.5	885	1	
Sb	121	3	115	0.045	ppb	58.9	82	0.6	
Ba	137	3	115	0.001	ppb	4373.0	63	0.5	
Tl	205	3	193	-0.039	ppb	-12.4	242	0.1	
(Pb)	206	3	193	-0.063	ppb	-79.8	248	1	
(Pb)	207	3	193	-0.053	ppb	-39.0	441	1	
Pb	208	3	193	-0.070	ppb	-20.8	1176	0.5	
Th	232	3	193	1.310	ppb	12.4	14293	1	>RL
U	238	3	193	0.028	ppb	48.1	1766	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4360444	1.50	4300192	101.40	60	120	
Sc (IS)	45	3	HMI He	637775	0.83	644593	98.94	60	120	
Ge Internal standard	72	2	HMI H2	2592300	0.57	2598552	99.76	60	120	
Ge Internal standard	72	3	HMI He	779118	0.45	772392	100.87	60	120	
In Internal Standard	115	3	HMI He	2922581	3.34	2872781	101.73	60	120	
Ir (IS)	193	3	HMI He	6380356	0.42	6092963	104.72	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-B
Data File Name	180SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:17:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-64.38	2	2000	
Na	23	3	45	108276.094	ppb	108276.094	2.03	12204949	400000	
Mg	24	3	45	15319.471	ppb	15319.471	2.18	906643	400000	
Al	27	3	45	83.602	ppb	83.602	10.72	2066	400000	
K	39	3	45	5760.462	ppb	5760.462	1.48	306068	400000	
Ca	40	2	45	143543.621	ppb	143543.621	1.90	85006146	400000	
V	51	3	72	0.062	ppb	0.062	204.24	995	2000	
Cr	52	3	72	0.776	ppb	0.776	28.44	3582	5000	
Mn	55	3	72	0.059	ppb	0.059	74.30	386	10000	
Fe	56	2	72	6.962	ppb	6.962	43.85	71814	10000	
Co	59	3	72	0.119	ppb	0.119	18.86	205	2000	
Ni	60	3	72	23.598	ppb	23.598	2.98	9140	5000	
Cu	63	3	72	0.502	ppb	0.502	11.91	870	5000	
Zn	66	3	72	4.361	ppb	4.361	12.28	901	5000	
As	75	3	72	0.286	ppb	0.286	31.05	73	2000	
Se	78	2	72	0.877	ppb	0.877	10.00	53	2000	
Sr	88	3	72	1011.970	ppb	1011.970	0.95	532523	4000	
Mo	95	3	115	4.706	ppb	4.706	4.23	2476	2000	
Ag	107	3	115	0.007	ppb	0.007	132.35	27	100	
Cd	111	3	115	-0.014	ppb	-0.014	-167.75	7	2000	
Sn	120	3	115	-0.004	ppb	-0.004	-2238.58	756	2000	
Sb	121	3	115	0.418	ppb	0.418	8.04	371	1000	
Ba	137	3	115	82.390	ppb	82.390	1.80	21041	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-6.21	217	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-94.96	273	100	
(Pb)	207	3	193	-0.084	ppb	-0.084	-57.10	390	100	
Pb	208	3	193	-0.061	ppb	-0.061	-19.91	1178	5000	
Th	232	3	193	0.165	ppb	0.165	113.36	7812	2000	
U	238	3	193	0.155	ppb	0.155	26.39	2396	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4405896	1.60	4300192	102.46	60	120	
Sc (IS)	45	3	HMI He	631448	1.53	644593	97.96	60	120	
Ge Internal standard	72	2	HMI H2	2494716	1.27	2598552	96.00	60	120	
Ge Internal standard	72	3	HMI He	741538	0.78	772392	96.01	60	120	
In Internal Standard	115	3	HMI He	2887980	0.77	2872781	100.53	60	120	
Ir (IS)	193	3	HMI He	6149543	1.69	6092963	100.93	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-E MS
Data File Name	181SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:18:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.804	ppb	40.804	3.45	1744	2000	
Na	23	3	45	106166.409	ppb	106166.409	1.90	12113896	400000	
Mg	24	3	45	15563.043	ppb	15563.043	1.29	932365	400000	
Al	27	3	45	803.423	ppb	803.423	2.91	18765	400000	
K	39	3	45	6248.382	ppb	6248.382	0.35	333722	400000	
Ca	40	2	45	142741.361	ppb	142741.361	0.99	84257908	400000	
V	51	3	72	38.459	ppb	38.459	1.00	24930	2000	
Cr	52	3	72	39.730	ppb	39.730	1.44	33460	5000	
Mn	55	3	72	39.918	ppb	39.918	1.64	16508	10000	
Fe	56	2	72	797.625	ppb	797.625	1.90	1312212	10000	
Co	59	3	72	38.586	ppb	38.586	1.69	50219	2000	
Ni	60	3	72	61.788	ppb	61.788	0.59	23328	5000	
Cu	63	3	72	39.014	ppb	39.014	0.38	39306	5000	
Zn	66	3	72	41.208	ppb	41.208	3.32	6803	5000	
As	75	3	72	39.970	ppb	39.970	2.34	4554	2000	
Se	78	2	72	39.618	ppb	39.618	1.59	2354	2000	
Sr	88	3	72	1057.854	ppb	1057.854	0.93	568042	4000	
Mo	95	3	115	41.243	ppb	41.243	0.45	21430	2000	
Ag	107	3	115	38.269	ppb	38.269	1.25	67016	100	
Cd	111	3	115	37.014	ppb	37.014	3.85	9245	2000	
Sn	120	3	115	35.422	ppb	35.422	1.70	28732	2000	
Sb	121	3	115	37.513	ppb	37.513	1.15	29391	1000	
Ba	137	3	115	120.543	ppb	120.543	1.21	30802	5000	
Tl	205	3	193	37.373	ppb	37.373	1.03	149872	2000	
(Pb)	206	3	193	37.457	ppb	37.457	2.75	50060	100	
(Pb)	207	3	193	37.031	ppb	37.031	2.38	43718	100	
Pb	208	3	193	37.222	ppb	37.222	1.79	200916	5000	
Th	232	3	193	35.932	ppb	35.932	1.36	198869	2000	
U	238	3	193	38.035	ppb	38.035	0.94	215151	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4391094	1.12	4300192	102.11	60	120	
Sc (IS)	45	3	HMI He	639138	1.24	644593	99.15	60	120	
Ge Internal standard	72	2	HMI H2	2561715	0.89	2598552	98.58	60	120	
Ge Internal standard	72	3	HMI He	756687	0.68	772392	97.97	60	120	
In Internal Standard	115	3	HMI He	2892476	0.95	2872781	100.69	60	120	
Ir (IS)	193	3	HMI He	6310165	0.57	6092963	103.56	60	120	

Sample Report

Sample Table

Sample Name	280-174630-E-1-F MSD
Data File Name	182SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:20:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	43.133	ppb	43.133	6.51	1876	2000	
Na	23	3	45	106808.788	ppb	106808.788	1.10	12180911	400000	
Mg	24	3	45	15751.164	ppb	15751.164	1.82	943024	400000	
Al	27	3	45	790.424	ppb	790.424	2.60	18451	400000	
K	39	3	45	6409.061	ppb	6409.061	2.40	341321	400000	
Ca	40	2	45	143677.144	ppb	143677.144	2.31	84303284	400000	
V	51	3	72	39.486	ppb	39.486	3.82	25492	2000	
Cr	52	3	72	41.025	ppb	41.025	1.31	34357	5000	
Mn	55	3	72	40.427	ppb	40.427	1.79	16667	10000	
Fe	56	2	72	817.129	ppb	817.129	3.74	1319265	10000	
Co	59	3	72	40.024	ppb	40.024	2.14	51941	2000	
Ni	60	3	72	61.926	ppb	61.926	2.54	23311	5000	
Cu	63	3	72	40.689	ppb	40.689	3.83	40853	5000	
Zn	66	3	72	42.775	ppb	42.775	2.17	7035	5000	
As	75	3	72	40.432	ppb	40.432	4.57	4592	2000	
Se	78	2	72	41.550	ppb	41.550	4.59	2425	2000	
Sr	88	3	72	1062.937	ppb	1062.937	1.05	569220	4000	
Mo	95	3	115	43.684	ppb	43.684	2.61	22307	2000	
Ag	107	3	115	39.235	ppb	39.235	1.66	67547	100	
Cd	111	3	115	40.072	ppb	40.072	1.28	9842	2000	
Sn	120	3	115	36.665	ppb	36.665	1.11	29214	2000	
Sb	121	3	115	39.517	ppb	39.517	3.45	30428	1000	
Ba	137	3	115	126.060	ppb	126.060	2.09	31660	5000	
Tl	205	3	193	38.156	ppb	38.156	1.03	152006	2000	
(Pb)	206	3	193	38.702	ppb	38.702	0.89	51378	100	
(Pb)	207	3	193	37.800	ppb	37.800	1.65	44325	100	
Pb	208	3	193	38.405	ppb	38.405	1.56	205899	5000	
Th	232	3	193	38.654	ppb	38.654	0.61	212004	2000	
U	238	3	193	38.965	ppb	38.965	0.78	218931	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365392	1.23	4300192	101.52	60	120	
Sc (IS)	45	3	HMI He	638707	0.78	644593	99.09	60	120	
Ge Internal standard	72	2	HMI H2	2517827	1.71	2598552	96.89	60	120	
Ge Internal standard	72	3	HMI He	754656	1.46	772392	97.70	60	120	
In Internal Standard	115	3	HMI He	2843989	2.11	2872781	99.00	60	120	
Ir (IS)	193	3	HMI He	6268932	0.69	6092963	102.89	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-1-B@50
Data File Name	183SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:22:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.073	ppb	-0.073	-181.67	3	2000	
Na	23	3	45	22827.275	ppb	22827.275	1.44	2586351	400000	
Mg	24	3	45	7235.369	ppb	7235.369	1.23	428414	400000	
Al	27	3	45	1.002	ppb	1.002	129.82	174	400000	
K	39	3	45	314.388	ppb	314.388	7.95	42745	400000	
Ca	40	2	45	10718.537	ppb	10718.537	0.39	6220647	400000	
V	51	3	72	-0.118	ppb	-0.118	-96.99	895	2000	
Cr	52	3	72	0.235	ppb	0.235	165.07	3210	5000	
Mn	55	3	72	2.007	ppb	2.007	11.75	1171	10000	
Fe	56	2	72	4.042	ppb	4.042	86.88	68286	10000	
Co	59	3	72	0.019	ppb	0.019	74.31	78	2000	
Ni	60	3	72	0.510	ppb	0.510	22.80	855	5000	
Cu	63	3	72	0.217	ppb	0.217	2.79	598	5000	
Zn	66	3	72	4.146	ppb	4.146	4.84	878	5000	
As	75	3	72	0.174	ppb	0.174	76.33	62	2000	
Se	78	2	72	47.813	ppb	47.813	3.63	2804	2000	
Sr	88	3	72	198.424	ppb	198.424	0.63	105641	4000	
Mo	95	3	115	0.086	ppb	0.086	64.20	80	2000	
Ag	107	3	115	0.016	ppb	0.016	31.12	40	100	
Cd	111	3	115	-0.020	ppb	-0.020	-103.20	5	2000	
Sn	120	3	115	0.531	ppb	0.531	7.97	1134	2000	
Sb	121	3	115	0.064	ppb	0.064	79.71	92	1000	
Ba	137	3	115	0.219	ppb	0.219	40.95	113	5000	
Tl	205	3	193	-0.024	ppb	-0.024	-30.09	300	2000	
(Pb)	206	3	193	0.404	ppb	0.404	13.61	868	100	
(Pb)	207	3	193	0.382	ppb	0.382	6.56	946	100	
Pb	208	3	193	0.373	ppb	0.373	9.29	3543	5000	
Th	232	3	193	1.903	ppb	1.903	11.44	17327	2000	
U	238	3	193	3.677	ppb	3.677	1.58	22276	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4308668	0.80	4300192	100.20	60	120	
Sc (IS)	45	3	HMI He	631484	1.27	644593	97.97	60	120	
Ge Internal standard	72	2	HMI H2	2529892	0.61	2598552	97.36	60	120	
Ge Internal standard	72	3	HMI He	749987	0.75	772392	97.10	60	120	
In Internal Standard	115	3	HMI He	2782601	1.68	2872781	96.86	60	120	
Ir (IS)	193	3	HMI He	6321109	0.94	6092963	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-2-B@50
Data File Name	184SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:24:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.074	ppb	-0.074	-88.64	3	2000	
Na	23	3	45	45712.170	ppb	45712.170	0.97	5182280	400000	
Mg	24	3	45	6806.536	ppb	6806.536	1.95	404553	400000	
Al	27	3	45	2.581	ppb	2.581	102.17	210	400000	
K	39	3	45	321.613	ppb	321.613	7.01	43240	400000	
Ca	40	2	45	5812.678	ppb	5812.678	1.06	3442662	400000	
V	51	3	72	0.021	ppb	0.021	272.28	990	2000	
Cr	52	3	72	0.363	ppb	0.363	53.70	3339	5000	
Mn	55	3	72	6.153	ppb	6.153	3.58	2859	10000	
Fe	56	2	72	5.935	ppb	5.935	53.24	72136	10000	
Co	59	3	72	0.186	ppb	0.186	10.80	297	2000	
Ni	60	3	72	1.006	ppb	1.006	7.83	1045	5000	
Cu	63	3	72	0.180	ppb	0.180	6.64	566	5000	
Zn	66	3	72	3.918	ppb	3.918	12.99	850	5000	
As	75	3	72	0.215	ppb	0.215	80.00	67	2000	
Se	78	2	72	0.123	ppb	0.123	102.00	9	2000	
Sr	88	3	72	172.552	ppb	172.552	0.76	92729	4000	
Mo	95	3	115	0.163	ppb	0.163	14.48	122	2000	
Ag	107	3	115	0.014	ppb	0.014	89.36	38	100	
Cd	111	3	115	-0.014	ppb	-0.014	-222.87	7	2000	
Sn	120	3	115	0.337	ppb	0.337	47.05	1016	2000	
Sb	121	3	115	0.059	ppb	0.059	62.05	90	1000	
Ba	137	3	115	0.292	ppb	0.292	36.37	135	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-6.86	220	2000	
(Pb)	206	3	193	0.365	ppb	0.365	8.49	806	100	
(Pb)	207	3	193	0.319	ppb	0.319	4.77	861	100	
Pb	208	3	193	0.330	ppb	0.330	1.56	3272	5000	
Th	232	3	193	0.392	ppb	0.392	25.98	9144	2000	
U	238	3	193	1.054	ppb	1.054	3.89	7425	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4389440	1.35	4300192	102.08	60	120	
Sc (IS)	45	3	HMI He	633781	0.15	644593	98.32	60	120	
Ge Internal standard	72	2	HMI H2	2561668	1.44	2598552	98.58	60	120	
Ge Internal standard	72	3	HMI He	757000	1.06	772392	98.01	60	120	
In Internal Standard	115	3	HMI He	2859777	1.68	2872781	99.55	60	120	
Ir (IS)	193	3	HMI He	6244634	1.73	6092963	102.49	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-3-B@50
Data File Name	185SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:26:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.073	ppb	-0.073	-178.91	3	2000	
Na	23	3	45	22808.443	ppb	22808.443	0.67	2588615	400000	
Mg	24	3	45	5761.280	ppb	5761.280	1.03	341760	400000	
Al	27	3	45	0.564	ppb	0.564	41.94	163	400000	
K	39	3	45	239.810	ppb	239.810	10.22	39187	400000	
Ca	40	2	45	7870.827	ppb	7870.827	0.82	4588819	400000	
V	51	3	72	0.169	ppb	0.169	18.72	1088	2000	
Cr	52	3	72	0.405	ppb	0.405	55.81	3390	5000	
Mn	55	3	72	5.811	ppb	5.811	6.77	2737	10000	
Fe	56	2	72	6.852	ppb	6.852	51.09	72810	10000	
Co	59	3	72	0.018	ppb	0.018	81.53	78	2000	
Ni	60	3	72	0.620	ppb	0.620	20.70	908	5000	
Cu	63	3	72	0.202	ppb	0.202	8.96	591	5000	
Zn	66	3	72	3.616	ppb	3.616	10.23	806	5000	
As	75	3	72	0.285	ppb	0.285	43.59	75	2000	
Se	78	2	72	5.563	ppb	5.563	14.12	329	2000	
Sr	88	3	72	157.871	ppb	157.871	1.85	85302	4000	
Mo	95	3	115	0.089	ppb	0.089	50.70	85	2000	
Ag	107	3	115	0.025	ppb	0.025	12.05	58	100	
Cd	111	3	115	-0.028	ppb	-0.028	-82.70	3	2000	
Sn	120	3	115	0.198	ppb	0.198	32.75	923	2000	
Sb	121	3	115	0.035	ppb	0.035	19.19	73	1000	
Ba	137	3	115	0.120	ppb	0.120	49.63	93	5000	
Tl	205	3	193	-0.047	ppb	-0.047	-13.85	202	2000	
(Pb)	206	3	193	0.352	ppb	0.352	7.91	785	100	
(Pb)	207	3	193	0.344	ppb	0.344	18.32	886	100	
Pb	208	3	193	0.346	ppb	0.346	1.37	3339	5000	
Th	232	3	193	-0.035	ppb	-0.035	-298.91	6840	2000	
U	238	3	193	2.473	ppb	2.473	3.29	15228	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4325564	1.84	4300192	100.59	60	120	
Sc (IS)	45	3	HMI He	632470	0.34	644593	98.12	60	120	
Ge Internal standard	72	2	HMI H2	2537883	1.65	2598552	97.67	60	120	
Ge Internal standard	72	3	HMI He	761130	1.47	772392	98.54	60	120	
In Internal Standard	115	3	HMI He	2911788	1.00	2872781	101.36	60	120	
Ir (IS)	193	3	HMI He	6208479	1.78	6092963	101.90	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-1-B
Data File Name	186SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:28:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	1035626.592	ppb	1035626.592	0.84	118340153	400000	
Mg	24	3	45	327846.123	ppb	327846.123	1.09	19689796	400000	
Al	27	3	45	-0.104	ppb	-0.104	-2282.91	150	400000	
K	39	3	45	15034.455	ppb	15034.455	1.56	765817	400000	
Ca	40	2	45	524072.720	ppb	524072.720	0.58	297473506	400000	
V	51	3	72	-0.236	ppb	-0.236	-51.66	828	2000	
Cr	52	3	72	0.308	ppb	0.308	76.42	3292	5000	
Mn	55	3	72	20.070	ppb	20.070	0.98	8473	10000	
Fe	56	2	72	7.936	ppb	7.936	45.89	74004	10000	
Co	59	3	72	0.127	ppb	0.127	16.60	218	2000	
Ni	60	3	72	1.511	ppb	1.511	3.75	1228	5000	
Cu	63	3	72	1.189	ppb	1.189	3.42	1571	5000	
Zn	66	3	72	2.694	ppb	2.694	6.35	653	5000	
As	75	3	72	0.214	ppb	0.214	105.80	67	2000	
Se	78	2	72	2264.598	ppb	2264.598	0.77	132166	2000	
Sr	88	3	72	9743.235	ppb	9743.235	2.09	5224020	4000	
Mo	95	3	115	0.996	ppb	0.996	20.26	530	2000	
Ag	107	3	115	0.008	ppb	0.008	20.96	27	100	
Cd	111	3	115	-0.013	ppb	-0.013	-250.93	7	2000	
Sn	120	3	115	-0.001	ppb	-0.001	-12900.80	725	2000	
Sb	121	3	115	0.087	ppb	0.087	52.36	108	1000	
Ba	137	3	115	11.154	ppb	11.154	6.98	2776	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-14.88	215	2000	
(Pb)	206	3	193	-0.032	ppb	-0.032	-30.65	277	100	
(Pb)	207	3	193	-0.021	ppb	-0.021	-44.57	456	100	
Pb	208	3	193	-0.026	ppb	-0.026	-28.77	1348	5000	
Th	232	3	193	-0.111	ppb	-0.111	-60.45	6312	2000	
U	238	3	193	182.125	ppb	182.125	3.30	985818	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4222837	1.31	4300192	98.20	60	120	
Sc (IS)	45	3	HMI He	640786	1.10	644593	99.41	60	120	
Ge Internal standard	72	2	HMI H2	2518751	0.98	2598552	96.93	60	120	
Ge Internal standard	72	3	HMI He	755730	1.56	772392	97.84	60	120	
In Internal Standard	115	3	HMI He	2763803	1.18	2872781	96.21	60	120	
Ir (IS)	193	3	HMI He	6076904	2.70	6092963	99.74	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-2-B
Data File Name	187SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:29:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-96.48	3	2000	
Na	23	3	45	2080505.447	ppb	2080505.447	0.24	233686306	400000	>LDR
Mg	24	3	45	308910.886	ppb	308910.886	0.92	18235279	400000	
Al	27	3	45	1.762	ppb	1.762	41.81	190	400000	
K	39	3	45	15359.140	ppb	15359.140	0.89	768431	400000	
Ca	40	2	45	270339.985	ppb	270339.985	1.21	156862090	400000	
V	51	3	72	-0.297	ppb	-0.297	-50.31	778	2000	
Cr	52	3	72	2.288	ppb	2.288	9.43	4727	5000	
Mn	55	3	72	191.126	ppb	191.126	1.30	76270	10000	
Fe	56	2	72	9.680	ppb	9.680	48.63	78084	10000	
Co	59	3	72	6.594	ppb	6.594	1.05	8475	2000	
Ni	60	3	72	18.634	ppb	18.634	4.34	7375	5000	
Cu	63	3	72	0.605	ppb	0.605	6.09	973	5000	
Zn	66	3	72	7.687	ppb	7.687	5.39	1426	5000	
As	75	3	72	0.225	ppb	0.225	66.60	67	2000	
Se	78	2	72	3.702	ppb	3.702	12.64	222	2000	
Sr	88	3	72	8569.151	ppb	8569.151	1.49	4519780	4000	
Mo	95	3	115	6.110	ppb	6.110	3.77	3050	2000	
Ag	107	3	115	0.003	ppb	0.003	52.08	18	100	
Cd	111	3	115	-0.013	ppb	-0.013	-86.14	7	2000	
Sn	120	3	115	0.661	ppb	0.661	11.64	1219	2000	
Sb	121	3	115	0.798	ppb	0.798	5.43	638	1000	
Ba	137	3	115	11.926	ppb	11.926	5.62	2951	5000	
Tl	205	3	193	-0.050	ppb	-0.050	-8.21	180	2000	
(Pb)	206	3	193	0.019	ppb	0.019	197.17	330	100	
(Pb)	207	3	193	-0.035	ppb	-0.035	-276.14	425	100	
Pb	208	3	193	-0.010	ppb	-0.010	-382.06	1376	5000	
Th	232	3	193	-0.255	ppb	-0.255	-21.15	5382	2000	
U	238	3	193	49.188	ppb	49.188	2.49	258432	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4316178	1.41	4300192	100.37	60	120	
Sc (IS)	45	3	HMI He	629887	0.64	644593	97.72	60	120	
Ge Internal standard	72	2	HMI H2	2572009	3.91	2598552	98.98	60	120	
Ge Internal standard	72	3	HMI He	743395	1.66	772392	96.25	60	120	
In Internal Standard	115	3	HMI He	2753145	3.17	2872781	95.84	60	120	
Ir (IS)	193	3	HMI He	5872618	2.08	6092963	96.38	60	120	

Sample Report

Sample Table

Sample Name	280-175011-D-3-B
Data File Name	188SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:31:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609057 6020b
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.27	2	2000	
Na	23	3	45	1061466.876	ppb	1061466.876	1.06	119050991	400000	
Mg	24	3	45	269346.915	ppb	269346.915	1.06	15874380	400000	
Al	27	3	45	2.065	ppb	2.065	84.81	197	400000	
K	39	3	45	11479.921	ppb	11479.921	0.35	580359	400000	
Ca	40	2	45	377803.164	ppb	377803.164	0.93	214963825	400000	
V	51	3	72	-0.169	ppb	-0.169	-51.94	861	2000	
Cr	52	3	72	0.483	ppb	0.483	39.23	3394	5000	
Mn	55	3	72	190.064	ppb	190.064	0.62	76381	10000	
Fe	56	2	72	6.447	ppb	6.447	63.56	71026	10000	
Co	59	3	72	0.217	ppb	0.217	16.24	333	2000	
Ni	60	3	72	4.486	ppb	4.486	4.63	2296	5000	
Cu	63	3	72	2.403	ppb	2.403	4.95	2754	5000	
Zn	66	3	72	2.672	ppb	2.672	13.50	643	5000	
As	75	3	72	0.578	ppb	0.578	15.26	107	2000	
Se	78	2	72	262.819	ppb	262.819	0.99	15195	2000	
Sr	88	3	72	7868.433	ppb	7868.433	1.31	4179756	4000	
Mo	95	3	115	2.102	ppb	2.102	3.25	1091	2000	
Ag	107	3	115	0.013	ppb	0.013	82.36	35	100	
Cd	111	3	115	0.022	ppb	0.022	256.15	15	2000	
Sn	120	3	115	-0.062	ppb	-0.062	-71.05	688	2000	
Sb	121	3	115	0.089	ppb	0.089	9.74	112	1000	
Ba	137	3	115	10.246	ppb	10.246	2.34	2586	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-37.19	215	2000	
(Pb)	206	3	193	-0.032	ppb	-0.032	-78.99	267	100	
(Pb)	207	3	193	-0.044	ppb	-0.044	-118.65	416	100	
Pb	208	3	193	-0.043	ppb	-0.043	-19.24	1214	5000	
Th	232	3	193	-0.387	ppb	-0.387	-23.21	4717	2000	
U	238	3	193	117.315	ppb	117.315	1.51	613804	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4232952	1.30	4300192	98.44	60	120	
Sc (IS)	45	3	HMI He	628919	1.28	644593	97.57	60	120	
Ge Internal standard	72	2	HMI H2	2494872	1.01	2598552	96.01	60	120	
Ge Internal standard	72	3	HMI He	748592	1.23	772392	96.92	60	120	
In Internal Standard	115	3	HMI He	2796362	1.01	2872781	97.34	60	120	
Ir (IS)	193	3	HMI He	5866571	1.61	6092963	96.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	189_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:33:24-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	50.581	ppb	1.959	2269	50	101.2	90	110	
Na	23	3	45	47905.615	ppb	1.639	5559584	51000	93.9	90	110	
Mg	24	3	45	10179.456	ppb	1.173	619353	11000	92.5	90	110	
Al	27	3	45	959.724	ppb	4.008	22725	1000	96.0	90	110	
K	39	3	45	10120.786	ppb	2.799	531221	11000	92.0	90	110	
Ca	40	2	45	10171.823	ppb	2.661	6189346	11000	92.5	90	110	
V	51	3	72	50.608	ppb	0.345	32994	50	101.2	90	110	
Cr	52	3	72	51.370	ppb	2.720	43013	50	102.7	90	110	
Mn	55	3	72	50.900	ppb	2.778	21267	50	101.8	90	110	
Fe	56	2	72	1056.325	ppb	1.111	1721888	1000	105.6	90	110	
Co	59	3	72	50.242	ppb	2.223	66372	50	100.5	90	110	
Ni	60	3	72	49.146	ppb	1.269	18979	50	98.3	90	110	
Cu	63	3	72	49.971	ppb	0.949	51005	50	99.9	90	110	
Zn	66	3	72	50.784	ppb	1.973	8460	50	101.6	90	110	
As	75	3	72	51.935	ppb	1.069	5995	50	103.9	90	110	
Se	78	2	72	50.756	ppb	1.366	3022	50	101.5	90	110	
Sr	88	3	72	103.197	ppb	1.044	56301	100	103.2	90	110	
Mo	95	3	115	48.448	ppb	2.848	25301	50	96.9	90	110	
Ag	107	3	115	48.711	ppb	1.473	85773	50	97.4	90	110	
Cd	111	3	115	49.009	ppb	2.645	12306	50	98.0	90	110	
Sn	120	3	115	46.987	ppb	1.108	38072	50	94.0	90	110	
Sb	121	3	115	49.400	ppb	1.570	38904	50	98.8	90	110	
Ba	137	3	115	48.663	ppb	1.805	12540	50	97.3	90	110	
Tl	205	3	193	48.146	ppb	2.531	192047	50	96.3	90	110	
(Pb)	206	3	193	48.508	ppb	3.603	64419	50	97.0	90	110	
(Pb)	207	3	193	48.086	ppb	2.594	56354	50	96.2	90	110	
Pb	208	3	193	48.144	ppb	3.899	258143	50	96.3	90	110	
Th	232	3	193	47.400	ppb	0.501	258884	50	94.8	90	110	
U	238	3	193	48.445	ppb	3.485	272268	50	96.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4517622	1.35	4300192	105.06	60	120	
Sc (IS)	45	3	HMI He	648996	1.47	644593	100.68	60	120	
Ge Internal standard	72	2	HMI H2	2568452	1.23	2598552	98.84	60	120	
Ge Internal standard	72	3	HMI He	768265	0.61	772392	99.47	60	120	
In Internal Standard	115	3	HMI He	2908196	0.66	2872781	101.23	60	120	
Ir (IS)	193	3	HMI He	6281867	1.93	6092963	103.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	190_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:35:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	382.206	ppb	6.9	61035	25	>RL
Mg	24	3	45	20.213	ppb	13.6	1502	25	
Al	27	3	45	-2.435	ppb	-87.8	97	15	
K	39	3	45	2.161	ppb	1404.0	28397	50	
V	51	3	72	0.272	ppb	36.9	1183	1	
Cr	52	3	72	0.296	ppb	52.4	3392	1	
Mn	55	3	72	-0.198	ppb	-49.7	300	0.5	
Co	59	3	72	0.021	ppb	74.6	83	0.5	
Ni	60	3	72	0.228	ppb	82.2	783	1	
Cu	63	3	72	0.082	ppb	35.9	483	1	
Zn	66	3	72	-0.371	ppb	-54.5	170	5	
As	75	3	72	0.109	ppb	78.8	57	1	
Se	78	2	72	0.151	ppb	44.6	11	1	
Sr	88	3	72	0.490	ppb	17.4	315	0.5	
Mo	95	3	115	0.077	ppb	15.1	80	0.5	
Ag	107	3	115	0.012	ppb	105.5	35	1	
Cd	111	3	115	-0.021	ppb	-89.9	5	0.5	
Sn	120	3	115	0.095	ppb	142.2	855	1	
Sb	121	3	115	0.030	ppb	48.4	70	0.6	
Ba	137	3	115	-0.033	ppb	-139.7	55	0.5	
Tl	205	3	193	-0.029	ppb	-13.3	277	0.1	
(Pb)	206	3	193	-0.065	ppb	-26.8	243	1	
(Pb)	207	3	193	-0.030	ppb	-143.4	463	1	
Pb	208	3	193	-0.056	ppb	-38.6	1238	0.5	
Th	232	3	193	1.404	ppb	11.7	14611	1	>RL
U	238	3	193	0.047	ppb	24.6	1851	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4449982	1.41	4300192	103.48	60	120	
Sc (IS)	45	3	HMI He	649116	1.39	644593	100.70	60	120	
Ge Internal standard	72	2	HMI H2	2650603	0.92	2598552	102.00	60	120	
Ge Internal standard	72	3	HMI He	780881	1.24	772392	101.10	60	120	
In Internal Standard	115	3	HMI He	2956235	2.19	2872781	102.90	60	120	
Ir (IS)	193	3	HMI He	6301634	0.35	6092963	103.42	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	191LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:36:58-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.675	ppb	10.287	37	1	67.5	70	130	>+/-30%
Na	23	3	45	506.186	ppb	2.751	74543	300	168.7	70	130	>+/-30%
Mg	24	3	45	53.060	ppb	6.589	3461	50	106.1	70	130	
Al	27	3	45	43.520	ppb	7.793	1165	50	87.0	70	130	
K	39	3	45	89.064	ppb	26.200	32357	120	74.2	70	130	
Ca	40	2	45	208.763	ppb	2.831	137189	200	104.4	70	130	
V	51	3	72	5.184	ppb	3.978	4365	5	103.7	70	130	
Cr	52	3	72	2.138	ppb	19.417	4873	2	106.9	70	130	
Mn	55	3	72	0.843	ppb	23.255	738	1	84.3	70	130	
Fe	56	2	72	51.523	ppb	9.516	147650	50	103.0	70	130	
Co	59	3	72	0.948	ppb	4.360	1336	1	94.8	70	130	
Ni	60	3	72	2.352	ppb	15.171	1596	2	117.6	70	130	
Cu	63	3	72	2.061	ppb	6.016	2536	2	103.1	70	130	
Zn	66	3	72	8.597	ppb	7.708	1658	10	86.0	70	130	
As	75	3	72	5.355	ppb	11.386	671	5	107.1	70	130	
Se	78	2	72	5.144	ppb	11.427	316	5	102.9	70	130	
Sr	88	3	72	4.920	ppb	8.739	2786	5	98.4	70	130	
Mo	95	3	115	1.862	ppb	12.747	1006	2	93.1	70	130	
Ag	107	3	115	0.944	ppb	3.858	1671	1	94.4	70	130	
Cd	111	3	115	0.984	ppb	2.421	257	1	98.4	70	130	
Sn	120	3	115	8.470	ppb	4.451	7470	10	84.7	70	130	
Sb	121	3	115	1.879	ppb	4.896	1519	2	93.9	70	130	
Ba	137	3	115	0.870	ppb	11.112	285	1	87.0	70	130	
Tl	205	3	193	0.878	ppb	4.638	3942	1	87.8	70	130	
(Pb)	206	3	193	0.851	ppb	6.392	1474	1	85.1	70	130	
(Pb)	207	3	193	0.873	ppb	9.175	1533	1	87.3	70	130	
Pb	208	3	193	0.829	ppb	3.541	6034	1	82.9	70	130	
Th	232	3	193	1.076	ppb	7.697	13010	1	107.6	70	130	
U	238	3	193	0.967	ppb	2.474	7085	1	96.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4415970	1.23	4300192	102.69	60	120	
Sc (IS)	45	3	HMI He	641660	0.90	644593	99.54	60	120	
Ge Internal standard	72	2	HMI H2	2636047	1.40	2598552	101.44	60	120	
Ge Internal standard	72	3	HMI He	785536	0.72	772392	101.70	60	120	
In Internal Standard	115	3	HMI He	2901834	1.75	2872781	101.01	60	120	
Ir (IS)	193	3	HMI He	6371714	0.75	6092963	104.57	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608911/1-A
Data File Name	192_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:38:47-06:00
Sample Type	Blank
Dilution	1
Comment	608911 6020a
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.033	ppb	-349.025718	5	0.5
Na	23	3	45	320.204	ppb	29.00000116	52358	25
Mg	24	3	45	27.052	ppb	70.39938229	1862	25
Al	27	3	45	-0.149	ppb	-174.3655859	147	15
K	39	3	45	4.101	ppb	505.1885651	27712	50
Ca	40	2	45	18.116	ppb	3.291432152	23500	200
V	51	3	72	0.364	ppb	12.46072274	1219	1
Cr	52	3	72	1.174	ppb	18.88421992	4014	1
Mn	55	3	72	0.075	ppb	83.10990192	406	0.5
Fe	56	2	72	6.647	ppb	60.38003348	73092	50
Co	59	3	72	0.022	ppb	40.30865654	83	0.5
Ni	60	3	72	0.236	ppb	80.56793972	773	1
Cu	63	3	72	0.085	ppb	89.16352533	478	1
Zn	66	3	72	0.255	ppb	114.8503603	268	5
As	75	3	72	0.133	ppb	114.5280332	58	1
(Se)	78	3	72	1.055	ppb	130.4585939	30	1
Sr	88	3	72	0.663	ppb	76.11594634	403	0.5
Mo	95	3	115	0.042	ppb	19.56234625	60	0.5
Ag	107	3	115	0.008	ppb	191.478153	27	1
Cd	111	3	115	-0.014	ppb	-81.45558274	7	0.5
Sn	120	3	115	0.023	ppb	278.4439662	773	1
Sb	121	3	115	0.030	ppb	29.3351865	68	0.6
Ba	137	3	115	0.066	ppb	143.7242161	78	0.5
Tl	205	3	193	-0.036	ppb	-10.37806758	245	0.1
(Pb)	206	3	193	-0.033	ppb	-172.641127	280	1
(Pb)	207	3	193	-0.044	ppb	-92.5715793	438	1
Pb	208	3	193	-0.057	ppb	-19.34123853	1211	0.5
Th	232	3	193	-0.146	ppb	-29.64398167	6245	1
U	238	3	193	0.059	ppb	24.7279098	1884	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4315007	1.38	4300192	100.34	60	120	
Sc (IS)	45	3	HMI He	631093	0.35	644593	97.91	60	120	
Ge Internal standard	72	2	HMI H2	2558221	0.54	2598552	98.45	60	120	
Ge Internal standard	72	3	HMI He	767083	0.58	772392	99.31	60	120	
In Internal Standard	115	3	HMI He	2870398	1.26	2872781	99.92	60	120	
Ir (IS)	193	3	HMI He	6190210	0.42	6092963	101.60	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608911/24-A
Data File Name	193_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:40:36-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608911 6020a
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.974	41.974	ppb	4.861	1866	40	104.9	80	120	
Na	23	3	45	905.381	905.381	ppb	1.531	122302	40	2263.5	80	120	>+/-20%
Mg	24	3	45	717.109	717.109	ppb	1.371	44146	40	1792.8	80	120	>+/-20%
Al	27	3	45	728.956	728.956	ppb	4.531	17402	40	1822.4	80	120	>+/-20%
K	39	3	45	723.121	723.121	ppb	5.300	64603	40	1807.8	80	120	>+/-20%
Ca	40	2	45	793.203	793.203	ppb	2.760	498916	40	1983.0	80	120	>+/-20%
V	51	3	72	38.136	38.136	ppb	0.702	25873	40	95.3	80	120	
Cr	52	3	72	39.201	39.201	ppb	0.641	34586	40	98.0	80	120	
Mn	55	3	72	39.203	39.203	ppb	2.525	16970	40	98.0	80	120	
Fe	56	2	72	824.506	824.506	ppb	2.489	1408703	40	2061.3	80	120	>+/-20%
(Fe)	56	3	72	768.920	768.920	ppb	1.053	540931	40	1922.3	80	120	>+/-20%
Co	59	3	72	38.638	38.638	ppb	0.984	52617	40	96.6	80	120	
Ni	60	3	72	38.056	38.056	ppb	1.183	15304	40	95.1	80	120	
Cu	63	3	72	39.404	39.404	ppb	1.865	41533	40	98.5	80	120	
Zn	66	3	72	40.428	40.428	ppb	1.381	6988	40	101.1	80	120	
As	75	3	72	39.243	39.243	ppb	1.666	4678	40	98.1	80	120	
Se	78	2	72	41.442	41.442	ppb	3.258	2560	40	103.6	80	120	
(Se)	78	3	72	44.651	44.651	ppb	20.621	320	40	111.6	80	120	
Sr	88	3	72	80.247	80.247	ppb	1.488	45127	40	200.6	80	120	>+/-20%
Mo	95	3	115	37.287	37.287	ppb	2.100	20125	40	93.2	80	120	
Ag	107	3	115	38.420	38.420	ppb	2.514	69879	40	96.1	80	120	
Cd	111	3	115	38.465	38.465	ppb	6.030	9975	40	96.2	80	120	
Sn	120	3	115	35.883	35.883	ppb	1.187	30224	40	89.7	80	120	
Sb	121	3	115	38.113	38.113	ppb	1.887	31021	40	95.3	80	120	
Ba	137	3	115	38.225	38.225	ppb	2.219	10192	40	95.6	80	120	
Tl	205	3	193	37.678	37.678	ppb	1.783	157442	40	94.2	80	120	
(Pb)	206	3	193	38.255	38.255	ppb	2.124	53270	40	95.6	80	120	
(Pb)	207	3	193	37.543	37.543	ppb	1.515	46183	40	93.9	80	120	
Pb	208	3	193	38.013	38.013	ppb	2.138	213772	40	95.0	80	120	
Th	232	3	193	34.769	34.769	ppb	2.973	200735	40	86.9	80	120	
U	238	3	193	37.928	37.928	ppb	1.719	223569	40	94.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4553343	2.98	4300192	105.89	60	120	
Sc (IS)	45	3	HMI He	652843	1.11	644593	101.28	60	120	
Ge Internal standard	72	2	HMI H2	2665629	2.67	2598552	102.58	60	120	
Ge Internal standard	72	3	HMI He	791688	0.31	772392	102.50	60	120	
In Internal Standard	115	3	HMI He	3004777	1.89	2872781	104.59	60	120	
Ir (IS)	193	3	HMI He	6576293	1.51	6092963	107.93	60	120	

Sample Report

Sample Table

Sample Name	280-175070-D-2-A
Data File Name	194SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:42:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3041812.782	ppb	3041812.782	0.45	346055296	400000	>LDR
Mg	24	3	45	64345.029	ppb	64345.029	1.40	3847550	400000	
Al	27	3	45	140.175	ppb	140.175	2.96	3394	400000	
K	39	3	45	224844.315	ppb	224844.315	1.59	11014505	400000	
Ca	40	2	45	5585.121	ppb	5585.121	1.23	3420743	400000	
V	51	3	72	209.428	ppb	209.428	2.18	134270	2000	
Cr	52	3	72	242.206	ppb	242.206	2.09	192486	5000	
Mn	55	3	72	134.477	ppb	134.477	1.27	55929	10000	
Fe	56	2	72	1771.257	ppb	1771.257	1.10	2993661	10000	
Co	59	3	72	12.162	ppb	12.162	2.45	16211	2000	
Ni	60	3	72	188.940	ppb	188.940	2.77	71459	5000	
Cu	63	3	72	3.399	ppb	3.399	1.87	3860	5000	
Zn	66	3	72	17.775	ppb	17.775	1.72	3129	5000	
As	75	3	72	97.443	ppb	97.443	2.00	11282	2000	
Se	78	2	72	0.892	ppb	0.892	9.11	58	2000	
Sr	88	3	72	261.918	ppb	261.918	1.85	143739	4000	
Mo	95	3	115	9.786	ppb	9.786	3.00	4913	2000	
Ag	107	3	115	0.061	ppb	0.061	26.96	115	100	
Cd	111	3	115	0.036	ppb	0.036	147.42	18	2000	
Sn	120	3	115	5.307	ppb	5.307	5.29	4757	2000	
Sb	121	3	115	16.451	ppb	16.451	4.92	12408	1000	
Ba	137	3	115	159.262	ppb	159.262	2.07	39083	5000	
Tl	205	3	193	0.490	ppb	0.490	10.35	2222	2000	
(Pb)	206	3	193	0.500	ppb	0.500	9.01	938	100	
(Pb)	207	3	193	0.459	ppb	0.459	4.88	976	100	
Pb	208	3	193	0.491	ppb	0.491	0.93	3937	5000	
Th	232	3	193	0.621	ppb	0.621	9.22	9874	2000	
U	238	3	193	0.478	ppb	0.478	4.48	4032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4537949	1.20	4300192	105.53	60	120	
Sc (IS)	45	3	HMI He	638008	0.12	644593	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2702999	1.53	2598552	104.02	60	120	
Ge Internal standard	72	3	HMI He	773235	1.22	772392	100.11	60	120	
In Internal Standard	115	3	HMI He	2779540	0.98	2872781	96.75	60	120	
Ir (IS)	193	3	HMI He	5957679	0.51	6092963	97.78	60	120	

Sample Report

Sample Table

Sample Name	280-175070-D-3-A
Data File Name	195SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:44:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	275744.557	ppb	275744.557	2.23	29957417	400000	
Mg	24	3	45	149426.163	ppb	149426.163	1.03	8529274	400000	
Al	27	3	45	26.245	ppb	26.245	8.46	724	400000	
K	39	3	45	25770.808	ppb	25770.808	1.14	1228855	400000	
Ca	40	2	45	293856.186	ppb	293856.186	2.77	160900637	400000	
V	51	3	72	2.356	ppb	2.356	6.77	2406	2000	
Cr	52	3	72	2.995	ppb	2.995	11.07	5267	5000	
Mn	55	3	72	5626.433	ppb	5626.433	3.94	2239392	10000	
Fe	56	2	72	9422.300	ppb	9422.300	1.98	14364102	10000	
Co	59	3	72	4.947	ppb	4.947	3.70	6383	2000	
Ni	60	3	72	107.431	ppb	107.431	1.28	39436	5000	
Cu	63	3	72	8.885	ppb	8.885	2.29	9105	5000	
Zn	66	3	72	26.121	ppb	26.121	3.32	4327	5000	
As	75	3	72	2.938	ppb	2.938	13.29	368	2000	
Se	78	2	72	0.244	ppb	0.244	50.27	16	2000	
Sr	88	3	72	1678.839	ppb	1678.839	1.43	887464	4000	
Mo	95	3	115	0.404	ppb	0.404	13.90	237	2000	
Ag	107	3	115	0.009	ppb	0.009	53.88	28	100	
Cd	111	3	115	-0.026	ppb	-0.026	-95.21	3	2000	
Sn	120	3	115	0.921	ppb	0.921	12.14	1414	2000	
Sb	121	3	115	0.206	ppb	0.206	20.65	197	1000	
Ba	137	3	115	416.941	ppb	416.941	2.35	101205	5000	
Tl	205	3	193	0.061	ppb	0.061	4.38	596	2000	
(Pb)	206	3	193	3.255	ppb	3.255	2.90	4344	100	
(Pb)	207	3	193	3.178	ppb	3.178	1.96	3930	100	
Pb	208	3	193	3.243	ppb	3.243	1.59	17659	5000	
Th	232	3	193	0.917	ppb	0.917	12.50	11238	2000	
U	238	3	193	0.331	ppb	0.331	4.95	3217	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4076175	4.12	4300192	94.79	60	120	
Sc (IS)	45	3	HMI He	609128	1.91	644593	94.50	60	120	
Ge Internal standard	72	2	HMI H2	2482886	1.33	2598552	95.55	60	120	
Ge Internal standard	72	3	HMI He	744845	0.89	772392	96.43	60	120	
In Internal Standard	115	3	HMI He	2752750	2.98	2872781	95.82	60	120	
Ir (IS)	193	3	HMI He	5892696	0.96	6092963	96.71	60	120	

Sample Report

Sample Table

Sample Name	280-174977-C-12-A
Data File Name	196SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:45:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.43	2	2000	
Na	23	3	45	1120.298	ppb	1120.298	2.98	140447	400000	
Mg	24	3	45	107.913	ppb	107.913	6.08	6555	400000	
Al	27	3	45	503.614	ppb	503.614	5.25	11510	400000	
K	39	3	45	225.195	ppb	225.195	13.59	37866	400000	
Ca	40	2	45	299.520	ppb	299.520	4.12	183985	400000	
V	51	3	72	1.259	ppb	1.259	21.23	1779	2000	
Cr	52	3	72	1.753	ppb	1.753	23.91	4454	5000	
Mn	55	3	72	8.672	ppb	8.672	3.26	3920	10000	
Fe	56	2	72	435.817	ppb	435.817	2.94	736093	10000	
Co	59	3	72	0.136	ppb	0.136	6.87	233	2000	
Ni	60	3	72	0.910	ppb	0.910	28.35	1020	5000	
Cu	63	3	72	0.646	ppb	0.646	4.92	1043	5000	
Zn	66	3	72	2.840	ppb	2.840	8.40	685	5000	
As	75	3	72	0.236	ppb	0.236	62.01	70	2000	
Se	78	2	72	0.023	ppb	0.023	86.41	3	2000	
Sr	88	3	72	1.294	ppb	1.294	13.34	746	4000	
Mo	95	3	115	8.510	ppb	8.510	6.14	4405	2000	
Ag	107	3	115	0.009	ppb	0.009	15.37	28	100	
Cd	111	3	115	0.000	ppb	0.000	-75700.74	10	2000	
Sn	120	3	115	0.428	ppb	0.428	164.43	1091	2000	
Sb	121	3	115	0.127	ppb	0.127	8.68	143	1000	
Ba	137	3	115	3.185	ppb	3.185	9.99	866	5000	
Tl	205	3	193	0.024	ppb	0.024	63.70	470	2000	
(Pb)	206	3	193	0.204	ppb	0.204	19.45	576	100	
(Pb)	207	3	193	0.218	ppb	0.218	7.27	723	100	
Pb	208	3	193	0.190	ppb	0.190	3.30	2451	5000	
Th	232	3	193	0.050	ppb	0.050	41.04	7110	2000	
U	238	3	193	0.045	ppb	0.045	75.85	1764	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4254796	2.72	4300192	98.94	60	120	
Sc (IS)	45	3	HMI He	622400	0.29	644593	96.56	60	120	
Ge Internal standard	72	2	HMI H2	2529955	1.41	2598552	97.36	60	120	
Ge Internal standard	72	3	HMI He	764969	1.58	772392	99.04	60	120	
In Internal Standard	115	3	HMI He	2864496	2.21	2872781	99.71	60	120	
Ir (IS)	193	3	HMI He	6056571	0.25	6092963	99.40	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-2-A
Data File Name	197SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:47:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.072	ppb	-0.072	-185.10	3	2000	
Na	23	3	45	18992.908	ppb	18992.908	1.68	2239779	400000	
Mg	24	3	45	13172.659	ppb	13172.659	2.88	810423	400000	
Al	27	3	45	0.723	ppb	0.723	260.41	174	400000	
K	39	3	45	7427.584	ppb	7427.584	0.66	401966	400000	
Ca	40	2	45	49558.479	ppb	49558.479	2.89	30100787	400000	
V	51	3	72	24.265	ppb	24.265	0.40	17110	2000	
Cr	52	3	72	1.828	ppb	1.828	18.03	4742	5000	
Mn	55	3	72	3.995	ppb	3.995	7.94	2111	10000	
Fe	56	2	72	9.111	ppb	9.111	54.00	82853	10000	
Co	59	3	72	0.037	ppb	0.037	40.72	108	2000	
Ni	60	3	72	0.410	ppb	0.410	52.32	878	5000	
Cu	63	3	72	0.555	ppb	0.555	10.15	1000	5000	
Zn	66	3	72	1.365	ppb	1.365	9.72	470	5000	
As	75	3	72	13.560	ppb	13.560	4.50	1673	2000	
Se	78	2	72	3.948	ppb	3.948	8.36	255	2000	
Sr	88	3	72	264.945	ppb	264.945	1.66	151324	4000	
Mo	95	3	115	9.370	ppb	9.370	3.47	4988	2000	
Ag	107	3	115	0.004	ppb	0.004	82.56	20	100	
Cd	111	3	115	-0.021	ppb	-0.021	-94.64	5	2000	
Sn	120	3	115	-0.192	ppb	-0.192	-31.98	620	2000	
Sb	121	3	115	0.314	ppb	0.314	13.06	297	1000	
Ba	137	3	115	42.893	ppb	42.893	3.38	11204	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-1092.19	385	2000	
(Pb)	206	3	193	-0.051	ppb	-0.051	-46.98	262	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-69.10	426	100	
Pb	208	3	193	-0.057	ppb	-0.057	-22.98	1226	5000	
Th	232	3	193	-0.154	ppb	-0.154	-34.33	6295	2000	
U	238	3	193	1.660	ppb	1.660	1.40	10866	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4518104	2.86	4300192	105.07	60	120	
Sc (IS)	45	3	HMI He	656296	0.93	644593	101.82	60	120	
Ge Internal standard	72	2	HMI H2	2758294	3.29	2598552	106.15	60	120	
Ge Internal standard	72	3	HMI He	804689	0.86	772392	104.18	60	120	
In Internal Standard	115	3	HMI He	2945724	0.84	2872781	102.54	60	120	
Ir (IS)	193	3	HMI He	6285356	1.74	6092963	103.16	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-5-A
Data File Name	198SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:49:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.111	ppb	-0.111	-59.96	2	2000	
Na	23	3	45	17580.192	ppb	17580.192	1.59	2041698	400000	
Mg	24	3	45	17301.380	ppb	17301.380	1.69	1047709	400000	
Al	27	3	45	7.532	ppb	7.532	54.55	330	400000	
K	39	3	45	6992.106	ppb	6992.106	2.05	374092	400000	
Ca	40	2	45	59037.914	ppb	59037.914	2.07	35174806	400000	
V	51	3	72	21.574	ppb	21.574	5.10	15221	2000	
Cr	52	3	72	0.949	ppb	0.949	30.05	4000	5000	
Mn	55	3	72	0.324	ppb	0.324	29.24	530	10000	
Fe	56	2	72	6.338	ppb	6.338	49.52	75028	10000	
Co	59	3	72	0.022	ppb	0.022	20.98	87	2000	
Ni	60	3	72	1.422	ppb	1.422	6.71	1264	5000	
Cu	63	3	72	17.739	ppb	17.739	1.10	19099	5000	
Zn	66	3	72	1.857	ppb	1.857	11.63	550	5000	
As	75	3	72	5.353	ppb	5.353	15.41	683	2000	
Se	78	2	72	5.677	ppb	5.677	4.10	349	2000	
Sr	88	3	72	300.982	ppb	300.982	1.82	170738	4000	
Mo	95	3	115	2.774	ppb	2.774	4.88	1499	2000	
Ag	107	3	115	0.004	ppb	0.004	74.14	22	100	
Cd	111	3	115	0.005	ppb	0.005	208.81	12	2000	
Sn	120	3	115	-0.051	ppb	-0.051	-27.74	731	2000	
Sb	121	3	115	0.202	ppb	0.202	17.50	207	1000	
Ba	137	3	115	38.769	ppb	38.769	2.44	10101	5000	
Tl	205	3	193	-0.021	ppb	-0.021	-24.96	305	2000	
(Pb)	206	3	193	-0.012	ppb	-0.012	-96.57	310	100	
(Pb)	207	3	193	-0.083	ppb	-0.083	-35.25	396	100	
Pb	208	3	193	-0.049	ppb	-0.049	-40.17	1254	5000	
Th	232	3	193	-0.320	ppb	-0.320	-9.02	5360	2000	
U	238	3	193	3.048	ppb	3.048	1.02	18446	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4432053	2.40	4300192	103.07	60	120	
Sc (IS)	45	3	HMI He	646075	1.42	644593	100.23	60	120	
Ge Internal standard	72	2	HMI H2	2640387	2.05	2598552	101.61	60	120	
Ge Internal standard	72	3	HMI He	799244	0.87	772392	103.48	60	120	
In Internal Standard	115	3	HMI He	2937128	1.59	2872781	102.24	60	120	
Ir (IS)	193	3	HMI He	6224811	0.93	6092963	102.16	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-7-A
Data File Name	199SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:51:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.09	2	2000	
Na	23	3	45	18389.089	ppb	18389.089	0.50	2121519	400000	
Mg	24	3	45	10855.172	ppb	10855.172	1.87	653296	400000	
Al	27	3	45	11.215	ppb	11.215	3.00	414	400000	
K	39	3	45	5847.061	ppb	5847.061	2.09	315453	400000	
Ca	40	2	45	30972.346	ppb	30972.346	1.11	18199042	400000	
V	51	3	72	18.273	ppb	18.273	2.16	13081	2000	
Cr	52	3	72	1.964	ppb	1.964	20.15	4830	5000	
Mn	55	3	72	78.795	ppb	78.795	1.40	34111	10000	
Fe	56	2	72	312.361	ppb	312.361	1.46	565076	10000	
Co	59	3	72	0.093	ppb	0.093	34.13	185	2000	
Ni	60	3	72	0.738	ppb	0.738	18.68	1001	5000	
Cu	63	3	72	0.869	ppb	0.869	5.07	1328	5000	
Zn	66	3	72	4.856	ppb	4.856	5.24	1058	5000	
As	75	3	72	5.900	ppb	5.900	7.08	750	2000	
Se	78	2	72	1.667	ppb	1.667	8.36	103	2000	
Sr	88	3	72	168.391	ppb	168.391	2.92	95745	4000	
Mo	95	3	115	3.498	ppb	3.498	6.53	1894	2000	
Ag	107	3	115	0.030	ppb	0.030	21.74	67	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.239	ppb	-0.239	-11.09	585	2000	
Sb	121	3	115	0.115	ppb	0.115	40.54	138	1000	
Ba	137	3	115	19.957	ppb	19.957	3.36	5268	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-15.82	215	2000	
(Pb)	206	3	193	0.175	ppb	0.175	26.29	550	100	
(Pb)	207	3	193	0.133	ppb	0.133	23.75	640	100	
Pb	208	3	193	0.167	ppb	0.167	2.70	2381	5000	
Th	232	3	193	-0.339	ppb	-0.339	-4.81	5219	2000	
U	238	3	193	1.931	ppb	1.931	2.08	12158	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4368755	1.68	4300192	101.59	60	120	
Sc (IS)	45	3	HMI He	641954	0.50	644593	99.59	60	120	
Ge Internal standard	72	2	HMI H2	2621726	0.84	2598552	100.89	60	120	
Ge Internal standard	72	3	HMI He	801016	0.86	772392	103.71	60	120	
In Internal Standard	115	3	HMI He	2959568	2.18	2872781	103.02	60	120	
Ir (IS)	193	3	HMI He	6173384	0.19	6092963	101.32	60	120	

Sample Report

Sample Table

Sample Name	280-175081-A-1-A
Data File Name	200SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:53:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.57	2	2000	
Na	23	3	45	2998.985	ppb	2998.985	1.66	359616	400000	
Mg	24	3	45	4467.315	ppb	4467.315	0.50	268825	400000	
Al	27	3	45	0.606	ppb	0.606	283.29	167	400000	
K	39	3	45	2062.071	ppb	2062.071	1.46	129284	400000	
Ca	40	2	45	19940.107	ppb	19940.107	1.68	11746433	400000	
V	51	3	72	3.340	ppb	3.340	5.01	3209	2000	
Cr	52	3	72	1.652	ppb	1.652	10.03	4540	5000	
Mn	55	3	72	0.124	ppb	0.124	158.50	441	10000	
Fe	56	2	72	7.009	ppb	7.009	50.29	77017	10000	
Co	59	3	72	0.031	ppb	0.031	92.77	98	2000	
Ni	60	3	72	0.278	ppb	0.278	92.44	816	5000	
Cu	63	3	72	0.314	ppb	0.314	19.27	735	5000	
Zn	66	3	72	1.749	ppb	1.749	8.87	528	5000	
As	75	3	72	0.931	ppb	0.931	34.00	155	2000	
Se	78	2	72	0.183	ppb	0.183	40.57	13	2000	
Sr	88	3	72	97.612	ppb	97.612	2.05	55069	4000	
Mo	95	3	115	0.715	ppb	0.715	24.45	415	2000	
Ag	107	3	115	0.026	ppb	0.026	0.25	60	100	
Cd	111	3	115	-0.008	ppb	-0.008	-521.26	8	2000	
Sn	120	3	115	-0.280	ppb	-0.280	-32.51	546	2000	
Sb	121	3	115	0.121	ppb	0.121	21.37	142	1000	
Ba	137	3	115	24.147	ppb	24.147	2.44	6305	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-57.90	257	2000	
(Pb)	206	3	193	-0.075	ppb	-0.075	-7.72	225	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-73.52	421	100	
Pb	208	3	193	-0.063	ppb	-0.063	-18.17	1171	5000	
Th	232	3	193	-0.404	ppb	-0.404	-11.78	4874	2000	
U	238	3	193	0.274	ppb	0.274	6.70	3051	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4378112	1.60	4300192	101.81	60	120	
Sc (IS)	45	3	HMI He	641482	1.01	644593	99.52	60	120	
Ge Internal standard	72	2	HMI H2	2677349	2.94	2598552	103.03	60	120	
Ge Internal standard	72	3	HMI He	794389	0.16	772392	102.85	60	120	
In Internal Standard	115	3	HMI He	2932034	0.19	2872781	102.06	60	120	
Ir (IS)	193	3	HMI He	6161290	1.12	6092963	101.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	201_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:55:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	55.314	ppb	4.202	2271	50	110.6	90	110	>+\-10%
Na	23	3	45	47026.133	ppb	2.730	5299158	51000	92.2	90	110	
Mg	24	3	45	10016.072	ppb	1.295	591673	11000	91.1	90	110	
Al	27	3	45	935.853	ppb	0.548	21525	1000	93.6	90	110	
K	39	3	45	9982.011	ppb	1.000	509142	11000	90.7	90	110	
Ca	40	2	45	10306.743	ppb	0.889	5939670	11000	93.7	90	110	
V	51	3	72	49.961	ppb	3.697	31770	50	99.9	90	110	
Cr	52	3	72	51.181	ppb	5.138	41788	50	102.4	90	110	
Mn	55	3	72	51.032	ppb	5.485	20784	50	102.1	90	110	
Fe	56	2	72	1035.671	ppb	3.033	1680774	1000	103.6	90	110	
Co	59	3	72	49.716	ppb	3.473	64042	50	99.4	90	110	
Ni	60	3	72	50.013	ppb	4.635	18817	50	100.0	90	110	
Cu	63	3	72	49.248	ppb	2.443	49029	50	98.5	90	110	
Zn	66	3	72	50.505	ppb	5.836	8202	50	101.0	90	110	
As	75	3	72	53.650	ppb	4.733	6035	50	107.3	90	110	
Se	78	2	72	49.250	ppb	1.770	2918	50	98.5	90	110	
Sr	88	3	72	101.516	ppb	3.729	54010	100	101.5	90	110	
Mo	95	3	115	47.552	ppb	1.381	24548	50	95.1	90	110	
Ag	107	3	115	47.668	ppb	0.695	82961	50	95.3	90	110	
Cd	111	3	115	47.955	ppb	4.120	11903	50	95.9	90	110	
Sn	120	3	115	46.953	ppb	1.911	37606	50	93.9	90	110	
Sb	121	3	115	48.290	ppb	2.036	37589	50	96.6	90	110	
Ba	137	3	115	48.685	ppb	4.488	12400	50	97.4	90	110	
Tl	205	3	193	47.913	ppb	0.742	185137	50	95.8	90	110	
(Pb)	206	3	193	48.314	ppb	2.700	62147	50	96.6	90	110	
(Pb)	207	3	193	48.078	ppb	1.871	54583	50	96.2	90	110	
Pb	208	3	193	48.139	ppb	2.449	250032	50	96.3	90	110	
Th	232	3	193	47.596	ppb	1.118	251705	50	95.2	90	110	
U	238	3	193	48.401	ppb	1.964	263488	50	96.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4278307	0.82	4300192	99.49	60	120	
Sc (IS)	45	3	HMI He	630052	0.42	644593	97.74	60	120	
Ge Internal standard	72	2	HMI H2	2555306	1.02	2598552	98.34	60	120	
Ge Internal standard	72	3	HMI He	749526	2.79	772392	97.04	60	120	
In Internal Standard	115	3	HMI He	2874606	0.37	2872781	100.06	60	120	
Ir (IS)	193	3	HMI He	6083536	1.67	6092963	99.85	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	202_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:56:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	134.539	ppb	0.1	31540	25	>RL
Mg	24	3	45	1.496	ppb	71.8	354	25	
Al	27	3	45	-3.068	ppb	-49.6	80	15	
K	39	3	45	6.069	ppb	625.6	27849	50	
V	51	3	72	0.708	ppb	38.3	1438	1	
Cr	52	3	72	0.263	ppb	82.1	3310	1	
Mn	55	3	72	0.010	ppb	1566.3	380	0.5	
Co	59	3	72	0.017	ppb	160.7	77	0.5	
Ni	60	3	72	0.306	ppb	36.3	800	1	
Cu	63	3	72	0.076	ppb	82.2	470	1	
Zn	66	3	72	-0.466	ppb	-12.8	152	5	
As	75	3	72	0.090	ppb	200.5	53	1	
Se	78	2	72	0.057	ppb	68.5	5	1	
Sr	88	3	72	0.031	ppb	157.3	60	0.5	
Mo	95	3	115	0.079	ppb	53.6	80	0.5	
Ag	107	3	115	0.009	ppb	32.2	30	1	
Cd	111	3	115	-0.021	ppb	-94.6	5	0.5	
Sn	120	3	115	-0.058	ppb	-56.4	718	1	
Sb	121	3	115	0.008	ppb	100.8	52	0.6	
Ba	137	3	115	-0.093	ppb	-54.1	38	0.5	
Tl	205	3	193	-0.026	ppb	-35.8	283	0.1	
(Pb)	206	3	193	-0.054	ppb	-29.6	252	1	
(Pb)	207	3	193	-0.073	ppb	-51.6	403	1	
Pb	208	3	193	-0.068	ppb	-14.9	1143	0.5	
Th	232	3	193	1.269	ppb	8.8	13549	1	>RL
U	238	3	193	0.028	ppb	93.7	1699	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4301515	0.79	4300192	100.03	60	120	
Sc (IS)	45	3	HMI He	632095	0.35	644593	98.06	60	120	
Ge Internal standard	72	2	HMI H2	2545655	0.44	2598552	97.96	60	120	
Ge Internal standard	72	3	HMI He	768110	0.68	772392	99.45	60	120	
In Internal Standard	115	3	HMI He	2906748	1.03	2872781	101.18	60	120	
Ir (IS)	193	3	HMI He	6143386	1.74	6092963	100.83	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	203LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T19:58:36-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.611	ppb	29.631	32	1	61.1	70	130	>+/-30%
Na	23	3	45	381.963	ppb	2.652	59695	300	127.3	70	130	
Mg	24	3	45	45.888	ppb	8.534	2997	50	91.8	70	130	
Al	27	3	45	39.103	ppb	13.662	1051	50	78.2	70	130	
K	39	3	45	112.573	ppb	13.665	33159	120	93.8	70	130	
Ca	40	2	45	196.061	ppb	2.359	125576	200	98.0	70	130	
V	51	3	72	5.435	ppb	0.970	4472	5	108.7	70	130	
Cr	52	3	72	2.225	ppb	8.752	4883	2	111.3	70	130	
Mn	55	3	72	0.799	ppb	23.505	711	1	79.9	70	130	
Fe	56	2	72	54.451	ppb	7.939	149862	50	108.9	70	130	
Co	59	3	72	0.957	ppb	4.085	1331	1	95.7	70	130	
Ni	60	3	72	2.256	ppb	4.110	1541	2	112.8	70	130	
Cu	63	3	72	1.880	ppb	1.630	2319	2	94.0	70	130	
Zn	66	3	72	9.255	ppb	9.686	1744	10	92.5	70	130	
As	75	3	72	4.908	ppb	10.232	611	5	98.2	70	130	
Se	78	2	72	4.795	ppb	5.582	290	5	95.9	70	130	
Sr	88	3	72	4.756	ppb	4.963	2662	5	95.1	70	130	
Mo	95	3	115	1.742	ppb	20.869	955	2	87.1	70	130	
Ag	107	3	115	0.946	ppb	9.562	1691	1	94.6	70	130	
Cd	111	3	115	0.975	ppb	22.741	257	1	97.5	70	130	
Sn	120	3	115	8.235	ppb	4.463	7362	10	82.3	70	130	
Sb	121	3	115	1.848	ppb	9.346	1511	2	92.4	70	130	
Ba	137	3	115	0.761	ppb	13.013	260	1	76.1	70	130	
Tl	205	3	193	0.888	ppb	1.506	3910	1	88.8	70	130	
(Pb)	206	3	193	0.821	ppb	4.233	1408	1	82.1	70	130	
(Pb)	207	3	193	0.828	ppb	3.923	1453	1	82.8	70	130	
Pb	208	3	193	0.841	ppb	3.905	5991	1	84.1	70	130	
Th	232	3	193	0.990	ppb	17.033	12317	1	99.0	70	130	
U	238	3	193	0.971	ppb	1.622	6980	1	97.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4276736	0.64	4300192	99.45	60	120	
Sc (IS)	45	3	HMI He	635007	0.71	644593	98.51	60	120	
Ge Internal standard	72	2	HMI H2	2591673	0.80	2598552	99.74	60	120	
Ge Internal standard	72	3	HMI He	775846	0.50	772392	100.45	60	120	
In Internal Standard	115	3	HMI He	2932884	1.84	2872781	102.09	60	120	
Ir (IS)	193	3	HMI He	6257349	0.81	6092963	102.70	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A
Data File Name	204SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:00:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	66.508	ppb	66.508	6.10	2679	2000	
Na	23	3	45	36018.963	ppb	36018.963	1.81	4025220	400000	
Mg	24	3	45	214314.481	ppb	214314.481	0.88	12538480	400000	
Al	27	3	45	230487.389	ppb	230487.389	1.85	5215615	400000	
K	39	3	45	6881.028	ppb	6881.028	2.10	356170	400000	
Ca	40	2	45	443052.895	ppb	443052.895	1.14	245756423	400000	
V	51	3	72	55.279	ppb	55.279	2.82	35853	2000	
Cr	52	3	72	7.105	ppb	7.105	2.81	8605	5000	
Mn	55	3	72	12183.473	ppb	12183.473	1.89	4988345	10000	
Fe	56	2	72	808.990	ppb	808.990	1.31	1313749	10000	
Co	59	3	72	588.979	ppb	588.979	3.08	775423	2000	
Ni	60	3	72	534.943	ppb	534.943	2.44	199274	5000	
Cu	63	3	72	7.139	ppb	7.139	4.72	7602	5000	
Zn	66	3	72	2747.999	ppb	2747.999	2.20	444575	5000	
As	75	3	72	4.594	ppb	4.594	7.82	568	2000	
Se	78	2	72	14.072	ppb	14.072	4.73	827	2000	
Sr	88	3	72	3410.465	ppb	3410.465	2.50	1854356	4000	
Mo	95	3	115	0.064	ppb	0.064	47.61	70	2000	
Ag	107	3	115	0.022	ppb	0.022	48.33	50	100	
Cd	111	3	115	7.651	ppb	7.651	6.84	1878	2000	
Sn	120	3	115	-0.047	ppb	-0.047	-281.87	708	2000	
Sb	121	3	115	0.057	ppb	0.057	39.45	88	1000	
Ba	137	3	115	10.534	ppb	10.534	0.68	2689	5000	
Tl	205	3	193	0.687	ppb	0.687	0.95	2992	2000	
(Pb)	206	3	193	10.215	ppb	10.215	2.07	13239	100	
(Pb)	207	3	193	9.137	ppb	9.137	3.13	10634	100	
Pb	208	3	193	9.537	ppb	9.537	1.20	50135	5000	
Th	232	3	193	2.327	ppb	2.327	6.71	18630	2000	
U	238	3	193	98.474	ppb	98.474	1.94	528231	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4126753	1.22	4300192	95.97	60	120	
Sc (IS)	45	3	HMI He	624296	1.10	644593	96.85	60	120	
Ge Internal standard	72	2	HMI H2	2530315	1.19	2598552	97.37	60	120	
Ge Internal standard	72	3	HMI He	766376	1.33	772392	99.22	60	120	
In Internal Standard	115	3	HMI He	2830137	1.09	2872781	98.52	60	120	
Ir (IS)	193	3	HMI He	6011628	1.36	6092963	98.67	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A
Data File Name	205SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:02:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	80.479	ppb	80.479	2.79	3145	2000	
Na	23	3	45	62599.010	ppb	62599.010	1.52	6902206	400000	
Mg	24	3	45	315441.966	ppb	315441.966	1.69	18238867	400000	
Al	27	3	45	86190.242	ppb	86190.242	2.05	1927703	400000	
K	39	3	45	14970.773	ppb	14970.773	1.20	734266	400000	
Ca	40	2	45	452445.885	ppb	452445.885	0.18	253162962	400000	
V	51	3	72	4.207	ppb	4.207	7.75	3622	2000	
Cr	52	3	72	2.783	ppb	2.783	14.83	5227	5000	
Mn	55	3	72	15542.305	ppb	15542.305	0.14	6329272	10000	
Fe	56	2	72	282.266	ppb	282.266	3.38	501951	10000	
Co	59	3	72	758.186	ppb	758.186	2.21	992978	2000	
Ni	60	3	72	612.129	ppb	612.129	0.32	226718	5000	
Cu	63	3	72	4.891	ppb	4.891	3.36	5303	5000	
Zn	66	3	72	3422.970	ppb	3422.970	0.78	550762	5000	
As	75	3	72	3.565	ppb	3.565	15.39	448	2000	
Se	78	2	72	17.076	ppb	17.076	6.86	1009	2000	
Sr	88	3	72	4417.561	ppb	4417.561	1.65	2389255	4000	
Mo	95	3	115	0.082	ppb	0.082	15.03	78	2000	
Ag	107	3	115	0.017	ppb	0.017	42.91	42	100	
Cd	111	3	115	10.678	ppb	10.678	3.95	2576	2000	
Sn	120	3	115	-0.139	ppb	-0.139	-58.26	626	2000	
Sb	121	3	115	0.046	ppb	0.046	88.12	78	1000	
Ba	137	3	115	8.387	ppb	8.387	5.45	2119	5000	
Tl	205	3	193	1.896	ppb	1.896	0.35	7445	2000	
(Pb)	206	3	193	10.695	ppb	10.695	1.14	13562	100	
(Pb)	207	3	193	9.425	ppb	9.425	2.01	10734	100	
Pb	208	3	193	9.989	ppb	9.989	1.18	51380	5000	
Th	232	3	193	0.493	ppb	0.493	9.85	9122	2000	
U	238	3	193	178.002	ppb	178.002	0.97	934440	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4162571	0.67	4300192	96.80	60	120	
Sc (IS)	45	3	HMI He	616938	0.27	644593	95.71	60	120	
Ge Internal standard	72	2	HMI H2	2547065	1.51	2598552	98.02	60	120	
Ge Internal standard	72	3	HMI He	762151	0.25	772392	98.67	60	120	
In Internal Standard	115	3	HMI He	2786327	1.97	2872781	96.99	60	120	
Ir (IS)	193	3	HMI He	5890028	0.48	6092963	96.67	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-3-A
Data File Name	206SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:03:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-96.79	3	2000	
Na	23	3	45	2156.261	ppb	2156.261	1.39	259640	400000	
Mg	24	3	45	7370.378	ppb	7370.378	2.69	437197	400000	
Al	27	3	45	1706.327	ppb	1706.327	2.59	39279	400000	
K	39	3	45	21401.330	ppb	21401.330	0.48	1064798	400000	
Ca	40	2	45	43170.960	ppb	43170.960	1.11	25707597	400000	
V	51	3	72	4.145	ppb	4.145	1.14	3719	2000	
Cr	52	3	72	1.640	ppb	1.640	27.37	4507	5000	
Mn	55	3	72	26.790	ppb	26.790	5.11	11701	10000	
Fe	56	2	72	882.769	ppb	882.769	5.31	1491636	10000	
Co	59	3	72	1.019	ppb	1.019	8.11	1439	2000	
Ni	60	3	72	2.095	ppb	2.095	13.30	1508	5000	
Cu	63	3	72	5.104	ppb	5.104	4.34	5723	5000	
Zn	66	3	72	4.493	ppb	4.493	10.26	983	5000	
As	75	3	72	1.261	ppb	1.261	39.98	193	2000	
Se	78	2	72	0.467	ppb	0.467	4.25	31	2000	
Sr	88	3	72	286.002	ppb	286.002	1.13	160524	4000	
Mo	95	3	115	2.492	ppb	2.492	7.03	1344	2000	
Ag	107	3	115	0.014	ppb	0.014	42.94	38	100	
Cd	111	3	115	-0.014	ppb	-0.014	-213.93	7	2000	
Sn	120	3	115	-0.259	ppb	-0.259	-6.89	561	2000	
Sb	121	3	115	0.317	ppb	0.317	8.21	297	1000	
Ba	137	3	115	64.781	ppb	64.781	0.60	16756	5000	
Tl	205	3	193	0.016	ppb	0.016	46.38	458	2000	
(Pb)	206	3	193	0.932	ppb	0.932	14.01	1566	100	
(Pb)	207	3	193	0.804	ppb	0.804	11.73	1436	100	
Pb	208	3	193	0.897	ppb	0.897	5.15	6343	5000	
Th	232	3	193	0.122	ppb	0.122	17.72	7792	2000	
U	238	3	193	4.368	ppb	4.368	2.83	26102	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4428318	1.37	4300192	102.98	60	120	
Sc (IS)	45	3	HMI He	632769	1.81	644593	98.17	60	120	
Ge Internal standard	72	2	HMI H2	2643364	0.42	2598552	101.72	60	120	
Ge Internal standard	72	3	HMI He	790807	1.48	772392	102.38	60	120	
In Internal Standard	115	3	HMI He	2922634	2.31	2872781	101.74	60	120	
Ir (IS)	193	3	HMI He	6308338	1.49	6092963	103.53	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A
Data File Name	207SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:05:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	65.797	ppb	65.797	5.14	2726	2000	
Na	23	3	45	34986.640	ppb	34986.640	2.87	4018561	400000	
Mg	24	3	45	209631.690	ppb	209631.690	0.55	12605173	400000	
Al	27	3	45	222943.233	ppb	222943.233	1.30	5185188	400000	
K	39	3	45	6654.281	ppb	6654.281	2.40	354908	400000	
Ca	40	2	45	423680.196	ppb	423680.196	2.15	246279286	400000	
V	51	3	72	55.627	ppb	55.627	1.95	36605	2000	
Cr	52	3	72	6.354	ppb	6.354	4.98	8140	5000	
Mn	55	3	72	12154.415	ppb	12154.415	2.79	5049231	10000	
Fe	56	2	72	795.128	ppb	795.128	2.26	1295704	10000	
Co	59	3	72	586.403	ppb	586.403	1.86	783478	2000	
Ni	60	3	72	533.288	ppb	533.288	2.17	201593	5000	
Cu	63	3	72	7.069	ppb	7.069	2.78	7645	5000	
Zn	66	3	72	2728.319	ppb	2728.319	1.53	447907	5000	
As	75	3	72	4.263	ppb	4.263	4.13	538	2000	
Se	78	2	72	13.834	ppb	13.834	6.52	815	2000	
Sr	88	3	72	3360.743	ppb	3360.743	2.24	1854308	4000	
Mo	95	3	115	0.049	ppb	0.049	40.71	63	2000	
Ag	107	3	115	0.018	ppb	0.018	13.83	45	100	
Cd	111	3	115	7.527	ppb	7.527	3.94	1873	2000	
Sn	120	3	115	-0.180	ppb	-0.180	-20.64	613	2000	
Sb	121	3	115	0.039	ppb	0.039	21.00	75	1000	
Ba	137	3	115	9.960	ppb	9.960	4.91	2579	5000	
Tl	205	3	193	0.627	ppb	0.627	3.31	2842	2000	
(Pb)	206	3	193	9.813	ppb	9.813	4.48	13082	100	
(Pb)	207	3	193	9.081	ppb	9.081	1.68	10869	100	
Pb	208	3	193	9.398	ppb	9.398	2.24	50808	5000	
Th	232	3	193	2.038	ppb	2.038	5.71	17645	2000	
U	238	3	193	96.572	ppb	96.572	2.05	532610	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4325701	2.23	4300192	100.59	60	120	
Sc (IS)	45	3	HMI He	641628	1.23	644593	99.54	60	120	
Ge Internal standard	72	2	HMI H2	2537099	0.36	2598552	97.64	60	120	
Ge Internal standard	72	3	HMI He	777618	1.00	772392	100.68	60	120	
In Internal Standard	115	3	HMI He	2868118	2.03	2872781	99.84	60	120	
Ir (IS)	193	3	HMI He	6180838	1.26	6092963	101.44	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	208SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:07:34-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-97.30	3	2000	
Na	23	3	45	19570.011	ppb	19570.011	0.71	2192442	400000	
Mg	24	3	45	13625.582	ppb	13625.582	1.91	796602	400000	
Al	27	3	45	37.280	ppb	37.280	8.08	991	400000	
K	39	3	45	7502.718	ppb	7502.718	1.03	385543	400000	
Ca	40	2	45	51463.936	ppb	51463.936	1.86	29801781	400000	
V	51	3	72	22.809	ppb	22.809	1.79	15679	2000	
Cr	52	3	72	1.945	ppb	1.945	19.45	4697	5000	
Mn	55	3	72	5.541	ppb	5.541	8.19	2696	10000	
Fe	56	2	72	10.224	ppb	10.224	43.62	79943	10000	
Co	59	3	72	0.156	ppb	0.156	18.30	265	2000	
Ni	60	3	72	0.658	ppb	0.658	49.41	946	5000	
Cu	63	3	72	0.612	ppb	0.612	12.23	1030	5000	
Zn	66	3	72	1.873	ppb	1.873	24.34	540	5000	
As	75	3	72	14.349	ppb	14.349	4.05	1716	2000	
Se	78	2	72	4.091	ppb	4.091	15.50	249	2000	
Sr	88	3	72	263.079	ppb	263.079	2.10	145899	4000	
Mo	95	3	115	9.682	ppb	9.682	7.58	4997	2000	
Ag	107	3	115	0.010	ppb	0.010	4.67	30	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.262	ppb	-0.262	-15.57	546	2000	
Sb	121	3	115	0.407	ppb	0.407	29.33	358	1000	
Ba	137	3	115	42.041	ppb	42.041	1.87	10657	5000	
Tl	205	3	193	-0.039	ppb	-0.039	-10.83	230	2000	
(Pb)	206	3	193	-0.037	ppb	-0.037	-56.12	272	100	
(Pb)	207	3	193	-0.010	ppb	-0.010	-458.88	471	100	
Pb	208	3	193	-0.038	ppb	-0.038	-35.26	1294	5000	
Th	232	3	193	-0.363	ppb	-0.363	-6.54	5040	2000	
U	238	3	193	1.722	ppb	1.722	1.63	10898	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4306104	0.63	4300192	100.14	60	120	
Sc (IS)	45	3	HMI He	623665	0.60	644593	96.75	60	120	
Ge Internal standard	72	2	HMI H2	2599664	1.13	2598552	100.04	60	120	
Ge Internal standard	72	3	HMI He	781373	0.78	772392	101.16	60	120	
In Internal Standard	115	3	HMI He	2859165	2.61	2872781	99.53	60	120	
Ir (IS)	193	3	HMI He	6110465	1.42	6092963	100.29	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	209SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:09:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3733.612	ppb	3733.612	1.23	431951	400000	
Mg	24	3	45	2610.885	ppb	2610.885	1.37	153072	400000	
Al	27	3	45	9.053	ppb	9.053	31.16	354	400000	
K	39	3	45	1488.268	ppb	1488.268	3.12	98408	400000	
Ca	40	2	45	10478.390	ppb	10478.390	0.65	5934046	400000	
V	51	3	72	4.245	ppb	4.245	5.80	3732	2000	
Cr	52	3	72	0.622	ppb	0.622	77.10	3644	5000	
Mn	55	3	72	2.986	ppb	2.986	6.54	1626	10000	
Fe	56	2	72	9.044	ppb	9.044	30.42	76457	10000	
Co	59	3	72	0.066	ppb	0.066	15.58	143	2000	
Ni	60	3	72	0.537	ppb	0.537	22.08	900	5000	
Cu	63	3	72	0.262	ppb	0.262	14.02	668	5000	
Zn	66	3	72	3.184	ppb	3.184	7.85	755	5000	
As	75	3	72	2.829	ppb	2.829	12.57	373	2000	
Se	78	2	72	0.803	ppb	0.803	6.79	49	2000	
Sr	88	3	72	52.806	ppb	52.806	1.01	29277	4000	
Mo	95	3	115	1.822	ppb	1.822	0.99	971	2000	
Ag	107	3	115	0.017	ppb	0.017	24.61	43	100	
Cd	111	3	115	-0.034	ppb	-0.034	-34.83	2	2000	
Sn	120	3	115	-0.093	ppb	-0.093	-87.77	678	2000	
Sb	121	3	115	0.093	ppb	0.093	39.07	117	1000	
Ba	137	3	115	8.826	ppb	8.826	3.42	2284	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-22.47	205	2000	
(Pb)	206	3	193	0.281	ppb	0.281	35.46	680	100	
(Pb)	207	3	193	0.294	ppb	0.294	8.88	816	100	
Pb	208	3	193	0.280	ppb	0.280	15.61	2944	5000	
Th	232	3	193	-0.417	ppb	-0.417	-9.10	4774	2000	
U	238	3	193	0.322	ppb	0.322	5.31	3294	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4204632	2.57	4300192	97.78	60	120	
Sc (IS)	45	3	HMI He	624529	0.52	644593	96.89	60	120	
Ge Internal standard	72	2	HMI H2	2542709	2.14	2598552	97.85	60	120	
Ge Internal standard	72	3	HMI He	780147	0.80	772392	101.00	60	120	
In Internal Standard	115	3	HMI He	2856264	0.76	2872781	99.43	60	120	
Ir (IS)	193	3	HMI He	6126451	2.42	6092963	100.55	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	210SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:11:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.333	ppb	42.333	5.59	1751	2000	
Na	23	3	45	20149.916	ppb	20149.916	1.81	2280184	400000	
Mg	24	3	45	14544.064	ppb	14544.064	3.48	858963	400000	
Al	27	3	45	746.564	ppb	746.564	1.18	17201	400000	
K	39	3	45	8472.126	ppb	8472.126	0.69	436284	400000	
Ca	40	2	45	52832.747	ppb	52832.747	0.77	30789867	400000	
V	51	3	72	61.977	ppb	61.977	3.45	40889	2000	
Cr	52	3	72	40.728	ppb	40.728	0.93	35366	5000	
Mn	55	3	72	43.898	ppb	43.898	0.84	18722	10000	
Fe	56	2	72	803.842	ppb	803.842	0.74	1341676	10000	
Co	59	3	72	38.789	ppb	38.789	1.00	52170	2000	
Ni	60	3	72	38.522	ppb	38.522	3.20	15289	5000	
Cu	63	3	72	39.733	ppb	39.733	1.33	41359	5000	
Zn	66	3	72	41.138	ppb	41.138	3.16	7018	5000	
As	75	3	72	52.785	ppb	52.785	5.24	6198	2000	
Se	78	2	72	43.027	ppb	43.027	4.88	2594	2000	
Sr	88	3	72	350.038	ppb	350.038	0.59	194262	4000	
Mo	95	3	115	48.231	ppb	48.231	0.88	24817	2000	
Ag	107	3	115	39.016	ppb	39.016	2.00	67672	100	
Cd	111	3	115	38.545	ppb	38.545	2.65	9537	2000	
Sn	120	3	115	37.829	ppb	37.829	1.94	30341	2000	
Sb	121	3	115	39.897	ppb	39.897	0.15	30965	1000	
Ba	137	3	115	84.570	ppb	84.570	0.63	21425	5000	
Tl	205	3	193	38.895	ppb	38.895	1.75	152930	2000	
(Pb)	206	3	193	38.743	ppb	38.743	2.00	50764	100	
(Pb)	207	3	193	38.255	ppb	38.255	2.99	44267	100	
Pb	208	3	193	38.805	ppb	38.805	2.32	205320	5000	
Th	232	3	193	36.836	ppb	36.836	0.46	199763	2000	
U	238	3	193	40.406	ppb	40.406	1.85	224021	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4333860	0.29	4300192	100.78	60	120	
Sc (IS)	45	3	HMI He	630064	0.46	644593	97.75	60	120	
Ge Internal standard	72	2	HMI H2	2599837	1.19	2598552	100.05	60	120	
Ge Internal standard	72	3	HMI He	781920	0.98	772392	101.23	60	120	
In Internal Standard	115	3	HMI He	2865374	1.92	2872781	99.74	60	120	
Ir (IS)	193	3	HMI He	6188054	1.10	6092963	101.56	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	211SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:12:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.706	ppb	40.706	11.26	1703	2000	
Na	23	3	45	19638.019	ppb	19638.019	2.67	2247474	400000	
Mg	24	3	45	14205.849	ppb	14205.849	1.32	848420	400000	
Al	27	3	45	742.830	ppb	742.830	2.29	17308	400000	
K	39	3	45	8084.840	ppb	8084.840	0.32	422257	400000	
Ca	40	2	45	52969.865	ppb	52969.865	1.57	30608600	400000	
V	51	3	72	60.625	ppb	60.625	1.35	40625	2000	
Cr	52	3	72	40.305	ppb	40.305	2.55	35554	5000	
Mn	55	3	72	42.297	ppb	42.297	0.55	18323	10000	
Fe	56	2	72	808.243	ppb	808.243	0.91	1366429	10000	
Co	59	3	72	37.472	ppb	37.472	0.86	51153	2000	
Ni	60	3	72	37.776	ppb	37.776	2.97	15232	5000	
Cu	63	3	72	38.982	ppb	38.982	1.86	41189	5000	
Zn	66	3	72	39.835	ppb	39.835	5.15	6905	5000	
As	75	3	72	53.814	ppb	53.814	0.48	6415	2000	
Se	78	2	72	42.703	ppb	42.703	3.90	2608	2000	
Sr	88	3	72	336.853	ppb	336.853	1.59	189740	4000	
Mo	95	3	115	46.018	ppb	46.018	5.07	24103	2000	
Ag	107	3	115	38.291	ppb	38.291	2.92	67626	100	
Cd	111	3	115	38.413	ppb	38.413	1.68	9680	2000	
Sn	120	3	115	37.396	ppb	37.396	1.83	30553	2000	
Sb	121	3	115	39.477	ppb	39.477	0.29	31201	1000	
Ba	137	3	115	81.374	ppb	81.374	2.65	20991	5000	
Tl	205	3	193	39.117	ppb	39.117	1.41	153075	2000	
(Pb)	206	3	193	39.454	ppb	39.454	2.60	51457	100	
(Pb)	207	3	193	39.035	ppb	39.035	1.66	44956	100	
Pb	208	3	193	38.989	ppb	38.989	2.14	205349	5000	
Th	232	3	193	38.725	ppb	38.725	0.31	208647	2000	
U	238	3	193	40.456	ppb	40.456	1.04	223252	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4297767	1.35	4300192	99.94	60	120	
Sc (IS)	45	3	HMI He	637082	0.43	644593	98.83	60	120	
Ge Internal standard	72	2	HMI H2	2634308	1.50	2598552	101.38	60	120	
Ge Internal standard	72	3	HMI He	793611	0.49	772392	102.75	60	120	
In Internal Standard	115	3	HMI He	2917914	1.78	2872781	101.57	60	120	
Ir (IS)	193	3	HMI He	6158732	0.90	6092963	101.08	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D pds
Data File Name	212SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:14:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	110.211	ppb	110.211	1.35	4660	2000	
Na	23	3	45	23925.909	ppb	23925.909	1.05	2709352	400000	
Mg	24	3	45	15391.736	ppb	15391.736	3.13	910776	400000	
Al	27	3	45	2023.025	ppb	2023.025	2.72	46439	400000	
K	39	3	45	9453.909	ppb	9453.909	1.29	484563	400000	
Ca	40	2	45	53409.699	ppb	53409.699	1.69	31188875	400000	
V	51	3	72	116.746	ppb	116.746	0.51	77415	2000	
Cr	52	3	72	98.533	ppb	98.533	0.88	82421	5000	
Mn	55	3	72	97.745	ppb	97.745	1.79	41900	10000	
Fe	56	2	72	1058.323	ppb	1058.323	1.69	1748432	10000	
Co	59	3	72	96.194	ppb	96.194	1.48	131441	2000	
Ni	60	3	72	94.646	ppb	94.646	0.65	37163	5000	
Cu	63	3	72	97.959	ppb	97.959	0.56	103069	5000	
Zn	66	3	72	201.755	ppb	201.755	2.04	34078	5000	
As	75	3	72	117.837	ppb	117.837	1.26	14017	2000	
Se	78	2	72	106.172	ppb	106.172	1.69	6406	2000	
Sr	88	3	72	356.230	ppb	356.230	1.09	200985	4000	
Mo	95	3	115	106.449	ppb	106.449	2.56	55086	2000	
Ag	107	3	115	26.103	ppb	26.103	0.96	45588	100	
Cd	111	3	115	99.167	ppb	99.167	1.71	24687	2000	
Sn	120	3	115	98.130	ppb	98.130	1.02	78033	2000	
Sb	121	3	115	95.655	ppb	95.655	1.01	74666	1000	
Ba	137	3	115	142.131	ppb	142.131	0.70	36205	5000	
Tl	205	3	193	98.154	ppb	98.154	1.19	385849	2000	
(Pb)	206	3	193	97.892	ppb	97.892	1.44	127941	100	
(Pb)	207	3	193	96.998	ppb	96.998	3.06	111633	100	
Pb	208	3	193	97.265	ppb	97.265	1.60	513054	5000	
Th	232	3	193	104.980	ppb	104.980	2.01	556961	2000	
U	238	3	193	214.112	ppb	214.112	3.98	1181706	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4343562	2.01	4300192	101.01	60	120	
Sc (IS)	45	3	HMI He	631265	0.66	644593	97.93	60	120	
Ge Internal standard	72	2	HMI H2	2603174	0.31	2598552	100.18	60	120	
Ge Internal standard	72	3	HMI He	794934	0.61	772392	102.92	60	120	
In Internal Standard	115	3	HMI He	2884393	1.06	2872781	100.40	60	120	
Ir (IS)	193	3	HMI He	6196001	1.16	6092963	101.69	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	213_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:16:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.166	ppb	4.253	2199	50	106.3	90	110	
Na	23	3	45	48077.438	ppb	0.728	5396703	51000	94.3	90	110	
Mg	24	3	45	10265.689	ppb	1.400	604064	11000	93.3	90	110	
Al	27	3	45	972.928	ppb	2.884	22283	1000	97.3	90	110	
K	39	3	45	10181.534	ppb	1.063	516772	11000	92.6	90	110	
Ca	40	2	45	10406.909	ppb	1.045	5978238	11000	94.6	90	110	
V	51	3	72	51.478	ppb	1.701	32670	50	103.0	90	110	
Cr	52	3	72	51.808	ppb	2.226	42228	50	103.6	90	110	
Mn	55	3	72	50.939	ppb	1.550	20730	50	101.9	90	110	
Fe	56	2	72	1073.315	ppb	0.849	1697398	1000	107.3	90	110	
Co	59	3	72	50.702	ppb	1.882	65237	50	101.4	90	110	
Ni	60	3	72	50.905	ppb	0.572	19124	50	101.8	90	110	
Cu	63	3	72	50.169	ppb	2.599	49868	50	100.3	90	110	
Zn	66	3	72	49.873	ppb	1.541	8097	50	99.7	90	110	
As	75	3	72	53.952	ppb	2.057	6063	50	107.9	90	110	
Se	78	2	72	50.244	ppb	3.823	2904	50	100.5	90	110	
Sr	88	3	72	103.817	ppb	2.957	55159	100	103.8	90	110	
Mo	95	3	115	49.334	ppb	2.913	25495	50	98.7	90	110	
Ag	107	3	115	48.425	ppb	3.274	84361	50	96.8	90	110	
Cd	111	3	115	49.329	ppb	2.339	12258	50	98.7	90	110	
Sn	120	3	115	48.001	ppb	3.144	38471	50	96.0	90	110	
Sb	121	3	115	49.566	ppb	3.388	38620	50	99.1	90	110	
Ba	137	3	115	48.750	ppb	4.260	12428	50	97.5	90	110	
Tl	205	3	193	48.712	ppb	2.849	189756	50	97.4	90	110	
(Pb)	206	3	193	49.709	ppb	2.843	64474	50	99.4	90	110	
(Pb)	207	3	193	48.995	ppb	3.456	56066	50	98.0	90	110	
Pb	208	3	193	49.000	ppb	3.002	256611	50	98.0	90	110	
Th	232	3	193	51.785	ppb	2.011	275559	50	103.6	90	110	
U	238	3	193	48.273	ppb	2.856	265002	50	96.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4264829	1.09	4300192	99.18	60	120	
Sc (IS)	45	3	HMI He	627631	0.58	644593	97.37	60	120	
Ge Internal standard	72	2	HMI H2	2493149	1.33	2598552	95.94	60	120	
Ge Internal standard	72	3	HMI He	748314	1.08	772392	96.88	60	120	
In Internal Standard	115	3	HMI He	2878701	2.31	2872781	100.21	60	120	
Ir (IS)	193	3	HMI He	6135421	1.91	6092963	100.70	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	214_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:18:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.070	ppb	-192.6	3	0.5	
Na	23	3	45	75.801	ppb	4.2	24927	25	>RL
Mg	24	3	45	3.129	ppb	43.3	450	25	
Al	27	3	45	-0.894	ppb	-125.4	130	15	
K	39	3	45	-9.953	ppb	-223.3	27080	50	
V	51	3	72	0.202	ppb	56.8	1121	1	
Cr	52	3	72	0.547	ppb	60.5	3540	1	
Mn	55	3	72	0.188	ppb	55.0	455	0.5	
Co	59	3	72	0.030	ppb	41.3	95	0.5	
Ni	60	3	72	0.447	ppb	48.7	855	1	
Cu	63	3	72	0.059	ppb	19.3	453	1	
Zn	66	3	72	-0.108	ppb	-181.0	210	5	
As	75	3	72	0.073	ppb	146.4	52	1	
Se	78	2	72	0.068	ppb	49.6	6	1	
Sr	88	3	72	0.037	ppb	90.5	63	0.5	
Mo	95	3	115	0.107	ppb	46.4	93	0.5	
Ag	107	3	115	0.010	ppb	17.0	32	1	
Cd	111	3	115	-0.007	ppb	-306.3	8	0.5	
Sn	120	3	115	0.050	ppb	215.1	796	1	
Sb	121	3	115	0.055	ppb	42.6	88	0.6	
Ba	137	3	115	-0.040	ppb	-31.8	52	0.5	
Tl	205	3	193	-0.004	ppb	-327.0	365	0.1	
(Pb)	206	3	193	-0.064	ppb	-32.5	237	1	
(Pb)	207	3	193	-0.050	ppb	-97.0	426	1	
Pb	208	3	193	-0.054	ppb	-21.1	1209	0.5	
Th	232	3	193	1.912	ppb	13.4	16803	1	>RL
U	238	3	193	0.038	ppb	69.7	1746	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4256588	0.88	4300192	98.99	60	120	
Sc (IS)	45	3	HMI He	632311	0.97	644593	98.09	60	120	
Ge Internal standard	72	2	HMI H2	2558926	0.27	2598552	98.48	60	120	
Ge Internal standard	72	3	HMI He	769939	1.85	772392	99.68	60	120	
In Internal Standard	115	3	HMI He	2880210	1.16	2872781	100.26	60	120	
Ir (IS)	193	3	HMI He	6113205	1.49	6092963	100.33	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	215LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:20:07-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.069	ppb	21.974	50	1	106.9	70	130	
Na	23	3	45	336.198	ppb	3.848	54918	300	112.1	70	130	
Mg	24	3	45	44.087	ppb	6.897	2910	50	88.2	70	130	
Al	27	3	45	45.104	ppb	7.255	1198	50	90.2	70	130	
K	39	3	45	98.456	ppb	44.011	32698	120	82.0	70	130	
Ca	40	2	45	203.148	ppb	1.687	126238	200	101.6	70	130	
V	51	3	72	4.669	ppb	5.436	4015	5	93.4	70	130	
Cr	52	3	72	2.058	ppb	10.851	4792	2	102.9	70	130	
Mn	55	3	72	0.920	ppb	8.343	768	1	92.0	70	130	
Fe	56	2	72	53.543	ppb	8.305	143126	50	107.1	70	130	
Co	59	3	72	0.991	ppb	1.470	1388	1	99.1	70	130	
Ni	60	3	72	2.200	ppb	5.698	1533	2	110.0	70	130	
Cu	63	3	72	1.867	ppb	2.391	2326	2	93.4	70	130	
Zn	66	3	72	8.714	ppb	6.137	1669	10	87.1	70	130	
As	75	3	72	5.336	ppb	8.820	666	5	106.7	70	130	
Se	78	2	72	5.096	ppb	8.007	297	5	101.9	70	130	
Sr	88	3	72	4.740	ppb	3.159	2676	5	94.8	70	130	
Mo	95	3	115	2.020	ppb	13.177	1086	2	101.0	70	130	
Ag	107	3	115	0.871	ppb	3.995	1543	1	87.1	70	130	
Cd	111	3	115	0.867	ppb	11.077	227	1	86.7	70	130	
Sn	120	3	115	8.286	ppb	3.578	7317	10	82.9	70	130	
Sb	121	3	115	1.935	ppb	6.939	1561	2	96.7	70	130	
Ba	137	3	115	0.838	ppb	25.362	277	1	83.8	70	130	
Tl	205	3	193	0.834	ppb	5.022	3682	1	83.4	70	130	
(Pb)	206	3	193	0.776	ppb	9.358	1343	1	77.6	70	130	
(Pb)	207	3	193	0.837	ppb	11.739	1456	1	83.7	70	130	
Pb	208	3	193	0.803	ppb	7.923	5764	1	80.3	70	130	
Th	232	3	193	1.370	ppb	14.931	14286	1	137.0	70	130	>+/-30%
U	238	3	193	0.938	ppb	6.796	6767	1	93.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4164266	1.42	4300192	96.84	60	120	
Sc (IS)	45	3	HMI He	639897	2.10	644593	99.27	60	120	
Ge Internal standard	72	2	HMI H2	2499401	1.15	2598552	96.18	60	120	
Ge Internal standard	72	3	HMI He	782523	1.75	772392	101.31	60	120	
In Internal Standard	115	3	HMI He	2898903	2.53	2872781	100.91	60	120	
Ir (IS)	193	3	HMI He	6232941	1.98	6092963	102.30	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-6-A
Data File Name	216SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:21:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17162.830	ppb	17162.830	0.96	1975564	400000	
Mg	24	3	45	17042.542	ppb	17042.542	2.71	1022747	400000	
Al	27	3	45	4.072	ppb	4.072	42.28	247	400000	
K	39	3	45	6978.035	ppb	6978.035	0.53	370000	400000	
Ca	40	2	45	59240.009	ppb	59240.009	0.26	34581404	400000	
V	51	3	72	21.099	ppb	21.099	2.82	14987	2000	
Cr	52	3	72	1.250	ppb	1.250	14.67	4265	5000	
Mn	55	3	72	0.364	ppb	0.364	27.72	550	10000	
Fe	56	2	72	5.910	ppb	5.910	57.53	75279	10000	
Co	59	3	72	0.129	ppb	0.129	6.21	235	2000	
Ni	60	3	72	1.478	ppb	1.478	7.59	1293	5000	
Cu	63	3	72	16.258	ppb	16.258	0.46	17629	5000	
Zn	66	3	72	1.823	ppb	1.823	13.97	546	5000	
As	75	3	72	5.993	ppb	5.993	14.90	763	2000	
Se	78	2	72	4.957	ppb	4.957	11.29	309	2000	
Sr	88	3	72	293.571	ppb	293.571	2.10	167392	4000	
Mo	95	3	115	3.131	ppb	3.131	6.12	1696	2000	
Ag	107	3	115	0.013	ppb	0.013	53.47	37	100	
Cd	111	3	115	-0.015	ppb	-0.015	-72.96	7	2000	
Sn	120	3	115	-0.143	ppb	-0.143	-28.61	660	2000	
Sb	121	3	115	0.268	ppb	0.268	17.04	260	1000	
Ba	137	3	115	38.564	ppb	38.564	3.14	10086	5000	
Tl	205	3	193	-0.041	ppb	-0.041	-17.02	230	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-15.57	237	100	
(Pb)	207	3	193	-0.114	ppb	-0.114	-26.19	363	100	
Pb	208	3	193	-0.082	ppb	-0.082	-15.15	1088	5000	
Th	232	3	193	-0.288	ppb	-0.288	-14.29	5573	2000	
U	238	3	193	3.079	ppb	3.079	1.27	18755	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4341330	1.77	4300192	100.96	60	120	
Sc (IS)	45	3	HMI He	640116	0.56	644593	99.31	60	120	
Ge Internal standard	72	2	HMI H2	2675516	0.62	2598552	102.96	60	120	
Ge Internal standard	72	3	HMI He	803351	0.49	772392	104.01	60	120	
In Internal Standard	115	3	HMI He	2948846	2.15	2872781	102.65	60	120	
Ir (IS)	193	3	HMI He	6270777	1.95	6092963	102.92	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-8-A
Data File Name	217SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:23:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17968.914	ppb	17968.914	2.72	2112895	400000	
Mg	24	3	45	10644.127	ppb	10644.127	1.38	652916	400000	
Al	27	3	45	-0.110	ppb	-0.110	-1386.71	153	400000	
K	39	3	45	5698.770	ppb	5698.770	1.35	314079	400000	
Ca	40	2	45	31171.925	ppb	31171.925	1.19	18301108	400000	
V	51	3	72	17.074	ppb	17.074	2.32	12398	2000	
Cr	52	3	72	2.015	ppb	2.015	16.17	4915	5000	
Mn	55	3	72	0.762	ppb	0.762	4.70	725	10000	
Fe	56	2	72	14.068	ppb	14.068	30.23	89850	10000	
Co	59	3	72	0.046	ppb	0.046	5.25	122	2000	
Ni	60	3	72	0.413	ppb	0.413	5.39	883	5000	
Cu	63	3	72	0.288	ppb	0.288	22.25	720	5000	
Zn	66	3	72	0.426	ppb	0.426	45.62	312	5000	
As	75	3	72	5.940	ppb	5.940	4.18	761	2000	
Se	78	2	72	1.395	ppb	1.395	6.90	90	2000	
Sr	88	3	72	167.249	ppb	167.249	1.22	95938	4000	
Mo	95	3	115	3.677	ppb	3.677	1.10	2039	2000	
Ag	107	3	115	0.006	ppb	0.006	44.53	25	100	
Cd	111	3	115	-0.022	ppb	-0.022	-88.42	5	2000	
Sn	120	3	115	-0.208	ppb	-0.208	-44.96	625	2000	
Sb	121	3	115	0.166	ppb	0.166	26.21	183	1000	
Ba	137	3	115	17.688	ppb	17.688	4.32	4792	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-18.83	162	2000	
(Pb)	206	3	193	-0.057	ppb	-0.057	-12.22	252	100	
(Pb)	207	3	193	-0.099	ppb	-0.099	-71.07	378	100	
Pb	208	3	193	-0.081	ppb	-0.081	-16.71	1089	5000	
Th	232	3	193	-0.347	ppb	-0.347	-8.90	5234	2000	
U	238	3	193	1.938	ppb	1.938	2.58	12330	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365199	2.77	4300192	101.51	60	120	
Sc (IS)	45	3	HMI He	654338	1.46	644593	101.51	60	120	
Ge Internal standard	72	2	HMI H2	2716067	2.17	2598552	104.52	60	120	
Ge Internal standard	72	3	HMI He	807997	0.39	772392	104.61	60	120	
In Internal Standard	115	3	HMI He	3031665	1.80	2872781	105.53	60	120	
Ir (IS)	193	3	HMI He	6239719	0.59	6092963	102.41	60	120	

Sample Report

Sample Table

Sample Name	280-175081-A-2-A
Data File Name	218SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:25:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3130.310	ppb	3130.310	1.08	371814	400000	
Mg	24	3	45	4854.081	ppb	4854.081	0.17	289875	400000	
Al	27	3	45	2.835	ppb	2.835	62.70	217	400000	
K	39	3	45	2217.382	ppb	2217.382	1.53	135861	400000	
Ca	40	2	45	21781.359	ppb	21781.359	0.40	12665898	400000	
V	51	3	72	2.782	ppb	2.782	12.74	2886	2000	
Cr	52	3	72	1.780	ppb	1.780	28.15	4708	5000	
Mn	55	3	72	0.252	ppb	0.252	43.35	503	10000	
Fe	56	2	72	9.383	ppb	9.383	38.45	81329	10000	
Co	59	3	72	0.030	ppb	0.030	8.33	98	2000	
Ni	60	3	72	0.719	ppb	0.719	40.44	1000	5000	
Cu	63	3	72	0.241	ppb	0.241	16.77	668	5000	
Zn	66	3	72	2.852	ppb	2.852	6.81	723	5000	
As	75	3	72	1.093	ppb	1.093	4.71	177	2000	
Se	78	2	72	0.220	ppb	0.220	87.72	16	2000	
Sr	88	3	72	103.186	ppb	103.186	1.16	59041	4000	
Mo	95	3	115	0.725	ppb	0.725	5.36	421	2000	
Ag	107	3	115	0.000	ppb	0.000	-615.10	13	100	
Cd	111	3	115	-0.021	ppb	-0.021	-92.44	5	2000	
Sn	120	3	115	-0.189	ppb	-0.189	-19.17	621	2000	
Sb	121	3	115	0.187	ppb	0.187	16.50	195	1000	
Ba	137	3	115	26.829	ppb	26.829	2.59	7022	5000	
Tl	205	3	193	-0.058	ppb	-0.058	-17.28	160	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-62.91	233	100	
(Pb)	207	3	193	-0.106	ppb	-0.106	-43.36	366	100	
Pb	208	3	193	-0.072	ppb	-0.072	-13.93	1124	5000	
Th	232	3	193	-0.393	ppb	-0.393	-6.21	4939	2000	
U	238	3	193	0.306	ppb	0.306	6.63	3234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4321856	1.19	4300192	100.50	60	120	
Sc (IS)	45	3	HMI He	636629	0.82	644593	98.76	60	120	
Ge Internal standard	72	2	HMI H2	2688098	2.28	2598552	103.45	60	120	
Ge Internal standard	72	3	HMI He	805737	0.71	772392	104.32	60	120	
In Internal Standard	115	3	HMI He	2942533	1.38	2872781	102.43	60	120	
Ir (IS)	193	3	HMI He	6172800	1.02	6092963	101.31	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	219SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:27:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	67.268	ppb	67.268	6.24	2772	2000	
Na	23	3	45	35834.303	ppb	35834.303	1.80	4077929	400000	
Mg	24	3	45	216104.005	ppb	216104.005	0.81	12874859	400000	
Al	27	3	45	224973.435	ppb	224973.435	0.96	5184366	400000	
K	39	3	45	6732.856	ppb	6732.856	1.57	355488	400000	
Ca	40	2	45	431773.739	ppb	431773.739	0.43	248277294	400000	
V	51	3	72	54.221	ppb	54.221	1.95	35900	2000	
Cr	52	3	72	5.861	ppb	5.861	4.81	7797	5000	
Mn	55	3	72	12172.671	ppb	12172.671	1.11	5085344	10000	
Fe	56	2	72	785.076	ppb	785.076	1.31	1310068	10000	
Co	59	3	72	588.483	ppb	588.483	1.63	790573	2000	
Ni	60	3	72	539.096	ppb	539.096	2.03	204898	5000	
Cu	63	3	72	7.273	ppb	7.273	3.90	7895	5000	
Zn	66	3	72	2748.503	ppb	2748.503	0.74	453722	5000	
As	75	3	72	4.195	ppb	4.195	2.68	533	2000	
Se	78	2	72	13.431	ppb	13.431	5.90	810	2000	
Sr	88	3	72	3393.452	ppb	3393.452	0.87	1883011	4000	
Mo	95	3	115	0.093	ppb	0.093	46.54	85	2000	
Ag	107	3	115	0.011	ppb	0.011	70.85	32	100	
Cd	111	3	115	8.115	ppb	8.115	11.63	1989	2000	
Sn	120	3	115	-0.007	ppb	-0.007	-472.37	738	2000	
Sb	121	3	115	0.068	ppb	0.068	53.79	97	1000	
Ba	137	3	115	10.952	ppb	10.952	0.89	2792	5000	
Tl	205	3	193	0.668	ppb	0.668	1.98	2899	2000	
(Pb)	206	3	193	10.275	ppb	10.275	1.49	13214	100	
(Pb)	207	3	193	9.340	ppb	9.340	1.21	10783	100	
Pb	208	3	193	9.650	ppb	9.650	1.06	50334	5000	
Th	232	3	193	2.205	ppb	2.205	3.98	17876	2000	
U	238	3	193	99.861	ppb	99.861	0.65	531729	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4277811	0.81	4300192	99.48	60	120	
Sc (IS)	45	3	HMI He	635708	0.89	644593	98.62	60	120	
Ge Internal standard	72	2	HMI H2	2596452	0.89	2598552	99.92	60	120	
Ge Internal standard	72	3	HMI He	781901	1.28	772392	101.23	60	120	
In Internal Standard	115	3	HMI He	2829213	1.93	2872781	98.48	60	120	
Ir (IS)	193	3	HMI He	5967399	1.74	6092963	97.94	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	220SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:29:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	84.503	ppb	84.503	4.47	3474	2000	
Na	23	3	45	63181.090	ppb	63181.090	0.51	7214329	400000	
Mg	24	3	45	314358.980	ppb	314358.980	1.83	18822124	400000	
Al	27	3	45	90010.661	ppb	90010.661	1.36	2084758	400000	
K	39	3	45	15188.374	ppb	15188.374	1.72	771002	400000	
Ca	40	2	45	456069.231	ppb	456069.231	1.24	263651549	400000	
V	51	3	72	3.994	ppb	3.994	3.76	3595	2000	
Cr	52	3	72	1.959	ppb	1.959	8.29	4733	5000	
Mn	55	3	72	16070.615	ppb	16070.615	0.92	6744301	10000	
Fe	56	2	72	228.948	ppb	228.948	1.92	425119	10000	
Co	59	3	72	787.154	ppb	787.154	3.40	1062163	2000	
Ni	60	3	72	623.663	ppb	623.663	0.99	238020	5000	
Cu	63	3	72	4.808	ppb	4.808	1.73	5380	5000	
Zn	66	3	72	3475.035	ppb	3475.035	1.15	576182	5000	
As	75	3	72	2.911	ppb	2.911	24.70	385	2000	
Se	78	2	72	18.023	ppb	18.023	3.04	1081	2000	
Sr	88	3	72	4494.422	ppb	4494.422	1.46	2505028	4000	
Mo	95	3	115	0.051	ppb	0.051	51.31	65	2000	
Ag	107	3	115	0.023	ppb	0.023	40.47	55	100	
Cd	111	3	115	11.474	ppb	11.474	2.64	2887	2000	
Sn	120	3	115	-0.216	ppb	-0.216	-51.45	591	2000	
Sb	121	3	115	0.044	ppb	0.044	15.07	80	1000	
Ba	137	3	115	8.957	ppb	8.957	1.95	2357	5000	
Tl	205	3	193	1.914	ppb	1.914	2.99	7835	2000	
(Pb)	206	3	193	10.508	ppb	10.508	2.55	13906	100	
(Pb)	207	3	193	9.097	ppb	9.097	3.16	10823	100	
Pb	208	3	193	9.785	ppb	9.785	1.39	52530	5000	
Th	232	3	193	0.474	ppb	0.474	7.56	9421	2000	
U	238	3	193	178.277	ppb	178.277	1.01	976190	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4300550	0.35	4300192	100.01	60	120	
Sc (IS)	45	3	HMI He	638908	0.68	644593	99.12	60	120	
Ge Internal standard	72	2	HMI H2	2584356	0.97	2598552	99.45	60	120	
Ge Internal standard	72	3	HMI He	785426	0.83	772392	101.69	60	120	
In Internal Standard	115	3	HMI He	2906612	1.39	2872781	101.18	60	120	
Ir (IS)	193	3	HMI He	6143952	0.53	6092963	100.84	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-3-A
Data File Name	221SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:30:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.028	ppb	-0.028	-440.75	5	2000	
Na	23	3	45	2208.436	ppb	2208.436	1.04	266122	400000	
Mg	24	3	45	7581.004	ppb	7581.004	0.64	450767	400000	
Al	27	3	45	1688.905	ppb	1688.905	4.08	38970	400000	
K	39	3	45	21546.320	ppb	21546.320	1.40	1074026	400000	
Ca	40	2	45	46050.758	ppb	46050.758	2.89	26223808	400000	
V	51	3	72	4.134	ppb	4.134	4.38	3732	2000	
Cr	52	3	72	1.601	ppb	1.601	18.47	4502	5000	
Mn	55	3	72	25.755	ppb	25.755	1.84	11331	10000	
Fe	56	2	72	914.341	ppb	914.341	3.35	1509772	10000	
Co	59	3	72	0.868	ppb	0.868	18.93	1241	2000	
Ni	60	3	72	2.039	ppb	2.039	3.42	1496	5000	
Cu	63	3	72	5.135	ppb	5.135	3.36	5792	5000	
Zn	66	3	72	4.677	ppb	4.677	6.35	1020	5000	
As	75	3	72	1.167	ppb	1.167	18.07	183	2000	
Se	78	2	72	0.444	ppb	0.444	4.16	29	2000	
Sr	88	3	72	292.814	ppb	292.814	0.94	165268	4000	
Mo	95	3	115	2.502	ppb	2.502	9.93	1354	2000	
Ag	107	3	115	0.011	ppb	0.011	51.66	33	100	
Cd	111	3	115	-0.014	ppb	-0.014	-217.50	7	2000	
Sn	120	3	115	-0.152	ppb	-0.152	-6.16	648	2000	
Sb	121	3	115	0.409	ppb	0.409	27.75	370	1000	
Ba	137	3	115	66.593	ppb	66.593	1.91	17261	5000	
Tl	205	3	193	0.003	ppb	0.003	423.09	401	2000	
(Pb)	206	3	193	1.012	ppb	1.012	14.38	1654	100	
(Pb)	207	3	193	0.864	ppb	0.864	3.51	1493	100	
Pb	208	3	193	0.909	ppb	0.909	5.45	6337	5000	
Th	232	3	193	0.252	ppb	0.252	28.23	8395	2000	
U	238	3	193	4.484	ppb	4.484	0.27	26500	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4235543	1.45	4300192	98.50	60	120	
Sc (IS)	45	3	HMI He	634109	0.67	644593	98.37	60	120	
Ge Internal standard	72	2	HMI H2	2586800	0.19	2598552	99.55	60	120	
Ge Internal standard	72	3	HMI He	795233	1.38	772392	102.96	60	120	
In Internal Standard	115	3	HMI He	2929632	1.33	2872781	101.98	60	120	
Ir (IS)	193	3	HMI He	6247794	3.26	6092963	102.54	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-4-A
Data File Name	222SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:32:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	65.285	ppb	65.285	4.76	2731	2000	
Na	23	3	45	36872.250	ppb	36872.250	2.50	4269720	400000	
Mg	24	3	45	222207.082	ppb	222207.082	2.16	13471794	400000	
Al	27	3	45	234239.822	ppb	234239.822	1.43	5493358	400000	
K	39	3	45	6922.680	ppb	6922.680	1.25	371203	400000	
Ca	40	2	45	425333.995	ppb	425333.995	2.01	253506795	400000	
V	51	3	72	56.523	ppb	56.523	1.01	38369	2000	
Cr	52	3	72	6.214	ppb	6.214	6.06	8287	5000	
Mn	55	3	72	12366.508	ppb	12366.508	0.91	5302362	10000	
Fe	56	2	72	804.463	ppb	804.463	0.87	1357626	10000	
Co	59	3	72	602.236	ppb	602.236	0.65	830404	2000	
Ni	60	3	72	547.621	ppb	547.621	1.42	213620	5000	
Cu	63	3	72	7.371	ppb	7.371	2.39	8208	5000	
Zn	66	3	72	2779.945	ppb	2779.945	1.70	470971	5000	
As	75	3	72	4.675	ppb	4.675	3.36	605	2000	
Se	78	2	72	13.570	ppb	13.570	7.41	829	2000	
Sr	88	3	72	3391.624	ppb	3391.624	2.47	1931218	4000	
Mo	95	3	115	0.081	ppb	0.081	8.34	82	2000	
Ag	107	3	115	0.016	ppb	0.016	46.07	42	100	
Cd	111	3	115	7.991	ppb	7.991	8.04	2029	2000	
Sn	120	3	115	-0.100	ppb	-0.100	-26.51	690	2000	
Sb	121	3	115	0.075	ppb	0.075	18.30	105	1000	
Ba	137	3	115	10.974	ppb	10.974	4.20	2896	5000	
Tl	205	3	193	0.680	ppb	0.680	4.13	3014	2000	
(Pb)	206	3	193	10.650	ppb	10.650	1.74	14007	100	
(Pb)	207	3	193	9.403	ppb	9.403	3.02	11104	100	
Pb	208	3	193	10.004	ppb	10.004	2.86	53351	5000	
Th	232	3	193	2.327	ppb	2.327	5.04	18930	2000	
U	238	3	193	102.773	ppb	102.773	1.71	560113	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4434933	1.71	4300192	103.13	60	120	
Sc (IS)	45	3	HMI He	646982	1.00	644593	100.37	60	120	
Ge Internal standard	72	2	HMI H2	2628933	0.70	2598552	101.17	60	120	
Ge Internal standard	72	3	HMI He	802459	0.79	772392	103.89	60	120	
In Internal Standard	115	3	HMI He	2927505	0.81	2872781	101.90	60	120	
Ir (IS)	193	3	HMI He	6109168	2.05	6092963	100.27	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	223_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:34:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.943	ppb	8.515	2286	50	107.9	90	110	
Na	23	3	45	47999.546	ppb	1.128	5477143	51000	94.1	90	110	
Mg	24	3	45	10360.068	ppb	1.740	619640	11000	94.2	90	110	
Al	27	3	45	994.342	ppb	2.521	23146	1000	99.4	90	110	
K	39	3	45	10118.174	ppb	3.178	522092	11000	92.0	90	110	
Ca	40	2	45	10517.787	ppb	1.906	6167572	11000	95.6	90	110	
V	51	3	72	49.582	ppb	2.792	32735	50	99.2	90	110	
Cr	52	3	72	50.144	ppb	2.048	42572	50	100.3	90	110	
Mn	55	3	72	50.908	ppb	0.867	21529	50	101.8	90	110	
Fe	56	2	72	1092.971	ppb	1.216	1769928	1000	109.3	90	110	
Co	59	3	72	49.035	ppb	1.776	65565	50	98.1	90	110	
Ni	60	3	72	50.159	ppb	1.360	19591	50	100.3	90	110	
Cu	63	3	72	49.239	ppb	0.341	50871	50	98.5	90	110	
Zn	66	3	72	51.449	ppb	2.390	8672	50	102.9	90	110	
As	75	3	72	50.465	ppb	2.179	5897	50	100.9	90	110	
Se	78	2	72	51.686	ppb	1.751	3062	50	103.4	90	110	
Sr	88	3	72	101.403	ppb	1.979	55992	100	101.4	90	110	
Mo	95	3	115	49.431	ppb	1.994	25680	50	98.9	90	110	
Ag	107	3	115	49.148	ppb	0.449	86083	50	98.3	90	110	
Cd	111	3	115	49.996	ppb	2.193	12490	50	100.0	90	110	
Sn	120	3	115	48.505	ppb	1.353	39071	50	97.0	90	110	
Sb	121	3	115	49.652	ppb	2.147	38894	50	99.3	90	110	
Ba	137	3	115	48.918	ppb	3.706	12536	50	97.8	90	110	
Tl	205	3	193	47.342	ppb	2.525	192861	50	94.7	90	110	
(Pb)	206	3	193	47.676	ppb	0.190	64685	50	95.4	90	110	
(Pb)	207	3	193	47.902	ppb	1.871	57339	50	95.8	90	110	
Pb	208	3	193	47.440	ppb	0.895	259876	50	94.9	90	110	
Th	232	3	193	47.038	ppb	0.447	262392	50	94.1	90	110	
U	238	3	193	46.999	ppb	1.354	269860	50	94.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4353678	1.03	4300192	101.24	60	120	
Sc (IS)	45	3	HMI He	637998	1.36	644593	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2554492	1.33	2598552	98.30	60	120	
Ge Internal standard	72	3	HMI He	777537	0.22	772392	100.67	60	120	
In Internal Standard	115	3	HMI He	2892981	0.88	2872781	100.70	60	120	
Ir (IS)	193	3	HMI He	6414355	0.74	6092963	105.27	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	224_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:36:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	63.518	ppb	18.5	23700	25	>RL
Mg	24	3	45	6.831	ppb	49.4	674	25	
Al	27	3	45	2.973	ppb	37.3	220	15	
K	39	3	45	-19.033	ppb	-132.2	26826	50	
V	51	3	72	-0.193	ppb	-45.1	885	1	
Cr	52	3	72	0.565	ppb	68.4	3610	1	
Mn	55	3	72	0.479	ppb	26.0	583	0.5	
Co	59	3	72	0.028	ppb	6.7	93	0.5	
Ni	60	3	72	0.492	ppb	17.3	885	1	
Cu	63	3	72	0.070	ppb	69.1	471	1	
Zn	66	3	72	-0.159	ppb	-19.7	205	5	
As	75	3	72	-0.020	ppb	-657.3	42	1	
Se	78	2	72	-0.001	ppb	-2433.6	2	1	
Sr	88	3	72	0.086	ppb	73.9	92	0.5	
Mo	95	3	115	0.099	ppb	27.2	90	0.5	
Ag	107	3	115	0.007	ppb	47.6	25	1	
Cd	111	3	115	-0.041	ppb	0.0	0	0.5	
Sn	120	3	115	-0.018	ppb	-119.4	748	1	
Sb	121	3	115	0.051	ppb	48.6	85	0.6	
Ba	137	3	115	-0.008	ppb	-442.0	60	0.5	
Tl	205	3	193	-0.032	ppb	-35.2	267	0.1	
(Pb)	206	3	193	-0.065	ppb	-37.3	245	1	
(Pb)	207	3	193	-0.091	ppb	-29.4	395	1	
Pb	208	3	193	-0.075	ppb	-9.8	1141	0.5	
Th	232	3	193	1.466	ppb	13.1	15058	1	>RL
U	238	3	193	0.019	ppb	58.6	1704	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4365902	1.22	4300192	101.53	60	120	
Sc (IS)	45	3	HMI He	636615	0.44	644593	98.76	60	120	
Ge Internal standard	72	2	HMI H2	2653141	1.02	2598552	102.10	60	120	
Ge Internal standard	72	3	HMI He	782023	0.41	772392	101.25	60	120	
In Internal Standard	115	3	HMI He	2899354	2.07	2872781	100.92	60	120	
Ir (IS)	193	3	HMI He	6348915	0.36	6092963	104.20	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	225LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:38:04-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.243	ppb	65.111	60	1	124.3	70	130	
Na	23	3	45	324.988	ppb	2.716	52774	300	108.3	70	130	
Mg	24	3	45	50.330	ppb	12.335	3230	50	100.7	70	130	
Al	27	3	45	50.927	ppb	8.285	1311	50	101.9	70	130	
K	39	3	45	99.128	ppb	42.526	32223	120	82.6	70	130	
Ca	40	2	45	204.322	ppb	2.522	133548	200	102.2	70	130	
V	51	3	72	4.381	ppb	5.914	3812	5	87.6	70	130	
Cr	52	3	72	2.222	ppb	4.226	4900	2	111.1	70	130	
Mn	55	3	72	1.381	ppb	10.622	956	1	138.1	70	130	>+/-30%
Fe	56	2	72	56.407	ppb	10.188	155439	50	112.8	70	130	
Co	59	3	72	0.940	ppb	5.084	1313	1	94.0	70	130	
Ni	60	3	72	2.324	ppb	8.125	1573	2	116.2	70	130	
Cu	63	3	72	1.937	ppb	4.077	2386	2	96.8	70	130	
Zn	66	3	72	9.920	ppb	2.531	1861	10	99.2	70	130	
As	75	3	72	4.874	ppb	5.530	610	5	97.5	70	130	
Se	78	2	72	5.122	ppb	8.041	315	5	102.4	70	130	
Sr	88	3	72	4.929	ppb	2.905	2767	5	98.6	70	130	
Mo	95	3	115	1.897	ppb	6.582	1011	2	94.9	70	130	
Ag	107	3	115	0.927	ppb	8.981	1619	1	92.7	70	130	
Cd	111	3	115	0.951	ppb	19.130	245	1	95.1	70	130	
Sn	120	3	115	8.979	ppb	2.171	7770	10	89.8	70	130	
Sb	121	3	115	1.906	ppb	9.839	1519	2	95.3	70	130	
Ba	137	3	115	1.060	ppb	22.355	328	1	106.0	70	130	
Tl	205	3	193	0.877	ppb	2.601	3805	1	87.7	70	130	
(Pb)	206	3	193	0.861	ppb	6.662	1438	1	86.1	70	130	
(Pb)	207	3	193	0.762	ppb	0.766	1354	1	76.2	70	130	
Pb	208	3	193	0.854	ppb	4.112	5963	1	85.4	70	130	
Th	232	3	193	1.090	ppb	16.365	12644	1	109.0	70	130	
U	238	3	193	0.957	ppb	4.070	6792	1	95.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4383115	1.53	4300192	101.93	60	120	
Sc (IS)	45	3	HMI He	629416	1.25	644593	97.65	60	120	
Ge Internal standard	72	2	HMI H2	2635514	1.33	2598552	101.42	60	120	
Ge Internal standard	72	3	HMI He	778798	1.18	772392	100.83	60	120	
In Internal Standard	115	3	HMI He	2862811	1.62	2872781	99.65	60	120	
Ir (IS)	193	3	HMI He	6157855	1.35	6092963	101.07	60	120	

Blank Report

Sample Table

Sample Name	mb 280-609143/1-a
Data File Name	226_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:39:53-06:00
Sample Type	Blank
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	45.502	ppb	12.0009917	22116	25
Mg	24	3	45	4.121	ppb	29.63340442	524	25
Al	27	3	45	2.632	ppb	47.45452554	217	15
K	39	3	45	-22.906	ppb	-121.2845018	27207	50
Ca	40	2	45	16.975	ppb	3.678945867	23380	200
V	51	3	72	-0.258	ppb	-44.29458665	861	1
Cr	52	3	72	0.729	ppb	39.36049459	3825	1
Mn	55	3	72	0.444	ppb	27.04636596	581	0.5
Fe	56	2	72	12.418	ppb	35.2160176	85506	50
Co	59	3	72	0.036	ppb	43.49347516	107	0.5
Ni	60	3	72	0.709	ppb	43.47275477	990	1
Cu	63	3	72	0.018	ppb	180.1674152	428	1
Zn	66	3	72	-0.157	ppb	-164.570884	210	5
As	75	3	72	0.043	ppb	449.5222468	50	1
(Se)	78	3	72	1.351	ppb	81.49243514	33	1
Sr	88	3	72	0.056	ppb	103.6082434	77	0.5
Mo	95	3	115	0.030	ppb	33.63924674	55	0.5
Ag	107	3	115	0.008	ppb	84.72416675	28	1
Cd	111	3	115	-0.008	ppb	-391.5766997	8	0.5
Sn	120	3	115	-0.152	ppb	-34.14916741	653	1
Sb	121	3	115	-0.012	ppb	-217.611064	37	0.6
Ba	137	3	115	-0.058	ppb	-137.7335862	48	0.5
Tl	205	3	193	-0.059	ppb	-2.560123429	162	0.1
(Pb)	206	3	193	-0.095	ppb	-20.53285127	207	1
(Pb)	207	3	193	-0.101	ppb	-40.25824719	388	1
Pb	208	3	193	-0.087	ppb	-13.11454761	1093	0.5
Th	232	3	193	-0.350	ppb	-10.59033505	5377	1
U	238	3	193	0.011	ppb	169.1043338	1683	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4416245	1.39	4300192	102.70	60	120	
Sc (IS)	45	3	HMI He	650133	0.69	644593	100.86	60	120	
Ge Internal standard	72	2	HMI H2	2662668	0.73	2598552	102.47	60	120	
Ge Internal standard	72	3	HMI He	799828	0.88	772392	103.55	60	120	
In Internal Standard	115	3	HMI He	2947969	1.27	2872781	102.62	60	120	
Ir (IS)	193	3	HMI He	6432258	1.88	6092963	105.57	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-609143/19-a
Data File Name	227_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:41:42-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609143 200.8/6020B
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.895	38.895	ppb	1.956	1686	40	97.2	80	120	
Na	23	3	45	825.258	825.258	ppb	2.918	112533	40	2063.1	80	120	>+/-20%
Mg	24	3	45	729.088	729.088	ppb	1.698	44705	40	1822.7	80	120	>+/-20%
Al	27	3	45	749.049	749.049	ppb	3.424	17812	40	1872.6	80	120	>+/-20%
K	39	3	45	734.359	734.359	ppb	5.887	64918	40	1835.9	80	120	>+/-20%
Ca	40	2	45	804.999	804.999	ppb	1.179	496868	40	2012.5	80	120	>+/-20%
V	51	3	72	37.089	37.089	ppb	1.550	25794	40	92.7	80	120	
Cr	52	3	72	39.002	39.002	ppb	2.673	35252	40	97.5	80	120	
Mn	55	3	72	38.996	38.996	ppb	1.923	17287	40	97.5	80	120	
Fe	56	2	72	816.789	816.789	ppb	0.397	1384419	40	2042.0	80	120	>+/-20%
(Fe)	56	3	72	749.593	749.593	ppb	1.080	540418	40	1874.0	80	120	>+/-20%
Co	59	3	72	38.426	38.426	ppb	1.385	53580	40	96.1	80	120	
Ni	60	3	72	38.192	38.192	ppb	0.791	15724	40	95.5	80	120	
Cu	63	3	72	39.194	39.194	ppb	0.100	42303	40	98.0	80	120	
Zn	66	3	72	39.145	39.145	ppb	1.422	6937	40	97.9	80	120	
As	75	3	72	38.724	38.724	ppb	2.507	4728	40	96.8	80	120	
Se	78	2	72	39.654	39.654	ppb	0.917	2430	40	99.1	80	120	
(Se)	78	3	72	39.840	39.840	ppb	8.293	295	40	99.6	80	120	
Sr	88	3	72	78.228	78.228	ppb	1.458	45047	40	195.6	80	120	>+/-20%
Mo	95	3	115	38.210	38.210	ppb	3.065	20157	40	95.5	80	120	
Ag	107	3	115	39.835	39.835	ppb	2.225	70820	40	99.6	80	120	
Cd	111	3	115	39.479	39.479	ppb	3.964	10010	40	98.7	80	120	
Sn	120	3	115	36.722	36.722	ppb	3.403	30209	40	91.8	80	120	
Sb	121	3	115	38.791	38.791	ppb	1.178	30860	40	97.0	80	120	
Ba	137	3	115	39.384	39.384	ppb	4.998	10256	40	98.5	80	120	
Tl	205	3	193	38.127	38.127	ppb	1.915	156306	40	95.3	80	120	
(Pb)	206	3	193	38.976	38.976	ppb	2.206	53243	40	97.4	80	120	
(Pb)	207	3	193	38.541	38.541	ppb	1.626	46502	40	96.4	80	120	
Pb	208	3	193	38.630	38.630	ppb	1.913	213123	40	96.6	80	120	
Th	232	3	193	35.532	35.532	ppb	3.249	201109	40	88.8	80	120	
U	238	3	193	38.402	38.402	ppb	1.056	222091	40	96.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4467733	0.99	4300192	103.90	60	120	
Sc (IS)	45	3	HMI He	650340	0.78	644593	100.89	60	120	
Ge Internal standard	72	2	HMI H2	2642126	0.38	2598552	101.68	60	120	
Ge Internal standard	72	3	HMI He	810674	0.54	772392	104.96	60	120	
In Internal Standard	115	3	HMI He	2937072	1.77	2872781	102.24	60	120	
Ir (IS)	193	3	HMI He	6452373	1.59	6092963	105.90	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-g
Data File Name	228SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:43:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.161	ppb	0.161	111.32	13	2000	
Na	23	3	45	11790.045	ppb	11790.045	1.59	1362073	400000	
Mg	24	3	45	6115.585	ppb	6115.585	2.01	367083	400000	
Al	27	3	45	6296.376	ppb	6296.376	2.35	146253	400000	
K	39	3	45	1916.707	ppb	1916.707	3.57	121854	400000	
Ca	40	2	45	15442.848	ppb	15442.848	1.07	9084061	400000	
V	51	3	72	10.053	ppb	10.053	5.10	7648	2000	
Cr	52	3	72	4.407	ppb	4.407	3.83	6798	5000	
Mn	55	3	72	164.620	ppb	164.620	0.22	70722	10000	
Fe	56	2	72	6120.061	ppb	6120.061	2.05	10217214	10000	
Co	59	3	72	2.054	ppb	2.054	7.88	2877	2000	
Ni	60	3	72	4.367	ppb	4.367	2.43	2406	5000	
Cu	63	3	72	5.245	ppb	5.245	2.14	5938	5000	
Zn	66	3	72	22.455	ppb	22.455	4.54	4025	5000	
As	75	3	72	1.479	ppb	1.479	30.33	222	2000	
Se	78	2	72	0.465	ppb	0.465	11.37	31	2000	
Sr	88	3	72	134.770	ppb	134.770	1.15	76514	4000	
Mo	95	3	115	0.527	ppb	0.527	7.83	318	2000	
Ag	107	3	115	0.045	ppb	0.045	25.74	93	100	
Cd	111	3	115	0.044	ppb	0.044	110.98	22	2000	
Sn	120	3	115	0.116	ppb	0.116	68.65	870	2000	
Sb	121	3	115	0.399	ppb	0.399	11.65	365	1000	
Ba	137	3	115	125.537	ppb	125.537	0.62	32734	5000	
Tl	205	3	193	0.012	ppb	0.012	74.73	445	2000	
(Pb)	206	3	193	3.998	ppb	3.998	0.58	5705	100	
(Pb)	207	3	193	3.778	ppb	3.778	0.70	4967	100	
Pb	208	3	193	4.674	ppb	4.674	28.68	26861	5000	
Th	232	3	193	3.251	ppb	3.251	8.68	24782	2000	
U	238	3	193	0.486	ppb	0.486	2.89	4367	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370022	0.26	4300192	101.62	60	120	
Sc (IS)	45	3	HMI He	640062	0.68	644593	99.30	60	120	
Ge Internal standard	72	2	HMI H2	2712792	1.18	2598552	104.40	60	120	
Ge Internal standard	72	3	HMI He	799644	0.93	772392	103.53	60	120	
In Internal Standard	115	3	HMI He	2951896	0.89	2872781	102.75	60	120	
Ir (IS)	193	3	HMI He	6385270	1.06	6092963	104.80	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-h ms
Data File Name	229SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:45:21-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.868	ppb	38.868	3.77	1676	2000	
Na	23	3	45	12735.514	ppb	12735.514	1.76	1470613	400000	
Mg	24	3	45	7005.833	ppb	7005.833	1.12	420671	400000	
Al	27	3	45	7415.005	ppb	7415.005	2.30	172262	400000	
K	39	3	45	2752.028	ppb	2752.028	1.12	162880	400000	
Ca	40	2	45	16099.985	ppb	16099.985	1.61	9631968	400000	
V	51	3	72	48.266	ppb	48.266	1.70	32944	2000	
Cr	52	3	72	43.095	ppb	43.095	1.28	38245	5000	
Mn	55	3	72	205.052	ppb	205.052	0.61	88374	10000	
Fe	56	2	72	7062.430	ppb	7062.430	3.43	11721997	10000	
Co	59	3	72	40.211	ppb	40.211	1.04	55541	2000	
Ni	60	3	72	41.901	ppb	41.901	0.71	17020	5000	
Cu	63	3	72	43.635	ppb	43.635	1.63	46607	5000	
Zn	66	3	72	61.617	ppb	61.617	3.39	10679	5000	
As	75	3	72	39.821	ppb	39.821	0.96	4815	2000	
Se	78	2	72	38.164	ppb	38.164	2.85	2389	2000	
Sr	88	3	72	213.281	ppb	213.281	1.20	121586	4000	
Mo	95	3	115	38.069	ppb	38.069	2.11	20255	2000	
Ag	107	3	115	38.642	ppb	38.642	0.33	69290	100	
Cd	111	3	115	38.008	ppb	38.008	1.65	9722	2000	
Sn	120	3	115	34.602	ppb	34.602	0.94	28757	2000	
Sb	121	3	115	36.571	ppb	36.571	0.95	29341	1000	
Ba	137	3	115	164.309	ppb	164.309	0.52	42965	5000	
Tl	205	3	193	38.594	ppb	38.594	2.44	154641	2000	
(Pb)	206	3	193	43.525	ppb	43.525	1.61	58080	100	
(Pb)	207	3	193	42.866	ppb	42.866	0.72	50498	100	
Pb	208	3	193	43.076	ppb	43.076	1.25	232127	5000	
Th	232	3	193	39.175	ppb	39.175	1.89	216016	2000	
U	238	3	193	39.279	ppb	39.279	1.34	221981	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4444952	1.18	4300192	103.37	60	120	
Sc (IS)	45	3	HMI He	640331	0.61	644593	99.34	60	120	
Ge Internal standard	72	2	HMI H2	2700304	2.25	2598552	103.92	60	120	
Ge Internal standard	72	3	HMI He	803091	0.79	772392	103.97	60	120	
In Internal Standard	115	3	HMI He	2961545	0.46	2872781	103.09	60	120	
Ir (IS)	193	3	HMI He	6306055	0.73	6092963	103.50	60	120	

Sample Report

Sample Table

Sample Name	280-175144-c-1-i msd
Data File Name	230SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:47:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.777	ppb	41.777	8.96	1806	2000	
Na	23	3	45	13036.975	ppb	13036.975	0.26	1502108	400000	
Mg	24	3	45	7210.290	ppb	7210.290	0.95	432092	400000	
Al	27	3	45	7518.560	ppb	7518.560	0.29	174328	400000	
K	39	3	45	2861.264	ppb	2861.264	2.88	167890	400000	
Ca	40	2	45	16924.049	ppb	16924.049	1.93	9978203	400000	
V	51	3	72	49.058	ppb	49.058	3.20	33636	2000	
Cr	52	3	72	44.157	ppb	44.157	1.15	39307	5000	
Mn	55	3	72	212.503	ppb	212.503	0.46	92040	10000	
Fe	56	2	72	7304.557	ppb	7304.557	3.58	12146538	10000	
Co	59	3	72	41.308	ppb	41.308	1.53	57346	2000	
Ni	60	3	72	42.731	ppb	42.731	1.30	17432	5000	
Cu	63	3	72	44.457	ppb	44.457	2.13	47720	5000	
Zn	66	3	72	62.017	ppb	62.017	1.78	10804	5000	
As	75	3	72	40.596	ppb	40.596	0.73	4933	2000	
Se	78	2	72	40.381	ppb	40.381	4.56	2536	2000	
Sr	88	3	72	219.971	ppb	219.971	0.77	126047	4000	
Mo	95	3	115	39.532	ppb	39.532	1.42	20806	2000	
Ag	107	3	115	39.977	ppb	39.977	0.83	70911	100	
Cd	111	3	115	38.694	ppb	38.694	1.82	9790	2000	
Sn	120	3	115	36.494	ppb	36.494	1.43	29962	2000	
Sb	121	3	115	37.789	ppb	37.789	1.42	29989	1000	
Ba	137	3	115	172.759	ppb	172.759	1.74	44683	5000	
Tl	205	3	193	40.152	ppb	40.152	0.92	158579	2000	
(Pb)	206	3	193	45.133	ppb	45.133	1.20	59354	100	
(Pb)	207	3	193	44.577	ppb	44.577	0.81	51741	100	
Pb	208	3	193	44.933	ppb	44.933	0.27	238604	5000	
Th	232	3	193	42.064	ppb	42.064	0.94	228126	2000	
U	238	3	193	41.032	ppb	41.032	0.48	228503	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4380221	0.62	4300192	101.86	60	120	
Sc (IS)	45	3	HMI He	639065	0.74	644593	99.14	60	120	
Ge Internal standard	72	2	HMI H2	2706070	2.42	2598552	104.14	60	120	
Ge Internal standard	72	3	HMI He	807207	0.87	772392	104.51	60	120	
In Internal Standard	115	3	HMI He	2929724	0.75	2872781	101.98	60	120	
Ir (IS)	193	3	HMI He	6215586	0.56	6092963	102.01	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-k
Data File Name	231SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:48:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	17997.152	ppb	17997.152	1.50	2039030	400000	
Mg	24	3	45	10950.376	ppb	10950.376	2.84	646999	400000	
Al	27	3	45	1.760	ppb	1.760	90.26	190	400000	
K	39	3	45	5922.532	ppb	5922.532	1.59	313386	400000	
Ca	40	2	45	31264.279	ppb	31264.279	2.15	18251014	400000	
V	51	3	72	17.034	ppb	17.034	1.36	12254	2000	
Cr	52	3	72	2.160	ppb	2.160	0.49	4985	5000	
Mn	55	3	72	0.990	ppb	0.990	22.27	815	10000	
Fe	56	2	72	20.896	ppb	20.896	23.47	99788	10000	
Co	59	3	72	0.061	ppb	0.061	32.48	142	2000	
Ni	60	3	72	0.559	ppb	0.559	11.14	931	5000	
Cu	63	3	72	0.313	ppb	0.313	13.01	740	5000	
Zn	66	3	72	1.667	ppb	1.667	9.63	518	5000	
As	75	3	72	6.183	ppb	6.183	4.44	783	2000	
Se	78	2	72	1.442	ppb	1.442	18.99	91	2000	
Sr	88	3	72	168.532	ppb	168.532	0.37	95765	4000	
Mo	95	3	115	3.633	ppb	3.633	3.40	1971	2000	
Ag	107	3	115	0.017	ppb	0.017	89.84	45	100	
Cd	111	3	115	-0.021	ppb	-0.021	-93.19	5	2000	
Sn	120	3	115	-0.016	ppb	-0.016	-203.62	766	2000	
Sb	121	3	115	0.185	ppb	0.185	25.97	195	1000	
Ba	137	3	115	18.119	ppb	18.119	2.40	4800	5000	
Tl	205	3	193	-0.026	ppb	-0.026	-33.81	288	2000	
(Pb)	206	3	193	-0.084	ppb	-0.084	-26.37	217	100	
(Pb)	207	3	193	-0.090	ppb	-0.090	-31.75	391	100	
Pb	208	3	193	-0.088	ppb	-0.088	-12.40	1059	5000	
Th	232	3	193	2.051	ppb	2.051	17.81	18017	2000	
U	238	3	193	1.945	ppb	1.945	2.39	12452	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4340971	2.59	4300192	100.95	60	120	
Sc (IS)	45	3	HMI He	630417	1.90	644593	97.80	60	120	
Ge Internal standard	72	2	HMI H2	2676347	1.88	2598552	102.99	60	120	
Ge Internal standard	72	3	HMI He	800393	1.00	772392	103.63	60	120	
In Internal Standard	115	3	HMI He	2965449	0.90	2872781	103.23	60	120	
Ir (IS)	193	3	HMI He	6282269	1.75	6092963	103.11	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-kSD@5
Data File Name	232SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:50:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	3626.512	ppb	3626.512	0.89	424691	400000	
Mg	24	3	45	2225.418	ppb	2225.418	2.33	131958	400000	
Al	27	3	45	2.619	ppb	2.619	73.35	210	400000	
K	39	3	45	1177.166	ppb	1177.166	2.54	84467	400000	
Ca	40	2	45	6479.623	ppb	6479.623	0.17	3860370	400000	
V	51	3	72	3.499	ppb	3.499	3.85	3319	2000	
Cr	52	3	72	0.588	ppb	0.588	6.95	3692	5000	
Mn	55	3	72	1.635	ppb	1.635	11.77	1085	10000	
Fe	56	2	72	15.499	ppb	15.499	34.10	89821	10000	
Co	59	3	72	0.026	ppb	0.026	51.75	92	2000	
Ni	60	3	72	0.579	ppb	0.579	40.15	935	5000	
Cu	63	3	72	0.200	ppb	0.200	13.98	616	5000	
Zn	66	3	72	3.481	ppb	3.481	10.53	820	5000	
As	75	3	72	1.460	ppb	1.460	16.93	218	2000	
Se	78	2	72	0.403	ppb	0.403	31.46	27	2000	
Sr	88	3	72	34.412	ppb	34.412	3.14	19476	4000	
Mo	95	3	115	0.782	ppb	0.782	14.44	445	2000	
Ag	107	3	115	0.013	ppb	0.013	30.99	37	100	
Cd	111	3	115	-0.034	ppb	-0.034	-33.50	2	2000	
Sn	120	3	115	0.104	ppb	0.104	130.43	843	2000	
Sb	121	3	115	0.076	ppb	0.076	23.39	105	1000	
Ba	137	3	115	3.851	ppb	3.851	4.68	1045	5000	
Tl	205	3	193	-0.050	ppb	-0.050	-11.45	188	2000	
(Pb)	206	3	193	0.316	ppb	0.316	11.02	730	100	
(Pb)	207	3	193	0.221	ppb	0.221	10.67	736	100	
Pb	208	3	193	0.271	ppb	0.271	12.70	2910	5000	
Th	232	3	193	0.406	ppb	0.406	19.79	9074	2000	
U	238	3	193	0.439	ppb	0.439	5.40	3950	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4417059	0.43	4300192	102.72	60	120	
Sc (IS)	45	3	HMI He	631480	0.60	644593	97.97	60	120	
Ge Internal standard	72	2	HMI H2	2640356	1.66	2598552	101.61	60	120	
Ge Internal standard	72	3	HMI He	795916	1.11	772392	103.05	60	120	
In Internal Standard	115	3	HMI He	2895339	1.87	2872781	100.79	60	120	
Ir (IS)	193	3	HMI He	6147606	1.43	6092963	100.90	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-I ms
Data File Name	233SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:52:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.396	ppb	39.396	1.59	1699	2000	
Na	23	3	45	18121.049	ppb	18121.049	1.03	2112216	400000	
Mg	24	3	45	11018.360	ppb	11018.360	1.12	669967	400000	
Al	27	3	45	745.153	ppb	745.153	2.83	17672	400000	
K	39	3	45	6258.895	ppb	6258.895	2.42	339117	400000	
Ca	40	2	45	30681.148	ppb	30681.148	2.49	18214549	400000	
V	51	3	72	54.329	ppb	54.329	0.88	36996	2000	
Cr	52	3	72	40.188	ppb	40.188	0.82	35933	5000	
Mn	55	3	72	39.633	ppb	39.633	3.61	17416	10000	
Fe	56	2	72	798.361	ppb	798.361	1.12	1398589	10000	
Co	59	3	72	38.583	ppb	38.583	2.03	53357	2000	
Ni	60	3	72	37.638	ppb	37.638	1.93	15379	5000	
Cu	63	3	72	38.903	ppb	38.903	2.21	41645	5000	
Zn	66	3	72	39.768	ppb	39.768	1.40	6987	5000	
As	75	3	72	45.112	ppb	45.112	3.96	5458	2000	
Se	78	2	72	39.596	ppb	39.596	2.73	2505	2000	
Sr	88	3	72	241.075	ppb	241.075	0.76	137600	4000	
Mo	95	3	115	41.721	ppb	41.721	0.86	21930	2000	
Ag	107	3	115	39.022	ppb	39.022	1.99	69132	100	
Cd	111	3	115	38.798	ppb	38.798	3.05	9805	2000	
Sn	120	3	115	38.165	ppb	38.165	2.65	31263	2000	
Sb	121	3	115	39.101	ppb	39.101	1.75	30994	1000	
Ba	137	3	115	57.685	ppb	57.685	1.04	14944	5000	
Tl	205	3	193	38.412	ppb	38.412	0.69	155218	2000	
(Pb)	206	3	193	38.774	ppb	38.774	2.37	52201	100	
(Pb)	207	3	193	37.961	ppb	37.961	0.75	45149	100	
Pb	208	3	193	38.715	ppb	38.715	2.02	210493	5000	
Th	232	3	193	36.529	ppb	36.529	0.40	203624	2000	
U	238	3	193	40.376	ppb	40.376	2.52	230014	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4414605	1.52	4300192	102.66	60	120	
Sc (IS)	45	3	HMI He	648520	0.69	644593	100.61	60	120	
Ge Internal standard	72	2	HMI H2	2727850	0.47	2598552	104.98	60	120	
Ge Internal standard	72	3	HMI He	804143	1.55	772392	104.11	60	120	
In Internal Standard	115	3	HMI He	2926156	0.50	2872781	101.86	60	120	
Ir (IS)	193	3	HMI He	6358816	1.49	6092963	104.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-m msd
Data File Name	234SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:54:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.537	ppb	38.537	6.87	1649	2000	
Na	23	3	45	18071.159	ppb	18071.159	2.57	2063008	400000	
Mg	24	3	45	10888.089	ppb	10888.089	2.21	648414	400000	
Al	27	3	45	744.057	ppb	744.057	4.57	17281	400000	
K	39	3	45	6272.587	ppb	6272.587	2.63	332813	400000	
Ca	40	2	45	30468.657	ppb	30468.657	1.97	18023836	400000	
V	51	3	72	51.998	ppb	51.998	2.27	35407	2000	
Cr	52	3	72	40.219	ppb	40.219	2.99	35907	5000	
Mn	55	3	72	37.945	ppb	37.945	3.30	16672	10000	
Fe	56	2	72	789.889	ppb	789.889	1.93	1364505	10000	
Co	59	3	72	37.409	ppb	37.409	1.09	51675	2000	
Ni	60	3	72	36.047	ppb	36.047	0.96	14742	5000	
Cu	63	3	72	38.735	ppb	38.735	1.45	41420	5000	
Zn	66	3	72	38.441	ppb	38.441	0.48	6752	5000	
As	75	3	72	43.105	ppb	43.105	1.40	5208	2000	
Se	78	2	72	39.231	ppb	39.231	2.90	2446	2000	
Sr	88	3	72	235.137	ppb	235.137	1.29	134035	4000	
Mo	95	3	115	39.749	ppb	39.749	2.58	21448	2000	
Ag	107	3	115	37.119	ppb	37.119	0.59	67498	100	
Cd	111	3	115	35.757	ppb	35.757	2.46	9277	2000	
Sn	120	3	115	35.233	ppb	35.233	1.11	29680	2000	
Sb	121	3	115	36.698	ppb	36.698	0.78	29857	1000	
Ba	137	3	115	55.094	ppb	55.094	2.42	14651	5000	
Tl	205	3	193	38.591	ppb	38.591	1.27	152321	2000	
(Pb)	206	3	193	38.423	ppb	38.423	0.76	50544	100	
(Pb)	207	3	193	37.869	ppb	37.869	1.53	43999	100	
Pb	208	3	193	38.361	ppb	38.361	1.03	203779	5000	
Th	232	3	193	38.119	ppb	38.119	1.87	207234	2000	
U	238	3	193	40.375	ppb	40.375	0.88	224718	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4398536	1.41	4300192	102.29	60	120	
Sc (IS)	45	3	HMI He	635293	1.48	644593	98.56	60	120	
Ge Internal standard	72	2	HMI H2	2688788	0.79	2598552	103.47	60	120	
Ge Internal standard	72	3	HMI He	803022	0.36	772392	103.97	60	120	
In Internal Standard	115	3	HMI He	3003228	0.81	2872781	104.54	60	120	
Ir (IS)	193	3	HMI He	6211329	0.47	6092963	101.94	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-8-kPDS
Data File Name	235SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:56:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	105.792	ppb	105.792	1.49	4442	2000	
Na	23	3	45	22567.554	ppb	22567.554	2.09	2588090	400000	
Mg	24	3	45	12450.362	ppb	12450.362	0.29	745994	400000	
Al	27	3	45	1907.289	ppb	1907.289	3.42	44334	400000	
K	39	3	45	7613.407	ppb	7613.407	0.88	400514	400000	
Ca	40	2	45	32874.878	ppb	32874.878	3.77	19268719	400000	
V	51	3	72	109.502	ppb	109.502	1.14	73662	2000	
Cr	52	3	72	94.537	ppb	94.537	0.82	80288	5000	
Mn	55	3	72	92.815	ppb	92.815	2.02	40347	10000	
Fe	56	2	72	1037.663	ppb	1037.663	4.15	1746407	10000	
Co	59	3	72	92.951	ppb	92.951	2.24	128741	2000	
Ni	60	3	72	91.606	ppb	91.606	2.75	36476	5000	
Cu	63	3	72	95.654	ppb	95.654	0.90	102020	5000	
Zn	66	3	72	192.155	ppb	192.155	2.43	32908	5000	
As	75	3	72	103.696	ppb	103.696	2.01	12508	2000	
Se	78	2	72	99.226	ppb	99.226	1.48	6095	2000	
Sr	88	3	72	261.381	ppb	261.381	1.47	149484	4000	
Mo	95	3	115	97.249	ppb	97.249	1.32	50871	2000	
Ag	107	3	115	25.127	ppb	25.127	3.27	44346	100	
Cd	111	3	115	95.153	ppb	95.153	1.10	23943	2000	
Sn	120	3	115	94.647	ppb	94.647	1.74	76096	2000	
Sb	121	3	115	93.950	ppb	93.950	2.55	74118	1000	
Ba	137	3	115	114.610	ppb	114.610	4.24	29510	5000	
Tl	205	3	193	95.361	ppb	95.361	0.57	376721	2000	
(Pb)	206	3	193	95.279	ppb	95.279	1.48	125144	100	
(Pb)	207	3	193	94.622	ppb	94.622	0.91	109464	100	
Pb	208	3	193	94.794	ppb	94.794	0.95	502520	5000	
Th	232	3	193	102.053	ppb	102.053	0.48	544327	2000	
U	238	3	193	206.103	ppb	206.103	3.49	1143319	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4360555	2.72	4300192	101.40	60	120	
Sc (IS)	45	3	HMI He	639121	0.71	644593	99.15	60	120	
Ge Internal standard	72	2	HMI H2	2650713	2.23	2598552	102.01	60	120	
Ge Internal standard	72	3	HMI He	805763	0.99	772392	104.32	60	120	
In Internal Standard	115	3	HMI He	2915437	1.51	2872781	101.48	60	120	
Ir (IS)	193	3	HMI He	6225981	0.36	6092963	102.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	236_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:57:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	55.626	ppb	1.863	2329	50	111.3	90	110	>+\-10%
Na	23	3	45	48121.679	ppb	2.417	5537524	51000	94.4	90	110	
Mg	24	3	45	10269.952	ppb	0.849	619427	11000	93.4	90	110	
Al	27	3	45	964.318	ppb	3.670	22638	1000	96.4	90	110	
K	39	3	45	10148.410	ppb	1.281	528057	11000	92.3	90	110	
Ca	40	2	45	10340.438	ppb	0.569	6079357	11000	94.0	90	110	
V	51	3	72	51.000	ppb	0.547	33041	50	102.0	90	110	
Cr	52	3	72	51.278	ppb	0.748	42682	50	102.6	90	110	
Mn	55	3	72	49.990	ppb	1.624	20769	50	100.0	90	110	
Fe	56	2	72	1068.488	ppb	0.371	1724500	1000	106.8	90	110	
Co	59	3	72	51.521	ppb	1.238	67646	50	103.0	90	110	
Ni	60	3	72	51.082	ppb	0.960	19581	50	102.2	90	110	
Cu	63	3	72	50.190	ppb	0.414	50915	50	100.4	90	110	
Zn	66	3	72	49.300	ppb	5.291	8167	50	98.6	90	110	
As	75	3	72	53.499	ppb	2.644	6135	50	107.0	90	110	
Se	78	2	72	50.432	ppb	2.126	2975	50	100.9	90	110	
Sr	88	3	72	103.848	ppb	2.707	56310	100	103.8	90	110	
Mo	95	3	115	48.579	ppb	4.570	25411	50	97.2	90	110	
Ag	107	3	115	49.270	ppb	3.110	86919	50	98.5	90	110	
Cd	111	3	115	49.684	ppb	4.314	12498	50	99.4	90	110	
Sn	120	3	115	48.408	ppb	3.961	39268	50	96.8	90	110	
Sb	121	3	115	49.877	ppb	2.655	39358	50	99.8	90	110	
Ba	137	3	115	50.989	ppb	4.473	13157	50	102.0	90	110	
Tl	205	3	193	48.622	ppb	3.805	193361	50	97.2	90	110	
(Pb)	206	3	193	48.897	ppb	4.108	64749	50	97.8	90	110	
(Pb)	207	3	193	48.536	ppb	2.937	56723	50	97.1	90	110	
Pb	208	3	193	48.787	ppb	3.530	260852	50	97.6	90	110	
Th	232	3	193	52.210	ppb	3.981	283514	50	104.4	90	110	
U	238	3	193	49.055	ppb	4.869	274823	50	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4364730	2.95	4300192	101.50	60	120	
Sc (IS)	45	3	HMI He	643338	0.99	644593	99.81	60	120	
Ge Internal standard	72	2	HMI H2	2543915	1.33	2598552	97.90	60	120	
Ge Internal standard	72	3	HMI He	763583	1.25	772392	98.86	60	120	
In Internal Standard	115	3	HMI He	2915636	3.40	2872781	101.49	60	120	
Ir (IS)	193	3	HMI He	6266173	3.14	6092963	102.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	237_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T20:59:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.110	ppb	-60.9	2	0.5	
Na	23	3	45	46.922	ppb	13.6	21815	25	>RL
Mg	24	3	45	1.900	ppb	37.3	380	25	
Al	27	3	45	-2.952	ppb	-8.2	83	15	
K	39	3	45	-6.033	ppb	-455.9	27458	50	
V	51	3	72	0.059	ppb	154.4	1040	1	
Cr	52	3	72	0.184	ppb	139.7	3285	1	
Mn	55	3	72	0.079	ppb	73.8	413	0.5	
Co	59	3	72	0.034	ppb	59.4	100	0.5	
Ni	60	3	72	0.587	ppb	66.0	915	1	
Cu	63	3	72	-0.002	ppb	-2605.5	395	1	
Zn	66	3	72	0.012	ppb	628.4	232	5	
As	75	3	72	0.141	ppb	30.1	60	1	
Se	78	2	72	0.089	ppb	109.7	7	1	
Sr	88	3	72	0.069	ppb	33.4	82	0.5	
Mo	95	3	115	0.049	ppb	68.3	65	0.5	
Ag	107	3	115	0.017	ppb	53.7	43	1	
Cd	111	3	115	-0.001	ppb	-1341.9	10	0.5	
Sn	120	3	115	0.136	ppb	61.7	881	1	
Sb	121	3	115	0.085	ppb	56.8	113	0.6	
Ba	137	3	115	-0.057	ppb	-152.0	48	0.5	
Tl	205	3	193	-0.034	ppb	-67.6	257	0.1	
(Pb)	206	3	193	-0.079	ppb	-76.3	223	1	
(Pb)	207	3	193	-0.100	ppb	-23.4	380	1	
Pb	208	3	193	-0.086	ppb	-20.8	1069	0.5	
Th	232	3	193	1.729	ppb	14.7	16286	1	>RL
U	238	3	193	0.043	ppb	40.3	1819	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4317419	0.59	4300192	100.40	60	120	
Sc (IS)	45	3	HMI He	636554	0.53	644593	98.75	60	120	
Ge Internal standard	72	2	HMI H2	2596922	1.25	2598552	99.94	60	120	
Ge Internal standard	72	3	HMI He	776490	0.41	772392	100.53	60	120	
In Internal Standard	115	3	HMI He	2939974	0.90	2872781	102.34	60	120	
Ir (IS)	193	3	HMI He	6278103	0.19	6092963	103.04	60	120	

Sample Report

Sample Table

Sample Name	280-175143-n-1-a
Data File Name	238SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:01:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.014	ppb	0.014	1032.53	7	2000	
Na	23	3	45	1402798.912	ppb	1402798.912	2.34	157748304	400000	
Mg	24	3	45	434245.480	ppb	434245.480	3.80	25658718	400000	
Al	27	3	45	671.133	ppb	671.133	5.78	15491	400000	
K	39	3	45	86616.998	ppb	86616.998	1.83	4211002	400000	
Ca	40	2	45	1654612.756	ppb	1654612.756	1.79	949464745	400000	
V	51	3	72	18.126	ppb	18.126	1.90	12298	2000	
Cr	52	3	72	10.062	ppb	10.062	1.50	10789	5000	
Mn	55	3	72	3867.904	ppb	3867.904	0.84	1568259	10000	
Fe	56	2	72	359136.250	ppb	359136.250	2.12	551286534	10000	>LDR
Co	59	3	72	7.366	ppb	7.366	0.92	9657	2000	
Ni	60	3	72	30.380	ppb	30.380	3.77	11843	5000	
Cu	63	3	72	11.357	ppb	11.357	2.68	11746	5000	
Zn	66	3	72	44.684	ppb	44.684	4.14	7377	5000	
As	75	3	72	33.607	ppb	33.607	2.62	3845	2000	
Se	78	2	72	3.392	ppb	3.392	9.39	199	2000	
Sr	88	3	72	8260.934	ppb	8260.934	2.16	4447190	4000	
Mo	95	3	115	19.614	ppb	19.614	3.68	9859	2000	
Ag	107	3	115	0.022	ppb	0.022	28.43	50	100	
Cd	111	3	115	0.050	ppb	0.050	89.12	22	2000	
Sn	120	3	115	1.960	ppb	1.960	10.03	2227	2000	
Sb	121	3	115	1.707	ppb	1.707	9.96	1333	1000	
Ba	137	3	115	10052.436	ppb	10052.436	4.55	2474872	5000	
Tl	205	3	193	-0.019	ppb	-0.019	-31.58	313	2000	
(Pb)	206	3	193	1.323	ppb	1.323	3.98	2066	100	
(Pb)	207	3	193	1.214	ppb	1.214	9.54	1896	100	
Pb	208	3	193	1.216	ppb	1.216	1.33	7972	5000	
Th	232	3	193	0.828	ppb	0.828	34.43	11436	2000	
U	238	3	193	0.594	ppb	0.594	1.82	4875	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4269749	1.41	4300192	99.29	60	120	
Sc (IS)	45	3	HMI He	630756	1.70	644593	97.85	60	120	
Ge Internal standard	72	2	HMI H2	2510275	0.76	2598552	96.60	60	120	
Ge Internal standard	72	3	HMI He	758749	1.29	772392	98.23	60	120	
In Internal Standard	115	3	HMI He	2793533	1.44	2872781	97.24	60	120	
Ir (IS)	193	3	HMI He	6246406	0.96	6092963	102.52	60	120	

Sample Report

Sample Table

Sample Name	280-175147-c-1-a
Data File Name	239SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:03:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.004	ppb	0.004	4196.71	7	2000	
Na	23	3	45	7861.977	ppb	7861.977	1.20	912408	400000	
Mg	24	3	45	4621.481	ppb	4621.481	0.34	277046	400000	
Al	27	3	45	4211.198	ppb	4211.198	1.57	97712	400000	
K	39	3	45	1722.683	ppb	1722.683	1.53	112172	400000	
Ca	40	2	45	11853.012	ppb	11853.012	4.61	7057613	400000	
V	51	3	72	6.387	ppb	6.387	3.06	5257	2000	
Cr	52	3	72	3.120	ppb	3.120	12.76	5780	5000	
Mn	55	3	72	127.204	ppb	127.204	0.45	54966	10000	
Fe	56	2	72	3917.360	ppb	3917.360	2.29	6515087	10000	
Co	59	3	72	1.686	ppb	1.686	2.72	2384	2000	
Ni	60	3	72	3.099	ppb	3.099	6.40	1923	5000	
Cu	63	3	72	4.927	ppb	4.927	0.74	5627	5000	
Zn	66	3	72	17.752	ppb	17.752	2.58	3245	5000	
As	75	3	72	1.321	ppb	1.321	22.98	203	2000	
Se	78	2	72	0.489	ppb	0.489	12.86	33	2000	
Sr	88	3	72	72.655	ppb	72.655	2.10	41442	4000	
Mo	95	3	115	0.408	ppb	0.408	14.96	258	2000	
Ag	107	3	115	0.035	ppb	0.035	16.21	77	100	
Cd	111	3	115	0.056	ppb	0.056	33.11	25	2000	
Sn	120	3	115	-0.059	ppb	-0.059	-74.11	738	2000	
Sb	121	3	115	0.249	ppb	0.249	9.70	248	1000	
Ba	137	3	115	110.661	ppb	110.661	2.03	29234	5000	
Tl	205	3	193	0.003	ppb	0.003	196.03	405	2000	
(Pb)	206	3	193	3.663	ppb	3.663	3.44	5195	100	
(Pb)	207	3	193	3.317	ppb	3.317	5.41	4372	100	
Pb	208	3	193	3.562	ppb	3.562	1.64	20625	5000	
Th	232	3	193	0.917	ppb	0.917	10.49	12038	2000	
U	238	3	193	0.483	ppb	0.483	4.29	4304	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4426444	3.70	4300192	102.94	60	120	
Sc (IS)	45	3	HMI He	639052	0.39	644593	99.14	60	120	
Ge Internal standard	72	2	HMI H2	2692924	1.72	2598552	103.63	60	120	
Ge Internal standard	72	3	HMI He	802989	0.57	772392	103.96	60	120	
In Internal Standard	115	3	HMI He	2990700	2.18	2872781	104.10	60	120	
Ir (IS)	193	3	HMI He	6313162	1.57	6092963	103.61	60	120	

Sample Report

Sample Table

Sample Name	280-175148-c-1-a
Data File Name	240SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:05:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.089	ppb	0.089	134.28	10	2000	
Na	23	3	45	16353.605	ppb	16353.605	1.22	1892408	400000	
Mg	24	3	45	10438.489	ppb	10438.489	0.69	629567	400000	
Al	27	3	45	1589.391	ppb	1589.391	7.64	37205	400000	
K	39	3	45	1470.640	ppb	1470.640	1.87	100504	400000	
Ca	40	2	45	21496.262	ppb	21496.262	1.70	12795098	400000	
V	51	3	72	1.894	ppb	1.894	5.17	2296	2000	
Cr	52	3	72	1.162	ppb	1.162	9.89	4205	5000	
Mn	55	3	72	86.580	ppb	86.580	0.76	37666	10000	
Fe	56	2	72	1589.093	ppb	1589.093	3.09	2667915	10000	
Co	59	3	72	0.858	ppb	0.858	5.04	1244	2000	
Ni	60	3	72	1.916	ppb	1.916	10.53	1468	5000	
Cu	63	3	72	2.586	ppb	2.586	0.53	3159	5000	
Zn	66	3	72	8.516	ppb	8.516	4.28	1686	5000	
As	75	3	72	0.525	ppb	0.525	32.90	108	2000	
Se	78	2	72	0.214	ppb	0.214	18.14	15	2000	
Sr	88	3	72	202.537	ppb	202.537	0.34	115840	4000	
Mo	95	3	115	0.380	ppb	0.380	19.09	245	2000	
Ag	107	3	115	0.014	ppb	0.014	66.06	40	100	
Cd	111	3	115	0.049	ppb	0.049	78.77	23	2000	
Sn	120	3	115	-0.210	ppb	-0.210	-42.57	618	2000	
Sb	121	3	115	0.165	ppb	0.165	7.55	182	1000	
Ba	137	3	115	88.103	ppb	88.103	1.36	23446	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-9.82	210	2000	
(Pb)	206	3	193	1.654	ppb	1.654	3.63	2537	100	
(Pb)	207	3	193	1.599	ppb	1.599	3.58	2376	100	
Pb	208	3	193	1.634	ppb	1.634	2.49	10335	5000	
Th	232	3	193	0.162	ppb	0.162	15.19	8044	2000	
U	238	3	193	1.413	ppb	1.413	0.41	9564	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4423412	1.02	4300192	102.87	60	120	
Sc (IS)	45	3	HMI He	643287	0.64	644593	99.80	60	120	
Ge Internal standard	72	2	HMI H2	2678227	0.95	2598552	103.07	60	120	
Ge Internal standard	72	3	HMI He	805690	0.85	772392	104.31	60	120	
In Internal Standard	115	3	HMI He	3010480	1.66	2872781	104.79	60	120	
Ir (IS)	193	3	HMI He	6339067	0.93	6092963	104.04	60	120	

Sample Report

Sample Table

Sample Name	280-175150-c-1-a
Data File Name	241SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:07:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.031	ppb	-0.031	-5.62	5	2000	
Na	23	3	45	9683.477	ppb	9683.477	1.45	1120829	400000	
Mg	24	3	45	6919.401	ppb	6919.401	2.23	414937	400000	
Al	27	3	45	969.086	ppb	969.086	1.54	22621	400000	
K	39	3	45	1220.723	ppb	1220.723	2.45	87684	400000	
Ca	40	2	45	13911.860	ppb	13911.860	1.81	8240512	400000	
V	51	3	72	0.937	ppb	0.937	8.53	1643	2000	
Cr	52	3	72	1.128	ppb	1.128	11.78	4132	5000	
Mn	55	3	72	80.597	ppb	80.597	1.61	34701	10000	
Fe	56	2	72	1163.379	ppb	1163.379	1.95	1993607	10000	
Co	59	3	72	0.795	ppb	0.795	8.64	1144	2000	
Ni	60	3	72	1.415	ppb	1.415	15.76	1258	5000	
Cu	63	3	72	2.574	ppb	2.574	5.43	3112	5000	
Zn	66	3	72	10.229	ppb	10.229	7.00	1956	5000	
As	75	3	72	0.858	ppb	0.858	23.65	147	2000	
Se	78	2	72	0.330	ppb	0.330	68.50	23	2000	
Sr	88	3	72	98.099	ppb	98.099	1.45	55512	4000	
Mo	95	3	115	0.460	ppb	0.460	18.33	282	2000	
Ag	107	3	115	0.014	ppb	0.014	114.47	38	100	
Cd	111	3	115	-0.001	ppb	-0.001	-3682.55	10	2000	
Sn	120	3	115	-0.239	ppb	-0.239	-14.22	580	2000	
Sb	121	3	115	0.208	ppb	0.208	21.90	212	1000	
Ba	137	3	115	78.642	ppb	78.642	1.29	20422	5000	
Tl	205	3	193	-0.043	ppb	-0.043	-15.43	222	2000	
(Pb)	206	3	193	2.280	ppb	2.280	4.26	3327	100	
(Pb)	207	3	193	2.152	ppb	2.152	9.39	2982	100	
Pb	208	3	193	2.176	ppb	2.176	4.40	13074	5000	
Th	232	3	193	0.009	ppb	0.009	654.67	7134	2000	
U	238	3	193	0.282	ppb	0.282	8.50	3141	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4400369	1.36	4300192	102.33	60	120	
Sc (IS)	45	3	HMI He	639608	1.79	644593	99.23	60	120	
Ge Internal standard	72	2	HMI H2	2709439	2.01	2598552	104.27	60	120	
Ge Internal standard	72	3	HMI He	796851	0.82	772392	103.17	60	120	
In Internal Standard	115	3	HMI He	2936425	0.86	2872781	102.22	60	120	
Ir (IS)	193	3	HMI He	6256362	2.14	6092963	102.68	60	120	

Sample Report

Sample Table

Sample Name	280-175079-a-7-b
Data File Name	242SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:08:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-63.79	2	2000	
Na	23	3	45	17220.218	ppb	17220.218	1.77	1993753	400000	
Mg	24	3	45	10385.738	ppb	10385.738	0.37	627006	400000	
Al	27	3	45	11.300	ppb	11.300	10.41	417	400000	
K	39	3	45	5585.165	ppb	5585.165	1.29	303525	400000	
Ca	40	2	45	30201.679	ppb	30201.679	1.39	17773082	400000	
V	51	3	72	15.526	ppb	15.526	2.43	11489	2000	
Cr	52	3	72	1.964	ppb	1.964	16.16	4925	5000	
Mn	55	3	72	71.672	ppb	71.672	1.16	31667	10000	
Fe	56	2	72	194.497	ppb	194.497	5.08	389896	10000	
Co	59	3	72	0.076	ppb	0.076	27.94	165	2000	
Ni	60	3	72	0.561	ppb	0.561	9.09	951	5000	
Cu	63	3	72	0.669	ppb	0.669	6.14	1138	5000	
Zn	66	3	72	1.588	ppb	1.588	17.20	515	5000	
As	75	3	72	4.970	ppb	4.970	20.95	651	2000	
Se	78	2	72	1.390	ppb	1.390	31.95	89	2000	
Sr	88	3	72	162.171	ppb	162.171	2.54	94001	4000	
Mo	95	3	115	3.039	ppb	3.039	3.36	1673	2000	
Ag	107	3	115	0.035	ppb	0.035	27.28	78	100	
Cd	111	3	115	-0.021	ppb	-0.021	-1.18	5	2000	
Sn	120	3	115	-0.320	ppb	-0.320	-42.51	525	2000	
Sb	121	3	115	0.166	ppb	0.166	16.30	182	1000	
Ba	137	3	115	18.588	ppb	18.588	7.00	4972	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-16.16	165	2000	
(Pb)	206	3	193	0.156	ppb	0.156	7.92	541	100	
(Pb)	207	3	193	0.105	ppb	0.105	49.40	626	100	
Pb	208	3	193	0.123	ppb	0.123	9.68	2214	5000	
Th	232	3	193	-0.329	ppb	-0.329	-3.54	5430	2000	
U	238	3	193	1.862	ppb	1.862	3.12	12142	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4375356	1.50	4300192	101.75	60	120	
Sc (IS)	45	3	HMI He	643926	0.62	644593	99.90	60	120	
Ge Internal standard	72	2	HMI H2	2720109	2.81	2598552	104.68	60	120	
Ge Internal standard	72	3	HMI He	816541	1.00	772392	105.72	60	120	
In Internal Standard	115	3	HMI He	2996380	1.31	2872781	104.30	60	120	
Ir (IS)	193	3	HMI He	6361557	1.15	6092963	104.41	60	120	

Sample Report

Sample Table

Sample Name	280-175151-c-1-a
Data File Name	243SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:10:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.070	ppb	-0.070	-196.80	3	2000	
Na	23	3	45	35007.353	ppb	35007.353	3.96	4005589	400000	
Mg	24	3	45	16432.033	ppb	16432.033	1.66	984485	400000	
Al	27	3	45	1245.100	ppb	1245.100	7.67	28994	400000	
K	39	3	45	2481.115	ppb	2481.115	3.30	149304	400000	
Ca	40	2	45	37438.980	ppb	37438.980	2.69	22096088	400000	
V	51	3	72	2.062	ppb	2.062	6.22	2372	2000	
Cr	52	3	72	1.363	ppb	1.363	16.97	4305	5000	
Mn	55	3	72	33.581	ppb	33.581	3.58	14632	10000	
Fe	56	2	72	1029.757	ppb	1029.757	4.65	1757192	10000	
Co	59	3	72	0.451	ppb	0.451	18.13	671	2000	
Ni	60	3	72	1.081	ppb	1.081	7.81	1124	5000	
Cu	63	3	72	3.296	ppb	3.296	2.69	3855	5000	
Zn	66	3	72	5.450	ppb	5.450	3.90	1148	5000	
As	75	3	72	0.750	ppb	0.750	35.67	133	2000	
Se	78	2	72	1.411	ppb	1.411	1.58	90	2000	
Sr	88	3	72	309.871	ppb	309.871	2.72	174613	4000	
Mo	95	3	115	1.522	ppb	1.522	12.96	841	2000	
Ag	107	3	115	0.011	ppb	0.011	49.27	33	100	
Cd	111	3	115	-0.001	ppb	-0.001	-1800.23	10	2000	
Sn	120	3	115	-0.203	ppb	-0.203	-38.14	610	2000	
Sb	121	3	115	0.460	ppb	0.460	19.61	411	1000	
Ba	137	3	115	106.837	ppb	106.837	2.54	27759	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-12.94	220	2000	
(Pb)	206	3	193	0.926	ppb	0.926	8.52	1574	100	
(Pb)	207	3	193	0.857	ppb	0.857	10.24	1513	100	
Pb	208	3	193	0.903	ppb	0.903	1.96	6437	5000	
Th	232	3	193	-0.002	ppb	-0.002	-3182.62	7200	2000	
U	238	3	193	1.846	ppb	1.846	1.77	12067	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4389027	1.10	4300192	102.07	60	120	
Sc (IS)	45	3	HMI He	639160	0.60	644593	99.16	60	120	
Ge Internal standard	72	2	HMI H2	2687738	2.16	2598552	103.43	60	120	
Ge Internal standard	72	3	HMI He	794027	0.99	772392	102.80	60	120	
In Internal Standard	115	3	HMI He	2941435	2.40	2872781	102.39	60	120	
Ir (IS)	193	3	HMI He	6369997	0.08	6092963	104.55	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-3-a
Data File Name	244SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:12:27-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	19587.315	ppb	19587.315	0.20	2249940	400000	
Mg	24	3	45	20063.211	ppb	20063.211	2.35	1202618	400000	
Al	27	3	45	6.387	ppb	6.387	37.42	300	400000	
K	39	3	45	7886.015	ppb	7886.015	0.85	414097	400000	
Ca	40	2	45	105136.073	ppb	105136.073	2.77	62380392	400000	
V	51	3	72	6.374	ppb	6.374	6.25	5235	2000	
Cr	52	3	72	4.765	ppb	4.765	8.37	7097	5000	
Mn	55	3	72	0.626	ppb	0.626	37.18	660	10000	
Fe	56	2	72	31.833	ppb	31.833	14.04	118589	10000	
Co	59	3	72	0.029	ppb	0.029	33.61	97	2000	
Ni	60	3	72	2.086	ppb	2.086	11.17	1524	5000	
Cu	63	3	72	0.616	ppb	0.616	19.14	1060	5000	
Zn	66	3	72	2.728	ppb	2.728	4.72	698	5000	
As	75	3	72	1.699	ppb	1.699	17.36	248	2000	
Se	78	2	72	2.504	ppb	2.504	9.94	159	2000	
Sr	88	3	72	458.141	ppb	458.141	1.26	260429	4000	
Mo	95	3	115	1.670	ppb	1.670	7.39	930	2000	
Ag	107	3	115	0.023	ppb	0.023	20.46	55	100	
Cd	111	3	115	-0.028	ppb	-0.028	-78.02	3	2000	
Sn	120	3	115	-0.176	ppb	-0.176	-58.86	638	2000	
Sb	121	3	115	0.151	ppb	0.151	28.91	168	1000	
Ba	137	3	115	124.046	ppb	124.046	4.10	32494	5000	
Tl	205	3	193	-0.068	ppb	-0.068	-3.59	123	2000	
(Pb)	206	3	193	-0.034	ppb	-0.034	-96.20	285	100	
(Pb)	207	3	193	-0.072	ppb	-0.072	-11.26	415	100	
Pb	208	3	193	-0.046	ppb	-0.046	-26.94	1294	5000	
Th	232	3	193	-0.378	ppb	-0.378	-14.88	5135	2000	
U	238	3	193	7.457	ppb	7.457	0.29	43536	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4413916	0.86	4300192	102.64	60	120	
Sc (IS)	45	3	HMI He	639471	0.51	644593	99.21	60	120	
Ge Internal standard	72	2	HMI H2	2695870	1.02	2598552	103.75	60	120	
Ge Internal standard	72	3	HMI He	801012	1.31	772392	103.71	60	120	
In Internal Standard	115	3	HMI He	2967749	3.29	2872781	103.31	60	120	
Ir (IS)	193	3	HMI He	6321017	0.62	6092963	103.74	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-2-a
Data File Name	245SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:14:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	19163.049	ppb	19163.049	2.38	2191000	400000	
Mg	24	3	45	20401.832	ppb	20401.832	2.33	1217070	400000	
Al	27	3	45	1.821	ppb	1.821	59.27	194	400000	
K	39	3	45	7894.035	ppb	7894.035	0.75	412498	400000	
Ca	40	2	45	102671.245	ppb	102671.245	2.58	60081219	400000	
V	51	3	72	6.558	ppb	6.558	6.28	5362	2000	
Cr	52	3	72	2.506	ppb	2.506	8.64	5275	5000	
Mn	55	3	72	0.461	ppb	0.461	35.63	590	10000	
Fe	56	2	72	26.264	ppb	26.264	14.96	110582	10000	
Co	59	3	72	0.093	ppb	0.093	17.01	185	2000	
Ni	60	3	72	1.672	ppb	1.672	23.79	1366	5000	
Cu	63	3	72	0.274	ppb	0.274	10.78	700	5000	
Zn	66	3	72	1.334	ppb	1.334	33.60	463	5000	
As	75	3	72	1.699	ppb	1.699	12.27	248	2000	
Se	78	2	72	2.406	ppb	2.406	8.49	154	2000	
Sr	88	3	72	453.998	ppb	453.998	1.26	258325	4000	
Mo	95	3	115	1.693	ppb	1.693	10.03	933	2000	
Ag	107	3	115	0.025	ppb	0.025	27.66	58	100	
Cd	111	3	115	-0.015	ppb	-0.015	-74.11	7	2000	
Sn	120	3	115	-0.294	ppb	-0.294	-41.48	536	2000	
Sb	121	3	115	0.176	ppb	0.176	8.96	187	1000	
Ba	137	3	115	123.325	ppb	123.325	1.18	32093	5000	
Tl	205	3	193	-0.068	ppb	-0.068	-8.38	120	2000	
(Pb)	206	3	193	-0.064	ppb	-0.064	-30.68	243	100	
(Pb)	207	3	193	-0.066	ppb	-0.066	-56.71	418	100	
Pb	208	3	193	-0.054	ppb	-0.054	-26.41	1239	5000	
Th	232	3	193	-0.410	ppb	-0.410	-5.02	4917	2000	
U	238	3	193	7.375	ppb	7.375	0.79	42678	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4353871	1.71	4300192	101.25	60	120	
Sc (IS)	45	3	HMI He	636396	0.15	644593	98.73	60	120	
Ge Internal standard	72	2	HMI H2	2724747	1.03	2598552	104.86	60	120	
Ge Internal standard	72	3	HMI He	801745	0.79	772392	103.80	60	120	
In Internal Standard	115	3	HMI He	2946170	1.64	2872781	102.55	60	120	
Ir (IS)	193	3	HMI He	6263068	0.72	6092963	102.79	60	120	

Sample Report

Sample Table

Sample Name	280-175172-a-5-a
Data File Name	246SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:16:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609143 200.8/6020B
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.53	2	2000	
Na	23	3	45	19683.583	ppb	19683.583	1.27	2257051	400000	
Mg	24	3	45	20532.071	ppb	20532.071	1.32	1228669	400000	
Al	27	3	45	3.093	ppb	3.093	5.38	224	400000	
K	39	3	45	8031.140	ppb	8031.140	1.33	420464	400000	
Ca	40	2	45	106918.000	ppb	106918.000	1.04	62819914	400000	
V	51	3	72	6.825	ppb	6.825	2.86	5527	2000	
Cr	52	3	72	4.623	ppb	4.623	8.61	6975	5000	
Mn	55	3	72	0.538	ppb	0.538	26.92	621	10000	
Fe	56	2	72	28.474	ppb	28.474	13.35	111616	10000	
Co	59	3	72	0.046	ppb	0.046	53.13	120	2000	
Ni	60	3	72	2.085	ppb	2.085	7.00	1523	5000	
Cu	63	3	72	0.514	ppb	0.514	19.73	951	5000	
Zn	66	3	72	1.036	ppb	1.036	1.80	411	5000	
As	75	3	72	1.702	ppb	1.702	20.14	248	2000	
Se	78	2	72	2.690	ppb	2.690	7.09	168	2000	
Sr	88	3	72	461.692	ppb	461.692	0.03	262145	4000	
Mo	95	3	115	1.803	ppb	1.803	12.41	990	2000	
Ag	107	3	115	0.022	ppb	0.022	37.90	53	100	
Cd	111	3	115	-0.008	ppb	-0.008	-153.39	8	2000	
Sn	120	3	115	-0.251	ppb	-0.251	-39.88	570	2000	
Sb	121	3	115	0.120	ppb	0.120	34.05	142	1000	
Ba	137	3	115	122.888	ppb	122.888	3.69	31894	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-15.24	135	2000	
(Pb)	206	3	193	0.093	ppb	0.093	25.16	458	100	
(Pb)	207	3	193	0.045	ppb	0.045	59.05	556	100	
Pb	208	3	193	0.093	ppb	0.093	14.80	2056	5000	
Th	232	3	193	-0.414	ppb	-0.414	-11.23	4985	2000	
U	238	3	193	7.413	ppb	7.413	0.55	43650	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4370670	1.43	4300192	101.64	60	120	
Sc (IS)	45	3	HMI He	638386	1.03	644593	99.04	60	120	
Ge Internal standard	72	2	HMI H2	2661258	2.29	2598552	102.41	60	120	
Ge Internal standard	72	3	HMI He	800000	0.71	772392	103.57	60	120	
In Internal Standard	115	3	HMI He	2939788	2.56	2872781	102.33	60	120	
Ir (IS)	193	3	HMI He	6374364	0.97	6092963	104.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	247_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:17:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.765	ppb	11.044	2214	50	105.5	90	110	
Na	23	3	45	48488.942	ppb	1.733	5395202	51000	95.1	90	110	
Mg	24	3	45	10290.100	ppb	1.491	600249	11000	93.5	90	110	
Al	27	3	45	959.856	ppb	2.973	21795	1000	96.0	90	110	
K	39	3	45	10210.153	ppb	1.242	513612	11000	92.8	90	110	
Ca	40	2	45	10529.589	ppb	1.914	6145915	11000	95.7	90	110	
V	51	3	72	48.879	ppb	1.036	31388	50	97.8	90	110	
Cr	52	3	72	50.791	ppb	2.473	41885	50	101.6	90	110	
Mn	55	3	72	50.373	ppb	2.699	20713	50	100.7	90	110	
Fe	56	2	72	1086.154	ppb	2.566	1741359	1000	108.6	90	110	
Co	59	3	72	50.313	ppb	0.398	65403	50	100.6	90	110	
Ni	60	3	72	51.074	ppb	0.479	19381	50	102.1	90	110	
Cu	63	3	72	50.256	ppb	0.356	50470	50	100.5	90	110	
Zn	66	3	72	50.191	ppb	3.783	8230	50	100.4	90	110	
As	75	3	72	53.445	ppb	2.242	6068	50	106.9	90	110	
Se	78	2	72	51.915	ppb	1.983	3044	50	103.8	90	110	
Sr	88	3	72	104.209	ppb	2.121	55942	100	104.2	90	110	
Mo	95	3	115	49.974	ppb	1.843	25446	50	99.9	90	110	
Ag	107	3	115	49.191	ppb	3.576	84423	50	98.4	90	110	
Cd	111	3	115	50.394	ppb	0.720	12341	50	100.8	90	110	
Sn	120	3	115	49.086	ppb	3.170	38740	50	98.2	90	110	
Sb	121	3	115	50.486	ppb	2.700	38759	50	101.0	90	110	
Ba	137	3	115	51.425	ppb	5.326	12910	50	102.8	90	110	
Tl	205	3	193	47.951	ppb	2.112	193301	50	95.9	90	110	
(Pb)	206	3	193	47.466	ppb	1.100	63730	50	94.9	90	110	
(Pb)	207	3	193	47.616	ppb	0.647	56405	50	95.2	90	110	
Pb	208	3	193	47.686	ppb	0.926	258493	50	95.4	90	110	
Th	232	3	193	47.516	ppb	0.670	262226	50	95.0	90	110	
U	238	3	193	47.862	ppb	1.895	271900	50	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4334439	2.31	4300192	100.80	60	120	
Sc (IS)	45	3	HMI He	622156	0.55	644593	96.52	60	120	
Ge Internal standard	72	2	HMI H2	2528670	0.37	2598552	97.31	60	120	
Ge Internal standard	72	3	HMI He	755913	0.31	772392	97.87	60	120	
In Internal Standard	115	3	HMI He	2835965	1.95	2872781	98.72	60	120	
Ir (IS)	193	3	HMI He	6347234	0.74	6092963	104.17	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	248_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T21:19:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	74.760	ppb	8.4	24335	25	>RL
Mg	24	3	45	3.222	ppb	36.2	447	25	
Al	27	3	45	-1.963	ppb	-35.9	103	15	
K	39	3	45	-6.900	ppb	-477.6	26712	50	
V	51	3	72	-0.560	ppb	-9.0	631	1	
Cr	52	3	72	0.368	ppb	83.4	3364	1	
Mn	55	3	72	-0.007	ppb	-1381.9	370	0.5	
Co	59	3	72	0.017	ppb	108.5	77	0.5	
Ni	60	3	72	0.505	ppb	48.4	866	1	
Cu	63	3	72	0.009	ppb	425.9	398	1	
Zn	66	3	72	0.009	ppb	2275.1	227	5	
As	75	3	72	0.049	ppb	184.6	48	1	
Se	78	2	72	0.055	ppb	35.0	5	1	
Sr	88	3	72	0.072	ppb	91.9	82	0.5	
Mo	95	3	115	0.049	ppb	55.0	63	0.5	
Ag	107	3	115	0.010	ppb	30.9	30	1	
Cd	111	3	115	-0.027	ppb	-86.5	3	0.5	
Sn	120	3	115	0.032	ppb	101.3	780	1	
Sb	121	3	115	0.036	ppb	25.8	73	0.6	
Ba	137	3	115	-0.033	ppb	-191.4	53	0.5	
Tl	205	3	193	-0.039	ppb	-27.9	233	0.1	
(Pb)	206	3	193	-0.067	ppb	-19.3	235	1	
(Pb)	207	3	193	-0.134	ppb	-18.0	335	1	
Pb	208	3	193	-0.089	ppb	-17.4	1038	0.5	
Th	232	3	193	1.564	ppb	9.2	15150	1	>RL
U	238	3	193	0.033	ppb	49.3	1738	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4332137	0.82	4300192	100.74	60	120	
Sc (IS)	45	3	HMI He	620232	0.72	644593	96.22	60	120	
Ge Internal standard	72	2	HMI H2	2594948	0.33	2598552	99.86	60	120	
Ge Internal standard	72	3	HMI He	761522	0.44	772392	98.59	60	120	
In Internal Standard	115	3	HMI He	2870724	0.98	2872781	99.93	60	120	
Ir (IS)	193	3	HMI He	6174407	2.28	6092963	101.34	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609194/1-B
Data File Name	249_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:05:58-06:00
Sample Type	Blank
Dilution	1
Comment	609233 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	281.230	ppb	1.082267342	46650	25
Mg	24	3	45	1.563	ppb	45.98899089	347	25
Al	27	3	45	-0.262	ppb	-303.3904984	140	15
K	39	3	45	-2.733	ppb	-1025.155607	26612	50
Ca	40	2	45	16.072	ppb	3.172188851	21786	200
V	51	3	72	-0.358	ppb	-36.15352345	760	1
Cr	52	3	72	-0.469	ppb	-12.89308656	2724	1
Mn	55	3	72	0.188	ppb	45.45909871	450	0.5
Fe	56	2	72	20.001	ppb	13.2390376	97474	50
Co	59	3	72	0.003	ppb	288.8187496	58	0.5
Ni	60	3	72	-0.581	ppb	-18.75977448	466	1
Cu	63	3	72	0.121	ppb	16.28564249	511	1
Zn	66	3	72	1.393	ppb	7.443895937	450	5
As	75	3	72	0.092	ppb	112.1561568	53	1
(Se)	78	3	72	0.293	ppb	264.0718631	25	1
Sr	88	3	72	0.056	ppb	51.92766477	73	0.5
Mo	95	3	115	0.046	ppb	101.1237291	62	0.5
Ag	107	3	115	0.005	ppb	125.3402849	22	1
Cd	111	3	115	-0.041	ppb	0	0	0.5
Sn	120	3	115	-0.132	ppb	-40.30787229	650	1
Sb	121	3	115	0.009	ppb	284.4853356	52	0.6
Ba	137	3	115	0.219	ppb	51.55799151	117	0.5
Tl	205	3	193	-0.061	ppb	-18.25714322	143	0.1
(Pb)	206	3	193	-0.007	ppb	-344.8737397	310	1
(Pb)	207	3	193	0.068	ppb	78.34724986	560	1
Pb	208	3	193	0.002	ppb	652.1535081	1503	0.5
Th	232	3	193	0.030	ppb	404.0969576	7077	1
U	238	3	193	0.011	ppb	159.4563042	1598	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4212308	0.52	4300192	97.96	60	120	
Sc (IS)	45	3	HMI He	613371	0.41	644593	95.16	60	120	
Ge Internal standard	72	2	HMI H2	2653486	1.92	2598552	102.11	60	120	
Ge Internal standard	72	3	HMI He	762841	0.76	772392	98.76	60	120	
In Internal Standard	115	3	HMI He	2865732	0.86	2872781	99.75	60	120	
Ir (IS)	193	3	HMI He	6116676	1.21	6092963	100.39	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609194/2-C
Data File Name	250_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:07:46-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609233 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.163	41.163	ppb	4.612	1784	40	102.9	80	120	
Na	23	3	45	824.460	824.460	ppb	1.679	107441	40	2061.1	80	120	>+/-20%
Mg	24	3	45	698.999	698.999	ppb	1.645	40967	40	1747.5	80	120	>+/-20%
Al	27	3	45	761.725	761.725	ppb	3.092	17305	40	1904.3	80	120	>+/-20%
K	39	3	45	757.724	757.724	ppb	1.037	63148	40	1894.3	80	120	>+/-20%
Ca	40	2	45	801.018	801.018	ppb	1.655	479066	40	2002.5	80	120	>+/-20%
V	51	3	72	38.527	38.527	ppb	2.065	25187	40	96.3	80	120	
Cr	52	3	72	37.658	37.658	ppb	0.635	32151	40	94.1	80	120	
Mn	55	3	72	39.176	39.176	ppb	0.499	16348	40	97.9	80	120	
Fe	56	2	72	773.093	773.093	ppb	1.989	1309478	40	1932.7	80	120	>+/-20%
(Fe)	56	3	72	754.416	754.416	ppb	0.655	511947	40	1886.0	80	120	>+/-20%
Co	59	3	72	38.356	38.356	ppb	2.256	50351	40	95.9	80	120	
Ni	60	3	72	37.869	37.869	ppb	2.291	14684	40	94.7	80	120	
Cu	63	3	72	39.145	39.145	ppb	0.733	39777	40	97.9	80	120	
Zn	66	3	72	39.778	39.778	ppb	4.304	6632	40	99.4	80	120	
As	75	3	72	38.143	38.143	ppb	5.616	4385	40	95.4	80	120	
Se	78	2	72	39.470	39.470	ppb	0.941	2411	40	98.7	80	120	
(Se)	78	3	72	42.557	42.557	ppb	18.467	295	40	106.4	80	120	
Sr	88	3	72	78.554	78.554	ppb	1.938	42587	40	196.4	80	120	>+/-20%
Mo	95	3	115	36.550	36.550	ppb	4.096	18869	40	91.4	80	120	
Ag	107	3	115	38.059	38.059	ppb	1.738	66218	40	95.1	80	120	
Cd	111	3	115	36.763	36.763	ppb	3.147	9127	40	91.9	80	120	
Sn	120	3	115	35.786	35.786	ppb	2.087	28835	40	89.5	80	120	
Sb	121	3	115	38.069	38.069	ppb	1.840	29633	40	95.2	80	120	
Ba	137	3	115	38.212	38.212	ppb	2.119	9742	40	95.5	80	120	
Tl	205	3	193	37.354	37.354	ppb	1.662	148953	40	93.4	80	120	
(Pb)	206	3	193	37.722	37.722	ppb	1.004	50134	40	94.3	80	120	
(Pb)	207	3	193	36.963	36.963	ppb	2.713	43393	40	92.4	80	120	
Pb	208	3	193	37.509	37.509	ppb	1.850	201317	40	93.8	80	120	
Th	232	3	193	34.808	34.808	ppb	0.302	191800	40	87.0	80	120	
U	238	3	193	37.561	37.561	ppb	2.263	211284	40	93.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4329078	1.58	4300192	100.67	60	120	
Sc (IS)	45	3	HMI He	621380	0.57	644593	96.40	60	120	
Ge Internal standard	72	2	HMI H2	2633775	1.83	2598552	101.36	60	120	
Ge Internal standard	72	3	HMI He	763204	0.37	772392	98.81	60	120	
In Internal Standard	115	3	HMI He	2873938	1.43	2872781	100.04	60	120	
Ir (IS)	193	3	HMI He	6274906	0.73	6092963	102.99	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-G
Data File Name	251SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:09:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.110	ppb	-0.110	-62.10	2	2000	
Na	23	3	45	64588.015	ppb	64588.015	1.04	7139357	400000	
Mg	24	3	45	25228.902	ppb	25228.902	1.30	1462682	400000	
Al	27	3	45	-0.018	ppb	-0.018	-7612.56	147	400000	
K	39	3	45	2797.418	ppb	2797.418	0.87	159483	400000	
Ca	40	2	45	91824.080	ppb	91824.080	0.49	52558958	400000	
V	51	3	72	-0.187	ppb	-0.187	-48.76	878	2000	
Cr	52	3	72	-0.521	ppb	-0.521	-67.96	2719	5000	
Mn	55	3	72	0.410	ppb	0.410	20.06	548	10000	
Fe	56	2	72	-1.611	ppb	-1.611	-128.64	61354	10000	
Co	59	3	72	0.085	ppb	0.085	38.33	168	2000	
Ni	60	3	72	0.425	ppb	0.425	35.17	850	5000	
Cu	63	3	72	0.472	ppb	0.472	11.02	876	5000	
Zn	66	3	72	1.099	ppb	1.099	22.65	408	5000	
As	75	3	72	0.245	ppb	0.245	81.02	72	2000	
Se	78	2	72	2.010	ppb	2.010	17.63	123	2000	
Sr	88	3	72	711.645	ppb	711.645	0.38	390537	4000	
Mo	95	3	115	1.402	ppb	1.402	6.06	753	2000	
Ag	107	3	115	0.008	ppb	0.008	76.43	27	100	
Cd	111	3	115	-0.021	ppb	-0.021	-98.10	5	2000	
Sn	120	3	115	-0.117	ppb	-0.117	-37.98	656	2000	
Sb	121	3	115	0.133	ppb	0.133	2.04	147	1000	
Ba	137	3	115	76.719	ppb	76.719	2.69	19289	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-26.08	210	2000	
(Pb)	206	3	193	-0.084	ppb	-0.084	-18.73	212	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-26.24	418	100	
Pb	208	3	193	-0.064	ppb	-0.064	-8.93	1158	5000	
Th	232	3	193	1.797	ppb	1.797	17.49	16234	2000	
U	238	3	193	7.065	ppb	7.065	1.94	40028	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4257359	0.48	4300192	99.00	60	120	
Sc (IS)	45	3	HMI He	618551	0.84	644593	95.96	60	120	
Ge Internal standard	72	2	HMI H2	2607060	1.09	2598552	100.33	60	120	
Ge Internal standard	72	3	HMI He	773259	0.68	772392	100.11	60	120	
In Internal Standard	115	3	HMI He	2843433	1.40	2872781	98.98	60	120	
Ir (IS)	193	3	HMI He	6123162	1.16	6092963	100.50	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-H MS
Data File Name	252SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:11:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.146	ppb	40.146	2.59	1699	2000	
Na	23	3	45	65304.473	ppb	65304.473	1.14	7149696	400000	
Mg	24	3	45	25258.121	ppb	25258.121	1.00	1450429	400000	
Al	27	3	45	730.811	ppb	730.811	0.96	16376	400000	
K	39	3	45	3515.170	ppb	3515.170	0.20	191642	400000	
Ca	40	2	45	91340.960	ppb	91340.960	1.04	52532165	400000	
V	51	3	72	36.612	ppb	36.612	2.62	24064	2000	
Cr	52	3	72	36.935	ppb	36.935	3.17	31697	5000	
Mn	55	3	72	37.777	ppb	37.777	2.35	15831	10000	
Fe	56	2	72	765.281	ppb	765.281	2.39	1280209	10000	
Co	59	3	72	36.344	ppb	36.344	1.58	47874	2000	
Ni	60	3	72	36.757	ppb	36.757	1.49	14324	5000	
Cu	63	3	72	37.231	ppb	37.231	0.41	37983	5000	
Zn	66	3	72	38.946	ppb	38.946	2.47	6522	5000	
As	75	3	72	38.842	ppb	38.842	5.44	4482	2000	
Se	78	2	72	39.966	ppb	39.966	3.93	2409	2000	
Sr	88	3	72	784.544	ppb	784.544	0.81	426380	4000	
Mo	95	3	115	36.891	ppb	36.891	1.03	18957	2000	
Ag	107	3	115	37.399	ppb	37.399	1.48	64760	100	
Cd	111	3	115	36.983	ppb	36.983	1.74	9137	2000	
Sn	120	3	115	34.754	ppb	34.754	0.27	27894	2000	
Sb	121	3	115	36.625	ppb	36.625	2.19	28373	1000	
Ba	137	3	115	111.807	ppb	111.807	1.20	28255	5000	
Tl	205	3	193	37.250	ppb	37.250	1.21	144783	2000	
(Pb)	206	3	193	37.268	ppb	37.268	0.55	48279	100	
(Pb)	207	3	193	36.978	ppb	36.978	1.15	42318	100	
Pb	208	3	193	37.127	ppb	37.127	1.24	194237	5000	
Th	232	3	193	36.564	ppb	36.564	0.61	196013	2000	
U	238	3	193	44.745	ppb	44.745	1.46	245052	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4277770	0.87	4300192	99.48	60	120	
Sc (IS)	45	3	HMI He	612639	0.39	644593	95.04	60	120	
Ge Internal standard	72	2	HMI H2	2600338	2.15	2598552	100.07	60	120	
Ge Internal standard	72	3	HMI He	765830	1.16	772392	99.15	60	120	
In Internal Standard	115	3	HMI He	2860310	1.55	2872781	99.57	60	120	
Ir (IS)	193	3	HMI He	6116074	1.35	6092963	100.38	60	120	

Sample Report

Sample Table

Sample Name	280-174932-C-1-I MSD
Data File Name	253SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:13:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.146	ppb	39.146	5.78	1654	2000	
Na	23	3	45	66001.043	ppb	66001.043	1.32	7236759	400000	
Mg	24	3	45	25769.290	ppb	25769.290	2.15	1481875	400000	
Al	27	3	45	713.503	ppb	713.503	1.68	16015	400000	
K	39	3	45	3514.291	ppb	3514.291	0.57	191903	400000	
Ca	40	2	45	92678.286	ppb	92678.286	2.91	53190519	400000	
V	51	3	72	37.014	ppb	37.014	1.44	24087	2000	
Cr	52	3	72	36.818	ppb	36.818	3.77	31306	5000	
Mn	55	3	72	38.222	ppb	38.222	0.35	15861	10000	
Fe	56	2	72	752.179	ppb	752.179	2.84	1265483	10000	
Co	59	3	72	36.609	ppb	36.609	0.59	47767	2000	
Ni	60	3	72	37.907	ppb	37.907	2.23	14607	5000	
Cu	63	3	72	37.706	ppb	37.706	0.45	38093	5000	
Zn	66	3	72	38.311	ppb	38.311	5.09	6357	5000	
As	75	3	72	38.281	ppb	38.281	3.63	4374	2000	
Se	78	2	72	39.274	ppb	39.274	2.99	2379	2000	
Sr	88	3	72	797.322	ppb	797.322	0.37	429194	4000	
Mo	95	3	115	37.418	ppb	37.418	2.60	19259	2000	
Ag	107	3	115	36.583	ppb	36.583	1.62	63456	100	
Cd	111	3	115	36.628	ppb	36.628	1.73	9064	2000	
Sn	120	3	115	35.220	ppb	35.220	1.65	28303	2000	
Sb	121	3	115	36.786	ppb	36.786	0.67	28551	1000	
Ba	137	3	115	114.317	ppb	114.317	1.72	28936	5000	
Tl	205	3	193	36.799	ppb	36.799	1.34	144089	2000	
(Pb)	206	3	193	37.149	ppb	37.149	0.48	48482	100	
(Pb)	207	3	193	36.957	ppb	36.957	2.83	42602	100	
Pb	208	3	193	36.868	ppb	36.868	0.32	194326	5000	
Th	232	3	193	37.536	ppb	37.536	1.29	202528	2000	
U	238	3	193	44.511	ppb	44.511	0.58	245572	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4270534	2.12	4300192	99.31	60	120	
Sc (IS)	45	3	HMI He	613615	1.30	644593	95.19	60	120	
Ge Internal standard	72	2	HMI H2	2612372	0.69	2598552	100.53	60	120	
Ge Internal standard	72	3	HMI He	758502	0.41	772392	98.20	60	120	
In Internal Standard	115	3	HMI He	2865262	1.50	2872781	99.74	60	120	
Ir (IS)	193	3	HMI He	6161016	0.32	6092963	101.12	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-2-B
Data File Name	254SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:14:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.109	ppb	-0.109	-62.97	2	2000	
Na	23	3	45	68988.229	ppb	68988.229	0.72	7494637	400000	
Mg	24	3	45	27563.941	ppb	27563.941	2.21	1570786	400000	
Al	27	3	45	5.546	ppb	5.546	53.46	267	400000	
K	39	3	45	2795.503	ppb	2795.503	2.11	156683	400000	
Ca	40	2	45	98923.752	ppb	98923.752	2.25	55845415	400000	
V	51	3	72	-0.273	ppb	-0.273	-22.53	810	2000	
Cr	52	3	72	0.192	ppb	0.192	193.43	3222	5000	
Mn	55	3	72	0.742	ppb	0.742	3.72	673	10000	
Fe	56	2	72	10.285	ppb	10.285	46.68	79232	10000	
Co	59	3	72	0.067	ppb	0.067	18.13	142	2000	
Ni	60	3	72	0.733	ppb	0.733	8.82	948	5000	
Cu	63	3	72	0.944	ppb	0.944	16.84	1333	5000	
Zn	66	3	72	1.092	ppb	1.092	18.89	400	5000	
As	75	3	72	0.314	ppb	0.314	57.03	78	2000	
Se	78	2	72	1.964	ppb	1.964	7.87	119	2000	
Sr	88	3	72	783.478	ppb	783.478	0.87	422417	4000	
Mo	95	3	115	1.585	ppb	1.585	7.64	848	2000	
Ag	107	3	115	0.014	ppb	0.014	23.35	38	100	
Cd	111	3	115	0.000	ppb	0.000	-17552.63	10	2000	
Sn	120	3	115	-0.008	ppb	-0.008	-939.58	743	2000	
Sb	121	3	115	0.104	ppb	0.104	38.67	125	1000	
Ba	137	3	115	77.648	ppb	77.648	1.93	19575	5000	
Tl	205	3	193	-0.033	ppb	-0.033	-9.04	252	2000	
(Pb)	206	3	193	-0.007	ppb	-0.007	-453.91	308	100	
(Pb)	207	3	193	-0.054	ppb	-0.054	-113.21	420	100	
Pb	208	3	193	-0.020	ppb	-0.020	-49.57	1379	5000	
Th	232	3	193	2.203	ppb	2.203	14.22	18191	2000	
U	238	3	193	8.221	ppb	8.221	1.15	46002	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4200235	2.16	4300192	97.68	60	120	
Sc (IS)	45	3	HMI He	607979	0.49	644593	94.32	60	120	
Ge Internal standard	72	2	HMI H2	2574955	1.75	2598552	99.09	60	120	
Ge Internal standard	72	3	HMI He	759750	1.11	772392	98.36	60	120	
In Internal Standard	115	3	HMI He	2850466	0.20	2872781	99.22	60	120	
Ir (IS)	193	3	HMI He	6079371	1.69	6092963	99.78	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-3-B
Data File Name	255SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:16:46-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	69004.482	ppb	69004.482	1.41	7468753	400000	
Mg	24	3	45	26735.746	ppb	26735.746	0.68	1518122	400000	
Al	27	3	45	-1.702	ppb	-1.702	-18.96	107	400000	
K	39	3	45	2695.500	ppb	2695.500	2.84	151444	400000	
Ca	40	2	45	94297.291	ppb	94297.291	1.31	53516808	400000	
V	51	3	72	-0.326	ppb	-0.326	-35.64	770	2000	
Cr	52	3	72	0.245	ppb	0.245	80.92	3234	5000	
Mn	55	3	72	0.374	ppb	0.374	35.35	520	10000	
Fe	56	2	72	12.611	ppb	12.611	20.56	82171	10000	
Co	59	3	72	0.086	ppb	0.086	11.68	165	2000	
Ni	60	3	72	0.763	ppb	0.763	15.91	951	5000	
Cu	63	3	72	0.630	ppb	0.630	7.81	1011	5000	
Zn	66	3	72	0.884	ppb	0.884	27.19	363	5000	
As	75	3	72	0.394	ppb	0.394	63.64	87	2000	
Se	78	2	72	1.929	ppb	1.929	8.34	116	2000	
Sr	88	3	72	756.090	ppb	756.090	1.50	404250	4000	
Mo	95	3	115	1.705	ppb	1.705	9.63	890	2000	
Ag	107	3	115	0.012	ppb	0.012	78.59	33	100	
Cd	111	3	115	-0.027	ppb	-0.027	-90.06	3	2000	
Sn	120	3	115	-0.260	ppb	-0.260	-16.95	535	2000	
Sb	121	3	115	0.085	ppb	0.085	37.78	108	1000	
Ba	137	3	115	78.377	ppb	78.377	0.31	19328	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-10.50	180	2000	
(Pb)	206	3	193	-0.003	ppb	-0.003	-235.08	320	100	
(Pb)	207	3	193	-0.048	ppb	-0.048	-92.66	435	100	
Pb	208	3	193	-0.035	ppb	-0.035	-11.86	1326	5000	
Th	232	3	193	0.345	ppb	0.345	38.32	8837	2000	
U	238	3	193	8.419	ppb	8.419	1.64	48033	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4222024	2.71	4300192	98.18	60	120	
Sc (IS)	45	3	HMI He	605807	1.31	644593	93.98	60	120	
Ge Internal standard	72	2	HMI H2	2549493	0.96	2598552	98.11	60	120	
Ge Internal standard	72	3	HMI He	753417	0.65	772392	97.54	60	120	
In Internal Standard	115	3	HMI He	2788404	0.77	2872781	97.06	60	120	
Ir (IS)	193	3	HMI He	6203747	1.14	6092963	101.82	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-4-B
Data File Name	256SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:18:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	69550.283	ppb	69550.283	1.06	7628858	400000	
Mg	24	3	45	27019.688	ppb	27019.688	1.95	1554657	400000	
Al	27	3	45	-0.426	ppb	-0.426	-573.56	137	400000	
K	39	3	45	2790.537	ppb	2790.537	0.91	157965	400000	
Ca	40	2	45	100310.879	ppb	100310.879	2.61	56287277	400000	
V	51	3	72	-0.260	ppb	-0.260	-83.09	825	2000	
Cr	52	3	72	0.266	ppb	0.266	83.91	3305	5000	
Mn	55	3	72	0.573	ppb	0.573	18.49	610	10000	
Fe	56	2	72	14.191	ppb	14.191	28.83	84427	10000	
Co	59	3	72	0.104	ppb	0.104	23.44	192	2000	
Ni	60	3	72	0.643	ppb	0.643	10.49	923	5000	
Cu	63	3	72	0.617	ppb	0.617	10.97	1015	5000	
Zn	66	3	72	3.698	ppb	3.698	4.23	825	5000	
As	75	3	72	0.148	ppb	0.148	58.36	60	2000	
Se	78	2	72	1.798	ppb	1.798	6.45	108	2000	
Sr	88	3	72	765.968	ppb	765.968	0.15	416563	4000	
Mo	95	3	115	1.772	ppb	1.772	5.06	943	2000	
Ag	107	3	115	0.012	ppb	0.012	38.83	33	100	
Cd	111	3	115	0.000	ppb	0.000	-1617.94	10	2000	
Sn	120	3	115	-0.229	ppb	-0.229	-21.60	570	2000	
Sb	121	3	115	0.078	ppb	0.078	5.90	105	1000	
Ba	137	3	115	78.564	ppb	78.564	2.00	19782	5000	
Tl	205	3	193	-0.053	ppb	-0.053	-13.11	178	2000	
(Pb)	206	3	193	-0.074	ppb	-0.074	-20.60	225	100	
(Pb)	207	3	193	-0.066	ppb	-0.066	-57.99	408	100	
Pb	208	3	193	-0.061	ppb	-0.061	-13.64	1174	5000	
Th	232	3	193	-0.023	ppb	-0.023	-114.65	6815	2000	
U	238	3	193	8.654	ppb	8.654	2.29	48713	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4174202	1.04	4300192	97.07	60	120	
Sc (IS)	45	3	HMI He	613924	0.99	644593	95.24	60	120	
Ge Internal standard	72	2	HMI H2	2543759	0.59	2598552	97.89	60	120	
Ge Internal standard	72	3	HMI He	766302	0.26	772392	99.21	60	120	
In Internal Standard	115	3	HMI He	2847414	1.46	2872781	99.12	60	120	
Ir (IS)	193	3	HMI He	6127656	2.62	6092963	100.57	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-5-B
Data File Name	257SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:20:22-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	73605.834	ppb	73605.834	2.11	7868952	400000	
Mg	24	3	45	27022.897	ppb	27022.897	2.24	1515646	400000	
Al	27	3	45	0.934	ppb	0.934	585.87	164	400000	
K	39	3	45	2720.268	ppb	2720.268	1.34	150767	400000	
Ca	40	2	45	91273.610	ppb	91273.610	1.75	51713820	400000	
V	51	3	72	-0.079	ppb	-0.079	-272.61	918	2000	
Cr	52	3	72	0.049	ppb	0.049	87.99	3069	5000	
Mn	55	3	72	0.827	ppb	0.827	15.22	698	10000	
Fe	56	2	72	9.543	ppb	9.543	31.93	79281	10000	
Co	59	3	72	0.080	ppb	0.080	17.48	157	2000	
Ni	60	3	72	0.588	ppb	0.588	17.41	883	5000	
Cu	63	3	72	0.464	ppb	0.464	11.05	841	5000	
Zn	66	3	72	0.790	ppb	0.790	23.34	347	5000	
As	75	3	72	0.204	ppb	0.204	57.43	65	2000	
Se	78	2	72	1.629	ppb	1.629	7.20	101	2000	
Sr	88	3	72	738.204	ppb	738.204	1.32	392705	4000	
Mo	95	3	115	1.774	ppb	1.774	9.38	918	2000	
Ag	107	3	115	0.004	ppb	0.004	71.84	20	100	
Cd	111	3	115	-0.006	ppb	-0.006	-416.03	8	2000	
Sn	120	3	115	-0.152	ppb	-0.152	-76.68	613	2000	
Sb	121	3	115	0.084	ppb	0.084	29.48	107	1000	
Ba	137	3	115	72.699	ppb	72.699	2.12	17805	5000	
Tl	205	3	193	-0.058	ppb	-0.058	-14.64	158	2000	
(Pb)	206	3	193	-0.069	ppb	-0.069	-23.29	232	100	
(Pb)	207	3	193	-0.080	ppb	-0.080	-35.70	393	100	
Pb	208	3	193	-0.063	ppb	-0.063	-3.01	1164	5000	
Th	232	3	193	-0.183	ppb	-0.183	-51.44	5978	2000	
U	238	3	193	9.420	ppb	9.420	1.78	52844	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4214265	0.67	4300192	98.00	60	120	
Sc (IS)	45	3	HMI He	598474	1.13	644593	92.85	60	120	
Ge Internal standard	72	2	HMI H2	2614675	2.52	2598552	100.62	60	120	
Ge Internal standard	72	3	HMI He	749610	0.41	772392	97.05	60	120	
In Internal Standard	115	3	HMI He	2768727	0.51	2872781	96.38	60	120	
Ir (IS)	193	3	HMI He	6121207	1.31	6092963	100.46	60	120	

Sample Report

Sample Table

Sample Name	280-174932-B-6-B
Data File Name	258SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:22:10-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609233 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	75592.496	ppb	75592.496	1.11	8070618	400000	
Mg	24	3	45	27196.551	ppb	27196.551	3.78	1523348	400000	
Al	27	3	45	-0.406	ppb	-0.406	-328.96	133	400000	
K	39	3	45	2755.581	ppb	2755.581	1.50	152186	400000	
Ca	40	2	45	95851.899	ppb	95851.899	1.32	54222036	400000	
V	51	3	72	-0.259	ppb	-0.259	-10.16	806	2000	
Cr	52	3	72	0.000	ppb	0.000	-209880.55	3029	5000	
Mn	55	3	72	1.374	ppb	1.374	7.73	916	10000	
Fe	56	2	72	20.036	ppb	20.036	16.59	93947	10000	
Co	59	3	72	0.098	ppb	0.098	19.43	180	2000	
Ni	60	3	72	0.738	ppb	0.738	24.66	936	5000	
Cu	63	3	72	1.257	ppb	1.257	11.36	1623	5000	
Zn	66	3	72	1.299	ppb	1.299	31.33	426	5000	
As	75	3	72	0.430	ppb	0.430	38.97	90	2000	
Se	78	2	72	1.790	ppb	1.790	11.45	108	2000	
Sr	88	3	72	747.254	ppb	747.254	0.56	397071	4000	
Mo	95	3	115	1.832	ppb	1.832	1.95	951	2000	
Ag	107	3	115	0.004	ppb	0.004	68.85	20	100	
Cd	111	3	115	-0.006	ppb	-0.006	-516.75	8	2000	
Sn	120	3	115	-0.232	ppb	-0.232	-41.82	555	2000	
Sb	121	3	115	0.099	ppb	0.099	9.53	118	1000	
Ba	137	3	115	71.423	ppb	71.423	2.36	17576	5000	
Tl	205	3	193	-0.059	ppb	-0.059	-4.78	150	2000	
(Pb)	206	3	193	0.003	ppb	0.003	1038.99	318	100	
(Pb)	207	3	193	0.054	ppb	0.054	52.43	536	100	
Pb	208	3	193	0.003	ppb	0.003	1098.54	1483	5000	
Th	232	3	193	-0.250	ppb	-0.250	-22.25	5552	2000	
U	238	3	193	10.086	ppb	10.086	2.01	55656	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4207787	1.41	4300192	97.85	60	120	
Sc (IS)	45	3	HMI He	597638	0.46	644593	92.72	60	120	
Ge Internal standard	72	2	HMI H2	2555103	0.81	2598552	98.33	60	120	
Ge Internal standard	72	3	HMI He	748759	0.84	772392	96.94	60	120	
In Internal Standard	115	3	HMI He	2782160	1.03	2872781	96.85	60	120	
Ir (IS)	193	3	HMI He	6033021	1.72	6092963	99.02	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	259_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:23:57-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	52.103	ppb	9.691	2159	50	104.2	90	110	
Na	23	3	45	48340.448	ppb	2.156	5161446	51000	94.8	90	110	
Mg	24	3	45	10235.290	ppb	2.941	572862	11000	93.0	90	110	
Al	27	3	45	934.612	ppb	4.740	20365	1000	93.5	90	110	
K	39	3	45	10095.410	ppb	2.563	487602	11000	91.8	90	110	
Ca	40	2	45	10398.909	ppb	0.790	5821928	11000	94.5	90	110	
V	51	3	72	49.847	ppb	1.753	30248	50	99.7	90	110	
Cr	52	3	72	50.016	ppb	0.209	39045	50	100.0	90	110	
Mn	55	3	72	49.819	ppb	1.672	19374	50	99.6	90	110	
Fe	56	2	72	1056.946	ppb	2.387	1657473	1000	105.7	90	110	
Co	59	3	72	50.040	ppb	1.004	61505	50	100.1	90	110	
Ni	60	3	72	51.129	ppb	0.536	18345	50	102.3	90	110	
Cu	63	3	72	50.046	ppb	2.452	47519	50	100.1	90	110	
Zn	66	3	72	50.143	ppb	0.196	7775	50	100.3	90	110	
As	75	3	72	52.668	ppb	2.744	5655	50	105.3	90	110	
Se	78	2	72	49.777	ppb	3.528	2851	50	99.6	90	110	
Sr	88	3	72	102.966	ppb	0.615	52266	100	103.0	90	110	
Mo	95	3	115	48.790	ppb	3.971	24121	50	97.6	90	110	
Ag	107	3	115	48.770	ppb	1.975	81311	50	97.5	90	110	
Cd	111	3	115	49.568	ppb	1.512	11788	50	99.1	90	110	
Sn	120	3	115	48.649	ppb	2.463	37298	50	97.3	90	110	
Sb	121	3	115	49.672	ppb	2.500	37038	50	99.3	90	110	
Ba	137	3	115	49.558	ppb	1.360	12095	50	99.1	90	110	
Tl	205	3	193	47.670	ppb	0.352	184409	50	95.3	90	110	
(Pb)	206	3	193	48.401	ppb	1.672	62340	50	96.8	90	110	
(Pb)	207	3	193	47.398	ppb	1.201	53882	50	94.8	90	110	
Pb	208	3	193	48.229	ppb	1.356	250818	50	96.5	90	110	
Th	232	3	193	47.417	ppb	0.609	251108	50	94.8	90	110	
U	238	3	193	48.341	ppb	0.702	263505	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4156576	1.75	4300192	96.66	60	120	
Sc (IS)	45	3	HMI He	597176	2.13	644593	92.64	60	120	
Ge Internal standard	72	2	HMI H2	2471134	1.61	2598552	95.10	60	120	
Ge Internal standard	72	3	HMI He	714790	1.01	772392	92.54	60	120	
In Internal Standard	115	3	HMI He	2754191	1.74	2872781	95.87	60	120	
Ir (IS)	193	3	HMI He	6090424	1.00	6092963	99.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	260_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:25:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.108	ppb	-64.5	2	0.5	
Na	23	3	45	62.656	ppb	4.6	21912	25	>RL
Mg	24	3	45	1.496	ppb	180.2	330	25	
Al	27	3	45	-3.751	ppb	-38.3	60	15	
K	39	3	45	-12.521	ppb	-236.8	25205	50	
V	51	3	72	-0.509	ppb	-19.3	638	1	
Cr	52	3	72	0.153	ppb	231.8	3079	1	
Mn	55	3	72	-0.116	ppb	-36.4	313	0.5	
Co	59	3	72	0.027	ppb	48.7	87	0.5	
Ni	60	3	72	0.662	ppb	31.2	890	1	
Cu	63	3	72	-0.024	ppb	-113.2	351	1	
Zn	66	3	72	-0.076	ppb	-143.7	205	5	
As	75	3	72	0.004	ppb	3973.7	42	1	
Se	78	2	72	0.082	ppb	23.7	7	1	
Sr	88	3	72	0.062	ppb	89.5	73	0.5	
Mo	95	3	115	0.030	ppb	142.2	52	0.5	
Ag	107	3	115	0.021	ppb	55.4	48	1	
Cd	111	3	115	-0.020	ppb	-106.8	5	0.5	
Sn	120	3	115	0.102	ppb	73.6	805	1	
Sb	121	3	115	0.024	ppb	71.1	62	0.6	
Ba	137	3	115	0.009	ppb	780.2	62	0.5	
Tl	205	3	193	-0.039	ppb	-7.7	228	0.1	
(Pb)	206	3	193	-0.094	ppb	-21.7	198	1	
(Pb)	207	3	193	-0.081	ppb	-66.7	391	1	
Pb	208	3	193	-0.077	ppb	-26.1	1088	0.5	
Th	232	3	193	1.470	ppb	12.0	14506	1	>RL
U	238	3	193	0.024	ppb	62.8	1666	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109760	0.94	4300192	95.57	60	120	
Sc (IS)	45	3	HMI He	590897	1.24	644593	91.67	60	120	
Ge Internal standard	72	2	HMI H2	2479940	1.93	2598552	95.44	60	120	
Ge Internal standard	72	3	HMI He	732941	0.90	772392	94.89	60	120	
In Internal Standard	115	3	HMI He	2770663	1.35	2872781	96.45	60	120	
Ir (IS)	193	3	HMI He	6107195	0.60	6092963	100.23	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609246/1-A
Data File Name	261_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:27:34-06:00
Sample Type	Blank
Dilution	1
Comment	609246 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.031	ppb	-656.0920877	5	0.5
Na	23	3	45	91.889	ppb	2.920074882	25121	25
Mg	24	3	45	1.158	ppb	118.0304718	314	25
Al	27	3	45	1.025	ppb	92.07209853	163	15
K	39	3	45	-9.415	ppb	-426.1376362	25472	50
Ca	40	2	45	12.972	ppb	6.12751493	19981	200
V	51	3	72	-0.543	ppb	-7.607723281	626	1
Cr	52	3	72	0.133	ppb	93.81636075	3107	1
Mn	55	3	72	-0.103	ppb	-101.7702416	323	0.5
Fe	56	2	72	1.775	ppb	207.4065478	65269	50
Co	59	3	72	0.020	ppb	19.57785546	78	0.5
Ni	60	3	72	0.081	ppb	28.21117499	693	1
Cu	63	3	72	0.163	ppb	13.05018855	540	1
Zn	66	3	72	0.130	ppb	220.8150574	240	5
As	75	3	72	0.119	ppb	211.572423	55	1
(Se)	78	3	72	0.663	ppb	253.1302327	27	1
Sr	88	3	72	0.038	ppb	63.19564445	62	0.5
Mo	95	3	115	0.019	ppb	283.0322028	47	0.5
Ag	107	3	115	0.008	ppb	55.41541296	27	1
Cd	111	3	115	-0.027	ppb	-43.51917327	3	0.5
Sn	120	3	115	-0.110	ppb	-58.76283385	650	1
Sb	121	3	115	0.013	ppb	42.74688118	53	0.6
Ba	137	3	115	0.090	ppb	89.38543346	82	0.5
Tl	205	3	193	-0.065	ppb	-10.56832699	128	0.1
(Pb)	206	3	193	-0.108	ppb	-10.26379454	178	1
(Pb)	207	3	193	-0.076	ppb	-66.55678964	393	1
Pb	208	3	193	-0.095	ppb	-5.56824325	985	0.5
Th	232	3	193	0.044	ppb	241.1659186	7074	1
U	238	3	193	0.020	ppb	103.3668355	1633	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203060	1.95	4300192	97.74	60	120	
Sc (IS)	45	3	HMI He	593948	0.57	644593	92.14	60	120	
Ge Internal standard	72	2	HMI H2	2548365	2.86	2598552	98.07	60	120	
Ge Internal standard	72	3	HMI He	743470	1.02	772392	96.26	60	120	
In Internal Standard	115	3	HMI He	2788061	2.98	2872781	97.05	60	120	
Ir (IS)	193	3	HMI He	6054579	1.12	6092963	99.37	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609246/2-A
Data File Name	262_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:29:23-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609246 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.856	39.856	ppb	6.170	1674	40	99.6	80	120	
Na	23	3	45	763.874	763.874	ppb	1.392	97786	40	1909.7	80	120	>+/-20%
Mg	24	3	45	694.716	694.716	ppb	1.185	39525	40	1736.8	80	120	>+/-20%
Al	27	3	45	743.128	743.128	ppb	2.800	16393	40	1857.8	80	120	>+/-20%
K	39	3	45	712.085	712.085	ppb	2.327	59194	40	1780.2	80	120	>+/-20%
Ca	40	2	45	785.723	785.723	ppb	0.932	446843	40	1964.3	80	120	>+/-20%
V	51	3	72	36.608	36.608	ppb	1.107	23470	40	91.5	80	120	
Cr	52	3	72	38.118	38.118	ppb	0.353	31812	40	95.3	80	120	
Mn	55	3	72	39.357	39.357	ppb	0.426	16071	40	98.4	80	120	
Fe	56	2	72	798.123	798.123	ppb	2.781	1268234	40	1995.3	80	120	>+/-20%
(Fe)	56	3	72	740.340	740.340	ppb	0.719	491973	40	1850.9	80	120	>+/-20%
Co	59	3	72	37.884	37.884	ppb	1.118	48671	40	94.7	80	120	
Ni	60	3	72	38.130	38.130	ppb	2.847	14464	40	95.3	80	120	
Cu	63	3	72	38.046	38.046	ppb	1.012	37844	40	95.1	80	120	
Zn	66	3	72	37.755	37.755	ppb	0.944	6172	40	94.4	80	120	
As	75	3	72	39.209	39.209	ppb	2.591	4410	40	98.0	80	120	
Se	78	2	72	39.358	39.358	ppb	3.140	2258	40	98.4	80	120	
(Se)	78	3	72	38.189	38.189	ppb	16.810	262	40	95.5	80	120	
Sr	88	3	72	75.985	75.985	ppb	2.124	40318	40	190.0	80	120	>+/-20%
Mo	95	3	115	37.076	37.076	ppb	0.894	18527	40	92.7	80	120	
Ag	107	3	115	38.387	38.387	ppb	1.634	64637	40	96.0	80	120	
Cd	111	3	115	37.601	37.601	ppb	0.963	9034	40	94.0	80	120	
Sn	120	3	115	35.075	35.075	ppb	3.309	27358	40	87.7	80	120	
Sb	121	3	115	37.421	37.421	ppb	0.275	28194	40	93.6	80	120	
Ba	137	3	115	38.593	38.593	ppb	2.718	9520	40	96.5	80	120	
Tl	205	3	193	36.656	36.656	ppb	1.348	145627	40	91.6	80	120	
(Pb)	206	3	193	37.194	37.194	ppb	1.774	49248	40	93.0	80	120	
(Pb)	207	3	193	36.913	36.913	ppb	2.332	43174	40	92.3	80	120	
Pb	208	3	193	37.165	37.165	ppb	1.443	198739	40	92.9	80	120	
Th	232	3	193	34.411	34.411	ppb	1.591	188962	40	86.0	80	120	
U	238	3	193	37.280	37.280	ppb	0.265	208942	40	93.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4113826	0.85	4300192	95.67	60	120	
Sc (IS)	45	3	HMI He	603197	0.10	644593	93.58	60	120	
Ge Internal standard	72	2	HMI H2	2474550	0.60	2598552	95.23	60	120	
Ge Internal standard	72	3	HMI He	746911	0.63	772392	96.70	60	120	
In Internal Standard	115	3	HMI He	2781363	1.83	2872781	96.82	60	120	
Ir (IS)	193	3	HMI He	6251064	0.50	6092963	102.59	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-609246/3-A
Data File Name	263SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:31:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.246	ppb	41.246	1.43	1684	2000	
Na	23	3	45	800.808	ppb	800.808	0.71	101395	400000	
Mg	24	3	45	698.893	ppb	698.893	0.72	39618	400000	
Al	27	3	45	733.603	ppb	733.603	2.81	16132	400000	
K	39	3	45	716.201	ppb	716.201	2.18	59180	400000	
Ca	40	2	45	803.572	ppb	803.572	0.21	450280	400000	
V	51	3	72	36.514	ppb	36.514	1.36	23483	2000	
Cr	52	3	72	37.674	ppb	37.674	1.33	31568	5000	
Mn	55	3	72	37.929	ppb	37.929	1.48	15549	10000	
Fe	56	2	72	779.472	ppb	779.472	1.03	1249732	10000	
Co	59	3	72	37.722	ppb	37.722	1.91	48599	2000	
Ni	60	3	72	37.484	ppb	37.484	2.16	14270	5000	
Cu	63	3	72	37.842	ppb	37.842	3.21	37749	5000	
Zn	66	3	72	38.531	ppb	38.531	3.25	6312	5000	
As	75	3	72	36.320	ppb	36.320	4.63	4102	2000	
Se	78	2	72	38.314	ppb	38.314	4.00	2216	2000	
Sr	88	3	72	76.170	ppb	76.170	1.09	40527	4000	
Mo	95	3	115	36.275	ppb	36.275	3.16	18111	2000	
Ag	107	3	115	38.212	ppb	38.212	2.28	64277	100	
Cd	111	3	115	38.340	ppb	38.340	0.97	9204	2000	
Sn	120	3	115	35.529	ppb	35.529	2.62	27682	2000	
Sb	121	3	115	38.167	ppb	38.167	1.68	28727	1000	
Ba	137	3	115	38.660	ppb	38.660	2.66	9529	5000	
Tl	205	3	193	37.379	ppb	37.379	2.09	145536	2000	
(Pb)	206	3	193	38.218	ppb	38.218	0.70	49597	100	
(Pb)	207	3	193	37.526	ppb	37.526	3.10	43006	100	
Pb	208	3	193	37.748	ppb	37.748	1.98	197819	5000	
Th	232	3	193	37.327	ppb	37.327	2.58	200301	2000	
U	238	3	193	37.627	ppb	37.627	1.67	206694	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4055751	1.77	4300192	94.32	60	120	
Sc (IS)	45	3	HMI He	601056	1.63	644593	93.25	60	120	
Ge Internal standard	72	2	HMI H2	2493869	1.44	2598552	95.97	60	120	
Ge Internal standard	72	3	HMI He	749116	2.08	772392	96.99	60	120	
In Internal Standard	115	3	HMI He	2778977	1.90	2872781	96.73	60	120	
Ir (IS)	193	3	HMI He	6128113	1.99	6092963	100.58	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-A
Data File Name	264SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:32:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.056	ppb	0.056	132.18	8	2000	
Na	23	3	45	1301.573	ppb	1301.573	1.18	153244	400000	
Mg	24	3	45	1797.249	ppb	1797.249	3.28	100297	400000	
Al	27	3	45	1586.943	ppb	1586.943	3.38	34310	400000	
K	39	3	45	2166.349	ppb	2166.349	2.36	124449	400000	
Ca	40	2	45	34010.724	ppb	34010.724	1.20	18785032	400000	
V	51	3	72	4.399	ppb	4.399	6.55	3662	2000	
Cr	52	3	72	2.147	ppb	2.147	16.98	4635	5000	
Mn	55	3	72	30.246	ppb	30.246	2.14	12418	10000	
Fe	56	2	72	1299.935	ppb	1299.935	2.43	2081661	10000	
Co	59	3	72	0.538	ppb	0.538	3.57	743	2000	
Ni	60	3	72	1.555	ppb	1.555	10.37	1228	5000	
Cu	63	3	72	5.886	ppb	5.886	2.63	6168	5000	
Zn	66	3	72	24.196	ppb	24.196	0.25	4029	5000	
As	75	3	72	1.226	ppb	1.226	7.34	178	2000	
Se	78	2	72	0.226	ppb	0.226	36.04	15	2000	
Sr	88	3	72	63.384	ppb	63.384	1.15	33586	4000	
Mo	95	3	115	2.676	ppb	2.676	7.51	1354	2000	
Ag	107	3	115	0.027	ppb	0.027	17.74	58	100	
Cd	111	3	115	0.023	ppb	0.023	188.04	15	2000	
Sn	120	3	115	0.355	ppb	0.355	5.56	988	2000	
Sb	121	3	115	0.391	ppb	0.391	18.92	333	1000	
Ba	137	3	115	23.470	ppb	23.470	1.64	5740	5000	
Tl	205	3	193	-0.014	ppb	-0.014	-23.27	327	2000	
(Pb)	206	3	193	1.791	ppb	1.791	4.12	2612	100	
(Pb)	207	3	193	1.655	ppb	1.655	4.65	2344	100	
Pb	208	3	193	1.691	ppb	1.691	3.86	10220	5000	
Th	232	3	193	2.288	ppb	2.288	18.05	18651	2000	
U	238	3	193	0.301	ppb	0.301	7.51	3162	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4106577	0.50	4300192	95.50	60	120	
Sc (IS)	45	3	HMI He	594026	0.72	644593	92.16	60	120	
Ge Internal standard	72	2	HMI H2	2541267	2.18	2598552	97.80	60	120	
Ge Internal standard	72	3	HMI He	745801	0.32	772392	96.56	60	120	
In Internal Standard	115	3	HMI He	2745634	0.85	2872781	95.57	60	120	
Ir (IS)	193	3	HMI He	6085984	1.00	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-B MS
Data File Name	265SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:34:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.394	ppb	39.394	6.50	1646	2000	
Na	23	3	45	2152.293	ppb	2152.293	2.82	240263	400000	
Mg	24	3	45	2546.946	ppb	2546.946	2.11	140228	400000	
Al	27	3	45	2623.558	ppb	2623.558	2.18	55908	400000	
K	39	3	45	2981.928	ppb	2981.928	1.35	159470	400000	
Ca	40	2	45	33900.198	ppb	33900.198	2.43	19175801	400000	
V	51	3	72	41.356	ppb	41.356	1.27	26100	2000	
Cr	52	3	72	40.812	ppb	40.812	1.32	33470	5000	
Mn	55	3	72	67.900	ppb	67.900	0.59	27161	10000	
Fe	56	2	72	2049.449	ppb	2049.449	0.51	3268974	10000	
Co	59	3	72	38.114	ppb	38.114	2.10	48422	2000	
Ni	60	3	72	37.429	ppb	37.429	3.69	14048	5000	
Cu	63	3	72	44.359	ppb	44.359	2.54	43563	5000	
Zn	66	3	72	65.575	ppb	65.575	2.64	10437	5000	
As	75	3	72	38.898	ppb	38.898	1.41	4327	2000	
Se	78	2	72	37.707	ppb	37.707	2.94	2237	2000	
Sr	88	3	72	139.392	ppb	139.392	2.36	73091	4000	
Mo	95	3	115	38.407	ppb	38.407	1.52	19391	2000	
Ag	107	3	115	37.035	ppb	37.035	0.85	63024	100	
Cd	111	3	115	36.180	ppb	36.180	1.39	8787	2000	
Sn	120	3	115	34.620	ppb	34.620	0.59	27309	2000	
Sb	121	3	115	37.444	ppb	37.444	3.56	28493	1000	
Ba	137	3	115	61.414	ppb	61.414	2.12	15285	5000	
Tl	205	3	193	37.930	ppb	37.930	0.88	142709	2000	
(Pb)	206	3	193	40.084	ppb	40.084	0.33	50243	100	
(Pb)	207	3	193	39.918	ppb	39.918	1.90	44185	100	
Pb	208	3	193	39.834	ppb	39.834	0.54	201640	5000	
Th	232	3	193	36.936	ppb	36.936	2.09	191624	2000	
U	238	3	193	38.659	ppb	38.659	1.06	205148	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4205734	0.88	4300192	97.80	60	120	
Sc (IS)	45	3	HMI He	586401	1.90	644593	90.97	60	120	
Ge Internal standard	72	2	HMI H2	2558409	0.66	2598552	98.46	60	120	
Ge Internal standard	72	3	HMI He	738682	2.11	772392	95.64	60	120	
In Internal Standard	115	3	HMI He	2810993	3.09	2872781	97.85	60	120	
Ir (IS)	193	3	HMI He	5920209	0.57	6092963	97.16	60	120	

Sample Report

Sample Table

Sample Name	280-175137-A-1-C MSD
Data File Name	266SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:36:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	42.492	ppb	42.492	4.12	1718	2000	
Na	23	3	45	2103.886	ppb	2103.886	1.52	235817	400000	
Mg	24	3	45	2605.111	ppb	2605.111	1.78	143804	400000	
Al	27	3	45	2898.152	ppb	2898.152	2.25	61914	400000	
K	39	3	45	3087.279	ppb	3087.279	1.57	164672	400000	
Ca	40	2	45	36046.908	ppb	36046.908	3.03	19880045	400000	
V	51	3	72	42.432	ppb	42.432	2.02	26717	2000	
Cr	52	3	72	40.705	ppb	40.705	1.49	33347	5000	
Mn	55	3	72	68.723	ppb	68.723	1.77	27445	10000	
Fe	56	2	72	2237.995	ppb	2237.995	1.65	3436924	10000	
Co	59	3	72	38.567	ppb	38.567	0.80	48935	2000	
Ni	60	3	72	38.424	ppb	38.424	0.62	14392	5000	
Cu	63	3	72	44.688	ppb	44.688	0.82	43836	5000	
Zn	66	3	72	63.294	ppb	63.294	2.35	10070	5000	
As	75	3	72	41.600	ppb	41.600	3.64	4618	2000	
Se	78	2	72	40.684	ppb	40.684	1.96	2328	2000	
Sr	88	3	72	143.051	ppb	143.051	0.61	74921	4000	
Mo	95	3	115	38.793	ppb	38.793	2.76	19624	2000	
Ag	107	3	115	37.829	ppb	37.829	2.22	64500	100	
Cd	111	3	115	36.412	ppb	36.412	1.42	8857	2000	
Sn	120	3	115	35.129	ppb	35.129	1.80	27753	2000	
Sb	121	3	115	36.789	ppb	36.789	2.58	28067	1000	
Ba	137	3	115	63.158	ppb	63.158	3.53	15747	5000	
Tl	205	3	193	39.580	ppb	39.580	1.61	147006	2000	
(Pb)	206	3	193	41.898	ppb	41.898	0.60	51840	100	
(Pb)	207	3	193	40.005	ppb	40.005	0.62	43717	100	
Pb	208	3	193	41.424	ppb	41.424	1.17	206970	5000	
Th	232	3	193	39.641	ppb	39.641	0.95	202550	2000	
U	238	3	193	40.316	ppb	40.316	0.75	211172	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4101257	1.94	4300192	95.37	60	120	
Sc (IS)	45	3	HMI He	588063	1.02	644593	91.23	60	120	
Ge Internal standard	72	2	HMI H2	2467217	0.08	2598552	94.95	60	120	
Ge Internal standard	72	3	HMI He	737667	0.66	772392	95.50	60	120	
In Internal Standard	115	3	HMI He	2816315	1.12	2872781	98.03	60	120	
Ir (IS)	193	3	HMI He	5845561	1.08	6092963	95.94	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-D
Data File Name	267SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:38:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	72565.526	ppb	72565.526	0.55	7651693	400000	
Mg	24	3	45	20243.865	ppb	20243.865	1.31	1119964	400000	
Al	27	3	45	20.571	ppb	20.571	19.44	581	400000	
K	39	3	45	23130.494	ppb	23130.494	2.02	1071282	400000	
Ca	40	2	45	32028.400	ppb	32028.400	2.02	17622410	400000	
V	51	3	72	1.368	ppb	1.368	21.19	1781	2000	
Cr	52	3	72	10.186	ppb	10.186	2.44	10574	5000	
Mn	55	3	72	12.931	ppb	12.931	1.85	5453	10000	
Fe	56	2	72	509.255	ppb	509.255	0.86	847722	10000	
Co	59	3	72	0.846	ppb	0.846	3.69	1124	2000	
Ni	60	3	72	2.565	ppb	2.565	4.07	1574	5000	
Cu	63	3	72	18.023	ppb	18.023	0.30	17891	5000	
Zn	66	3	72	33.509	ppb	33.509	1.08	5430	5000	
As	75	3	72	5.741	ppb	5.741	9.57	673	2000	
Se	78	2	72	0.468	ppb	0.468	41.41	29	2000	
Sr	88	3	72	185.618	ppb	185.618	0.86	97136	4000	
Mo	95	3	115	325.500	ppb	325.500	0.81	162790	2000	
Ag	107	3	115	0.022	ppb	0.022	46.32	50	100	
Cd	111	3	115	0.325	ppb	0.325	24.05	88	2000	
Sn	120	3	115	0.138	ppb	0.138	12.45	838	2000	
Sb	121	3	115	2.561	ppb	2.561	9.03	1974	1000	
Ba	137	3	115	10.233	ppb	10.233	4.08	2576	5000	
Tl	205	3	193	-0.023	ppb	-0.023	-102.47	288	2000	
(Pb)	206	3	193	0.324	ppb	0.324	8.40	728	100	
(Pb)	207	3	193	0.281	ppb	0.281	7.79	793	100	
Pb	208	3	193	0.340	ppb	0.340	4.41	3219	5000	
Th	232	3	193	1.913	ppb	1.913	13.36	16636	2000	
U	238	3	193	0.517	ppb	0.517	6.47	4305	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4090645	1.68	4300192	95.13	60	120	
Sc (IS)	45	3	HMI He	590181	0.35	644593	91.56	60	120	
Ge Internal standard	72	2	HMI H2	2523718	1.03	2598552	97.12	60	120	
Ge Internal standard	72	3	HMI He	737103	1.11	772392	95.43	60	120	
In Internal Standard	115	3	HMI He	2788676	1.49	2872781	97.07	60	120	
Ir (IS)	193	3	HMI He	6049500	1.20	6092963	99.29	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-E MS
Data File Name	268SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:40:11-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.156	ppb	40.156	8.11	1649	2000	
Na	23	3	45	74172.749	ppb	74172.749	1.23	7830500	400000	
Mg	24	3	45	21167.215	ppb	21167.215	2.79	1172529	400000	
Al	27	3	45	728.701	ppb	728.701	1.36	15751	400000	
K	39	3	45	24499.414	ppb	24499.414	1.31	1134619	400000	
Ca	40	2	45	32500.007	ppb	32500.007	0.46	18375655	400000	
V	51	3	72	37.644	ppb	37.644	2.91	24077	2000	
Cr	52	3	72	46.540	ppb	46.540	1.30	38140	5000	
Mn	55	3	72	49.786	ppb	49.786	1.91	20211	10000	
Fe	56	2	72	1277.468	ppb	1277.468	0.84	2004568	10000	
Co	59	3	72	36.913	ppb	36.913	2.66	47369	2000	
Ni	60	3	72	37.284	ppb	37.284	0.29	14147	5000	
Cu	63	3	72	55.289	ppb	55.289	1.96	54762	5000	
Zn	66	3	72	70.220	ppb	70.220	1.94	11277	5000	
As	75	3	72	42.357	ppb	42.357	4.02	4755	2000	
Se	78	2	72	38.500	ppb	38.500	5.85	2221	2000	
Sr	88	3	72	260.972	ppb	260.972	1.85	138209	4000	
Mo	95	3	115	366.777	ppb	366.777	0.46	183666	2000	
Ag	107	3	115	36.275	ppb	36.275	0.71	61324	100	
Cd	111	3	115	35.917	ppb	35.917	1.93	8664	2000	
Sn	120	3	115	35.379	ppb	35.379	1.33	27702	2000	
Sb	121	3	115	38.541	ppb	38.541	0.97	29147	1000	
Ba	137	3	115	48.797	ppb	48.797	0.40	12073	5000	
Tl	205	3	193	36.496	ppb	36.496	2.42	141397	2000	
(Pb)	206	3	193	37.202	ppb	37.202	0.81	48050	100	
(Pb)	207	3	193	36.777	ppb	36.777	4.55	41940	100	
Pb	208	3	193	36.928	ppb	36.928	1.89	192597	5000	
Th	232	3	193	34.899	ppb	34.899	0.94	186834	2000	
U	238	3	193	37.567	ppb	37.567	2.03	205331	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4203419	1.52	4300192	97.75	60	120	
Sc (IS)	45	3	HMI He	590960	0.88	644593	91.68	60	120	
Ge Internal standard	72	2	HMI H2	2487978	0.64	2598552	95.74	60	120	
Ge Internal standard	72	3	HMI He	746231	1.89	772392	96.61	60	120	
In Internal Standard	115	3	HMI He	2792165	1.57	2872781	97.19	60	120	
Ir (IS)	193	3	HMI He	6097658	1.86	6092963	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-175127-A-2-F MSD
Data File Name	269SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:41:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	41.045	ppb	41.045	4.63	1679	2000	
Na	23	3	45	71713.121	ppb	71713.121	1.27	7600520	400000	
Mg	24	3	45	19843.226	ppb	19843.226	0.41	1103435	400000	
Al	27	3	45	719.342	ppb	719.342	0.71	15611	400000	
K	39	3	45	23528.364	ppb	23528.364	2.90	1094657	400000	
Ca	40	2	45	32380.931	ppb	32380.931	0.73	17884845	400000	
V	51	3	72	36.641	ppb	36.641	1.95	23315	2000	
Cr	52	3	72	45.481	ppb	45.481	1.27	37096	5000	
Mn	55	3	72	48.881	ppb	48.881	1.73	19724	10000	
Fe	56	2	72	1260.135	ppb	1260.135	1.11	1991538	10000	
Co	59	3	72	36.493	ppb	36.493	2.88	46531	2000	
Ni	60	3	72	36.286	ppb	36.286	3.94	13692	5000	
Cu	63	3	72	54.840	ppb	54.840	2.04	53981	5000	
Zn	66	3	72	69.397	ppb	69.397	3.17	11074	5000	
As	75	3	72	42.370	ppb	42.370	1.75	4727	2000	
Se	78	2	72	37.521	ppb	37.521	3.65	2180	2000	
Sr	88	3	72	255.410	ppb	255.410	2.15	134391	4000	
Mo	95	3	115	358.305	ppb	358.305	1.46	178374	2000	
Ag	107	3	115	35.588	ppb	35.588	2.00	59811	100	
Cd	111	3	115	36.631	ppb	36.631	1.71	8782	2000	
Sn	120	3	115	35.311	ppb	35.311	1.52	27490	2000	
Sb	121	3	115	38.230	ppb	38.230	1.50	28745	1000	
Ba	137	3	115	46.893	ppb	46.893	1.39	11536	5000	
Tl	205	3	193	35.783	ppb	35.783	1.03	138025	2000	
(Pb)	206	3	193	36.506	ppb	36.506	0.78	46935	100	
(Pb)	207	3	193	36.139	ppb	36.139	0.81	41048	100	
Pb	208	3	193	36.247	ppb	36.247	1.04	188213	5000	
Th	232	3	193	35.103	ppb	35.103	2.19	187012	2000	
U	238	3	193	36.539	ppb	36.539	0.68	198852	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4106232	0.65	4300192	95.49	60	120	
Sc (IS)	45	3	HMI He	593235	1.14	644593	92.03	60	120	
Ge Internal standard	72	2	HMI H2	2504885	0.50	2598552	96.40	60	120	
Ge Internal standard	72	3	HMI He	741428	1.58	772392	95.99	60	120	
In Internal Standard	115	3	HMI He	2776228	2.26	2872781	96.64	60	120	
Ir (IS)	193	3	HMI He	6069067	1.11	6092963	99.61	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	270_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:43:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	53.511	ppb	4.215	2086	50	107.0	90	110	
Na	23	3	45	46656.803	ppb	2.443	4841818	51000	91.5	90	110	
Mg	24	3	45	9984.710	ppb	2.401	543184	11000	90.8	90	110	
Al	27	3	45	929.153	ppb	5.168	19673	1000	92.9	90	110	
K	39	3	45	9947.093	ppb	1.446	467374	11000	90.4	90	110	
Ca	40	2	45	10357.151	ppb	1.771	5506443	11000	94.2	90	110	
V	51	3	72	47.783	ppb	2.517	28578	50	95.6	90	110	
Cr	52	3	72	48.909	ppb	1.969	37642	50	97.8	90	110	
Mn	55	3	72	47.868	ppb	2.287	18335	50	95.7	90	110	
Fe	56	2	72	1084.984	ppb	2.855	1586836	1000	108.5	90	110	
Co	59	3	72	48.949	ppb	1.675	59221	50	97.9	90	110	
Ni	60	3	72	48.472	ppb	1.235	17149	50	96.9	90	110	
Cu	63	3	72	48.797	ppb	1.467	45614	50	97.6	90	110	
Zn	66	3	72	49.370	ppb	2.225	7537	50	98.7	90	110	
As	75	3	72	52.034	ppb	1.571	5500	50	104.1	90	110	
Se	78	2	72	51.391	ppb	2.206	2749	50	102.8	90	110	
Sr	88	3	72	100.969	ppb	1.972	50446	100	101.0	90	110	
Mo	95	3	115	48.511	ppb	2.824	23407	50	97.0	90	110	
Ag	107	3	115	48.337	ppb	3.077	78623	50	96.7	90	110	
Cd	111	3	115	48.109	ppb	2.117	11162	50	96.2	90	110	
Sn	120	3	115	46.972	ppb	0.418	35175	50	93.9	90	110	
Sb	121	3	115	49.418	ppb	2.518	35954	50	98.8	90	110	
Ba	137	3	115	48.611	ppb	1.678	11574	50	97.2	90	110	
Tl	205	3	193	47.156	ppb	1.317	179717	50	94.3	90	110	
(Pb)	206	3	193	47.258	ppb	1.509	59978	50	94.5	90	110	
(Pb)	207	3	193	47.346	ppb	1.676	53019	50	94.7	90	110	
Pb	208	3	193	47.007	ppb	1.904	240880	50	94.0	90	110	
Th	232	3	193	49.411	ppb	1.072	257517	50	98.8	90	110	
U	238	3	193	47.461	ppb	3.388	254863	50	94.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3947305	1.22	4300192	91.79	60	120	
Sc (IS)	45	3	HMI He	580386	2.06	644593	90.04	60	120	
Ge Internal standard	72	2	HMI H2	2306927	0.92	2598552	88.78	60	120	
Ge Internal standard	72	3	HMI He	703504	0.94	772392	91.08	60	120	
In Internal Standard	115	3	HMI He	2687875	2.51	2872781	93.56	60	120	
Ir (IS)	193	3	HMI He	6000795	1.65	6092963	98.49	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	271_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:45:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.024	ppb	-9.9	5	0.5	
Na	23	3	45	61.916	ppb	14.1	21394	25	>RL
Mg	24	3	45	1.801	ppb	100.0	340	25	
Al	27	3	45	-2.274	ppb	-91.4	90	15	
K	39	3	45	-9.286	ppb	-236.3	24830	50	
V	51	3	72	-0.530	ppb	-8.5	615	1	
Cr	52	3	72	0.629	ppb	30.6	3372	1	
Mn	55	3	72	-0.176	ppb	-70.0	285	0.5	
Co	59	3	72	0.011	ppb	94.4	65	0.5	
Ni	60	3	72	0.687	ppb	28.5	883	1	
Cu	63	3	72	-0.028	ppb	-134.8	342	1	
Zn	66	3	72	-0.162	ppb	-143.9	188	5	
As	75	3	72	0.027	ppb	534.2	43	1	
Se	78	2	72	0.048	ppb	39.2	5	1	
Sr	88	3	72	0.022	ppb	181.7	52	0.5	
Mo	95	3	115	0.145	ppb	20.9	107	0.5	
Ag	107	3	115	0.013	ppb	36.7	33	1	
Cd	111	3	115	0.002	ppb	2393.8	10	0.5	
Sn	120	3	115	0.096	ppb	56.4	785	1	
Sb	121	3	115	0.040	ppb	20.9	72	0.6	
Ba	137	3	115	-0.027	ppb	-112.1	52	0.5	
Tl	205	3	193	-0.018	ppb	-81.0	310	0.1	
(Pb)	206	3	193	-0.089	ppb	-9.8	203	1	
(Pb)	207	3	193	-0.107	ppb	-16.7	358	1	
Pb	208	3	193	-0.092	ppb	-21.8	998	0.5	
Th	232	3	193	1.906	ppb	18.7	16563	1	>RL
U	238	3	193	0.018	ppb	34.6	1616	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4107211	2.34	4300192	95.51	60	120	
Sc (IS)	45	3	HMI He	578971	0.38	644593	89.82	60	120	
Ge Internal standard	72	2	HMI H2	2454682	1.53	2598552	94.46	60	120	
Ge Internal standard	72	3	HMI He	720395	0.78	772392	93.27	60	120	
In Internal Standard	115	3	HMI He	2715462	0.52	2872781	94.52	60	120	
Ir (IS)	193	3	HMI He	6043618	1.78	6092963	99.19	60	120	

Sample Report

Sample Table

Sample Name	280-175167-A-3-A
Data File Name	272SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:47:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.36	2	2000	
Na	23	3	45	222351.348	ppb	222351.348	1.41	23953796	400000	
Mg	24	3	45	10784.708	ppb	10784.708	0.77	610469	400000	
Al	27	3	45	826.412	ppb	826.412	2.61	18230	400000	
K	39	3	45	135302.275	ppb	135302.275	0.26	6282886	400000	
Ca	40	2	45	27209.340	ppb	27209.340	0.55	15107044	400000	
V	51	3	72	-0.441	ppb	-0.441	-33.68	708	2000	
Cr	52	3	72	0.438	ppb	0.438	40.47	3427	5000	
Mn	55	3	72	11.684	ppb	11.684	4.37	5142	10000	
Fe	56	2	72	218.926	ppb	218.926	3.07	393654	10000	
Co	59	3	72	0.086	ppb	0.086	14.36	167	2000	
Ni	60	3	72	3.394	ppb	3.394	12.91	1938	5000	
Cu	63	3	72	2.978	ppb	2.978	6.29	3389	5000	
Zn	66	3	72	5.968	ppb	5.968	4.28	1188	5000	
As	75	3	72	4.215	ppb	4.215	6.86	523	2000	
Se	78	2	72	1.597	ppb	1.597	12.33	94	2000	
Sr	88	3	72	294.483	ppb	294.483	0.84	159654	4000	
Mo	95	3	115	32.268	ppb	32.268	2.56	16253	2000	
Ag	107	3	115	0.011	ppb	0.011	13.06	32	100	
Cd	111	3	115	-0.034	ppb	-0.034	-35.82	2	2000	
Sn	120	3	115	-0.074	ppb	-0.074	-154.69	680	2000	
Sb	121	3	115	2.690	ppb	2.690	6.48	2082	1000	
Ba	137	3	115	7.448	ppb	7.448	6.73	1901	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-29.18	203	2000	
(Pb)	206	3	193	0.009	ppb	0.009	523.01	332	100	
(Pb)	207	3	193	0.016	ppb	0.016	142.86	501	100	
Pb	208	3	193	0.008	ppb	0.008	326.64	1531	5000	
Th	232	3	193	0.484	ppb	0.484	34.95	9442	2000	
U	238	3	193	0.117	ppb	0.117	18.70	2179	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4127125	0.91	4300192	95.98	60	120	
Sc (IS)	45	3	HMI He	603766	0.66	644593	93.67	60	120	
Ge Internal standard	72	2	HMI H2	2485738	1.96	2598552	95.66	60	120	
Ge Internal standard	72	3	HMI He	763809	0.44	772392	98.89	60	120	
In Internal Standard	115	3	HMI He	2803258	1.50	2872781	97.58	60	120	
Ir (IS)	193	3	HMI He	6121810	0.90	6092963	100.47	60	120	

Sample Report

Sample Table

Sample Name	280-175184-B-1-C
Data File Name	273SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:49:15-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.40	2	2000	
Na	23	3	45	111523.927	ppb	111523.927	1.01	12017006	400000	
Mg	24	3	45	14033.761	ppb	14033.761	2.07	793963	400000	
Al	27	3	45	0.453	ppb	0.453	483.18	153	400000	
K	39	3	45	5709.616	ppb	5709.616	0.93	290235	400000	
Ca	40	2	45	84225.108	ppb	84225.108	1.23	47021819	400000	
V	51	3	72	-0.586	ppb	-0.586	-13.08	606	2000	
Cr	52	3	72	0.243	ppb	0.243	87.39	3224	5000	
Mn	55	3	72	1.428	ppb	1.428	6.75	941	10000	
Fe	56	2	72	11.050	ppb	11.050	38.12	80688	10000	
Co	59	3	72	0.160	ppb	0.160	16.77	260	2000	
Ni	60	3	72	1.943	ppb	1.943	6.54	1378	5000	
Cu	63	3	72	0.417	ppb	0.417	11.71	796	5000	
Zn	66	3	72	2.509	ppb	2.509	16.04	620	5000	
As	75	3	72	0.173	ppb	0.173	105.25	62	2000	
Se	78	2	72	0.100	ppb	0.100	34.21	8	2000	
Sr	88	3	72	612.500	ppb	612.500	0.54	326550	4000	
Mo	95	3	115	1.304	ppb	1.304	12.72	698	2000	
Ag	107	3	115	0.007	ppb	0.007	224.10	25	100	
Cd	111	3	115	0.014	ppb	0.014	225.18	13	2000	
Sn	120	3	115	-0.188	ppb	-0.188	-36.45	598	2000	
Sb	121	3	115	0.064	ppb	0.064	39.97	93	1000	
Ba	137	3	115	70.836	ppb	70.836	1.57	17706	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-4.16	143	2000	
(Pb)	206	3	193	-0.058	ppb	-0.058	-58.28	245	100	
(Pb)	207	3	193	-0.106	ppb	-0.106	-28.25	363	100	
Pb	208	3	193	-0.064	ppb	-0.064	-14.13	1158	5000	
Th	232	3	193	-0.085	ppb	-0.085	-116.38	6488	2000	
U	238	3	193	1.687	ppb	1.687	1.78	10716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4152455	0.33	4300192	96.56	60	120	
Sc (IS)	45	3	HMI He	603567	1.26	644593	93.64	60	120	
Ge Internal standard	72	2	HMI H2	2580063	1.34	2598552	99.29	60	120	
Ge Internal standard	72	3	HMI He	751232	0.79	772392	97.26	60	120	
In Internal Standard	115	3	HMI He	2825559	0.88	2872781	98.36	60	120	
Ir (IS)	193	3	HMI He	6113881	2.52	6092963	100.34	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-1-A
Data File Name	274SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:51:02-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.04	2	2000	
Na	23	3	45	146619.899	ppb	146619.899	3.91	15664528	400000	
Mg	24	3	45	24215.029	ppb	24215.029	2.49	1358779	400000	
Al	27	3	45	20.346	ppb	20.346	11.01	584	400000	
K	39	3	45	5344.690	ppb	5344.690	2.21	271139	400000	
Ca	40	2	45	233156.457	ppb	233156.457	1.15	129033443	400000	
V	51	3	72	-0.434	ppb	-0.434	-17.85	705	2000	
Cr	52	3	72	0.516	ppb	0.516	29.47	3449	5000	
Mn	55	3	72	207.027	ppb	207.027	2.18	83893	10000	
Fe	56	2	72	87.842	ppb	87.842	6.94	200150	10000	
Co	59	3	72	11.815	ppb	11.815	1.32	15386	2000	
Ni	60	3	72	11.160	ppb	11.160	3.68	4757	5000	
Cu	63	3	72	0.275	ppb	0.275	26.59	660	5000	
Zn	66	3	72	15.227	ppb	15.227	2.00	2651	5000	
As	75	3	72	0.689	ppb	0.689	8.50	120	2000	
Se	78	2	72	65.677	ppb	65.677	4.32	3896	2000	
Sr	88	3	72	4807.969	ppb	4807.969	1.34	2576802	4000	
Mo	95	3	115	8072.694	ppb	8072.694	3.74	4018905	2000	
Ag	107	3	115	0.010	ppb	0.010	4.49	30	100	
Cd	111	3	115	0.800	ppb	0.800	23.53	202	2000	
Sn	120	3	115	-0.215	ppb	-0.215	-34.45	568	2000	
Sb	121	3	115	0.082	ppb	0.082	12.25	105	1000	
Ba	137	3	115	29.359	ppb	29.359	6.97	7243	5000	
Tl	205	3	193	-0.046	ppb	-0.046	-15.60	202	2000	
(Pb)	206	3	193	-0.097	ppb	-0.097	-47.85	195	100	
(Pb)	207	3	193	-0.115	ppb	-0.115	-19.45	353	100	
Pb	208	3	193	-0.095	ppb	-0.095	-14.54	1000	5000	
Th	232	3	193	-0.097	ppb	-0.097	-68.04	6427	2000	
U	238	3	193	81.590	ppb	81.590	1.81	445756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4117657	2.72	4300192	95.76	60	120	
Sc (IS)	45	3	HMI He	598724	1.30	644593	92.88	60	120	
Ge Internal standard	72	2	HMI H2	2560759	2.87	2598552	98.55	60	120	
Ge Internal standard	72	3	HMI He	755251	1.34	772392	97.78	60	120	
In Internal Standard	115	3	HMI He	2778111	2.58	2872781	96.70	60	120	
Ir (IS)	193	3	HMI He	6118978	0.79	6092963	100.43	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-2-A
Data File Name	275SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:52:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.106	ppb	-0.106	-69.55	2	2000	
Na	23	3	45	148949.145	ppb	148949.145	1.28	15554272	400000	
Mg	24	3	45	24485.819	ppb	24485.819	2.52	1342875	400000	
Al	27	3	45	32.756	ppb	32.756	9.67	834	400000	
K	39	3	45	5449.826	ppb	5449.826	0.90	269731	400000	
Ca	40	2	45	242988.654	ppb	242988.654	2.42	130740830	400000	
V	51	3	72	-0.427	ppb	-0.427	-24.16	691	2000	
Cr	52	3	72	0.593	ppb	0.593	65.61	3420	5000	
Mn	55	3	72	213.825	ppb	213.825	0.68	84520	10000	
Fe	56	2	72	71.807	ppb	71.807	5.15	171680	10000	
Co	59	3	72	11.843	ppb	11.843	2.71	15044	2000	
Ni	60	3	72	11.529	ppb	11.529	9.14	4772	5000	
Cu	63	3	72	0.310	ppb	0.310	9.53	678	5000	
Zn	66	3	72	14.064	ppb	14.064	5.70	2404	5000	
As	75	3	72	0.624	ppb	0.624	21.52	110	2000	
Se	78	2	72	68.248	ppb	68.248	2.81	3970	2000	
Sr	88	3	72	4893.607	ppb	4893.607	2.60	2558371	4000	
Mo	95	3	115	1775.495	ppb	1775.495	1.96	883470	2000	
Ag	107	3	115	0.008	ppb	0.008	56.43	27	100	
Cd	111	3	115	0.154	ppb	0.154	65.77	47	2000	
Sn	120	3	115	-0.109	ppb	-0.109	-44.05	646	2000	
Sb	121	3	115	0.073	ppb	0.073	43.92	98	1000	
Ba	137	3	115	28.531	ppb	28.531	3.33	7040	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-21.96	158	2000	
(Pb)	206	3	193	-0.062	ppb	-0.062	-4.52	232	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-64.77	401	100	
Pb	208	3	193	-0.076	ppb	-0.076	-14.73	1059	5000	
Th	232	3	193	-0.306	ppb	-0.306	-22.83	5164	2000	
U	238	3	193	66.524	ppb	66.524	0.72	351622	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4003450	1.39	4300192	93.10	60	120	
Sc (IS)	45	3	HMI He	585105	0.45	644593	90.77	60	120	
Ge Internal standard	72	2	HMI H2	2509350	1.56	2598552	96.57	60	120	
Ge Internal standard	72	3	HMI He	736678	0.34	772392	95.38	60	120	
In Internal Standard	115	3	HMI He	2775126	0.79	2872781	96.60	60	120	
Ir (IS)	193	3	HMI He	5915021	0.67	6092963	97.08	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-3-A
Data File Name	276SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:54:36-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.107	ppb	-0.107	-68.68	2	2000	
Na	23	3	45	141774.209	ppb	141774.209	0.78	15202327	400000	
Mg	24	3	45	23036.447	ppb	23036.447	2.19	1297200	400000	
Al	27	3	45	22.378	ppb	22.378	13.94	631	400000	
K	39	3	45	5238.748	ppb	5238.748	0.45	267235	400000	
Ca	40	2	45	231239.118	ppb	231239.118	0.77	124586190	400000	
V	51	3	72	-0.540	ppb	-0.540	-13.69	636	2000	
Cr	52	3	72	0.511	ppb	0.511	54.64	3434	5000	
Mn	55	3	72	205.028	ppb	205.028	2.15	82839	10000	
Fe	56	2	72	60.194	ppb	60.194	9.81	150551	10000	
Co	59	3	72	11.182	ppb	11.182	2.91	14517	2000	
Ni	60	3	72	10.353	ppb	10.353	0.61	4449	5000	
Cu	63	3	72	0.220	ppb	0.220	2.61	603	5000	
Zn	66	3	72	13.813	ppb	13.813	5.05	2417	5000	
As	75	3	72	0.603	ppb	0.603	7.74	110	2000	
Se	78	2	72	65.226	ppb	65.226	3.18	3714	2000	
Sr	88	3	72	4686.175	ppb	4686.175	1.79	2503540	4000	
Mo	95	3	115	556.933	ppb	556.933	1.25	278234	2000	
Ag	107	3	115	0.014	ppb	0.014	43.84	37	100	
Cd	111	3	115	0.035	ppb	0.035	121.30	18	2000	
Sn	120	3	115	-0.218	ppb	-0.218	-25.15	566	2000	
Sb	121	3	115	0.099	ppb	0.099	16.99	118	1000	
Ba	137	3	115	27.876	ppb	27.876	2.75	6907	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-9.97	163	2000	
(Pb)	206	3	193	-0.089	ppb	-0.089	-18.22	205	100	
(Pb)	207	3	193	-0.089	ppb	-0.089	-6.75	381	100	
Pb	208	3	193	-0.088	ppb	-0.088	-3.08	1028	5000	
Th	232	3	193	-0.338	ppb	-0.338	-19.02	5159	2000	
U	238	3	193	40.981	ppb	40.981	2.06	223877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4007957	1.51	4300192	93.20	60	120	
Sc (IS)	45	3	HMI He	600780	0.69	644593	93.20	60	120	
Ge Internal standard	72	2	HMI H2	2456782	2.01	2598552	94.54	60	120	
Ge Internal standard	72	3	HMI He	752863	0.52	772392	97.47	60	120	
In Internal Standard	115	3	HMI He	2785796	0.38	2872781	96.97	60	120	
Ir (IS)	193	3	HMI He	6097951	1.04	6092963	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-4-A
Data File Name	277SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:56:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	143927.787	ppb	143927.787	0.93	15073239	400000	
Mg	24	3	45	23667.301	ppb	23667.301	2.54	1301563	400000	
Al	27	3	45	26.213	ppb	26.213	4.82	697	400000	
K	39	3	45	5321.918	ppb	5321.918	0.79	264740	400000	
Ca	40	2	45	224463.963	ppb	224463.963	1.05	125578983	400000	
V	51	3	72	-0.904	ppb	-0.904	-4.92	401	2000	
Cr	52	3	72	0.284	ppb	0.284	26.11	3184	5000	
Mn	55	3	72	208.336	ppb	208.336	1.13	82184	10000	
Fe	56	2	72	47.767	ppb	47.767	9.32	136646	10000	
Co	59	3	72	11.157	ppb	11.157	3.60	14145	2000	
Ni	60	3	72	11.161	ppb	11.161	1.74	4632	5000	
Cu	63	3	72	0.169	ppb	0.169	11.57	540	5000	
Zn	66	3	72	13.893	ppb	13.893	6.90	2372	5000	
As	75	3	72	0.641	ppb	0.641	14.83	112	2000	
Se	78	2	72	66.069	ppb	66.069	2.69	3893	2000	
Sr	88	3	72	4713.522	ppb	4713.522	1.99	2458885	4000	
Mo	95	3	115	247.264	ppb	247.264	2.10	122431	2000	
Ag	107	3	115	0.005	ppb	0.005	86.61	22	100	
Cd	111	3	115	-0.013	ppb	-0.013	-190.39	7	2000	
Sn	120	3	115	-0.284	ppb	-0.284	-32.11	511	2000	
Sb	121	3	115	0.078	ppb	0.078	10.25	102	1000	
Ba	137	3	115	28.395	ppb	28.395	2.54	6970	5000	
Tl	205	3	193	-0.056	ppb	-0.056	-11.62	158	2000	
(Pb)	206	3	193	-0.122	ppb	-0.122	-5.99	158	100	
(Pb)	207	3	193	-0.110	ppb	-0.110	-21.91	348	100	
Pb	208	3	193	-0.104	ppb	-0.104	-4.16	926	5000	
Th	232	3	193	-0.372	ppb	-0.372	-7.88	4862	2000	
U	238	3	193	40.472	ppb	40.472	2.64	215663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4161771	0.25	4300192	96.78	60	120	
Sc (IS)	45	3	HMI He	586789	1.00	644593	91.03	60	120	
Ge Internal standard	72	2	HMI H2	2542380	1.74	2598552	97.84	60	120	
Ge Internal standard	72	3	HMI He	735119	0.35	772392	95.17	60	120	
In Internal Standard	115	3	HMI He	2760871	1.02	2872781	96.10	60	120	
Ir (IS)	193	3	HMI He	5949495	2.63	6092963	97.65	60	120	

Sample Report

Sample Table

Sample Name	280-175184-D-1-A
Data File Name	278SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T22:58:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609246 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	112433.923	ppb	112433.923	1.95	11930622	400000	
Mg	24	3	45	14269.181	ppb	14269.181	2.51	795276	400000	
Al	27	3	45	-1.459	ppb	-1.459	-167.08	110	400000	
K	39	3	45	5839.064	ppb	5839.064	1.09	291711	400000	
Ca	40	2	45	85978.585	ppb	85978.585	2.26	47808009	400000	
V	51	3	72	-0.894	ppb	-0.894	-1.37	408	2000	
Cr	52	3	72	0.347	ppb	0.347	87.98	3237	5000	
Mn	55	3	72	1.112	ppb	1.112	10.92	798	10000	
Fe	56	2	72	10.245	ppb	10.245	39.07	78004	10000	
Co	59	3	72	0.153	ppb	0.153	22.26	247	2000	
Ni	60	3	72	1.903	ppb	1.903	28.17	1338	5000	
Cu	63	3	72	0.366	ppb	0.366	15.93	731	5000	
Zn	66	3	72	2.158	ppb	2.158	22.00	553	5000	
As	75	3	72	0.033	ppb	0.033	364.33	45	2000	
Se	78	2	72	0.182	ppb	0.182	29.26	13	2000	
Sr	88	3	72	630.759	ppb	630.759	1.20	329802	4000	
Mo	95	3	115	1.959	ppb	1.959	15.51	1001	2000	
Ag	107	3	115	0.007	ppb	0.007	84.72	25	100	
Cd	111	3	115	-0.020	ppb	-0.020	-179.30	5	2000	
Sn	120	3	115	-0.220	ppb	-0.220	-19.71	556	2000	
Sb	121	3	115	0.021	ppb	0.021	106.67	58	1000	
Ba	137	3	115	71.235	ppb	71.235	1.97	17271	5000	
Tl	205	3	193	-0.063	ppb	-0.063	-4.36	137	2000	
(Pb)	206	3	193	-0.094	ppb	-0.094	-11.53	197	100	
(Pb)	207	3	193	-0.138	ppb	-0.138	-19.46	323	100	
Pb	208	3	193	-0.102	ppb	-0.102	-11.91	951	5000	
Th	232	3	193	-0.388	ppb	-0.388	-2.90	4867	2000	
U	238	3	193	1.627	ppb	1.627	2.72	10296	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4135573	0.91	4300192	96.17	60	120	
Sc (IS)	45	3	HMI He	594403	1.20	644593	92.21	60	120	
Ge Internal standard	72	2	HMI H2	2533245	0.78	2598552	97.49	60	120	
Ge Internal standard	72	3	HMI He	736843	2.10	772392	95.40	60	120	
In Internal Standard	115	3	HMI He	2741316	2.01	2872781	95.42	60	120	
Ir (IS)	193	3	HMI He	6056954	2.78	6092963	99.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	279_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:00:00-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.634	ppb	8.365	2174	50	109.3	90	110	
Na	23	3	45	49740.630	ppb	1.684	5076849	51000	97.5	90	110	
Mg	24	3	45	10556.685	ppb	0.693	564862	11000	96.0	90	110	
Al	27	3	45	991.563	ppb	1.276	20653	1000	99.2	90	110	
K	39	3	45	10215.103	ppb	0.302	471404	11000	92.9	90	110	
Ca	40	2	45	10481.448	ppb	2.357	5635998	11000	95.3	90	110	
V	51	3	72	50.408	ppb	0.437	29378	50	100.8	90	110	
Cr	52	3	72	51.663	ppb	2.478	38643	50	103.3	90	110	
Mn	55	3	72	51.216	ppb	2.520	19120	50	102.4	90	110	
Fe	56	2	72	1052.637	ppb	0.490	1589257	1000	105.3	90	110	
Co	59	3	72	50.880	ppb	2.929	60060	50	101.8	90	110	
Ni	60	3	72	51.098	ppb	3.657	17606	50	102.2	90	110	
Cu	63	3	72	50.003	ppb	2.346	45607	50	100.0	90	110	
Zn	66	3	72	49.746	ppb	3.779	7408	50	99.5	90	110	
As	75	3	72	52.498	ppb	3.509	5413	50	105.0	90	110	
Se	78	2	72	51.129	ppb	1.178	2820	50	102.3	90	110	
Sr	88	3	72	105.011	ppb	2.904	51189	100	105.0	90	110	
Mo	95	3	115	48.415	ppb	2.663	23474	50	96.8	90	110	
Ag	107	3	115	48.777	ppb	0.749	79737	50	97.6	90	110	
Cd	111	3	115	48.610	ppb	2.167	11336	50	97.2	90	110	
Sn	120	3	115	48.256	ppb	3.113	36278	50	96.5	90	110	
Sb	121	3	115	49.122	ppb	1.062	35917	50	98.2	90	110	
Ba	137	3	115	50.156	ppb	2.033	11998	50	100.3	90	110	
Tl	205	3	193	47.529	ppb	2.954	181192	50	95.1	90	110	
(Pb)	206	3	193	48.244	ppb	3.394	61238	50	96.5	90	110	
(Pb)	207	3	193	47.983	ppb	1.319	53759	50	96.0	90	110	
Pb	208	3	193	47.962	ppb	3.196	245823	50	95.9	90	110	
Th	232	3	193	47.319	ppb	2.029	246995	50	94.6	90	110	
U	238	3	193	48.140	ppb	3.560	258595	50	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3993183	2.12	4300192	92.86	60	120	
Sc (IS)	45	3	HMI He	570735	1.12	644593	88.54	60	120	
Ge Internal standard	72	2	HMI H2	2378470	0.41	2598552	91.53	60	120	
Ge Internal standard	72	3	HMI He	686667	1.86	772392	88.90	60	120	
In Internal Standard	115	3	HMI He	2700127	1.08	2872781	93.99	60	120	
Ir (IS)	193	3	HMI He	6004595	2.30	6092963	98.55	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	280_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:01:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.149	ppb	0.0	0	0.5	
Na	23	3	45	93.551	ppb	5.7	24208	25	>RL
Mg	24	3	45	1.353	ppb	78.0	310	25	
Al	27	3	45	-3.816	ppb	-19.0	57	15	
K	39	3	45	5.229	ppb	203.3	25007	50	
V	51	3	72	-0.690	ppb	-12.3	508	1	
Cr	52	3	72	0.257	ppb	56.3	3034	1	
Mn	55	3	72	-0.032	ppb	-314.1	333	0.5	
Co	59	3	72	0.019	ppb	117.4	73	0.5	
Ni	60	3	72	0.681	ppb	23.9	861	1	
Cu	63	3	72	-0.004	ppb	-1012.4	356	1	
Zn	66	3	72	-0.113	ppb	-68.5	192	5	
As	75	3	72	-0.028	ppb	-93.9	37	1	
Se	78	2	72	0.039	ppb	161.4	4	1	
Sr	88	3	72	0.214	ppb	14.3	147	0.5	
Mo	95	3	115	0.257	ppb	27.9	157	0.5	
Ag	107	3	115	0.005	ppb	169.9	20	1	
Cd	111	3	115	-0.019	ppb	-116.7	5	0.5	
Sn	120	3	115	0.048	ppb	215.2	728	1	
Sb	121	3	115	0.024	ppb	46.9	58	0.6	
Ba	137	3	115	-0.036	ppb	-187.6	48	0.5	
Tl	205	3	193	-0.037	ppb	-35.6	228	0.1	
(Pb)	206	3	193	-0.095	ppb	-15.0	190	1	
(Pb)	207	3	193	-0.103	ppb	-8.8	353	1	
Pb	208	3	193	-0.099	ppb	-9.6	943	0.5	
Th	232	3	193	1.488	ppb	12.7	14091	1	>RL
U	238	3	193	0.018	ppb	97.7	1578	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3930491	1.87	4300192	91.40	60	120	
Sc (IS)	45	3	HMI He	568357	0.68	644593	88.17	60	120	
Ge Internal standard	72	2	HMI H2	2385082	0.54	2598552	91.79	60	120	
Ge Internal standard	72	3	HMI He	704571	1.60	772392	91.22	60	120	
In Internal Standard	115	3	HMI He	2639316	1.70	2872781	91.87	60	120	
Ir (IS)	193	3	HMI He	5897336	1.32	6092963	96.79	60	120	

Blank Report

Sample Table

Sample Name	MB 280-609219/1-B
Data File Name	281_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:03:37-06:00
Sample Type	Blank
Dilution	1
Comment	609238 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.149	ppb	0	0	0.5
Na	23	3	45	102.446	ppb	4.557803575	25452	25
Mg	24	3	45	1.637	ppb	76.48505131	330	25
Al	27	3	45	-0.810	ppb	-108.1551599	120	15
K	39	3	45	7.183	ppb	455.6774478	25445	50
Ca	40	2	45	23.990	ppb	6.398590519	25693	200
V	51	3	72	-0.728	ppb	-8.523607271	493	1
Cr	52	3	72	0.248	ppb	130.5760524	3069	1
Mn	55	3	72	0.018	ppb	197.6406077	356	0.5
Fe	56	2	72	23.443	ppb	20.1867278	94882	50
Co	59	3	72	-0.009	ppb	-248.519874	40	0.5
Ni	60	3	72	0.074	ppb	328.5979583	663	1
Cu	63	3	72	0.033	ppb	152.6084584	396	1
Zn	66	3	72	1.089	ppb	27.18987172	375	5
As	75	3	72	-0.064	ppb	-181.2821806	33	1
(Se)	78	3	72	-0.003	ppb	-86436.2757	22	1
Sr	88	3	72	0.181	ppb	6.587186937	132	0.5
Mo	95	3	115	0.173	ppb	38.82058169	120	0.5
Ag	107	3	115	0.007	ppb	30.4280059	23	1
Cd	111	3	115	-0.027	ppb	-46.04698027	3	0.5
Sn	120	3	115	-0.203	ppb	-74.97139209	563	1
Sb	121	3	115	-0.015	ppb	-107.3440591	32	0.6
Ba	137	3	115	-0.027	ppb	-397.7907335	52	0.5
Tl	205	3	193	-0.055	ppb	-16.41795192	163	0.1
(Pb)	206	3	193	-0.105	ppb	-22.2516493	180	1
(Pb)	207	3	193	-0.081	ppb	-27.46311505	381	1
Pb	208	3	193	-0.097	ppb	-20.54734367	960	0.5
Th	232	3	193	0.058	ppb	160.6732833	7040	1
U	238	3	193	0.008	ppb	408.9550533	1541	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121585	2.04	4300192	95.85	60	120	
Sc (IS)	45	3	HMI He	576216	0.91	644593	89.39	60	120	
Ge Internal standard	72	2	HMI H2	2442241	0.78	2598552	93.98	60	120	
Ge Internal standard	72	3	HMI He	714043	1.23	772392	92.45	60	120	
In Internal Standard	115	3	HMI He	2710472	1.81	2872781	94.35	60	120	
Ir (IS)	193	3	HMI He	5967033	1.86	6092963	97.93	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-609219/2-B
Data File Name	282_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:05:28-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	609238 200.8
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	42.854	42.854	ppb	10.059	1728	40	107.1	80	120	
Na	23	3	45	810.573	810.573	ppb	0.616	99295	40	2026.4	80	120	>+/-20%
Mg	24	3	45	712.214	712.214	ppb	0.179	39130	40	1780.5	80	120	>+/-20%
Al	27	3	45	725.490	725.490	ppb	2.699	15461	40	1813.7	80	120	>+/-20%
K	39	3	45	713.102	713.102	ppb	1.486	57217	40	1782.8	80	120	>+/-20%
Ca	40	2	45	807.631	807.631	ppb	1.504	460022	40	2019.1	80	120	>+/-20%
V	51	3	72	36.866	36.866	ppb	2.793	22769	40	92.2	80	120	
Cr	52	3	72	38.070	38.070	ppb	0.355	30622	40	95.2	80	120	
Mn	55	3	72	38.431	38.431	ppb	2.065	15132	40	96.1	80	120	
Fe	56	2	72	793.905	793.905	ppb	1.920	1269805	40	1984.8	80	120	>+/-20%
(Fe)	56	3	72	746.427	746.427	ppb	0.391	477879	40	1866.1	80	120	>+/-20%
Co	59	3	72	38.851	38.851	ppb	1.493	48101	40	97.1	80	120	
Ni	60	3	72	38.205	38.205	ppb	2.674	13965	40	95.5	80	120	
Cu	63	3	72	38.752	38.752	ppb	0.663	37141	40	96.9	80	120	
Zn	66	3	72	39.374	39.374	ppb	2.741	6193	40	98.4	80	120	
As	75	3	72	37.657	37.657	ppb	0.567	4084	40	94.1	80	120	
Se	78	2	72	40.075	40.075	ppb	2.478	2314	40	100.2	80	120	
(Se)	78	3	72	45.601	45.601	ppb	2.324	297	40	114.0	80	120	
Sr	88	3	72	78.996	78.996	ppb	0.154	40390	40	197.5	80	120	>+/-20%
Mo	95	3	115	36.361	36.361	ppb	4.616	18040	40	90.9	80	120	
Ag	107	3	115	38.036	38.036	ppb	2.559	63613	40	95.1	80	120	
Cd	111	3	115	37.319	37.319	ppb	2.623	8904	40	93.3	80	120	
Sn	120	3	115	35.292	35.292	ppb	3.004	27341	40	88.2	80	120	
Sb	121	3	115	37.164	37.164	ppb	2.195	27815	40	92.9	80	120	
Ba	137	3	115	39.036	39.036	ppb	6.206	9560	40	97.6	80	120	
Tl	205	3	193	37.451	37.451	ppb	1.569	144072	40	93.6	80	120	
(Pb)	206	3	193	37.621	37.621	ppb	1.523	48236	40	94.1	80	120	
(Pb)	207	3	193	37.503	37.503	ppb	0.531	42478	40	93.8	80	120	
Pb	208	3	193	37.820	37.820	ppb	1.575	195820	40	94.5	80	120	
Th	232	3	193	35.468	35.468	ppb	2.328	188383	40	88.7	80	120	
U	238	3	193	37.680	37.680	ppb	1.999	204477	40	94.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4124548	3.35	4300192	95.92	60	120	
Sc (IS)	45	3	HMI He	582584	0.35	644593	90.38	60	120	
Ge Internal standard	72	2	HMI H2	2489999	1.39	2598552	95.82	60	120	
Ge Internal standard	72	3	HMI He	719786	0.55	772392	93.19	60	120	
In Internal Standard	115	3	HMI He	2763459	2.75	2872781	96.19	60	120	
Ir (IS)	193	3	HMI He	6054342	1.89	6092963	99.37	60	120	

Sample Report

Sample Table

Sample Name	280-175144-D-1-B
Data File Name	283SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:07:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.107	ppb	-0.107	-67.74	2	2000	
Na	23	3	45	11572.433	ppb	11572.433	1.06	1225981	400000	
Mg	24	3	45	4808.600	ppb	4808.600	1.24	264668	400000	
Al	27	3	45	766.111	ppb	766.111	1.16	16436	400000	
K	39	3	45	675.829	ppb	675.829	2.87	55957	400000	
Ca	40	2	45	15017.744	ppb	15017.744	0.35	8225229	400000	
V	51	3	72	0.974	ppb	0.974	24.76	1524	2000	
Cr	52	3	72	0.979	ppb	0.979	23.89	3667	5000	
Mn	55	3	72	107.160	ppb	107.160	1.06	42069	10000	
Fe	56	2	72	879.554	ppb	879.554	2.56	1401572	10000	
Co	59	3	72	0.900	ppb	0.900	11.71	1178	2000	
Ni	60	3	72	1.401	ppb	1.401	19.62	1144	5000	
Cu	63	3	72	2.658	ppb	2.658	3.33	2926	5000	
Zn	66	3	72	17.937	ppb	17.937	5.63	2974	5000	
As	75	3	72	0.497	ppb	0.497	24.69	95	2000	
Se	78	2	72	0.289	ppb	0.289	56.19	19	2000	
Sr	88	3	72	121.887	ppb	121.887	1.33	63049	4000	
Mo	95	3	115	0.354	ppb	0.354	13.50	207	2000	
Ag	107	3	115	0.014	ppb	0.014	101.13	35	100	
Cd	111	3	115	0.045	ppb	0.045	93.79	20	2000	
Sn	120	3	115	-0.020	ppb	-0.020	-683.39	693	2000	
Sb	121	3	115	0.246	ppb	0.246	12.30	222	1000	
Ba	137	3	115	93.880	ppb	93.880	2.73	22319	5000	
Tl	205	3	193	-0.039	ppb	-0.039	-20.88	232	2000	
(Pb)	206	3	193	2.500	ppb	2.500	4.34	3565	100	
(Pb)	207	3	193	2.108	ppb	2.108	2.17	2894	100	
Pb	208	3	193	2.252	ppb	2.252	5.18	13284	5000	
Th	232	3	193	1.690	ppb	1.690	8.12	15799	2000	
U	238	3	193	0.344	ppb	0.344	14.09	3434	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4068650	0.81	4300192	94.62	60	120	
Sc (IS)	45	3	HMI He	586791	0.63	644593	91.03	60	120	
Ge Internal standard	72	2	HMI H2	2492804	1.35	2598552	95.93	60	120	
Ge Internal standard	72	3	HMI He	728527	0.83	772392	94.32	60	120	
In Internal Standard	115	3	HMI He	2690024	0.89	2872781	93.64	60	120	
Ir (IS)	193	3	HMI He	6172836	4.71	6092963	101.31	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-B
Data File Name	284SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:09:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.059	ppb	0.059	440.95	8	2000	
Na	23	3	45	7165.497	ppb	7165.497	2.47	756191	400000	
Mg	24	3	45	3843.821	ppb	3843.821	1.77	209223	400000	
Al	27	3	45	625.710	ppb	625.710	0.82	13300	400000	
K	39	3	45	865.692	ppb	865.692	4.19	63755	400000	
Ca	40	2	45	11333.695	ppb	11333.695	1.96	6271397	400000	
V	51	3	72	0.586	ppb	0.586	13.40	1316	2000	
Cr	52	3	72	0.417	ppb	0.417	57.07	3317	5000	
Mn	55	3	72	92.926	ppb	92.926	2.20	37218	10000	
Fe	56	2	72	614.610	ppb	614.610	0.58	1013627	10000	
Co	59	3	72	0.926	ppb	0.926	3.45	1234	2000	
Ni	60	3	72	1.447	ppb	1.447	13.45	1183	5000	
Cu	63	3	72	2.434	ppb	2.434	4.25	2762	5000	
Zn	66	3	72	13.675	ppb	13.675	6.05	2362	5000	
As	75	3	72	0.630	ppb	0.630	26.54	112	2000	
Se	78	2	72	0.262	ppb	0.262	32.46	17	2000	
Sr	88	3	72	61.742	ppb	61.742	1.26	32574	4000	
Mo	95	3	115	0.296	ppb	0.296	20.63	180	2000	
Ag	107	3	115	0.005	ppb	0.005	61.33	22	100	
Cd	111	3	115	0.045	ppb	0.045	5.78	20	2000	
Sn	120	3	115	-0.082	ppb	-0.082	-57.13	653	2000	
Sb	121	3	115	0.096	ppb	0.096	57.59	113	1000	
Ba	137	3	115	87.774	ppb	87.774	2.14	21048	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-9.27	160	2000	
(Pb)	206	3	193	2.173	ppb	2.173	4.59	3114	100	
(Pb)	207	3	193	2.030	ppb	2.030	2.38	2779	100	
Pb	208	3	193	2.085	ppb	2.085	3.01	12308	5000	
Th	232	3	193	0.266	ppb	0.266	56.59	8295	2000	
U	238	3	193	0.350	ppb	0.350	7.08	3442	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4109030	0.94	4300192	95.55	60	120	
Sc (IS)	45	3	HMI He	580225	1.44	644593	90.01	60	120	
Ge Internal standard	72	2	HMI H2	2531866	0.57	2598552	97.43	60	120	
Ge Internal standard	72	3	HMI He	742443	1.41	772392	96.12	60	120	
In Internal Standard	115	3	HMI He	2713182	3.07	2872781	94.44	60	120	
Ir (IS)	193	3	HMI He	6114356	1.78	6092963	100.35	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-C MS
Data File Name	285SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:10:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.524	ppb	39.524	4.50	1591	2000	
Na	23	3	45	7817.512	ppb	7817.512	3.76	834572	400000	
Mg	24	3	45	4437.266	ppb	4437.266	0.47	244624	400000	
Al	27	3	45	1335.842	ppb	1335.842	3.96	28591	400000	
K	39	3	45	1551.719	ppb	1551.719	1.31	95468	400000	
Ca	40	2	45	11610.329	ppb	11610.329	0.95	6471913	400000	
V	51	3	72	37.252	ppb	37.252	2.44	23735	2000	
Cr	52	3	72	36.960	ppb	36.960	2.77	30769	5000	
Mn	55	3	72	129.144	ppb	129.144	2.25	51616	10000	
Fe	56	2	72	1331.326	ppb	1331.326	2.26	2141645	10000	
Co	59	3	72	37.647	ppb	37.647	1.17	48104	2000	
Ni	60	3	72	36.673	ppb	36.673	2.20	13862	5000	
Cu	63	3	72	39.627	ppb	39.627	0.96	39191	5000	
Zn	66	3	72	49.791	ppb	49.791	0.70	8025	5000	
As	75	3	72	36.831	ppb	36.831	5.03	4124	2000	
Se	78	2	72	37.784	ppb	37.784	2.97	2239	2000	
Sr	88	3	72	136.441	ppb	136.441	1.37	71970	4000	
Mo	95	3	115	37.253	ppb	37.253	2.93	18453	2000	
Ag	107	3	115	37.525	ppb	37.525	3.03	62639	100	
Cd	111	3	115	37.644	ppb	37.644	0.80	8967	2000	
Sn	120	3	115	34.400	ppb	34.400	0.93	26628	2000	
Sb	121	3	115	36.998	ppb	36.998	2.87	27637	1000	
Ba	137	3	115	123.796	ppb	123.796	3.22	30149	5000	
Tl	205	3	193	36.923	ppb	36.923	1.01	142444	2000	
(Pb)	206	3	193	39.565	ppb	39.565	2.20	50850	100	
(Pb)	207	3	193	38.878	ppb	38.878	1.42	44135	100	
Pb	208	3	193	39.445	ppb	39.445	1.57	204736	5000	
Th	232	3	193	35.064	ppb	35.064	1.82	186849	2000	
U	238	3	193	37.667	ppb	37.667	0.72	204990	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4139638	2.13	4300192	96.27	60	120	
Sc (IS)	45	3	HMI He	587687	1.24	644593	91.17	60	120	
Ge Internal standard	72	2	HMI H2	2554539	1.98	2598552	98.31	60	120	
Ge Internal standard	72	3	HMI He	742873	0.72	772392	96.18	60	120	
In Internal Standard	115	3	HMI He	2758122	2.13	2872781	96.01	60	120	
Ir (IS)	193	3	HMI He	6070528	0.98	6092963	99.63	60	120	

Sample Report

Sample Table

Sample Name	280-175147-D-1-D MSD
Data File Name	286SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:12:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	40.484	ppb	40.484	3.29	1589	2000	
Na	23	3	45	7879.973	ppb	7879.973	1.71	839886	400000	
Mg	24	3	45	4460.038	ppb	4460.038	0.84	245558	400000	
Al	27	3	45	1339.339	ppb	1339.339	1.42	28634	400000	
K	39	3	45	1566.658	ppb	1566.658	2.19	96010	400000	
Ca	40	2	45	11762.212	ppb	11762.212	1.10	6479167	400000	
V	51	3	72	36.940	ppb	36.940	1.09	23318	2000	
Cr	52	3	72	37.289	ppb	37.289	1.17	30714	5000	
Mn	55	3	72	129.643	ppb	129.643	2.12	51307	10000	
Fe	56	2	72	1379.945	ppb	1379.945	1.13	2164535	10000	
Co	59	3	72	37.872	ppb	37.872	1.88	47917	2000	
Ni	60	3	72	37.307	ppb	37.307	1.01	13953	5000	
Cu	63	3	72	40.051	ppb	40.051	1.11	39218	5000	
Zn	66	3	72	50.399	ppb	50.399	4.62	8040	5000	
As	75	3	72	36.880	ppb	36.880	2.66	4089	2000	
Se	78	2	72	38.154	ppb	38.154	1.04	2206	2000	
Sr	88	3	72	138.287	ppb	138.287	2.05	72228	4000	
Mo	95	3	115	36.413	ppb	36.413	0.74	17923	2000	
Ag	107	3	115	37.544	ppb	37.544	2.71	62256	100	
Cd	111	3	115	36.329	ppb	36.329	1.28	8598	2000	
Sn	120	3	115	35.588	ppb	35.588	2.22	27333	2000	
Sb	121	3	115	37.273	ppb	37.273	1.67	27658	1000	
Ba	137	3	115	123.590	ppb	123.590	1.05	29907	5000	
Tl	205	3	193	37.035	ppb	37.035	2.15	142703	2000	
(Pb)	206	3	193	39.888	ppb	39.888	2.68	51196	100	
(Pb)	207	3	193	38.386	ppb	38.386	2.66	43521	100	
Pb	208	3	193	39.299	ppb	39.299	2.28	203722	5000	
Th	232	3	193	37.047	ppb	37.047	2.00	196786	2000	
U	238	3	193	37.787	ppb	37.787	2.77	205347	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4090604	1.89	4300192	95.13	60	120	
Sc (IS)	45	3	HMI He	586899	0.66	644593	91.05	60	120	
Ge Internal standard	72	2	HMI H2	2492804	0.49	2598552	95.93	60	120	
Ge Internal standard	72	3	HMI He	735622	0.92	772392	95.24	60	120	
In Internal Standard	115	3	HMI He	2739675	2.10	2872781	95.37	60	120	
Ir (IS)	193	3	HMI He	6064390	2.40	6092963	99.53	60	120	

Sample Report

Sample Table

Sample Name	280-175148-D-1-B
Data File Name	287SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:14:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.024	ppb	-0.024	-531.34	5	2000	
Na	23	3	45	16737.373	ppb	16737.373	3.07	1780247	400000	
Mg	24	3	45	10487.159	ppb	10487.159	1.35	581537	400000	
Al	27	3	45	511.421	ppb	511.421	1.60	11106	400000	
K	39	3	45	1188.145	ppb	1188.145	4.00	79598	400000	
Ca	40	2	45	22526.553	ppb	22526.553	2.22	12554069	400000	
V	51	3	72	0.502	ppb	0.502	14.38	1246	2000	
Cr	52	3	72	0.482	ppb	0.482	33.62	3315	5000	
Mn	55	3	72	101.191	ppb	101.191	0.51	39919	10000	
Fe	56	2	72	593.641	ppb	593.641	2.91	952269	10000	
Co	59	3	72	0.768	ppb	0.768	3.33	1018	2000	
Ni	60	3	72	1.044	ppb	1.044	30.20	1023	5000	
Cu	63	3	72	2.364	ppb	2.364	2.19	2654	5000	
Zn	66	3	72	12.213	ppb	12.213	2.02	2102	5000	
As	75	3	72	0.738	ppb	0.738	39.88	122	2000	
Se	78	2	72	0.212	ppb	0.212	15.86	14	2000	
Sr	88	3	72	206.902	ppb	206.902	0.69	107471	4000	
Mo	95	3	115	0.416	ppb	0.416	6.82	242	2000	
Ag	107	3	115	0.012	ppb	0.012	39.45	33	100	
Cd	111	3	115	0.050	ppb	0.050	102.67	22	2000	
Sn	120	3	115	0.045	ppb	0.045	243.81	755	2000	
Sb	121	3	115	0.202	ppb	0.202	29.09	193	1000	
Ba	137	3	115	93.503	ppb	93.503	0.57	22700	5000	
Tl	205	3	193	-0.044	ppb	-0.044	-11.68	208	2000	
(Pb)	206	3	193	1.654	ppb	1.654	5.28	2397	100	
(Pb)	207	3	193	1.549	ppb	1.549	8.82	2191	100	
Pb	208	3	193	1.636	ppb	1.636	2.36	9775	5000	
Th	232	3	193	2.182	ppb	2.182	11.66	17836	2000	
U	238	3	193	1.482	ppb	1.482	8.74	9402	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4142891	1.44	4300192	96.34	60	120	
Sc (IS)	45	3	HMI He	591499	1.03	644593	91.76	60	120	
Ge Internal standard	72	2	HMI H2	2457534	0.78	2598552	94.57	60	120	
Ge Internal standard	72	3	HMI He	731731	0.94	772392	94.74	60	120	
In Internal Standard	115	3	HMI He	2746563	1.57	2872781	95.61	60	120	
Ir (IS)	193	3	HMI He	5988865	1.30	6092963	98.29	60	120	

Sample Report

Sample Table

Sample Name	280-175150-D-1-B
Data File Name	288SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:16:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.059	ppb	0.059	125.48	8	2000	
Na	23	3	45	9355.284	ppb	9355.284	0.69	984018	400000	
Mg	24	3	45	6942.019	ppb	6942.019	0.93	378120	400000	
Al	27	3	45	564.764	ppb	564.764	3.99	12027	400000	
K	39	3	45	1140.639	ppb	1140.639	0.74	76065	400000	
Ca	40	2	45	13562.306	ppb	13562.306	2.59	7406739	400000	
V	51	3	72	0.599	ppb	0.599	33.24	1321	2000	
Cr	52	3	72	0.465	ppb	0.465	63.09	3347	5000	
Mn	55	3	72	70.320	ppb	70.320	1.99	28233	10000	
Fe	56	2	72	679.587	ppb	679.587	0.18	1092820	10000	
Co	59	3	72	0.636	ppb	0.636	3.41	865	2000	
Ni	60	3	72	1.307	ppb	1.307	38.65	1129	5000	
Cu	63	3	72	2.041	ppb	2.041	4.83	2377	5000	
Zn	66	3	72	16.299	ppb	16.299	6.51	2769	5000	
As	75	3	72	0.666	ppb	0.666	49.65	115	2000	
Se	78	2	72	0.279	ppb	0.279	37.05	18	2000	
Sr	88	3	72	93.786	ppb	93.786	0.39	49428	4000	
Mo	95	3	115	0.462	ppb	0.462	3.37	263	2000	
Ag	107	3	115	0.004	ppb	0.004	235.96	20	100	
Cd	111	3	115	0.022	ppb	0.022	247.41	15	2000	
Sn	120	3	115	0.047	ppb	0.047	43.42	755	2000	
Sb	121	3	115	0.193	ppb	0.193	34.35	185	1000	
Ba	137	3	115	71.054	ppb	71.054	2.79	17208	5000	
Tl	205	3	193	-0.057	ppb	-0.057	-19.49	160	2000	
(Pb)	206	3	193	1.656	ppb	1.656	1.57	2439	100	
(Pb)	207	3	193	1.595	ppb	1.595	2.61	2277	100	
Pb	208	3	193	1.598	ppb	1.598	2.08	9740	5000	
Th	232	3	193	0.649	ppb	0.649	24.36	10237	2000	
U	238	3	193	0.239	ppb	0.239	11.23	2824	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4057584	1.84	4300192	94.36	60	120	
Sc (IS)	45	3	HMI He	580855	0.90	644593	90.11	60	120	
Ge Internal standard	72	2	HMI H2	2483262	0.29	2598552	95.56	60	120	
Ge Internal standard	72	3	HMI He	742031	2.56	772392	96.07	60	120	
In Internal Standard	115	3	HMI He	2738483	2.62	2872781	95.33	60	120	
Ir (IS)	193	3	HMI He	6086386	2.40	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175151-D-1-B
Data File Name	289SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:18:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.108	ppb	-0.108	-65.30	2	2000	
Na	23	3	45	33756.301	ppb	33756.301	2.12	3511537	400000	
Mg	24	3	45	15483.833	ppb	15483.833	0.54	843297	400000	
Al	27	3	45	268.799	ppb	268.799	8.27	5797	400000	
K	39	3	45	2124.758	ppb	2124.758	0.79	119871	400000	
Ca	40	2	45	35574.343	ppb	35574.343	1.41	19670776	400000	
V	51	3	72	0.312	ppb	0.312	31.35	1139	2000	
Cr	52	3	72	0.613	ppb	0.613	50.78	3437	5000	
Mn	55	3	72	26.100	ppb	26.100	3.74	10629	10000	
Fe	56	2	72	287.060	ppb	287.060	1.10	499430	10000	
Co	59	3	72	0.300	ppb	0.300	26.77	431	2000	
Ni	60	3	72	0.850	ppb	0.850	16.39	961	5000	
Cu	63	3	72	1.739	ppb	1.739	4.45	2066	5000	
Zn	66	3	72	16.210	ppb	16.210	7.18	2737	5000	
As	75	3	72	0.488	ppb	0.488	64.89	95	2000	
Se	78	2	72	1.015	ppb	1.015	21.79	61	2000	
Sr	88	3	72	291.994	ppb	291.994	0.78	152649	4000	
Mo	95	3	115	1.434	ppb	1.434	10.31	733	2000	
Ag	107	3	115	0.008	ppb	0.008	122.66	25	100	
Cd	111	3	115	-0.019	ppb	-0.019	-113.88	5	2000	
Sn	120	3	115	-0.161	ppb	-0.161	-37.02	593	2000	
Sb	121	3	115	0.416	ppb	0.416	8.38	348	1000	
Ba	137	3	115	96.857	ppb	96.857	3.59	23224	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-7.48	143	2000	
(Pb)	206	3	193	0.572	ppb	0.572	4.43	1051	100	
(Pb)	207	3	193	0.536	ppb	0.536	2.35	1085	100	
Pb	208	3	193	0.551	ppb	0.551	5.31	4331	5000	
Th	232	3	193	0.103	ppb	0.103	115.28	7422	2000	
U	238	3	193	1.677	ppb	1.677	2.37	10609	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4111690	1.40	4300192	95.62	60	120	
Sc (IS)	45	3	HMI He	580971	0.75	644593	90.13	60	120	
Ge Internal standard	72	2	HMI H2	2496659	1.50	2598552	96.08	60	120	
Ge Internal standard	72	3	HMI He	736547	1.10	772392	95.36	60	120	
In Internal Standard	115	3	HMI He	2714316	2.43	2872781	94.48	60	120	
Ir (IS)	193	3	HMI He	6086203	1.25	6092963	99.89	60	120	

Sample Report

Sample Table

Sample Name	280-175184-B-1-B
Data File Name	290SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:19:53-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	609238 200.8
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	112279.486	ppb	112279.486	2.64	11890467	400000	
Mg	24	3	45	14237.072	ppb	14237.072	0.99	791841	400000	
Al	27	3	45	2.280	ppb	2.280	36.77	190	400000	
K	39	3	45	5722.800	ppb	5722.800	1.23	285867	400000	
Ca	40	2	45	85405.564	ppb	85405.564	1.15	47321837	400000	
V	51	3	72	-0.731	ppb	-0.731	-19.23	511	2000	
Cr	52	3	72	0.239	ppb	0.239	22.74	3185	5000	
Mn	55	3	72	1.291	ppb	1.291	5.59	876	10000	
Fe	56	2	72	15.014	ppb	15.014	30.78	84189	10000	
Co	59	3	72	0.128	ppb	0.128	20.81	217	2000	
Ni	60	3	72	2.053	ppb	2.053	9.29	1403	5000	
Cu	63	3	72	0.743	ppb	0.743	1.26	1108	5000	
Zn	66	3	72	7.352	ppb	7.352	4.50	1373	5000	
As	75	3	72	0.119	ppb	0.119	36.29	55	2000	
Se	78	2	72	0.105	ppb	0.105	120.27	8	2000	
Sr	88	3	72	615.647	ppb	615.647	0.75	324718	4000	
Mo	95	3	115	1.186	ppb	1.186	9.73	628	2000	
Ag	107	3	115	0.002	ppb	0.002	442.12	17	100	
Cd	111	3	115	-0.027	ppb	-0.027	-88.90	3	2000	
Sn	120	3	115	-0.163	ppb	-0.163	-51.81	606	2000	
Sb	121	3	115	0.072	ppb	0.072	43.53	98	1000	
Ba	137	3	115	71.434	ppb	71.434	3.33	17566	5000	
Tl	205	3	193	-0.060	ppb	-0.060	-12.43	147	2000	
(Pb)	206	3	193	-0.085	ppb	-0.085	-21.49	208	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-9.43	413	100	
Pb	208	3	193	-0.077	ppb	-0.077	-9.74	1083	5000	
Th	232	3	193	-0.140	ppb	-0.140	-47.31	6165	2000	
U	238	3	193	1.656	ppb	1.656	1.38	10488	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4121309	2.20	4300192	95.84	60	120	
Sc (IS)	45	3	HMI He	593266	1.05	644593	92.04	60	120	
Ge Internal standard	72	2	HMI H2	2499918	1.15	2598552	96.20	60	120	
Ge Internal standard	72	3	HMI He	743202	0.70	772392	96.22	60	120	
In Internal Standard	115	3	HMI He	2780409	1.15	2872781	96.78	60	120	
Ir (IS)	193	3	HMI He	6081197	0.78	6092963	99.81	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	291_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:21:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.871	ppb	16.885	2057	50	103.7	90	110	
Na	23	3	45	47934.715	ppb	2.548	5013990	51000	94.0	90	110	
Mg	24	3	45	10256.258	ppb	2.625	562389	11000	93.2	90	110	
Al	27	3	45	946.469	ppb	3.521	20205	1000	94.6	90	110	
K	39	3	45	10001.919	ppb	1.504	473514	11000	90.9	90	110	
Ca	40	2	45	10611.587	ppb	0.888	5723766	11000	96.5	90	110	
V	51	3	72	48.709	ppb	2.624	29548	50	97.4	90	110	
Cr	52	3	72	49.408	ppb	1.234	38561	50	98.8	90	110	
Mn	55	3	72	49.225	ppb	4.747	19129	50	98.5	90	110	
Fe	56	2	72	1058.089	ppb	4.180	1604561	1000	105.8	90	110	
Co	59	3	72	48.543	ppb	0.586	59603	50	97.1	90	110	
Ni	60	3	72	48.529	ppb	1.287	17426	50	97.1	90	110	
Cu	63	3	72	48.940	ppb	0.996	46430	50	97.9	90	110	
Zn	66	3	72	49.852	ppb	3.162	7720	50	99.7	90	110	
As	75	3	72	52.034	ppb	0.580	5582	50	104.1	90	110	
Se	78	2	72	51.153	ppb	2.762	2834	50	102.3	90	110	
Sr	88	3	72	100.585	ppb	1.110	51003	100	100.6	90	110	
Mo	95	3	115	47.245	ppb	2.181	23510	50	94.5	90	110	
Ag	107	3	115	47.358	ppb	1.234	79432	50	94.7	90	110	
Cd	111	3	115	47.190	ppb	1.351	11289	50	94.4	90	110	
Sn	120	3	115	47.102	ppb	1.387	36358	50	94.2	90	110	
Sb	121	3	115	48.685	ppb	1.885	36520	50	97.4	90	110	
Ba	137	3	115	49.823	ppb	0.830	12230	50	99.6	90	110	
Tl	205	3	193	46.336	ppb	3.440	182749	50	92.7	90	110	
(Pb)	206	3	193	46.576	ppb	1.713	61187	50	93.2	90	110	
(Pb)	207	3	193	46.716	ppb	2.871	54145	50	93.4	90	110	
Pb	208	3	193	46.494	ppb	1.378	246606	50	93.0	90	110	
Th	232	3	193	46.382	ppb	2.165	250572	50	92.8	90	110	
U	238	3	193	46.958	ppb	2.328	261012	50	93.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4004539	1.18	4300192	93.12	60	120	
Sc (IS)	45	3	HMI He	584902	0.74	644593	90.74	60	120	
Ge Internal standard	72	2	HMI H2	2390425	1.58	2598552	91.99	60	120	
Ge Internal standard	72	3	HMI He	713942	1.43	772392	92.43	60	120	
In Internal Standard	115	3	HMI He	2770617	1.76	2872781	96.44	60	120	
Ir (IS)	193	3	HMI He	6209575	0.56	6092963	101.91	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	292_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-19T23:23:30-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	161CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.106	ppb	-69.9	2	0.5	
Na	23	3	45	66.160	ppb	4.2	21839	25	>RL
Mg	24	3	45	1.548	ppb	37.4	327	25	
Al	27	3	45	-3.859	ppb	-28.9	57	15	
K	39	3	45	0.297	ppb	10315.7	25258	50	
V	51	3	72	-0.669	ppb	-6.7	535	1	
Cr	52	3	72	0.394	ppb	109.1	3212	1	
Mn	55	3	72	-0.067	ppb	-166.9	328	0.5	
Co	59	3	72	0.018	ppb	55.9	73	0.5	
Ni	60	3	72	0.492	ppb	39.6	818	1	
Cu	63	3	72	-0.022	ppb	-101.2	348	1	
Zn	66	3	72	0.072	ppb	470.4	225	5	
As	75	3	72	0.009	ppb	2469.4	42	1	
Se	78	2	72	0.111	ppb	33.1	8	1	
Sr	88	3	72	0.041	ppb	49.2	62	0.5	
Mo	95	3	115	0.086	ppb	48.5	80	0.5	
Ag	107	3	115	0.008	ppb	92.9	27	1	
Cd	111	3	115	-0.020	ppb	-2.2	5	0.5	
Sn	120	3	115	0.010	ppb	289.4	736	1	
Sb	121	3	115	0.038	ppb	41.8	72	0.6	
Ba	137	3	115	-0.052	ppb	-28.2	47	0.5	
Tl	205	3	193	-0.039	ppb	-11.2	228	0.1	
(Pb)	206	3	193	-0.092	ppb	-25.5	198	1	
(Pb)	207	3	193	-0.133	ppb	-21.4	328	1	
Pb	208	3	193	-0.103	ppb	-6.0	943	0.5	
Th	232	3	193	1.312	ppb	12.5	13511	1	>RL
U	238	3	193	0.018	ppb	90.3	1614	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4047303	1.23	4300192	94.12	60	120	
Sc (IS)	45	3	HMI He	579226	0.80	644593	89.86	60	120	
Ge Internal standard	72	2	HMI H2	2392133	1.10	2598552	92.06	60	120	
Ge Internal standard	72	3	HMI He	723187	0.55	772392	93.63	60	120	
In Internal Standard	115	3	HMI He	2772876	2.15	2872781	96.52	60	120	
Ir (IS)	193	3	HMI He	6024106	1.01	6092963	98.87	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	293SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:39:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-22.058	ppb	-22.058	-11.76	12251	400000	
Mg	24	3	45	-1.927	ppb	-1.927	-53.76	133	400000	
Al	27	3	45	-1.125	ppb	-1.125	-112.15	110	400000	
K	39	3	45	2.069	ppb	2.069	1051.97	24389	400000	
Ca	40	2	45	-9.812	ppb	-9.812	-3.08	6592	400000	
V	51	3	72	-1.198	ppb	-1.198	-3.33	208	2000	
Cr	52	3	72	-2.341	ppb	-2.341	-3.08	1149	5000	
Mn	55	3	72	-0.694	ppb	-0.694	-3.87	82	10000	
Fe	56	2	72	-25.906	ppb	-25.906	-4.64	20573	10000	
Co	59	3	72	-0.026	ppb	-0.026	-58.19	18	2000	
Ni	60	3	72	-1.311	ppb	-1.311	-7.13	177	5000	
Cu	63	3	72	-0.174	ppb	-0.174	-32.24	193	5000	
Zn	66	3	72	-0.859	ppb	-0.859	-12.79	78	5000	
As	75	3	72	-0.246	ppb	-0.246	-41.86	13	2000	
Se	78	2	72	0.003	ppb	0.003	22.43	2	2000	
Sr	88	3	72	-0.024	ppb	-0.024	-51.06	27	4000	
Mo	95	3	115	0.196	ppb	0.196	49.41	127	2000	
Ag	107	3	115	0.006	ppb	0.006	128.02	22	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.744	ppb	-0.744	-5.53	157	2000	
Sb	121	3	115	-0.016	ppb	-0.016	-111.40	30	1000	
Ba	137	3	115	-0.105	ppb	-0.105	-106.18	32	5000	
Tl	205	3	193	-0.071	ppb	-0.071	-12.48	97	2000	
(Pb)	206	3	193	-0.116	ppb	-0.116	-17.33	153	100	
(Pb)	207	3	193	0.546	ppb	0.546	8.96	993	100	
Pb	208	3	193	0.012	ppb	0.012	105.36	1401	5000	
Th	232	3	193	-0.530	ppb	-0.530	-4.16	3767	2000	
U	238	3	193	0.000	ppb	0.000	-5648.87	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3894329	1.11	4300192	90.56	60	120	
Sc (IS)	45	3	HMI He	557420	1.01	644593	86.48	60	120	
Ge Internal standard	72	2	HMI H2	2372720	1.69	2598552	91.31	60	120	
Ge Internal standard	72	3	HMI He	685387	1.02	772392	88.74	60	120	
In Internal Standard	115	3	HMI He	2630300	2.48	2872781	91.56	60	120	
Ir (IS)	193	3	HMI He	5510011	1.89	6092963	90.43	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	294SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:41:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.104	ppb	-0.104	-74.35	2	2000	
Na	23	3	45	-22.786	ppb	-22.786	-15.29	12224	400000	
Mg	24	3	45	-1.353	ppb	-1.353	-47.73	163	400000	
Al	27	3	45	-4.430	ppb	-4.430	-25.49	43	400000	
K	39	3	45	-0.102	ppb	-0.102	-21969.39	24389	400000	
Ca	40	2	45	-8.690	ppb	-8.690	-1.43	7283	400000	
V	51	3	72	-1.249	ppb	-1.249	-5.48	182	2000	
Cr	52	3	72	-2.383	ppb	-2.383	-2.59	1133	5000	
Mn	55	3	72	-0.678	ppb	-0.678	-4.04	88	10000	
Fe	56	2	72	-31.228	ppb	-31.228	-0.43	13423	10000	
Co	59	3	72	-0.023	ppb	-0.023	-20.79	22	2000	
Ni	60	3	72	-1.426	ppb	-1.426	-10.35	140	5000	
Cu	63	3	72	-0.138	ppb	-0.138	-16.53	228	5000	
Zn	66	3	72	-0.558	ppb	-0.558	-41.59	123	5000	
As	75	3	72	-0.119	ppb	-0.119	-101.69	27	2000	
Se	78	2	72	0.013	ppb	0.013	156.71	3	2000	
Sr	88	3	72	-0.021	ppb	-0.021	-109.90	28	4000	
Mo	95	3	115	-0.042	ppb	-0.042	-26.28	15	2000	
Ag	107	3	115	0.001	ppb	0.001	679.16	13	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.597	ppb	-0.597	-5.11	260	2000	
Sb	121	3	115	-0.025	ppb	-0.025	-14.56	23	1000	
Ba	137	3	115	-0.171	ppb	-0.171	-19.57	17	5000	
Tl	205	3	193	-0.061	ppb	-0.061	-24.97	130	2000	
(Pb)	206	3	193	-0.134	ppb	-0.134	-9.05	133	100	
(Pb)	207	3	193	0.201	ppb	0.201	43.99	643	100	
Pb	208	3	193	-0.062	ppb	-0.062	-39.15	1056	5000	
Th	232	3	193	-0.500	ppb	-0.500	-10.02	3922	2000	
U	238	3	193	-0.017	ppb	-0.017	-7.76	1306	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3950461	1.39	4300192	91.87	60	120	
Sc (IS)	45	3	HMI He	559488	0.93	644593	86.80	60	120	
Ge Internal standard	72	2	HMI H2	2477104	1.22	2598552	95.33	60	120	
Ge Internal standard	72	3	HMI He	693043	0.29	772392	89.73	60	120	
In Internal Standard	115	3	HMI He	2606729	2.20	2872781	90.74	60	120	
Ir (IS)	193	3	HMI He	5534291	1.01	6092963	90.83	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	295SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:44:04-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-23.293	ppb	-23.293	-28.45	12324	400000	
Mg	24	3	45	-0.457	ppb	-0.457	-229.77	214	400000	
Al	27	3	45	-3.477	ppb	-3.477	-21.93	63	400000	
K	39	3	45	2.295	ppb	2.295	1607.12	24797	400000	
Ca	40	2	45	-8.792	ppb	-8.792	-5.78	7283	400000	
V	51	3	72	-1.265	ppb	-1.265	-1.36	173	2000	
Cr	52	3	72	-2.093	ppb	-2.093	-4.69	1343	5000	
Mn	55	3	72	-0.675	ppb	-0.675	-9.91	90	10000	
Fe	56	2	72	-20.969	ppb	-20.969	-7.28	28455	10000	
Co	59	3	72	-0.019	ppb	-0.019	-74.20	27	2000	
Ni	60	3	72	-1.029	ppb	-1.029	-4.88	275	5000	
Cu	63	3	72	-0.121	ppb	-0.121	-17.87	245	5000	
Zn	66	3	72	-0.609	ppb	-0.609	-18.75	117	5000	
As	75	3	72	-0.248	ppb	-0.248	-29.84	13	2000	
Se	78	2	72	0.002	ppb	0.002	1743.86	2	2000	
Sr	88	3	72	0.005	ppb	0.005	616.55	42	4000	
Mo	95	3	115	-0.046	ppb	-0.046	-25.88	13	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-151.48	8	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.704	ppb	-0.704	-11.01	185	2000	
Sb	121	3	115	-0.032	ppb	-0.032	-46.43	18	1000	
Ba	137	3	115	-0.142	ppb	-0.142	-8.46	23	5000	
Tl	205	3	193	-0.075	ppb	-0.075	-7.63	83	2000	
(Pb)	206	3	193	-0.121	ppb	-0.121	-28.30	148	100	
(Pb)	207	3	193	0.044	ppb	0.044	97.32	481	100	
Pb	208	3	193	-0.083	ppb	-0.083	-21.35	956	5000	
Th	232	3	193	-0.448	ppb	-0.448	-3.75	4160	2000	
U	238	3	193	-0.002	ppb	-0.002	-372.71	1379	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3979829	0.38	4300192	92.55	60	120	
Sc (IS)	45	3	HMI He	566574	0.82	644593	87.90	60	120	
Ge Internal standard	72	2	HMI H2	2432480	0.88	2598552	93.61	60	120	
Ge Internal standard	72	3	HMI He	696897	1.56	772392	90.23	60	120	
In Internal Standard	115	3	HMI He	2614140	1.26	2872781	91.00	60	120	
Ir (IS)	193	3	HMI He	5525558	1.46	6092963	90.69	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	296SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:45:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.149	ppb	-0.149	0.00	0	2000	
Na	23	3	45	-20.512	ppb	-20.512	-11.17	12655	400000	
Mg	24	3	45	-2.347	ppb	-2.347	-24.24	113	400000	
Al	27	3	45	-2.198	ppb	-2.198	-21.53	90	400000	
K	39	3	45	-0.154	ppb	-0.154	-10624.14	24790	400000	
Ca	40	2	45	-9.299	ppb	-9.299	-3.64	6829	400000	
V	51	3	72	-1.229	ppb	-1.229	-2.77	197	2000	
Cr	52	3	72	-1.735	ppb	-1.735	-8.40	1616	5000	
Mn	55	3	72	-0.475	ppb	-0.475	-20.46	167	10000	
Fe	56	2	72	-15.957	ppb	-15.957	-15.40	35997	10000	
Co	59	3	72	0.000	ppb	0.000	-11904.55	50	2000	
Ni	60	3	72	-0.946	ppb	-0.946	-8.58	307	5000	
Cu	63	3	72	-0.150	ppb	-0.150	-4.73	222	5000	
Zn	66	3	72	-0.652	ppb	-0.652	-15.37	112	5000	
As	75	3	72	-0.234	ppb	-0.234	-20.01	15	2000	
Se	78	2	72	-0.010	ppb	-0.010	-213.87	1	2000	
Sr	88	3	72	-0.016	ppb	-0.016	-97.84	32	4000	
Mo	95	3	115	-0.021	ppb	-0.021	-134.61	25	2000	
Ag	107	3	115	0.008	ppb	0.008	104.03	25	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.732	ppb	-0.732	-6.74	165	2000	
Sb	121	3	115	-0.032	ppb	-0.032	-55.17	18	1000	
Ba	137	3	115	-0.157	ppb	-0.157	-13.64	20	5000	
Tl	205	3	193	-0.065	ppb	-0.065	-3.76	117	2000	
(Pb)	206	3	193	-0.107	ppb	-0.107	-23.00	163	100	
(Pb)	207	3	193	-0.056	ppb	-0.056	-75.96	378	100	
Pb	208	3	193	-0.109	ppb	-0.109	-18.14	830	5000	
Th	232	3	193	-0.487	ppb	-0.487	-5.46	3962	2000	
U	238	3	193	0.027	ppb	0.027	27.23	1516	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3874690	1.86	4300192	90.11	60	120	
Sc (IS)	45	3	HMI He	568774	0.52	644593	88.24	60	120	
Ge Internal standard	72	2	HMI H2	2436021	2.33	2598552	93.75	60	120	
Ge Internal standard	72	3	HMI He	705662	0.48	772392	91.36	60	120	
In Internal Standard	115	3	HMI He	2623077	0.35	2872781	91.31	60	120	
Ir (IS)	193	3	HMI He	5499269	1.76	6092963	90.26	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	297SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:47:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	161CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.105	ppb	-0.105	-72.44	2	2000	
Na	23	3	45	-17.368	ppb	-17.368	-19.26	12792	400000	
Mg	24	3	45	-1.494	ppb	-1.494	-17.08	157	400000	
Al	27	3	45	-2.110	ppb	-2.110	-149.03	90	400000	
K	39	3	45	6.742	ppb	6.742	404.67	24750	400000	
Ca	40	2	45	-9.543	ppb	-9.543	-6.84	6815	400000	
V	51	3	72	-1.252	ppb	-1.252	-4.69	182	2000	
Cr	52	3	72	-1.229	ppb	-1.229	-17.83	1961	5000	
Mn	55	3	72	-0.484	ppb	-0.484	-6.32	162	10000	
Fe	56	2	72	-10.135	ppb	-10.135	-25.54	43864	10000	
Co	59	3	72	-0.005	ppb	-0.005	-39.93	43	2000	
Ni	60	3	72	-0.629	ppb	-0.629	-18.57	411	5000	
Cu	63	3	72	-0.136	ppb	-0.136	-36.51	232	5000	
Zn	66	3	72	-0.702	ppb	-0.702	-38.30	103	5000	
As	75	3	72	-0.201	ppb	-0.201	-72.38	18	2000	
Se	78	2	72	0.002	ppb	0.002	1486.33	2	2000	
Sr	88	3	72	-0.025	ppb	-0.025	-182.19	27	4000	
Mo	95	3	115	-0.035	ppb	-0.035	-93.36	18	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-208.69	8	100	
Cd	111	3	115	-0.041	ppb	-0.041	0.00	0	2000	
Sn	120	3	115	-0.750	ppb	-0.750	-4.44	150	2000	
Sb	121	3	115	-0.037	ppb	-0.037	-20.18	15	1000	
Ba	137	3	115	-0.155	ppb	-0.155	-37.23	20	5000	
Tl	205	3	193	-0.069	ppb	-0.069	-7.80	102	2000	
(Pb)	206	3	193	-0.135	ppb	-0.135	-7.87	132	100	
(Pb)	207	3	193	-0.116	ppb	-0.116	-41.86	318	100	
Pb	208	3	193	-0.129	ppb	-0.129	-11.34	743	5000	
Th	232	3	193	-0.483	ppb	-0.483	-6.13	4012	2000	
U	238	3	193	0.008	ppb	0.008	113.65	1433	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3940703	1.16	4300192	91.64	60	120	
Sc (IS)	45	3	HMI He	560859	1.24	644593	87.01	60	120	
Ge Internal standard	72	2	HMI H2	2393104	1.20	2598552	92.09	60	120	
Ge Internal standard	72	3	HMI He	699661	0.75	772392	90.58	60	120	
In Internal Standard	115	3	HMI He	2584395	1.03	2872781	89.96	60	120	
Ir (IS)	193	3	HMI He	5543461	1.88	6092963	90.98	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	298CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T08:49:33-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	2	10392.30
Na	23	45	3	HMI He	13183	0.03
Mg	24	45	3	HMI He	153	27.65
Al	27	45	3	HMI He	117	22.42
K	39	45	3	HMI He	24011	0.03
Ca	40	45	2	HMI H2	10100	0.03
V	51	72	3	HMI He	586	2.47
Cr	52	72	3	HMI He	2272	0.26
Mn	55	72	3	HMI He	163	5.73
Fe	56	72	2	HMI H2	45775	0.02
Co	59	72	3	HMI He	55	59.62
Ni	60	72	3	HMI He	485	1.91
Cu	63	72	3	HMI He	298	6.51
Zn	66	72	3	HMI He	138	7.54
As	75	72	3	HMI He	30	166.76
Se	78	72	2	HMI H2	1	25980.76
(Se)	78	72	3	HMI He	25	80.06
Sr	88	72	3	HMI He	25	138.67
Mo	95	115	3	HMI He	27	332.46
Ag	107	115	3	HMI He	15	222.20
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	546	1.56
Sb	121	115	3	HMI He	33	93.70
Ba	137	115	3	HMI He	33	113.31
Tl	205	193	3	HMI He	100	10.00
(Pb)	206	193	3	HMI He	228	3.63
(Pb)	207	193	3	HMI He	332	5.01
Pb	208	193	3	HMI He	1008	0.77
Th	232	193	3	HMI He	6115	0.14
U	238	193	3	HMI He	1258	0.32

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3535116	3.27
Sc (IS)	45	3	HMI He	505423	0.85
Ge Internal standard	72	2	HMI H2	2359166	1.21
Ge Internal standard	72	3	HMI He	680743	1.25
In Internal Standard	115	3	HMI He	2361818	2.47
Ir (IS)	193	3	HMI He	5045699	1.11

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	299CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T08:51:22-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	298CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	7	1718.96
Na	23	45	3	HMI He	8793161	0.00
Mg	24	45	3	HMI He	933559	0.00
Al	27	45	3	HMI He	97	62.64
K	39	45	3	HMI He	779161	0.00
V	51	72	3	HMI He	621	0.78
Cr	52	72	3	HMI He	2431	0.32
Mn	55	72	3	HMI He	225	5.50
Co	59	72	3	HMI He	53	61.78
Ni	60	72	3	HMI He	506	4.76
Cu	63	72	3	HMI He	298	4.58
Zn	66	72	3	HMI He	232	5.92
As	75	72	3	HMI He	55	16.53
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	40	82.71
Sr	88	72	3	HMI He	192	8.21
Mo	95	115	3	HMI He	28	190.39
Ag	107	115	3	HMI He	27	107.43
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	713	1.19
Sb	121	115	3	HMI He	38	70.87
Ba	137	115	3	HMI He	148	4.73
Tl	205	193	3	HMI He	85	24.96
(Pb)	206	193	3	HMI He	268	7.81
(Pb)	207	193	3	HMI He	423	0.70
Pb	208	193	3	HMI He	1254	0.55
Th	232	193	3	HMI He	4917	0.12
U	238	193	3	HMI He	1283	0.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3582014	1.43	3535116	101.33	60	120	
Sc (IS)	45	3	HMI He	510430	0.72	505423	100.99	60	120	
Ge Internal standard	72	2	HMI H2	2176579	1.11	2359166	92.26	60	120	
Ge Internal standard	72	3	HMI He	632822	0.14	680743	92.96	60	120	
In Internal Standard	115	3	HMI He	2398594	1.71	2361818	101.56	60	120	
Ir (IS)	193	3	HMI He	5017108	1.62	5045699	99.43	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	300CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T08:53:12-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	298CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3592	0.10
Na	23	45	3	HMI He	189383	0.00
Mg	24	45	3	HMI He	91744	0.00
Al	27	45	3	HMI He	34854	0.00
K	39	45	3	HMI He	99251	0.00
V	51	72	3	HMI He	50546	0.00
Cr	52	72	3	HMI He	63927	0.00
Mn	55	72	3	HMI He	32884	0.00
Co	59	72	3	HMI He	105575	0.00
Ni	60	72	3	HMI He	29849	0.00
Cu	63	72	3	HMI He	79642	0.00
Zn	66	72	3	HMI He	12678	0.02
As	75	72	3	HMI He	9370	0.01
Se	78	72	2	HMI H2	4929	0.03
(Se)	78	72	3	HMI He	485	3.15
Sr	88	72	3	HMI He	88851	0.00
Mo	95	115	3	HMI He	40093	0.00
Ag	107	115	3	HMI He	136255	0.00
Cd	111	115	3	HMI He	19546	0.01
Sn	120	115	3	HMI He	61790	0.00
Sb	121	115	3	HMI He	61892	0.00
Ba	137	115	3	HMI He	20446	0.00
Tl	205	193	3	HMI He	307831	0.00
(Pb)	206	193	3	HMI He	101959	0.00
(Pb)	207	193	3	HMI He	91778	0.00
Pb	208	193	3	HMI He	412678	0.00
Th	232	193	3	HMI He	421028	0.00
U	238	193	3	HMI He	425852	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3570589	0.97	3535116	101.00	60	120	
Sc (IS)	45	3	HMI He	506403	0.83	505423	100.19	60	120	
Ge Internal standard	72	2	HMI H2	2377013	1.72	2359166	100.76	60	120	
Ge Internal standard	72	3	HMI He	673582	0.24	680743	98.95	60	120	
In Internal Standard	115	3	HMI He	2337354	0.47	2361818	98.96	60	120	
Ir (IS)	193	3	HMI He	5150856	1.56	5045699	102.08	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	301_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:55:01-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	38.124	ppb	1.454	1351	40	95.3	90	110	
Na	23	3	45	13256.336	ppb	0.776	1174427	12800	103.6	90	110	
Mg	24	3	45	4634.094	ppb	0.495	215904	4800	96.5	90	110	
Al	27	3	45	819.580	ppb	2.404	14432	800	102.4	90	110	
K	39	3	45	4710.191	ppb	1.718	201545	4800	98.1	90	110	
Ca	40	2	45	4900.840	ppb	2.256	2271761	4800	102.1	90	110	
V	51	3	72	40.783	ppb	0.691	20784	40	102.0	90	110	
Cr	52	3	72	41.764	ppb	6.280	27740	40	104.4	90	110	
Mn	55	3	72	41.396	ppb	2.257	13585	40	103.5	90	110	
Fe	56	2	72	827.454	ppb	2.394	1115438	800	103.4	90	110	
Co	59	3	72	40.922	ppb	3.101	42840	40	102.3	90	110	
Ni	60	3	72	41.652	ppb	5.407	12593	40	104.1	90	110	
Cu	63	3	72	41.577	ppb	3.314	32983	40	103.9	90	110	
Zn	66	3	72	84.919	ppb	4.085	10686	80	106.1	90	110	
As	75	3	72	40.277	ppb	5.923	3755	40	100.7	90	110	
Se	78	2	72	41.308	ppb	3.480	1956	40	103.3	90	110	
Sr	88	3	72	121.627	ppb	3.796	53541	120	101.4	90	110	
Mo	95	3	115	40.266	ppb	1.084	16450	40	100.7	90	110	
Ag	107	3	115	80.243	ppb	1.676	111288	80	100.3	90	110	
Cd	111	3	115	39.321	ppb	1.645	7825	40	98.3	90	110	
Sn	120	3	115	41.074	ppb	2.075	26156	40	102.7	90	110	
Sb	121	3	115	40.589	ppb	0.513	25595	40	101.5	90	110	
Ba	137	3	115	39.237	ppb	2.338	8185	40	98.1	90	110	
Tl	205	3	193	41.410	ppb	3.832	123428	40	103.5	90	110	
(Pb)	206	3	193	43.039	ppb	3.520	42607	40	107.6	90	110	
(Pb)	207	3	193	41.173	ppb	2.819	36775	40	102.9	90	110	
Pb	208	3	193	42.107	ppb	2.934	168795	40	105.3	90	110	
Th	232	3	193	83.812	ppb	1.904	342727	80	104.8	90	110	
U	238	3	193	45.448	ppb	4.219	187962	40	113.6	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3552026	2.96	3535116	100.48	60	120	
Sc (IS)	45	3	HMI He	509192	0.15	505423	100.75	60	120	
Ge Internal standard	72	2	HMI H2	2283565	0.30	2359166	96.80	60	120	
Ge Internal standard	72	3	HMI He	667882	3.49	680743	98.11	60	120	
In Internal Standard	115	3	HMI He	2379400	1.22	2361818	100.74	60	120	
Ir (IS)	193	3	HMI He	4989247	3.61	5045699	98.88	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	302_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:56:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	48.223	ppb	4.132	1724	50	96.4	90	110	
Na	23	3	45	49185.508	ppb	1.182	4390625	51000	96.4	90	110	
Mg	24	3	45	10380.009	ppb	2.066	490992	11000	94.4	90	110	
Al	27	3	45	1000.553	ppb	2.842	17866	1000	100.1	90	110	
K	39	3	45	10296.171	ppb	2.252	418336	11000	93.6	90	110	
Ca	40	2	45	10525.914	ppb	3.043	4918180	11000	95.7	90	110	
V	51	3	72	54.349	ppb	0.704	26772	50	108.7	90	110	
Cr	52	3	72	53.278	ppb	2.290	33888	50	106.6	90	110	
Mn	55	3	72	52.844	ppb	1.247	16847	50	105.7	90	110	
Fe	56	2	72	1067.031	ppb	2.405	1424286	1000	106.7	90	110	
Co	59	3	72	52.669	ppb	1.557	53697	50	105.3	90	110	
Ni	60	3	72	52.046	ppb	0.453	15217	50	104.1	90	110	
Cu	63	3	72	52.783	ppb	2.292	40710	50	105.6	90	110	
Zn	66	3	72	53.729	ppb	3.558	6635	50	107.5	90	110	
As	75	3	72	52.146	ppb	7.343	4728	50	104.3	90	110	
Se	78	2	72	53.747	ppb	3.074	2544	50	107.5	90	110	
Sr	88	3	72	105.555	ppb	2.121	45271	100	105.6	90	110	
Mo	95	3	115	51.025	ppb	3.989	20650	50	102.1	90	110	
Ag	107	3	115	50.892	ppb	0.926	69970	50	101.8	90	110	
Cd	111	3	115	50.757	ppb	1.405	10010	50	101.5	90	110	
Sn	120	3	115	50.946	ppb	2.845	32027	50	101.9	90	110	
Sb	121	3	115	50.353	ppb	1.970	31460	50	100.7	90	110	
Ba	137	3	115	50.993	ppb	2.584	10534	50	102.0	90	110	
Tl	205	3	193	50.210	ppb	2.315	155668	50	100.4	90	110	
(Pb)	206	3	193	51.324	ppb	2.090	52810	50	102.6	90	110	
(Pb)	207	3	193	49.754	ppb	1.519	46153	50	99.5	90	110	
Pb	208	3	193	50.638	ppb	2.440	210922	50	101.3	90	110	
Th	232	3	193	52.973	ppb	0.749	227594	50	105.9	90	110	
U	238	3	193	51.012	ppb	2.513	219330	50	102.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588946	1.61	3535116	101.52	60	120	
Sc (IS)	45	3	HMI He	517334	2.35	505423	102.36	60	120	
Ge Internal standard	72	2	HMI H2	2281982	1.94	2359166	96.73	60	120	
Ge Internal standard	72	3	HMI He	650198	0.84	680743	95.51	60	120	
In Internal Standard	115	3	HMI He	2358401	1.08	2361818	99.86	60	120	
Ir (IS)	193	3	HMI He	5187194	1.85	5045699	102.80	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	303_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T08:58:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.047	ppb	171.4	3	0.5	
Na	23	3	45	26.393	ppb	7.0	15608	25	>RL
Mg	24	3	45	0.551	ppb	32.5	180	25	
Al	27	3	45	-4.067	ppb	-7.6	47	15	
K	39	3	45	-8.726	ppb	-371.6	23888	50	
V	51	3	72	0.125	ppb	11.2	636	1	
Cr	52	3	72	0.432	ppb	28.0	2494	1	
Mn	55	3	72	0.204	ppb	44.4	227	0.5	
Co	59	3	72	0.001	ppb	1484.0	55	0.5	
Ni	60	3	72	0.558	ppb	11.1	638	1	
Cu	63	3	72	-0.063	ppb	-30.9	243	1	
Zn	66	3	72	0.357	ppb	30.6	180	5	
As	75	3	72	0.059	ppb	172.5	35	1	
Se	78	2	72	0.044	ppb	150.8	3	1	
Sr	88	3	72	0.020	ppb	127.6	33	0.5	
Mo	95	3	115	0.028	ppb	93.0	38	0.5	
Ag	107	3	115	0.007	ppb	1.4	25	1	
Cd	111	3	115	0.017	ppb	149.6	5	0.5	
Sn	120	3	115	0.277	ppb	31.3	718	1	
Sb	121	3	115	0.045	ppb	9.0	62	0.6	
Ba	137	3	115	0.057	ppb	151.0	45	0.5	
Tl	205	3	193	0.039	ppb	18.7	225	0.1	
(Pb)	206	3	193	-0.058	ppb	-94.1	175	1	
(Pb)	207	3	193	0.051	ppb	51.1	388	1	
Pb	208	3	193	0.002	ppb	818.0	1046	0.5	
Th	232	3	193	1.303	ppb	22.5	11736	1	>RL
U	238	3	193	0.027	ppb	91.1	1411	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3575013	1.82	3535116	101.13	60	120	
Sc (IS)	45	3	HMI He	509724	0.92	505423	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2312207	4.09	2359166	98.01	60	120	
Ge Internal standard	72	3	HMI He	667560	1.66	680743	98.06	60	120	
In Internal Standard	115	3	HMI He	2361470	0.56	2361818	99.99	60	120	
Ir (IS)	193	3	HMI He	5195379	2.13	5045699	102.97	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	304LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:12:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.920	ppb	28.609	35	1	92.0	70	130	
Na	23	3	45	287.802	ppb	0.568	38394	300	95.9	70	130	
Mg	24	3	45	46.476	ppb	3.126	2313	50	93.0	70	130	
Al	27	3	45	47.635	ppb	11.073	948	50	95.3	70	130	
K	39	3	45	117.142	ppb	25.961	28528	120	97.6	70	130	
Ca	40	2	45	199.977	ppb	0.860	101154	200	100.0	70	130	
V	51	3	72	4.910	ppb	9.630	2957	5	98.2	70	130	
Cr	52	3	72	2.425	ppb	16.138	3654	2	121.3	70	130	
Mn	55	3	72	1.223	ppb	18.870	548	1	122.3	70	130	
Fe	56	2	72	51.530	ppb	3.891	110787	50	103.1	70	130	
Co	59	3	72	0.939	ppb	8.699	1020	1	93.9	70	130	
Ni	60	3	72	2.131	ppb	20.552	1078	2	106.6	70	130	
Cu	63	3	72	1.990	ppb	5.182	1828	2	99.5	70	130	
Zn	66	3	72	9.781	ppb	4.658	1329	10	97.8	70	130	
As	75	3	72	4.857	ppb	6.096	471	5	97.1	70	130	
Se	78	2	72	5.197	ppb	9.402	246	5	103.9	70	130	
Sr	88	3	72	5.178	ppb	5.831	2267	5	103.6	70	130	
Mo	95	3	115	1.876	ppb	2.948	793	2	93.8	70	130	
Ag	107	3	115	0.985	ppb	8.441	1381	1	98.5	70	130	
Cd	111	3	115	0.821	ppb	16.756	165	1	82.1	70	130	
Sn	120	3	115	8.811	ppb	5.022	6050	10	88.1	70	130	
Sb	121	3	115	1.970	ppb	2.568	1274	2	98.5	70	130	
Ba	137	3	115	0.848	ppb	16.998	210	1	84.8	70	130	
Tl	205	3	193	0.974	ppb	6.148	3076	1	97.4	70	130	
(Pb)	206	3	193	0.862	ppb	12.549	1100	1	86.2	70	130	
(Pb)	207	3	193	0.930	ppb	17.537	1179	1	93.0	70	130	
Pb	208	3	193	0.906	ppb	2.430	4718	1	90.6	70	130	
Th	232	3	193	1.534	ppb	13.639	12520	1	153.4	70	130	>+/-30%
U	238	3	193	1.010	ppb	4.286	5527	1	101.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3506520	0.34	3535116	99.19	60	120	
Sc (IS)	45	3	HMI He	507916	0.69	505423	100.49	60	120	
Ge Internal standard	72	2	HMI H2	2278128	2.73	2359166	96.56	60	120	
Ge Internal standard	72	3	HMI He	656862	0.76	680743	96.49	60	120	
In Internal Standard	115	3	HMI He	2380764	1.56	2361818	100.80	60	120	
Ir (IS)	193	3	HMI He	5109678	2.08	5045699	101.27	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	305ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:15:51-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	4549.083	ppb	103.8	650309	100000	
Mg	24	3	45	4608.740	ppb	100.3	339470	100000	
Al	27	3	45	4744.814	ppb	100.0	131215	100000	
K	39	3	45	4193.521	ppb	106.8	289630	100000	
Ca	40	2	45	41161.156	ppb	17.2	12524673	100000	
V	51	3	72	-0.944	ppb	-7.0	168	1	
Cr	52	3	72	-0.315	ppb	-571.7	3237	1	
Mn	55	3	72	0.081	ppb	251.9	298	0.95	
Fe	56	2	72	45509.826	ppb	18.0	36303315	100000	
Co	59	3	72	-0.007	ppb	-403.9	75	0.5	
Ni	60	3	72	0.144	ppb	750.1	821	1	
Cu	63	3	72	-0.167	ppb	-16.9	257	1	
Zn	66	3	72	-0.281	ppb	-25.7	162	1	
As	75	3	72	-0.185	ppb	-24.8	20	1	
Se	78	2	72	0.003	ppb	887.2	1	1	
(Se)	78	3	72	-1.460	ppb	-56.4	28	1	
Sr	88	3	72	0.043	ppb	118.9	68	1	
Mo	95	3	115	86.188	ppb	86.3	56938	2000	
Ag	107	3	115	0.001	ppb	688.5	27	1	
Cd	111	3	115	0.012	ppb	95.1	7	1	
Sn	120	3	115	-0.680	ppb	-4.9	215	1	
Sb	121	3	115	-0.022	ppb	-56.2	33	1	
Ba	137	3	115	0.109	ppb	250.8	100	0.95	
Tl	205	3	193	-0.004	ppb	-203.2	143	1	
(Pb)	206	3	193	-0.082	ppb	-34.2	245	1	
(Pb)	207	3	193	-0.052	ppb	-32.3	481	1	
Pb	208	3	193	-0.076	ppb	-25.2	1176	1	
Th	232	3	193	-0.423	ppb	-30.2	7379	1	
U	238	3	193	0.012	ppb	142.4	2217	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	2412949	28.80	3535116	68.26	60	120	
Sc (IS)	45	3	HMI He	868321	12.21	505423	171.80	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	1453442	29.85	2359166	61.61	60	120	
Ge Internal standard	72	3	HMI He	1075211	13.43	680743	157.95	60	120	IS Failed
In Internal Standard	115	3	HMI He	4057722	11.15	2361818	171.81	60	120	IS Failed
Ir (IS)	193	3	HMI He	8521306	11.31	5045699	168.88	60	120	IS Failed

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-7686816
Data File Name	306ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:20:28-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	-45300.1	2	0.5	
Na	23	3	45	90482.365	ppb	0.5	8219991	100000	
Mg	24	3	45	90239.909	ppb	0.9	4350548	100000	
Al	27	3	45	93389.621	ppb	0.5	1688950	100000	
K	39	3	45	91288.553	ppb	2.0	3583984	100000	
Ca	40	2	45	91300.863	ppb	0.9	43727031	100000	
V	51	3	72	-0.108	ppb	-102.8	523	1	
Cr	52	3	72	2.000	ppb	15.9	3464	1	>RL or LOD
Mn	55	3	72	0.940	ppb	16.9	466	0.95	
Fe	56	2	72	98239.665	ppb	1.9	122981440	100000	
Co	59	3	72	0.242	ppb	10.4	308	0.5	
Ni	60	3	72	0.717	ppb	29.4	686	1	
Cu	63	3	72	0.221	ppb	14.3	468	1	
Zn	66	3	72	1.515	ppb	14.9	325	1	>RL or LOD
As	75	3	72	-0.013	ppb	-257.5	28	1	
Se	78	2	72	0.044	ppb	146.8	3	1	
(Se)	78	3	72	1.551	ppb	230.1	32	1	>RL or LOD
Sr	88	3	72	0.827	ppb	7.6	390	1	
Mo	95	3	115	1826.386	ppb	2.2	774878	2000	
Ag	107	3	115	0.034	ppb	18.7	65	1	
Cd	111	3	115	0.185	ppb	40.3	40	1	
Sn	120	3	115	0.495	ppb	18.2	895	1	
Sb	121	3	115	0.125	ppb	38.9	117	1	
Ba	137	3	115	1.552	ppb	13.3	370	0.95	>RL or LOD
Tl	205	3	193	0.023	ppb	32.0	170	1	
(Pb)	206	3	193	0.097	ppb	52.6	327	1	
(Pb)	207	3	193	0.137	ppb	49.5	456	1	
Pb	208	3	193	0.144	ppb	29.6	1596	1	
Th	232	3	193	-0.387	ppb	-16.0	4572	1	
U	238	3	193	0.053	ppb	30.0	1484	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3684245	0.36	3535116	104.22	60	120	
Sc (IS)	45	3	HMI He	527232	0.91	505423	104.31	60	120	
Ge Internal standard	72	2	HMI H2	2208340	2.86	2359166	93.61	60	120	
Ge Internal standard	72	3	HMI He	669944	0.71	680743	98.41	60	120	
In Internal Standard	115	3	HMI He	2475459	1.65	2361818	104.81	60	120	
Ir (IS)	193	3	HMI He	5073596	0.38	5045699	100.55	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-7686817
Data File Name	307ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:22:14-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	99.709	ppb	3.463	3522	100	99.7	80	120	
Na	23	3	45	95050.388	ppb	1.214	8659487	100	95050.4	80	120	>+\-20%
Mg	24	3	45	93564.093	ppb	1.593	4523620	100	93564.1	80	120	>+\-20%
Al	27	3	45	95349.028	ppb	1.136	1729427	100	95349.0	80	120	>+\-20%
K	39	3	45	96388.768	ppb	2.151	3794486	100	96388.8	80	120	>+\-20%
Ca	40	2	45	101479.803	ppb	2.127	47497334	100	101479.8	80	120	>+\-20%
V	51	3	72	98.530	ppb	1.390	48864	100	98.5	80	120	
Cr	52	3	72	100.906	ppb	0.600	63265	100	100.9	80	120	
Mn	55	3	72	100.263	ppb	1.229	32347	100	100.3	80	120	
Fe	56	2	72	97094.673	ppb	1.064	125460063	100	97094.7	80	120	>+\-20%
Co	59	3	72	98.491	ppb	0.704	102009	100	98.5	80	120	
Ni	60	3	72	97.614	ppb	1.222	28597	100	97.6	80	120	
Cu	63	3	72	100.425	ppb	1.067	78459	100	100.4	80	120	
Zn	66	3	72	97.276	ppb	2.173	12103	100	97.3	80	120	
As	75	3	72	99.906	ppb	3.743	9185	100	99.9	80	120	
Se	78	2	72	100.651	ppb	0.510	4756	100	100.7	80	120	
(Se)	78	3	72	116.480	ppb	9.506	550	100	116.5	80	120	
Sr	88	3	72	197.986	ppb	0.733	86289	100	198.0	80	120	>+\-20%
Mo	95	3	115	1954.505	ppb	2.487	806073	100	1954.5	80	120	>+\-20%
Ag	107	3	115	94.399	ppb	2.503	132387	100	94.4	80	120	
Cd	111	3	115	93.674	ppb	4.005	18841	100	93.7	80	120	
Sn	120	3	115	96.973	ppb	4.353	61668	100	97.0	80	120	
Sb	121	3	115	95.737	ppb	1.859	60999	100	95.7	80	120	
Ba	137	3	115	96.760	ppb	2.190	20366	100	96.8	80	120	
Tl	205	3	193	97.445	ppb	0.657	296059	100	97.4	80	120	
(Pb)	206	3	193	98.524	ppb	0.652	99164	100	98.5	80	120	
(Pb)	207	3	193	95.607	ppb	1.808	86627	100	95.6	80	120	
Pb	208	3	193	98.223	ppb	0.361	400121	100	98.2	80	120	
Th	232	3	193	97.967	ppb	0.944	407287	100	98.0	80	120	
U	238	3	193	106.129	ppb	0.362	445956	100	106.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3601336	1.97	3535116	101.87	60	120	
Sc (IS)	45	3	HMI He	528792	0.64	505423	104.62	60	120	
Ge Internal standard	72	2	HMI H2	2278692	0.77	2359166	96.59	60	120	
Ge Internal standard	72	3	HMI He	660810	0.74	680743	97.07	60	120	
In Internal Standard	115	3	HMI He	2406784	2.57	2361818	101.90	60	120	
Ir (IS)	193	3	HMI He	5083516	0.66	5045699	100.75	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	308SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:23:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.050	ppb	0.050	166.86	3	2000	
Na	23	3	45	51.625	ppb	51.625	5.14	18217	400000	
Mg	24	3	45	20.502	ppb	20.502	5.28	1135	400000	
Al	27	3	45	13.428	ppb	13.428	33.46	360	400000	
K	39	3	45	7.683	ppb	7.683	355.64	25041	400000	
Ca	40	2	45	25.744	ppb	25.744	1.58	22240	400000	
V	51	3	72	0.010	ppb	0.010	83.63	558	2000	
Cr	52	3	72	0.487	ppb	0.487	115.44	2431	5000	
Mn	55	3	72	0.100	ppb	0.100	158.29	185	10000	
Fe	56	2	72	34.923	ppb	34.923	12.94	84370	10000	
Co	59	3	72	0.006	ppb	0.006	56.17	58	2000	
Ni	60	3	72	0.561	ppb	0.561	31.98	615	5000	
Cu	63	3	72	0.035	ppb	0.035	173.05	308	5000	
Zn	66	3	72	0.573	ppb	0.573	114.70	198	5000	
As	75	3	72	0.187	ppb	0.187	80.33	45	2000	
Se	78	2	72	0.076	ppb	0.076	58.97	4	2000	
Sr	88	3	72	0.046	ppb	0.046	60.92	43	4000	
Mo	95	3	115	3.819	ppb	3.819	19.21	1599	2000	
Ag	107	3	115	0.008	ppb	0.008	91.00	27	100	
Cd	111	3	115	0.008	ppb	0.008	360.00	3	2000	
Sn	120	3	115	0.036	ppb	0.036	167.16	578	2000	
Sb	121	3	115	0.025	ppb	0.025	57.53	50	1000	
Ba	137	3	115	0.316	ppb	0.316	10.52	100	5000	
Tl	205	3	193	0.057	ppb	0.057	15.81	277	2000	
(Pb)	206	3	193	0.012	ppb	0.012	78.10	243	100	
(Pb)	207	3	193	0.005	ppb	0.005	524.28	340	100	
Pb	208	3	193	0.017	ppb	0.017	67.39	1089	5000	
Th	232	3	193	2.353	ppb	2.353	13.21	15896	2000	
U	238	3	193	0.049	ppb	0.049	62.33	1481	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3584564	1.00	3535116	101.40	60	120	
Sc (IS)	45	3	HMI He	521035	0.40	505423	103.09	60	120	
Ge Internal standard	72	2	HMI H2	2152700	0.32	2359166	91.25	60	120	
Ge Internal standard	72	3	HMI He	643045	1.76	680743	94.46	60	120	
In Internal Standard	115	3	HMI He	2401681	2.09	2361818	101.69	60	120	
Ir (IS)	193	3	HMI He	5114446	1.10	5045699	101.36	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	309_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:25:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.576	ppb	5.837	1863	50	109.2	90	110	
Na	23	3	45	48907.588	ppb	2.640	4368242	51000	95.9	90	110	
Mg	24	3	45	10299.317	ppb	0.297	487547	11000	93.6	90	110	
Al	27	3	45	1003.695	ppb	2.916	17936	1000	100.4	90	110	
K	39	3	45	10433.987	ppb	0.681	423910	11000	94.9	90	110	
Ca	40	2	45	10654.689	ppb	1.547	5002190	11000	96.9	90	110	
V	51	3	72	55.204	ppb	1.521	26330	50	110.4	90	110	>+\-10%
Cr	52	3	72	55.510	ppb	1.754	34110	50	111.0	90	110	>+\-10%
Mn	55	3	72	54.502	ppb	2.518	16823	50	109.0	90	110	
Fe	56	2	72	1122.671	ppb	1.912	1413390	1000	112.3	90	110	>+\-10%
Co	59	3	72	54.861	ppb	0.851	54172	50	109.7	90	110	
Ni	60	3	72	56.219	ppb	2.621	15883	50	112.4	90	110	>+\-10%
Cu	63	3	72	54.651	ppb	1.974	40815	50	109.3	90	110	
Zn	66	3	72	56.976	ppb	3.800	6808	50	114.0	90	110	>+\-10%
As	75	3	72	55.780	ppb	2.967	4898	50	111.6	90	110	>+\-10%
Se	78	2	72	54.683	ppb	4.332	2444	50	109.4	90	110	
Sr	88	3	72	110.315	ppb	2.840	45822	100	110.3	90	110	>+\-10%
Mo	95	3	115	50.901	ppb	1.508	20919	50	101.8	90	110	
Ag	107	3	115	50.010	ppb	3.048	69774	50	100.0	90	110	
Cd	111	3	115	50.802	ppb	0.960	10172	50	101.6	90	110	
Sn	120	3	115	49.949	ppb	2.961	31875	50	99.9	90	110	
Sb	121	3	115	50.855	ppb	0.271	32260	50	101.7	90	110	
Ba	137	3	115	51.190	ppb	1.989	10734	50	102.4	90	110	
Tl	205	3	193	50.019	ppb	3.763	157603	50	100.0	90	110	
(Pb)	206	3	193	50.980	ppb	1.586	53329	50	102.0	90	110	
(Pb)	207	3	193	49.839	ppb	1.576	46990	50	99.7	90	110	
Pb	208	3	193	50.279	ppb	1.480	212910	50	100.6	90	110	
Th	232	3	193	50.479	ppb	3.112	220685	50	101.0	90	110	
U	238	3	193	50.357	ppb	3.084	220073	50	100.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3605856	2.19	3535116	102.00	60	120	
Sc (IS)	45	3	HMI He	517560	0.60	505423	102.40	60	120	
Ge Internal standard	72	2	HMI H2	2155458	1.19	2359166	91.37	60	120	
Ge Internal standard	72	3	HMI He	629708	0.40	680743	92.50	60	120	
In Internal Standard	115	3	HMI He	2394159	2.25	2361818	101.37	60	120	
Ir (IS)	193	3	HMI He	5272767	2.14	5045699	104.50	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	310_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:27:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.001	ppb	7094.2	2	0.5	
Na	23	3	45	43.558	ppb	16.4	17204	25	>RL
Mg	24	3	45	2.807	ppb	56.1	287	25	
Al	27	3	45	-0.859	ppb	-294.8	103	15	
K	39	3	45	-17.386	ppb	-179.8	23677	50	
V	51	3	72	0.022	ppb	864.5	563	1	
Cr	52	3	72	0.550	ppb	49.2	2466	1	
Mn	55	3	72	0.222	ppb	35.1	223	0.5	
Co	59	3	72	-0.004	ppb	-669.9	48	0.5	
Ni	60	3	72	0.797	ppb	23.5	680	1	
Cu	63	3	72	-0.002	ppb	-1768.1	280	1	
Zn	66	3	72	0.194	ppb	123.0	153	5	
As	75	3	72	0.151	ppb	115.4	42	1	
Se	78	2	72	0.030	ppb	142.6	2	1	
Sr	88	3	72	0.004	ppb	589.2	25	0.5	
Mo	95	3	115	0.269	ppb	21.4	140	0.5	
Ag	107	3	115	0.013	ppb	40.5	33	1	
Cd	111	3	115	0.016	ppb	150.5	5	0.5	
Sn	120	3	115	0.151	ppb	60.1	658	1	
Sb	121	3	115	0.009	ppb	268.6	40	0.6	
Ba	137	3	115	0.115	ppb	101.1	58	0.5	
Tl	205	3	193	0.028	ppb	24.8	190	0.1	
(Pb)	206	3	193	-0.001	ppb	-4973.0	233	1	
(Pb)	207	3	193	-0.024	ppb	-83.0	318	1	
Pb	208	3	193	-0.009	ppb	-322.3	996	0.5	
Th	232	3	193	1.270	ppb	12.8	11580	1	>RL
U	238	3	193	0.005	ppb	362.0	1313	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3605443	0.61	3535116	101.99	60	120	
Sc (IS)	45	3	HMI He	512374	0.71	505423	101.38	60	120	
Ge Internal standard	72	2	HMI H2	2191449	2.12	2359166	92.89	60	120	
Ge Internal standard	72	3	HMI He	641679	0.69	680743	94.26	60	120	
In Internal Standard	115	3	HMI He	2429300	1.66	2361818	102.86	60	120	
Ir (IS)	193	3	HMI He	5179229	0.65	5045699	102.65	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608984/1-A
Data File Name	311_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:29:25-06:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.049	ppb	335.8119925	3	0.5
Na	23	3	45	32.722	ppb	26.03049258	16543	25
Mg	24	3	45	2.771	ppb	40.09669	290	25
Al	27	3	45	1.471	ppb	145.9897711	147	15
K	39	3	45	-22.602	ppb	-83.50806129	23908	50
Ca	40	2	45	6.502	ppb	14.37913377	13233	200
V	51	3	72	-0.007	ppb	-149.6448632	553	1
Cr	52	3	72	0.496	ppb	20.66988758	2452	1
Mn	55	3	72	0.423	ppb	15.01403708	288	0.5
Fe	56	2	72	15.568	ppb	26.8767949	60995	50
Co	59	3	72	0.004	ppb	161.4321325	57	0.5
Ni	60	3	72	0.494	ppb	35.25475843	600	1
Cu	63	3	72	0.053	ppb	102.4399317	323	1
Zn	66	3	72	6.132	ppb	8.39335439	870	5
As	75	3	72	0.109	ppb	114.9429451	38	1
(Se)	78	3	72	1.390	ppb	209.0691421	30	1
Sr	88	3	72	0.042	ppb	106.3123949	42	0.5
Mo	95	3	115	0.170	ppb	31.58238968	98	0.5
Ag	107	3	115	0.002	ppb	195.1008711	18	1
Cd	111	3	115	0.008	ppb	177.7477712	3	0.5
Sn	120	3	115	0.407	ppb	27.43698073	823	1
Sb	121	3	115	0.016	ppb	204.4683249	45	0.6
Ba	137	3	115	0.005	ppb	1353.86144	35	0.5
Tl	205	3	193	0.025	ppb	25.40133462	180	0.1
(Pb)	206	3	193	-0.047	ppb	-8.86716873	188	1
(Pb)	207	3	193	0.008	ppb	613.346312	350	1
Pb	208	3	193	-0.015	ppb	-141.7022912	978	0.5
Th	232	3	193	-0.100	ppb	-69.65103754	5912	1
U	238	3	193	0.013	ppb	92.24450009	1358	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3573029	0.76	3535116	101.07	60	120	
Sc (IS)	45	3	HMI He	521752	0.39	505423	103.23	60	120	
Ge Internal standard	72	2	HMI H2	2159109	1.55	2359166	91.52	60	120	
Ge Internal standard	72	3	HMI He	646402	1.27	680743	94.96	60	120	
In Internal Standard	115	3	HMI He	2433826	2.47	2361818	103.05	60	120	
Ir (IS)	193	3	HMI He	5221412	0.84	5045699	103.48	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-3-A@10
Data File Name	312SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:31:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	11030.895	ppb	11030.895	0.99	982946	400000	
Mg	24	3	45	7781.643	ppb	7781.643	0.75	363725	400000	
Al	27	3	45	3.133	ppb	3.133	149.29	174	400000	
K	39	3	45	480.754	ppb	480.754	5.68	42433	400000	
Ca	40	2	45	22291.512	ppb	22291.512	1.08	10275816	400000	
V	51	3	72	0.211	ppb	0.211	31.88	663	2000	
Cr	52	3	72	0.702	ppb	0.702	42.43	2596	5000	
Mn	55	3	72	2.379	ppb	2.379	13.79	910	10000	
Fe	56	2	72	20.049	ppb	20.049	21.39	67820	10000	
Co	59	3	72	0.048	ppb	0.048	37.78	102	2000	
Ni	60	3	72	0.993	ppb	0.993	22.79	746	5000	
Cu	63	3	72	0.316	ppb	0.316	35.00	528	5000	
Zn	66	3	72	4.183	ppb	4.183	4.07	640	5000	
As	75	3	72	0.382	ppb	0.382	71.80	63	2000	
Se	78	2	72	0.044	ppb	0.044	148.46	3	2000	
Sr	88	3	72	84.465	ppb	84.465	0.97	36312	4000	
Mo	95	3	115	0.120	ppb	0.120	11.22	75	2000	
Ag	107	3	115	0.004	ppb	0.004	99.66	20	100	
Cd	111	3	115	0.017	ppb	0.017	149.00	5	2000	
Sn	120	3	115	0.155	ppb	0.155	78.54	638	2000	
Sb	121	3	115	0.030	ppb	0.030	84.91	52	1000	
Ba	137	3	115	36.055	ppb	36.055	3.98	7417	5000	
Tl	205	3	193	0.032	ppb	0.032	27.25	200	2000	
(Pb)	206	3	193	0.409	ppb	0.409	15.38	651	100	
(Pb)	207	3	193	0.382	ppb	0.382	14.79	690	100	
Pb	208	3	193	0.387	ppb	0.387	8.06	2630	5000	
Th	232	3	193	-0.218	ppb	-0.218	-33.20	5357	2000	
U	238	3	193	0.494	ppb	0.494	5.28	3392	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3543729	1.02	3535116	100.24	60	120	
Sc (IS)	45	3	HMI He	511036	1.85	505423	101.11	60	120	
Ge Internal standard	72	2	HMI H2	2204109	2.30	2359166	93.43	60	120	
Ge Internal standard	72	3	HMI He	651604	0.58	680743	95.72	60	120	
In Internal Standard	115	3	HMI He	2345384	0.67	2361818	99.30	60	120	
Ir (IS)	193	3	HMI He	5166531	0.59	5045699	102.39	60	120	

Sample Report

Sample Table

Sample Name	280-175121-A-4-A@10
Data File Name	313SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:33:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	10262.685	ppb	10262.685	1.47	919270	400000	
Mg	24	3	45	7541.734	ppb	7541.734	0.89	353946	400000	
Al	27	3	45	-1.049	ppb	-1.049	-5.66	100	400000	
K	39	3	45	577.266	ppb	577.266	4.72	46279	400000	
Ca	40	2	45	20605.234	ppb	20605.234	1.53	9374303	400000	
V	51	3	72	0.155	ppb	0.155	91.93	636	2000	
Cr	52	3	72	0.380	ppb	0.380	38.65	2407	5000	
Mn	55	3	72	21.135	ppb	21.135	2.83	6860	10000	
Fe	56	2	72	68.467	ppb	68.467	7.34	126993	10000	
Co	59	3	72	0.317	ppb	0.317	12.19	376	2000	
Ni	60	3	72	1.146	ppb	1.146	30.79	791	5000	
Cu	63	3	72	0.198	ppb	0.198	21.52	438	5000	
Zn	66	3	72	4.185	ppb	4.185	27.59	640	5000	
As	75	3	72	0.176	ppb	0.176	119.68	45	2000	
Se	78	2	72	0.105	ppb	0.105	26.11	5	2000	
Sr	88	3	72	84.742	ppb	84.742	0.76	36514	4000	
Mo	95	3	115	0.096	ppb	0.096	18.23	68	2000	
Ag	107	3	115	0.019	ppb	0.019	24.32	43	100	
Cd	111	3	115	0.032	ppb	0.032	158.40	8	2000	
Sn	120	3	115	0.366	ppb	0.366	19.02	803	2000	
Sb	121	3	115	0.011	ppb	0.011	156.03	42	1000	
Ba	137	3	115	33.946	ppb	33.946	5.02	7297	5000	
Tl	205	3	193	0.005	ppb	0.005	55.72	120	2000	
(Pb)	206	3	193	0.425	ppb	0.425	6.40	673	100	
(Pb)	207	3	193	0.434	ppb	0.434	23.46	743	100	
Pb	208	3	193	0.397	ppb	0.397	16.01	2694	5000	
Th	232	3	193	-0.364	ppb	-0.364	-19.20	4792	2000	
U	238	3	193	0.495	ppb	0.495	0.42	3430	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3497479	1.57	3535116	98.94	60	120	
Sc (IS)	45	3	HMI He	513095	1.05	505423	101.52	60	120	
Ge Internal standard	72	2	HMI H2	2182800	1.78	2359166	92.52	60	120	
Ge Internal standard	72	3	HMI He	653132	1.94	680743	95.94	60	120	
In Internal Standard	115	3	HMI He	2451496	2.27	2361818	103.80	60	120	
Ir (IS)	193	3	HMI He	5216644	2.77	5045699	103.39	60	120	

Sample Report

Sample Table

Sample Name	280-175123-A-3-A@10
Data File Name	314SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:34:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608984 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	15771.825	ppb	15771.825	1.21	1417248	400000	
Mg	24	3	45	5895.950	ppb	5895.950	0.60	279039	400000	
Al	27	3	45	1.926	ppb	1.926	134.79	153	400000	
K	39	3	45	464.868	ppb	464.868	9.85	42366	400000	
Ca	40	2	45	20568.645	ppb	20568.645	2.48	9742220	400000	
V	51	3	72	0.317	ppb	0.317	3.59	708	2000	
Cr	52	3	72	0.795	ppb	0.795	24.06	2629	5000	
Mn	55	3	72	32.292	ppb	32.292	1.44	10292	10000	
Fe	56	2	72	18.996	ppb	18.996	24.42	67160	10000	
Co	59	3	72	0.204	ppb	0.204	21.87	258	2000	
Ni	60	3	72	5.047	ppb	5.047	7.88	1881	5000	
Cu	63	3	72	0.175	ppb	0.175	32.48	416	5000	
Zn	66	3	72	4.194	ppb	4.194	12.97	635	5000	
As	75	3	72	0.219	ppb	0.219	99.12	48	2000	
Se	78	2	72	0.131	ppb	0.131	101.68	7	2000	
Sr	88	3	72	110.974	ppb	110.974	1.59	47292	4000	
Mo	95	3	115	0.113	ppb	0.113	26.46	73	2000	
Ag	107	3	115	0.015	ppb	0.015	65.99	37	100	
Cd	111	3	115	0.000	ppb	0.000	18160.17	2	2000	
Sn	120	3	115	0.179	ppb	0.179	15.73	661	2000	
Sb	121	3	115	0.013	ppb	0.013	66.65	42	1000	
Ba	137	3	115	41.416	ppb	41.416	1.59	8624	5000	
Tl	205	3	193	0.007	ppb	0.007	200.58	123	2000	
(Pb)	206	3	193	0.407	ppb	0.407	8.47	651	100	
(Pb)	207	3	193	0.456	ppb	0.456	20.40	758	100	
Pb	208	3	193	0.386	ppb	0.386	2.56	2632	5000	
Th	232	3	193	-0.434	ppb	-0.434	-12.85	4469	2000	
U	238	3	193	0.434	ppb	0.434	6.94	3141	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3642046	2.46	3535116	103.02	60	120	
Sc (IS)	45	3	HMI He	517351	1.32	505423	102.36	60	120	
Ge Internal standard	72	2	HMI H2	2227174	1.21	2359166	94.41	60	120	
Ge Internal standard	72	3	HMI He	646162	2.57	680743	94.92	60	120	
In Internal Standard	115	3	HMI He	2375162	1.22	2361818	100.57	60	120	
Ir (IS)	193	3	HMI He	5177986	1.94	5045699	102.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	315_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:36:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.645	ppb	3.574	1751	50	99.3	90	110	
Na	23	3	45	48341.984	ppb	1.150	4219381	51000	94.8	90	110	
Mg	24	3	45	10407.657	ppb	2.103	481443	11000	94.6	90	110	
Al	27	3	45	1017.163	ppb	4.280	17759	1000	101.7	90	110	
K	39	3	45	10582.439	ppb	1.569	419832	11000	96.2	90	110	
Ca	40	2	45	10520.169	ppb	1.373	4833842	11000	95.6	90	110	
V	51	3	72	54.400	ppb	1.999	25863	50	108.8	90	110	
Cr	52	3	72	55.526	ppb	1.884	33999	50	111.1	90	110	>+\-10%
Mn	55	3	72	54.607	ppb	3.151	16795	50	109.2	90	110	
Fe	56	2	72	1112.380	ppb	4.814	1402540	1000	111.2	90	110	>+\-10%
Co	59	3	72	54.068	ppb	1.154	53199	50	108.1	90	110	
Ni	60	3	72	54.326	ppb	1.141	15311	50	108.7	90	110	
Cu	63	3	72	55.746	ppb	0.618	41481	50	111.5	90	110	>+\-10%
Zn	66	3	72	56.486	ppb	0.843	6727	50	113.0	90	110	>+\-10%
As	75	3	72	54.405	ppb	2.870	4762	50	108.8	90	110	
Se	78	2	72	54.508	ppb	2.554	2441	50	109.0	90	110	
Sr	88	3	72	111.350	ppb	0.512	46093	100	111.4	90	110	>+\-10%
Mo	95	3	115	50.429	ppb	0.745	20459	50	100.9	90	110	
Ag	107	3	115	49.751	ppb	1.164	68551	50	99.5	90	110	
Cd	111	3	115	50.966	ppb	0.443	10074	50	101.9	90	110	
Sn	120	3	115	49.347	ppb	1.745	31106	50	98.7	90	110	
Sb	121	3	115	50.352	ppb	1.160	31528	50	100.7	90	110	
Ba	137	3	115	48.955	ppb	1.540	10137	50	97.9	90	110	
Tl	205	3	193	51.449	ppb	2.437	159107	50	102.9	90	110	
(Pb)	206	3	193	51.729	ppb	2.601	53091	50	103.5	90	110	
(Pb)	207	3	193	51.247	ppb	2.013	47406	50	102.5	90	110	
Pb	208	3	193	51.310	ppb	3.350	213150	50	102.6	90	110	
Th	232	3	193	50.688	ppb	1.557	217565	50	101.4	90	110	
U	238	3	193	52.127	ppb	3.642	223498	50	104.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3528763	1.82	3535116	99.82	60	120	
Sc (IS)	45	3	HMI He	505848	1.19	505423	100.08	60	120	
Ge Internal standard	72	2	HMI H2	2158858	1.62	2359166	91.51	60	120	
Ge Internal standard	72	3	HMI He	627496	0.38	680743	92.18	60	120	
In Internal Standard	115	3	HMI He	2363551	1.18	2361818	100.07	60	120	
Ir (IS)	193	3	HMI He	5174825	2.43	5045699	102.56	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	316_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:39:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.002	ppb	5442.7	2	0.5	
Na	23	3	45	30.015	ppb	21.6	15808	25	>RL
Mg	24	3	45	0.735	ppb	199.9	187	25	
Al	27	3	45	-1.160	ppb	-57.7	97	15	
K	39	3	45	-21.569	ppb	-122.2	23219	50	
V	51	3	72	0.084	ppb	168.0	586	1	
Cr	52	3	72	0.545	ppb	13.3	2439	1	
Mn	55	3	72	0.192	ppb	69.2	212	0.5	
Co	59	3	72	-0.003	ppb	-175.5	48	0.5	
Ni	60	3	72	0.838	ppb	27.4	685	1	
Cu	63	3	72	0.006	ppb	331.8	283	1	
Zn	66	3	72	0.628	ppb	19.2	203	5	
As	75	3	72	0.214	ppb	164.9	47	1	
Se	78	2	72	0.137	ppb	68.5	7	1	
Sr	88	3	72	-0.024	ppb	-29.3	13	0.5	
Mo	95	3	115	0.099	ppb	65.0	67	0.5	
Ag	107	3	115	-0.002	ppb	-222.9	12	1	
Cd	111	3	115	0.009	ppb	171.3	3	0.5	
Sn	120	3	115	0.213	ppb	25.0	676	1	
Sb	121	3	115	0.022	ppb	134.4	47	0.6	
Ba	137	3	115	-0.015	ppb	-153.5	30	0.5	
Tl	205	3	193	0.028	ppb	25.0	188	0.1	
(Pb)	206	3	193	-0.021	ppb	-162.6	212	1	
(Pb)	207	3	193	-0.007	ppb	-228.8	332	1	
Pb	208	3	193	-0.014	ppb	-43.1	973	0.5	
Th	232	3	193	2.487	ppb	12.7	16568	1	>RL
U	238	3	193	0.013	ppb	280.4	1338	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3590007	2.26	3535116	101.55	60	120	
Sc (IS)	45	3	HMI He	505833	1.03	505423	100.08	60	120	
Ge Internal standard	72	2	HMI H2	2128978	0.38	2359166	90.24	60	120	
Ge Internal standard	72	3	HMI He	635267	0.88	680743	93.32	60	120	
In Internal Standard	115	3	HMI He	2352965	1.37	2361818	99.63	60	120	
Ir (IS)	193	3	HMI He	5152464	1.09	5045699	102.12	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608636/1-A
Data File Name	317_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:40:50-06:00
Sample Type	Blank
Dilution	1
Comment	608636 6020b
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	-0.046	ppb	0	0	0.5
Na	23	3	45	19.128	ppb	20.10431403	15000	25
Mg	24	3	45	1.544	ppb	34.04804705	227	25
Al	27	3	45	-2.739	ppb	-20.27437345	70	15
K	39	3	45	-22.891	ppb	-175.1159629	23386	50
Ca	40	2	45	4.696	ppb	11.13416432	12331	200
V	51	3	72	0.076	ppb	155.7592463	581	1
Cr	52	3	72	0.526	ppb	54.75986058	2424	1
Mn	55	3	72	0.187	ppb	55.79688735	210	0.5
Fe	56	2	72	7.863	ppb	36.55504845	51484	50
Co	59	3	72	0.024	ppb	100.7951035	75	0.5
Ni	60	3	72	0.168	ppb	129.8976574	498	1
Cu	63	3	72	0.038	ppb	223.0146129	307	1
Zn	66	3	72	0.362	ppb	26.89432818	172	5
As	75	3	72	0.232	ppb	127.2844153	48	1
(Se)	78	3	72	1.530	ppb	259.7864212	30	1
Sr	88	3	72	0.040	ppb	139.1878506	40	0.5
Mo	95	3	115	0.054	ppb	60.09709859	50	0.5
Ag	107	3	115	0.001	ppb	587.348189	17	1
Cd	111	3	115	-0.008	ppb	0	0	0.5
Sn	120	3	115	-0.085	ppb	-128.583389	503	1
Sb	121	3	115	0.041	ppb	132.7315572	60	0.6
Ba	137	3	115	0.180	ppb	33.46057732	72	0.5
Tl	205	3	193	0.000	ppb	-1109.485115	102	0.1
(Pb)	206	3	193	-0.028	ppb	-129.9232032	207	1
(Pb)	207	3	193	0.025	ppb	144.0738827	363	1
Pb	208	3	193	-0.019	ppb	-58.35542812	956	0.5
Th	232	3	193	0.090	ppb	30.9366016	6673	1
U	238	3	193	0.024	ppb	51.00239527	1399	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3554189	2.13	3535116	100.54	60	120	
Sc (IS)	45	3	HMI He	510729	0.65	505423	101.05	60	120	
Ge Internal standard	72	2	HMI H2	2158169	0.38	2359166	91.48	60	120	
Ge Internal standard	72	3	HMI He	634614	1.34	680743	93.22	60	120	
In Internal Standard	115	3	HMI He	2407122	1.25	2361818	101.92	60	120	
Ir (IS)	193	3	HMI He	5191085	2.53	5045699	102.88	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608636/19-A
Data File Name	318_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:42:41-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608636 6020b
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	37.962	37.962	ppb	4.626	1329	40	94.9	80	120	
Na	23	3	45	767.533	767.533	ppb	2.330	80776	40	1918.8	80	120	>+/-20%
Mg	24	3	45	710.915	710.915	ppb	2.929	33359	40	1777.3	80	120	>+/-20%
Al	27	3	45	756.549	756.549	ppb	3.507	13380	40	1891.4	80	120	>+/-20%
K	39	3	45	726.949	726.949	ppb	6.038	51727	40	1817.4	80	120	>+/-20%
Ca	40	2	45	811.514	811.514	ppb	1.200	386295	40	2028.8	80	120	>+/-20%
V	51	3	72	41.240	41.240	ppb	1.169	19989	40	103.1	80	120	
Cr	52	3	72	42.009	42.009	ppb	1.580	26572	40	105.0	80	120	
Mn	55	3	72	42.808	42.808	ppb	0.658	13370	40	107.0	80	120	
Fe	56	2	72	845.644	845.644	ppb	0.896	1081138	40	2114.1	80	120	>+/-20%
(Fe)	56	3	72	824.254	824.254	ppb	1.473	420075	40	2060.6	80	120	>+/-20%
Co	59	3	72	41.830	41.830	ppb	1.496	41700	40	104.6	80	120	
Ni	60	3	72	42.415	42.415	ppb	2.964	12206	40	106.0	80	120	
Cu	63	3	72	43.114	43.114	ppb	1.133	32559	40	107.8	80	120	
Zn	66	3	72	43.981	43.981	ppb	0.433	5333	40	110.0	80	120	
As	75	3	72	39.646	39.646	ppb	2.614	3522	40	99.1	80	120	
Se	78	2	72	43.076	43.076	ppb	5.733	1936	40	107.7	80	120	
(Se)	78	3	72	47.576	47.576	ppb	18.039	230	40	118.9	80	120	
Sr	88	3	72	83.610	83.610	ppb	1.288	35059	40	209.0	80	120	>+/-20%
Mo	95	3	115	39.172	39.172	ppb	2.153	15878	40	97.9	80	120	
Ag	107	3	115	40.251	40.251	ppb	0.906	55403	40	100.6	80	120	
Cd	111	3	115	38.605	38.605	ppb	1.858	7622	40	96.5	80	120	
Sn	120	3	115	37.708	37.708	ppb	0.770	23871	40	94.3	80	120	
Sb	121	3	115	38.876	38.876	ppb	1.390	24322	40	97.2	80	120	
Ba	137	3	115	39.715	39.715	ppb	2.833	8222	40	99.3	80	120	
Tl	205	3	193	39.608	39.608	ppb	0.687	124218	40	99.0	80	120	
(Pb)	206	3	193	39.506	39.506	ppb	0.348	41166	40	98.8	80	120	
(Pb)	207	3	193	38.568	38.568	ppb	2.746	36254	40	96.4	80	120	
Pb	208	3	193	39.545	39.545	ppb	1.253	166821	40	98.9	80	120	
Th	232	3	193	36.797	36.797	ppb	1.320	161826	40	92.0	80	120	
U	238	3	193	40.130	40.130	ppb	1.302	174783	40	100.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3566014	0.53	3535116	100.87	60	120	
Sc (IS)	45	3	HMI He	510928	1.15	505423	101.09	60	120	
Ge Internal standard	72	2	HMI H2	2167601	1.03	2359166	91.88	60	120	
Ge Internal standard	72	3	HMI He	635565	0.59	680743	93.36	60	120	
In Internal Standard	115	3	HMI He	2360718	0.57	2361818	99.95	60	120	
Ir (IS)	193	3	HMI He	5245053	0.88	5045699	103.95	60	120	

Sample Report

Sample Table

Sample Name	280-174977-A-2-A
Data File Name	319SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:44:31-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	530.270	ppb	530.270	1.78	59896	400000	
Mg	24	3	45	14.420	ppb	14.420	18.01	828	400000	
Al	27	3	45	19.567	ppb	19.567	25.40	460	400000	
K	39	3	45	-25.981	ppb	-25.981	-156.43	23266	400000	
Ca	40	2	45	133.741	ppb	133.741	1.52	71687	400000	
V	51	3	72	0.078	ppb	0.078	159.76	590	2000	
Cr	52	3	72	0.926	ppb	0.926	26.77	2689	5000	
Mn	55	3	72	2.310	ppb	2.310	13.82	875	10000	
Fe	56	2	72	34.634	ppb	34.634	9.14	84008	10000	
Co	59	3	72	0.036	ppb	0.036	30.48	88	2000	
Ni	60	3	72	0.338	ppb	0.338	95.56	551	5000	
Cu	63	3	72	0.264	ppb	0.264	7.20	481	5000	
Zn	66	3	72	0.974	ppb	0.974	23.29	247	5000	
As	75	3	72	0.169	ppb	0.169	97.68	43	2000	
Se	78	2	72	0.106	ppb	0.106	24.09	5	2000	
Sr	88	3	72	0.523	ppb	0.523	10.22	245	4000	
Mo	95	3	115	1.886	ppb	1.886	3.74	788	2000	
Ag	107	3	115	0.008	ppb	0.008	204.82	27	100	
Cd	111	3	115	0.000	ppb	0.000	-25000.59	2	2000	
Sn	120	3	115	0.238	ppb	0.238	15.99	691	2000	
Sb	121	3	115	0.105	ppb	0.105	18.61	98	1000	
Ba	137	3	115	0.759	ppb	0.759	43.78	188	5000	
Tl	205	3	193	0.022	ppb	0.022	59.06	173	2000	
(Pb)	206	3	193	0.021	ppb	0.021	106.51	258	100	
(Pb)	207	3	193	-0.001	ppb	-0.001	-3854.42	342	100	
Pb	208	3	193	0.008	ppb	0.008	114.42	1076	5000	
Th	232	3	193	1.476	ppb	1.476	10.76	12553	2000	
U	238	3	193	0.022	ppb	0.022	7.45	1399	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3542282	1.15	3535116	100.20	60	120	
Sc (IS)	45	3	HMI He	510631	0.55	505423	101.03	60	120	
Ge Internal standard	72	2	HMI H2	2151933	0.38	2359166	91.22	60	120	
Ge Internal standard	72	3	HMI He	641944	0.58	680743	94.30	60	120	
In Internal Standard	115	3	HMI He	2352964	1.67	2361818	99.63	60	120	
Ir (IS)	193	3	HMI He	5226619	1.85	5045699	103.59	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-5-A
Data File Name	320SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:46:20-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.097	ppb	0.097	147.58	5	2000	
Na	23	3	45	27943.364	ppb	27943.364	1.36	2455608	400000	
Mg	24	3	45	10482.176	ppb	10482.176	1.57	487119	400000	
Al	27	3	45	1.689	ppb	1.689	53.24	147	400000	
K	39	3	45	6733.950	ppb	6733.950	0.20	277142	400000	
Ca	40	2	45	34923.832	ppb	34923.832	1.00	16510182	400000	
V	51	3	72	17.121	ppb	17.121	4.59	8813	2000	
Cr	52	3	72	3.403	ppb	3.403	11.02	4195	5000	
Mn	55	3	72	3.726	ppb	3.726	4.15	1333	10000	
Fe	56	2	72	134.708	ppb	134.708	1.27	211301	10000	
Co	59	3	72	0.030	ppb	0.030	23.44	83	2000	
Ni	60	3	72	0.999	ppb	0.999	16.45	746	5000	
Cu	63	3	72	0.120	ppb	0.120	36.04	376	5000	
Zn	66	3	72	3.989	ppb	3.989	1.14	615	5000	
As	75	3	72	6.707	ppb	6.707	17.67	633	2000	
Se	78	2	72	3.204	ppb	3.204	5.52	147	2000	
Sr	88	3	72	198.432	ppb	198.432	1.12	85072	4000	
Mo	95	3	115	5.870	ppb	5.870	5.01	2477	2000	
Ag	107	3	115	0.003	ppb	0.003	102.20	20	100	
Cd	111	3	115	0.000	ppb	0.000	-2815.34	2	2000	
Sn	120	3	115	-0.032	ppb	-0.032	-371.79	543	2000	
Sb	121	3	115	0.176	ppb	0.176	20.57	148	1000	
Ba	137	3	115	26.628	ppb	26.628	8.15	5688	5000	
Tl	205	3	193	0.004	ppb	0.004	113.16	112	2000	
(Pb)	206	3	193	2.273	ppb	2.273	7.51	2514	100	
(Pb)	207	3	193	2.080	ppb	2.080	4.13	2211	100	
Pb	208	3	193	2.151	ppb	2.151	2.42	9755	5000	
Th	232	3	193	0.318	ppb	0.318	51.55	7472	2000	
U	238	3	193	2.709	ppb	2.709	3.48	12618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3635665	1.96	3535116	102.84	60	120	
Sc (IS)	45	3	HMI He	508089	0.27	505423	100.53	60	120	
Ge Internal standard	72	2	HMI H2	2206334	1.93	2359166	93.52	60	120	
Ge Internal standard	72	3	HMI He	650044	0.81	680743	95.49	60	120	
In Internal Standard	115	3	HMI He	2436780	4.13	2361818	103.17	60	120	
Ir (IS)	193	3	HMI He	5084375	1.34	5045699	100.77	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-7-A
Data File Name	321SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:48:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	27928.920	ppb	27928.920	2.00	2458872	400000	
Mg	24	3	45	9155.057	ppb	9155.057	1.54	426232	400000	
Al	27	3	45	-0.055	ppb	-0.055	-2916.40	117	400000	
K	39	3	45	5859.896	ppb	5859.896	0.82	244760	400000	
Ca	40	2	45	28723.013	ppb	28723.013	2.06	13255764	400000	
V	51	3	72	22.439	ppb	22.439	0.96	11249	2000	
Cr	52	3	72	2.656	ppb	2.656	17.65	3707	5000	
Mn	55	3	72	0.707	ppb	0.707	10.64	375	10000	
Fe	56	2	72	15.816	ppb	15.816	24.25	62798	10000	
Co	59	3	72	-0.005	ppb	-0.005	-369.95	47	2000	
Ni	60	3	72	0.591	ppb	0.591	18.62	623	5000	
Cu	63	3	72	0.048	ppb	0.048	238.10	318	5000	
Zn	66	3	72	3.017	ppb	3.017	17.24	491	5000	
As	75	3	72	7.908	ppb	7.908	6.97	733	2000	
Se	78	2	72	2.411	ppb	2.411	19.99	111	2000	
Sr	88	3	72	158.759	ppb	158.759	2.11	67274	4000	
Mo	95	3	115	4.540	ppb	4.540	5.95	1918	2000	
Ag	107	3	115	0.014	ppb	0.014	89.27	35	100	
Cd	111	3	115	0.016	ppb	0.016	151.85	5	2000	
Sn	120	3	115	-0.087	ppb	-0.087	-112.15	506	2000	
Sb	121	3	115	0.183	ppb	0.183	42.64	152	1000	
Ba	137	3	115	17.091	ppb	17.091	4.54	3657	5000	
Tl	205	3	193	0.001	ppb	0.001	628.79	108	2000	
(Pb)	206	3	193	0.003	ppb	0.003	1667.30	240	100	
(Pb)	207	3	193	0.010	ppb	0.010	40.63	353	100	
Pb	208	3	193	0.006	ppb	0.006	356.96	1071	5000	
Th	232	3	193	-0.180	ppb	-0.180	-40.22	5593	2000	
U	238	3	193	1.724	ppb	1.724	1.78	8744	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3548374	0.85	3535116	100.38	60	120	
Sc (IS)	45	3	HMI He	509073	1.31	505423	100.72	60	120	
Ge Internal standard	72	2	HMI H2	2217067	3.73	2359166	93.98	60	120	
Ge Internal standard	72	3	HMI He	642547	1.09	680743	94.39	60	120	
In Internal Standard	115	3	HMI He	2427328	0.84	2361818	102.77	60	120	
Ir (IS)	193	3	HMI He	5236484	2.10	5045699	103.78	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-9-A
Data File Name	322SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:49:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.001	ppb	0.001	7653.12	2	2000	
Na	23	3	45	25486.621	ppb	25486.621	2.27	2194467	400000	
Mg	24	3	45	19044.582	ppb	19044.582	0.22	866632	400000	
Al	27	3	45	2.635	ppb	2.635	109.17	160	400000	
K	39	3	45	7352.144	ppb	7352.144	1.11	294175	400000	
Ca	40	2	45	62119.638	ppb	62119.638	0.90	28569394	400000	
V	51	3	72	19.443	ppb	19.443	3.40	9629	2000	
Cr	52	3	72	3.235	ppb	3.235	3.90	3970	5000	
Mn	55	3	72	0.846	ppb	0.846	27.67	410	10000	
Fe	56	2	72	18.565	ppb	18.565	13.85	64269	10000	
Co	59	3	72	0.046	ppb	0.046	6.19	97	2000	
Ni	60	3	72	0.616	ppb	0.616	20.11	618	5000	
Cu	63	3	72	0.387	ppb	0.387	12.49	563	5000	
Zn	66	3	72	3.384	ppb	3.384	1.64	525	5000	
As	75	3	72	5.727	ppb	5.727	4.17	528	2000	
Se	78	2	72	6.319	ppb	6.319	3.99	282	2000	
Sr	88	3	72	354.225	ppb	354.225	0.76	147171	4000	
Mo	95	3	115	6.517	ppb	6.517	6.54	2612	2000	
Ag	107	3	115	0.005	ppb	0.005	150.11	22	100	
Cd	111	3	115	0.000	ppb	0.000	12043.03	2	2000	
Sn	120	3	115	-0.046	ppb	-0.046	-92.14	508	2000	
Sb	121	3	115	0.384	ppb	0.384	22.84	268	1000	
Ba	137	3	115	76.231	ppb	76.231	0.87	15445	5000	
Tl	205	3	193	0.005	ppb	0.005	42.39	115	2000	
(Pb)	206	3	193	-0.071	ppb	-0.071	-40.96	158	100	
(Pb)	207	3	193	0.023	ppb	0.023	260.20	353	100	
Pb	208	3	193	-0.023	ppb	-0.023	-85.64	920	5000	
Th	232	3	193	-0.311	ppb	-0.311	-28.99	4879	2000	
U	238	3	193	9.434	ppb	9.434	1.68	40668	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3538024	2.24	3535116	100.08	60	120	
Sc (IS)	45	3	HMI He	497608	0.59	505423	98.45	60	120	
Ge Internal standard	72	2	HMI H2	2147357	1.71	2359166	91.02	60	120	
Ge Internal standard	72	3	HMI He	630037	0.37	680743	92.55	60	120	
In Internal Standard	115	3	HMI He	2314935	0.94	2361818	98.01	60	120	
Ir (IS)	193	3	HMI He	5067184	1.06	5045699	100.43	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-10-A
Data File Name	323SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:52:14-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	24829.367	ppb	24829.367	2.04	2136099	400000	
Mg	24	3	45	18036.696	ppb	18036.696	2.21	819926	400000	
Al	27	3	45	5.016	ppb	5.016	59.43	200	400000	
K	39	3	45	7027.693	ppb	7027.693	1.14	281923	400000	
Ca	40	2	45	62138.428	ppb	62138.428	2.94	27909528	400000	
V	51	3	72	19.117	ppb	19.117	2.98	9482	2000	
Cr	52	3	72	3.114	ppb	3.114	4.70	3904	5000	
Mn	55	3	72	0.633	ppb	0.633	20.72	345	10000	
Fe	56	2	72	13.619	ppb	13.619	20.82	58341	10000	
Co	59	3	72	0.056	ppb	0.056	36.75	107	2000	
Ni	60	3	72	0.614	ppb	0.614	25.74	618	5000	
Cu	63	3	72	0.131	ppb	0.131	100.40	373	5000	
Zn	66	3	72	3.281	ppb	3.281	10.84	513	5000	
As	75	3	72	5.704	ppb	5.704	5.29	526	2000	
Se	78	2	72	6.545	ppb	6.545	13.80	293	2000	
Sr	88	3	72	342.492	ppb	342.492	1.60	142389	4000	
Mo	95	3	115	5.989	ppb	5.989	4.69	2382	2000	
Ag	107	3	115	0.000	ppb	0.000	1281.69	15	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.157	ppb	-0.157	-101.52	436	2000	
Sb	121	3	115	0.292	ppb	0.292	16.30	210	1000	
Ba	137	3	115	74.307	ppb	74.307	4.06	14919	5000	
Tl	205	3	193	0.006	ppb	0.006	262.06	118	2000	
(Pb)	206	3	193	-0.042	ppb	-0.042	-73.84	188	100	
(Pb)	207	3	193	-0.042	ppb	-0.042	-62.67	297	100	
Pb	208	3	193	-0.039	ppb	-0.039	-36.41	860	5000	
Th	232	3	193	-0.419	ppb	-0.419	-6.40	4460	2000	
U	238	3	193	9.101	ppb	9.101	2.29	39518	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3455321	1.11	3535116	97.74	60	120	
Sc (IS)	45	3	HMI He	497069	1.13	505423	98.35	60	120	
Ge Internal standard	72	2	HMI H2	2151682	0.78	2359166	91.21	60	120	
Ge Internal standard	72	3	HMI He	630452	0.72	680743	92.61	60	120	
In Internal Standard	115	3	HMI He	2294832	1.31	2361818	97.16	60	120	
Ir (IS)	193	3	HMI He	5098570	1.22	5045699	101.05	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	324_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:54:02-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.761	ppb	3.599	1736	50	103.5	90	110	
Na	23	3	45	49004.735	ppb	1.549	4140061	51000	96.1	90	110	
Mg	24	3	45	10503.851	ppb	0.606	470274	11000	95.5	90	110	
Al	27	3	45	1040.575	ppb	2.457	17582	1000	104.1	90	110	
K	39	3	45	10431.775	ppb	1.819	400800	11000	94.8	90	110	
Ca	40	2	45	10857.125	ppb	3.206	4803829	11000	98.7	90	110	
V	51	3	72	55.725	ppb	2.430	25426	50	111.5	90	110	>+\-10%
Cr	52	3	72	55.692	ppb	2.138	32740	50	111.4	90	110	>+\-10%
Mn	55	3	72	54.125	ppb	2.505	15986	50	108.2	90	110	
Fe	56	2	72	1129.556	ppb	0.880	1352343	1000	113.0	90	110	>+\-10%
Co	59	3	72	53.818	ppb	0.924	50851	50	107.6	90	110	
Ni	60	3	72	54.850	ppb	2.162	14839	50	109.7	90	110	
Cu	63	3	72	54.857	ppb	1.443	39203	50	109.7	90	110	
Zn	66	3	72	56.881	ppb	2.882	6503	50	113.8	90	110	>+\-10%
As	75	3	72	54.017	ppb	6.398	4539	50	108.0	90	110	
Se	78	2	72	57.112	ppb	4.169	2428	50	114.2	90	110	>+\-10%
Sr	88	3	72	108.429	ppb	1.560	43102	100	108.4	90	110	
Mo	95	3	115	51.203	ppb	1.927	20132	50	102.4	90	110	
Ag	107	3	115	51.095	ppb	1.482	68235	50	102.2	90	110	
Cd	111	3	115	52.298	ppb	3.717	10017	50	104.6	90	110	
Sn	120	3	115	51.936	ppb	1.266	31707	50	103.9	90	110	
Sb	121	3	115	51.097	ppb	1.584	31012	50	102.2	90	110	
Ba	137	3	115	50.207	ppb	2.987	10076	50	100.4	90	110	
Tl	205	3	193	51.283	ppb	0.687	153418	50	102.6	90	110	
(Pb)	206	3	193	52.037	ppb	0.345	51661	50	104.1	90	110	
(Pb)	207	3	193	51.098	ppb	0.765	45724	50	102.2	90	110	
Pb	208	3	193	51.595	ppb	0.301	207362	50	103.2	90	110	
Th	232	3	193	50.660	ppb	1.510	210249	50	101.3	90	110	
U	238	3	193	52.042	ppb	0.502	215897	50	104.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3397839	0.36	3535116	96.12	60	120	
Sc (IS)	45	3	HMI He	489530	2.03	505423	96.86	60	120	
Ge Internal standard	72	2	HMI H2	2049992	1.74	2359166	86.89	60	120	
Ge Internal standard	72	3	HMI He	602613	1.18	680743	88.52	60	120	
In Internal Standard	115	3	HMI He	2290869	1.11	2361818	97.00	60	120	
Ir (IS)	193	3	HMI He	5004027	0.22	5045699	99.17	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	325_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:55:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	40.801	ppb	5.4	16316	25	>RL
Mg	24	3	45	2.232	ppb	89.9	250	25	
Al	27	3	45	-1.810	ppb	-134.7	83	15	
K	39	3	45	-36.448	ppb	-98.6	22086	50	
V	51	3	72	0.192	ppb	105.2	616	1	
Cr	52	3	72	0.514	ppb	21.1	2342	1	
Mn	55	3	72	0.315	ppb	38.1	242	0.5	
Co	59	3	72	-0.005	ppb	-574.1	45	0.5	
Ni	60	3	72	0.516	ppb	48.4	576	1	
Cu	63	3	72	0.021	ppb	240.7	285	1	
Zn	66	3	72	0.380	ppb	16.2	168	5	
As	75	3	72	0.250	ppb	84.5	48	1	
Se	78	2	72	0.094	ppb	29.7	5	1	
Sr	88	3	72	0.035	ppb	175.0	37	0.5	
Mo	95	3	115	0.038	ppb	82.9	42	0.5	
Ag	107	3	115	0.010	ppb	78.0	28	1	
Cd	111	3	115	0.000	ppb	10981.3	2	0.5	
Sn	120	3	115	0.187	ppb	53.6	651	1	
Sb	121	3	115	0.041	ppb	73.8	58	0.6	
Ba	137	3	115	0.102	ppb	60.5	53	0.5	
Tl	205	3	193	0.036	ppb	10.5	210	0.1	
(Pb)	206	3	193	-0.047	ppb	-68.1	183	1	
(Pb)	207	3	193	0.027	ppb	164.2	358	1	
Pb	208	3	193	-0.018	ppb	-122.1	945	0.5	
Th	232	3	193	1.036	ppb	16.6	10431	1	>RL
U	238	3	193	0.019	ppb	129.4	1349	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3361732	0.43	3535116	95.10	60	120	
Sc (IS)	45	3	HMI He	492927	0.46	505423	97.53	60	120	
Ge Internal standard	72	2	HMI H2	2100696	2.34	2359166	89.04	60	120	
Ge Internal standard	72	3	HMI He	614823	1.11	680743	90.32	60	120	
In Internal Standard	115	3	HMI He	2323185	0.52	2361818	98.36	60	120	
Ir (IS)	193	3	HMI He	5092048	2.40	5045699	100.92	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-E
Data File Name	326SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:57:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	29000.961	ppb	29000.961	2.73	2505101	400000	
Mg	24	3	45	3362.944	ppb	3362.944	0.58	153733	400000	
Al	27	3	45	1.634	ppb	1.634	72.10	143	400000	
K	39	3	45	9224.257	ppb	9224.257	0.40	364415	400000	
Ca	40	2	45	13097.203	ppb	13097.203	1.75	6069606	400000	
V	51	3	72	0.941	ppb	0.941	7.01	1021	2000	
Cr	52	3	72	0.711	ppb	0.711	27.24	2614	5000	
Mn	55	3	72	5.852	ppb	5.852	7.83	2019	10000	
Fe	56	2	72	103.714	ppb	103.714	3.93	172088	10000	
Co	59	3	72	0.091	ppb	0.091	15.90	147	2000	
Ni	60	3	72	0.565	ppb	0.565	31.15	628	5000	
Cu	63	3	72	0.023	ppb	0.023	277.30	305	5000	
Zn	66	3	72	1.178	ppb	1.178	28.69	277	5000	
As	75	3	72	1.534	ppb	1.534	15.84	168	2000	
Se	78	2	72	0.060	ppb	0.060	43.89	3	2000	
Sr	88	3	72	157.496	ppb	157.496	1.80	68047	4000	
Mo	95	3	115	6.308	ppb	6.308	1.34	2622	2000	
Ag	107	3	115	0.015	ppb	0.015	33.86	37	100	
Cd	111	3	115	0.016	ppb	0.016	262.82	5	2000	
Sn	120	3	115	0.022	ppb	0.022	288.21	570	2000	
Sb	121	3	115	0.054	ppb	0.054	65.04	68	1000	
Ba	137	3	115	37.292	ppb	37.292	4.24	7845	5000	
Tl	205	3	193	0.009	ppb	0.009	69.07	130	2000	
(Pb)	206	3	193	-0.056	ppb	-0.056	-62.38	178	100	
(Pb)	207	3	193	-0.006	ppb	-0.006	-948.88	337	100	
Pb	208	3	193	-0.030	ppb	-0.030	-98.50	915	5000	
Th	232	3	193	-0.150	ppb	-0.150	-42.50	5700	2000	
U	238	3	193	0.084	ppb	0.084	15.81	1663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3559743	1.65	3535116	100.70	60	120	
Sc (IS)	45	3	HMI He	499467	0.95	505423	98.82	60	120	
Ge Internal standard	72	2	HMI H2	2201398	1.72	2359166	93.31	60	120	
Ge Internal standard	72	3	HMI He	655070	0.31	680743	96.23	60	120	
In Internal Standard	115	3	HMI He	2399504	1.49	2361818	101.60	60	120	
Ir (IS)	193	3	HMI He	5218069	0.43	5045699	103.42	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-Esd@5
Data File Name	327SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T09:59:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	6083.618	ppb	6083.618	1.00	531233	400000	
Mg	24	3	45	710.660	ppb	710.660	0.80	32333	400000	
Al	27	3	45	0.724	ppb	0.724	202.13	127	400000	
K	39	3	45	2016.212	ppb	2016.212	1.79	97370	400000	
Ca	40	2	45	2869.761	ppb	2869.761	1.65	1314596	400000	
V	51	3	72	0.251	ppb	0.251	25.22	678	2000	
Cr	52	3	72	0.098	ppb	0.098	687.04	2217	5000	
Mn	55	3	72	2.584	ppb	2.584	9.55	968	10000	
Fe	56	2	72	25.373	ppb	25.373	17.82	72548	10000	
Co	59	3	72	0.027	ppb	0.027	34.00	80	2000	
Ni	60	3	72	0.332	ppb	0.332	24.20	555	5000	
Cu	63	3	72	0.117	ppb	0.117	29.35	373	5000	
Zn	66	3	72	3.538	ppb	3.538	10.72	558	5000	
As	75	3	72	0.257	ppb	0.257	54.00	52	2000	
Se	78	2	72	0.017	ppb	0.017	156.72	1	2000	
Sr	88	3	72	34.131	ppb	34.131	1.20	14599	4000	
Mo	95	3	115	1.365	ppb	1.365	5.95	578	2000	
Ag	107	3	115	0.012	ppb	0.012	34.69	32	100	
Cd	111	3	115	0.000	ppb	0.000	25470.54	2	2000	
Sn	120	3	115	0.138	ppb	0.138	83.11	631	2000	
Sb	121	3	115	0.027	ppb	0.027	62.10	50	1000	
Ba	137	3	115	8.120	ppb	8.120	7.89	1704	5000	
Tl	205	3	193	0.006	ppb	0.006	118.85	120	2000	
(Pb)	206	3	193	0.339	ppb	0.339	9.38	573	100	
(Pb)	207	3	193	0.342	ppb	0.342	3.83	645	100	
Pb	208	3	193	0.331	ppb	0.331	8.30	2371	5000	
Th	232	3	193	-0.262	ppb	-0.262	-41.24	5112	2000	
U	238	3	193	0.038	ppb	0.038	28.01	1433	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3498154	0.49	3535116	98.95	60	120	
Sc (IS)	45	3	HMI He	495282	0.32	505423	97.99	60	120	
Ge Internal standard	72	2	HMI H2	2149410	1.92	2359166	91.11	60	120	
Ge Internal standard	72	3	HMI He	647714	1.54	680743	95.15	60	120	
In Internal Standard	115	3	HMI He	2356104	1.77	2361818	99.76	60	120	
Ir (IS)	193	3	HMI He	5104873	0.52	5045699	101.17	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-F MS
Data File Name	328SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:01:17-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	7315.738	ppb	7315.738	104.33	764302	400000	
Mg	24	3	45	1021.024	ppb	1021.024	105.48	55390	400000	
Al	27	3	45	194.167	ppb	194.167	107.97	4082	400000	
K	39	3	45	2417.410	ppb	2417.410	119.37	136813	400000	
Ca	40	2	45	42.648	ppb	42.648	67.34	7606	400000	
V	51	3	72	9.601	ppb	9.601	115.94	5834	2000	
Cr	52	3	72	10.156	ppb	10.156	129.37	9402	5000	
Mn	55	3	72	12.104	ppb	12.104	108.84	4461	10000	
Fe	56	2	72	-18.354	ppb	-18.354	-28.28	5280	10000	
Co	59	3	72	10.424	ppb	10.424	109.30	11853	2000	
Ni	60	3	72	10.097	ppb	10.097	117.78	3756	5000	
Cu	63	3	72	10.651	ppb	10.651	111.93	9389	5000	
Zn	66	3	72	10.062	ppb	10.062	120.19	1501	5000	
As	75	3	72	9.808	ppb	9.808	109.64	1020	2000	
Se	78	2	72	0.180	ppb	0.180	116.27	2	2000	
Sr	88	3	72	64.796	ppb	64.796	110.61	30760	4000	
Mo	95	3	115	11.152	ppb	11.152	117.86	5064	2000	
Ag	107	3	115	9.706	ppb	9.706	111.46	15107	100	
Cd	111	3	115	9.947	ppb	9.947	115.37	2201	2000	
Sn	120	3	115	9.081	ppb	9.081	127.92	6885	2000	
Sb	121	3	115	9.202	ppb	9.202	116.56	6469	1000	
Ba	137	3	115	20.092	ppb	20.092	115.20	4689	5000	
Tl	205	3	193	9.632	ppb	9.632	114.78	34778	2000	
(Pb)	206	3	193	9.509	ppb	9.509	119.33	11538	100	
(Pb)	207	3	193	9.366	ppb	9.366	118.17	10424	100	
Pb	208	3	193	9.617	ppb	9.617	118.00	47432	5000	
Th	232	3	193	5.412	ppb	5.412	124.68	34703	2000	
U	238	3	193	9.792	ppb	9.792	117.54	50147	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	1006298	36.17	3535116	28.47	60	120	IS Failed
Sc (IS)	45	3	HMI He	720287	25.53	505423	142.51	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	621276	28.55	2359166	26.33	60	120	IS Failed
Ge Internal standard	72	3	HMI He	893930	26.70	680743	131.32	60	120	IS Failed
In Internal Standard	115	3	HMI He	3343475	27.44	2361818	141.56	60	120	IS Failed
Ir (IS)	193	3	HMI He	7464596	25.55	5045699	147.94	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-174901-A-7-G MSD
Data File Name	329SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:03:09-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.145	ppb	39.145	10.01	1379	2000	
Na	23	3	45	30743.078	ppb	30743.078	3.01	2682682	400000	
Mg	24	3	45	4142.862	ppb	4142.862	1.11	191302	400000	
Al	27	3	45	765.966	ppb	765.966	1.79	13373	400000	
K	39	3	45	10409.165	ppb	10409.165	1.29	412369	400000	
Ca	40	2	45	14083.654	ppb	14083.654	1.27	6451269	400000	
V	51	3	72	40.758	ppb	40.758	1.11	20320	2000	
Cr	52	3	72	39.945	ppb	39.945	0.56	26083	5000	
Mn	55	3	72	45.474	ppb	45.474	5.55	14585	10000	
Fe	56	2	72	873.713	ppb	873.713	1.13	1152491	10000	
Co	59	3	72	39.544	ppb	39.544	1.87	40527	2000	
Ni	60	3	72	40.619	ppb	40.619	2.85	12038	5000	
Cu	63	3	72	41.394	ppb	41.394	1.16	32148	5000	
Zn	66	3	72	48.372	ppb	48.372	2.14	6017	5000	
As	75	3	72	42.419	ppb	42.419	1.82	3872	2000	
Se	78	2	72	41.781	ppb	41.781	4.49	1941	2000	
Sr	88	3	72	243.788	ppb	243.788	0.32	105062	4000	
Mo	95	3	115	44.332	ppb	44.332	0.45	18150	2000	
Ag	107	3	115	39.011	ppb	39.011	2.08	54239	100	
Cd	111	3	115	38.164	ppb	38.164	0.66	7612	2000	
Sn	120	3	115	39.033	ppb	39.033	2.74	24941	2000	
Sb	121	3	115	37.550	ppb	37.550	1.44	23733	1000	
Ba	137	3	115	77.919	ppb	77.919	1.45	16260	5000	
Tl	205	3	193	39.053	ppb	39.053	1.28	120663	2000	
(Pb)	206	3	193	39.901	ppb	39.901	2.25	40956	100	
(Pb)	207	3	193	38.428	ppb	38.428	2.54	35584	100	
Pb	208	3	193	39.502	ppb	39.502	2.48	164142	5000	
Th	232	3	193	38.450	ppb	38.450	2.38	166259	2000	
U	238	3	193	39.781	ppb	39.781	1.82	170693	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3519584	1.42	3535116	99.56	60	120	
Sc (IS)	45	3	HMI He	504635	1.52	505423	99.84	60	120	
Ge Internal standard	72	2	HMI H2	2239113	1.42	2359166	94.91	60	120	
Ge Internal standard	72	3	HMI He	653459	1.28	680743	95.99	60	120	
In Internal Standard	115	3	HMI He	2384746	0.67	2361818	100.97	60	120	
Ir (IS)	193	3	HMI He	5167701	1.98	5045699	102.42	60	120	

Sample Report

Sample Table

Sample Name	280-174901-A-7-E pds
Data File Name	330SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:04:59-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	99.899	ppb	99.899	0.69	3447	2000	
Na	23	3	45	33354.369	ppb	33354.369	2.39	2916998	400000	
Mg	24	3	45	5312.063	ppb	5312.063	3.69	245919	400000	
Al	27	3	45	1992.190	ppb	1992.190	3.01	34694	400000	
K	39	3	45	11452.526	ppb	11452.526	1.42	452621	400000	
Ca	40	2	45	15198.590	ppb	15198.590	1.49	6965785	400000	
V	51	3	72	100.629	ppb	100.629	3.06	49389	2000	
Cr	52	3	72	101.586	ppb	101.586	2.74	63027	5000	
Mn	55	3	72	105.013	ppb	105.013	4.36	33517	10000	
Fe	56	2	72	1152.508	ppb	1152.508	2.50	1508422	10000	
Co	59	3	72	102.215	ppb	102.215	3.07	104783	2000	
Ni	60	3	72	100.633	ppb	100.633	3.16	29164	5000	
Cu	63	3	72	106.296	ppb	106.296	2.73	82187	5000	
Zn	66	3	72	216.215	ppb	216.215	2.93	26462	5000	
As	75	3	72	101.489	ppb	101.489	3.11	9234	2000	
Se	78	2	72	105.359	ppb	105.359	4.24	4898	2000	
Sr	88	3	72	264.751	ppb	264.751	0.95	114226	4000	
Mo	95	3	115	105.746	ppb	105.746	0.59	42499	2000	
Ag	107	3	115	26.165	ppb	26.165	3.42	35736	100	
Cd	111	3	115	98.690	ppb	98.690	2.39	19334	2000	
Sn	120	3	115	100.664	ppb	100.664	2.95	62331	2000	
Sb	121	3	115	95.246	ppb	95.246	3.10	59083	1000	
Ba	137	3	115	136.948	ppb	136.948	2.51	28049	5000	
Tl	205	3	193	99.923	ppb	99.923	1.66	309131	2000	
(Pb)	206	3	193	100.119	ppb	100.119	3.97	102567	100	
(Pb)	207	3	193	98.627	ppb	98.627	2.30	90968	100	
Pb	208	3	193	99.825	ppb	99.825	3.33	413932	5000	
Th	232	3	193	106.213	ppb	106.213	1.78	449135	2000	
U	238	3	193	209.286	ppb	209.286	3.48	893963	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3521858	1.27	3535116	99.62	60	120	
Sc (IS)	45	3	HMI He	506099	0.93	505423	100.13	60	120	
Ge Internal standard	72	2	HMI H2	2242701	1.79	2359166	95.06	60	120	
Ge Internal standard	72	3	HMI He	654292	1.91	680743	96.11	60	120	
In Internal Standard	115	3	HMI He	2343133	1.71	2361818	99.21	60	120	
Ir (IS)	193	3	HMI He	5177877	2.63	5045699	102.62	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-4-A
Data File Name	331SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:06:48-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.050	ppb	0.050	332.64	3	2000	
Na	23	3	45	27709.376	ppb	27709.376	2.77	2432904	400000	
Mg	24	3	45	10757.566	ppb	10757.566	0.62	499447	400000	
Al	27	3	45	2.654	ppb	2.654	50.54	163	400000	
K	39	3	45	6755.443	ppb	6755.443	0.76	277691	400000	
Ca	40	2	45	36014.999	ppb	36014.999	0.55	16535505	400000	
V	51	3	72	18.420	ppb	18.420	1.97	9362	2000	
Cr	52	3	72	3.124	ppb	3.124	10.79	3997	5000	
Mn	55	3	72	0.938	ppb	0.938	6.35	448	10000	
Fe	56	2	72	6.971	ppb	6.971	32.83	51929	10000	
Co	59	3	72	0.062	ppb	0.062	22.35	115	2000	
Ni	60	3	72	0.862	ppb	0.862	22.53	701	5000	
Cu	63	3	72	0.098	ppb	0.098	98.24	356	5000	
Zn	66	3	72	3.394	ppb	3.394	5.85	538	5000	
As	75	3	72	6.694	ppb	6.694	9.91	626	2000	
Se	78	2	72	3.197	ppb	3.197	15.75	148	2000	
Sr	88	3	72	197.080	ppb	197.080	1.03	83776	4000	
Mo	95	3	115	6.490	ppb	6.490	4.20	2641	2000	
Ag	107	3	115	0.016	ppb	0.016	29.08	37	100	
Cd	111	3	115	0.043	ppb	0.043	60.85	10	2000	
Sn	120	3	115	-0.054	ppb	-0.054	-190.52	511	2000	
Sb	121	3	115	0.293	ppb	0.293	28.71	215	1000	
Ba	137	3	115	28.141	ppb	28.141	2.08	5803	5000	
Tl	205	3	193	0.057	ppb	0.057	13.02	270	2000	
(Pb)	206	3	193	1.242	ppb	1.242	2.77	1458	100	
(Pb)	207	3	193	1.069	ppb	1.069	7.48	1281	100	
Pb	208	3	193	1.090	ppb	1.090	6.37	5369	5000	
Th	232	3	193	3.148	ppb	3.148	13.06	18792	2000	
U	238	3	193	2.773	ppb	2.773	6.80	12705	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3530775	1.26	3535116	99.88	60	120	
Sc (IS)	45	3	HMI He	507615	0.25	505423	100.43	60	120	
Ge Internal standard	72	2	HMI H2	2223836	0.48	2359166	94.26	60	120	
Ge Internal standard	72	3	HMI He	644513	0.81	680743	94.68	60	120	
In Internal Standard	115	3	HMI He	2348368	1.69	2361818	99.43	60	120	
Ir (IS)	193	3	HMI He	5015829	1.94	5045699	99.41	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-6-A
Data File Name	332SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:08:38-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	26739.677	ppb	26739.677	2.63	2326878	400000	
Mg	24	3	45	8727.088	ppb	8727.088	1.21	401555	400000	
Al	27	3	45	2.529	ppb	2.529	176.71	160	400000	
K	39	3	45	5652.393	ppb	5652.393	1.56	234135	400000	
Ca	40	2	45	27300.723	ppb	27300.723	0.53	12734309	400000	
V	51	3	72	21.140	ppb	21.140	1.84	10797	2000	
Cr	52	3	72	2.057	ppb	2.057	6.48	3410	5000	
Mn	55	3	72	0.585	ppb	0.585	29.60	342	10000	
Fe	56	2	72	2.890	ppb	2.890	85.32	48075	10000	
Co	59	3	72	0.038	ppb	0.038	17.16	92	2000	
Ni	60	3	72	0.155	ppb	0.155	190.88	510	5000	
Cu	63	3	72	0.082	ppb	0.082	63.37	350	5000	
Zn	66	3	72	3.448	ppb	3.448	4.49	551	5000	
As	75	3	72	6.936	ppb	6.936	3.26	656	2000	
Se	78	2	72	2.027	ppb	2.027	8.12	97	2000	
Sr	88	3	72	150.240	ppb	150.240	2.17	64669	4000	
Mo	95	3	115	4.239	ppb	4.239	8.11	1778	2000	
Ag	107	3	115	0.002	ppb	0.002	260.20	18	100	
Cd	111	3	115	0.008	ppb	0.008	178.15	3	2000	
Sn	120	3	115	-0.055	ppb	-0.055	-77.82	523	2000	
Sb	121	3	115	0.205	ppb	0.205	12.16	165	1000	
Ba	137	3	115	15.594	ppb	15.594	1.68	3317	5000	
Tl	205	3	193	0.023	ppb	0.023	21.33	173	2000	
(Pb)	206	3	193	-0.055	ppb	-0.055	-82.16	177	100	
(Pb)	207	3	193	-0.003	ppb	-0.003	-591.00	335	100	
Pb	208	3	193	-0.028	ppb	-0.028	-65.94	913	5000	
Th	232	3	193	0.511	ppb	0.511	37.32	8362	2000	
U	238	3	193	1.680	ppb	1.680	2.02	8410	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3586149	0.74	3535116	101.44	60	120	
Sc (IS)	45	3	HMI He	503019	0.86	505423	99.52	60	120	
Ge Internal standard	72	2	HMI H2	2284646	2.83	2359166	96.84	60	120	
Ge Internal standard	72	3	HMI He	652697	1.78	680743	95.88	60	120	
In Internal Standard	115	3	HMI He	2410810	1.85	2361818	102.07	60	120	
Ir (IS)	193	3	HMI He	5148006	0.07	5045699	102.03	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-8-A
Data File Name	333SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:10:28-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.002	ppb	0.002	3967.09	2	2000	
Na	23	3	45	26076.770	ppb	26076.770	1.08	2271678	400000	
Mg	24	3	45	19048.080	ppb	19048.080	0.71	877054	400000	
Al	27	3	45	1.959	ppb	1.959	205.35	150	400000	
K	39	3	45	7454.233	ppb	7454.233	1.24	301444	400000	
Ca	40	2	45	62445.260	ppb	62445.260	1.46	29075250	400000	
V	51	3	72	19.490	ppb	19.490	2.74	9879	2000	
Cr	52	3	72	2.631	ppb	2.631	5.03	3709	5000	
Mn	55	3	72	0.501	ppb	0.501	17.66	312	10000	
Fe	56	2	72	3.960	ppb	3.960	63.95	48718	10000	
Co	59	3	72	0.062	ppb	0.062	26.33	115	2000	
Ni	60	3	72	0.512	ppb	0.512	31.05	603	5000	
Cu	63	3	72	0.130	ppb	0.130	60.58	381	5000	
Zn	66	3	72	3.181	ppb	3.181	7.78	513	5000	
As	75	3	72	6.291	ppb	6.291	14.62	591	2000	
Se	78	2	72	6.383	ppb	6.383	6.26	299	2000	
Sr	88	3	72	355.755	ppb	355.755	0.75	151313	4000	
Mo	95	3	115	6.161	ppb	6.161	4.19	2497	2000	
Ag	107	3	115	0.000	ppb	0.000	4477.50	15	100	
Cd	111	3	115	0.026	ppb	0.026	152.94	7	2000	
Sn	120	3	115	-0.151	ppb	-0.151	-101.12	450	2000	
Sb	121	3	115	0.282	ppb	0.282	31.82	208	1000	
Ba	137	3	115	77.981	ppb	77.981	3.56	15958	5000	
Tl	205	3	193	0.004	ppb	0.004	75.46	113	2000	
(Pb)	206	3	193	-0.062	ppb	-0.062	-36.06	168	100	
(Pb)	207	3	193	-0.063	ppb	-0.063	-88.23	278	100	
Pb	208	3	193	-0.043	ppb	-0.043	-64.39	843	5000	
Th	232	3	193	0.045	ppb	0.045	383.13	6362	2000	
U	238	3	193	9.559	ppb	9.559	3.04	41443	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3581670	0.64	3535116	101.32	60	120	
Sc (IS)	45	3	HMI He	503490	0.40	505423	99.62	60	120	
Ge Internal standard	72	2	HMI H2	2251867	1.13	2359166	95.45	60	120	
Ge Internal standard	72	3	HMI He	645004	1.26	680743	94.75	60	120	
In Internal Standard	115	3	HMI He	2339141	1.38	2361818	99.04	60	120	
Ir (IS)	193	3	HMI He	5100233	1.92	5045699	101.08	60	120	

Sample Report

Sample Table

Sample Name	280-174974-A-11-A
Data File Name	334SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:12:19-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608636 6020b
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.003	ppb	0.003	2838.65	2	2000	
Na	23	3	45	26306.467	ppb	26306.467	0.34	2290654	400000	
Mg	24	3	45	19365.692	ppb	19365.692	1.56	891366	400000	
Al	27	3	45	75.043	ppb	75.043	4.24	1411	400000	
K	39	3	45	7533.880	ppb	7533.880	0.61	304298	400000	
Ca	40	2	45	65545.557	ppb	65545.557	1.71	30103205	400000	
V	51	3	72	19.871	ppb	19.871	0.47	10005	2000	
Cr	52	3	72	2.512	ppb	2.512	5.26	3617	5000	
Mn	55	3	72	3.131	ppb	3.131	4.22	1129	10000	
Fe	56	2	72	83.540	ppb	83.540	7.66	144858	10000	
Co	59	3	72	0.089	ppb	0.089	23.43	142	2000	
Ni	60	3	72	0.607	ppb	0.607	27.69	626	5000	
Cu	63	3	72	0.331	ppb	0.331	22.12	531	5000	
Zn	66	3	72	3.119	ppb	3.119	23.51	503	5000	
As	75	3	72	5.994	ppb	5.994	4.61	561	2000	
Se	78	2	72	6.587	ppb	6.587	10.96	297	2000	
Sr	88	3	72	362.698	ppb	362.698	0.94	153387	4000	
Mo	95	3	115	6.254	ppb	6.254	4.27	2582	2000	
Ag	107	3	115	0.001	ppb	0.001	197.92	17	100	
Cd	111	3	115	0.000	ppb	0.000	-45829.80	2	2000	
Sn	120	3	115	-0.225	ppb	-0.225	-24.57	411	2000	
Sb	121	3	115	0.380	ppb	0.380	5.12	273	1000	
Ba	137	3	115	79.515	ppb	79.515	1.23	16582	5000	
Tl	205	3	193	0.003	ppb	0.003	183.23	110	2000	
(Pb)	206	3	193	0.109	ppb	0.109	23.10	342	100	
(Pb)	207	3	193	0.131	ppb	0.131	13.67	455	100	
Pb	208	3	193	0.148	ppb	0.148	11.16	1628	5000	
Th	232	3	193	-0.214	ppb	-0.214	-33.68	5329	2000	
U	238	3	193	9.860	ppb	9.860	3.66	42834	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3533063	2.56	3535116	99.94	60	120	
Sc (IS)	45	3	HMI He	503287	0.64	505423	99.58	60	120	
Ge Internal standard	72	2	HMI H2	2171550	2.55	2359166	92.05	60	120	
Ge Internal standard	72	3	HMI He	641289	0.91	680743	94.20	60	120	
In Internal Standard	115	3	HMI He	2383054	0.23	2361818	100.90	60	120	
Ir (IS)	193	3	HMI He	5116730	2.66	5045699	101.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	335_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:14:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	54.120	ppb	6.694	1801	50	108.2	90	110	
Na	23	3	45	50452.994	ppb	1.552	4355247	51000	98.9	90	110	
Mg	24	3	45	10781.619	ppb	1.082	493292	11000	98.0	90	110	
Al	27	3	45	1033.590	ppb	4.721	17846	1000	103.4	90	110	
K	39	3	45	10819.057	ppb	0.744	424004	11000	98.4	90	110	
Ca	40	2	45	10868.234	ppb	0.747	4895578	11000	98.8	90	110	
V	51	3	72	56.276	ppb	2.674	26188	50	112.6	90	110	>+\-10%
Cr	52	3	72	57.404	ppb	0.354	34368	50	114.8	90	110	>+\-10%
Mn	55	3	72	55.969	ppb	3.458	16857	50	111.9	90	110	>+\-10%
Fe	56	2	72	1129.478	ppb	2.582	1374235	1000	112.9	90	110	>+\-10%
Co	59	3	72	56.040	ppb	3.462	54003	50	112.1	90	110	>+\-10%
Ni	60	3	72	56.430	ppb	1.810	15561	50	112.9	90	110	>+\-10%
Cu	63	3	72	56.674	ppb	0.805	41309	50	113.3	90	110	>+\-10%
Zn	66	3	72	59.353	ppb	2.547	6918	50	118.7	90	110	>+\-10%
As	75	3	72	57.755	ppb	6.043	4948	50	115.5	90	110	>+\-10%
Se	78	2	72	58.047	ppb	2.898	2508	50	116.1	90	110	>+\-10%
Sr	88	3	72	114.771	ppb	2.584	46534	100	114.8	90	110	>+\-10%
Mo	95	3	115	53.225	ppb	1.592	21126	50	106.4	90	110	
Ag	107	3	115	52.295	ppb	0.697	70507	50	104.6	90	110	
Cd	111	3	115	53.499	ppb	0.921	10347	50	107.0	90	110	
Sn	120	3	115	52.098	ppb	0.835	32106	50	104.2	90	110	
Sb	121	3	115	51.781	ppb	1.022	31725	50	103.6	90	110	
Ba	137	3	115	52.532	ppb	2.022	10642	50	105.1	90	110	
Tl	205	3	193	51.861	ppb	2.822	158066	50	103.7	90	110	
(Pb)	206	3	193	53.327	ppb	3.782	53924	50	106.7	90	110	
(Pb)	207	3	193	52.736	ppb	1.646	48079	50	105.5	90	110	
Pb	208	3	193	52.949	ppb	3.191	216774	50	105.9	90	110	
Th	232	3	193	52.274	ppb	3.255	220836	50	104.5	90	110	
U	238	3	193	53.630	ppb	3.325	226614	50	107.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3459263	1.50	3535116	97.85	60	120	
Sc (IS)	45	3	HMI He	500282	1.07	505423	98.98	60	120	
Ge Internal standard	72	2	HMI H2	2083633	1.32	2359166	88.32	60	120	
Ge Internal standard	72	3	HMI He	614770	1.51	680743	90.31	60	120	
In Internal Standard	115	3	HMI He	2312597	0.52	2361818	97.92	60	120	
Ir (IS)	193	3	HMI He	5101183	3.14	5045699	101.10	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	336_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:37:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	298CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	-0.046	ppb	0.0	0	0.5	
Na	23	3	45	18.482	ppb	15.7	14616	25	
Mg	24	3	45	0.917	ppb	85.3	194	25	
Al	27	3	45	-2.446	ppb	-50.7	73	15	
K	39	3	45	-9.592	ppb	-282.6	23370	50	
V	51	3	72	0.402	ppb	28.7	733	1	
Cr	52	3	72	0.149	ppb	53.1	2199	1	
Mn	55	3	72	0.152	ppb	74.1	198	0.5	
Co	59	3	72	-0.001	ppb	-1436.7	50	0.5	
Ni	60	3	72	0.467	ppb	89.6	580	1	
Cu	63	3	72	-0.075	ppb	-28.8	222	1	
Zn	66	3	72	0.452	ppb	43.4	182	5	
As	75	3	72	0.158	ppb	77.4	42	1	
Se	78	2	72	0.017	ppb	157.0	1	1	
Sr	88	3	72	0.016	ppb	266.3	30	0.5	
Mo	95	3	115	0.055	ppb	45.0	48	0.5	
Ag	107	3	115	-0.001	ppb	-385.2	13	1	
Cd	111	3	115	0.000	ppb	3875.9	2	0.5	
Sn	120	3	115	0.158	ppb	43.6	631	1	
Sb	121	3	115	0.029	ppb	202.8	50	0.6	
Ba	137	3	115	0.045	ppb	134.9	42	0.5	
Tl	205	3	193	0.010	ppb	146.2	128	0.1	
(Pb)	206	3	193	-0.034	ppb	-60.2	192	1	
(Pb)	207	3	193	0.069	ppb	121.4	388	1	
Pb	208	3	193	-0.007	ppb	-302.5	965	0.5	
Th	232	3	193	1.351	ppb	16.3	11455	1	>RL
U	238	3	193	0.013	ppb	138.7	1293	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3458643	1.28	3535116	97.84	60	120	
Sc (IS)	45	3	HMI He	499504	1.42	505423	98.83	60	120	
Ge Internal standard	72	2	HMI H2	2143080	0.58	2359166	90.84	60	120	
Ge Internal standard	72	3	HMI He	632646	0.84	680743	92.93	60	120	
In Internal Standard	115	3	HMI He	2314694	1.93	2361818	98.00	60	120	
Ir (IS)	193	3	HMI He	4978249	0.38	5045699	98.66	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	337SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:38:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.001	ppb	-0.001	-6949.53	2	2000	
Na	23	3	45	-13.604	ppb	-13.604	-34.99	13210	400000	
Mg	24	3	45	-0.428	ppb	-0.428	-174.02	147	400000	
Al	27	3	45	-2.714	ppb	-2.714	-11.90	77	400000	
K	39	3	45	-59.795	ppb	-59.795	-35.80	23961	400000	
Ca	40	2	45	-7.416	ppb	-7.416	-16.43	7299	400000	
V	51	3	72	-0.656	ppb	-0.656	-8.53	260	2000	
Cr	52	3	72	-1.058	ppb	-1.058	-7.68	1648	5000	
Mn	55	3	72	-0.070	ppb	-0.070	-75.79	143	10000	
Fe	56	2	72	-10.162	ppb	-10.162	-17.81	32330	10000	
Co	59	3	72	-0.012	ppb	-0.012	-99.78	43	2000	
Ni	60	3	72	-0.512	ppb	-0.512	-18.46	340	5000	
Cu	63	3	72	-0.152	ppb	-0.152	-28.84	180	5000	
Zn	66	3	72	-0.214	ppb	-0.214	-37.31	113	5000	
As	75	3	72	-0.127	ppb	-0.127	-24.12	18	2000	
Se	78	2	72	0.054	ppb	0.054	43.54	3	2000	
Sr	88	3	72	0.043	ppb	0.043	93.10	45	4000	
Mo	95	3	115	0.004	ppb	0.004	367.38	32	2000	
Ag	107	3	115	0.005	ppb	0.005	215.74	23	100	
Cd	111	3	115	0.022	ppb	0.022	56.89	7	2000	
Sn	120	3	115	-0.619	ppb	-0.619	-6.59	180	2000	
Sb	121	3	115	-0.014	ppb	-0.014	-36.35	27	1000	
Ba	137	3	115	-0.109	ppb	-0.109	-13.04	12	5000	
Tl	205	3	193	0.006	ppb	0.006	222.17	128	2000	
(Pb)	206	3	193	-0.123	ppb	-0.123	-3.89	117	100	
(Pb)	207	3	193	-0.071	ppb	-0.071	-46.24	295	100	
Pb	208	3	193	-0.083	ppb	-0.083	-14.35	741	5000	
Th	232	3	193	-0.563	ppb	-0.563	-10.79	4220	2000	
U	238	3	193	0.007	ppb	0.007	200.85	1418	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3851345	1.74	3535116	108.95	60	120	
Sc (IS)	45	3	HMI He	556317	0.64	505423	110.07	60	120	
Ge Internal standard	72	2	HMI H2	2370777	0.43	2359166	100.49	60	120	
Ge Internal standard	72	3	HMI He	694862	0.66	680743	102.07	60	120	
In Internal Standard	115	3	HMI He	2591788	2.54	2361818	109.74	60	120	
Ir (IS)	193	3	HMI He	5564197	2.49	5045699	110.28	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	338SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:40:43-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-13.286	ppb	-13.286	-6.22	13229	400000	
Mg	24	3	45	-0.557	ppb	-0.557	-105.67	140	400000	
Al	27	3	45	-1.836	ppb	-1.836	-44.61	93	400000	
K	39	3	45	-70.544	ppb	-70.544	-32.76	23503	400000	
Ca	40	2	45	-7.131	ppb	-7.131	-6.42	7433	400000	
V	51	3	72	-0.718	ppb	-0.718	-11.37	225	2000	
Cr	52	3	72	-0.947	ppb	-0.947	-18.84	1693	5000	
Mn	55	3	72	0.027	ppb	0.027	414.14	173	10000	
Fe	56	2	72	-8.185	ppb	-8.185	-14.03	34404	10000	
Co	59	3	72	-0.016	ppb	-0.016	-102.18	38	2000	
Ni	60	3	72	-0.138	ppb	-0.138	-111.96	446	5000	
Cu	63	3	72	-0.077	ppb	-0.077	-75.14	238	5000	
Zn	66	3	72	-0.333	ppb	-0.333	-34.44	97	5000	
As	75	3	72	-0.177	ppb	-0.177	-17.41	13	2000	
Se	78	2	72	0.042	ppb	0.042	152.29	3	2000	
Sr	88	3	72	0.022	ppb	0.022	103.29	35	4000	
Mo	95	3	115	-0.025	ppb	-0.025	-66.99	18	2000	
Ag	107	3	115	0.002	ppb	0.002	145.04	20	100	
Cd	111	3	115	0.000	ppb	0.000	-2955.06	2	2000	
Sn	120	3	115	-0.664	ppb	-0.664	-5.92	148	2000	
Sb	121	3	115	-0.026	ppb	-0.026	-44.21	18	1000	
Ba	137	3	115	-0.086	ppb	-0.086	-41.60	17	5000	
Tl	205	3	193	0.007	ppb	0.007	197.32	130	2000	
(Pb)	206	3	193	-0.103	ppb	-0.103	-6.02	135	100	
(Pb)	207	3	193	-0.053	ppb	-0.053	-156.38	303	100	
Pb	208	3	193	-0.079	ppb	-0.079	-28.13	736	5000	
Th	232	3	193	-0.566	ppb	-0.566	-4.07	4085	2000	
U	238	3	193	0.022	ppb	0.022	69.33	1446	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3848602	1.61	3535116	108.87	60	120	
Sc (IS)	45	3	HMI He	555943	0.34	505423	110.00	60	120	
Ge Internal standard	72	2	HMI H2	2329975	1.16	2359166	98.76	60	120	
Ge Internal standard	72	3	HMI He	684858	0.75	680743	100.60	60	120	
In Internal Standard	115	3	HMI He	2563587	1.97	2361818	108.54	60	120	
Ir (IS)	193	3	HMI He	5399902	1.61	5045699	107.02	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	339SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:42:33-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.046	ppb	0.046	174.15	3	2000	
Na	23	3	45	-10.440	ppb	-10.440	-48.24	13290	400000	
Mg	24	3	45	0.356	ppb	0.356	291.93	184	400000	
Al	27	3	45	-3.001	ppb	-3.001	-31.49	70	400000	
K	39	3	45	-48.934	ppb	-48.934	-112.26	24021	400000	
Ca	40	2	45	-6.731	ppb	-6.731	-9.53	7510	400000	
V	51	3	72	-0.677	ppb	-0.677	-15.47	245	2000	
Cr	52	3	72	-0.947	ppb	-0.947	-9.90	1689	5000	
Mn	55	3	72	-0.042	ppb	-0.042	-173.40	150	10000	
Fe	56	2	72	-8.029	ppb	-8.029	-30.79	34906	10000	
Co	59	3	72	-0.025	ppb	-0.025	-28.72	28	2000	
Ni	60	3	72	-0.285	ppb	-0.285	-71.61	401	5000	
Cu	63	3	72	-0.134	ppb	-0.134	-23.03	192	5000	
Zn	66	3	72	-0.173	ppb	-0.173	-96.37	117	5000	
As	75	3	72	-0.106	ppb	-0.106	-131.94	20	2000	
Se	78	2	72	0.000	ppb	0.000	10604.11	1	2000	
Sr	88	3	72	0.018	ppb	0.018	126.82	33	4000	
Mo	95	3	115	-0.021	ppb	-0.021	-107.25	20	2000	
Ag	107	3	115	-0.002	ppb	-0.002	-187.61	13	100	
Cd	111	3	115	0.007	ppb	0.007	379.75	3	2000	
Sn	120	3	115	-0.651	ppb	-0.651	-7.43	157	2000	
Sb	121	3	115	-0.024	ppb	-0.024	-31.10	20	1000	
Ba	137	3	115	-0.064	ppb	-0.064	-40.26	22	5000	
Tl	205	3	193	0.005	ppb	0.005	201.30	122	2000	
(Pb)	206	3	193	-0.093	ppb	-0.093	-24.41	143	100	
(Pb)	207	3	193	-0.025	ppb	-0.025	-167.99	327	100	
Pb	208	3	193	-0.069	ppb	-0.069	-17.67	770	5000	
Th	232	3	193	-0.573	ppb	-0.573	-5.09	4010	2000	
U	238	3	193	0.009	ppb	0.009	352.13	1371	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3785607	0.48	3535116	107.09	60	120	
Sc (IS)	45	3	HMI He	547295	0.68	505423	108.28	60	120	
Ge Internal standard	72	2	HMI H2	2350047	0.81	2359166	99.61	60	120	
Ge Internal standard	72	3	HMI He	683098	0.53	680743	100.35	60	120	
In Internal Standard	115	3	HMI He	2569814	0.33	2361818	108.81	60	120	
Ir (IS)	193	3	HMI He	5337440	0.65	5045699	105.78	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	340SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:44:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-15.664	ppb	-15.664	-20.26	12926	400000	
Mg	24	3	45	0.249	ppb	0.249	479.97	180	400000	
Al	27	3	45	-4.627	ppb	-4.627	-19.58	40	400000	
K	39	3	45	-63.196	ppb	-63.196	-61.73	23664	400000	
Ca	40	2	45	-7.309	ppb	-7.309	-6.04	7263	400000	
V	51	3	72	-0.732	ppb	-0.732	-12.97	220	2000	
Cr	52	3	72	-0.826	ppb	-0.826	-21.69	1789	5000	
Mn	55	3	72	-0.063	ppb	-0.063	-99.48	145	10000	
Fe	56	2	72	-7.348	ppb	-7.348	-43.65	35535	10000	
Co	59	3	72	-0.024	ppb	-0.024	-38.99	30	2000	
Ni	60	3	72	-0.238	ppb	-0.238	-24.98	421	5000	
Cu	63	3	72	-0.091	ppb	-0.091	-22.29	230	5000	
Zn	66	3	72	-0.392	ppb	-0.392	-26.91	90	5000	
As	75	3	72	-0.179	ppb	-0.179	-17.23	13	2000	
Se	78	2	72	0.097	ppb	0.097	23.43	5	2000	
Sr	88	3	72	0.032	ppb	0.032	119.29	40	4000	
Mo	95	3	115	-0.036	ppb	-0.036	-67.28	13	2000	
Ag	107	3	115	0.002	ppb	0.002	126.49	20	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.648	ppb	-0.648	-9.41	158	2000	
Sb	121	3	115	-0.029	ppb	-0.029	-51.33	17	1000	
Ba	137	3	115	-0.026	ppb	-0.026	-155.86	30	5000	
Tl	205	3	193	0.002	ppb	0.002	209.05	113	2000	
(Pb)	206	3	193	-0.105	ppb	-0.105	-7.73	133	100	
(Pb)	207	3	193	-0.060	ppb	-0.060	-55.95	300	100	
Pb	208	3	193	-0.081	ppb	-0.081	-13.01	735	5000	
Th	232	3	193	-0.593	ppb	-0.593	-7.11	4005	2000	
U	238	3	193	0.006	ppb	0.006	398.73	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3805921	1.18	3535116	107.66	60	120	
Sc (IS)	45	3	HMI He	552690	0.34	505423	109.35	60	120	
Ge Internal standard	72	2	HMI H2	2334660	1.31	2359166	98.96	60	120	
Ge Internal standard	72	3	HMI He	692445	0.68	680743	101.72	60	120	
In Internal Standard	115	3	HMI He	2565285	2.70	2361818	108.61	60	120	
Ir (IS)	193	3	HMI He	5449448	1.24	5045699	108.00	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	341SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:47:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	298CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	-0.046	ppb	-0.046	0.00	0	2000	
Na	23	3	45	-9.391	ppb	-9.391	-64.39	13564	400000	
Mg	24	3	45	0.039	ppb	0.039	3644.51	170	400000	
Al	27	3	45	-3.937	ppb	-3.937	-32.79	53	400000	
K	39	3	45	-56.036	ppb	-56.036	-52.87	24021	400000	
Ca	40	2	45	-7.167	ppb	-7.167	-9.44	7419	400000	
V	51	3	72	-0.820	ppb	-0.820	-5.11	178	2000	
Cr	52	3	72	-0.461	ppb	-0.461	-53.74	2059	5000	
Mn	55	3	72	0.016	ppb	0.016	570.63	175	10000	
Fe	56	2	72	-1.964	ppb	-1.964	-146.35	43489	10000	
Co	59	3	72	-0.007	ppb	-0.007	-180.66	50	2000	
Ni	60	3	72	-0.156	ppb	-0.156	-80.88	455	5000	
Cu	63	3	72	-0.102	ppb	-0.102	-17.26	225	5000	
Zn	66	3	72	-0.305	ppb	-0.305	-48.14	103	5000	
As	75	3	72	-0.164	ppb	-0.164	-55.07	15	2000	
Se	78	2	72	0.027	ppb	0.027	149.81	2	2000	
Sr	88	3	72	0.009	ppb	0.009	246.74	30	4000	
Mo	95	3	115	-0.018	ppb	-0.018	-94.45	22	2000	
Ag	107	3	115	0.007	ppb	0.007	121.47	27	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.647	ppb	-0.647	-2.14	160	2000	
Sb	121	3	115	-0.024	ppb	-0.024	-31.72	20	1000	
Ba	137	3	115	-0.057	ppb	-0.057	-60.45	23	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-318.90	102	2000	
(Pb)	206	3	193	-0.116	ppb	-0.116	-9.62	123	100	
(Pb)	207	3	193	-0.069	ppb	-0.069	-28.52	295	100	
Pb	208	3	193	-0.083	ppb	-0.083	-14.27	738	5000	
Th	232	3	193	-0.594	ppb	-0.594	-4.03	4054	2000	
U	238	3	193	0.008	ppb	0.008	163.58	1413	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3851813	1.51	3535116	108.96	60	120	
Sc (IS)	45	3	HMI He	554184	1.24	505423	109.65	60	120	
Ge Internal standard	72	2	HMI H2	2377937	0.33	2359166	100.80	60	120	
Ge Internal standard	72	3	HMI He	706006	0.96	680743	103.71	60	120	
In Internal Standard	115	3	HMI He	2581239	1.04	2361818	109.29	60	120	
Ir (IS)	193	3	HMI He	5521502	0.74	5045699	109.43	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	342CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T10:49:28-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	13537	0.02
Mg	24	45	3	HMI He	133	17.17
Al	27	45	3	HMI He	80	94.95
K	39	45	3	HMI He	23062	0.02
Ca	40	45	2	HMI H2	9519	0.02
V	51	72	3	HMI He	633	2.56
Cr	52	72	3	HMI He	2137	0.35
Mn	55	72	3	HMI He	183	13.51
Fe	56	72	2	HMI H2	34036	0.03
Co	59	72	3	HMI He	32	160.36
Ni	60	72	3	HMI He	421	2.11
Cu	63	72	3	HMI He	252	1.21
Zn	66	72	3	HMI He	132	9.28
As	75	72	3	HMI He	60	100.19
Se	78	72	2	HMI H2	1	6495.19
(Se)	78	72	3	HMI He	33	93.70
Sr	88	72	3	HMI He	15	384.99
Mo	95	115	3	HMI He	27	226.17
Ag	107	115	3	HMI He	15	0.00
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	506	3.03
Sb	121	115	3	HMI He	27	107.43
Ba	137	115	3	HMI He	40	54.18
Tl	205	193	3	HMI He	100	18.04
(Pb)	206	193	3	HMI He	172	10.78
(Pb)	207	193	3	HMI He	282	5.25
Pb	208	193	3	HMI He	851	0.85
Th	232	193	3	HMI He	6263	0.09
U	238	193	3	HMI He	1218	0.37

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3473788	3.33
Sc (IS)	45	3	HMI He	498630	0.87
Ge Internal standard	72	2	HMI H2	2241871	1.81
Ge Internal standard	72	3	HMI He	647352	0.70
In Internal Standard	115	3	HMI He	2356036	1.72
Ir (IS)	193	3	HMI He	4999588	0.98

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	343CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T10:51:15-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	342CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	8693007	0.00
Mg	24	45	3	HMI He	928288	0.00
Al	27	45	3	HMI He	157	35.09
K	39	45	3	HMI He	772526	0.00
V	51	72	3	HMI He	620	1.17
Cr	52	72	3	HMI He	2432	0.17
Mn	55	72	3	HMI He	280	4.47
Co	59	72	3	HMI He	68	40.57
Ni	60	72	3	HMI He	560	0.97
Cu	63	72	3	HMI He	347	0.64
Zn	66	72	3	HMI He	257	2.19
As	75	72	3	HMI He	45	74.09
Se	78	72	2	HMI H2	2	8660.25
(Se)	78	72	3	HMI He	22	325.48
Sr	88	72	3	HMI He	238	3.09
Mo	95	115	3	HMI He	48	24.71
Ag	107	115	3	HMI He	27	177.05
Cd	111	115	3	HMI He	2	10392.30
Sn	120	115	3	HMI He	661	2.60
Sb	121	115	3	HMI He	33	113.31
Ba	137	115	3	HMI He	138	18.36
Tl	205	193	3	HMI He	130	7.83
(Pb)	206	193	3	HMI He	242	2.16
(Pb)	207	193	3	HMI He	376	1.47
Pb	208	193	3	HMI He	1091	0.09
Th	232	193	3	HMI He	5192	0.16
U	238	193	3	HMI He	1361	0.12

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3414129	0.37	3473788	98.28	60	120	
Sc (IS)	45	3	HMI He	503279	0.64	498630	100.93	60	120	
Ge Internal standard	72	2	HMI H2	2085309	2.25	2241871	93.02	60	120	
Ge Internal standard	72	3	HMI He	612711	1.17	647352	94.65	60	120	
In Internal Standard	115	3	HMI He	2393601	2.81	2356036	101.59	60	120	
Ir (IS)	193	3	HMI He	5033952	1.74	4999588	100.69	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-7691034
Data File Name	344CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T10:53:03-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	CAL
ISTD Ref File Name	342CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3545	0.02
Na	23	45	3	HMI He	187074	0.00
Mg	24	45	3	HMI He	90081	0.00
Al	27	45	3	HMI He	34560	0.00
K	39	45	3	HMI He	96187	0.00
V	51	72	3	HMI He	50132	0.00
Cr	52	72	3	HMI He	64021	0.00
Mn	55	72	3	HMI He	32544	0.01
Co	59	72	3	HMI He	105629	0.00
Ni	60	72	3	HMI He	29919	0.01
Cu	63	72	3	HMI He	79384	0.00
Zn	66	72	3	HMI He	12920	0.02
As	75	72	3	HMI He	9334	0.04
Se	78	72	2	HMI H2	4743	0.01
(Se)	78	72	3	HMI He	593	0.50
Sr	88	72	3	HMI He	88301	0.00
Mo	95	115	3	HMI He	39969	0.00
Ag	107	115	3	HMI He	136047	0.00
Cd	111	115	3	HMI He	19710	0.01
Sn	120	115	3	HMI He	63402	0.00
Sb	121	115	3	HMI He	62224	0.00
Ba	137	115	3	HMI He	20180	0.01
Tl	205	193	3	HMI He	306600	0.00
(Pb)	206	193	3	HMI He	103769	0.00
(Pb)	207	193	3	HMI He	89872	0.00
Pb	208	193	3	HMI He	414964	0.00
Th	232	193	3	HMI He	420230	0.00
U	238	193	3	HMI He	429581	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3480266	1.17	3473788	100.19	60	120	
Sc (IS)	45	3	HMI He	504412	0.09	498630	101.16	60	120	
Ge Internal standard	72	2	HMI H2	2242215	2.27	2241871	100.02	60	120	
Ge Internal standard	72	3	HMI He	649916	1.04	647352	100.40	60	120	
In Internal Standard	115	3	HMI He	2372947	2.94	2356036	100.72	60	120	
Ir (IS)	193	3	HMI He	5069595	1.85	4999588	101.40	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-7691037
Data File Name	345_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:54:50-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	41.484	ppb	2.917	1458	40	103.7	90	110	
Na	23	3	45	12909.197	ppb	2.551	1137641	12800	100.9	90	110	
Mg	24	3	45	4618.014	ppb	0.637	215176	4800	96.2	90	110	
Al	27	3	45	822.352	ppb	1.609	14272	800	102.8	90	110	
K	39	3	45	4655.089	ppb	1.708	198352	4800	97.0	90	110	
Ca	40	2	45	4709.401	ppb	1.416	2226359	4800	98.1	90	110	
V	51	3	72	42.066	ppb	2.040	20837	40	105.2	90	110	
Cr	52	3	72	42.074	ppb	3.134	27362	40	105.2	90	110	
Mn	55	3	72	43.065	ppb	4.336	13708	40	107.7	90	110	
Fe	56	2	72	821.974	ppb	2.155	1097251	800	102.7	90	110	
Co	59	3	72	40.742	ppb	1.152	41817	40	101.9	90	110	
Ni	60	3	72	40.805	ppb	2.749	12096	40	102.0	90	110	
Cu	63	3	72	43.576	ppb	2.532	33733	40	108.9	90	110	
Zn	66	3	72	82.154	ppb	1.848	10330	80	102.7	90	110	
As	75	3	72	38.578	ppb	5.399	3532	40	96.4	90	110	
Se	78	2	72	42.293	ppb	2.035	1967	40	105.7	90	110	
Sr	88	3	72	123.523	ppb	3.430	52961	120	102.9	90	110	
Mo	95	3	115	40.524	ppb	1.235	16055	40	101.3	90	110	
Ag	107	3	115	82.659	ppb	1.882	111347	80	103.3	90	110	
Cd	111	3	115	39.675	ppb	3.190	7743	40	99.2	90	110	
Sn	120	3	115	40.434	ppb	1.093	25689	40	101.1	90	110	
Sb	121	3	115	41.010	ppb	0.451	25275	40	102.5	90	110	
Ba	137	3	115	40.112	ppb	0.694	8042	40	100.3	90	110	
Tl	205	3	193	40.599	ppb	2.474	123694	40	101.5	90	110	
(Pb)	206	3	193	41.032	ppb	3.365	42386	40	102.6	90	110	
(Pb)	207	3	193	41.014	ppb	2.299	36778	40	102.5	90	110	
Pb	208	3	193	41.074	ppb	3.449	169760	40	102.7	90	110	
Th	232	3	193	82.088	ppb	2.226	343738	80	102.6	90	110	
U	238	3	193	44.049	ppb	3.397	188631	40	110.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508656	1.01	3473788	101.00	60	120	
Sc (IS)	45	3	HMI He	504927	1.13	498630	101.26	60	120	
Ge Internal standard	72	2	HMI H2	2196933	0.58	2241871	98.00	60	120	
Ge Internal standard	72	3	HMI He	631209	1.83	647352	97.51	60	120	
In Internal Standard	115	3	HMI He	2348519	2.06	2356036	99.68	60	120	
Ir (IS)	193	3	HMI He	5036455	3.30	4999588	100.74	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	346_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:56:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	47.493	ppb	2.210	1683	50	95.0	90	110	
Na	23	3	45	49891.766	ppb	2.101	4292460	51000	97.8	90	110	
Mg	24	3	45	10528.717	ppb	1.078	482959	11000	95.7	90	110	
Al	27	3	45	1035.871	ppb	1.149	17686	1000	103.6	90	110	
K	39	3	45	10644.494	ppb	1.963	416994	11000	96.8	90	110	
Ca	40	2	45	10462.540	ppb	0.428	4890440	11000	95.1	90	110	
V	51	3	72	53.802	ppb	1.421	26330	50	107.6	90	110	
Cr	52	3	72	52.350	ppb	1.358	33352	50	104.7	90	110	
Mn	55	3	72	52.786	ppb	1.779	16673	50	105.6	90	110	
Fe	56	2	72	1053.226	ppb	2.714	1361550	1000	105.3	90	110	
Co	59	3	72	51.737	ppb	1.563	52792	50	103.5	90	110	
Ni	60	3	72	53.289	ppb	1.888	15584	50	106.6	90	110	
Cu	63	3	72	53.477	ppb	0.592	41114	50	107.0	90	110	
Zn	66	3	72	53.111	ppb	2.775	6685	50	106.2	90	110	
As	75	3	72	54.409	ppb	2.021	4930	50	108.8	90	110	
Se	78	2	72	53.686	ppb	0.814	2434	50	107.4	90	110	
Sr	88	3	72	106.256	ppb	2.789	45306	100	106.3	90	110	
Mo	95	3	115	53.109	ppb	2.353	21229	50	106.2	90	110	
Ag	107	3	115	51.023	ppb	2.143	69392	50	102.0	90	110	
Cd	111	3	115	52.246	ppb	1.932	10294	50	104.5	90	110	
Sn	120	3	115	49.458	ppb	0.591	31603	50	98.9	90	110	
Sb	121	3	115	51.096	ppb	1.187	31782	50	102.2	90	110	
Ba	137	3	115	50.503	ppb	3.473	10209	50	101.0	90	110	
Tl	205	3	193	50.389	ppb	3.406	157073	50	100.8	90	110	
(Pb)	206	3	193	49.254	ppb	1.003	52051	50	98.5	90	110	
(Pb)	207	3	193	50.922	ppb	2.255	46651	50	101.8	90	110	
Pb	208	3	193	49.899	ppb	0.343	210923	50	99.8	90	110	
Th	232	3	193	52.397	ppb	1.324	226865	50	104.8	90	110	
U	238	3	193	50.099	ppb	0.849	219429	50	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3477165	0.46	3473788	100.10	60	120	
Sc (IS)	45	3	HMI He	497336	1.96	498630	99.74	60	120	
Ge Internal standard	72	2	HMI H2	2142171	0.63	2241871	95.55	60	120	
Ge Internal standard	72	3	HMI He	627603	1.26	647352	96.95	60	120	
In Internal Standard	115	3	HMI He	2370598	0.84	2356036	100.62	60	120	
Ir (IS)	193	3	HMI He	5152062	1.18	4999588	103.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	347_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T10:58:26-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.142	ppb	98.6	5	0.5	
Na	23	3	45	28.259	ppb	38.0	16012	25	>RL
Mg	24	3	45	2.305	ppb	39.6	240	25	
Al	27	3	45	-0.411	ppb	-228.0	73	15	
K	39	3	45	0.058	ppb	44172.5	23136	50	
V	51	3	72	0.157	ppb	109.5	686	1	
Cr	52	3	72	0.151	ppb	38.1	2154	1	
Mn	55	3	72	0.154	ppb	90.9	225	0.5	
Co	59	3	72	0.022	ppb	45.5	53	0.5	
Ni	60	3	72	0.133	ppb	107.1	445	1	
Cu	63	3	72	0.038	ppb	9.2	272	1	
Zn	66	3	72	0.253	ppb	79.1	158	5	
As	75	3	72	-0.237	ppb	-27.4	37	1	
Se	78	2	72	0.001	ppb	5501.4	1	1	
Sr	88	3	72	0.064	ppb	56.3	42	0.5	
Mo	95	3	115	0.064	ppb	41.8	52	0.5	
Ag	107	3	115	0.018	ppb	101.3	38	1	
Cd	111	3	115	0.026	ppb	152.3	7	0.5	
Sn	120	3	115	0.395	ppb	22.9	746	1	
Sb	121	3	115	0.038	ppb	0.9	50	0.6	
Ba	137	3	115	0.094	ppb	41.4	58	0.5	
Tl	205	3	193	0.038	ppb	18.1	218	0.1	
(Pb)	206	3	193	-0.002	ppb	-537.7	172	1	
(Pb)	207	3	193	0.038	ppb	41.9	318	1	
Pb	208	3	193	0.001	ppb	2040.5	863	0.5	
Th	232	3	193	1.679	ppb	15.7	13255	1	>RL
U	238	3	193	0.032	ppb	109.5	1368	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3492159	1.36	3473788	100.53	60	120	
Sc (IS)	45	3	HMI He	500112	0.97	498630	100.30	60	120	
Ge Internal standard	72	2	HMI H2	2148438	0.46	2241871	95.83	60	120	
Ge Internal standard	72	3	HMI He	625308	0.13	647352	96.59	60	120	
In Internal Standard	115	3	HMI He	2337987	0.42	2356036	99.23	60	120	
Ir (IS)	193	3	HMI He	5050924	0.46	4999588	101.03	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	348LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:00:14-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.089	ppb	6.436	38	1	108.9	70	130	
Na	23	3	45	279.281	ppb	1.679	38287	300	93.1	70	130	
Mg	24	3	45	42.154	ppb	0.804	2112	50	84.3	70	130	
Al	27	3	45	42.915	ppb	4.862	828	50	85.8	70	130	
K	39	3	45	99.900	ppb	20.872	27297	120	83.2	70	130	
Ca	40	2	45	190.277	ppb	2.423	98640	200	95.1	70	130	
V	51	3	72	4.860	ppb	8.579	2966	5	97.2	70	130	
Cr	52	3	72	2.006	ppb	12.384	3302	2	100.3	70	130	
Mn	55	3	72	0.904	ppb	22.545	465	1	90.4	70	130	
Fe	56	2	72	48.534	ppb	6.278	94572	50	97.1	70	130	
Co	59	3	72	0.916	ppb	3.363	975	1	91.6	70	130	
Ni	60	3	72	1.740	ppb	12.001	913	2	87.0	70	130	
Cu	63	3	72	2.049	ppb	1.312	1828	2	102.5	70	130	
Zn	66	3	72	9.014	ppb	5.881	1253	10	90.1	70	130	
As	75	3	72	4.695	ppb	1.452	483	5	93.9	70	130	
Se	78	2	72	4.615	ppb	12.263	213	5	92.3	70	130	
Sr	88	3	72	4.552	ppb	1.011	1974	5	91.0	70	130	
Mo	95	3	115	1.831	ppb	7.624	763	2	91.6	70	130	
Ag	107	3	115	0.936	ppb	9.828	1296	1	93.6	70	130	
Cd	111	3	115	0.972	ppb	30.273	195	1	97.2	70	130	
Sn	120	3	115	8.236	ppb	1.497	5722	10	82.4	70	130	
Sb	121	3	115	1.877	ppb	7.779	1201	2	93.8	70	130	
Ba	137	3	115	0.778	ppb	13.728	198	1	77.8	70	130	
Tl	205	3	193	0.897	ppb	5.384	2891	1	89.7	70	130	
(Pb)	206	3	193	0.864	ppb	6.794	1085	1	86.4	70	130	
(Pb)	207	3	193	0.966	ppb	0.981	1168	1	96.6	70	130	
Pb	208	3	193	0.884	ppb	3.072	4590	1	88.4	70	130	
Th	232	3	193	1.356	ppb	25.078	12128	1	135.6	70	130	>+/-30%
U	238	3	193	0.942	ppb	6.537	5344	1	94.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3489651	1.02	3473788	100.46	60	120	
Sc (IS)	45	3	HMI He	508372	1.06	498630	101.95	60	120	
Ge Internal standard	72	2	HMI H2	2161929	1.79	2241871	96.43	60	120	
Ge Internal standard	72	3	HMI He	633715	0.13	647352	97.89	60	120	
In Internal Standard	115	3	HMI He	2385291	1.23	2356036	101.24	60	120	
Ir (IS)	193	3	HMI He	5141959	1.12	4999588	102.85	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-
Data File Name	349LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:02:03-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	28.720	ppb	14.485	16386	300	9.6	70	130	>+/-30%
Mg	24	3	45	1.496	ppb	41.687	207	50	3.0	70	130	>+/-30%
Al	27	3	45	1.834	ppb	209.543	113	50	3.7	70	130	>+/-30%
K	39	3	45	-12.738	ppb	-105.515	23139	120	-10.6	70	130	>+/-30%
Ca	40	2	45	13.993	ppb	2.332	16142	200	7.0	70	130	>+/-30%
V	51	3	72	-0.035	ppb	-309.222	610	5	-0.7	70	130	>+/-30%
Cr	52	3	72	0.005	ppb	5367.617	2121	2	0.2	70	130	>+/-30%
Mn	55	3	72	0.146	ppb	105.184	228	1	14.6	70	130	>+/-30%
Fe	56	2	72	3.243	ppb	67.449	36856	50	6.5	70	130	>+/-30%
Co	59	3	72	0.016	ppb	105.628	48	1	1.6	70	130	>+/-30%
Ni	60	3	72	0.202	ppb	56.442	476	2	10.1	70	130	>+/-30%
Cu	63	3	72	0.137	ppb	43.578	356	2	6.9	70	130	>+/-30%
Zn	66	3	72	1.028	ppb	40.659	260	10	10.3	70	130	>+/-30%
As	75	3	72	-0.138	ppb	-48.940	47	5	-2.8	70	130	>+/-30%
Se	78	2	72	0.031	ppb	167.029	3	5	0.6	70	130	>+/-30%
Sr	88	3	72	0.119	ppb	30.419	67	5	2.4	70	130	>+/-30%
Mo	95	3	115	0.017	ppb	92.746	33	2	0.9	70	130	>+/-30%
Ag	107	3	115	0.014	ppb	40.185	33	1	1.4	70	130	>+/-30%
Cd	111	3	115	0.009	ppb	172.167	3	1	0.9	70	130	>+/-30%
Sn	120	3	115	0.262	ppb	53.190	670	10	2.6	70	130	>+/-30%
Sb	121	3	115	0.040	ppb	69.908	52	2	2.0	70	130	>+/-30%
Ba	137	3	115	0.000	ppb	-66641.315	40	1	0.0	70	130	>+/-30%
Tl	205	3	193	0.009	ppb	80.691	133	1	0.9	70	130	>+/-30%
(Pb)	206	3	193	0.034	ppb	37.050	215	1	3.4	70	130	>+/-30%
(Pb)	207	3	193	0.062	ppb	84.894	350	1	6.2	70	130	>+/-30%
Pb	208	3	193	0.027	ppb	81.613	1001	1	2.7	70	130	>+/-30%
Th	232	3	193	3.115	ppb	3.124	19766	1	311.5	70	130	>+/-30%
U	238	3	193	0.022	ppb	131.233	1368	1	2.2	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3495425	1.73	3473788	100.62	60	120	
Sc (IS)	45	3	HMI He	510446	1.70	498630	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2156743	2.14	2241871	96.20	60	120	
Ge Internal standard	72	3	HMI He	641199	1.20	647352	99.05	60	120	
In Internal Standard	115	3	HMI He	2356977	1.88	2356036	100.04	60	120	
Ir (IS)	193	3	HMI He	5207217	2.29	4999588	104.15	60	120	

Sample Report

Sample Table

Sample Name	280-175190-A-1-A@10
Data File Name	350SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:03:54-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	15349.017	ppb	15349.017	1.14	1344754	400000	
Mg	24	3	45	2364.896	ppb	2364.896	1.10	109792	400000	
Al	27	3	45	4.816	ppb	4.816	50.76	163	400000	
K	39	3	45	545.655	ppb	545.655	5.30	43702	400000	
Ca	40	2	45	23163.276	ppb	23163.276	1.00	11053254	400000	
V	51	3	72	-0.030	ppb	-0.030	-368.25	615	2000	
Cr	52	3	72	-0.111	ppb	-0.111	-66.68	2056	5000	
Mn	55	3	72	23.910	ppb	23.910	2.56	7842	10000	
Fe	56	2	72	15.208	ppb	15.208	12.14	52753	10000	
Co	59	3	72	1.254	ppb	1.254	5.53	1343	2000	
Ni	60	3	72	1.369	ppb	1.369	36.34	818	5000	
Cu	63	3	72	0.083	ppb	0.083	38.45	315	5000	
Zn	66	3	72	5.822	ppb	5.822	3.66	868	5000	
As	75	3	72	-0.085	ppb	-0.085	-325.05	52	2000	
Se	78	2	72	7.363	ppb	7.363	2.34	342	2000	
Sr	88	3	72	470.202	ppb	470.202	1.18	205511	4000	
Mo	95	3	115	825.993	ppb	825.993	2.69	331876	2000	
Ag	107	3	115	0.013	ppb	0.013	12.66	33	100	
Cd	111	3	115	0.134	ppb	0.134	41.97	28	2000	
Sn	120	3	115	0.339	ppb	0.339	30.95	728	2000	
Sb	121	3	115	0.002	ppb	0.002	621.26	28	1000	
Ba	137	3	115	3.028	ppb	3.028	4.78	655	5000	
Tl	205	3	193	0.013	ppb	0.013	64.88	143	2000	
(Pb)	206	3	193	0.540	ppb	0.540	5.42	750	100	
(Pb)	207	3	193	0.495	ppb	0.495	6.22	745	100	
Pb	208	3	193	0.482	ppb	0.482	4.04	2924	5000	
Th	232	3	193	-0.245	ppb	-0.245	-13.73	5455	2000	
U	238	3	193	8.434	ppb	8.434	2.18	38181	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3553238	1.40	3473788	102.29	60	120	
Sc (IS)	45	3	HMI He	502853	1.66	498630	100.85	60	120	
Ge Internal standard	72	2	HMI H2	2186889	1.62	2241871	97.55	60	120	
Ge Internal standard	72	3	HMI He	643394	0.99	647352	99.39	60	120	
In Internal Standard	115	3	HMI He	2386278	2.37	2356036	101.28	60	120	
Ir (IS)	193	3	HMI He	5179302	0.67	4999588	103.59	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A@50
Data File Name	351SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:05:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.445	ppb	1.445	19.65	52	2000	
Na	23	3	45	716.104	ppb	716.104	2.26	76552	400000	
Mg	24	3	45	4281.973	ppb	4281.973	1.68	200794	400000	
Al	27	3	45	4739.155	ppb	4739.155	2.32	82384	400000	
K	39	3	45	142.777	ppb	142.777	24.53	28909	400000	
Ca	40	2	45	8638.941	ppb	8638.941	3.34	4034775	400000	
V	51	3	72	1.156	ppb	1.156	7.87	1203	2000	
Cr	52	3	72	0.191	ppb	0.191	97.71	2254	5000	
Mn	55	3	72	252.311	ppb	252.311	0.92	81497	10000	
Fe	56	2	72	22.725	ppb	22.725	12.81	62798	10000	
Co	59	3	72	11.904	ppb	11.904	1.81	12551	2000	
Ni	60	3	72	11.465	ppb	11.465	4.11	3789	5000	
Cu	63	3	72	0.273	ppb	0.273	15.91	466	5000	
Zn	66	3	72	61.426	ppb	61.426	1.85	7953	5000	
As	75	3	72	-0.089	ppb	-0.089	-70.60	52	2000	
Se	78	2	72	0.455	ppb	0.455	48.97	23	2000	
Sr	88	3	72	64.787	ppb	64.787	0.44	28497	4000	
Mo	95	3	115	0.871	ppb	0.871	19.88	376	2000	
Ag	107	3	115	0.008	ppb	0.008	95.95	27	100	
Cd	111	3	115	0.203	ppb	0.203	26.25	42	2000	
Sn	120	3	115	0.303	ppb	0.303	26.09	700	2000	
Sb	121	3	115	0.016	ppb	0.016	65.94	37	1000	
Ba	137	3	115	0.330	ppb	0.330	23.22	107	5000	
Tl	205	3	193	0.043	ppb	0.043	29.59	235	2000	
(Pb)	206	3	193	0.729	ppb	0.729	17.32	938	100	
(Pb)	207	3	193	0.806	ppb	0.806	14.59	1018	100	
Pb	208	3	193	0.734	ppb	0.734	9.00	3943	5000	
Th	232	3	193	-0.360	ppb	-0.360	-10.09	4915	2000	
U	238	3	193	1.967	ppb	1.967	2.05	9761	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3475746	3.72	3473788	100.06	60	120	
Sc (IS)	45	3	HMI He	508185	0.75	498630	101.92	60	120	
Ge Internal standard	72	2	HMI H2	2201351	2.82	2241871	98.19	60	120	
Ge Internal standard	72	3	HMI He	647166	0.27	647352	99.97	60	120	
In Internal Standard	115	3	HMI He	2375625	2.86	2356036	100.83	60	120	
Ir (IS)	193	3	HMI He	5121991	1.29	4999588	102.45	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A@50
Data File Name	352SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:07:35-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.355	ppb	1.355	13.63	47	2000	
Na	23	3	45	1258.387	ppb	1258.387	1.00	125042	400000	
Mg	24	3	45	6238.150	ppb	6238.150	1.20	294728	400000	
Al	27	3	45	1833.126	ppb	1833.126	3.23	32169	400000	
K	39	3	45	277.651	ppb	277.651	18.03	34286	400000	
Ca	40	2	45	8941.626	ppb	8941.626	0.74	4270587	400000	
V	51	3	72	0.190	ppb	0.190	98.59	723	2000	
Cr	52	3	72	0.245	ppb	0.245	82.29	2276	5000	
Mn	55	3	72	327.321	ppb	327.321	1.56	105128	10000	
Fe	56	2	72	12.153	ppb	12.153	16.79	48423	10000	
Co	59	3	72	15.274	ppb	15.274	1.04	16013	2000	
Ni	60	3	72	13.830	ppb	13.830	0.90	4460	5000	
Cu	63	3	72	0.238	ppb	0.238	30.79	436	5000	
Zn	66	3	72	77.415	ppb	77.415	1.43	9939	5000	
As	75	3	72	-0.013	ppb	-0.013	-823.14	58	2000	
Se	78	2	72	0.349	ppb	0.349	24.22	17	2000	
Sr	88	3	72	85.979	ppb	85.979	1.68	37620	4000	
Mo	95	3	115	0.151	ppb	0.151	50.47	88	2000	
Ag	107	3	115	0.017	ppb	0.017	86.39	38	100	
Cd	111	3	115	0.201	ppb	0.201	32.86	42	2000	
Sn	120	3	115	0.137	ppb	0.137	76.99	603	2000	
Sb	121	3	115	-0.009	ppb	-0.009	-299.97	22	1000	
Ba	137	3	115	0.166	ppb	0.166	118.52	75	5000	
Tl	205	3	193	0.039	ppb	0.039	43.13	225	2000	
(Pb)	206	3	193	0.758	ppb	0.758	7.27	980	100	
(Pb)	207	3	193	0.768	ppb	0.768	8.03	995	100	
Pb	208	3	193	0.703	ppb	0.703	2.89	3857	5000	
Th	232	3	193	-0.469	ppb	-0.469	-8.50	4504	2000	
U	238	3	193	3.556	ppb	3.556	2.29	16813	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3551695	0.11	3473788	102.24	60	120	
Sc (IS)	45	3	HMI He	512085	0.79	498630	102.70	60	120	
Ge Internal standard	72	2	HMI H2	2167304	1.67	2241871	96.67	60	120	
Ge Internal standard	72	3	HMI He	643857	0.37	647352	99.46	60	120	
In Internal Standard	115	3	HMI He	2403088	1.32	2356036	102.00	60	120	
Ir (IS)	193	3	HMI He	5175721	1.67	4999588	103.52	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A@50
Data File Name	353SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:09:26-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.211	ppb	1.211	17.16	42	2000	
Na	23	3	45	742.395	ppb	742.395	2.93	79900	400000	
Mg	24	3	45	4399.171	ppb	4399.171	2.55	209019	400000	
Al	27	3	45	4826.085	ppb	4826.085	2.97	85006	400000	
K	39	3	45	131.474	ppb	131.474	24.45	28859	400000	
Ca	40	2	45	8849.345	ppb	8849.345	1.33	4268379	400000	
V	51	3	72	1.153	ppb	1.153	3.25	1216	2000	
Cr	52	3	72	-0.055	ppb	-0.055	-238.45	2129	5000	
Mn	55	3	72	259.575	ppb	259.575	1.37	84884	10000	
Fe	56	2	72	23.437	ppb	23.437	7.01	63847	10000	
Co	59	3	72	12.623	ppb	12.623	2.00	13473	2000	
Ni	60	3	72	11.923	ppb	11.923	3.66	3972	5000	
Cu	63	3	72	0.305	ppb	0.305	16.94	498	5000	
Zn	66	3	72	63.591	ppb	63.591	1.88	8332	5000	
As	75	3	72	-0.096	ppb	-0.096	-305.92	52	2000	
Se	78	2	72	0.444	ppb	0.444	34.95	22	2000	
Sr	88	3	72	67.078	ppb	67.078	0.51	29873	4000	
Mo	95	3	115	0.061	ppb	0.061	21.59	52	2000	
Ag	107	3	115	0.008	ppb	0.008	144.03	27	100	
Cd	111	3	115	0.158	ppb	0.158	14.87	33	2000	
Sn	120	3	115	0.278	ppb	0.278	24.09	691	2000	
Sb	121	3	115	0.031	ppb	0.031	86.37	47	1000	
Ba	137	3	115	0.382	ppb	0.382	16.63	118	5000	
Tl	205	3	193	0.024	ppb	0.024	37.07	178	2000	
(Pb)	206	3	193	0.799	ppb	0.799	9.07	1018	100	
(Pb)	207	3	193	0.768	ppb	0.768	6.00	990	100	
Pb	208	3	193	0.769	ppb	0.769	3.49	4110	5000	
Th	232	3	193	-0.454	ppb	-0.454	-11.88	4542	2000	
U	238	3	193	2.058	ppb	2.058	4.41	10211	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3587210	1.30	3473788	103.27	60	120	
Sc (IS)	45	3	HMI He	515033	1.98	498630	103.29	60	120	
Ge Internal standard	72	2	HMI H2	2203341	0.31	2241871	98.28	60	120	
Ge Internal standard	72	3	HMI He	655255	0.28	647352	101.22	60	120	
In Internal Standard	115	3	HMI He	2398268	3.00	2356036	101.79	60	120	
Ir (IS)	193	3	HMI He	5148208	0.65	4999588	102.97	60	120	

Blank Report

Sample Table

Sample Name	MB 280-608911/1-A
Data File Name	354_BLK.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:11:15-06:00
Sample Type	Blank
Dilution	1
Comment	608911 6020a
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5
Na	23	3	45	40.437	ppb	20.64133431	16827	25
Mg	24	3	45	4.660	ppb	8.780518785	344	25
Al	27	3	45	2.420	ppb	107.4491378	120	15
K	39	3	45	13.323	ppb	236.5352786	23313	50
Ca	40	2	45	15.415	ppb	5.402050742	16583	200
V	51	3	72	0.087	ppb	162.9532908	648	1
Cr	52	3	72	0.929	ppb	49.4483936	2602	1
Mn	55	3	72	0.357	ppb	19.6560088	287	0.5
Fe	56	2	72	5.111	ppb	42.38813449	37515	50
Co	59	3	72	0.036	ppb	53.164863	67	0.5
Ni	60	3	72	0.013	ppb	916.5315212	408	1
Cu	63	3	72	0.062	ppb	91.53498698	288	1
Zn	66	3	72	1.104	ppb	45.02423846	262	5
As	75	3	72	-0.160	ppb	-52.34701567	43	1
(Se)	78	3	72	-2.841	ppb	-101.3383529	17	1
Sr	88	3	72	0.152	ppb	32.81966272	78	0.5
Mo	95	3	115	0.132	ppb	20.13916644	77	0.5
Ag	107	3	115	0.009	ppb	48.04210485	27	1
Cd	111	3	115	0.009	ppb	335.397613	3	0.5
Sn	120	3	115	0.098	ppb	61.72807631	551	1
Sb	121	3	115	0.015	ppb	56.54409414	35	0.6
Ba	137	3	115	0.057	ppb	163.0090434	50	0.5
Tl	205	3	193	0.016	ppb	26.79545598	150	0.1
(Pb)	206	3	193	-0.018	ppb	-213.2659241	155	1
(Pb)	207	3	193	0.019	ppb	129.0148589	303	1
Pb	208	3	193	0.006	ppb	186.8353461	890	0.5
Th	232	3	193	-0.507	ppb	-18.24446952	4249	1
U	238	3	193	0.039	ppb	29.47320768	1401	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3448693	1.08	3473788	99.28	60	120	
Sc (IS)	45	3	HMI He	493176	1.03	498630	98.91	60	120	
Ge Internal standard	72	2	HMI H2	2065363	2.16	2241871	92.13	60	120	
Ge Internal standard	72	3	HMI He	621277	1.01	647352	95.97	60	120	
In Internal Standard	115	3	HMI He	2291880	0.25	2356036	97.28	60	120	
Ir (IS)	193	3	HMI He	5068499	2.48	4999588	101.38	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-608911/24-A
Data File Name	355_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:13:05-06:00
Sample Type	LCS
Dilution	1
Analyst	Denver Metals
Comment	608911 6020a
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	39.709	39.709	ppb	5.755	1403	40	99.3	80	120	
Na	23	3	45	797.819	797.819	ppb	0.778	83807	40	1994.5	80	120	>+/-20%
Mg	24	3	45	696.917	696.917	ppb	0.850	32831	40	1742.3	80	120	>+/-20%
Al	27	3	45	792.385	792.385	ppb	3.271	13857	40	1981.0	80	120	>+/-20%
K	39	3	45	766.059	766.059	ppb	4.038	52544	40	1915.1	80	120	>+/-20%
Ca	40	2	45	799.011	799.011	ppb	2.685	389519	40	1997.5	80	120	>+/-20%
V	51	3	72	40.713	40.713	ppb	0.216	20877	40	101.8	80	120	
Cr	52	3	72	39.838	39.838	ppb	1.178	26913	40	99.6	80	120	
Mn	55	3	72	40.580	40.580	ppb	0.865	13375	40	101.5	80	120	
Fe	56	2	72	800.600	800.600	ppb	3.143	1075400	40	2001.5	80	120	>+/-20%
(Fe)	56	3	72	775.934	775.934	ppb	0.714	419771	40	1939.8	80	120	>+/-20%
Co	59	3	72	39.175	39.175	ppb	1.131	41583	40	97.9	80	120	
Ni	60	3	72	38.711	38.711	ppb	2.859	11891	40	96.8	80	120	
Cu	63	3	72	41.621	41.621	ppb	0.165	33333	40	104.1	80	120	
Zn	66	3	72	42.273	42.273	ppb	1.178	5562	40	105.7	80	120	
As	75	3	72	39.189	39.189	ppb	1.400	3710	40	98.0	80	120	
Se	78	2	72	41.587	41.587	ppb	3.873	1946	40	104.0	80	120	
(Se)	78	3	72	30.771	30.771	ppb	25.989	207	40	76.9	80	120	>+/-20%
Sr	88	3	72	79.086	79.086	ppb	2.552	35079	40	197.7	80	120	>+/-20%
Mo	95	3	115	39.802	39.802	ppb	1.628	16083	40	99.5	80	120	
Ag	107	3	115	40.057	40.057	ppb	1.389	55033	40	100.1	80	120	
Cd	111	3	115	39.423	39.423	ppb	0.828	7847	40	98.6	80	120	
Sn	120	3	115	36.533	36.533	ppb	4.429	23704	40	91.3	80	120	
Sb	121	3	115	39.446	39.446	ppb	2.124	24791	40	98.6	80	120	
Ba	137	3	115	40.498	40.498	ppb	2.689	8277	40	101.2	80	120	
Tl	205	3	193	39.826	39.826	ppb	2.520	124222	40	99.6	80	120	
(Pb)	206	3	193	39.646	39.646	ppb	2.938	41942	40	99.1	80	120	
(Pb)	207	3	193	39.673	39.673	ppb	2.632	36424	40	99.2	80	120	
Pb	208	3	193	39.908	39.908	ppb	3.025	168898	40	99.8	80	120	
Th	232	3	193	36.367	36.367	ppb	1.083	159516	40	90.9	80	120	
U	238	3	193	39.943	39.943	ppb	3.189	175233	40	99.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3544446	2.41	3473788	102.03	60	120	
Sc (IS)	45	3	HMI He	508708	0.43	498630	102.02	60	120	
Ge Internal standard	72	2	HMI H2	2209734	1.80	2241871	98.57	60	120	
Ge Internal standard	72	3	HMI He	652696	0.35	647352	100.83	60	120	
In Internal Standard	115	3	HMI He	2394637	1.70	2356036	101.64	60	120	
Ir (IS)	193	3	HMI He	5154912	1.93	4999588	103.11	60	120	

Sample Report

Sample Table

Sample Name	280-174977-C-12-A
Data File Name	356SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:15:00-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.048	ppb	0.048	173.21	2	2000	
Na	23	3	45	559.330	ppb	559.330	2.31	63197	400000	
Mg	24	3	45	85.372	ppb	85.372	2.87	4161	400000	
Al	27	3	45	488.591	ppb	488.591	4.29	8618	400000	
K	39	3	45	135.575	ppb	135.575	27.89	28809	400000	
Ca	40	2	45	244.189	ppb	244.189	0.30	125506	400000	
V	51	3	72	0.810	ppb	0.810	12.83	1038	2000	
Cr	52	3	72	1.595	ppb	1.595	9.64	3137	5000	
Mn	55	3	72	8.349	ppb	8.349	7.28	2891	10000	
Fe	56	2	72	440.606	ppb	440.606	2.37	602436	10000	
Co	59	3	72	0.139	ppb	0.139	14.52	178	2000	
Ni	60	3	72	0.556	ppb	0.556	31.40	588	5000	
Cu	63	3	72	0.467	ppb	0.467	7.29	623	5000	
Zn	66	3	72	3.171	ppb	3.171	11.00	538	5000	
As	75	3	72	-0.163	ppb	-0.163	-1.77	45	2000	
Se	78	2	72	0.058	ppb	0.058	73.63	4	2000	
Sr	88	3	72	1.156	ppb	1.156	13.67	526	4000	
Mo	95	3	115	8.681	ppb	8.681	3.44	3564	2000	
Ag	107	3	115	0.008	ppb	0.008	94.04	27	100	
Cd	111	3	115	0.025	ppb	0.025	59.31	7	2000	
Sn	120	3	115	0.313	ppb	0.313	31.80	720	2000	
Sb	121	3	115	0.149	ppb	0.149	26.25	122	1000	
Ba	137	3	115	3.143	ppb	3.143	12.46	686	5000	
Tl	205	3	193	0.018	ppb	0.018	58.69	160	2000	
(Pb)	206	3	193	0.216	ppb	0.216	20.01	405	100	
(Pb)	207	3	193	0.263	ppb	0.263	21.42	530	100	
Pb	208	3	193	0.234	ppb	0.234	11.93	1862	5000	
Th	232	3	193	0.984	ppb	0.984	18.24	10601	2000	
U	238	3	193	0.035	ppb	0.035	17.42	1411	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3535102	0.32	3473788	101.77	60	120	
Sc (IS)	45	3	HMI He	511291	0.94	498630	102.54	60	120	
Ge Internal standard	72	2	HMI H2	2193188	1.61	2241871	97.83	60	120	
Ge Internal standard	72	3	HMI He	650777	0.59	647352	100.53	60	120	
In Internal Standard	115	3	HMI He	2418954	1.19	2356036	102.67	60	120	
Ir (IS)	193	3	HMI He	5157287	1.32	4999588	103.15	60	120	

Sample Report

Sample Table

Sample Name	174894-2
Data File Name	357SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:16:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	62948.894	ppb	62948.894	1.02	6633286	400000	
Mg	24	3	45	13563.478	ppb	13563.478	0.88	762533	400000	
Al	27	3	45	4.666	ppb	4.666	134.38	197	400000	
K	39	3	45	1608.507	ppb	1608.507	0.64	101184	400000	
Ca	40	2	45	34551.559	ppb	34551.559	1.96	19942962	400000	
V	51	3	72	-0.857	ppb	-0.857	-4.40	250	2000	
Cr	52	3	72	-0.665	ppb	-0.665	-19.71	2051	5000	
Mn	55	3	72	511.045	ppb	511.045	3.16	195808	10000	
Fe	56	2	72	-8.440	ppb	-8.440	-18.37	27187	10000	
Co	59	3	72	0.155	ppb	0.155	14.33	232	2000	
Ni	60	3	72	0.342	ppb	0.342	19.17	620	5000	
Cu	63	3	72	0.124	ppb	0.124	35.44	415	5000	
Zn	66	3	72	0.630	ppb	0.630	28.24	252	5000	
As	75	3	72	16.061	ppb	16.061	2.24	1833	2000	
Se	78	2	72	0.019	ppb	0.019	217.92	3	2000	
Sr	88	3	72	263.447	ppb	263.447	0.81	137578	4000	
Mo	95	3	115	4.968	ppb	4.968	9.47	2461	2000	
Ag	107	3	115	0.008	ppb	0.008	209.63	32	100	
Cd	111	3	115	-0.002	ppb	-0.002	-752.67	2	2000	
Sn	120	3	115	-0.628	ppb	-0.628	-4.49	140	2000	
Sb	121	3	115	0.016	ppb	0.016	154.27	45	1000	
Ba	137	3	115	334.947	ppb	334.947	1.78	82651	5000	
Tl	205	3	193	0.008	ppb	0.008	39.39	152	2000	
(Pb)	206	3	193	-0.014	ppb	-0.014	-176.38	192	100	
(Pb)	207	3	193	0.014	ppb	0.014	177.34	358	100	
Pb	208	3	193	-0.020	ppb	-0.020	-73.68	938	5000	
Th	232	3	193	-0.630	ppb	-0.630	-9.03	4487	2000	
U	238	3	193	0.026	ppb	0.026	10.07	1614	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4300040	1.20	3473788	123.79	60	120	IS Failed
Sc (IS)	45	3	HMI He	609537	1.74	498630	122.24	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2664767	0.84	2241871	118.86	60	120	
Ge Internal standard	72	3	HMI He	768667	0.71	647352	118.74	60	120	
In Internal Standard	115	3	HMI He	2903289	1.57	2356036	123.23	60	120	IS Failed
Ir (IS)	193	3	HMI He	6076046	1.55	4999588	121.53	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	358_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:18:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
Na	23	3	45	-63.184	ppb	-8.625	14689	51000	-0.1	90	110	>+\-10%
Mg	24	3	45	-0.131	ppb	-740.638	230	11000	0.0	90	110	>+\-10%
Al	27	3	45	-2.433	ppb	-26.198	70	1000	-0.2	90	110	>+\-10%
K	39	3	45	-305.327	ppb	-6.449	21271	11000	-2.8	90	110	>+\-10%
Ca	40	2	45	-8.144	ppb	-6.370	9686	11000	-0.1	90	110	>+\-10%
V	51	3	72	-1.072	ppb	-2.015	183	50	-2.1	90	110	>+\-10%
Cr	52	3	72	-2.785	ppb	-3.286	740	50	-5.6	90	110	>+\-10%
Mn	55	3	72	-0.388	ppb	-10.498	103	50	-0.8	90	110	>+\-10%
Fe	56	2	72	-20.192	ppb	-1.960	11620	1000	-2.0	90	110	>+\-10%
Co	59	3	72	-0.018	ppb	-46.918	22	50	0.0	90	110	>+\-10%
Ni	60	3	72	-1.243	ppb	-2.228	98	50	-2.5	90	110	>+\-10%
Cu	63	3	72	-0.130	ppb	-25.108	262	50	-0.3	90	110	>+\-10%
Zn	66	3	72	-0.489	ppb	-13.643	122	50	-1.0	90	110	>+\-10%
As	75	3	72	-0.501	ppb	-22.789	23	50	-1.0	90	110	>+\-10%
Se	78	2	72	-0.001	ppb	-1817.518	2	50	0.0	90	110	>+\-10%
Sr	88	3	72	0.001	ppb	2250.974	27	100	0.0	90	110	>+\-10%
Mo	95	3	115	-0.045	ppb	-27.002	15	50	-0.1	90	110	>+\-10%
Ag	107	3	115	-0.001	ppb	-448.581	23	50	0.0	90	110	>+\-10%
Cd	111	3	115	-0.008	ppb	0.000	0	50	0.0	90	110	>+\-10%
Sn	120	3	115	-0.638	ppb	-1.841	188	50	-1.3	90	110	>+\-10%
Sb	121	3	115	-0.019	ppb	-51.889	27	50	0.0	90	110	>+\-10%
Ba	137	3	115	-0.100	ppb	-28.062	35	50	-0.2	90	110	>+\-10%
Tl	205	3	193	-0.009	ppb	-16.003	130	50	0.0	90	110	>+\-10%
(Pb)	206	3	193	-0.064	ppb	-9.276	192	50	-0.1	90	110	>+\-10%
(Pb)	207	3	193	-0.050	ppb	-62.433	428	50	-0.1	90	110	>+\-10%
Pb	208	3	193	-0.069	ppb	-10.295	1023	50	-0.1	90	110	>+\-10%
Th	232	3	193	-0.637	ppb	-5.679	6592	50	-1.3	90	110	>+\-10%
U	238	3	193	0.032	ppb	63.314	2434	50	0.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	5875479	1.13	3473788	169.14	60	120	IS Failed
Sc (IS)	45	3	HMI He	905025	3.95	498630	181.50	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3552600	3.34	2241871	158.47	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1139526	4.43	647352	176.03	60	120	IS Failed
In Internal Standard	115	3	HMI He	4133853	1.63	2356036	175.46	60	120	IS Failed
Ir (IS)	193	3	HMI He	8994679	2.28	4999588	179.91	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	359_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:20:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.047	ppb	173.2	2	0.5	
Na	23	3	45	66.102	ppb	7.1	18985	25	>RL
Mg	24	3	45	9.300	ppb	14.6	554	25	
Al	27	3	45	-1.337	ppb	-113.1	57	15	
K	39	3	45	8.330	ppb	200.0	23092	50	
V	51	3	72	0.182	ppb	74.7	701	1	
Cr	52	3	72	0.422	ppb	28.8	2326	1	
Mn	55	3	72	0.645	ppb	29.3	380	0.5	>RL
Co	59	3	72	0.022	ppb	63.6	53	0.5	
Ni	60	3	72	0.290	ppb	128.9	491	1	
Cu	63	3	72	-0.032	ppb	-109.5	220	1	
Zn	66	3	72	0.100	ppb	288.3	140	5	
As	75	3	72	-0.108	ppb	-109.7	48	1	
Se	78	2	72	0.001	ppb	4883.5	1	1	
Sr	88	3	72	0.219	ppb	38.0	108	0.5	
Mo	95	3	115	0.067	ppb	27.4	53	0.5	
Ag	107	3	115	-0.006	ppb	-34.3	7	1	
Cd	111	3	115	0.000	ppb	102379.6	2	0.5	
Sn	120	3	115	0.140	ppb	59.8	595	1	
Sb	121	3	115	0.019	ppb	68.0	38	0.6	
Ba	137	3	115	0.232	ppb	33.3	87	0.5	
Tl	205	3	193	0.013	ppb	44.2	137	0.1	
(Pb)	206	3	193	0.008	ppb	452.0	178	1	
(Pb)	207	3	193	0.067	ppb	91.3	338	1	
Pb	208	3	193	0.010	ppb	190.9	886	0.5	
Th	232	3	193	0.287	ppb	63.9	7357	1	
U	238	3	193	0.036	ppb	64.9	1356	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3441292	2.36	3473788	99.06	60	120	
Sc (IS)	45	3	HMI He	492503	0.49	498630	98.77	60	120	
Ge Internal standard	72	2	HMI H2	2146543	1.72	2241871	95.75	60	120	
Ge Internal standard	72	3	HMI He	628060	0.58	647352	97.02	60	120	
In Internal Standard	115	3	HMI He	2363188	0.80	2356036	100.30	60	120	
Ir (IS)	193	3	HMI He	4951375	2.17	4999588	99.04	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	360_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:23:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	46.261	ppb	8.273	1636	50	92.5	90	110	
Na	23	3	45	49524.871	ppb	1.663	4287731	51000	97.1	90	110	
Mg	24	3	45	10510.389	ppb	0.900	485168	11000	95.5	90	110	
Al	27	3	45	1035.059	ppb	3.692	17782	1000	103.5	90	110	
K	39	3	45	10677.234	ppb	1.975	420883	11000	97.1	90	110	
Ca	40	2	45	10311.240	ppb	5.485	4806207	11000	93.7	90	110	
V	51	3	72	53.459	ppb	0.951	25920	50	106.9	90	110	
Cr	52	3	72	53.471	ppb	1.577	33701	50	106.9	90	110	
Mn	55	3	72	53.834	ppb	1.281	16842	50	107.7	90	110	
Fe	56	2	72	1071.515	ppb	4.096	1358426	1000	107.2	90	110	
Co	59	3	72	52.421	ppb	1.242	52986	50	104.8	90	110	
Ni	60	3	72	53.654	ppb	0.960	15541	50	107.3	90	110	
Cu	63	3	72	53.714	ppb	1.662	40900	50	107.4	90	110	
Zn	66	3	72	56.395	ppb	1.826	7025	50	112.8	90	110	>+\-10%
As	75	3	72	53.332	ppb	2.908	4788	50	106.7	90	110	
Se	78	2	72	55.964	ppb	4.036	2489	50	111.9	90	110	>+\-10%
Sr	88	3	72	107.479	ppb	1.888	45401	100	107.5	90	110	
Mo	95	3	115	52.612	ppb	2.033	20444	50	105.2	90	110	
Ag	107	3	115	52.762	ppb	1.880	69752	50	105.5	90	110	
Cd	111	3	115	52.244	ppb	0.574	10007	50	104.5	90	110	
Sn	120	3	115	51.217	ppb	1.591	31794	50	102.4	90	110	
Sb	121	3	115	51.864	ppb	3.720	31353	50	103.7	90	110	
Ba	137	3	115	53.316	ppb	2.718	10474	50	106.6	90	110	
Tl	205	3	193	51.263	ppb	1.974	157223	50	102.5	90	110	
(Pb)	206	3	193	50.856	ppb	1.979	52860	50	101.7	90	110	
(Pb)	207	3	193	52.141	ppb	0.727	47000	50	104.3	90	110	
Pb	208	3	193	50.957	ppb	1.677	211876	50	101.9	90	110	
Th	232	3	193	50.537	ppb	2.694	215465	50	101.1	90	110	
U	238	3	193	51.124	ppb	0.937	220289	50	102.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3473182	4.66	3473788	99.98	60	120	
Sc (IS)	45	3	HMI He	500408	0.14	498630	100.36	60	120	
Ge Internal standard	72	2	HMI H2	2102404	2.20	2241871	93.78	60	120	
Ge Internal standard	72	3	HMI He	621657	0.59	647352	96.03	60	120	
In Internal Standard	115	3	HMI He	2304539	1.60	2356036	97.81	60	120	
Ir (IS)	193	3	HMI He	5069760	2.66	4999588	101.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	361_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:25:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	28.091	ppb	27.1	16102	25	>RL
Mg	24	3	45	2.422	ppb	28.5	247	25	
Al	27	3	45	0.138	ppb	882.9	83	15	
K	39	3	45	0.008	ppb	521420.4	23286	50	
V	51	3	72	-0.024	ppb	-419.4	615	1	
Cr	52	3	72	0.186	ppb	80.7	2229	1	
Mn	55	3	72	0.178	ppb	31.7	238	0.5	
Co	59	3	72	0.015	ppb	134.4	47	0.5	
Ni	60	3	72	0.646	ppb	19.2	605	1	
Cu	63	3	72	0.053	ppb	108.4	290	1	
Zn	66	3	72	0.195	ppb	120.4	155	5	
As	75	3	72	-0.320	ppb	-45.5	30	1	
Se	78	2	72	0.104	ppb	72.7	6	1	
Sr	88	3	72	0.035	ppb	87.0	30	0.5	
Mo	95	3	115	0.126	ppb	38.4	78	0.5	
Ag	107	3	115	0.002	ppb	192.8	18	1	
Cd	111	3	115	0.008	ppb	354.0	3	0.5	
Sn	120	3	115	0.312	ppb	40.0	715	1	
Sb	121	3	115	0.039	ppb	48.1	52	0.6	
Ba	137	3	115	0.037	ppb	203.9	48	0.5	
Tl	205	3	193	0.034	ppb	23.6	212	0.1	
(Pb)	206	3	193	0.009	ppb	130.2	190	1	
(Pb)	207	3	193	0.009	ppb	636.6	303	1	
Pb	208	3	193	-0.014	ppb	-122.6	833	0.5	
Th	232	3	193	1.172	ppb	16.6	11566	1	>RL
U	238	3	193	0.027	ppb	39.0	1393	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3514954	2.47	3473788	101.19	60	120	
Sc (IS)	45	3	HMI He	503353	0.63	498630	100.95	60	120	
Ge Internal standard	72	2	HMI H2	2143158	0.60	2241871	95.60	60	120	
Ge Internal standard	72	3	HMI He	640786	0.58	647352	98.99	60	120	
In Internal Standard	115	3	HMI He	2404117	0.72	2356036	102.04	60	120	
Ir (IS)	193	3	HMI He	5233634	0.08	4999588	104.68	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	362LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:27:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.735	ppb	56.252	27	1	73.5	70	130	
Na	23	3	45	291.626	ppb	2.905	39364	300	97.2	70	130	
Mg	24	3	45	44.492	ppb	6.813	2222	50	89.0	70	130	
Al	27	3	45	43.316	ppb	7.559	834	50	86.6	70	130	
K	39	3	45	113.419	ppb	34.459	27819	120	94.5	70	130	
Ca	40	2	45	183.551	ppb	2.262	97575	200	91.8	70	130	
V	51	3	72	5.139	ppb	5.836	3150	5	102.8	70	130	
Cr	52	3	72	2.140	ppb	11.549	3437	2	107.0	70	130	
Mn	55	3	72	0.916	ppb	18.722	476	1	91.6	70	130	
Fe	56	2	72	49.969	ppb	8.831	97666	50	99.9	70	130	
Co	59	3	72	0.958	ppb	6.101	1033	1	95.8	70	130	
Ni	60	3	72	1.979	ppb	19.354	996	2	99.0	70	130	
Cu	63	3	72	1.936	ppb	4.789	1768	2	96.8	70	130	
Zn	66	3	72	10.445	ppb	6.368	1454	10	104.4	70	130	
As	75	3	72	4.903	ppb	11.294	510	5	98.1	70	130	
Se	78	2	72	4.302	ppb	4.850	201	5	86.0	70	130	
Sr	88	3	72	4.594	ppb	3.028	2024	5	91.9	70	130	
Mo	95	3	115	1.695	ppb	1.970	715	2	84.8	70	130	
Ag	107	3	115	0.971	ppb	6.711	1356	1	97.1	70	130	
Cd	111	3	115	0.791	ppb	12.531	160	1	79.1	70	130	
Sn	120	3	115	8.880	ppb	4.821	6187	10	88.8	70	130	
Sb	121	3	115	1.898	ppb	6.352	1226	2	94.9	70	130	
Ba	137	3	115	1.061	ppb	22.114	258	1	106.1	70	130	
Tl	205	3	193	0.914	ppb	4.862	2932	1	91.4	70	130	
(Pb)	206	3	193	0.893	ppb	11.712	1110	1	89.3	70	130	
(Pb)	207	3	193	0.868	ppb	10.258	1075	1	86.8	70	130	
Pb	208	3	193	0.909	ppb	3.273	4673	1	90.9	70	130	
Th	232	3	193	1.173	ppb	16.852	11321	1	117.3	70	130	
U	238	3	193	0.983	ppb	1.229	5500	1	98.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3565931	1.54	3473788	102.65	60	120	
Sc (IS)	45	3	HMI He	508281	1.10	498630	101.94	60	120	
Ge Internal standard	72	2	HMI H2	2190963	1.89	2241871	97.73	60	120	
Ge Internal standard	72	3	HMI He	643918	1.81	647352	99.47	60	120	
In Internal Standard	115	3	HMI He	2408073	0.78	2356036	102.21	60	120	
Ir (IS)	193	3	HMI He	5118118	0.88	4999588	102.37	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-1-A
Data File Name	363SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:29:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	60.581	ppb	60.581	6.11	2037	2000	
Na	23	3	45	35840.265	ppb	35840.265	2.12	3123381	400000	
Mg	24	3	45	212863.531	ppb	212863.531	1.01	9876113	400000	
Al	27	3	45	239670.632	ppb	239670.632	1.02	4121102	400000	
K	39	3	45	6901.004	ppb	6901.004	1.43	281731	400000	
Ca	40	2	45	424239.762	ppb	424239.762	2.16	194494464	400000	
V	51	3	72	59.108	ppb	59.108	2.27	28747	2000	
Cr	52	3	72	6.899	ppb	6.899	4.42	6170	5000	
Mn	55	3	72	12685.926	ppb	12685.926	1.47	3949278	10000	
Fe	56	2	72	813.299	ppb	813.299	2.40	1039931	10000	
Co	59	3	72	612.104	ppb	612.104	1.55	621764	2000	
Ni	60	3	72	564.723	ppb	564.723	1.33	160596	5000	
Cu	63	3	72	7.342	ppb	7.342	5.98	5828	5000	
Zn	66	3	72	2864.956	ppb	2864.956	1.63	352465	5000	
As	75	3	72	3.595	ppb	3.595	13.41	378	2000	
Se	78	2	72	14.366	ppb	14.366	7.92	641	2000	
Sr	88	3	72	3485.993	ppb	3485.993	2.58	1480189	4000	
Mo	95	3	115	0.162	ppb	0.162	35.29	90	2000	
Ag	107	3	115	0.024	ppb	0.024	32.01	47	100	
Cd	111	3	115	8.440	ppb	8.440	0.98	1643	2000	
Sn	120	3	115	0.251	ppb	0.251	31.97	658	2000	
Sb	121	3	115	0.052	ppb	0.052	56.20	58	1000	
Ba	137	3	115	10.428	ppb	10.428	2.47	2112	5000	
Tl	205	3	193	0.719	ppb	0.719	4.93	2261	2000	
(Pb)	206	3	193	10.411	ppb	10.411	3.17	10736	100	
(Pb)	207	3	193	9.608	ppb	9.608	0.93	8714	100	
Pb	208	3	193	9.842	ppb	9.842	2.47	40770	5000	
Th	232	3	193	2.471	ppb	2.471	2.35	16246	2000	
U	238	3	193	102.308	ppb	102.308	1.70	430618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3418181	2.68	3473788	98.40	60	120	
Sc (IS)	45	3	HMI He	503103	0.22	498630	100.90	60	120	
Ge Internal standard	72	2	HMI H2	2104222	1.70	2241871	93.86	60	120	
Ge Internal standard	72	3	HMI He	625147	1.87	647352	96.57	60	120	
In Internal Standard	115	3	HMI He	2339653	0.73	2356036	99.30	60	120	
Ir (IS)	193	3	HMI He	4966703	2.34	4999588	99.34	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-2-A
Data File Name	364SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:31:03-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	73.276	ppb	73.276	1.34	2422	2000	
Na	23	3	45	62093.367	ppb	62093.367	1.41	5377585	400000	
Mg	24	3	45	306187.371	ppb	306187.371	1.76	14143200	400000	
Al	27	3	45	91226.880	ppb	91226.880	2.76	1561643	400000	
K	39	3	45	14917.053	ppb	14917.053	2.19	579343	400000	
Ca	40	2	45	441552.111	ppb	441552.111	0.70	202504125	400000	
V	51	3	72	4.300	ppb	4.300	3.60	2697	2000	
Cr	52	3	72	3.024	ppb	3.024	6.03	3920	5000	
Mn	55	3	72	16023.426	ppb	16023.426	0.92	5061298	10000	
Fe	56	2	72	279.809	ppb	279.809	0.54	377439	10000	
Co	59	3	72	743.454	ppb	743.454	0.03	766373	2000	
Ni	60	3	72	624.357	ppb	624.357	0.36	180138	5000	
Cu	63	3	72	5.203	ppb	5.203	2.42	4265	5000	
Zn	66	3	72	3518.706	ppb	3518.706	0.34	439287	5000	
As	75	3	72	2.777	ppb	2.777	19.61	310	2000	
Se	78	2	72	18.727	ppb	18.727	6.12	832	2000	
Sr	88	3	72	4367.568	ppb	4367.568	3.12	1882131	4000	
Mo	95	3	115	0.090	ppb	0.090	10.17	62	2000	
Ag	107	3	115	0.019	ppb	0.019	19.76	40	100	
Cd	111	3	115	10.743	ppb	10.743	4.39	2084	2000	
Sn	120	3	115	-0.026	ppb	-0.026	-418.25	485	2000	
Sb	121	3	115	0.063	ppb	0.063	37.47	65	1000	
Ba	137	3	115	8.697	ppb	8.697	2.35	1763	5000	
Tl	205	3	193	1.987	ppb	1.987	2.36	6165	2000	
(Pb)	206	3	193	10.489	ppb	10.489	3.15	10994	100	
(Pb)	207	3	193	9.425	ppb	9.425	2.02	8692	100	
Pb	208	3	193	9.838	ppb	9.838	2.51	41431	5000	
Th	232	3	193	0.297	ppb	0.297	9.60	7550	2000	
U	238	3	193	178.748	ppb	178.748	0.36	763922	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3418263	1.18	3473788	98.40	60	120	
Sc (IS)	45	3	HMI He	500941	1.13	498630	100.46	60	120	
Ge Internal standard	72	2	HMI H2	2096795	1.22	2241871	93.53	60	120	
Ge Internal standard	72	3	HMI He	634296	0.48	647352	97.98	60	120	
In Internal Standard	115	3	HMI He	2332431	1.12	2356036	99.00	60	120	
Ir (IS)	193	3	HMI He	5047763	0.79	4999588	100.96	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-3-A
Data File Name	365SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:32:49-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.047	ppb	0.047	173.21	2	2000	
Na	23	3	45	2063.597	ppb	2063.597	2.02	197694	400000	
Mg	24	3	45	7142.523	ppb	7142.523	0.80	340122	400000	
Al	27	3	45	1104.902	ppb	1104.902	3.83	19577	400000	
K	39	3	45	20614.237	ppb	20614.237	0.87	815926	400000	
Ca	40	2	45	42922.982	ppb	42922.982	1.91	20641832	400000	
V	51	3	72	3.410	ppb	3.410	11.09	2349	2000	
Cr	52	3	72	1.196	ppb	1.196	28.01	2917	5000	
Mn	55	3	72	26.936	ppb	26.936	3.24	8998	10000	
Fe	56	2	72	783.898	ppb	783.898	1.42	1073723	10000	
Co	59	3	72	0.979	ppb	0.979	6.63	1078	2000	
Ni	60	3	72	1.600	ppb	1.600	13.91	905	5000	
Cu	63	3	72	5.112	ppb	5.112	0.77	4345	5000	
Zn	66	3	72	5.024	ppb	5.024	11.65	783	5000	
As	75	3	72	1.129	ppb	1.129	28.37	167	2000	
Se	78	2	72	0.503	ppb	0.503	30.90	25	2000	
Sr	88	3	72	284.589	ppb	284.589	1.38	127030	4000	
Mo	95	3	115	2.512	ppb	2.512	2.06	1048	2000	
Ag	107	3	115	0.015	ppb	0.015	49.29	37	100	
Cd	111	3	115	0.025	ppb	0.025	115.99	7	2000	
Sn	120	3	115	-0.012	ppb	-0.012	-381.48	510	2000	
Sb	121	3	115	0.349	ppb	0.349	12.05	248	1000	
Ba	137	3	115	66.333	ppb	66.333	3.58	13630	5000	
Tl	205	3	193	0.038	ppb	0.038	22.79	225	2000	
(Pb)	206	3	193	0.977	ppb	0.977	6.08	1233	100	
(Pb)	207	3	193	1.027	ppb	1.027	5.31	1253	100	
Pb	208	3	193	0.984	ppb	0.984	5.87	5131	5000	
Th	232	3	193	0.024	ppb	0.024	88.62	6704	2000	
U	238	3	193	4.474	ppb	4.474	1.24	21202	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3582855	0.40	3473788	103.14	60	120	
Sc (IS)	45	3	HMI He	516188	1.29	498630	103.52	60	120	
Ge Internal standard	72	2	HMI H2	2250849	1.04	2241871	100.40	60	120	
Ge Internal standard	72	3	HMI He	657005	0.15	647352	101.49	60	120	
In Internal Standard	115	3	HMI He	2412251	1.39	2356036	102.39	60	120	
Ir (IS)	193	3	HMI He	5267286	0.51	4999588	105.35	60	120	

Sample Report

Sample Table

Sample Name	160-49647-C-4-A
Data File Name	366SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:34:37-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	59.376	ppb	59.376	5.51	2056	2000	
Na	23	3	45	35708.041	ppb	35708.041	3.09	3201498	400000	
Mg	24	3	45	209813.921	ppb	209813.921	0.95	10015900	400000	
Al	27	3	45	230532.171	ppb	230532.171	2.12	4078719	400000	
K	39	3	45	6698.976	ppb	6698.976	2.17	282068	400000	
Ca	40	2	45	412764.710	ppb	412764.710	0.32	197451903	400000	
V	51	3	72	58.530	ppb	58.530	0.85	29497	2000	
Cr	52	3	72	6.527	ppb	6.527	4.46	6162	5000	
Mn	55	3	72	12531.776	ppb	12531.776	2.22	4040779	10000	
Fe	56	2	72	761.786	ppb	761.786	2.94	1023517	10000	
Co	59	3	72	601.626	ppb	601.626	0.98	633050	2000	
Ni	60	3	72	558.455	ppb	558.455	0.90	164511	5000	
Cu	63	3	72	7.219	ppb	7.219	1.42	5943	5000	
Zn	66	3	72	2855.269	ppb	2855.269	0.20	363886	5000	
As	75	3	72	3.842	ppb	3.842	9.86	415	2000	
Se	78	2	72	14.522	ppb	14.522	3.37	679	2000	
Sr	88	3	72	3447.605	ppb	3447.605	1.03	1516412	4000	
Mo	95	3	115	0.089	ppb	0.089	48.17	63	2000	
Ag	107	3	115	0.006	ppb	0.006	41.93	23	100	
Cd	111	3	115	8.115	ppb	8.115	7.27	1624	2000	
Sn	120	3	115	-0.029	ppb	-0.029	-300.72	498	2000	
Sb	121	3	115	0.065	ppb	0.065	16.53	68	1000	
Ba	137	3	115	10.981	ppb	10.981	1.06	2287	5000	
Tl	205	3	193	0.722	ppb	0.722	3.90	2351	2000	
(Pb)	206	3	193	10.044	ppb	10.044	3.05	10744	100	
(Pb)	207	3	193	9.491	ppb	9.491	2.84	8925	100	
Pb	208	3	193	9.693	ppb	9.693	0.47	41639	5000	
Th	232	3	193	1.984	ppb	1.984	2.67	14786	2000	
U	238	3	193	100.626	ppb	100.626	0.42	439082	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3565435	2.16	3473788	102.64	60	120	
Sc (IS)	45	3	HMI He	517666	0.96	498630	103.82	60	120	
Ge Internal standard	72	2	HMI H2	2206977	2.44	2241871	98.44	60	120	
Ge Internal standard	72	3	HMI He	647471	0.51	647352	100.02	60	120	
In Internal Standard	115	3	HMI He	2408459	2.31	2356036	102.23	60	120	
Ir (IS)	193	3	HMI He	5147276	0.70	4999588	102.95	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	367SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:36:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	19267.134	ppb	19267.134	1.72	1690099	400000	
Mg	24	3	45	12942.004	ppb	12942.004	2.84	602164	400000	
Al	27	3	45	29.271	ppb	29.271	30.20	584	400000	
K	39	3	45	7408.323	ppb	7408.323	2.03	301574	400000	
Ca	40	2	45	50349.201	ppb	50349.201	1.35	23860298	400000	
V	51	3	72	23.841	ppb	23.841	2.95	12373	2000	
Cr	52	3	72	1.595	ppb	1.595	21.10	3115	5000	
Mn	55	3	72	5.948	ppb	5.948	8.52	2097	10000	
Fe	56	2	72	8.448	ppb	8.448	21.54	44419	10000	
Co	59	3	72	0.167	ppb	0.167	9.14	207	2000	
Ni	60	3	72	0.582	ppb	0.582	17.24	591	5000	
Cu	63	3	72	0.512	ppb	0.512	19.41	655	5000	
Zn	66	3	72	2.661	ppb	2.661	9.01	470	5000	
As	75	3	72	13.469	ppb	13.469	5.74	1303	2000	
Se	78	2	72	4.035	ppb	4.035	14.43	189	2000	
Sr	88	3	72	264.582	ppb	264.582	1.59	116218	4000	
Mo	95	3	115	9.930	ppb	9.930	3.45	4024	2000	
Ag	107	3	115	0.002	ppb	0.002	453.02	18	100	
Cd	111	3	115	0.026	ppb	0.026	152.96	7	2000	
Sn	120	3	115	-0.121	ppb	-0.121	-60.53	436	2000	
Sb	121	3	115	0.281	ppb	0.281	12.37	203	1000	
Ba	137	3	115	43.073	ppb	43.073	3.71	8782	5000	
Tl	205	3	193	0.002	ppb	0.002	224.14	110	2000	
(Pb)	206	3	193	0.035	ppb	0.035	106.64	213	100	
(Pb)	207	3	193	0.044	ppb	0.044	96.52	330	100	
Pb	208	3	193	0.018	ppb	0.018	84.10	950	5000	
Th	232	3	193	-0.543	ppb	-0.543	-4.83	4164	2000	
U	238	3	193	1.779	ppb	1.779	1.59	8982	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3530609	1.34	3473788	101.64	60	120	
Sc (IS)	45	3	HMI He	504644	2.45	498630	101.21	60	120	
Ge Internal standard	72	2	HMI H2	2204814	1.51	2241871	98.35	60	120	
Ge Internal standard	72	3	HMI He	646574	0.76	647352	99.88	60	120	
In Internal Standard	115	3	HMI He	2390053	2.25	2356036	101.44	60	120	
Ir (IS)	193	3	HMI He	5140772	1.24	4999588	102.82	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	368SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:38:13-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	3632.102	ppb	3632.102	0.90	326817	400000	
Mg	24	3	45	2560.339	ppb	2560.339	2.47	118197	400000	
Al	27	3	45	17.356	ppb	17.356	14.06	377	400000	
K	39	3	45	1482.202	ppb	1482.202	4.64	78306	400000	
Ca	40	2	45	10086.417	ppb	10086.417	2.00	4720660	400000	
V	51	3	72	4.338	ppb	4.338	1.66	2764	2000	
Cr	52	3	72	0.204	ppb	0.204	73.02	2256	5000	
Mn	55	3	72	3.423	ppb	3.423	4.20	1283	10000	
Fe	56	2	72	9.520	ppb	9.520	21.43	45647	10000	
Co	59	3	72	0.060	ppb	0.060	12.94	95	2000	
Ni	60	3	72	0.449	ppb	0.449	75.48	551	5000	
Cu	63	3	72	0.217	ppb	0.217	31.51	421	5000	
Zn	66	3	72	4.174	ppb	4.174	6.49	661	5000	
As	75	3	72	2.319	ppb	2.319	12.51	273	2000	
Se	78	2	72	0.888	ppb	0.888	18.97	43	2000	
Sr	88	3	72	51.727	ppb	51.727	1.73	22694	4000	
Mo	95	3	115	1.841	ppb	1.841	7.21	768	2000	
Ag	107	3	115	0.006	ppb	0.006	233.87	23	100	
Cd	111	3	115	0.008	ppb	0.008	175.35	3	2000	
Sn	120	3	115	0.082	ppb	0.082	37.17	565	2000	
Sb	121	3	115	0.082	ppb	0.082	22.48	78	1000	
Ba	137	3	115	8.595	ppb	8.595	0.72	1784	5000	
Tl	205	3	193	0.003	ppb	0.003	211.42	113	2000	
(Pb)	206	3	193	0.342	ppb	0.342	4.51	536	100	
(Pb)	207	3	193	0.333	ppb	0.333	14.84	593	100	
Pb	208	3	193	0.321	ppb	0.321	7.90	2227	5000	
Th	232	3	193	-0.589	ppb	-0.589	-2.83	3970	2000	
U	238	3	193	0.392	ppb	0.392	1.03	2956	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3482209	1.93	3473788	100.24	60	120	
Sc (IS)	45	3	HMI He	500075	0.62	498630	100.29	60	120	
Ge Internal standard	72	2	HMI H2	2196510	1.26	2241871	97.98	60	120	
Ge Internal standard	72	3	HMI He	645469	0.66	647352	99.71	60	120	
In Internal Standard	115	3	HMI He	2388062	1.61	2356036	101.36	60	120	
Ir (IS)	193	3	HMI He	5143275	1.20	4999588	102.87	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	369SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:40:07-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	38.025	ppb	38.025	12.16	1343	2000	
Na	23	3	45	20018.373	ppb	20018.373	1.20	1764345	400000	
Mg	24	3	45	13697.995	ppb	13697.995	1.77	640650	400000	
Al	27	3	45	769.296	ppb	769.296	1.32	13413	400000	
K	39	3	45	8199.277	ppb	8199.277	2.16	332917	400000	
Ca	40	2	45	51593.393	ppb	51593.393	1.01	24292644	400000	
V	51	3	72	62.052	ppb	62.052	1.52	31435	2000	
Cr	52	3	72	39.875	ppb	39.875	0.35	26891	5000	
Mn	55	3	72	44.350	ppb	44.350	0.76	14575	10000	
Fe	56	2	72	791.203	ppb	791.203	3.96	1055648	10000	
Co	59	3	72	38.137	ppb	38.137	3.15	40407	2000	
Ni	60	3	72	37.374	ppb	37.374	2.66	11477	5000	
Cu	63	3	72	39.687	ppb	39.687	1.37	31741	5000	
Zn	66	3	72	40.789	ppb	40.789	3.72	5363	5000	
As	75	3	72	49.864	ppb	49.864	3.69	4697	2000	
Se	78	2	72	45.396	ppb	45.396	2.67	2108	2000	
Sr	88	3	72	342.967	ppb	342.967	0.96	151819	4000	
Mo	95	3	115	48.787	ppb	48.787	2.39	19564	2000	
Ag	107	3	115	39.367	ppb	39.367	1.16	53703	100	
Cd	111	3	115	38.123	ppb	38.123	1.76	7535	2000	
Sn	120	3	115	37.283	ppb	37.283	1.10	24018	2000	
Sb	121	3	115	38.915	ppb	38.915	1.36	24283	1000	
Ba	137	3	115	83.671	ppb	83.671	2.58	16937	5000	
Tl	205	3	193	38.678	ppb	38.678	2.49	120936	2000	
(Pb)	206	3	193	38.624	ppb	38.624	4.12	40954	100	
(Pb)	207	3	193	38.712	ppb	38.712	1.55	35646	100	
Pb	208	3	193	38.988	ppb	38.988	2.56	165433	5000	
Th	232	3	193	36.339	ppb	36.339	0.19	159815	2000	
U	238	3	193	41.121	ppb	41.121	2.75	180806	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508049	0.26	3473788	100.99	60	120	
Sc (IS)	45	3	HMI He	507106	1.38	498630	101.70	60	120	
Ge Internal standard	72	2	HMI H2	2194708	2.41	2241871	97.90	60	120	
Ge Internal standard	72	3	HMI He	651605	1.08	647352	100.66	60	120	
In Internal Standard	115	3	HMI He	2377573	0.96	2356036	100.91	60	120	
Ir (IS)	193	3	HMI He	5167774	2.42	4999588	103.36	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	370SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:41:57-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	37.140	ppb	37.140	7.15	1309	2000	
Na	23	3	45	19361.507	ppb	19361.507	2.22	1696531	400000	
Mg	24	3	45	13167.113	ppb	13167.113	1.26	612109	400000	
Al	27	3	45	756.336	ppb	756.336	4.94	13109	400000	
K	39	3	45	7929.399	ppb	7929.399	0.95	320798	400000	
Ca	40	2	45	50131.320	ppb	50131.320	1.81	23606942	400000	
V	51	3	72	61.711	ppb	61.711	0.66	31069	2000	
Cr	52	3	72	40.085	ppb	40.085	0.76	26854	5000	
Mn	55	3	72	42.302	ppb	42.302	3.25	13823	10000	
Fe	56	2	72	755.198	ppb	755.198	3.12	1020924	10000	
Co	59	3	72	37.944	ppb	37.944	1.50	39963	2000	
Ni	60	3	72	36.876	ppb	36.876	3.24	11259	5000	
Cu	63	3	72	40.004	ppb	40.004	1.21	31796	5000	
Zn	66	3	72	40.031	ppb	40.031	3.03	5232	5000	
As	75	3	72	50.844	ppb	50.844	4.67	4758	2000	
Se	78	2	72	43.756	ppb	43.756	5.02	2056	2000	
Sr	88	3	72	335.133	ppb	335.133	0.55	147442	4000	
Mo	95	3	115	48.815	ppb	48.815	3.62	19394	2000	
Ag	107	3	115	39.183	ppb	39.183	0.66	52967	100	
Cd	111	3	115	39.458	ppb	39.458	6.42	7722	2000	
Sn	120	3	115	37.725	ppb	37.725	5.19	24065	2000	
Sb	121	3	115	38.553	ppb	38.553	1.81	23836	1000	
Ba	137	3	115	81.022	ppb	81.022	4.57	16250	5000	
Tl	205	3	193	38.361	ppb	38.361	3.10	120949	2000	
(Pb)	206	3	193	37.938	ppb	37.938	2.15	40581	100	
(Pb)	207	3	193	38.684	ppb	38.684	2.72	35910	100	
Pb	208	3	193	38.430	ppb	38.430	3.18	164437	5000	
Th	232	3	193	37.011	ppb	37.011	1.83	163991	2000	
U	238	3	193	40.651	ppb	40.651	3.86	180234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3508559	0.58	3473788	101.00	60	120	
Sc (IS)	45	3	HMI He	503980	0.10	498630	101.07	60	120	
Ge Internal standard	72	2	HMI H2	2219935	2.13	2241871	99.02	60	120	
Ge Internal standard	72	3	HMI He	647563	0.46	647352	100.03	60	120	
In Internal Standard	115	3	HMI He	2355962	1.69	2356036	100.00	60	120	
Ir (IS)	193	3	HMI He	5211565	2.54	4999588	104.24	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D pds
Data File Name	371SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:43:47-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	100.856	ppb	100.856	3.57	3515	2000	
Na	23	3	45	23209.530	ppb	23209.530	3.00	2036898	400000	
Mg	24	3	45	14657.546	ppb	14657.546	4.59	683158	400000	
Al	27	3	45	2003.283	ppb	2003.283	2.37	34691	400000	
K	39	3	45	9096.044	ppb	9096.044	2.55	365656	400000	
Ca	40	2	45	50896.223	ppb	50896.223	1.12	24093219	400000	
V	51	3	72	120.869	ppb	120.869	1.15	60308	2000	
Cr	52	3	72	97.307	ppb	97.307	1.78	62199	5000	
Mn	55	3	72	101.465	ppb	101.465	0.97	32938	10000	
Fe	56	2	72	1031.252	ppb	1031.252	2.79	1355643	10000	
Co	59	3	72	96.061	ppb	96.061	1.21	101225	2000	
Ni	60	3	72	96.032	ppb	96.032	1.04	28674	5000	
Cu	63	3	72	100.295	ppb	100.295	1.46	79419	5000	
Zn	66	3	72	201.921	ppb	201.921	1.59	25886	5000	
As	75	3	72	115.644	ppb	115.644	0.64	10757	2000	
Se	78	2	72	108.244	ppb	108.244	2.17	4987	2000	
Sr	88	3	72	350.993	ppb	350.993	1.81	154577	4000	
Mo	95	3	115	106.714	ppb	106.714	2.12	43072	2000	
Ag	107	3	115	26.151	ppb	26.151	1.74	35942	100	
Cd	111	3	115	94.122	ppb	94.122	4.46	18729	2000	
Sn	120	3	115	97.404	ppb	97.404	3.73	62368	2000	
Sb	121	3	115	93.266	ppb	93.266	2.91	58577	1000	
Ba	137	3	115	139.610	ppb	139.610	1.69	28445	5000	
Tl	205	3	193	97.060	ppb	97.060	1.96	307095	2000	
(Pb)	206	3	193	94.907	ppb	94.907	1.29	101646	100	
(Pb)	207	3	193	96.957	ppb	96.957	1.68	89914	100	
Pb	208	3	193	95.548	ppb	95.548	1.33	409180	5000	
Th	232	3	193	104.423	ppb	104.423	0.50	452549	2000	
U	238	3	193	202.315	ppb	202.315	0.78	895733	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3526792	0.41	3473788	101.53	60	120	
Sc (IS)	45	3	HMI He	505704	2.74	498630	101.42	60	120	
Ge Internal standard	72	2	HMI H2	2177551	2.07	2241871	97.13	60	120	
Ge Internal standard	72	3	HMI He	648252	0.42	647352	100.14	60	120	
In Internal Standard	115	3	HMI He	2395399	1.79	2356036	101.67	60	120	
Ir (IS)	193	3	HMI He	5230638	1.42	4999588	104.62	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	372_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:45:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
Na	23	3	45	-75.894	ppb	-1.418	14245	51000	-0.1	90	110	>+\-10%
Mg	24	3	45	1.461	ppb	38.566	407	11000	0.0	90	110	>+\-10%
Al	27	3	45	-1.246	ppb	-90.685	120	1000	-0.1	90	110	>+\-10%
K	39	3	45	-344.027	ppb	-7.705	20907	11000	-3.1	90	110	>+\-10%
Ca	40	2	45	-1.876	ppb	-40.641	14956	11000	0.0	90	110	>+\-10%
V	51	3	72	-1.078	ppb	-2.208	197	50	-2.2	90	110	>+\-10%
Cr	52	3	72	-2.852	ppb	-0.408	731	50	-5.7	90	110	>+\-10%
Mn	55	3	72	-0.156	ppb	-24.378	257	50	-0.3	90	110	>+\-10%
Fe	56	2	72	-11.840	ppb	-23.644	30502	1000	-1.2	90	110	>+\-10%
Co	59	3	72	-0.005	ppb	-190.004	52	50	0.0	90	110	>+\-10%
Ni	60	3	72	-1.311	ppb	-3.680	70	50	-2.6	90	110	>+\-10%
Cu	63	3	72	-0.124	ppb	-31.016	297	50	-0.2	90	110	>+\-10%
Zn	66	3	72	-0.403	ppb	-21.571	155	50	-0.8	90	110	>+\-10%
As	75	3	72	-0.451	ppb	-6.395	35	50	-0.9	90	110	>+\-10%
Se	78	2	72	0.031	ppb	263.977	5	50	0.1	90	110	>+\-10%
Sr	88	3	72	0.040	ppb	70.586	63	100	0.0	90	110	>+\-10%
Mo	95	3	115	-0.049	ppb	-14.819	13	50	-0.1	90	110	>+\-10%
Ag	107	3	115	0.007	ppb	37.909	47	50	0.0	90	110	>+\-10%
Cd	111	3	115	0.000	ppb	3511.370	3	50	0.0	90	110	>+\-10%
Sn	120	3	115	-0.627	ppb	-4.690	217	50	-1.3	90	110	>+\-10%
Sb	121	3	115	-0.010	ppb	-231.344	40	50	0.0	90	110	>+\-10%
Ba	137	3	115	-0.078	ppb	-18.639	47	50	-0.2	90	110	>+\-10%
Tl	205	3	193	0.002	ppb	212.715	210	50	0.0	90	110	>+\-10%
(Pb)	206	3	193	-0.049	ppb	-35.187	243	50	-0.1	90	110	>+\-10%
(Pb)	207	3	193	-0.042	ppb	-112.604	488	50	-0.1	90	110	>+\-10%
Pb	208	3	193	-0.069	ppb	-27.363	1136	50	-0.1	90	110	>+\-10%
Th	232	3	193	-0.617	ppb	-3.454	7479	50	-1.2	90	110	>+\-10%
U	238	3	193	0.034	ppb	47.808	2717	50	0.1	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6011818	2.26	3473788	173.06	60	120	IS Failed
Sc (IS)	45	3	HMI He	1013190	1.86	498630	203.19	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3726272	1.26	2241871	166.21	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1249194	1.31	647352	192.97	60	120	IS Failed
In Internal Standard	115	3	HMI He	4500401	5.11	2356036	191.02	60	120	IS Failed
Ir (IS)	193	3	HMI He	9984157	3.69	4999588	199.70	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	373_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:47:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.096	ppb	86.6	3	0.5	
Na	23	3	45	28.084	ppb	17.8	16052	25	>RL
Mg	24	3	45	11.151	ppb	16.4	651	25	
Al	27	3	45	5.204	ppb	28.3	170	15	
K	39	3	45	5.426	ppb	482.4	23413	50	
V	51	3	72	0.089	ppb	219.2	656	1	
Cr	52	3	72	0.300	ppb	131.1	2251	1	
Mn	55	3	72	0.877	ppb	21.4	451	0.5	>RL
Co	59	3	72	0.060	ppb	32.4	92	0.5	
Ni	60	3	72	0.268	ppb	31.9	485	1	
Cu	63	3	72	0.071	ppb	67.5	298	1	
Zn	66	3	72	0.371	ppb	36.1	173	5	
As	75	3	72	-0.294	ppb	-47.5	32	1	
Se	78	2	72	0.017	ppb	272.9	2	1	
Sr	88	3	72	0.220	ppb	39.6	108	0.5	
Mo	95	3	115	0.094	ppb	31.2	63	0.5	
Ag	107	3	115	0.014	ppb	69.3	33	1	
Cd	111	3	115	0.060	ppb	107.5	13	0.5	
Sn	120	3	115	0.123	ppb	101.4	580	1	
Sb	121	3	115	0.033	ppb	62.5	47	0.6	
Ba	137	3	115	0.060	ppb	48.3	52	0.5	
Tl	205	3	193	0.037	ppb	21.3	220	0.1	
(Pb)	206	3	193	0.010	ppb	293.2	188	1	
(Pb)	207	3	193	0.068	ppb	38.2	353	1	
Pb	208	3	193	0.019	ppb	74.4	961	0.5	
Th	232	3	193	2.965	ppb	9.7	18982	1	>RL
U	238	3	193	0.054	ppb	18.3	1494	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3520563	0.32	3473788	101.35	60	120	
Sc (IS)	45	3	HMI He	501777	0.90	498630	100.63	60	120	
Ge Internal standard	72	2	HMI H2	2094429	1.25	2241871	93.42	60	120	
Ge Internal standard	72	3	HMI He	627386	0.77	647352	96.92	60	120	
In Internal Standard	115	3	HMI He	2343737	0.66	2356036	99.48	60	120	
Ir (IS)	193	3	HMI He	5164412	1.02	4999588	103.30	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	374LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:49:12-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.654	ppb	24.589	23	1	65.4	70	130	>+/-30%
Na	23	3	45	280.488	ppb	2.579	38461	300	93.5	70	130	
Mg	24	3	45	47.332	ppb	7.845	2359	50	94.7	70	130	
Al	27	3	45	44.535	ppb	16.213	858	50	89.1	70	130	
K	39	3	45	87.238	ppb	33.804	26866	120	72.7	70	130	
Ca	40	2	45	186.694	ppb	1.971	99846	200	93.3	70	130	
V	51	3	72	4.442	ppb	5.748	2774	5	88.8	70	130	
Cr	52	3	72	2.041	ppb	11.706	3334	2	102.1	70	130	
Mn	55	3	72	1.540	ppb	12.893	668	1	154.0	70	130	>+/-30%
Fe	56	2	72	48.919	ppb	7.375	97044	50	97.8	70	130	
Co	59	3	72	0.975	ppb	8.688	1038	1	97.5	70	130	
Ni	60	3	72	2.268	ppb	8.617	1068	2	113.4	70	130	
Cu	63	3	72	1.922	ppb	9.697	1734	2	96.1	70	130	
Zn	66	3	72	9.308	ppb	12.063	1293	10	93.1	70	130	
As	75	3	72	3.924	ppb	3.020	415	5	78.5	70	130	
Se	78	2	72	4.878	ppb	7.896	229	5	97.6	70	130	
Sr	88	3	72	4.330	ppb	8.167	1886	5	86.6	70	130	
Mo	95	3	115	1.781	ppb	4.062	746	2	89.0	70	130	
Ag	107	3	115	0.898	ppb	9.070	1249	1	89.8	70	130	
Cd	111	3	115	0.896	ppb	19.735	180	1	89.6	70	130	
Sn	120	3	115	7.938	ppb	8.495	5560	10	79.4	70	130	
Sb	121	3	115	1.811	ppb	3.975	1166	2	90.5	70	130	
Ba	137	3	115	0.816	ppb	29.405	207	1	81.6	70	130	
Tl	205	3	193	0.926	ppb	3.111	3019	1	92.6	70	130	
(Pb)	206	3	193	0.920	ppb	7.732	1156	1	92.0	70	130	
(Pb)	207	3	193	0.885	ppb	15.253	1108	1	88.5	70	130	
Pb	208	3	193	0.860	ppb	3.372	4543	1	86.0	70	130	
Th	232	3	193	1.841	ppb	11.517	14341	1	184.1	70	130	>+/-30%
U	238	3	193	0.891	ppb	8.594	5187	1	89.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3593149	0.62	3473788	103.44	60	120	
Sc (IS)	45	3	HMI He	509299	1.09	498630	102.14	60	120	
Ge Internal standard	72	2	HMI H2	2207384	1.95	2241871	98.46	60	120	
Ge Internal standard	72	3	HMI He	635847	1.12	647352	98.22	60	120	
In Internal Standard	115	3	HMI He	2398472	1.66	2356036	101.80	60	120	
Ir (IS)	193	3	HMI He	5202905	1.34	4999588	104.07	60	120	

Sample Report

Sample Table

Sample Name	174894-2
Data File Name	375SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:51:01-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	59568.772	ppb	59568.772	2.86	6500553	400000	
Mg	24	3	45	12898.859	ppb	12898.859	1.91	750853	400000	
Al	27	3	45	8.966	ppb	8.966	87.05	297	400000	
K	39	3	45	1497.502	ppb	1497.502	1.35	99557	400000	
Ca	40	2	45	33469.326	ppb	33469.326	1.30	19677215	400000	
V	51	3	72	-0.875	ppb	-0.875	-8.19	243	2000	
Cr	52	3	72	-0.410	ppb	-0.410	-63.40	2277	5000	
Mn	55	3	72	495.457	ppb	495.457	2.18	193127	10000	
Fe	56	2	72	-2.827	ppb	-2.827	-68.58	36668	10000	
Co	59	3	72	0.188	ppb	0.188	3.58	277	2000	
Ni	60	3	72	0.603	ppb	0.603	5.01	723	5000	
Cu	63	3	72	0.137	ppb	0.137	41.76	435	5000	
Zn	66	3	72	0.668	ppb	0.668	17.08	262	5000	
As	75	3	72	15.553	ppb	15.553	2.53	1808	2000	
Se	78	2	72	0.018	ppb	0.018	223.26	3	2000	
Sr	88	3	72	253.776	ppb	253.776	2.58	134795	4000	
Mo	95	3	115	3.480	ppb	3.480	12.07	1746	2000	
Ag	107	3	115	0.007	ppb	0.007	40.92	30	100	
Cd	111	3	115	0.012	ppb	0.012	170.92	5	2000	
Sn	120	3	115	-0.639	ppb	-0.639	-5.23	132	2000	
Sb	121	3	115	-0.011	ppb	-0.011	-106.30	25	1000	
Ba	137	3	115	328.908	ppb	328.908	2.12	81759	5000	
Tl	205	3	193	0.014	ppb	0.014	58.84	177	2000	
(Pb)	206	3	193	-0.040	ppb	-0.040	-47.93	162	100	
(Pb)	207	3	193	0.018	ppb	0.018	141.66	366	100	
Pb	208	3	193	-0.034	ppb	-0.034	-47.36	876	5000	
Th	232	3	193	-0.601	ppb	-0.601	-8.22	4684	2000	
U	238	3	193	0.052	ppb	0.052	29.34	1768	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4378746	2.12	3473788	126.05	60	120	IS Failed
Sc (IS)	45	3	HMI He	631209	1.71	498630	126.59	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2713356	1.65	2241871	121.03	60	120	IS Failed
Ge Internal standard	72	3	HMI He	781959	1.43	647352	120.79	60	120	IS Failed
In Internal Standard	115	3	HMI He	2924749	1.19	2356036	124.14	60	120	IS Failed
Ir (IS)	193	3	HMI He	6151132	2.15	4999588	123.03	60	120	IS Failed

Sample Report

Sample Table

Sample Name	07658979@10
Data File Name	376SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:52:50-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.076	ppb	1.076	20.84	38	2000	
Na	23	3	45	157.687	ppb	157.687	5.12	27454	400000	
Mg	24	3	45	5457.613	ppb	5457.613	1.93	254390	400000	
Al	27	3	45	32029.811	ppb	32029.811	2.09	553086	400000	
K	39	3	45	6217.242	ppb	6217.242	2.45	257171	400000	
Ca	40	2	45	110603.204	ppb	110603.204	0.91	53155880	400000	
V	51	3	72	44.820	ppb	44.820	0.58	21636	2000	
Cr	52	3	72	27.341	ppb	27.341	2.96	18071	5000	
Mn	55	3	72	710.618	ppb	710.618	0.92	218211	10000	
Fe	56	2	72	21427.131	ppb	21427.131	1.40	26999714	10000	
Co	59	3	72	8.803	ppb	8.803	2.13	8843	2000	
Ni	60	3	72	22.966	ppb	22.966	4.44	6822	5000	
Cu	63	3	72	29.212	ppb	29.212	1.69	22155	5000	
Zn	66	3	72	55.625	ppb	55.625	4.11	6867	5000	
As	75	3	72	8.473	ppb	8.473	13.28	803	2000	
Se	78	2	72	0.355	ppb	0.355	15.61	17	2000	
Sr	88	3	72	71.018	ppb	71.018	1.43	29741	4000	
Mo	95	3	115	0.978	ppb	0.978	6.64	418	2000	
Ag	107	3	115	0.077	ppb	0.077	2.08	120	100	
Cd	111	3	115	0.395	ppb	0.395	26.51	80	2000	
Sn	120	3	115	2.667	ppb	2.667	5.05	2191	2000	
Sb	121	3	115	0.742	ppb	0.742	2.19	490	1000	
Ba	137	3	115	96.907	ppb	96.907	3.70	19606	5000	
Tl	205	3	193	0.384	ppb	0.384	7.76	1328	2000	
(Pb)	206	3	193	30.552	ppb	30.552	1.14	33097	100	
(Pb)	207	3	193	29.159	ppb	29.159	1.86	27456	100	
Pb	208	3	193	29.681	ppb	29.681	1.49	128701	5000	
Th	232	3	193	4.876	ppb	4.876	0.78	27588	2000	
U	238	3	193	0.834	ppb	0.834	4.84	5000	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3581311	1.01	3473788	103.10	60	120	
Sc (IS)	45	3	HMI He	505173	0.11	498630	101.31	60	120	
Ge Internal standard	72	2	HMI H2	2136342	1.14	2241871	95.29	60	120	
Ge Internal standard	72	3	HMI He	616183	1.48	647352	95.19	60	120	
In Internal Standard	115	3	HMI He	2377873	2.38	2356036	100.93	60	120	
Ir (IS)	193	3	HMI He	5270995	1.78	4999588	105.43	60	120	

Sample Report

Sample Table

Sample Name	07658982@10
Data File Name	377SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:54:39-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.785	ppb	1.785	37.20	63	2000	
Na	23	3	45	108.564	ppb	108.564	4.83	23764	400000	
Mg	24	3	45	5818.665	ppb	5818.665	0.44	278104	400000	
Al	27	3	45	40555.270	ppb	40555.270	1.38	718076	400000	
K	39	3	45	7358.744	ppb	7358.744	2.37	307735	400000	
Ca	40	2	45	124701.357	ppb	124701.357	1.57	59848466	400000	
V	51	3	72	63.541	ppb	63.541	0.68	30715	2000	
Cr	52	3	72	35.075	ppb	35.075	2.87	22827	5000	
Mn	55	3	72	763.170	ppb	763.170	1.30	236616	10000	
Fe	56	2	72	27427.001	ppb	27427.001	3.03	34104781	10000	
Co	59	3	72	11.378	ppb	11.378	5.31	11529	2000	
Ni	60	3	72	27.861	ppb	27.861	2.61	8270	5000	
Cu	63	3	72	21.261	ppb	21.261	1.25	16348	5000	
Zn	66	3	72	65.009	ppb	65.009	1.88	8083	5000	
As	75	3	72	10.527	ppb	10.527	13.20	991	2000	
Se	78	2	72	0.523	ppb	0.523	33.05	25	2000	
Sr	88	3	72	63.756	ppb	63.756	3.91	26955	4000	
Mo	95	3	115	1.071	ppb	1.071	9.00	461	2000	
Ag	107	3	115	0.089	ppb	0.089	12.46	138	100	
Cd	111	3	115	0.408	ppb	0.408	31.25	83	2000	
Sn	120	3	115	2.352	ppb	2.352	8.51	2016	2000	
Sb	121	3	115	1.158	ppb	1.158	11.18	756	1000	
Ba	137	3	115	132.249	ppb	132.249	0.90	27071	5000	
Tl	205	3	193	0.506	ppb	0.506	4.72	1719	2000	
(Pb)	206	3	193	76.282	ppb	76.282	2.40	82345	100	
(Pb)	207	3	193	72.057	ppb	72.057	0.56	67407	100	
Pb	208	3	193	73.383	ppb	73.383	1.76	316809	5000	
Th	232	3	193	7.225	ppb	7.225	1.89	37691	2000	
U	238	3	193	1.000	ppb	1.000	7.09	5735	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3577080	1.43	3473788	102.97	60	120	
Sc (IS)	45	3	HMI He	518006	0.51	498630	103.89	60	120	
Ge Internal standard	72	2	HMI H2	2109377	1.81	2241871	94.09	60	120	
Ge Internal standard	72	3	HMI He	622147	1.16	647352	96.11	60	120	
In Internal Standard	115	3	HMI He	2406144	2.41	2356036	102.13	60	120	
Ir (IS)	193	3	HMI He	5269387	0.81	4999588	105.40	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	378SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:56:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	60.591	ppb	60.591	7.42	2136	2000	
Na	23	3	45	34643.453	ppb	34643.453	0.38	3107872	400000	
Mg	24	3	45	207046.997	ppb	207046.997	0.76	9887953	400000	
Al	27	3	45	231244.994	ppb	231244.994	0.63	4092790	400000	
K	39	3	45	6520.176	ppb	6520.176	1.40	275273	400000	
Ca	40	2	45	394018.760	ppb	394018.760	2.95	191935744	400000	
V	51	3	72	56.383	ppb	56.383	3.20	28393	2000	
Cr	52	3	72	6.104	ppb	6.104	8.53	5890	5000	
Mn	55	3	72	12377.250	ppb	12377.250	2.15	3984930	10000	
Fe	56	2	72	746.264	ppb	746.264	1.39	1026846	10000	
Co	59	3	72	586.160	ppb	586.160	2.03	615844	2000	
Ni	60	3	72	542.118	ppb	542.118	1.29	159482	5000	
Cu	63	3	72	7.374	ppb	7.374	1.88	6057	5000	
Zn	66	3	72	2788.753	ppb	2788.753	0.16	354922	5000	
As	75	3	72	3.625	ppb	3.625	20.95	395	2000	
Se	78	2	72	13.637	ppb	13.637	5.12	653	2000	
Sr	88	3	72	3282.901	ppb	3282.901	0.70	1441930	4000	
Mo	95	3	115	0.098	ppb	0.098	77.53	67	2000	
Ag	107	3	115	0.011	ppb	0.011	35.91	30	100	
Cd	111	3	115	7.588	ppb	7.588	6.74	1519	2000	
Sn	120	3	115	0.036	ppb	0.036	206.21	540	2000	
Sb	121	3	115	0.081	ppb	0.081	13.28	78	1000	
Ba	137	3	115	10.012	ppb	10.012	8.52	2086	5000	
Tl	205	3	193	0.686	ppb	0.686	2.15	2249	2000	
(Pb)	206	3	193	9.862	ppb	9.862	2.34	10599	100	
(Pb)	207	3	193	9.075	ppb	9.075	1.84	8580	100	
Pb	208	3	193	9.485	ppb	9.485	2.08	40931	5000	
Th	232	3	193	2.697	ppb	2.697	5.51	17859	2000	
U	238	3	193	98.602	ppb	98.602	1.45	432005	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3631462	1.57	3473788	104.54	60	120	
Sc (IS)	45	3	HMI He	517828	0.90	498630	103.85	60	120	
Ge Internal standard	72	2	HMI H2	2257743	1.14	2241871	100.71	60	120	
Ge Internal standard	72	3	HMI He	646584	1.37	647352	99.88	60	120	
In Internal Standard	115	3	HMI He	2406178	1.35	2356036	102.13	60	120	
Ir (IS)	193	3	HMI He	5168742	1.79	4999588	103.38	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	379SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T11:58:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	75.451	ppb	75.451	4.39	2584	2000	
Na	23	3	45	61901.829	ppb	61901.829	1.96	5512402	400000	
Mg	24	3	45	307183.068	ppb	307183.068	1.11	14591471	400000	
Al	27	3	45	90289.260	ppb	90289.260	3.83	1589329	400000	
K	39	3	45	14838.349	ppb	14838.349	0.94	592777	400000	
Ca	40	2	45	438462.668	ppb	438462.668	1.34	205412328	400000	
V	51	3	72	3.932	ppb	3.932	6.19	2582	2000	
Cr	52	3	72	1.752	ppb	1.752	21.51	3230	5000	
Mn	55	3	72	16087.149	ppb	16087.149	0.88	5207711	10000	
Fe	56	2	72	216.687	ppb	216.687	2.13	312316	10000	
Co	59	3	72	742.370	ppb	742.370	0.98	784222	2000	
Ni	60	3	72	621.961	ppb	621.961	0.77	183898	5000	
Cu	63	3	72	5.123	ppb	5.123	5.94	4309	5000	
Zn	66	3	72	3498.551	ppb	3498.551	0.35	447608	5000	
As	75	3	72	2.514	ppb	2.514	14.88	293	2000	
Se	78	2	72	17.469	ppb	17.469	3.90	809	2000	
Sr	88	3	72	4348.358	ppb	4348.358	0.22	1920162	4000	
Mo	95	3	115	0.071	ppb	0.071	78.76	55	2000	
Ag	107	3	115	0.026	ppb	0.026	37.28	50	100	
Cd	111	3	115	11.214	ppb	11.214	6.19	2214	2000	
Sn	120	3	115	-0.068	ppb	-0.068	-56.31	466	2000	
Sb	121	3	115	0.045	ppb	0.045	83.03	55	1000	
Ba	137	3	115	8.186	ppb	8.186	3.67	1691	5000	
Tl	205	3	193	1.955	ppb	1.955	1.25	6197	2000	
(Pb)	206	3	193	10.203	ppb	10.203	1.75	10929	100	
(Pb)	207	3	193	9.242	ppb	9.242	2.14	8710	100	
Pb	208	3	193	9.644	ppb	9.644	2.77	41489	5000	
Th	232	3	193	0.524	ppb	0.524	13.33	8665	2000	
U	238	3	193	178.046	ppb	178.046	1.94	777040	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3492159	1.63	3473788	100.53	60	120	
Sc (IS)	45	3	HMI He	515116	1.18	498630	103.31	60	120	
Ge Internal standard	72	2	HMI H2	2186905	1.86	2241871	97.55	60	120	
Ge Internal standard	72	3	HMI He	650040	0.55	647352	100.42	60	120	
In Internal Standard	115	3	HMI He	2373516	1.15	2356036	100.74	60	120	
Ir (IS)	193	3	HMI He	5155515	1.36	4999588	103.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	380_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:00:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	0.061	ppb	86.871	3	50	0.1	90	110	>+\-10%
Na	23	3	45	-0.158	ppb	-44349.447	30251	51000	0.0	90	110	>+\-10%
Mg	24	3	45	33.977	ppb	64.386	3798	11000	0.3	90	110	>+\-10%
Al	27	3	45	7.447	ppb	85.032	464	1000	0.7	90	110	>+\-10%
K	39	3	45	-327.261	ppb	-1.035	24329	11000	-3.0	90	110	>+\-10%
Ca	40	2	45	23.894	ppb	4.892	31229	11000	0.2	90	110	>+\-10%
V	51	3	72	-1.053	ppb	-5.496	243	50	-2.1	90	110	>+\-10%
Cr	52	3	72	0.672	ppb	129.424	5475	50	1.3	90	110	>+\-10%
Mn	55	3	72	2.017	ppb	36.491	1788	50	4.0	90	110	>+\-10%
Fe	56	2	72	-7.744	ppb	-25.444	33782	1000	-0.8	90	110	>+\-10%
Co	59	3	72	0.165	ppb	70.152	440	50	0.3	90	110	>+\-10%
Ni	60	3	72	1.383	ppb	38.224	1774	50	2.8	90	110	>+\-10%
Cu	63	3	72	-0.064	ppb	-72.589	431	50	-0.1	90	110	>+\-10%
Zn	66	3	72	0.018	ppb	955.368	287	50	0.0	90	110	>+\-10%
As	75	3	72	-0.395	ppb	-11.890	50	50	-0.8	90	110	>+\-10%
Se	78	2	72	0.040	ppb	28.381	5	50	0.1	90	110	>+\-10%
Sr	88	3	72	0.468	ppb	48.263	473	100	0.5	90	110	>+\-10%
Mo	95	3	115	0.116	ppb	92.756	153	50	0.2	90	110	>+\-10%
Ag	107	3	115	0.083	ppb	99.523	268	50	0.2	90	110	>+\-10%
Cd	111	3	115	0.072	ppb	61.887	33	50	0.1	90	110	>+\-10%
Sn	120	3	115	-0.567	ppb	-14.607	318	50	-1.1	90	110	>+\-10%
Sb	121	3	115	0.041	ppb	185.526	110	50	0.1	90	110	>+\-10%
Ba	137	3	115	-0.046	ppb	-218.608	65	50	-0.1	90	110	>+\-10%
Tl	205	3	193	0.081	ppb	108.472	738	50	0.2	90	110	>+\-10%
(Pb)	206	3	193	0.025	ppb	361.353	423	50	0.0	90	110	>+\-10%
(Pb)	207	3	193	0.030	ppb	236.804	660	50	0.1	90	110	>+\-10%
Pb	208	3	193	-0.001	ppb	-10814.341	1819	50	0.0	90	110	>+\-10%
Th	232	3	193	-0.530	ppb	-12.941	8779	50	-1.1	90	110	>+\-10%
U	238	3	193	0.109	ppb	66.136	3599	50	0.2	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	5256541	8.97	3473788	151.32	60	120	IS Failed
Sc (IS)	45	3	HMI He	1110560	1.46	498630	222.72	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3181551	9.57	2241871	141.92	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1387585	1.45	647352	214.35	60	120	IS Failed
In Internal Standard	115	3	HMI He	4948464	1.28	2356036	210.03	60	120	IS Failed
Ir (IS)	193	3	HMI He	10699689	1.37	4999588	214.01	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	381_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:02:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	51.188	ppb	1.466	1768	50	102.4	90	110	
Na	23	3	45	48973.563	ppb	2.116	4185683	51000	96.0	90	110	
Mg	24	3	45	10336.371	ppb	1.262	471048	11000	94.0	90	110	
Al	27	3	45	1026.144	ppb	1.509	17405	1000	102.6	90	110	
K	39	3	45	10323.915	ppb	0.853	402505	11000	93.9	90	110	
Ca	40	2	45	10352.476	ppb	4.052	4784867	11000	94.1	90	110	
V	51	3	72	52.052	ppb	0.938	25088	50	104.1	90	110	
Cr	52	3	72	52.055	ppb	0.561	32650	50	104.1	90	110	
Mn	55	3	72	54.234	ppb	2.289	16854	50	108.5	90	110	
Fe	56	2	72	1079.312	ppb	1.681	1337792	1000	107.9	90	110	
Co	59	3	72	51.734	ppb	3.046	51949	50	103.5	90	110	
Ni	60	3	72	51.178	ppb	0.897	14747	50	102.4	90	110	
Cu	63	3	72	51.808	ppb	1.460	39201	50	103.6	90	110	
Zn	66	3	72	52.070	ppb	0.703	6453	50	104.1	90	110	
As	75	3	72	50.241	ppb	1.801	4485	50	100.5	90	110	
Se	78	2	72	53.745	ppb	3.888	2338	50	107.5	90	110	
Sr	88	3	72	104.882	ppb	1.306	44019	100	104.9	90	110	
Mo	95	3	115	50.439	ppb	3.155	19851	50	100.9	90	110	
Ag	107	3	115	49.890	ppb	1.126	66814	50	99.8	90	110	
Cd	111	3	115	50.017	ppb	3.107	9704	50	100.0	90	110	
Sn	120	3	115	48.484	ppb	2.319	30513	50	97.0	90	110	
Sb	121	3	115	50.600	ppb	3.319	30982	50	101.2	90	110	
Ba	137	3	115	51.331	ppb	0.725	10219	50	102.7	90	110	
Tl	205	3	193	48.335	ppb	1.378	153319	50	96.7	90	110	
(Pb)	206	3	193	47.337	ppb	3.170	50888	50	94.7	90	110	
(Pb)	207	3	193	48.518	ppb	4.345	45225	50	97.0	90	110	
Pb	208	3	193	47.683	ppb	2.646	205060	50	95.4	90	110	
Th	232	3	193	48.221	ppb	2.627	212905	50	96.4	90	110	
U	238	3	193	48.753	ppb	2.267	217267	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3440437	2.55	3473788	99.04	60	120	
Sc (IS)	45	3	HMI He	494022	0.62	498630	99.08	60	120	
Ge Internal standard	72	2	HMI H2	2054881	0.11	2241871	91.66	60	120	
Ge Internal standard	72	3	HMI He	617617	0.63	647352	95.41	60	120	
In Internal Standard	115	3	HMI He	2334237	1.39	2356036	99.07	60	120	
Ir (IS)	193	3	HMI He	5241709	1.50	4999588	104.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	382_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:04:28-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	51.074	ppb	5.0	17869	25	>RL
Mg	24	3	45	9.566	ppb	18.5	571	25	
Al	27	3	45	4.129	ppb	24.4	150	15	
K	39	3	45	-5.571	ppb	-284.9	22795	50	
V	51	3	72	-0.198	ppb	-16.9	511	1	
Cr	52	3	72	0.386	ppb	11.1	2269	1	
Mn	55	3	72	0.936	ppb	29.2	463	0.5	>RL
Co	59	3	72	0.060	ppb	22.8	90	0.5	
Ni	60	3	72	0.661	ppb	19.6	588	1	
Cu	63	3	72	0.001	ppb	8107.6	242	1	
Zn	66	3	72	0.609	ppb	12.7	200	5	
As	75	3	72	-0.142	ppb	-215.7	45	1	
Se	78	2	72	0.045	ppb	114.3	3	1	
Sr	88	3	72	0.137	ppb	37.5	72	0.5	
Mo	95	3	115	0.077	ppb	49.4	57	0.5	
Ag	107	3	115	0.011	ppb	69.3	30	1	
Cd	111	3	115	0.009	ppb	168.3	3	0.5	
Sn	120	3	115	0.422	ppb	25.1	761	1	
Sb	121	3	115	0.052	ppb	41.3	58	0.6	
Ba	137	3	115	0.011	ppb	287.6	42	0.5	
Tl	205	3	193	0.039	ppb	14.0	223	0.1	
(Pb)	206	3	193	-0.010	ppb	-277.1	167	1	
(Pb)	207	3	193	0.026	ppb	191.7	313	1	
Pb	208	3	193	-0.004	ppb	-373.0	861	0.5	
Th	232	3	193	1.119	ppb	19.7	11154	1	>RL
U	238	3	193	0.039	ppb	27.9	1423	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3495508	5.71	3473788	100.63	60	120	
Sc (IS)	45	3	HMI He	496974	2.19	498630	99.67	60	120	
Ge Internal standard	72	2	HMI H2	2145320	2.50	2241871	95.69	60	120	
Ge Internal standard	72	3	HMI He	618498	2.13	647352	95.54	60	120	
In Internal Standard	115	3	HMI He	2327851	2.06	2356036	98.80	60	120	
Ir (IS)	193	3	HMI He	5149267	2.39	4999588	102.99	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	383LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:06:17-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	1.057	ppb	20.698	37	1	105.7	70	130	
Na	23	3	45	303.035	ppb	2.514	39495	300	101.0	70	130	
Mg	24	3	45	51.897	ppb	3.850	2513	50	103.8	70	130	
Al	27	3	45	49.085	ppb	3.054	914	50	98.2	70	130	
K	39	3	45	118.687	ppb	42.223	27394	120	98.9	70	130	
Ca	40	2	45	193.872	ppb	1.482	97750	200	96.9	70	130	
V	51	3	72	4.638	ppb	6.166	2816	5	92.8	70	130	
Cr	52	3	72	1.933	ppb	14.519	3207	2	96.7	70	130	
Mn	55	3	72	1.797	ppb	7.567	735	1	179.7	70	130	>+/-30%
Fe	56	2	72	51.960	ppb	10.187	95368	50	103.9	70	130	
Co	59	3	72	0.994	ppb	6.057	1038	1	99.4	70	130	
Ni	60	3	72	2.097	ppb	6.890	1000	2	104.8	70	130	
Cu	63	3	72	2.003	ppb	6.606	1764	2	100.2	70	130	
Zn	66	3	72	10.089	ppb	10.012	1364	10	100.9	70	130	
As	75	3	72	4.505	ppb	18.191	458	5	90.1	70	130	
Se	78	2	72	5.019	ppb	9.176	223	5	100.4	70	130	
Sr	88	3	72	4.688	ppb	4.681	2002	5	93.8	70	130	
Mo	95	3	115	1.843	ppb	13.336	756	2	92.1	70	130	
Ag	107	3	115	0.937	ppb	7.936	1279	1	93.7	70	130	
Cd	111	3	115	0.987	ppb	12.944	195	1	98.7	70	130	
Sn	120	3	115	8.151	ppb	3.293	5592	10	81.5	70	130	
Sb	121	3	115	1.674	ppb	7.605	1060	2	83.7	70	130	
Ba	137	3	115	0.908	ppb	19.379	222	1	90.8	70	130	
Tl	205	3	193	0.882	ppb	7.585	2856	1	88.2	70	130	
(Pb)	206	3	193	0.867	ppb	11.213	1093	1	86.7	70	130	
(Pb)	207	3	193	0.961	ppb	20.480	1166	1	96.1	70	130	
Pb	208	3	193	0.883	ppb	3.186	4603	1	88.3	70	130	
Th	232	3	193	1.191	ppb	22.052	11486	1	119.1	70	130	
U	238	3	193	0.976	ppb	2.602	5515	1	97.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3399465	0.97	3473788	97.86	60	120	
Sc (IS)	45	3	HMI He	497320	0.78	498630	99.74	60	120	
Ge Internal standard	72	2	HMI H2	2084448	1.47	2241871	92.98	60	120	
Ge Internal standard	72	3	HMI He	624012	1.63	647352	96.39	60	120	
In Internal Standard	115	3	HMI He	2353594	1.10	2356036	99.90	60	120	
Ir (IS)	193	3	HMI He	5161562	1.60	4999588	103.24	60	120	

Sample Report

Sample Table

Sample Name	07658979@10
Data File Name	384SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:08:08-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.928	ppb	0.928	48.13	33	2000	
Na	23	3	45	125.357	ppb	125.357	5.79	24696	400000	
Mg	24	3	45	5366.143	ppb	5366.143	1.22	250745	400000	
Al	27	3	45	31241.548	ppb	31241.548	0.68	540800	400000	
K	39	3	45	6095.922	ppb	6095.922	1.32	253226	400000	
Ca	40	2	45	111941.197	ppb	111941.197	0.13	53548925	400000	
V	51	3	72	45.515	ppb	45.515	1.33	21634	2000	
Cr	52	3	72	28.168	ppb	28.168	1.02	18285	5000	
Mn	55	3	72	707.646	ppb	707.646	0.86	214068	10000	
Fe	56	2	72	22405.948	ppb	22405.948	1.37	27620391	10000	
Co	59	3	72	8.731	ppb	8.731	4.06	8642	2000	
Ni	60	3	72	22.527	ppb	22.527	2.30	6600	5000	
Cu	63	3	72	29.295	ppb	29.295	1.65	21888	5000	
Zn	66	3	72	56.907	ppb	56.907	2.70	6920	5000	
As	75	3	72	9.104	ppb	9.104	2.64	845	2000	
Se	78	2	72	0.453	ppb	0.453	19.51	21	2000	
Sr	88	3	72	69.963	ppb	69.963	0.72	28863	4000	
Mo	95	3	115	0.915	ppb	0.915	7.94	388	2000	
Ag	107	3	115	0.097	ppb	0.097	47.50	145	100	
Cd	111	3	115	0.342	ppb	0.342	16.04	68	2000	
Sn	120	3	115	2.910	ppb	2.910	6.87	2314	2000	
Sb	121	3	115	0.849	ppb	0.849	11.30	550	1000	
Ba	137	3	115	96.196	ppb	96.196	2.42	19218	5000	
Tl	205	3	193	0.379	ppb	0.379	6.94	1286	2000	
(Pb)	206	3	193	31.175	ppb	31.175	1.56	33077	100	
(Pb)	207	3	193	29.329	ppb	29.329	2.10	27050	100	
Pb	208	3	193	30.021	ppb	30.021	1.58	127509	5000	
Th	232	3	193	4.716	ppb	4.716	1.68	26350	2000	
U	238	3	193	0.845	ppb	0.845	3.76	4944	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3564856	1.17	3473788	102.62	60	120	
Sc (IS)	45	3	HMI He	506412	0.31	498630	101.56	60	120	
Ge Internal standard	72	2	HMI H2	2090245	1.07	2241871	93.24	60	120	
Ge Internal standard	72	3	HMI He	607004	0.75	647352	93.77	60	120	
In Internal Standard	115	3	HMI He	2347148	1.26	2356036	99.62	60	120	
Ir (IS)	193	3	HMI He	5162549	0.54	4999588	103.26	60	120	

Sample Report

Sample Table

Sample Name	07658982@10
Data File Name	385SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:09:58-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	1.797	ppb	1.797	42.39	63	2000	
Na	23	3	45	95.296	ppb	95.296	9.31	22323	400000	
Mg	24	3	45	5543.565	ppb	5543.565	2.50	261933	400000	
Al	27	3	45	38000.245	ppb	38000.245	2.17	665085	400000	
K	39	3	45	6975.166	ppb	6975.166	2.27	289554	400000	
Ca	40	2	45	117897.215	ppb	117897.215	0.75	56773553	400000	
V	51	3	72	58.506	ppb	58.506	0.49	28276	2000	
Cr	52	3	72	31.908	ppb	31.908	0.73	20917	5000	
Mn	55	3	72	709.731	ppb	709.731	0.91	219633	10000	
Fe	56	2	72	25350.285	ppb	25350.285	2.08	31812106	10000	
Co	59	3	72	10.531	ppb	10.531	2.05	10655	2000	
Ni	60	3	72	25.756	ppb	25.756	3.25	7660	5000	
Cu	63	3	72	19.638	ppb	19.638	3.37	15086	5000	
Zn	66	3	72	60.884	ppb	60.884	2.66	7563	5000	
As	75	3	72	9.691	ppb	9.691	3.66	916	2000	
Se	78	2	72	0.550	ppb	0.550	30.17	26	2000	
Sr	88	3	72	58.086	ppb	58.086	1.34	24515	4000	
Mo	95	3	115	1.066	ppb	1.066	0.83	458	2000	
Ag	107	3	115	0.100	ppb	0.100	20.76	153	100	
Cd	111	3	115	0.434	ppb	0.434	19.28	88	2000	
Sn	120	3	115	2.334	ppb	2.334	2.59	2001	2000	
Sb	121	3	115	1.213	ppb	1.213	9.84	791	1000	
Ba	137	3	115	121.199	ppb	121.199	2.15	24751	5000	
Tl	205	3	193	0.516	ppb	0.516	7.22	1746	2000	
(Pb)	206	3	193	70.392	ppb	70.392	2.02	75808	100	
(Pb)	207	3	193	66.784	ppb	66.784	0.86	62337	100	
Pb	208	3	193	67.837	ppb	67.837	1.68	292203	5000	
Th	232	3	193	6.659	ppb	6.659	1.11	35164	2000	
U	238	3	193	0.877	ppb	0.877	2.24	5175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588726	1.03	3473788	103.31	60	120	
Sc (IS)	45	3	HMI He	512117	1.23	498630	102.70	60	120	
Ge Internal standard	72	2	HMI H2	2128320	1.32	2241871	94.93	60	120	
Ge Internal standard	72	3	HMI He	620978	1.59	647352	95.93	60	120	
In Internal Standard	115	3	HMI He	2400312	1.06	2356036	101.88	60	120	
Ir (IS)	193	3	HMI He	5256105	0.47	4999588	105.13	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-1-A
Data File Name	386SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:27:41-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	57.494	ppb	57.494	3.68	2022	2000	
Na	23	3	45	33695.150	ppb	33695.150	1.95	3019880	400000	
Mg	24	3	45	201865.456	ppb	201865.456	0.39	9629284	400000	
Al	27	3	45	222653.489	ppb	222653.489	2.14	3936088	400000	
K	39	3	45	6468.337	ppb	6468.337	2.15	272980	400000	
Ca	40	2	45	391851.335	ppb	391851.335	0.88	188680956	400000	
V	51	3	72	53.966	ppb	53.966	3.54	27473	2000	
Cr	52	3	72	5.818	ppb	5.818	6.51	5772	5000	
Mn	55	3	72	11960.918	ppb	11960.918	0.30	3890175	10000	
Fe	56	2	72	739.362	ppb	739.362	1.54	997861	10000	
Co	59	3	72	560.252	ppb	560.252	1.69	594563	2000	
Ni	60	3	72	510.876	ppb	510.876	2.15	151814	5000	
Cu	63	3	72	7.058	ppb	7.058	5.39	5868	5000	
Zn	66	3	72	2624.572	ppb	2624.572	1.73	337356	5000	
As	75	3	72	4.006	ppb	4.006	17.49	433	2000	
Se	78	2	72	13.462	ppb	13.462	1.81	632	2000	
Sr	88	3	72	3220.101	ppb	3220.101	2.22	1428358	4000	
Mo	95	3	115	0.033	ppb	0.033	228.31	40	2000	
Ag	107	3	115	0.024	ppb	0.024	45.94	48	100	
Cd	111	3	115	7.012	ppb	7.012	8.75	1383	2000	
Sn	120	3	115	-0.025	ppb	-0.025	-143.50	493	2000	
Sb	121	3	115	0.061	ppb	0.061	34.83	65	1000	
Ba	137	3	115	9.500	ppb	9.500	7.20	1953	5000	
Tl	205	3	193	0.638	ppb	0.638	7.02	2062	2000	
(Pb)	206	3	193	9.523	ppb	9.523	3.81	10062	100	
(Pb)	207	3	193	9.012	ppb	9.012	2.17	8377	100	
Pb	208	3	193	9.097	ppb	9.097	1.20	38622	5000	
Th	232	3	193	2.333	ppb	2.333	0.96	16044	2000	
U	238	3	193	94.374	ppb	94.374	1.80	406476	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3588657	0.80	3473788	103.31	60	120	
Sc (IS)	45	3	HMI He	517252	0.38	498630	103.73	60	120	
Ge Internal standard	72	2	HMI H2	2214043	1.23	2241871	98.76	60	120	
Ge Internal standard	72	3	HMI He	653108	1.47	647352	100.89	60	120	
In Internal Standard	115	3	HMI He	2369554	0.18	2356036	100.57	60	120	
Ir (IS)	193	3	HMI He	5080191	0.81	4999588	101.61	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-2-A
Data File Name	387SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:29:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	70.254	ppb	70.254	9.39	2431	2000	
Na	23	3	45	59394.392	ppb	59394.392	2.74	5307639	400000	
Mg	24	3	45	292349.259	ppb	292349.259	2.98	13932331	400000	
Al	27	3	45	87785.857	ppb	87785.857	1.43	1550652	400000	
K	39	3	45	14421.623	ppb	14421.623	1.24	578698	400000	
Ca	40	2	45	412226.099	ppb	412226.099	1.81	194088031	400000	
V	51	3	72	3.770	ppb	3.770	3.02	2496	2000	
Cr	52	3	72	1.269	ppb	1.269	7.66	2924	5000	
Mn	55	3	72	15561.500	ppb	15561.500	1.87	5023625	10000	
Fe	56	2	72	204.667	ppb	204.667	3.68	292333	10000	
Co	59	3	72	713.830	ppb	713.830	1.32	752015	2000	
Ni	60	3	72	604.005	ppb	604.005	2.34	178100	5000	
Cu	63	3	72	4.909	ppb	4.909	8.77	4125	5000	
Zn	66	3	72	3397.456	ppb	3397.456	1.24	433480	5000	
As	75	3	72	2.577	ppb	2.577	16.46	298	2000	
Se	78	2	72	17.438	ppb	17.438	3.59	796	2000	
Sr	88	3	72	4244.391	ppb	4244.391	1.73	1869027	4000	
Mo	95	3	115	0.047	ppb	0.047	92.22	45	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-176.09	13	100	
Cd	111	3	115	10.937	ppb	10.937	3.83	2131	2000	
Sn	120	3	115	-0.117	ppb	-0.117	-71.14	430	2000	
Sb	121	3	115	0.054	ppb	0.054	52.54	60	1000	
Ba	137	3	115	8.439	ppb	8.439	3.09	1719	5000	
Tl	205	3	193	1.916	ppb	1.916	2.82	5982	2000	
(Pb)	206	3	193	9.939	ppb	9.939	3.16	10487	100	
(Pb)	207	3	193	8.851	ppb	8.851	2.54	8227	100	
Pb	208	3	193	9.361	ppb	9.361	1.63	39688	5000	
Th	232	3	193	0.315	ppb	0.315	11.96	7667	2000	
U	238	3	193	172.348	ppb	172.348	1.44	740683	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3510089	2.28	3473788	101.04	60	120	
Sc (IS)	45	3	HMI He	516800	0.45	498630	103.64	60	120	
Ge Internal standard	72	2	HMI H2	2155035	3.24	2241871	96.13	60	120	
Ge Internal standard	72	3	HMI He	648293	0.97	647352	100.15	60	120	
In Internal Standard	115	3	HMI He	2342897	0.67	2356036	99.44	60	120	
Ir (IS)	193	3	HMI He	5075752	0.75	4999588	101.52	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-3-A
Data File Name	388SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:31:16-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.191	ppb	0.191	115.44	7	2000	
Na	23	3	45	2049.486	ppb	2049.486	1.44	192947	400000	
Mg	24	3	45	7046.825	ppb	7046.825	1.05	329578	400000	
Al	27	3	45	1100.042	ppb	1100.042	5.05	19143	400000	
K	39	3	45	20499.145	ppb	20499.145	0.76	797048	400000	
Ca	40	2	45	43549.435	ppb	43549.435	0.99	20019285	400000	
V	51	3	72	3.339	ppb	3.339	9.79	2264	2000	
Cr	52	3	72	0.941	ppb	0.941	19.91	2699	5000	
Mn	55	3	72	25.635	ppb	25.635	1.30	8392	10000	
Fe	56	2	72	784.525	ppb	784.525	2.21	1032656	10000	
Co	59	3	72	0.907	ppb	0.907	17.31	980	2000	
Ni	60	3	72	1.563	ppb	1.563	8.76	875	5000	
Cu	63	3	72	4.970	ppb	4.970	4.63	4142	5000	
Zn	66	3	72	4.588	ppb	4.588	11.22	711	5000	
As	75	3	72	1.221	ppb	1.221	25.70	172	2000	
Se	78	2	72	0.525	ppb	0.525	23.30	25	2000	
Sr	88	3	72	284.564	ppb	284.564	1.24	124333	4000	
Mo	95	3	115	2.563	ppb	2.563	6.63	1061	2000	
Ag	107	3	115	0.013	ppb	0.013	16.24	33	100	
Cd	111	3	115	0.025	ppb	0.025	58.46	7	2000	
Sn	120	3	115	-0.065	ppb	-0.065	-58.31	473	2000	
Sb	121	3	115	0.312	ppb	0.312	24.93	223	1000	
Ba	137	3	115	62.305	ppb	62.305	0.89	12723	5000	
Tl	205	3	193	0.030	ppb	0.030	42.58	193	2000	
(Pb)	206	3	193	0.928	ppb	0.928	11.23	1133	100	
(Pb)	207	3	193	0.928	ppb	0.928	15.80	1115	100	
Pb	208	3	193	0.910	ppb	0.910	5.95	4625	5000	
Th	232	3	193	0.062	ppb	0.062	44.53	6598	2000	
U	238	3	193	4.331	ppb	4.331	4.48	19756	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3425126	2.07	3473788	98.60	60	120	
Sc (IS)	45	3	HMI He	506961	0.48	498630	101.67	60	120	
Ge Internal standard	72	2	HMI H2	2163433	0.85	2241871	96.50	60	120	
Ge Internal standard	72	3	HMI He	643106	0.28	647352	99.34	60	120	
In Internal Standard	115	3	HMI He	2396124	0.37	2356036	101.70	60	120	
Ir (IS)	193	3	HMI He	5061867	1.54	4999588	101.25	60	120	

Sample Report

Sample Table

Sample Name	160-49647-B-4-A
Data File Name	389SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:33:05-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	61.536	ppb	61.536	5.77	2137	2000	
Na	23	3	45	35887.234	ppb	35887.234	2.77	3143321	400000	
Mg	24	3	45	214042.979	ppb	214042.979	1.99	9981178	400000	
Al	27	3	45	236919.724	ppb	236919.724	1.33	4095022	400000	
K	39	3	45	6820.722	ppb	6820.722	1.95	280145	400000	
Ca	40	2	45	426366.865	ppb	426366.865	0.97	196522913	400000	
V	51	3	72	59.057	ppb	59.057	3.89	29004	2000	
Cr	52	3	72	5.974	ppb	5.974	3.39	5675	5000	
Mn	55	3	72	12978.212	ppb	12978.212	0.35	4080146	10000	
Fe	56	2	72	786.997	ppb	786.997	1.86	1024467	10000	
Co	59	3	72	609.090	ppb	609.090	1.60	624816	2000	
Ni	60	3	72	554.486	ppb	554.486	0.17	159263	5000	
Cu	63	3	72	7.296	ppb	7.296	2.16	5853	5000	
Zn	66	3	72	2857.333	ppb	2857.333	1.01	355021	5000	
As	75	3	72	3.699	ppb	3.699	16.87	391	2000	
Se	78	2	72	15.036	ppb	15.036	0.88	682	2000	
Sr	88	3	72	3468.778	ppb	3468.778	1.97	1487373	4000	
Mo	95	3	115	0.098	ppb	0.098	12.61	65	2000	
Ag	107	3	115	0.020	ppb	0.020	10.69	42	100	
Cd	111	3	115	8.386	ppb	8.386	3.28	1629	2000	
Sn	120	3	115	0.062	ppb	0.062	99.53	540	2000	
Sb	121	3	115	0.052	ppb	0.052	18.04	58	1000	
Ba	137	3	115	10.568	ppb	10.568	3.55	2136	5000	
Tl	205	3	193	0.675	ppb	0.675	2.63	2129	2000	
(Pb)	206	3	193	10.122	ppb	10.122	2.80	10457	100	
(Pb)	207	3	193	9.504	ppb	9.504	3.49	8630	100	
Pb	208	3	193	9.742	ppb	9.742	2.08	40417	5000	
Th	232	3	193	2.064	ppb	2.064	6.25	14605	2000	
U	238	3	193	101.861	ppb	101.861	2.01	429270	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3435380	0.58	3473788	98.89	60	120	
Sc (IS)	45	3	HMI He	505726	1.29	498630	101.42	60	120	
Ge Internal standard	72	2	HMI H2	2139445	1.02	2241871	95.43	60	120	
Ge Internal standard	72	3	HMI He	631279	1.04	647352	97.52	60	120	
In Internal Standard	115	3	HMI He	2335127	0.50	2356036	99.11	60	120	
Ir (IS)	193	3	HMI He	4972439	1.44	4999588	99.46	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-D
Data File Name	390SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:34:52-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	18419.688	ppb	18419.688	2.28	1615246	400000	
Mg	24	3	45	12309.509	ppb	12309.509	2.34	572438	400000	
Al	27	3	45	45.650	ppb	45.650	12.02	868	400000	
K	39	3	45	7216.587	ppb	7216.587	2.20	294166	400000	
Ca	40	2	45	49091.953	ppb	49091.953	0.87	22809741	400000	
V	51	3	72	22.839	ppb	22.839	4.47	11781	2000	
Cr	52	3	72	1.153	ppb	1.153	18.15	2821	5000	
Mn	55	3	72	6.432	ppb	6.432	6.10	2236	10000	
Fe	56	2	72	7.855	ppb	7.855	22.15	41431	10000	
Co	59	3	72	0.178	ppb	0.178	24.95	217	2000	
Ni	60	3	72	0.443	ppb	0.443	12.50	546	5000	
Cu	63	3	72	0.447	ppb	0.447	14.73	598	5000	
Zn	66	3	72	2.466	ppb	2.466	5.18	441	5000	
As	75	3	72	14.009	ppb	14.009	4.38	1341	2000	
Se	78	2	72	4.047	ppb	4.047	5.74	181	2000	
Sr	88	3	72	257.823	ppb	257.823	2.23	112334	4000	
Mo	95	3	115	9.181	ppb	9.181	7.10	3709	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-183.27	13	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.121	ppb	-0.121	-85.10	436	2000	
Sb	121	3	115	0.293	ppb	0.293	2.00	210	1000	
Ba	137	3	115	40.398	ppb	40.398	2.17	8220	5000	
Tl	205	3	193	0.002	ppb	0.002	151.82	103	2000	
(Pb)	206	3	193	0.069	ppb	0.069	58.51	240	100	
(Pb)	207	3	193	0.053	ppb	0.053	35.96	325	100	
Pb	208	3	193	0.019	ppb	0.019	119.97	920	5000	
Th	232	3	193	-0.485	ppb	-0.485	-13.85	4227	2000	
U	238	3	193	1.795	ppb	1.795	2.44	8684	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3461661	0.15	3473788	99.65	60	120	
Sc (IS)	45	3	HMI He	504276	1.61	498630	101.13	60	120	
Ge Internal standard	72	2	HMI H2	2093081	2.55	2241871	93.36	60	120	
Ge Internal standard	72	3	HMI He	641400	1.03	647352	99.08	60	120	
In Internal Standard	115	3	HMI He	2384445	3.25	2356036	101.21	60	120	
Ir (IS)	193	3	HMI He	4932886	1.56	4999588	98.67	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-Dsd@5
Data File Name	391SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:36:42-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	3541.552	ppb	3541.552	1.00	314209	400000	
Mg	24	3	45	2505.806	ppb	2505.806	1.21	113943	400000	
Al	27	3	45	20.696	ppb	20.696	25.33	427	400000	
K	39	3	45	1435.278	ppb	1435.278	3.79	75414	400000	
Ca	40	2	45	10061.356	ppb	10061.356	1.51	4609923	400000	
V	51	3	72	4.424	ppb	4.424	0.74	2754	2000	
Cr	52	3	72	0.080	ppb	0.080	582.26	2139	5000	
Mn	55	3	72	3.862	ppb	3.862	8.14	1398	10000	
Fe	56	2	72	6.634	ppb	6.634	33.38	40778	10000	
Co	59	3	72	0.052	ppb	0.052	69.22	85	2000	
Ni	60	3	72	0.264	ppb	0.264	35.75	488	5000	
Cu	63	3	72	0.208	ppb	0.208	17.54	406	5000	
Zn	66	3	72	4.381	ppb	4.381	4.53	675	5000	
As	75	3	72	2.448	ppb	2.448	1.88	280	2000	
Se	78	2	72	0.799	ppb	0.799	21.16	37	2000	
Sr	88	3	72	52.251	ppb	52.251	0.65	22499	4000	
Mo	95	3	115	1.831	ppb	1.831	4.96	745	2000	
Ag	107	3	115	0.010	ppb	0.010	53.36	28	100	
Cd	111	3	115	0.009	ppb	0.009	167.98	3	2000	
Sn	120	3	115	0.194	ppb	0.194	31.93	620	2000	
Sb	121	3	115	0.112	ppb	0.112	19.16	95	1000	
Ba	137	3	115	8.706	ppb	8.706	3.23	1764	5000	
Tl	205	3	193	0.004	ppb	0.004	217.27	113	2000	
(Pb)	206	3	193	0.468	ppb	0.468	14.11	651	100	
(Pb)	207	3	193	0.363	ppb	0.363	17.62	603	100	
Pb	208	3	193	0.416	ppb	0.416	4.23	2554	5000	
Th	232	3	193	-0.537	ppb	-0.537	-8.34	4082	2000	
U	238	3	193	0.368	ppb	0.368	5.28	2779	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3408161	2.36	3473788	98.11	60	120	
Sc (IS)	45	3	HMI He	492547	1.10	498630	98.78	60	120	
Ge Internal standard	72	2	HMI H2	2136703	1.92	2241871	95.31	60	120	
Ge Internal standard	72	3	HMI He	633440	0.45	647352	97.85	60	120	
In Internal Standard	115	3	HMI He	2330819	2.35	2356036	98.93	60	120	
Ir (IS)	193	3	HMI He	5009270	1.36	4999588	100.19	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-E MS
Data File Name	392SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:38:32-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	39.207	ppb	39.207	7.78	1378	2000	
Na	23	3	45	19480.306	ppb	19480.306	1.33	1728598	400000	
Mg	24	3	45	13388.974	ppb	13388.974	1.63	630430	400000	
Al	27	3	45	765.165	ppb	765.165	0.89	13430	400000	
K	39	3	45	7945.808	ppb	7945.808	0.99	325515	400000	
Ca	40	2	45	51131.967	ppb	51131.967	3.26	23882414	400000	
V	51	3	72	62.212	ppb	62.212	2.50	31224	2000	
Cr	52	3	72	38.609	ppb	38.609	3.21	25868	5000	
Mn	55	3	72	43.238	ppb	43.238	4.31	14083	10000	
Fe	56	2	72	766.595	ppb	766.595	3.16	1023389	10000	
Co	59	3	72	37.254	ppb	37.254	0.87	39126	2000	
Ni	60	3	72	37.572	ppb	37.572	5.04	11429	5000	
Cu	63	3	72	39.360	ppb	39.360	1.70	31198	5000	
Zn	66	3	72	39.679	ppb	39.679	3.54	5173	5000	
As	75	3	72	49.640	ppb	49.640	1.52	4633	2000	
Se	78	2	72	43.010	ppb	43.010	0.78	1997	2000	
Sr	88	3	72	333.804	ppb	333.804	1.06	146438	4000	
Mo	95	3	115	47.154	ppb	47.154	1.83	19022	2000	
Ag	107	3	115	37.646	ppb	37.646	3.22	51651	100	
Cd	111	3	115	36.478	ppb	36.478	0.97	7252	2000	
Sn	120	3	115	36.118	ppb	36.118	1.80	23421	2000	
Sb	121	3	115	37.368	ppb	37.368	1.09	23456	1000	
Ba	137	3	115	79.975	ppb	79.975	2.04	16289	5000	
Tl	205	3	193	36.763	ppb	36.763	3.16	115919	2000	
(Pb)	206	3	193	37.213	ppb	37.213	2.32	39813	100	
(Pb)	207	3	193	36.573	ppb	36.573	3.51	33965	100	
Pb	208	3	193	37.184	ppb	37.184	2.60	159155	5000	
Th	232	3	193	33.844	ppb	33.844	0.10	150532	2000	
U	238	3	193	39.208	ppb	39.208	3.14	173917	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3481658	2.44	3473788	100.23	60	120	
Sc (IS)	45	3	HMI He	510434	1.16	498630	102.37	60	120	
Ge Internal standard	72	2	HMI H2	2193078	1.58	2241871	97.82	60	120	
Ge Internal standard	72	3	HMI He	645747	0.79	647352	99.75	60	120	
In Internal Standard	115	3	HMI He	2391645	1.14	2356036	101.51	60	120	
Ir (IS)	193	3	HMI He	5210834	1.64	4999588	104.23	60	120	

Sample Report

Sample Table

Sample Name	280-175079-A-1-F MSD
Data File Name	393SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:40:23-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	608911 6020a
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	36.759	ppb	36.759	4.99	1293	2000	
Na	23	3	45	19113.012	ppb	19113.012	2.74	1669742	400000	
Mg	24	3	45	13348.269	ppb	13348.269	0.66	618719	400000	
Al	27	3	45	806.758	ppb	806.758	1.97	13938	400000	
K	39	3	45	7942.091	ppb	7942.091	2.52	320317	400000	
Ca	40	2	45	47753.423	ppb	47753.423	0.66	23027642	400000	
V	51	3	72	60.549	ppb	60.549	1.49	30857	2000	
Cr	52	3	72	38.913	ppb	38.913	3.25	26440	5000	
Mn	55	3	72	41.943	ppb	41.943	1.46	13872	10000	
Fe	56	2	72	766.921	ppb	766.921	0.85	1028950	10000	
Co	59	3	72	37.122	ppb	37.122	0.59	39562	2000	
Ni	60	3	72	37.699	ppb	37.699	0.71	11637	5000	
Cu	63	3	72	39.056	ppb	39.056	0.51	31418	5000	
Zn	66	3	72	54.369	ppb	54.369	0.41	7143	5000	
As	75	3	72	49.786	ppb	49.786	3.15	4715	2000	
Se	78	2	72	42.982	ppb	42.982	1.30	2005	2000	
Sr	88	3	72	327.212	ppb	327.212	0.64	145669	4000	
Mo	95	3	115	46.842	ppb	46.842	2.87	18819	2000	
Ag	107	3	115	37.928	ppb	37.928	3.12	51834	100	
Cd	111	3	115	37.242	ppb	37.242	2.43	7373	2000	
Sn	120	3	115	36.609	ppb	36.609	2.99	23636	2000	
Sb	121	3	115	37.620	ppb	37.620	2.47	23517	1000	
Ba	137	3	115	78.288	ppb	78.288	1.49	15883	5000	
Tl	205	3	193	38.074	ppb	38.074	1.69	119846	2000	
(Pb)	206	3	193	37.098	ppb	37.098	0.96	39615	100	
(Pb)	207	3	193	37.752	ppb	37.752	2.29	34991	100	
Pb	208	3	193	37.163	ppb	37.163	1.50	158788	5000	
Th	232	3	193	36.607	ppb	36.607	1.63	161964	2000	
U	238	3	193	39.369	ppb	39.369	1.19	174328	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3592736	0.76	3473788	103.42	60	120	
Sc (IS)	45	3	HMI He	502539	1.38	498630	100.78	60	120	
Ge Internal standard	72	2	HMI H2	2203451	1.02	2241871	98.29	60	120	
Ge Internal standard	72	3	HMI He	655287	0.87	647352	101.23	60	120	
In Internal Standard	115	3	HMI He	2382269	1.27	2356036	101.11	60	120	
Ir (IS)	193	3	HMI He	5200403	0.17	4999588	104.02	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-7691036
Data File Name	394_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:42:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	2	6	49.456	ppb	7.297	1758	50	98.9	90	110	
Na	23	3	45	48700.813	ppb	0.971	4233139	51000	95.5	90	110	
Mg	24	3	45	10225.766	ppb	1.644	473810	11000	93.0	90	110	
Al	27	3	45	1014.723	ppb	3.033	17498	1000	101.5	90	110	
K	39	3	45	10413.195	ppb	2.610	412564	11000	94.7	90	110	
Ca	40	2	45	10254.651	ppb	3.577	4822449	11000	93.2	90	110	
V	51	3	72	53.251	ppb	1.868	25614	50	106.5	90	110	
Cr	52	3	72	53.333	ppb	0.553	33347	50	106.7	90	110	
Mn	55	3	72	53.530	ppb	1.920	16613	50	107.1	90	110	
Fe	56	2	72	1054.357	ppb	2.710	1335865	1000	105.4	90	110	
Co	59	3	72	51.470	ppb	1.996	51597	50	102.9	90	110	
Ni	60	3	72	51.848	ppb	1.567	14911	50	103.7	90	110	
Cu	63	3	72	52.815	ppb	1.203	39893	50	105.6	90	110	
Zn	66	3	72	53.560	ppb	3.368	6623	50	107.1	90	110	
As	75	3	72	50.679	ppb	2.866	4517	50	101.4	90	110	
Se	78	2	72	54.931	ppb	3.605	2441	50	109.9	90	110	
Sr	88	3	72	105.285	ppb	1.661	44109	100	105.3	90	110	
Mo	95	3	115	49.917	ppb	0.658	20282	50	99.8	90	110	
Ag	107	3	115	49.180	ppb	3.617	67970	50	98.4	90	110	
Cd	111	3	115	48.955	ppb	3.140	9804	50	97.9	90	110	
Sn	120	3	115	47.171	ppb	3.740	30652	50	94.3	90	110	
Sb	121	3	115	49.597	ppb	1.236	31351	50	99.2	90	110	
Ba	137	3	115	48.447	ppb	1.341	9955	50	96.9	90	110	
Tl	205	3	193	50.129	ppb	0.673	154308	50	100.3	90	110	
(Pb)	206	3	193	49.211	ppb	0.806	51341	50	98.4	90	110	
(Pb)	207	3	193	50.439	ppb	1.556	45633	50	100.9	90	110	
Pb	208	3	193	49.603	ppb	0.795	207004	50	99.2	90	110	
Th	232	3	193	51.032	ppb	1.911	218342	50	102.1	90	110	
U	238	3	193	50.551	ppb	0.720	218575	50	101.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3500221	2.68	3473788	100.76	60	120	
Sc (IS)	45	3	HMI He	502384	1.62	498630	100.75	60	120	
Ge Internal standard	72	2	HMI H2	2099975	1.87	2241871	93.67	60	120	
Ge Internal standard	72	3	HMI He	616598	1.20	647352	95.25	60	120	
In Internal Standard	115	3	HMI He	2409117	0.63	2356036	102.25	60	120	
Ir (IS)	193	3	HMI He	5086348	0.73	4999588	101.74	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-7691033
Data File Name	395_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:44:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	0.5	
Na	23	3	45	40.231	ppb	8.5	17234	25	>RL
Mg	24	3	45	5.742	ppb	36.8	404	25	
Al	27	3	45	4.197	ppb	65.4	153	15	
K	39	3	45	-1.082	ppb	-2842.9	23360	50	
V	51	3	72	-0.061	ppb	-483.0	596	1	
Cr	52	3	72	-0.123	ppb	-103.7	2041	1	
Mn	55	3	72	0.759	ppb	23.6	423	0.5	>RL
Co	59	3	72	0.044	ppb	44.5	77	0.5	
Ni	60	3	72	0.342	ppb	14.9	516	1	
Cu	63	3	72	0.059	ppb	74.5	295	1	
Zn	66	3	72	0.882	ppb	25.4	242	5	
As	75	3	72	-0.192	ppb	-195.9	42	1	
Se	78	2	72	0.043	ppb	150.4	3	1	
Sr	88	3	72	0.084	ppb	27.4	52	0.5	
Mo	95	3	115	0.013	ppb	109.8	32	0.5	
Ag	107	3	115	0.011	ppb	116.1	30	1	
Cd	111	3	115	0.009	ppb	170.8	3	0.5	
Sn	120	3	115	0.198	ppb	42.4	628	1	
Sb	121	3	115	0.048	ppb	140.8	57	0.6	
Ba	137	3	115	0.034	ppb	308.6	47	0.5	
Tl	205	3	193	0.036	ppb	16.9	217	0.1	
(Pb)	206	3	193	-0.005	ppb	-769.3	173	1	
(Pb)	207	3	193	-0.002	ppb	-2319.7	292	1	
Pb	208	3	193	-0.019	ppb	-45.1	805	0.5	
Th	232	3	193	1.368	ppb	16.6	12295	1	>RL
U	238	3	193	0.034	ppb	103.4	1411	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3540753	0.45	3473788	101.93	60	120	
Sc (IS)	45	3	HMI He	505641	1.51	498630	101.41	60	120	
Ge Internal standard	72	2	HMI H2	2166207	2.15	2241871	96.62	60	120	
Ge Internal standard	72	3	HMI He	640795	0.97	647352	98.99	60	120	
In Internal Standard	115	3	HMI He	2351369	0.83	2356036	99.80	60	120	
Ir (IS)	193	3	HMI He	5189898	1.86	4999588	103.81	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-7691038
Data File Name	396LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:45:49-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	-73.618	ppb	-1.424	14282	300	-24.5	70	130	>+/-30%
Mg	24	3	45	1.241	ppb	80.699	377	50	2.5	70	130	>+/-30%
Al	27	3	45	0.121	ppb	420.408	163	50	0.2	70	130	>+/-30%
K	39	3	45	-324.308	ppb	-3.422	21869	120	-270.3	70	130	>+/-30%
Ca	40	2	45	-1.466	ppb	-85.353	15822	200	-0.7	70	130	>+/-30%
V	51	3	72	-1.079	ppb	-2.722	187	5	-21.6	70	130	>+/-30%
Cr	52	3	72	-2.851	ppb	-1.383	700	2	-142.5	70	130	>+/-30%
Mn	55	3	72	-0.004	ppb	-2999.456	335	1	-0.4	70	130	>+/-30%
Fe	56	2	72	-19.070	ppb	-9.233	14753	50	-38.1	70	130	>+/-30%
Co	59	3	72	-0.013	ppb	-45.522	33	1	-1.3	70	130	>+/-30%
Ni	60	3	72	-1.302	ppb	-1.975	72	2	-65.1	70	130	>+/-30%
Cu	63	3	72	-0.135	ppb	-25.834	268	2	-6.7	70	130	>+/-30%
Zn	66	3	72	-0.253	ppb	-13.329	183	10	-2.5	70	130	>+/-30%
As	75	3	72	-0.490	ppb	-16.201	27	5	-9.8	70	130	>+/-30%
Se	78	2	72	0.006	ppb	276.431	3	5	0.1	70	130	>+/-30%
Sr	88	3	72	0.041	ppb	83.538	60	5	0.8	70	130	>+/-30%
Mo	95	3	115	-0.051	ppb	-21.298	12	2	-2.5	70	130	>+/-30%
Ag	107	3	115	0.000	ppb	1117.419	28	1	0.0	70	130	>+/-30%
Cd	111	3	115	-0.004	ppb	-207.644	2	1	-0.4	70	130	>+/-30%
Sn	120	3	115	-0.628	ppb	-0.265	207	10	-6.3	70	130	>+/-30%
Sb	121	3	115	-0.018	ppb	-49.144	28	2	-0.9	70	130	>+/-30%
Ba	137	3	115	-0.122	ppb	-32.170	28	1	-12.2	70	130	>+/-30%
Tl	205	3	193	-0.007	ppb	-26.182	152	1	-0.7	70	130	>+/-30%
(Pb)	206	3	193	-0.061	ppb	-36.572	213	1	-6.1	70	130	>+/-30%
(Pb)	207	3	193	-0.066	ppb	-52.992	436	1	-6.6	70	130	>+/-30%
Pb	208	3	193	-0.076	ppb	-15.571	1054	1	-7.6	70	130	>+/-30%
Th	232	3	193	-0.660	ppb	-4.678	6952	1	-66.0	70	130	>+/-30%
U	238	3	193	0.011	ppb	206.313	2466	1	1.1	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6227566	3.45	3473788	179.27	60	120	IS Failed
Sc (IS)	45	3	HMI He	988217	2.41	498630	198.19	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3733041	2.35	2241871	166.51	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1194015	3.57	647352	184.45	60	120	IS Failed
In Internal Standard	115	3	HMI He	4299938	1.36	2356036	182.51	60	120	IS Failed
Ir (IS)	193	3	HMI He	9741451	2.37	4999588	194.85	60	120	IS Failed

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-
Data File Name	397LCCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:47:37-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	342CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	2	6	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Na	23	3	45	39.475	ppb	8.819	17245	300	13.2	70	130	>+/-30%
Mg	24	3	45	9.855	ppb	14.760	597	50	19.7	70	130	>+/-30%
Al	27	3	45	12.603	ppb	17.622	300	50	25.2	70	130	>+/-30%
K	39	3	45	-14.193	ppb	-66.082	22962	120	-11.8	70	130	>+/-30%
Ca	40	2	45	20.616	ppb	1.619	19259	200	10.3	70	130	>+/-30%
V	51	3	72	-0.105	ppb	-93.513	573	5	-2.1	70	130	>+/-30%
Cr	52	3	72	-0.019	ppb	-1576.937	2096	2	-0.9	70	130	>+/-30%
Mn	55	3	72	1.498	ppb	11.233	656	1	149.8	70	130	>+/-30%
Fe	56	2	72	2.378	ppb	68.794	35722	50	4.8	70	130	>+/-30%
Co	59	3	72	0.071	ppb	7.904	105	1	7.1	70	130	>+/-30%
Ni	60	3	72	0.315	ppb	14.502	506	2	15.7	70	130	>+/-30%
Cu	63	3	72	0.101	ppb	32.870	327	2	5.1	70	130	>+/-30%
Zn	66	3	72	1.277	ppb	17.080	290	10	12.8	70	130	>+/-30%
As	75	3	72	-0.245	ppb	-46.442	37	5	-4.9	70	130	>+/-30%
Se	78	2	72	0.074	ppb	35.140	5	5	1.5	70	130	>+/-30%
Sr	88	3	72	0.323	ppb	6.721	155	5	6.5	70	130	>+/-30%
Mo	95	3	115	0.093	ppb	50.985	63	2	4.6	70	130	>+/-30%
Ag	107	3	115	0.011	ppb	36.391	30	1	1.1	70	130	>+/-30%
Cd	111	3	115	0.017	ppb	148.114	5	1	1.7	70	130	>+/-30%
Sn	120	3	115	0.278	ppb	41.460	683	10	2.8	70	130	>+/-30%
Sb	121	3	115	0.029	ppb	25.903	45	2	1.5	70	130	>+/-30%
Ba	137	3	115	0.158	ppb	62.332	72	1	15.8	70	130	>+/-30%
Tl	205	3	193	0.002	ppb	326.361	108	1	0.2	70	130	>+/-30%
(Pb)	206	3	193	0.053	ppb	81.745	230	1	5.3	70	130	>+/-30%
(Pb)	207	3	193	0.041	ppb	154.180	323	1	4.1	70	130	>+/-30%
Pb	208	3	193	0.034	ppb	56.298	1008	1	3.4	70	130	>+/-30%
Th	232	3	193	3.298	ppb	2.429	20054	1	329.8	70	130	>+/-30%
U	238	3	193	0.018	ppb	134.345	1314	1	1.8	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3497024	1.74	3473788	100.67	60	120	
Sc (IS)	45	3	HMI He	507869	0.92	498630	101.85	60	120	
Ge Internal standard	72	2	HMI H2	2156273	0.85	2241871	96.18	60	120	
Ge Internal standard	72	3	HMI He	638056	0.95	647352	98.56	60	120	
In Internal Standard	115	3	HMI He	2365538	2.05	2356036	100.40	60	120	
Ir (IS)	193	3	HMI He	5081653	1.35	4999588	101.64	60	120	

Sample Report

Sample Table

Sample Name	174893-2
Data File Name	398SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:49:25-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	92563.341	ppb	92563.341	2.29	9995057	400000	
Mg	24	3	45	33494.216	ppb	33494.216	2.03	1930933	400000	
Al	27	3	45	9.324	ppb	9.324	33.48	300	400000	
K	39	3	45	1271.894	ppb	1271.894	4.68	88093	400000	
Ca	40	2	45	52750.583	ppb	52750.583	0.95	31463243	400000	
V	51	3	72	-1.009	ppb	-1.009	-10.90	163	2000	
Cr	52	3	72	-0.637	ppb	-0.637	-33.72	2106	5000	
Mn	55	3	72	694.239	ppb	694.239	2.64	270383	10000	
Fe	56	2	72	-4.512	ppb	-4.512	-181.09	33754	10000	
Co	59	3	72	1.971	ppb	1.971	6.16	2541	2000	
Ni	60	3	72	1.376	ppb	1.376	17.44	996	5000	
Cu	63	3	72	0.595	ppb	0.595	24.57	870	5000	
Zn	66	3	72	2.597	ppb	2.597	6.92	558	5000	
As	75	3	72	1.952	ppb	1.952	27.93	290	2000	
Se	78	2	72	0.134	ppb	0.134	52.82	9	2000	
Sr	88	3	72	460.103	ppb	460.103	0.93	244282	4000	
Mo	95	3	115	1.761	ppb	1.761	14.91	891	2000	
Ag	107	3	115	0.003	ppb	0.003	254.77	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.618	ppb	-0.618	-6.06	147	2000	
Sb	121	3	115	0.005	ppb	0.005	525.86	37	1000	
Ba	137	3	115	269.881	ppb	269.881	2.06	66343	5000	
Tl	205	3	193	0.015	ppb	0.015	134.47	178	2000	
(Pb)	206	3	193	-0.052	ppb	-0.052	-40.38	147	100	
(Pb)	207	3	193	-0.030	ppb	-0.030	-88.61	317	100	
Pb	208	3	193	-0.055	ppb	-0.055	-10.39	778	5000	
Th	232	3	193	-0.645	ppb	-0.645	-8.56	4494	2000	
U	238	3	193	0.100	ppb	0.100	7.14	2032	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	4443960	0.30	3473788	127.93	60	120	IS Failed
Sc (IS)	45	3	HMI He	625140	1.01	498630	125.37	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	2705005	1.12	2241871	120.66	60	120	IS Failed
Ge Internal standard	72	3	HMI He	781543	0.92	647352	120.73	60	120	IS Failed
In Internal Standard	115	3	HMI He	2891916	0.97	2356036	122.75	60	120	IS Failed
Ir (IS)	193	3	HMI He	6189589	1.55	4999588	123.80	60	120	IS Failed

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	399SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:52:40-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	2.163	ppb	2.163	147.80	15521	400000	
Mg	24	3	45	7.217	ppb	7.217	145.85	527	400000	
Al	27	3	45	3.421	ppb	3.421	100.35	157	400000	
K	39	3	45	-45.867	ppb	-45.867	-13.34	24165	400000	
Ca	40	2	45	-1.732	ppb	-1.732	-55.91	9950	400000	
V	51	3	72	-0.928	ppb	-0.928	-3.83	192	2000	
Cr	52	3	72	-0.537	ppb	-0.537	-23.68	1969	5000	
Mn	55	3	72	0.540	ppb	0.540	36.15	390	10000	
Fe	56	2	72	7.029	ppb	7.029	47.56	45548	10000	
Co	59	3	72	0.030	ppb	0.030	46.03	68	2000	
Ni	60	3	72	0.095	ppb	0.095	223.80	490	5000	
Cu	63	3	72	-0.100	ppb	-0.100	-49.54	188	5000	
Zn	66	3	72	-0.025	ppb	-0.025	-747.66	140	5000	
As	75	3	72	-0.499	ppb	-0.499	-9.84	15	2000	
Se	78	2	72	0.012	ppb	0.012	585.99	2	2000	
Sr	88	3	72	0.115	ppb	0.115	72.12	72	4000	
Mo	95	3	115	-0.010	ppb	-0.010	-95.93	25	2000	
Ag	107	3	115	0.004	ppb	0.004	112.24	23	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.517	ppb	-0.517	-6.84	203	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-19.22	17	1000	
Ba	137	3	115	-0.043	ppb	-0.043	-173.14	35	5000	
Tl	205	3	193	0.002	ppb	0.002	99.04	118	2000	
(Pb)	206	3	193	-0.050	ppb	-0.050	-33.34	135	100	
(Pb)	207	3	193	0.021	ppb	0.021	363.29	335	100	
Pb	208	3	193	-0.044	ppb	-0.044	-44.39	751	5000	
Th	232	3	193	-0.661	ppb	-0.661	-2.82	3989	2000	
U	238	3	193	0.011	ppb	0.011	265.60	1414	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3966819	1.05	3473788	114.19	60	120	
Sc (IS)	45	3	HMI He	563892	0.40	498630	113.09	60	120	
Ge Internal standard	72	2	HMI H2	2357552	0.68	2241871	105.16	60	120	
Ge Internal standard	72	3	HMI He	705615	0.58	647352	109.00	60	120	
In Internal Standard	115	3	HMI He	2618086	2.56	2356036	111.12	60	120	
Ir (IS)	193	3	HMI He	5590669	1.64	4999588	111.82	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	400SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:54:29-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.046	ppb	0.046	173.21	2	2000	
Na	23	3	45	-4.869	ppb	-4.869	-92.13	14692	400000	
Mg	24	3	45	2.732	ppb	2.732	36.49	290	400000	
Al	27	3	45	1.751	ppb	1.751	42.00	123	400000	
K	39	3	45	-40.425	ppb	-40.425	-33.27	24165	400000	
Ca	40	2	45	-0.980	ppb	-0.980	-18.72	10291	400000	
V	51	3	72	-0.876	ppb	-0.876	-5.61	218	2000	
Cr	52	3	72	-0.561	ppb	-0.561	-27.88	1944	5000	
Mn	55	3	72	0.532	ppb	0.532	5.19	385	10000	
Fe	56	2	72	2.515	ppb	2.515	71.30	39449	10000	
Co	59	3	72	0.006	ppb	0.006	143.51	42	2000	
Ni	60	3	72	-0.087	ppb	-0.087	-287.87	430	5000	
Cu	63	3	72	-0.054	ppb	-0.054	-52.49	227	5000	
Zn	66	3	72	-0.358	ppb	-0.358	-31.60	93	5000	
As	75	3	72	-0.415	ppb	-0.415	-13.97	23	2000	
Se	78	2	72	-0.002	ppb	-0.002	-1455.33	1	2000	
Sr	88	3	72	0.085	ppb	0.085	52.24	57	4000	
Mo	95	3	115	0.090	ppb	0.090	204.75	68	2000	
Ag	107	3	115	0.000	ppb	0.000	1431.34	17	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.564	ppb	-0.564	-11.84	168	2000	
Sb	121	3	115	-0.019	ppb	-0.019	-81.95	17	1000	
Ba	137	3	115	-0.048	ppb	-0.048	-138.17	33	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-510.26	107	2000	
(Pb)	206	3	193	-0.027	ppb	-0.027	-139.03	162	100	
(Pb)	207	3	193	-0.031	ppb	-0.031	-21.89	285	100	
Pb	208	3	193	-0.044	ppb	-0.044	-37.00	753	5000	
Th	232	3	193	-0.655	ppb	-0.655	-6.07	4022	2000	
U	238	3	193	0.004	ppb	0.004	332.58	1384	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3943350	0.35	3473788	113.52	60	120	
Sc (IS)	45	3	HMI He	558532	0.99	498630	112.01	60	120	
Ge Internal standard	72	2	HMI H2	2367361	1.70	2241871	105.60	60	120	
Ge Internal standard	72	3	HMI He	702394	0.59	647352	108.50	60	120	
In Internal Standard	115	3	HMI He	2585407	0.39	2356036	109.74	60	120	
Ir (IS)	193	3	HMI He	5599036	1.15	4999588	111.99	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	401SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:56:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.000	ppb	0.000	#DIV/0!	0	2000	
Na	23	3	45	-7.750	ppb	-7.750	-91.28	14586	400000	
Mg	24	3	45	2.228	ppb	2.228	71.13	267	400000	
Al	27	3	45	1.348	ppb	1.348	281.41	117	400000	
K	39	3	45	-51.495	ppb	-51.495	-42.39	23978	400000	
Ca	40	2	45	-1.079	ppb	-1.079	-101.32	10070	400000	
V	51	3	72	-0.905	ppb	-0.905	-8.26	203	2000	
Cr	52	3	72	-0.578	ppb	-0.578	-4.41	1938	5000	
Mn	55	3	72	0.386	ppb	0.386	63.12	335	10000	
Fe	56	2	72	2.135	ppb	2.135	120.75	39355	10000	
Co	59	3	72	0.012	ppb	0.012	101.78	48	2000	
Ni	60	3	72	0.217	ppb	0.217	79.34	528	5000	
Cu	63	3	72	-0.067	ppb	-0.067	-35.07	217	5000	
Zn	66	3	72	-0.263	ppb	-0.263	-37.06	107	5000	
As	75	3	72	-0.449	ppb	-0.449	-21.87	20	2000	
Se	78	2	72	-0.002	ppb	-0.002	-989.43	1	2000	
Sr	88	3	72	0.112	ppb	0.112	66.55	70	4000	
Mo	95	3	115	0.001	ppb	0.001	3396.36	30	2000	
Ag	107	3	115	-0.001	ppb	-0.001	-311.70	15	100	
Cd	111	3	115	-0.001	ppb	-0.001	-1970.04	2	2000	
Sn	120	3	115	-0.524	ppb	-0.524	-11.56	198	2000	
Sb	121	3	115	0.003	ppb	0.003	729.89	32	1000	
Ba	137	3	115	-0.140	ppb	-0.140	-8.77	13	5000	
Tl	205	3	193	0.005	ppb	0.005	102.40	130	2000	
(Pb)	206	3	193	-0.042	ppb	-0.042	-60.21	145	100	
(Pb)	207	3	193	-0.058	ppb	-0.058	-14.82	258	100	
Pb	208	3	193	-0.059	ppb	-0.059	-17.53	686	5000	
Th	232	3	193	-0.615	ppb	-0.615	-5.86	4212	2000	
U	238	3	193	0.027	ppb	0.027	44.68	1493	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3877667	0.76	3473788	111.63	60	120	
Sc (IS)	45	3	HMI He	565139	0.61	498630	113.34	60	120	
Ge Internal standard	72	2	HMI H2	2396270	1.30	2241871	106.89	60	120	
Ge Internal standard	72	3	HMI He	704309	0.92	647352	108.80	60	120	
In Internal Standard	115	3	HMI He	2620830	1.43	2356036	111.24	60	120	
Ir (IS)	193	3	HMI He	5605741	0.81	4999588	112.12	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	402SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:58:06-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	-12.538	ppb	-12.538	-58.65	14235	400000	
Mg	24	3	45	2.500	ppb	2.500	31.41	284	400000	
Al	27	3	45	1.970	ppb	1.970	43.94	130	400000	
K	39	3	45	-46.022	ppb	-46.022	-64.64	24409	400000	
Ca	40	2	45	0.287	ppb	0.287	206.32	11042	400000	
V	51	3	72	-0.966	ppb	-0.966	-9.52	172	2000	
Cr	52	3	72	-0.684	ppb	-0.684	-31.43	1878	5000	
Mn	55	3	72	0.358	ppb	0.358	47.88	327	10000	
Fe	56	2	72	2.229	ppb	2.229	91.65	39322	10000	
Co	59	3	72	0.016	ppb	0.016	30.64	53	2000	
Ni	60	3	72	0.105	ppb	0.105	25.15	495	5000	
Cu	63	3	72	-0.068	ppb	-0.068	-40.00	217	5000	
Zn	66	3	72	-0.114	ppb	-0.114	-389.09	128	5000	
As	75	3	72	-0.533	ppb	-0.533	-19.28	12	2000	
Se	78	2	72	0.024	ppb	0.024	90.94	3	2000	
Sr	88	3	72	0.073	ppb	0.073	35.90	52	4000	
Mo	95	3	115	-0.029	ppb	-0.029	-121.97	17	2000	
Ag	107	3	115	-0.007	ppb	-0.007	-28.18	7	100	
Cd	111	3	115	-0.008	ppb	-0.008	0.00	0	2000	
Sn	120	3	115	-0.593	ppb	-0.593	-1.57	152	2000	
Sb	121	3	115	-0.026	ppb	-0.026	-31.77	12	1000	
Ba	137	3	115	-0.096	ppb	-0.096	-35.74	23	5000	
Tl	205	3	193	-0.002	ppb	-0.002	-285.93	107	2000	
(Pb)	206	3	193	-0.056	ppb	-0.056	-43.58	128	100	
(Pb)	207	3	193	-0.047	ppb	-0.047	-86.00	268	100	
Pb	208	3	193	-0.061	ppb	-0.061	-20.50	673	5000	
Th	232	3	193	-0.635	ppb	-0.635	-4.31	4104	2000	
U	238	3	193	0.007	ppb	0.007	42.11	1393	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3971822	1.27	3473788	114.34	60	120	
Sc (IS)	45	3	HMI He	569684	0.36	498630	114.25	60	120	
Ge Internal standard	72	2	HMI H2	2386069	1.30	2241871	106.43	60	120	
Ge Internal standard	72	3	HMI He	708232	0.68	647352	109.40	60	120	
In Internal Standard	115	3	HMI He	2638465	0.82	2356036	111.99	60	120	
Ir (IS)	193	3	HMI He	5585791	0.18	4999588	111.73	60	120	

Sample Report

Sample Table

Sample Name	rinse-7688110
Data File Name	403SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Acq Date Time	2023-04-20T12:59:55-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	342CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Be	9	2	6	0.044	ppb	0.044	173.21	2	2000	
Na	23	3	45	-5.421	ppb	-5.421	-92.91	14662	400000	
Mg	24	3	45	4.402	ppb	4.402	90.07	377	400000	
Al	27	3	45	4.881	ppb	4.881	121.75	184	400000	
K	39	3	45	-24.444	ppb	-24.444	-99.64	24860	400000	
Ca	40	2	45	0.033	ppb	0.033	1015.79	10755	400000	
V	51	3	72	-0.935	ppb	-0.935	-2.99	187	2000	
Cr	52	3	72	-0.606	ppb	-0.606	-7.11	1914	5000	
Mn	55	3	72	0.559	ppb	0.559	51.11	395	10000	
Fe	56	2	72	4.478	ppb	4.478	45.51	42317	10000	
Co	59	3	72	0.015	ppb	0.015	169.82	52	2000	
Ni	60	3	72	0.075	ppb	0.075	300.29	481	5000	
Cu	63	3	72	-0.087	ppb	-0.087	-39.30	198	5000	
Zn	66	3	72	-0.165	ppb	-0.165	-114.82	120	5000	
As	75	3	72	-0.449	ppb	-0.449	-11.06	20	2000	
Se	78	2	72	0.051	ppb	0.051	77.87	4	2000	
Sr	88	3	72	0.119	ppb	0.119	51.50	73	4000	
Mo	95	3	115	0.006	ppb	0.006	323.05	32	2000	
Ag	107	3	115	-0.003	ppb	-0.003	-243.96	12	100	
Cd	111	3	115	-0.001	ppb	-0.001	-2097.85	2	2000	
Sn	120	3	115	-0.603	ppb	-0.603	-6.04	142	2000	
Sb	121	3	115	-0.031	ppb	-0.031	-14.35	8	1000	
Ba	137	3	115	-0.041	ppb	-0.041	-57.08	35	5000	
Tl	205	3	193	-0.004	ppb	-0.004	-149.92	98	2000	
(Pb)	206	3	193	-0.058	ppb	-0.058	-39.49	127	100	
(Pb)	207	3	193	-0.030	ppb	-0.030	-46.30	287	100	
Pb	208	3	193	-0.051	ppb	-0.051	-15.47	723	5000	
Th	232	3	193	-0.647	ppb	-0.647	-3.79	4060	2000	
U	238	3	193	0.025	ppb	0.025	93.24	1483	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	3917564	0.77	3473788	112.77	60	120	
Sc (IS)	45	3	HMI He	559324	0.51	498630	112.17	60	120	
Ge Internal standard	72	2	HMI H2	2376386	0.25	2241871	106.00	60	120	
Ge Internal standard	72	3	HMI He	702732	0.48	647352	108.55	60	120	
In Internal Standard	115	3	HMI He	2597449	2.16	2356036	110.25	60	120	
Ir (IS)	193	3	HMI He	5602069	0.40	4999588	112.05	60	120	

Calibration Blank Report

Sample Table

Sample Name2	icis-7691033
Data File Name	404CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
Method	
Acq Date Time	2023-04-20T13:01:42-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	0	#VALUE!
Na	23	45	3	HMI He	15651	0.01
Mg	24	45	3	HMI He	397	16.18
Al	27	45	3	HMI He	127	21.87
K	39	45	3	HMI He	23597	0.03
Ca	40	45	2	HMI H2	12278	0.01
V	51	72	3	HMI He	583	3.06
Cr	52	72	3	HMI He	2041	0.32
Mn	55	72	3	HMI He	443	1.28
Fe	56	72	2	HMI H2	35959	0.02
Co	59	72	3	HMI He	60	97.27
Ni	60	72	3	HMI He	348	1.26
Cu	63	72	3	HMI He	295	1.52
Zn	66	72	3	HMI He	152	10.04
As	75	72	3	HMI He	40	82.71
Se	78	72	2	HMI H2	4	2165.06
(Se)	78	72	3	HMI He	18	374.49
Sr	88	72	3	HMI He	63	47.21
Mo	95	115	3	HMI He	37	140.88
Ag	107	115	3	HMI He	17	207.80
Cd	111	115	3	HMI He	0	#VALUE!
Sn	120	115	3	HMI He	481	3.27
Sb	121	115	3	HMI He	28	95.18
Ba	137	115	3	HMI He	42	158.67
Tl	205	193	3	HMI He	90	16.34
(Pb)	206	193	3	HMI He	178	7.76
(Pb)	207	193	3	HMI He	270	1.19
Pb	208	193	3	HMI He	820	0.78
Th	232	193	3	HMI He	5647	0.14
U	238	193	3	HMI He	1351	0.43

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc (IS)	45	2	HMI H2	3460228	0.59
Sc (IS)	45	3	HMI He	505695	0.71
Ge Internal standard	72	2	HMI H2	2187657	2.33
Ge Internal standard	72	3	HMI He	654972	0.70
In Internal Standard	115	3	HMI He	2371544	1.25
Ir (IS)	193	3	HMI He	5024616	0.81

Calibration Standard Report

Sample Table

Sample Name	ic-7691035
Data File Name	405CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\79_041423.b
method	
Acq Date Time	2023-04-20T13:03:31-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	CAL 4
ISTD Ref File Name	404CALB.d
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Be	9	6	2	HMI H2	3	5196.15
Na	23	45	3	HMI He	2246946	0.01
Mg	24	45	3	HMI He	228150	0.06
Al	27	45	3	HMI He	113	27.31
K	39	45	3	HMI He	206298	0.06
V	51	72	3	HMI He	245	13.41
Cr	52	72	3	HMI He	3766	2.74
Mn	55	72	3	HMI He	528	15.10
Co	59	72	3	HMI He	100	101.17
Ni	60	72	3	HMI He	1113	11.67
Cu	63	72	3	HMI He	310	3.12
Zn	66	72	3	HMI He	175	11.78
As	75	72	3	HMI He	40	205.00
Se	78	72	2	HMI H2	3	1623.80
(Se)	78	72	3	HMI He	43	15.39
Sr	88	72	3	HMI He	90	52.76
Mo	95	115	3	HMI He	80	131.49
Ag	107	115	3	HMI He	22	268.08
Cd	111	115	3	HMI He	3	2598.08
Sn	120	115	3	HMI He	345	10.57
Sb	121	115	3	HMI He	23	140.40
Ba	137	115	3	HMI He	62	114.92
Tl	205	193	3	HMI He	152	13.11
(Pb)	206	193	3	HMI He	202	4.32
(Pb)	207	193	3	HMI He	448	2.26
Pb	208	193	3	HMI He	1035	0.40
Th	232	193	3	HMI He	9317	0.28
U	238	193	3	HMI He	2102	1.21

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc (IS)	45	2	HMI H2	6261358	4.80	3460228	180.95	60	120	IS Failed
Sc (IS)	45	3	HMI He	863843	26.82	505695	170.82	60	120	IS Failed
Ge Internal standard	72	2	HMI H2	3791234	4.78	2187657	173.30	60	120	IS Failed
Ge Internal standard	72	3	HMI He	1057661	28.04	654972	161.48	60	120	IS Failed
In Internal Standard	115	3	HMI He	3913234	25.35	2371544	165.01	60	120	IS Failed
Ir (IS)	193	3	HMI He	8492440	25.47	5024616	169.02	60	120	IS Failed

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG No.:

Project: Bannock Ft. Hall Mine LF, Idaho

Client Sample ID	Lab Sample ID
MW-119D-20230413	280-175123-1
MW-119S-20230413	280-175123-2
RW-3-20230413	280-175123-3

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-119D-20230413 Lab Sample ID: 280-175123-1

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG ID.:

Matrix: Water Date Sampled: 04/13/2023 10:55

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	1.2	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	2.5	0.50	0.090	mg/L		H H3	1	9056A
16887-00-6	Chloride	210	60	20	mg/L			20	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L		H H3	1	9056A
14808-79-8	Sulfate	100	100	21	mg/L			20	9056A
7440-44-0	Total Organic Carbon - Duplicates	1.7	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-119S-20230413 Lab Sample ID: 280-175123-2

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG ID.:

Matrix: Water Date Sampled: 04/13/2023 09:15

Reporting Basis: WET Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	1.3	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	4.1	0.50	0.090	mg/L		H H3	1	9056A
16887-00-6	Chloride	270	60	20	mg/L			20	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L		H H3	1	9056A
14808-79-8	Sulfate	110	10	2.1	mg/L			2	9056A
7440-44-0	Total Organic Carbon - Duplicates	2.2	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: RW-3-20230413 | Lab Sample ID: 280-175123-3

Lab Name: Eurofins Denver | Job No.: 280-175123-1

SDG ID.:

Matrix: Water | Date Sampled: 04/13/2023 12:45

Reporting Basis: WET | Date Received: 04/17/2023 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
24959-67-9	Bromide	ND	0.50	0.23	mg/L			1	9056A
14797-55-8	Nitrate as N	5.6	1.0	0.18	mg/L		H H3	2	9056A
16887-00-6	Chloride	340	60	20	mg/L			20	9056A
14797-65-0	Nitrite as N	ND	0.50	0.049	mg/L		H H3	1	9056A
14808-79-8	Sulfate	49	5.0	1.0	mg/L			1	9056A
7440-44-0	Total Organic Carbon - Duplicates	3.8	1.0	0.35	mg/L			1	9060A

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Analyst: EJS Batch Start Date: 04/03/2023

Reporting Units: mg/L Analytical Batch No.: 607366

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	17:54	Bromide	1.92	2.00	96	90-110		IC ICV 5_00402
			Chloride	84.5	80.0	106	90-110		Cl ICV Std_00006
			Sulfate	85.7	80.0	107	90-110		IC SO4 ICV_00024
8	ICB	18:06	Bromide	ND					
			Chloride	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Analyst: EJS Batch Start Date: 04/12/2023

Reporting Units: mg/L Analytical Batch No.: 608435

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	15:34	Nitrate as N	2.15	2.00	107	90-110		IC ICV 5_00403
			Nitrite as N	2.12	2.00	106	90-110		IC ICV 5_00403
8	ICB	15:49	Nitrate as N	ND					
			Nitrite as N	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Analyst: EJS Batch Start Date: 04/12/2023

Reporting Units: mg/L Analytical Batch No.: 608436

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	15:34	Bromide	2.01	2.00	101	90-110		IC ICV 5_00403
			Chloride	85.7	80.0	107	90-110		Cl ICV Std_00006
			Sulfate	86.9	80.0	109	90-110		IC SO4 ICV_00024
8	ICB	15:49	Bromide	ND					
			Chloride	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Analyst: MEC Batch Start Date: 04/17/2023

Reporting Units: mg/L Analytical Batch No.: 608955

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	12:13	Nitrate as N	2.39	2.50	96	90-110		IC LCS_01947
			Nitrite as N	2.43	2.50	97	90-110		IC LCS_01947
2	CCB	12:28	Nitrate as N	ND					
			Nitrite as N	ND					
17	CCV	16:13	Nitrate as N	2.41	2.50	96	90-110		IC LCS_01947
			Nitrite as N	2.42	2.50	97	90-110		IC LCS_01947
18	CCB	16:28	Nitrate as N	ND					
			Nitrite as N	ND					
29	CCV	19:14	Nitrate as N	2.41	2.50	96	90-110		IC LCS_01947
			Nitrite as N	2.43	2.50	97	90-110		IC LCS_01947
30	CCB	19:29	Nitrate as N	ND					
			Nitrite as N	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Analyst: MEC Batch Start Date: 04/17/2023

Reporting Units: mg/L Analytical Batch No.: 608956

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	12:13	Chloride	50.5	50.0	101	90-110		IC LCS_01947
			Sulfate	50.2	50.0	100	90-110		IC LCS_01947
2	CCB	12:28	Chloride	ND					
			Sulfate	ND					
17	CCV	16:13	Chloride	51.1	50.0	102	90-110		IC LCS_01947
			Sulfate	50.7	50.0	101	90-110		IC LCS_01947
18	CCB	16:28	Chloride	ND					
			Sulfate	ND					
29	CCV	19:14	Chloride	50.8	50.0	102	90-110		IC LCS_01947
			Sulfate	49.9	50.0	100	90-110		IC LCS_01947
30	CCB	19:29	Chloride	ND					
			Sulfate	ND					
41	CCV	22:14	Chloride	51.0	50.0	102	90-110		IC LCS_01947
			Sulfate	50.1	50.0	100	90-110		IC LCS_01947
42	CCB	22:29	Chloride	ND					
			Sulfate	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Analyst: EJS Batch Start Date: 04/29/2023

Reporting Units: mg/L Analytical Batch No.: 610654

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
41	CCV	21:22	Bromide	2.38	2.50	95	90-110		IC LCS_01950
42	CCB	21:34	Bromide	ND					
53	CCV	23:46	Bromide	2.27	2.50	91	90-110		IC LCS_01950
54	CCB	23:58	Bromide	ND					
65	CCV	02:09	Bromide	2.30	2.50	92	90-110		IC LCS_01950
66	CCB	02:21	Bromide	ND					
77	CCV	04:33	Bromide	2.32	2.50	93	90-110		IC LCS_01950
78	CCB	04:44	Bromide	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Analyst: ABW Batch Start Date: 04/21/2023

Reporting Units: mg/L Analytical Batch No.: 609838

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	15:01	Total Organic Carbon - Duplicates	19.7	20.0	98	90-110		TOC ICV Std_00051
2	ICB	15:16	Total Organic Carbon - Duplicates	ND					
15	CCV	18:27	Total Organic Carbon - Duplicates	24.3	25.0	97	90-110		TOC LCS Std_00057
16	CCB	18:43	Total Organic Carbon - Duplicates	ND					
27	CCV	21:27	Total Organic Carbon - Duplicates	24.2	25.0	97	90-110		TOC LCS Std_00057
28	CCB	21:43	Total Organic Carbon - Duplicates	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Analyst: ABW Batch Start Date: 04/24/2023

Reporting Units: mg/L Analytical Batch No.: 610099

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	18:12	Total Organic Carbon - Duplicates	19.7	20.0	98	90-110		TOC ICV Std_00051
2	ICB	18:27	Total Organic Carbon - Duplicates	ND					
15	CCV	21:41	Total Organic Carbon - Duplicates	23.9	25.0	96	90-110		TOC LCS Std_00057
16	CCB	21:56	Total Organic Carbon - Duplicates	ND					

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 608955 Date: 04/17/2023 13:28							
9056A	MB 280-608955/6	Nitrate as N	ND		mg/L	0.50	1
9056A	MB 280-608955/6	Nitrite as N	ND		mg/L	0.50	1
Batch ID: 608956 Date: 04/17/2023 13:28							
9056A	MB 280-608956/6	Chloride	ND		mg/L	3.0	1
9056A	MB 280-608956/6	Sulfate	ND		mg/L	5.0	1
Batch ID: 610654 Date: 04/29/2023 22:58							
9056A	MB 280-610654/49	Bromide	ND		mg/L	0.50	1
Batch ID: 609838 Date: 04/21/2023 15:46							
9060A	MB 280-609838/4	Total Organic Carbon - Duplicates	ND		mg/L	1.0	1
9060A	MB 280-609838/4	TOC Result 2	ND		mg/L	1.0	1
9060A	MB 280-609838/4	TOC Result 1	ND		mg/L	1.0	1
Batch ID: 610099 Date: 04/24/2023 18:57							
9060A	MB 280-610099/4	Total Organic Carbon - Duplicates	ND		mg/L	1.0	1
9060A	MB 280-610099/4	TOC Result 2	ND		mg/L	1.0	1
9060A	MB 280-610099/4	TOC Result 1	ND		mg/L	1.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 610099 Date: 04/24/2023 19:41											
9060A	280-175123-2	Total Organic Carbon - Duplicates	2.2		mg/L						
9060A	280-175123-2 MS	Total Organic Carbon - Duplicates	26.3		mg/L	25.0	96	88-112			
9060A	280-175123-2	TOC Result 2	2.3		mg/L						
9060A	280-175123-2 MS	TOC Result 2	25.9		mg/L	25.0	94	88-112			
9060A	280-175123-2	TOC Result 1	2.2		mg/L						
9060A	280-175123-2 MS	TOC Result 1	26.8		mg/L	25.0	98	88-112			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 610099 Date: 04/24/2023 19:56											
9060A	280-175123-2 MSD	Total Organic Carbon - Duplicates	26.2		mg/L	25.0	96	88-112	1	15	
9060A	280-175123-2 MSD	TOC Result 2	26.2		mg/L	25.0	96	88-112	1	15	
9060A	280-175123-2 MSD	TOC Result 1	26.2		mg/L	25.0	96	88-112	2	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608955	Date: 04/17/2023 12:58										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608955/4	Nitrate as N	2.39		mg/L	2.50	96	90-110	0	10	
9056A	LCS 280-608955/4	Nitrite as N	2.44		mg/L	2.50	97	90-110	1	10	
Batch ID: 608956	Date: 04/17/2023 12:58										
						LCS Source: IC LCS_01947					
9056A	LCS 280-608956/4	Chloride	50.4		mg/L	50.0	101	90-110	0	10	
9056A	LCS 280-608956/4	Sulfate	49.8		mg/L	50.0	100	90-110	0	10	
Batch ID: 610654	Date: 04/29/2023 22:34										
						LCS Source: IC LCS_01950					
9056A	LCS 280-610654/47	Bromide	2.37		mg/L	2.50	95	90-110	3	10	
Batch ID: 609838	Date: 04/21/2023 15:30										
						LCS Source: TOC LCS Std_00057					
9060A	LCS 280-609838/3	Total Organic Carbon - Duplicates	24.5		mg/L	25.0	98	88-112			
9060A	LCS 280-609838/3	TOC Result 2	24.8		mg/L	25.0	99	88-112			
9060A	LCS 280-609838/3	TOC Result 1	24.2		mg/L	25.0	97	88-112			
Batch ID: 610099	Date: 04/24/2023 18:41										
						LCS Source: TOC LCS Std_00057					
9060A	LCS 280-610099/3	Total Organic Carbon - Duplicates	24.8		mg/L	25.0	99	88-112			
9060A	LCS 280-610099/3	TOC Result 2	24.7		mg/L	25.0	99	88-112			
9060A	LCS 280-610099/3	TOC Result 1	24.9		mg/L	25.0	100	88-112			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608955	Date: 04/17/2023 13:13										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608955/5	Nitrate as N	2.39		mg/L	2.50	95	90-110	0	10	
9056A	LCSD 280-608955/5	Nitrite as N	2.42		mg/L	2.50	97	90-110	1	10	
Batch ID: 608956	Date: 04/17/2023 13:13										
						LCSD Source: IC LCS_01947					
9056A	LCSD 280-608956/5	Chloride	50.4		mg/L	50.0	101	90-110	0	10	
9056A	LCSD 280-608956/5	Sulfate	49.9		mg/L	50.0	100	90-110	0	10	
Batch ID: 610654	Date: 04/29/2023 22:46										
						LCSD Source: IC LCS_01950					
9056A	LCSD 280-610654/48	Bromide	2.29		mg/L	2.50	92	90-110	3	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608955	Date: 04/17/2023 12:43										
						LCS Source: IC Cal low_00703					
9056A	MRL 280-608955/3	Nitrate as N	0.233	J	mg/L	0.250	93	50-150			
9056A	MRL 280-608955/3	Nitrite as N	0.236	J	mg/L	0.250	94	50-150			
Batch ID: 608956	Date: 04/17/2023 12:43										
						LCS Source: IC CAL cl/so4_00475					
9056A	MRL 280-608956/3	Chloride	2.40	J	mg/L	2.50	96	50-150			
9056A	MRL 280-608956/3	Sulfate	2.39	J	mg/L	2.50	95	50-150			
Batch ID: 610654	Date: 04/29/2023 13:48										
						LCS Source: IC Cal low_00706					
9056A	MRL 280-610654/3	Bromide	ND		mg/L	0.250	86	50-150			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

16A-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Eurofins Denver Job No: 280-175123-1

SDG No.: Analysis Batch No.: 607366

Instrument ID: WC_IonChrom15 Calibration ID: 78779

Start Date: 04/03/2023 16:42 End Date: 04/03/2023 17:42

Analytical Method: 9056A

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Bromide	1.0000	1120000	-10600	WLR	Inverse Conc

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175123-1

SDG No.: Analysis Batch No.: 607366

Instrument ID: WC_IonChrom15 Calibration ID: 78779

Start Date: 04/03/2023 16:42 End Date: 04/03/2023 17:42

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Bromide				0.20	0.21	3	0.50	0.50	-1

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175123-1

SDG No.: Analysis Batch No.: 607366

Instrument ID: WC_IonChrom15 Calibration ID: 78779

Start Date: 04/03/2023 16:42 End Date: 04/03/2023 17:42

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Bromide	1.0	0.98	-2	2.5	2.5	-2	5.0	5.1	1

16A-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Eurofins Denver Job No: 280-175123-1

SDG No.: Analysis Batch No.: 608435

Instrument ID: WC_IonChrom10 Calibration ID: 79245

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Nitrate as N	0.9995	45900000	-1630000	WLR	Inverse Conc
Nitrite as N	1.0000	46400000	-1280000	WLR	Inverse Conc

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver | Job No: 280-175123-1

SDG No.: | Analysis Batch No.: 608435

Instrument ID: WC_IonChrom10 | Calibration ID: 79245

Start Date: 04/12/2023 14:04 | End Date: 04/12/2023 15:19

Analytical Method: 9056A | Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Nitrate as N				0.20	0.22	10	0.50	0.47	-6
Nitrite as N				0.20	0.20	1	0.50	0.49	-1

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175123-1

SDG No.: Analysis Batch No.: 608435

Instrument ID: WC_IonChrom10 Calibration ID: 79245

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Nitrate as N	1.0	0.95	-5	2.5	2.5	0	5.0	5.1	1
Nitrite as N	1.0	0.99	-1	2.5	2.5	1	5.0	5.0	0

16A-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Eurofins Denver Job No: 280-175123-1

SDG No.: Analysis Batch No.: 608436

Instrument ID: WC_IonChrom10 Calibration ID: 79246

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Chloride	1.0000	19200000	-2630000	WLR	Inverse Conc
Sulfate	1.0000	13800000	-1280000	WLR	Inverse Conc

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175123-1

SDG No.: Analysis Batch No.: 608436

Instrument ID: WC_IonChrom10 Calibration ID: 79246

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Chloride	0.50	0.53	5	1.3	1.2	-3	2.5	2.4	-3
Sulfate	0.50	0.60	20	1.3	1.1	-9	2.5	2.2	-11

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver Job No: 280-175123-1

SDG No.: Analysis Batch No.: 608436

Instrument ID: WC_IonChrom10 Calibration ID: 79246

Start Date: 04/12/2023 14:04 End Date: 04/12/2023 15:19

Analytical Method: 9056A Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Chloride	30.0	30.1	0	60.0	60.0	0	100	100	0
Sulfate	30.0	29.8	-1	60.0	60.1	0	100	100	0

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A MDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		3	1.02
Nitrate as N		0.5	0.0901
Nitrite as N		0.5	0.049
Sulfate		5	1.03

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		3	1.02
Nitrate as N		0.5	0.0901
Nitrite as N		0.5	0.0494
Sulfate		5	1.03

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom15

Method: 9056A MDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.233

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom15

Method: 9056A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.233

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI7

Method: 9060A MDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Organic Carbon - Duplicates		1	0.345

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CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-175123-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI7

Method: 9060A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Organic Carbon - Duplicates		1	0.345

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/12/2023 14:04 End Date: 04/13/2023 17:51

Lab Sample Id	D/F	Type	Time	Analytes																										
				NO2-N	NO3																									
STD 280-608435/1 IC	1		14:04	X	X																									
STD 280-608435/2 IC	1		14:19	X	X																									
STD 280-608435/3 IC	1		14:34	X	X																									
STD 280-608435/4 IC	1		14:49	X	X																									
STD 280-608435/5 IC	1		15:04	X	X																									
STD 280-608435/6 IC	1		15:19	X	X																									
ICV 280-608435/7	1		15:34	X	X																									
ICB 280-608435/8	1		15:49	X	X																									
RTC 280-608435/9			16:04																											
ZZZZZZ			16:19																											
ZZZZZZ			16:34																											
ZZZZZZ			16:49																											
ZZZZZZ			17:04																											
ZZZZZZ			17:20																											
ZZZZZZ			17:36																											
ZZZZZZ			13:39																											
ZZZZZZ			13:54																											
ZZZZZZ			14:09																											
ZZZZZZ			14:24																											
ZZZZZZ			14:39																											
ZZZZZZ			14:54																											
ZZZZZZ			15:09																											
ZZZZZZ			15:24																											
CCV 280-608435/24			15:54																											
CCB 280-608435/25			17:51																											

Prep Types:
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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/12/2023 14:04 End Date: 04/13/2023 17:51

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
STD 280-608436/1 IC	1		14:04	X	X	X																								
STD 280-608436/2 IC	1		14:19	X	X	X																								
STD 280-608436/3 IC	1		14:34	X	X	X																								
STD 280-608436/4 IC	1		14:49	X	X	X																								
STD 280-608436/5 IC	1		15:04	X	X	X																								
STD 280-608436/6 IC	1		15:19	X	X	X																								
ICV 280-608436/7	1		15:34	X	X	X																								
ICB 280-608436/8	1		15:49	X	X	X																								
RTC 280-608436/9			16:04																											
ZZZZZZ			16:19																											
ZZZZZZ			16:34																											
ZZZZZZ			16:49																											
ZZZZZZ			17:04																											
ZZZZZZ			17:20																											
ZZZZZZ			17:36																											
ZZZZZZ			13:39																											
ZZZZZZ			13:54																											
ZZZZZZ			14:09																											
ZZZZZZ			14:24																											
ZZZZZZ			14:39																											
ZZZZZZ			14:54																											
ZZZZZZ			15:09																											
ZZZZZZ			15:24																											
CCV 280-608436/24			15:54																											
CCB 280-608436/25			17:51																											

Prep Types:
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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																										
				NO2-N	NO3																									
CCV 280-608955/1	1		12:13	X	X																									
CCB 280-608955/2	1		12:28	X	X																									
MRL 280-608955/3	1	T	12:43	X	X																									
LCS 280-608955/4	1	T	12:58	X	X																									
LCSD 280-608955/5	1	T	13:13	X	X																									
MB 280-608955/6	1	T	13:28	X	X																									
ZZZZZZ			13:43																											
ZZZZZZ			13:58																											
ZZZZZZ			14:13																											
ZZZZZZ			14:28																											
ZZZZZZ			14:43																											
ZZZZZZ			14:58																											
280-175123-1	1	T	15:13	X	X																									
ZZZZZZ			15:28																											
280-175123-2	1	T	15:43	X	X																									
ZZZZZZ			15:58																											
CCV 280-608955/17	1		16:13	X	X																									
CCB 280-608955/18	1		16:28	X	X																									
ZZZZZZ			16:43																											
280-175123-3	1	T	16:58	X																										
280-175123-3	2	T	17:13		X																									
ZZZZZZ			17:29																											
ZZZZZZ			17:44																											
ZZZZZZ			17:59																											
ZZZZZZ			18:14																											
ZZZZZZ			18:29																											
ZZZZZZ			18:44																											
ZZZZZZ			18:59																											
CCV 280-608955/29	1		19:14	X	X																									
CCB 280-608955/30	1		19:29	X	X																									
ZZZZZZ			19:44																											
ZZZZZZ			19:59																											
ZZZZZZ			20:14																											
ZZZZZZ			20:29																											
ZZZZZZ			20:59																											
ZZZZZZ			21:59																											
CCV 280-608955/41			22:14																											
CCB 280-608955/42			22:29																											
ZZZZZZ			23:29																											

FORM XIII-IN

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																									
				NO2-N	NO3																								
ZZZZZZ			23:44																										
ZZZZZZ			23:59																										
ZZZZZZ			00:14																										
CCV 280-608955/53			01:14																										
CCB 280-608955/54			01:29																										
ZZZZZZ			03:14																										
ZZZZZZ			03:29																										
ZZZZZZ			03:44																										
CCV 280-608955/65			04:14																										
CCB 280-608955/66			04:29																										
ZZZZZZ			06:30																										
ZZZZZZ			06:45																										
ZZZZZZ			07:00																										
CCV 280-608955/77			07:15																										
CCB 280-608955/78			07:30																										
ZZZZZZ			07:45																										
CCV 280-608955/84			09:00																										
CCB 280-608955/85			09:15																										

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																										
				CL-	SO4																									
CCV 280-608956/1	1		12:13	X	X																									
CCB 280-608956/2	1		12:28	X	X																									
MRL 280-608956/3	1	T	12:43	X	X																									
LCS 280-608956/4	1	T	12:58	X	X																									
LCSD 280-608956/5	1	T	13:13	X	X																									
MB 280-608956/6	1	T	13:28	X	X																									
ZZZZZZ			13:43																											
ZZZZZZ			13:58																											
ZZZZZZ			14:13																											
ZZZZZZ			14:28																											
ZZZZZZ			14:43																											
ZZZZZZ			14:58																											
ZZZZZZ			15:13																											
280-175123-1	20	T	15:28	X	X																									
ZZZZZZ			15:43																											
280-175123-2	2	T	15:58		X																									
CCV 280-608956/17	1		16:13	X	X																									
CCB 280-608956/18	1		16:28	X	X																									
280-175123-2	20	T	16:43	X																										
280-175123-3	1	T	16:58		X																									
ZZZZZZ			17:13																											
280-175123-3	20	T	17:29	X																										
ZZZZZZ			17:44																											
ZZZZZZ			17:59																											
ZZZZZZ			18:14																											
ZZZZZZ			18:29																											
ZZZZZZ			18:44																											
ZZZZZZ			18:59																											
CCV 280-608956/29	1		19:14	X	X																									
CCB 280-608956/30	1		19:29	X	X																									
ZZZZZZ			19:44																											
ZZZZZZ			19:59																											
ZZZZZZ			20:14																											
ZZZZZZ			20:29																											
ZZZZZZ			20:44																											
ZZZZZZ			20:59																											
ZZZZZZ			21:14																											
ZZZZZZ			21:29																											
ZZZZZZ			21:44																											
ZZZZZZ			21:59																											
CCV 280-608956/41	1		22:14	X	X																									

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																									
				CL-	SO4																								
CCB 280-608956/42	1		22:29	X	X																								
ZZZZZZ			22:44																										
ZZZZZZ			22:59																										
ZZZZZZ			23:14																										
ZZZZZZ			23:29																										
ZZZZZZ			23:44																										
ZZZZZZ			23:59																										
ZZZZZZ			00:14																										
ZZZZZZ			00:29																										
ZZZZZZ			00:44																										
ZZZZZZ			00:59																										
CCV 280-608956/53			01:14																										
CCB 280-608956/54			01:29																										
ZZZZZZ			01:44																										
ZZZZZZ			01:59																										
ZZZZZZ			02:14																										
ZZZZZZ			02:29																										
ZZZZZZ			02:44																										
ZZZZZZ			02:59																										
ZZZZZZ			03:14																										
ZZZZZZ			03:29																										
ZZZZZZ			03:44																										
ZZZZZZ			03:59																										
CCV 280-608956/65			04:14																										
CCB 280-608956/66			04:29																										
ZZZZZZ			04:44																										
ZZZZZZ			04:59																										
ZZZZZZ			05:14																										
ZZZZZZ			05:29																										
ZZZZZZ			05:45																										
ZZZZZZ			06:00																										
ZZZZZZ			06:15																										
ZZZZZZ			06:30																										
ZZZZZZ			06:45																										
ZZZZZZ			07:00																										
CCV 280-608956/77			07:15																										
CCB 280-608956/78			07:30																										
ZZZZZZ			07:45																										
ZZZZZZ			08:00																										
ZZZZZZ			08:15																										
ZZZZZZ			08:30																										

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 04/17/2023 12:13 End Date: 04/18/2023 09:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cl-	SO4																							
ZZZZZZ			08:45																									
CCV 280-608956/84			09:00																									
CCB 280-608956/85			09:15																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/03/2023 16:42 End Date: 04/04/2023 19:35

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
STD 280-607366/1 IC	1		16:42	X	X	X																								
STD 280-607366/2 IC	1		16:54	X	X	X																								
STD 280-607366/3 IC	1		17:06	X	X	X																								
STD 280-607366/4 IC	1		17:18	X	X	X																								
STD 280-607366/5 IC	1		17:30	X	X	X																								
STD 280-607366/6 IC	1		17:42	X	X	X																								
ICV 280-607366/7	1		17:54	X	X	X																								
ICB 280-607366/8	1		18:06	X	X	X																								
RTC 280-607366/9			18:18																											
ZZZZZZ			18:30																											
ZZZZZZ			18:42																											
ZZZZZZ			18:54																											
ZZZZZZ			19:06																											
ZZZZZZ			19:17																											
ZZZZZZ			19:29																											
ZZZZZZ			19:41																											
ZZZZZZ			19:54																											
ZZZZZZ			20:05																											
ZZZZZZ			20:17																											
ZZZZZZ			20:29																											
ZZZZZZ			20:41																											
ZZZZZZ			20:53																											
ZZZZZZ			21:05																											
CCV 280-607366/24			21:17																											
CCB 280-607366/25			21:29																											
ZZZZZZ			21:41																											
ZZZZZZ			21:53																											
ZZZZZZ			22:05																											
ZZZZZZ			22:17																											
ZZZZZZ			22:29																											
ZZZZZZ			22:41																											
ZZZZZZ			22:53																											
ZZZZZZ			23:05																											
ZZZZZZ			23:17																											
ZZZZZZ			23:28																											
CCV 280-607366/36			23:40																											
CCB 280-607366/37			23:52																											
ZZZZZZ			00:04																											
ZZZZZZ			00:16																											
ZZZZZZ			00:28																											
ZZZZZZ			00:40																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/03/2023 16:42 End Date: 04/04/2023 19:35

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
ZZZZZZ			00:52																											
ZZZZZZ			01:04																											
ZZZZZZ			01:16																											
ZZZZZZ			01:28																											
ZZZZZZ			01:40																											
ZZZZZZ			01:52																											
CCV 280-607366/48			02:04																											
CCB 280-607366/49			02:16																											
ZZZZZZ			02:28																											
ZZZZZZ			02:40																											
ZZZZZZ			02:52																											
ZZZZZZ			03:03																											
ZZZZZZ			03:15																											
ZZZZZZ			03:27																											
ZZZZZZ			03:39																											
ZZZZZZ			03:51																											
ZZZZZZ			04:03																											
ZZZZZZ			04:15																											
CCV 280-607366/60			04:27																											
CCB 280-607366/61			04:39																											
ZZZZZZ			04:51																											
ZZZZZZ			05:03																											
ZZZZZZ			05:15																											
ZZZZZZ			05:27																											
ZZZZZZ			05:39																											
ZZZZZZ			05:51																											
ZZZZZZ			06:03																											
ZZZZZZ			06:14																											
ZZZZZZ			06:26																											
ZZZZZZ			09:25																											
CCV 280-607366/72			10:25																											
CCB 280-607366/73			10:37																											
ZZZZZZ			10:49																											
ZZZZZZ			11:01																											
ZZZZZZ			11:13																											
ZZZZZZ			11:25																											
ZZZZZZ			11:37																											
ZZZZZZ			11:49																											
ZZZZZZ			12:01																											
ZZZZZZ			12:13																											
ZZZZZZ			12:25																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/03/2023 16:42 End Date: 04/04/2023 19:35

Lab Sample Id	D/F	Type	Time	Analytes																										
				Br	CL-	SO4																								
ZZZZZZ			12:37																											
CCV 280-607366/84			12:49																											
CCB 280-607366/85			13:00																											
ZZZZZZ			13:12																											
ZZZZZZ			13:24																											
ZZZZZZ			13:36																											
ZZZZZZ			13:48																											
ZZZZZZ			14:00																											
ZZZZZZ			14:12																											
ZZZZZZ			14:24																											
ZZZZZZ			14:36																											
ZZZZZZ			14:48																											
ZZZZZZ			15:00																											
CCV 280-607366/96			15:12																											
CCB 280-607366/97			15:24																											
ZZZZZZ			15:36																											
ZZZZZZ			15:48																											
ZZZZZZ			16:00																											
ZZZZZZ			16:12																											
ZZZZZZ			16:24																											
ZZZZZZ			16:36																											
ZZZZZZ			16:48																											
ZZZZZZ			17:00																											
ZZZZZZ			17:12																											
ZZZZZZ			17:24																											
CCV 280-607366/108			17:36																											
CCB 280-607366/109			17:48																											
ZZZZZZ			18:00																											
ZZZZZZ			18:12																											
ZZZZZZ			18:24																											
ZZZZZZ			18:35																											
ZZZZZZ			18:47																											
ZZZZZZ			18:59																											
ZZZZZZ			19:11																											
CCV 280-607366/117			19:23																											
CCB 280-607366/118			19:35																											

Prep Types:
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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/29/2023 13:25 End Date: 04/30/2023 07:44

Lab Sample Id	D/F	Type	Time	Analytes
				Br
CCV 280-610654/1			13:25	
CCB 280-610654/2			13:37	
MRL 280-610654/3	1	T	13:48	X
ZZZZZZ			14:00	
ZZZZZZ			14:12	
ZZZZZZ			14:24	
ZZZZZZ			14:36	
ZZZZZZ			14:48	
ZZZZZZ			15:00	
ZZZZZZ			15:12	
ZZZZZZ			15:24	
ZZZZZZ			15:36	
ZZZZZZ			15:48	
ZZZZZZ			16:00	
ZZZZZZ			16:12	
ZZZZZZ			16:24	
CCV 280-610654/17			16:36	
CCB 280-610654/18			16:48	
ZZZZZZ			17:00	
ZZZZZZ			17:12	
ZZZZZZ			17:23	
ZZZZZZ			17:35	
ZZZZZZ			17:47	
ZZZZZZ			17:59	
ZZZZZZ			18:11	
ZZZZZZ			18:23	
ZZZZZZ			18:35	
ZZZZZZ			18:47	
CCV 280-610654/29			18:59	
CCB 280-610654/30			19:11	
ZZZZZZ			19:23	
ZZZZZZ			19:35	
ZZZZZZ			19:47	
ZZZZZZ			19:59	
ZZZZZZ			20:11	
ZZZZZZ			20:23	
ZZZZZZ			20:34	
ZZZZZZ			20:46	
ZZZZZZ			20:58	
ZZZZZZ			21:10	
CCV 280-610654/41	1		21:22	X

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/29/2023 13:25 End Date: 04/30/2023 07:44

Lab Sample Id	D/F	Type	Time	Analytes
				Br
CCB 280-610654/42	1		21:34	X
ZZZZZZ			21:46	
ZZZZZZ			21:58	
ZZZZZZ			22:10	
ZZZZZZ			22:22	
LCS 280-610654/47	1	T	22:34	X
LCSD 280-610654/48	1	T	22:46	X
MB 280-610654/49	1	T	22:58	X
ZZZZZZ			23:10	
ZZZZZZ			23:22	
ZZZZZZ			23:34	
CCV 280-610654/53	1		23:46	X
CCB 280-610654/54	1		23:58	X
ZZZZZZ			00:10	
ZZZZZZ			00:22	
ZZZZZZ			00:34	
ZZZZZZ			00:46	
ZZZZZZ			00:58	
ZZZZZZ			01:10	
ZZZZZZ			01:22	
ZZZZZZ			01:33	
ZZZZZZ			01:45	
ZZZZZZ			01:57	
CCV 280-610654/65	1		02:09	X
CCB 280-610654/66	1		02:21	X
ZZZZZZ			02:33	
ZZZZZZ			02:45	
ZZZZZZ			02:57	
ZZZZZZ			03:09	
ZZZZZZ			03:21	
280-175123-3	1	T	03:33	X
280-175123-2	1	T	03:45	X
280-175123-1	1	T	03:57	X
ZZZZZZ			04:09	
ZZZZZZ			04:21	
CCV 280-610654/77	1		04:33	X
CCB 280-610654/78	1		04:44	X
ZZZZZZ			04:56	
ZZZZZZ			05:08	
ZZZZZZ			05:20	
ZZZZZZ			05:32	

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_IonChrom15 Analysis Method: 9056A

Start Date: 04/29/2023 13:25 End Date: 04/30/2023 07:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br																								
ZZZZZZ			05:44																									
ZZZZZZ			05:56																									
ZZZZZZ			06:08																									
ZZZZZZ			06:20																									
ZZZZZZ			06:32																									
ZZZZZZ			06:44																									
CCV 280-610654/89			06:56																									
CCB 280-610654/90			07:08																									
ZZZZZZ			07:20																									
CCV 280-610654/92			07:32																									
CCB 280-610654/93			07:44																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_SHI7 Analysis Method: 9060A

Start Date: 04/21/2023 15:01 End Date: 04/22/2023 13:54

Lab Sample Id	D/F	Type	Time	Analytes																										
				TOC1	TOC2	TOCD																								
ICV 280-609838/1	1		15:01	X	X	X																								
ICB 280-609838/2	1		15:16			X																								
LCS 280-609838/3	1	T	15:30	X	X	X																								
MB 280-609838/4	1	T	15:46			X																								
ZZZZZZ			16:00																											
ZZZZZZ			16:15																											
ZZZZZZ			16:29																											
ZZZZZZ			16:45																											
ZZZZZZ			17:00																											
ZZZZZZ			17:14																											
ZZZZZZ			17:29																											
ZZZZZZ			17:43																											
ZZZZZZ			17:58																											
ZZZZZZ			18:12																											
CCV 280-609838/15	1		18:27	X	X	X																								
CCB 280-609838/16	1		18:43			X																								
ZZZZZZ			18:57																											
280-175123-1	1	T	19:12			X																								
ZZZZZZ			19:26																											
ZZZZZZ			19:42																											
ZZZZZZ			19:57																											
ZZZZZZ			20:12																											
ZZZZZZ			20:28																											
ZZZZZZ			20:43																											
ZZZZZZ			20:58																											
ZZZZZZ			21:13																											
CCV 280-609838/27	1		21:27	X	X	X																								
CCB 280-609838/28	1		21:43			X																								
ZZZZZZ			21:57																											
ZZZZZZ			22:12																											
ZZZZZZ			22:28																											
ZZZZZZ			22:43																											
ZZZZZZ			22:58																											
ZZZZZZ			23:13																											
ZZZZZZ			23:28																											
ZZZZZZ			23:43																											
ZZZZZZ			23:57																											
ZZZZZZ			00:12																											
CCV 280-609838/39			00:28																											
CCB 280-609838/40			00:44																											

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_SHI7 Analysis Method: 9060A

Start Date: 04/21/2023 15:01 End Date: 04/22/2023 13:54

Lab Sample Id	D/F	Type	Time	Analytes																									
				TOC1	TOC2	TOCD																							
ZZZZZZ			00:59																										
ZZZZZZ			01:14																										
ZZZZZZ			01:28																										
ZZZZZZ			01:42																										
ZZZZZZ			01:56																										
ZZZZZZ			02:11																										
ZZZZZZ			02:25																										
ZZZZZZ			02:39																										
ZZZZZZ			02:54																										
ZZZZZZ			03:09																										
CCV 280-609838/51			03:25																										
CCB 280-609838/52			03:40																										
ZZZZZZ			03:55																										
ZZZZZZ			04:09																										
ZZZZZZ			04:25																										
ZZZZZZ			04:40																										
ZZZZZZ			04:55																										
ZZZZZZ			05:09																										
ZZZZZZ			05:24																										
ZZZZZZ			05:38																										
ZZZZZZ			05:52																										
ZZZZZZ			06:06																										
CCV 280-609838/63			06:21																										
CCB 280-609838/64			06:36																										
ZZZZZZ			06:51																										
ZZZZZZ			07:05																										
ZZZZZZ			07:20																										
ZZZZZZ			07:35																										
ZZZZZZ			07:50																										
ZZZZZZ			08:05																										
ZZZZZZ			08:21																										
ZZZZZZ			08:36																										
ZZZZZZ			08:51																										
ZZZZZZ			09:07																										
CCV 280-609838/75			09:22																										
CCB 280-609838/76			09:37																										
ZZZZZZ			09:52																										
ZZZZZZ			10:07																										
ZZZZZZ			10:21																										
ZZZZZZ			10:36																										

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_SHI7 Analysis Method: 9060A

Start Date: 04/21/2023 15:01 End Date: 04/22/2023 13:54

Lab Sample Id	D/F	Type	Time	Analytes																										
				TOC1	TOC2	TOCD																								
ZZZZZZ			10:51																											
ZZZZZZ			11:06																											
ZZZZZZ			11:21																											
ZZZZZZ			11:37																											
ZZZZZZ			11:52																											
ZZZZZZ			12:08																											
CCV 280-609838/86			12:23																											
CCB 280-609838/87			12:39																											
ZZZZZZ			12:53																											
ZZZZZZ			13:08																											
ZZZZZZ			13:23																											
CCV 280-609838/91			13:38																											
CCB 280-609838/92			13:54																											

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_SHI7 Analysis Method: 9060A

Start Date: 04/24/2023 18:12 End Date: 04/25/2023 16:55

Lab Sample Id	D/F	Type	Time	Analytes																										
				TOC1	TOC2	TOCD																								
ICV 280-610099/1	1		18:12	X	X	X																								
ICB 280-610099/2	1		18:27			X																								
LCS 280-610099/3	1	T	18:41	X	X	X																								
MB 280-610099/4	1	T	18:57			X																								
ZZZZZZ			19:11																											
280-175123-2	1	T	19:26			X																								
280-175123-2 MS	1	T	19:41	X	X	X																								
280-175123-2 MSD	1	T	19:56	X	X	X																								
280-175123-3	1	T	20:12			X																								
ZZZZZZ			20:27																											
ZZZZZZ			20:42																											
ZZZZZZ			20:56																											
ZZZZZZ			21:11																											
ZZZZZZ			21:26																											
CCV 280-610099/15	1		21:41	X	X	X																								
CCB 280-610099/16	1		21:56			X																								
ZZZZZZ			22:10																											
ZZZZZZ			22:25																											
ZZZZZZ			22:39																											
ZZZZZZ			22:53																											
ZZZZZZ			23:08																											
ZZZZZZ			23:23																											
ZZZZZZ			23:38																											
ZZZZZZ			23:52																											
ZZZZZZ			00:07																											
ZZZZZZ			00:21																											
CCV 280-610099/27			00:36																											
CCB 280-610099/28			00:51																											
ZZZZZZ			01:05																											
ZZZZZZ			01:19																											
ZZZZZZ			01:34																											
ZZZZZZ			01:48																											
ZZZZZZ			02:02																											
ZZZZZZ			02:17																											
ZZZZZZ			02:32																											
ZZZZZZ			02:46																											
ZZZZZZ			03:00																											
ZZZZZZ			03:15																											
CCV 280-610099/39			03:30																											
CCB 280-610099/40			03:46																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_SHI7 Analysis Method: 9060A

Start Date: 04/24/2023 18:12 End Date: 04/25/2023 16:55

Lab Sample Id	D/F	Type	Time	Analytes																									
				TOC1	TOC2	TOCD																							
ZZZZZZ			04:00																										
ZZZZZZ			04:15																										
ZZZZZZ			04:30																										
ZZZZZZ			04:44																										
ZZZZZZ			04:58																										
ZZZZZZ			05:13																										
ZZZZZZ			05:28																										
ZZZZZZ			05:42																										
ZZZZZZ			05:57																										
ZZZZZZ			06:11																										
CCV 280-610099/51			06:26																										
CCB 280-610099/52			06:42																										
ZZZZZZ			06:56																										
ZZZZZZ			07:11																										
ZZZZZZ			07:26																										
ZZZZZZ			07:42																										
ZZZZZZ			07:56																										
ZZZZZZ			08:11																										
ZZZZZZ			08:27																										
ZZZZZZ			08:41																										
ZZZZZZ			08:55																										
ZZZZZZ			09:09																										
CCV 280-610099/63			09:24																										
CCB 280-610099/64			09:40																										
ZZZZZZ			09:54																										
ZZZZZZ			10:09																										
ZZZZZZ			10:24																										
ZZZZZZ			10:40																										
ZZZZZZ			10:54																										
ZZZZZZ			11:10																										
ZZZZZZ			11:25																										
ZZZZZZ			11:41																										
ZZZZZZ			11:56																										
ZZZZZZ			12:10																										
CCV 280-610099/75			12:25																										
CCB 280-610099/76			12:41																										
ZZZZZZ			12:55																										
ZZZZZZ			13:10																										
ZZZZZZ			13:25																										
ZZZZZZ			13:39																										

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Instrument ID: WC_SHI7 Analysis Method: 9060A

Start Date: 04/24/2023 18:12 End Date: 04/25/2023 16:55

Lab Sample Id	D/F	Type	Time	Analytes																										
				TOC1	TOC2	TOCD																								
ZZZZZZ			13:54																											
ZZZZZZ			14:09																											
ZZZZZZ			14:23																											
ZZZZZZ			14:38																											
ZZZZZZ			14:54																											
ZZZZZZ			15:10																											
CCV 280-610099/87			15:25																											
CCB 280-610099/88			15:41																											
ZZZZZZ			15:55																											
ZZZZZZ			16:10																											
ZZZZZZ			16:24																											
CCV 280-610099/92			16:39																											
CCB 280-610099/93			16:55																											

Prep Types:
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 607366 Batch Start Date: 04/03/23 16:42 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cl ICV Std 00006	IC CAL cl/so4 00473	IC Cal low 00701	IC ICV 5 00402
STD 280-607366/1 IC		9056A		10 mL	10 mL		0.04 mL		
STD 280-607366/2 IC		9056A		10 mL	10 mL		0.1 mL	0.08 mL	
STD 280-607366/3 IC		9056A		10 mL	10 mL		0.2 mL	0.2 mL	
STD 280-607366/4 IC		9056A		10 mL	10 mL		2.4 mL	0.4 mL	
STD 280-607366/5 IC		9056A		10 mL	10 mL		4.8 mL	1 mL	
STD 280-607366/6 IC		9056A		10 mL	10 mL		8 mL	2 mL	
ICV 280-607366/7		9056A		10 mL	10 mL	0.8 mL			0.8 mL
ICB 280-607366/8		9056A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00024					
STD 280-607366/1 IC		9056A							
STD 280-607366/2 IC		9056A							
STD 280-607366/3 IC		9056A							
STD 280-607366/4 IC		9056A							
STD 280-607366/5 IC		9056A							
STD 280-607366/6 IC		9056A							
ICV 280-607366/7		9056A		0.8 mL					
ICB 280-607366/8		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 607366 Batch Start Date: 04/03/23 16:42 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00004
Batch Comment	EJS

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608435 Batch Start Date: 04/12/23 14:04 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cl ICV Std 00006	IC CAL cl/so4 00475	IC Cal low 00703	IC ICV 5 00403
STD 280-608435/1 IC		9056A		10 mL	10 mL		0.04 mL		
STD 280-608435/2 IC		9056A		10 mL	10 mL		0.1 mL	0.08 mL	
STD 280-608435/3 IC		9056A		10 mL	10 mL		0.2 mL	0.2 mL	
STD 280-608435/4 IC		9056A		10 mL	10 mL		2.4 mL	0.4 mL	
STD 280-608435/5 IC		9056A		10 mL	10 mL		4.8 mL	1 mL	
STD 280-608435/6 IC		9056A		10 mL	10 mL		8 mL	2 mL	
ICV 280-608435/7		9056A		10 mL	10 mL	0.8 mL			0.8 mL
ICB 280-608435/8		9056A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00024					
STD 280-608435/1 IC		9056A							
STD 280-608435/2 IC		9056A							
STD 280-608435/3 IC		9056A							
STD 280-608435/4 IC		9056A							
STD 280-608435/5 IC		9056A							
STD 280-608435/6 IC		9056A							
ICV 280-608435/7		9056A		0.8 mL					
ICB 280-608435/8		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608435 Batch Start Date: 04/12/23 14:04 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	IC10 ELUENT_00006
Batch Comment	EJS

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608436 Batch Start Date: 04/12/23 14:04 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cl ICV Std 00006	IC CAL cl/so4 00475	IC Cal low 00703	IC ICV 5 00403
STD 280-608436/1 IC		9056A		10 mL	10 mL		0.04 mL		
STD 280-608436/2 IC		9056A		10 mL	10 mL		0.1 mL	0.08 mL	
STD 280-608436/3 IC		9056A		10 mL	10 mL		0.2 mL	0.2 mL	
STD 280-608436/4 IC		9056A		10 mL	10 mL		2.4 mL	0.4 mL	
STD 280-608436/5 IC		9056A		10 mL	10 mL		4.8 mL	1 mL	
STD 280-608436/6 IC		9056A		10 mL	10 mL		8 mL	2 mL	
ICV 280-608436/7		9056A		10 mL	10 mL	0.8 mL			0.8 mL
ICB 280-608436/8		9056A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00024					
STD 280-608436/1 IC		9056A							
STD 280-608436/2 IC		9056A							
STD 280-608436/3 IC		9056A							
STD 280-608436/4 IC		9056A							
STD 280-608436/5 IC		9056A							
STD 280-608436/6 IC		9056A							
ICV 280-608436/7		9056A		0.8 mL					
ICB 280-608436/8		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608436 Batch Start Date: 04/12/23 14:04 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	IC10 ELUENT_00006
Batch Comment	EJS

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608955 Batch Start Date: 04/17/23 12:13 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	
CCV 280-608955/1		9056A		10 mL	10 mL			10 mL	
CCB 280-608955/2		9056A		10 mL	10 mL				
MRL 280-608955/3		9056A		10 mL	10 mL	0.2 mL	0.1 mL		
LCS 280-608955/4		9056A		10 mL	10 mL			10 mL	
LCSD 280-608955/5		9056A		10 mL	10 mL			10 mL	
MB 280-608955/6		9056A		10 mL	10 mL				
280-175123-C-1	MW-119D-20230413	9056A	T	10 mL	10 mL				
280-175123-C-1	MW-119D-20230413	9056A	T	10 mL	10 mL				
280-175123-C-2	MW-119S-20230413	9056A	T	10 mL	10 mL				
280-175123-C-2	MW-119S-20230413	9056A	T	10 mL	10 mL				
CCV 280-608955/17		9056A		10 mL	10 mL			10 mL	
CCB 280-608955/18		9056A		10 mL	10 mL				
280-175123-C-2	MW-119S-20230413	9056A	T	10 mL	10 mL				
280-175123-C-3	RW-3-20230413	9056A	T	10 mL	10 mL				
280-175123-C-3	RW-3-20230413	9056A	T	10 mL	10 mL				
280-175123-C-3	RW-3-20230413	9056A	T	10 mL	10 mL				
CCV 280-608955/29		9056A		10 mL	10 mL			10 mL	
CCB 280-608955/30		9056A		10 mL	10 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, 100IC
Sufficient Volume for Batch QC	yes
Eluent 1 ID	IC10 Eluent_00006
Batch Comment	MEC

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608955 Batch Start Date: 04/17/23 12:13 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608956 Batch Start Date: 04/17/23 12:13 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00475	IC Cal low 00703	IC LCS 01947	
CCV 280-608956/1		9056A		10 mL	10 mL			10 mL	
CCB 280-608956/2		9056A		10 mL	10 mL				
MRL 280-608956/3		9056A		10 mL	10 mL	0.2 mL	0.1 mL		
LCS 280-608956/4		9056A		10 mL	10 mL			10 mL	
LCSD 280-608956/5		9056A		10 mL	10 mL			10 mL	
MB 280-608956/6		9056A		10 mL	10 mL				
280-175123-C-1	MW-119D-20230413	9056A	T	10 mL	10 mL				
280-175123-C-1	MW-119D-20230413	9056A	T	10 mL	10 mL				
280-175123-C-2	MW-119S-20230413	9056A	T	10 mL	10 mL				
280-175123-C-2	MW-119S-20230413	9056A	T	10 mL	10 mL				
CCV 280-608956/17		9056A		10 mL	10 mL			10 mL	
CCB 280-608956/18		9056A		10 mL	10 mL				
280-175123-C-2	MW-119S-20230413	9056A	T	10 mL	10 mL				
280-175123-C-3	RW-3-20230413	9056A	T	10 mL	10 mL				
280-175123-C-3	RW-3-20230413	9056A	T	10 mL	10 mL				
280-175123-C-3	RW-3-20230413	9056A	T	10 mL	10 mL				
CCV 280-608956/29		9056A		10 mL	10 mL			10 mL	
CCB 280-608956/30		9056A		10 mL	10 mL				
CCV 280-608956/41		9056A		10 mL	10 mL			10 mL	
CCB 280-608956/42		9056A		10 mL	10 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 608956 Batch Start Date: 04/17/23 12:13 Batch Analyst: Collins, Michael E

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, 100IC
Sufficient Volume for Batch QC	yes
Eluent 1 ID	IC10 Eluent_00006
Batch Comment	MEC

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610654 Batch Start Date: 04/29/23 13:25 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00477	IC Cal low 00706	IC LCS 01950	
MRL 280-610654/3		9056A		5 mL	5 mL	0.2 mL	0.1 mL		
CCV 280-610654/41		9056A		5 mL	5 mL			10 mL	
CCB 280-610654/42		9056A		5 mL	5 mL				
LCS 280-610654/47		9056A		5 mL	5 mL			10 mL	
LCSD 280-610654/48		9056A		5 mL	5 mL			10 mL	
MB 280-610654/49		9056A		5 mL	5 mL				
CCV 280-610654/53		9056A		5 mL	5 mL			10 mL	
CCB 280-610654/54		9056A		5 mL	5 mL				
CCV 280-610654/65		9056A		5 mL	5 mL			10 mL	
CCB 280-610654/66		9056A		5 mL	5 mL				
280-175123-C-3	RW-3-20230413	9056A	T	5 mL	5 mL				
280-175123-C-2	MW-119S-20230413	9056A	T	5 mL	5 mL				
280-175123-C-1	MW-119D-20230413	9056A	T	5 mL	5 mL				
CCV 280-610654/77		9056A		5 mL	5 mL			10 mL	
CCB 280-610654/78		9056A		5 mL	5 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, IC100, BMF100, AB8A100
Sufficient Volume for Batch QC	Y
Eluent 1 ID	AS22 ELUENT_00007
Batch Comment	EJS

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610654 Batch Start Date: 04/29/23 13:25 Batch Analyst: Sherman, Erik J

Batch Method: 9056A Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 609838 Batch Start Date: 04/21/23 15:01 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	TOC ICV Std 00051	TOC LCS Std 00057
ICV 280-609838/1		9060A		50 mL	50 mL	<2 SU	<2 SU	1 mL	
ICB 280-609838/2		9060A		20 mL	20 mL	<2 SU	<2 SU		
LCS 280-609838/3		9060A		200 mL	200 mL	<2 SU	<2 SU		5 mL
MB 280-609838/4		9060A		20 mL	20 mL	<2 SU	<2 SU		
CCV 280-609838/15		9060A		200 mL	200 mL	<2 SU	<2 SU		5 mL
CCB 280-609838/16		9060A		20 mL	20 mL	<2 SU	<2 SU		
280-175123-B-1	MW-119D-20230413	9060A	T	20 mL	20 mL	<2 SU	<2 SU		
CCV 280-609838/27		9060A		200 mL	200 mL	<2 SU	<2 SU		5 mL
CCB 280-609838/28		9060A		20 mL	20 mL	<2 SU	<2 SU		

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment					
ICV 280-609838/1		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
ICB 280-609838/2		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
LCS 280-609838/3		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 609838 Batch Start Date: 04/21/23 15:01 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment					
MB 280-609838/4		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
CCV 280-609838/15		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
CCB 280-609838/16		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
280-175123-B-1	MW-119D-20230413	9060A	T	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
CCV 280-609838/27		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
CCB 280-609838/28		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 609838 Batch Start Date: 04/21/23 15:01 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Batch Notes	
Acid ID	0.2% H2SO4_00457, H2SO4_00214
Combustion Catylyst ID	S638-92069-02
Pipette/Syringe/Dispenser ID	BWH 5000,1000 MS
pH Paper ID	HC205981
Vial Lot Number	705212201761
Batch Comment	Run and reviewed by ABW

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610099 Batch Start Date: 04/24/23 18:12 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	TOC ICV Std 00051	TOC LCS Std 00057
ICV 280-610099/1		9060A		50 mL	50 mL	<2 SU	<2 SU	1 mL	
ICB 280-610099/2		9060A		20 mL	20 mL	<2 SU	<2 SU		
LCS 280-610099/3		9060A		200 mL	200 mL	<2 SU	<2 SU		5 mL
MB 280-610099/4		9060A		20 mL	20 mL	<2 SU	<2 SU		
280-175123-B-2	MW-119S-20230413	9060A	T	20 mL	20 mL	<2 SU	<2 SU		
280-175123-B-2 MS	MW-119S-20230413	9060A	T	50 mL	50 mL	<2 SU	<2 SU		1.25 mL
280-175123-B-2 MSD	MW-119S-20230413	9060A	T	50 mL	50 mL	<2 SU	<2 SU		1.25 mL
280-175123-B-3	RW-3-20230413	9060A	T	20 mL	20 mL	<2 SU	<2 SU		
CCV 280-610099/15		9060A		200 mL	200 mL	<2 SU	<2 SU		5 mL
CCB 280-610099/16		9060A		20 mL	20 mL	<2 SU	<2 SU		

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment					
ICV 280-610099/1		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
ICB 280-610099/2		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
LCS 280-610099/3		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610099 Batch Start Date: 04/24/23 18:12 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment					
MB 280-610099/4		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
280-175123-B-2	MW-119S-20230413	9060A	T	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
280-175123-B-2 MS	MW-119S-20230413	9060A	T	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
280-175123-B-2 MSD	MW-119S-20230413	9060A	T	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
280-175123-B-3	RW-3-20230413	9060A	T	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
CCV 280-610099/15		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					
CCB 280-610099/16		9060A		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610099 Batch Start Date: 04/24/23 18:12 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Batch Notes	
Acid ID	0.2% H2SO4_00457, H2SO4_00214
Combustion Catylyst ID	S638-92069-02
Pipette/Syringe/Dispenser ID	BWH 5000,1000 MS
pH Paper ID	HC205981
Vial Lot Number	705212201761
Batch Comment	Run and reviewed by ABW

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610201 Batch Start Date: 04/24/23 18:12 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	TOC LCS Std 00057	AnalysisComment
LCS 280-610201/3		9060A		200 mL	200 mL	<2 SU	<2 SU	5 mL	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
MB 280-610201/4		9060A		20 mL	20 mL	<2 SU	<2 SU		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-175123-B-2	MW-119S-20230413	9060A	T	20 mL	20 mL	<2 SU	<2 SU		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-175123-B-2 MS	MW-119S-20230413	9060A	T	50 mL	50 mL	<2 SU	<2 SU	1.25 mL	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-175123-B-2 MSD	MW-119S-20230413	9060A	T	50 mL	50 mL	<2 SU	<2 SU	1.25 mL	The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.
280-175123-B-3	RW-3-20230413	9060A	T	20 mL	20 mL	<2 SU	<2 SU		The final volume of these samples was fixed at 50 by the TOCControlV preprocessor.

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-175123-1

SDG No.:

Batch Number: 610201 Batch Start Date: 04/24/23 18:12 Batch Analyst: Wondimu, Akewak B

Batch Method: 9060A Batch End Date:

Batch Notes	
Acid ID	0.2% H2SO4_00457, H2SO4_00214
Combustion Catylyst ID	S638-92069-02
Pipette/Syringe/Dispenser ID	BWH 5000,1000 MS
pH Paper ID	HC205981
Batch Comment	Run and reviewed by ABW

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Report Date: 14-Apr-2023 14:03:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14				
Lims ID:	STD L1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	12-Apr-2023 14:04:00	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-001				
Misc. Info.:	280-0120345-001				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC10*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 14:03:48	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
First Level Reviewer: LVW8		Date:	12-Apr-2023 15:40:32		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.175				ND	
2 Chloride	4.383	4.383	0.000	7464190	NC	NC	M
3 Nitrite as N		5.103				ND	
4 Bromide		6.292				ND	U
5 Nitrate as N		7.057				ND	
6 Orthophosphate as P	9.447	9.447	0.000	3338493		-0.3613	M
7 Sulfate	10.645	10.645	0.000	7022789	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

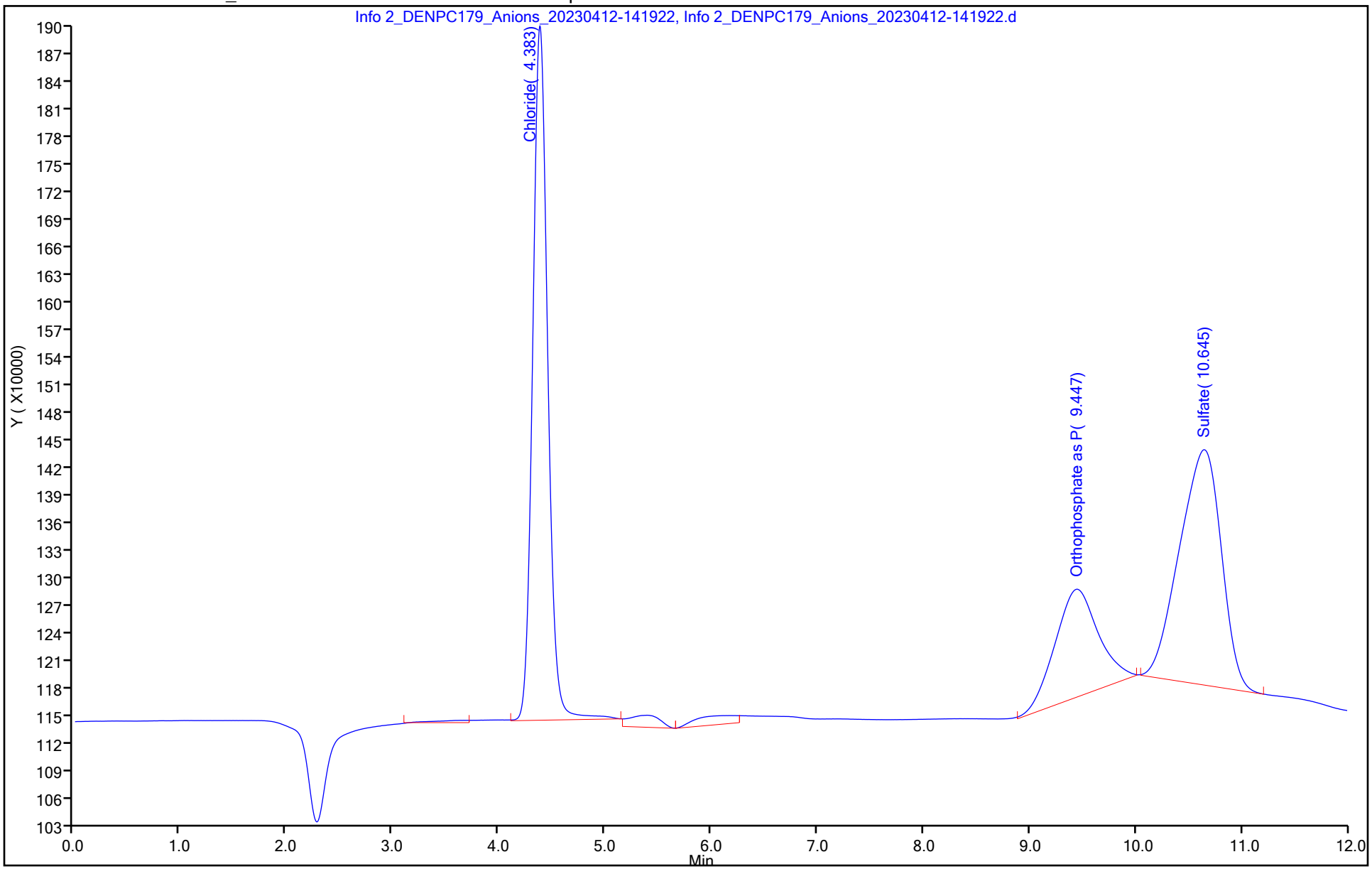
IC CAL cl/so4_00475	Amount Added:	0.04	Units: mL
IC Cal low_00703	Amount Added:	0.00	Units: mL

Report Date: 14-Apr-2023 14:03:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-141922.d

Injection Date:	12-Apr-2023 14:04:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L1			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

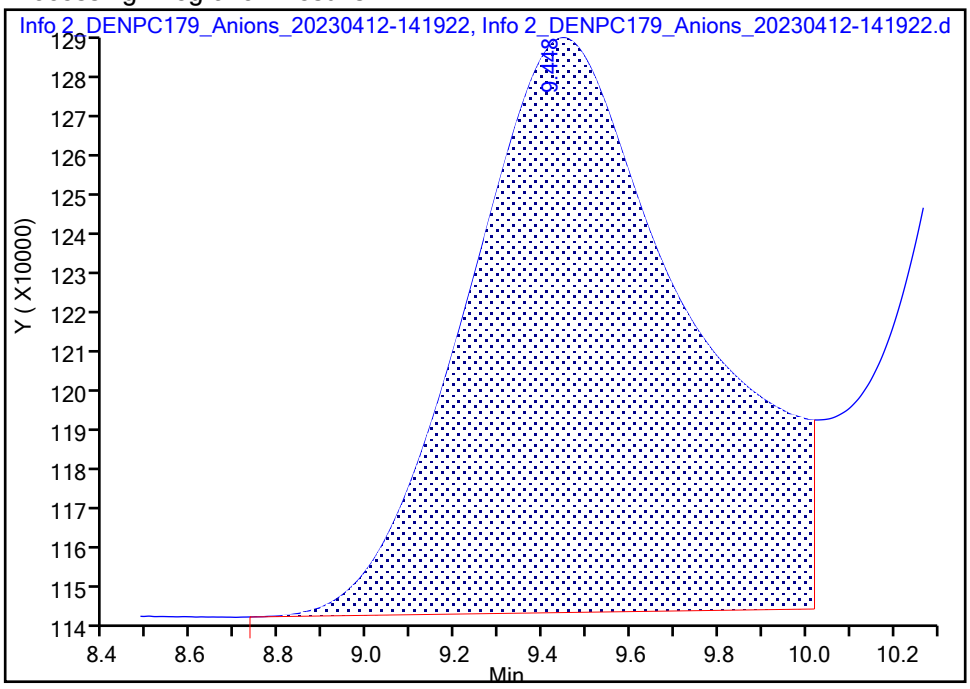
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14
Injection Date: 12-Apr-2023 14:04:00 Instrument ID: WC_IonChrom10
Lims ID: STD L1
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

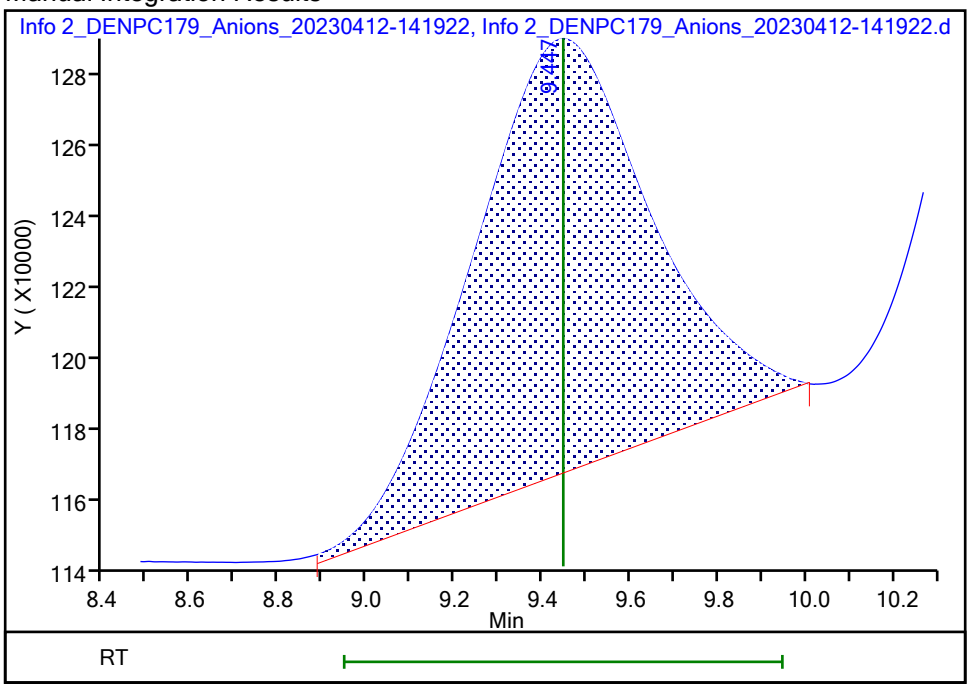
Processing Integration Results

RT: 9.45
Area: 4931641
Amount: -0.506480
Amount Units: ug/ml



Manual Integration Results

RT: 9.45
Area: 3338493
Amount: -0.361342
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:40:49
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Apr-2023 14:19:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-002
Misc. Info.: 280-0120345-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:03:50 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:41:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.163	3.163	0.000	6262507	NC	NC	Ma
2 Chloride	4.380	4.380	0.000	20679388	NC	NC	M
3 Nitrite as N	5.115	5.115	0.000	8087413	0.2000	0.2019	M
4 Bromide	6.352	6.352	0.000	2964734	NC	NC	
5 Nitrate as N	7.383	7.383	0.000	8434441	0.2000	0.2195	a
6 Orthophosphate as P	9.813	9.813	0.000	13953811	0.2000	0.1404	M
7 Sulfate	11.045	11.045	0.000	14421328	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

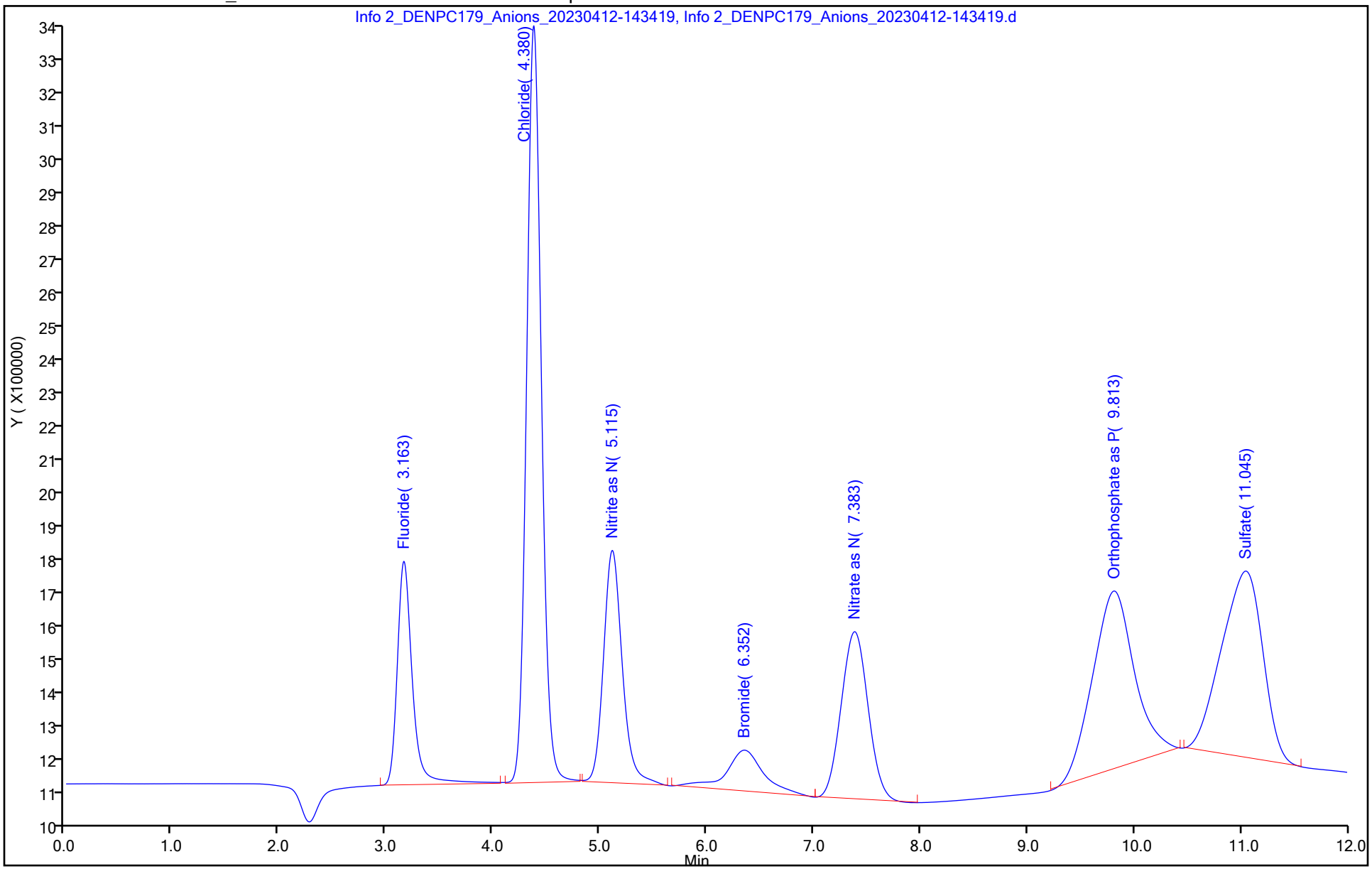
IC CAL cl/so4_00475 Amount Added: 0.10 Units: mL
IC Cal low_00703 Amount Added: 0.08 Units: mL

Report Date: 14-Apr-2023 14:03:51 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143419.d

Injection Date:	12-Apr-2023 14:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

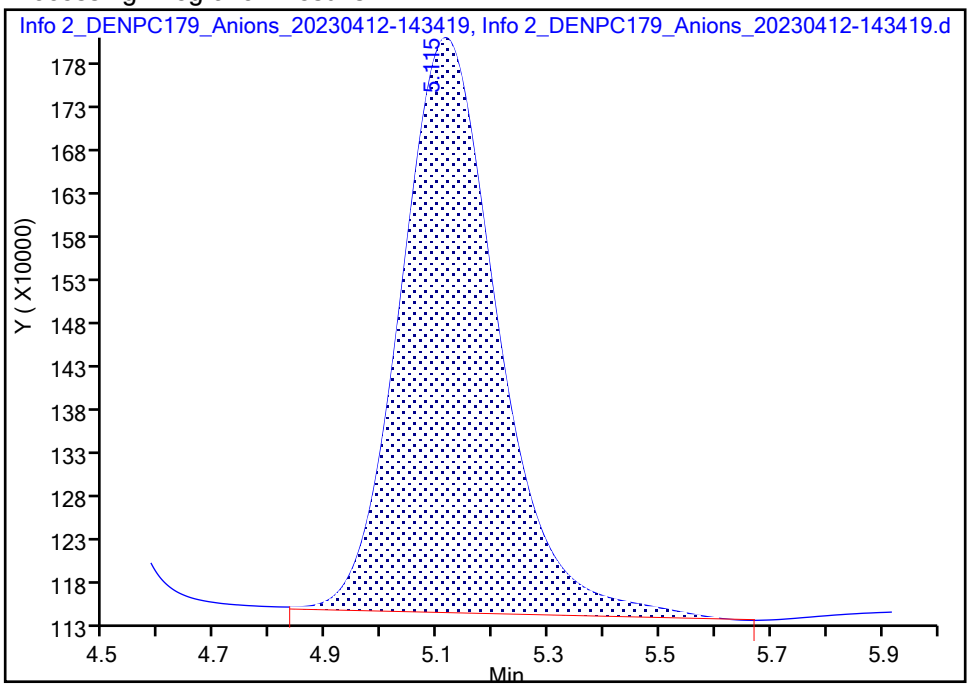
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

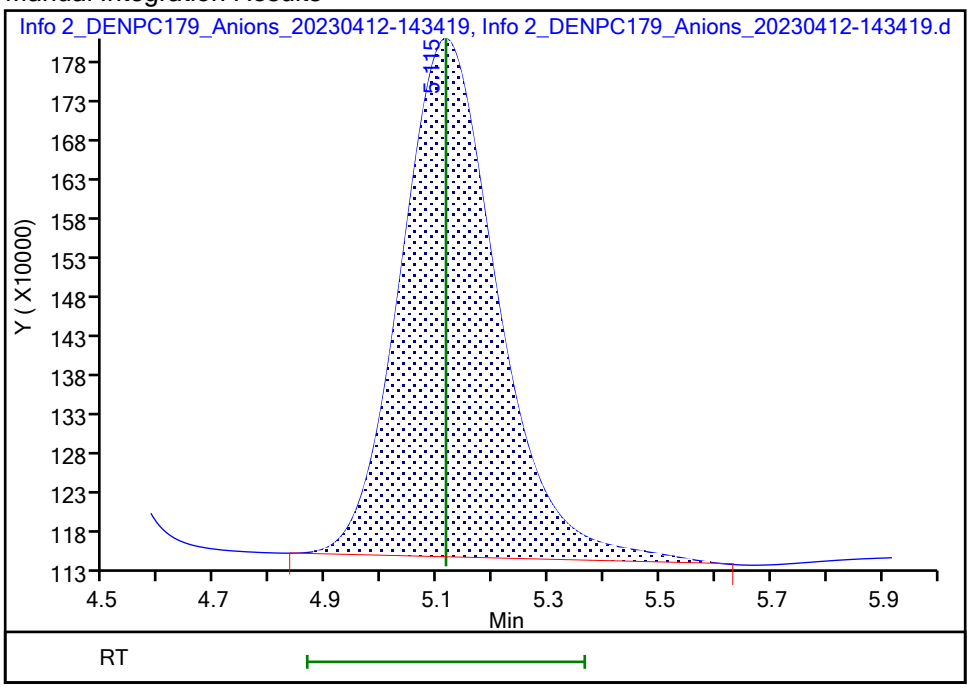
Processing Integration Results

RT: 5.12
Area: 8151496
Amount: 0.199877
Amount Units: ug/ml



Manual Integration Results

RT: 5.12
Area: 8087413
Amount: 0.201920
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:06

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

Column: Detector Info 2_091554_1

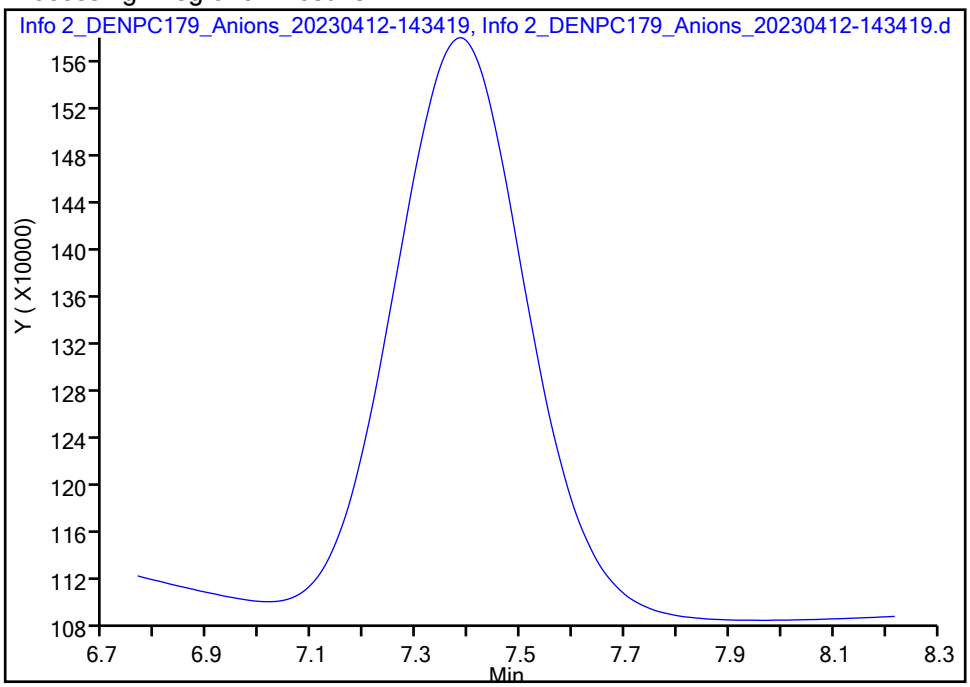
5 Nitrate as N, CAS: 14797-55-8

Signal: 1

Not Detected

Expected RT: 7.38

Processing Integration Results



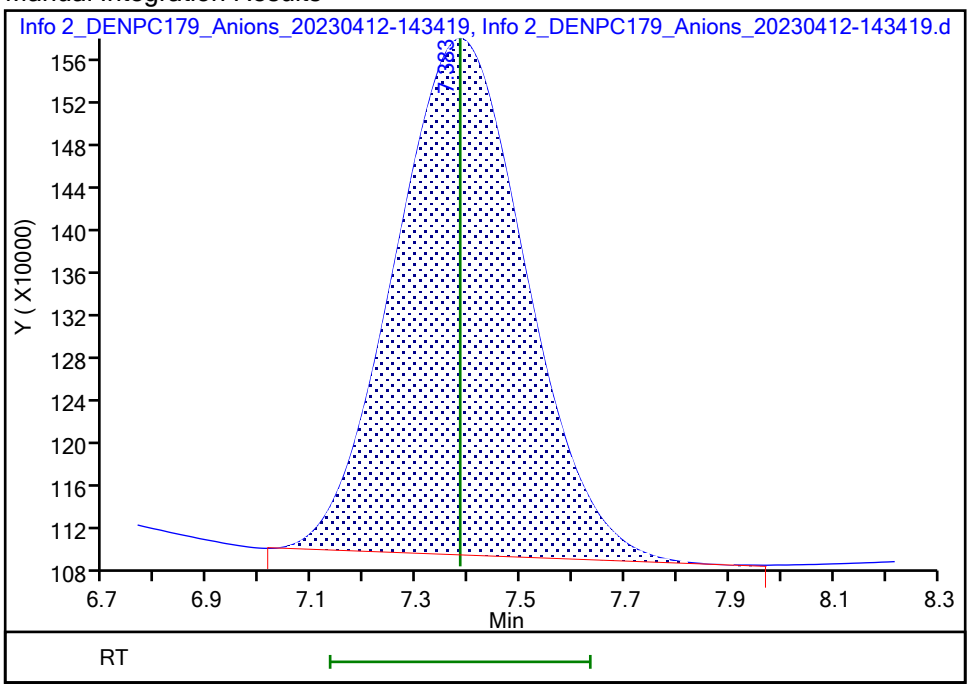
Manual Integration Results

RT: 7.38

Area: 8434441

Amount: 0.219511

Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:22

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

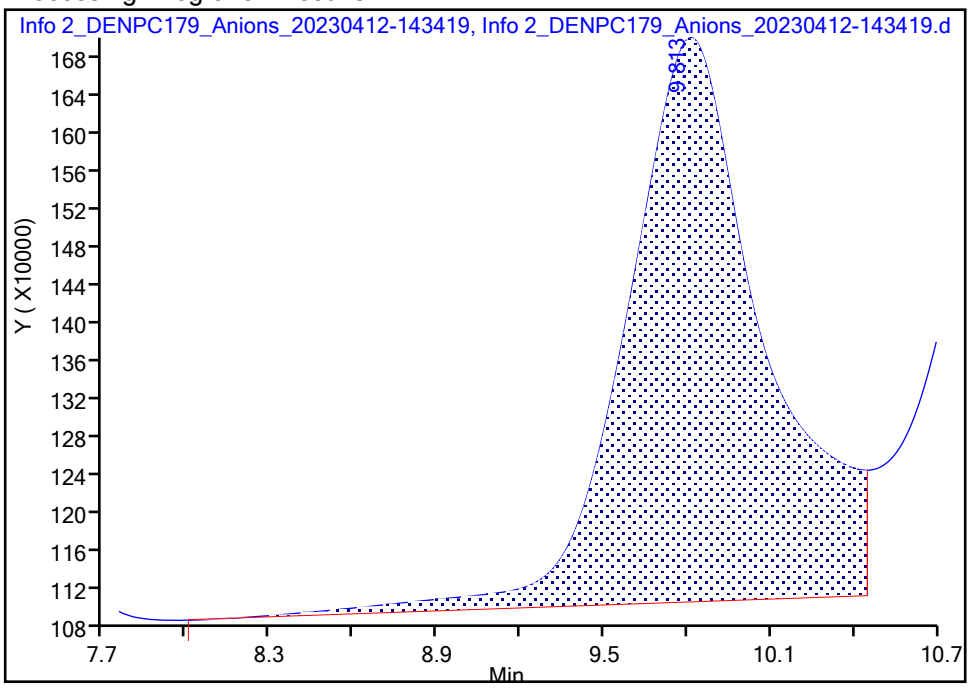
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

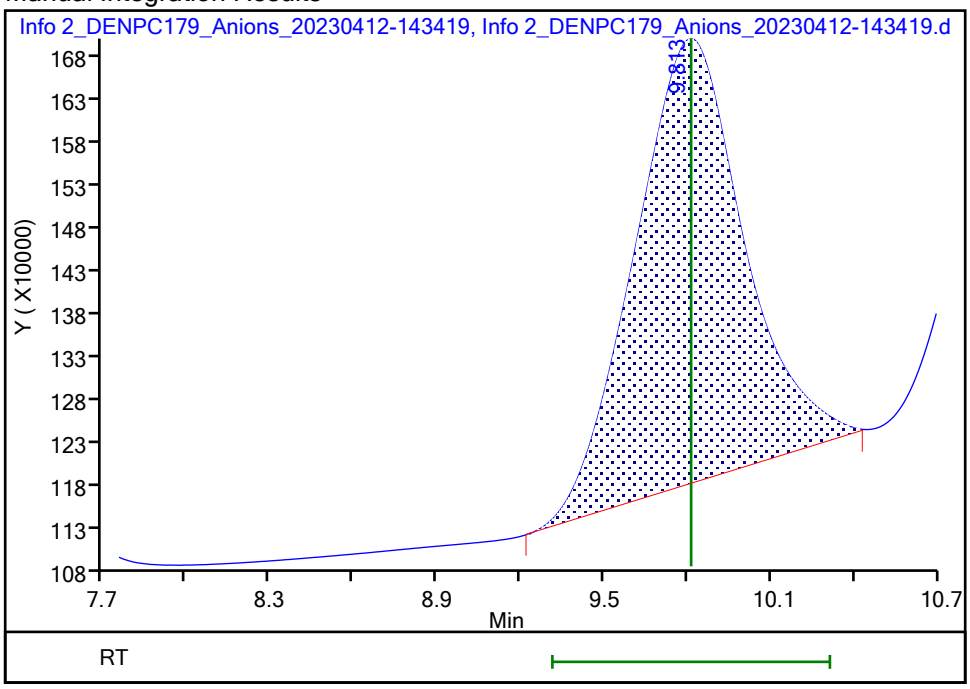
Processing Integration Results

RT: 9.81
Area: 20197362
Amount: 0.155449
Amount Units: ug/ml



Manual Integration Results

RT: 9.81
Area: 13953811
Amount: 0.140386
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:19

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Apr-2023 14:34:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-003
Misc. Info.: 280-0120345-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:03:53 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:42:15

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.168	3.168	0.000	16995372	NC	NC	Ma
2 Chloride	4.383	4.383	0.000	43975181	NC	NC	M
3 Nitrite as N	5.118	5.118	0.000	21615246	0.5000	0.4936	M
4 Bromide	6.317	6.317	0.000	3222251	NC	NC	M
5 Nitrate as N	7.123	7.123	0.000	19909305	0.5000	0.4697	M
6 Orthophosphate as P	9.405	9.405	0.000	23629516	0.5000	0.5977	M
7 Sulfate	10.647	10.647	0.000	29311364	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

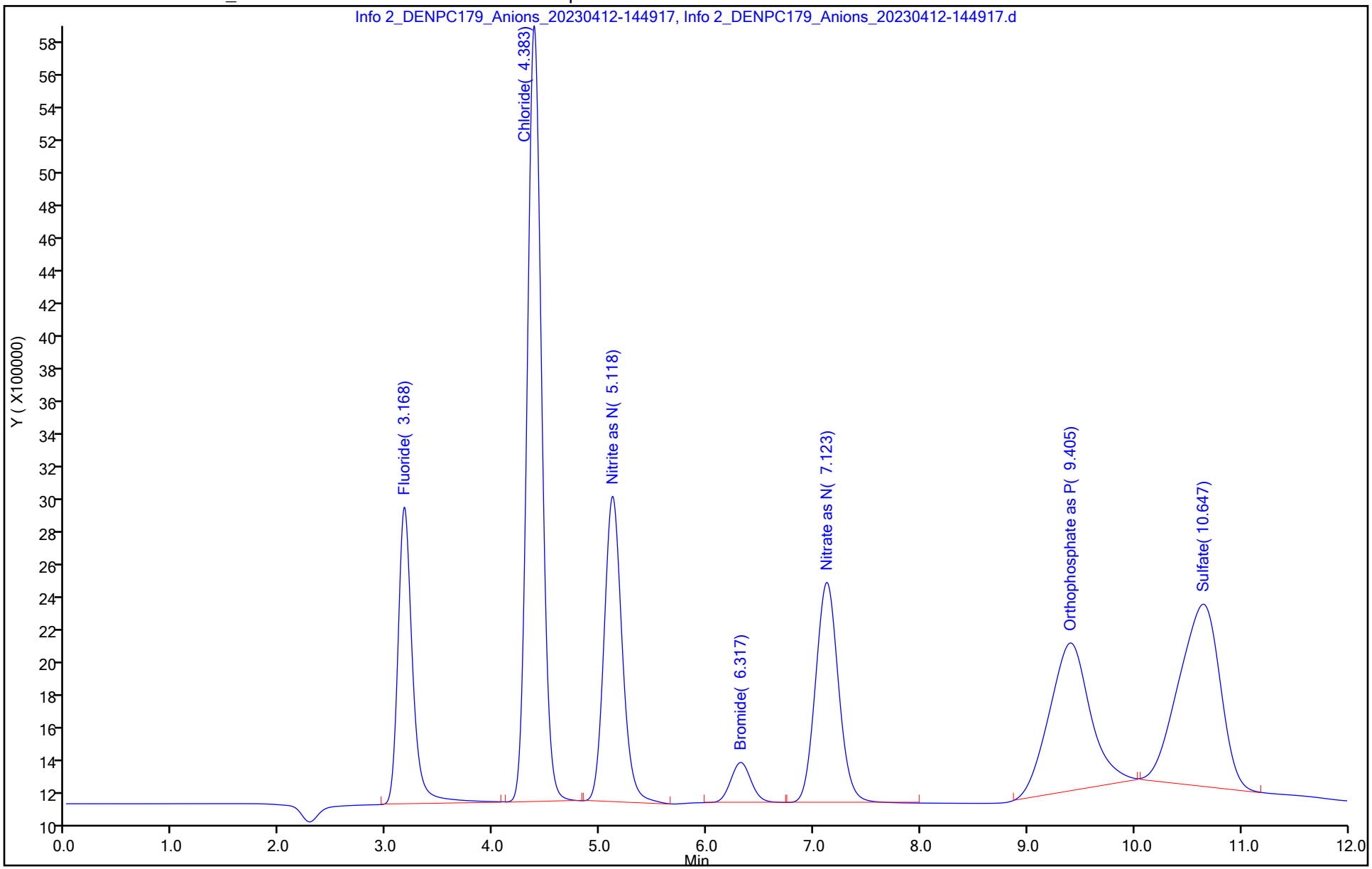
IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL
IC Cal low_00703 Amount Added: 0.20 Units: mL

Report Date: 14-Apr-2023 14:03:53 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144917.d

Injection Date:	12-Apr-2023 14:34:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

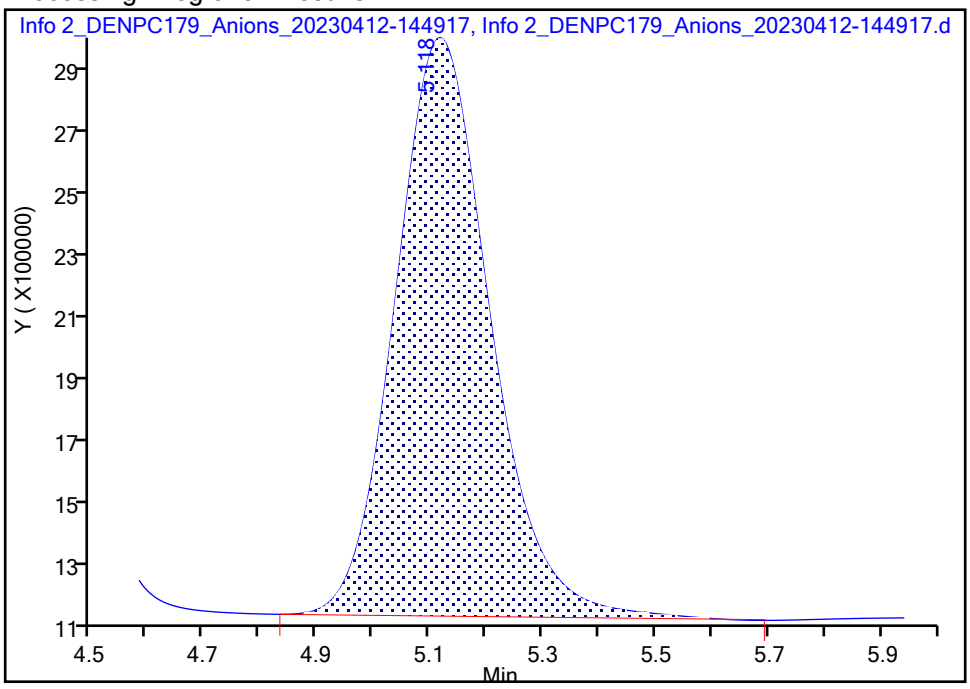
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

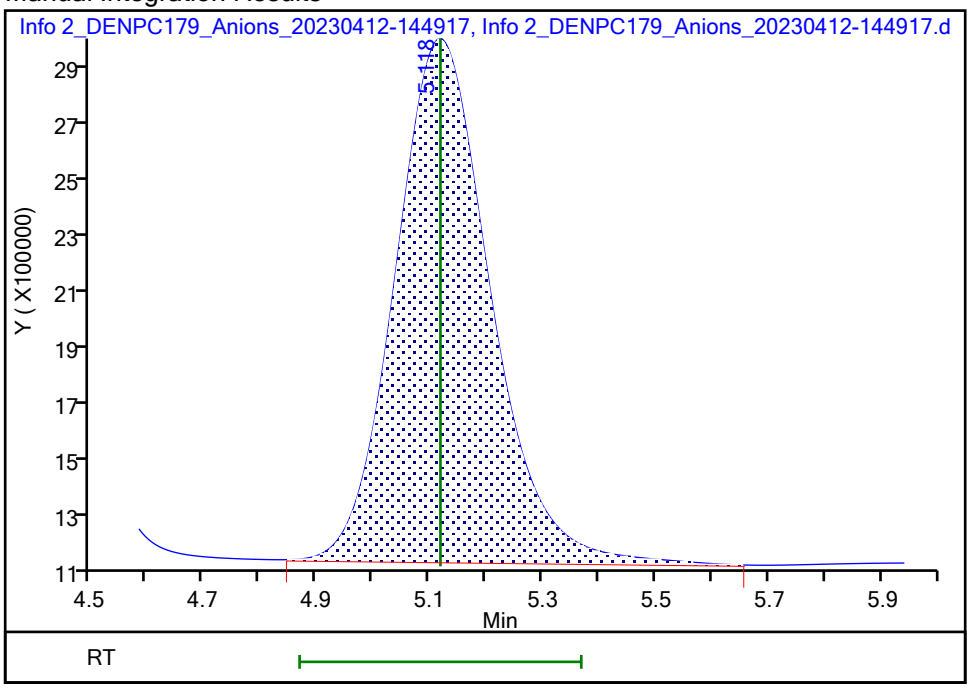
Processing Integration Results

RT: 5.12
Area: 21704269
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.12
Area: 21615246
Amount: 0.493602
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:46

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

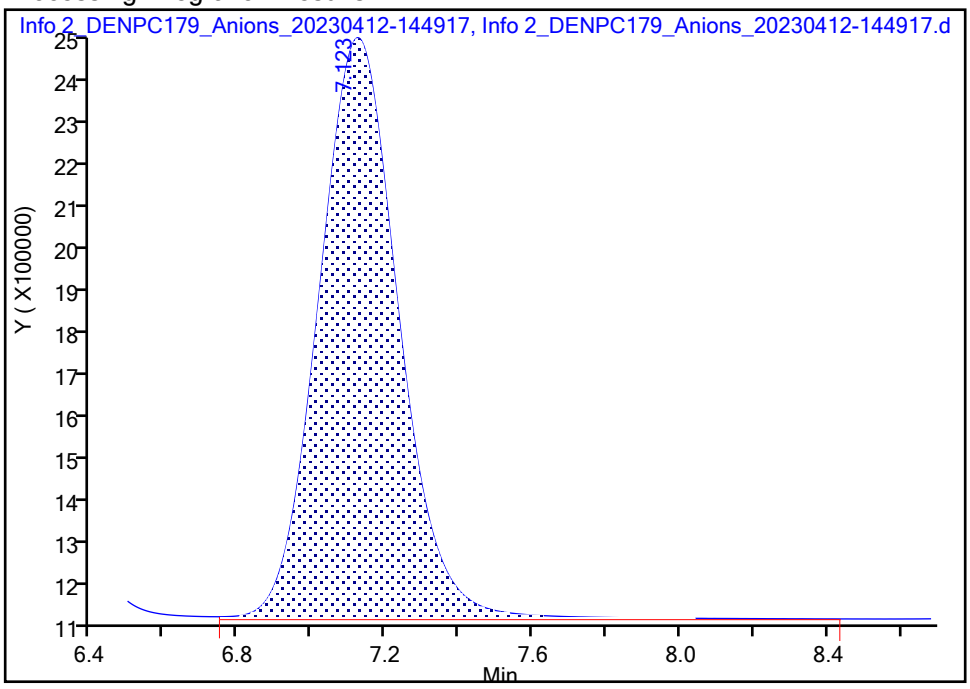
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144
Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10
Lims ID: STD L3
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

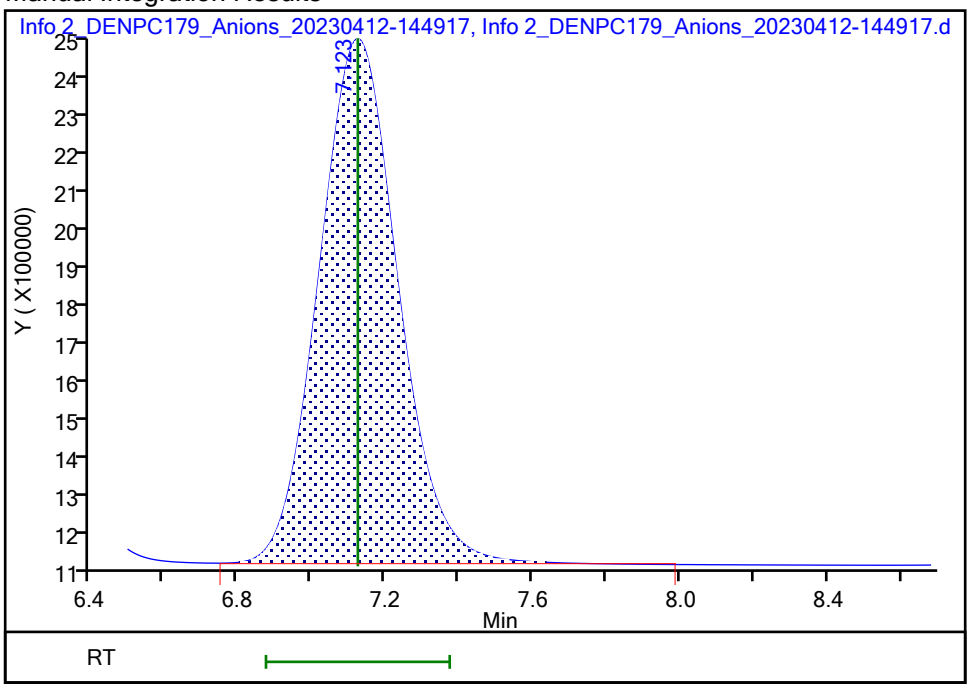
Processing Integration Results

RT: 7.12
Area: 20406914
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.12
Area: 19909305
Amount: 0.469685
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:55
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

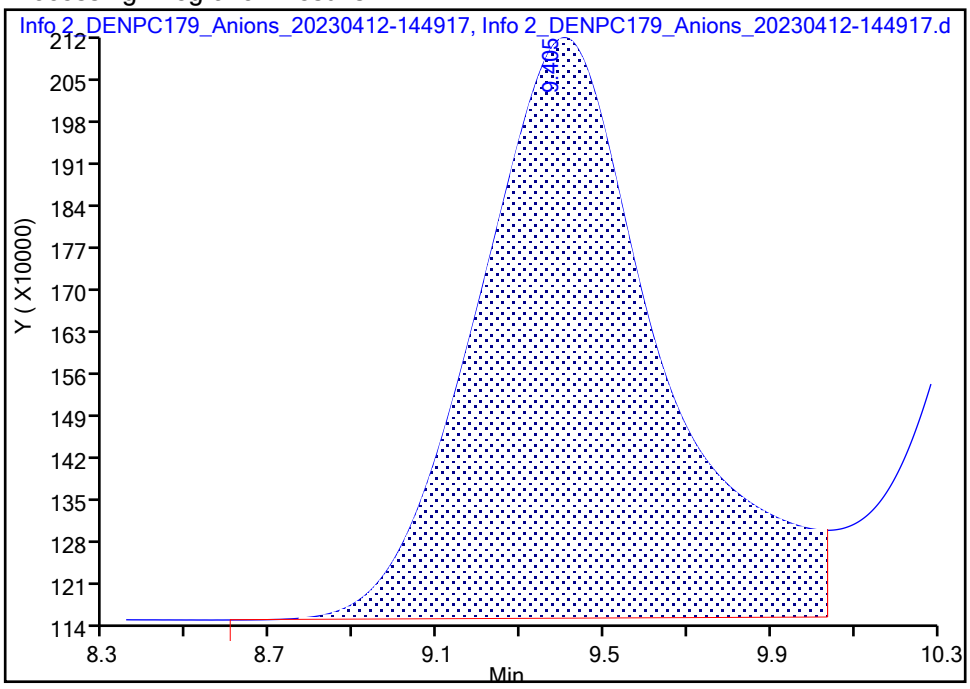
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

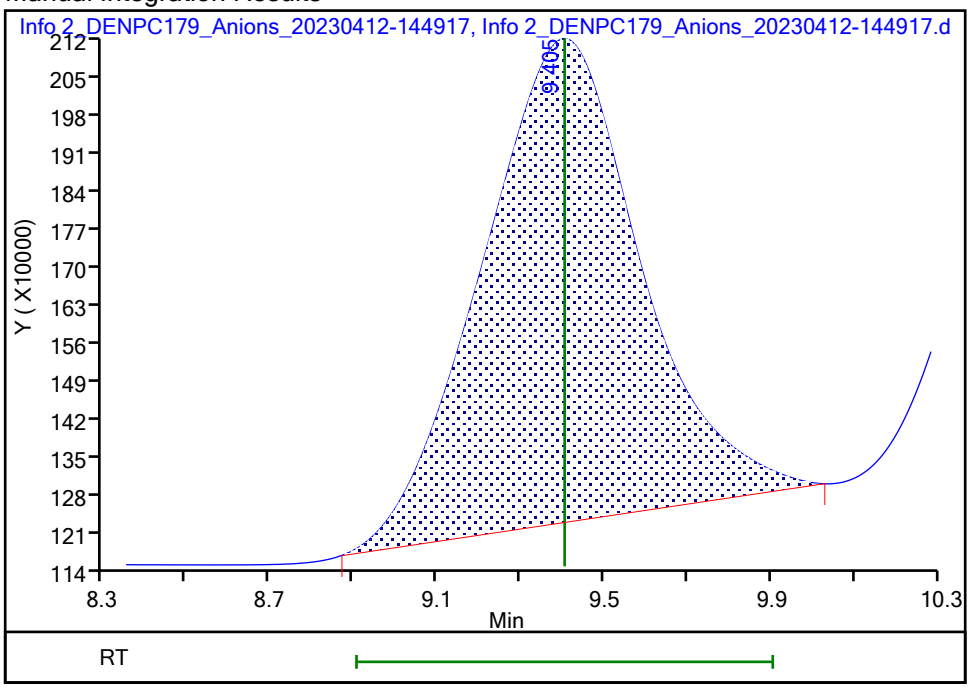
Processing Integration Results

RT: 9.41
Area: 29322324
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 9.41
Area: 23629516
Amount: 0.597704
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:10

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Apr-2023 14:49:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-004
Misc. Info.: 280-0120345-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:03:55 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:42:52

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.168	3.168	0.000	37412858	NC	NC	Ma
2 Chloride	4.390	4.390	0.000	575824993	NC	NC	M
3 Nitrite as N	5.113	5.113	0.000	44844044	1.00	0.99	M
4 Bromide	6.308	6.308	0.000	6583592	NC	NC	M
5 Nitrate as N	7.103	7.103	0.000	42066844	1.00	0.9528	M
6 Orthophosphate as P	9.388	9.388	0.000	34760084	1.00	1.12	M
7 Sulfate	10.628	10.628	0.000	410479688	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

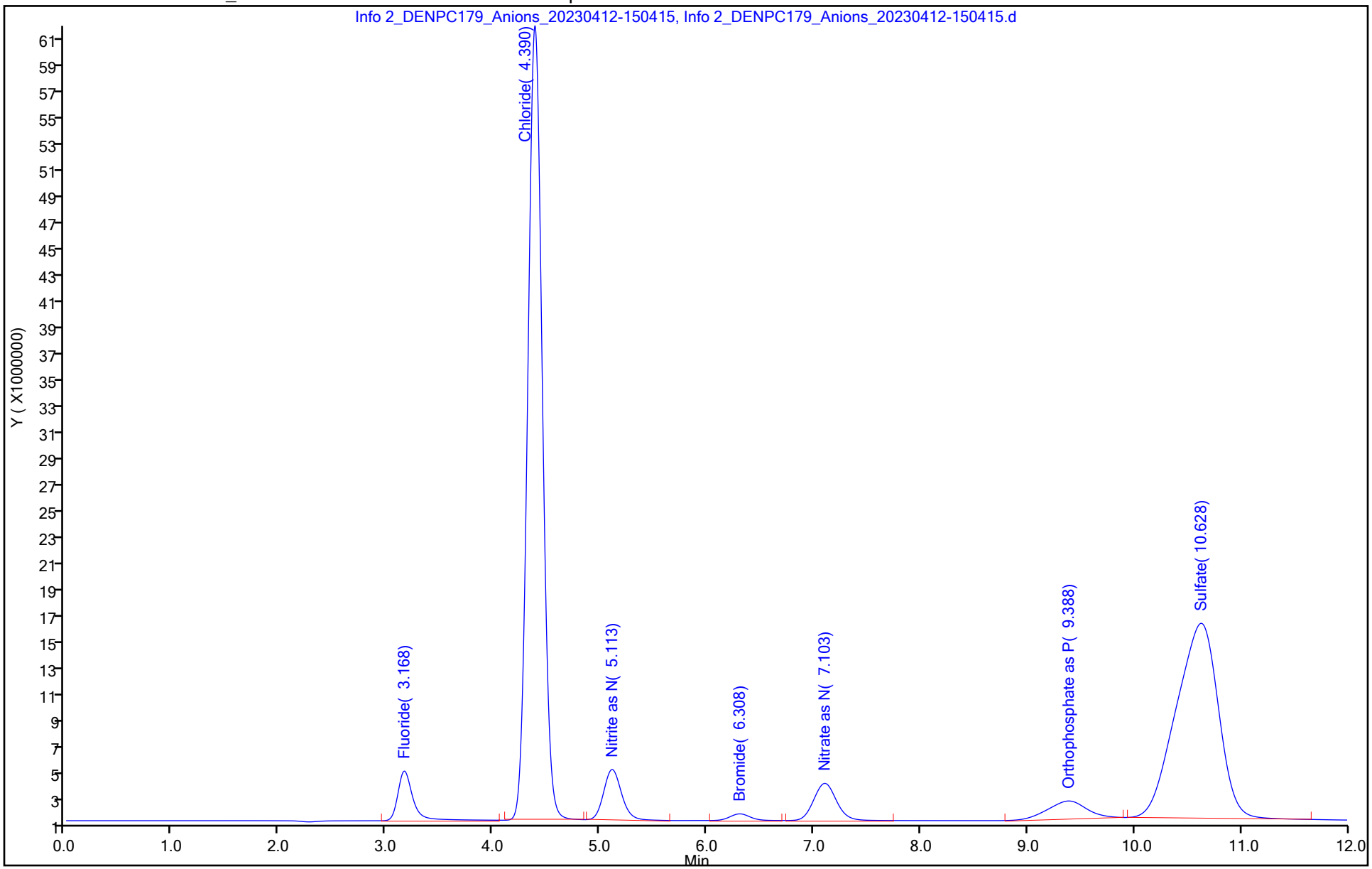
Reagents:

IC CAL cl/so4_00475 Amount Added: 2.40 Units: mL
IC Cal low_00703 Amount Added: 0.40 Units: mL

Report Date: 14-Apr-2023 14:03:55 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150415.d				
Injection Date:	12-Apr-2023 14:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

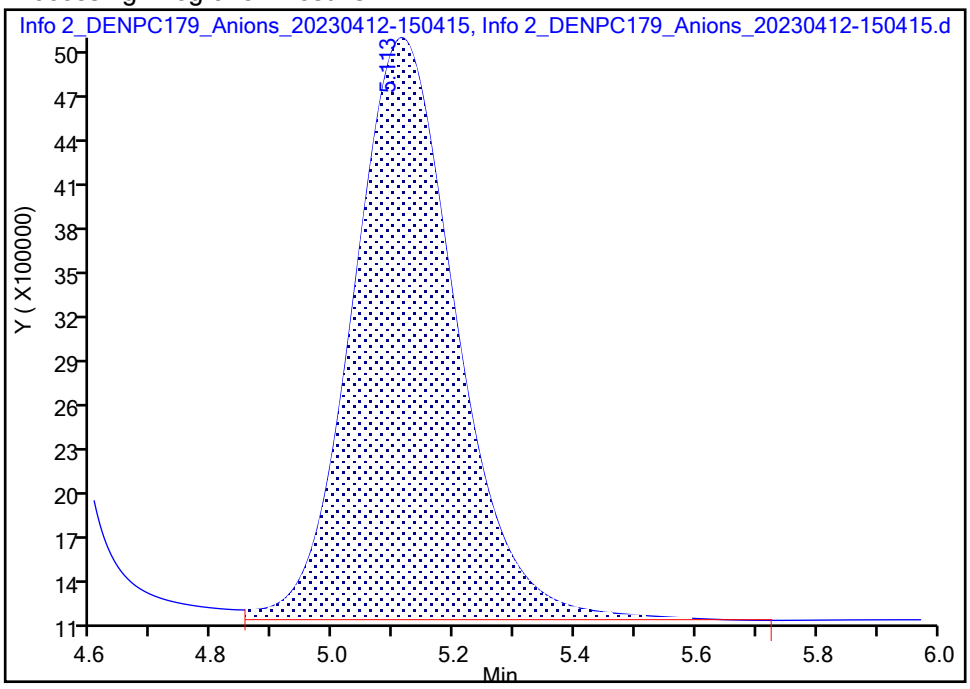
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

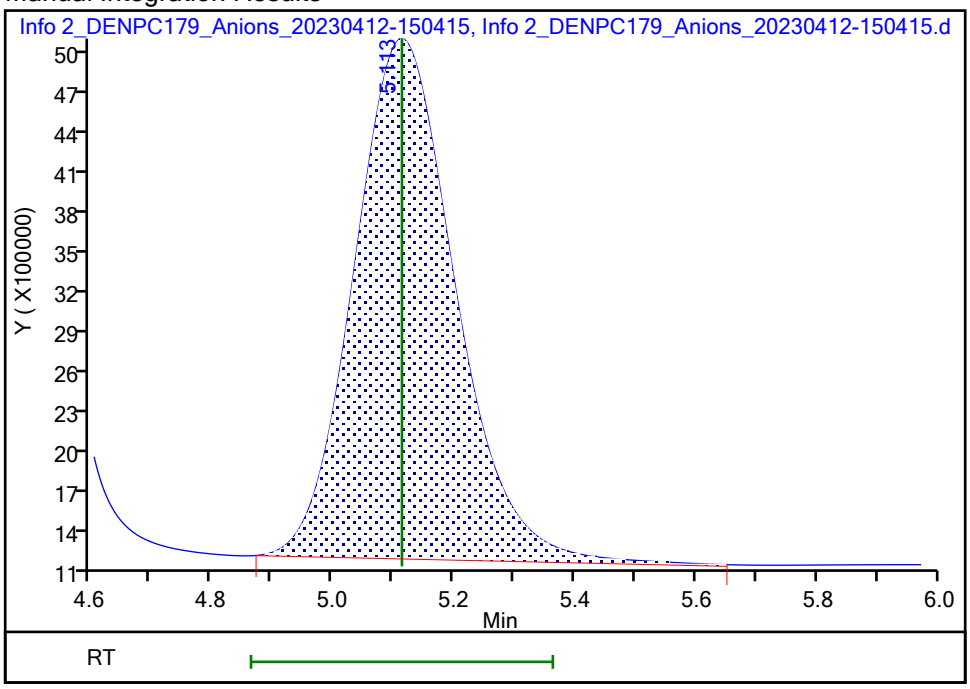
Processing Integration Results

RT: 5.11
Area: 46326440
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.11
Area: 44844044
Amount: 0.994454
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:27
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

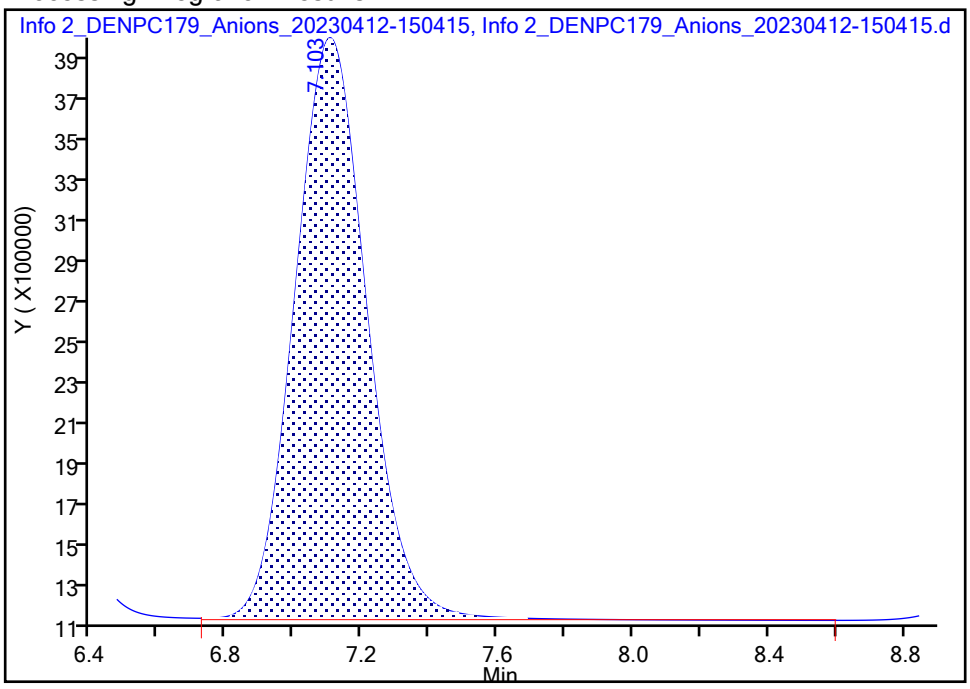
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

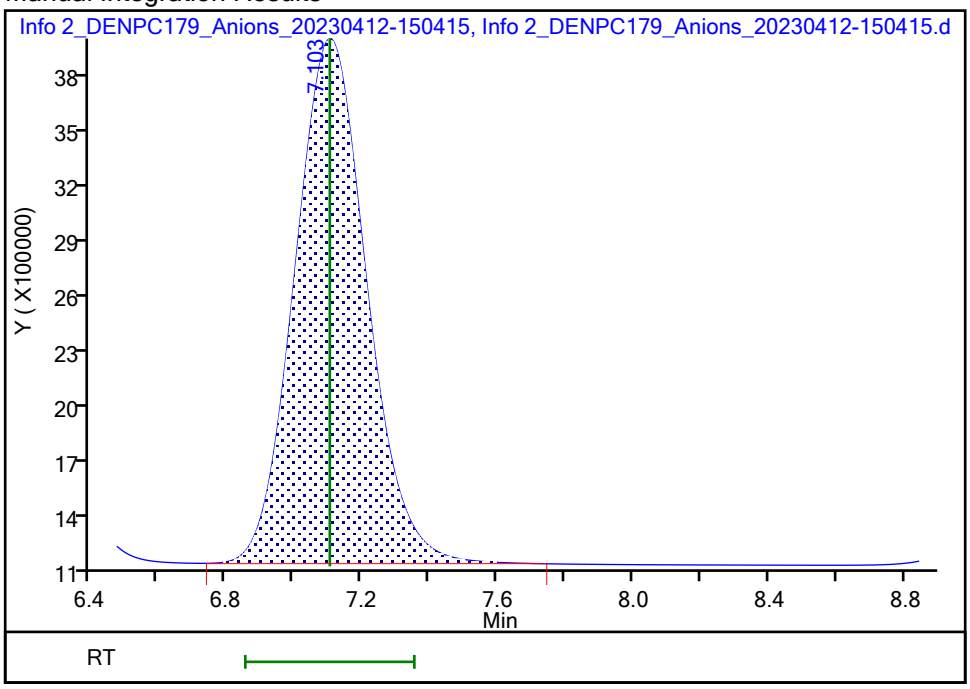
Processing Integration Results

RT: 7.10
Area: 42281044
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.10
Area: 42066844
Amount: 0.952760
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:36
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

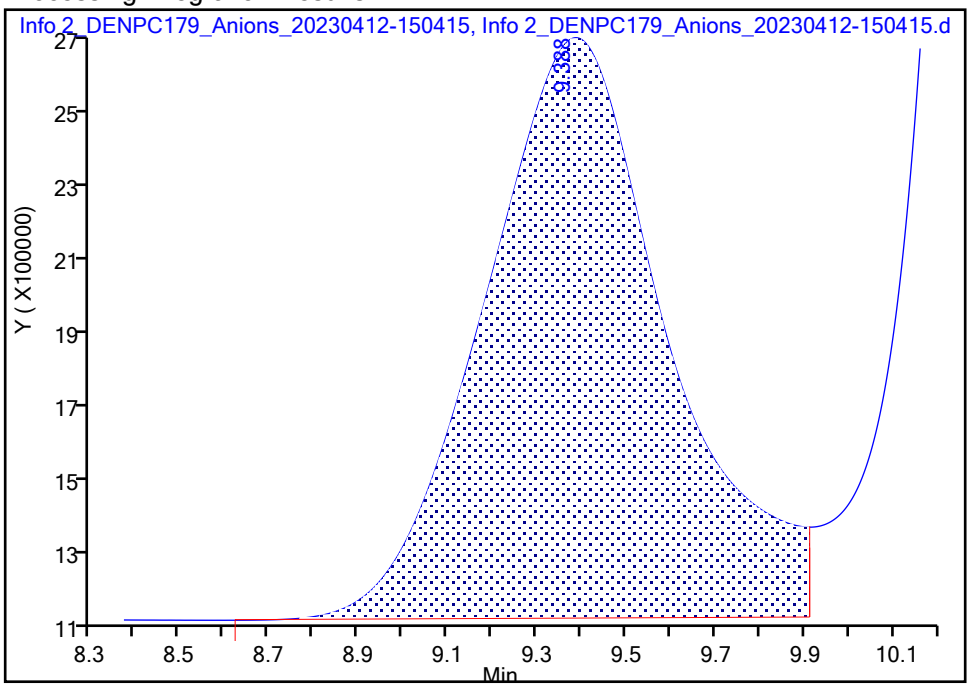
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

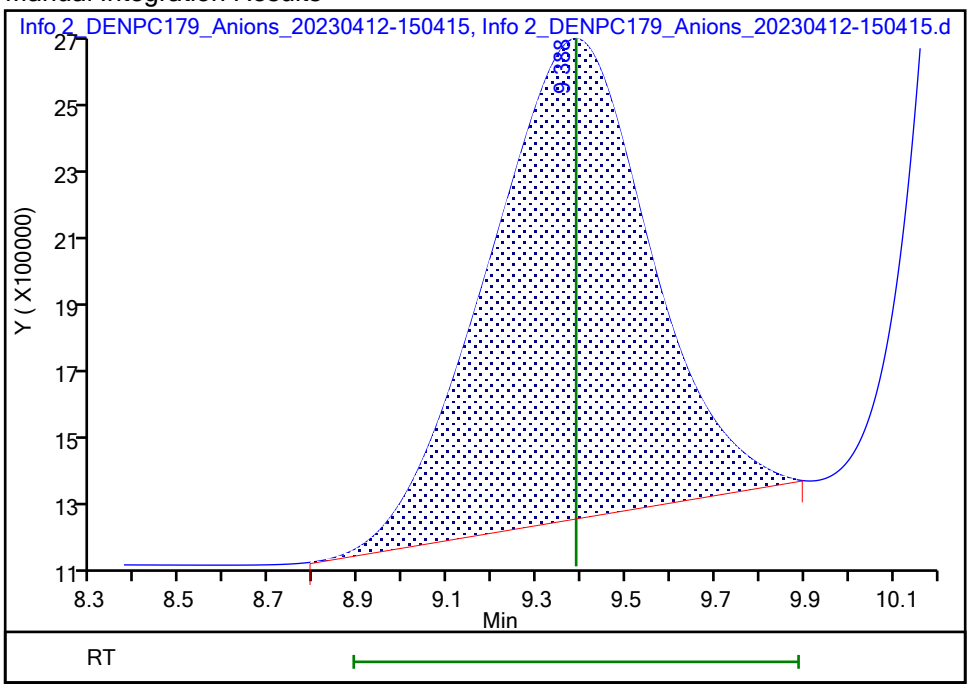
Processing Integration Results

RT: 9.39
Area: 42806166
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 9.39
Area: 34760084
Amount: 1.123785
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:46
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 12-Apr-2023 15:04:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-005
Misc. Info.: 280-0120345-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:03:57 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:43:24

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.170	3.170	0.000	96629288	NC	NC	Ma
2 Chloride	4.405	4.405	0.000	1149686166	NC	NC	M
3 Nitrite as N	5.107	5.107	0.000	116231748	2.50	2.53	M
4 Bromide	6.298	6.298	0.000	17672625	NC	NC	
5 Nitrate as N	7.078	7.078	0.000	112738215	2.50	2.49	M
6 Orthophosphate as P	9.368	9.368	0.000	65067694	2.50	2.56	M
7 Sulfate	10.610	10.610	0.000	828007497	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

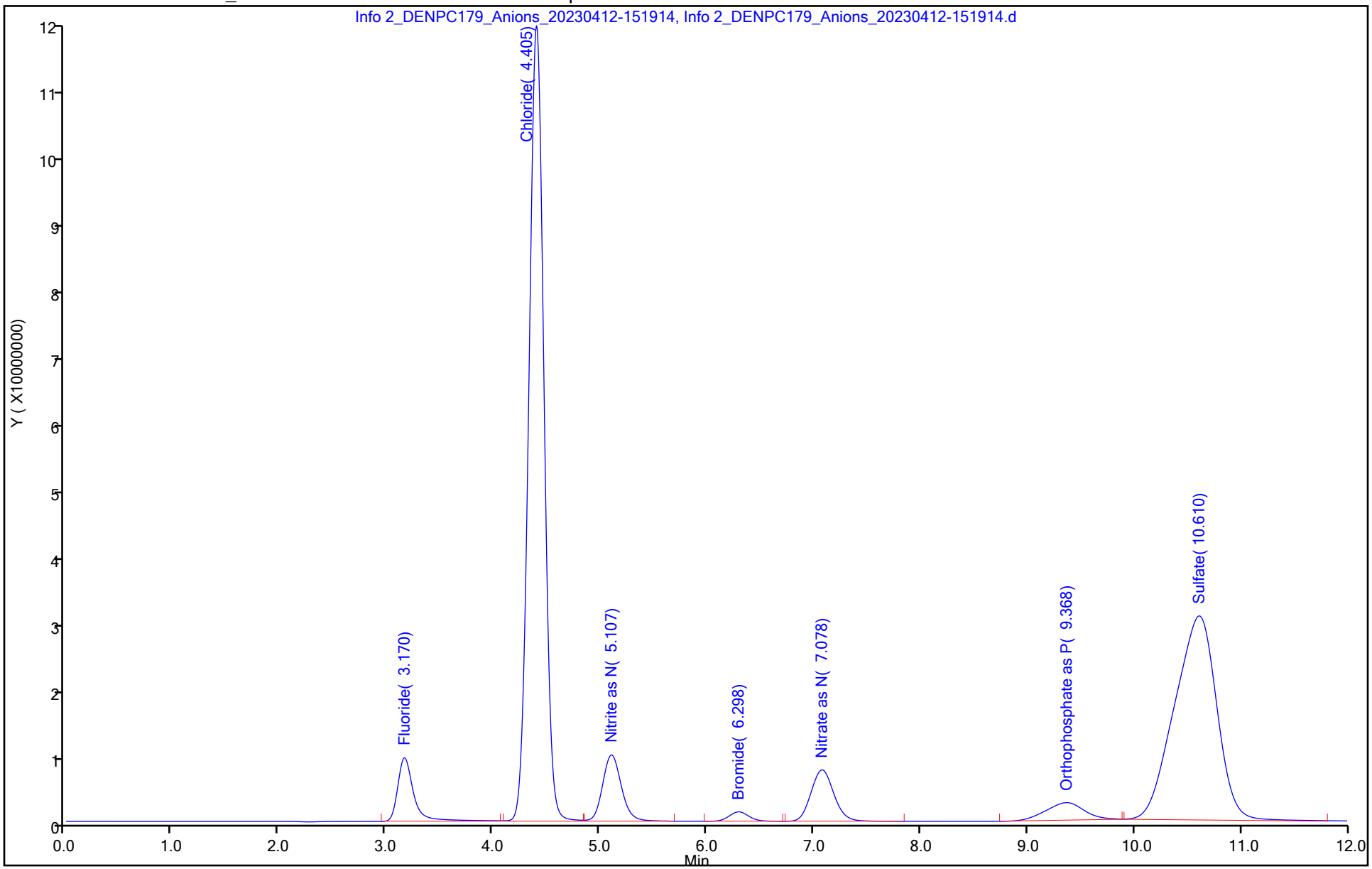
Reagents:

IC CAL cl/so4_00475 Amount Added: 4.80 Units: mL
IC Cal low_00703 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2023 14:03:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151914.d				
Injection Date:	12-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

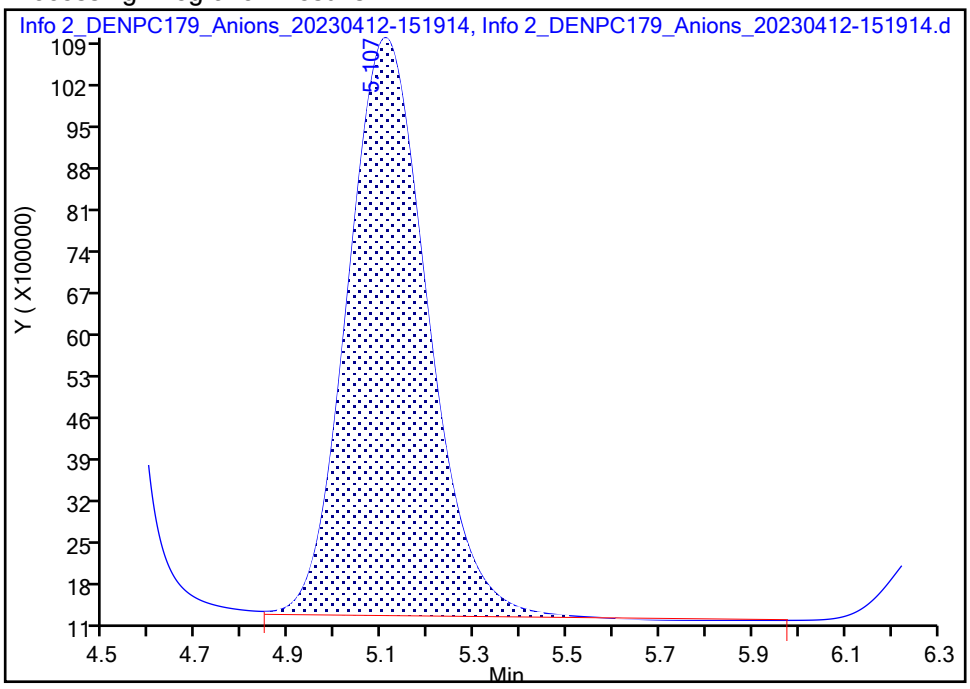
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151
Injection Date: 12-Apr-2023 15:04:00 Instrument ID: WC_IonChrom10
Lims ID: STD L5
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

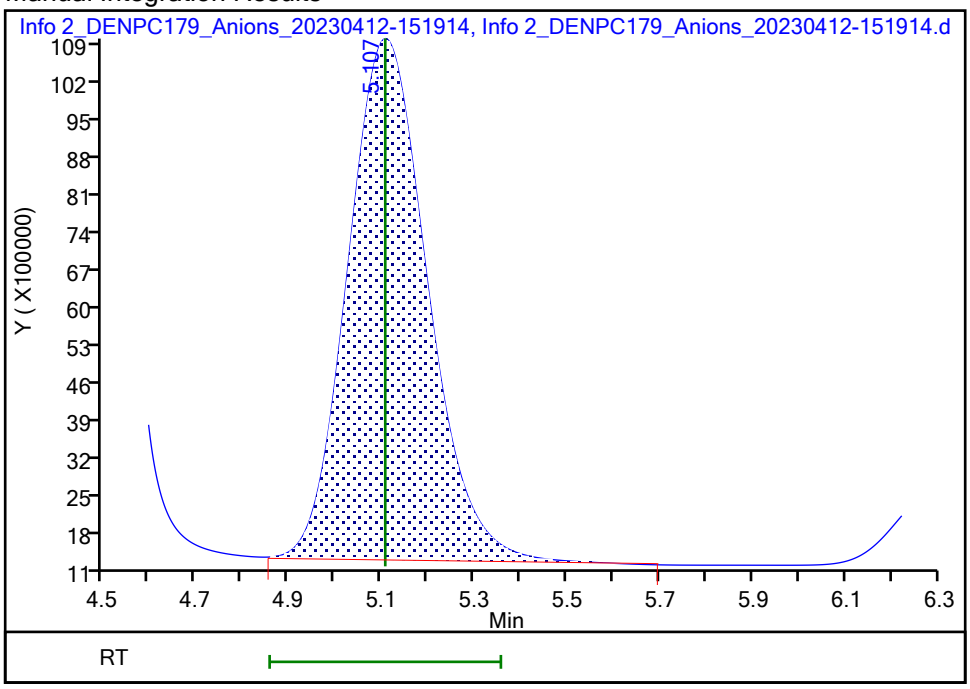
Processing Integration Results

RT: 5.11
Area: 117216841
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.11
Area: 116231748
Amount: 2.533691
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:01
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

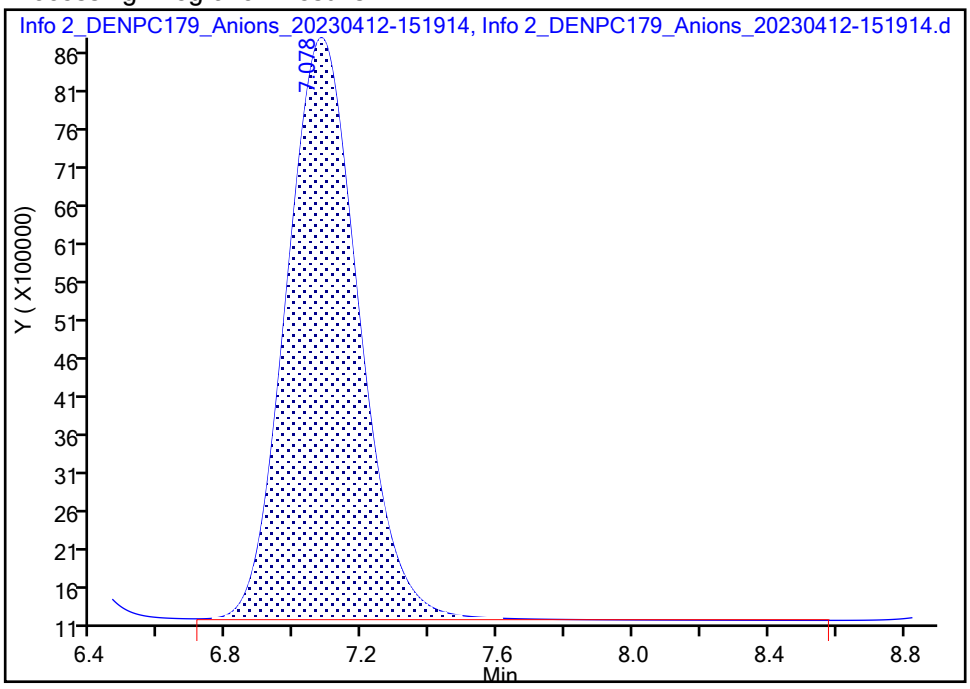
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151
Injection Date: 12-Apr-2023 15:04:00 Instrument ID: WC_IonChrom10
Lims ID: STD L5
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

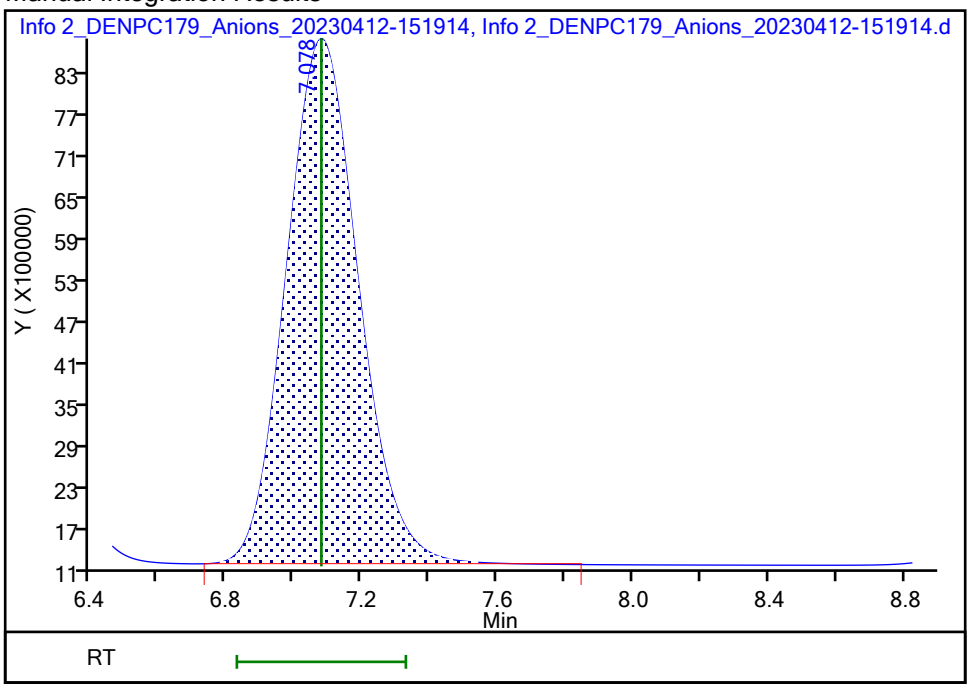
Processing Integration Results

RT: 7.08
Area: 112804805
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.08
Area: 112738215
Amount: 2.493526
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:10
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151

Injection Date: 12-Apr-2023 15:04:00 Instrument ID: WC_IonChrom10

Lims ID: STD L5

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

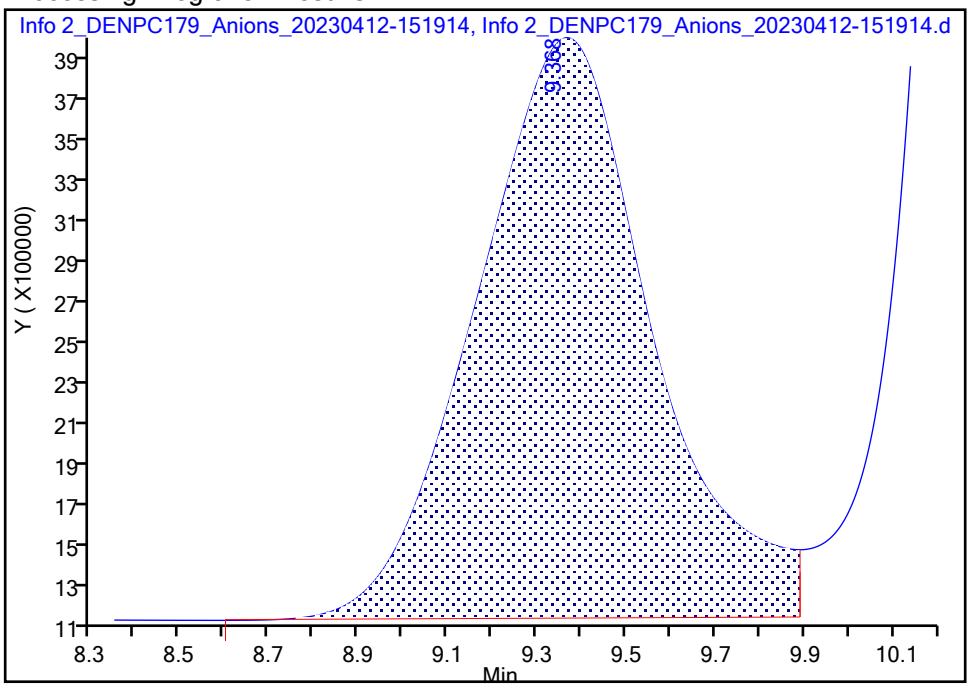
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

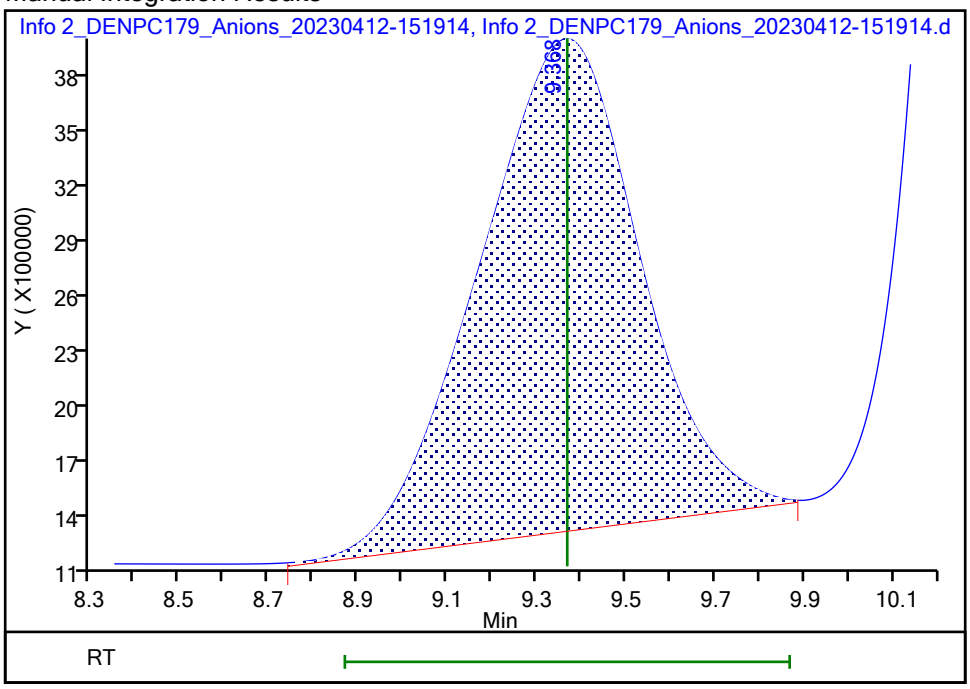
Processing Integration Results

RT: 9.37
Area: 75792721
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 9.37
Area: 65067694
Amount: 2.556261
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:19

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Apr-2023 15:19:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-006
Misc. Info.: 280-0120345-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:04:00 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 17:08:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.175	3.175	0.000	190381963	NC	NC	Ma
2 Chloride	4.428	4.428	0.000	1914243902	NC	NC	M
3 Nitrite as N	5.103	5.103	0.000	229518060	5.00	4.98	M
4 Bromide	6.292	6.292	0.000	37078318	NC	NC	
5 Nitrate as N	7.057	7.057	0.000	230663663	5.00	5.06	M
6 Orthophosphate as P	9.353	9.353	0.000	112155923	5.00	4.78	M
7 Sulfate	10.592	10.592	0.000	1384314036	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

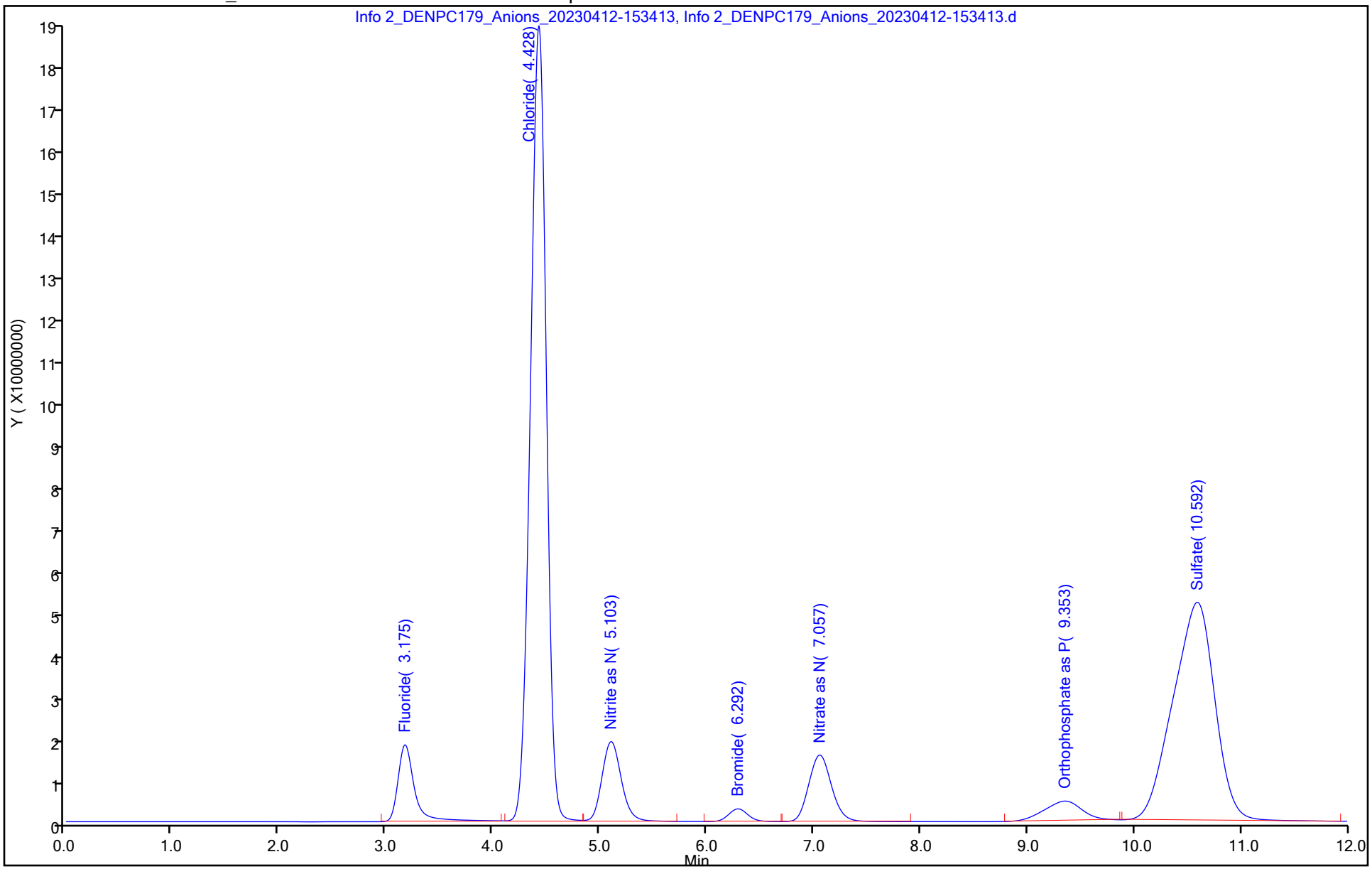
Reagents:

IC CAL cl/so4_00475 Amount Added: 8.00 Units: mL
IC Cal low_00703 Amount Added: 2.00 Units: mL

Report Date: 14-Apr-2023 14:04:00 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153413.d				
Injection Date:	12-Apr-2023 15:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

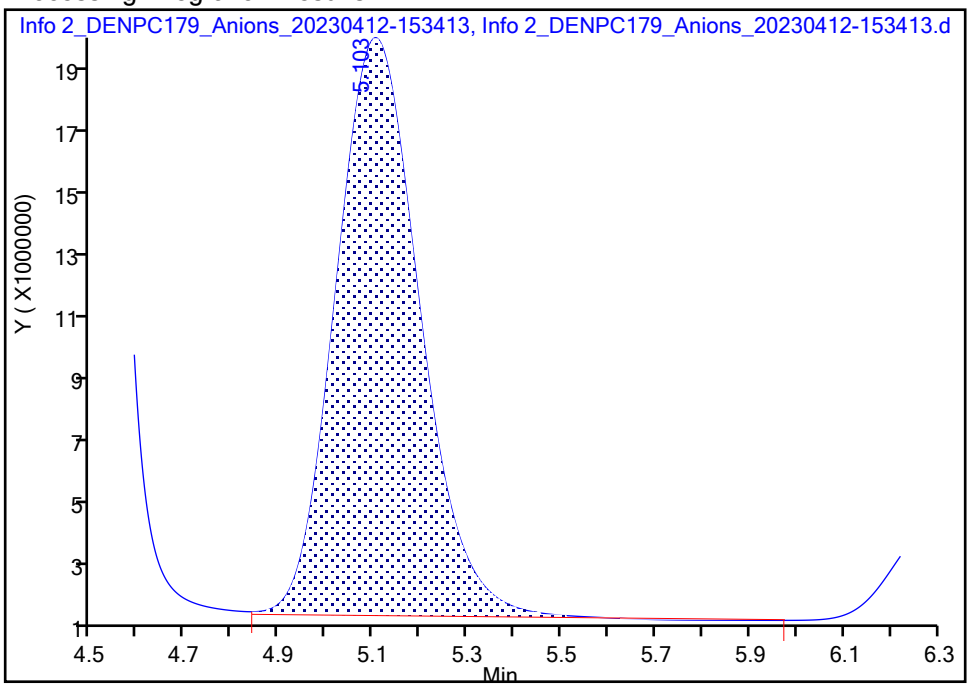
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Injection Date: 12-Apr-2023 15:19:00 Instrument ID: WC_IonChrom10
Lims ID: STD L6
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

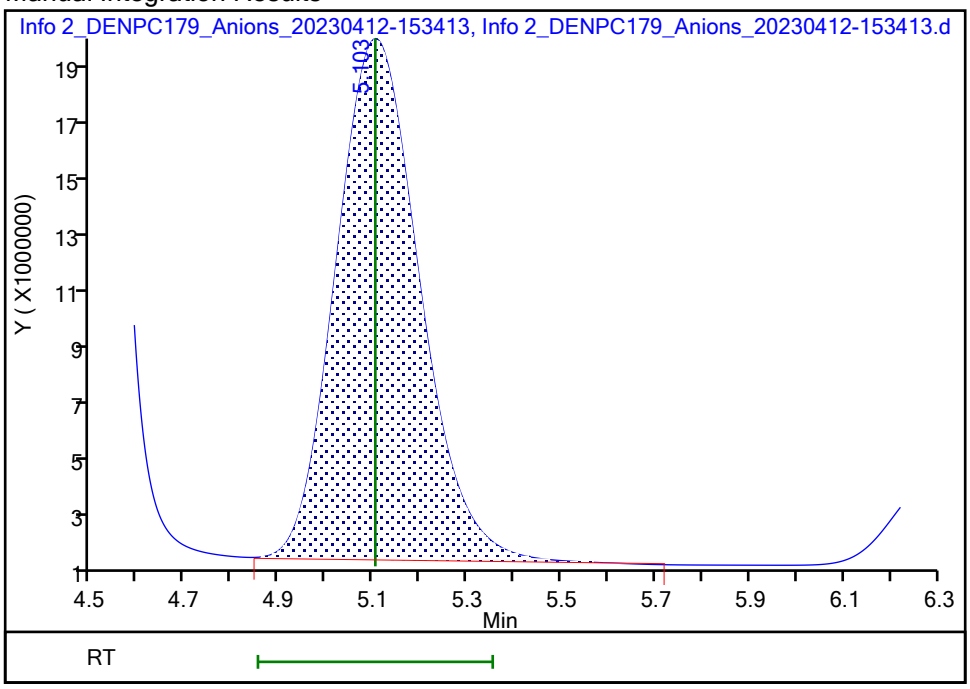
Processing Integration Results

RT: 5.10
Area: 230908651
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.10
Area: 229518060
Amount: 4.976333
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:38
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

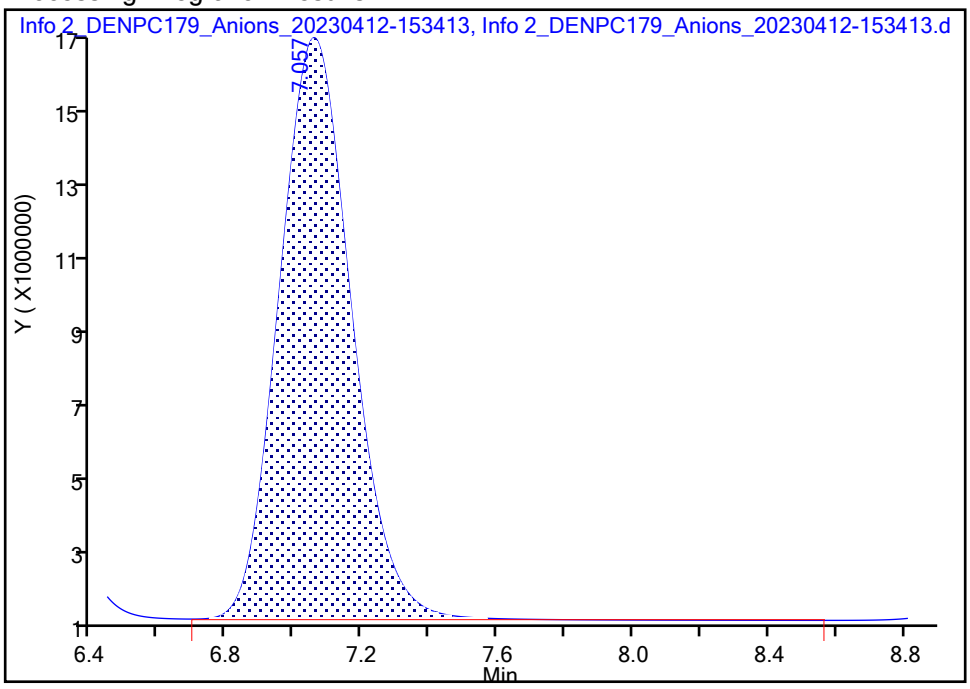
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Injection Date: 12-Apr-2023 15:19:00 Instrument ID: WC_IonChrom10
Lims ID: STD L6
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

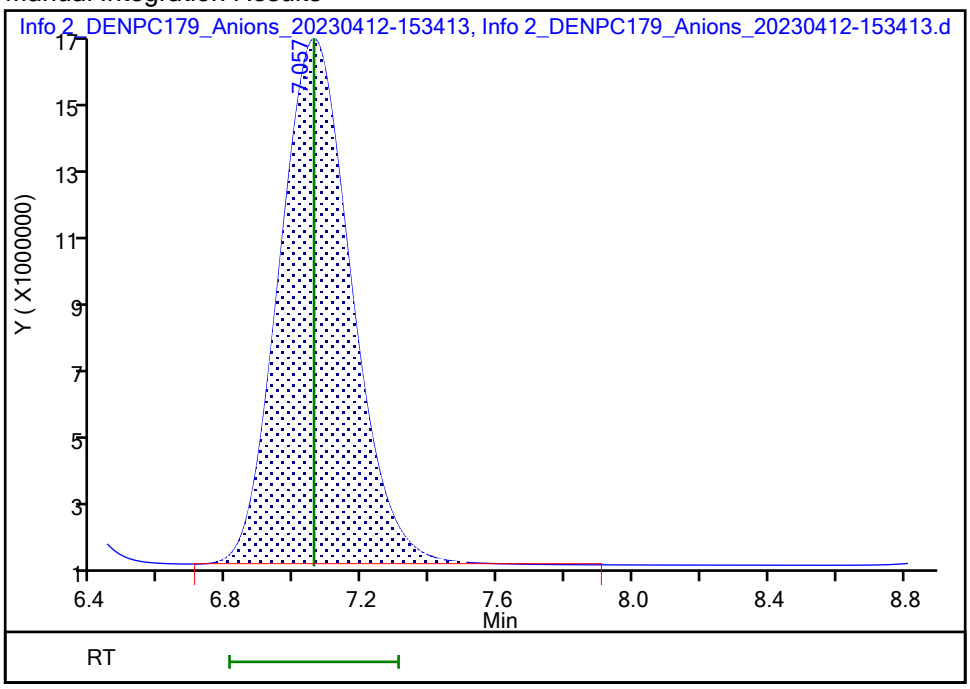
Processing Integration Results

RT: 7.06
Area: 230797057
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.06
Area: 230663663
Amount: 5.064518
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:47
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

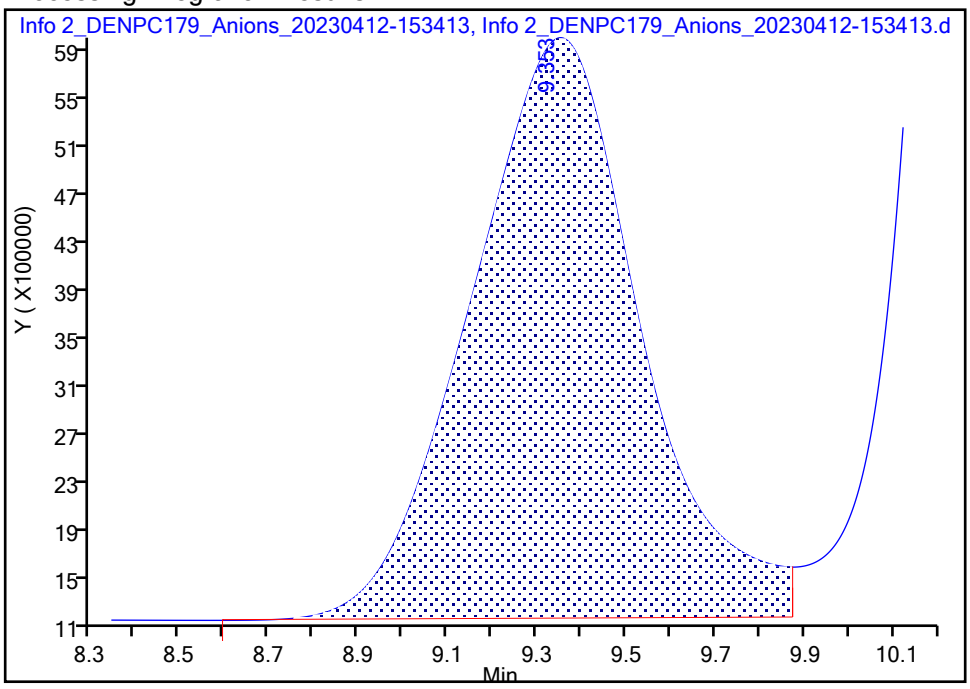
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Injection Date: 12-Apr-2023 15:19:00 Instrument ID: WC_IonChrom10
Lims ID: STD L6
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

6 Orthophosphate as P, CAS: STL00599

Signal: 1

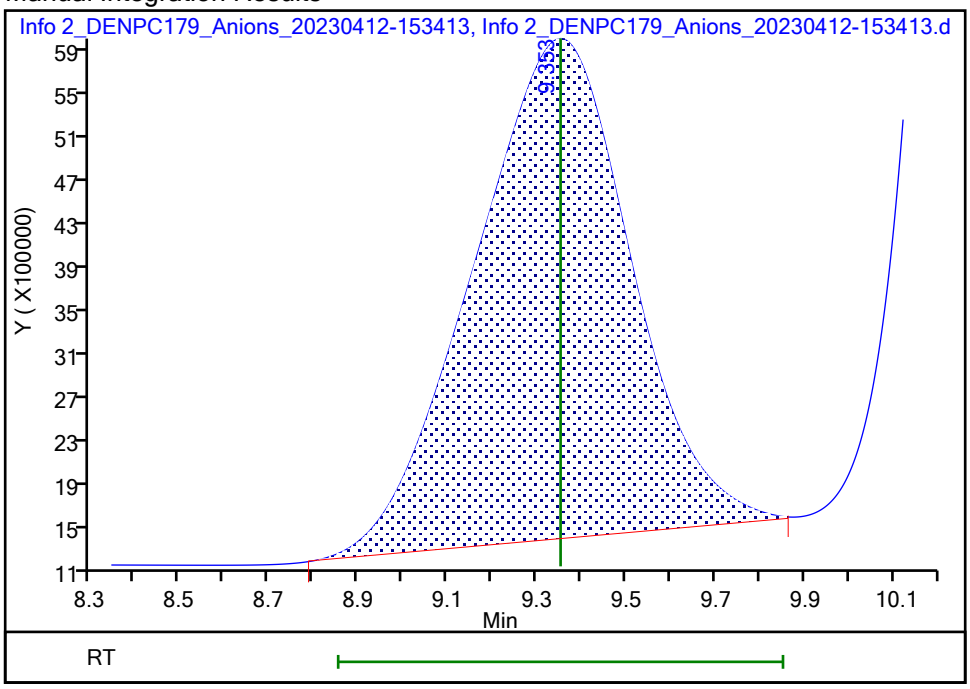
Processing Integration Results

RT: 9.35
Area: 127117672
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 9.35
Area: 112155923
Amount: 4.781864
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:56
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 120345 **Inst ID:** IC16 **Analysis Date:** 04/12/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	174903	7	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
40437065	43230492	44844044	46492699	45903612		-1277342			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			46378611		
M8087413	M21615246	M44844044	M116231748	M229518060					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
5 Nitrate as N				Signal: 1					
42172205	39818610	42066844	45095286	46132733		-1634037			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			45867680		
M8434441	M19909305	M42066844	M112738215	M230663663					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
6 Orthophosphate as P				Signal: 1			R1		
69769055	47259032	34760084	26027078	22431185		10983593			*0.990
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			21157507		
M13953811	M23629516	M34760084	M65067694	M112155923					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

Report Date: 14-Apr-2023 13:55:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 13:55:16	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 17.1	10.0	117.1	
2 Chloride	80.0	85.7	7.1	10.0	107.1	
4 Bromide	2.00	2.01	0.6	10.0	100.6	
7 Sulfate	80.0	86.9	8.7	10.0	108.7	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 13:56:07	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.12	6.0	10.0	106.0	
5 Nitrate as N	2.00	2.15	7.4	10.0	107.4	
6 Orthophosphate as	2.00	2.84	* 41.9	10.0	141.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Apr-2023 15:34:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-007
Misc. Info.: 280-0120345-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:06:59 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 13-Apr-2023 12:05:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.172	3.172	0.000	88983337	NC	NC	Ma
2 Chloride	4.423	4.423	0.000	1641996046	NC	NC	
3 Nitrite as N	5.112	5.112	0.000	97019728	2.00	2.12	M
4 Bromide	6.305	6.305	0.000	14681577	NC	NC	
5 Nitrate as N	7.087	7.087	0.000	96882220	2.00	2.15	
6 Orthophosphate as P	9.373	9.373	0.000	71034633	2.00	2.84	
7 Sulfate	10.593	10.593	0.000	1198792597	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

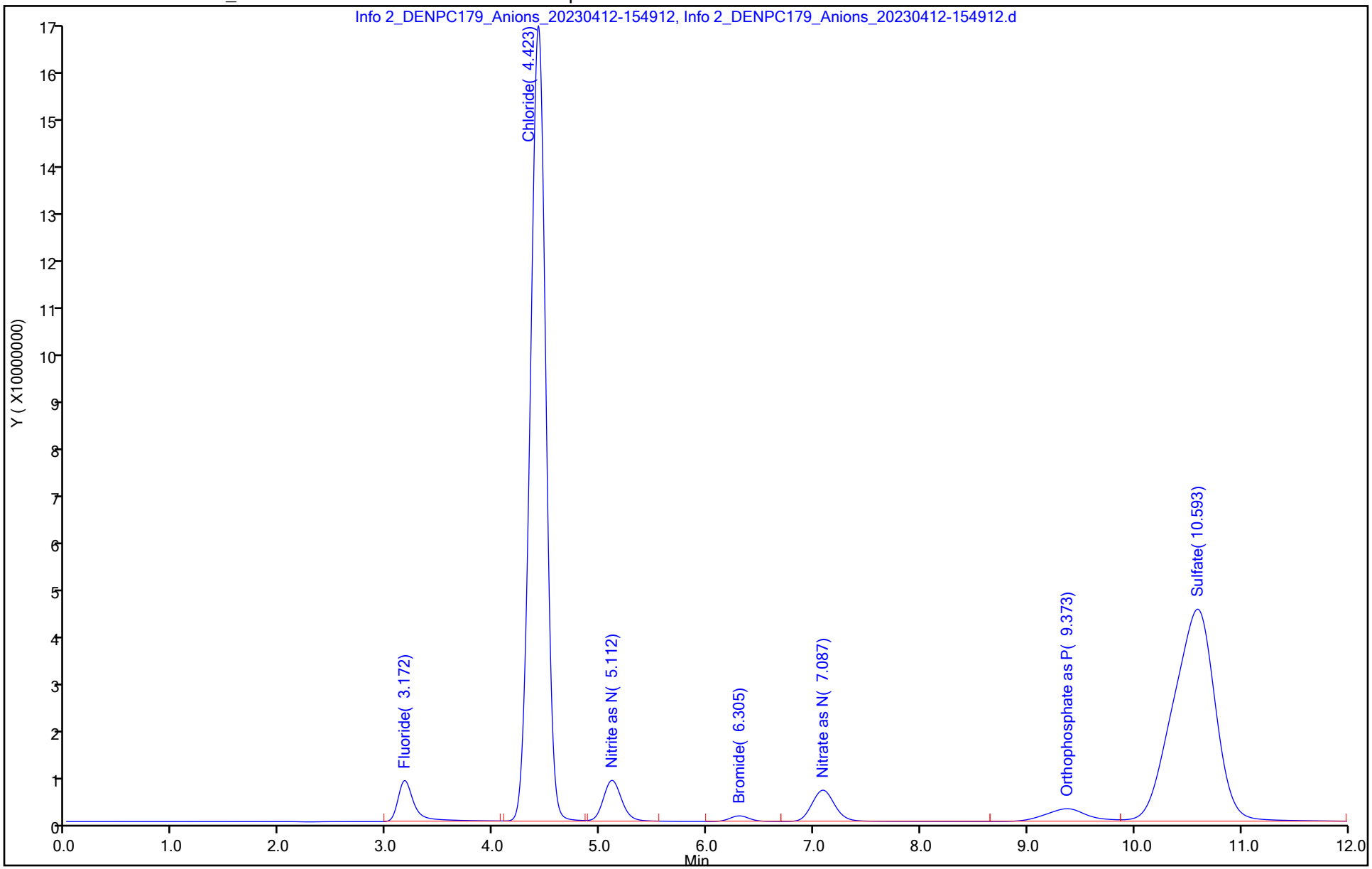
Reagents:

IC SO4 ICV_00024	Amount Added:	0.80	Units: mL
Cl ICV Std_00006	Amount Added:	0.80	Units: mL
IC ICV 5_00403	Amount Added:	0.80	Units: mL

Report Date: 14-Apr-2023 14:06:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154912.d				
Injection Date:	12-Apr-2023 15:34:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154

Injection Date: 12-Apr-2023 15:34:00 Instrument ID: WC_IonChrom10

Lims ID: ICV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 7

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

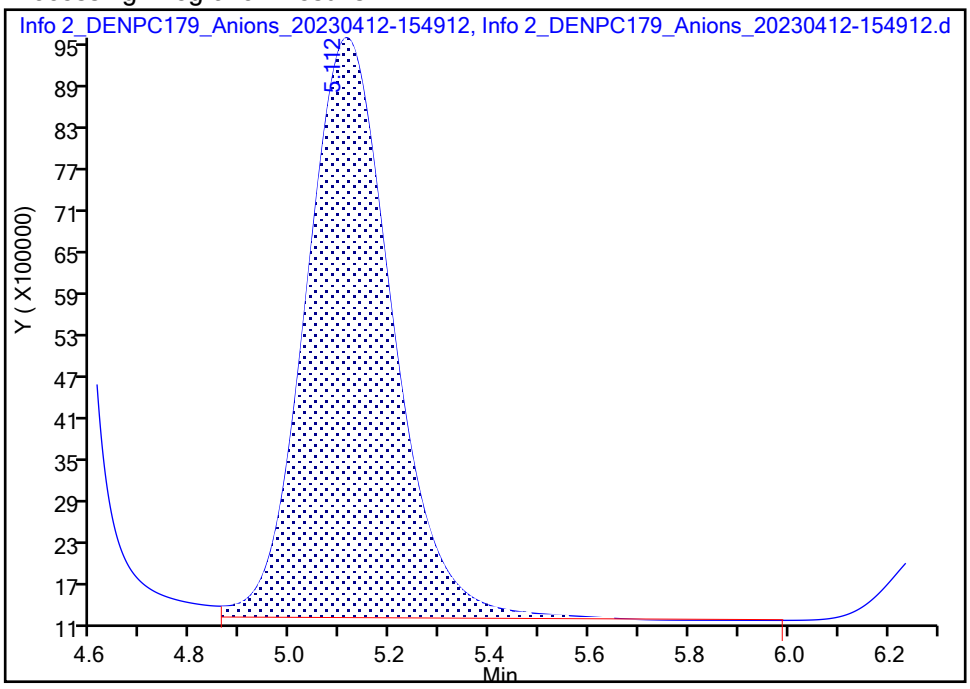
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

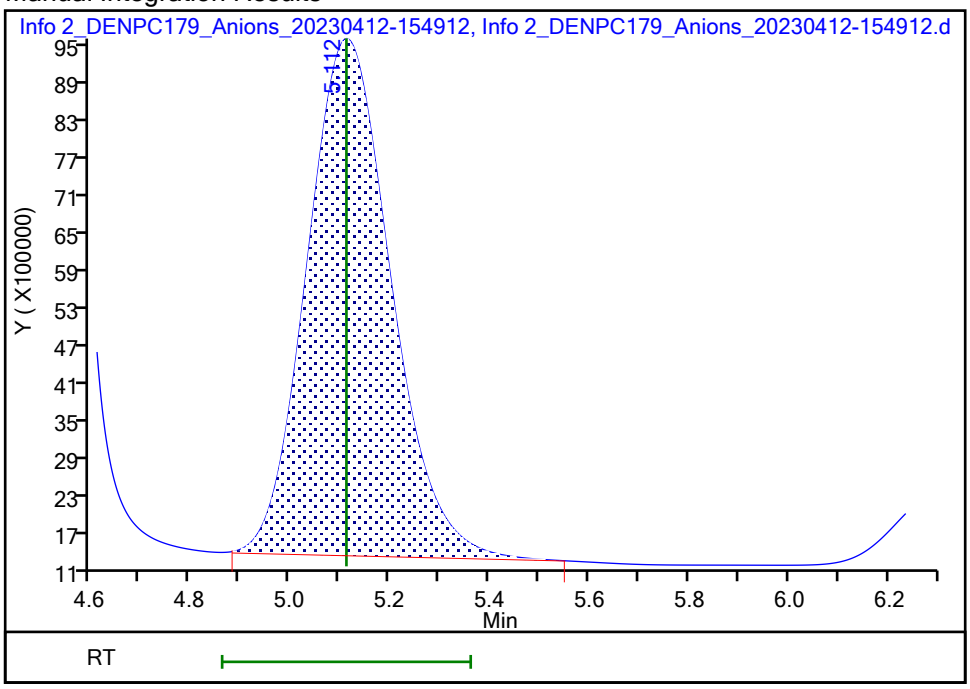
Processing Integration Results

RT: 5.11
Area: 101247304
Amount: 2.210602
Amount Units: ug/ml



Manual Integration Results

RT: 5.11
Area: 97019728
Amount: 2.119448
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 13:56:04

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 12-Apr-2023 15:49:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-008
Misc. Info.: 280-0120345-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 14-Apr-2023 14:07:08 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 14:07:17

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.172				ND	U
2 Chloride		4.397				ND	U
3 Nitrite as N		5.103				ND	
4 Bromide		6.293				ND	U
5 Nitrate as N		7.072				ND	
6 Orthophosphate as P	9.417	9.418	-0.001	14030813		0.1440	
7 Sulfate	10.600	10.602	-0.002	368472		NC	M

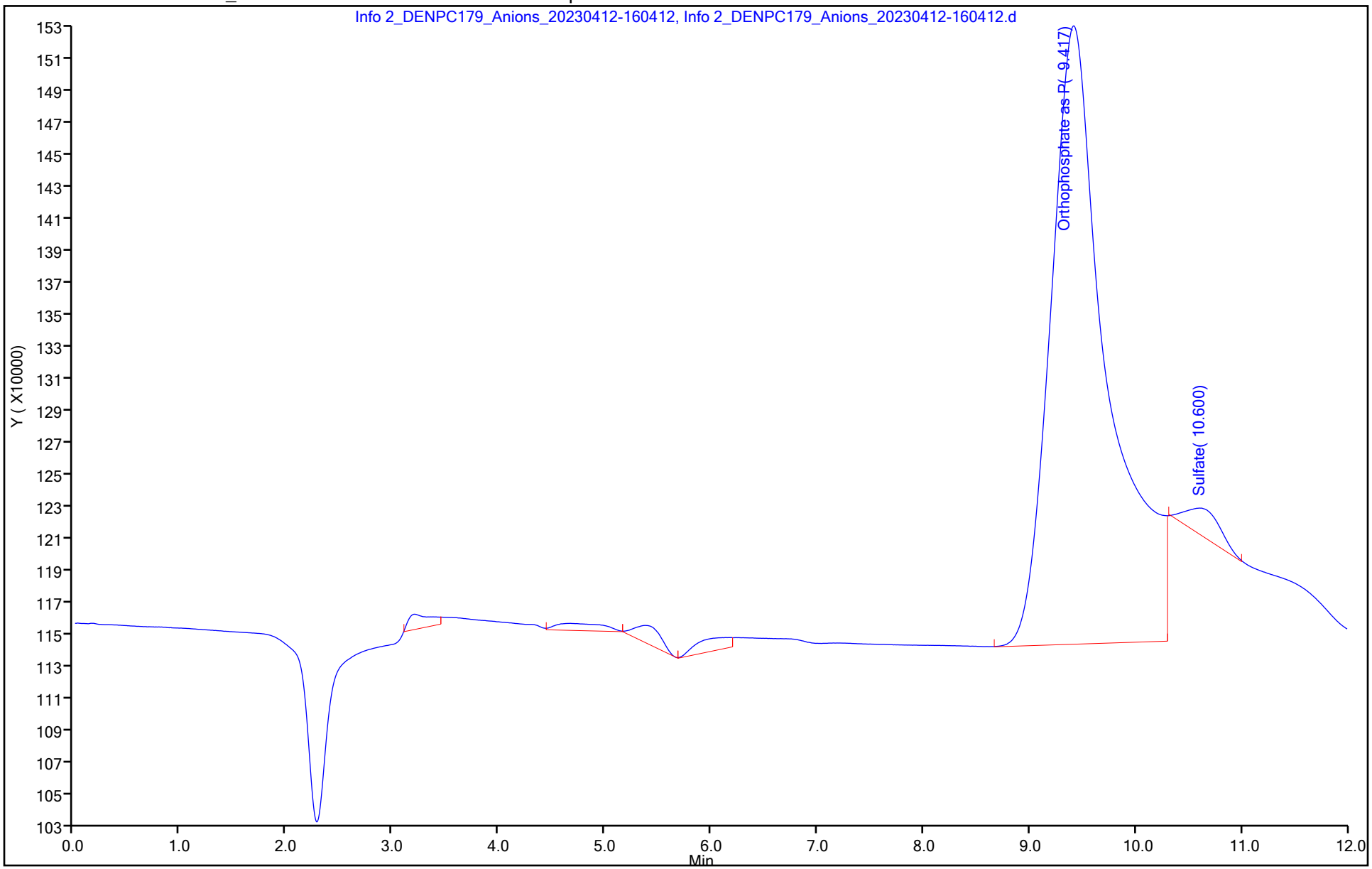
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 14-Apr-2023 14:07:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160412.d				
Injection Date:	12-Apr-2023 15:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14
Lims ID: STD L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Apr-2023 14:04:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-001
Misc. Info.: 280-0120345-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:48 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:40:32

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.175				ND	
2 Chloride	4.383	4.383	0.000	7464190	0.5000	0.5261	M
3 Nitrite as N		5.103				ND	
4 Bromide		6.292				ND	U
5 Nitrate as N		7.057				ND	
6 Orthophosphate as P	9.447	9.447	0.000	3338493		NC	M
7 Sulfate	10.645	10.645	0.000	7022789	0.5000	0.6018	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

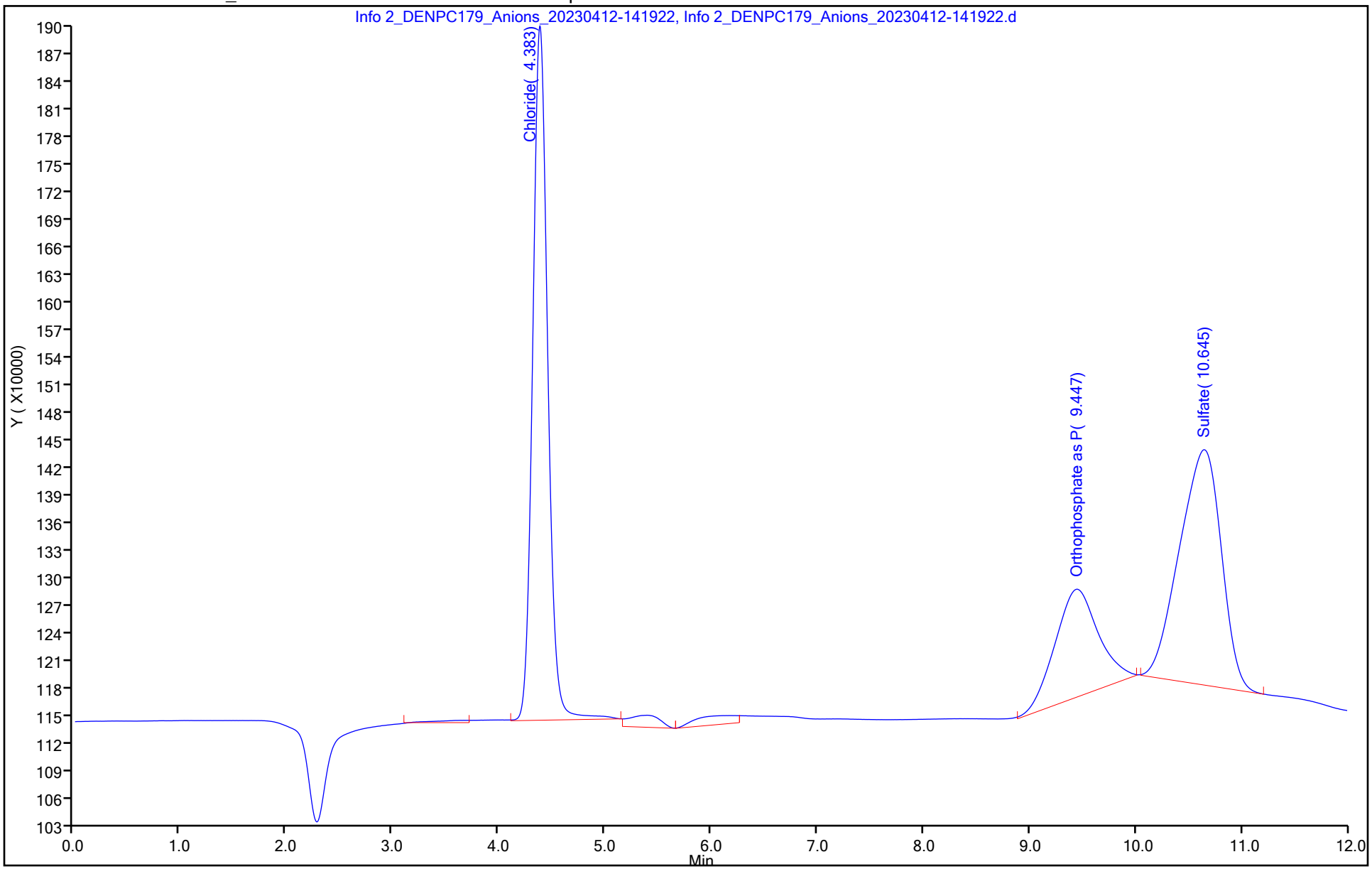
IC CAL cl/so4_00475 Amount Added: 0.04 Units: mL
IC Cal low_00703 Amount Added: 0.00 Units: mL

Report Date: 14-Apr-2023 14:03:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-141922.d

Injection Date:	12-Apr-2023 14:04:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L1			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

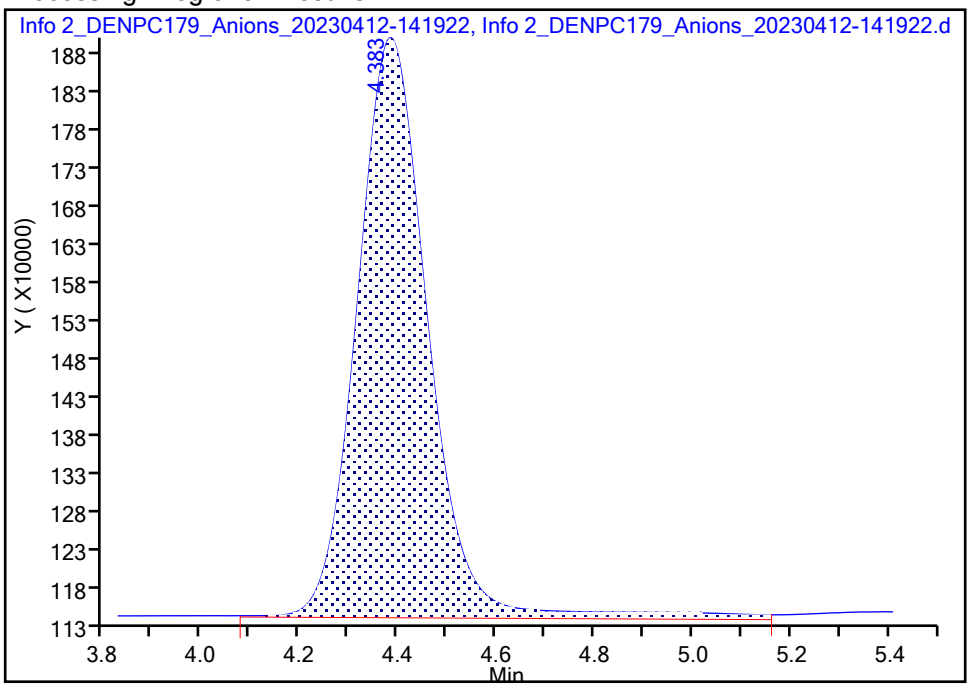
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14				
Injection Date:	12-Apr-2023 14:04:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L1				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

2 Chloride, CAS: 16887-00-6

Signal: 1

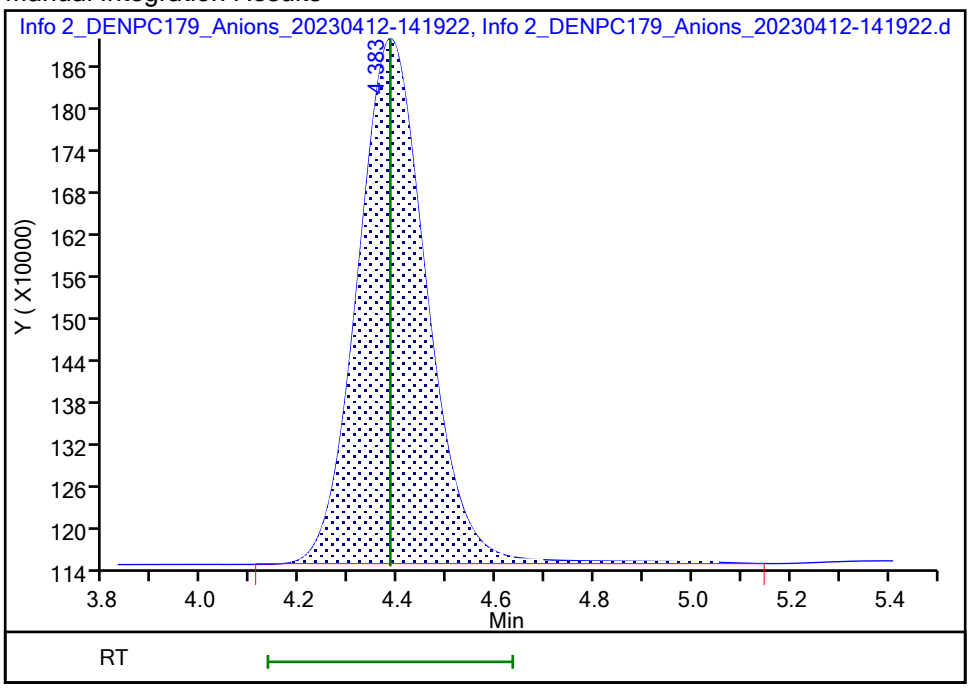
Processing Integration Results

RT: 4.38
Area: 7801695
Amount: 0.531210
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 7464190
Amount: 0.526115
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:40:25

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

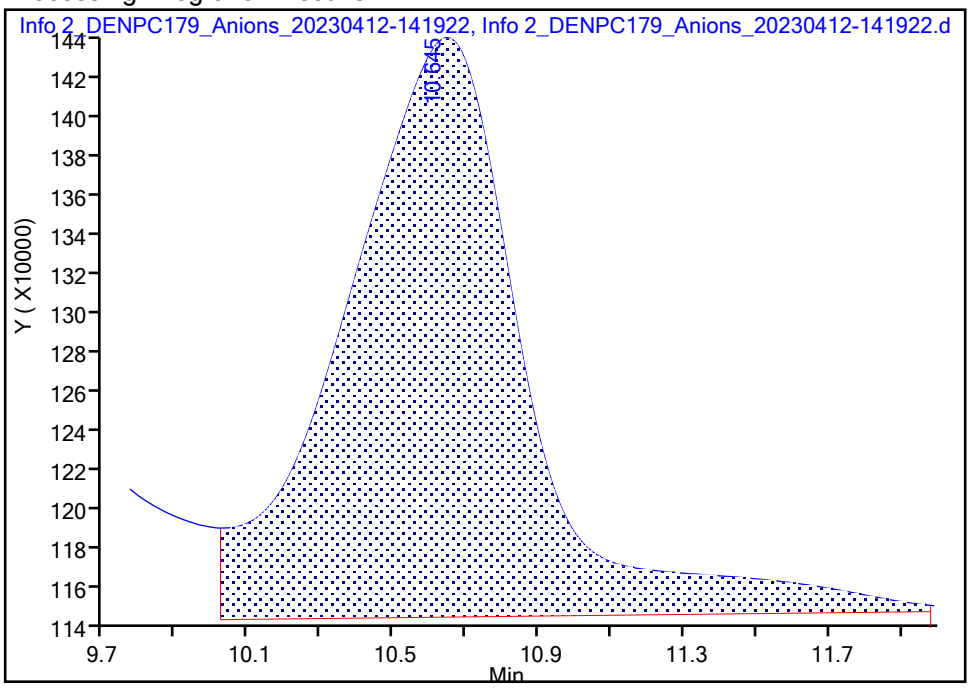
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14
Injection Date: 12-Apr-2023 14:04:00 Instrument ID: WC_IonChrom10
Lims ID: STD L1
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

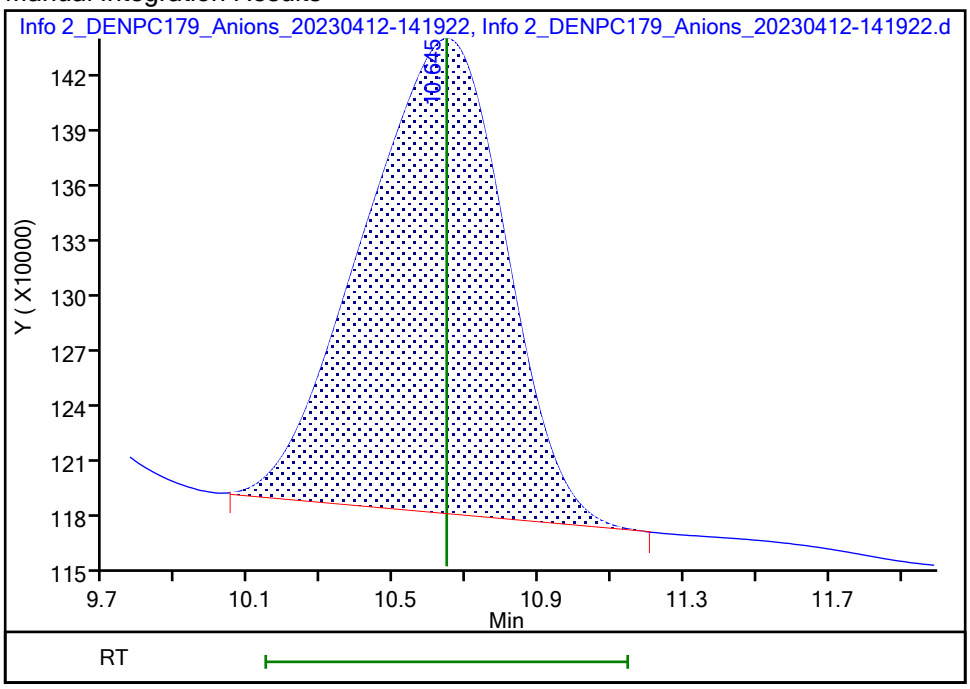
Processing Integration Results

RT: 10.65
Area: 10125141
Amount: 0.498424
Amount Units: ug/ml



Manual Integration Results

RT: 10.65
Area: 7022789
Amount: 0.601802
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:40:28
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Apr-2023 14:19:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-002
Misc. Info.: 280-0120345-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:50 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:41:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.163	3.163	0.000	6262507	0.2000	0.2038	Ma
2 Chloride	4.380	4.380	0.000	20679388	1.25	1.21	M
3 Nitrite as N	5.115	5.115	0.000	8087413	NC	NC	M
4 Bromide	6.352	6.352	0.000	2964734	0.2000	0.2942	
5 Nitrate as N	7.383	7.383	0.000	8434441	NC	NC	a
6 Orthophosphate as P	9.813	9.813	0.000	13953811	NC	NC	M
7 Sulfate	11.045	11.045	0.000	14421328	1.25	1.14	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

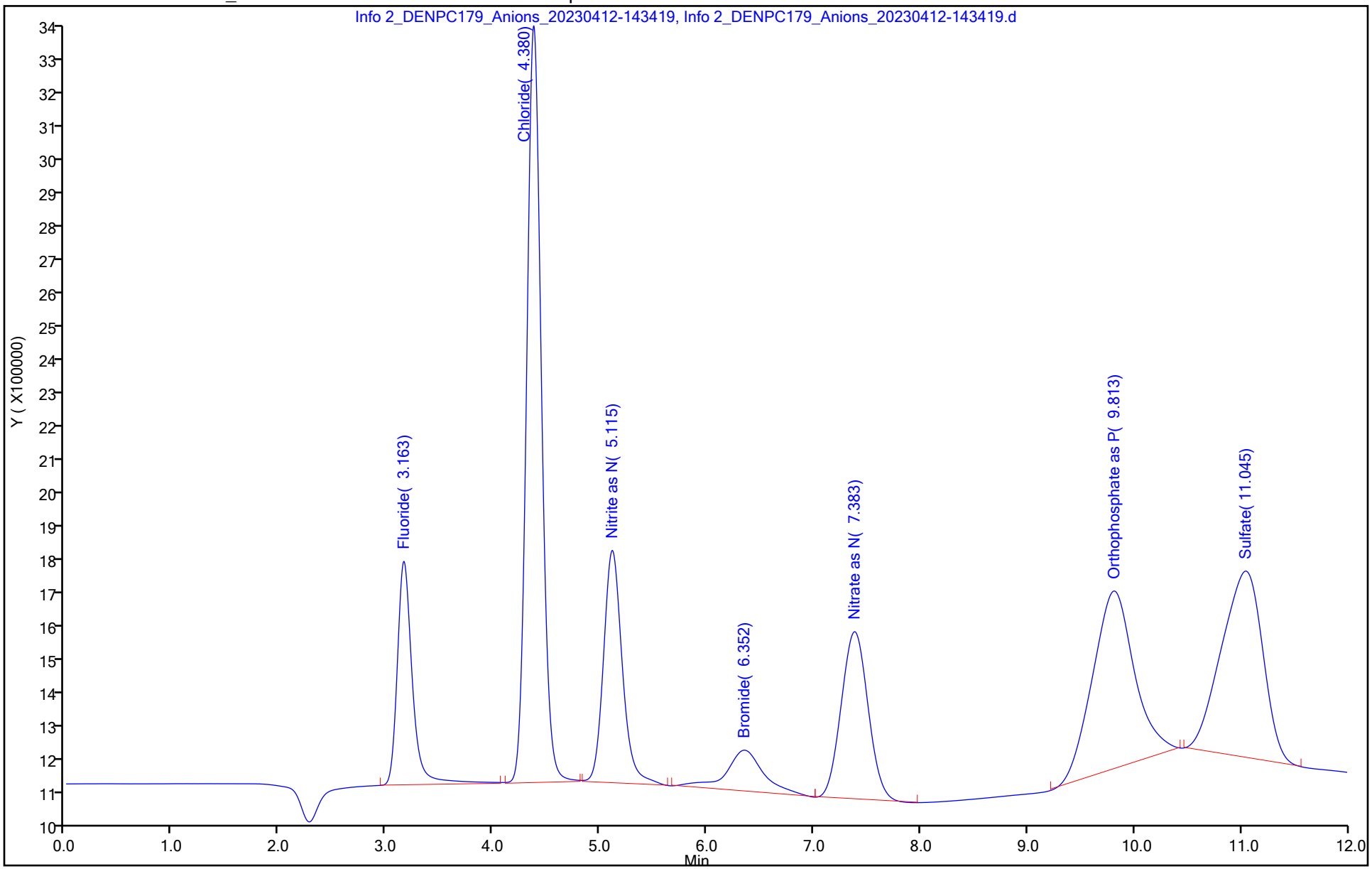
Reagents:

IC CAL cl/so4_00475 Amount Added: 0.10 Units: mL
IC Cal low_00703 Amount Added: 0.08 Units: mL

Report Date: 14-Apr-2023 14:03:51 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143419.d				
Injection Date:	12-Apr-2023 14:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

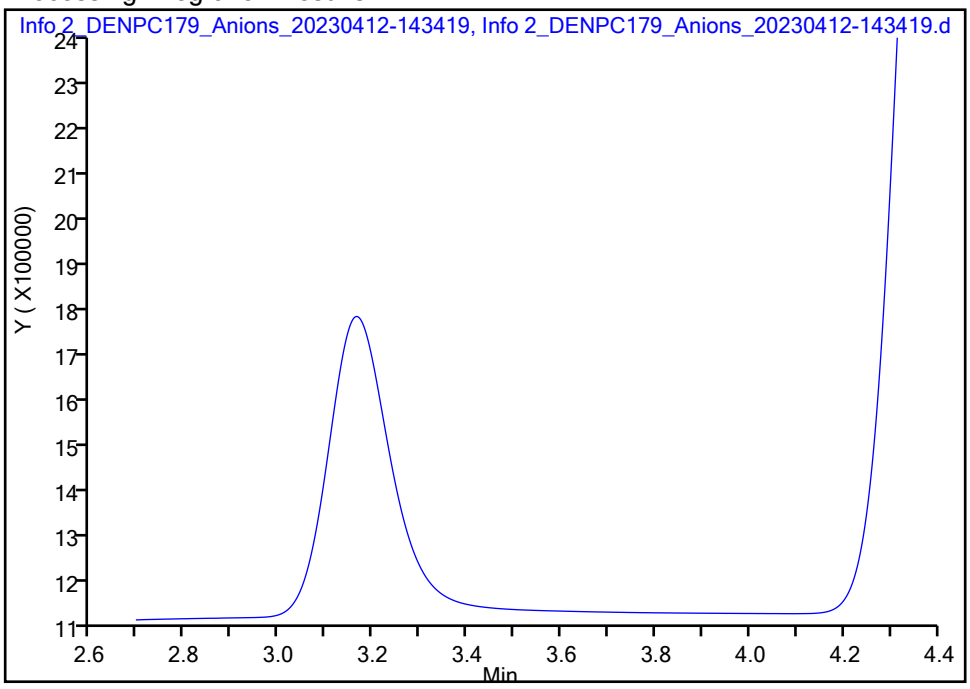
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143				
Injection Date:	12-Apr-2023 14:19:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L2				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

1 Fluoride, CAS: 16984-48-8

Signal: 1

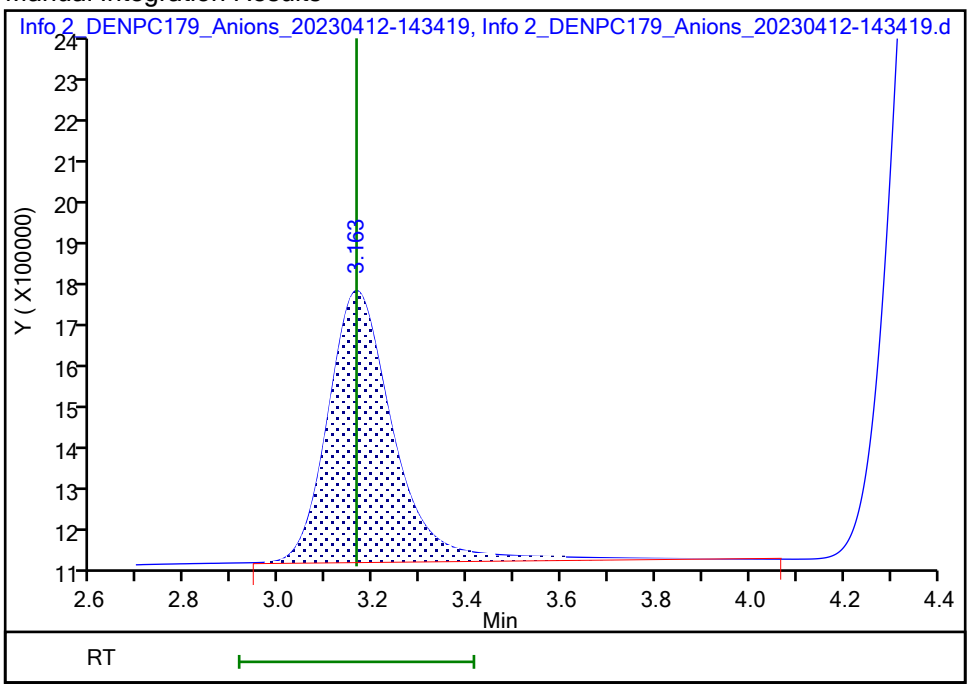
Not Detected
Expected RT: 3.16

Processing Integration Results



Manual Integration Results

RT: 3.16
Area: 6262507
Amount: 0.203766
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:29
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

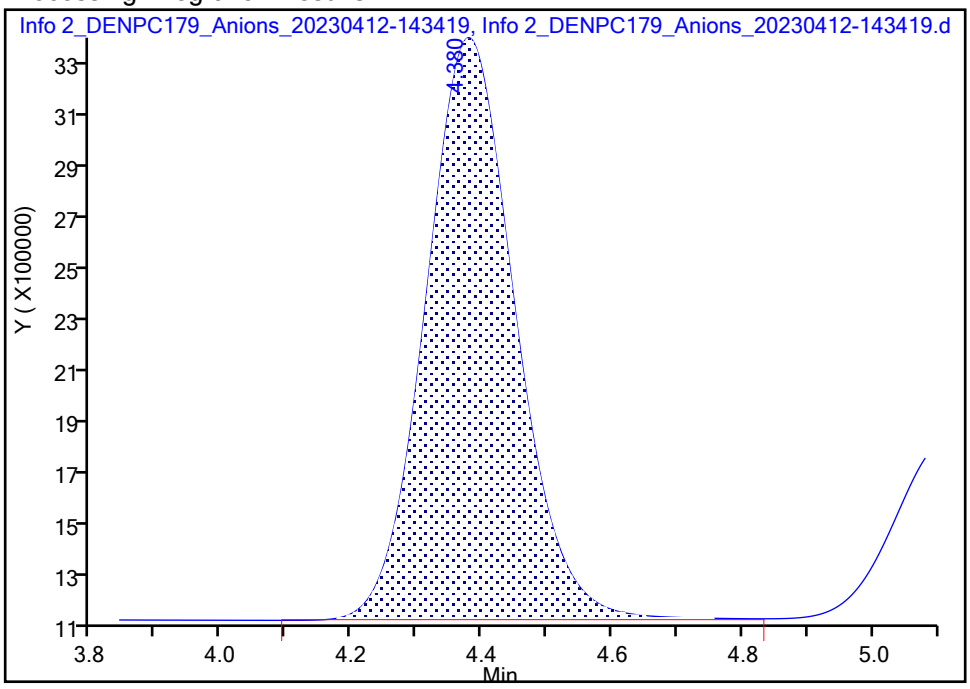
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

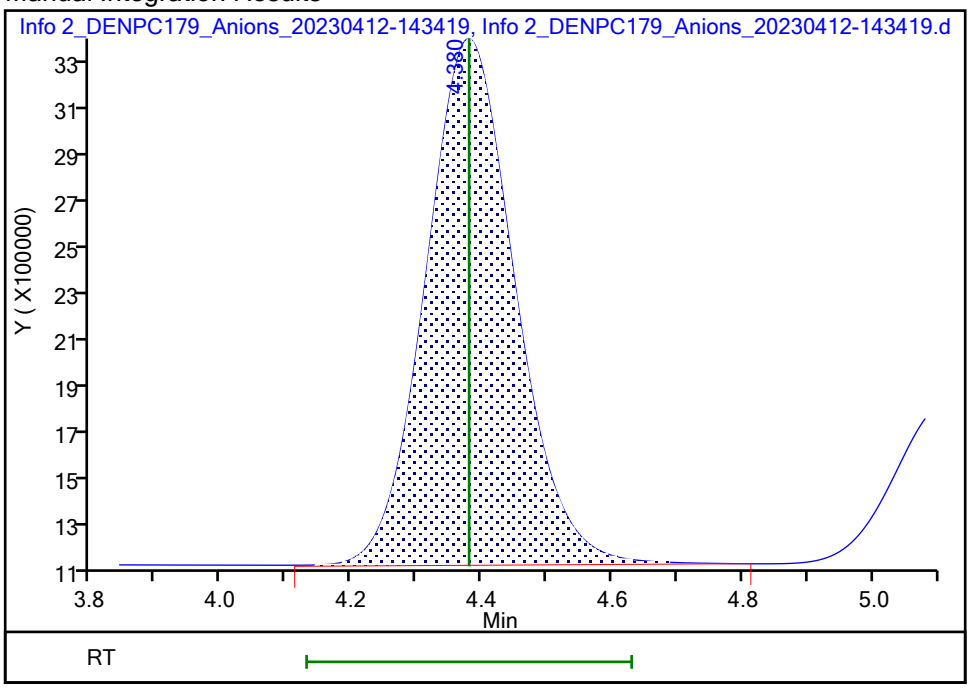
Processing Integration Results

RT: 4.38
Area: 20754406
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 20679388
Amount: 1.214764
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:02

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-143

Injection Date: 12-Apr-2023 14:19:00 Instrument ID: WC_IonChrom10

Lims ID: STD L2

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

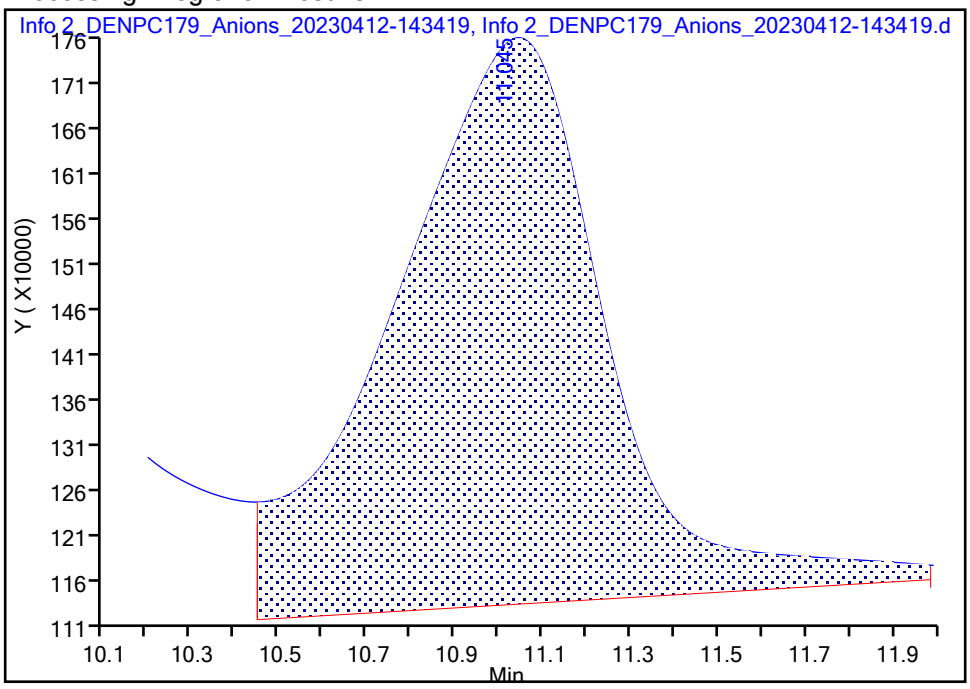
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

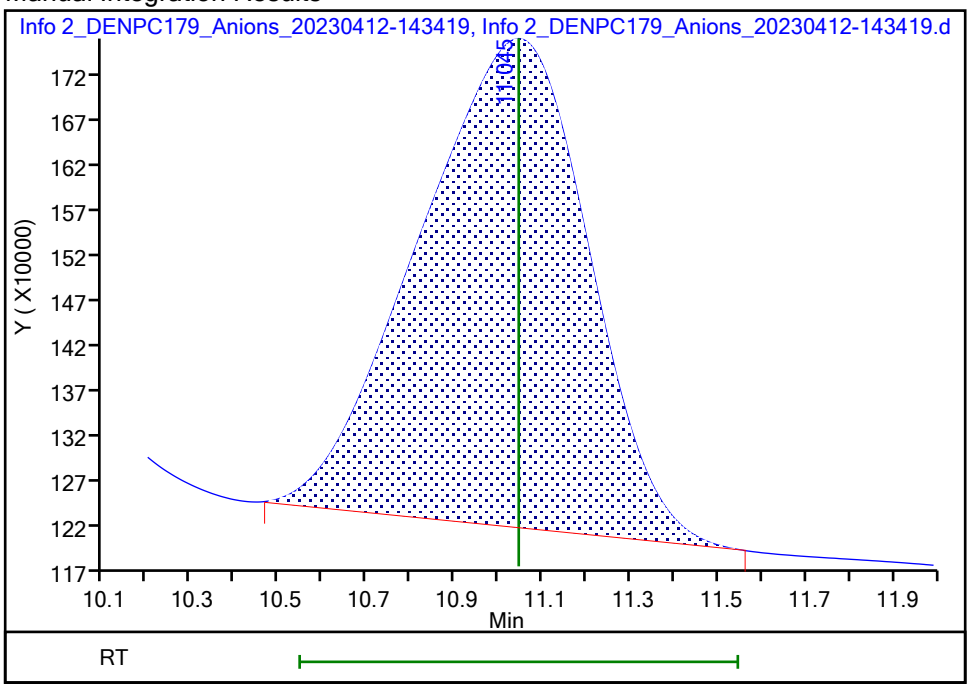
Processing Integration Results

RT: 11.05
Area: 21000030
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 11.05
Area: 14421328
Amount: 1.137806
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:15

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Apr-2023 14:34:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-003
Misc. Info.: 280-0120345-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:53 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:42:15

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.168	3.168	0.000	16995372	0.5000	0.4813	Ma
2 Chloride	4.383	4.383	0.000	43975181	2.50	2.43	M
3 Nitrite as N	5.118	5.118	0.000	21615246	NC	NC	M
4 Bromide	6.317	6.317	0.000	3222251	0.5000	0.3320	M
5 Nitrate as N	7.123	7.123	0.000	19909305	NC	NC	M
6 Orthophosphate as P	9.405	9.405	0.000	23629516	NC	NC	M
7 Sulfate	10.647	10.647	0.000	29311364	2.50	2.22	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

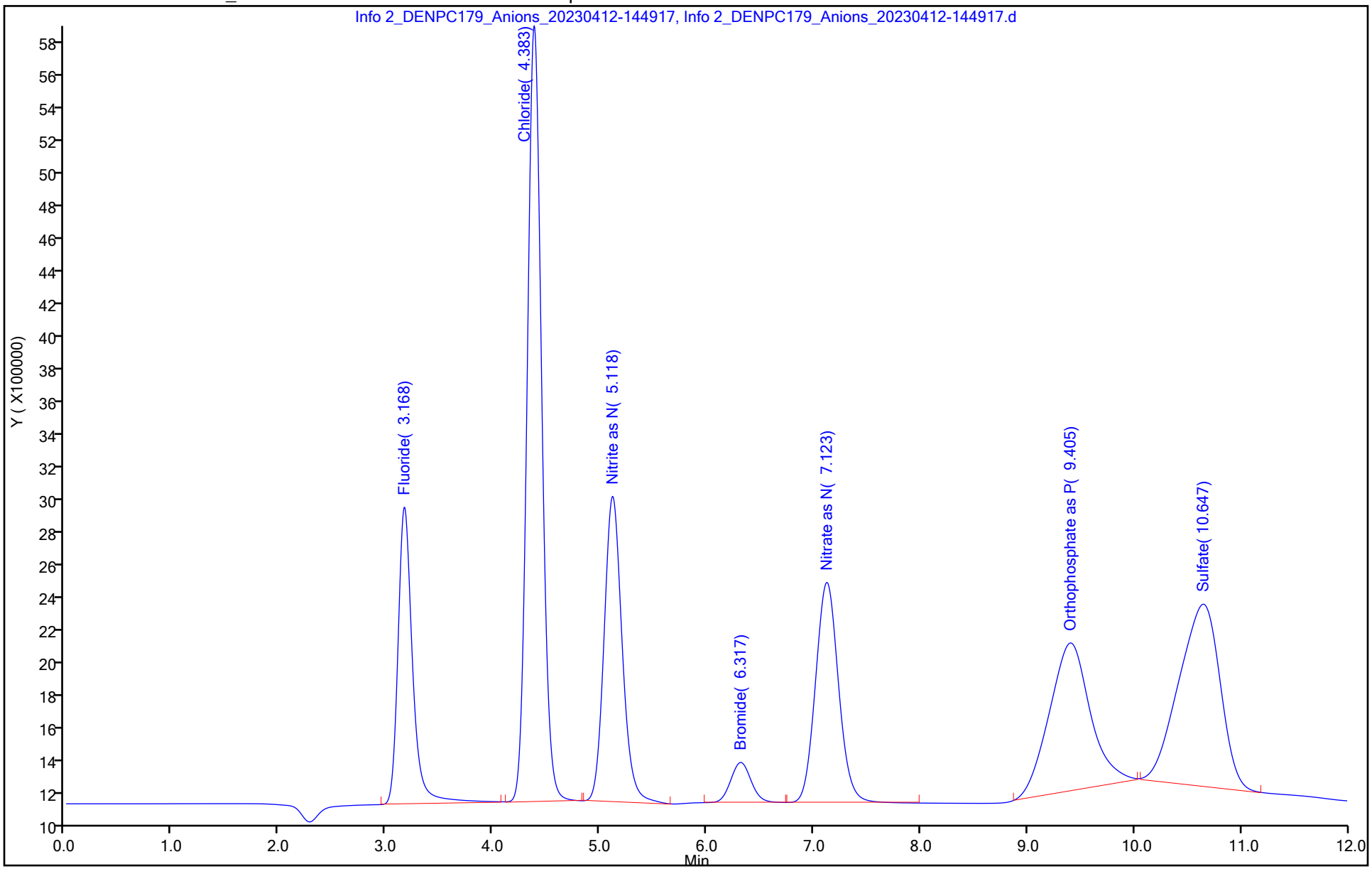
IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL
IC Cal low_00703 Amount Added: 0.20 Units: mL

Report Date: 14-Apr-2023 14:03:54 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144917.d

Injection Date:	12-Apr-2023 14:34:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

Column: Detector Info 2_091554_1

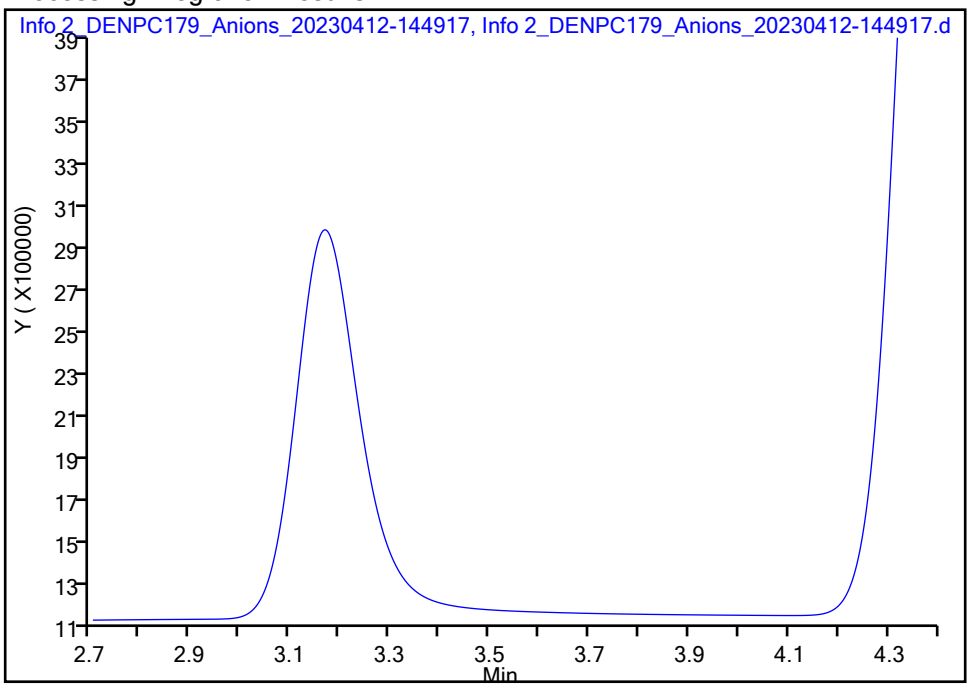
1 Fluoride, CAS: 16984-48-8

Signal: 1

Not Detected

Expected RT: 3.17

Processing Integration Results



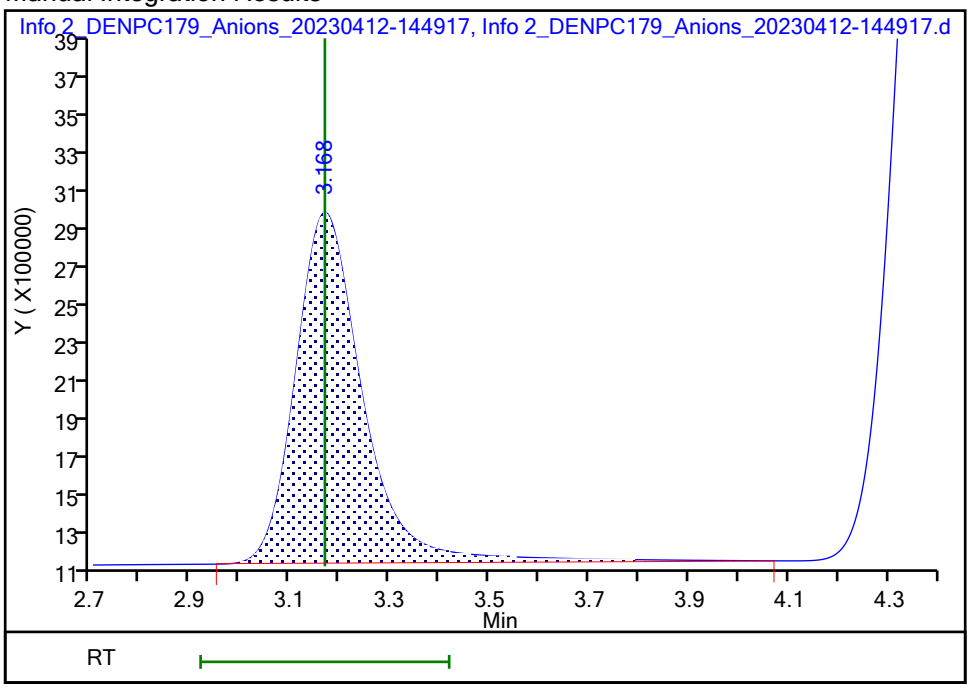
Manual Integration Results

RT: 3.17

Area: 16995372

Amount: 0.481313

Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:12

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

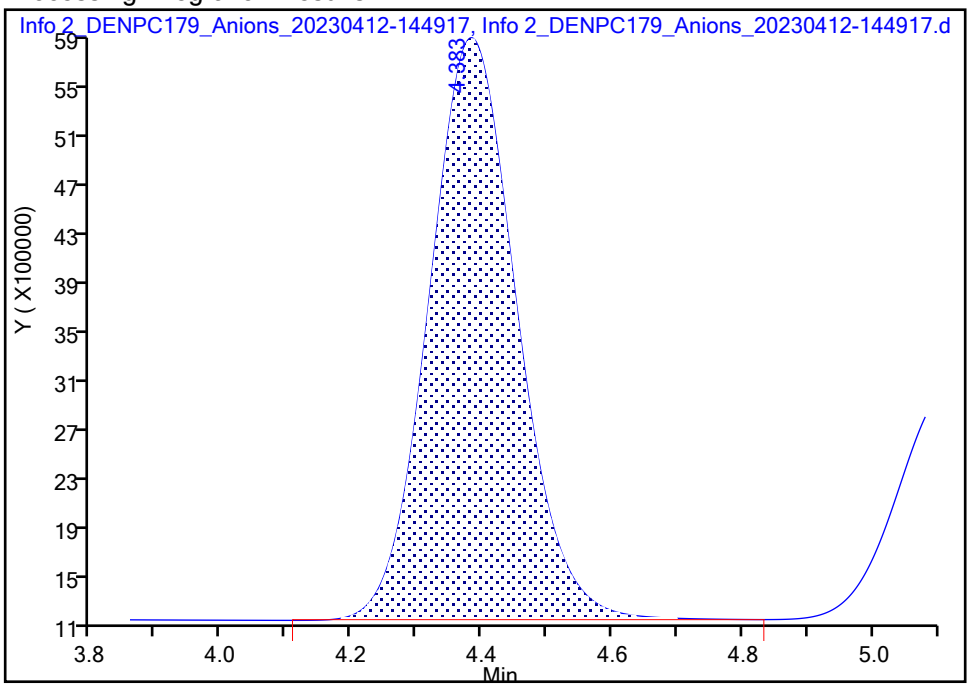
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

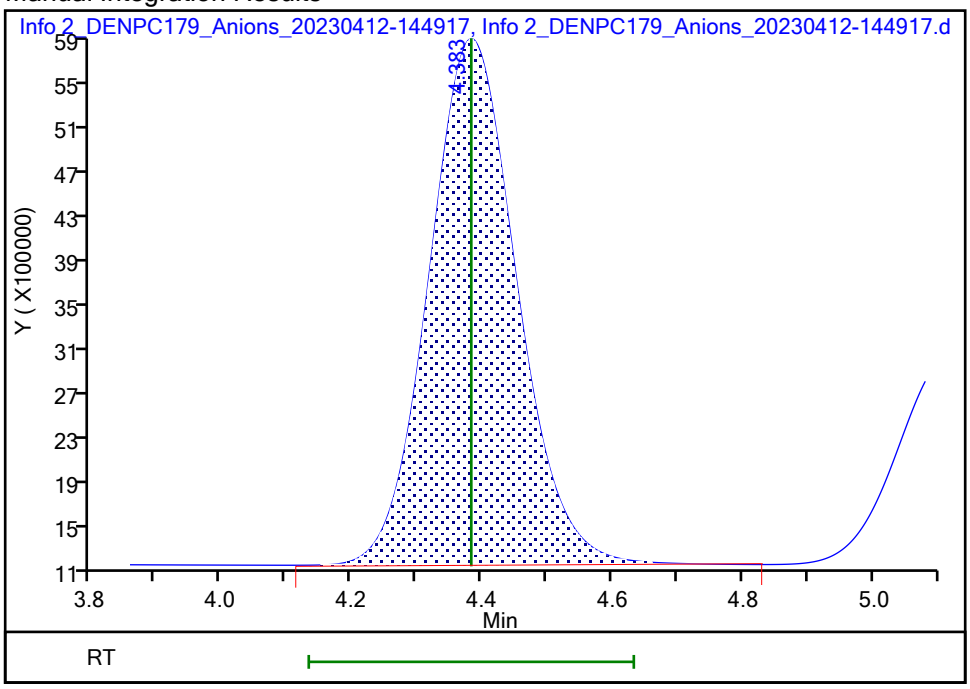
Processing Integration Results

RT: 4.38
Area: 44047360
Amount: 2.430258
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 43975181
Amount: 2.428716
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:50

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

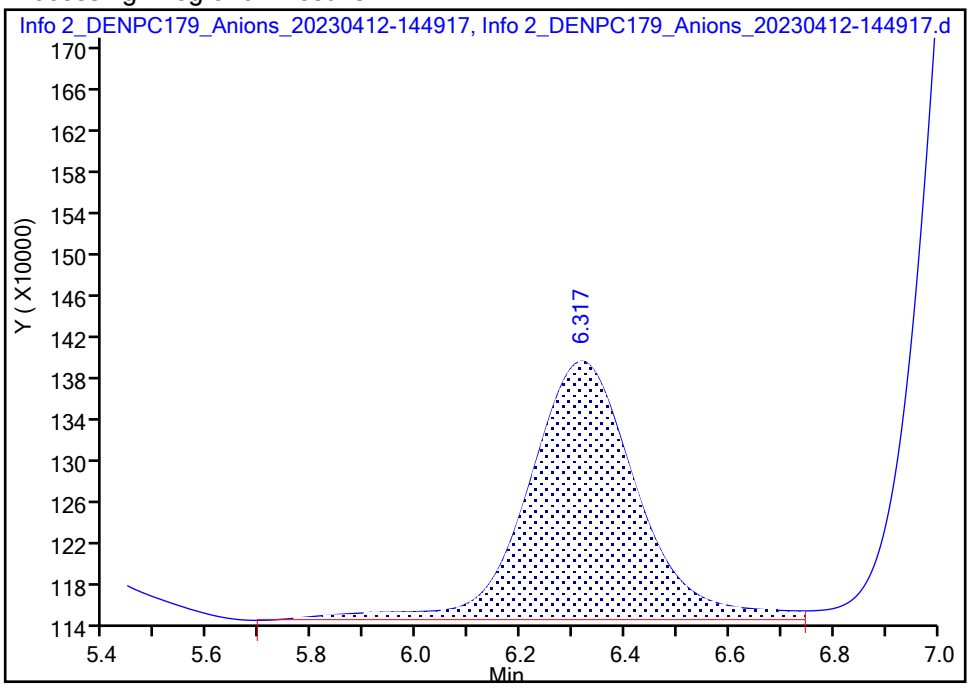
Column: Detector Info 2_091554_1

4 Bromide, CAS: 24959-67-9

Signal: 1

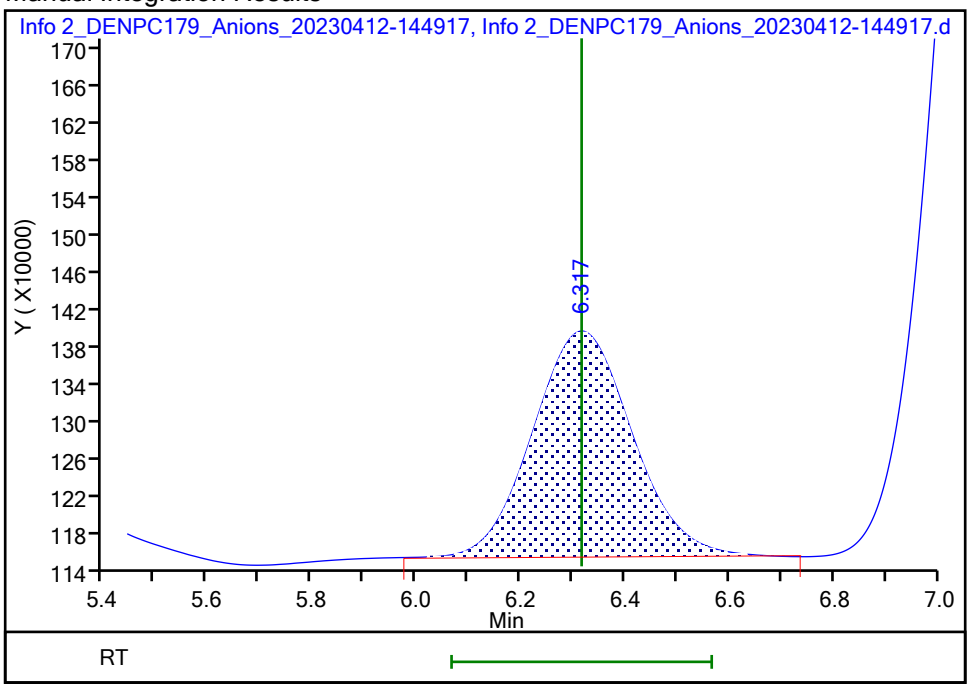
Processing Integration Results

RT: 6.32
Area: 3677937
Amount: 0.379796
Amount Units: ug/ml



Manual Integration Results

RT: 6.32
Area: 3222251
Amount: 0.331977
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:41:59

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-144

Injection Date: 12-Apr-2023 14:34:00 Instrument ID: WC_IonChrom10

Lims ID: STD L3

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

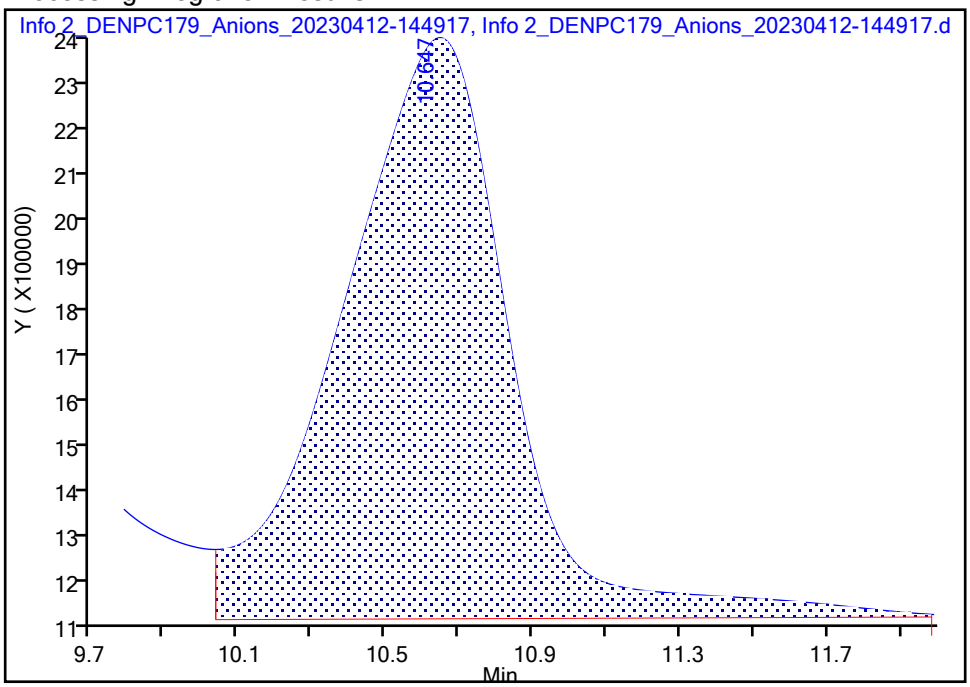
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

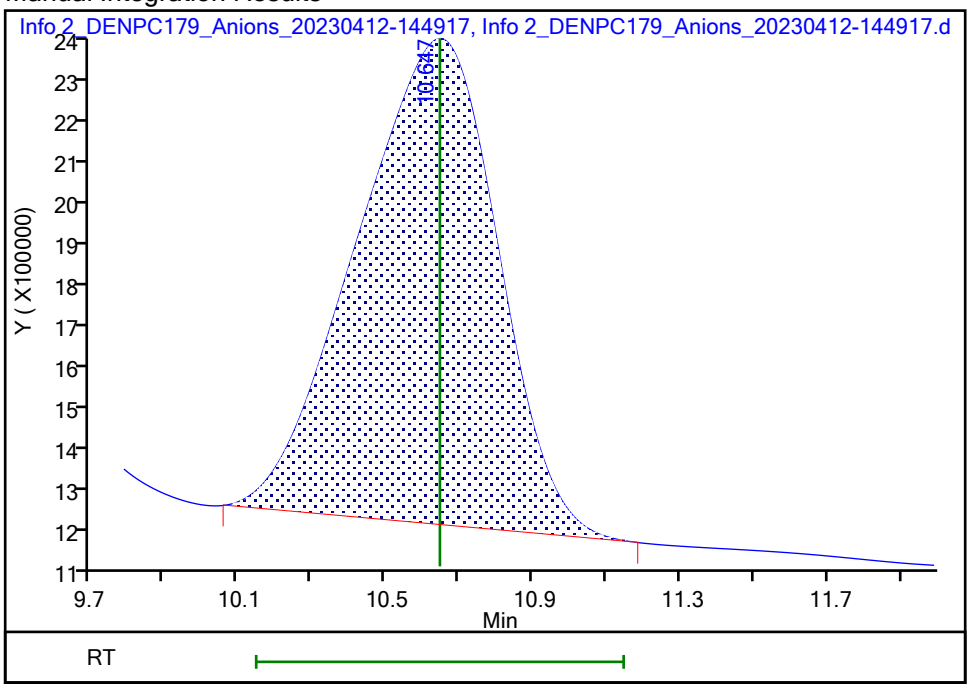
RT: 10.65
Area: 37890185
Amount: 2.712749
Amount Units: ug/ml

Processing Integration Results



RT: 10.65
Area: 29311364
Amount: 2.216549
Amount Units: ug/ml

Manual Integration Results



Reviewer: LVW8, 12-Apr-2023 15:42:07

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Apr-2023 14:49:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-004
Misc. Info.: 280-0120345-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:55 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:42:52

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.168	3.168	0.000	37412858	1.00	1.01	Ma
2 Chloride	4.390	4.390	0.000	575824993	30.0	30.1	M
3 Nitrite as N	5.113	5.113	0.000	44844044	NC	NC	M
4 Bromide	6.308	6.308	0.000	6583592	1.00	0.8250	M
5 Nitrate as N	7.103	7.103	0.000	42066844	NC	NC	M
6 Orthophosphate as P	9.388	9.388	0.000	34760084	NC	NC	M
7 Sulfate	10.628	10.628	0.000	410479688	30.0	29.8	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

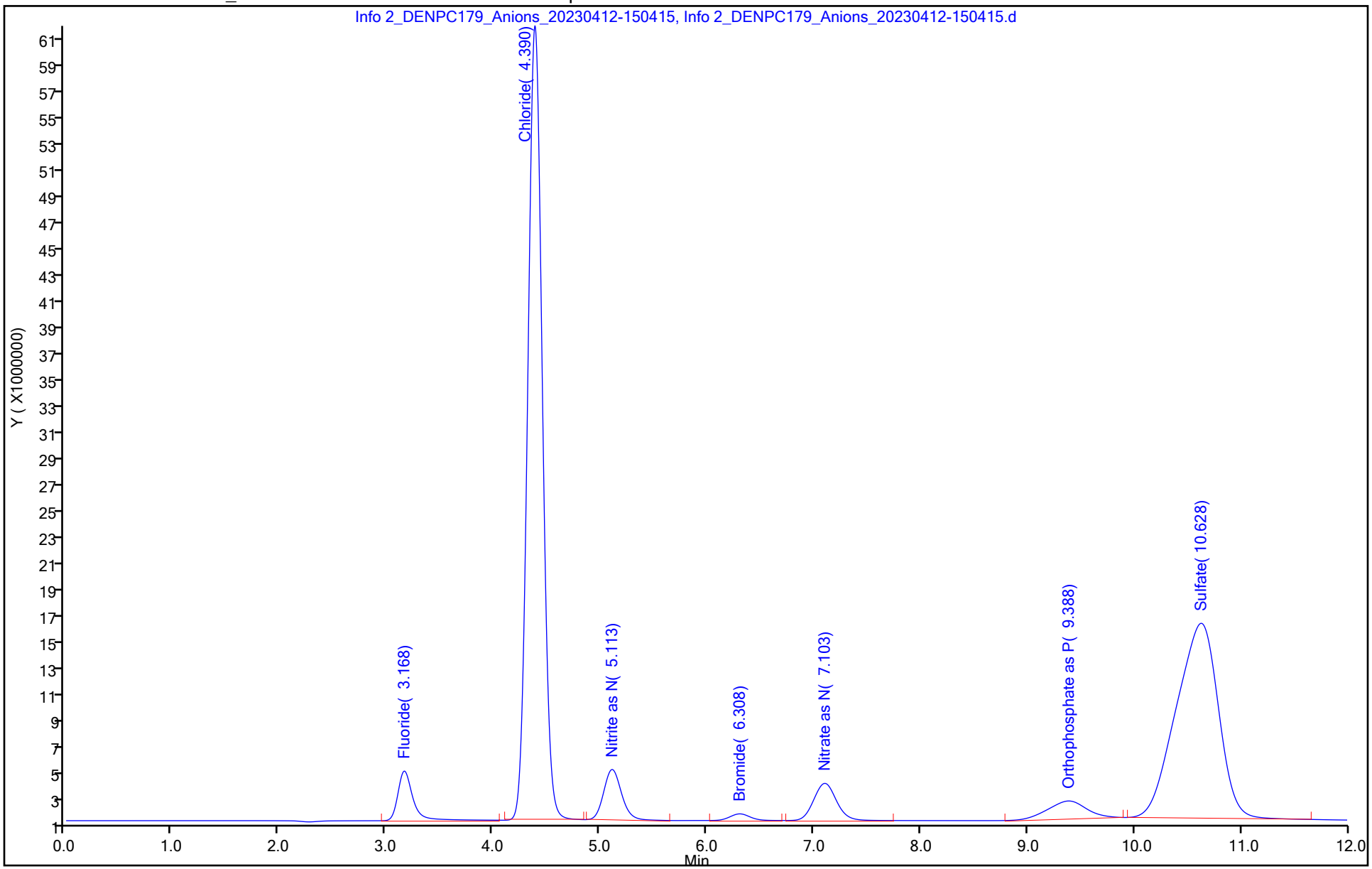
Reagents:

IC CAL cl/so4_00475 Amount Added: 2.40 Units: mL
IC Cal low_00703 Amount Added: 0.40 Units: mL

Report Date: 14-Apr-2023 14:03:55 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150415.d				
Injection Date:	12-Apr-2023 14:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

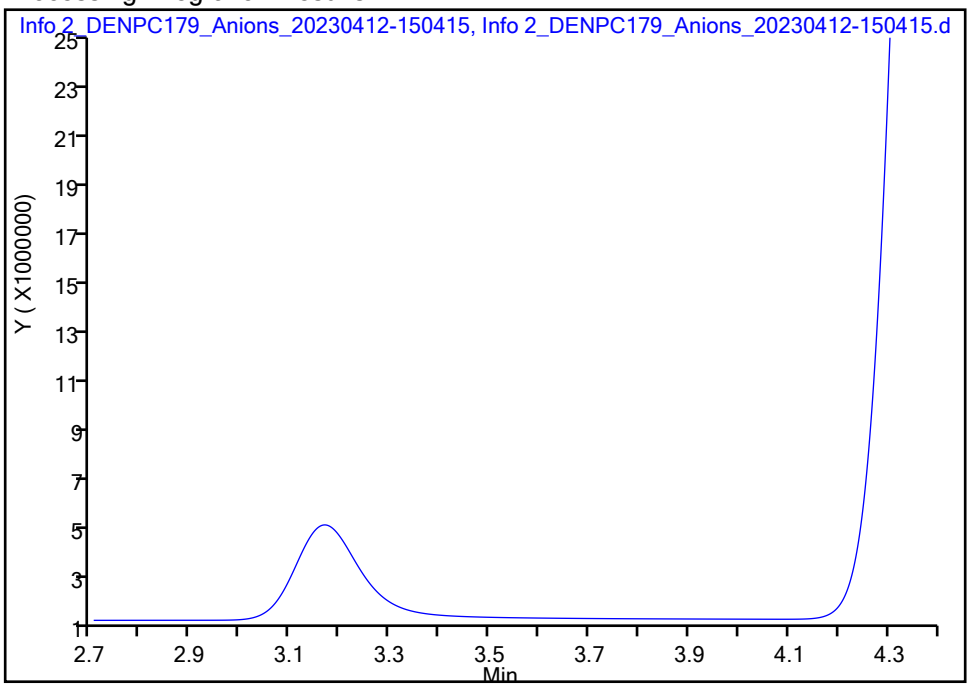
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150				
Injection Date:	12-Apr-2023 14:49:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L4				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

1 Fluoride, CAS: 16984-48-8

Signal: 1

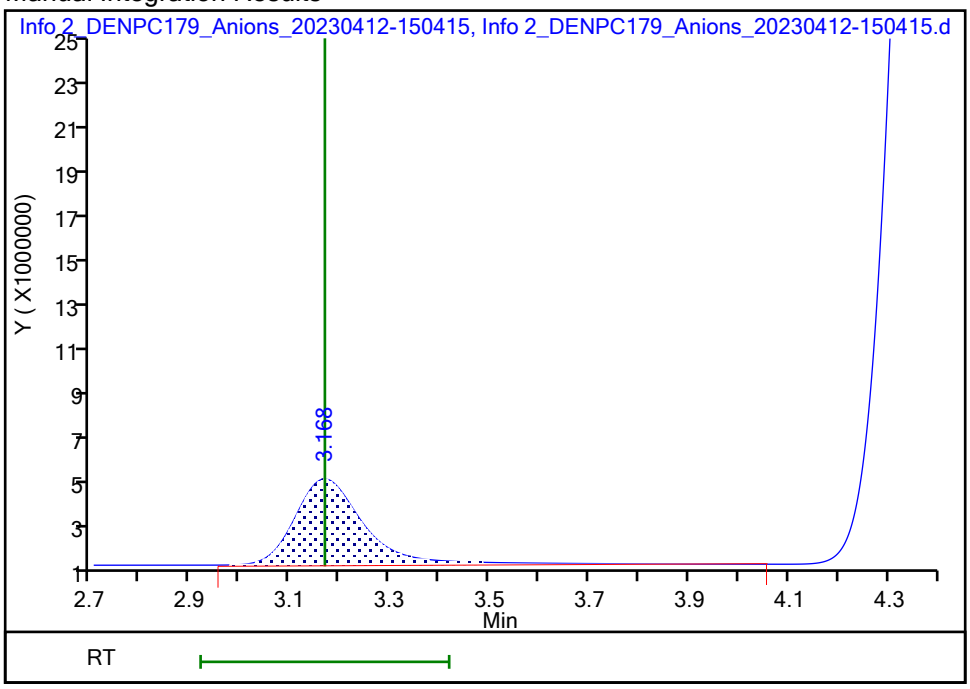
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.17
Area: 37412858
Amount: 1.009300
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:48
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

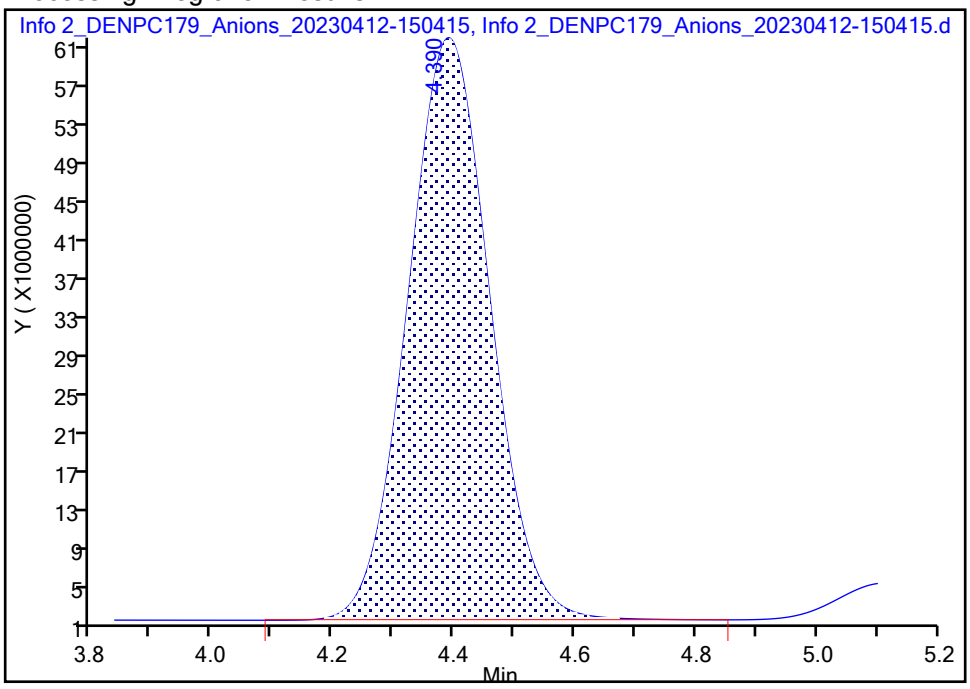
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150				
Injection Date:	12-Apr-2023 14:49:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L4				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

2 Chloride, CAS: 16887-00-6

Signal: 1

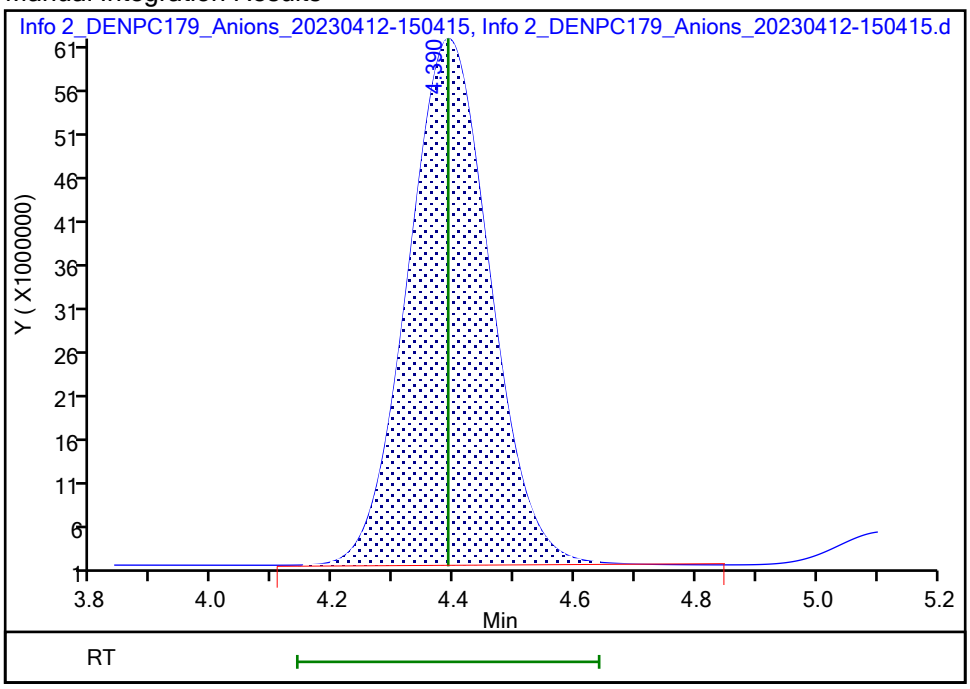
Processing Integration Results

RT: 4.39
Area: 577275465
Amount: 30.190881
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 575824993
Amount: 30.143601
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:25
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

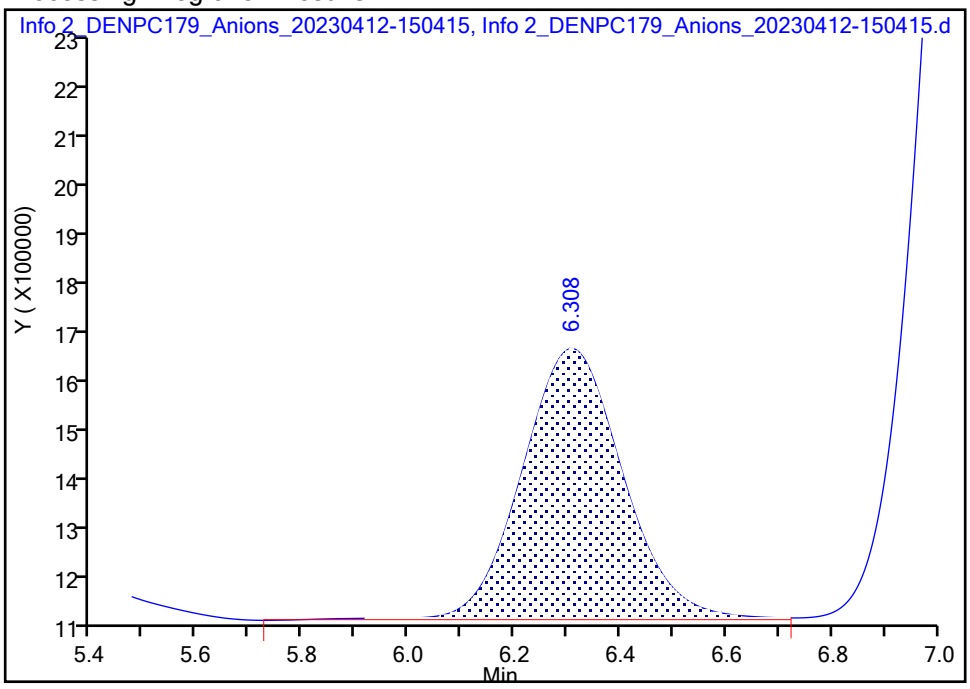
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

4 Bromide, CAS: 24959-67-9

Signal: 1

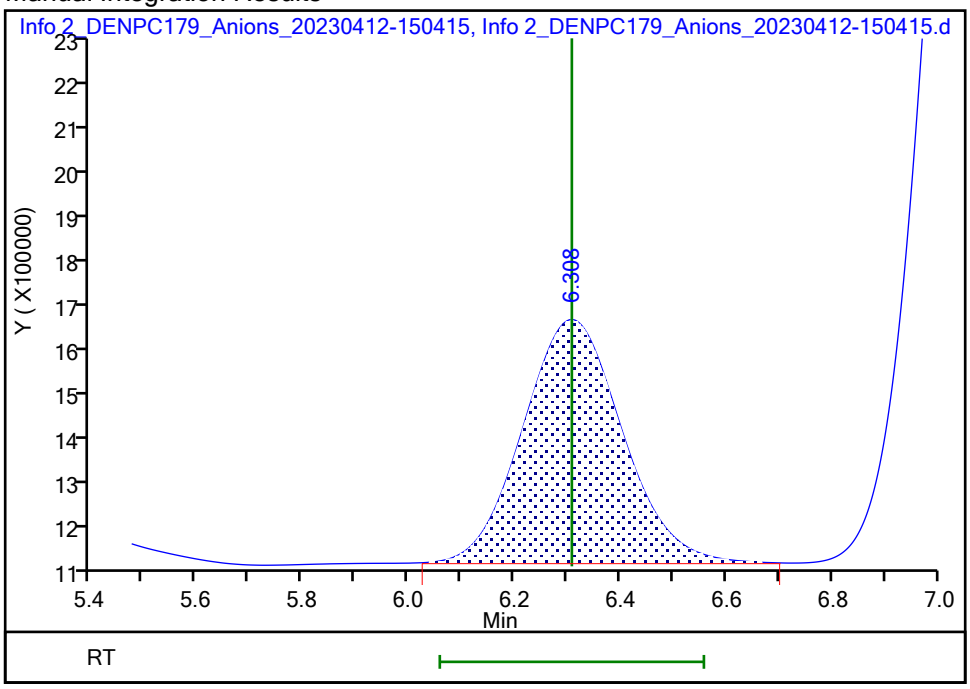
Processing Integration Results

RT: 6.31
Area: 6790567
Amount: 0.851251
Amount Units: ug/ml



Manual Integration Results

RT: 6.31
Area: 6583592
Amount: 0.824970
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:31
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

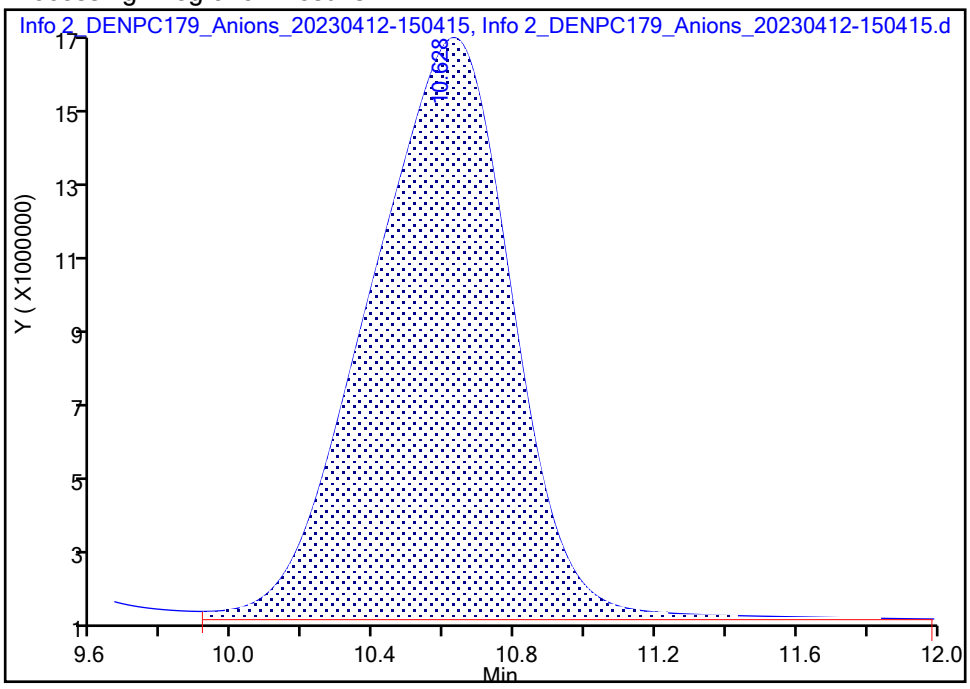
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-150
Injection Date: 12-Apr-2023 14:49:00 Instrument ID: WC_IonChrom10
Lims ID: STD L4
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

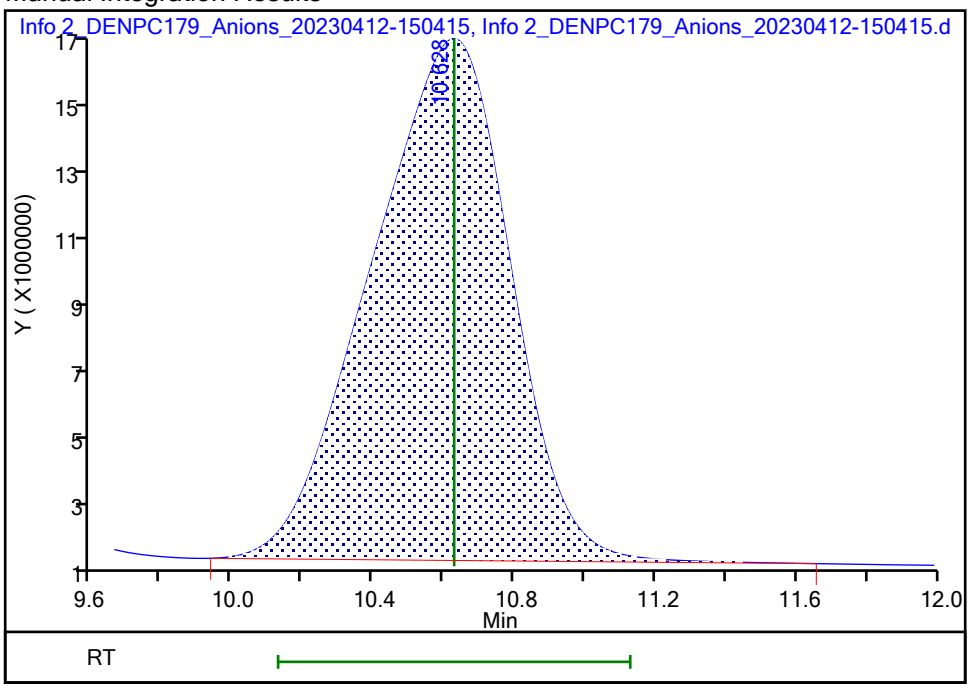
Processing Integration Results

RT: 10.63
Area: 426510642
Amount: 30.246646
Amount Units: ug/ml



Manual Integration Results

RT: 10.63
Area: 410479688
Amount: 29.831152
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:42:42
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Report Date: 14-Apr-2023 14:03:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 12-Apr-2023 15:04:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-005
Misc. Info.: 280-0120345-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:03:57 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 15:43:24

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.170	3.170	0.000	96629288	2.50	2.54	Ma
2 Chloride	4.405	4.405	0.000	1149686166	60.0	60.0	M
3 Nitrite as N	5.107	5.107	0.000	116231748	NC	NC	M
4 Bromide	6.298	6.298	0.000	17672625	2.50	2.45	
5 Nitrate as N	7.078	7.078	0.000	112738215	NC	NC	M
6 Orthophosphate as P	9.368	9.368	0.000	65067694	NC	NC	M
7 Sulfate	10.610	10.610	0.000	828007497	60.0	60.1	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

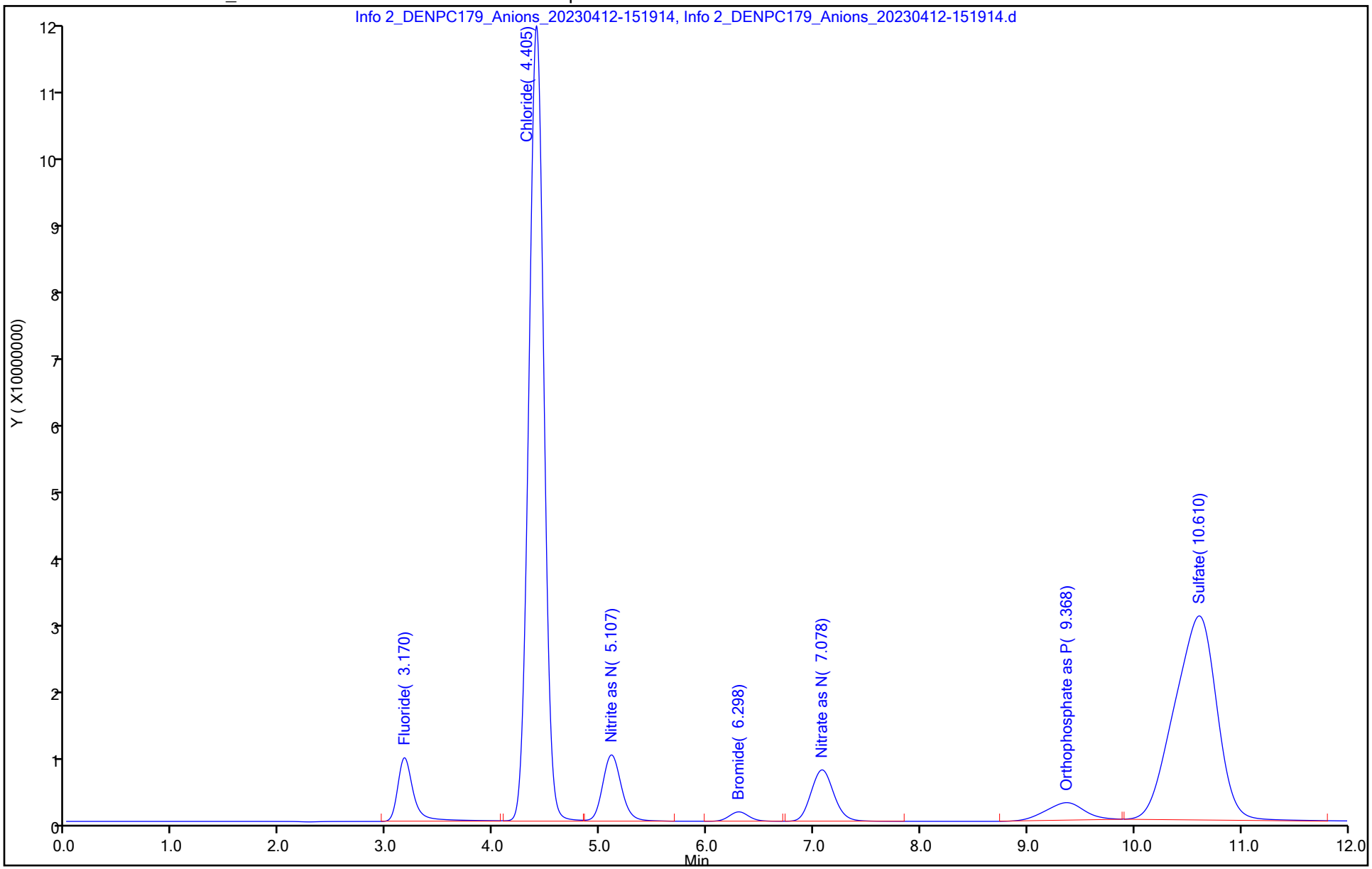
Reagents:

IC CAL cl/so4_00475 Amount Added: 4.80 Units: mL
IC Cal low_00703 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2023 14:03:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151914.d				
Injection Date:	12-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

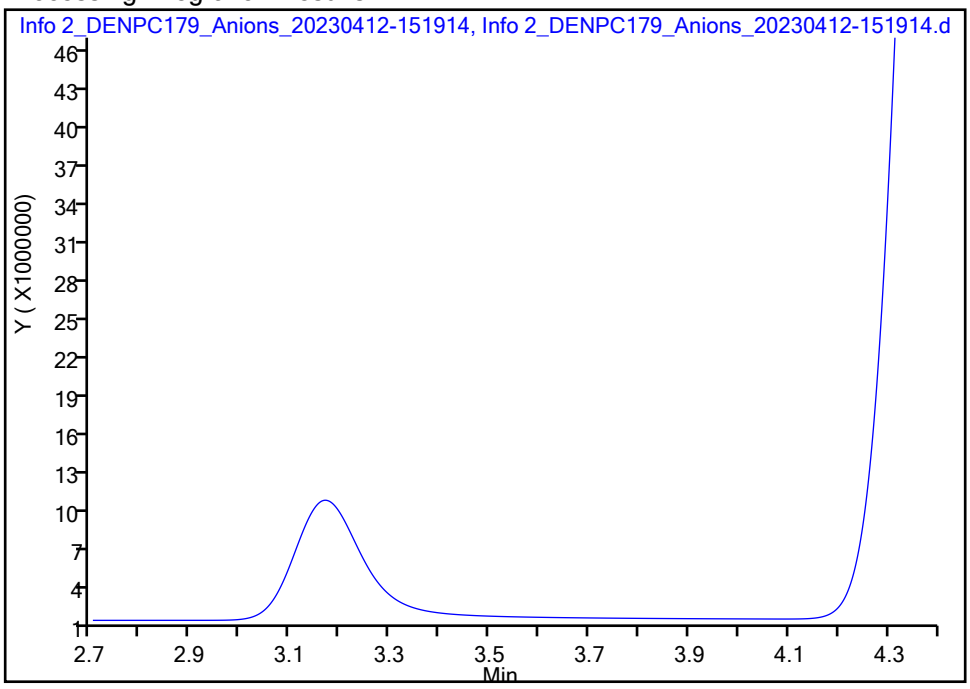
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151				
Injection Date:	12-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L5				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

1 Fluoride, CAS: 16984-48-8

Signal: 1

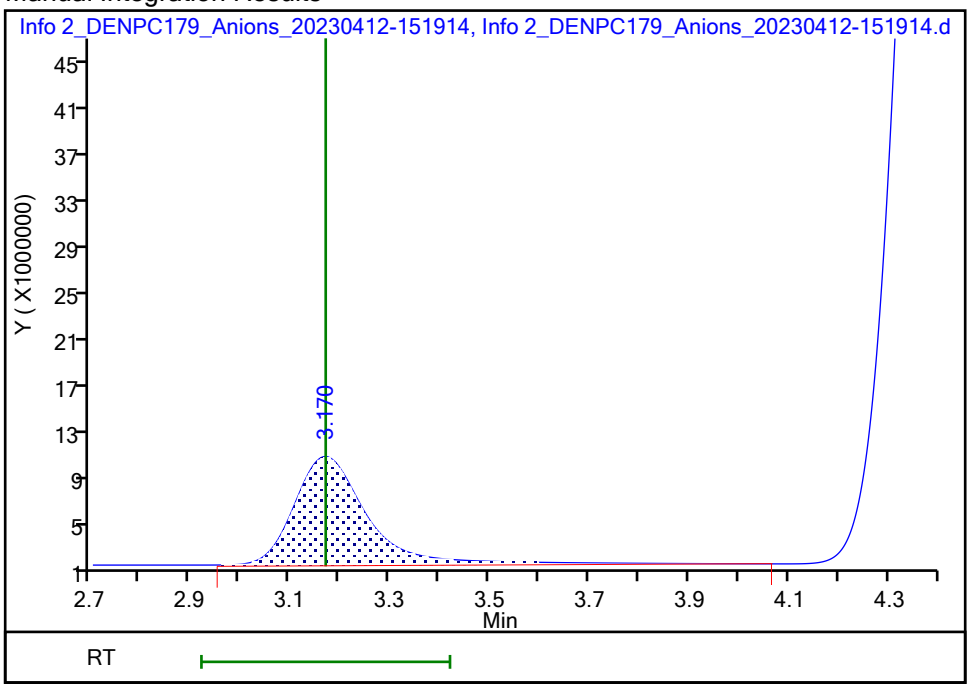
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.17
Area: 96629288
Amount: 2.540610
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:20
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151

Injection Date: 12-Apr-2023 15:04:00 Instrument ID: WC_IonChrom10

Lims ID: STD L5

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

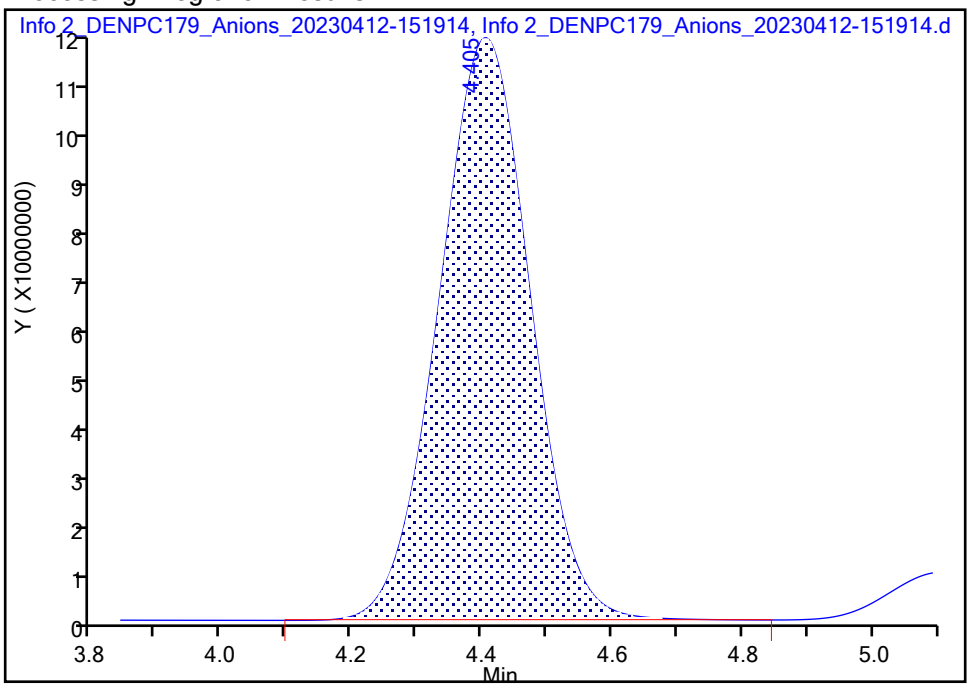
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

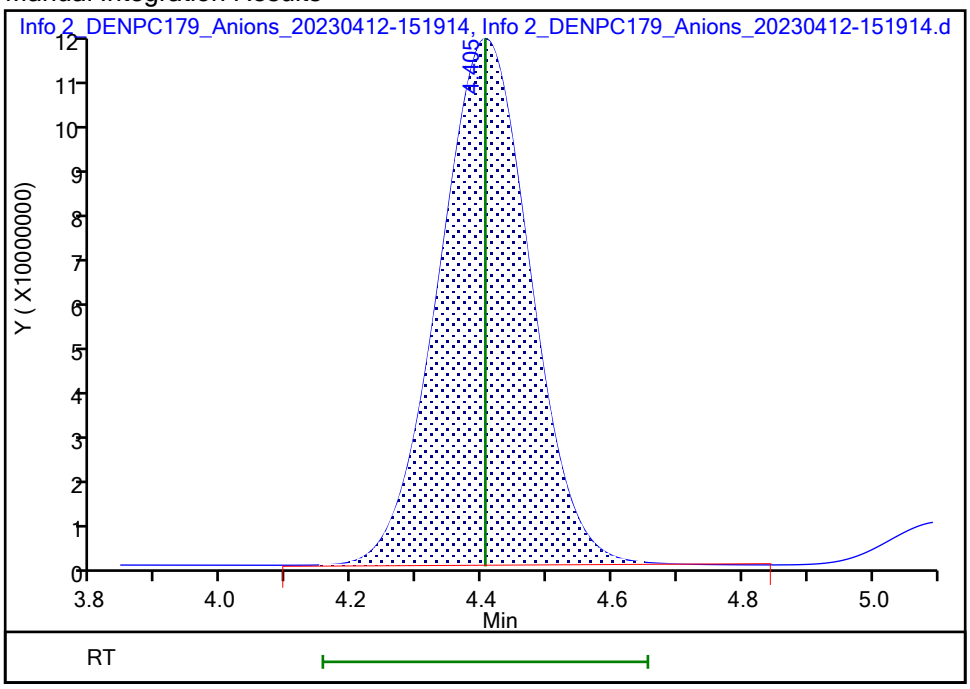
Processing Integration Results

RT: 4.41
Area: 1150534467
Amount: 60.058368
Amount Units: ug/ml



Manual Integration Results

RT: 4.41
Area: 1149686166
Amount: 60.047713
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:05

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

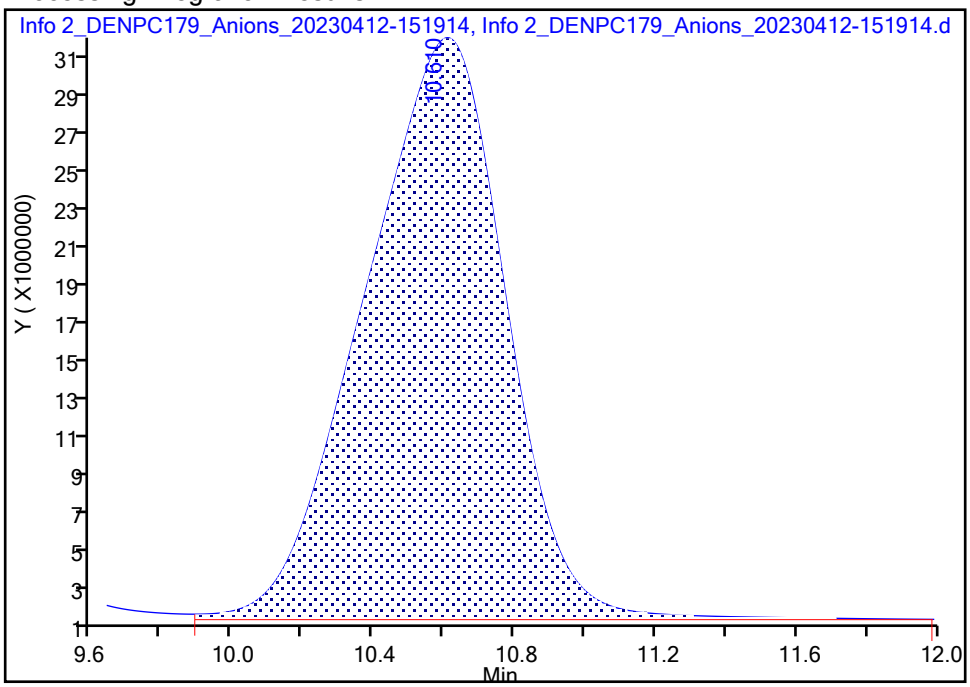
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-151				
Injection Date:	12-Apr-2023 15:04:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L5				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

7 Sulfate, CAS: 14808-79-8

Signal: 1

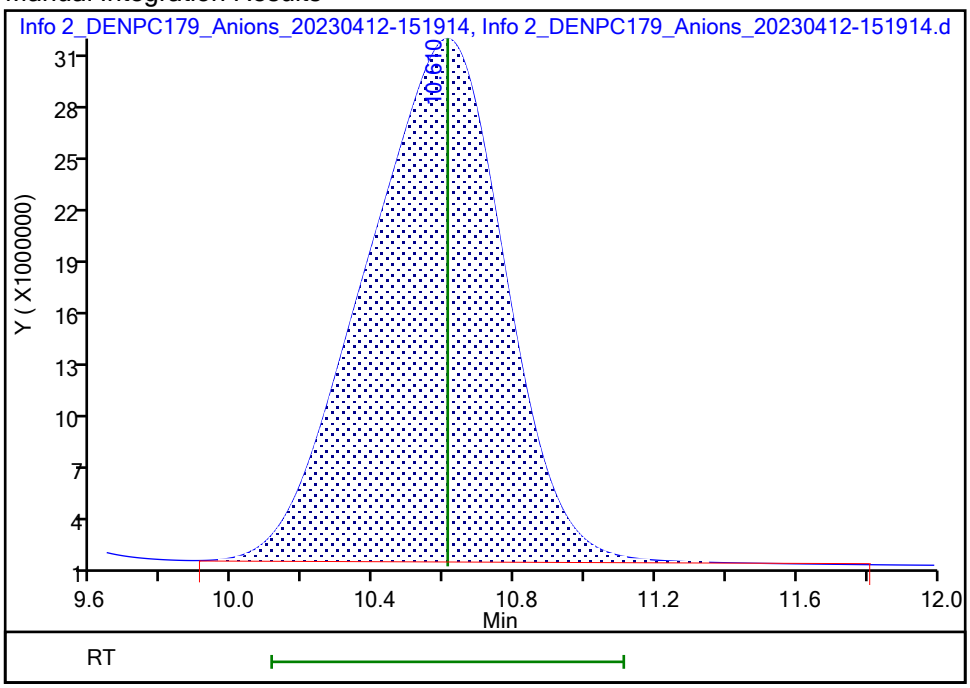
Processing Integration Results

RT: 10.61
Area: 849186271
Amount: 60.463432
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 828007497
Amount: 60.079901
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:15

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Apr-2023 15:19:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-006
Misc. Info.: 280-0120345-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:04:00 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: LVW8 Date: 12-Apr-2023 17:08:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.175	3.175	0.000	190381963	5.00	4.97	Ma
2 Chloride	4.428	4.428	0.000	1914243902	100.0	99.9	M
3 Nitrite as N	5.103	5.103	0.000	229518060	NC	NC	M
4 Bromide	6.292	6.292	0.000	37078318	5.00	5.30	
5 Nitrate as N	7.057	7.057	0.000	230663663	NC	NC	M
6 Orthophosphate as P	9.353	9.353	0.000	112155923	NC	NC	M
7 Sulfate	10.592	10.592	0.000	1384314036	100.0	100.4	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

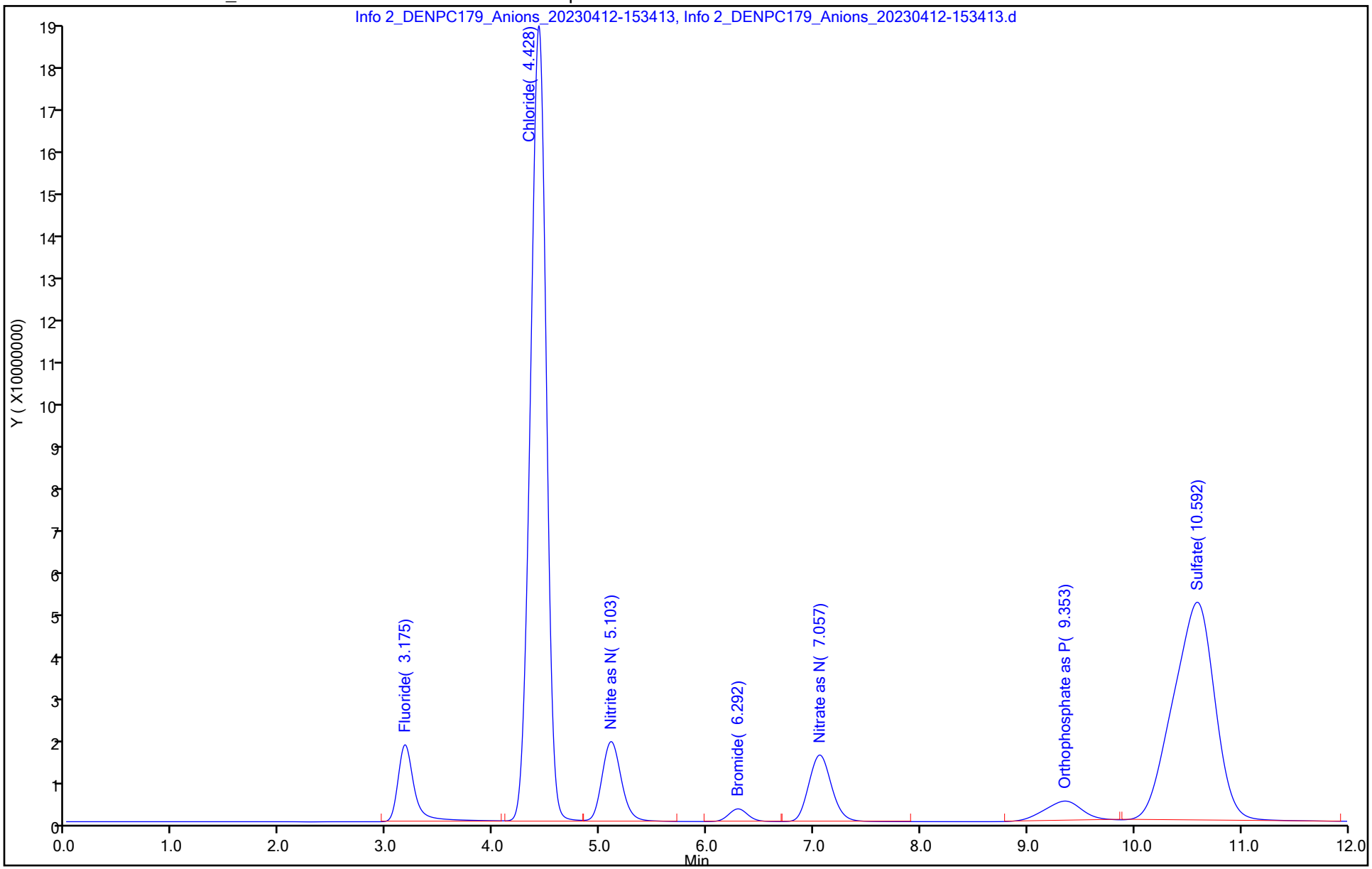
Reagents:

IC CAL cl/so4_00475 Amount Added: 8.00 Units: mL
IC Cal low_00703 Amount Added: 2.00 Units: mL

Report Date: 14-Apr-2023 14:04:01 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153413.d				
Injection Date:	12-Apr-2023 15:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

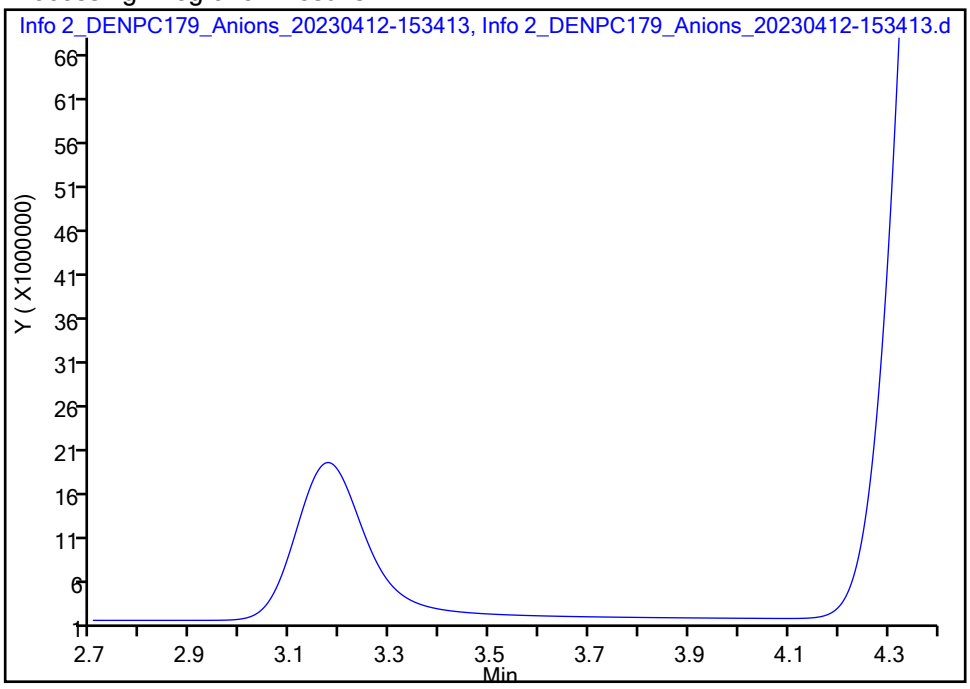
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153				
Injection Date:	12-Apr-2023 15:19:00	Instrument ID:	WC_IonChrom10		
Lims ID:	STD L6				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

1 Fluoride, CAS: 16984-48-8

Signal: 1

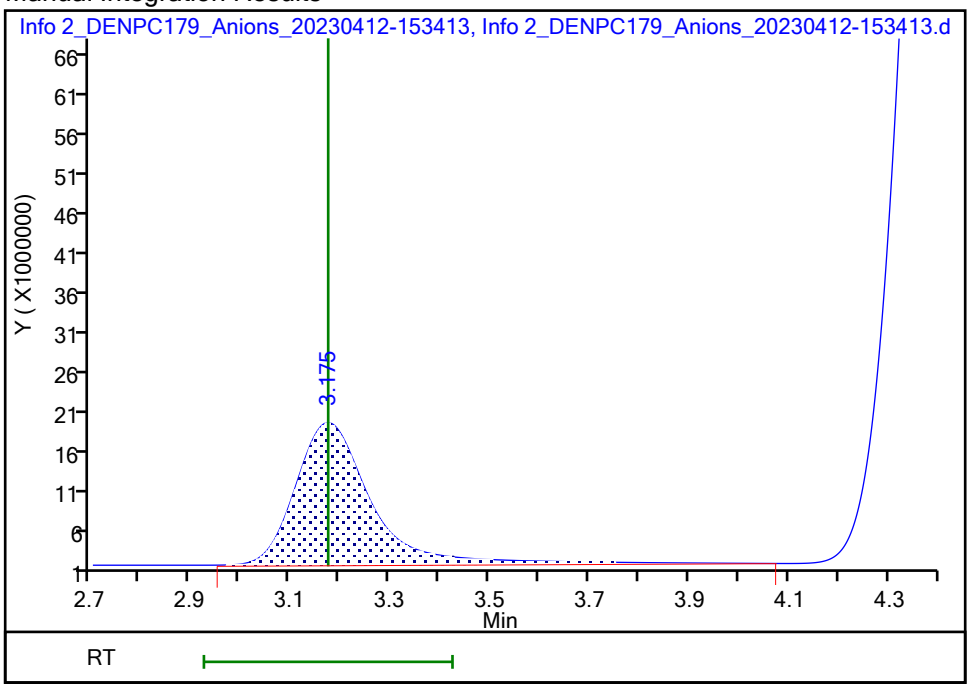
Not Detected
Expected RT: 3.18

Processing Integration Results



Manual Integration Results

RT: 3.18
Area: 190381963
Amount: 4.965012
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:58
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

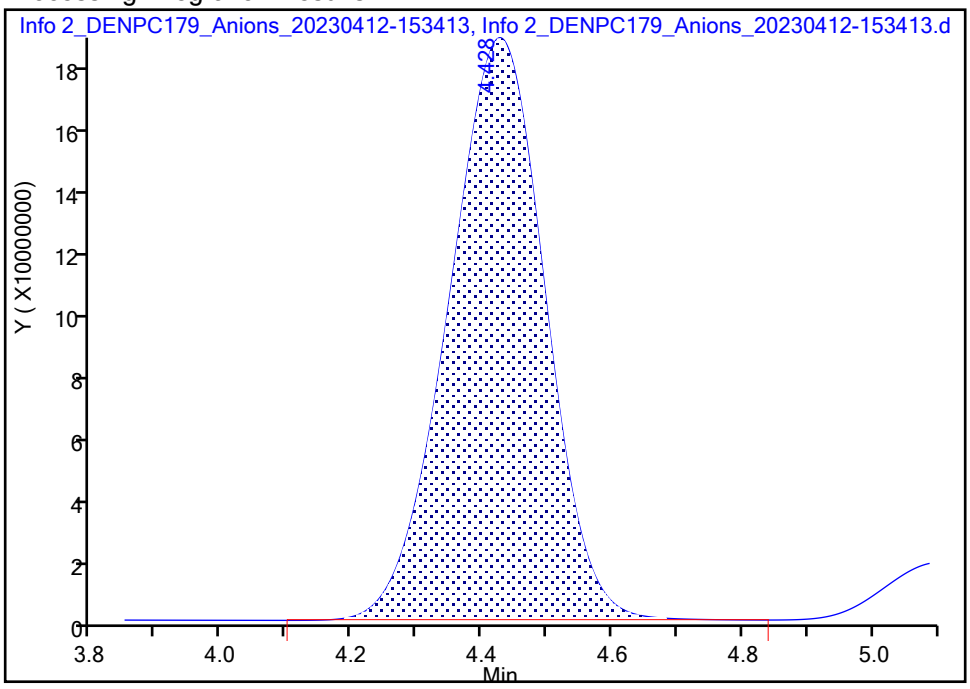
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Injection Date: 12-Apr-2023 15:19:00 Instrument ID: WC_IonChrom10
Lims ID: STD L6
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

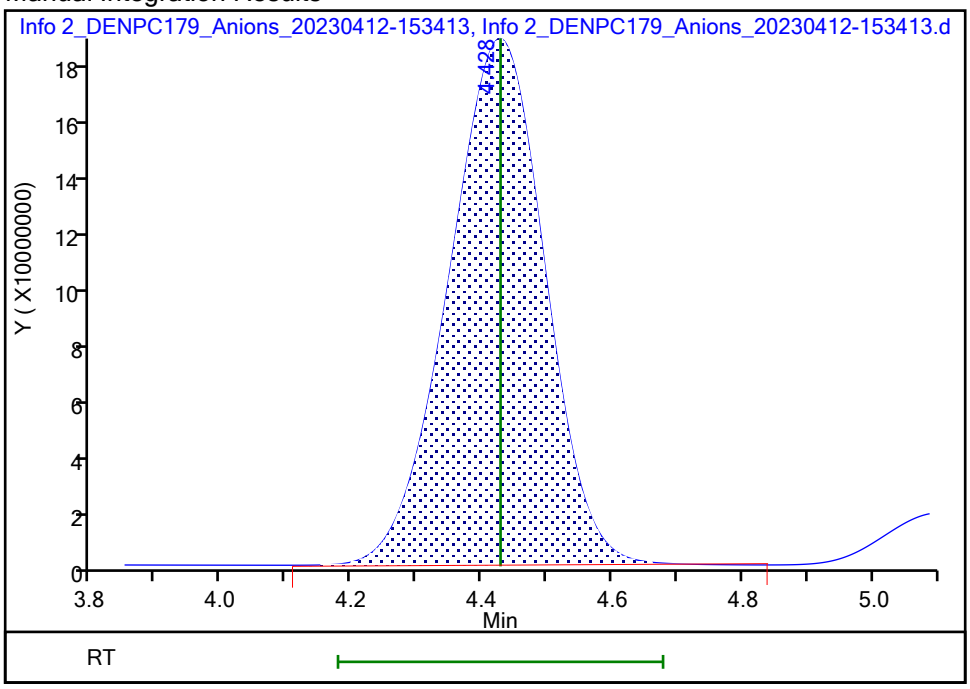
Processing Integration Results

RT: 4.43
Area: 1915444596
Amount: 99.918589
Amount Units: ug/ml



Manual Integration Results

RT: 4.43
Area: 1914243902
Amount: 99.889092
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:42
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

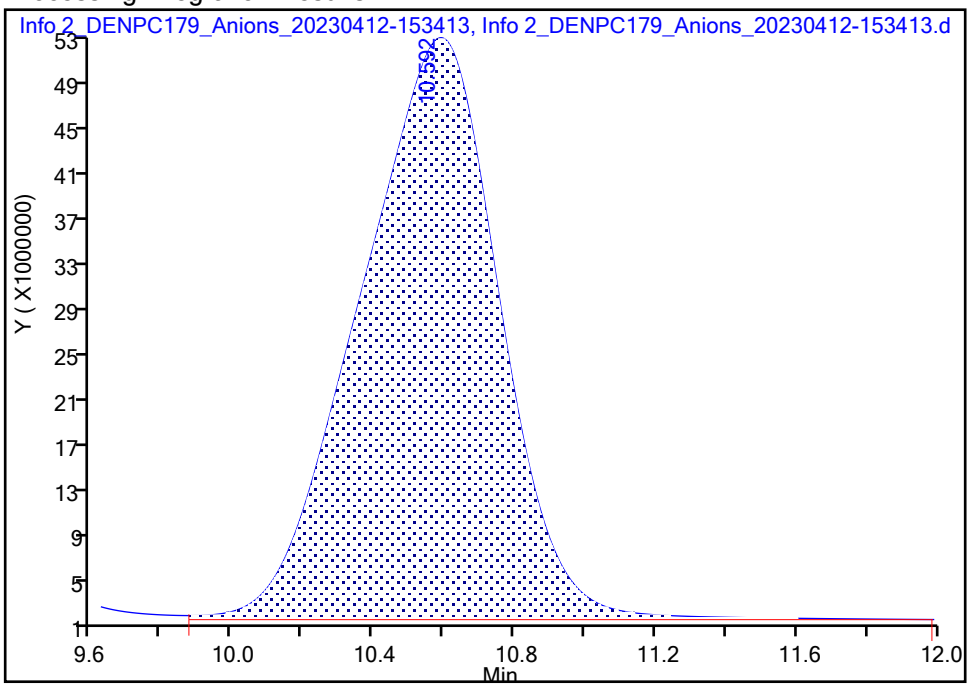
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153
Injection Date: 12-Apr-2023 15:19:00 Instrument ID: WC_IonChrom10
Lims ID: STD L6
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

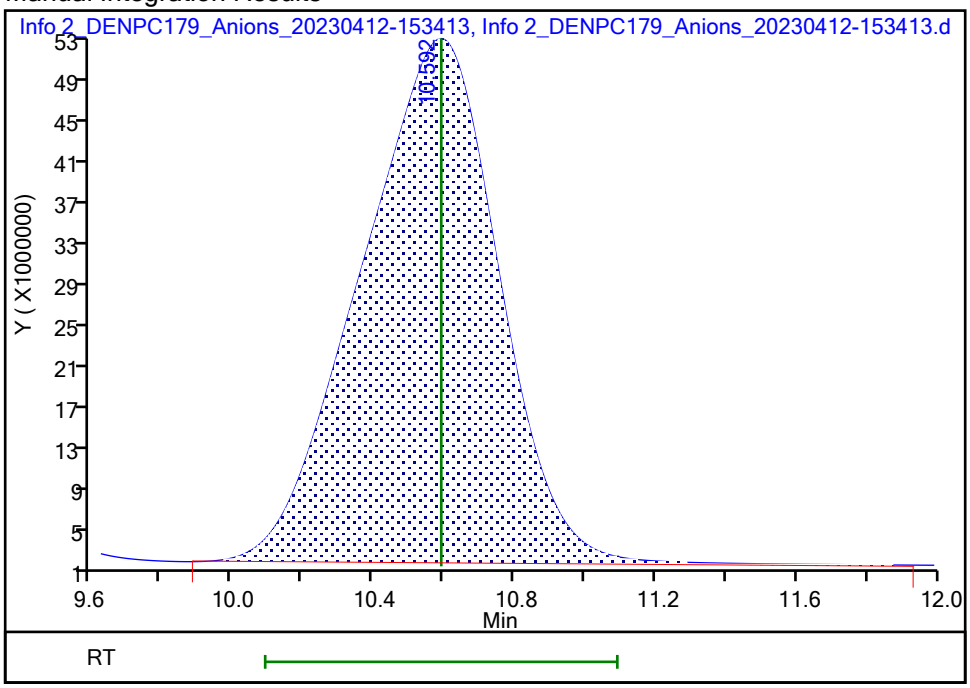
RT: 10.59
Area: 1413345488
Amount: 101.3581
Amount Units: ug/ml

Processing Integration Results



Manual Integration Results

RT: 10.59
Area: 1384314036
Amount: 100.3828
Amount Units: ug/ml



Reviewer: LVW8, 12-Apr-2023 15:43:52
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 120345 **Inst ID:** IC16 **Analysis Date:** 04/12/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	174903	7	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
40437065	43230492	44844044	46492699	45903612		-1277342			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			46378611		
M8087413	M21615246	M44844044	M116231748	M229518060					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
5 Nitrate as N				Signal: 1					
42172205	39818610	42066844	45095286	46132733		-1634037			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			45867680		
M8434441	M19909305	M42066844	M112738215	M230663663					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
6 Orthophosphate as P				Signal: 1			R1		
69769055	47259032	34760084	26027078	22431185		10983593			*0.990
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			21157507		
M13953811	M23629516	M34760084	M65067694	M112155923					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

Report Date: 14-Apr-2023 13:55:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 13:55:16	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 17.1	10.0	117.1	
2 Chloride	80.0	85.7	7.1	10.0	107.1	
4 Bromide	2.00	2.01	0.6	10.0	100.6	
7 Sulfate	80.0	86.9	8.7	10.0	108.7	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 13:56:07	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.12	6.0	10.0	106.0	
5 Nitrate as N	2.00	2.15	7.4	10.0	107.4	
6 Orthophosphate as	2.00	2.84	* 41.9	10.0	141.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Apr-2023 15:34:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-007
Misc. Info.: 280-0120345-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:06:59 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 13-Apr-2023 12:05:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.172	3.172	0.000	88983337	2.00	2.34	Ma
2 Chloride	4.423	4.423	0.000	1641996046	80.0	85.7	
3 Nitrite as N	5.112	5.112	0.000	97019728	NC	NC	M
4 Bromide	6.305	6.305	0.000	14681577	2.00	2.01	
5 Nitrate as N	7.087	7.087	0.000	96882220	NC	NC	
6 Orthophosphate as P	9.373	9.373	0.000	71034633	NC	NC	
7 Sulfate	10.593	10.593	0.000	1198792597	80.0	86.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

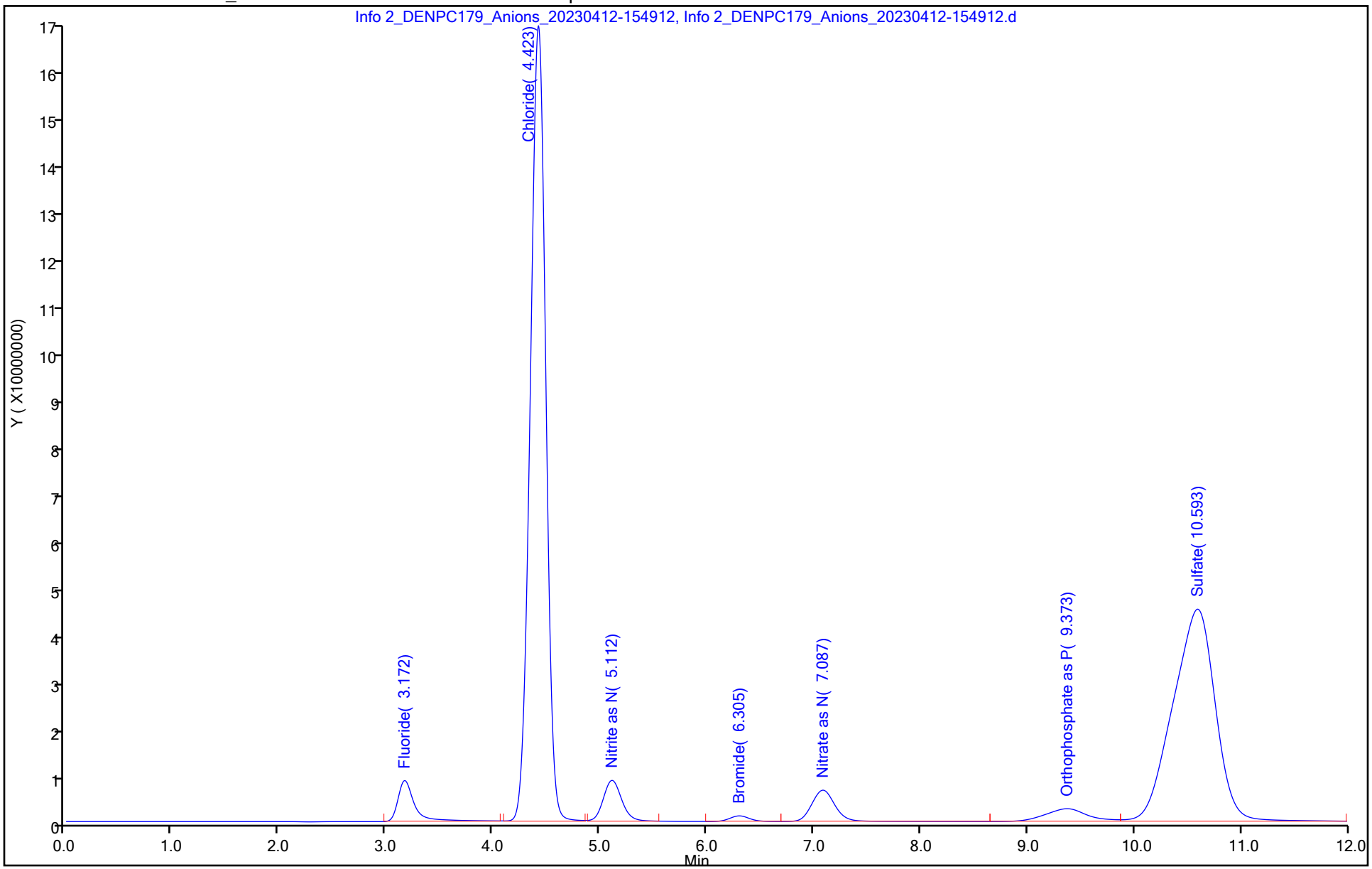
Reagents:

IC SO4 ICV_00024	Amount Added:	0.80	Units: mL
Cl ICV Std_00006	Amount Added:	0.80	Units: mL
IC ICV 5_00403	Amount Added:	0.80	Units: mL

Report Date: 14-Apr-2023 14:06:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-154912.d				
Injection Date:	12-Apr-2023 15:34:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 12-Apr-2023 15:49:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120345-008
Misc. Info.: 280-0120345-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Apr-2023 14:07:08 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1620

First Level Reviewer: XAY4 Date: 14-Apr-2023 14:07:17

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.172				ND	U
2 Chloride		4.397				ND	U
3 Nitrite as N		5.103				ND	
4 Bromide		6.293				ND	U
5 Nitrate as N		7.072				ND	
6 Orthophosphate as P	9.417	9.418	-0.001	14030813		NC	
7 Sulfate	10.600	10.602	-0.002	368472		0.1197	M

QC Flag Legend

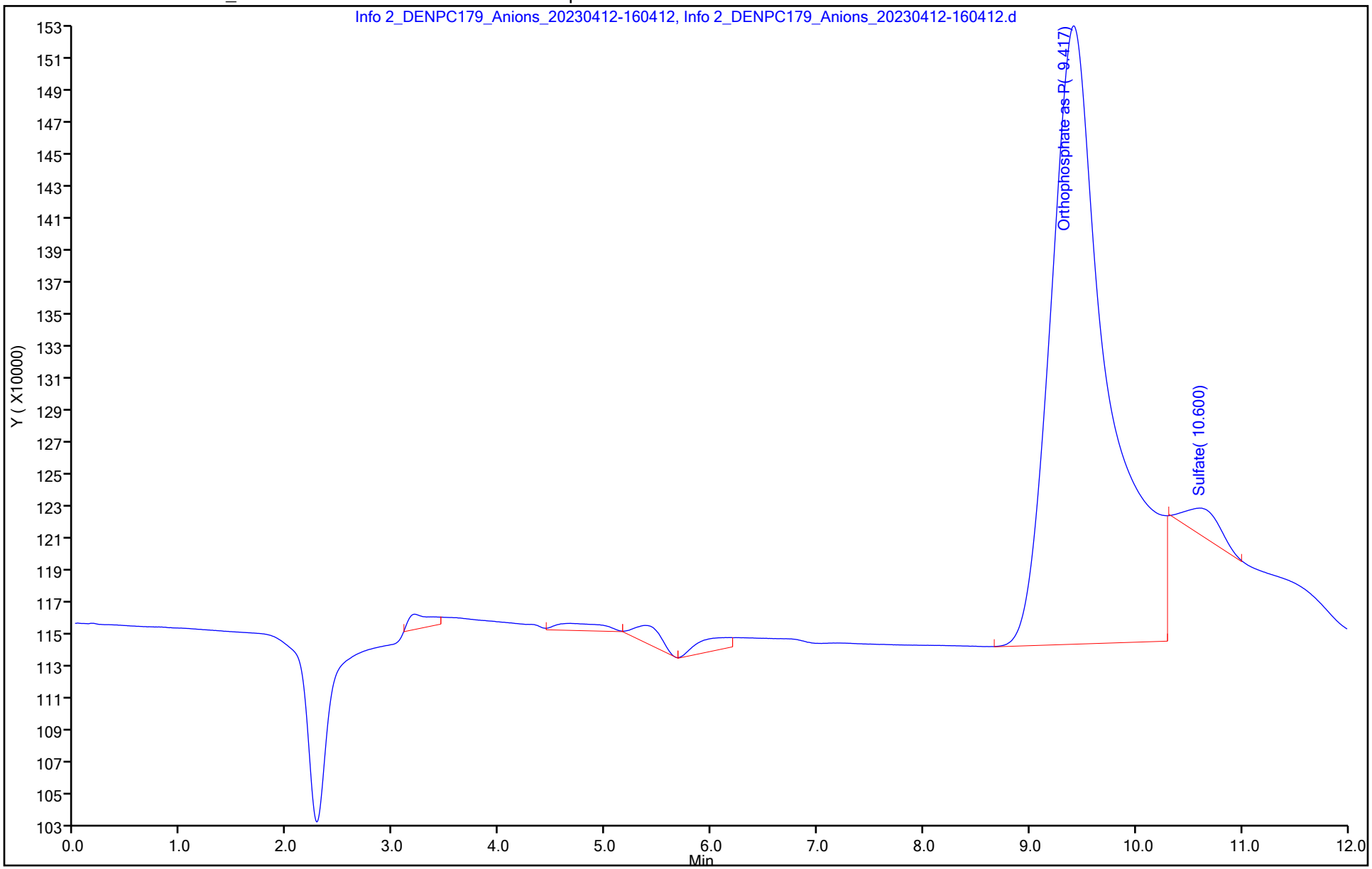
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 14-Apr-2023 14:07:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160412.d

Injection Date:	12-Apr-2023 15:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160

Injection Date: 12-Apr-2023 15:49:00 Instrument ID: WC_IonChrom10

Lims ID: ICB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

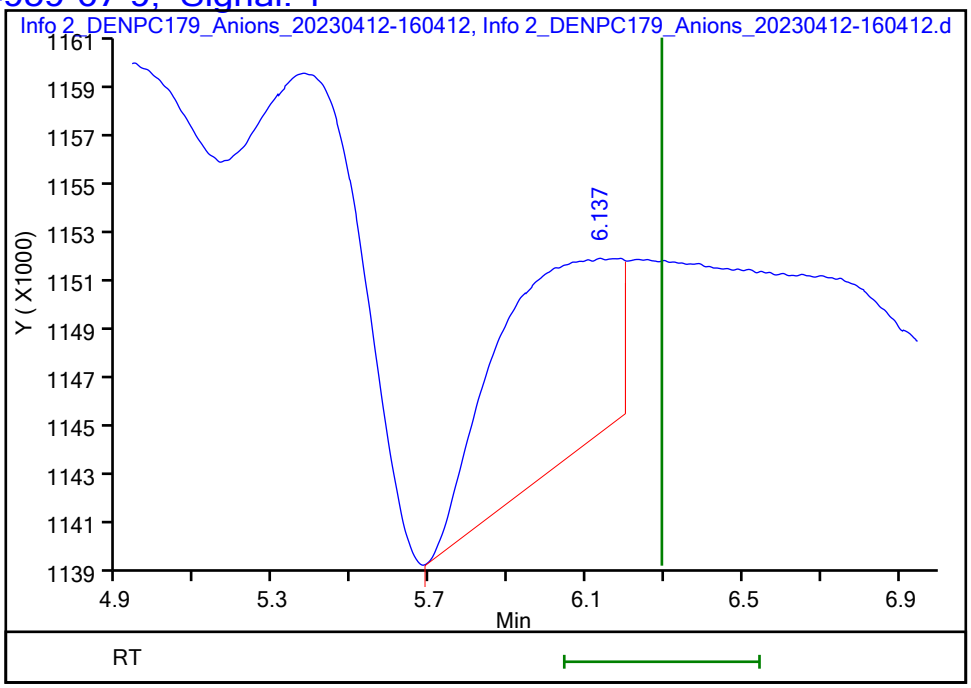
Column: Detector Info 2_091554_1

4 Bromide, CAS: 24959-67-9, Signal: 1

RT: 6.14

Response: 177191

Amount: 0



Reviewer: XAY4, 14-Apr-2023 14:01:41

Audit Action: Manually Integrated Audit Reason:

User Disabled Compound Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160

Injection Date: 12-Apr-2023 15:49:00 Instrument ID: WC_IonChrom10

Lims ID: ICB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

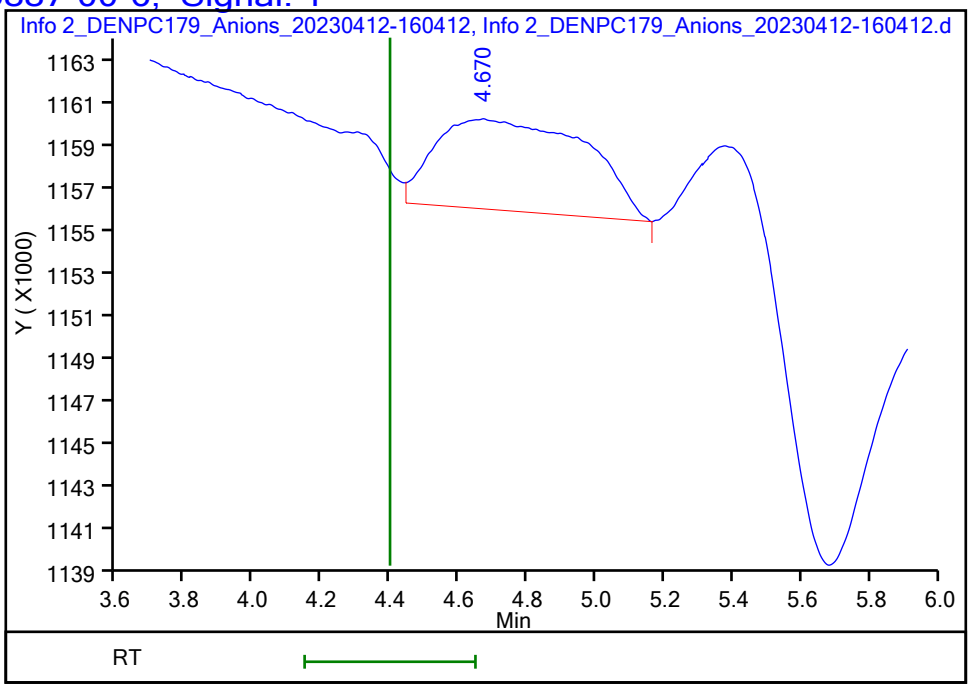
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.67

Response: 130526

Amount: 0



Reviewer: XAY4, 14-Apr-2023 14:01:41

Audit Action: Manually Integrated Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-160

Injection Date: 12-Apr-2023 15:49:00 Instrument ID: WC_IonChrom10

Lims ID: ICB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

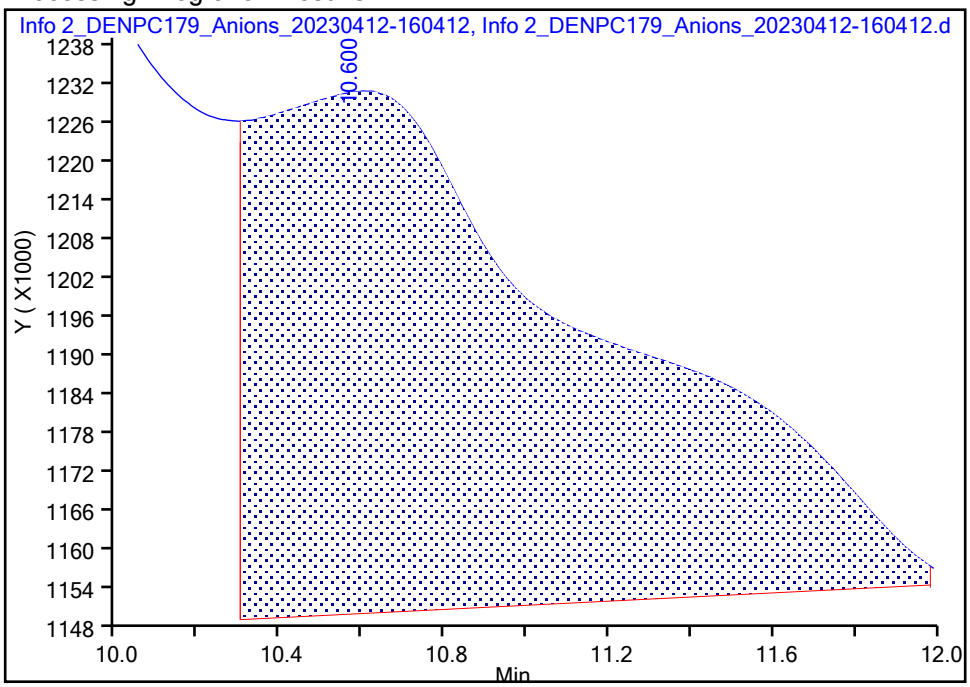
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

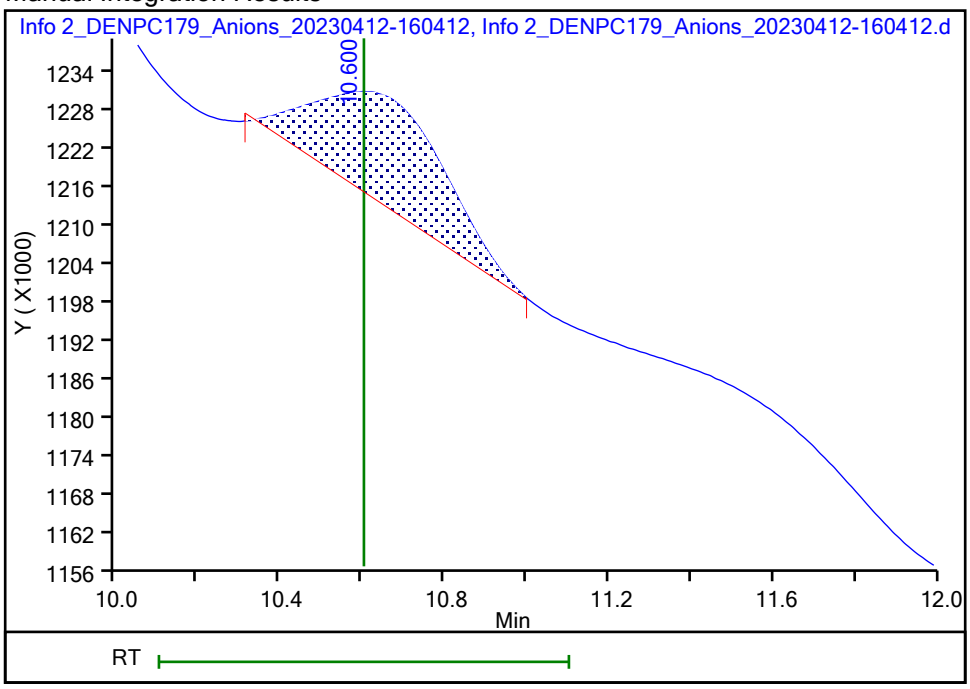
Processing Integration Results

RT: 10.60
Area: 4676250
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.60
Area: 368472
Amount: 0.119715
Amount Units: ug/ml



Reviewer: XAY4, 14-Apr-2023 14:01:28

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 170473 **Inst ID:** IC10 **Analysis Date:** 4/17/23 **Analyst:** MEC

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	175122	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175123	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175121	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174751	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174752	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174755	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174764	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174847	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174869	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174554	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174585	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174728	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174807	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
40437065	43230492	44844044	46492699	45903612		-1277342			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			46378611		
M8087413	M21615246	M44844044	M116231748	M229518060					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
5 Nitrate as N				Signal: 1					
42172205	39818610	42066844	45095286	46132733		-1634037			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			45867680		
M8434441	M19909305	M42066844	M112738215	M230663663					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
6 Orthophosphate as P				Signal: 1			R1		
69769055	47259032	34760084	26027078	22431185		10983593			*0.990
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			21157507		
M13953811	M23629516	M34760084	M65067694	M112155923					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

Report Date: 14-Apr-2023 13:55:19 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 13:55:16	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 17.1	10.0	117.1	
2 Chloride	80.0	85.7	7.1	10.0	107.1	
4 Bromide	2.00	2.01	0.6	10.0	100.6	
7 Sulfate	80.0	86.9	8.7	10.0	108.7	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 13:56:07	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.12	6.0	10.0	106.0	
5 Nitrate as N	2.00	2.15	7.4	10.0	107.4	
6 Orthophosphate as	2.00	2.84	* 41.9	10.0	141.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 12:13:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-001
Misc. Info.: 280-0120473-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:34 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 17-Apr-2023 12:30:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			NC	ND	
2 Chloride	4.392	4.392	0.000	965656060	NC	NC	M
3 Nitrite as N	5.092	5.092	0.000	111266176	2.50	2.43	M
4 Bromide	6.270	6.270	0.000	17057754	NC	NC	
5 Nitrate as N	7.045	7.045	0.000	108180494	2.50	2.39	M
6 Orthophosphate as P	9.338	9.338	0.000	67394238	2.50	2.67	
7 Sulfate	10.613	10.613	0.000	691020270	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

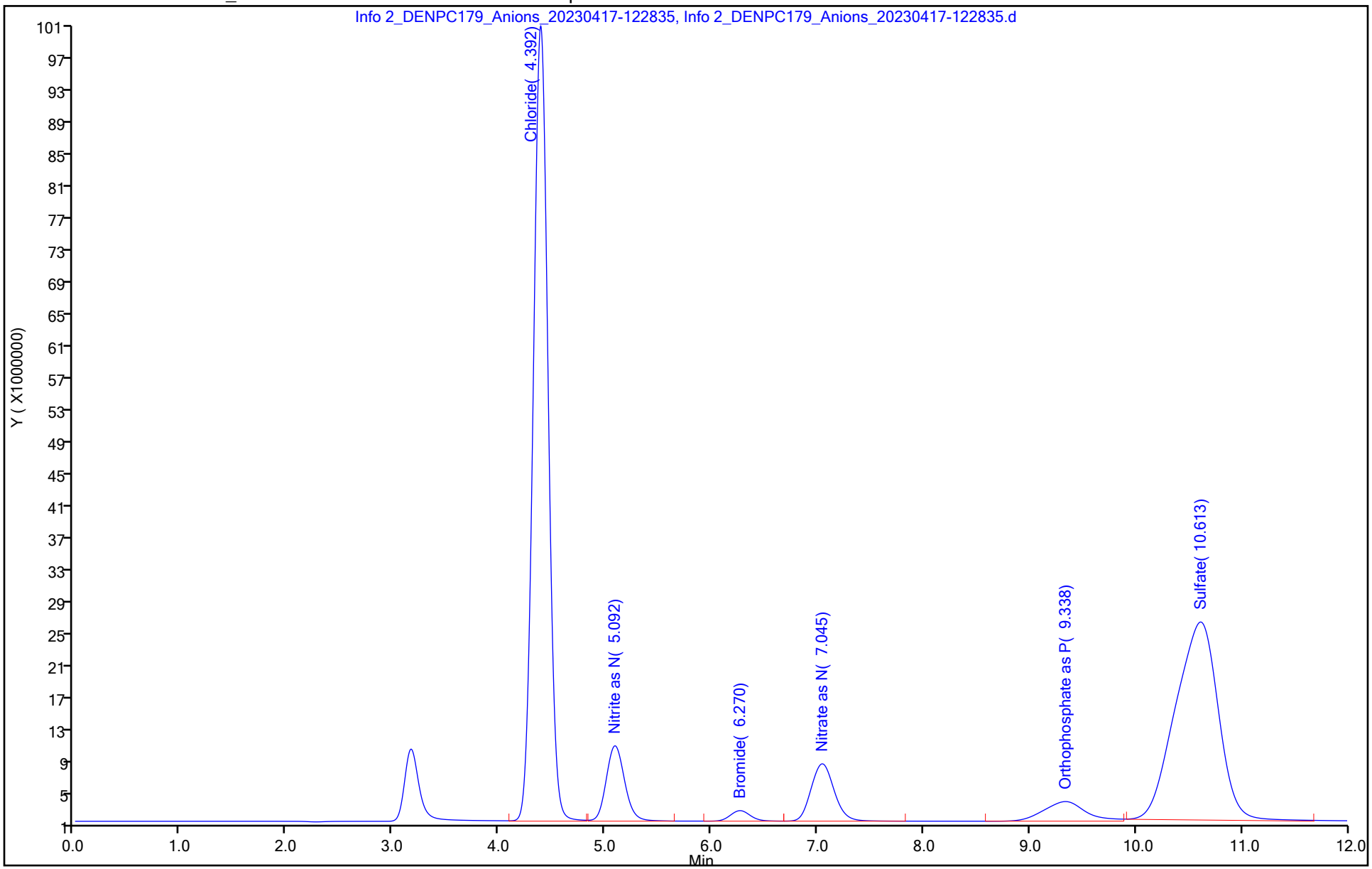
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:34 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122835.d

Injection Date:	17-Apr-2023 12:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

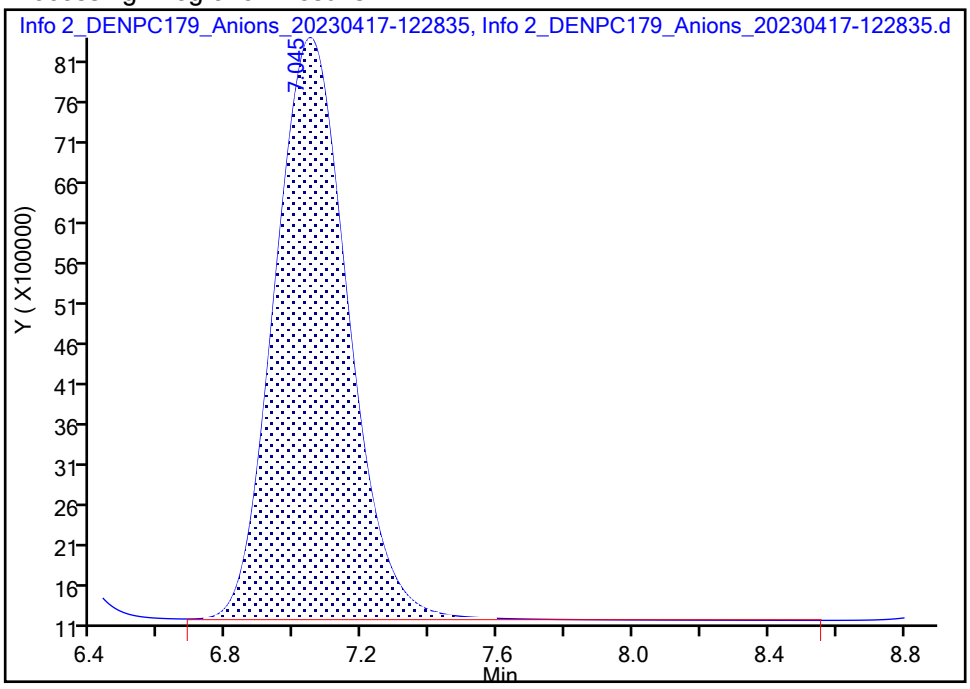
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122
Injection Date: 17-Apr-2023 12:13:00 Instrument ID: WC_IonChrom10
Lims ID: ccv
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

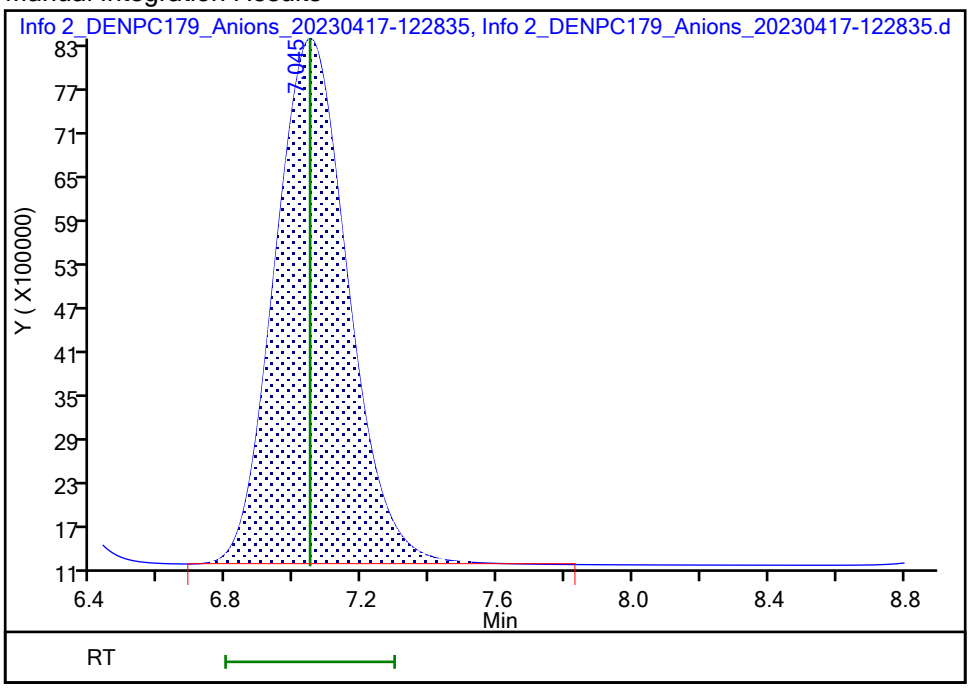
Processing Integration Results

RT: 7.05
Area: 108389646
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.05
Area: 108180494
Amount: 2.394159
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:30
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122

Injection Date: 17-Apr-2023 12:13:00 Instrument ID: WC_IonChrom10

Lims ID: ccv

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

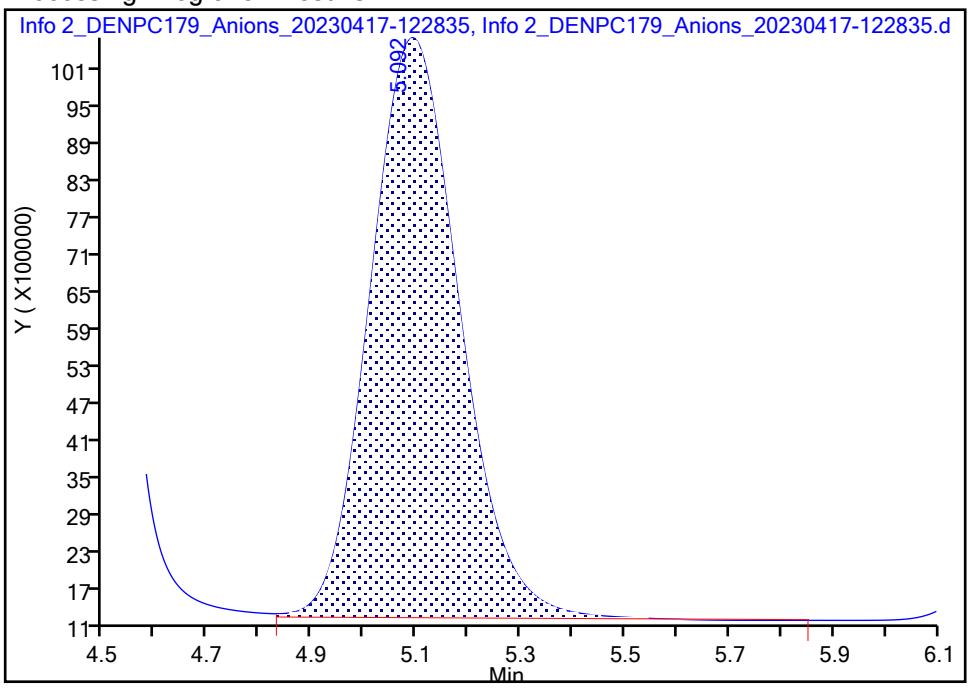
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

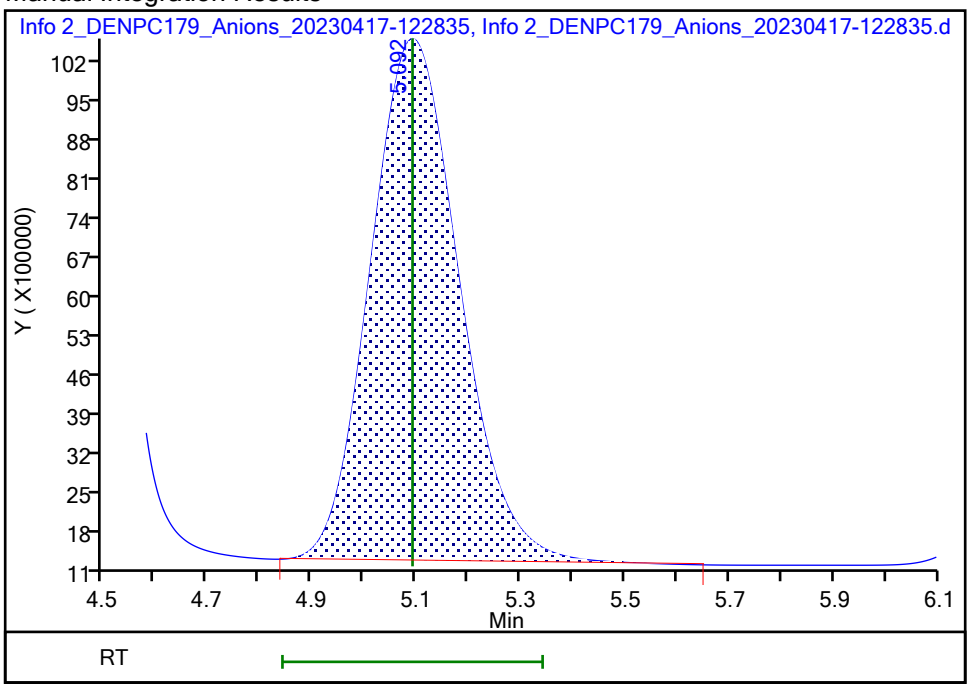
Processing Integration Results

RT: 5.09
Area: 112119308
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.09
Area: 111266176
Amount: 2.426625
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:18

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 12:28:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-002
Misc. Info.: 280-0120473-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:35 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:45:51

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.392				ND	
3 Nitrite as N		5.092				ND	
4 Bromide	6.092	6.092	0.000	135061		NC	
5 Nitrate as N		7.045				ND	
6 Orthophosphate as P	9.407	9.407	0.000	6308047		-0.2210	
7 Sulfate	10.633	10.633	0.000	492097		NC	M

QC Flag Legend

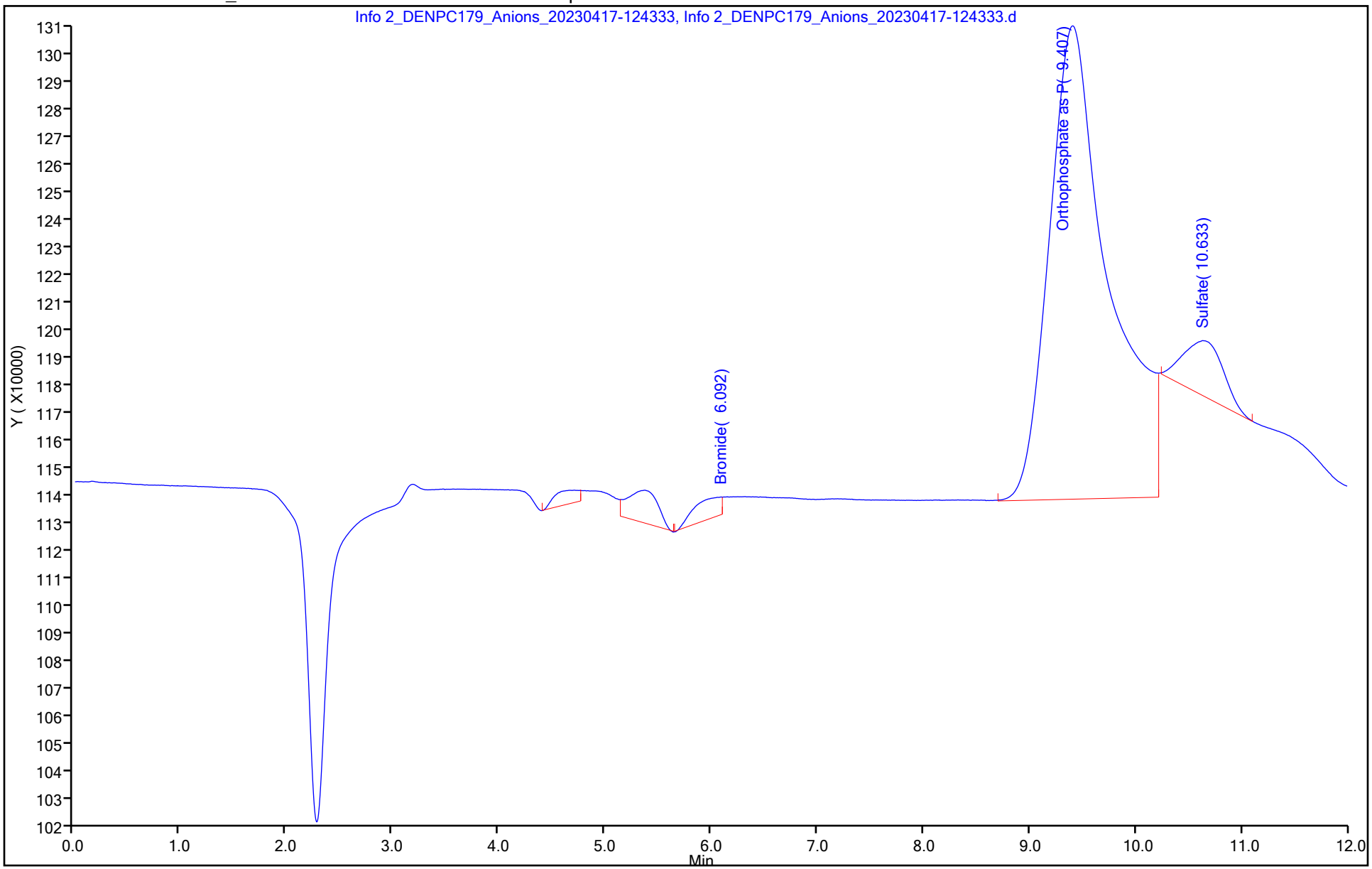
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124333.d

Injection Date:	17-Apr-2023 12:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 17-Apr-2023 12:43:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-003
Misc. Info.: 280-0120473-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:36 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:46:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			NC	ND	
2 Chloride	4.373	4.373	0.000	43365025	NC	NC	M
3 Nitrite as N	5.100	5.100	0.000	9679058	0.2500	0.2362	M
4 Bromide	6.292	6.292	0.000	1517948	NC	NC	M
5 Nitrate as N	7.098	7.098	0.000	9034958	0.2500	0.2326	M
6 Orthophosphate as P	9.373	9.373	0.000	16271405	0.2500	0.2499	
7 Sulfate	10.637	10.637	0.000	31642899	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

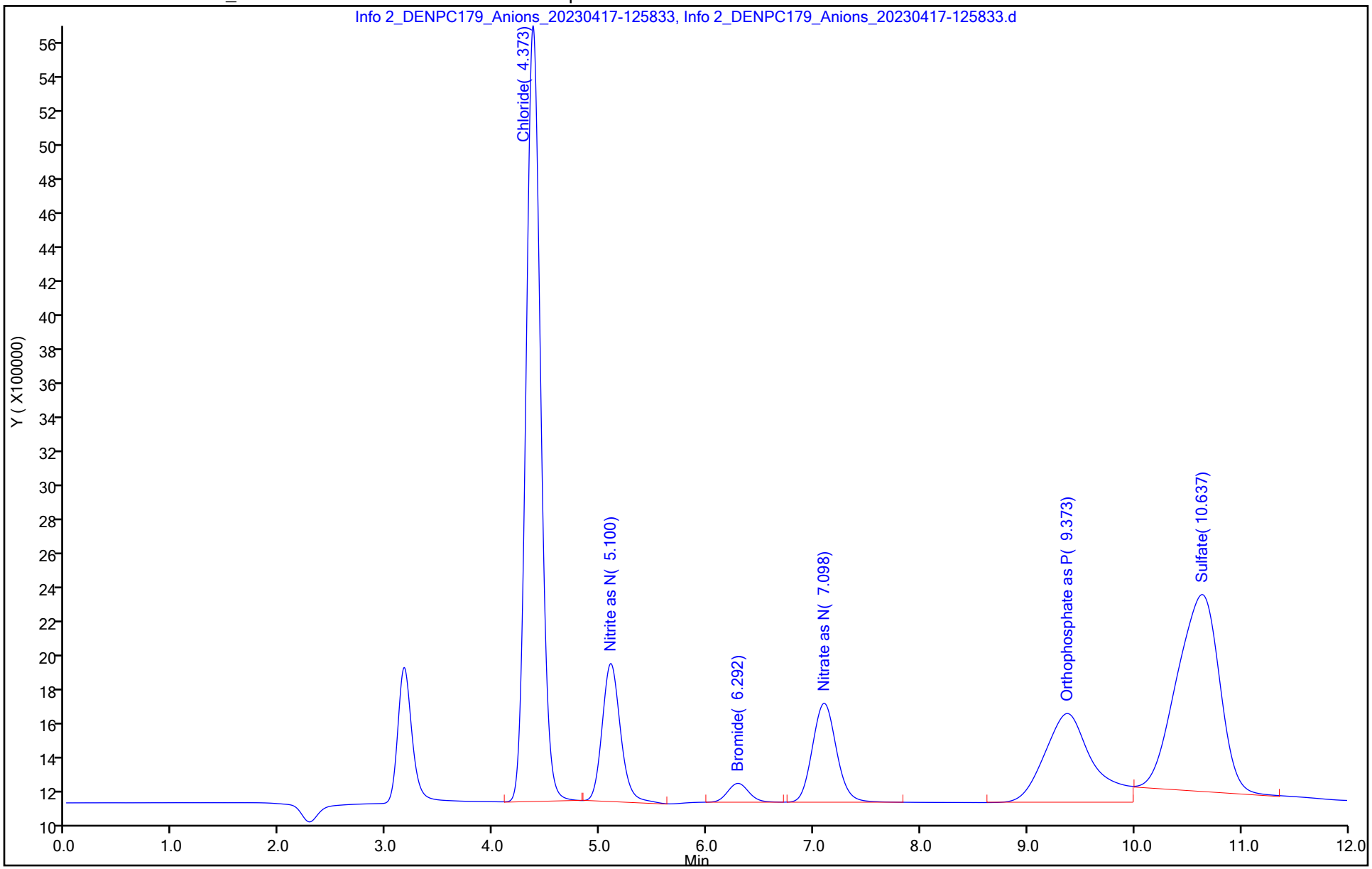
IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL
IC Cal low_00703 Amount Added: 0.10 Units: mL

Report Date: 18-Apr-2023 11:36:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125833.d

Injection Date:	17-Apr-2023 12:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

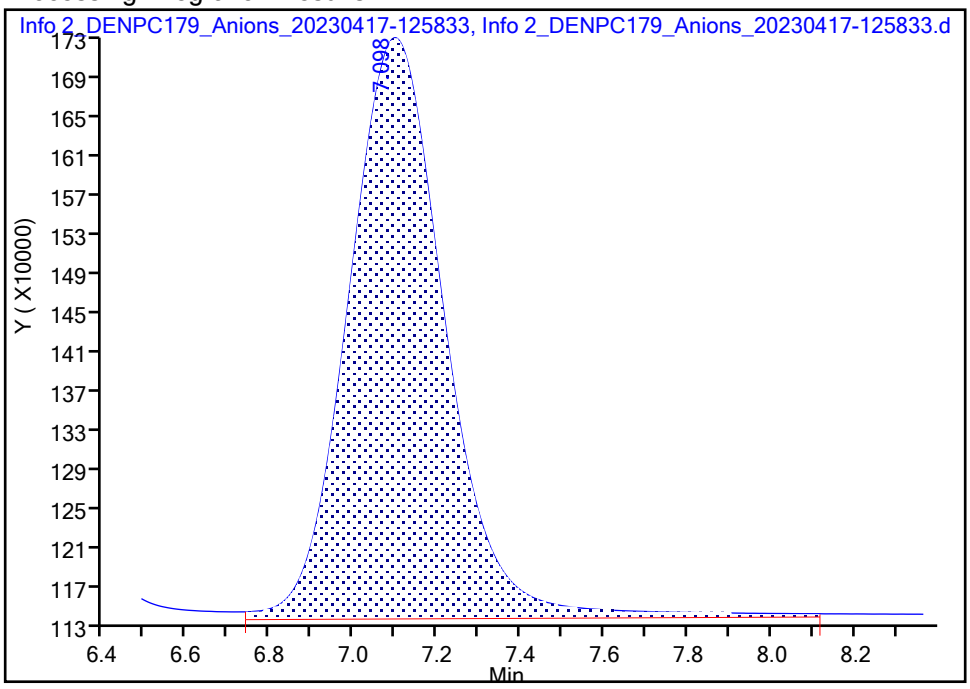
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125
Injection Date: 17-Apr-2023 12:43:00 Instrument ID: WC_IonChrom10
Lims ID: mrl
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

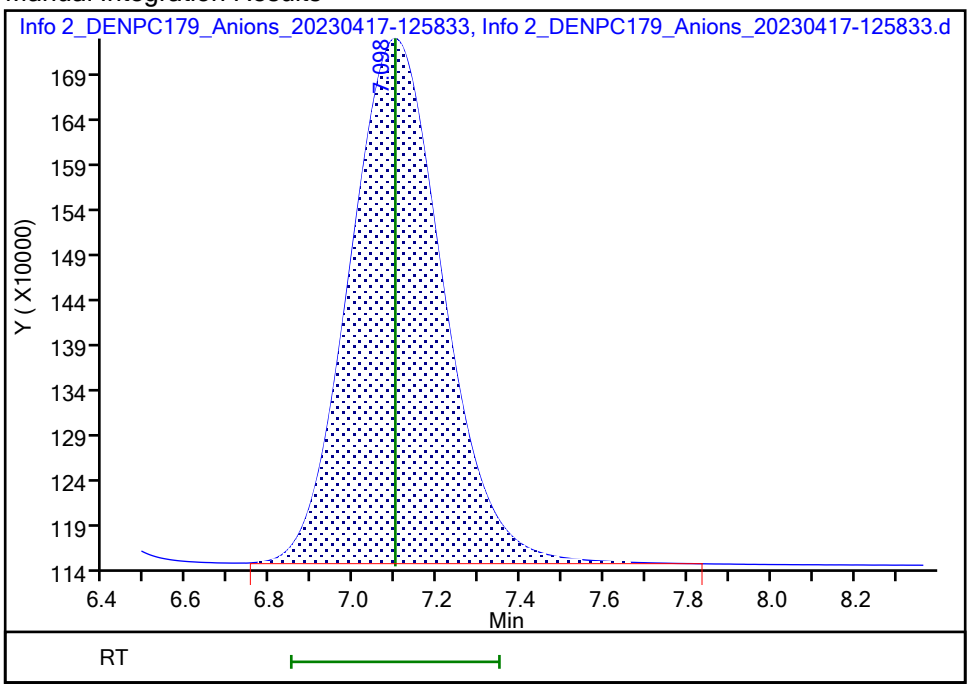
Processing Integration Results

RT: 7.10
Area: 9520802
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.10
Area: 9034958
Amount: 0.232604
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:03
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125

Injection Date: 17-Apr-2023 12:43:00 Instrument ID: WC_IonChrom10

Lims ID: mrl

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

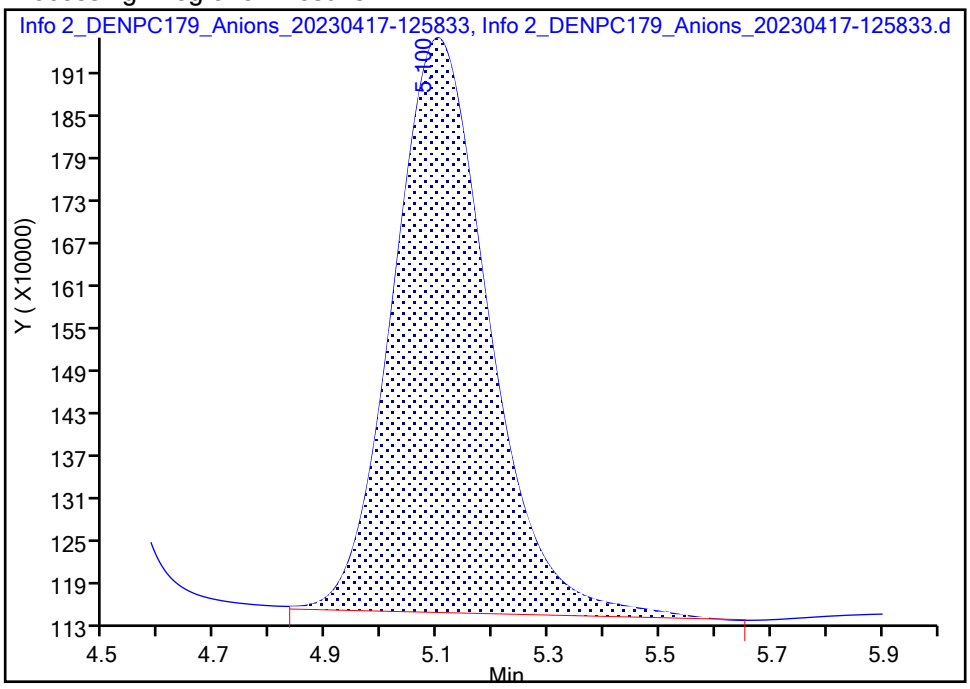
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

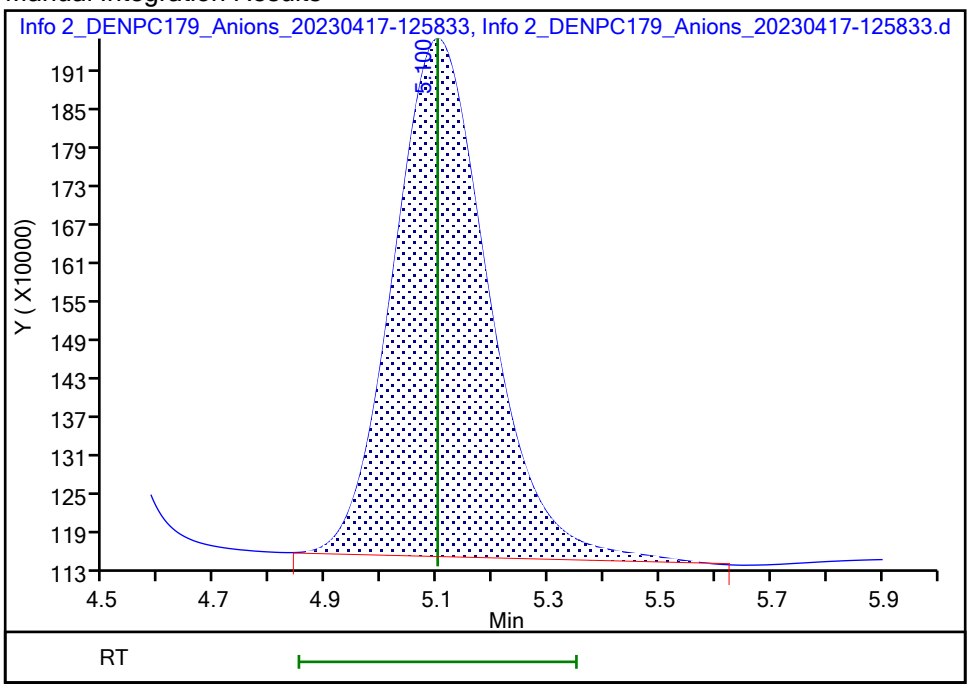
Processing Integration Results

RT: 5.10
Area: 9781958
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.10
Area: 9679058
Amount: 0.236238
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:56

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 17-Apr-2023 12:58:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-004
Misc. Info.: 280-0120473-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:37 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 17-Apr-2023 13:33:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			NC	ND	
2 Chloride	4.388	4.388	0.000	964877890	NC	NC	M
3 Nitrite as N	5.088	5.088	0.000	111656489	2.50	2.44	M
4 Bromide	6.268	6.268	0.000	17046566	NC	NC	
5 Nitrate as N	7.042	7.042	0.000	108151002	2.50	2.39	M
6 Orthophosphate as P	9.335	9.335	0.000	69309307	2.50	2.76	
7 Sulfate	10.605	10.605	0.000	686690141	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

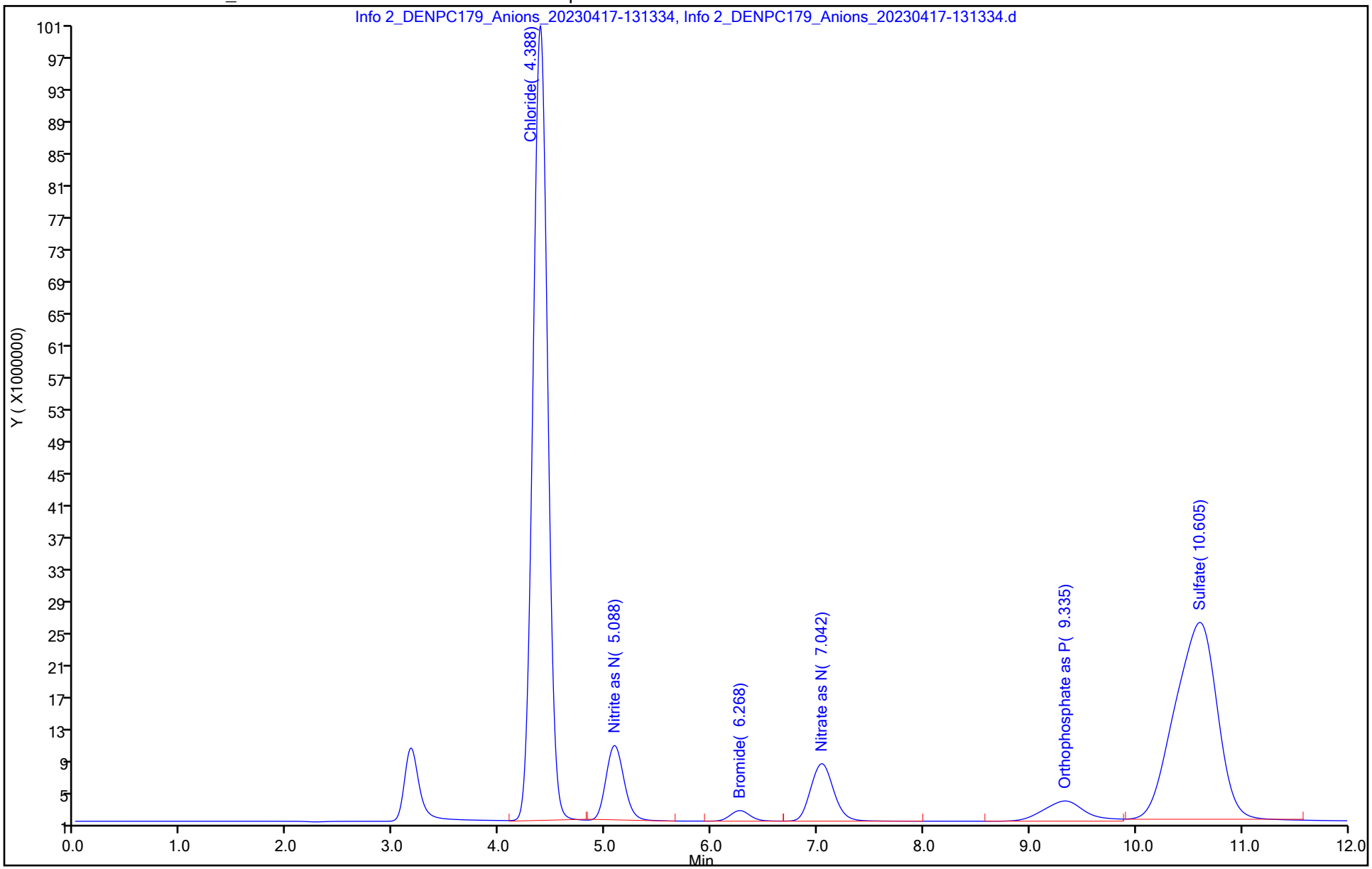
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:37 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131334.d

Injection Date:	17-Apr-2023 12:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131

Injection Date: 17-Apr-2023 12:58:00 Instrument ID: WC_IonChrom10

Lims ID: lcs

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

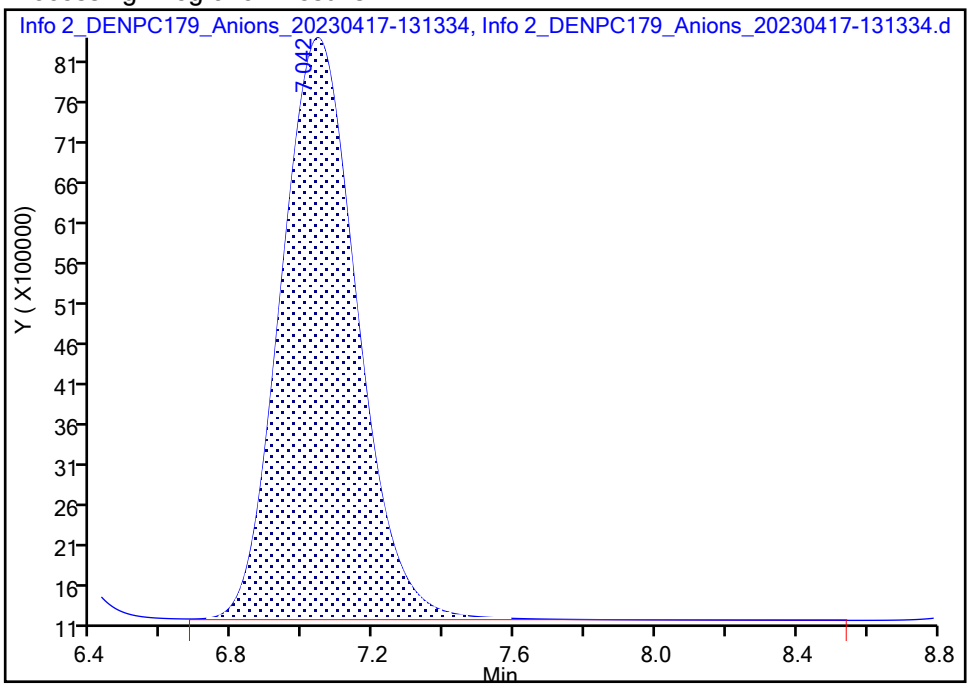
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

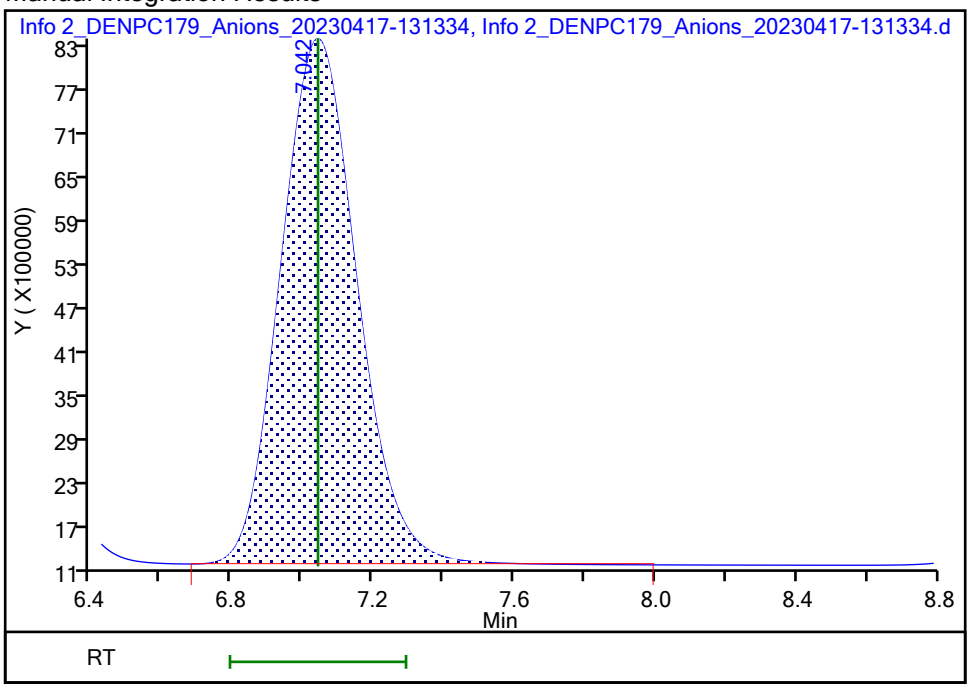
Processing Integration Results

RT: 7.04
Area: 108285388
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.04
Area: 108151002
Amount: 2.393516
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:30

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-13

Injection Date: 17-Apr-2023 12:58:00 Instrument ID: WC_IonChrom10

Lims ID: lcs

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

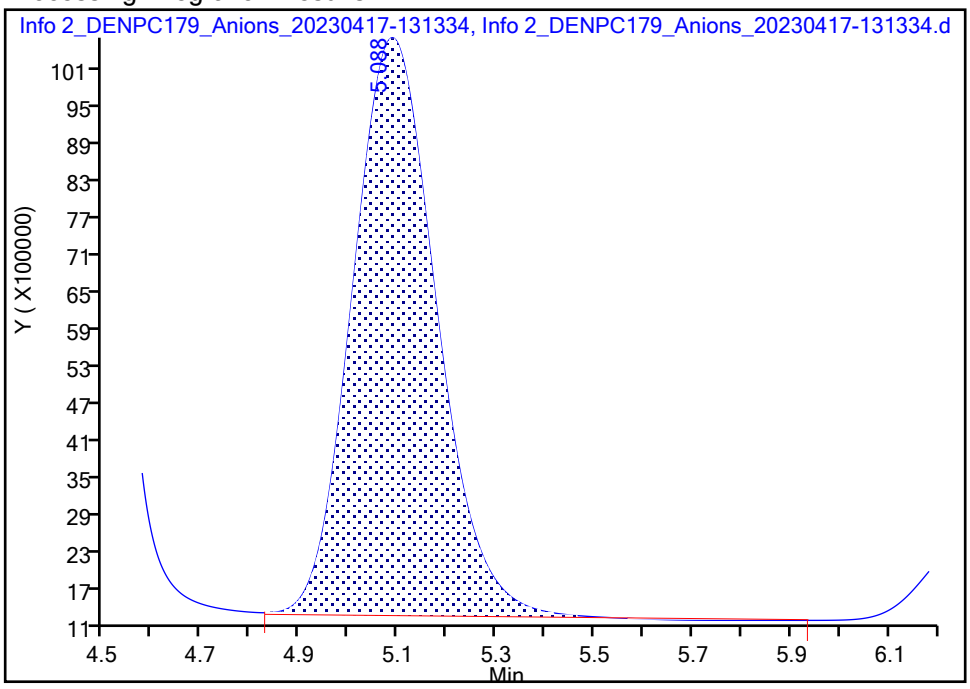
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

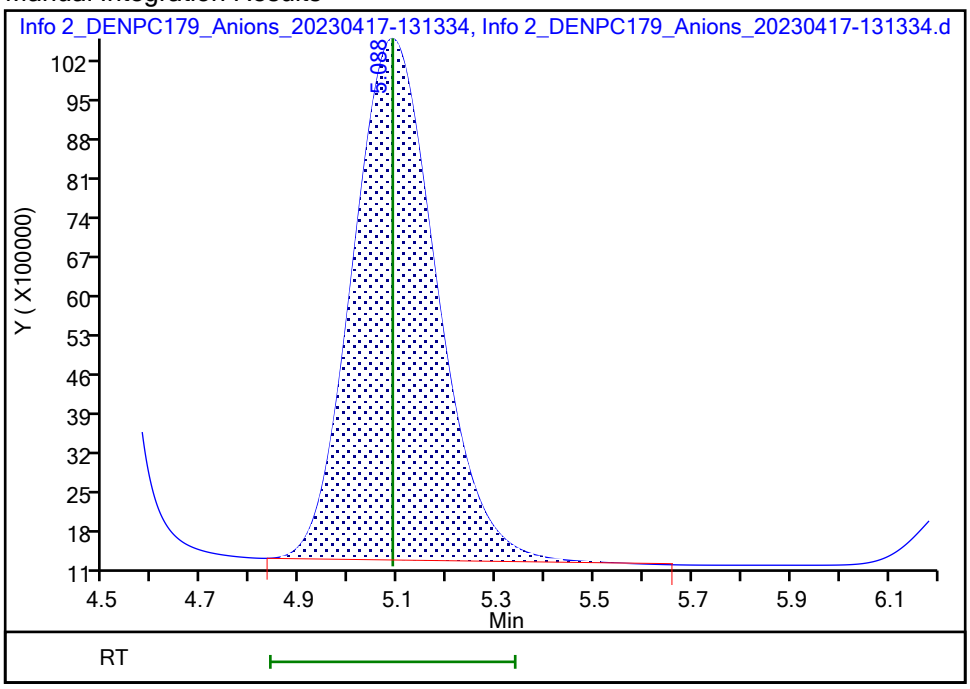
Processing Integration Results

RT: 5.09
Area: 112402585
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.09
Area: 111656489
Amount: 2.435041
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:22

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 17-Apr-2023 13:13:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-005
Misc. Info.: 280-0120473-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:37 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:46:58

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			NC	ND	
2 Chloride	4.388	4.388	0.000	964113552	NC	NC	M
3 Nitrite as N	5.088	5.088	0.000	110818321	2.50	2.42	M
4 Bromide	6.272	6.272	0.000	17020706	NC	NC	
5 Nitrate as N	7.043	7.043	0.000	107794212	2.50	2.39	M
6 Orthophosphate as P	9.337	9.337	0.000	69452215	2.50	2.76	
7 Sulfate	10.610	10.610	0.000	687195393	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

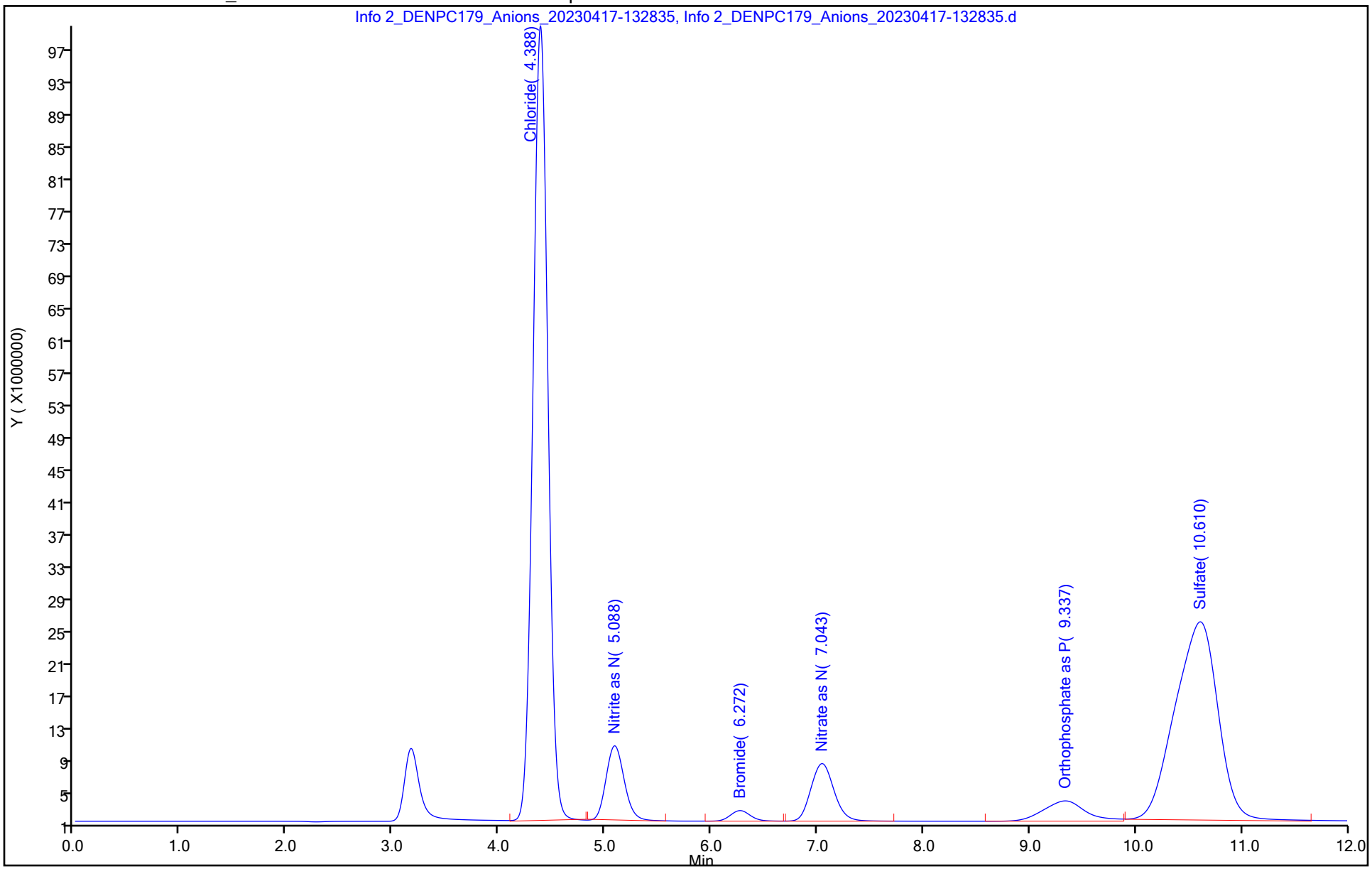
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132835.d				
Injection Date:	17-Apr-2023 13:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132

Injection Date: 17-Apr-2023 13:13:00 Instrument ID: WC_IonChrom10

Lims ID: lcsd

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

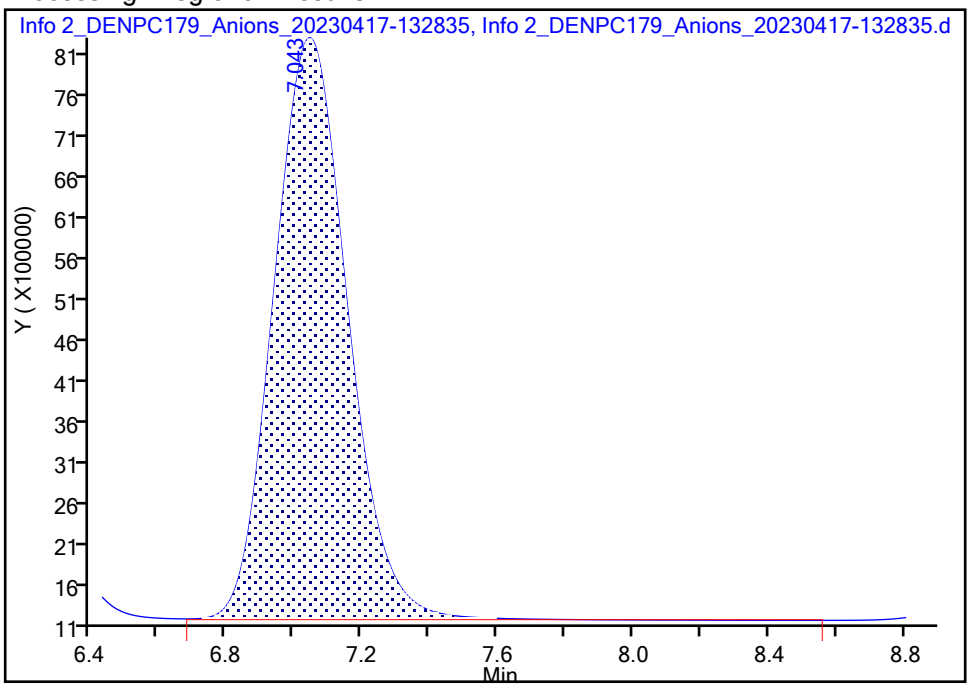
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

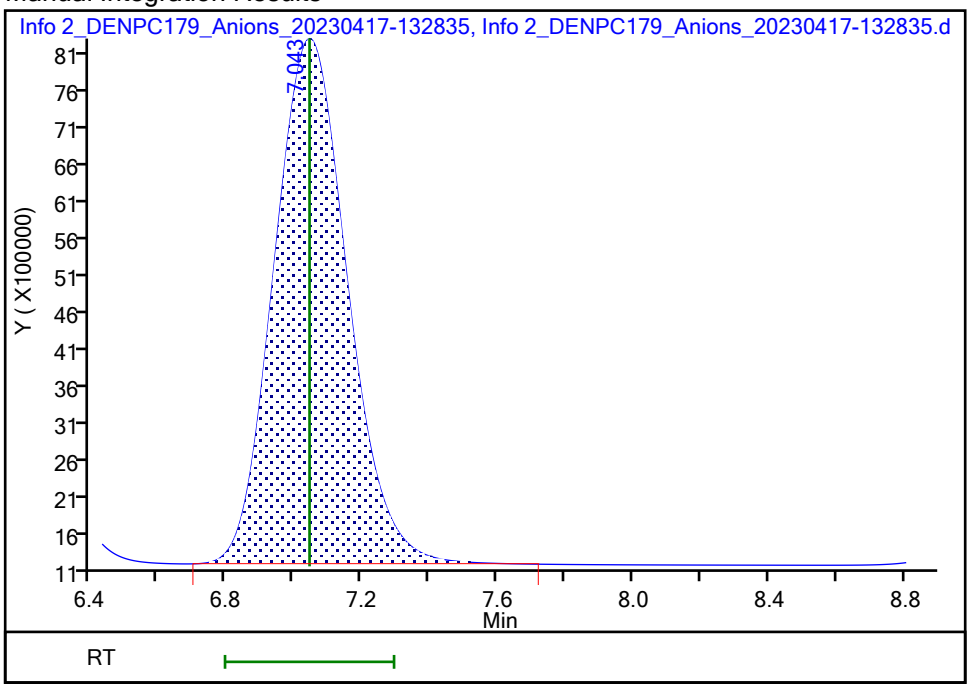
Processing Integration Results

RT: 7.04
Area: 108139251
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.04
Area: 107794212
Amount: 2.385738
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:51

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132

Injection Date: 17-Apr-2023 13:13:00 Instrument ID: WC_IonChrom10

Lims ID: lcsd

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

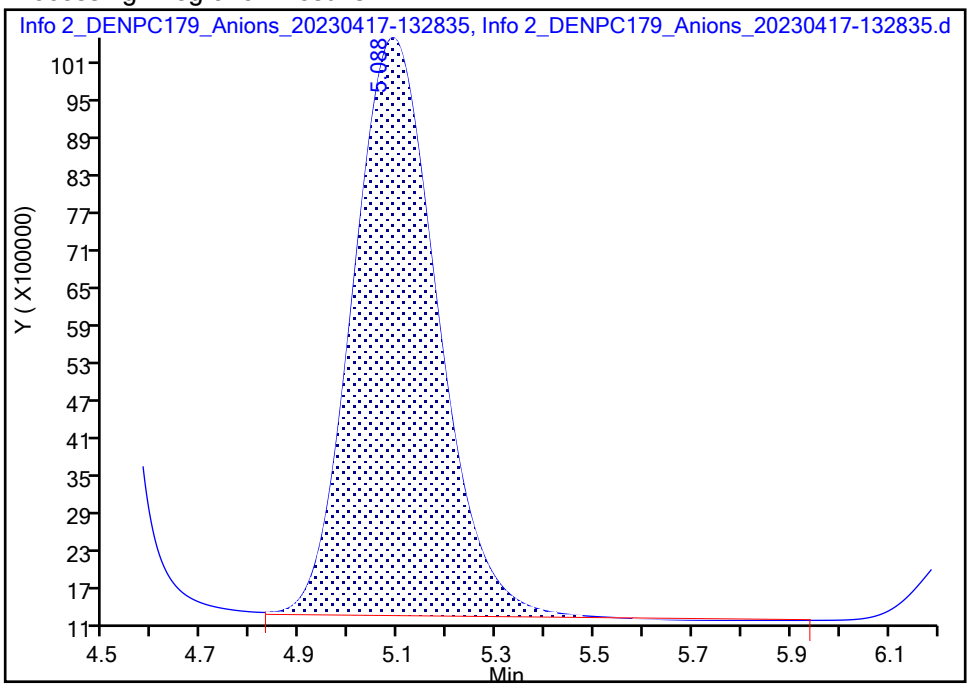
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

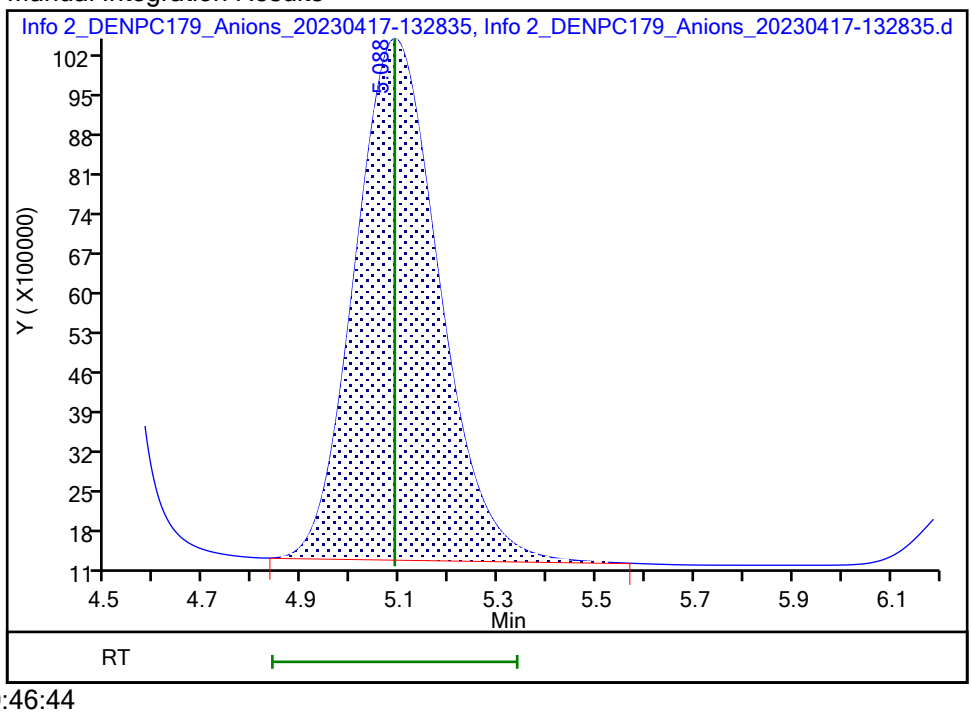
Processing Integration Results

RT: 5.09
Area: 111796582
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.09
Area: 110818321
Amount: 2.416969
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:44

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 17-Apr-2023 13:28:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-006
Misc. Info.: 280-0120473-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:47:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.075	6.075	0.000	130913		NC	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.402	9.402	0.000	8300787		-0.1268	
7 Sulfate	10.633	10.633	0.000	456822		NC	M

QC Flag Legend

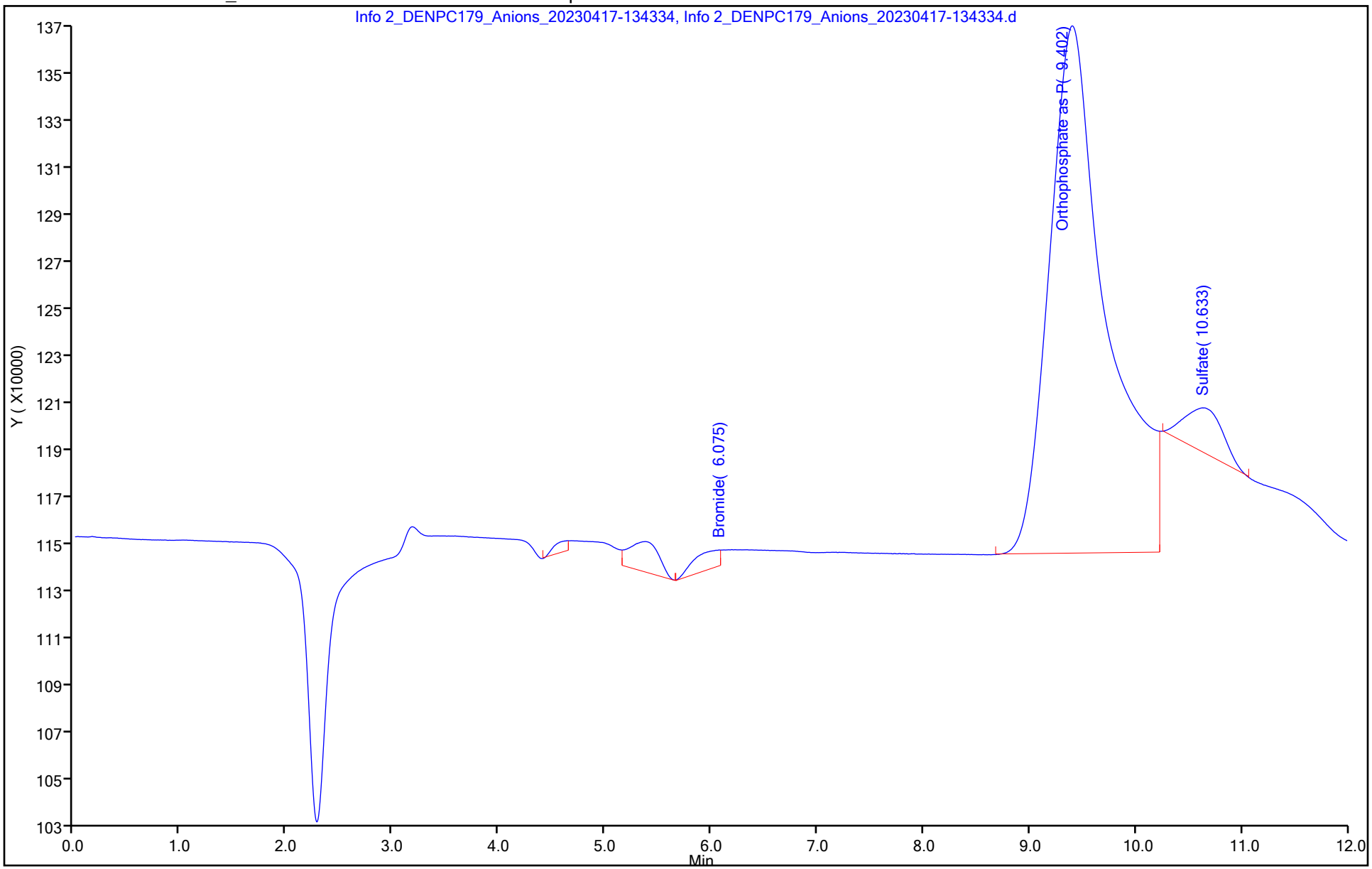
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134334.d

Injection Date:	17-Apr-2023 13:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-152
Lims ID: 280-175123-C-1
Client ID: MW-119D-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 15:13:00 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-013
Misc. Info.: 280-0120473-013
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:50:34

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.500	4.388	0.112	3758057043	NC	M
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.097	7.043	0.054	110895962	2.45	M
7 Sulfate	10.602	10.633	-0.031	1446567480	NC	M

QC Flag Legend

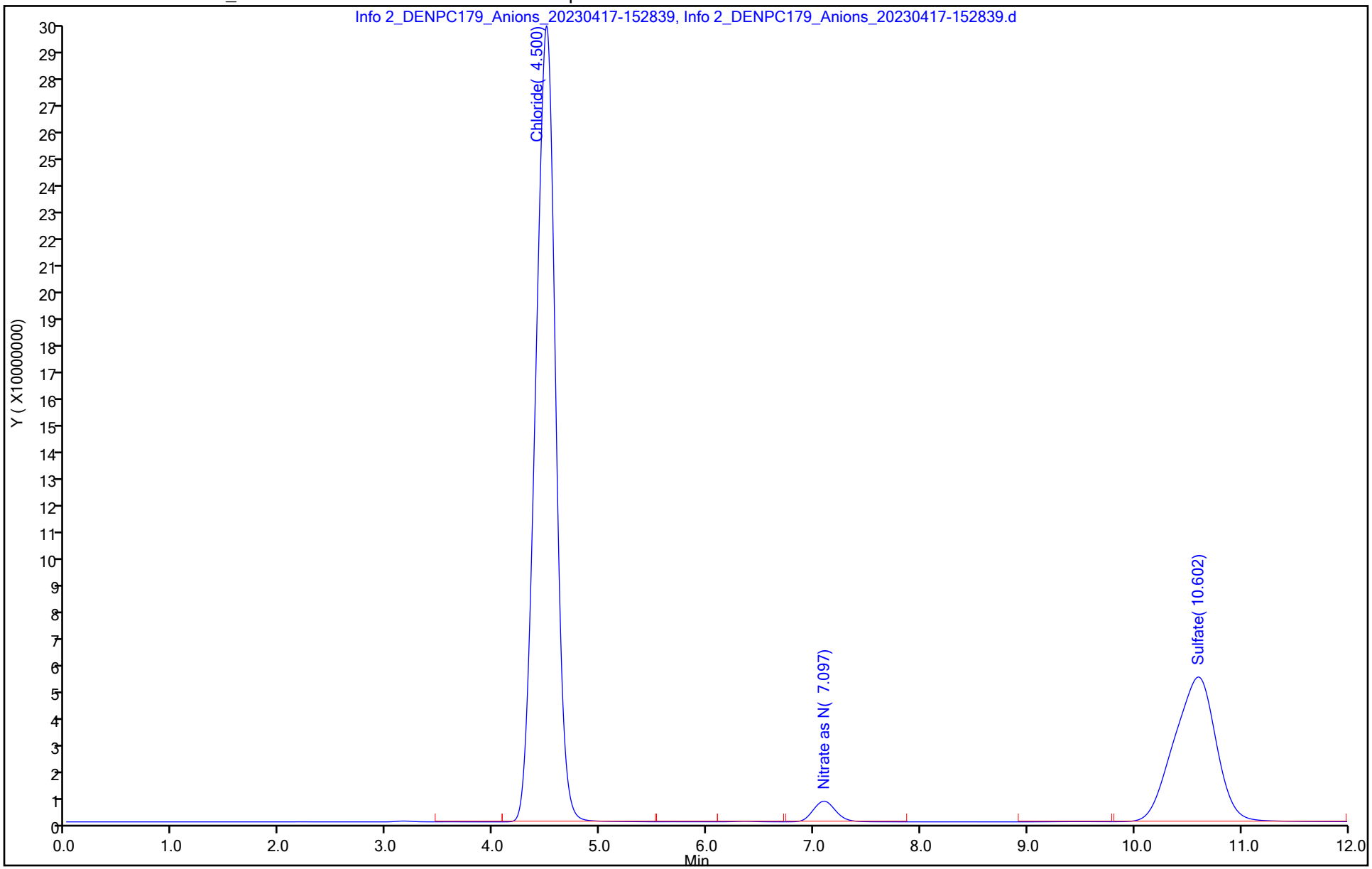
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:43 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-152839.d

Injection Date:	17-Apr-2023 15:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175123-C-1	Lab Sample ID:	280-175123-1	Worklist Smp#:	13
Client ID:	MW-119D-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

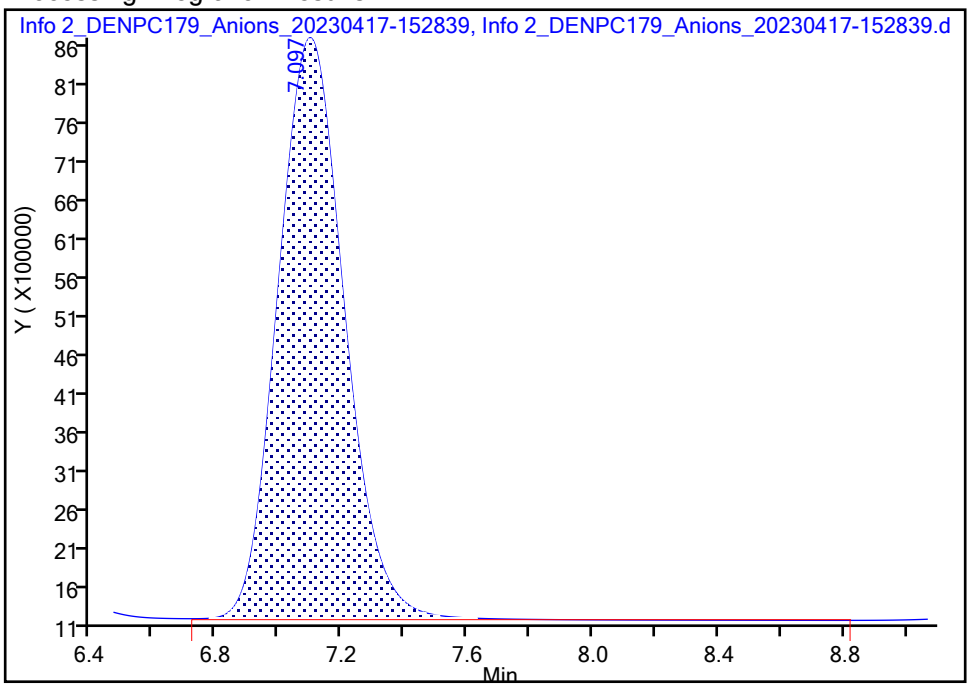
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-152				
Injection Date:	17-Apr-2023 15:13:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175123-C-1	Lab Sample ID:	280-175123-1		
Client ID:	MW-119D-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions		
Column:		Detector	Info 2_091554_1		

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

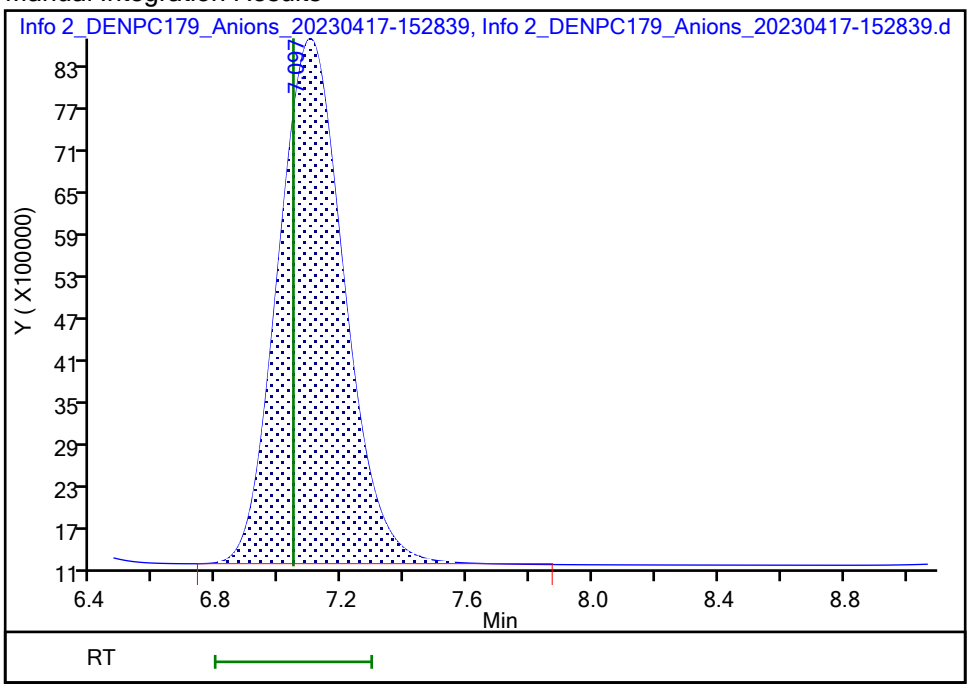
Processing Integration Results

RT: 7.10
Area: 110995253
Amount: 2.455526
Amount Units: ug/ml



Manual Integration Results

RT: 7.10
Area: 110895962
Amount: 2.453361
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:50:29

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-155
Lims ID: 280-175123-C-2
Client ID: MW-119S-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 15:43:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-015
Misc. Info.: 280-0120473-015
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:51:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.532	4.388	0.144	4852163459	NC	M
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.092	7.043	0.049	184850567	4.07	M
7 Sulfate	10.605	10.633	-0.028	1465829585	NC	M

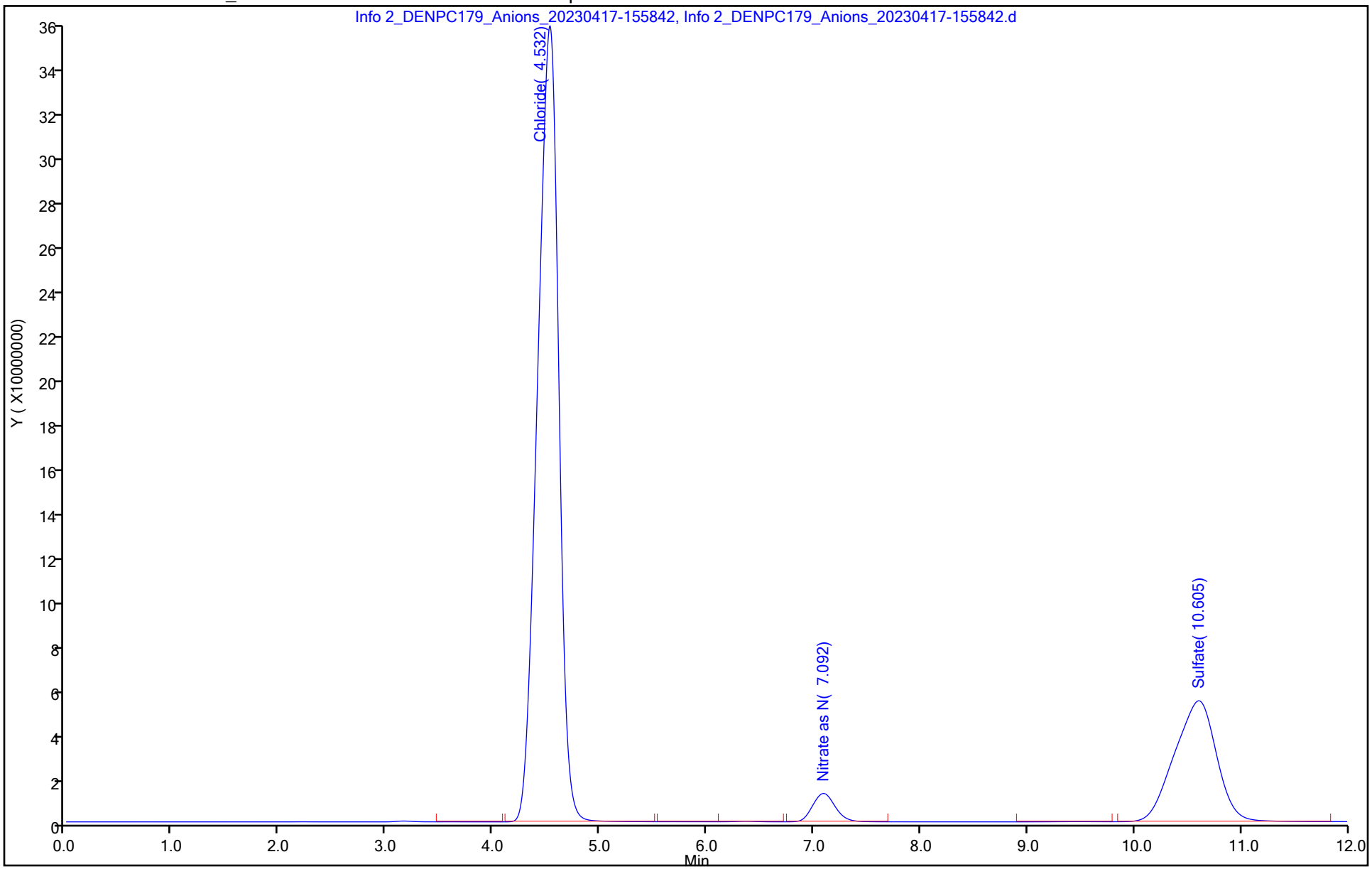
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:45 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-155842.d				
Injection Date:	17-Apr-2023 15:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175123-C-2	Lab Sample ID:	280-175123-2	Worklist Smp#:	15
Client ID:	MW-119S-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

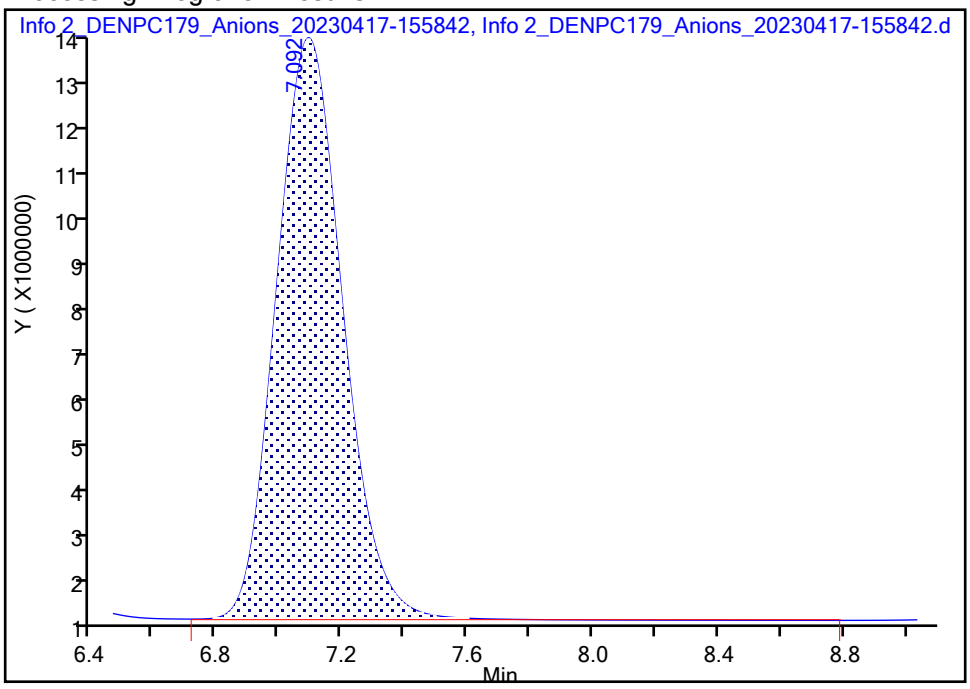
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-155				
Injection Date:	17-Apr-2023 15:43:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175123-C-2	Lab Sample ID:	280-175123-2		
Client ID:	MW-119S-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions		
Column:		Detector	Info 2_091554_1		

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

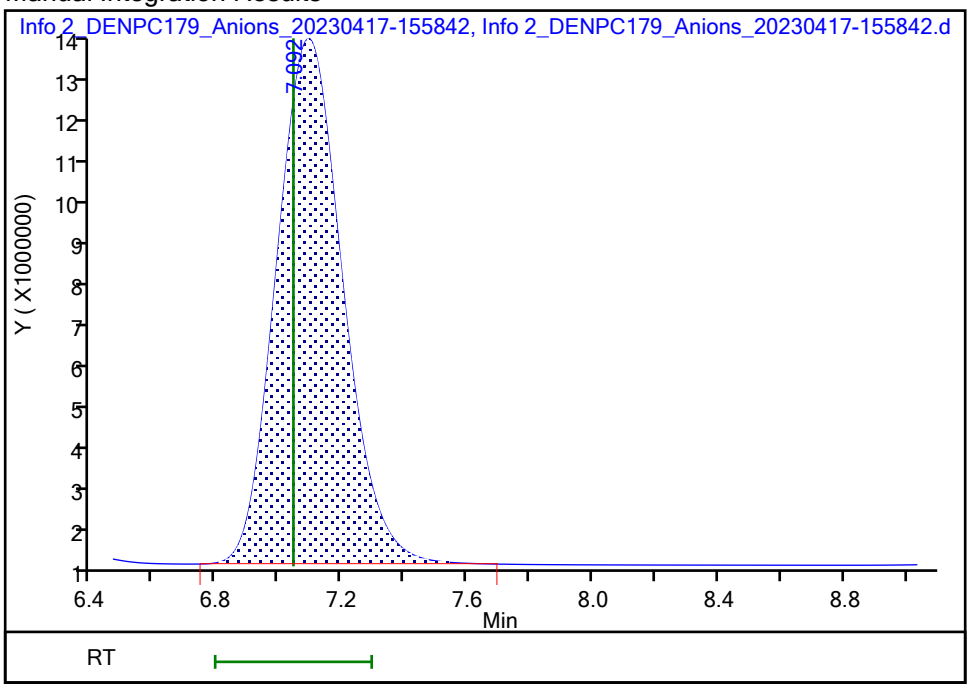
Processing Integration Results

RT: 7.09
Area: 185542791
Amount: 4.080800
Amount Units: ug/ml



Manual Integration Results

RT: 7.09
Area: 184850567
Amount: 4.065708
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:14

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 16:13:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-017
Misc. Info.: 280-0120473-017
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:13:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			ND	ND	
2 Chloride	4.392	4.388	0.004	977790198	NC	NC	M
3 Nitrite as N	5.092	5.088	0.004	110879515	2.50	2.42	M
4 Bromide	6.270	6.075	0.195	17147164	NC	NC	
5 Nitrate as N	7.050	7.043	0.007	108729132	2.50	2.41	M
6 Orthophosphate as P	9.333	9.402	-0.069	66031793	2.50	2.60	
7 Sulfate	10.610	10.633	-0.023	698664535	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

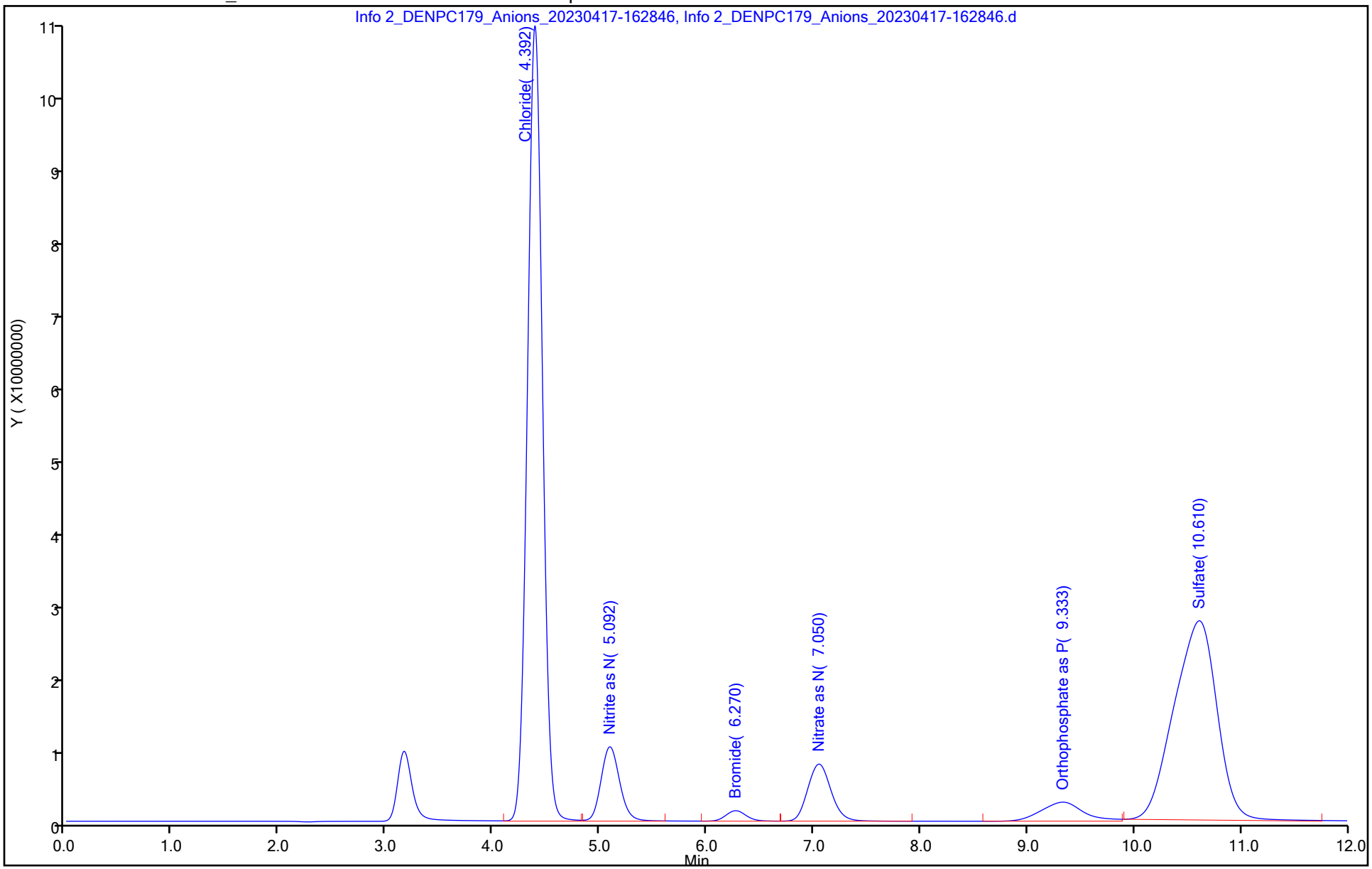
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:46 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162846.d				
Injection Date:	17-Apr-2023 16:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

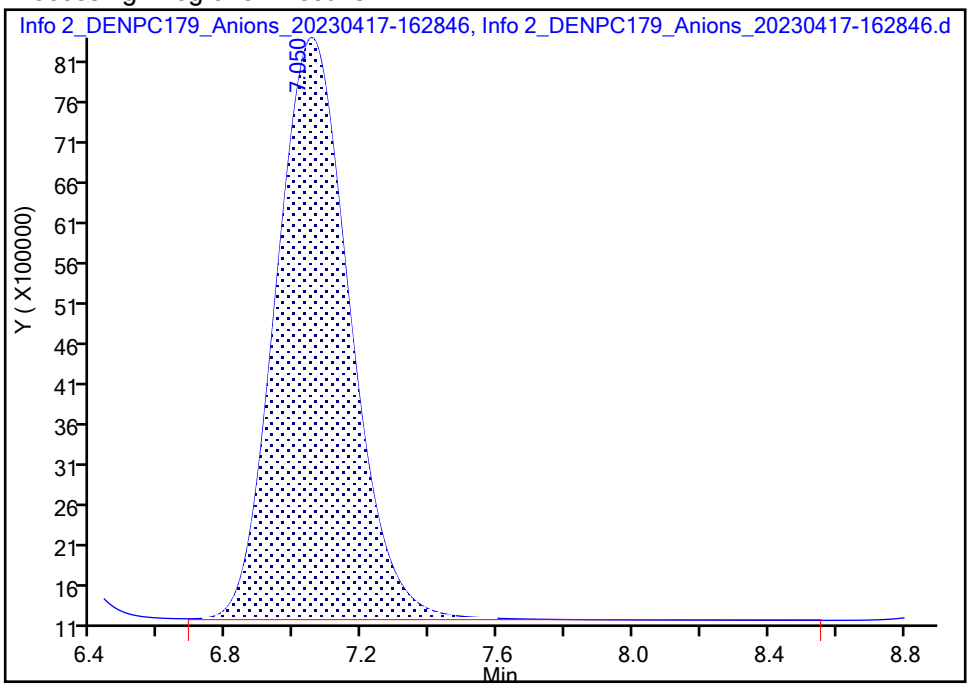
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162
Injection Date: 17-Apr-2023 16:13:00 Instrument ID: WC_IonChrom10
Lims ID: CCV
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

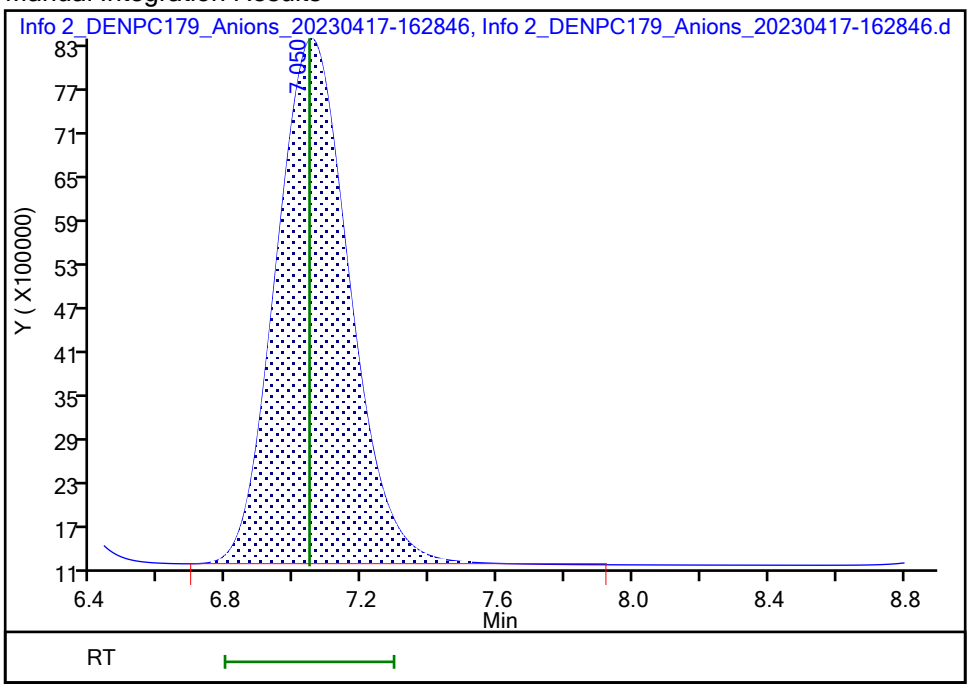
Processing Integration Results

RT: 7.05
Area: 108803145
Amount: 2.407734
Amount Units: ug/ml



Manual Integration Results

RT: 7.05
Area: 108729132
Amount: 2.406121
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:52
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162

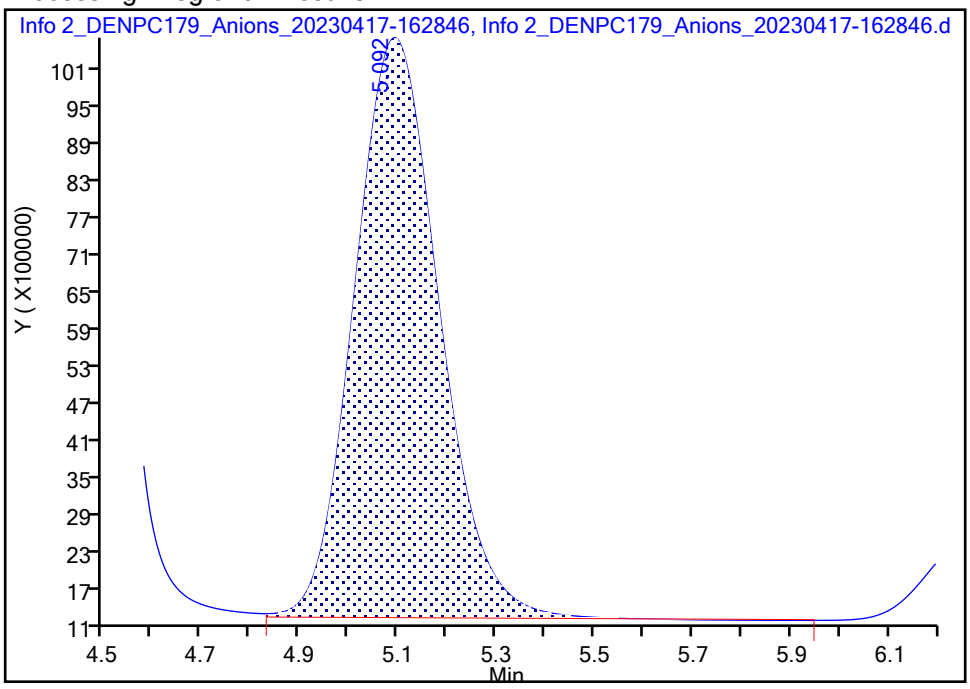
Injection Date:	17-Apr-2023 16:13:00	Instrument ID:	WC_IonChrom10		
Lims ID:	CCV				
Client ID:					
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions		
Column:		Detector	Info 2_091554_1		

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

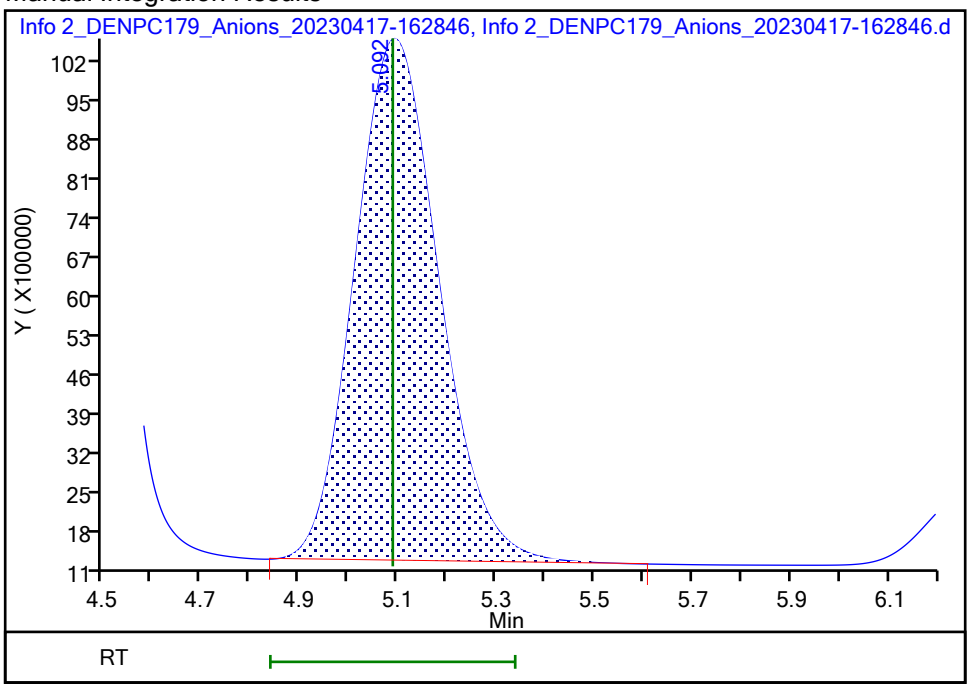
Processing Integration Results

RT: 5.09
Area: 111964988
Amount: 2.441693
Amount Units: ug/ml



Manual Integration Results

RT: 5.09
Area: 110879515
Amount: 2.418288
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:45

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 16:28:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-018
Misc. Info.: 280-0120473-018
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:52:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.042	6.075	-0.033	105239		NC	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.405	9.402	0.003	5901360		-0.2402	
7 Sulfate	10.647	10.633	0.014	439227		NC	M

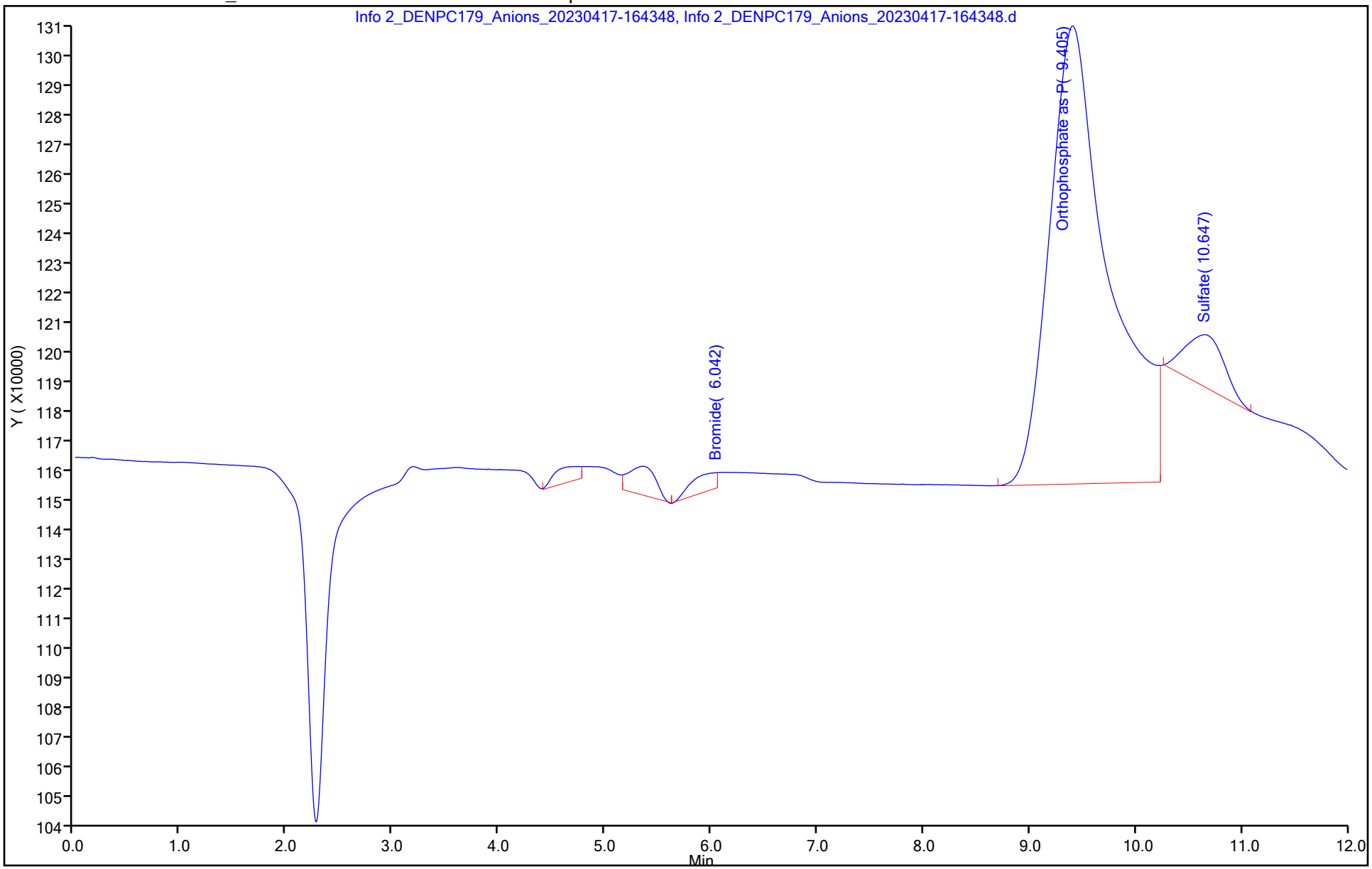
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:47 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164348.d				
Injection Date:	17-Apr-2023 16:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	18
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-171
Lims ID: 280-175123-C-3
Client ID: RW-3-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 16:58:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-020
Misc. Info.: 280-0120473-020
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:53:32

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.568	4.388	0.180	6416708790	NC	M
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.120	7.043	0.077	262051105	5.75	EM
7 Sulfate	10.668	10.633	0.035	674925285	NC	M

QC Flag Legend

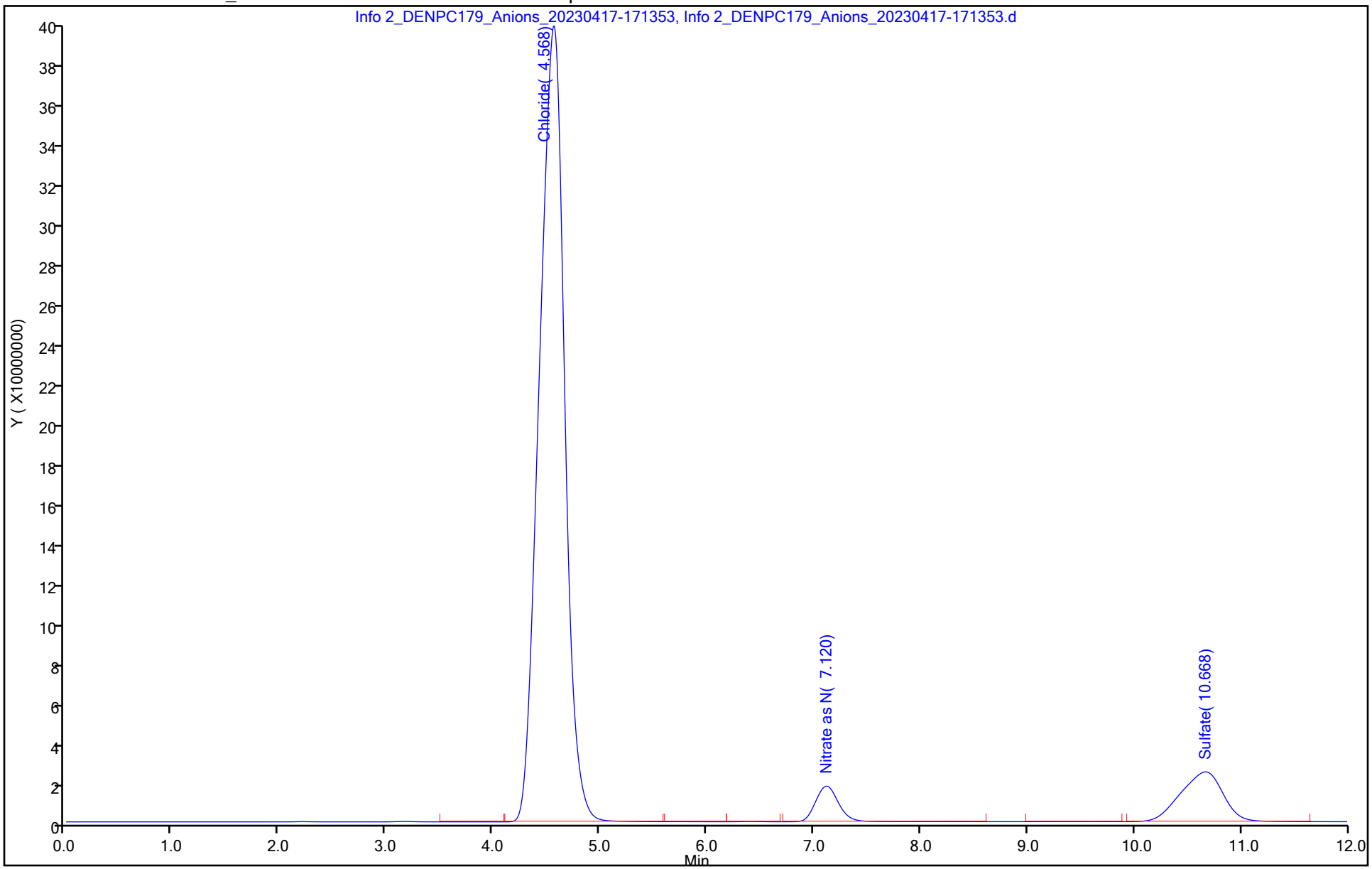
Processing Flags
- NC - Not Calibrated
- E - Exceeded Maximum Amount

Review Flags
- M - Manually Integrated

Report Date: 18-Apr-2023 11:36:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-171353.d				
Injection Date:	17-Apr-2023 16:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175123-C-3	Lab Sample ID:	280-175123-3	Worklist Smp#:	20
Client ID:	RW-3-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-172
Lims ID: 280-175123-C-3
Client ID: RW-3-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 17:13:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 5.0 ul Dil. Factor: 2.0000
Sample Info: 280-0120473-021
Misc. Info.: 280-0120473-021
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:53:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.483	4.388	0.095	3286790418	NC	M
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.097	7.043	0.054	127748955	2.82	M
7 Sulfate	10.663	10.633	0.030	338701295	NC	M

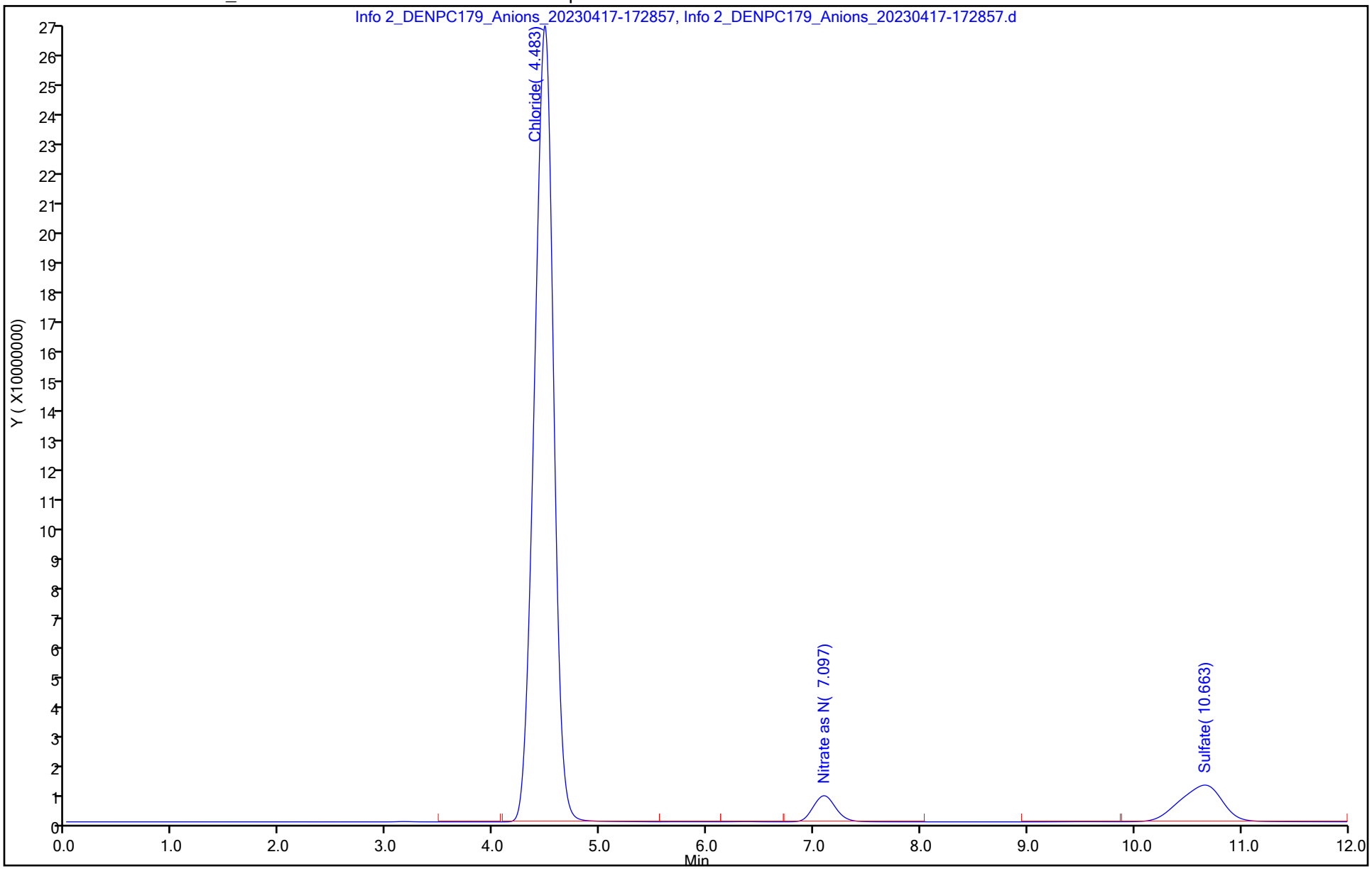
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-172857.d				
Injection Date:	17-Apr-2023 17:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175123-C-3	Lab Sample ID:	280-175123-3	Worklist Smp#:	21
Client ID:	RW-3-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	2.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

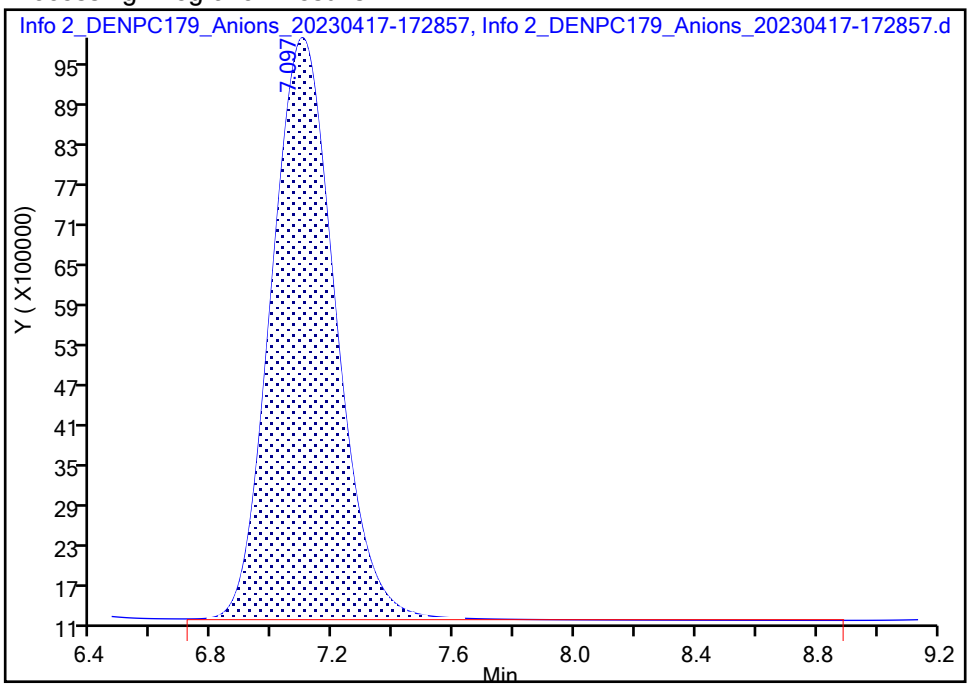
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-172		
Injection Date:	17-Apr-2023 17:13:00	Instrument ID:	WC_IonChrom10
Lims ID:	280-175123-C-3	Lab Sample ID:	280-175123-3
Client ID:	RW-3-20230413		
Operator ID:	wetchemd	ALS Bottle#:	0 Worklist Smp#: 21
Injection Vol:	5.0 ul	Dil. Factor:	2.0000
Method:	Anions_IC10	Limit Group:	Wet - Anions
Column:		Detector	Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

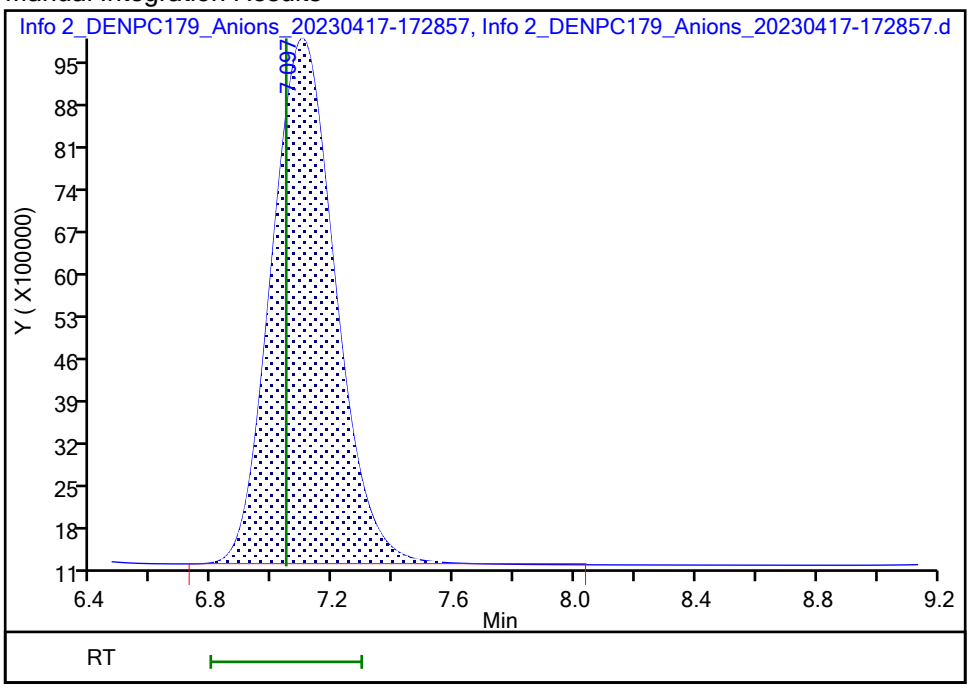
Processing Integration Results

RT: 7.10
Area: 128618621
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.10
Area: 127748955
Amount: 2.820788
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:53:43

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 19:14:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-029
Misc. Info.: 280-0120473-029
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:56 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:56:42

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			ND	ND	
2 Chloride	4.397	4.388	0.009	972805619	NC	NC	M
3 Nitrite as N	5.100	5.088	0.012	111586446	2.50	2.43	M
4 Bromide	6.278	6.075	0.203	17126988	NC	NC	
5 Nitrate as N	7.062	7.043	0.019	108815721	2.50	2.41	M
6 Orthophosphate as P	9.380	9.402	-0.022	63493313	2.50	2.48	
7 Sulfate	10.627	10.633	-0.006	688051501	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

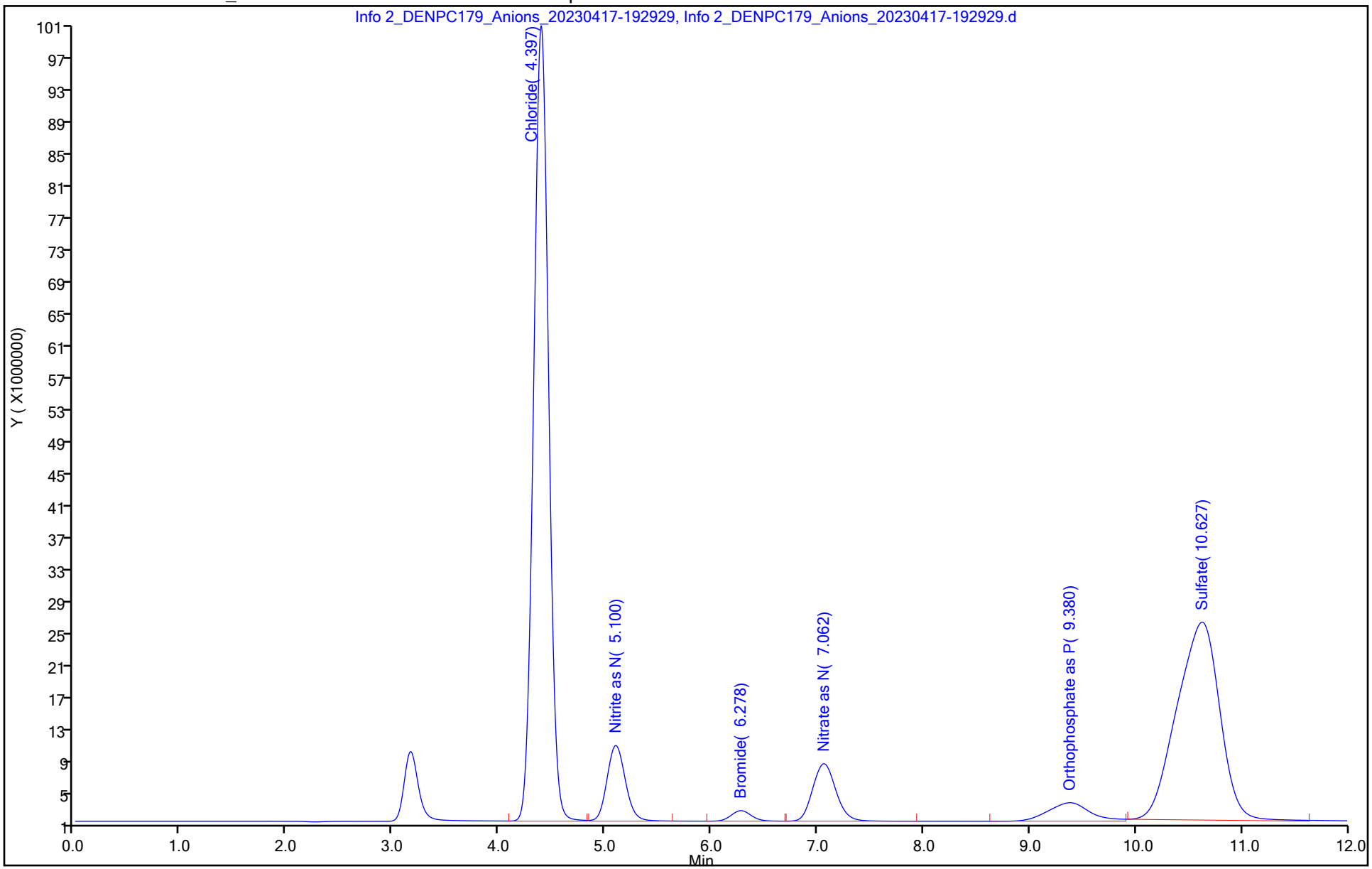
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:56 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192929.d

Injection Date:	17-Apr-2023 19:14:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	29
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Manual Integration/User Assign Peak Report

Eurofins Denver

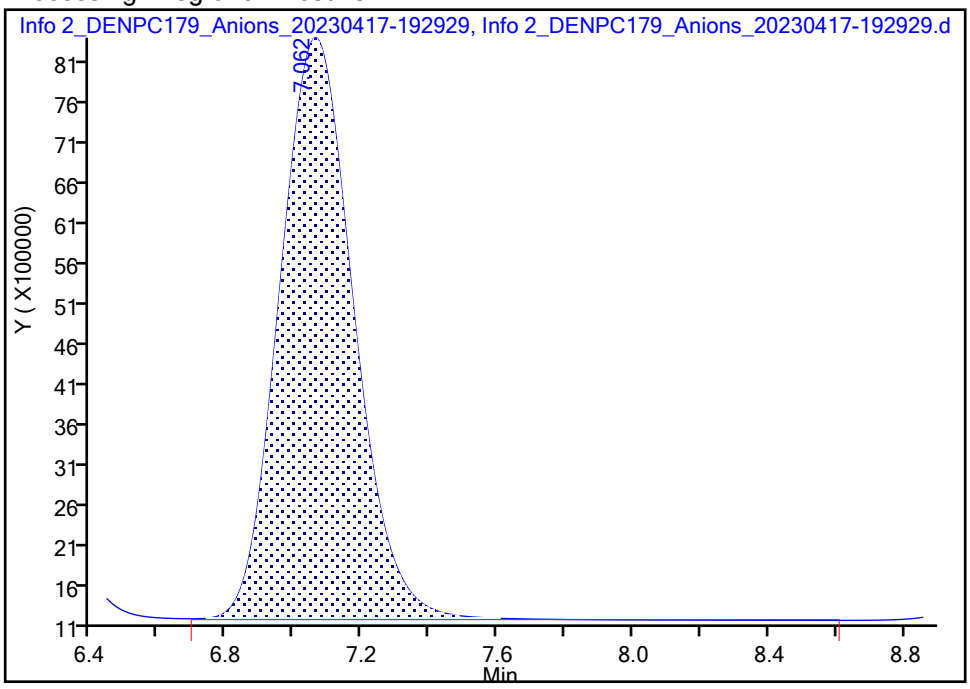
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192
Injection Date: 17-Apr-2023 19:14:00 Instrument ID: WC_IonChrom10
Lims ID: CCV
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

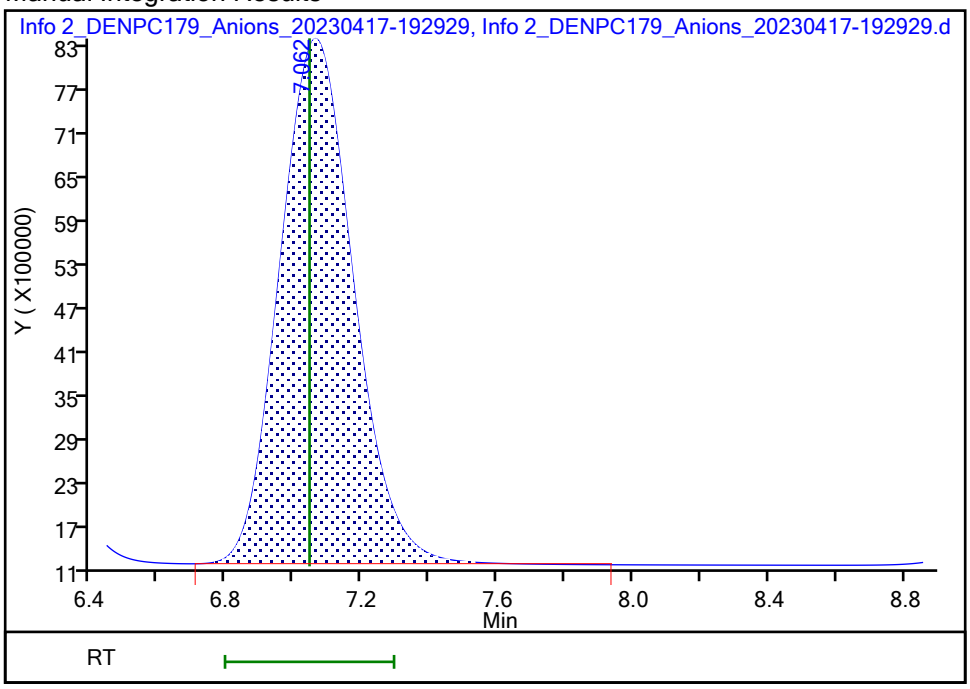
Processing Integration Results

RT: 7.06
Area: 108897104
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 7.06
Area: 108815721
Amount: 2.408008
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:56:32
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192

Injection Date: 17-Apr-2023 19:14:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 29

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions

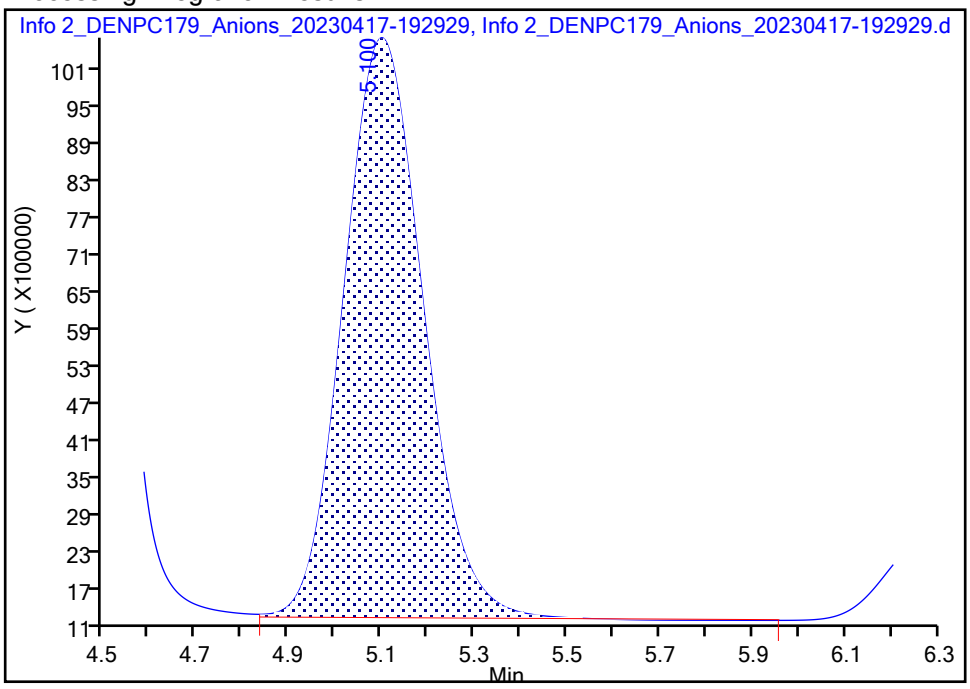
Column: Detector Info 2_091554_1

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

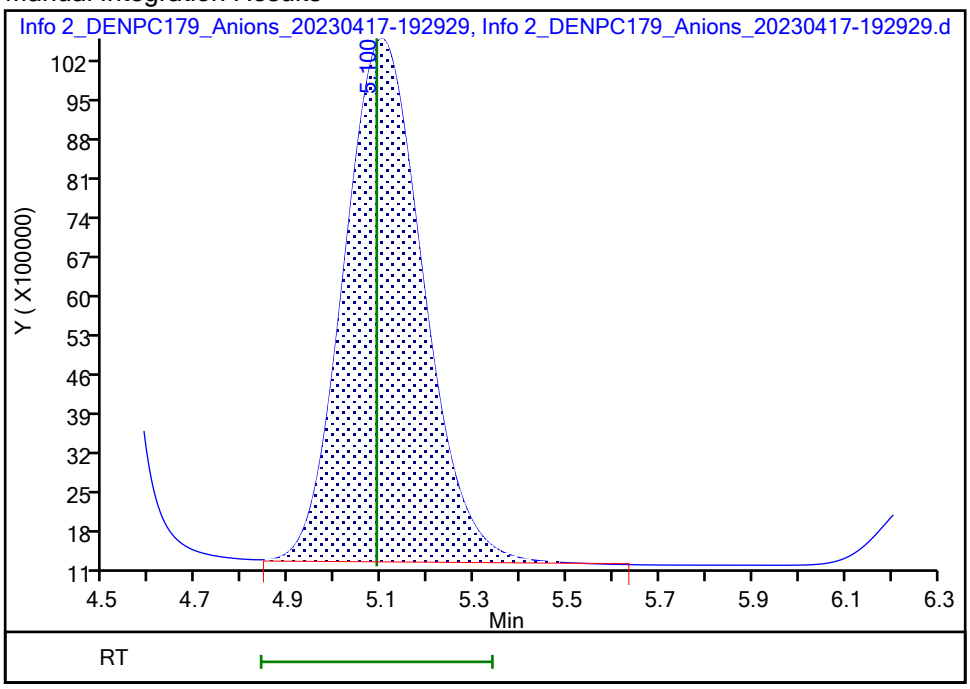
Processing Integration Results

RT: 5.10
Area: 112699248
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 5.10
Area: 111586446
Amount: 2.433531
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:56:26

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-194
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 19:29:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-030
Misc. Info.: 280-0120473-030
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 18-Apr-2023 11:36:56 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:56:53

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.150	6.075	0.075	152131		NC	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.455	9.402	0.053	4591295		-0.3021	
7 Sulfate	10.660	10.633	0.027	412660		NC	M

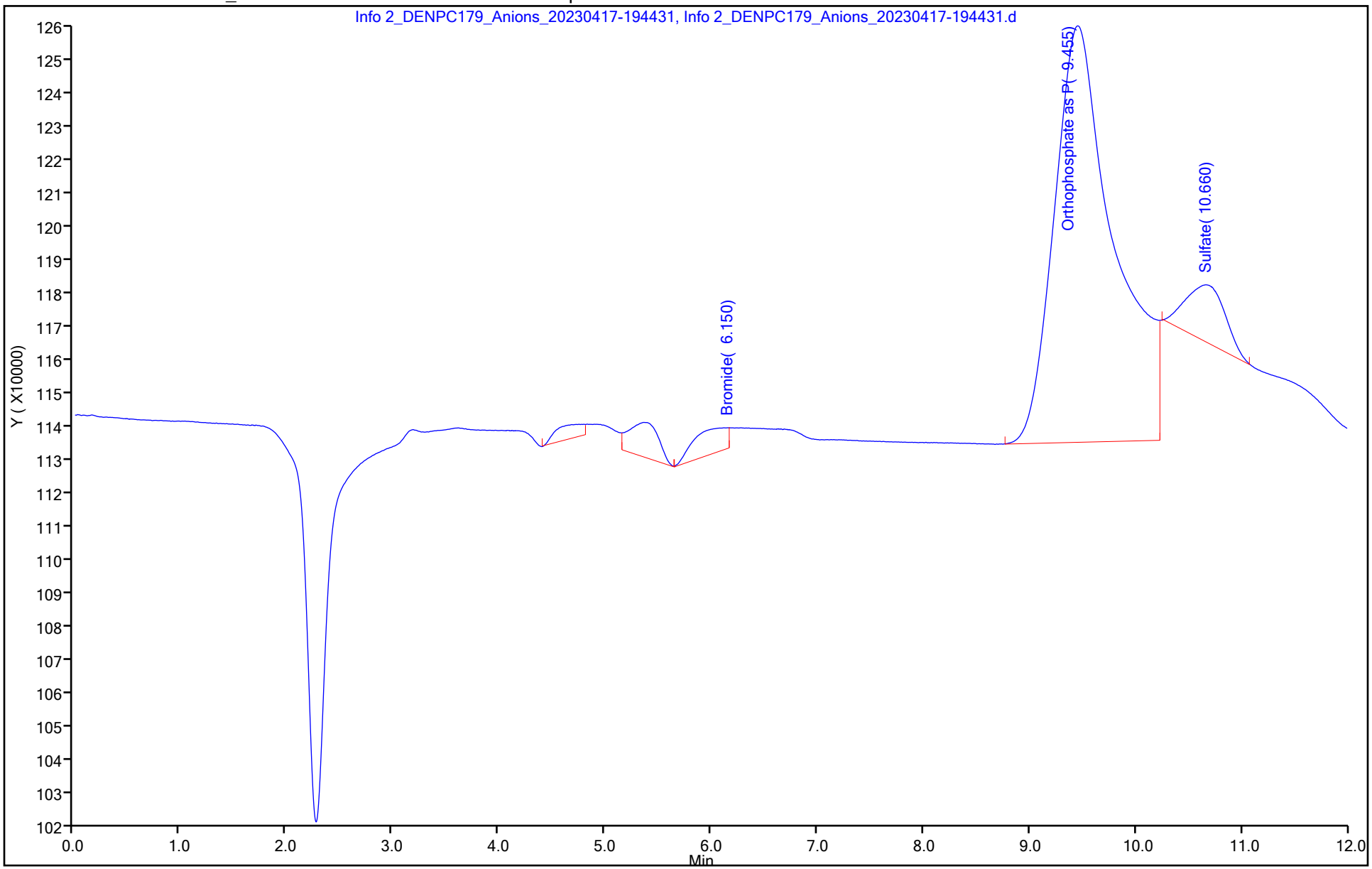
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-194431.d				
Injection Date:	17-Apr-2023 19:29:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	30
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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IC Instrument Information

WL: 170473 **Inst ID:** IC10 **Analysis Date:** 4/17/23 **Analyst:** MEC

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	175122	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175123	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175121	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174751	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174752	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174755	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174764	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174847	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174869	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174554	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174585	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174728	4	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174807	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
40437065	43230492	44844044	46492699	45903612		-1277342			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			46378611		
M8087413	M21615246	M44844044	M116231748	M229518060					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
5 Nitrate as N				Signal: 1					
42172205	39818610	42066844	45095286	46132733		-1634037			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			45867680		
M8434441	M19909305	M42066844	M112738215	M230663663					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					
6 Orthophosphate as P				Signal: 1			R1		
69769055	47259032	34760084	26027078	22431185		10983593			*0.990
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			21157507		
M13953811	M23629516	M34760084	M65067694	M112155923					
120345(2)	120345(3)	120345(4)	120345(5)	120345(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 13-Apr-2023 18:10:21
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14192
Inj Date: 12-Apr-2023 14:04:00 Worklist: 120345 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14341
Inj Date: 12-Apr-2023 14:19:00 Worklist: 120345 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-14491
Inj Date: 12-Apr-2023 14:34:00 Worklist: 120345 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15041
Inj Date: 12-Apr-2023 14:49:00 Worklist: 120345 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15191
Inj Date: 12-Apr-2023 15:04:00 Worklist: 120345 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15341
Inj Date: 12-Apr-2023 15:19:00 Worklist: 120345 Sample#: 6

Start Cal Date: 12-Apr-2023 14:04:00 End Cal Date: 12-Apr-2023 15:19:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Apr-2023 13:55:16	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 17.1	10.0	117.1	
2 Chloride	80.0	85.7	7.1	10.0	107.1	
4 Bromide	2.00	2.01	0.6	10.0	100.6	
7 Sulfate	80.0	86.9	8.7	10.0	108.7	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Apr-2023 15:34:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120345-007				
Misc. Info.:	280-0120345-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	14-Apr-2023 13:56:07	Calib Date:	12-Apr-2023 15:19:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-15				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1620				
Start Cal Date:	12-Apr-2023 14:04:00				
End Cal Date:	12-Apr-2023 15:19:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.12	6.0	10.0	106.0	
5 Nitrate as N	2.00	2.15	7.4	10.0	107.4	
6 Orthophosphate as	2.00	2.84	*41.9	10.0	141.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 12:13:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-001
Misc. Info.: 280-0120473-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:34 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 17-Apr-2023 12:30:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			2.50	ND	
2 Chloride	4.392	4.392	0.000	965656060	50.0	50.5	M
3 Nitrite as N	5.092	5.092	0.000	111266176	NC	NC	M
4 Bromide	6.270	6.270	0.000	17057754	2.50	2.36	
5 Nitrate as N	7.045	7.045	0.000	108180494	NC	NC	M
6 Orthophosphate as P	9.338	9.338	0.000	67394238	NC	NC	
7 Sulfate	10.613	10.613	0.000	691020270	50.0	50.2	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

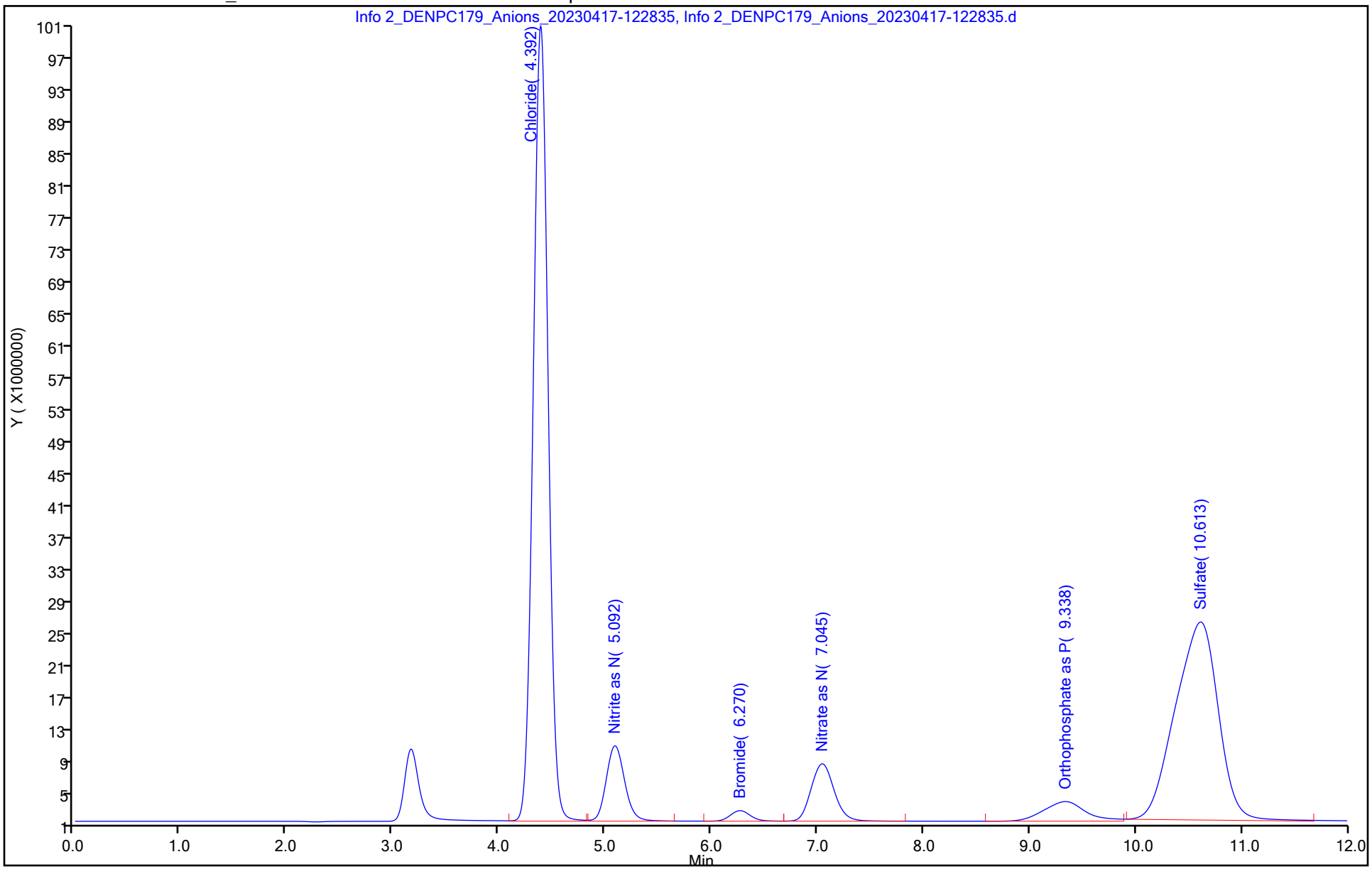
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122835.d

Injection Date:	17-Apr-2023 12:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122

Injection Date: 17-Apr-2023 12:13:00 Instrument ID: WC_IonChrom10

Lims ID: ccv

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

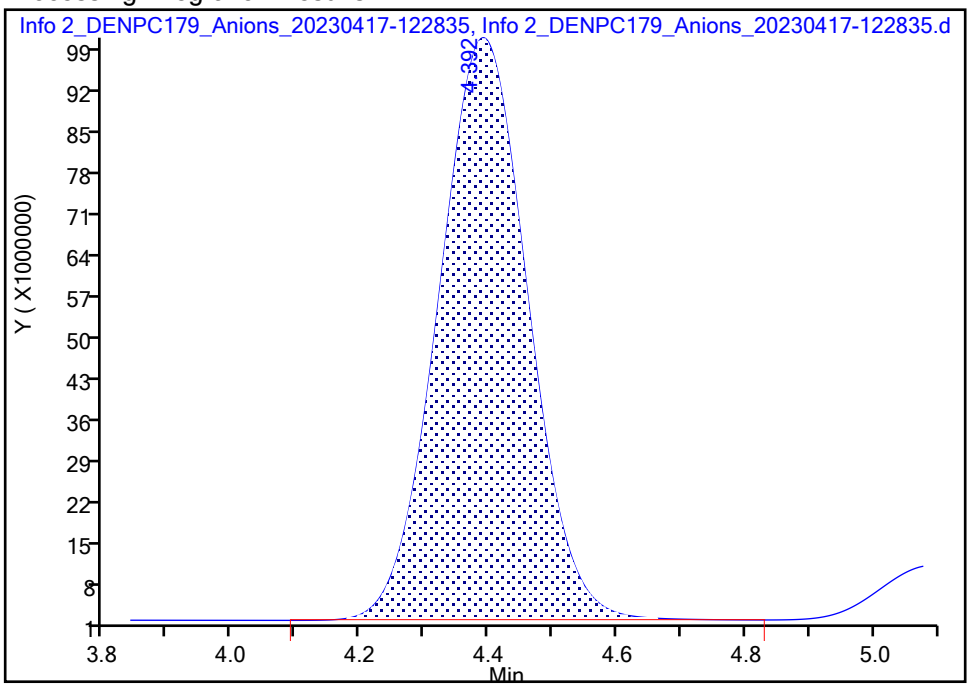
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

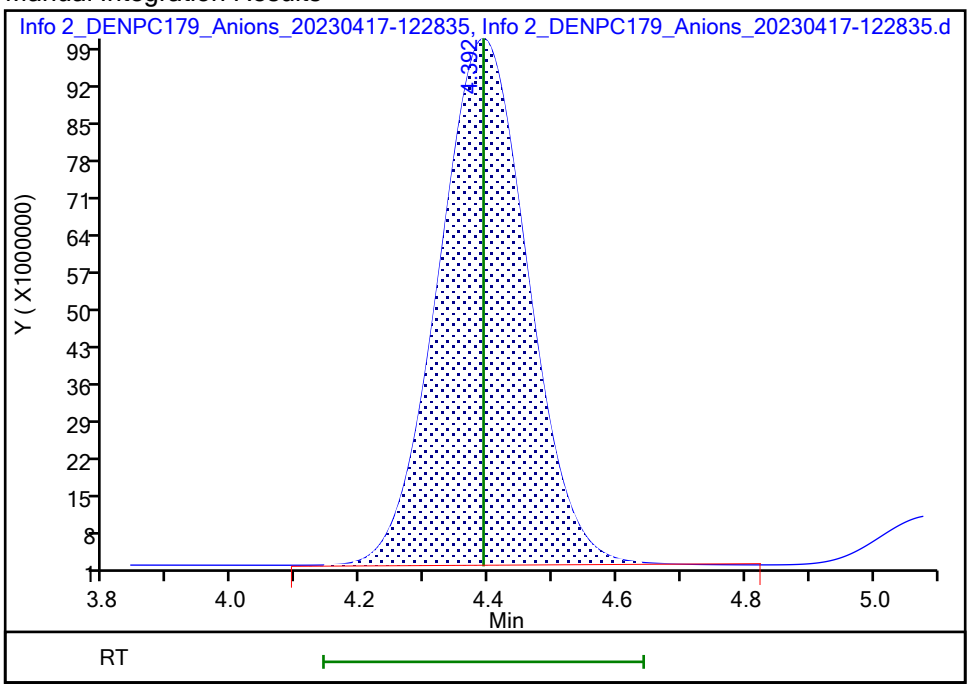
Processing Integration Results

RT: 4.39
Area: 966443190
Amount: 50.498856
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 965656060
Amount: 50.457838
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:15

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

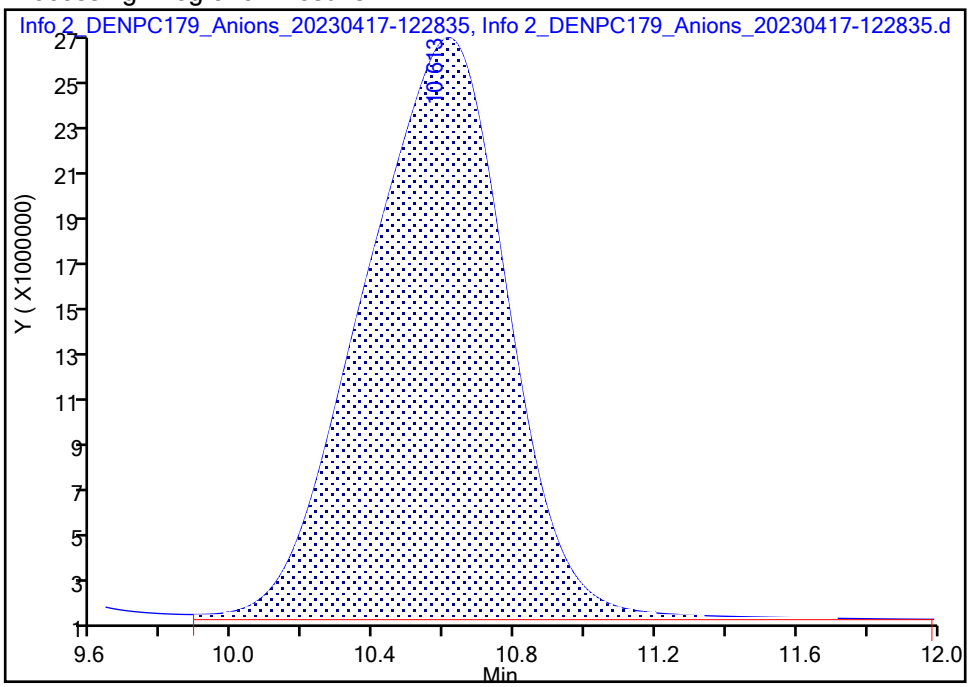
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-122
Injection Date: 17-Apr-2023 12:13:00 Instrument ID: WC_IonChrom10
Lims ID: ccv
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

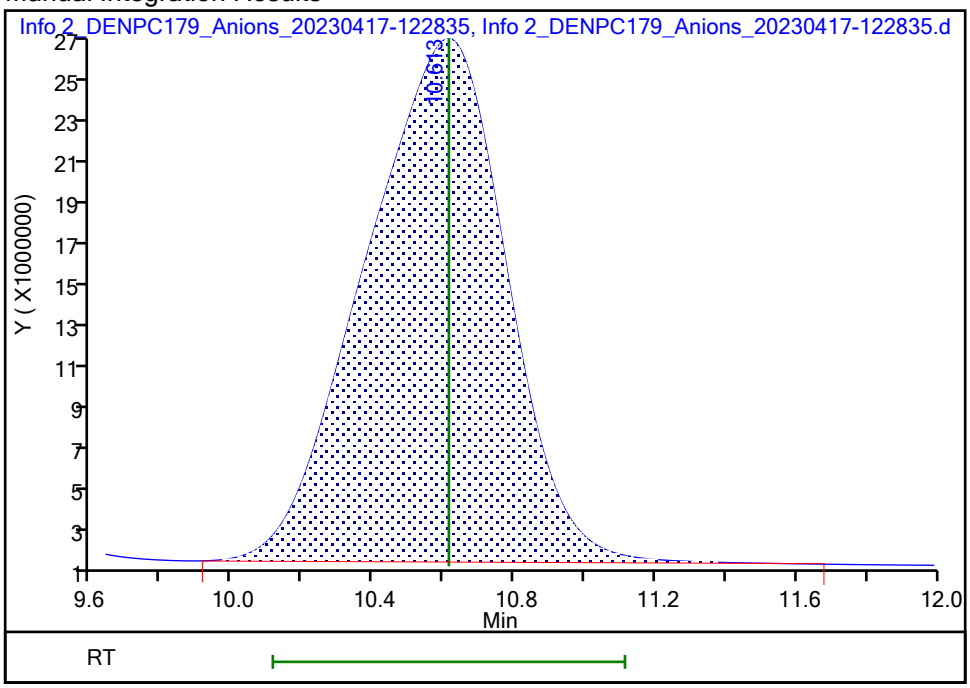
Processing Integration Results

RT: 10.61
Area: 708653349
Amount: 51.433019
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 691020270
Amount: 50.155551
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:36
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 12:28:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-002
Misc. Info.: 280-0120473-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:35 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:45:51

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.392				ND	
3 Nitrite as N		5.092				ND	
4 Bromide	6.092	6.092	0.000	135061		-0.1208	
5 Nitrate as N		7.045				ND	
6 Orthophosphate as P	9.407	9.407	0.000	6308047		NC	
7 Sulfate	10.633	10.633	0.000	492097		0.1287	M

QC Flag Legend

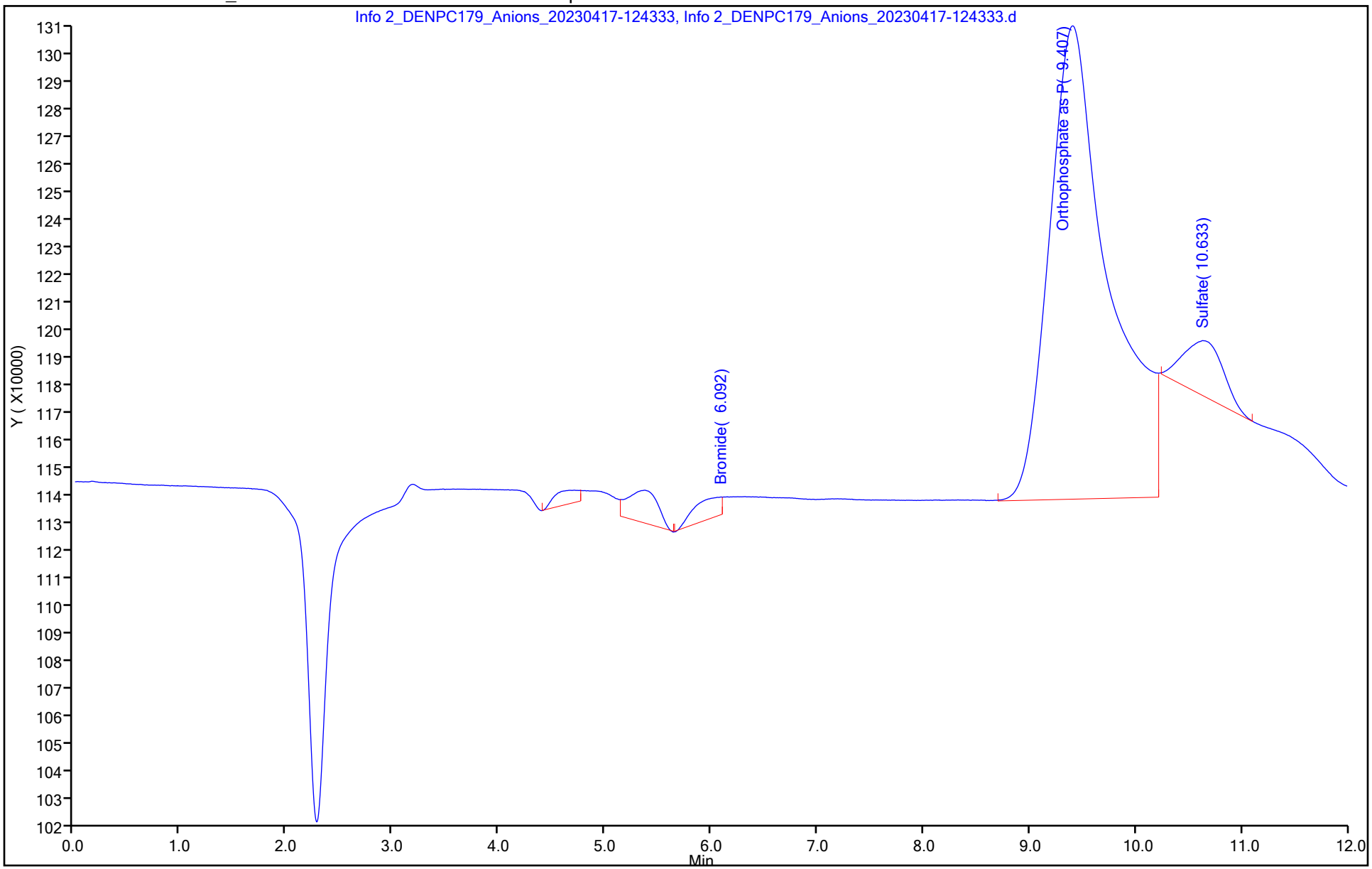
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:35 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124333.d

Injection Date:	17-Apr-2023 12:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-124

Injection Date: 17-Apr-2023 12:28:00 Instrument ID: WC_IonChrom10

Lims ID: ccb

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 2

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

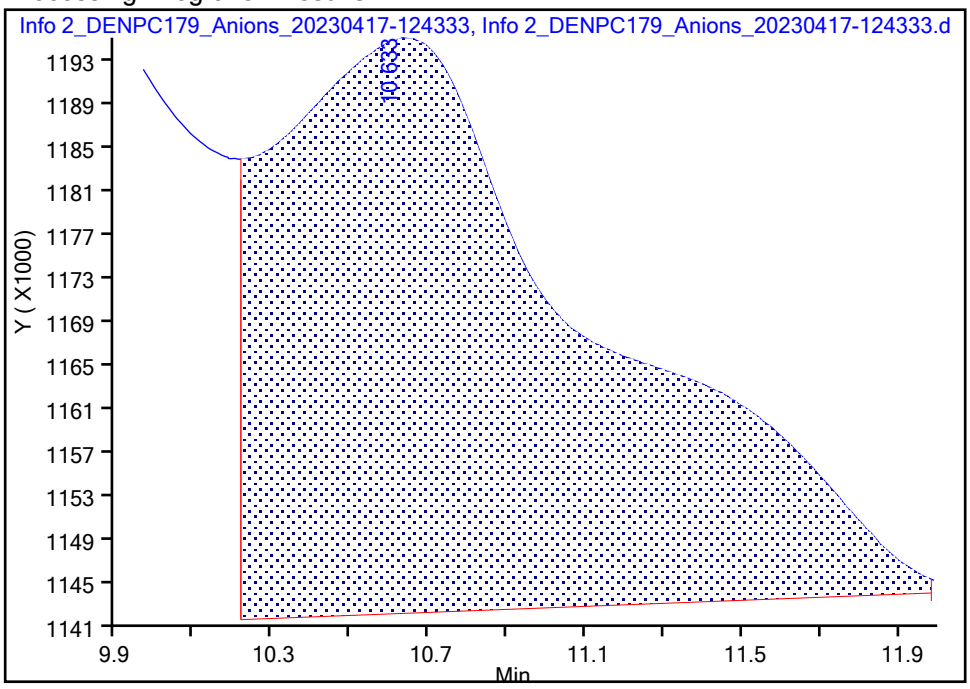
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

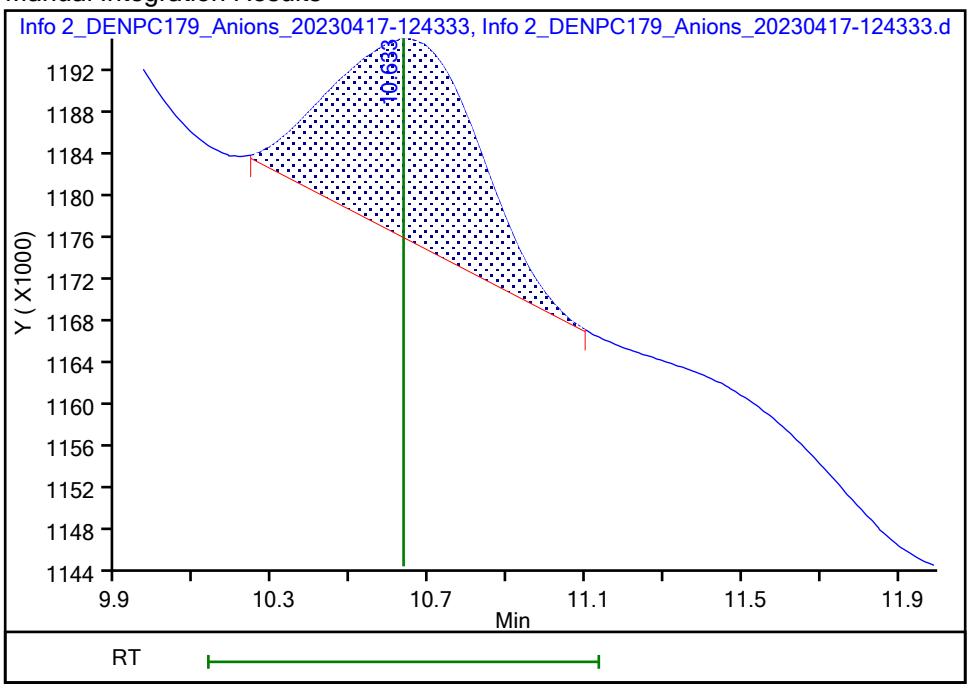
Processing Integration Results

RT: 10.63
Area: 3065604
Amount: 0.315115
Amount Units: ug/ml



Manual Integration Results

RT: 10.63
Area: 492097
Amount: 0.128671
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:49

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 17-Apr-2023 12:43:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-003
Misc. Info.: 280-0120473-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:36 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:46:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			0.2500	ND	
2 Chloride	4.373	4.373	0.000	43365025	2.50	2.40	M
3 Nitrite as N	5.100	5.100	0.000	9679058	NC	NC	M
4 Bromide	6.292	6.292	0.000	1517948	0.2500	0.0820	M
5 Nitrate as N	7.098	7.098	0.000	9034958	NC	NC	M
6 Orthophosphate as P	9.373	9.373	0.000	16271405	NC	NC	
7 Sulfate	10.637	10.637	0.000	31642899	2.50	2.39	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

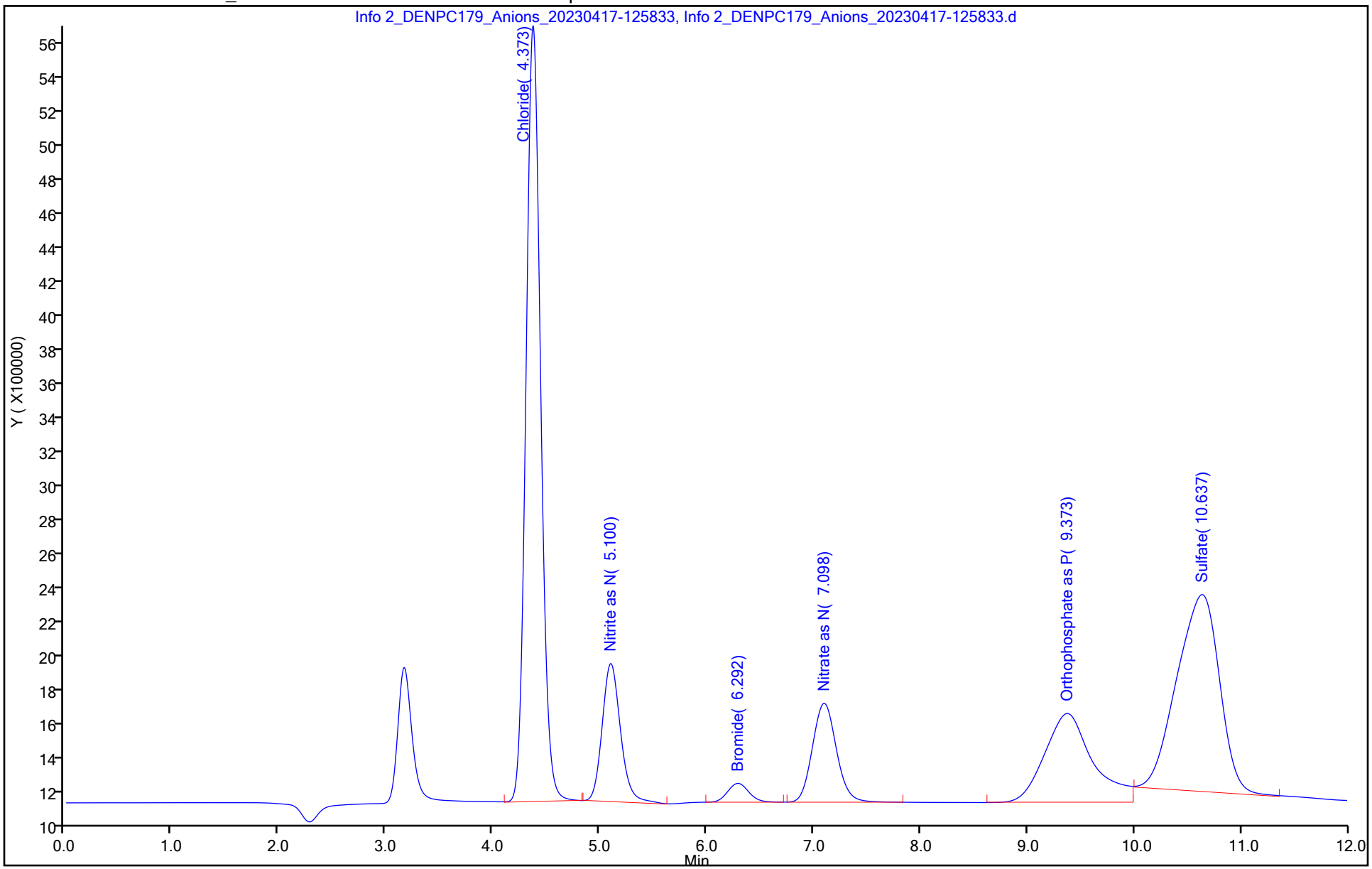
Reagents:

IC CAL cl/so4_00475 Amount Added: 0.20 Units: mL
IC Cal low_00703 Amount Added: 0.10 Units: mL

Report Date: 18-Apr-2023 11:36:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125833.d				
Injection Date:	17-Apr-2023 12:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125

Injection Date: 17-Apr-2023 12:43:00 Instrument ID: WC_IonChrom10

Lims ID: mrl

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

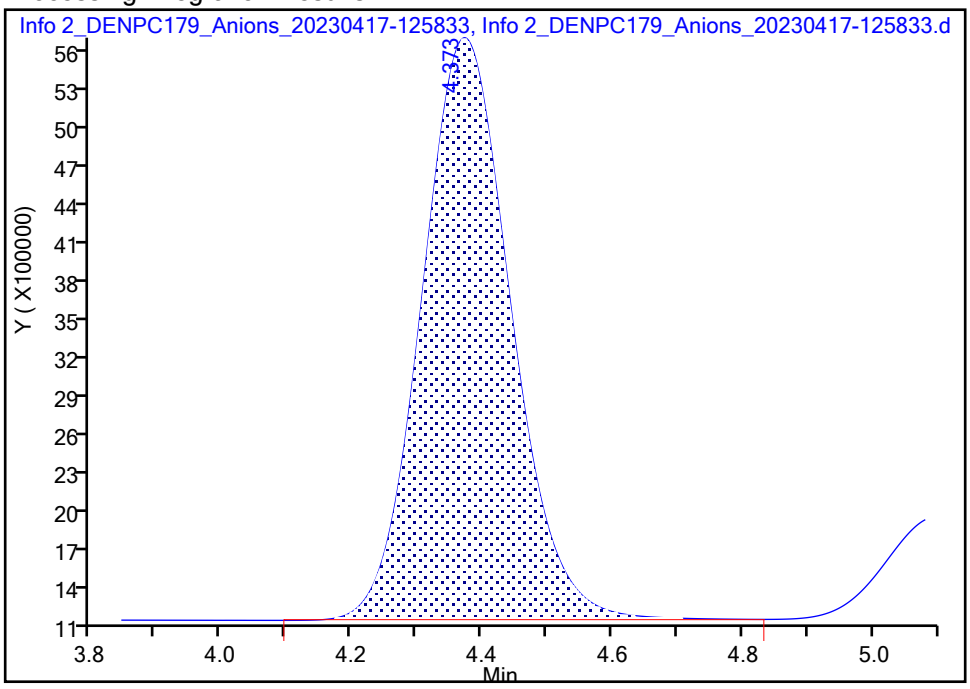
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

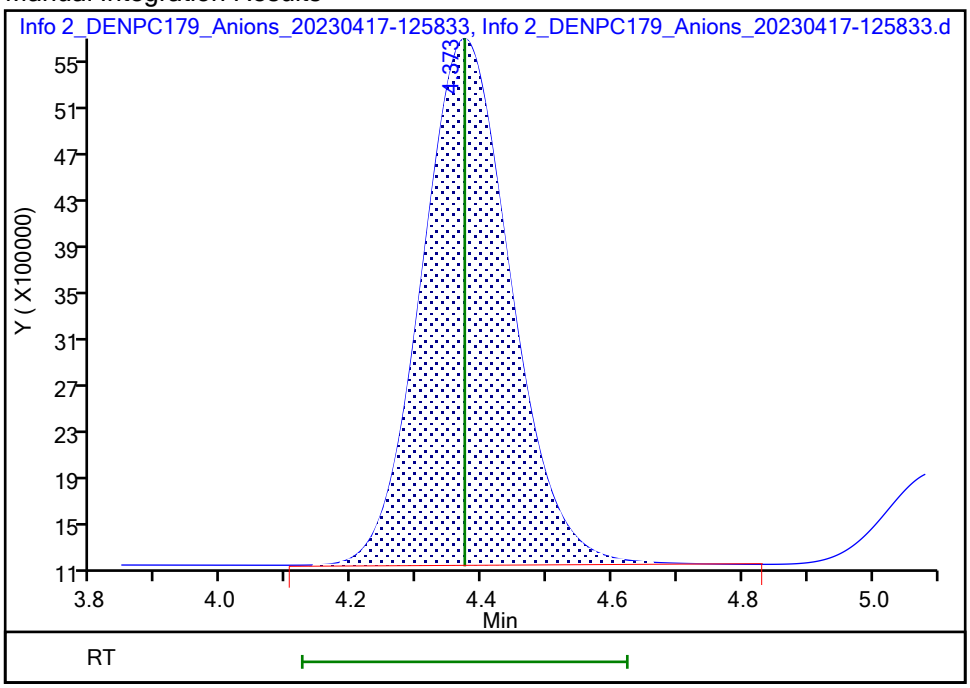
Processing Integration Results

RT: 4.37
Area: 43446307
Amount: 2.401156
Amount Units: ug/ml



Manual Integration Results

RT: 4.37
Area: 43365025
Amount: 2.396920
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:45:59

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

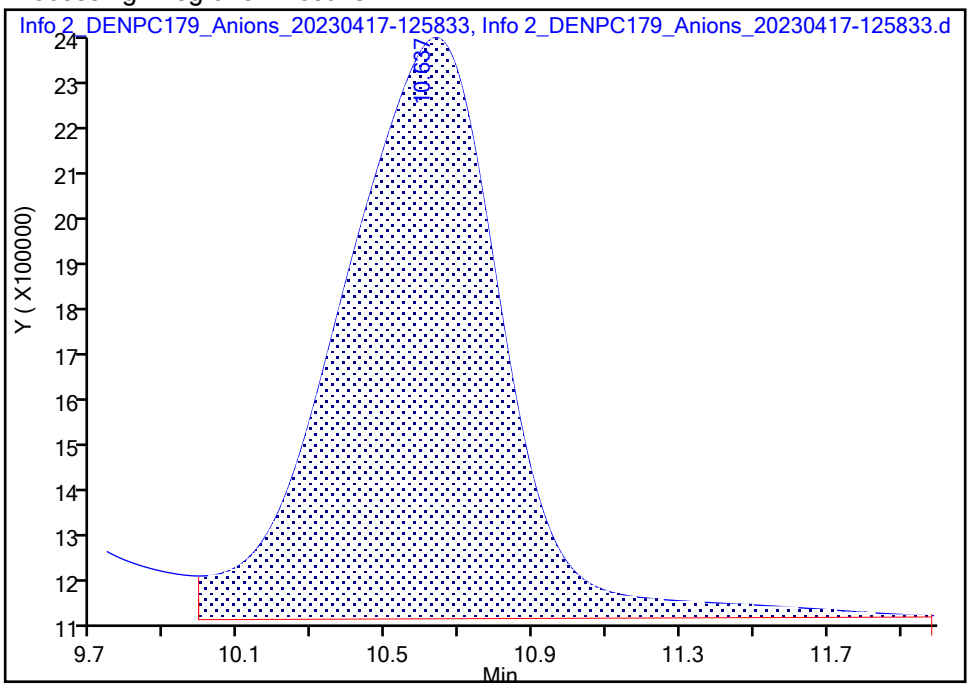
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-125
Injection Date: 17-Apr-2023 12:43:00 Instrument ID: WC_IonChrom10
Lims ID: mrl
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

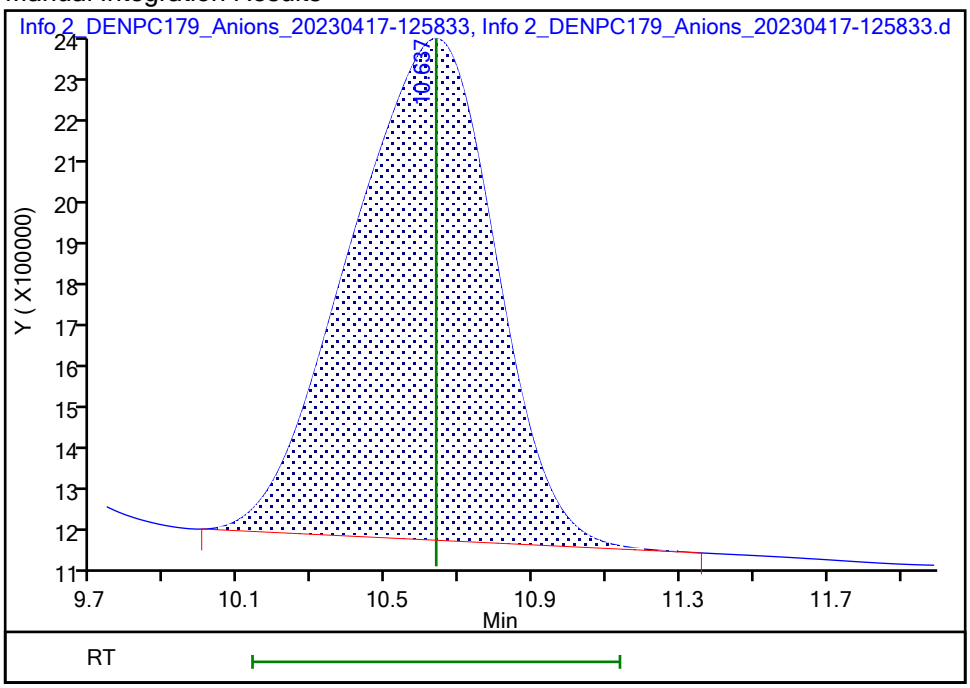
Processing Integration Results

RT: 10.64
Area: 37513872
Amount: 2.810798
Amount Units: ug/ml



Manual Integration Results

RT: 10.64
Area: 31642899
Amount: 2.385462
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:12
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 17-Apr-2023 12:58:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-004
Misc. Info.: 280-0120473-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:37 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 17-Apr-2023 13:33:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			2.50	ND	
2 Chloride	4.388	4.388	0.000	964877890	50.0	50.4	M
3 Nitrite as N	5.088	5.088	0.000	111656489	NC	NC	M
4 Bromide	6.268	6.268	0.000	17046566	2.50	2.36	
5 Nitrate as N	7.042	7.042	0.000	108151002	NC	NC	M
6 Orthophosphate as P	9.335	9.335	0.000	69309307	NC	NC	
7 Sulfate	10.605	10.605	0.000	686690141	50.0	49.8	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

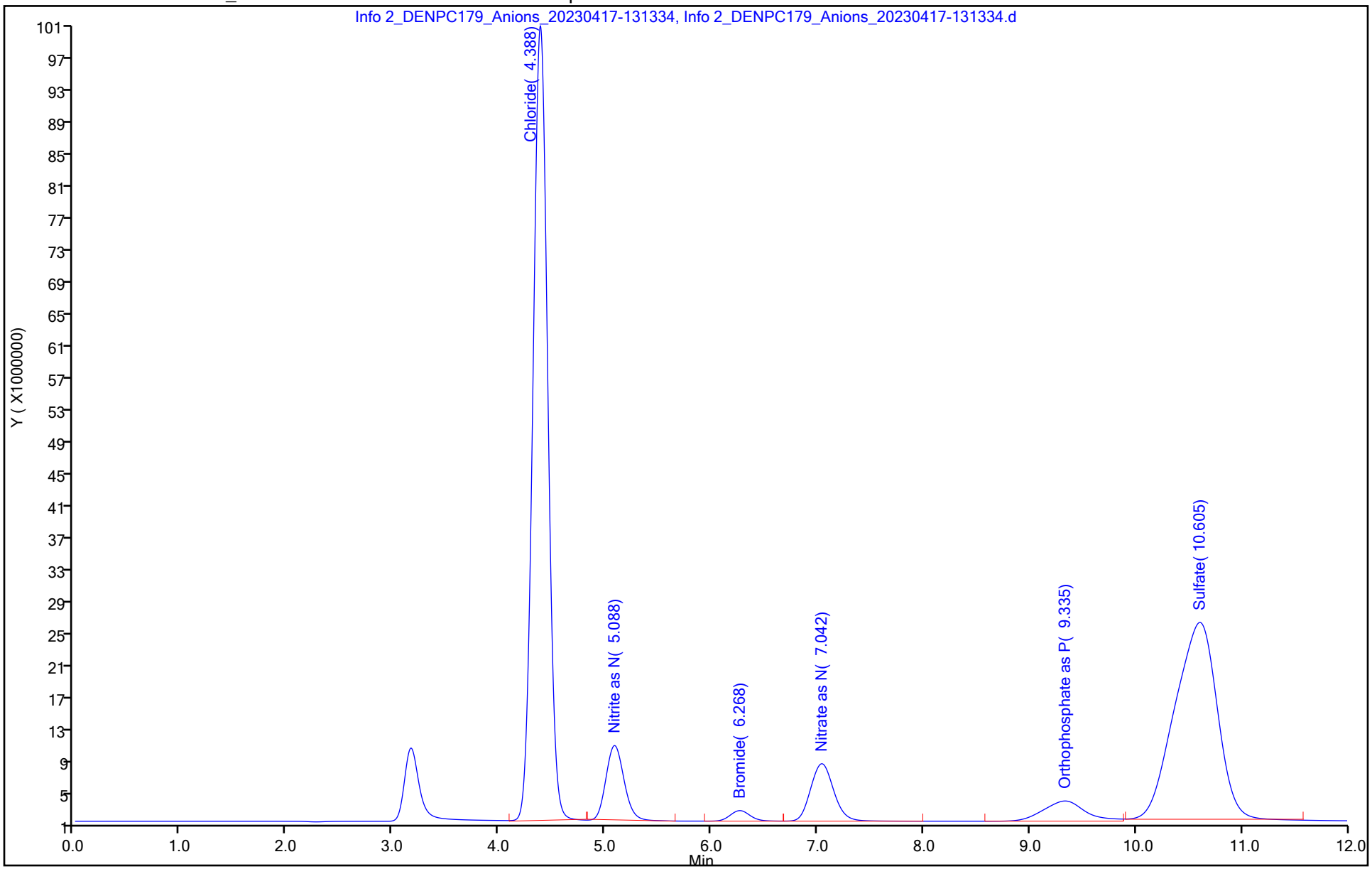
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:37 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131334.d

Injection Date:	17-Apr-2023 12:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131

Injection Date: 17-Apr-2023 12:58:00 Instrument ID: WC_IonChrom10

Lims ID: lcs

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

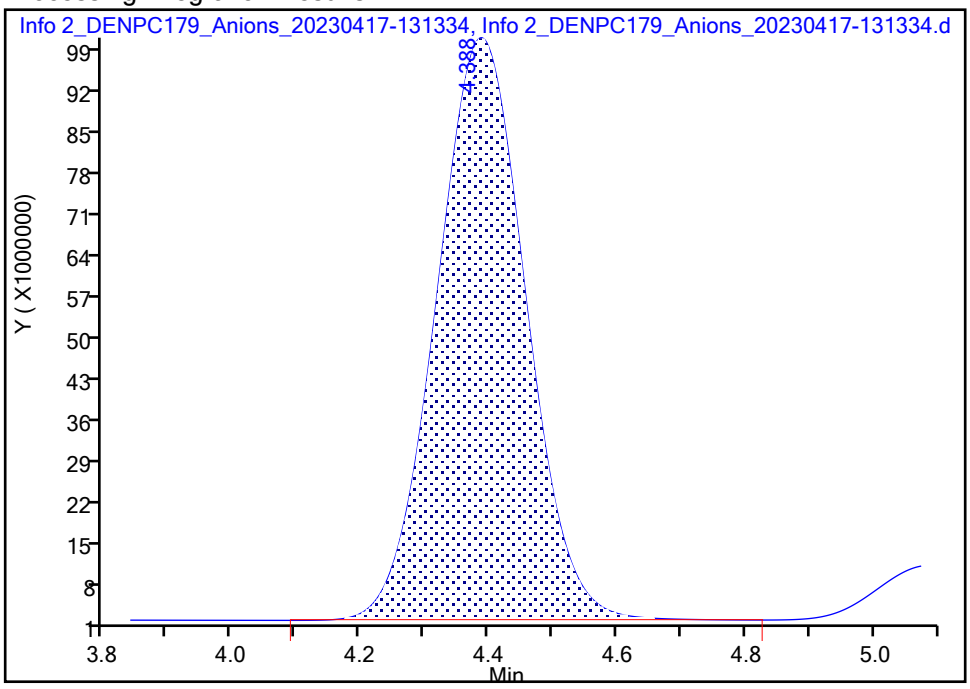
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

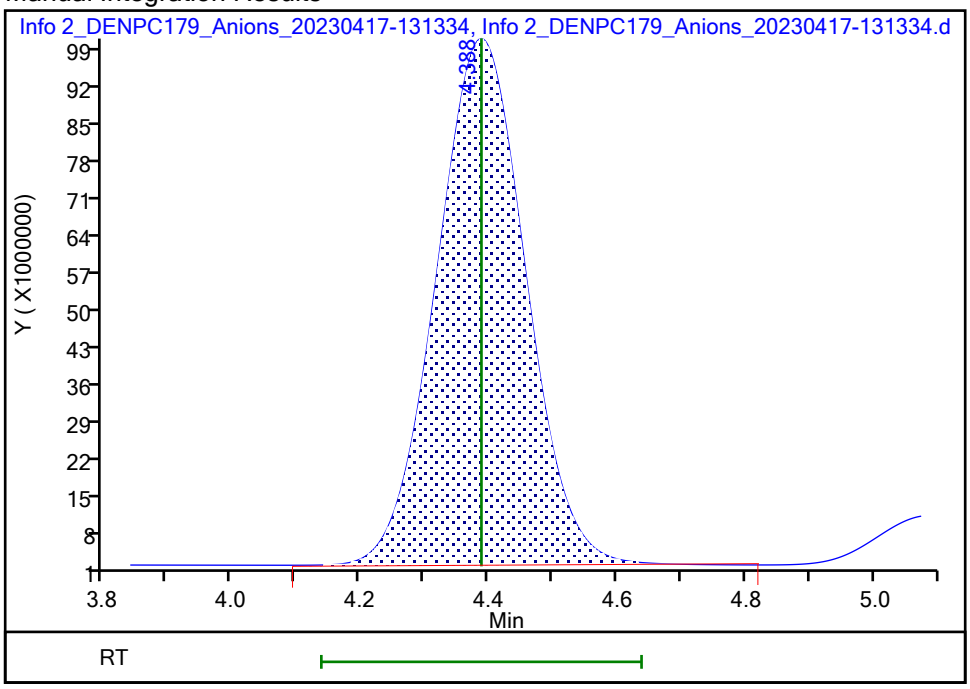
Processing Integration Results

RT: 4.39
Area: 965518345
Amount: 50.450662
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 964877890
Amount: 50.417287
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:25

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-131

Injection Date: 17-Apr-2023 12:58:00 Instrument ID: WC_IonChrom10

Lims ID: lcs

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

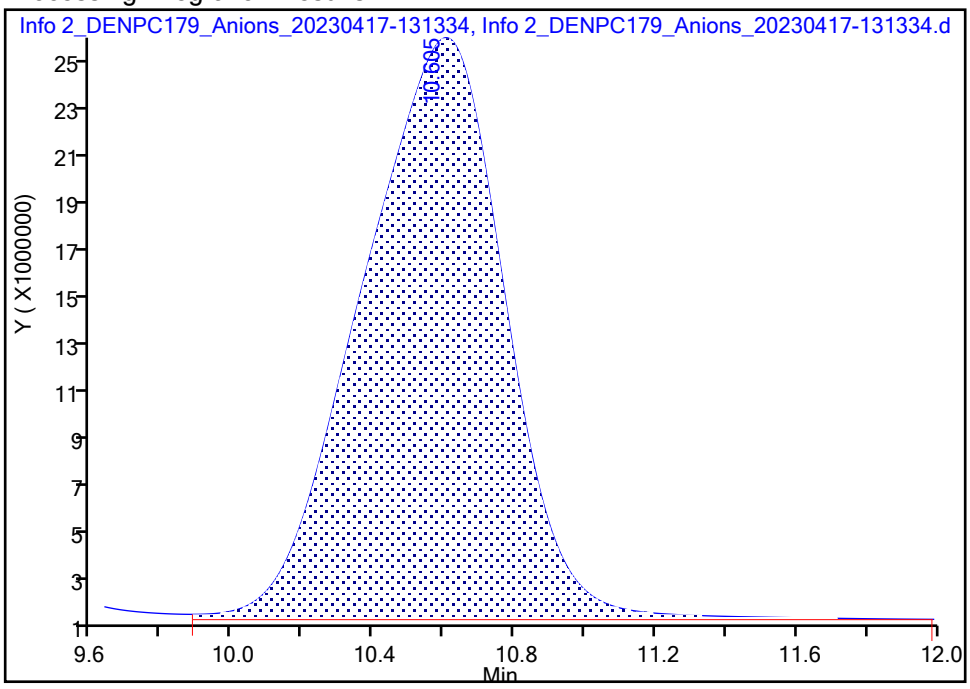
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

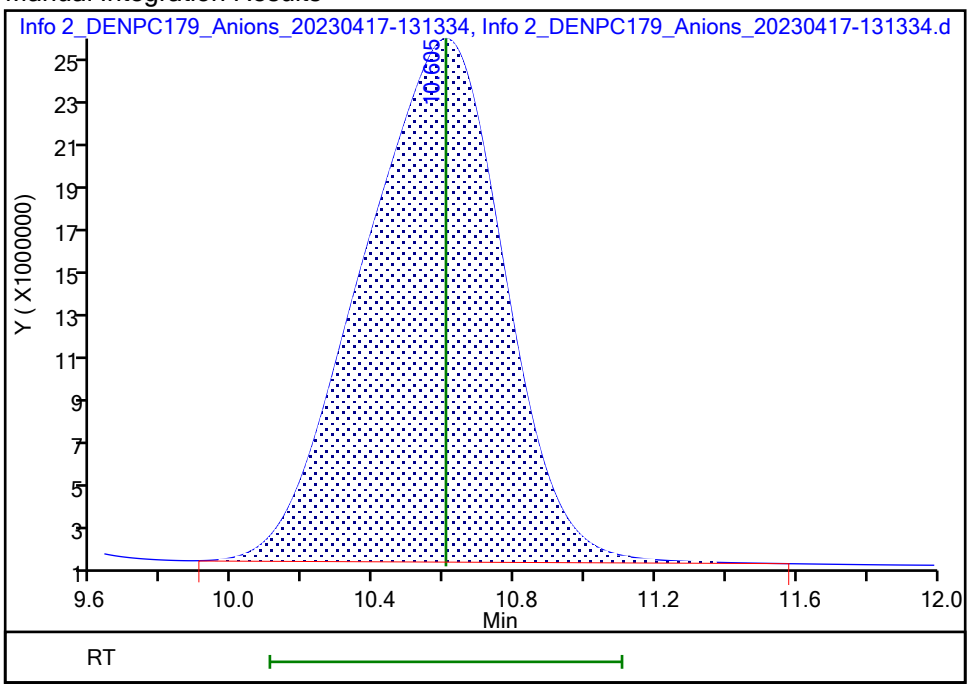
Processing Integration Results

RT: 10.61
Area: 705744294
Amount: 51.222266
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 686690141
Amount: 49.841845
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:35

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 17-Apr-2023 13:13:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-005
Misc. Info.: 280-0120473-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:37 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:46:58

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			2.50	ND	
2 Chloride	4.388	4.388	0.000	964113552	50.0	50.4	M
3 Nitrite as N	5.088	5.088	0.000	110818321	NC	NC	M
4 Bromide	6.272	6.272	0.000	17020706	2.50	2.36	
5 Nitrate as N	7.043	7.043	0.000	107794212	NC	NC	M
6 Orthophosphate as P	9.337	9.337	0.000	69452215	NC	NC	
7 Sulfate	10.610	10.610	0.000	687195393	50.0	49.9	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

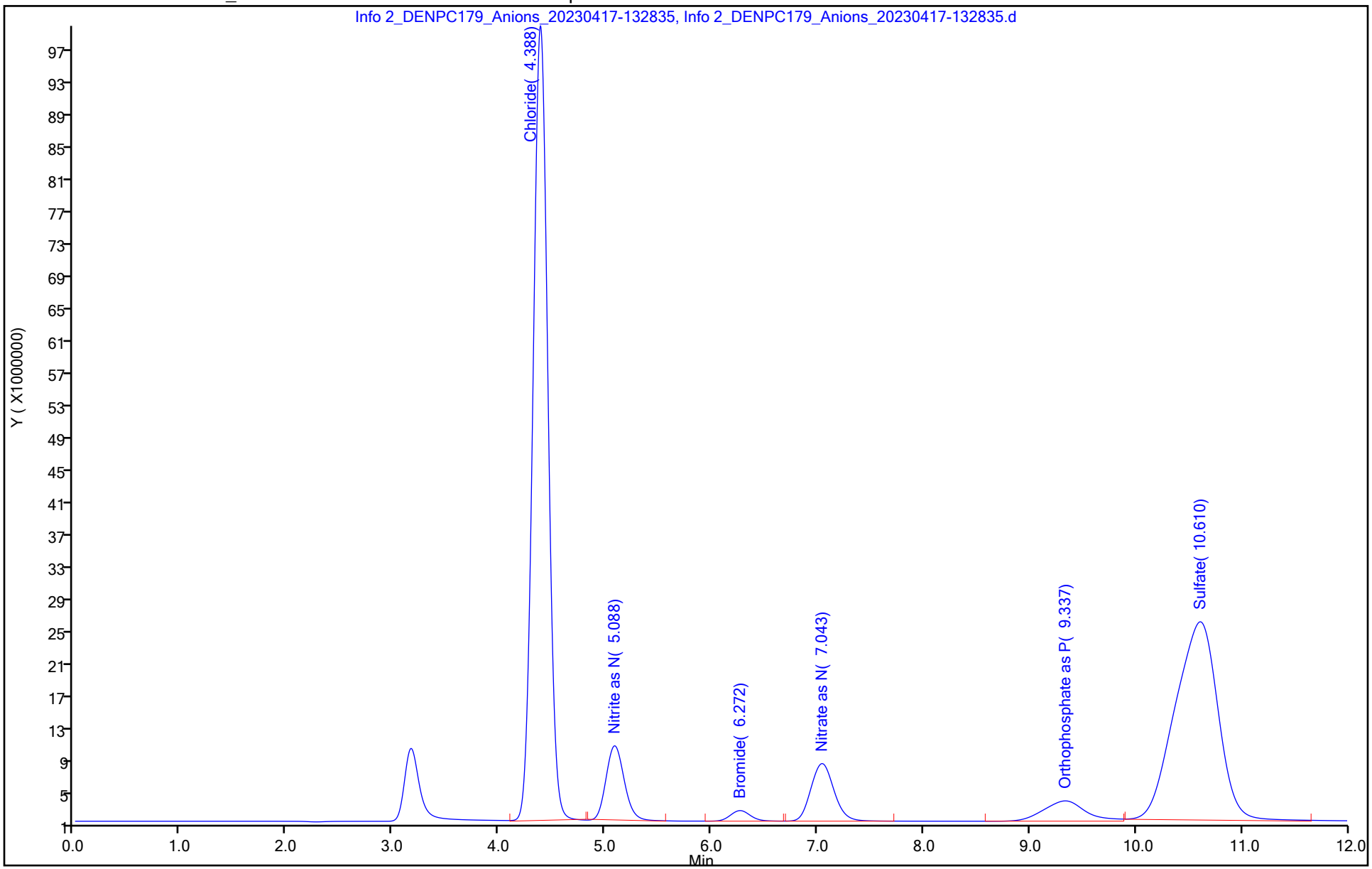
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132835.d				
Injection Date:	17-Apr-2023 13:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132

Injection Date: 17-Apr-2023 13:13:00 Instrument ID: WC_IonChrom10

Lims ID: lcsd

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

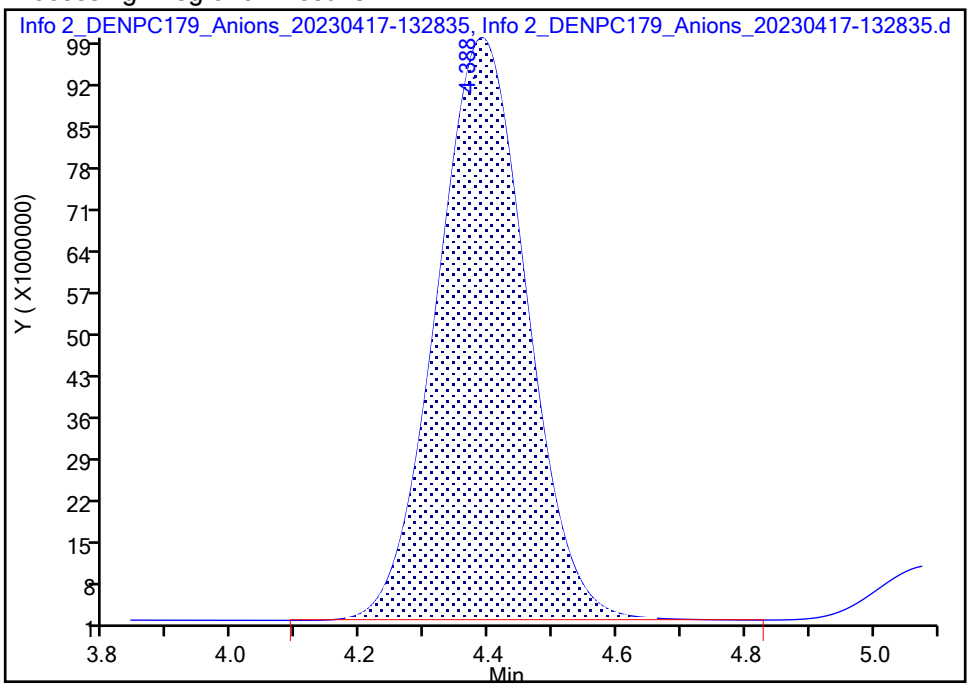
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

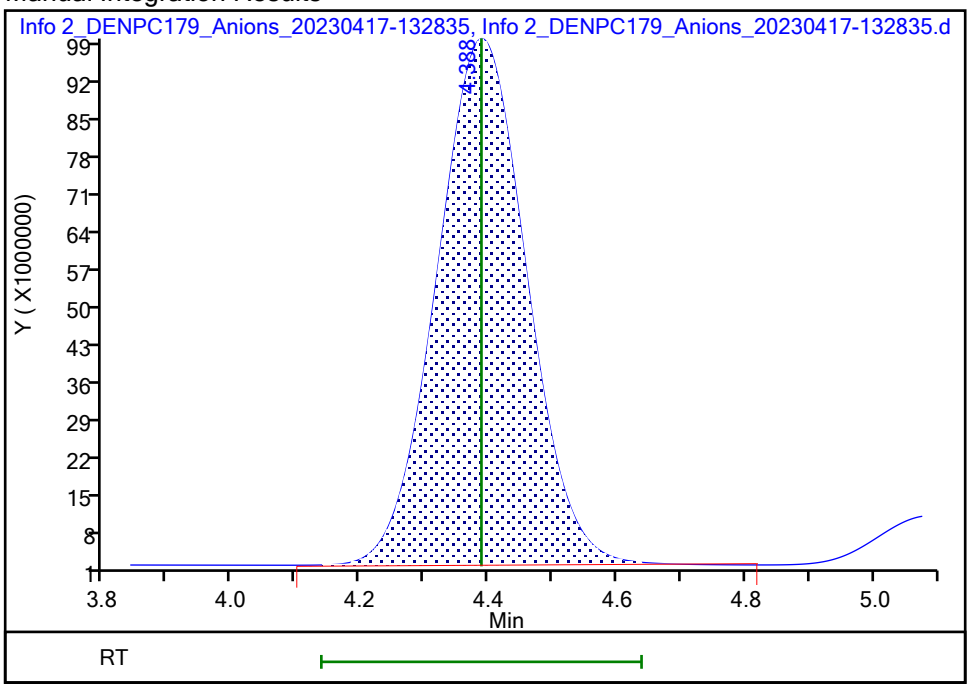
Processing Integration Results

RT: 4.39
Area: 964653754
Amount: 50.405607
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 964113552
Amount: 50.377457
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:47

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-132

Injection Date: 17-Apr-2023 13:13:00 Instrument ID: WC_IonChrom10

Lims ID: lcsd

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

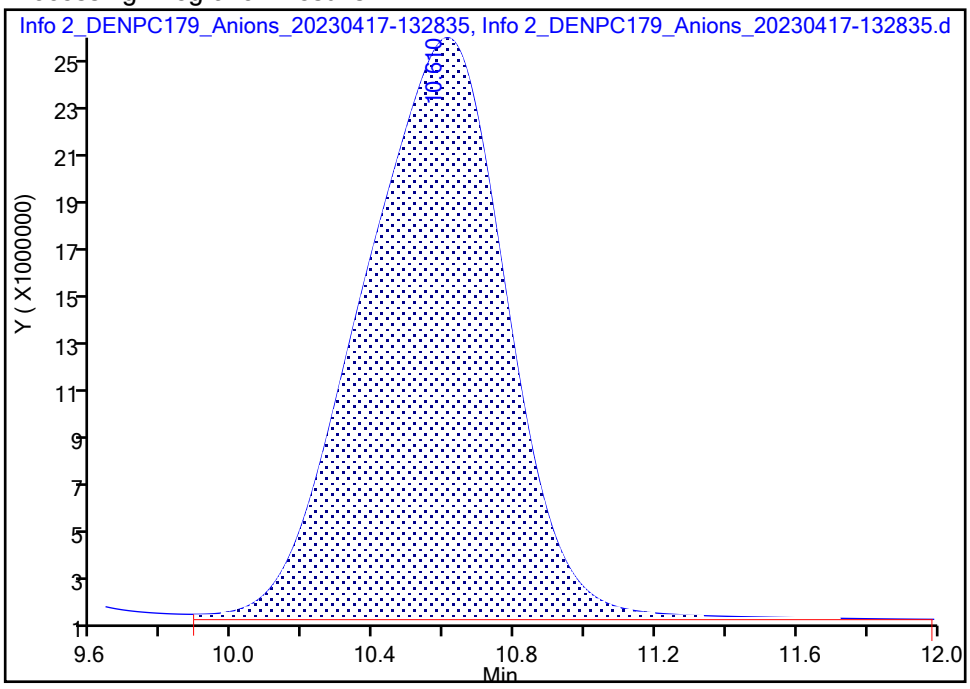
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

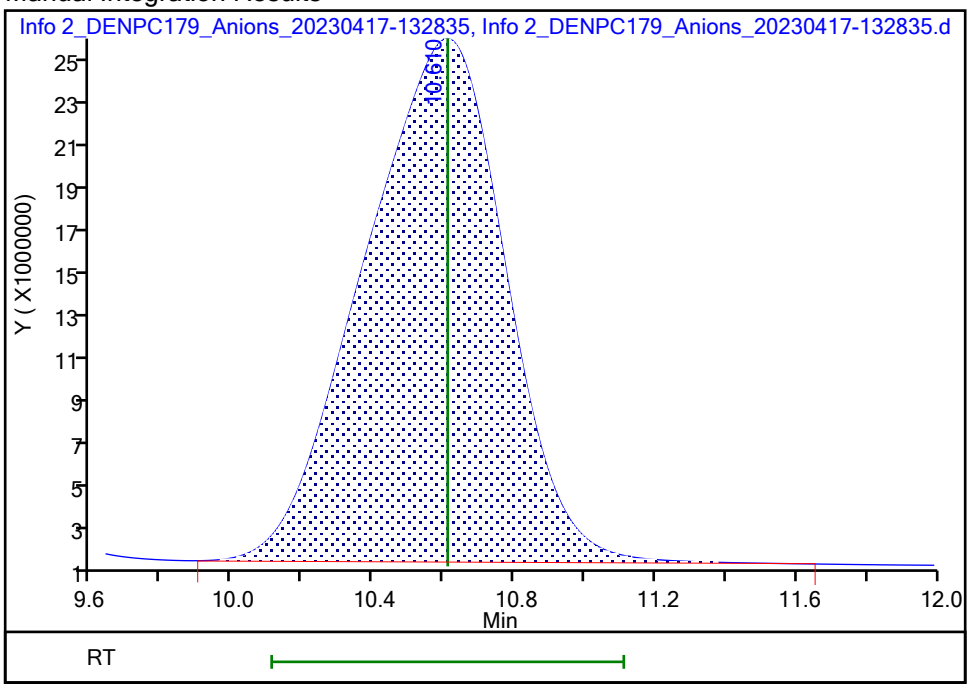
Processing Integration Results

RT: 10.61
Area: 704927694
Amount: 51.163106
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 687195393
Amount: 49.878449
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:46:56

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 17-Apr-2023 13:28:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-006
Misc. Info.: 280-0120473-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:47:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.075	6.075	0.000	130913		-0.1214	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.402	9.402	0.000	8300787		NC	
7 Sulfate	10.633	10.633	0.000	456822		0.1261	M

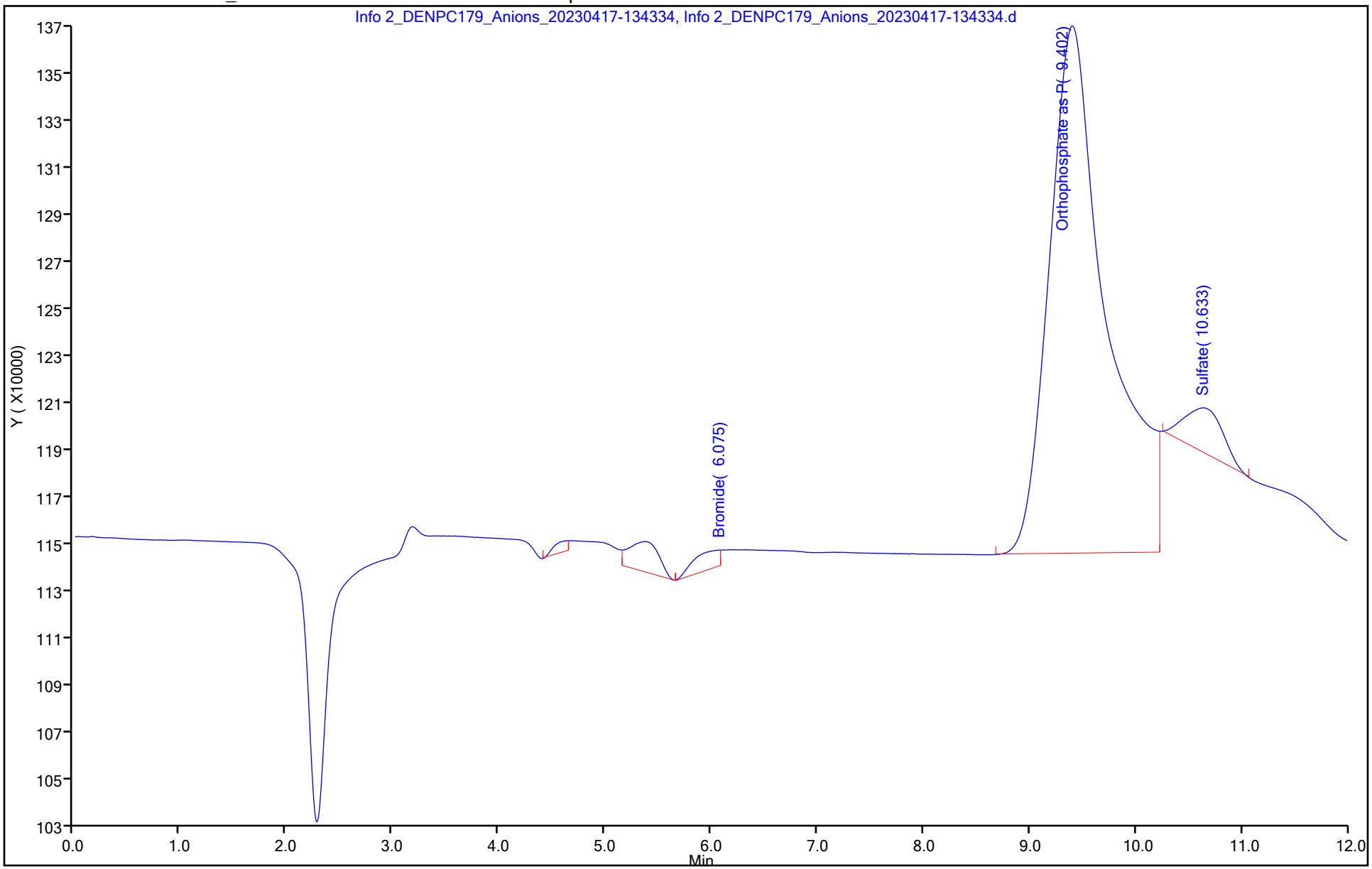
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134334.d				
Injection Date:	17-Apr-2023 13:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-134

Injection Date: 17-Apr-2023 13:28:00 Instrument ID: WC_IonChrom10

Lims ID: mb

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 6

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

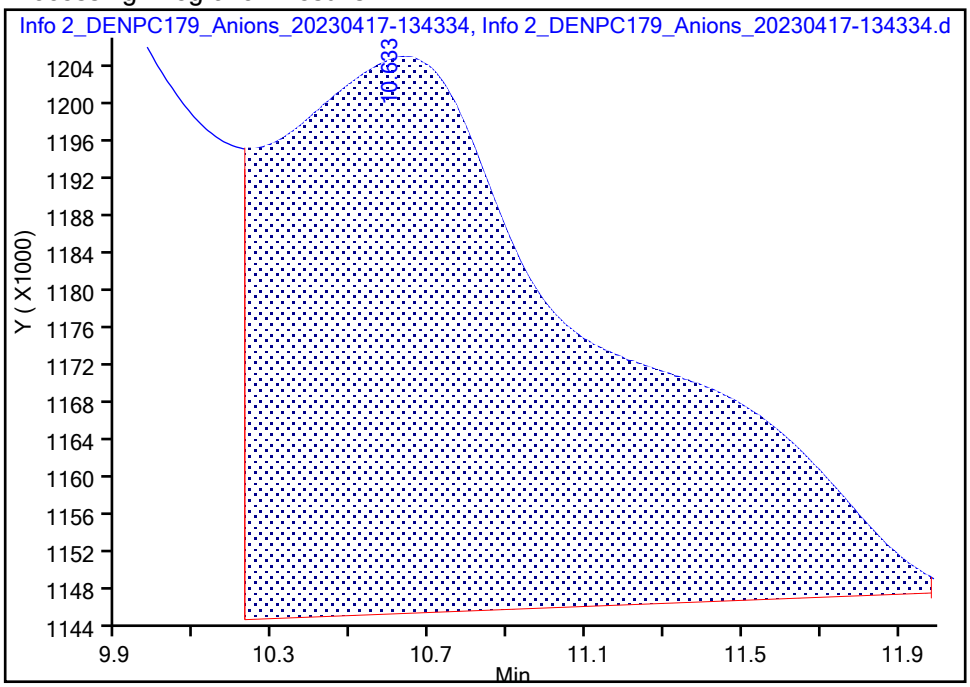
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

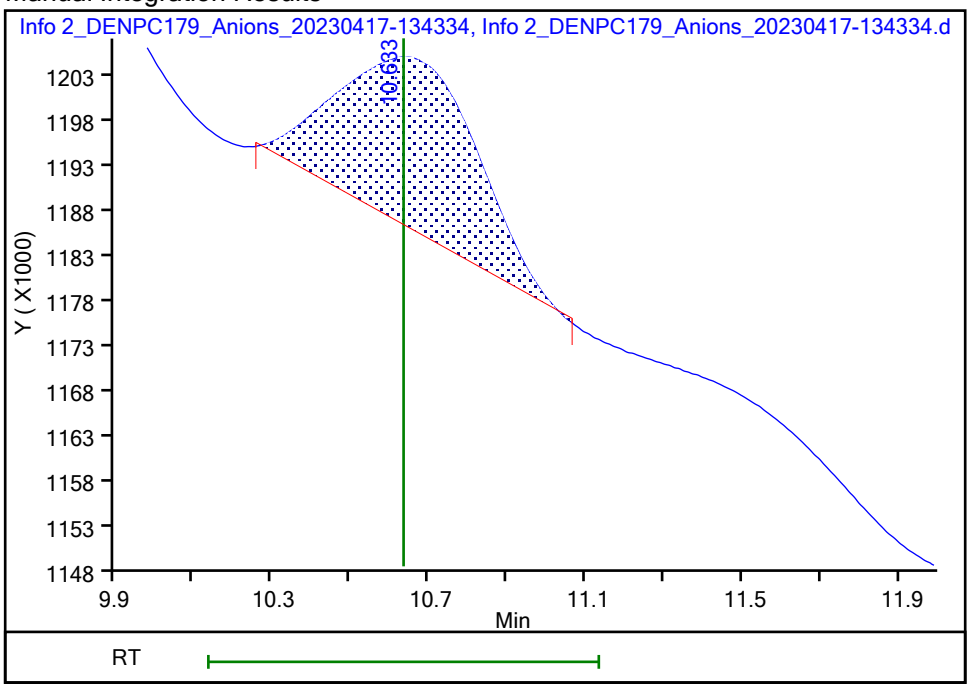
RT: 10.63
Area: 3480682
Amount: 0.345186
Amount Units: ug/ml

Processing Integration Results



RT: 10.63
Area: 456822
Amount: 0.126116
Amount Units: ug/ml

Manual Integration Results



Reviewer: LVW8, 18-Apr-2023 10:47:02

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-154
Lims ID: 280-175123-C-1
Client ID: MW-119D-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 15:28:00 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 20.0000
Sample Info: 280-0120473-014
Misc. Info.: 280-0120473-014
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:50:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.375	4.388	-0.013	194097781	10.3	M
3 Nitrite as N		5.088			ND	
4 Bromide	6.302	6.075	0.227	674300	-0.0417	
5 Nitrate as N	7.117	7.043	0.074	4623798	NC	M
7 Sulfate	10.637	10.633	0.004	69580647	5.13	M

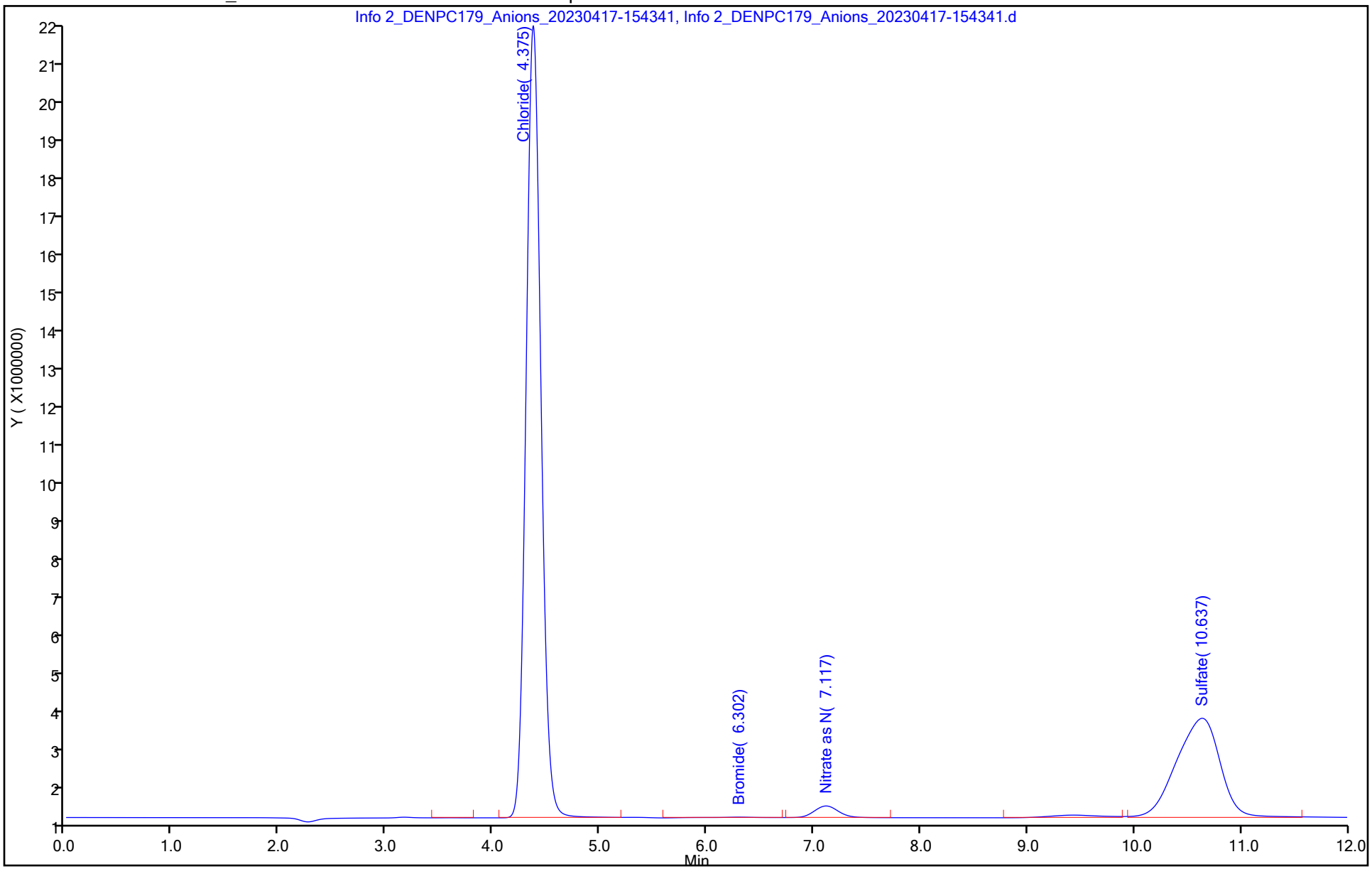
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:44 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-154341.d				
Injection Date:	17-Apr-2023 15:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175123-C-1	Lab Sample ID:	280-175123-1	Worklist Smp#:	14
Client ID:	MW-119D-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

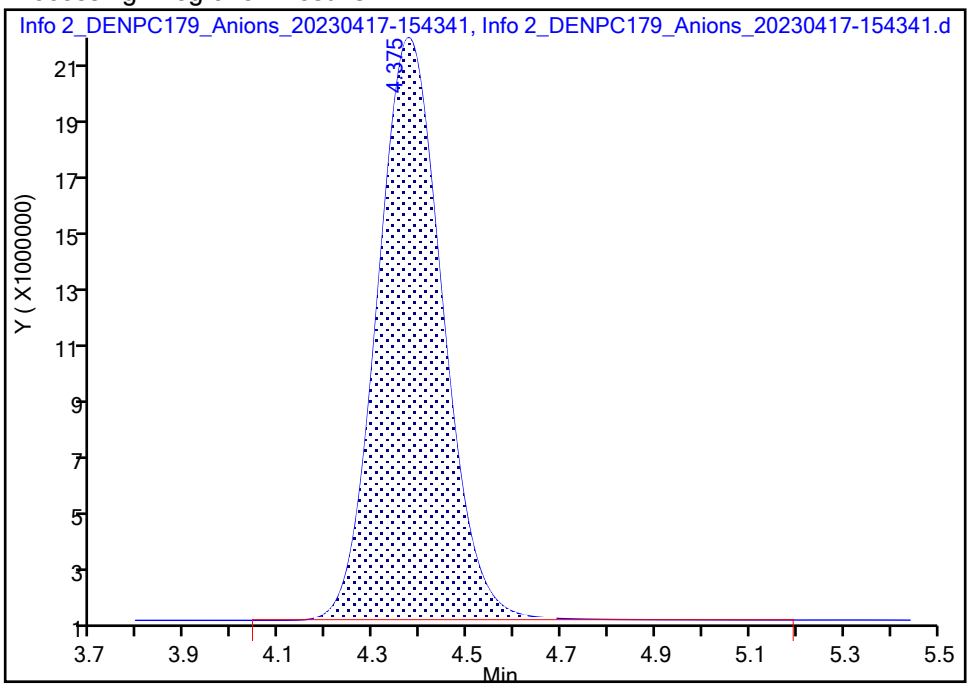
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-154				
Injection Date:	17-Apr-2023 15:28:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175123-C-1	Lab Sample ID:	280-175123-1		
Client ID:	MW-119D-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	5.0 ul	Dil. Factor:	20.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

2 Chloride, CAS: 16887-00-6

Signal: 1

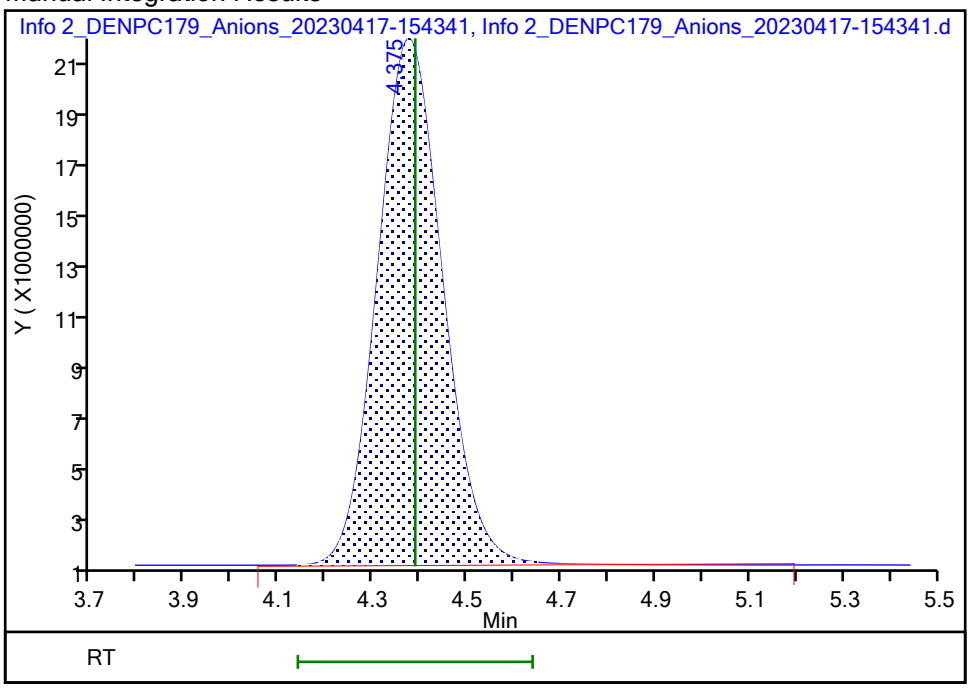
Processing Integration Results

RT: 4.38
Area: 194232785
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 194097781
Amount: 10.251659
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:50:41

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

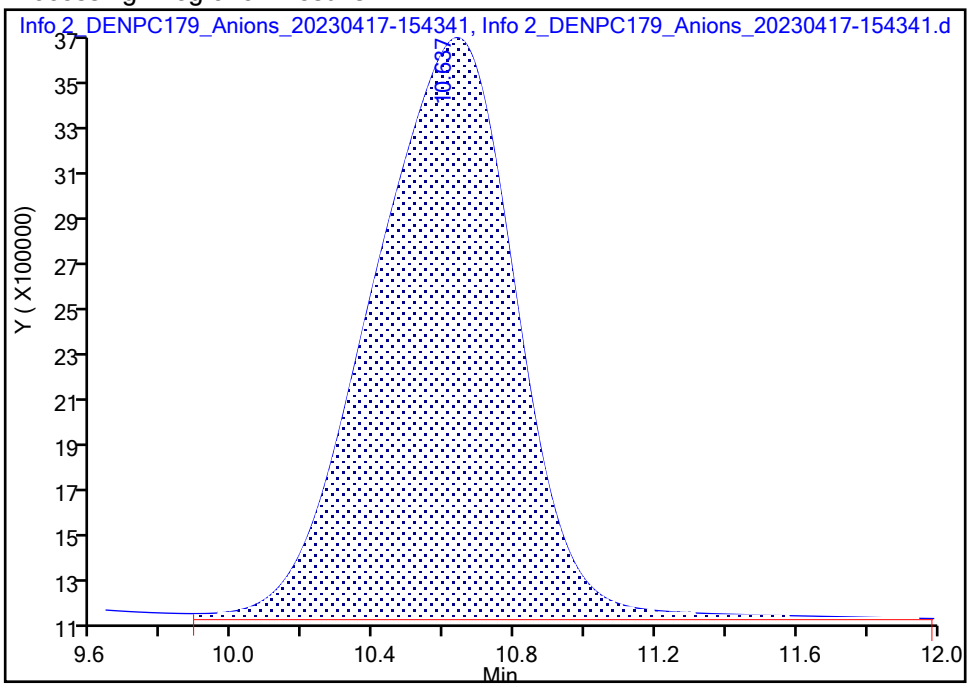
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-154				
Injection Date:	17-Apr-2023 15:28:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175123-C-1	Lab Sample ID:	280-175123-1		
Client ID:	MW-119D-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	5.0 ul	Dil. Factor:	20.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

7 Sulfate, CAS: 14808-79-8

Signal: 1

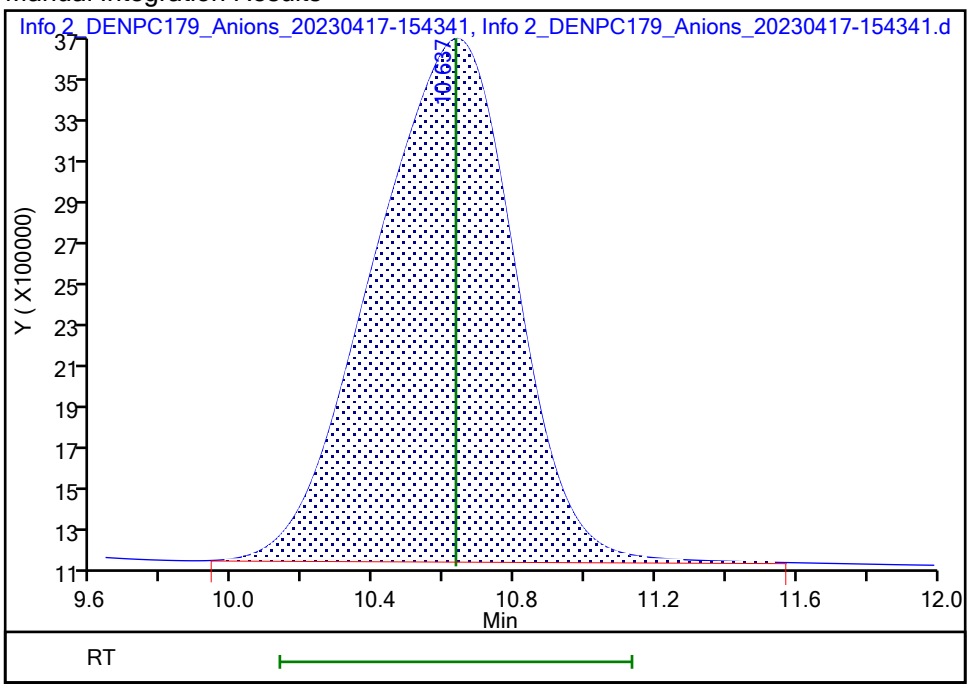
Processing Integration Results

RT: 10.64
Area: 72080358
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.64
Area: 69580647
Amount: 5.133948
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:50:49
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-161
Lims ID: 280-175123-C-2
Client ID: MW-119S-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 15:58:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 5.0 ul Dil. Factor: 2.0000
Sample Info: 280-0120473-016
Misc. Info.: 280-0120473-016
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:38 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:51:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.455	4.388	0.067	2493556463	130.1	EM
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.093	7.043	0.050	91805713	NC	M
7 Sulfate	10.632	10.633	-0.001	766192659	55.6	M

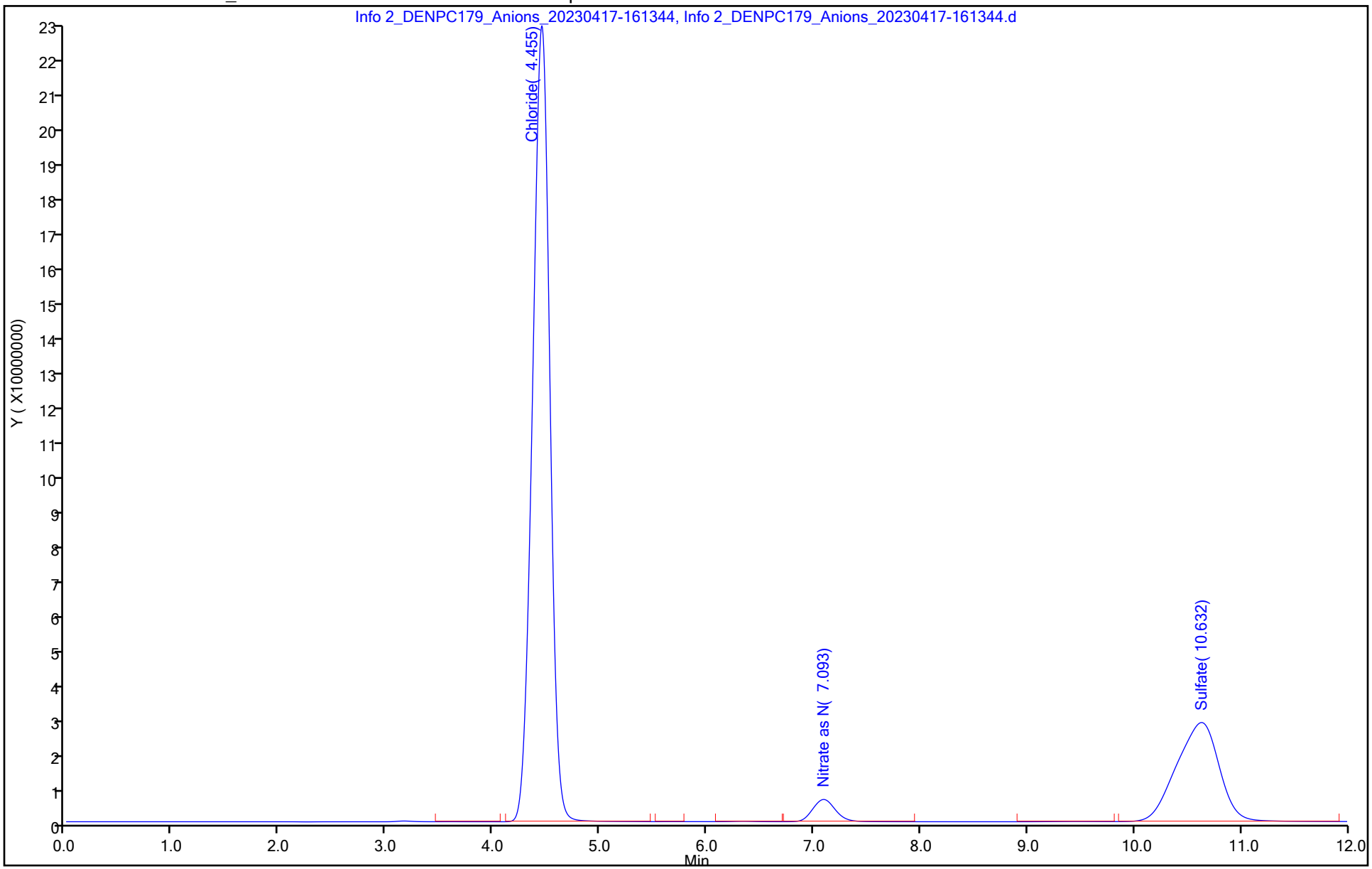
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:46 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-161344.d				
Injection Date:	17-Apr-2023 15:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175123-C-2	Lab Sample ID:	280-175123-2	Worklist Smp#:	16
Client ID:	MW-119S-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	2.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

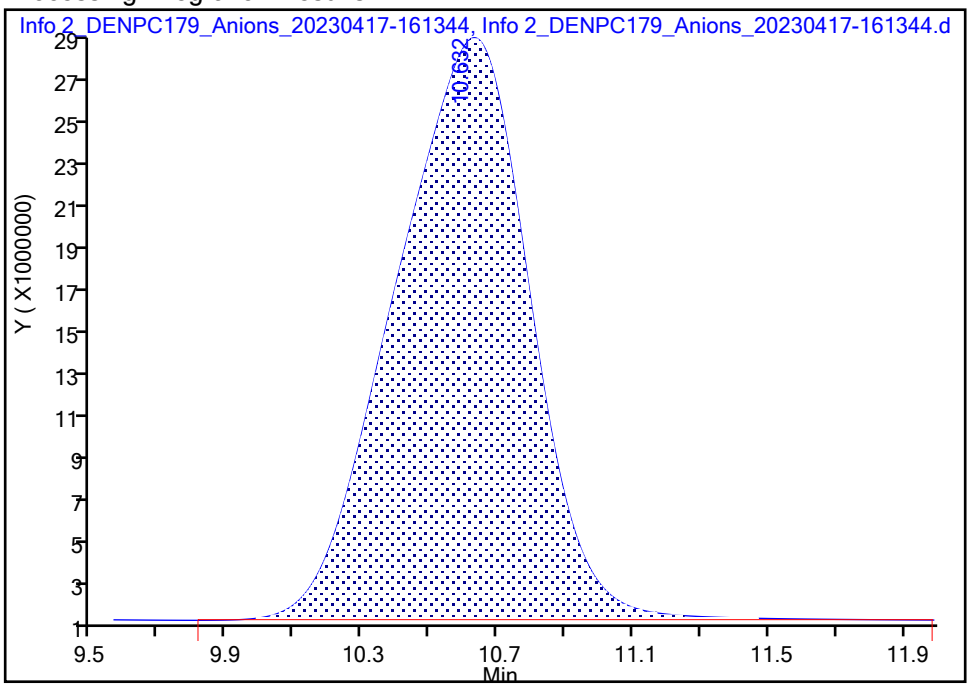
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-161				
Injection Date:	17-Apr-2023 15:58:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175123-C-2	Lab Sample ID:	280-175123-2		
Client ID:	MW-119S-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	5.0 ul	Dil. Factor:	2.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

7 Sulfate, CAS: 14808-79-8

Signal: 1

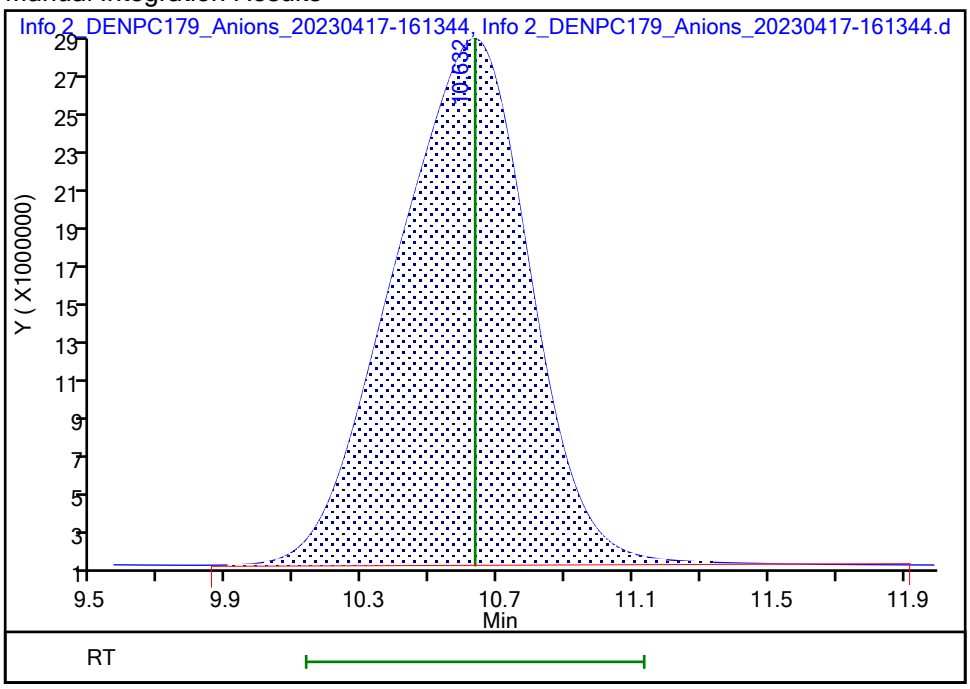
Processing Integration Results

RT: 10.63
Area: 767180895
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.63
Area: 766192659
Amount: 55.601585
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:38
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 16:13:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-017
Misc. Info.: 280-0120473-017
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:13:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			ND	ND	
2 Chloride	4.392	4.388	0.004	977790198	50.0	51.1	M
3 Nitrite as N	5.092	5.088	0.004	110879515	NC	NC	M
4 Bromide	6.270	6.075	0.195	17147164	2.50	2.37	
5 Nitrate as N	7.050	7.043	0.007	108729132	NC	NC	M
6 Orthophosphate as P	9.333	9.402	-0.069	66031793	NC	NC	
7 Sulfate	10.610	10.633	-0.023	698664535	50.0	50.7	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

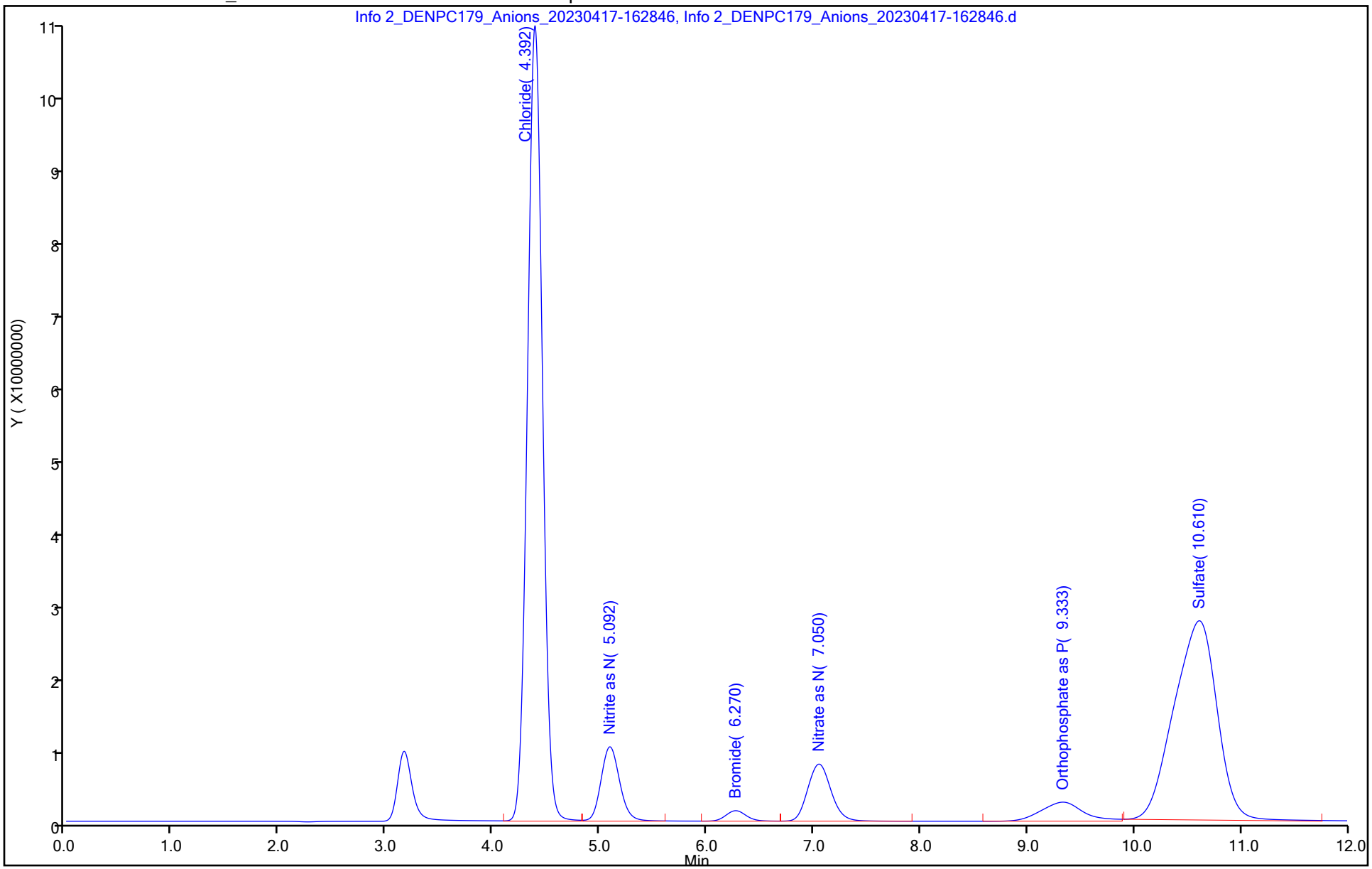
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:46 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162846.d				
Injection Date:	17-Apr-2023 16:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162

Injection Date: 17-Apr-2023 16:13:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

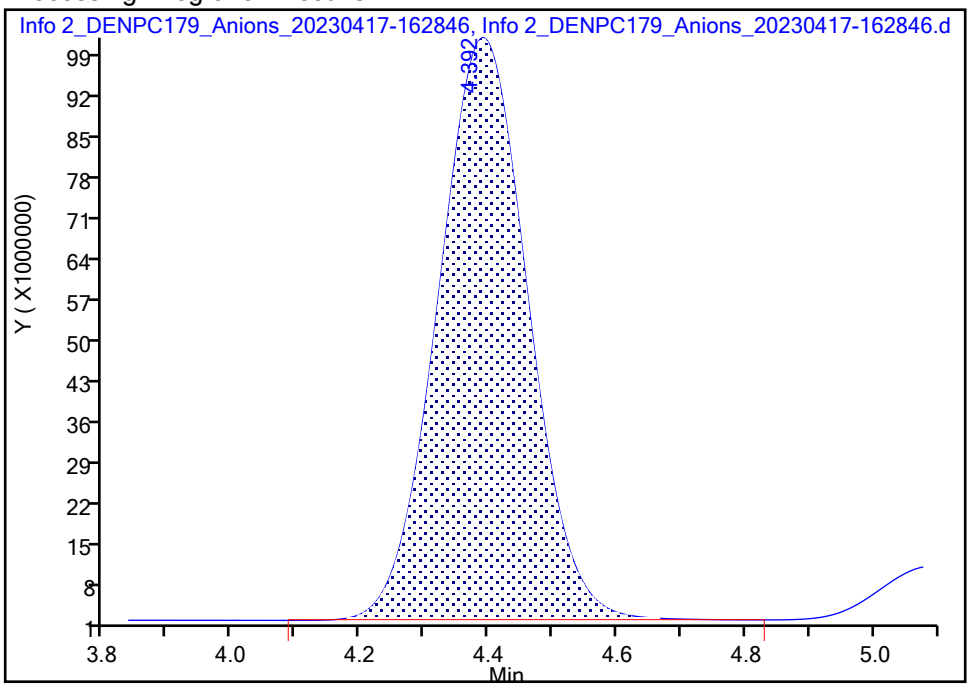
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

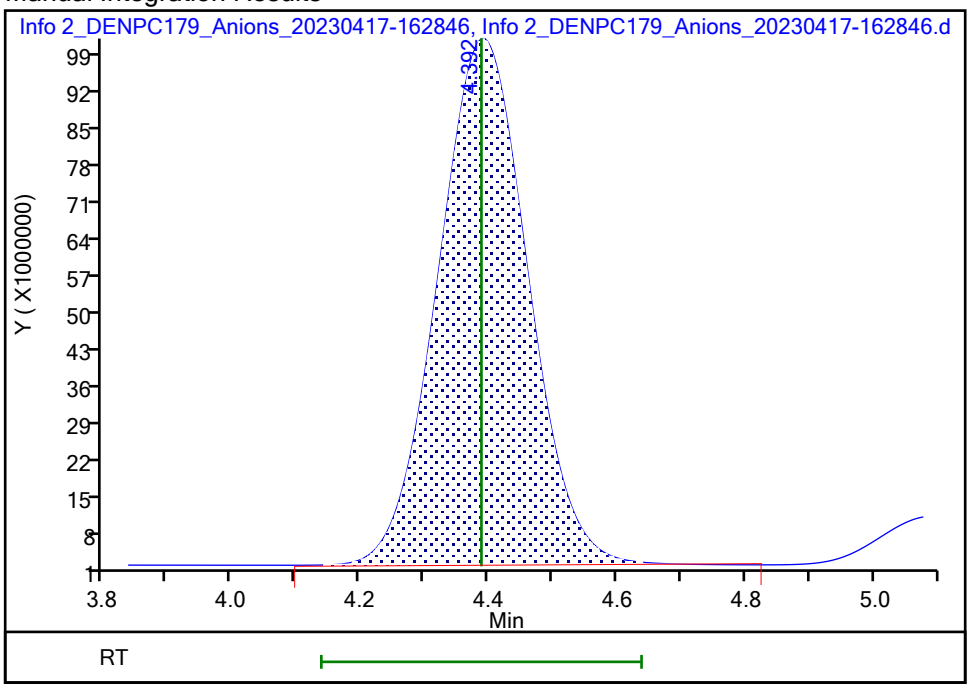
Processing Integration Results

RT: 4.39
Area: 978719860
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Area: 977790198
Amount: 51.090152
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:48

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

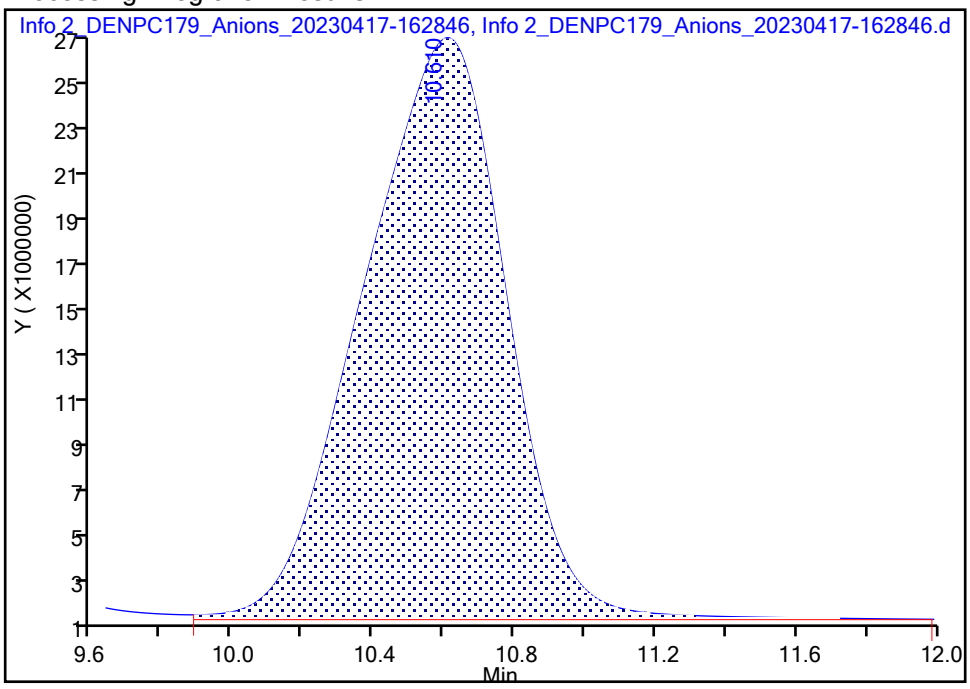
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-162
Injection Date: 17-Apr-2023 16:13:00 Instrument ID: WC_IonChrom10
Lims ID: CCV
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

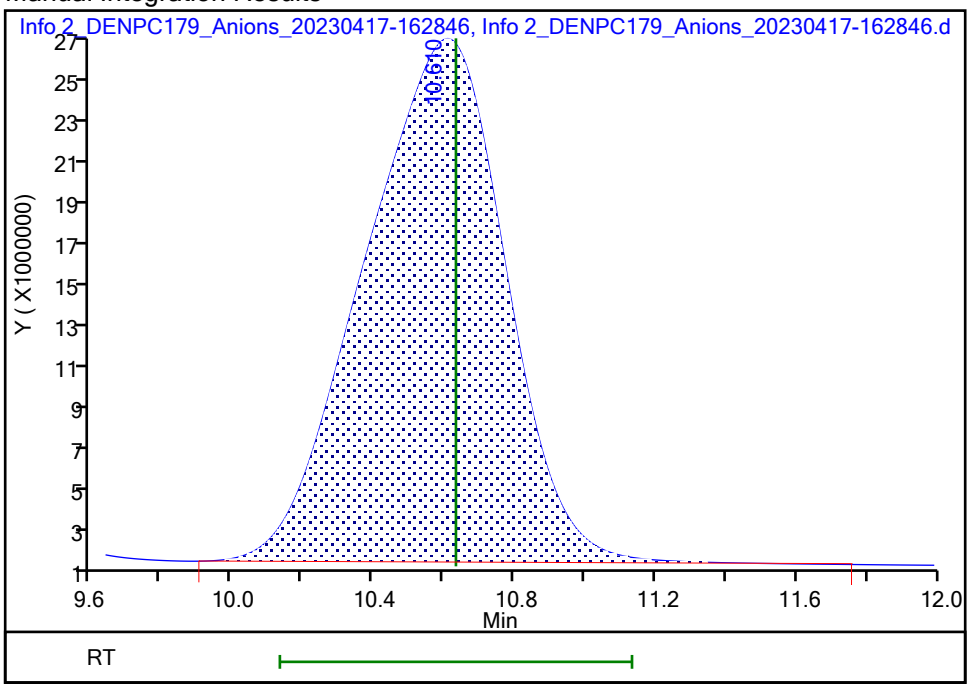
Processing Integration Results

RT: 10.61
Area: 715627003
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.61
Area: 698664535
Amount: 50.709357
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:51:56
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 16:28:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-018
Misc. Info.: 280-0120473-018
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:52:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.042	6.075	-0.033	105239		-0.1252	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.405	9.402	0.003	5901360		NC	
7 Sulfate	10.647	10.633	0.014	439227		0.1248	M

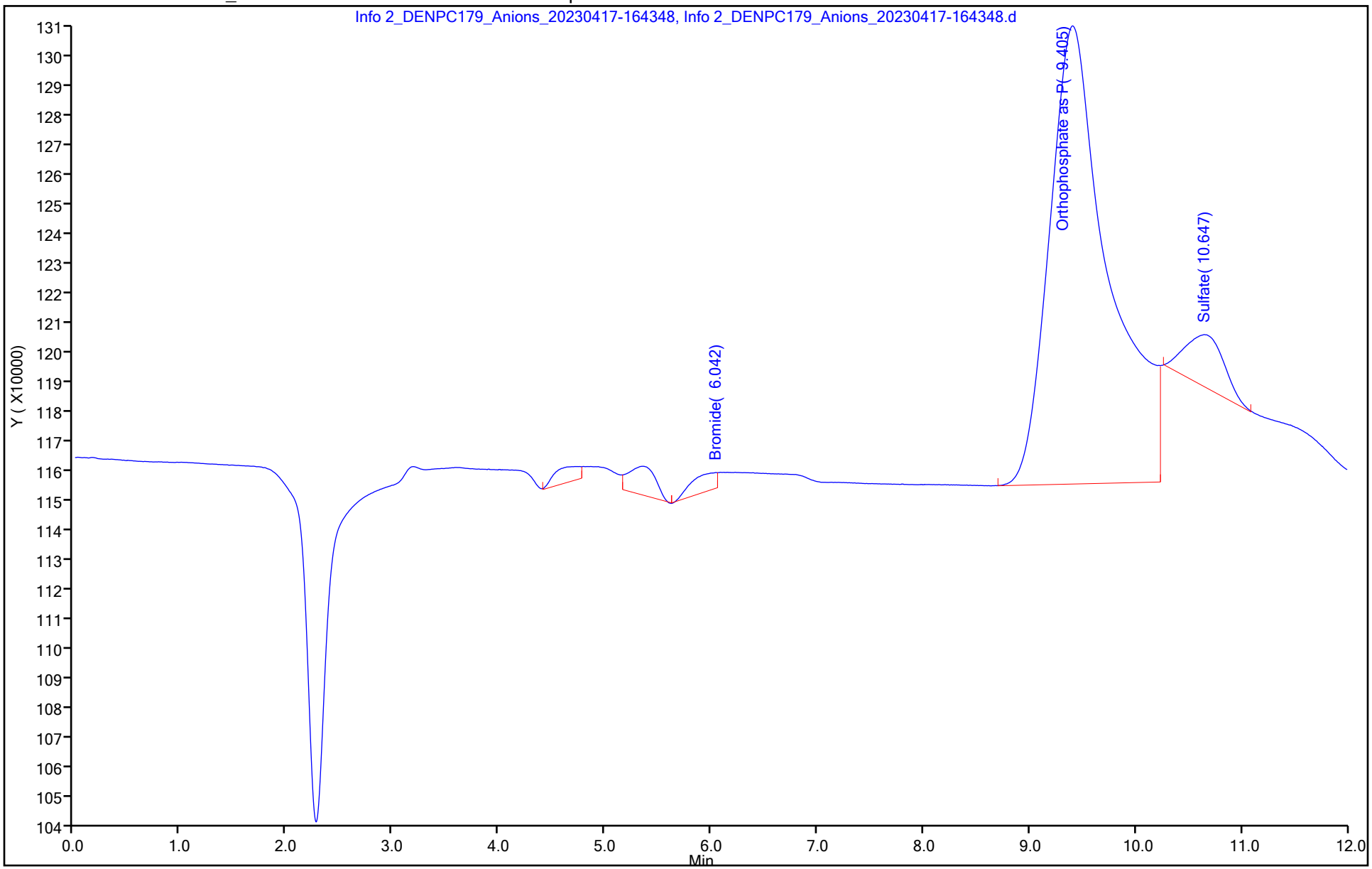
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:47 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164348.d				
Injection Date:	17-Apr-2023 16:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	18
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-164

Injection Date: 17-Apr-2023 16:28:00 Instrument ID: WC_IonChrom10

Lims ID: CCB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 18

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

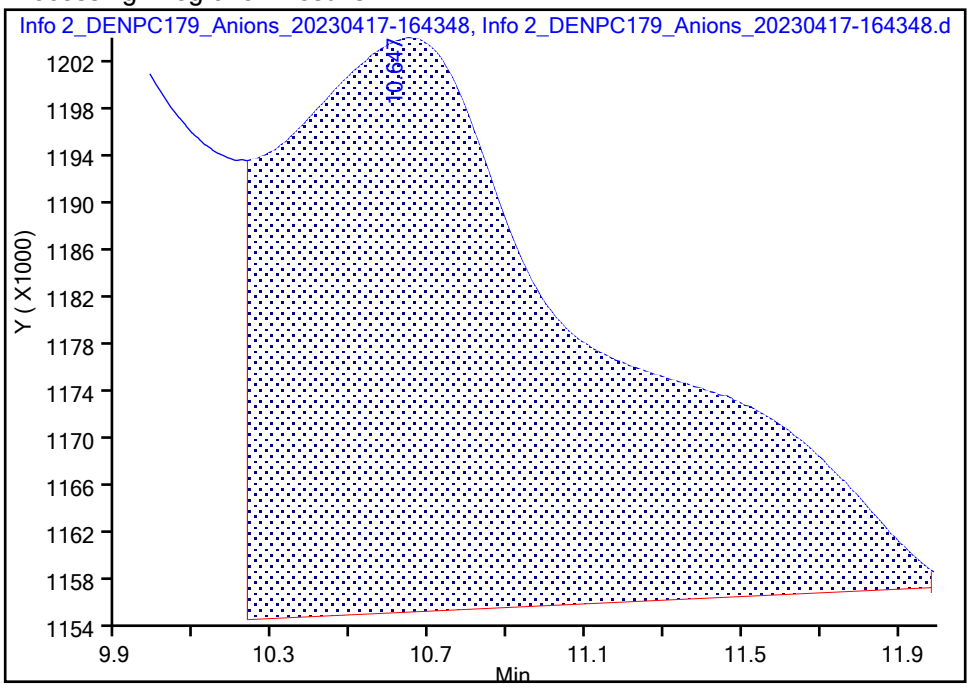
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

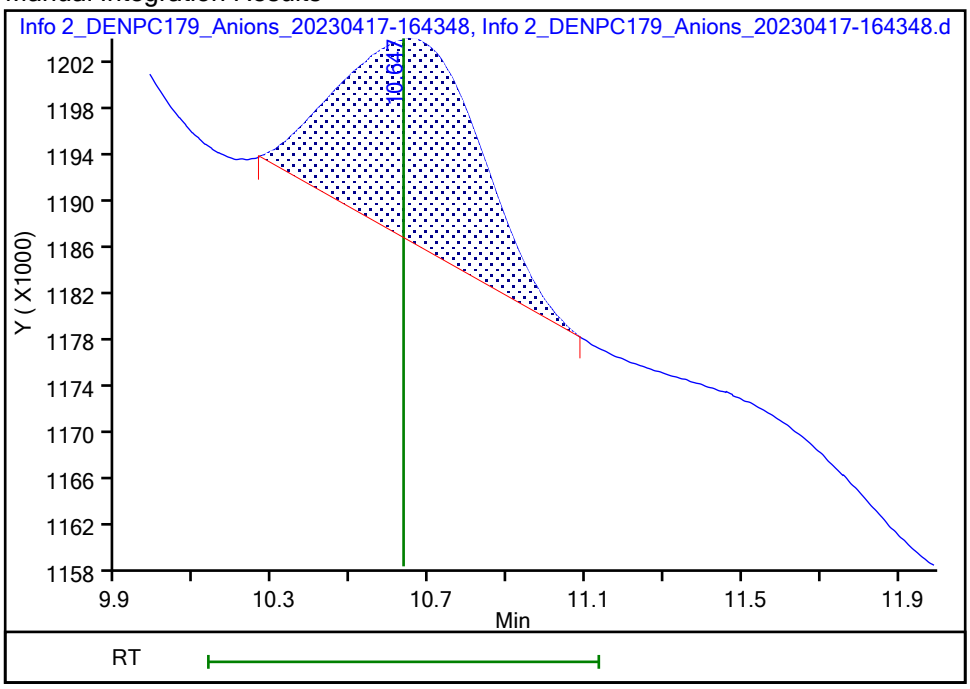
Processing Integration Results

RT: 10.65
Area: 2749315
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 10.65
Area: 439227
Amount: 0.124841
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:52:03

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-165
Lims ID: 280-175123-C-2
Client ID: MW-119S-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 16:43:00 ALS Bottle#: 0 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 20.0000
Sample Info: 280-0120473-019
Misc. Info.: 280-0120473-019
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:53:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.375	4.388	-0.013	252893477	13.3	M
3 Nitrite as N	5.337	5.088	0.249	259997	NC	
4 Bromide	6.300	6.075	0.225	775475	-0.0269	
5 Nitrate as N	7.108	7.043	0.065	7851767	NC	M
7 Sulfate	10.637	10.633	0.004	71214818	5.25	M

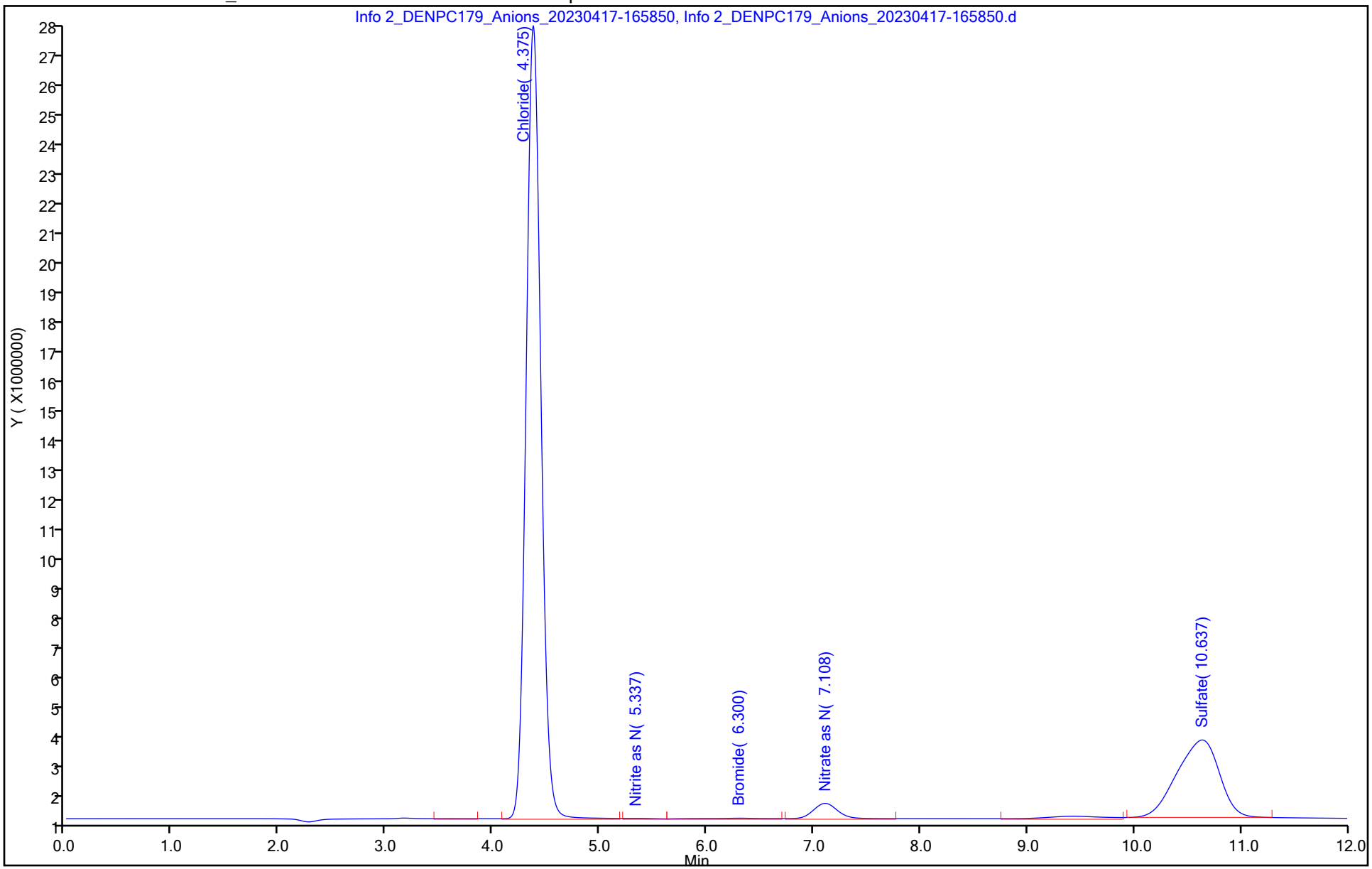
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:48 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-165850.d				
Injection Date:	17-Apr-2023 16:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175123-C-2	Lab Sample ID:	280-175123-2	Worklist Smp#:	19
Client ID:	MW-119S-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

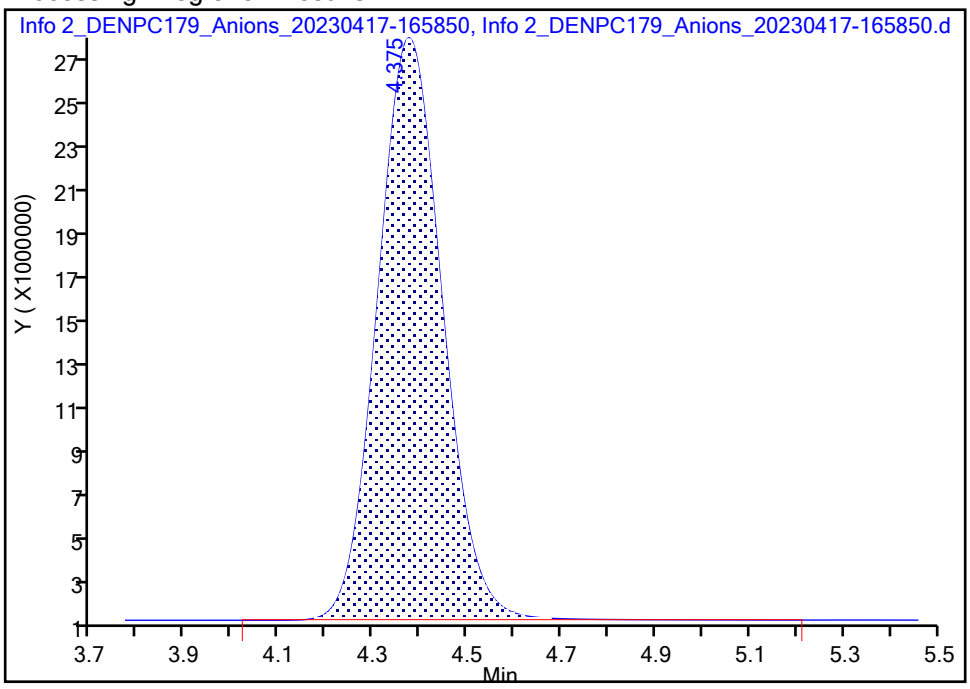
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-165				
Injection Date:	17-Apr-2023 16:43:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175123-C-2	Lab Sample ID:	280-175123-2		
Client ID:	MW-119S-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	5.0 ul	Dil. Factor:	20.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

2 Chloride, CAS: 16887-00-6

Signal: 1

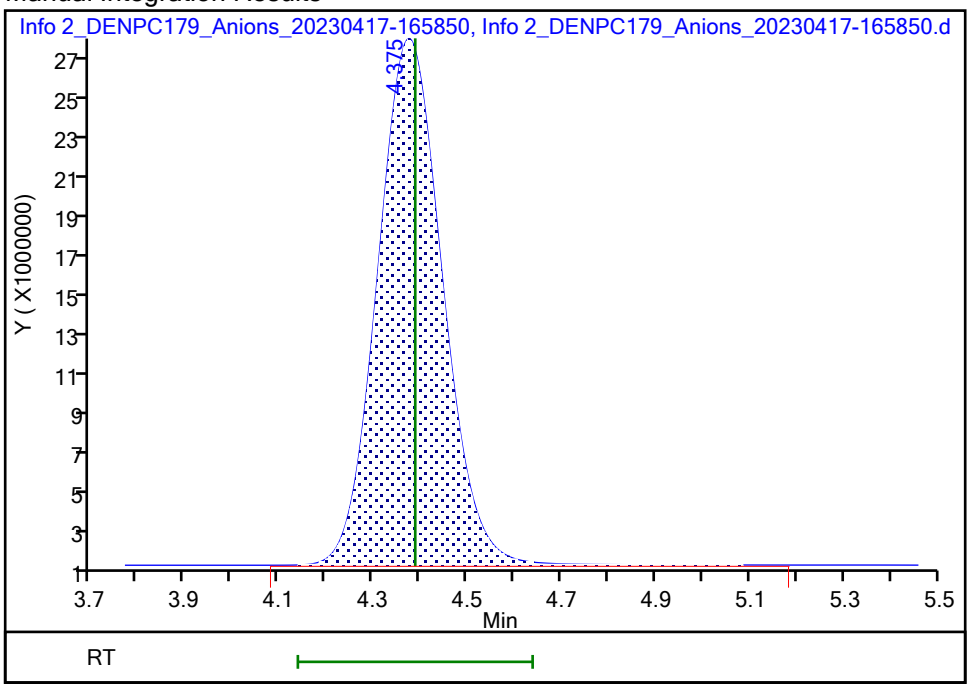
Processing Integration Results

RT: 4.38
Area: 253487447
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 252893477
Amount: 13.315523
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:52:55

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-171
Lims ID: 280-175123-C-3
Client ID: RW-3-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 16:58:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-020
Misc. Info.: 280-0120473-020
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:53:32

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.568	4.388	0.180	6416708790	334.5	EM
3 Nitrite as N		5.088			ND	
4 Bromide		6.075			ND	
5 Nitrate as N	7.120	7.043	0.077	262051105	NC	M
7 Sulfate	10.668	10.633	0.035	674925285	49.0	M

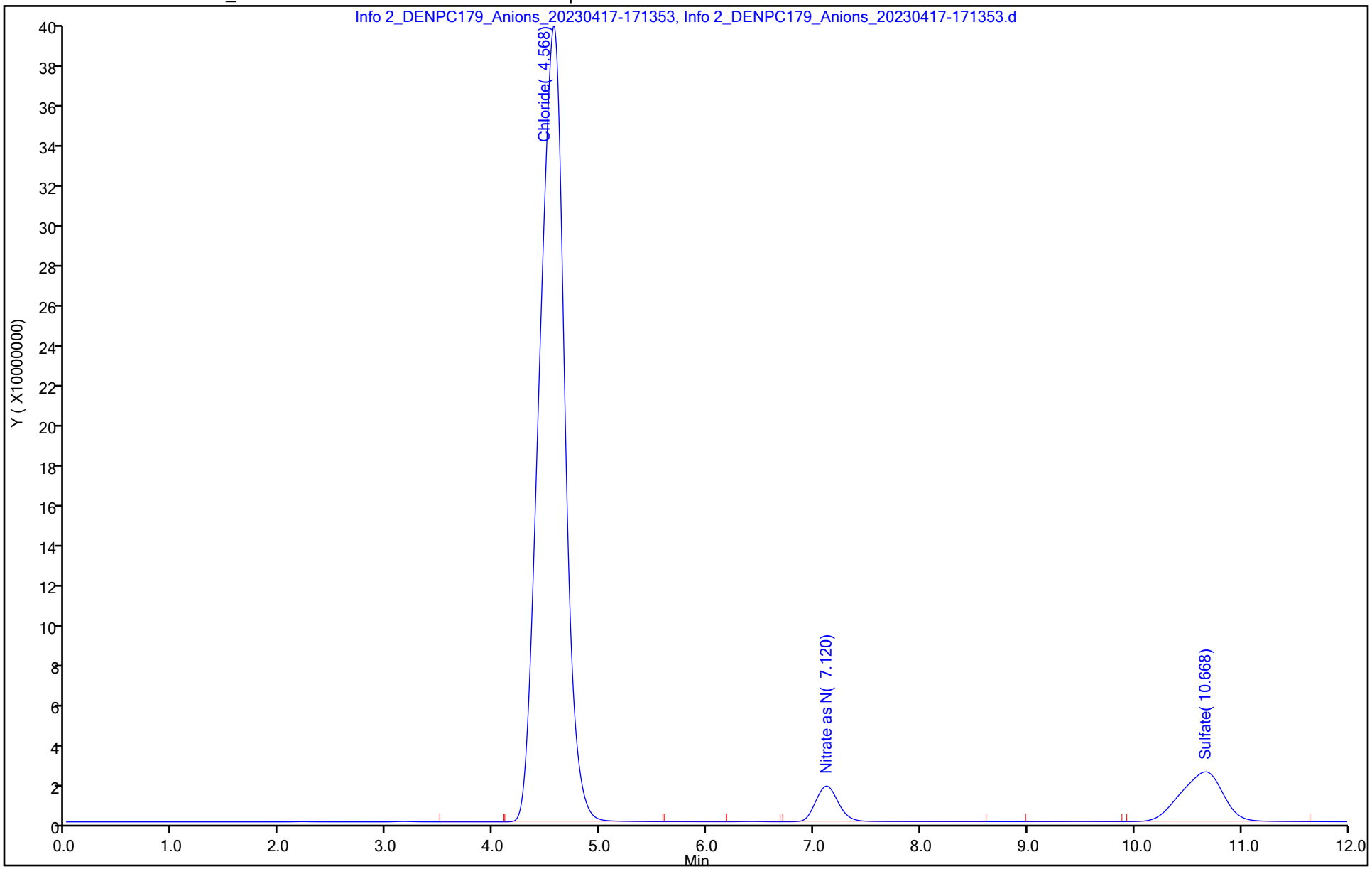
QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:49 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-171353.d				
Injection Date:	17-Apr-2023 16:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175123-C-3	Lab Sample ID:	280-175123-3	Worklist Smp#:	20
Client ID:	RW-3-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



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Manual Integration/User Assign Peak Report

Eurofins Denver

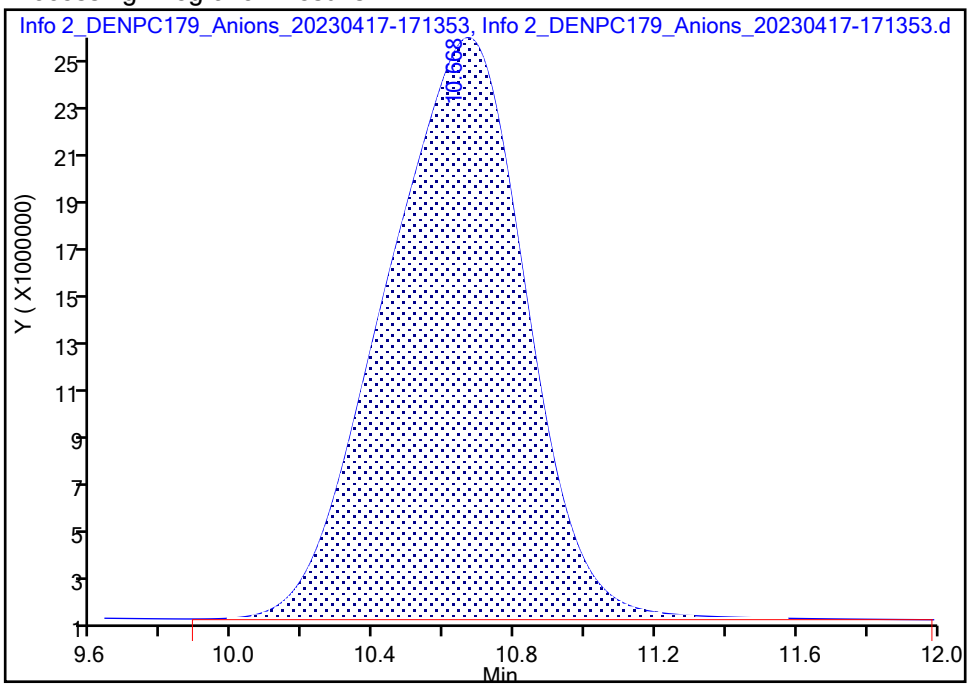
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-171				
Injection Date:	17-Apr-2023 16:58:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175123-C-3	Lab Sample ID:	280-175123-3		
Client ID:	RW-3-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

7 Sulfate, CAS: 14808-79-8

Signal: 1

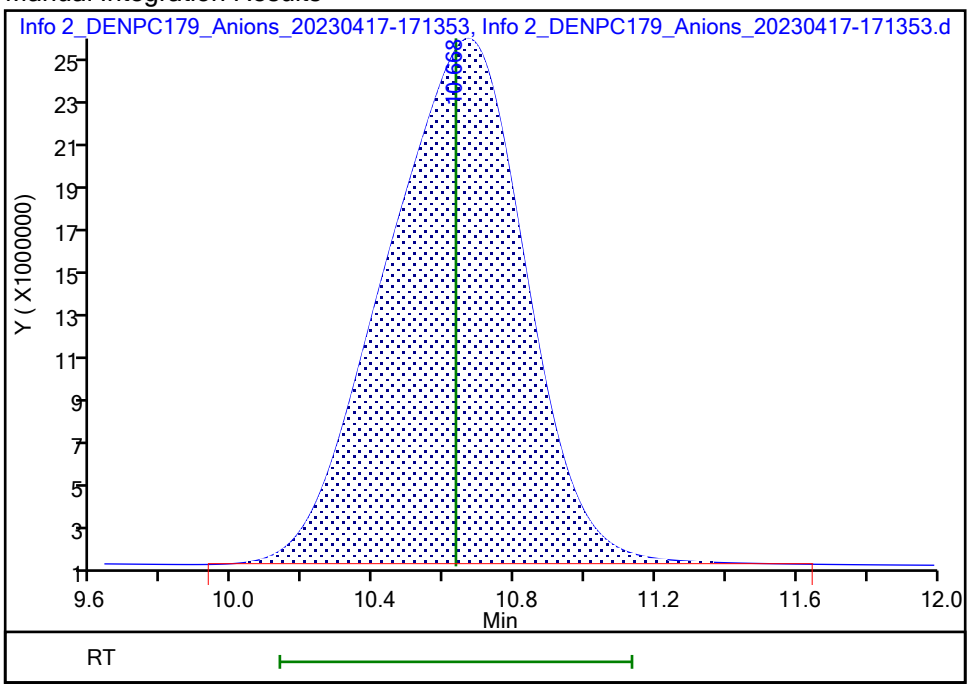
Processing Integration Results

RT: 10.67
Area: 681534469
Amount: 49.468330
Amount Units: ug/ml



Manual Integration Results

RT: 10.67
Area: 674925285
Amount: 48.989513
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:53:31

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-174
Lims ID: 280-175123-C-3
Client ID: RW-3-20230413
Sample Type: Client
Inject. Date: 17-Apr-2023 17:29:00 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 5.0 ul Dil. Factor: 20.0000
Sample Info: 280-0120473-022
Misc. Info.: 280-0120473-022
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:46 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:54:09

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.380	4.388	-0.008	323541955	17.0	M
3 Nitrite as N		5.088			ND	
4 Bromide	6.033	6.075	-0.042	178872	-0.1144	
5 Nitrate as N	7.112	7.043	0.069	10888243	NC	
7 Sulfate	10.652	10.633	0.019	31637512	2.39	

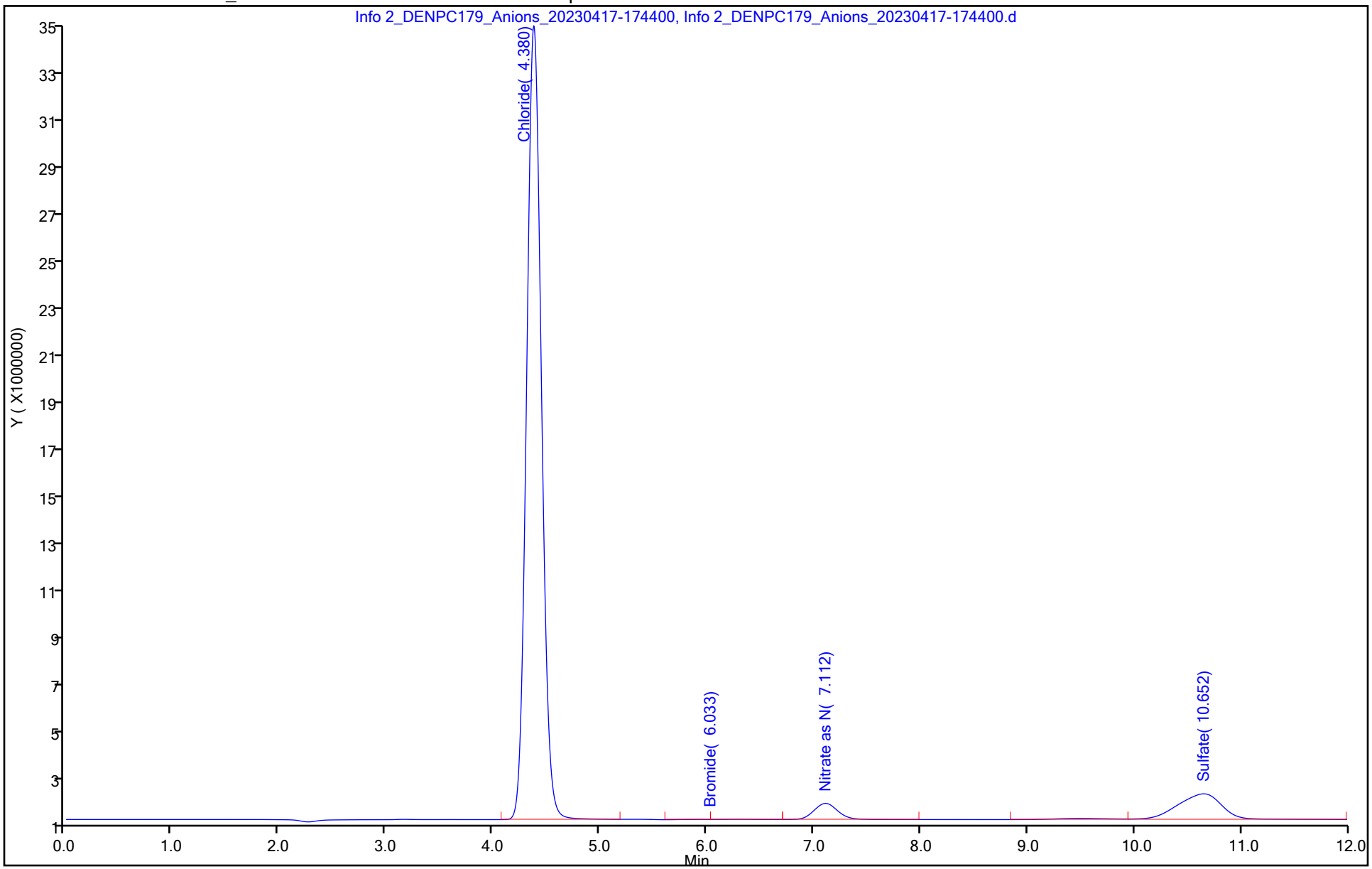
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:50 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-174400.d				
Injection Date:	17-Apr-2023 17:29:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-175123-C-3	Lab Sample ID:	280-175123-3	Worklist Smp#:	22
Client ID:	RW-3-20230413				
Injection Vol:	5.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

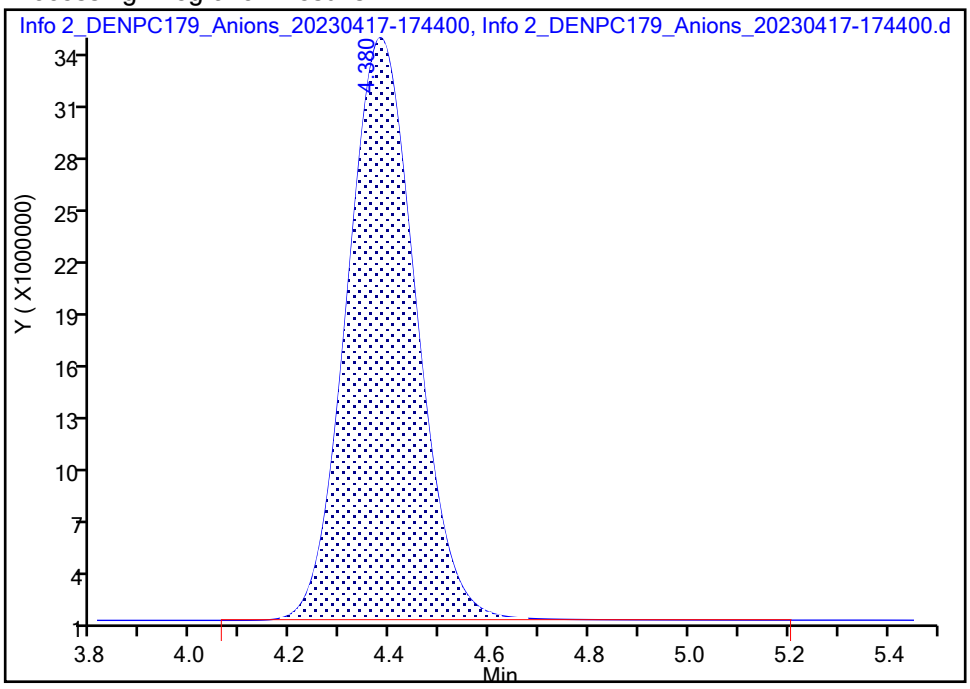
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-174				
Injection Date:	17-Apr-2023 17:29:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-175123-C-3	Lab Sample ID:	280-175123-3		
Client ID:	RW-3-20230413				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	5.0 ul	Dil. Factor:	20.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		
Column:		Detector	Info 2_091554_1		

2 Chloride, CAS: 16887-00-6

Signal: 1

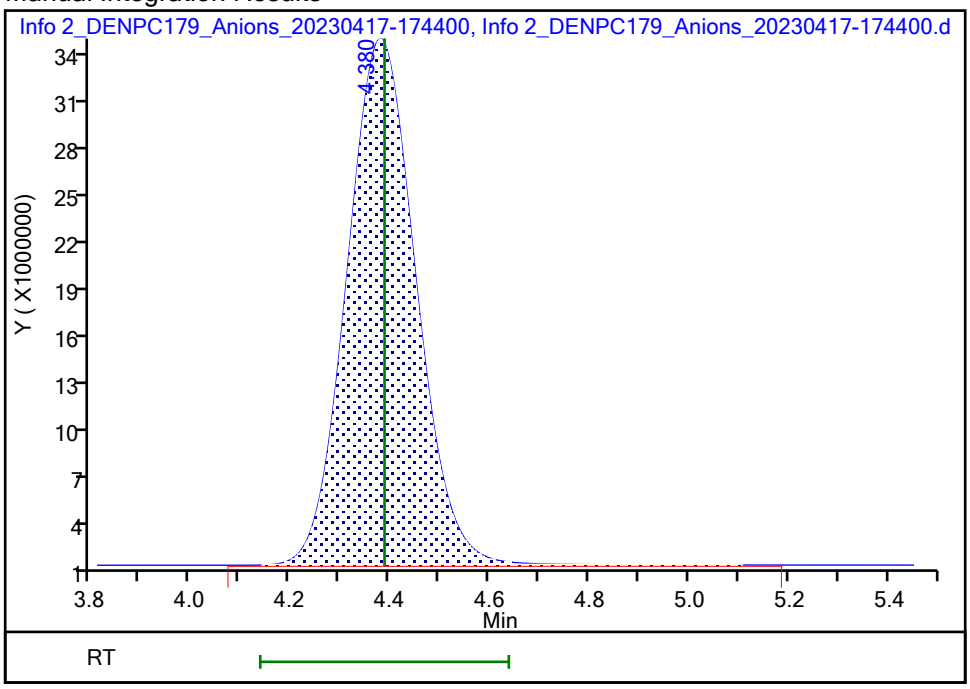
Processing Integration Results

RT: 4.38
Area: 323738905
Amount: 17.007304
Amount Units: ug/ml



Manual Integration Results

RT: 4.38
Area: 323541955
Amount: 16.997041
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:54:07
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 19:14:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-029
Misc. Info.: 280-0120473-029
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:56 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:56:42

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			ND	ND	
2 Chloride	4.397	4.388	0.009	972805619	50.0	50.8	M
3 Nitrite as N	5.100	5.088	0.012	111586446	NC	NC	M
4 Bromide	6.278	6.075	0.203	17126988	2.50	2.37	
5 Nitrate as N	7.062	7.043	0.019	108815721	NC	NC	M
6 Orthophosphate as P	9.380	9.402	-0.022	63493313	NC	NC	
7 Sulfate	10.627	10.633	-0.006	688051501	50.0	49.9	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

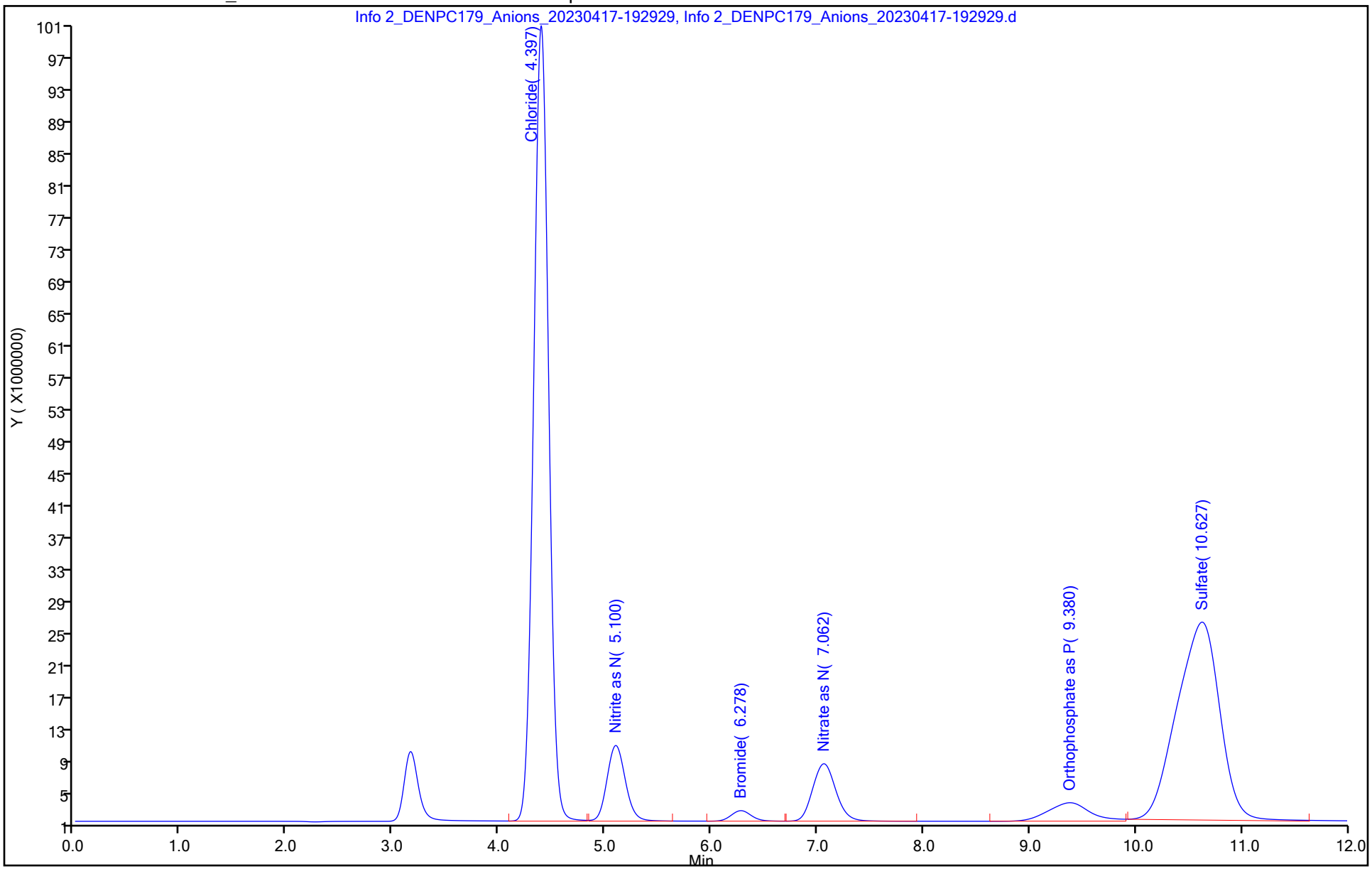
IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:36:56 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192929.d

Injection Date:	17-Apr-2023 19:14:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	29
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192

Injection Date: 17-Apr-2023 19:14:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 29

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

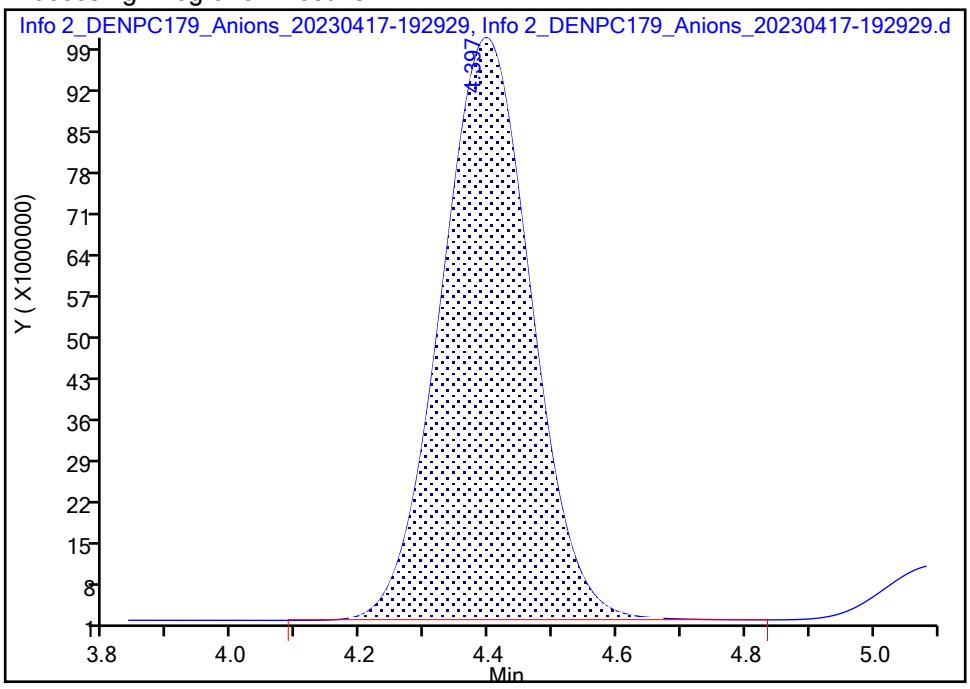
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

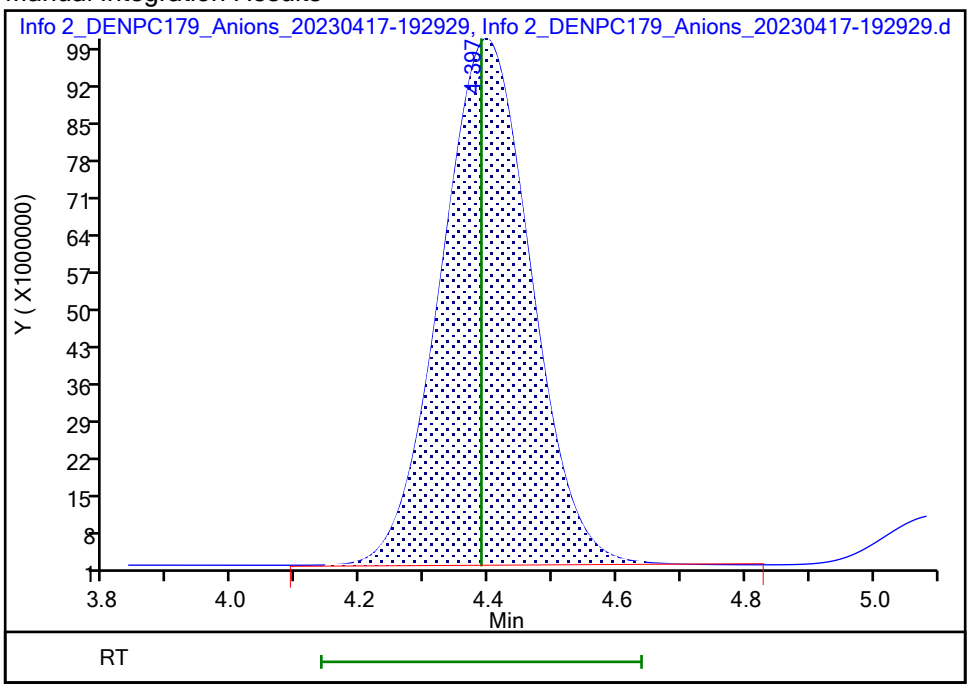
Processing Integration Results

RT: 4.40
Area: 973745942
Amount: 50.879405
Amount Units: ug/ml



Manual Integration Results

RT: 4.40
Area: 972805619
Amount: 50.830404
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:56:29

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-192

Injection Date: 17-Apr-2023 19:14:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 29

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

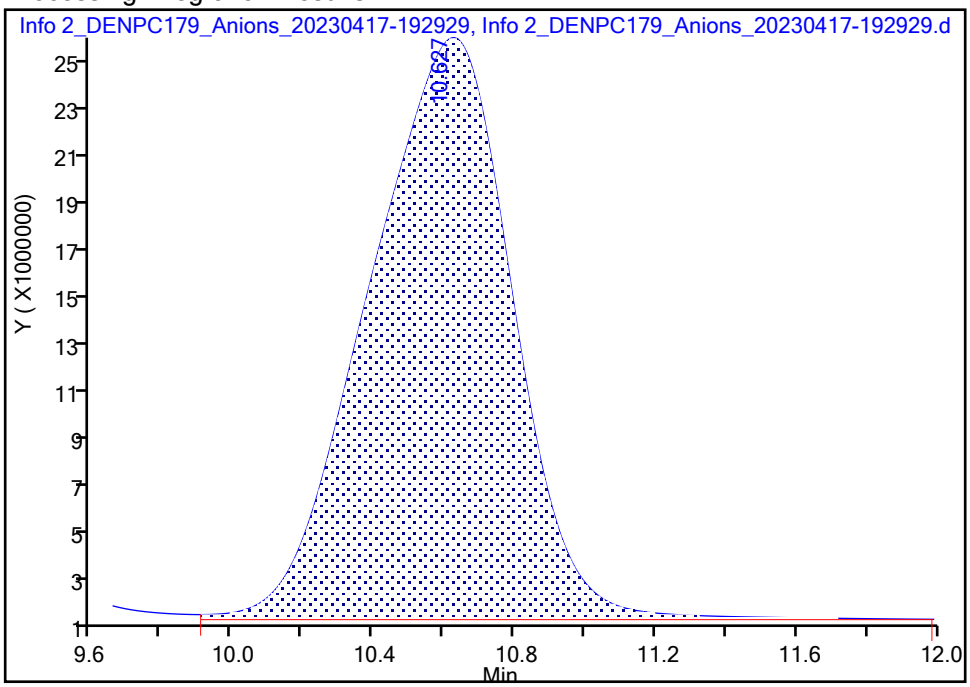
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

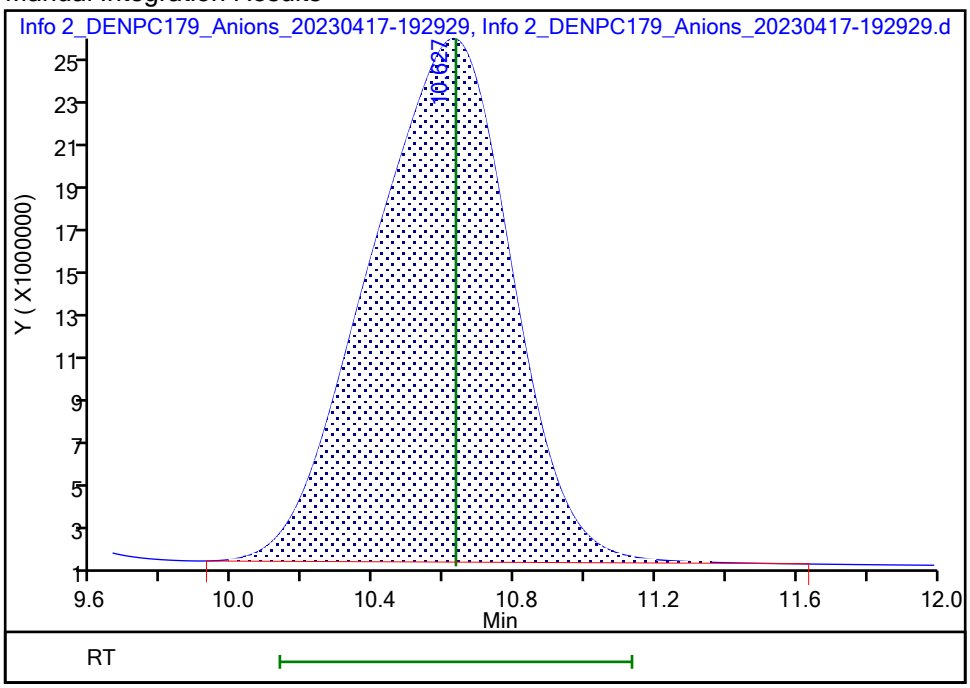
Processing Integration Results

RT: 10.63
Area: 706244174
Amount: 51.258481
Amount Units: ug/ml



Manual Integration Results

RT: 10.63
Area: 688051501
Amount: 49.940472
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:56:41

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-194
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 19:29:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-030
Misc. Info.: 280-0120473-030
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:36:56 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 10:56:53

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	
4 Bromide	6.150	6.075	0.075	152131		-0.1183	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.455	9.402	0.053	4591295		NC	
7 Sulfate	10.660	10.633	0.027	412660		0.1229	M

QC Flag Legend

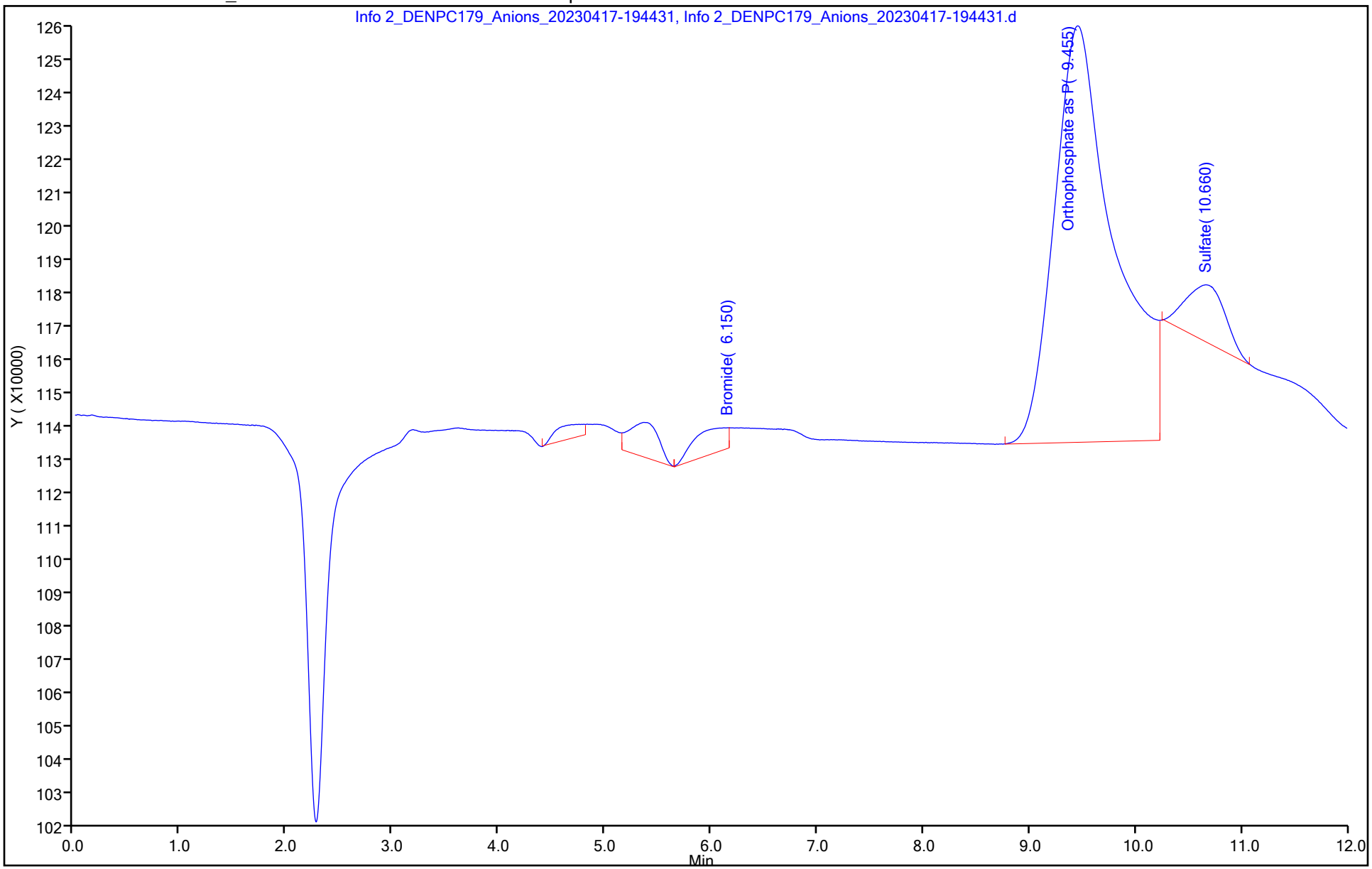
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 18-Apr-2023 11:36:58 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-194431.d

Injection Date:	17-Apr-2023 19:29:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	30
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-194

Injection Date: 17-Apr-2023 19:29:00 Instrument ID: WC_IonChrom10

Lims ID: CCB

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 30

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

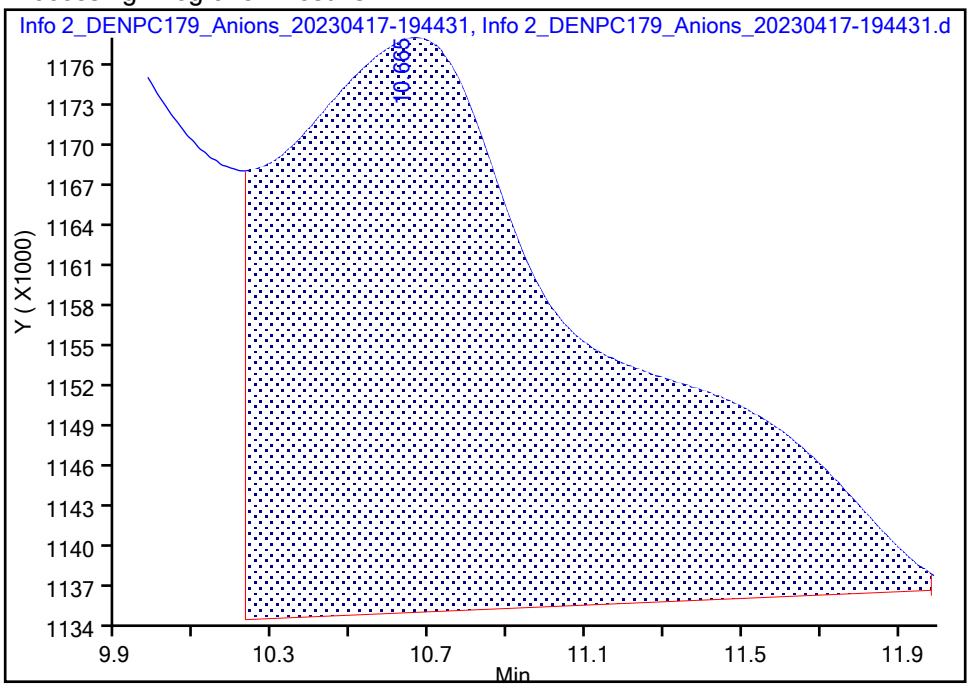
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

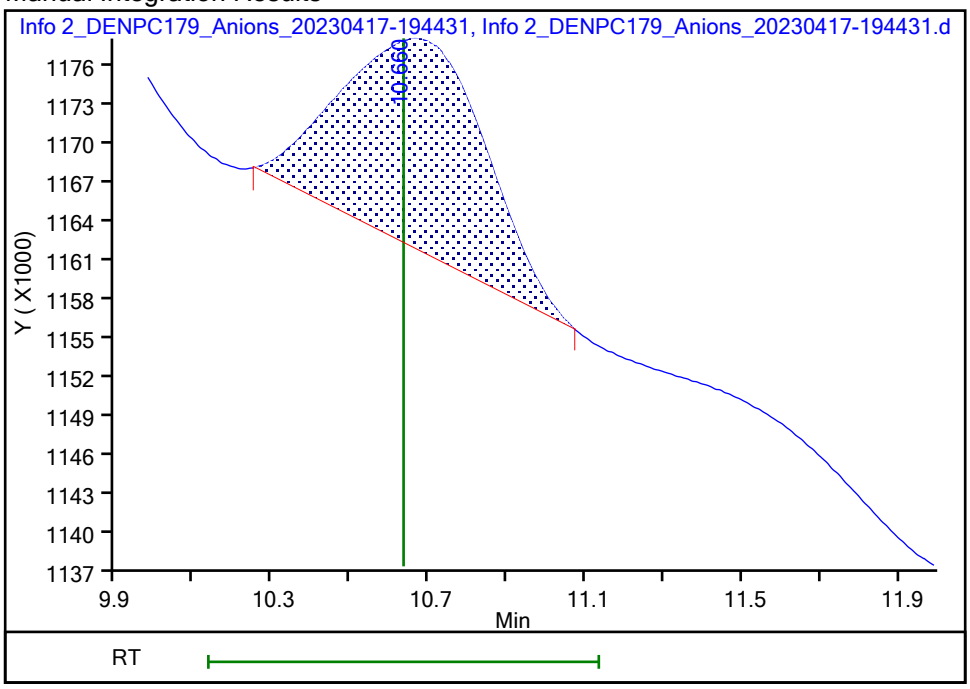
Processing Integration Results

RT: 10.67
Area: 2468107
Amount: 0.271828
Amount Units: ug/ml



Manual Integration Results

RT: 10.66
Area: 412660
Amount: 0.122916
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 10:56:49

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-222
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Apr-2023 22:14:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-041
Misc. Info.: 280-0120473-041
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:37:06 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 11:01:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238			2.50	ND	
2 Chloride	4.395	4.388	0.007	975732916	50.0	51.0	M
3 Nitrite as N	5.098	5.088	0.010	112375865	NC	NC	M
4 Bromide	6.280	6.075	0.205	17242112	2.50	2.39	
5 Nitrate as N	7.062	7.043	0.019	108702390	NC	NC	M
6 Orthophosphate as P	9.375	9.402	-0.027	67066091	NC	NC	
7 Sulfate	10.618	10.633	-0.015	690036701	50.0	50.1	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

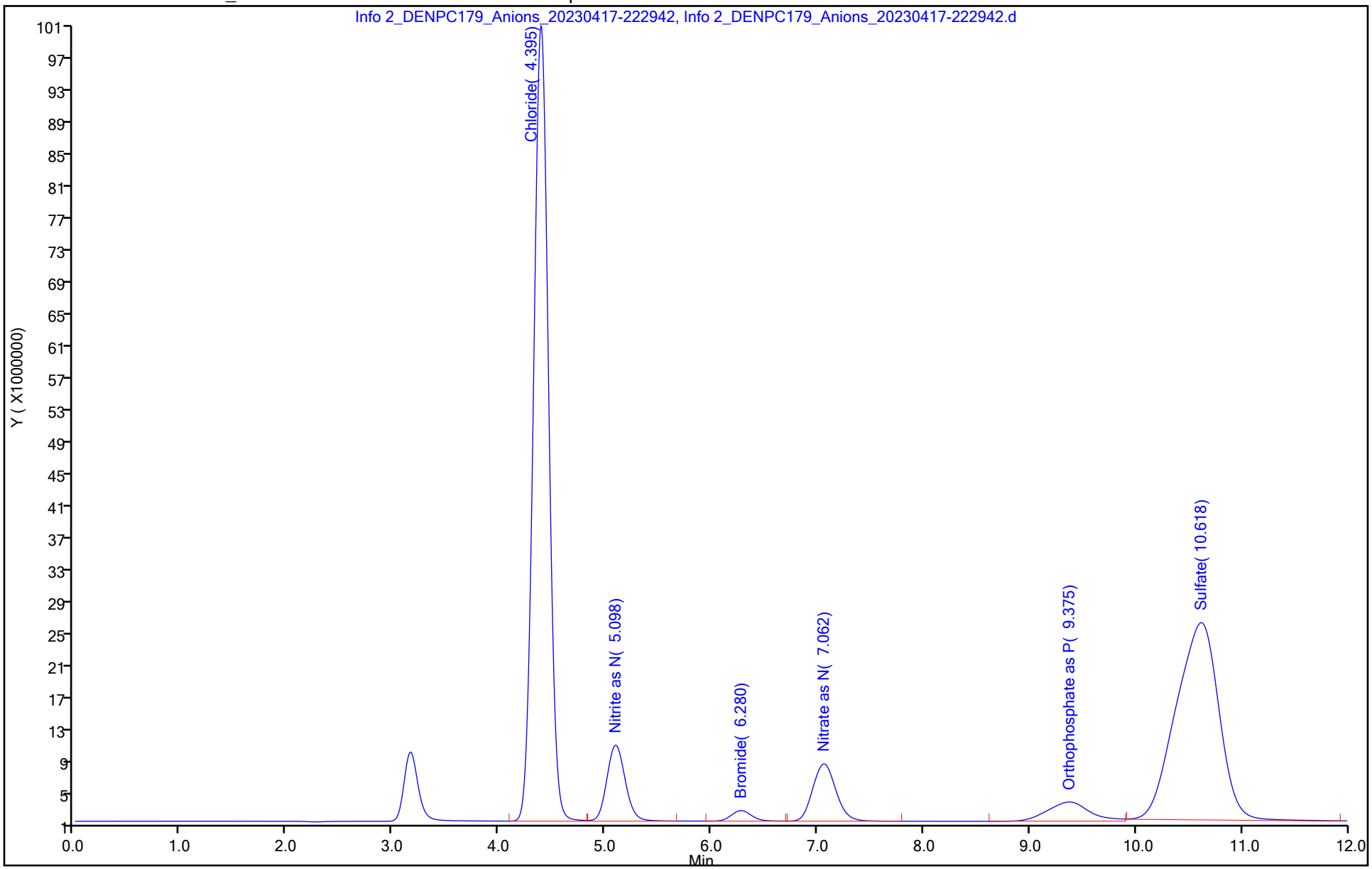
Reagents:

IC LCS_01947 Amount Added: 10.00 Units: mL

Report Date: 18-Apr-2023 11:37:07 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-222942.d				
Injection Date:	17-Apr-2023 22:14:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	41
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-222

Injection Date: 17-Apr-2023 22:14:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 41

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

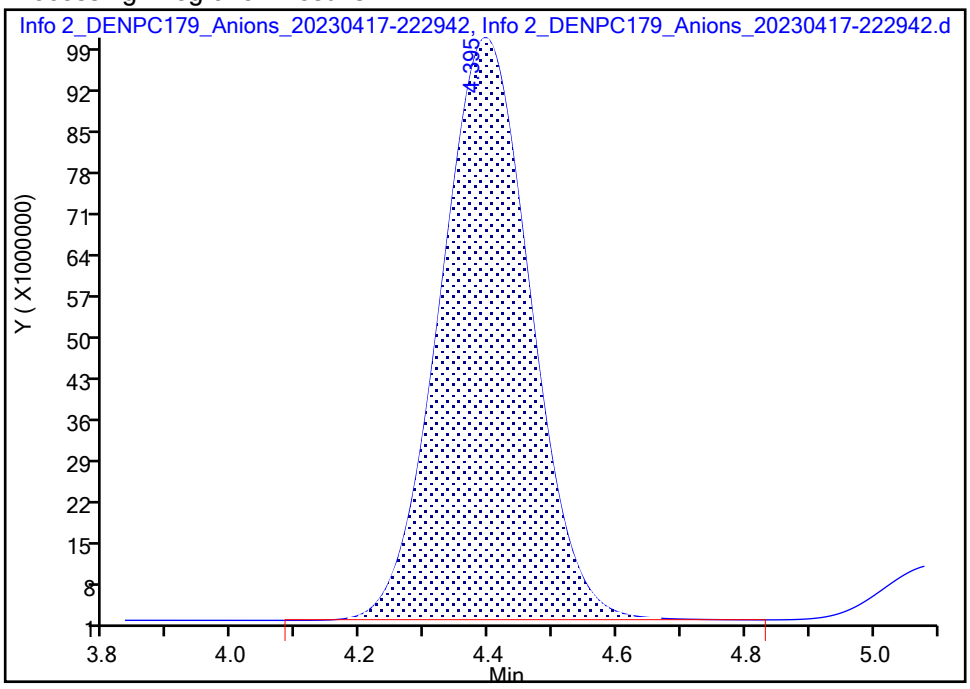
Column: Detector Info 2_091554_1

2 Chloride, CAS: 16887-00-6

Signal: 1

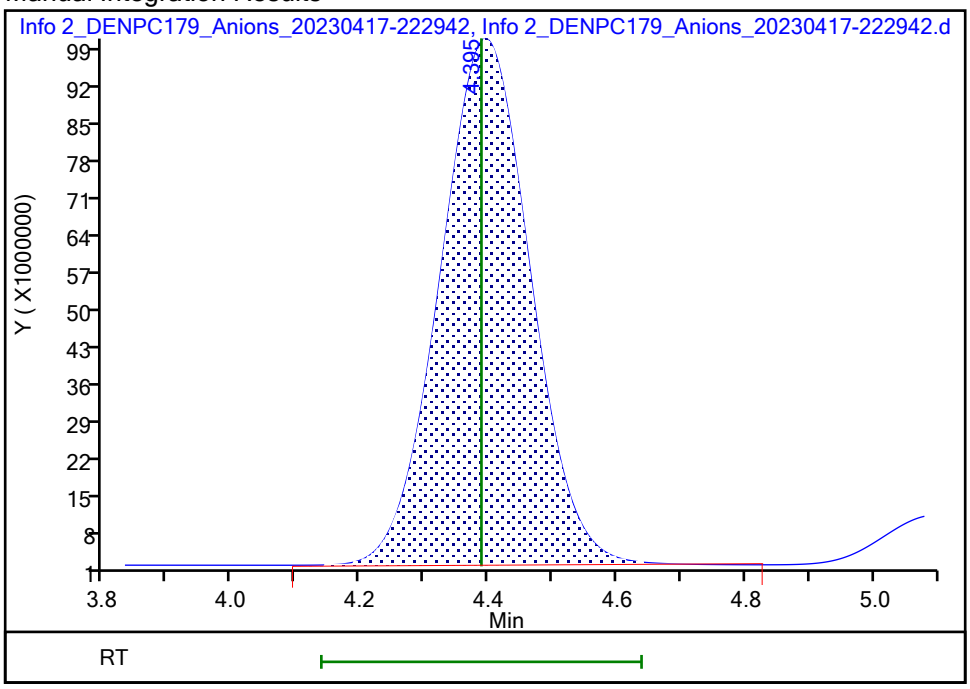
Processing Integration Results

RT: 4.40
Area: 976679795
Amount: 51.032289
Amount Units: ug/ml



Manual Integration Results

RT: 4.40
Area: 975732916
Amount: 50.982947
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 11:01:25

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-222

Injection Date: 17-Apr-2023 22:14:00 Instrument ID: WC_IonChrom10

Lims ID: CCV

Client ID:

Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 41

Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: Anions_IC10 Limit Group: Wet - Anions 28D

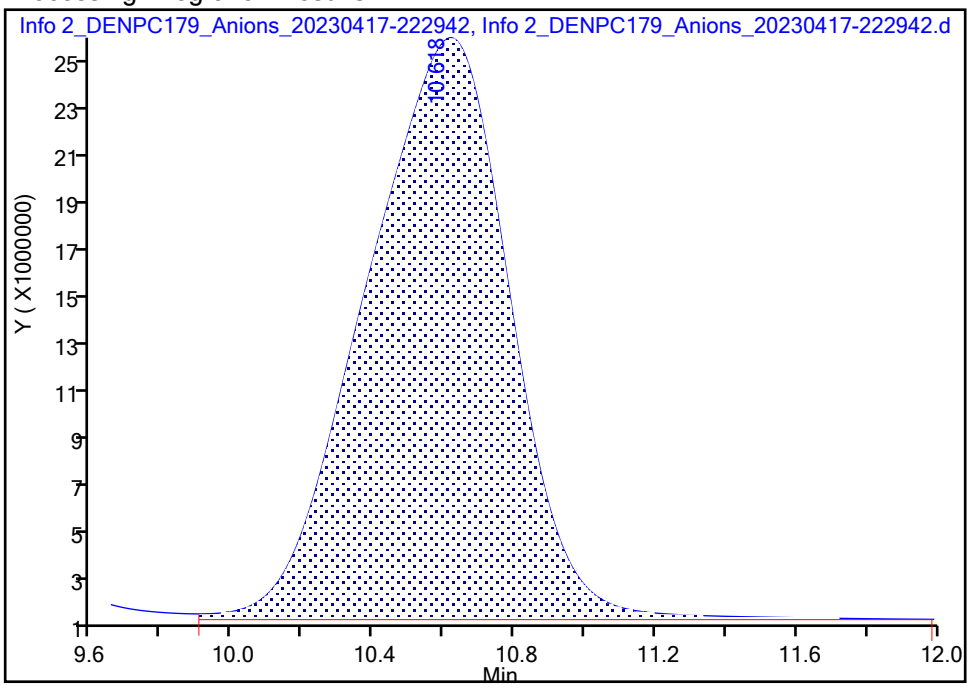
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

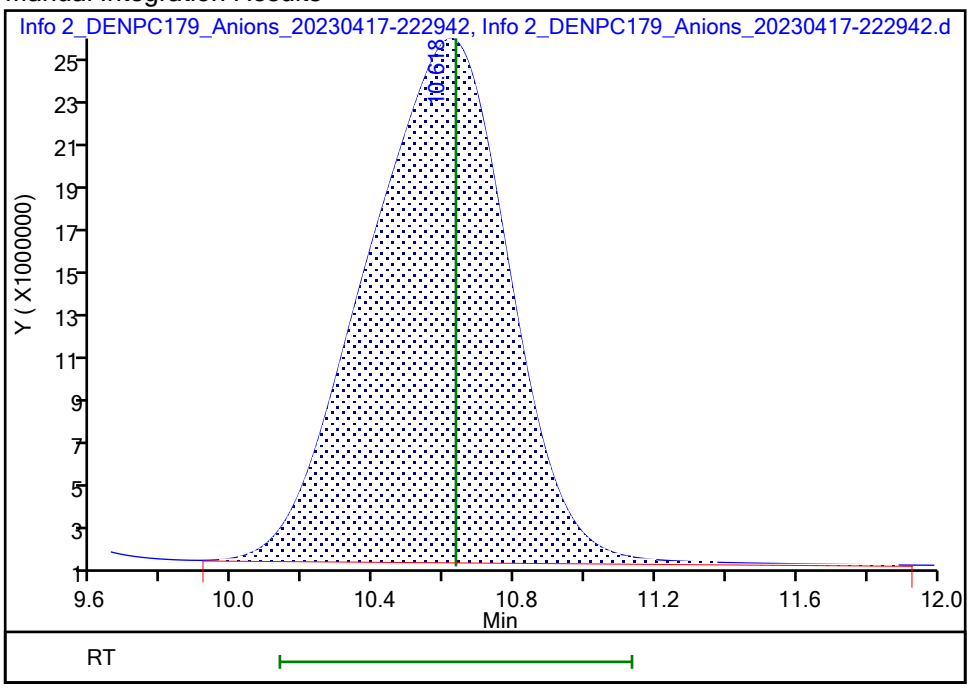
Processing Integration Results

RT: 10.62
Area: 708350670
Amount: 51.411091
Amount Units: ug/ml



Manual Integration Results

RT: 10.62
Area: 690036701
Amount: 50.084294
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 11:01:35

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-224
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 17-Apr-2023 22:29:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120473-042
Misc. Info.: 280-0120473-042
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 18-Apr-2023 11:37:06 Calib Date: 12-Apr-2023 15:19:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230412-120345.b\Info 2_DENPC179_Anions_20230412-153

Column 1 : Det: Info 2_091554_1
Process Host: CTX1681

First Level Reviewer: LVW8 Date: 18-Apr-2023 11:01:46

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.238				ND	
2 Chloride		4.388				ND	
3 Nitrite as N		5.088				ND	U
4 Bromide	6.065	6.075	-0.010	104470		-0.1253	
5 Nitrate as N		7.043				ND	
6 Orthophosphate as P	9.455	9.402	0.053	7029760		NC	
7 Sulfate	10.665	10.633	0.032	375509		0.1202	M

QC Flag Legend

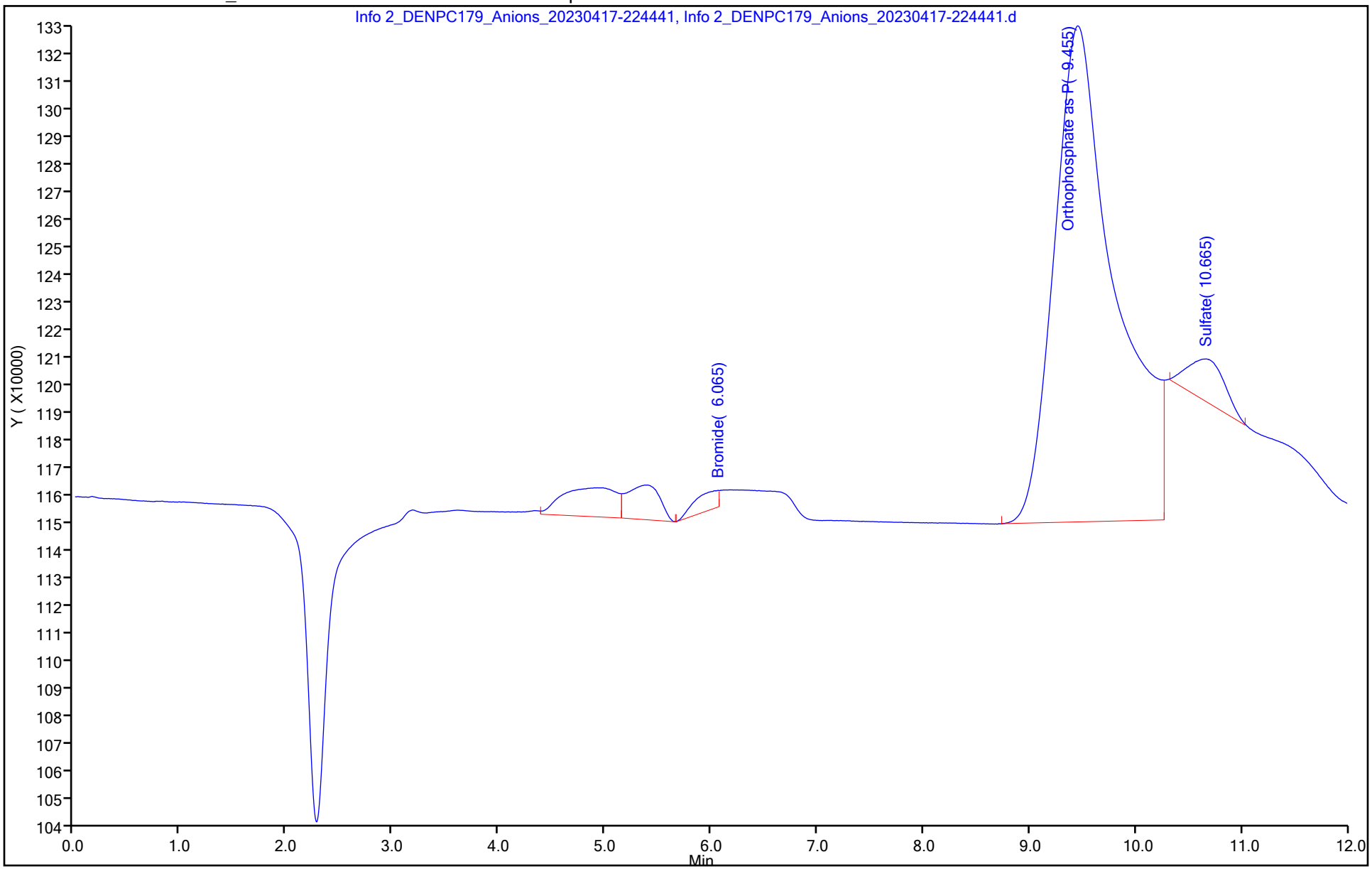
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 18-Apr-2023 11:37:08 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-224441.d

Injection Date:	17-Apr-2023 22:29:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	42
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



11/27/2023
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Manual Integration/User Assign Peak Report

Eurofins Denver

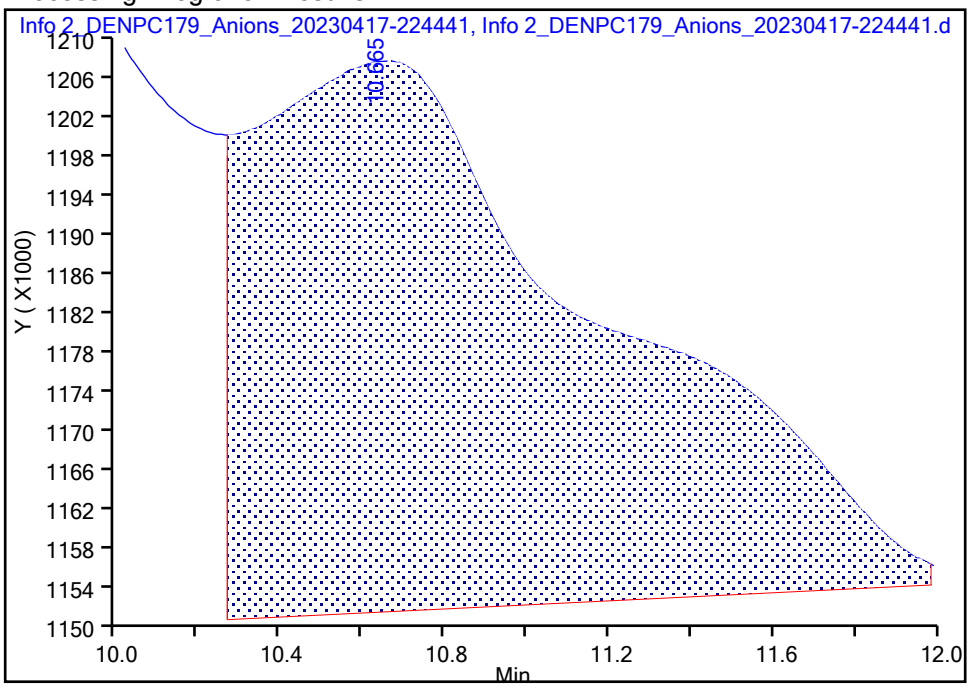
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230417-120473.b\Info 2_DENPC179_Anions_20230417-224
Injection Date: 17-Apr-2023 22:29:00 Instrument ID: WC_IonChrom10
Lims ID: CCB
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions 28D
Column: Detector Info 2_091554_1

7 Sulfate, CAS: 14808-79-8

Signal: 1

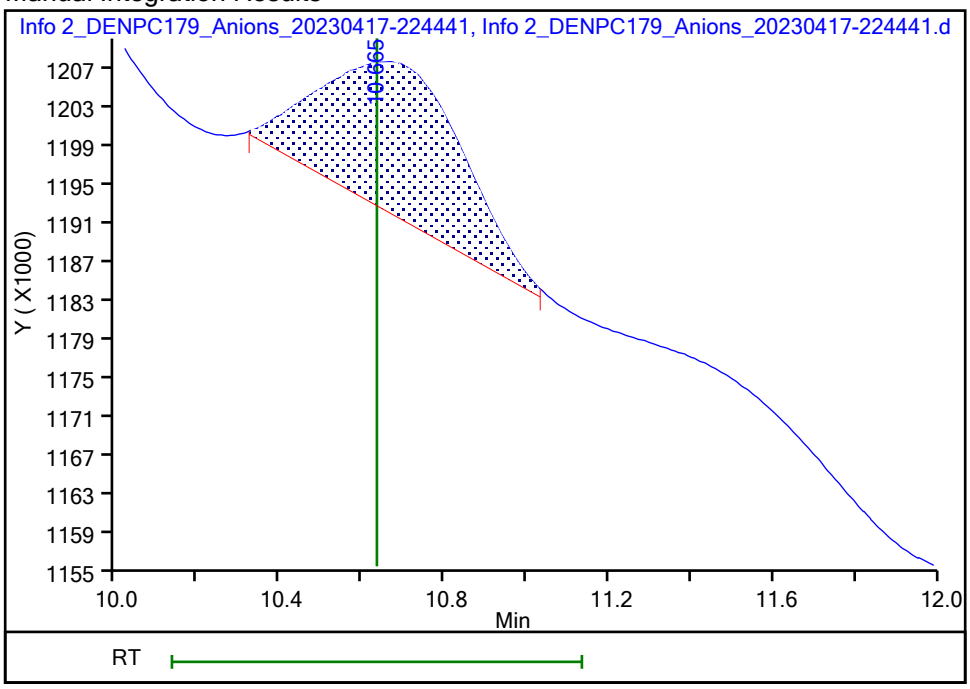
Processing Integration Results

RT: 10.67
Area: 3333445
Amount: 0.334519
Amount Units: ug/ml



Manual Integration Results

RT: 10.67
Area: 375509
Amount: 0.120225
Amount Units: ug/ml



Reviewer: LVW8, 18-Apr-2023 11:01:39
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_E				
Lims ID:	STD L1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	03-Apr-2023 16:42:00	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120028-002280-0120083-001				
Misc. Info.:	STD L1				
Operator ID:		Instrument ID:	WC_IonChrom15		
Sublist:	chrom-IC_15 Anions*sub1				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	04-Apr-2023 11:17:57	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1646				
First Level Reviewer: XAY4		Date:	04-Apr-2023 10:07:06		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride	2.700	2.700	0.000	1651846	0.5000	0.6109	M
3 Nitrite as N		3.230				ND	M
4 Bromide		3.823				ND	U
5 Nitrate as N		4.297				ND	U
7 Orthophosphate as P		5.763				ND	U
6 Sulfate	6.540	6.540	0.000	1025703	0.5000	0.6073	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

IC CAL cl/so4_00473	Amount Added:	0.04	Units: mL
IC Cal low_00701	Amount Added:	0.00	Units: mL

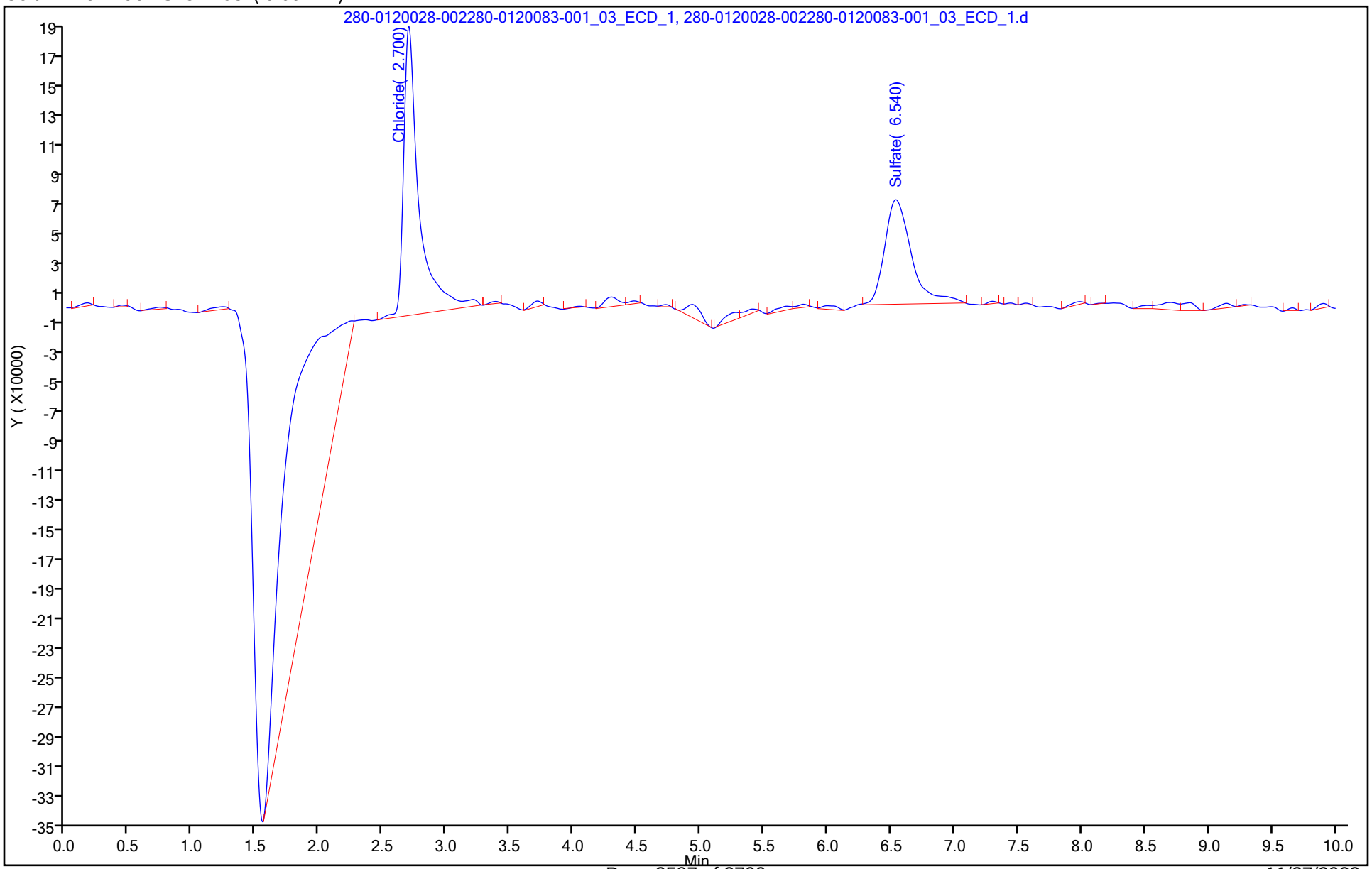
Report Date: 04-Apr-2023 11:17:57 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD_1.d

Injection Date:	03-Apr-2023 16:42:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L1			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

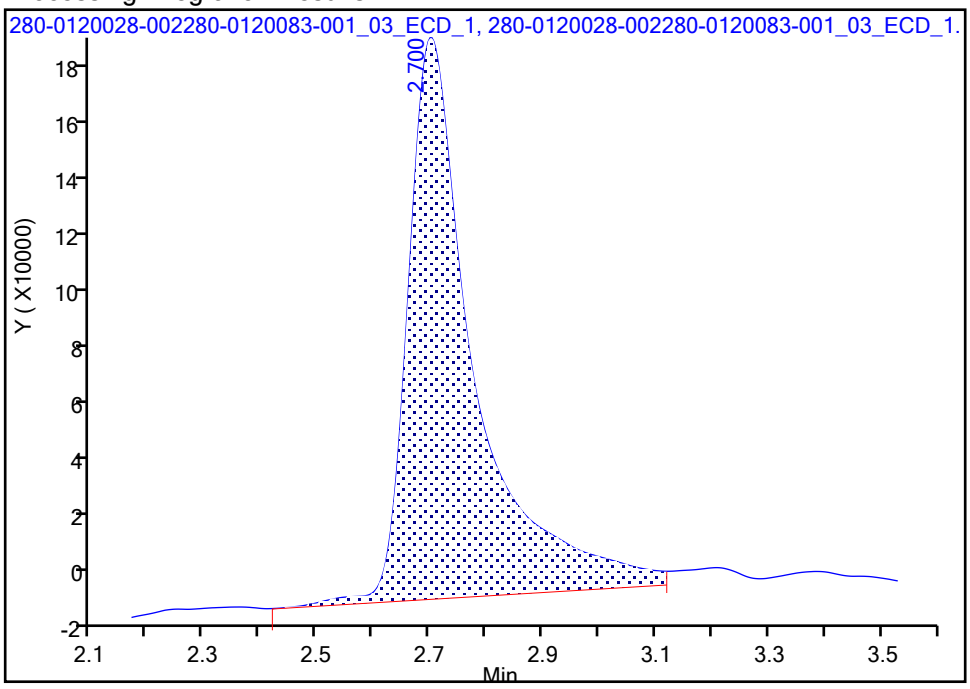
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_E				
Injection Date:	03-Apr-2023 16:42:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

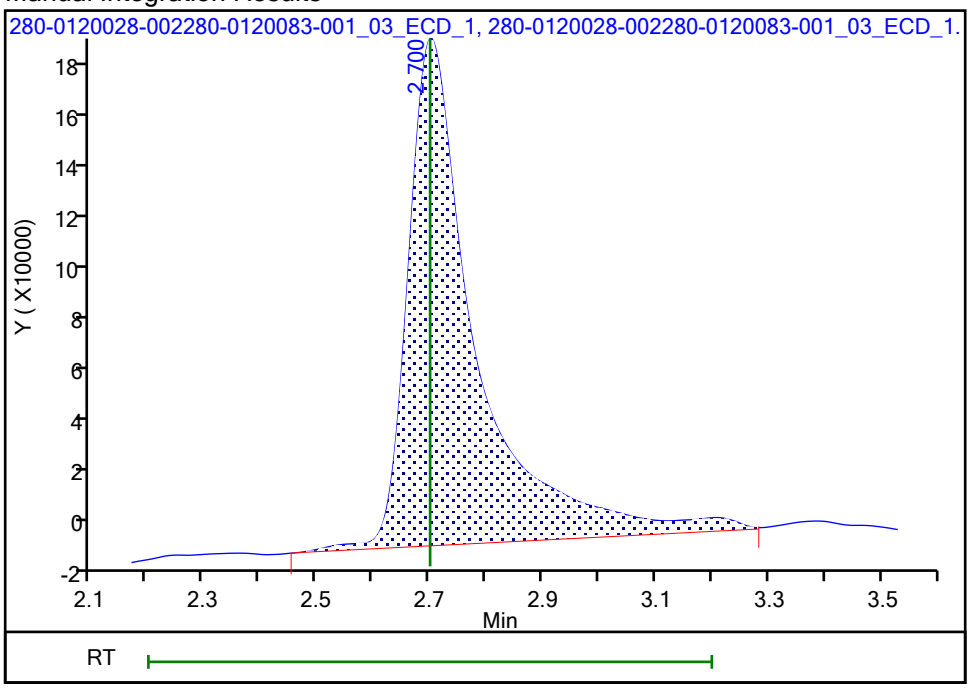
Processing Integration Results

RT: 2.70
Area: 1622548
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 1651846
Amount: 0.610935
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:06:44

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

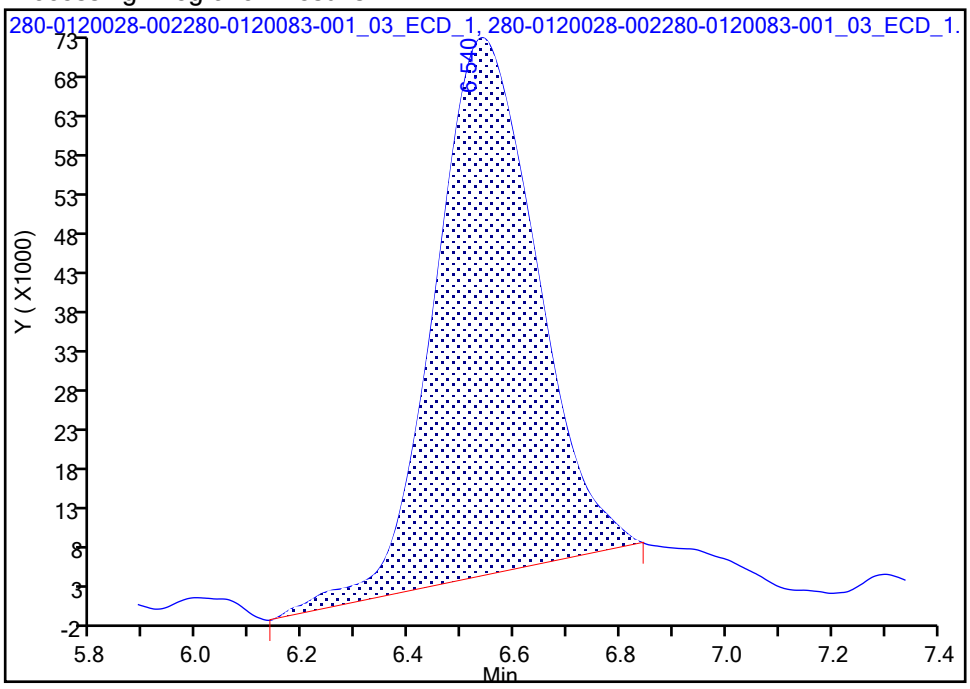
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_E
Injection Date: 03-Apr-2023 16:42:00 Instrument ID: WC_IonChrom15
Lims ID: STD L1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

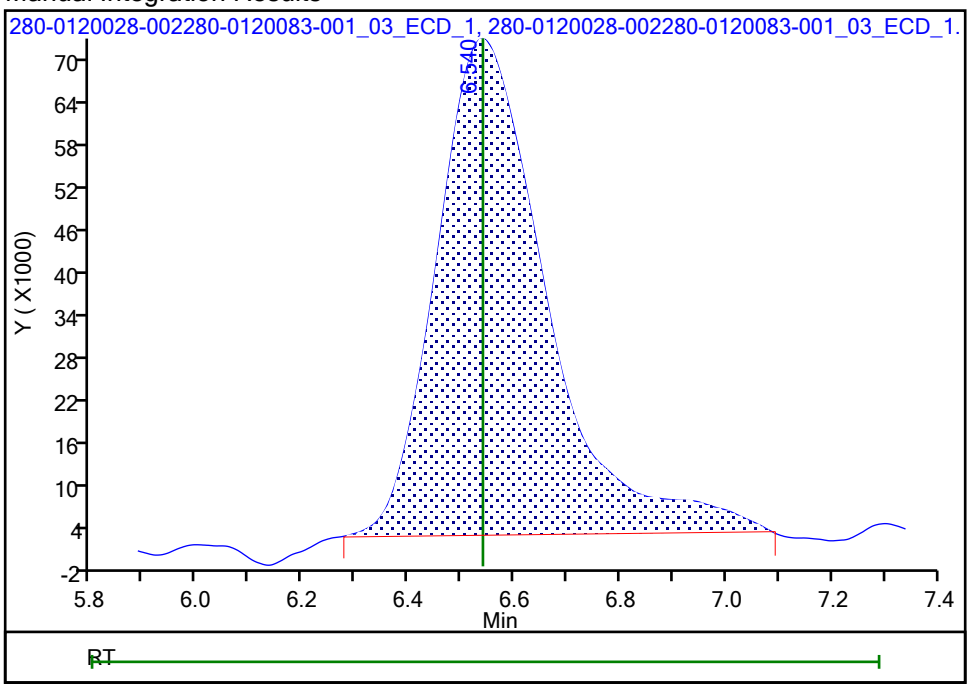
Processing Integration Results

RT: 6.54
Area: 926322
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 6.54
Area: 1025703
Amount: 0.607346
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:07:02
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 03-Apr-2023 16:54:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-002
Misc. Info.: STD L2
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:57 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.927	1.927	0.000	514755	0.2000	0.2028	Ma
2 Chloride	2.700	2.700	0.000	4009670	1.25	1.22	M
3 Nitrite as N	3.230	3.230	0.000	1566723	NC	NC	M
4 Bromide	3.833	3.833	0.000	220121	0.2000	0.2066	
5 Nitrate as N	4.303	4.303	0.000	1304923	NC	NC	
7 Orthophosphate as P	5.760	5.760	0.000	446882	NC	NC	
6 Sulfate	6.540	6.540	0.000	2443469	1.25	1.14	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.10 Units: mL
IC Cal low_00701 Amount Added: 0.08 Units: mL

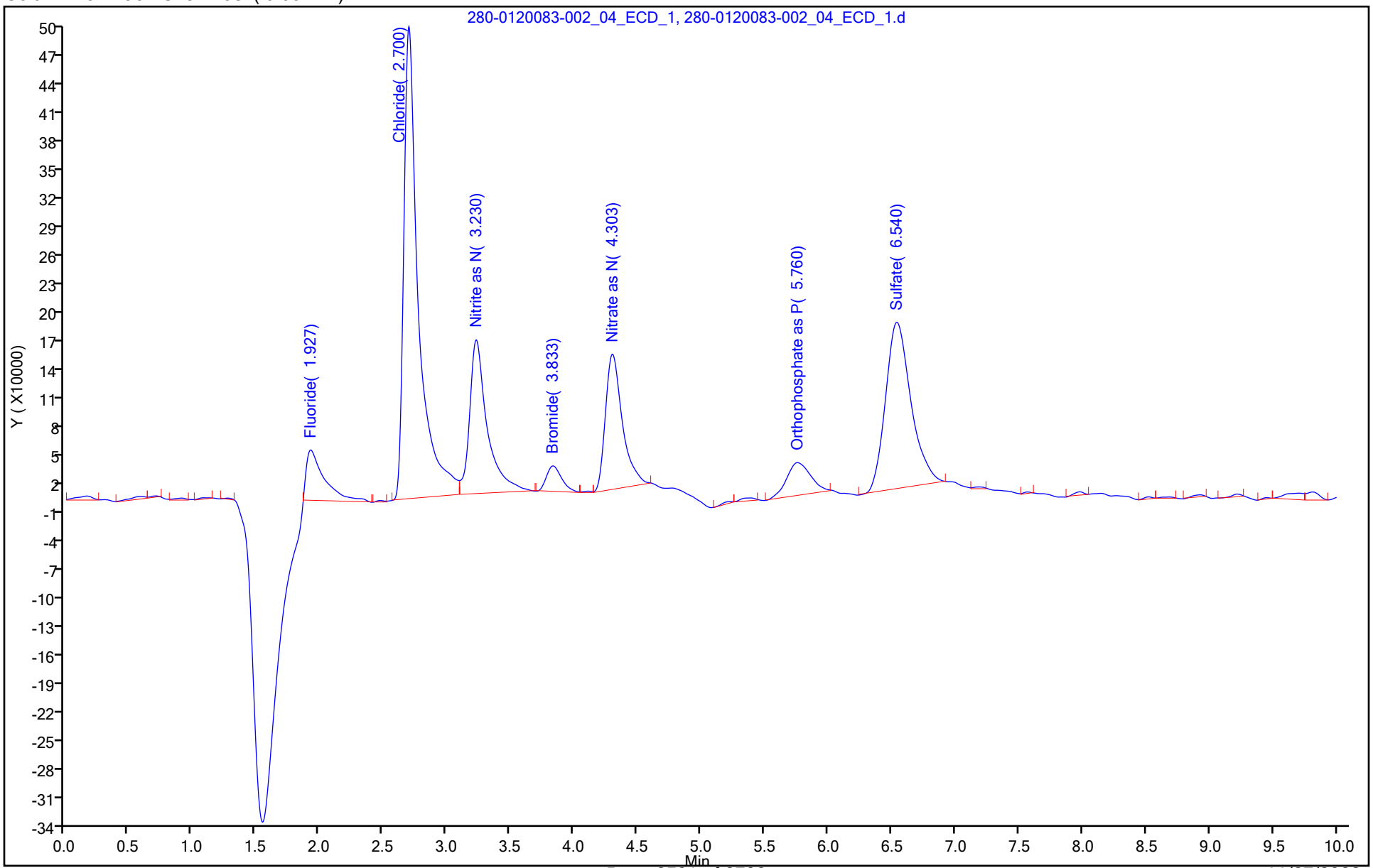
Report Date: 04-Apr-2023 11:17:58 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d

Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

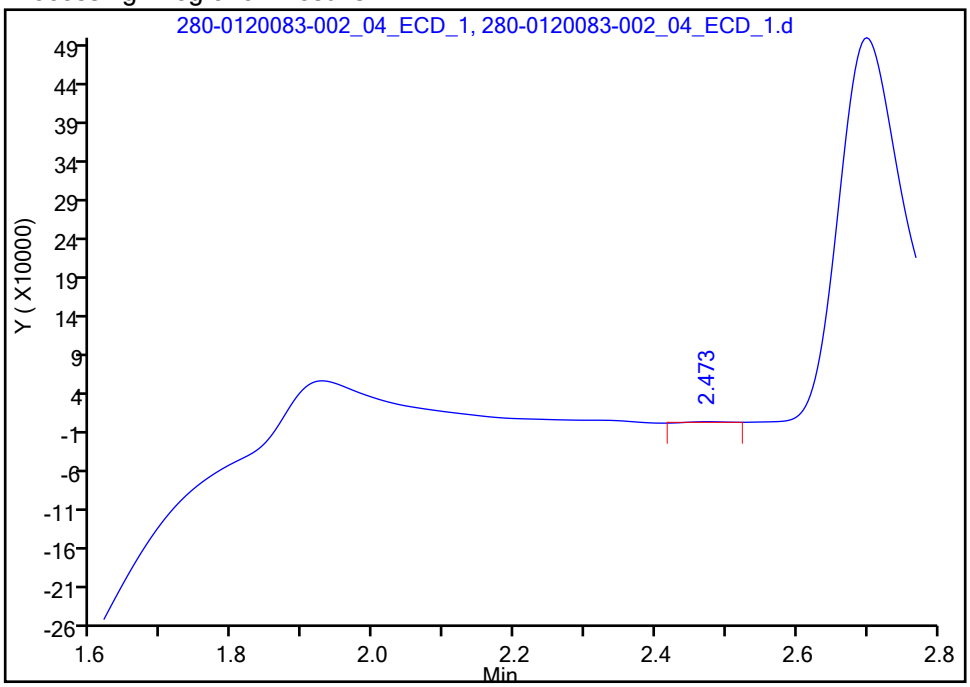
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d				
Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

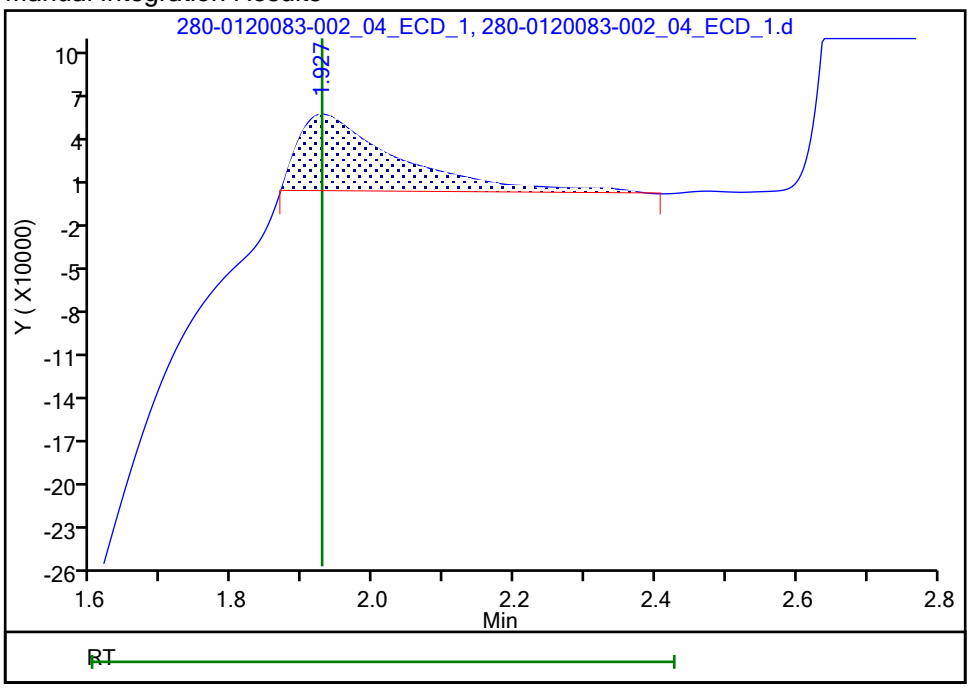
RT: 2.47
Area: 4318
Amount: 0
Amount Units: ug/ml

Processing Integration Results



RT: 1.93
Area: 514755
Amount: 0.202821
Amount Units: ug/ml

Manual Integration Results



Reviewer: XAY4, 04-Apr-2023 10:07:17
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

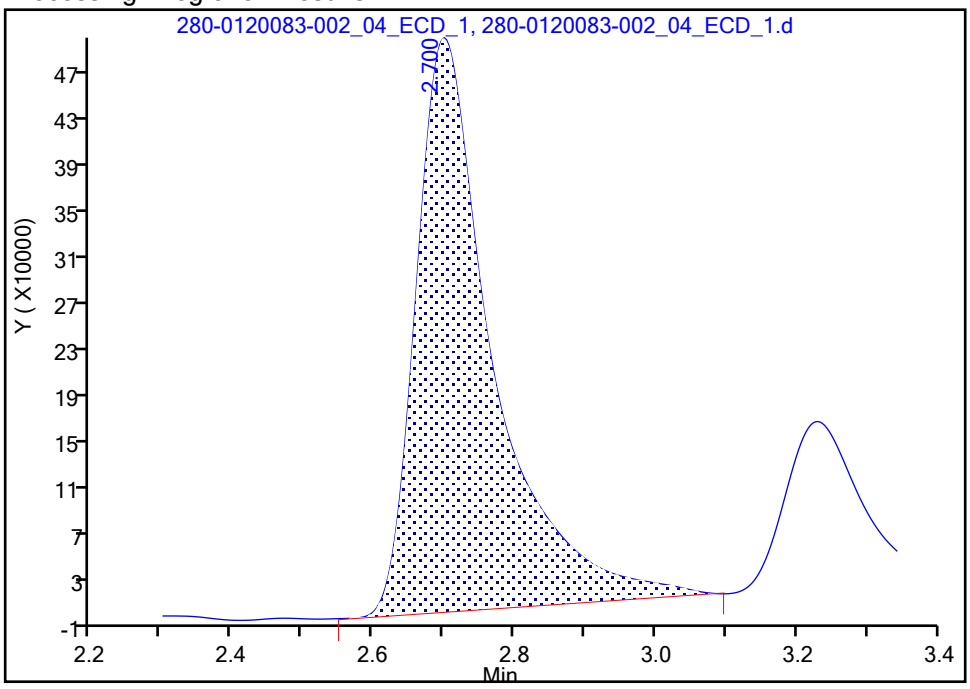
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d				
Injection Date:	03-Apr-2023 16:54:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

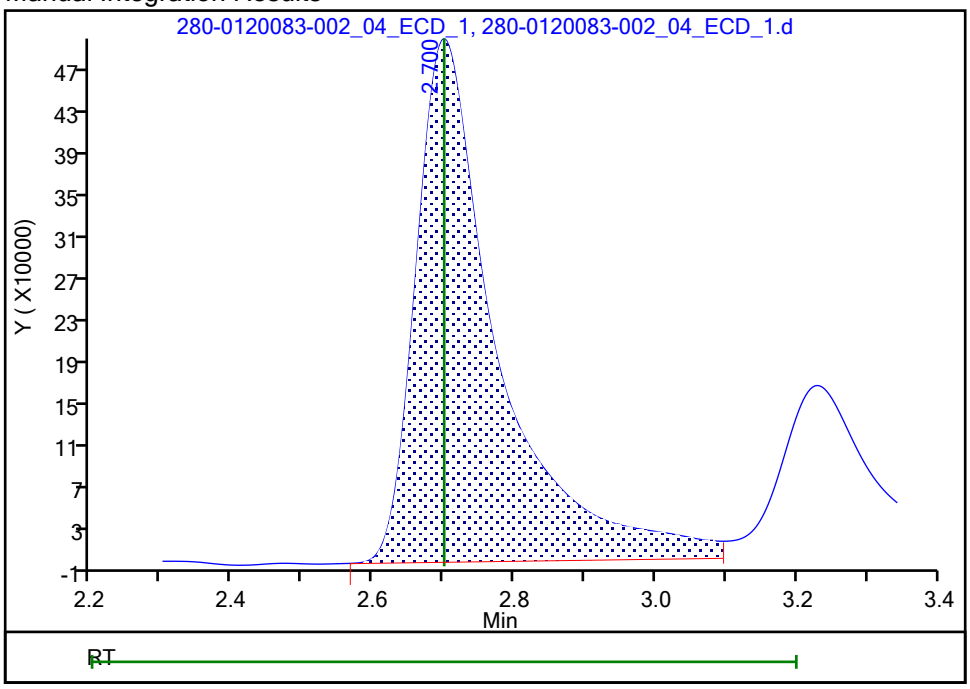
Processing Integration Results

RT: 2.70
Area: 3768322
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 4009670
Amount: 1.216005
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:09:23

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 03-Apr-2023 17:06:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-003
Misc. Info.: STD L3
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:58 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:07:49

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.923	1.923	0.000	1716859	0.5000	0.4463	M
2 Chloride	2.700	2.700	0.000	7890362	2.50	2.21	M
3 Nitrite as N	3.230	3.230	0.000	3703597	NC	NC	M
4 Bromide	3.830	3.830	0.000	543772	0.5000	0.4965	
5 Nitrate as N	4.303	4.303	0.000	3752523	NC	NC	
7 Orthophosphate as P	5.767	5.767	0.000	1406263	NC	NC	
6 Sulfate	6.543	6.543	0.000	5485179	2.50	2.29	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC CAL cl/so4_00473 Amount Added: 0.20 Units: mL
IC Cal low_00701 Amount Added: 0.20 Units: mL

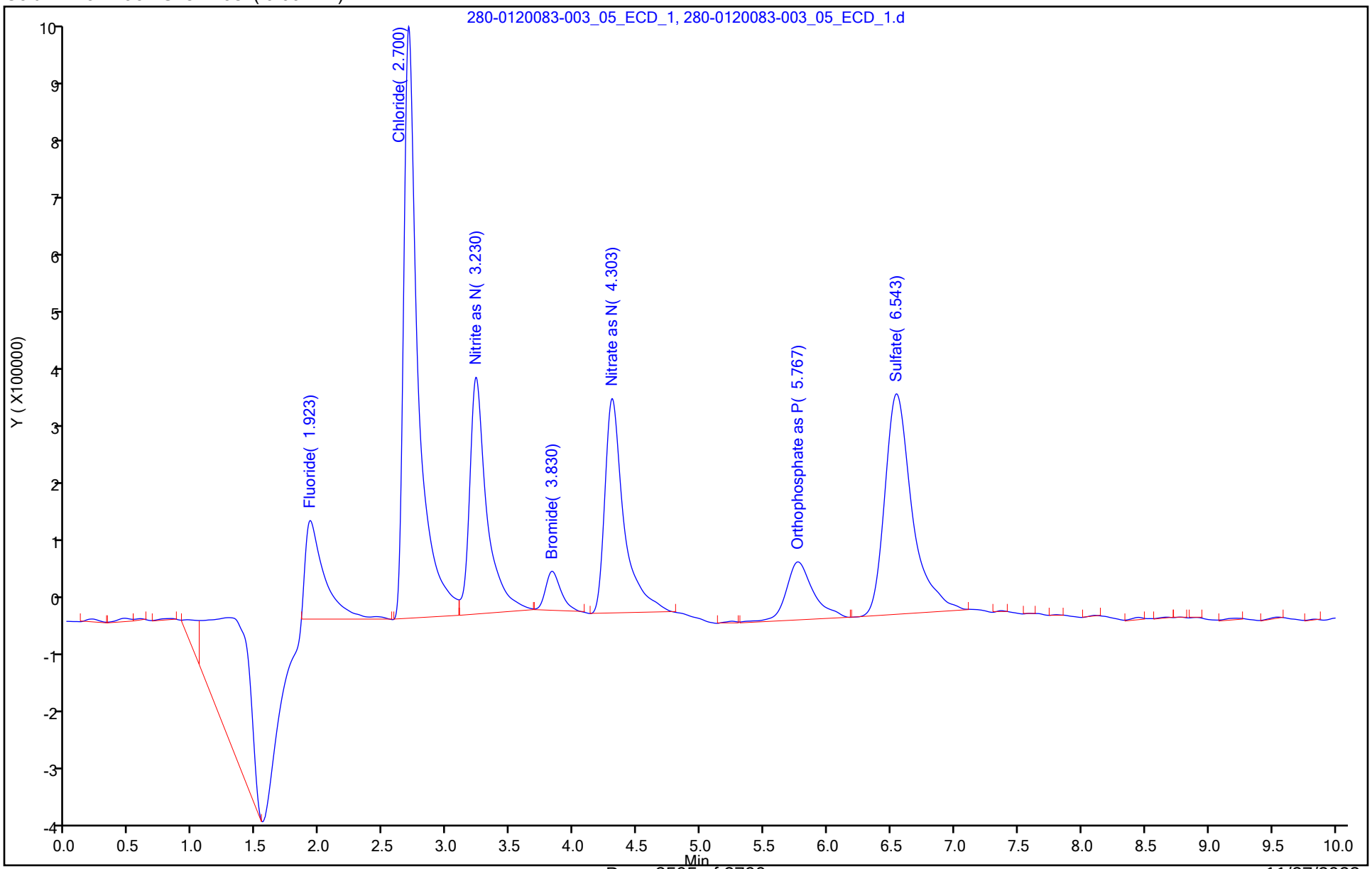
Report Date: 04-Apr-2023 11:17:58 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d

Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Manual Integration/User Assign Peak Report

Eurofins Denver

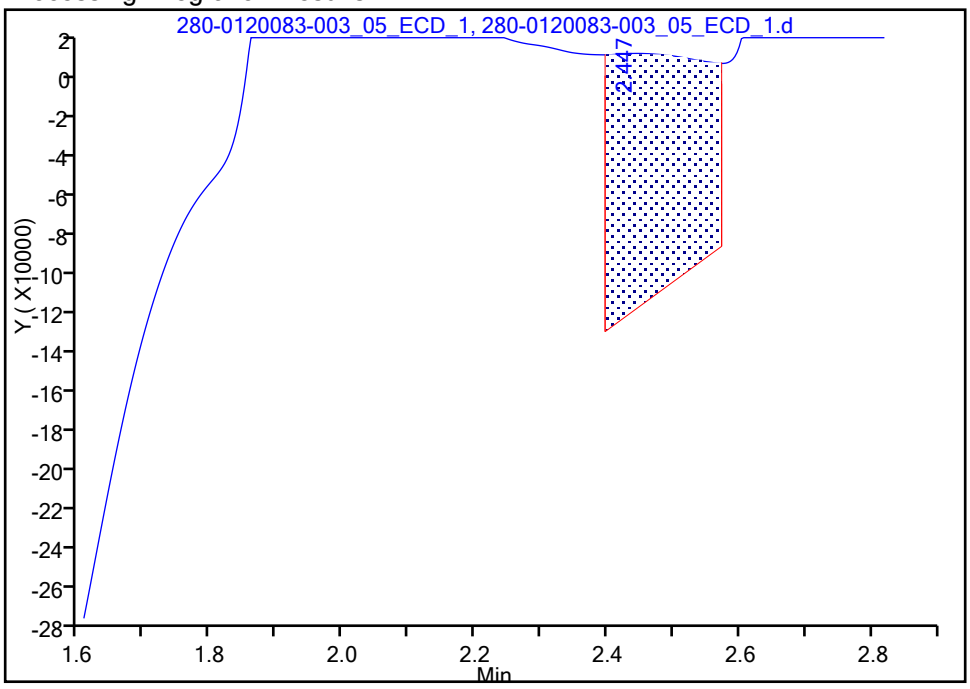
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d				
Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

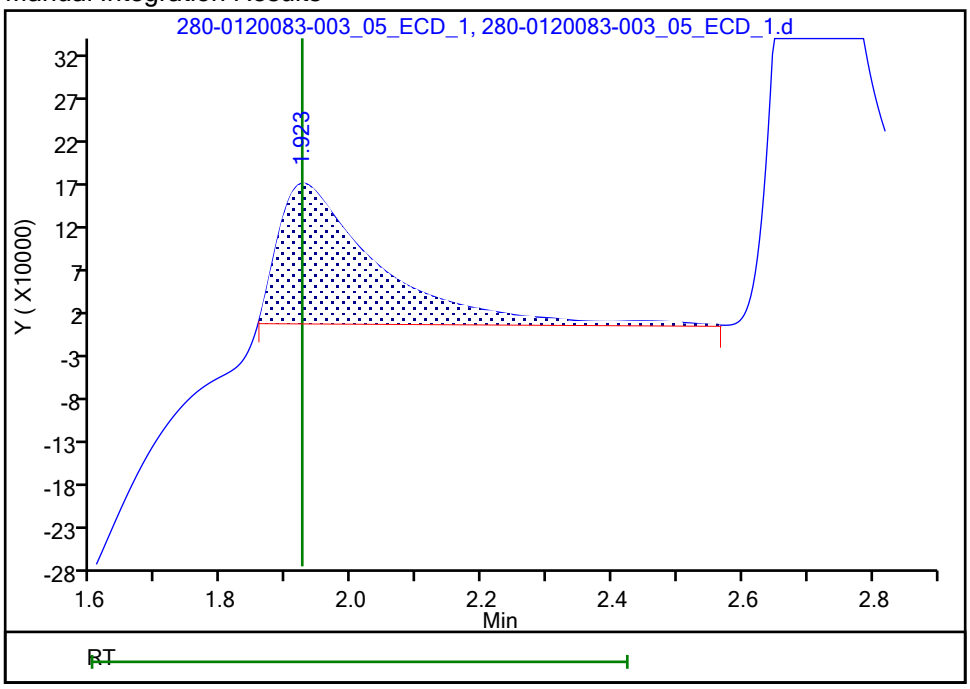
RT: 2.45
Area: 1236234
Amount: 0
Amount Units: ug/ml

Processing Integration Results



RT: 1.92
Area: 1716859
Amount: 0.446324
Amount Units: ug/ml

Manual Integration Results



Reviewer: XAY4, 04-Apr-2023 10:07:36
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

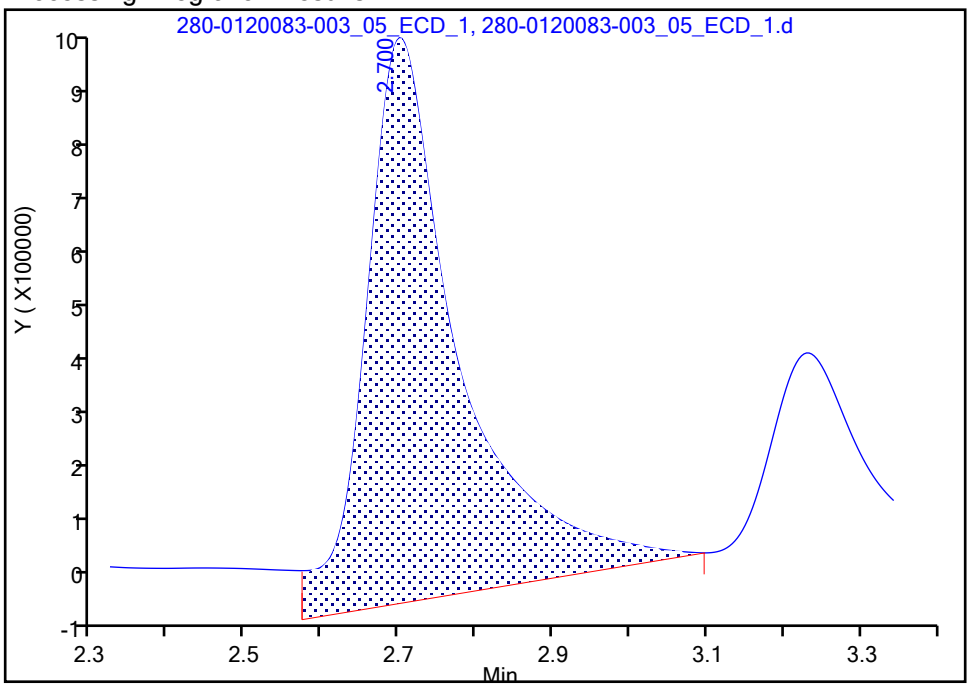
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d				
Injection Date:	03-Apr-2023 17:06:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

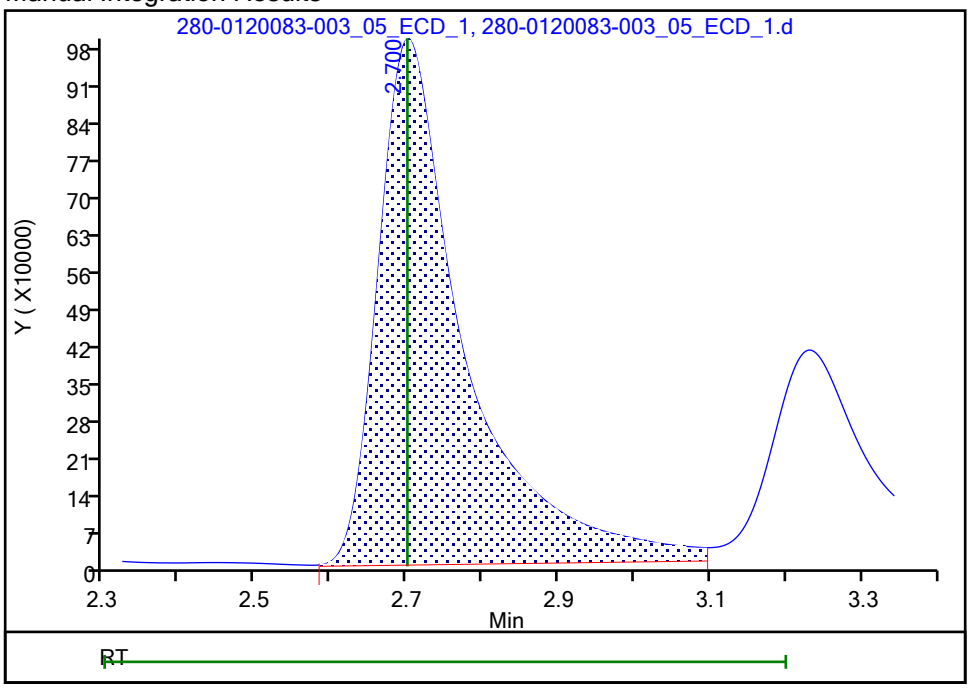
Processing Integration Results

RT: 2.70
Area: 8952138
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 7890362
Amount: 2.211878
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:09:49
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 03-Apr-2023 17:18:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-004
Misc. Info.: STD L4
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	5002458	1.00	1.11	Ma
2 Chloride	2.703	2.703	0.000	104633916	30.0	27.0	M
3 Nitrite as N	3.227	3.227	0.000	9946553	NC	NC	Ma
4 Bromide	3.827	3.827	0.000	1082846	1.00	0.9794	
5 Nitrate as N	4.300	4.300	0.000	7262541	NC	NC	
7 Orthophosphate as P	5.763	5.763	0.000	2563153	NC	NC	
6 Sulfate	6.550	6.550	0.000	75166700	30.0	28.5	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 2.40 Units: mL
IC Cal low_00701 Amount Added: 0.40 Units: mL

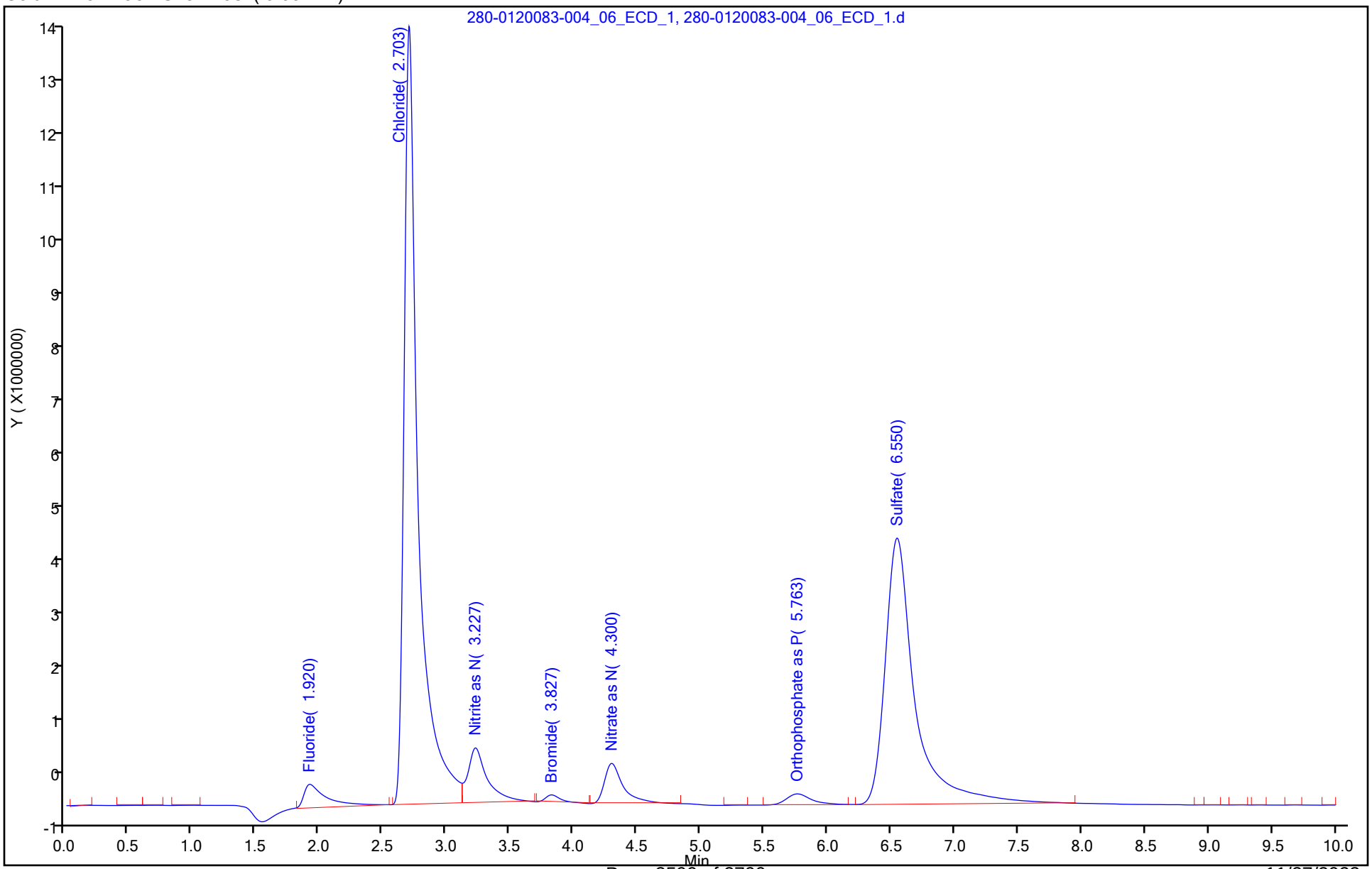
Report Date: 04-Apr-2023 11:17:59 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d

Injection Date:	03-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

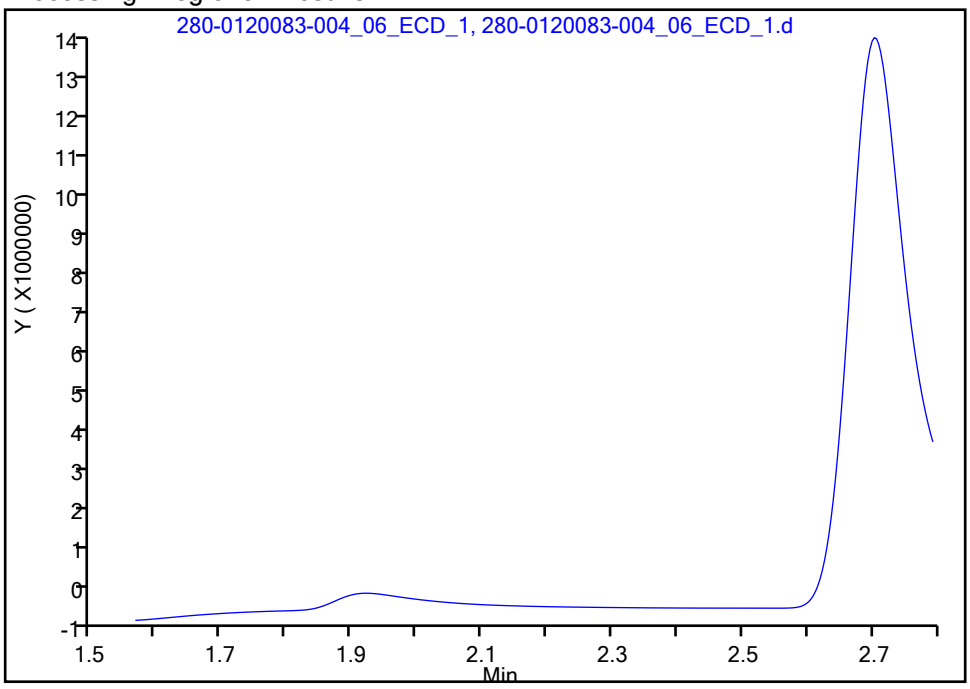
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d				
Injection Date:	03-Apr-2023 17:18:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L4				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

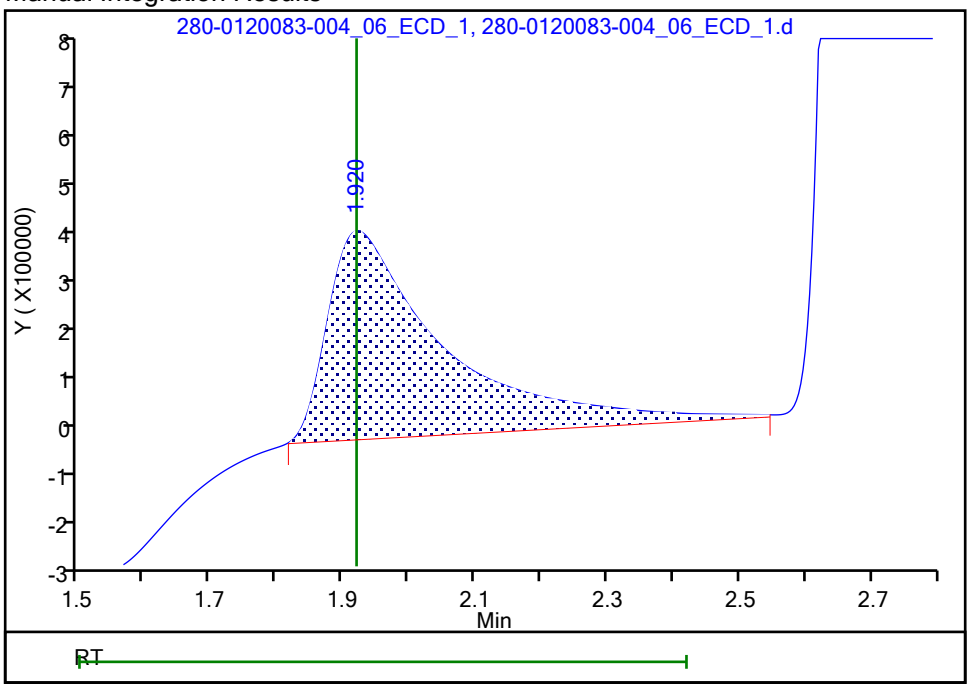
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 5002458
Amount: 1.111870
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:07:59
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

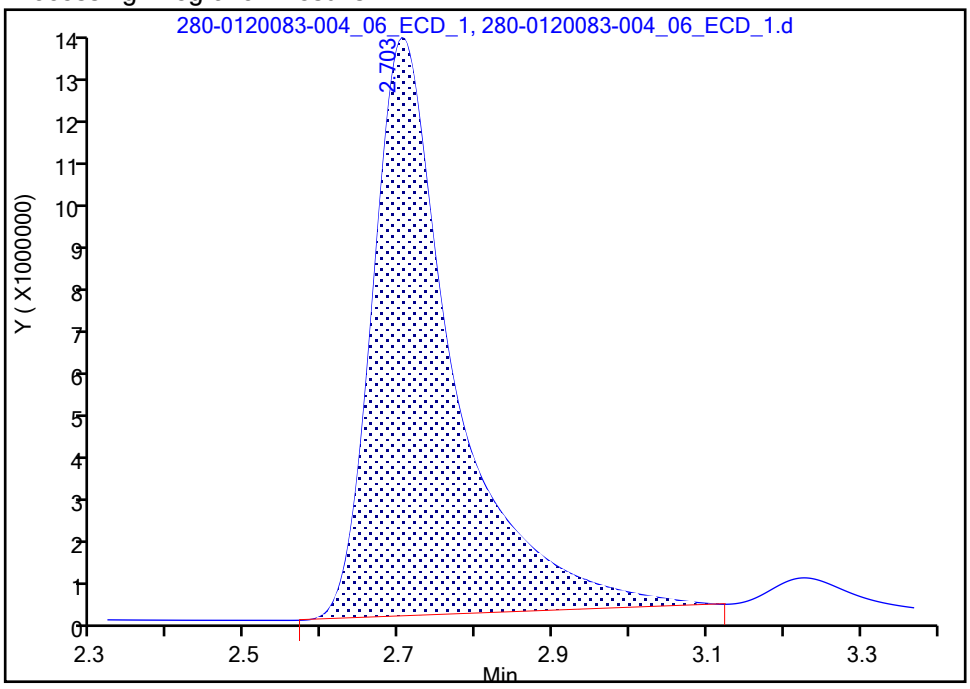
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Injection Date: 03-Apr-2023 17:18:00 Instrument ID: WC_IonChrom15
Lims ID: STD L4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6

Signal: 1

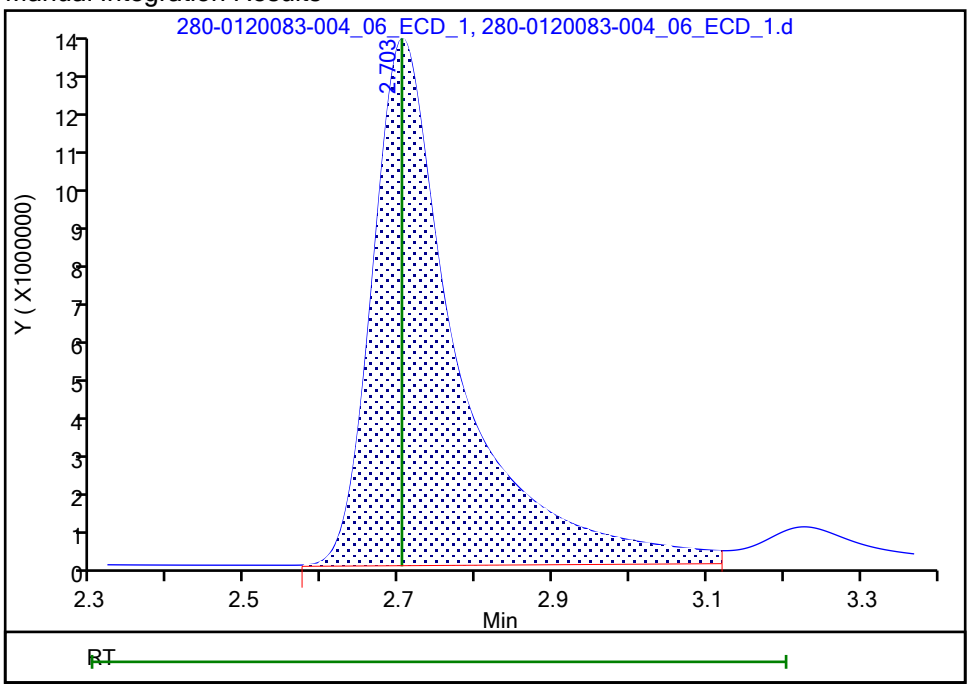
Processing Integration Results

RT: 2.70
Area: 99363161
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.70
Area: 104633916
Amount: 27.038454
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:01
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 03-Apr-2023 17:30:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-005
Misc. Info.: STD L5
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:17:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	11696825	2.50	2.47	Ma
2 Chloride	2.710	2.710	0.000	225809574	60.0	58.1	M
3 Nitrite as N	3.230	3.230	0.000	22727090	NC	NC	Ma
4 Bromide	3.827	3.827	0.000	2730351	2.50	2.46	
5 Nitrate as N	4.300	4.300	0.000	19732616	NC	NC	
7 Orthophosphate as P	5.763	5.763	0.000	6654551	NC	NC	
6 Sulfate	6.557	6.557	0.000	155347554	60.0	58.7	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 4.80 Units: mL
IC Cal low_00701 Amount Added: 1.00 Units: mL

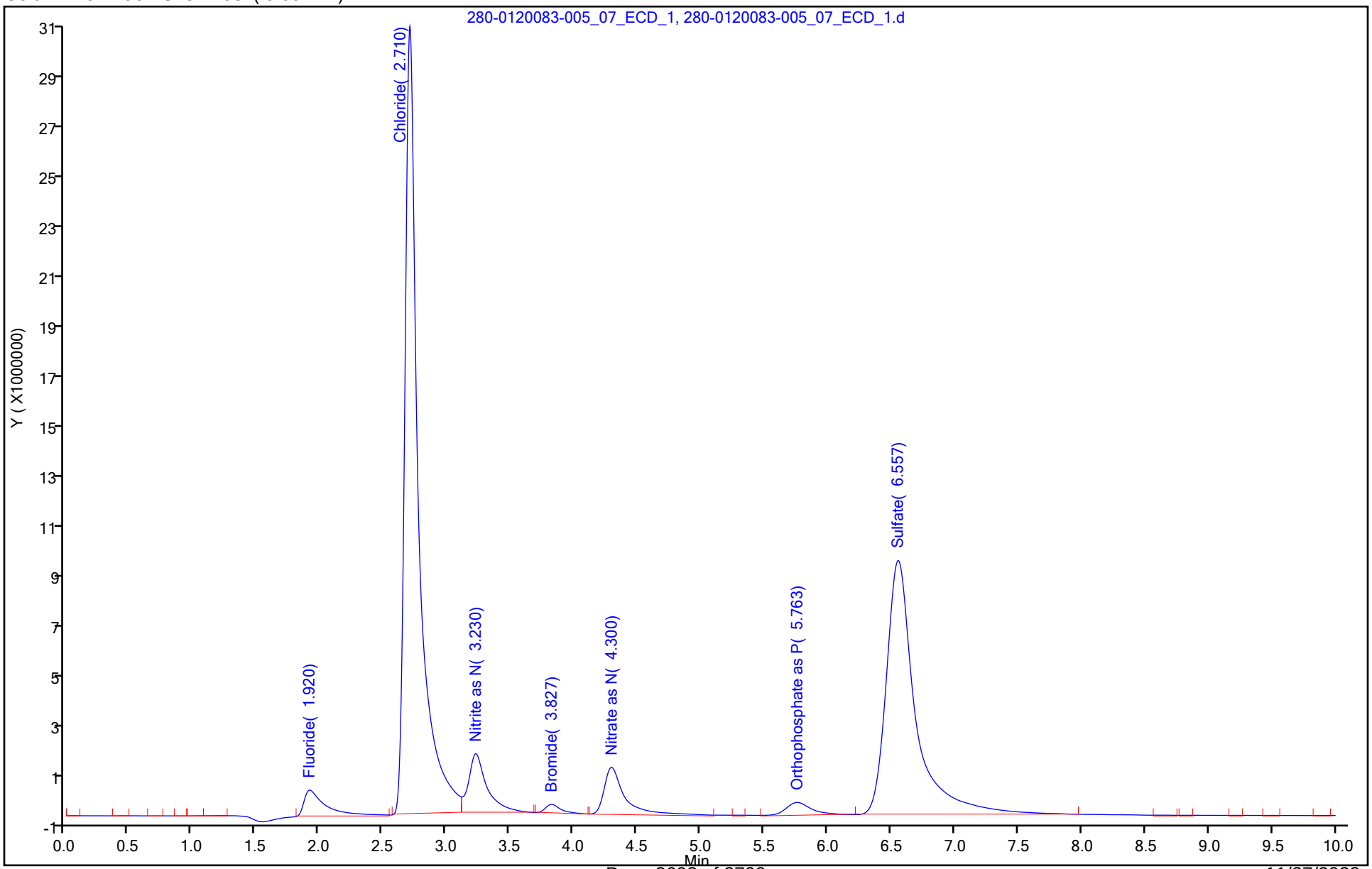
Report Date: 04-Apr-2023 11:17:59 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d

Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

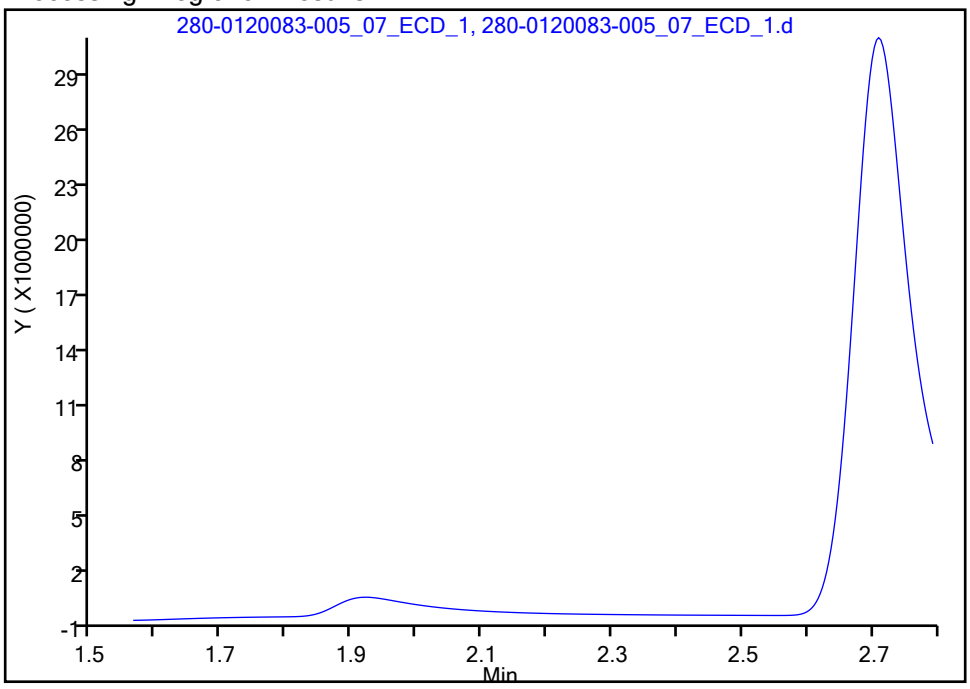
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d				
Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L5				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

1 Fluoride, CAS: 16984-48-8

Signal: 1

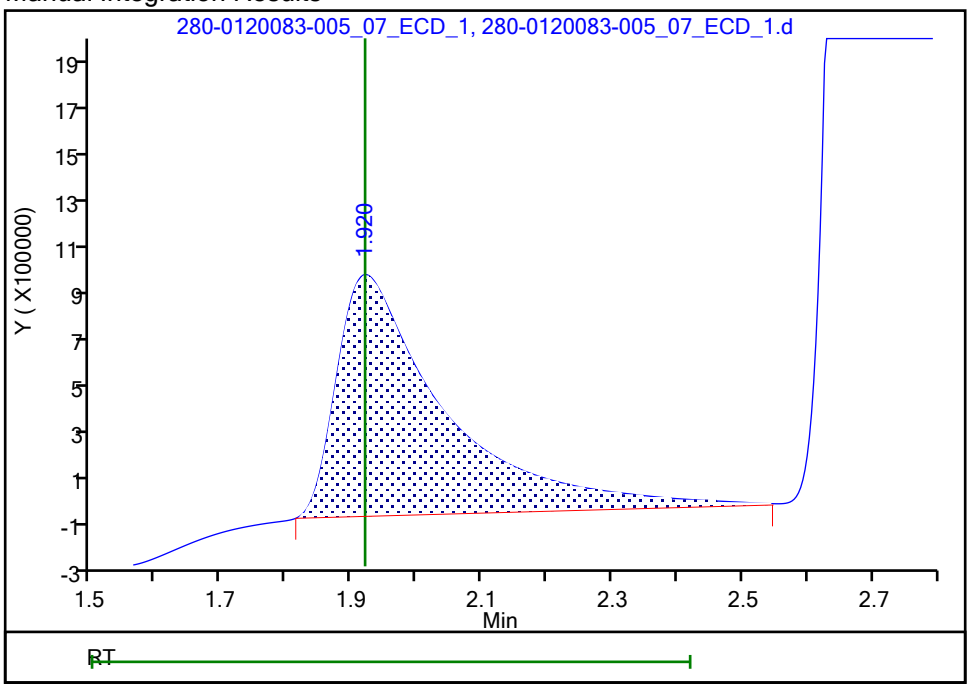
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 11696825
Amount: 2.467911
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:08:15
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

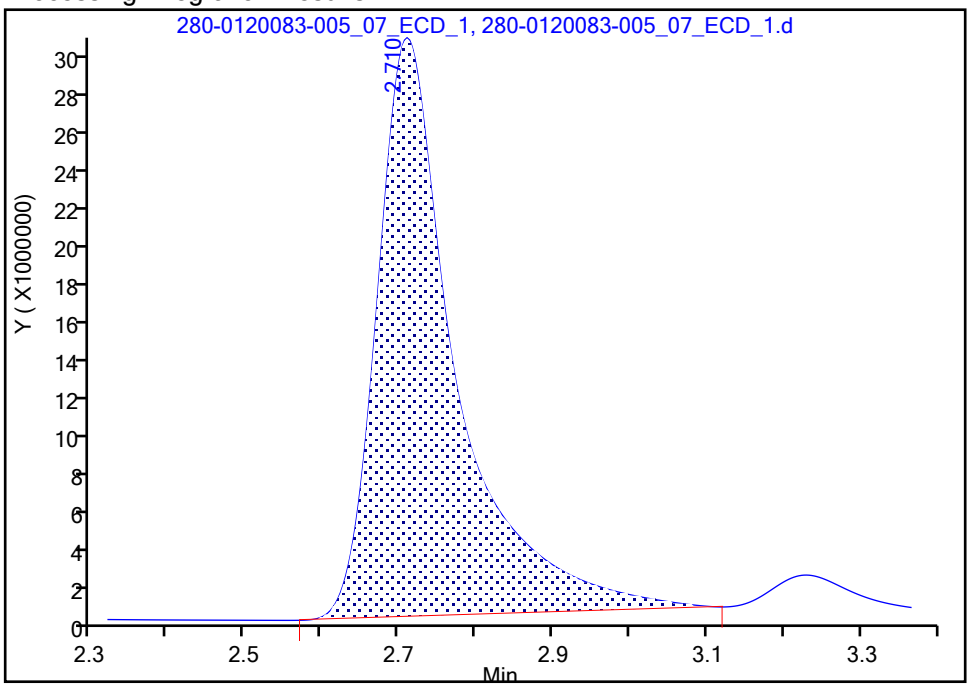
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d				
Injection Date:	03-Apr-2023 17:30:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L5				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

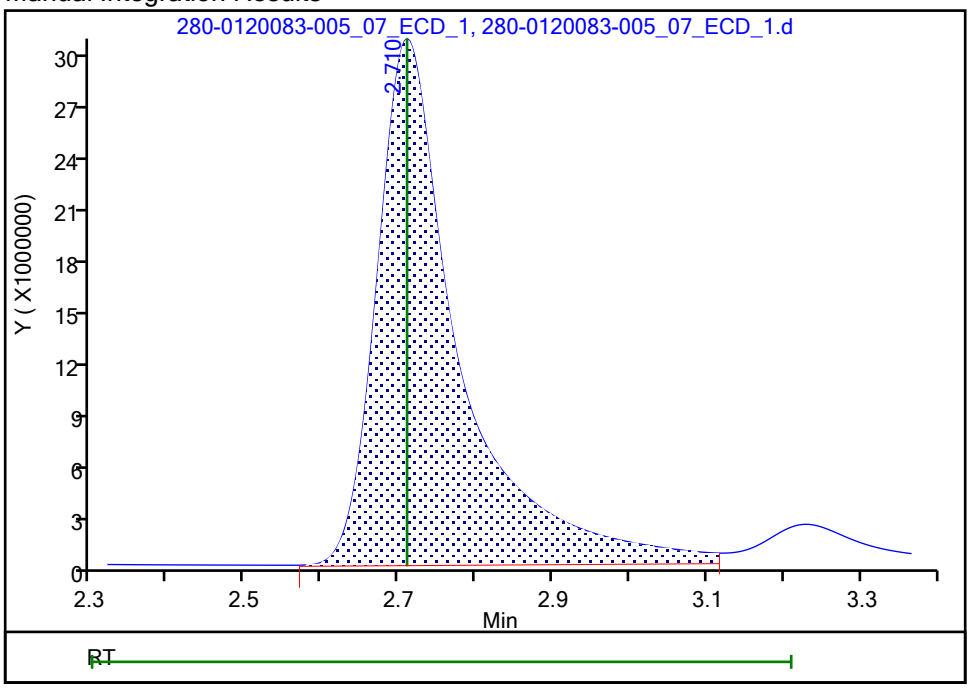
Processing Integration Results

RT: 2.71
Area: 216176281
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.71
Area: 225809574
Amount: 58.134858
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:25
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 03-Apr-2023 17:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-006
Misc. Info.: STD L6
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:18:00 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:08:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	24054194	5.00	4.97	Ma
2 Chloride	2.717	2.717	0.000	408580005	100.0	105.0	M
3 Nitrite as N	3.230	3.230	0.000	45521852	NC	NC	Ma
4 Bromide	3.823	3.823	0.000	5641478	5.00	5.06	
5 Nitrate as N	4.293	4.293	0.000	41136324	NC	NC	
7 Orthophosphate as P	5.757	5.757	0.000	13790470	NC	NC	
6 Sulfate	6.563	6.563	0.000	273226252	100.0	103.0	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC CAL cl/so4_00473 Amount Added: 8.00 Units: mL
IC Cal low_00701 Amount Added: 2.00 Units: mL

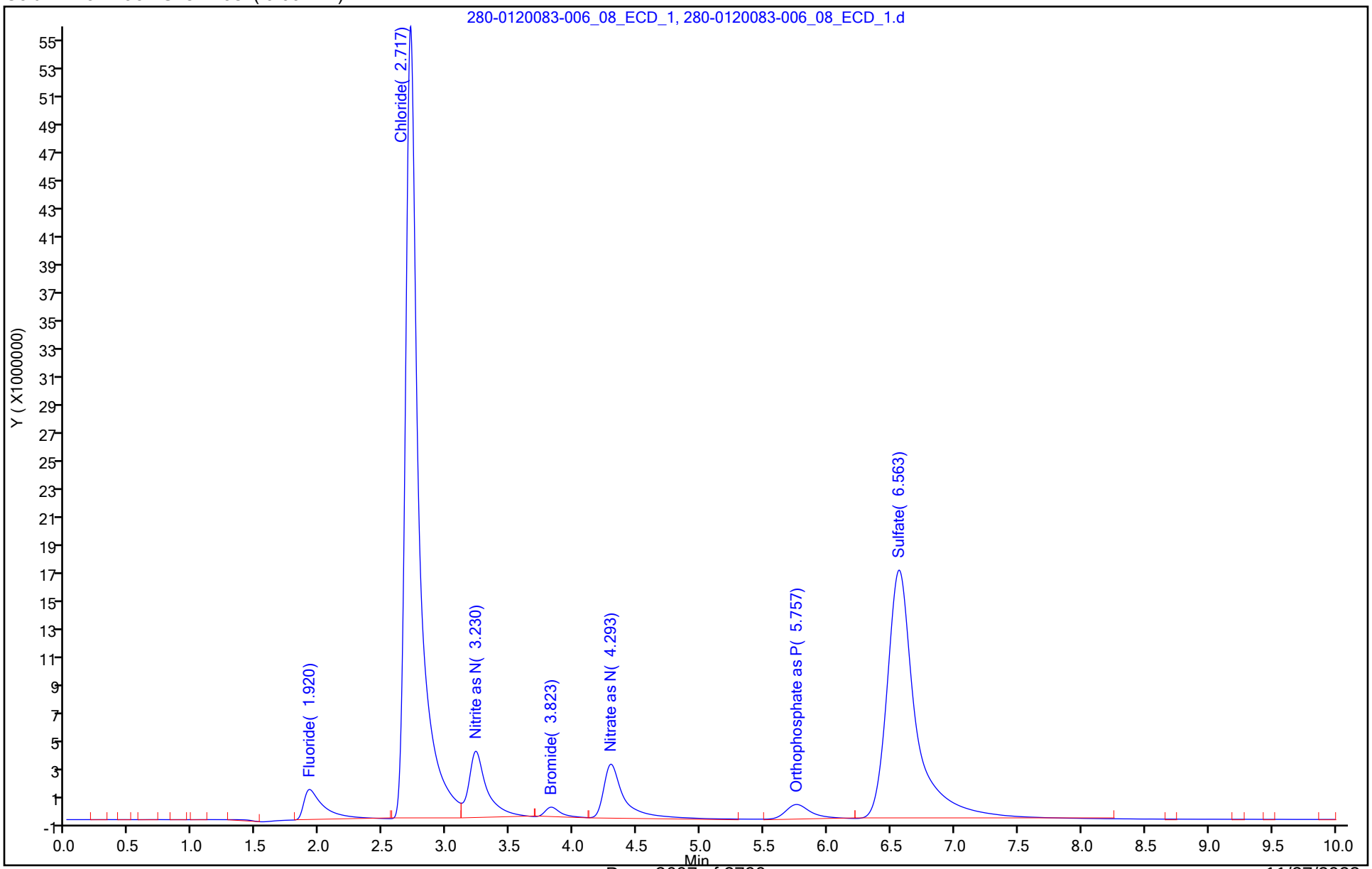
Report Date: 04-Apr-2023 11:18:00 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Injection Date:	03-Apr-2023 17:42:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

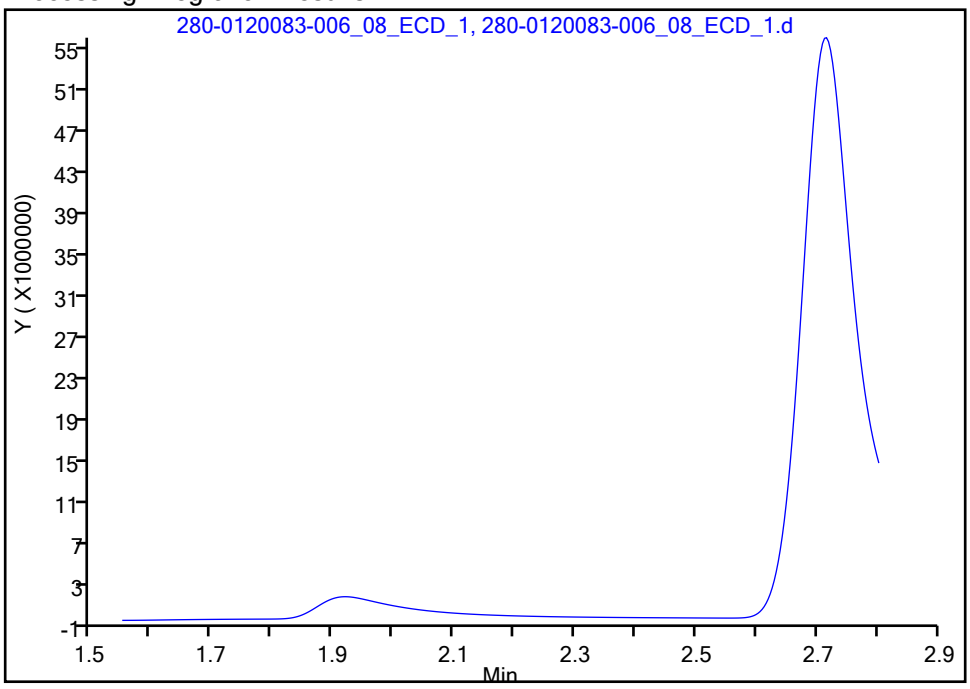
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Injection Date: 03-Apr-2023 17:42:00 Instrument ID: WC_IonChrom15
Lims ID: STD L6
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

1 Fluoride, CAS: 16984-48-8

Signal: 1

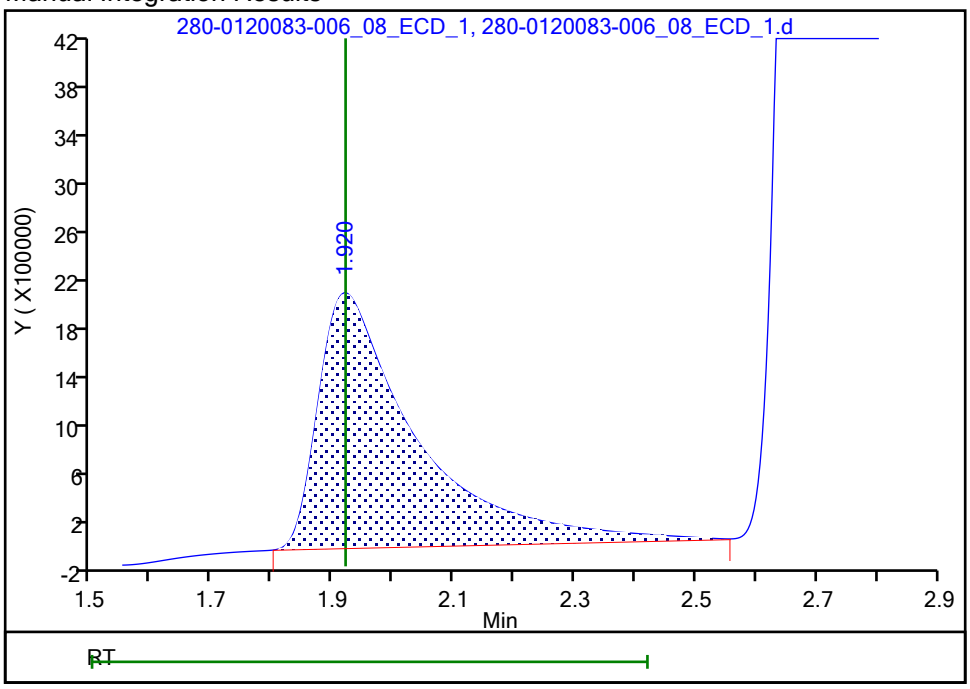
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 24054194
Amount: 4.971075
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:08:29
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

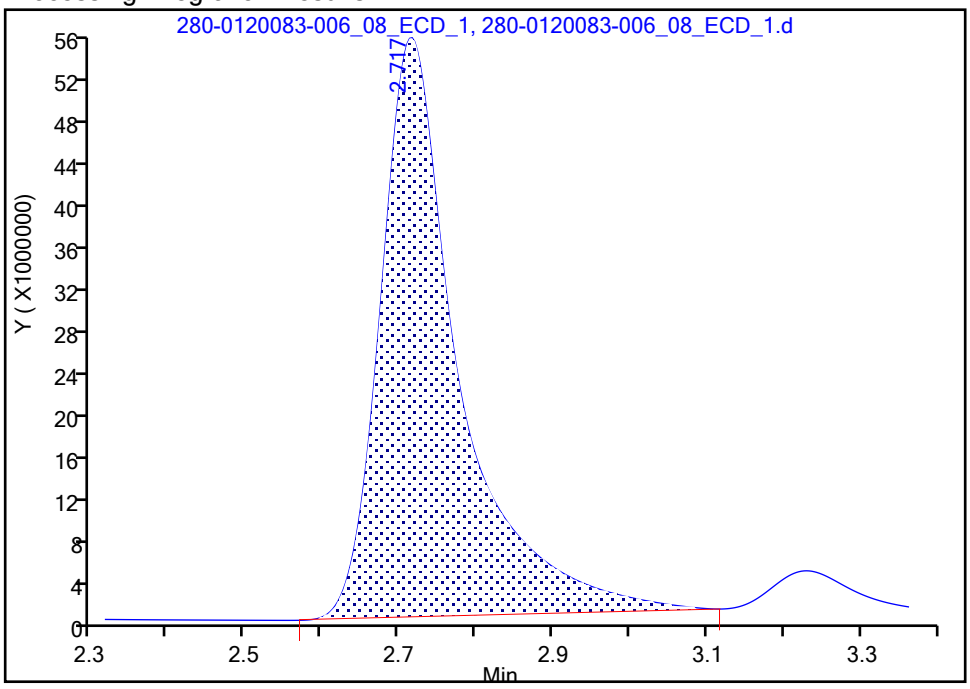
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Injection Date:	03-Apr-2023 17:42:00	Instrument ID:	WC_IonChrom15		
Lims ID:	STD L6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

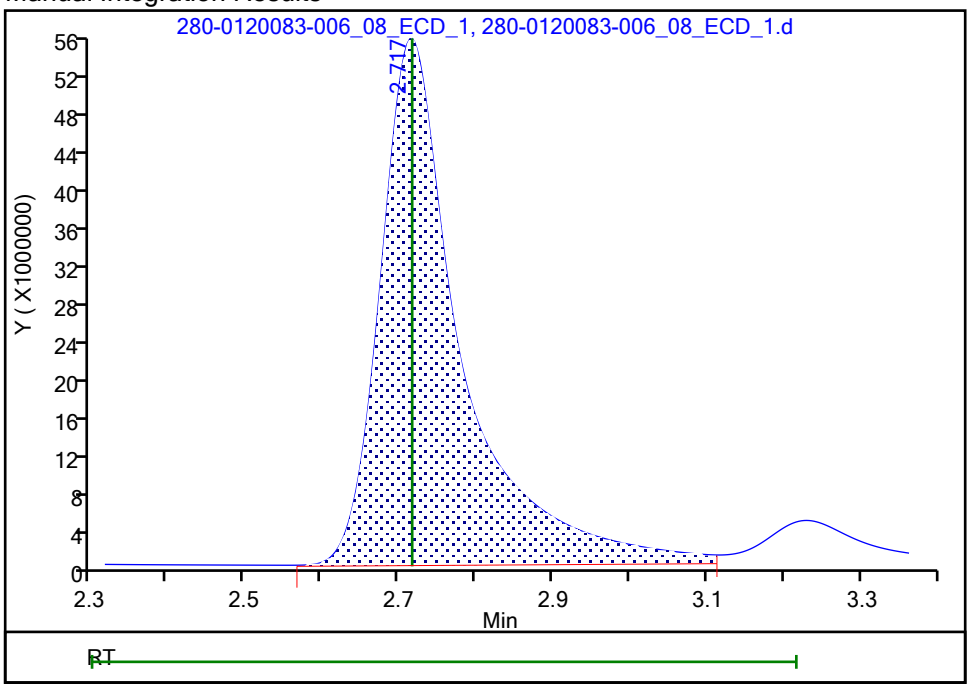
Processing Integration Results

RT: 2.72
Area: 393078326
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.72
Area: 408580005
Amount: 105.0379
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:10:51
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 120083 **Inst ID:** IC15 **Analysis Date:** 4/4/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	173969	1	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	173607	15	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	173854	21	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	173760	1	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	49218	8	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	173855	2	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	49222	2	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	49221	1	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	174060	7	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	~~173607~~ EJS 4/4		F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason	
969	1	(F) (Cl) NO2 Br NO3 PO4 (SO4)	200x	rerun	
607	15	(F) (Cl) NO2 Br NO3 PO4 (SO4)	5,500,200x	rerun	
~~854~~ EJS 4/4	~~21~~	F Cl NO2 Br NO3 PO4 SO4	~~100x~~	~~reran~~	EJS 4/4
855	2	(F) (Cl) NO2 Br NO3 PO4 (SO4)	100x	rerun	
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			
		F Cl NO2 Br NO3 PO4 SO4			

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:53:33 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver

ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.920	1.920	0.000	9279739	2.00	1.98	M
2 Chloride	2.717	2.717	0.000	328549047	80.0	84.5	M
3 Nitrite as N	3.227	3.227	0.000	20889847	NC	NC	Ma
4 Bromide	3.827	3.827	0.000	2137744	2.00	1.92	
5 Nitrate as N	4.300	4.300	0.000	15854770	NC	NC	
7 Orthophosphate as P	5.763	5.763	0.000	5351617	NC	NC	
6 Sulfate	6.563	6.563	0.000	227136614	80.0	85.7	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC SO4 ICV_00024	Amount Added:	0.80	Units: mL
Cl ICV Std_00006	Amount Added:	0.80	Units: mL
IC ICV 5_00402	Amount Added:	0.80	Units: mL

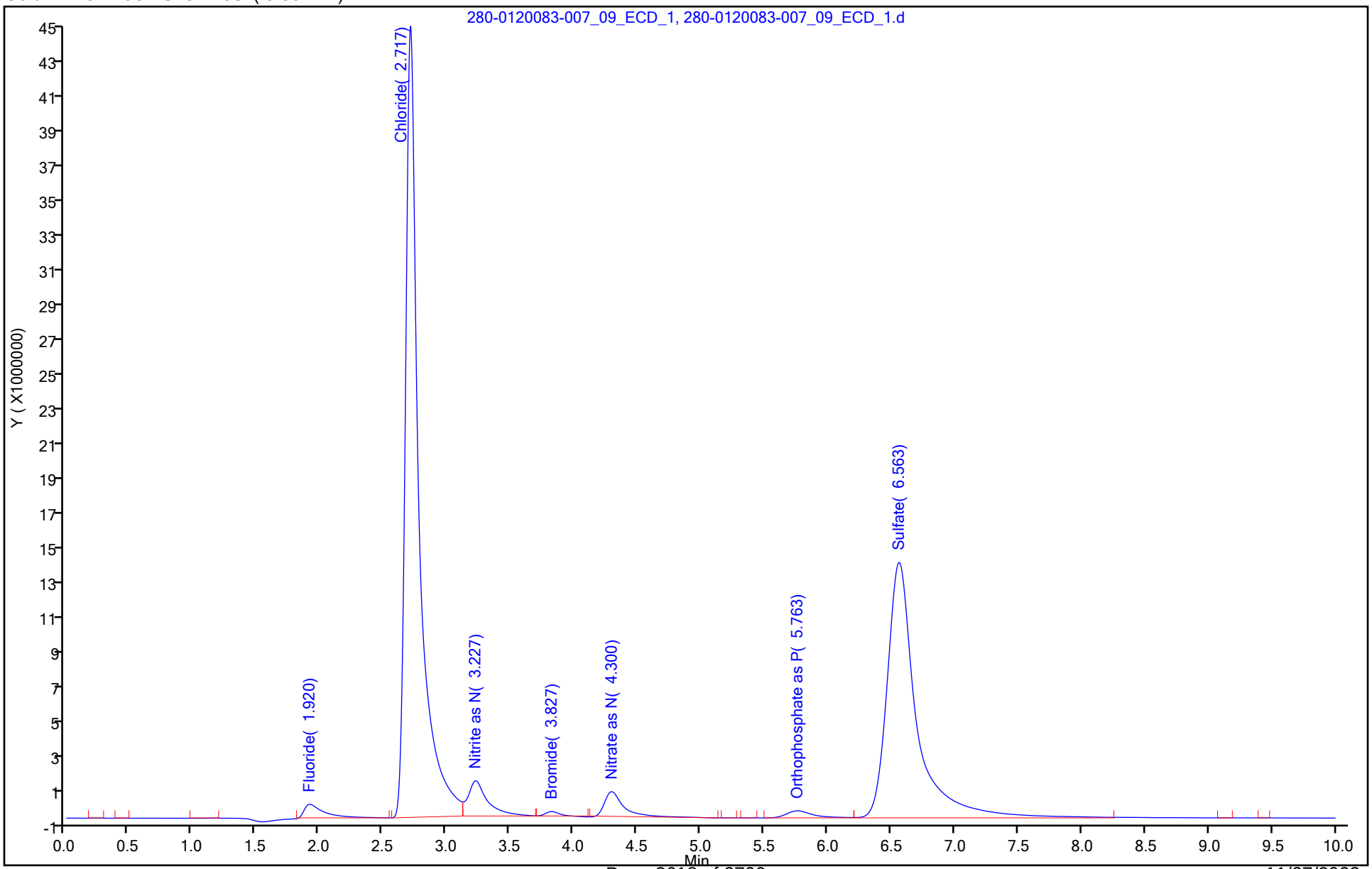
Report Date: 04-Apr-2023 11:53:49 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d

Injection Date:	03-Apr-2023 17:54:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:19 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

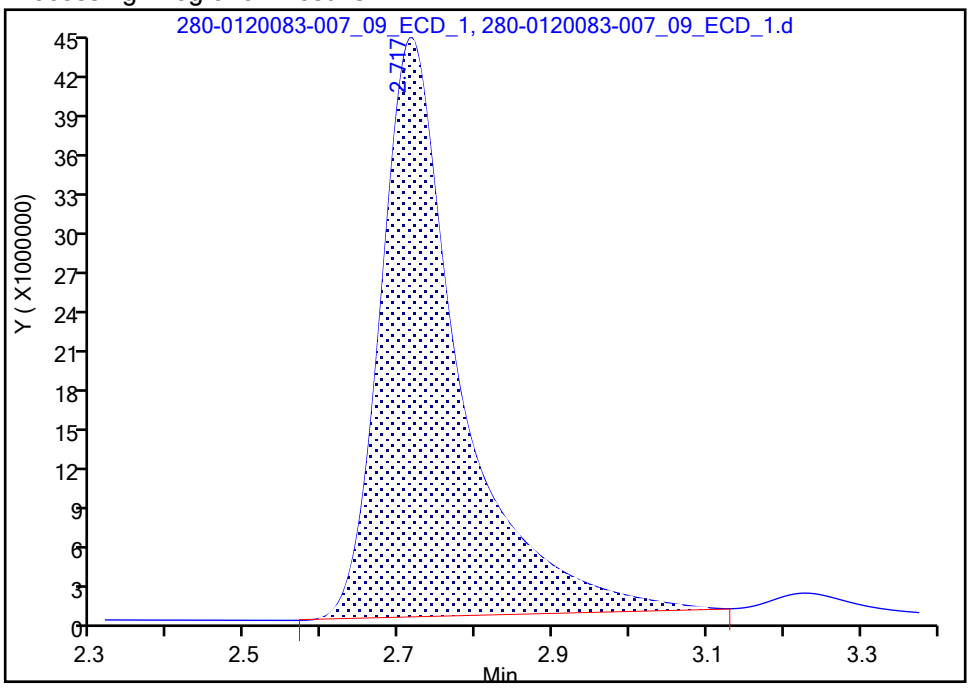
Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d				
Injection Date:	03-Apr-2023 17:54:00	Instrument ID:	WC_IonChrom15		
Lims ID:	ICV				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		
Column:	Ion Pac AS18 - Fast (0.00 mm)	Detector	0005		

2 Chloride, CAS: 16887-00-6

Signal: 1

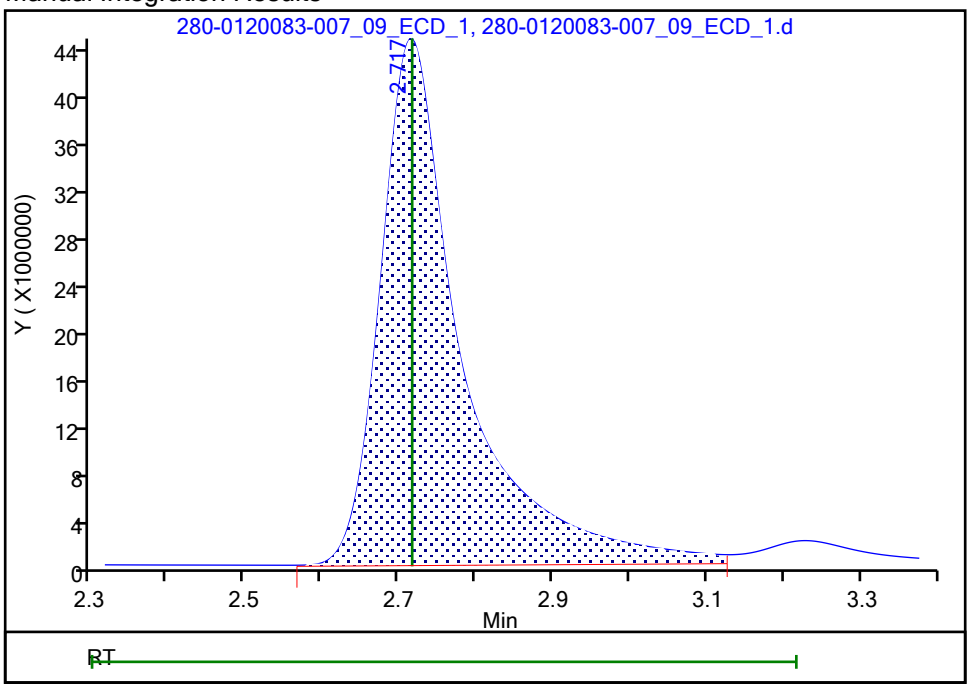
Processing Integration Results

RT: 2.72
Area: 315873449
Amount: 0
Amount Units: ug/ml



Manual Integration Results

RT: 2.72
Area: 328549047
Amount: 84.500122
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 10:13:57

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-008_10_ECD_1.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 03-Apr-2023 18:06:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-008
Misc. Info.: ICB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 04-Apr-2023 11:52:16 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 11:51:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.920				ND	U
2 Chloride	2.707	2.707	0.000	90380		0.2102	M
3 Nitrite as N	3.270	3.230	0.040	16278		NC	
4 Bromide	3.710	3.823	-0.113	7406		0.0161	
5 Nitrate as N	4.310	4.297	0.013	15246		NC	
7 Orthophosphate as P	5.837	5.763	0.074	23300		NC	
6 Sulfate	6.507	6.557	-0.050	10924		0.2255	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

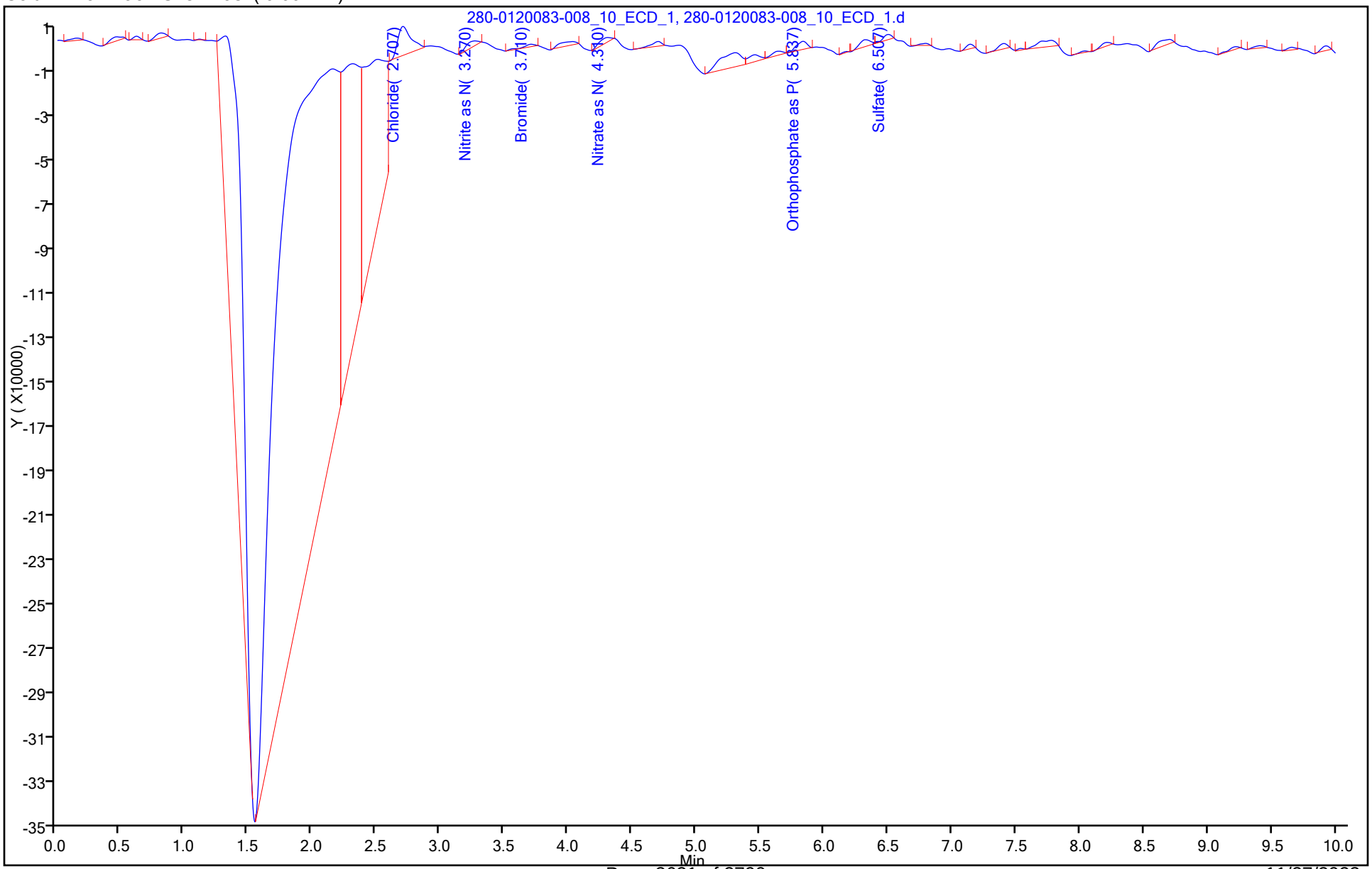
Report Date: 04-Apr-2023 11:52:18 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-008_10_ECD_1.d

Injection Date:	03-Apr-2023 18:06:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



Manual Integration/User Assign Peak Report

Eurofins Denver

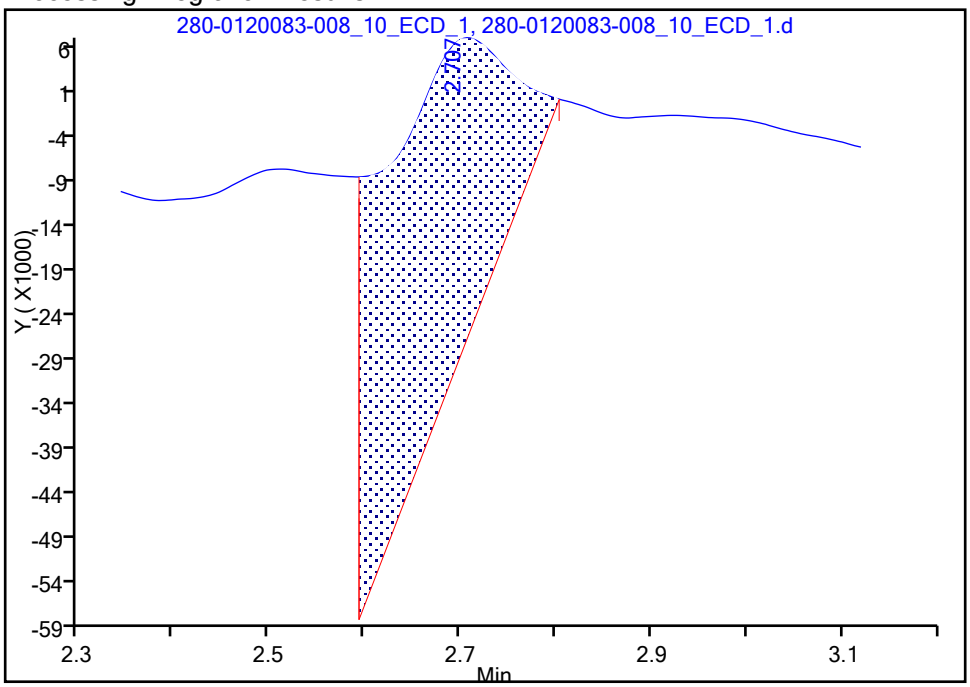
Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-008_10_ECD_1.d
Injection Date: 03-Apr-2023 18:06:00 Instrument ID: WC_IonChrom15
Lims ID: ICB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: IC_15 Anions Limit Group: Wet - Anions 28D
Column: Ion Pac AS18 - Fast (0.00 mm) Detector 0005

2 Chloride, CAS: 16887-00-6

Signal: 1

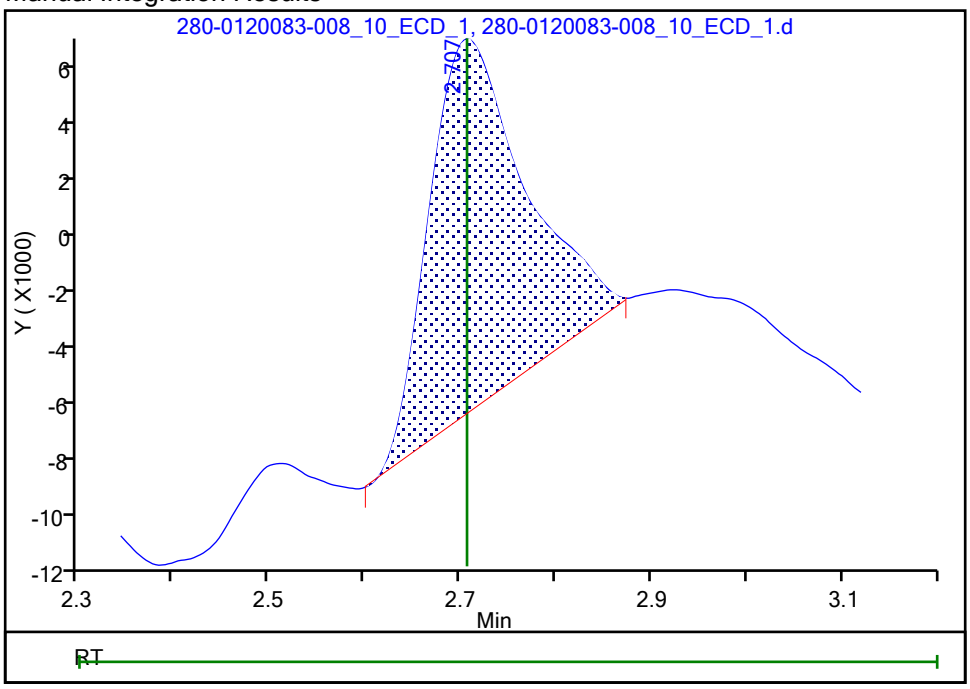
Processing Integration Results

RT: 2.71
Area: 368023
Amount: 0.281477
Amount Units: ug/ml



Manual Integration Results

RT: 2.71
Area: 90380
Amount: 0.210227
Amount Units: ug/ml



Reviewer: XAY4, 04-Apr-2023 11:51:01
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

IC Instrument Information

WL: 120908 **Inst ID:** DIS **Analysis Date:** 4/29/23 **Analyst:** EJS

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	175294	3	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	175071	4	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	175104	3	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175348	6	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175038	10	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	175121	3	F Cl NO2 (Br) NO3 PO4 SO4	MS/D	
☐	175122	3	F Cl NO2 (Br) NO3 PO4 SO4	MS/D	
175123 EJS 4/29 ☐	~~175123~~	3	F Cl NO2 (Br) NO3 PO4 SO4	MS/D	
☐	175128	2	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	175106	5	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
294	3	(F) (Cl) NO2 Br NO3 PO4 (SO4)	10/50	test
071	4	(F) (Cl) NO2 Br NO3 PO4 (SO4)	10/50	test
EJS 4/29 ~~348~~		F Cl NO2 Br NO3 PO4 SO4		
106	5	F (Cl) NO2 Br NO3 PO4 (SO4)	5/10	test
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: CorrCoef Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride			Signal: 1						
Error: raw_COD									
2573775	3433718	5002458	4678730	4810839		-486509			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			4936700		
M514755	M1716859	M5002458	M11696825	M24054194					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
2 Chloride			Signal: 1						
3303692	3207736	3156145	3487797	3763493	4085800	-728828			0.997
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		3896774		
M1651846	M4009670	M7890362	M104633916	M225809574	M408580005				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				
4 Bromide			Signal: 1						
1100605	1087544	1082846	1092140	1128296		-10563			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			1116455		
220121	543772	1082846	2730351	5641478					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
6 Sulfate			Signal: 1						
Error: raw_COD									
2051406	1954775	2194072	2505557	2589126	2732263	-588335			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		2657528		
M1025703	2443469	5485179	75166700	155347554	273226252				
120083(1)	120083(2)	120083(3)	120083(4)	120083(5)	120083(6)				

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Instrument: WC_IonChrom15 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Apr-2023 11:52:16
No.Compounds:7
Sublist: chrom-IC_15 Anions*sub1
Limit Group: Wet - Anions

Detectors

Detector: 1, 0005
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-10.000 No. Points: 1561

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120028-002280-0120083-001_03_ECD
Inj Date: 03-Apr-2023 16:42:00 Worklist: 120083 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-002_04_ECD_1.d
Inj Date: 03-Apr-2023 16:54:00 Worklist: 120083 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-003_05_ECD_1.d
Inj Date: 03-Apr-2023 17:06:00 Worklist: 120083 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-004_06_ECD_1.d
Inj Date: 03-Apr-2023 17:18:00 Worklist: 120083 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-005_07_ECD_1.d
Inj Date: 03-Apr-2023 17:30:00 Worklist: 120083 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d
Inj Date: 03-Apr-2023 17:42:00 Worklist: 120083 Sample#: 6

Start Cal Date: 01-Apr-2023 08:01:00 End Cal Date: 03-Apr-2023 17:42:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
7833615	7407194	9946553	9090836	9104370		-336464			0.997
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			9255232		
M1566723	M3703597	M9946553	M22727090	M45521852					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
5 Nitrate as N				Signal: 1					
Error: CorrCoef									
6524615	7505046	7262541	7893046	8227265		-401876			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			8173729		
1304923	3752523	7262541	19732616	41136324					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					
7 Orthophosphate as P				Signal: 1					
2234410	2812526	2563153	2661820	2758094		-81866			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			2746809		
446882	1406263	2563153	6654551	13790470					
120083(2)	120083(3)	120083(4)	120083(5)	120083(6)					

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	03-Apr-2023 17:54:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120083-007				
Misc. Info.:	ICV				
Operator ID:		Instrument ID:	WC_IonChrom15		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	04-Apr-2023 11:53:33	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1646				
First Level Reviewer: XAY4		Date:	04-Apr-2023 10:06:27		
Start Cal Date:	03-Apr-2023 16:42:00				
End Cal Date:	03-Apr-2023 17:42:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	1.98	-1.1	10.0	98.9	
2 Chloride	80.0	84.5	5.6	10.0	105.6	
4 Bromide	2.00	1.92	-3.8	10.0	96.2	
6 Sulfate	80.0	85.7	7.1	10.0	107.1	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-007_09_ECD_1.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Apr-2023 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120083-007
Misc. Info.: ICV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\IC_15 Anions.m
Limit Group: Wet - Anions
Last Update: 04-Apr-2023 11:53:48 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1646

First Level Reviewer: XAY4 Date: 04-Apr-2023 10:06:27

Start Cal Date: 03-Apr-2023 16:42:00
End Cal Date: 03-Apr-2023 17:42:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	2.29	* 14.7	10.0	114.7	
5 Nitrate as N	2.00	1.99	-0.6	10.0	99.4	
7 Orthophosphate as	2.00	1.98	-1.1	10.0	98.9	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-003_04_ECD_1.d
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 29-Apr-2023 13:48:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-003
Misc. Info.: MRL
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:41:59 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:28:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.917	1.917	0.000	676943	0.2500	0.2357	M
2 Chloride	2.670	2.670	0.000	7917239	2.50	2.22	M
3 Nitrite as N		3.153			NC	ND	M
4 Bromide	3.767	3.767	0.000	229294	0.2500	0.2148	
5 Nitrate as N	4.213	4.213	0.000	1658548	NC	NC	
7 Orthophosphate as P	5.607	5.607	0.000	618678	NC	NC	
6 Sulfate	6.327	6.327	0.000	5600360	2.50	2.33	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC Cal low_00706 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00477 Amount Added: 0.20 Units: mL

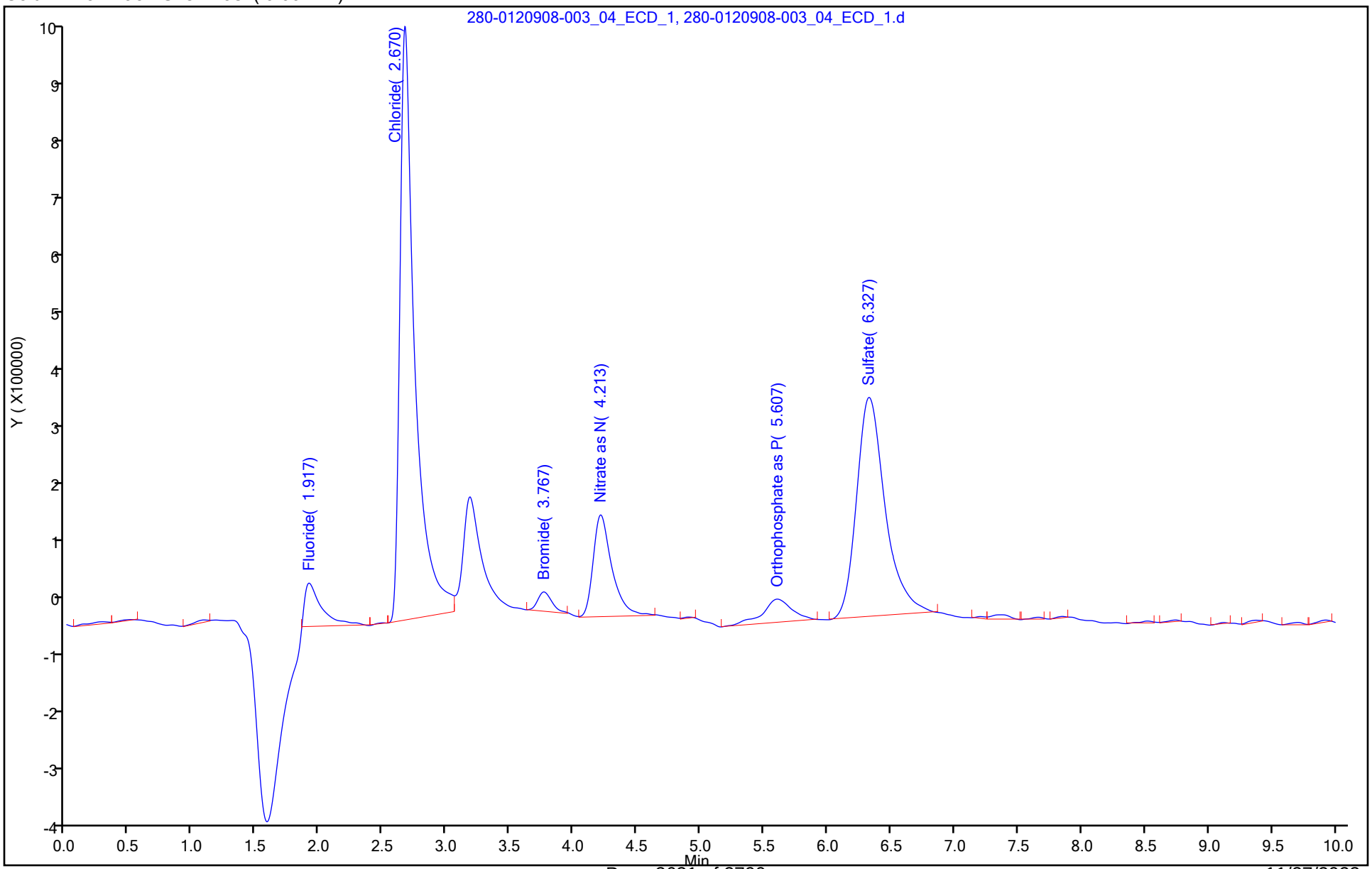
Report Date: 01-May-2023 11:41:59 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-003_04_ECD_1.d

Injection Date:	29-Apr-2023 13:48:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-041_42_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 29-Apr-2023 21:22:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-041
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:32:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	12030516	2.50	2.54	M
2 Chloride	2.673	2.757	-0.084	174412799	50.0	44.9	
3 Nitrite as N	3.173	3.120	0.053	12601648	NC	NC	
4 Bromide	3.747	3.813	-0.066	2642966	2.50	2.38	
5 Nitrate as N	4.193	4.087	0.106	19871478	NC	NC	
7 Orthophosphate as P	5.587	5.640	-0.053	6433698	NC	NC	
6 Sulfate	6.313	6.430	-0.117	128997072	50.0	48.8	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

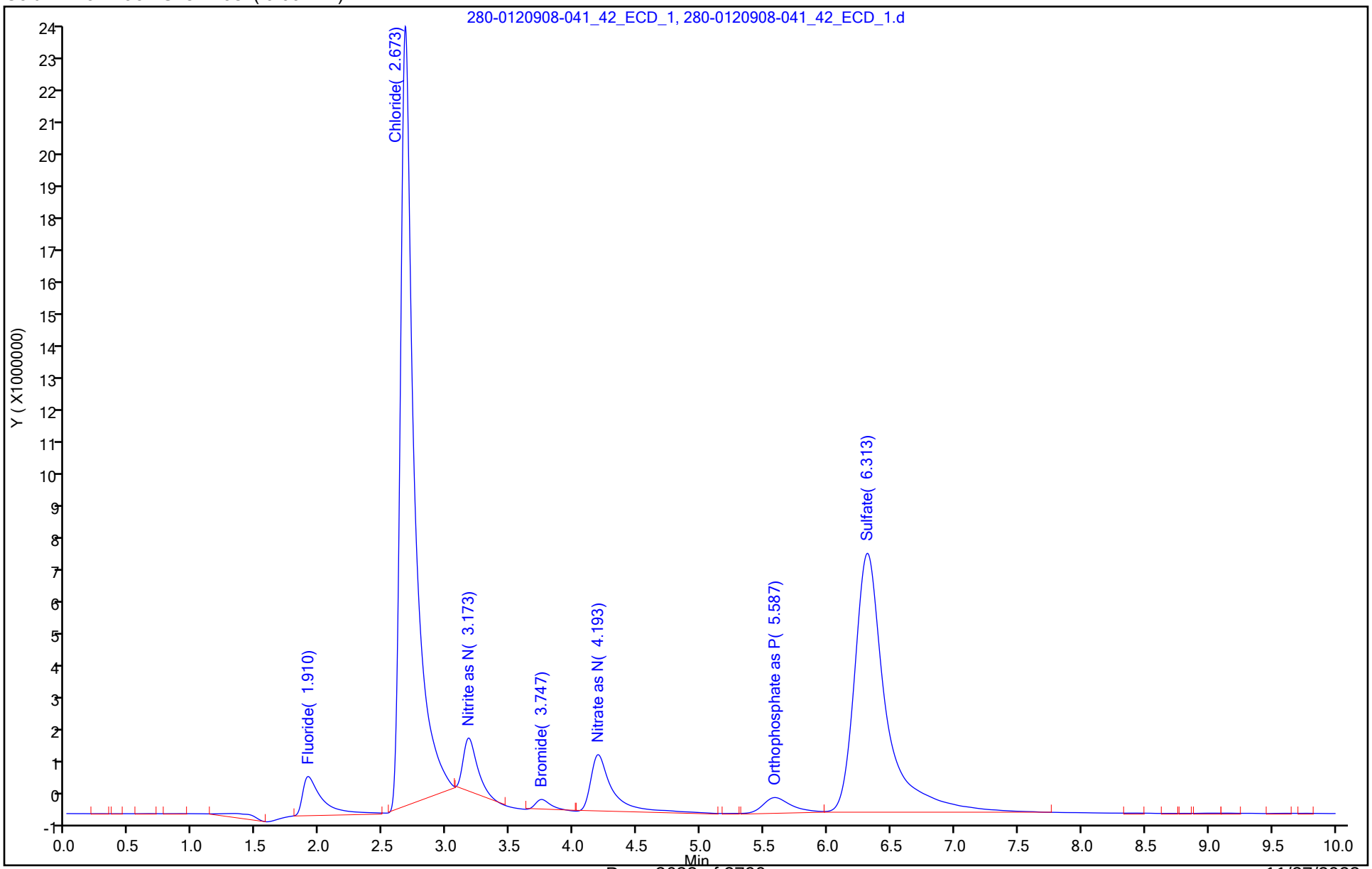
Report Date: 01-May-2023 11:42:20 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-041_42_ECD_1.d

Injection Date:	29-Apr-2023 21:22:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	41
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-042_43_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 29-Apr-2023 21:34:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-042
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:32:51

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.787	2.757	0.030	11609		0.1900	
3 Nitrite as N	3.113	3.120	-0.007	37662		NC	
4 Bromide	3.737	3.813	-0.076	17515		0.0251	
5 Nitrate as N	4.157	4.087	0.070	54477		NC	
7 Orthophosphate as P	5.547	5.640	-0.093	27098		NC	
6 Sulfate	6.473	6.430	0.043	4148		0.2229	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

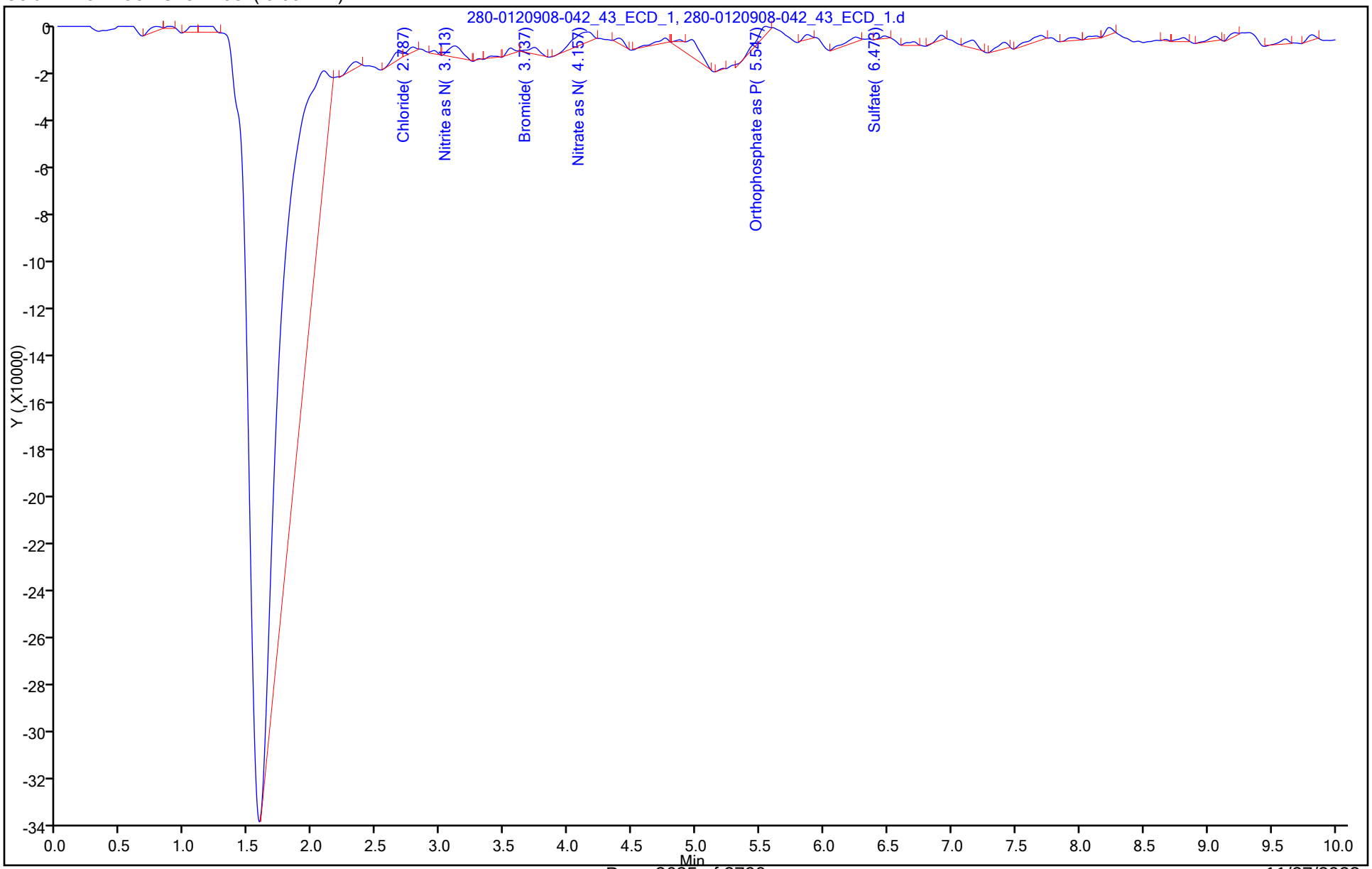
Report Date: 01-May-2023 11:42:21 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-042_43_ECD_1.d

Injection Date:	29-Apr-2023 21:34:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	42
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-047_48_ECD_1.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 29-Apr-2023 22:34:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-047
Misc. Info.: LCS
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:33:55

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.907	1.910	-0.003	11718961	2.50	2.47	M
2 Chloride	2.673	2.757	-0.084	184356888	50.0	47.5	Ma
3 Nitrite as N		3.120			NC	ND	Ma
4 Bromide	3.750	3.813	-0.063	2634159	2.50	2.37	
5 Nitrate as N	4.193	4.087	0.106	20128673	NC	NC	
7 Orthophosphate as P	5.587	5.640	-0.053	6292660	NC	NC	
6 Sulfate	6.313	6.430	-0.117	128609801	50.0	48.6	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

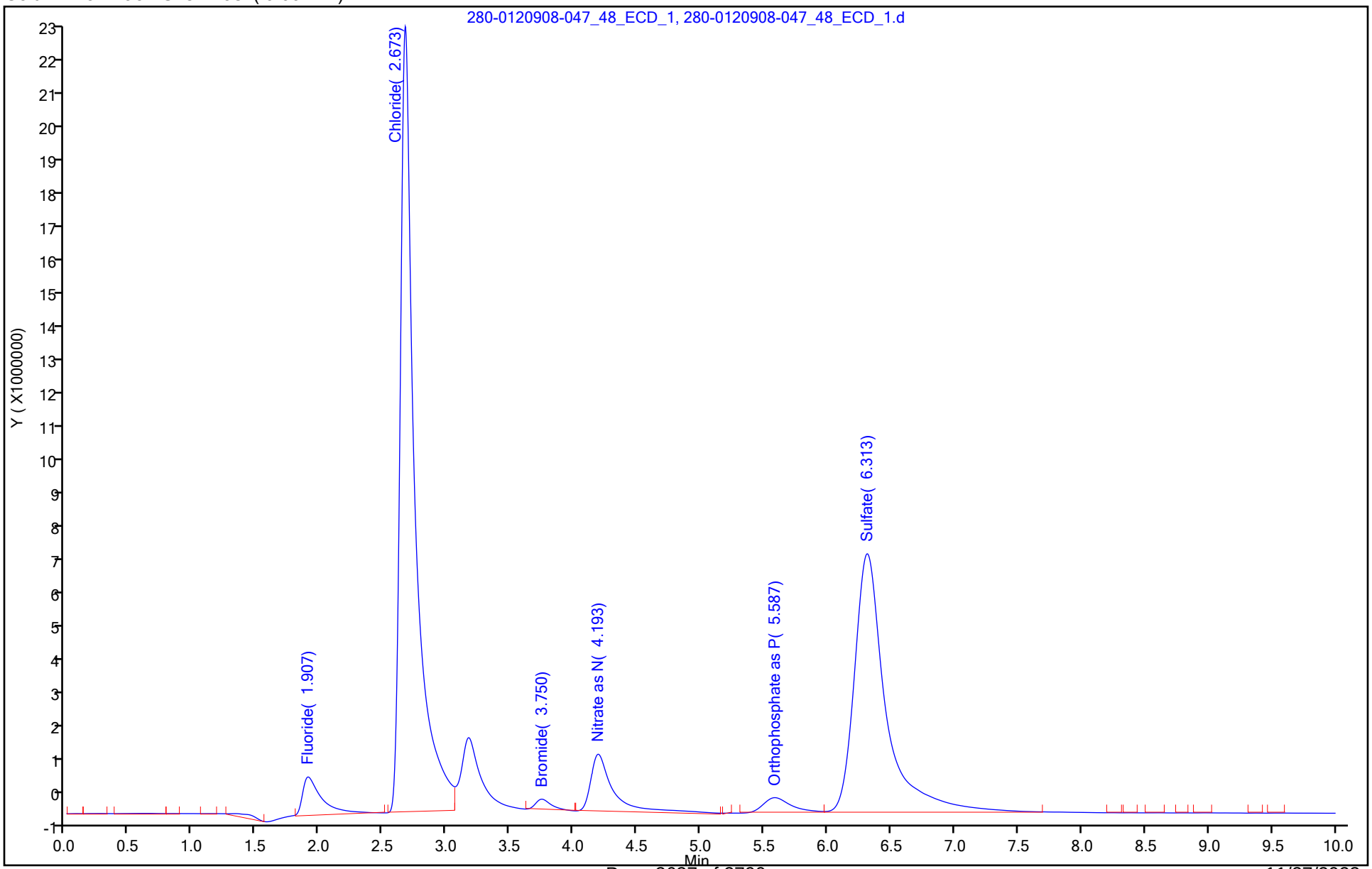
Report Date: 01-May-2023 11:42:23 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-047_48_ECD_1.d

Injection Date:	29-Apr-2023 22:34:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcs			Worklist Smp#:	47
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-048_49_ECD_1.d
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 29-Apr-2023 22:46:00 ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-048
Misc. Info.: LCSD
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:34:17

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	12045798	2.50	2.54	M
2 Chloride	2.673	2.757	-0.084	184641880	50.0	47.6	Ma
3 Nitrite as N		3.120			NC	ND	Ma
4 Bromide	3.750	3.813	-0.063	2547665	2.50	2.29	
5 Nitrate as N	4.197	4.087	0.110	19691878	NC	NC	
7 Orthophosphate as P	5.587	5.640	-0.053	6268850	NC	NC	
6 Sulfate	6.313	6.430	-0.117	129055879	50.0	48.8	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

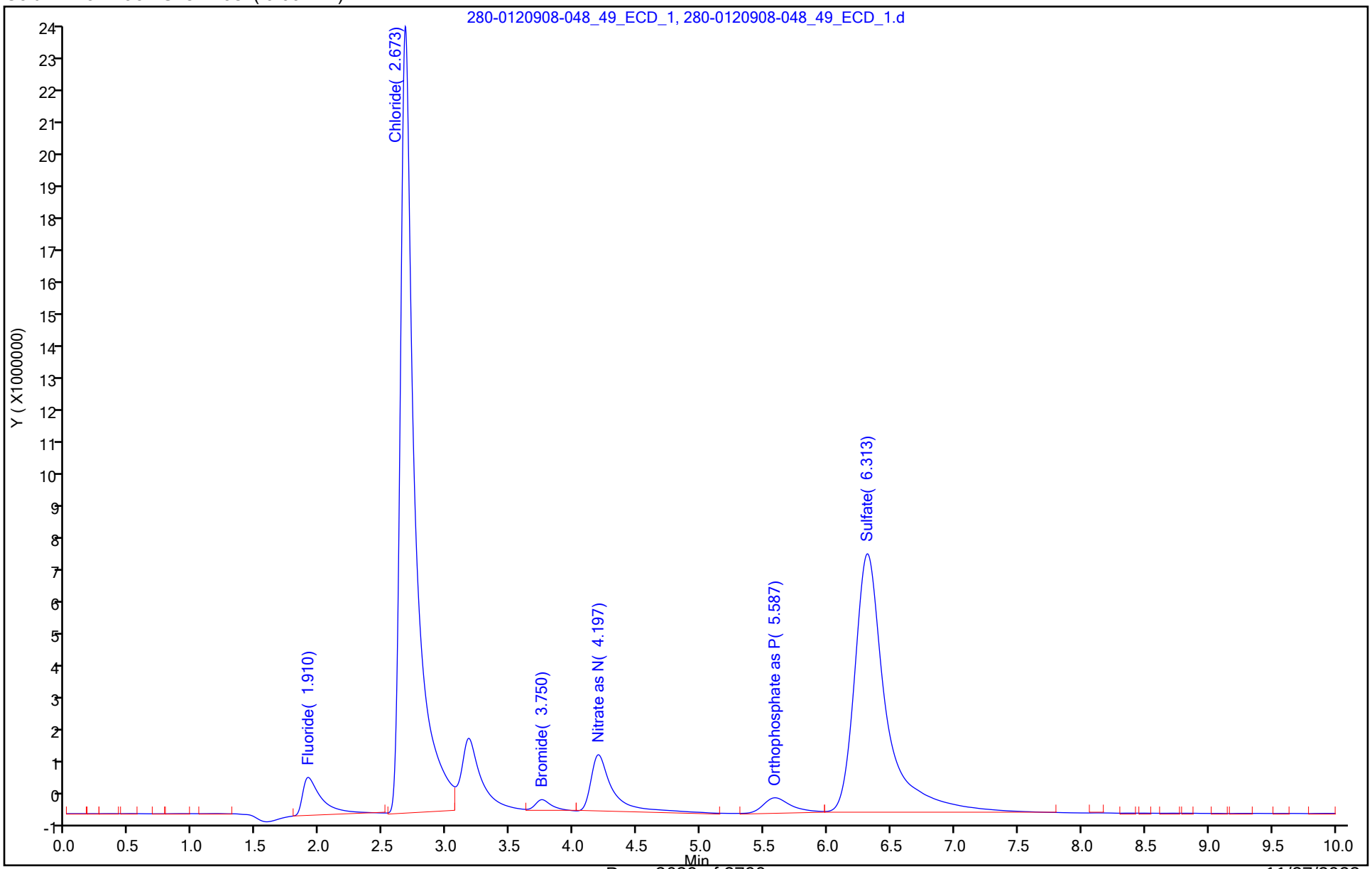
Report Date: 01-May-2023 11:42:23 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-048_49_ECD_1.d

Injection Date:	29-Apr-2023 22:46:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	48
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-049_50_ECD_1.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 29-Apr-2023 22:58:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-049
Misc. Info.: MB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:20 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:34:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.667	2.757	-0.090	23642		0.1931	
3 Nitrite as N	3.120	3.120	0.000	15079		NC	
4 Bromide	3.773	3.813	-0.040	5068		0.0140	
5 Nitrate as N	4.043	4.087	-0.044	9010		NC	
7 Orthophosphate as P	5.700	5.640	0.060	161323		NC	
6 Sulfate	6.420	6.430	-0.010	52321		0.2411	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

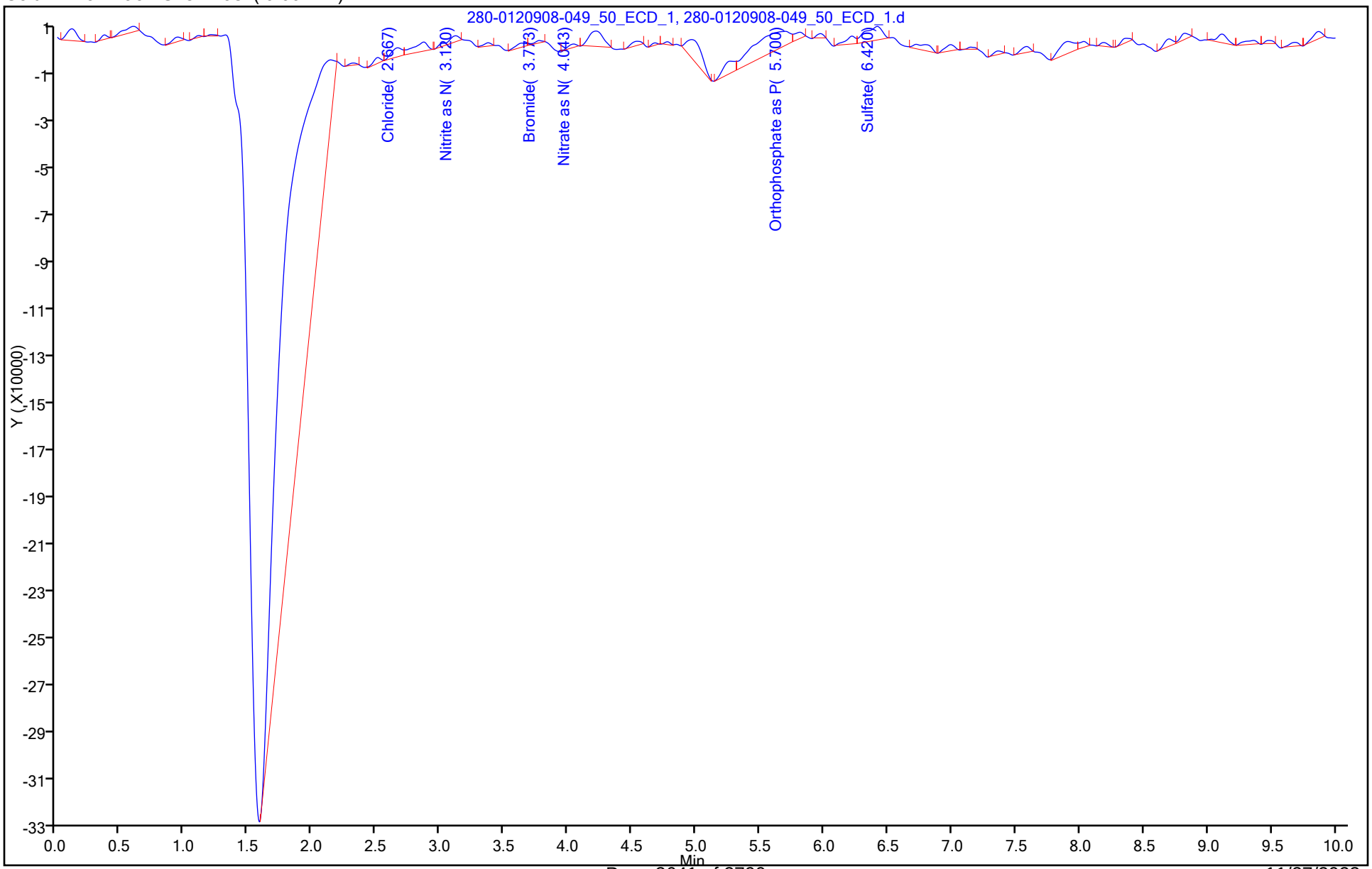
Report Date: 01-May-2023 11:42:24 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-049_50_ECD_1.d

Injection Date:	29-Apr-2023 22:58:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	mb			Worklist Smp#:	49
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-053_54_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 29-Apr-2023 23:46:00 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-053
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:26 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:35:15

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	12143045	2.50	2.56	M
2 Chloride	2.677	2.757	-0.080	185530604	50.0	47.8	M
3 Nitrite as N	3.177	3.120	0.057	12714023	NC	NC	
4 Bromide	3.753	3.813	-0.060	2528063	2.50	2.27	
5 Nitrate as N	4.200	4.087	0.113	19556528	NC	NC	
7 Orthophosphate as P	5.590	5.640	-0.050	6187828	NC	NC	
6 Sulfate	6.317	6.430	-0.113	128722027	50.0	48.7	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

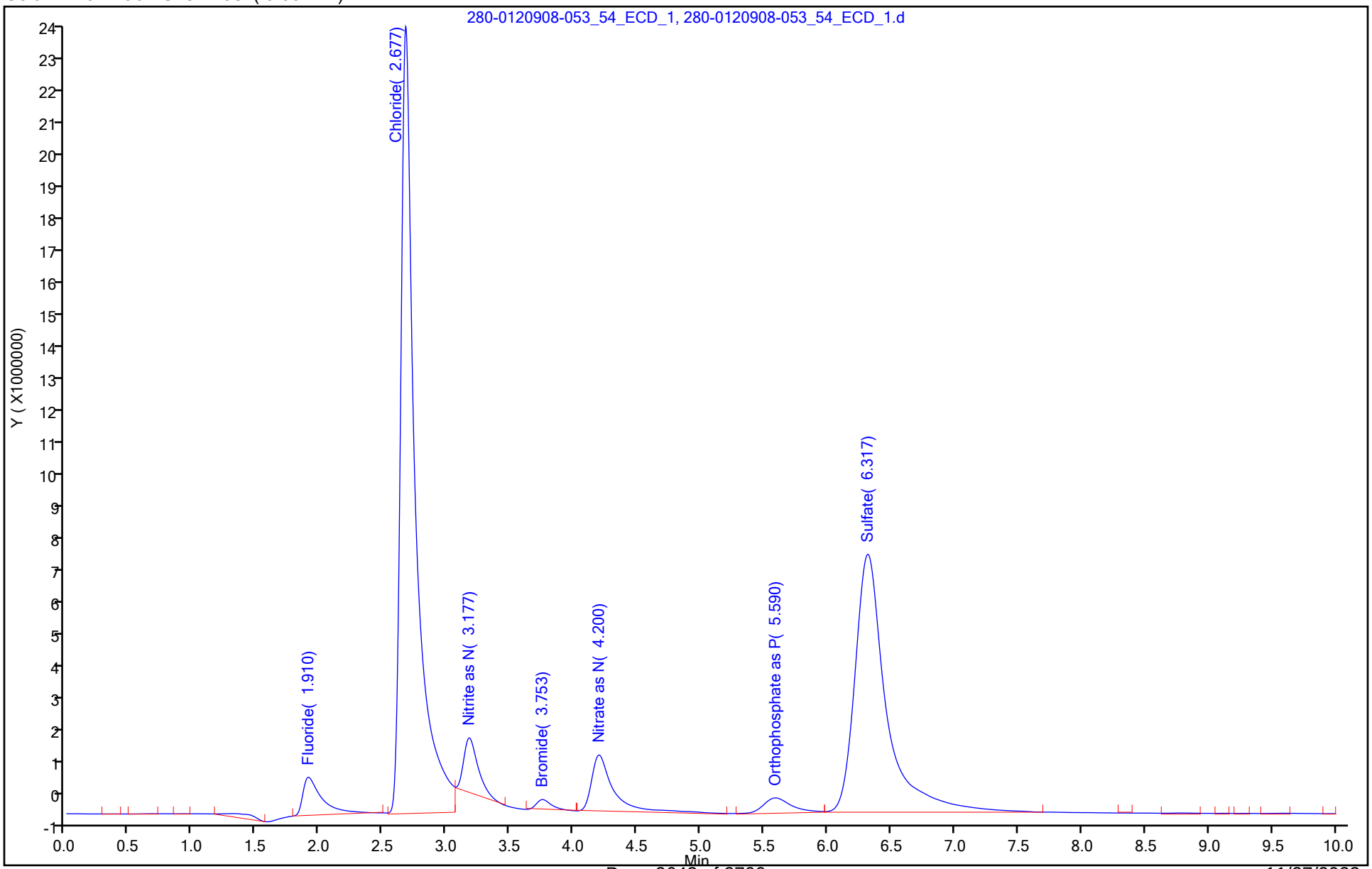
Report Date: 01-May-2023 11:42:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-053_54_ECD_1.d

Injection Date:	29-Apr-2023 23:46:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	53
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-054_55_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 29-Apr-2023 23:58:00 ALS Bottle#: 0 Worklist Smp#: 54
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-054
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:26 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:35:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.800	2.757	0.043	7966		0.1891	
3 Nitrite as N	3.070	3.120	-0.050	7429		NC	
4 Bromide	3.640	3.813	-0.173	12954		0.0211	
5 Nitrate as N	4.170	4.087	0.083	53318		NC	
7 Orthophosphate as P	5.623	5.640	-0.017	44454		NC	
6 Sulfate	6.483	6.430	0.053	4262		0.2230	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

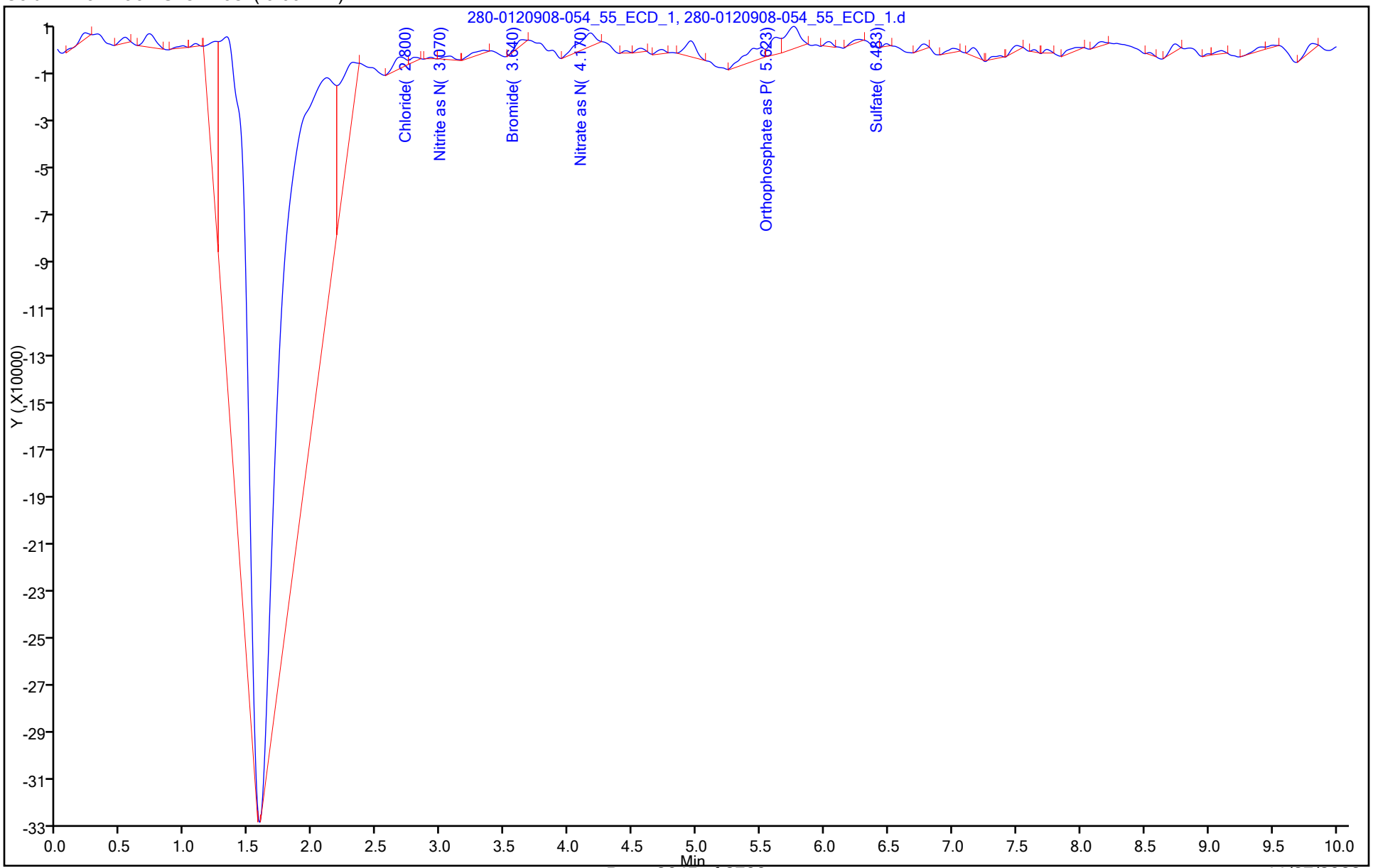
Report Date: 01-May-2023 11:42:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-054_55_ECD_1.d

Injection Date:	29-Apr-2023 23:58:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	54
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-065_66_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 30-Apr-2023 02:09:00 ALS Bottle#: 0 Worklist Smp#: 65
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-065
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:37:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	11864367	2.50	2.50	M
2 Chloride	2.680	2.757	-0.077	184772855	50.0	47.6	Ma
3 Nitrite as N		3.120			NC	ND	Ma
4 Bromide	3.760	3.813	-0.053	2559217	2.50	2.30	
5 Nitrate as N	4.207	4.087	0.120	20006071	NC	NC	
7 Orthophosphate as P	5.587	5.640	-0.053	6244826	NC	NC	
6 Sulfate	6.313	6.430	-0.117	129249143	50.0	48.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

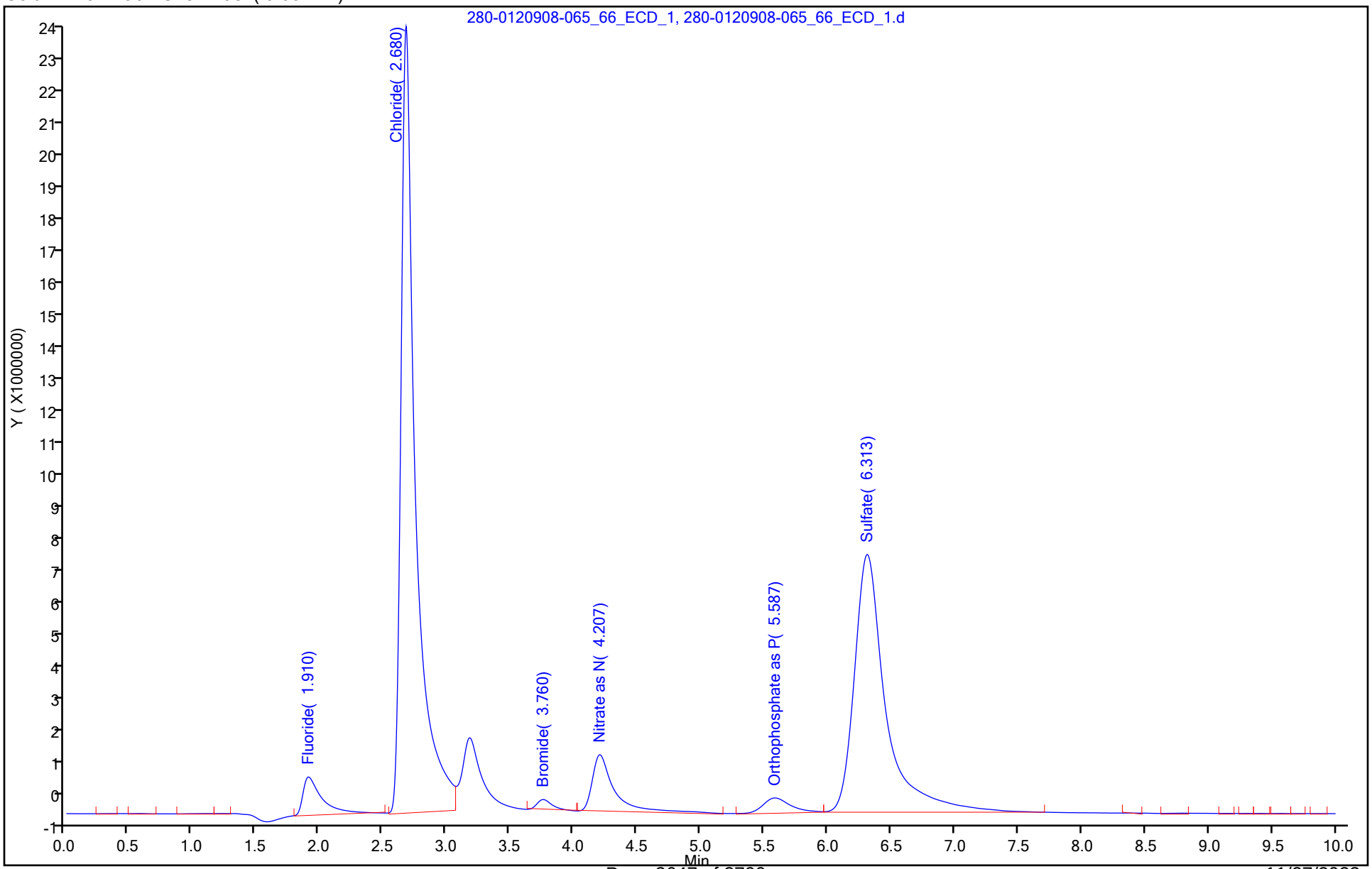
Report Date: 01-May-2023 11:42:32 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-065_66_ECD_1.d

Injection Date:	30-Apr-2023 02:09:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	65
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-066_67_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 30-Apr-2023 02:21:00 ALS Bottle#: 0 Worklist Smp#: 66
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-066
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:32 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:37:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride	2.797	2.757	0.040	11058		0.1899	
3 Nitrite as N	3.097	3.120	-0.023	13292		NC	
4 Bromide	3.803	3.813	-0.010	2874		0.0120	
5 Nitrate as N	4.173	4.087	0.086	7901		NC	
7 Orthophosphate as P	5.563	5.640	-0.077	32493		NC	
6 Sulfate	6.440	6.430	0.010	41663		0.2371	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

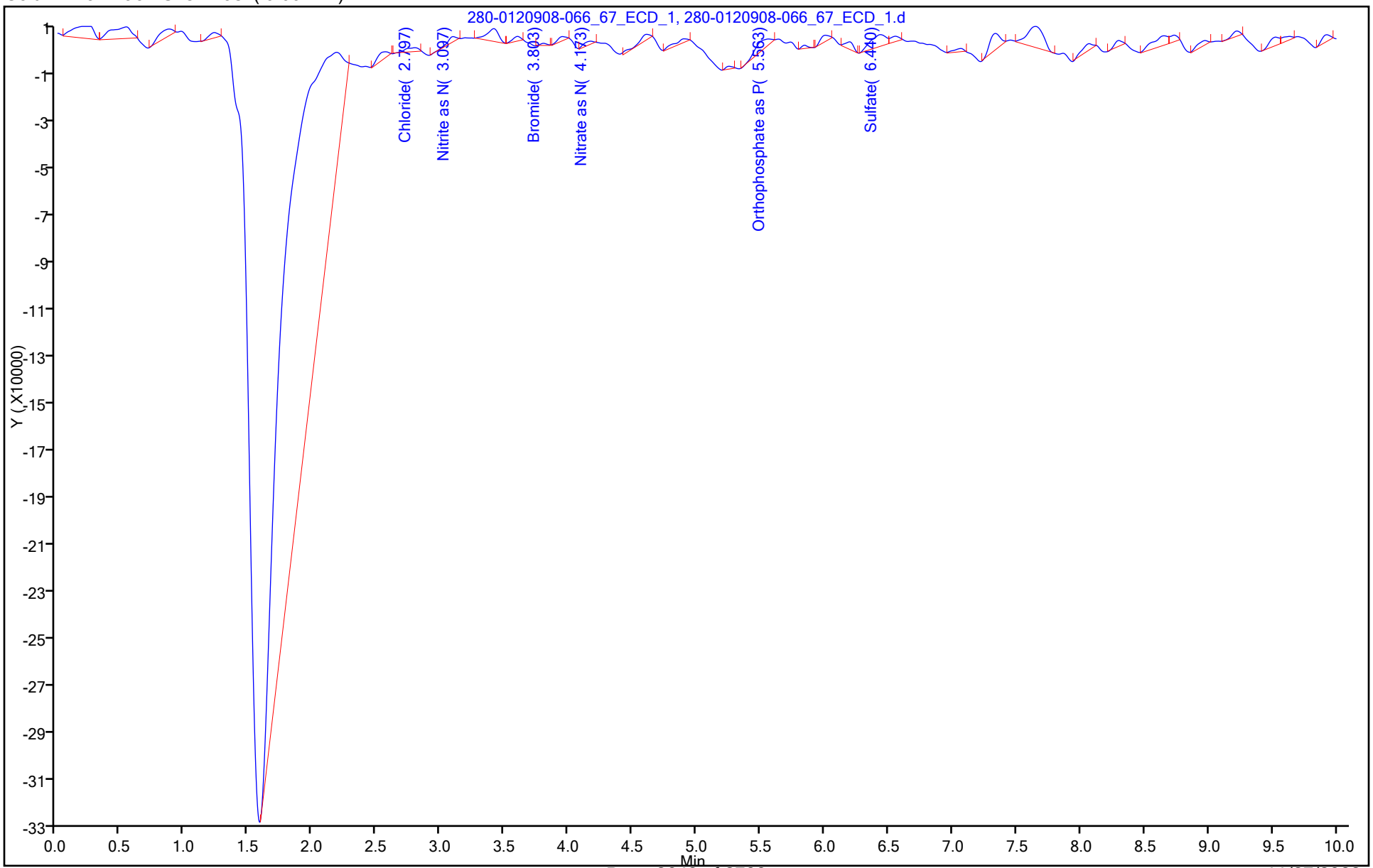
Report Date: 01-May-2023 11:42:33 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-066_67_ECD_1.d

Injection Date:	30-Apr-2023 02:21:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	66
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-072_73_ECD_1.d				
Lims ID:	280-175123-C-3				
Client ID:	RW-3-20230413				
Sample Type:	Client				
Inject. Date:	30-Apr-2023 03:33:00	ALS Bottle#:	0	Worklist Smp#:	72
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120908-072				
Misc. Info.:	280-175123-C-3				
Operator ID:		Instrument ID:	WC_IonChrom15		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	01-May-2023 11:42:32	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1628				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	1.890	1.910	-0.020	80186	0.1148	
2 Chloride	2.730	2.757	-0.027	1725898685	443.1	E
3 Nitrite as N		3.120			ND	
4 Bromide		3.813			ND	
5 Nitrate as N	4.287	4.087	0.200	40125367	NC	
7 Orthophosphate as P	5.897	5.640	0.257	8415	NC	
6 Sulfate	6.350	6.430	-0.080	132475578	50.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

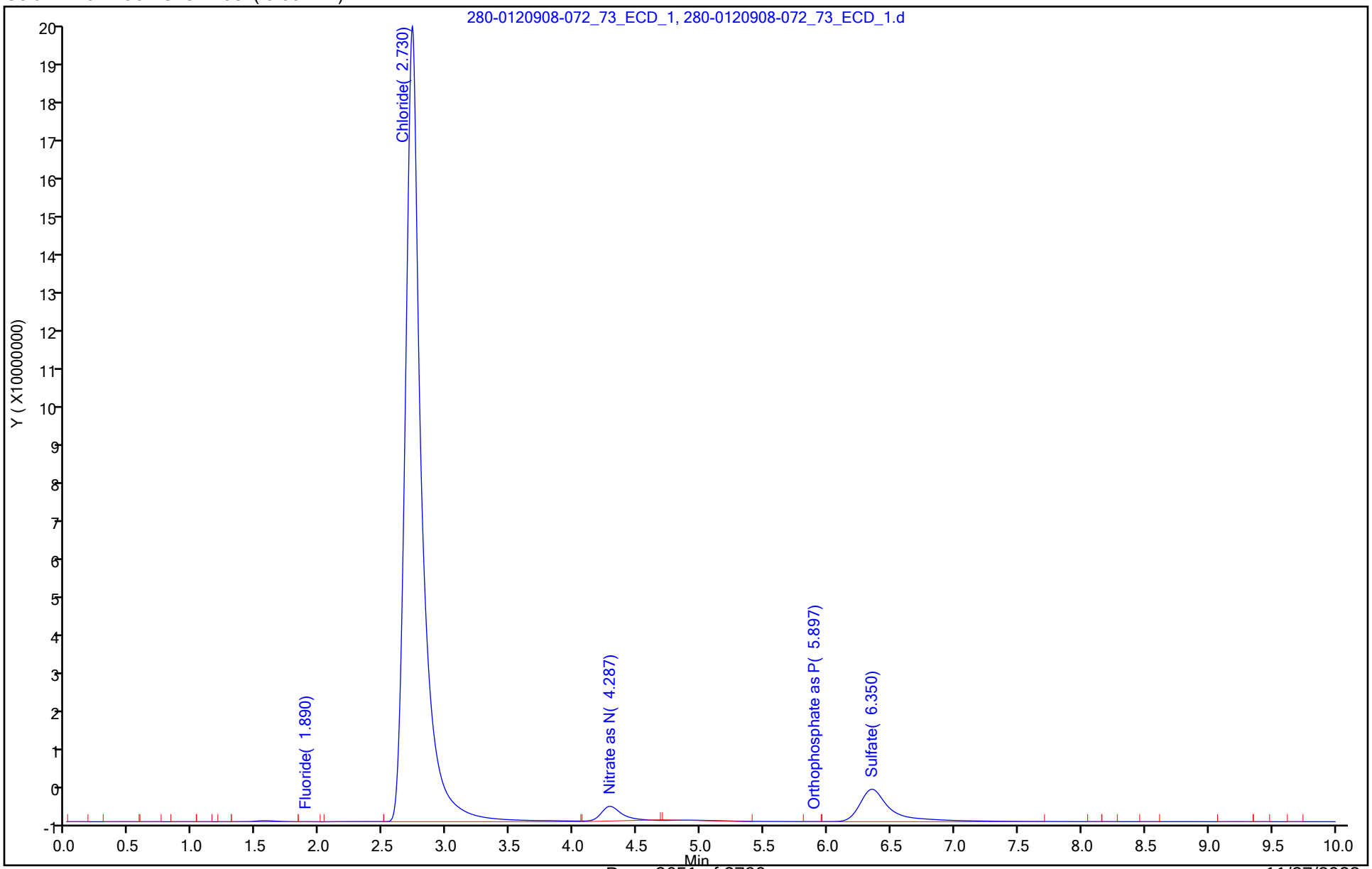
E - Exceeded Maximum Amount

Report Date: 01-May-2023 11:42:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-072_73_ECD_1.d				
Injection Date:	30-Apr-2023 03:33:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-175123-C-3	Lab Sample ID:	280-175123-3	Worklist Smp#:	72
Client ID:	RW-3-20230413				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-073_74_ECD_1.d				
Lims ID:	280-175123-C-2				
Client ID:	MW-119S-20230413				
Sample Type:	Client				
Inject. Date:	30-Apr-2023 03:45:00	ALS Bottle#:	0	Worklist Smp#:	73
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120908-073				
Misc. Info.:	280-175123-C-2				
Operator ID:		Instrument ID:	WC_IonChrom15		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	01-May-2023 11:42:32	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1628				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	1.903	1.910	-0.007	349574	0.1694	
2 Chloride	2.717	2.757	-0.040	1266173571	325.1	E
3 Nitrite as N		3.120			ND	
4 Bromide	3.763	3.813	-0.050	1392555	1.26	
5 Nitrate as N	4.247	4.087	0.160	30328457	NC	
7 Orthophosphate as P	5.883	5.640	0.243	12820	NC	
6 Sulfate	6.367	6.430	-0.063	312226452	117.7	E

QC Flag Legend

Processing Flags

NC - Not Calibrated

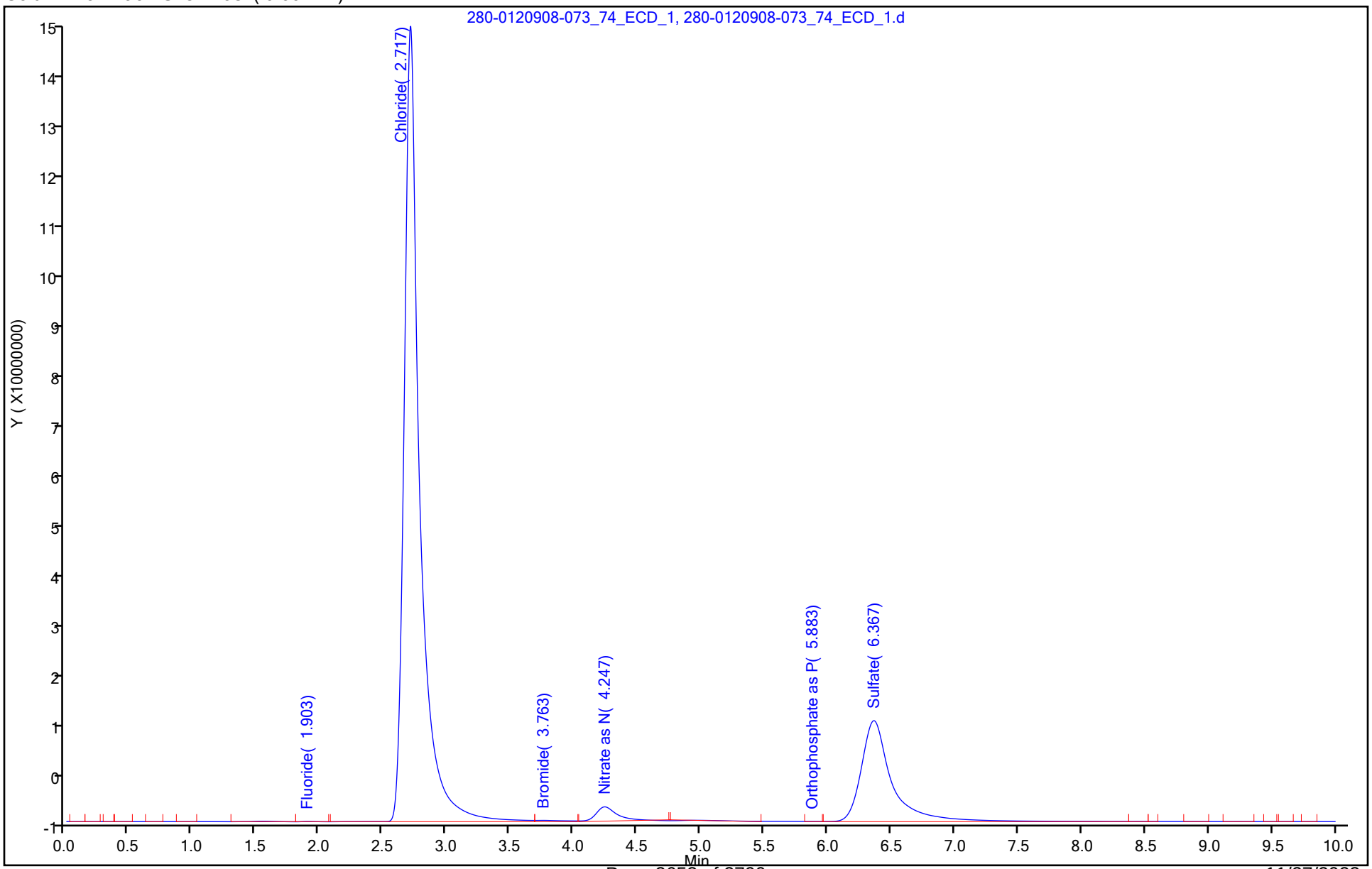
E - Exceeded Maximum Amount

Report Date: 01-May-2023 11:42:36 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-073_74_ECD_1.d				
Injection Date:	30-Apr-2023 03:45:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-175123-C-2	Lab Sample ID:	280-175123-2	Worklist Smp#:	73
Client ID:	MW-119S-20230413				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-074_75_ECD_1.d				
Lims ID:	280-175123-C-1				
Client ID:	MW-119D-20230413				
Sample Type:	Client				
Inject. Date:	30-Apr-2023 03:57:00	ALS Bottle#:	0	Worklist Smp#:	74
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0120908-074				
Misc. Info.:	280-175123-C-1				
Operator ID:		Instrument ID:	WC_IonChrom15		
Method:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m				
Limit Group:	Wet - Anions 28D				
Last Update:	01-May-2023 11:42:32	Calib Date:	03-Apr-2023 17:42:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d				
Column 1 :	Ion Pac AS18 - Fast (0.00 mm)		Det: 0005		
Process Host:	CTX1628				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	1.900	1.910	-0.010	252919	0.1498	
2 Chloride	2.707	2.757	-0.050	950630656	244.1	E
3 Nitrite as N		3.120			ND	
4 Bromide	3.757	3.813	-0.056	1379507	1.25	
5 Nitrate as N	4.237	4.087	0.150	18624640	NC	
7 Orthophosphate as P		5.640			ND	
6 Sulfate	6.363	6.430	-0.067	307498794	115.9	E

QC Flag Legend

Processing Flags

NC - Not Calibrated

E - Exceeded Maximum Amount

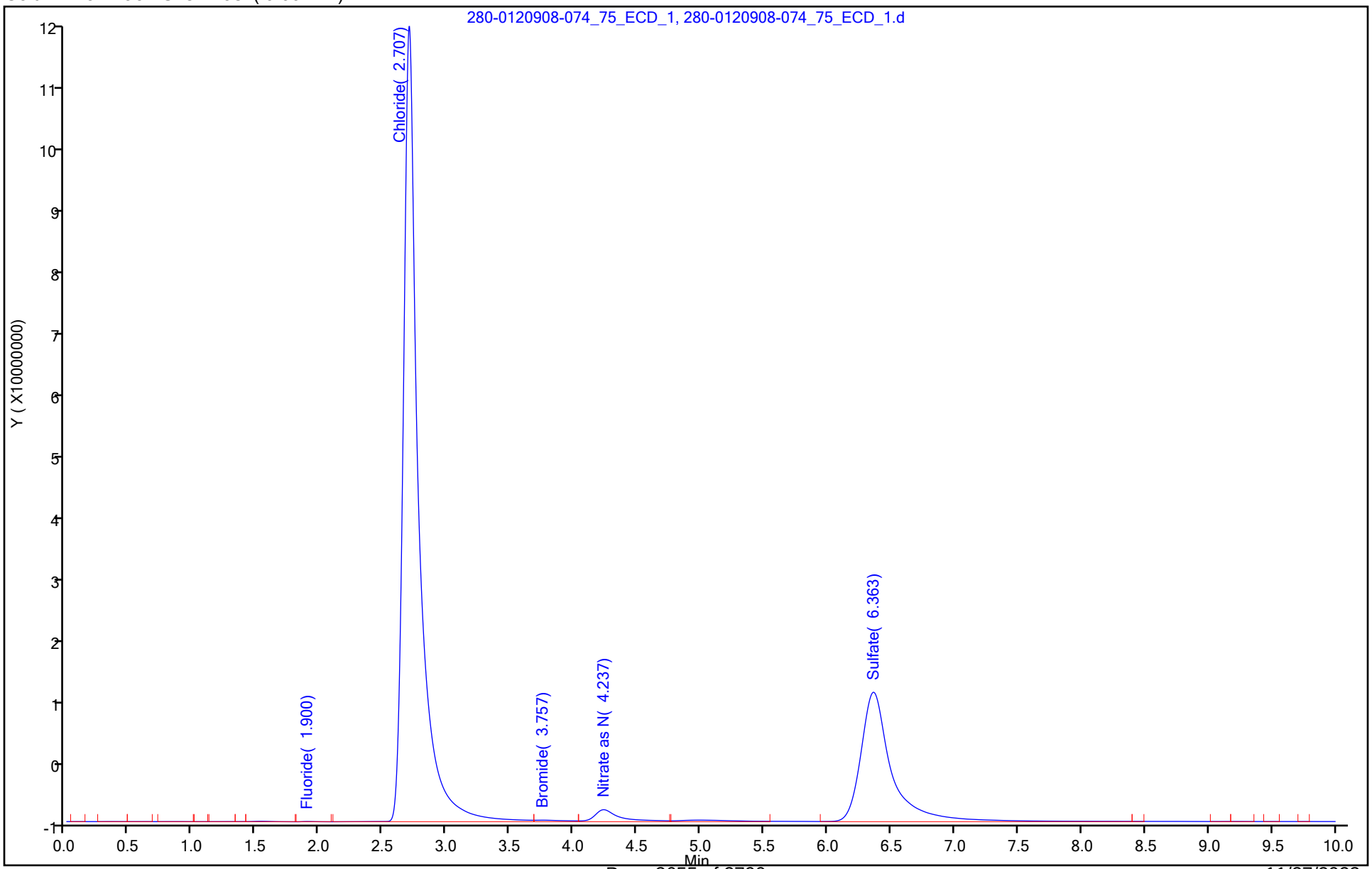
Report Date: 01-May-2023 11:42:37 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-074_75_ECD_1.d

Injection Date:	30-Apr-2023 03:57:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	280-175123-C-1	Lab Sample ID:	280-175123-1	Worklist Smp#:	74
Client ID:	MW-119D-20230413				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-077_78_ECD_1.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 30-Apr-2023 04:33:00 ALS Bottle#: 0 Worklist Smp#: 77
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-077
Misc. Info.: CCV
Operator ID: Instrument ID: WC_IonChrom15
Sublist: chrom-IC_15 Anions*sub1

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:38 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:38:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.910	1.910	0.000	11975149	2.50	2.52	M
2 Chloride	2.677	2.757	-0.080	184625889	50.0	47.6	Ma
3 Nitrite as N		3.120			NC	ND	Ma
4 Bromide	3.750	3.813	-0.063	2582089	2.50	2.32	
5 Nitrate as N	4.197	4.087	0.110	19721473	NC	NC	
7 Orthophosphate as P	5.583	5.640	-0.057	6224514	NC	NC	
6 Sulfate	6.317	6.430	-0.113	129250879	50.0	48.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

IC LCS_01950 Amount Added: 10.00 Units: mL

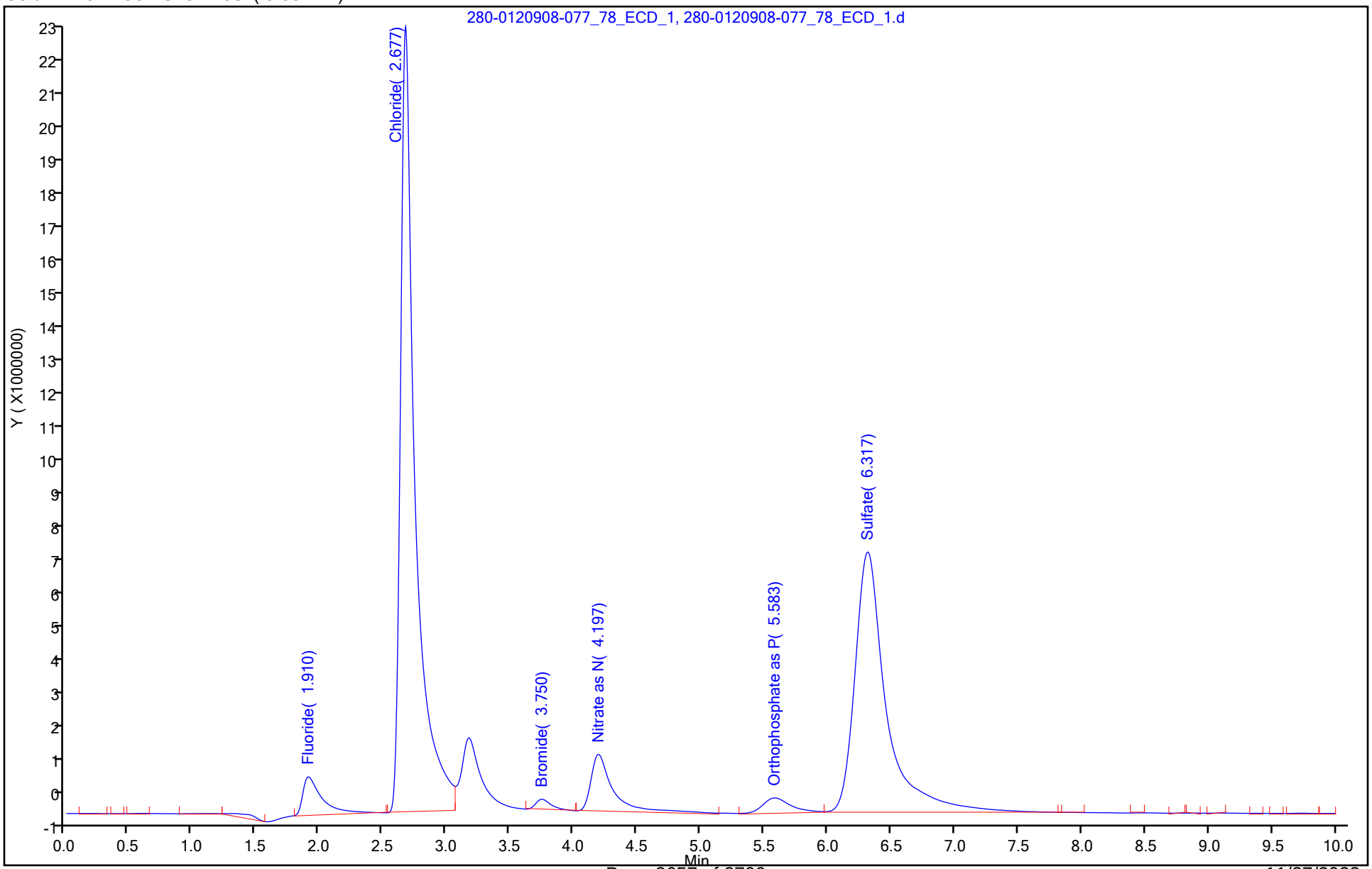
Report Date: 01-May-2023 11:42:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-077_78_ECD_1.d

Injection Date:	30-Apr-2023 04:33:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	77
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:19 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-078_79_ECD_1.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 30-Apr-2023 04:44:00 ALS Bottle#: 0 Worklist Smp#: 78
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0120908-078
Misc. Info.: CCB
Operator ID: Instrument ID: WC_IonChrom15

Method: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\IC_15 Anions.m
Limit Group: Wet - Anions 28D
Last Update: 01-May-2023 11:42:38 Calib Date: 03-Apr-2023 17:42:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230403-120083.b\280-0120083-006_08_ECD_1.d

Column 1 : Ion Pac AS18 - Fast (0.00 mm) Det: 0005
Process Host: CTX1628

First Level Reviewer: XAY4 Date: 01-May-2023 11:38:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		1.910				ND	U
2 Chloride		2.757				ND	U
3 Nitrite as N	2.993	3.120	-0.127	325309		NC	
4 Bromide	3.797	3.813	-0.016	9024		0.0175	
5 Nitrate as N	4.033	4.087	-0.054	27256		NC	
7 Orthophosphate as P	5.677	5.640	0.037	19317		NC	
6 Sulfate	6.370	6.430	-0.060	4509		0.2231	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

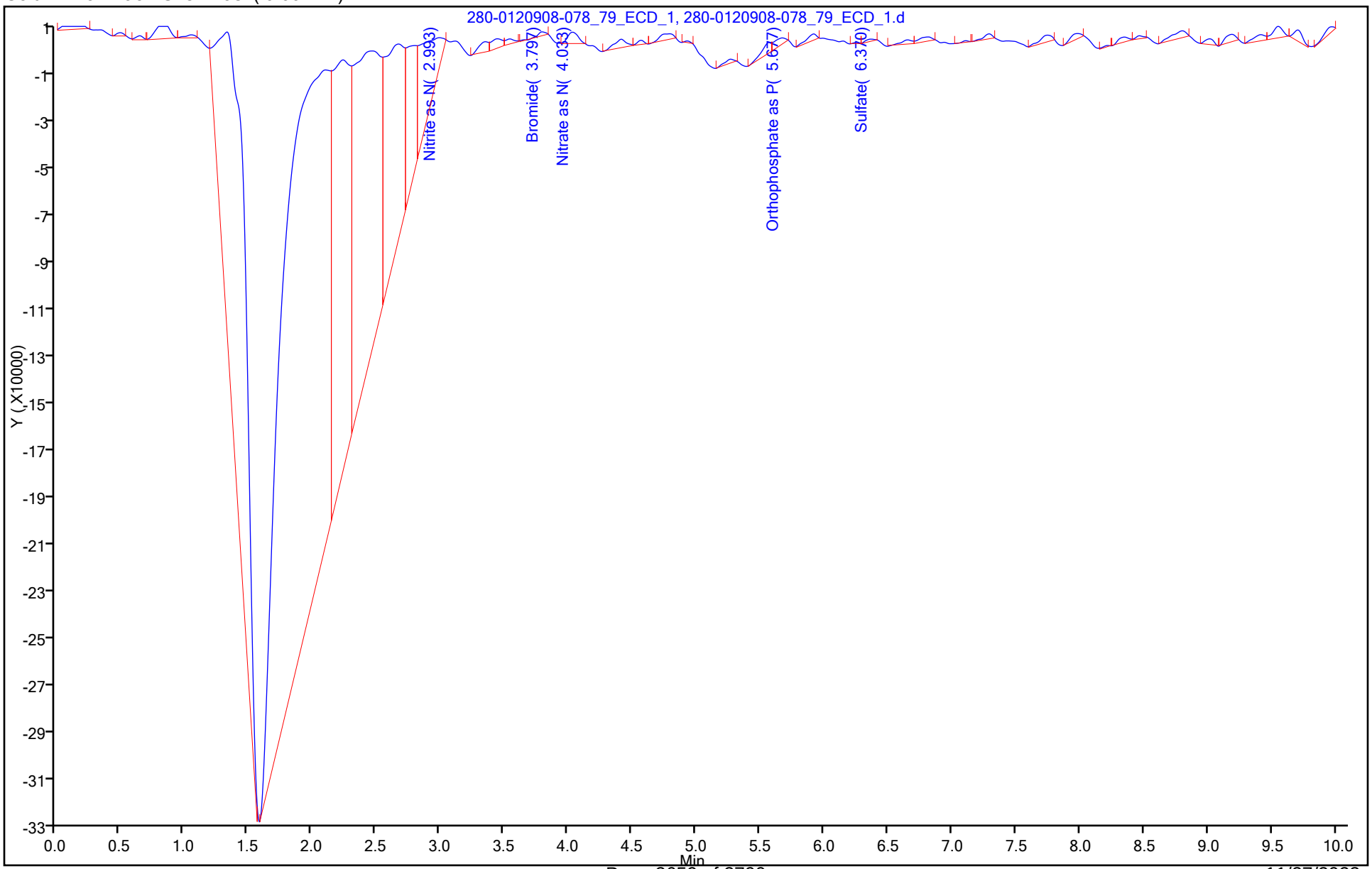
Report Date: 01-May-2023 11:42:40 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom15\20230429-120908.b\280-0120908-078_79_ECD_1.d

Injection Date:	30-Apr-2023 04:44:00	Instrument ID:	WC_IonChrom15	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	78
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	IC_15 Anions	Limit Group:	Wet - Anions 28D		

Column: Ion Pac AS18 - Fast (0.00 mm)



11/27/2023
7:19 PM

	Analysis	Sample Name	Sample I	ObjectID
1	NPOC	ICV		0L-10900100866-10101000-134B1151D7E4-000
2	NPOC	ICB		0L-10900100866-10101000-134B1151D7E4-000
3	NPOC	LCS		0L-10900100866-10101000-134B1151D7E4-000
4	NPOC	MB		0L-10900100866-10101000-134B1151D7E4-000
5	NPOC	TIC		0L-10900100866-10101000-134B1151D7E4-000
6	NPOC	280-175051-a-6		0L-10900100866-10101000-134B1151D7E4-000
7	NPOC	MS 280-175051-a-6		0L-10900100866-10101000-134B1151D7E4-000
8	NPOC	MSD 280-175051-a-6		0L-10900100866-10101000-134B1151D7E4-000
9	NPOC	280-175051-a-7		0L-10900100866-10101000-134B1151D7E4-000
10	NPOC	280-175121-b-2		0L-10900100866-10101000-134B1151D7E4-000
11	NPOC	280-175121-b-3		0L-10900100866-10101000-134B1151D7E4-000
12	NPOC	280-175121-b-4		0L-10900100866-10101000-134B1151D7E4-000
13	NPOC	280-175122-b-1		0L-10900100866-10101000-134B1151D7E4-000
14	NPOC	280-175122-b-2		0L-10900100866-10101000-134B1151D7E4-000
15	NPOC	CCV		0L-10900100866-10101000-134B1151D7E4-000
16	NPOC	CCB		0L-10900100866-10101000-134B1151D7E4-000
17	NPOC	280-175122-b-3		0L-10900100866-10101000-134B1151D7E4-001
18	NPOC	280-175123-b-1		0L-10900100866-10101000-134B1151D7E4-001
19	NPOC	280-175301-a-4		0L-10900100866-10101000-134B1151D7E4-001
20	NPOC	280-175042-I-1		0L-10900100866-10101000-134B1151D7E4-001
21	NPOC	MS 280-175042-I-1		0L-10900100866-10101000-134B1151D7E4-001
22	NPOC	MSD 280-175042-I-1		0L-10900100866-10101000-134B1151D7E4-001
23	NPOC	280-175042-k-2		0L-10900100866-10101000-134B1151D7E4-001
24	NPOC	280-175042-I-3		0L-10900100866-10101000-134B1151D7E4-001
25	NPOC	280-175042-I-4		0L-10900100866-10101000-134B1151D7E4-001
26	NPOC	280-175042-k-5		0L-10900100866-10101000-134B1151D7E4-001
27	NPOC	CCV		0L-10900100866-10101000-134B1151D7E4-001
28	NPOC	CCB		0L-10900100866-10101000-134B1151D7E4-001
29	NPOC	280-175042-I-6		0L-10900100866-10101000-134B1151D7E4-001
30	NPOC	280-175042-k-7		0L-10900100866-10101000-134B1151D7E4-001
31	NPOC	280-175042-k-8		0L-10900100866-10101000-134B1151D7E4-001
32	NPOC	280-175042-k-9		0L-10900100866-10101000-134B1151D7E4-001
33	NPOC	280-175042-k-10		0L-10900100866-10101000-134B1151D7E4-002
34	NPOC	LCS		0L-10900100866-10101000-134B1151D7E4-002
35	NPOC	MB		0L-10900100866-10101000-134B1151D7E4-002
36	NPOC	TIC		0L-10900100866-10101000-134B1151D7E4-002
37	NPOC	280-175042-I-11		0L-10900100866-10101000-134B1151D7E4-002
38	NPOC	MS 280-175042-I-11		0L-10900100866-10101000-134B1151D7E4-002
39	NPOC	CCV		0L-10900100866-10101000-134B1151D7E4-002
40	NPOC	CCB		0L-10900100866-10101000-134B1151D7E4-002
41	NPOC	MSD 280-175042-I-11		0L-10900100866-10101000-134B1151D7E4-002
42	NPOC	280-175042-I-12		0L-10900100866-10101000-134B1151D7E4-002
43	NPOC	280-175042-k-13		0L-10900100866-10101000-134B1151D7E4-002
44	NPOC	280-175046-b-1		0L-10900100866-10101000-134B1151D7E4-002
45	NPOC	280-175046-b-2		0L-10900100866-10101000-134B1151D7E4-002
46	NPOC	280-175046-d-3		0L-10900100866-10101000-134B1151D7E4-002
47	NPOC	280-175046-b-4		0L-10900100866-10101000-134B1151D7E4-002
48	NPOC	280-175046-b-5		0L-10900100866-10101000-134B1151D7E4-002
49	NPOC	280-175070-b-2		0L-10900100866-10101000-134B1151D7E4-003
50	NPOC	280-175070-a-3		0L-10900100866-10101000-134B1151D7E4-003
51	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-000
52	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-000
53	NPOC	280-175104-c-1		0L-10900100866-10101000-134B1151D7E5-000

	Origin	Manual Dilution	Result	Notes	Comment	Status
1	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:19.88mg/L			Completed
2	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1408mg/L			Completed
3	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.51mg/L			Completed
4	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1171mg/L			Completed
5	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1769mg/L			Completed
6	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.227mg/L			Completed
7	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:25.25mg/L			Completed
8	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:25.16mg/L			Completed
9	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.247mg/L			Completed
10	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.485mg/L			Completed
11	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:4.569mg/L			Completed
12	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:4.942mg/L			Completed
13	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:5.082mg/L			Completed
14	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:3.829mg/L			Completed
15	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.36mg/L			Completed
16	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.2307mg/L			Completed
17	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:10.67mg/L			Completed
18	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.658mg/L			Completed
19	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:34.86mg/L			Completed
20	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.806mg/L			Completed
21	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:26.72mg/L			Completed
22	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:26.47mg/L			Completed
23	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:11.54mg/L			Completed
24	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:5.856mg/L			Completed
25	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.751mg/L			Completed
26	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.061mg/L			Completed
27	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.30mg/L			Completed
28	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1292mg/L			Completed
29	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:5.893mg/L			Completed
30	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:13.36mg/L			Completed
31	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.550mg/L			Completed
32	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.739mg/L			Completed
33	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:5.095mg/L			Completed
34	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.70mg/L			Completed
35	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1194mg/L			Completed
36	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1885mg/L			Completed
37	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:3.839mg/L			Completed
38	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:27.55mg/L			Completed
39	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.41mg/L			Completed
40	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1938mg/L			Completed
41	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:27.60mg/L			Completed
42	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.776mg/L			Completed
43	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.479mg/L			Completed
44	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.9111mg/L			Completed
45	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.333mg/L			Completed
46	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.5932mg/L			Completed
47	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.6405mg/L			Completed
48	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.4453mg/L			Completed
49	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	50.00	NPOC:1732mg/L			Completed
50	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	5.000	NPOC:104.1mg/L			Completed
51	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.17mg/L			Completed
52	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1796mg/L			Completed
53	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7654mg/L			Completed

	Action	Date / Time	Vial
1		4/21/2023 3:08:50 PM	1
2		4/21/2023 3:22:55 PM	2
3		4/21/2023 3:38:26 PM	3
4		4/21/2023 3:52:45 PM	4
5		4/21/2023 4:07:14 PM	5
6		4/21/2023 4:21:31 PM	6
7		4/21/2023 4:37:05 PM	7
8		4/21/2023 4:52:44 PM	8
9		4/21/2023 5:06:53 PM	9
10		4/21/2023 5:21:13 PM	10
11		4/21/2023 5:35:47 PM	11
12		4/21/2023 5:50:13 PM	12
13		4/21/2023 6:05:05 PM	13
14		4/21/2023 6:19:28 PM	14
15		4/21/2023 6:35:18 PM	15
16		4/21/2023 6:49:29 PM	16
17		4/21/2023 7:04:33 PM	17
18		4/21/2023 7:18:38 PM	18
19		4/21/2023 7:34:23 PM	19
20		4/21/2023 7:48:53 PM	20
21		4/21/2023 8:04:52 PM	21
22		4/21/2023 8:20:28 PM	22
23		4/21/2023 8:35:51 PM	23
24		4/21/2023 8:50:37 PM	24
25		4/21/2023 9:05:16 PM	25
26		4/21/2023 9:19:21 PM	26
27		4/21/2023 9:35:29 PM	27
28		4/21/2023 9:49:38 PM	28
29		4/21/2023 10:04:50 PM	29
30		4/21/2023 10:20:21 PM	30
31		4/21/2023 10:35:13 PM	31
32		4/21/2023 10:50:13 PM	32
33		4/21/2023 11:05:13 PM	33
34		4/21/2023 11:21:02 PM	34
35		4/21/2023 11:35:20 PM	35
36		4/21/2023 11:50:02 PM	36
37		4/22/2023 12:04:42 AM	37
38		4/22/2023 12:20:23 AM	38
39		4/22/2023 12:36:31 AM	39
40		4/22/2023 12:50:52 AM	40
41		4/22/2023 1:06:24 AM	41
42		4/22/2023 1:20:46 AM	42
43		4/22/2023 1:34:55 AM	43
44		4/22/2023 1:49:01 AM	44
45		4/22/2023 2:03:11 AM	45
46		4/22/2023 2:17:17 AM	46
47		4/22/2023 2:31:24 AM	47
48		4/22/2023 2:45:49 AM	48
49		4/22/2023 3:01:32 AM	49
50		4/22/2023 3:17:05 AM	50
51		4/22/2023 3:33:00 AM	51
52		4/22/2023 3:47:15 AM	52
53		4/22/2023 4:01:26 AM	53

	Analysis	Sample Name	Sample I	ObjectID
54	NPOC	MS 280-175104-c-1		0L-10900100866-10101000-134B1151D7E5-000
55	NPOC	MSD 280-175104-c-1		0L-10900100866-10101000-134B1151D7E5-000
56	NPOC	280-175104-c-2		0L-10900100866-10101000-134B1151D7E5-000
57	NPOC	280-175104-c-3		0L-10900100866-10101000-134B1151D7E5-000
58	NPOC	280-175074-d-1		0L-10900100866-10101000-134B1151D7E5-000
59	NPOC	280-175074-e-3		0L-10900100866-10101000-134B1151D7E5-000
60	NPOC	280-175074-d-5		0L-10900100866-10101000-134B1151D7E5-000
61	NPOC	280-175074-d-7		0L-10900100866-10101000-134B1151D7E5-000
62	NPOC	280-175078-e-1		0L-10900100866-10101000-134B1151D7E5-000
63	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-000
64	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-000
65	NPOC	280-175105-d-1		0L-10900100866-10101000-134B1151D7E5-000
66	NPOC	280-175108-d-1		0L-10900100866-10101000-134B1151D7E5-000
67	NPOC	LCS		0L-10900100866-10101000-134B1151D7E5-001
68	NPOC	MB		0L-10900100866-10101000-134B1151D7E5-001
69	NPOC	280-175112-n-1		0L-10900100866-10101000-134B1151D7E5-001
70	NPOC	MS 280-175112-n-1		0L-10900100866-10101000-134B1151D7E5-001
71	NPOC	MSD 280-175112-n-1		0L-10900100866-10101000-134B1151D7E5-001
72	NPOC	280-175112-m-2		0L-10900100866-10101000-134B1151D7E5-001
73	NPOC	280-175112-m-3		0L-10900100866-10101000-134B1151D7E5-001
74	NPOC	280-175112-m-4		0L-10900100866-10101000-134B1151D7E5-001
75	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-001
76	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-001
77	NPOC	280-175112-k-5		0L-10900100866-10101000-134B1151D7E5-001
78	NPOC	280-175112-l-6		0L-10900100866-10101000-134B1151D7E5-001
79	NPOC	280-175112-l-7		0L-10900100866-10101000-134B1151D7E5-001
80	NPOC	280-175112-k-8		0L-10900100866-10101000-134B1151D7E5-001
81	NPOC	280-175112-l-9		0L-10900100866-10101000-134B1151D7E5-001
82	NPOC	280-175112-m-10		0L-10900100866-10101000-134B1151D7E5-001
83	NPOC	280-175112-l-11		0L-10900100866-10101000-134B1151D7E5-002
84	NPOC	MS 280-175112-l-11		0L-10900100866-10101000-134B1151D7E5-002
85	NPOC	MSD 280-175112-l-11		0L-10900100866-10101000-134B1151D7E5-002
86	NPOC	280-175112-k-12		0L-10900100866-10101000-134B1151D7E5-002
87	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-002
88	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-002
89	NPOC	280-175301-a-1		0L-10900100866-10101000-134B1151D7E5-002
90	NPOC	280-175301-a-2		0L-10900100866-10101000-134B1151D7E5-002
91	NPOC	280-175301-a-3		0L-10900100866-10101000-134B1151D7E5-002
92	NPOC	CCV		0L-10900100866-10101000-134B1151D7E5-002
93	NPOC	CCB		0L-10900100866-10101000-134B1151D7E5-002

	Origin	Manual Dilution	Result	Notes	Comment	Status
54	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.65mg/L			Completed
55	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.60mg/L			Completed
56	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7287mg/L			Completed
57	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.444mg/L			Completed
58	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7511mg/L			Completed
59	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.704mg/L			Completed
60	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7224mg/L			Completed
61	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.7489mg/L			Completed
62	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:3.573mg/L			Completed
63	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:23.89mg/L			Completed
64	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1369mg/L			Completed
65	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.410mg/L			Completed
66	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.6721mg/L			Completed
67	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.63mg/L			Completed
68	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1878mg/L			Completed
69	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.253mg/L			Completed
70	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:30.32mg/L			Completed
71	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:29.96mg/L			Completed
72	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:4.987mg/L			Completed
73	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:18.50mg/L			Completed
74	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.581mg/L			Completed
75	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.29mg/L			Completed
76	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1805mg/L			Completed
77	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:11.90mg/L			Completed
78	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.648mg/L			Completed
79	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:13.95mg/L			Completed
80	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:1.451mg/L			Completed
81	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:9.448mg/L			Completed
82	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:13.90mg/L			Completed
83	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:6.718mg/L			Completed
84	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:30.85mg/L			Completed
85	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:30.89mg/L			Completed
86	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:7.922mg/L			Completed
87	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.25mg/L			Completed
88	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.1463mg/L			Completed
89	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.616mg/L			Completed
90	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:34.65mg/L			Completed
91	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:2.767mg/L			Completed
92	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:24.16mg/L			Completed
93	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	1.000	NPOC:0.2098mg/L			Completed

	Action	Date / Time	Vial
54		4/22/2023 4:16:59 AM	54
55		4/22/2023 4:33:06 AM	55
56		4/22/2023 4:47:51 AM	56
57		4/22/2023 5:02:06 AM	57
58		4/22/2023 5:16:18 AM	58
59		4/22/2023 5:30:25 AM	59
60		4/22/2023 5:44:32 AM	60
61		4/22/2023 5:58:39 AM	61
62		4/22/2023 6:13:14 AM	62
63		4/22/2023 6:29:06 AM	63
64		4/22/2023 6:43:19 AM	64
65		4/22/2023 6:58:00 AM	65
66		4/22/2023 7:12:07 AM	66
67		4/22/2023 7:27:57 AM	67
68		4/22/2023 7:42:05 AM	68
69		4/22/2023 7:57:06 AM	69
70		4/22/2023 8:12:57 AM	70
71		4/22/2023 8:28:40 AM	71
72		4/22/2023 8:43:23 AM	72
73		4/22/2023 8:59:16 AM	73
74		4/22/2023 9:13:42 AM	74
75		4/22/2023 9:29:31 AM	75
76		4/22/2023 9:43:59 AM	76
77		4/22/2023 9:59:14 AM	77
78		4/22/2023 10:13:28 AM	78
79		4/22/2023 10:28:49 AM	79
80		4/22/2023 10:43:01 AM	80
81		4/22/2023 10:58:04 AM	81
82		4/22/2023 11:13:53 AM	82
83		4/22/2023 11:28:50 AM	83
84		4/22/2023 11:44:40 AM	84
85		4/22/2023 12:00:18 PM	85
86		4/22/2023 12:15:24 PM	86
87		4/22/2023 12:31:27 PM	87
88		4/22/2023 12:45:36 PM	88
89		4/22/2023 12:59:58 PM	89
90		4/22/2023 1:15:58 PM	90
91		4/22/2023 1:30:20 PM	91
92		4/22/2023 1:46:06 PM	92
93		4/22/2023 2:00:33 PM	93

TOC-L Cal Curve Information
C:\TOC-L\CalCurves\NPOC Calibration 10 31 2022.2023 03 20 14 43 51.cal

Date of Creation	3/20/2023 4:26:03 PM
User	abw
System	TOC-LCSN

Cal. Curve

Sample Name:	NPOC Calibration_AutoDilution_Calibration_03_20_2023
Sample ID:	Auto Dilution Calibration 03 20 2023
Object ID	0L-10900100866-10101000-134B0B02249E-0000
Cal. Curve:	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status	Completed
Comment:	

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.1980	50uL	1.000	*******		3/20/2023 2:51:43 PM
2	0.2915	50uL	1.000	*******		3/20/2023 2:54:03 PM
3	0.3385	50uL	1.000	*******		3/20/2023 2:56:12 PM
4	0.000	50uL	1.000	*******		3/20/2023 2:58:17 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	0.2070
SD Area	0.1498
CV Area	72.39%
Vial	88
No Washes	2

Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.039	50uL	50.00	*******		3/20/2023 3:07:14 PM
2	2.505	50uL	50.00	*******		3/20/2023 3:09:43 PM
3	2.186	50uL	50.00	*******		3/20/2023 3:12:14 PM
4	2.514	50uL	50.00	*******		3/20/2023 3:14:59 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	2.311
SD Area	0.2370
CV Area	10.25%
Vial	89
No Washes	2

Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	12.32	50uL	10.00	*******		3/20/2023 3:23:17 PM
2	13.04	50uL	10.00	*******		3/20/2023 3:26:06 PM
3	12.48	50uL	10.00	*******		3/20/2023 3:28:50 PM
4	12.86	50uL	10.00	*******		3/20/2023 3:31:49 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	12.68
SD Area	0.3324
CV Area	2.62%
Vial	89
No Washes	2

Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	24.07	50uL	5.000	*******		3/20/2023 3:40:19 PM
2	25.15	50uL	5.000	*******		3/20/2023 3:43:35 PM
3	24.82	50uL	5.000	*******		3/20/2023 3:46:37 PM
4	25.03	50uL	5.000	*******		3/20/2023 3:49:45 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	24.77
SD Area	0.4846
CV Area	1.96%
Vial	89
No Washes	2

Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	61.40	50uL	2.000	*******		3/20/2023 3:58:15 PM
2	61.02	50uL	2.000	*******		3/20/2023 4:01:24 PM
3	62.07	50uL	2.000	*******		3/20/2023 4:04:31 PM
4	62.38	50uL	2.000	*******		3/20/2023 4:07:56 PM

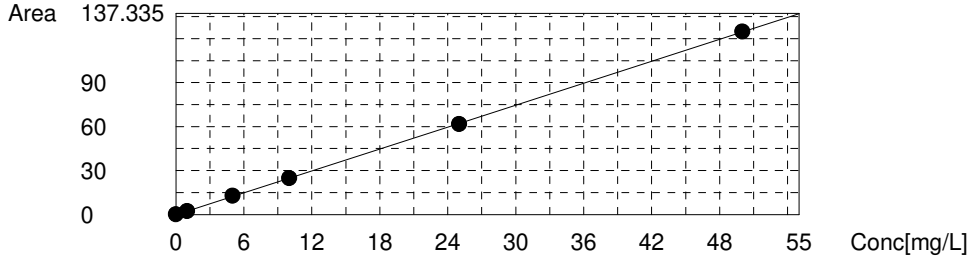
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	61.72
SD Area	0.6193
CV Area	1.00%
Vial	89
No Washes	2

Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	123.1	50uL	1.000	*******		3/20/2023 4:15:57 PM
2	124.0	50uL	1.000	*******		3/20/2023 4:19:27 PM
3	124.6	50uL	1.000	*******		3/20/2023 4:22:39 PM
4	127.7	50uL	1.000	*******		3/20/2023 4:26:03 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	124.9
SD Area	1.997
CV Area	1.60%
Vial	89
No Washes	2

Slope:	2.493
Intercept	-0.04883
r^2	1.0000
r	1.0000
RSE(%)	N/A
Zero Shift	No



TOC-Control L Report

ABW
2023_04_21_001.tlx

Instr.Information

Instrument Options TOC/ASI/
Catalyst Regular Sensitivity

Sample

Sample Name: ICV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

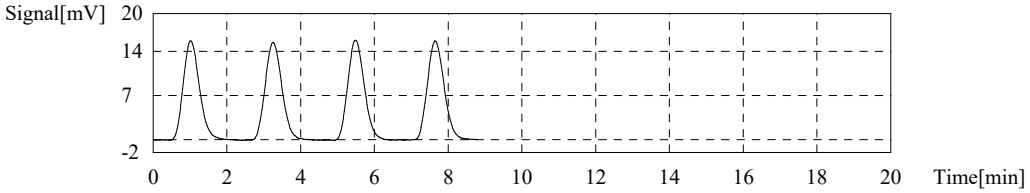
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:19.88mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	48.66	19.54mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:01:41 PM
2	49.21	19.76mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:04:08 PM
3	49.88	20.03mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:06:29 PM
4	50.22	20.17mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:08:50 PM

Mean Area 49.49
Mean Conc. 19.88mg/L



Sample

Sample Name: ICB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

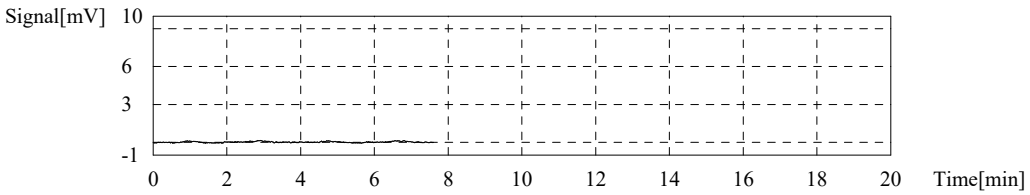
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1408mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3219	0.1487mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:16:40 PM
2	0.4017	0.1808mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:18:45 PM
3	0.1515	0.08037mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:20:50 PM
4	0.3331	0.1532mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:22:55 PM

Mean Area 0.3020
Mean Conc. 0.1408mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

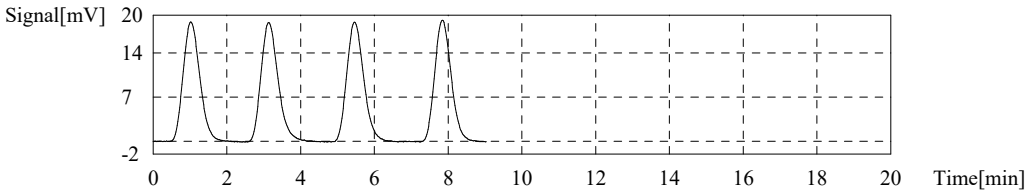
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.51mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.38	24.24mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:30:58 PM
2	61.68	24.77mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:33:27 PM
3	61.56	24.72mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:36:01 PM
4	60.56	24.32mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:38:26 PM

Mean Area 61.05
Mean Conc. 24.51mg/L



Sample

Sample Name: MB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

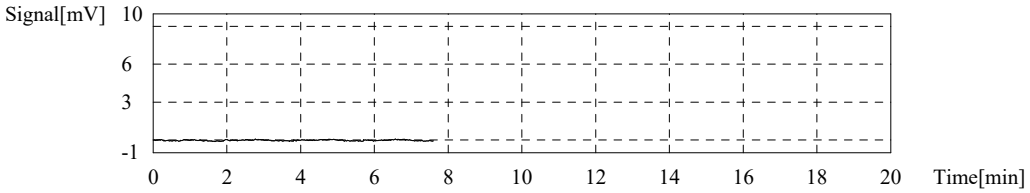
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1171mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1855	0.09401mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:46:16 PM
2	0.05930	0.04338mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:48:25 PM
3	0.4254	0.1903mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:50:34 PM
4	0.3018	0.1407mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 3:52:45 PM

Mean Area 0.2430
Mean Conc. 0.1171mg/L



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

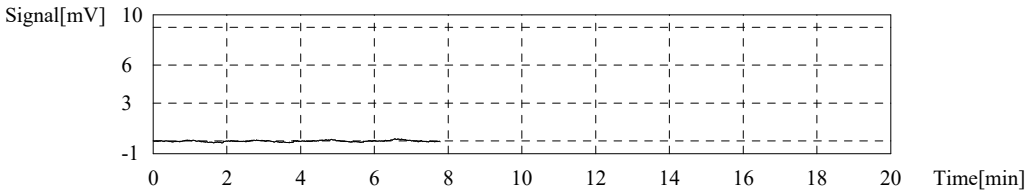
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1769mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3542	0.1617mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:00:35 PM
2	0.3835	0.1735mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:02:44 PM
3	0.1459	0.07813mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:04:53 PM
4	0.6847	0.2943mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:07:14 PM

Mean Area 0.3921
Mean Conc. 0.1769mg/L



Sample

Sample Name: 280-175051-a-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

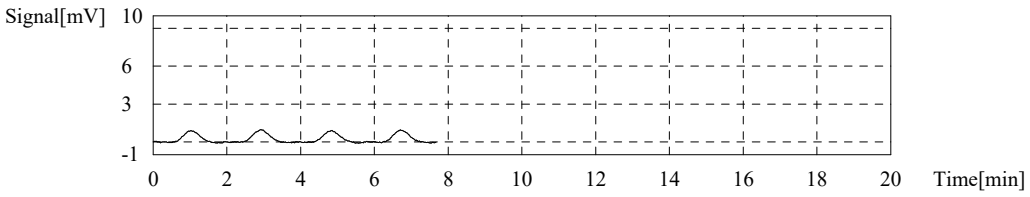
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.227mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.946	1.202mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:15:04 PM
2	3.072	1.252mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:17:13 PM
3	3.087	1.258mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:19:18 PM
4	2.935	1.197mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:21:31 PM

Mean Area 3.010
Mean Conc. 1.227mg/L



Sample

Sample Name: MS 280-175051-a-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

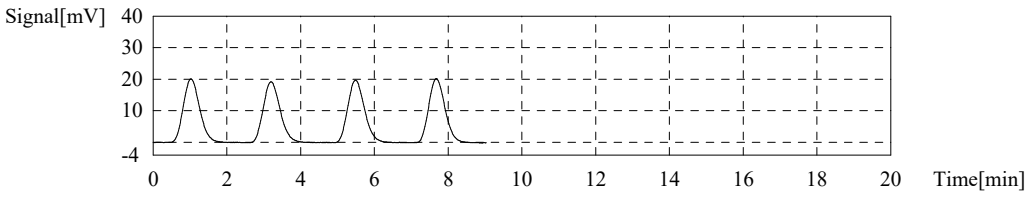
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.25mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.94	25.27mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:29:37 PM
2	62.39	25.05mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:32:08 PM
3	63.23	25.39mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:34:32 PM
4	63.02	25.30mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:37:05 PM

Mean Area 62.90
Mean Conc. 25.25mg/L



Sample

Sample Name: MSD 280-175051-a-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

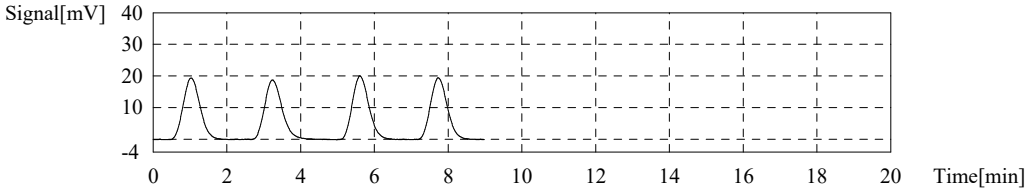
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.16mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.48	25.09mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:45:21 PM
2	62.00	24.89mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:47:54 PM
3	63.76	25.60mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:50:13 PM
4	62.40	25.05mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 4:52:44 PM

Mean Area 62.66
Mean Conc. 25.16mg/L



Sample

Sample Name: 280-175051-a-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

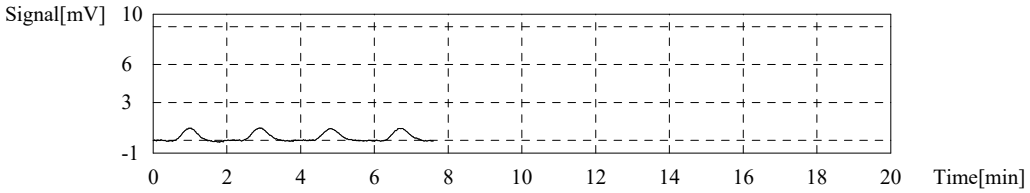
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.247mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.142	1.280mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:00:34 PM
2	3.190	1.299mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:02:43 PM
3	2.884	1.177mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:04:48 PM
4	3.020	1.231mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:06:53 PM

Mean Area 3.059
Mean Conc. 1.247mg/L



Sample

Sample Name: 280-175121-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

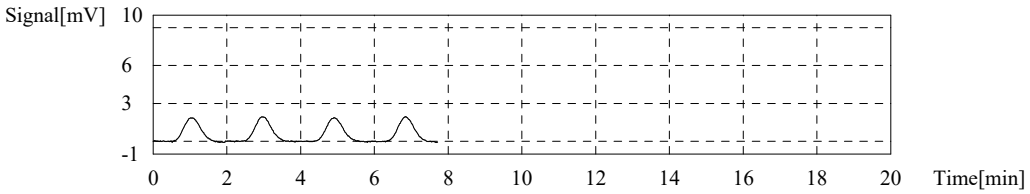
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.485mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.123	2.476mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:14:46 PM
2	6.219	2.515mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:16:56 PM
3	6.228	2.518mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:19:04 PM
4	6.015	2.433mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:21:13 PM

Mean Area 6.146
Mean Conc. 2.485mg/L



Sample

Sample Name: 280-175121-b-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

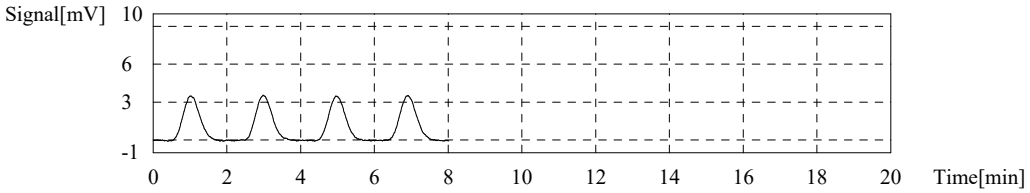
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.569mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.31	4.557mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:29:07 PM
2	11.34	4.569mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:31:16 PM
3	11.26	4.537mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:33:23 PM
4	11.45	4.613mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:35:47 PM

Mean Area 11.34
Mean Conc. 4.569mg/L



Sample

Sample Name: 280-175121-b-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

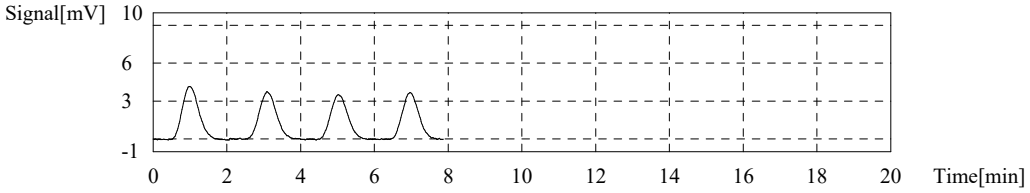
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.942mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.56	5.460mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:43:47 PM
2	12.17	4.902mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:45:58 PM
3	11.69	4.710mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:48:06 PM
4	11.66	4.698mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:50:13 PM

Mean Area 12.27
Mean Conc. 4.942mg/L



Sample

Sample Name: 280-175122-b-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

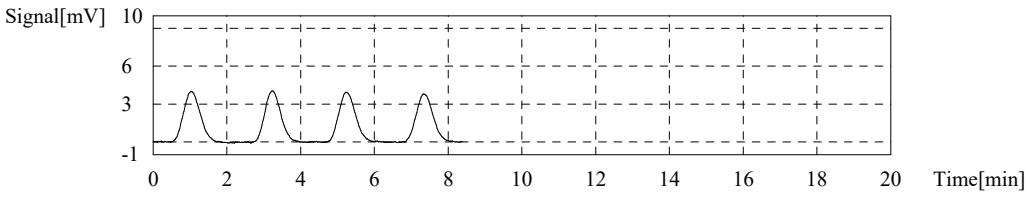
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.082mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.93	5.207mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 5:58:22 PM
2	12.63	5.087mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:00:34 PM
3	12.75	5.135mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:02:49 PM
4	12.16	4.898mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:05:05 PM

Mean Area 12.62
Mean Conc. 5.082mg/L



Sample

Sample Name: 280-175122-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

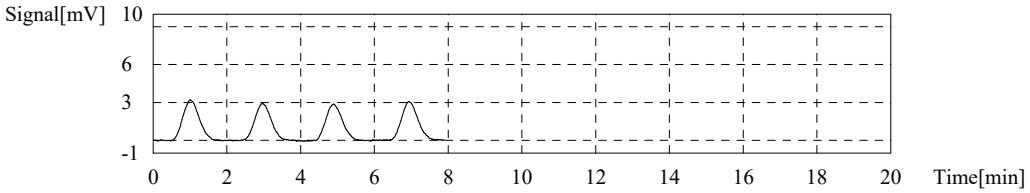
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.829mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.07	4.060mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:12:56 PM
2	9.135	3.685mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:15:03 PM
3	9.300	3.751mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:17:18 PM
4	9.473	3.820mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:19:28 PM

Mean Area 9.495
Mean Conc. 3.829mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

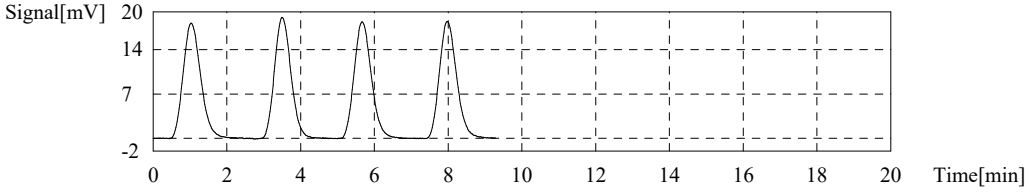
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.36mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.97	24.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:27:51 PM
2	60.22	24.18mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:30:16 PM
3	60.61	24.34mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:32:46 PM
4	60.87	24.44mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:35:18 PM

Mean Area 60.67
Mean Conc. 24.36mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

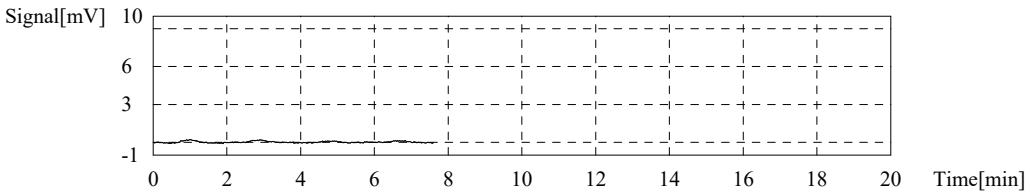
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2307mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6751	0.2904mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:43:08 PM
2	0.5055	0.2224mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:45:19 PM
3	0.4707	0.2084mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:47:24 PM
4	0.4537	0.2016mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:49:29 PM

Mean Area 0.5263
Mean Conc. 0.2307mg/L



Sample

Sample Name: 280-175122-b-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

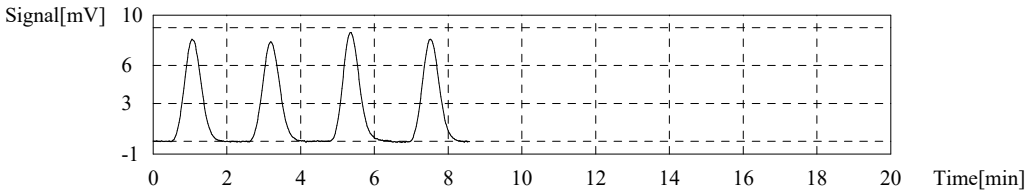
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.67mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	26.20	10.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:57:32 PM
2	26.08	10.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 6:59:55 PM
3	27.38	11.00mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:02:14 PM
4	26.57	10.68mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:04:33 PM

Mean Area 26.56
Mean Conc. 10.67mg/L



Sample

Sample Name: 280-175123-b-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

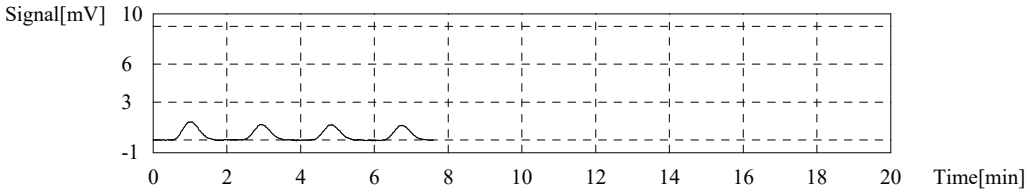
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.658mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.679	1.897mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:12:23 PM
2	3.800	1.544mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:14:28 PM
3	3.954	1.606mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:16:33 PM
4	3.903	1.585mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:18:38 PM

Mean Area 4.084
Mean Conc. 1.658mg/L



Sample

Sample Name: 280-175301-a-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

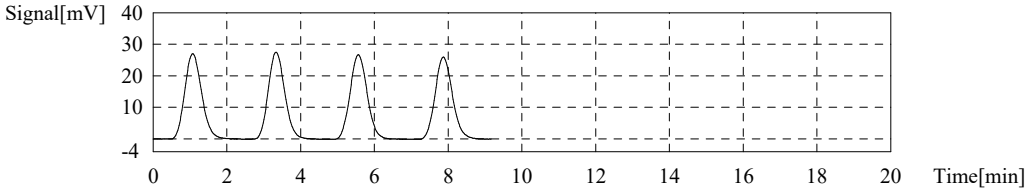
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:34.86mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	86.93	34.90mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:26:52 PM
2	86.77	34.83mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:29:19 PM
3	87.37	35.07mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:31:48 PM
4	86.29	34.64mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:34:23 PM

Mean Area 86.84
Mean Conc. 34.86mg/L



Sample

Sample Name: 280-175042-l-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

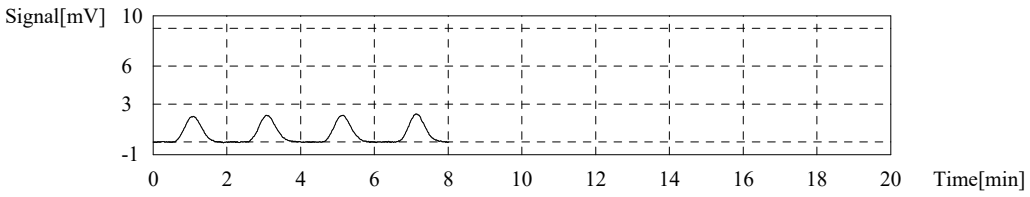
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.806mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.752	2.728mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:42:21 PM
2	6.898	2.787mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:44:34 PM
3	6.974	2.818mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:46:45 PM
4	7.153	2.889mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:48:53 PM

Mean Area 6.944
Mean Conc. 2.806mg/L



Sample

Sample Name: MS 280-175042-l-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

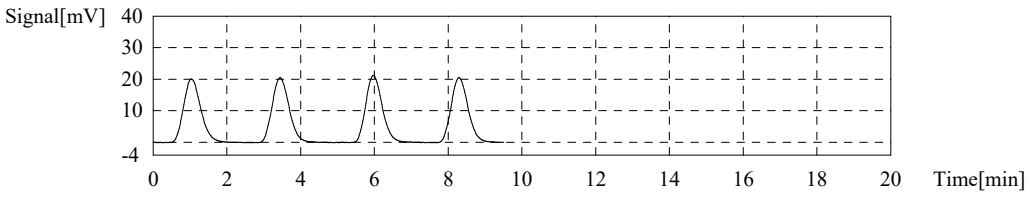
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.72mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	66.07	26.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:57:13 PM
2	66.76	26.80mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 7:59:57 PM
3	67.29	27.02mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:02:26 PM
4	66.09	26.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:04:52 PM

Mean Area 66.55
Mean Conc. 26.72mg/L



Sample

Sample Name: MSD 280-175042-l-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

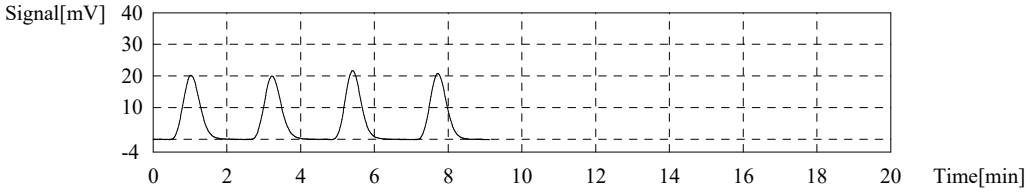
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.47mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	65.29	26.21mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:12:59 PM
2	65.22	26.19mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:15:22 PM
3	67.02	26.91mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:17:51 PM
4	66.20	26.58mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:20:28 PM

Mean Area 65.93
Mean Conc. 26.47mg/L



Sample

Sample Name: 280-175042-k-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

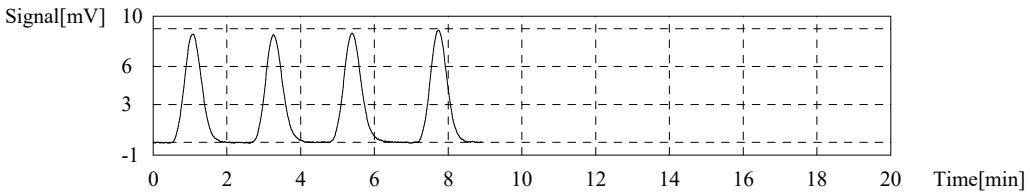
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.54mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	28.50	11.45mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:28:35 PM
2	28.13	11.31mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:30:53 PM
3	29.35	11.79mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:33:25 PM
4	28.92	11.62mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:35:51 PM

Mean Area 28.73
Mean Conc. 11.54mg/L



Sample

Sample Name: 280-175042-I-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

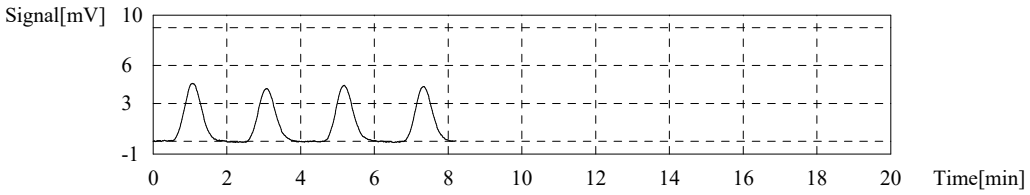
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.856mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.08	6.070mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:43:46 PM
2	14.19	5.713mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:46:05 PM
3	14.69	5.913mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:48:28 PM
4	14.23	5.729mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:50:37 PM

Mean Area 14.55
Mean Conc. 5.856mg/L



Sample

Sample Name: 280-175042-I-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

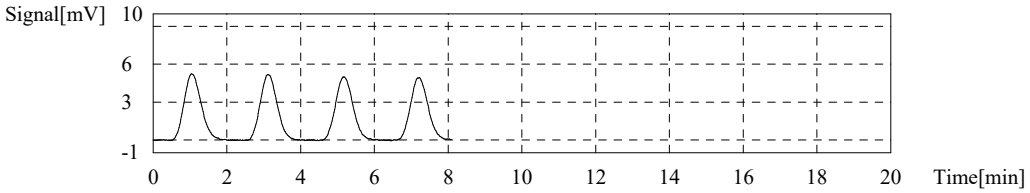
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.751mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	17.38	6.992mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 8:58:36 PM
2	16.78	6.752mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:00:50 PM
3	16.64	6.696mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:03:08 PM
4	16.31	6.563mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:05:16 PM

Mean Area 16.78
Mean Conc. 6.751mg/L



Sample

Sample Name: 280-175042-k-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

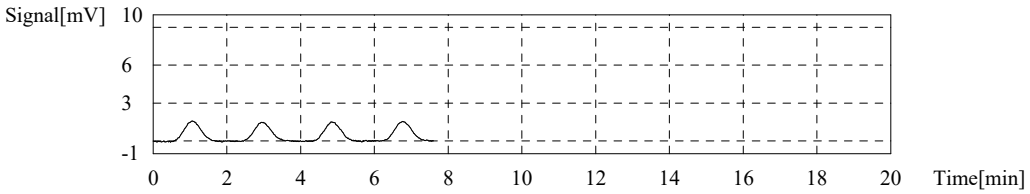
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.061mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.433	2.199mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:13:06 PM
2	4.886	1.980mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:15:11 PM
3	4.952	2.006mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:17:16 PM
4	5.081	2.058mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:19:21 PM

Mean Area 5.088
Mean Conc. 2.061mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

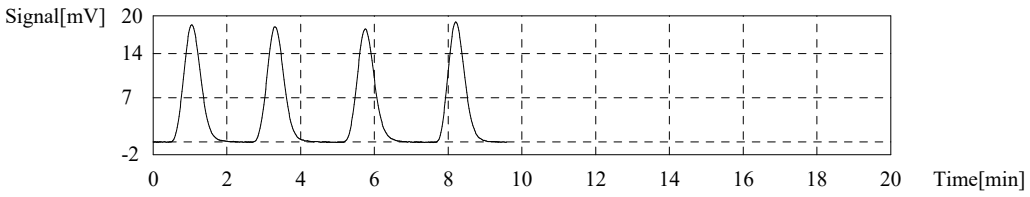
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.30mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.74	24.39mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:27:31 PM
2	59.94	24.07mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:30:13 PM
3	60.30	24.21mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:32:54 PM
4	61.10	24.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:35:29 PM

Mean Area 60.52
Mean Conc. 24.30mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

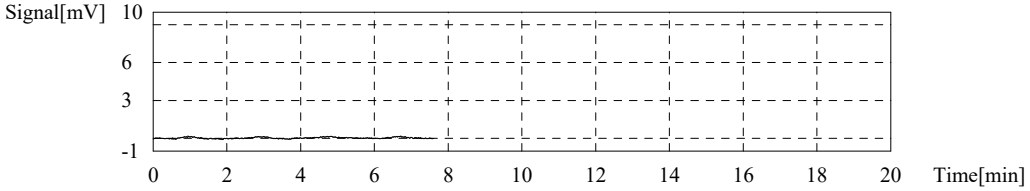
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1292mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3801	0.1721mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:43:19 PM
2	0.3135	0.1454mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:45:27 PM
3	0.03770	0.03472mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:47:32 PM
4	0.3619	0.1648mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:49:38 PM

Mean Area 0.2733
Mean Conc. 0.1292mg/L



Sample

Sample Name: 280-175042-l-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

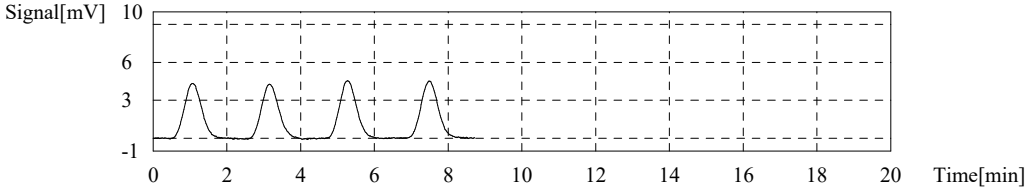
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.893mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	14.34	5.773mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:57:39 PM
2	14.64	5.893mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 9:59:57 PM
3	14.71	5.921mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:02:20 PM
4	14.87	5.985mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:04:50 PM

Mean Area 14.64
Mean Conc. 5.893mg/L



Sample

Sample Name: 280-175042-k-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

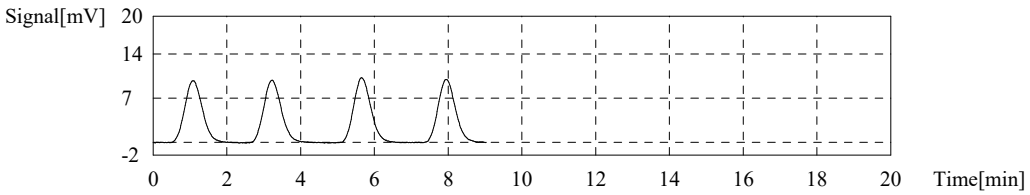
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:13.36mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.91	13.22mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:12:54 PM
2	33.20	13.34mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:15:32 PM
3	33.67	13.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:18:00 PM
4	33.23	13.35mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:20:21 PM

Mean Area 33.25
Mean Conc. 13.36mg/L



Sample

Sample Name: 280-175042-k-8
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

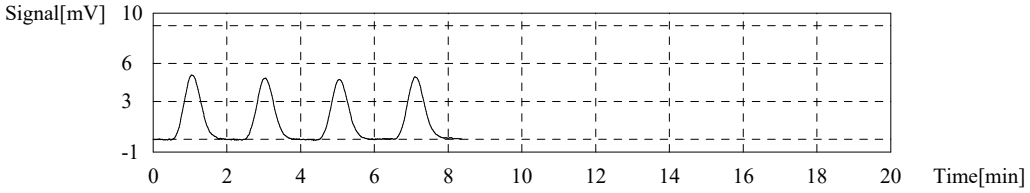
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.550mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.70	6.720mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:28:15 PM
2	15.95	6.419mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:30:27 PM
3	15.94	6.415mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:32:42 PM
4	16.52	6.647mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:35:13 PM

Mean Area 16.28
Mean Conc. 6.550mg/L



Sample

Sample Name: 280-175042-k-9
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

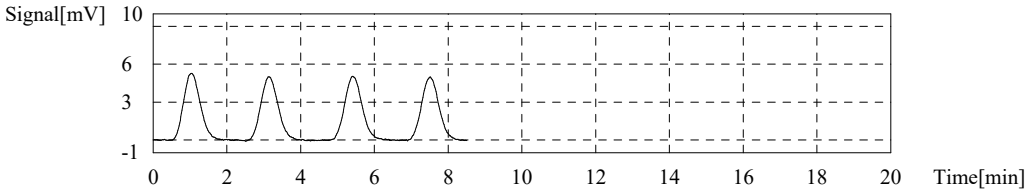
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.739mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.89	6.796mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:43:14 PM
2	16.83	6.772mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:45:40 PM
3	16.68	6.712mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:47:56 PM
4	16.59	6.675mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:50:13 PM

Mean Area 16.75
Mean Conc. 6.739mg/L



Sample

Sample Name: 280-175042-k-10
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

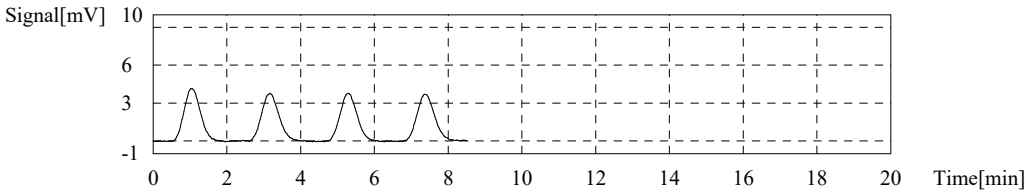
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.095mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.17	5.303mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 10:58:15 PM
2	12.46	5.019mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:00:32 PM
3	12.55	5.055mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:02:50 PM
4	12.42	5.002mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:05:13 PM

Mean Area 12.65
Mean Conc. 5.095mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

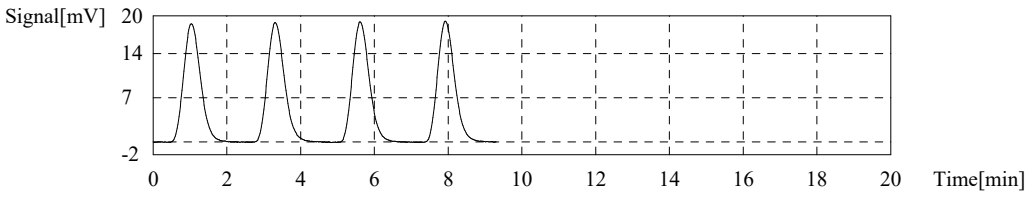
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.70mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.74	24.39mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:13:28 PM
2	61.32	24.62mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:15:57 PM
3	61.64	24.75mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:18:27 PM
4	62.38	25.05mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:21:02 PM

Mean Area 61.52
Mean Conc. 24.70mg/L



Sample

Sample Name: MB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

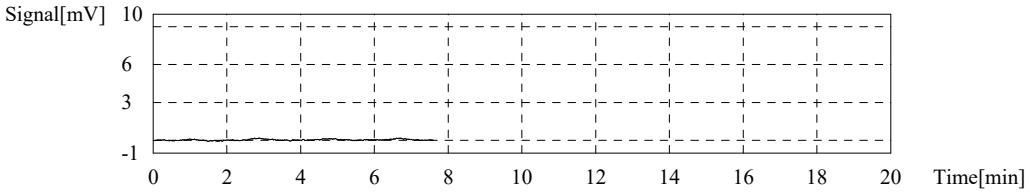
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1194mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2149	0.1058mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:28:53 PM
2	0.3975	0.1791mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:31:02 PM
3	0.000	0.01959mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:33:07 PM
4	0.3824	0.1730mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:35:20 PM

Mean Area 0.2487
Mean Conc. 0.1194mg/L



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

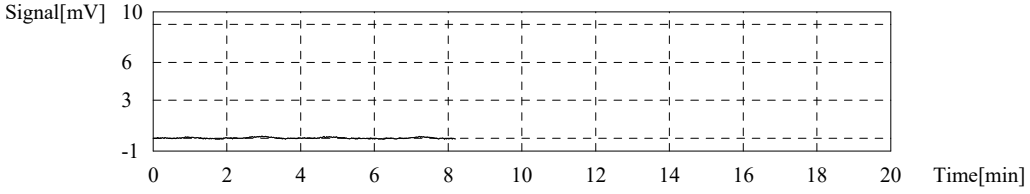
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1885mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2992	0.1396mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:43:11 PM
2	0.3630	0.1652mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:45:16 PM
3	0.6648	0.2863mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:47:57 PM
4	0.3575	0.1630mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:50:02 PM

Mean Area 0.4211
Mean Conc. 0.1885mg/L



Sample

Sample Name: 280-175042-I-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

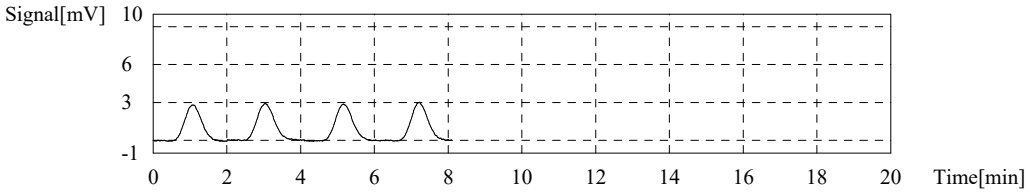
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.839mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.205	3.713mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/21/2023 11:57:59 PM
2	9.517	3.838mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:00:21 AM
3	9.711	3.916mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:02:36 AM
4	9.650	3.891mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:04:42 AM

Mean Area 9.521
Mean Conc. 3.839mg/L



Sample

Sample Name: MS 280-175042-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

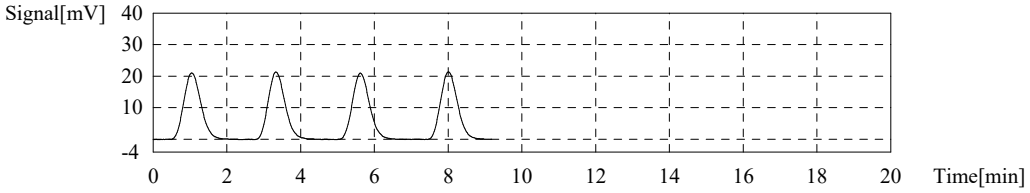
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.55mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	68.51	27.51mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:12:57 AM
2	68.47	27.49mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:15:23 AM
3	68.62	27.55mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:17:59 AM
4	68.92	27.67mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:20:23 AM

Mean Area 68.63
Mean Conc. 27.55mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

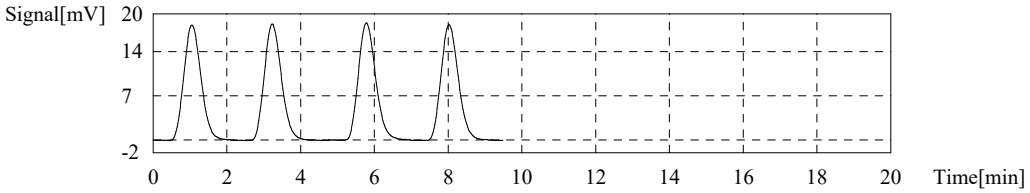
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.41mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.99	24.09mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:28:31 AM
2	60.97	24.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:31:20 AM
3	61.11	24.54mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:33:49 AM
4	61.09	24.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:36:31 AM

Mean Area 60.79
Mean Conc. 24.41mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

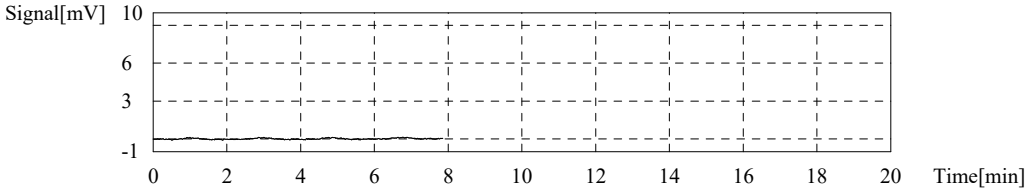
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1938mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4307	0.1924mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:44:22 AM
2	0.2949	0.1379mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:46:27 AM
3	0.5862	0.2548mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:48:32 AM
4	0.4246	0.1899mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:50:52 AM

Mean Area 0.4341
Mean Conc. 0.1938mg/L



Sample

Sample Name: MSD 280-175042-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

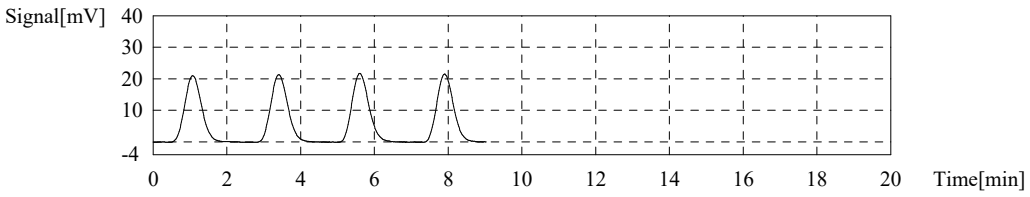
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.60mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	67.26	27.00mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:59:10 AM
2	68.93	27.67mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:01:34 AM
3	70.45	28.28mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:04:02 AM
4	68.36	27.45mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:06:24 AM

Mean Area 68.75
Mean Conc. 27.60mg/L



Sample

Sample Name: 280-175042-l-12
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

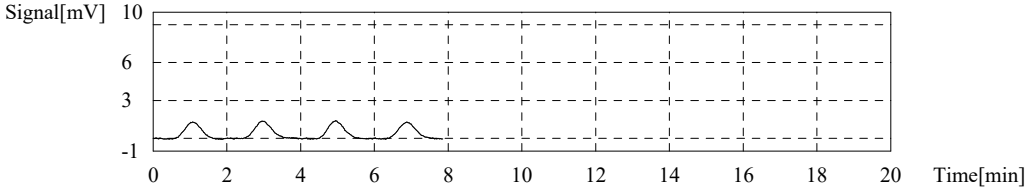
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.776mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.245	1.723mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:14:15 AM
2	4.417	1.792mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:16:26 AM
3	4.491	1.821mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:18:32 AM
4	4.361	1.769mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:20:46 AM

Mean Area 4.378
Mean Conc. 1.776mg/L



Sample

Sample Name: 280-175042-k-13
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

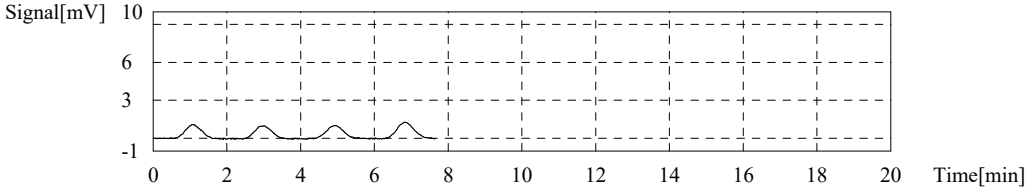
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.479mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.377	1.374mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:28:37 AM
2	3.438	1.399mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:30:44 AM
3	3.350	1.364mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:32:49 AM
4	4.382	1.778mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:34:55 AM

Mean Area 3.637
Mean Conc. 1.479mg/L



Sample

Sample Name: 280-175046-b-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

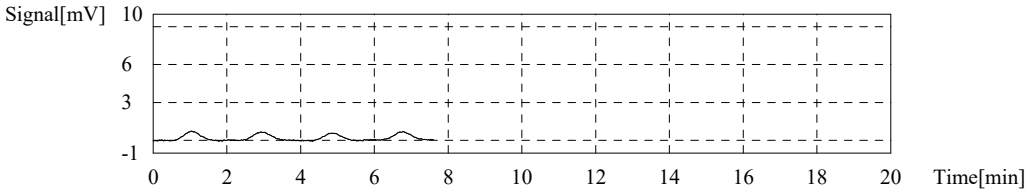
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9111mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.509	1.026mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:42:46 AM
2	2.241	0.9187mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:44:51 AM
3	2.084	0.8557mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:46:56 AM
4	2.054	0.8437mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:49:01 AM

Mean Area 2.222
Mean Conc. 0.9111mg/L



Sample

Sample Name: 280-175046-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

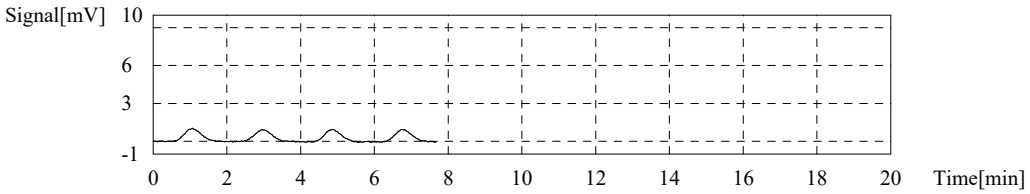
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.333mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.255	1.325mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:56:52 AM
2	3.292	1.340mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:58:57 AM
3	3.225	1.313mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:01:02 AM
4	3.318	1.351mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:03:11 AM

Mean Area 3.273
Mean Conc. 1.333mg/L



Sample

Sample Name: 280-175046-d-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

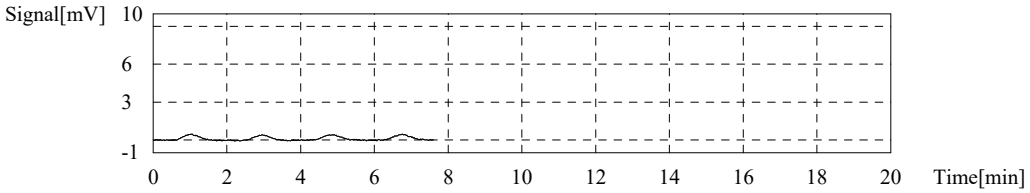
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5932mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.398	0.5805mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:11:02 AM
2	1.480	0.6134mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:13:07 AM
3	1.289	0.5367mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:15:12 AM
4	1.552	0.6422mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:17:17 AM

Mean Area 1.430
Mean Conc. 0.5932mg/L



Sample

Sample Name: 280-175046-b-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

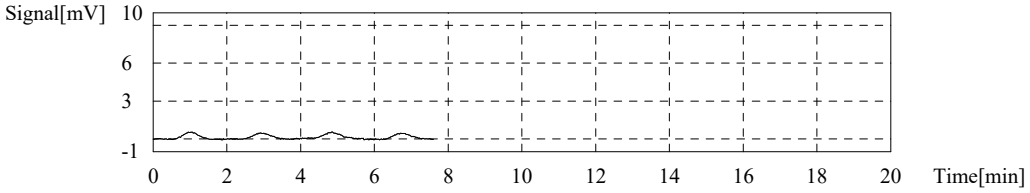
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6405mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.667	0.6884mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:25:08 AM
2	1.624	0.6711mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:27:14 AM
3	1.422	0.5901mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:29:19 AM
4	1.478	0.6126mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:31:24 AM

Mean Area 1.548
Mean Conc. 0.6405mg/L



Sample

Sample Name: 280-175046-b-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

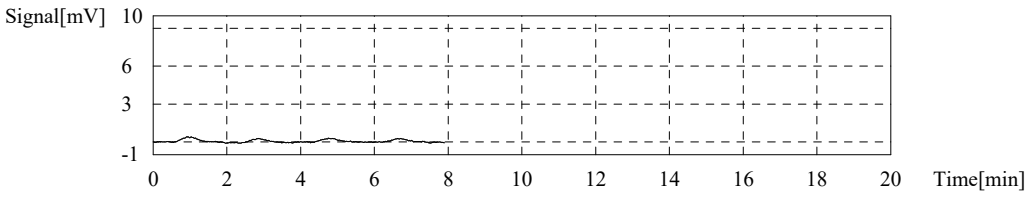
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4453mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.227	0.5119mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:39:15 AM
2	0.9957	0.4191mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:41:21 AM
3	0.9964	0.4193mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:43:26 AM
4	1.025	0.4308mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:45:49 AM

Mean Area 1.061
Mean Conc. 0.4453mg/L



Sample

Sample Name: 280-175070-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

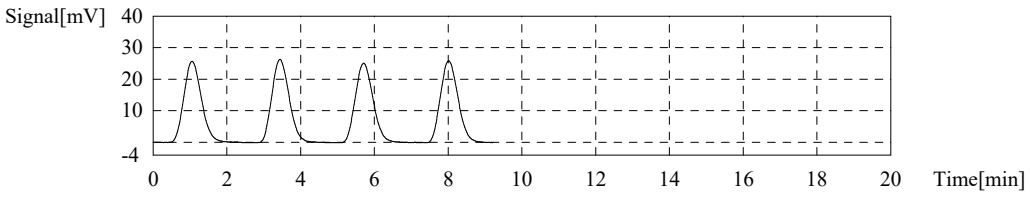
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	50.00	NPOC:1732mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	86.08	1728mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:54:10 AM
2	86.72	1741mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:56:36 AM
3	85.38	1714mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:59:06 AM
4	86.90	1744mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:01:32 AM

Mean Area 86.27
Mean Conc. 1732mg/L



Sample

Sample Name: 280-175070-a-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

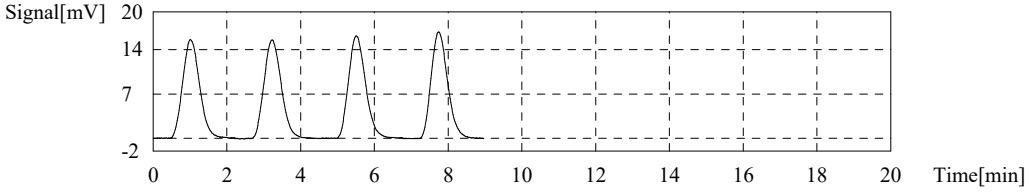
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	5.000	NPOC:104.1mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	50.22	100.8mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:09:42 AM
2	51.78	104.0mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:12:11 AM
3	52.19	104.8mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:14:37 AM
4	53.29	107.0mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:17:05 AM

Mean Area 51.87
Mean Conc. 104.1mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

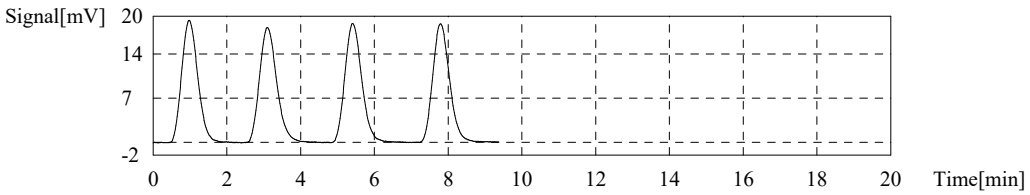
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.17mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.75	23.99mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:25:07 AM
2	59.94	24.07mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:27:37 AM
3	60.71	24.38mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:30:13 AM
4	60.35	24.23mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:33:00 AM

Mean Area 60.19
Mean Conc. 24.17mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

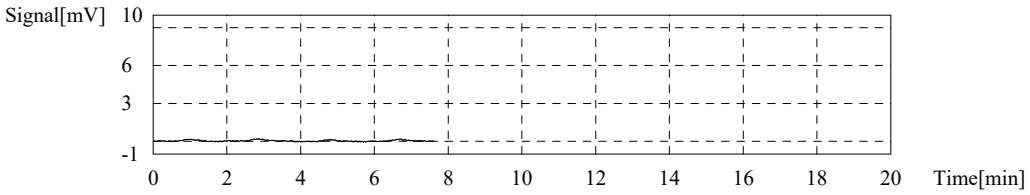
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1796mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3940	0.1777mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:40:51 AM
2	0.5323	0.2331mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:43:04 AM
3	0.2300	0.1119mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:45:09 AM
4	0.4393	0.1958mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:47:15 AM

Mean Area 0.3989
Mean Conc. 0.1796mg/L



Sample

Sample Name: 280-175104-c-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

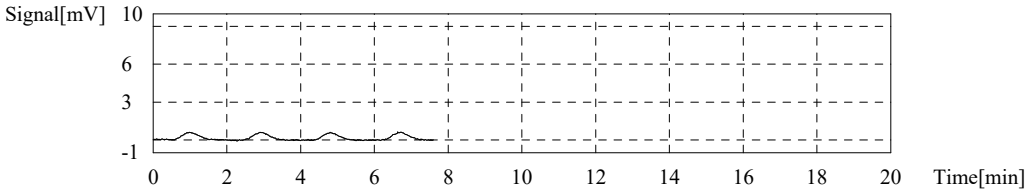
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7654mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.767	0.7285mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:55:06 AM
2	2.014	0.8276mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:57:11 AM
3	1.774	0.7313mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 3:59:18 AM
4	1.881	0.7742mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:01:26 AM

Mean Area 1.859
Mean Conc. 0.7654mg/L



Sample

Sample Name: MS 280-175104-c-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

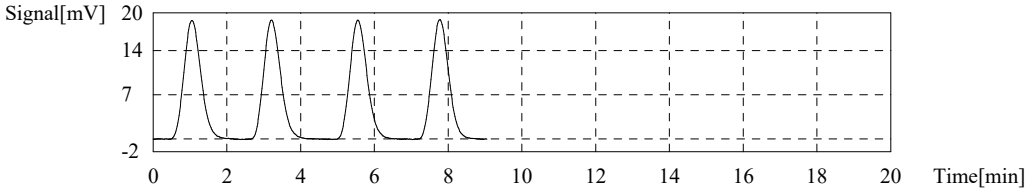
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.65mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	61.07	24.52mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:09:34 AM
2	61.31	24.62mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:12:04 AM
3	61.87	24.84mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:14:28 AM
4	61.30	24.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:16:59 AM

Mean Area 61.39
Mean Conc. 24.65mg/L



Sample

Sample Name: MSD 280-175104-c-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

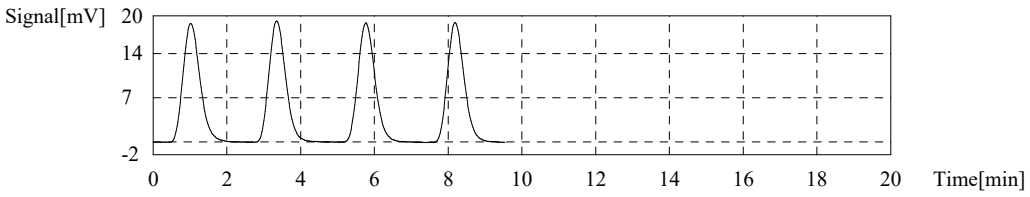
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.60mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	61.01	24.50mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:25:17 AM
2	61.28	24.60mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:27:50 AM
3	61.82	24.82mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:30:29 AM
4	60.93	24.46mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:33:06 AM

Mean Area 61.26
Mean Conc. 24.60mg/L



Sample

Sample Name: 280-175104-c-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

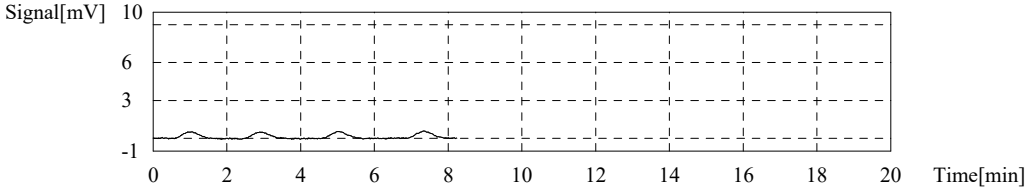
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7287mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.638	0.6768mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:40:58 AM
2	1.880	0.7738mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:43:16 AM
3	1.864	0.7674mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:45:46 AM
4	1.688	0.6968mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:47:51 AM

Mean Area 1.768
Mean Conc. 0.7287mg/L



Sample

Sample Name: 280-175104-c-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

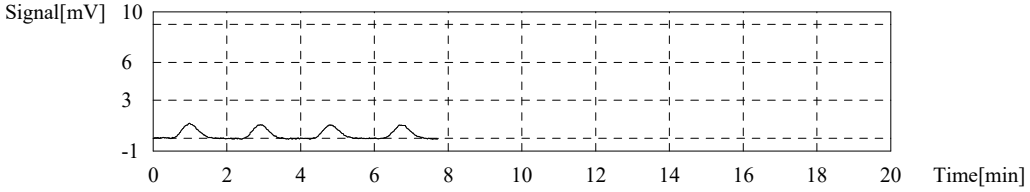
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.444mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.584	1.457mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:55:43 AM
2	3.518	1.431mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:57:48 AM
3	3.526	1.434mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 4:59:53 AM
4	3.572	1.453mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:02:06 AM

Mean Area 3.550
Mean Conc. 1.444mg/L



Sample

Sample Name: 280-175074-d-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

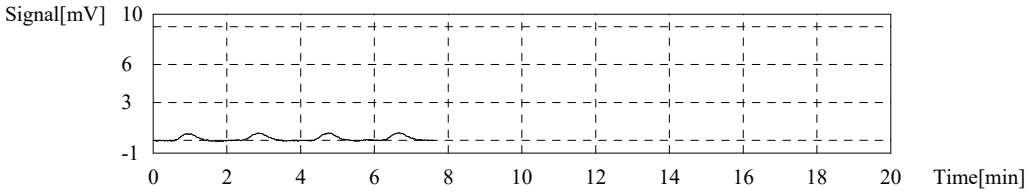
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7511mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.775	0.7317mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:09:58 AM
2	1.773	0.7309mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:12:03 AM
3	1.927	0.7927mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:14:13 AM
4	1.818	0.7490mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:16:18 AM

Mean Area 1.823
Mean Conc. 0.7511mg/L



Sample

Sample Name: 280-175074-e-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

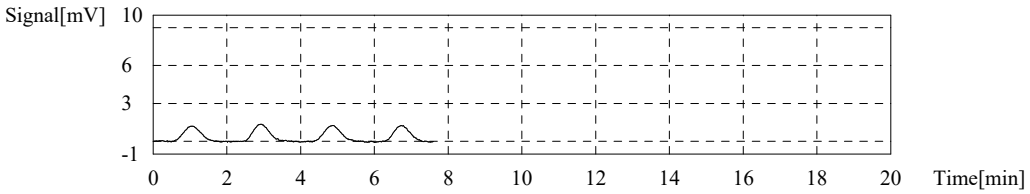
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.704mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.168	1.692mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:24:10 AM
2	4.194	1.702mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:26:15 AM
3	4.213	1.710mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:28:20 AM
4	4.219	1.712mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:30:25 AM

Mean Area 4.199
Mean Conc. 1.704mg/L



Sample

Sample Name: 280-175074-d-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

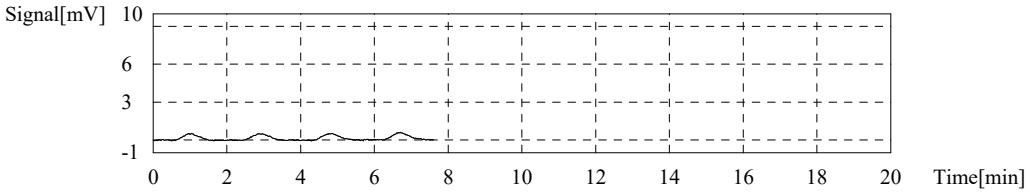
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7224mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.802	0.7425mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:38:17 AM
2	1.690	0.6976mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:40:22 AM
3	1.846	0.7602mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:42:27 AM
4	1.669	0.6892mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:44:32 AM

Mean Area 1.752
Mean Conc. 0.7224mg/L



Sample

Sample Name: 280-175074-d-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

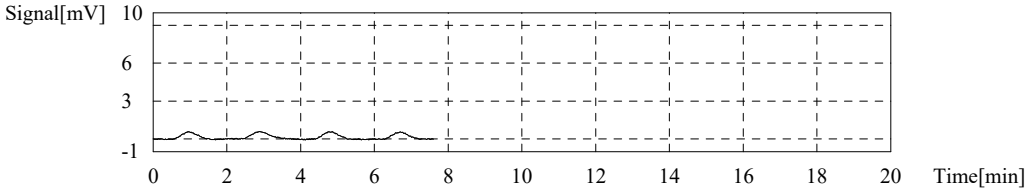
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7489mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.838	0.7570mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:52:24 AM
2	1.962	0.8067mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:54:29 AM
3	1.784	0.7353mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:56:34 AM
4	1.687	0.6964mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 5:58:39 AM

Mean Area 1.818
Mean Conc. 0.7489mg/L



Sample

Sample Name: 280-175078-e-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

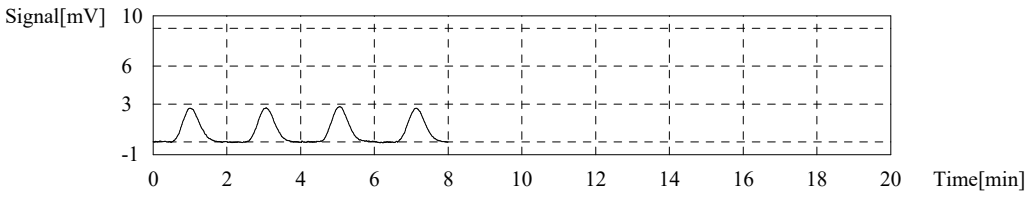
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.573mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.596	3.468mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:06:38 AM
2	8.917	3.597mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:08:53 AM
3	8.991	3.627mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:11:07 AM
4	8.929	3.602mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:13:14 AM

Mean Area 8.858
Mean Conc. 3.573mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

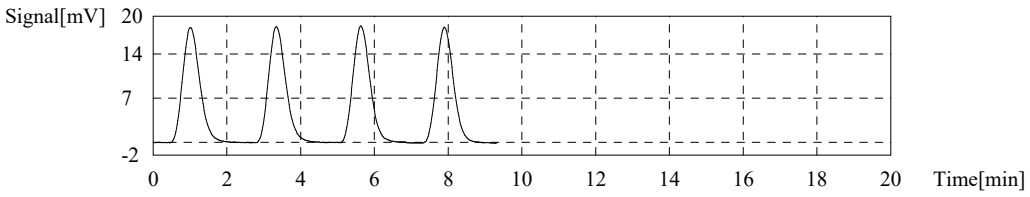
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.89mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.41	23.85mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:21:33 AM
2	59.88	24.04mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:24:01 AM
3	59.13	23.74mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:26:26 AM
4	59.61	23.93mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:29:06 AM

Mean Area 59.51
Mean Conc. 23.89mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

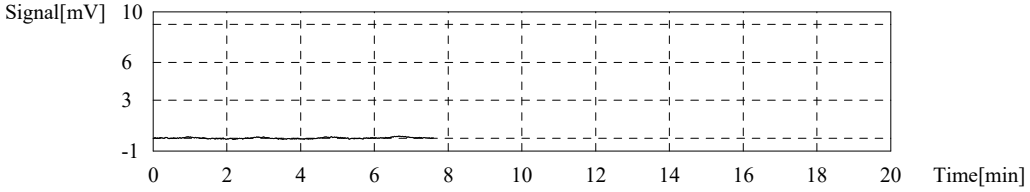
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1369mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1897	0.09570mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:36:58 AM
2	0.2451	0.1179mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:39:09 AM
3	0.2663	0.1264mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:41:14 AM
4	0.4686	0.2076mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:43:19 AM

Mean Area 0.2924
Mean Conc. 0.1369mg/L



Sample

Sample Name: 280-175105-d-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

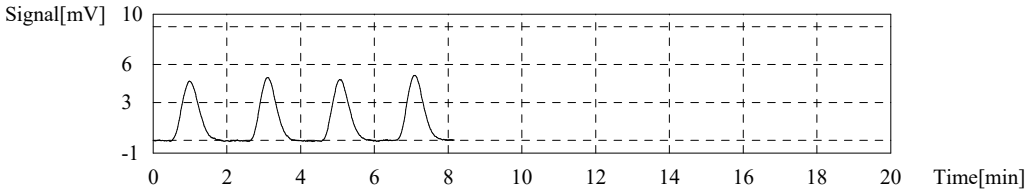
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.410mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.65	6.298mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:51:24 AM
2	15.81	6.363mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:53:33 AM
3	15.95	6.419mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:55:46 AM
4	16.30	6.559mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 6:58:00 AM

Mean Area 15.93
Mean Conc. 6.410mg/L



Sample

Sample Name: 280-175108-d-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

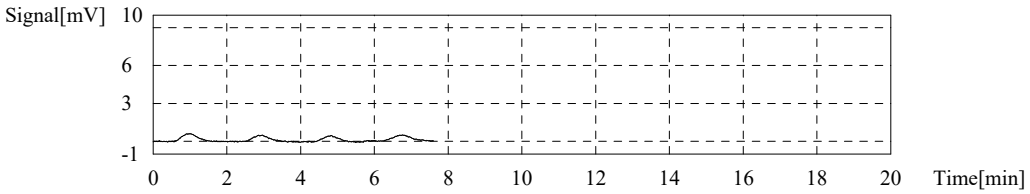
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6721mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.862	0.7666mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:05:52 AM
2	1.552	0.6422mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:07:57 AM
3	1.572	0.6503mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:10:02 AM
4	1.520	0.6294mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:12:07 AM

Mean Area 1.627
Mean Conc. 0.6721mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

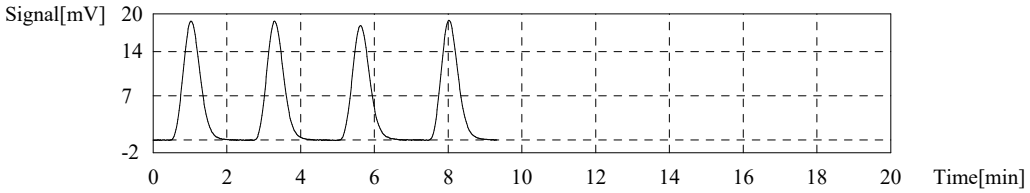
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.63mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	61.63	24.75mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:20:20 AM
2	60.97	24.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:22:49 AM
3	60.89	24.45mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:25:27 AM
4	61.90	24.85mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:27:57 AM

Mean Area 61.35
Mean Conc. 24.63mg/L



Sample

Sample Name: MB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

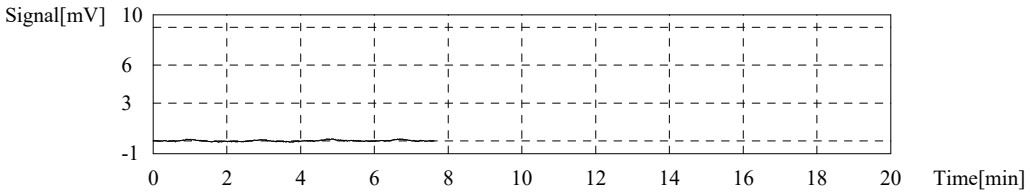
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1878mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4554	0.2023mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:35:50 AM
2	0.4135	0.1855mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:37:55 AM
3	0.4125	0.1851mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:40:00 AM
4	0.3953	0.1782mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:42:05 AM

Mean Area 0.4192
Mean Conc. 0.1878mg/L



Sample

Sample Name: 280-175112-n-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

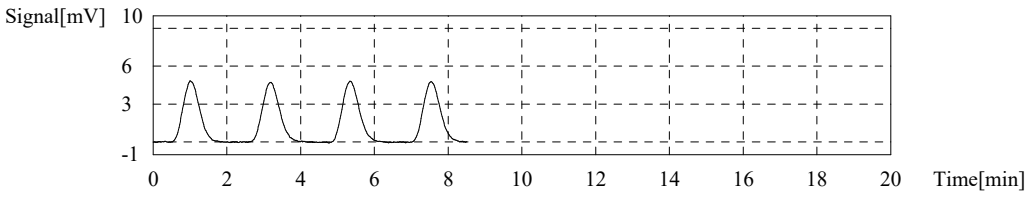
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.253mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.40	6.198mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:50:11 AM
2	15.33	6.170mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:52:33 AM
3	15.88	6.391mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:54:56 AM
4	15.54	6.254mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 7:57:06 AM

Mean Area 15.54
Mean Conc. 6.253mg/L



Sample

Sample Name: MS 280-175112-n-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

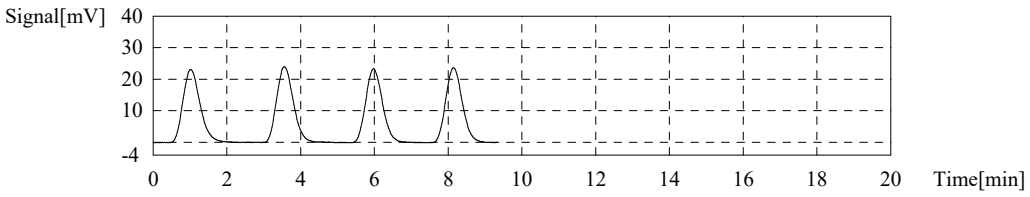
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:30.32mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.87	30.46mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:05:35 AM
2	76.54	30.73mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:08:09 AM
3	74.38	29.86mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:10:30 AM
4	75.30	30.23mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:12:57 AM

Mean Area 75.52
Mean Conc. 30.32mg/L



Sample

Sample Name: MSD 280-175112-n-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

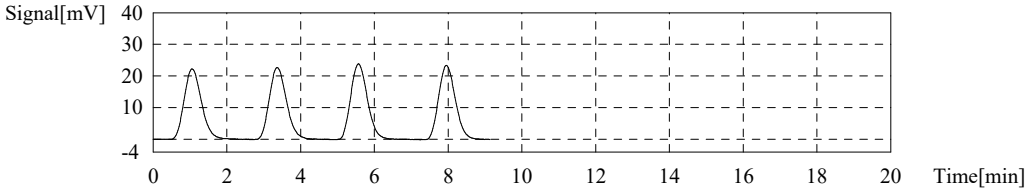
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:29.96mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	73.15	29.37mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:21:14 AM
2	74.18	29.78mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:23:42 AM
3	76.24	30.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:26:16 AM
4	74.91	30.07mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:28:40 AM

Mean Area 74.62
Mean Conc. 29.96mg/L



Sample

Sample Name: 280-175112-m-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

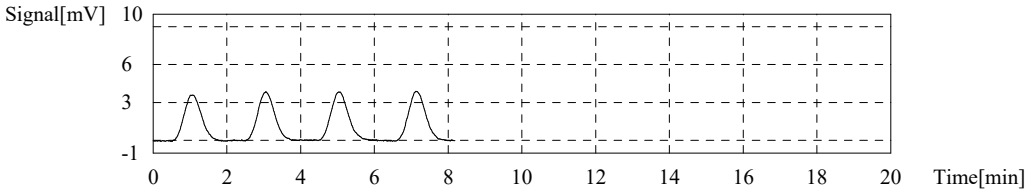
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.987mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.91	4.798mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:36:38 AM
2	12.49	5.031mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:38:48 AM
3	12.50	5.035mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:41:05 AM
4	12.63	5.087mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:43:23 AM

Mean Area 12.38
Mean Conc. 4.987mg/L



Sample

Sample Name: 280-175112-m-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

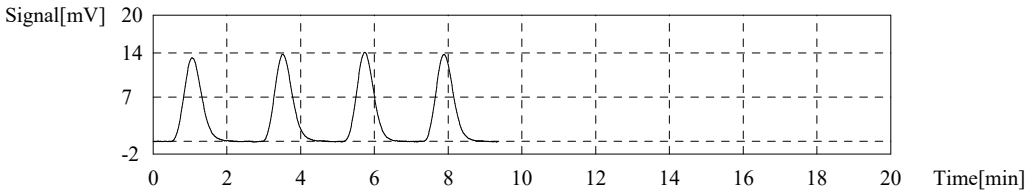
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:18.50mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	45.17	18.14mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:51:50 AM
2	46.25	18.57mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:54:13 AM
3	46.20	18.55mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:56:34 AM
4	46.68	18.75mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 8:59:16 AM

Mean Area 46.08
Mean Conc. 18.50mg/L



Sample

Sample Name: 280-175112-m-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

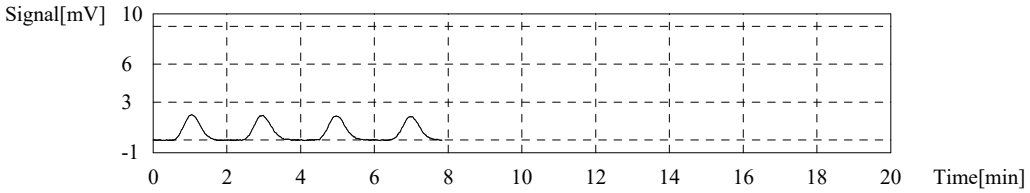
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.581mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.427	2.598mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:07:10 AM
2	6.417	2.594mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:09:25 AM
3	6.346	2.566mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:11:35 AM
4	6.350	2.567mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:13:42 AM

Mean Area 6.385
Mean Conc. 2.581mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

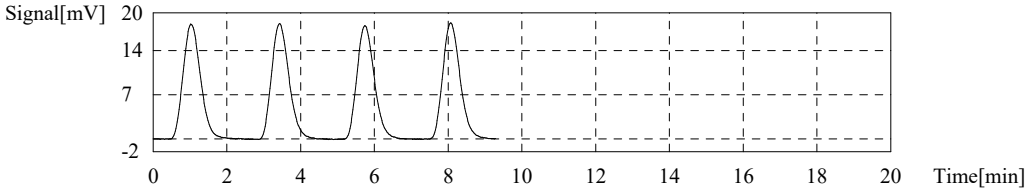
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.29mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.35	24.23mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:22:05 AM
2	60.95	24.47mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:24:34 AM
3	59.82	24.02mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:27:04 AM
4	60.84	24.43mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:29:31 AM

Mean Area 60.49
Mean Conc. 24.29mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

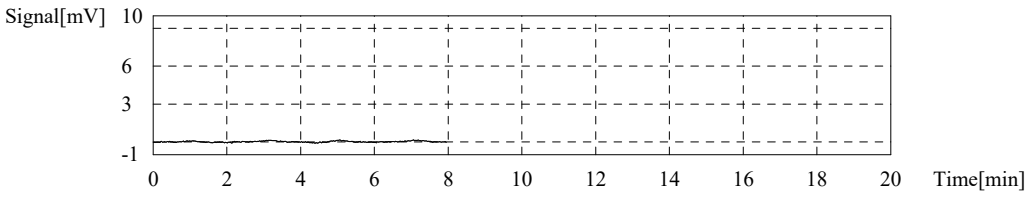
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1805mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3881	0.1753mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:37:38 AM
2	0.1615	0.08438mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:39:43 AM
3	0.7196	0.3083mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:41:54 AM
4	0.3350	0.1540mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:43:59 AM

Mean Area 0.4011
Mean Conc. 0.1805mg/L



Sample

Sample Name: 280-175112-k-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

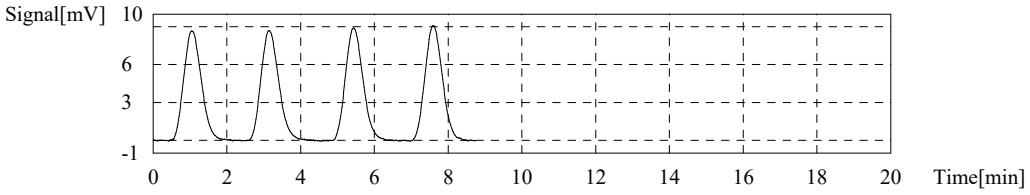
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.90mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	28.84	11.59mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:52:02 AM
2	29.62	11.90mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:54:29 AM
3	29.64	11.91mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:56:49 AM
4	30.33	12.19mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 9:59:14 AM

Mean Area 29.61
Mean Conc. 11.90mg/L



Sample

Sample Name: 280-175112-l-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

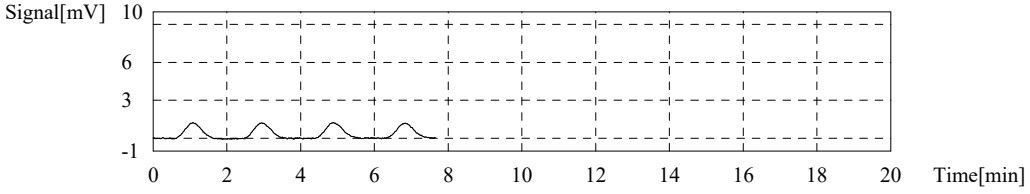
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.648mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.109	1.668mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:07:06 AM
2	4.089	1.660mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:09:18 AM
3	4.177	1.695mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:11:23 AM
4	3.864	1.570mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:13:28 AM

Mean Area 4.060
Mean Conc. 1.648mg/L



Sample

Sample Name: 280-175112-l-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

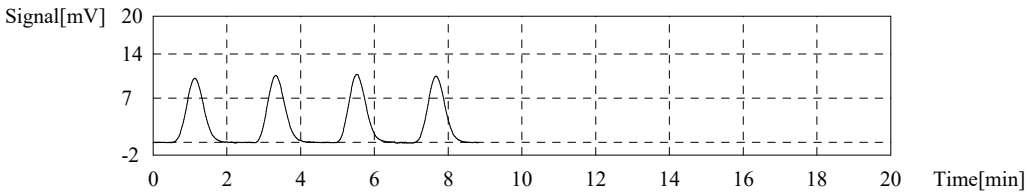
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:13.95mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.86	13.60mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:21:42 AM
2	35.16	14.13mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:24:04 AM
3	35.11	14.11mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:26:21 AM
4	34.75	13.96mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:28:49 AM

Mean Area 34.72
Mean Conc. 13.95mg/L



Sample

Sample Name: 280-175112-k-8
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

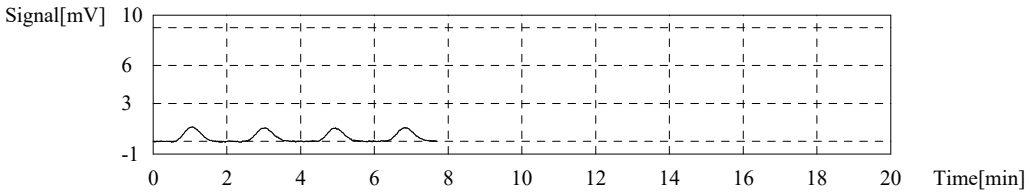
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.451mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.873	1.573mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:36:45 AM
2	3.712	1.509mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:38:51 AM
3	3.289	1.339mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:40:56 AM
4	3.398	1.383mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:43:01 AM

Mean Area 3.568
Mean Conc. 1.451mg/L



Sample

Sample Name: 280-175112-l-9
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

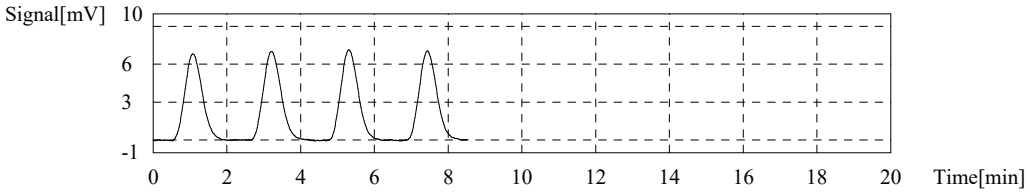
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.448mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.91	9.211mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:51:08 AM
2	23.56	9.472mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:53:25 AM
3	23.73	9.540mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:55:44 AM
4	23.80	9.568mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 10:58:04 AM

Mean Area 23.50
Mean Conc. 9.448mg/L



Sample

Sample Name: 280-175112-m-10
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

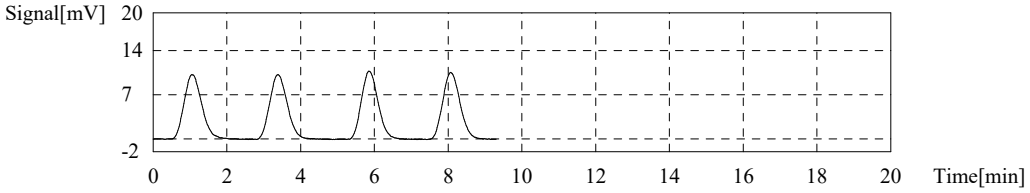
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:13.90mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	34.38	13.81mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:06:21 AM
2	34.45	13.84mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:09:01 AM
3	34.39	13.82mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:11:24 AM
4	35.16	14.13mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:13:53 AM

Mean Area 34.60
Mean Conc. 13.90mg/L



Sample

Sample Name: 280-175112-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

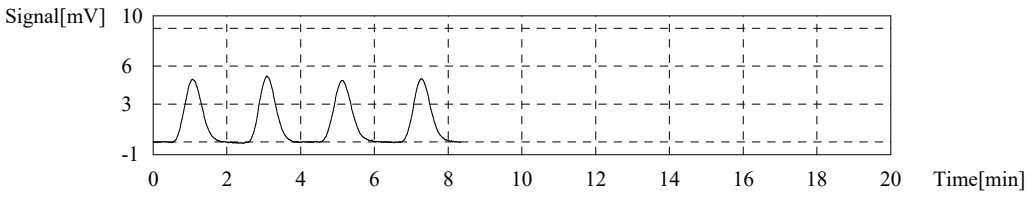
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.718mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.62	6.687mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:21:53 AM
2	16.84	6.776mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:24:04 AM
3	16.77	6.748mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:26:28 AM
4	16.55	6.659mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:28:50 AM

Mean Area 16.70
Mean Conc. 6.718mg/L



Sample

Sample Name: MS 280-175112-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

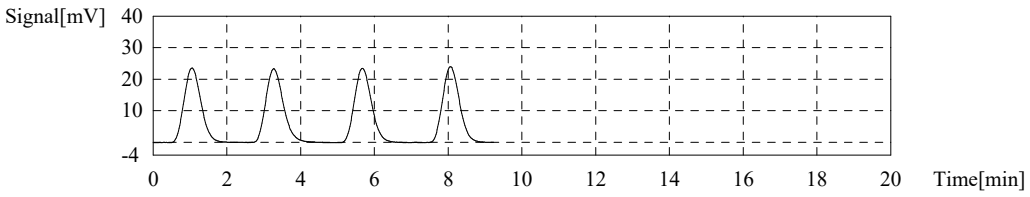
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:30.85mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.96	30.49mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:37:02 AM
2	77.49	31.11mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:39:40 AM
3	76.79	30.83mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:42:15 AM
4	77.19	30.99mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:44:40 AM

Mean Area 76.86
Mean Conc. 30.85mg/L



Sample

Sample Name: MSD 280-175112-l-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

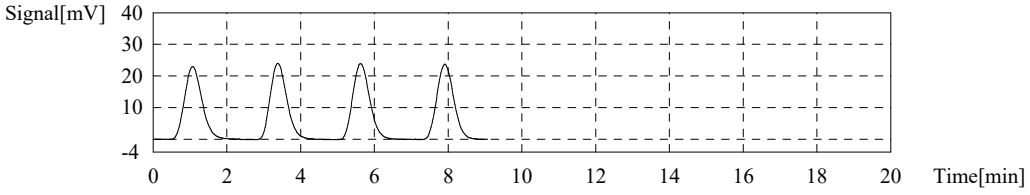
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:30.89mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.26	30.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:52:59 AM
2	76.51	30.72mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:55:27 AM
3	78.03	31.33mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 11:57:53 AM
4	77.02	30.92mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:00:18 PM

Mean Area 76.96
Mean Conc. 30.89mg/L



Sample

Sample Name: 280-175112-k-12
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

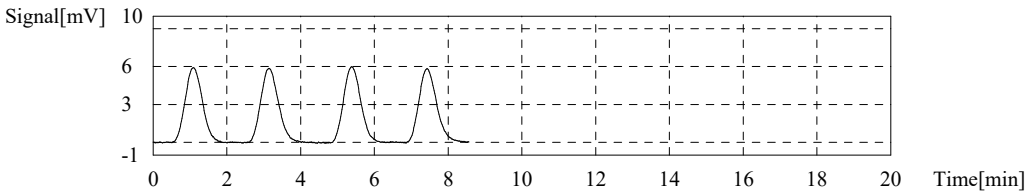
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.922mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	19.46	7.827mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:08:21 PM
2	19.81	7.967mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:10:46 PM
3	19.70	7.923mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:13:01 PM
4	19.82	7.971mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:15:24 PM

Mean Area 19.70
Mean Conc. 7.922mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

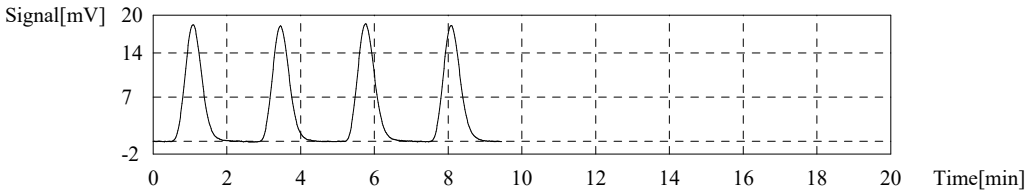
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.25mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.78	24.00mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:23:46 PM
2	59.79	24.01mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:26:17 PM
3	61.45	24.67mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:28:47 PM
4	60.61	24.34mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:31:27 PM

Mean Area 60.41
Mean Conc. 24.25mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

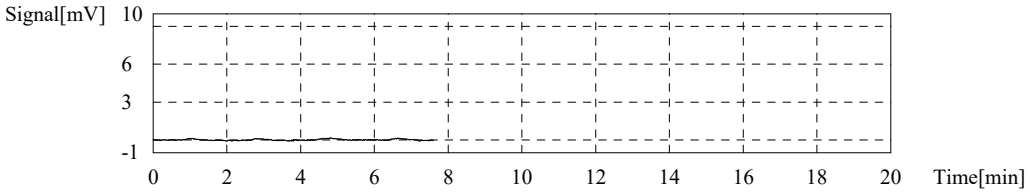
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1463mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1502	0.07985mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:39:20 PM
2	0.5309	0.2326mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:41:26 PM
3	0.3264	0.1505mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:43:31 PM
4	0.2562	0.1224mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:45:36 PM

Mean Area 0.3159
Mean Conc. 0.1463mg/L



Sample

Sample Name: 280-175301-a-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

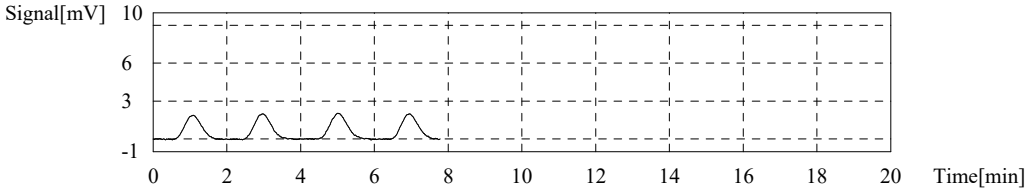
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.616mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.116	2.473mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:53:29 PM
2	6.564	2.653mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:55:44 PM
3	6.577	2.658mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:57:53 PM
4	6.633	2.681mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 12:59:58 PM

Mean Area 6.472
Mean Conc. 2.616mg/L



Sample

Sample Name: 280-175301-a-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

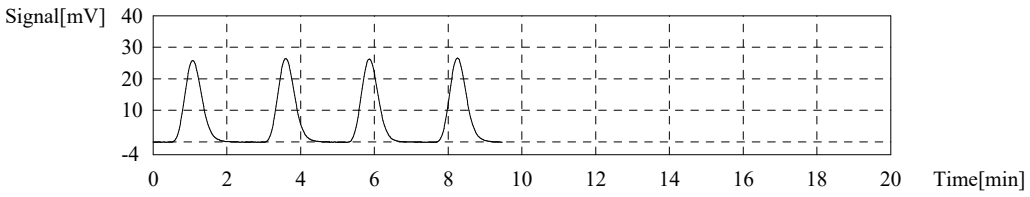
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:34.65mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	85.69	34.40mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:08:28 PM
2	86.23	34.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:10:55 PM
3	86.01	34.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:13:29 PM
4	87.35	35.06mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:15:58 PM

Mean Area 86.32
Mean Conc. 34.65mg/L



Sample

Sample Name: 280-175301-a-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

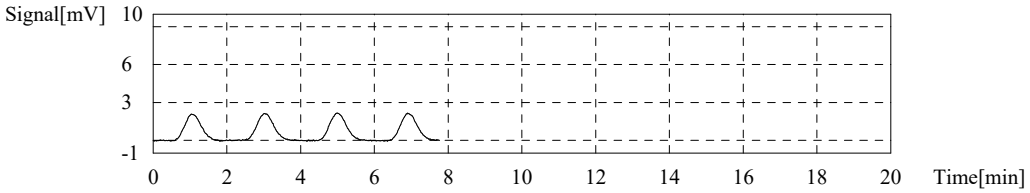
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.767mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.620	2.676mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:23:54 PM
2	7.072	2.857mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:26:06 PM
3	6.892	2.785mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:28:15 PM
4	6.805	2.750mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:30:20 PM

Mean Area 6.847
Mean Conc. 2.767mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

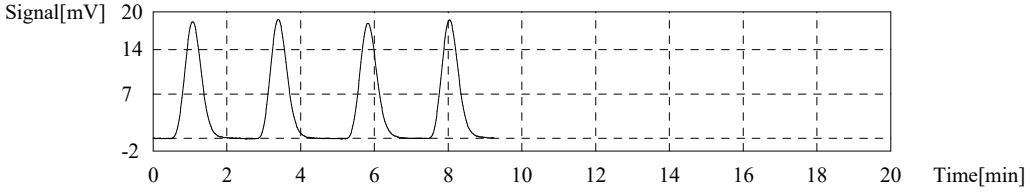
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.16mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.41	23.85mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:38:40 PM
2	60.96	24.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:41:15 PM
3	60.20	24.17mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:43:41 PM
4	60.12	24.14mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:46:06 PM

Mean Area 60.17
Mean Conc. 24.16mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2098mg/L

1. Det

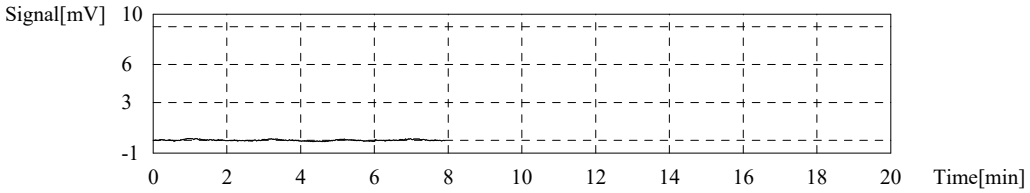
Anal.: NPOC

TOC-Control L Report

ABW
2023_04_21_001.tlx

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6319	0.2731mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:54:18 PM
2	0.4040	0.1817mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:56:23 PM
3	0.3157	0.1462mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 1:58:28 PM
4	0.5447	0.2381mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/22/2023 2:00:33 PM

Mean Area 0.4741
Mean Conc. 0.2098mg/L



Shi 7 TOC

9060

5310

	Analysis	Sample Name	Result	Notes	Vial
1*	NPOC	ICV			1
2*	NPOC	ICB			2
3*	NPOC	LCS			3
4*	NPOC	MB			4
5*	NPOC	TIC			5
6*	NPOC	280-175051-a-6			6
7*	NPOC	MS 280-175051-a-6			7
8*	NPOC	MSD 280-175051-a-6			8
9*	NPOC	280-175051-a-7			9
10*	NPOC	280-175121-b-2			10
11*	NPOC	280-175121-b-3			11
12*	NPOC	280-175121-b-4			12
13*	NPOC	280-175122-b-1			13
14*	NPOC	280-175122-b-2			14
15*	NPOC	CCV			15
16*	NPOC	CCB			16
17*	NPOC	280-175122-b-3			17
18*	NPOC	280-175123-b-1			18
19*	NPOC	280-175301-a-4		5310	19
20*	NPOC	280-175042-l-1			20
21*	NPOC	MS 280-175042-l-1			21
22*	NPOC	MSD 280-175042-l-1			22
23*	NPOC	280-175042-k-2			23
24*	NPOC	280-175042-l-3			24
25*	NPOC	280-175042-l-4			25
26*	NPOC	280-175042-k-5			26
27*	NPOC	CCV			27
28*	NPOC	CCB			28
29*	NPOC	280-175042-l-6			29
30*	NPOC	280-175042-k-7			30
31*	NPOC	280-175042-k-8			31
32*	NPOC	280-175042-k-9			32
33*	NPOC	280-175042-k-10			33
34*	NPOC	LCS			34
35*	NPOC	MB			35
36*	NPOC	TIC			36
37*	NPOC	280-175042-l-11			37
38*	NPOC	MS 280-175042-l-11			38
39*	NPOC	CCV			39
40*	NPOC	CCB			40
41*	NPOC	MSD 280-175042-l-11			41
42*	NPOC	280-175042-l-12			42
43*	NPOC	280-175042-k-13			43
44*	NPOC	280-175046-b-1			44
45*	NPOC	280-175046-b-2			45
46*	NPOC	280-175046-~~c~~-3 d-3			46
47*	NPOC	280-175046-b-4			47
48*	NPOC	280-175046-b-5			48
49*	NPOC	280-175070-b-2	22	50x color	49
50*	NPOC	280-175070-a-3		5x odor	50
51*	NPOC	CCV			51
52*	NPOC	CCB			52
53*	NPOC	280-175104-c-1			53

Shi 7 TOC

	Analysis	Sample Name	Result	Notes	Vial
54*	NPOC	MS 280-175104-c-1			54
55*	NPOC	MSD 280-175104-c-1			55
56*	NPOC	280-175104-c-2			56
57*	NPOC	280-175104-c-3			57
58*	NPOC	280-175074-d-1			58
59*	NPOC	280-175074-e-3			59
60*	NPOC	280-175074-d-5			60
61*	NPOC	280-175074-d-7			61
62*	NPOC	280-175078-e-1			62
63*	NPOC	CCV			63
64*	NPOC	CCB			64
65*	NPOC	280-175105-d-1			65
66*	NPOC	280-175108-d-1			66
67*	NPOC	LCS			67
68*	NPOC	MB			68
69*	NPOC	280-175112-n-1			69
70*	NPOC	MS 280-175112-n-1			70
71*	NPOC	MSD 280-175112-n-1			71
72*	NPOC	280-175112-m-2			72
73*	NPOC	280-175112-m-3			73
74*	NPOC	280-175112-m-4			74
75*	NPOC	CCV			75
76*	NPOC	CCB			76
77*	NPOC	280-175112-k-5			77
78*	NPOC	280-175112-l-6			78
79*	NPOC	280-175112-l-7			79
80*	NPOC	280-175112-k-8			80
81*	NPOC	280-175112-l-9			81
82*	NPOC	280-175112-m-10			82
83*	NPOC	280-175112-l-11			83
84*	NPOC	MSD 280-175112-l-11			84
85*	NPOC	MSD 280-175112-l-11			85
86*	NPOC	280-175112-k-12			86
87*	NPOC	CCV			87
88*	NPOC	CCB			88
89*	NPOC	280-175301-a-1			89
90*	NPOC	280-175301-a-2			90
91*	NPOC	280-175301-a-3			91
92*	NPOC	CCV			92
93*	NPOC	CCB			93

5310

PH<2

BWH 5000, 1000 MS

	Analysis	Sample Name	Sample ID	ObjectID
1	NPOC	ICV		0L-10900100866-10101000-134B11822952-0000
2	NPOC	ICB		0L-10900100866-10101000-134B11822952-0001
3	NPOC	LCS		0L-10900100866-10101000-134B11822952-0002
4	NPOC	MB		0L-10900100866-10101000-134B11822952-0003
5	NPOC	TIC		0L-10900100866-10101000-134B11822952-0004
6	NPOC	280-175123-b-2		0L-10900100866-10101000-134B11822952-0005
7	NPOC	MS 280-175123-b-2		0L-10900100866-10101000-134B11822952-0006
8	NPOC	MSD 280-175123-b-2		0L-10900100866-10101000-134B11822952-0007
9	NPOC	280-175123-b-3		0L-10900100866-10101000-134B11822952-0008
10	NPOC	280-175142-a-2		0L-10900100866-10101000-134B11822952-0009
11	NPOC	280-175142-a-3		0L-10900100866-10101000-134B11822952-000A
12	NPOC	280-175142-a-4		0L-10900100866-10101000-134B11822952-000B
13	NPOC	280-175431-a-35		0L-10900100866-10101000-134B11822952-000C
14	NPOC	280-175070-b-2		0L-10900100866-10101000-134B11822952-000D
15	NPOC	CCV		0L-10900100866-10101000-134B11822952-000E
16	NPOC	CCB		0L-10900100866-10101000-134B11822952-000F
17	NPOC	280-175128-d-1		0L-10900100866-10101000-134B11822952-0010
18	NPOC	280-175128-c-2		0L-10900100866-10101000-134B11822952-0011
19	NPOC	280-175431-a-7		0L-10900100866-10101000-134B11822952-0012
20	NPOC	280-175431-a-15		0L-10900100866-10101000-134B11822953-0000
21	NPOC	MS 280-175431-a-15		0L-10900100866-10101000-134B11822953-0001
22	NPOC	MSD 280-175431-a-15		0L-10900100866-10101000-134B11822953-0002
23	NPOC	280-175431-a-17		0L-10900100866-10101000-134B11822953-0003
24	NPOC	280-175431-a-19		0L-10900100866-10101000-134B11822953-0004
25	NPOC	280-175431-a-24		0L-10900100866-10101000-134B11822953-0005
26	NPOC	280-175431-a-33		0L-10900100866-10101000-134B11822953-0006
27	NPOC	CCV		0L-10900100866-10101000-134B11822953-0007
28	NPOC	CCB		0L-10900100866-10101000-134B11822953-0008
29	NPOC	280-175465-a-26		0L-10900100866-10101000-134B11822953-0009
30	NPOC	280-175465-a-28		0L-10900100866-10101000-134B11822953-000A
31	NPOC	280-175465-a-30		0L-10900100866-10101000-134B11822953-000B
32	NPOC	280-175465-a-33		0L-10900100866-10101000-134B11822953-000C
33	NPOC	280-175465-a-35		0L-10900100866-10101000-134B11822953-000D
34	NPOC	LCS		0L-10900100866-10101000-134B11822953-000E
35	NPOC	MB		0L-10900100866-10101000-134B11822953-000F
36	NPOC	TIC		0L-10900100866-10101000-134B11822953-0010
37	NPOC	280-175465-a-38		0L-10900100866-10101000-134B11822953-0011
38	NPOC	MS 280-175465-a-38		0L-10900100866-10101000-134B11822953-0012
39	NPOC	CCV		0L-10900100866-10101000-134B11822953-0013
40	NPOC	CCB		0L-10900100866-10101000-134B11822953-0014
41	NPOC	MSD 280-175465-a-38		0L-10900100866-10101000-134B11822953-0015
42	NPOC	280-175465-a-17		0L-10900100866-10101000-134B11822953-0016
43	NPOC	280-175465-a-19		0L-10900100866-10101000-134B11822953-0017
44	NPOC	280-175465-a-21		0L-10900100866-10101000-134B11822953-0018
45	NPOC	280-175465-a-22		0L-10900100866-10101000-134B11822953-0019
46	NPOC	280-175374-f-2		0L-10900100866-10101000-134B11822953-001A
47	NPOC	280-175374-f-3		0L-10900100866-10101000-134B11822953-001B
48	NPOC	280-175432-c-10		0L-10900100866-10101000-134B11822953-001C
49	NPOC	280-175432-d-11		0L-10900100866-10101000-134B11822953-001D
50	NPOC	280-175432-d-9		0L-10900100866-10101000-134B11822953-001E
51	NPOC	CCV		0L-10900100866-10101000-134B11822953-001F
52	NPOC	CCB		0L-10900100866-10101000-134B11822953-0020
53	NPOC	280-175465-a-39		0L-10900100866-10101000-134B11822953-0021

	Origin	Manual Diluti	Result	Notes
1	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:19.82mg/L	
2	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.1126mg/L	
3	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:24.95mg/L	
4	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.1338mg/L	
5	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.1898mg/L	
6	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:2.289mg/L	
7	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:26.42mg/L	
8	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:26.13mg/L	
9	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:3.801mg/L	
10	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:37.94mg/L	
11	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:2.079mg/L	
12	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:2.037mg/L	
13	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:7.518mg/L	
14	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	100.0	NPOC:1745mg/L	
15	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:24.04mg/L	
16	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.1307mg/L	
17	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.9183mg/L	
18	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.8535mg/L	
19	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.755mg/L	
20	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.128mg/L	
21	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:24.48mg/L	
22	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:24.38mg/L	
23	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.588mg/L	
24	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:2.199mg/L	
25	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.9671mg/L	
26	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:3.301mg/L	
27	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:23.94mg/L	
28	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.09190mg/L	
29	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	10.00	NPOC:19.27mg/L	
30	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:4.635mg/L	
31	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:3.063mg/L	
32	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:2.905mg/L	
33	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:4.429mg/L	
34	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:24.51mg/L	
35	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.05631mg/L	
36	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.1213mg/L	
37	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:8.216mg/L	
38	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:56.96mg/L	
39	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:23.57mg/L	
40	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.2186mg/L	
41	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:56.25mg/L	
42	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.379mg/L	
43	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:5.116mg/L	
44	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:10.77mg/L	
45	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:7.330mg/L	
46	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.9938mg/L	
47	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.5624mg/L	
48	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:26.07mg/L	
49	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:9.389mg/L	
50	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:9.804mg/L	
51	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:23.55mg/L	
52	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.1953mg/L	
53	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:9.110mg/L	

	Commen	Status	Action	Date / Time	Vial
1		Completed		4/24/2023 6:19:25 PM	1
2		Completed		4/24/2023 6:33:37 PM	2
3		Completed		4/24/2023 6:49:37 PM	3
4		Completed		4/24/2023 7:03:59 PM	4
5		Completed		4/24/2023 7:18:20 PM	5
6		Completed		4/24/2023 7:32:42 PM	6
7		Completed		4/24/2023 7:48:30 PM	7
8		Completed		4/24/2023 8:04:39 PM	8
9		Completed		4/24/2023 8:19:36 PM	9
10		Completed		4/24/2023 8:34:37 PM	10
11		Completed		4/24/2023 8:49:04 PM	11
12		Completed		4/24/2023 9:03:21 PM	12
13		Completed		4/24/2023 9:18:07 PM	13
14		Completed		4/24/2023 9:33:28 PM	14
15		Completed		4/24/2023 9:48:56 PM	15
16		Completed		4/24/2023 10:03:02 PM	16
17		Completed		4/24/2023 10:17:29 PM	17
18		Completed		4/24/2023 10:31:35 PM	18
19		Completed		4/24/2023 10:45:59 PM	19
20		Completed		4/24/2023 11:00:05 PM	20
21		Completed		4/24/2023 11:15:21 PM	21
22		Completed		4/24/2023 11:30:57 PM	22
23		Completed		4/24/2023 11:45:02 PM	23
24		Completed		4/24/2023 11:59:12 PM	24
25		Completed		4/25/2023 12:13:29 AM	25
26		Completed		4/25/2023 12:27:59 AM	26
27		Completed		4/25/2023 12:43:21 AM	27
28		Completed		4/25/2023 12:57:27 AM	28
29		Completed		4/25/2023 1:11:48 AM	29
30		Completed		4/25/2023 1:26:14 AM	30
31		Completed		4/25/2023 1:40:26 AM	31
32		Completed		4/25/2023 1:54:35 AM	32
33		Completed		4/25/2023 2:08:58 AM	33
34		Completed		4/25/2023 2:24:40 AM	34
35		Completed		4/25/2023 2:38:46 AM	35
36		Completed		4/25/2023 2:52:52 AM	36
37		Completed		4/25/2023 3:07:18 AM	37
38		Completed		4/25/2023 3:22:44 AM	38
39		Completed		4/25/2023 3:38:26 AM	39
40		Completed		4/25/2023 3:52:33 AM	40
41		Completed		4/25/2023 4:08:01 AM	41
42		Completed		4/25/2023 4:22:16 AM	42
43		Completed		4/25/2023 4:36:27 AM	43
44		Completed		4/25/2023 4:50:55 AM	44
45		Completed		4/25/2023 5:05:31 AM	45
46		Completed		4/25/2023 5:20:23 AM	46
47		Completed		4/25/2023 5:34:29 AM	47
48		Completed		4/25/2023 5:49:40 AM	48
49		Completed		4/25/2023 6:04:00 AM	49
50		Completed		4/25/2023 6:18:38 AM	50
51		Completed		4/25/2023 6:34:15 AM	51
52		Completed		4/25/2023 6:48:34 AM	52
53		Completed		4/25/2023 7:03:29 AM	53

	Analysis	Sample Name	Sample ID	ObjectID
54	NPOC	MS 280-175465-a-39		0L-10900100866-10101000-134B11822953-0022
55	NPOC	MSD 280-175465-a-39		0L-10900100866-10101000-134B11822953-0023
56	NPOC	280-175431-a-9		0L-10900100866-10101000-134B11822953-0024
57	NPOC	280-175431-a-11		0L-10900100866-10101000-134B11822953-0025
58	NPOC	280-175431-a-13		0L-10900100866-10101000-134B11822953-0026
59	NPOC	280-175374-f-1		0L-10900100866-10101000-134B11822953-0027
60	NPOC	280-175432-d-5		0L-10900100866-10101000-134B11822953-0028
61	NPOC	280-175432-d-6		0L-10900100866-10101000-134B11822953-0029
62	NPOC	280-175432-d-7		0L-10900100866-10101000-134B11822953-002A
63	NPOC	CCV		0L-10900100866-10101000-134B11822953-002B
64	NPOC	CCB		0L-10900100866-10101000-134B11822953-002C
65	NPOC	280-175432-d-8		0L-10900100866-10101000-134B11822953-002D
66	NPOC	280-175374-e-14		0L-10900100866-10101000-134B11822953-002E
67	NPOC	LCS		0L-10900100866-10101000-134B11822953-002F
68	NPOC	MB		0L-10900100866-10101000-134B11822953-0030
69	NPOC	280-175465-a-25		0L-10900100866-10101000-134B11822953-0031
70	NPOC	MS 280-175465-a-25		0L-10900100866-10101000-134B11822953-0032
71	NPOC	MSD 280-175465-a-25		0L-10900100866-10101000-134B11822953-0033
72	NPOC	280-175432-d-1		0L-10900100866-10101000-134B11822953-0034
73	NPOC	280-175432-d-2		0L-10900100866-10101000-134B11822953-0035
74	NPOC	280-175432-c-3		0L-10900100866-10101000-134B11822953-0036
75	NPOC	CCV		0L-10900100866-10101000-134B11822953-0037
76	NPOC	CCB		0L-10900100866-10101000-134B11822953-0038
77	NPOC	280-175432-c-4		0L-10900100866-10101000-134B11822953-0039
78	NPOC	280-175374-e-9		0L-10900100866-10101000-134B11822953-003A
79	NPOC	280-175374-f-10		0L-10900100866-10101000-134B11822953-003B
80	NPOC	280-175374-f-11		0L-10900100866-10101000-134B11822953-003C
81	NPOC	280-175374-e-12		0L-10900100866-10101000-134B11822953-003D
82	NPOC	280-175374-f-13		0L-10900100866-10101000-134B11822953-003E
83	NPOC	280-175374-f-4		0L-10900100866-10101000-134B11822953-003F
84	NPOC	MS 280-175374-f-4		0L-10900100866-10101000-134B11822953-0040
85	NPOC	MSD 280-175374-f-4		0L-10900100866-10101000-134B11822953-0041
86	NPOC	280-175374-f-5		0L-10900100866-10101000-134B11822953-0042
87	NPOC	CCV		0L-10900100866-10101000-134B11822953-0043
88	NPOC	CCB		0L-10900100866-10101000-134B11822953-0044
89	NPOC	280-175374-e-6		0L-10900100866-10101000-134B11822953-0045
90	NPOC	280-175374-e-7		0L-10900100866-10101000-134B11822953-0046
91	NPOC	280-175374-f-8		0L-10900100866-10101000-134B11822953-0047
92	NPOC	CCV		0L-10900100866-10101000-134B11822953-0048
93	NPOC	CCB		0L-10900100866-10101000-134B11822954-0000

	Origin	Manual Diluti	Result	Notes
54	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:56.70mg/L	
55	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:56.20mg/L	
56	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.024mg/L	
57	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:4.057mg/L	
58	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:17.92mg/L	
59	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.6290mg/L	
60	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.6206mg/L	
61	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.090mg/L	
62	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.149mg/L	
63	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:23.83mg/L	
64	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.06488mg/L	
65	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:2.163mg/L	
66	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.073mg/L	
67	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:24.29mg/L	
68	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.07701mg/L	
69	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:18.35mg/L	
70	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:65.87mg/L	
71	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	2.000	NPOC:66.88mg/L	
72	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.5498mg/L	
73	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.135mg/L	
74	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.403mg/L	
75	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:23.72mg/L	
76	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.1171mg/L	
77	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.880mg/L	
78	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.8196mg/L	
79	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:2.717mg/L	
80	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:3.950mg/L	
81	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:2.802mg/L	
82	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.6097mg/L	
83	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.5601mg/L	
84	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:24.47mg/L	
85	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:24.61mg/L	
86	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.9734mg/L	
87	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:24.47mg/L	
88	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.1502mg/L	
89	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.142mg/L	
90	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.905mg/L	
91	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:1.718mg/L	
92	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:23.98mg/L	
93	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.c	1.000	NPOC:0.1921mg/L	

	Commen	Status	Action	Date / Time	Vial
54		Completed		4/25/2023 7:18:57 AM	54
55		Completed		4/25/2023 7:34:26 AM	55
56		Completed		4/25/2023 7:48:39 AM	56
57		Completed		4/25/2023 8:03:29 AM	57
58		Completed		4/25/2023 8:19:13 AM	58
59		Completed		4/25/2023 8:33:20 AM	59
60		Completed		4/25/2023 8:47:27 AM	60
61		Completed		4/25/2023 9:01:45 AM	61
62		Completed		4/25/2023 9:16:09 AM	62
63		Completed		4/25/2023 9:32:45 AM	63
64		Completed		4/25/2023 9:46:55 AM	64
65		Completed		4/25/2023 10:01:31 AM	65
66		Completed		4/25/2023 10:15:52 AM	66
67		Completed		4/25/2023 10:32:09 AM	67
68		Completed		4/25/2023 10:46:16 AM	68
69		Completed		4/25/2023 11:01:46 AM	69
70		Completed		4/25/2023 11:17:32 AM	70
71		Completed		4/25/2023 11:34:05 AM	71
72		Completed		4/25/2023 11:48:12 AM	72
73		Completed		4/25/2023 12:02:30 PM	73
74		Completed		4/25/2023 12:17:05 PM	74
75		Completed		4/25/2023 12:33:42 PM	75
76		Completed		4/25/2023 12:47:50 PM	76
77		Completed		4/25/2023 1:02:29 PM	77
78		Completed		4/25/2023 1:17:00 PM	78
79		Completed		4/25/2023 1:31:50 PM	79
80		Completed		4/25/2023 1:46:58 PM	80
81		Completed		4/25/2023 2:01:51 PM	81
82		Completed		4/25/2023 2:16:01 PM	82
83		Completed		4/25/2023 2:30:09 PM	83
84		Completed		4/25/2023 2:46:05 PM	84
85		Completed		4/25/2023 3:02:46 PM	85
86		Completed		4/25/2023 3:17:06 PM	86
87		Completed		4/25/2023 3:33:39 PM	87
88		Completed		4/25/2023 3:47:48 PM	88
89		Completed		4/25/2023 4:02:07 PM	89
90		Completed		4/25/2023 4:16:33 PM	90
91		Completed		4/25/2023 4:31:13 PM	91
92		Completed		4/25/2023 4:47:52 PM	92
93		Completed		4/25/2023 5:02:01 PM	93

TOC-L Cal Curve Information
C:\TOC-L\CalCurves\NPOC Calibration 10 31 2022.2023 03 20 14 43 51.cal

Date of Creation	3/20/2023 4:26:03 PM
User	abw
System	TOC-LCSN

Cal. Curve

Sample Name:	NPOC Calibration_AutoDilution_Calibration_03_20_2023
Sample ID:	Auto Dilution Calibration 03 20 2023
Object ID	0L-10900100866-10101000-134B0B02249E-0000
Cal. Curve:	NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status	Completed
Comment:	

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.1980	50uL	1.000	*******		3/20/2023 2:51:43 PM
2	0.2915	50uL	1.000	*******		3/20/2023 2:54:03 PM
3	0.3385	50uL	1.000	*******		3/20/2023 2:56:12 PM
4	0.000	50uL	1.000	*******		3/20/2023 2:58:17 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	0.2070
SD Area	0.1498
CV Area	72.39%
Vial	88
No Washes	2

Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.039	50uL	50.00	*******		3/20/2023 3:07:14 PM
2	2.505	50uL	50.00	*******		3/20/2023 3:09:43 PM
3	2.186	50uL	50.00	*******		3/20/2023 3:12:14 PM
4	2.514	50uL	50.00	*******		3/20/2023 3:14:59 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	2.311
SD Area	0.2370
CV Area	10.25%
Vial	89
No Washes	2

Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	12.32	50uL	10.00	*******		3/20/2023 3:23:17 PM
2	13.04	50uL	10.00	*******		3/20/2023 3:26:06 PM
3	12.48	50uL	10.00	*******		3/20/2023 3:28:50 PM
4	12.86	50uL	10.00	*******		3/20/2023 3:31:49 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	12.68
SD Area	0.3324
CV Area	2.62%
Vial	89
No Washes	2

Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	24.07	50uL	5.000	*******		3/20/2023 3:40:19 PM
2	25.15	50uL	5.000	*******		3/20/2023 3:43:35 PM
3	24.82	50uL	5.000	*******		3/20/2023 3:46:37 PM
4	25.03	50uL	5.000	*******		3/20/2023 3:49:45 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	24.77
SD Area	0.4846
CV Area	1.96%
Vial	89
No Washes	2

Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	61.40	50uL	2.000	*******		3/20/2023 3:58:15 PM
2	61.02	50uL	2.000	*******		3/20/2023 4:01:24 PM
3	62.07	50uL	2.000	*******		3/20/2023 4:04:31 PM
4	62.38	50uL	2.000	*******		3/20/2023 4:07:56 PM

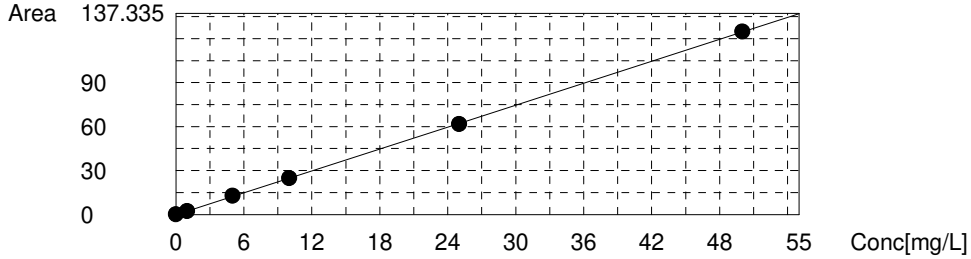
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	61.72
SD Area	0.6193
CV Area	1.00%
Vial	89
No Washes	2

Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	123.1	50uL	1.000	*******		3/20/2023 4:15:57 PM
2	124.0	50uL	1.000	*******		3/20/2023 4:19:27 PM
3	124.6	50uL	1.000	*******		3/20/2023 4:22:39 PM
4	127.7	50uL	1.000	*******		3/20/2023 4:26:03 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	124.9
SD Area	1.997
CV Area	1.60%
Vial	89
No Washes	2

Slope:	2.493
Intercept	-0.04883
r^2	1.0000
r	1.0000
RSE(%)	N/A
Zero Shift	No



Instr.Information

Instrument Options TOC/ASI/
Catalyst Regular Sensitivity

Sample

Sample Name: ICV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

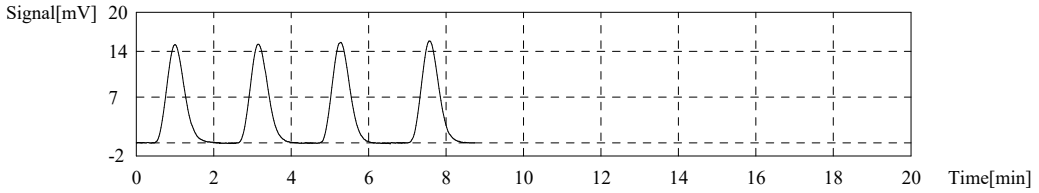
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:19.82mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	48.92	19.65mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:12:08 PM
2	48.97	19.67mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:14:27 PM
3	49.67	19.95mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:16:56 PM
4	49.85	20.02mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:19:25 PM

Mean Area 49.35
Mean Conc. 19.82mg/L



Sample

Sample Name: ICB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

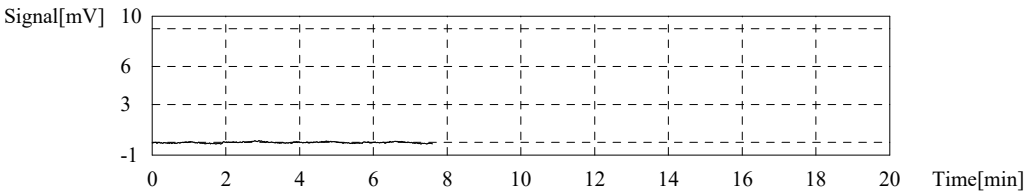
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1126mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3596	0.1639mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:27:15 PM
2	0.06040	0.04382mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:29:20 PM
3	0.1873	0.09474mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:31:28 PM
4	0.3196	0.1478mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:33:37 PM

Mean Area 0.2317
Mean Conc. 0.1126mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

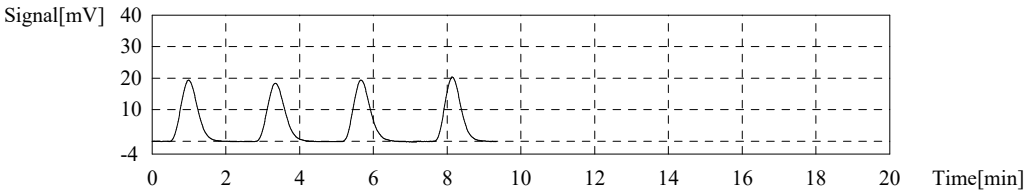
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.95mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.03	24.91mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:41:53 PM
2	61.49	24.69mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:44:25 PM
3	62.59	25.13mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:47:12 PM
4	62.42	25.06mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:49:37 PM

Mean Area 62.13
Mean Conc. 24.95mg/L



Sample

Sample Name: MB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

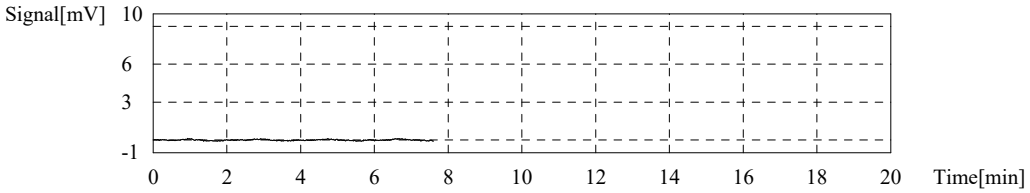
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1338mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3613	0.1645mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:57:27 PM
2	0.3102	0.1440mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 6:59:40 PM
3	0.2504	0.1201mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:01:50 PM
4	0.2164	0.1064mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:03:59 PM

Mean Area 0.2846
Mean Conc. 0.1338mg/L



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

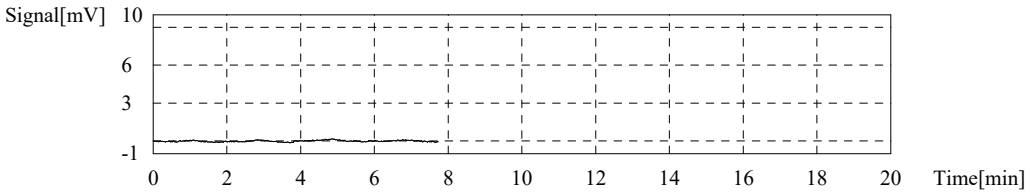
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1898mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2564	0.1225mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:11:49 PM
2	0.3686	0.1675mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:13:58 PM
3	0.5616	0.2449mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:16:15 PM
4	0.5105	0.2244mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:18:20 PM

Mean Area 0.4243
Mean Conc. 0.1898mg/L



Sample

Sample Name: 280-175123-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

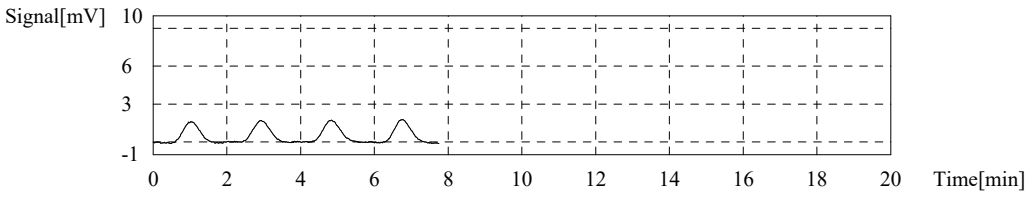
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.289mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.417	2.193mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:26:10 PM
2	5.574	2.256mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:28:19 PM
3	5.718	2.314mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:30:27 PM
4	5.915	2.393mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:32:42 PM

Mean Area 5.656
Mean Conc. 2.289mg/L



Sample

Sample Name: MS 280-175123-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

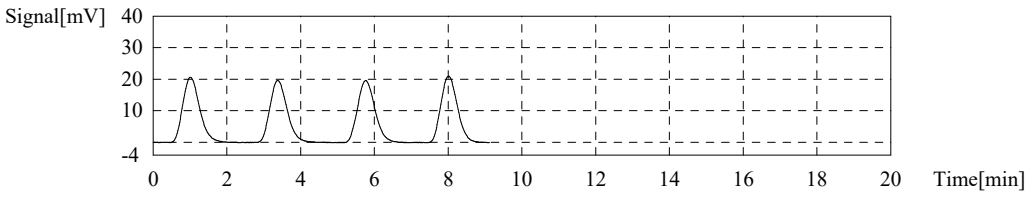
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.42mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	66.67	26.77mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:41:01 PM
2	64.50	25.90mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:43:44 PM
3	65.33	26.23mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:46:12 PM
4	66.67	26.77mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:48:30 PM

Mean Area 65.79
Mean Conc. 26.42mg/L



Sample

Sample Name: MSD 280-175123-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

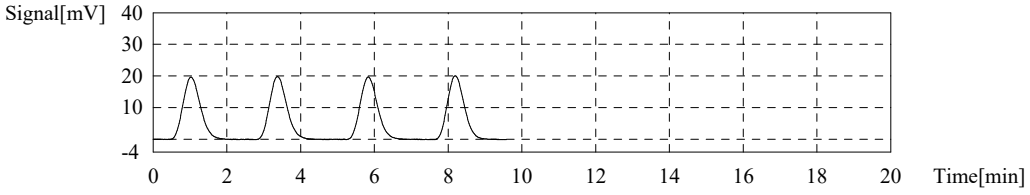
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.13mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	65.30	26.22mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:56:47 PM
2	65.21	26.18mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 7:59:29 PM
3	65.19	26.17mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:02:03 PM
4	64.66	25.96mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:04:39 PM

Mean Area 65.09
Mean Conc. 26.13mg/L



Sample

Sample Name: 280-175123-b-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

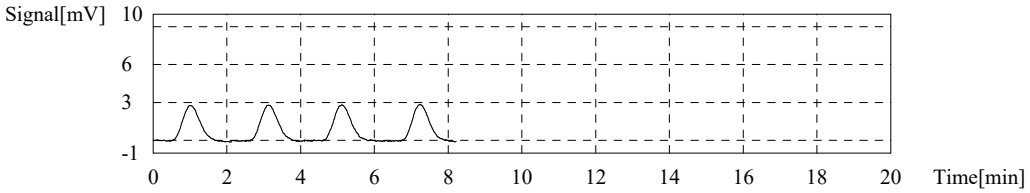
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.801mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.506	3.833mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:12:43 PM
2	9.223	3.720mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:14:58 PM
3	9.372	3.780mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:17:21 PM
4	9.604	3.873mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:19:36 PM

Mean Area 9.426
Mean Conc. 3.801mg/L



Sample

Sample Name: 280-175142-a-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

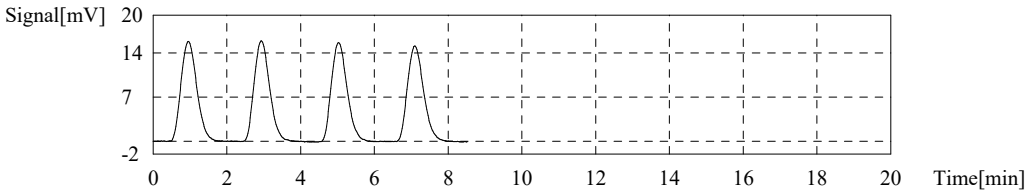
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:37.94mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	47.77	38.37mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:27:32 PM
2	47.28	37.98mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:29:49 PM
3	47.14	37.86mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:32:03 PM
4	46.76	37.56mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:34:37 PM

Mean Area 47.24
Mean Conc. 37.94mg/L



Sample

Sample Name: 280-175142-a-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

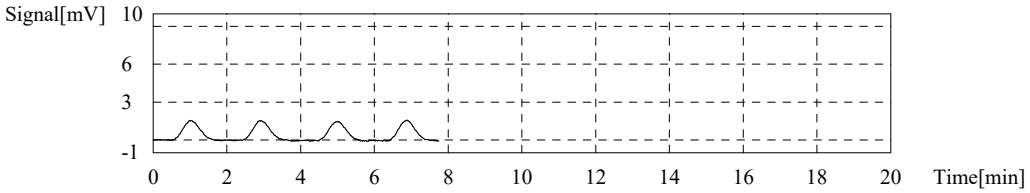
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.079mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.102	2.067mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:42:28 PM
2	5.249	2.125mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:44:46 PM
3	5.143	2.083mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:46:55 PM
4	5.042	2.042mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:49:04 PM

Mean Area 5.134
Mean Conc. 2.079mg/L



Sample

Sample Name: 280-175142-a-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

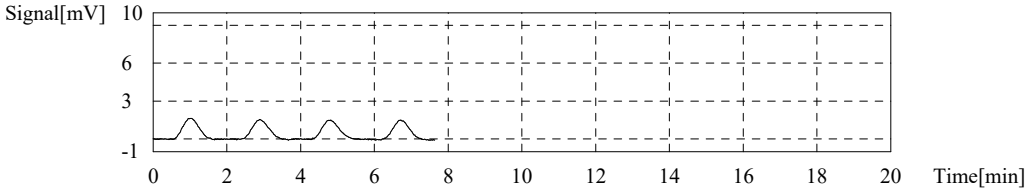
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.037mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.139	2.081mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:56:55 PM
2	5.044	2.043mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 8:59:05 PM
3	4.972	2.014mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:01:10 PM
4	4.958	2.009mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:03:21 PM

Mean Area 5.028
Mean Conc. 2.037mg/L



Sample

Sample Name: 280-175431-a-35
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

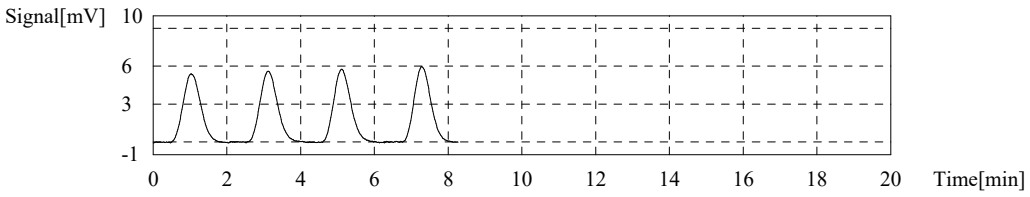
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.518mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	18.34	7.378mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:11:23 PM
2	18.37	7.390mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:13:34 PM
3	19.01	7.646mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:15:57 PM
4	19.04	7.658mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:18:07 PM

Mean Area 18.69
Mean Conc. 7.518mg/L



Sample

Sample Name: 280-175070-b-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

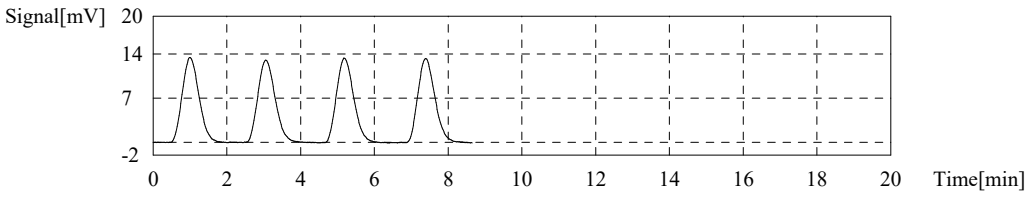
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	100.0	NPOC:1745mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	43.14	1733mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:26:07 PM
2	42.97	1726mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:28:26 PM
3	44.02	1768mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:30:50 PM
4	43.62	1752mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:33:28 PM

Mean Area 43.44
Mean Conc. 1745mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

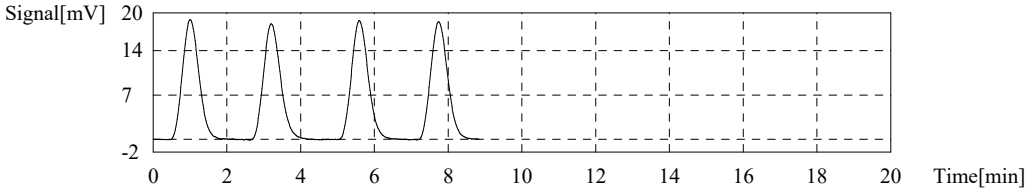
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.04mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.16	23.75mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:41:40 PM
2	60.05	24.11mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:44:14 PM
3	60.11	24.14mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:46:39 PM
4	60.12	24.14mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:48:56 PM

Mean Area 59.86
Mean Conc. 24.04mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

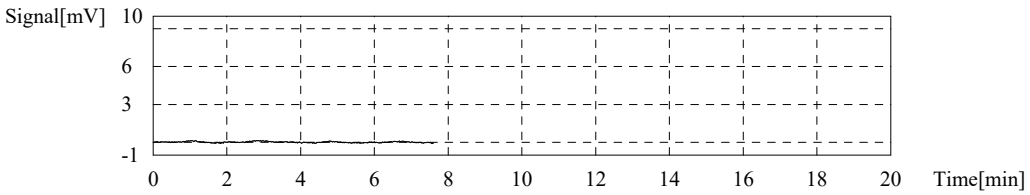
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1307mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3847	0.1739mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:56:47 PM
2	0.3504	0.1602mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 9:58:52 PM
3	0.1938	0.09734mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:00:57 PM
4	0.1787	0.09129mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:03:02 PM

Mean Area 0.2769
Mean Conc. 0.1307mg/L



Sample

Sample Name: 280-175128-d-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

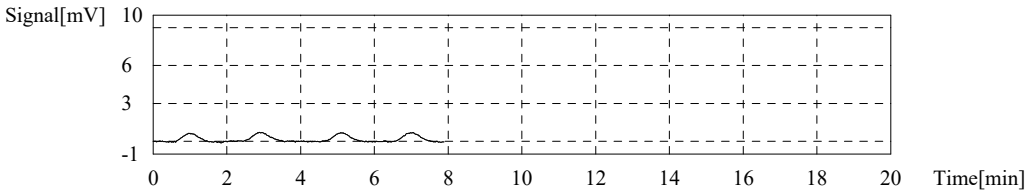
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9183mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.185	0.8962mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:10:53 PM
2	2.180	0.8942mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:13:19 PM
3	2.271	0.9307mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:15:24 PM
4	2.324	0.9520mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:17:29 PM

Mean Area 2.240
Mean Conc. 0.9183mg/L



Sample

Sample Name: 280-175128-c-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

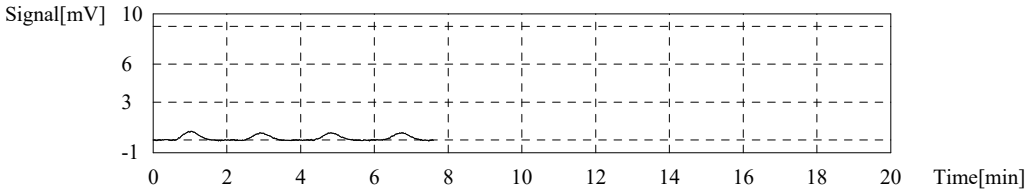
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.8535mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.374	0.9720mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:25:19 PM
2	1.890	0.7779mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:27:25 PM
3	1.991	0.8184mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:29:30 PM
4	2.059	0.8457mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:31:35 PM

Mean Area 2.079
Mean Conc. 0.8535mg/L



Sample

Sample Name: 280-175431-a-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

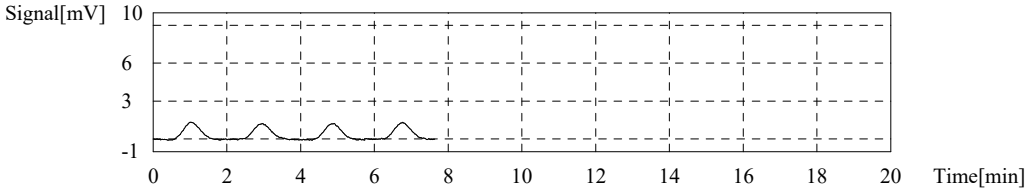
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.755mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.627	1.876mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:39:31 PM
2	4.130	1.677mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:41:42 PM
3	4.279	1.736mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:43:50 PM
4	4.267	1.732mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:45:59 PM

Mean Area 4.326
Mean Conc. 1.755mg/L



Sample

Sample Name: 280-175431-a-15
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

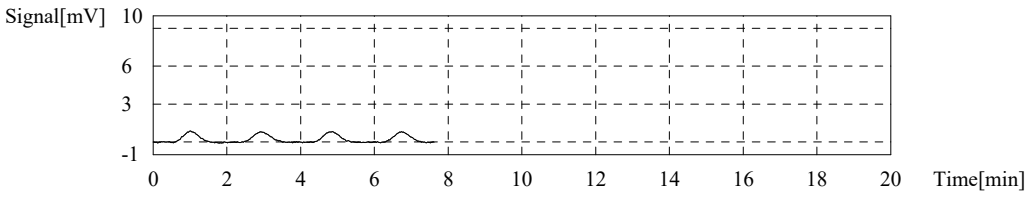
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.128mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.656	1.085mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:53:49 PM
2	2.827	1.154mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:55:55 PM
3	2.817	1.150mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 10:58:00 PM
4	2.755	1.125mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:00:05 PM

Mean Area 2.764
Mean Conc. 1.128mg/L



Sample

Sample Name: MS 280-175431-a-15
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

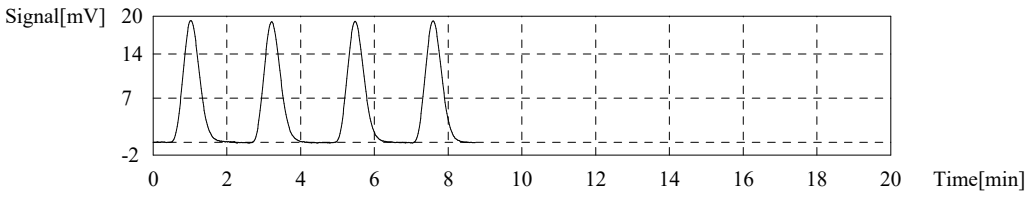
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.48mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.52	24.30mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:08:14 PM
2	61.32	24.62mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:10:43 PM
3	61.28	24.60mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:13:01 PM
4	60.79	24.41mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:15:21 PM

Mean Area 60.98
Mean Conc. 24.48mg/L



Sample

Sample Name: MSD 280-175431-a-15
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

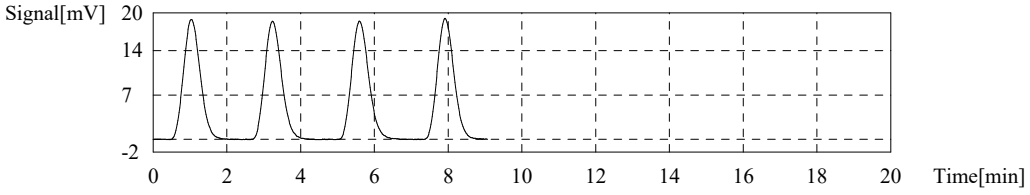
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.38mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.57	24.32mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:23:30 PM
2	60.42	24.26mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:26:03 PM
3	61.19	24.57mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:28:35 PM
4	60.71	24.38mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:30:57 PM

Mean Area 60.72
Mean Conc. 24.38mg/L



Sample

Sample Name: 280-175431-a-17
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

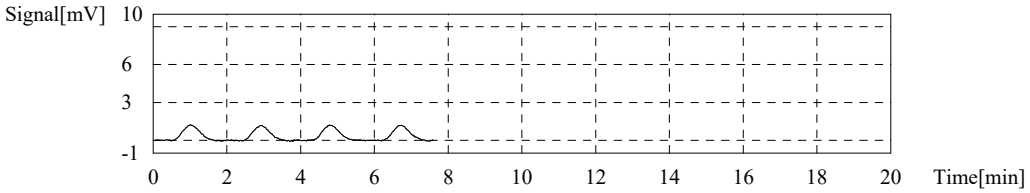
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.588mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.095	1.662mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:38:47 PM
2	3.800	1.544mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:40:52 PM
3	3.866	1.571mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:42:57 PM
4	3.872	1.573mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:45:02 PM

Mean Area 3.908
Mean Conc. 1.588mg/L



Sample

Sample Name: 280-175431-a-19
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

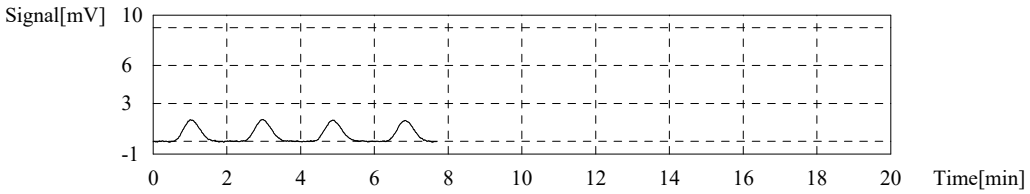
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.199mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.593	2.263mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:52:54 PM
2	5.266	2.132mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:54:59 PM
3	5.516	2.233mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:57:07 PM
4	5.356	2.168mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/24/2023 11:59:12 PM

Mean Area 5.433
Mean Conc. 2.199mg/L



Sample

Sample Name: 280-175431-a-24
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

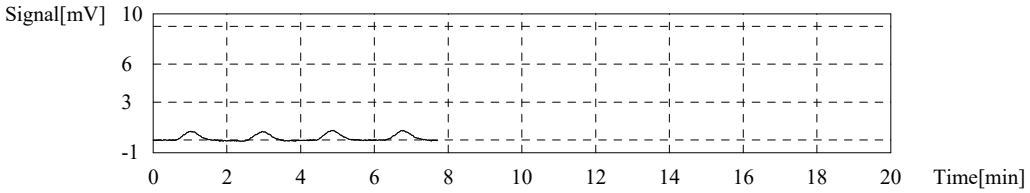
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9671mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.181	0.8946mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:07:05 AM
2	2.427	0.9933mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:09:15 AM
3	2.371	0.9708mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:11:20 AM
4	2.468	1.010mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:13:29 AM

Mean Area 2.362
Mean Conc. 0.9671mg/L



Sample

Sample Name: 280-175431-a-33
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

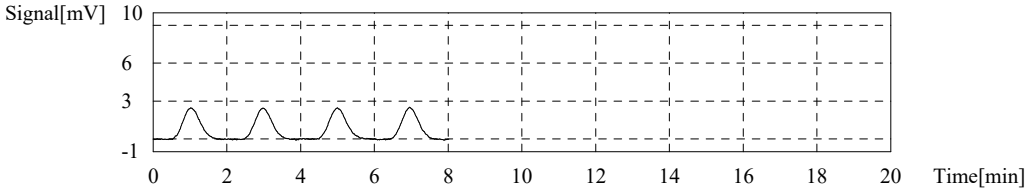
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.301mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.339	3.365mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:21:20 AM
2	8.230	3.321mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:23:32 AM
3	8.079	3.261mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:25:41 AM
4	8.073	3.258mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:27:59 AM

Mean Area 8.180
Mean Conc. 3.301mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

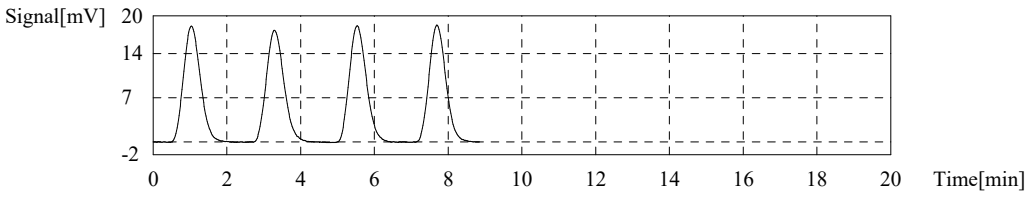
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.94mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.52	23.90mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:36:10 AM
2	59.33	23.82mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:38:38 AM
3	60.28	24.20mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:40:58 AM
4	59.32	23.82mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:43:21 AM

Mean Area 59.61
Mean Conc. 23.94mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

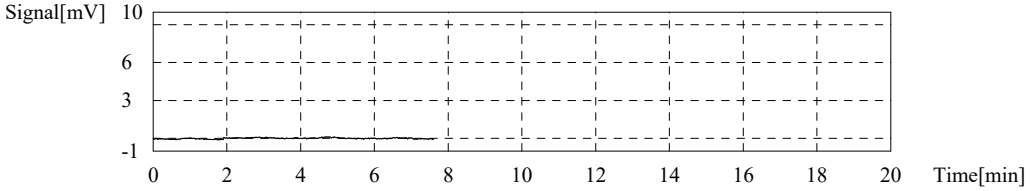
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.09190mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2178	0.1070mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:51:11 AM
2	0.000	0.01959mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:53:17 AM
3	0.5031	0.2214mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:55:22 AM
4	0.000	0.01959mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:57:27 AM

Mean Area 0.1802
Mean Conc. 0.09190mg/L



Sample

Sample Name: 280-175465-a-26
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

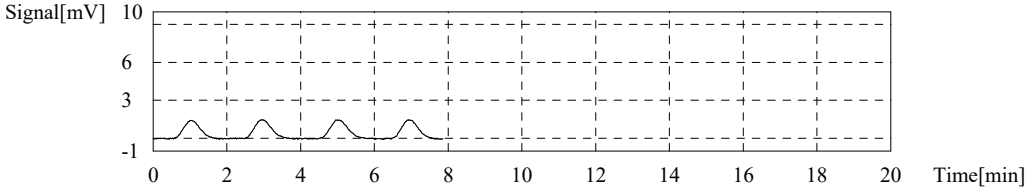
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	10.00	NPOC:19.27mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.609	18.69mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:05:19 AM
2	4.848	19.65mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:07:33 AM
3	4.884	19.79mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:09:42 AM
4	4.674	18.95mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:11:48 AM

Mean Area 4.754
Mean Conc. 19.27mg/L



Sample

Sample Name: 280-175465-a-28
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

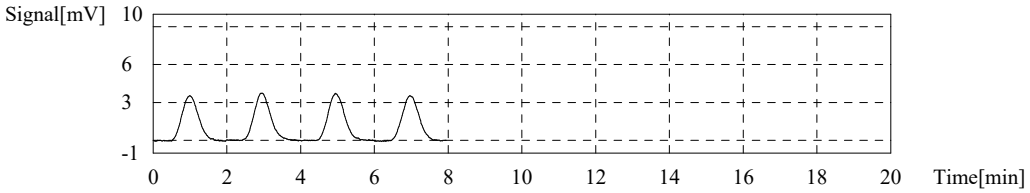
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.635mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.30	4.553mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:19:42 AM
2	11.78	4.746mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:21:52 AM
3	11.65	4.694mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:24:03 AM
4	11.29	4.549mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:26:14 AM

Mean Area 11.51
Mean Conc. 4.635mg/L



Sample

Sample Name: 280-175465-a-30
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

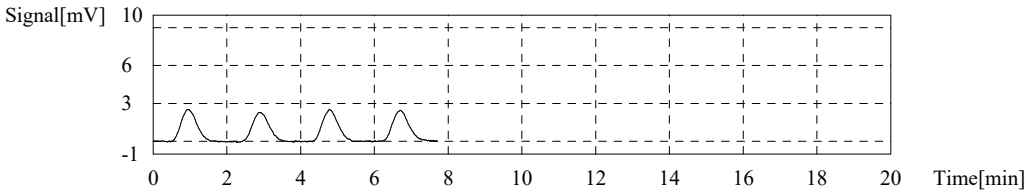
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.063mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.588	3.064mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:34:06 AM
2	7.461	3.013mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:36:11 AM
3	7.529	3.040mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:38:16 AM
4	7.766	3.135mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:40:26 AM

Mean Area 7.586
Mean Conc. 3.063mg/L



Sample

Sample Name: 280-175465-a-33
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

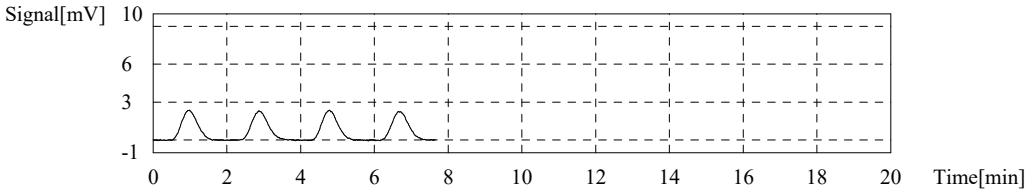
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.905mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.280	2.940mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:48:17 AM
2	7.147	2.887mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:50:22 AM
3	7.054	2.850mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:52:27 AM
4	7.283	2.942mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:54:35 AM

Mean Area 7.191
Mean Conc. 2.905mg/L



Sample

Sample Name: 280-175465-a-35
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

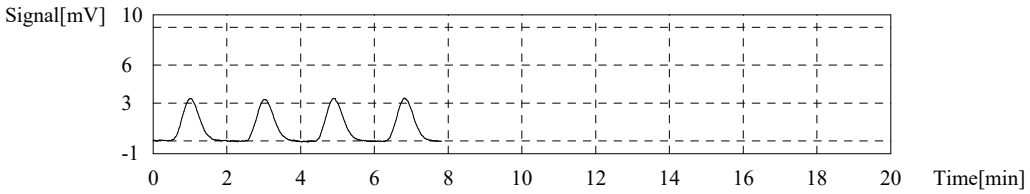
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.429mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.74	4.328mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:02:32 AM
2	10.86	4.377mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:04:37 AM
3	11.12	4.481mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:06:46 AM
4	11.24	4.529mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:08:58 AM

Mean Area 10.99
Mean Conc. 4.429mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

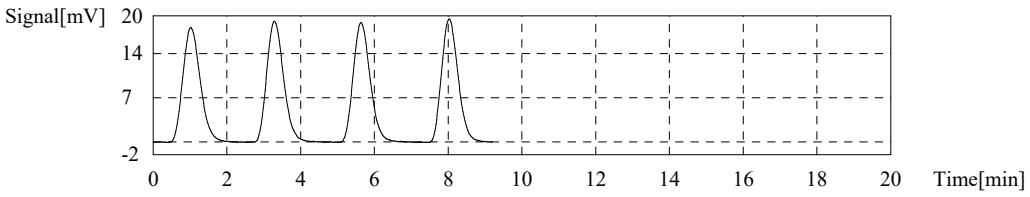
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.51mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.42	24.26mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:17:12 AM
2	61.57	24.72mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:19:43 AM
3	61.07	24.52mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:22:18 AM
4	61.07	24.52mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:24:40 AM

Mean Area 61.03
Mean Conc. 24.51mg/L



Sample

Sample Name: MB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

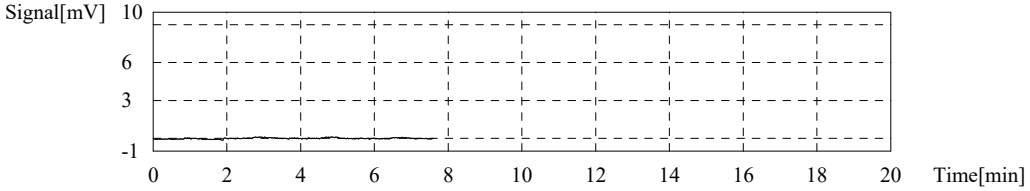
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.05631mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	0.01959mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:32:31 AM
2	0.08140	0.05225mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:34:36 AM
3	0.09460	0.05754mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:36:41 AM
4	0.1901	0.09586mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:38:46 AM

Mean Area 0.09152
Mean Conc. 0.05631mg/L



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

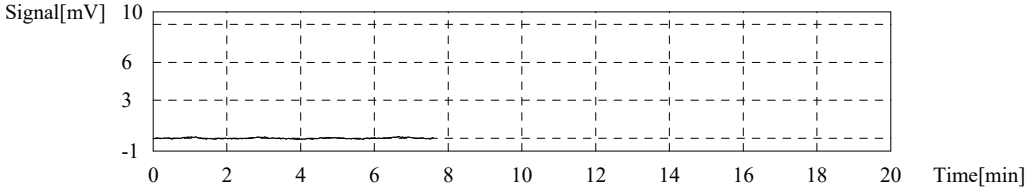
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1213mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2593	0.1236mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:46:37 AM
2	0.1315	0.07235mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:48:42 AM
3	0.2094	0.1036mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:50:47 AM
4	0.4143	0.1858mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:52:52 AM

Mean Area 0.2536
Mean Conc. 0.1213mg/L



Sample

Sample Name: 280-175465-a-38
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

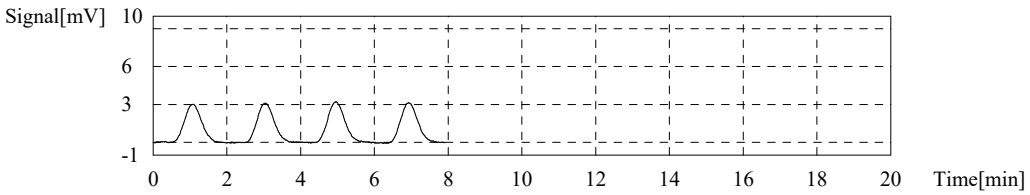
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:8.216mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.02	8.079mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:00:51 AM
2	9.993	8.058mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:02:56 AM
3	10.35	8.344mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:05:05 AM
4	10.40	8.384mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:07:18 AM

Mean Area 10.19
Mean Conc. 8.216mg/L



Sample

Sample Name: MS 280-175465-a-38
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

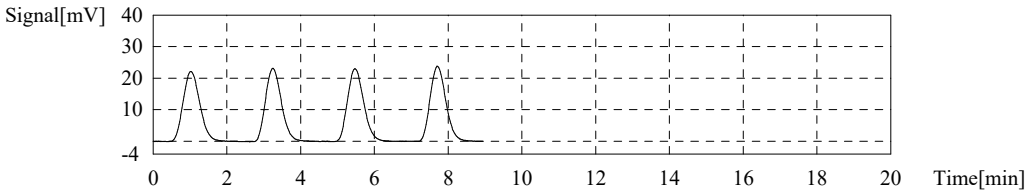
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:56.96mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	70.46	56.58mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:15:31 AM
2	70.58	56.67mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:17:55 AM
3	71.11	57.10mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:20:21 AM
4	71.59	57.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:22:44 AM

Mean Area 70.94
Mean Conc. 56.96mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

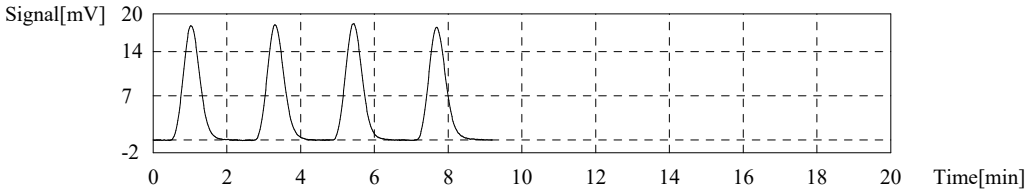
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.57mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.75	23.19mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:30:58 AM
2	58.97	23.68mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:33:16 AM
3	59.10	23.73mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:35:43 AM
4	58.95	23.67mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:38:26 AM

Mean Area 58.69
Mean Conc. 23.57mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

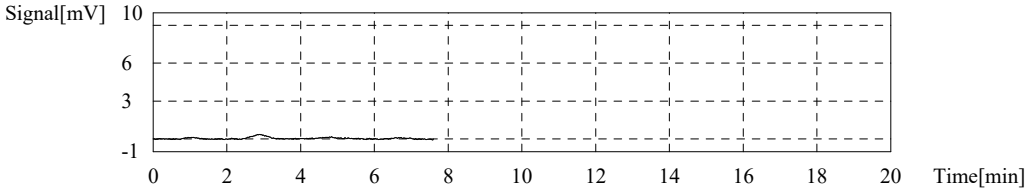
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2186mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2740	0.1295mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:46:17 AM
2	0.9885	0.4162mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:48:22 AM
3	0.3043	0.1417mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:50:27 AM
4	0.4172	0.1870mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:52:33 AM

Mean Area 0.4960
Mean Conc. 0.2186mg/L



Sample

Sample Name: MSD 280-175465-a-38
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

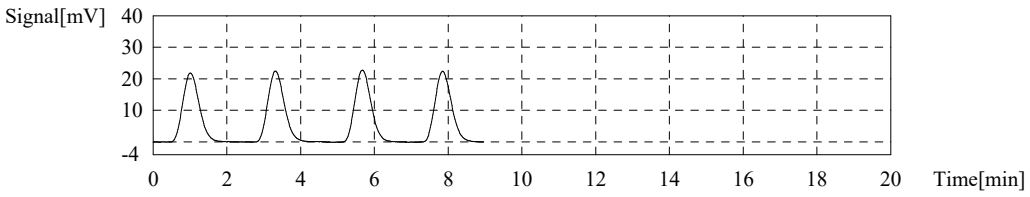
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:56.25mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	68.59	55.08mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:00:48 AM
2	70.67	56.74mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:03:22 AM
3	70.47	56.58mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:05:43 AM
4	70.50	56.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:08:01 AM

Mean Area 70.06
Mean Conc. 56.25mg/L



Sample

Sample Name: 280-175465-a-17
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

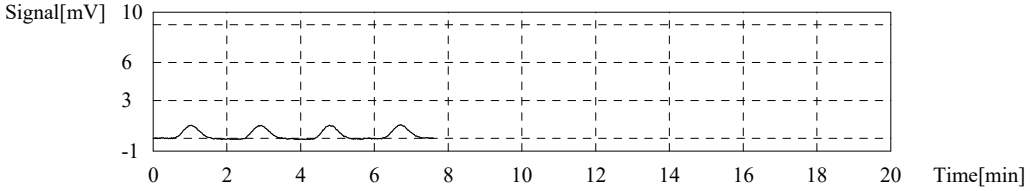
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.379mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.301	1.344mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:15:52 AM
2	3.395	1.382mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:17:57 AM
3	3.502	1.425mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:20:02 AM
4	3.353	1.365mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:22:16 AM

Mean Area 3.388
Mean Conc. 1.379mg/L



Sample

Sample Name: 280-175465-a-19
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

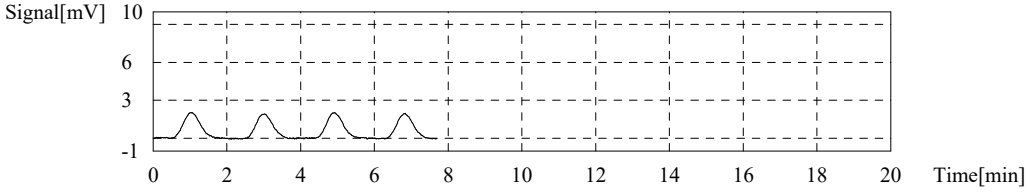
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:5.116mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.588	5.325mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:30:12 AM
2	6.273	5.073mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:32:17 AM
3	6.220	5.030mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:34:22 AM
4	6.225	5.034mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:36:27 AM

Mean Area 6.327
Mean Conc. 5.116mg/L



Sample

Sample Name: 280-175465-a-21
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

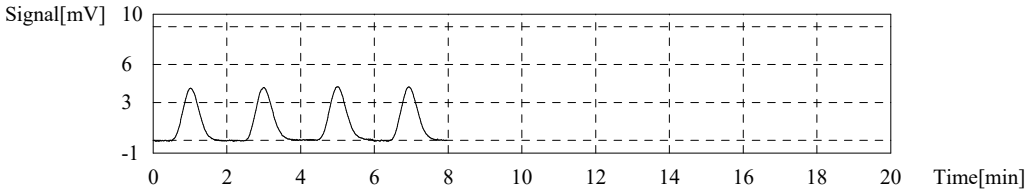
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:10.77mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.00	10.47mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:44:26 AM
2	13.41	10.80mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:46:35 AM
3	13.49	10.86mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:48:43 AM
4	13.58	10.94mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:50:55 AM

Mean Area 13.37
Mean Conc. 10.77mg/L



Sample

Sample Name: 280-175465-a-22
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

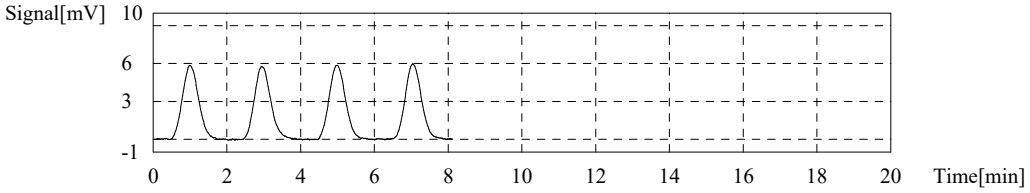
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.330mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	17.93	7.213mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:58:49 AM
2	18.33	7.374mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:01:01 AM
3	18.39	7.398mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:03:16 AM
4	18.24	7.337mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:05:31 AM

Mean Area 18.22
Mean Conc. 7.330mg/L



Sample

Sample Name: 280-175374-f-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

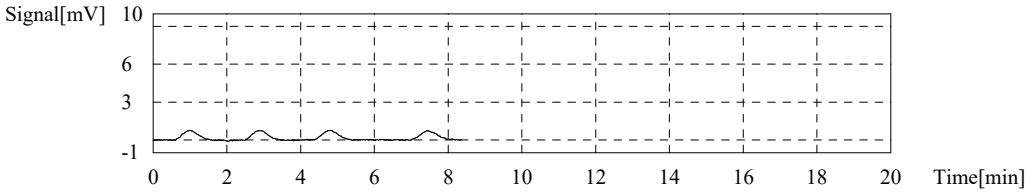
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9938mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.432	0.9953mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:13:22 AM
2	2.322	0.9512mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:15:27 AM
3	2.446	1.001mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:18:18 AM
4	2.513	1.028mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:20:23 AM

Mean Area 2.428
Mean Conc. 0.9938mg/L



Sample

Sample Name: 280-175374-f-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

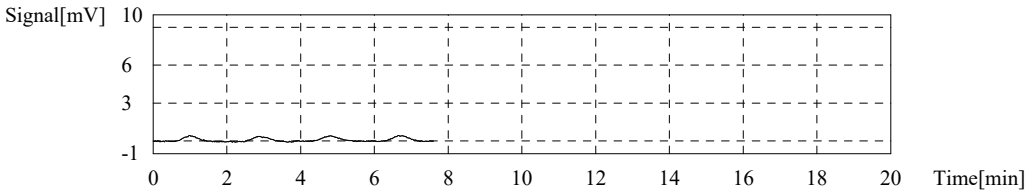
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5624mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.253	0.5223mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:28:14 AM
2	1.274	0.5307mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:30:19 AM
3	1.412	0.5861mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:32:24 AM
4	1.473	0.6106mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:34:29 AM

Mean Area 1.353
Mean Conc. 0.5624mg/L



Sample

Sample Name: 280-175432-c-10
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

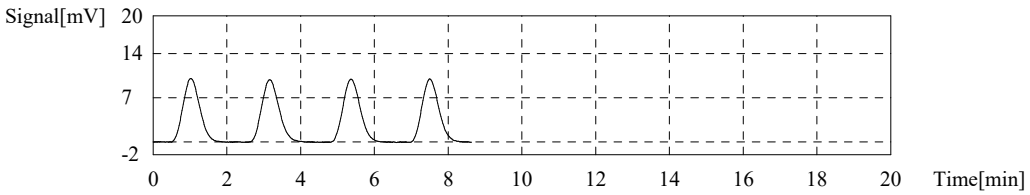
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:26.07mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.07	25.77mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:42:34 AM
2	32.71	26.29mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:44:59 AM
3	32.71	26.29mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:47:20 AM
4	32.27	25.93mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:49:40 AM

Mean Area 32.44
Mean Conc. 26.07mg/L



Sample

Sample Name: 280-175432-d-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

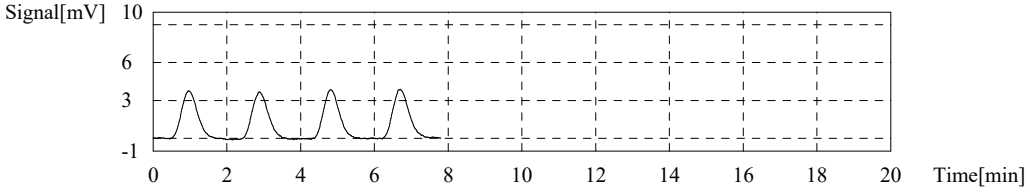
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:9.389mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.41	9.195mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:57:32 AM
2	11.65	9.387mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:59:39 AM
3	11.65	9.387mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:01:46 AM
4	11.90	9.588mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:04:00 AM

Mean Area 11.65
Mean Conc. 9.389mg/L



Sample

Sample Name: 280-175432-d-9
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

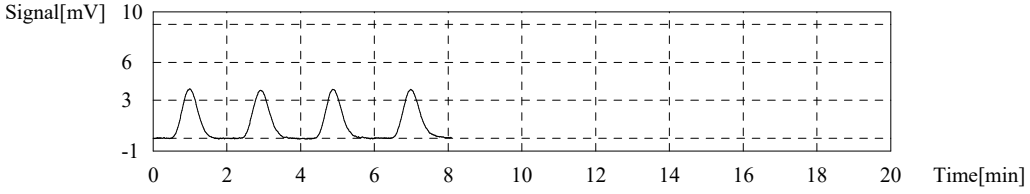
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:9.804mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.93	9.612mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:11:53 AM
2	12.24	9.860mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:14:03 AM
3	12.19	9.820mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:16:21 AM
4	12.32	9.925mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:18:38 AM

Mean Area 12.17
Mean Conc. 9.804mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

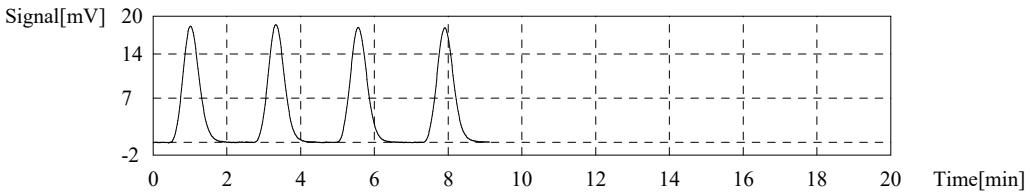
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.55mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	58.48	23.48mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:26:51 AM
2	58.70	23.57mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:29:16 AM
3	58.51	23.49mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:31:48 AM
4	58.89	23.65mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:34:15 AM

Mean Area 58.64
Mean Conc. 23.55mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

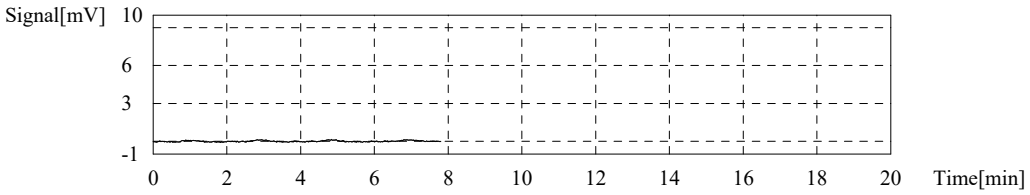
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1953mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3901	0.1761mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:42:06 AM
2	0.4923	0.2171mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:44:11 AM
3	0.5561	0.2427mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:46:28 AM
4	0.3132	0.1452mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:48:34 AM

Mean Area 0.4379
Mean Conc. 0.1953mg/L



Sample

Sample Name: 280-175465-a-39
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

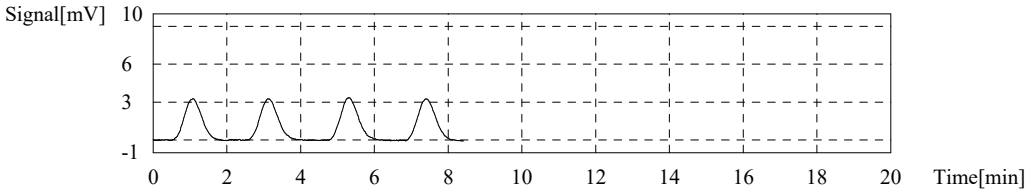
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:9.110mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.11	8.954mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:56:34 AM
2	11.23	9.050mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 6:58:55 AM
3	11.52	9.283mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:01:12 AM
4	11.36	9.154mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:03:29 AM

Mean Area 11.31
Mean Conc. 9.110mg/L



Sample

Sample Name: MS 280-175465-a-39
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

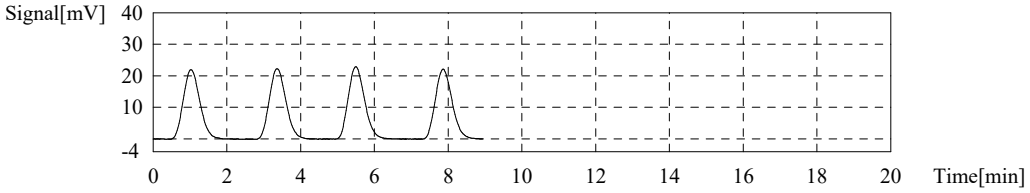
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:56.70mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	69.41	55.73mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:11:45 AM
2	70.76	56.82mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:14:05 AM
3	71.74	57.60mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:16:38 AM
4	70.54	56.64mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:18:57 AM

Mean Area 70.61
Mean Conc. 56.70mg/L



Sample

Sample Name: MSD 280-175465-a-39
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

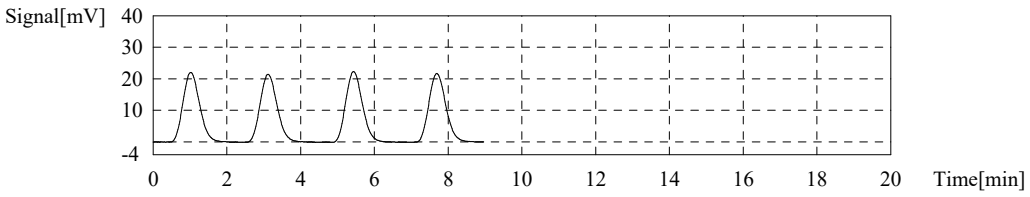
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:56.20mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	69.63	55.91mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:26:58 AM
2	69.26	55.61mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:29:30 AM
3	71.03	57.03mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:31:56 AM
4	70.05	56.25mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:34:26 AM

Mean Area 69.99
Mean Conc. 56.20mg/L



Sample

Sample Name: 280-175431-a-9
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

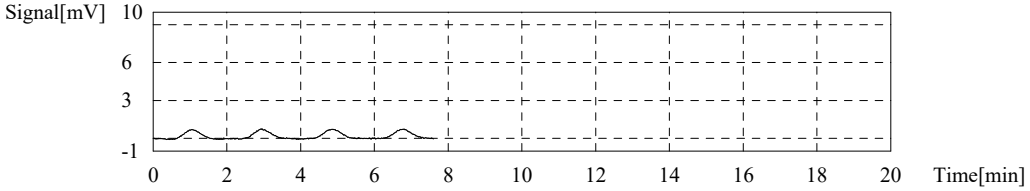
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.024mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.455	1.005mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:42:20 AM
2	2.443	0.9997mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:44:29 AM
3	2.568	1.050mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:46:34 AM
4	2.545	1.041mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:48:39 AM

Mean Area 2.503
Mean Conc. 1.024mg/L



Sample

Sample Name: 280-175431-a-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

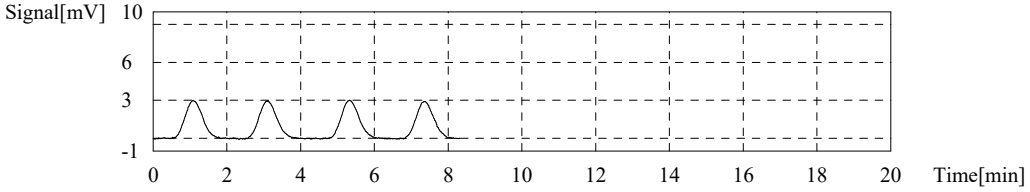
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.057mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.950	4.012mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:56:37 AM
2	10.13	4.084mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 7:59:02 AM
3	10.20	4.112mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:01:13 AM
4	9.973	4.021mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:03:29 AM

Mean Area 10.06
Mean Conc. 4.057mg/L



Sample

Sample Name: 280-175431-a-13
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

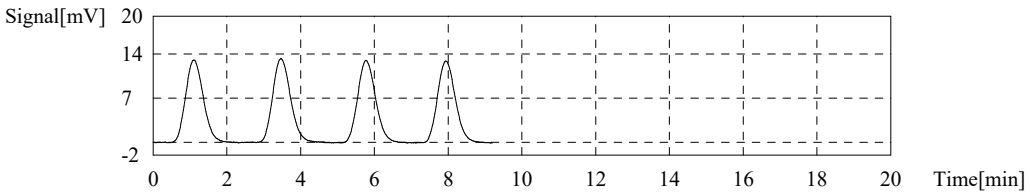
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:17.92mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	44.46	17.86mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:11:49 AM
2	45.11	18.12mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:14:17 AM
3	44.50	17.87mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:16:39 AM
4	44.35	17.81mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:19:13 AM

Mean Area 44.60
Mean Conc. 17.92mg/L



Sample

Sample Name: 280-175374-f-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

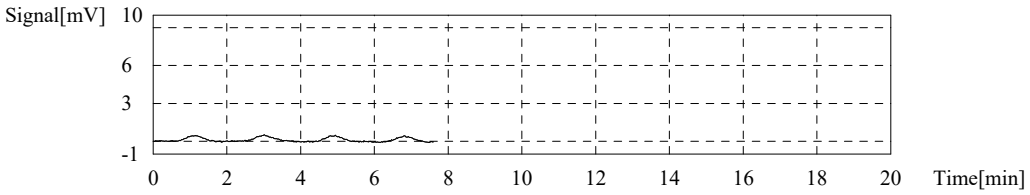
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6290mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.526	0.6318mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:27:05 AM
2	1.540	0.6374mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:29:10 AM
3	1.510	0.6254mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:31:15 AM
4	1.500	0.6214mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:33:20 AM

Mean Area 1.519
Mean Conc. 0.6290mg/L



Sample

Sample Name: 280-175432-d-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

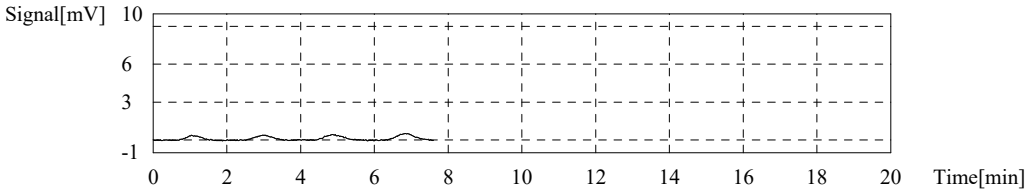
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6206mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.151	0.4814mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:41:12 AM
2	1.494	0.6190mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:43:17 AM
3	1.380	0.5732mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:45:22 AM
4	1.967	0.8087mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:47:27 AM

Mean Area 1.498
Mean Conc. 0.6206mg/L



Sample

Sample Name: 280-175432-d-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

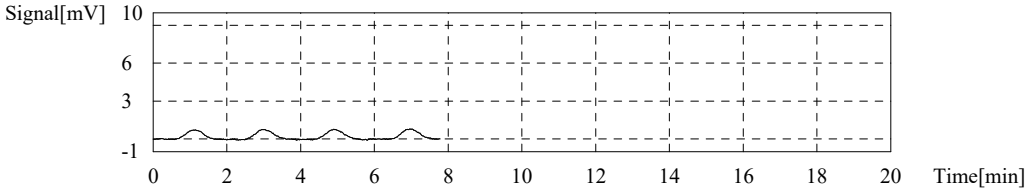
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.090mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.508	1.026mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:55:19 AM
2	2.647	1.082mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:57:24 AM
3	2.920	1.191mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 8:59:37 AM
4	2.594	1.060mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:01:45 AM

Mean Area 2.667
Mean Conc. 1.090mg/L



Sample

Sample Name: 280-175432-d-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

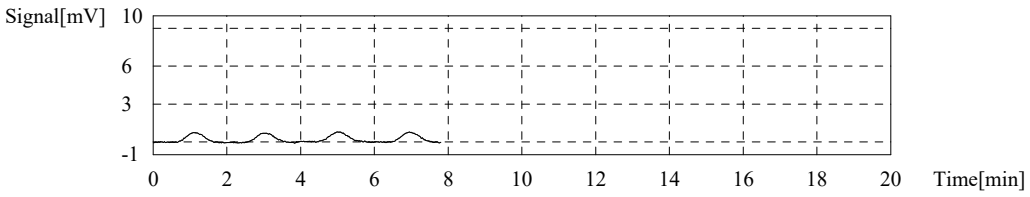
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.149mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.629	1.074mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:09:37 AM
2	2.913	1.188mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:11:52 AM
3	2.826	1.153mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:14:01 AM
4	2.897	1.182mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:16:09 AM

Mean Area 2.816
Mean Conc. 1.149mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

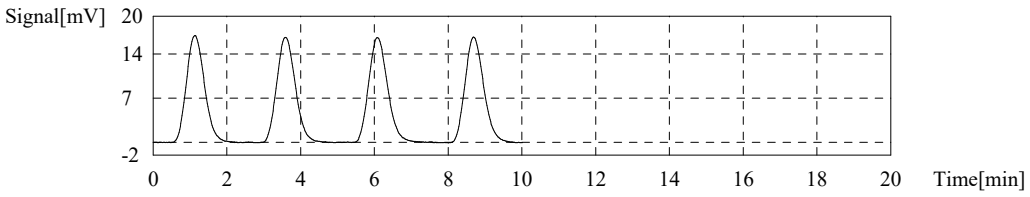
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.83mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	58.72	23.58mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:24:34 AM
2	59.25	23.79mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:27:16 AM
3	59.64	23.95mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:30:07 AM
4	59.77	24.00mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:32:45 AM

Mean Area 59.35
Mean Conc. 23.83mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

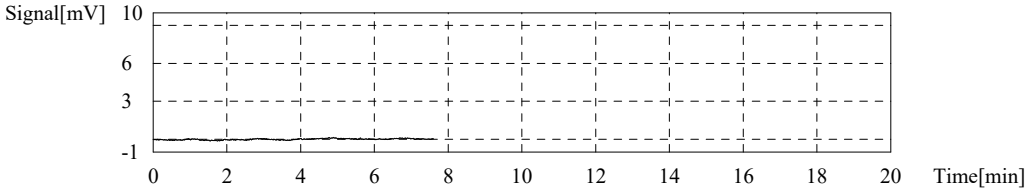
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.06488mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	0.01959mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:40:37 AM
2	0.3099	0.1439mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:42:42 AM
3	0.000	0.01959mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:44:51 AM
4	0.1416	0.07640mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:46:55 AM

Mean Area 0.1129
Mean Conc. 0.06488mg/L



Sample

Sample Name: 280-175432-d-8
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

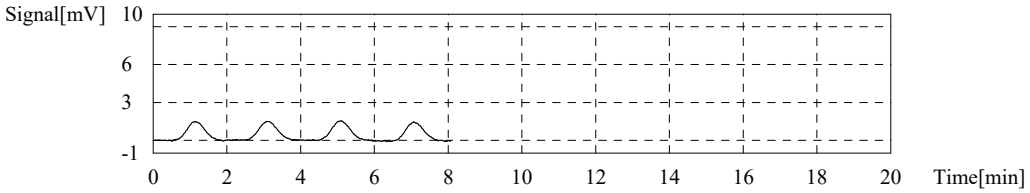
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.163mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.379	2.178mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:54:50 AM
2	5.211	2.110mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:57:01 AM
3	5.542	2.243mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 9:59:12 AM
4	5.239	2.121mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:01:31 AM

Mean Area 5.343
Mean Conc. 2.163mg/L



Sample

Sample Name: 280-175374-e-14
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

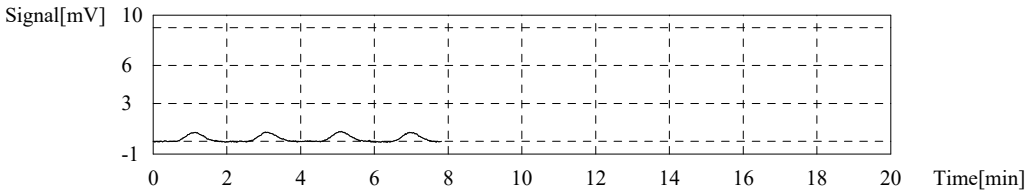
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.073mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.718	1.110mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:09:28 AM
2	2.718	1.110mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:11:37 AM
3	2.491	1.019mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:13:44 AM
4	2.575	1.053mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:15:52 AM

Mean Area 2.625
Mean Conc. 1.073mg/L



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

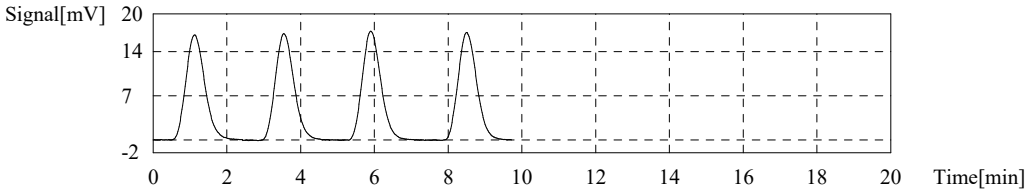
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.29mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.86	24.04mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:24:15 AM
2	60.36	24.24mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:26:48 AM
3	61.32	24.62mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:29:36 AM
4	60.43	24.26mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:32:09 AM

Mean Area 60.49
Mean Conc. 24.29mg/L



Sample

Sample Name: MB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

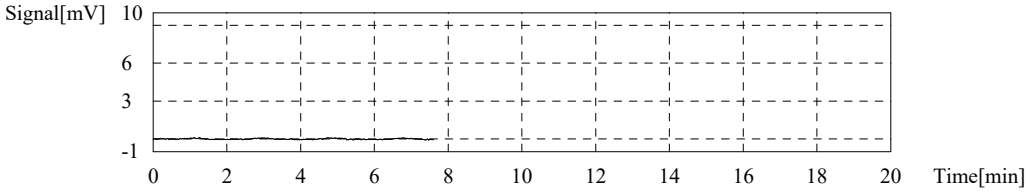
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.07701mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3247	0.1499mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:40:01 AM
2	0.000	0.01959mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:42:06 AM
3	0.09840	0.05907mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:44:11 AM
4	0.1494	0.07953mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:46:16 AM

Mean Area 0.1431
Mean Conc. 0.07701mg/L



Sample

Sample Name: 280-175465-a-25
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

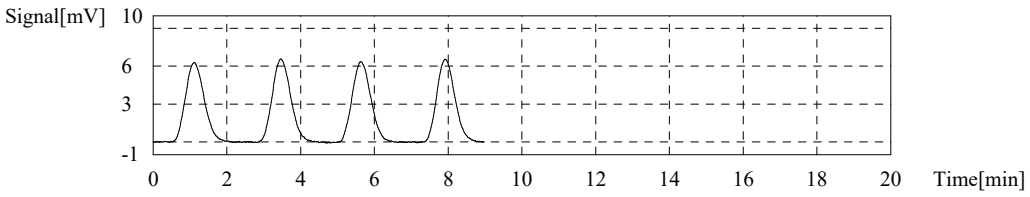
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:18.35mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.23	17.88mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:54:34 AM
2	23.23	18.68mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:56:54 AM
3	23.02	18.51mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 10:59:23 AM
4	22.82	18.35mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:01:46 AM

Mean Area 22.83
Mean Conc. 18.35mg/L



Sample

Sample Name: MS 280-175465-a-25
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

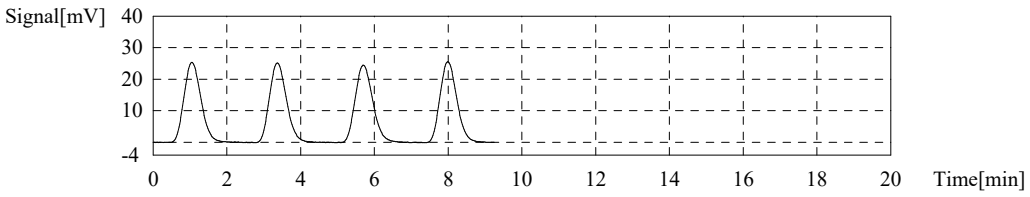
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:65.87mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	82.21	66.00mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:10:03 AM
2	81.86	65.72mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:12:33 AM
3	81.77	65.65mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:15:02 AM
4	82.33	66.10mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:17:32 AM

Mean Area 82.04
Mean Conc. 65.87mg/L



Sample

Sample Name: MSD 280-175465-a-25
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

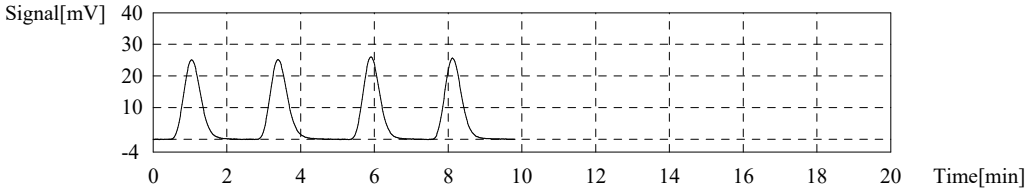
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:66.88mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	82.83	66.50mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:25:51 AM
2	83.67	67.18mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:28:37 AM
3	83.15	66.76mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:31:06 AM
4	83.55	67.08mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:34:05 AM

Mean Area 83.30
Mean Conc. 66.88mg/L



Sample

Sample Name: 280-175432-d-1
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

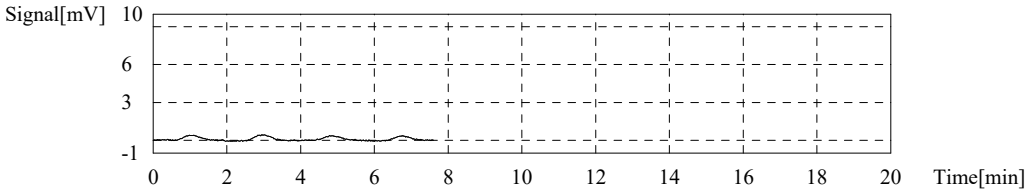
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5498mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.203	0.5022mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:41:57 AM
2	1.570	0.6495mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:44:02 AM
3	1.225	0.5111mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:46:07 AM
4	1.288	0.5363mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:48:12 AM

Mean Area 1.322
Mean Conc. 0.5498mg/L



Sample

Sample Name: 280-175432-d-2
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

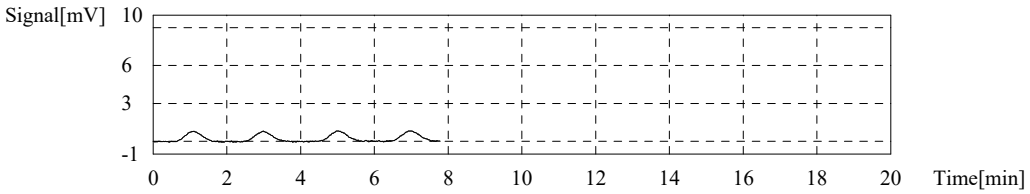
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.135mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.665	1.089mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:56:04 AM
2	2.789	1.139mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 11:58:17 AM
3	2.976	1.214mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:00:25 PM
4	2.691	1.099mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:02:30 PM

Mean Area 2.780
Mean Conc. 1.135mg/L



Sample

Sample Name: 280-175432-c-3
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

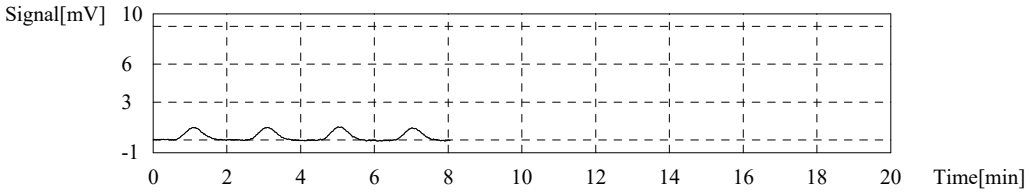
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.403mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.462	1.409mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:10:28 PM
2	3.460	1.408mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:12:37 PM
3	3.578	1.455mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:14:47 PM
4	3.288	1.339mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:17:05 PM

Mean Area 3.447
Mean Conc. 1.403mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

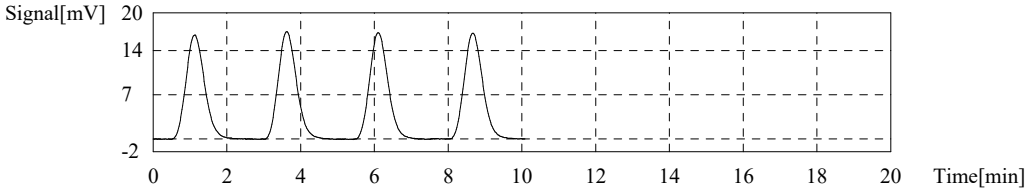
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.72mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	58.38	23.44mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:25:34 PM
2	59.61	23.93mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:28:13 PM
3	59.37	23.84mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:30:58 PM
4	58.91	23.65mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:33:42 PM

Mean Area 59.07
Mean Conc. 23.72mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

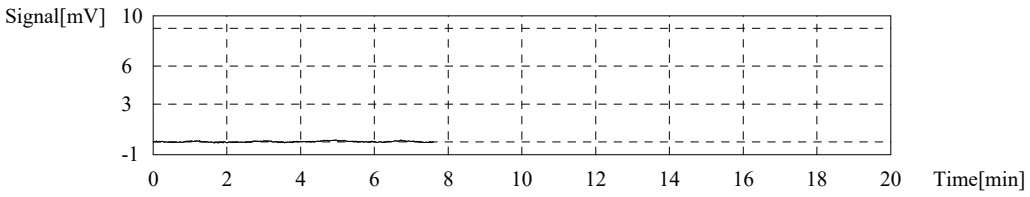
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1171mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2118	0.1046mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:41:35 PM
2	0.3650	0.1660mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:43:40 PM
3	0.3172	0.1469mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:45:45 PM
4	0.07830	0.05100mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:47:50 PM

Mean Area 0.2431
Mean Conc. 0.1171mg/L



Sample

Sample Name: 280-175432-c-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

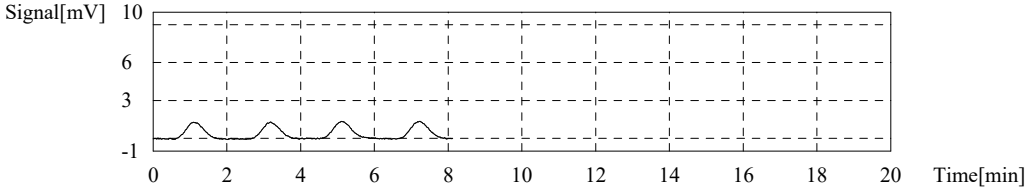
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.880mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.624	1.875mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:55:52 PM
2	4.595	1.863mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 12:57:59 PM
3	4.645	1.883mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:00:16 PM
4	4.684	1.899mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:02:29 PM

Mean Area 4.637
Mean Conc. 1.880mg/L



Sample

Sample Name: 280-175374-e-9
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

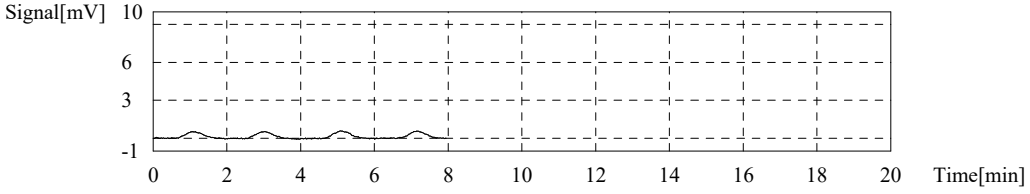
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.8196mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.822	0.7506mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:10:23 PM
2	1.945	0.7999mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:12:40 PM
3	2.282	0.9351mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:14:54 PM
4	1.927	0.7927mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:17:00 PM

Mean Area 1.994
Mean Conc. 0.8196mg/L



Sample

Sample Name: 280-175374-f-10
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

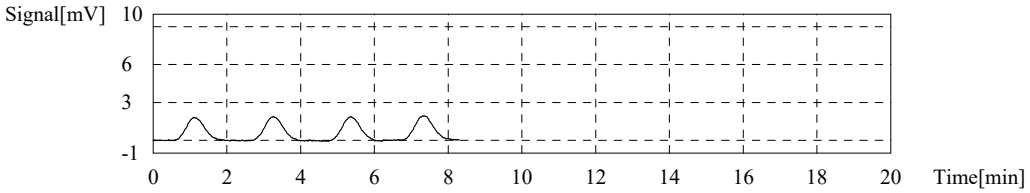
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.717mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.438	2.603mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:25:06 PM
2	6.970	2.816mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:27:23 PM
3	6.644	2.685mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:29:34 PM
4	6.837	2.763mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:31:50 PM

Mean Area 6.722
Mean Conc. 2.717mg/L



Sample

Sample Name: 280-175374-f-11
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

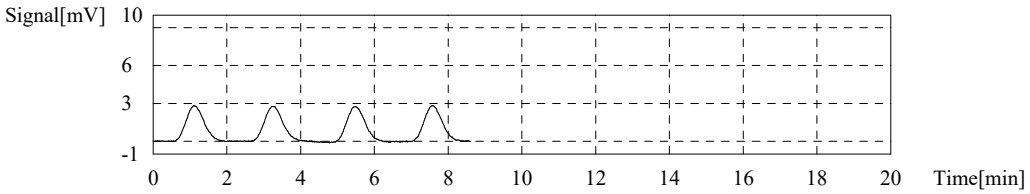
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.950mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.541	3.847mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:39:56 PM
2	9.792	3.948mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:42:21 PM
3	10.11	4.076mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:44:38 PM
4	9.743	3.928mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:46:58 PM

Mean Area 9.797
Mean Conc. 3.950mg/L



Sample

Sample Name: 280-175374-e-12
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

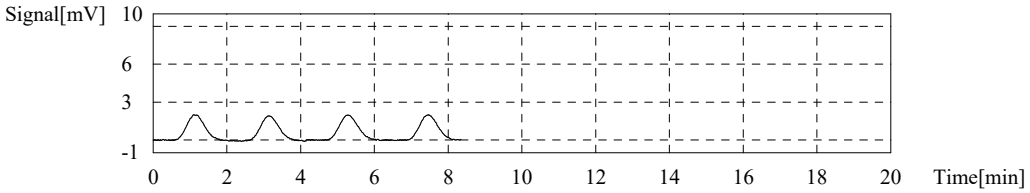
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.802mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.014	2.834mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:54:58 PM
2	7.021	2.836mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:57:17 PM
3	6.836	2.762mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 1:59:38 PM
4	6.869	2.775mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:01:51 PM

Mean Area 6.935
Mean Conc. 2.802mg/L



Sample

Sample Name: 280-175374-f-13
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

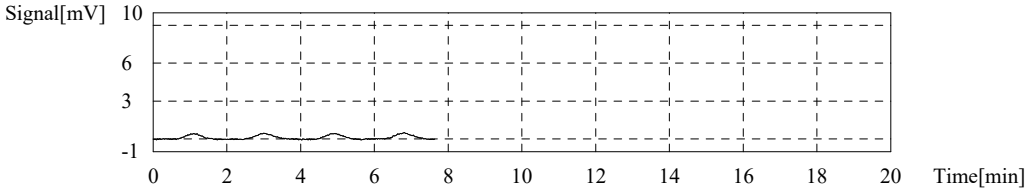
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6097mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.141	0.4774mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:09:44 PM
2	1.597	0.6603mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:11:49 PM
3	1.647	0.6804mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:13:54 PM
4	1.498	0.6206mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:16:01 PM

Mean Area 1.471
Mean Conc. 0.6097mg/L



Sample

Sample Name: 280-175374-f-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

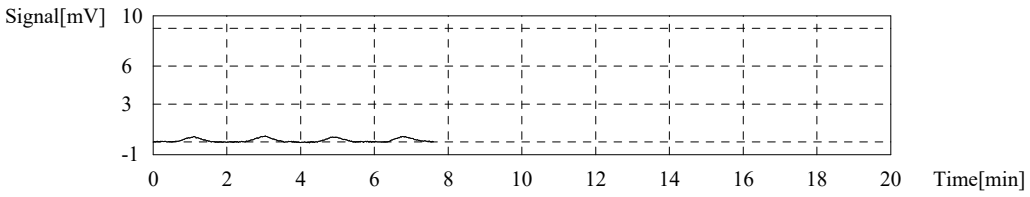
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5601mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.269	0.5287mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:23:54 PM
2	1.336	0.5556mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:25:59 PM
3	1.380	0.5732mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:28:04 PM
4	1.404	0.5829mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:30:09 PM

Mean Area 1.347
Mean Conc. 0.5601mg/L



Sample

Sample Name: MS 280-175374-f-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

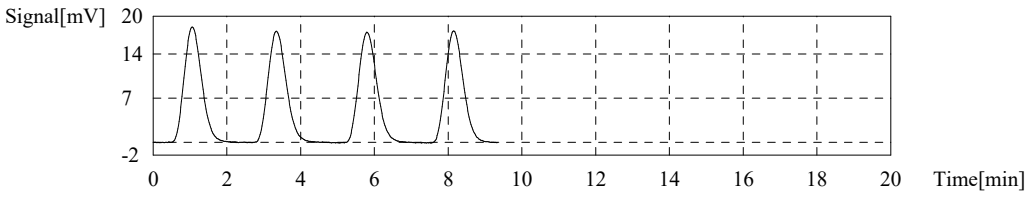
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.47mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.78	24.40mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:38:23 PM
2	61.20	24.57mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:41:05 PM
3	61.09	24.53mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:43:37 PM
4	60.66	24.36mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:46:05 PM

Mean Area 60.93
Mean Conc. 24.47mg/L



Sample

Sample Name: MSD 280-175374-f-4
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

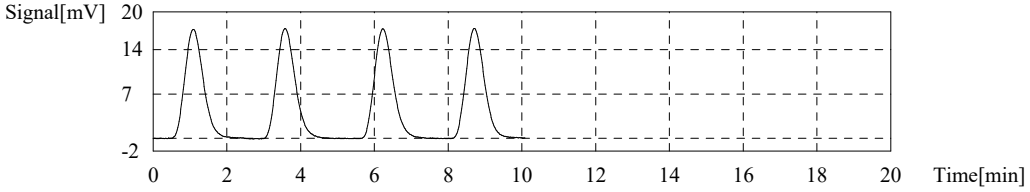
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.61mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.44	24.27mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:54:32 PM
2	61.87	24.84mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 2:57:27 PM
3	61.61	24.74mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:00:06 PM
4	61.21	24.58mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:02:46 PM

Mean Area 61.28
Mean Conc. 24.61mg/L



Sample

Sample Name: 280-175374-f-5
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

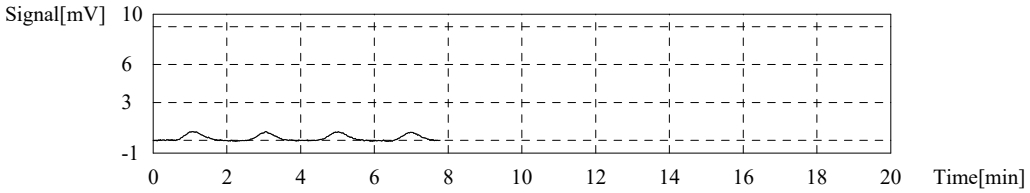
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9734mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.369	0.9700mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:10:42 PM
2	2.258	0.9255mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:12:51 PM
3	2.555	1.045mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:15:00 PM
4	2.328	0.9536mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:17:06 PM

Mean Area 2.378
Mean Conc. 0.9734mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

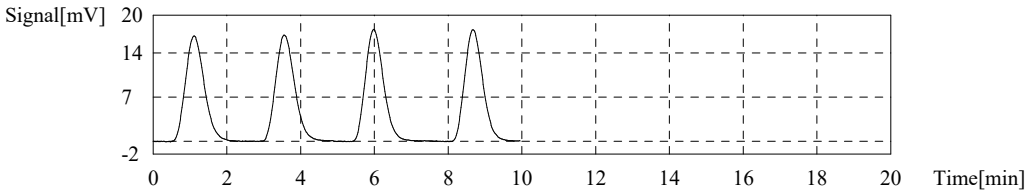
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.47mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.34	24.23mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:25:32 PM
2	60.50	24.29mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:28:11 PM
3	61.69	24.77mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:31:05 PM
4	61.21	24.58mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:33:39 PM

Mean Area 60.94
Mean Conc. 24.47mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

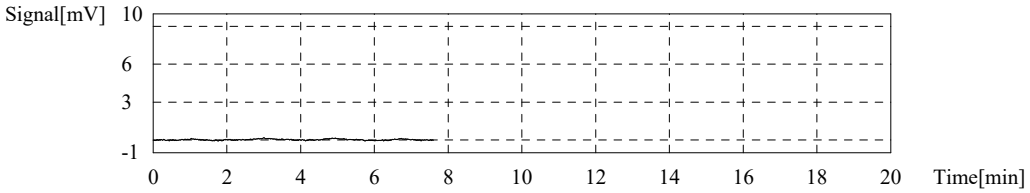
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1502mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4019	0.1808mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:41:33 PM
2	0.1136	0.06517mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:43:38 PM
3	0.5073	0.2231mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:45:43 PM
4	0.2793	0.1316mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:47:48 PM

Mean Area 0.3255
Mean Conc. 0.1502mg/L



Sample

Sample Name: 280-175374-e-6
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

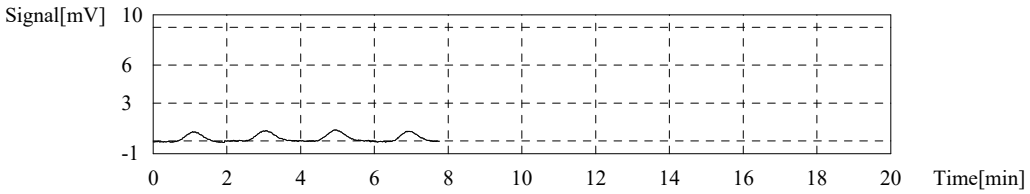
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.142mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.836	1.157mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:55:44 PM
2	2.770	1.131mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 3:57:49 PM
3	2.989	1.219mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:00:02 PM
4	2.598	1.062mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:02:07 PM

Mean Area 2.798
Mean Conc. 1.142mg/L



Sample

Sample Name: 280-175374-e-7
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

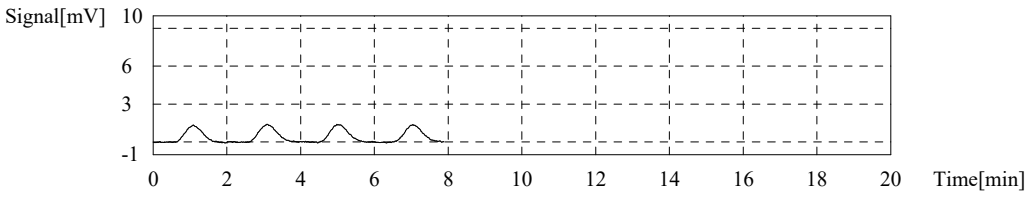
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.905mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.491	1.821mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:10:07 PM
2	4.829	1.957mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:12:14 PM
3	4.735	1.919mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:14:26 PM
4	4.745	1.923mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:16:33 PM

Mean Area 4.700
Mean Conc. 1.905mg/L



Sample

Sample Name: 280-175374-f-8
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

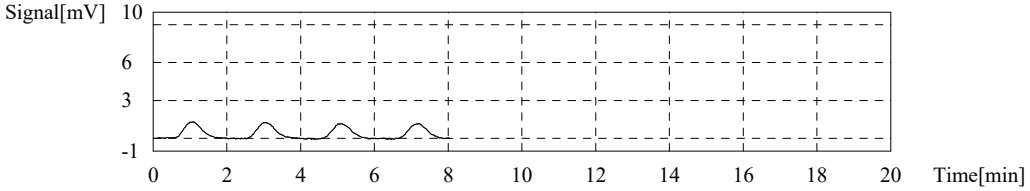
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.718mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.071	1.653mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:24:31 PM
2	4.414	1.790mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:26:43 PM
3	4.240	1.721mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:29:02 PM
4	4.212	1.709mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:31:13 PM

Mean Area 4.234
Mean Conc. 1.718mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

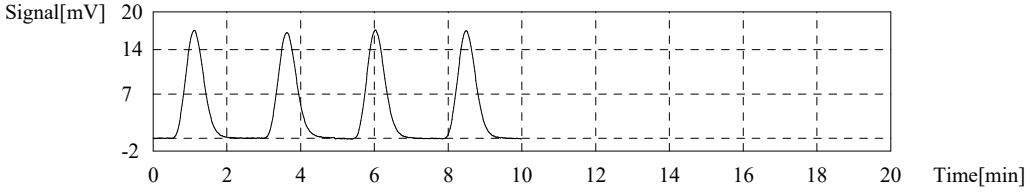
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.98mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.84	24.03mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:39:46 PM
2	59.00	23.69mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:42:22 PM
3	60.27	24.20mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:45:04 PM
4	59.81	24.02mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:47:52 PM

Mean Area 59.73
Mean Conc. 23.98mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1921mg/L

1. Det

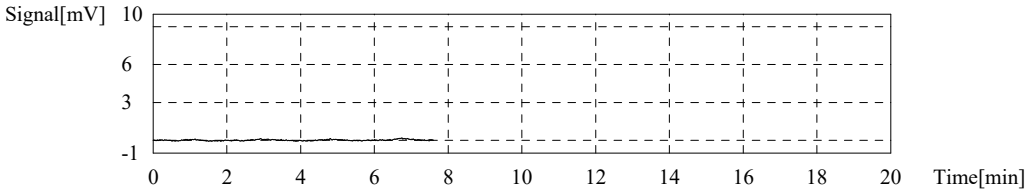
Anal.: NPOC

TOC-Control L Report

ABW
2023_04_24_001.tlx

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3597	0.1639mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:55:46 PM
2	0.3356	0.1542mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:57:51 PM
3	0.4705	0.2084mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 4:59:56 PM
4	0.5537	0.2417mg/L	50uL	1.000		NPOC_Calibration_10_31_2022.2023_03_20_14_43_51.cal	4/25/2023 5:02:01 PM

Mean Area 0.4299
Mean Conc. 0.1921mg/L



Shi 7 TOC

9060

5310

	Analysis	Sample Name	Result (pH<2)	Notes	Vial
1*	NPOC	ICV			1
2*	NPOC	ICB		0.2% H_2SO_4 0.0459	2
3*	NPOC	LCS			3
4*	NPOC	MB			4
5*	NPOC	TIC			5
6*	NPOC	280-175123-b-2			6
7*	NPOC	MS 280-175123-b-2			7
8*	NPOC	MSD 280-175123-b-2			8
9*	NPOC	280-175123-b-3			9
10*	NPOC	280-175142-a-2		2x odor	10
11*	NPOC	280-175142-a-3			11
12*	NPOC	280-175142-a-4			12
13*	NPOC	280-175431-a-35			13
14*	NPOC	280-175070-b-2	>2	100x RR	14
15*	NPOC	CCV			15
16*	NPOC	CCB			16
17*	NPOC	280-175128-d-1			17
18*	NPOC	280-175128-c-2			18
19*	NPOC	280-175431-a-7			19
20*	NPOC	280-175431-a-15			20
21*	NPOC	MS 280-175431-a-15			21
22*	NPOC	MSD 280-175431-a-15			22
23*	NPOC	280-175431-a-17			23
24*	NPOC	280-175431-a-19			24
25*	NPOC	280-175431-a-24			25
26*	NPOC	280-175431-a-33			26
27*	NPOC	CCV			27
28*	NPOC	CCB			28
29*	NPOC	280-175465-a-26		10x odor	29
30*	NPOC	280-175465-a-28			30
31*	NPOC	280-175465-a-30			31
32*	NPOC	280-175465-a-33			32
33*	NPOC	280-175465-a-35			33
34*	NPOC	LCS			34
35*	NPOC	MB			35
36*	NPOC	TIC			36
37*	NPOC	280-175465-a-38		2x odor	37
38*	NPOC	MS 280-175465-a-38		2x ↓	38
39*	NPOC	CCV			39
40*	NPOC	CCB			40
41*	NPOC	MSD 280-175465-a-38		2x odor	41
42*	NPOC	280-175465-a-17			42
43*	NPOC	280-175465-a-19		2x ↓	43
44*	NPOC	280-175465-a-21		2x odor, color	44
45*	NPOC	280-175465-a-22			45
46*	NPOC	280-175374-f-2			46
47*	NPOC	280-175374-f-3			47
48*	NPOC	280-175432-c-10		2x odor, color	48
49*	NPOC	280-175432-d-11		2x ↓	49
50*	NPOC	280-175432-d-9		2x	50
51*	NPOC	CCV			51
52*	NPOC	CCB			52
53*	NPOC	280-175465-a-39		2x odor	53

Shift 7 TOC

5310

	Analysis	Sample Name	Result	Notes	Vial
			pH<2		
54*	NPOC	MS 280-175465-a-39		2x odor	54
55*	NPOC	MSD 280-175465-a-39		2x "	55
56*	NPOC	280-175431-a-9			56
57*	NPOC	280-175431-a-11			57
58*	NPOC	280-175431-a-13			58
59*	NPOC	280-175374-f-1			59
60*	NPOC	280-175432-d-5			60
61*	NPOC	280-175432-d-6			61
62*	NPOC	280-175432-d-7			62
63*	NPOC	CCV			63
64*	NPOC	CCB			64
65*	NPOC	280-175432-d-8			65
66*	NPOC	280-175374-e-14			66
67*	NPOC	LCS			67
68*	NPOC	MB			68
69*	NPOC	280-175465-a-25		2x odor & color	69
70*	NPOC	MS 280-175465-a-25		2x ↓	70
71*	NPOC	MSD 280-175465-a-25		2x	71
72*	NPOC	280-175432-d-1			72
73*	NPOC	280-175432-d-2			73
74*	NPOC	280-175432-c-3			74
75*	NPOC	CCV			75
76*	NPOC	CCB			76
77*	NPOC	280-175432-c-4			77
78*	NPOC	280-175374-e-9			78
79*	NPOC	280-175374-f-10			79
80*	NPOC	280-175374-f-11			80
81*	NPOC	280-175374-e-12			81
82*	NPOC	280-175374-f-13			82
83*	NPOC	280-175374-f-4			83
84*	NPOC	MS 280-175374-f-4			84
85*	NPOC	MSD 280-175374-f-4			85
86*	NPOC	280-175374-f-5			86
87*	NPOC	CCV			87
88*	NPOC	CCB			88
89*	NPOC	280-175374-e-6			89
90*	NPOC	280-175374-e-7			90
91*	NPOC	280-175374-f-8			91
92*	NPOC	CCV			92
93*	NPOC	CCB			93

BWH 5000, 1000 MS

Shipping and Receiving Documents

Eurofins TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Bieniulis, Dylan T.	Carrier Tracking No(s):	COC No:
Client Contact: Mary Lou Fox	Phone:	E-Mail: Dylan.Bieniulis@et.eurofinsus.com		Page:
Company: CDM Smith, Inc.				Job #:
Address: 14432 S.E. Eastgate Way Suite 100	Due Date Requested:			
City: Bellvue	TAT Requested (days): 15 business days			
State, Zip: WA, 98007				
Phone: 425-519-8300	PO #: 98961			
Email: FoxML@cdmsmith.com	WO #:			
Project Name: Bannock Ft. Hall Mine LF, Idaho	Project #: 28018772			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D - VOCs	8011 - EDB, DBCP, and 1,2,3-TCP	6020B - Total Metals	6020B - Dissolved Metals (Field Filtered)	7470A - Total Mercury	8270E - SVOCs	8321A - Herbicides and Pentachlorophenol	8270E_SIM - Benzo[a]pyrene	8081B - OC Pesticides and 8082A - PCBs	8141B OP Pesticides	8290 - 2,3,7,8-TCDD (ETA SACRAMENTO)	4500_CN_E - Total Cyanide	SM4500_S2_D - Total Sulfide	9056A - Anions (NO3, NO2, Cl, SO4, and Br)	9060A - TOC	RSK-175 - Dissolved Gases (MEEA)	2320B - Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	A	D	D	D	N	N	N	N	N	N	B	C/B	N	S	A	N		
MW-119D-20230413	4/13/23	1055	G	W			X			X										X	X			6	
MW-119S-20230413	4/13/23	0915	G	W			X			X										X	X			6	
RW-3-20230413	4/13/23	1245	G	W			X			X										X	X			6	
MW-113D-20230414	4/14/23	1255	G	W			X																	3	
MW-113S-20230414	4/14/23	0925	G	W			X																	3	
MW-112M-20230415	4/15/23	1245	G	W			X																		
MW-112D-20230415	4/15/23	1405	G	W			X																		
~~EB~~ HR EB-04-20230414	4/14/23	1010	G	W			X																		
EB-03-20230413	4/13/23	1415	G	W			X																		
MW-109D-20230415	4/15/23	1800	G	W			X																		
TB-05-20230416	4/16/23	0940	G	W			X																	3	

280-175123 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		4/16/23 0945			4/17/23 0900	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.3 +R14 CF0.1

11/27/2023 7:19 PM

Login Sample Receipt Checklist

Client: CDM Smith Inc

Job Number: 280-175123-1

Login Number: 175123
List Number: 1
Creator: Held, Wesley

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Headspace larger than 1/4" in one or more vials, one vial with accpt. headspace
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix F

VOCs, Geochemistry, and Inorganics Trend Charts

Chlorinated Ethenes and Geochemistry Time Series Plots -

Data filters

This report is filtered to only include:

- **MP-2, MP-3, MP-4, MW-101S, MW-102S, MW-105D, MW-105S, MW-109D, MW-109S, MW-110S, MW-111D, MW-112D, MW-112M, MW-113D, MW-113S, MW-118D, MW-119D, MW-119S, MW-120D, MW-120S, MW-123, MW-124, and MW-125** from **Cell 1 Monitoring Well**
- Results from **01 January 2002** to **30 April 2023**

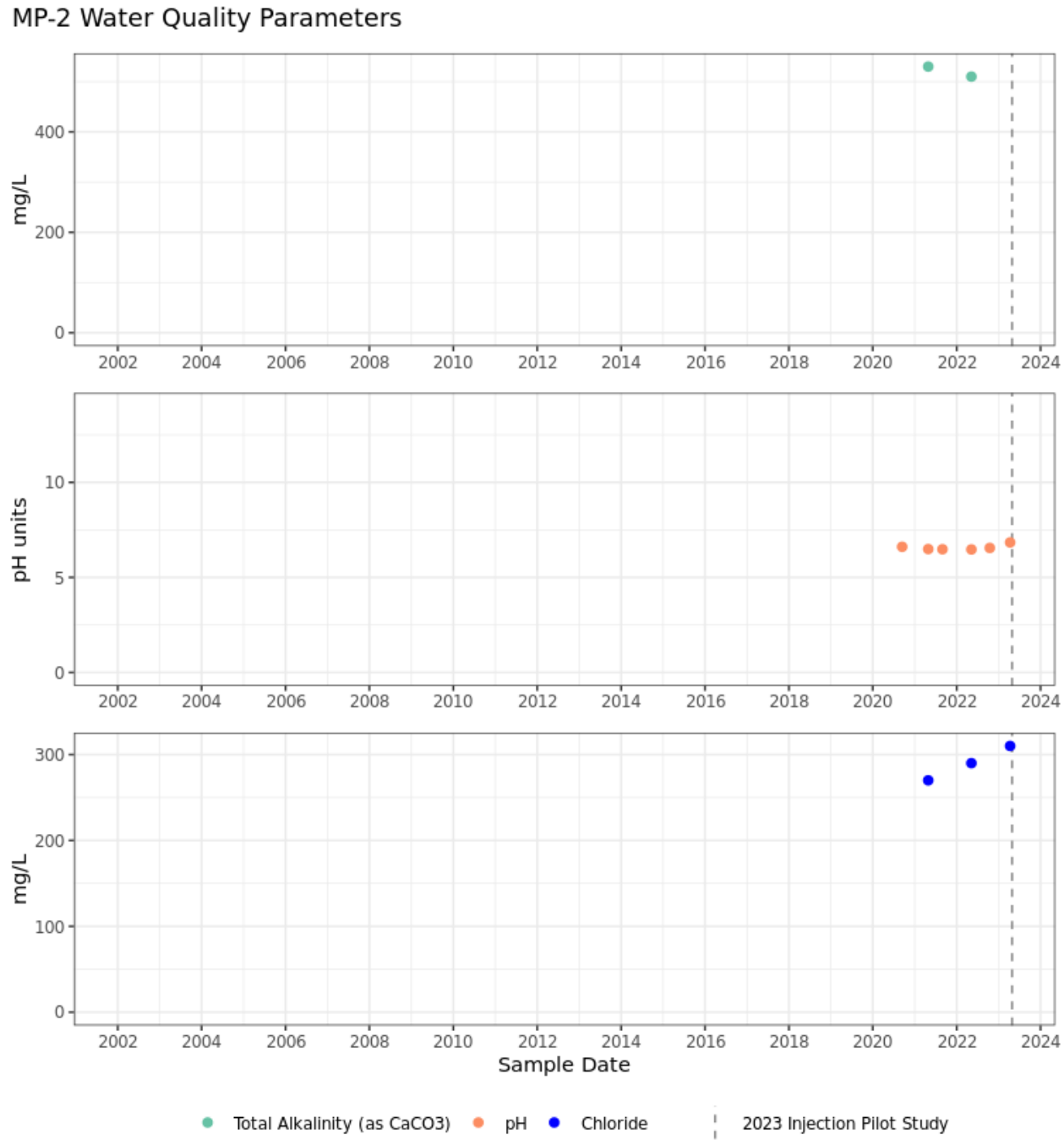
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- The molar concentration graphs only plot detected data
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

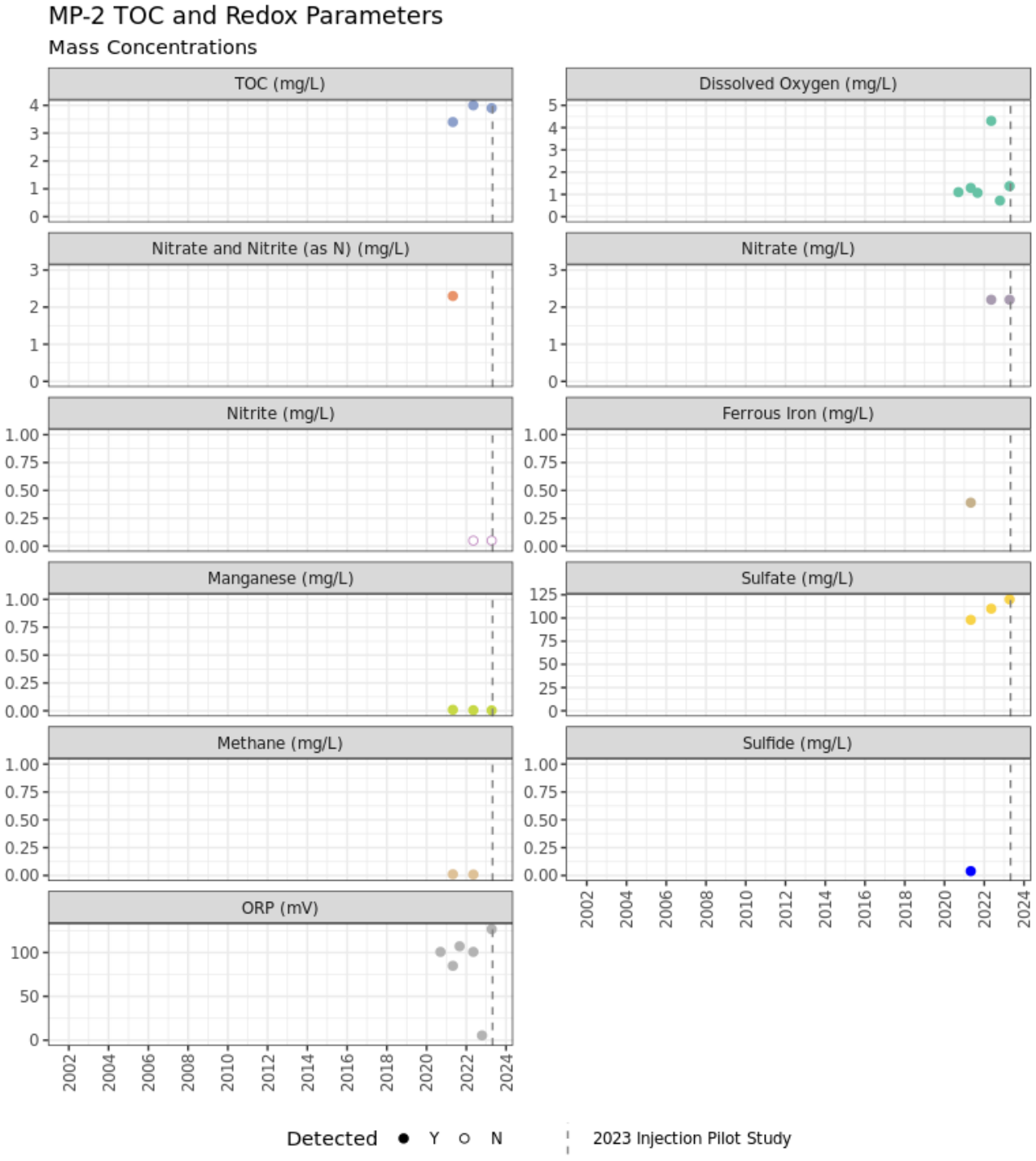
Well summaries

MP-2

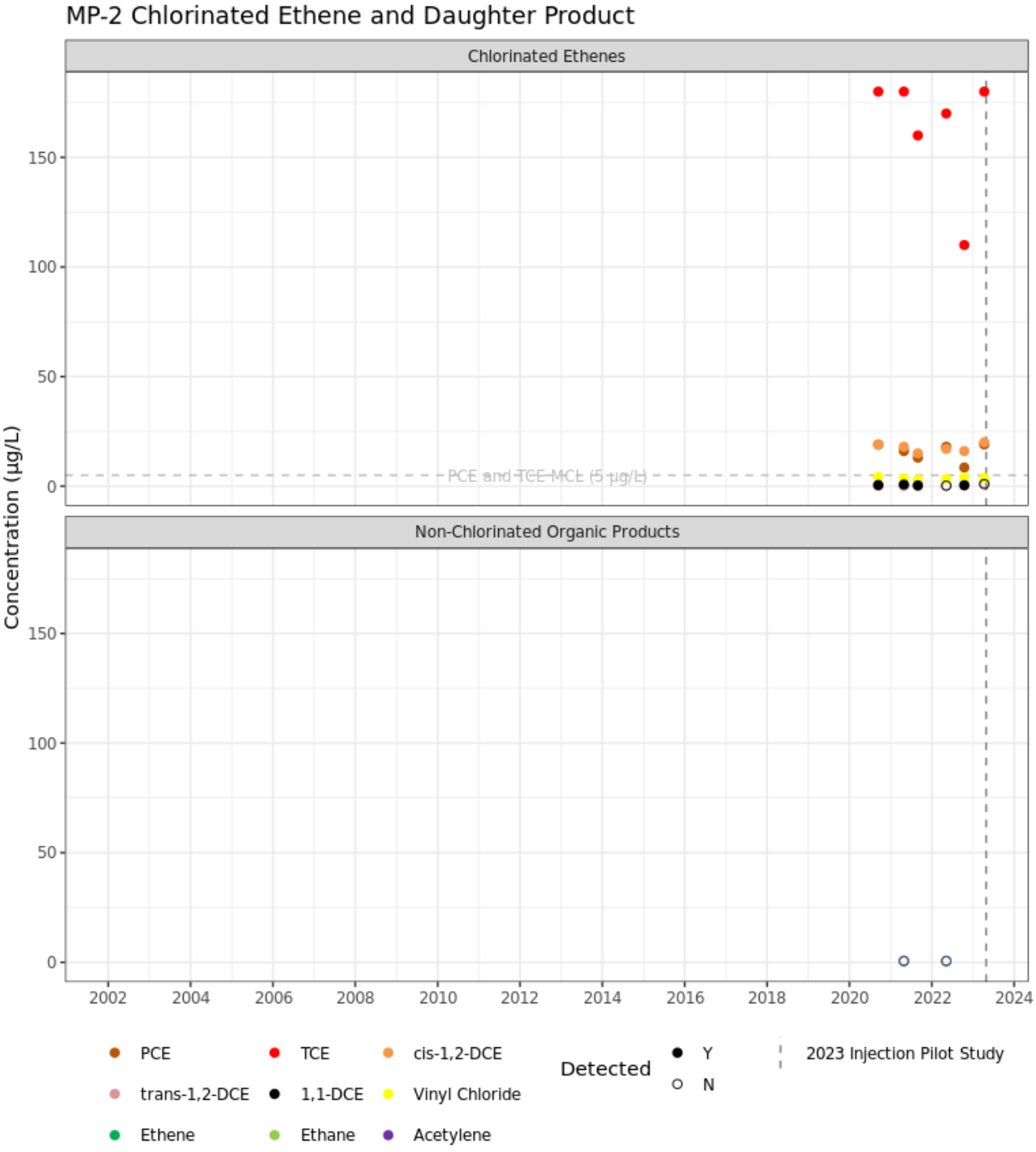
Water Quality



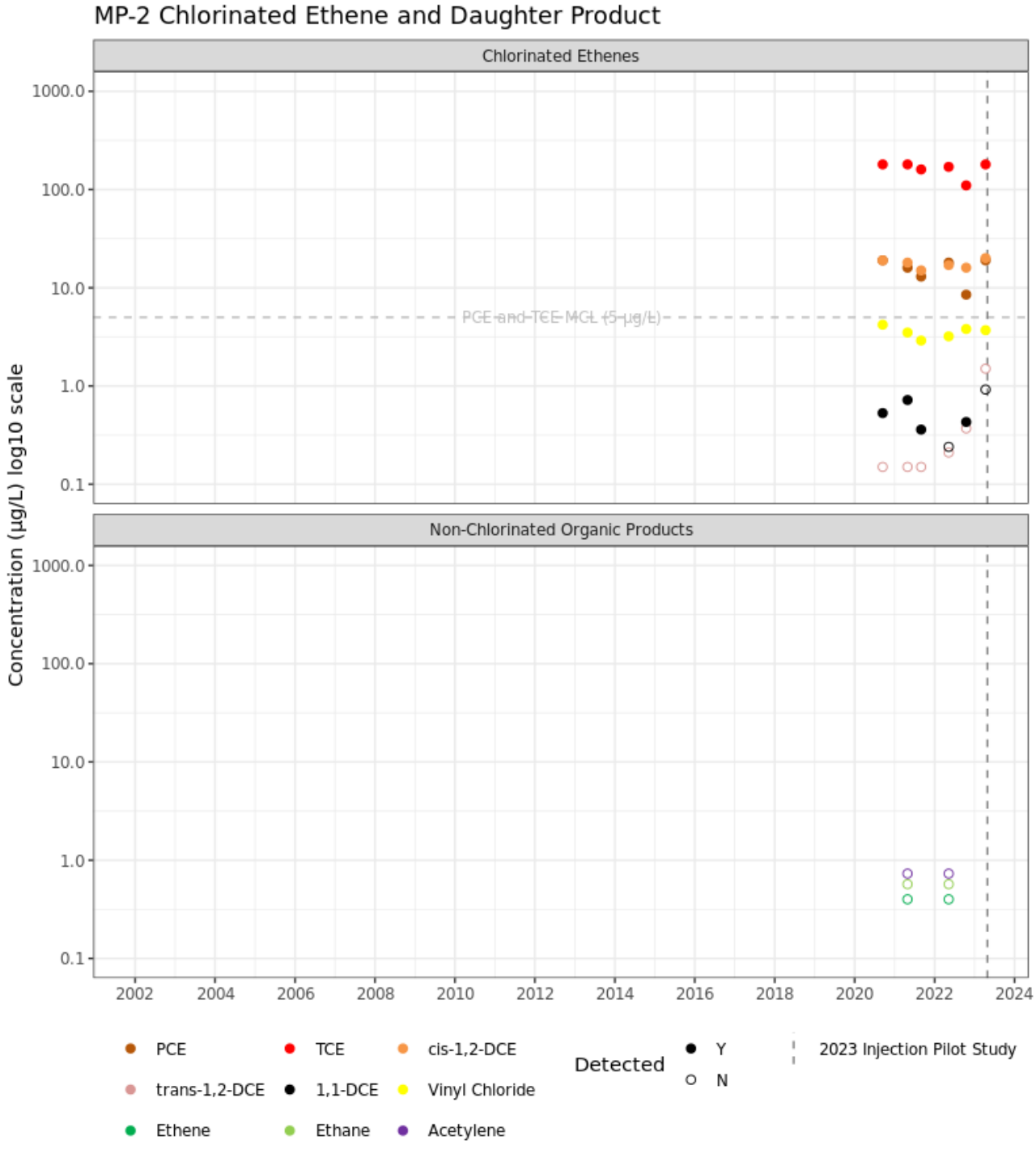
TOC and Redox Parameters



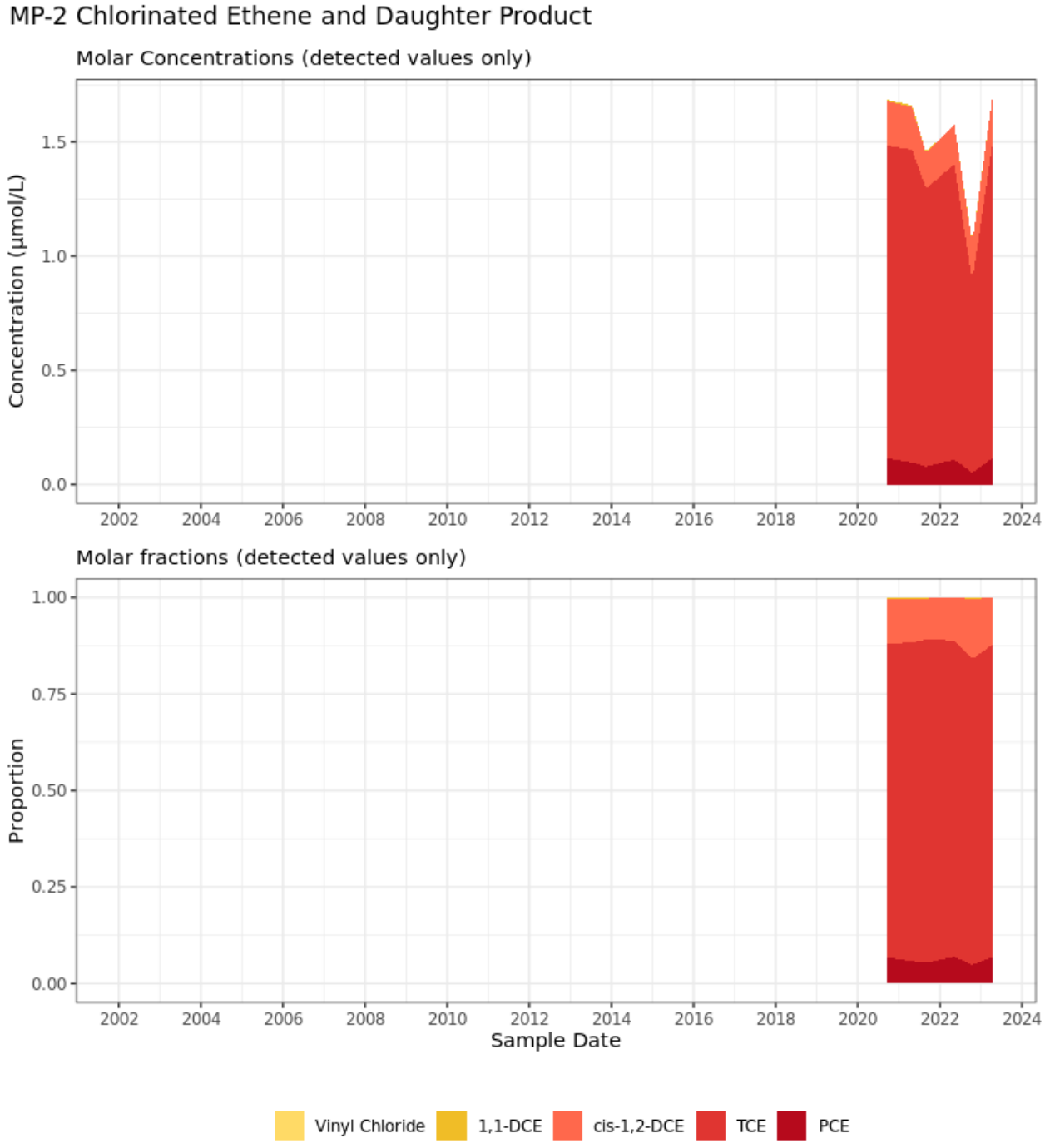
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

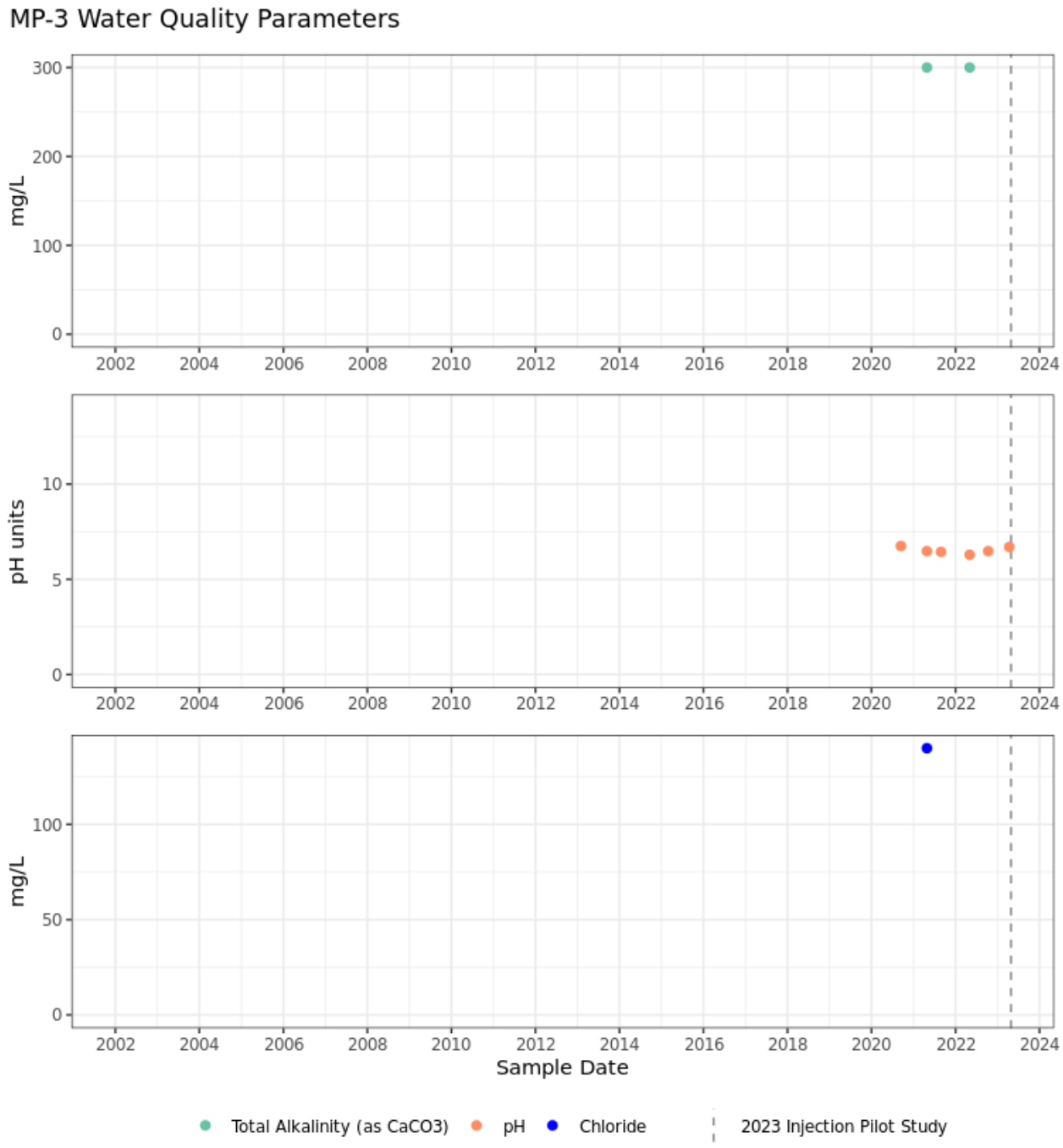


Chlorinated Ethene and Daughter Product Concentration

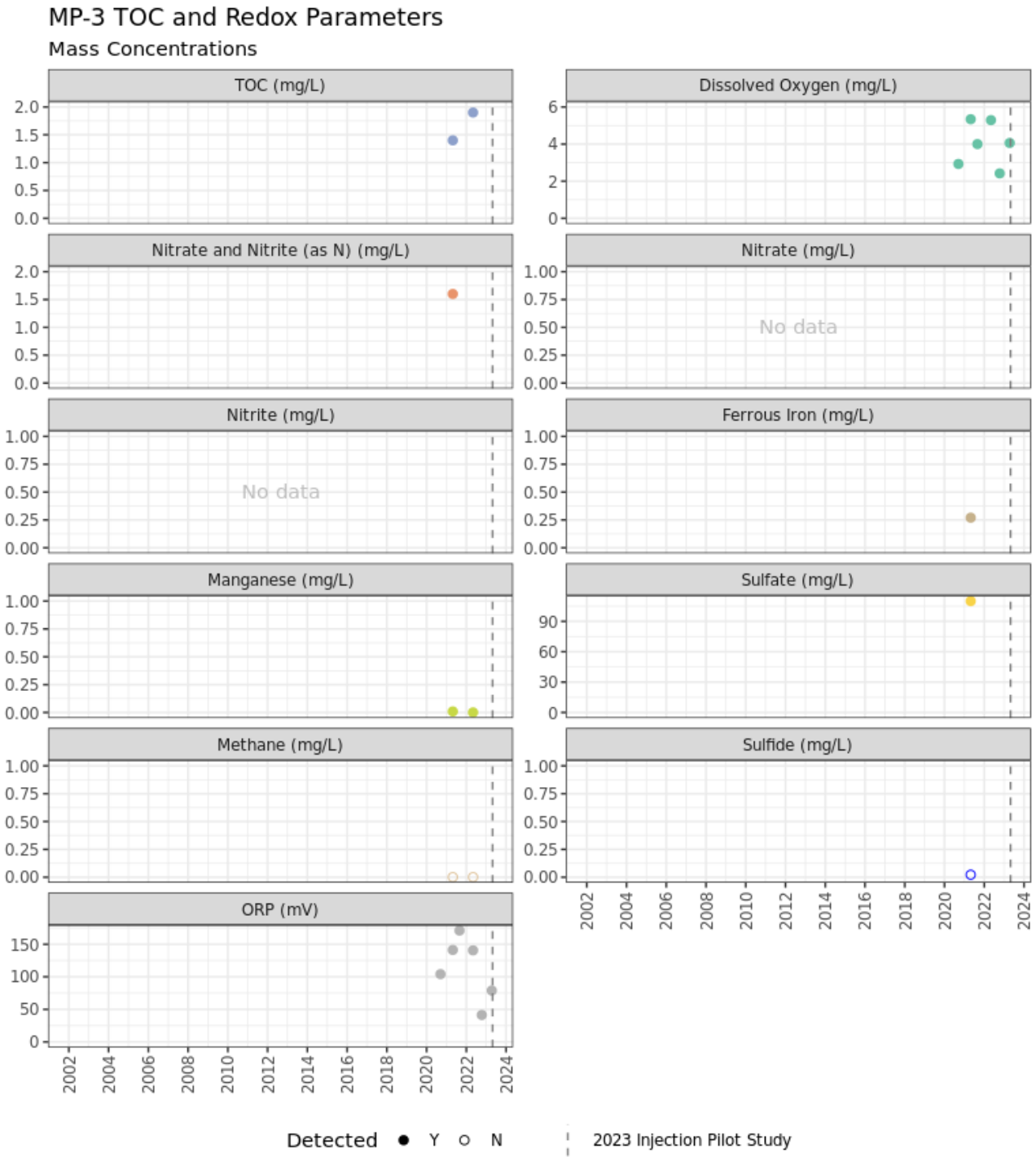


MP-3

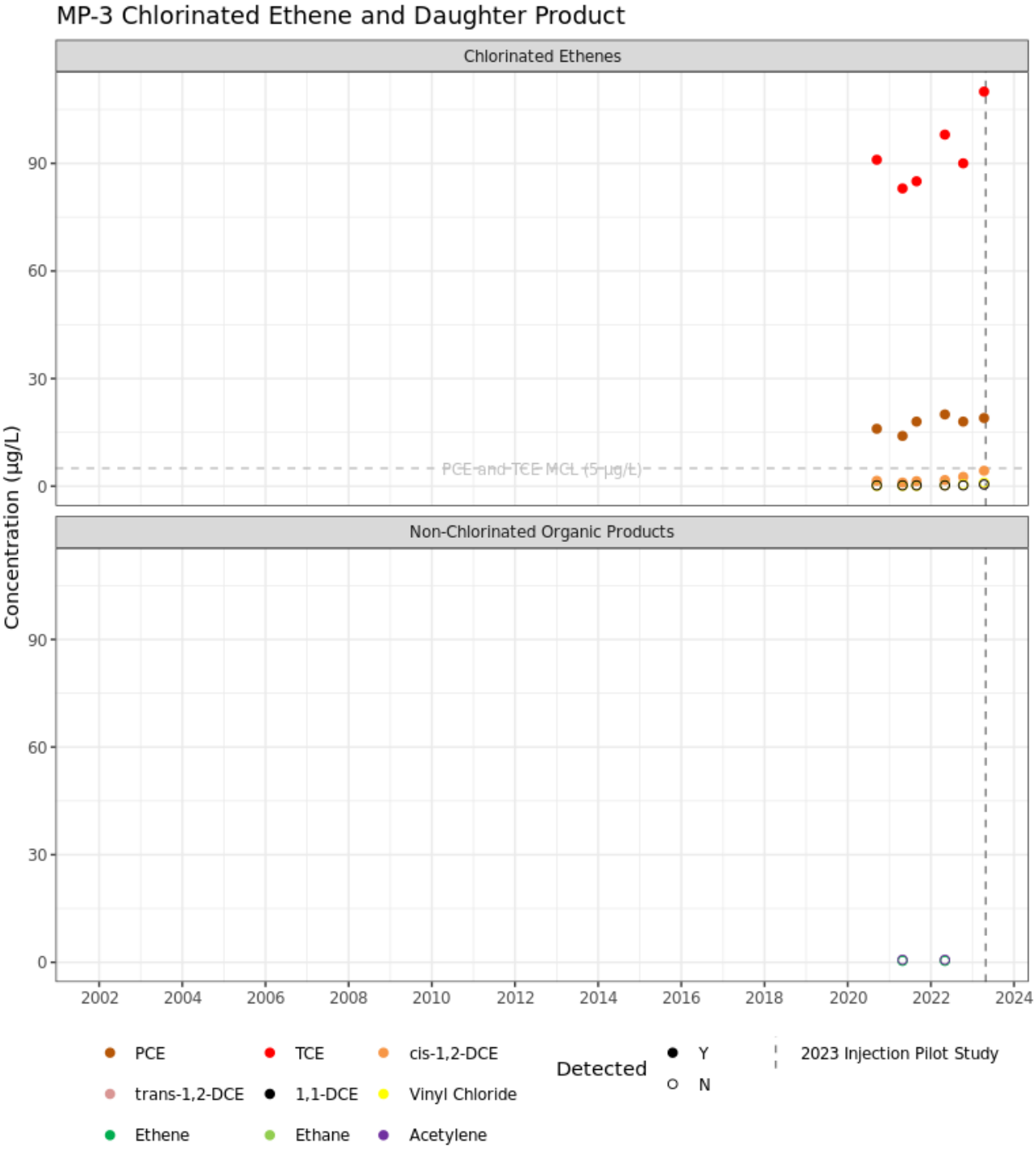
Water Quality



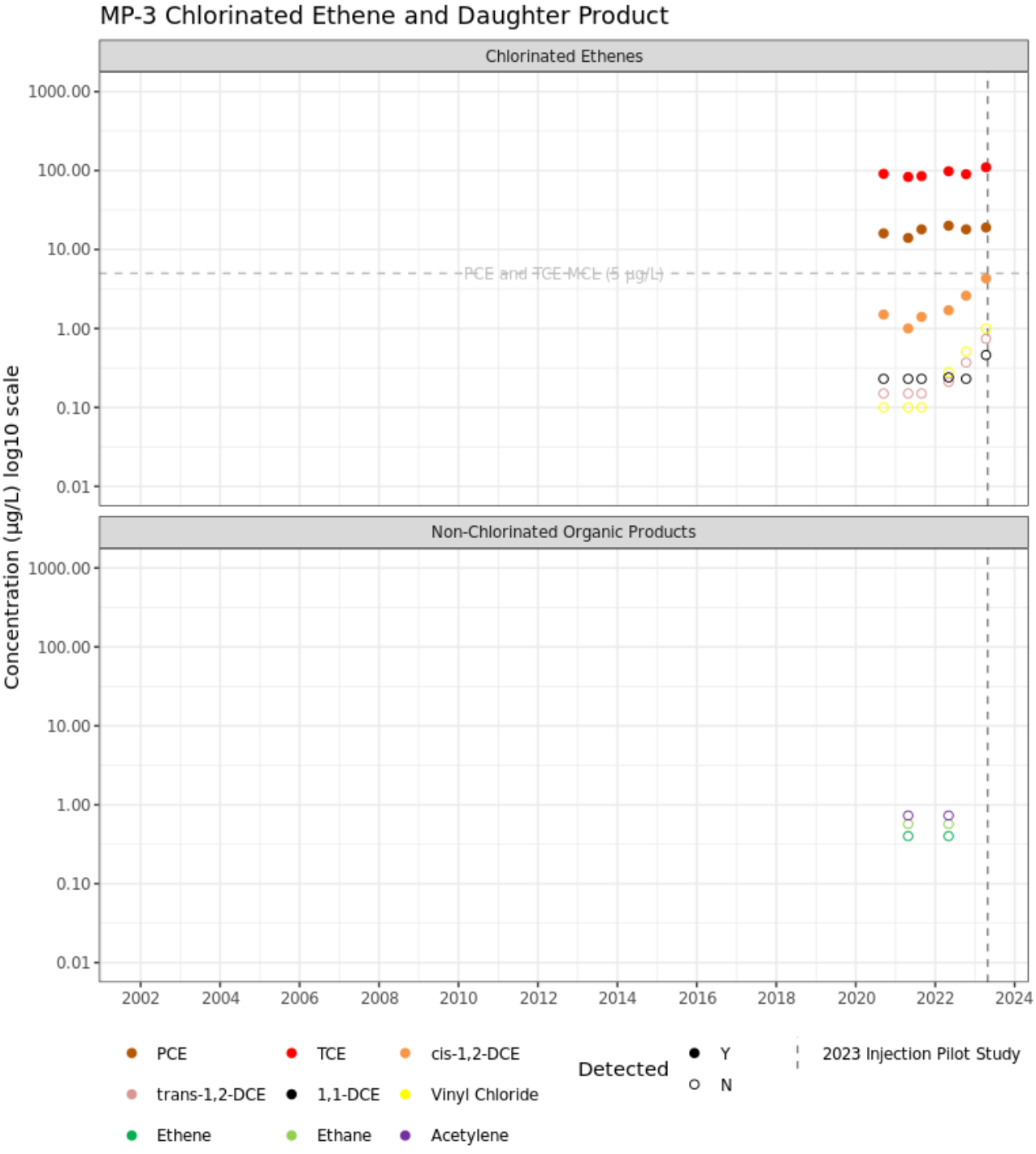
TOC and Redox Parameters



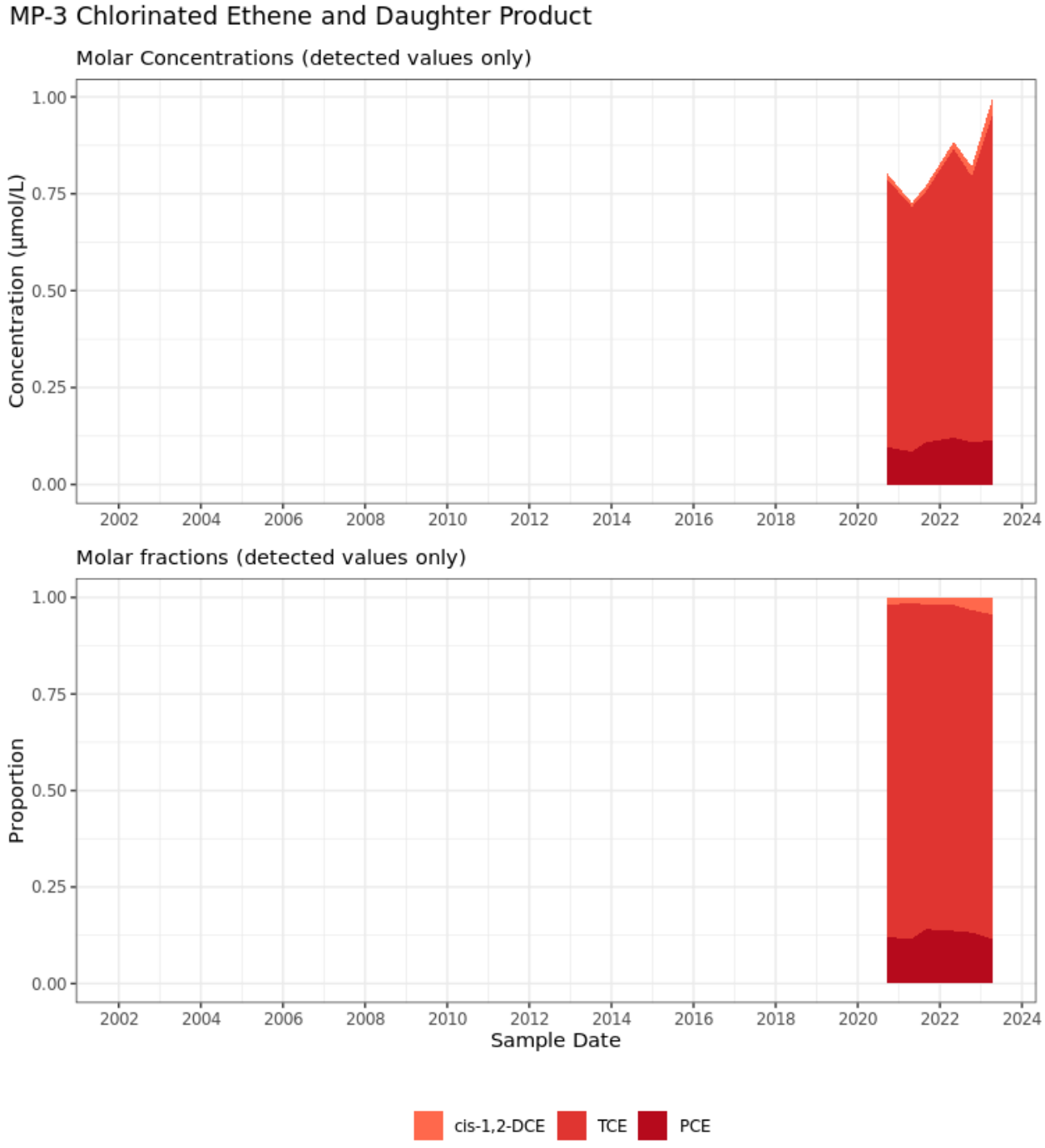
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

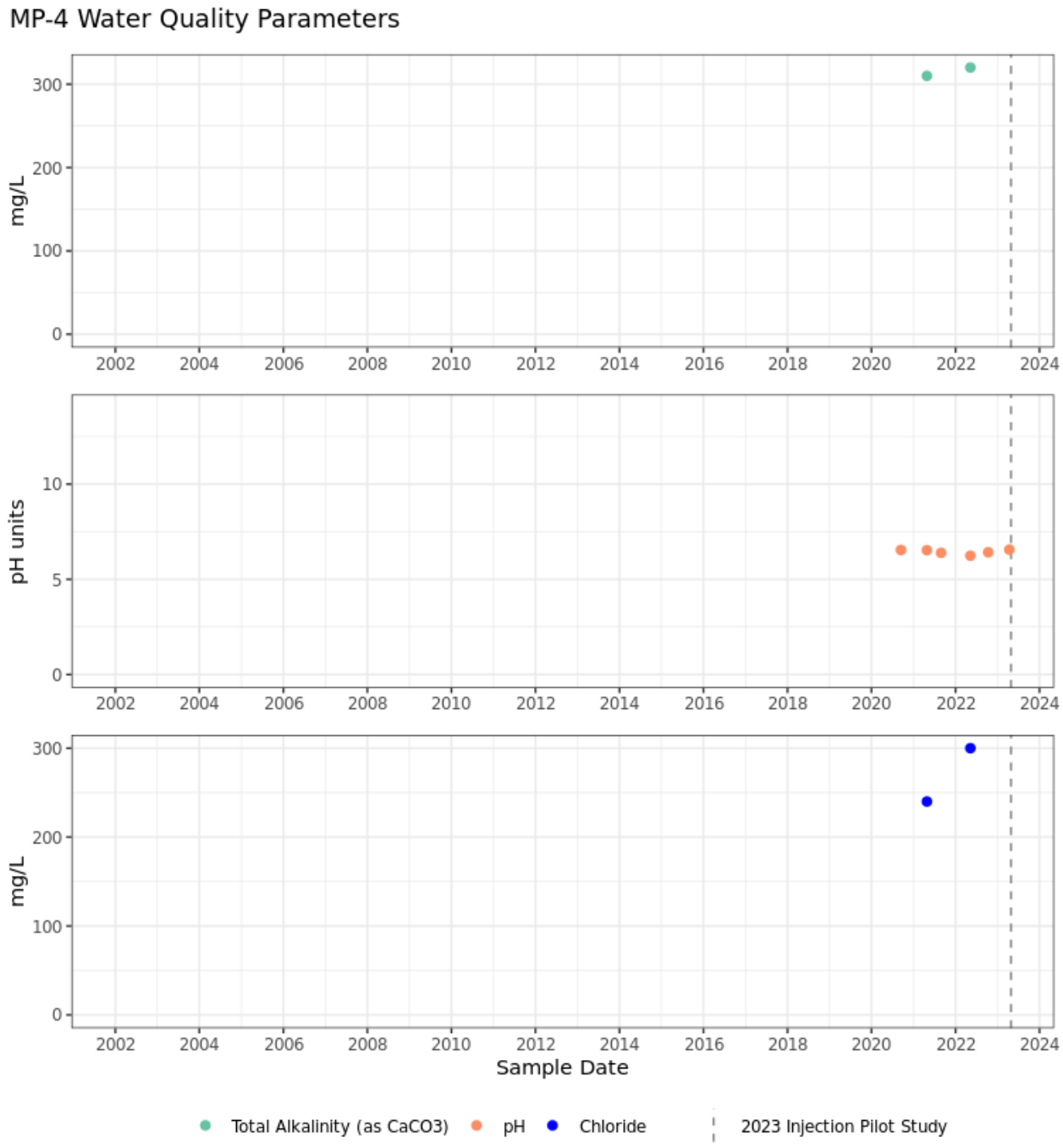


Chlorinated Ethene and Daughter Product Concentration

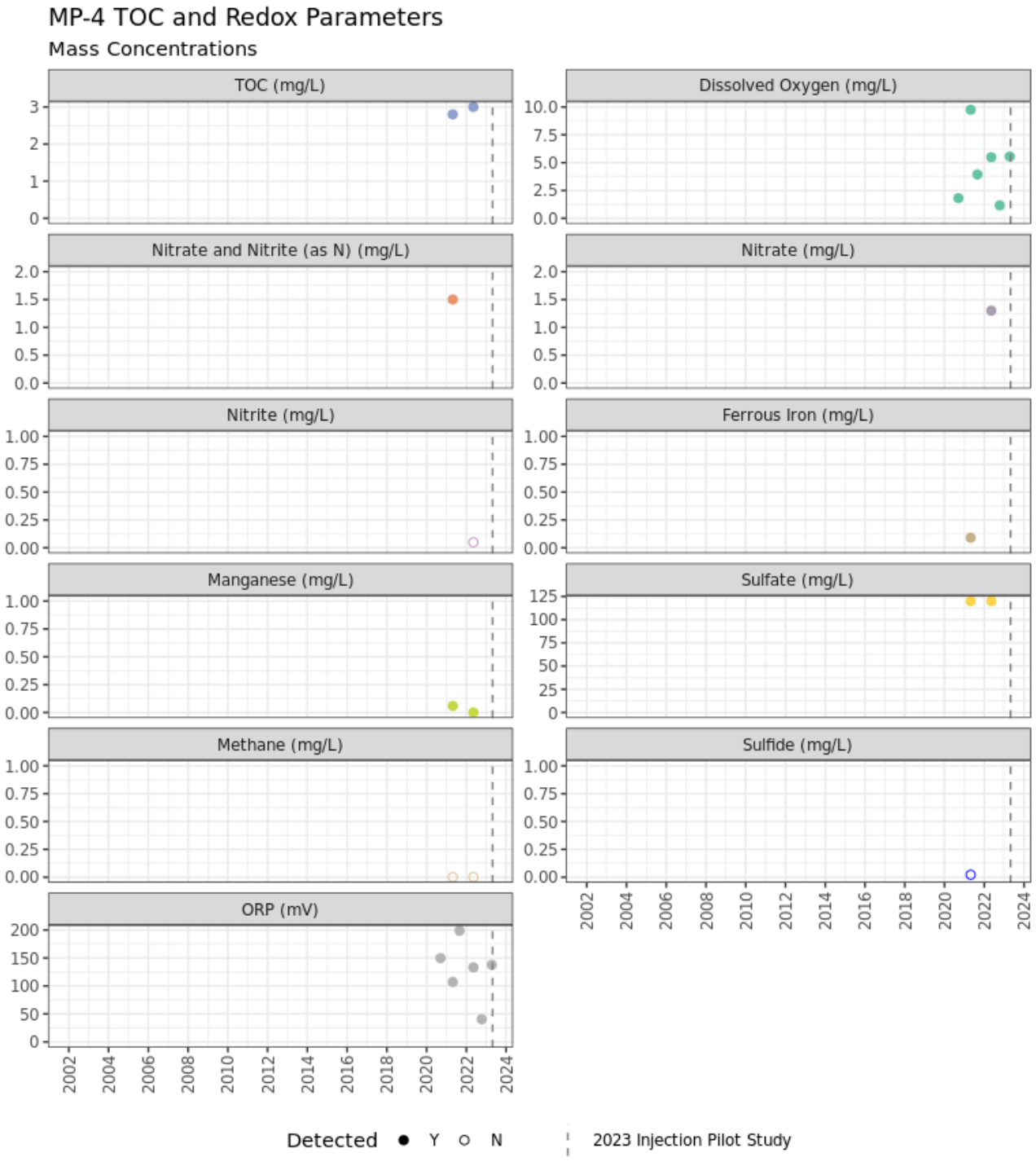


MP-4

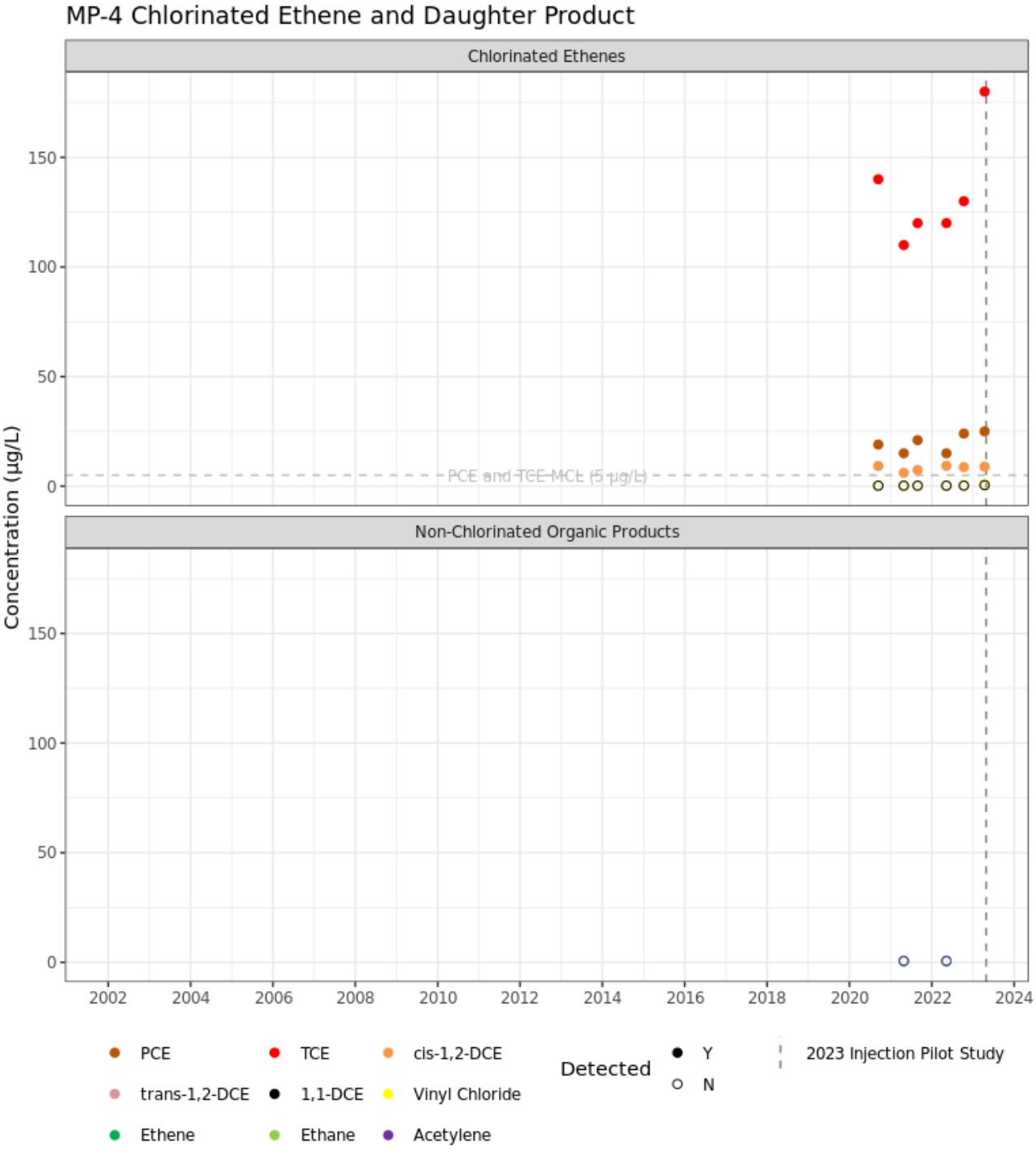
Water Quality



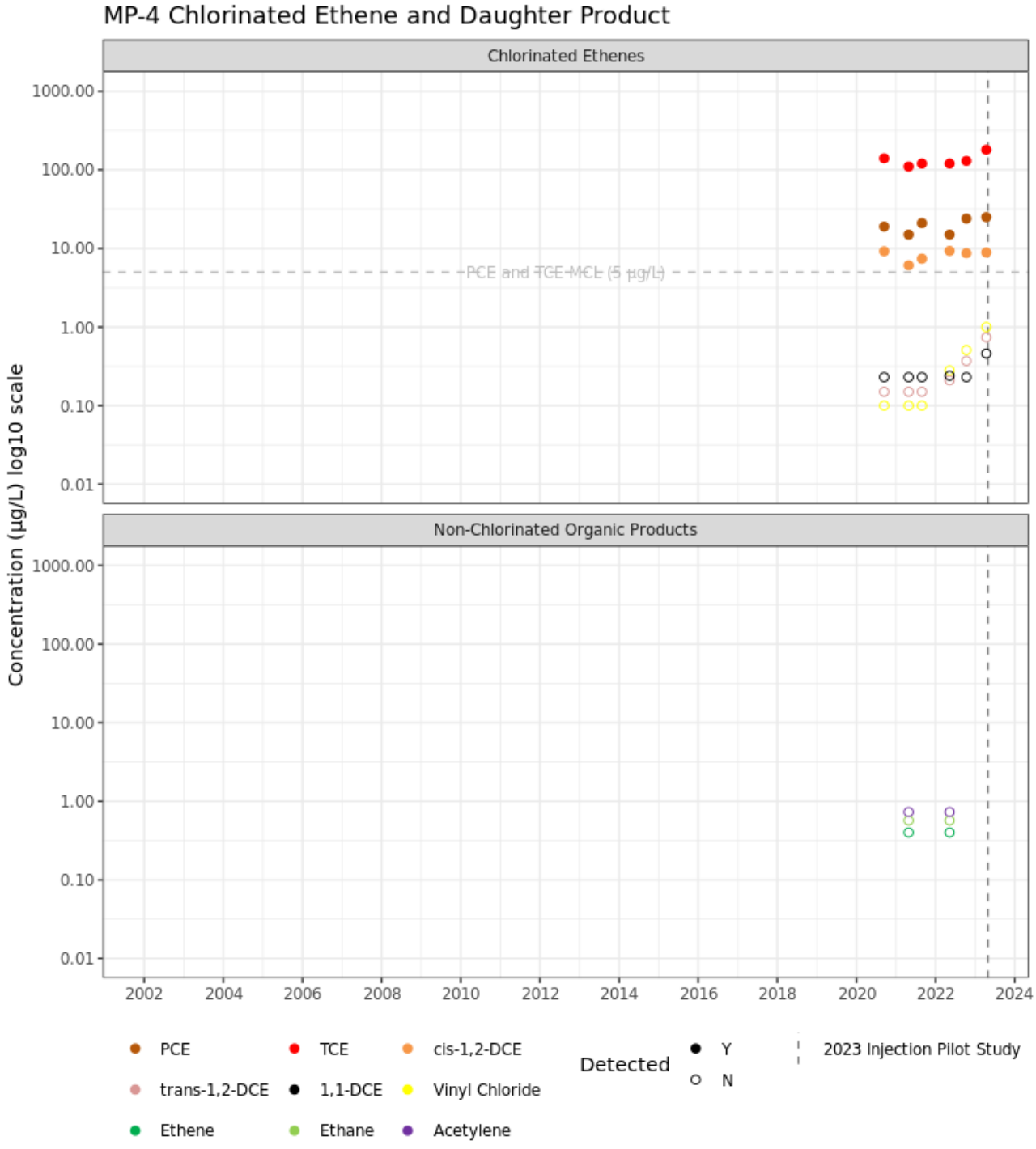
TOC and Redox Parameters



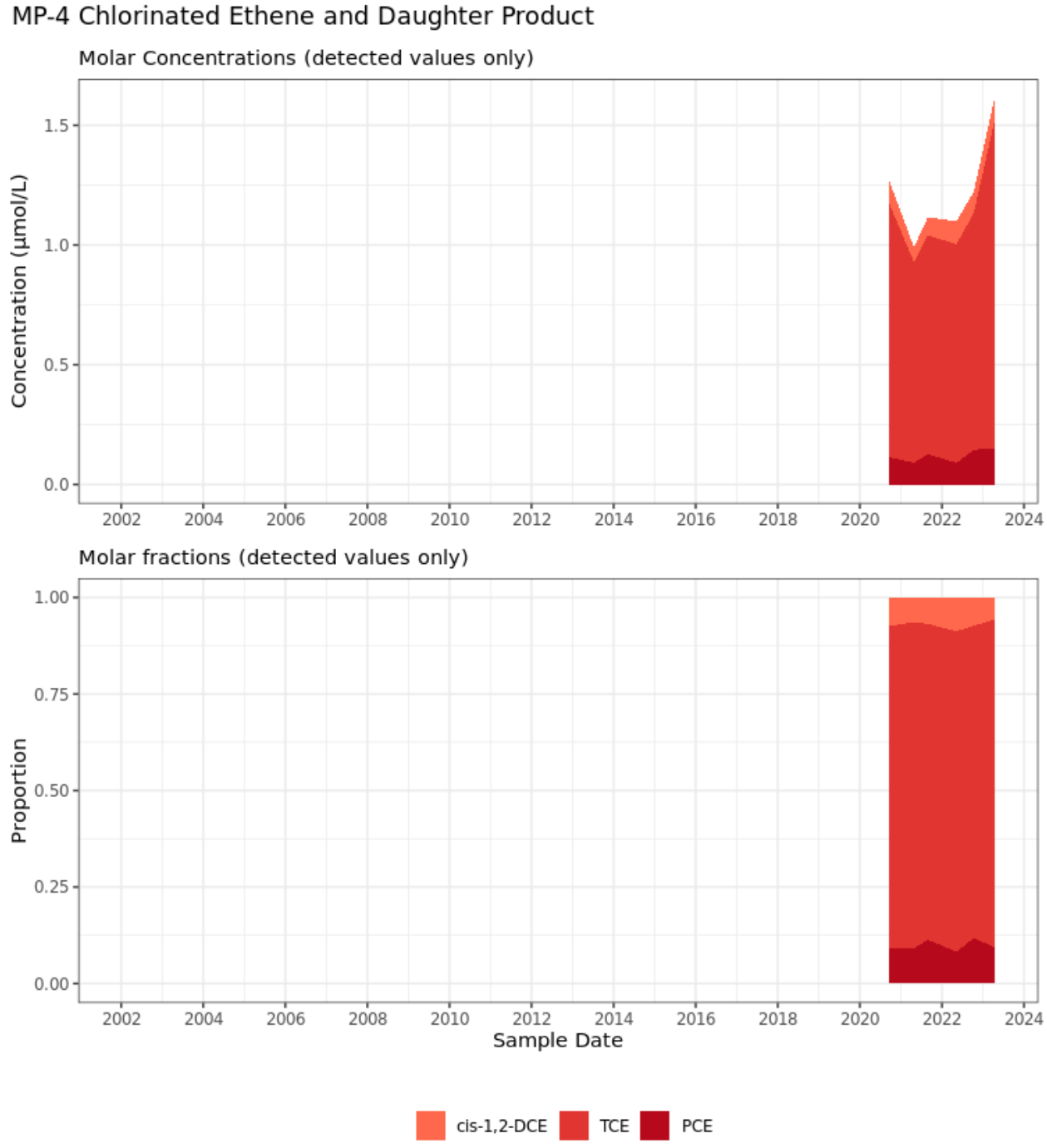
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

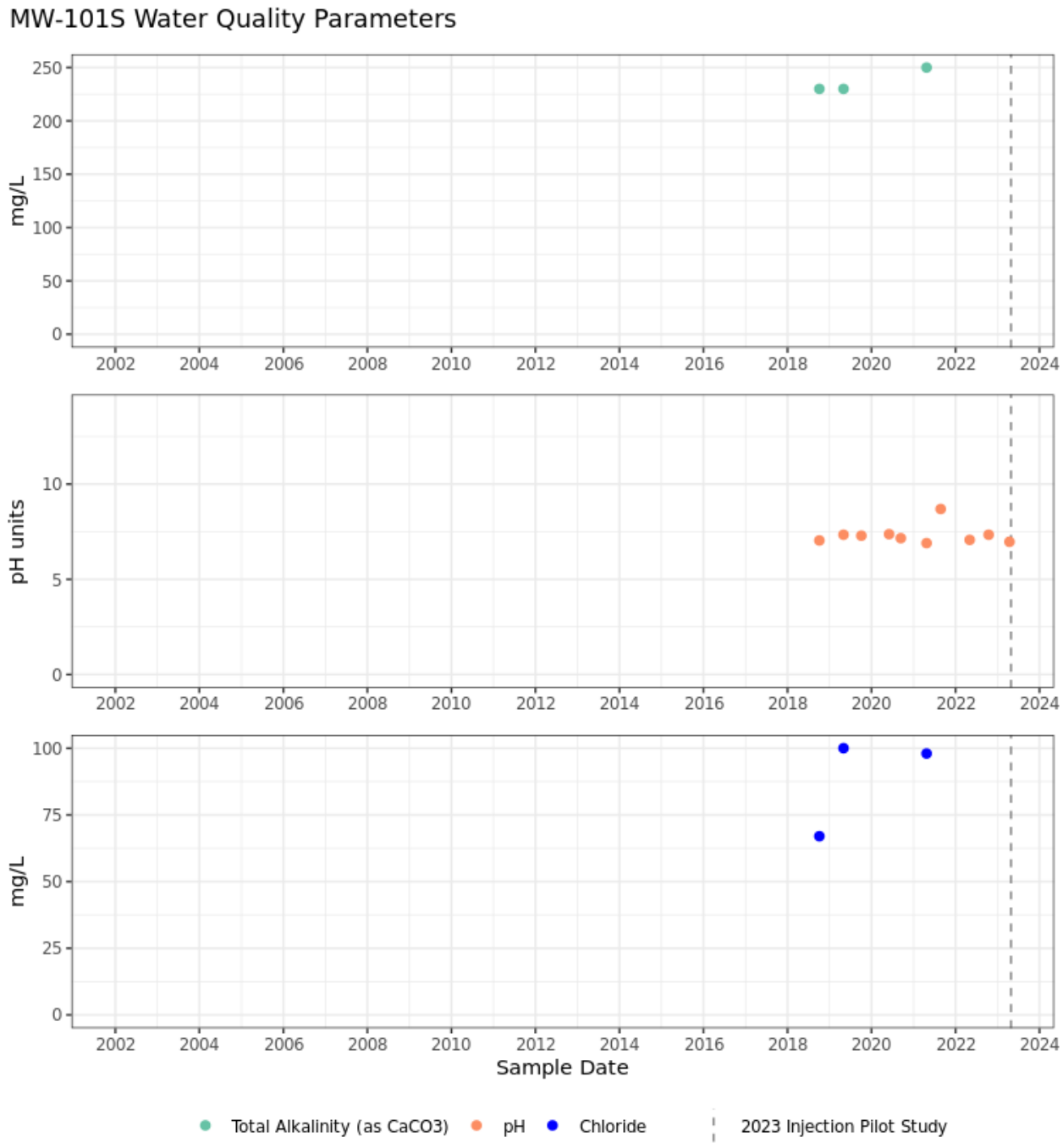


Chlorinated Ethene and Daughter Product Concentration

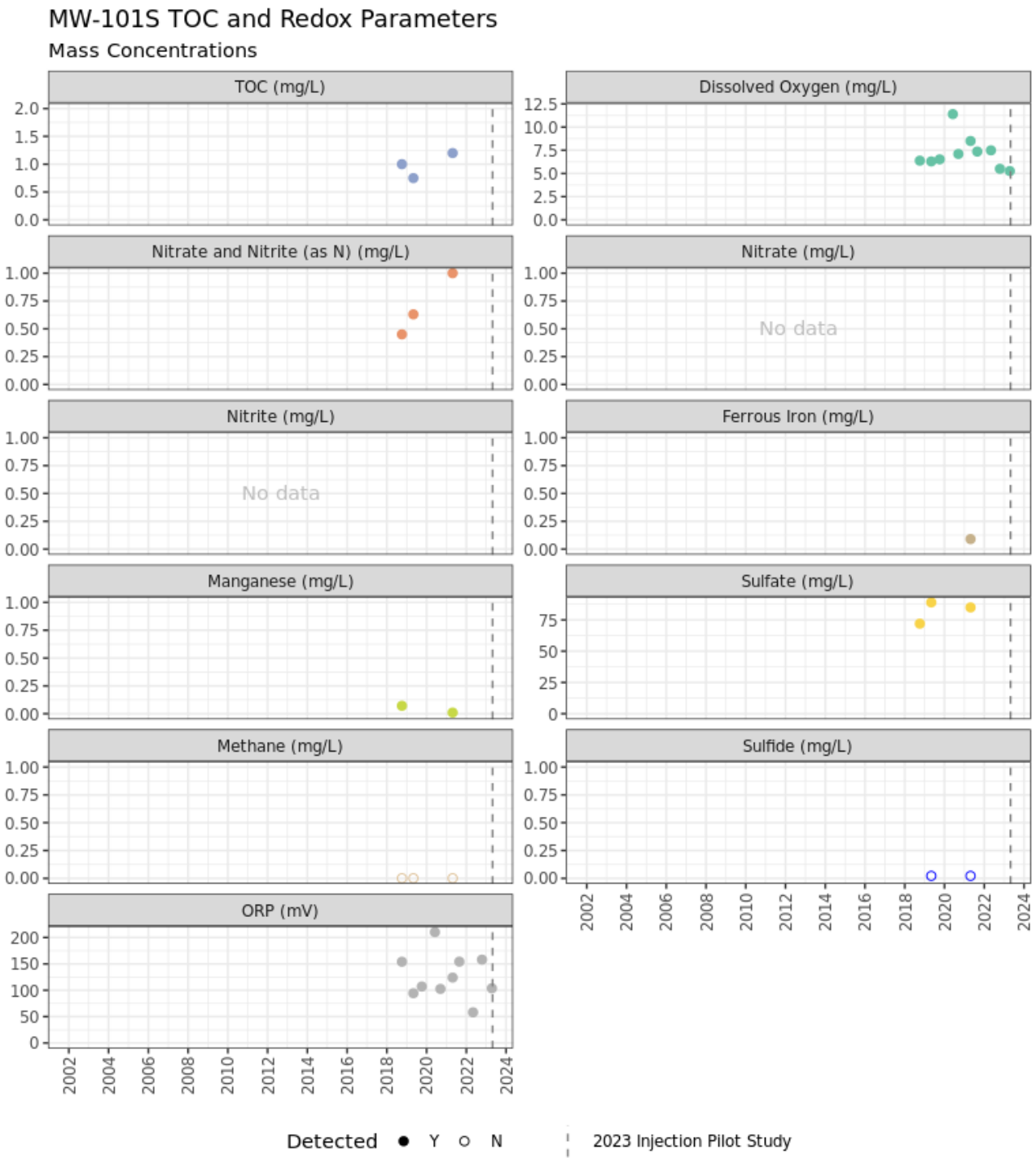


MW-101S

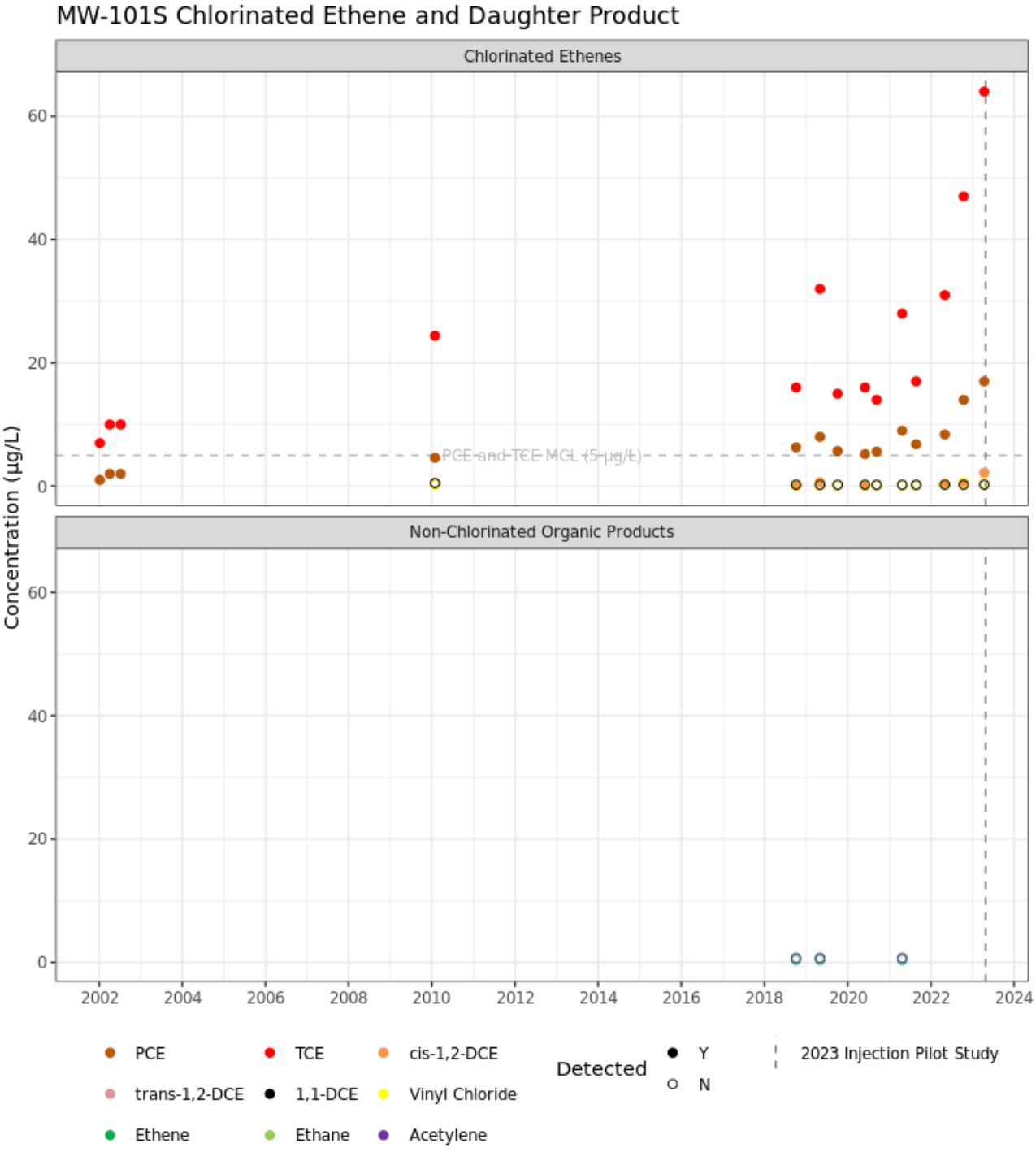
Water Quality



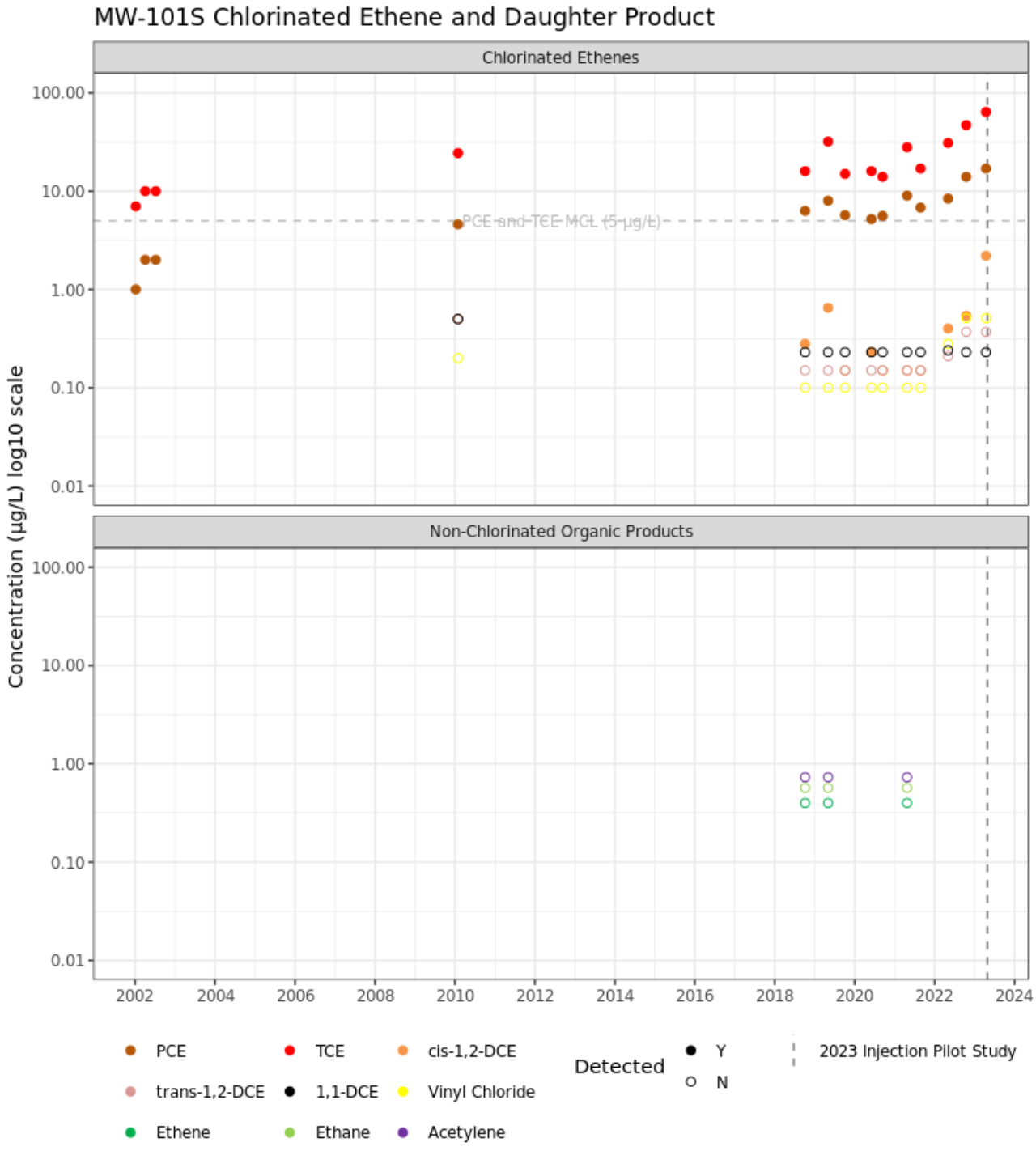
TOC and Redox Parameters



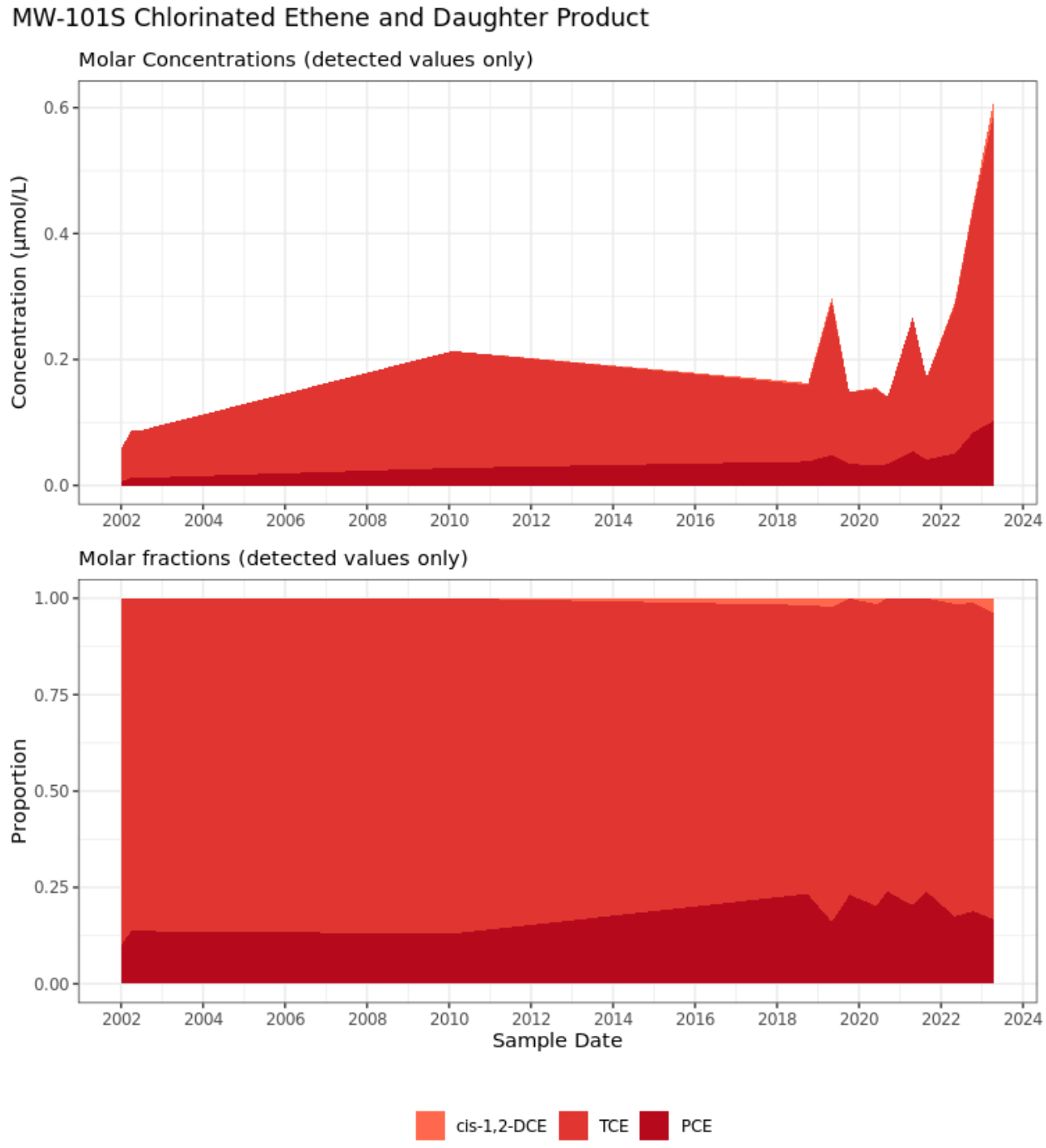
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

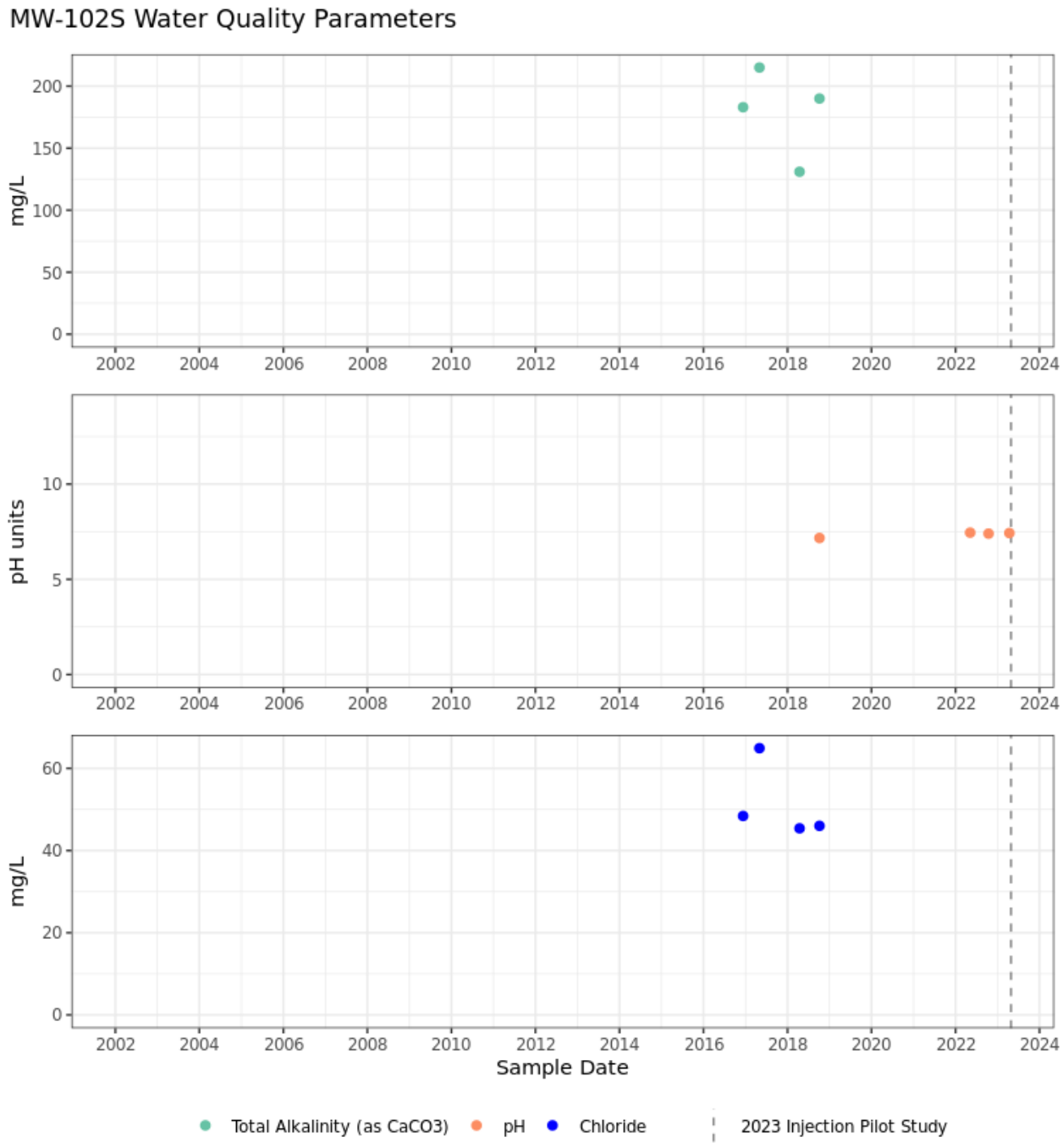


Chlorinated Ethene and Daughter Product Concentration

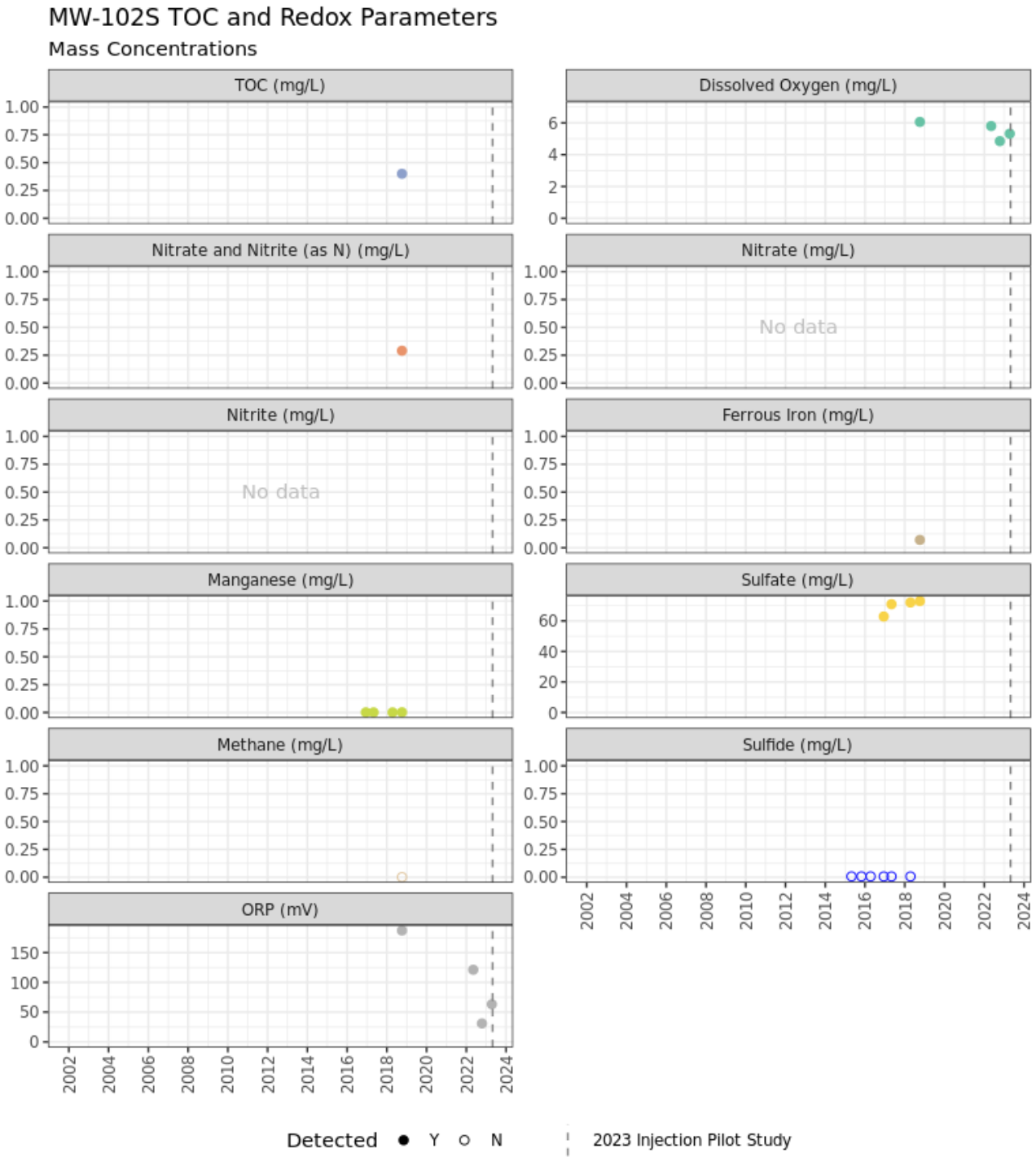


MW-102S

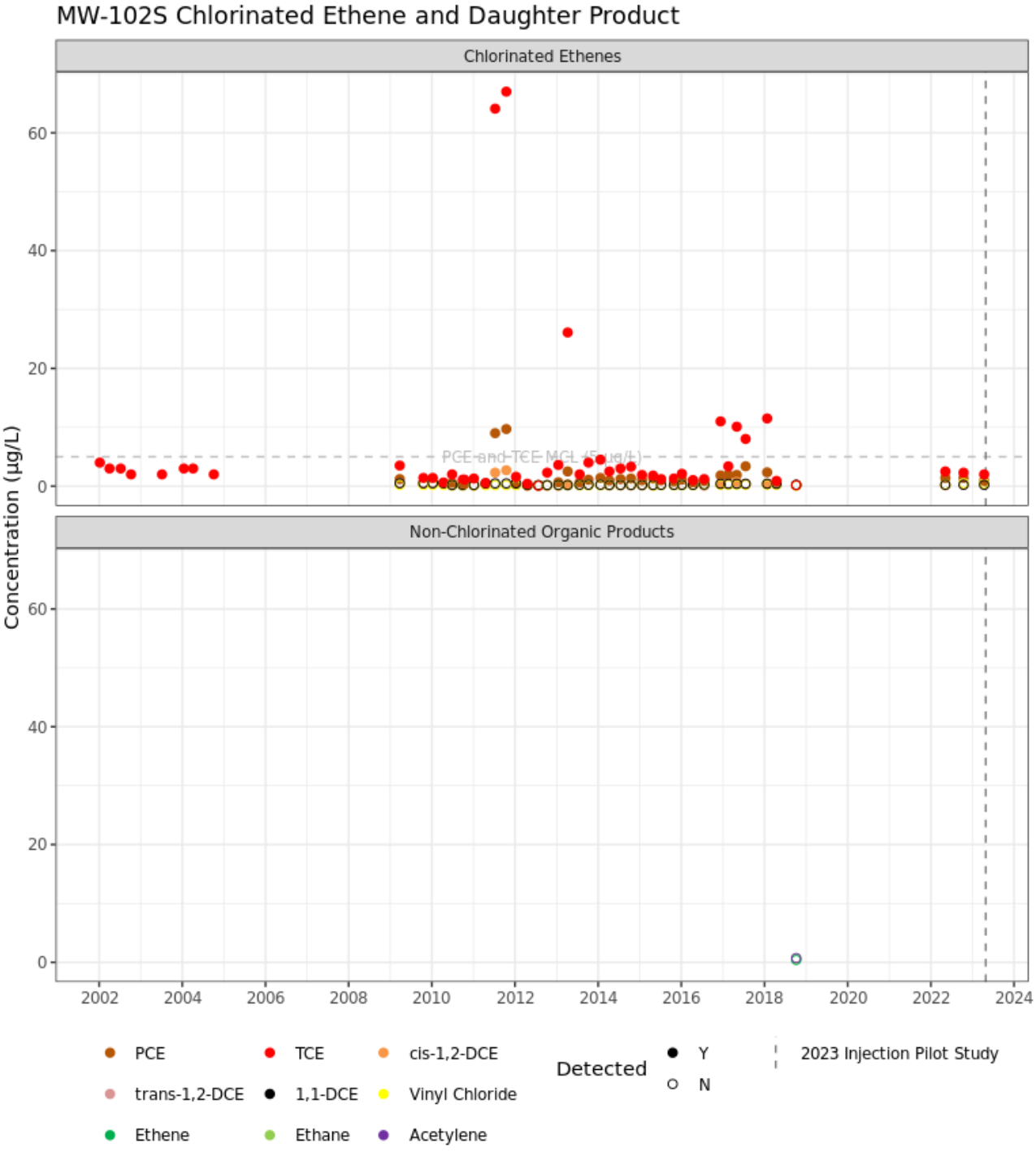
Water Quality



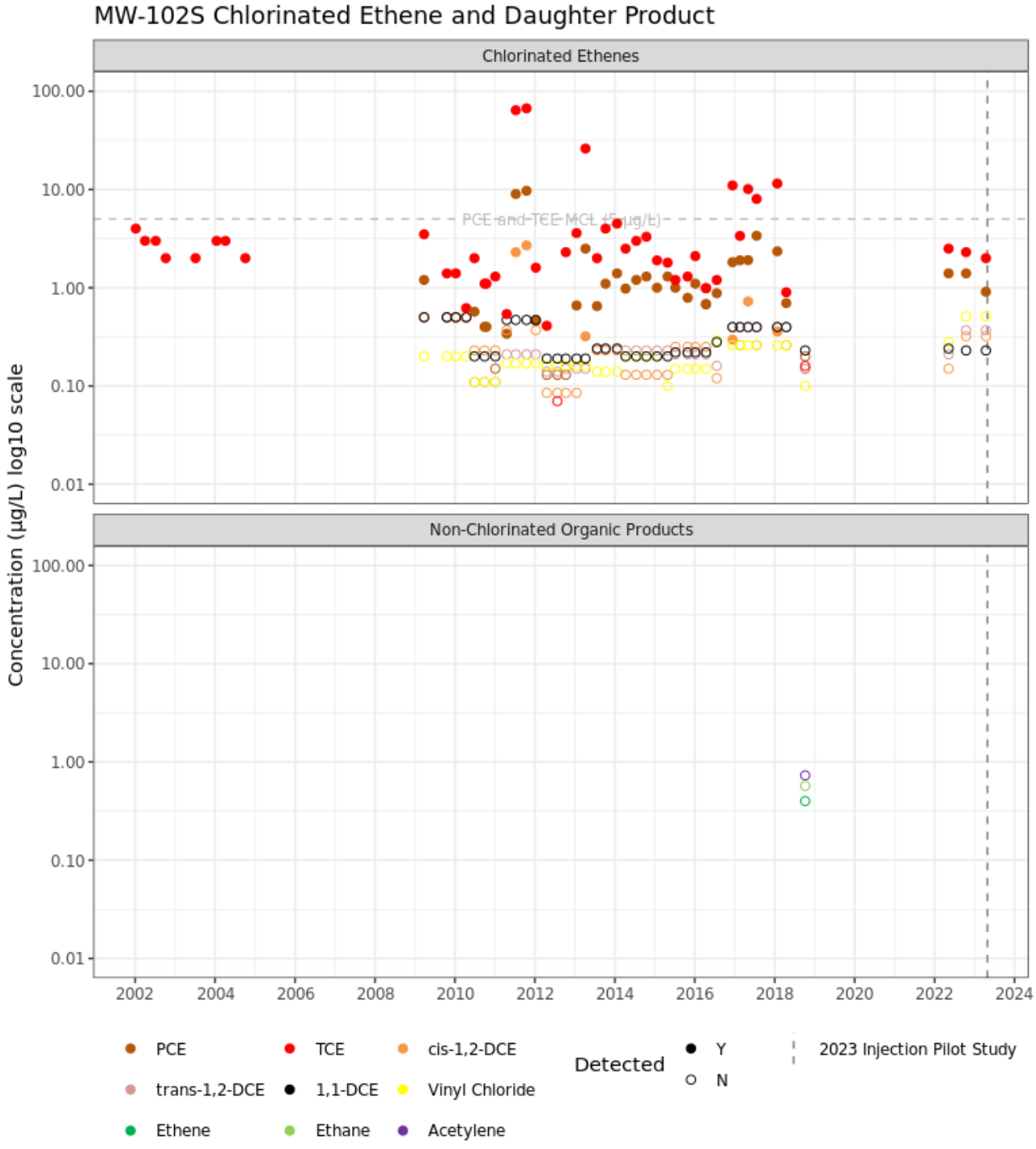
TOC and Redox Parameters



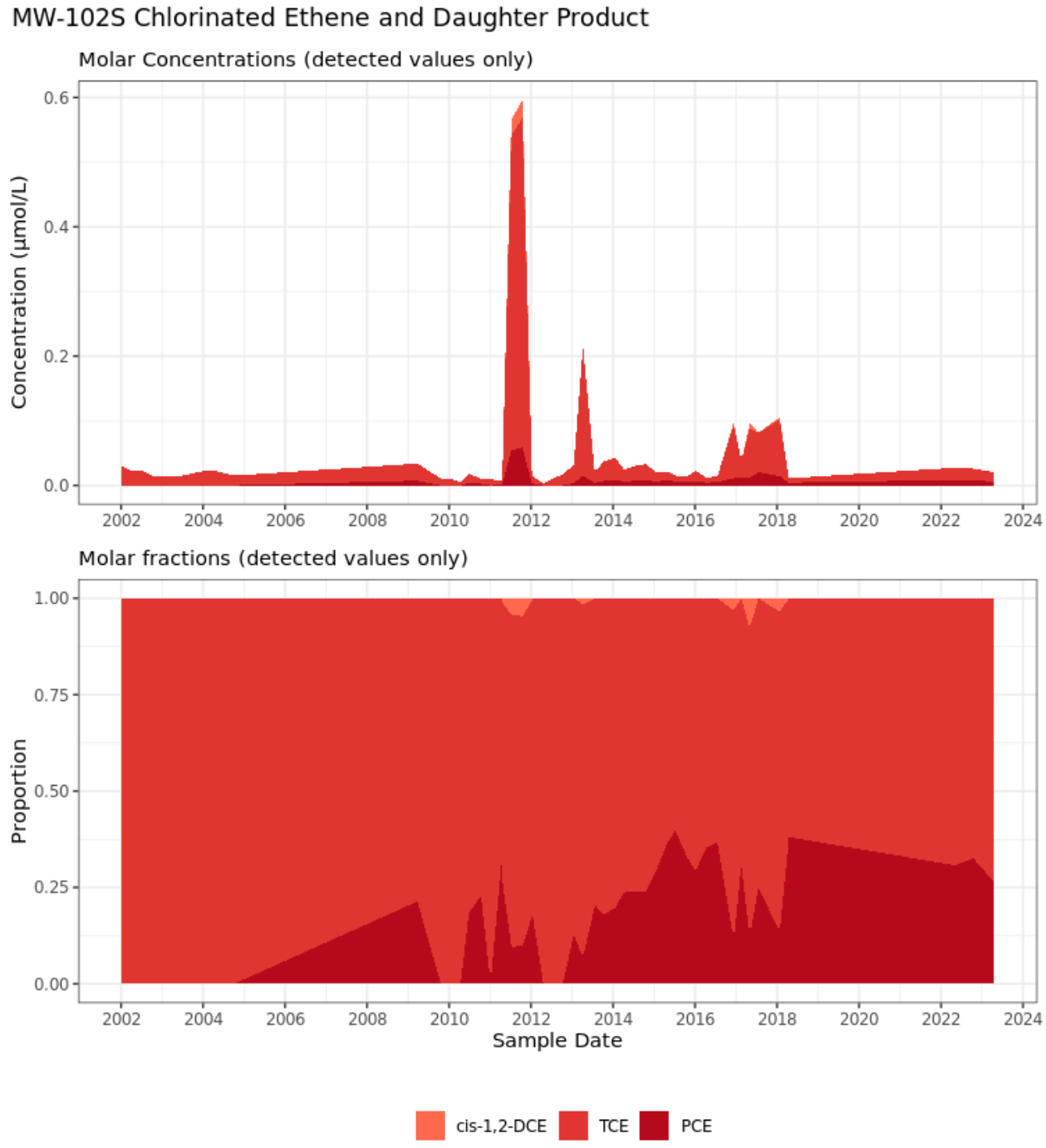
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

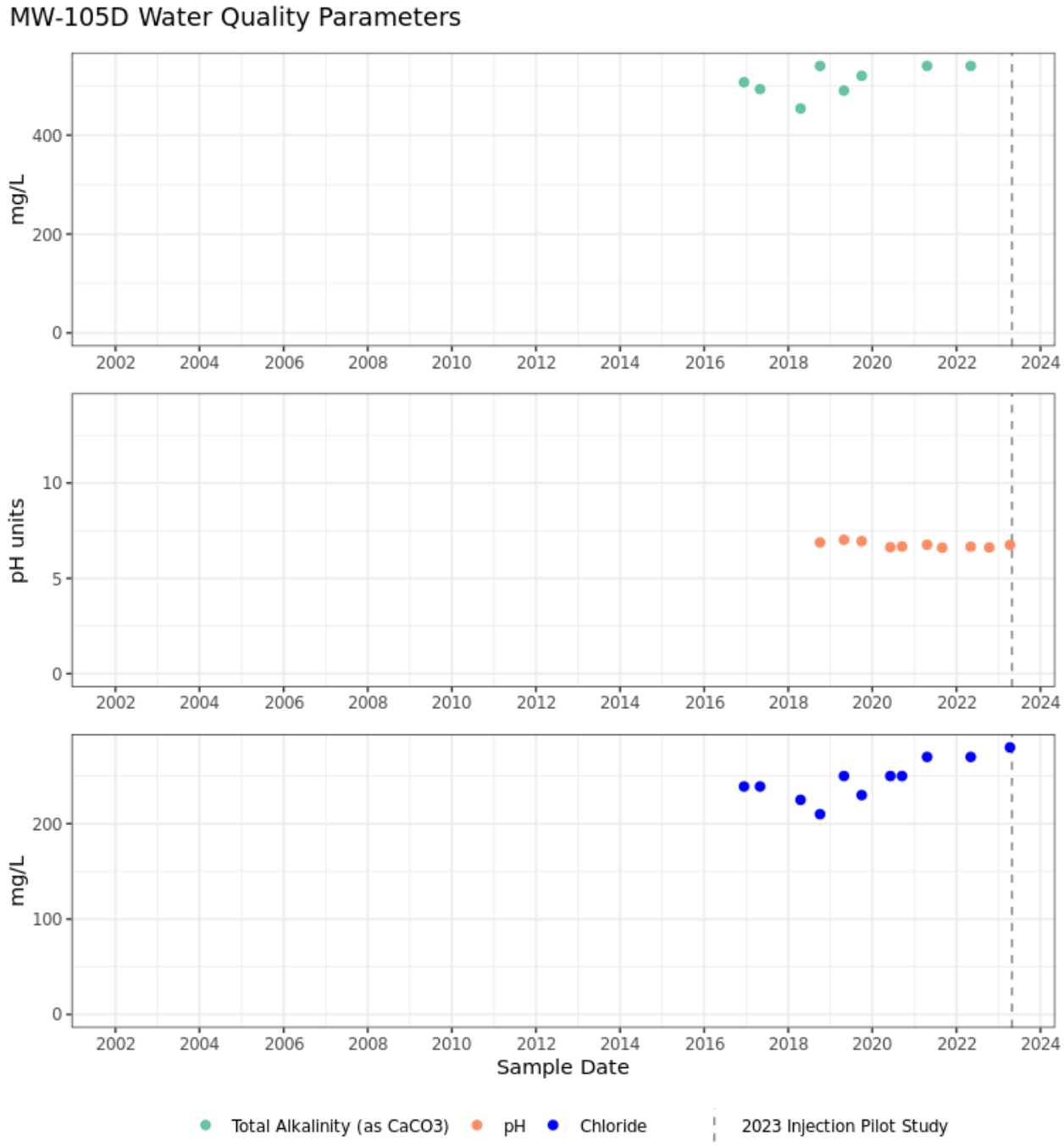


Chlorinated Ethene and Daughter Product Concentration

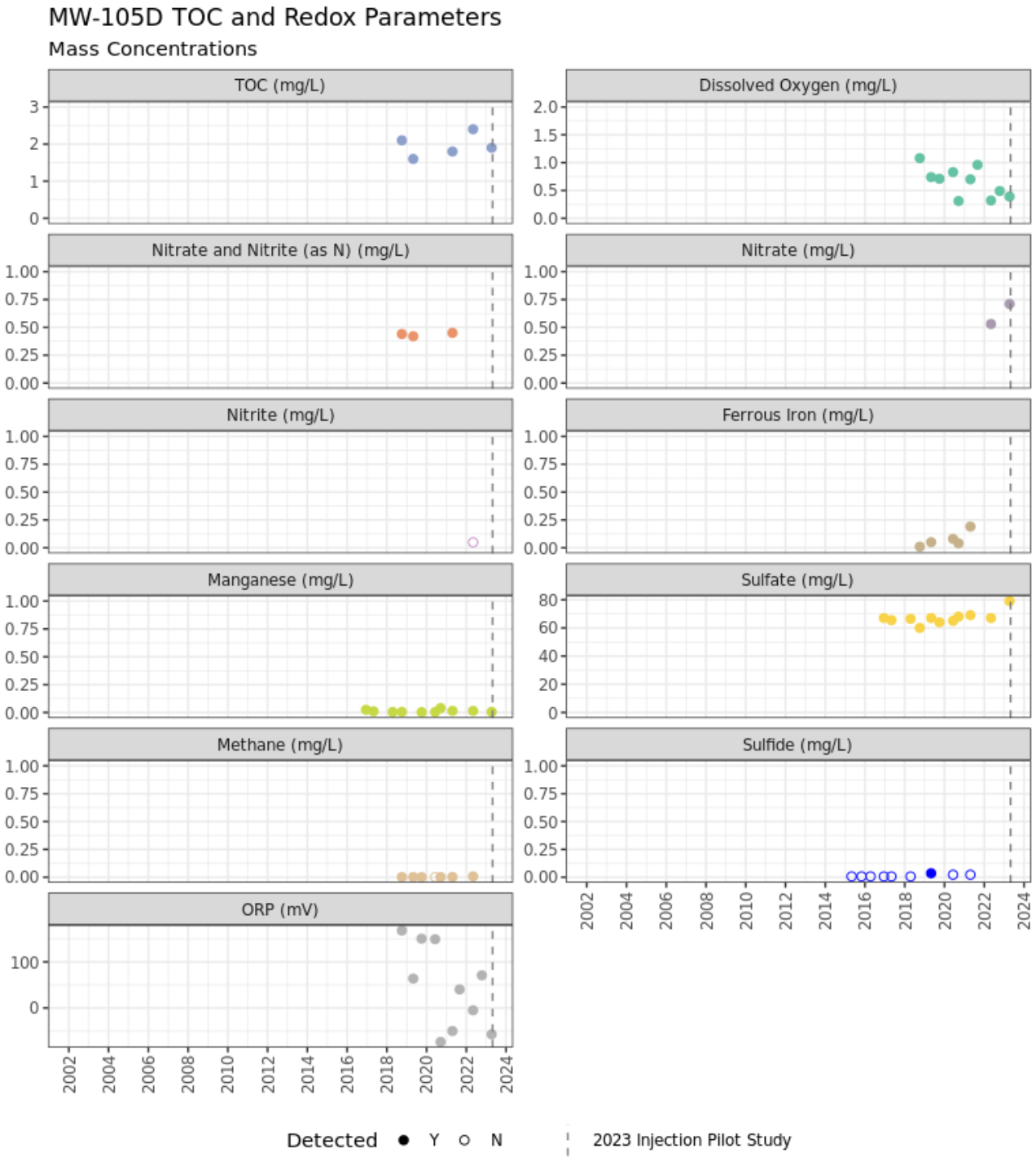


MW-105D

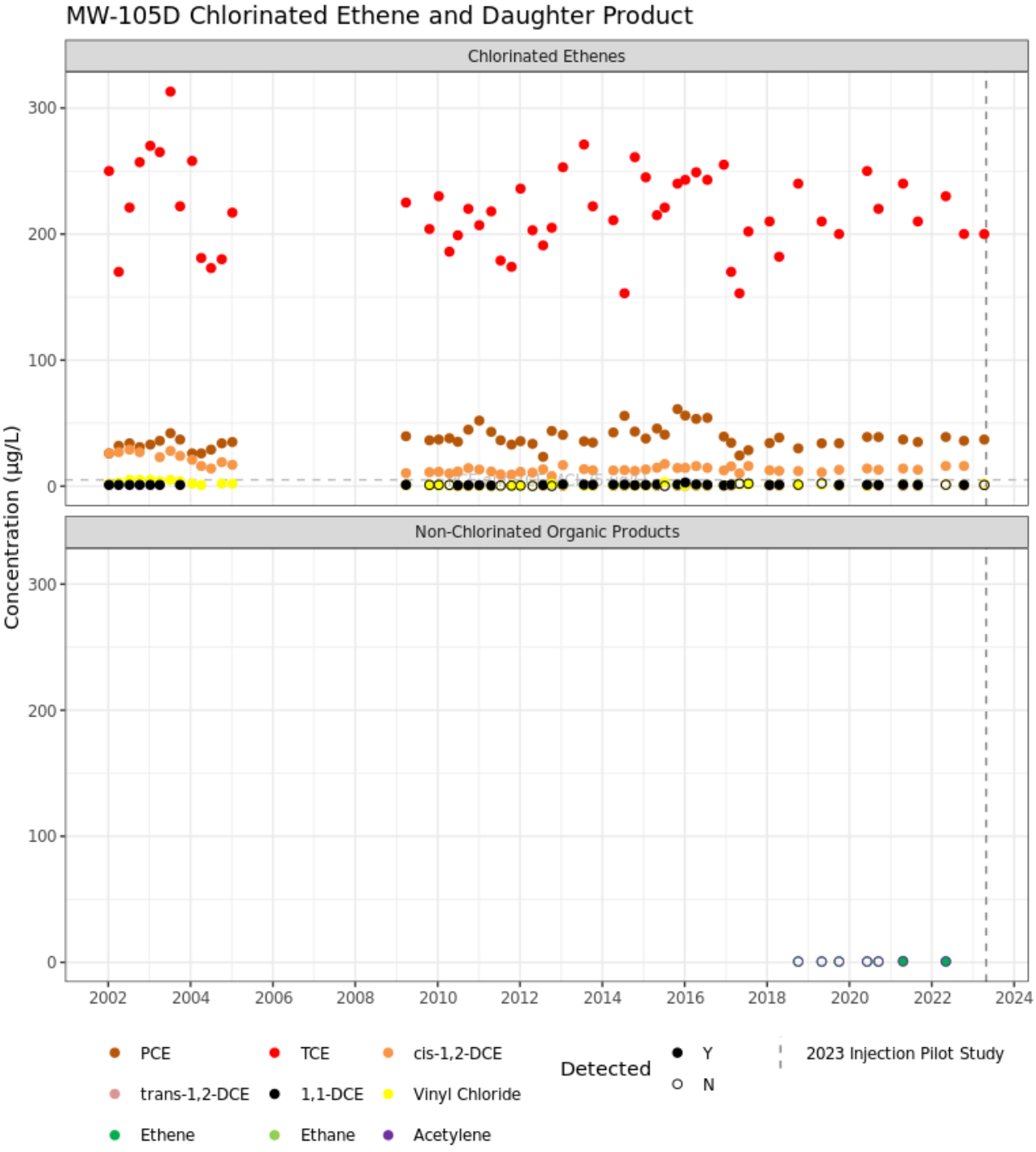
Water Quality



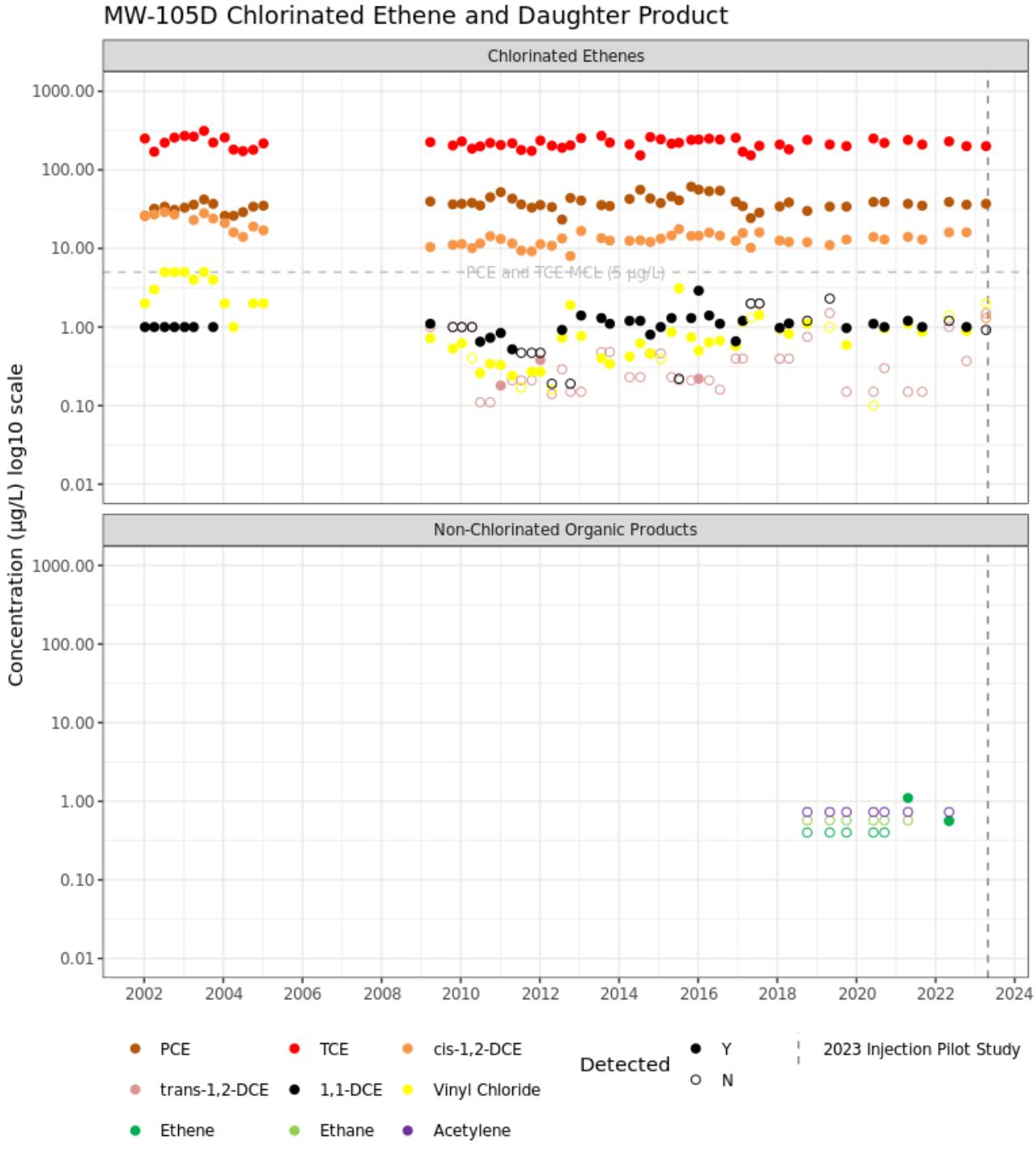
TOC and Redox Parameters



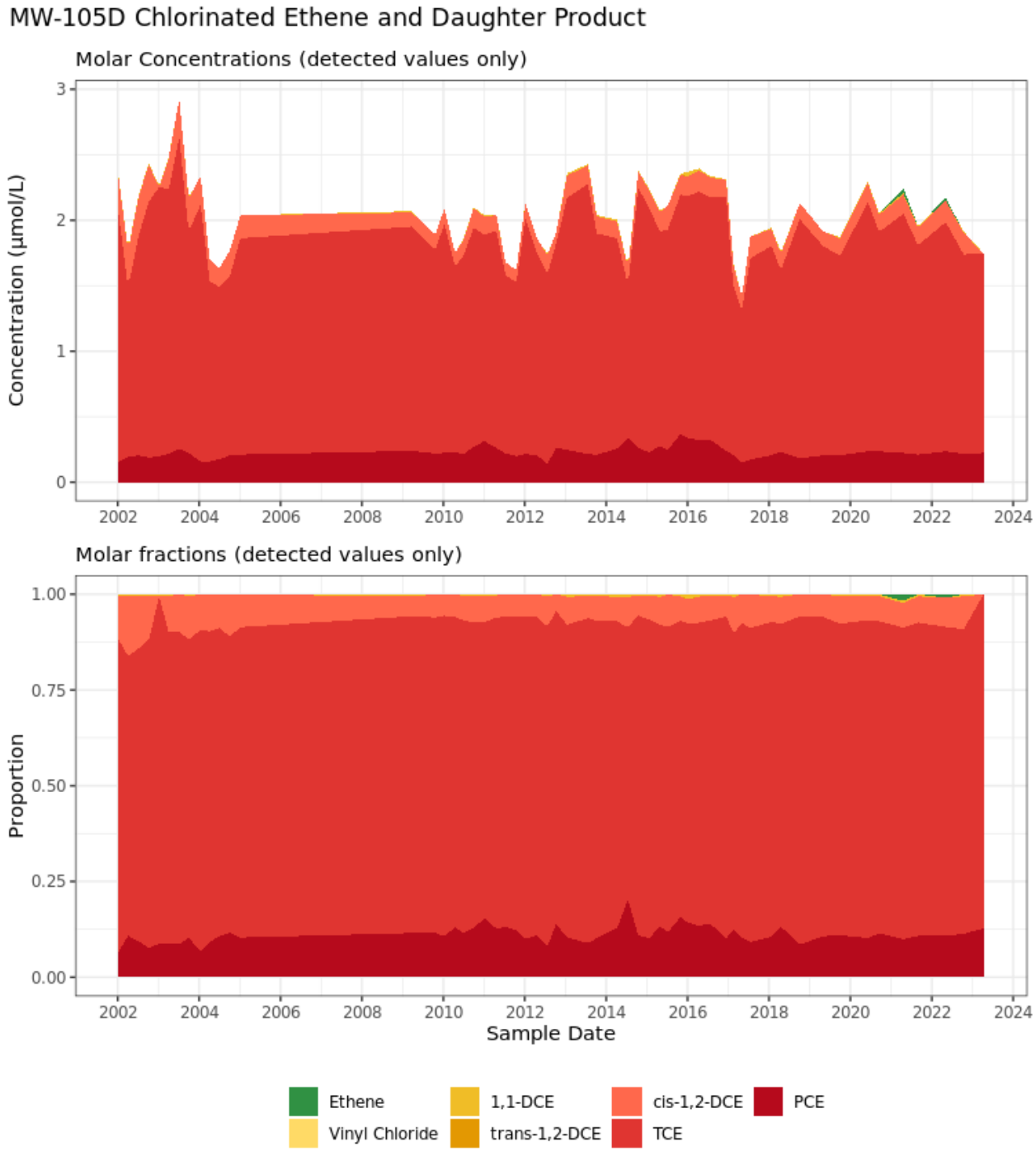
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

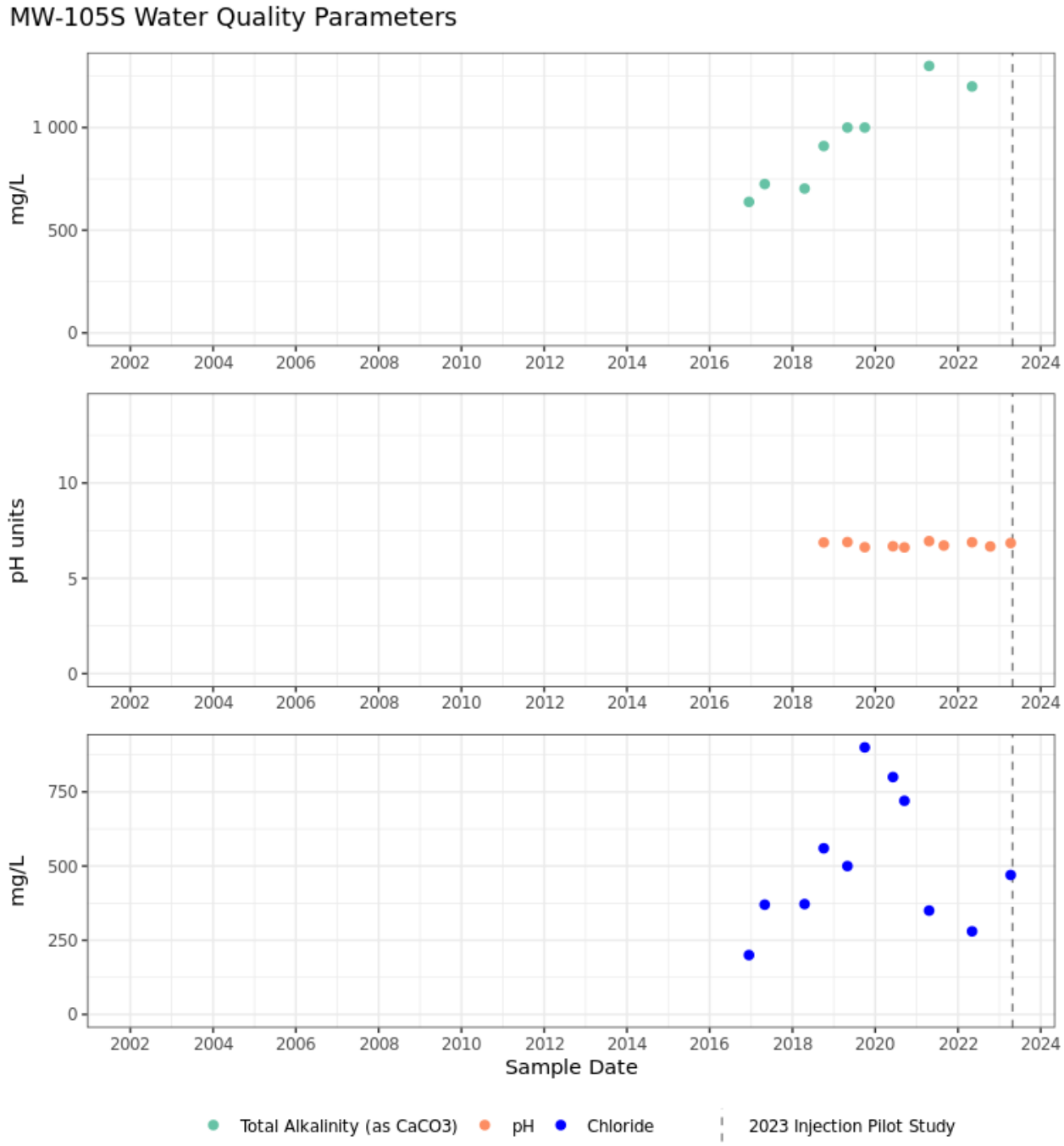


Chlorinated Ethene and Daughter Product Concentration

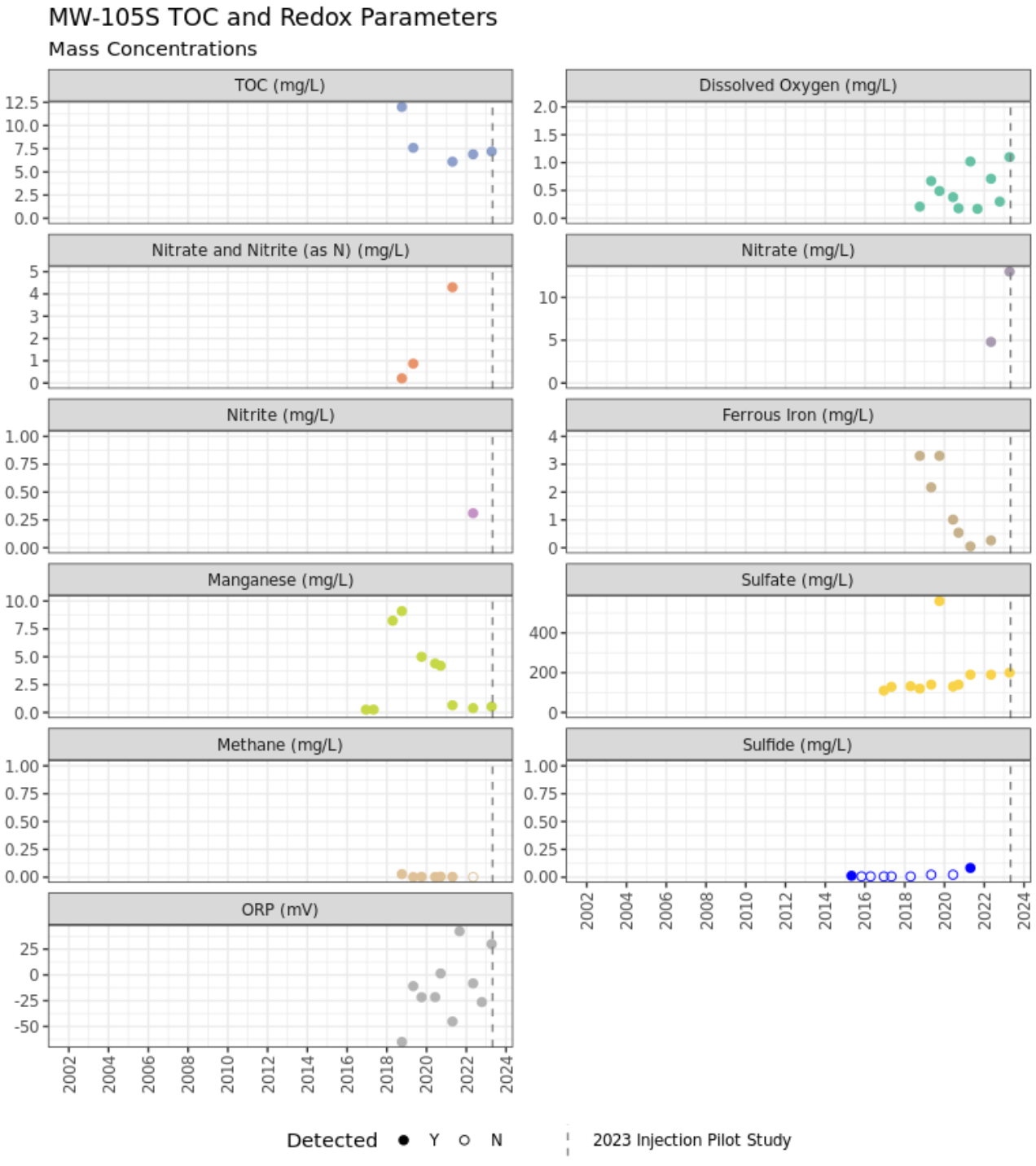


MW-105S

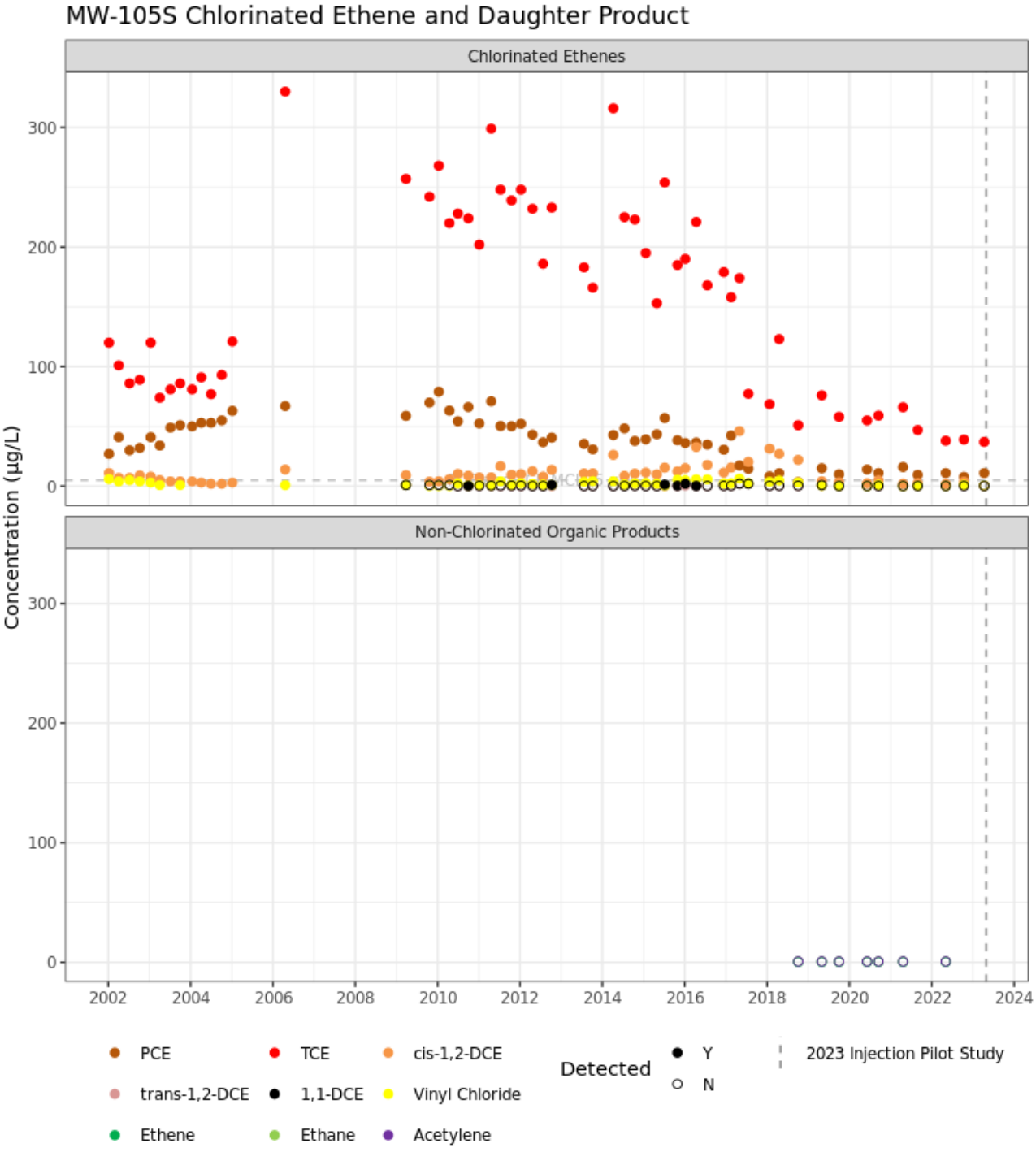
Water Quality



TOC and Redox Parameters



Chlorinated Ethene and Daughter Product Mass

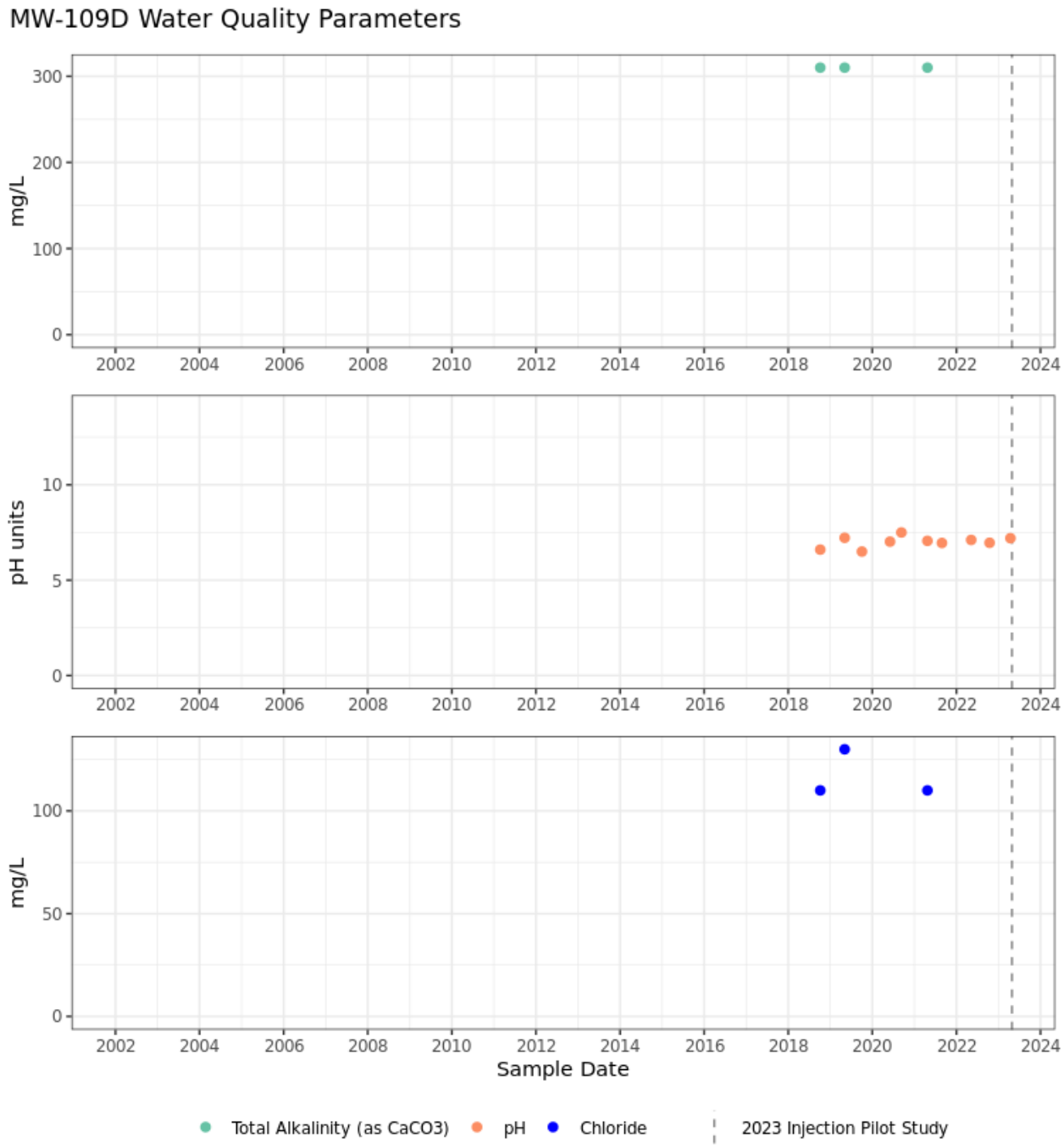


Chlorinated Ethene and Daughter Product Mass (log10)

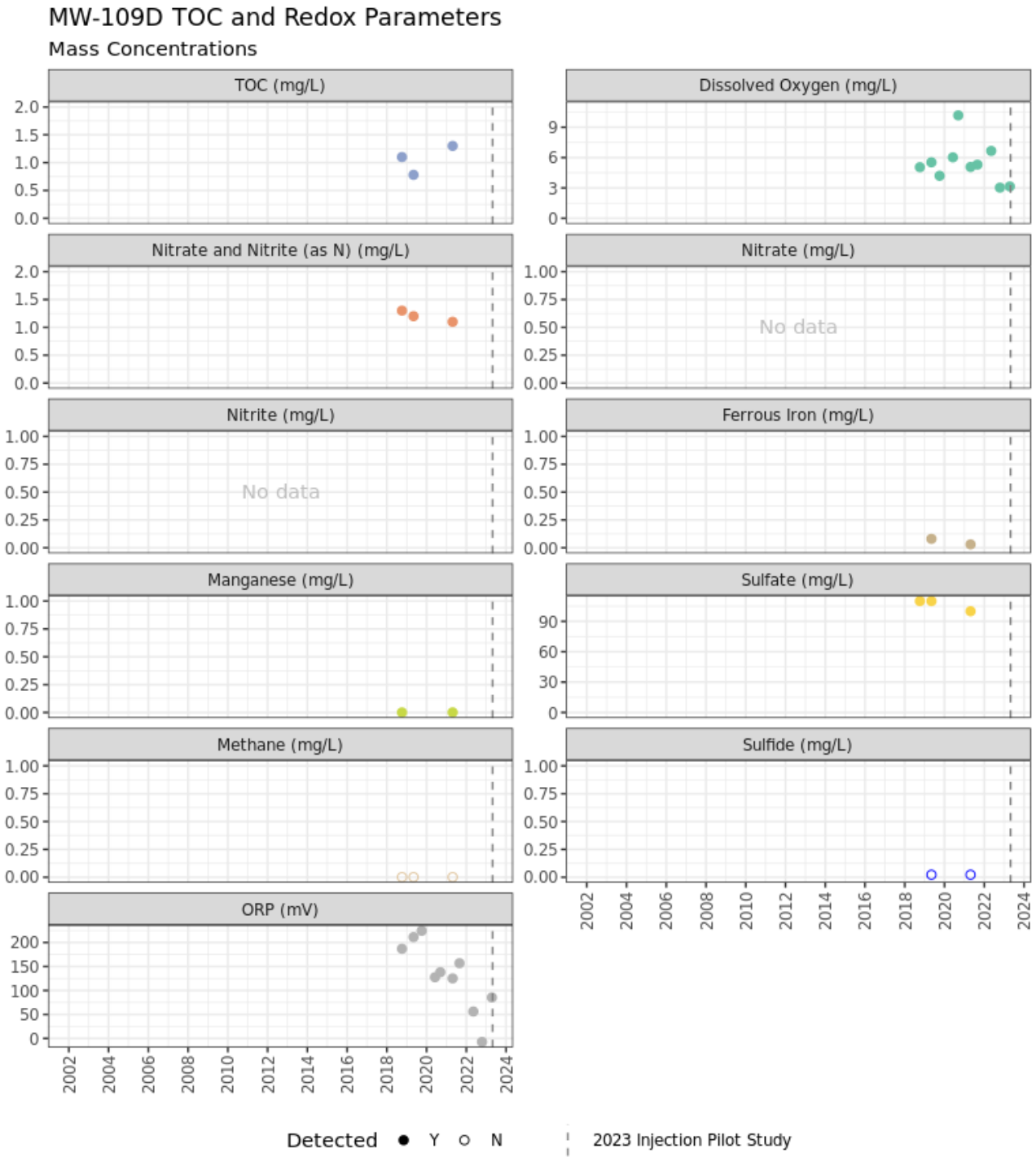
Chlorinated Ethene and Daughter Product Concentration

MW-109D

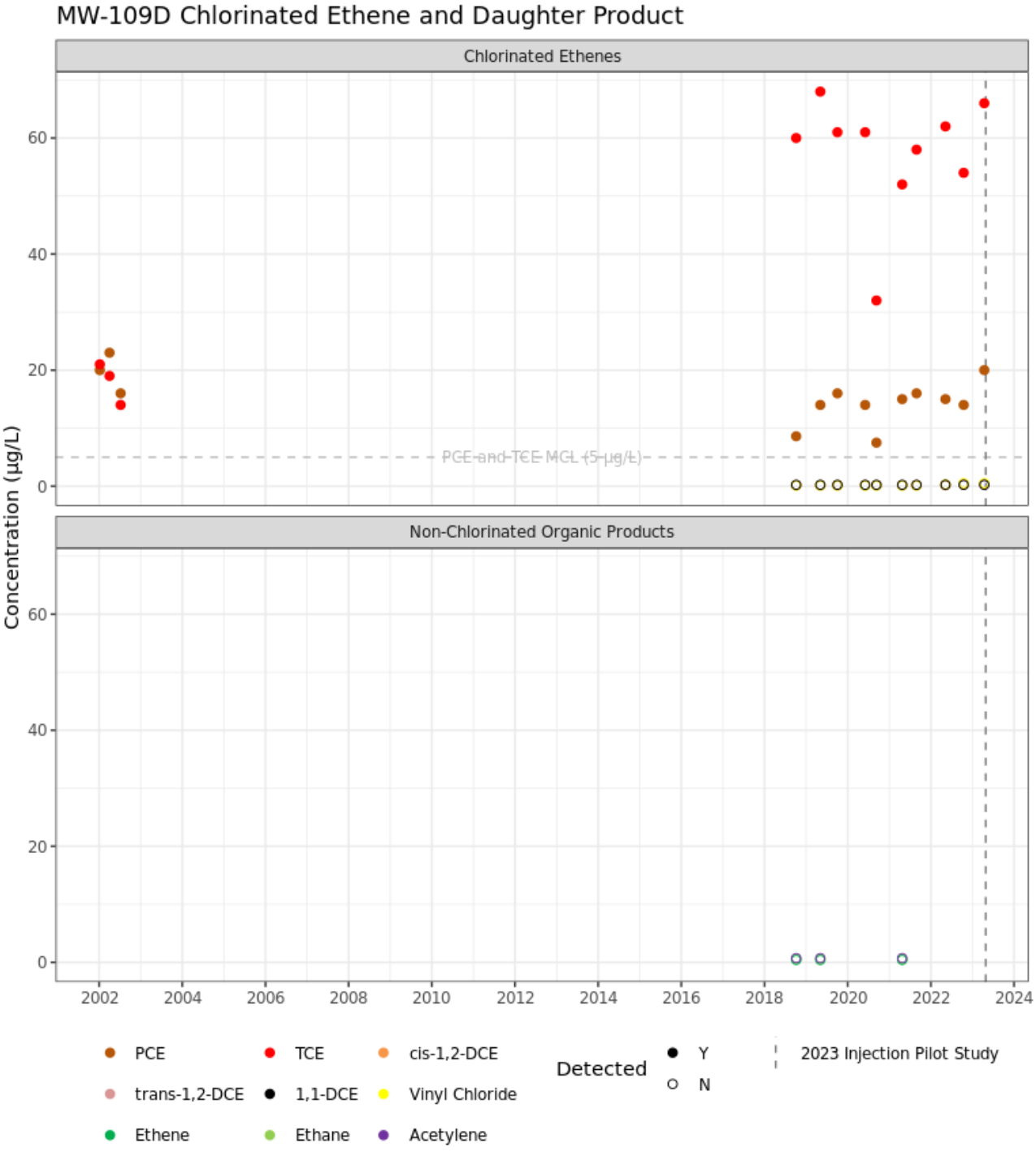
Water Quality



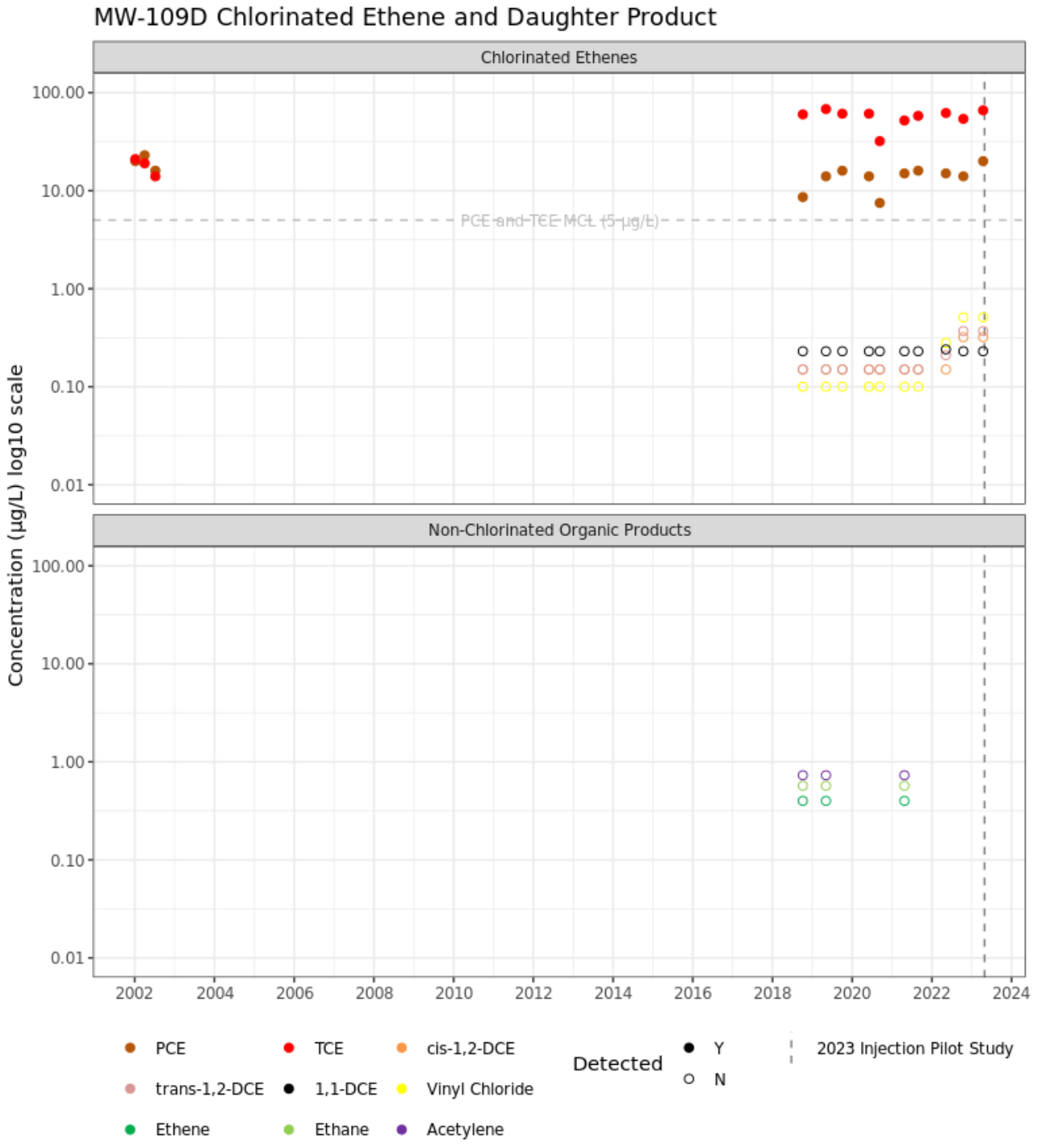
TOC and Redox Parameters



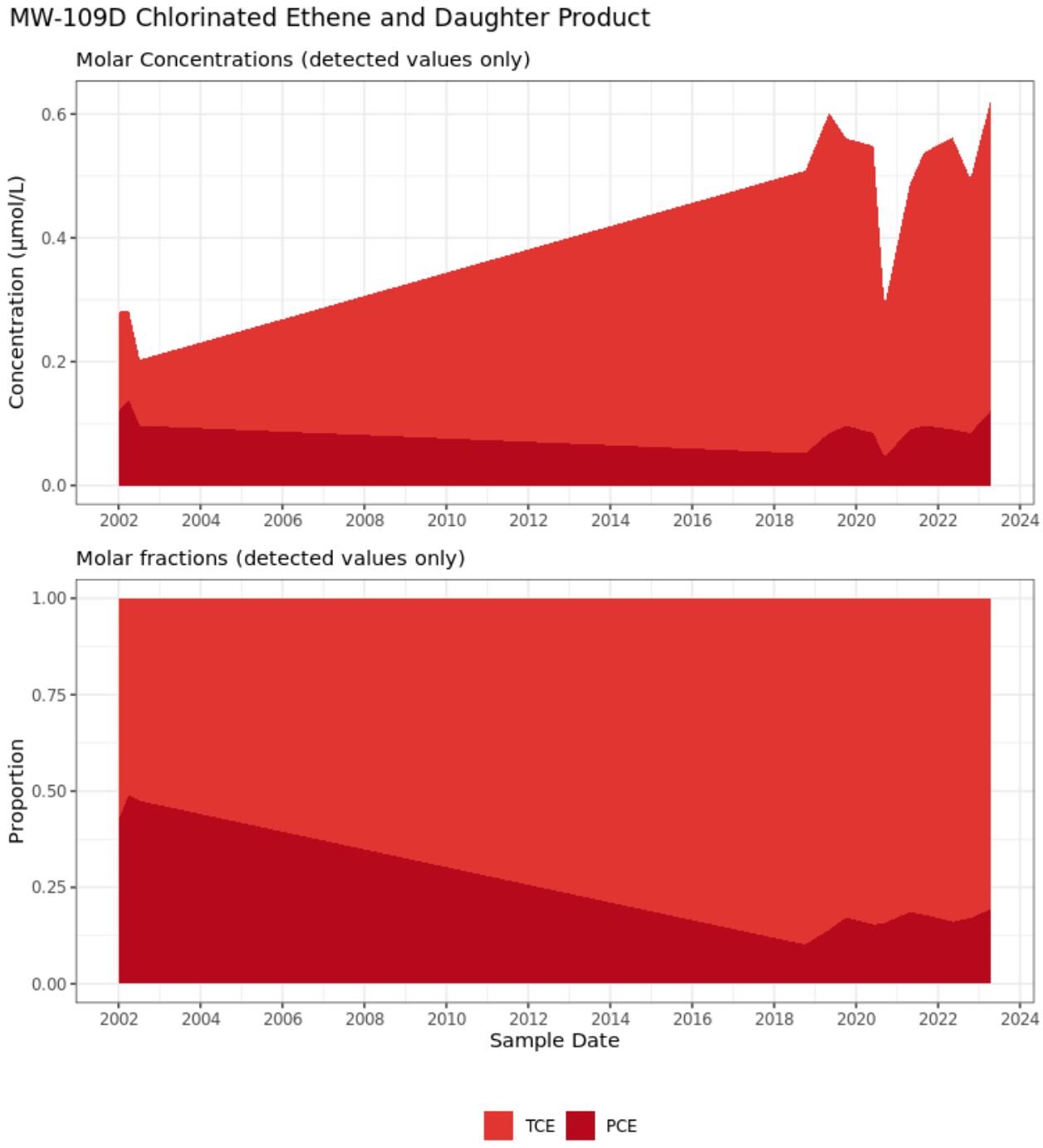
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

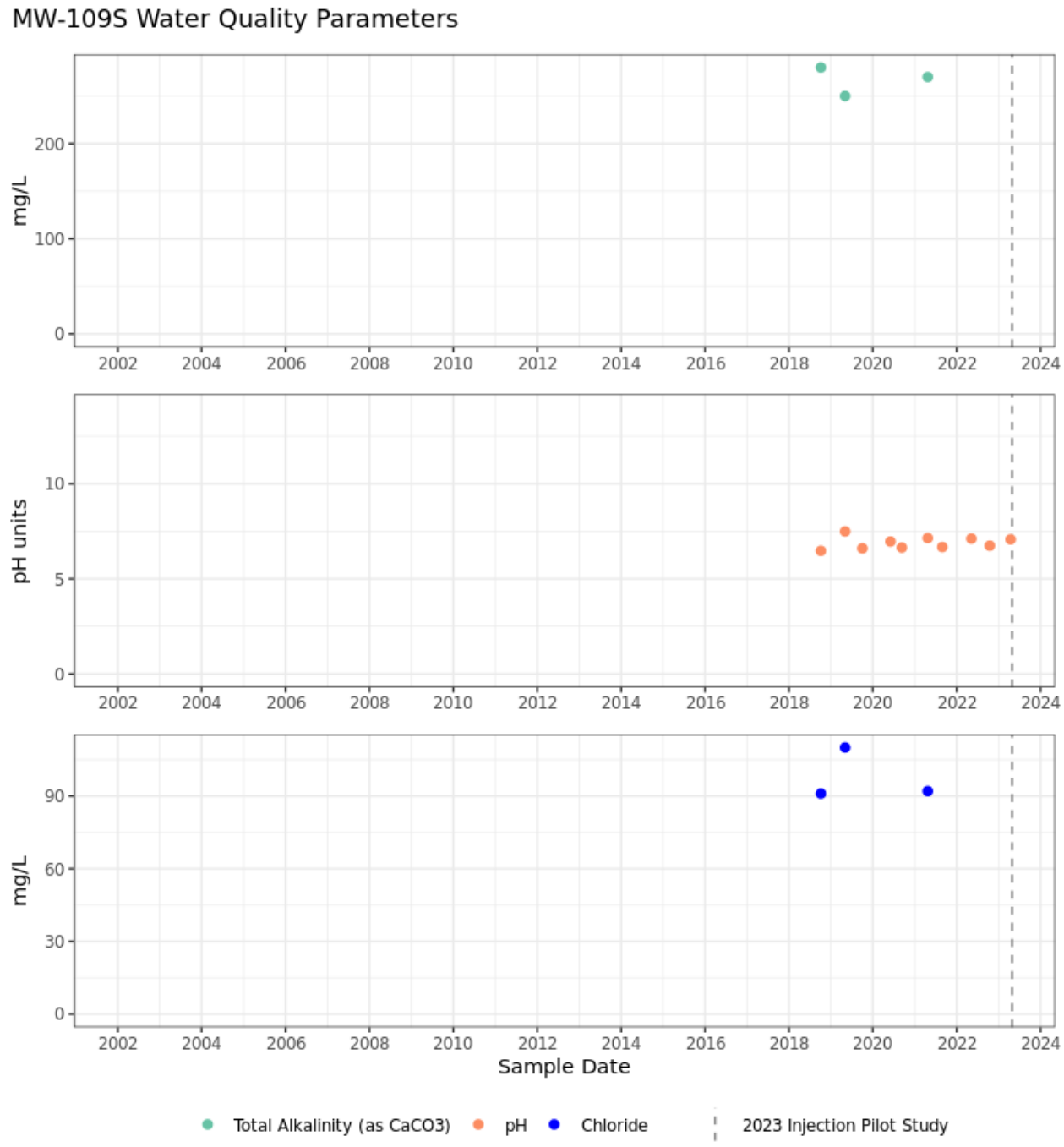


Chlorinated Ethene and Daughter Product Concentration

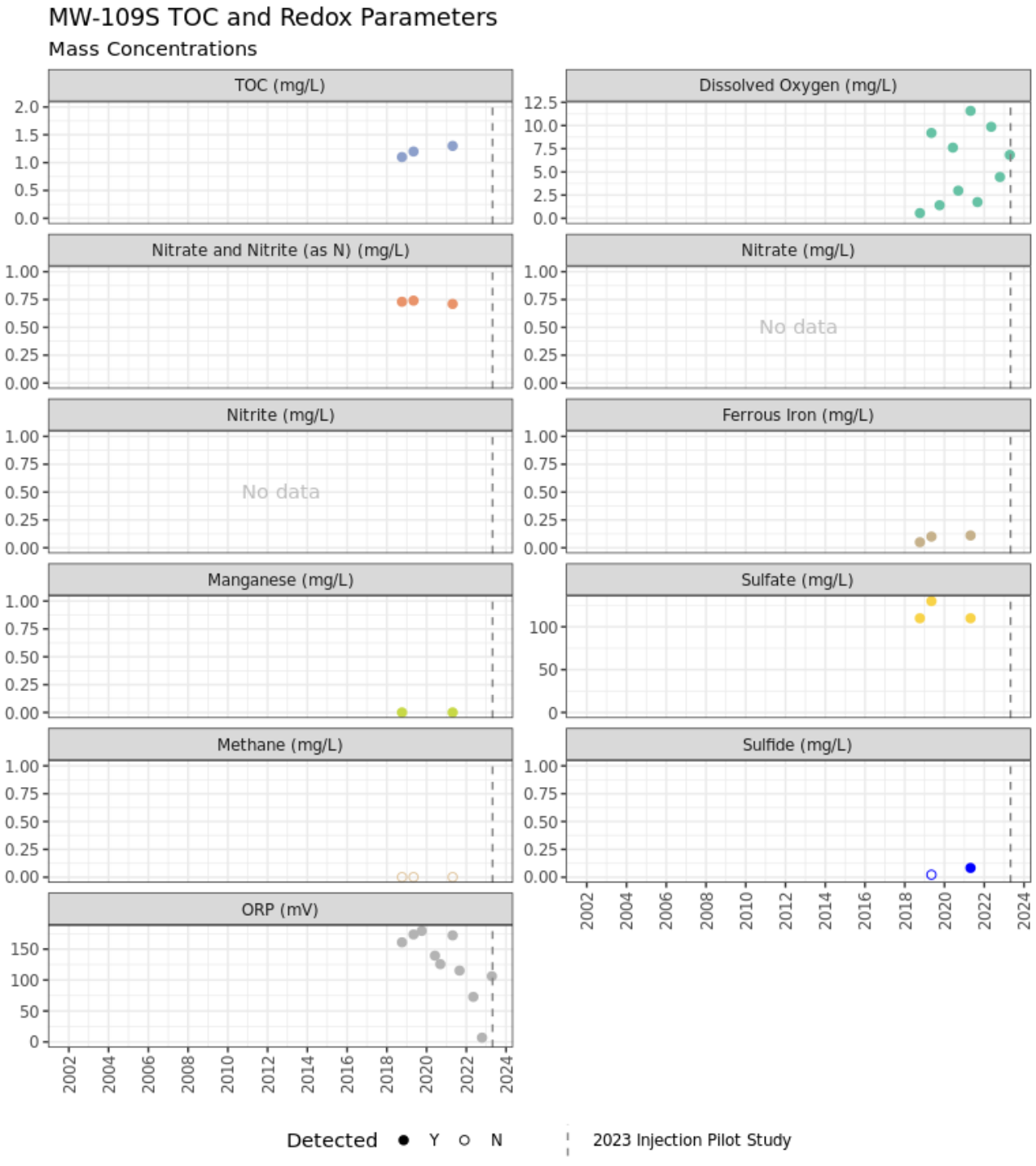


MW-109S

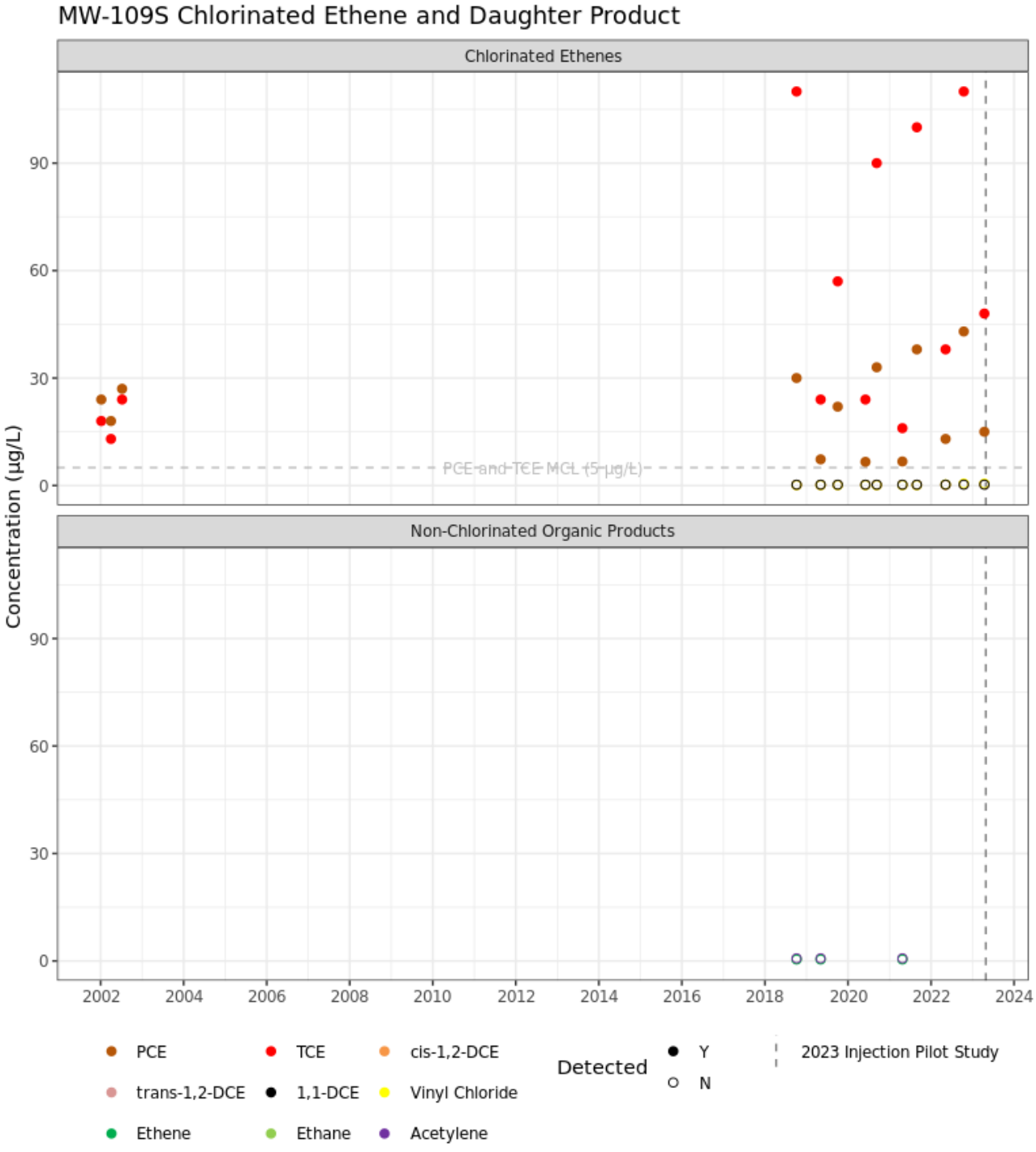
Water Quality



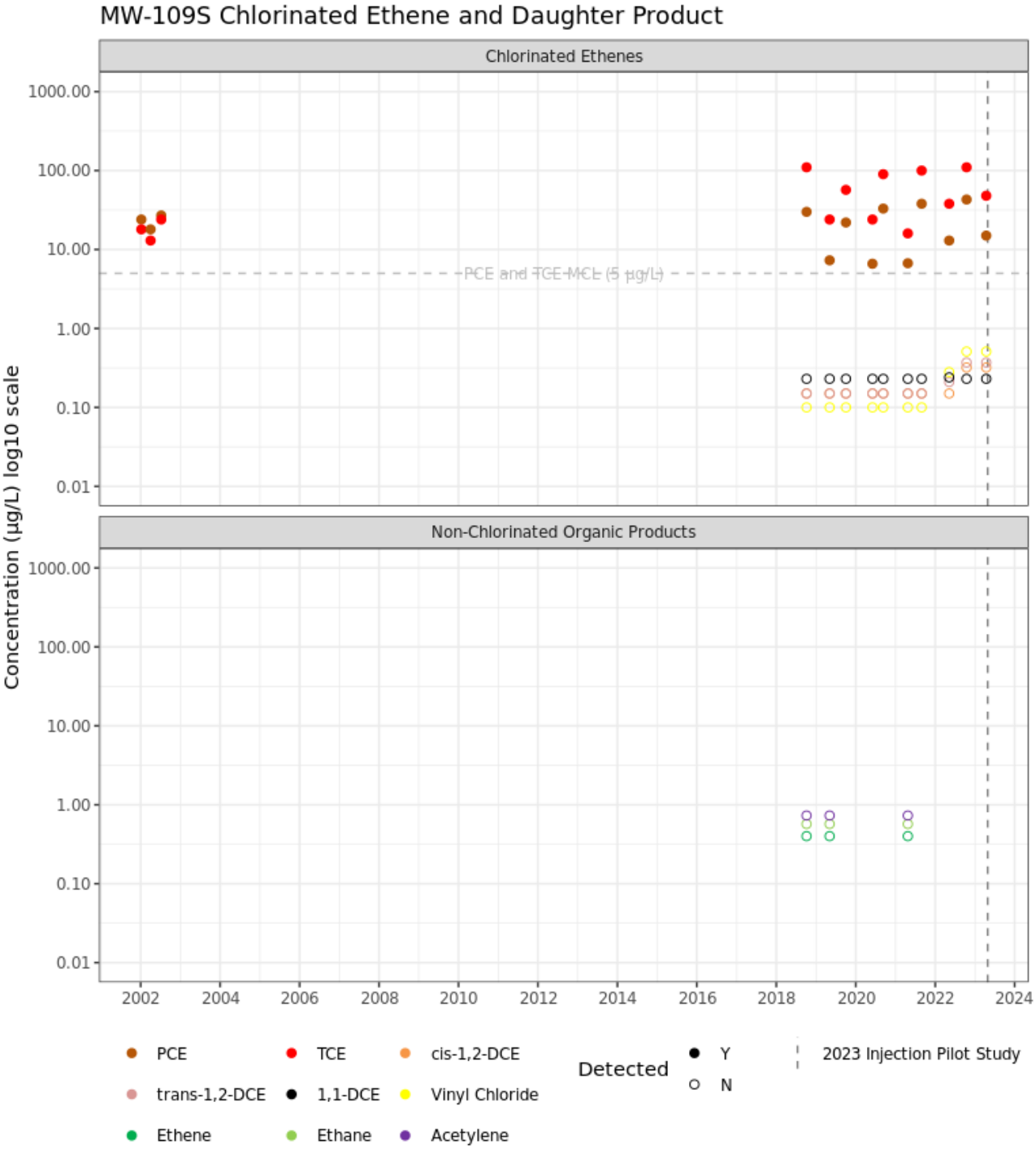
TOC and Redox Parameters



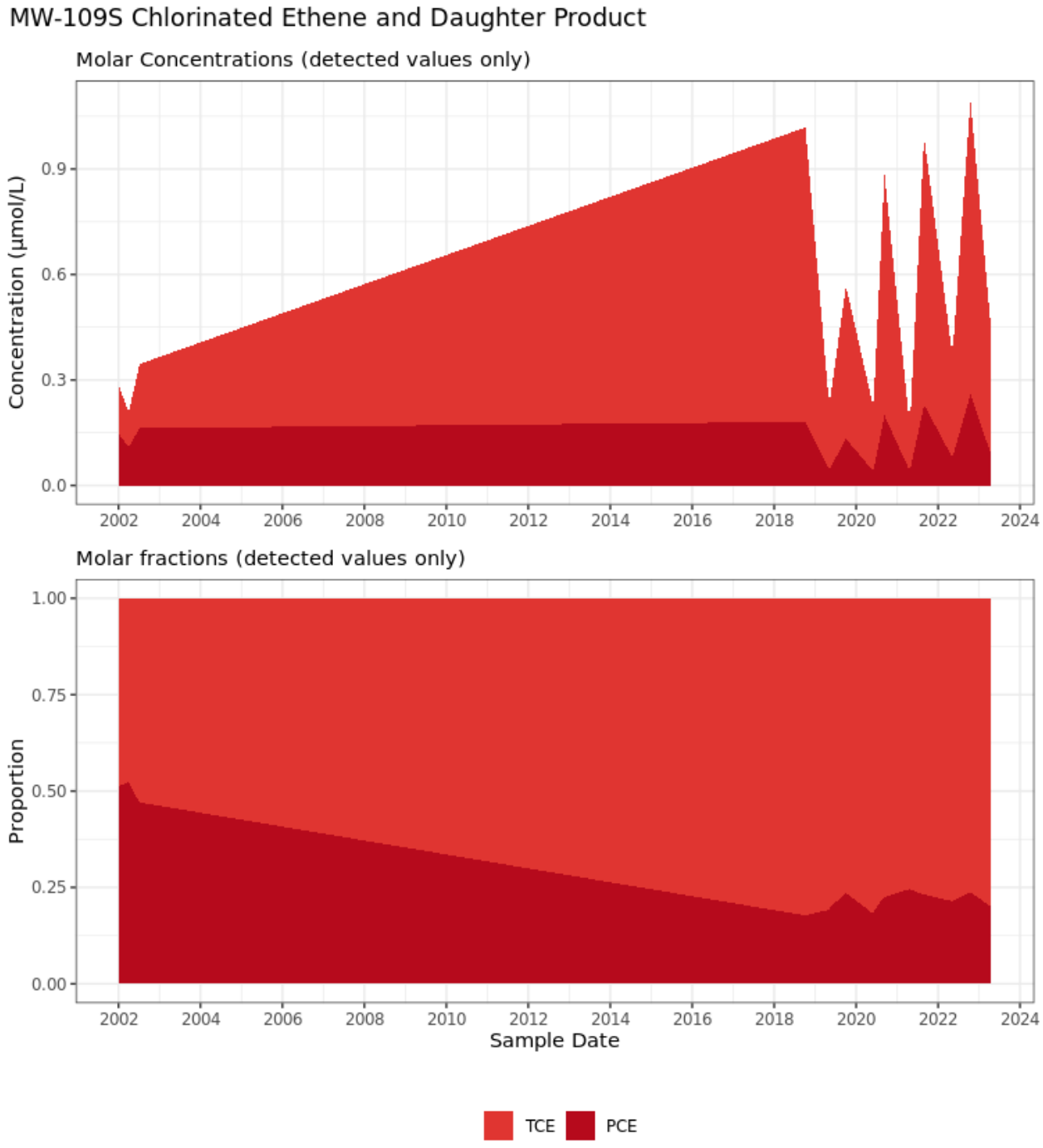
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

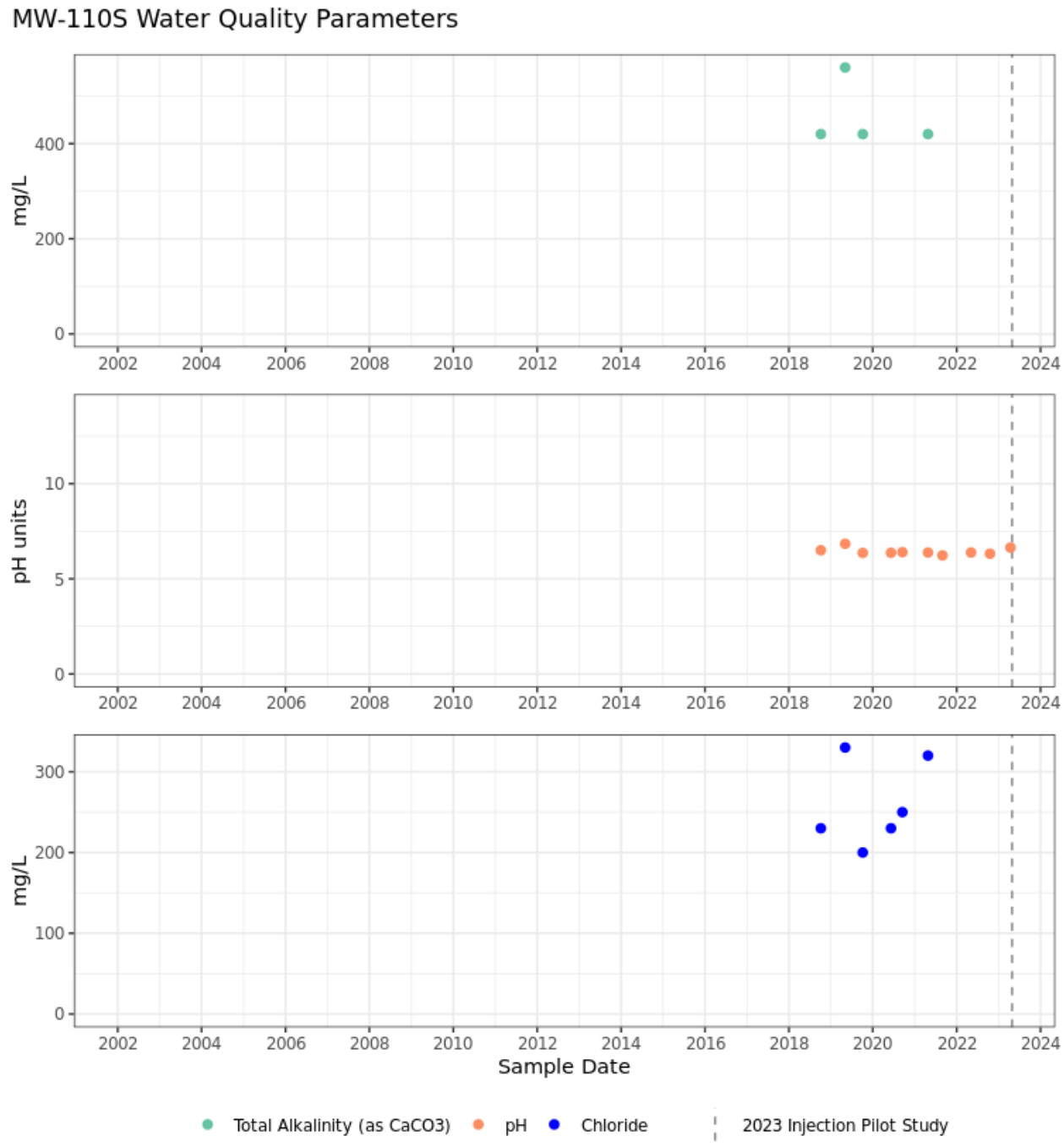


Chlorinated Ethene and Daughter Product Concentration

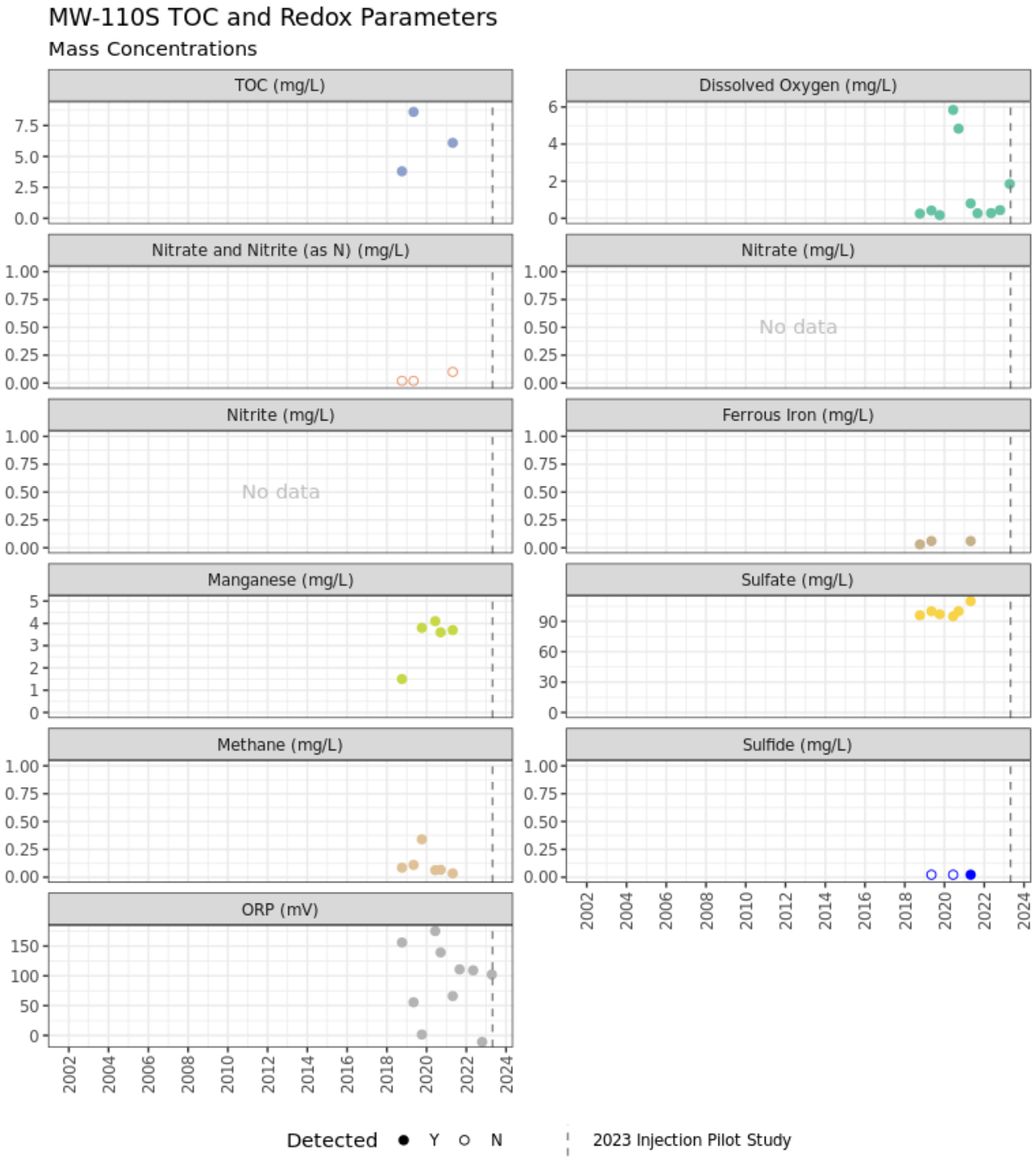


MW-110S

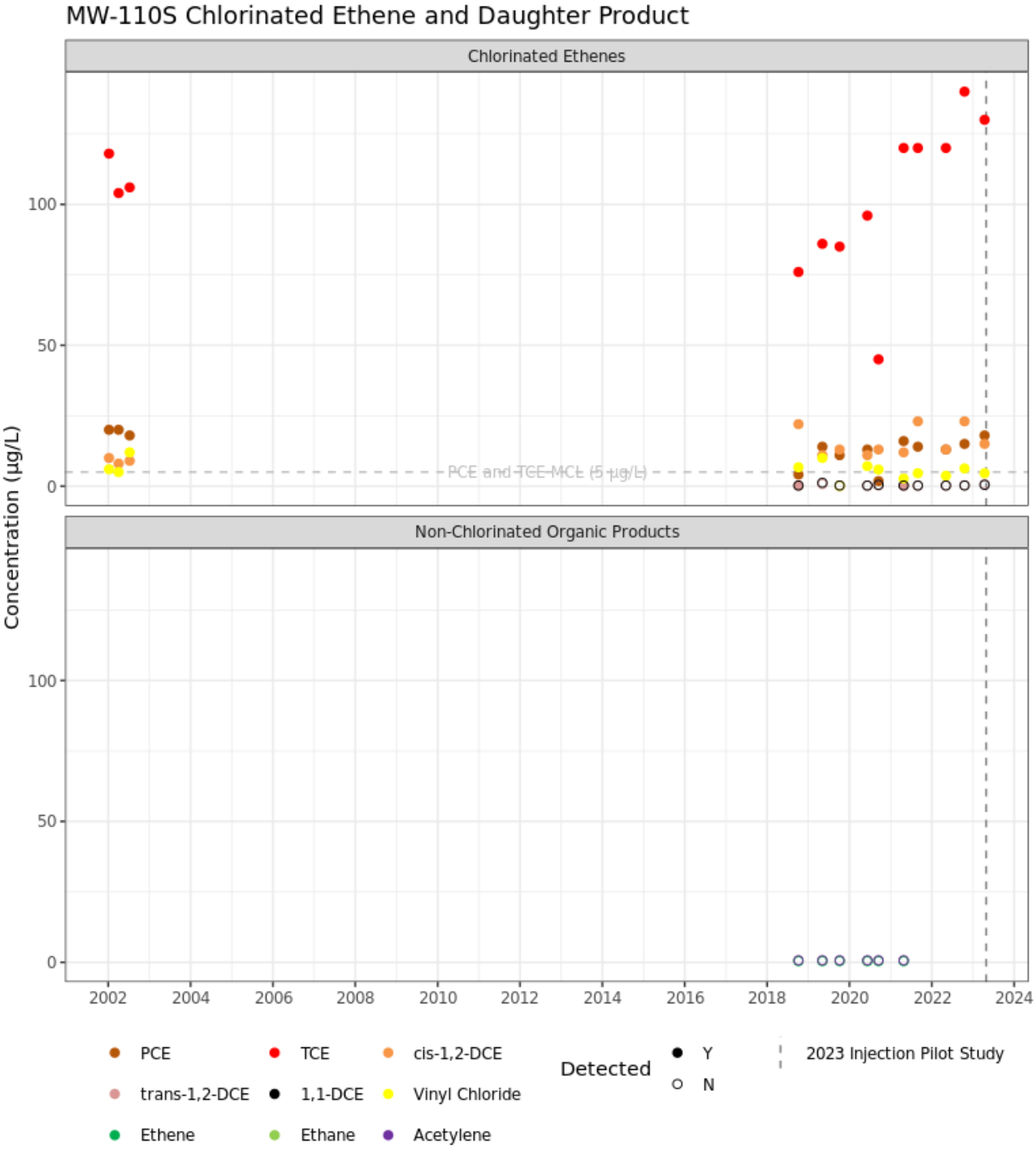
Water Quality



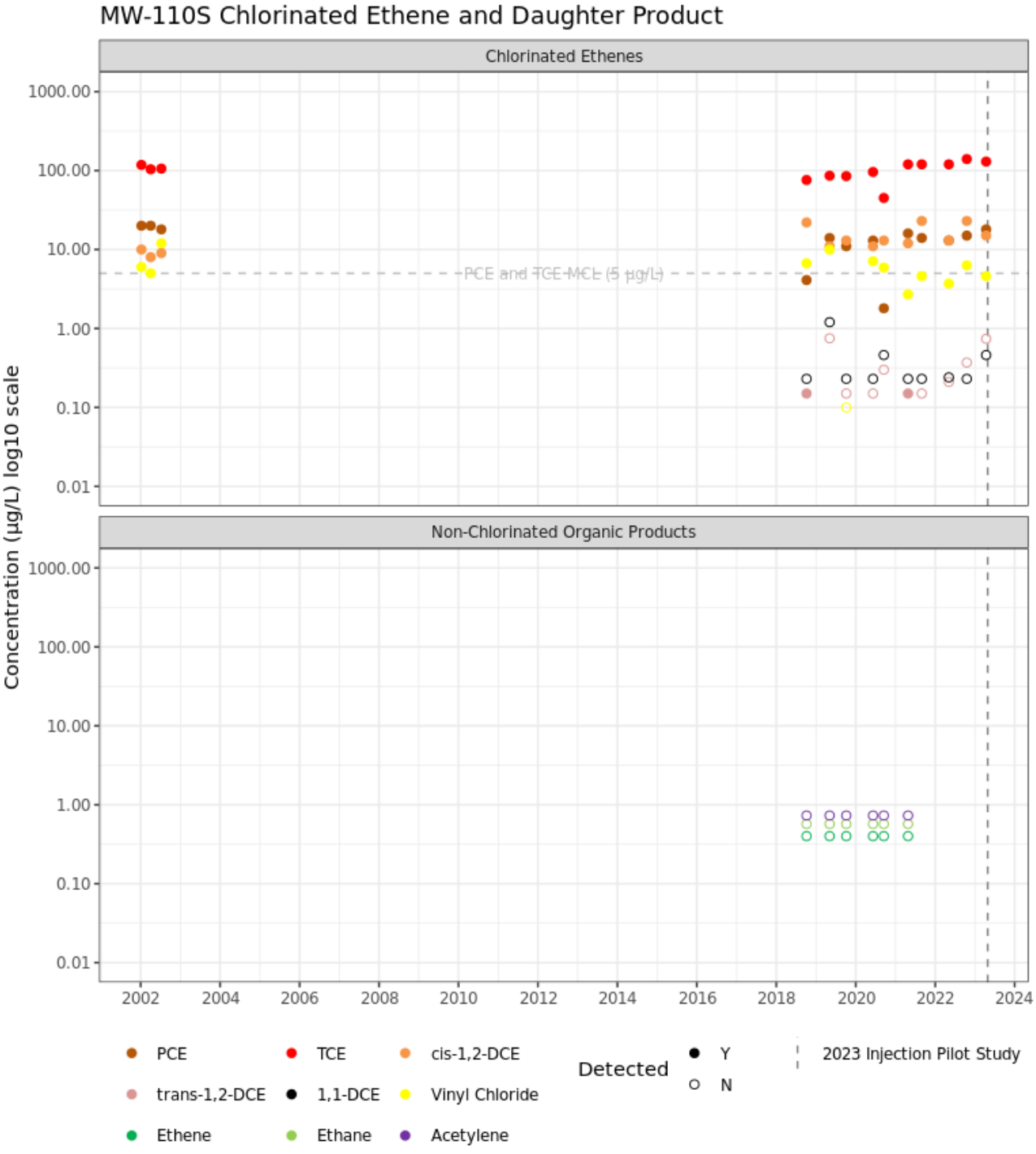
TOC and Redox Parameters



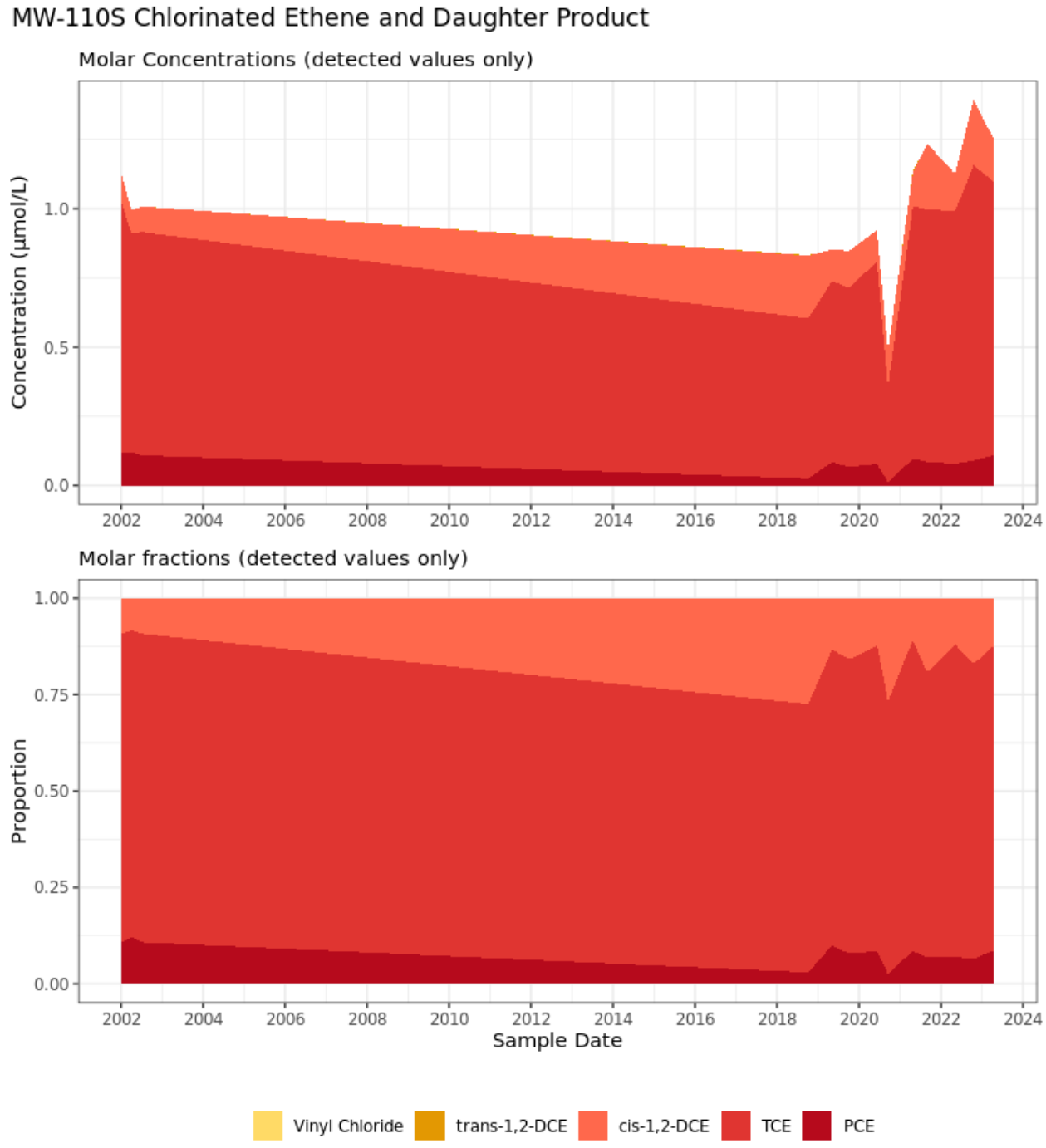
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

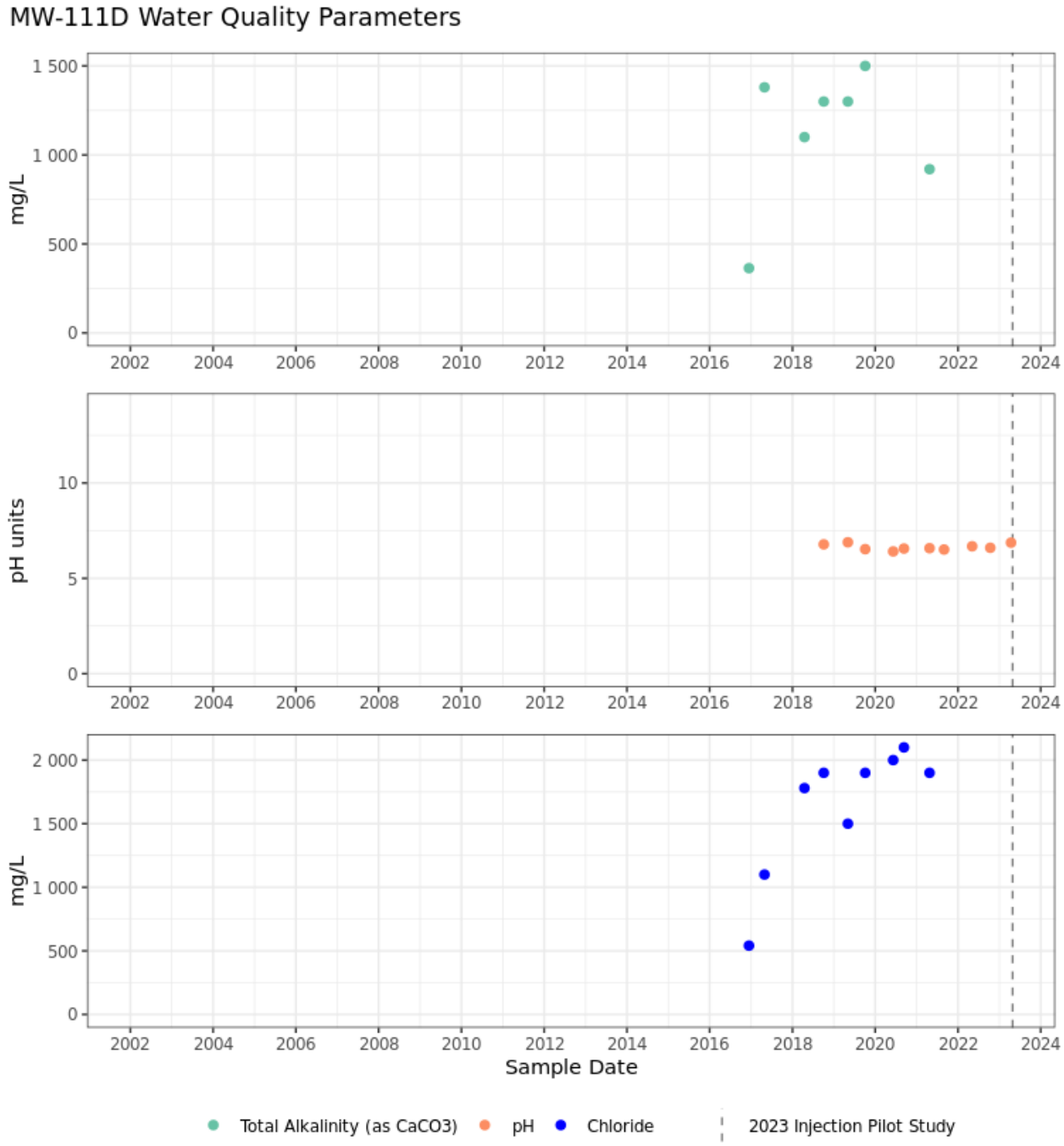


Chlorinated Ethene and Daughter Product Concentration

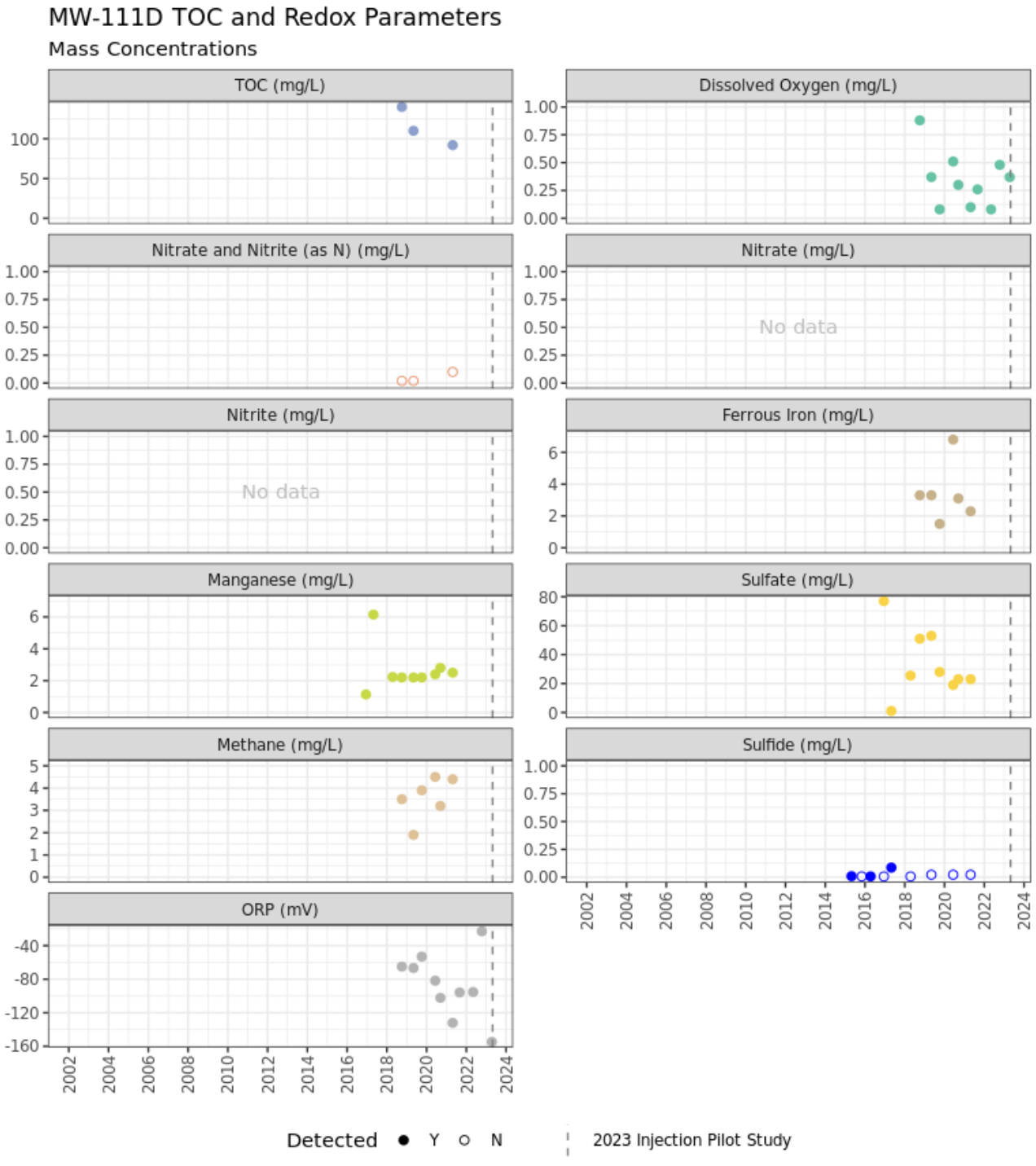


MW-111D

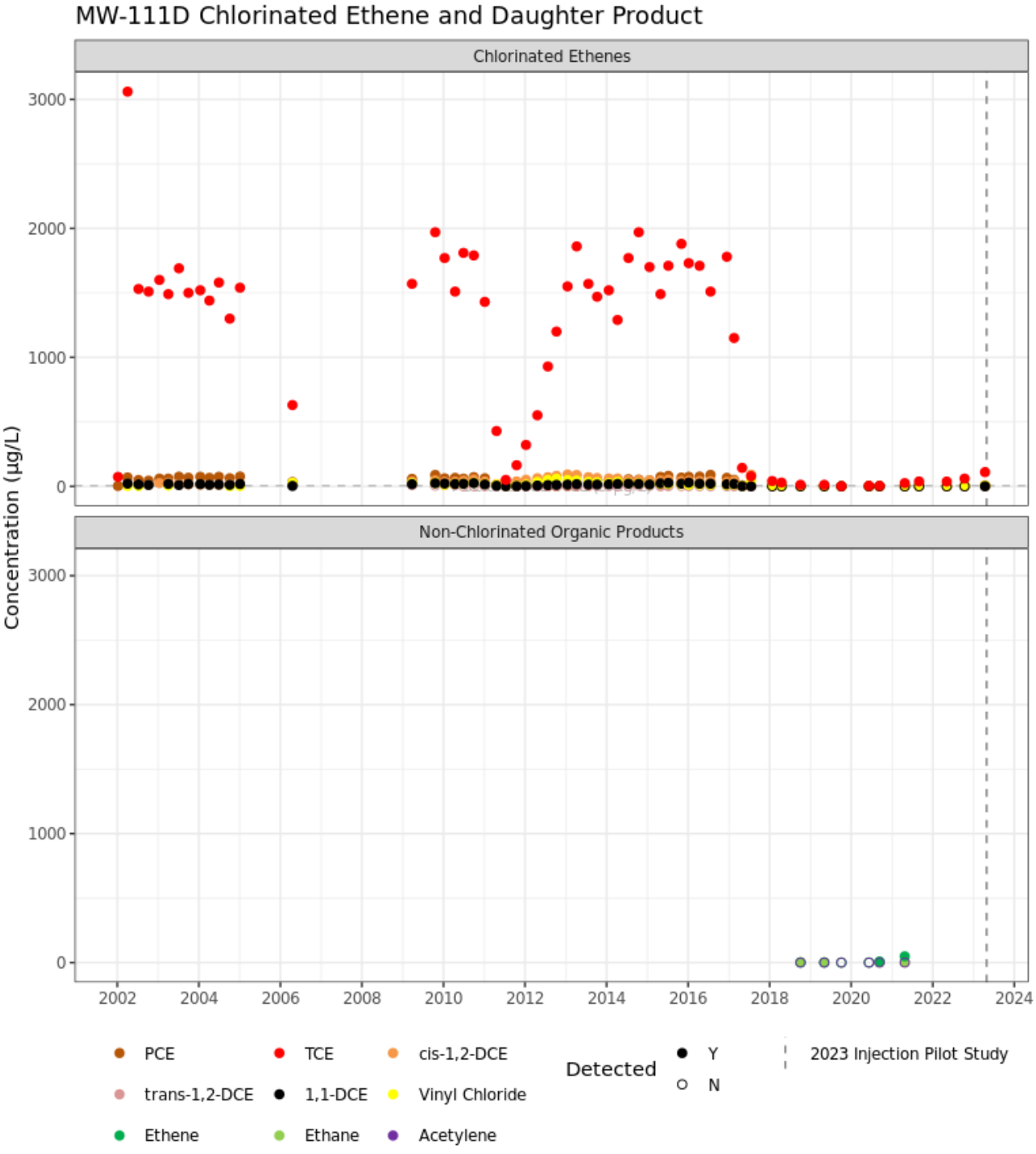
Water Quality



TOC and Redox Parameters

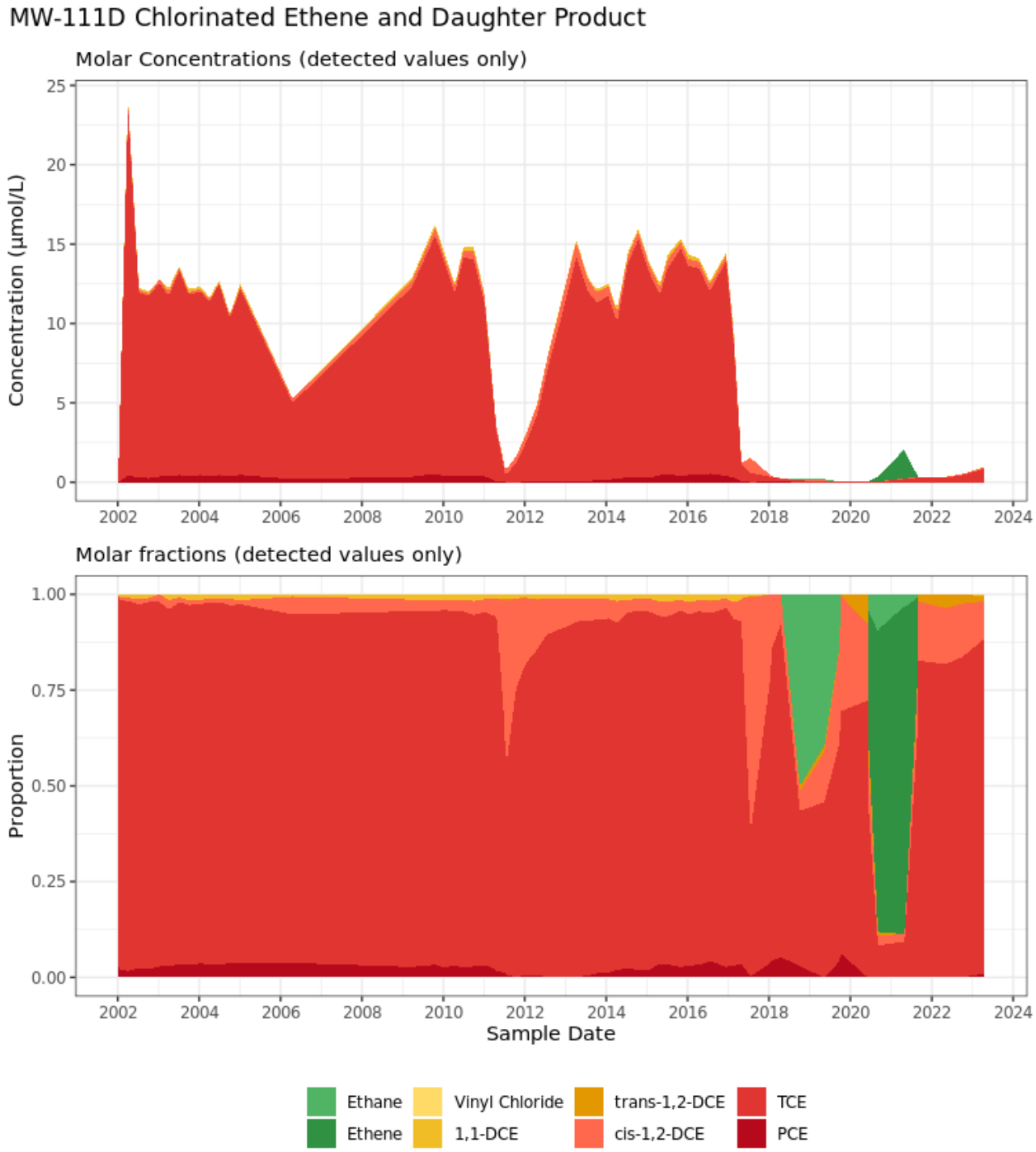


Chlorinated Ethene and Daughter Product Mass



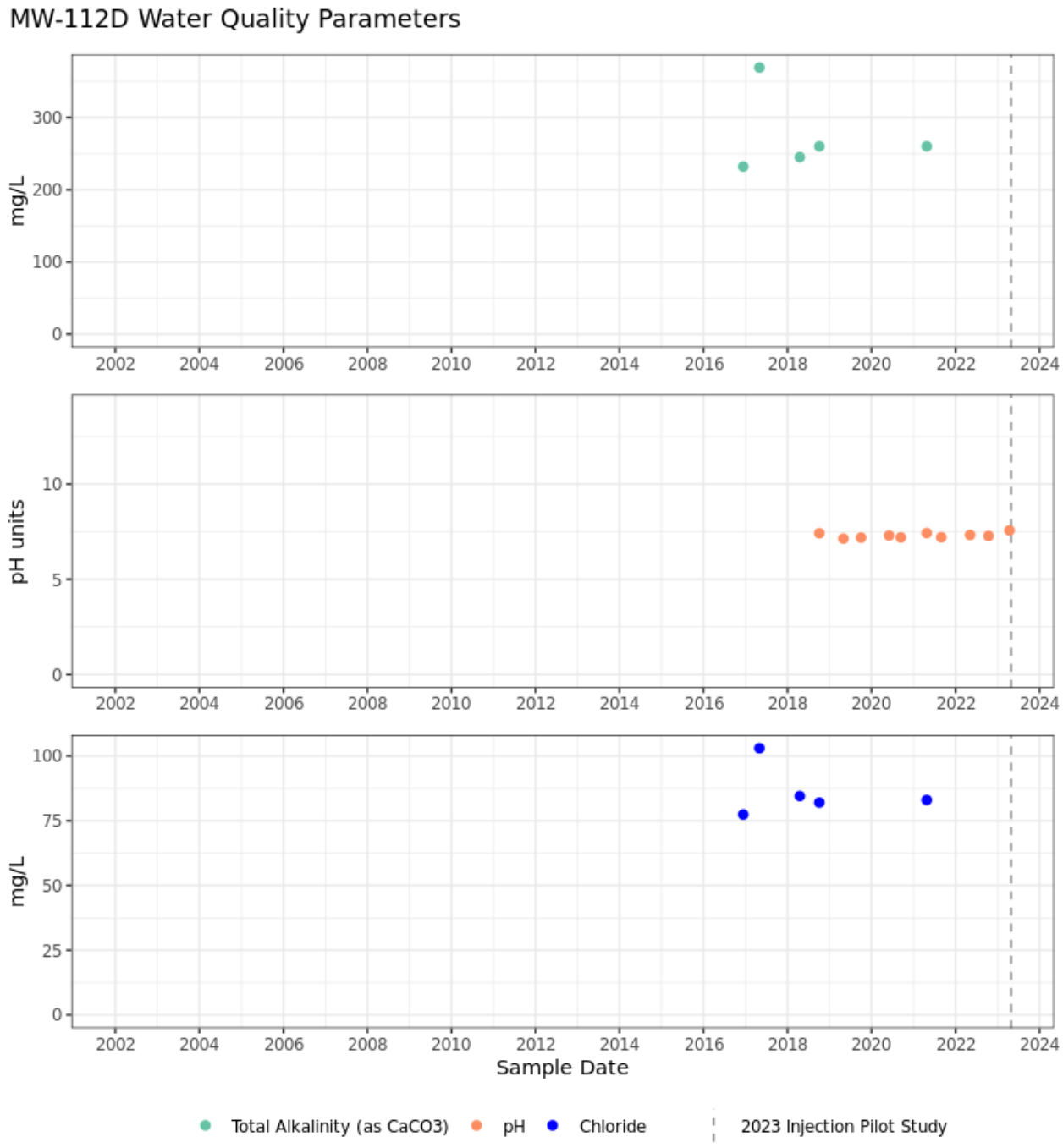
Chlorinated Ethene and Daughter Product Mass (log10)

Chlorinated Ethene and Daughter Product Concentration

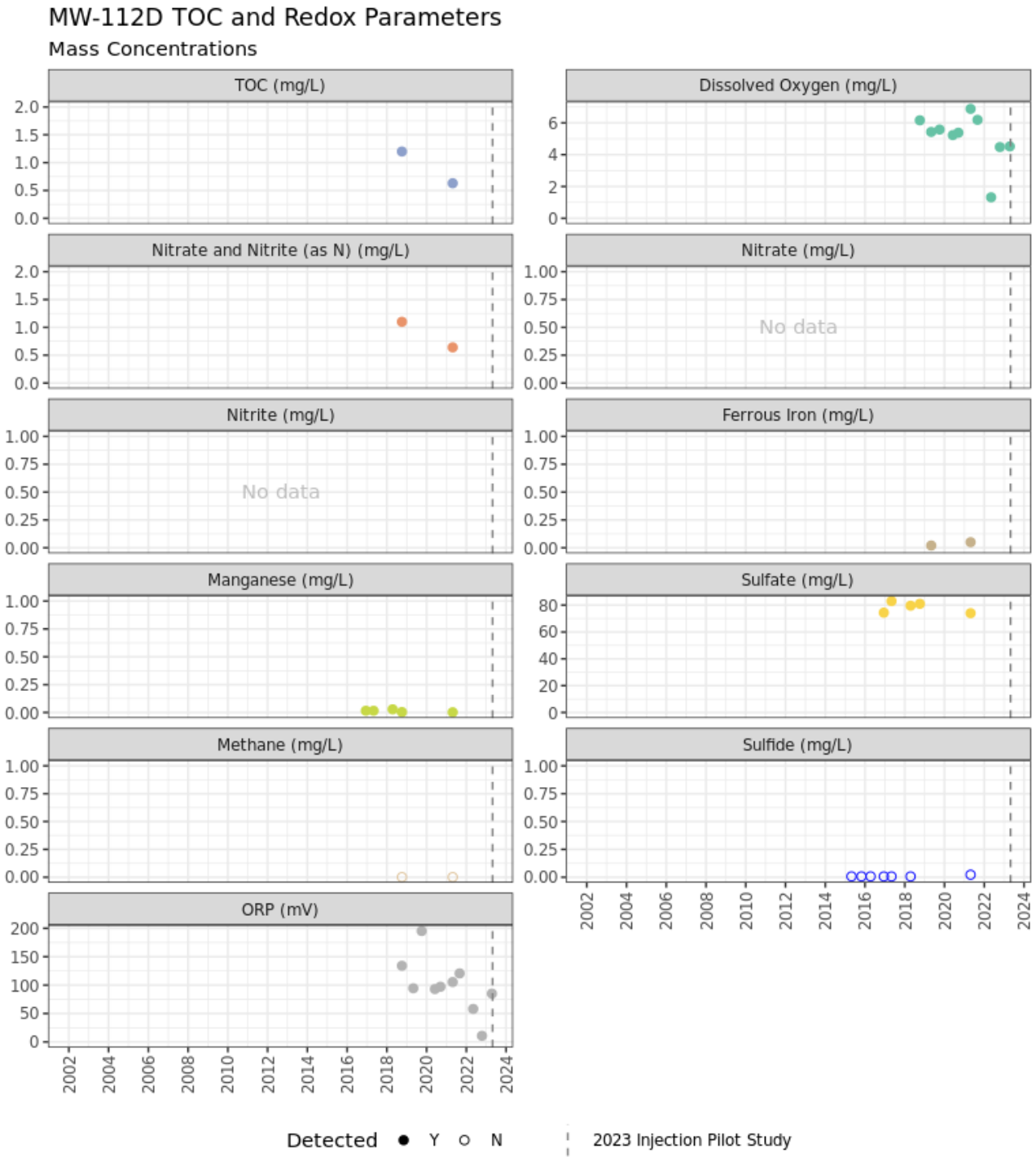


MW-112D

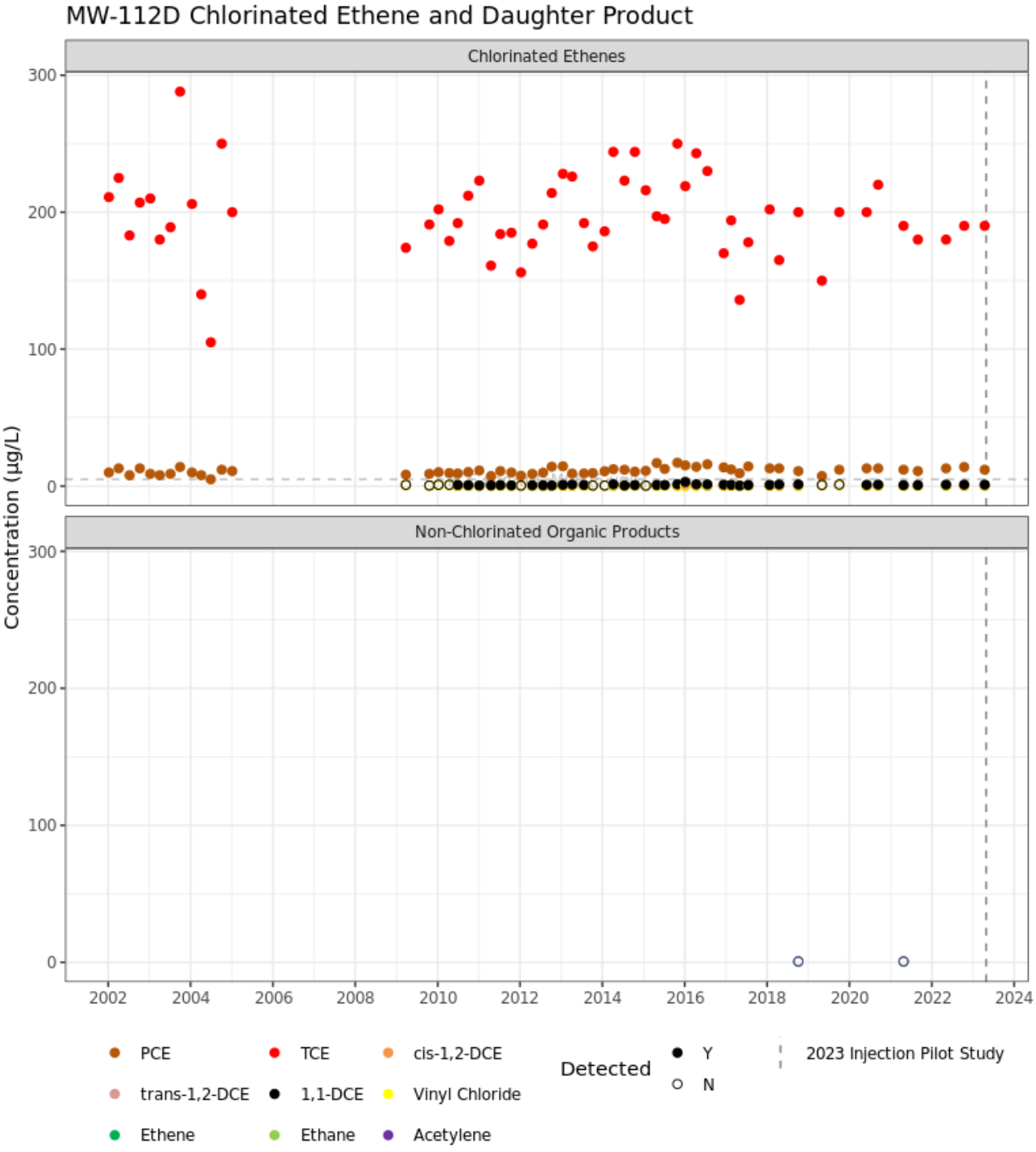
Water Quality



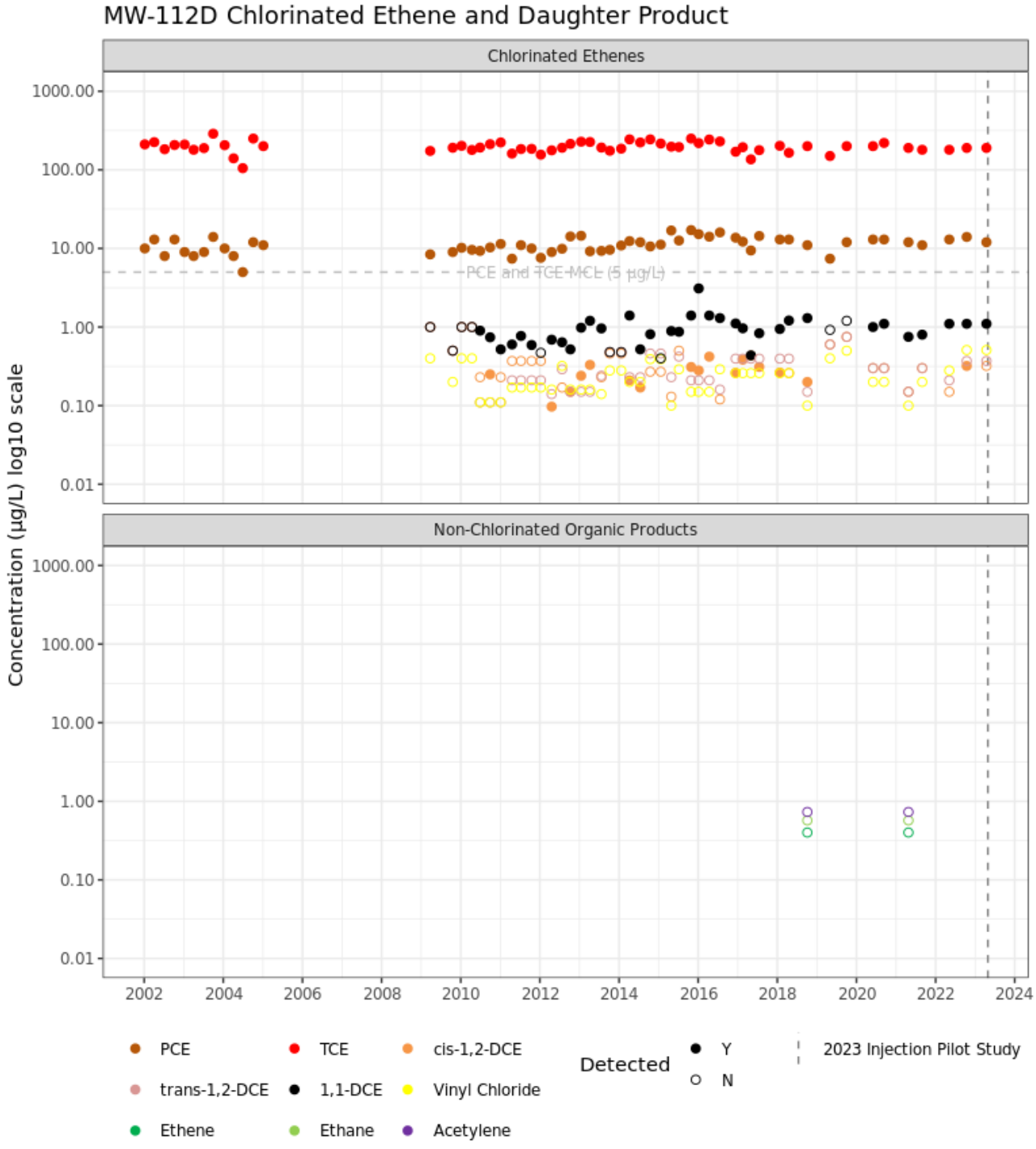
TOC and Redox Parameters



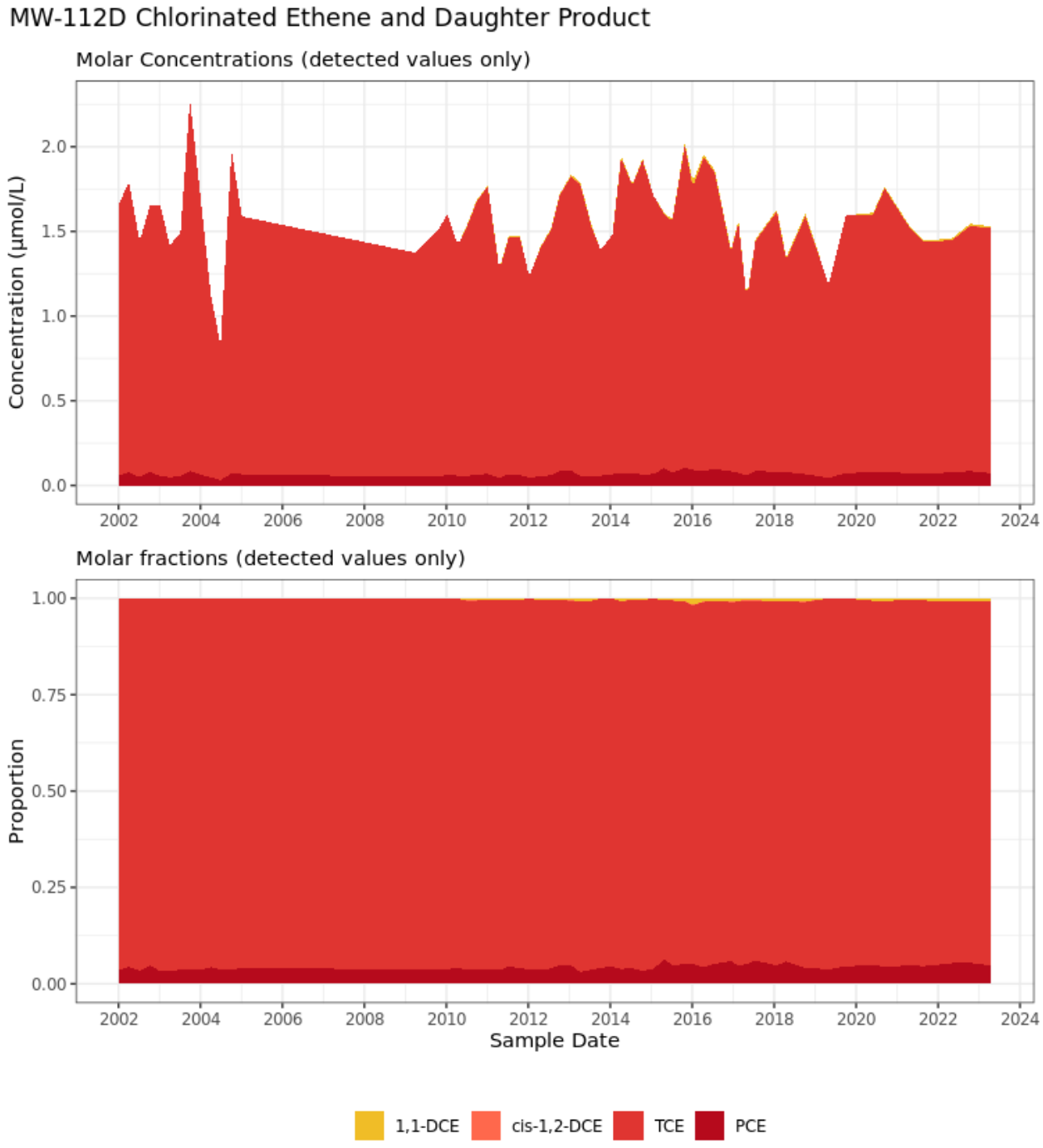
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

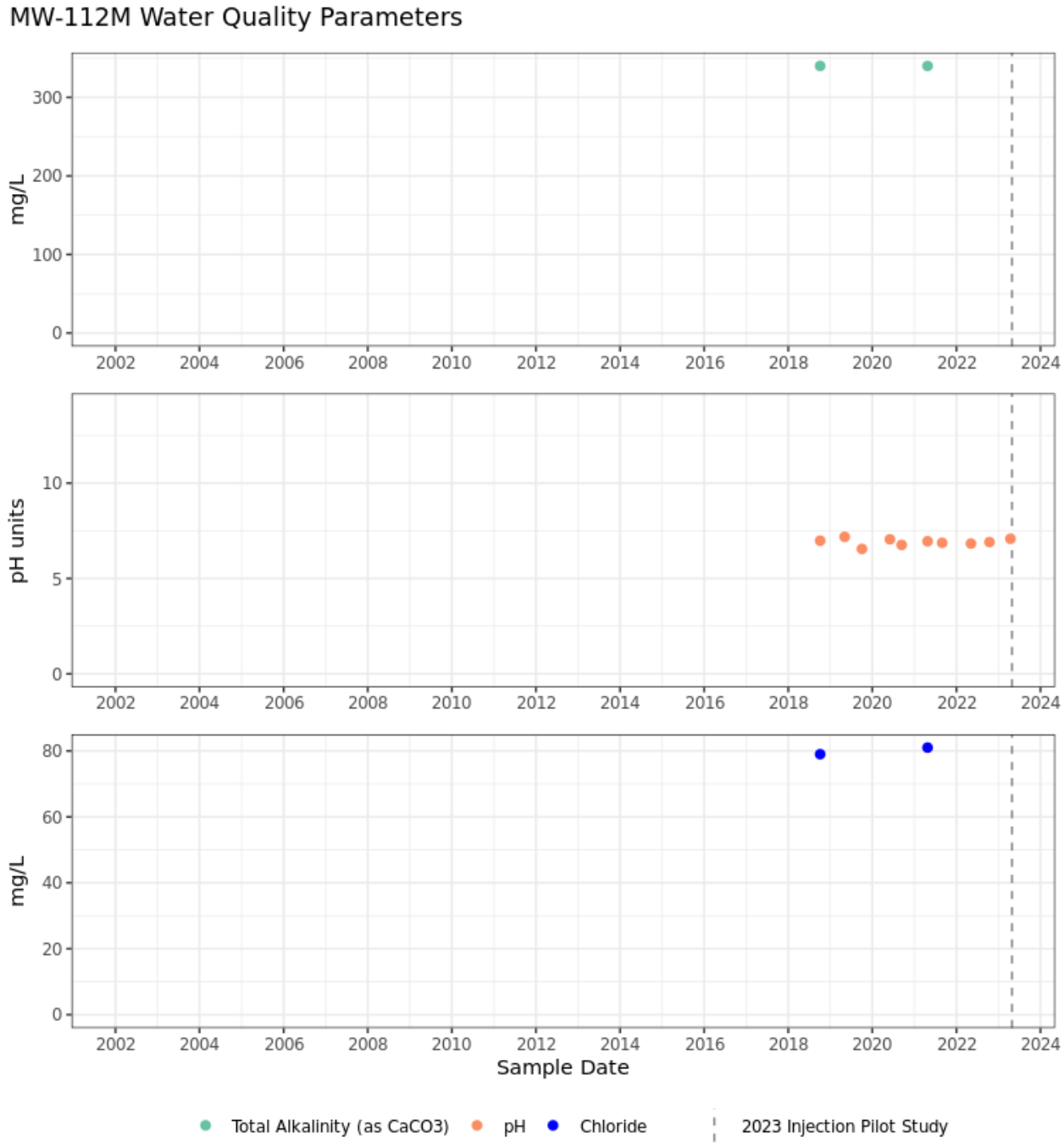


Chlorinated Ethene and Daughter Product Concentration

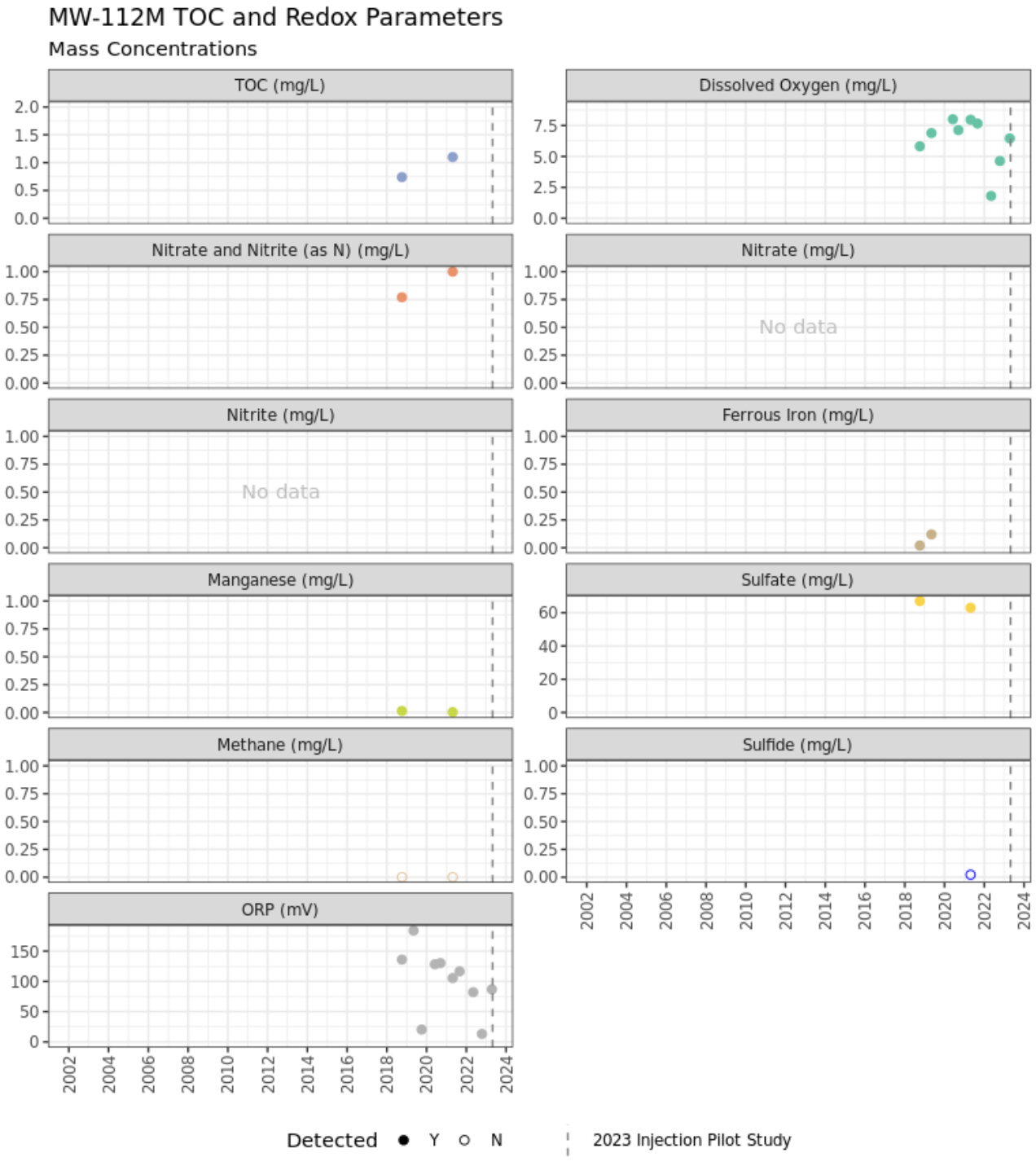


MW-112M

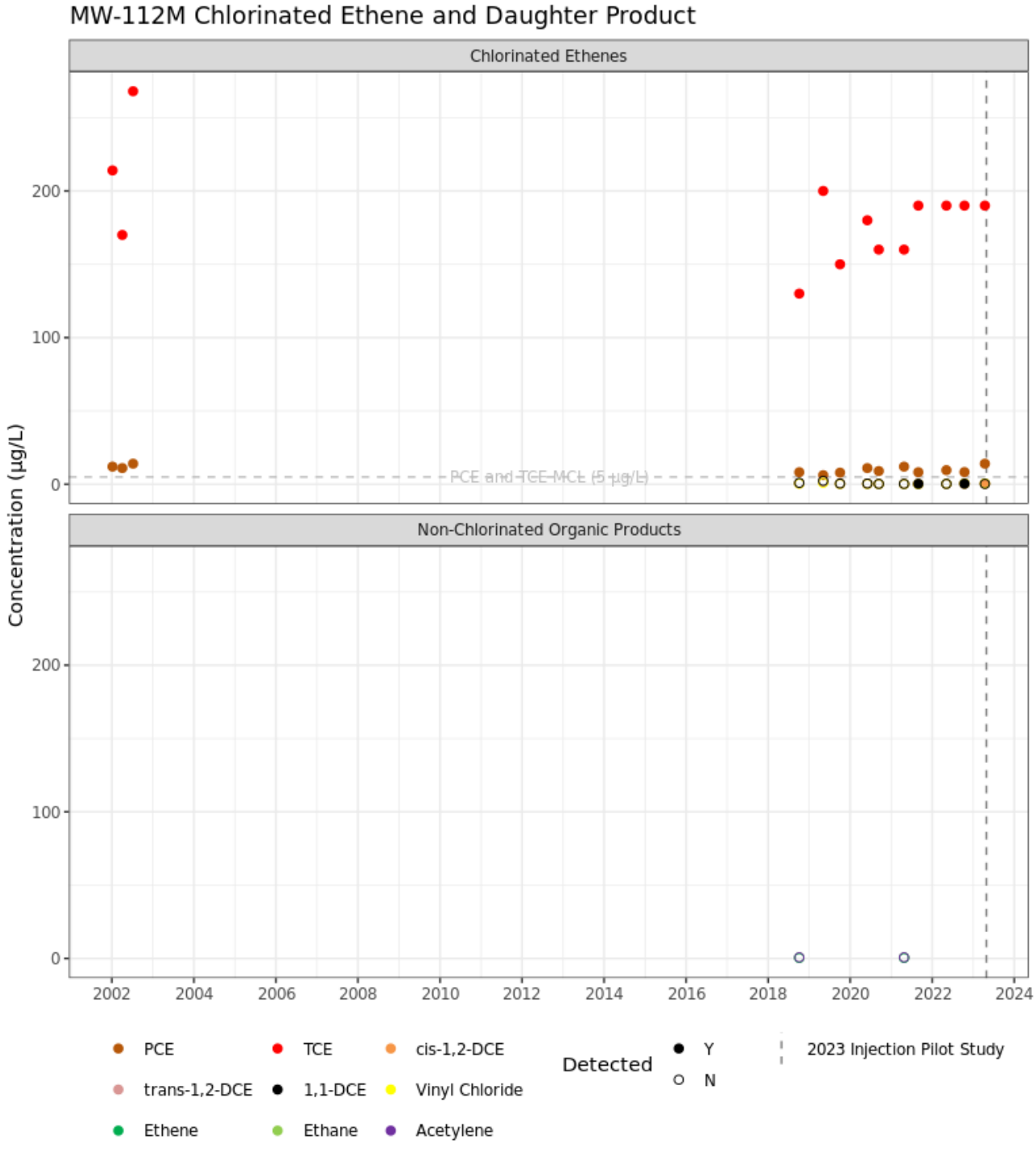
Water Quality



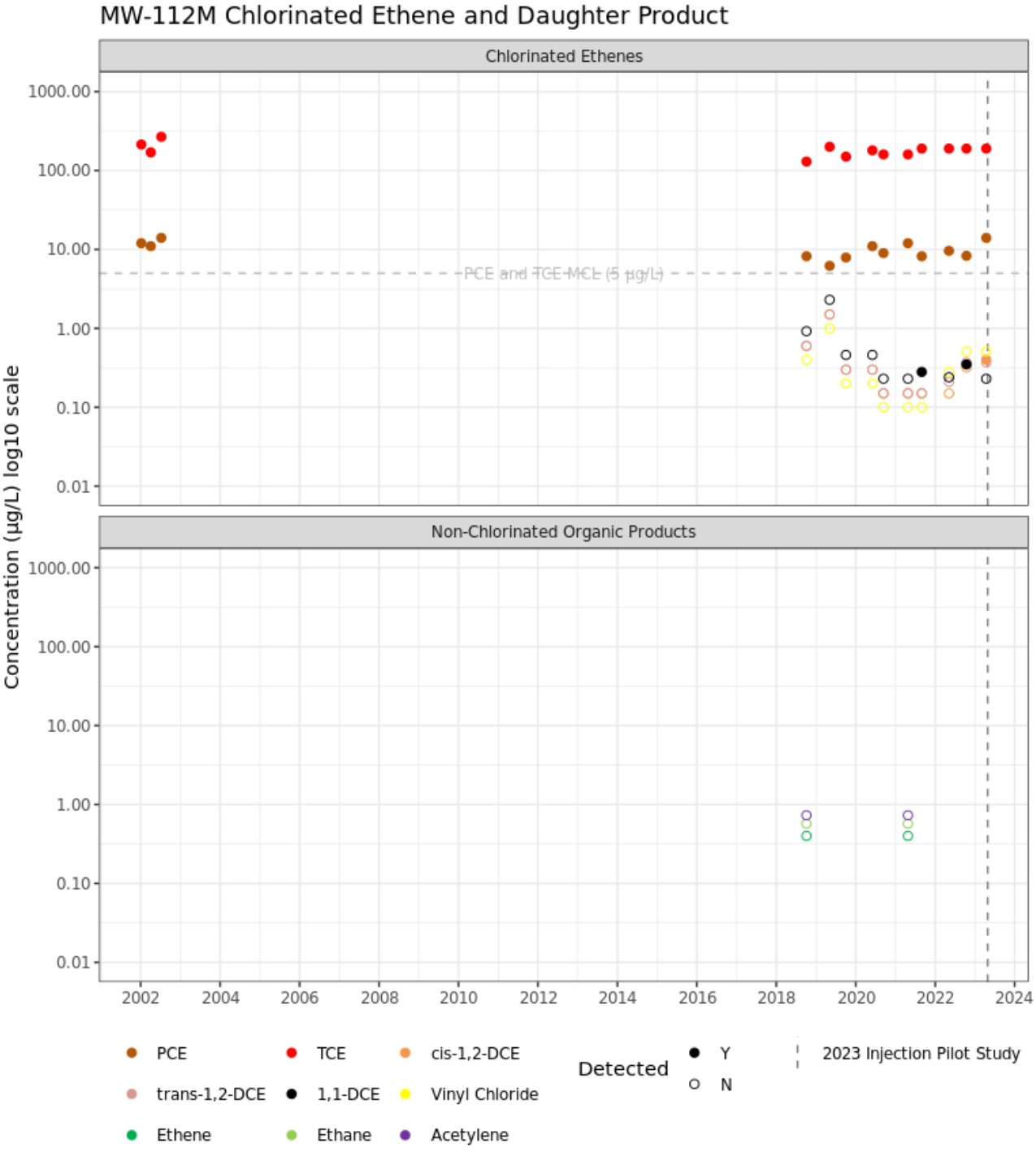
TOC and Redox Parameters



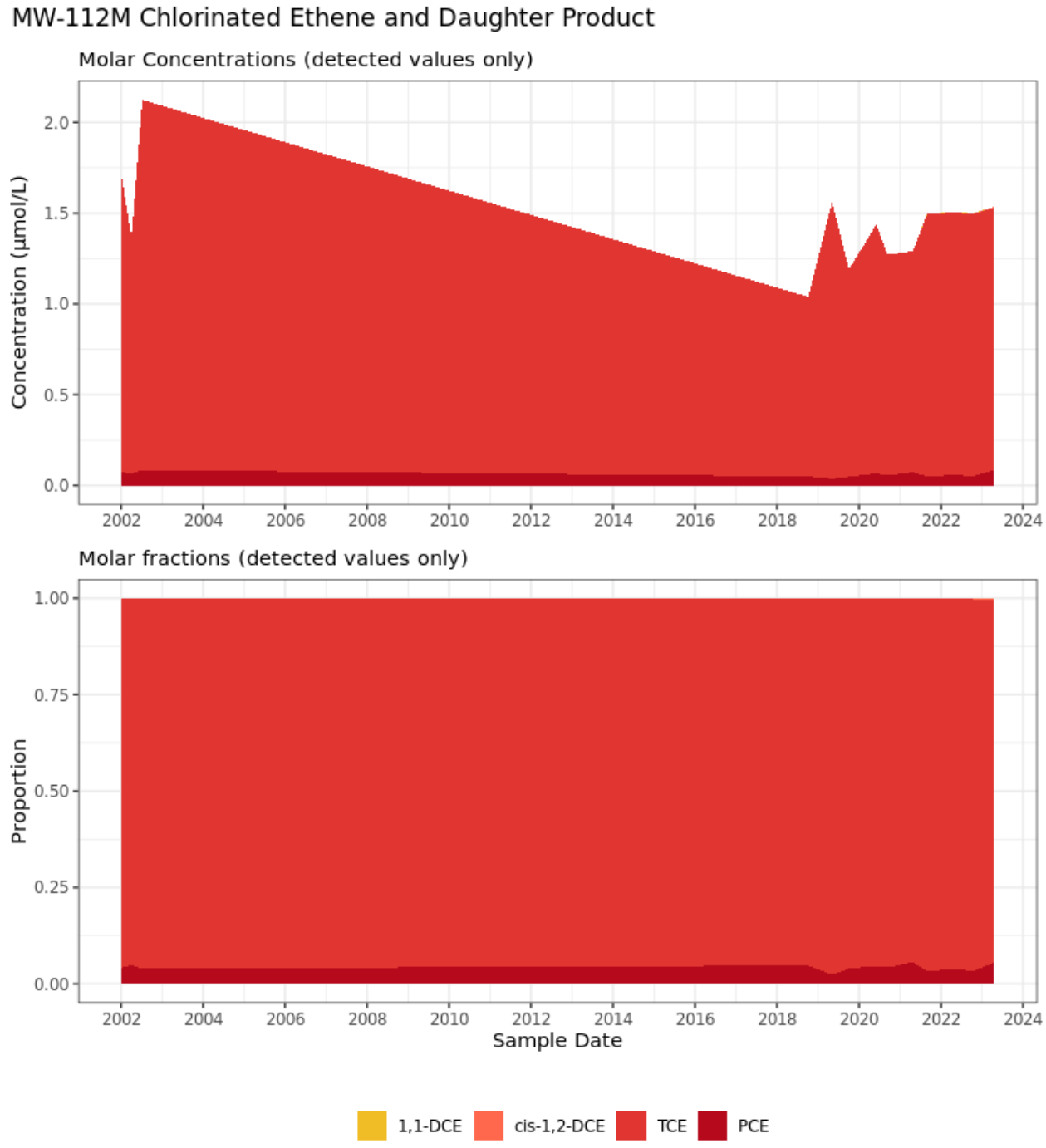
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

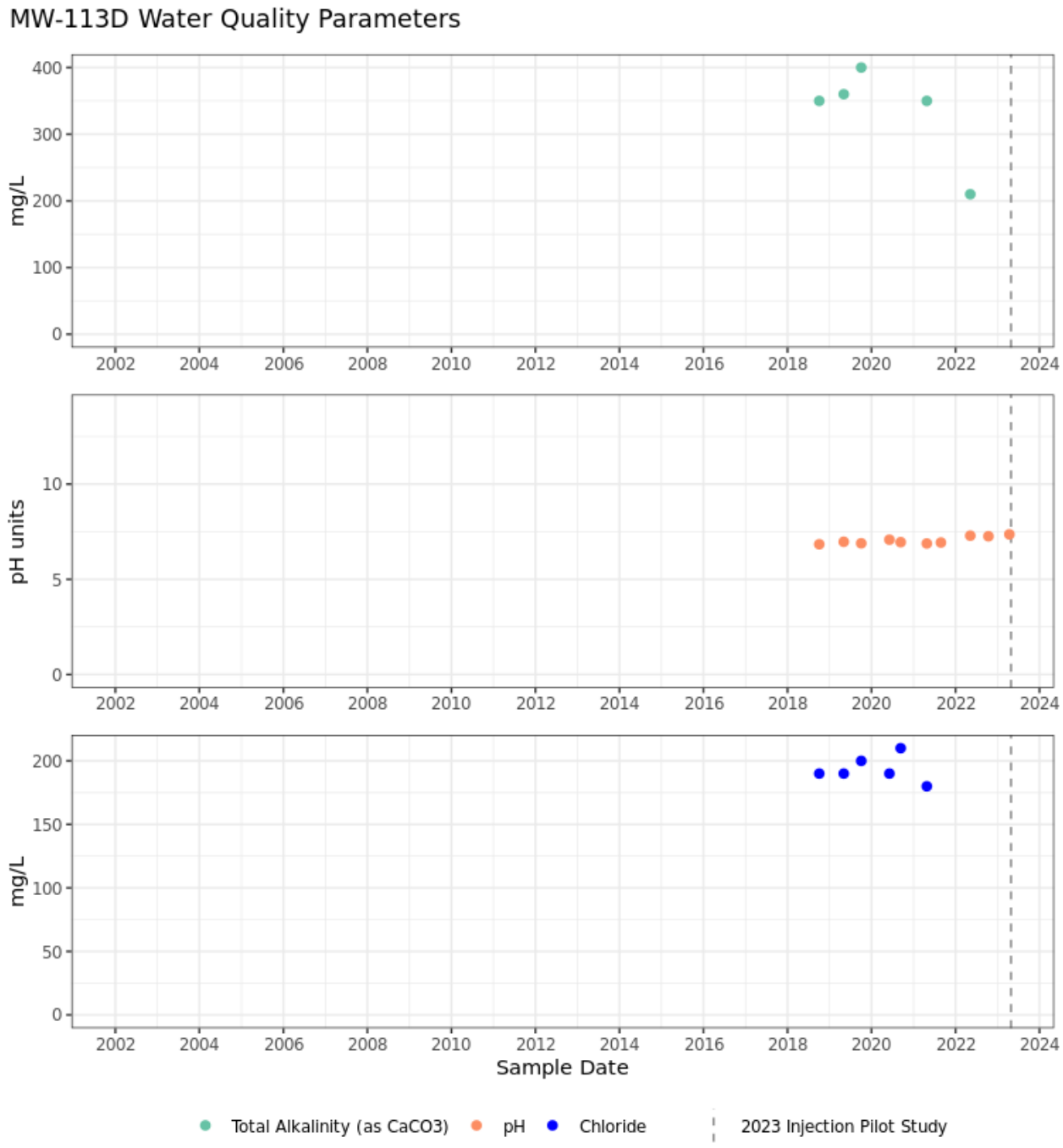


Chlorinated Ethene and Daughter Product Concentration

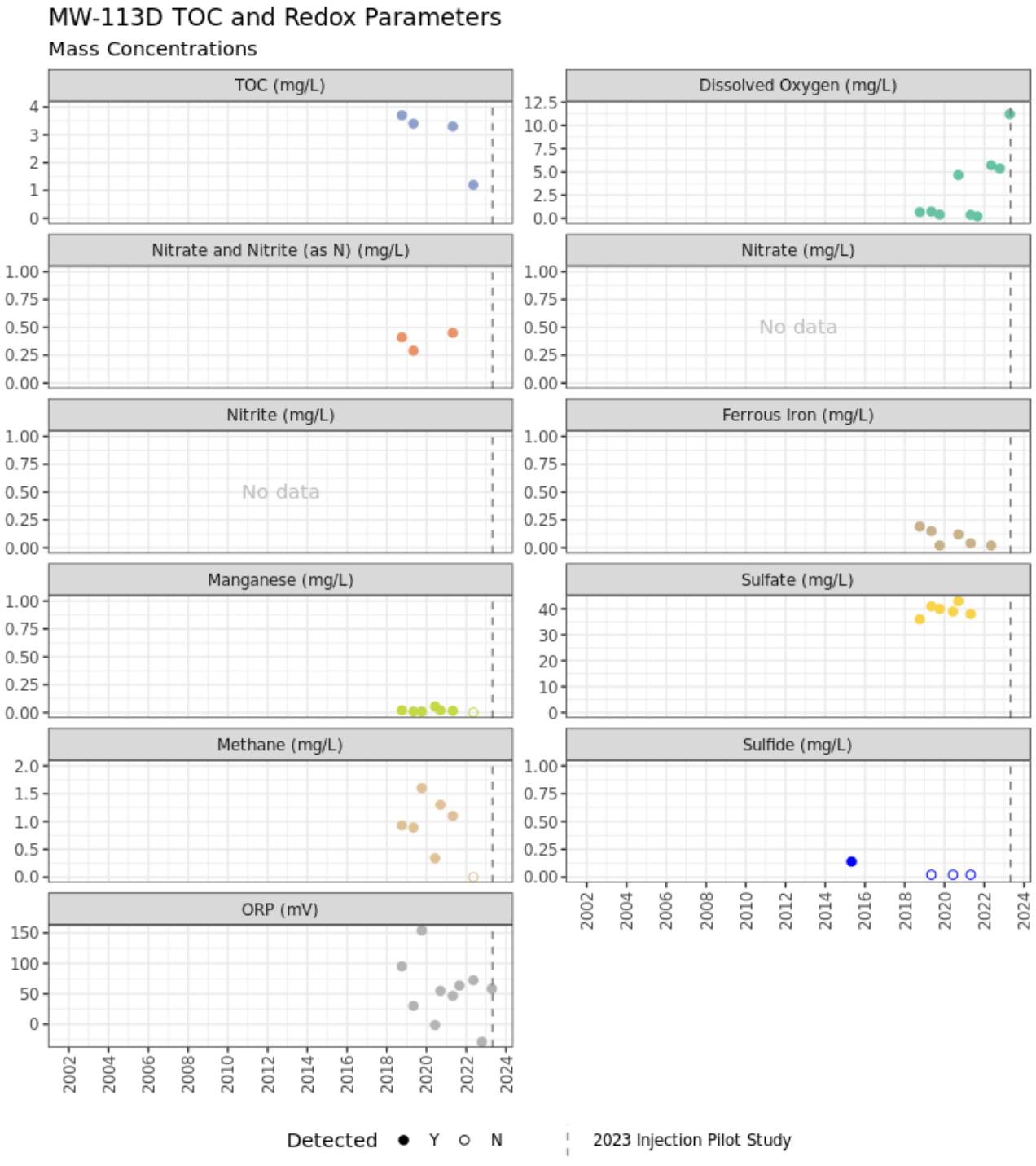


MW-113D

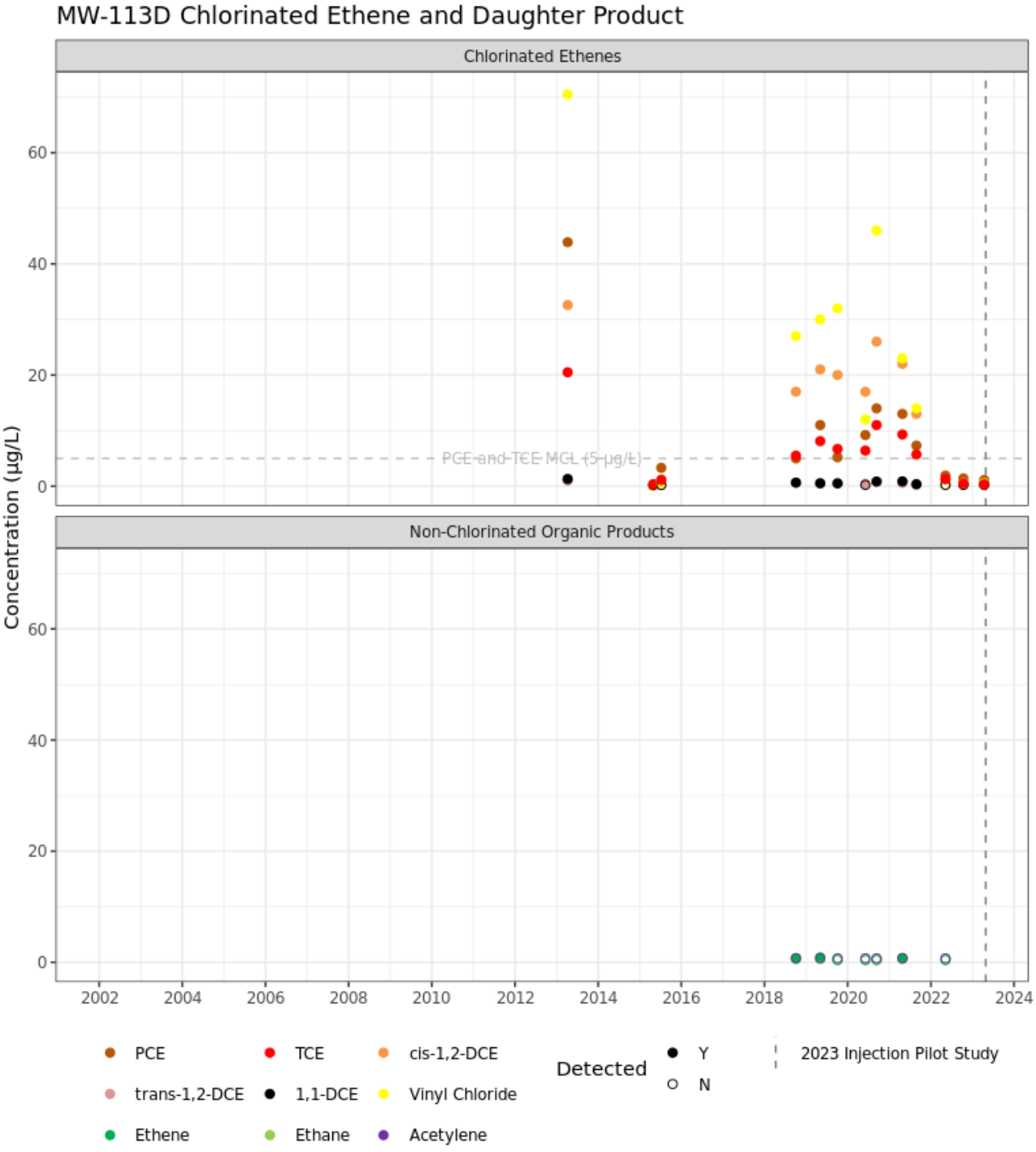
Water Quality



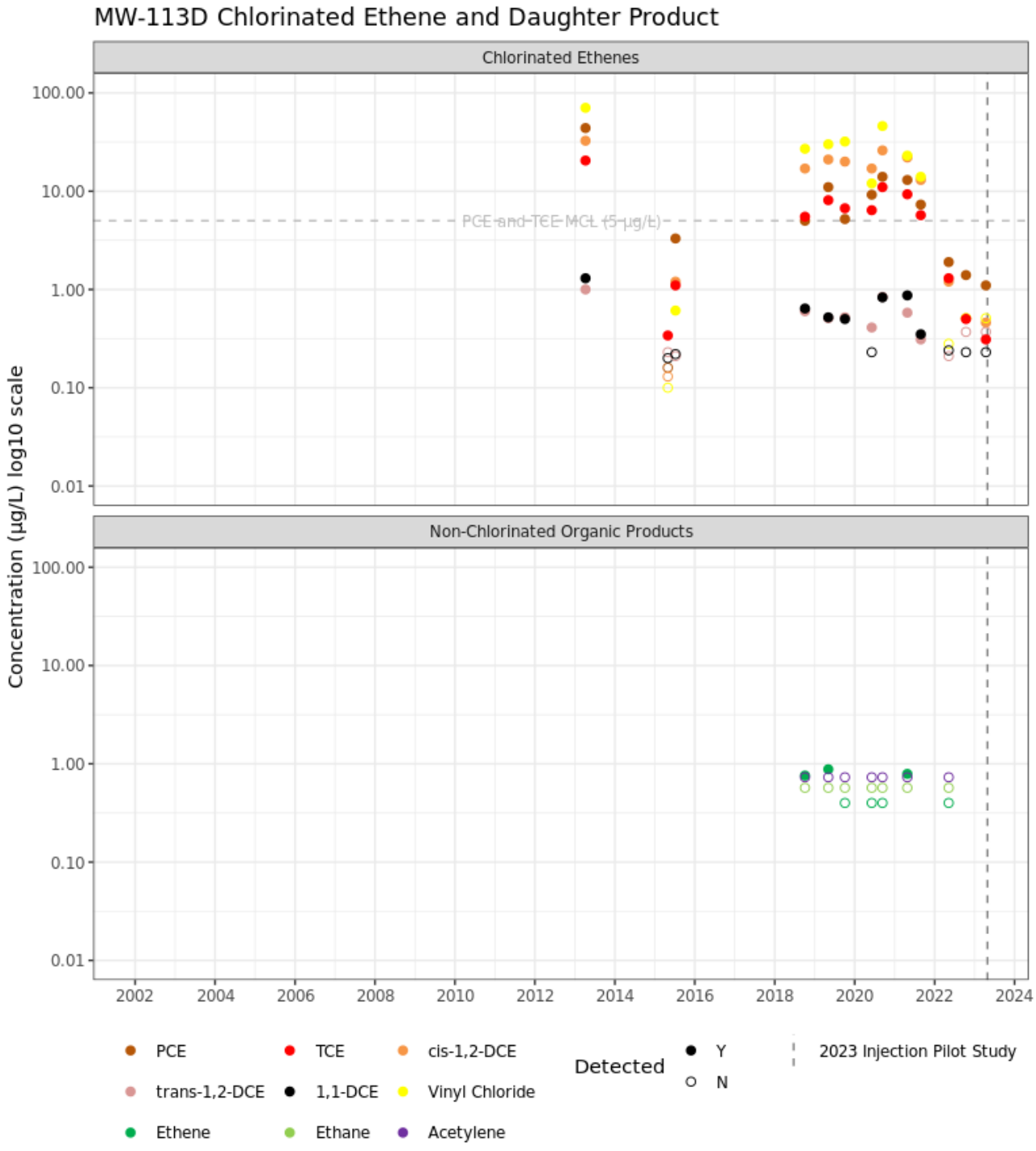
TOC and Redox Parameters



Chlorinated Ethene and Daughter Product Mass



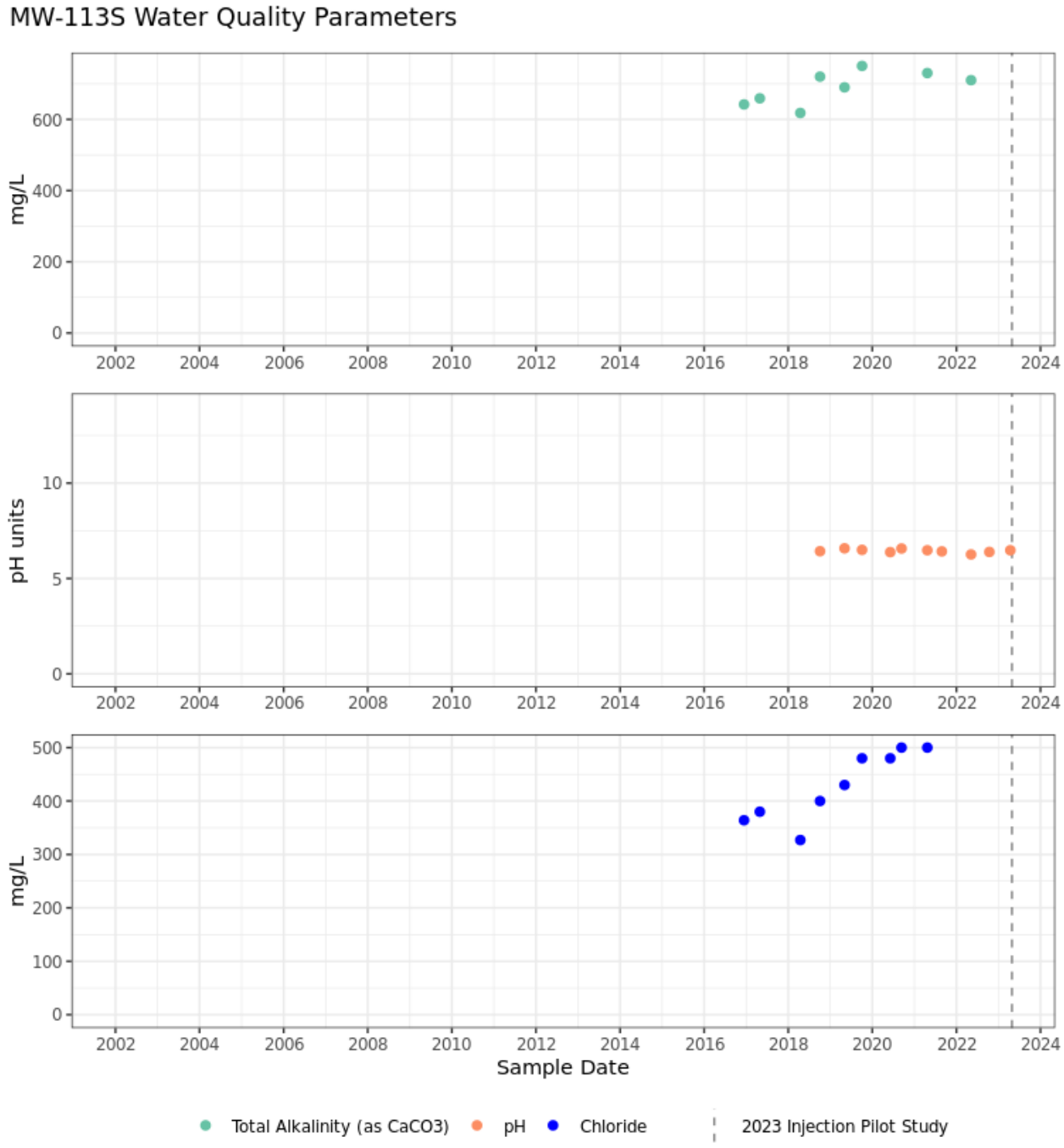
Chlorinated Ethene and Daughter Product Mass (log10)



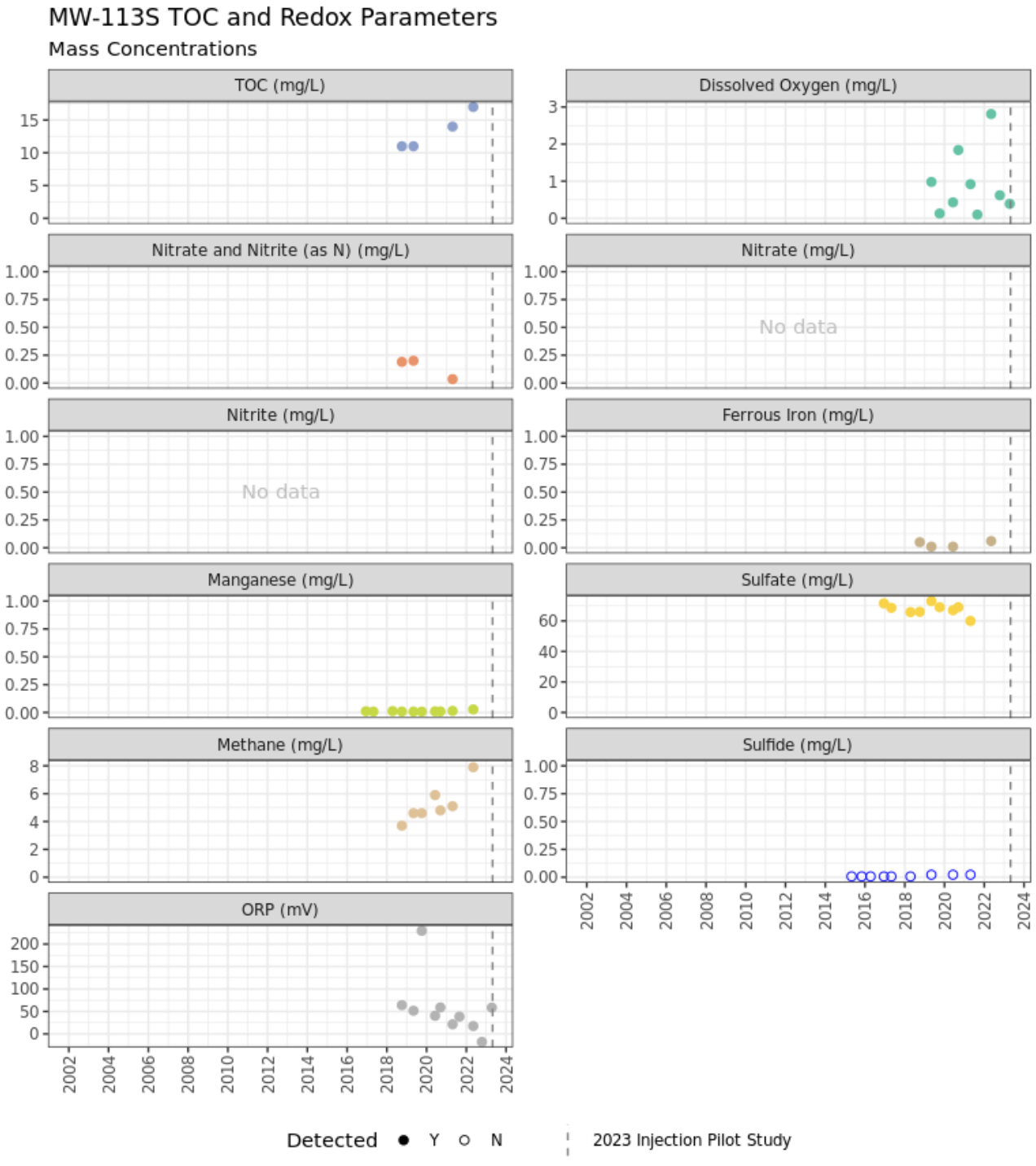
Chlorinated Ethene and Daughter Product Concentration

MW-113S

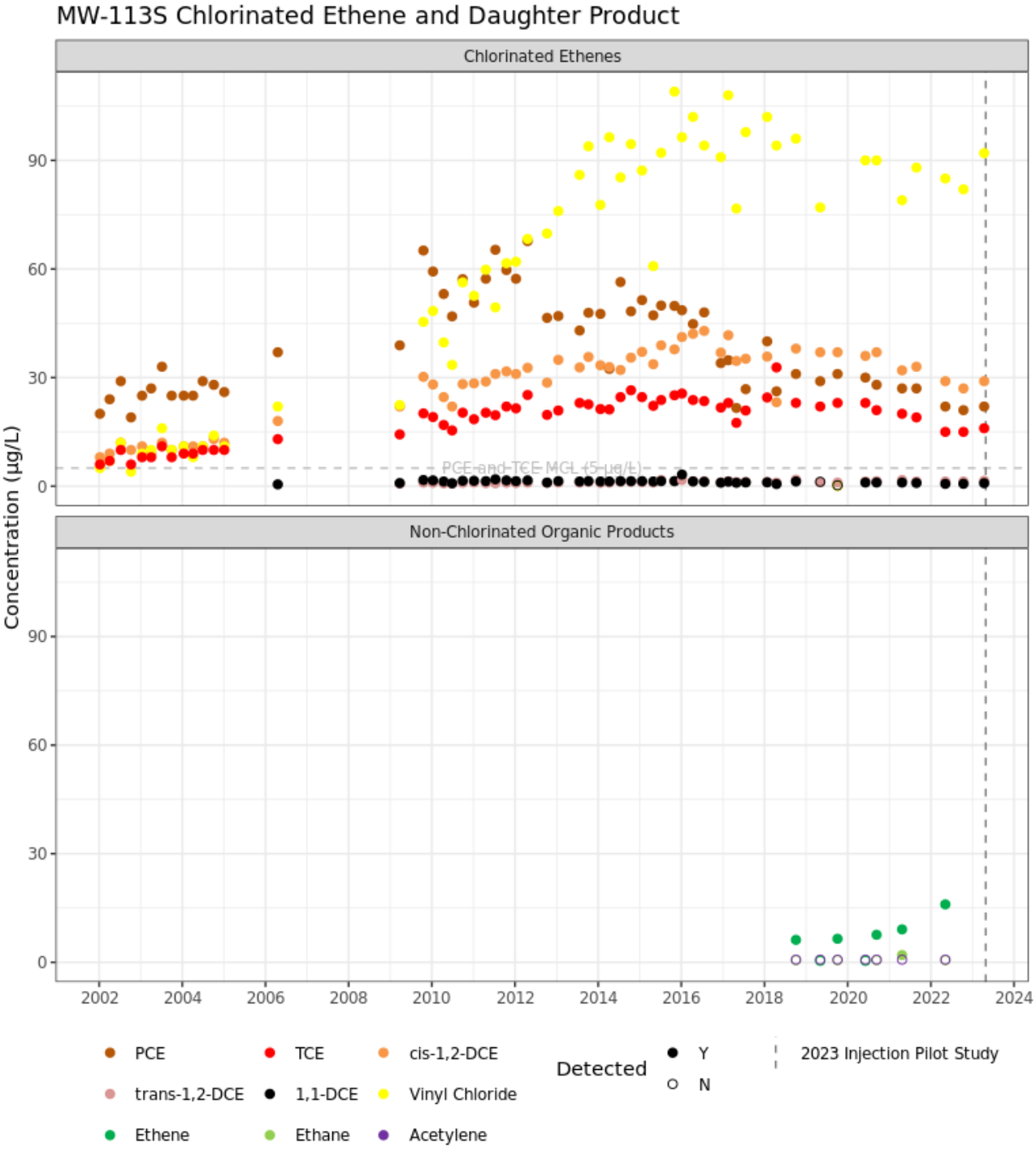
Water Quality



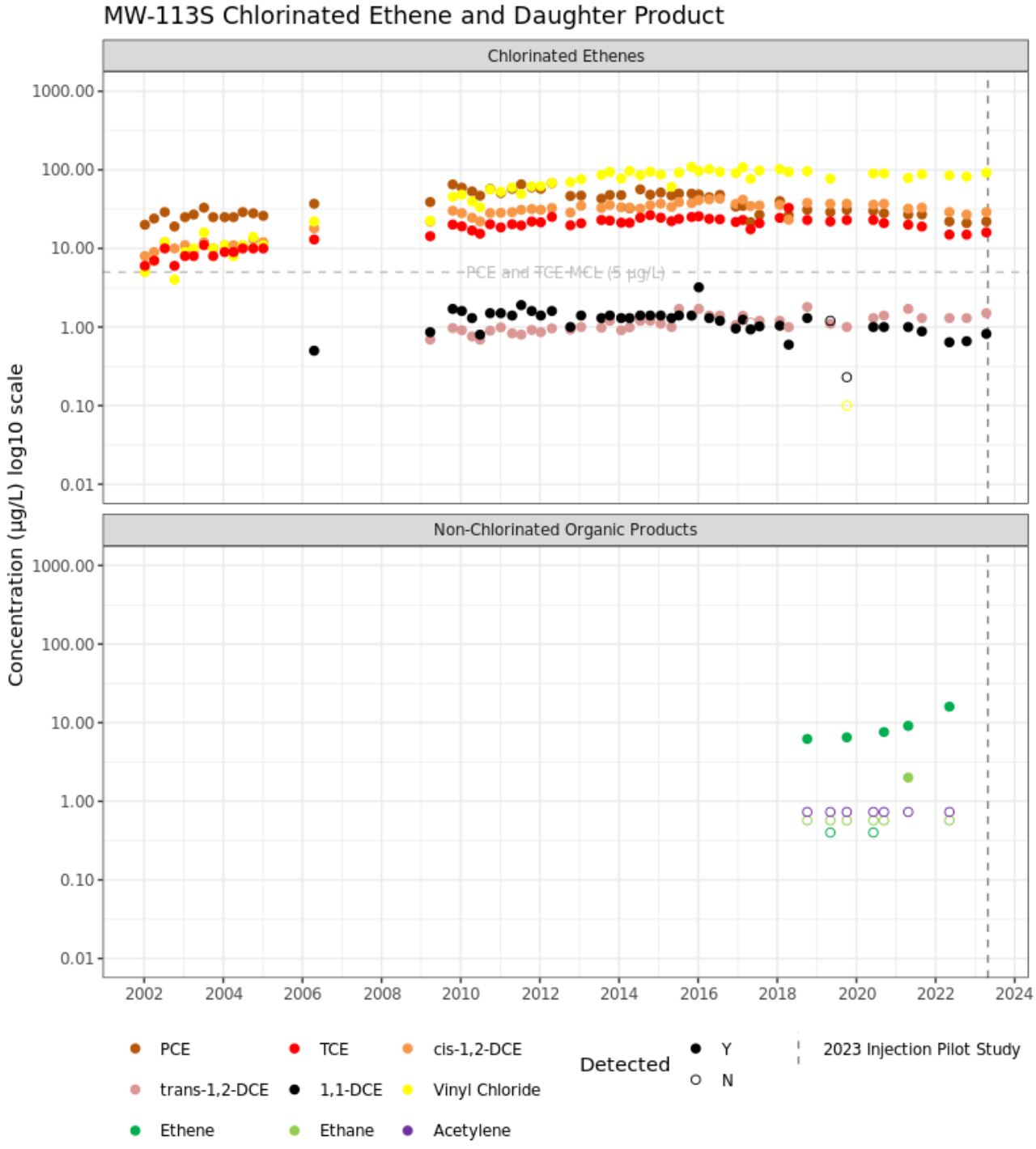
TOC and Redox Parameters



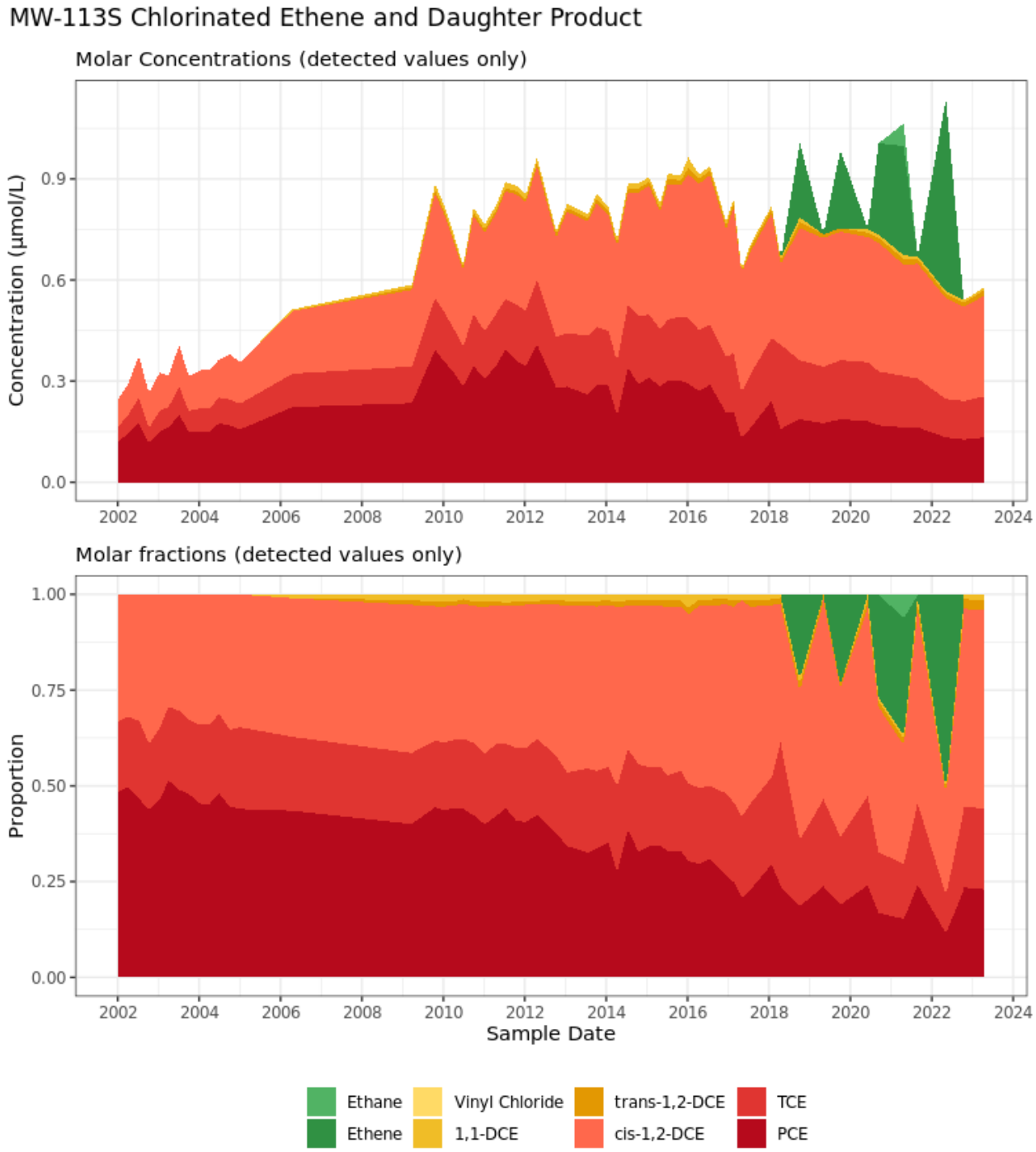
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

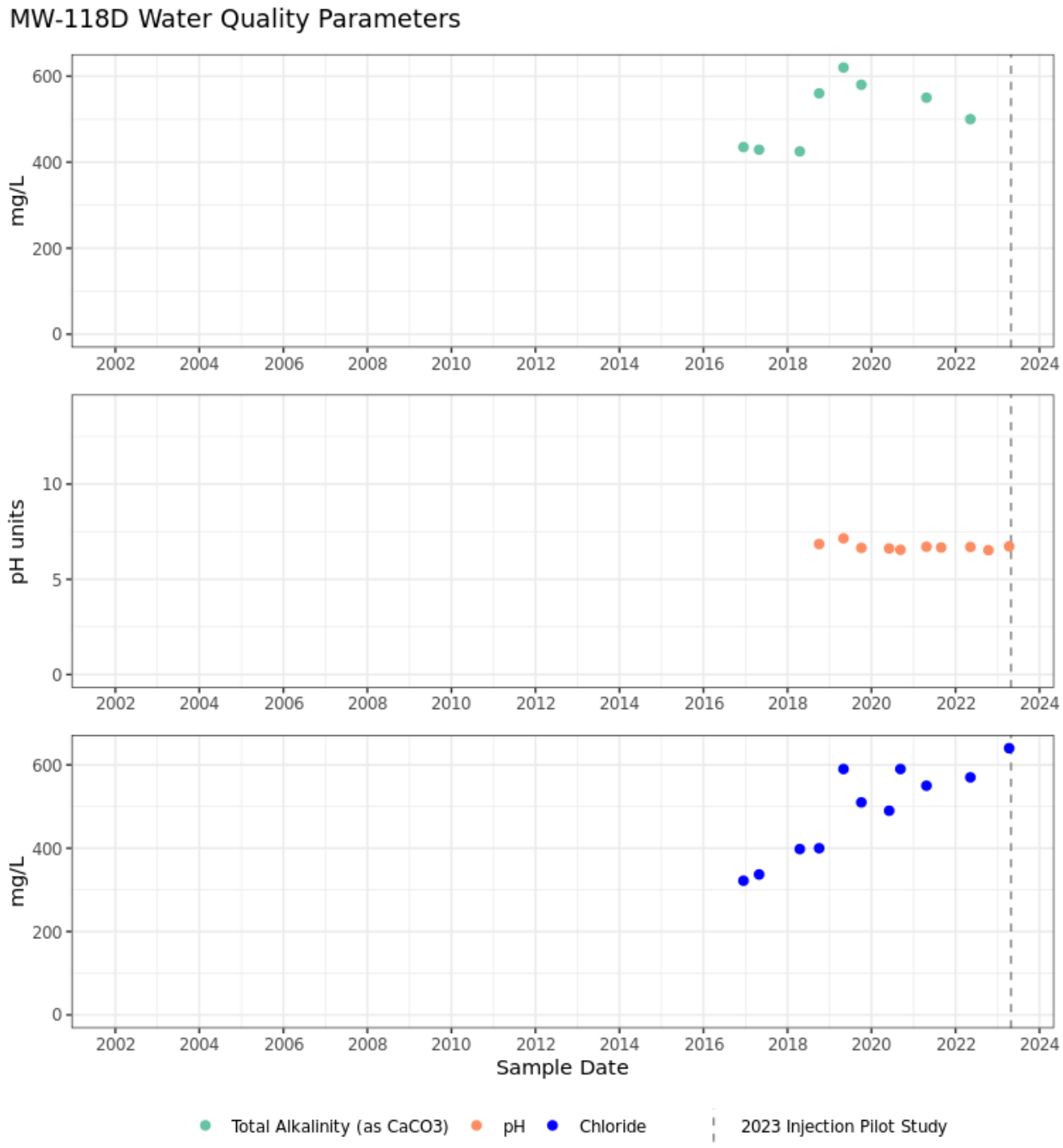


Chlorinated Ethene and Daughter Product Concentration

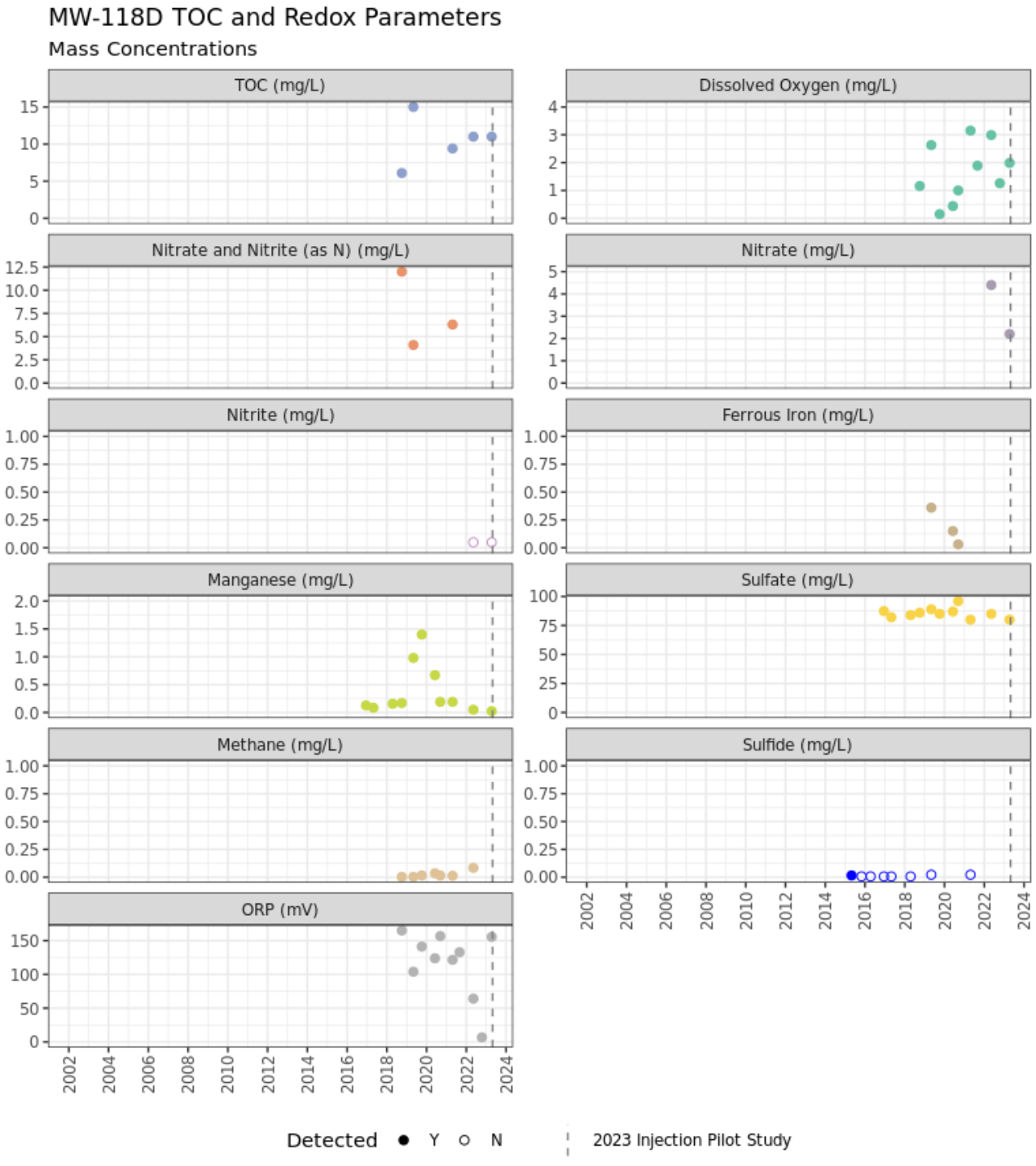


MW-118D

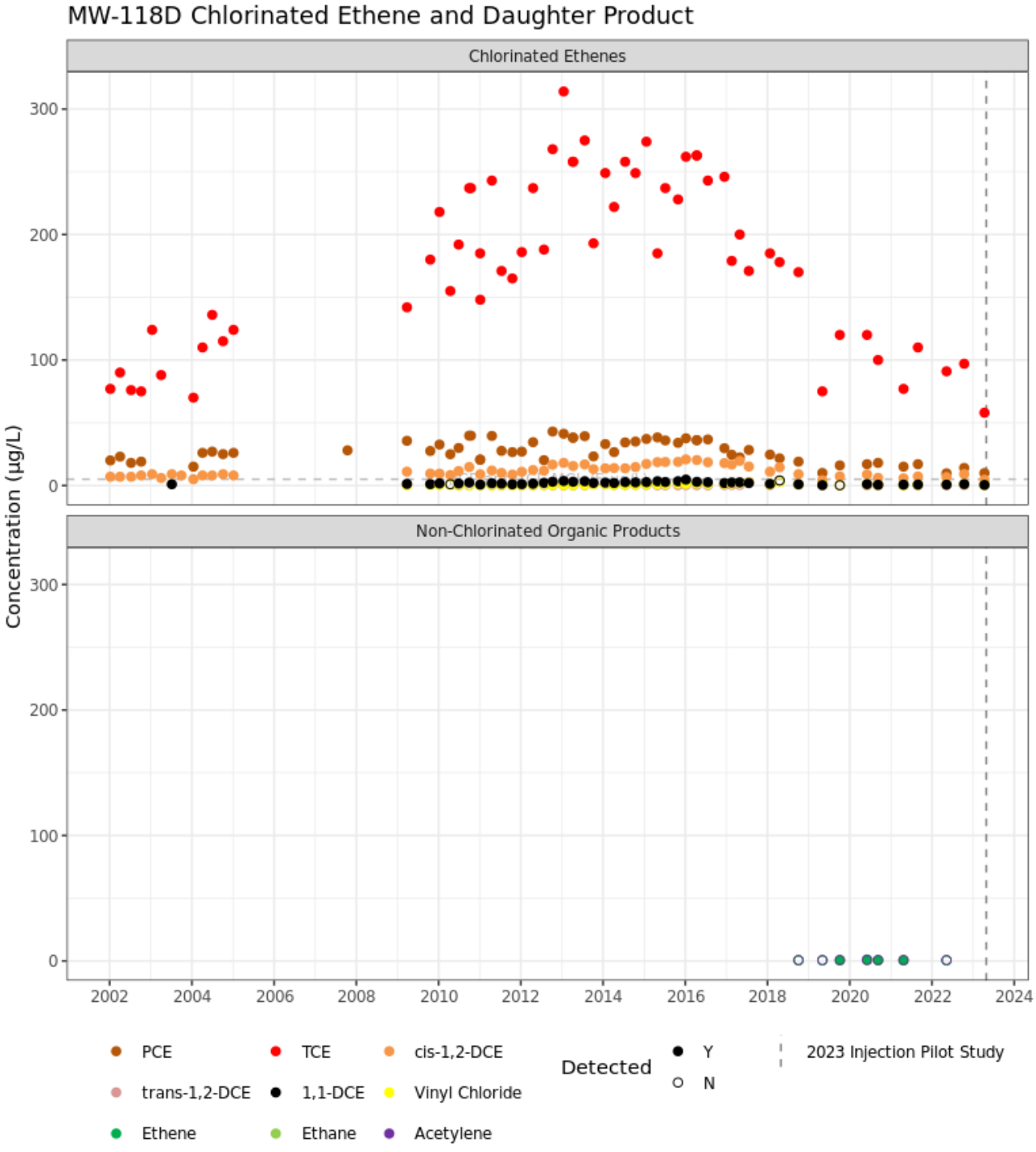
Water Quality



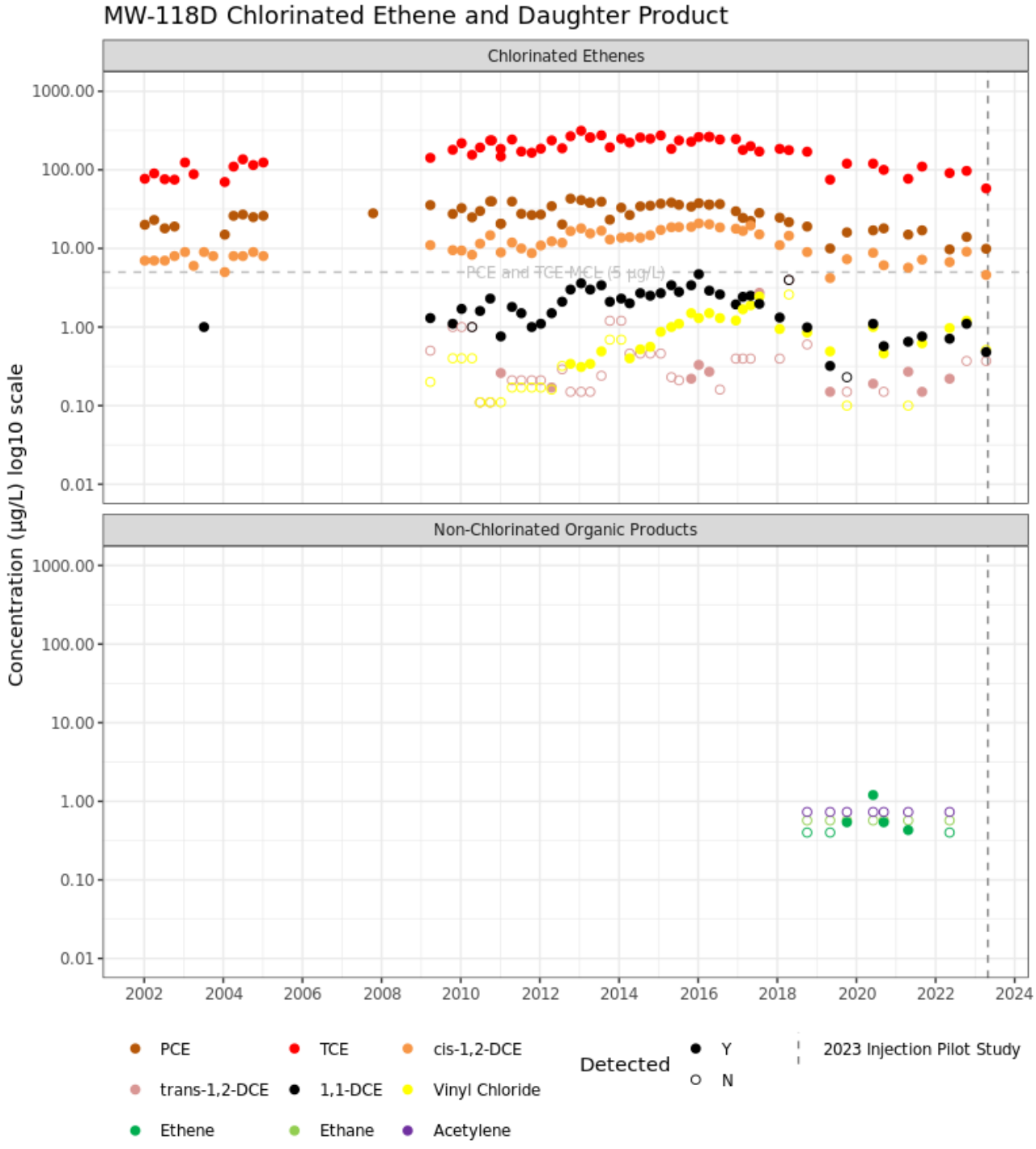
TOC and Redox Parameters



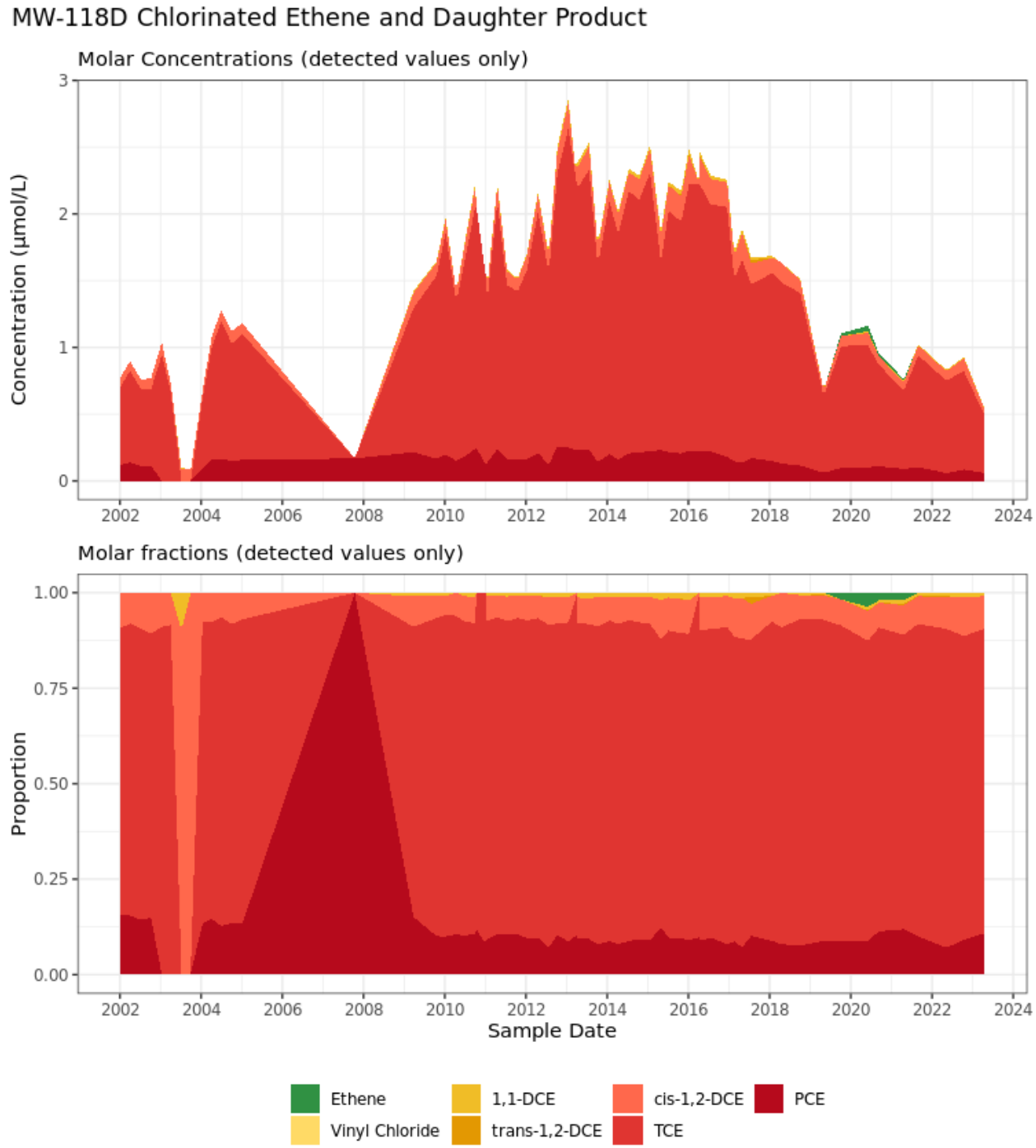
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

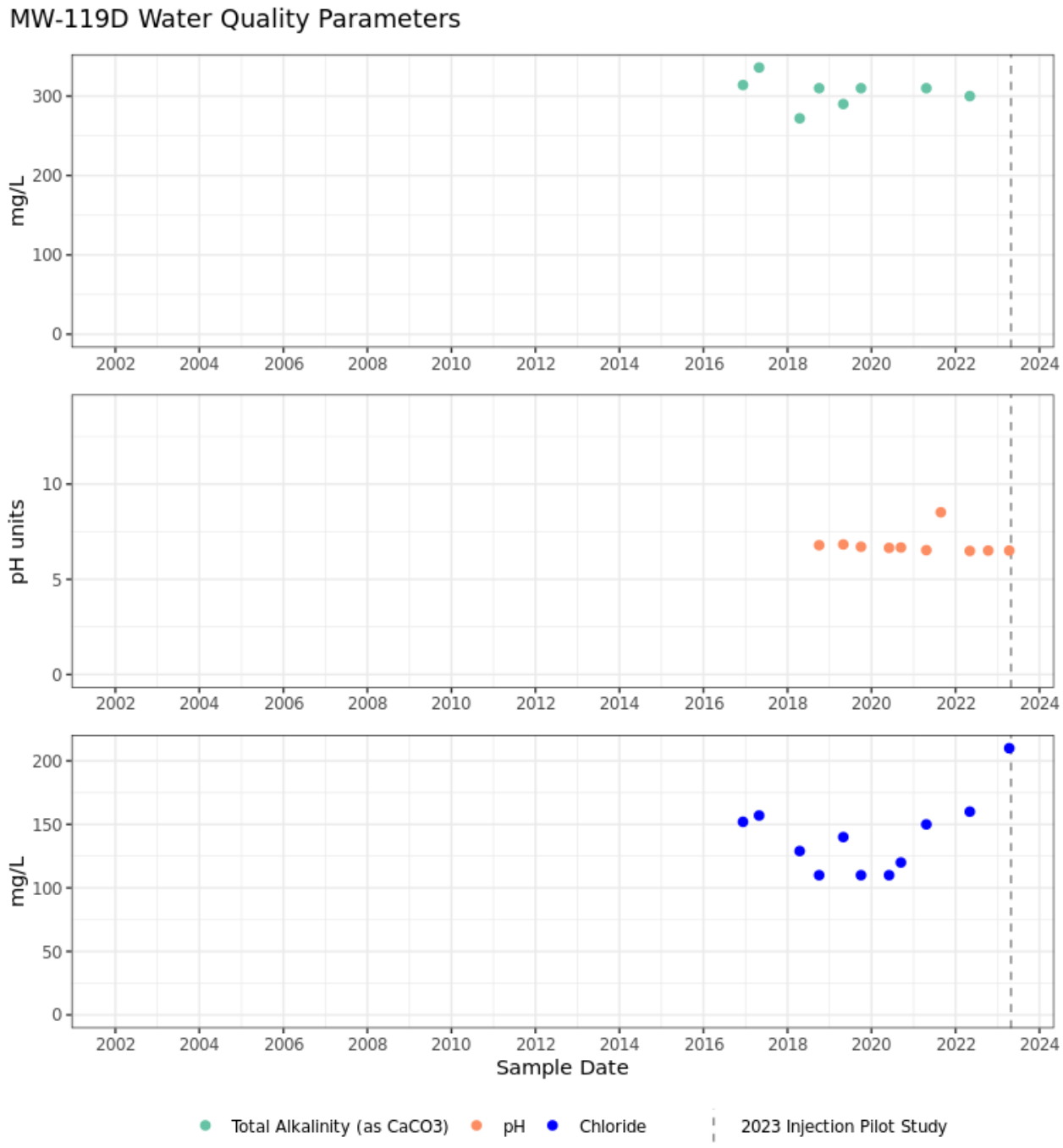


Chlorinated Ethene and Daughter Product Concentration

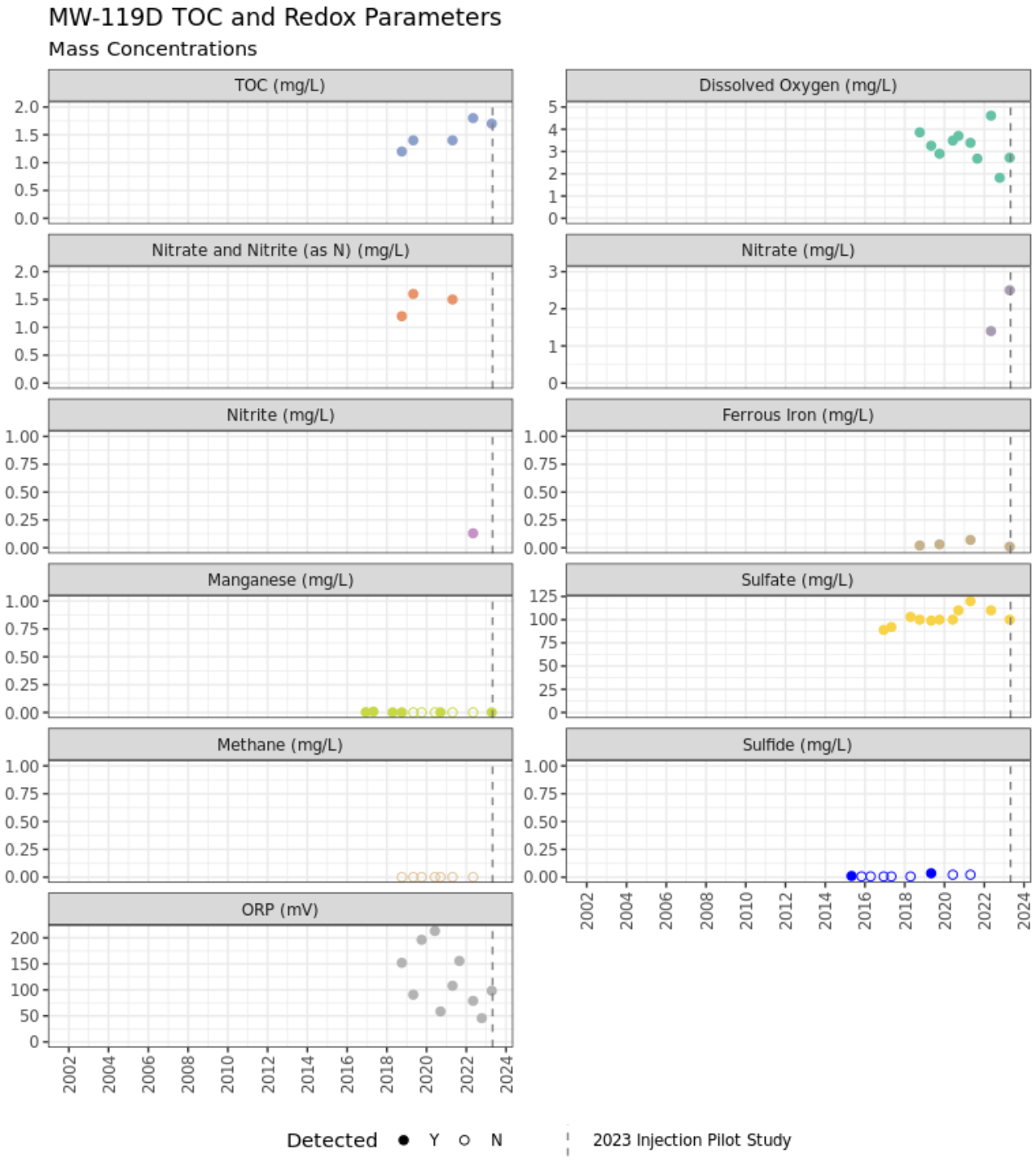


MW-119D

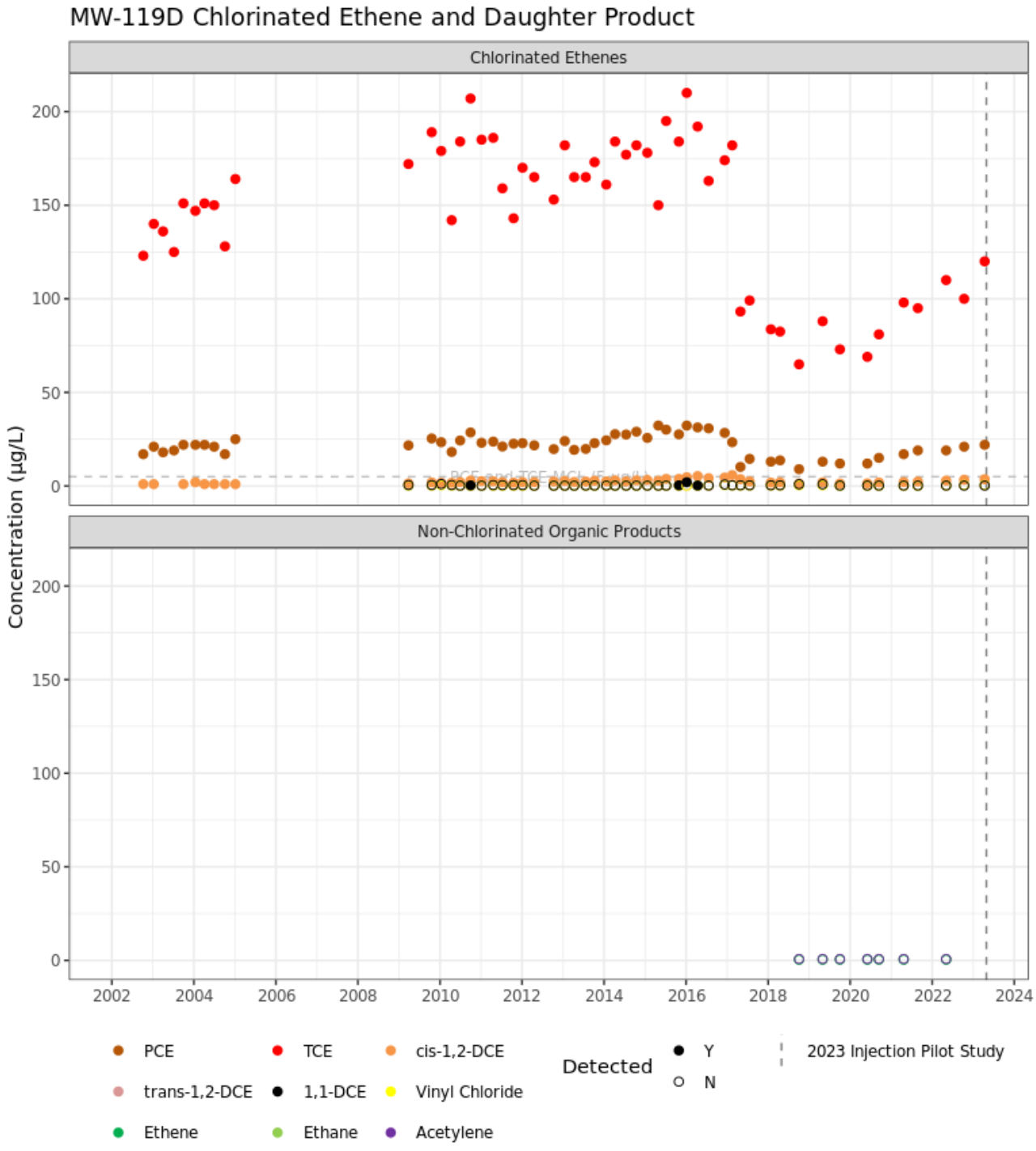
Water Quality



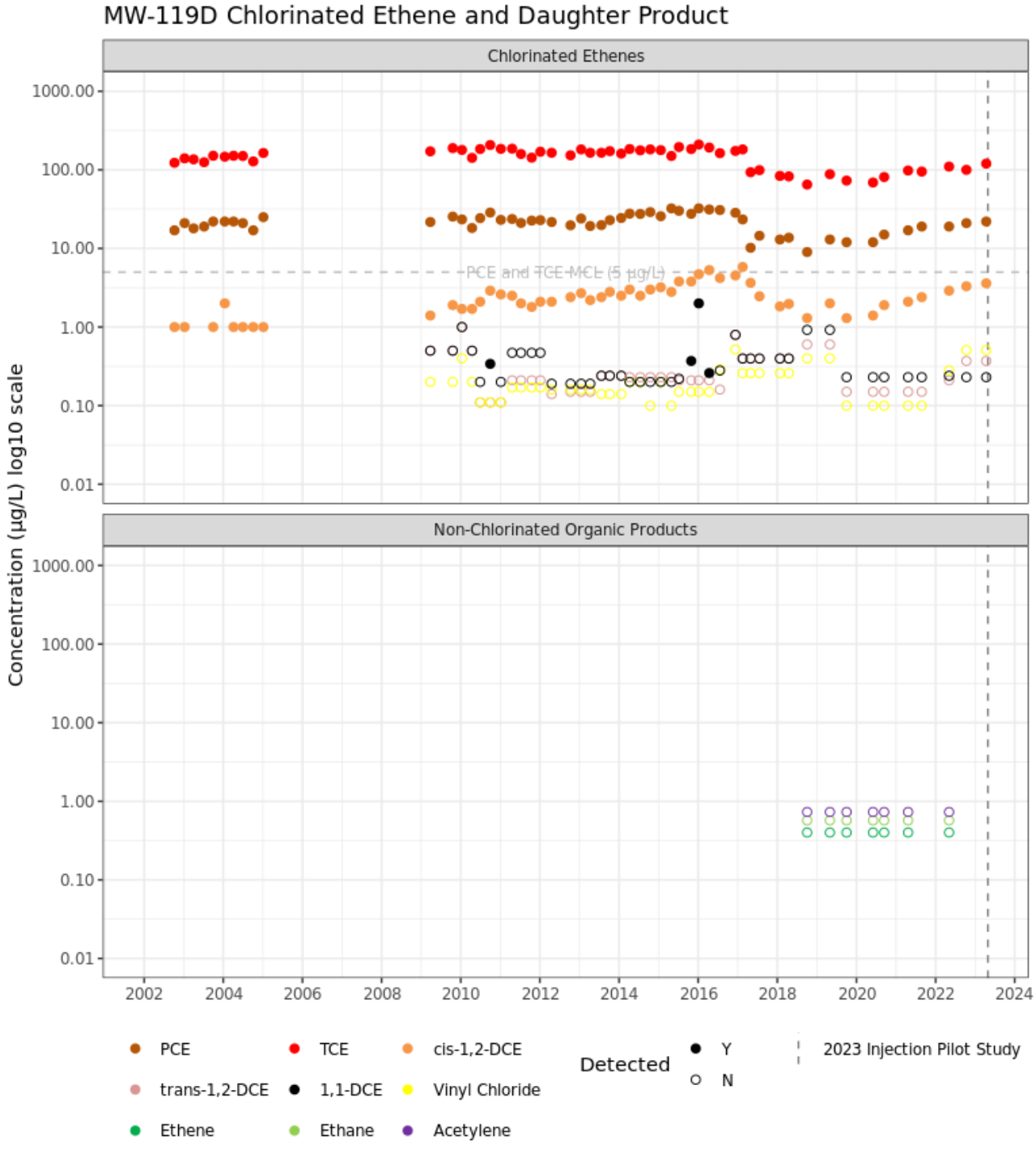
TOC and Redox Parameters



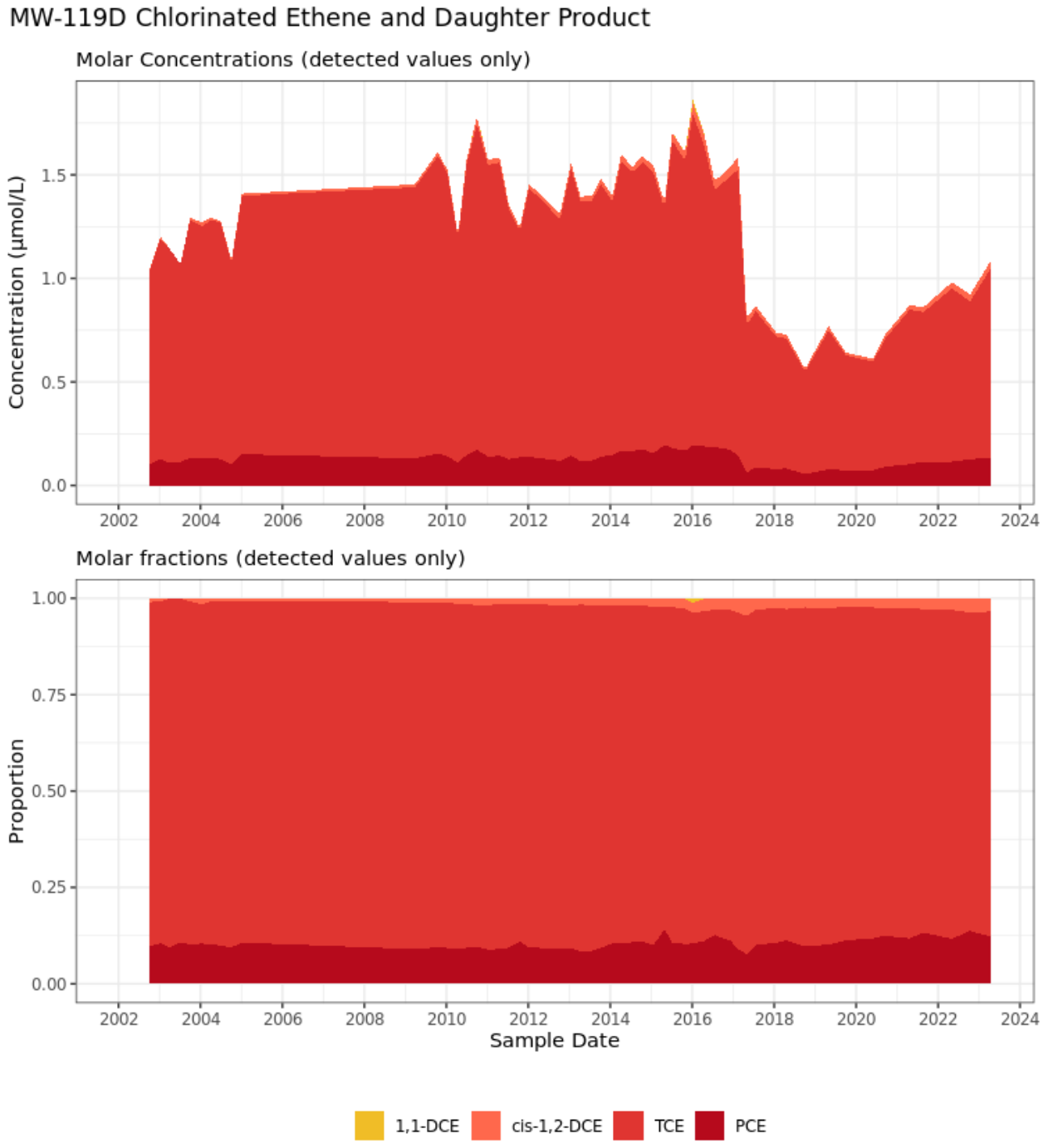
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

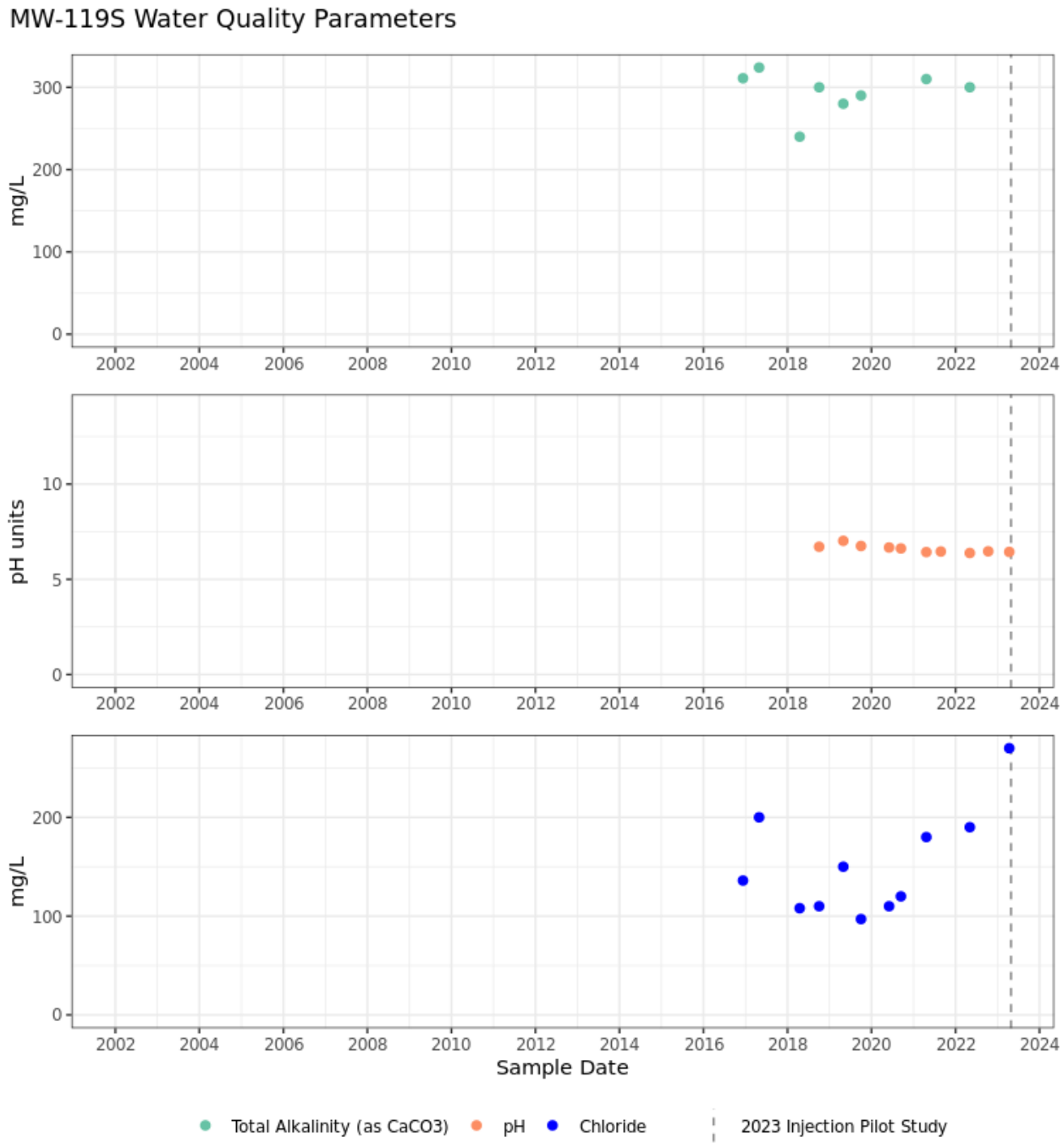


Chlorinated Ethene and Daughter Product Concentration

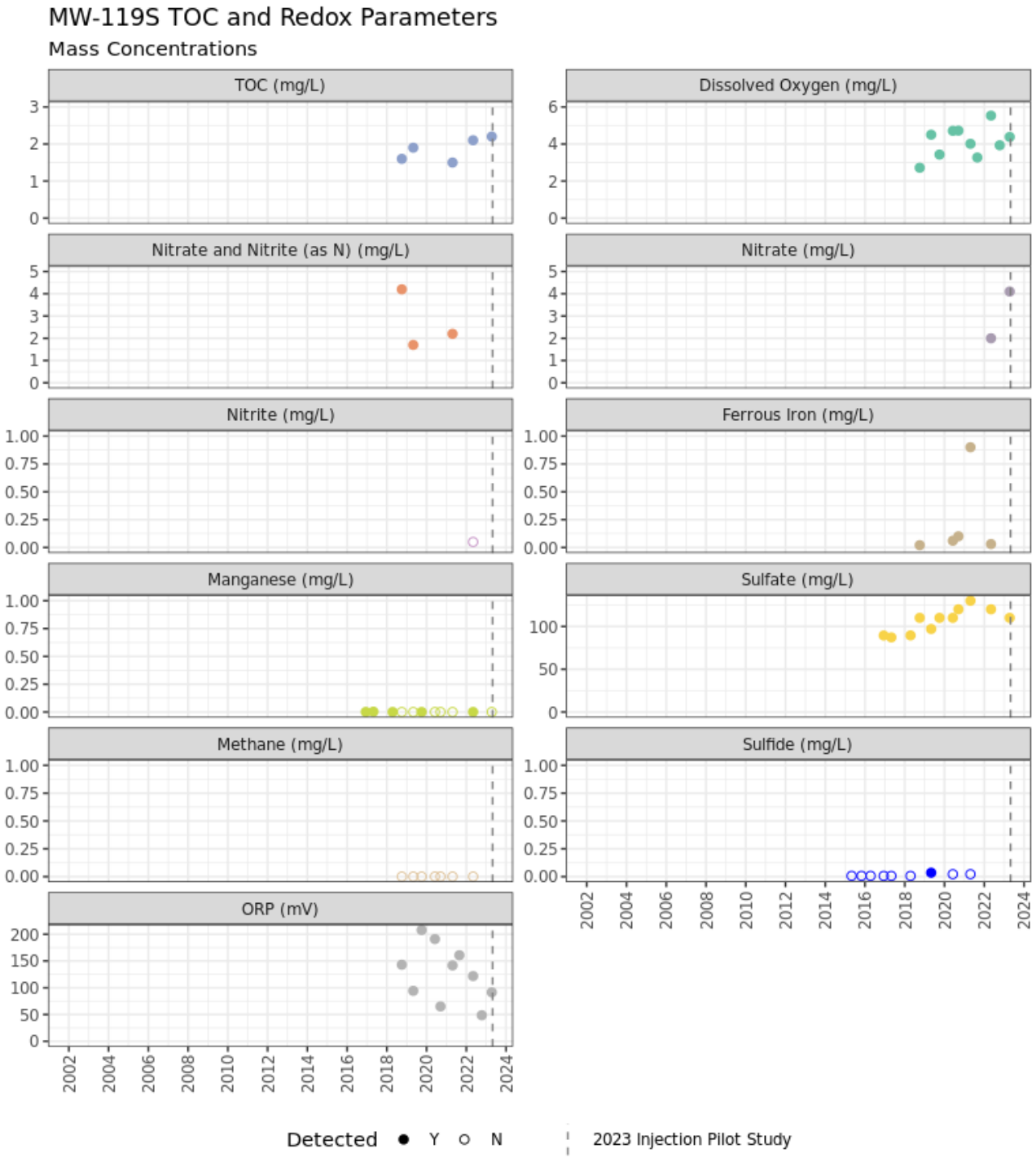


MW-119S

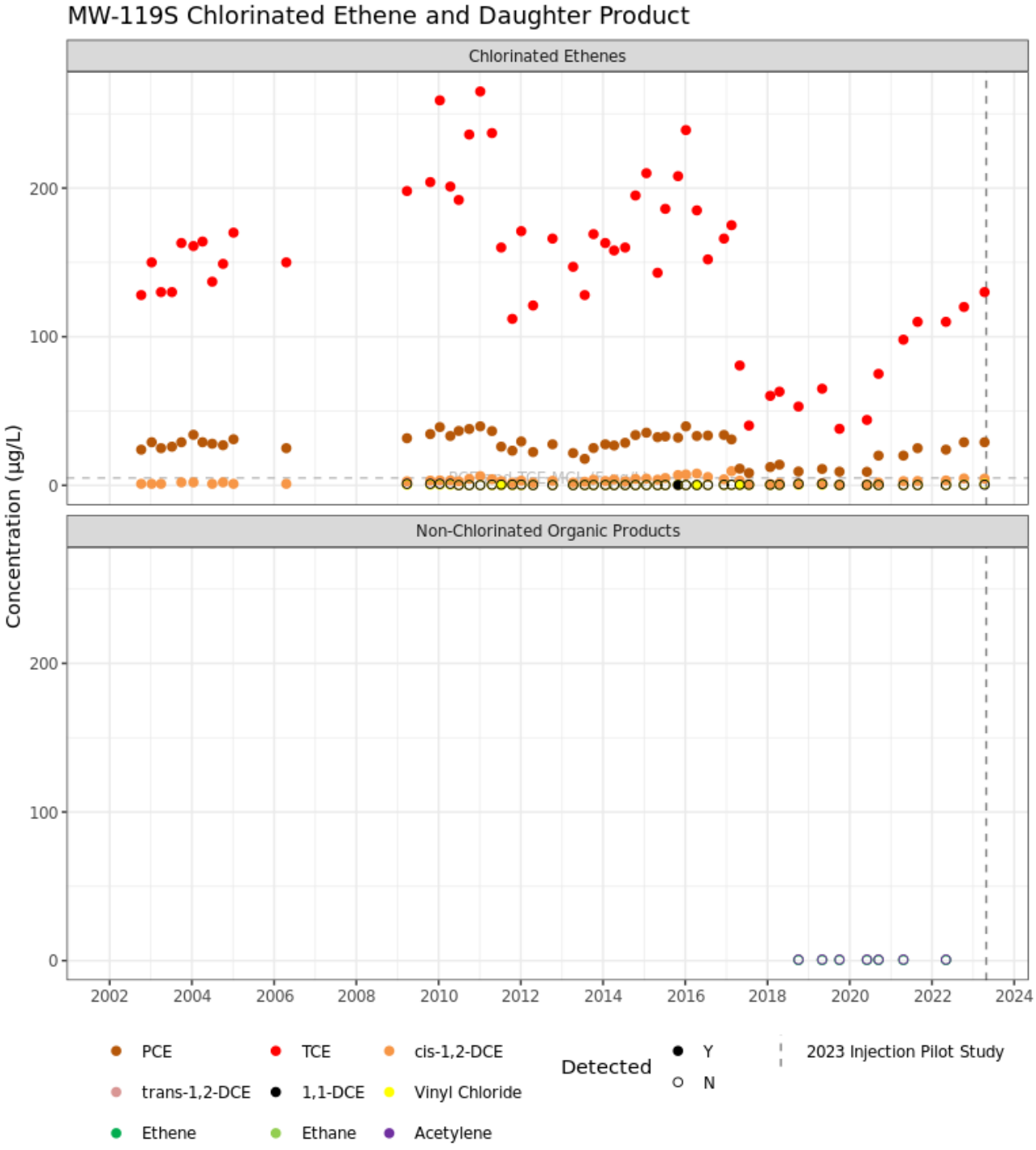
Water Quality



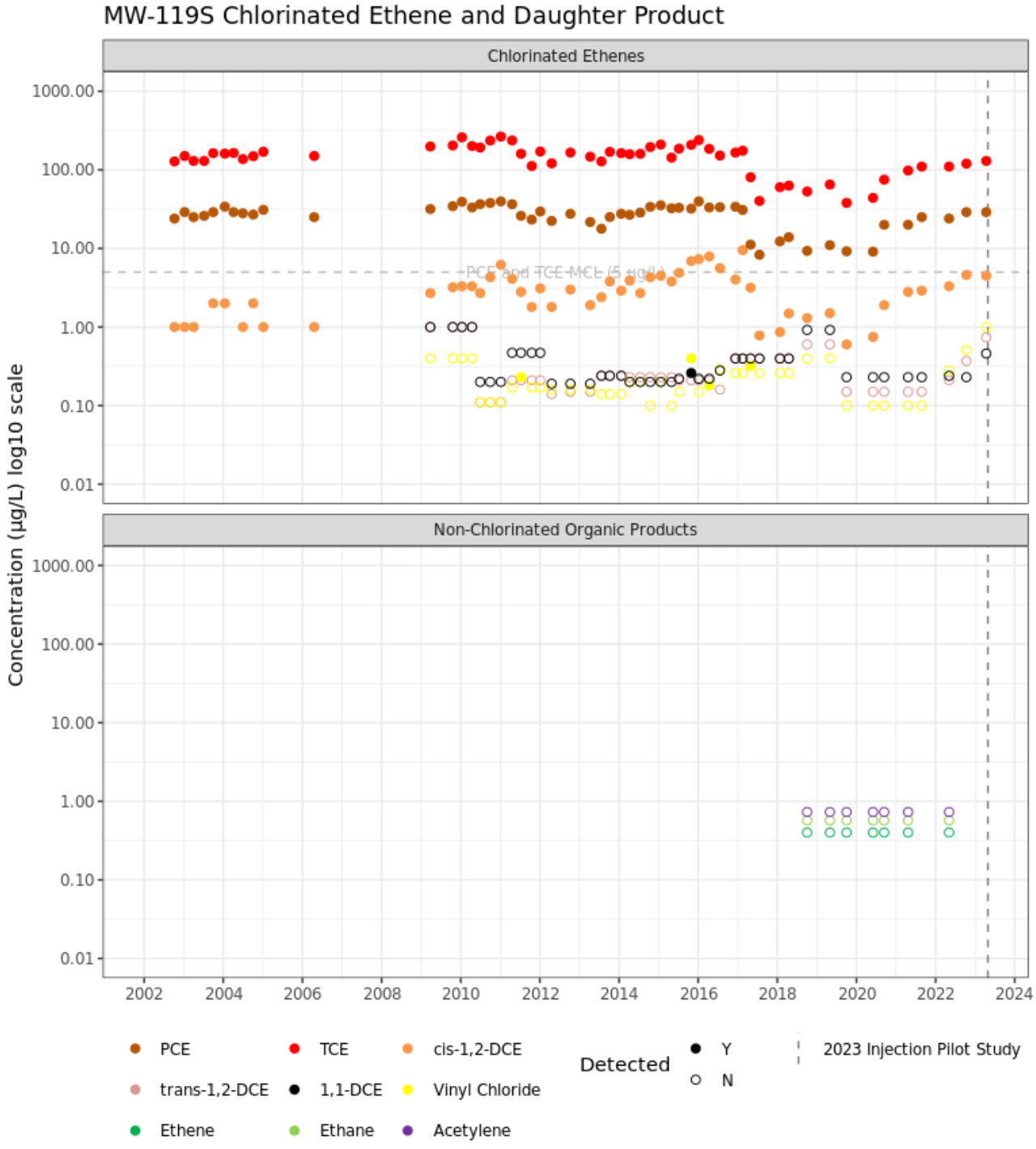
TOC and Redox Parameters



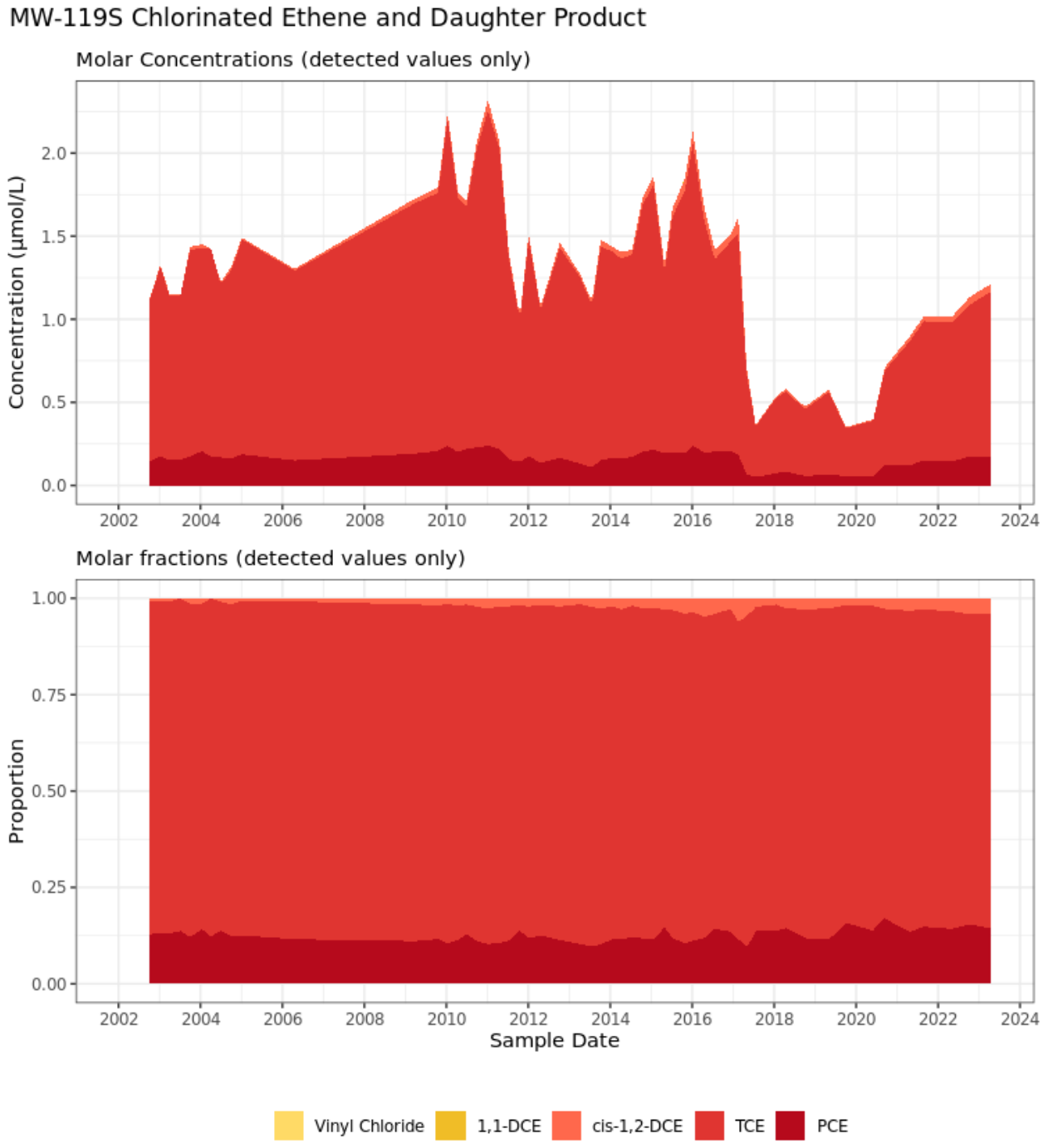
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

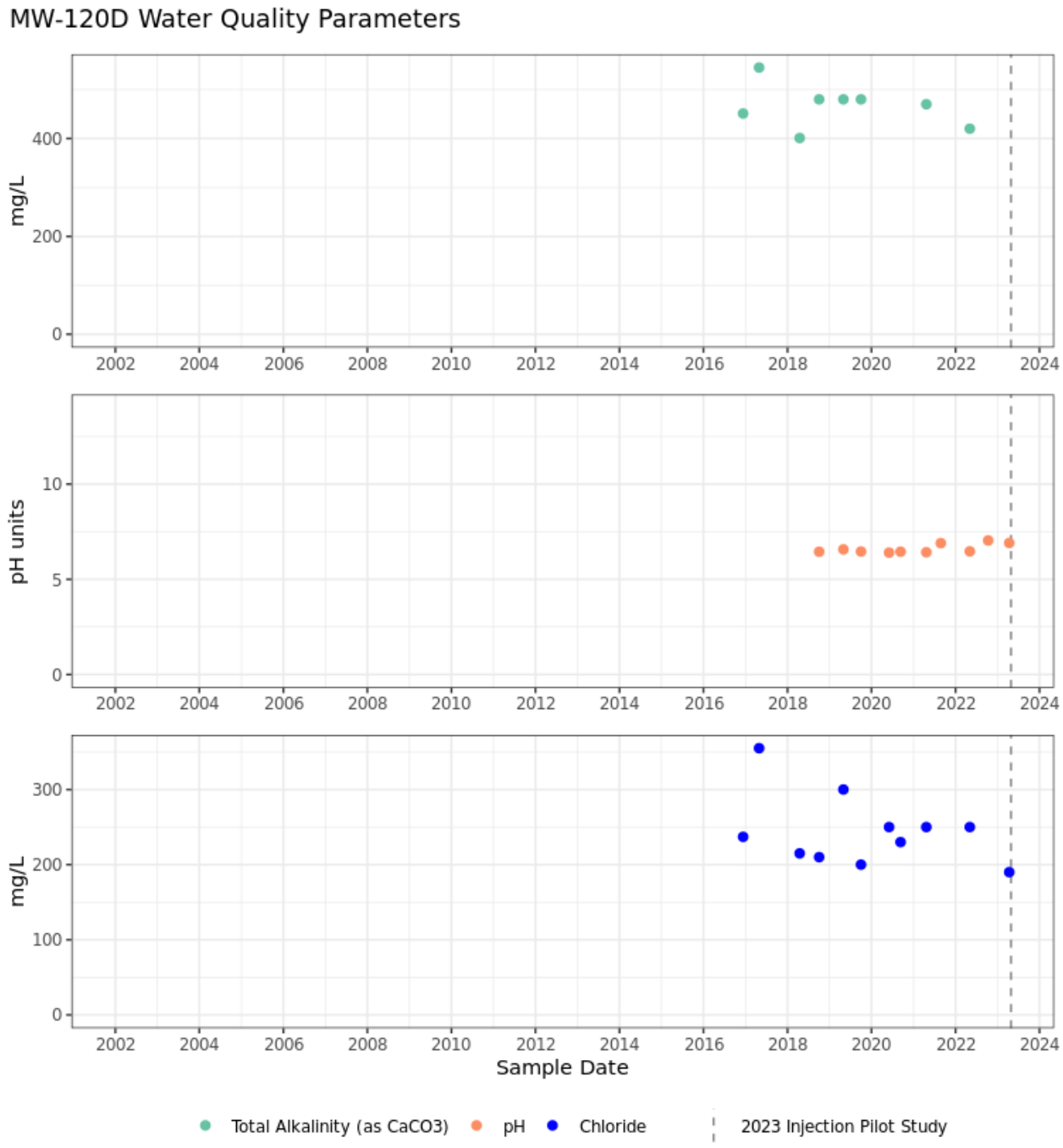


Chlorinated Ethene and Daughter Product Concentration

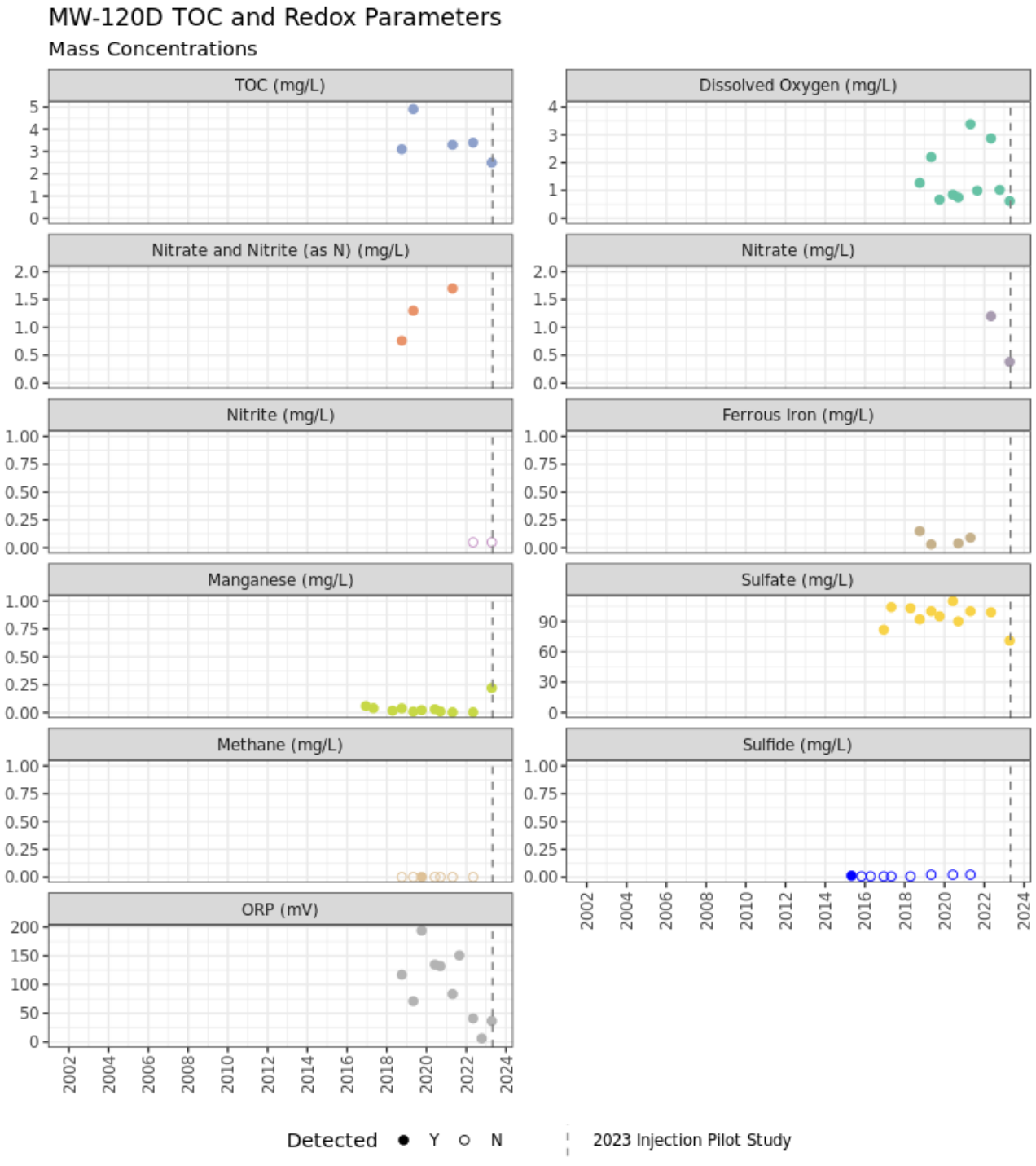


MW-120D

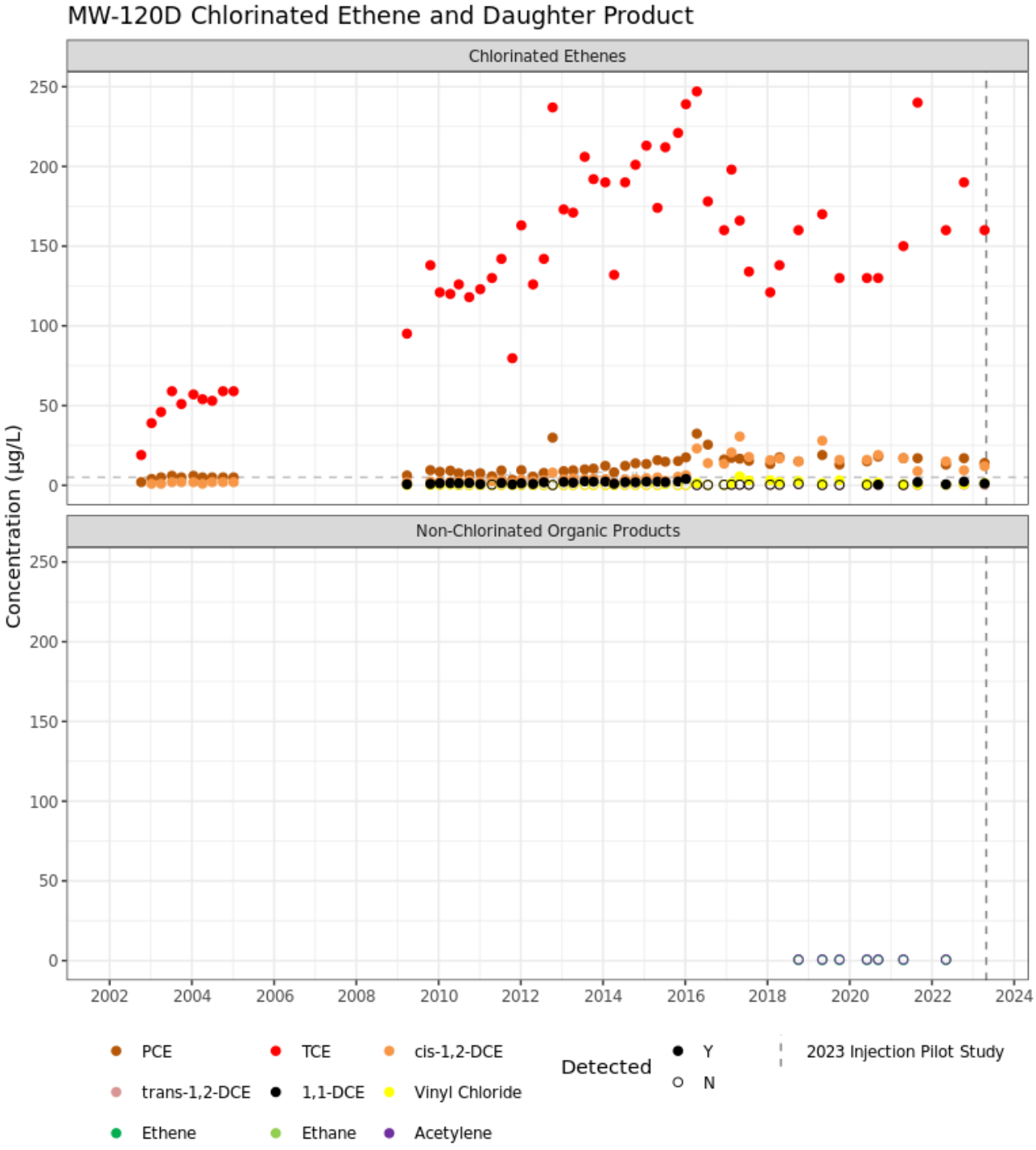
Water Quality



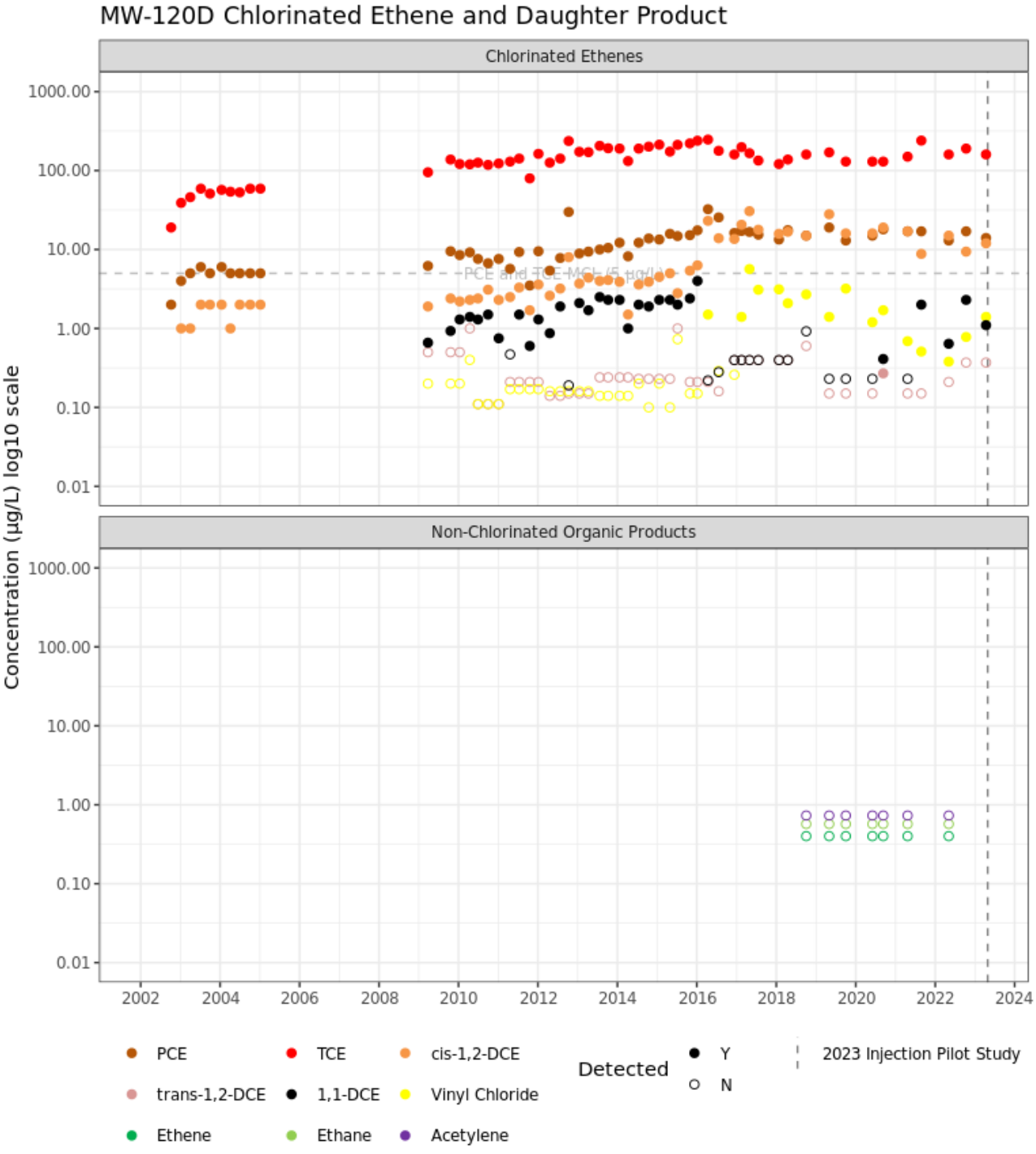
TOC and Redox Parameters



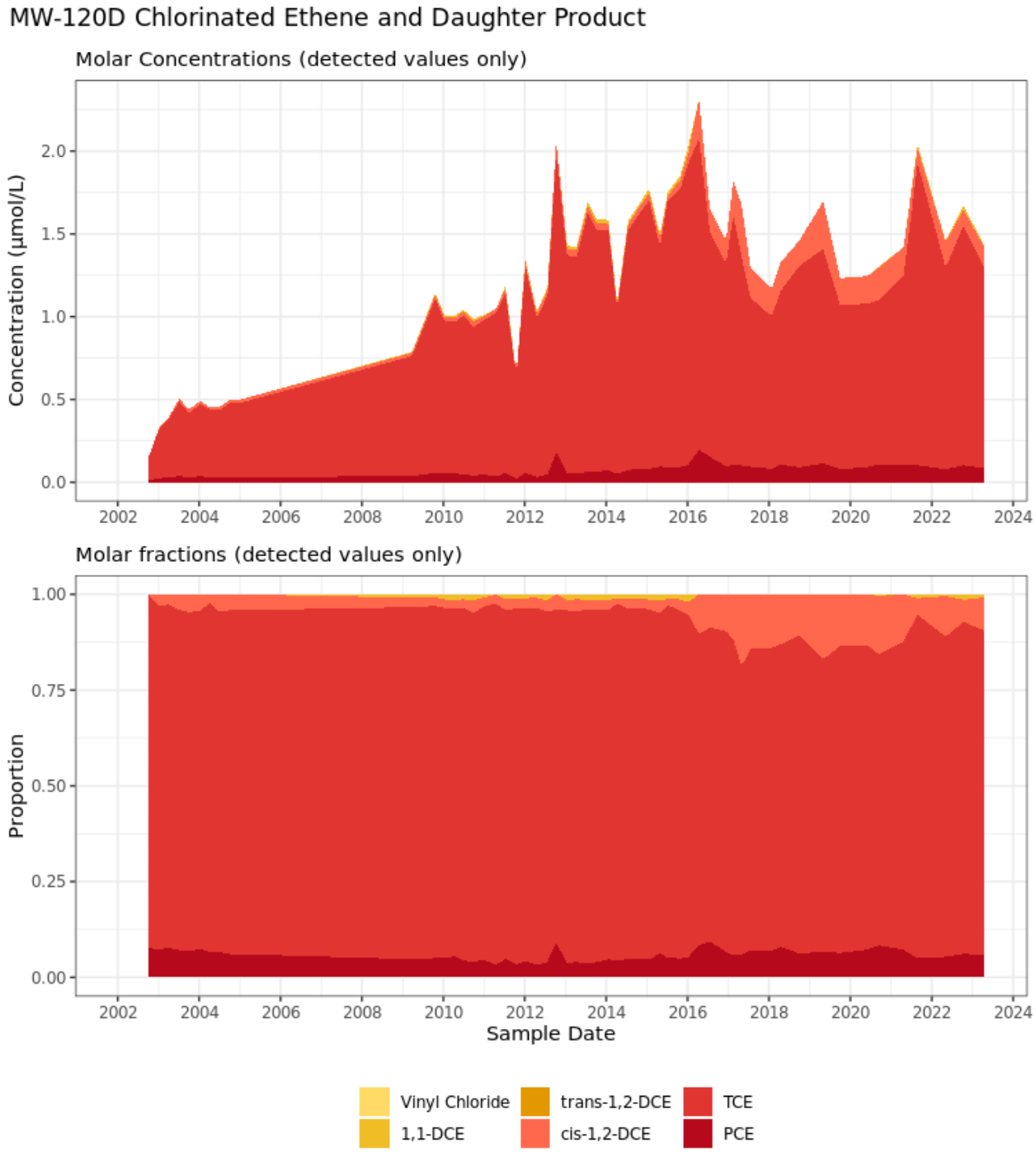
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

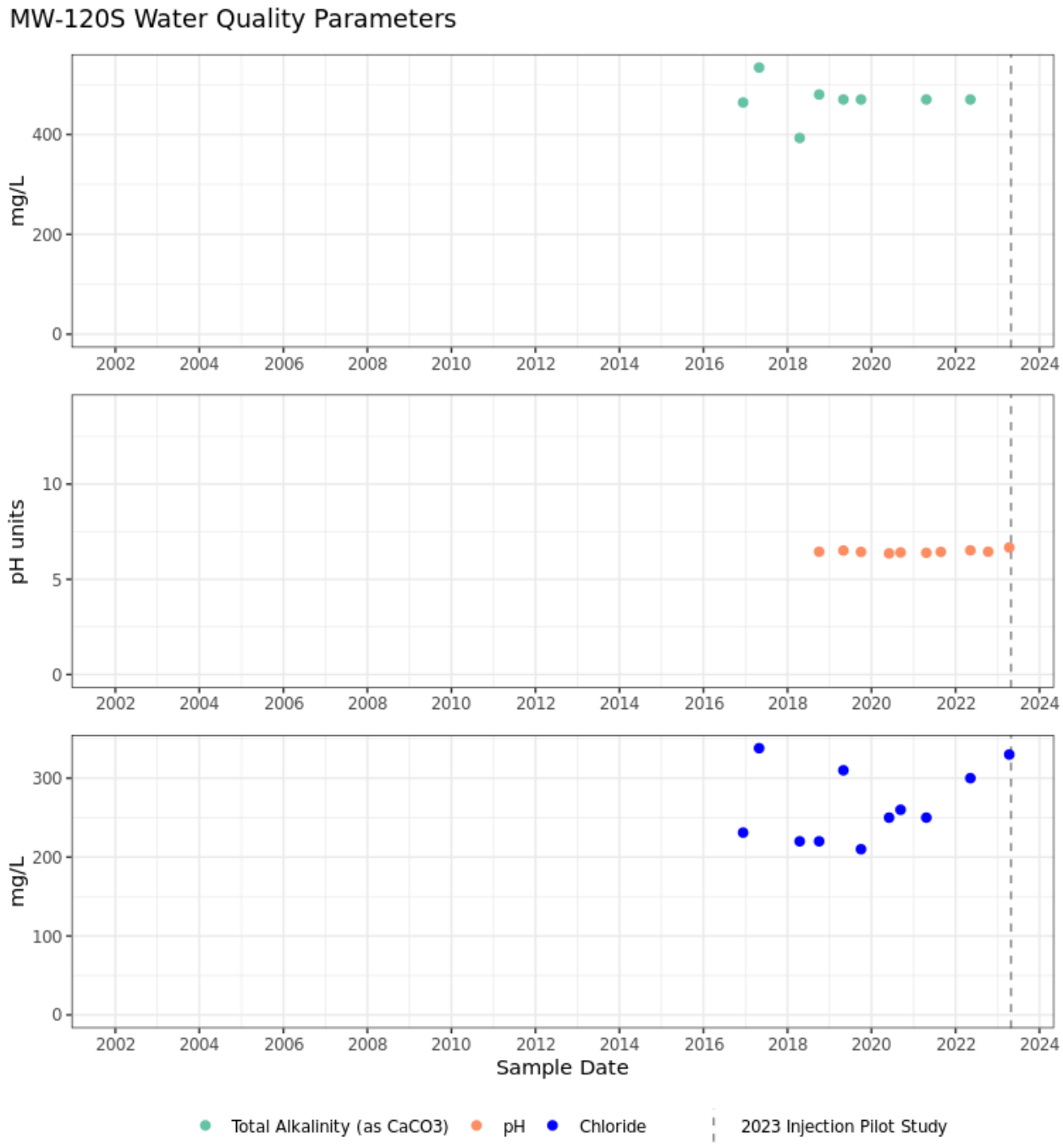


Chlorinated Ethene and Daughter Product Concentration

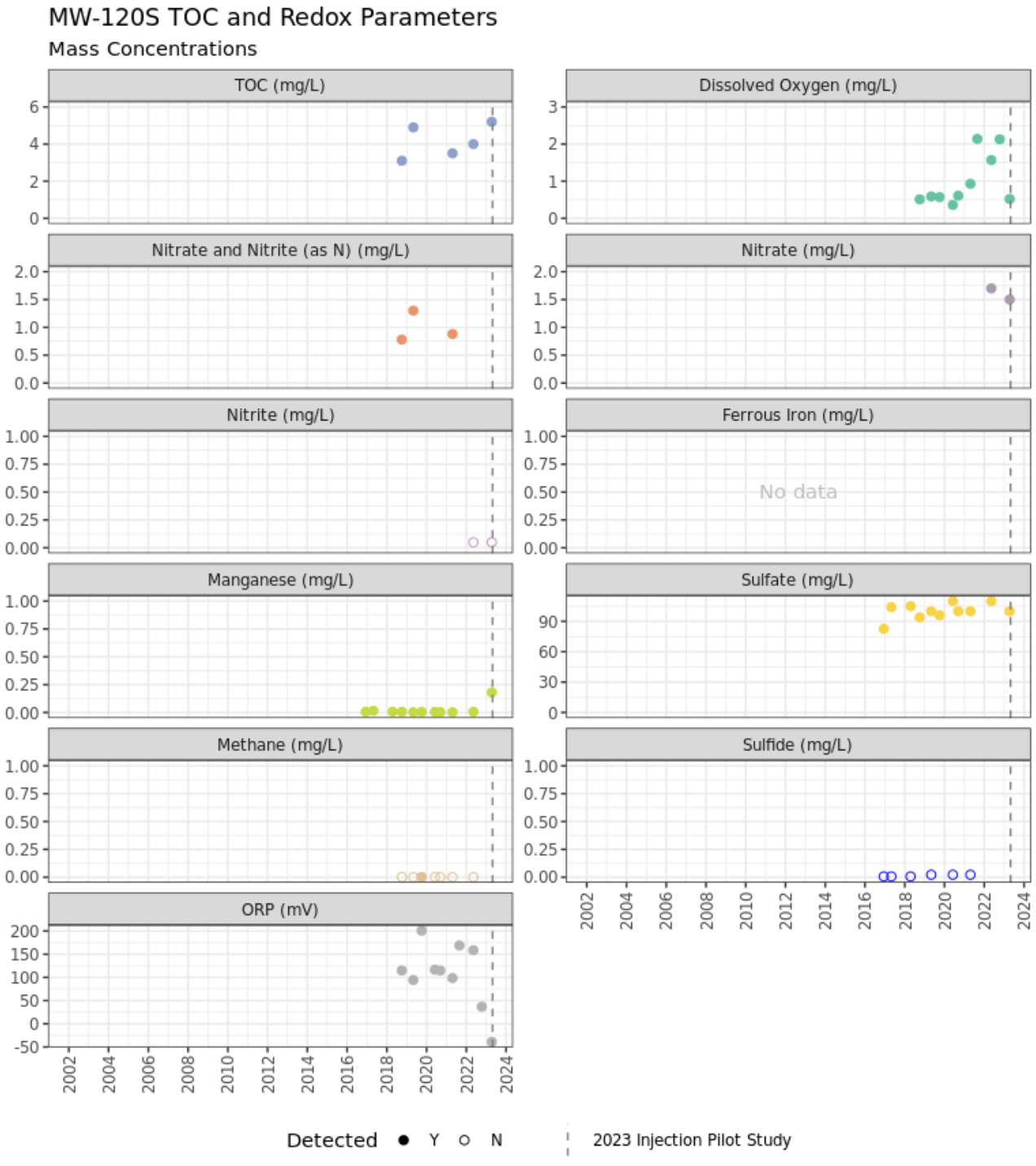


MW-120S

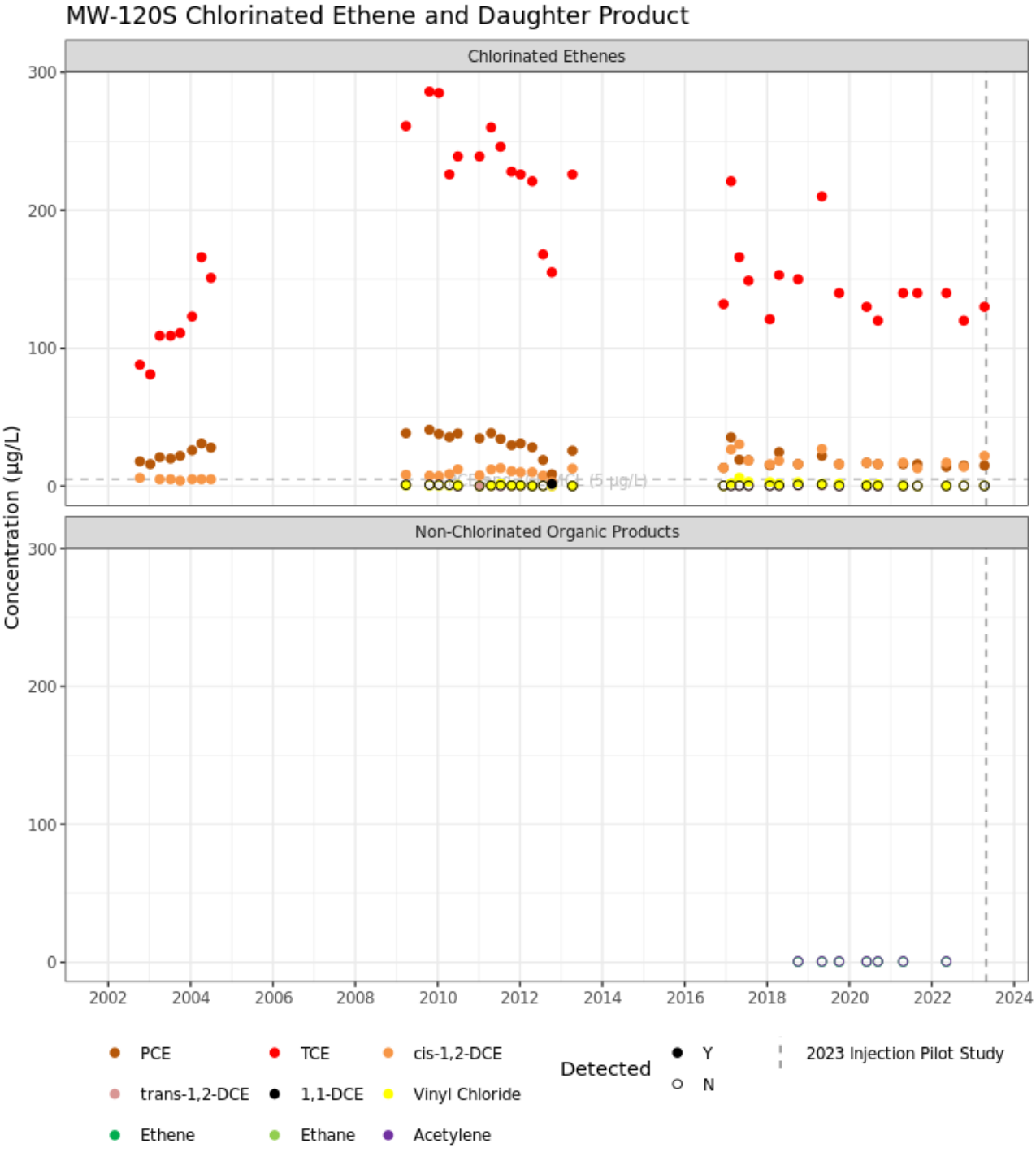
Water Quality



TOC and Redox Parameters

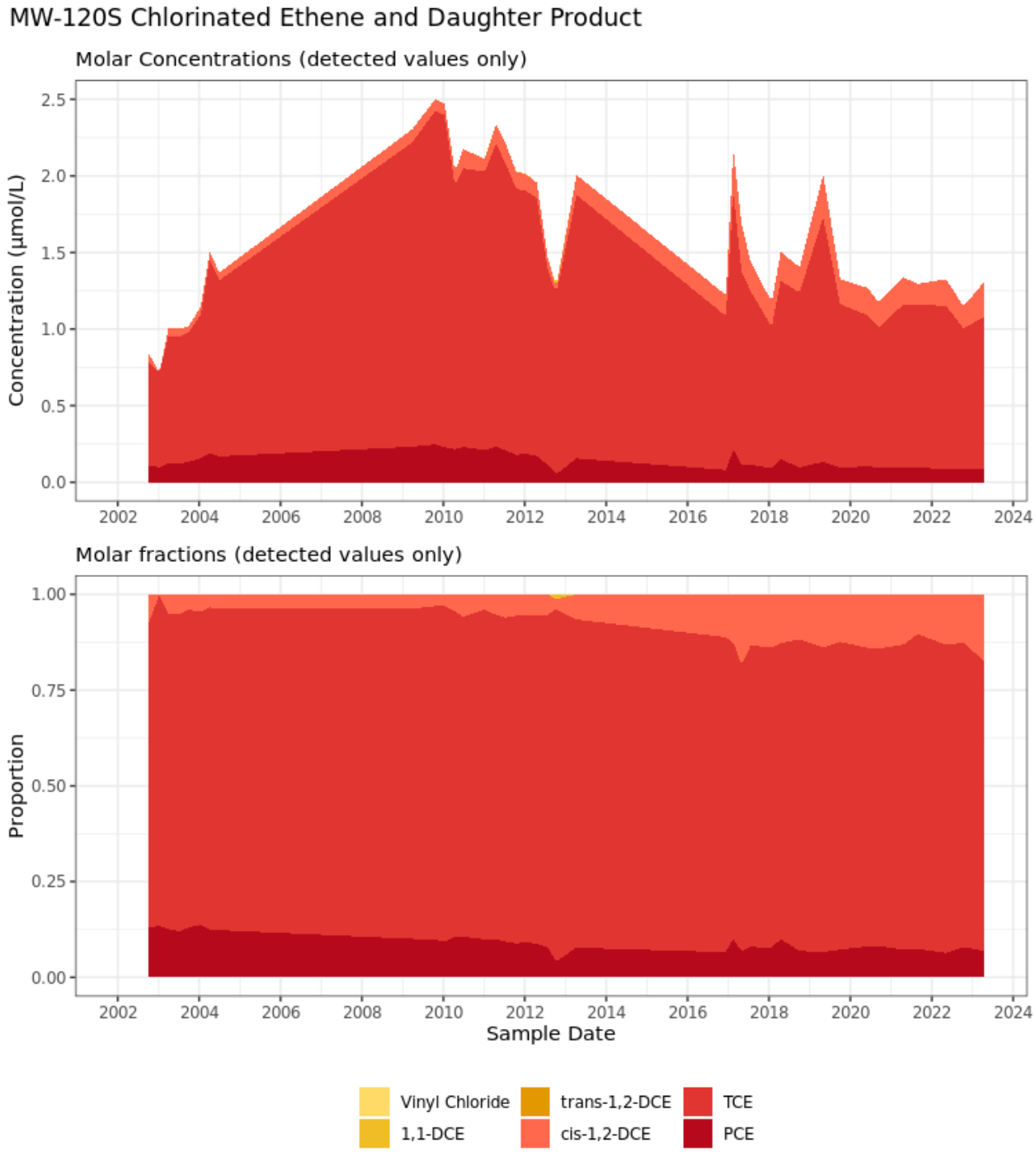


Chlorinated Ethene and Daughter Product Mass



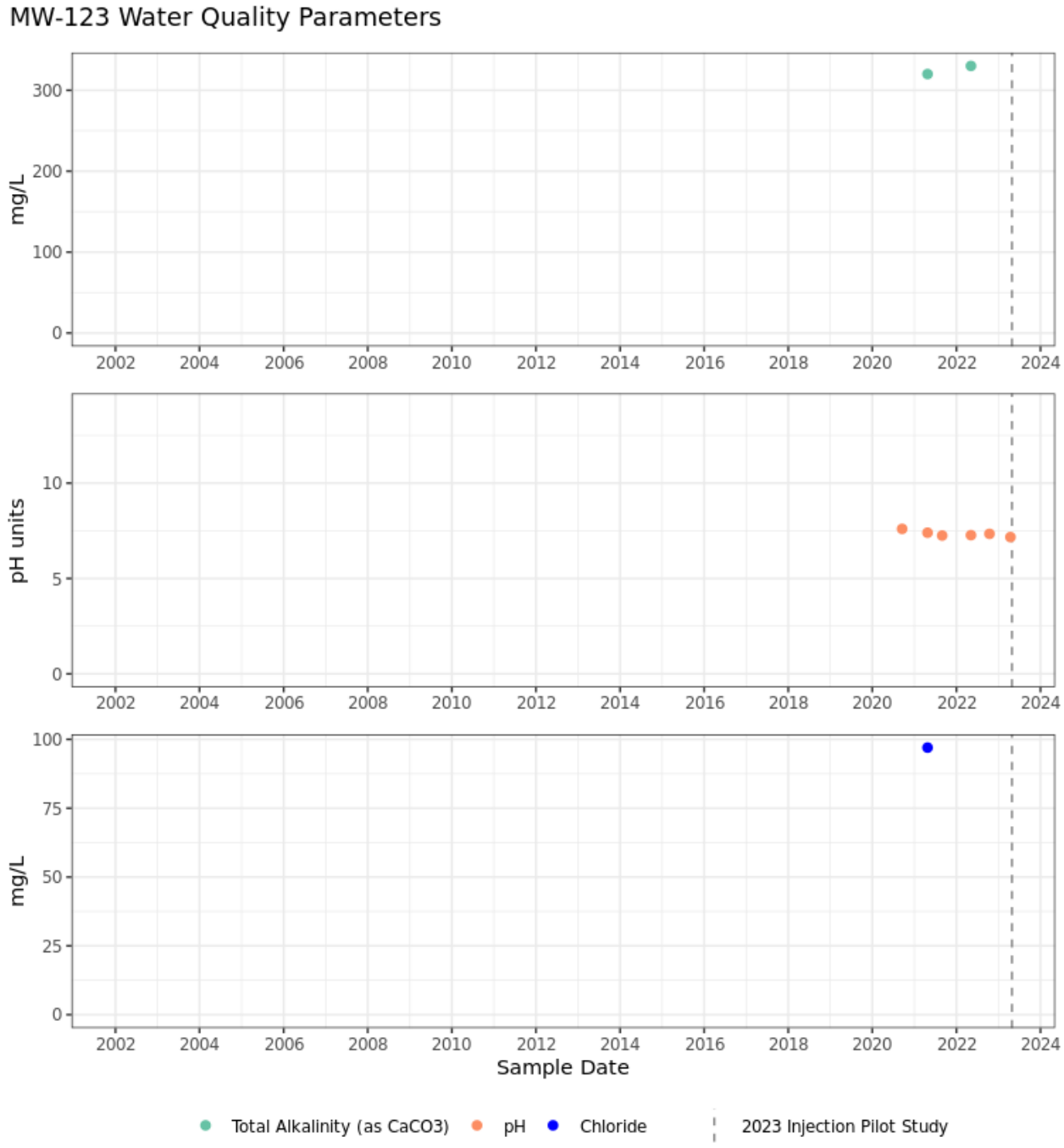
Chlorinated Ethene and Daughter Product Mass (log10)

Chlorinated Ethene and Daughter Product Concentration

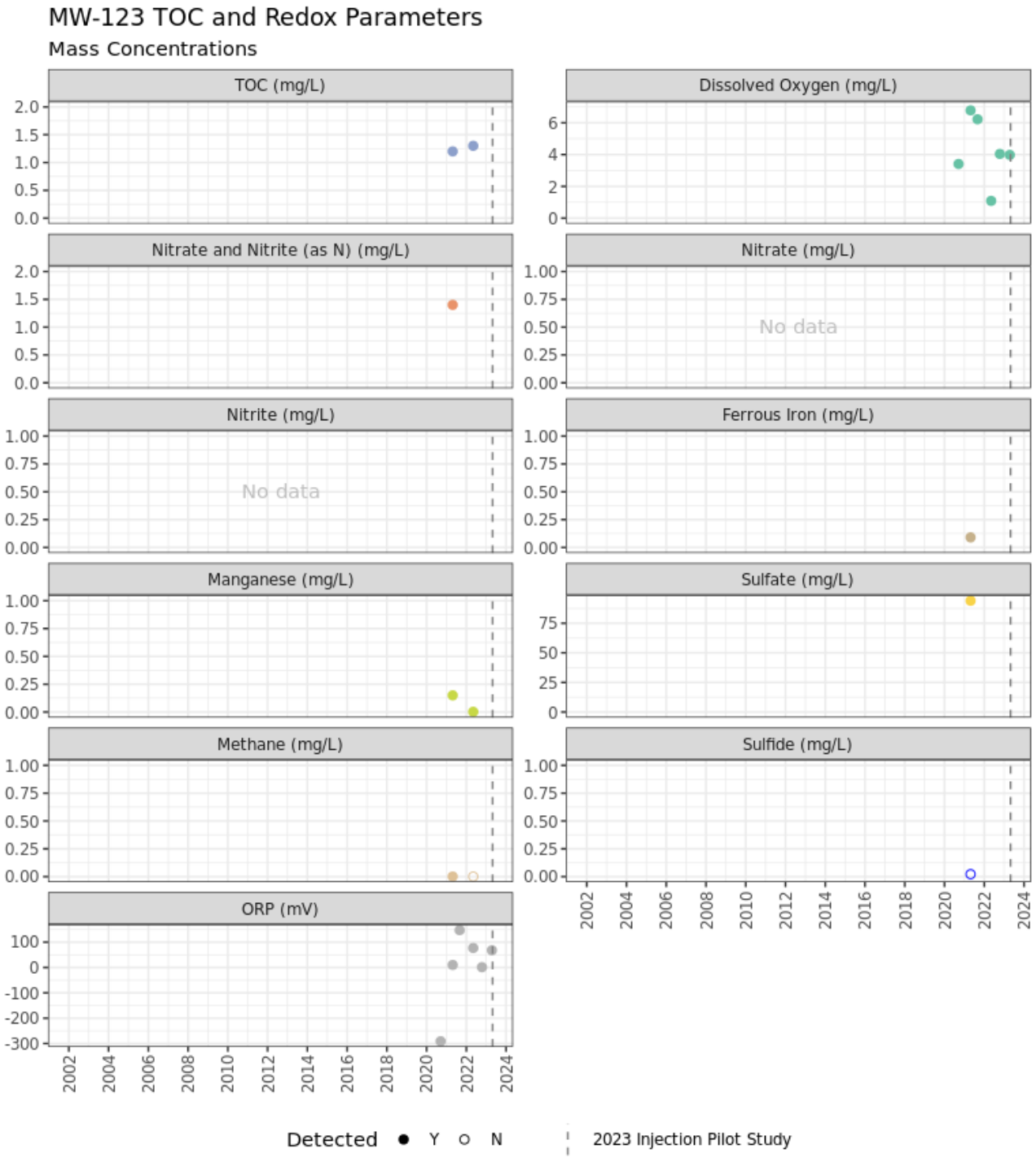


MW-123

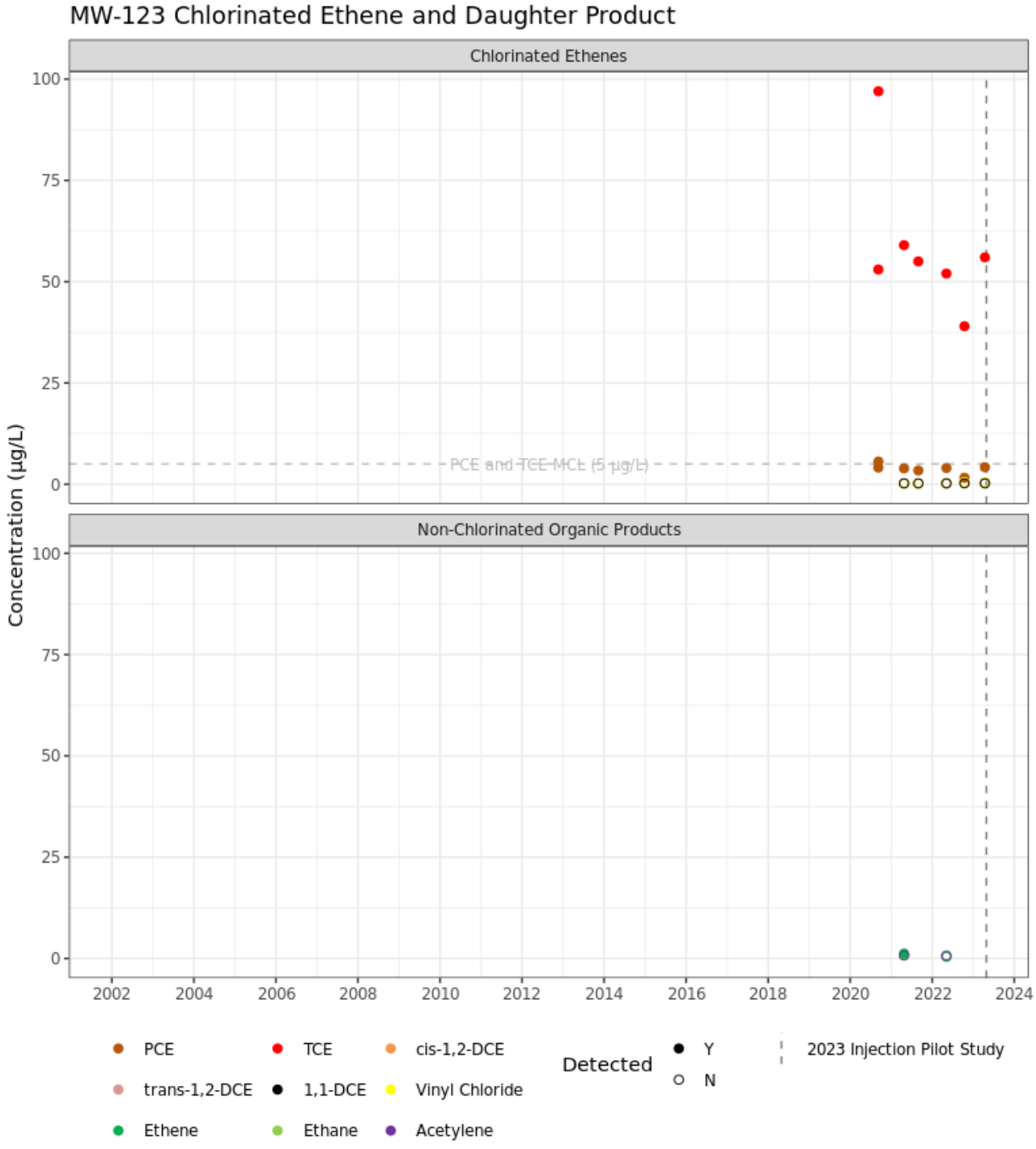
Water Quality



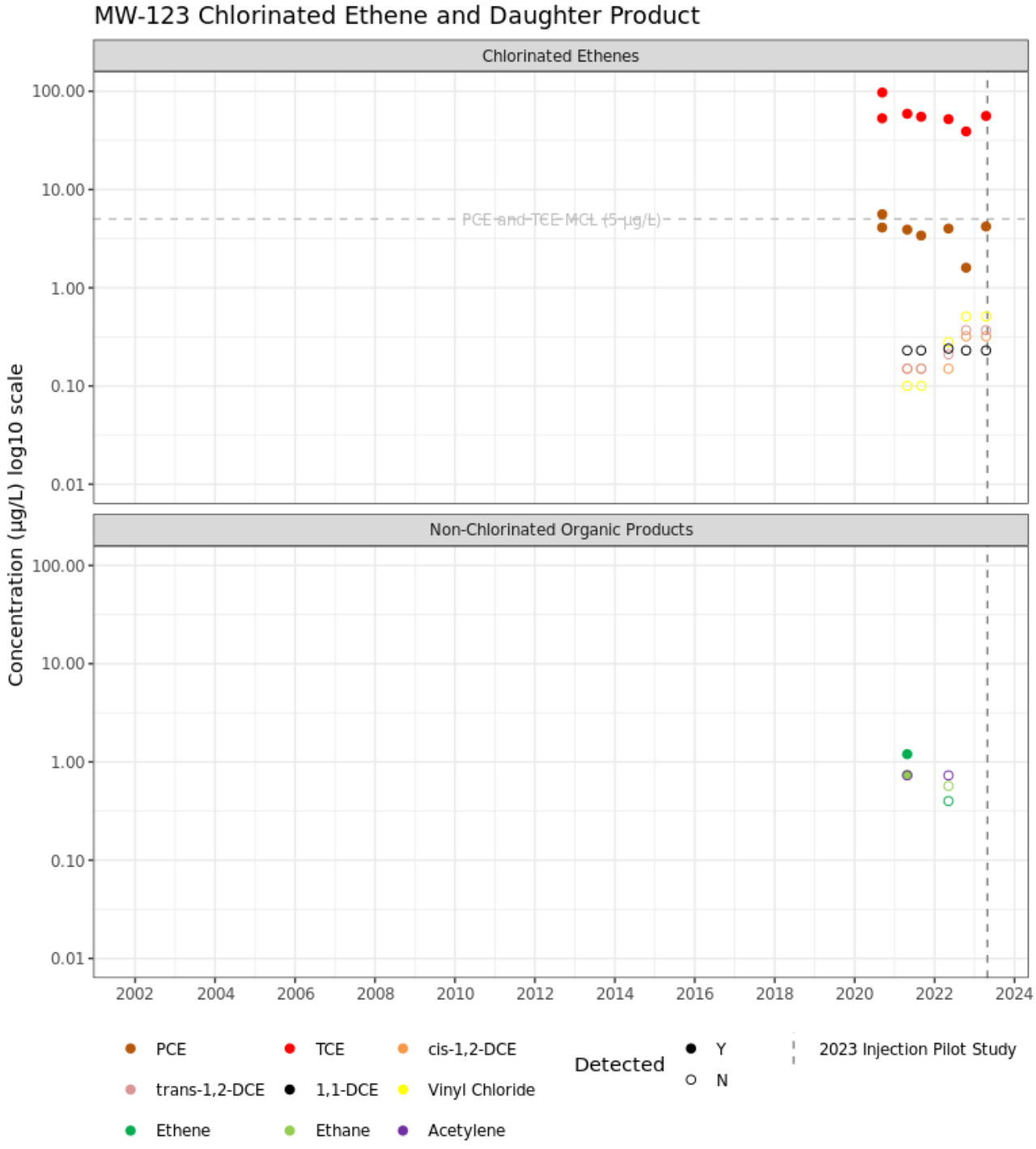
TOC and Redox Parameters



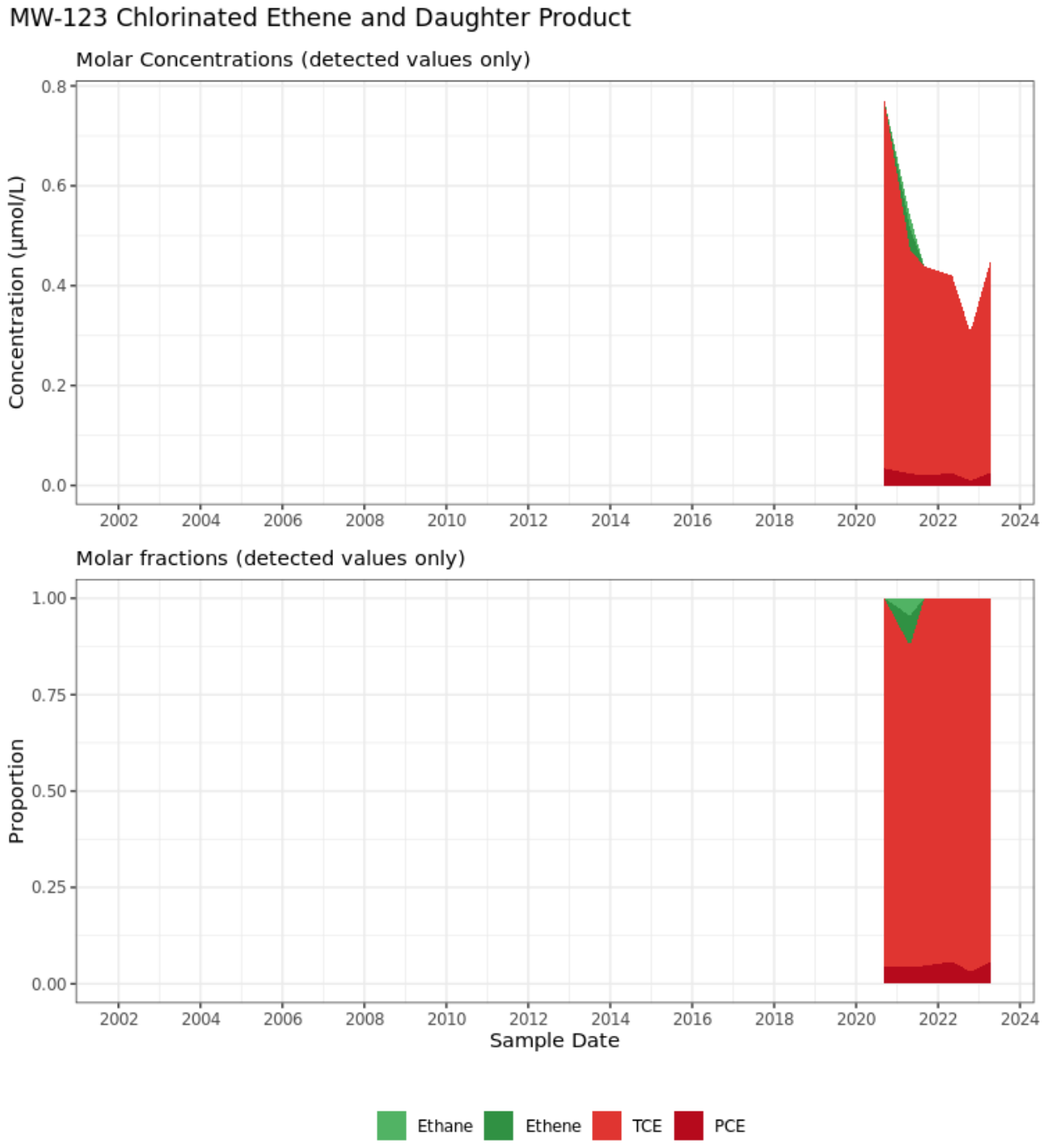
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

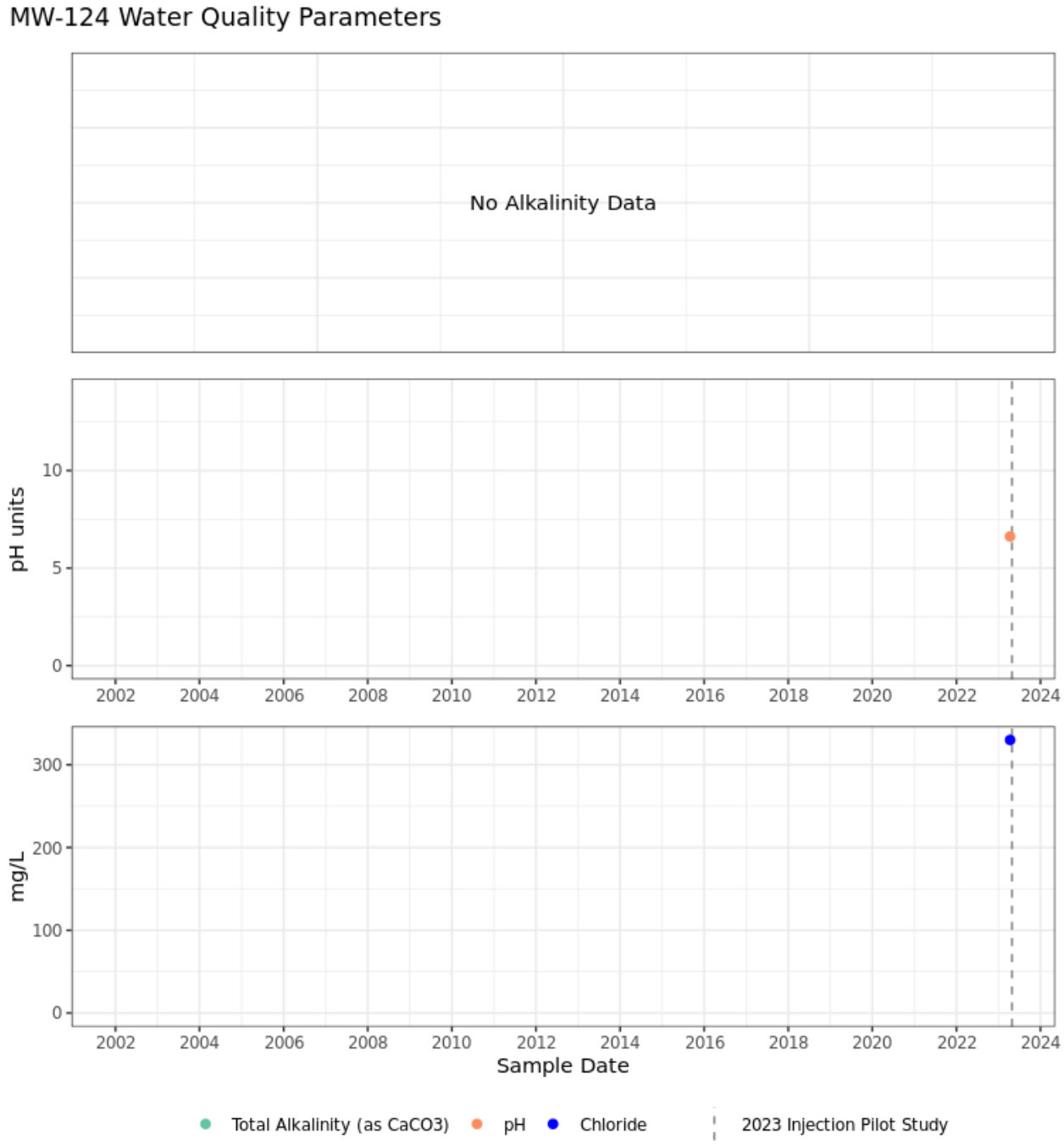


Chlorinated Ethene and Daughter Product Concentration

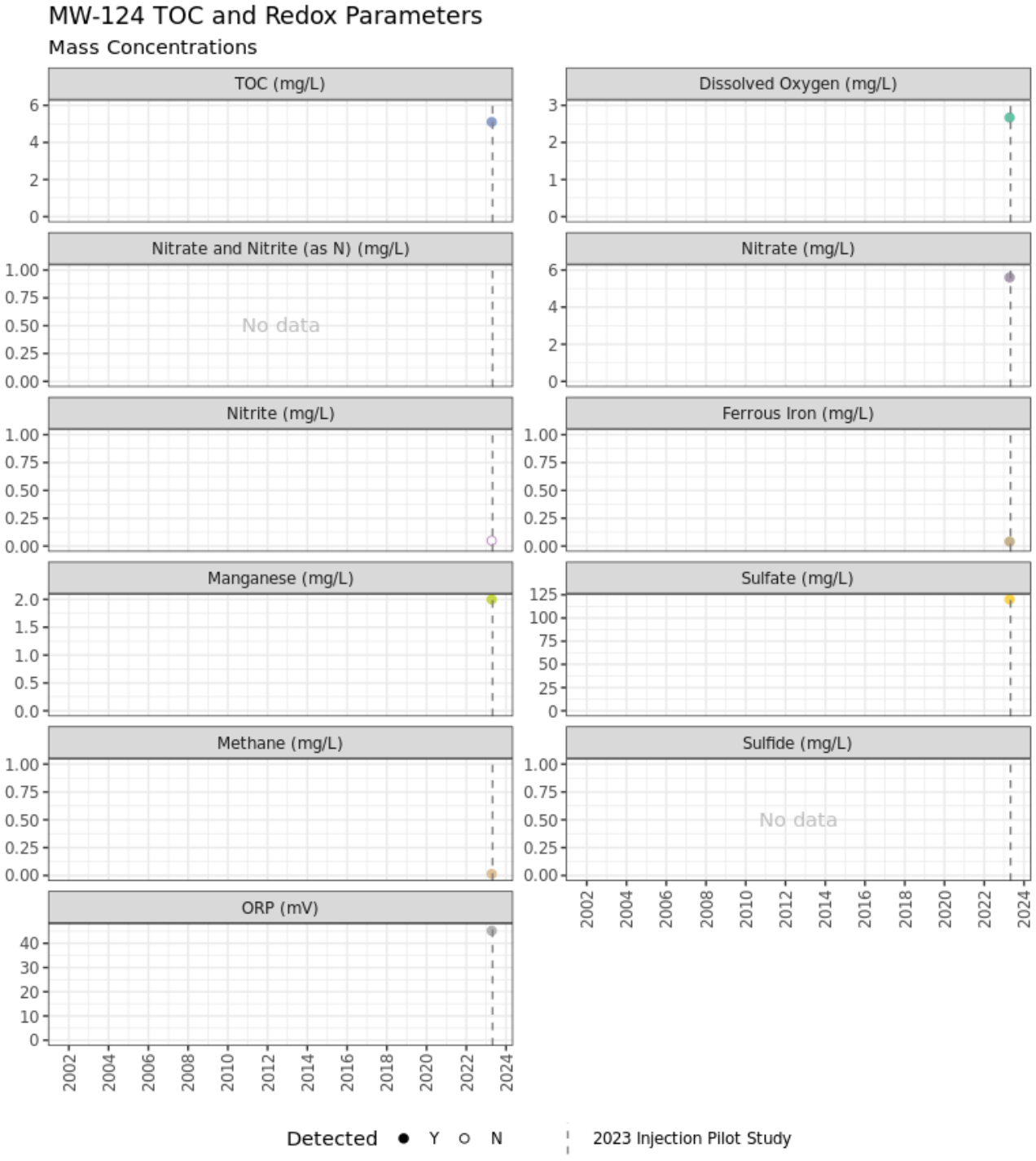


MW-124

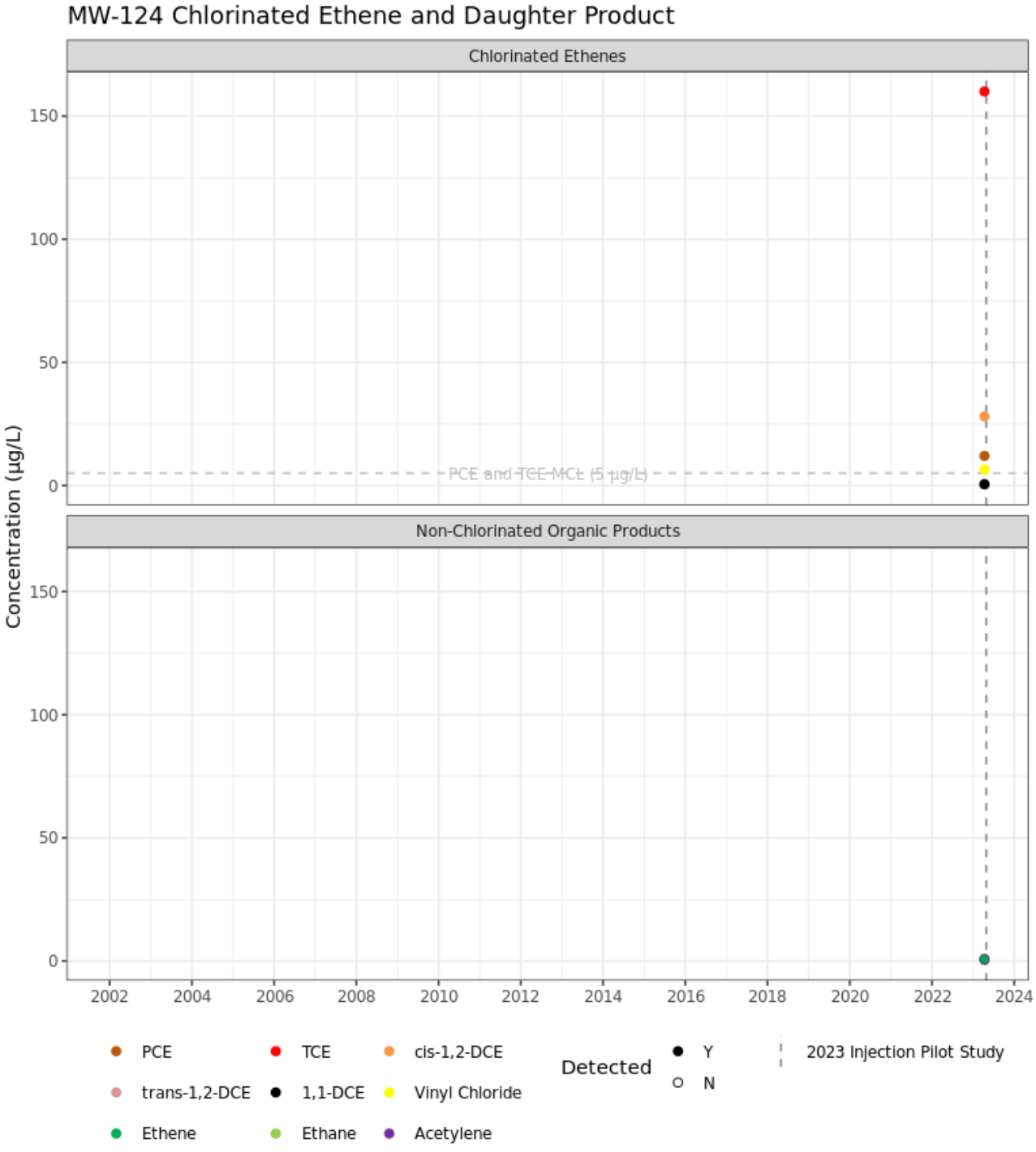
Water Quality



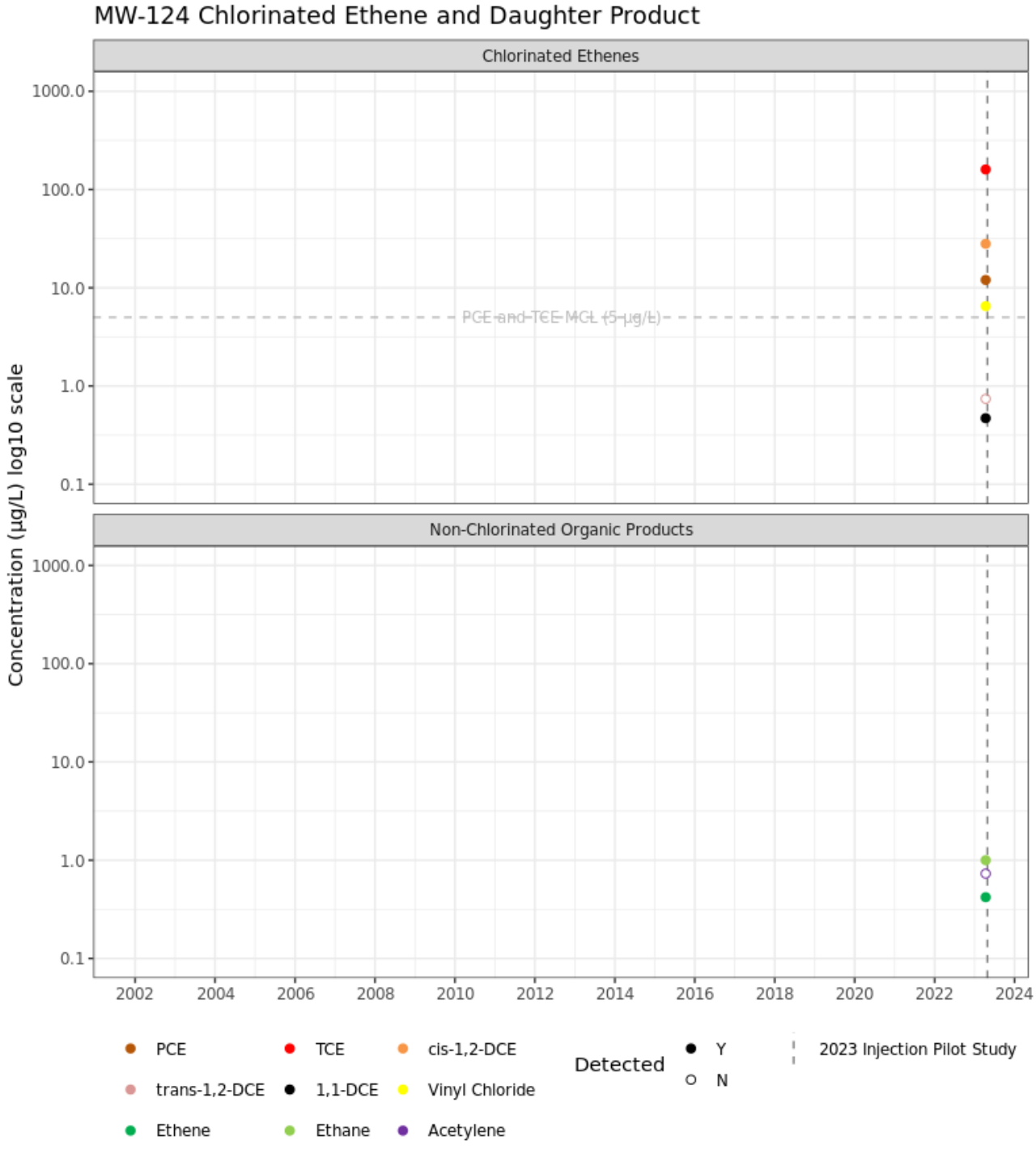
TOC and Redox Parameters



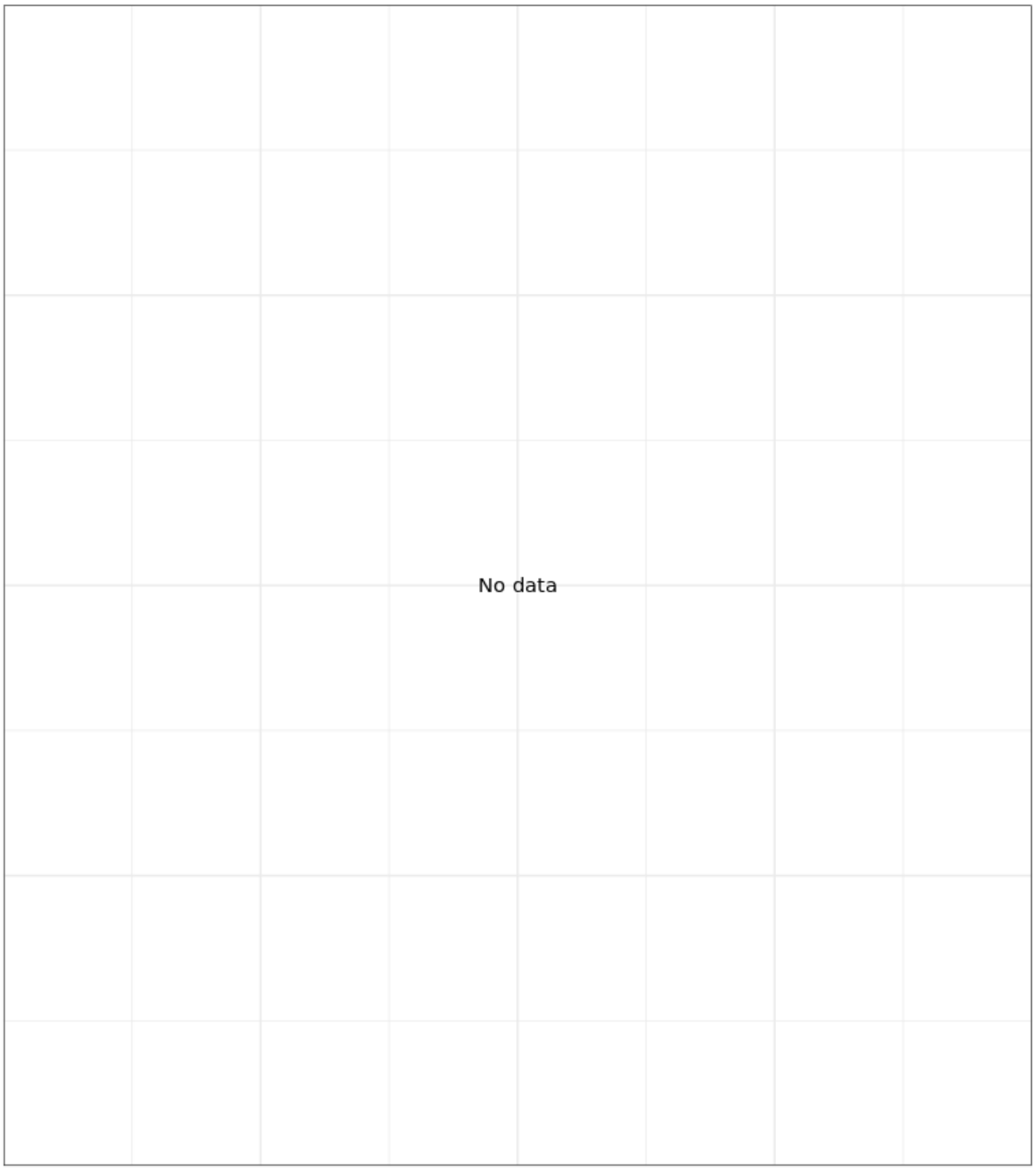
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

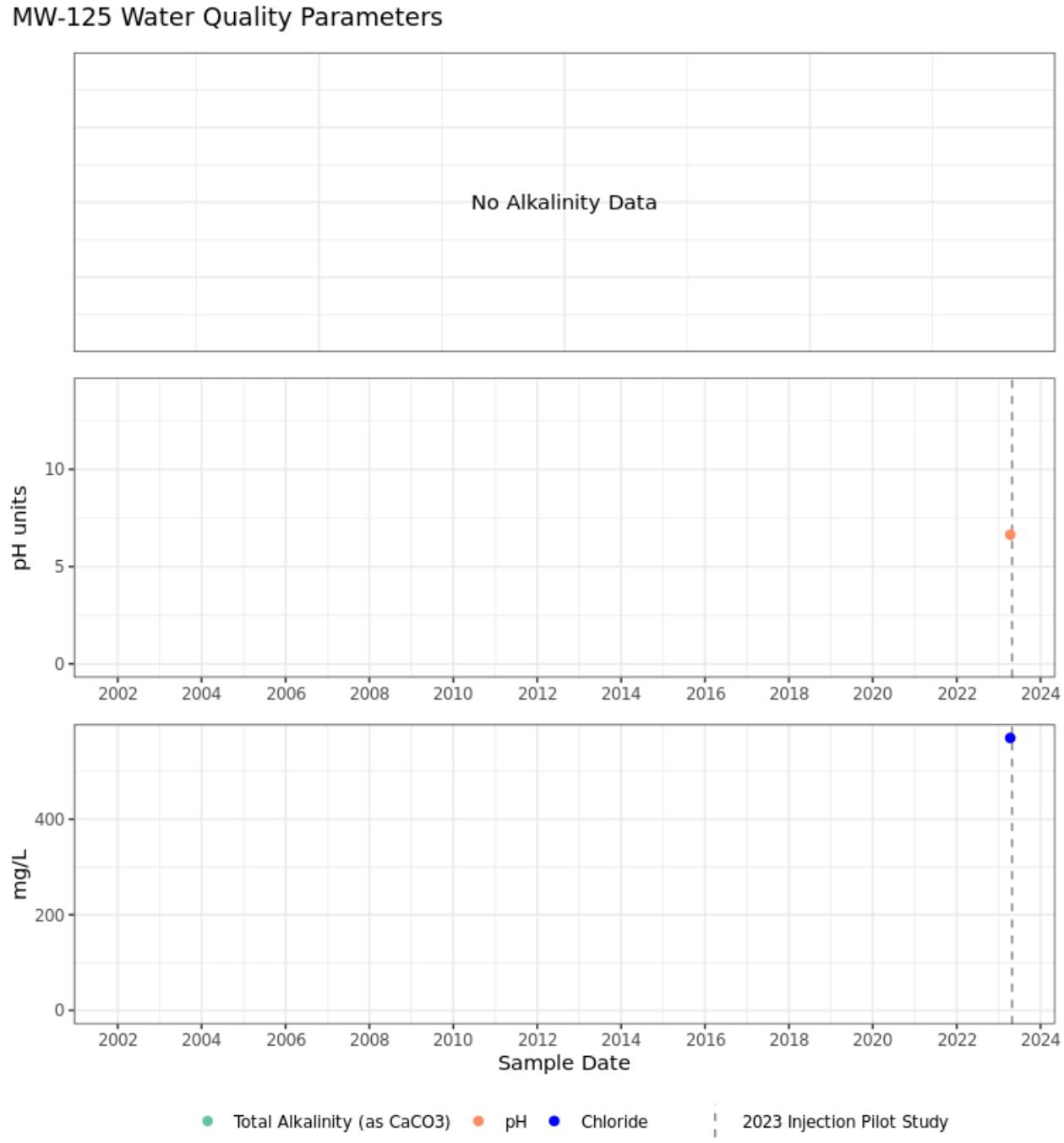


Chlorinated Ethene and Daughter Product Concentration



MW-125

Water Quality



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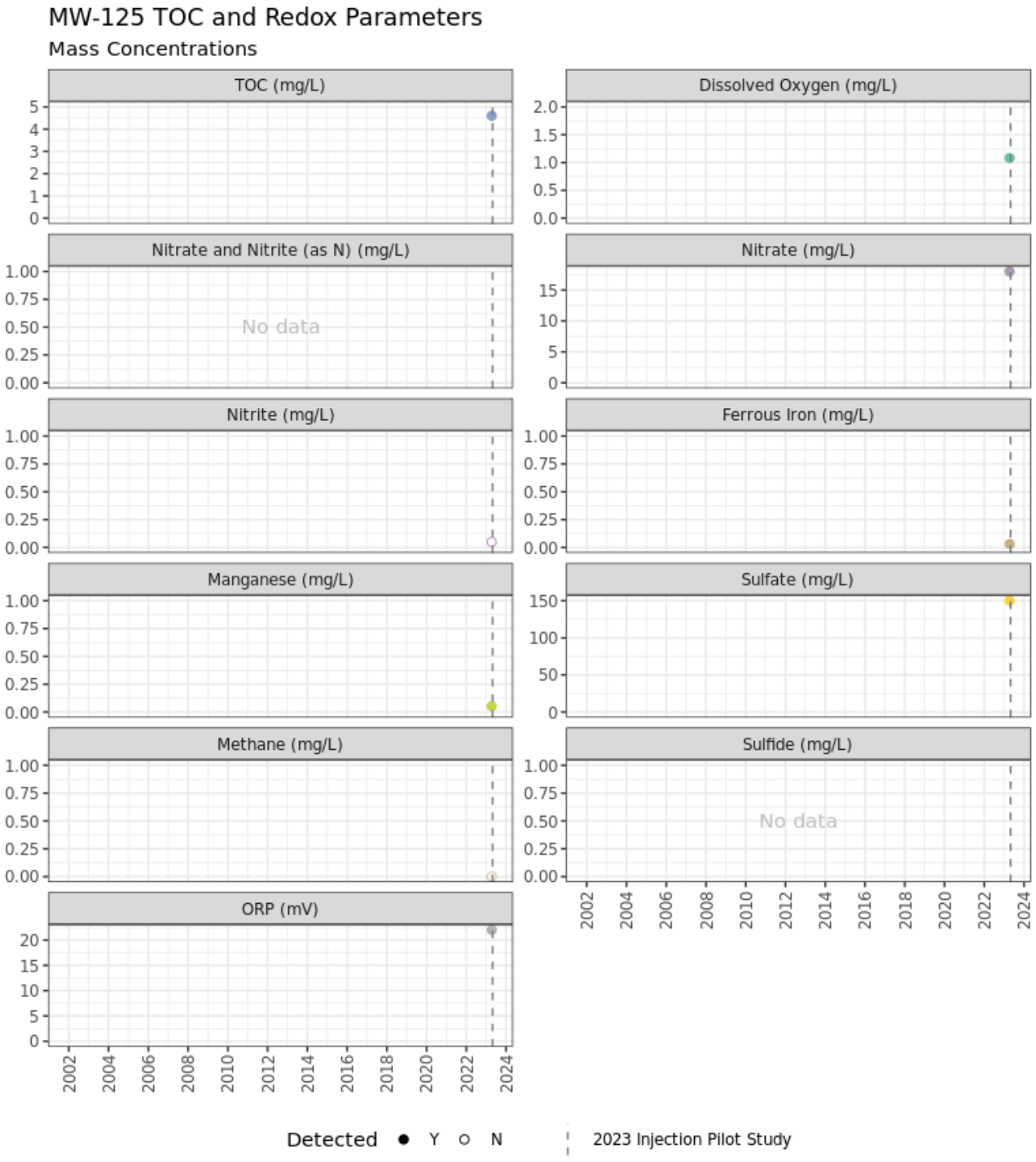
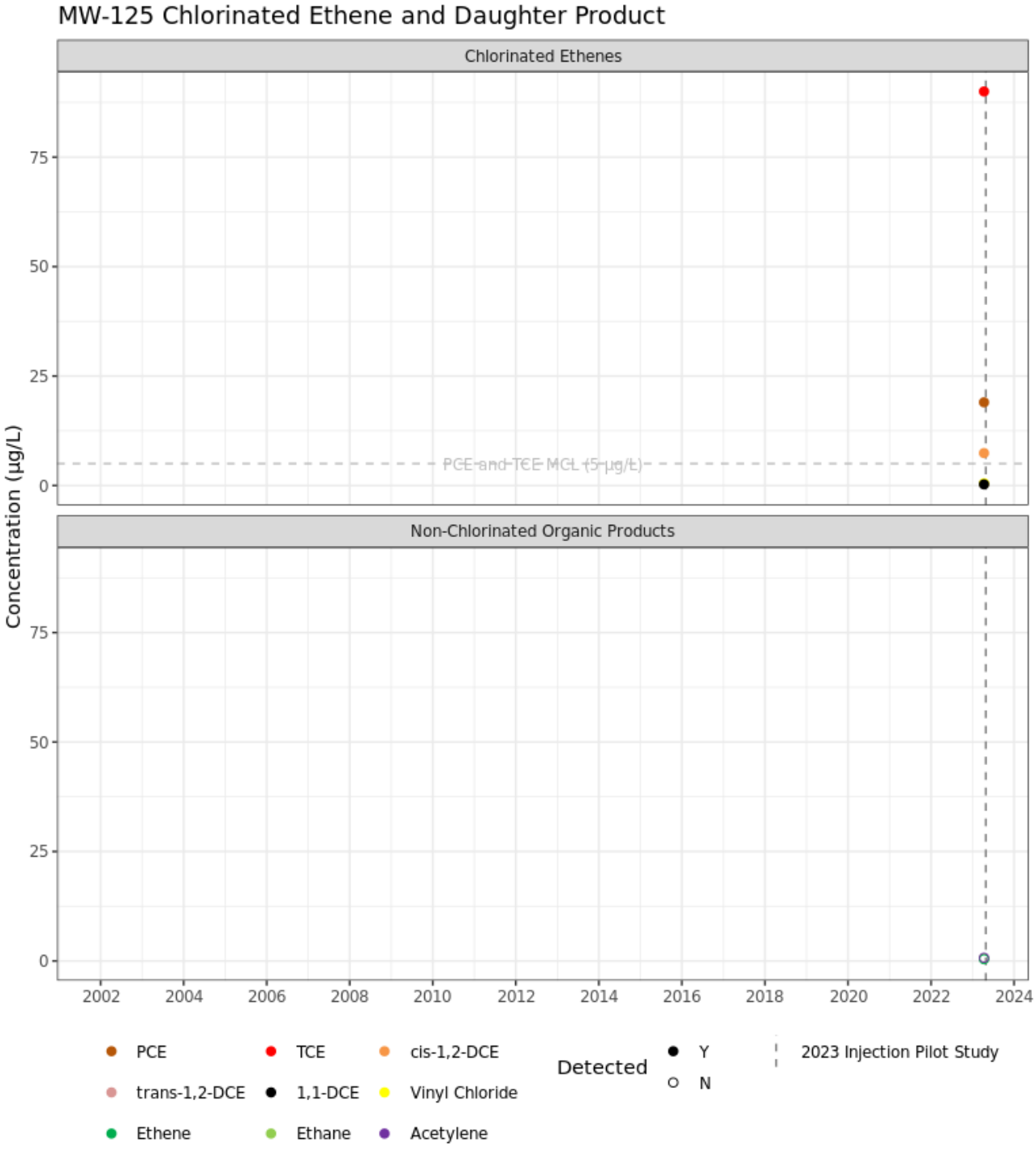
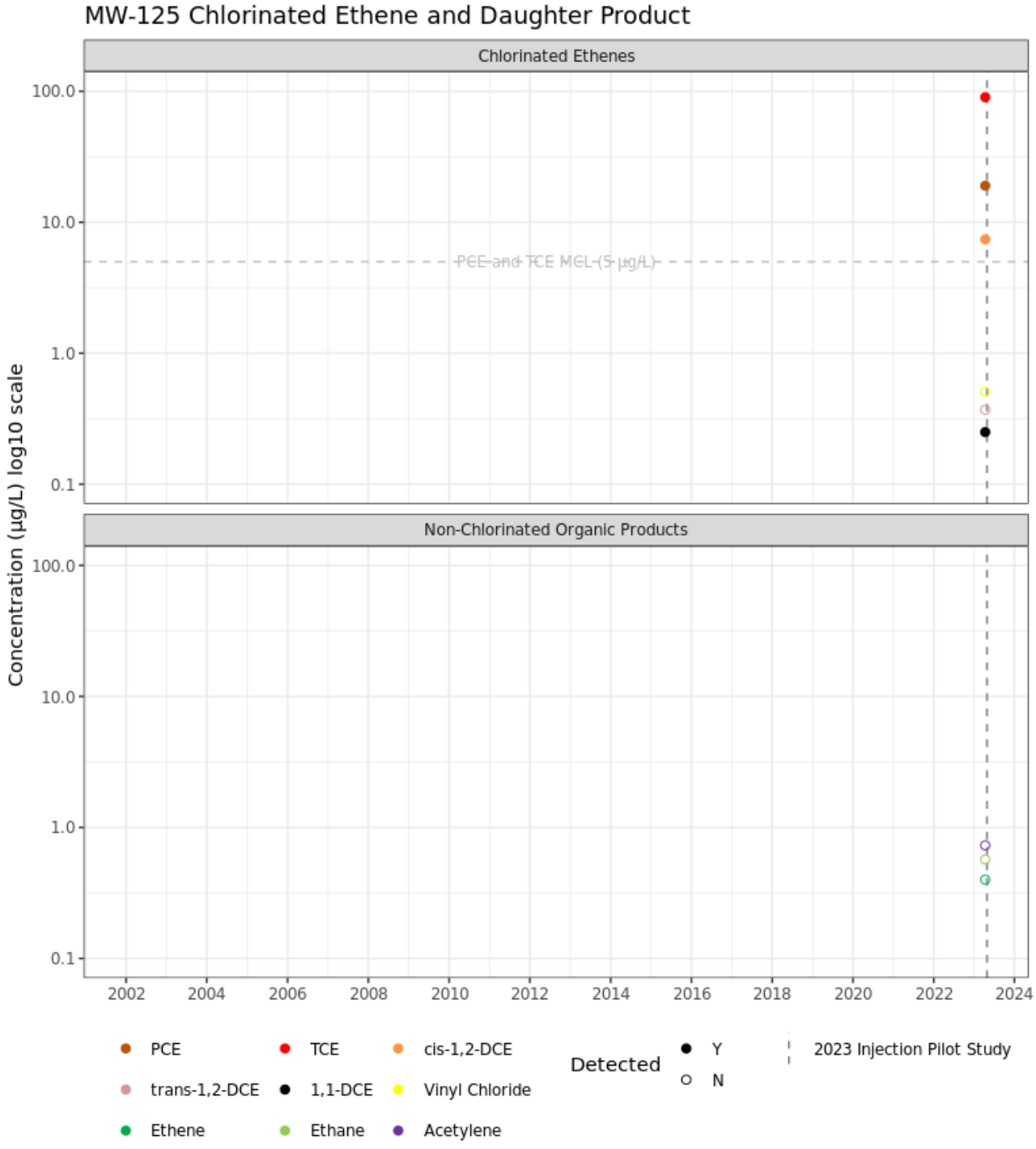


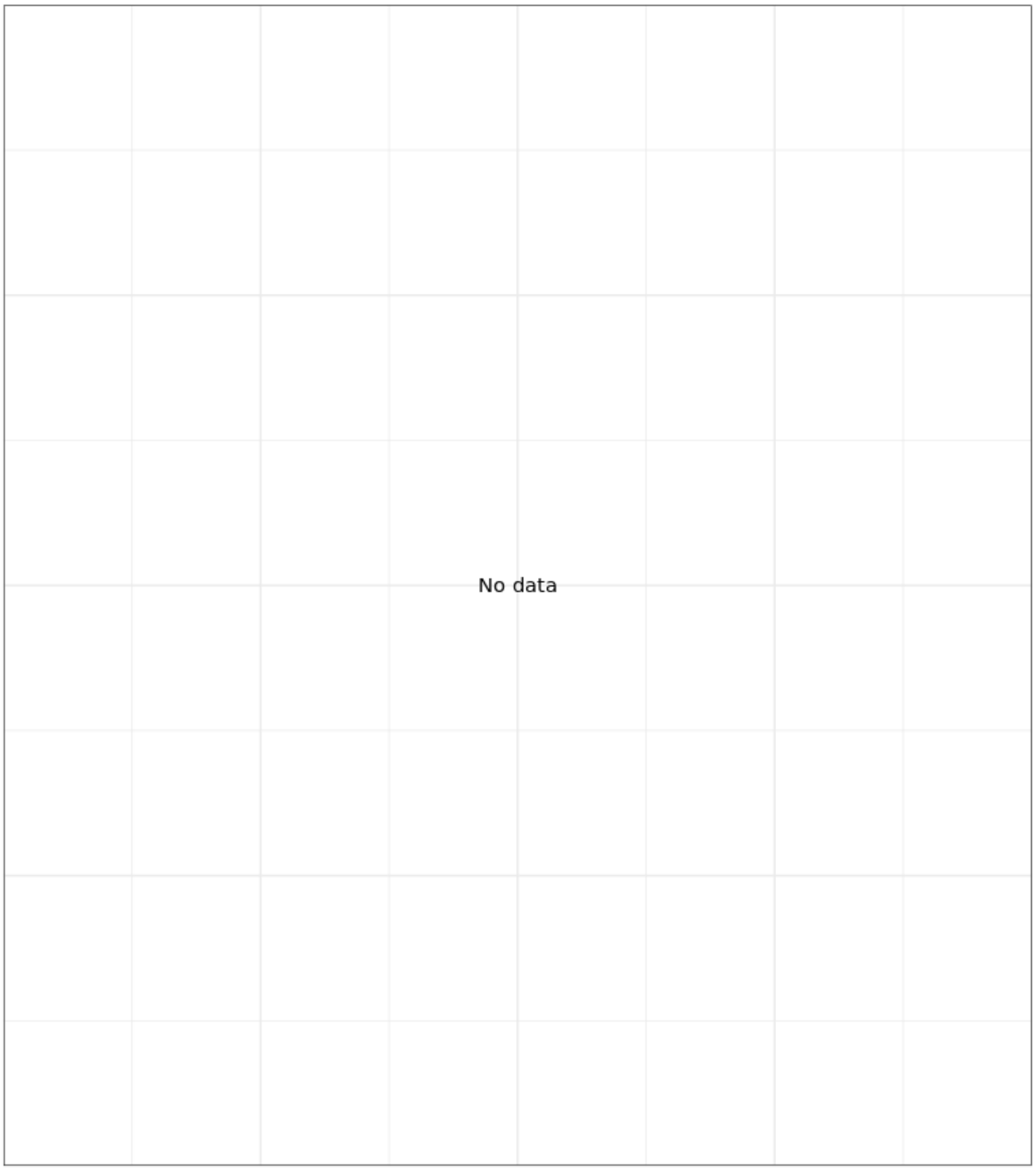
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)



Chlorinated Ethene and Daughter Product Concentration



Chlorinated Ethenes and Geochemistry Time Series Plots -

Data filters

This report is filtered to only include:

- **MW-8, MW-9, MW-12, and MW-13** from **Cell 2 Monitoring Well**
- Results from **01 January 2002** to **30 May 2023**

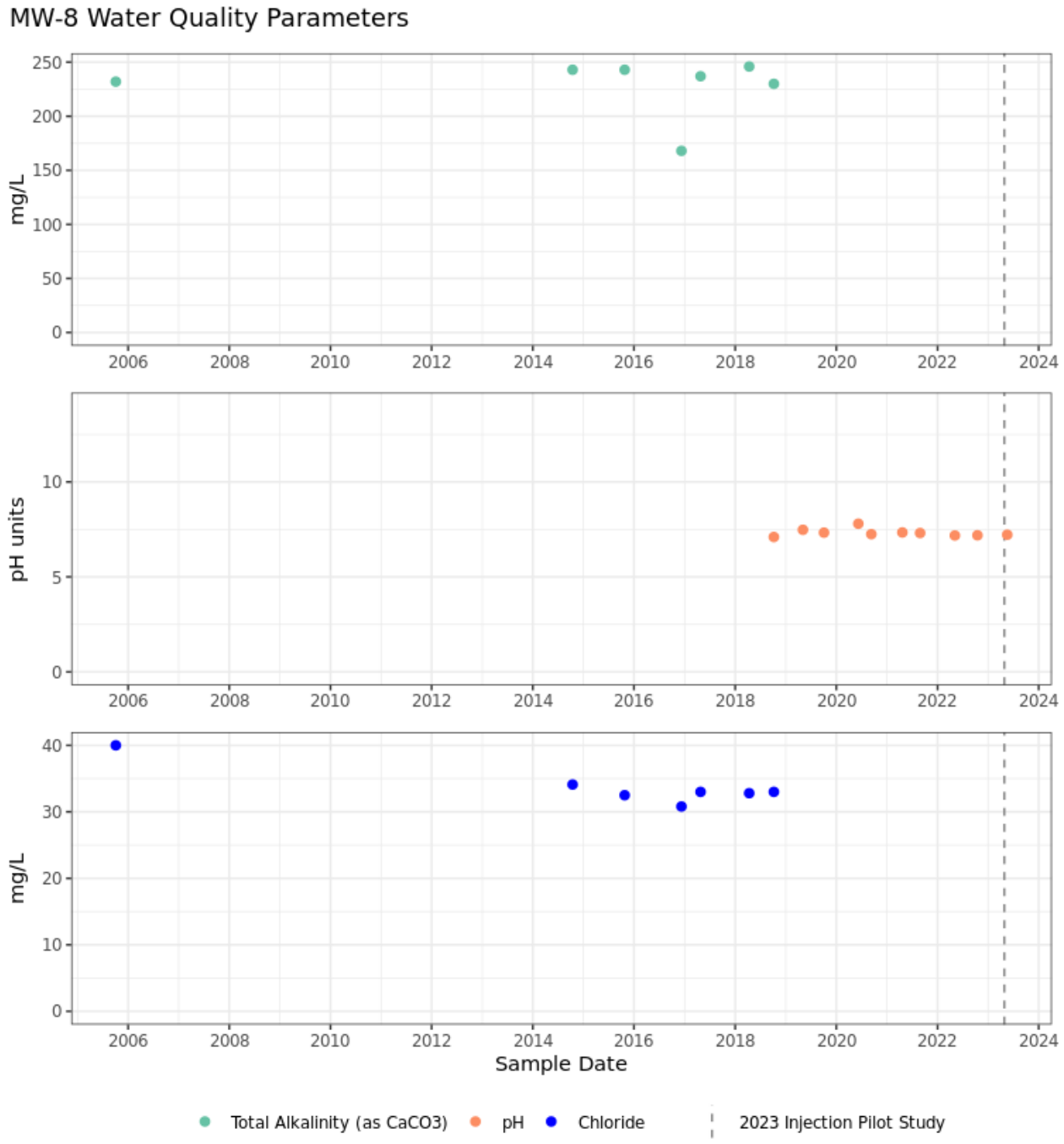
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- The molar concentration graphs only plot detected data
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

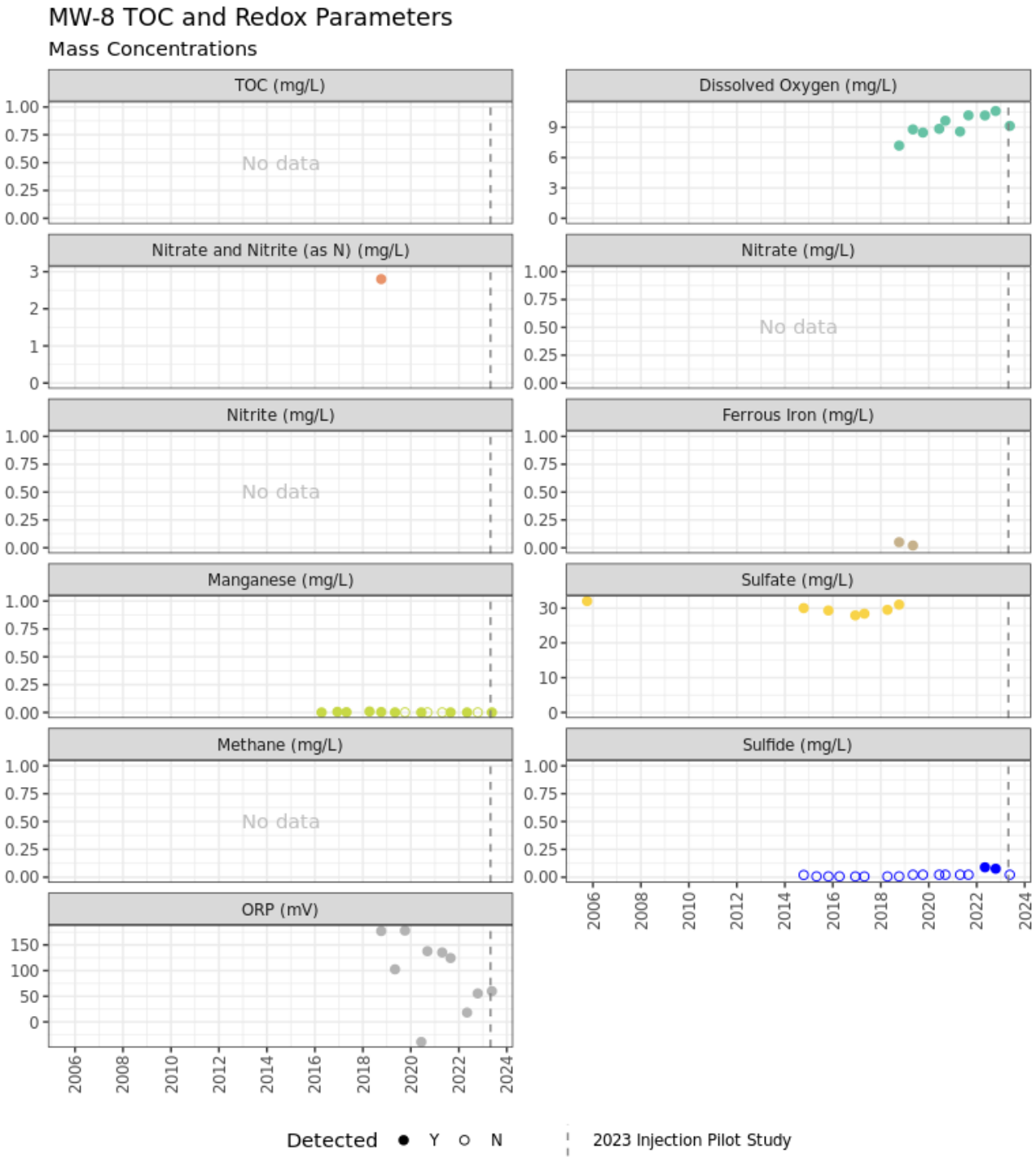
Well summaries

MW-8

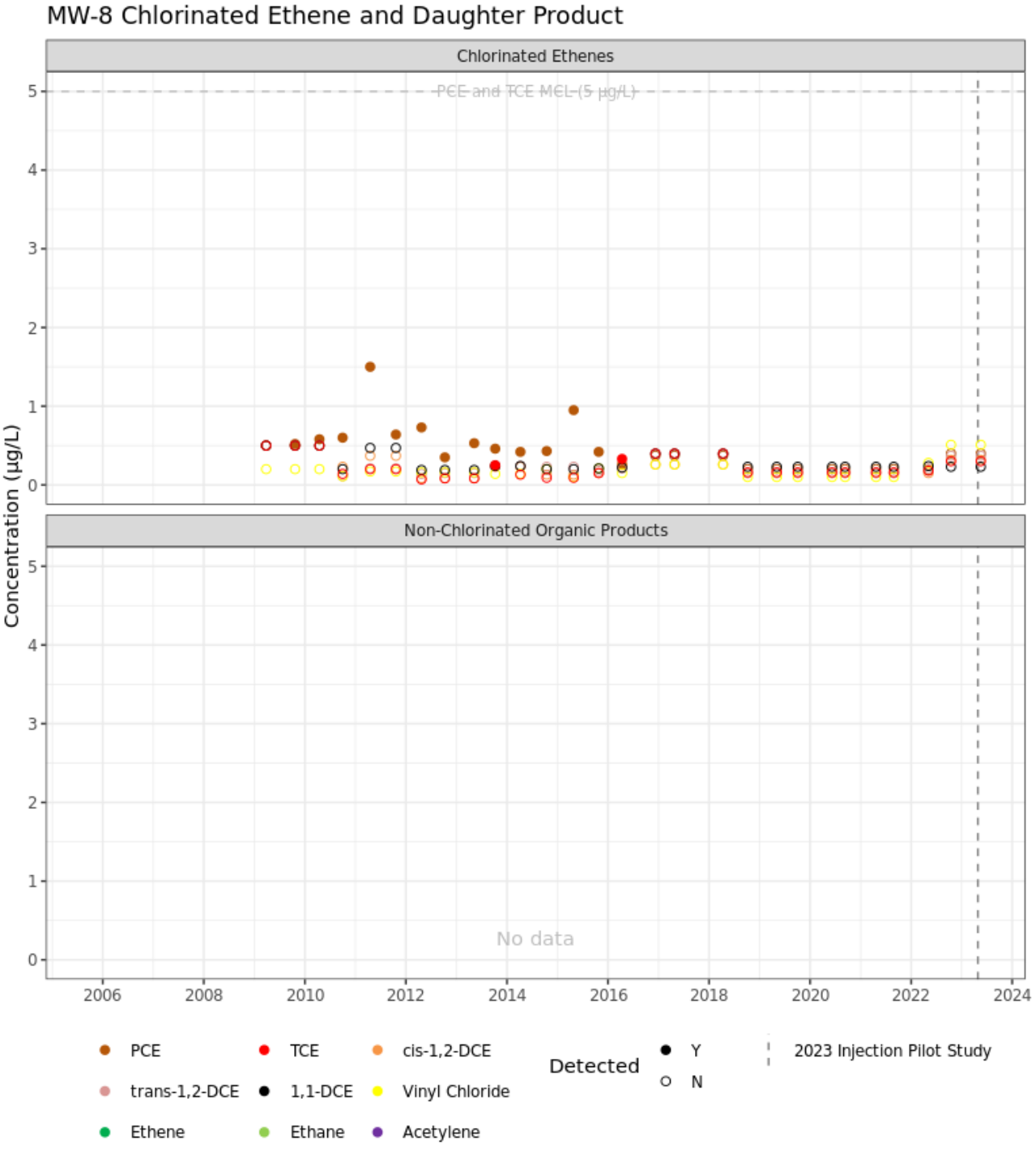
Water Quality



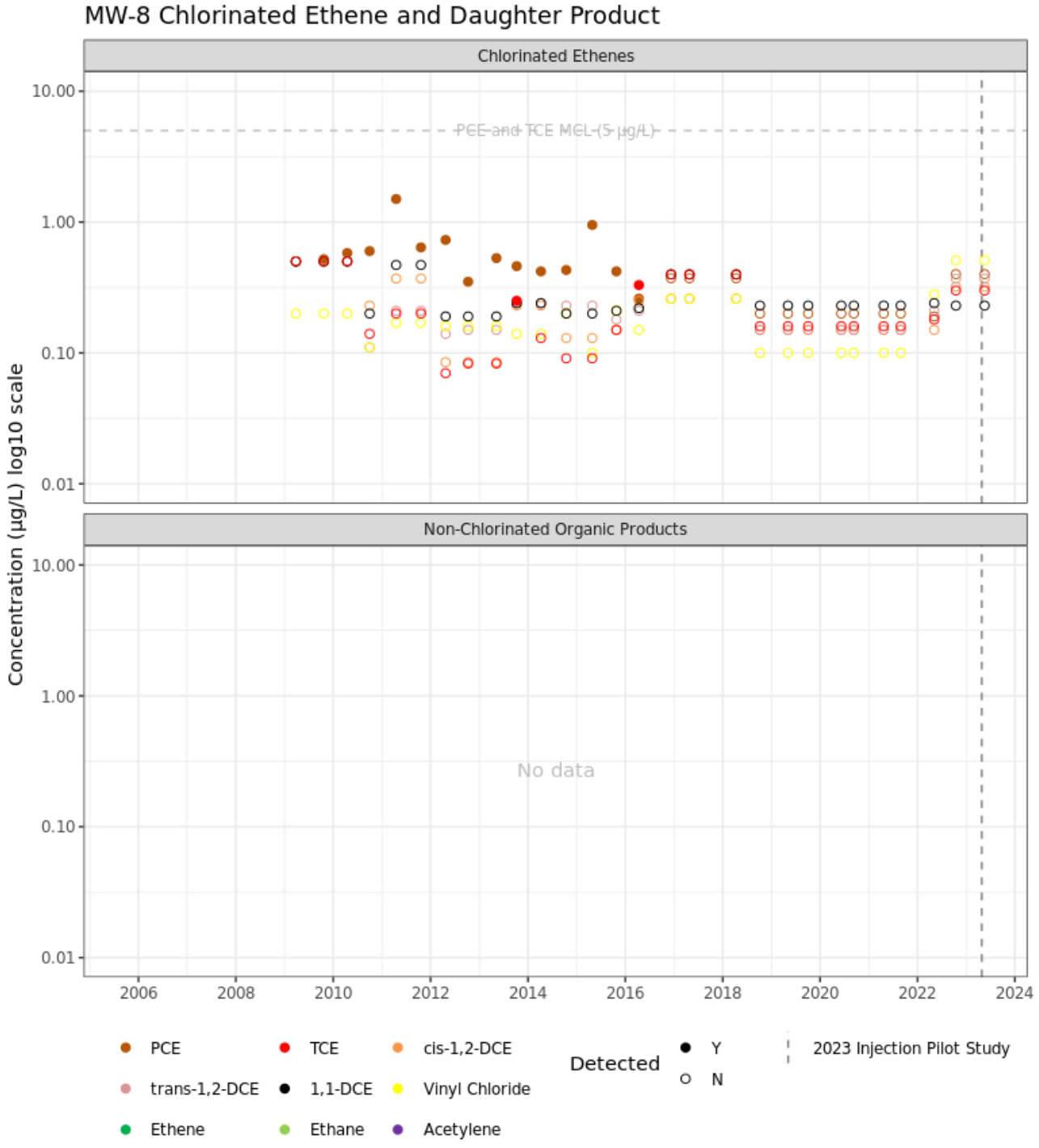
TOC and Redox Parameters



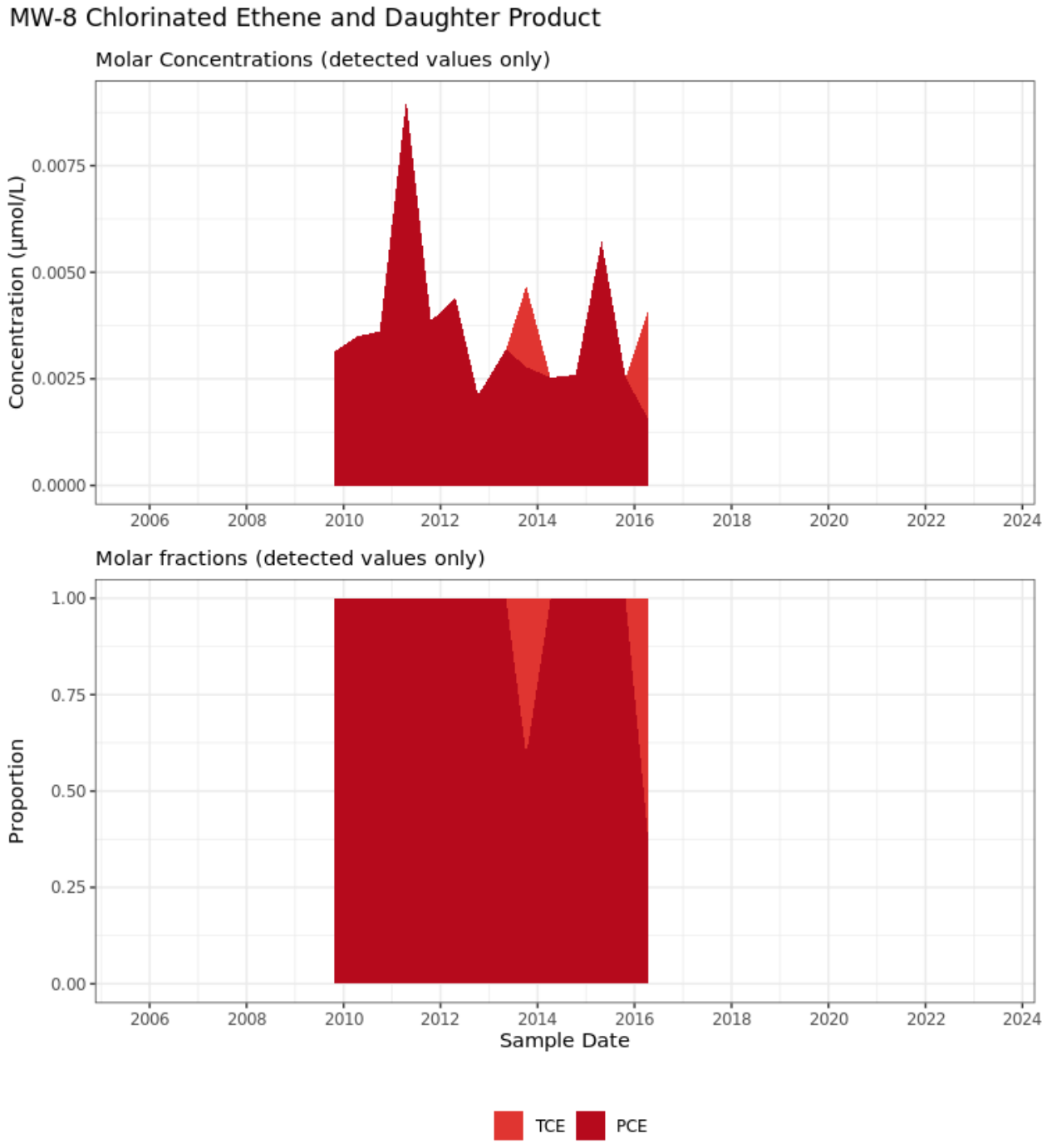
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

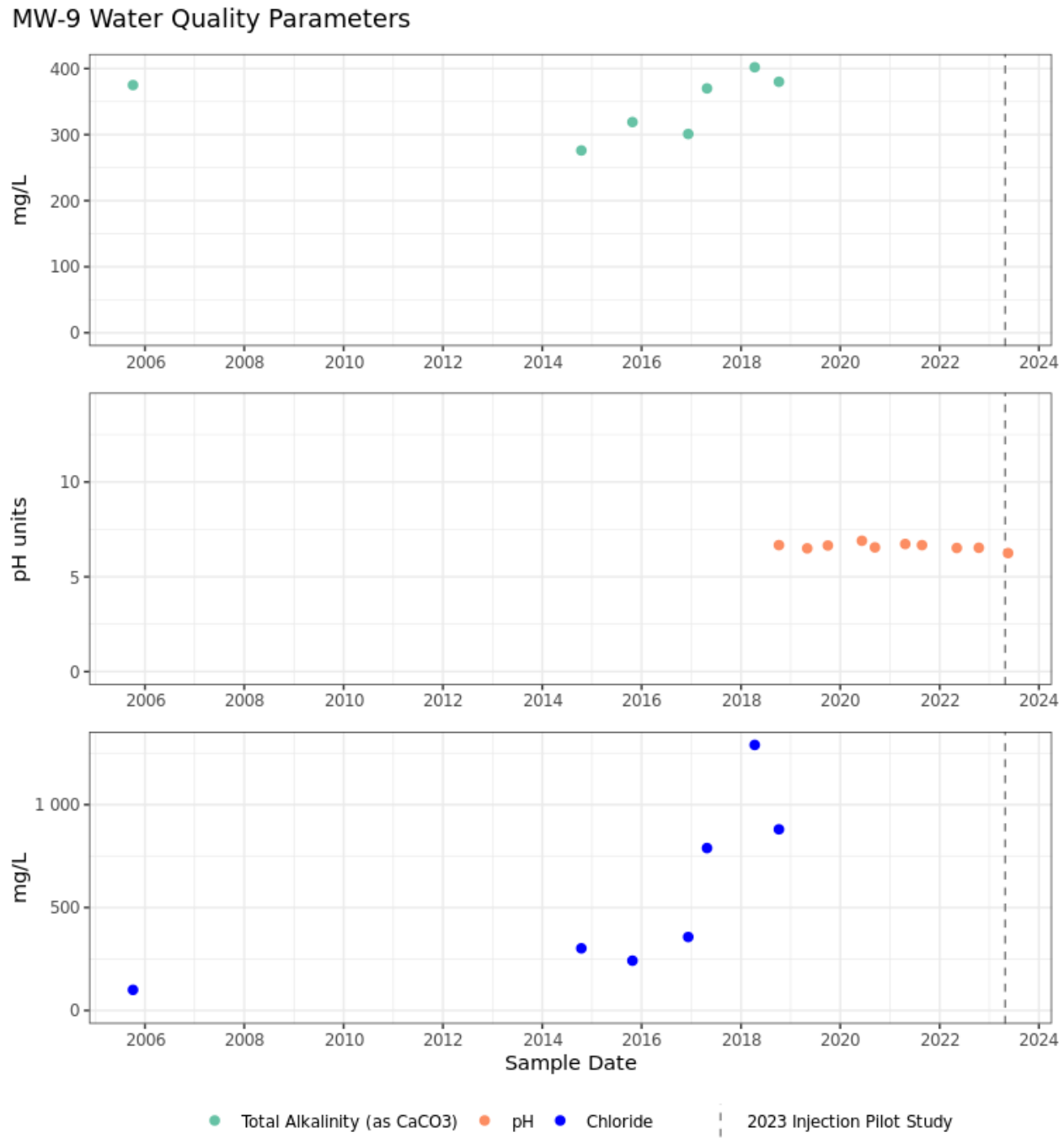


Chlorinated Ethene and Daughter Product Concentration

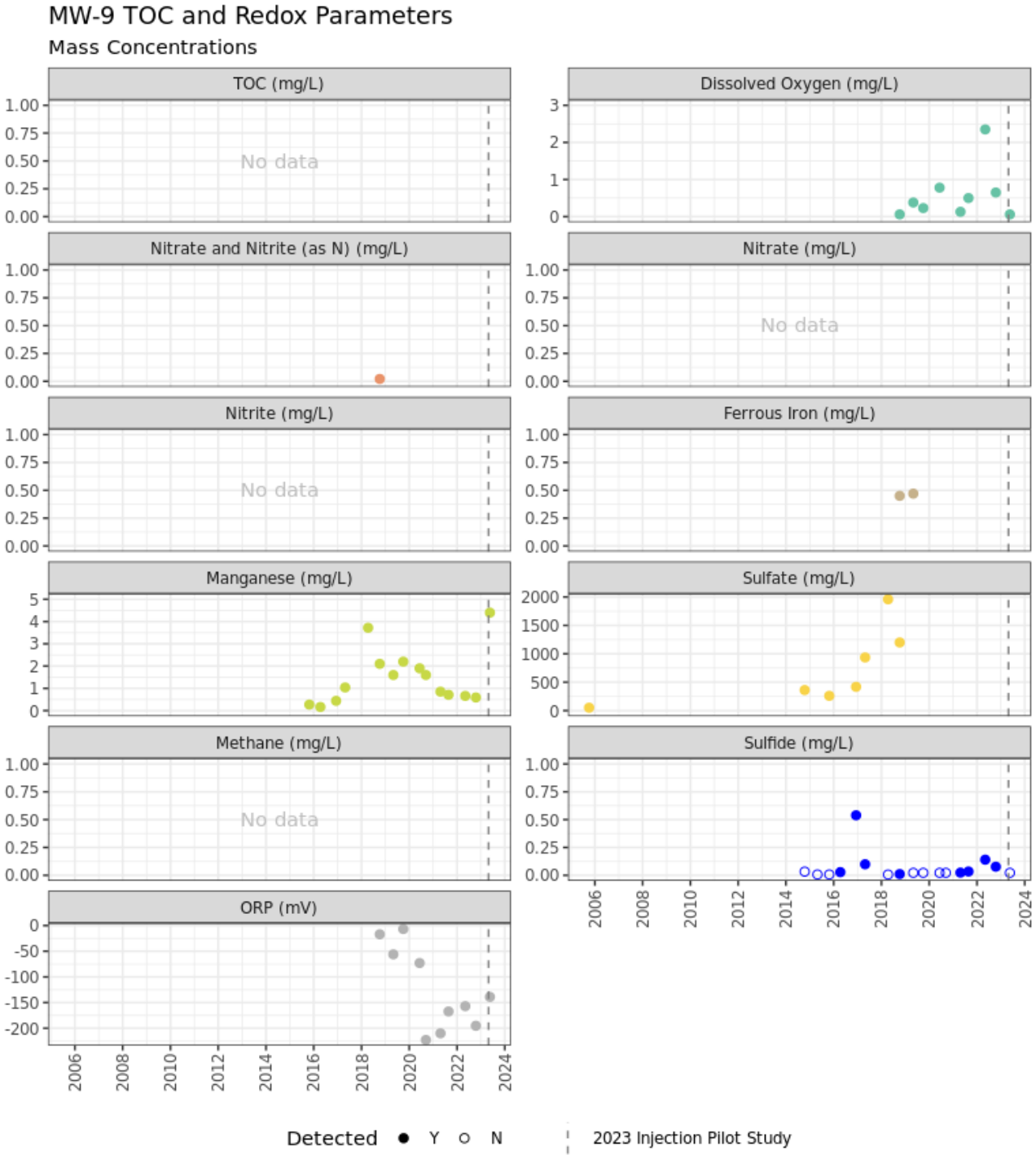


MW-9

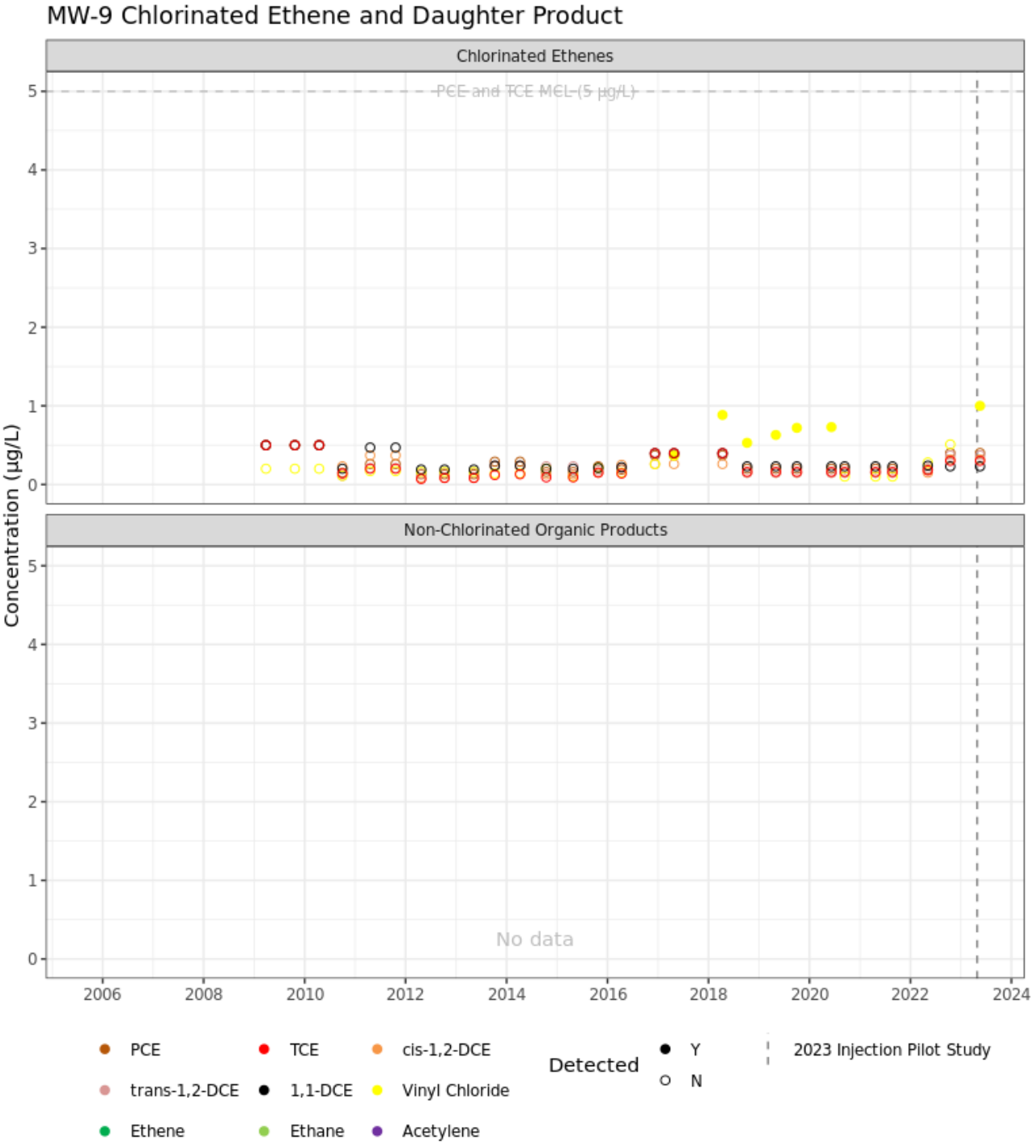
Water Quality



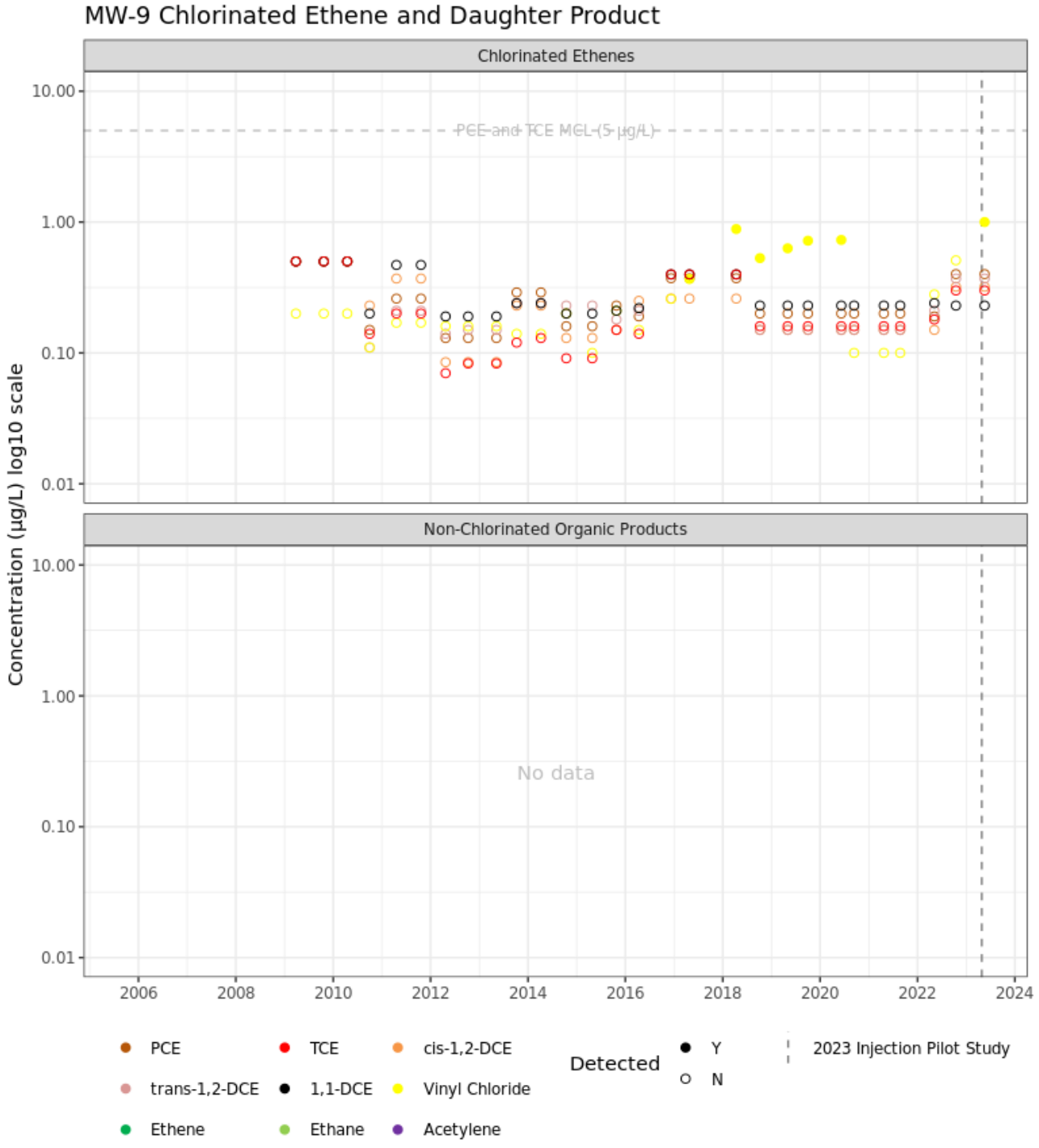
TOC and Redox Parameters



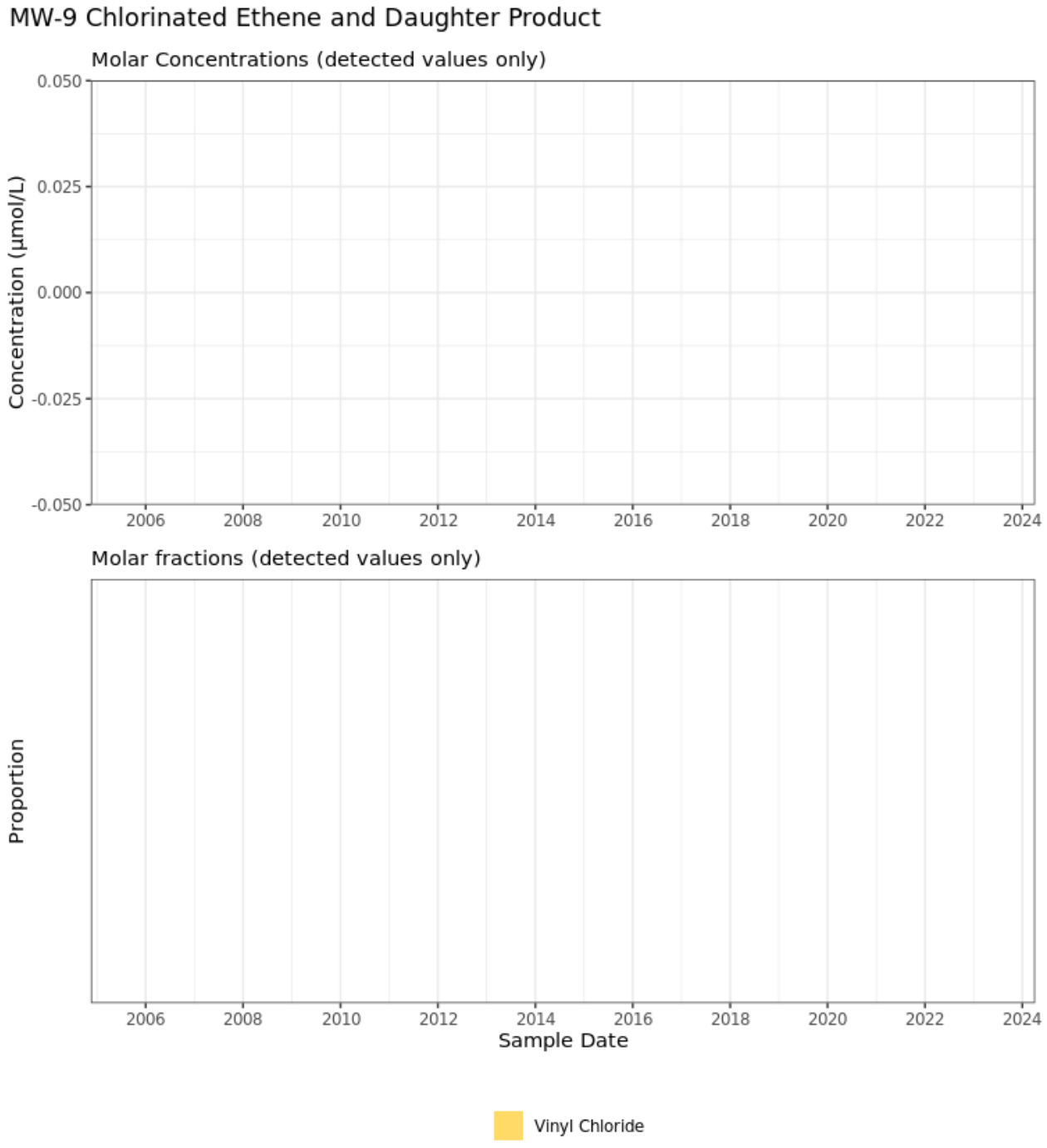
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

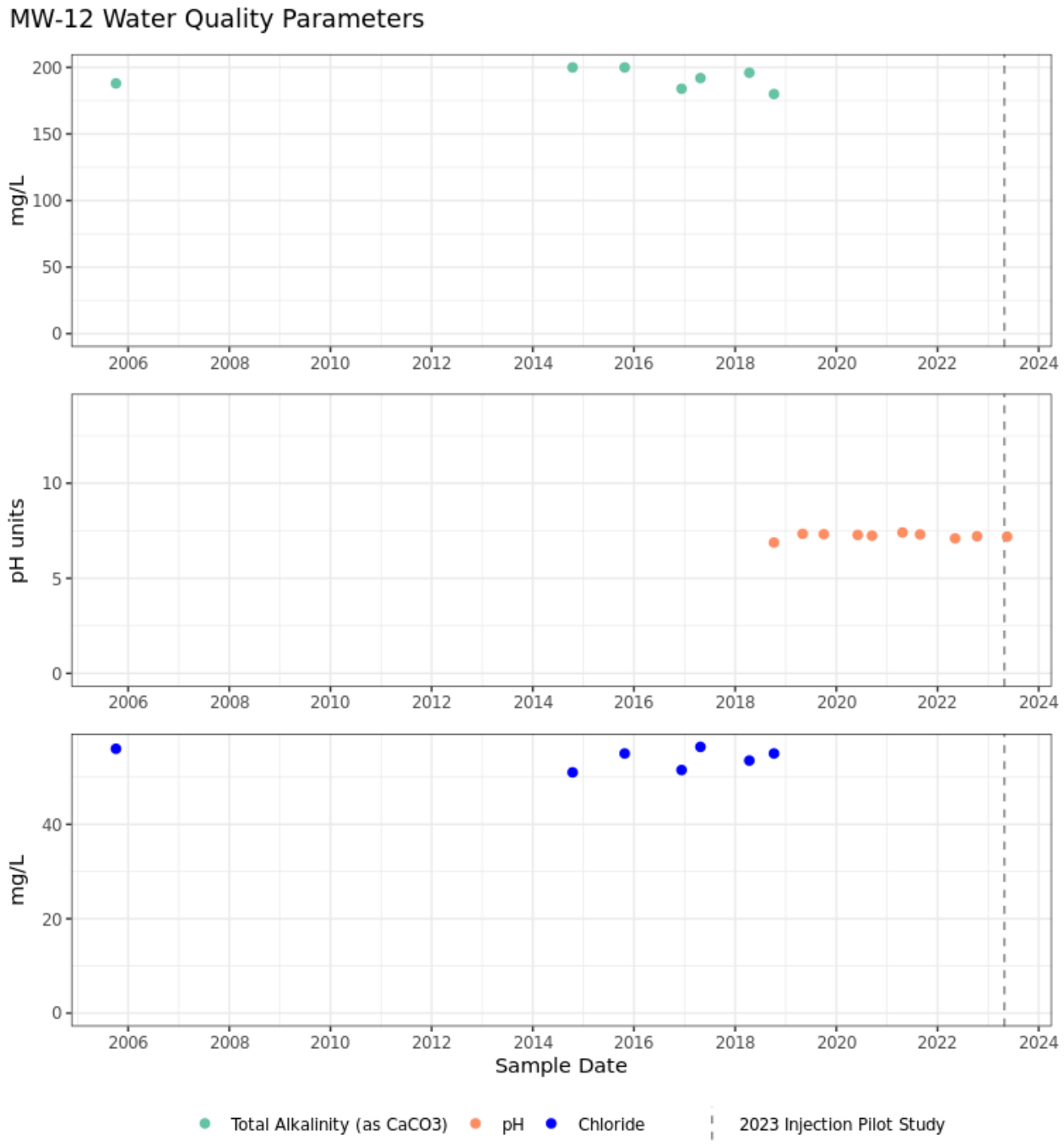


Chlorinated Ethene and Daughter Product Concentration

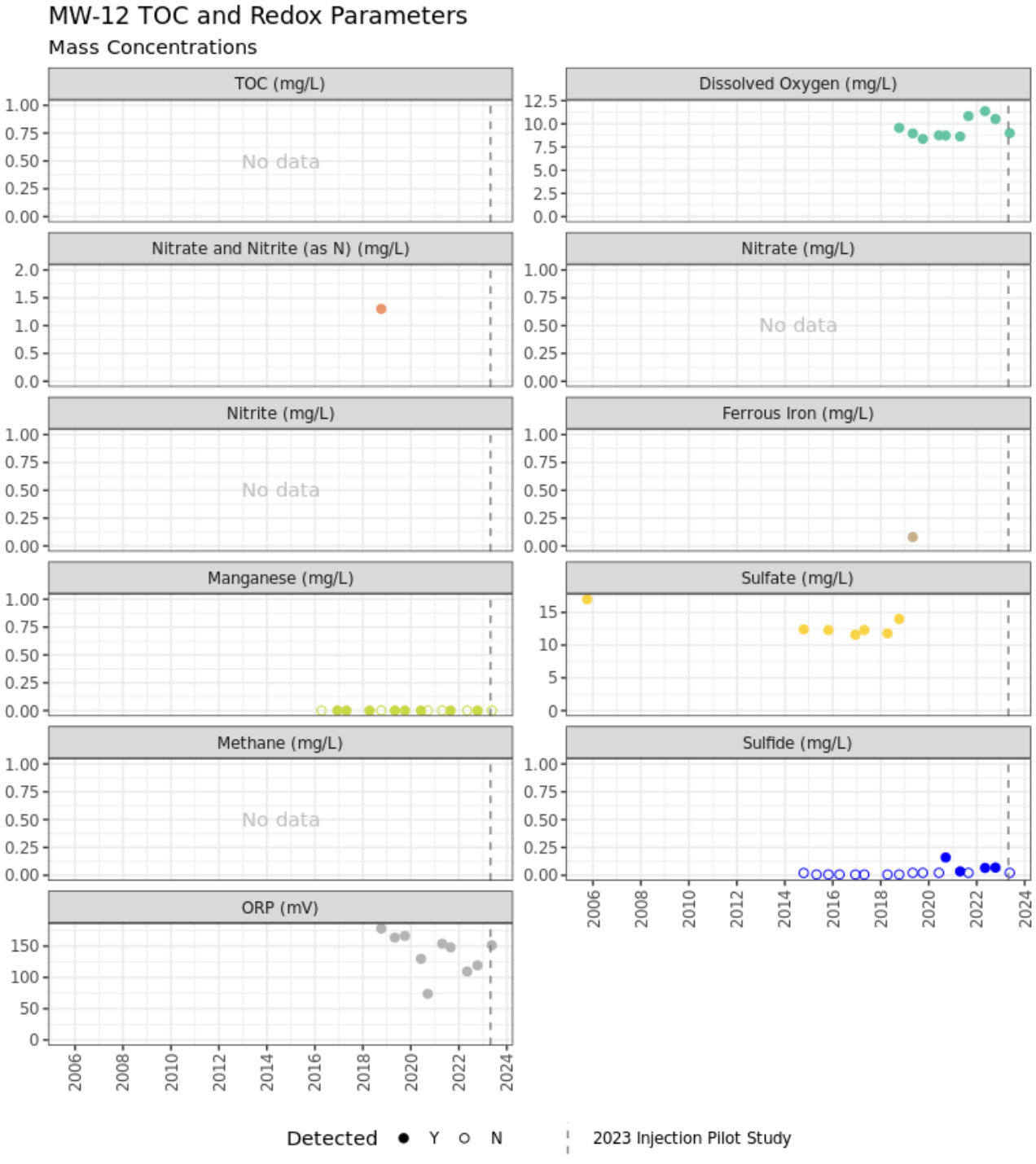


MW-12

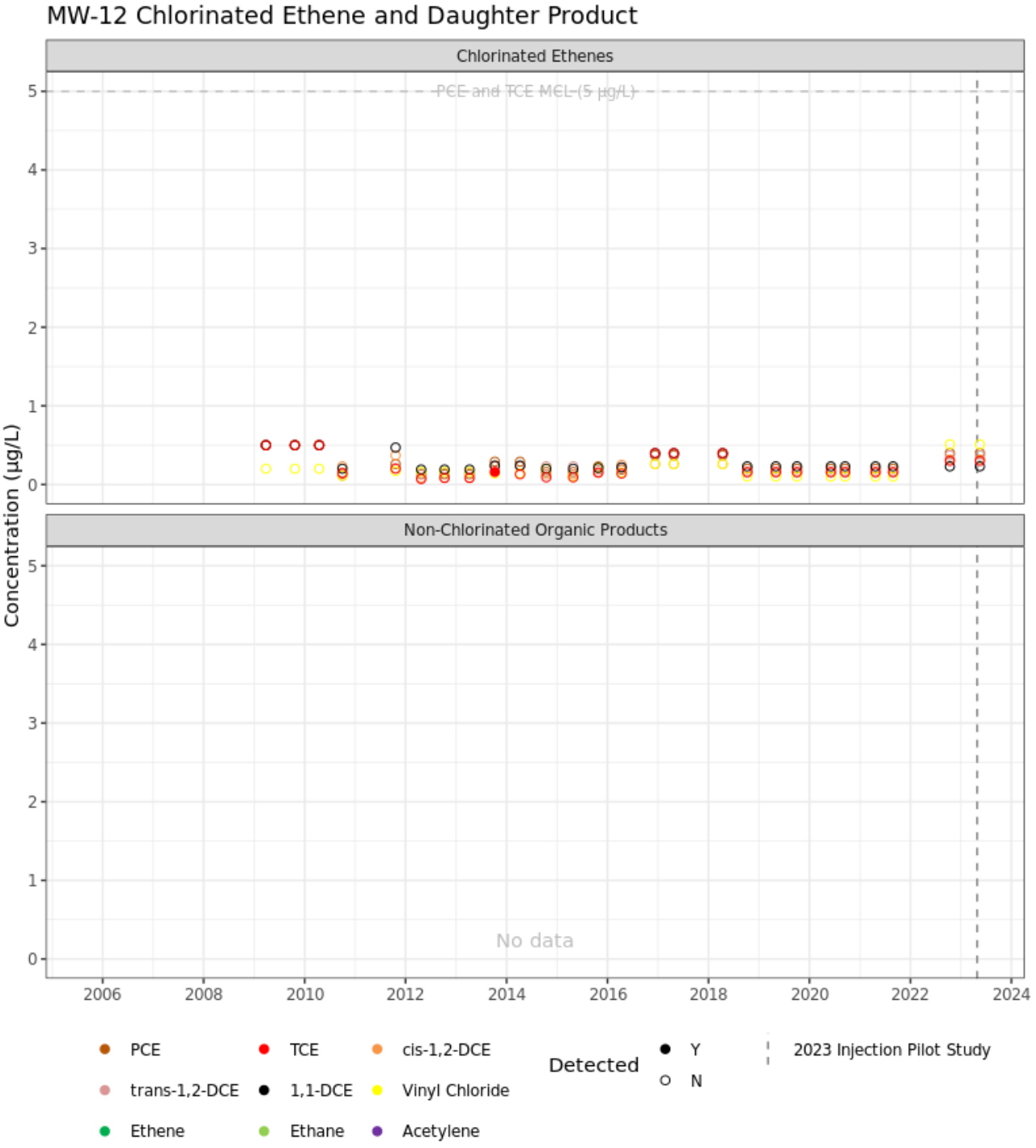
Water Quality



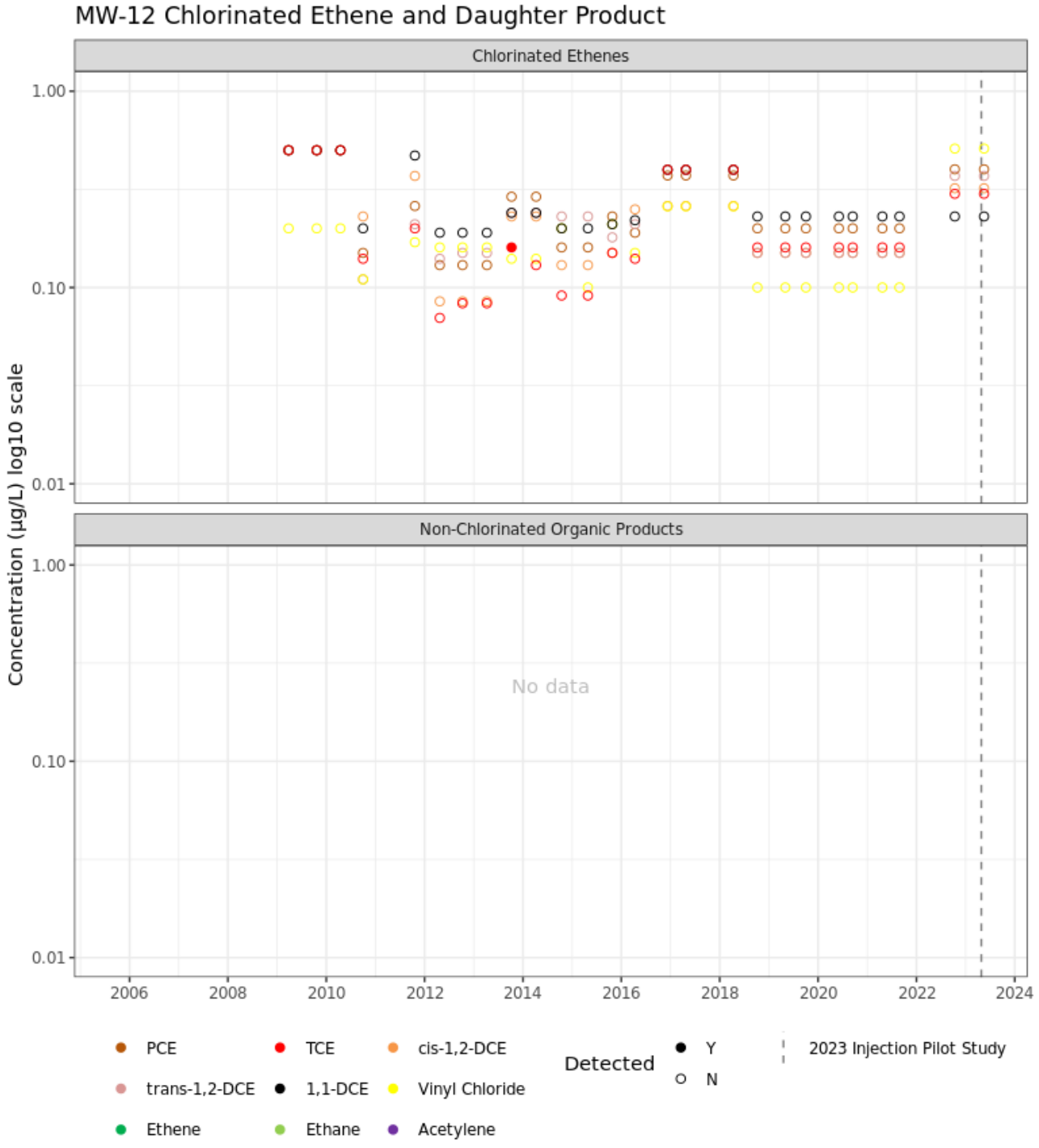
TOC and Redox Parameters



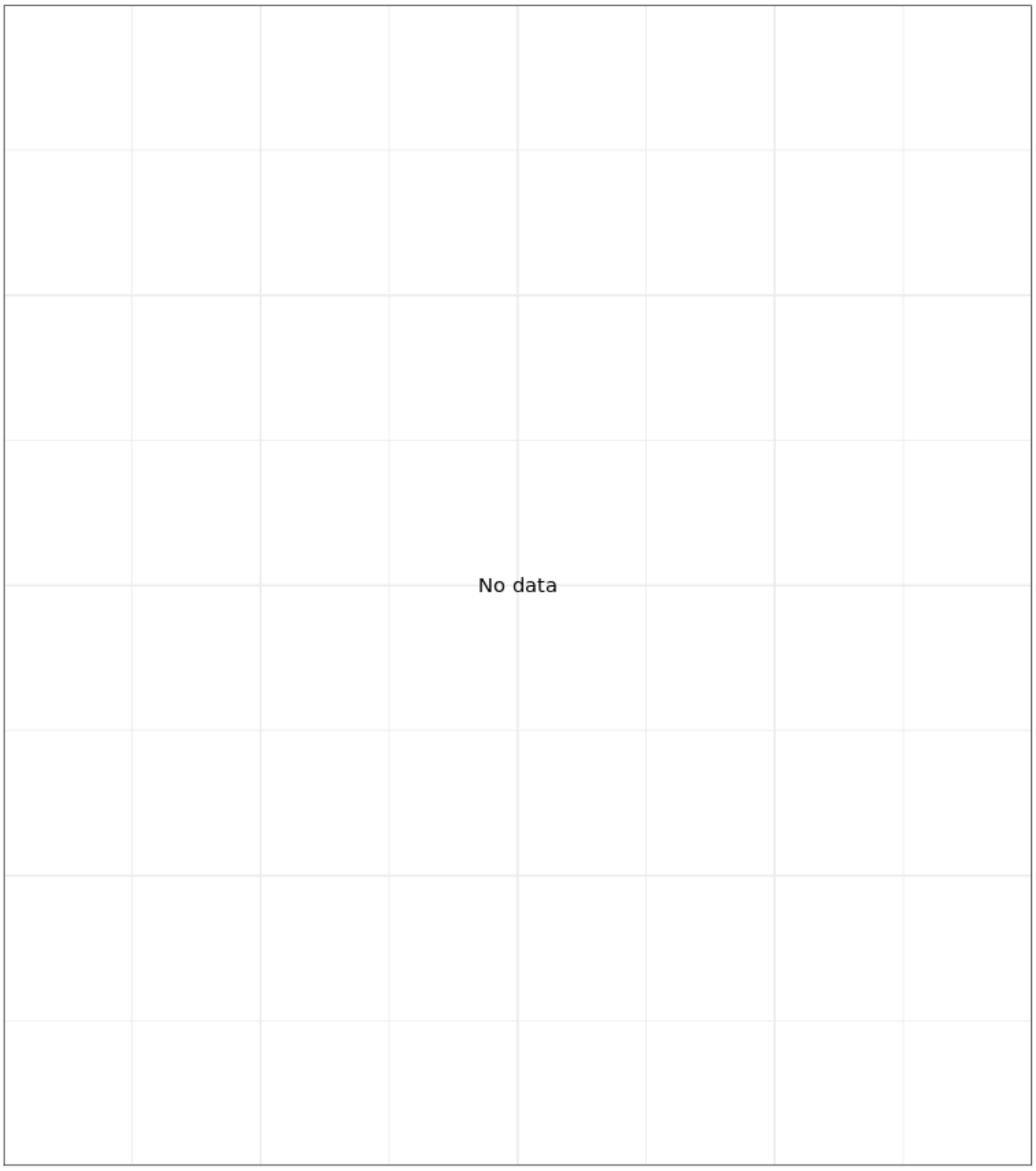
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

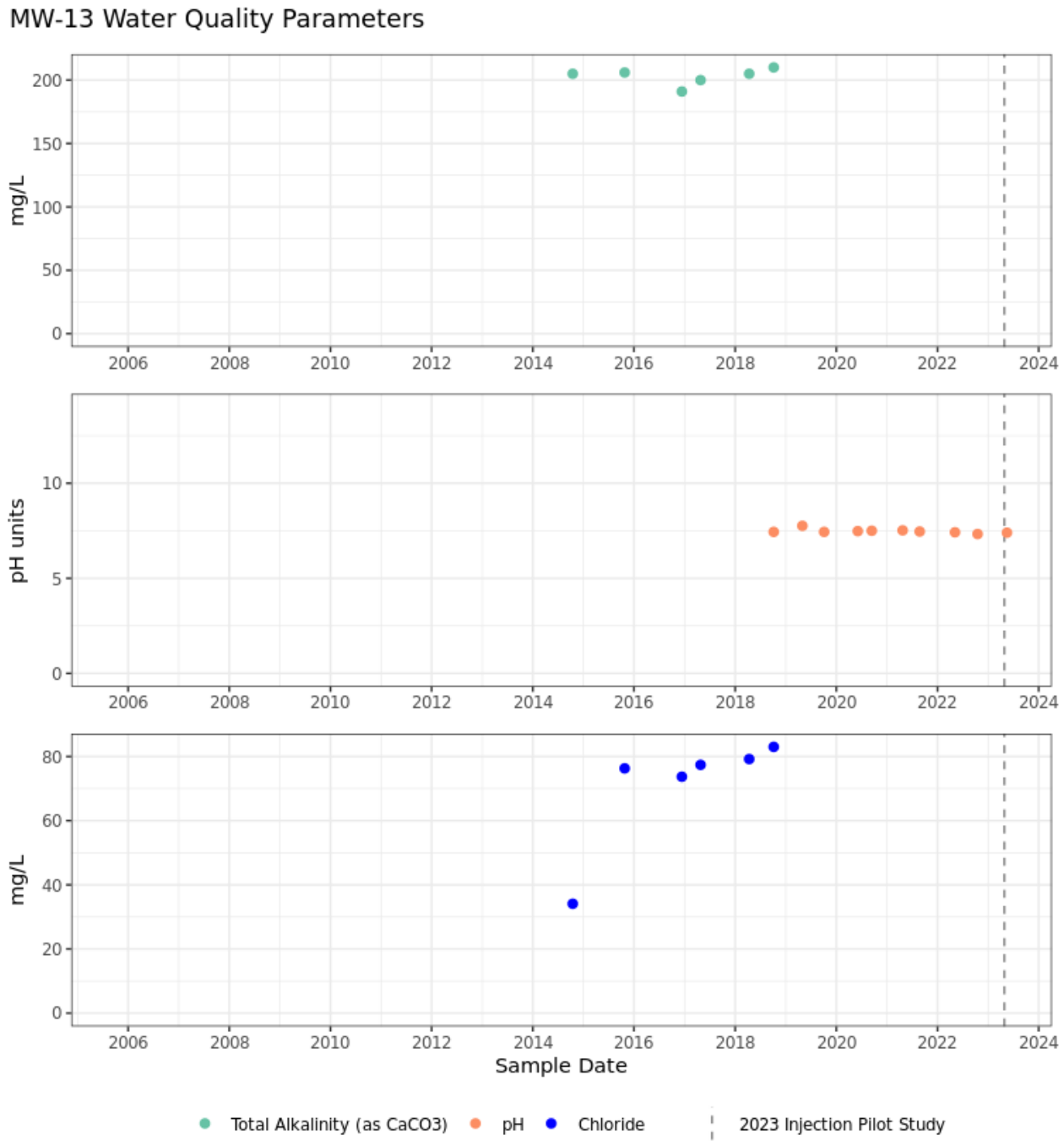


Chlorinated Ethene and Daughter Product Concentration

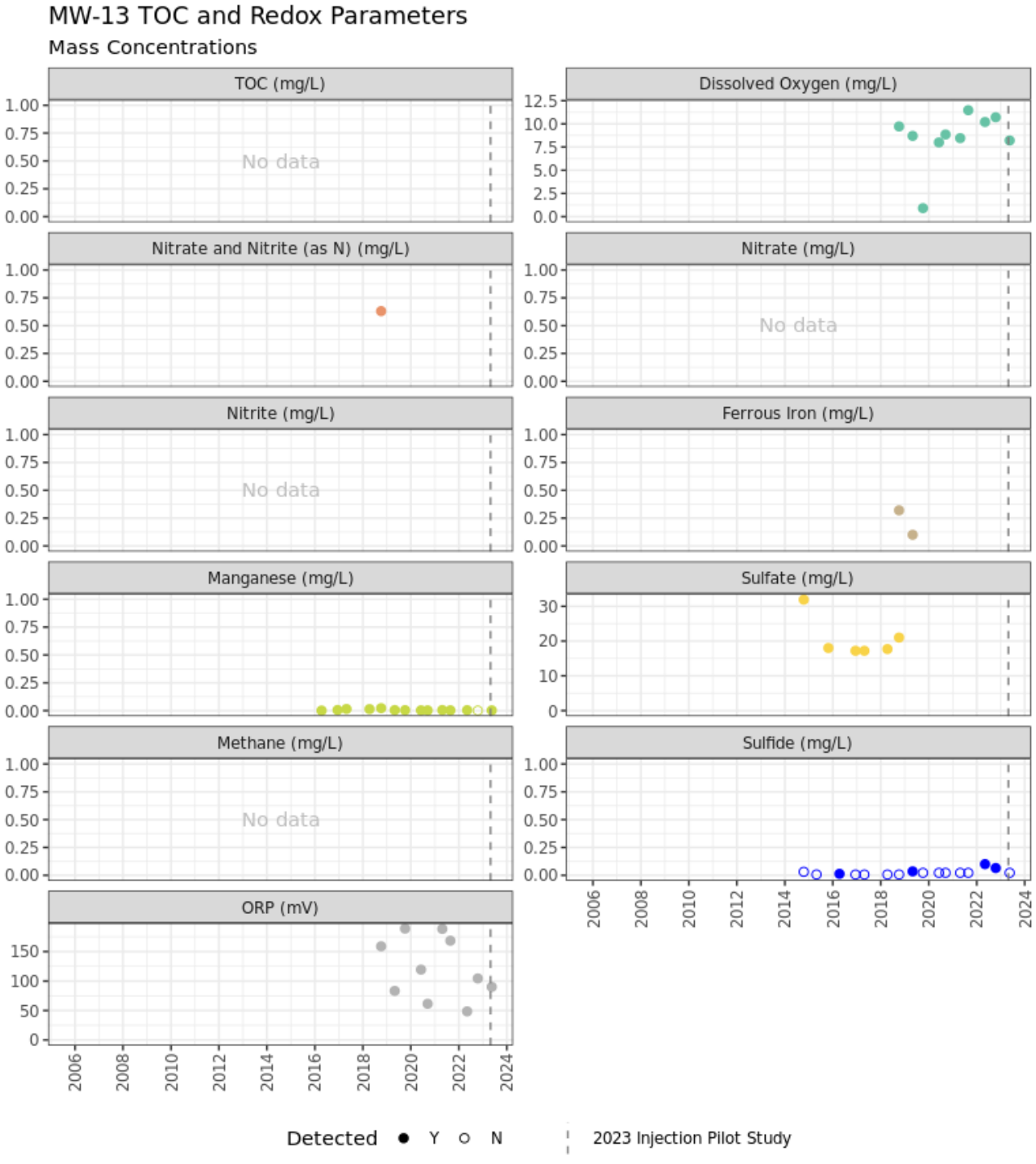


MW-13

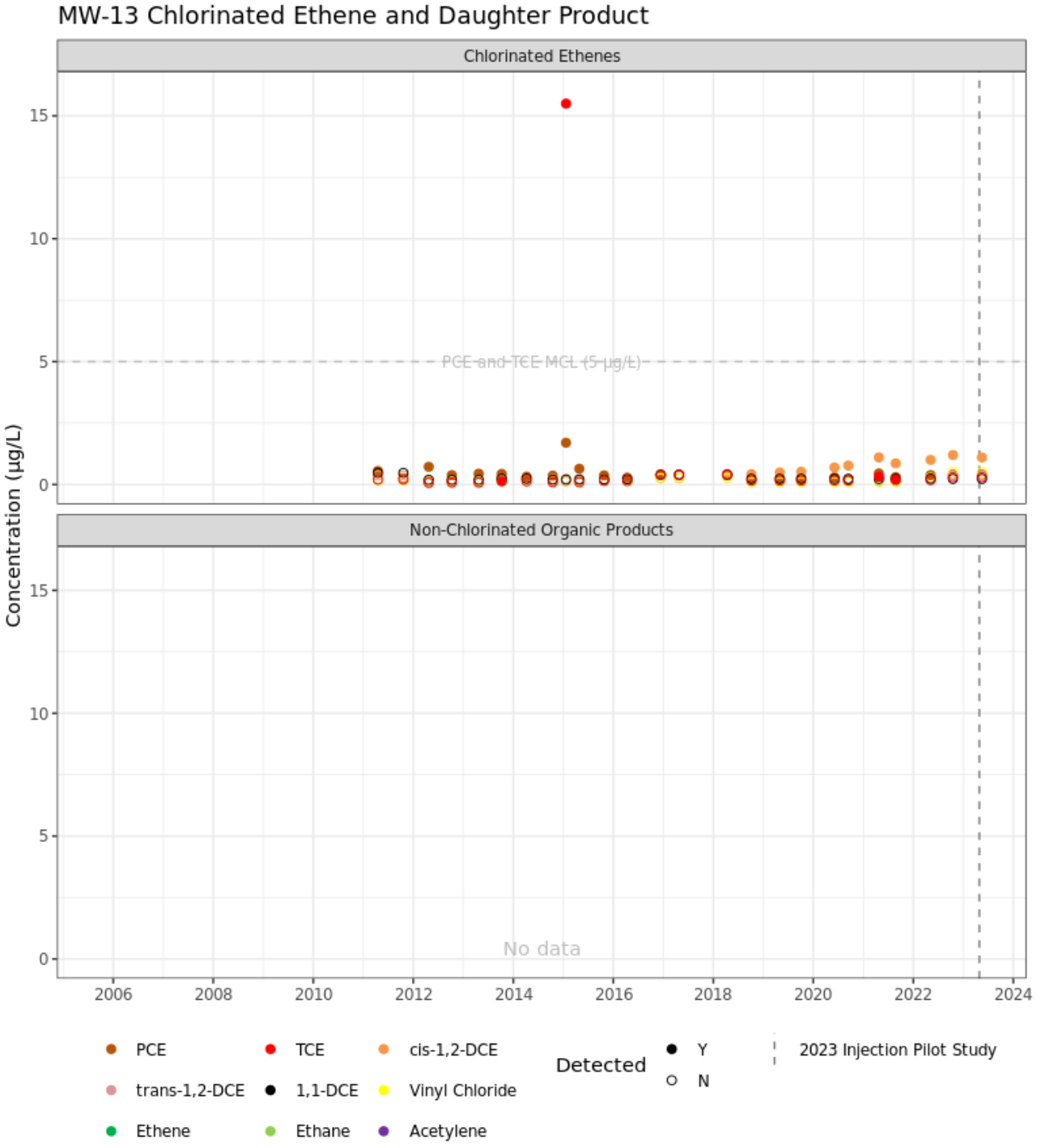
Water Quality



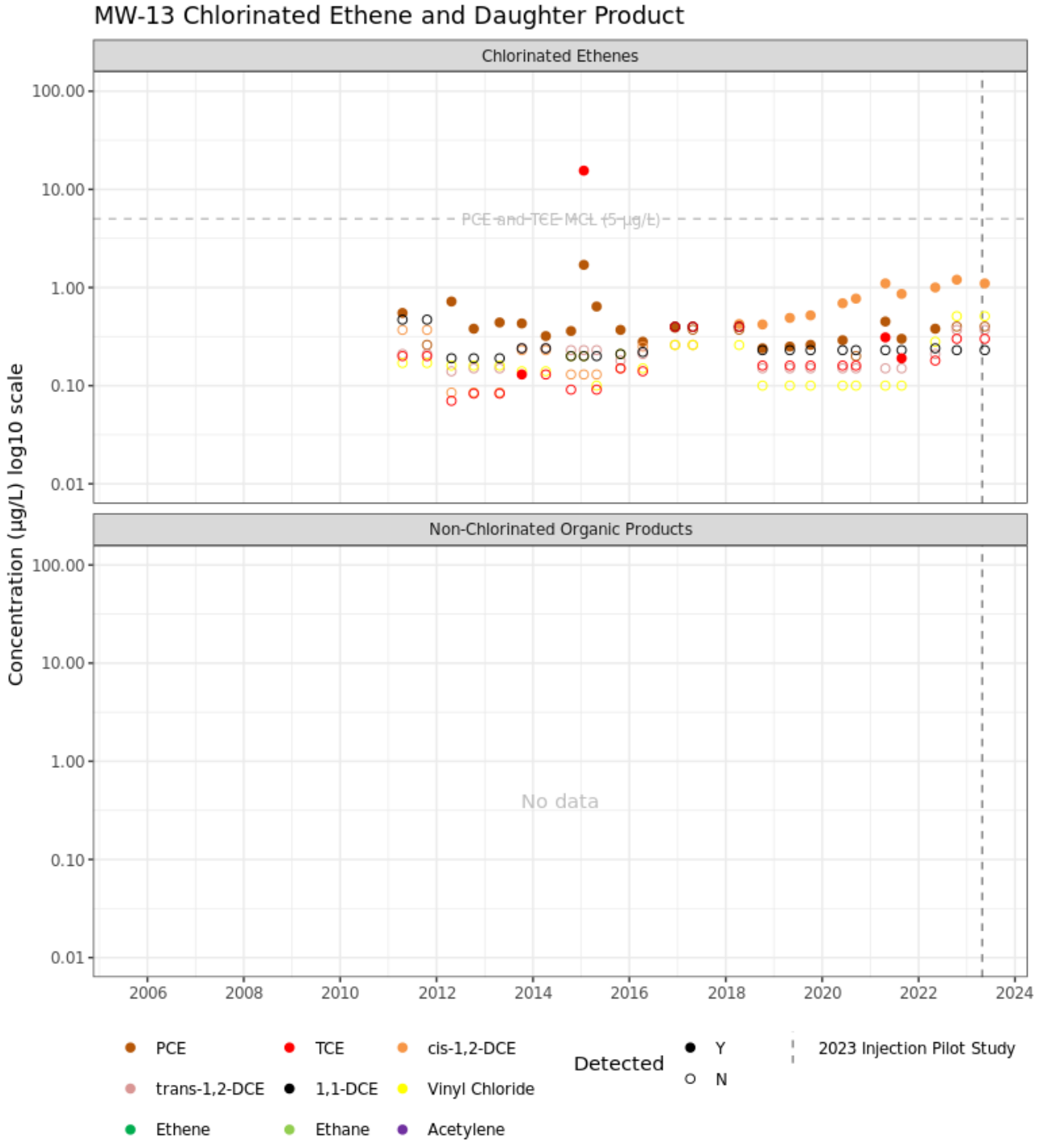
TOC and Redox Parameters



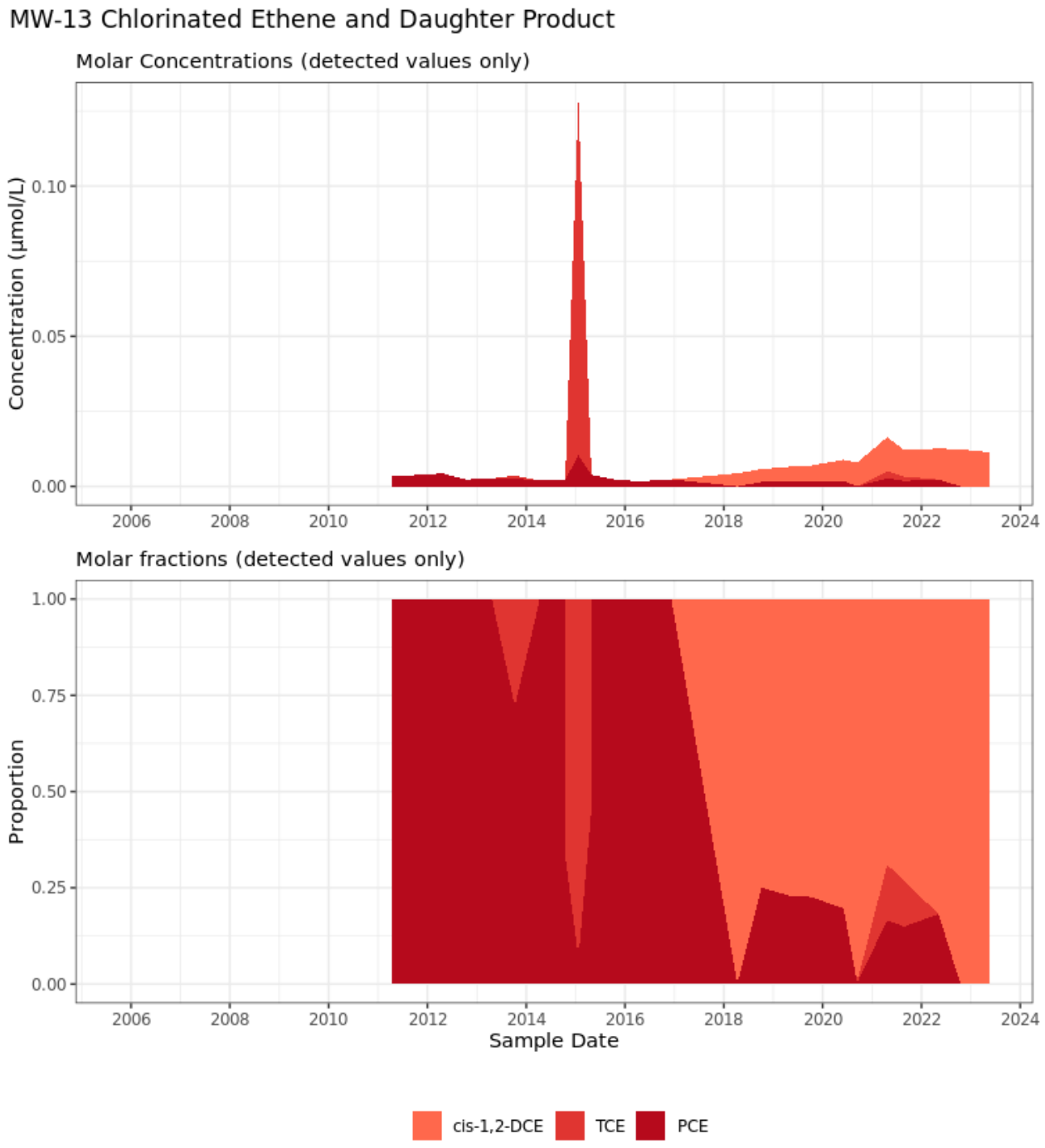
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)



Chlorinated Ethene and Daughter Product Concentration



Chlorinated Ethenes and Geochemistry Time Series Plots -

Data filters

This report is filtered to only include:

- **MW-3A, MW-4, MW-4A, MW-5AR, and MW-6A** from **Cell 4 Monitoring Well**
- Results from **01 January 2002** to **30 May 2023**

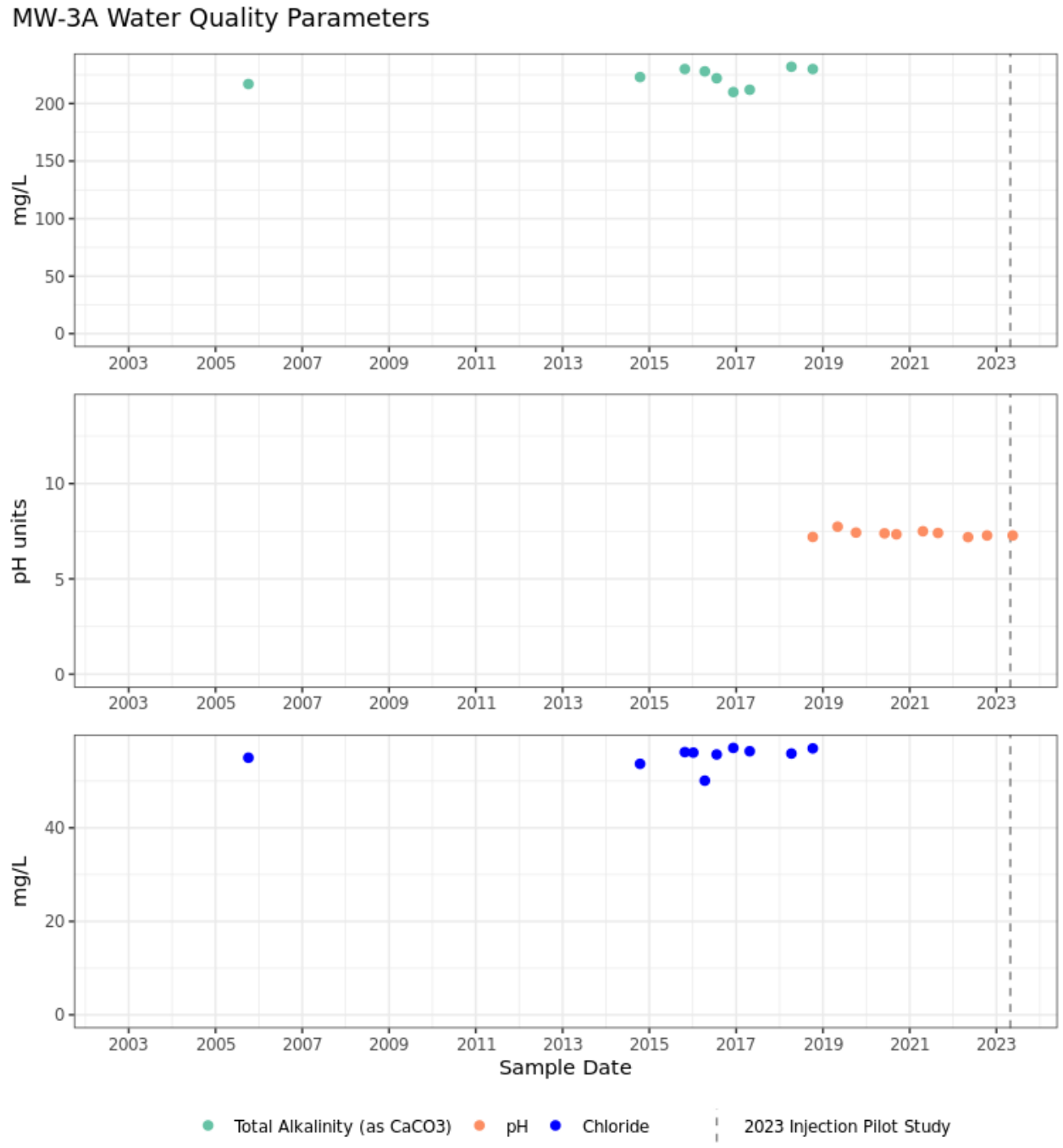
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- The molar concentration graphs only plot detected data
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

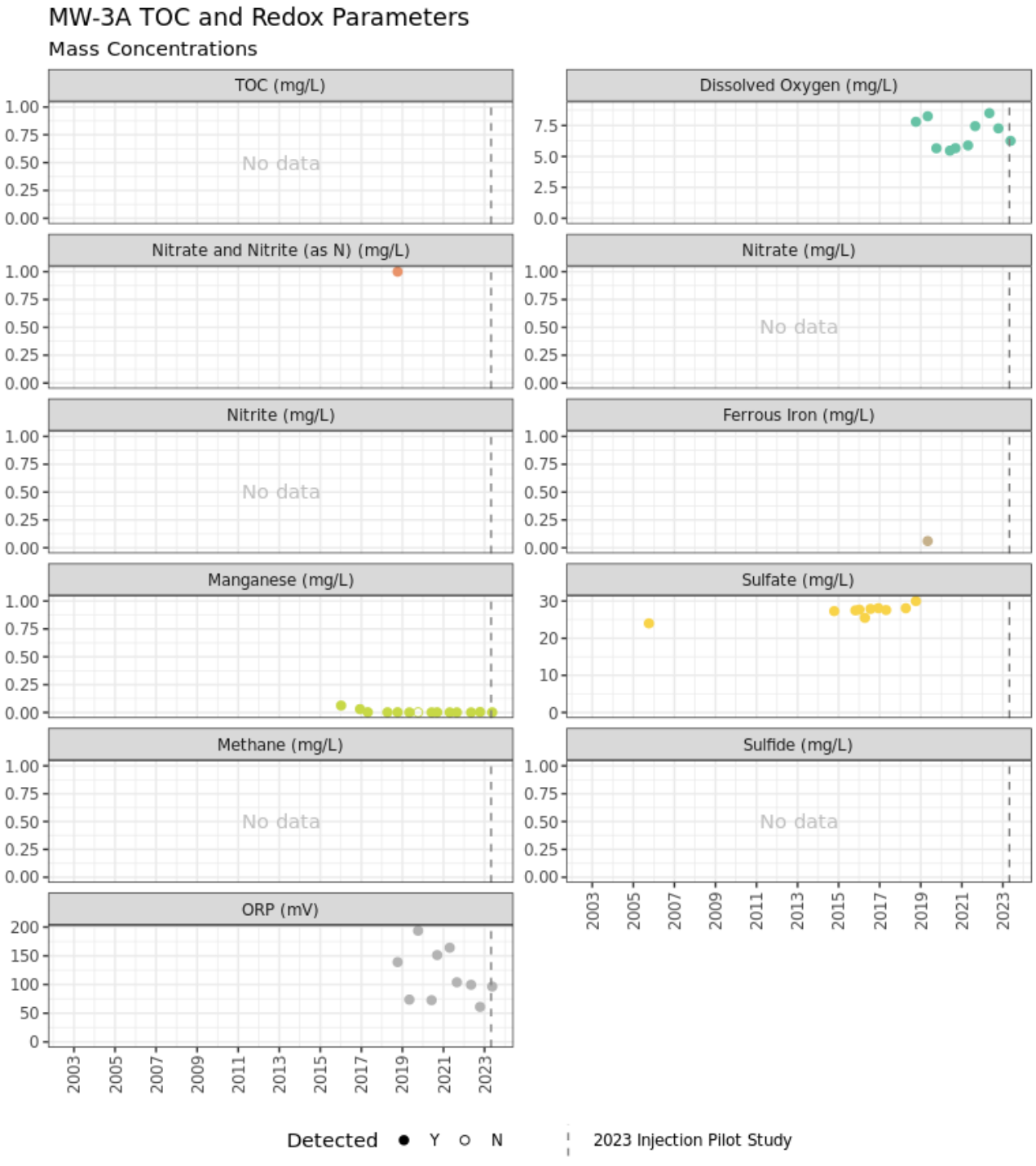
Well summaries

MW-3A

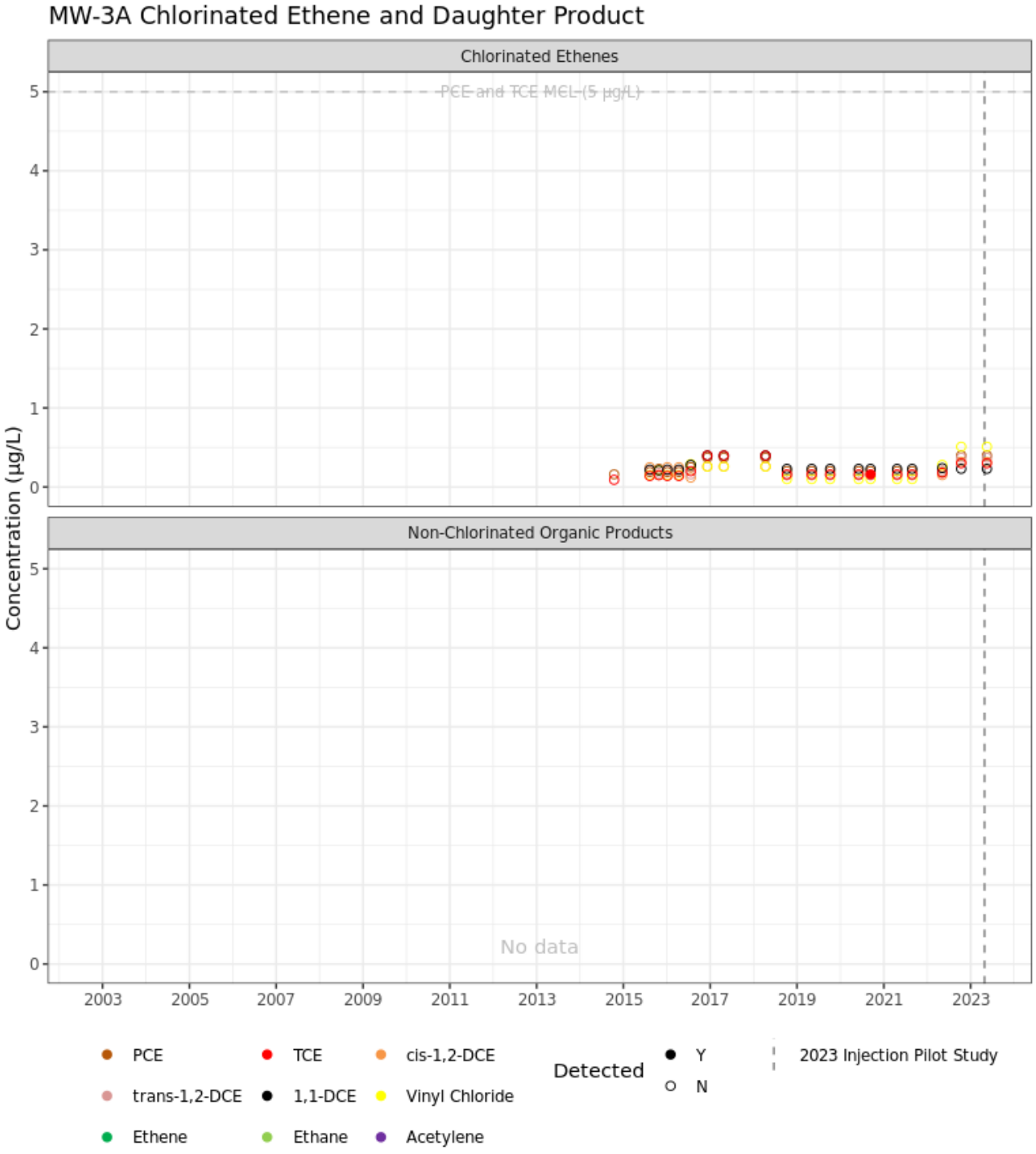
Water Quality



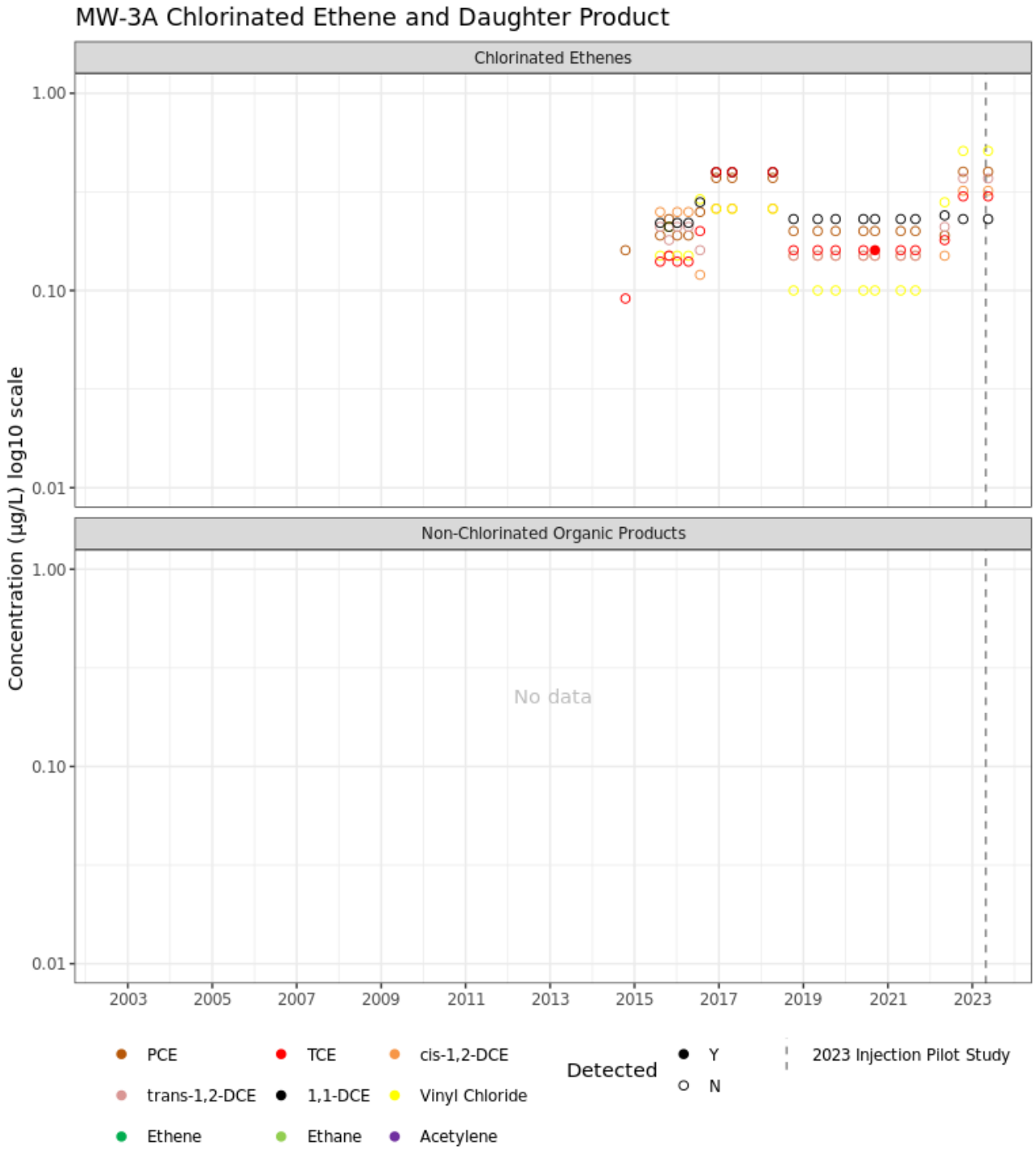
TOC and Redox Parameters



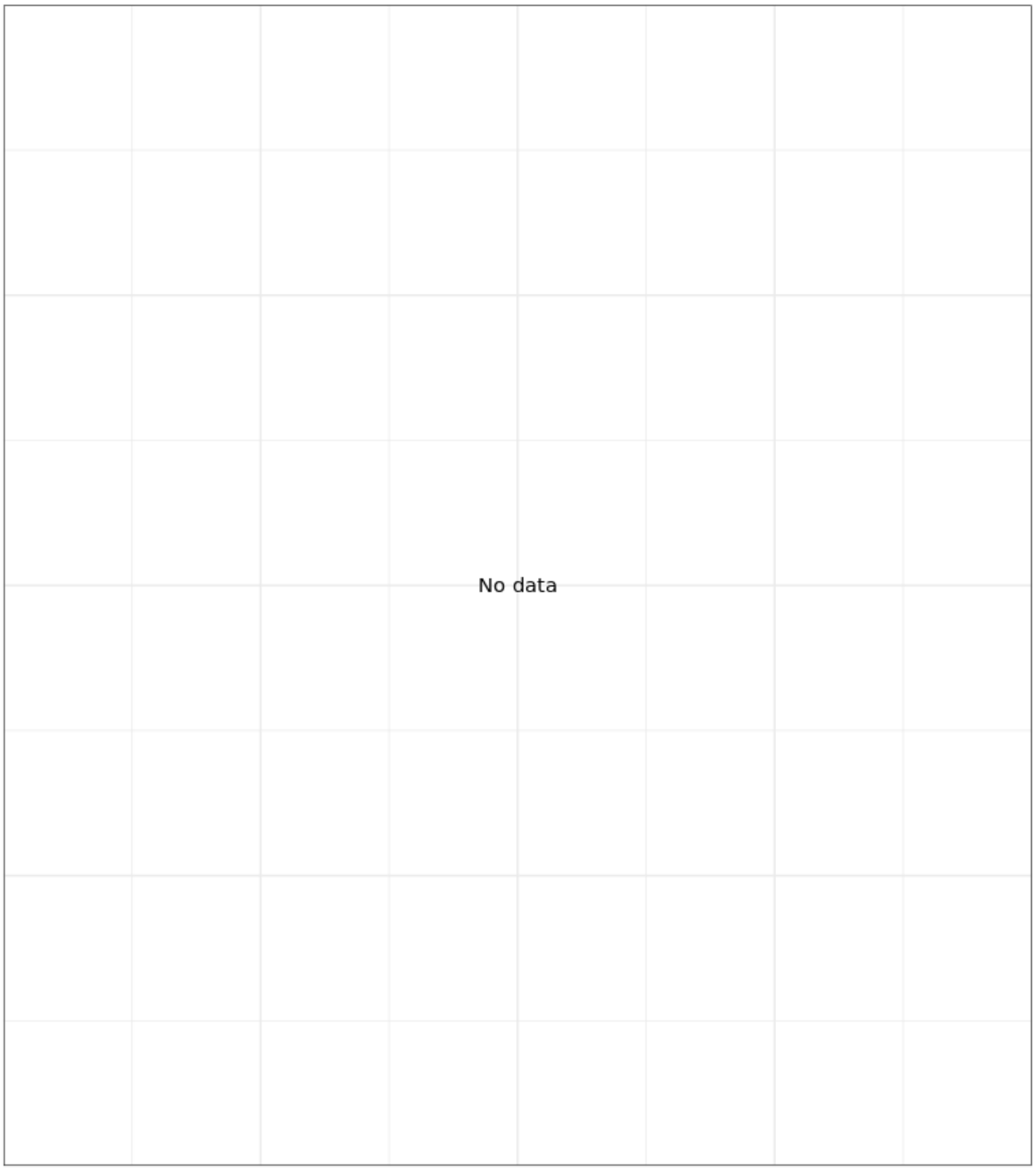
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

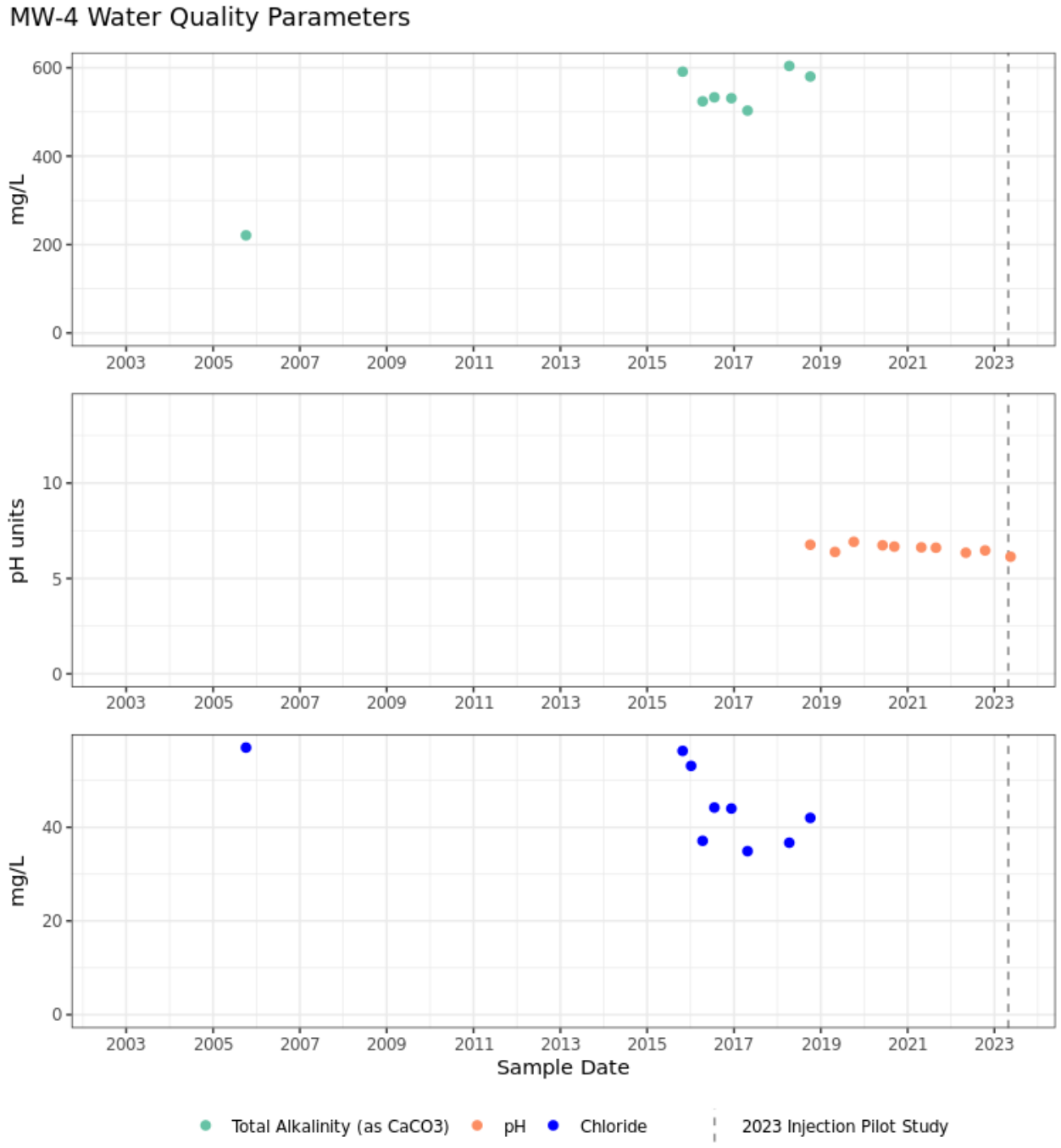


Chlorinated Ethene and Daughter Product Concentration

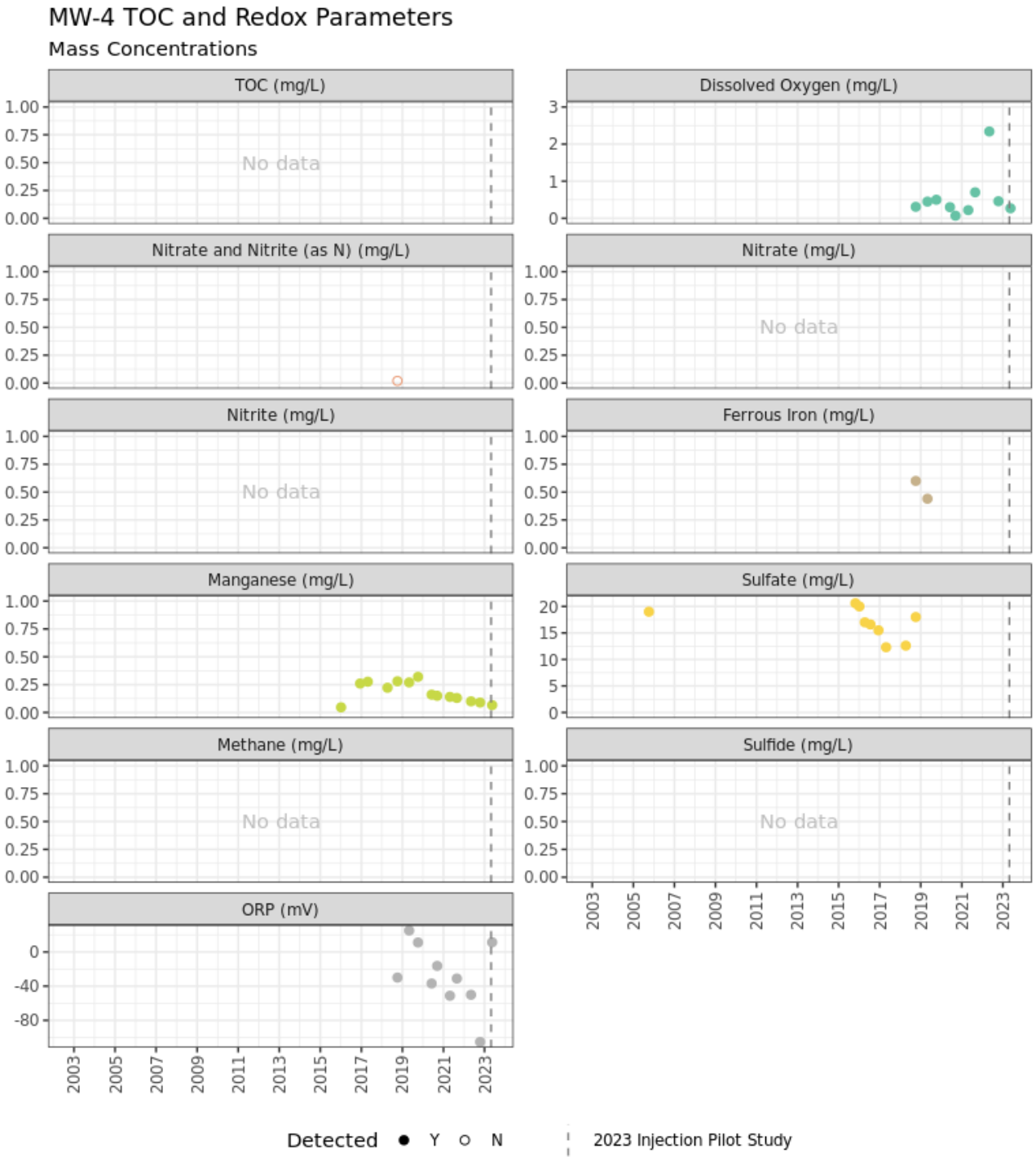


MW-4

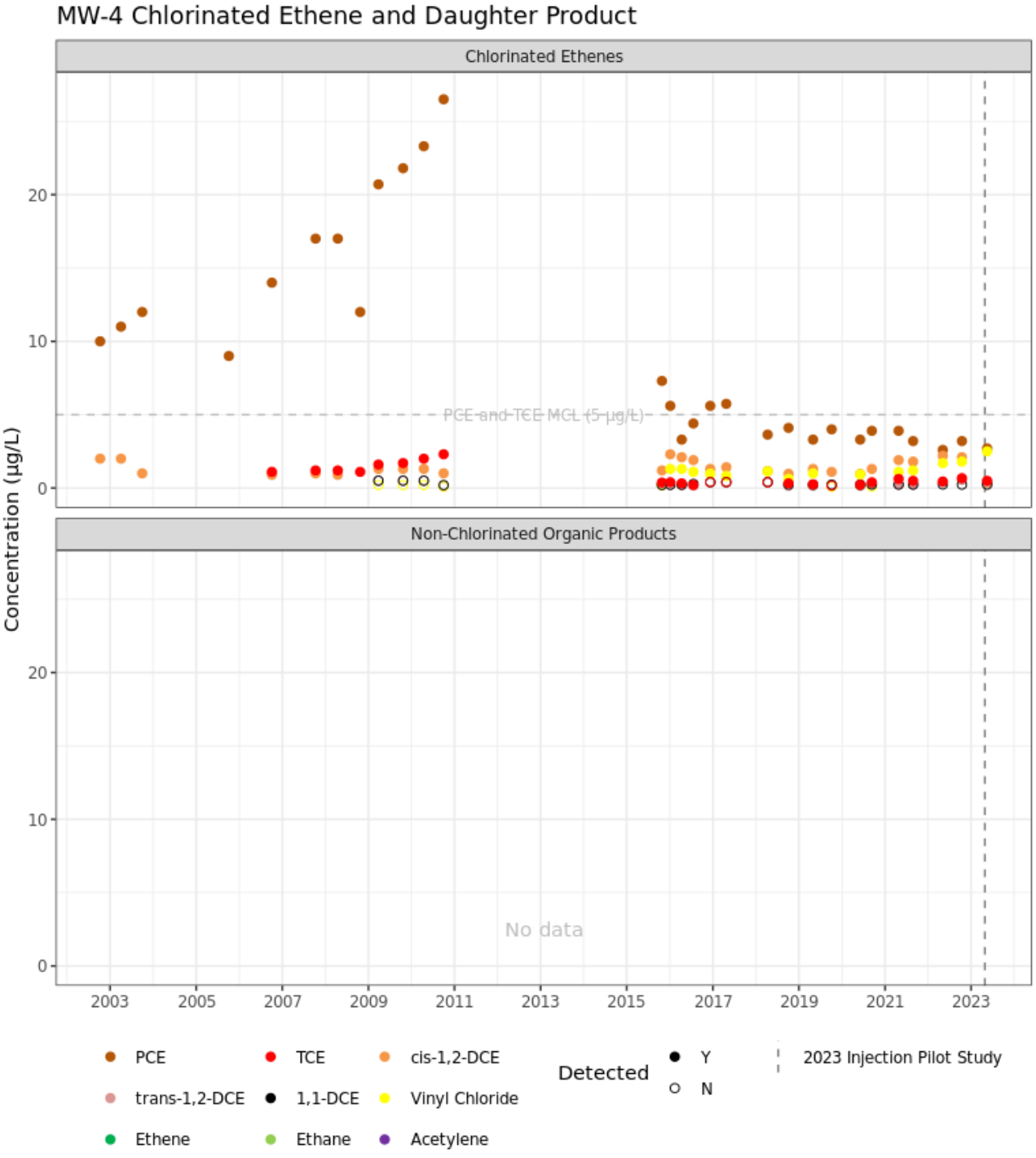
Water Quality



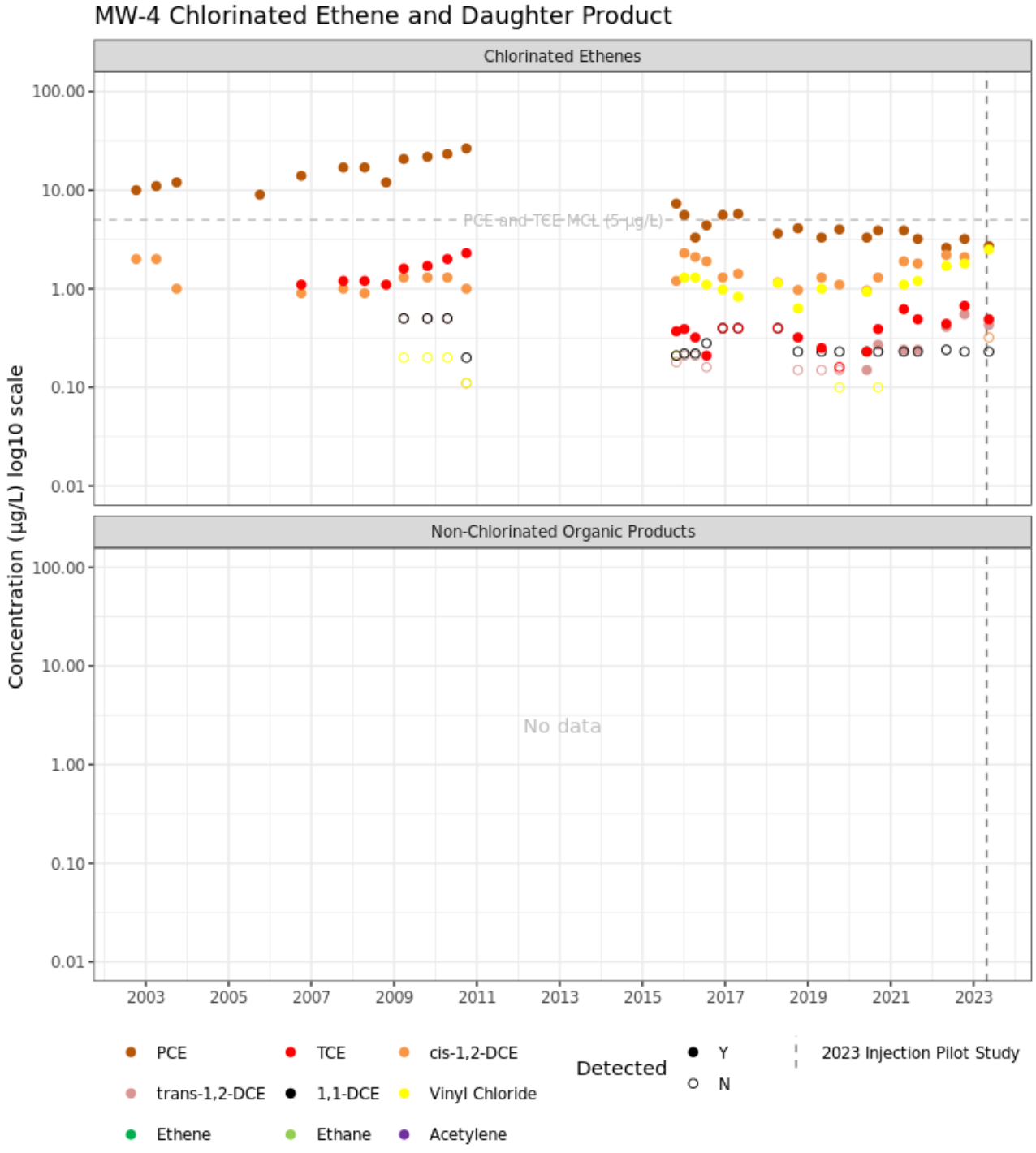
TOC and Redox Parameters



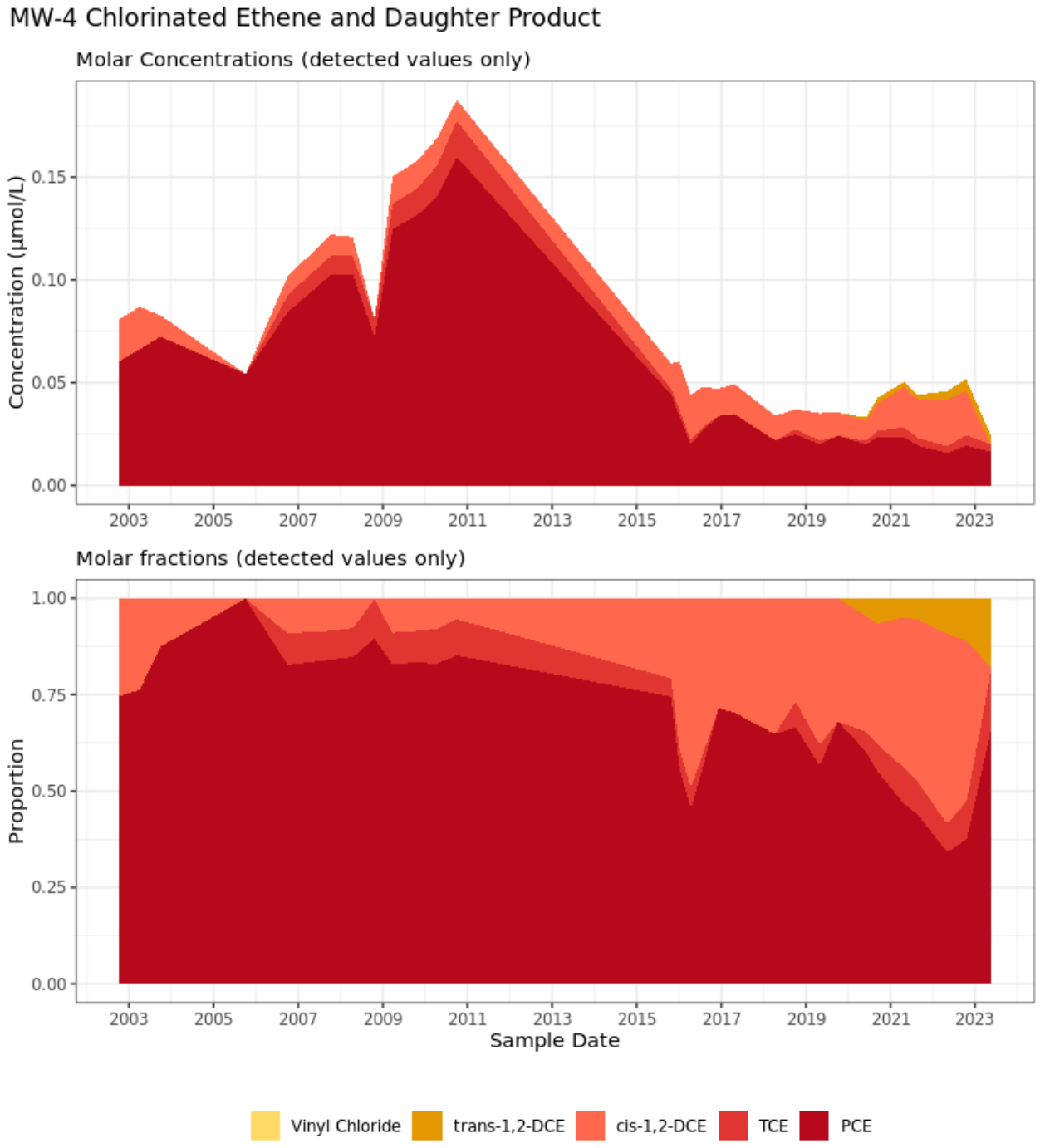
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

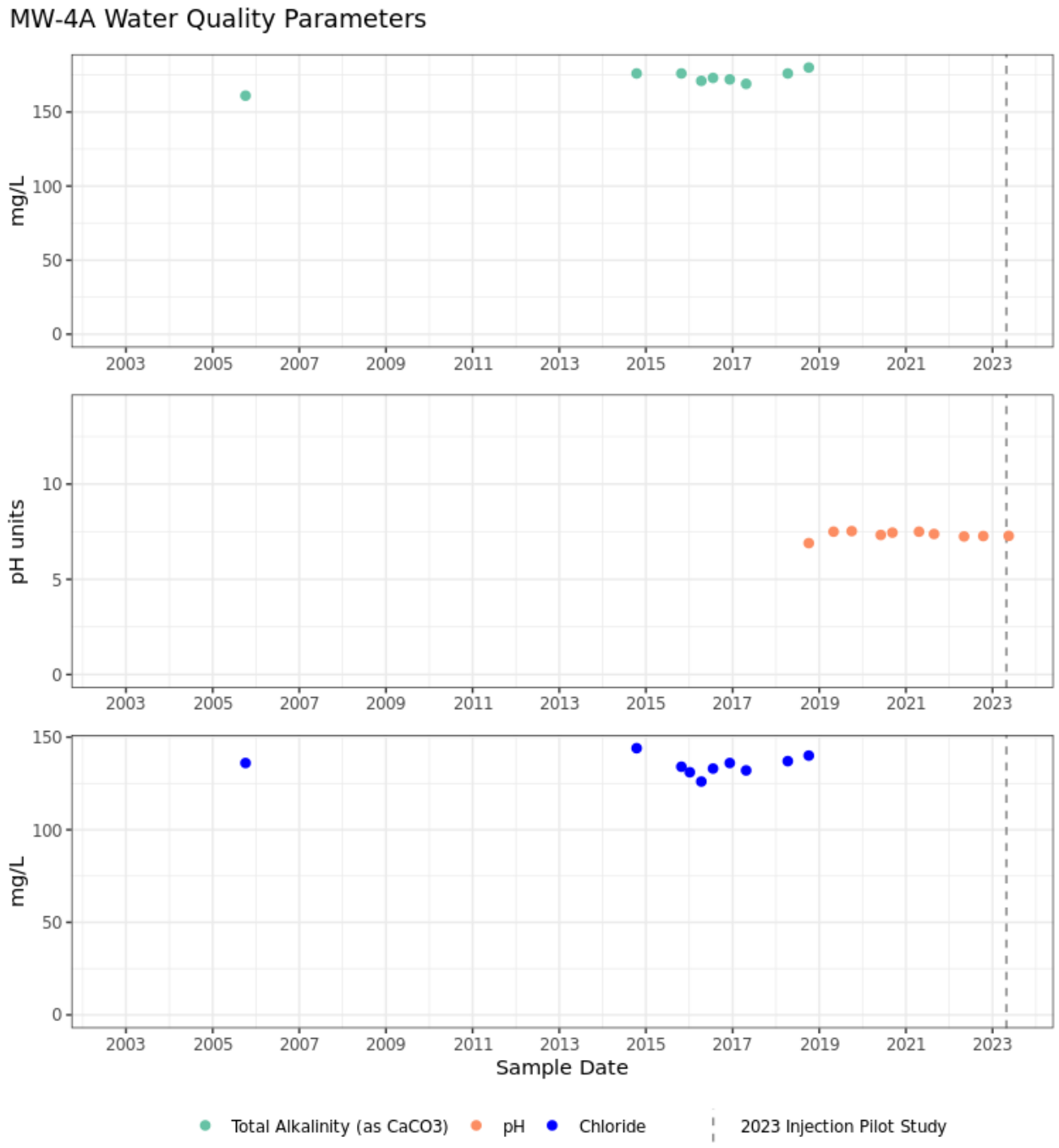


Chlorinated Ethene and Daughter Product Concentration

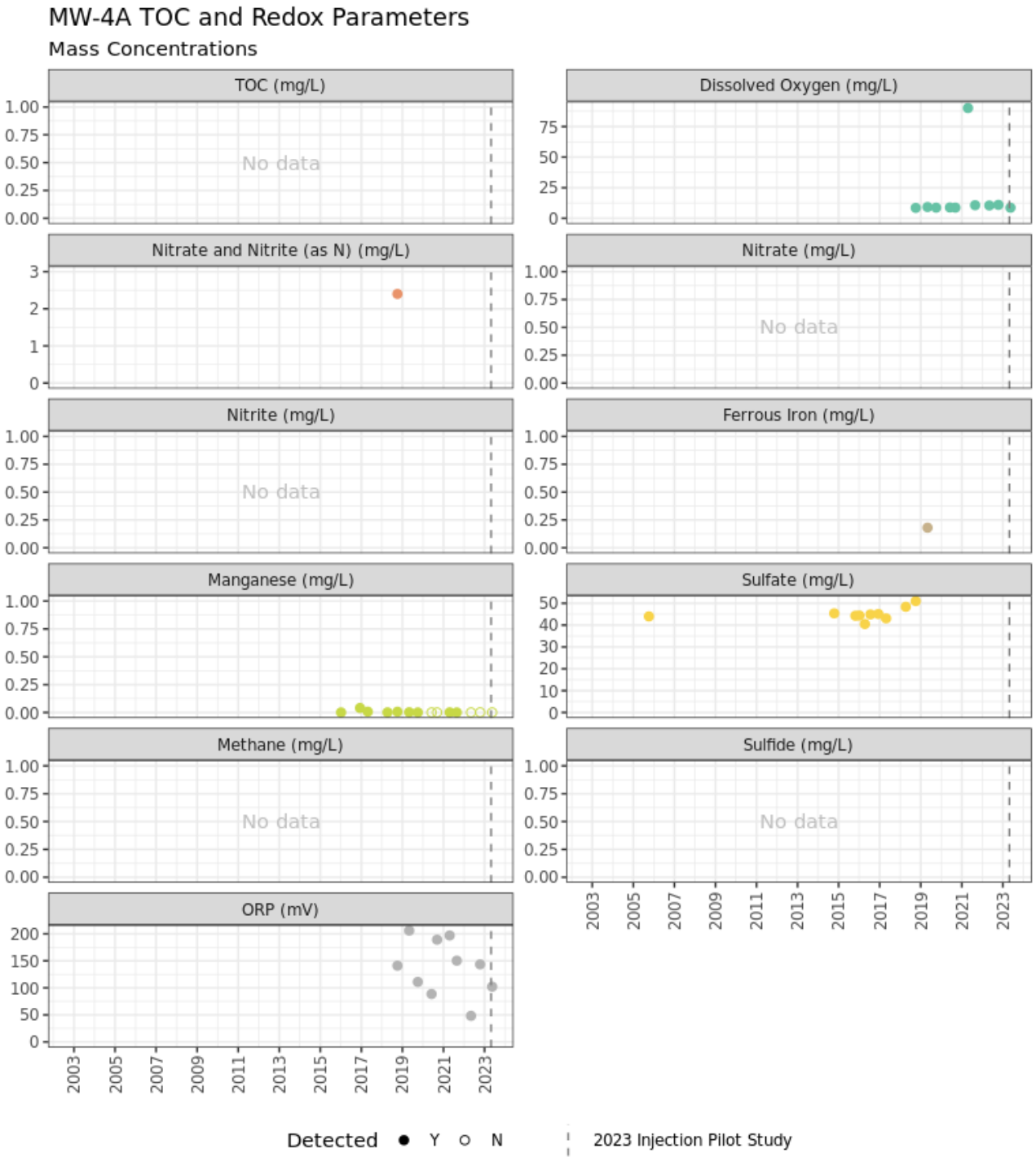


MW-4A

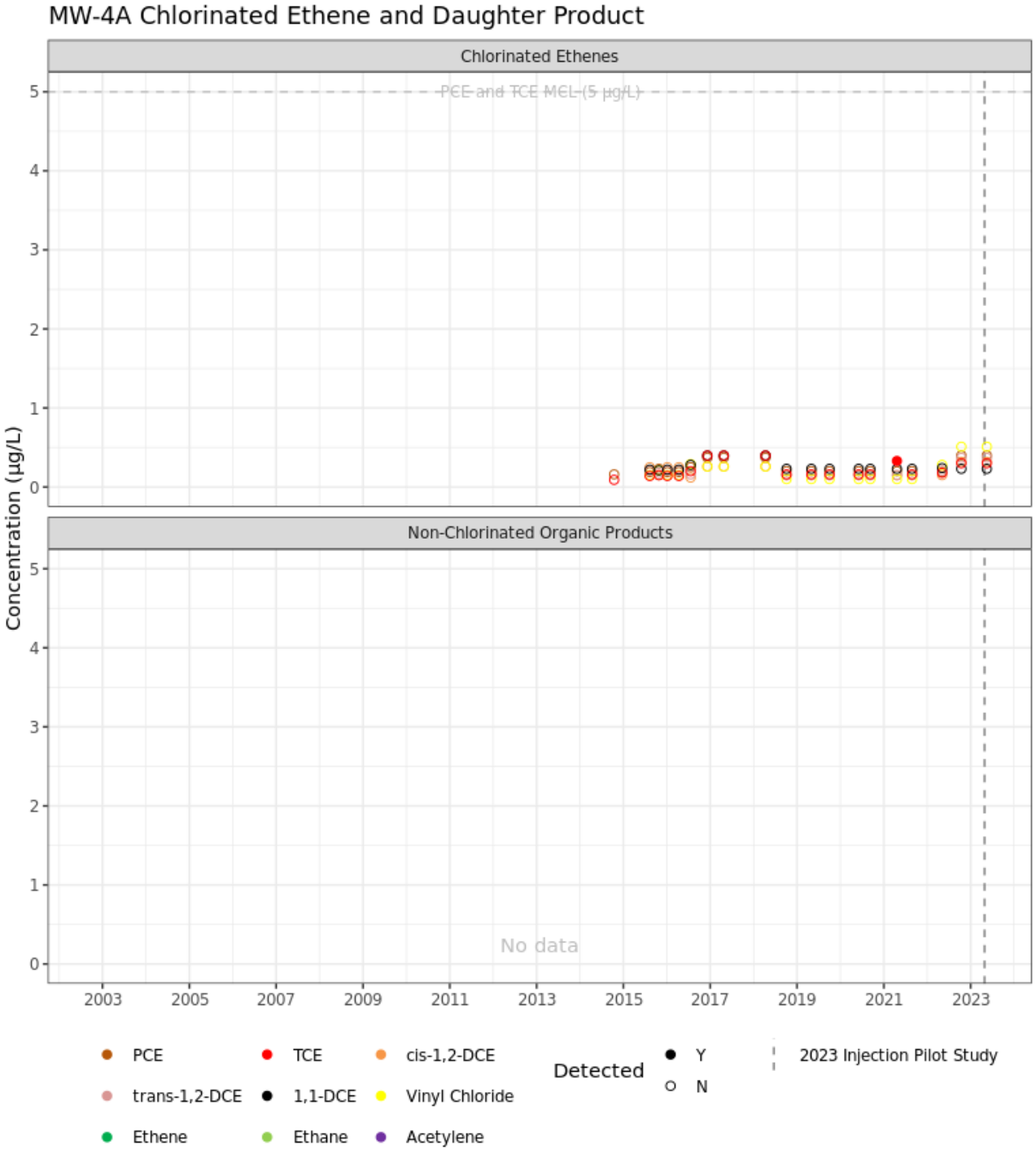
Water Quality



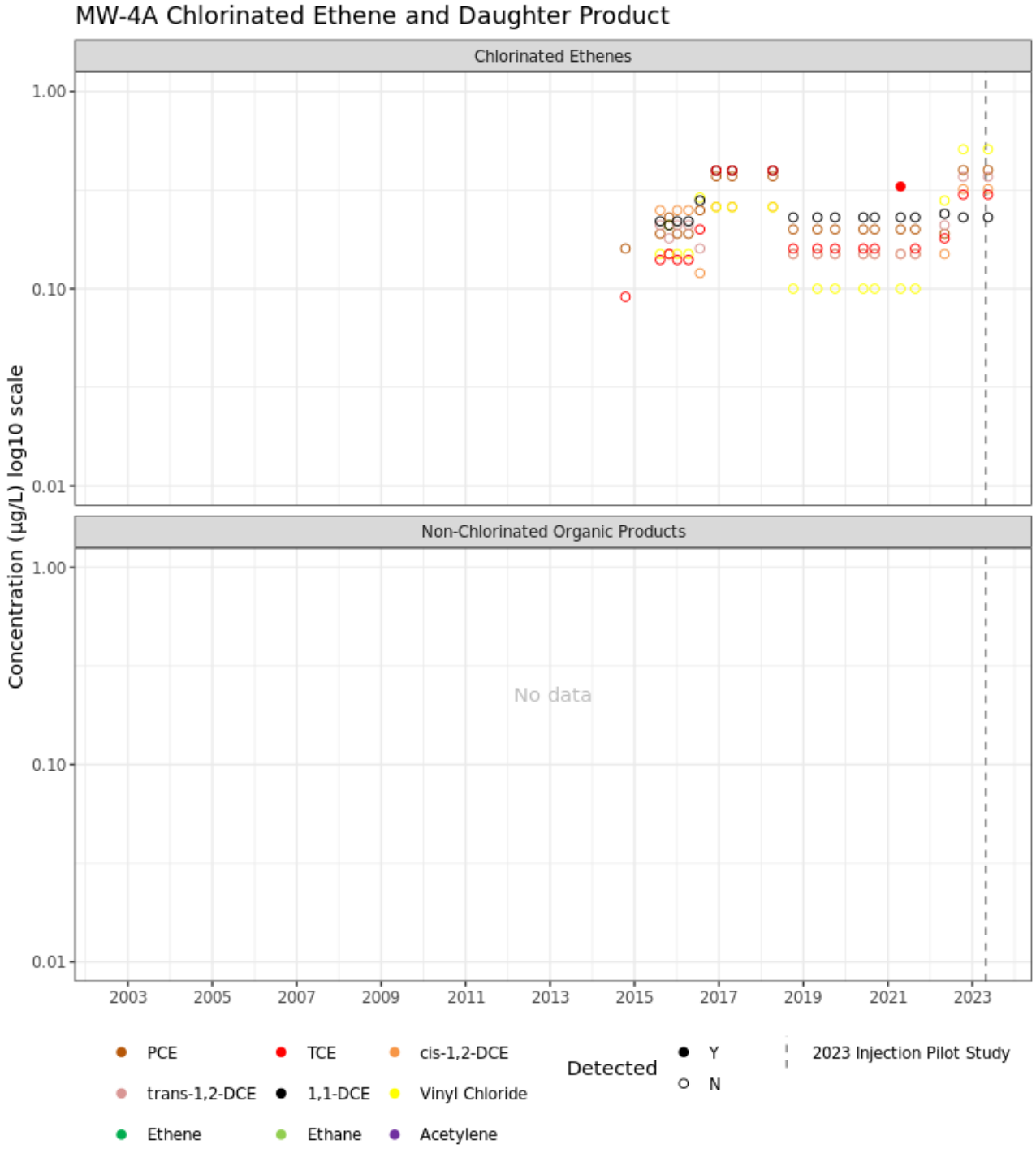
TOC and Redox Parameters



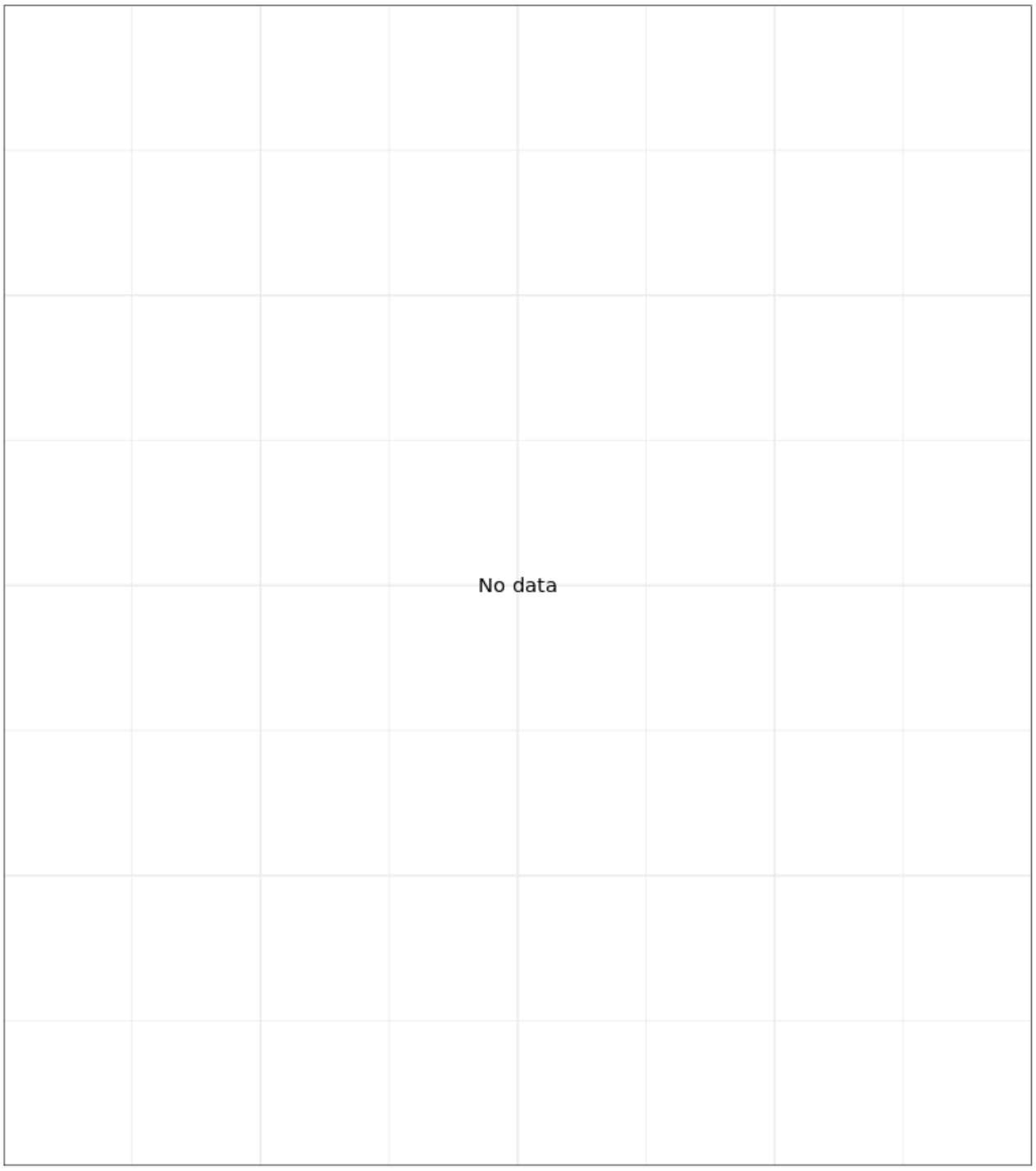
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

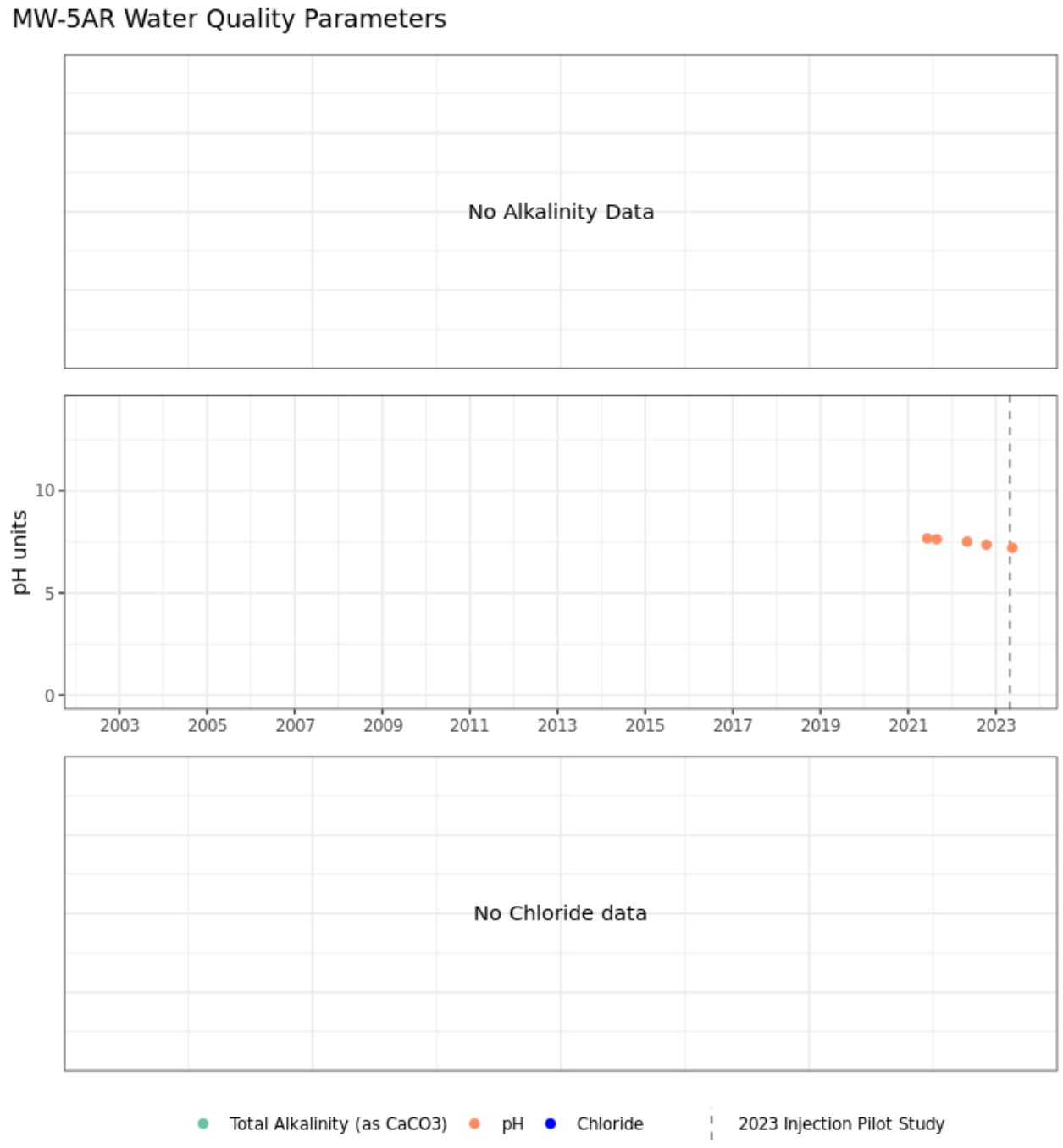


Chlorinated Ethene and Daughter Product Concentration

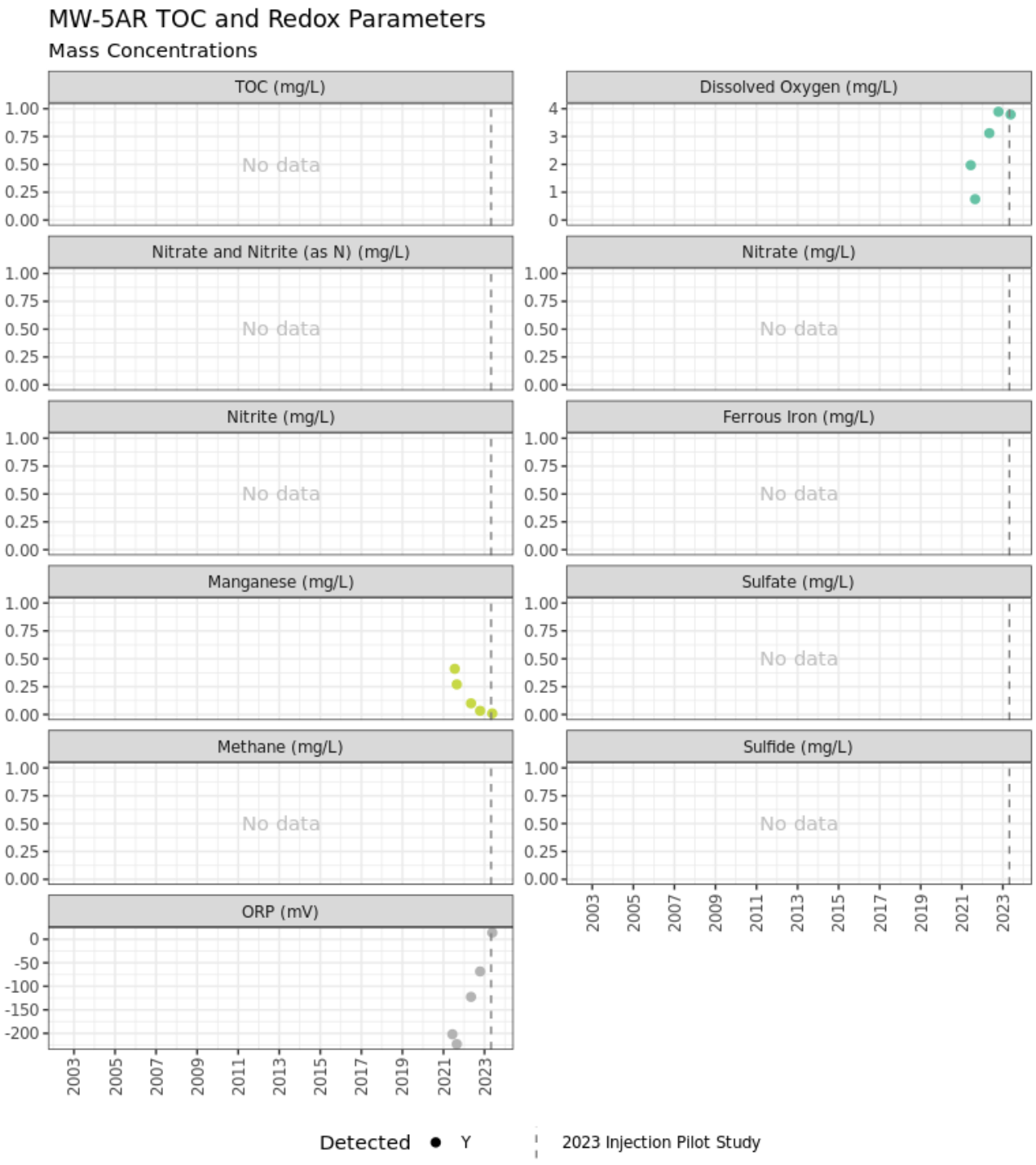


MW-5AR

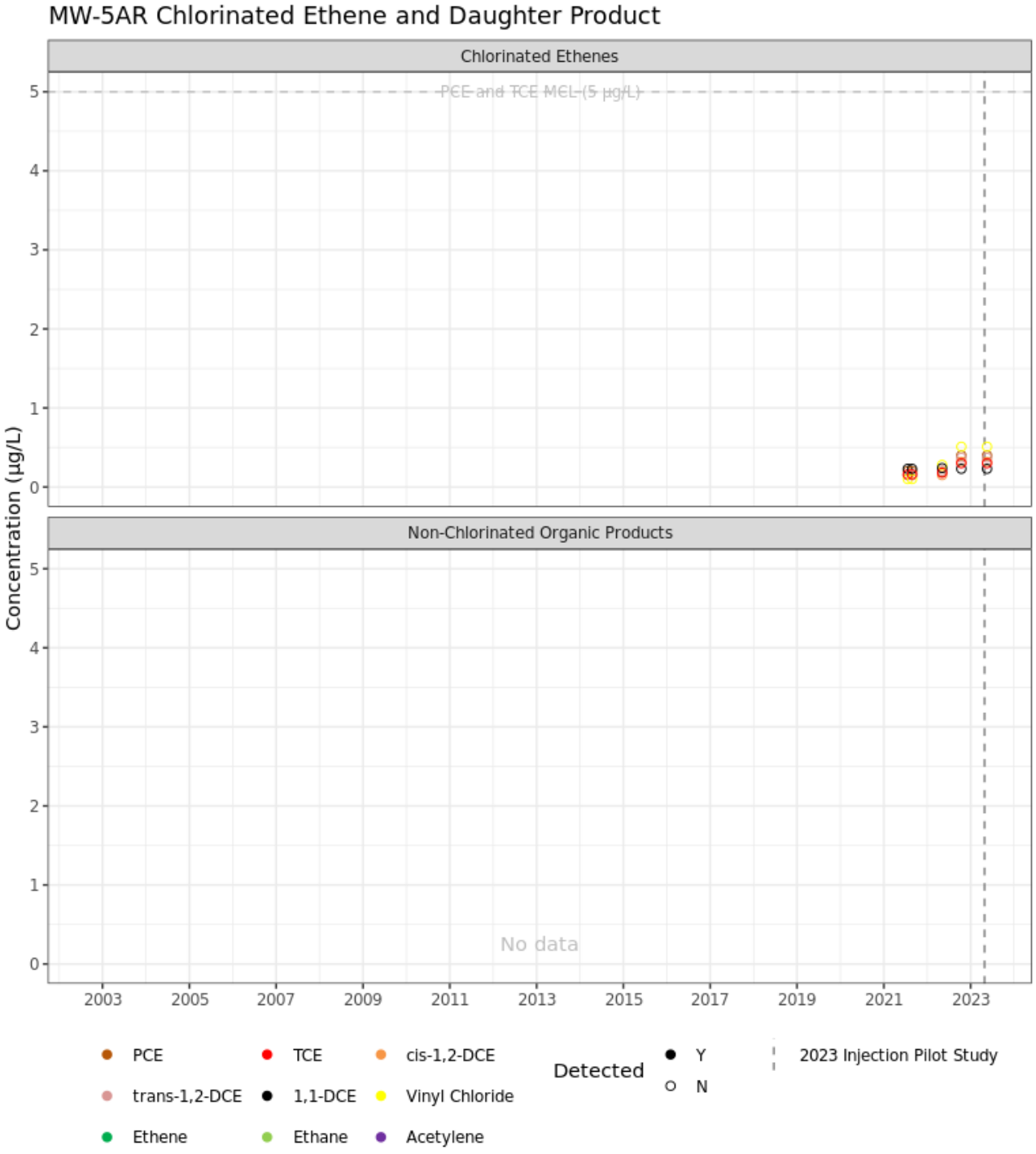
Water Quality



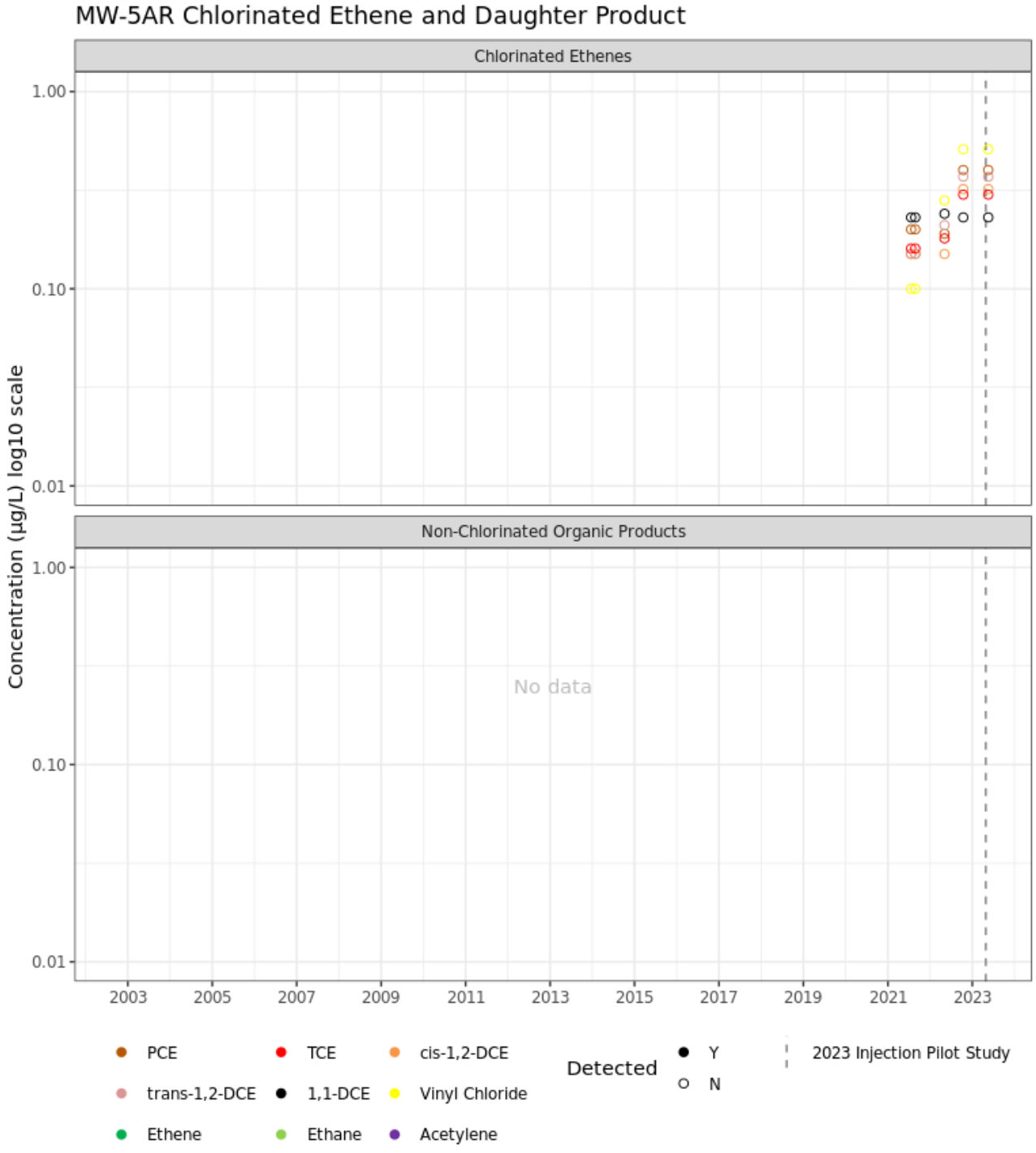
TOC and Redox Parameters



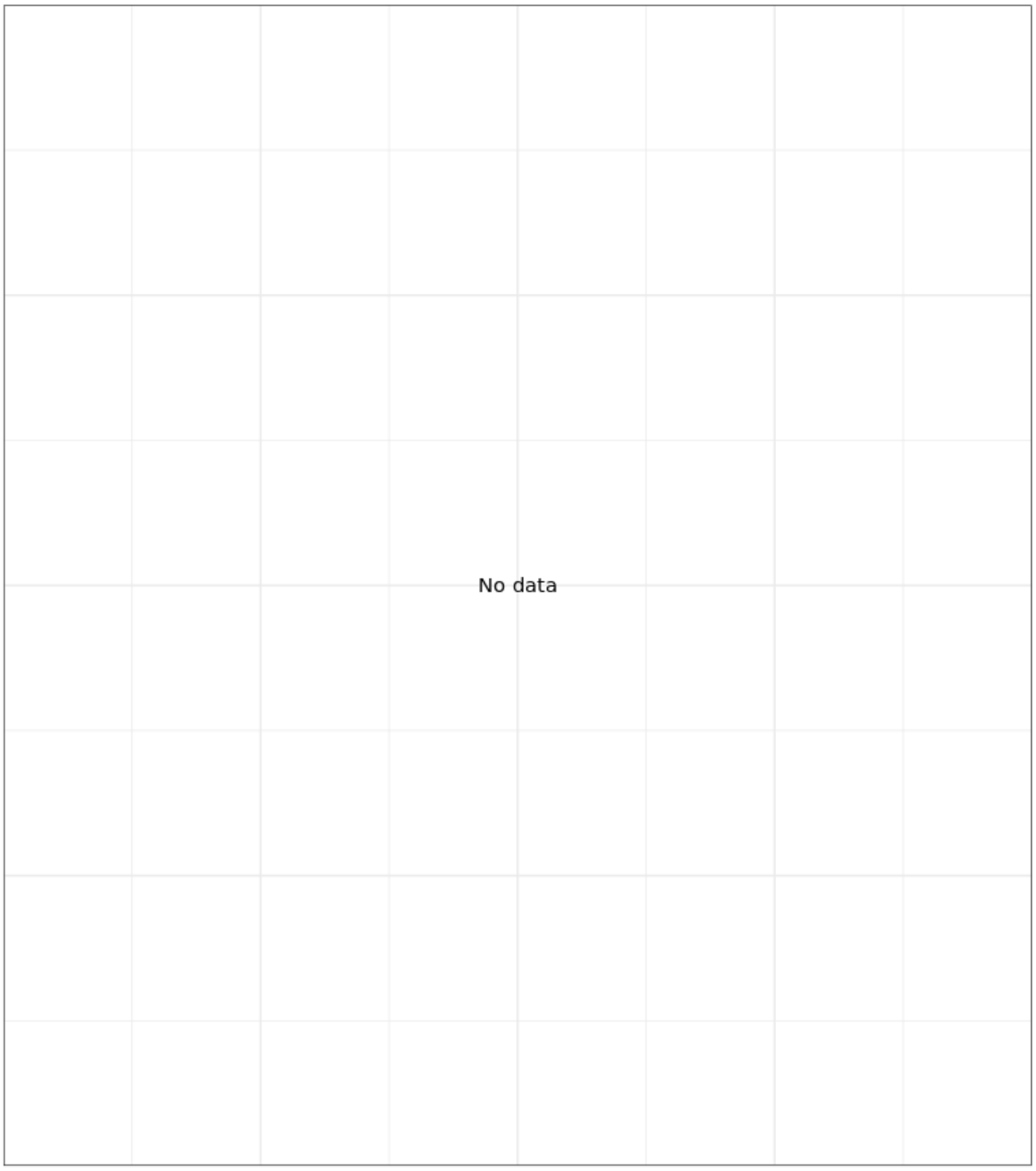
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

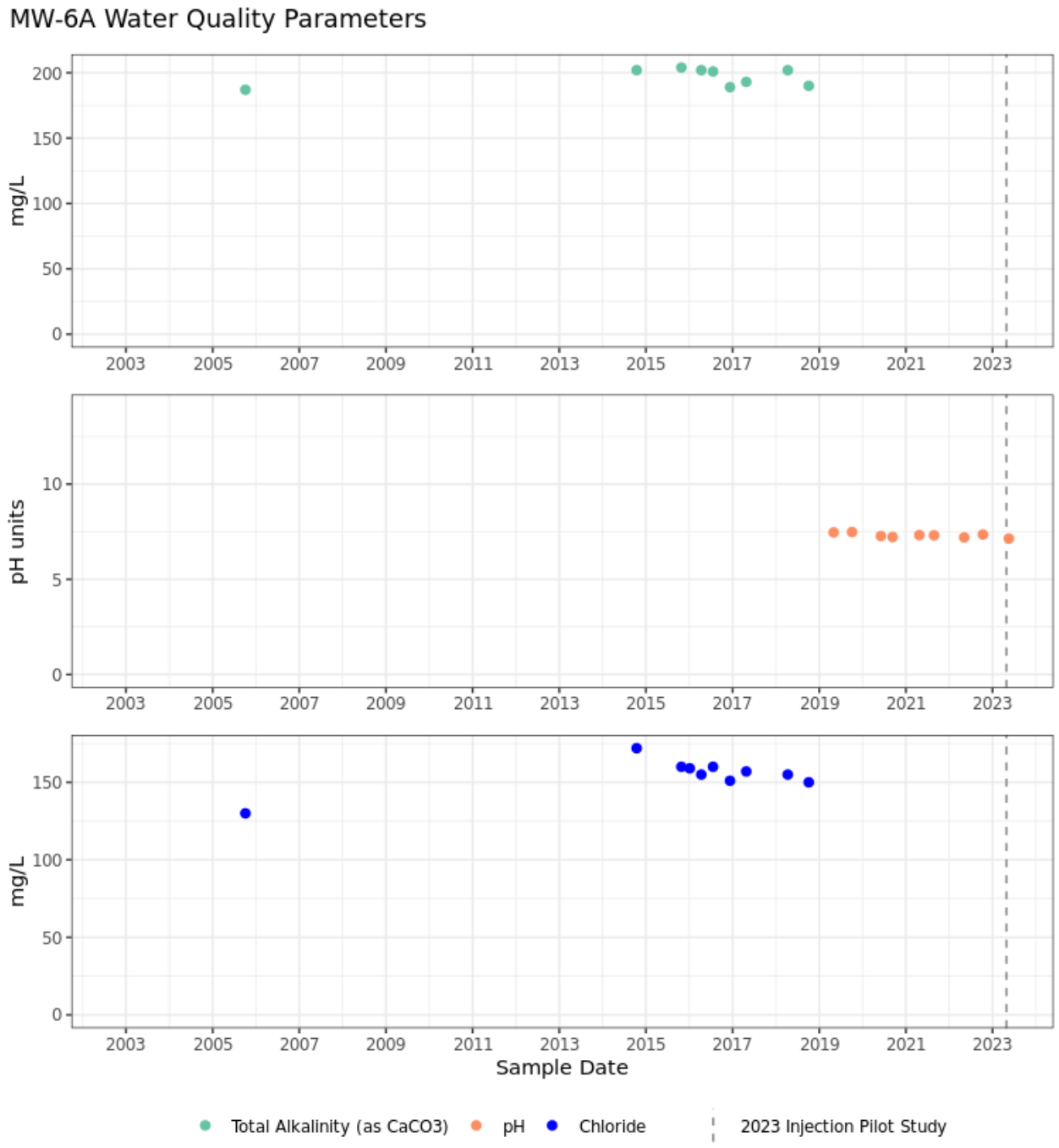


Chlorinated Ethene and Daughter Product Concentration

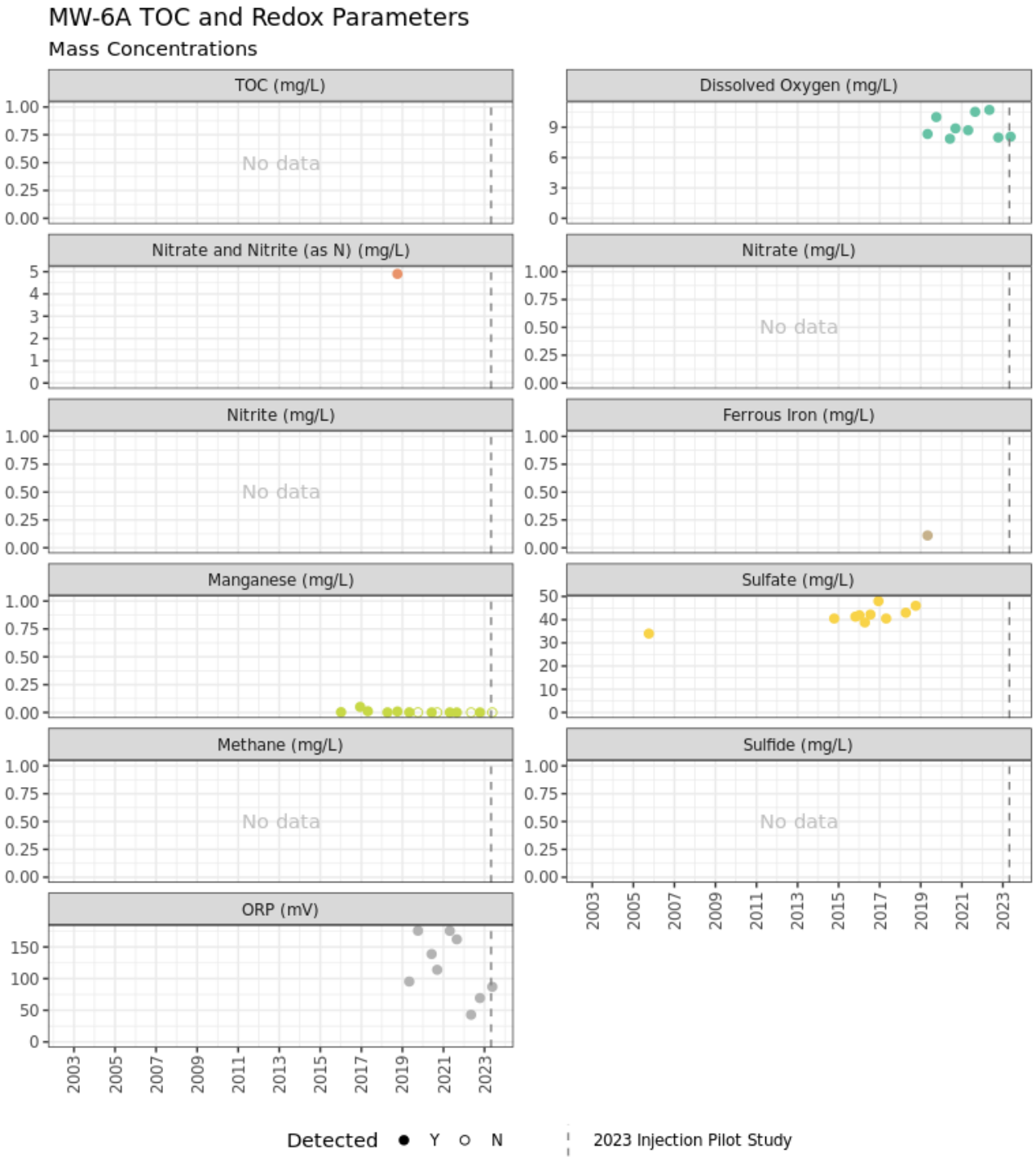


MW-6A

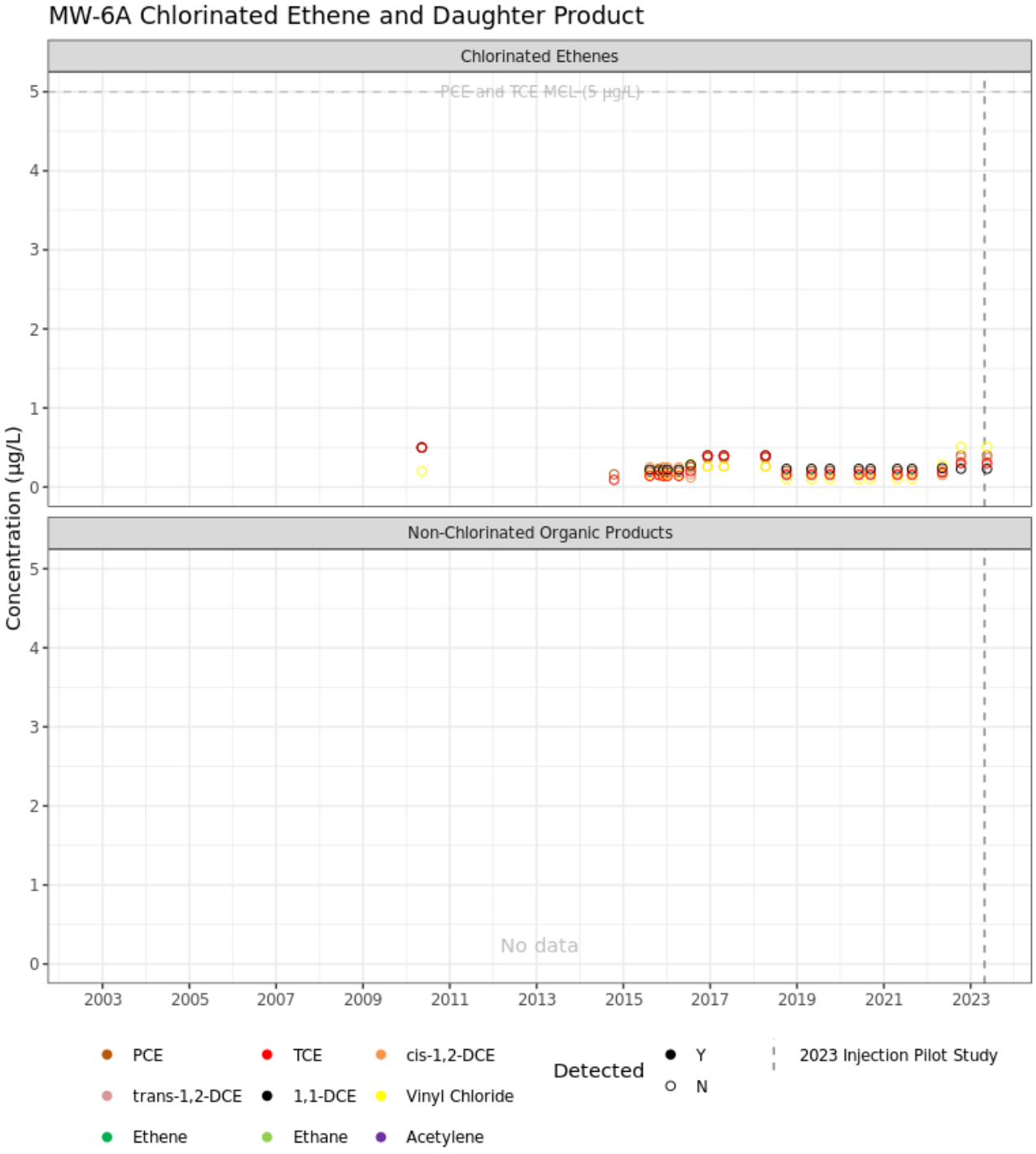
Water Quality



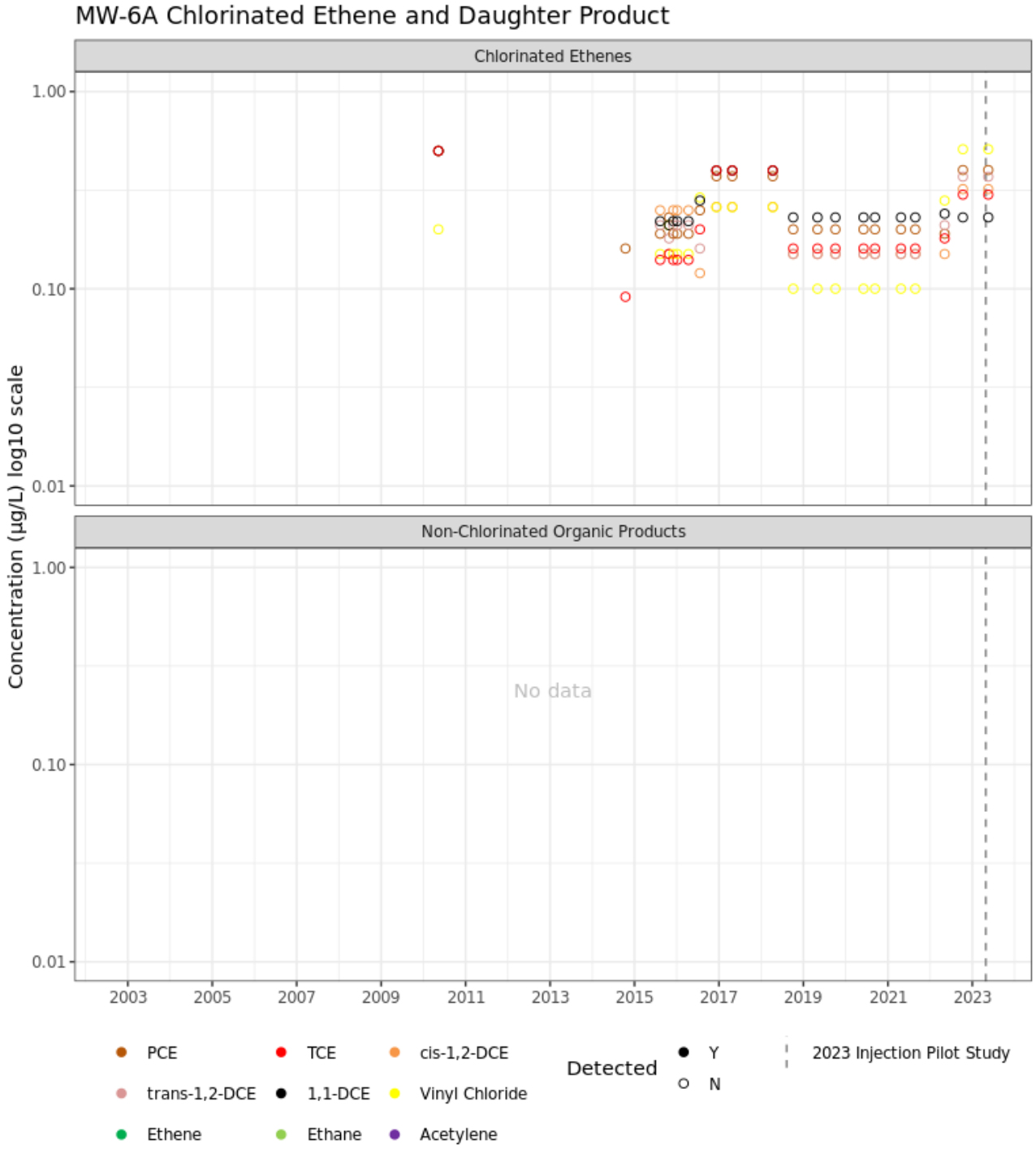
TOC and Redox Parameters



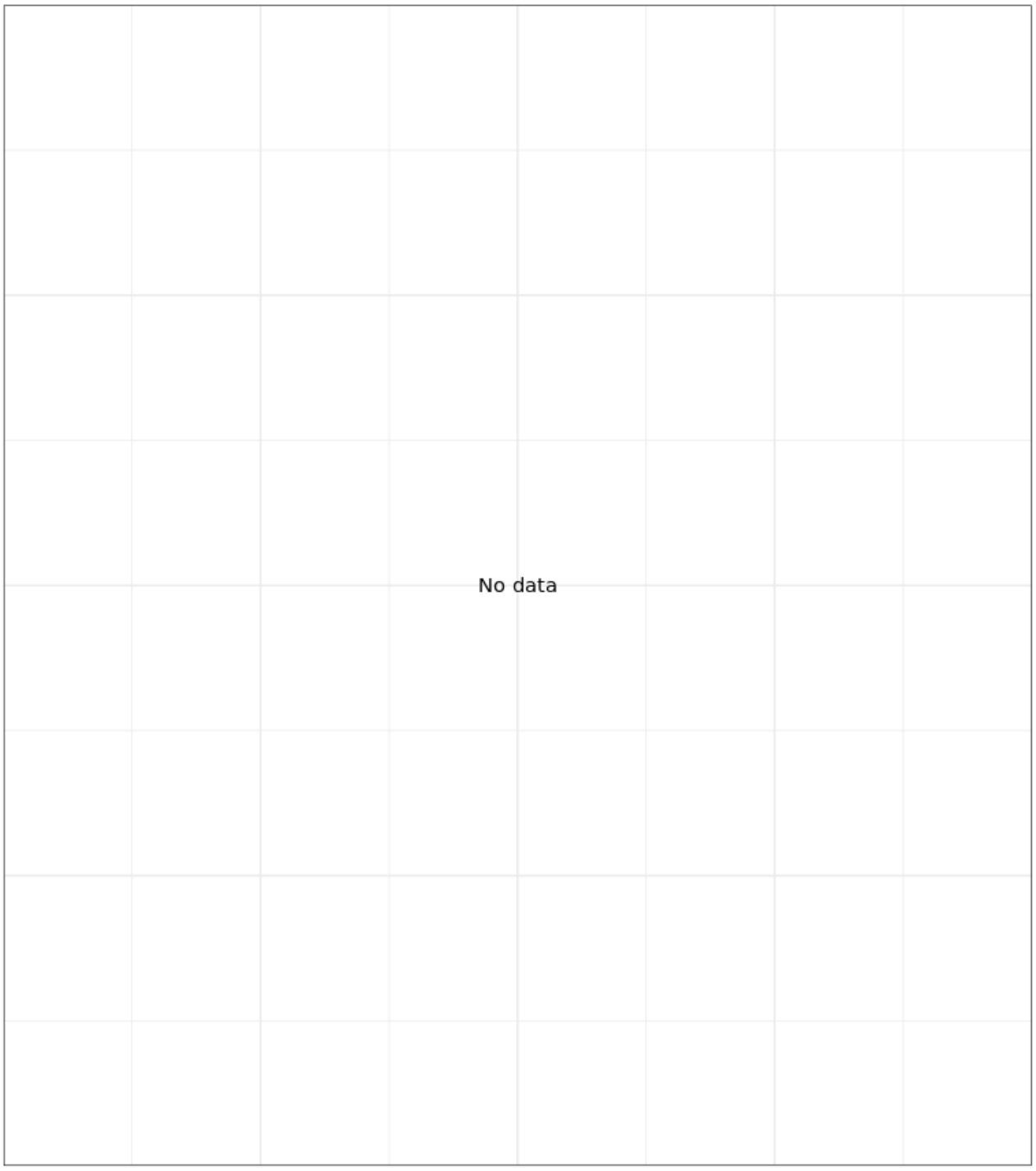
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)



Chlorinated Ethene and Daughter Product Concentration



Inorganic Chemicals Time Series Plots

Data filters

This report is filtered to only include:

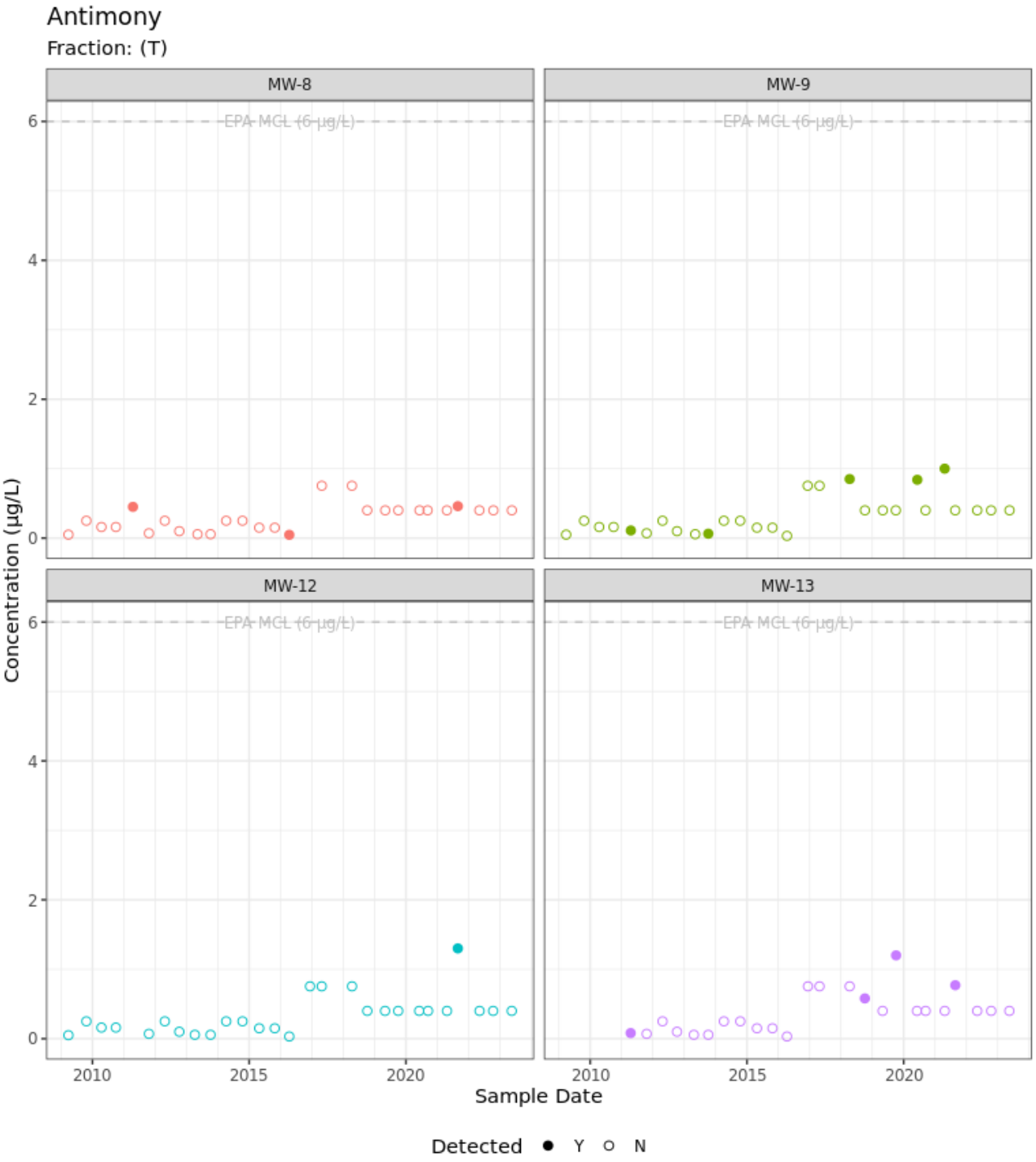
- **MW-8, MW-9, MW-12, and MW-13** from **Cell 2 Monitoring Well**
- Results from **01 January 2002** to **31 May 2023**
- Fraction: **T**
- Inorganic analytes: **All inorganics**

Graph notes

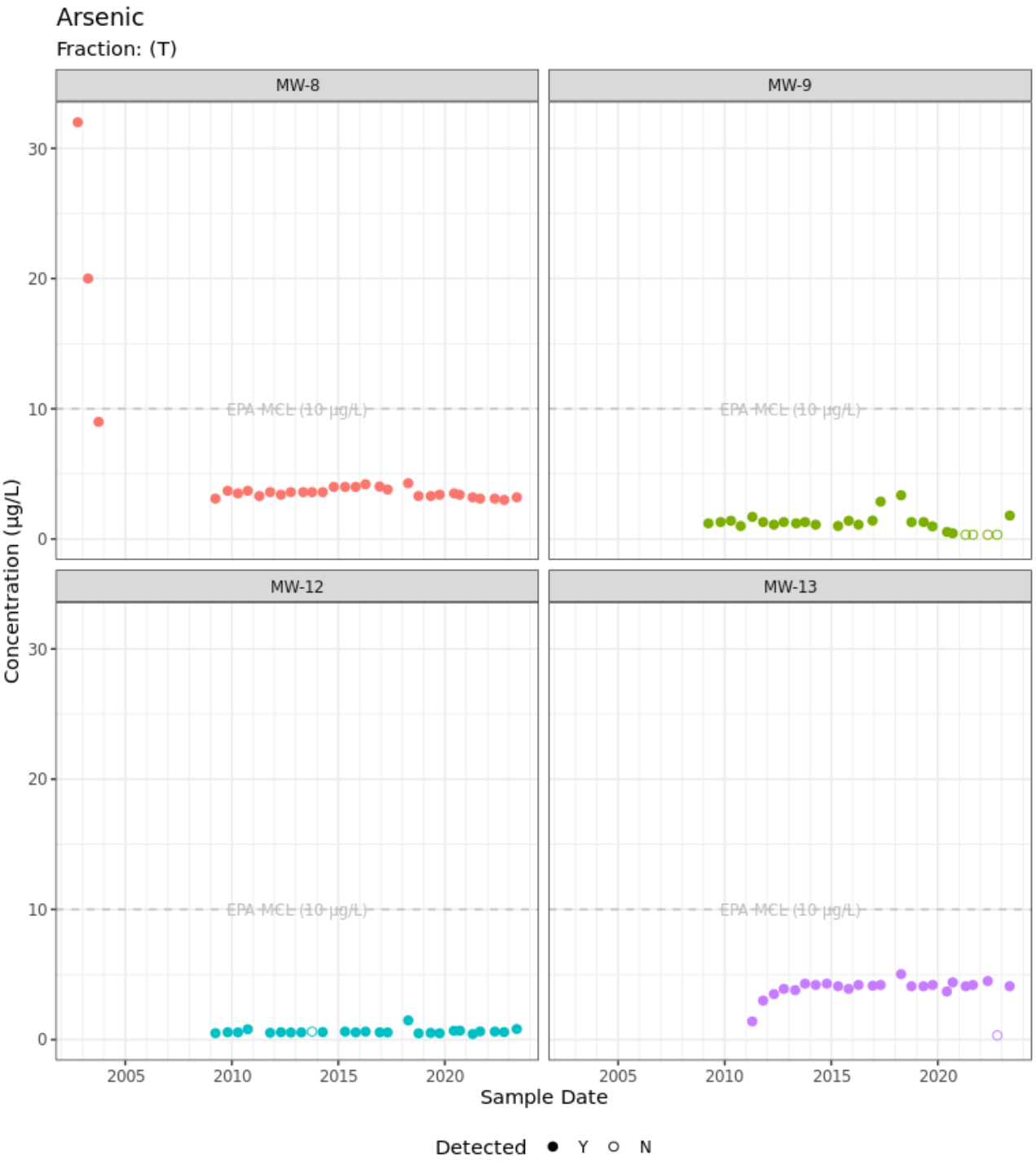
- When only the year is shown in the x-axis label, this represents the start of the year.

Inorganic chemical summaries

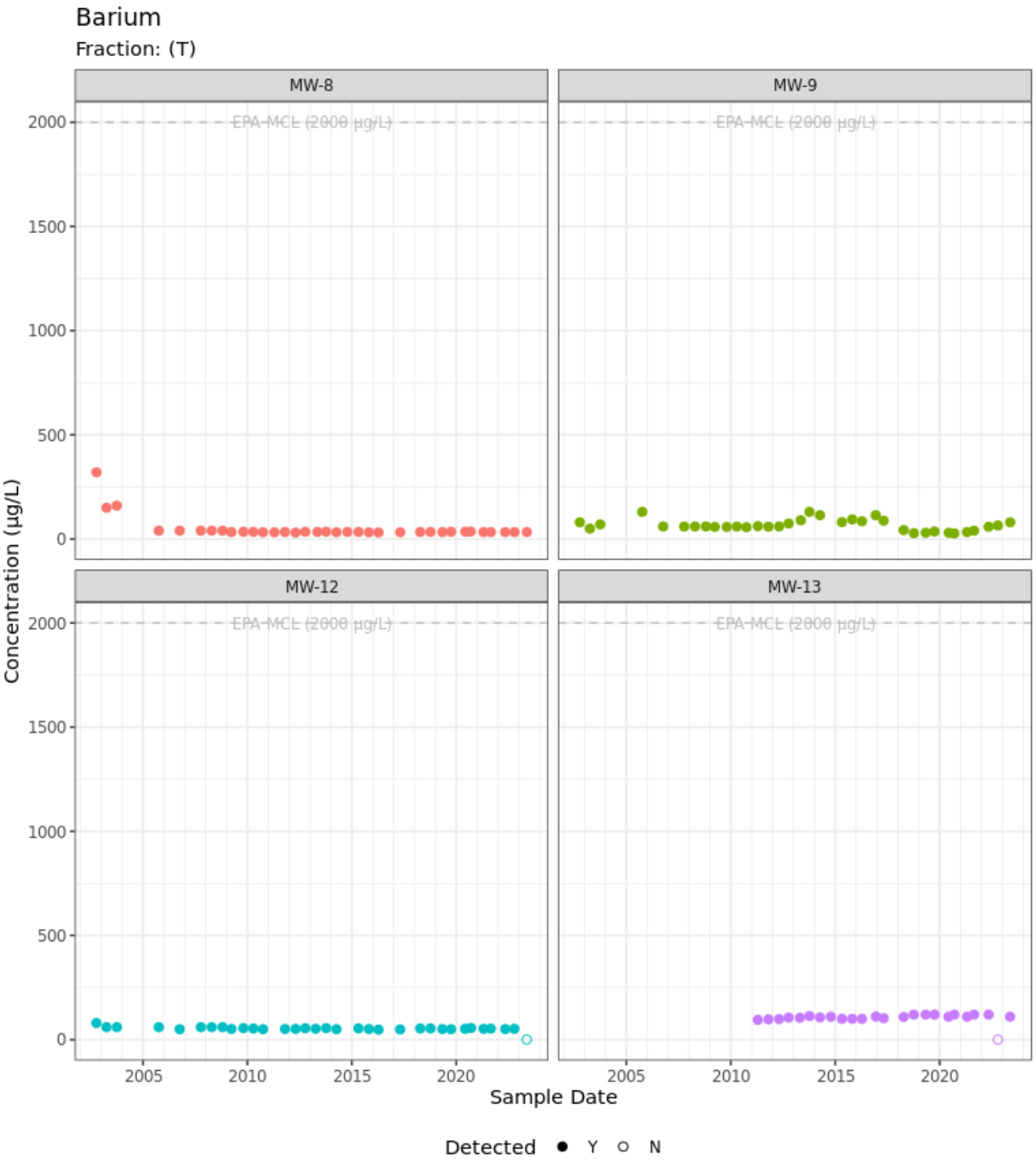
Antimony



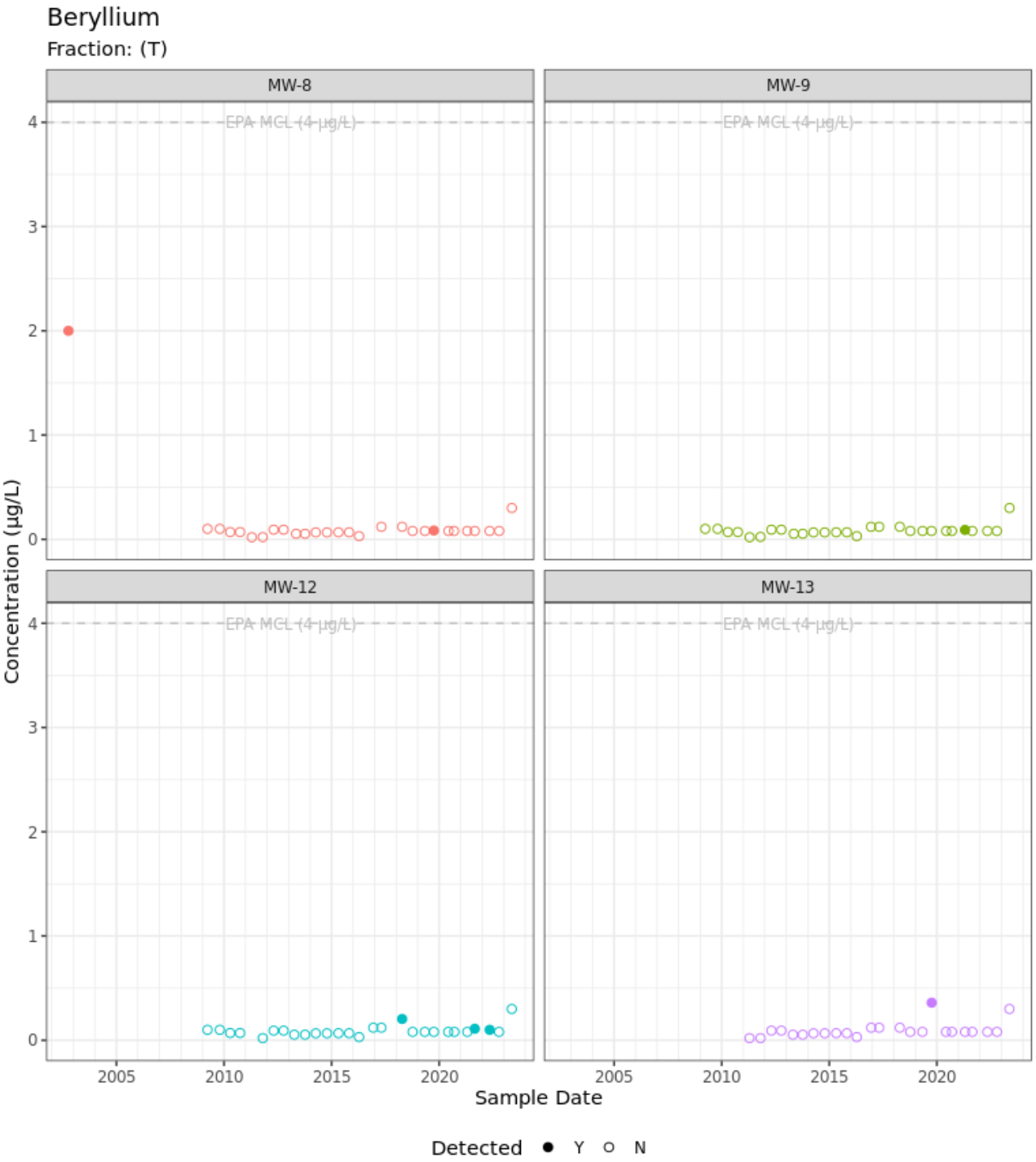
Arsenic


Arsenic
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA MCL (10 µg/L)
Concentration (µg/L)
0
10
20
30
2005
2010
2015
2020
Sample Date
Detected
Y
N

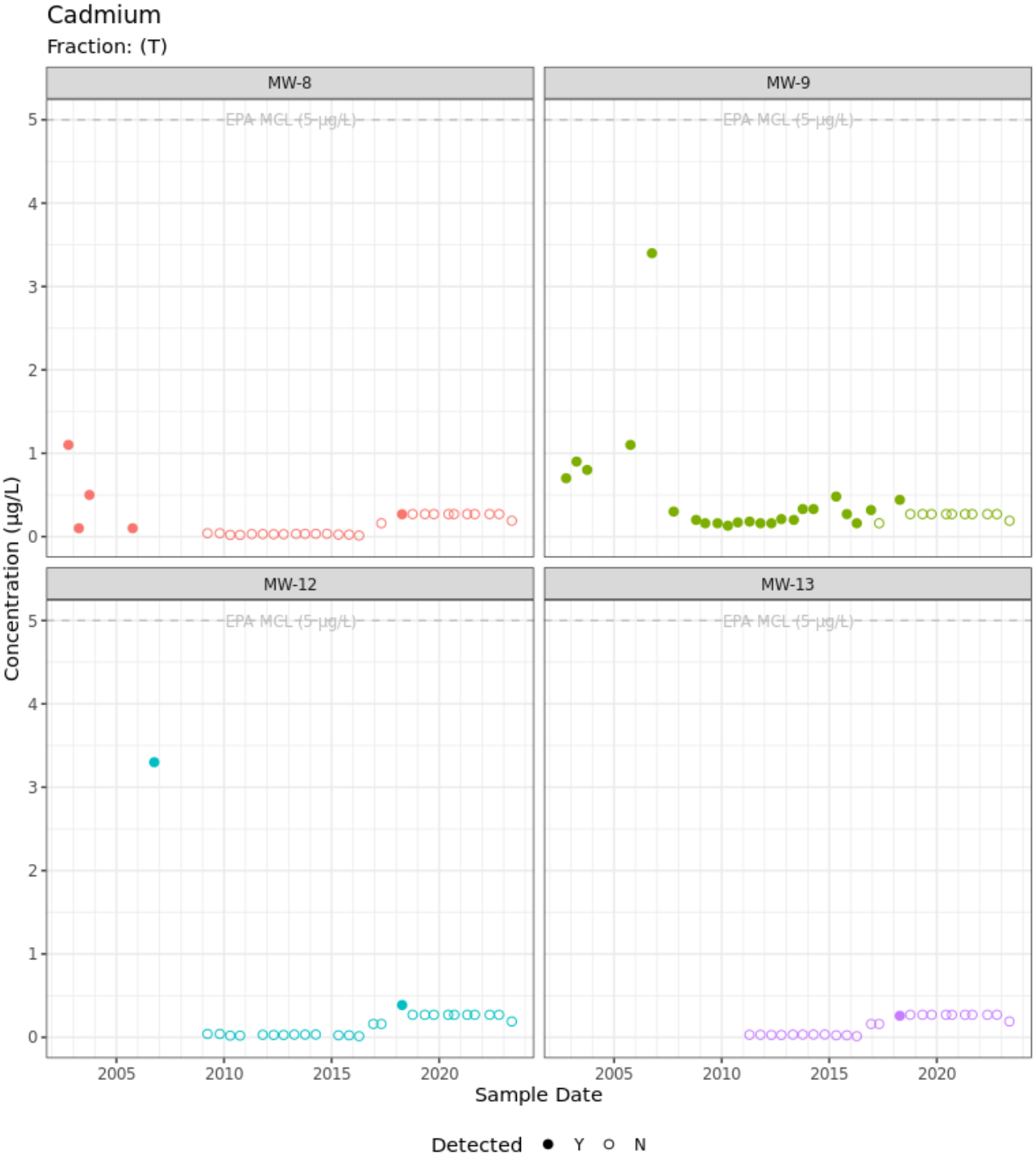
Barium


Barium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA-MCL (2000 µg/L)
2000
1500
1000
500
0
Concentration (µg/L)
2005
2010
2015
2020
Sample Date
Detected
Y
N

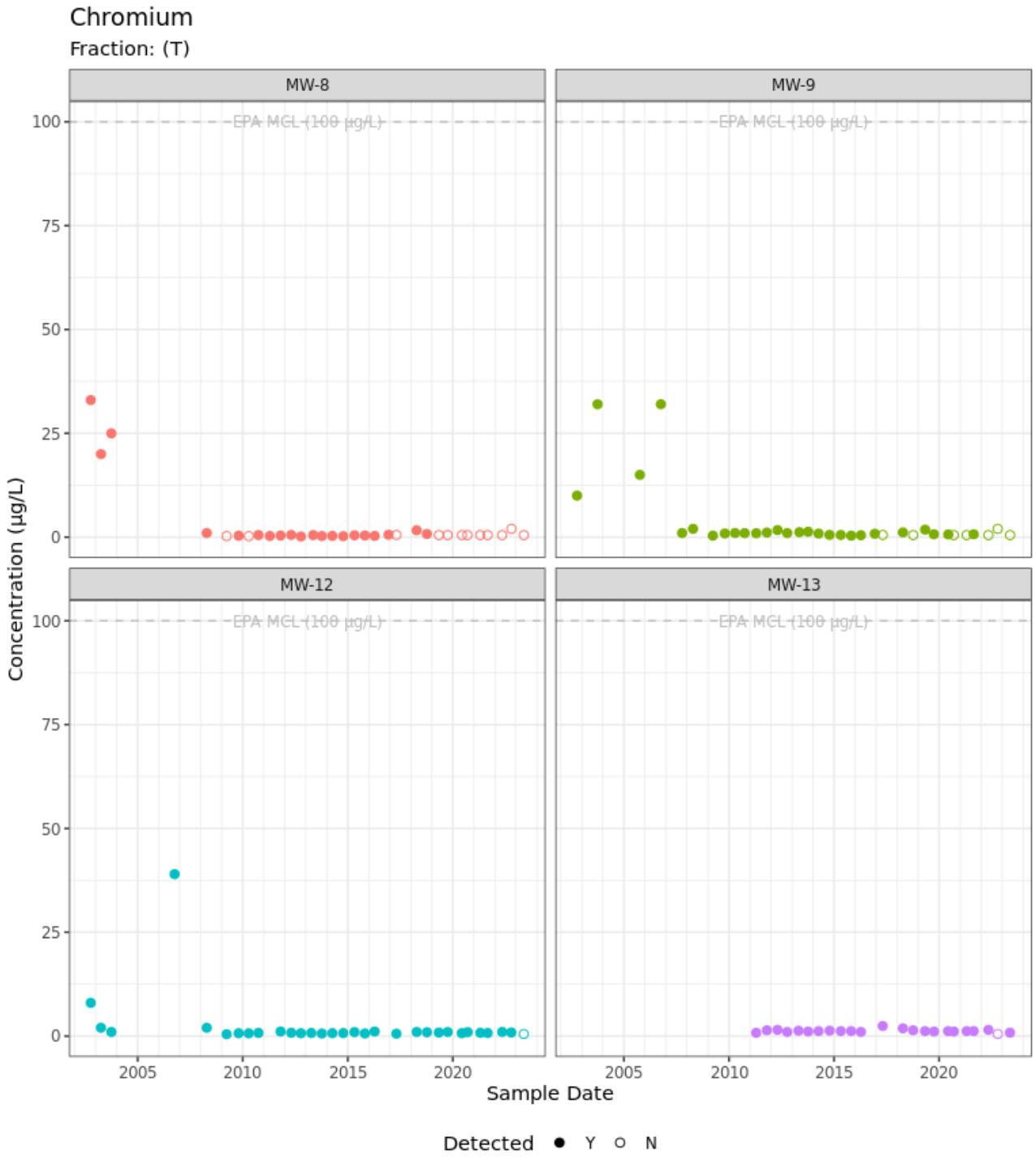
Beryllium


Beryllium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA MCL (4 µg/L)
Concentration (µg/L)
0
1
2
3
4
2005
2010
2015
2020
Sample Date
Detected
Y
N

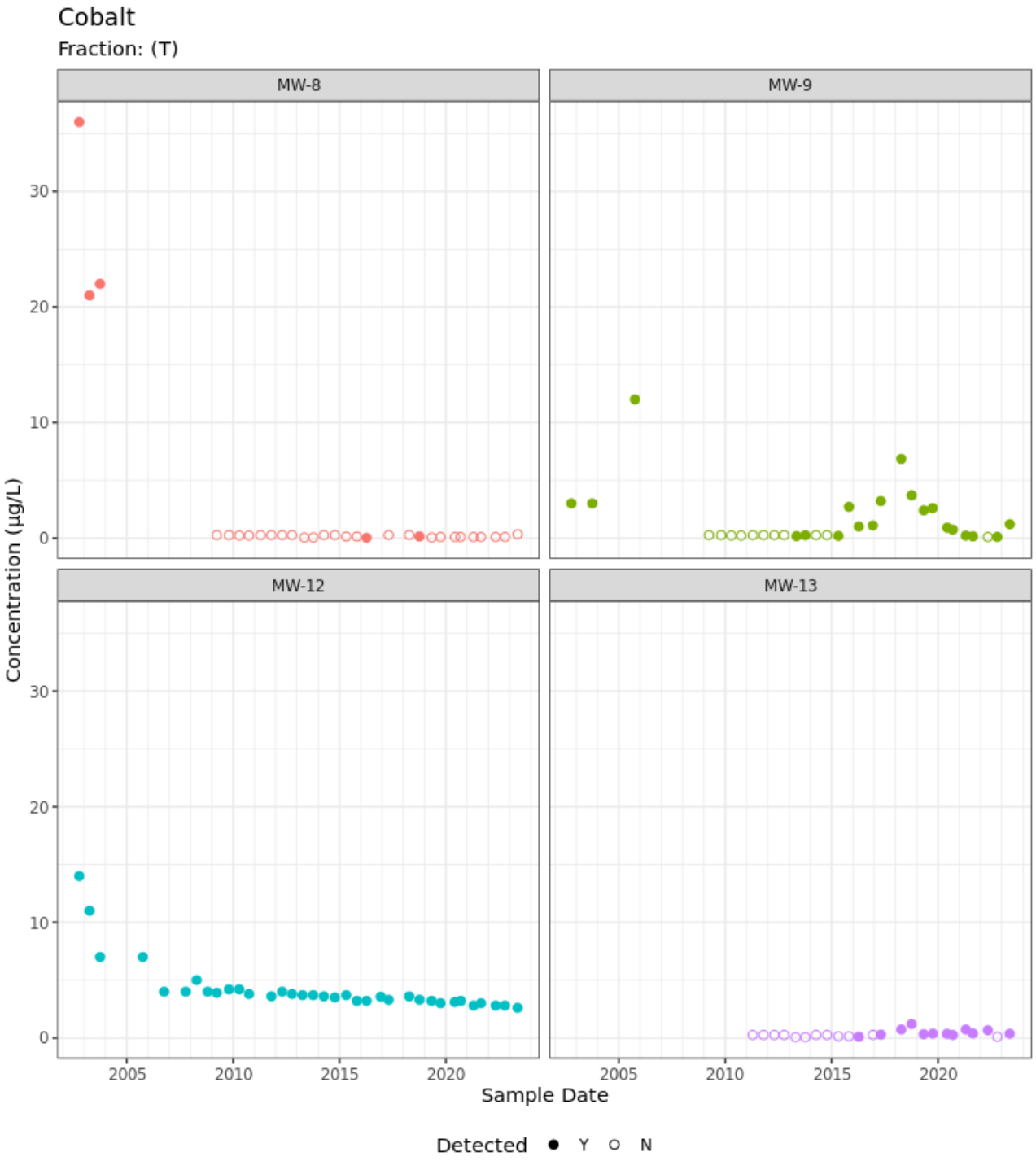
Cadmium


Cadmium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA MCL (5 µg/L)
Concentration (µg/L)
0
1
2
3
4
5
2005
2010
2015
2020
Sample Date
Detected
Y
N

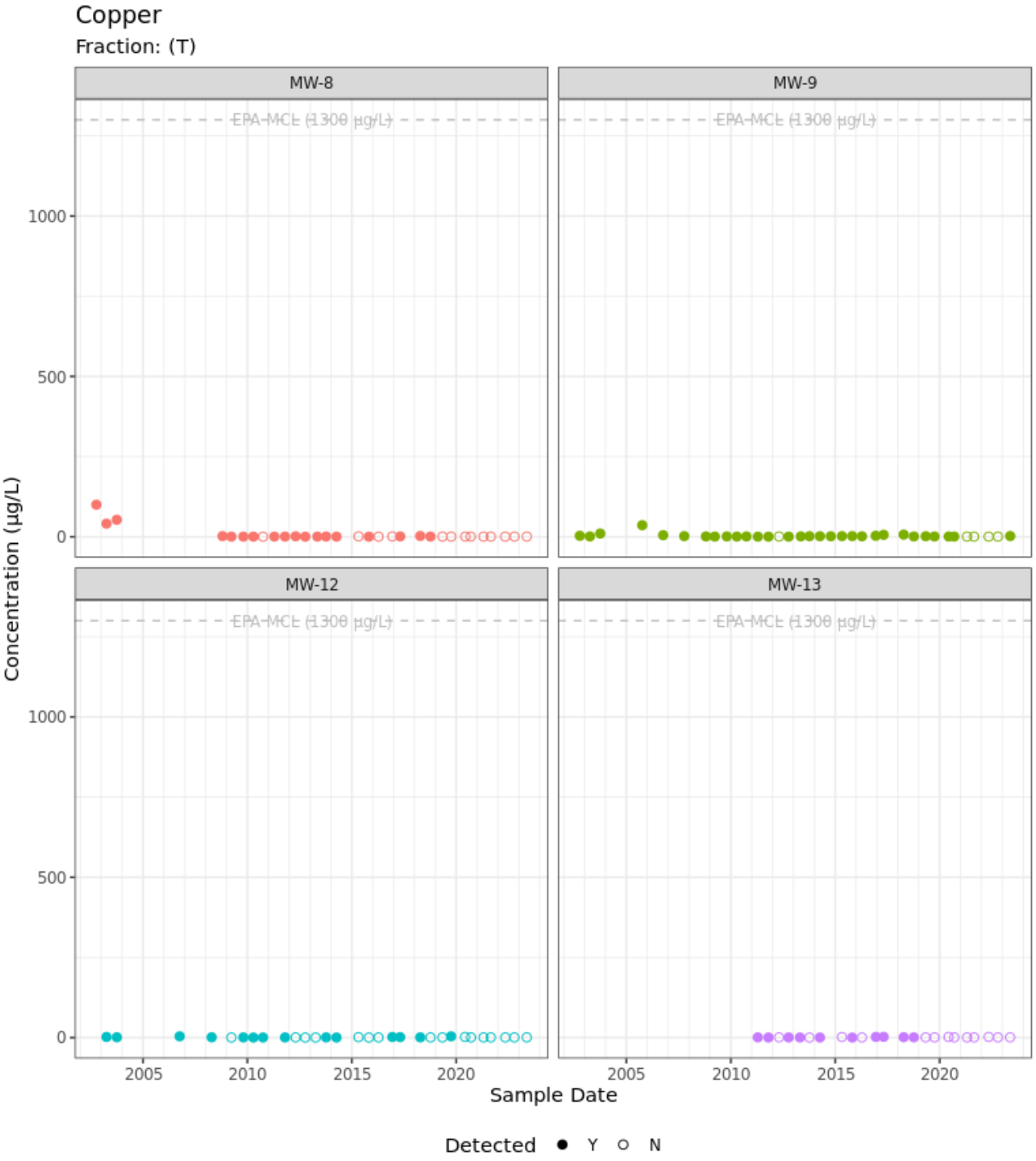
Chromium


Chromium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA MCL (100 µg/L)
Concentration (µg/L)
100
75
50
25
0
2005
2010
2015
2020
Sample Date
Detected
Y
N

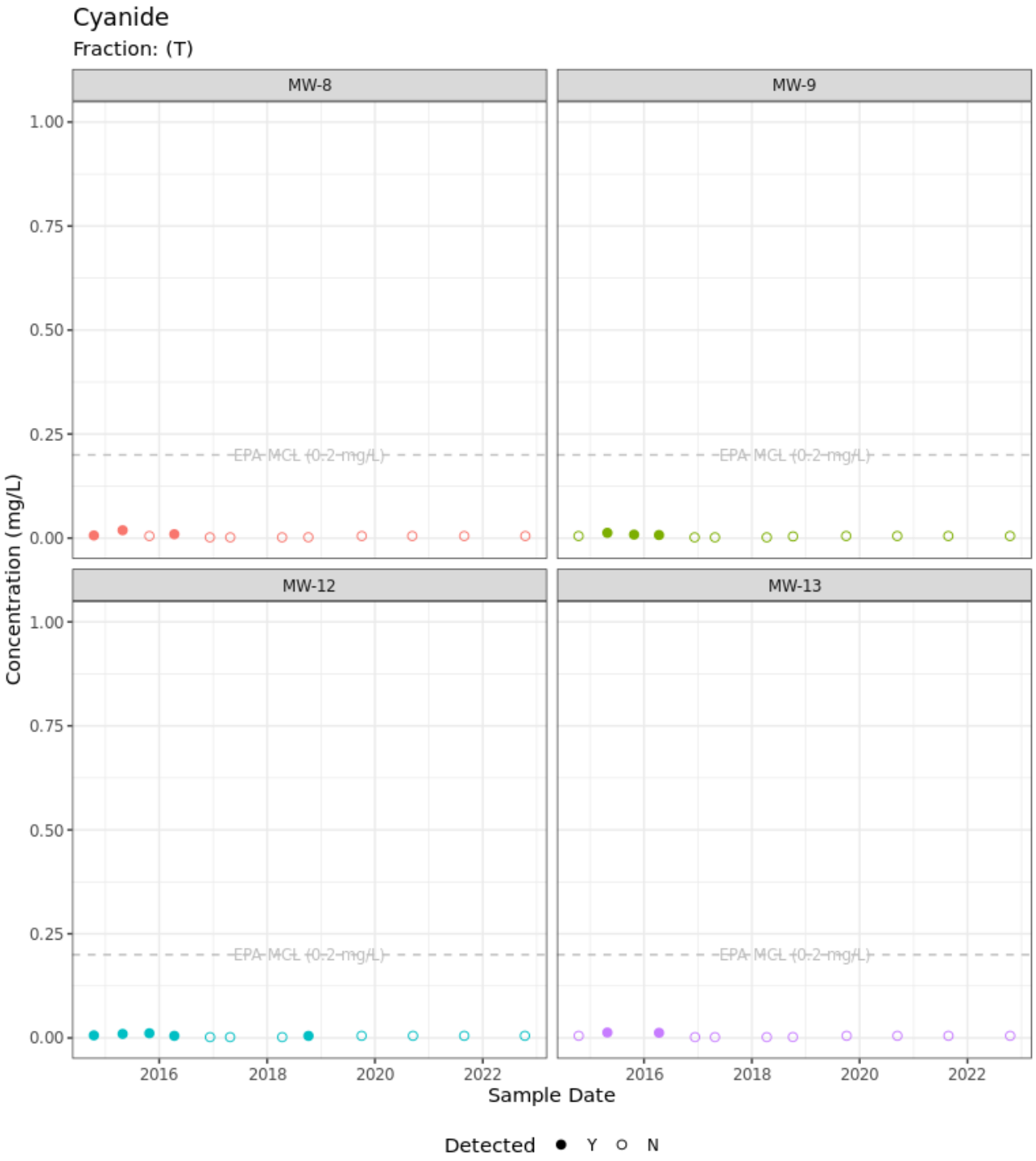
Cobalt


Cobalt
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (µg/L)
0
10
20
30
2005
2010
2015
2020
Sample Date
Detected
Y
N

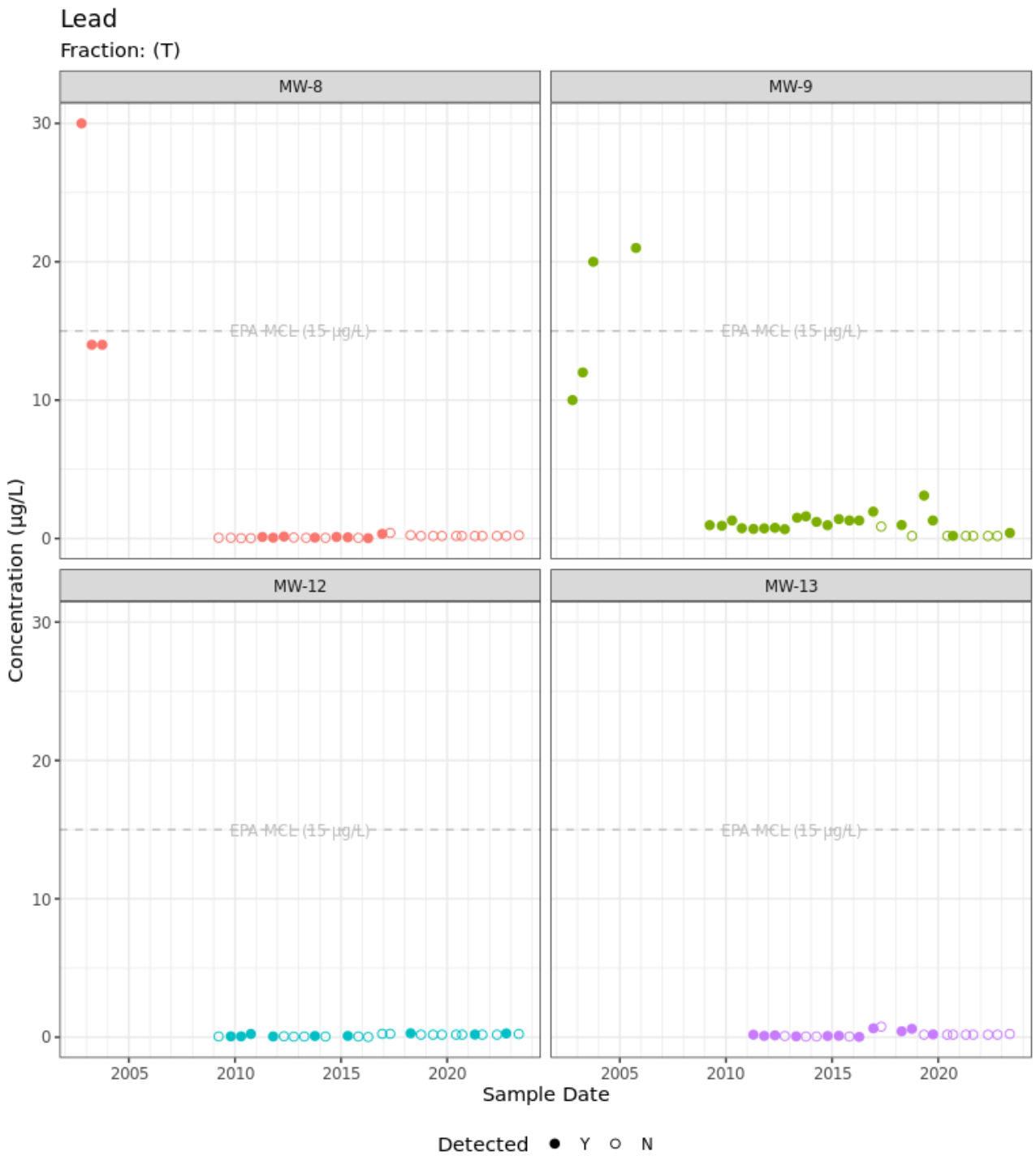
Copper


Copper
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA MCL (1300 µg/L)
Concentration (µg/L)
0
500
1000
2005
2010
2015
2020
Sample Date
Detected
Y
N

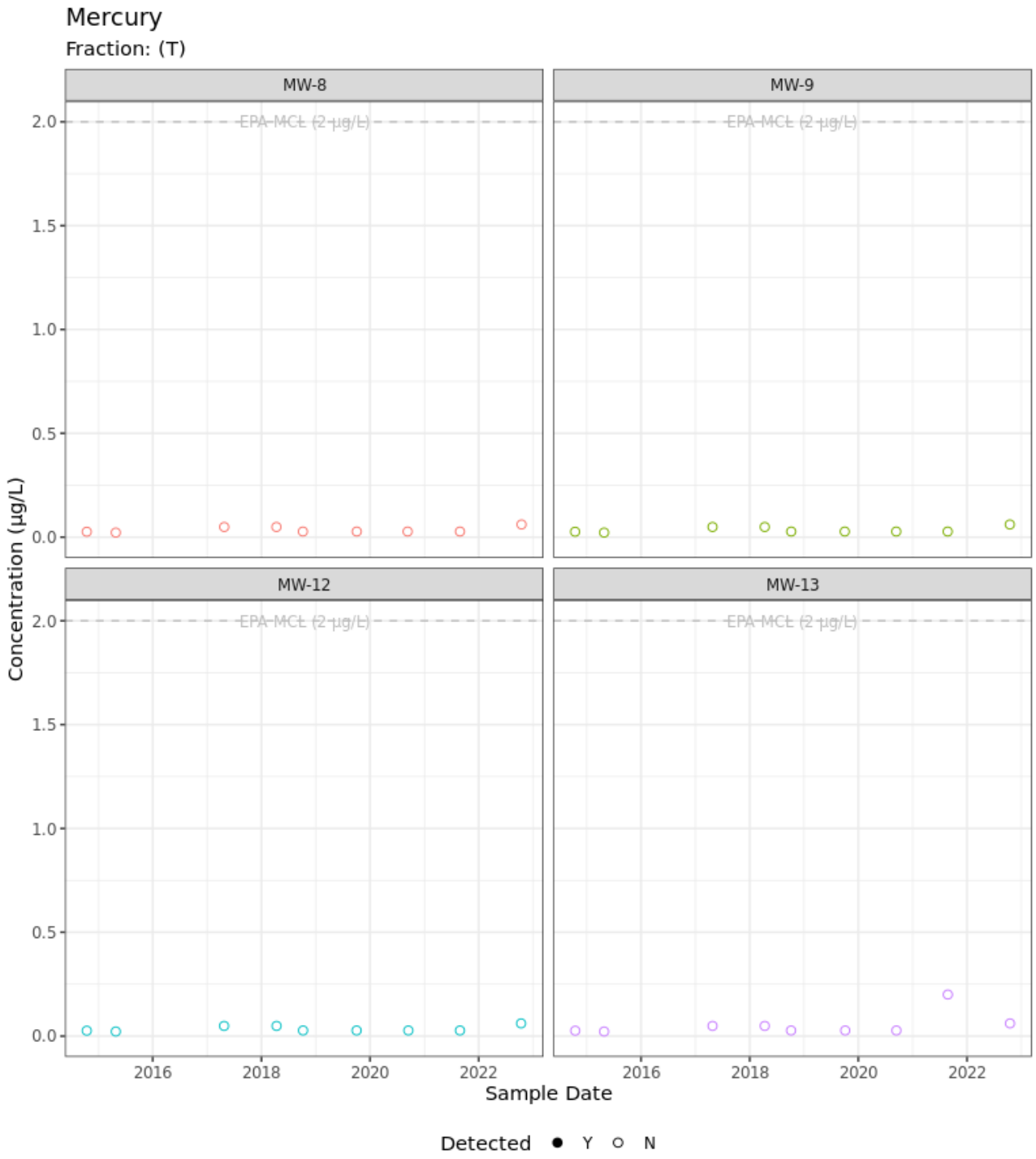
Cyanide


Cyanide
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
1.00
0.75
0.50
0.25
0.00
EPA MCL (0.2 mg/L)
Concentration (mg/L)
2016
2018
2020
2022
Sample Date
Detected
Y
N

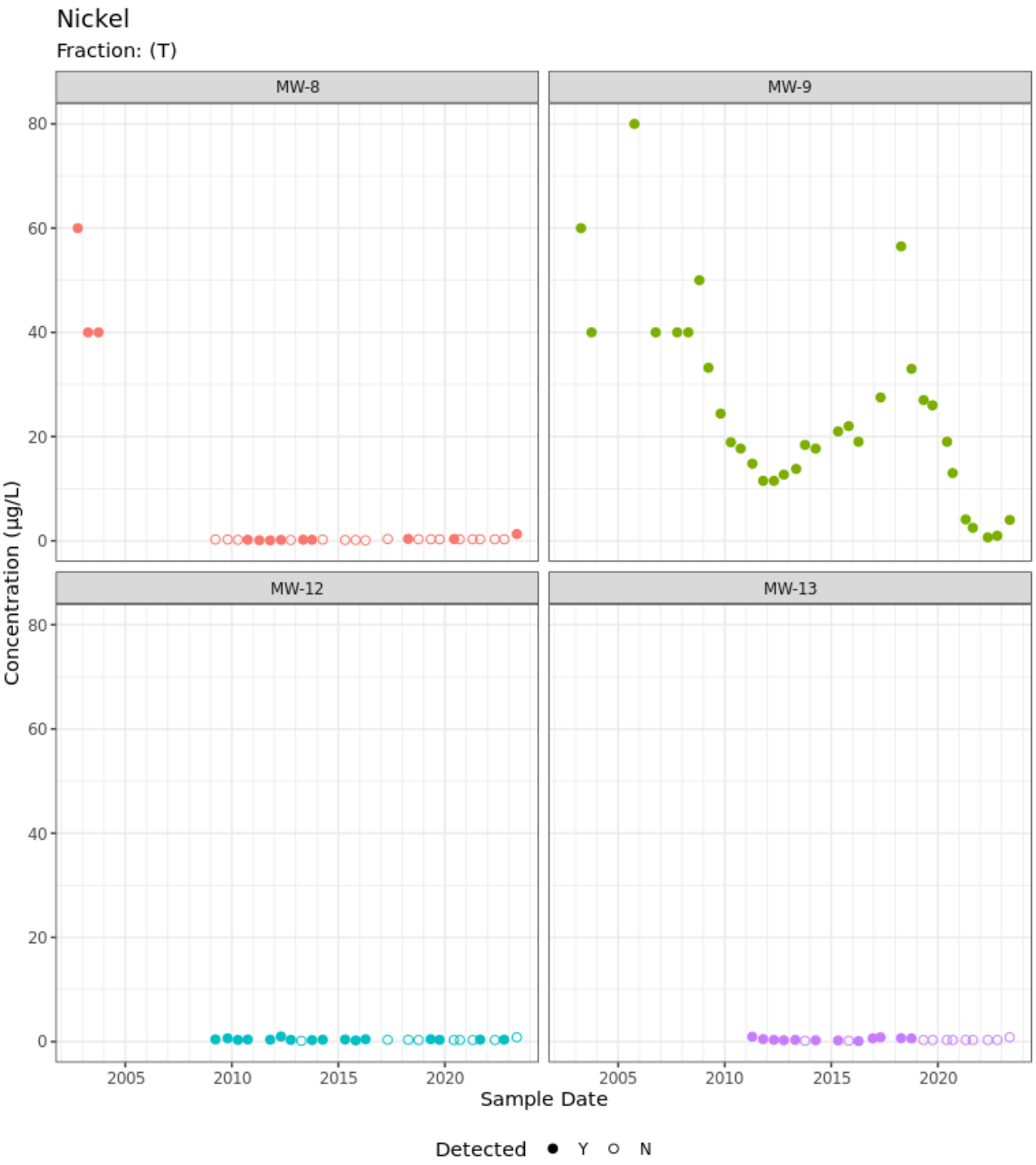
Lead


Lead
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA MCL (15 µg/L)
Concentration (µg/L)
0
10
20
30
2005
2010
2015
2020
Sample Date
Detected
Y
N

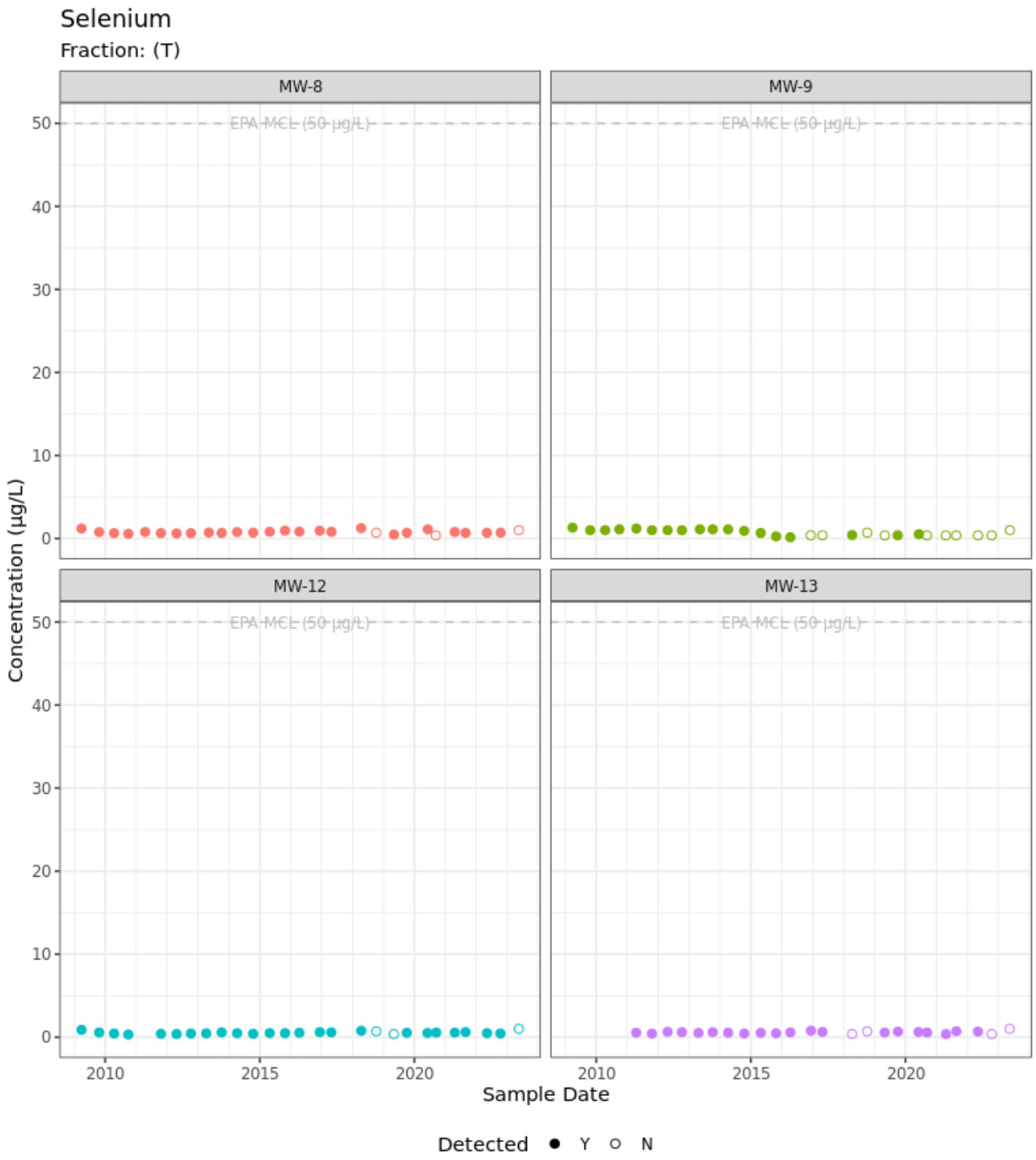
Mercury


Mercury
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA MCL (2 µg/L)
Concentration (µg/L)
2.0
1.5
1.0
0.5
0.0
2016
2018
2020
2022
Sample Date
Detected Y N

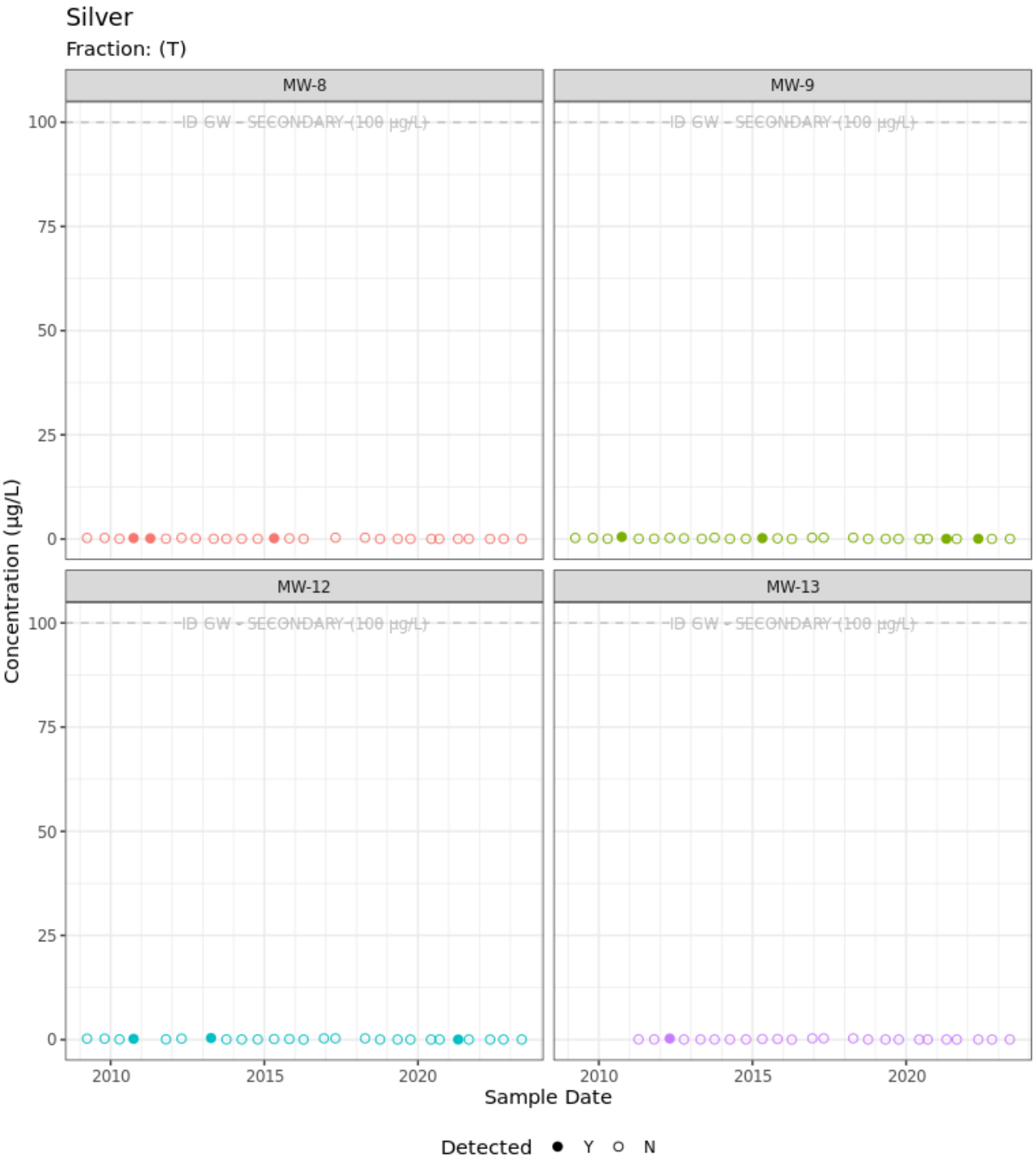
Nickel


Nickel
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (µg/L)
0
20
40
60
80
2005
2010
2015
2020
Sample Date
Detected
Y
N

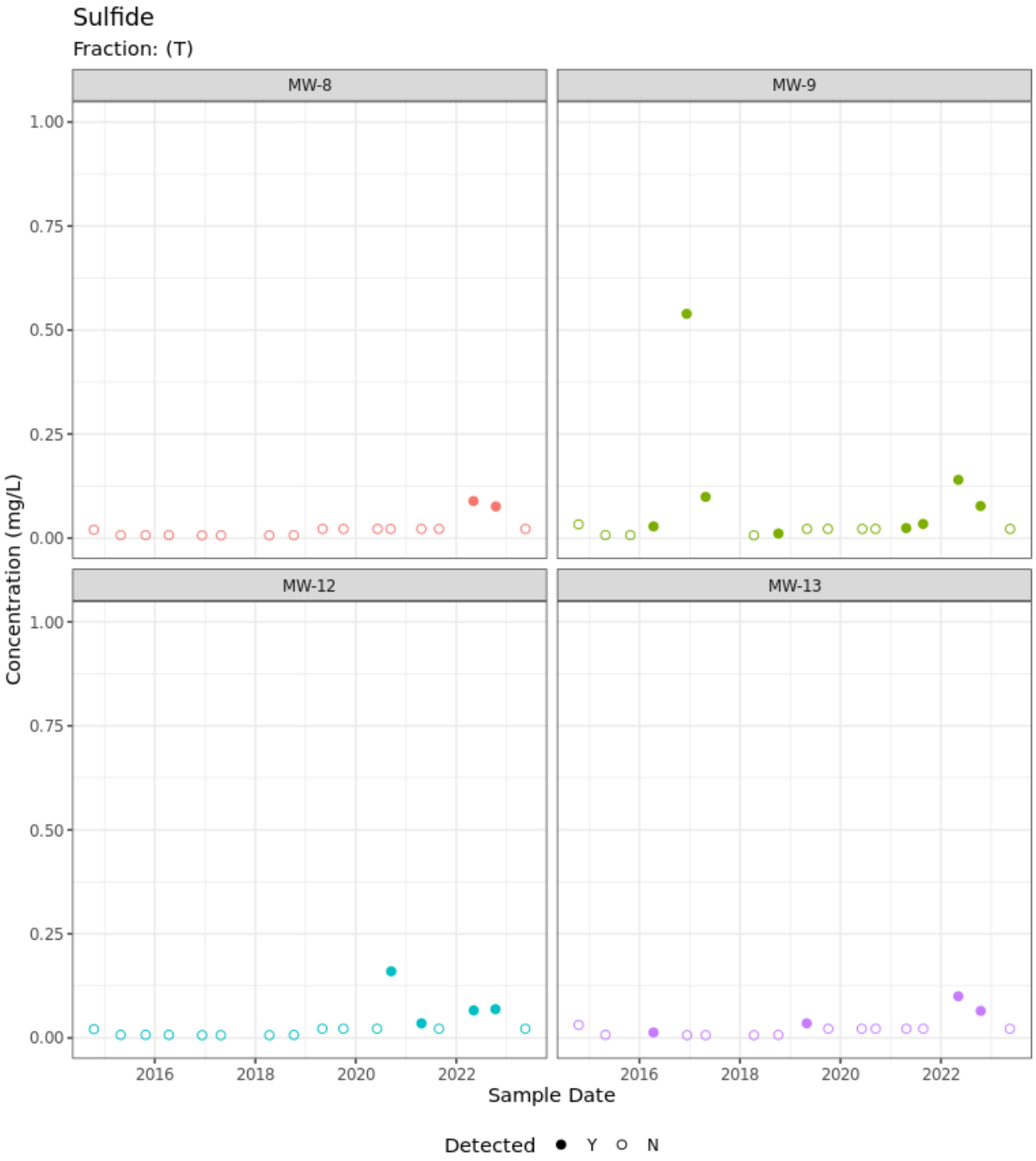
Selenium


Selenium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA MCL (50 µg/L)
Concentration (µg/L)
0
10
20
30
40
50
2010
2015
2020
Sample Date
Detected
Y
N

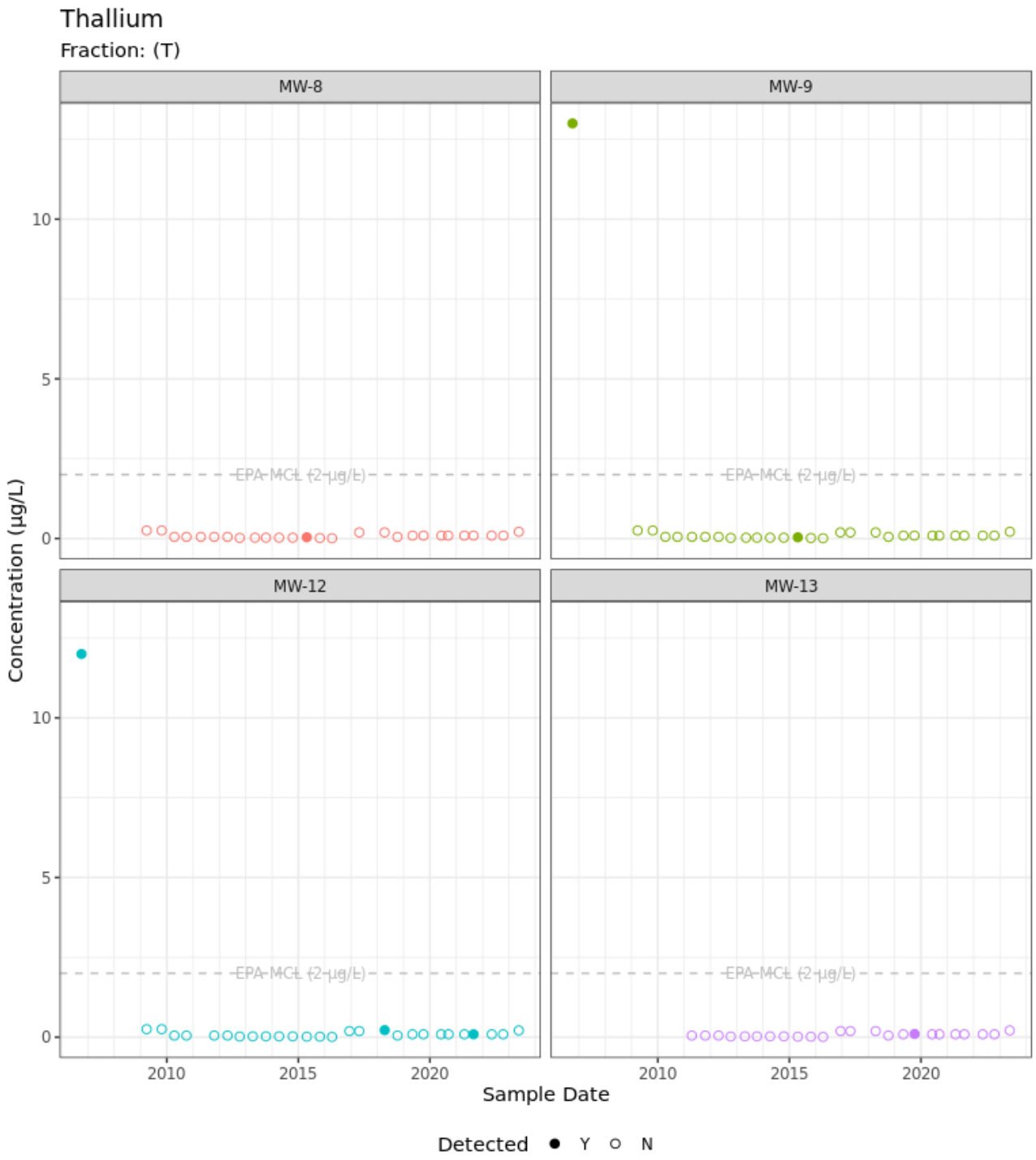
Silver


Silver
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
ID GW - SECONDARY (100 µg/L)
100
75
50
25
0
Concentration (µg/L)
2010
2015
2020
Sample Date
Detected
Y
N

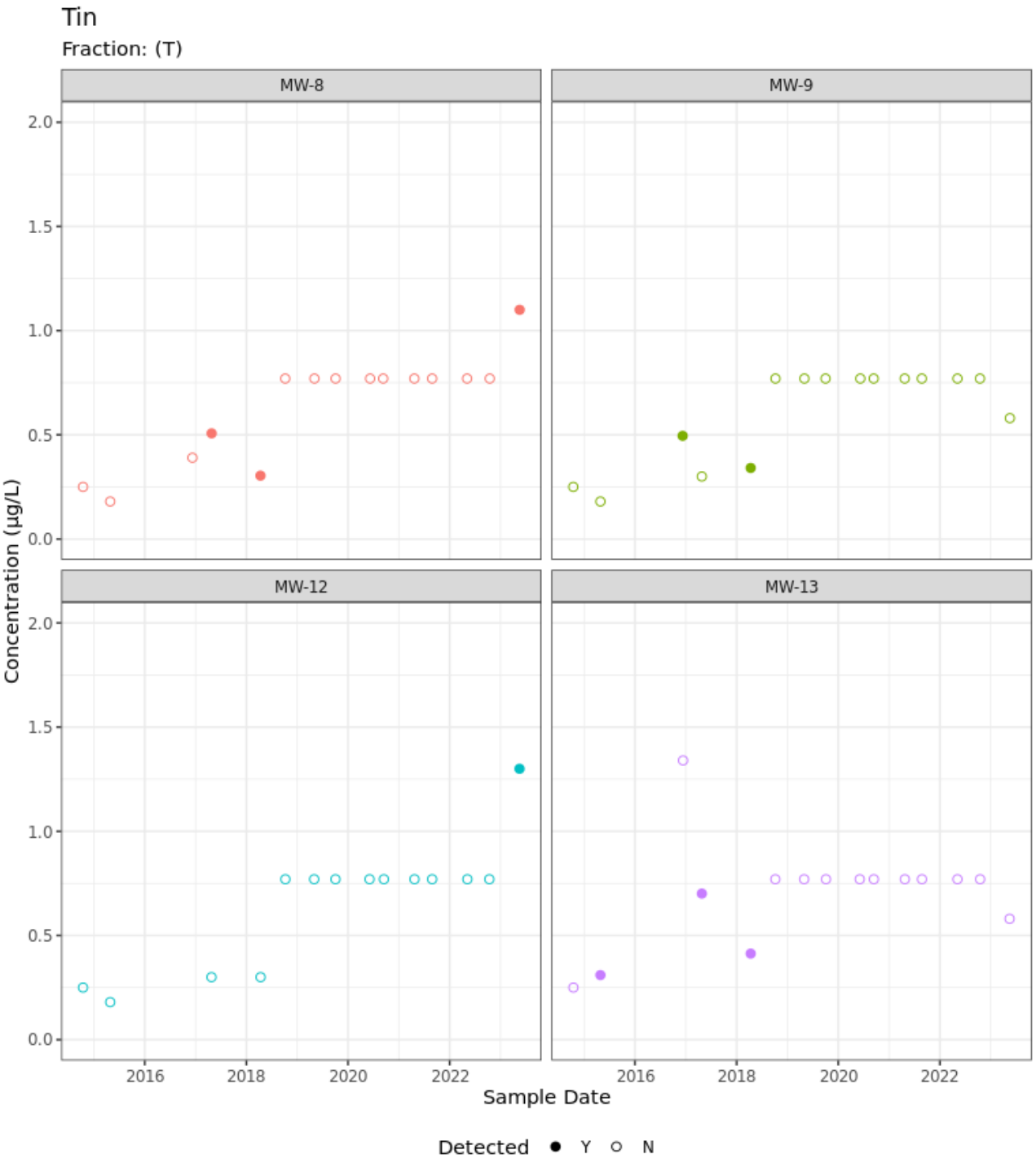
Sulfide


Sulfide
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (mg/L)
1.00
0.75
0.50
0.25
0.00
2016
2018
2020
2022
Sample Date
Detected
Y
N

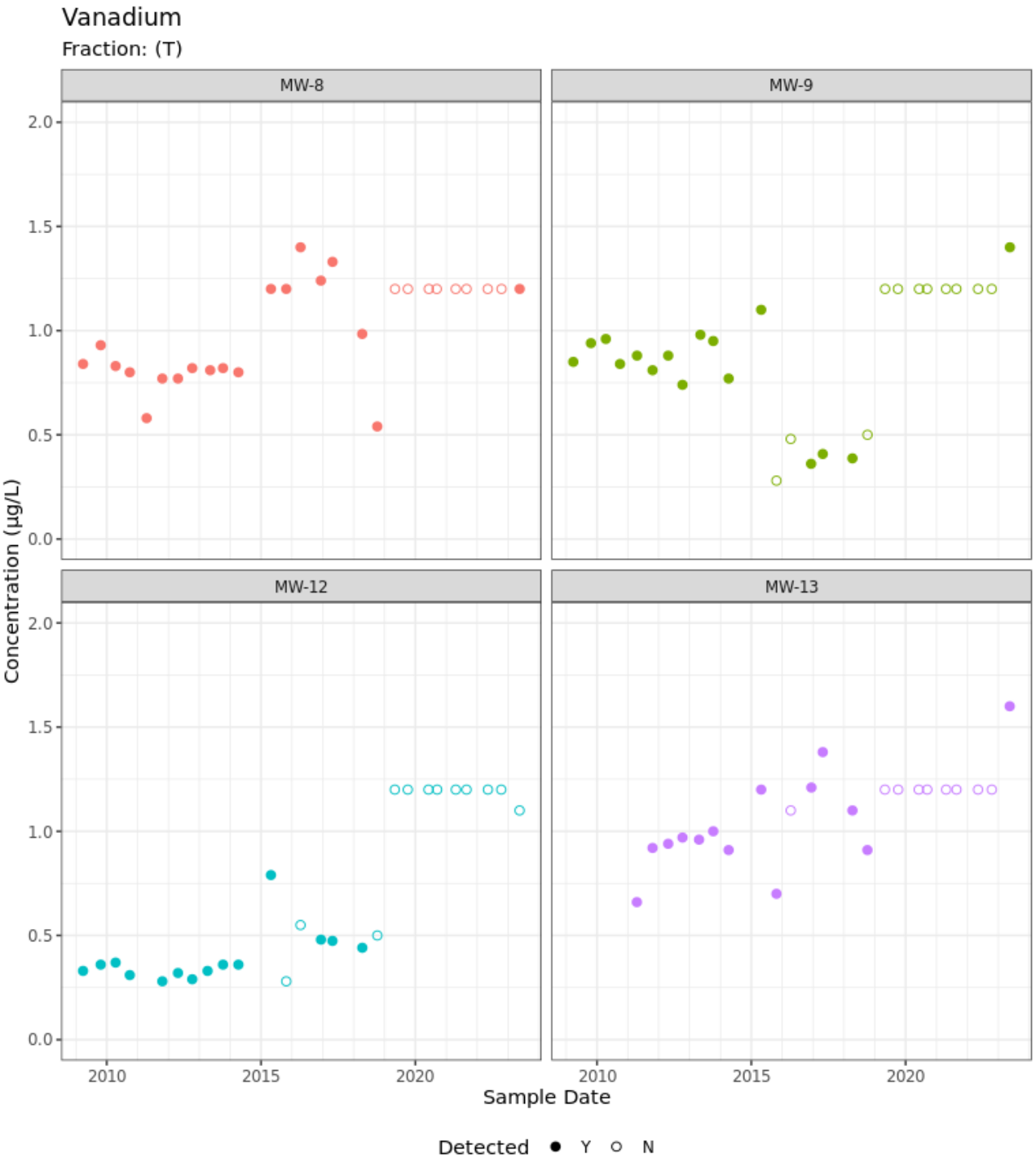
Thallium


Thallium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
EPA MCL (2 µg/L)
Concentration (µg/L)
0
5
10
2010
2015
2020
Sample Date
Detected
Y
N

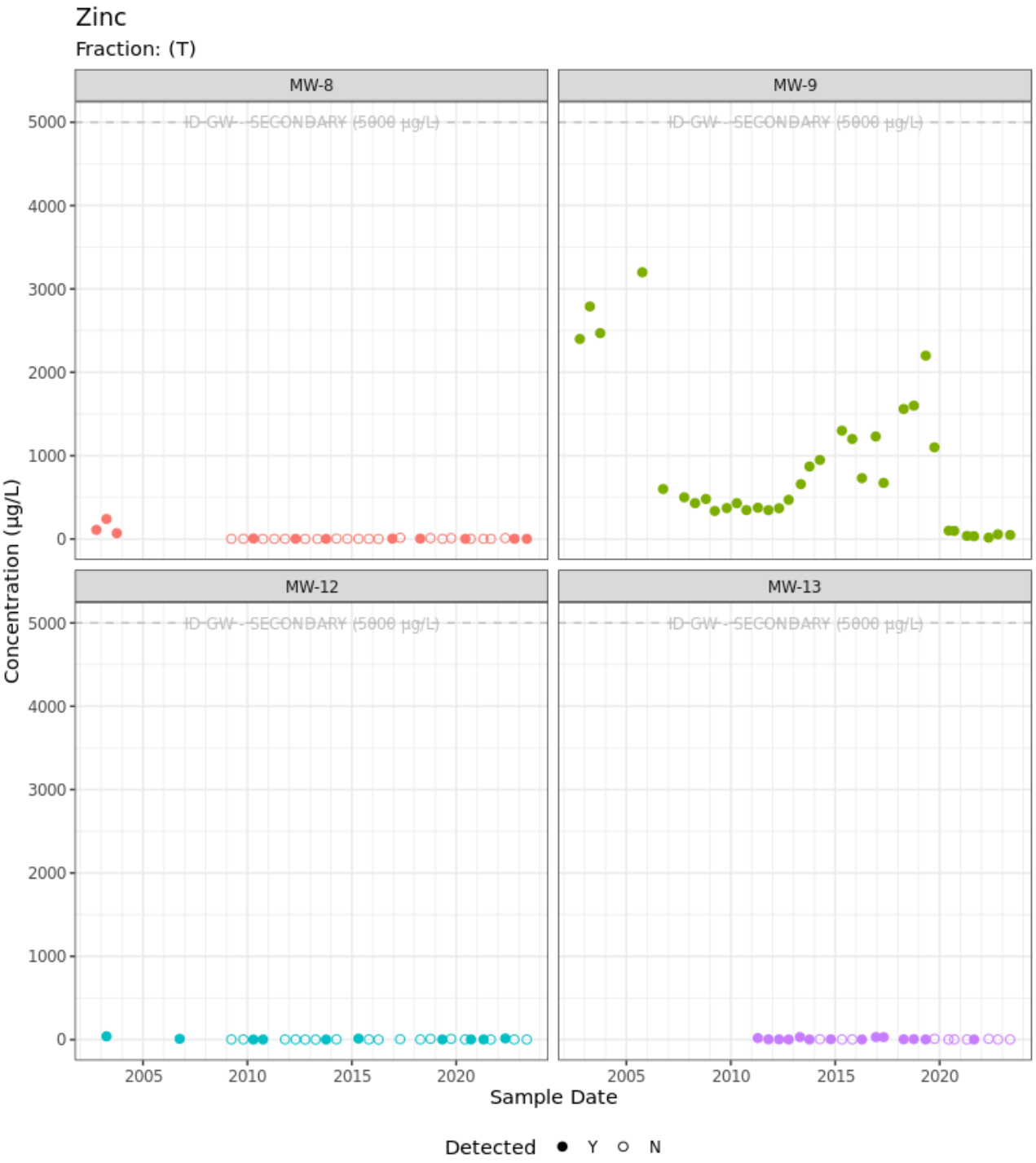
Tin


Tin
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (µg/L)
2.0
1.5
1.0
0.5
0.0
2016
2018
2020
2022
Sample Date
Detected
Y
N

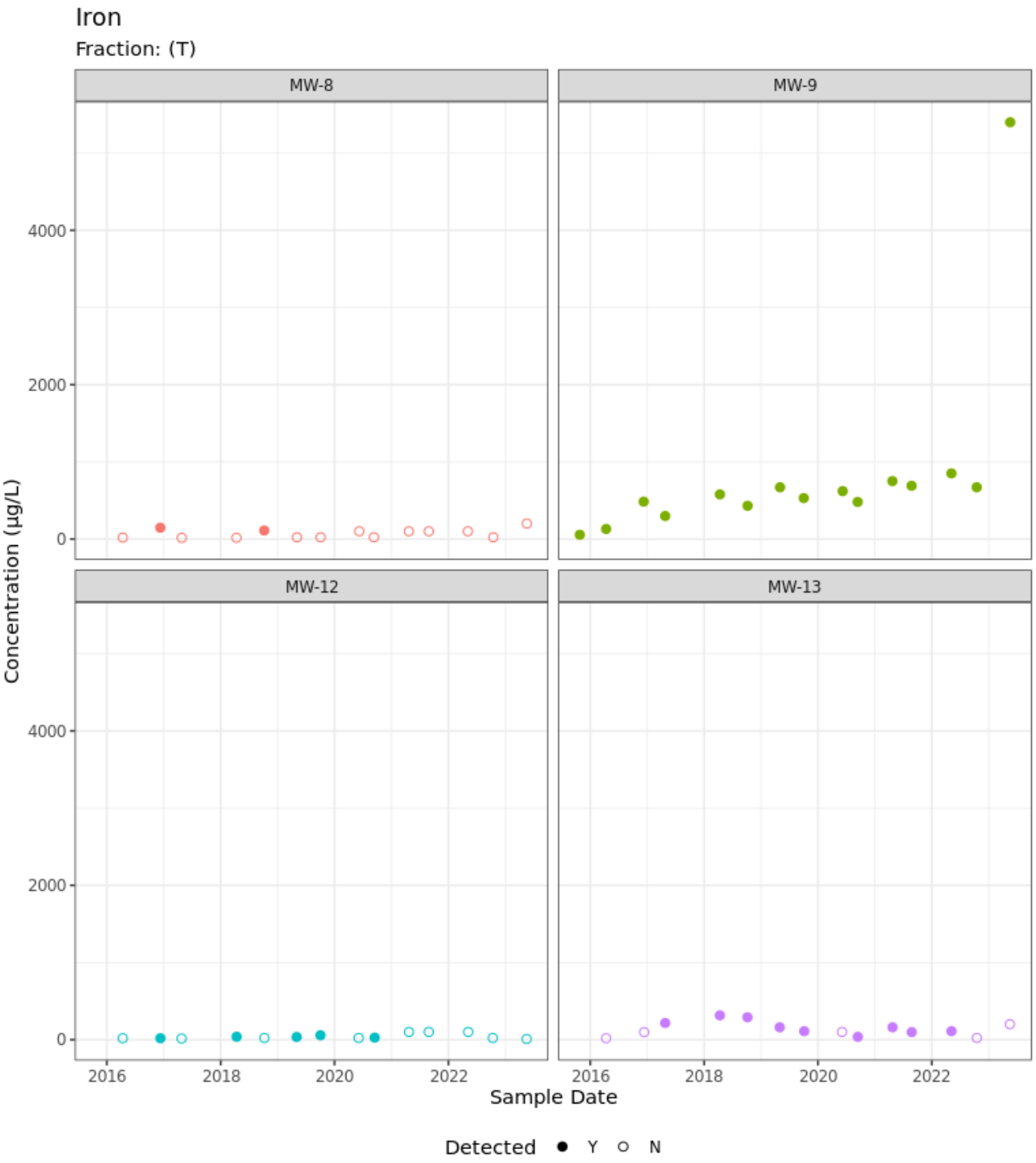
Vanadium


Vanadium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (µg/L)
2.0
1.5
1.0
0.5
0.0
2010
2015
2020
Sample Date
Detected
Y
N

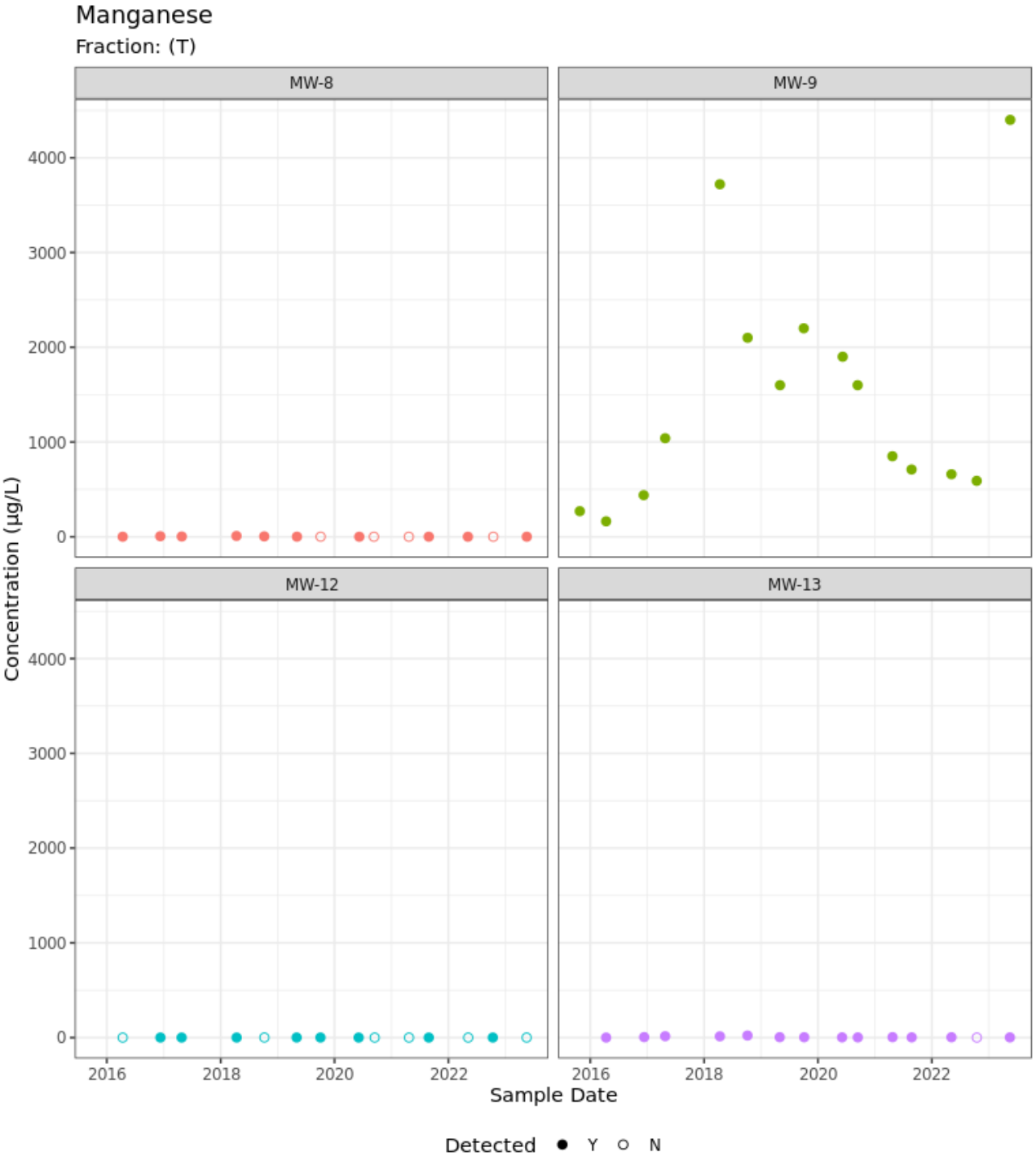
Zinc


Zinc
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
ID-GW--SECONDARY (5000 µg/L)
5000
4000
3000
2000
1000
0
Concentration (µg/L)
2005
2010
2015
2020
Sample Date
Detected
Y
N

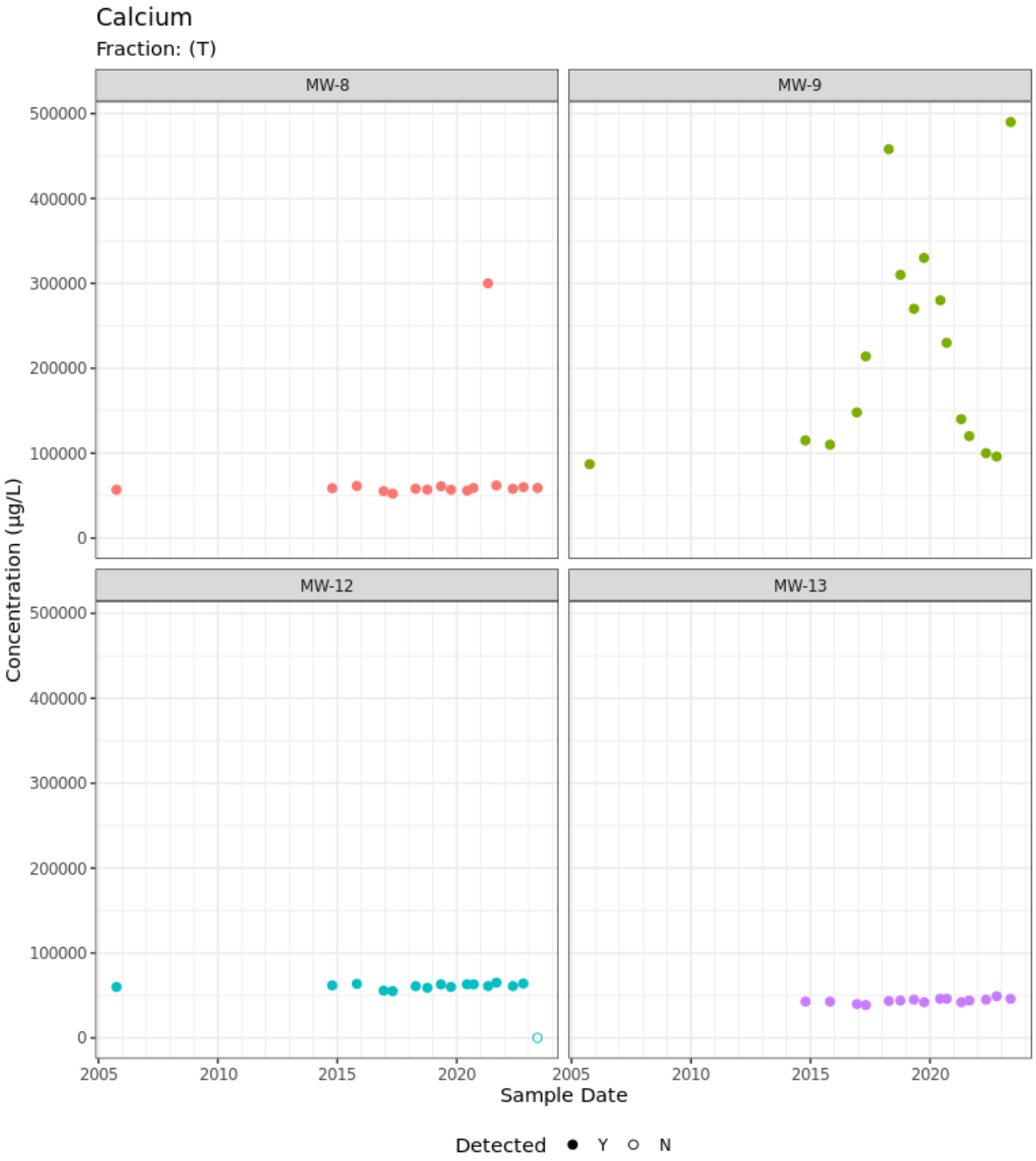
Iron


Iron
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (µg/L)
0
2000
4000
2016
2018
2020
2022
Sample Date
Detected
Y
N

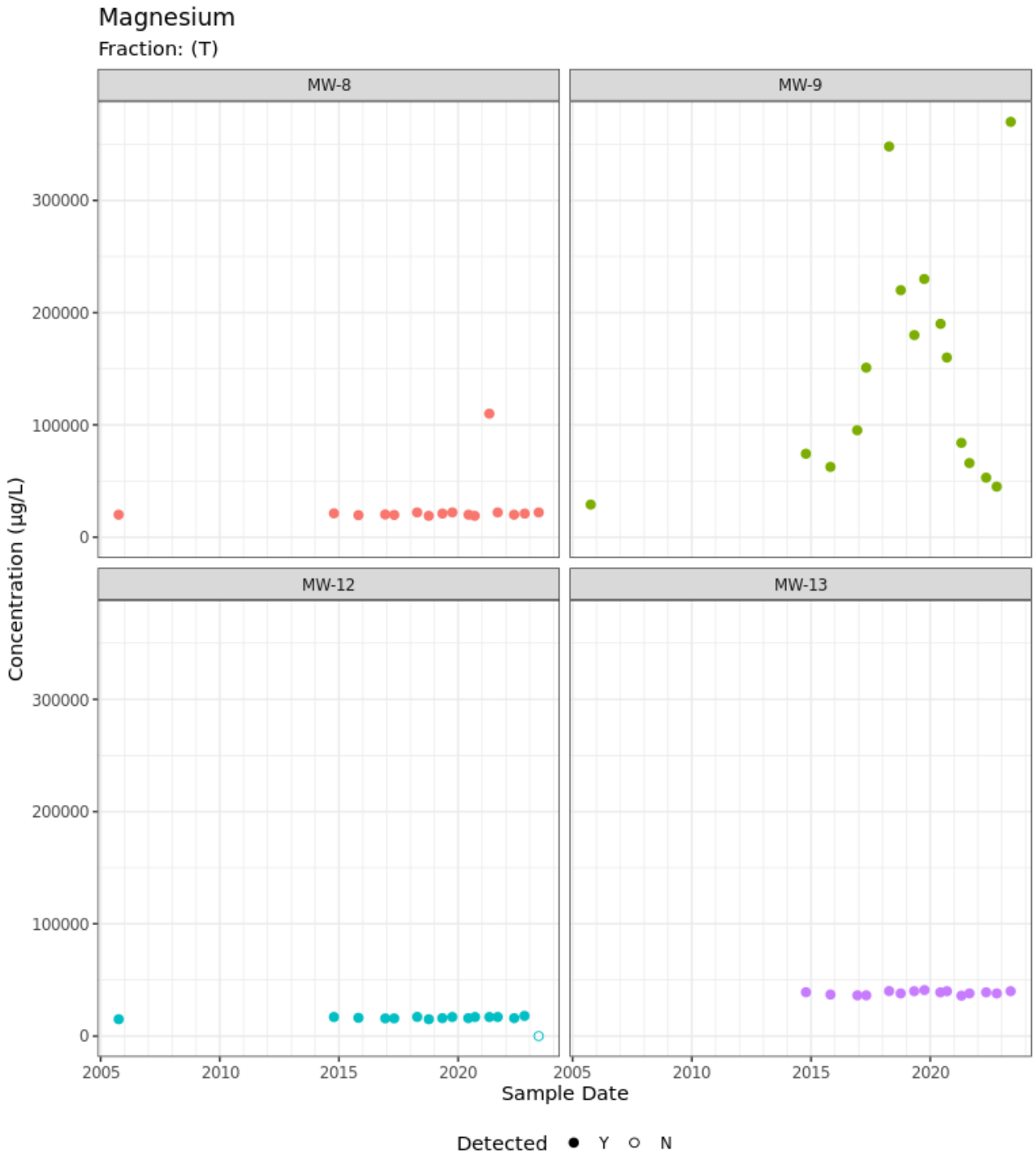
Manganese


Manganese
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (µg/L)
0
1000
2000
3000
4000
2016
2018
2020
2022
Sample Date
Detected
Y
N

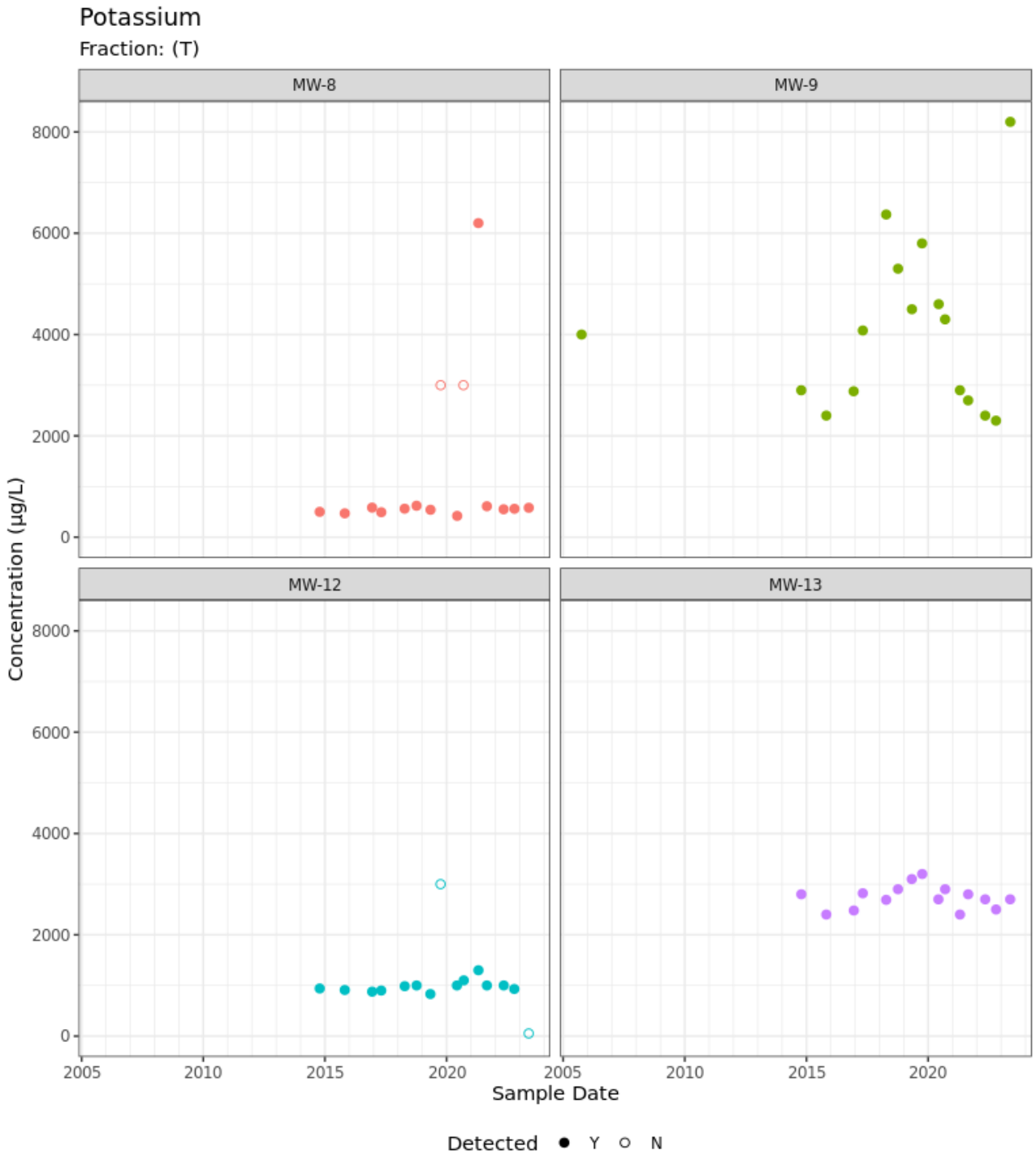
Calcium


Calcium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (µg/L)
500000
400000
300000
200000
100000
0
2005
2010
2015
2020
Sample Date
Detected
Y
N

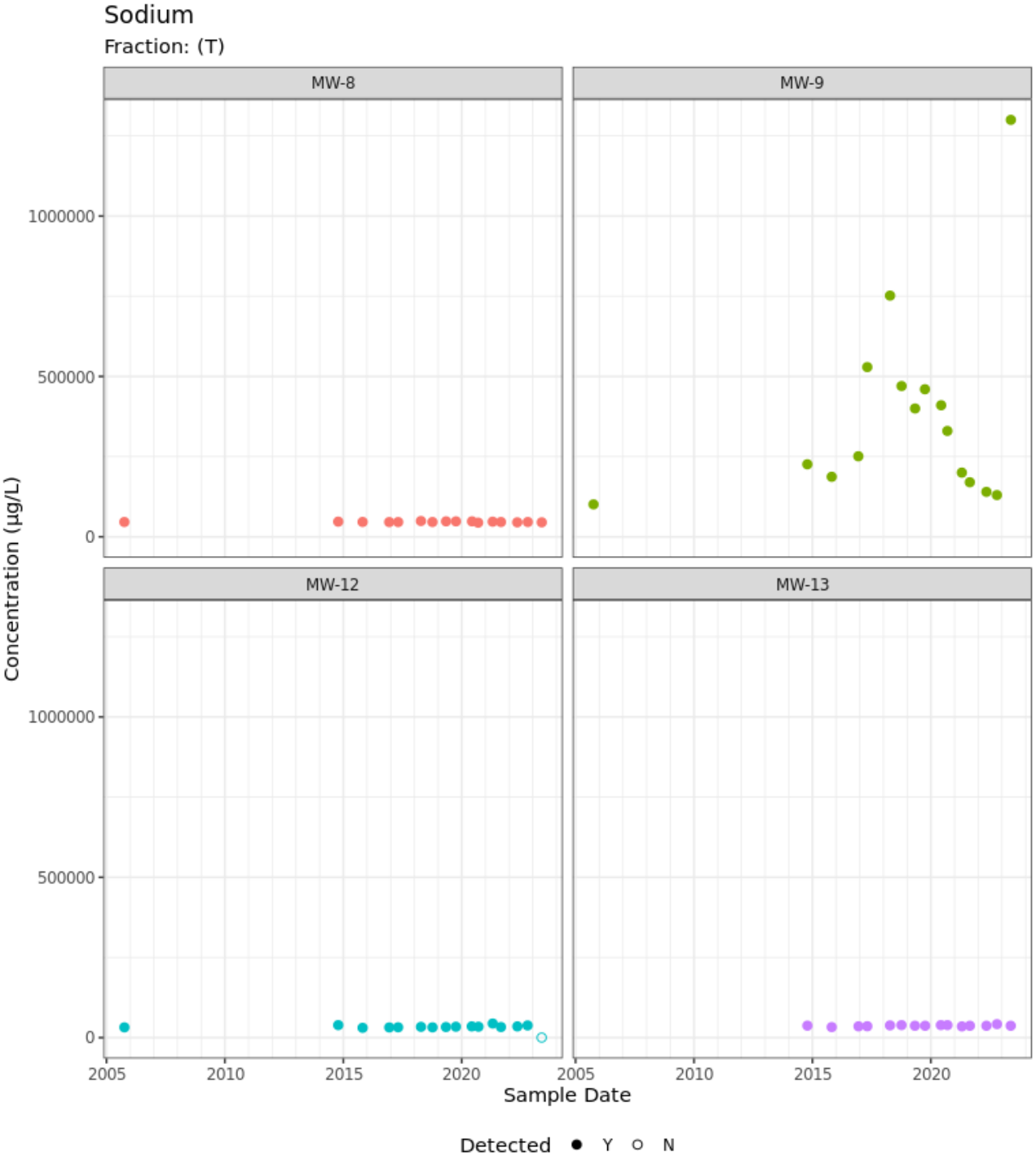
Magnesium


Magnesium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (µg/L)
300000
200000
100000
0
2005
2010
2015
2020
Sample Date
Detected
Y
N

Potassium


Potassium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
Concentration (µg/L)
0
2000
4000
6000
8000
2005
2010
2015
2020
Sample Date
Detected
Y
N

Sodium


Sodium
Fraction: (T)
MW-8
MW-9
MW-12
MW-13
1000000
500000
0
Concentration (µg/L)
2005
2010
2015
2020
Sample Date
Detected
Y
N

Inorganic Chemicals Time Series Plots

Data filters

This report is filtered to only include:

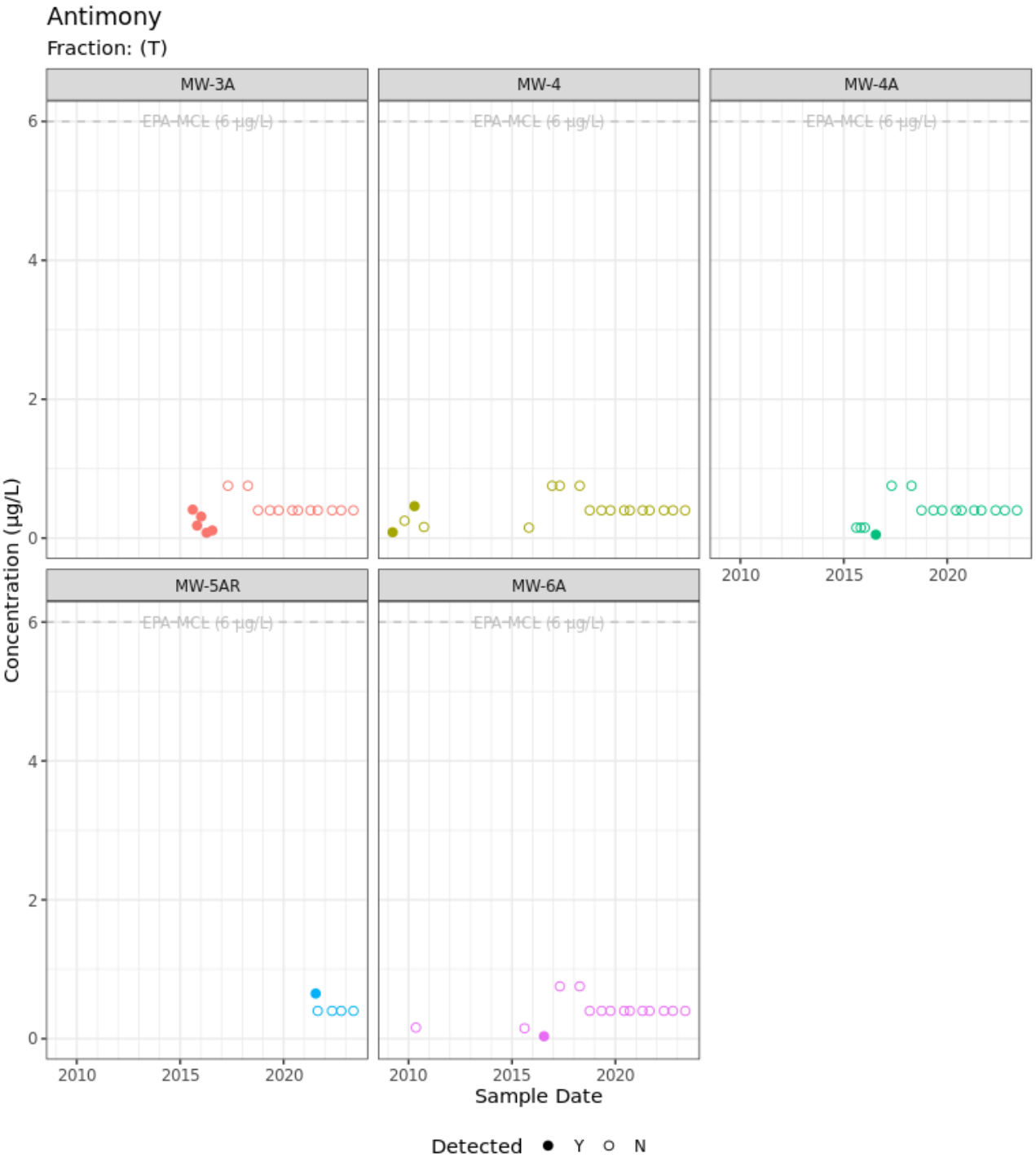
- **MW-3A, MW-4, MW-4A, MW-5AR, and MW-6A** from **Cell 4 Monitoring Well**
- Results from **01 January 2002** to **31 May 2023**
- Fraction: **T**
- Inorganic analytes: **All inorganics**

Graph notes

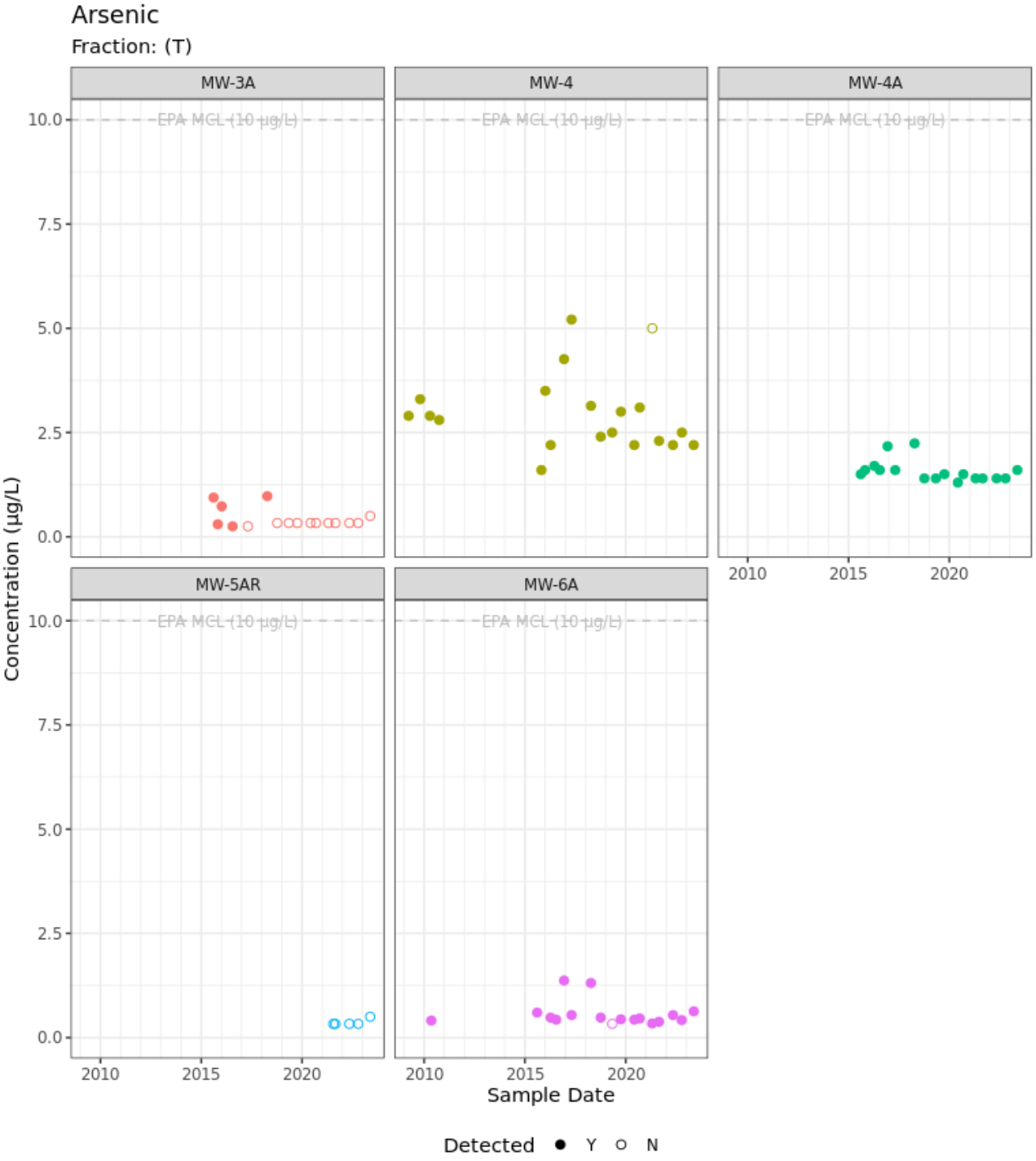
- When only the year is shown in the x-axis label, this represents the start of the year.

Inorganic chemical summaries

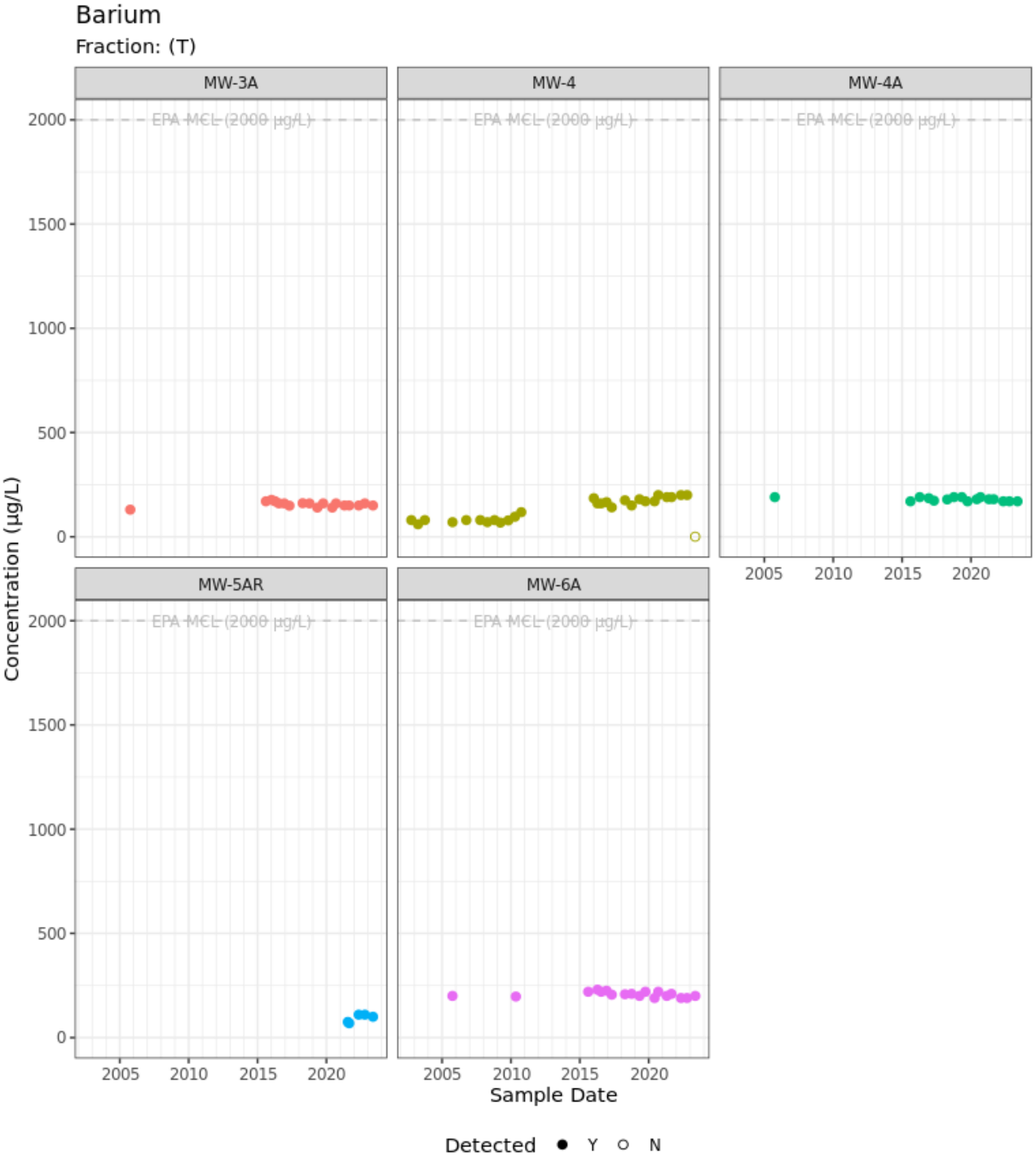
Antimony



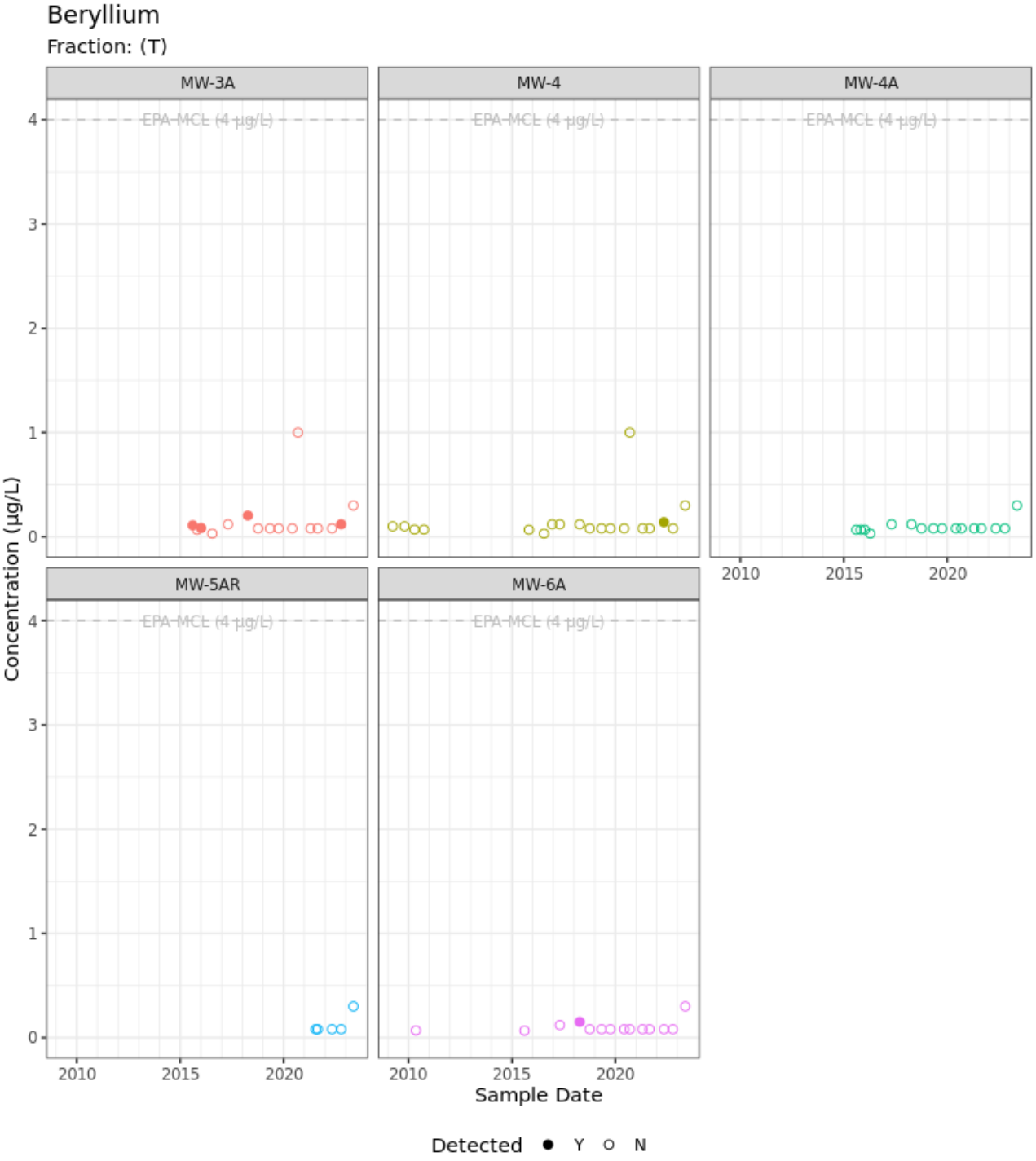
Arsenic


Arsenic
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
EPA MCL (10 µg/L)
Concentration (µg/L)
10.0
7.5
5.0
2.5
0.0
2010
2015
2020
Sample Date
Detected Y N

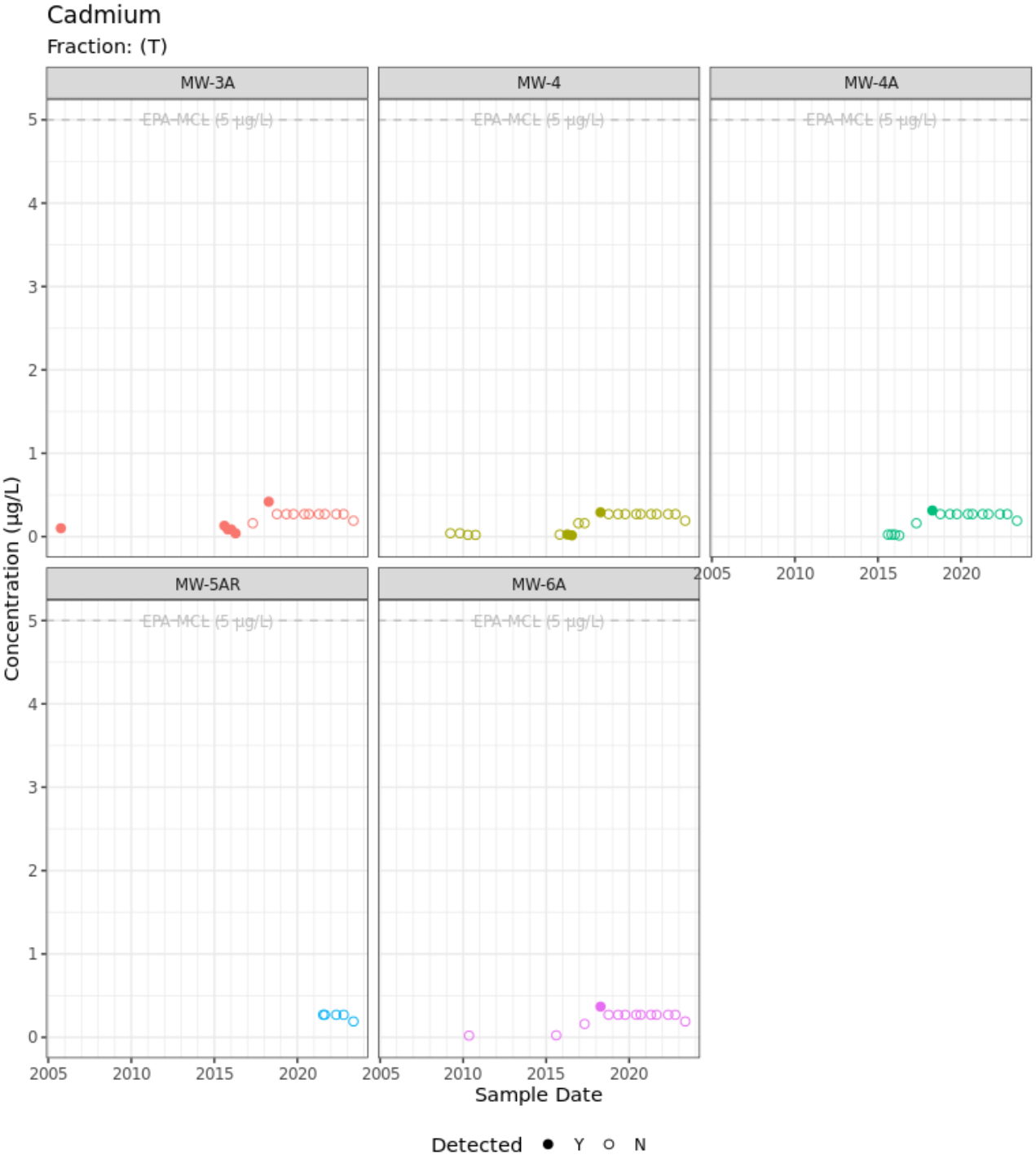
Barium


Barium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
EPA MCL (2000 µg/L)
Concentration (µg/L)
2000
1500
1000
500
0
2005
2010
2015
2020
Sample Date
Detected
Y
N

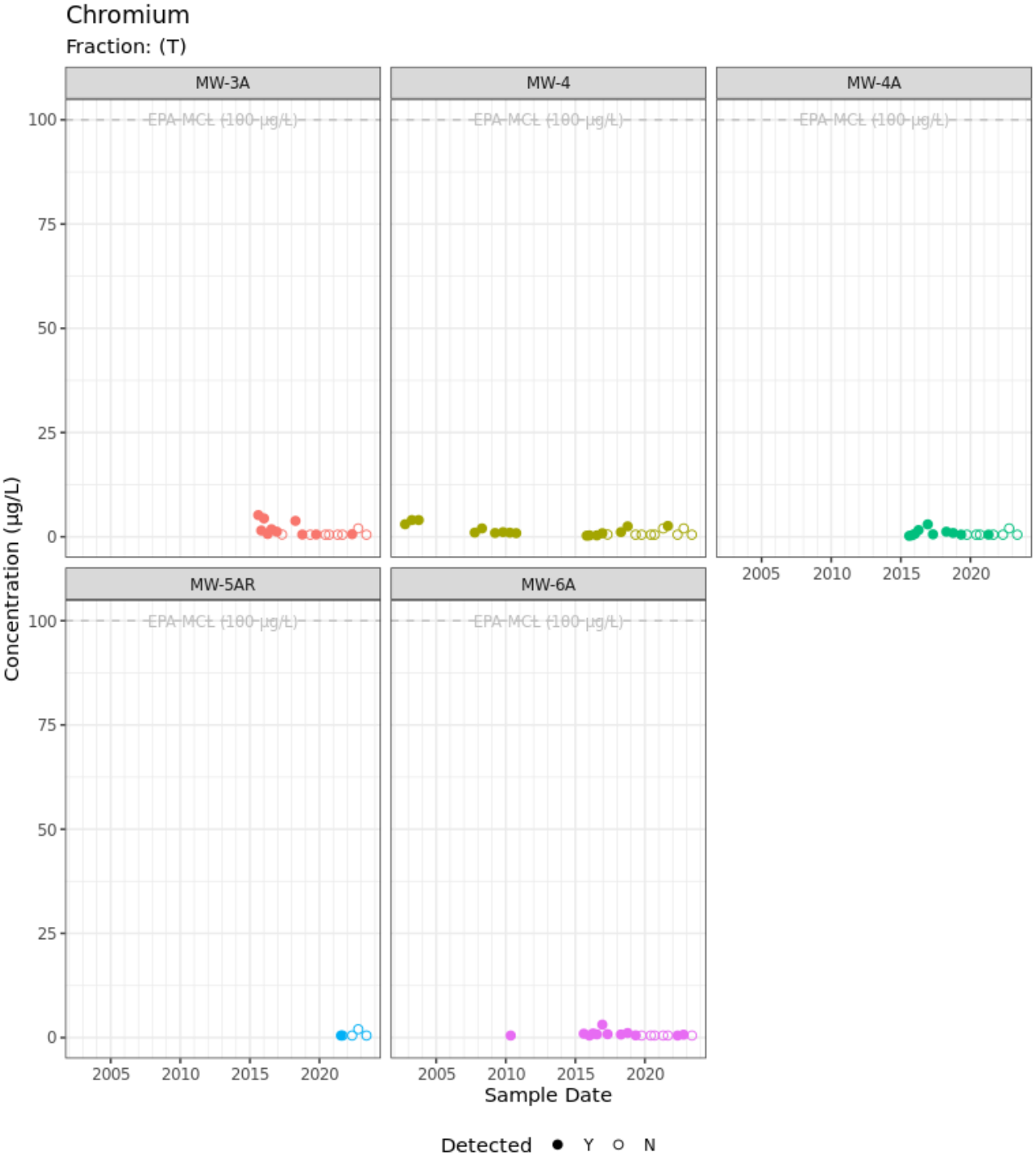
Beryllium


Beryllium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
EPA MCL (4 µg/L)
Concentration (µg/L)
0
1
2
3
4
2010
2015
2020
Sample Date
Detected
Y
N

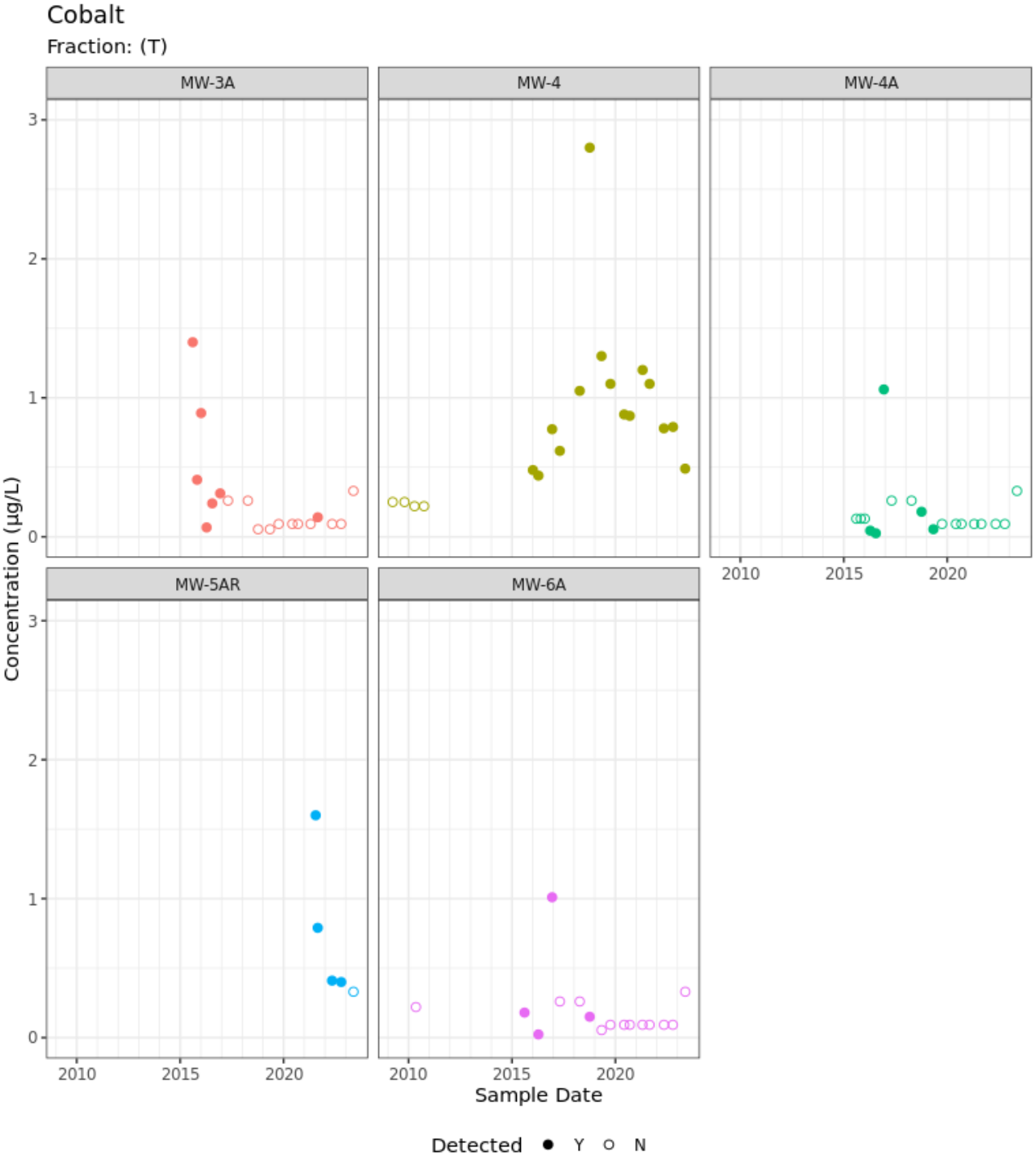
Cadmium


Cadmium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
EPA-MCL (5 µg/L)
Concentration (µg/L)
0
1
2
3
4
5
2005
2010
2015
2020
Sample Date
Detected
Y
N

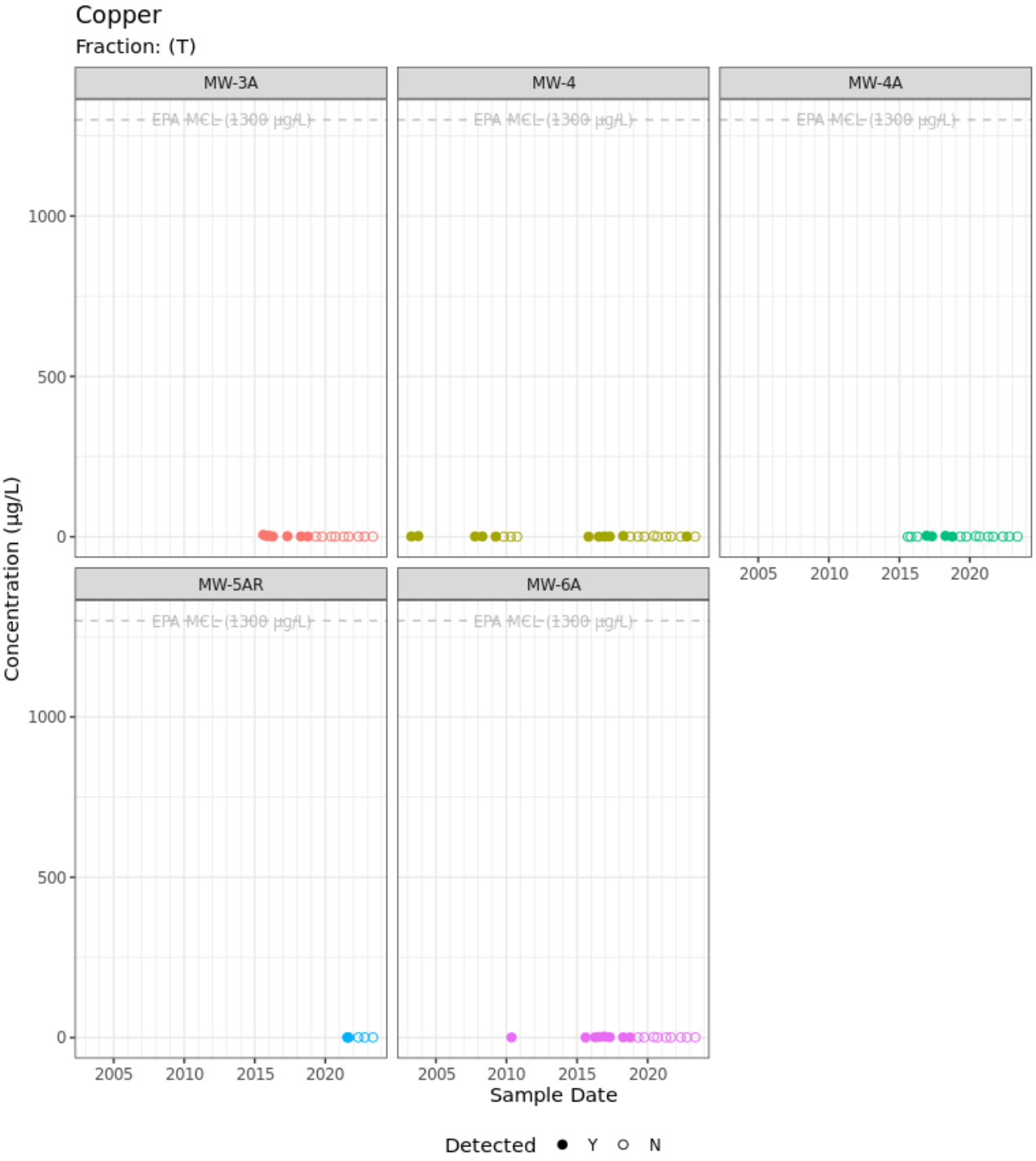
Chromium


Chromium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
EPA MCL (100 µg/L)
Concentration (µg/L)
100
75
50
25
0
2005
2010
2015
2020
Sample Date
Detected
Y
N

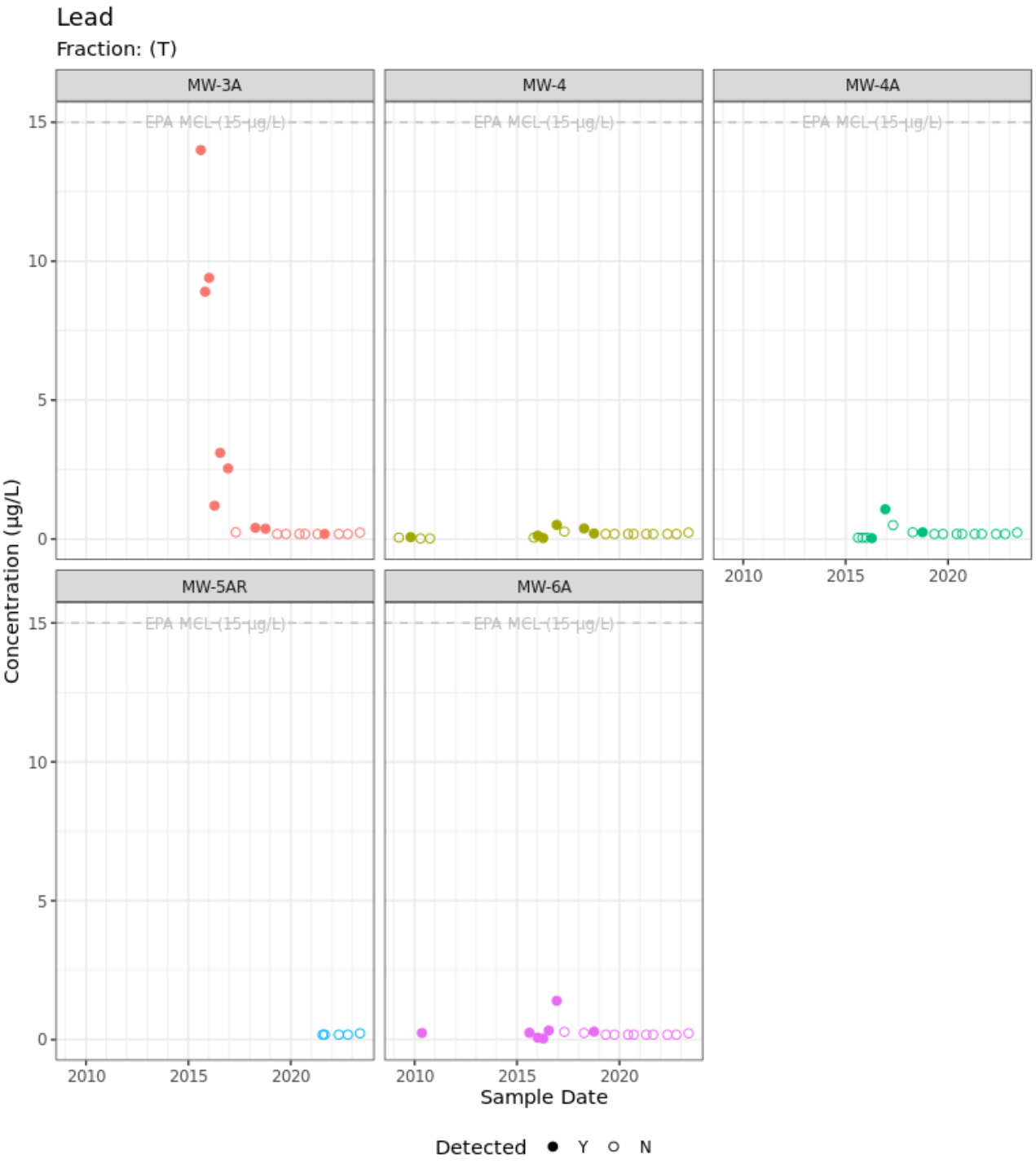
Cobalt


Cobalt
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
0
1
2
3
2010
2015
2020
Sample Date
Detected
Y
N

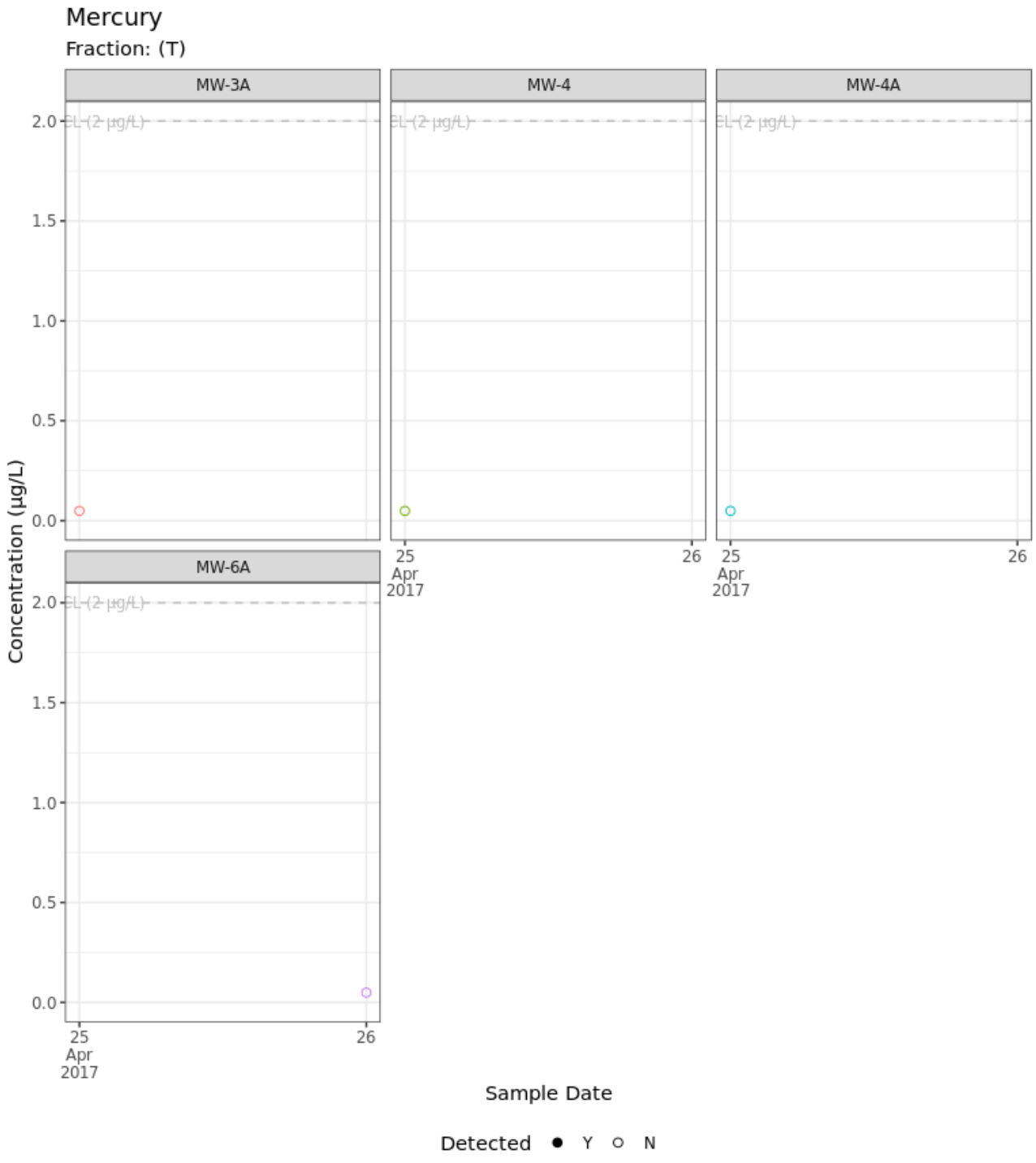
Copper


Copper
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
EPA MCL (1300 µg/L)
Concentration (µg/L)
0
500
1000
2005
2010
2015
2020
Sample Date
Detected
Y
N

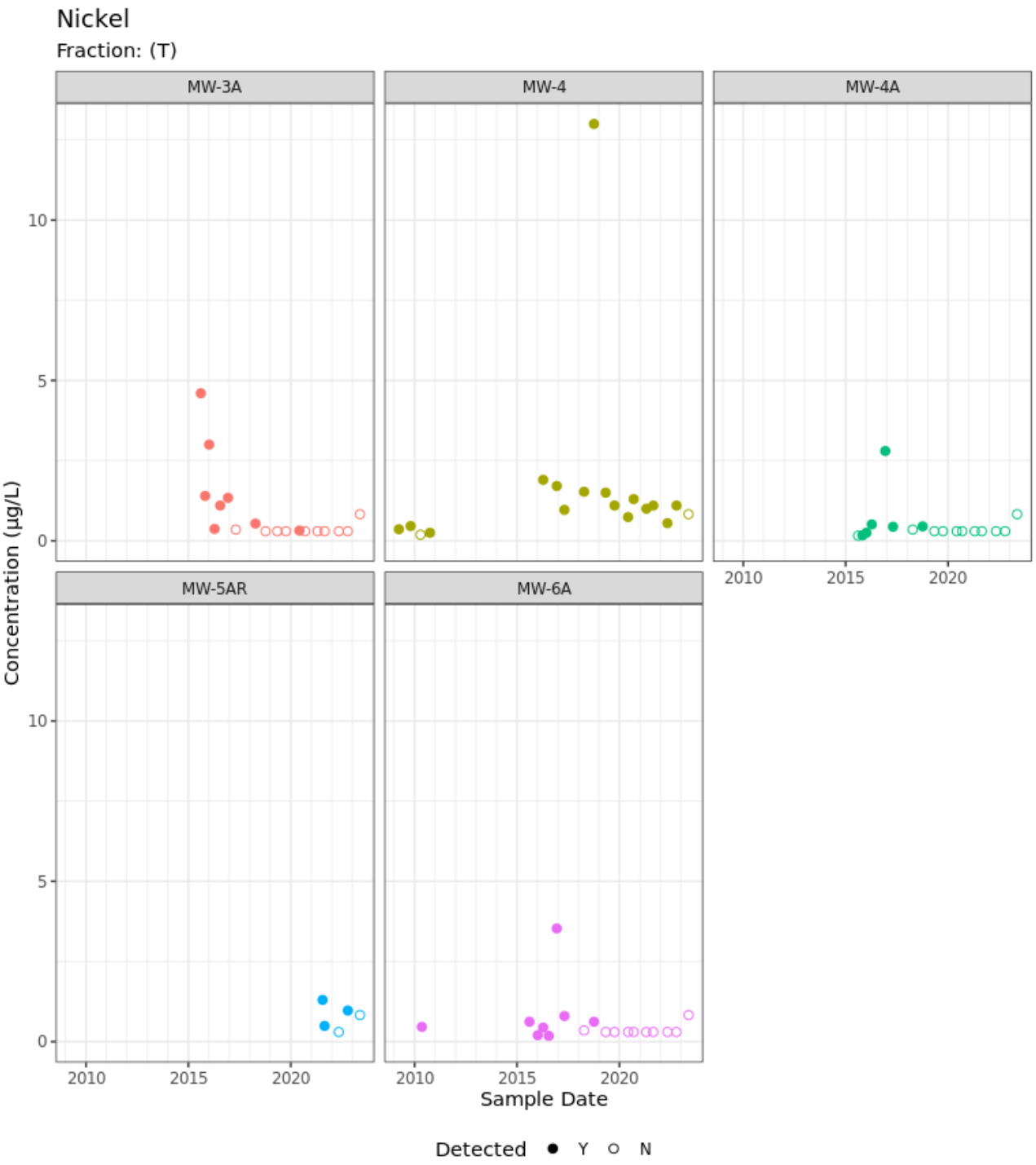
Lead


Lead
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
EPA MCL (15 µg/L)
Concentration (µg/L)
0
5
10
15
2010
2015
2020
Sample Date
Detected
Y
N

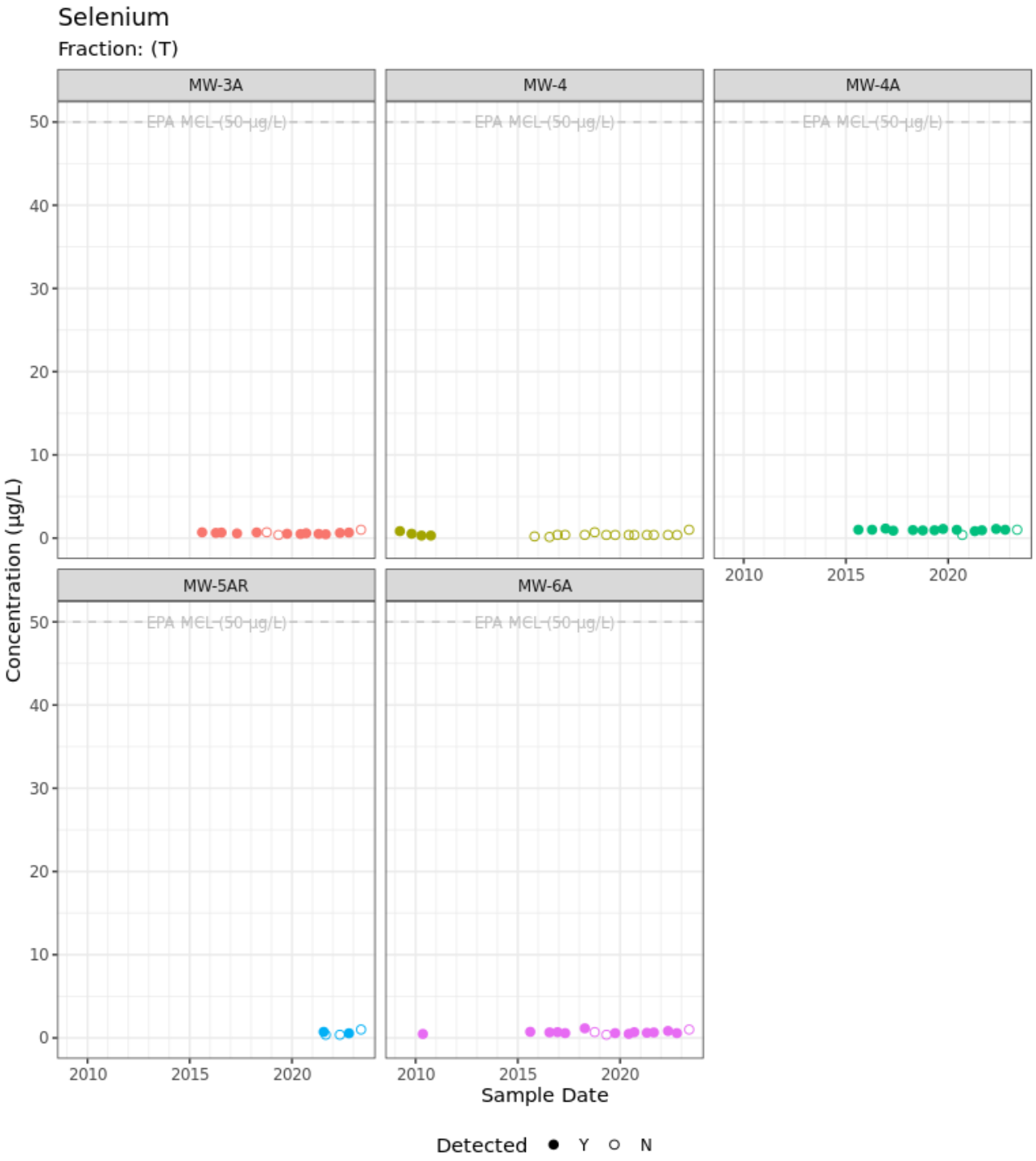
Mercury


Mercury
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-6A
EL (2 µg/L)
Concentration (µg/L)
2.0
1.5
1.0
0.5
0.0
25
Apr
2017
26
Sample Date
Detected
Y
N

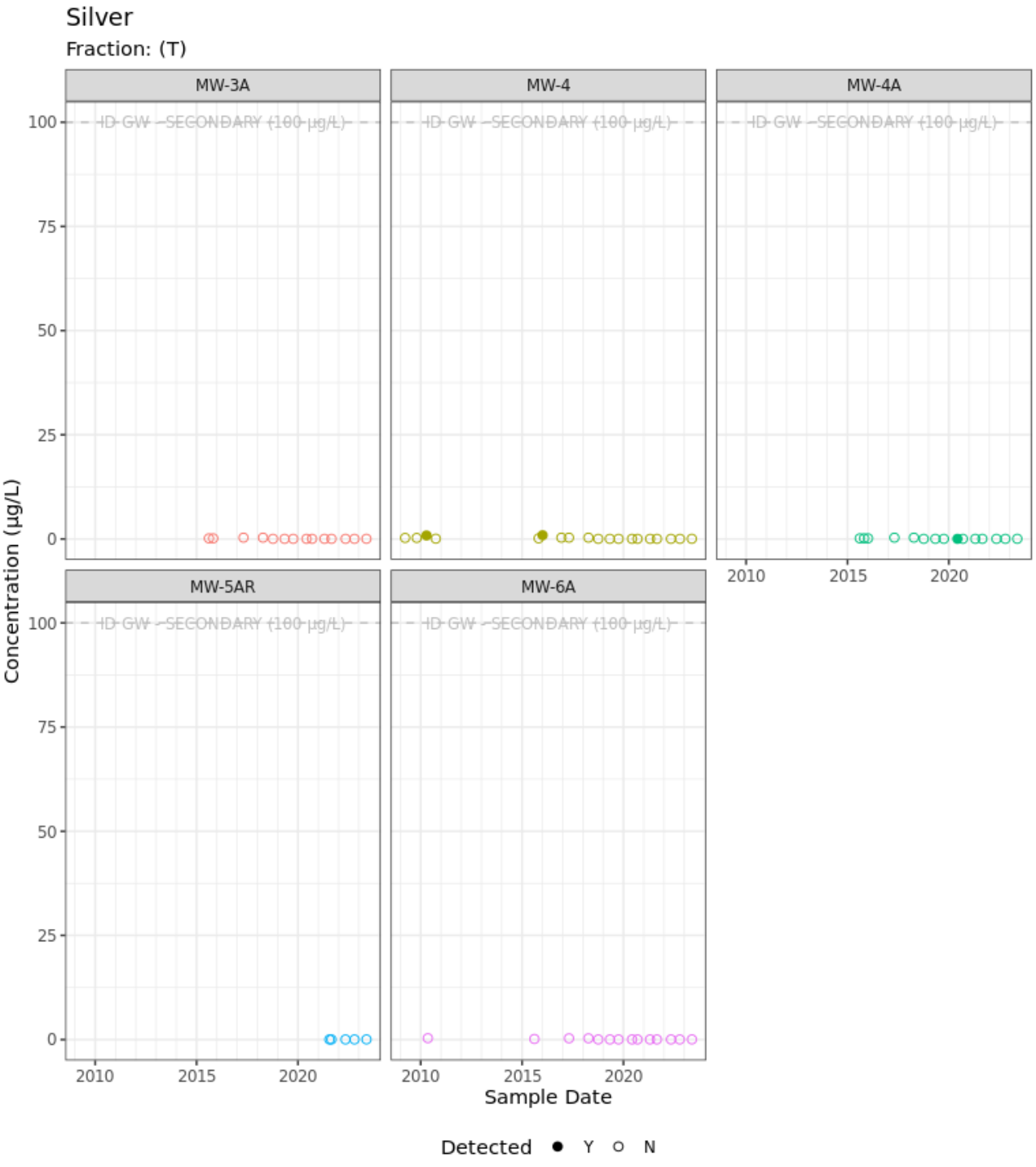
Nickel


Nickel
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
0
5
10
2010
2015
2020
Sample Date
Detected
Y
N

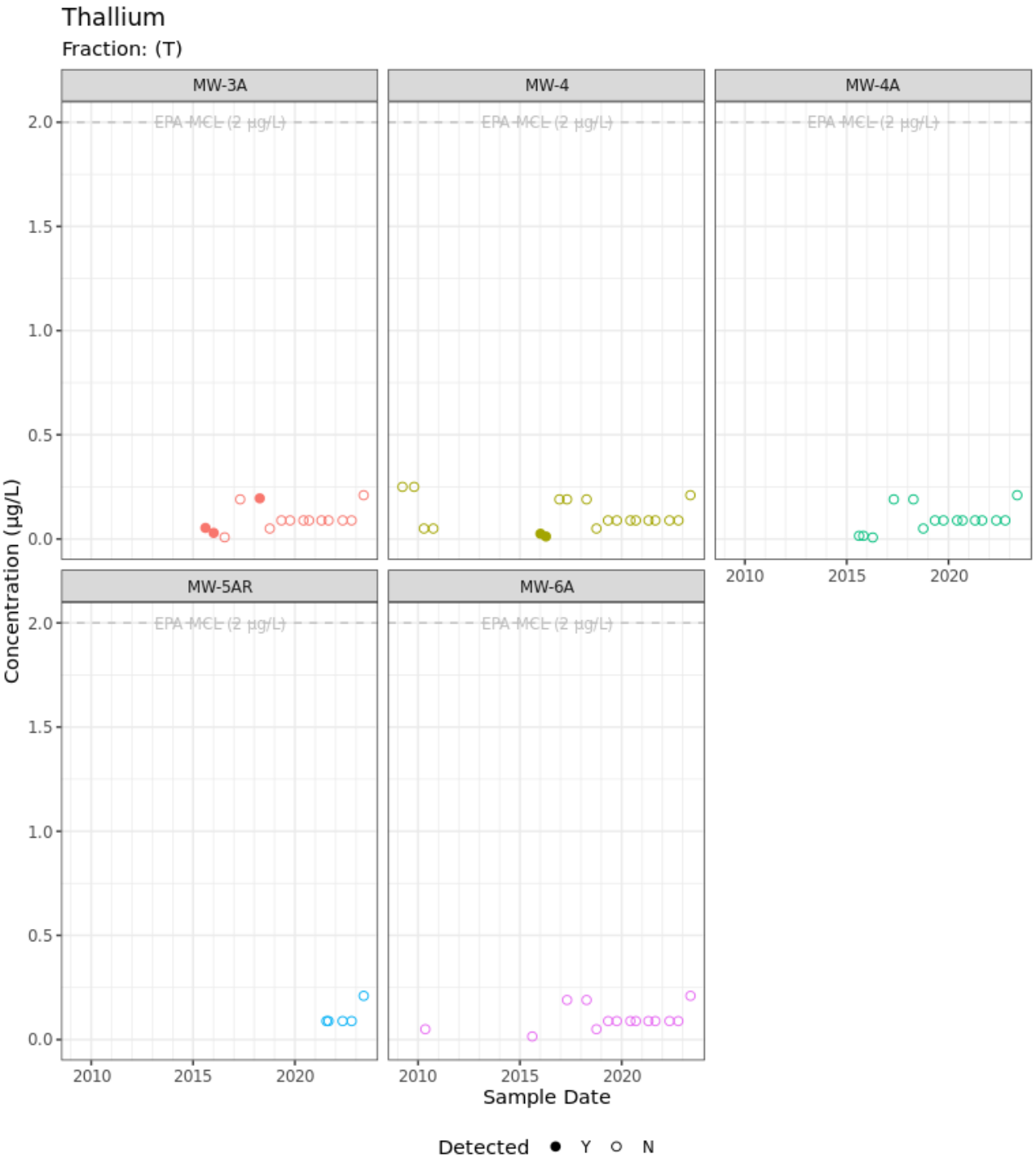
Selenium


Selenium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
EPA MCL (50 µg/L)
Concentration (µg/L)
0
10
20
30
40
50
2010
2015
2020
Sample Date
Detected
Y
N

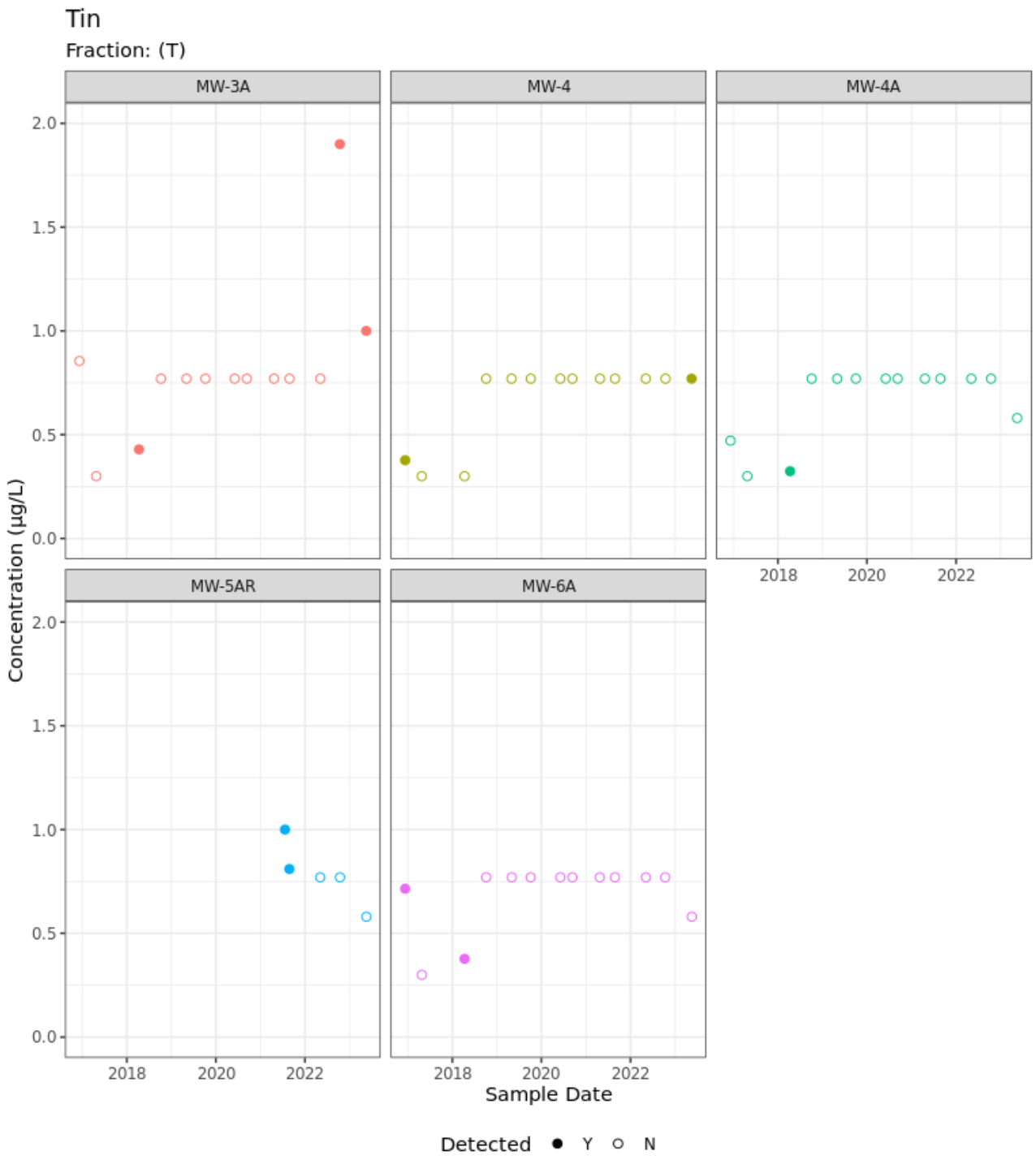
Silver


Silver
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
ID GW - SECONDARY (100 µg/L)
Concentration (µg/L)
100
75
50
25
0
2010
2015
2020
Sample Date
Detected Y N

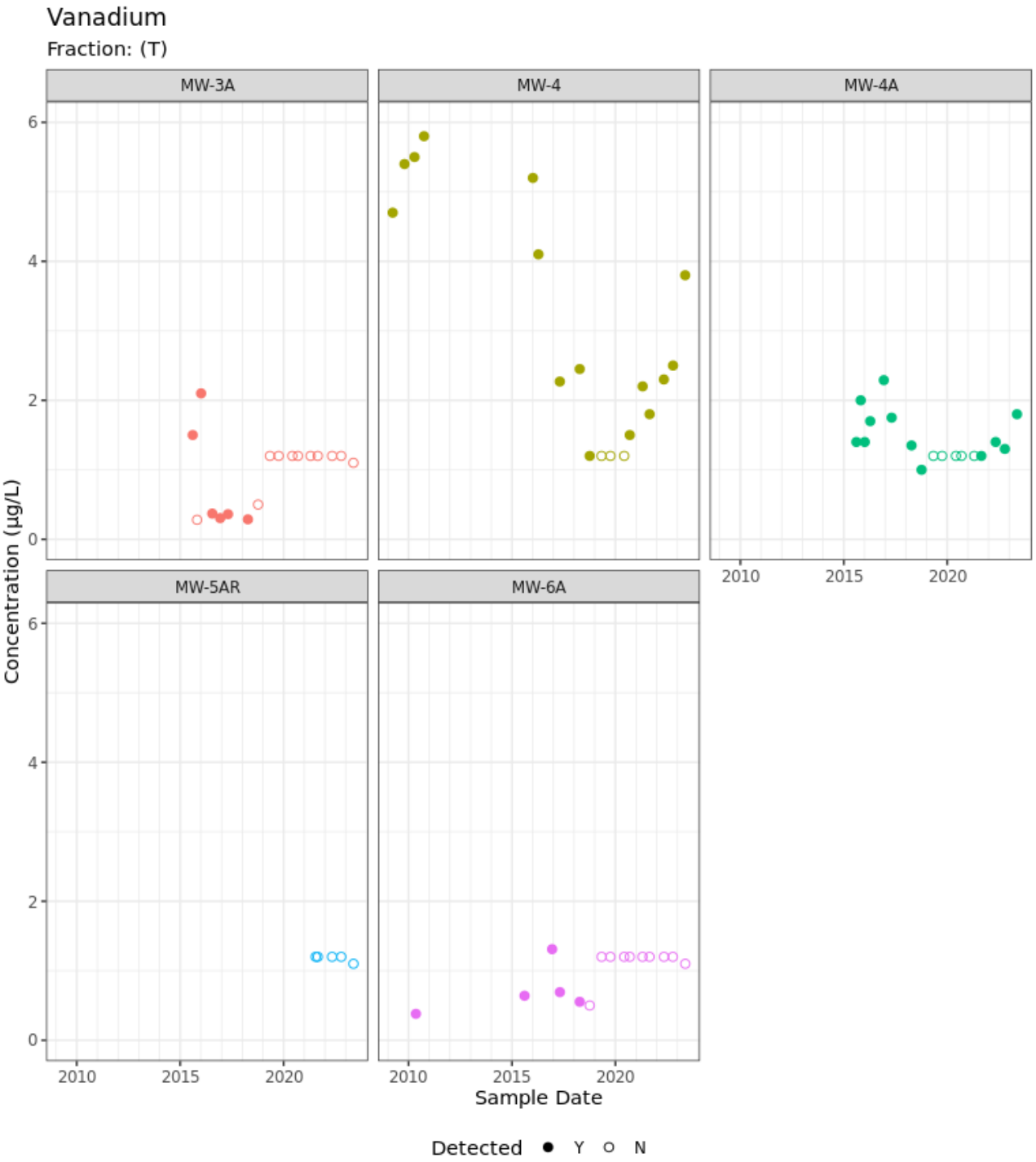
Thallium


Thallium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
EPA MCL (2 µg/L)
Concentration (µg/L)
2.0
1.5
1.0
0.5
0.0
2010
2015
2020
Sample Date
Detected
Y
N

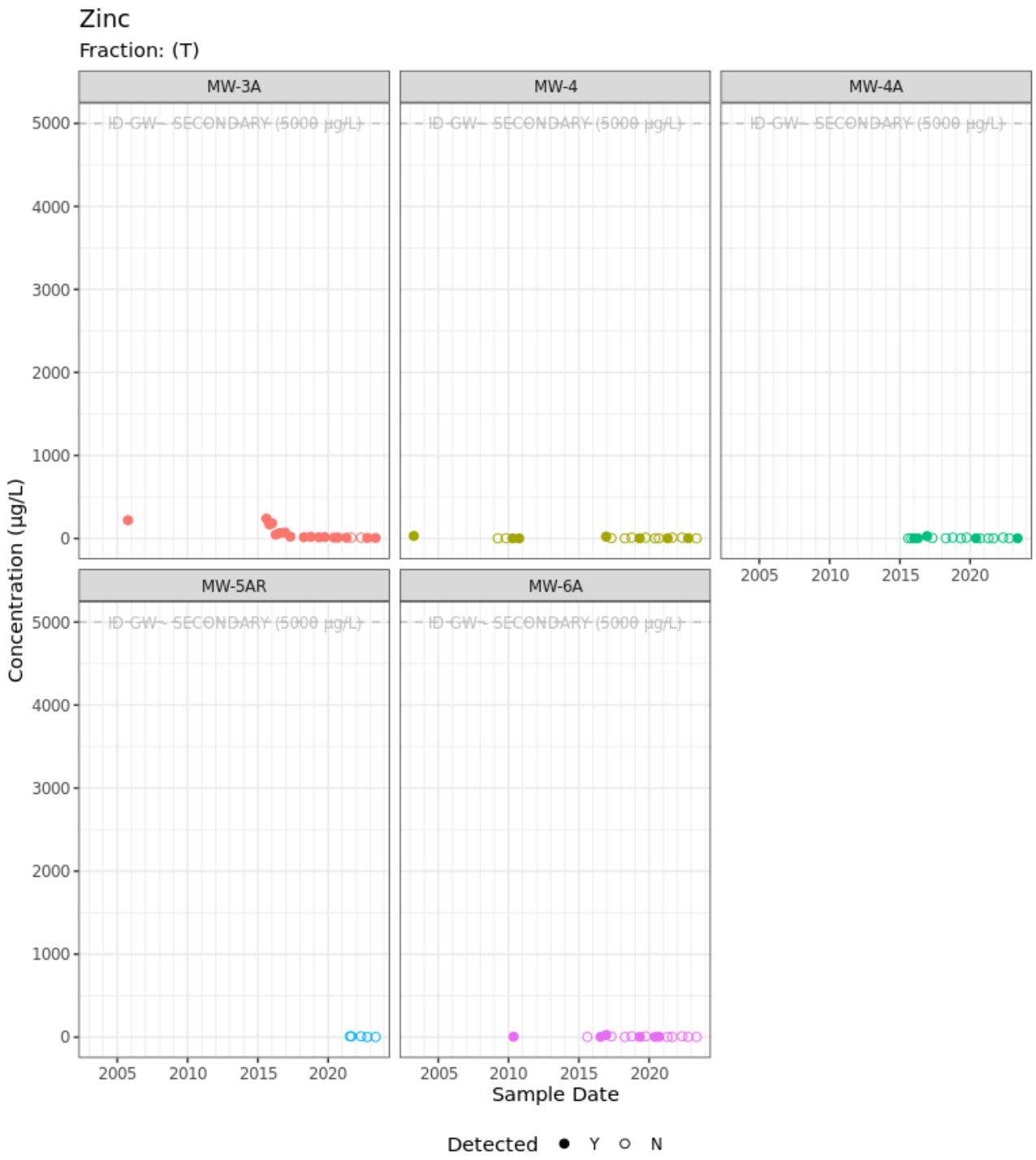
Tin


Tin
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
0.0
0.5
1.0
1.5
2.0
2018
2020
2022
Sample Date
Detected
Y
N

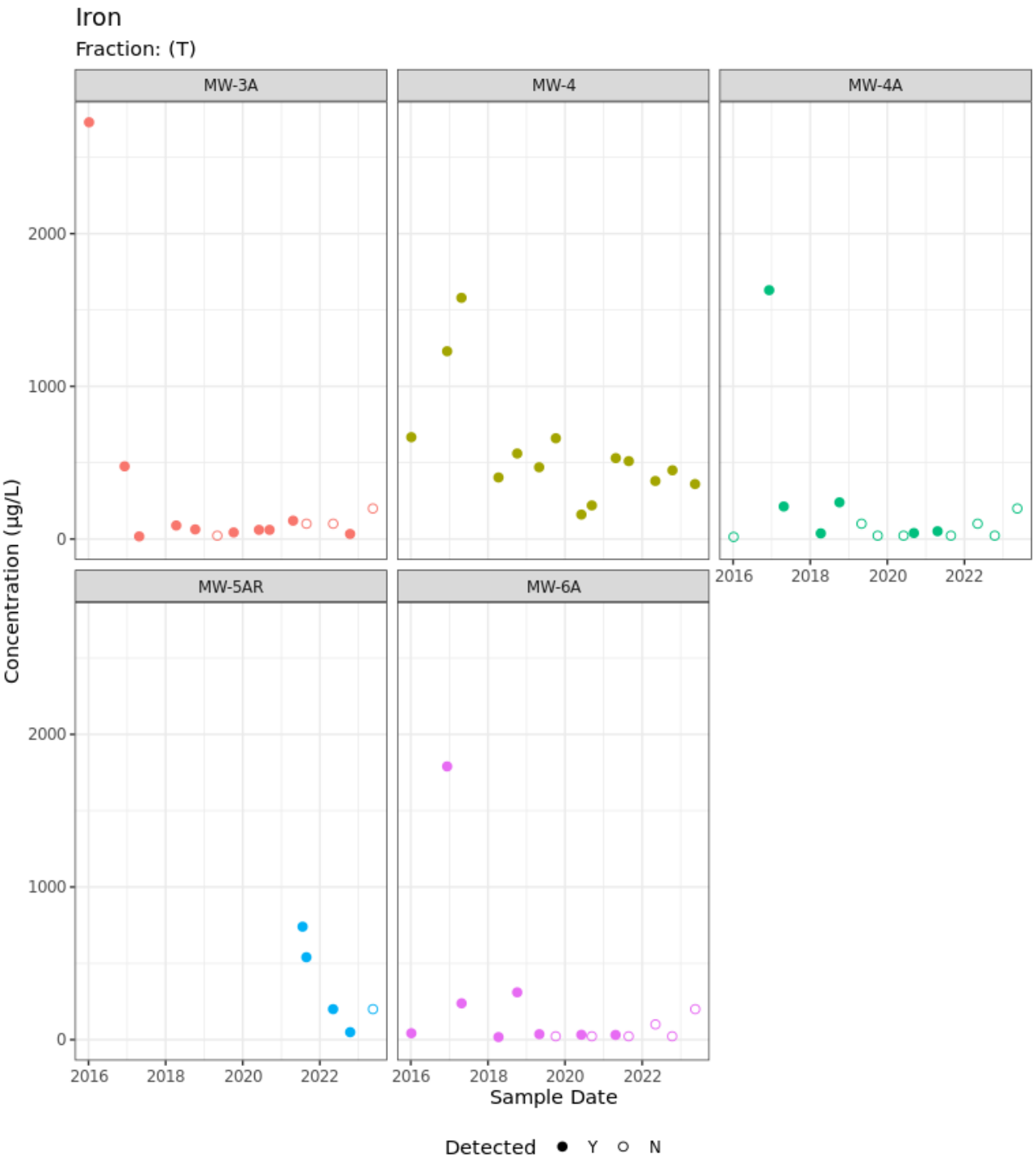
Vanadium


Vanadium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
0
2
4
6
2010
2015
2020
Sample Date
Detected
Y
N

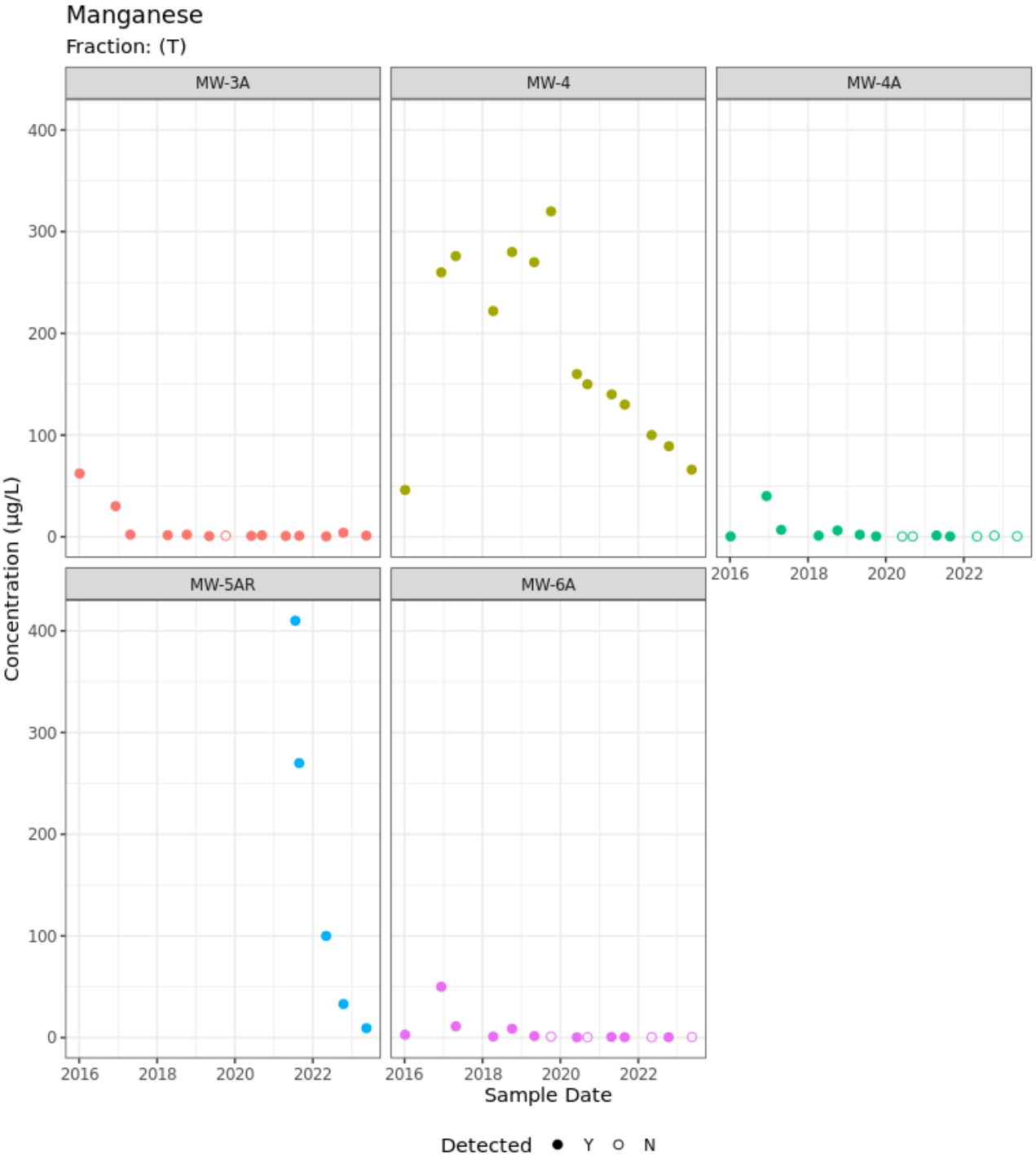
Zinc


Zinc
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
ID-GW~ SECONDARY (5000 µg/L)
5000
4000
3000
2000
1000
0
Concentration (µg/L)
2005
2010
2015
2020
Sample Date
Detected
Y
N

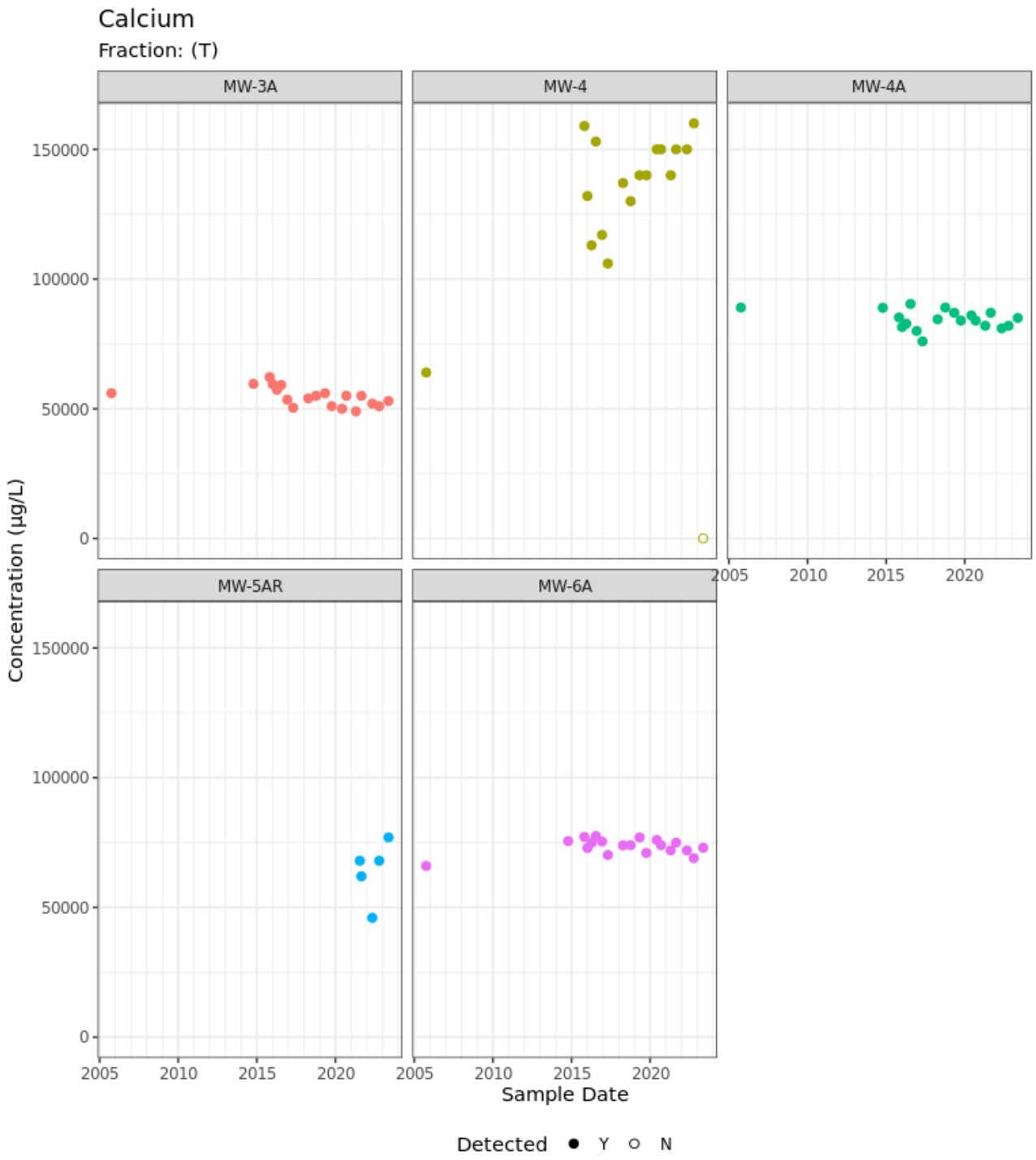
Iron


Iron
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
0
1000
2000
2016
2018
2020
2022
Sample Date
Detected
Y
N

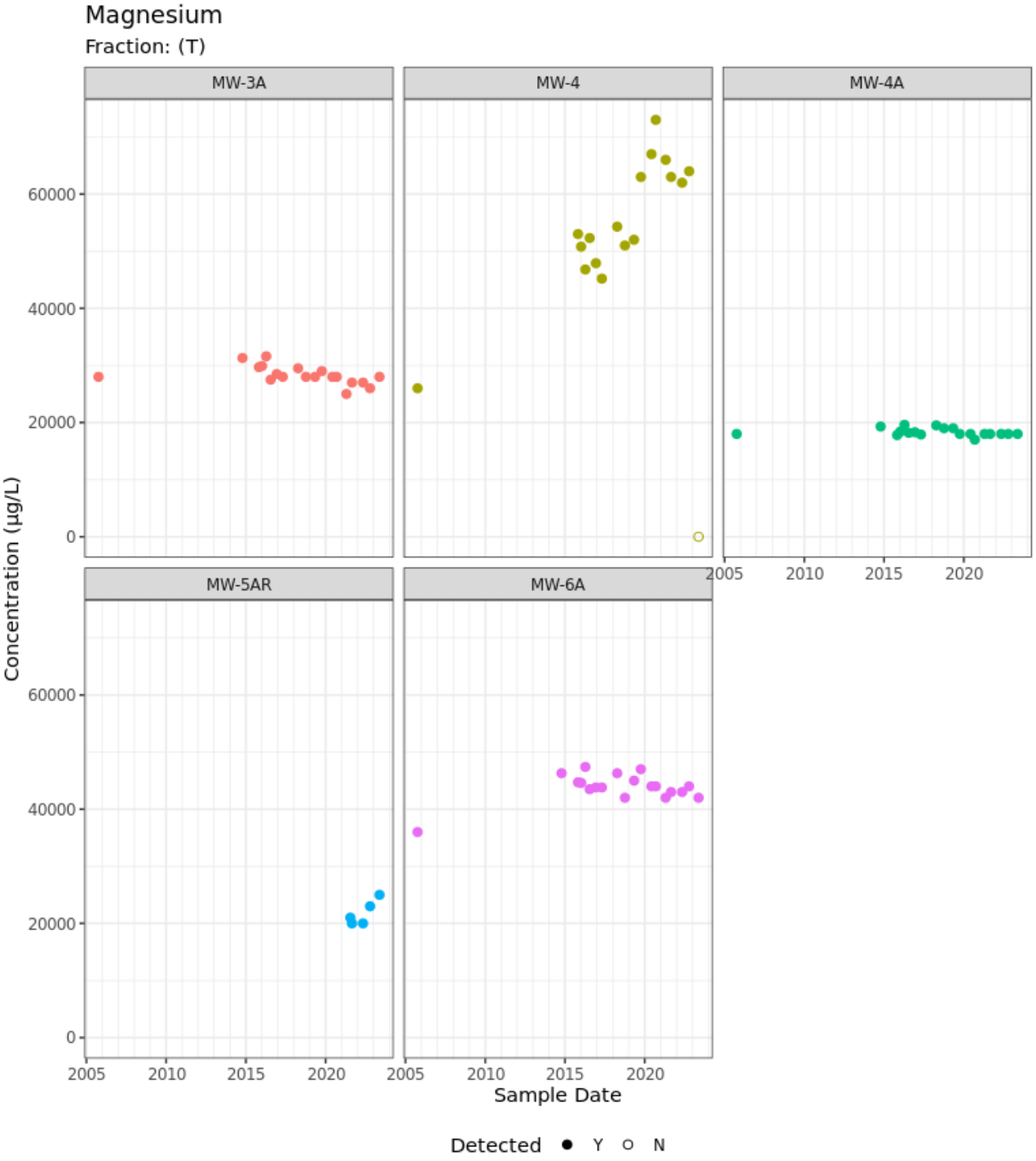
Manganese


Manganese
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
0
100
200
300
400
2016
2018
2020
2022
Sample Date
Detected
Y
N

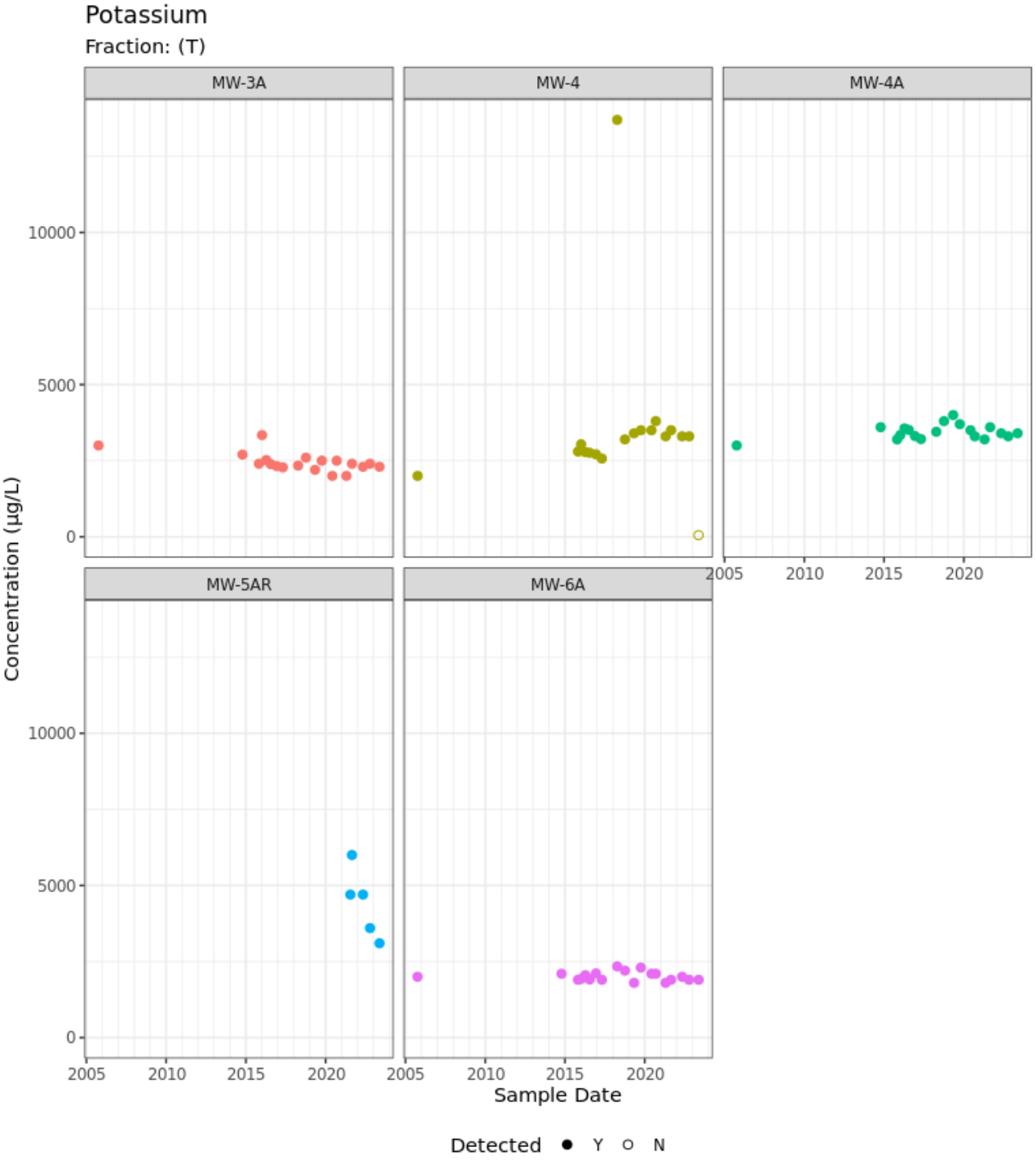
Calcium


Calcium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
150000
100000
50000
0
2005
2010
2015
2020
Sample Date
Detected
Y
N

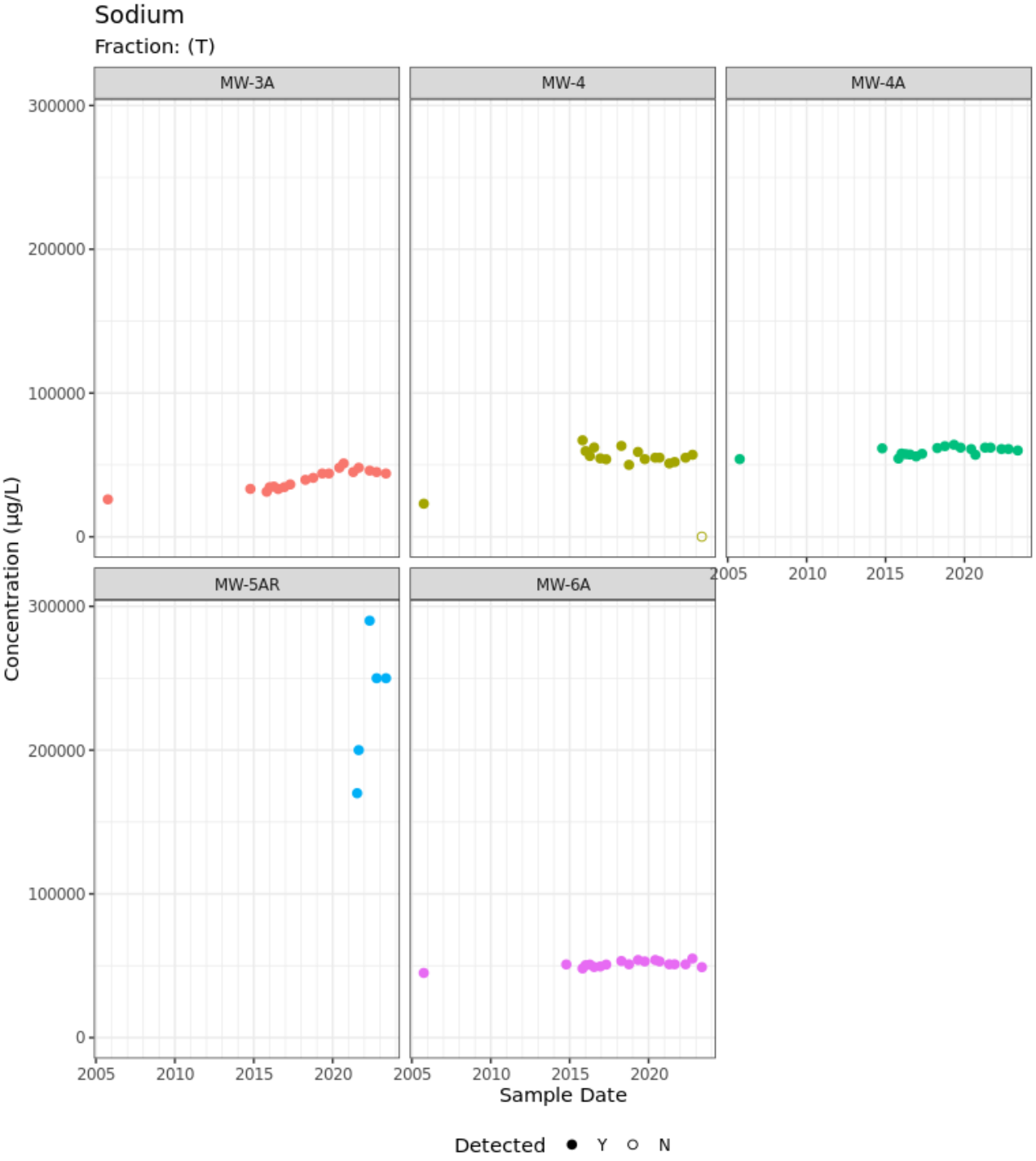
Magnesium


Magnesium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
0
20000
40000
60000
2005
2010
2015
2020
Sample Date
Detected
Y
N

Potassium


Potassium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
10000
5000
0
2005
2010
2015
2020
Sample Date
Detected
Y
N

Sodium


Sodium
Fraction: (T)
MW-3A
MW-4
MW-4A
MW-5AR
MW-6A
Concentration (µg/L)
300000
200000
100000
0
2005
2010
2015
2020
Sample Date
Detected
Y
N

Inorganic Chemicals Time Series Plots

Data filters

This report is filtered to only include:

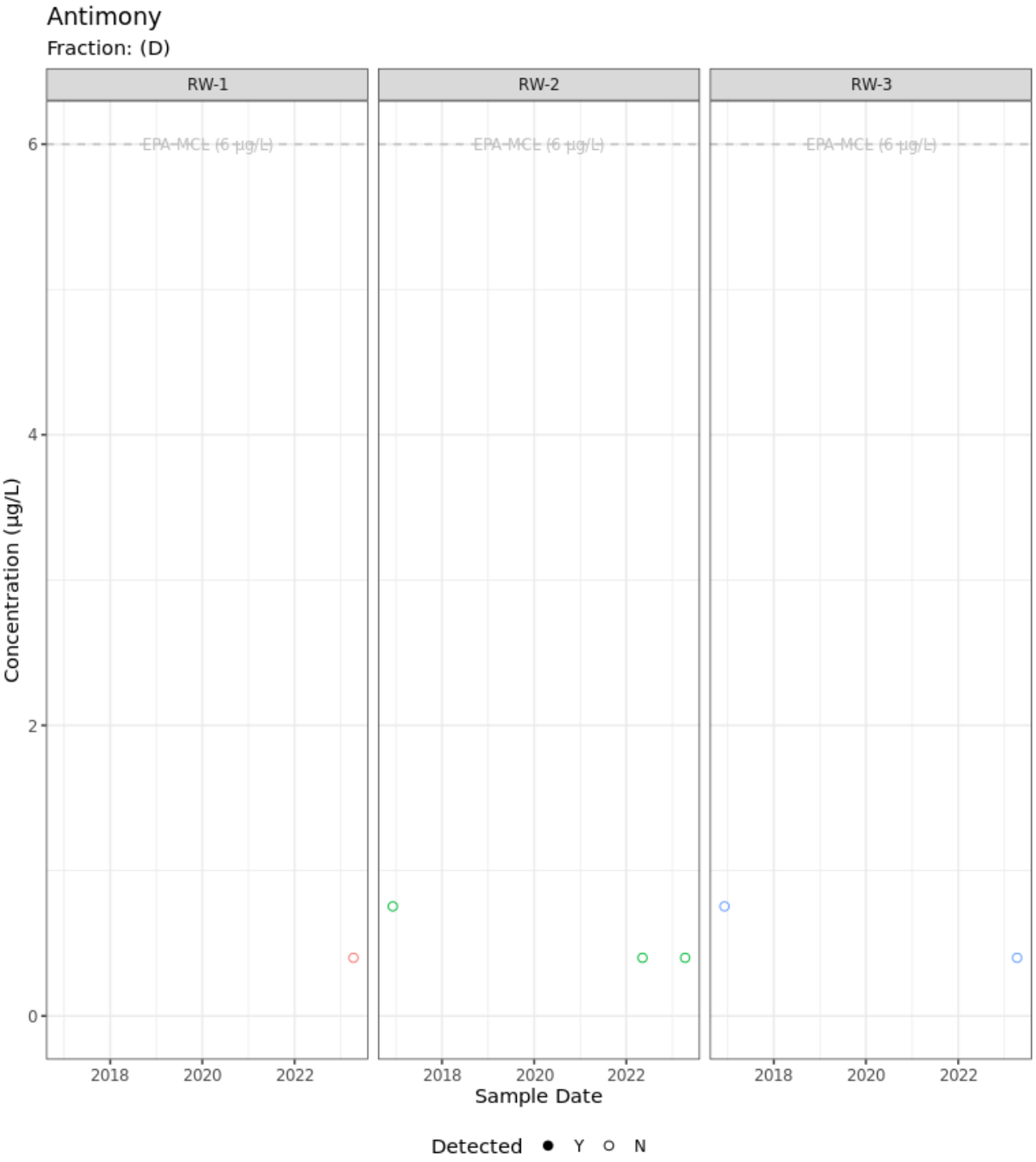
- **RW-1, RW-2, and RW-3** from **Remediation System Extraction Well**
- Results from **01 January 2002** to **30 April 2023**
- Fraction: **D**
- Inorganic analytes: **All inorganics**

Graph notes

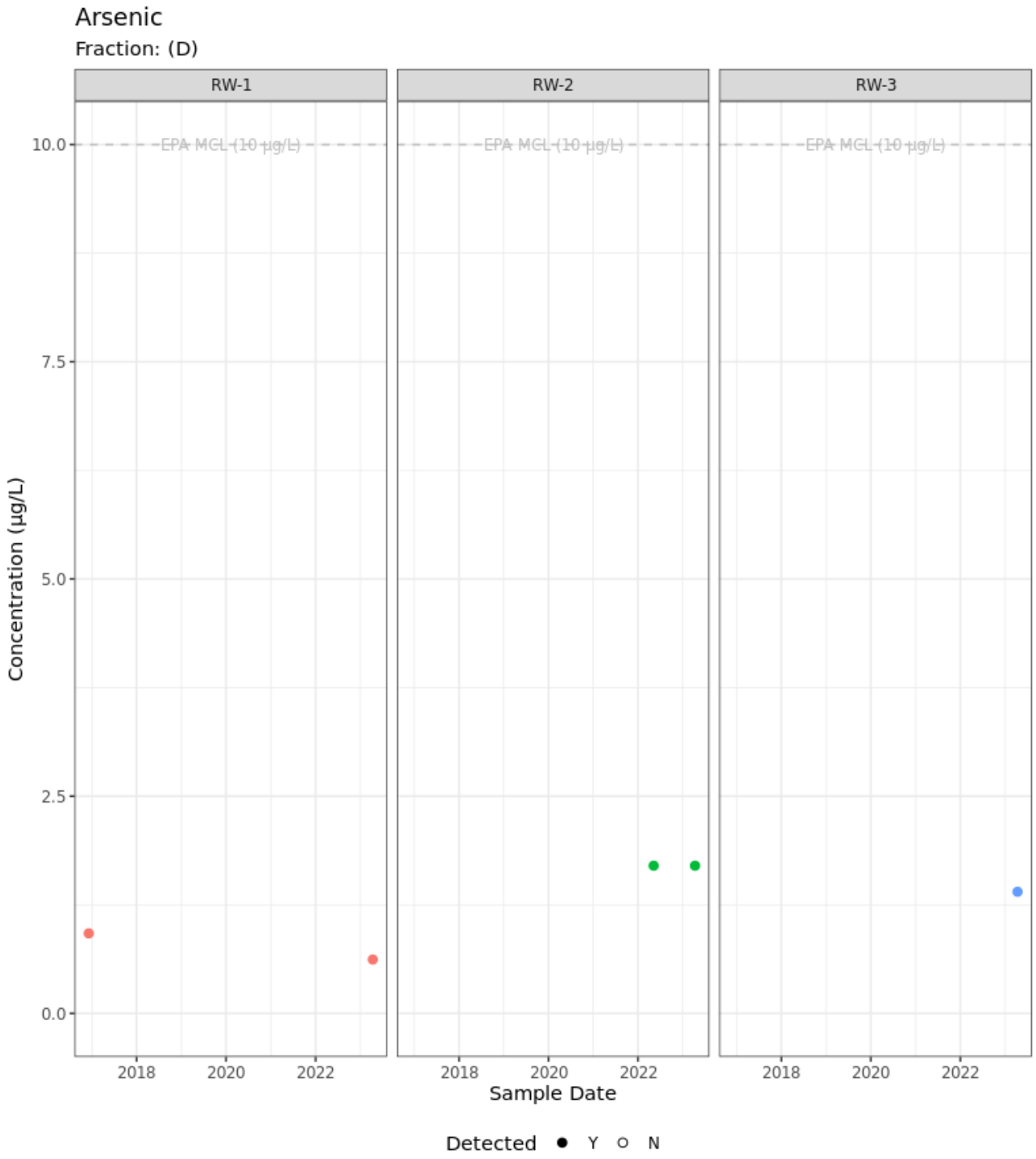
- When only the year is shown in the x-axis label, this represents the start of the year.

Inorganic chemical summaries

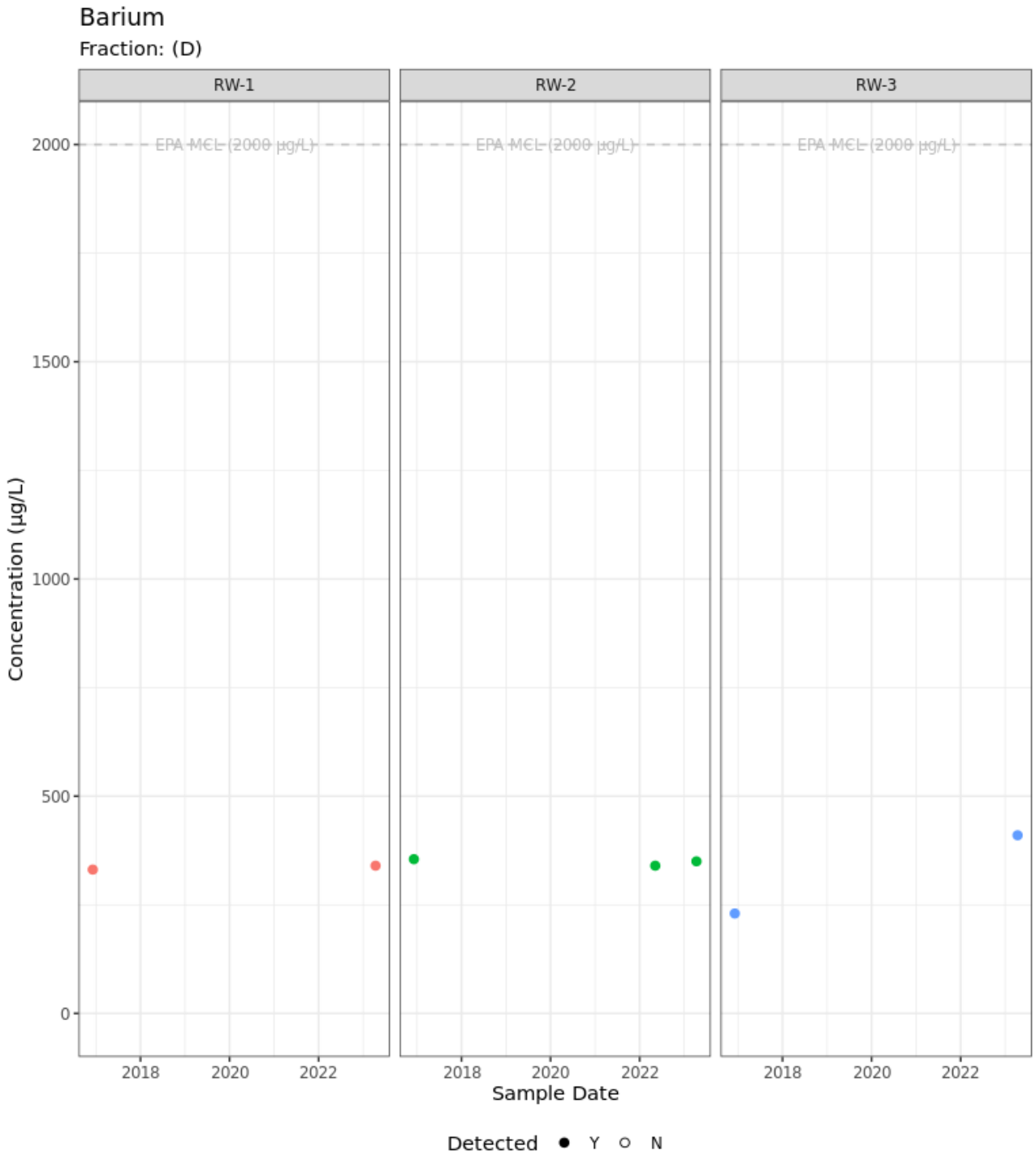
Antimony



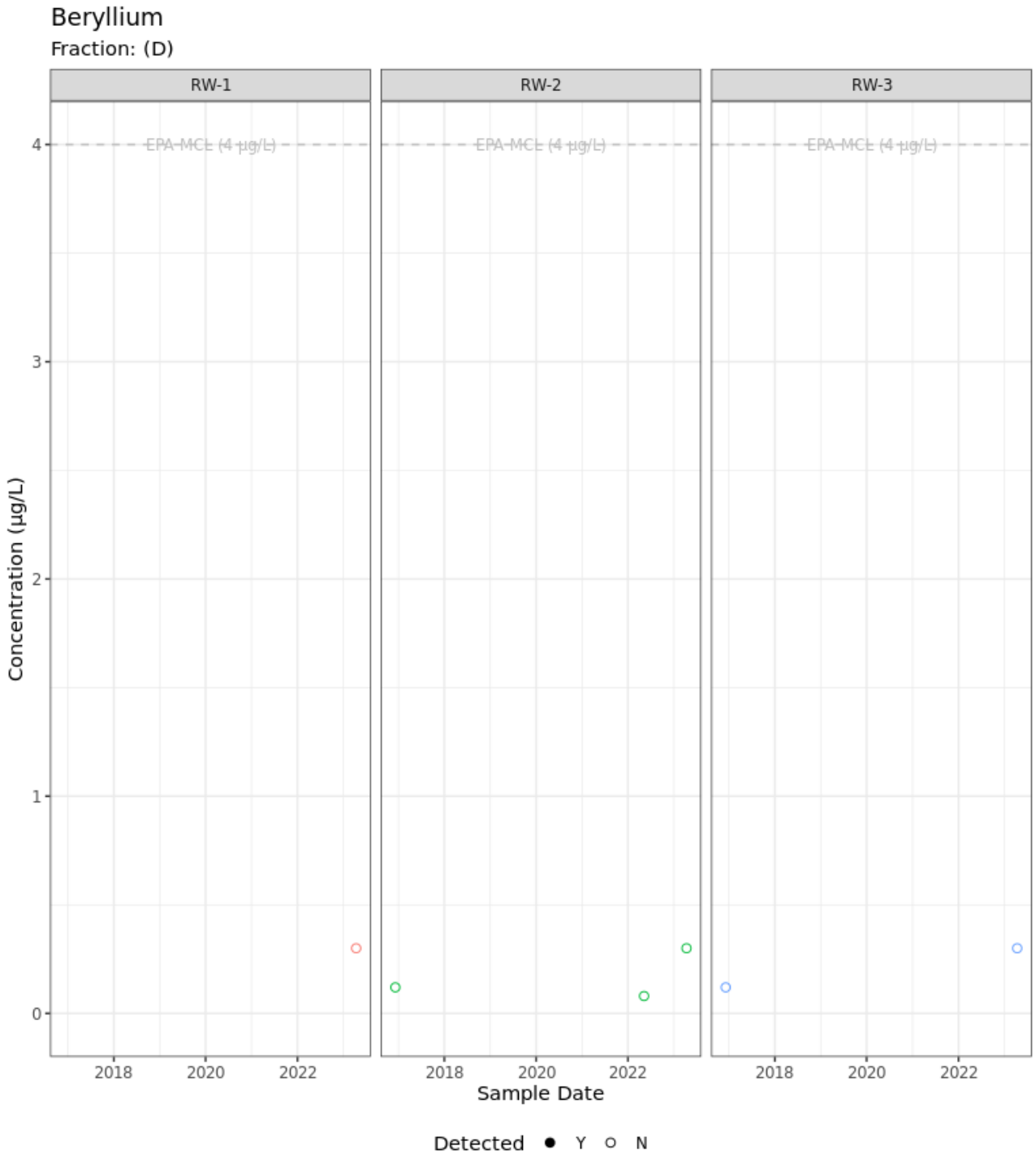
Arsenic


Arsenic
Fraction: (D)
RW-1
RW-2
RW-3
EPA MCL (10 µg/L)
10.0
7.5
5.0
2.5
0.0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

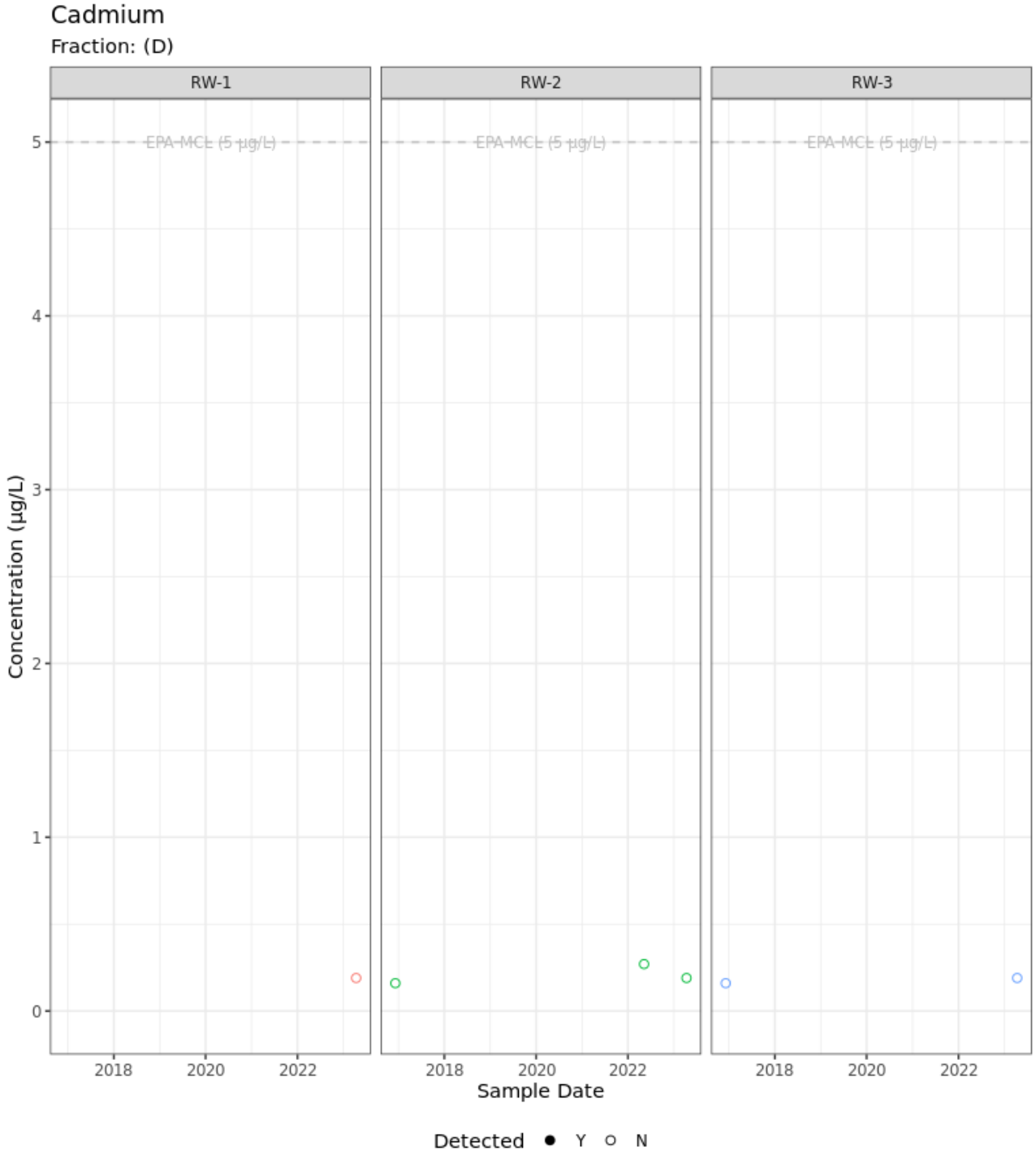
Barium


Barium
Fraction: (D)
RW-1
RW-2
RW-3
EPA MCL (2000 µg/L)
2000
1500
1000
500
0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

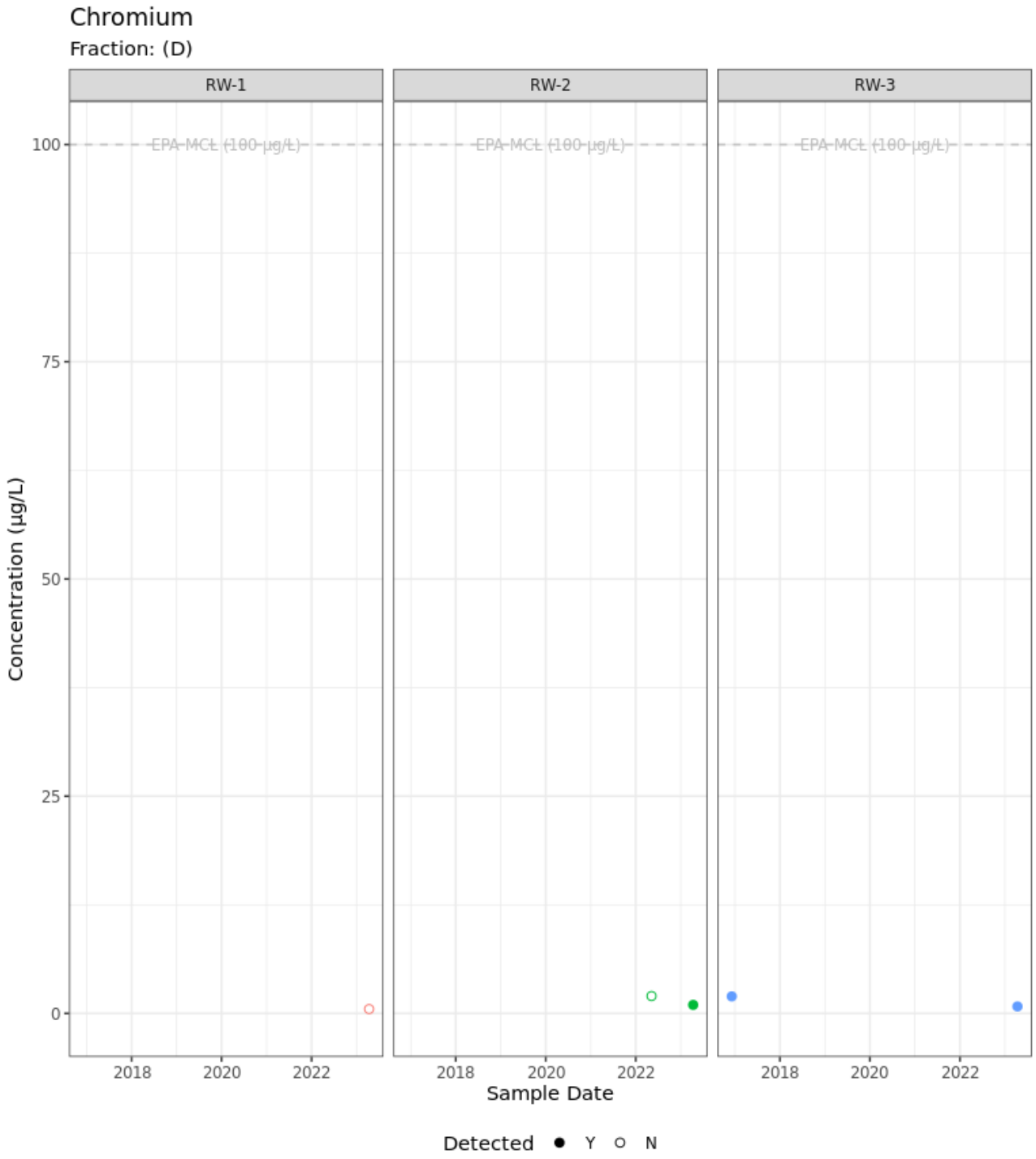
Beryllium


Beryllium
Fraction: (D)
RW-1
RW-2
RW-3
EPA MCL (4 µg/L)
Concentration (µg/L)
0
1
2
3
4
2018
2020
2022
Sample Date
Detected
Y
N

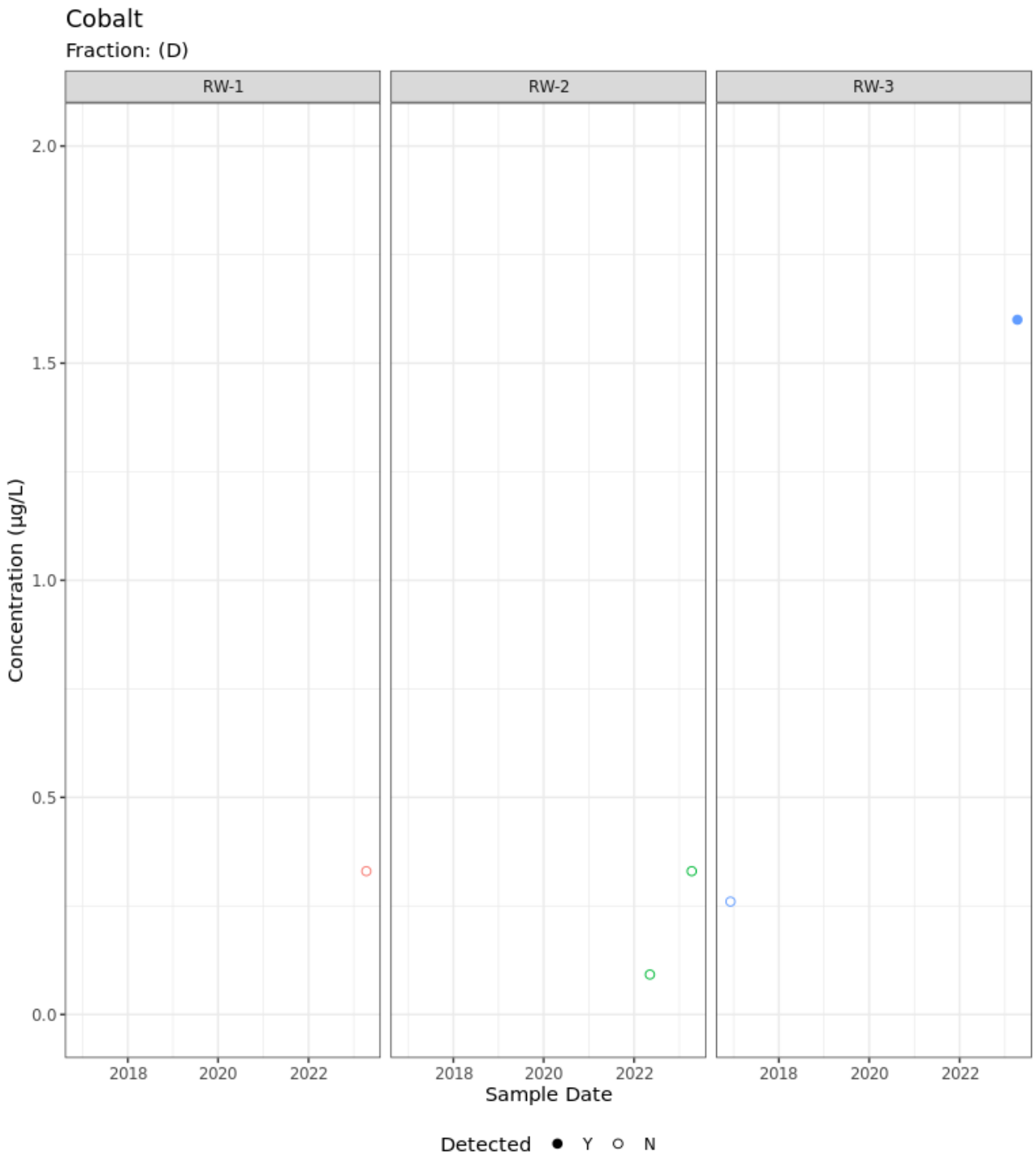
Cadmium


Cadmium
Fraction: (D)
RW-1
RW-2
RW-3
EPA-MCL (5 µg/L)
Concentration (µg/L)
0
1
2
3
4
5
2018
2020
2022
Sample Date
Detected
Y
N

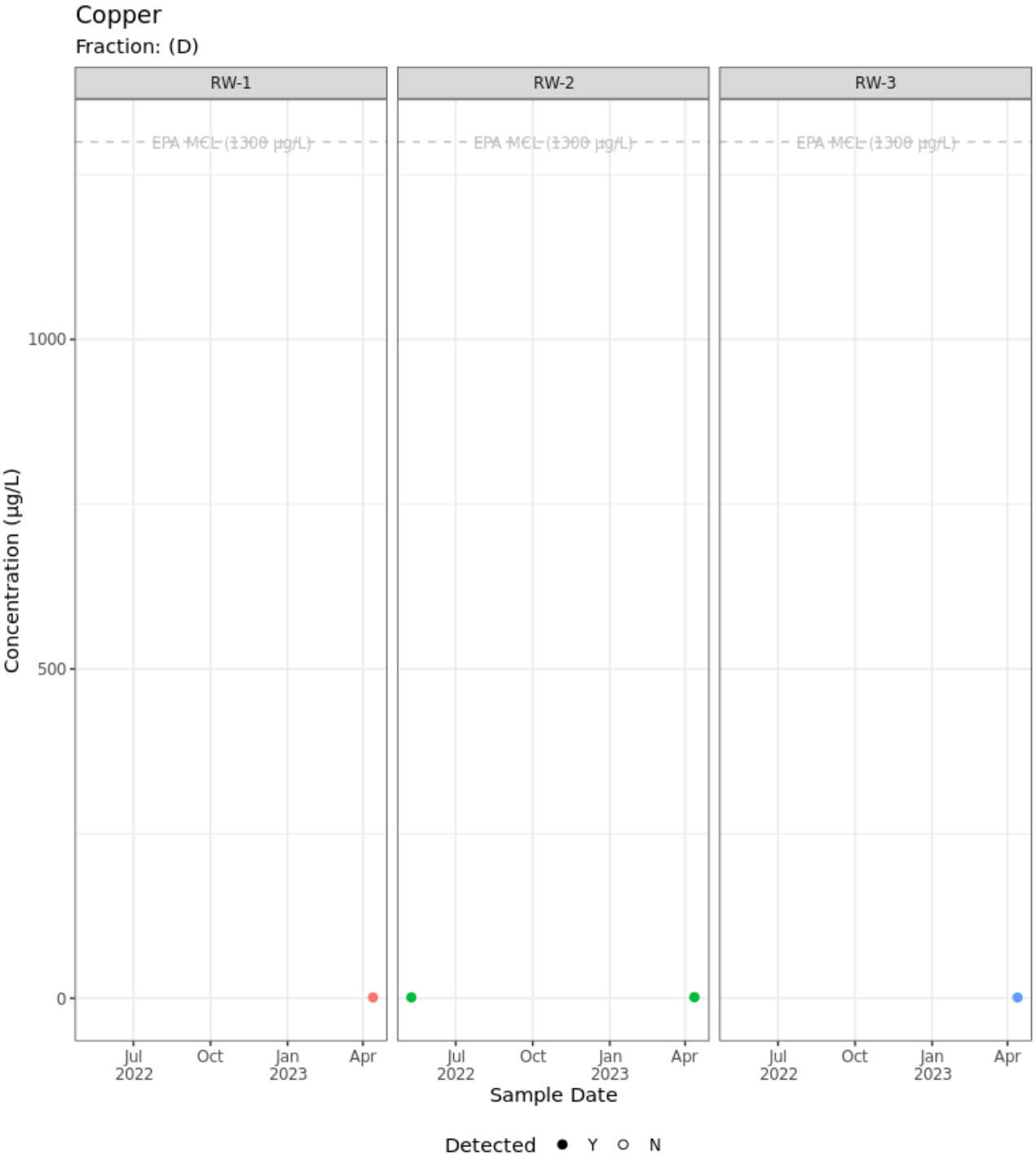
Chromium


Chromium
Fraction: (D)
RW-1
RW-2
RW-3
EPA MCL (100 µg/L)
100
75
50
25
0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

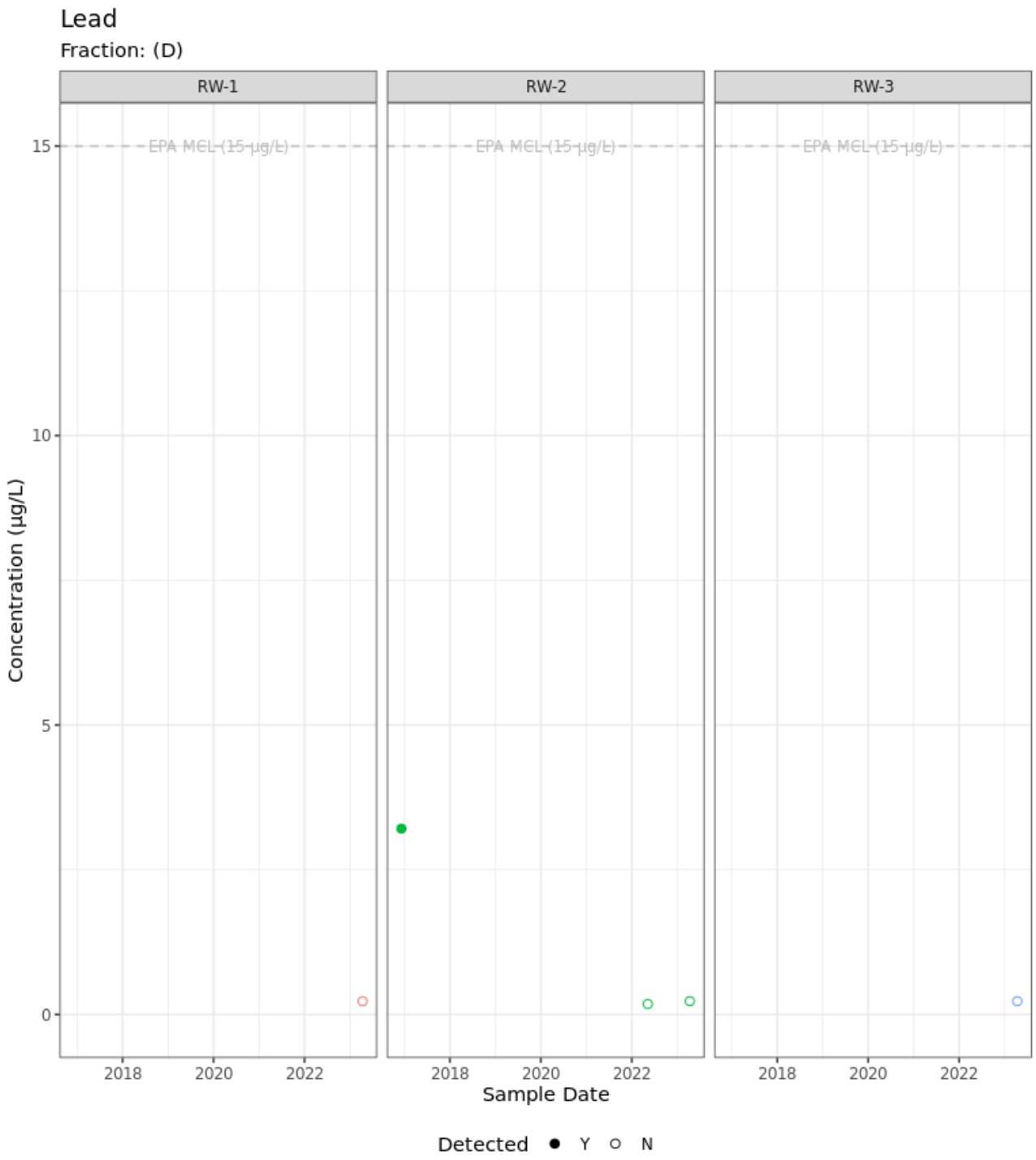
Cobalt


Cobalt
Fraction: (D)
RW-1
RW-2
RW-3
2.0
1.5
1.0
0.5
0.0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

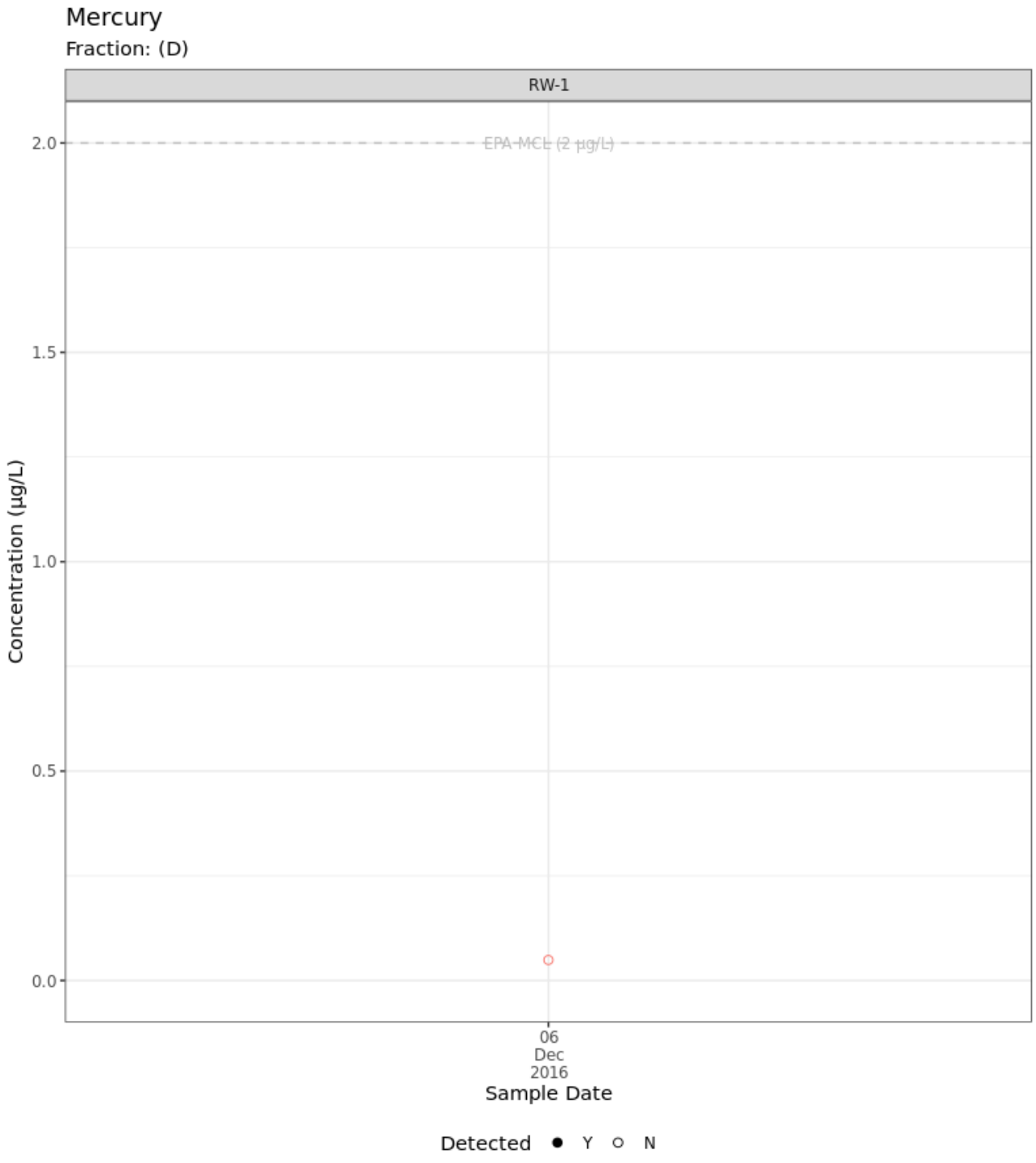
Copper


Copper
Fraction: (D)
RW-1
RW-2
RW-3
EPA MCL (1300 µg/L)
1000
500
0
Concentration (µg/L)
Jul 2022
Oct
Jan 2023
Apr
Sample Date
Detected
Y
N

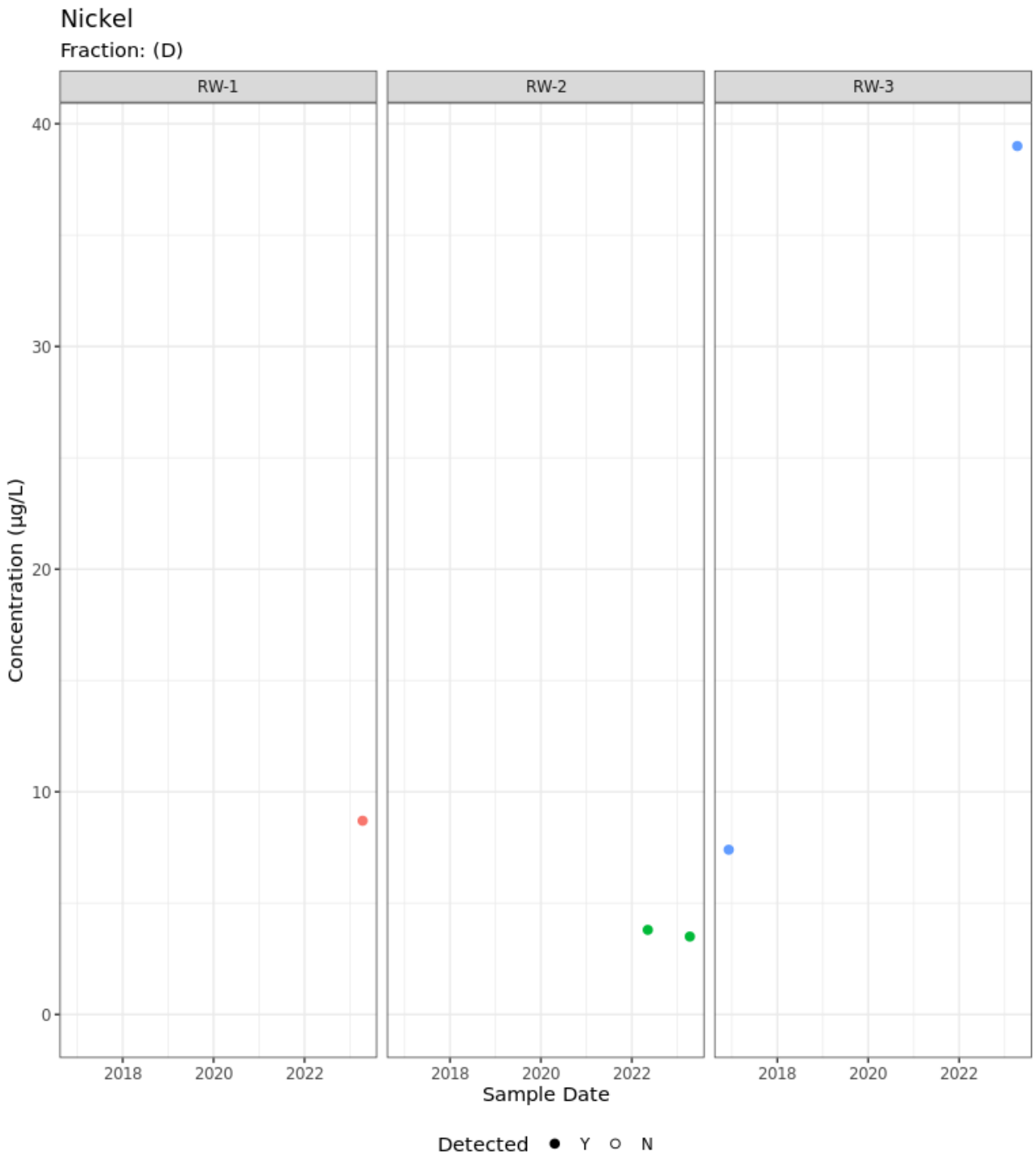
Lead


Lead
Fraction: (D)
RW-1
RW-2
RW-3
EPA MCL (15 µg/L)
15
10
5
0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

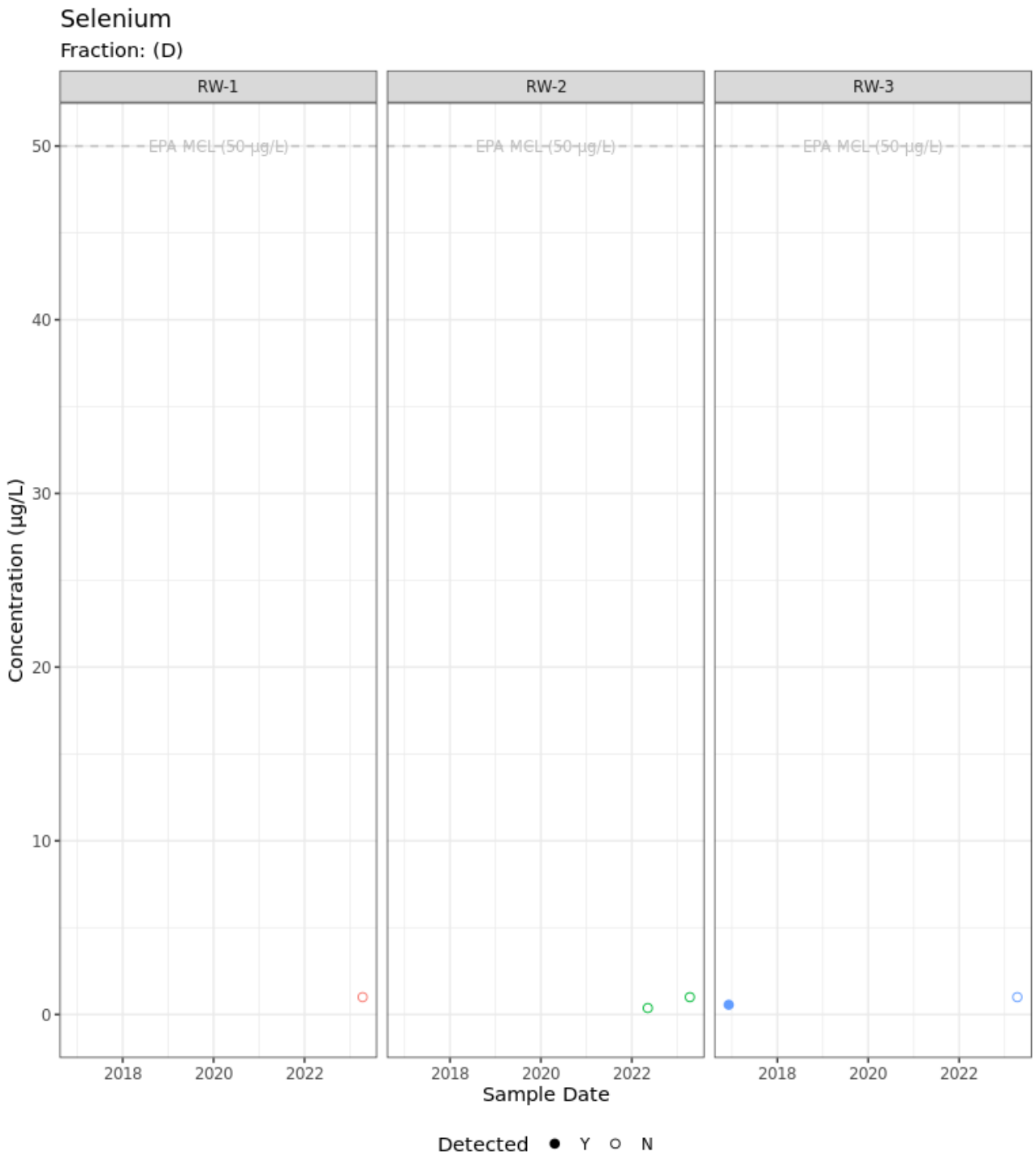
Mercury


Mercury
Fraction: (D)
RW-1
EPA MCL (2 µg/L)
2.0
1.5
1.0
0.5
0.0
Concentration (µg/L)
06
Dec
2016
Sample Date
Detected
Y
N

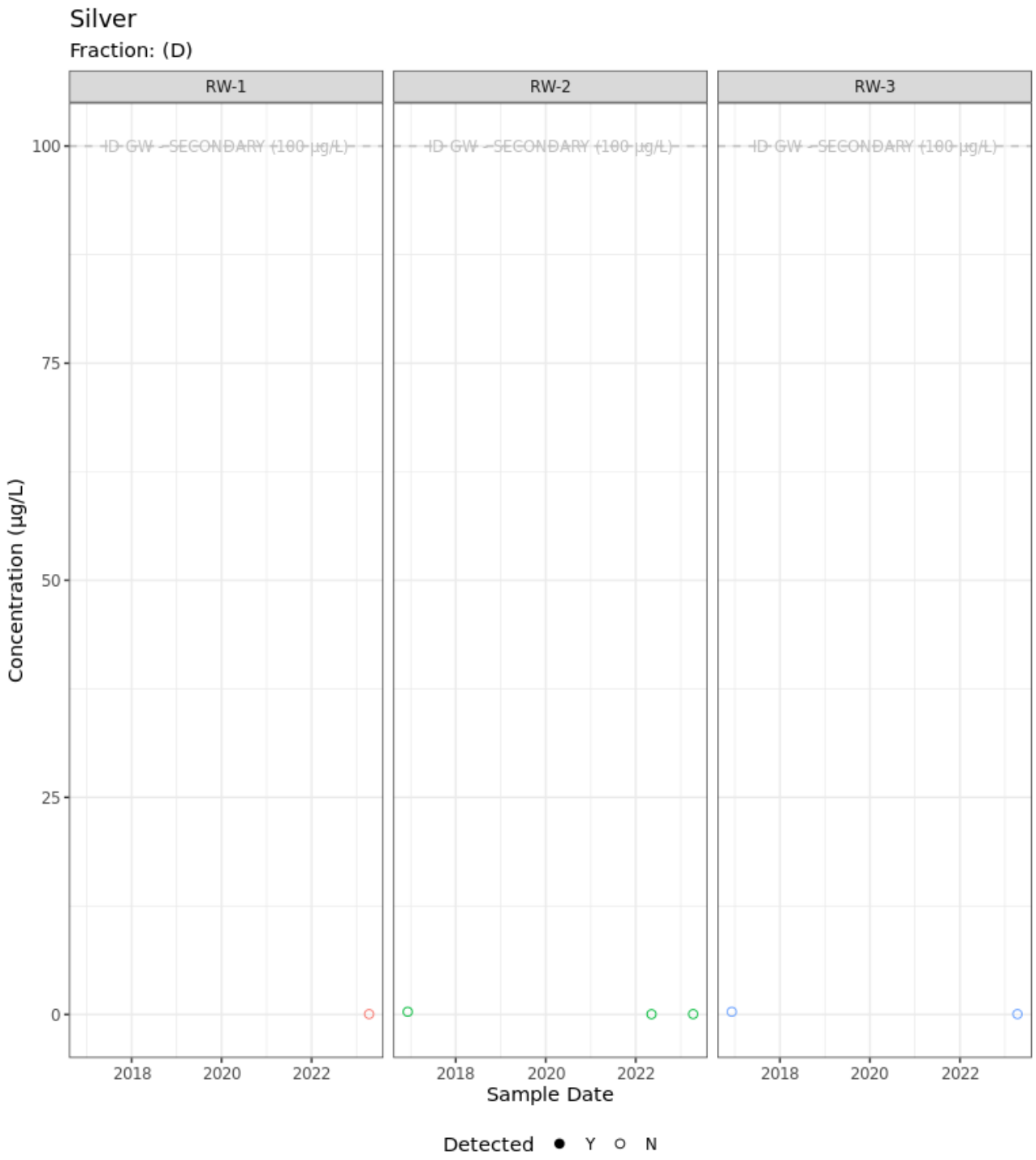
Nickel


Nickel
Fraction: (D)
RW-1
RW-2
RW-3
40
30
20
10
0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

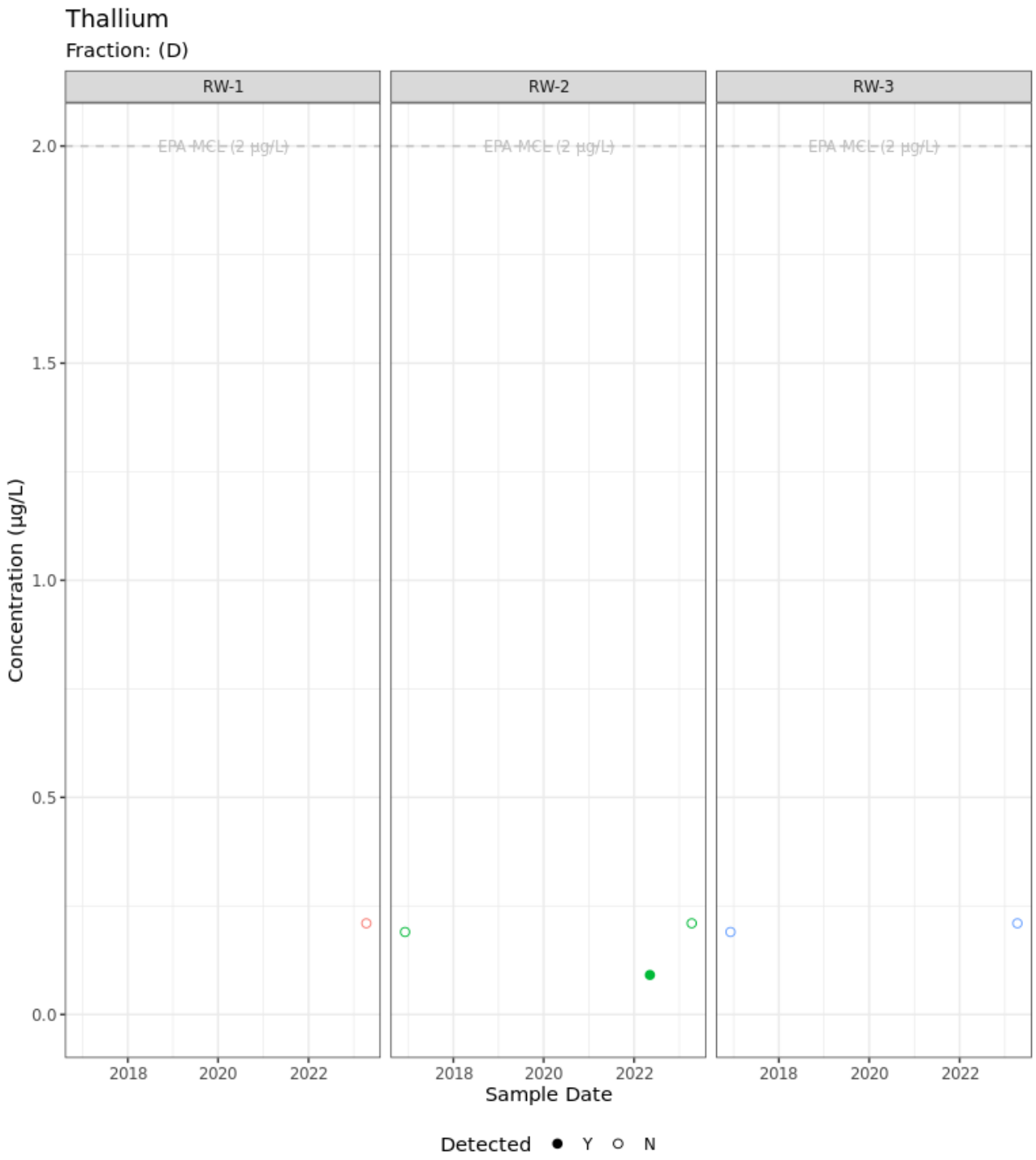
Selenium


Selenium
Fraction: (D)
RW-1
RW-2
RW-3
EPA MCL (50 µg/L)
50
40
30
20
10
0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

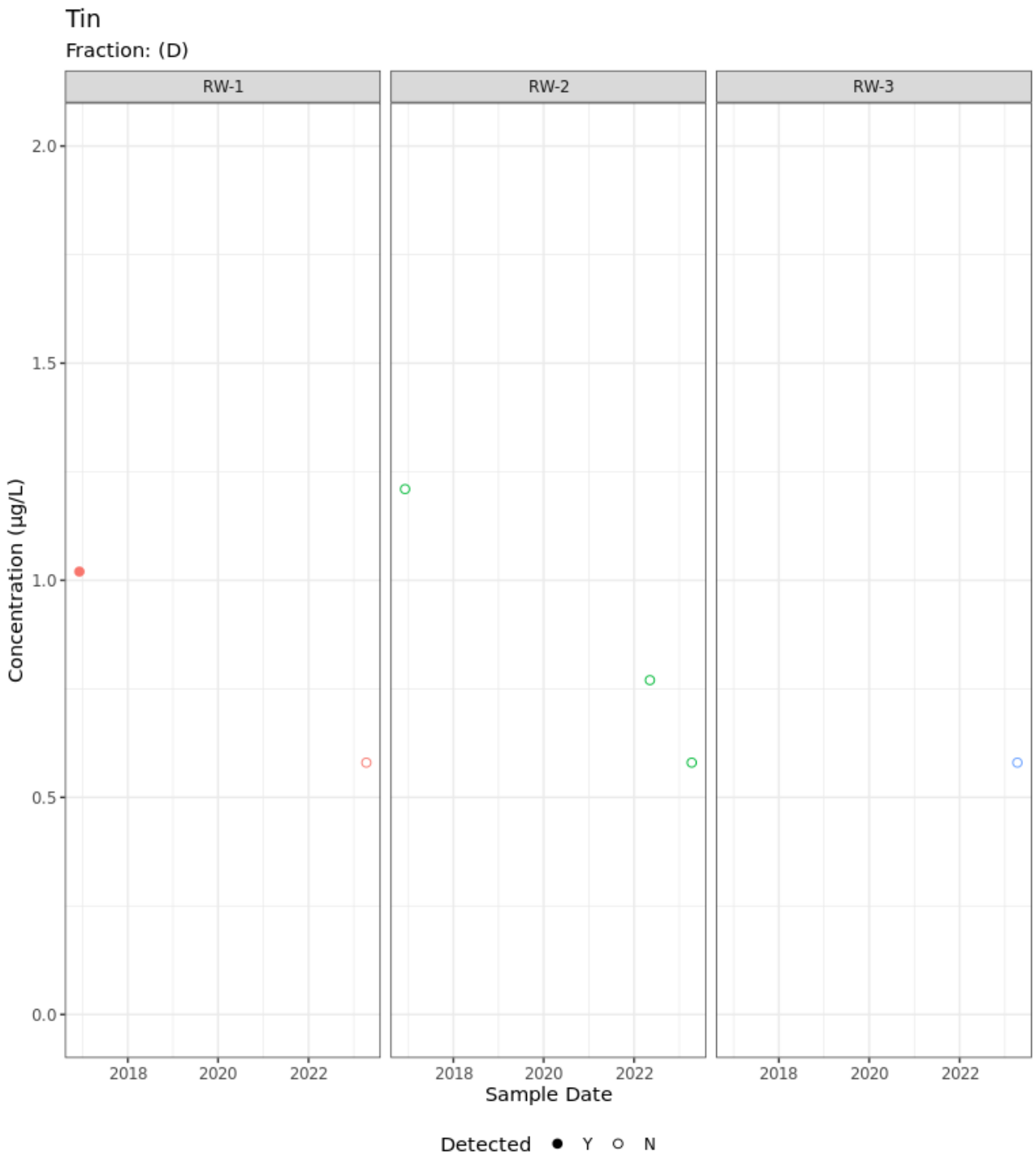
Silver


Silver
Fraction: (D)
RW-1
RW-2
RW-3
ID GW - SECONDARY (100 µg/L)
100
75
50
25
0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

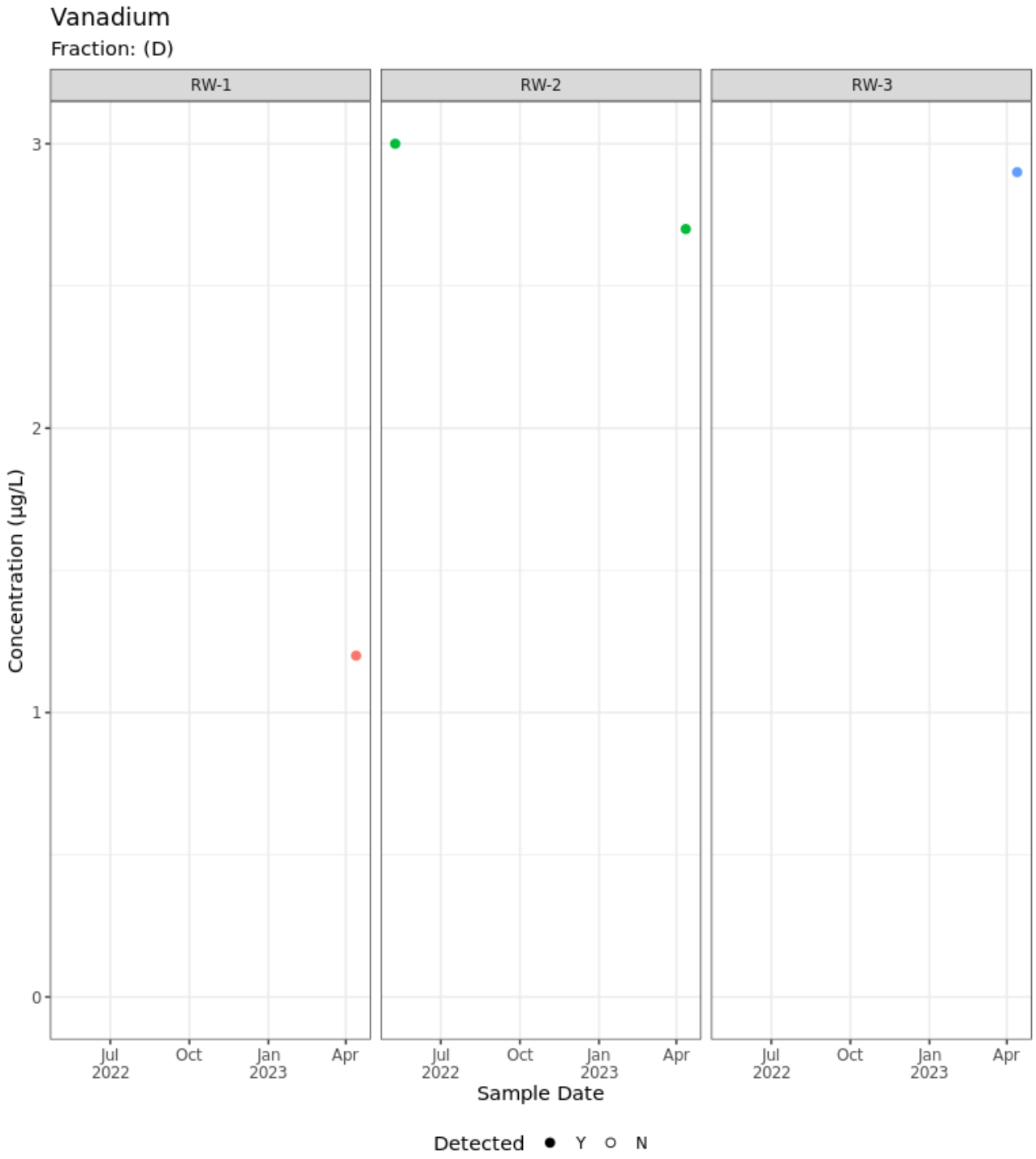
Thallium


Thallium
Fraction: (D)
RW-1
RW-2
RW-3
EPA MCL (2 µg/L)
2.0
1.5
1.0
0.5
0.0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

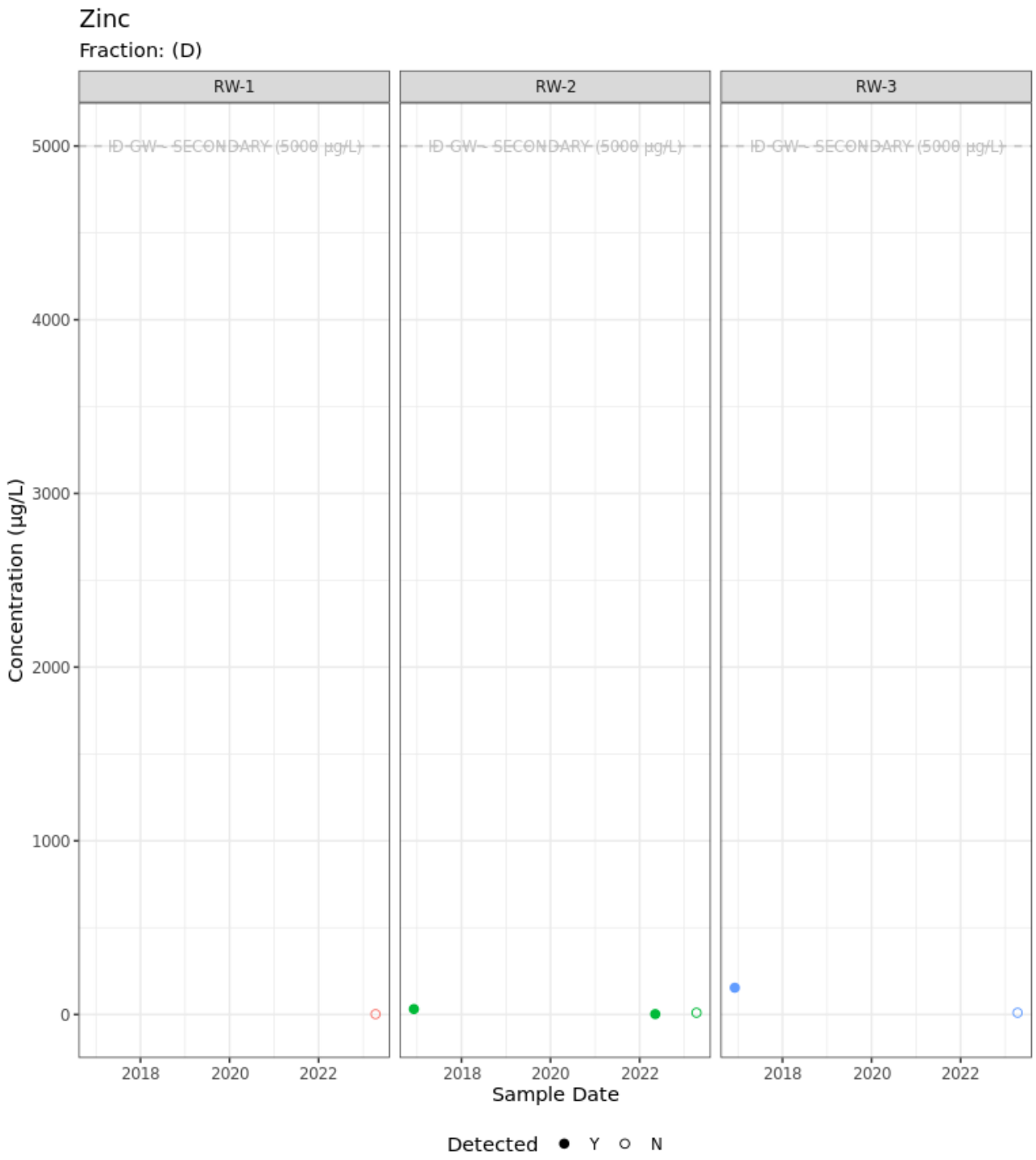
Tin


Tin
Fraction: (D)
RW-1
RW-2
RW-3
Concentration (µg/L)
2.0
1.5
1.0
0.5
0.0
2018
2020
2022
Sample Date
Detected
Y
N

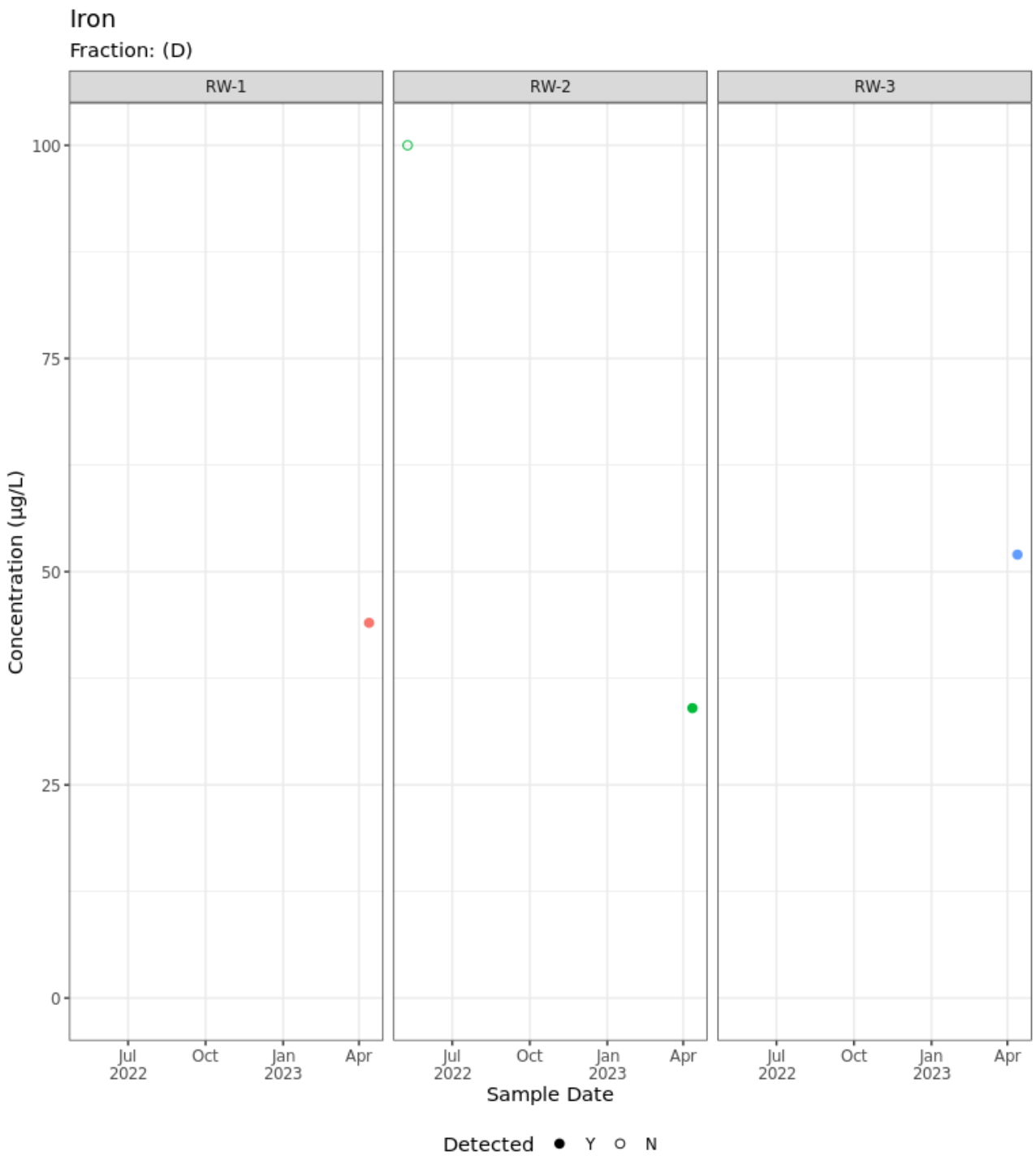
Vanadium


Vanadium
Fraction: (D)
RW-1
RW-2
RW-3
Concentration (µg/L)
3
2
1
0
Jul 2022
Oct
Jan 2023
Apr
Sample Date
Detected
Y
N

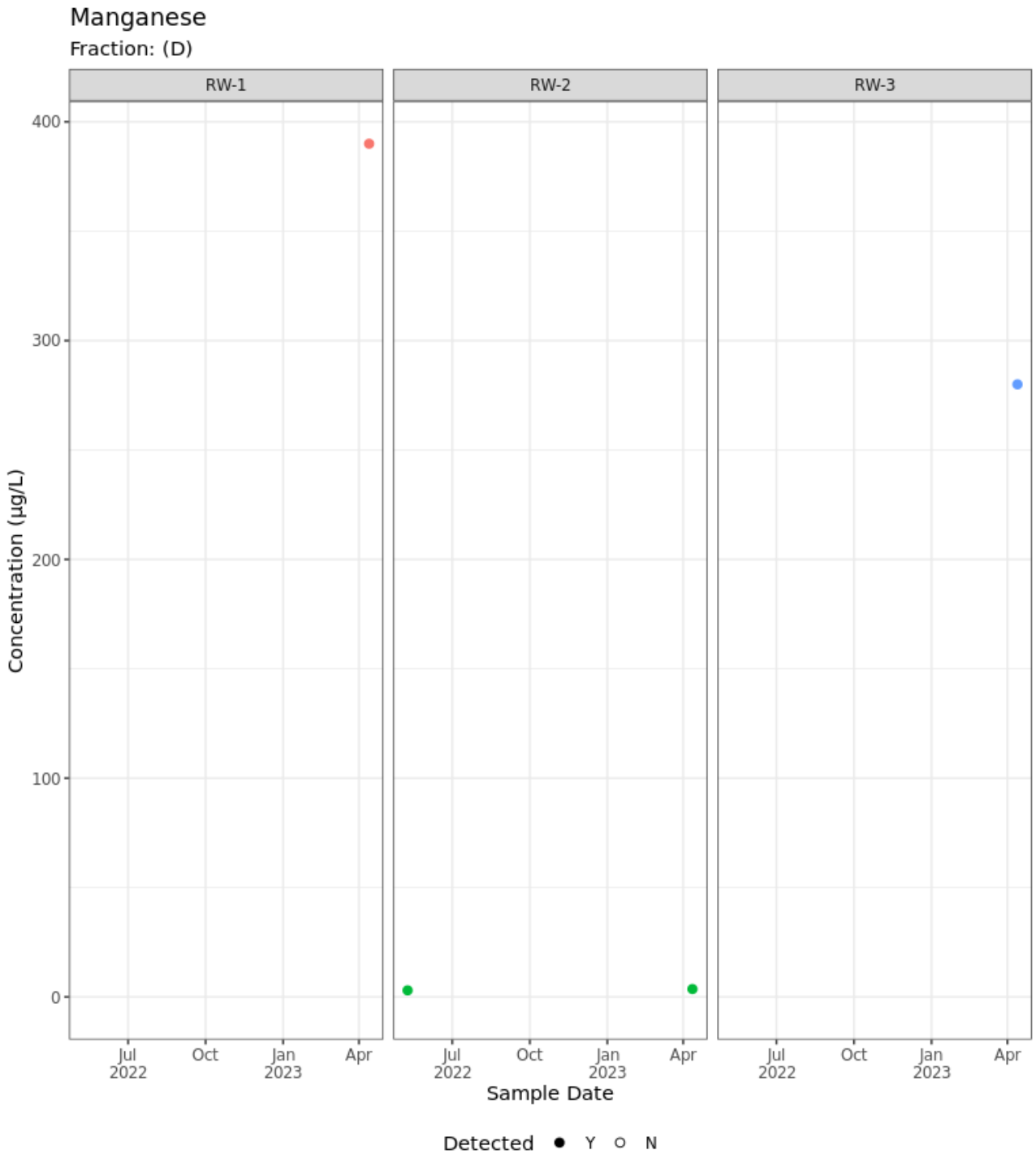
Zinc


Zinc
Fraction: (D)
RW-1
RW-2
RW-3
ID-GW~ SECONDARY (5000 µg/L)
5000
4000
3000
2000
1000
0
Concentration (µg/L)
2018
2020
2022
Sample Date
Detected
Y
N

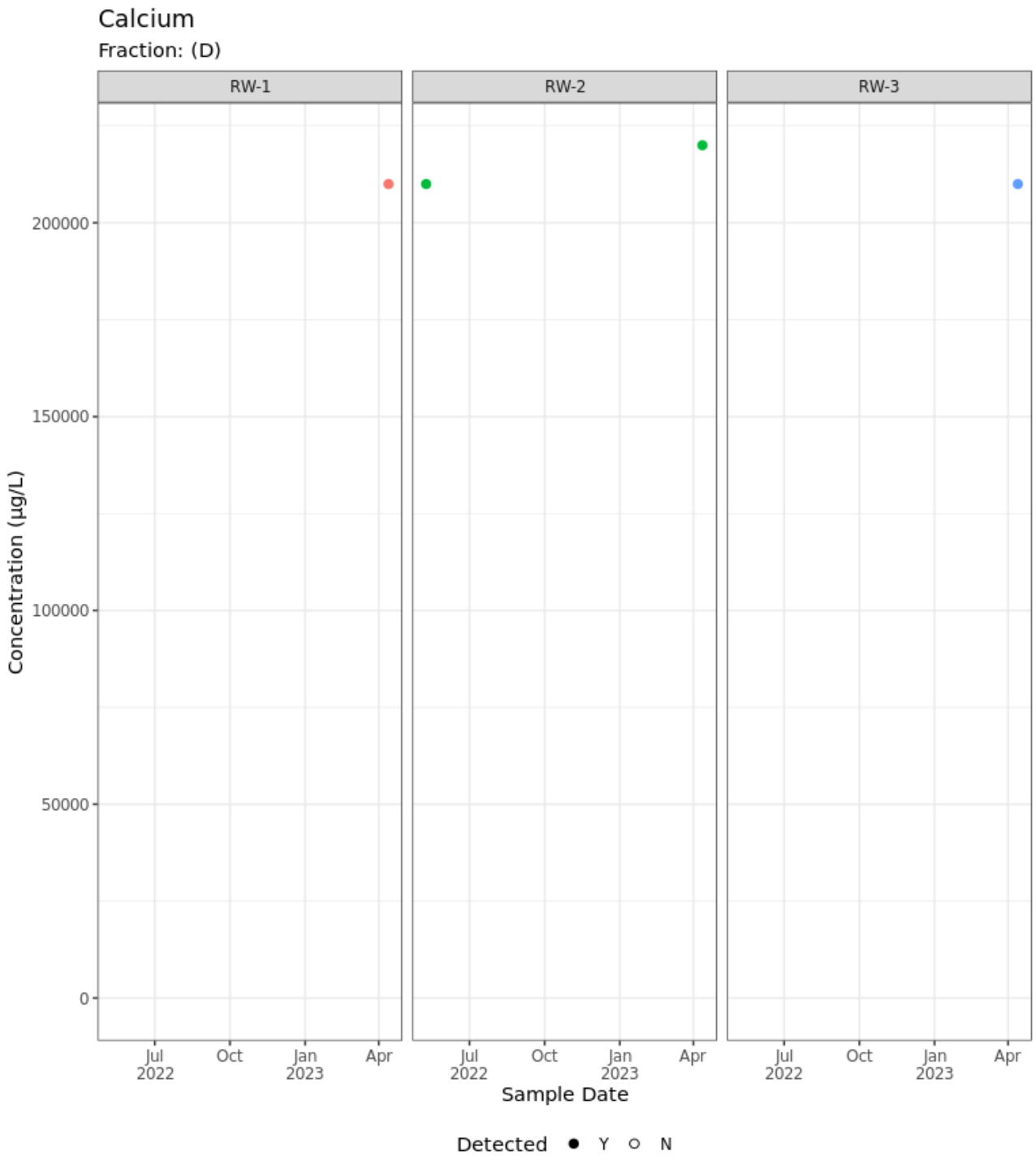
Iron


Iron
Fraction: (D)
RW-1
RW-2
RW-3
100
75
50
25
0
Concentration (µg/L)
Jul 2022
Oct
Jan 2023
Apr
Sample Date
Detected
Y
N

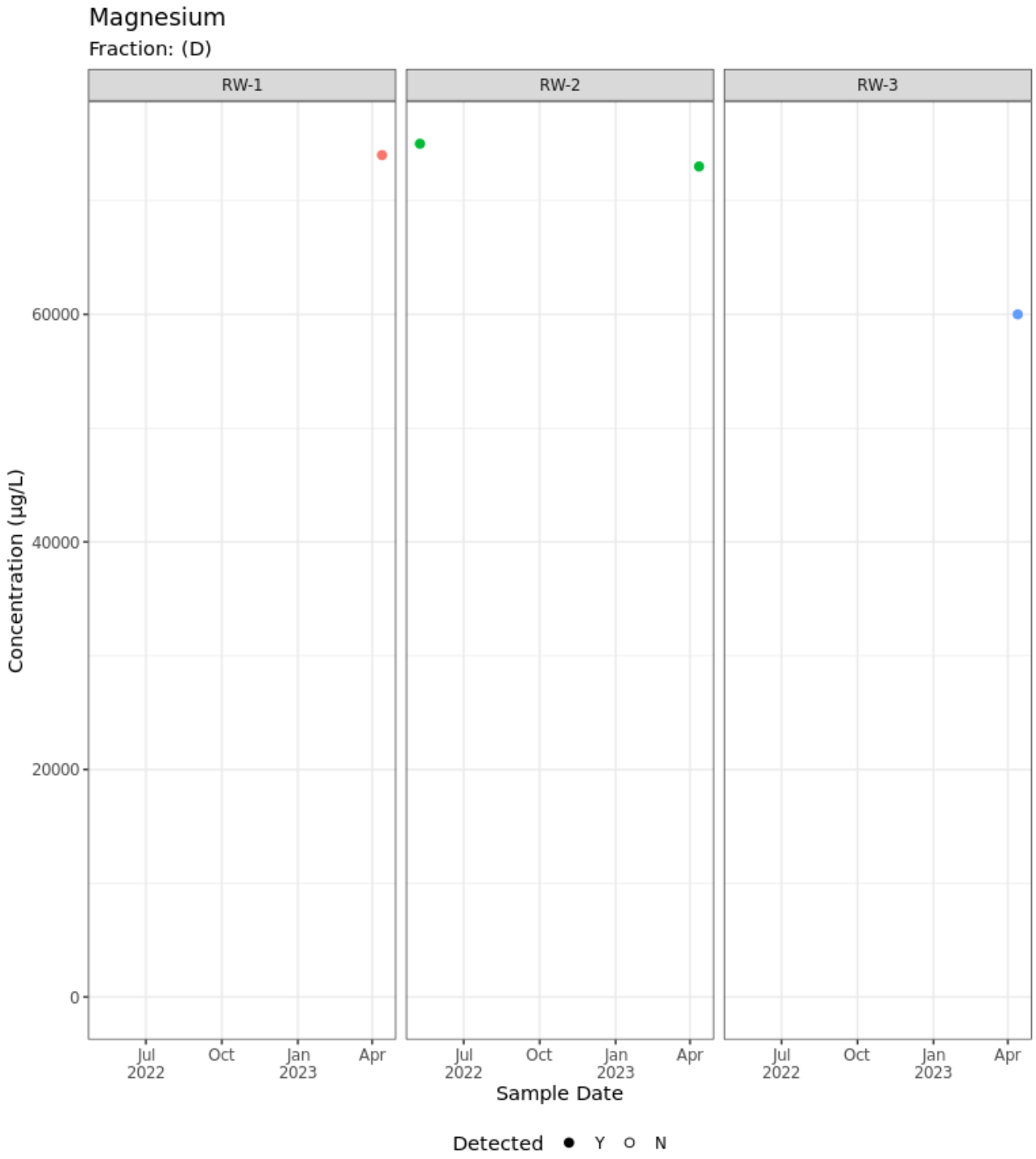
Manganese


Manganese
Fraction: (D)
RW-1
RW-2
RW-3
400
300
200
100
0
Concentration (µg/L)
Jul 2022
Oct
Jan 2023
Apr
Sample Date
Detected
Y
N

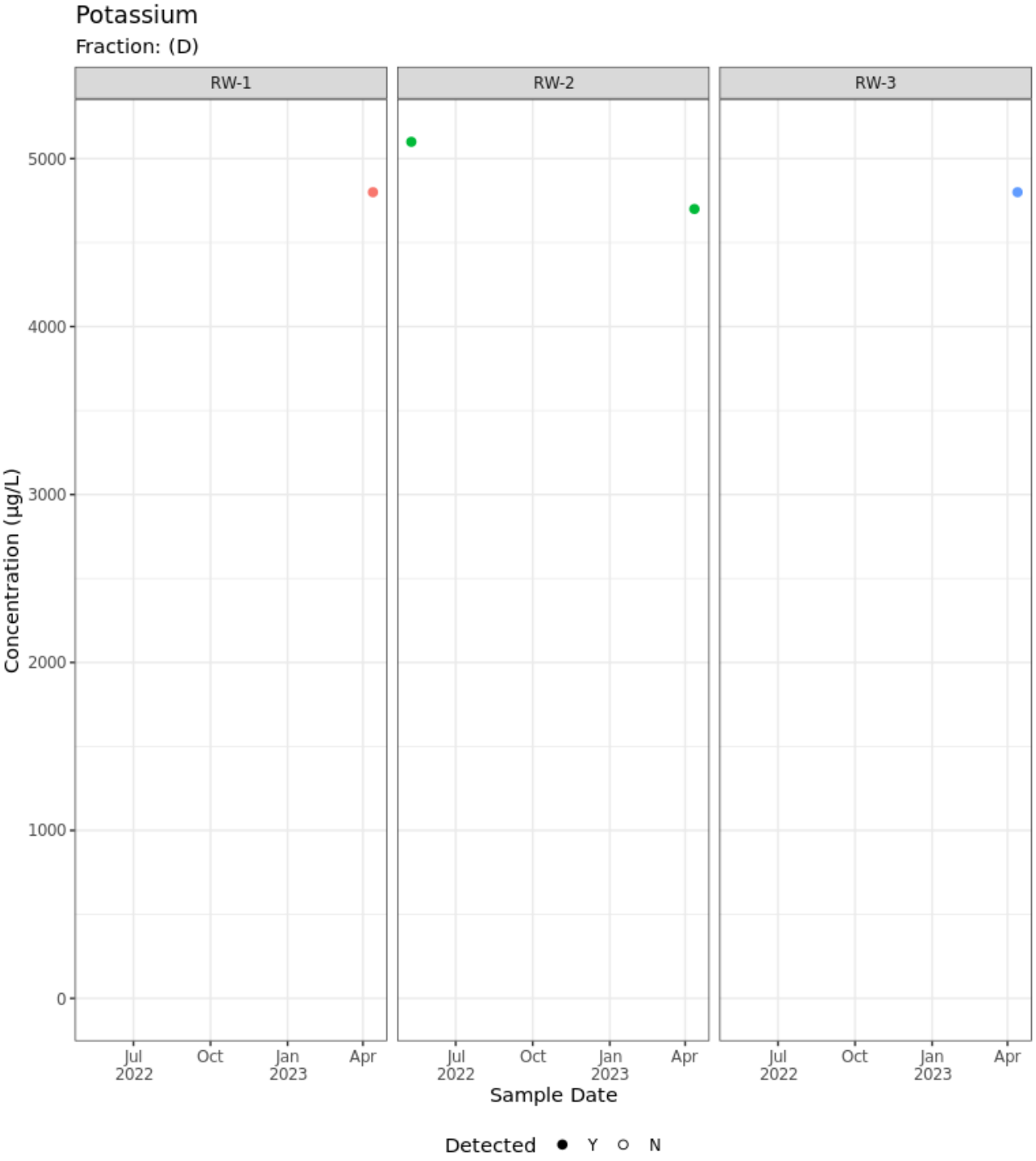
Calcium


Calcium
Fraction: (D)
RW-1
RW-2
RW-3
200000
150000
100000
50000
0
Concentration (µg/L)
Jul 2022
Oct
Jan 2023
Apr
Sample Date
Detected
Y
N

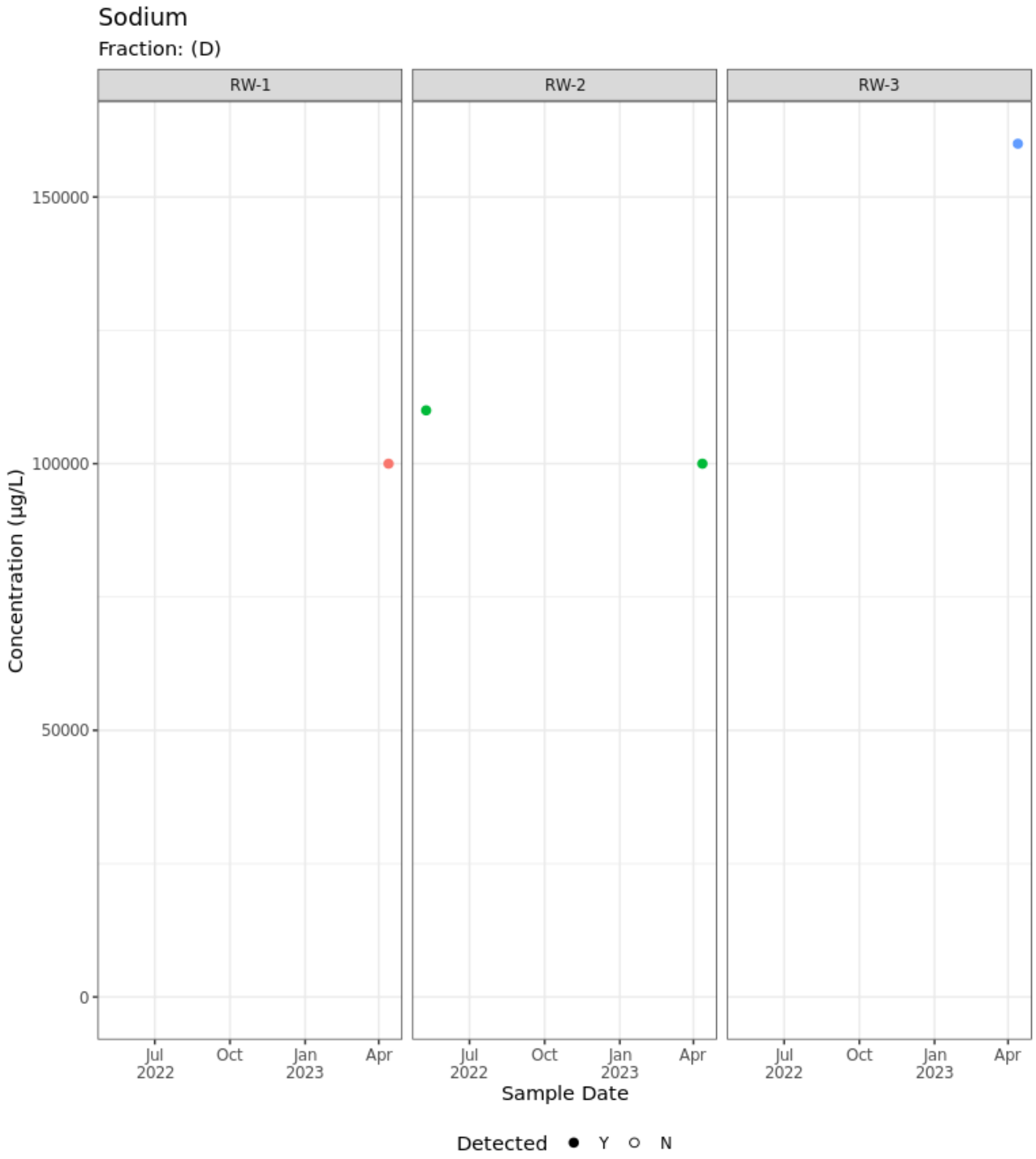
Magnesium


Magnesium
Fraction: (D)
RW-1
RW-2
RW-3
60000
40000
20000
0
Concentration (µg/L)
Jul 2022
Oct
Jan 2023
Apr
Sample Date
Detected
Y
N

Potassium


Potassium
Fraction: (D)
RW-1
RW-2
RW-3
Concentration (µg/L)
5000
4000
3000
2000
1000
0
Jul 2022
Oct
Jan 2023
Apr
Sample Date
Detected
Y
N

Sodium


Sodium
Fraction: (D)
RW-1
RW-2
RW-3
150000
100000
50000
0
Concentration (µg/L)
Jul 2022
Oct
Jan 2023
Apr
Sample Date
Detected
Y
N

Chlorinated Ethenes and Geochemistry Time Series Plots -

Data filters

This report is filtered to only include:

- **MW-103S and MW-115S** from **Offsite Monitoring Well**
- Results from **01 January 2002** to **30 May 2023**

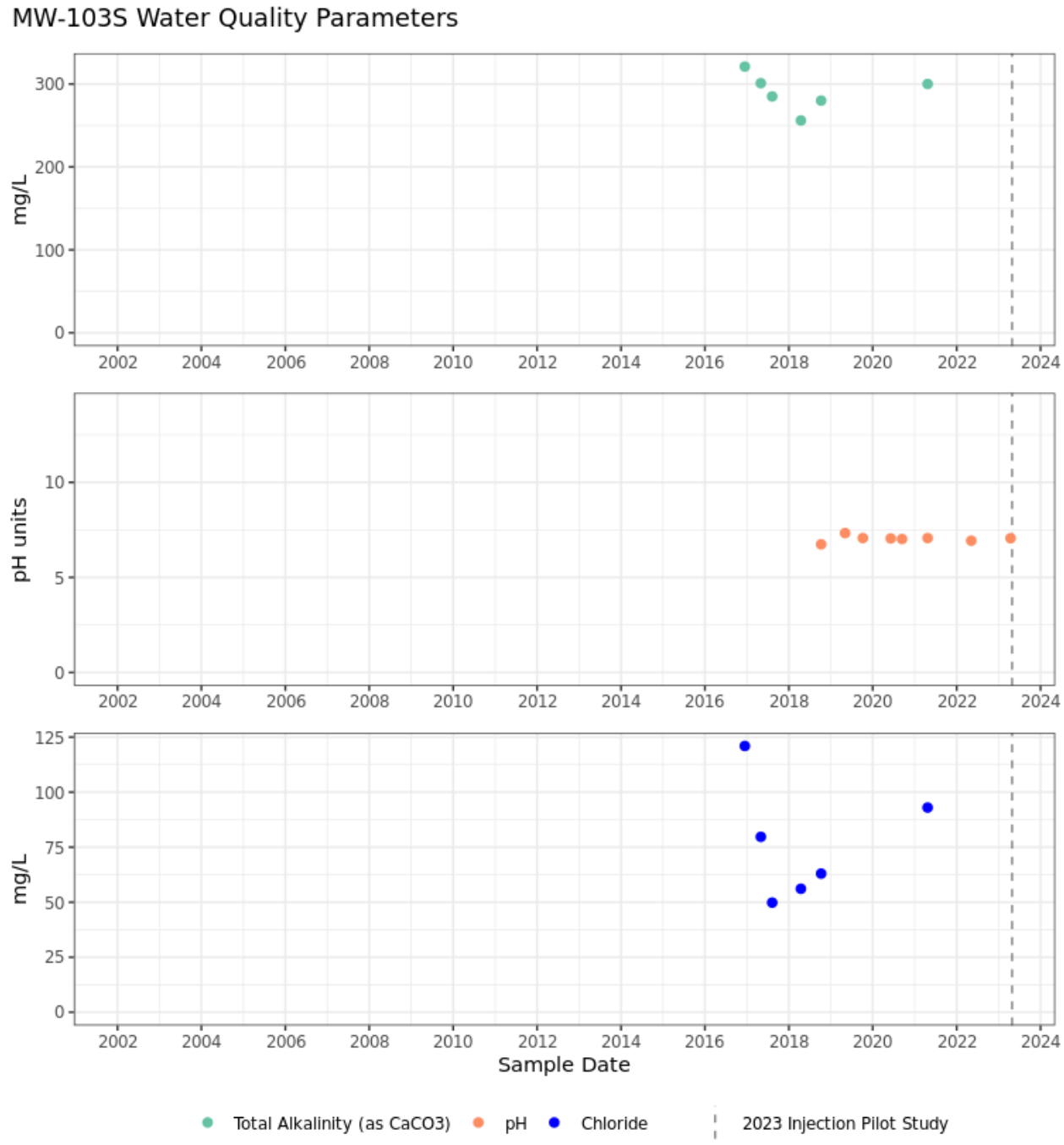
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- The molar concentration graphs only plot detected data
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

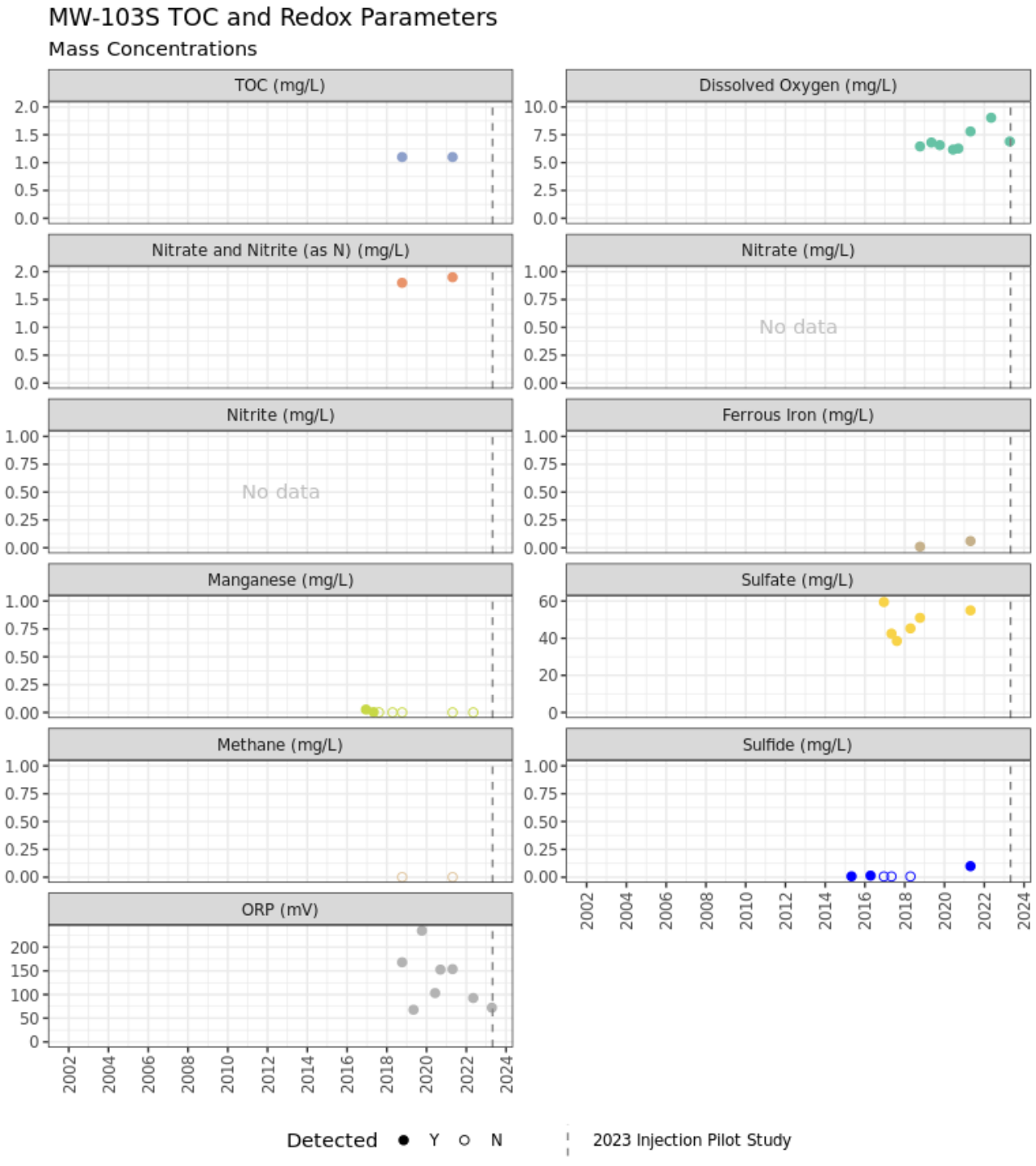
Well summaries

MW-103S

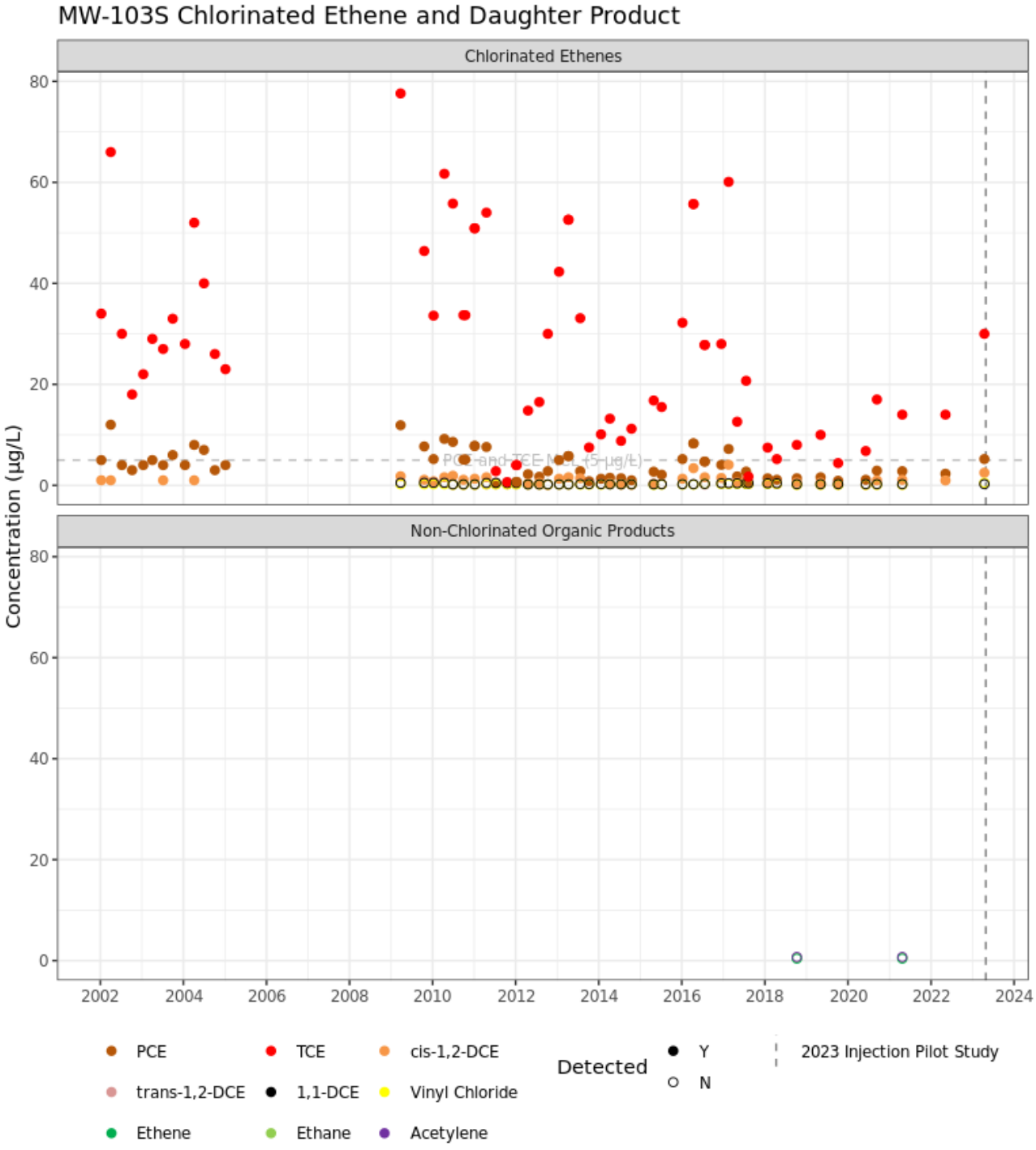
Water Quality



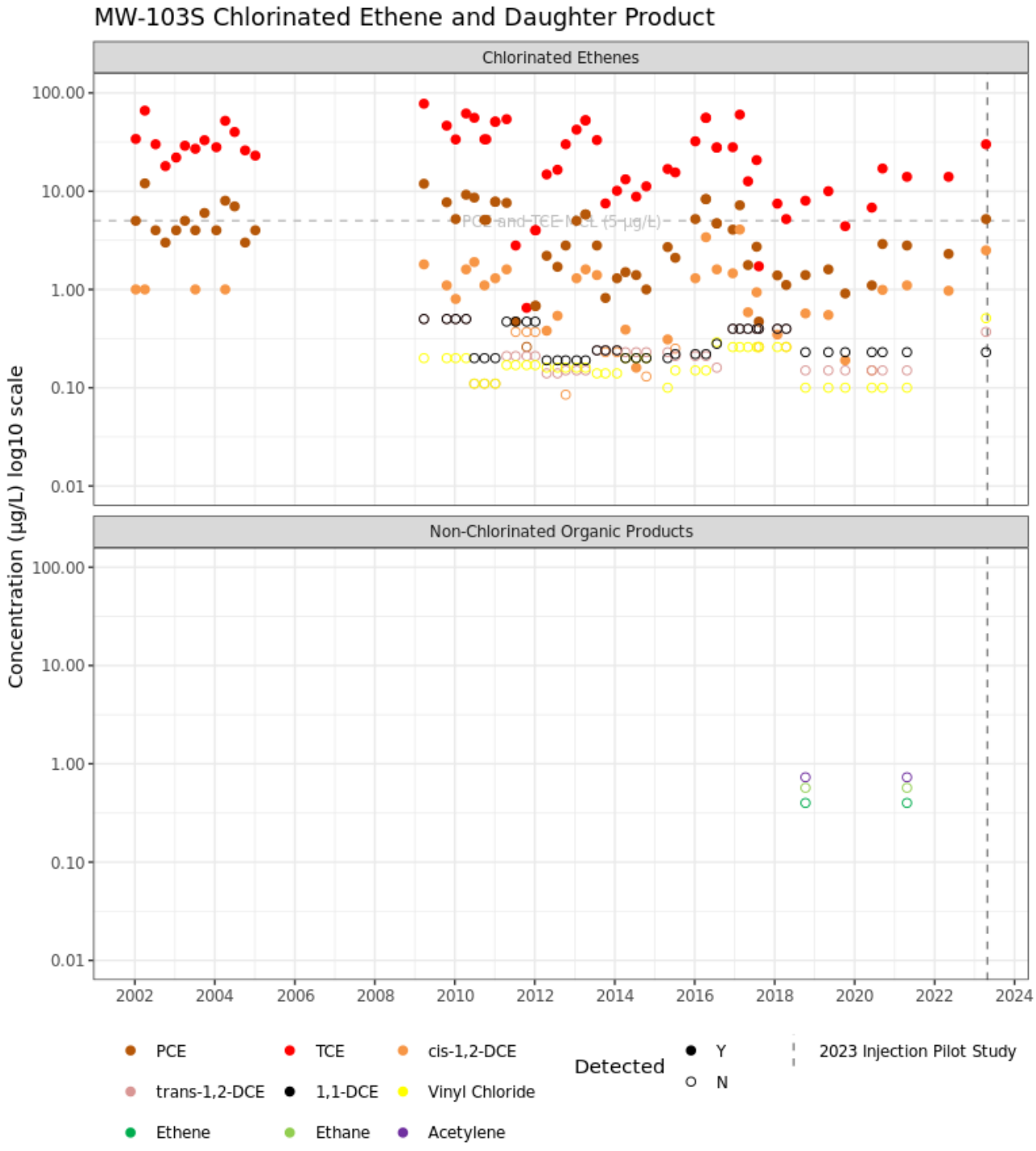
TOC and Redox Parameters



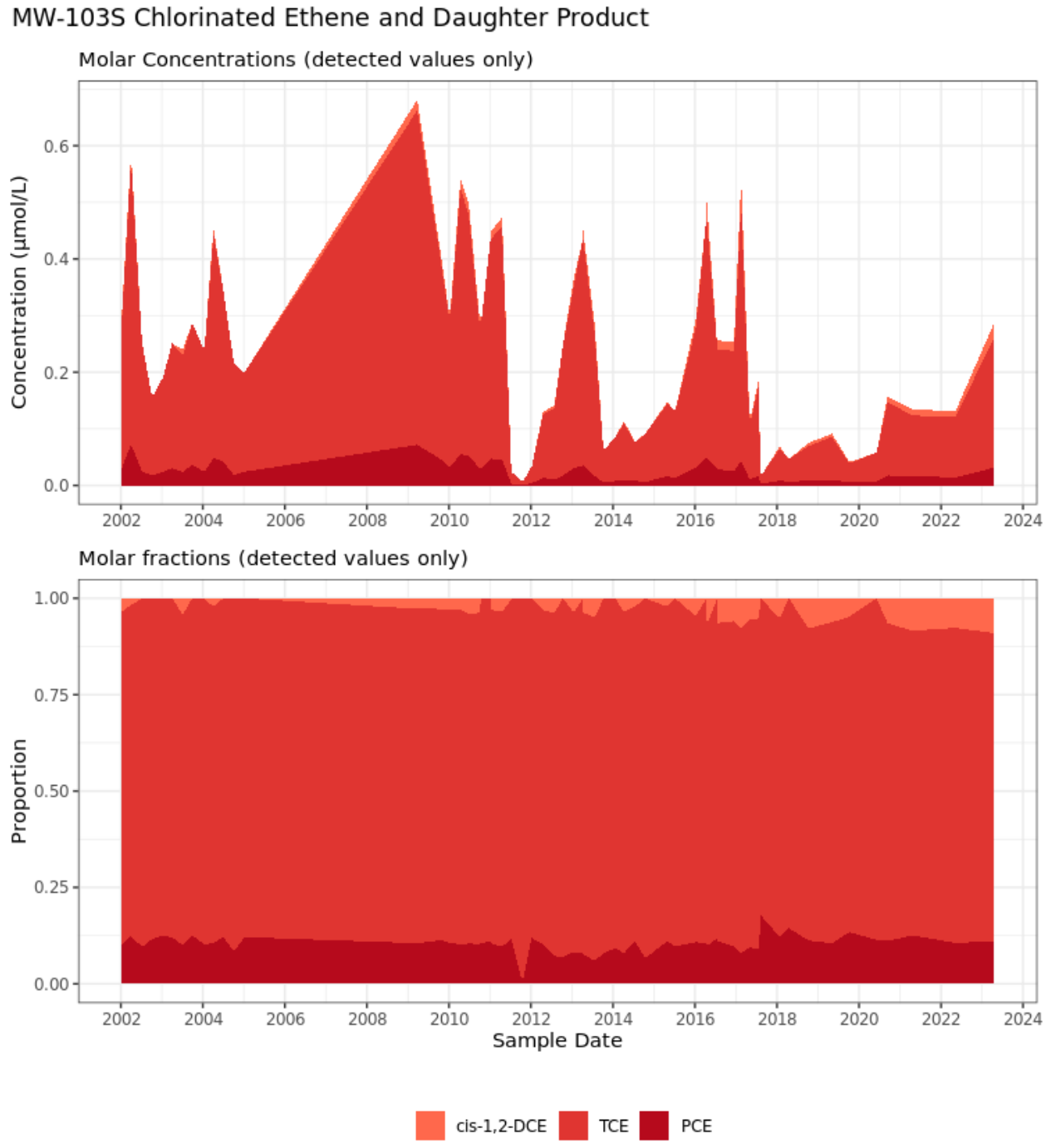
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)

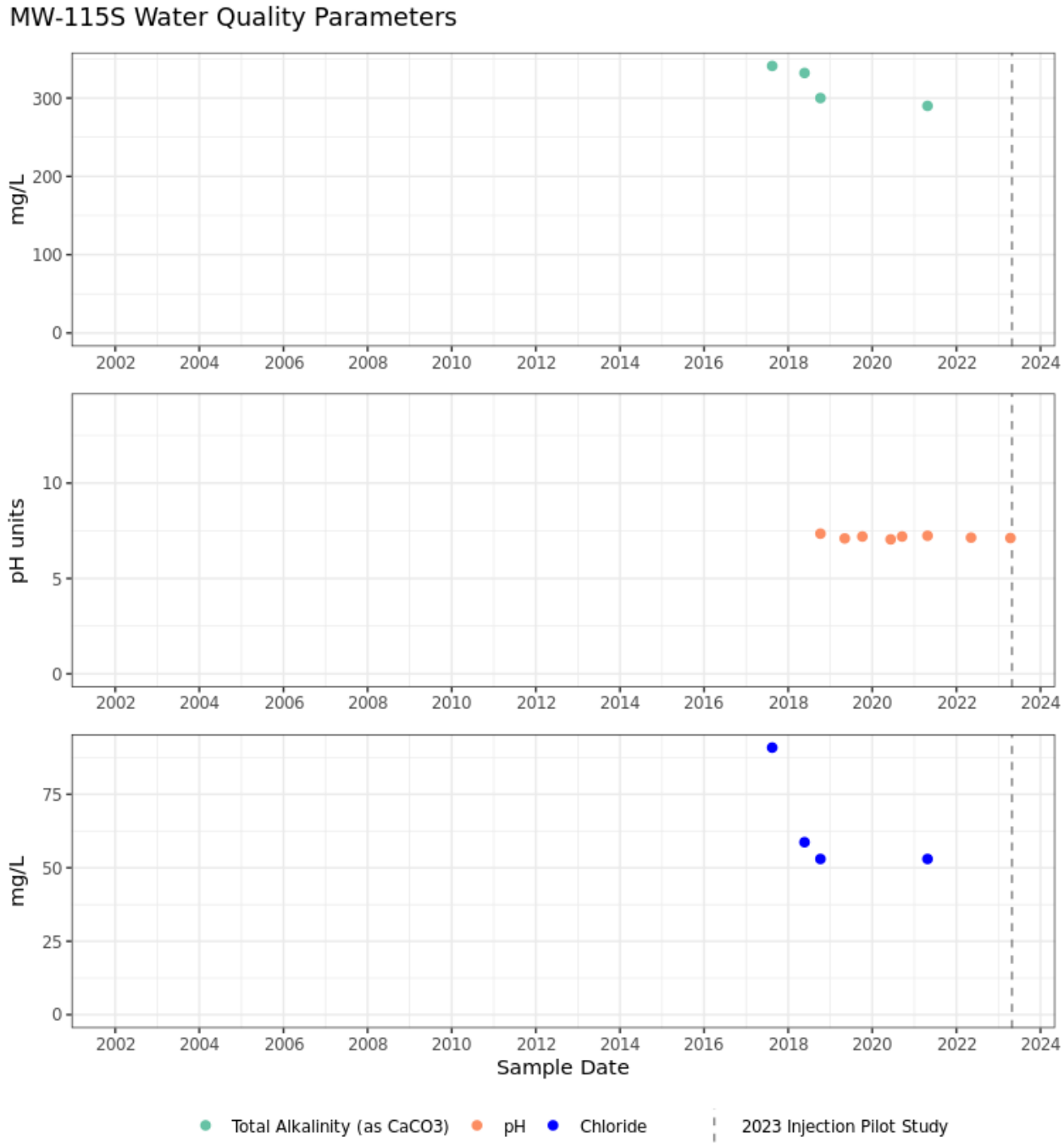


Chlorinated Ethene and Daughter Product Concentration

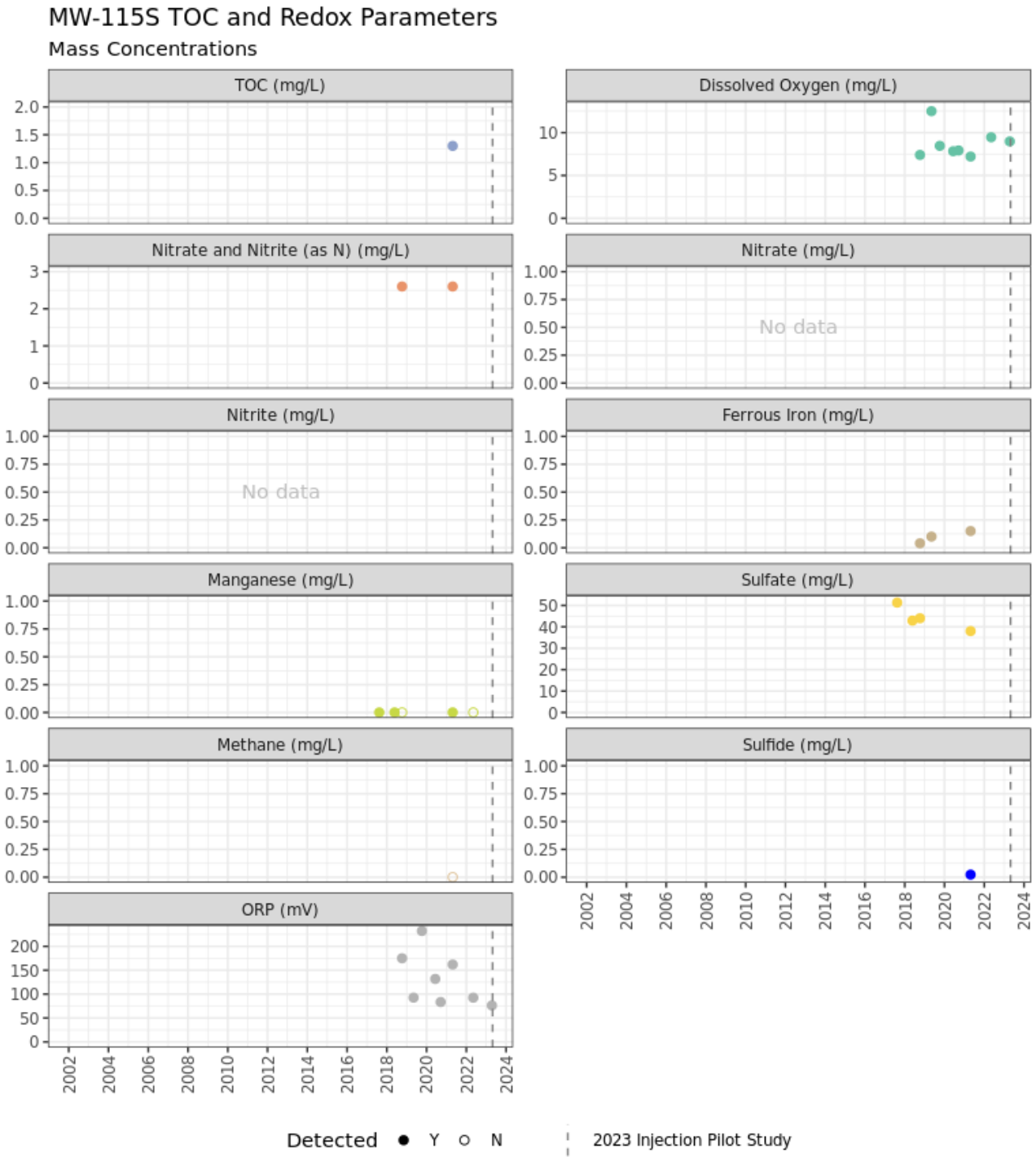


MW-115S

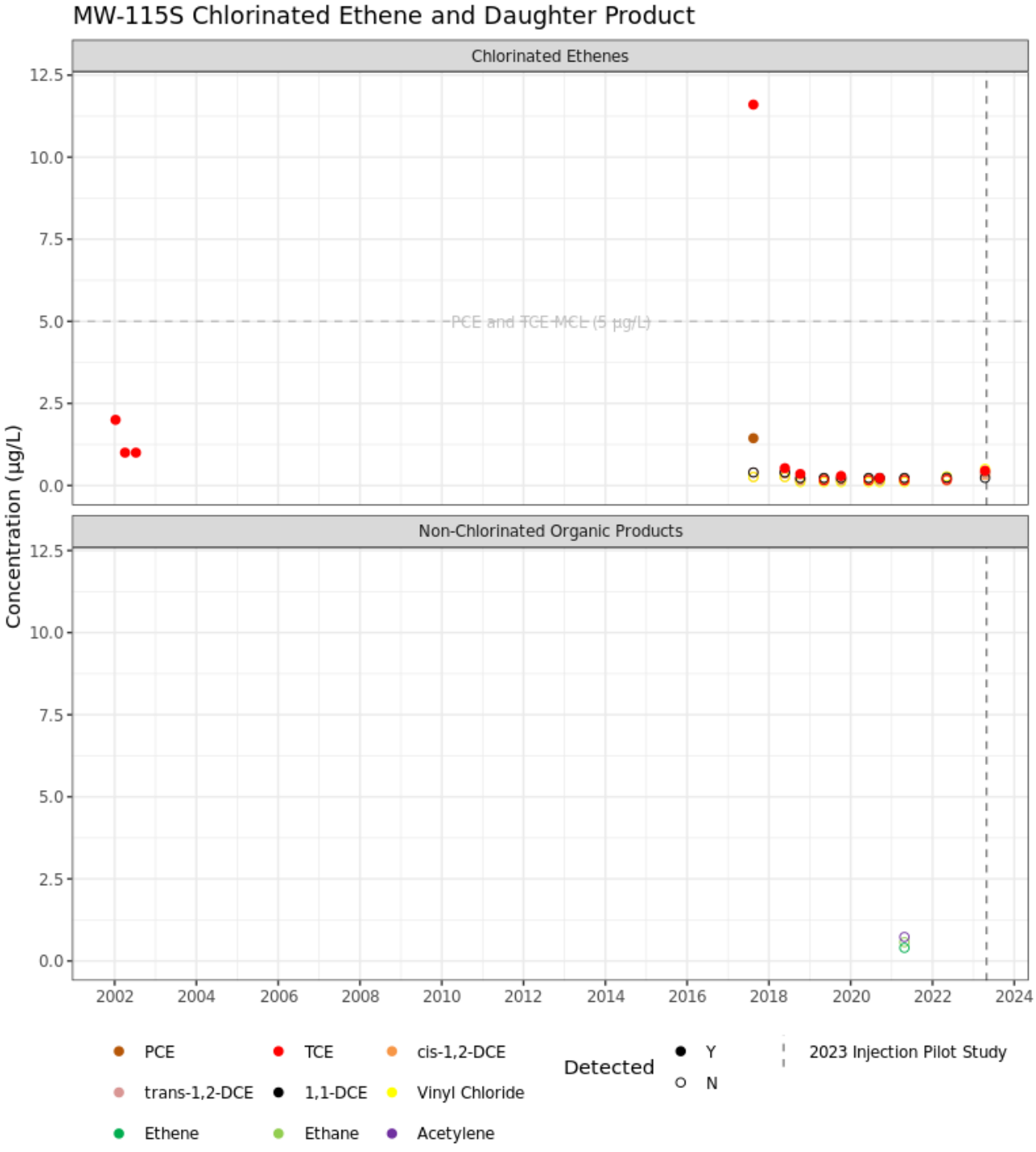
Water Quality



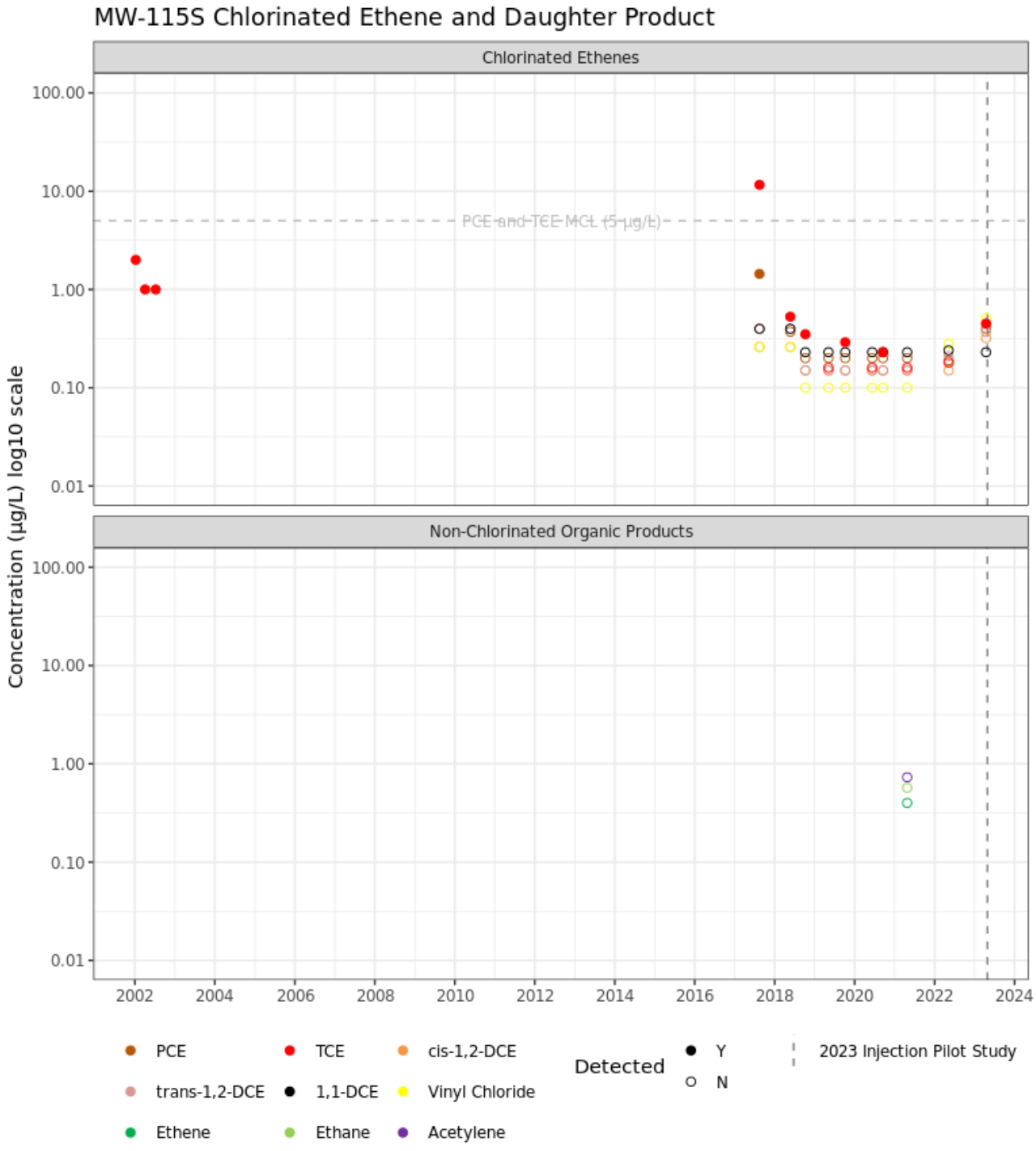
TOC and Redox Parameters



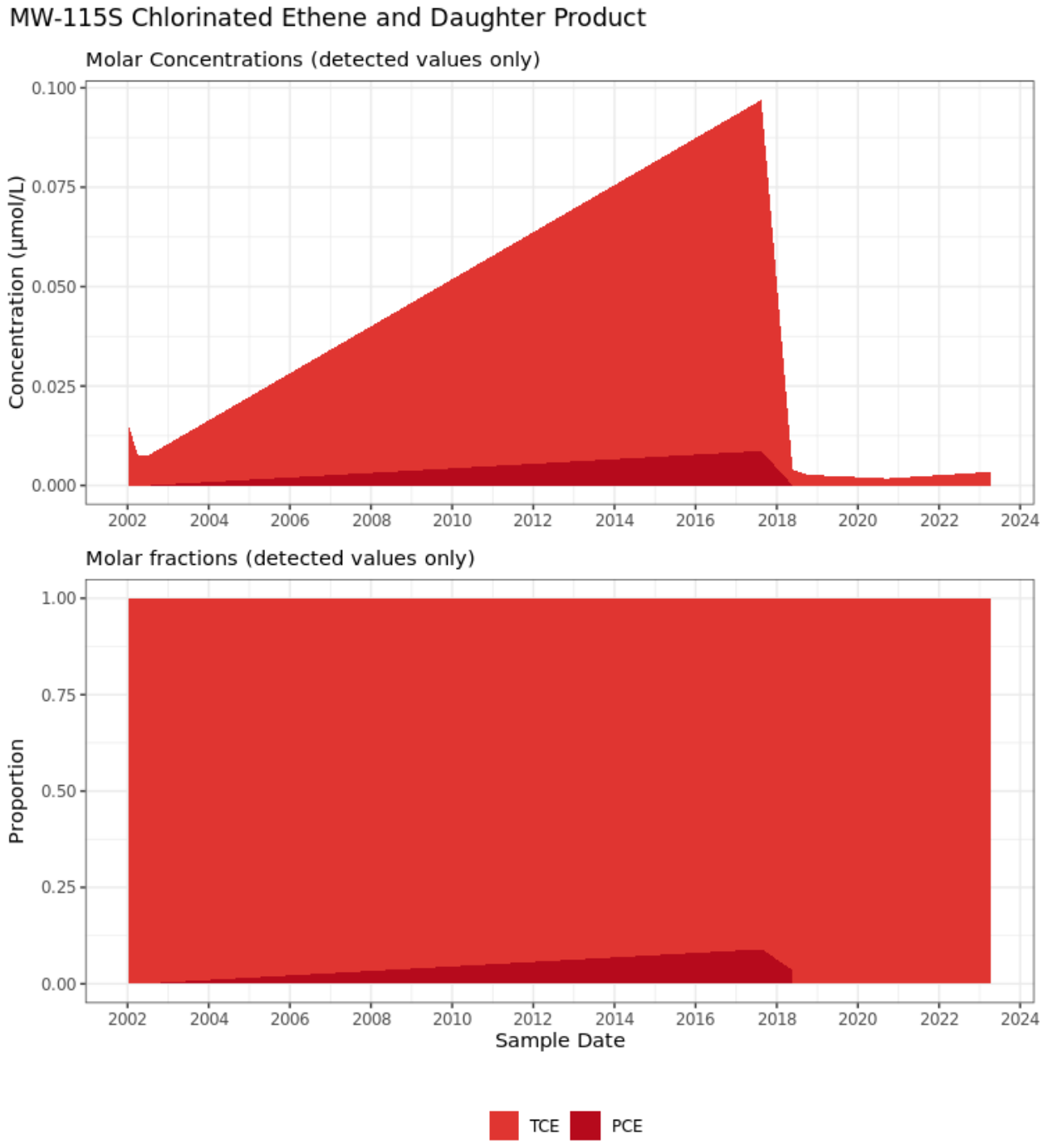
Chlorinated Ethene and Daughter Product Mass



Chlorinated Ethene and Daughter Product Mass (log10)



Chlorinated Ethene and Daughter Product Concentration



Appendix G

Statistical Methods, Approach, and Analysis

Appendix G

This appendix contains descriptions of statistical methods used to assess datasets from Fort Hall Mine Landfill (FHML) monitoring wells, descriptions of the statistical approaches established for each monitoring well group, comprehensive statistical results tables with corresponding definitions and acronyms, and time series plots for select individual datasets for parameters that exceed criteria. Statistical methods and approaches are consistent with relevant U.S. Environmental Protection Agency (EPA) and Idaho Department of Environmental Quality (IDEQ) guidance as well as EPA ProUCL documentation (EPA 2009, IDEQ 2014, EPA 2022). The statistical calculations are performed using the EnvStats R package (Millard 2013).

G.1 Statistical Methods

This section presents a general description of statistical methods, or tests, used in the analysis of Cell 1, Cell 2, Cell 4, and offsite monitoring wells data sets. **Section G.2** explains how these tests are used in combination as an overall approach for each well group based on the monitoring tier requirements.

G.1.1 Comparison of a Value to a Standard

Comparison of a value to a standard is the simplest analysis performed on analytical data from all wells sampled. Standards include maximum contaminant levels (MCLs), where available, and IDGW rule primary and secondary standards.

G.1.2 Comparison of Confidence Limits to a Standard

Computation of confidence intervals is the recommended statistical strategy for assessment or corrective action monitoring (EPA 2009) because it defines accepted variability in the data and prevents single outliers from driving decision-making. A confidence interval of the mean accounts for variability in sample data and estimates the true arithmetic average of the population of data. Confidence intervals are calculated for a data set to allow the comparison of the entire data set, rather than a single result, to a fixed value such as an MCL. Confidence intervals may be calculated for different parameters of a population of potential measurements, such as the mean and variance. Additionally, confidence intervals can be obtained via parametric or nonparametric estimation methods. Some parametric methods require as few as two data points to calculate a confidence interval; however, using at least eight data points is generally considered best practice (EPA 2006). Nonparametric methods can be advantageous for sparse environmental data sets, for which it can be difficult to estimate parameters of the underlying probability distribution.

Testing a data set involves calculation of the confidence limit for the data set at a determined confidence level, followed by comparison of the confidence limit to the standard. Assessment-monitoring-level criteria, or success during corrective action, is statistically indicated when the entire confidence interval lies to one side of the standard. The lower confidence limit (LCL) and upper confidence limit (UCL) are used as the lower and upper bounds, respectively, of the confidence interval of the data set. The confidence interval, calculated using a particular data set and estimation method, will contain the true value of the population parameter (e.g., the mean)

with a probability equal to the confidence level, provided that all statistical assumptions of the parametric or nonparametric estimation method have been met.

The LCL of the parameter (e.g., mean) is compared to the standard in assessment monitoring. If the LCL exceeds the standard, there is statistically significant evidence that the standard may not be met. If results greater than the LCL during assessment monitoring are observed, additional evaluation is necessary to determine if a sampling, analytical, or statistical error occurred or if the results are due to an alternate contaminant source, as discussed in the Quality Assurance Project Plan (QAPP) (CDM Smith 2021b).

Conversely, the UCL of the data set mean is appropriate when comparing data to the standard in corrective action monitoring. To achieve statistically significant evidence for compliance (and, therefore, successful corrective action), the UCL must fall below the standard.

For calculating confidence limits (i.e., LCLs and UCLs) for groundwater chemicals of concern (COCs), the following approach was used:

- Confidence limits were calculated with a 95 percent (%) confidence interval for data sets that contain at least two distinct detected results. If two distinct detected results were not present in a data set, the confidence limits were not calculated, indicated by "NC" in the tables.
- Bootstrapping was performed for most data sets. For each data set, 2,500 bootstrap samples (i.e., recreations of the original data set, for each of which an equal number of measurement values are generated by sampling with replacement from the original set of measured values) were taken, and parameters were calculated based on the average of the calculated statistics across the bootstrap samples. For data sets with only detected values (i.e., above the method detection limit [MDL]), ordinary nonparametric bootstrapping was performed to estimate the mean, standard deviation, and confidence limits. For data sets with nondetect, or censored, results, the nonparametric Kaplan-Meier method was used. For data sets with too few unique detected values to compute the confidence limits, the data set mean and standard deviation were calculated without bootstrapping.

G.1.3 Comparison of a Result to a Background Threshold Values

Comparing results to background threshold values (referred to herein as background) is appropriate when evaluating COCs that do not have a promulgated standard, or if COCs occur at the site above standards due to natural background (e.g., metals) of the aquifer. The background threshold may be one of several values. For this analysis and consistent with available guidance (EPA 2009, IDEQ 2014), the upper prediction limit (UPL) was calculated and used as the representative background value. The UPL is a more conservative background threshold level than other options, such as the mean of background. A result from a compliance well that exceeds the UPL of background is considered to exceed background.

To establish background, one of two methods may be used, both of which rely on establishing a UPL for background concentrations. For the interwell method, a background (e.g., upgradient) well is used to compute a background UPL for each COC parameter. Then, the most recent sampling result from each compliance well is compared to this UPL. If results greater than the UPL of background are observed, additional evaluation is necessary to determine if a sampling, analytical, or statistical

error occurred or if the results are because of an alternate contaminant source, as discussed in the QAPP (CDM Smith 2021b).

In contrast, for the intrawell method, historical baseline data are used as a comparison for later test data from the same well. This baseline data must have been collected prior to the potential COC impacts in the well. The same comparison of the background UPL from the baseline time period is compared to the period of potential impact.

The following approach and associated assumptions were used in the statistical comparison to background:

- The UPL is calculated for designated background well (i.e., interwell method) data sets with at least two distinct detected results.
- The UPL is calculated using a nonparametric prediction interval for Cells 2 and 4. A one-sided upper prediction interval is calculated. The UPL represents the predicted value above which the next (single) value will not exceed with its corresponding confidence level.

G.1.4 Trend Analysis

Concentration data is analyzed for statistical trends using the Mann–Kendall trend test with a Theil–Sen trend line. The Mann–Kendall test is commonly used to identify temporal trends of COCs in groundwater wells. The Theil–Sen regression line, which identifies a corresponding slope to the trend of data, often accompanies the Mann–Kendall test.

The Mann–Kendall test is a nonparametric analysis that compares each data point to later data points in the same data set to develop a summation statistic S based on the comparisons (EPA 2009). The magnitude of S illustrates the consistency (i.e., lack of variation) of this trend over time, and the sign of S corresponds to the trend's direction. The probability (p-value) of the test statistic is used to determine whether the trend is statistically significant at the significance level (alpha) chosen. The confidence level, which differs from confidence limits (**Section G.1.2**), is the p-value subtracted from one, as a percentage. The coefficient of variation is the dataset standard deviation divided by the mean.

The Theil–Sen trend line is a nonparametric alternative to linear regression, which takes a median slope of pairwise measurements in a data set and applies it to the entire data set using the median concentration and median sample date (EPA 2009). Theil–Sen trend line calculations produce a trend line through the data set, as well as the associated slope.

The following approach was used for trend analysis, unless otherwise noted:

- For the Mann–Kendall test, the alpha is defined to be 0.05. Therefore, a statistically significant trend is present if the confidence level is greater than 95% for increasing and decreasing results, with a direction corresponding to the sign of S. No trend is statistically significant for confidence levels below 95%.
- Mann–Kendall and Theil–Sen evaluations are only performed on data sets with more than 50% detected results, at least 6 results, and no more than 40 results.

- Nondetect results are included in both evaluations as the value of the MDL.

G.2 Statistical Approach by Well Group

The following sections present the statistical approach by well group, based on the Resource Conservation and Recovery Act (RCRA) or corrective action monitoring requirements for each cell, including the calculations and assumptions.

G.2.1 Cell 1 – Corrective Action Monitoring

Cell 1 is in corrective action but is not regulated under RCRA requirements. Under corrective action, cleanup measures must be undertaken at the site. The groundwater treatment system has been in operation since 2002; incomplete capture of contamination and remedial strategy improvements are currently being assessed. To monitor contamination in Cell 1 and offsite monitoring wells in the interim, semiannual groundwater sampling is conducted, and analytical results are analyzed and reported in semiannual monitoring reports. Concentration results are screened against EPA MCLs and IDGW standards. Data from recent and relevant timeframes (i.e., the last 5 years at least) are statistically analyzed. Previous CDM Smith monitoring reports have evaluated longer time frames of historical data.

Cell 1 is in corrective action but is not regulated under RCRA requirements. The appropriate statistic of interest for corrective action is the UCL (EPA 2009). There are several parameters in which the UCL may be applied. In this analysis, the mean of test data is used. If the UCL of the mean is below the standard, there is statistically significant evidence that concentration levels meet regulatory criteria for that location. The exceedance criteria for corrective action pertain to the effectiveness of the remediation system. Additionally, concentrations trends are used to determine remedy performance with respect to treatment objectives (e.g., capturing the COC plume with the extraction system).

The Cell 1 and offsite monitoring well statistical approach is, therefore, as follows (also presented in the main text **Section 4.3.1**):

- **Statistical Tests**
  - Comparison of UCL of the mean to the standard if the standard is available.
  - Mann–Kendall trend analysis and Theil–Sen regression for data sets meeting the exceedance criterion (below). Mann-Kendall test results for Cell 1 wells uses a range for alpha to define probably significant trends where the confidence level is between 90% and 95%. Additionally, the COV is used to distinguish between no trend and stable trend results for datasets with confidence levels below 90% for which no statistically significant trend has been identified (Connor et al. 2012). The designation of "no trend" and "no trend – stable" both occur where the presence of a trend is not statistically identified in the given dataset.
  - Parameters with data sets consisting entirely of MDL values are not analyzed or shown.
- **Chemicals Analyzed**

- Volatile organic compounds (VOCs).
- Select inorganics.
- Cell 1 is not regulated under RCRA requirements; however, the organic and inorganic parameter lists match the RCRA Appendix I list.

- **Statistical Exceedance Criterion:** A 95% UCL of the mean of a COC exceeds the standard in Cell 1 or offsite monitoring wells.

Remediation system extraction wells (online and offline) are also sampled semiannually. These wells are not analyzed with all the Cell 1 statistical tests; rather, Mann–Kendall trends are evaluated for tetrachloroethene (PCE) and trichloroethene (TCE) and shown on report figures to support the Cell 1 analysis.

The Cell 1 statistical approach does not include a comparison to background. There is no appropriate upgradient well for Cell 1 with which to evaluate background inorganics concentrations. Cell 2 and Cell 4 background wells completed in overburden, primarily composed of loess, would be inappropriate background wells for Cell 1 monitoring wells completed in alluvium or bedrock because of significant differences in COC fate and transport in differing geologic formations. Additionally, Cell 1 monitoring wells were not installed until the early 1990s or later, after an extensive COC plume was already established (IDEQ 2016a, b), so early data in each well cannot be accurately used as a baseline for the intrawell method. Therefore, inorganic parameters were not compared to background in Cell 1 monitoring wells using either background method.

G.2.2 Cell 2 – RCRA Assessment Monitoring

Cell 2 is currently managed under RCRA assessment monitoring. Assessment monitoring requirements include sampling of background and compliance wells for RCRA Appendix II parameters list, which include all RCRA Appendix I VOC and inorganic parameters, as well as semivolatile organic compounds, mercury, tin, cyanide, sulfide, pesticides, herbicides, polychlorinated biphenyls (PCBs), and 2,3,7,8-tetrachloro-p-dibenzodioxin (2,3,7,8-TCDD). The monitoring is conducted semiannually; during one event (i.e., fall), all Appendix II parameters are analyzed, and during the other event (i.e., spring), all Appendix I parameters are analyzed, along with any additional Appendix II parameters detected during the prior event.

Analytical results from Cell 2 wells are reviewed after each semiannual groundwater sampling event for detections and exceedances of promulgated standards and background concentrations. Data from recent and relevant timeframes (i.e., the last 5 years at least) are statistically analyzed. Previous CDM Smith monitoring reports have evaluated longer time frames of historical data.

According to EPA guidance (EPA 2009), the appropriate statistic for assessment monitoring is the LCL. While there are several parameters for which this statistic may be calculated, the approach used for Cell 2 monitoring calculates the LCL of the data set mean. Therefore, the statistical evaluation to determine whether there is a statistically significant increase in a parameter above its standard is a comparison of the LCL of the mean to the standard. If the LCL of the mean is greater than the standard, the result may warrant corrective action. If the LCL of the mean is less than the standard, the parameter is compliant with the criteria for the assessment monitoring level of

management. For inorganic parameters without a promulgated standard or with background levels that exceed the MCL, the background level can be substituted for the standard in assessment monitoring.

Therefore, background threshold values are developed for any detected Appendix II parameter. Detectable background concentrations of metals are expected, whereas background concentrations of anthropogenic organic compounds are typically considered to be the MDL. Groundwater protection standards (GPS) are also established for any detected parameters; these are typically federal MCLs or state-specific standards. For the FHML, background levels for organic parameters are considered to be MDLs because no background levels are expected for these chemicals. Background levels for inorganic parameters are site-specific, but they are generally above MDLs because of the natural minerology of the aquifer.

If concentrations of all Appendix II parameters are at or below background for two consecutive sampling events, then the groundwater monitoring program for the area can revert back to semiannual detection monitoring. However, if concentrations of any of the Appendix II parameters are significantly greater than background but less than the GPS, then assessment monitoring continues. If any parameter exceeds a GPS and the exceedance cannot be explained as a statistical anomaly, alternate sources, or natural background, then corrective measures must be initiated.

Finally, trend results can identify parameters that may exceed standards or background in the future. To understand if trends are significant, an evaluation of background well trends must be performed for chemicals that are present naturally in the environment (i.e., certain metals) to understand the uniformity of the data to which test results are compared. Therefore, this analysis was also conducted for background well inorganic parameter data sets to establish if trends may be the result of other factors, such as decreased detection limits of the analytical method, intrinsic variance in sampling, or natural variance.

According to EPA guidance (EPA 2009), the appropriate statistic for assessment monitoring is the LCL. While there are several parameters for which this statistic may be calculated, the approach used for Cell 2 monitoring calculates the LCL of the data set mean, where the data set includes all analytical data from 2016 through the latest result for a given chemical. Therefore, the statistical evaluation to determine whether there is a statistically significant increase in a parameter above its standard is a comparison of the LCL of the mean to the standard. If the LCL of the mean is greater than the standard, the result may warrant corrective action. If the LCL of the mean is less than the standard, the parameter is compliant with the criteria for the assessment monitoring level of management. For inorganic parameters without a promulgated standard or with background levels that exceed the MCL, the background level can be substituted for the standard in assessment monitoring.

For the FHML, background levels for organic parameters are considered to be MDLs because no background levels are expected for these chemicals. Background levels for inorganic parameters are site-specific, but they are generally above MDLs because of the natural minerology of the aquifer.

- **Statistical Tests**
  - Comparison of latest value to standard if available.

- Comparison of LCL of the mean to standard if available.
- Comparison of latest value to UPL of the mean of the background data set (defined as background level) for inorganics if the standard is not available.
- Mann–Kendall trend analysis and Theil–Sen regression for data sets meeting the exceedance criteria (below).
- Parameters with data sets consisting entirely of MDL values were not statistically analyzed and are not shown. The only data sets presented with 100% MDL values are those for inorganic parameters in background well MW-12, which are shown for comparison to downgradient compliance wells.

- **Chemicals Analyzed:** RCRA Appendix II parameters.
- **Statistical Exceedance Criteria**
  - A 95% LCL of the mean that exceeds the promulgated standard may trigger corrective action.
  - Either an inorganic result that exceeds the 95% UPL of background or a detection of an organic (i.e., exceedance of background) requires continuation of the assessment monitoring management tier.
- **Source of Background Data**
  - Organic parameters: Not applicable. All detections of organic Appendix I or Appendix II parameters (40 CFR §258, Subpart E) are considered exceedances of background.
  - Inorganic parameters: Background compliance well MW-12, interwell method.

G.2.3 Cell 4 – RCRA Detection Monitoring

Cell 4 is currently managed under RCRA detection monitoring. Detection monitoring requirements include semiannual sampling of background and compliance wells for RCRA Appendix I parameters list, which includes VOCs and metals. Analytical results from Cell 4 wells are reviewed after each semiannual groundwater sampling event for detections and exceedances of promulgated standards and background concentrations. Data from recent and relevant timeframes (i.e., the last 5 years at least) are statistically analyzed. Previous CDM Smith monitoring reports have evaluated longer time frames of historical data.

Under detection monitoring, analytical results that exceed the parameter's background concentration may trigger assessment monitoring. Background levels can be established for (a) the well from where test data are being analyzed (intrawell method), if sufficient data are available for the time period prior to the well's contamination, or (b) an upgradient-designated background well that is determined to be unaffected by the source of contamination (interwell method) (EPA 2009). Therefore, background threshold values are developed for the parameters and periodically updated with ongoing data collection as appropriate. For FHML, background levels for organic parameters are considered to be the MDL for that parameter because no background levels are expected for

these chemicals. Background levels for inorganic parameters are site-specific, but they are generally above MDLs because of the natural minerology of the aquifer. If a statistically significant increase over background for an inorganic chemical or a statistically significant detection of an organic chemical is observed that cannot be attributed to sampling or analytical error, natural variation, or a source outside of the landfill cell, then assessment monitoring is initiated within 90 days.

Additionally, trend results can identify parameters that may exceed standards or background in the future. To understand if trends are significant, an evaluation of background well trends must be performed for chemicals that are present naturally in the environment (i.e., certain metals) to understand the uniformity of the data to which test results are compared. Therefore, this analysis was also conducted for background well inorganic parameter data sets to establish if trends may be the result of other factors, such as decreased detection limits of the analytical method, intrinsic variance in sampling, or natural variance.

The Cell 4 monitoring well statistical approach is, therefore, as follows (also presented in the main text **Section 4.5.1**):

- **Statistical Tests**
  - Comparison of latest value to standard if the standard is available.
    - *If the latest value exceeds the standard, then comparison of LCL to standard.*
  - Comparison of latest value to MDL for organics.
  - Comparison of latest value to UPL of the mean of the background data set (defined as background level) for inorganics.
  - Mann–Kendall trend analysis and Theil–Sen regression for data sets meeting the exceedance criteria (below).
  - Parameters with data sets consisting entirely of MDL values were not statistically analyzed and are not shown. The only data sets presented with 100% MDL values are those for inorganic parameters in background well MW-4A, which are shown for comparison to downgradient compliance wells.
- **Chemicals Analyzed:** RCRA Appendix I parameters.
- **Statistical Exceedance Criteria**
  - Result or 95% LCL of the mean exceeds the promulgated standard (may trigger corrective action).
  - Result exceeds the 95% UPL of background (inorganic) or MDL of the parameter (organic) (may trigger assessment monitoring).
- **Source of Background Data**

- Organic parameters: Not applicable. All detections of organic Appendix I parameters (40 CFR §258, Subpart E) are considered exceedances of background.
- Inorganic parameters: Background compliance well MW-4A, interwell method.

G.2.4 City of Pocatello and Domestic Wells

Select offsite City of Pocatello monitoring wells and privately owned domestic wells are sampled annually to assess overall plume trends. City of Pocatello wells include municipal supply wells and monitoring wells. Domestic wells are supply wells located on private properties.

These wells are analyzed for VOCs, and concentration results are screened against promulgated standards. For wells with sufficient data, Mann–Kendall and Theil–Sen analyses of PCE and TCE are performed consistent with the Cell 1 approach to identify probable and stable trends, where present. Most data sets start in 2002, if data is available, because that is when the groundwater treatment system began operation. For wells that do not have at least six data points since 2002, all data are included in the analysis. Select wells (e.g., RW-2076F and RW-8030P) with extensive sampling histories are often evaluated with more recent time frames.

G.3 Statistical Analysis

See attached tables for comprehensive statistical results and attached graphs for select datasets with exceedances.

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Appendix G
Statistical Definitions and Acronyms
Fort Hall Mine Landfill

Field Name or Abbreviation	Definition
%	percent
µg/L	microgram per liter
BCa bootstrap	bootstrapping method to estimate confidence limits that corrects for bias and skewness in the distribution of bootstrap estimates,
Bootstrap	method for estimating uncertainty of a statistic where many recreations of the data set are generated by sampling the measured v
CAS_RN	chemical CAS RN
CHEMICAL_NAME	chemical/analyte/parameter
CL	confidence limit
CL conf	confidence level of the confidence limits
Confidence Level	confidence level of the Mann-Kendall Trend Test
COV	coefficient of variation, calculated as the dataset standard deviation divided by the mean
Dataset mean	mean of the records in the dataset
Dataset n	number of records between the Min Date and the Max Date
Direction	Mann-Kendall trend result
EPA	United States Environmental Protection Agency
GSI Toolkit Trend	trend result from the GSI Environmental, Inc. Mann-Kendall Toolkit (Connor et al. 2012)
ID GW	Idaho Groundwater Rule (Primary or Secondary Standard)
J	estimated result
Kaplan-Meier	statistical method to estimate the distribution of censored data (i.e., containing nondetect values)
Last Q	laboratory qualifier for the most recent result (if any)
Latest Result	most recent result
Latest Result > mean	Determination whether the Latest Result exceeds the dataset mean
Latest Result > Standard	Determination whether the Latest Result exceeds the Standard
Latest Result > UPL of background	Determination wheter the Latest Result exceeds the UPL of the background well
LCL	lower confidence limit of the data set mean
LCL > Standard	Determination whether the LCL exceeds the standard
LCL of the mean	lower confidence limit of the data set mean
Mann Kendall Trend	the output of the Mann-Kendall Trend Test, which is a nonparametric statistical test used to determine whether a time series has a
Max Date	most recent date in the analyzed dataset
MCL	maximum contaminant level
mg/L	milligram per liter
Min Date	earliest date in the analyzed dataset
n	number of data results in the dataset
N (background)	number of records for this analyte in the background well (Cell 2 and Cell 4 Monitoring Well only)
NA	not applicable
NC	not calculated
ND	nondetect
ND %	percentage of nondetect results in the dataset
ND (background)	number of nondetect results in the background well (Cell 2 and Cell 4 Monitoring Well only)
NP	nonparametric
ordinary nonparametric bootstrap	method for estimating uncertainty of a statistic where many recreations of the data set are generated by sampling the measured v
Parameter est. method	method used to estimate the mean and standard deviation, which depends on the number of unique detected values in the datase
p-value	probability of the Mann Kendall Trend Test that S would occur without a significant trend
Q	qualifier
RCRA	Resource Conservation and Recovery Act
RCRA regulated chemical	Whether the chemical is RCRA regulated
S	Kendall's S
sd	standard deviation of the dataset
sd(S)	standard deviation of Kendall's S
Standard	value of the standard (if any)
Standard source	source of the environmental standard (if any)
TS	Theil-Sen, nonparametric method to estimate dataset trend line
TS Intercept	Theil-Sen intercept
TS Slope	Theil-Sen slope
U	nondetect result
UCL	upper confidence limit of the data set mean
UCL > Standard	Determination whether the UCL of the mean exceeds the standard
UCL of the mean	upper confidence limit of the mean measurement
UJ	result estimated to be nondetect
Unit	unit of measurement of chemical concentrations

Appendix G
Statistical Definitions and Acronyms
Fort Hall Mine Landfill

Field Name or Abbreviation	Definition
UPL	upper prediction limit
UPL conf	confidence level for the UPL (for the background well)
UPL method	method of calculation for the Upper Prediction Limit of the background measurement
UPL of background	UPL of the background well (Cell 2 and Cell 4 Monitoring Well only)
Well ID	SYS_LOC_CODE of the well
Z	approximated value of Kendall's S, for datasets with n > 10

Arsenic : MW-8

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **30 April 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-8**
- CAS_RN - **7440-38-2**
- CHEMICAL_NAME - **Arsenic**

Graph notes

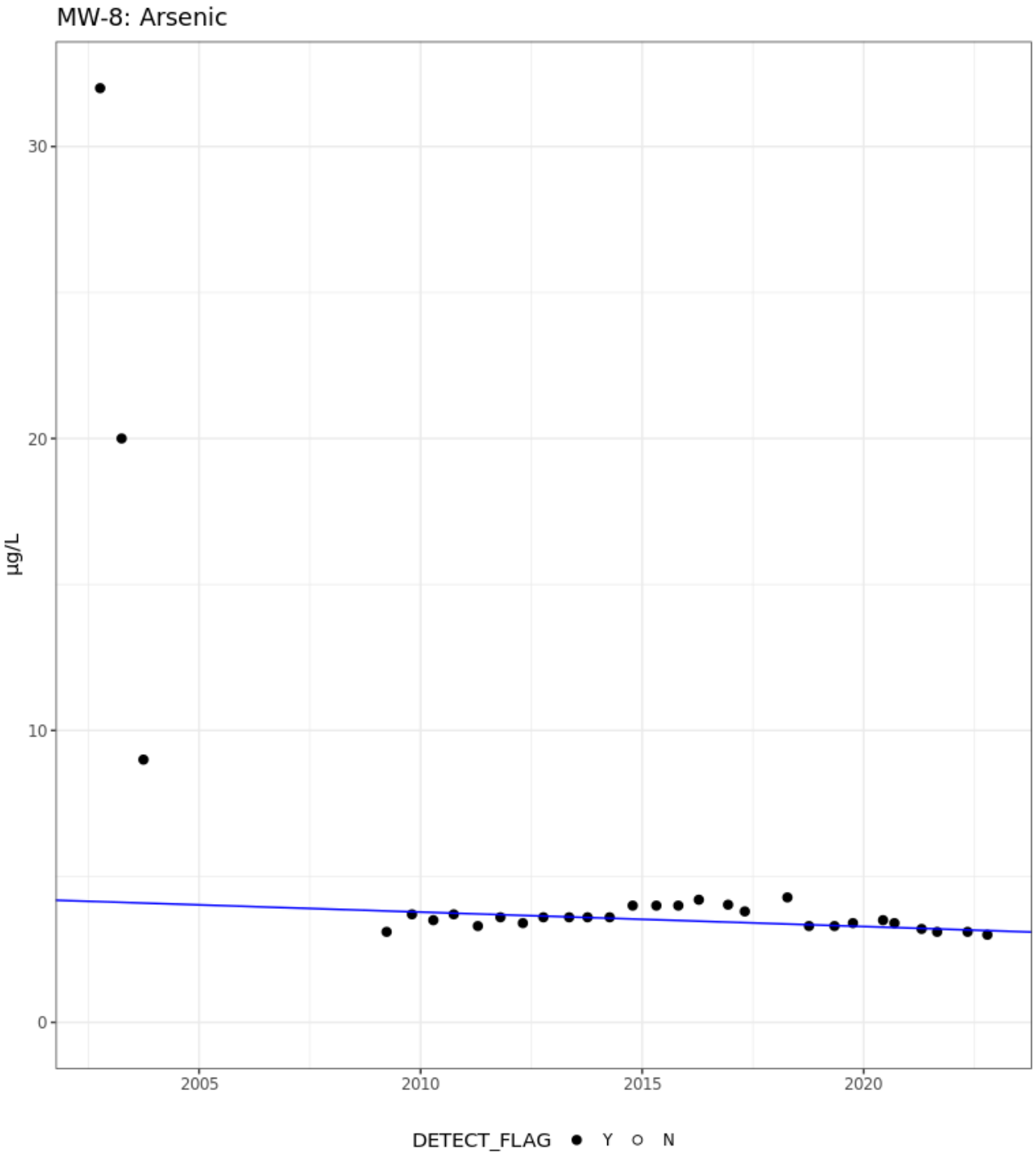
- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-8	7440-38-2	Arsenic	2002-10-09	32.00	µg/L	Y	
MW-8	7440-38-2	Arsenic	2003-04-04	20.00	µg/L	Y	
MW-8	7440-38-2	Arsenic	2003-10-01	9.00	µg/L	Y	
MW-8	7440-38-2	Arsenic	2009-03-27	3.10	µg/L	Y	
MW-8	7440-38-2	Arsenic	2009-10-22	3.70	µg/L	Y	
MW-8	7440-38-2	Arsenic	2010-04-16	3.50	µg/L	Y	
MW-8	7440-38-2	Arsenic	2010-10-01	3.70	µg/L	Y	B
MW-8	7440-38-2	Arsenic	2011-04-18	3.30	µg/L	Y	B
MW-8	7440-38-2	Arsenic	2011-10-21	3.60	µg/L	Y	
MW-8	7440-38-2	Arsenic	2012-04-23	3.40	µg/L	Y	
MW-8	7440-38-2	Arsenic	2012-10-09	3.60	µg/L	Y	
MW-8	7440-38-2	Arsenic	2013-05-09	3.60	µg/L	Y	
MW-8	7440-38-2	Arsenic	2013-10-08	3.60	µg/L	Y	B
MW-8	7440-38-2	Arsenic	2014-04-08	3.60	µg/L	Y	
MW-8	7440-38-2	Arsenic	2014-10-15	4.00	µg/L	Y	
MW-8	7440-38-2	Arsenic	2015-04-28	4.00	µg/L	Y	
MW-8	7440-38-2	Arsenic	2015-10-26	4.00	µg/L	Y	
MW-8	7440-38-2	Arsenic	2016-04-12	4.20	µg/L	Y	
MW-8	7440-38-2	Arsenic	2016-12-09	4.03	µg/L	Y	
MW-8	7440-38-2	Arsenic	2017-04-26	3.80	µg/L	Y	
MW-8	7440-38-2	Arsenic	2018-04-12	4.28	µg/L	Y	
MW-8	7440-38-2	Arsenic	2018-10-07	3.30	µg/L	Y	J
MW-8	7440-38-2	Arsenic	2019-05-05	3.30	µg/L	Y	J
MW-8	7440-38-2	Arsenic	2019-10-04	3.40	µg/L	Y	J
MW-8	7440-38-2	Arsenic	2020-06-08	3.50	µg/L	Y	J
MW-8	7440-38-2	Arsenic	2020-09-10	3.40	µg/L	Y	J
MW-8	7440-38-2	Arsenic	2021-04-22	3.20	µg/L	Y	J

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-8	7440-38-2	Arsenic	2021-08-28	3.10	µg/L	Y	J
MW-8	7440-38-2	Arsenic	2022-05-06	3.10	µg/L	Y	J
MW-8	7440-38-2	Arsenic	2022-10-16	3.00	µg/L	Y	J

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-8	Bannock_Inorganics	7440-38-2	Arsenic	µg/L	2002-10-09	2022-10-16	EPA MCL	10	3	J

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
30	0	Ordinary nonparametric bootstrap	5.24	5.95

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
BCa bootstrap	0.95	3.57	7.55	No	No	No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z
No	-0.000136	5.76	0.00441	99.6%	-147	53.5	-2.73

Nickel : MW-8

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **30 April 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-8**
- CAS_RN - **7440-02-0**
- CHEMICAL_NAME - **Nickel**

Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

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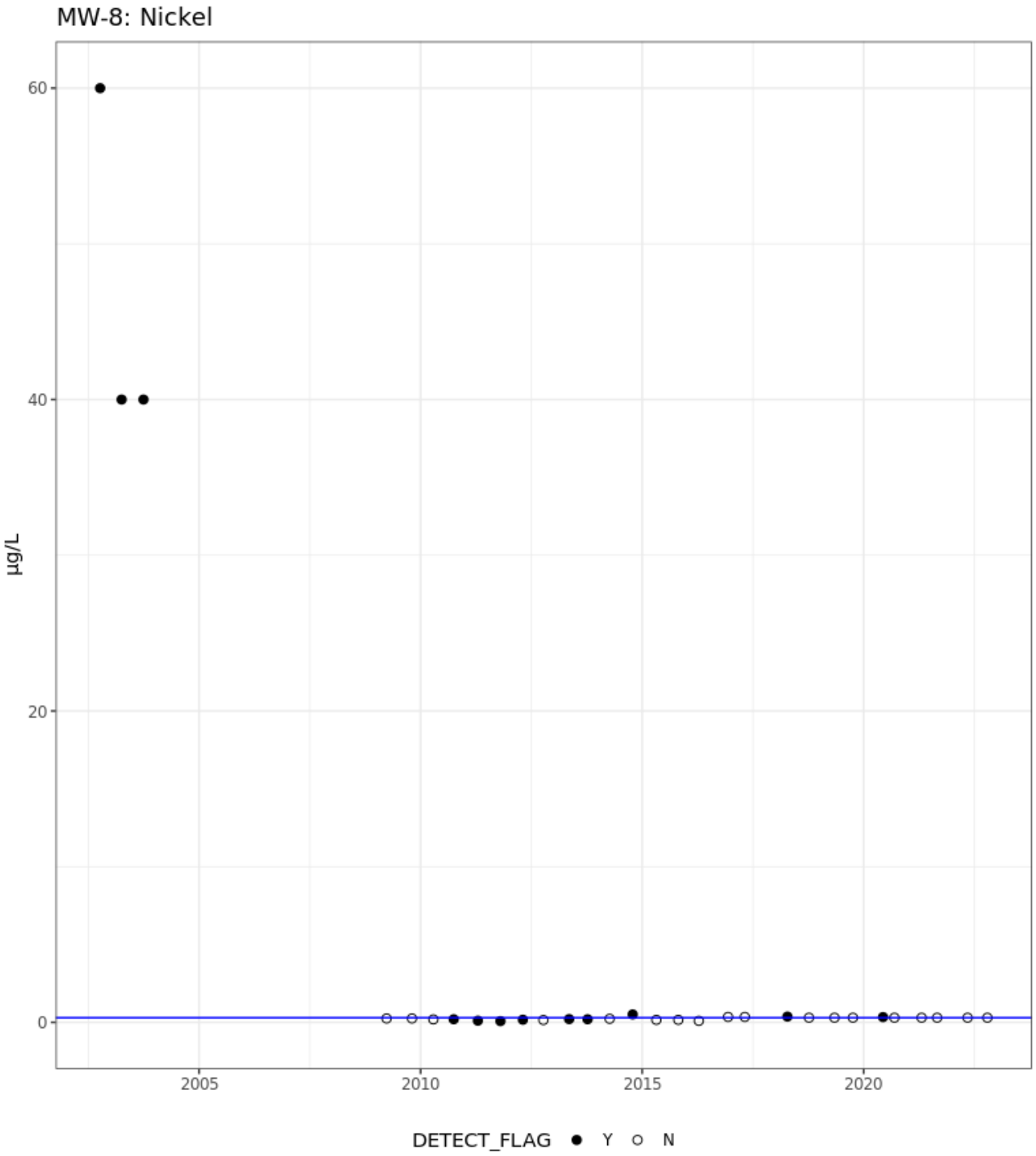
Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-8	7440-02-0	Nickel	2002-10-09	60.000	µg/L	Y	
MW-8	7440-02-0	Nickel	2003-04-04	40.000	µg/L	Y	
MW-8	7440-02-0	Nickel	2003-10-01	40.000	µg/L	Y	
MW-8	7440-02-0	Nickel	2009-03-27	0.250	µg/L	N	U
MW-8	7440-02-0	Nickel	2009-10-22	0.250	µg/L	N	U
MW-8	7440-02-0	Nickel	2010-04-16	0.190	µg/L	N	U
MW-8	7440-02-0	Nickel	2010-10-01	0.200	µg/L	Y	J
MW-8	7440-02-0	Nickel	2011-04-18	0.110	µg/L	Y	J
MW-8	7440-02-0	Nickel	2011-10-21	0.081	µg/L	Y	J
MW-8	7440-02-0	Nickel	2012-04-23	0.170	µg/L	Y	J
MW-8	7440-02-0	Nickel	2012-10-09	0.150	µg/L	N	U
MW-8	7440-02-0	Nickel	2013-05-09	0.210	µg/L	Y	J
MW-8	7440-02-0	Nickel	2013-10-08	0.200	µg/L	Y	J
MW-8	7440-02-0	Nickel	2014-04-08	0.230	µg/L	N	U
MW-8	7440-02-0	Nickel	2014-10-15	0.510	µg/L	Y	
MW-8	7440-02-0	Nickel	2015-04-28	0.160	µg/L	N	U
MW-8	7440-02-0	Nickel	2015-10-26	0.160	µg/L	N	U
MW-8	7440-02-0	Nickel	2016-04-12	0.099	µg/L	N	U
MW-8	7440-02-0	Nickel	2016-12-09	0.350	µg/L	N	U
MW-8	7440-02-0	Nickel	2017-04-26	0.350	µg/L	N	U
MW-8	7440-02-0	Nickel	2018-04-12	0.372	µg/L	Y	J
MW-8	7440-02-0	Nickel	2018-10-07	0.300	µg/L	N	U
MW-8	7440-02-0	Nickel	2019-05-05	0.300	µg/L	N	U
MW-8	7440-02-0	Nickel	2019-10-04	0.300	µg/L	N	U
MW-8	7440-02-0	Nickel	2020-06-08	0.340	µg/L	Y	J
MW-8	7440-02-0	Nickel	2020-09-10	0.300	µg/L	N	U
MW-8	7440-02-0	Nickel	2021-04-22	0.300	µg/L	N	U
MW-8	7440-02-0	Nickel	2021-08-28	0.300	µg/L	N	U
MW-8	7440-02-0	Nickel	2022-05-06	0.300	µg/L	N	U

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-8	7440-02-0	Nickel	2022-10-16	0.300	µg/L	N	U

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-8	Bannock_Inorganics	7440-02-0	Nickel	µg/L	2002-10-09	2022-10-16			0.3	U

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
30	60	NP Kaplan-Meier	4.81	14.3

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Bootstrap	0.95	0.17	10.8			No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z

Acetone : MW-9

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **23 July 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_VOCs**
- SYS_LOC_CODE - **MW-9**
- CAS_RN - **67-64-1**
- CHEMICAL_NAME - **Acetone**

Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

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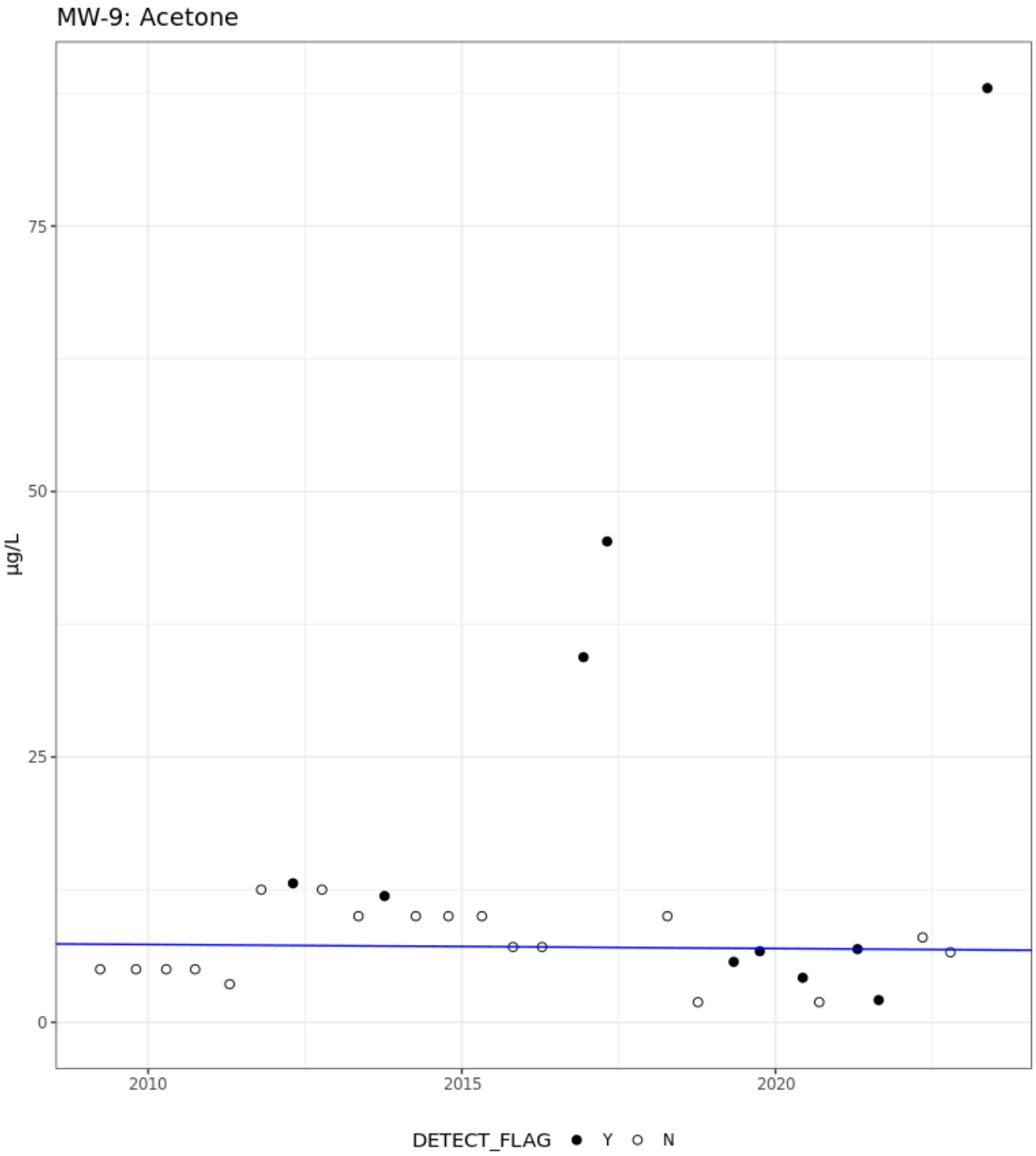
Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	67-64-1	Acetone	2009-03-27	5.0	µg/L	N	U
MW-9	67-64-1	Acetone	2009-10-22	5.0	µg/L	N	U
MW-9	67-64-1	Acetone	2010-04-16	5.0	µg/L	N	U
MW-9	67-64-1	Acetone	2010-10-01	5.0	µg/L	N	U
MW-9	67-64-1	Acetone	2011-04-20	3.6	µg/L	N	UB
MW-9	67-64-1	Acetone	2011-10-21	12.5	µg/L	N	U
MW-9	67-64-1	Acetone	2012-04-23	13.1	µg/L	Y	J
MW-9	67-64-1	Acetone	2012-10-09	12.5	µg/L	N	U
MW-9	67-64-1	Acetone	2013-05-09	10.0	µg/L	N	U
MW-9	67-64-1	Acetone	2013-10-08	11.9	µg/L	Y	J
MW-9	67-64-1	Acetone	2014-04-08	10.0	µg/L	N	U
MW-9	67-64-1	Acetone	2014-10-15	10.0	µg/L	N	U
MW-9	67-64-1	Acetone	2015-04-28	10.0	µg/L	N	U
MW-9	67-64-1	Acetone	2015-10-26	7.1	µg/L	N	U
MW-9	67-64-1	Acetone	2016-04-12	7.1	µg/L	N	U
MW-9	67-64-1	Acetone	2016-12-09	34.4	µg/L	Y	J
MW-9	67-64-1	Acetone	2017-04-26	45.3	µg/L	Y	J
MW-9	67-64-1	Acetone	2018-04-12	10.0	µg/L	N	U
MW-9	67-64-1	Acetone	2018-10-07	1.9	µg/L	N	U
MW-9	67-64-1	Acetone	2019-05-03	5.7	µg/L	Y	J
MW-9	67-64-1	Acetone	2019-10-02	6.7	µg/L	Y	J
MW-9	67-64-1	Acetone	2020-06-08	4.2	µg/L	Y	J
MW-9	67-64-1	Acetone	2020-09-12	1.9	µg/L	N	U
MW-9	67-64-1	Acetone	2021-04-23	6.9	µg/L	Y	J
MW-9	67-64-1	Acetone	2021-08-24	2.1	µg/L	Y	J
MW-9	67-64-1	Acetone	2022-05-07	8.0	µg/L	N	U
MW-9	67-64-1	Acetone	2022-10-16	6.6	µg/L	N	U
MW-9	67-64-1	Acetone	2023-05-19	88.0	µg/L	Y	

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-9	Bannock_VOCs	67-64-1	Acetone	µg/L	2009-03-27	2023-05-19			88	

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
28	64.3	NP Kaplan-Meier	9.68	18

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Bootstrap	0.95	4.24	17.5			Yes

Trend details

TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction

Arsenic : MW-9

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **30 April 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-9**
- CAS_RN - **7440-38-2**
- CHEMICAL_NAME - **Arsenic**

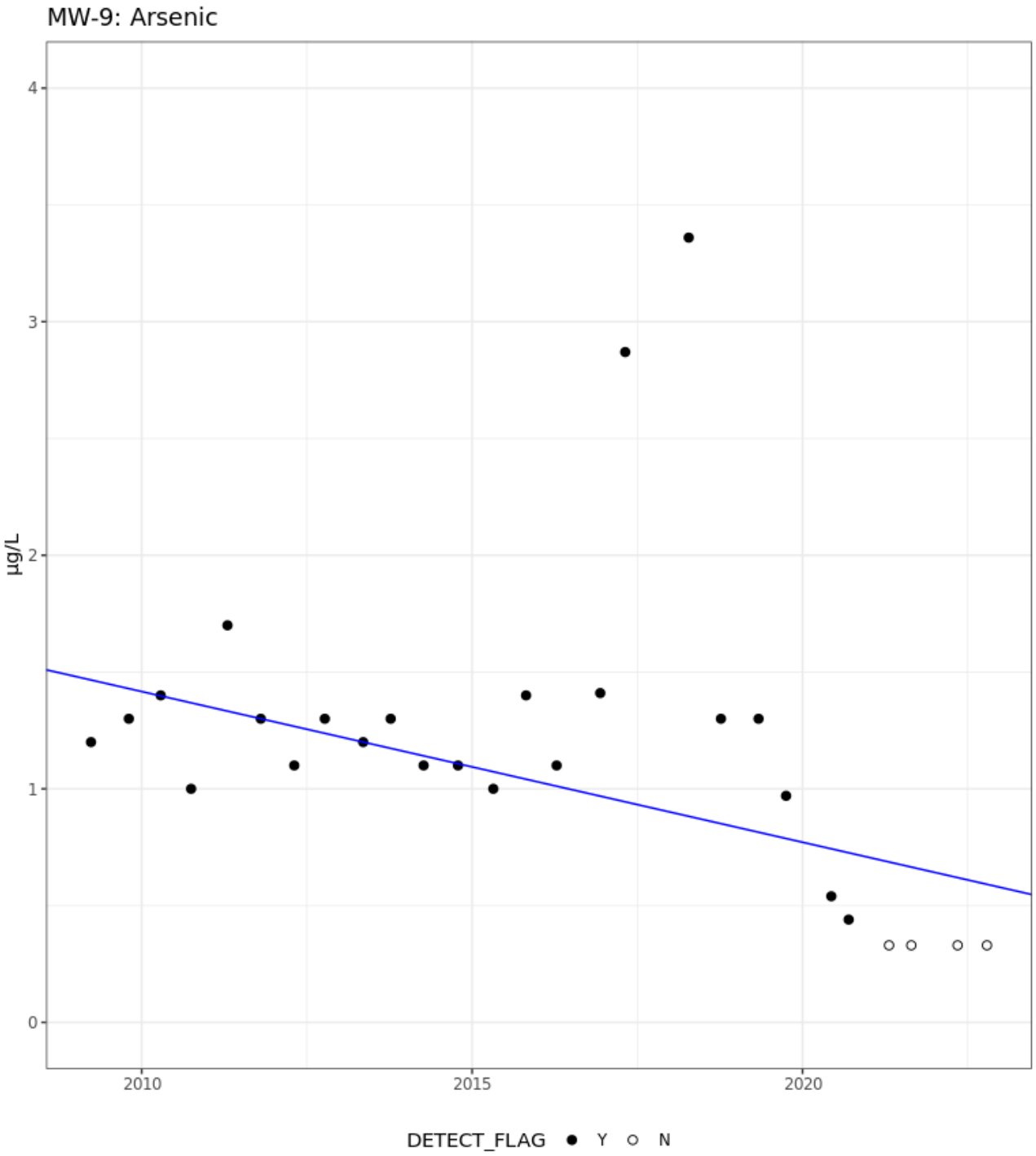
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	7440-38-2	Arsenic	2009-03-27	1.20	µg/L	Y	
MW-9	7440-38-2	Arsenic	2009-10-22	1.30	µg/L	Y	
MW-9	7440-38-2	Arsenic	2010-04-16	1.40	µg/L	Y	
MW-9	7440-38-2	Arsenic	2010-10-01	1.00	µg/L	Y	B
MW-9	7440-38-2	Arsenic	2011-04-20	1.70	µg/L	Y	B
MW-9	7440-38-2	Arsenic	2011-10-21	1.30	µg/L	Y	
MW-9	7440-38-2	Arsenic	2012-04-23	1.10	µg/L	Y	
MW-9	7440-38-2	Arsenic	2012-10-09	1.30	µg/L	Y	
MW-9	7440-38-2	Arsenic	2013-05-09	1.20	µg/L	Y	
MW-9	7440-38-2	Arsenic	2013-10-08	1.30	µg/L	Y	B
MW-9	7440-38-2	Arsenic	2014-04-08	1.10	µg/L	Y	
MW-9	7440-38-2	Arsenic	2014-10-15	1.10	µg/L	Y	
MW-9	7440-38-2	Arsenic	2015-04-28	1.00	µg/L	Y	
MW-9	7440-38-2	Arsenic	2015-10-26	1.40	µg/L	Y	
MW-9	7440-38-2	Arsenic	2016-04-12	1.10	µg/L	Y	
MW-9	7440-38-2	Arsenic	2016-12-09	1.41	µg/L	Y	J
MW-9	7440-38-2	Arsenic	2017-04-26	2.87	µg/L	Y	
MW-9	7440-38-2	Arsenic	2018-04-12	3.36	µg/L	Y	
MW-9	7440-38-2	Arsenic	2018-10-07	1.30	µg/L	Y	J
MW-9	7440-38-2	Arsenic	2019-05-03	1.30	µg/L	Y	J
MW-9	7440-38-2	Arsenic	2019-10-02	0.97	µg/L	Y	J
MW-9	7440-38-2	Arsenic	2020-06-08	0.54	µg/L	Y	J
MW-9	7440-38-2	Arsenic	2020-09-12	0.44	µg/L	Y	J
MW-9	7440-38-2	Arsenic	2021-04-23	0.33	µg/L	N	U
MW-9	7440-38-2	Arsenic	2021-08-24	0.33	µg/L	N	U
MW-9	7440-38-2	Arsenic	2022-05-07	0.33	µg/L	N	U
MW-9	7440-38-2	Arsenic	2022-10-16	0.33	µg/L	N	U

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-9	Bannock_Inorganics	7440-38-2	Arsenic	µg/L	2009-03-27	2022-10-16	EPA MCL	10	0.33	U

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
27	14.8	NP Kaplan-Meier	1.19	0.669

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Bootstrap	0.95	0.95	1.46	No	No	No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z
No	-0.000177	4	0.00397	99.6%	-127	45.4	-2.78

Barium : MW-9

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **30 April 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-9**
- CAS_RN - **7440-39-3**
- CHEMICAL_NAME - **Barium**

Graph notes

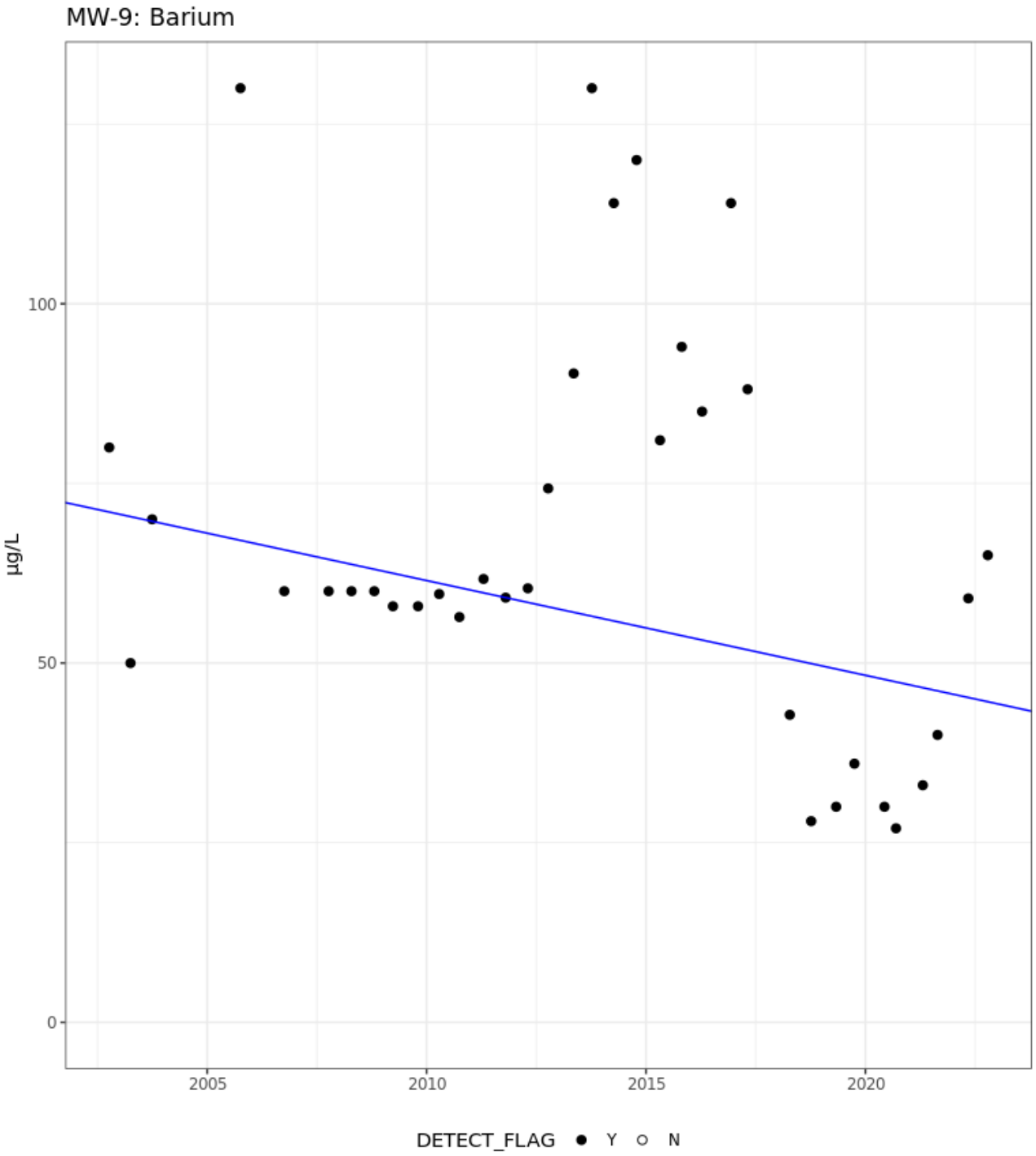
- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	7440-39-3	Barium	2002-10-09	80.0	µg/L	Y	
MW-9	7440-39-3	Barium	2003-04-04	50.0	µg/L	Y	
MW-9	7440-39-3	Barium	2003-10-01	70.0	µg/L	Y	
MW-9	7440-39-3	Barium	2005-10-05	130.0	µg/L	Y	
MW-9	7440-39-3	Barium	2006-10-05	60.0	µg/L	Y	
MW-9	7440-39-3	Barium	2007-10-09	60.0	µg/L	Y	
MW-9	7440-39-3	Barium	2008-04-16	60.0	µg/L	Y	
MW-9	7440-39-3	Barium	2008-10-23	60.0	µg/L	Y	
MW-9	7440-39-3	Barium	2009-03-27	57.9	µg/L	Y	
MW-9	7440-39-3	Barium	2009-10-22	57.9	µg/L	Y	
MW-9	7440-39-3	Barium	2010-04-16	59.6	µg/L	Y	
MW-9	7440-39-3	Barium	2010-10-01	56.4	µg/L	Y	
MW-9	7440-39-3	Barium	2011-04-20	61.7	µg/L	Y	
MW-9	7440-39-3	Barium	2011-10-21	59.1	µg/L	Y	
MW-9	7440-39-3	Barium	2012-04-23	60.4	µg/L	Y	
MW-9	7440-39-3	Barium	2012-10-09	74.3	µg/L	Y	
MW-9	7440-39-3	Barium	2013-05-09	90.3	µg/L	Y	
MW-9	7440-39-3	Barium	2013-10-08	130.0	µg/L	Y	
MW-9	7440-39-3	Barium	2014-04-08	114.0	µg/L	Y	
MW-9	7440-39-3	Barium	2014-10-15	120.0	µg/L	Y	B
MW-9	7440-39-3	Barium	2015-04-28	81.0	µg/L	Y	
MW-9	7440-39-3	Barium	2015-10-26	94.0	µg/L	Y	
MW-9	7440-39-3	Barium	2016-04-12	85.0	µg/L	Y	
MW-9	7440-39-3	Barium	2016-12-09	114.0	µg/L	Y	
MW-9	7440-39-3	Barium	2017-04-26	88.1	µg/L	Y	
MW-9	7440-39-3	Barium	2018-04-12	42.8	µg/L	Y	

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	7440-39-3	Barium	2018-10-07	28.0	µg/L	Y	
MW-9	7440-39-3	Barium	2019-05-03	30.0	µg/L	Y	
MW-9	7440-39-3	Barium	2019-10-02	36.0	µg/L	Y	
MW-9	7440-39-3	Barium	2020-06-08	30.0	µg/L	Y	
MW-9	7440-39-3	Barium	2020-09-12	27.0	µg/L	Y	
MW-9	7440-39-3	Barium	2021-04-23	33.0	µg/L	Y	
MW-9	7440-39-3	Barium	2021-08-24	40.0	µg/L	Y	
MW-9	7440-39-3	Barium	2022-05-07	59.0	µg/L	Y	
MW-9	7440-39-3	Barium	2022-10-16	65.0	µg/L	Y	

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-9	Bannock_Inorganics	7440-39-3	Barium	µg/L	2002-10-09	2022-10-16	EPA MCL	2,000	65	

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
35	0	Ordinary nonparametric bootstrap	67.6	28.7

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
BCa bootstrap	0.95	58.5	77.4	No	No	No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z
No	-0.00361	114	0.0907	90.9%	-95	67.9	-1.38

Benzene : MW-9

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **23 July 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_VOCs**
- SYS_LOC_CODE - **MW-9**
- CAS_RN - **71-43-2**
- CHEMICAL_NAME - **Benzene**

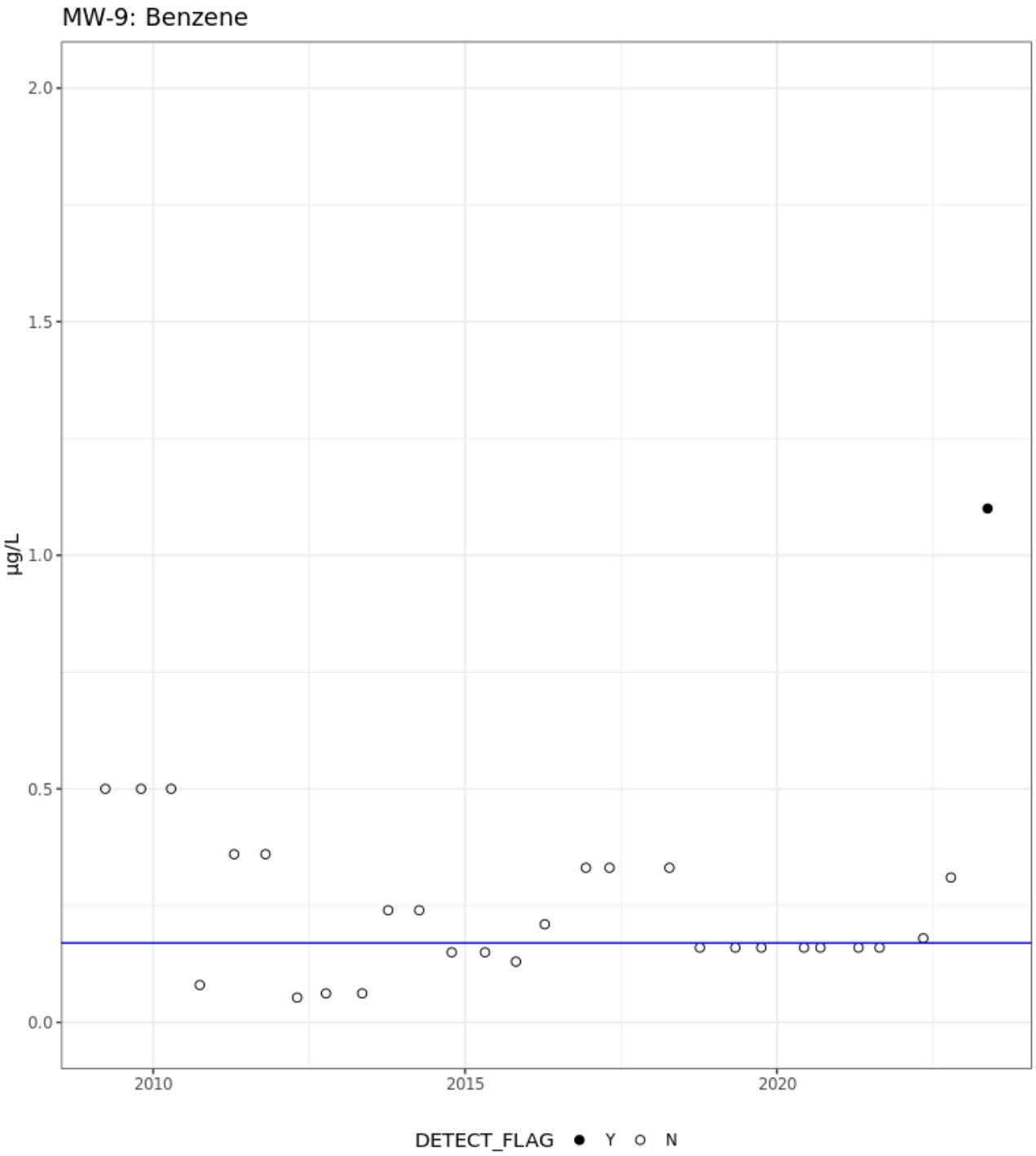
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	71-43-2	Benzene	2009-03-27	0.500	µg/L	N	U
MW-9	71-43-2	Benzene	2009-10-22	0.500	µg/L	N	U
MW-9	71-43-2	Benzene	2010-04-16	0.500	µg/L	N	U
MW-9	71-43-2	Benzene	2010-10-01	0.080	µg/L	N	U
MW-9	71-43-2	Benzene	2011-04-20	0.360	µg/L	N	U
MW-9	71-43-2	Benzene	2011-10-21	0.360	µg/L	N	U
MW-9	71-43-2	Benzene	2012-04-23	0.053	µg/L	N	U
MW-9	71-43-2	Benzene	2012-10-09	0.062	µg/L	N	U
MW-9	71-43-2	Benzene	2013-05-09	0.062	µg/L	N	U
MW-9	71-43-2	Benzene	2013-10-08	0.240	µg/L	N	UJ
MW-9	71-43-2	Benzene	2014-04-08	0.240	µg/L	N	U
MW-9	71-43-2	Benzene	2014-10-15	0.150	µg/L	N	U
MW-9	71-43-2	Benzene	2015-04-28	0.150	µg/L	N	U
MW-9	71-43-2	Benzene	2015-10-26	0.130	µg/L	N	U
MW-9	71-43-2	Benzene	2016-04-12	0.210	µg/L	N	U
MW-9	71-43-2	Benzene	2016-12-09	0.331	µg/L	N	U
MW-9	71-43-2	Benzene	2017-04-26	0.331	µg/L	N	U
MW-9	71-43-2	Benzene	2018-04-12	0.331	µg/L	N	U
MW-9	71-43-2	Benzene	2018-10-07	0.160	µg/L	N	U
MW-9	71-43-2	Benzene	2019-05-03	0.160	µg/L	N	U
MW-9	71-43-2	Benzene	2019-10-02	0.160	µg/L	N	U
MW-9	71-43-2	Benzene	2020-06-08	0.160	µg/L	N	U
MW-9	71-43-2	Benzene	2020-09-12	0.160	µg/L	N	U
MW-9	71-43-2	Benzene	2021-04-23	0.160	µg/L	N	U
MW-9	71-43-2	Benzene	2021-08-24	0.160	µg/L	N	U
MW-9	71-43-2	Benzene	2022-05-07	0.180	µg/L	N	U
MW-9	71-43-2	Benzene	2022-10-16	0.310	µg/L	N	U
MW-9	71-43-2	Benzene	2023-05-19	1.100	µg/L	Y	

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-9	Bannock_VOCs	71-43-2	Benzene	µg/L	2009-03-27	2023-05-19	EPA MCL	5	1.1	

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
28	96.4	Does not take in to account ND status	0.261	0.21

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Not enough distinct detected values to assess						Yes

Trend details

TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction

Lead : MW-9

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **30 April 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-9**
- CAS_RN - **7439-92-1**
- CHEMICAL_NAME - **Lead**

Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

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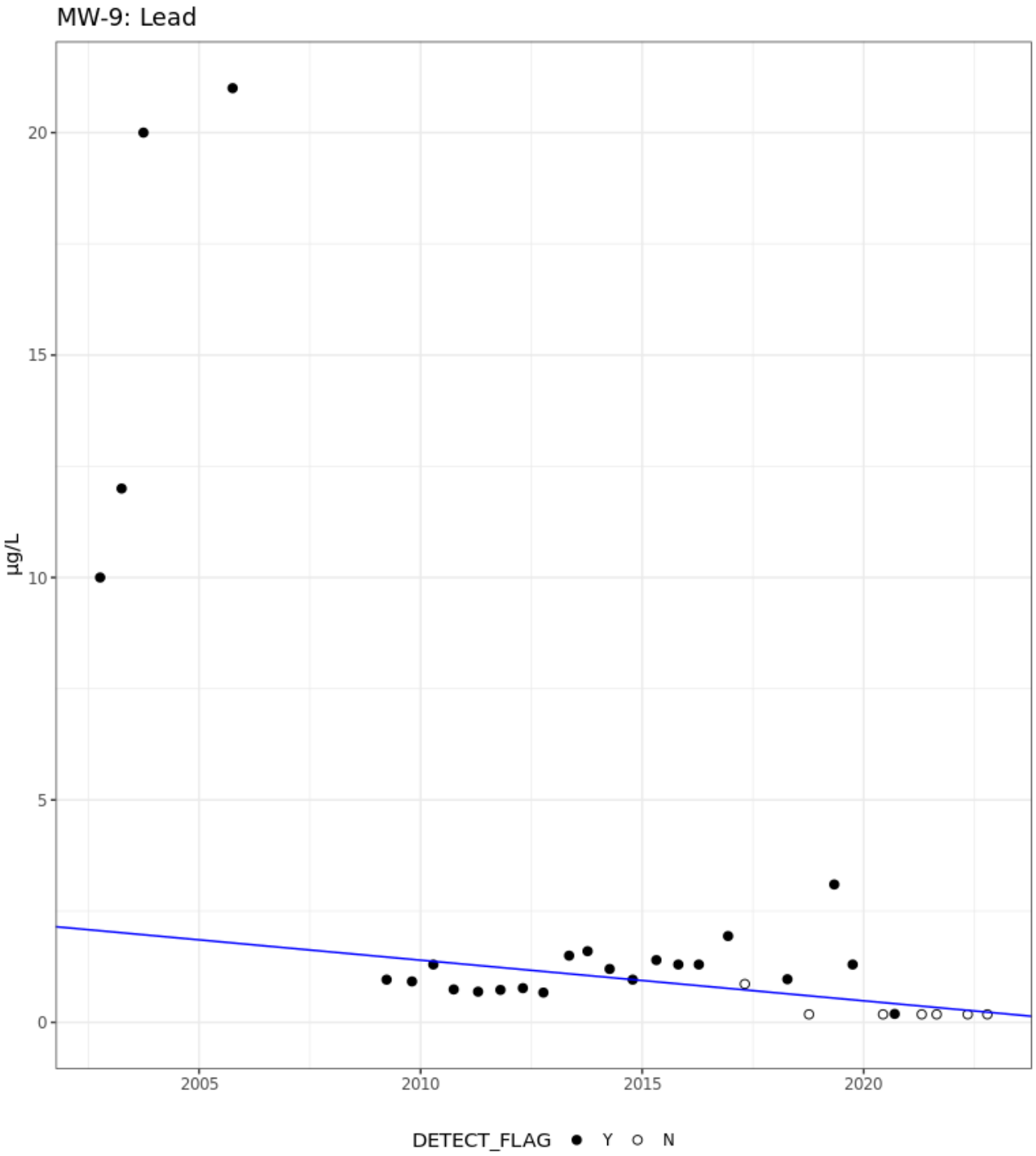
Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	7439-92-1	Lead	2002-10-09	10.000	µg/L	Y	
MW-9	7439-92-1	Lead	2003-04-04	12.000	µg/L	Y	
MW-9	7439-92-1	Lead	2003-10-01	20.000	µg/L	Y	
MW-9	7439-92-1	Lead	2005-10-05	21.000	µg/L	Y	
MW-9	7439-92-1	Lead	2009-03-27	0.960	µg/L	Y	
MW-9	7439-92-1	Lead	2009-10-22	0.920	µg/L	Y	
MW-9	7439-92-1	Lead	2010-04-16	1.300	µg/L	Y	
MW-9	7439-92-1	Lead	2010-10-01	0.740	µg/L	Y	B
MW-9	7439-92-1	Lead	2011-04-20	0.690	µg/L	Y	
MW-9	7439-92-1	Lead	2011-10-21	0.730	µg/L	Y	
MW-9	7439-92-1	Lead	2012-04-23	0.770	µg/L	Y	B
MW-9	7439-92-1	Lead	2012-10-09	0.670	µg/L	Y	B
MW-9	7439-92-1	Lead	2013-05-09	1.500	µg/L	Y	
MW-9	7439-92-1	Lead	2013-10-08	1.600	µg/L	Y	
MW-9	7439-92-1	Lead	2014-04-08	1.200	µg/L	Y	
MW-9	7439-92-1	Lead	2014-10-15	0.960	µg/L	Y	
MW-9	7439-92-1	Lead	2015-04-28	1.400	µg/L	Y	
MW-9	7439-92-1	Lead	2015-10-26	1.300	µg/L	Y	
MW-9	7439-92-1	Lead	2016-04-12	1.300	µg/L	Y	
MW-9	7439-92-1	Lead	2016-12-09	1.940	µg/L	Y	J
MW-9	7439-92-1	Lead	2017-04-26	0.863	µg/L	N	UB
MW-9	7439-92-1	Lead	2018-04-12	0.970	µg/L	Y	BJ
MW-9	7439-92-1	Lead	2018-10-07	0.180	µg/L	N	U
MW-9	7439-92-1	Lead	2019-05-03	3.100	µg/L	Y	
MW-9	7439-92-1	Lead	2019-10-02	1.300	µg/L	Y	
MW-9	7439-92-1	Lead	2020-06-08	0.180	µg/L	N	U
MW-9	7439-92-1	Lead	2020-09-12	0.190	µg/L	Y	J

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	7439-92-1	Lead	2021-04-23	0.180	µg/L	N	U
MW-9	7439-92-1	Lead	2021-08-24	0.180	µg/L	N	U
MW-9	7439-92-1	Lead	2022-05-07	0.180	µg/L	N	U
MW-9	7439-92-1	Lead	2022-10-16	0.180	µg/L	N	U

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-9	Bannock_Inorganics	7439-92-1	Lead	µg/L	2002-10-09	2022-10-16	ID GW - PRIMARY	15	0.18	U

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
31	22.6	NP Kaplan-Meier	2.84	5.3

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Bootstrap	0.95	1.2	4.91	No	No	No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z
No	-0.00025	5.05	0.00117	99.9%	-179	56.3	-3.16

Nickel : MW-9

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **30 April 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-9**
- CAS_RN - **7440-02-0**
- CHEMICAL_NAME - **Nickel**

Graph notes

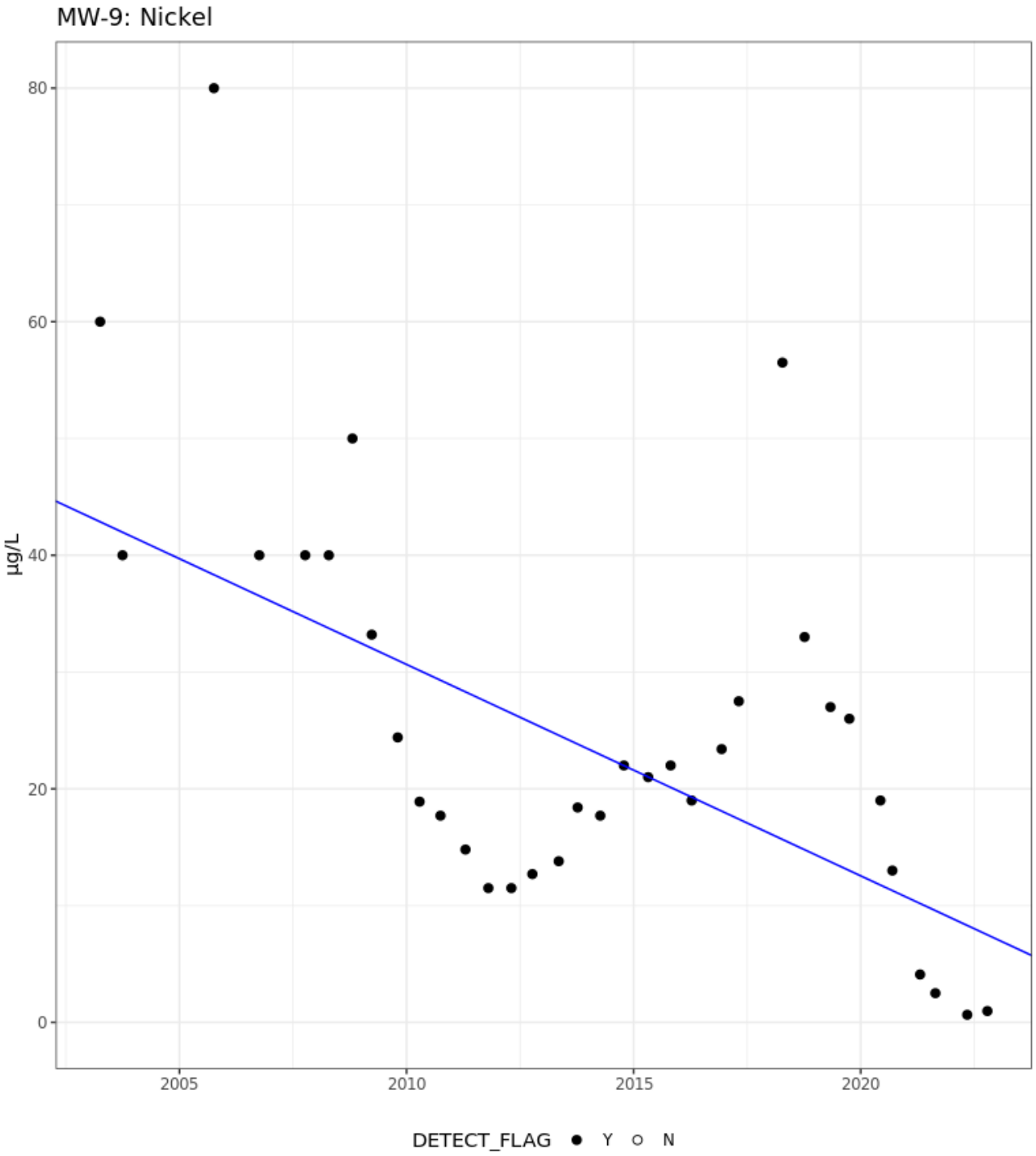
- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	7440-02-0	Nickel	2003-04-04	60.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2003-10-01	40.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2005-10-05	80.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2006-10-05	40.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2007-10-09	40.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2008-04-16	40.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2008-10-23	50.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2009-03-27	33.20	µg/L	Y	
MW-9	7440-02-0	Nickel	2009-10-22	24.40	µg/L	Y	
MW-9	7440-02-0	Nickel	2010-04-16	18.90	µg/L	Y	
MW-9	7440-02-0	Nickel	2010-10-01	17.70	µg/L	Y	
MW-9	7440-02-0	Nickel	2011-04-20	14.80	µg/L	Y	
MW-9	7440-02-0	Nickel	2011-10-21	11.50	µg/L	Y	
MW-9	7440-02-0	Nickel	2012-04-23	11.50	µg/L	Y	
MW-9	7440-02-0	Nickel	2012-10-09	12.70	µg/L	Y	
MW-9	7440-02-0	Nickel	2013-05-09	13.80	µg/L	Y	
MW-9	7440-02-0	Nickel	2013-10-08	18.40	µg/L	Y	
MW-9	7440-02-0	Nickel	2014-04-08	17.70	µg/L	Y	
MW-9	7440-02-0	Nickel	2014-10-15	22.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2015-04-28	21.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2015-10-26	22.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2016-04-12	19.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2016-12-09	23.40	µg/L	Y	
MW-9	7440-02-0	Nickel	2017-04-26	27.50	µg/L	Y	
MW-9	7440-02-0	Nickel	2018-04-12	56.50	µg/L	Y	
MW-9	7440-02-0	Nickel	2018-10-07	33.00	µg/L	Y	

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	7440-02-0	Nickel	2019-05-03	27.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2019-10-02	26.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2020-06-08	19.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2020-09-12	13.00	µg/L	Y	
MW-9	7440-02-0	Nickel	2021-04-23	4.10	µg/L	Y	
MW-9	7440-02-0	Nickel	2021-08-24	2.50	µg/L	Y	
MW-9	7440-02-0	Nickel	2022-05-07	0.65	µg/L	Y	J
MW-9	7440-02-0	Nickel	2022-10-16	0.97	µg/L	Y	J

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-9	Bannock_Inorganics	7440-02-0	Nickel	µg/L	2003-04-04	2022-10-16			0.97	J

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
34	0	Ordinary nonparametric bootstrap	25.4	17.6

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
BCa bootstrap	0.95	19.9	31.5			No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z
	-0.00496	103	0.000744	99.9%	-215	65	-3.29

Vinyl chloride : MW-9

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **23 July 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_VOCs**
- SYS_LOC_CODE - **MW-9**
- CAS_RN - **75-01-4**
- CHEMICAL_NAME - **Vinyl chloride**

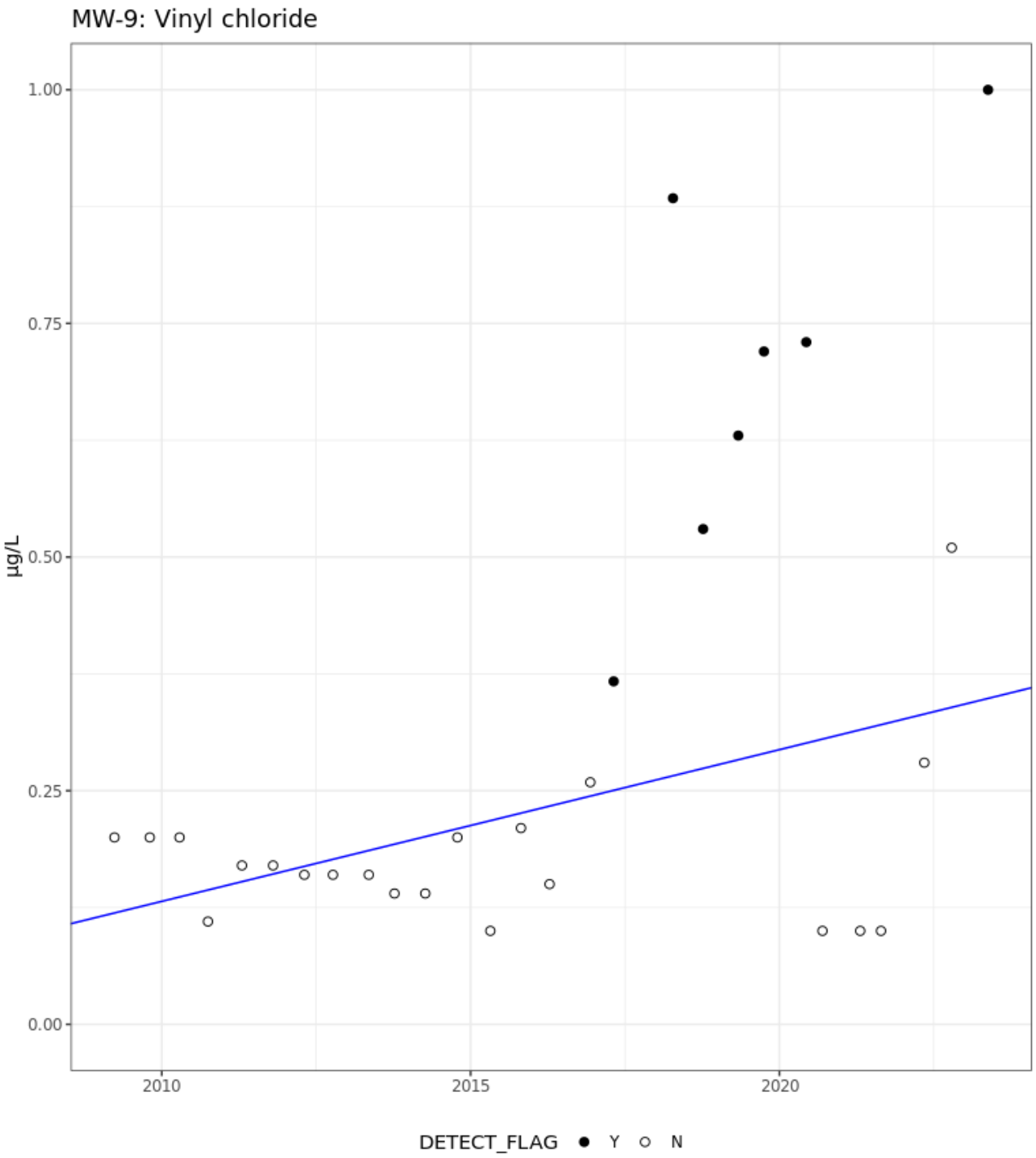
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	75-01-4	Vinyl chloride	2009-03-27	0.200	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2009-10-22	0.200	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2010-04-16	0.200	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2010-10-01	0.110	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2011-04-20	0.170	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2011-10-21	0.170	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2012-04-23	0.160	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2012-10-09	0.160	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2013-05-09	0.160	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2013-10-08	0.140	µg/L	N	UJ
MW-9	75-01-4	Vinyl chloride	2014-04-08	0.140	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2014-10-15	0.200	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2015-04-28	0.100	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2015-10-26	0.210	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2016-04-12	0.150	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2016-12-09	0.259	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2017-04-26	0.367	µg/L	Y	J
MW-9	75-01-4	Vinyl chloride	2018-04-12	0.884	µg/L	Y	J
MW-9	75-01-4	Vinyl chloride	2018-10-07	0.530	µg/L	Y	J
MW-9	75-01-4	Vinyl chloride	2019-05-03	0.630	µg/L	Y	J
MW-9	75-01-4	Vinyl chloride	2019-10-02	0.720	µg/L	Y	J
MW-9	75-01-4	Vinyl chloride	2020-06-08	0.730	µg/L	Y	J
MW-9	75-01-4	Vinyl chloride	2020-09-12	0.100	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2021-04-23	0.100	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2021-08-24	0.100	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2022-05-07	0.280	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2022-10-16	0.510	µg/L	N	U
MW-9	75-01-4	Vinyl chloride	2023-05-19	1.000	µg/L	Y	J

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-9	Bannock_VOCs	75-01-4	Vinyl chloride	µg/L	2009-03-27	2023-05-19	EPA MCL	2	1	J

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
28	75	NP Kaplan-Meier	0.249	0.275

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Bootstrap	0.95	0.154	0.354	No	No	Yes

Trend details

TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction

Zinc : MW-9

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **30 April 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-9**
- CAS_RN - **7440-66-6**
- CHEMICAL_NAME - **Zinc**

Graph notes

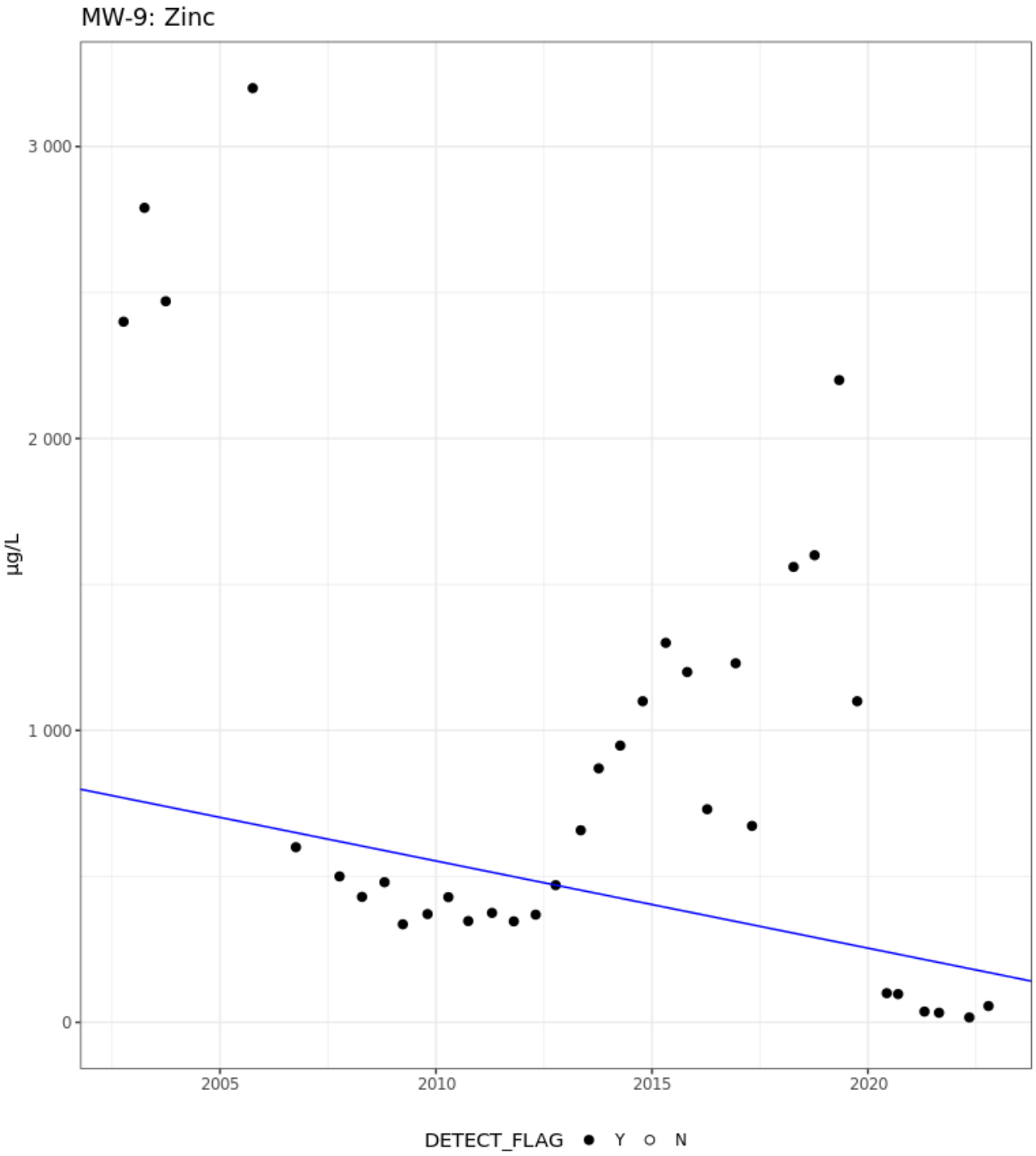
- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	7440-66-6	Zinc	2002-10-09	2,400	µg/L	Y	
MW-9	7440-66-6	Zinc	2003-04-04	2,790	µg/L	Y	
MW-9	7440-66-6	Zinc	2003-10-01	2,470	µg/L	Y	
MW-9	7440-66-6	Zinc	2005-10-05	3,200	µg/L	Y	
MW-9	7440-66-6	Zinc	2006-10-05	600	µg/L	Y	
MW-9	7440-66-6	Zinc	2007-10-09	500	µg/L	Y	
MW-9	7440-66-6	Zinc	2008-04-16	430	µg/L	Y	
MW-9	7440-66-6	Zinc	2008-10-23	480	µg/L	Y	
MW-9	7440-66-6	Zinc	2009-03-27	336	µg/L	Y	
MW-9	7440-66-6	Zinc	2009-10-22	371	µg/L	Y	
MW-9	7440-66-6	Zinc	2010-04-16	429	µg/L	Y	
MW-9	7440-66-6	Zinc	2010-10-01	347	µg/L	Y	
MW-9	7440-66-6	Zinc	2011-04-20	375	µg/L	Y	
MW-9	7440-66-6	Zinc	2011-10-21	346	µg/L	Y	
MW-9	7440-66-6	Zinc	2012-04-23	369	µg/L	Y	
MW-9	7440-66-6	Zinc	2012-10-09	470	µg/L	Y	
MW-9	7440-66-6	Zinc	2013-05-09	658	µg/L	Y	
MW-9	7440-66-6	Zinc	2013-10-08	870	µg/L	Y	
MW-9	7440-66-6	Zinc	2014-04-08	948	µg/L	Y	B
MW-9	7440-66-6	Zinc	2014-10-15	1,100	µg/L	Y	B
MW-9	7440-66-6	Zinc	2015-04-28	1,300	µg/L	Y	
MW-9	7440-66-6	Zinc	2015-10-26	1,200	µg/L	Y	
MW-9	7440-66-6	Zinc	2016-04-12	730	µg/L	Y	
MW-9	7440-66-6	Zinc	2016-12-09	1,230	µg/L	Y	
MW-9	7440-66-6	Zinc	2017-04-26	673	µg/L	Y	B
MW-9	7440-66-6	Zinc	2018-04-12	1,560	µg/L	Y	

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-9	7440-66-6	Zinc	2018-10-07	1,600	µg/L	Y	
MW-9	7440-66-6	Zinc	2019-05-03	2,200	µg/L	Y	
MW-9	7440-66-6	Zinc	2019-10-02	1,100	µg/L	Y	
MW-9	7440-66-6	Zinc	2020-06-08	100	µg/L	Y	
MW-9	7440-66-6	Zinc	2020-09-12	97	µg/L	Y	
MW-9	7440-66-6	Zinc	2021-04-23	37	µg/L	Y	
MW-9	7440-66-6	Zinc	2021-08-24	33	µg/L	Y	
MW-9	7440-66-6	Zinc	2022-05-07	17	µg/L	Y	J+
MW-9	7440-66-6	Zinc	2022-10-16	56	µg/L	Y	

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-9	Bannock_Inorganics	7440-66-6	Zinc	µg/L	2002-10-09	2022-10-16	ID GW - SECONDARY	5	56	

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
35	0	Ordinary nonparametric bootstrap	898	838

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
BCa bootstrap	0.95	642	1,180	Yes	Yes	No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z
Yes	-0.0818	1,750	0.0575	94.2%	-112	68	-1.63

1,1-Dichloroethane : MW-13

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **23 July 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_VOCs**
- SYS_LOC_CODE - **MW-13**
- CAS_RN - **75-34-3**
- CHEMICAL_NAME - **1,1-Dichloroethane**

Graph notes

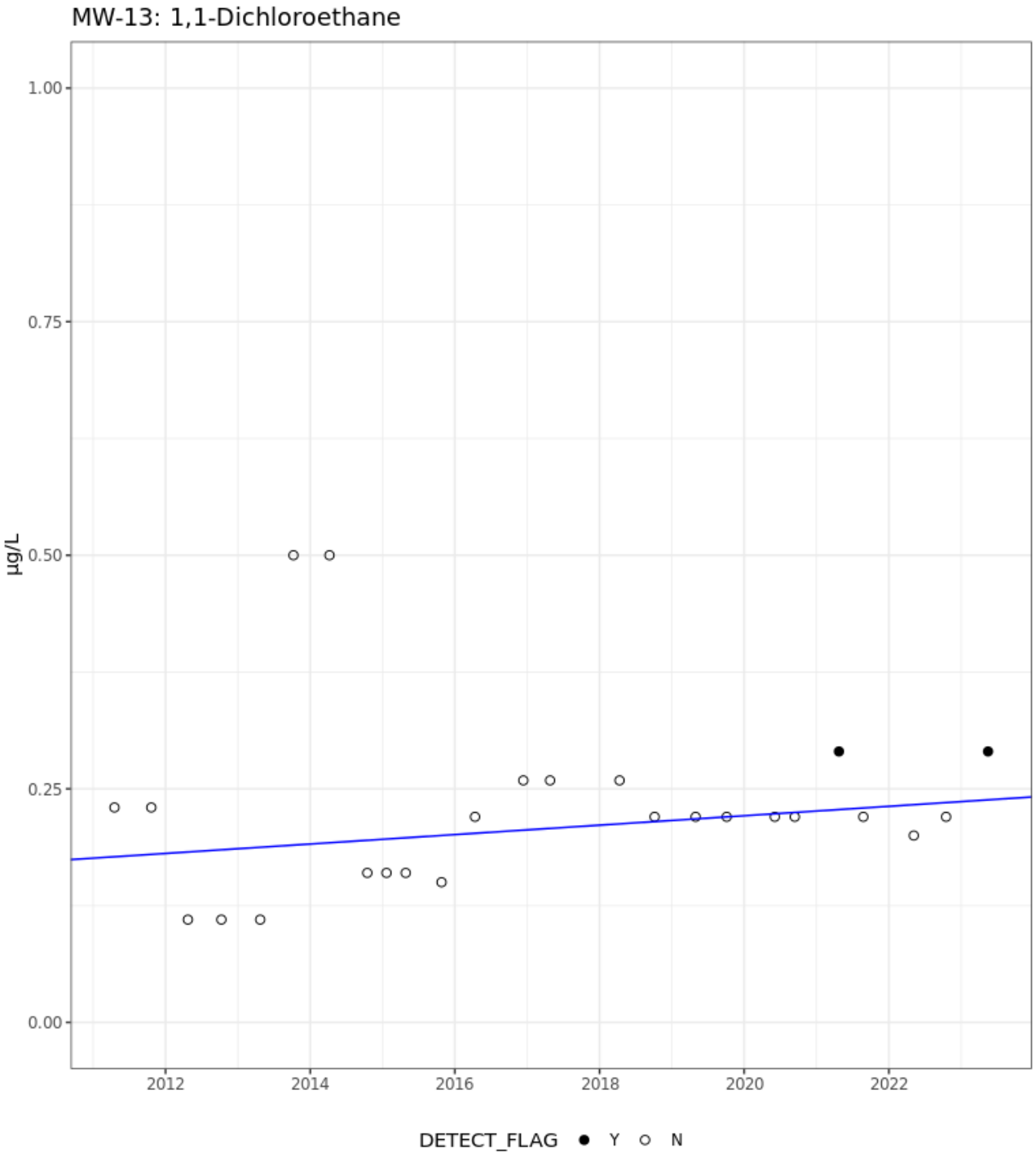
- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-13	75-34-3	1,1-Dichloroethane	2011-04-18	0.230	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2011-10-21	0.230	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2012-04-23	0.110	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2012-10-09	0.110	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2013-04-23	0.110	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2013-10-08	0.500	µg/L	N	UJ
MW-13	75-34-3	1,1-Dichloroethane	2014-04-08	0.500	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2014-10-16	0.160	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2015-01-21	0.160	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2015-04-28	0.160	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2015-10-26	0.150	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2016-04-12	0.220	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2016-12-12	0.259	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2017-04-26	0.259	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2018-04-12	0.259	µg/L	N	U

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-13	75-34-3	1,1-Dichloroethane	2018-10-06	0.220	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2019-05-01	0.220	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2019-10-05	0.220	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2020-06-04	0.220	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2020-09-13	0.220	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2021-04-24	0.290	µg/L	Y	J
MW-13	75-34-3	1,1-Dichloroethane	2021-08-25	0.220	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2022-05-07	0.200	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2022-10-17	0.220	µg/L	N	U
MW-13	75-34-3	1,1-Dichloroethane	2023-05-17	0.290	µg/L	Y	J

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-13	Bannock_VOCs	75-34-3	1,1-Dichloroethane	µg/L	2011-04-18	2023-05-17			0.29	J

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
25	92	Does not take in to account ND status	0.229	0.0961

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Not enough distinct detected values to assess						Yes

Trend details

TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction

Arsenic : MW-13

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **30 April 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-13**
- CAS_RN - **7440-38-2**
- CHEMICAL_NAME - **Arsenic**

Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

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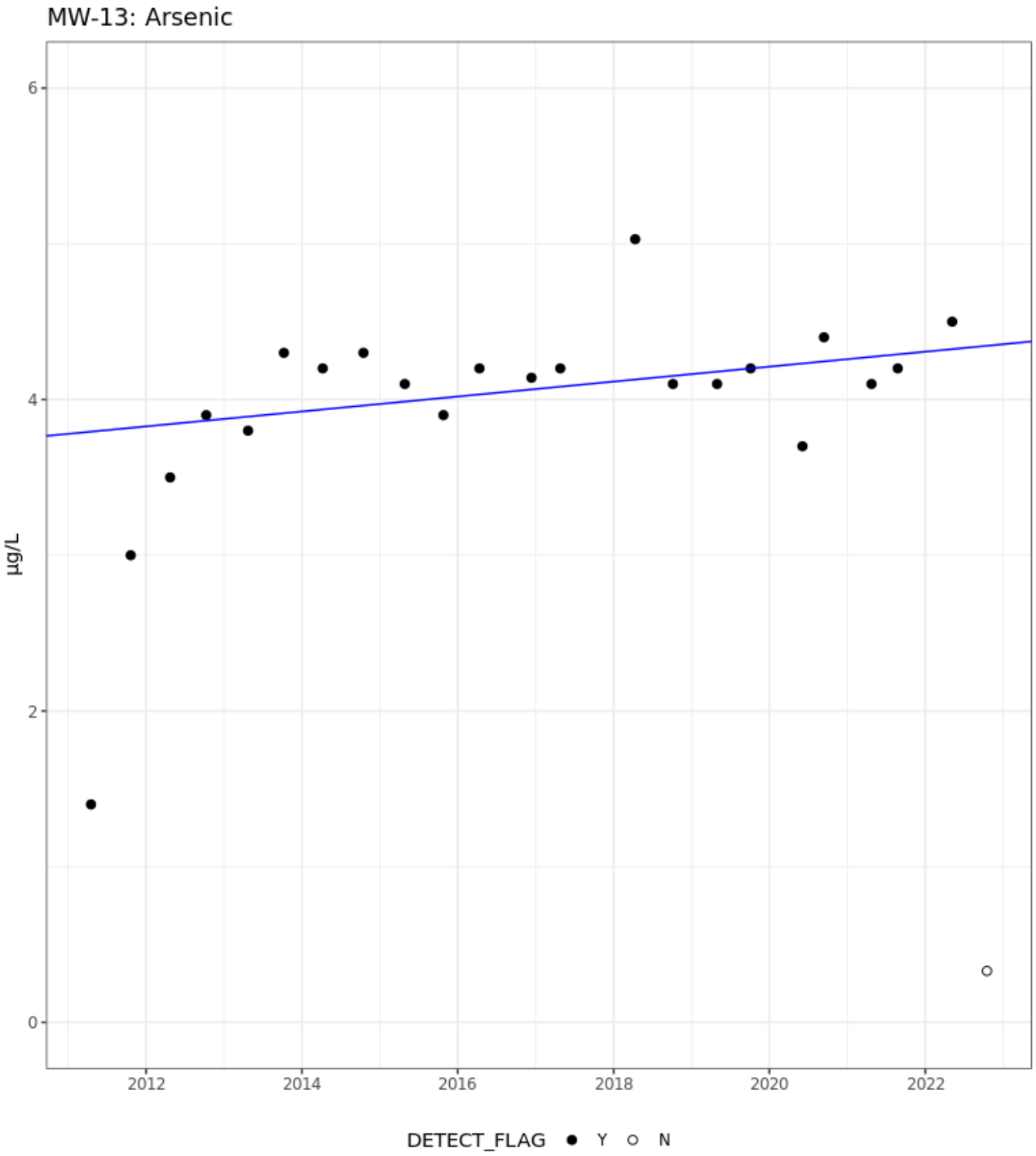
Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-13	7440-38-2	Arsenic	2011-04-18	1.40	µg/L	Y	B
MW-13	7440-38-2	Arsenic	2011-10-21	3.00	µg/L	Y	
MW-13	7440-38-2	Arsenic	2012-04-23	3.50	µg/L	Y	
MW-13	7440-38-2	Arsenic	2012-10-09	3.90	µg/L	Y	
MW-13	7440-38-2	Arsenic	2013-04-23	3.80	µg/L	Y	
MW-13	7440-38-2	Arsenic	2013-10-08	4.30	µg/L	Y	B
MW-13	7440-38-2	Arsenic	2014-04-08	4.20	µg/L	Y	
MW-13	7440-38-2	Arsenic	2014-10-16	4.30	µg/L	Y	
MW-13	7440-38-2	Arsenic	2015-04-28	4.10	µg/L	Y	
MW-13	7440-38-2	Arsenic	2015-10-26	3.90	µg/L	Y	
MW-13	7440-38-2	Arsenic	2016-04-12	4.20	µg/L	Y	
MW-13	7440-38-2	Arsenic	2016-12-12	4.14	µg/L	Y	
MW-13	7440-38-2	Arsenic	2017-04-26	4.20	µg/L	Y	
MW-13	7440-38-2	Arsenic	2018-04-12	5.03	µg/L	Y	
MW-13	7440-38-2	Arsenic	2018-10-06	4.10	µg/L	Y	J
MW-13	7440-38-2	Arsenic	2019-05-01	4.10	µg/L	Y	J
MW-13	7440-38-2	Arsenic	2019-10-05	4.20	µg/L	Y	J
MW-13	7440-38-2	Arsenic	2020-06-04	3.70	µg/L	Y	J
MW-13	7440-38-2	Arsenic	2020-09-13	4.40	µg/L	Y	J
MW-13	7440-38-2	Arsenic	2021-04-24	4.10	µg/L	Y	J
MW-13	7440-38-2	Arsenic	2021-08-25	4.20	µg/L	Y	J
MW-13	7440-38-2	Arsenic	2022-05-07	4.50	µg/L	Y	J
MW-13	7440-38-2	Arsenic	2022-10-17	0.33	µg/L	N	U

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-13	Bannock_Inorganics	7440-38-2	Arsenic	µg/L	2011-04-18	2022-10-17	EPA MCL	10	0.33	U

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
23	4.3	NP Kaplan-Meier	3.81	0.993

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Bootstrap	0.95	3.34	4.15	No	No	No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z
No	0.000131	1.81	0.0439	95.6%	65		

Barium : MW-13

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **30 April 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-13**
- CAS_RN - **7440-39-3**
- CHEMICAL_NAME - **Barium**

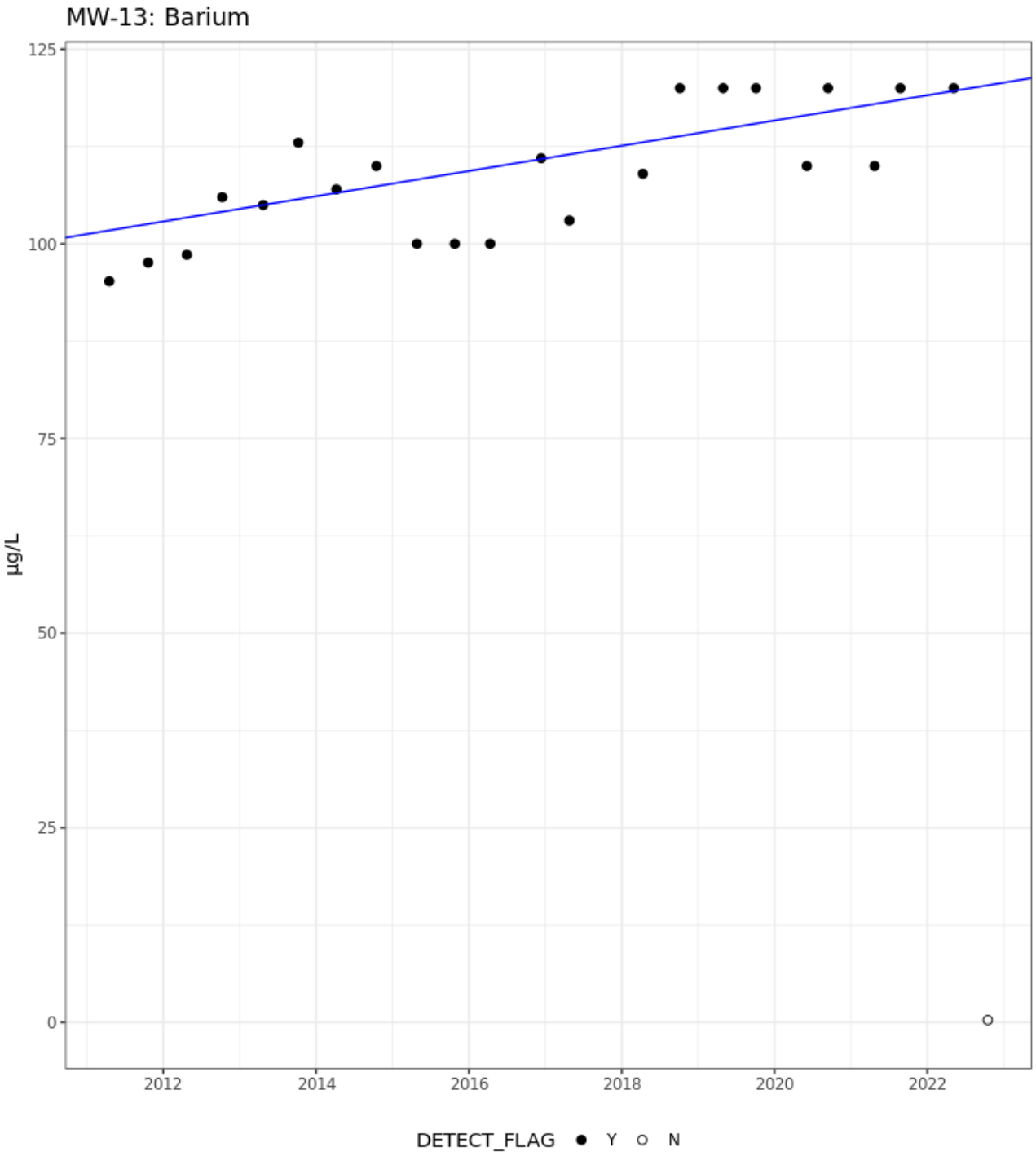
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-13	7440-39-3	Barium	2011-04-18	95.20	µg/L	Y	
MW-13	7440-39-3	Barium	2011-10-21	97.60	µg/L	Y	
MW-13	7440-39-3	Barium	2012-04-23	98.60	µg/L	Y	
MW-13	7440-39-3	Barium	2012-10-09	106.00	µg/L	Y	
MW-13	7440-39-3	Barium	2013-04-23	105.00	µg/L	Y	
MW-13	7440-39-3	Barium	2013-10-08	113.00	µg/L	Y	
MW-13	7440-39-3	Barium	2014-04-08	107.00	µg/L	Y	
MW-13	7440-39-3	Barium	2014-10-16	110.00	µg/L	Y	
MW-13	7440-39-3	Barium	2015-04-28	100.00	µg/L	Y	
MW-13	7440-39-3	Barium	2015-10-26	100.00	µg/L	Y	
MW-13	7440-39-3	Barium	2016-04-12	100.00	µg/L	Y	
MW-13	7440-39-3	Barium	2016-12-12	111.00	µg/L	Y	
MW-13	7440-39-3	Barium	2017-04-26	103.00	µg/L	Y	
MW-13	7440-39-3	Barium	2018-04-12	109.00	µg/L	Y	
MW-13	7440-39-3	Barium	2018-10-06	120.00	µg/L	Y	
MW-13	7440-39-3	Barium	2019-05-01	120.00	µg/L	Y	
MW-13	7440-39-3	Barium	2019-10-05	120.00	µg/L	Y	
MW-13	7440-39-3	Barium	2020-06-04	110.00	µg/L	Y	
MW-13	7440-39-3	Barium	2020-09-13	120.00	µg/L	Y	
MW-13	7440-39-3	Barium	2021-04-24	110.00	µg/L	Y	
MW-13	7440-39-3	Barium	2021-08-25	120.00	µg/L	Y	
MW-13	7440-39-3	Barium	2022-05-07	120.00	µg/L	Y	
MW-13	7440-39-3	Barium	2022-10-17	0.29	µg/L	N	U

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-13	Bannock_Inorganics	7440-39-3	Barium	µg/L	2011-04-18	2022-10-17	EPA MCL	2,000	0.29	U

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
23	4.3	NP Kaplan-Meier	104	23.6

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Bootstrap	0.95	93.4	111	No	No	No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z
No	0.00444	34.8	0.00178	99.8%	110		

cis-1,2-Dichloroethene : MW-13

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **23 July 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_VOCs**
- SYS_LOC_CODE - **MW-13**
- CAS_RN - **156-59-2**
- CHEMICAL_NAME - **cis-1,2-Dichloroethene**

Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

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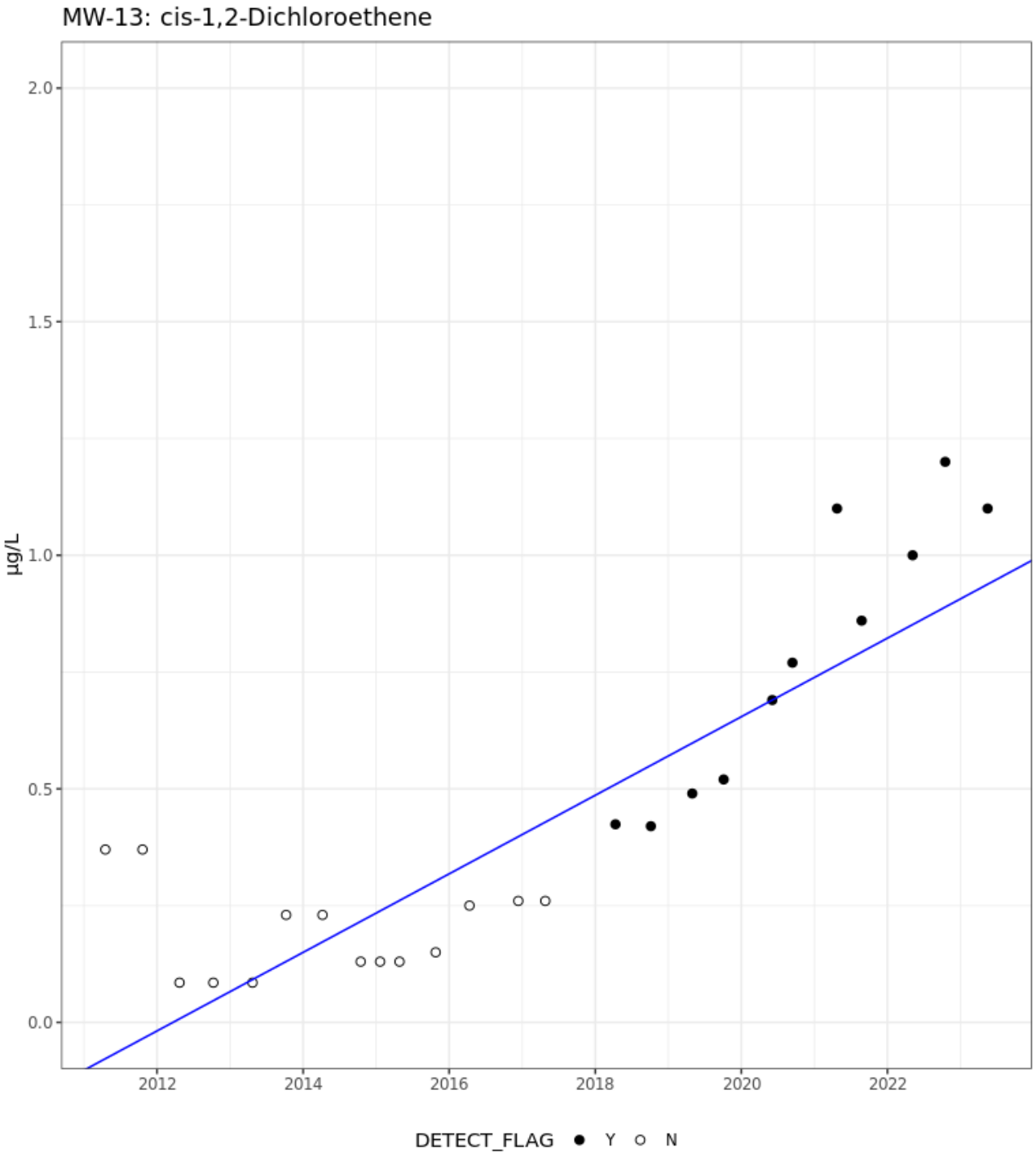
Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-13	156-59-2	cis-1,2-Dichloroethene	2011-04-18	0.370	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2011-10-21	0.370	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2012-04-23	0.085	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2012-10-09	0.085	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2013-04-23	0.085	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2013-10-08	0.230	µg/L	N	UJ
MW-13	156-59-2	cis-1,2-Dichloroethene	2014-04-08	0.230	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2014-10-16	0.130	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2015-01-21	0.130	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2015-04-28	0.130	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2015-10-26	0.150	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2016-04-12	0.250	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2016-12-12	0.260	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2017-04-26	0.260	µg/L	N	U
MW-13	156-59-2	cis-1,2-Dichloroethene	2018-04-12	0.424	µg/L	Y	J

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-13	156-59-2	cis-1,2-Dichloroethene	2018-10-06	0.420	µg/L	Y	J
MW-13	156-59-2	cis-1,2-Dichloroethene	2019-05-01	0.490	µg/L	Y	J
MW-13	156-59-2	cis-1,2-Dichloroethene	2019-10-05	0.520	µg/L	Y	J
MW-13	156-59-2	cis-1,2-Dichloroethene	2020-06-04	0.690	µg/L	Y	J
MW-13	156-59-2	cis-1,2-Dichloroethene	2020-09-13	0.770	µg/L	Y	J
MW-13	156-59-2	cis-1,2-Dichloroethene	2021-04-24	1.100	µg/L	Y	
MW-13	156-59-2	cis-1,2-Dichloroethene	2021-08-25	0.860	µg/L	Y	J
MW-13	156-59-2	cis-1,2-Dichloroethene	2022-05-07	1.000	µg/L	Y	
MW-13	156-59-2	cis-1,2-Dichloroethene	2022-10-17	1.200	µg/L	Y	
MW-13	156-59-2	cis-1,2-Dichloroethene	2023-05-17	1.100	µg/L	Y	

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-13	Bannock_VOCs	156-59-2	cis-1,2-Dichloroethene	µg/L	2011-04-18	2023-05-17	EPA MCL	70	1.1	

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
25	56	NP Kaplan-Meier	0.391	0.391

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Bootstrap	0.95	0.248	0.548	No	No	Yes

Trend details

TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction

Dichlorodifluoromethane : MW-13

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **23 July 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_VOCs**
- SYS_LOC_CODE - **MW-13**
- CAS_RN - **75-71-8**
- CHEMICAL_NAME - **Dichlorodifluoromethane**

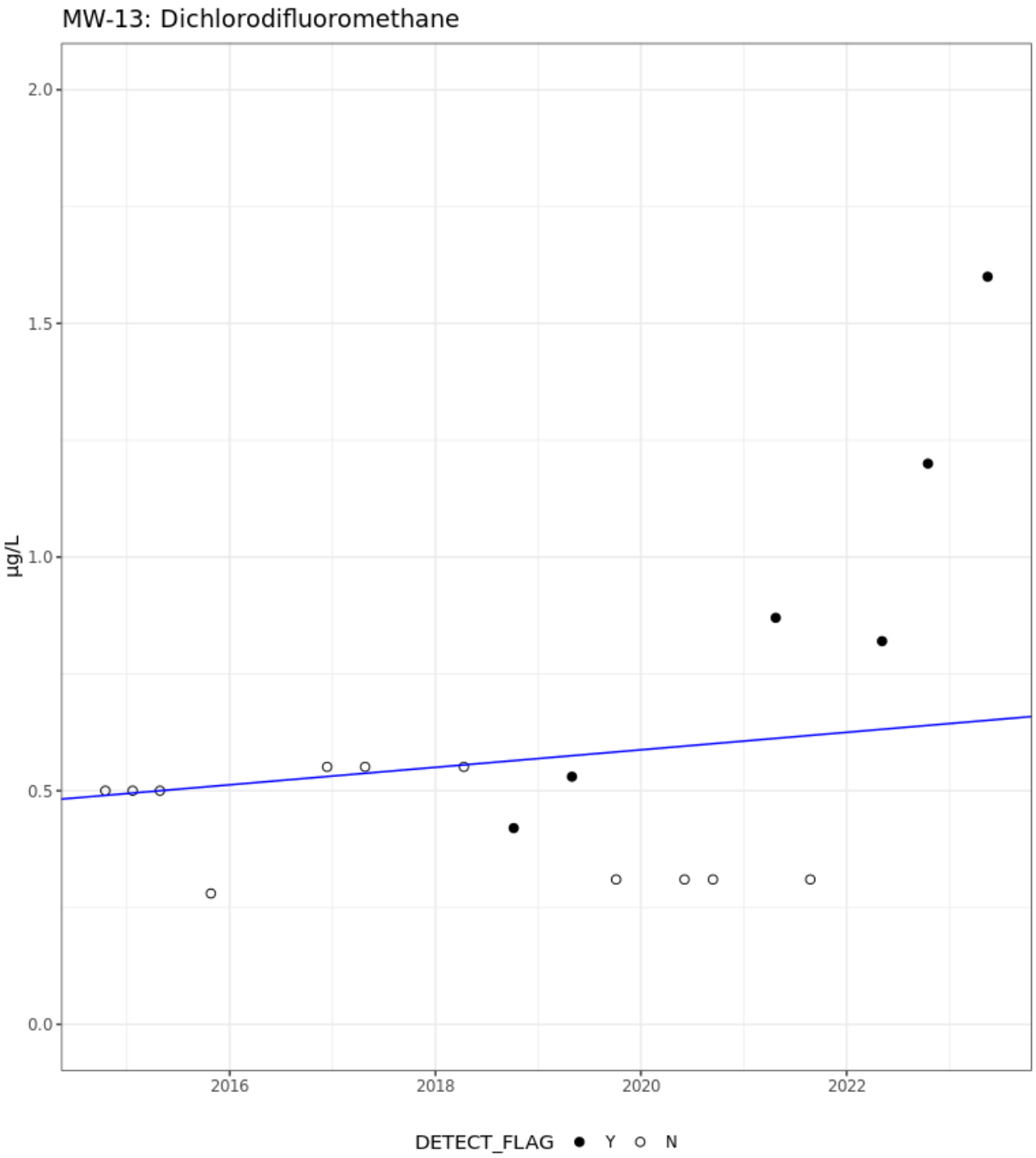
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-13	75-71-8	Dichlorodifluoromethane	2014-10-16	0.500	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2015-01-21	0.500	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2015-04-28	0.500	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2015-10-26	0.280	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2016-12-12	0.551	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2017-04-26	0.551	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2018-04-12	0.551	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2018-10-06	0.420	µg/L	Y	J
MW-13	75-71-8	Dichlorodifluoromethane	2019-05-01	0.530	µg/L	Y	J
MW-13	75-71-8	Dichlorodifluoromethane	2019-10-05	0.310	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2020-06-04	0.310	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2020-09-13	0.310	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2021-04-24	0.870	µg/L	Y	J
MW-13	75-71-8	Dichlorodifluoromethane	2021-08-25	0.310	µg/L	N	U
MW-13	75-71-8	Dichlorodifluoromethane	2022-05-07	0.820	µg/L	Y	J
MW-13	75-71-8	Dichlorodifluoromethane	2022-10-17	1.200	µg/L	Y	J
MW-13	75-71-8	Dichlorodifluoromethane	2023-05-17	1.600	µg/L	Y	J

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-13	Bannock_VOCs	75-71-8	Dichlorodifluoromethane	µg/L	2014-10-16	2023-05-17			1.6	J

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
17	64.7	NP Kaplan-Meier	0.513	0.377

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Bootstrap	0.95	0.356	0.728			Yes

Trend details

TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction

Trichlorofluoromethane : MW-13

Data filters

This report is filtered to only include:

- Results from **01 January 2002** to **23 July 2023**
- LOC_GROUP_CODE - **Cell 2 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_VOCs**
- SYS_LOC_CODE - **MW-13**
- CAS_RN - **75-69-4**
- CHEMICAL_NAME - **Trichlorofluoromethane**

Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

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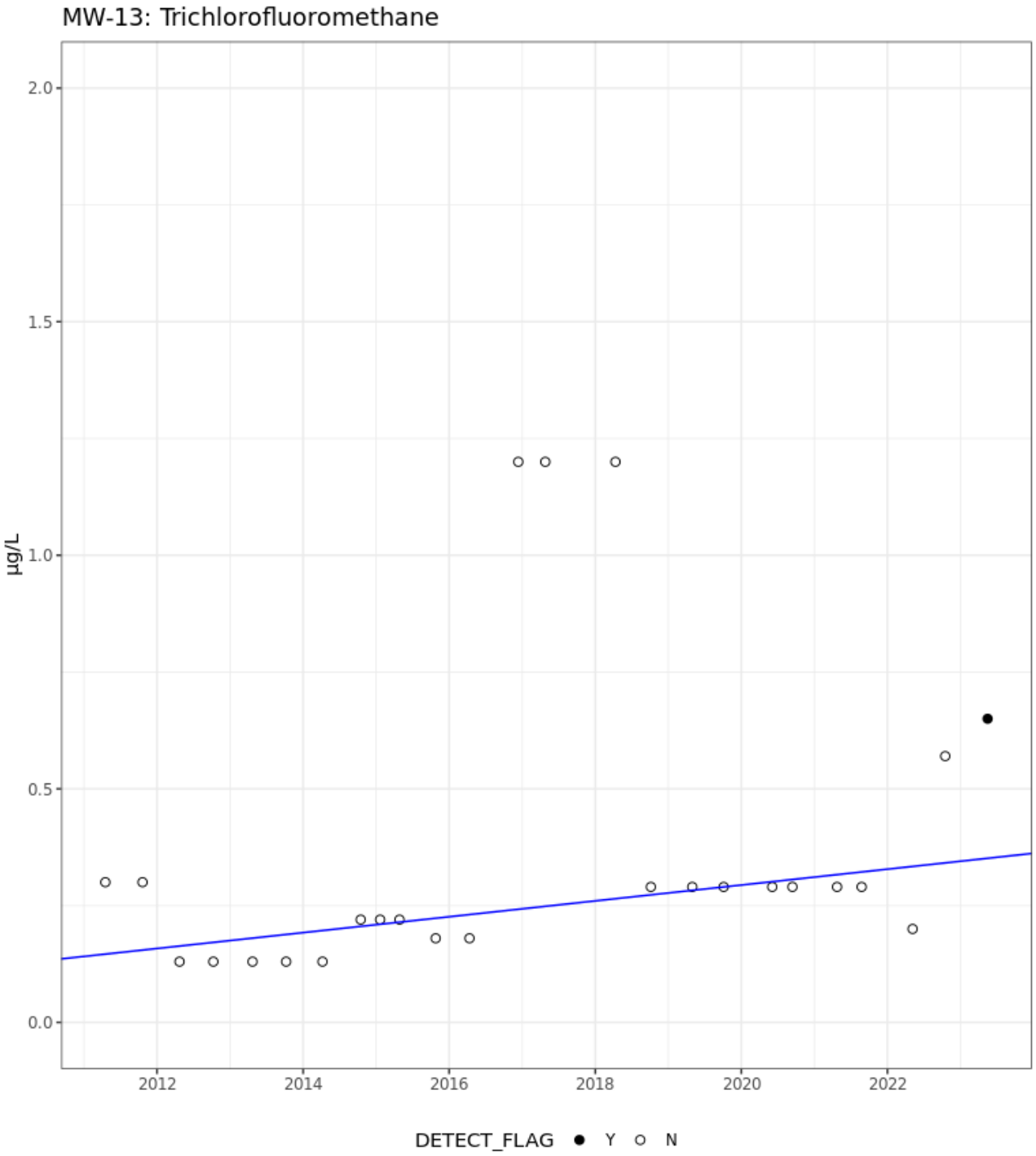
Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-13	75-69-4	Trichlorofluoromethane	2011-04-18	0.30	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2011-10-21	0.30	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2012-04-23	0.13	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2012-10-09	0.13	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2013-04-23	0.13	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2013-10-08	0.13	µg/L	N	UJ
MW-13	75-69-4	Trichlorofluoromethane	2014-04-08	0.13	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2014-10-16	0.22	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2015-01-21	0.22	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2015-04-28	0.22	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2015-10-26	0.18	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2016-04-12	0.18	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2016-12-12	1.20	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2017-04-26	1.20	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2018-04-12	1.20	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2018-10-06	0.29	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2019-05-01	0.29	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2019-10-05	0.29	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2020-06-04	0.29	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2020-09-13	0.29	µg/L	N	U

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-13	75-69-4	Trichlorofluoromethane	2021-04-24	0.29	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2021-08-25	0.29	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2022-05-07	0.20	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2022-10-17	0.57	µg/L	N	U
MW-13	75-69-4	Trichlorofluoromethane	2023-05-17	0.65	µg/L	Y	J

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-13	Bannock_VOCs	75-69-4	Trichlorofluoromethane	µg/L	2011-04-18	2023-05-17			0.65	J

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
25	96	Does not take in to account ND status	0.373	0.335

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
Not enough distinct detected values to assess						Yes

Trend details

TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction

Barium : MW-6A

Data filters

This report is filtered to only include:

- Results from **01 August 2017** to **30 May 2023**
- LOC_GROUP_CODE - **Cell 4 Monitoring Well**
- METHOD_ANALYTE_GROUP - **Bannock_Inorganics**
- SYS_LOC_CODE - **MW-6A**
- CAS_RN - **7440-39-3**
- CHEMICAL_NAME - **Barium**

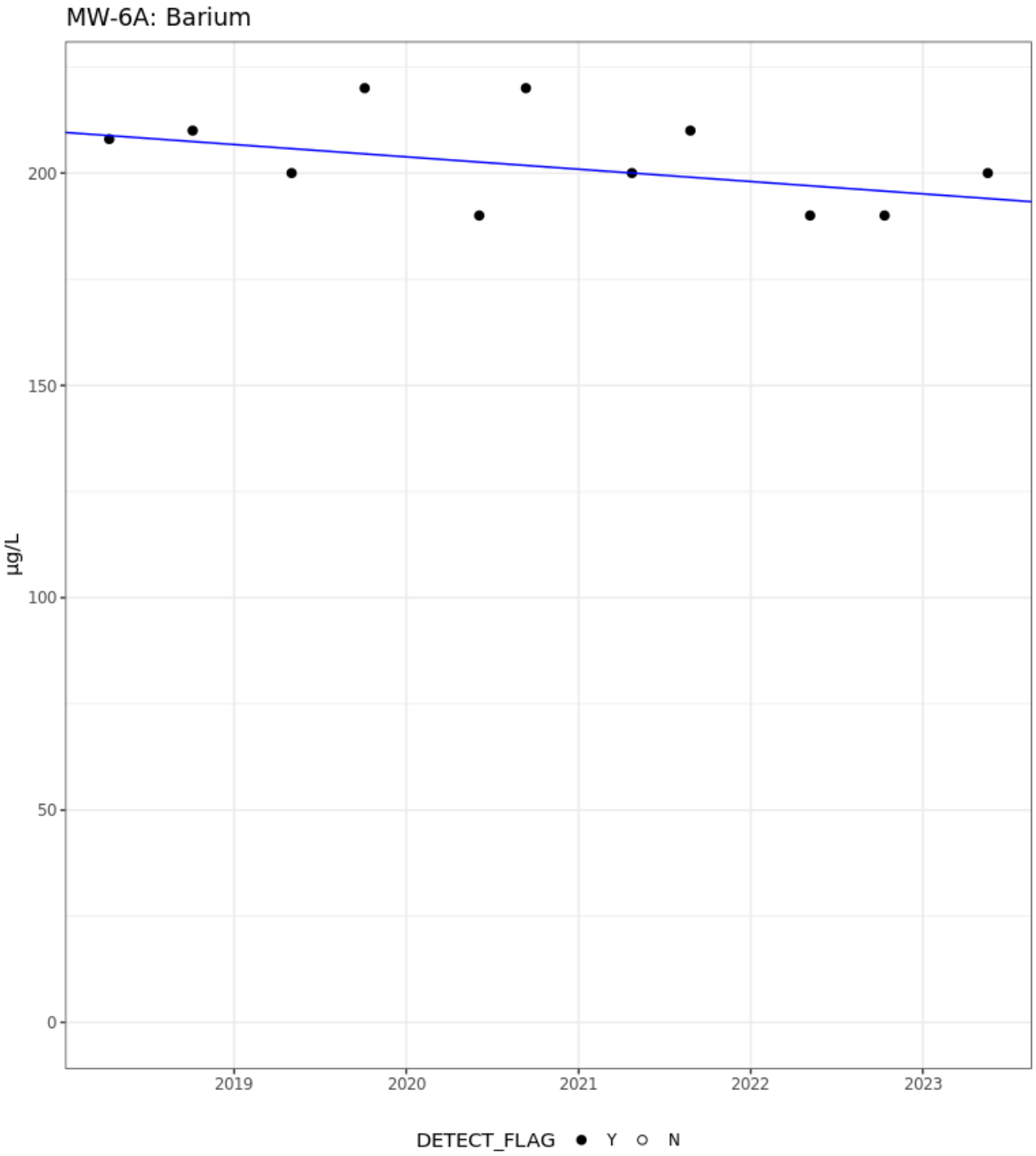
Graph notes

- When only the year is shown in the x-axis label, this represents the start of the year
- ORP values that are negative cannot be put in to a log10 scale graph and will not show.

Dataset values

SYS_LOC_CODE	CAS_RN	CHEMICAL_NAME	SAMPLE_DATE	REPORT_RESULT_VALUE	REPORT_RESULT_UNIT	DETECT_FLAG	INTERPRETED_QUALIFIERS
MW-6A	7440-39-3	Barium	2018-04-11	208	µg/L	Y	
MW-6A	7440-39-3	Barium	2018-10-05	210	µg/L	Y	
MW-6A	7440-39-3	Barium	2019-05-03	200	µg/L	Y	
MW-6A	7440-39-3	Barium	2019-10-05	220	µg/L	Y	
MW-6A	7440-39-3	Barium	2020-06-04	190	µg/L	Y	
MW-6A	7440-39-3	Barium	2020-09-11	220	µg/L	Y	
MW-6A	7440-39-3	Barium	2021-04-24	200	µg/L	Y	
MW-6A	7440-39-3	Barium	2021-08-26	210	µg/L	Y	
MW-6A	7440-39-3	Barium	2022-05-07	190	µg/L	Y	
MW-6A	7440-39-3	Barium	2022-10-12	190	µg/L	Y	
MW-6A	7440-39-3	Barium	2023-05-19	200	µg/L	Y	

Time series graph



Statistics

Dataset details

SYS_LOC_CODE	METHOD_ANALYTE_GROUP	CAS_RN	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q
MW-6A	Bannock_Inorganics	7440-39-3	Barium	µg/L	2018-04-11	2023-05-19	EPA MCL	2,000	200	

Parameter estimate details

Dataset n	ND %	Parameter est. method	Dataset mean	sd
11	0	Ordinary nonparametric bootstrap	203	11.1

Confidence limit details

CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard	Latest Result > mean
BCa bootstrap	0.95	197	210	No	No	No

Trend details

Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z
No	-0.00795	349	0.131	86.9%	-15	12.5	-1.12

Table G-1
Cell 1 Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset				General								
Well ID	RCRA Regulated Chemical	Chemical	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Latest Result Qualifier	Latest Result > Standard?	Dataset n	ND %
MP-2	Yes	1,1,1-Trichloroethane	µg/L	09/13/2020	04/11/2023	EPA MCL	200	1.6	U	No	6	66.7
MW-105D	Yes	1,1,1-Trichloroethane	µg/L	01/23/2018	04/11/2023	EPA MCL	200	1.6	U	No	12	66.7
MW-112D	Yes	1,1,1-Trichloroethane	µg/L	01/24/2018	04/15/2023	EPA MCL	200	0.58	J	No	12	16.7
MW-112M	Yes	1,1,1-Trichloroethane	µg/L	10/05/2018	04/15/2023	EPA MCL	200	0.39	U	No	10	50
MW-118D	Yes	1,1,1-Trichloroethane	µg/L	01/23/2018	04/12/2023	EPA MCL	200	0.39	U	No	12	41.7
MW-120D	Yes	1,1,1-Trichloroethane	µg/L	01/25/2018	04/13/2023	EPA MCL	200	0.39	U	No	12	83.3
MW-120S	Yes	1,1,1-Trichloroethane	µg/L	01/25/2018	04/13/2023	EPA MCL	200	0.39	U	No	12	91.7
MW-123	Yes	1,1,1-Trichloroethane	µg/L	04/25/2021	04/15/2023	EPA MCL	200	0.39	U	No	5	80
MP-2	Yes	1,1-Dichloroethane	µg/L	09/13/2020	04/11/2023	NA	NC	1.7	J	No	6	0
MP-4	Yes	1,1-Dichloroethane	µg/L	09/13/2020	04/14/2023	NA	NC	0.79	J	No	6	33.3
MW-105D	Yes	1,1-Dichloroethane	µg/L	01/23/2018	04/11/2023	NA	NC	3.3	J	No	12	8.3
MW-105S	Yes	1,1-Dichloroethane	µg/L	01/23/2018	04/11/2023	NA	NC	0.44	J	No	12	25
MW-110S	Yes	1,1-Dichloroethane	µg/L	10/06/2018	04/14/2023	NA	NC	1	J	No	10	10
MW-111D	Yes	1,1-Dichloroethane	µg/L	01/24/2018	04/14/2023	NA	NC	24		No	12	0
MW-112D	Yes	1,1-Dichloroethane	µg/L	01/24/2018	04/15/2023	NA	NC	0.48	J	No	12	58.3
MW-112M	Yes	1,1-Dichloroethane	µg/L	10/05/2018	04/15/2023	NA	NC	0.79	J	No	10	50
MW-113D	Yes	1,1-Dichloroethane	µg/L	10/04/2018	04/14/2023	NA	NC	0.41	J	No	10	0
MW-113S	Yes	1,1-Dichloroethane	µg/L	01/24/2018	04/14/2023	NA	NC	26		No	12	0
MW-118D	Yes	1,1-Dichloroethane	µg/L	01/23/2018	04/12/2023	NA	NC	7.8		No	12	0
MW-119D	Yes	1,1-Dichloroethane	µg/L	01/25/2018	04/13/2023	NA	NC	0.22	U	No	12	58.3
MW-119S	Yes	1,1-Dichloroethane	µg/L	01/25/2018	04/13/2023	NA	NC	0.44	U	No	12	91.7
MW-120D	Yes	1,1-Dichloroethane	µg/L	01/25/2018	04/13/2023	NA	NC	1.1		No	12	0
MW-120S	Yes	1,1-Dichloroethane	µg/L	01/25/2018	04/13/2023	NA	NC	1.2		No	12	0
MP-2	Yes	1,1-Dichloroethene	µg/L	09/13/2020	04/11/2023	EPA MCL	7	0.92	U	No	6	33.3
MW-105D	Yes	1,1-Dichloroethene	µg/L	01/23/2018	04/11/2023	EPA MCL	7	0.92	U	No	12	33.3
MW-111D	Yes	1,1-Dichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	7	0.43	J	No	12	91.7
MW-112D	Yes	1,1-Dichloroethene	µg/L	01/24/2018	04/15/2023	EPA MCL	7	1.1		No	12	16.7
MW-112M	Yes	1,1-Dichloroethene	µg/L	10/05/2018	04/15/2023	EPA MCL	7	0.23	U	No	10	80
MW-113D	Yes	1,1-Dichloroethene	µg/L	10/04/2018	04/14/2023	EPA MCL	7	0.23	U	No	10	40
MW-113S	Yes	1,1-Dichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	7	0.82	J	No	12	16.7
MW-118D	Yes	1,1-Dichloroethene	µg/L	01/23/2018	04/12/2023	EPA MCL	7	0.48	J	No	12	16.7
MW-120D	Yes	1,1-Dichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	7	1.1		No	12	58.3
MP-2	Yes	1,2-Dichlorobenzene	µg/L	09/13/2020	04/11/2023	EPA MCL	600	1.5	U	No	6	16.7
MP-4	Yes	1,2-Dichlorobenzene	µg/L	09/13/2020	04/14/2023	EPA MCL	600	0.74	U	No	6	16.7
MW-101S	Yes	1,2-Dichlorobenzene	µg/L	10/05/2018	04/15/2023	EPA MCL	600	0.37	U	No	10	90
MW-105D	Yes	1,2-Dichlorobenzene	µg/L	01/23/2018	04/11/2023	EPA MCL	600	1.5	U	No	12	75
MW-105S	Yes	1,2-Dichlorobenzene	µg/L	01/23/2018	04/11/2023	EPA MCL	600	0.37	U	No	12	66.7
MW-110S	Yes	1,2-Dichlorobenzene	µg/L	10/06/2018	04/14/2023	EPA MCL	600	2.7		No	10	0
MW-111D	Yes	1,2-Dichlorobenzene	µg/L	01/24/2018	04/14/2023	EPA MCL	600	8.9		No	12	0
MW-112M	Yes	1,2-Dichlorobenzene	µg/L	10/05/2018	04/15/2023	EPA MCL	600	0.37	U	No	10	70
MW-113D	Yes	1,2-Dichlorobenzene	µg/L	10/04/2018	04/14/2023	EPA MCL	600	0.37	U	No	10	90
MW-113S	Yes	1,2-Dichlorobenzene	µg/L	01/24/2018	04/14/2023	EPA MCL	600	11		No	12	0

Table G-1
Cell 1 Statistical Results - VOCs
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Dataset			Confidence Limits								
Well ID	RCRA Regulated Chemical	Chemical	Parameter est. method	Dataset mean	sd	CL Method	CL Confidence Level	LCL of mean	UCL of mean	UCL of mean > Standard?	LCL of mean > Standard
MP-2	Yes	1,1,1-Trichloroethane	NP Kaplan-Meier	0.2	0.049	Normal Approximation	0.95	0.182	0.218	No	No
MW-105D	Yes	1,1,1-Trichloroethane	NP Kaplan-Meier	0.295	0.13	Bootstrap	0.95	0	0.389	No	No
MW-112D	Yes	1,1,1-Trichloroethane	NP Kaplan-Meier	0.714	0.146	Bootstrap	0.95	0.633	0.798	No	No
MW-112M	Yes	1,1,1-Trichloroethane	NP Kaplan-Meier	0.373	0.199	Bootstrap	0.95	0.244	0.521	No	No
MW-118D	Yes	1,1,1-Trichloroethane	NP Kaplan-Meier	0.292	0.131	Bootstrap	0.95	0.217	0.384	No	No
MW-120D	Yes	1,1,1-Trichloroethane	NP Kaplan-Meier	0.17	0.0245	Bootstrap	0.95	0	0.195	No	No
MW-120S	Yes	1,1,1-Trichloroethane	Does not take in to account ND status	0.323	0.209	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-123	Yes	1,1,1-Trichloroethane	Does not take in to account ND status	0.27	0.111	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MP-2	Yes	1,1-Dichloroethane	Ordinary nonparametric bootstrap	1.68	0.194	BCa bootstrap	0.95	1.55	1.83	NC	NC
MP-4	Yes	1,1-Dichloroethane	NP Kaplan-Meier	0.508	0.22	Bootstrap	0.95	0.333	0.668	NC	NC
MW-105D	Yes	1,1-Dichloroethane	NP Kaplan-Meier	3.21	0.72	Bootstrap	0.95	2.74	3.52	NC	NC
MW-105S	Yes	1,1-Dichloroethane	NP Kaplan-Meier	0.624	0.269	Bootstrap	0.95	0.462	0.779	NC	NC
MW-110S	Yes	1,1-Dichloroethane	NP Kaplan-Meier	0.93	0.106	Bootstrap	0.95	0.859	0.998	NC	NC
MW-111D	Yes	1,1-Dichloroethane	Ordinary nonparametric bootstrap	9.18	9.69	BCa bootstrap	0.95	4.4	14.7	NC	NC
MW-112D	Yes	1,1-Dichloroethane	NP Kaplan-Meier	0.355	0.11	Bootstrap	0.95	0.262	0.439	NC	NC
MW-112M	Yes	1,1-Dichloroethane	NP Kaplan-Meier	0.459	0.225	Bootstrap	0.95	0.296	0.628	NC	NC
MW-113D	Yes	1,1-Dichloroethane	Ordinary nonparametric bootstrap	8.59	5.82	BCa bootstrap	0.95	5	12	NC	NC
MW-113S	Yes	1,1-Dichloroethane	Ordinary nonparametric bootstrap	24.9	2.26	BCa bootstrap	0.95	23.6	26.1	NC	NC
MW-118D	Yes	1,1-Dichloroethane	Ordinary nonparametric bootstrap	6.96	0.859	BCa bootstrap	0.95	6.5	7.42	NC	NC
MW-119D	Yes	1,1-Dichloroethane	NP Kaplan-Meier	0.248	0.0427	Bootstrap	0.95	0.222	0.276	NC	NC
MW-119S	Yes	1,1-Dichloroethane	Does not take in to account ND status	0.359	0.251	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-120D	Yes	1,1-Dichloroethane	Ordinary nonparametric bootstrap	1.21	0.139	BCa bootstrap	0.95	1.13	1.28	NC	NC
MW-120S	Yes	1,1-Dichloroethane	Ordinary nonparametric bootstrap	1.14	0.169	BCa bootstrap	0.95	1.05	1.23	NC	NC
MP-2	Yes	1,1-Dichloroethene	NP Kaplan-Meier	0.456	0.162	Bootstrap	0.95	0.302	0.606	No	No
MW-105D	Yes	1,1-Dichloroethene	NP Kaplan-Meier	1.03	0.0795	Bootstrap	0.95	0.98	1.08	No	No
MW-111D	Yes	1,1-Dichloroethene	Does not take in to account ND status	0.295	0.095	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-112D	Yes	1,1-Dichloroethene	NP Kaplan-Meier	1.01	0.171	Bootstrap	0.95	0.909	1.11	No	No
MW-112M	Yes	1,1-Dichloroethene	NP Kaplan-Meier	0.258	0.0449	Bootstrap	0.95	0	0.302	No	No
MW-113D	Yes	1,1-Dichloroethene	NP Kaplan-Meier	0.463	0.238	Bootstrap	0.95	0.323	0.611	No	No
MW-113S	Yes	1,1-Dichloroethene	NP Kaplan-Meier	0.829	0.273	Bootstrap	0.95	0.668	0.98	No	No
MW-118D	Yes	1,1-Dichloroethene	NP Kaplan-Meier	0.748	0.33	Bootstrap	0.95	0.559	0.941	No	No
MW-120D	Yes	1,1-Dichloroethene	NP Kaplan-Meier	0.678	0.707	Bootstrap	0.95	0.319	1.14	No	No
MP-2	Yes	1,2-Dichlorobenzene	NP Kaplan-Meier	0.59	0.136	Bootstrap	0.95	0.472	0.706	No	No
MP-4	Yes	1,2-Dichlorobenzene	NP Kaplan-Meier	0.454	0.0909	Bootstrap	0.95	0.38	0.539	No	No
MW-101S	Yes	1,2-Dichlorobenzene	Does not take in to account ND status	0.196	0.0919	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-105D	Yes	1,2-Dichlorobenzene	NP Kaplan-Meier	0.239	0.0673	Bootstrap	0.95	0	0.309	No	No
MW-105S	Yes	1,2-Dichlorobenzene	NP Kaplan-Meier	0.274	0.185	Bootstrap	0.95	0	0.393	No	No
MW-110S	Yes	1,2-Dichlorobenzene	Ordinary nonparametric bootstrap	1.54	0.665	BCa bootstrap	0.95	1.14	1.92	No	No
MW-111D	Yes	1,2-Dichlorobenzene	Ordinary nonparametric bootstrap	13.5	6.01	BCa bootstrap	0.95	10.6	17.1	No	No
MW-112M	Yes	1,2-Dichlorobenzene	NP Kaplan-Meier	0.246	0.109	Bootstrap	0.95	0	0.348	No	No
MW-113D	Yes	1,2-Dichlorobenzene	Does not take in to account ND status	0.218	0.0933	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-113S	Yes	1,2-Dichlorobenzene	Ordinary nonparametric bootstrap	8.51	1.76	BCa bootstrap	0.95	7.53	9.38	No	No

Table G-1
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Dataset			Trend Analysis								
Well ID	RCRA Regulated Chemical	Chemical	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	COV	GSI Toolkit Trend
MP-2	Yes	1,1,1-Trichloroethane	NC	NC	NC	NC	NC	NC	NC	1.18	NC
MW-105D	Yes	1,1,1-Trichloroethane	NC	NC	NC	NC	NC	NC	NC	0.831	NC
MW-112D	Yes	1,1,1-Trichloroethane	-0.000205	4.56	0.00299	99.7%	-41	14.6	-2.75	0.197	NC
MW-112M	Yes	1,1,1-Trichloroethane	-0.000176	3.81	0.105	89.5%	-15	11.2	-1.25	0.753	NC
MW-118D	Yes	1,1,1-Trichloroethane	-0.000153	3.16	0.168	83.2%	-15	14.6	-0.962	1.42	NC
MW-120D	Yes	1,1,1-Trichloroethane	NC	NC	NC	NC	NC	NC	NC	0.536	NC
MW-120S	Yes	1,1,1-Trichloroethane	NC	NC	NC	NC	NC	NC	NC	0.646	NC
MW-123	Yes	1,1,1-Trichloroethane	NC	NC	NC	NC	NC	NC	NC	0.412	NC
MP-2	Yes	1,1-Dichloroethane	-0.000332	7.94	0.283	71.7%	-4	5.22	-0.574	0.115	NC
MP-4	Yes	1,1-Dichloroethane	0.0000954	-1.25	0.424	57.6%	2	5.22	0.191	0.474	NC
MW-105D	Yes	1,1-Dichloroethane	0.000059	2.2	0.365	63.5%	6	14.5	0.346	0.234	NC
MW-105S	Yes	1,1-Dichloroethane	-0.000299	6.23	0.00247	99.8%	-42	14.6	-2.81	0.426	NC
MW-110S	Yes	1,1-Dichloroethane	7.65E-06	0.837	0.359	64.1%	5	11.1	0.361	0.126	NC
MW-111D	Yes	1,1-Dichloroethane	0.0124	-220	0.000235	100.0%	52	14.6	3.49	1.05	NC
MW-112D	Yes	1,1-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.517	NC
MW-112M	Yes	1,1-Dichloroethane	-0.0000544	1.58	0.394	60.6%	-4	11.1	-0.269	0.817	NC
MW-113D	Yes	1,1-Dichloroethane	-0.00781	154	0.0159	98.4%	-25	11.2	-2.15	0.677	NC
MW-113S	Yes	1,1-Dichloroethane	0.00143	-2.15	0.165	83.5%	15	14.4	0.973	0.0908	NC
MW-118D	Yes	1,1-Dichloroethane	0.000963	-11.1	0.0196	98.0%	31	14.6	2.06	0.123	NC
MW-119D	Yes	1,1-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.707	NC
MW-119S	Yes	1,1-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.699	NC
MW-120D	Yes	1,1-Dichloroethane	0	1.2	0.389	61.1%	5	14.1	0.283	0.115	NC
MW-120S	Yes	1,1-Dichloroethane	0	1.15	0.389	61.1%	-5	14.1	-0.283	0.148	NC
MP-2	Yes	1,1-Dichloroethene	0.00017	-2.73	0.5	50.0%	1	5.32	0	0.468	NC
MW-105D	Yes	1,1-Dichloroethene	-0.0000211	1.44	0.265	73.5%	-10	14.3	-0.629	0.319	NC
MW-111D	Yes	1,1-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	0.322	NC
MW-112D	Yes	1,1-Dichloroethene	-0.0000353	1.76	0.312	68.8%	-8	14.3	-0.49	0.159	NC
MW-112M	Yes	1,1-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	1.13	NC
MW-113D	Yes	1,1-Dichloroethene	-0.000231	4.69	0.0423	95.8%	-20	11	-1.73	0.538	NC
MW-113S	Yes	1,1-Dichloroethene	-0.000235	5.32	0.0833	91.7%	-21	14.5	-1.38	0.341	NC
MW-118D	Yes	1,1-Dichloroethene	-0.000246	5.38	0.205	79.5%	-13	14.6	-0.824	0.973	NC
MW-120D	Yes	1,1-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	0.94	NC
MP-2	Yes	1,2-Dichlorobenzene	0.00017	-2.52	0.354	64.6%	3	5.32	0.376	0.533	NC
MP-4	Yes	1,2-Dichlorobenzene	0.000335	-5.84	0.0664	93.4%	9	5.32	1.5	0.295	NC
MW-101S	Yes	1,2-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.469	NC
MW-105D	Yes	1,2-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.816	NC
MW-105S	Yes	1,2-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.605	NC
MW-110S	Yes	1,2-Dichlorobenzene	0.000925	-15.8	0.0297	97.0%	22	11.1	1.89	0.433	NC
MW-111D	Yes	1,2-Dichlorobenzene	-0.00419	90.5	0.0495	95.0%	-25	14.6	-1.65	0.444	NC
MW-112M	Yes	1,2-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.853	NC
MW-113D	Yes	1,2-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.428	NC
MW-113S	Yes	1,2-Dichlorobenzene	0.00244	-36.8	0.00479	99.5%	38	14.3	2.59	0.207	NC

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Dataset				General								
Well ID	RCRA Regulated Chemical	Chemical	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Latest Result Qualifier	Latest Result > Standard?	Dataset n	ND %
MW-118D	Yes	1,2-Dichlorobenzene	µg/L	01/23/2018	04/12/2023	EPA MCL	600	1.1		No	12	25
MW-119D	Yes	1,2-Dichlorobenzene	µg/L	01/25/2018	04/13/2023	EPA MCL	600	0.37	U	No	12	91.7
MW-120D	Yes	1,2-Dichlorobenzene	µg/L	01/25/2018	04/13/2023	EPA MCL	600	0.72	J	No	12	8.3
MW-120S	Yes	1,2-Dichlorobenzene	µg/L	01/25/2018	04/13/2023	EPA MCL	600	2.9		No	12	0
MW-101S	Yes	1,2-Dichloroethane	µg/L	10/05/2018	04/15/2023	EPA MCL	5	0.54	U	No	10	80
MW-105D	Yes	1,2-Dichloroethane	µg/L	01/23/2018	04/11/2023	EPA MCL	5	2.2	U	No	12	91.7
MW-105S	Yes	1,2-Dichloroethane	µg/L	01/23/2018	04/11/2023	EPA MCL	5	0.54	U	No	12	91.7
MW-110S	Yes	1,2-Dichloroethane	µg/L	10/06/2018	04/14/2023	EPA MCL	5	1.1	U	No	10	90
MW-111D	Yes	1,2-Dichloroethane	µg/L	01/24/2018	04/14/2023	EPA MCL	5	0.54	U	No	12	91.7
MW-112M	Yes	1,2-Dichloroethane	µg/L	10/05/2018	04/15/2023	EPA MCL	5	0.54	U	No	10	90
MW-113D	Yes	1,2-Dichloroethane	µg/L	10/04/2018	04/14/2023	EPA MCL	5	0.54	U	No	10	30
MW-113S	Yes	1,2-Dichloroethane	µg/L	01/24/2018	04/14/2023	EPA MCL	5	3.9		No	12	0
MW-120D	Yes	1,2-Dichloroethane	µg/L	01/25/2018	04/13/2023	EPA MCL	5	0.54	U	No	12	83.3
MW-120S	Yes	1,2-Dichloroethane	µg/L	01/25/2018	04/13/2023	EPA MCL	5	0.54	U	No	12	91.7
MP-2	Yes	1,2-Dichloropropane	µg/L	09/13/2020	04/11/2023	EPA MCL	5	2.1	U	No	6	83.3
MW-105D	Yes	1,2-Dichloropropane	µg/L	01/23/2018	04/11/2023	EPA MCL	5	2.1	U	No	12	75
MW-105S	Yes	1,2-Dichloropropane	µg/L	01/23/2018	04/11/2023	EPA MCL	5	0.52	U	No	12	75
MW-110S	Yes	1,2-Dichloropropane	µg/L	10/06/2018	04/14/2023	EPA MCL	5	1	J	No	10	20
MW-111D	Yes	1,2-Dichloropropane	µg/L	01/24/2018	04/14/2023	EPA MCL	5	2.4		No	12	8.3
MW-113D	Yes	1,2-Dichloropropane	µg/L	10/04/2018	04/14/2023	EPA MCL	5	0.52	U	No	10	30
MW-113S	Yes	1,2-Dichloropropane	µg/L	01/24/2018	04/14/2023	EPA MCL	5	5		No	12	0
MW-118D	Yes	1,2-Dichloropropane	µg/L	01/23/2018	04/12/2023	EPA MCL	5	0.9	J	No	12	25
MW-120D	Yes	1,2-Dichloropropane	µg/L	01/25/2018	04/13/2023	EPA MCL	5	0.52	U	No	12	41.7
MW-120S	Yes	1,2-Dichloropropane	µg/L	01/25/2018	04/13/2023	EPA MCL	5	0.65	J	No	12	41.7
MW-111D	Yes	1,3-Dichlorobenzene	µg/L	01/24/2018	04/14/2023	ID GW - PRIMARY	600	0.33	U	No	12	66.7
MW-113S	Yes	1,3-Dichlorobenzene	µg/L	01/24/2018	04/14/2023	ID GW - PRIMARY	600	0.33	U	No	12	83.3
MW-119D	Yes	1,3-Dichlorobenzene	µg/L	01/25/2018	04/13/2023	ID GW - PRIMARY	600	0.33	U	No	12	91.7
MP-2	Yes	1,4-Dichlorobenzene	µg/L	09/13/2020	04/11/2023	EPA MCL	75	1.6	U	No	6	83.3
MW-105D	Yes	1,4-Dichlorobenzene	µg/L	01/23/2018	04/11/2023	EPA MCL	75	1.6	U	No	12	66.7
MW-105S	Yes	1,4-Dichlorobenzene	µg/L	01/23/2018	04/11/2023	EPA MCL	75	0.39	U	No	12	75
MW-110S	Yes	1,4-Dichlorobenzene	µg/L	10/06/2018	04/14/2023	EPA MCL	75	0.79	J	No	10	50
MW-111D	Yes	1,4-Dichlorobenzene	µg/L	01/24/2018	04/14/2023	EPA MCL	75	3.6		No	12	0
MW-112M	Yes	1,4-Dichlorobenzene	µg/L	10/05/2018	04/15/2023	EPA MCL	75	0.39	U	No	10	70
MW-113D	Yes	1,4-Dichlorobenzene	µg/L	10/04/2018	04/14/2023	EPA MCL	75	0.39	U	No	10	60
MW-113S	Yes	1,4-Dichlorobenzene	µg/L	01/24/2018	04/14/2023	EPA MCL	75	5.8		No	12	0
MW-118D	Yes	1,4-Dichlorobenzene	µg/L	01/23/2018	04/12/2023	EPA MCL	75	0.52	J	No	12	33.3
MW-119D	Yes	1,4-Dichlorobenzene	µg/L	01/25/2018	04/13/2023	EPA MCL	75	0.39	U	No	12	91.7
MW-120D	Yes	1,4-Dichlorobenzene	µg/L	01/25/2018	04/13/2023	EPA MCL	75	0.39	U	No	12	58.3
MW-120S	Yes	1,4-Dichlorobenzene	µg/L	01/25/2018	04/13/2023	EPA MCL	75	0.42	J	No	12	58.3
MW-111D	Yes	2-Butanone (MEK)	µg/L	01/24/2018	04/14/2023	NA	NC	6	U	No	12	91.7
MW-109D	Yes	Acetone	µg/L	10/06/2018	04/15/2023	NA	NC	6.6	U	No	10	90
MW-111D	Yes	Acetone	µg/L	01/24/2018	04/14/2023	NA	NC	6.6	U	No	12	58.3

Table G-1
Cell 1 Statistical Results - VOCs
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Fort Hall Mine Landfill

Dataset			Confidence Limits								
Well ID	RCRA Regulated Chemical	Chemical	Parameter est. method	Dataset mean	sd	CL Method	CL Confidence Level	LCL of mean	UCL of mean	UCL of mean > Standard?	LCL of mean > Standard
MW-118D	Yes	1,2-Dichlorobenzene	NP Kaplan-Meier	0.767	0.3	Bootstrap	0.95	0.607	0.964	No	No
MW-119D	Yes	1,2-Dichlorobenzene	Does not take in to account ND status	0.306	0.166	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-120D	Yes	1,2-Dichlorobenzene	NP Kaplan-Meier	0.942	0.421	Bootstrap	0.95	0.712	1.18	No	No
MW-120S	Yes	1,2-Dichlorobenzene	Ordinary nonparametric bootstrap	1.35	0.556	BCa bootstrap	0.95	1.1	1.68	No	No
MW-101S	Yes	1,2-Dichloroethane	NP Kaplan-Meier	0.139	0.0196	Bootstrap	0.95	0	0.156	No	No
MW-105D	Yes	1,2-Dichloroethane	Does not take in to account ND status	0.594	0.615	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-105S	Yes	1,2-Dichloroethane	Does not take in to account ND status	0.285	0.173	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-110S	Yes	1,2-Dichloroethane	Does not take in to account ND status	0.45	0.365	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-111D	Yes	1,2-Dichloroethane	Does not take in to account ND status	0.28	0.169	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-112M	Yes	1,2-Dichloroethane	Does not take in to account ND status	0.403	0.357	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-113D	Yes	1,2-Dichloroethane	NP Kaplan-Meier	2.12	1.36	Bootstrap	0.95	1.26	2.93	No	No
MW-113S	Yes	1,2-Dichloroethane	Ordinary nonparametric bootstrap	3.81	0.57	BCa bootstrap	0.95	3.51	4.11	No	No
MW-120D	Yes	1,2-Dichloroethane	NP Kaplan-Meier	0.159	0.0464	Bootstrap	0.95	0	0.2	No	No
MW-120S	Yes	1,2-Dichloroethane	Does not take in to account ND status	0.325	0.196	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MP-2	Yes	1,2-Dichloropropane	Does not take in to account ND status	0.628	0.746	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-105D	Yes	1,2-Dichloropropane	NP Kaplan-Meier	0.288	0.125	Bootstrap	0.95	0	0.403	No	No
MW-105S	Yes	1,2-Dichloropropane	NP Kaplan-Meier	0.26	0.115	Bootstrap	0.95	0	0.34	No	No
MW-110S	Yes	1,2-Dichloropropane	NP Kaplan-Meier	0.726	0.299	Bootstrap	0.95	0.524	0.896	No	No
MW-111D	Yes	1,2-Dichloropropane	NP Kaplan-Meier	1.76	0.662	Bootstrap	0.95	1.34	2.1	No	No
MW-113D	Yes	1,2-Dichloropropane	NP Kaplan-Meier	1.52	0.909	Bootstrap	0.95	0.938	2.09	No	No
MW-113S	Yes	1,2-Dichloropropane	Ordinary nonparametric bootstrap	4.26	0.634	BCa bootstrap	0.95	3.9	4.6	No	No
MW-118D	Yes	1,2-Dichloropropane	NP Kaplan-Meier	0.662	0.222	Bootstrap	0.95	0.504	0.789	No	No
MW-120D	Yes	1,2-Dichloropropane	NP Kaplan-Meier	0.47	0.222	Bootstrap	0.95	0.337	0.612	No	No
MW-120S	Yes	1,2-Dichloropropane	NP Kaplan-Meier	0.496	0.231	Bootstrap	0.95	0.353	0.644	No	No
MW-111D	Yes	1,3-Dichlorobenzene	NP Kaplan-Meier	0.179	0.0613	Bootstrap	0.95	0	0.221	No	No
MW-113S	Yes	1,3-Dichlorobenzene	NP Kaplan-Meier	0.142	0.0261	Bootstrap	0.95	0	0.165	No	No
MW-119D	Yes	1,3-Dichlorobenzene	Does not take in to account ND status	0.26	0.144	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MP-2	Yes	1,4-Dichlorobenzene	Does not take in to account ND status	0.443	0.574	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-105D	Yes	1,4-Dichlorobenzene	NP Kaplan-Meier	0.248	0.0879	Bootstrap	0.95	0	0.318	No	No
MW-105S	Yes	1,4-Dichlorobenzene	NP Kaplan-Meier	0.202	0.0803	Bootstrap	0.95	0	0.26	No	No
MW-110S	Yes	1,4-Dichlorobenzene	NP Kaplan-Meier	0.381	0.223	Bootstrap	0.95	0.235	0.547	No	No
MW-111D	Yes	1,4-Dichlorobenzene	Ordinary nonparametric bootstrap	4.99	1.78	BCa bootstrap	0.95	4.06	5.98	No	No
MW-112M	Yes	1,4-Dichlorobenzene	NP Kaplan-Meier	0.23	0.0816	Bootstrap	0.95	0	0.306	No	No
MW-113D	Yes	1,4-Dichlorobenzene	NP Kaplan-Meier	0.327	0.209	Bootstrap	0.95	0	0.466	No	No
MW-113S	Yes	1,4-Dichlorobenzene	Ordinary nonparametric bootstrap	4.78	0.886	BCa bootstrap	0.95	4.28	5.24	No	No
MW-118D	Yes	1,4-Dichlorobenzene	NP Kaplan-Meier	0.5	0.257	Bootstrap	0.95	0.357	0.675	No	No
MW-119D	Yes	1,4-Dichlorobenzene	Does not take in to account ND status	0.313	0.178	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-120D	Yes	1,4-Dichlorobenzene	NP Kaplan-Meier	0.28	0.119	Bootstrap	0.95	0.2	0.357	No	No
MW-120S	Yes	1,4-Dichlorobenzene	NP Kaplan-Meier	0.292	0.129	Bootstrap	0.95	0.209	0.379	No	No
MW-111D	Yes	2-Butanone (MEK)	Does not take in to account ND status	3.3	1.61	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-109D	Yes	Acetone	Does not take in to account ND status	3.58	2.47	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-111D	Yes	Acetone	NP Kaplan-Meier	5.38	4.42	Bootstrap	0.95	2.94	8.3	NC	NC

Table G-1
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Dataset			Trend Analysis								
Well ID	RCRA Regulated Chemical	Chemical	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	COV	GSI Toolkit Trend
MW-118D	Yes	1,2-Dichlorobenzene	0.000103	-1.15	0.269	73.1%	10	14.6	0.617	0.815	NC
MW-119D	Yes	1,2-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.541	NC
MW-120D	Yes	1,2-Dichlorobenzene	-0.000161	3.87	0.205	79.5%	-13	14.6	-0.824	0.437	NC
MW-120S	Yes	1,2-Dichlorobenzene	0.00024	-3.17	0.223	77.7%	12	14.4	0.763	0.411	NC
MW-101S	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.755	NC
MW-105D	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	1.03	NC
MW-105S	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.608	NC
MW-110S	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.811	NC
MW-111D	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.602	NC
MW-112M	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.887	NC
MW-113D	Yes	1,2-Dichloroethane	-0.00178	35.3	0.0046	99.5%	-30	11.1	-2.6	0.602	NC
MW-113S	Yes	1,2-Dichloroethane	0.000283	-1.6	0.205	79.5%	13	14.6	0.824	0.15	NC
MW-120D	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.583	NC
MW-120S	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	0.602	NC
MP-2	Yes	1,2-Dichloropropane	NC	NC	NC	NC	NC	NC	NC	1.19	NC
MW-105D	Yes	1,2-Dichloropropane	NC	NC	NC	NC	NC	NC	NC	0.904	NC
MW-105S	Yes	1,2-Dichloropropane	NC	NC	NC	NC	NC	NC	NC	0.548	NC
MW-110S	Yes	1,2-Dichloropropane	0.000213	-3.12	0.0194	98.1%	24	11.1	2.07	0.381	NC
MW-111D	Yes	1,2-Dichloropropane	0.000703	-11.3	0.0045	99.6%	39	14.6	2.61	0.392	NC
MW-113D	Yes	1,2-Dichloropropane	-0.00121	24.1	0.00953	99.0%	-27	11.1	-2.34	0.539	NC
MW-113S	Yes	1,2-Dichloropropane	0.000863	-11.8	0.0054	99.5%	38	14.5	2.55	0.149	NC
MW-118D	Yes	1,2-Dichloropropane	0.0000761	-0.64	0.269	73.1%	10	14.6	0.617	0.811	NC
MW-120D	Yes	1,2-Dichloropropane	-0.0000446	1.38	0.224	77.6%	-12	14.5	-0.757	0.406	NC
MW-120S	Yes	1,2-Dichloropropane	-0.0000326	1.22	0.391	60.9%	-5	14.5	-0.276	0.413	NC
MW-111D	Yes	1,3-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.34	NC
MW-113S	Yes	1,3-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.643	NC
MW-119D	Yes	1,3-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.553	NC
MP-2	Yes	1,4-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	1.29	NC
MW-105D	Yes	1,4-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.901	NC
MW-105S	Yes	1,4-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.531	NC
MW-110S	Yes	1,4-Dichlorobenzene	0	0.375	0.5	50.0%	0	11.1	0	0.517	NC
MW-111D	Yes	1,4-Dichlorobenzene	-0.00099	23.1	0.136	86.4%	-17	14.6	-1.1	0.357	NC
MW-112M	Yes	1,4-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.947	NC
MW-113D	Yes	1,4-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.511	NC
MW-113S	Yes	1,4-Dichlorobenzene	0.00105	-14.6	0.00237	99.8%	42	14.5	2.82	0.185	NC
MW-118D	Yes	1,4-Dichlorobenzene	-0.000149	3.37	0.122	87.8%	-18	14.6	-1.16	0.948	NC
MW-119D	Yes	1,4-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.567	NC
MW-120D	Yes	1,4-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.454	NC
MW-120S	Yes	1,4-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.539	NC
MW-111D	Yes	2-Butanone (MEK)	NC	NC	NC	NC	NC	NC	NC	0.489	NC
MW-109D	Yes	Acetone	NC	NC	NC	NC	NC	NC	NC	0.69	NC
MW-111D	Yes	Acetone	NC	NC	NC	NC	NC	NC	NC	0.573	NC

Table G-1
Cell 1 Statistical Results - VOCs
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Dataset				General								
Well ID	RCRA Regulated Chemical	Chemical	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Latest Result Qualifier	Latest Result > Standard?	Dataset n	ND %
MW-113S	Yes	Acetone	µg/L	01/24/2018	04/14/2023	NA	NC	6.6	U	No	12	91.7
MP-2	Yes	Benzene	µg/L	09/13/2020	04/11/2023	EPA MCL	5	1.2	U	No	6	50
MW-105D	Yes	Benzene	µg/L	01/23/2018	04/11/2023	EPA MCL	5	1.2	U	No	12	75
MW-110S	Yes	Benzene	µg/L	10/06/2018	04/14/2023	EPA MCL	5	0.63	J	No	10	20
MW-111D	Yes	Benzene	µg/L	01/24/2018	04/14/2023	EPA MCL	5	7.3		Yes	12	0
MW-113D	Yes	Benzene	µg/L	10/04/2018	04/14/2023	EPA MCL	5	0.31	U	No	10	30
MW-113S	Yes	Benzene	µg/L	01/24/2018	04/14/2023	EPA MCL	5	7.3		Yes	12	0
MW-118D	Yes	Benzene	µg/L	01/23/2018	04/12/2023	EPA MCL	5	0.47	J	No	12	33.3
MW-105S	Yes	Carbon disulfide	µg/L	01/23/2018	04/11/2023	NA	NC	0.63	U	No	12	91.7
MW-113D	Yes	Carbon disulfide	µg/L	10/04/2018	04/14/2023	NA	NC	0.63	U	No	10	90
MW-109S	Yes	Carbon tetrachloride	µg/L	10/06/2018	04/15/2023	EPA MCL	5	0.57	U	No	10	90
MW-110S	Yes	Chlorobenzene	µg/L	10/06/2018	04/14/2023	EPA MCL	100	0.84	U	No	10	50
MW-111D	Yes	Chlorobenzene	µg/L	01/24/2018	04/14/2023	EPA MCL	100	6.7		No	12	16.7
MW-112M	Yes	Chlorobenzene	µg/L	10/05/2018	04/15/2023	EPA MCL	100	0.42	U	No	10	90
MW-113S	Yes	Chlorobenzene	µg/L	01/24/2018	04/14/2023	EPA MCL	100	0.46	J	No	12	75
MW-118D	Yes	Chlorobenzene	µg/L	01/23/2018	04/12/2023	EPA MCL	100	0.42	U	No	12	83.3
MW-120D	Yes	Chlorobenzene	µg/L	01/25/2018	04/13/2023	EPA MCL	100	0.42	U	No	12	91.7
MW-120S	Yes	Chlorobenzene	µg/L	01/25/2018	04/13/2023	EPA MCL	100	0.42	U	No	12	75
MW-111D	Yes	Chloroethane	µg/L	01/24/2018	04/14/2023	NA	NC	1.4	U	No	12	66.7
MW-113S	Yes	Chloroethane	µg/L	01/24/2018	04/14/2023	NA	NC	1.4	U	No	12	66.7
MW-118D	Yes	Chloroethane	µg/L	01/23/2018	04/12/2023	NA	NC	1.4	U	No	12	91.7
MP-2	Yes	Chloroform	µg/L	09/13/2020	04/11/2023	ID GW - PRIMARY	2	1.6	J	No	6	0
MP-3	Yes	Chloroform	µg/L	09/13/2020	04/13/2023	ID GW - PRIMARY	2	2.1		Yes	6	0
MP-4	Yes	Chloroform	µg/L	09/13/2020	04/14/2023	ID GW - PRIMARY	2	0.72	U	No	6	16.7
MW-101S	Yes	Chloroform	µg/L	10/05/2018	04/15/2023	ID GW - PRIMARY	2	0.97	J	No	10	50
MW-105D	Yes	Chloroform	µg/L	01/23/2018	04/11/2023	ID GW - PRIMARY	2	1.4	U	No	12	25
MW-105S	Yes	Chloroform	µg/L	01/23/2018	04/11/2023	ID GW - PRIMARY	2	1.5		No	12	0
MW-109D	Yes	Chloroform	µg/L	10/06/2018	04/15/2023	ID GW - PRIMARY	2	0.55	J	No	10	0
MW-109S	Yes	Chloroform	µg/L	10/06/2018	04/15/2023	ID GW - PRIMARY	2	0.65	J	No	10	10
MW-110S	Yes	Chloroform	µg/L	10/06/2018	04/14/2023	ID GW - PRIMARY	2	0.72	U	No	10	80
MW-111D	Yes	Chloroform	µg/L	01/24/2018	04/14/2023	ID GW - PRIMARY	2	0.48	J	No	12	91.7
MW-112D	Yes	Chloroform	µg/L	01/24/2018	04/15/2023	ID GW - PRIMARY	2	0.36	U	No	12	66.7
MW-112M	Yes	Chloroform	µg/L	10/05/2018	04/15/2023	ID GW - PRIMARY	2	1.2		No	10	10
MW-113D	Yes	Chloroform	µg/L	10/04/2018	04/14/2023	ID GW - PRIMARY	2	0.36	U	No	10	30
MW-113S	Yes	Chloroform	µg/L	01/24/2018	04/14/2023	ID GW - PRIMARY	2	1.4		No	12	0
MW-118D	Yes	Chloroform	µg/L	01/23/2018	04/12/2023	ID GW - PRIMARY	2	0.37	J	No	12	8.3
MW-119D	Yes	Chloroform	µg/L	01/25/2018	04/13/2023	ID GW - PRIMARY	2	1.3		No	12	8.3
MW-119S	Yes	Chloroform	µg/L	01/25/2018	04/13/2023	ID GW - PRIMARY	2	1.8	J	No	12	8.3
MW-120D	Yes	Chloroform	µg/L	01/25/2018	04/13/2023	ID GW - PRIMARY	2	0.4	J	No	12	8.3
MW-120S	Yes	Chloroform	µg/L	01/25/2018	04/13/2023	ID GW - PRIMARY	2	0.69	J	No	12	16.7
MP-2	Yes	cis-1,2-Dichloroethene	µg/L	09/13/2020	04/11/2023	EPA MCL	70	20		No	6	0
MP-3	Yes	cis-1,2-Dichloroethene	µg/L	09/13/2020	04/13/2023	EPA MCL	70	4.3		No	6	0

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Dataset			Confidence Limits								
Well ID	RCRA Regulated Chemical	Chemical	Parameter est. method	Dataset mean	sd	CL Method	CL Confidence Level	LCL of mean	UCL of mean	UCL of mean > Standard?	LCL of mean > Standard
MW-113S	Yes	Acetone	Does not take in to account ND status	5.68	3.46	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MP-2	Yes	Benzene	NP Kaplan-Meier	0.218	0.0466	Bootstrap	0.95	0	0.263	No	No
MW-105D	Yes	Benzene	NP Kaplan-Meier	0.185	0.0229	Bootstrap	0.95	0	0.21	No	No
MW-110S	Yes	Benzene	NP Kaplan-Meier	0.426	0.133	Bootstrap	0.95	0.332	0.511	No	No
MW-111D	Yes	Benzene	Ordinary nonparametric bootstrap	13.9	5.74	BCa bootstrap	0.95	10.9	16.9	Yes	Yes
MW-113D	Yes	Benzene	NP Kaplan-Meier	1.78	1.15	Bootstrap	0.95	1.06	2.45	No	No
MW-113S	Yes	Benzene	Ordinary nonparametric bootstrap	7.35	0.562	BCa bootstrap	0.95	7.03	7.62	Yes	Yes
MW-118D	Yes	Benzene	NP Kaplan-Meier	0.367	0.188	Bootstrap	0.95	0.261	0.49	No	No
MW-105S	Yes	Carbon disulfide	Does not take in to account ND status	0.385	0.252	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-113D	Yes	Carbon disulfide	Does not take in to account ND status	0.35	0.27	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-109S	Yes	Carbon tetrachloride	Does not take in to account ND status	0.272	0.158	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-110S	Yes	Chlorobenzene	NP Kaplan-Meier	0.322	0.115	Bootstrap	0.95	0.236	0.401	No	No
MW-111D	Yes	Chlorobenzene	NP Kaplan-Meier	8.17	6.28	Bootstrap	0.95	4.71	11.9	No	No
MW-112M	Yes	Chlorobenzene	Does not take in to account ND status	0.459	0.465	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-113S	Yes	Chlorobenzene	NP Kaplan-Meier	0.235	0.097	Bootstrap	0.95	0	0.304	No	No
MW-118D	Yes	Chlorobenzene	NP Kaplan-Meier	0.176	0.0105	Bootstrap	0.95	0	0.185	No	No
MW-120D	Yes	Chlorobenzene	Does not take in to account ND status	0.287	0.161	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-120S	Yes	Chlorobenzene	NP Kaplan-Meier	0.185	0.0229	Bootstrap	0.95	0	0.206	No	No
MW-111D	Yes	Chloroethane	NP Kaplan-Meier	0.616	0.382	Bootstrap	0.95	0	0.875	NC	NC
MW-113S	Yes	Chloroethane	NP Kaplan-Meier	0.562	0.271	Bootstrap	0.95	0	0.782	NC	NC
MW-118D	Yes	Chloroethane	Does not take in to account ND status	1.02	1.2	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MP-2	Yes	Chloroform	Ordinary nonparametric bootstrap	1.17	0.225	BCa bootstrap	0.95	1.03	1.35	No	No
MP-3	Yes	Chloroform	Ordinary nonparametric bootstrap	1.16	0.488	BCa bootstrap	0.95	0.885	1.56	No	No
MP-4	Yes	Chloroform	NP Kaplan-Meier	0.885	0.155	Bootstrap	0.95	0.768	1	No	No
MW-101S	Yes	Chloroform	NP Kaplan-Meier	0.27	0.238	Bootstrap	0.95	0.165	0.435	No	No
MW-105D	Yes	Chloroform	NP Kaplan-Meier	1.42	0.208	Bootstrap	0.95	1.3	1.54	No	No
MW-105S	Yes	Chloroform	Ordinary nonparametric bootstrap	1.32	0.475	BCa bootstrap	0.95	1.04	1.56	No	No
MW-109D	Yes	Chloroform	Ordinary nonparametric bootstrap	0.45	0.072	BCa bootstrap	0.95	0.404	0.489	No	No
MW-109S	Yes	Chloroform	NP Kaplan-Meier	0.559	0.271	Bootstrap	0.95	0.394	0.715	No	No
MW-110S	Yes	Chloroform	NP Kaplan-Meier	0.183	0.0335	Bootstrap	0.95	0	0.22	No	No
MW-111D	Yes	Chloroform	Does not take in to account ND status	0.249	0.109	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-112D	Yes	Chloroform	NP Kaplan-Meier	0.28	0.149	Bootstrap	0.95	0	0.4	No	No
MW-112M	Yes	Chloroform	NP Kaplan-Meier	0.797	0.201	Bootstrap	0.95	0.672	0.934	No	No
MW-113D	Yes	Chloroform	NP Kaplan-Meier	1.28	0.745	Bootstrap	0.95	0.791	1.73	No	No
MW-113S	Yes	Chloroform	Ordinary nonparametric bootstrap	2.25	0.637	BCa bootstrap	0.95	1.92	2.58	Yes	No
MW-118D	Yes	Chloroform	NP Kaplan-Meier	0.676	0.194	Bootstrap	0.95	0.561	0.794	No	No
MW-119D	Yes	Chloroform	NP Kaplan-Meier	0.794	0.189	Bootstrap	0.95	0.7	0.909	No	No
MW-119S	Yes	Chloroform	NP Kaplan-Meier	0.847	0.358	Bootstrap	0.95	0.667	1.07	No	No
MW-120D	Yes	Chloroform	NP Kaplan-Meier	0.535	0.158	Bootstrap	0.95	0.448	0.632	No	No
MW-120S	Yes	Chloroform	NP Kaplan-Meier	0.563	0.106	Bootstrap	0.95	0.498	0.625	No	No
MP-2	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	17.5	1.87	BCa bootstrap	0.95	16.2	18.8	No	No
MP-3	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	2.08	1.21	BCa bootstrap	0.95	1.33	3.1	No	No

Table G-1
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Dataset			Trend Analysis								
Well ID	RCRA Regulated Chemical	Chemical	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	COV	GSI Toolkit Trend
MW-113S	Yes	Acetone	NC	NC	NC	NC	NC	NC	NC	0.61	NC
MP-2	Yes	Benzene	0.00028	-5.08	0.0903	91.0%	8	5.22	1.34	1	NC
MW-105D	Yes	Benzene	NC	NC	NC	NC	NC	NC	NC	0.867	NC
MW-110S	Yes	Benzene	0.000127	-1.94	0.142	85.8%	13	11.2	1.07	0.384	NC
MW-111D	Yes	Benzene	-0.00766	156	0.000485	100.0%	-49	14.6	-3.3	0.414	Decreasing
MW-113D	Yes	Benzene	-0.00163	32.1	0.0746	92.5%	-17	11.1	-1.44	0.65	NC
MW-113S	Yes	Benzene	-0.000212	11.5	0.121	87.9%	-18	14.5	-1.17	0.0765	Stable
MW-118D	Yes	Benzene	0.000122	-1.89	0.152	84.8%	16	14.6	1.03	1.32	NC
MW-105S	Yes	Carbon disulfide	NC	NC	NC	NC	NC	NC	NC	0.656	NC
MW-113D	Yes	Carbon disulfide	NC	NC	NC	NC	NC	NC	NC	0.771	NC
MW-109S	Yes	Carbon tetrachloride	NC	NC	NC	NC	NC	NC	NC	0.58	NC
MW-110S	Yes	Chlorobenzene	0.000217	-3.7	0.0152	98.5%	25	11.1	2.16	0.547	NC
MW-111D	Yes	Chlorobenzene	0.00344	-58	0.107	89.3%	19	14.5	1.24	0.803	NC
MW-112M	Yes	Chlorobenzene	NC	NC	NC	NC	NC	NC	NC	1.01	NC
MW-113S	Yes	Chlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.582	NC
MW-118D	Yes	Chlorobenzene	NC	NC	NC	NC	NC	NC	NC	1.71	NC
MW-120D	Yes	Chlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.56	NC
MW-120S	Yes	Chlorobenzene	NC	NC	NC	NC	NC	NC	NC	0.634	NC
MW-111D	Yes	Chloroethane	NC	NC	NC	NC	NC	NC	NC	0.554	NC
MW-113S	Yes	Chloroethane	NC	NC	NC	NC	NC	NC	NC	0.63	NC
MW-118D	Yes	Chloroethane	NC	NC	NC	NC	NC	NC	NC	1.18	NC
MP-2	Yes	Chloroform	0	1.1	0.5	50.0%	-1	5.13	0	0.193	NC
MP-3	Yes	Chloroform	0.000659	-11.4	0.0903	91.0%	8	5.22	1.34	0.422	NC
MP-4	Yes	Chloroform	-0.0000442	1.63	0.424	57.6%	-2	5.22	-0.191	0.191	NC
MW-101S	Yes	Chloroform	0.000114	-1.91	0.0621	93.8%	17	10.4	1.54	0.871	NC
MW-105D	Yes	Chloroform	0.0000263	0.999	0.39	61.0%	5	14.4	0.278	0.14	NC
MW-105S	Yes	Chloroform	-0.000431	9.34	0.0846	91.5%	-21	14.6	-1.37	0.361	NC
MW-109D	Yes	Chloroform	0.0000458	-0.377	0.103	89.7%	15	11.1	1.26	0.16	NC
MW-109S	Yes	Chloroform	0.000136	-1.97	0.265	73.5%	8	11.1	0.629	0.51	NC
MW-110S	Yes	Chloroform	NC	NC	NC	NC	NC	NC	NC	0.696	NC
MW-111D	Yes	Chloroform	NC	NC	NC	NC	NC	NC	NC	0.437	NC
MW-112D	Yes	Chloroform	NC	NC	NC	NC	NC	NC	NC	0.483	NC
MW-112M	Yes	Chloroform	0.000281	-4.46	0.105	89.5%	15	11.2	1.25	0.369	NC
MW-113D	Yes	Chloroform	-0.00109	21.6	0.00889	99.1%	-27	11	-2.37	0.571	NC
MW-113S	Yes	Chloroform	-0.000861	18.2	0.00972	99.0%	-35	14.6	-2.34	0.283	Decreasing
MW-118D	Yes	Chloroform	-0.000258	5.51	0.0139	98.6%	-33	14.6	-2.2	0.86	NC
MW-119D	Yes	Chloroform	0.000183	-2.59	0.0168	98.3%	32	14.6	2.12	0.245	NC
MW-119S	Yes	Chloroform	0.000296	-4.59	0.00972	99.0%	35	14.6	2.34	0.42	NC
MW-120D	Yes	Chloroform	-0.0000924	2.25	0.204	79.6%	-13	14.5	-0.828	0.297	NC
MW-120S	Yes	Chloroform	0	0.61	0.5	50.0%	0	14.5	0	0.205	NC
MP-2	Yes	cis-1,2-Dichloroethene	-0.00266	67.9	0.5	50.0%	-1	5.32	0	0.107	NC
MP-3	Yes	cis-1,2-Dichloroethene	0.00297	-54.7	0.0301	97.0%	11	5.32	1.88	0.58	NC

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Dataset				General								
Well ID	RCRA Regulated Chemical	Chemical	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Latest Result Qualifier	Latest Result > Standard?	Dataset n	ND %
MP-4	Yes	cis-1,2-Dichloroethene	µg/L	09/13/2020	04/14/2023	EPA MCL	70	8.9		No	6	0
MW-101S	Yes	cis-1,2-Dichloroethene	µg/L	10/05/2018	04/15/2023	EPA MCL	70	2.2		No	10	40
MW-102S	Yes	cis-1,2-Dichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	70	0.32	U	No	6	83.3
MW-105D	Yes	cis-1,2-Dichloroethene	µg/L	01/23/2018	04/11/2023	EPA MCL	70	1.3	U	No	12	8.3
MW-105S	Yes	cis-1,2-Dichloroethene	µg/L	01/23/2018	04/11/2023	EPA MCL	70	0.32	U	No	12	8.3
MW-110S	Yes	cis-1,2-Dichloroethene	µg/L	10/06/2018	04/14/2023	EPA MCL	70	15		No	10	0
MW-111D	Yes	cis-1,2-Dichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	70	9.2		No	12	0
MW-112D	Yes	cis-1,2-Dichloroethene	µg/L	01/24/2018	04/15/2023	EPA MCL	70	0.32	U	No	12	75
MW-112M	Yes	cis-1,2-Dichloroethene	µg/L	10/05/2018	04/15/2023	EPA MCL	70	0.4	J	No	10	90
MW-113D	Yes	cis-1,2-Dichloroethene	µg/L	10/04/2018	04/14/2023	EPA MCL	70	0.46	J	No	10	0
MW-113S	Yes	cis-1,2-Dichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	70	29		No	12	0
MW-118D	Yes	cis-1,2-Dichloroethene	µg/L	01/23/2018	04/12/2023	EPA MCL	70	4.6		No	12	0
MW-119D	Yes	cis-1,2-Dichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	70	0.32	U	No	12	8.3
MW-119S	Yes	cis-1,2-Dichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	70	0.64	U	No	12	8.3
MW-120D	Yes	cis-1,2-Dichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	70	12		No	12	0
MW-120S	Yes	cis-1,2-Dichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	70	22		No	12	0
MP-2	Yes	Dichlorodifluoromethane	µg/L	09/13/2020	04/11/2023	NA	NC	3.8	U	No	6	33.3
MW-101S	Yes	Dichlorodifluoromethane	µg/L	10/05/2018	04/15/2023	NA	NC	0.96	U	No	10	80
MW-105D	Yes	Dichlorodifluoromethane	µg/L	01/23/2018	04/11/2023	NA	NC	3.8	U	No	12	16.7
MW-105S	Yes	Dichlorodifluoromethane	µg/L	01/23/2018	04/11/2023	NA	NC	0.96	U	No	12	75
MW-110S	Yes	Dichlorodifluoromethane	µg/L	10/06/2018	04/14/2023	NA	NC	1.9	U	No	10	90
MW-111D	Yes	Dichlorodifluoromethane	µg/L	01/24/2018	04/14/2023	NA	NC	6.5		No	12	41.7
MW-112D	Yes	Dichlorodifluoromethane	µg/L	01/24/2018	04/15/2023	NA	NC	2.8	J	No	12	16.7
MW-112M	Yes	Dichlorodifluoromethane	µg/L	10/05/2018	04/15/2023	NA	NC	0.96	U	No	10	80
MW-113D	Yes	Dichlorodifluoromethane	µg/L	10/04/2018	04/14/2023	NA	NC	1.1	J	No	10	0
MW-113S	Yes	Dichlorodifluoromethane	µg/L	01/24/2018	04/14/2023	NA	NC	24		No	12	0
MW-118D	Yes	Dichlorodifluoromethane	µg/L	01/23/2018	04/12/2023	NA	NC	3.2		No	12	8.3
MW-120D	Yes	Dichlorodifluoromethane	µg/L	01/25/2018	04/13/2023	NA	NC	3.3		No	12	50
MW-120S	Yes	Dichlorodifluoromethane	µg/L	01/25/2018	04/13/2023	NA	NC	0.96	U	No	12	66.7
MW-111D	Yes	Ethylbenzene	µg/L	01/24/2018	04/14/2023	ID GW - PRIMARY	700	0.3	U	No	12	25
MW-113D	Yes	Iodomethane	µg/L	10/04/2018	04/14/2023	NA	NC	2.6	U	No	10	90
MW-113S	Yes	Iodomethane	µg/L	01/24/2018	04/14/2023	NA	NC	2.6	U	No	12	83.3
MW-110S	No	m,p-Xylene	µg/L	05/06/2019	04/14/2023	EPA MCL	10000	0.71	U	No	9	88.9
MW-105D	Yes	Methylene Chloride	µg/L	01/23/2018	04/11/2023	EPA MCL	5	3.8	U	No	12	91.7
MW-105S	Yes	Methylene Chloride	µg/L	01/23/2018	04/11/2023	EPA MCL	5	0.94	U	No	12	91.7
MW-113D	Yes	Methylene Chloride	µg/L	10/04/2018	04/14/2023	EPA MCL	5	0.94	U	No	10	30
MW-113S	Yes	Methylene Chloride	µg/L	01/24/2018	04/14/2023	EPA MCL	5	1.1	J	No	12	25
MW-118D	Yes	Methylene Chloride	µg/L	01/23/2018	04/12/2023	EPA MCL	5	0.94	U	No	12	91.7
MW-119S	Yes	Methylene Chloride	µg/L	01/25/2018	04/13/2023	EPA MCL	5	1.9	U	No	12	91.7
MW-120D	Yes	Methylene Chloride	µg/L	01/25/2018	04/13/2023	EPA MCL	5	0.94	U	No	12	91.7
MW-120S	Yes	Methylene Chloride	µg/L	01/25/2018	04/13/2023	EPA MCL	5	0.94	U	No	12	91.7
MW-110S	No	o-xylene (1,2-dimethylbenzene)	µg/L	05/06/2019	04/14/2023	EPA MCL	10000	0.66	U	No	9	88.9

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Dataset			Confidence Limits								
Well ID	RCRA Regulated Chemical	Chemical	Parameter est. method	Dataset mean	sd	CL Method	CL Confidence Level	LCL of mean	UCL of mean	UCL of mean > Standard?	LCL of mean > Standard
MP-4	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	8.27	1.26	BCa bootstrap	0.95	7.27	9.09	No	No
MW-101S	Yes	cis-1,2-Dichloroethene	NP Kaplan-Meier	0.49	0.595	Bootstrap	0.95	0.219	0.911	No	No
MW-102S	Yes	cis-1,2-Dichloroethene	Does not take in to account ND status	0.26	0.0906	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-105D	Yes	cis-1,2-Dichloroethene	NP Kaplan-Meier	12.3	3.62	Bootstrap	0.95	10	14	No	No
MW-105S	Yes	cis-1,2-Dichloroethene	NP Kaplan-Meier	8.8	10.6	Bootstrap	0.95	3.01	15.2	No	No
MW-110S	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	15.6	5.02	BCa bootstrap	0.95	12.9	18.7	No	No
MW-111D	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	3.65	2.8	BCa bootstrap	0.95	2.22	5.3	No	No
MW-112D	Yes	cis-1,2-Dichloroethene	NP Kaplan-Meier	0.2	0.0581	Bootstrap	0.95	0	0.26	No	No
MW-112M	Yes	cis-1,2-Dichloroethene	Does not take in to account ND status	0.402	0.412	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-113D	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	13.8	9.67	BCa bootstrap	0.95	8.17	19.1	No	No
MW-113S	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	32.8	4.81	BCa bootstrap	0.95	30.2	35.3	No	No
MW-118D	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	7.85	2.88	BCa bootstrap	0.95	6.37	9.62	No	No
MW-119D	Yes	cis-1,2-Dichloroethene	NP Kaplan-Meier	1.89	0.749	Bootstrap	0.95	1.47	2.32	No	No
MW-119S	Yes	cis-1,2-Dichloroethene	NP Kaplan-Meier	1.88	1.21	Bootstrap	0.95	1.25	2.6	No	No
MW-120D	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	15.7	4.93	BCa bootstrap	0.95	13.2	18.4	No	No
MW-120S	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	17.4	3.74	BCa bootstrap	0.95	15.7	19.6	No	No
MP-2	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	1.12	0.436	Bootstrap	0.95	0.661	1.44	NC	NC
MW-101S	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	0.369	0.148	Bootstrap	0.95	0	0.495	NC	NC
MW-105D	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	3.44	0.831	Bootstrap	0.95	2.95	3.93	NC	NC
MW-105S	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	0.449	0.303	Bootstrap	0.95	0	0.651	NC	NC
MW-110S	Yes	Dichlorodifluoromethane	Does not take in to account ND status	0.703	0.594	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-111D	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	2.16	2.56	Bootstrap	0.95	0.864	3.77	NC	NC
MW-112D	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	1.89	0.731	Bootstrap	0.95	1.48	2.31	NC	NC
MW-112M	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	0.7	0.977	Bootstrap	0.95	0	1.39	NC	NC
MW-113D	Yes	Dichlorodifluoromethane	Ordinary nonparametric bootstrap	16.3	11.6	BCa bootstrap	0.95	9.18	22.9	NC	NC
MW-113S	Yes	Dichlorodifluoromethane	Ordinary nonparametric bootstrap	30.4	6.49	BCa bootstrap	0.95	26.8	34	NC	NC
MW-118D	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	3.78	1.09	Bootstrap	0.95	3.12	4.43	NC	NC
MW-120D	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	1.46	1.76	Bootstrap	0.95	0.517	2.55	NC	NC
MW-120S	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	0.498	0.196	Bootstrap	0.95	0	0.643	NC	NC
MW-111D	Yes	Ethylbenzene	NP Kaplan-Meier	3.67	4.57	Bootstrap	0.95	1.4	6.5	No	No
MW-113D	Yes	Iodomethane	Does not take in to account ND status	0.87	0.956	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-113S	Yes	Iodomethane	NP Kaplan-Meier	0.564	0.693	Bootstrap	0.95	0	1.14	NC	NC
MW-110S	No	m,p-Xylene	Does not take in to account ND status	0.498	0.7	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-105D	Yes	Methylene Chloride	Does not take in to account ND status	2.11	2.47	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-105S	Yes	Methylene Chloride	Does not take in to account ND status	1.1	0.879	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-113D	Yes	Methylene Chloride	NP Kaplan-Meier	2.19	1.59	Bootstrap	0.95	1.22	3.23	No	No
MW-113S	Yes	Methylene Chloride	NP Kaplan-Meier	2.19	1.12	Bootstrap	0.95	1.59	2.87	No	No
MW-118D	Yes	Methylene Chloride	Does not take in to account ND status	1.71	2.63	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-119S	Yes	Methylene Chloride	Does not take in to account ND status	1.24	0.895	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-120D	Yes	Methylene Chloride	Does not take in to account ND status	0.949	0.327	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-120S	Yes	Methylene Chloride	Does not take in to account ND status	1.26	1.13	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-110S	No	o-xylene (1,2-dimethylbenzene)	Does not take in to account ND status	0.371	0.265	Not enough distinct detected values to assess	NC	NC	NC	NC	NC

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Dataset			Trend Analysis								
Well ID	RCRA Regulated Chemical	Chemical	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	COV	GSI Toolkit Trend
MP-4	Yes	cis-1,2-Dichloroethene	0.00109	-12.3	0.354	64.6%	3	5.32	0.376	0.153	NC
MW-101S	Yes	cis-1,2-Dichloroethene	0.000177	-3	0.229	77.1%	9	10.8	0.743	1.28	NC
MW-102S	Yes	cis-1,2-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	0.349	NC
MW-105D	Yes	cis-1,2-Dichloroethene	0.00151	-14.5	0.0822	91.8%	21	14.4	1.39	0.307	NC
MW-105S	Yes	cis-1,2-Dichloroethene	-0.00592	115	0.00102	99.9%	-46	14.6	-3.08	1.26	NC
MW-110S	Yes	cis-1,2-Dichloroethene	0.00182	-20.7	0.117	88.3%	14	10.9	1.19	0.322	NC
MW-111D	Yes	cis-1,2-Dichloroethene	0.00304	-52.6	0.0432	95.7%	26	14.6	1.71	0.767	NC
MW-112D	Yes	cis-1,2-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	0.541	NC
MW-112M	Yes	cis-1,2-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	1.02	NC
MW-113D	Yes	cis-1,2-Dichloroethene	-0.012	238	0.0194	98.1%	-24	11.1	-2.07	0.7	NC
MW-113S	Yes	cis-1,2-Dichloroethene	-0.00471	121	0.0415	95.8%	-26	14.4	-1.73	0.147	NC
MW-118D	Yes	cis-1,2-Dichloroethene	-0.00261	55.9	0.0574	94.3%	-24	14.6	-1.58	0.368	NC
MW-119D	Yes	cis-1,2-Dichloroethene	0.00055	-8.1	0.0652	93.5%	23	14.6	1.51	0.349	NC
MW-119S	Yes	cis-1,2-Dichloroethene	0.00145	-24.5	0.0321	96.8%	28	14.6	1.85	0.632	NC
MW-120D	Yes	cis-1,2-Dichloroethene	-0.00287	68	0.0953	90.5%	-20	14.5	-1.31	0.313	NC
MW-120S	Yes	cis-1,2-Dichloroethene	0	16.5	0.5	50.0%	0	14.3	0	0.214	NC
MP-2	Yes	Dichlorodifluoromethane	0.00185	-33.9	0.283	71.7%	4	5.22	0.574	0.751	NC
MW-101S	Yes	Dichlorodifluoromethane	NC	NC	NC	NC	NC	NC	NC	0.577	NC
MW-105D	Yes	Dichlorodifluoromethane	-0.0000227	3.98	0.5	50.0%	-1	14.6	0	0.242	NC
MW-105S	Yes	Dichlorodifluoromethane	NC	NC	NC	NC	NC	NC	NC	0.551	NC
MW-110S	Yes	Dichlorodifluoromethane	NC	NC	NC	NC	NC	NC	NC	0.845	NC
MW-111D	Yes	Dichlorodifluoromethane	0.00274	-48.6	0.0294	97.1%	28	14.3	1.89	1.21	NC
MW-112D	Yes	Dichlorodifluoromethane	0.000226	-2.4	0.291	70.9%	9	14.6	0.549	0.374	NC
MW-112M	Yes	Dichlorodifluoromethane	NC	NC	NC	NC	NC	NC	NC	1.01	NC
MW-113D	Yes	Dichlorodifluoromethane	-0.0145	283	0.0297	97.0%	-22	11.1	-1.89	0.715	NC
MW-113S	Yes	Dichlorodifluoromethane	-0.00397	103	0.121	87.9%	-18	14.5	-1.17	0.213	NC
MW-118D	Yes	Dichlorodifluoromethane	0.000076	2.43	0.473	52.7%	2	14.5	0.0688	0.306	NC
MW-120D	Yes	Dichlorodifluoromethane	0.000784	-13.4	0.224	77.6%	12	14.5	0.757	1.16	NC
MW-120S	Yes	Dichlorodifluoromethane	NC	NC	NC	NC	NC	NC	NC	0.52	NC
MW-111D	Yes	Ethylbenzene	-0.00519	99.3	0.000103	100.0%	-55	14.6	-3.71	1.29	NC
MW-113D	Yes	Iodomethane	NC	NC	NC	NC	NC	NC	NC	1.1	NC
MW-113S	Yes	Iodomethane	NC	NC	NC	NC	NC	NC	NC	0.69	NC
MW-110S	No	m,p-Xylene	NC	NC	NC	NC	NC	NC	NC	1.41	NC
MW-105D	Yes	Methylene Chloride	NC	NC	NC	NC	NC	NC	NC	1.17	NC
MW-105S	Yes	Methylene Chloride	NC	NC	NC	NC	NC	NC	NC	0.796	NC
MW-113D	Yes	Methylene Chloride	-0.0025	48.9	0.00152	99.8%	-34	11.1	-2.96	0.635	NC
MW-113S	Yes	Methylene Chloride	-0.00152	30.7	0.0229	97.7%	-30	14.5	-2	0.556	NC
MW-118D	Yes	Methylene Chloride	NC	NC	NC	NC	NC	NC	NC	1.54	NC
MW-119S	Yes	Methylene Chloride	NC	NC	NC	NC	NC	NC	NC	0.72	NC
MW-120D	Yes	Methylene Chloride	NC	NC	NC	NC	NC	NC	NC	0.345	NC
MW-120S	Yes	Methylene Chloride	NC	NC	NC	NC	NC	NC	NC	0.896	NC
MW-110S	No	o-xylene (1,2-dimethylbenzene)	NC	NC	NC	NC	NC	NC	NC	0.714	NC

Table G-1
Cell 1 Statistical Results - VOCs
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Fort Hall Mine Landfill

Dataset				General								
Well ID	RCRA Regulated Chemical	Chemical	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Latest Result Qualifier	Latest Result > Standard?	Dataset n	ND %
MW-111D	No	o-xylene (1,2-dimethylbenzene)	µg/L	05/05/2019	04/14/2023	EPA MCL	10000	0.74	J	No	7	14.3
MW-113D	No	o-xylene (1,2-dimethylbenzene)	µg/L	05/05/2019	04/14/2023	EPA MCL	10000	0.33	U	No	9	55.6
MW-113S	No	o-xylene (1,2-dimethylbenzene)	µg/L	05/05/2019	04/14/2023	EPA MCL	10000	1		No	9	11.1
MW-110S	Yes	Styrene	µg/L	10/06/2018	04/14/2023	EPA MCL	100	0.71	U	No	10	90
MP-2	Yes	Tetrachloroethene	µg/L	09/13/2020	04/11/2023	EPA MCL	5	19		Yes	6	0
MP-3	Yes	Tetrachloroethene	µg/L	09/13/2020	04/13/2023	EPA MCL	5	19		Yes	6	0
MP-4	Yes	Tetrachloroethene	µg/L	09/13/2020	04/14/2023	EPA MCL	5	25		Yes	6	0
MW-101S	Yes	Tetrachloroethene	µg/L	10/05/2018	04/15/2023	EPA MCL	5	17		Yes	10	0
MW-102S	Yes	Tetrachloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	5	0.91	J	No	6	16.7
MW-105D	Yes	Tetrachloroethene	µg/L	01/23/2018	04/11/2023	EPA MCL	5	37		Yes	12	0
MW-105S	Yes	Tetrachloroethene	µg/L	01/23/2018	04/11/2023	EPA MCL	5	11		Yes	12	0
MW-109D	Yes	Tetrachloroethene	µg/L	10/06/2018	04/15/2023	EPA MCL	5	20		Yes	10	0
MW-109S	Yes	Tetrachloroethene	µg/L	10/06/2018	04/15/2023	EPA MCL	5	15	J	Yes	10	0
MW-110S	Yes	Tetrachloroethene	µg/L	10/06/2018	04/14/2023	EPA MCL	5	18		Yes	10	0
MW-111D	Yes	Tetrachloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	5	1.6		No	12	58.3
MW-112D	Yes	Tetrachloroethene	µg/L	01/24/2018	04/15/2023	EPA MCL	5	12		Yes	12	0
MW-112M	Yes	Tetrachloroethene	µg/L	10/05/2018	04/15/2023	EPA MCL	5	14		Yes	10	0
MW-113D	Yes	Tetrachloroethene	µg/L	10/04/2018	04/14/2023	EPA MCL	5	1.1		No	10	0
MW-113S	Yes	Tetrachloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	5	22		Yes	12	0
MW-118D	Yes	Tetrachloroethene	µg/L	01/23/2018	04/12/2023	EPA MCL	5	9.9		Yes	12	0
MW-119D	Yes	Tetrachloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	5	22		Yes	12	0
MW-119S	Yes	Tetrachloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	5	29		Yes	12	0
MW-120D	Yes	Tetrachloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	5	14		Yes	12	0
MW-120S	Yes	Tetrachloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	5	15		Yes	12	0
MW-123	Yes	Tetrachloroethene	µg/L	09/08/2020	04/15/2023	EPA MCL	5	4.2		No	7	0
MW-110S	Yes	Toluene	µg/L	10/06/2018	04/14/2023	EPA MCL	1000	0.64	U	No	10	90
MW-111D	Yes	Toluene	µg/L	01/24/2018	04/14/2023	EPA MCL	1000	0.32	U	No	12	58.3
MW-113S	Yes	Toluene	µg/L	01/24/2018	04/14/2023	EPA MCL	1000	0.32	U	No	12	91.7
MW-110S	Yes	trans-1,2-Dichloroethene	µg/L	10/06/2018	04/14/2023	EPA MCL	100	0.74	U	No	10	80
MW-111D	Yes	trans-1,2-Dichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	100	1.3		No	12	33.3
MW-113D	Yes	trans-1,2-Dichloroethene	µg/L	10/04/2018	04/14/2023	EPA MCL	100	0.37	U	No	10	30
MW-113S	Yes	trans-1,2-Dichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	100	1.5		No	12	0
MW-118D	Yes	trans-1,2-Dichloroethene	µg/L	01/23/2018	04/12/2023	EPA MCL	100	0.37	U	No	12	58.3
MW-120D	Yes	trans-1,2-Dichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	100	0.37	U	No	12	91.7
MW-120S	Yes	trans-1,2-Dichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	100	0.37	U	No	12	83.3
MP-2	Yes	Trichloroethene	µg/L	09/13/2020	04/11/2023	EPA MCL	5	180		Yes	6	0
MP-3	Yes	Trichloroethene	µg/L	09/13/2020	04/13/2023	EPA MCL	5	110		Yes	6	0
MP-4	Yes	Trichloroethene	µg/L	09/13/2020	04/14/2023	EPA MCL	5	180		Yes	6	0
MW-101S	Yes	Trichloroethene	µg/L	10/05/2018	04/15/2023	EPA MCL	5	64		Yes	10	0
MW-102S	Yes	Trichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	5	2		No	6	16.7
MW-105D	Yes	Trichloroethene	µg/L	01/23/2018	04/11/2023	EPA MCL	5	200		Yes	12	0
MW-105S	Yes	Trichloroethene	µg/L	01/23/2018	04/11/2023	EPA MCL	5	37		Yes	12	0

Table G-1
Cell 1 Statistical Results - VOCs
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Dataset			Confidence Limits								
Well ID	RCRA Regulated Chemical	Chemical	Parameter est. method	Dataset mean	sd	CL Method	CL Confidence Level	LCL of mean	UCL of mean	UCL of mean > Standard?	LCL of mean > Standard
MW-111D	No	o-xylene (1,2-dimethylbenzene)	NP Kaplan-Meier	1.21	1.44	Bootstrap	0.95	0.494	2.42	No	No
MW-113D	No	o-xylene (1,2-dimethylbenzene)	NP Kaplan-Meier	0.299	0.136	Bootstrap	0.95	0	0.399	No	No
MW-113S	No	o-xylene (1,2-dimethylbenzene)	NP Kaplan-Meier	1.12	0.449	Bootstrap	0.95	0.835	1.4	No	No
MW-110S	Yes	Styrene	Does not take in to account ND status	0.568	0.461	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MP-2	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	15.6	4.15	BCa bootstrap	0.95	12.2	18.3	Yes	Yes
MP-3	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	17.5	2.17	BCa bootstrap	0.95	16	19	Yes	Yes
MP-4	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	19.8	4.31	BCa bootstrap	0.95	16.7	23	Yes	Yes
MW-101S	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	8.6	3.91	BCa bootstrap	0.95	6.52	11.2	Yes	Yes
MW-102S	Yes	Tetrachloroethene	NP Kaplan-Meier	1.16	0.675	Bootstrap	0.95	0.637	1.72	No	No
MW-105D	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	36.1	2.75	BCa bootstrap	0.95	34.4	37.5	Yes	Yes
MW-105S	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	10.7	3.38	BCa bootstrap	0.95	8.82	12.5	Yes	Yes
MW-109D	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	14	3.61	BCa bootstrap	0.95	11.8	16	Yes	Yes
MW-109S	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	21.5	13.7	BCa bootstrap	0.95	13.5	29.9	Yes	Yes
MW-110S	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	12	5.15	BCa bootstrap	0.95	8.75	14.7	Yes	Yes
MW-111D	Yes	Tetrachloroethene	NP Kaplan-Meier	0.77	0.89	Bootstrap	0.95	0.277	1.31	No	No
MW-112D	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	12	1.71	BCa bootstrap	0.95	11	12.8	Yes	Yes
MW-112M	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	9.44	2.29	BCa bootstrap	0.95	8.17	10.8	Yes	Yes
MW-113D	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	6.91	4.78	BCa bootstrap	0.95	4.08	9.7	Yes	No
MW-113S	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	27.8	5.16	BCa bootstrap	0.95	25.2	30.8	Yes	Yes
MW-118D	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	16	4.65	BCa bootstrap	0.95	13.4	18.6	Yes	Yes
MW-119D	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	15.5	4.07	BCa bootstrap	0.95	13.2	17.8	Yes	Yes
MW-119S	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	17.6	7.77	BCa bootstrap	0.95	13.4	21.8	Yes	Yes
MW-120D	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	15.8	2.1	BCa bootstrap	0.95	14.6	16.9	Yes	Yes
MW-120S	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	16.9	3.15	BCa bootstrap	0.95	15.4	18.7	Yes	Yes
MW-123	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	3.83	1.19	BCa bootstrap	0.95	2.95	4.59	No	No
MW-110S	Yes	Toluene	Does not take in to account ND status	0.325	0.236	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-111D	Yes	Toluene	NP Kaplan-Meier	0.27	0.2	Bootstrap	0.95	0.176	0.4	No	No
MW-113S	Yes	Toluene	Does not take in to account ND status	0.34	0.222	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-110S	Yes	trans-1,2-Dichloroethene	Does not take in to account ND status	0.312	0.24	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-111D	Yes	trans-1,2-Dichloroethene	NP Kaplan-Meier	0.548	0.436	Bootstrap	0.95	0.319	0.811	No	No
MW-113D	Yes	trans-1,2-Dichloroethene	NP Kaplan-Meier	0.45	0.189	Bootstrap	0.95	0.338	0.577	No	No
MW-113S	Yes	trans-1,2-Dichloroethene	Ordinary nonparametric bootstrap	1.32	0.249	BCa bootstrap	0.95	1.19	1.46	No	No
MW-118D	Yes	trans-1,2-Dichloroethene	NP Kaplan-Meier	0.183	0.0437	Bootstrap	0.95	0.15	0.217	No	No
MW-120D	Yes	trans-1,2-Dichloroethene	Does not take in to account ND status	0.28	0.146	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-120S	Yes	trans-1,2-Dichloroethene	NP Kaplan-Meier	0.162	0.016	Bootstrap	0.95	0	0.178	No	No
MP-2	Yes	Trichloroethene	Ordinary nonparametric bootstrap	163	27.3	BCa bootstrap	0.95	140	178	Yes	Yes
MP-3	Yes	Trichloroethene	Ordinary nonparametric bootstrap	92.8	9.91	BCa bootstrap	0.95	86.3	101	Yes	Yes
MP-4	Yes	Trichloroethene	Ordinary nonparametric bootstrap	133	25	BCa bootstrap	0.95	118	153	Yes	Yes
MW-101S	Yes	Trichloroethene	Ordinary nonparametric bootstrap	28	16.5	BCa bootstrap	0.95	19.2	38.3	Yes	Yes
MW-102S	Yes	Trichloroethene	NP Kaplan-Meier	3.23	3.79	Bootstrap	0.95	1.01	6.65	Yes	No
MW-105D	Yes	Trichloroethene	Ordinary nonparametric bootstrap	216	20.3	BCa bootstrap	0.95	205	228	Yes	Yes
MW-105S	Yes	Trichloroethene	Ordinary nonparametric bootstrap	59.8	23.5	BCa bootstrap	0.95	48.8	73.3	Yes	Yes

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Dataset			Trend Analysis								
Well ID	RCRA Regulated Chemical	Chemical	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	COV	GSI Toolkit Trend
MW-111D	No	o-xylene (1,2-dimethylbenzene)	0.000117	-1.53	0.274	72.6%	5	6.66	0.601	1.28	NC
MW-113D	No	o-xylene (1,2-dimethylbenzene)	NC	NC	NC	NC	NC	NC	NC	0.383	NC
MW-113S	No	o-xylene (1,2-dimethylbenzene)	-0.000259	5.99	0.162	83.8%	-10	9.13	-0.986	0.425	NC
MW-110S	Yes	Styrene	NC	NC	NC	NC	NC	NC	NC	0.811	NC
MP-2	Yes	Tetrachloroethene	-0.00166	48.4	0.424	57.6%	-2	5.22	-0.191	0.266	Stable
MP-3	Yes	Tetrachloroethene	0.00546	-86.3	0.0903	91.0%	8	5.22	1.34	0.124	Probably Increasing
MP-4	Yes	Tetrachloroethene	0.00659	-103	0.0903	91.0%	8	5.22	1.34	0.217	Probably Increasing
MW-101S	Yes	Tetrachloroethene	0.00467	-78.9	0.0245	97.6%	23	11.2	1.97	0.455	Increasing
MW-102S	Yes	Tetrachloroethene	-0.000551	11.8	0.424	57.6%	-2	5.22	-0.191	0.637	NC
MW-105D	Yes	Tetrachloroethene	0.0013	11.5	0.133	86.7%	17	14.4	1.11	0.0764	No trend
MW-105S	Yes	Tetrachloroethene	0.0000906	9.25	0.339	66.1%	7	14.5	0.415	0.317	No trend
MW-109D	Yes	Tetrachloroethene	0.0031	-43.1	0.0849	91.5%	16	10.9	1.38	0.258	Probably Increasing
MW-109S	Yes	Tetrachloroethene	0.00587	-91.5	0.237	76.3%	9	11.2	0.716	0.64	No trend
MW-110S	Yes	Tetrachloroethene	0.00432	-67.6	0.0357	96.4%	21	11.1	1.8	0.429	Increasing
MW-111D	Yes	Tetrachloroethene	NC	NC	NC	NC	NC	NC	NC	1.12	NC
MW-112D	Yes	Tetrachloroethene	0	12.5	0.359	64.1%	6	13.8	0.362	0.142	No trend
MW-112M	Yes	Tetrachloroethene	0.00236	-34.9	0.044	95.6%	20	11.1	1.71	0.243	Increasing
MW-113D	Yes	Tetrachloroethene	-0.00348	70.9	0.0762	92.4%	-17	11.2	-1.43	0.691	Probably Decreasing
MW-113S	Yes	Tetrachloroethene	-0.00653	149	0.00186	99.8%	-43	14.5	-2.9	0.185	Decreasing
MW-118D	Yes	Tetrachloroethene	-0.00585	125	0.0045	99.6%	-39	14.6	-2.61	0.291	Decreasing
MW-119D	Yes	Tetrachloroethene	0.00629	-101	0.00119	99.9%	45	14.5	3.04	0.263	Increasing
MW-119S	Yes	Tetrachloroethene	0.0101	-169	0.00795	99.2%	36	14.5	2.41	0.44	Increasing
MW-120D	Yes	Tetrachloroethene	-0.000128	18.4	0.39	61.0%	-5	14.4	-0.278	0.133	Stable
MW-120S	Yes	Tetrachloroethene	-0.00135	41.1	0.0225	97.8%	-29	14	-2.01	0.187	Decreasing
MW-123	Yes	Tetrachloroethene	-0.00148	31.6	0.274	72.6%	-5	6.66	-0.601	0.312	NC
MW-110S	Yes	Toluene	NC	NC	NC	NC	NC	NC	NC	0.725	NC
MW-111D	Yes	Toluene	NC	NC	NC	NC	NC	NC	NC	0.644	NC
MW-113S	Yes	Toluene	NC	NC	NC	NC	NC	NC	NC	0.652	NC
MW-110S	Yes	trans-1,2-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	0.771	NC
MW-111D	Yes	trans-1,2-Dichloroethene	0.000505	-8.76	0.0191	98.1%	31	14.5	2.07	0.765	NC
MW-113D	Yes	trans-1,2-Dichloroethene	-0.000219	4.5	0.044	95.6%	-20	11.1	-1.71	0.378	NC
MW-113S	Yes	trans-1,2-Dichloroethene	0.000158	-1.65	0.0917	90.8%	20	14.3	1.33	0.188	NC
MW-118D	Yes	trans-1,2-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	1.85	NC
MW-120D	Yes	trans-1,2-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	0.522	NC
MW-120S	Yes	trans-1,2-Dichloroethene	NC	NC	NC	NC	NC	NC	NC	0.599	NC
MP-2	Yes	Trichloroethene	-0.0166	487	0.273	72.7%	-4	4.97	-0.604	0.167	Stable
MP-3	Yes	Trichloroethene	0.0163	-217	0.13	87.0%	7	5.32	1.13	0.107	No trend
MP-4	Yes	Trichloroethene	0.0375	-591	0.169	83.1%	6	5.22	0.957	0.188	No trend
MW-101S	Yes	Trichloroethene	0.0211	-367	0.0297	97.0%	22	11.1	1.89	0.59	Increasing
MW-102S	Yes	Trichloroethene	-0.00147	30.5	0.354	64.6%	-3	5.32	-0.376	1.29	No Trend
MW-105D	Yes	Trichloroethene	0	210	0.444	55.6%	-3	14.3	-0.14	0.0942	Stable
MW-105S	Yes	Trichloroethene	-0.0176	379	0.00374	99.6%	-40	14.6	-2.67	0.393	Decreasing

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Cell 1 Statistical Results - VOCs
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Dataset				General								
Well ID	RCRA Regulated Chemical	Chemical	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Latest Result Qualifier	Latest Result > Standard?	Dataset n	ND %
MW-109D	Yes	Trichloroethene	µg/L	10/06/2018	04/15/2023	EPA MCL	5	66		Yes	10	0
MW-109S	Yes	Trichloroethene	µg/L	10/06/2018	04/15/2023	EPA MCL	5	48		Yes	10	0
MW-110S	Yes	Trichloroethene	µg/L	10/06/2018	04/14/2023	EPA MCL	5	130		Yes	10	0
MW-111D	Yes	Trichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	5	110		Yes	12	0
MW-112D	Yes	Trichloroethene	µg/L	01/24/2018	04/15/2023	EPA MCL	5	190		Yes	12	0
MW-112M	Yes	Trichloroethene	µg/L	10/05/2018	04/15/2023	EPA MCL	5	190		Yes	10	0
MW-113D	Yes	Trichloroethene	µg/L	10/04/2018	04/14/2023	EPA MCL	5	0.31	J	No	10	0
MW-113S	Yes	Trichloroethene	µg/L	01/24/2018	04/14/2023	EPA MCL	5	16		Yes	12	0
MW-118D	Yes	Trichloroethene	µg/L	01/23/2018	04/12/2023	EPA MCL	5	58		Yes	12	0
MW-119D	Yes	Trichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	5	120		Yes	12	0
MW-119S	Yes	Trichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	5	130		Yes	12	0
MW-120D	Yes	Trichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	5	160		Yes	12	0
MW-120S	Yes	Trichloroethene	µg/L	01/25/2018	04/13/2023	EPA MCL	5	130		Yes	12	0
MW-123	Yes	Trichloroethene	µg/L	09/08/2020	04/15/2023	EPA MCL	5	56		Yes	7	0
MW-105D	Yes	Trichlorofluoromethane	µg/L	01/23/2018	04/11/2023	NA	NC	2.3	U	No	12	41.7
MW-112D	Yes	Trichlorofluoromethane	µg/L	01/24/2018	04/15/2023	NA	NC	2		No	12	33.3
MW-113D	Yes	Trichlorofluoromethane	µg/L	10/04/2018	04/14/2023	NA	NC	0.57	U	No	10	20
MW-113S	Yes	Trichlorofluoromethane	µg/L	01/24/2018	04/14/2023	NA	NC	2.6		No	12	8.3
MW-118D	Yes	Trichlorofluoromethane	µg/L	01/23/2018	04/12/2023	NA	NC	0.57	U	No	12	50
MW-120D	Yes	Trichlorofluoromethane	µg/L	01/25/2018	04/13/2023	NA	NC	1.8	J	No	12	66.7
MP-2	Yes	Vinyl chloride	µg/L	09/13/2020	04/11/2023	EPA MCL	2	3.7	J	Yes	6	0
MW-105D	Yes	Vinyl chloride	µg/L	01/23/2018	04/11/2023	EPA MCL	2	2	U	No	12	33.3
MW-105S	Yes	Vinyl chloride	µg/L	01/23/2018	04/11/2023	EPA MCL	2	0.51	U	No	12	33.3
MW-110S	Yes	Vinyl chloride	µg/L	10/06/2018	04/14/2023	EPA MCL	2	4.6		Yes	10	10
MW-111D	Yes	Vinyl chloride	µg/L	01/24/2018	04/14/2023	EPA MCL	2	6.1		Yes	12	25
MW-113D	Yes	Vinyl chloride	µg/L	10/04/2018	04/14/2023	EPA MCL	2	0.51	U	No	10	30
MW-113S	Yes	Vinyl chloride	µg/L	01/24/2018	04/14/2023	EPA MCL	2	92		Yes	12	8.3
MW-118D	Yes	Vinyl chloride	µg/L	01/23/2018	04/12/2023	EPA MCL	2	0.51	U	No	12	33.3
MW-120D	Yes	Vinyl chloride	µg/L	01/25/2018	04/13/2023	EPA MCL	2	1.4	J	No	12	0
MW-120S	Yes	Vinyl chloride	µg/L	01/25/2018	04/13/2023	EPA MCL	2	0.51	U	No	12	25
MW-110S	Yes	Xylene (Total)	µg/L	10/06/2018	04/14/2023	EPA MCL	10000	0.66	U	No	10	80
MW-111D	Yes	Xylene (Total)	µg/L	01/24/2018	04/14/2023	EPA MCL	10000	0.74	J	No	12	8.3
MW-113D	Yes	Xylene (Total)	µg/L	10/04/2018	04/14/2023	EPA MCL	10000	0.33	U	No	10	50
MW-113S	Yes	Xylene (Total)	µg/L	01/24/2018	04/14/2023	EPA MCL	10000	1		No	12	16.7

Table G-1
Cell 1 Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			Confidence Limits								
Well ID	RCRA Regulated Chemical	Chemical	Parameter est. method	Dataset mean	sd	CL Method	CL Confidence Level	LCL of mean	UCL of mean	UCL of mean > Standard?	LCL of mean > Standard
MW-109D	Yes	Trichloroethene	Ordinary nonparametric bootstrap	57.4	10.1	BCa bootstrap	0.95	51.3	62.5	Yes	Yes
MW-109S	Yes	Trichloroethene	Ordinary nonparametric bootstrap	61.7	37.5	BCa bootstrap	0.95	41	83.3	Yes	Yes
MW-110S	Yes	Trichloroethene	Ordinary nonparametric bootstrap	102	29.3	BCa bootstrap	0.95	83.8	119	Yes	Yes
MW-111D	Yes	Trichloroethene	Ordinary nonparametric bootstrap	31.2	30.6	BCa bootstrap	0.95	16.5	49.7	Yes	Yes
MW-112D	Yes	Trichloroethene	Ordinary nonparametric bootstrap	189	18.5	BCa bootstrap	0.95	179	198	Yes	Yes
MW-112M	Yes	Trichloroethene	Ordinary nonparametric bootstrap	174	22.7	BCa bootstrap	0.95	160	186	Yes	Yes
MW-113D	Yes	Trichloroethene	Ordinary nonparametric bootstrap	5.48	3.7	BCa bootstrap	0.95	3.27	7.6	Yes	No
MW-113S	Yes	Trichloroethene	Ordinary nonparametric bootstrap	21.2	4.92	BCa bootstrap	0.95	18.7	23.9	Yes	Yes
MW-118D	Yes	Trichloroethene	Ordinary nonparametric bootstrap	115	42	BCa bootstrap	0.95	93.8	138	Yes	Yes
MW-119D	Yes	Trichloroethene	Ordinary nonparametric bootstrap	88.8	16.5	BCa bootstrap	0.95	80.1	97.8	Yes	Yes
MW-119S	Yes	Trichloroethene	Ordinary nonparametric bootstrap	80.5	31.5	BCa bootstrap	0.95	63.6	97.7	Yes	Yes
MW-120D	Yes	Trichloroethene	Ordinary nonparametric bootstrap	157	33.1	BCa bootstrap	0.95	141	178	Yes	Yes
MW-120S	Yes	Trichloroethene	Ordinary nonparametric bootstrap	141	24.3	BCa bootstrap	0.95	130	155	Yes	Yes
MW-123	Yes	Trichloroethene	Ordinary nonparametric bootstrap	58.7	18	BCa bootstrap	0.95	48.4	72.9	Yes	Yes
MW-105D	Yes	Trichlorofluoromethane	NP Kaplan-Meier	0.97	0.124	Bootstrap	0.95	0.88	1.06	NC	NC
MW-112D	Yes	Trichlorofluoromethane	NP Kaplan-Meier	0.937	0.334	Bootstrap	0.95	0.784	1.16	NC	NC
MW-113D	Yes	Trichlorofluoromethane	NP Kaplan-Meier	1.84	1.14	Bootstrap	0.95	1.15	2.55	NC	NC
MW-113S	Yes	Trichlorofluoromethane	NP Kaplan-Meier	2.56	0.954	Bootstrap	0.95	1.99	3.08	NC	NC
MW-118D	Yes	Trichlorofluoromethane	NP Kaplan-Meier	0.492	0.154	Bootstrap	0.95	0.381	0.598	NC	NC
MW-120D	Yes	Trichlorofluoromethane	NP Kaplan-Meier	0.611	0.548	Bootstrap	0.95	0	0.938	NC	NC
MP-2	Yes	Vinyl chloride	Ordinary nonparametric bootstrap	3.55	0.459	BCa bootstrap	0.95	3.22	3.88	Yes	Yes
MW-105D	Yes	Vinyl chloride	NP Kaplan-Meier	0.811	0.293	Bootstrap	0.95	0.593	0.972	No	No
MW-105S	Yes	Vinyl chloride	NP Kaplan-Meier	1.32	1.54	Bootstrap	0.95	0.505	2.23	Yes	No
MW-110S	Yes	Vinyl chloride	NP Kaplan-Meier	5.17	2.57	Bootstrap	0.95	3.61	6.71	Yes	Yes
MW-111D	Yes	Vinyl chloride	NP Kaplan-Meier	2.23	2.05	Bootstrap	0.95	1.14	3.43	Yes	No
MW-113D	Yes	Vinyl chloride	NP Kaplan-Meier	18.5	14.9	Bootstrap	0.95	9.14	28	Yes	Yes
MW-113S	Yes	Vinyl chloride	NP Kaplan-Meier	81.3	25.4	Bootstrap	0.95	64.1	91.8	Yes	Yes
MW-118D	Yes	Vinyl chloride	NP Kaplan-Meier	0.638	0.368	Bootstrap	0.95	0.411	0.857	No	No
MW-120D	Yes	Vinyl chloride	Ordinary nonparametric bootstrap	1.6	0.99	BCa bootstrap	0.95	1.06	2.18	Yes	No
MW-120S	Yes	Vinyl chloride	NP Kaplan-Meier	1.3	0.968	Bootstrap	0.95	0.75	1.85	No	No
MW-110S	Yes	Xylene (Total)	NP Kaplan-Meier	0.408	0.631	Bootstrap	0.95	0	0.832	No	No
MW-111D	Yes	Xylene (Total)	NP Kaplan-Meier	2.49	3.32	Bootstrap	0.95	0.783	4.54	No	No
MW-113D	Yes	Xylene (Total)	NP Kaplan-Meier	0.31	0.123	Bootstrap	0.95	0.237	0.403	No	No
MW-113S	Yes	Xylene (Total)	NP Kaplan-Meier	1.13	0.193	Bootstrap	0.95	1.01	1.24	No	No

Table G-1
Cell 1 Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			Trend Analysis								
Well ID	RCRA Regulated Chemical	Chemical	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	COV	GSI Toolkit Trend
MW-109D	Yes	Trichloroethene	0	60.5	0.5	50.0%	0	11.1	0	0.177	Stable
MW-109S	Yes	Trichloroethene	0.0127	-187	0.428	57.2%	3	11.1	0.18	0.607	No trend
MW-110S	Yes	Trichloroethene	0.037	-585	0.00423	99.6%	30	11	2.64	0.287	Increasing
MW-111D	Yes	Trichloroethene	0.0209	-362	0.0846	91.5%	21	14.6	1.37	0.982	Probably Increasing
MW-112D	Yes	Trichloroethene	-0.00278	244	0.288	71.2%	-9	14.3	-0.56	0.0978	Stable
MW-112M	Yes	Trichloroethene	0.029	-371	0.0567	94.3%	18	10.7	1.59	0.13	Probably Increasing
MW-113D	Yes	Trichloroethene	-0.00496	97.2	0.0368	96.3%	-21	11.2	-1.79	0.675	Decreasing
MW-113S	Yes	Trichloroethene	-0.00556	124	0.000203	100.0%	-52	14.4	-3.54	0.232	Decreasing
MW-118D	Yes	Trichloroethene	-0.0579	1190	0.00299	99.7%	-41	14.6	-2.75	0.365	Decreasing
MW-119D	Yes	Trichloroethene	0.0203	-285	0.0082	99.2%	36	14.6	2.4	0.186	Increasing
MW-119S	Yes	Trichloroethene	0.0409	-670	0.00125	99.9%	45	14.6	3.02	0.392	Increasing
MW-120D	Yes	Trichloroethene	0.0219	-259	0.0405	96.0%	26	14.3	1.75	0.212	Increasing
MW-120S	Yes	Trichloroethene	-0.01	326	0.0906	90.9%	-20	14.2	-1.34	0.172	Probably Decreasing
MW-123	Yes	Trichloroethene	-0.0183	401	0.184	81.6%	-7	6.66	-0.901	0.307	Stable
MW-105D	Yes	Trichlorofluoromethane	-0.00023	5.25	0.108	89.2%	-19	14.6	-1.24	0.486	NC
MW-112D	Yes	Trichlorofluoromethane	-0.00023	5.21	0.0939	90.6%	-20	14.4	-1.32	0.345	NC
MW-113D	Yes	Trichlorofluoromethane	-0.00169	33.4	0.00766	99.2%	-28	11.1	-2.42	0.603	NC
MW-113S	Yes	Trichlorofluoromethane	-0.000103	4.59	0.392	60.8%	-5	14.6	-0.275	0.389	NC
MW-118D	Yes	Trichlorofluoromethane	-0.000283	5.9	0.151	84.9%	-16	14.5	-1.03	2.08	NC
MW-120D	Yes	Trichlorofluoromethane	NC	NC	NC	NC	NC	NC	NC	0.699	NC
MP-2	Yes	Vinyl chloride	-0.000524	13.6	0.5	50.0%	-1	5.32	0	0.129	Stable
MW-105D	Yes	Vinyl chloride	0.000195	-2.58	0.136	86.4%	17	14.6	1.1	0.458	NC
MW-105S	Yes	Vinyl chloride	-0.00138	26.7	0.0565	94.4%	-24	14.5	-1.58	1.17	Probably Decreasing
MW-110S	Yes	Vinyl chloride	-0.00138	31.4	0.209	79.1%	-10	11.1	-0.808	0.523	Stable
MW-111D	Yes	Vinyl chloride	0.00216	-38	0.0727	92.7%	22	14.4	1.46	0.961	Probably Increasing
MW-113D	Yes	Vinyl chloride	-0.0204	397	0.0297	97.0%	-22	11.1	-1.89	0.845	Decreasing
MW-113S	Yes	Vinyl chloride	-0.00593	199	0.136	86.4%	-17	14.6	-1.1	0.327	Stable
MW-118D	Yes	Vinyl chloride	-0.000123	3	0.392	60.8%	-5	14.6	-0.275	0.803	NC
MW-120D	Yes	Vinyl chloride	-0.00119	23.4	0.00972	99.0%	-35	14.6	-2.34	0.619	Decreasing
MW-120S	Yes	Vinyl chloride	-0.00131	25.5	0.00125	99.9%	-45	14.6	-3.02	0.716	NC
MW-110S	Yes	Xylene (Total)	NC	NC	NC	NC	NC	NC	NC	1.34	NC
MW-111D	Yes	Xylene (Total)	-0.00046	9.43	0.205	79.5%	-13	14.6	-0.824	1.4	NC
MW-113D	Yes	Xylene (Total)	-0.0000557	1.39	0.162	83.8%	-12	11.1	-0.988	0.328	NC
MW-113S	Yes	Xylene (Total)	-0.000152	3.97	0.0802	92.0%	-21	14.2	-1.4	1.37	NC

Table G-2
Offsite Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			General								
Well ID	Chemical	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q	Latest Result > Standard?	Dataset n	ND %
MW-103S	1,2-Dichloroethane	µg/L	08/09/2017	04/15/2023	EPA MCL	5	0.54	U	No	10	80
MW-103S	Chloroform	µg/L	08/09/2017	04/15/2023	ID GW - PRIMARY	2	0.36	U	No	10	90
MW-103S	Tetrachloroethene	µg/L	08/09/2017	04/15/2023	EPA MCL	5	5.2		Yes	11	0
MW-103S	Trichloroethene	µg/L	08/09/2017	04/15/2023	EPA MCL	5	30		Yes	11	0
MW-103S	cis-1,2-Dichloroethene	µg/L	08/09/2017	04/15/2023	EPA MCL	70	2.5		No	11	27.3
MW-115S	Tetrachloroethene	µg/L	08/15/2017	04/15/2023	EPA MCL	5	0.4	U	No	10	90
MW-115S	Trichloroethene	µg/L	08/15/2017	04/15/2023	EPA MCL	5	0.45	J	No	10	40

See separate notes section.

Table G-2
Offsite Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset		Confidence Limits								
Well ID	Chemical	Parameter est. method	Dataset mean	sd	CL method	CL conf	LCL of the mean	UCL of the mean	UCL > Standard	LCL > Standard
MW-103S	1,2-Dichloroethane	NP Kaplan-Meier	0.147	0.0243	Bootstrap	0.95	0	0.17	No	No
MW-103S	Chloroform	Does not take in to account ND status	0.229	0.0899	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-103S	Tetrachloroethene	Ordinary nonparametric bootstrap	1.93	1.33	BCa bootstrap	0.95	1.27	2.74	No	No
MW-103S	Trichloroethene	Ordinary nonparametric bootstrap	10.8	7.86	BCa bootstrap	0.95	6.88	15.7	Yes	Yes
MW-103S	cis-1,2-Dichloroethene	NP Kaplan-Meier	0.701	0.664	Bootstrap	0.95	0.365	1.15	No	No
MW-115S	Tetrachloroethene	Does not take in to account ND status	0.36	0.387	Not enough distinct detected values to assess	NC	NC	NC	NC	NC
MW-115S	Trichloroethene	NP Kaplan-Meier	1.41	3.4	Bootstrap	0.95	0.216	3.71	No	No

See separate notes section.

Table G-2
Offsite Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset		Trend Analysis							
Well ID	Chemical	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction
MW-103S	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-103S	Chloroform	NC	NC	NC	NC	NC	NC	NC	NC
MW-103S	Tetrachloroethene	0.00153	-25.9	0.00976	99.0%	31	12.8	2.34	NC
MW-103S	Trichloroethene	0.00988	-169	0.00499	99.5%	34	12.8	2.58	Increasing
MW-103S	cis-1,2-Dichloroethene	0.000621	-10.6	0.0362	96.4%	24	12.8	1.8	NC
MW-115S	Tetrachloroethene	NC	NC	NC	NC	NC	NC	NC	NC
MW-115S	Trichloroethene	-0.000174	3.45	0.0866	91.3%	-16	11	-1.36	NC

See separate notes section.

Table G-3
Remediation System Well Statistical Analysis - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			General										
Well ID	Chemical	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q	Dataset n	ND %	Parameter est. method	Dataset mean	sd
RW-1	Tetrachloroethene	µg/L	01/26/2018	04/13/2023	EPA MCL	5	26		4	0	Ordinary nonparametric bootstrap	21.4	5.27
RW-1	Trichloroethene	µg/L	01/26/2018	04/13/2023	EPA MCL	5	250		4	0	Ordinary nonparametric bootstrap	186	46.8
RW-10	Tetrachloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	27		12	0	Ordinary nonparametric bootstrap	19.8	7.73
RW-10	Trichloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	110		12	0	Ordinary nonparametric bootstrap	79.1	29.8
RW-15	Tetrachloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	33		10	0	Ordinary nonparametric bootstrap	22.9	5.22
RW-15	Trichloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	180		10	0	Ordinary nonparametric bootstrap	126	24.9
RW-17	Tetrachloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	32		10	0	Ordinary nonparametric bootstrap	21.6	7.28
RW-17	Trichloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	130		10	0	Ordinary nonparametric bootstrap	91.8	26.3
RW-2	Tetrachloroethene	µg/L	01/26/2018	04/12/2023	EPA MCL	5	13		4	0	Ordinary nonparametric bootstrap	21.8	8.61
RW-2	Trichloroethene	µg/L	01/26/2018	04/12/2023	EPA MCL	5	140		4	0	Ordinary nonparametric bootstrap	153	9.76
RW-3	Tetrachloroethene	µg/L	01/26/2018	04/13/2023	EPA MCL	5	4.4		6	0	Ordinary nonparametric bootstrap	11.2	5.99
RW-3	Trichloroethene	µg/L	01/26/2018	04/13/2023	EPA MCL	5	7.2		6	0	Ordinary nonparametric bootstrap	70.4	52.7
RW-5	Tetrachloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	24		7	0	Ordinary nonparametric bootstrap	20.3	6.95
RW-5	Trichloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	100		7	0	Ordinary nonparametric bootstrap	86	28
RW-9R	Tetrachloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	22		9	0	Ordinary nonparametric bootstrap	14.8	4.16
RW-9R	Trichloroethene	µg/L	01/26/2018	04/11/2023	EPA MCL	5	200		9	0	Ordinary nonparametric bootstrap	152	34

See separate Notes Sheet

Table G-3
Remediation System Well Statistical Analysis - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			Confidence limits						Trend Analysis								
Well ID	Chemical	Unit	CL method	CL conf	UCL of the mean	UCL > Standard	Latest Result > mean	Latest Result > Standard	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	COV	GSI Toolkit Trend
RW-1	Tetrachloroethene	µg/L	BCa bootstrap	0.95	26	Yes	Yes	Yes	NC	NC	NC	NC	NC	NC	NC	0.246	NC
RW-1	Trichloroethene	µg/L	BCa bootstrap	0.95	229	Yes	Yes	Yes	NC	NC	NC	NC	NC	NC	NC	0.251	NC
RW-10	Tetrachloroethene	µg/L	BCa bootstrap	0.95	24.2	Yes	Yes	Yes	0.00962	-157	0.00762	99.2%	36	14.4	2.43	0.391	Increasing
RW-10	Trichloroethene	µg/L	BCa bootstrap	0.95	94.8	Yes	Yes	Yes	0.0358	-577	0.00299	99.7%	41	14.6	2.75	0.377	Increasing
RW-15	Tetrachloroethene	µg/L	BCa bootstrap	0.95	26	Yes	Yes	Yes	0.00593	-87	0.0368	96.3%	21	11.2	1.79	0.228	Increasing
RW-15	Trichloroethene	µg/L	BCa bootstrap	0.95	142	Yes	Yes	Yes	0.0261	-361	0.0746	92.5%	17	11.1	1.44	0.198	Probably Increasing
RW-17	Tetrachloroethene	µg/L	BCa bootstrap	0.95	26	Yes	Yes	Yes	0.00834	-131	0.0357	96.4%	21	11.1	1.8	0.336	Increasing
RW-17	Trichloroethene	µg/L	BCa bootstrap	0.95	107	Yes	Yes	Yes	0.0314	-481	0.0357	96.4%	21	11.1	1.8	0.287	Increasing
RW-2	Tetrachloroethene	µg/L	BCa bootstrap	0.95	29.2	Yes	No	Yes	NC	NC	NC	NC	NC	NC	NC	0.394	NC
RW-2	Trichloroethene	µg/L	BCa bootstrap	0.95	160	Yes	No	Yes	NC	NC	NC	NC	NC	NC	NC	0.0638	NC
RW-3	Tetrachloroethene	µg/L	BCa bootstrap	0.95	15.4	Yes	No	No	-0.00448	92.1	0.354	64.6%	-3	5.32	-0.376	0.536	Stable
RW-3	Trichloroethene	µg/L	BCa bootstrap	0.95	106	Yes	No	Yes	-0.0445	876	0.354	64.6%	-3	5.32	-0.376	0.748	Stable
RW-5	Tetrachloroethene	µg/L	BCa bootstrap	0.95	25	Yes	Yes	Yes	0.0084	-138	0.0113	98.9%	16	6.58	2.28	0.342	Increasing
RW-5	Trichloroethene	µg/L	BCa bootstrap	0.95	104	Yes	Yes	Yes	0.0359	-588	0.0177	98.2%	15	6.66	2.1	0.326	Increasing
RW-9R	Tetrachloroethene	µg/L	BCa bootstrap	0.95	17.5	Yes	Yes	Yes	0.00202	-23.8	0.147	85.3%	11	9.54	1.05	0.281	No trend
RW-9R	Trichloroethene	µg/L	BCa bootstrap	0.95	174	Yes	Yes	Yes	0.019	-208	0.265	73.5%	7	9.54	0.629	0.224	No trend

See separate Notes Sheet

Table G-4
Cell 2 Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset				General								
Well ID	RCRA regulated chemical	CHEMICAL_NAME	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q	Latest Result > Standard	Dataset n	ND %
MW-12	Yes	1,2,4-Trichlorobenzene	µg/L	04/13/2018	05/18/2023	EPA MCL	70	0.58	U	No	10	90
MW-12	Yes	1,2-Dichloroethane	µg/L	04/13/2018	05/18/2023	EPA MCL	5	0.54	U	No	10	90
MW-12	Yes	Iodomethane	µg/L	04/13/2018	05/18/2023	NA	NC	2.6	U	No	10	90
MW-13	Yes	1,1-Dichloroethane	µg/L	04/12/2018	05/17/2023	NA	NC	0.29	J	No	11	81.8
MW-13	Yes	1,2-Dichloroethane	µg/L	04/12/2018	05/17/2023	EPA MCL	5	0.54	U	No	11	90.9
MW-13	Yes	Dichlorodifluoromethane	µg/L	04/12/2018	05/17/2023	NA	NC	1.6	J	No	11	45.5
MW-13	Yes	Iodomethane	µg/L	04/12/2018	05/17/2023	NA	NC	2.6	U	No	11	90.9
MW-13	Yes	Tetrachloroethene	µg/L	04/12/2018	05/17/2023	EPA MCL	5	0.4	U	No	11	36.4
MW-13	Yes	Trichloroethene	µg/L	04/12/2018	05/17/2023	EPA MCL	5	0.3	U	No	11	81.8
MW-13	Yes	Trichlorofluoromethane	µg/L	04/12/2018	05/17/2023	NA	NC	0.65	J	No	11	90.9
MW-13	Yes	cis-1,2-Dichloroethene	µg/L	04/12/2018	05/17/2023	EPA MCL	70	1.1		No	11	0
MW-8	Yes	Acetone	µg/L	04/12/2018	05/19/2023	NA	NC	6.6	U	No	11	90.9
MW-9	Yes	1,2-Dichloroethane	µg/L	04/12/2018	05/19/2023	EPA MCL	5	0.54	U	No	11	90.9
MW-9	Yes	Acetone	µg/L	04/12/2018	05/19/2023	NA	NC	88		No	11	45.5
MW-9	Yes	Benzene	µg/L	04/12/2018	05/19/2023	EPA MCL	5	1.1		No	11	90.9
MW-9	Yes	Dichlorodifluoromethane	µg/L	04/12/2018	05/19/2023	NA	NC	0.96	U	No	11	90.9
MW-9	Yes	Vinyl chloride	µg/L	04/12/2018	05/19/2023	EPA MCL	2	1	J	No	11	45.5

Table G-4
Cell 2 Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			Confidence Limits						
Well ID	RCRA regulated chemical	CHEMICAL_NAME	Parameter est. method	Dataset mean	sd	CL method	CL conf	LCL of the mean	LCL > Standard
MW-12	Yes	1,2,4-Trichlorobenzene	Does not take in to account ND status	0.304	0.152	Not enough distinct detected values to assess	NC	NC	NC
MW-12	Yes	1,2-Dichloroethane	Does not take in to account ND status	0.242	0.173	Not enough distinct detected values to assess	NC	NC	NC
MW-12	Yes	Iodomethane	Does not take in to account ND status	0.991	1.23	Not enough distinct detected values to assess	NC	NC	NC
MW-13	Yes	1,1-Dichloroethane	Does not take in to account ND status	0.234	0.0307	Not enough distinct detected values to assess	NC	NC	NC
MW-13	Yes	1,2-Dichloroethane	Does not take in to account ND status	0.232	0.167	Not enough distinct detected values to assess	NC	NC	NC
MW-13	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	0.64	0.416	Bootstrap	0.95	0.415	NC
MW-13	Yes	Iodomethane	Does not take in to account ND status	0.99	1.18	Not enough distinct detected values to assess	NC	NC	NC
MW-13	Yes	Tetrachloroethene	NP Kaplan-Meier	0.288	0.0707	Bootstrap	0.95	0.246	No
MW-13	Yes	Trichloroethene	NP Kaplan-Meier	0.179	0.0448	Bootstrap	0.95	0	No
MW-13	Yes	Trichlorofluoromethane	Does not take in to account ND status	0.423	0.292	Not enough distinct detected values to assess	NC	NC	NC
MW-13	Yes	cis-1,2-Dichloroethene	Ordinary nonparametric bootstrap	0.779	0.292	BCa bootstrap	0.95	0.621	No
MW-8	Yes	Acetone	Does not take in to account ND status	4.08	3.08	Not enough distinct detected values to assess	NC	NC	NC
MW-9	Yes	1,2-Dichloroethane	Does not take in to account ND status	0.232	0.167	Not enough distinct detected values to assess	NC	NC	NC
MW-9	Yes	Acetone	NP Kaplan-Meier	11.7	24.2	Bootstrap	0.95	3	NC
MW-9	Yes	Benzene	Does not take in to account ND status	0.276	0.28	Not enough distinct detected values to assess	NC	NC	NC
MW-9	Yes	Dichlorodifluoromethane	Does not take in to account ND status	0.506	0.284	Not enough distinct detected values to assess	NC	NC	NC
MW-9	Yes	Vinyl chloride	NP Kaplan-Meier	0.454	0.343	Bootstrap	0.95	0.261	No

Table G-4
Cell 2 Statistical Results - VOCs
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Fort Hall Mine Landfill

Dataset			Trend analysis							
Well ID	RCRA regulated chemical	CHEMICAL_NAME	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction
MW-12	Yes	1,2,4-Trichlorobenzene	NC	NC	NC	NC	NC	NC	NC	NC
MW-12	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-12	Yes	Iodomethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	Yes	1,1-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	Yes	Dichlorodifluoromethane	0.00047	-7.94	0.1	90.0%	17	12.5	1.28	No Trend
MW-13	Yes	Iodomethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	Yes	Tetrachloroethene	0.0000824	-1.23	0.0255	97.4%	26	12.8	1.95	NC
MW-13	Yes	Trichloroethene	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	Yes	Trichlorofluoromethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	Yes	cis-1,2-Dichloroethene	0.000439	-7.4	0.000221	100.0%	46	12.8	3.51	Increasing
MW-8	Yes	Acetone	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	Yes	Acetone	0.00166	-24.3	0.195	80.5%	12	12.8	0.859	No Trend
MW-9	Yes	Benzene	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	Yes	Dichlorodifluoromethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	Yes	Vinyl chloride	-0.0000951	2.34	0.347	65.3%	-6	12.7	-0.394	No Trend

Table G-5
Cell 2 Statistical Results - Inorganics
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Dataset				General								
Well ID	RCRA regulated chemical	Chemical Name	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q	Latest Result > Standard	Dataset n	ND %
MW-13	Yes	Arsenic	µg/L	04/12/2018	05/17/2023	EPA MCL	10	4.1	J	No	11	9.1
MW-13	Yes	Barium	µg/L	04/12/2018	05/17/2023	EPA MCL	2000	110		No	11	9.1
MW-13	Yes	Beryllium	µg/L	04/12/2018	05/17/2023	EPA MCL	4	0.3	U	No	11	90.9
MW-13	No	Calcium	µg/L	04/12/2018	05/17/2023	NA	NA	46000		No	11	0
MW-13	Yes	Chromium	µg/L	04/12/2018	05/17/2023	EPA MCL	100	0.83	J	No	11	9.1
MW-13	Yes	Cobalt	µg/L	04/12/2018	05/17/2023	NA	NA	0.36	J	No	11	9.1
MW-13	Yes	Copper	µg/L	04/12/2018	05/17/2023	EPA MCL	1300	0.71	U	No	11	81.8
MW-13	No	Iron	µg/L	04/12/2018	05/17/2023	ID GW - SECONDARY	300	190	JB	No	11	18.2
MW-13	Yes	Lead	µg/L	04/12/2018	05/17/2023	ID GW - PRIMARY	15	0.23	U	No	11	72.7
MW-13	No	Magnesium	µg/L	04/12/2018	05/17/2023	NA	NA	40000		No	11	0
MW-13	No	Manganese	µg/L	04/12/2018	05/17/2023	ID GW - SECONDARY	50	2.2	J	No	11	9.1
MW-13	Yes	Nickel	µg/L	04/12/2018	05/17/2023	NA	NA	0.83	U	No	11	81.8
MW-13	No	Potassium	µg/L	04/12/2018	05/17/2023	NA	NA	2700		No	11	0
MW-13	No	Potassium	µg/L	04/12/2018	05/17/2023	NA	NA	2700		No	11	0
MW-13	Yes	Selenium	µg/L	04/12/2018	05/17/2023	EPA MCL	50	1	U	No	11	36.4
MW-13	No	Sodium	µg/L	04/12/2018	05/17/2023	NA	NA	37000		No	11	0
MW-13	Yes	Sulfide	mg/L	04/12/2018	05/17/2023	NA	NA	0.022	U	No	11	72.7
MW-13	Yes	Thallium	µg/L	04/12/2018	05/17/2023	EPA MCL	2	0.21	U	No	11	90.9
MW-13	Yes	Zinc	µg/L	04/12/2018	05/17/2023	ID GW - SECONDARY	5000	2	U	No	11	63.6
MW-8	Yes	Arsenic	µg/L	04/12/2018	05/19/2023	EPA MCL	10	3.2	J	No	11	0
MW-8	Yes	Barium	µg/L	04/12/2018	05/19/2023	EPA MCL	2000	33		No	11	0
MW-8	Yes	Beryllium	µg/L	04/12/2018	05/19/2023	EPA MCL	4	0.3	U	No	11	90.9
MW-8	No	Calcium	µg/L	04/12/2018	05/19/2023	NA	NA	59000		No	11	0
MW-8	Yes	Chromium	µg/L	04/12/2018	05/19/2023	EPA MCL	100	0.5	U	No	11	81.8
MW-8	Yes	Cobalt	µg/L	04/12/2018	05/19/2023	NA	NA	0.33	U	No	11	90.9
MW-8	Yes	Copper	µg/L	04/12/2018	05/19/2023	EPA MCL	1300	0.71	U	No	11	81.8
MW-8	No	Iron	µg/L	04/12/2018	05/19/2023	ID GW - SECONDARY	300	200	U	No	11	90.9
MW-8	No	Magnesium	µg/L	04/12/2018	05/19/2023	NA	NA	22000		No	11	0
MW-8	No	Manganese	µg/L	04/12/2018	05/19/2023	ID GW - SECONDARY	50	0.61	J	No	11	36.4
MW-8	Yes	Nickel	µg/L	04/12/2018	05/19/2023	NA	NA	1.3	J	No	11	72.7
MW-8	No	Potassium	µg/L	04/12/2018	05/19/2023	NA	NA	580	J	No	11	18.2
MW-8	No	Potassium	µg/L	04/12/2018	05/19/2023	NA	NA	580	J	No	11	18.2
MW-8	Yes	Selenium	µg/L	04/12/2018	05/19/2023	EPA MCL	50	1	U	No	11	27.3
MW-8	No	Sodium	µg/L	04/12/2018	05/19/2023	NA	NA	45000		No	11	0
MW-8	Yes	Sulfide	mg/L	04/12/2018	05/19/2023	NA	NA	0.022	UJ	No	11	81.8

Table G-5
Cell 2 Statistical Results - Inorganics
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Dataset			Confidence Limits						
Well ID	RCRA regulated chemical	Chemical Name	Parameter est. method	Dataset mean	sd	CL method	CL conf	LCL of the mean	LCL > Standard
MW-13	Yes	Arsenic	NP Kaplan-Meier	3.89	1.17	Bootstrap	0.95	3.16	No
MW-13	Yes	Barium	NP Kaplan-Meier	105	33.6	Bootstrap	0.95	83.6	No
MW-13	Yes	Beryllium	Does not take in to account ND status	0.129	0.101	Not enough distinct detected values to assess	NC	NC	NC
MW-13	No	Calcium	Ordinary nonparametric bootstrap	44800	2020	BCa bootstrap	0.95	43600	NC
MW-13	Yes	Chromium	NP Kaplan-Meier	1.19	0.332	Bootstrap	0.95	0.993	No
MW-13	Yes	Cobalt	NP Kaplan-Meier	0.494	0.294	Bootstrap	0.95	0.338	NC
MW-13	Yes	Copper	NP Kaplan-Meier	0.668	0.226	Bootstrap	0.95	0	No
MW-13	No	Iron	NP Kaplan-Meier	140	92.1	Bootstrap	0.95	90	No
MW-13	Yes	Lead	NP Kaplan-Meier	0.242	0.133	Bootstrap	0.95	0	No
MW-13	No	Magnesium	Ordinary nonparametric bootstrap	39000	1420	BCa bootstrap	0.95	38200	NC
MW-13	No	Manganese	NP Kaplan-Meier	5.61	6.11	Bootstrap	0.95	2.6	No
MW-13	Yes	Nickel	NP Kaplan-Meier	0.368	0.136	Bootstrap	0.95	0	NC
MW-13	No	Potassium	Ordinary nonparametric bootstrap	2780	236	BCa bootstrap	0.95	2650	NC
MW-13	No	Potassium	Ordinary nonparametric bootstrap	2780	236	BCa bootstrap	0.95	2650	NC
MW-13	Yes	Selenium	NP Kaplan-Meier	0.541	0.131	Bootstrap	0.95	0.452	No
MW-13	No	Sodium	Ordinary nonparametric bootstrap	37900	1810	BCa bootstrap	0.95	36900	NC
MW-13	Yes	Sulfide	NP Kaplan-Meier	0.0229	0.0302	Bootstrap	0.95	0	NC
MW-13	Yes	Thallium	Does not take in to account ND status	0.107	0.048	Not enough distinct detected values to assess	NC	NC	NC
MW-13	Yes	Zinc	NP Kaplan-Meier	2.81	1.39	Bootstrap	0.95	0	No
MW-8	Yes	Arsenic	Ordinary nonparametric bootstrap	3.34	0.345	BCa bootstrap	0.95	3.18	No
MW-8	Yes	Barium	Ordinary nonparametric bootstrap	33.8	1.08	BCa bootstrap	0.95	33.2	No
MW-8	Yes	Beryllium	Does not take in to account ND status	0.104	0.0661	Not enough distinct detected values to assess	NC	NC	NC
MW-8	No	Calcium	Ordinary nonparametric bootstrap	80600	72800	BCa bootstrap	0.95	57800	NC
MW-8	Yes	Chromium	NP Kaplan-Meier	0.641	0.345	Bootstrap	0.95	0	No
MW-8	Yes	Cobalt	Does not take in to account ND status	0.13	0.0854	Not enough distinct detected values to assess	NC	NC	NC
MW-8	Yes	Copper	NP Kaplan-Meier	0.731	0.534	Bootstrap	0.95	0	No
MW-8	No	Iron	Does not take in to account ND status	73.9	58.5	Not enough distinct detected values to assess	NC	NC	NC
MW-8	No	Magnesium	Ordinary nonparametric bootstrap	28900	26900	BCa bootstrap	0.95	20300	NC
MW-8	No	Manganese	NP Kaplan-Meier	1.56	2.48	Bootstrap	0.95	0.441	No
MW-8	Yes	Nickel	NP Kaplan-Meier	0.401	0.285	Bootstrap	0.95	0	NC
MW-8	No	Potassium	NP Kaplan-Meier	1070	1620	Bootstrap	0.95	528	NC
MW-8	No	Potassium	NP Kaplan-Meier	1070	1620	Bootstrap	0.95	528	NC
MW-8	Yes	Selenium	NP Kaplan-Meier	0.721	0.249	Bootstrap	0.95	0.577	No
MW-8	No	Sodium	Ordinary nonparametric bootstrap	46600	1590	BCa bootstrap	0.95	45600	NC
MW-8	Yes	Sulfide	NP Kaplan-Meier	0.0203	0.0294	Bootstrap	0.95	0	NC

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Cell 2 Statistical Results - Inorganics
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Dataset			Prediction limit					
Well ID	RCRA regulated chemical	Chemical Name	N (background)	ND (background)	UPL method	UPL conf	UPL of background	Latest Result > UPL of background
MW-13	Yes	Arsenic	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	1.48	Yes
MW-13	Yes	Barium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	56	Yes
MW-13	Yes	Beryllium	11	8	NP 1-sided prediction limit for next result on MW-1	0.917	0.3	No
MW-13	No	Calcium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	65000	No
MW-13	Yes	Chromium	11	1	NP 1-sided prediction limit for next result on MW-1	0.917	1	No
MW-13	Yes	Cobalt	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	3.59	No
MW-13	Yes	Copper	11	9	NP 1-sided prediction limit for next result on MW-1	0.917	4	No
MW-13	No	Iron	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	100	Yes
MW-13	Yes	Lead	11	8	NP 1-sided prediction limit for next result on MW-1	0.917	0.281	No
MW-13	No	Magnesium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	18000	Yes
MW-13	No	Manganese	11	5	NP 1-sided prediction limit for next result on MW-1	0.917	1.1	Yes
MW-13	Yes	Nickel	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	0.83	No
MW-13	No	Potassium	11	1	NP 1-sided prediction limit for next result on MW-1	0.917	3000	No
MW-13	No	Potassium	11	1	NP 1-sided prediction limit for next result on MW-1	0.917	3000	No
MW-13	Yes	Selenium	11	3	NP 1-sided prediction limit for next result on MW-1	0.917	1	No
MW-13	No	Sodium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	44000	No
MW-13	Yes	Sulfide	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	0.16	No
MW-13	Yes	Thallium	11	9	NP 1-sided prediction limit for next result on MW-1	0.917	0.22	No
MW-13	Yes	Zinc	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	15	No
MW-8	Yes	Arsenic	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	1.48	Yes
MW-8	Yes	Barium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	56	No
MW-8	Yes	Beryllium	11	8	NP 1-sided prediction limit for next result on MW-1	0.917	0.3	No
MW-8	No	Calcium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	65000	No
MW-8	Yes	Chromium	11	1	NP 1-sided prediction limit for next result on MW-1	0.917	1	No
MW-8	Yes	Cobalt	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	3.59	No
MW-8	Yes	Copper	11	9	NP 1-sided prediction limit for next result on MW-1	0.917	4	No
MW-8	No	Iron	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	100	No (ND)
MW-8	No	Magnesium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	18000	Yes
MW-8	No	Manganese	11	5	NP 1-sided prediction limit for next result on MW-1	0.917	1.1	No
MW-8	Yes	Nickel	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	0.83	Yes
MW-8	No	Potassium	11	1	NP 1-sided prediction limit for next result on MW-1	0.917	3000	No
MW-8	No	Potassium	11	1	NP 1-sided prediction limit for next result on MW-1	0.917	3000	No
MW-8	Yes	Selenium	11	3	NP 1-sided prediction limit for next result on MW-1	0.917	1	No
MW-8	No	Sodium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	44000	Yes
MW-8	Yes	Sulfide	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	0.16	No

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Dataset			Trend analysis							
Well ID	RCRA regulated chemical	Chemical Name	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction
MW-13	Yes	Arsenic	-0.0000758	5.58	0.287	71.3%	-8	12.4	-0.562	No Trend
MW-13	Yes	Barium	0	120	0.301	69.9%	-7	11.5	-0.52	No Trend
MW-13	Yes	Beryllium	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	No	Calcium	2.5	-682	0.056	94.4%	21	12.6	1.59	NC
MW-13	Yes	Chromium	-0.000329	7.27	0.046	95.4%	-22	12.4	-1.69	NC
MW-13	Yes	Cobalt	-0.00018	3.78	0.138	86.2%	-15	12.8	-1.09	NC
MW-13	Yes	Copper	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	No	Iron	-0.109	2160	0.0424	95.8%	-23	12.8	-1.72	Decreasing
MW-13	Yes	Lead	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	No	Magnesium	-0.26	44000	0.19	81.0%	-12	12.5	-0.878	No Trend
MW-13	No	Manganese	-0.00319	62.7	0.00939	99.1%	-31	12.8	-2.35	Decreasing
MW-13	Yes	Nickel	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	No	Potassium	-0.205	6620	0.134	86.6%	-15	12.6	-1.11	NC
MW-13	No	Potassium	-0.205	6620	0.134	86.6%	-15	12.6	-1.11	NC
MW-13	Yes	Selenium	0.000058	-0.448	0.377	62.3%	5	12.8	0.313	NC
MW-13	No	Sodium	0	37000	0.402	59.8%	-4	12	-0.249	NC
MW-13	Yes	Sulfide	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	Yes	Thallium	NC	NC	NC	NC	NC	NC	NC	NC
MW-13	Yes	Zinc	NC	NC	NC	NC	NC	NC	NC	NC
MW-8	Yes	Arsenic	-0.000264	8.14	0.00903	99.1%	-31	12.7	-2.36	Decreasing
MW-8	Yes	Barium	0	33	0.115	88.5%	-15	11.7	-1.2	NC
MW-8	Yes	Beryllium	NC	NC	NC	NC	NC	NC	NC	NC
MW-8	No	Calcium	1.15	37700	0.217	78.3%	11	12.8	0.783	NC
MW-8	Yes	Chromium	NC	NC	NC	NC	NC	NC	NC	NC
MW-8	Yes	Cobalt	NC	NC	NC	NC	NC	NC	NC	NC
MW-8	Yes	Copper	NC	NC	NC	NC	NC	NC	NC	NC
MW-8	No	Iron	NC	NC	NC	NC	NC	NC	NC	NC
MW-8	No	Magnesium	0	21000	0.343	65.7%	6	12.4	0.404	No Trend
MW-8	No	Manganese	-0.000864	17	0.0168	98.3%	-28	12.7	-2.13	NC
MW-8	Yes	Nickel	NC	NC	NC	NC	NC	NC	NC	NC
MW-8	No	Potassium	0	580	0.5	50.0%	0	12.8	0	NC
MW-8	No	Potassium	0	580	0.5	50.0%	0	12.8	0	NC
MW-8	Yes	Selenium	0	0.7	0.5	50.0%	-1	12.8	0	NC
MW-8	No	Sodium	-1.9	82200	0.0155	98.4%	-28	12.5	-2.15	Decreasing
MW-8	Yes	Sulfide	NC	NC	NC	NC	NC	NC	NC	NC

Table G-5
Cell 2 Statistical Results - Inorganics
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset				General								
Well ID	RCRA regulated chemical	Chemical Name	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q	Latest Result > Standard	Dataset n	ND %
MW-8	Yes	Zinc	µg/L	04/12/2018	05/19/2023	ID GW - SECONDARY	5000	2.2	J	No	11	63.6
MW-9	Yes	Arsenic	µg/L	04/12/2018	05/19/2023	EPA MCL	10	1.8	J	No	11	36.4
MW-9	Yes	Barium	µg/L	04/12/2018	05/19/2023	EPA MCL	2000	80		No	11	0
MW-9	Yes	Beryllium	µg/L	04/12/2018	05/19/2023	EPA MCL	4	0.3	U	No	11	90.9
MW-9	No	Calcium	µg/L	04/12/2018	05/19/2023	NA	NA	490000		No	11	0
MW-9	Yes	Chromium	µg/L	04/12/2018	05/19/2023	EPA MCL	100	0.5	U	No	11	54.5
MW-9	Yes	Cobalt	µg/L	04/12/2018	05/19/2023	NA	NA	1.2		No	11	9.1
MW-9	Yes	Copper	µg/L	04/12/2018	05/19/2023	EPA MCL	1300	2.2		No	11	36.4
MW-9	No	Iron	µg/L	04/12/2018	05/19/2023	ID GW - SECONDARY	300	5400		Yes	11	0
MW-9	Yes	Lead	µg/L	04/12/2018	05/19/2023	ID GW - PRIMARY	15	0.4	J	No	11	54.5
MW-9	No	Magnesium	µg/L	04/12/2018	05/19/2023	NA	NA	370000		No	11	0
MW-9	No	Manganese	µg/L	04/12/2018	05/19/2023	ID GW - SECONDARY	50	4400		Yes	11	0
MW-9	Yes	Nickel	µg/L	04/12/2018	05/19/2023	NA	NA	4		No	11	0
MW-9	No	Potassium	µg/L	04/12/2018	05/19/2023	NA	NA	8200		No	11	0
MW-9	No	Potassium	µg/L	04/12/2018	05/19/2023	NA	NA	8200		No	11	0
MW-9	Yes	Selenium	µg/L	04/12/2018	05/19/2023	EPA MCL	50	1	U	No	11	72.7
MW-9	No	Sodium	µg/L	04/12/2018	05/19/2023	NA	NA	1300000		No	11	0
MW-9	Yes	Sulfide	mg/L	04/12/2018	05/19/2023	NA	NA	0.022	UJ	No	11	54.5
MW-9	Yes	Zinc	µg/L	04/12/2018	05/19/2023	ID GW - SECONDARY	5000	48		No	11	0

Table G-5
Cell 2 Statistical Results - Inorganics
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			Confidence Limits						
Well ID	RCRA regulated chemical	Chemical Name	Parameter est. method	Dataset mean	sd	CL method	CL conf	LCL of the mean	LCL > Standard
MW-8	Yes	Zinc	NP Kaplan-Meier	2.6	0.98	Bootstrap	0.95	0	No
MW-9	Yes	Arsenic	NP Kaplan-Meier	1	0.89	Bootstrap	0.95	0.535	No
MW-9	Yes	Barium	Ordinary nonparametric bootstrap	42.8	17.6	BCa bootstrap	0.95	33.8	No
MW-9	Yes	Beryllium	Does not take in to account ND status	0.105	0.0659	Not enough distinct detected values to assess	NC	NC	NC
MW-9	No	Calcium	Ordinary nonparametric bootstrap	257000	137000	BCa bootstrap	0.95	183000	NC
MW-9	Yes	Chromium	NP Kaplan-Meier	0.747	0.398	Bootstrap	0.95	0.535	No
MW-9	Yes	Cobalt	NP Kaplan-Meier	1.72	1.99	Bootstrap	0.95	0.696	NC
MW-9	Yes	Copper	NP Kaplan-Meier	1.48	1.73	Bootstrap	0.95	0.746	No
MW-9	No	Iron	Ordinary nonparametric bootstrap	1060	1440	BCa bootstrap	0.95	578	**Yes**
MW-9	Yes	Lead	NP Kaplan-Meier	0.64	0.859	Bootstrap	0.95	0.22	No
MW-9	No	Magnesium	Ordinary nonparametric bootstrap	177000	112000	BCa bootstrap	0.95	116000	NC
MW-9	No	Manganese	Ordinary nonparametric bootstrap	1850	1250	BCa bootstrap	0.95	1210	**Yes**
MW-9	Yes	Nickel	Ordinary nonparametric bootstrap	17	17.6	BCa bootstrap	0.95	7.96	NC
MW-9	No	Potassium	Ordinary nonparametric bootstrap	4490	1860	BCa bootstrap	0.95	3490	NC
MW-9	No	Potassium	Ordinary nonparametric bootstrap	4490	1860	BCa bootstrap	0.95	3490	NC
MW-9	Yes	Selenium	NP Kaplan-Meier	0.394	0.0468	Bootstrap	0.95	0	No
MW-9	No	Sodium	Ordinary nonparametric bootstrap	433000	342000	BCa bootstrap	0.95	265000	NC
MW-9	Yes	Sulfide	NP Kaplan-Meier	0.0306	0.0399	Bootstrap	0.95	0.0104	NC
MW-9	Yes	Zinc	Ordinary nonparametric bootstrap	623	825	BCa bootstrap	0.95	189	No

Table G-5
Cell 2 Statistical Results - Inorganics
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			Prediction limit					
Well ID	RCRA regulated chemical	Chemical Name	N (background)	ND (background)	UPL method	UPL conf	UPL of background	Latest Result > UPL of background
MW-8	Yes	Zinc	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	15	No
MW-9	Yes	Arsenic	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	1.48	Yes
MW-9	Yes	Barium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	56	Yes
MW-9	Yes	Beryllium	11	8	NP 1-sided prediction limit for next result on MW-1	0.917	0.3	No
MW-9	No	Calcium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	65000	Yes
MW-9	Yes	Chromium	11	1	NP 1-sided prediction limit for next result on MW-1	0.917	1	No
MW-9	Yes	Cobalt	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	3.59	No
MW-9	Yes	Copper	11	9	NP 1-sided prediction limit for next result on MW-1	0.917	4	No
MW-9	No	Iron	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	100	Yes
MW-9	Yes	Lead	11	8	NP 1-sided prediction limit for next result on MW-1	0.917	0.281	Yes
MW-9	No	Magnesium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	18000	Yes
MW-9	No	Manganese	11	5	NP 1-sided prediction limit for next result on MW-1	0.917	1.1	Yes
MW-9	Yes	Nickel	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	0.83	Yes
MW-9	No	Potassium	11	1	NP 1-sided prediction limit for next result on MW-1	0.917	3000	Yes
MW-9	No	Potassium	11	1	NP 1-sided prediction limit for next result on MW-1	0.917	3000	Yes
MW-9	Yes	Selenium	11	3	NP 1-sided prediction limit for next result on MW-1	0.917	1	No
MW-9	No	Sodium	11	0	NP 1-sided prediction limit for next result on MW-1	0.917	44000	Yes
MW-9	Yes	Sulfide	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	0.16	No
MW-9	Yes	Zinc	11	7	NP 1-sided prediction limit for next result on MW-1	0.917	15	Yes

Table G-5
Cell 2 Statistical Results - Inorganics
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			Trend analysis							
Well ID	RCRA regulated chemical	Chemical Name	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction
MW-8	Yes	Zinc	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	Yes	Arsenic	-0.000742	14.5	0.00999	99.0%	-30	12.4	-2.33	Decreasing
MW-9	Yes	Barium	0.0237	-395	0.0175	98.2%	28	12.8	2.11	Increasing
MW-9	Yes	Beryllium	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	No	Calcium	-178	3520000	0.0146	98.5%	-29	12.8	-2.18	Decreasing
MW-9	Yes	Chromium	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	Yes	Cobalt	-0.00233	44.7	0.00155	99.8%	-39	12.8	-2.96	NC
MW-9	Yes	Copper	-0.000371	7.65	0.0126	98.7%	-29	12.5	-2.24	NC
MW-9	No	Iron	0.238	-3770	0.0118	98.8%	30	12.8	2.26	Increasing
MW-9	Yes	Lead	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	No	Magnesium	-146	2870000	0.0146	98.5%	-29	12.8	-2.18	Decreasing
MW-9	No	Manganese	-1.14	22500	0.0175	98.2%	-28	12.8	-2.11	Decreasing
MW-9	Yes	Nickel	-0.0263	503	0.000171	100.0%	-47	12.8	-3.58	Decreasing
MW-9	No	Potassium	-2.22	45000	0.0146	98.5%	-29	12.8	-2.18	Decreasing
MW-9	No	Potassium	-2.22	45000	0.0146	98.5%	-29	12.8	-2.18	Decreasing
MW-9	Yes	Selenium	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	No	Sodium	-262	5180000	0.00976	99.0%	-31	12.8	-2.34	Decreasing
MW-9	Yes	Sulfide	NC	NC	NC	NC	NC	NC	NC	NC
MW-9	Yes	Zinc	-0.913	17700	0.00253	99.7%	-37	12.8	-2.8	Decreasing

Table G-6
Cell 4 Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset						General					
Well ID	RCRA regulated chemical	Chemical Name	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q	Dataset n	ND %
MW-3A	Yes	1,2,4-Trichlorobenzene	µg/L	10/08/2018	05/18/2023	EPA MCL	70	0.58	U	10	90
MW-3A	Yes	1,4-Dichlorobenzene	µg/L	04/11/2018	05/18/2023	EPA MCL	75	0.39	U	11	90.9
MW-3A	Yes	Acrylonitrile	µg/L	04/11/2018	05/18/2023	NA	NA	4.5	U	11	90.9
MW-3A	Yes	Iodomethane	µg/L	04/11/2018	05/18/2023	NA	NA	2.6	U	11	90.9
MW-3A	Yes	Trichloroethene	µg/L	04/11/2018	05/18/2023	EPA MCL	5	0.3	U	11	90.9
MW-4	Yes	1,1,1-Trichloroethane	µg/L	04/11/2018	05/17/2023	EPA MCL	200	0.39	U	11	63.6
MW-4	Yes	1,1-Dichloroethane	µg/L	04/11/2018	05/17/2023	NA	NA	1.1		11	27.3
MW-4	Yes	1,2-Dichloroethane	µg/L	04/11/2018	05/17/2023	EPA MCL	5	0.87	J	11	63.6
MW-4	Yes	Benzene	µg/L	04/11/2018	05/17/2023	EPA MCL	5	0.89	J	11	27.3
MW-4	Yes	Chlorobenzene	µg/L	04/11/2018	05/17/2023	EPA MCL	100	0.42	U	11	90.9
MW-4	Yes	Dichlorodifluoromethane	µg/L	10/05/2018	05/17/2023	NA	NA	1	J	10	40
MW-4	Yes	Iodomethane	µg/L	04/11/2018	05/17/2023	NA	NA	2.6	U	11	90.9
MW-4	Yes	Tetrachloroethene	µg/L	04/11/2018	05/17/2023	EPA MCL	5	2.7		11	0
MW-4	Yes	Trichloroethene	µg/L	04/11/2018	05/17/2023	EPA MCL	5	0.49	J	11	18.2
MW-4	Yes	Vinyl chloride	µg/L	04/11/2018	05/17/2023	EPA MCL	2	2.5		11	18.2
MW-4	Yes	Xylene (Total)	µg/L	04/11/2018	05/17/2023	EPA MCL	10000	0.33	U	11	81.8
MW-4	Yes	cis-1,2-Dichloroethene	µg/L	04/11/2018	05/17/2023	EPA MCL	70	0.32	U	11	9.1
MW-4	No	o-xylene (1,2-dimethylbenzene)	µg/L	05/01/2019	05/17/2023	EPA MCL	10000	0.33	U	9	88.9
MW-4	Yes	trans-1,2-Dichloroethene	µg/L	04/11/2018	05/17/2023	EPA MCL	100	0.43	J	11	36.4
MW-4A	Yes	Trichloroethene	µg/L	04/11/2018	05/17/2023	EPA MCL	5	0.3	U	11	90.9
MW-5A	Yes	Iodomethane	µg/L	04/11/2018	04/23/2021	NA	NA	0.23	U	7	85.7
MW-5AR	Yes	Carbon disulfide	µg/L	07/21/2021	05/19/2023	NA	NA	0.63	U	5	60
MW-5AR	Yes	Toluene	µg/L	07/21/2021	05/19/2023	EPA MCL	1000	0.32	U	5	60

See separate note sheet

Table G-6
Cell 4 Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset										
Well ID	RCRA regulated chemical	Chemical Name	Parameter est. method	Dataset mean	sd	CL method	CL conf	LCL of the mean	LCL > Standard	Latest Result > Standard
MW-3A	Yes	1,2,4-Trichlorobenzene	Does not take in to account ND status	0.338	0.214	Not enough distinct detected values to assess	NC	NC	NC	No
MW-3A	Yes	1,4-Dichlorobenzene	Does not take in to account ND status	0.218	0.0927	Not enough distinct detected values to assess	NC	NC	NC	No
MW-3A	Yes	Acrylonitrile	Does not take in to account ND status	2.15	1.3	Not enough distinct detected values to assess	NC	NC	NC	NC
MW-3A	Yes	Iodomethane	Does not take in to account ND status	0.945	0.959	Not enough distinct detected values to assess	NC	NC	NC	NC
MW-3A	Yes	Trichloroethene	Does not take in to account ND status	0.209	0.0836	Not enough distinct detected values to assess	NC	NC	NC	No
MW-4	Yes	1,1,1-Trichloroethane	NP Kaplan-Meier	0.19	0.0312	Bootstrap	0.95	0	No	No
MW-4	Yes	1,1-Dichloroethane	NP Kaplan-Meier	0.53	0.379	Bootstrap	0.95	0.323	NC	NC
MW-4	Yes	1,2-Dichloroethane	NP Kaplan-Meier	0.308	0.256	Bootstrap	0.95	0	No	No
MW-4	Yes	Benzene	NP Kaplan-Meier	0.44	0.278	Bootstrap	0.95	0.288	No	No
MW-4	Yes	Chlorobenzene	Does not take in to account ND status	0.36	0.472	Not enough distinct detected values to assess	NC	NC	NC	No
MW-4	Yes	Dichlorodifluoromethane	NP Kaplan-Meier	0.642	0.297	Bootstrap	0.95	0.457	NC	NC
MW-4	Yes	Iodomethane	Does not take in to account ND status	0.983	1.17	Not enough distinct detected values to assess	NC	NC	NC	NC
MW-4	Yes	Tetrachloroethene	Ordinary nonparametric bootstrap	3.44	0.512	BCa bootstrap	0.95	3.15	No	No
MW-4	Yes	Trichloroethene	NP Kaplan-Meier	0.394	0.159	Bootstrap	0.95	0.297	No	No
MW-4	Yes	Vinyl chloride	NP Kaplan-Meier	1.11	0.68	Bootstrap	0.95	0.713	No	**Yes**
MW-4	Yes	Xylene (Total)	NP Kaplan-Meier	0.223	0.0956	Bootstrap	0.95	0	No	No
MW-4	Yes	cis-1,2-Dichloroethene	NP Kaplan-Meier	1.37	0.543	Bootstrap	0.95	1.05	No	No
MW-4	No	o-xylene (1,2-dimethylbenzene)	Does not take in to account ND status	0.224	0.0602	Not enough distinct detected values to assess	NC	NC	NC	No
MW-4	Yes	trans-1,2-Dichloroethene	NP Kaplan-Meier	0.267	0.132	Bootstrap	0.95	0.193	No	No
MW-4A	Yes	Trichloroethene	Does not take in to account ND status	0.224	0.0892	Not enough distinct detected values to assess	NC	NC	NC	No
MW-5A	Yes	Iodomethane	Does not take in to account ND status	0.636	1.07	Not enough distinct detected values to assess	NC	NC	NC	NC
MW-5AR	Yes	Carbon disulfide	NP Kaplan-Meier	0.562	0.505	Bootstrap	0.95	0	NC	NC
MW-5AR	Yes	Toluene	NP Kaplan-Meier	0.46	0.272	Bootstrap	0.95	0	No	No

See separate note sheet

Table G-6
Cell 4 Statistical Results - VOCs
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			Trend analysis							
Well ID	RCRA regulated chemical	Chemical Name	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction
MW-3A	Yes	1,2,4-Trichlorobenzene	NC	NC	NC	NC	NC	NC	NC	NC
MW-3A	Yes	1,4-Dichlorobenzene	NC	NC	NC	NC	NC	NC	NC	NC
MW-3A	Yes	Acrylonitrile	NC	NC	NC	NC	NC	NC	NC	NC
MW-3A	Yes	Iodomethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-3A	Yes	Trichloroethene	NC	NC	NC	NC	NC	NC	NC	NC
MW-4	Yes	1,1,1-Trichloroethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-4	Yes	1,1-Dichloroethane	0.000411	-7.16	0.000865	99.9%	41	12.8	3.13	Increasing
MW-4	Yes	1,2-Dichloroethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-4	Yes	Benzene	0.000436	-7.68	0.000683	99.9%	42	12.8	3.2	Increasing
MW-4	Yes	Chlorobenzene	NC	NC	NC	NC	NC	NC	NC	NC
MW-4	Yes	Dichlorodifluoromethane	0.000166	-2.27	0.292	70.8%	7	11	0.548	No Trend
MW-4	Yes	Iodomethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-4	Yes	Tetrachloroethene	-0.000505	12.7	0.0113	98.9%	-30	12.7	-2.28	Decreasing
MW-4	Yes	Trichloroethene	0.000162	-2.62	0.0362	96.4%	24	12.8	1.8	Increasing
MW-4	Yes	Vinyl chloride	0.000795	-13.5	0.0118	98.8%	30	12.8	2.26	Increasing
MW-4	Yes	Xylene (Total)	NC	NC	NC	NC	NC	NC	NC	NC
MW-4	Yes	cis-1,2-Dichloroethene	0.000587	-9.27	0.121	87.9%	16	12.8	1.17	No Trend
MW-4	No	o-xylene (1,2-dimethylbenzene)	NC	NC	NC	NC	NC	NC	NC	NC
MW-4	Yes	trans-1,2-Dichloroethene	0.000164	-2.76	0.0151	98.5%	28	12.4	2.17	Increasing
MW-4A	Yes	Trichloroethene	NC	NC	NC	NC	NC	NC	NC	NC
MW-5A	Yes	Iodomethane	NC	NC	NC	NC	NC	NC	NC	NC
MW-5AR	Yes	Carbon disulfide	NC	NC	NC	NC	NC	NC	NC	NC
MW-5AR	Yes	Toluene	NC	NC	NC	NC	NC	NC	NC	NC

See separate note sheet

Table G-7
Cell 4 Statistical Results - Inorganics
Spring 2023 Semiannual Monitoring Report
Fort Hall Mine Landfill

Dataset			General								
Well ID	RCRA regulated chemical	Chemical Name	Unit	Min Date	Max Date	Standard source	Standard	Latest Result	Last Q	Dataset n	ND %
MW-3A	Yes	Barium	µg/L	04/11/2018	05/18/2023	EPA MCL	2000	150		11	0
MW-4	Yes	Barium	µg/L	04/11/2018	05/17/2023	EPA MCL	2000	0.38	U	11	9.1
MW-4A	Yes	Barium	µg/L	04/11/2018	05/17/2023	EPA MCL	2000	170		11	0
MW-5A	Yes	Barium	µg/L	04/11/2018	04/23/2021	EPA MCL	2000	54		7	0
MW-5AR	Yes	Barium	µg/L	07/21/2021	05/19/2023	EPA MCL	2000	100		5	0
MW-6A	Yes	Barium	µg/L	04/11/2018	05/19/2023	EPA MCL	2000	200		11	0

Table G-7
Cell 4 Statistical Results - Inorganics
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Fort Hall Mine Landfill

Dataset			Confidence Limits							
Well ID	RCRA regulated chemical	Chemical Name	Parameter est. method	Dataset mean	sd	CL method	CL conf	LCL of the mean	LCL > Standard	Latest Result > Standard
MW-3A	Yes	Barium	Ordinary nonparametric bootstrap	153	7.96	BCa bootstrap	0.95	148	No	No
MW-4	Yes	Barium	NP Kaplan-Meier	166	54.5	Bootstrap	0.95	129	No	No
MW-4A	Yes	Barium	Ordinary nonparametric bootstrap	179	8.31	BCa bootstrap	0.95	174	No	No
MW-5A	Yes	Barium	Ordinary nonparametric bootstrap	55	1.01	BCa bootstrap	0.95	54.3	No	No
MW-5AR	Yes	Barium	Ordinary nonparametric bootstrap	92.8	19.5	BCa bootstrap	0.95	77.6	No	No
MW-6A	Yes	Barium	Ordinary nonparametric bootstrap	203	11.1	BCa bootstrap	0.95	197	No	No

Table G-7
Cell 4 Statistical Results - Inorganics
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Fort Hall Mine Landfill

Dataset			Prediction limit					
Well ID	RCRA regulated chemical	Chemical Name	N (background)	ND (background)	UPL method	UPL conf	UPL of background	Latest Result > UPL of background
MW-3A	Yes	Barium	11	0	NP 1-sided prediction limit for next result on MW-4A	0.917	190	No
MW-4	Yes	Barium	11	0	NP 1-sided prediction limit for next result on MW-4A	0.917	190	No
MW-4A	Yes	Barium	11	0	NP 1-sided prediction limit for next result	0.917	190	No
MW-5A	Yes	Barium	11	0	NP 1-sided prediction limit for next result on MW-4A	0.917	190	No
MW-5AR	Yes	Barium	11	0	NP 1-sided prediction limit for next result on MW-4A	0.917	190	No
MW-6A	Yes	Barium	11	0	NP 1-sided prediction limit for next result on MW-4A	0.917	190	Yes

Table G-7
Cell 4 Statistical Results - Inorganics
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Fort Hall Mine Landfill

Dataset			Trend analysis							
Well ID	RCRA regulated chemical	Chemical Name	TS Slope	TS Intercept	p-value	Confidence Level	S	sd(S)	Z	Direction
MW-3A	Yes	Barium	0	150	0.229	77.1%	-10	12.1	-0.742	No Trend
MW-4	Yes	Barium	0.0152	-94.3	0.117	88.3%	16	12.6	1.19	No Trend
MW-4A	Yes	Barium	-0.00947	355	0.0507	94.9%	-21	12.2	-1.64	No Trend
MW-5A	Yes	Barium	0	54.7	0.5	50.0%	1	6.08	0	No Trend
MW-5AR	Yes	Barium	NC	NC	NC	NC	NC	NC	NC	NC
MW-6A	Yes	Barium	-0.00795	349	0.131	86.9%	-15	12.5	-1.12	No Trend